wwPDB EM Validation Summary Report

Jul 2, 2023 – 01:10 AM JST

PDB ID	:	7Y7B
EMDB ID	:	EMD-33659
Title	:	Cryo-EM structure of cryptophyte photosystem I
Authors	:	Zhao, L.S.; Li, K.; Zhang, Y.Z.; Liu, L.N.
Deposited on	:	2022-06-22
Resolution	:	2.66 Å(reported)

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

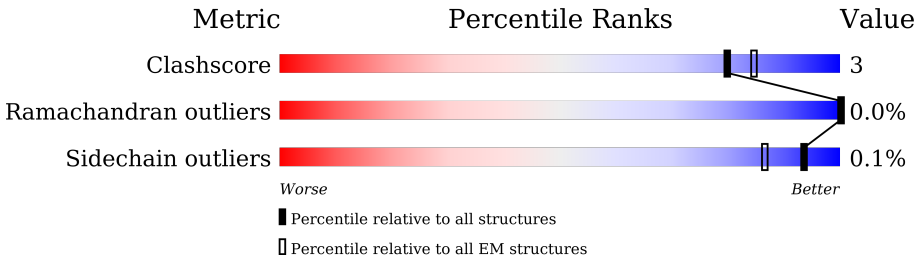
EMDB validation analysis	:	0.0.1.dev50
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.33

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.66 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	1	222	5% 69% 12% 19%
2	2	216	72% 6% 22%
3	3	236	72% 24%
4	4	217	77% 19%
5	5	229	72% 10% 18%
6	6	215	74% 7% 20%
7	7	230	74% 23%
8	8	227	70% 6% 24%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
9	9	220	73% 9% 18%
10	A	752	92% 6%
11	B	734	93% 7%
12	C	81	83% 15%
13	D	141	91% 6%
14	E	64	91% 5% 5%
15	F	183	83% 13%
16	I	36	75% 17% 8%
17	J	42	98%
18	K	87	87% 10%
19	L	153	95%
20	M	30	97%
21	O	99	91% 9%
22	R	133	63% 6% 31%
23	X	164	22% 79% 9% 12%
24	Z	242	62% 37%
25	a	215	80% 20%
25	d	215	80% 20%
26	b	218	81% 19%
27	c	257	84% 16%
28	e	208	80% 19%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
29	CLA	1	601	X	-	-	-
29	CLA	1	602	X	-	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
29	CLA	1	603	X	-	-	-
29	CLA	1	604	X	-	-	-
29	CLA	1	605	X	-	-	-
29	CLA	1	606	X	-	-	-
29	CLA	1	607	X	-	-	-
29	CLA	1	608	X	-	-	-
29	CLA	1	609	X	-	-	-
29	CLA	1	611	X	-	-	-
29	CLA	1	612	X	-	-	-
29	CLA	1	613	X	-	-	-
29	CLA	2	601	X	-	-	-
29	CLA	2	602	X	-	-	-
29	CLA	2	603	X	-	-	-
29	CLA	2	604	X	-	-	-
29	CLA	2	605	X	-	-	-
29	CLA	2	606	X	-	-	-
29	CLA	2	607	X	-	-	-
29	CLA	2	608	X	-	-	-
29	CLA	2	609	X	-	-	-
29	CLA	2	611	X	-	-	-
29	CLA	2	612	X	-	-	-
29	CLA	3	601	X	-	-	-
29	CLA	3	602	X	-	-	-
29	CLA	3	603	X	-	-	-
29	CLA	3	604	X	-	-	-
29	CLA	3	605	X	-	-	-
29	CLA	3	607	X	-	-	-
29	CLA	3	608	X	-	-	-
29	CLA	3	609	X	-	-	-
29	CLA	3	610	X	-	-	-
29	CLA	3	611	X	-	-	-
29	CLA	3	612	X	-	-	-
29	CLA	4	601	X	-	-	-
29	CLA	4	602	X	-	-	-
29	CLA	4	603	X	-	-	-
29	CLA	4	604	X	-	-	-
29	CLA	4	606	X	-	-	-
29	CLA	4	607	X	-	-	-
29	CLA	4	608	X	-	-	-
29	CLA	4	609	X	-	-	-
29	CLA	4	610	X	-	-	-
29	CLA	4	611	X	-	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
29	CLA	5	601	X	-	-	-
29	CLA	5	602	X	-	-	-
29	CLA	5	603	X	-	-	-
29	CLA	5	604	X	-	-	-
29	CLA	5	605	X	-	-	-
29	CLA	5	606	X	-	-	-
29	CLA	5	607	X	-	-	-
29	CLA	5	608	X	-	-	-
29	CLA	5	609	X	-	-	-
29	CLA	5	611	X	-	-	-
29	CLA	5	612	X	-	-	-
29	CLA	5	613	X	-	-	-
29	CLA	6	601	X	-	-	-
29	CLA	6	602	X	-	-	-
29	CLA	6	603	X	-	-	-
29	CLA	6	604	X	-	-	-
29	CLA	6	605	X	-	-	-
29	CLA	6	606	X	-	-	-
29	CLA	6	607	X	-	-	-
29	CLA	6	608	X	-	-	-
29	CLA	6	609	X	-	-	-
29	CLA	6	611	X	-	-	-
29	CLA	6	612	X	-	-	-
29	CLA	7	601	X	-	-	-
29	CLA	7	602	X	-	-	-
29	CLA	7	603	X	-	-	-
29	CLA	7	604	X	-	-	-
29	CLA	7	605	X	-	-	-
29	CLA	7	607	X	-	-	-
29	CLA	7	608	X	-	-	-
29	CLA	7	609	X	-	-	-
29	CLA	7	611	X	-	-	-
29	CLA	7	612	X	-	-	-
29	CLA	8	601	X	-	-	-
29	CLA	8	602	X	-	-	-
29	CLA	8	603	X	-	-	-
29	CLA	8	604	X	-	-	-
29	CLA	8	605	X	-	-	-
29	CLA	8	606	X	-	-	-
29	CLA	8	607	X	-	-	-
29	CLA	8	608	X	-	-	-
29	CLA	8	615	X	-	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
29	CLA	9	601	X	-	-	-
29	CLA	9	602	X	-	-	-
29	CLA	9	603	X	-	-	-
29	CLA	9	604	X	-	-	-
29	CLA	9	605	X	-	-	-
29	CLA	9	606	X	-	-	-
29	CLA	9	607	X	-	-	-
29	CLA	9	608	X	-	-	-
29	CLA	9	609	X	-	-	-
29	CLA	9	611	X	-	-	-
29	CLA	9	612	X	-	-	-
29	CLA	9	613	X	-	-	-
29	CLA	9	614	X	-	-	-
29	CLA	A	801	X	-	-	-
29	CLA	A	802	X	-	-	-
29	CLA	A	803	X	-	-	-
29	CLA	A	804	X	-	-	-
29	CLA	A	805	X	-	-	-
29	CLA	A	806	X	-	-	-
29	CLA	A	807	X	-	-	-
29	CLA	A	808	X	-	-	-
29	CLA	A	809	X	-	-	-
29	CLA	A	810	X	-	-	-
29	CLA	A	811	X	-	-	-
29	CLA	A	812	X	-	-	-
29	CLA	A	813	X	-	-	-
29	CLA	A	814	X	-	-	-
29	CLA	A	815	X	-	-	-
29	CLA	A	816	X	-	-	-
29	CLA	A	817	X	-	-	-
29	CLA	A	818	X	-	-	-
29	CLA	A	819	X	-	-	-
29	CLA	A	820	X	-	-	-
29	CLA	A	821	X	-	-	-
29	CLA	A	822	X	-	-	-
29	CLA	A	823	X	-	-	-
29	CLA	A	824	X	-	-	-
29	CLA	A	825	X	-	-	-
29	CLA	A	826	X	-	-	-
29	CLA	A	827	X	-	-	-
29	CLA	A	828	X	-	-	-
29	CLA	A	829	X	-	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
29	CLA	A	830	X	-	-	-
29	CLA	A	831	X	-	-	-
29	CLA	A	832	X	-	-	-
29	CLA	A	833	X	-	-	-
29	CLA	A	834	X	-	-	-
29	CLA	A	835	X	-	-	-
29	CLA	A	836	X	-	-	-
29	CLA	A	837	X	-	-	-
29	CLA	A	838	X	-	-	-
29	CLA	A	839	X	-	-	-
29	CLA	A	840	X	-	-	-
29	CLA	A	841	X	-	-	-
29	CLA	A	842	X	-	-	-
29	CLA	A	843	X	-	-	-
29	CLA	A	844	X	-	-	-
29	CLA	B	802	X	-	-	-
29	CLA	B	803	X	-	-	-
29	CLA	B	804	X	-	-	-
29	CLA	B	805	X	-	-	-
29	CLA	B	806	X	-	-	-
29	CLA	B	807	X	-	-	-
29	CLA	B	808	X	-	-	-
29	CLA	B	809	X	-	-	-
29	CLA	B	810	X	-	-	-
29	CLA	B	811	X	-	-	-
29	CLA	B	812	X	-	-	-
29	CLA	B	813	X	-	-	-
29	CLA	B	814	X	-	-	-
29	CLA	B	815	X	-	-	-
29	CLA	B	816	X	-	-	-
29	CLA	B	817	X	-	-	-
29	CLA	B	818	X	-	-	-
29	CLA	B	819	X	-	-	-
29	CLA	B	820	X	-	-	-
29	CLA	B	821	X	-	-	-
29	CLA	B	822	X	-	-	-
29	CLA	B	823	X	-	-	-
29	CLA	B	824	X	-	-	-
29	CLA	B	825	X	-	-	-
29	CLA	B	826	X	-	-	-
29	CLA	B	827	X	-	-	-
29	CLA	B	828	X	-	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
29	CLA	B	829	X	-	-	-
29	CLA	B	830	X	-	-	-
29	CLA	B	831	X	-	-	-
29	CLA	B	832	X	-	-	-
29	CLA	B	833	X	-	-	-
29	CLA	B	834	X	-	-	-
29	CLA	B	835	X	-	-	-
29	CLA	B	836	X	-	-	-
29	CLA	B	837	X	-	-	-
29	CLA	B	838	X	-	-	-
29	CLA	B	839	X	-	-	-
29	CLA	B	840	X	-	-	-
29	CLA	B	841	X	-	-	-
29	CLA	F	202	X	-	-	-
29	CLA	F	203	X	-	-	-
29	CLA	F	204	X	-	-	-
29	CLA	J	102	X	-	-	-
29	CLA	K	101	X	-	-	-
29	CLA	K	102	X	-	-	-
29	CLA	L	201	X	-	-	-
29	CLA	L	202	X	-	-	-
29	CLA	L	203	X	-	-	-
29	CLA	L	204	X	-	-	-
29	CLA	L	207	X	-	-	-
29	CLA	O	201	X	-	-	-
29	CLA	O	202	X	-	-	-
29	CLA	O	203	X	-	-	-
29	CLA	R	202	X	-	-	-
29	CLA	Z	301	X	-	-	-
29	CLA	Z	304	X	-	-	-
29	CLA	Z	305	X	-	-	-
29	CLA	Z	306	X	-	-	-
29	CLA	a	601	X	-	-	-
29	CLA	a	602	X	-	-	-
29	CLA	a	603	X	-	-	-
29	CLA	a	604	X	-	-	-
29	CLA	a	605	X	-	-	-
29	CLA	a	606	X	-	-	-
29	CLA	a	607	X	-	-	-
29	CLA	a	608	X	-	-	-
29	CLA	a	609	X	-	-	-
29	CLA	a	611	X	-	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
29	CLA	a	612	X	-	-	-
29	CLA	b	601	X	-	-	-
29	CLA	b	602	X	-	-	-
29	CLA	b	603	X	-	-	-
29	CLA	b	604	X	-	-	-
29	CLA	b	606	X	-	-	-
29	CLA	b	607	X	-	-	-
29	CLA	b	608	X	-	-	-
29	CLA	b	610	X	-	-	-
29	CLA	b	611	X	-	-	-
29	CLA	c	601	X	-	-	-
29	CLA	c	602	X	-	-	-
29	CLA	c	603	X	-	-	-
29	CLA	c	604	X	-	-	-
29	CLA	c	605	X	-	-	-
29	CLA	c	606	X	-	-	-
29	CLA	c	607	X	-	-	-
29	CLA	c	608	X	-	-	-
29	CLA	c	609	X	-	-	-
29	CLA	c	612	X	-	-	-
29	CLA	c	613	X	-	-	-
29	CLA	c	614	X	-	-	-
29	CLA	d	601	X	-	-	-
29	CLA	d	602	X	-	-	-
29	CLA	d	603	X	-	-	-
29	CLA	d	604	X	-	-	-
29	CLA	d	605	X	-	-	-
29	CLA	d	606	X	-	-	-
29	CLA	d	607	X	-	-	-
29	CLA	d	608	X	-	-	-
29	CLA	d	609	X	-	-	-
29	CLA	d	611	X	-	-	-
29	CLA	d	612	X	-	-	-
29	CLA	e	601	X	-	-	-
29	CLA	e	602	X	-	-	-
29	CLA	e	603	X	-	-	-
29	CLA	e	604	X	-	-	-
29	CLA	e	606	X	-	-	-
29	CLA	e	607	X	-	-	-
29	CLA	e	608	X	-	-	-
29	CLA	e	610	X	-	-	-
29	CLA	e	611	X	-	-	-

2 Entry composition (i)

There are 41 unique types of molecules in this entry. The entry contains 60515 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called ACPI-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	1	179	1338	861	227	242	8	0	0

- Molecule 2 is a protein called ACPI-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	2	168	1320	872	215	230	3	0	0

- Molecule 3 is a protein called ACPI-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	3	180	1362	875	231	246	10	0	0

- Molecule 4 is a protein called ACPI-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	4	176	1366	891	224	245	6	0	0

- Molecule 5 is a protein called ACPI-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	5	188	1403	908	234	253	8	0	0

- Molecule 6 is a protein called ACPI-6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	6	173	1305	846	217	232	10	0	0

- Molecule 7 is a protein called ACPI-7.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	7	177	Total	C	N	O	S	0	0
			1337	861	230	238	8		

- Molecule 8 is a protein called ACPI-8.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	8	173	Total	C	N	O	S	0	0
			1298	842	217	235	4		

- Molecule 9 is a protein called ACPI-12.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	9	180	Total	C	N	O	S	0	0
			1349	864	230	243	12		

- Molecule 10 is a protein called Photosystem I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	A	741	Total	C	N	O	S	0	0
			5824	3804	992	1000	28		

- Molecule 11 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	B	731	Total	C	N	O	S	0	0
			5828	3847	982	984	15		

- Molecule 12 is a protein called Photosystem I iron-sulfur center.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	C	80	Total	C	N	O	S	0	0
			591	361	103	115	12		

- Molecule 13 is a protein called Photosystem I reaction center subunit II.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	D	137	Total	C	N	O	S	0	0
			1070	685	184	198	3		

- Molecule 14 is a protein called Photosystem I reaction center subunit IV.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	E	61	Total	C	N	O	0	0
			491	312	85	94		

- Molecule 15 is a protein called Photosystem I reaction center subunit III.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	F	160	Total	C	N	O	S	0	0
			1258	814	214	228	2		

- Molecule 16 is a protein called Photosystem I reaction center subunit VIII.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	I	33	Total	C	N	O	S	0	0
			258	180	34	42	2		

- Molecule 17 is a protein called Photosystem I reaction center subunit IX.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	J	42	Total	C	N	O	S	0	0
			342	232	49	58	3		

- Molecule 18 is a protein called Photosystem I reaction center subunit PsaK.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	K	78	Total	C	N	O	S	0	0
			553	358	90	102	3		

- Molecule 19 is a protein called Photosystem I reaction center subunit XI.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	L	150	Total	C	N	O	S	0	0
			1143	746	184	211	2		

- Molecule 20 is a protein called Photosystem I reaction center subunit XII.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	M	30	Total	C	N	O	S	0	0
			227	152	35	39	1		

- Molecule 21 is a protein called PsaO.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	O	99	Total	C	N	O	S	0	0
			766	518	113	134	1		

- Molecule 22 is a protein called PsaR.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	R	92	Total	C	N	O	S	0	0
			680	439	112	127	2		

- Molecule 23 is a protein called Unk1.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	X	145	Total	C	N	O	0	0
			725	435	145	145		

- Molecule 24 is a protein called ACPI-S.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Z	153	Total	C	N	O	S	0	0
			1130	721	188	211	10		

- Molecule 25 is a protein called ACPI-13/10.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	a	171	Total	C	N	O	S	0	0
			1271	823	207	231	10		
25	d	171	Total	C	N	O	S	0	0
			1271	823	207	231	10		

- Molecule 26 is a protein called ACPI-14.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	b	176	Total	C	N	O	S	0	0
			1368	891	224	244	9		

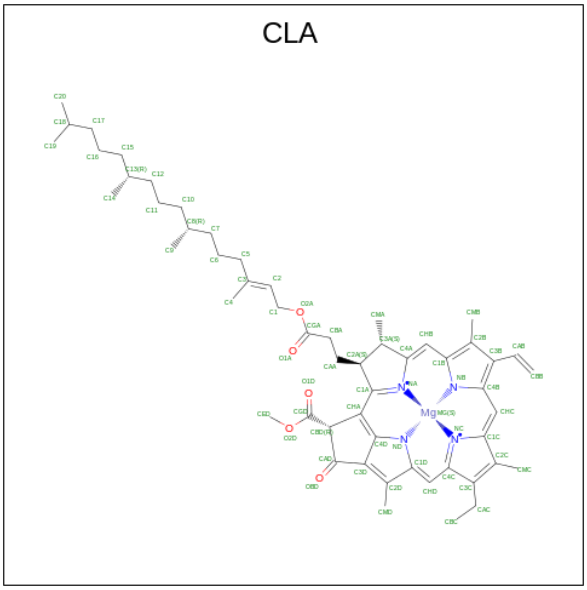
- Molecule 27 is a protein called ACPI-9.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	c	215	Total	C	N	O	S	0	0
			1615	1053	265	283	14		

- Molecule 28 is a protein called ACPI-11.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	e	168	Total	C	N	O	S	0	0
			1288	840	209	227	12		

- Molecule 29 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
29	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	1	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
29	1	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
29	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	1	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
29	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	1	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	1	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
29	2	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	3	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			54	44	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	4	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	5	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			60	50	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	5	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	5	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	6	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	7	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	7	1	Total	C	Mg	N	O	0
			53	43	1	4	5	
29	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	7	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	7	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	8	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	8	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	8	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	8	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	8	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	8	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	8	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	8	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	8	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			64	54	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			55	45	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	9	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	9	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	9	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	9	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
29	A	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			62	52	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			60	50	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 55	C 45	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 50	C 40	Mg 1	N 4	O 5	0
29	A	1	Total 60	C 50	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0
29	A	1	Total 55	C 45	Mg 1	N 4	O 5	0
29	A	1	Total 60	C 50	Mg 1	N 4	O 5	0
29	A	1	Total 55	C 45	Mg 1	N 4	O 5	0
29	A	1	Total 65	C 55	Mg 1	N 4	O 5	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			61	51	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			42	34	1	4	3	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	B	1	Total	C	Mg	N	O	0
			59	49	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			47	37	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	B	1	Total	C	Mg	N	O	0
			52	42	1	4	5	
29	F	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	F	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	F	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	J	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	K	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	K	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	L	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	L	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
29	L	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	L	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	L	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	O	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	O	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	O	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	R	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	Z	1	Total	C	Mg	N	O	0
			60	50	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	Z	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	Z	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	Z	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	a	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	b	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	b	1	Total	C	Mg	N	O	0
			64	54	1	4	5	
29	b	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	b	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	b	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

Continued on next page...

Continued from previous page...

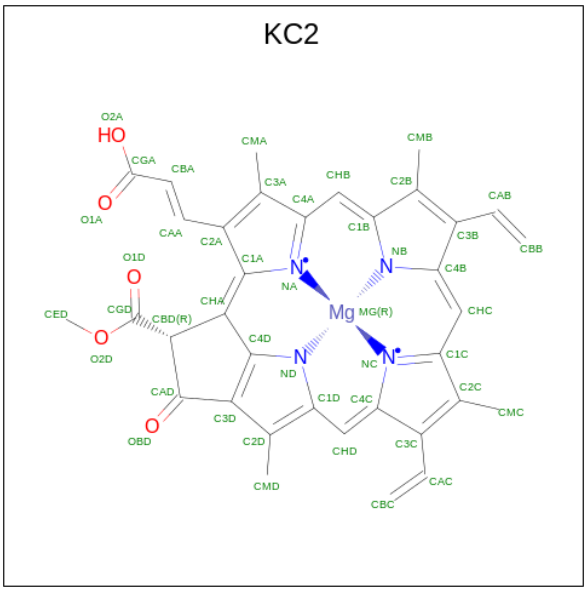
Mol	Chain	Residues	Atoms					AltConf
29	b	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
29	b	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	c	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	c	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	d	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	d	1	Total	C	Mg	N	O	0
			64	54	1	4	5	
29	d	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	d	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	d	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	d	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	d	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
29	d	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
29	d	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	d	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	d	1	Total	C	Mg	N	O	0
			63	53	1	4	5	
29	e	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	e	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
29	e	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
29	e	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	e	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
29	e	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
29	e	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
29	e	1	Total	C	Mg	N	O	0
			51	41	1	4	5	
29	e	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

- Molecule 30 is Chlorophyll c2 (three-letter code: KC2) (formula: $C_{35}H_{28}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



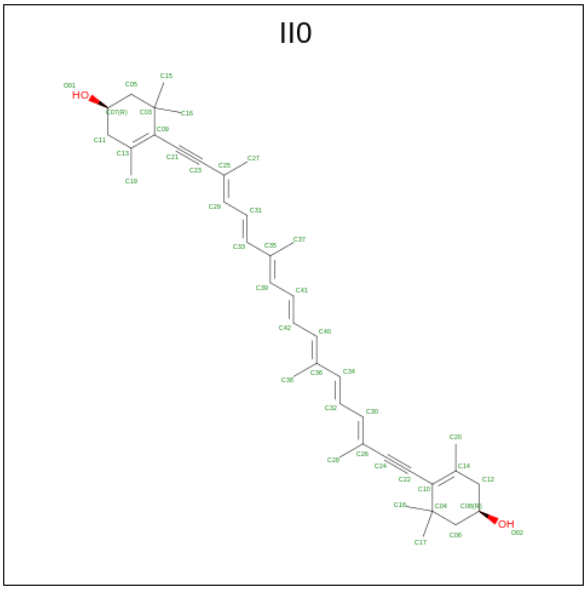
Mol	Chain	Residues	Atoms					AltConf
30	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	7	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	9	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	Z	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	a	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	b	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	b	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
30	c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	c	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	d	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	e	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	e	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

- Molecule 31 is (1 {R})-3,5,5-trimethyl-4-[(3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E})-3,7,12,16-tetramethyl-18-[(4 {R})-2,6,6-trimethyl-4-oxidanyl-cyclohexen-1-yl]octadeca-3,5,7,9,11,13,15-heptaen-1,17-diynyl]cyclohex-3-en-1-ol (three-letter code: II0) (formula: $C_{40}H_{52}O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
31	1	1	Total	C	O	0
			42	40	2	
31	1	1	Total	C	O	0
			42	40	2	
31	1	1	Total	C	O	0
			42	40	2	
31	1	1	Total	C	O	0
			42	40	2	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			AltConf
31	2	1	Total	C	O	0
			42	40	2	
31	2	1	Total	C	O	0
			42	40	2	
31	2	1	Total	C	O	0
			42	40	2	
31	3	1	Total	C	O	0
			42	40	2	
31	3	1	Total	C	O	0
			42	40	2	
31	3	1	Total	C	O	0
			42	40	2	
31	3	1	Total	C	O	0
			42	40	2	
31	3	1	Total	C	O	0
			42	40	2	
31	4	1	Total	C	O	0
			42	40	2	
31	4	1	Total	C	O	0
			42	40	2	
31	4	1	Total	C	O	0
			42	40	2	
31	4	1	Total	C	O	0
			42	40	2	
31	5	1	Total	C	O	0
			42	40	2	
31	5	1	Total	C	O	0
			42	40	2	
31	5	1	Total	C	O	0
			42	40	2	
31	5	1	Total	C	O	0
			42	40	2	
31	5	1	Total	C	O	0
			42	40	2	
31	6	1	Total	C	O	0
			42	40	2	
31	6	1	Total	C	O	0
			42	40	2	
31	6	1	Total	C	O	0
			42	40	2	
31	7	1	Total	C	O	0
			42	40	2	

Continued on next page...

Continued from previous page...

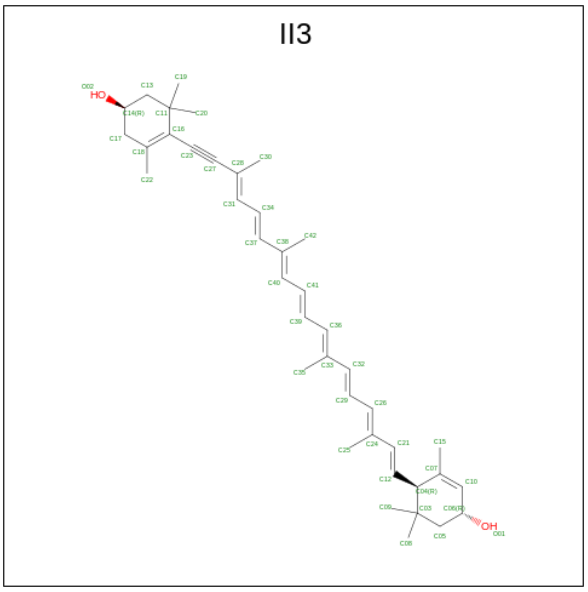
Mol	Chain	Residues	Atoms			AltConf
31	7	1	Total	C	O	0
			42	40	2	
31	7	1	Total	C	O	0
			42	40	2	
31	7	1	Total	C	O	0
			42	40	2	
31	8	1	Total	C	O	0
			42	40	2	
31	8	1	Total	C	O	0
			42	40	2	
31	8	1	Total	C	O	0
			42	40	2	
31	8	1	Total	C	O	0
			42	40	2	
31	9	1	Total	C	O	0
			42	40	2	
31	9	1	Total	C	O	0
			42	40	2	
31	9	1	Total	C	O	0
			42	40	2	
31	9	1	Total	C	O	0
			42	40	2	
31	B	1	Total	C	O	0
			42	40	2	
31	J	1	Total	C	O	0
			42	40	2	
31	O	1	Total	C	O	0
			42	40	2	
31	O	1	Total	C	O	0
			42	40	2	
31	R	1	Total	C	O	0
			42	40	2	
31	a	1	Total	C	O	0
			42	40	2	
31	a	1	Total	C	O	0
			42	40	2	
31	a	1	Total	C	O	0
			42	40	2	
31	a	1	Total	C	O	0
			42	40	2	
31	a	1	Total	C	O	0
			42	40	2	

Continued on next page...

Continued from previous page...

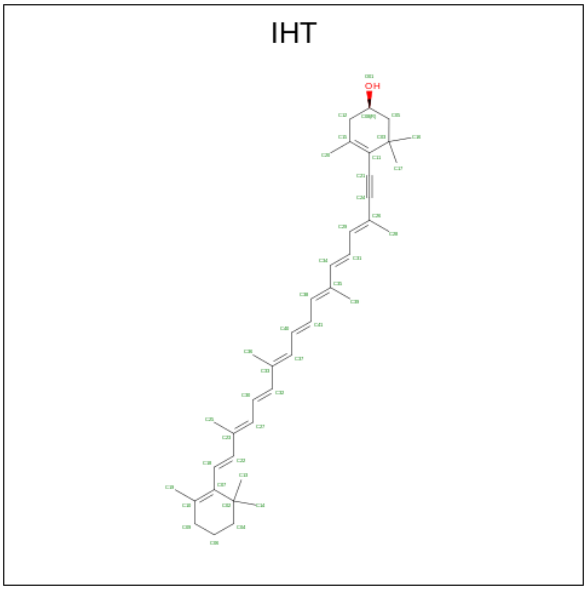
Mol	Chain	Residues	Atoms			AltConf
31	b	1	Total	C	O	0
			42	40	2	
31	b	1	Total	C	O	0
			42	40	2	
31	c	1	Total	C	O	0
			42	40	2	
31	c	1	Total	C	O	0
			42	40	2	
31	c	1	Total	C	O	0
			42	40	2	
31	c	1	Total	C	O	0
			42	40	2	
31	d	1	Total	C	O	0
			42	40	2	
31	d	1	Total	C	O	0
			42	40	2	
31	d	1	Total	C	O	0
			42	40	2	
31	d	1	Total	C	O	0
			42	40	2	
31	e	1	Total	C	O	0
			42	40	2	
31	e	1	Total	C	O	0
			42	40	2	
31	e	1	Total	C	O	0
			42	40	2	

- Molecule 32 is (1 {R})-3,5,5-trimethyl-4-[(3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E},17 {E})-3,7,12,16-tetramethyl-18-[(1 {R},4 {R})-2,6,6-trimethyl-4-oxidanyl-cyclohex-2-en-1-yl]octadeca-3,5,7,9,11,13,15,17-octaen-1-ynyl]cyclohex-3-en-1-ol (three-letter code: II3) (formula: $C_{40}H_{54}O_2$) (labeled as "Ligand of Interest" by depositor).



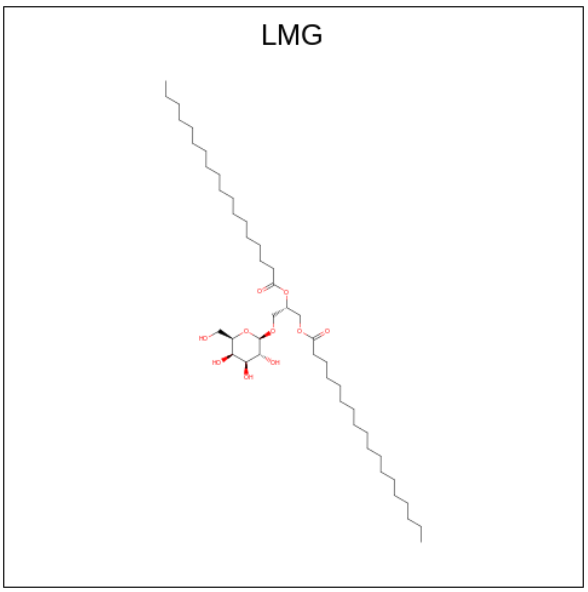
Mol	Chain	Residues	Atoms			AltConf
32	1	1	Total	C	O	0
			42	40	2	
32	b	1	Total	C	O	0
			42	40	2	
32	e	1	Total	C	O	0
			42	40	2	

- Molecule 33 is (1 {R})-3,5,5-trimethyl-4-[(3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E},17 {E})-3,7,12,16-tetramethyl-18-(2,6,6-trimethylcyclohexen-1-yl)octadeca-3,5,7,9,11,13,15,17-octaen-1-ynyl]cyclohex-3-en-1-ol (three-letter code: IHT) (formula: $C_{40}H_{54}O$) (labeled as "Ligand of Interest" by depositor).



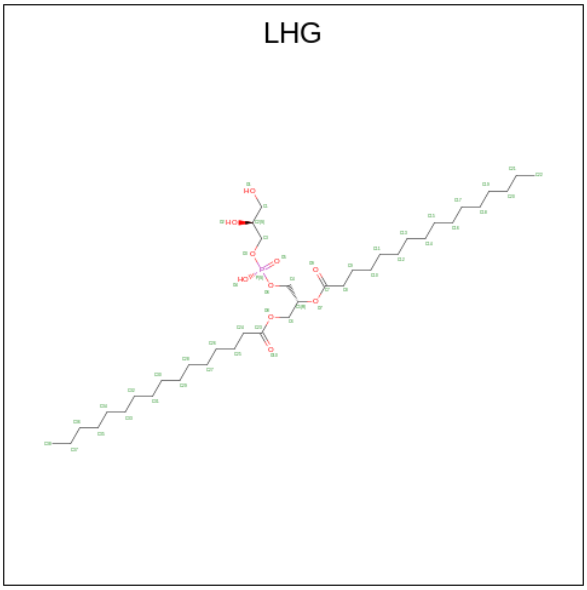
Mol	Chain	Residues	Atoms			AltConf
33	1	1	Total	C	O	0
			41	40	1	
33	2	1	Total	C	O	0
			41	40	1	
33	5	1	Total	C	O	0
			41	40	1	
33	6	1	Total	C	O	0
			41	40	1	
33	8	1	Total	C	O	0
			41	40	1	
33	9	1	Total	C	O	0
			41	40	1	
33	K	1	Total	C	O	0
			41	40	1	
33	L	1	Total	C	O	0
			41	40	1	
33	Z	1	Total	C	O	0
			41	40	1	
33	a	1	Total	C	O	0
			41	40	1	
33	c	1	Total	C	O	0
			41	40	1	
33	d	1	Total	C	O	0
			41	40	1	

- Molecule 34 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: $C_{45}H_{86}O_{10}$).



Mol	Chain	Residues	Atoms			AltConf
34	2	1	Total 36	C 26	O 10	0
34	3	1	Total 30	C 20	O 10	0
34	3	1	Total 32	C 22	O 10	0
34	6	1	Total 32	C 22	O 10	0
34	8	1	Total 52	C 42	O 10	0
34	F	1	Total 32	C 22	O 10	0
34	I	1	Total 51	C 41	O 10	0

- Molecule 35 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$).



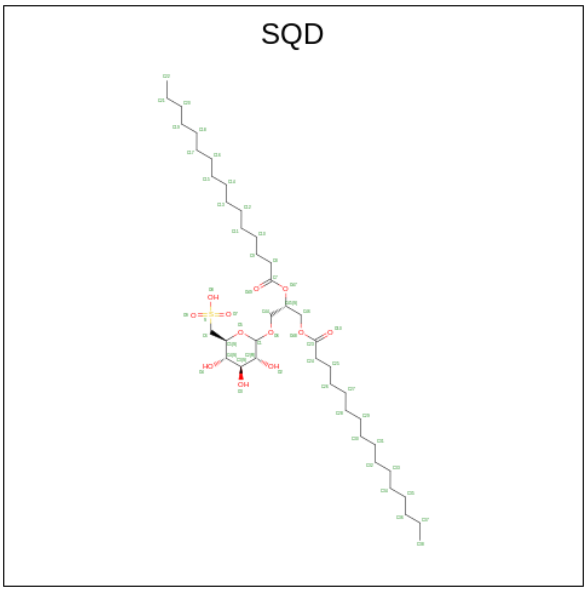
Mol	Chain	Residues	Atoms				AltConf
35	2	1	Total 22	C 12	O 9	P 1	0
35	2	1	Total 39	C 28	O 10	P 1	0
35	2	1	Total 42	C 31	O 10	P 1	0
35	3	1	Total 49	C 38	O 10	P 1	0

Continued on next page...

Continued from previous page...

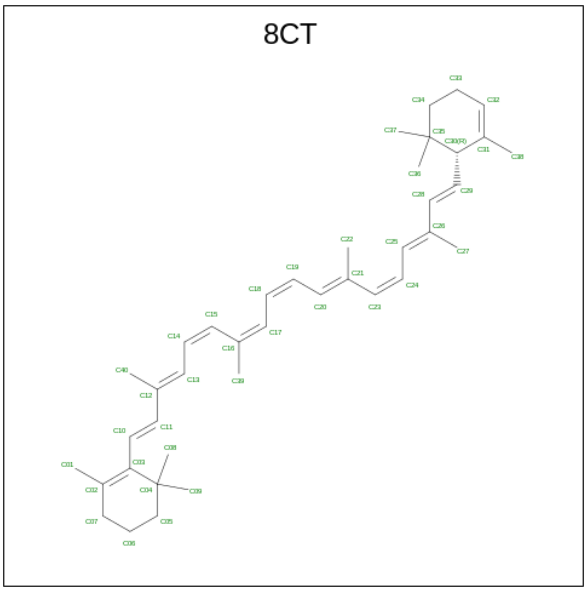
Mol	Chain	Residues	Atoms				AltConf
35	3	1	Total	C	O	P	0
			34	23	10	1	
35	3	1	Total	C	O	P	0
			49	38	10	1	
35	4	1	Total	C	O	P	0
			47	36	10	1	
35	4	1	Total	C	O	P	0
			45	34	10	1	
35	5	1	Total	C	O	P	0
			23	12	10	1	
35	6	1	Total	C	O	P	0
			35	24	10	1	
35	7	1	Total	C	O	P	0
			31	20	10	1	
35	7	1	Total	C	O	P	0
			39	28	10	1	
35	8	1	Total	C	O	P	0
			33	22	10	1	
35	A	1	Total	C	O	P	0
			49	38	10	1	
35	A	1	Total	C	O	P	0
			39	28	10	1	
35	B	1	Total	C	O	P	0
			45	34	10	1	
35	L	1	Total	C	O	P	0
			34	23	10	1	
35	Z	1	Total	C	O	P	0
			46	35	10	1	
35	a	1	Total	C	O	P	0
			29	18	10	1	
35	b	1	Total	C	O	P	0
			49	38	10	1	
35	c	1	Total	C	O	P	0
			29	18	10	1	
35	d	1	Total	C	O	P	0
			23	13	9	1	
35	d	1	Total	C	O	P	0
			39	28	10	1	

- Molecule 36 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: $C_{41}H_{78}O_{12}S$).



Mol	Chain	Residues	Atoms				AltConf
36	3	1	Total	C	O	S	0
			42	29	12	1	
36	O	1	Total	C	O	S	0
			29	16	12	1	

- Molecule 37 is (6'R,11cis,11'cis,13cis,15cis)-4',5'-didehydro-5',6'-dihydro-beta,beta-carotene (three-letter code: 8CT) (formula: $C_{40}H_{56}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms		AltConf
37	4	1	Total	C	0
			40	40	

Continued on next page...

Continued from previous page...

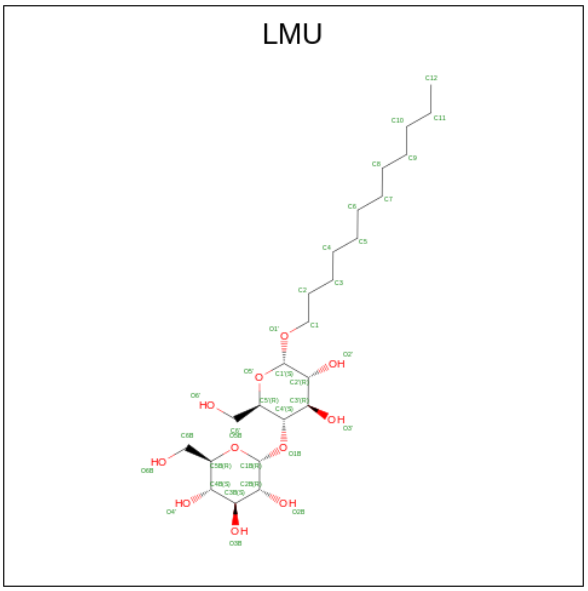
Mol	Chain	Residues	Atoms	AltConf
37	7	1	Total C 40 40	0
37	A	1	Total C 40 40	0
37	A	1	Total C 40 40	0
37	A	1	Total C 40 40	0
37	A	1	Total C 40 40	0
37	A	1	Total C 40 40	0
37	B	1	Total C 40 40	0
37	B	1	Total C 40 40	0
37	B	1	Total C 40 40	0
37	B	1	Total C 40 40	0
37	B	1	Total C 40 40	0
37	B	1	Total C 40 40	0
37	F	1	Total C 40 40	0
37	I	1	Total C 40 40	0
37	J	1	Total C 40 40	0
37	K	1	Total C 40 40	0
37	L	1	Total C 40 40	0
37	M	1	Total C 40 40	0
37	R	1	Total C 40 40	0
37	R	1	Total C 40 40	0
37	Z	1	Total C 40 40	0

Continued on next page...

Continued from previous page...

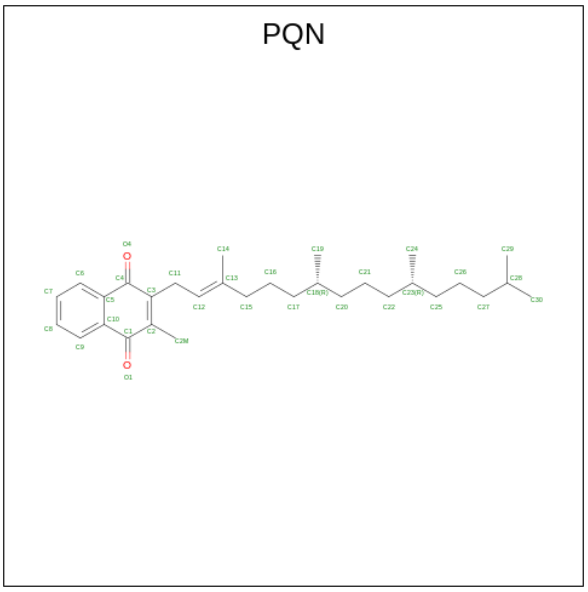
Mol	Chain	Residues	Atoms	AltConf
37	Z	1	Total C 40 40	0
37	b	1	Total C 40 40	0
37	e	1	Total C 40 40	0

- Molecule 38 is DODECYL-ALPHA-D-MALTOSIDE (three-letter code: LMU) (formula: $C_{24}H_{46}O_{11}$).



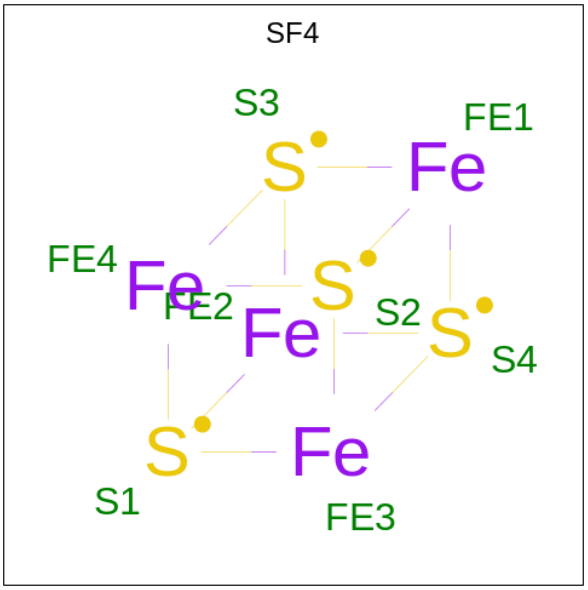
Mol	Chain	Residues	Atoms	AltConf
38	4	1	Total C O 35 24 11	0
38	7	1	Total C O 35 24 11	0
38	J	1	Total C O 31 20 11	0
38	O	1	Total C O 30 19 11	0
38	e	1	Total C O 31 20 11	0

- Molecule 39 is PHYLLOQUINONE (three-letter code: PQN) (formula: $C_{31}H_{46}O_2$).



Mol	Chain	Residues	Atoms			AltConf
39	A	1	Total	C	O	0
			33	31	2	
39	B	1	Total	C	O	0
			33	31	2	

- Molecule 40 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4).



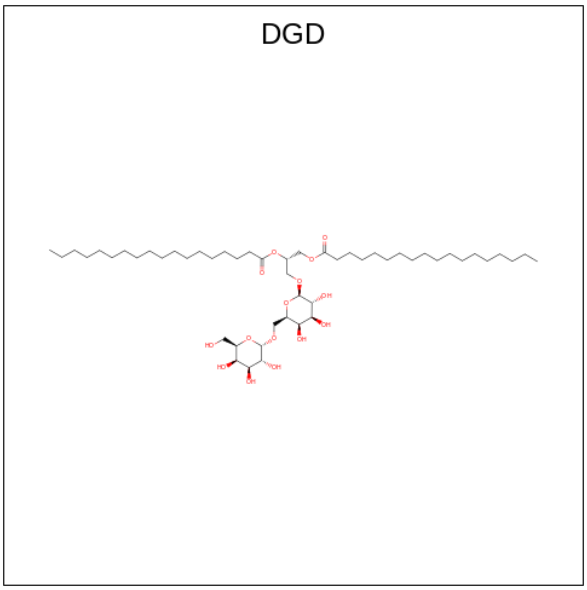
Mol	Chain	Residues	Atoms			AltConf
40	B	1	Total	Fe	S	0
			8	4	4	
40	C	1	Total	Fe	S	0
			8	4	4	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			AltConf
40	C	1	Total	Fe	S	0
			8	4	4	

- Molecule 41 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).



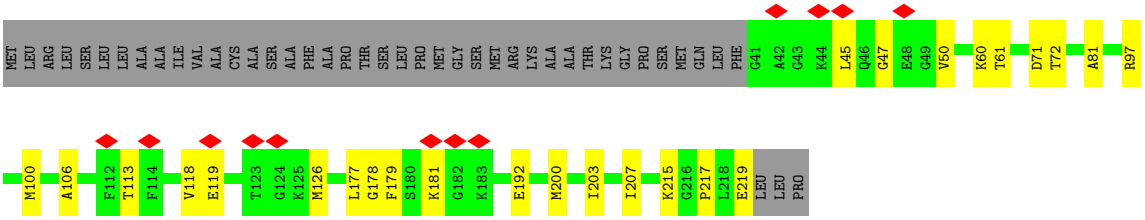
Mol	Chain	Residues	Atoms			AltConf
41	B	1	Total	C	O	0
			59	44	15	
41	Z	1	Total	C	O	0
			60	45	15	

3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

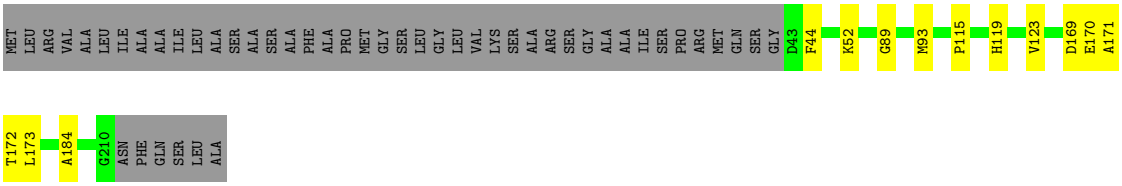
• Molecule 1: ACPI-1

Chain 1:



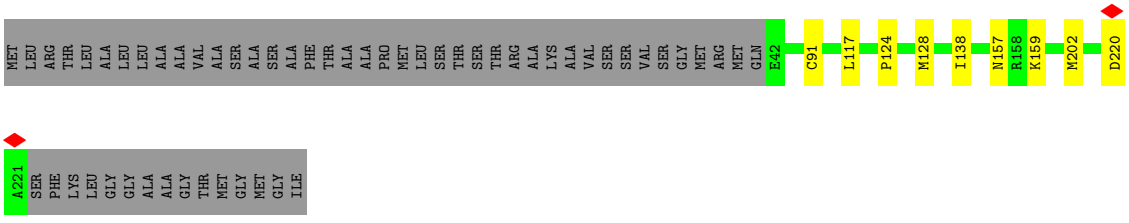
• Molecule 2: ACPI-2

Chain 2:



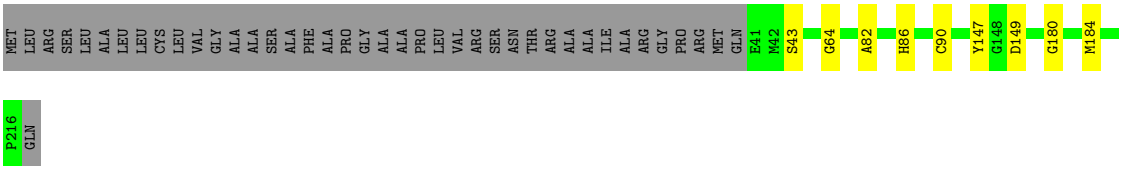
• Molecule 3: ACPI-3

Chain 3:



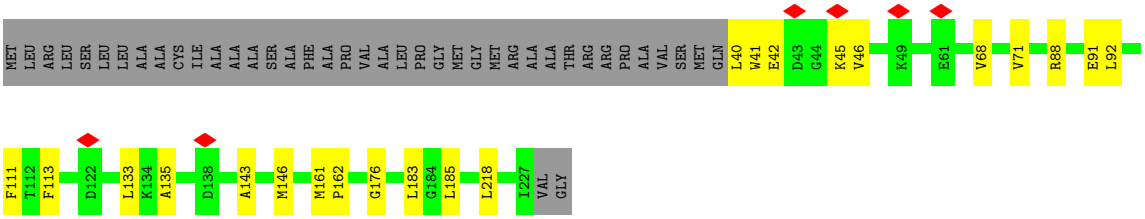
• Molecule 4: ACPI-4

Chain 4:



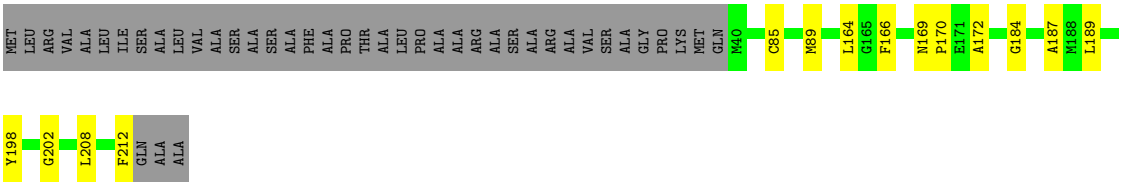
• Molecule 5: ACPI-5

Chain 5:



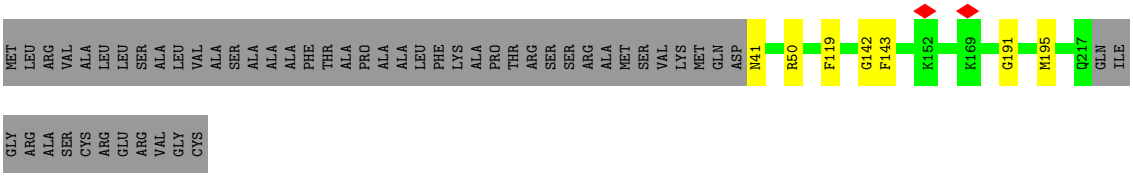
• Molecule 6: ACPI-6

Chain 6:



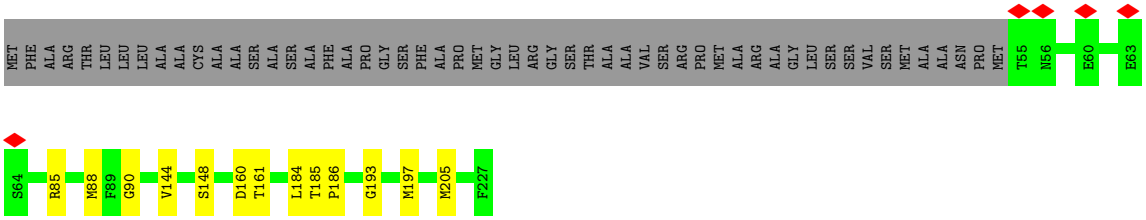
• Molecule 7: ACPI-7

Chain 7:



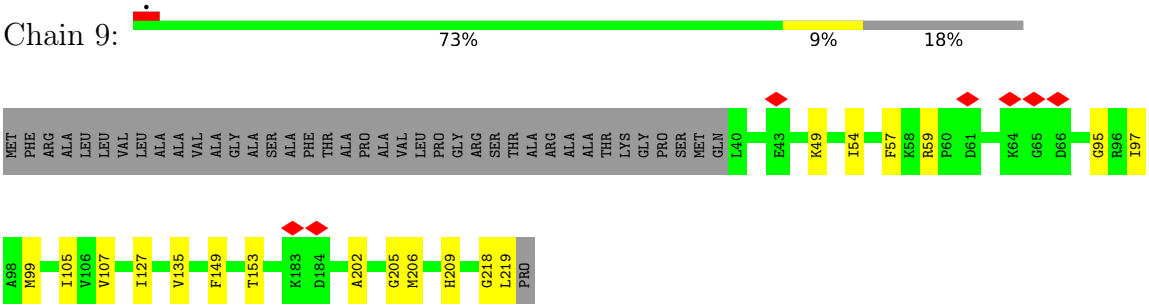
• Molecule 8: ACPI-8

Chain 8:



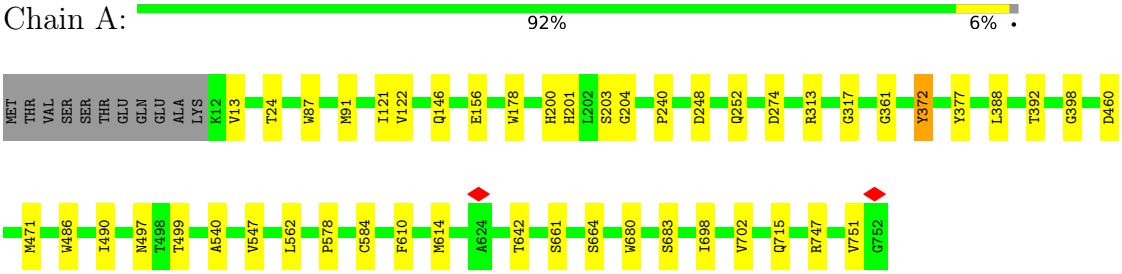
• Molecule 9: ACPI-12

Chain 9:



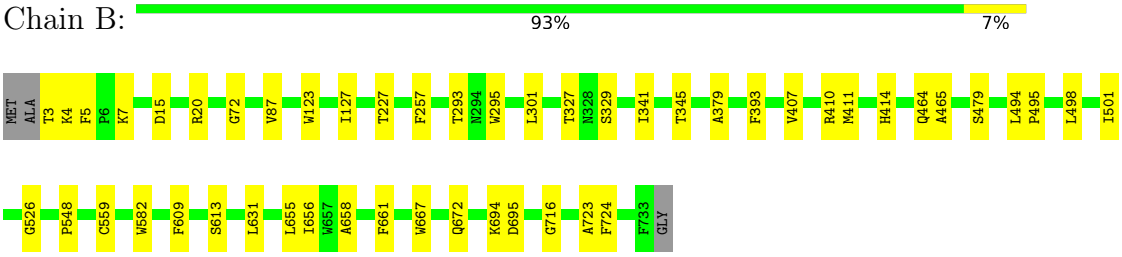
• Molecule 10: Photosystem I P700 chlorophyll a apoprotein A1

Chain A:



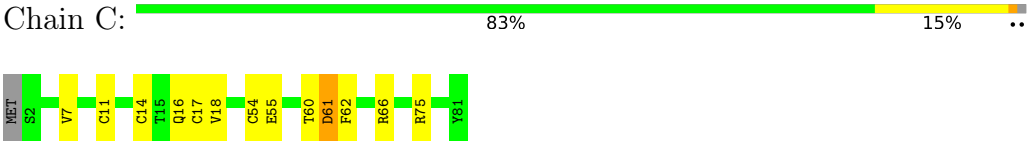
• Molecule 11: Photosystem I P700 chlorophyll a apoprotein A2

Chain B:



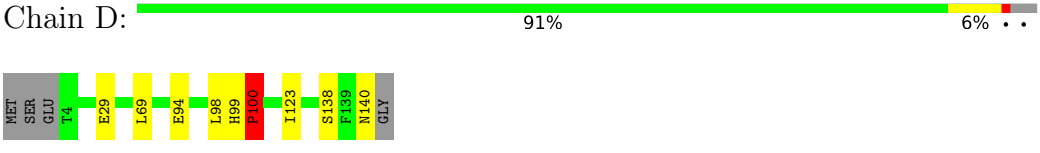
• Molecule 12: Photosystem I iron-sulfur center

Chain C:



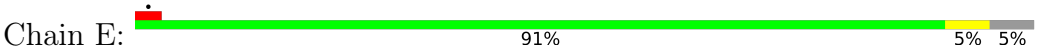
• Molecule 13: Photosystem I reaction center subunit II

Chain D:



• Molecule 14: Photosystem I reaction center subunit IV

Chain E:

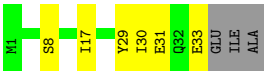


• Molecule 15: Photosystem I reaction center subunit III

Chain F:

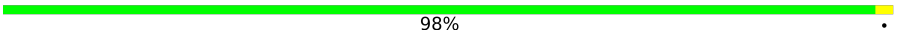
• Molecule 16: Photosystem I reaction center subunit VIII

Chain I:



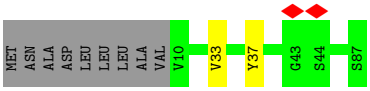
• Molecule 17: Photosystem I reaction center subunit IX

Chain J:



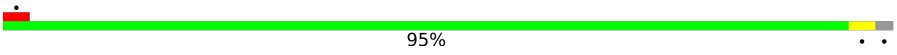
• Molecule 18: Photosystem I reaction center subunit PsaK

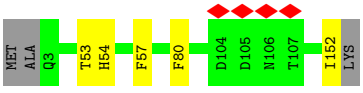
Chain K:



• Molecule 19: Photosystem I reaction center subunit XI

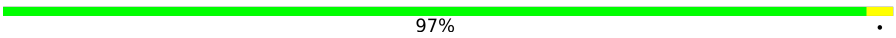
Chain L:





• Molecule 20: Photosystem I reaction center subunit XII

Chain M:

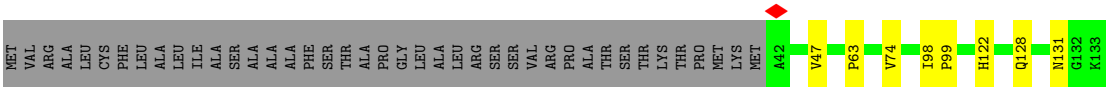


• Molecule 21: PsaO

Chain O:

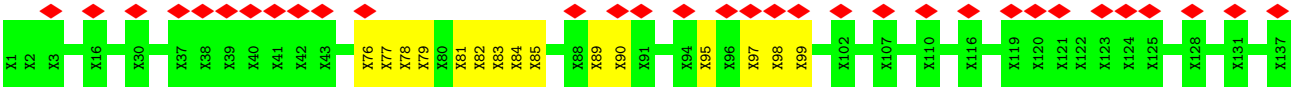
• Molecule 22: PsaR

Chain R:



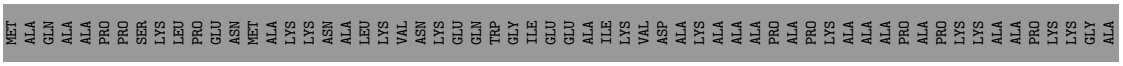
• Molecule 23: Unk1

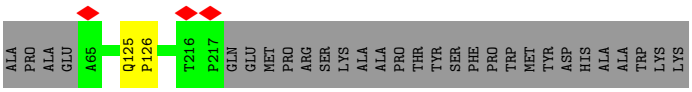
Chain X:



• Molecule 24: ACPI-S

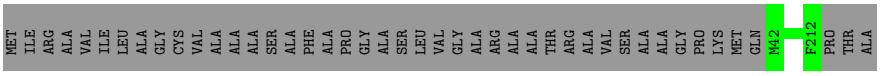
Chain Z:





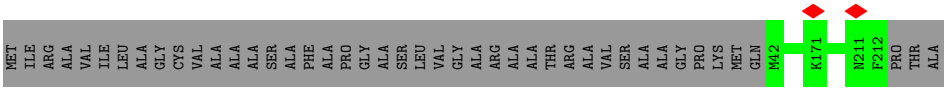
• Molecule 25: ACPI-13/10

Chain a:



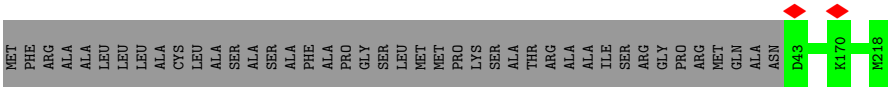
• Molecule 25: ACPI-13/10

Chain d:



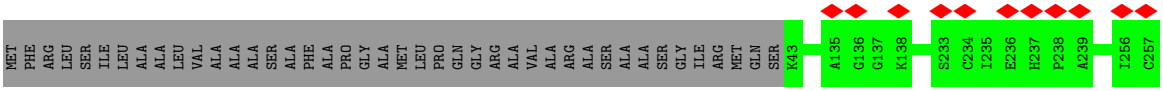
• Molecule 26: ACPI-14

Chain b:



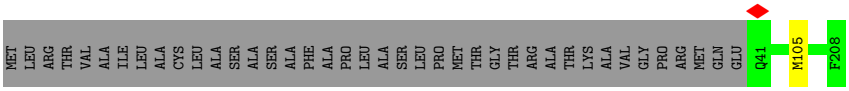
• Molecule 27: ACPI-9

Chain c:



• Molecule 28: ACPI-11

Chain e:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	133521	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.411	Depositor
Minimum map value	-0.120	Depositor
Average map value	0.032	Depositor
Map value standard deviation	0.064	Depositor
Recommended contour level	0.35	Depositor
Map size (Å)	423.99997, 423.99997, 423.99997	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.06, 1.06, 1.06	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: LHG, DGD, IHT, LMU, LMG, PQN, II0, CLA, SQD, 8CT, SF4, II3, KC2

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	1	0.32	0/1371	0.50	0/1854
2	2	0.30	0/1356	0.45	0/1835
3	3	0.27	0/1392	0.46	0/1883
4	4	0.28	0/1406	0.46	0/1900
5	5	0.31	0/1438	0.46	0/1940
6	6	0.34	0/1334	0.48	0/1796
7	7	0.28	0/1373	0.46	0/1858
8	8	0.27	0/1326	0.46	0/1804
9	9	0.28	0/1376	0.45	0/1846
10	A	0.29	0/6019	0.46	0/8204
11	B	0.30	0/6046	0.46	0/8254
12	C	0.39	0/600	0.63	0/812
13	D	0.30	0/1094	0.52	0/1476
14	E	0.29	0/499	0.51	0/677
15	F	0.29	0/1290	0.49	0/1745
16	I	0.33	0/266	0.46	0/362
17	J	0.31	0/353	0.43	0/481
18	K	0.29	0/563	0.47	0/768
19	L	0.31	0/1171	0.47	0/1594
20	M	0.30	0/228	0.43	0/310
21	O	0.29	0/796	0.42	0/1091
22	R	0.27	0/700	0.42	0/963
24	Z	0.28	0/1163	0.47	0/1572
25	a	0.29	0/1299	0.44	0/1747
25	d	0.29	0/1299	0.43	0/1747
26	b	0.29	0/1404	0.47	0/1902
27	c	0.30	0/1658	0.47	0/2241
28	e	0.29	0/1325	0.46	0/1793
All	All	0.30	0/40145	0.47	0/54455

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	1338	0	1329	19	0
2	2	1320	0	1309	10	0
3	3	1362	0	1389	6	0
4	4	1366	0	1349	6	0
5	5	1403	0	1398	15	0
6	6	1305	0	1324	14	0
7	7	1337	0	1317	4	0
8	8	1298	0	1322	12	0
9	9	1349	0	1358	13	0
10	A	5824	0	5672	38	0
11	B	5828	0	5626	38	0
12	C	591	0	568	11	0
13	D	1070	0	1076	15	0
14	E	491	0	491	2	0
15	F	1258	0	1266	5	0
16	I	258	0	268	6	0
17	J	342	0	344	1	0
18	K	553	0	581	1	0
19	L	1143	0	1145	3	0
20	M	227	0	257	2	0
21	O	766	0	752	7	0
22	R	680	0	674	4	0
23	X	725	0	152	11	0
24	Z	1130	0	1088	1	0
25	a	1271	0	1281	0	0
25	d	1271	0	1281	0	0
26	b	1368	0	1346	0	0
27	c	1615	0	1646	0	0
28	e	1288	0	1282	0	0
29	1	584	0	476	1	0
29	2	547	0	456	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	3	625	0	596	0	0
29	4	598	0	597	0	0
29	5	563	0	442	4	0
29	6	581	0	514	1	0
29	7	509	0	431	0	0
29	8	496	0	471	7	0
29	9	642	0	539	5	0
29	A	2679	0	2767	18	0
29	B	2406	0	2458	10	0
29	F	160	0	141	0	0
29	J	41	0	29	0	0
29	K	120	0	121	0	0
29	L	267	0	240	2	0
29	O	165	0	147	3	0
29	R	55	0	49	0	0
29	Z	225	0	206	1	0
29	a	645	0	632	0	0
29	b	530	0	525	0	0
29	c	666	0	632	0	0
29	d	589	0	538	0	0
29	e	472	0	414	0	0
30	1	45	0	0	0	0
30	2	45	0	0	0	0
30	3	45	0	0	0	0
30	4	45	0	0	0	0
30	5	45	0	0	0	0
30	6	90	0	0	0	0
30	7	90	0	0	0	0
30	9	45	0	0	0	0
30	Z	45	0	0	0	0
30	a	45	0	0	0	0
30	b	90	0	0	0	0
30	c	135	0	0	0	0
30	d	45	0	0	0	0
30	e	90	0	0	0	0
31	1	168	0	0	2	0
31	2	126	0	0	1	0
31	3	210	0	0	1	0
31	4	168	0	0	1	0
31	5	210	0	0	1	0
31	6	126	0	0	0	0
31	7	168	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	8	168	0	0	1	0
31	9	168	0	0	0	0
31	B	42	0	0	0	0
31	J	42	0	0	0	0
31	O	84	0	0	0	0
31	R	42	0	0	0	0
31	a	210	0	0	0	0
31	b	84	0	0	0	0
31	c	168	0	0	0	0
31	d	168	0	0	0	0
31	e	126	0	0	0	0
32	1	42	0	0	0	0
32	b	42	0	0	0	0
32	e	42	0	0	0	0
33	1	41	0	0	0	0
33	2	41	0	0	0	0
33	5	41	0	0	0	0
33	6	41	0	0	0	0
33	8	41	0	0	0	0
33	9	41	0	0	1	0
33	K	41	0	0	0	0
33	L	41	0	0	0	0
33	Z	41	0	0	0	0
33	a	41	0	0	0	0
33	c	41	0	0	0	0
33	d	41	0	0	0	0
34	2	36	0	42	0	0
34	3	62	0	64	0	0
34	6	32	0	34	0	0
34	8	52	0	77	0	0
34	F	32	0	34	0	0
34	I	51	0	75	0	0
35	2	103	0	125	0	0
35	3	132	0	186	0	0
35	4	92	0	130	0	0
35	5	23	0	16	0	0
35	6	35	0	40	0	0
35	7	70	0	83	0	0
35	8	33	0	36	0	0
35	A	88	0	122	0	0
35	B	45	0	60	1	0
35	L	34	0	38	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	Z	46	0	65	0	0
35	a	29	0	28	0	0
35	b	49	0	74	0	0
35	c	29	0	28	0	0
35	d	62	0	73	0	0
36	3	42	0	48	0	0
36	O	29	0	22	0	0
37	4	40	0	0	0	0
37	7	40	0	0	0	0
37	A	200	0	0	0	0
37	B	240	0	0	0	0
37	F	40	0	0	1	0
37	I	40	0	0	0	0
37	J	40	0	0	0	0
37	K	40	0	0	0	0
37	L	40	0	0	0	0
37	M	40	0	0	0	0
37	R	80	0	0	0	0
37	Z	80	0	0	0	0
37	b	40	0	0	0	0
37	e	40	0	0	0	0
38	4	35	0	46	1	0
38	7	35	0	46	1	0
38	J	31	0	35	1	0
38	O	30	0	33	4	0
38	e	31	0	35	0	0
39	A	33	0	46	0	0
39	B	33	0	46	0	0
40	B	8	0	0	0	0
40	C	16	0	0	1	0
41	B	59	0	79	0	0
41	Z	60	0	78	1	0
All	All	60515	0	54256	253	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 3.

The worst 5 of 253 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:6:89:MET:HE3	6:6:184:GLY:HA2	1.57	0.85

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:B:609:PHE:O	11:B:613:SER:OG	2.00	0.80
38:J:104:LMU:O5B	38:J:104:LMU:O3'	2.03	0.76
6:6:89:MET:HE3	6:6:184:GLY:CA	2.17	0.74
38:O:207:LMU:O2'	38:O:207:LMU:H5'	1.87	0.72

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	1	177/222 (80%)	172 (97%)	5 (3%)	0	100	100
2	2	166/216 (77%)	161 (97%)	5 (3%)	0	100	100
3	3	178/236 (75%)	174 (98%)	4 (2%)	0	100	100
4	4	174/217 (80%)	173 (99%)	1 (1%)	0	100	100
5	5	186/229 (81%)	176 (95%)	10 (5%)	0	100	100
6	6	171/215 (80%)	163 (95%)	8 (5%)	0	100	100
7	7	175/230 (76%)	172 (98%)	3 (2%)	0	100	100
8	8	171/227 (75%)	168 (98%)	3 (2%)	0	100	100
9	9	178/220 (81%)	174 (98%)	4 (2%)	0	100	100
10	A	739/752 (98%)	713 (96%)	26 (4%)	0	100	100
11	B	729/734 (99%)	706 (97%)	23 (3%)	0	100	100
12	C	78/81 (96%)	73 (94%)	4 (5%)	1 (1%)	12	18
13	D	135/141 (96%)	124 (92%)	10 (7%)	1 (1%)	22	33
14	E	59/64 (92%)	57 (97%)	2 (3%)	0	100	100
15	F	158/183 (86%)	152 (96%)	6 (4%)	0	100	100
16	I	31/36 (86%)	29 (94%)	2 (6%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	J	40/42 (95%)	40 (100%)	0	0	100	100
18	K	76/87 (87%)	72 (95%)	4 (5%)	0	100	100
19	L	148/153 (97%)	143 (97%)	5 (3%)	0	100	100
20	M	28/30 (93%)	28 (100%)	0	0	100	100
21	O	97/99 (98%)	93 (96%)	4 (4%)	0	100	100
22	R	90/133 (68%)	88 (98%)	2 (2%)	0	100	100
24	Z	151/242 (62%)	150 (99%)	1 (1%)	0	100	100
25	a	169/215 (79%)	165 (98%)	4 (2%)	0	100	100
25	d	169/215 (79%)	166 (98%)	3 (2%)	0	100	100
26	b	174/218 (80%)	171 (98%)	3 (2%)	0	100	100
27	c	213/257 (83%)	203 (95%)	10 (5%)	0	100	100
28	e	166/208 (80%)	165 (99%)	1 (1%)	0	100	100
All	All	5026/5902 (85%)	4871 (97%)	153 (3%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
13	D	100	PRO
12	C	61	ASP

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	1	130/163 (80%)	130 (100%)	0	100	100
2	2	134/167 (80%)	134 (100%)	0	100	100
3	3	145/183 (79%)	145 (100%)	0	100	100
4	4	139/167 (83%)	139 (100%)	0	100	100
5	5	139/166 (84%)	139 (100%)	0	100	100
6	6	134/160 (84%)	134 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	7	137/176 (78%)	137 (100%)	0	100	100
8	8	134/169 (79%)	134 (100%)	0	100	100
9	9	138/164 (84%)	138 (100%)	0	100	100
10	A	607/617 (98%)	606 (100%)	1 (0%)	93	97
11	B	592/593 (100%)	591 (100%)	1 (0%)	93	97
12	C	66/67 (98%)	66 (100%)	0	100	100
13	D	114/117 (97%)	113 (99%)	1 (1%)	78	87
14	E	56/59 (95%)	56 (100%)	0	100	100
15	F	133/154 (86%)	133 (100%)	0	100	100
16	I	27/29 (93%)	27 (100%)	0	100	100
17	J	38/38 (100%)	38 (100%)	0	100	100
18	K	62/69 (90%)	62 (100%)	0	100	100
19	L	126/128 (98%)	125 (99%)	1 (1%)	81	89
20	M	25/25 (100%)	25 (100%)	0	100	100
21	O	81/81 (100%)	81 (100%)	0	100	100
22	R	74/105 (70%)	73 (99%)	1 (1%)	67	81
24	Z	117/180 (65%)	117 (100%)	0	100	100
25	a	128/153 (84%)	128 (100%)	0	100	100
25	d	128/153 (84%)	128 (100%)	0	100	100
26	b	144/173 (83%)	144 (100%)	0	100	100
27	c	169/195 (87%)	169 (100%)	0	100	100
28	e	133/162 (82%)	132 (99%)	1 (1%)	81	89
All	All	4050/4613 (88%)	4044 (100%)	6 (0%)	93	97

5 of 6 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
19	L	80	PHE
22	R	122	HIS
28	e	105	MET
11	B	257	PHE
10	A	372	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
13	D	99	HIS
27	c	223	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

417 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
29	CLA	a	607	25	65,73,73	2.19	8 (12%)	76,113,113	1.39	7 (9%)
29	CLA	8	615	-	65,73,73	2.23	8 (12%)	76,113,113	1.39	8 (10%)
29	CLA	L	203	-	60,68,73	2.27	8 (13%)	70,107,113	1.47	8 (11%)
29	CLA	e	602	28	55,63,73	2.45	8 (14%)	64,101,113	1.64	9 (14%)
29	CLA	e	607	28	45,53,73	2.71	8 (17%)	52,89,113	1.71	7 (13%)
29	CLA	3	605	3	55,63,73	2.42	8 (14%)	64,101,113	1.55	6 (9%)
29	CLA	A	829	-	50,58,73	2.51	8 (16%)	58,95,113	1.64	7 (12%)
40	SF4	C	102	12	0,12,12	-	-	-		
29	CLA	6	601	6	45,53,73	2.63	8 (17%)	52,89,113	1.66	8 (15%)
35	LHG	A	851	-	38,38,48	0.70	1 (2%)	41,44,54	1.25	3 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
29	CLA	B	841	-	52,60,73	2.49	8 (15%)	60,97,113	1.56	7 (11%)
29	CLA	A	818	-	65,73,73	2.19	8 (12%)	76,113,113	1.41	7 (9%)
35	LHG	3	622	30	33,33,48	0.71	0	36,39,54	1.25	3 (8%)
29	CLA	8	606	8	55,63,73	2.38	8 (14%)	64,101,113	1.51	8 (12%)
29	CLA	a	605	-	55,63,73	2.37	8 (14%)	64,101,113	1.55	8 (12%)
37	8CT	L	206	-	40,41,41	0.21	0	50,56,56	0.44	0
40	SF4	C	101	12	0,12,12	-	-	-		
31	II0	d	616	-	39,43,43	2.69	4 (10%)	50,60,60	1.65	11 (22%)
29	CLA	c	602	27	65,73,73	2.23	8 (12%)	76,113,113	1.42	7 (9%)
30	KC2	7	610	7	48,53,53	1.48	8 (16%)	54,89,89	1.09	3 (5%)
29	CLA	Z	304	24	55,63,73	2.40	8 (14%)	64,101,113	1.48	7 (10%)
34	LMG	F	205	-	32,32,55	0.84	0	40,40,63	1.29	6 (15%)
29	CLA	b	601	26	45,53,73	2.66	8 (17%)	52,89,113	1.68	7 (13%)
29	CLA	6	606	-	55,63,73	2.40	8 (14%)	64,101,113	1.61	7 (10%)
35	LHG	4	617	29	46,46,48	0.61	0	49,52,54	1.19	4 (8%)
29	CLA	a	606	-	65,73,73	2.18	8 (12%)	76,113,113	1.43	7 (9%)
29	CLA	B	811	-	55,63,73	2.40	8 (14%)	64,101,113	1.54	7 (10%)
33	IHT	5	618	-	40,42,42	2.81	5 (12%)	53,58,58	2.24	16 (30%)
30	KC2	d	610	25	48,53,53	1.52	7 (14%)	54,89,89	1.12	3 (5%)
29	CLA	K	102	-	55,63,73	2.42	8 (14%)	64,101,113	1.52	8 (12%)
29	CLA	A	837	-	65,73,73	2.16	8 (12%)	76,113,113	1.35	7 (9%)
29	CLA	b	606	26	65,73,73	2.19	8 (12%)	76,113,113	1.37	7 (9%)
31	II0	3	615	-	39,43,43	2.72	4 (10%)	50,60,60	1.38	7 (14%)
29	CLA	B	825	-	65,73,73	2.19	8 (12%)	76,113,113	1.38	9 (11%)
37	8CT	A	852	-	40,41,41	0.24	0	50,56,56	0.64	1 (2%)
29	CLA	1	606	-	45,53,73	2.67	8 (17%)	52,89,113	1.69	7 (13%)
29	CLA	9	605	-	45,53,73	2.65	8 (17%)	52,89,113	1.69	7 (13%)
31	II0	a	613	-	39,43,43	2.70	4 (10%)	50,60,60	1.41	8 (16%)
29	CLA	A	813	-	42,50,73	2.77	8 (19%)	48,85,113	1.78	7 (14%)
37	8CT	Z	308	-	40,41,41	0.16	0	50,56,56	0.32	0
29	CLA	B	826	-	65,73,73	2.17	8 (12%)	76,113,113	1.36	7 (9%)
29	CLA	8	605	8	50,58,73	2.49	8 (16%)	58,95,113	1.66	9 (15%)
29	CLA	A	836	-	55,63,73	2.39	8 (14%)	64,101,113	1.46	7 (10%)
29	CLA	J	102	17	41,49,73	2.86	9 (21%)	47,84,113	1.82	8 (17%)
29	CLA	3	608	3	60,68,73	2.34	8 (13%)	70,107,113	1.48	8 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
31	II0	J	101	-	39,43,43	2.71	4 (10%)	50,60,60	1.47	9 (18%)
30	KC2	2	610	-	48,53,53	1.48	7 (14%)	54,89,89	1.07	4 (7%)
37	8CT	e	616	-	40,41,41	0.16	0	50,56,56	0.36	0
33	IHT	Z	302	-	40,42,42	2.83	4 (10%)	53,58,58	2.15	15 (28%)
29	CLA	4	606	4	60,68,73	2.30	8 (13%)	70,107,113	1.46	8 (11%)
29	CLA	c	609	-	41,49,73	2.87	9 (21%)	47,84,113	1.77	8 (17%)
29	CLA	4	603	-	54,62,73	2.45	8 (14%)	62,99,113	1.58	7 (11%)
29	CLA	5	608	-	60,68,73	2.33	8 (13%)	70,107,113	1.63	8 (11%)
30	KC2	c	615	-	48,53,53	1.52	8 (16%)	54,89,89	1.10	5 (9%)
29	CLA	A	833	-	65,73,73	2.21	8 (12%)	76,113,113	1.41	7 (9%)
29	CLA	L	201	-	65,73,73	2.20	8 (12%)	76,113,113	1.45	9 (11%)
29	CLA	B	838	-	65,73,73	2.23	8 (12%)	76,113,113	1.43	9 (11%)
29	CLA	d	605	25	45,53,73	2.67	8 (17%)	52,89,113	1.71	7 (13%)
30	KC2	1	610	1	48,53,53	1.53	7 (14%)	54,89,89	1.07	4 (7%)
29	CLA	A	820	-	65,73,73	2.22	8 (12%)	76,113,113	1.38	7 (9%)
35	LHG	a	618	-	28,28,48	0.81	0	31,34,54	1.31	3 (9%)
29	CLA	B	819	-	60,68,73	2.34	8 (13%)	70,107,113	1.55	9 (12%)
29	CLA	4	609	4	60,68,73	2.32	8 (13%)	70,107,113	1.47	7 (10%)
29	CLA	9	602	9	55,63,73	2.40	8 (14%)	64,101,113	1.58	8 (12%)
29	CLA	6	607	6	55,63,73	2.43	8 (14%)	64,101,113	1.50	7 (10%)
29	CLA	3	612	-	45,53,73	2.64	8 (17%)	52,89,113	1.62	7 (13%)
29	CLA	d	608	25	65,73,73	2.25	8 (12%)	76,113,113	1.45	8 (10%)
36	SQD	3	621	-	41,42,54	1.34	4 (9%)	50,53,65	1.12	3 (6%)
29	CLA	7	603	-	55,63,73	2.43	8 (14%)	64,101,113	1.53	7 (10%)
37	8CT	A	848	-	40,41,41	0.37	0	50,56,56	0.57	0
29	CLA	5	611	-	45,53,73	2.68	8 (17%)	52,89,113	1.64	7 (13%)
29	CLA	1	603	-	52,60,73	2.47	8 (15%)	60,97,113	1.53	8 (13%)
29	CLA	5	612	-	45,53,73	2.67	8 (17%)	52,89,113	1.72	8 (15%)
29	CLA	a	608	25	60,68,73	2.32	8 (13%)	70,107,113	1.49	6 (8%)
29	CLA	3	609	-	65,73,73	2.21	8 (12%)	76,113,113	1.34	6 (7%)
29	CLA	B	832	-	65,73,73	2.18	8 (12%)	76,113,113	1.37	8 (10%)
37	8CT	B	851	-	40,41,41	0.25	0	50,56,56	0.42	0
31	II0	5	617	-	39,43,43	2.70	4 (10%)	50,60,60	1.56	8 (16%)
29	CLA	2	605	2	60,68,73	2.23	8 (13%)	70,107,113	1.42	7 (10%)
37	8CT	F	201	-	40,41,41	0.46	1 (2%)	50,56,56	0.48	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
31	II0	5	620	-	39,43,43	2.75	4 (10%)	50,60,60	1.55	8 (16%)
31	II0	6	615	-	39,43,43	2.69	4 (10%)	50,60,60	1.36	6 (12%)
29	CLA	A	812	-	55,63,73	2.36	8 (14%)	64,101,113	1.56	9 (14%)
29	CLA	A	808	-	55,63,73	2.39	8 (14%)	64,101,113	1.54	8 (12%)
30	KC2	4	605	4	48,53,53	1.52	7 (14%)	54,89,89	1.07	4 (7%)
29	CLA	B	806	-	65,73,73	2.19	8 (12%)	76,113,113	1.40	9 (11%)
31	II0	4	615	-	39,43,43	2.67	4 (10%)	50,60,60	1.43	6 (12%)
29	CLA	B	804	-	45,53,73	2.66	8 (17%)	52,89,113	1.62	7 (13%)
35	LHG	5	619	-	22,22,48	0.88	1 (4%)	25,28,54	1.32	3 (12%)
29	CLA	2	608	2	60,68,73	2.34	8 (13%)	70,107,113	1.48	7 (10%)
29	CLA	B	807	-	65,73,73	2.15	8 (12%)	76,113,113	1.40	8 (10%)
29	CLA	1	613	-	45,53,73	2.68	8 (17%)	52,89,113	1.71	8 (15%)
29	CLA	4	601	4	55,63,73	2.39	8 (14%)	64,101,113	1.48	8 (12%)
29	CLA	L	207	-	41,49,73	2.74	9 (21%)	47,84,113	1.84	6 (12%)
37	8CT	I	101	-	40,41,41	0.27	0	50,56,56	0.46	0
29	CLA	L	202	19	51,59,73	2.49	8 (15%)	59,96,113	1.59	7 (11%)
29	CLA	A	807	10	50,58,73	2.52	8 (16%)	58,95,113	1.62	9 (15%)
29	CLA	a	602	25	55,63,73	2.42	8 (14%)	64,101,113	1.59	7 (10%)
29	CLA	5	607	5	45,53,73	2.68	8 (17%)	52,89,113	1.63	7 (13%)
31	II0	4	612	-	39,43,43	2.68	4 (10%)	50,60,60	1.42	8 (16%)
29	CLA	A	843	-	65,73,73	2.24	8 (12%)	76,113,113	1.44	6 (7%)
29	CLA	A	827	-	65,73,73	2.12	8 (12%)	76,113,113	1.37	8 (10%)
29	CLA	B	821	-	60,68,73	2.24	8 (13%)	70,107,113	1.47	8 (11%)
29	CLA	1	605	-	41,50,73	2.71	8 (19%)	46,85,113	1.68	6 (13%)
31	II0	7	615	-	39,43,43	2.74	4 (10%)	50,60,60	1.45	10 (20%)
31	II0	2	615	-	39,43,43	2.73	4 (10%)	50,60,60	1.57	10 (20%)
29	CLA	2	612	-	45,53,73	2.67	8 (17%)	52,89,113	1.70	7 (13%)
30	KC2	3	606	35	48,53,53	1.44	8 (16%)	54,89,89	1.13	6 (11%)
34	LMG	8	614	-	52,52,55	0.84	3 (5%)	60,60,63	1.28	6 (10%)
29	CLA	7	601	7	45,53,73	2.68	8 (17%)	52,89,113	1.64	7 (13%)
29	CLA	A	839	-	65,73,73	2.20	8 (12%)	76,113,113	1.41	8 (10%)
35	LHG	B	849	29	44,44,48	0.66	1 (2%)	47,50,54	1.20	5 (10%)
29	CLA	A	816	-	60,68,73	2.26	8 (13%)	70,107,113	1.46	7 (10%)
29	CLA	A	831	-	65,73,73	2.15	8 (12%)	76,113,113	1.34	7 (9%)
33	IHT	K	104	-	40,42,42	2.94	5 (12%)	53,58,58	2.01	18 (33%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
29	CLA	1	601	1	45,53,73	2.75	8 (17%)	52,89,113	1.77	8 (15%)
29	CLA	B	828	-	65,73,73	2.17	8 (12%)	76,113,113	1.37	7 (9%)
37	8CT	A	845	-	40,41,41	0.26	0	50,56,56	0.35	0
30	KC2	c	610	27	48,53,53	1.44	7 (14%)	54,89,89	1.13	6 (11%)
29	CLA	A	844	-	65,73,73	2.02	8 (12%)	76,113,113	1.44	7 (9%)
29	CLA	c	614	-	55,63,73	2.41	8 (14%)	64,101,113	1.46	6 (9%)
29	CLA	9	604	-	55,63,73	2.43	8 (14%)	64,101,113	1.51	7 (10%)
29	CLA	A	806	10	65,73,73	2.19	8 (12%)	76,113,113	1.38	8 (10%)
33	IHT	a	617	-	40,42,42	2.81	4 (10%)	53,58,58	2.30	17 (32%)
29	CLA	7	602	7	65,73,73	2.24	8 (12%)	76,113,113	1.44	9 (11%)
35	LHG	8	613	-	32,32,48	0.76	1 (3%)	35,38,54	1.18	2 (5%)
35	LHG	L	208	-	33,33,48	0.74	1 (3%)	36,39,54	1.19	2 (5%)
29	CLA	4	610	-	65,73,73	2.19	8 (12%)	76,113,113	1.38	7 (9%)
29	CLA	9	603	-	45,53,73	2.68	8 (17%)	52,89,113	1.68	7 (13%)
31	II0	3	613	-	39,43,43	2.67	4 (10%)	50,60,60	1.34	6 (12%)
35	LHG	3	619	-	48,48,48	0.60	0	51,54,54	1.21	6 (11%)
31	II0	9	617	-	39,43,43	2.71	4 (10%)	50,60,60	1.45	7 (14%)
31	II0	7	616	-	39,43,43	2.70	4 (10%)	50,60,60	1.46	9 (18%)
29	CLA	B	824	-	60,68,73	2.28	8 (13%)	70,107,113	1.51	7 (10%)
29	CLA	a	609	-	60,68,73	2.31	8 (13%)	70,107,113	1.52	8 (11%)
31	II0	a	616	-	39,43,43	2.80	4 (10%)	50,60,60	1.54	8 (16%)
29	CLA	c	603	-	65,73,73	2.19	8 (12%)	76,113,113	1.41	9 (11%)
37	8CT	B	847	-	40,41,41	0.16	0	50,56,56	0.49	0
29	CLA	8	604	-	65,73,73	2.22	8 (12%)	76,113,113	1.41	9 (11%)
35	LHG	7	619	29	38,38,48	0.65	0	41,44,54	1.16	3 (7%)
29	CLA	1	609	-	41,49,73	2.88	9 (21%)	47,84,113	1.79	7 (14%)
29	CLA	B	817	-	60,68,73	2.25	8 (13%)	70,107,113	1.46	7 (10%)
31	II0	e	612	-	39,43,43	2.69	4 (10%)	50,60,60	1.43	10 (20%)
38	LMU	J	104	-	32,32,36	0.41	0	43,43,47	1.04	2 (4%)
31	II0	a	619	-	39,43,43	2.69	4 (10%)	50,60,60	1.40	8 (16%)
29	CLA	e	608	-	41,49,73	2.88	9 (21%)	47,84,113	1.77	8 (17%)
29	CLA	6	605	6	55,63,73	2.36	8 (14%)	64,101,113	1.47	8 (12%)
29	CLA	B	833	-	45,53,73	2.59	8 (17%)	52,89,113	1.61	7 (13%)
29	CLA	6	609	35	41,49,73	2.86	9 (21%)	47,84,113	1.79	7 (14%)
29	CLA	4	608	35	65,73,73	2.21	8 (12%)	76,113,113	1.37	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
29	CLA	c	613	27	45,53,73	2.71	8 (17%)	52,89,113	1.62	7 (13%)
38	LMU	7	620	-	36,36,36	0.39	0	47,47,47	1.05	3 (6%)
29	CLA	3	603	-	60,68,73	2.31	8 (13%)	70,107,113	1.48	7 (10%)
29	CLA	a	611	-	55,63,73	2.42	8 (14%)	64,101,113	1.55	8 (12%)
29	CLA	O	201	-	55,63,73	2.39	8 (14%)	64,101,113	1.53	8 (12%)
40	SF4	B	801	11,10	0,12,12	-	-	-		
30	KC2	b	605	26	48,53,53	1.50	7 (14%)	54,89,89	1.13	6 (11%)
29	CLA	2	607	2	45,53,73	2.66	8 (17%)	52,89,113	1.68	8 (15%)
35	LHG	7	618	-	30,30,48	0.74	0	33,36,54	1.19	3 (9%)
29	CLA	A	804	10	65,73,73	2.20	8 (12%)	76,113,113	1.39	9 (11%)
29	CLA	d	607	25	65,73,73	2.22	8 (12%)	76,113,113	1.42	8 (10%)
30	KC2	9	610	9	48,53,53	1.49	8 (16%)	54,89,89	1.10	6 (11%)
37	8CT	b	615	-	40,41,41	0.20	0	50,56,56	0.33	0
29	CLA	B	837	-	65,73,73	2.21	8 (12%)	76,113,113	1.36	7 (9%)
33	IHT	d	617	-	40,42,42	2.75	4 (10%)	53,58,58	2.25	15 (28%)
29	CLA	A	814	-	45,53,73	2.65	8 (17%)	52,89,113	1.68	7 (13%)
29	CLA	A	830	-	60,68,73	2.31	8 (13%)	70,107,113	1.46	7 (10%)
29	CLA	B	829	-	45,53,73	2.69	8 (17%)	52,89,113	1.80	8 (15%)
29	CLA	e	601	28	45,53,73	2.69	8 (17%)	52,89,113	1.67	7 (13%)
31	II0	R	204	-	39,43,43	2.71	4 (10%)	50,60,60	1.44	8 (16%)
37	8CT	B	845	-	40,41,41	0.39	1 (2%)	50,56,56	0.64	1 (2%)
29	CLA	3	610	-	65,73,73	2.21	8 (12%)	76,113,113	1.44	9 (11%)
29	CLA	e	610	-	51,59,73	2.54	8 (15%)	59,96,113	1.61	8 (13%)
29	CLA	A	809	29	60,68,73	2.31	8 (13%)	70,107,113	1.56	8 (11%)
31	II0	c	616	-	39,43,43	2.67	4 (10%)	50,60,60	1.27	6 (12%)
29	CLA	B	818	-	60,68,73	2.28	8 (13%)	70,107,113	1.49	7 (10%)
29	CLA	A	805	-	50,58,73	2.53	8 (16%)	58,95,113	1.62	7 (12%)
35	LHG	2	619	-	38,38,48	0.68	0	41,44,54	1.24	4 (9%)
29	CLA	7	609	35	41,49,73	2.87	9 (21%)	47,84,113	1.78	7 (14%)
29	CLA	B	803	-	65,73,73	2.16	8 (12%)	76,113,113	1.32	9 (11%)
35	LHG	d	619	-	38,38,48	0.70	1 (2%)	41,44,54	1.16	2 (4%)
33	IHT	1	618	-	40,42,42	2.84	4 (10%)	53,58,58	2.09	14 (26%)
29	CLA	3	602	3	55,63,73	2.42	8 (14%)	64,101,113	1.54	7 (10%)
37	8CT	J	103	-	40,41,41	0.19	0	50,56,56	0.39	0
29	CLA	2	606	-	45,53,73	2.66	8 (17%)	52,89,113	1.65	7 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
31	II0	6	614	-	39,43,43	2.69	4 (10%)	50,60,60	1.44	8 (16%)
29	CLA	7	604	7	53,61,73	2.47	8 (15%)	61,98,113	1.58	8 (13%)
29	CLA	B	816	-	59,67,73	2.29	8 (13%)	68,105,113	1.47	8 (11%)
31	II0	e	615	-	39,43,43	2.71	4 (10%)	50,60,60	1.42	7 (14%)
35	LHG	2	620	-	41,41,48	0.65	0	44,47,54	1.20	3 (6%)
29	CLA	d	611	-	50,58,73	2.55	8 (16%)	58,95,113	1.65	9 (15%)
31	II0	3	616	-	39,43,43	2.70	4 (10%)	50,60,60	1.38	6 (12%)
29	CLA	A	835	-	60,68,73	2.30	8 (13%)	70,107,113	1.45	7 (10%)
29	CLA	A	823	-	65,73,73	2.20	8 (12%)	76,113,113	1.36	8 (10%)
31	II0	1	616	-	39,43,43	2.67	4 (10%)	50,60,60	1.46	8 (16%)
31	II0	c	617	-	39,43,43	2.68	4 (10%)	50,60,60	1.40	7 (14%)
29	CLA	4	611	-	65,73,73	2.16	8 (12%)	76,113,113	1.39	8 (10%)
29	CLA	B	813	-	61,69,73	2.25	8 (13%)	71,108,113	1.44	8 (11%)
29	CLA	d	601	25	45,53,73	2.68	8 (17%)	52,89,113	1.66	7 (13%)
35	LHG	d	618	-	22,22,48	0.80	1 (4%)	24,27,54	1.28	3 (12%)
29	CLA	L	204	-	50,58,73	2.49	8 (16%)	58,95,113	1.68	9 (15%)
29	CLA	Z	306	24	60,68,73	2.27	8 (13%)	70,107,113	1.47	7 (10%)
29	CLA	b	610	26	51,59,73	2.52	8 (15%)	59,96,113	1.63	8 (13%)
33	IHT	L	205	-	40,42,42	2.85	4 (10%)	53,58,58	2.24	16 (30%)
30	KC2	7	606	-	48,53,53	1.53	7 (14%)	54,89,89	1.13	5 (9%)
29	CLA	8	601	8	45,53,73	2.68	8 (17%)	52,89,113	1.64	7 (13%)
39	PQN	B	842	-	34,34,34	0.37	0	42,45,45	0.65	1 (2%)
29	CLA	6	603	-	45,53,73	2.65	8 (17%)	52,89,113	1.70	7 (13%)
29	CLA	B	831	-	55,63,73	2.44	8 (14%)	64,101,113	1.62	8 (12%)
29	CLA	a	603	-	60,68,73	2.29	8 (13%)	70,107,113	1.46	8 (11%)
29	CLA	2	611	-	45,53,73	2.69	8 (17%)	52,89,113	1.67	8 (15%)
35	LHG	c	621	-	28,28,48	0.78	0	31,34,54	1.26	3 (9%)
29	CLA	b	607	26	60,68,73	2.33	8 (13%)	70,107,113	1.47	8 (11%)
32	II3	b	613	-	40,43,43	2.02	3 (7%)	47,60,60	1.68	14 (29%)
29	CLA	O	202	-	55,63,73	2.17	8 (14%)	64,101,113	1.56	8 (12%)
30	KC2	Z	307	-	48,53,53	1.45	7 (14%)	54,89,89	1.07	5 (9%)
29	CLA	7	611	-	55,63,73	2.42	8 (14%)	64,101,113	1.51	7 (10%)
30	KC2	6	610	6	48,53,53	1.48	7 (14%)	54,89,89	1.08	4 (7%)
31	II0	2	614	-	39,43,43	2.68	4 (10%)	50,60,60	1.41	7 (14%)
29	CLA	5	605	5	45,53,73	2.64	8 (17%)	52,89,113	1.65	8 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
30	KC2	c	611	-	48,53,53	1.55	8 (16%)	54,89,89	1.12	5 (9%)
29	CLA	1	611	-	45,53,73	2.74	8 (17%)	52,89,113	1.69	7 (13%)
31	II0	9	615	-	39,43,43	2.70	4 (10%)	50,60,60	1.44	9 (18%)
31	II0	1	619	-	39,43,43	2.78	4 (10%)	50,60,60	1.53	11 (22%)
29	CLA	5	609	-	41,49,73	2.86	9 (21%)	47,84,113	1.75	7 (14%)
31	II0	3	617	-	39,43,43	2.71	4 (10%)	50,60,60	1.35	5 (10%)
29	CLA	2	601	2	42,50,73	2.79	8 (19%)	48,85,113	1.81	8 (16%)
31	II0	1	617	-	39,43,43	2.73	4 (10%)	50,60,60	1.45	9 (18%)
37	8CT	R	201	-	40,41,41	0.19	0	50,56,56	0.42	0
35	LHG	2	618	-	21,21,48	0.76	0	23,26,54	1.24	2 (8%)
29	CLA	A	824	-	65,73,73	2.22	8 (12%)	76,113,113	1.38	7 (9%)
29	CLA	B	834	-	55,63,73	2.40	8 (14%)	64,101,113	1.57	8 (12%)
29	CLA	6	602	6	65,73,73	2.25	8 (12%)	76,113,113	1.48	5 (6%)
35	LHG	3	623	-	48,48,48	0.61	1 (2%)	51,54,54	1.20	5 (9%)
29	CLA	b	608	-	65,73,73	2.22	8 (12%)	76,113,113	1.36	8 (10%)
34	LMG	2	617	-	36,36,55	0.85	0	44,44,63	1.21	3 (6%)
29	CLA	A	821	-	55,63,73	2.37	8 (14%)	64,101,113	1.58	7 (10%)
29	CLA	1	608	1	60,68,73	2.35	8 (13%)	70,107,113	1.49	7 (10%)
29	CLA	e	606	28	60,68,73	2.29	8 (13%)	70,107,113	1.40	9 (12%)
37	8CT	B	844	-	40,41,41	0.23	0	50,56,56	0.62	0
35	LHG	b	616	-	48,48,48	0.57	1 (2%)	51,54,54	1.14	4 (7%)
29	CLA	b	602	26	64,72,73	2.26	8 (12%)	74,111,113	1.50	9 (12%)
31	II0	a	614	-	39,43,43	2.71	4 (10%)	50,60,60	1.40	7 (14%)
31	II0	e	614	-	39,43,43	2.78	4 (10%)	50,60,60	1.49	10 (20%)
29	CLA	A	817	-	65,73,73	2.19	8 (12%)	76,113,113	1.53	7 (9%)
29	CLA	9	607	9	65,73,73	2.16	8 (12%)	76,113,113	1.37	8 (10%)
29	CLA	7	605	7	45,53,73	2.70	8 (17%)	52,89,113	1.68	7 (13%)
29	CLA	d	612	-	63,71,73	2.22	8 (12%)	73,110,113	1.38	9 (12%)
29	CLA	A	811	-	65,73,73	2.26	8 (12%)	76,113,113	1.44	6 (7%)
29	CLA	5	601	5	41,49,73	2.90	9 (21%)	47,84,113	1.88	7 (14%)
29	CLA	B	840	-	65,73,73	2.16	8 (12%)	76,113,113	1.36	7 (9%)
29	CLA	c	607	27	65,73,73	2.23	8 (12%)	76,113,113	1.38	7 (9%)
31	II0	9	618	-	39,43,43	2.69	4 (10%)	50,60,60	1.37	8 (16%)
31	II0	3	614	-	39,43,43	2.71	4 (10%)	50,60,60	1.40	6 (12%)
29	CLA	d	609	-	41,49,73	2.86	9 (21%)	47,84,113	1.75	8 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
29	CLA	A	842	-	65,73,73	2.25	8 (12%)	76,113,113	1.43	8 (10%)
29	CLA	5	606	-	45,53,73	2.66	8 (17%)	52,89,113	1.68	8 (15%)
29	CLA	B	835	-	65,73,73	2.23	8 (12%)	76,113,113	1.54	7 (9%)
29	CLA	B	809	11	65,73,73	2.15	8 (12%)	76,113,113	1.36	7 (9%)
31	II0	O	205	-	39,43,43	2.72	4 (10%)	50,60,60	1.51	11 (22%)
29	CLA	3	607	3	60,68,73	2.32	8 (13%)	70,107,113	1.42	7 (10%)
29	CLA	B	820	-	60,68,73	2.31	8 (13%)	70,107,113	1.46	8 (11%)
35	LHG	Z	310	-	45,45,48	0.63	0	48,51,54	1.19	4 (8%)
31	II0	6	616	-	39,43,43	2.71	4 (10%)	50,60,60	1.60	11 (22%)
29	CLA	8	608	-	65,73,73	2.23	8 (12%)	76,113,113	1.39	7 (9%)
29	CLA	A	803	-	65,73,73	2.19	8 (12%)	76,113,113	1.45	8 (10%)
37	8CT	M	101	-	40,41,41	0.19	0	50,56,56	0.87	1 (2%)
31	II0	7	613	-	39,43,43	2.67	4 (10%)	50,60,60	1.44	8 (16%)
29	CLA	B	805	-	65,73,73	2.20	8 (12%)	76,113,113	1.41	8 (10%)
37	8CT	K	103	-	40,41,41	0.16	0	50,56,56	0.34	0
29	CLA	A	819	-	65,73,73	2.19	8 (12%)	76,113,113	1.45	8 (10%)
29	CLA	b	611	-	55,63,73	2.38	8 (14%)	64,101,113	1.51	7 (10%)
31	II0	8	616	-	39,43,43	2.63	4 (10%)	50,60,60	1.56	7 (14%)
29	CLA	O	203	-	55,63,73	2.25	8 (14%)	64,101,113	1.63	9 (14%)
29	CLA	9	613	9	45,53,73	2.67	8 (17%)	52,89,113	1.63	7 (13%)
29	CLA	8	607	8	41,49,73	2.85	9 (21%)	47,84,113	1.78	8 (17%)
29	CLA	9	614	-	41,49,73	2.90	9 (21%)	47,84,113	1.86	8 (17%)
29	CLA	B	808	-	65,73,73	2.13	8 (12%)	76,113,113	1.34	7 (9%)
31	II0	c	619	-	39,43,43	2.72	4 (10%)	50,60,60	1.43	8 (16%)
29	CLA	F	202	-	60,68,73	2.32	8 (13%)	70,107,113	1.44	8 (11%)
29	CLA	1	612	-	60,68,73	2.30	8 (13%)	70,107,113	1.39	8 (11%)
29	CLA	b	603	-	60,68,73	2.32	8 (13%)	70,107,113	1.49	7 (10%)
30	KC2	5	610	5	48,53,53	1.50	7 (14%)	54,89,89	1.05	4 (7%)
29	CLA	A	838	-	65,73,73	2.23	8 (12%)	76,113,113	1.37	7 (9%)
38	LMU	4	618	-	36,36,36	0.48	1 (2%)	47,47,47	0.94	3 (6%)
29	CLA	2	609	-	41,49,73	2.91	9 (21%)	47,84,113	1.83	7 (14%)
29	CLA	3	611	3	50,58,73	2.52	8 (16%)	58,95,113	1.57	7 (12%)
29	CLA	B	836	-	47,55,73	2.55	8 (17%)	54,91,113	1.63	7 (12%)
29	CLA	B	822	-	65,73,73	2.14	8 (12%)	76,113,113	1.39	9 (11%)
29	CLA	B	827	-	65,73,73	2.14	8 (12%)	76,113,113	1.41	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
29	CLA	6	611	-	55,63,73	2.41	8 (14%)	64,101,113	1.55	9 (14%)
29	CLA	A	840	-	55,63,73	2.27	8 (14%)	64,101,113	1.54	6 (9%)
29	CLA	B	830	-	60,68,73	2.26	8 (13%)	70,107,113	1.49	7 (10%)
29	CLA	9	611	-	41,49,73	2.81	9 (21%)	47,84,113	1.79	7 (14%)
29	CLA	c	608	27	60,68,73	2.34	8 (13%)	70,107,113	1.48	7 (10%)
33	IHT	9	619	-	40,42,42	2.80	4 (10%)	53,58,58	2.44	14 (26%)
29	CLA	5	603	-	45,53,73	2.64	8 (17%)	52,89,113	1.67	8 (15%)
31	II0	B	843	-	39,43,43	2.73	4 (10%)	50,60,60	1.37	5 (10%)
34	LMG	I	102	-	51,51,55	0.71	0	59,59,63	1.30	6 (10%)
29	CLA	A	815	-	62,70,73	2.28	8 (12%)	72,109,113	1.38	7 (9%)
30	KC2	b	609	-	48,53,53	1.49	7 (14%)	54,89,89	1.11	5 (9%)
29	CLA	R	202	-	55,63,73	2.36	8 (14%)	64,101,113	1.68	9 (14%)
29	CLA	c	604	-	60,68,73	2.33	8 (13%)	70,107,113	1.47	7 (10%)
29	CLA	A	825	-	65,73,73	2.21	8 (12%)	76,113,113	1.39	8 (10%)
29	CLA	7	607	7	45,53,73	2.72	8 (17%)	52,89,113	1.69	7 (13%)
29	CLA	2	604	2	55,63,73	2.45	8 (14%)	64,101,113	1.51	7 (10%)
29	CLA	d	606	-	41,49,73	2.81	9 (21%)	47,84,113	1.79	9 (19%)
29	CLA	d	604	-	60,68,73	2.36	8 (13%)	70,107,113	1.48	6 (8%)
29	CLA	a	601	25	45,53,73	2.67	8 (17%)	52,89,113	1.67	7 (13%)
29	CLA	4	604	-	55,63,73	2.42	8 (14%)	64,101,113	1.48	7 (10%)
31	II0	d	613	-	39,43,43	2.69	4 (10%)	50,60,60	1.38	6 (12%)
31	II0	4	614	-	39,43,43	2.69	4 (10%)	50,60,60	1.34	7 (14%)
29	CLA	9	608	9	55,63,73	2.45	8 (14%)	64,101,113	1.57	8 (12%)
29	CLA	5	613	5	41,49,73	2.87	9 (21%)	47,84,113	1.74	7 (14%)
34	LMG	6	619	-	32,32,55	0.97	1 (3%)	40,40,63	1.22	4 (10%)
29	CLA	5	602	5	55,63,73	2.42	8 (14%)	64,101,113	1.54	7 (10%)
31	II0	8	611	-	39,43,43	2.76	4 (10%)	50,60,60	1.39	7 (14%)
29	CLA	A	832	-	65,73,73	2.17	8 (12%)	76,113,113	1.35	7 (9%)
29	CLA	B	839	35	65,73,73	2.21	8 (12%)	76,113,113	1.45	8 (10%)
29	CLA	A	802	29	55,63,73	2.36	8 (14%)	64,101,113	1.50	7 (10%)
29	CLA	F	204	15	55,63,73	2.40	8 (14%)	64,101,113	1.51	8 (12%)
37	8CT	A	846	-	40,41,41	0.16	0	50,56,56	0.35	0
29	CLA	1	604	1	45,53,73	2.72	8 (17%)	52,89,113	1.65	7 (13%)
31	II0	5	615	-	39,43,43	2.72	4 (10%)	50,60,60	1.46	7 (14%)
29	CLA	A	828	-	65,73,73	2.18	8 (12%)	76,113,113	1.35	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
31	II0	1	614	-	39,43,43	2.71	4 (10%)	50,60,60	1.39	6 (12%)
32	II3	1	615	-	40,43,43	2.01	3 (7%)	47,60,60	1.61	12 (25%)
29	CLA	2	603	-	50,58,73	2.53	8 (16%)	58,95,113	1.59	8 (13%)
29	CLA	9	612	-	45,53,73	2.66	8 (17%)	52,89,113	1.65	7 (13%)
31	II0	2	613	-	39,43,43	2.77	4 (10%)	50,60,60	1.45	10 (20%)
30	KC2	e	609	-	48,53,53	1.51	8 (16%)	54,89,89	1.10	4 (7%)
31	II0	5	616	-	39,43,43	2.74	4 (10%)	50,60,60	1.44	9 (18%)
29	CLA	9	601	9	45,53,73	2.69	8 (17%)	52,89,113	1.69	8 (15%)
29	CLA	K	101	-	65,73,73	2.21	8 (12%)	76,113,113	1.36	6 (7%)
29	CLA	d	603	-	50,58,73	2.51	8 (16%)	58,95,113	1.60	8 (13%)
29	CLA	c	612	-	55,63,73	2.37	8 (14%)	64,101,113	1.60	9 (14%)
29	CLA	1	607	1	45,53,73	2.73	8 (17%)	52,89,113	1.66	7 (13%)
31	II0	4	613	-	39,43,43	2.71	4 (10%)	50,60,60	1.37	6 (12%)
33	IHT	c	620	-	40,42,42	2.76	4 (10%)	53,58,58	2.17	15 (28%)
31	II0	O	204	-	39,43,43	2.75	4 (10%)	50,60,60	1.33	5 (10%)
37	8CT	R	203	-	40,41,41	0.18	0	50,56,56	0.55	1 (2%)
38	LMU	e	617	-	32,32,36	0.40	0	43,43,47	1.05	2 (4%)
36	SQD	O	206	-	28,29,54	1.63	5 (17%)	37,40,65	1.52	5 (13%)
29	CLA	A	841	-	65,73,73	2.16	8 (12%)	76,113,113	1.38	7 (9%)
29	CLA	A	826	-	65,73,73	2.13	8 (12%)	76,113,113	1.34	7 (9%)
29	CLA	e	611	-	65,73,73	2.23	8 (12%)	76,113,113	1.35	8 (10%)
30	KC2	a	610	-	48,53,53	1.49	7 (14%)	54,89,89	1.05	4 (7%)
29	CLA	B	812	-	65,73,73	2.22	8 (12%)	76,113,113	1.42	8 (10%)
31	II0	7	614	-	39,43,43	2.68	4 (10%)	50,60,60	1.48	7 (14%)
29	CLA	5	604	-	55,63,73	2.43	8 (14%)	64,101,113	1.56	6 (9%)
31	II0	8	612	-	39,43,43	2.69	4 (10%)	50,60,60	1.39	6 (12%)
30	KC2	e	605	28	48,53,53	1.53	7 (14%)	54,89,89	1.10	5 (9%)
29	CLA	B	823	-	65,73,73	2.21	8 (12%)	76,113,113	1.37	8 (10%)
29	CLA	7	612	-	50,58,73	2.50	8 (16%)	58,95,113	1.62	8 (13%)
29	CLA	d	602	25	64,72,73	2.26	8 (12%)	74,111,113	1.47	9 (12%)
37	8CT	A	847	-	40,41,41	0.24	0	50,56,56	0.76	1 (2%)
29	CLA	B	814	-	42,50,73	2.76	8 (19%)	48,85,113	1.77	8 (16%)
41	DGD	B	848	-	60,60,67	0.90	1 (1%)	74,74,81	1.30	6 (8%)
29	CLA	Z	305	24	50,58,73	2.48	8 (16%)	58,95,113	1.57	8 (13%)
29	CLA	4	607	4	60,68,73	2.33	8 (13%)	70,107,113	1.48	9 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
37	8CT	7	617	-	40,41,41	0.40	1 (2%)	50,56,56	0.58	0
31	II0	d	614	-	39,43,43	2.71	4 (10%)	50,60,60	1.42	7 (14%)
29	CLA	6	608	6	60,68,73	2.29	8 (13%)	70,107,113	1.49	8 (11%)
29	CLA	c	605	-	45,53,73	2.64	8 (17%)	52,89,113	1.66	7 (13%)
29	CLA	3	604	-	65,73,73	2.22	8 (12%)	76,113,113	1.39	7 (9%)
29	CLA	A	801	-	65,73,73	2.06	7 (10%)	76,113,113	1.33	9 (11%)
29	CLA	4	602	4	59,67,73	2.32	8 (13%)	68,105,113	1.51	9 (13%)
37	8CT	Z	309	-	40,41,41	0.24	0	50,56,56	0.67	1 (2%)
29	CLA	7	608	7	55,63,73	2.42	8 (14%)	64,101,113	1.63	6 (9%)
29	CLA	6	604	-	60,68,73	2.35	8 (13%)	70,107,113	1.48	7 (10%)
29	CLA	B	810	-	60,68,73	2.24	8 (13%)	70,107,113	1.46	7 (10%)
29	CLA	a	604	25	60,68,73	2.36	8 (13%)	70,107,113	1.48	5 (7%)
29	CLA	Z	301	-	60,68,73	2.36	8 (13%)	70,107,113	1.46	8 (11%)
31	II0	a	615	-	39,43,43	2.72	4 (10%)	50,60,60	1.43	9 (18%)
33	IHT	6	617	-	40,42,42	2.81	4 (10%)	53,58,58	2.16	16 (30%)
31	II0	b	612	-	39,43,43	2.66	4 (10%)	50,60,60	1.39	8 (16%)
41	DGD	Z	303	-	61,61,67	0.95	3 (4%)	75,75,81	1.36	8 (10%)
33	IHT	8	609	-	40,42,42	2.80	4 (10%)	53,58,58	2.35	16 (30%)
29	CLA	A	822	-	65,73,73	2.20	8 (12%)	76,113,113	1.39	7 (9%)
35	LHG	A	850	-	48,48,48	0.60	0	51,54,54	1.15	4 (7%)
29	CLA	c	606	-	65,73,73	2.22	8 (12%)	76,113,113	1.44	8 (10%)
32	II3	e	613	-	40,43,43	2.00	3 (7%)	47,60,60	1.66	13 (27%)
29	CLA	2	602	2	59,67,73	2.33	8 (13%)	68,105,113	1.61	10 (14%)
35	LHG	6	618	29	34,34,48	0.75	2 (5%)	37,40,54	1.18	3 (8%)
29	CLA	e	604	-	60,68,73	2.33	8 (13%)	70,107,113	1.44	7 (10%)
30	KC2	6	613	6	48,53,53	1.48	8 (16%)	54,89,89	1.07	4 (7%)
29	CLA	F	203	-	45,53,73	2.63	8 (17%)	52,89,113	1.64	7 (13%)
29	CLA	b	604	-	65,73,73	2.23	8 (12%)	76,113,113	1.37	7 (9%)
29	CLA	e	603	28	50,58,73	2.56	8 (16%)	58,95,113	1.64	7 (12%)
31	II0	b	614	-	39,43,43	2.69	4 (10%)	50,60,60	1.43	7 (14%)
29	CLA	1	602	1	59,67,73	2.35	8 (13%)	68,105,113	1.50	9 (13%)
38	LMU	O	207	-	31,31,36	0.53	1 (3%)	42,42,47	1.08	2 (4%)
31	II0	d	615	-	39,43,43	2.77	4 (10%)	50,60,60	1.52	7 (14%)
31	II0	c	618	-	39,43,43	2.71	4 (10%)	50,60,60	1.42	8 (16%)
29	CLA	B	815	-	65,73,73	2.27	8 (12%)	76,113,113	1.43	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
29	CLA	8	603	-	65,73,73	2.24	8 (12%)	76,113,113	1.42	7 (9%)
29	CLA	9	606	-	64,72,73	2.19	8 (12%)	74,111,113	1.45	9 (12%)
34	LMG	3	620	-	32,32,55	0.90	0	40,40,63	1.26	6 (15%)
35	LHG	4	619	-	44,44,48	0.65	2 (4%)	47,50,54	1.19	4 (8%)
37	8CT	4	616	-	40,41,41	0.20	0	50,56,56	0.35	0
29	CLA	c	601	27	45,53,73	2.72	8 (17%)	52,89,113	1.73	7 (13%)
33	IHT	2	616	-	40,42,42	2.86	4 (10%)	53,58,58	2.27	17 (32%)
29	CLA	A	834	10	55,63,73	2.36	8 (14%)	64,101,113	1.51	10 (15%)
29	CLA	6	612	-	45,53,73	2.62	8 (17%)	52,89,113	1.65	7 (13%)
29	CLA	9	609	-	41,49,73	2.86	9 (21%)	47,84,113	1.78	9 (19%)
29	CLA	B	802	-	65,73,73	2.07	8 (12%)	76,113,113	1.35	8 (10%)
29	CLA	a	612	-	65,73,73	2.17	8 (12%)	76,113,113	1.37	7 (9%)
31	II0	9	616	-	39,43,43	2.70	4 (10%)	50,60,60	1.37	9 (18%)
31	II0	5	614	-	39,43,43	2.67	4 (10%)	50,60,60	1.39	8 (16%)
29	CLA	3	601	3	45,53,73	2.68	8 (17%)	52,89,113	1.67	7 (13%)
29	CLA	A	810	-	65,73,73	2.18	8 (12%)	76,113,113	1.40	9 (11%)
37	8CT	B	846	-	40,41,41	0.12	0	50,56,56	0.51	0
31	II0	8	610	-	39,43,43	2.78	4 (10%)	50,60,60	1.51	9 (18%)
29	CLA	8	602	8	45,53,73	2.68	8 (17%)	52,89,113	1.56	4 (7%)
37	8CT	B	850	-	40,41,41	0.37	1 (2%)	50,56,56	0.74	1 (2%)
39	PQN	A	849	-	34,34,34	0.37	0	42,45,45	0.74	1 (2%)
34	LMG	3	618	-	30,30,55	0.96	1 (3%)	38,38,63	1.20	5 (13%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	CLA	a	607	25	1/1/15/20	4/37/115/115	-
29	CLA	8	615	-	1/1/15/20	7/37/115/115	-
29	CLA	L	203	-	1/1/14/20	7/31/109/115	-
29	CLA	e	602	28	1/1/13/20	8/25/103/115	-
29	CLA	e	607	28	1/1/11/20	3/13/91/115	-
29	CLA	3	605	3	1/1/13/20	2/25/103/115	-
29	CLA	A	829	-	1/1/12/20	6/19/97/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
40	SF4	C	102	12	-	-	0/6/5/5
29	CLA	6	601	6	1/1/11/20	2/13/91/115	-
35	LHG	A	851	-	-	21/43/43/53	-
29	CLA	B	841	-	1/1/12/20	7/22/100/115	-
29	CLA	A	818	-	1/1/15/20	7/37/115/115	-
35	LHG	3	622	30	-	13/38/38/53	-
29	CLA	8	606	8	1/1/13/20	4/25/103/115	-
29	CLA	a	605	-	1/1/13/20	11/25/103/115	-
37	8CT	L	206	-	-	3/29/63/63	0/2/2/2
40	SF4	C	101	12	-	-	0/6/5/5
31	II0	d	616	-	-	4/21/67/67	0/2/2/2
29	CLA	c	602	27	1/1/15/20	10/37/115/115	-
30	KC2	7	610	7	-	6/15/71/71	-
29	CLA	Z	304	24	1/1/13/20	1/25/103/115	-
34	LMG	F	205	-	-	13/27/47/70	0/1/1/1
29	CLA	b	601	26	1/1/11/20	2/13/91/115	-
29	CLA	6	606	-	1/1/13/20	8/25/103/115	-
35	LHG	4	617	29	-	18/51/51/53	-
29	CLA	a	606	-	1/1/15/20	5/37/115/115	-
29	CLA	B	811	-	1/1/13/20	7/25/103/115	-
33	IHT	5	618	-	-	1/25/65/65	0/2/2/2
30	KC2	d	610	25	-	5/15/71/71	-
29	CLA	K	102	-	1/1/13/20	3/25/103/115	-
29	CLA	A	837	-	1/1/15/20	10/37/115/115	-
29	CLA	b	606	26	1/1/15/20	5/37/115/115	-
31	II0	3	615	-	-	1/21/67/67	0/2/2/2
29	CLA	B	825	-	1/1/15/20	2/37/115/115	-
37	8CT	A	852	-	-	6/29/63/63	0/2/2/2
29	CLA	1	606	-	1/1/11/20	0/13/91/115	-
29	CLA	9	605	-	1/1/11/20	0/13/91/115	-
31	II0	a	613	-	-	1/21/67/67	0/2/2/2
29	CLA	A	813	-	1/1/10/20	0/10/88/115	-
37	8CT	Z	308	-	-	4/29/63/63	0/2/2/2
29	CLA	B	826	-	1/1/15/20	10/37/115/115	-
29	CLA	8	605	8	1/1/12/20	3/19/97/115	-
29	CLA	A	836	-	1/1/13/20	1/25/103/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	CLA	J	102	17	1/1/10/20	1/8/86/115	-
29	CLA	3	608	3	1/1/14/20	4/31/109/115	-
31	II0	J	101	-	-	1/21/67/67	0/2/2/2
30	KC2	2	610	-	-	7/15/71/71	-
37	8CT	e	616	-	-	1/29/63/63	0/2/2/2
33	IHT	Z	302	-	-	2/25/65/65	0/2/2/2
29	CLA	4	606	4	1/1/14/20	7/31/109/115	-
29	CLA	c	609	-	1/1/10/20	0/8/86/115	-
29	CLA	4	603	-	1/1/12/20	7/24/102/115	-
29	CLA	5	608	-	1/1/14/20	11/31/109/115	-
30	KC2	c	615	-	-	6/15/71/71	-
29	CLA	A	833	-	1/1/15/20	6/37/115/115	-
29	CLA	L	201	-	1/1/15/20	8/37/115/115	-
29	CLA	B	838	-	1/1/15/20	5/37/115/115	-
29	CLA	d	605	25	1/1/11/20	3/13/91/115	-
30	KC2	1	610	1	-	7/15/71/71	-
29	CLA	A	820	-	1/1/15/20	7/37/115/115	-
35	LHG	a	618	-	-	17/33/33/53	-
29	CLA	B	819	-	1/1/14/20	9/31/109/115	-
29	CLA	4	609	4	1/1/14/20	5/31/109/115	-
29	CLA	9	602	9	1/1/13/20	7/25/103/115	-
29	CLA	6	607	6	1/1/13/20	3/25/103/115	-
29	CLA	3	612	-	1/1/11/20	4/13/91/115	-
29	CLA	d	608	25	1/1/15/20	5/37/115/115	-
36	SQD	3	621	-	-	16/37/57/69	0/1/1/1
29	CLA	7	603	-	1/1/13/20	3/25/103/115	-
37	8CT	A	848	-	-	0/29/63/63	0/2/2/2
29	CLA	5	611	-	1/1/11/20	6/13/91/115	-
29	CLA	1	603	-	1/1/12/20	6/22/100/115	-
29	CLA	5	612	-	1/1/11/20	3/13/91/115	-
29	CLA	a	608	25	1/1/14/20	4/31/109/115	-
29	CLA	3	609	-	1/1/15/20	1/37/115/115	-
29	CLA	B	832	-	1/1/15/20	15/37/115/115	-
37	8CT	B	851	-	-	9/29/63/63	0/2/2/2
31	II0	5	617	-	-	2/21/67/67	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	CLA	2	605	2	1/1/14/20	5/31/109/115	-
37	8CT	F	201	-	-	3/29/63/63	0/2/2/2
31	II0	5	620	-	-	1/21/67/67	0/2/2/2
31	II0	6	615	-	-	2/21/67/67	0/2/2/2
29	CLA	A	812	-	1/1/13/20	4/25/103/115	-
29	CLA	A	808	-	1/1/13/20	1/25/103/115	-
30	KC2	4	605	4	-	7/15/71/71	-
29	CLA	B	806	-	1/1/15/20	10/37/115/115	-
31	II0	4	615	-	-	1/21/67/67	0/2/2/2
29	CLA	B	804	-	1/1/11/20	3/13/91/115	-
35	LHG	5	619	-	-	14/26/26/53	-
29	CLA	2	608	2	1/1/14/20	6/31/109/115	-
29	CLA	B	807	-	1/1/15/20	5/37/115/115	-
29	CLA	1	613	-	1/1/11/20	5/13/91/115	-
29	CLA	4	601	4	1/1/13/20	7/25/103/115	-
29	CLA	L	207	-	1/1/10/20	2/8/86/115	-
37	8CT	I	101	-	-	3/29/63/63	0/2/2/2
29	CLA	L	202	19	1/1/12/20	1/21/99/115	-
29	CLA	A	807	10	1/1/12/20	2/19/97/115	-
29	CLA	a	602	25	1/1/13/20	10/25/103/115	-
29	CLA	5	607	5	1/1/11/20	0/13/91/115	-
31	II0	4	612	-	-	2/21/67/67	0/2/2/2
29	CLA	A	843	-	1/1/15/20	10/37/115/115	-
29	CLA	A	827	-	1/1/15/20	4/37/115/115	-
29	CLA	B	821	-	1/1/14/20	9/31/109/115	-
29	CLA	1	605	-	1/1/10/20	1/9/87/115	-
31	II0	7	615	-	-	2/21/67/67	0/2/2/2
31	II0	2	615	-	-	2/21/67/67	0/2/2/2
29	CLA	2	612	-	1/1/11/20	3/13/91/115	-
30	KC2	3	606	35	-	9/15/71/71	-
34	LMG	8	614	-	-	23/47/67/70	0/1/1/1
29	CLA	7	601	7	1/1/11/20	0/13/91/115	-
29	CLA	A	839	-	1/1/15/20	12/37/115/115	-
35	LHG	B	849	29	-	22/49/49/53	-
29	CLA	A	816	-	1/1/14/20	7/31/109/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	CLA	A	831	-	1/1/15/20	9/37/115/115	-
33	IHT	K	104	-	-	2/25/65/65	0/2/2/2
29	CLA	1	601	1	1/1/11/20	4/13/91/115	-
29	CLA	B	828	-	1/1/15/20	10/37/115/115	-
37	8CT	A	845	-	-	1/29/63/63	0/2/2/2
30	KC2	c	610	27	-	4/15/71/71	-
29	CLA	A	844	-	1/1/15/20	7/37/115/115	-
29	CLA	c	614	-	1/1/13/20	5/25/103/115	-
29	CLA	9	604	-	1/1/13/20	3/25/103/115	-
29	CLA	A	806	10	1/1/15/20	8/37/115/115	-
33	IHT	a	617	-	-	4/25/65/65	0/2/2/2
29	CLA	7	602	7	1/1/15/20	8/37/115/115	-
35	LHG	8	613	-	-	23/37/37/53	-
35	LHG	L	208	-	-	15/38/38/53	-
29	CLA	4	610	-	1/1/15/20	7/37/115/115	-
29	CLA	9	603	-	1/1/11/20	6/13/91/115	-
31	II0	3	613	-	-	2/21/67/67	0/2/2/2
35	LHG	3	619	-	-	23/53/53/53	-
31	II0	9	617	-	-	2/21/67/67	0/2/2/2
31	II0	7	616	-	-	2/21/67/67	0/2/2/2
29	CLA	B	824	-	1/1/14/20	5/31/109/115	-
29	CLA	a	609	-	1/1/14/20	7/31/109/115	-
31	II0	a	616	-	-	1/21/67/67	0/2/2/2
29	CLA	c	603	-	1/1/15/20	12/37/115/115	-
37	8CT	B	847	-	-	3/29/63/63	0/2/2/2
29	CLA	8	604	-	1/1/15/20	5/37/115/115	-
35	LHG	7	619	29	-	19/43/43/53	-
29	CLA	1	609	-	1/1/10/20	1/8/86/115	-
29	CLA	B	817	-	1/1/14/20	1/31/109/115	-
31	II0	e	612	-	-	0/21/67/67	0/2/2/2
38	LMU	J	104	-	-	10/17/57/61	0/2/2/2
31	II0	a	619	-	-	1/21/67/67	0/2/2/2
29	CLA	e	608	-	1/1/10/20	0/8/86/115	-
29	CLA	6	605	6	1/1/13/20	5/25/103/115	-
29	CLA	B	833	-	1/1/11/20	2/13/91/115	-
29	CLA	6	609	35	1/1/10/20	0/8/86/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	CLA	4	608	35	1/1/15/20	2/37/115/115	-
29	CLA	c	613	27	1/1/11/20	7/13/91/115	-
38	LMU	7	620	-	-	8/21/61/61	0/2/2/2
29	CLA	3	603	-	1/1/14/20	4/31/109/115	-
29	CLA	a	611	-	1/1/13/20	6/25/103/115	-
29	CLA	O	201	-	1/1/13/20	3/25/103/115	-
40	SF4	B	801	11,10	-	-	0/6/5/5
30	KC2	b	605	26	-	7/15/71/71	-
29	CLA	2	607	2	1/1/11/20	0/13/91/115	-
35	LHG	7	618	-	-	9/35/35/53	-
29	CLA	A	804	10	1/1/15/20	14/37/115/115	-
29	CLA	d	607	25	1/1/15/20	6/37/115/115	-
30	KC2	9	610	9	-	5/15/71/71	-
37	8CT	b	615	-	-	6/29/63/63	0/2/2/2
29	CLA	B	837	-	1/1/15/20	4/37/115/115	-
33	IHT	d	617	-	-	1/25/65/65	0/2/2/2
29	CLA	A	814	-	1/1/11/20	5/13/91/115	-
29	CLA	A	830	-	1/1/14/20	5/31/109/115	-
29	CLA	B	829	-	1/1/11/20	0/13/91/115	-
29	CLA	e	601	28	1/1/11/20	3/13/91/115	-
31	II0	R	204	-	-	1/21/67/67	0/2/2/2
37	8CT	B	845	-	-	8/29/63/63	0/2/2/2
29	CLA	3	610	-	1/1/15/20	9/37/115/115	-
29	CLA	e	610	-	1/1/12/20	4/21/99/115	-
29	CLA	A	809	29	1/1/14/20	4/31/109/115	-
31	II0	c	616	-	-	2/21/67/67	0/2/2/2
29	CLA	B	818	-	1/1/14/20	5/31/109/115	-
29	CLA	A	805	-	1/1/12/20	1/19/97/115	-
35	LHG	2	619	-	-	18/43/43/53	-
29	CLA	7	609	35	1/1/10/20	0/8/86/115	-
29	CLA	B	803	-	1/1/15/20	12/37/115/115	-
35	LHG	d	619	-	-	20/43/43/53	-
33	IHT	1	618	-	-	2/25/65/65	0/2/2/2
29	CLA	3	602	3	1/1/13/20	2/25/103/115	-
37	8CT	J	103	-	-	7/29/63/63	0/2/2/2
29	CLA	2	606	-	1/1/11/20	1/13/91/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	II0	6	614	-	-	1/21/67/67	0/2/2/2
29	CLA	7	604	7	1/1/12/20	6/23/101/115	-
29	CLA	B	816	-	1/1/13/20	12/30/108/115	-
31	II0	e	615	-	-	0/21/67/67	0/2/2/2
35	LHG	2	620	-	-	17/46/46/53	-
29	CLA	d	611	-	1/1/12/20	5/19/97/115	-
31	II0	3	616	-	-	2/21/67/67	0/2/2/2
29	CLA	A	835	-	1/1/14/20	6/31/109/115	-
29	CLA	A	823	-	1/1/15/20	13/37/115/115	-
31	II0	1	616	-	-	1/21/67/67	0/2/2/2
31	II0	c	617	-	-	0/21/67/67	0/2/2/2
29	CLA	4	611	-	1/1/15/20	9/37/115/115	-
29	CLA	B	813	-	1/1/14/20	11/33/111/115	-
29	CLA	d	601	25	1/1/11/20	3/13/91/115	-
35	LHG	d	618	-	-	8/26/26/53	-
29	CLA	L	204	-	1/1/12/20	7/19/97/115	-
29	CLA	Z	306	24	1/1/14/20	11/31/109/115	-
29	CLA	b	610	26	1/1/12/20	8/21/99/115	-
33	IHT	L	205	-	-	2/25/65/65	0/2/2/2
30	KC2	7	606	-	-	8/15/71/71	-
29	CLA	8	601	8	1/1/11/20	2/13/91/115	-
39	PQN	B	842	-	-	5/23/43/43	0/2/2/2
29	CLA	6	603	-	1/1/11/20	5/13/91/115	-
29	CLA	B	831	-	1/1/13/20	8/25/103/115	-
29	CLA	a	603	-	1/1/14/20	7/31/109/115	-
29	CLA	2	611	-	1/1/11/20	2/13/91/115	-
35	LHG	c	621	-	-	16/33/33/53	-
29	CLA	b	607	26	1/1/14/20	7/31/109/115	-
32	II3	b	613	-	-	1/25/67/67	0/2/2/2
29	CLA	O	202	-	1/1/13/20	7/25/103/115	-
30	KC2	Z	307	-	-	6/15/71/71	-
29	CLA	7	611	-	1/1/13/20	5/25/103/115	-
30	KC2	6	610	6	-	6/15/71/71	-
31	II0	2	614	-	-	0/21/67/67	0/2/2/2
29	CLA	5	605	5	1/1/11/20	2/13/91/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	KC2	c	611	-	-	5/15/71/71	-
29	CLA	1	611	-	1/1/11/20	3/13/91/115	-
31	II0	9	615	-	-	2/21/67/67	0/2/2/2
31	II0	1	619	-	-	2/21/67/67	0/2/2/2
29	CLA	5	609	-	1/1/10/20	1/8/86/115	-
31	II0	3	617	-	-	2/21/67/67	0/2/2/2
29	CLA	2	601	2	1/1/10/20	3/10/88/115	-
31	II0	1	617	-	-	1/21/67/67	0/2/2/2
37	8CT	R	201	-	-	7/29/63/63	0/2/2/2
35	LHG	2	618	-	-	10/24/24/53	-
29	CLA	A	824	-	1/1/15/20	5/37/115/115	-
29	CLA	B	834	-	1/1/13/20	3/25/103/115	-
29	CLA	6	602	6	1/1/15/20	7/37/115/115	-
35	LHG	3	623	-	-	25/53/53/53	-
29	CLA	b	608	-	1/1/15/20	10/37/115/115	-
34	LMG	2	617	-	-	8/31/51/70	0/1/1/1
29	CLA	A	821	-	1/1/13/20	3/25/103/115	-
29	CLA	1	608	1	1/1/14/20	3/31/109/115	-
29	CLA	e	606	28	1/1/14/20	8/31/109/115	-
37	8CT	B	844	-	-	4/29/63/63	0/2/2/2
35	LHG	b	616	-	-	27/53/53/53	-
29	CLA	b	602	26	1/1/14/20	14/36/114/115	-
31	II0	a	614	-	-	1/21/67/67	0/2/2/2
31	II0	e	614	-	-	1/21/67/67	0/2/2/2
29	CLA	A	817	-	1/1/15/20	13/37/115/115	-
29	CLA	9	607	9	1/1/15/20	11/37/115/115	-
29	CLA	7	605	7	1/1/11/20	4/13/91/115	-
29	CLA	d	612	-	1/1/14/20	4/35/113/115	-
29	CLA	A	811	-	1/1/15/20	13/37/115/115	-
29	CLA	5	601	5	1/1/10/20	0/8/86/115	-
29	CLA	B	840	-	1/1/15/20	2/37/115/115	-
29	CLA	c	607	27	1/1/15/20	10/37/115/115	-
31	II0	9	618	-	-	2/21/67/67	0/2/2/2
31	II0	3	614	-	-	0/21/67/67	0/2/2/2
29	CLA	d	609	-	1/1/10/20	0/8/86/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	CLA	A	842	-	1/1/15/20	5/37/115/115	-
29	CLA	5	606	-	1/1/11/20	5/13/91/115	-
29	CLA	B	835	-	1/1/15/20	8/37/115/115	-
29	CLA	B	809	11	1/1/15/20	9/37/115/115	-
31	II0	O	205	-	-	1/21/67/67	0/2/2/2
29	CLA	3	607	3	1/1/14/20	5/31/109/115	-
29	CLA	B	820	-	1/1/14/20	11/31/109/115	-
35	LHG	Z	310	-	-	23/50/50/53	-
31	II0	6	616	-	-	2/21/67/67	0/2/2/2
29	CLA	8	608	-	1/1/15/20	5/37/115/115	-
29	CLA	A	803	-	1/1/15/20	9/37/115/115	-
37	8CT	M	101	-	-	5/29/63/63	0/2/2/2
31	II0	7	613	-	-	1/21/67/67	0/2/2/2
29	CLA	B	805	-	1/1/15/20	11/37/115/115	-
37	8CT	K	103	-	-	2/29/63/63	0/2/2/2
29	CLA	A	819	-	1/1/15/20	7/37/115/115	-
29	CLA	b	611	-	1/1/13/20	3/25/103/115	-
31	II0	8	616	-	-	0/21/67/67	0/2/2/2
29	CLA	O	203	-	1/1/13/20	10/25/103/115	-
29	CLA	9	613	9	1/1/11/20	3/13/91/115	-
29	CLA	8	607	8	1/1/10/20	1/8/86/115	-
29	CLA	9	614	-	1/1/10/20	1/8/86/115	-
29	CLA	B	808	-	1/1/15/20	11/37/115/115	-
31	II0	c	619	-	-	2/21/67/67	0/2/2/2
29	CLA	F	202	-	1/1/14/20	12/31/109/115	-
29	CLA	1	612	-	1/1/14/20	8/31/109/115	-
29	CLA	b	603	-	1/1/14/20	7/31/109/115	-
30	KC2	5	610	5	-	4/15/71/71	-
29	CLA	A	838	-	1/1/15/20	5/37/115/115	-
38	LMU	4	618	-	-	12/21/61/61	0/2/2/2
29	CLA	2	609	-	1/1/10/20	0/8/86/115	-
29	CLA	3	611	3	1/1/12/20	2/19/97/115	-
29	CLA	B	836	-	1/1/11/20	1/16/94/115	-
29	CLA	B	822	-	1/1/15/20	12/37/115/115	-
29	CLA	B	827	-	1/1/15/20	5/37/115/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	CLA	6	611	-	1/1/13/20	3/25/103/115	-
29	CLA	A	840	-	1/1/13/20	3/25/103/115	-
29	CLA	B	830	-	1/1/14/20	1/31/109/115	-
29	CLA	9	611	-	1/1/10/20	3/8/86/115	-
29	CLA	c	608	27	1/1/14/20	7/31/109/115	-
33	IHT	9	619	-	-	4/25/65/65	0/2/2/2
29	CLA	5	603	-	1/1/11/20	3/13/91/115	-
31	II0	B	843	-	-	2/21/67/67	0/2/2/2
34	LMG	I	102	-	-	22/46/66/70	0/1/1/1
29	CLA	A	815	-	1/1/14/20	2/34/112/115	-
30	KC2	b	609	-	-	2/15/71/71	-
29	CLA	R	202	-	1/1/13/20	10/25/103/115	-
29	CLA	c	604	-	1/1/14/20	3/31/109/115	-
29	CLA	A	825	-	1/1/15/20	9/37/115/115	-
29	CLA	7	607	7	1/1/11/20	2/13/91/115	-
29	CLA	2	604	2	1/1/13/20	1/25/103/115	-
29	CLA	d	606	-	1/1/10/20	1/8/86/115	-
29	CLA	d	604	-	1/1/14/20	4/31/109/115	-
29	CLA	a	601	25	1/1/11/20	4/13/91/115	-
29	CLA	4	604	-	1/1/13/20	9/25/103/115	-
31	II0	d	613	-	-	2/21/67/67	0/2/2/2
31	II0	4	614	-	-	1/21/67/67	0/2/2/2
29	CLA	9	608	9	1/1/13/20	8/25/103/115	-
29	CLA	5	613	5	1/1/10/20	1/8/86/115	-
34	LMG	6	619	-	-	5/27/47/70	0/1/1/1
29	CLA	5	602	5	1/1/13/20	5/25/103/115	-
31	II0	8	611	-	-	2/21/67/67	0/2/2/2
29	CLA	A	832	-	1/1/15/20	6/37/115/115	-
29	CLA	B	839	35	1/1/15/20	5/37/115/115	-
29	CLA	A	802	29	1/1/13/20	5/25/103/115	-
29	CLA	F	204	15	1/1/13/20	5/25/103/115	-
37	8CT	A	846	-	-	4/29/63/63	0/2/2/2
29	CLA	1	604	1	1/1/11/20	1/13/91/115	-
31	II0	5	615	-	-	2/21/67/67	0/2/2/2
29	CLA	A	828	-	1/1/15/20	7/37/115/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	II0	1	614	-	-	1/21/67/67	0/2/2/2
32	II3	1	615	-	-	1/25/67/67	0/2/2/2
29	CLA	2	603	-	1/1/12/20	5/19/97/115	-
29	CLA	9	612	-	1/1/11/20	3/13/91/115	-
31	II0	2	613	-	-	2/21/67/67	0/2/2/2
30	KC2	e	609	-	-	7/15/71/71	-
31	II0	5	616	-	-	0/21/67/67	0/2/2/2
29	CLA	9	601	9	1/1/11/20	5/13/91/115	-
29	CLA	K	101	-	1/1/15/20	8/37/115/115	-
29	CLA	d	603	-	1/1/12/20	2/19/97/115	-
29	CLA	c	612	-	1/1/13/20	3/25/103/115	-
29	CLA	1	607	1	1/1/11/20	0/13/91/115	-
31	II0	4	613	-	-	0/21/67/67	0/2/2/2
33	IHT	c	620	-	-	1/25/65/65	0/2/2/2
31	II0	O	204	-	-	2/21/67/67	0/2/2/2
37	8CT	R	203	-	-	4/29/63/63	0/2/2/2
38	LMU	e	617	-	-	8/17/57/61	0/2/2/2
36	SQD	O	206	-	-	11/24/44/69	0/1/1/1
29	CLA	A	841	-	1/1/15/20	5/37/115/115	-
29	CLA	A	826	-	1/1/15/20	5/37/115/115	-
29	CLA	e	611	-	1/1/15/20	9/37/115/115	-
30	KC2	a	610	-	-	2/15/71/71	-
29	CLA	B	812	-	1/1/15/20	16/37/115/115	-
31	II0	7	614	-	-	1/21/67/67	0/2/2/2
29	CLA	5	604	-	1/1/13/20	7/25/103/115	-
31	II0	8	612	-	-	1/21/67/67	0/2/2/2
30	KC2	e	605	28	-	5/15/71/71	-
29	CLA	B	823	-	1/1/15/20	9/37/115/115	-
29	CLA	7	612	-	1/1/12/20	6/19/97/115	-
29	CLA	d	602	25	1/1/14/20	9/36/114/115	-
37	8CT	A	847	-	-	8/29/63/63	0/2/2/2
29	CLA	B	814	-	1/1/10/20	4/10/88/115	-
41	DGD	B	848	-	-	17/48/88/95	0/2/2/2
29	CLA	Z	305	24	1/1/12/20	1/19/97/115	-
29	CLA	4	607	4	1/1/14/20	5/31/109/115	-
37	8CT	7	617	-	-	9/29/63/63	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	II0	d	614	-	-	2/21/67/67	0/2/2/2
29	CLA	6	608	6	1/1/14/20	5/31/109/115	-
29	CLA	c	605	-	1/1/11/20	5/13/91/115	-
29	CLA	3	604	-	1/1/15/20	4/37/115/115	-
29	CLA	A	801	-	1/1/15/20	6/37/115/115	-
29	CLA	4	602	4	1/1/13/20	2/30/108/115	-
37	8CT	Z	309	-	-	6/29/63/63	0/2/2/2
29	CLA	7	608	7	1/1/13/20	10/25/103/115	-
29	CLA	6	604	-	1/1/14/20	5/31/109/115	-
29	CLA	B	810	-	1/1/14/20	6/31/109/115	-
29	CLA	a	604	25	1/1/14/20	11/31/109/115	-
29	CLA	Z	301	-	1/1/14/20	11/31/109/115	-
31	II0	a	615	-	-	1/21/67/67	0/2/2/2
33	IHT	6	617	-	-	3/25/65/65	0/2/2/2
31	II0	b	612	-	-	1/21/67/67	0/2/2/2
41	DGD	Z	303	-	-	27/49/89/95	0/2/2/2
33	IHT	8	609	-	-	1/25/65/65	0/2/2/2
29	CLA	A	822	-	1/1/15/20	8/37/115/115	-
35	LHG	A	850	-	-	22/53/53/53	-
29	CLA	c	606	-	1/1/15/20	14/37/115/115	-
32	II3	e	613	-	-	3/25/67/67	0/2/2/2
29	CLA	2	602	2	1/1/13/20	12/30/108/115	-
35	LHG	6	618	29	-	15/39/39/53	-
29	CLA	e	604	-	1/1/14/20	3/31/109/115	-
30	KC2	6	613	6	-	7/15/71/71	-
29	CLA	F	203	-	1/1/11/20	3/13/91/115	-
29	CLA	b	604	-	1/1/15/20	17/37/115/115	-
29	CLA	e	603	28	1/1/12/20	4/19/97/115	-
31	II0	b	614	-	-	1/21/67/67	0/2/2/2
29	CLA	1	602	1	1/1/13/20	5/30/108/115	-
38	LMU	O	207	-	-	9/16/56/61	0/2/2/2
31	II0	d	615	-	-	2/21/67/67	0/2/2/2
31	II0	c	618	-	-	2/21/67/67	0/2/2/2
29	CLA	B	815	-	1/1/15/20	9/37/115/115	-
29	CLA	8	603	-	1/1/15/20	9/37/115/115	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
29	CLA	9	606	-	1/1/14/20	11/36/114/115	-
34	LMG	3	620	-	-	12/27/47/70	0/1/1/1
35	LHG	4	619	-	-	17/49/49/53	-
37	8CT	4	616	-	-	5/29/63/63	0/2/2/2
29	CLA	c	601	27	1/1/11/20	2/13/91/115	-
33	IHT	2	616	-	-	2/25/65/65	0/2/2/2
29	CLA	A	834	10	1/1/13/20	7/25/103/115	-
29	CLA	6	612	-	1/1/11/20	4/13/91/115	-
29	CLA	9	609	-	1/1/10/20	3/8/86/115	-
29	CLA	B	802	-	1/1/15/20	6/37/115/115	-
29	CLA	a	612	-	1/1/15/20	5/37/115/115	-
31	II0	9	616	-	-	2/21/67/67	0/2/2/2
31	II0	5	614	-	-	2/21/67/67	0/2/2/2
29	CLA	3	601	3	1/1/11/20	3/13/91/115	-
29	CLA	A	810	-	1/1/15/20	19/37/115/115	-
37	8CT	B	846	-	-	8/29/63/63	0/2/2/2
31	II0	8	610	-	-	2/21/67/67	0/2/2/2
29	CLA	8	602	8	1/1/11/20	4/13/91/115	-
37	8CT	B	850	-	-	4/29/63/63	0/2/2/2
39	PQN	A	849	-	-	11/23/43/43	0/2/2/2
34	LMG	3	618	-	-	10/25/45/70	0/1/1/1

The worst 5 of 2527 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A	811	CLA	C1B-NB	10.86	1.44	1.35
29	1	611	CLA	C1B-NB	10.81	1.44	1.35
29	a	604	CLA	C1B-NB	10.79	1.44	1.35
29	1	608	CLA	C1B-NB	10.77	1.44	1.35
29	1	601	CLA	C1B-NB	10.76	1.44	1.35

The worst 5 of 2848 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	8	609	IHT	C02-C07-C10	-10.25	108.18	122.61
33	9	619	IHT	C02-C07-C10	-10.19	108.27	122.61
33	d	617	IHT	C02-C07-C10	-9.38	109.40	122.61

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	5	618	IHT	C02-C07-C10	-8.97	109.98	122.61
33	L	205	IHT	C02-C07-C10	-8.87	110.12	122.61

5 of 254 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
29	1	601	CLA	ND
29	1	602	CLA	ND
29	1	603	CLA	ND
29	1	604	CLA	ND
29	1	605	CLA	ND

5 of 2392 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
29	1	603	CLA	C1A-C2A-CAA-CBA
29	2	601	CLA	C3A-C2A-CAA-CBA
29	2	601	CLA	CHA-CBD-CGD-O1D
29	2	601	CLA	CHA-CBD-CGD-O2D
29	2	602	CLA	C3A-C2A-CAA-CBA

There are no ring outliers.

60 monomers are involved in 68 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
29	8	615	CLA	1	0
40	C	102	SF4	1	0
29	8	606	CLA	1	0
29	A	837	CLA	1	0
29	8	605	CLA	1	0
29	A	836	CLA	3	0
29	5	608	CLA	1	0
29	L	201	CLA	1	0
29	5	612	CLA	1	0
29	B	832	CLA	2	0
37	F	201	8CT	1	0
31	5	620	II0	1	0
29	A	812	CLA	1	0
29	L	202	CLA	1	0
35	B	849	LHG	1	0
29	1	601	CLA	1	0
29	A	844	CLA	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
29	9	604	CLA	2	0
38	J	104	LMU	1	0
38	7	620	LMU	1	0
29	O	201	CLA	1	0
29	A	809	CLA	1	0
29	B	818	CLA	1	0
29	B	803	CLA	1	0
29	B	816	CLA	1	0
29	A	823	CLA	1	0
29	Z	306	CLA	1	0
31	2	614	II0	1	0
29	5	609	CLA	1	0
29	A	824	CLA	1	0
29	B	834	CLA	3	0
29	A	821	CLA	1	0
29	9	607	CLA	1	0
29	A	811	CLA	1	0
31	3	614	II0	1	0
29	A	842	CLA	1	0
29	8	608	CLA	1	0
29	O	203	CLA	2	0
29	B	808	CLA	1	0
38	4	618	LMU	1	0
29	B	822	CLA	1	0
29	A	840	CLA	1	0
33	9	619	IHT	1	0
29	9	608	CLA	1	0
29	B	839	CLA	1	0
31	1	614	II0	2	0
31	4	613	II0	1	0
29	A	826	CLA	2	0
29	5	604	CLA	1	0
29	6	608	CLA	1	0
29	A	801	CLA	1	0
41	Z	303	DGD	1	0
38	O	207	LMU	4	0
29	8	603	CLA	1	0
29	9	606	CLA	1	0
29	A	834	CLA	1	0
29	B	802	CLA	1	0
29	A	810	CLA	2	0
31	8	610	II0	1	0

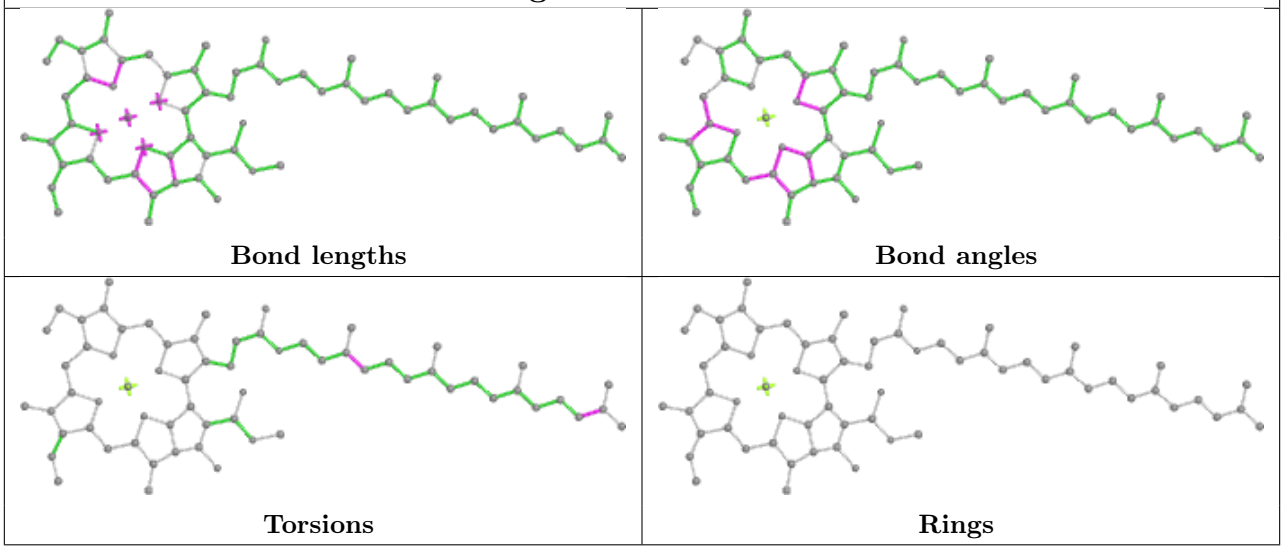
Continued on next page...

Continued from previous page...

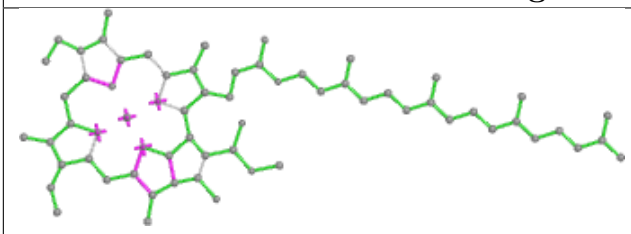
Mol	Chain	Res	Type	Clashes	Symm-Clashes
29	8	602	CLA	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

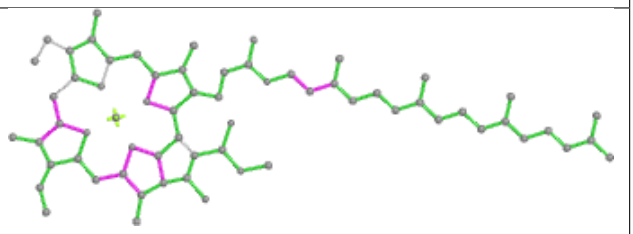
Ligand CLA a 607



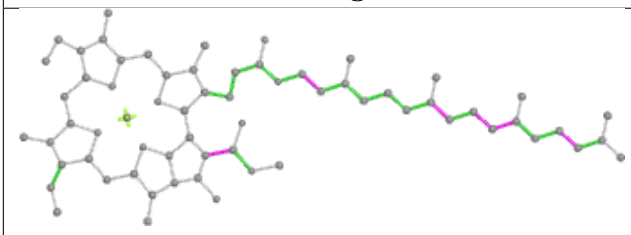
Ligand CLA 8 615



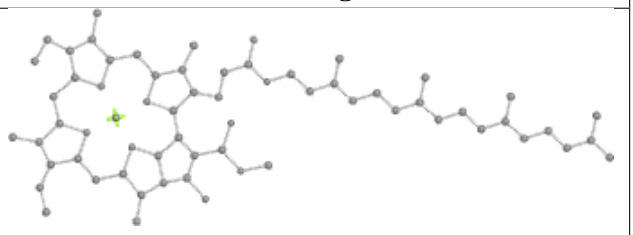
Bond lengths



Bond angles

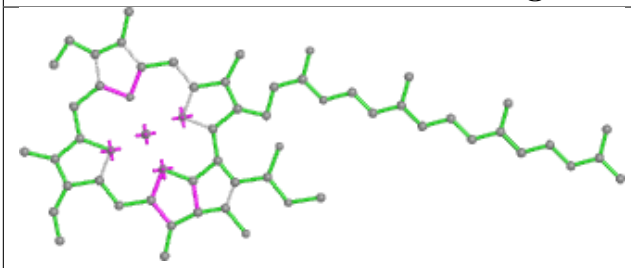


Torsions

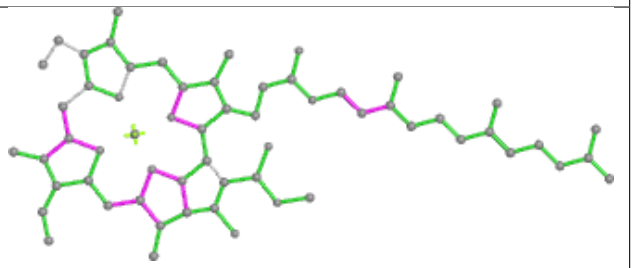


Rings

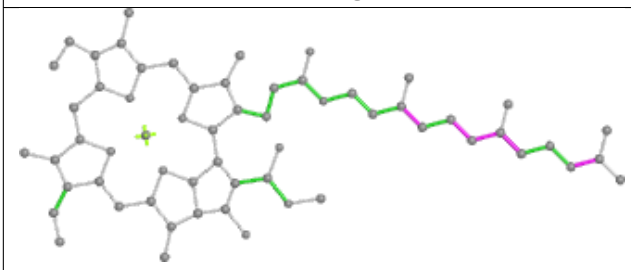
Ligand CLA L 203



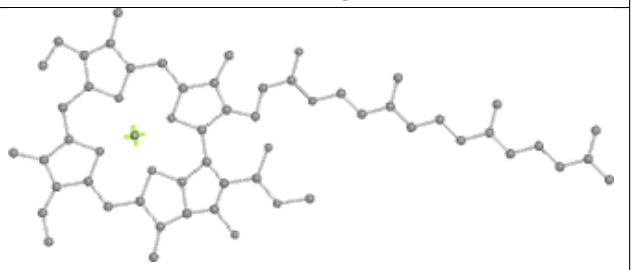
Bond lengths



Bond angles

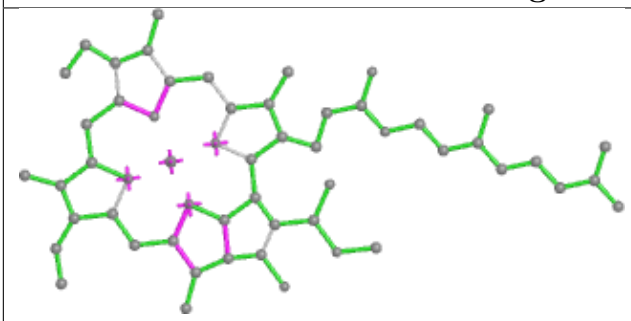


Torsions

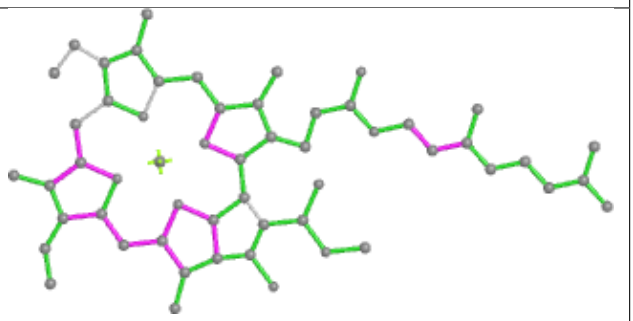


Rings

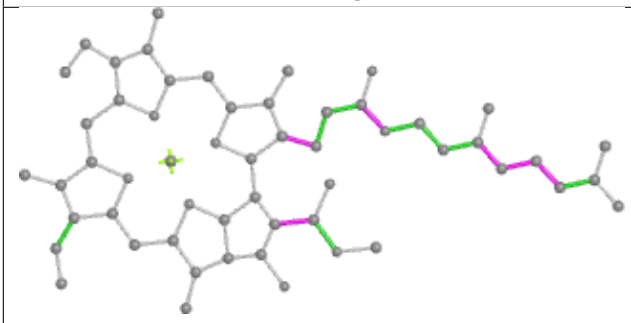
Ligand CLA e 602



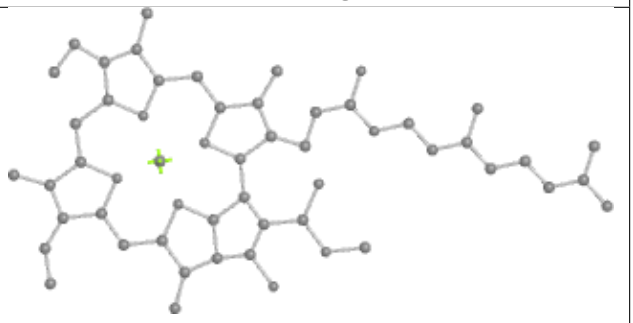
Bond lengths



Bond angles

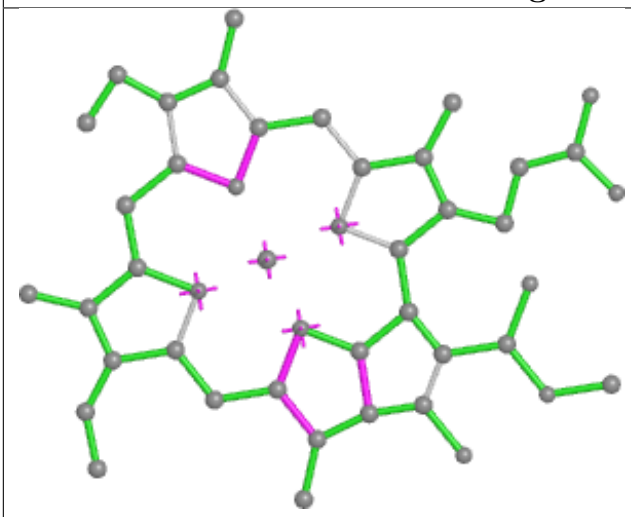


Torsions

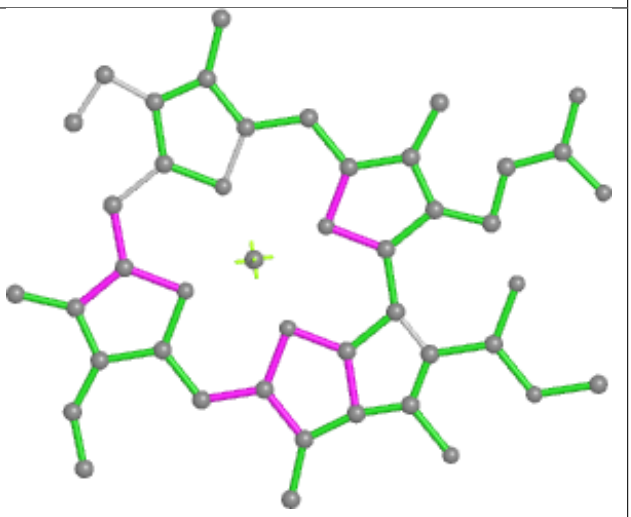


Rings

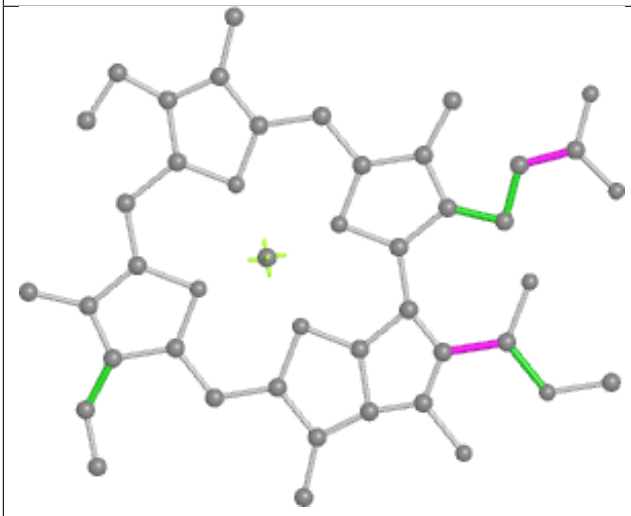
Ligand CLA e 607



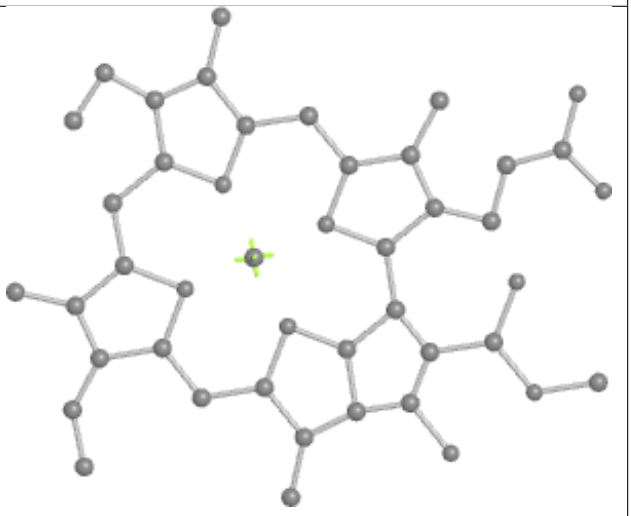
Bond lengths



Bond angles

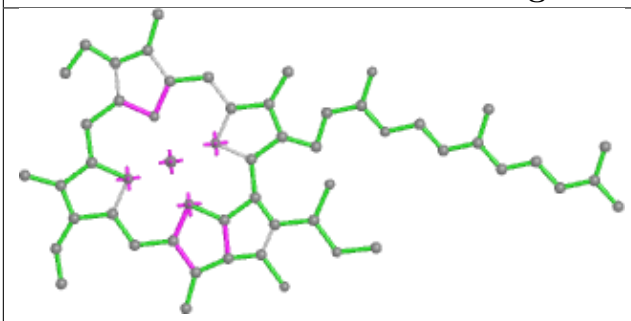


Torsions

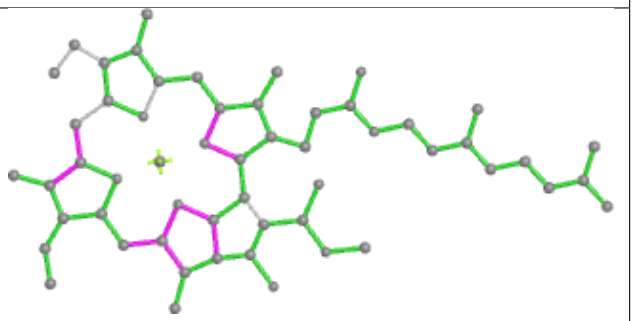


Rings

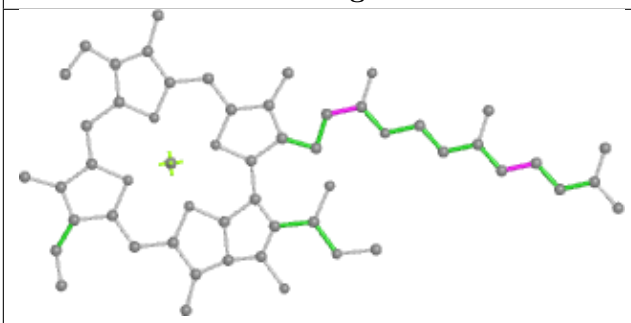
Ligand CLA 3 605



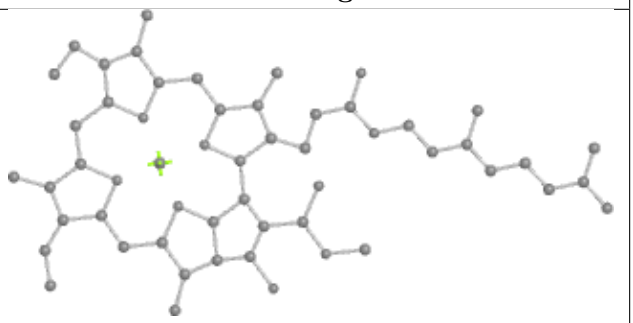
Bond lengths



Bond angles

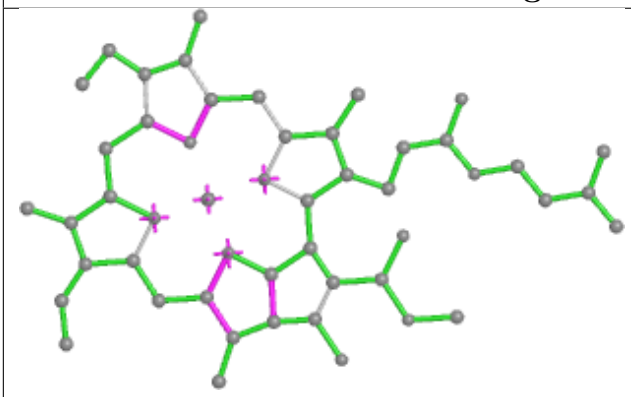


Torsions

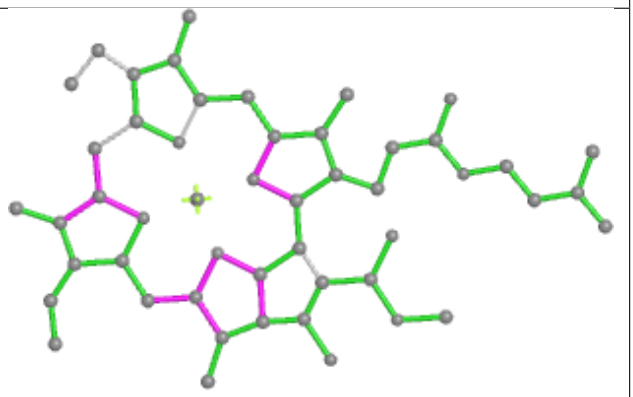


Rings

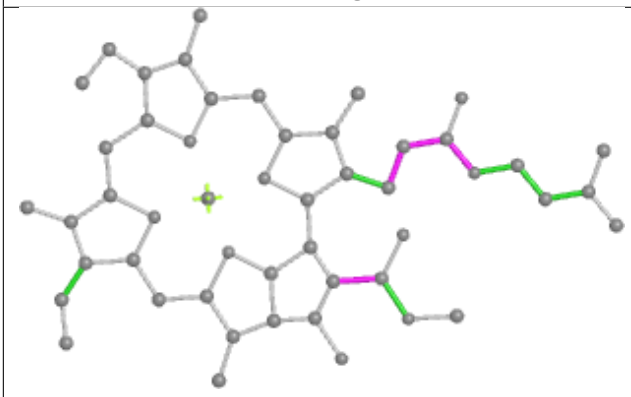
Ligand CLA A 829



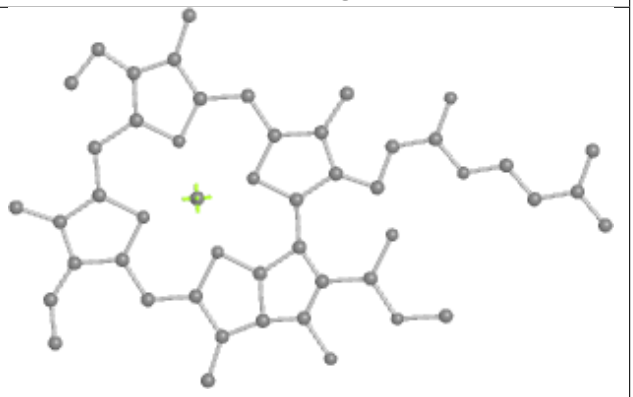
Bond lengths



Bond angles

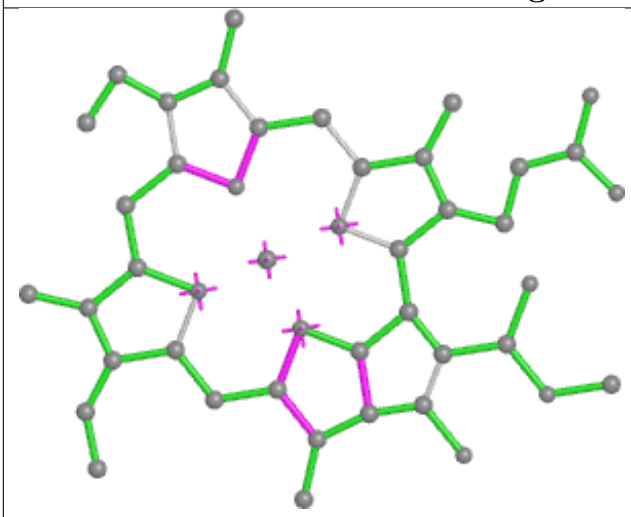


Torsions

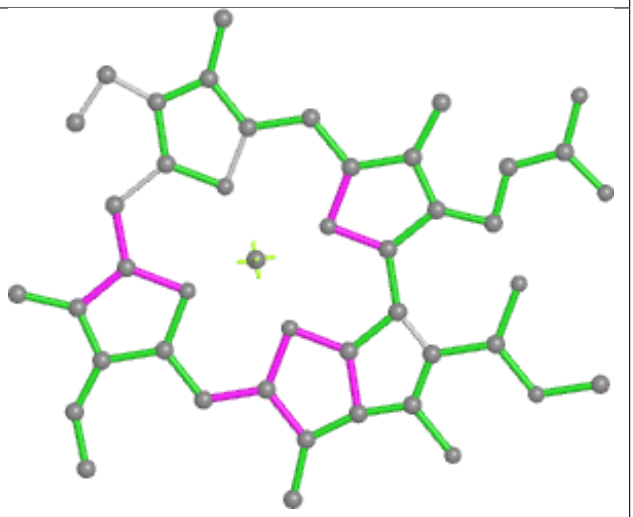


Rings

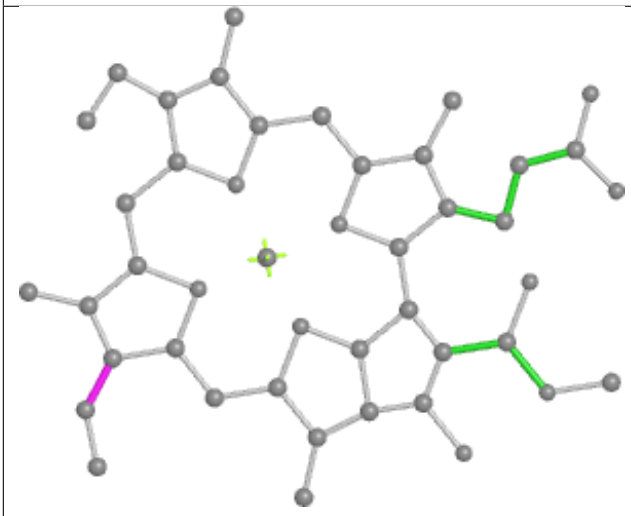
Ligand CLA 6 601



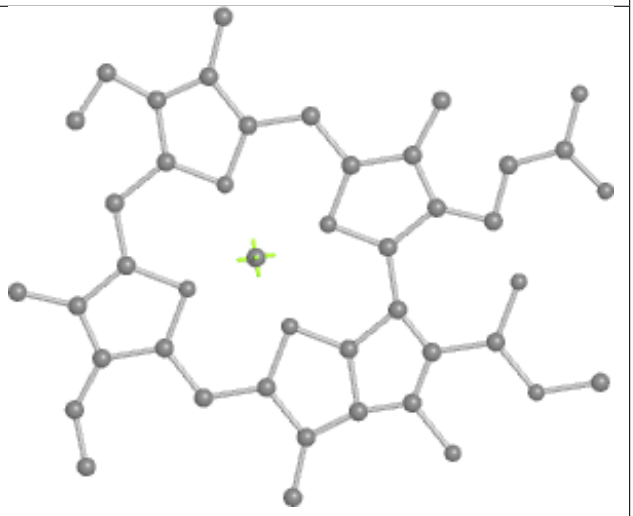
Bond lengths



Bond angles

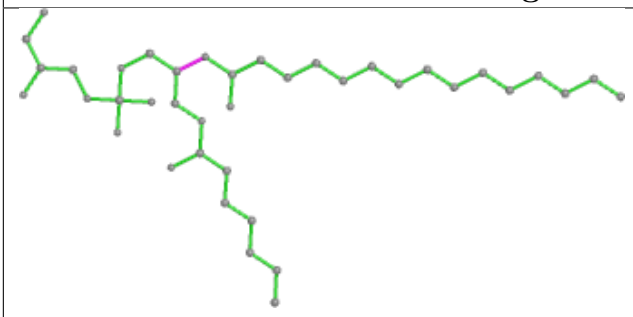


Torsions

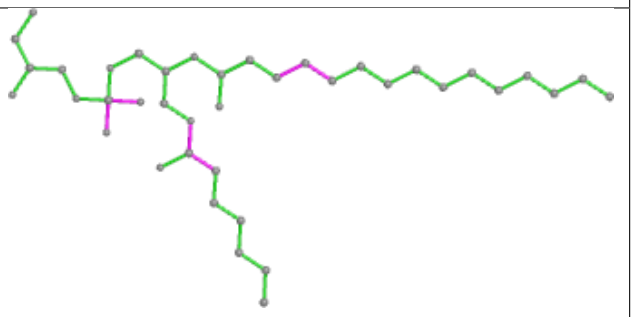


Rings

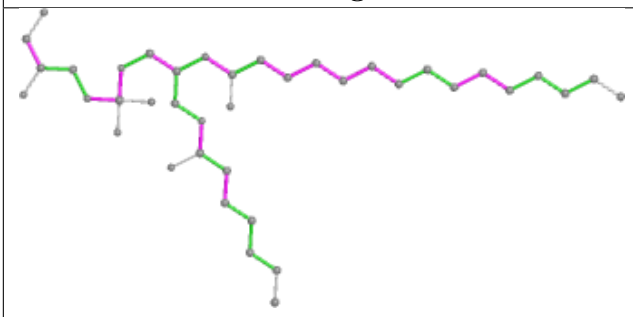
Ligand LHG A 851



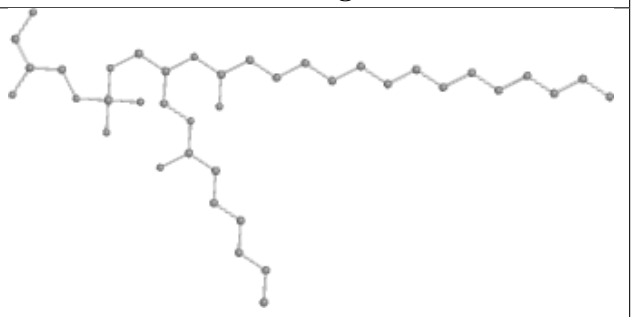
Bond lengths



Bond angles

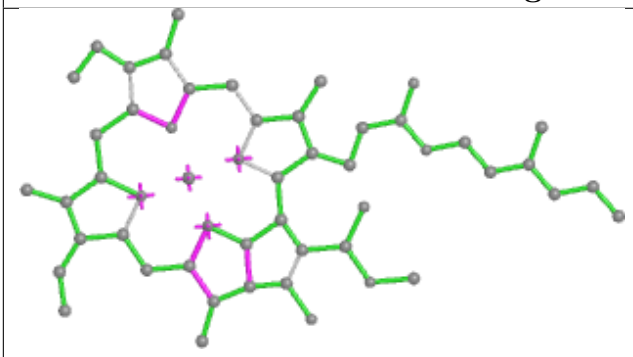


Torsions

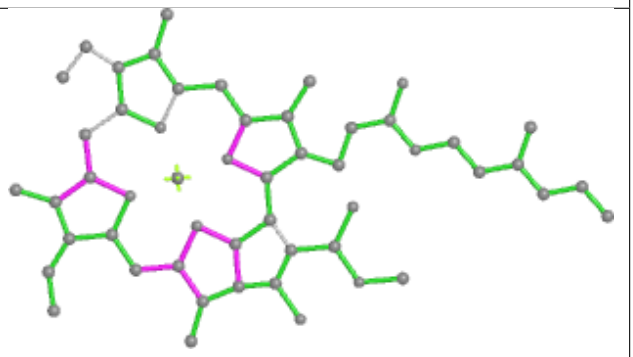


Rings

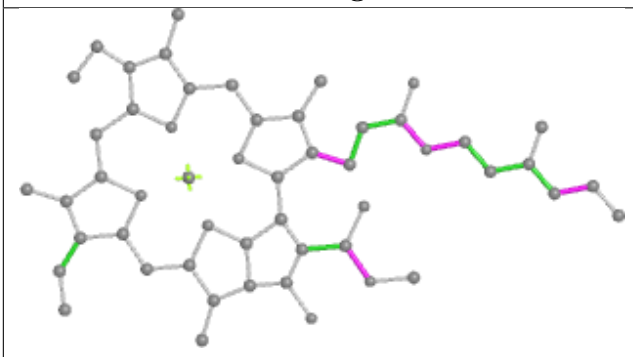
Ligand CLA B 841



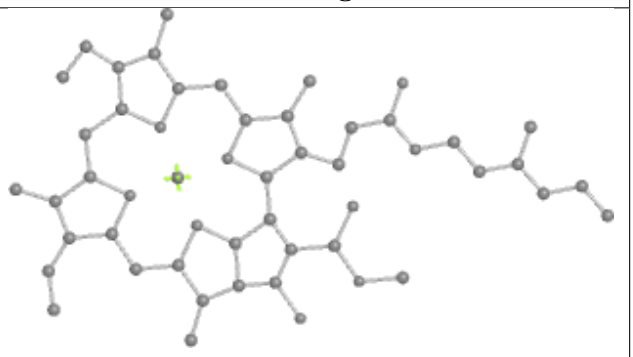
Bond lengths



Bond angles

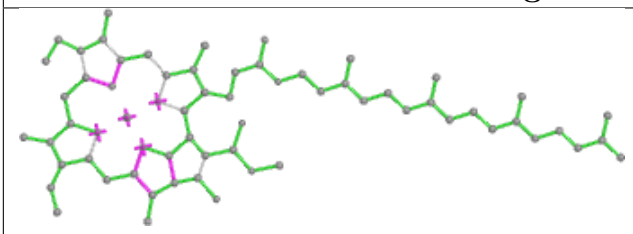


Torsions

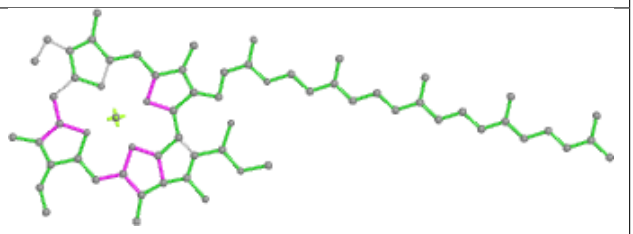


Rings

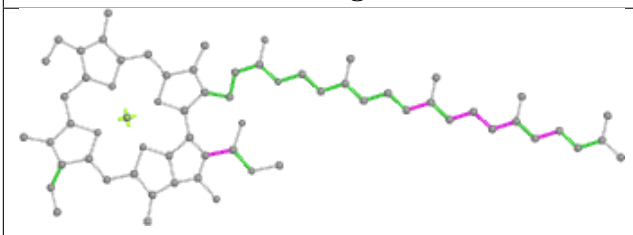
Ligand CLA A 818



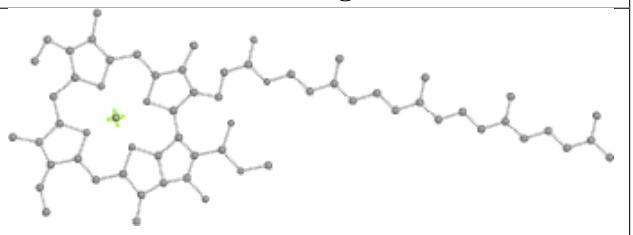
Bond lengths



Bond angles

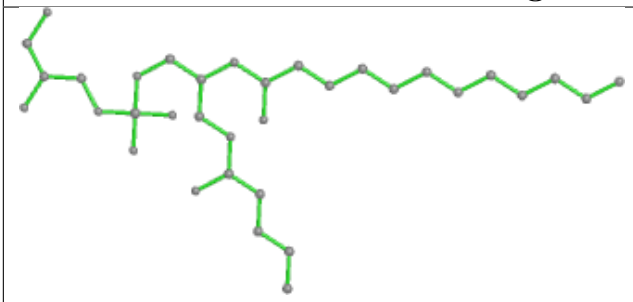


Torsions

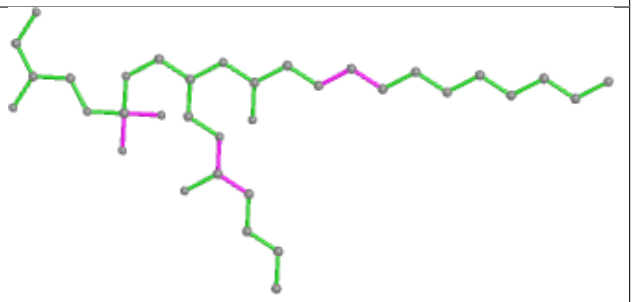


Rings

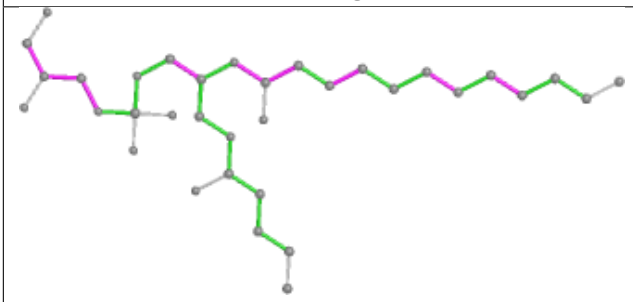
Ligand LHG 3 622



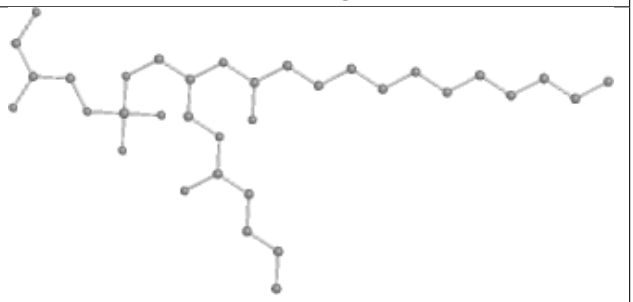
Bond lengths



Bond angles

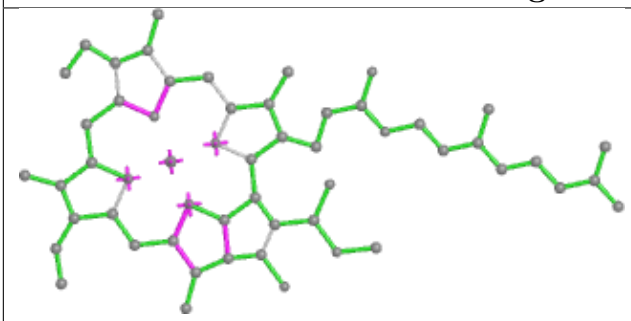


Torsions

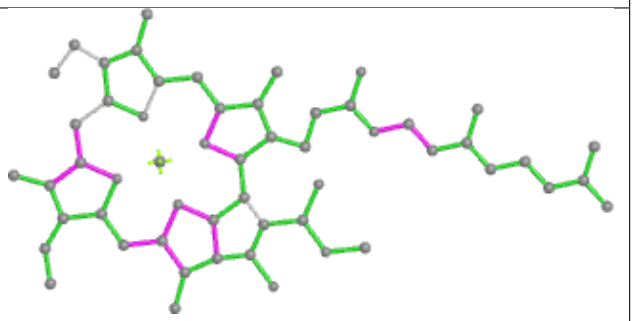


Rings

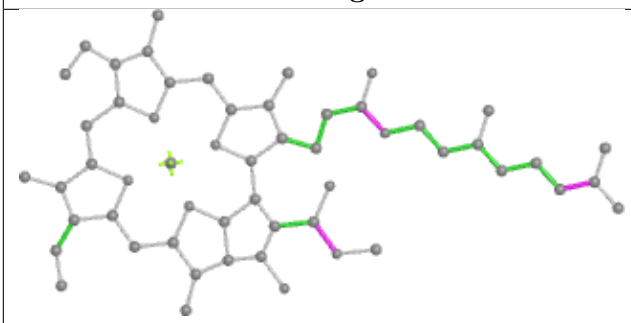
Ligand CLA 8 606



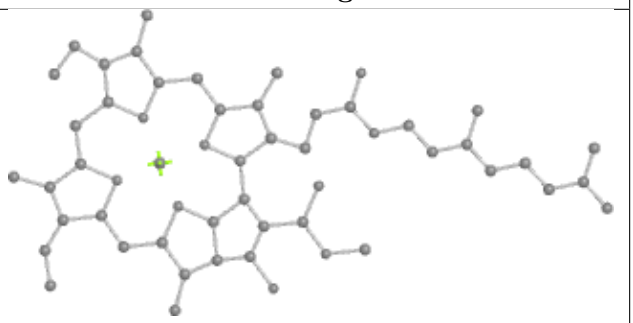
Bond lengths



Bond angles

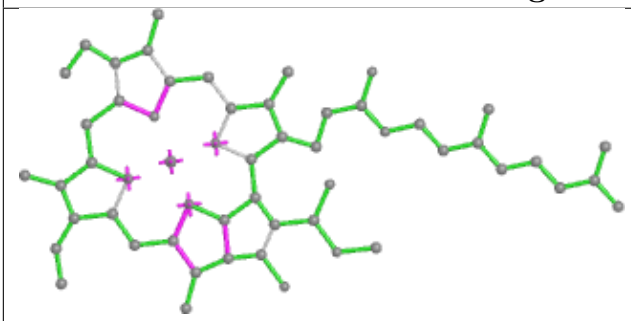


Torsions

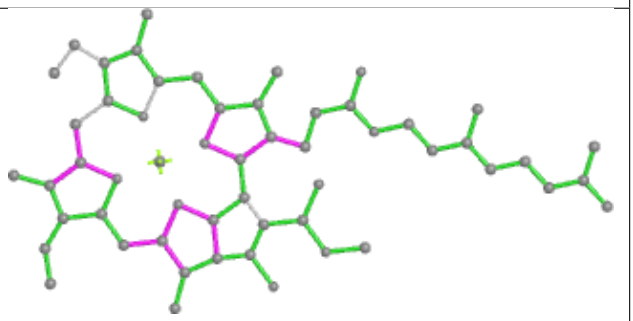


Rings

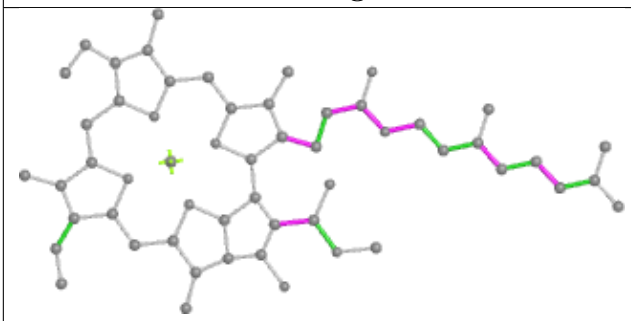
Ligand CLA a 605



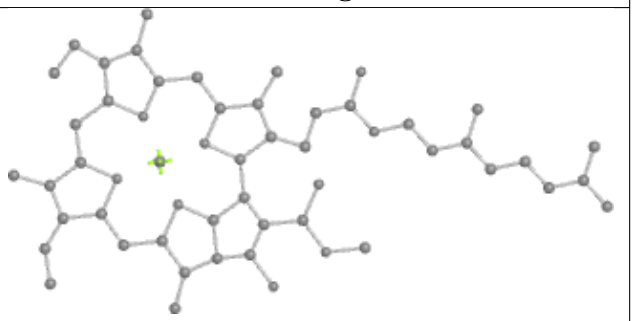
Bond lengths



Bond angles

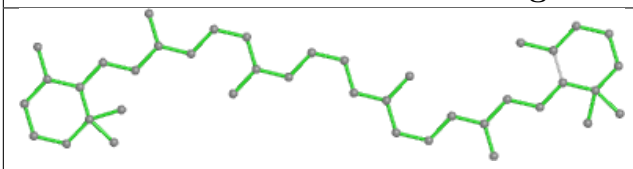


Torsions

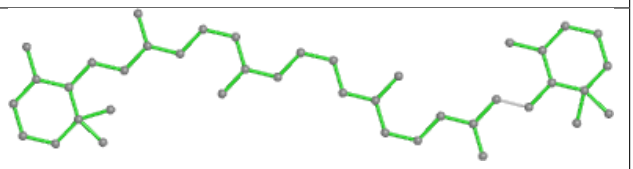


Rings

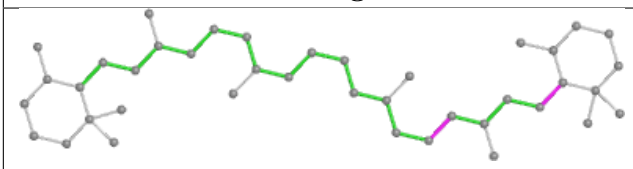
Ligand 8CT L 206



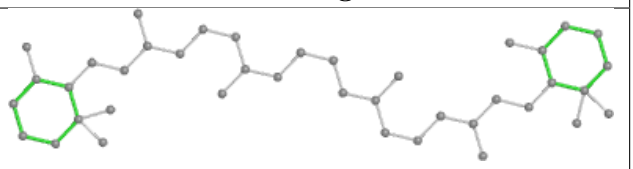
Bond lengths



Bond angles

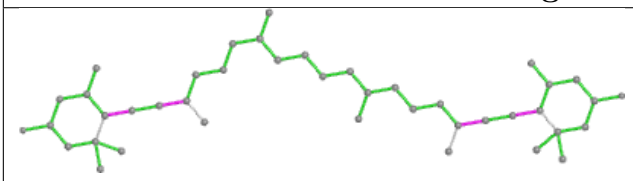


Torsions

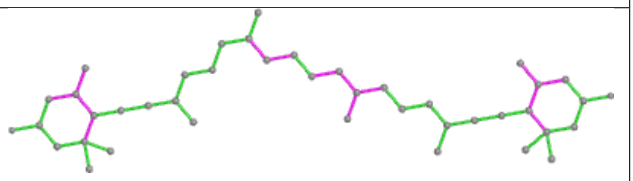


Rings

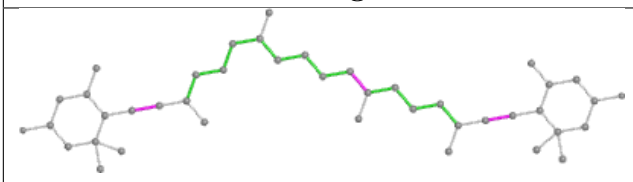
Ligand II0 d 616



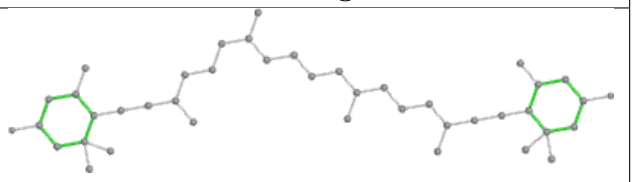
Bond lengths



Bond angles

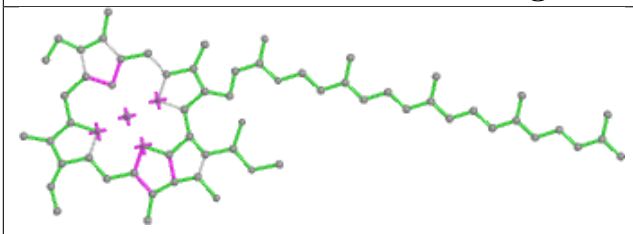


Torsions

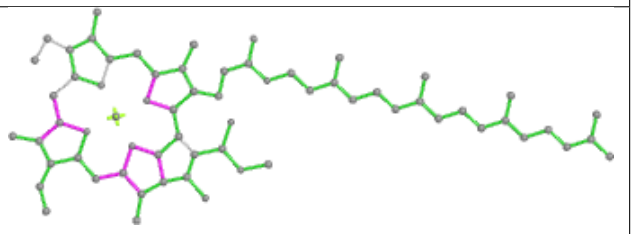


Rings

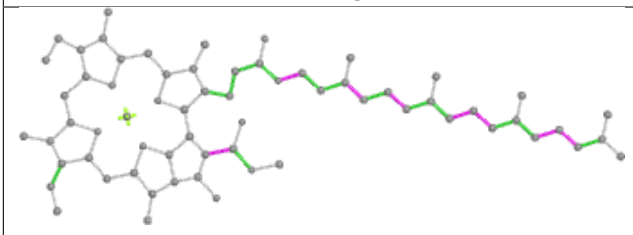
Ligand CLA c 602



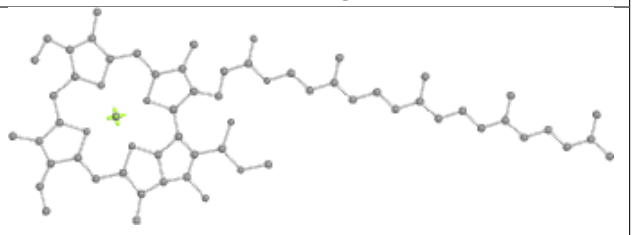
Bond lengths



Bond angles

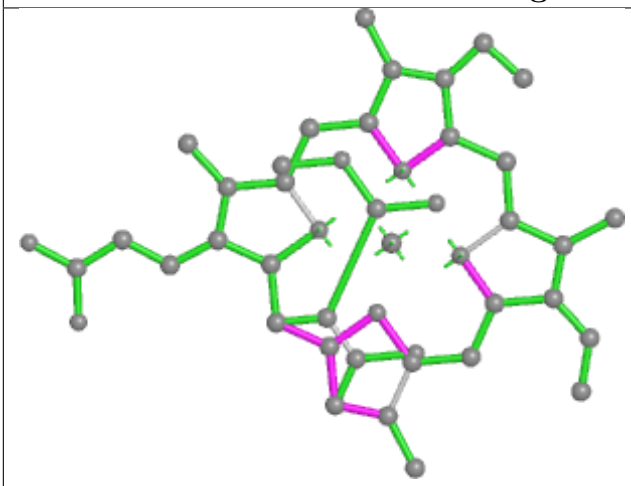


Torsions

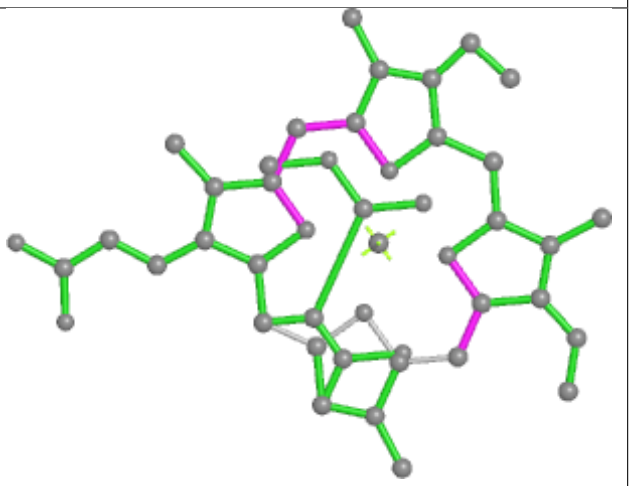


Rings

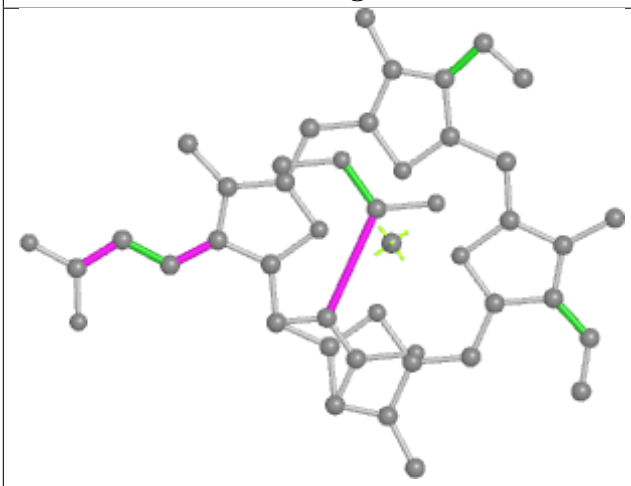
Ligand KC2 7 610



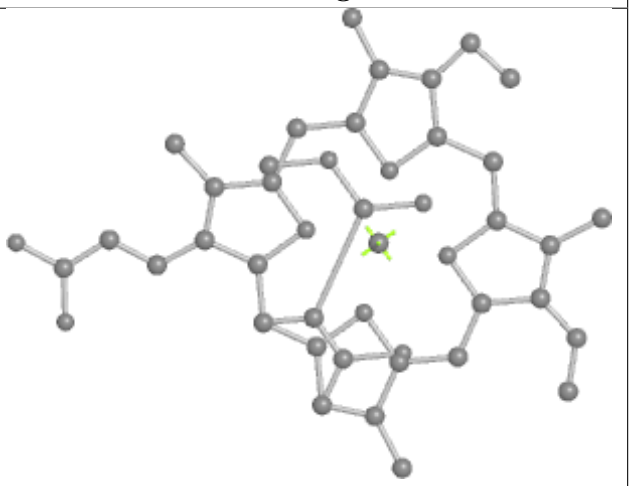
Bond lengths



Bond angles

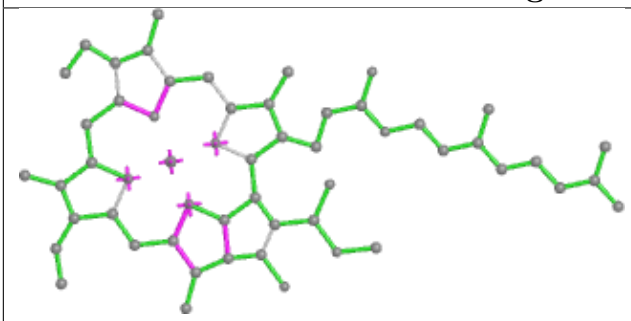


Torsions

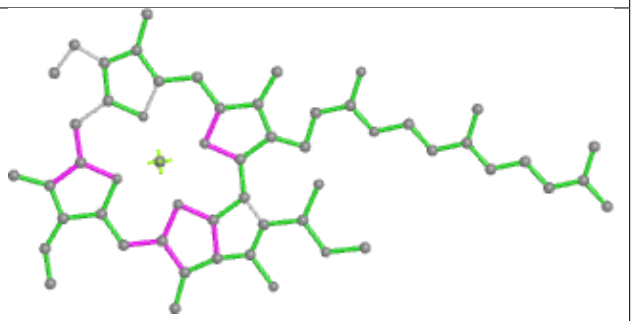


Rings

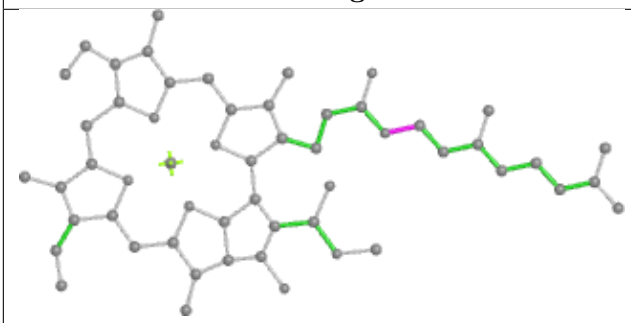
Ligand CLA Z 304



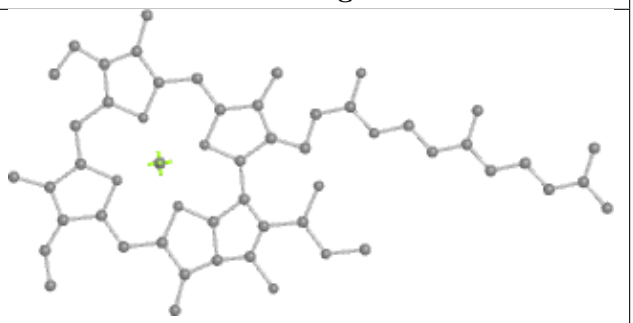
Bond lengths



Bond angles

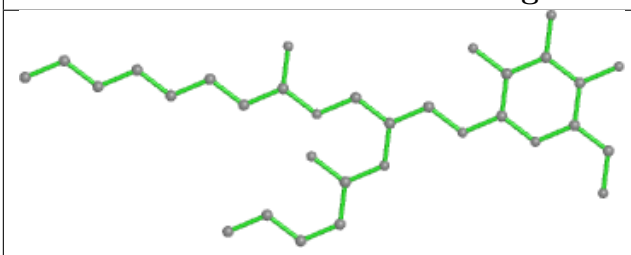


Torsions

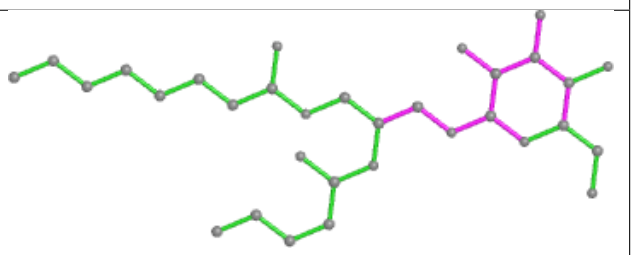


Rings

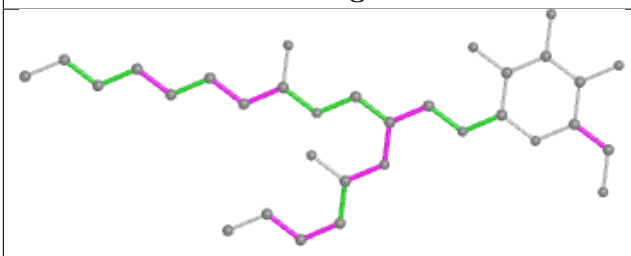
Ligand LMG F 205



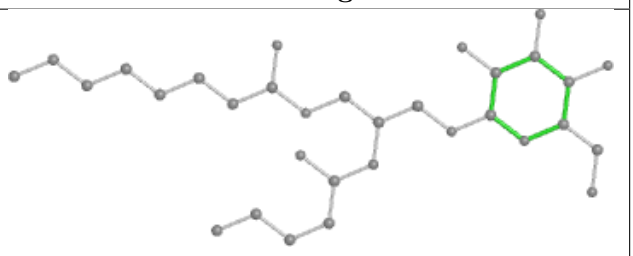
Bond lengths



Bond angles

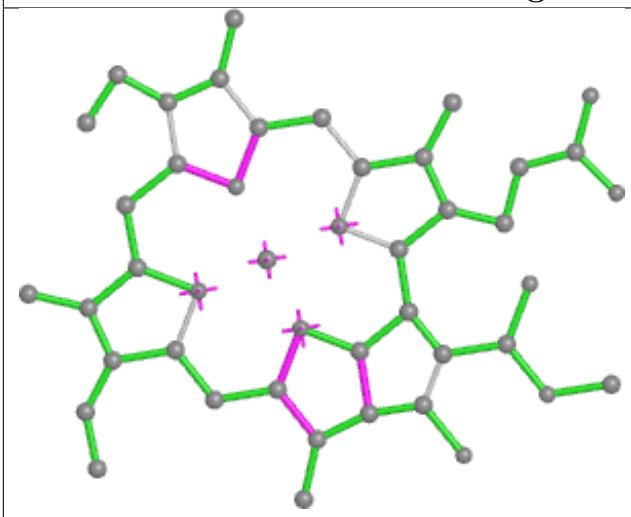


Torsions

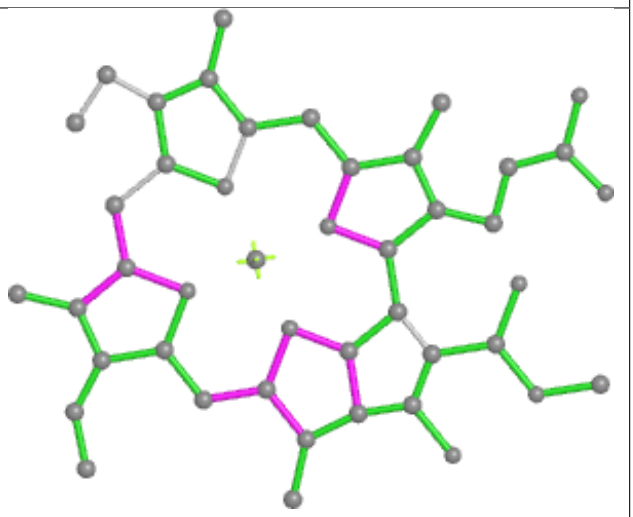


Rings

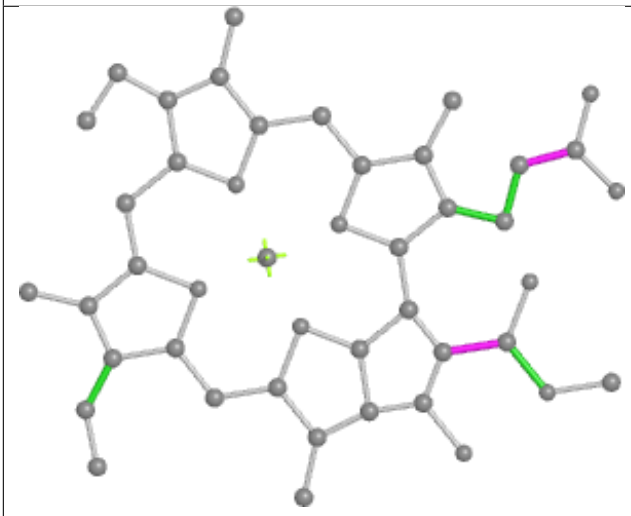
Ligand CLA b 601



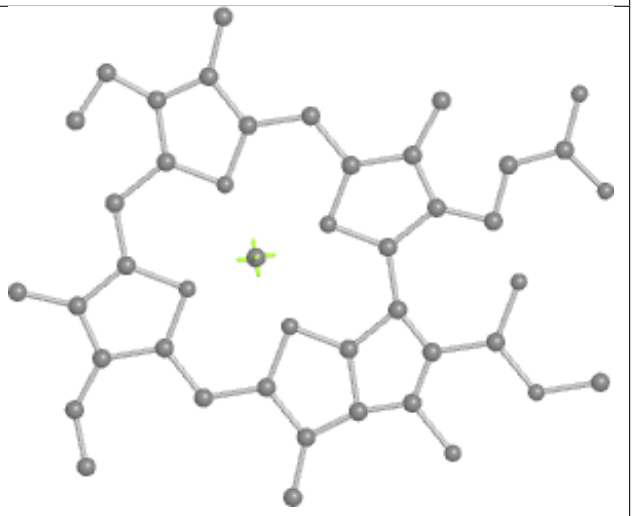
Bond lengths



Bond angles

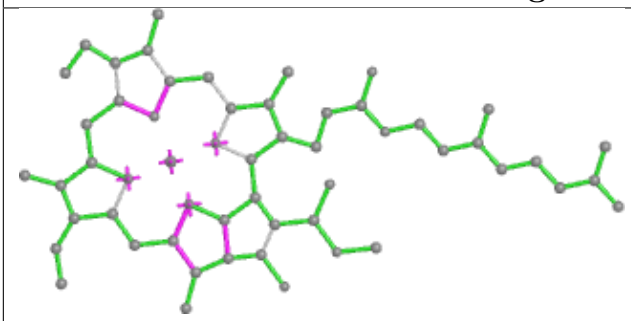


Torsions

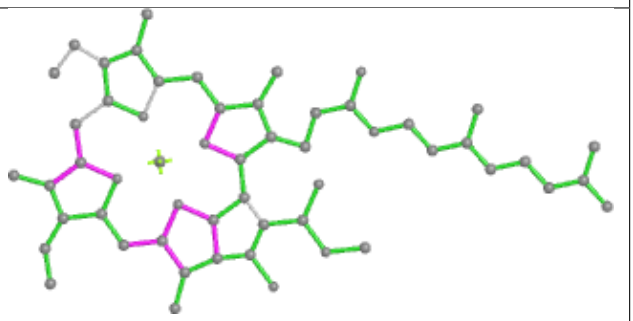


Rings

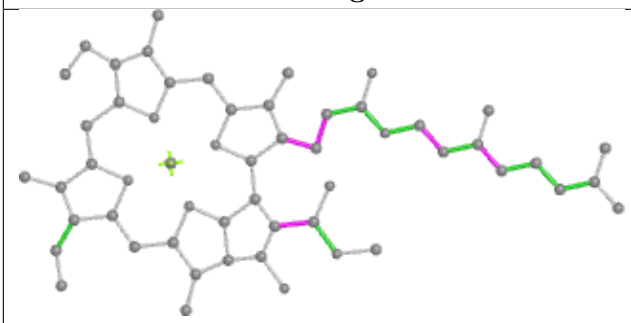
Ligand CLA 6 606



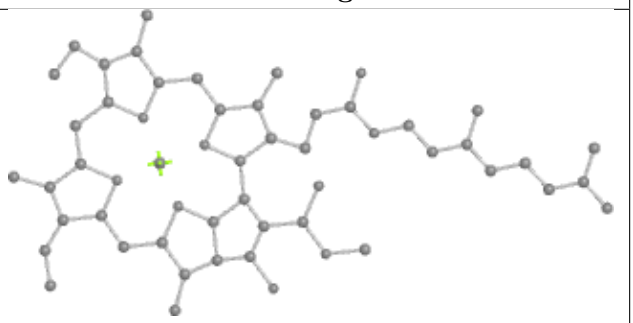
Bond lengths



Bond angles

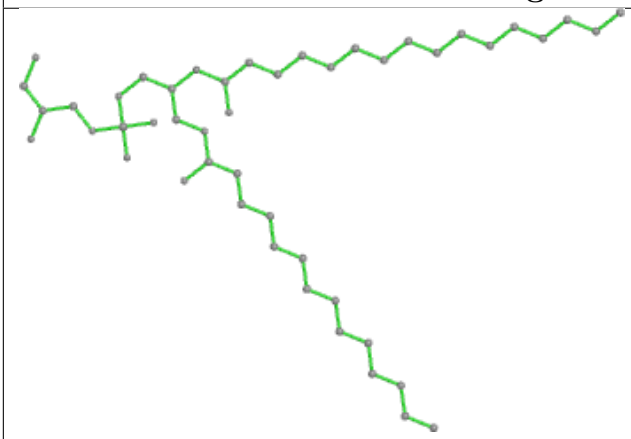


Torsions

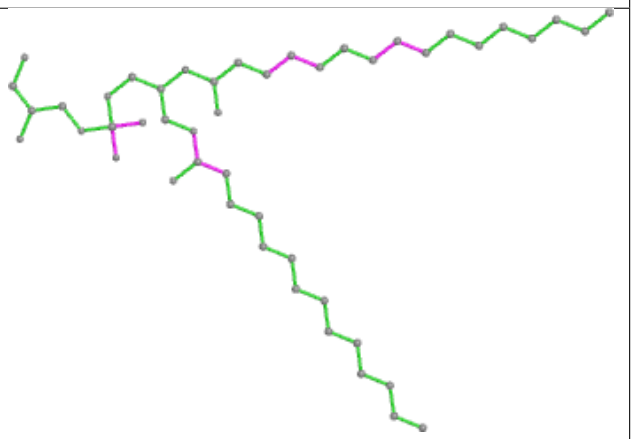


Rings

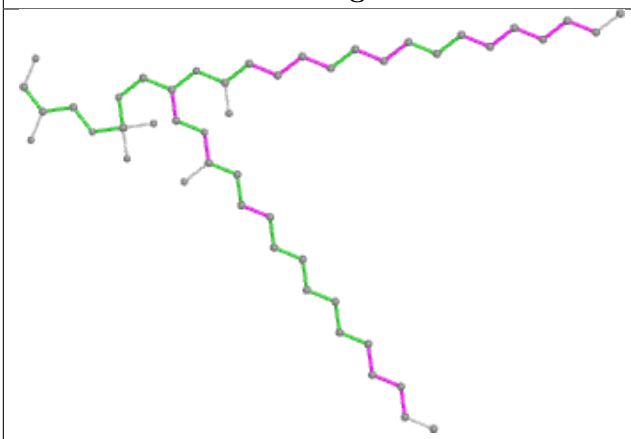
Ligand LHG 4 617



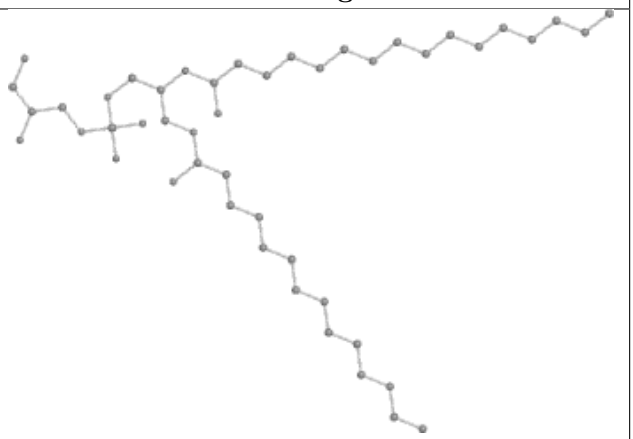
Bond lengths



Bond angles

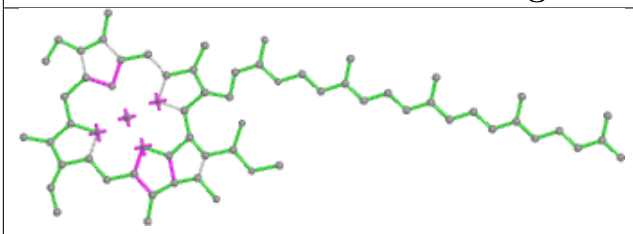


Torsions

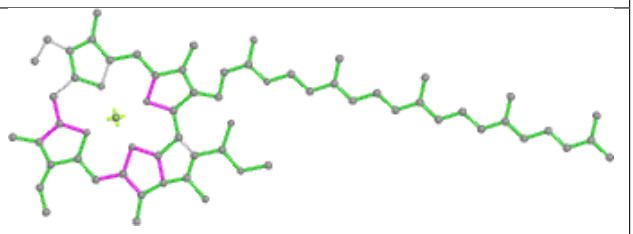


Rings

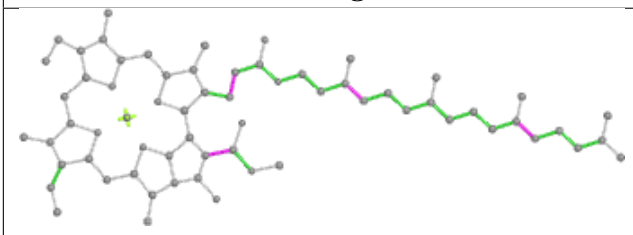
Ligand CLA a 606



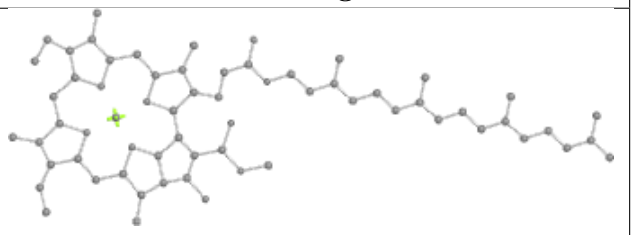
Bond lengths



Bond angles

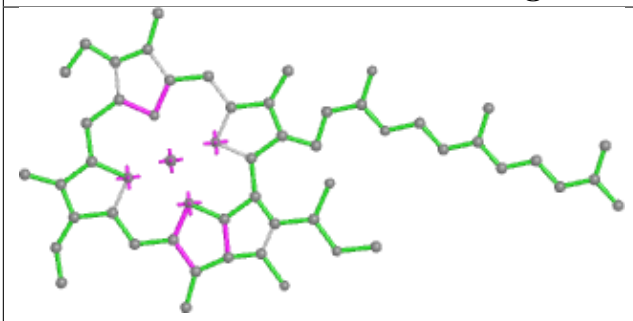


Torsions

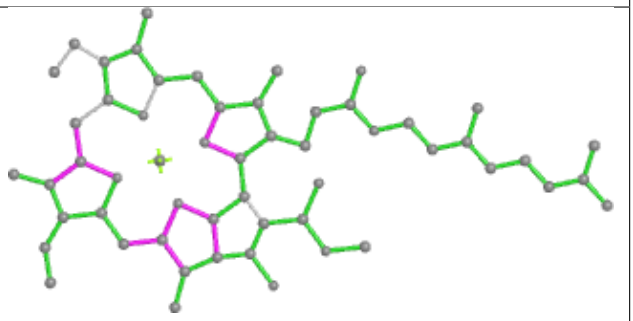


Rings

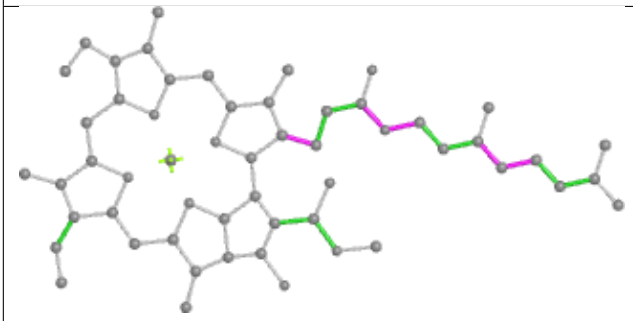
Ligand CLA B 811



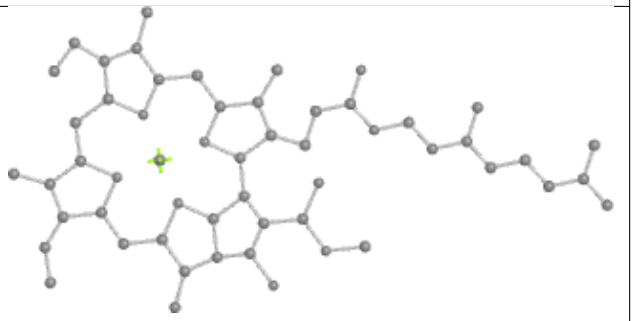
Bond lengths



Bond angles

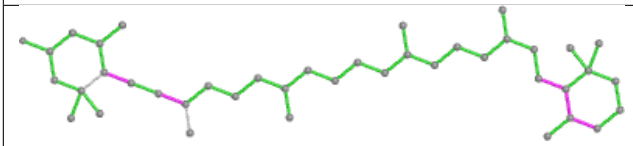


Torsions

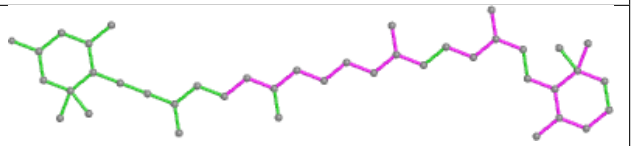


Rings

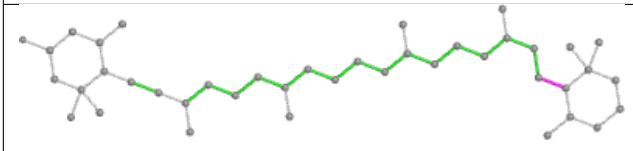
Ligand IHT 5 618



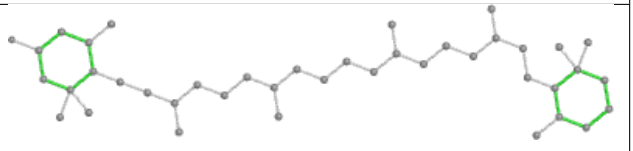
Bond lengths



Bond angles

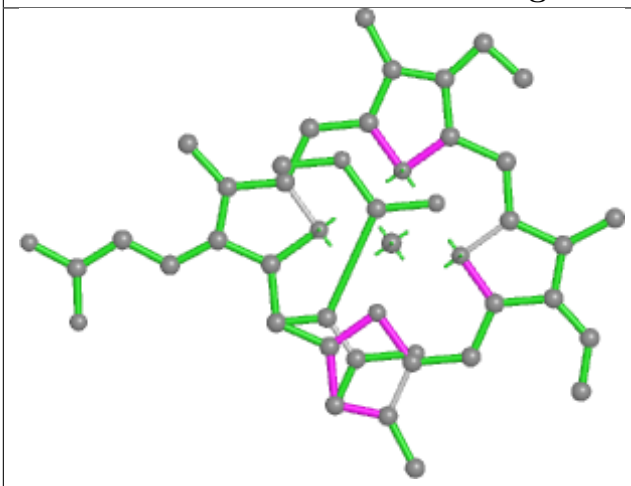


Torsions

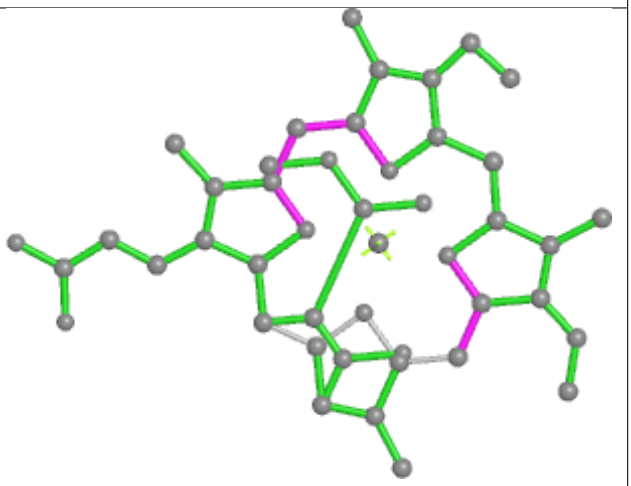


Rings

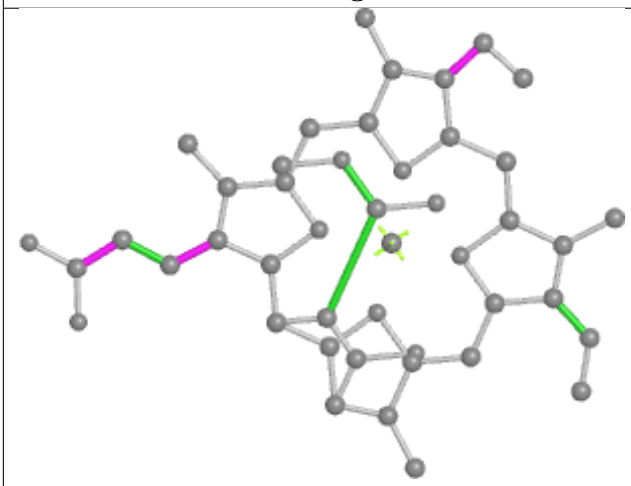
Ligand KC2 d 610



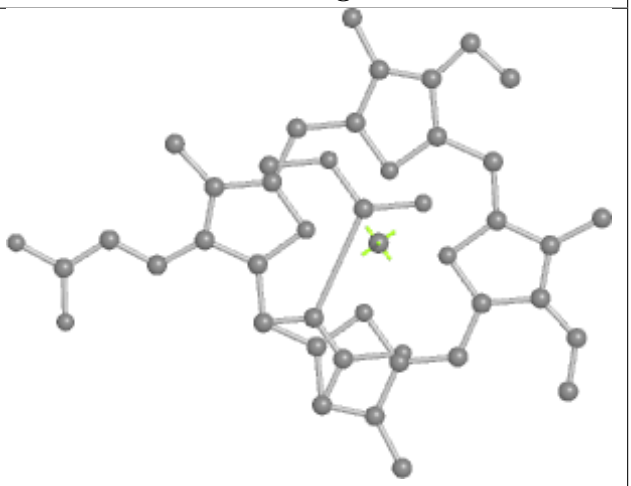
Bond lengths



Bond angles

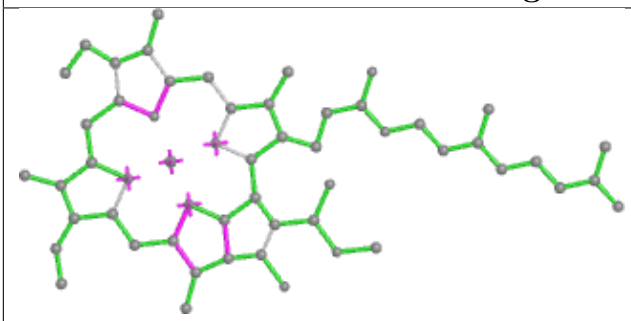


Torsions

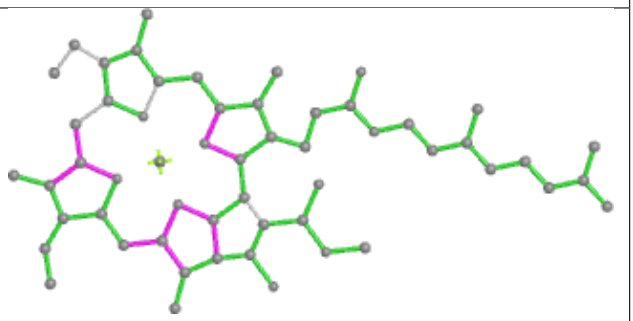


Rings

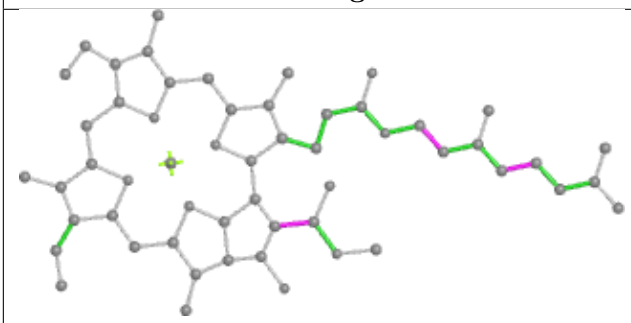
Ligand CLA K 102



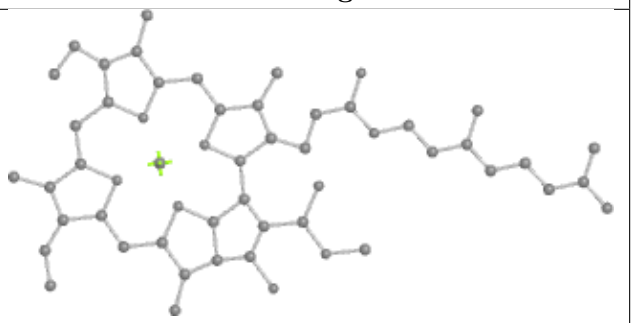
Bond lengths



Bond angles

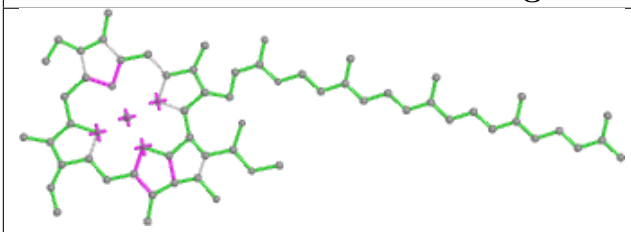


Torsions

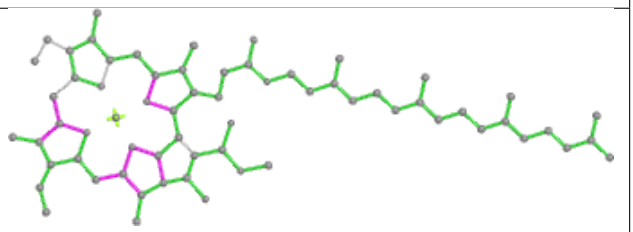


Rings

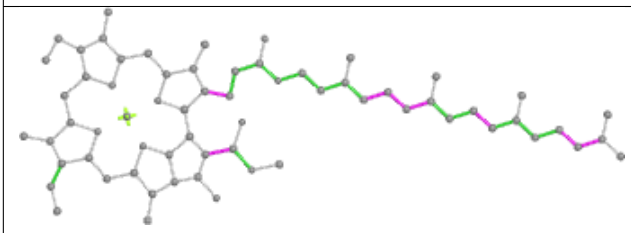
Ligand CLA A 837



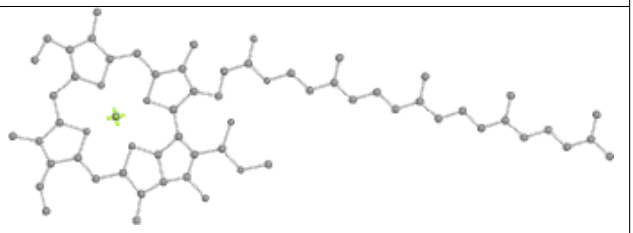
Bond lengths



Bond angles

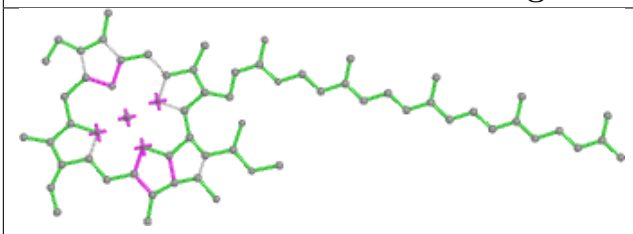


Torsions

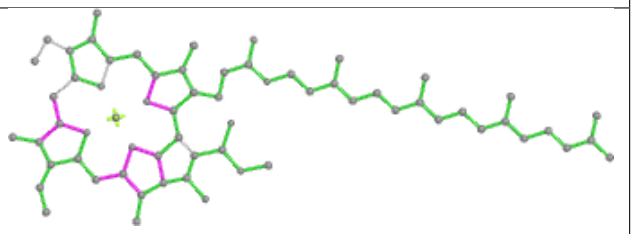


Rings

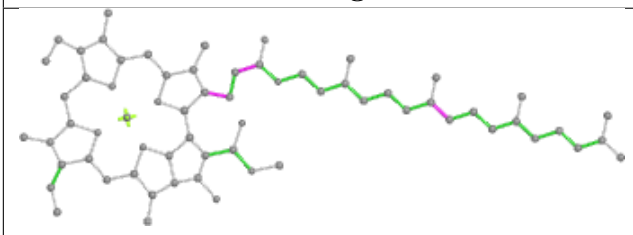
Ligand CLA b 606



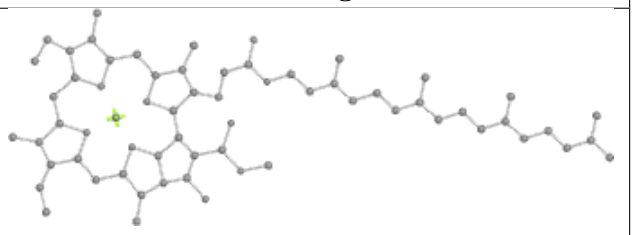
Bond lengths



Bond angles

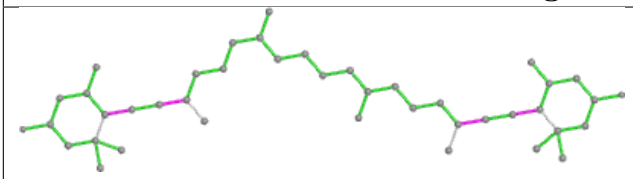


Torsions

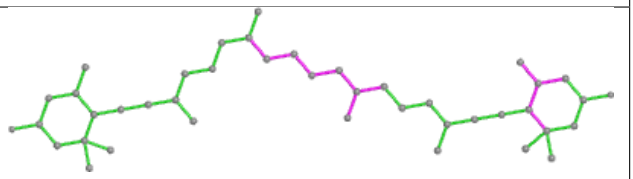


Rings

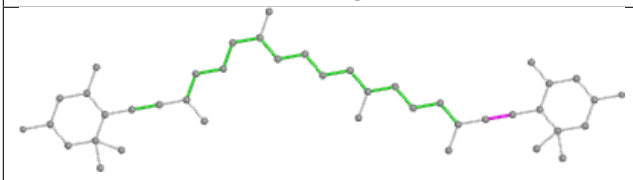
Ligand II0 3 615



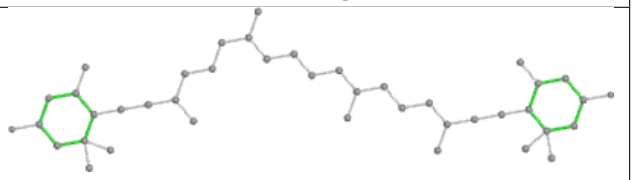
Bond lengths



Bond angles

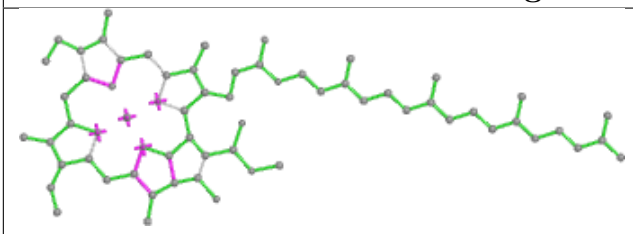


Torsions

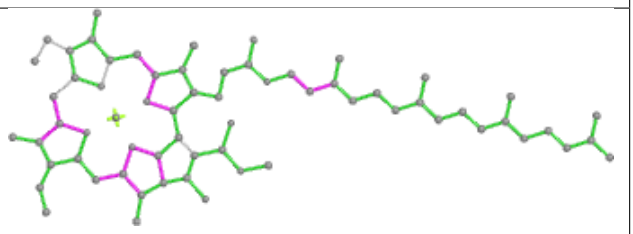


Rings

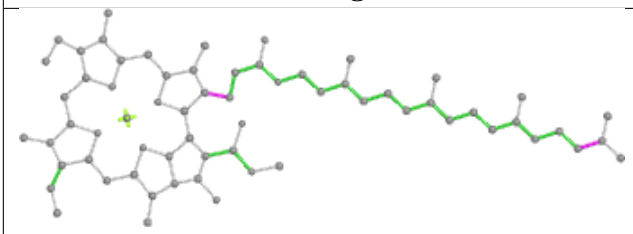
Ligand CLA B 825



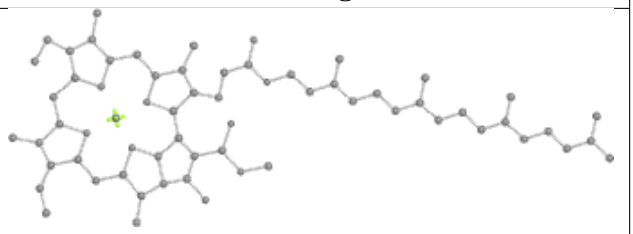
Bond lengths



Bond angles

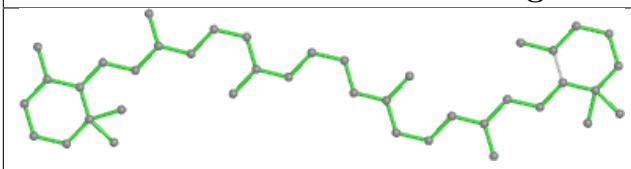


Torsions

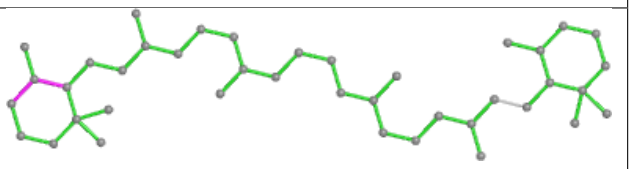


Rings

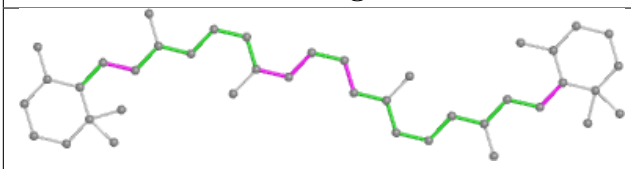
Ligand 8CT A 852



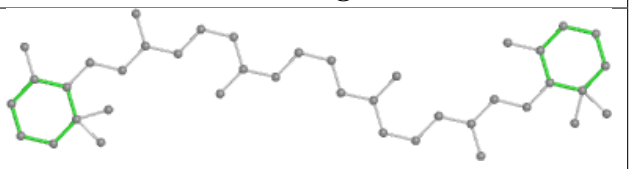
Bond lengths



Bond angles

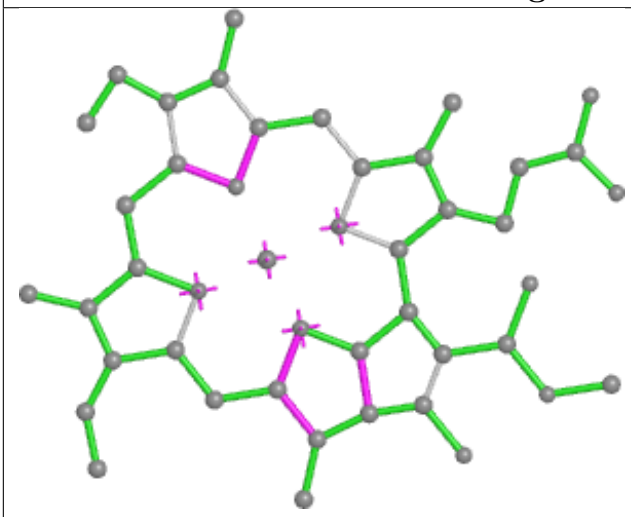


Torsions

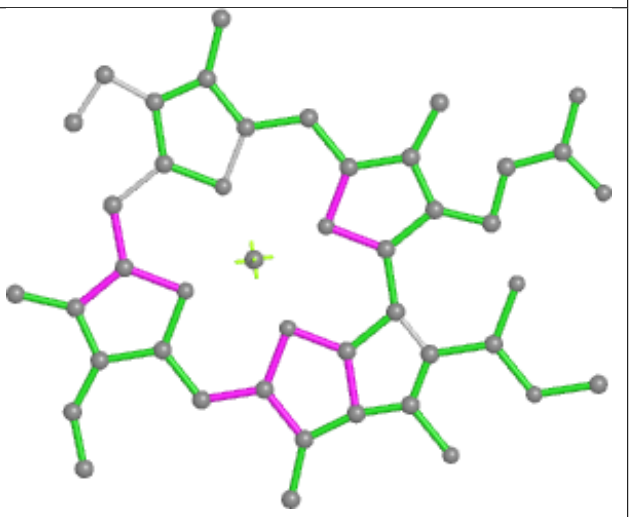


Rings

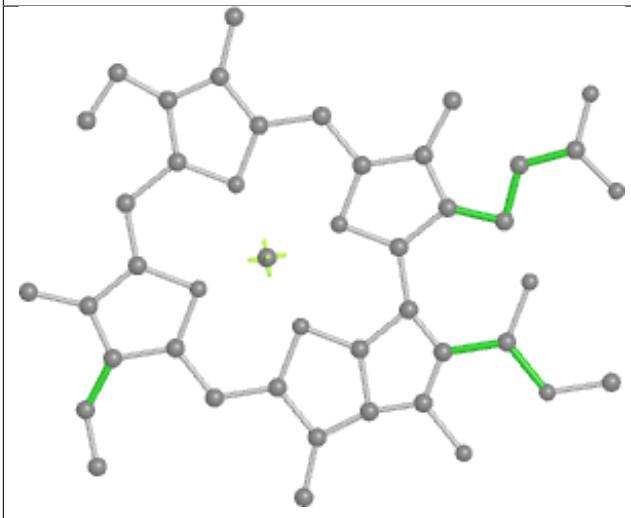
Ligand CLA 1 606



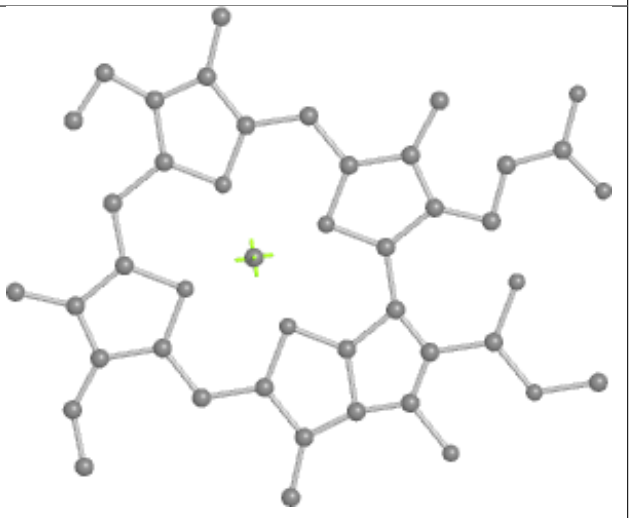
Bond lengths



Bond angles

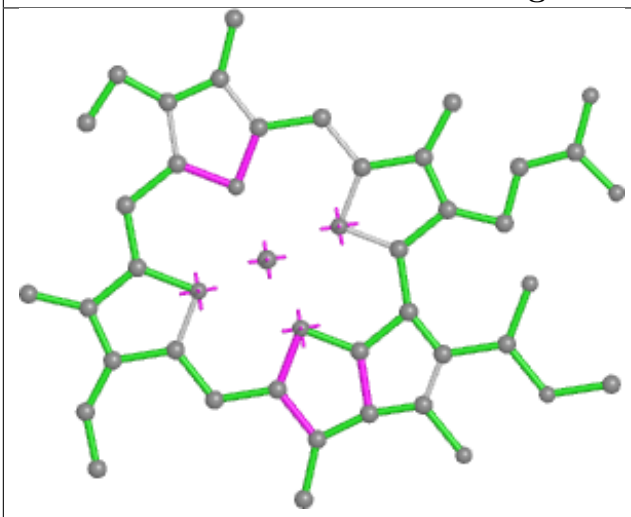


Torsions

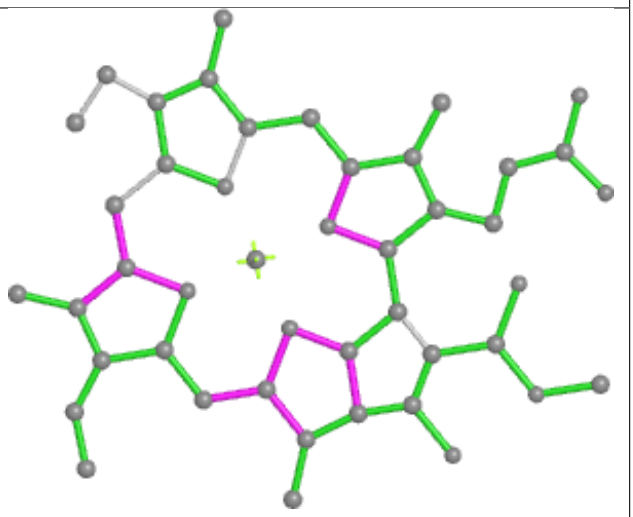


Rings

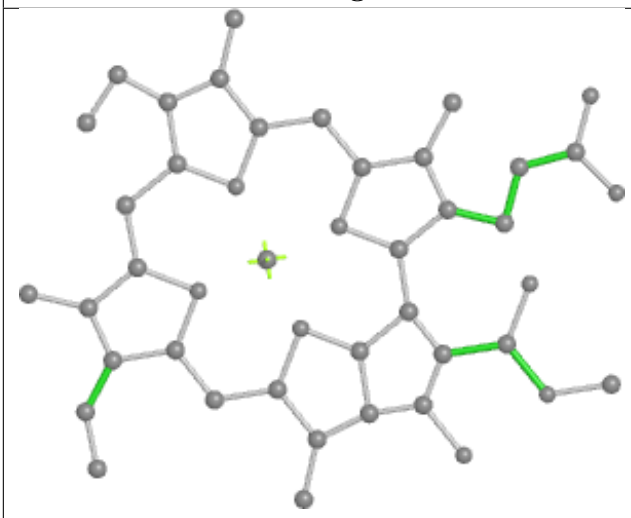
Ligand CLA 9 605



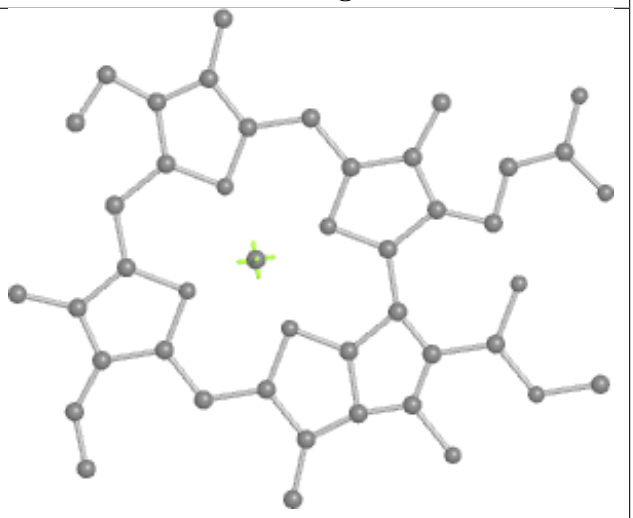
Bond lengths



Bond angles

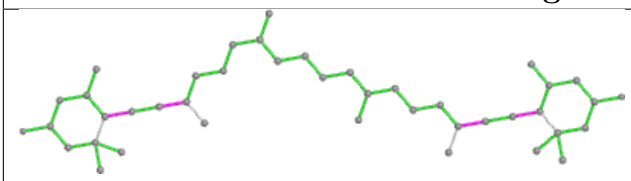


Torsions

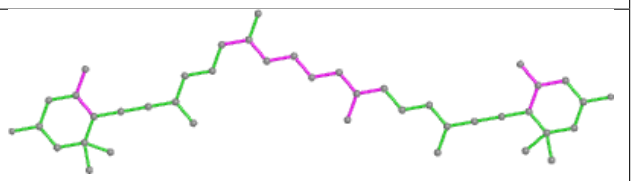


Rings

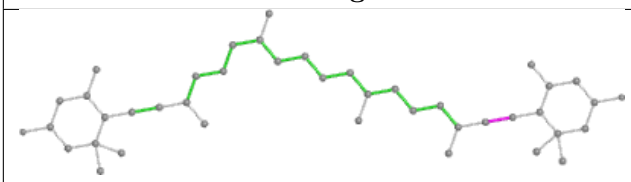
Ligand II0 a 613



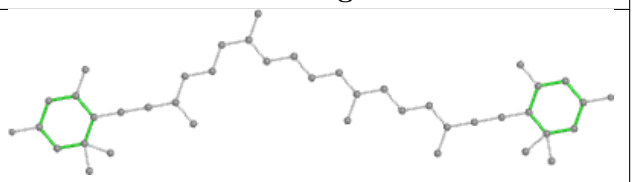
Bond lengths



Bond angles

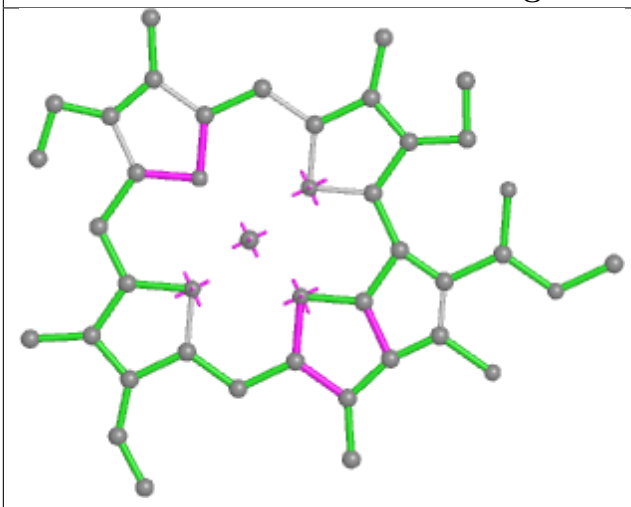


Torsions

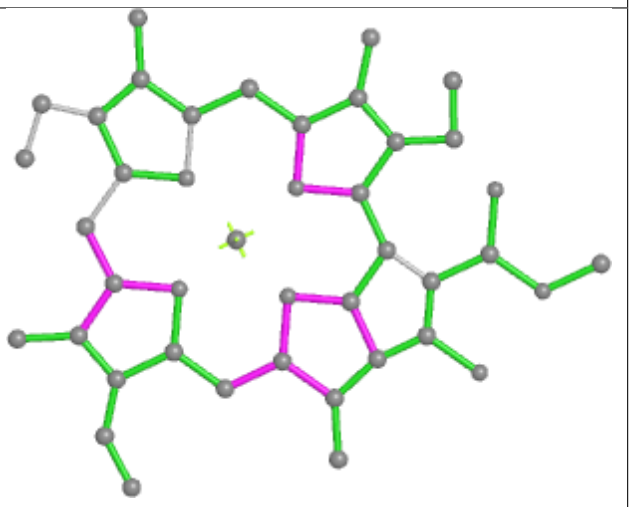


Rings

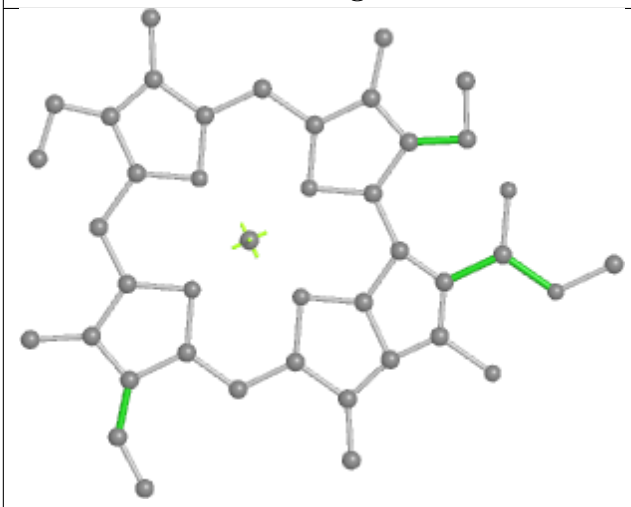
Ligand CLA A 813



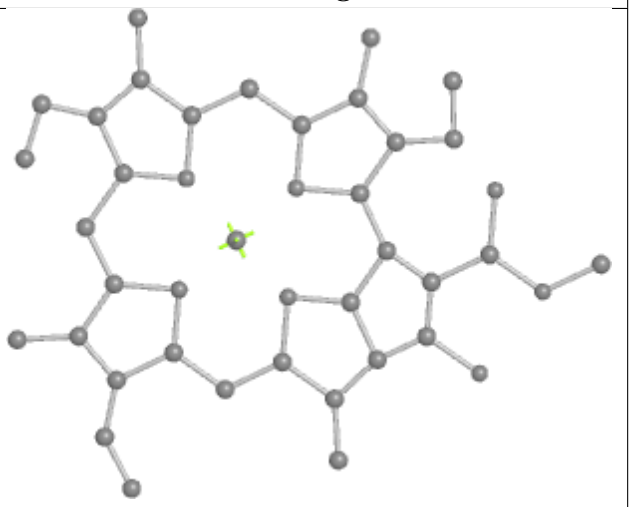
Bond lengths



Bond angles

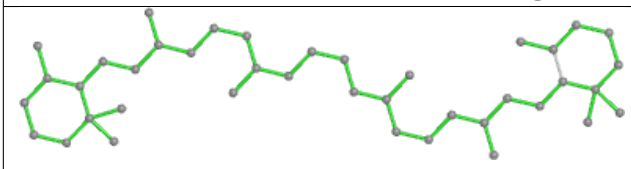


Torsions

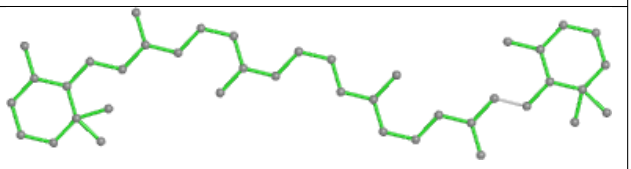


Rings

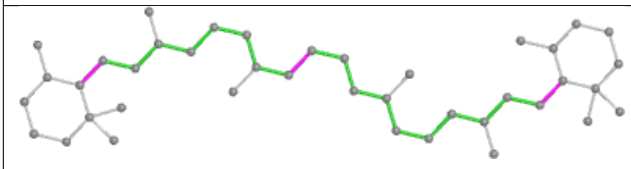
Ligand 8CT Z 308



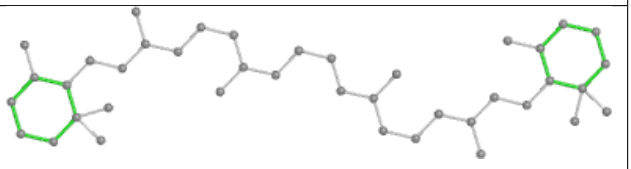
Bond lengths



Bond angles

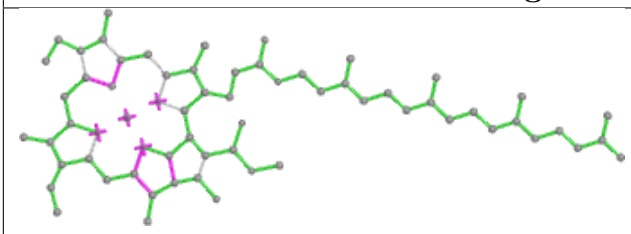


Torsions

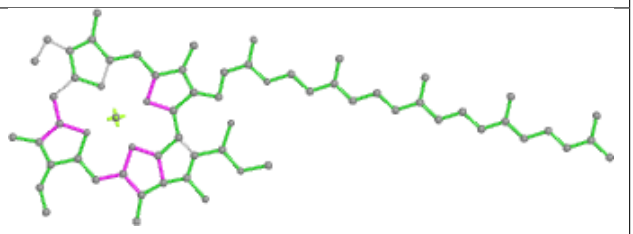


Rings

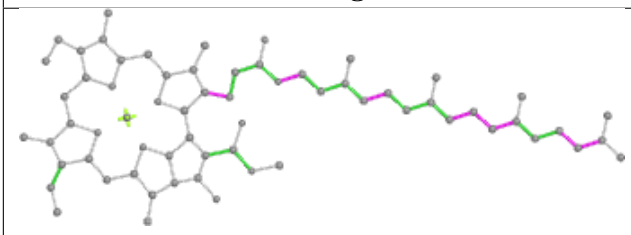
Ligand CLA B 826



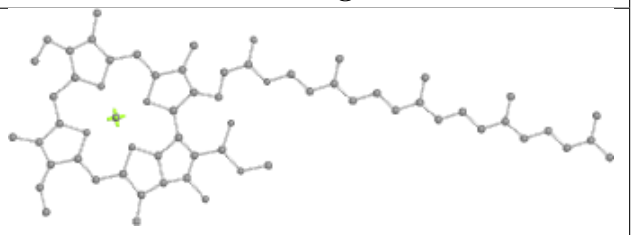
Bond lengths



Bond angles

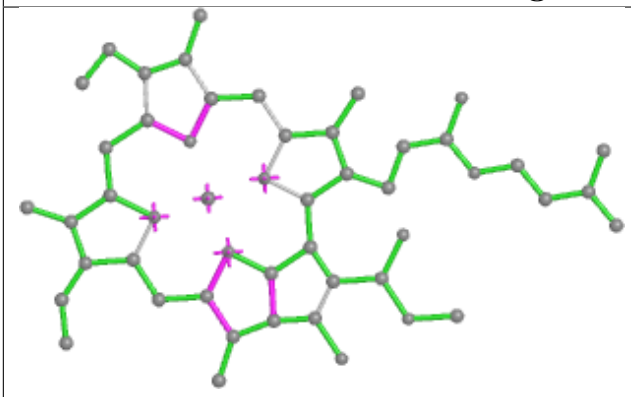


Torsions

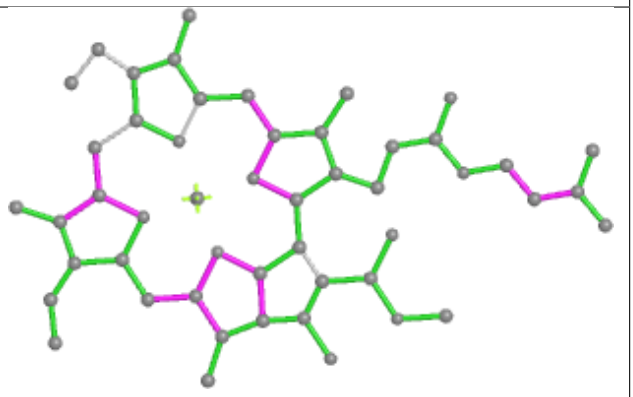


Rings

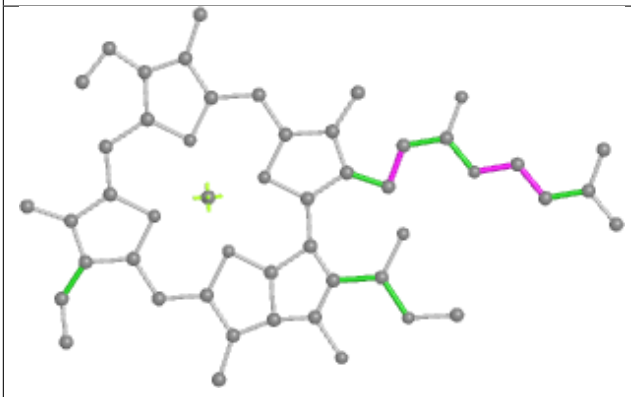
Ligand CLA 8 605



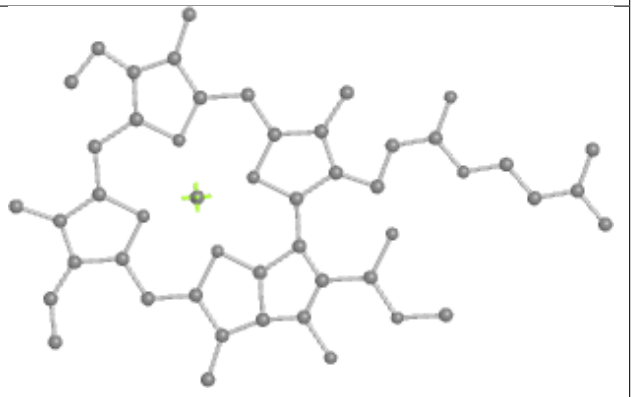
Bond lengths



Bond angles

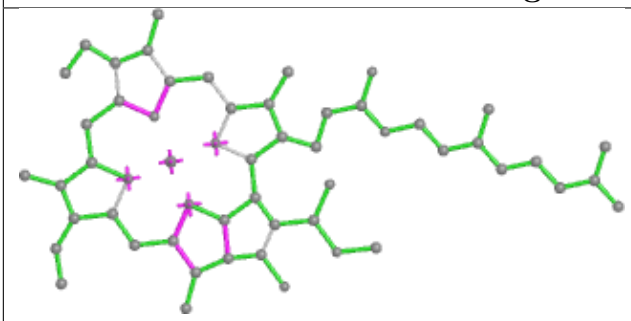


Torsions

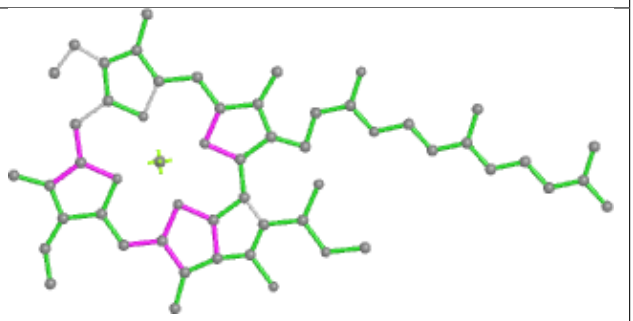


Rings

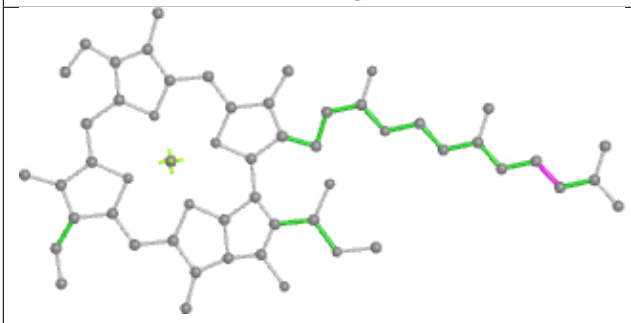
Ligand CLA A 836



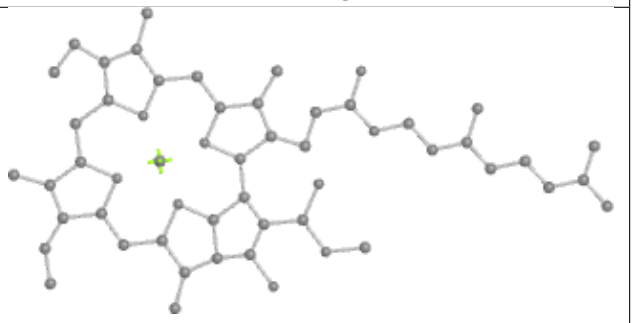
Bond lengths



Bond angles

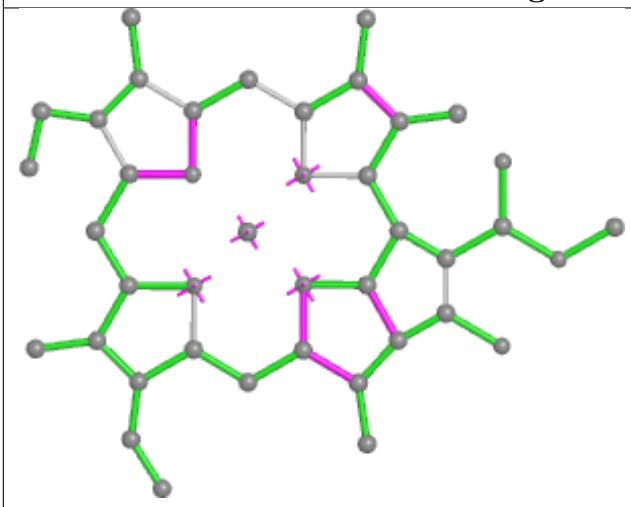


Torsions

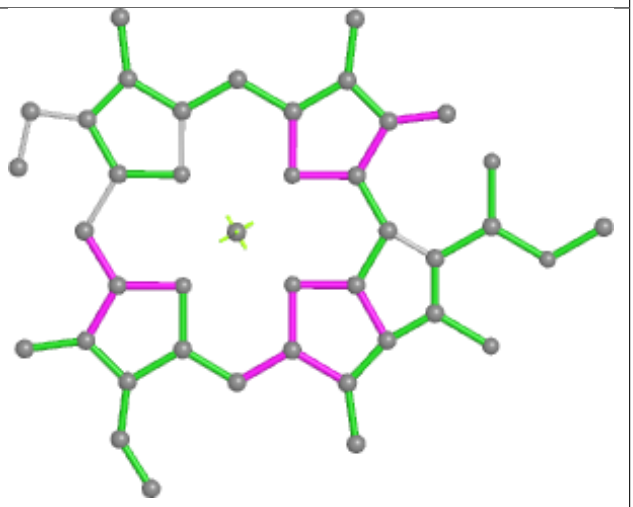


Rings

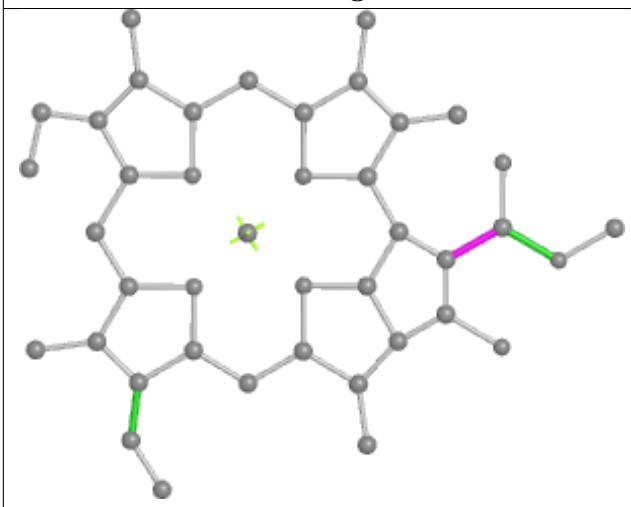
Ligand CLA J 102



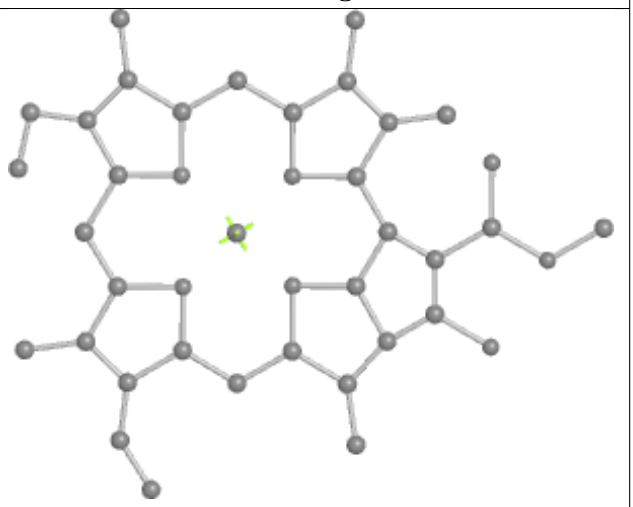
Bond lengths



Bond angles

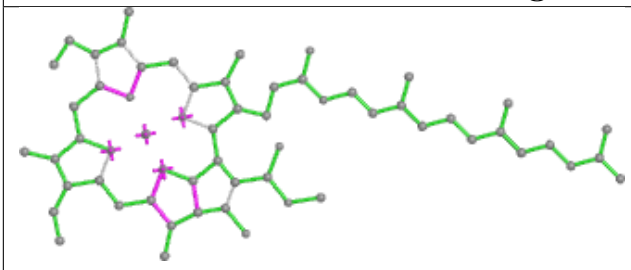


Torsions

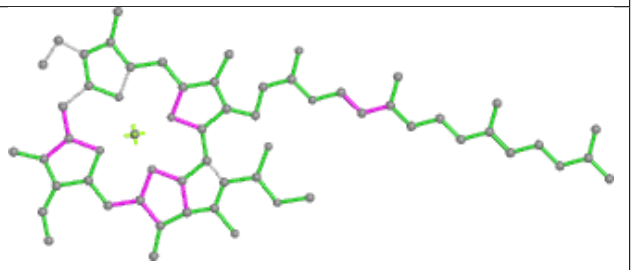


Rings

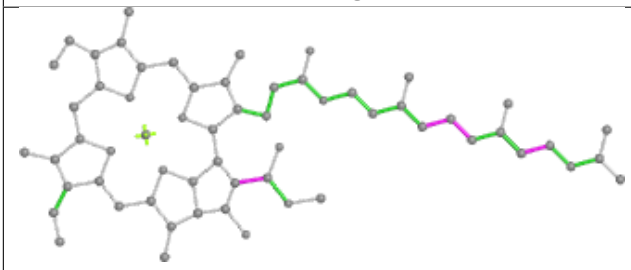
Ligand CLA 3 608



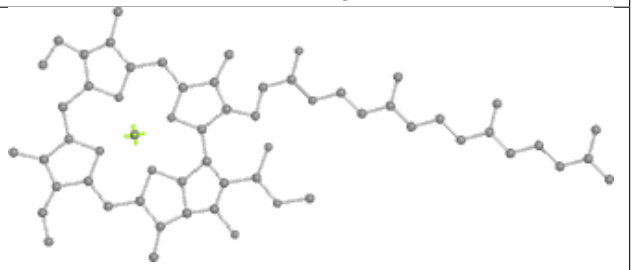
Bond lengths



Bond angles

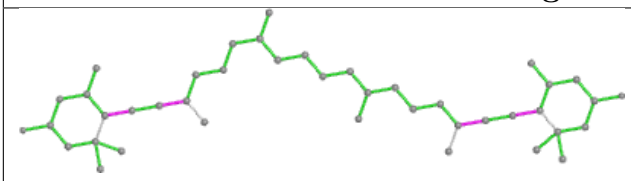


Torsions

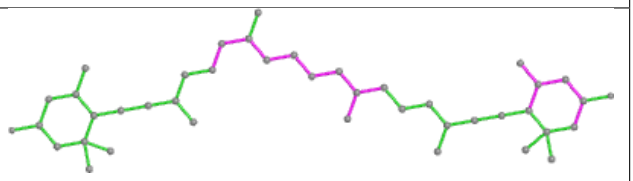


Rings

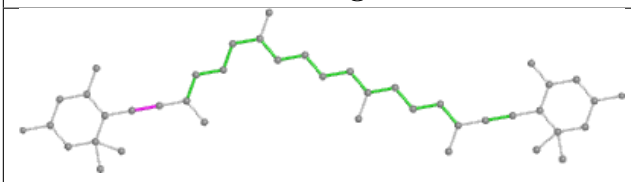
Ligand II0 J 101



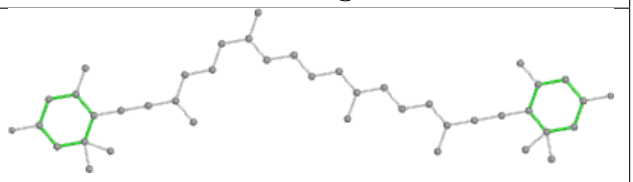
Bond lengths



Bond angles

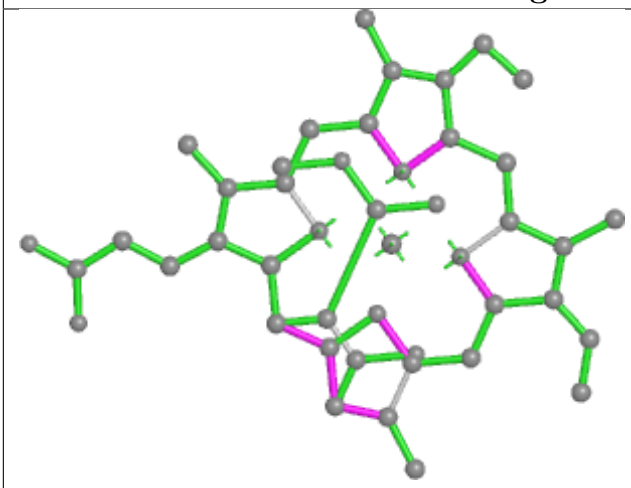


Torsions

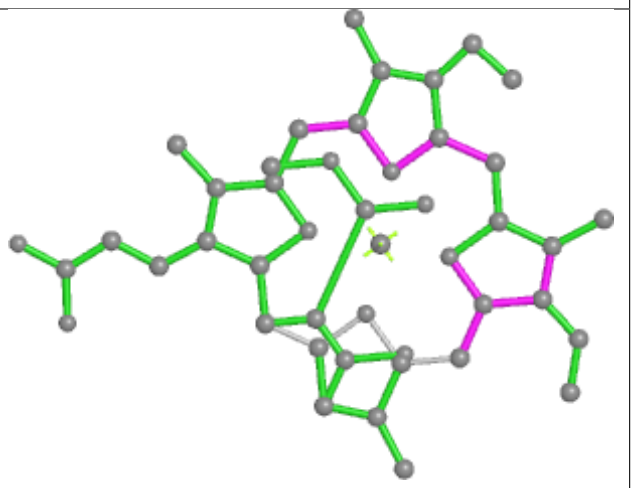


Rings

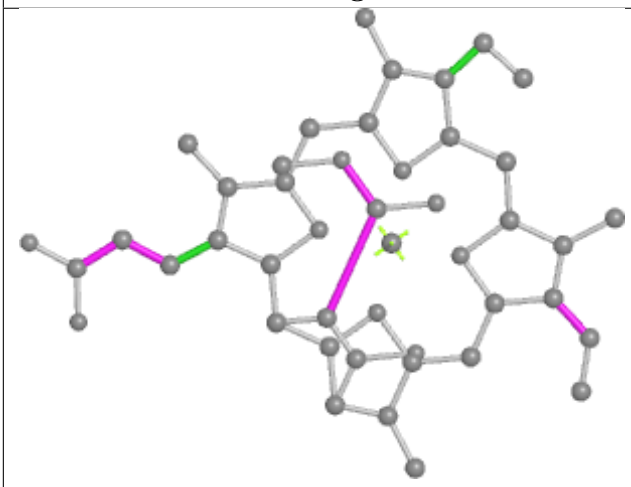
Ligand KC2 2 610



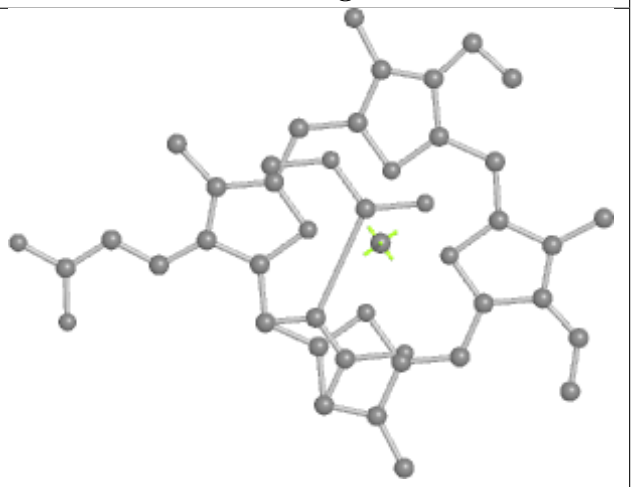
Bond lengths



Bond angles

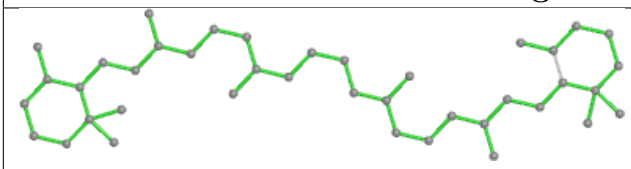


Torsions

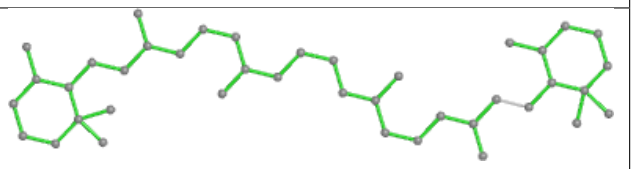


Rings

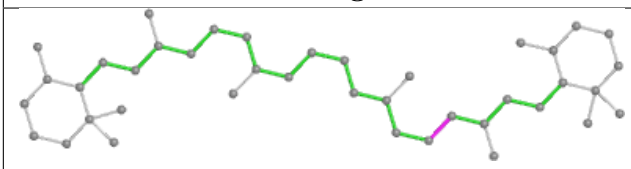
Ligand 8CT e 616



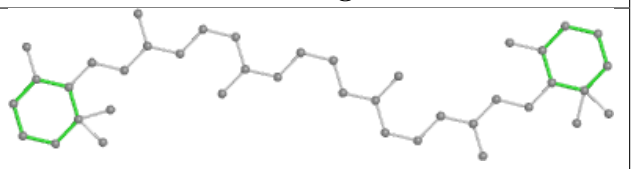
Bond lengths



Bond angles

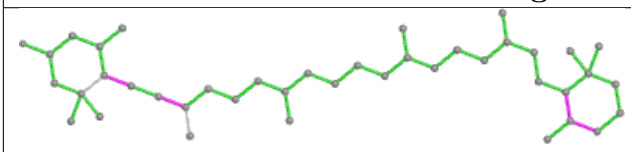


Torsions

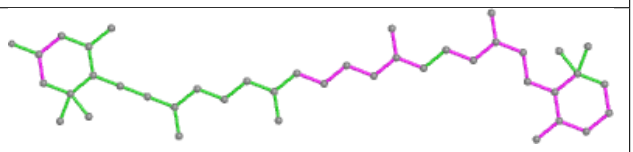


Rings

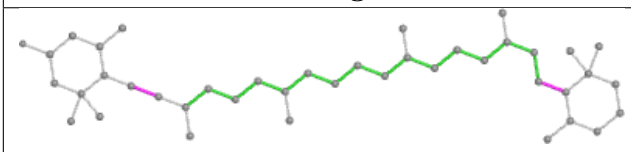
Ligand IHT Z 302



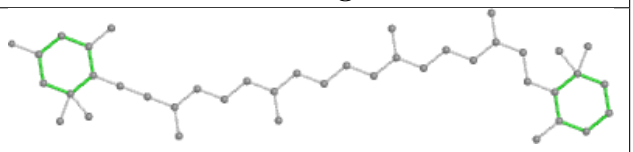
Bond lengths



Bond angles

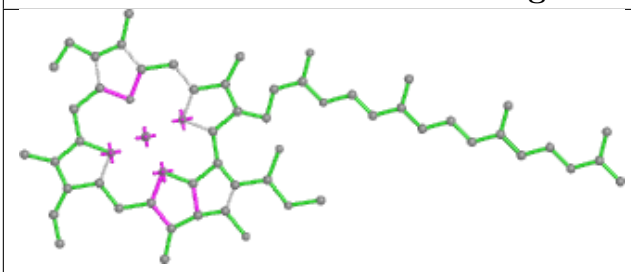


Torsions

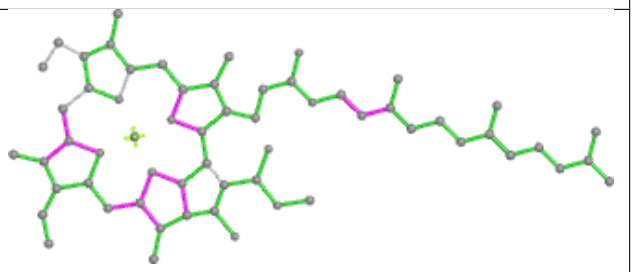


Rings

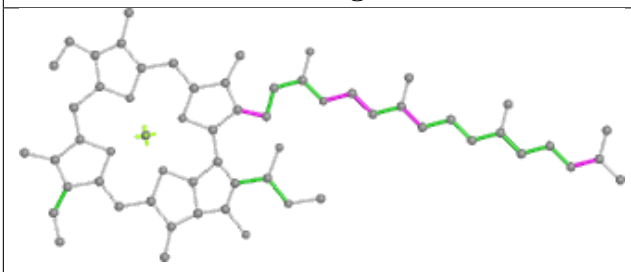
Ligand CLA 4 606



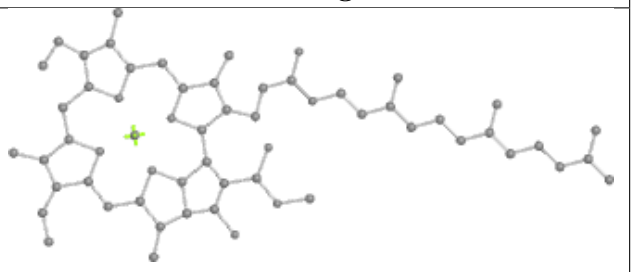
Bond lengths



Bond angles

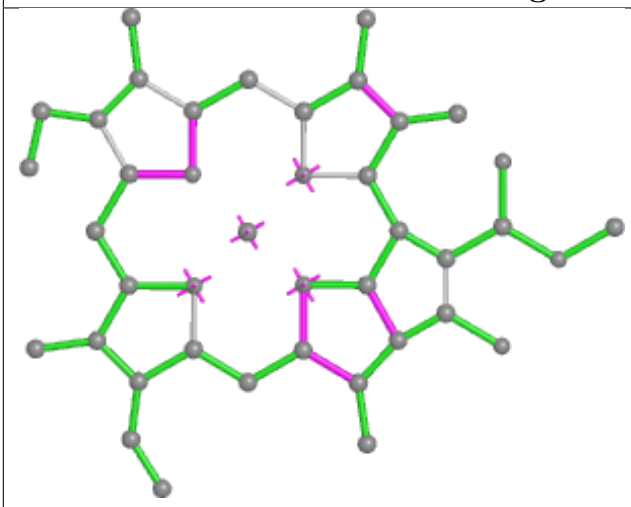


Torsions

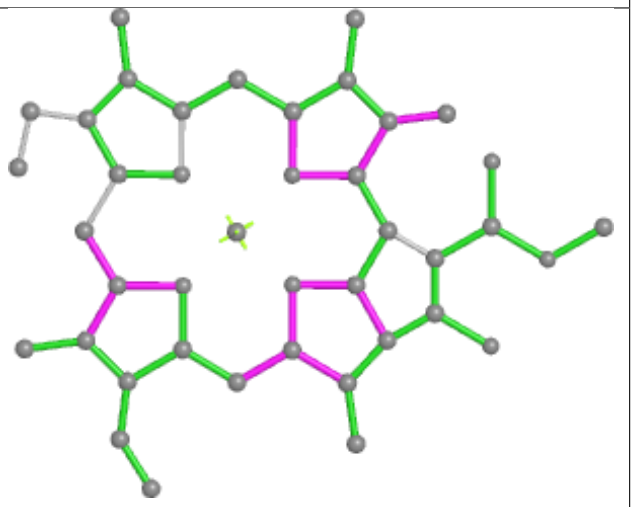


Rings

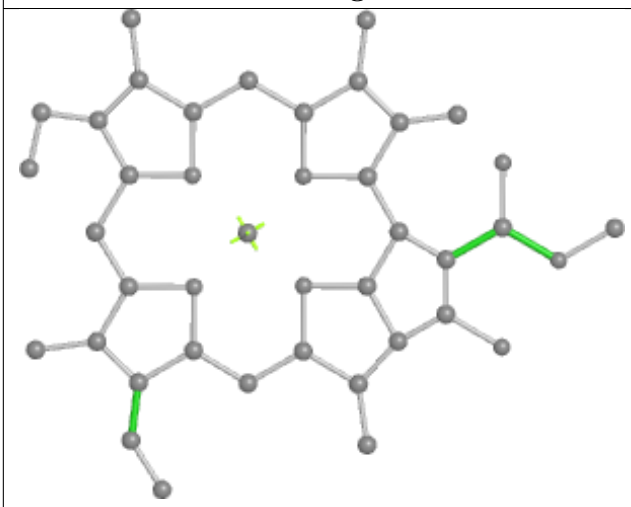
Ligand CLA c 609



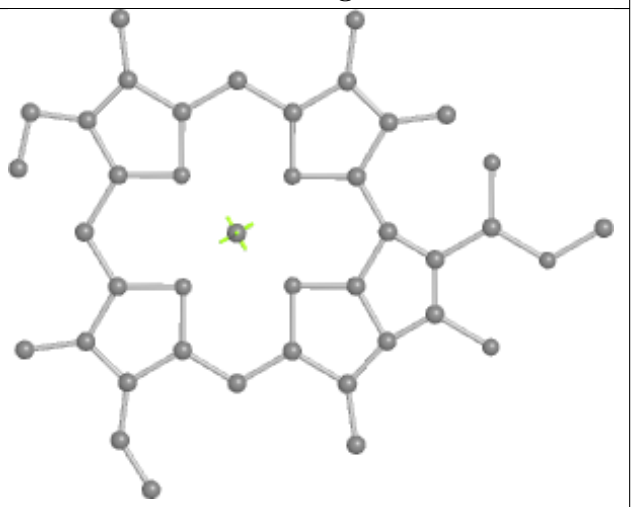
Bond lengths



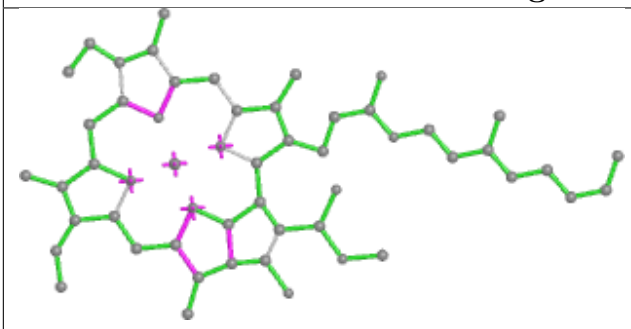
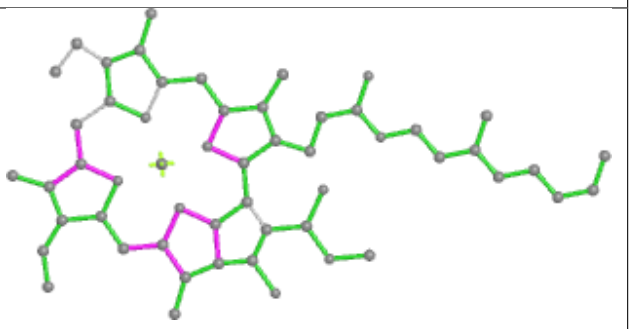
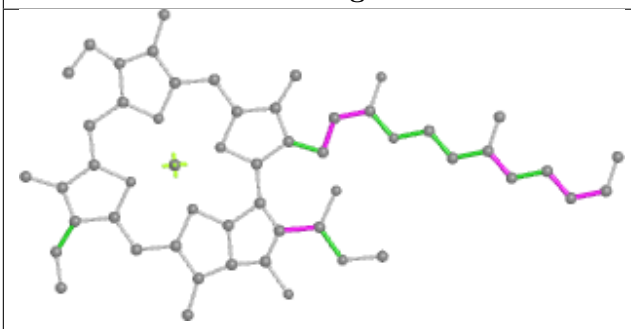
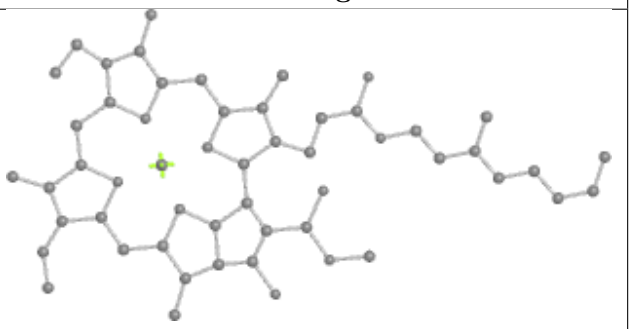
Bond angles

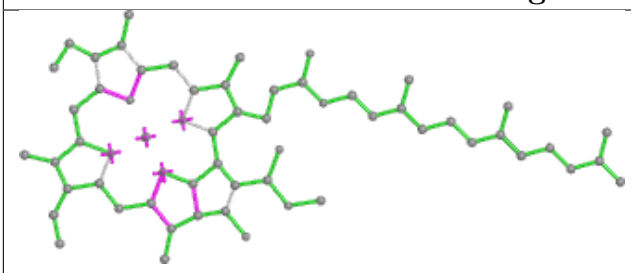
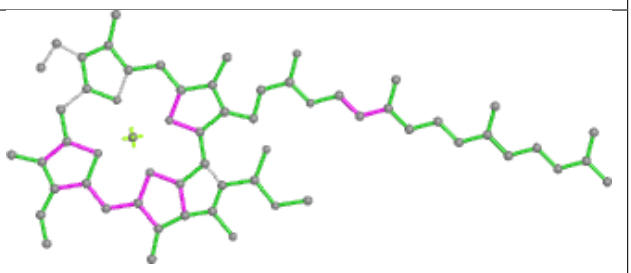
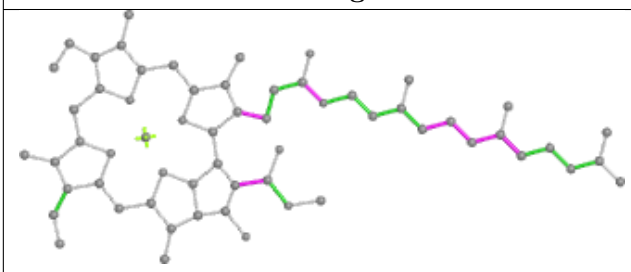
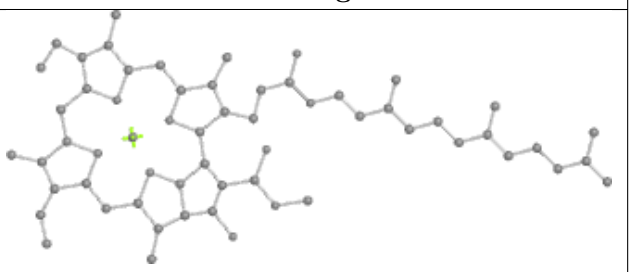


Torsions

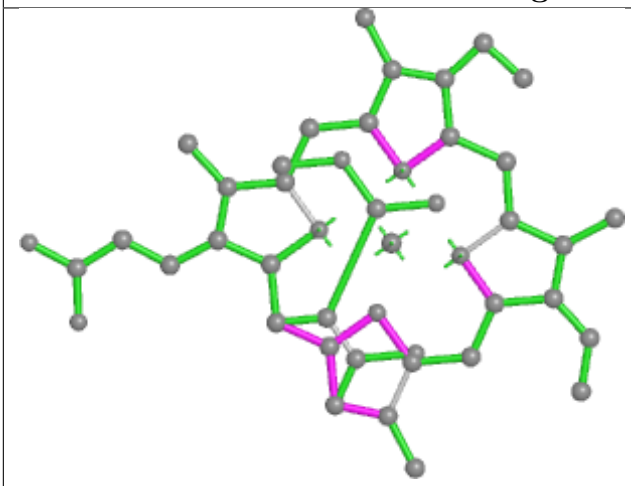


Rings

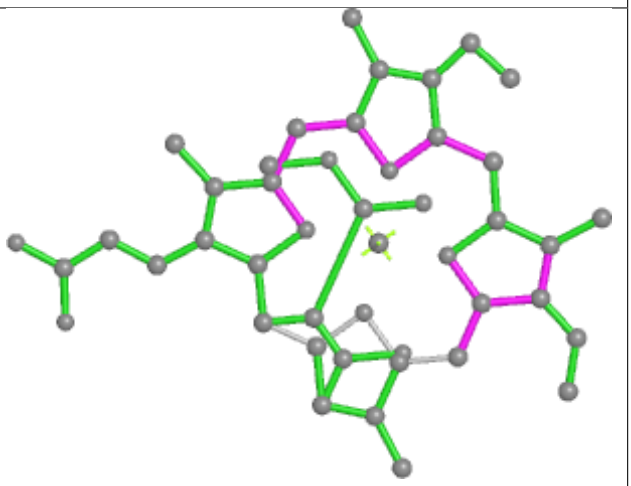
Ligand CLA 4 603	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA 5 608	
	
Bond lengths	Bond angles
	
Torsions	Rings

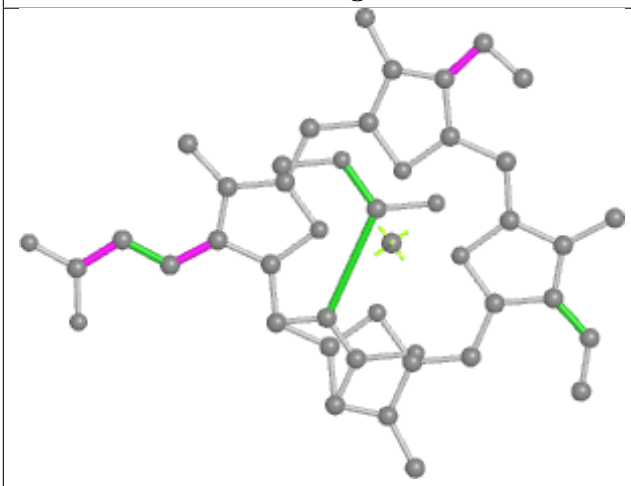
Ligand KC2 c 615



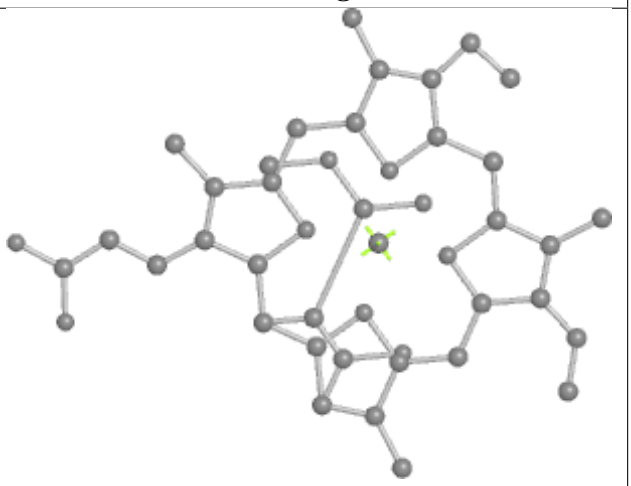
Bond lengths



Bond angles

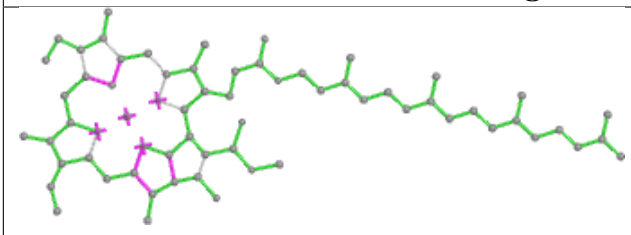


Torsions

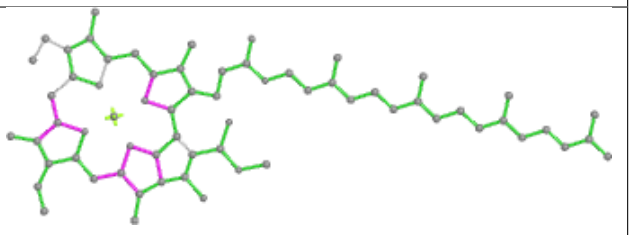


Rings

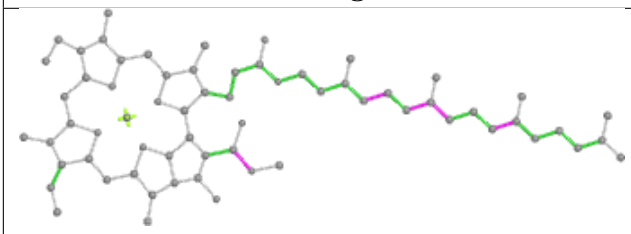
Ligand CLA A 833



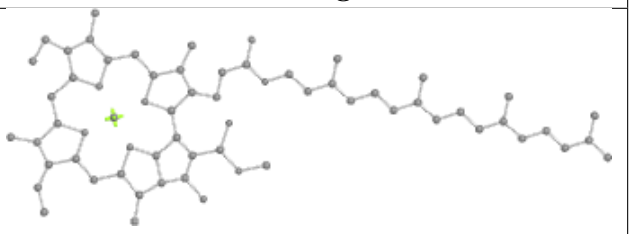
Bond lengths



Bond angles

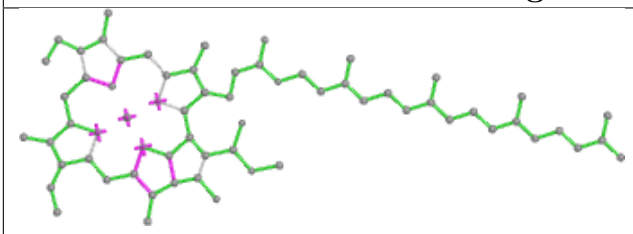


Torsions

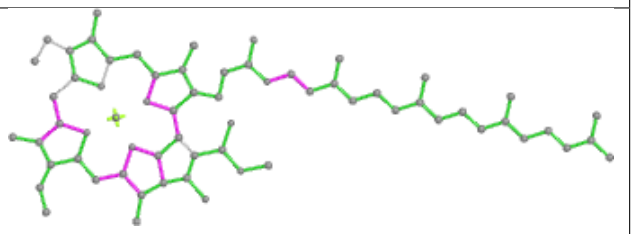


Rings

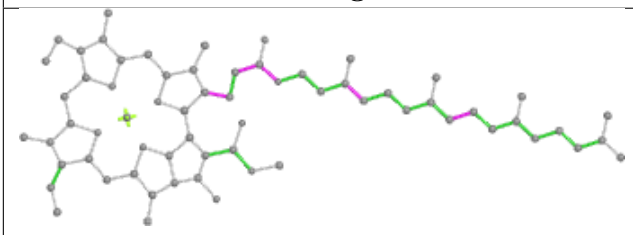
Ligand CLA L 201



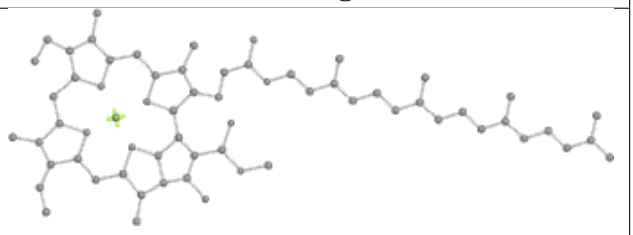
Bond lengths



Bond angles

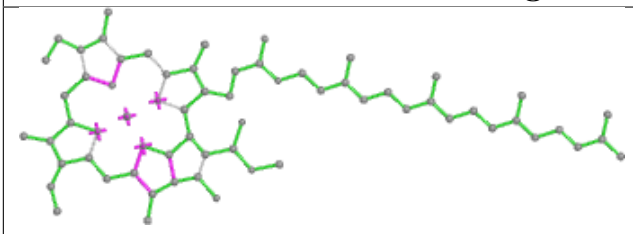


Torsions

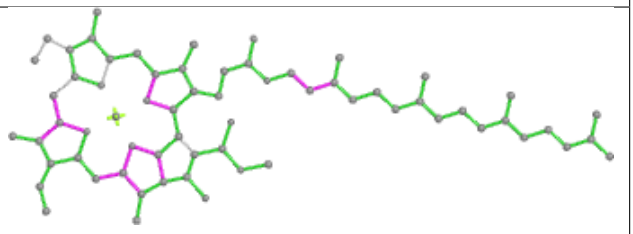


Rings

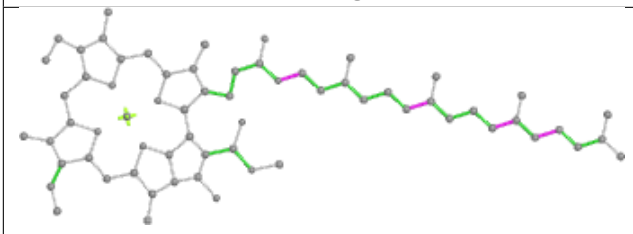
Ligand CLA B 838



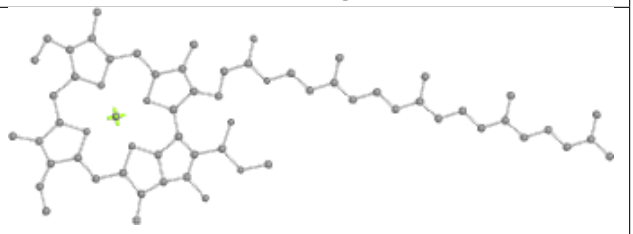
Bond lengths



Bond angles

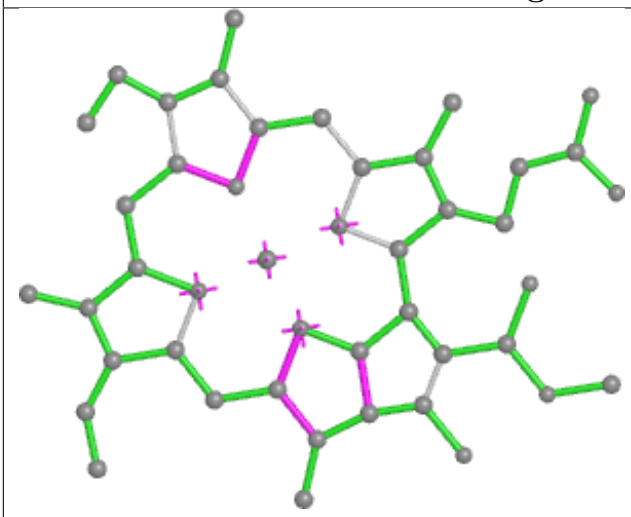


Torsions

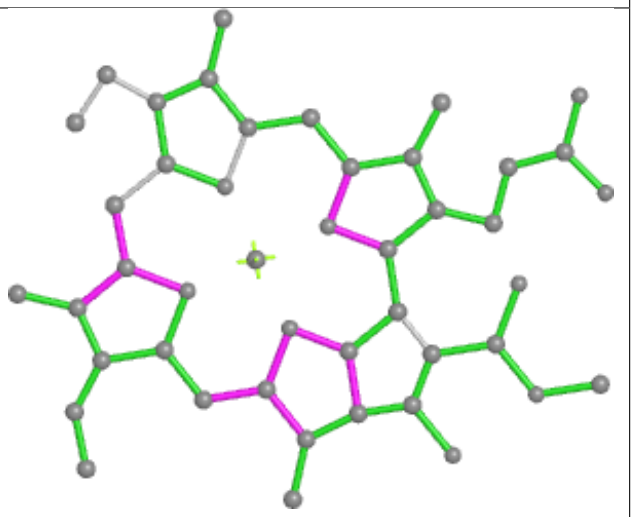


Rings

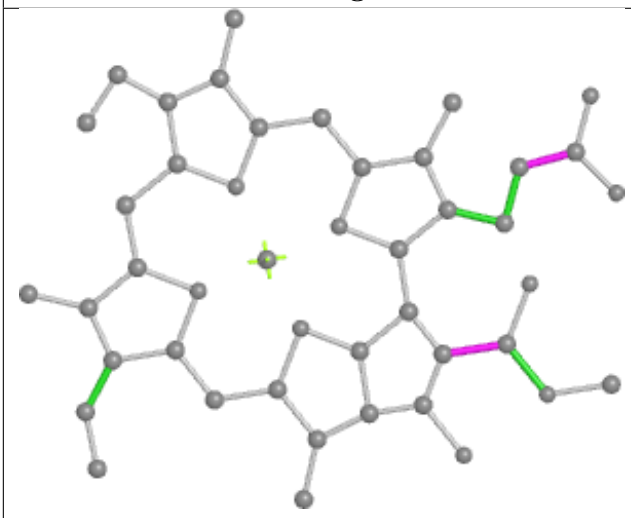
Ligand CLA d 605



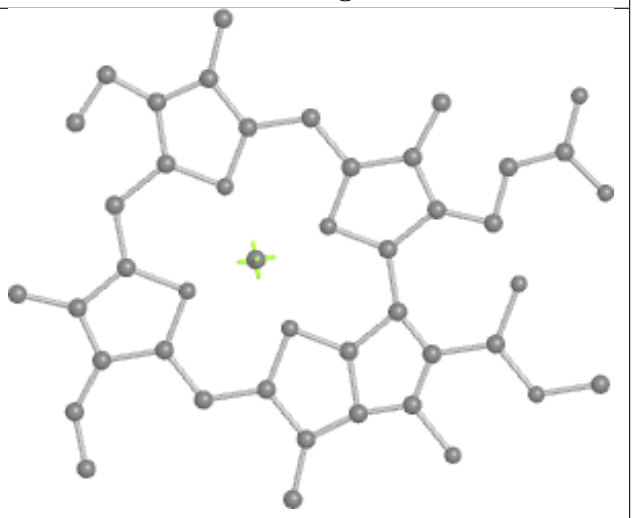
Bond lengths



Bond angles

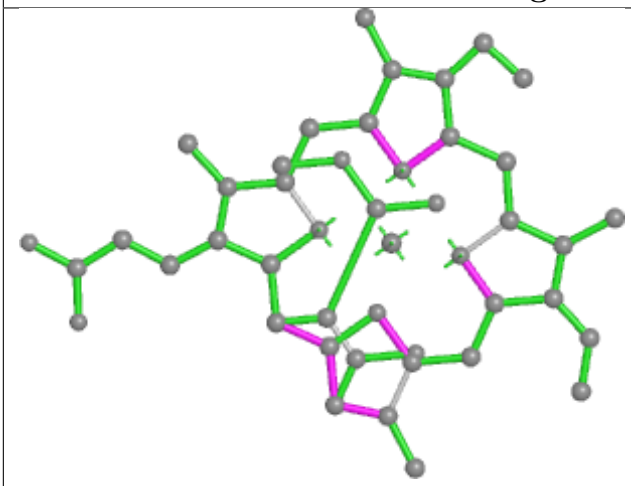


Torsions

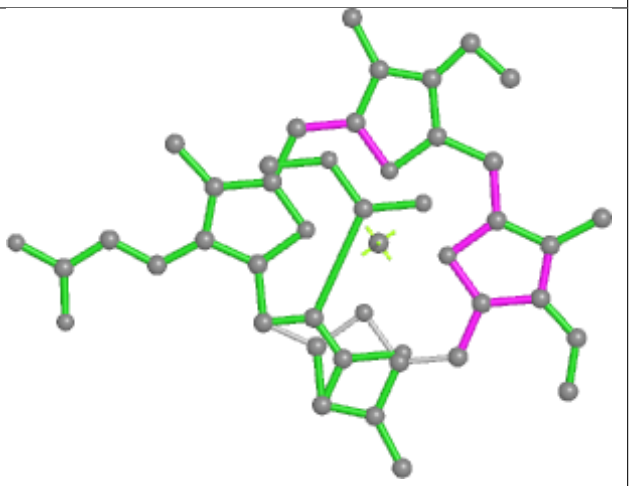


Rings

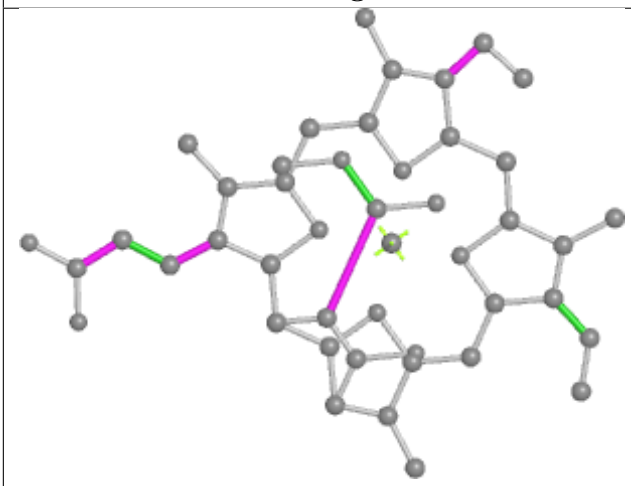
Ligand KC2 1 610



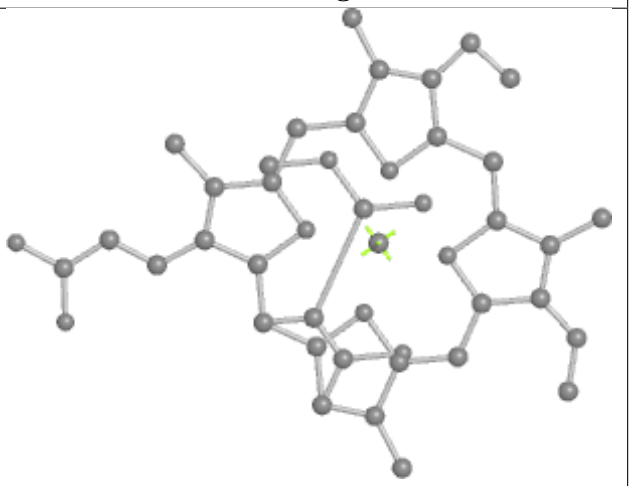
Bond lengths



Bond angles

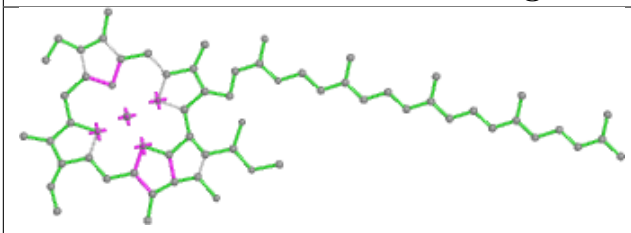


Torsions

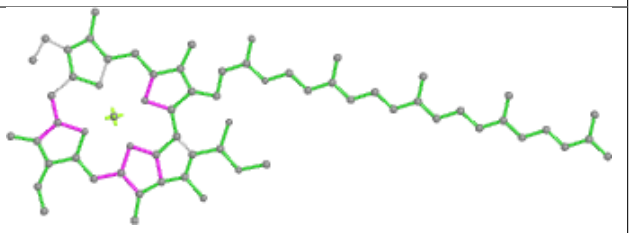


Rings

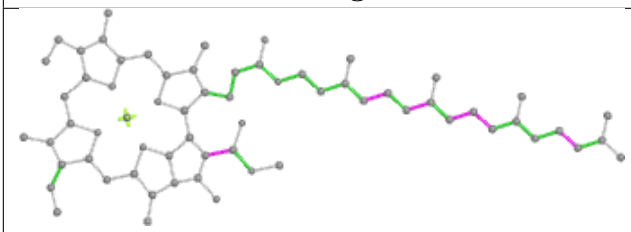
Ligand CLA A 820



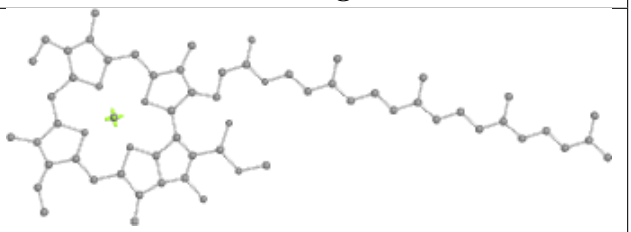
Bond lengths



Bond angles

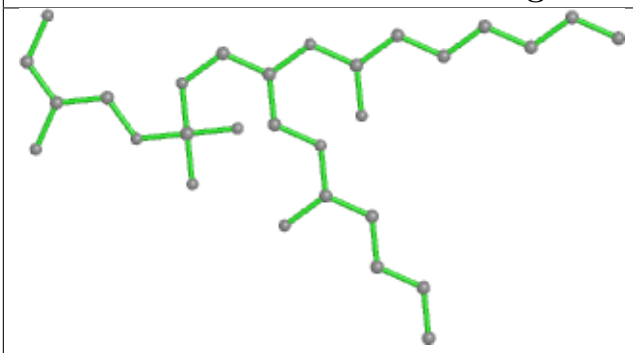


Torsions

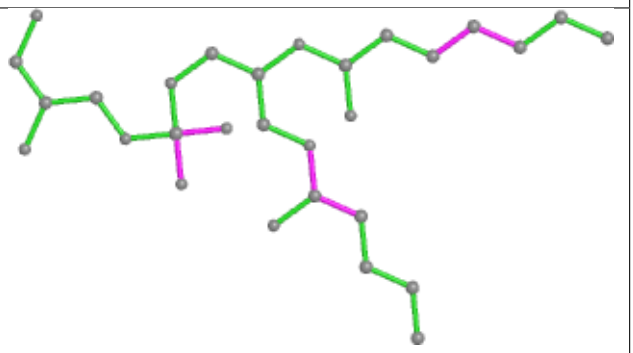


Rings

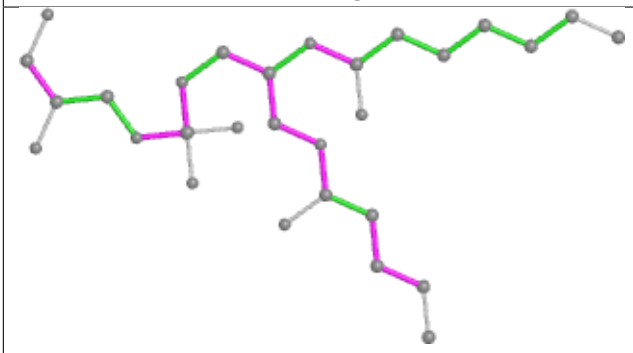
Ligand LHG a 618



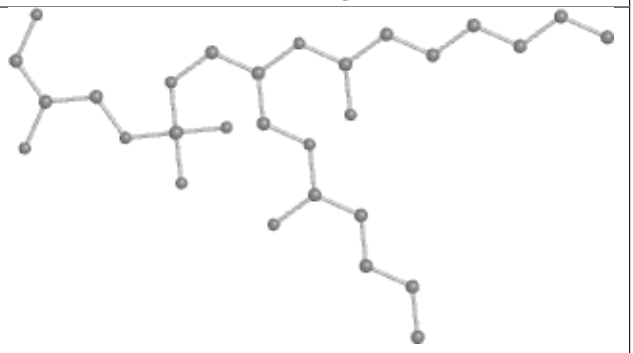
Bond lengths



Bond angles

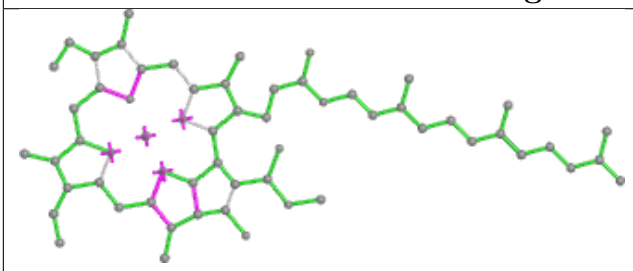


Torsions

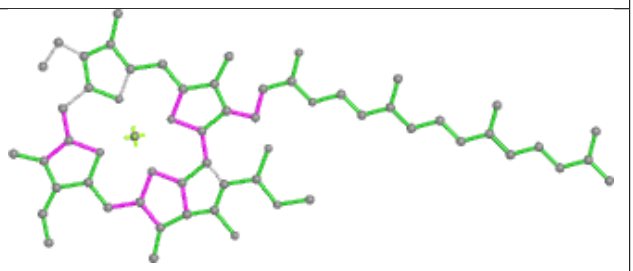


Rings

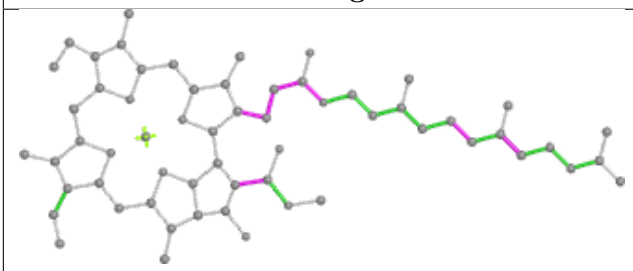
Ligand CLA B 819



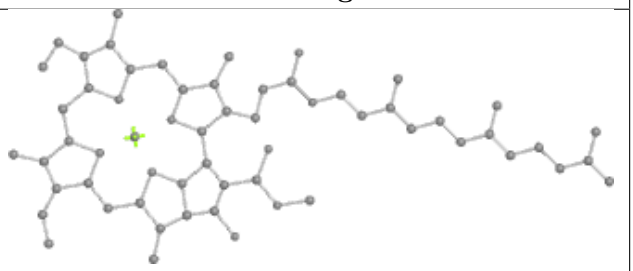
Bond lengths



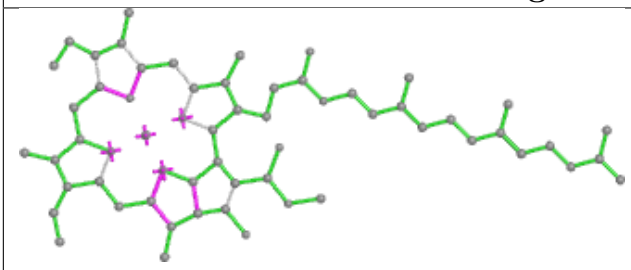
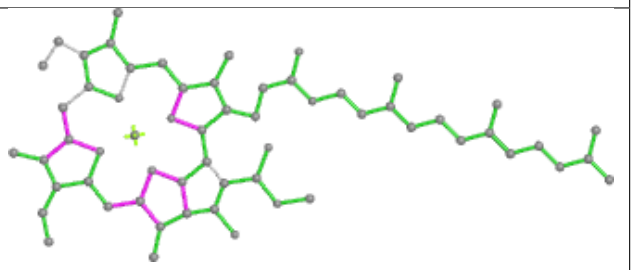
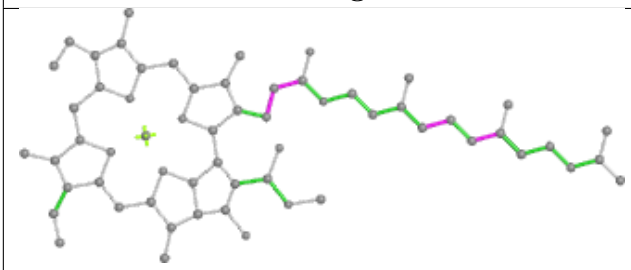
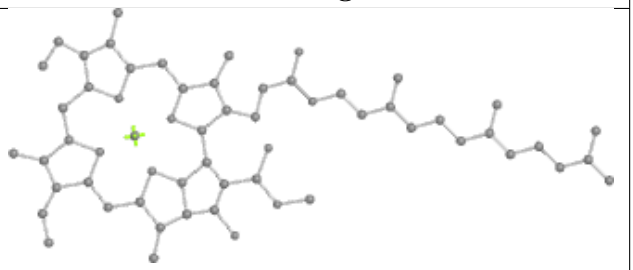
Bond angles

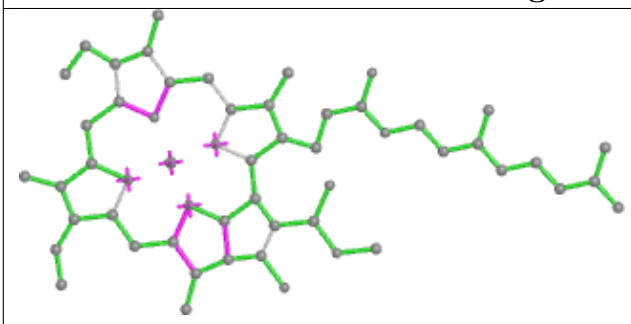
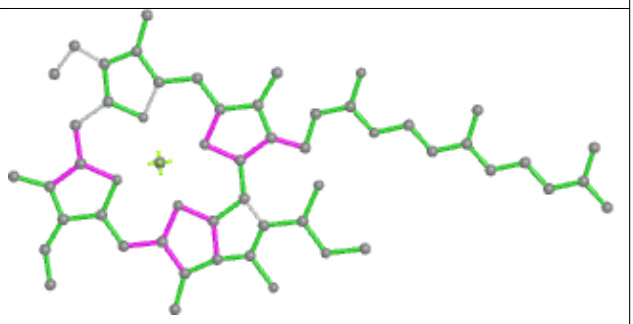
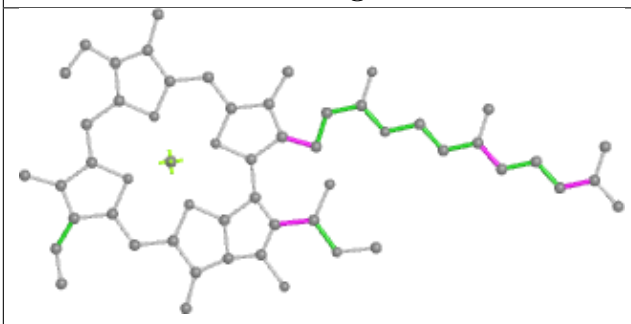
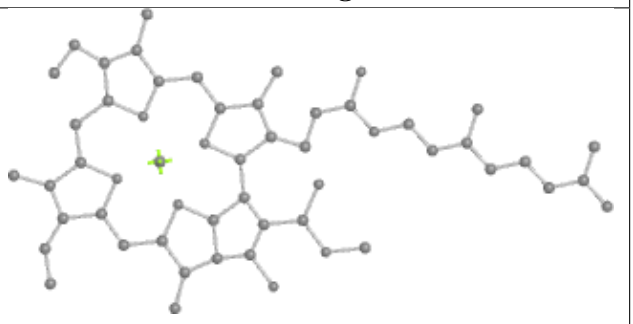


Torsions

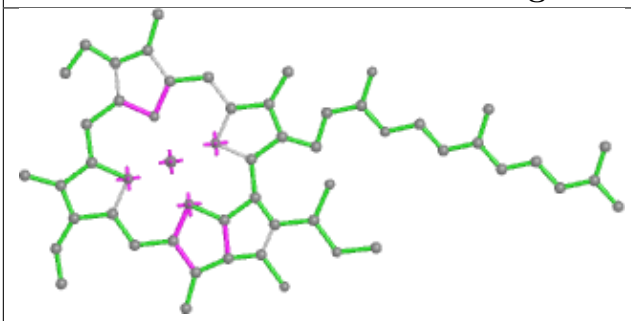


Rings

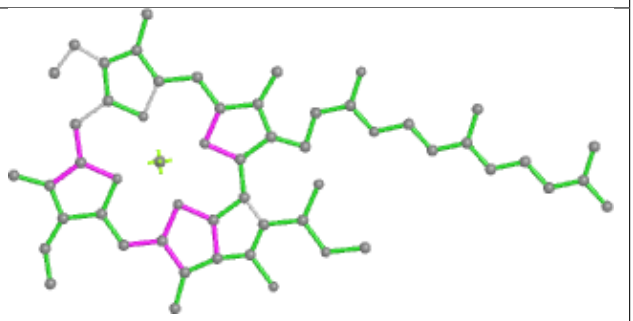
Ligand CLA 4 609	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA 9 602	
	
Bond lengths	Bond angles
	
Torsions	Rings

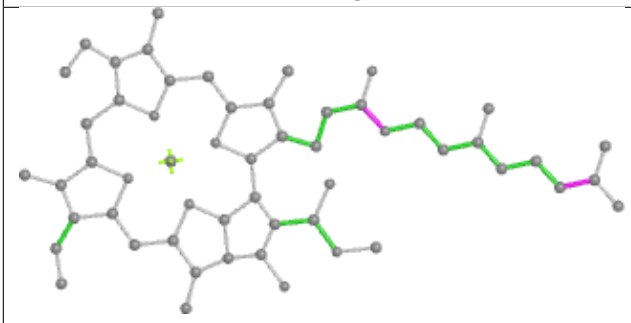
Ligand CLA 6 607



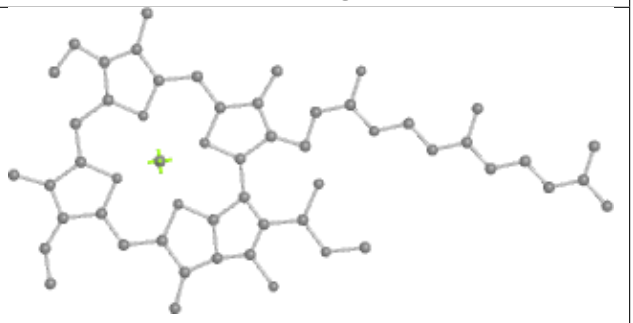
Bond lengths



Bond angles

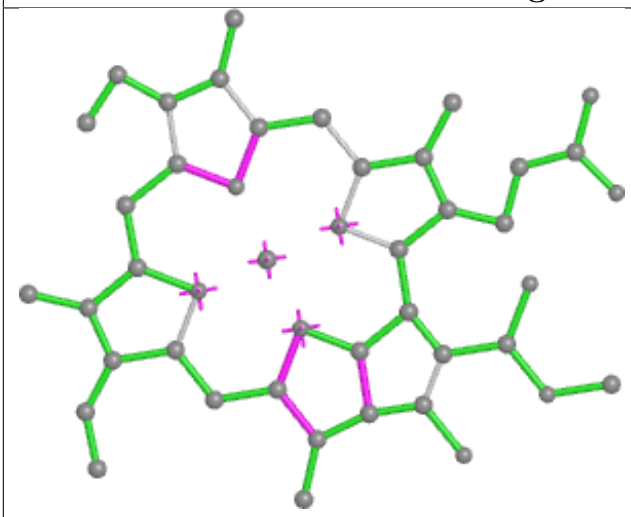


Torsions

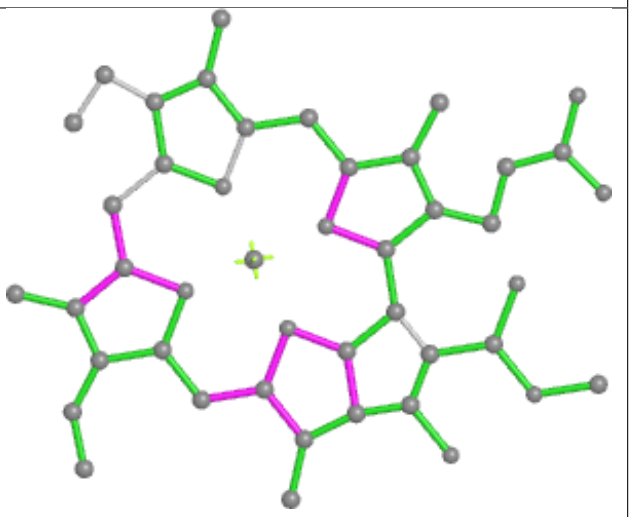


Rings

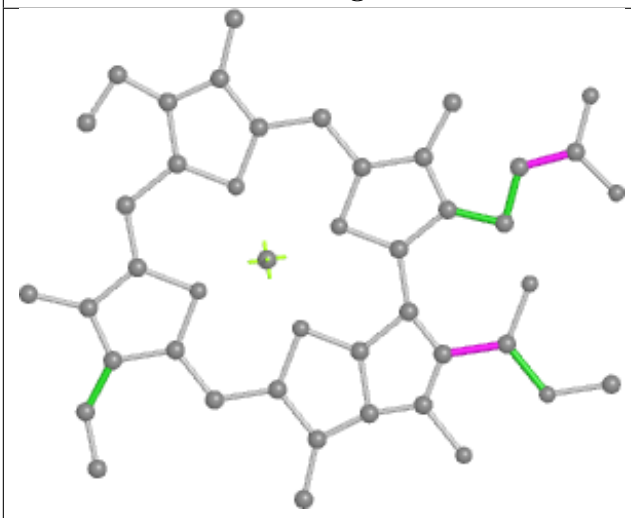
Ligand CLA 3 612



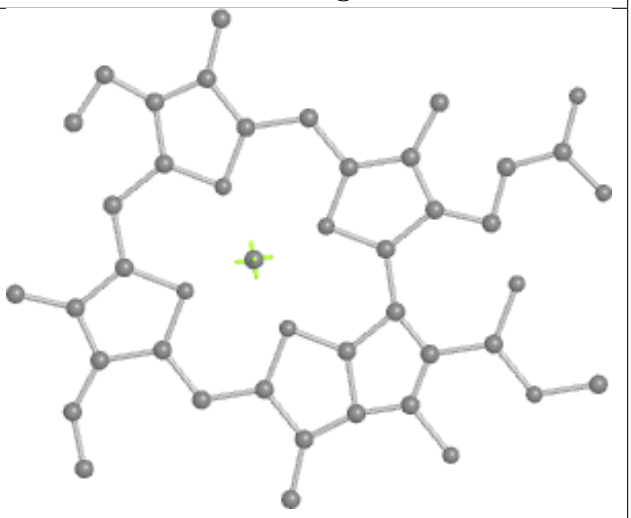
Bond lengths



Bond angles

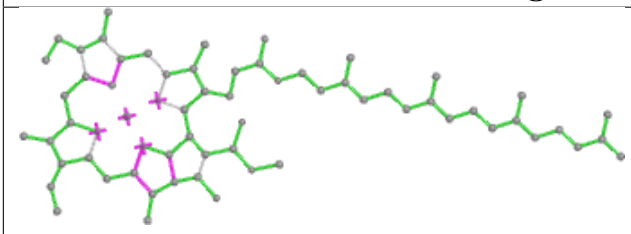


Torsions

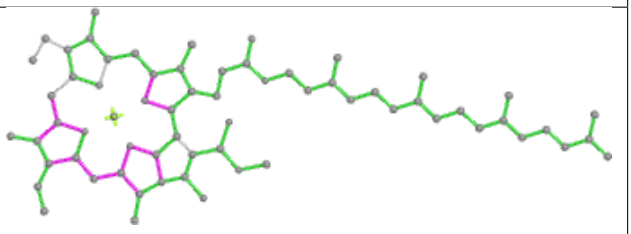


Rings

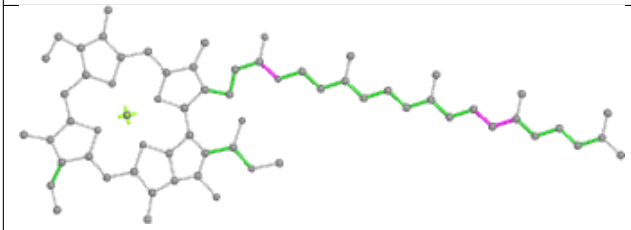
Ligand CLA d 608



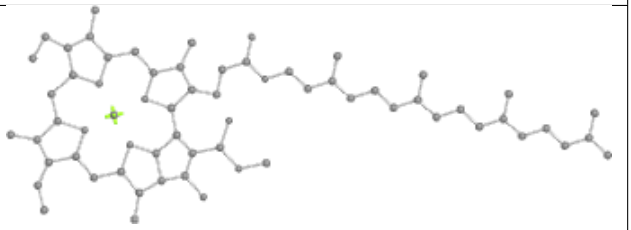
Bond lengths



Bond angles

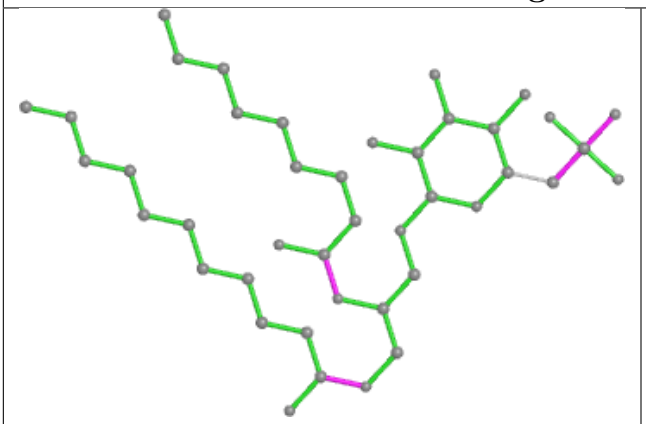


Torsions

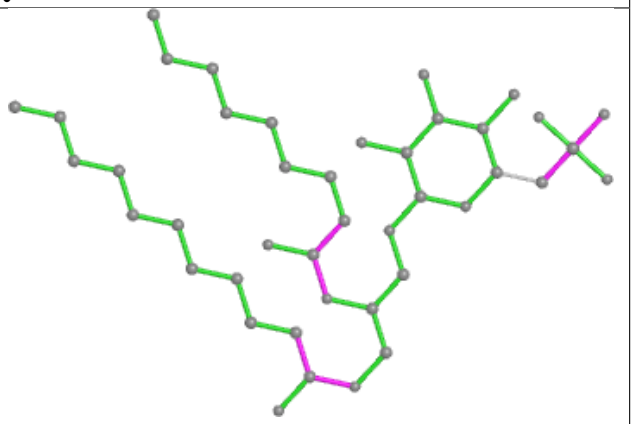


Rings

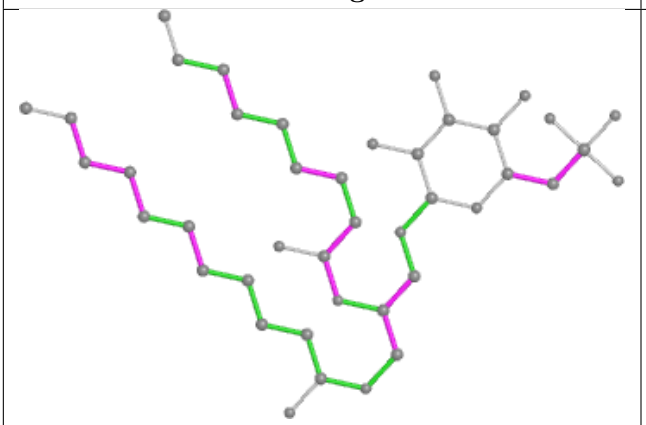
Ligand SQD 3 621



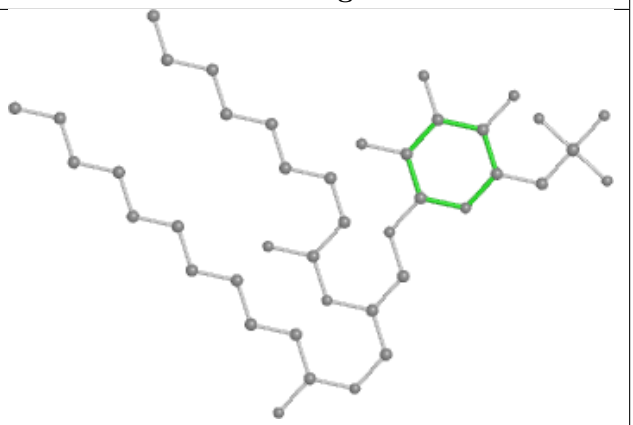
Bond lengths



Bond angles

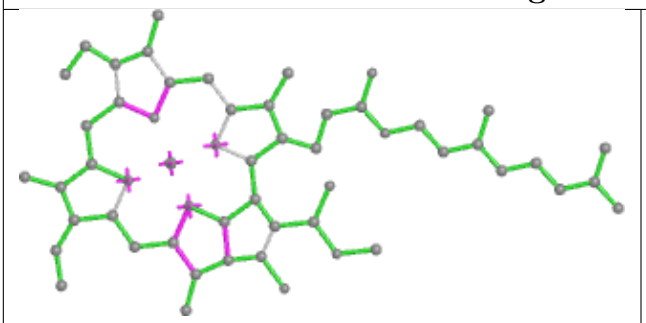


Torsions

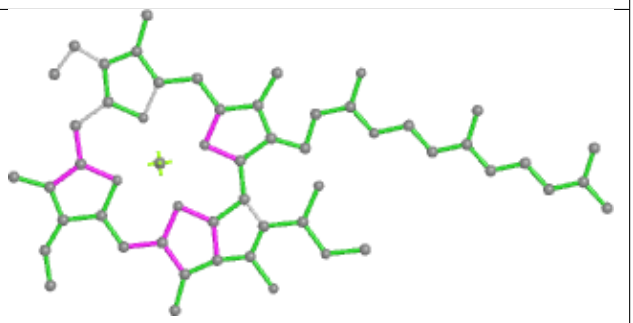


Rings

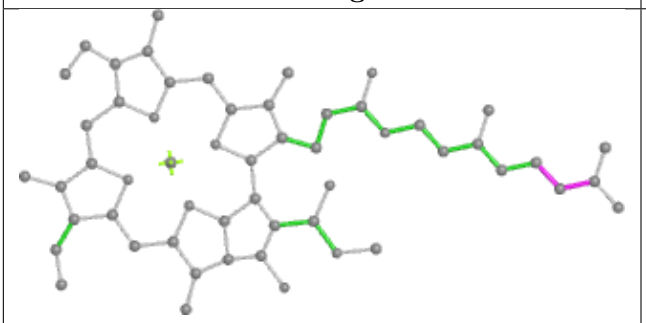
Ligand CLA 7 603



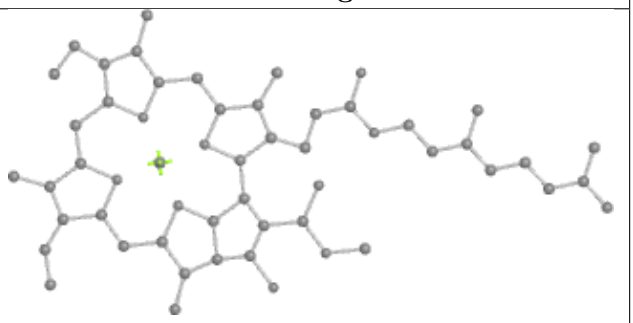
Bond lengths



Bond angles

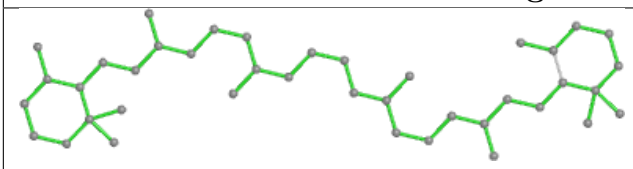


Torsions

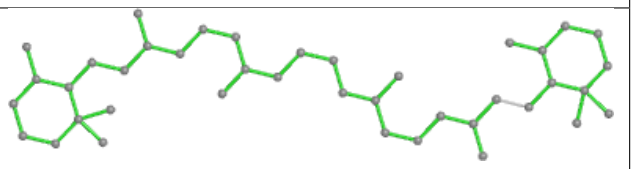


Rings

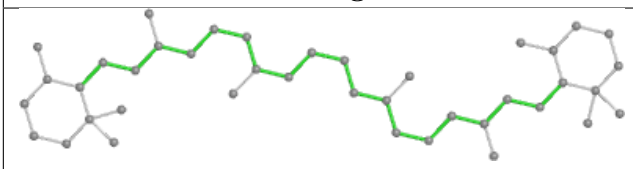
Ligand 8CT A 848



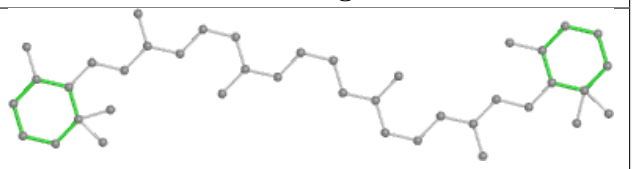
Bond lengths



Bond angles

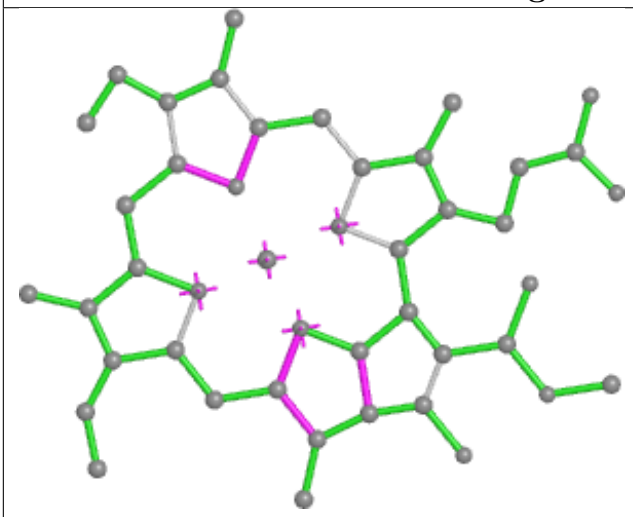


Torsions

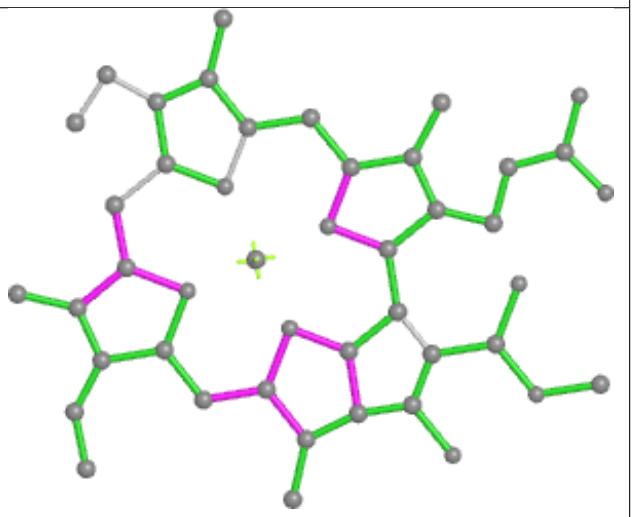


Rings

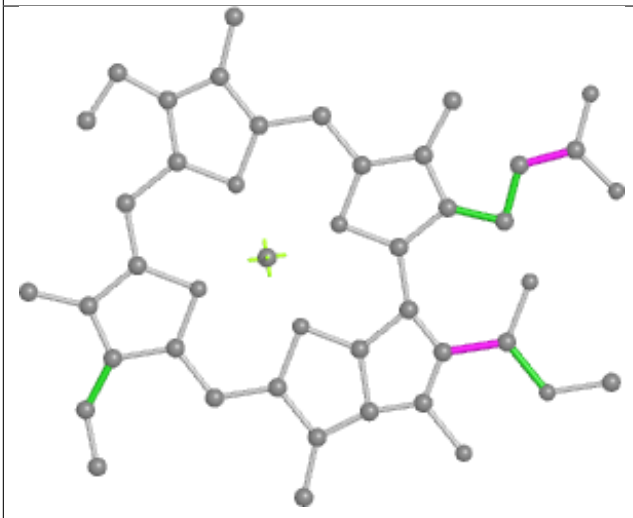
Ligand CLA 5 611



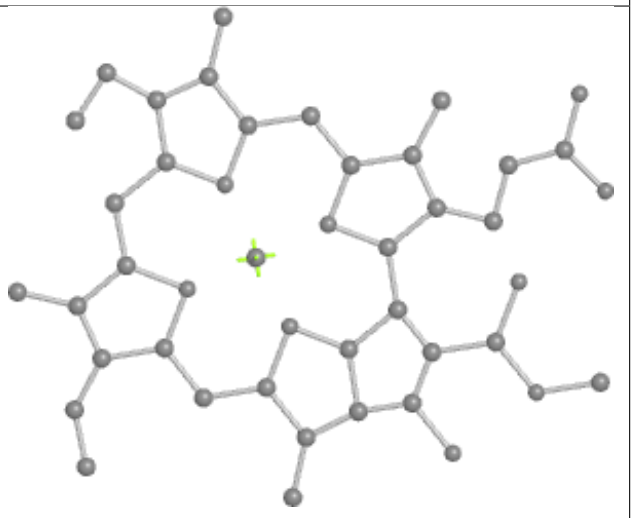
Bond lengths



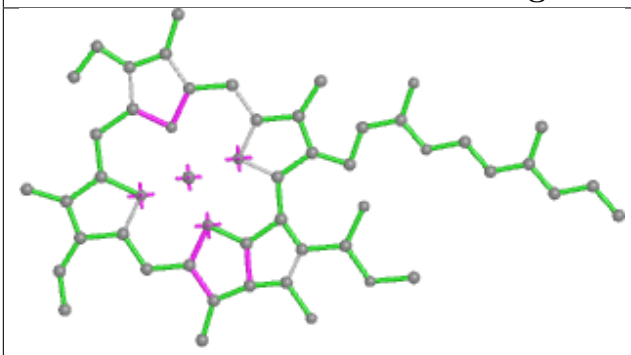
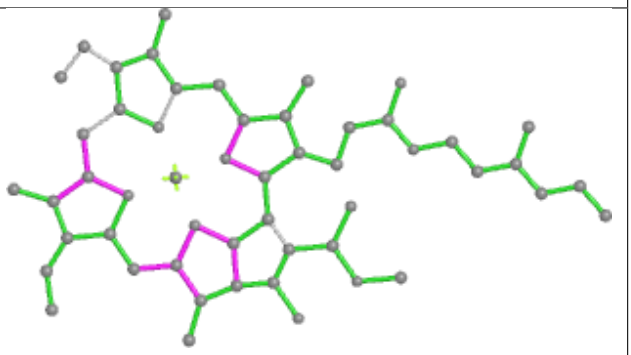
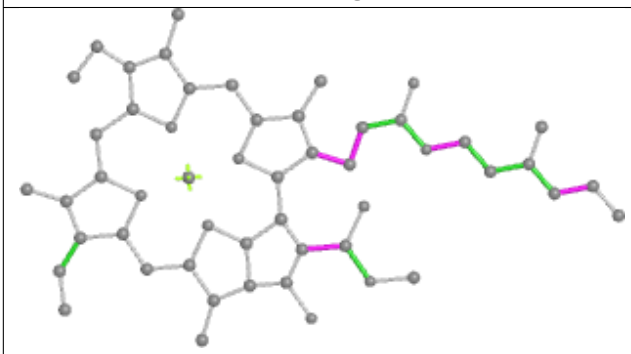
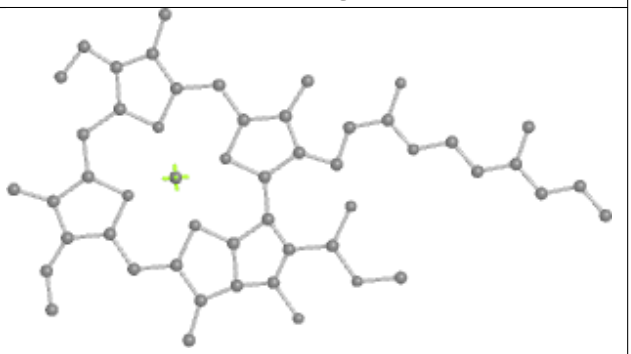
Bond angles



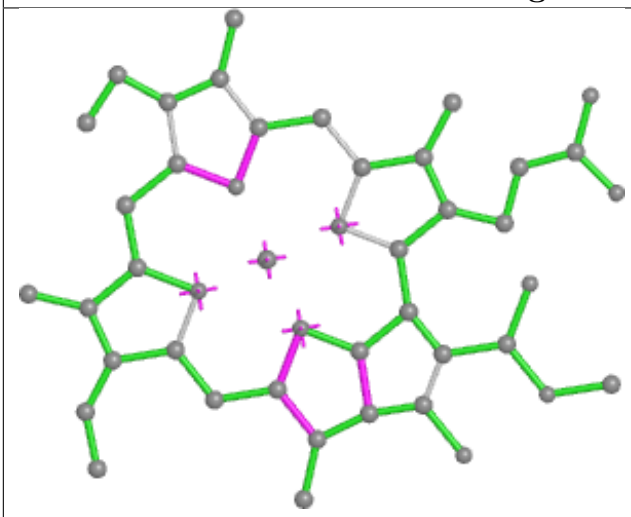
Torsions



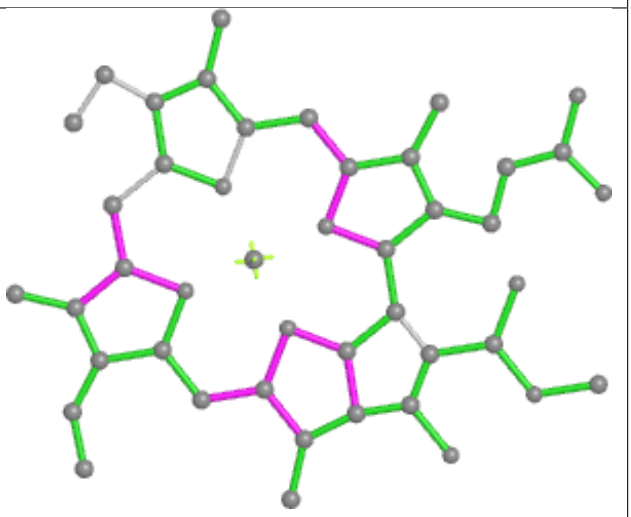
Rings

Ligand CLA 1 603	
	
Bond lengths	**Bond angles**
	
Torsions	**Rings**

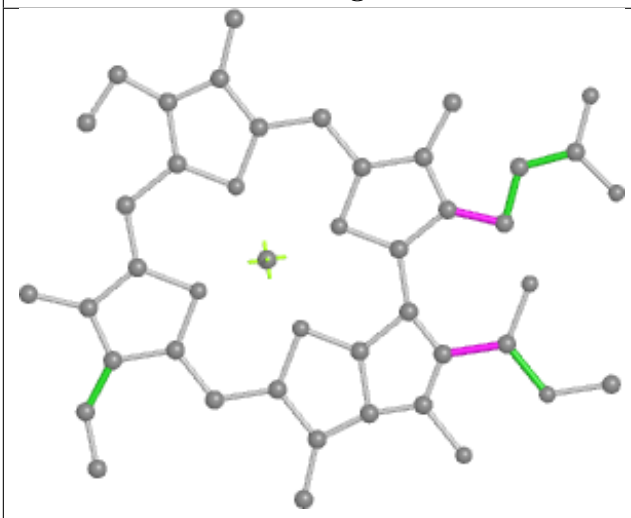
Ligand CLA 5 612



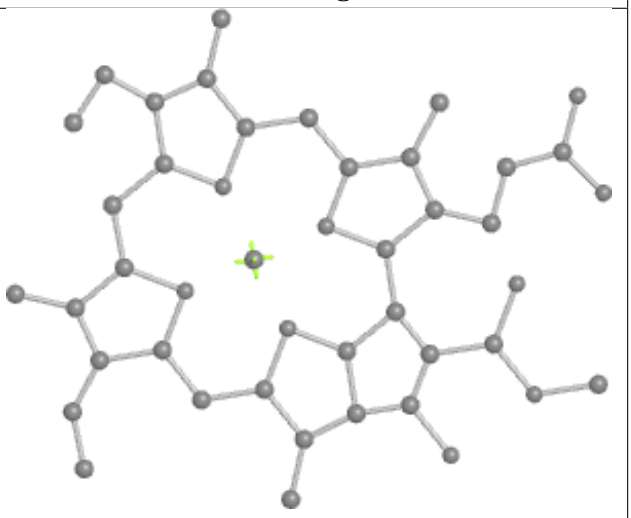
Bond lengths



Bond angles

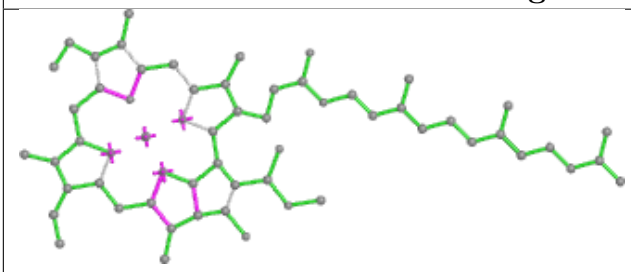


Torsions

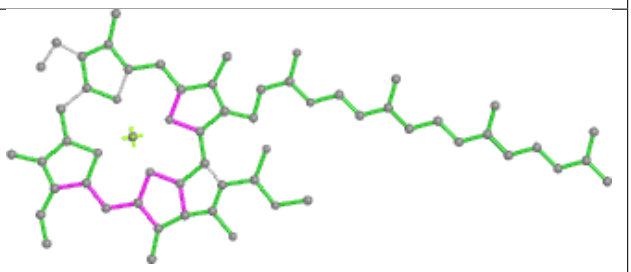


Rings

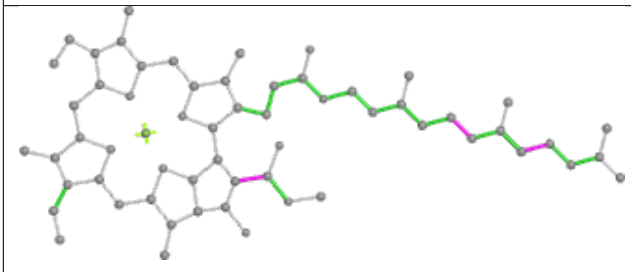
Ligand CLA a 608



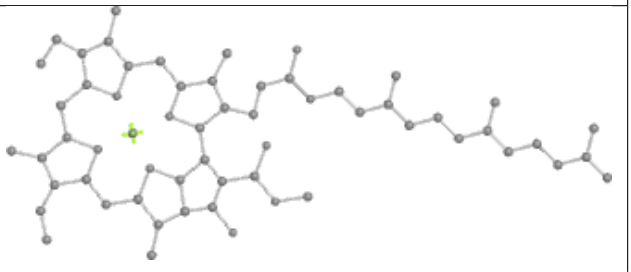
Bond lengths



Bond angles

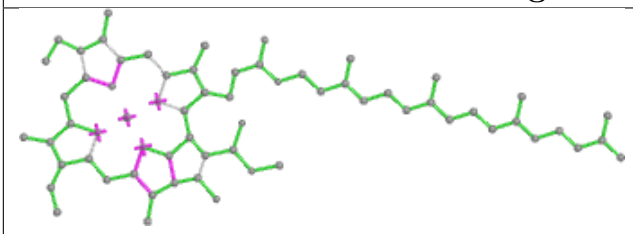


Torsions

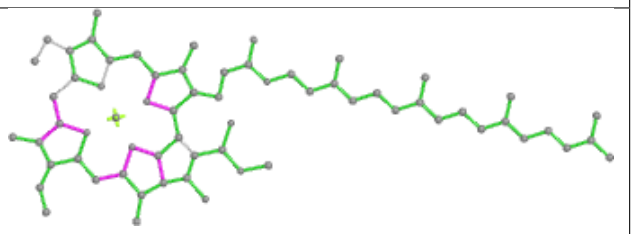


Rings

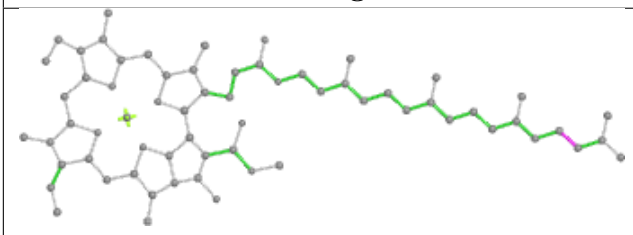
Ligand CLA 3 609



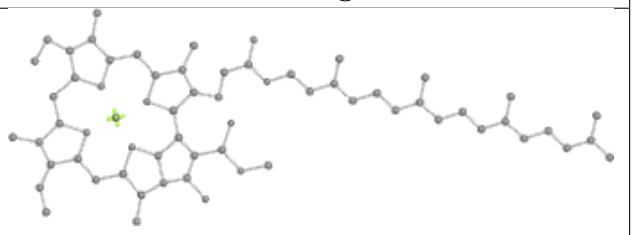
Bond lengths



Bond angles

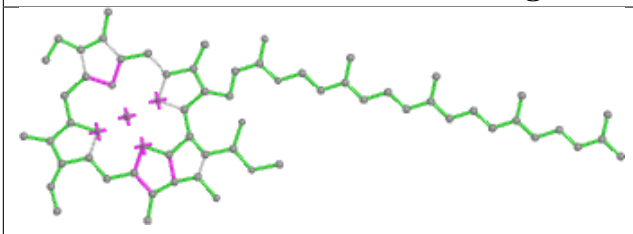


Torsions

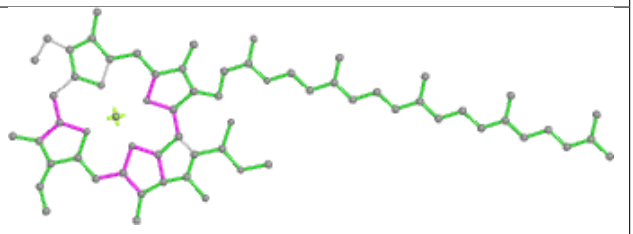


Rings

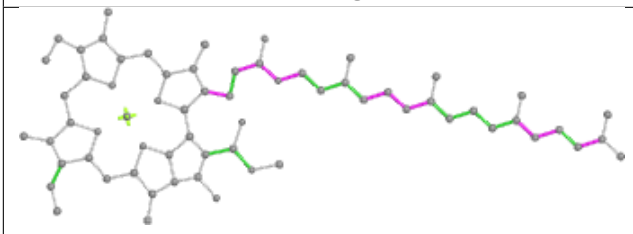
Ligand CLA B 832



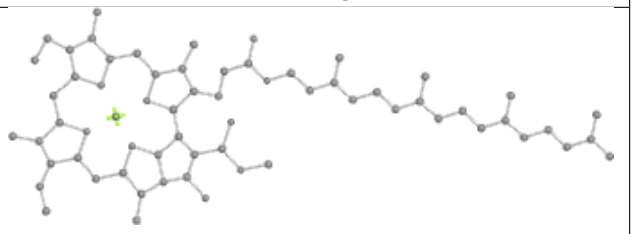
Bond lengths



Bond angles

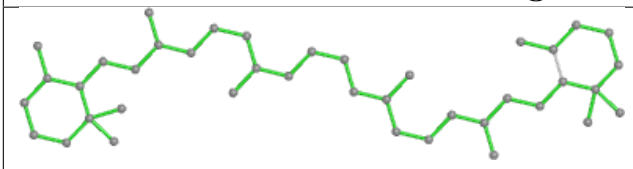


Torsions

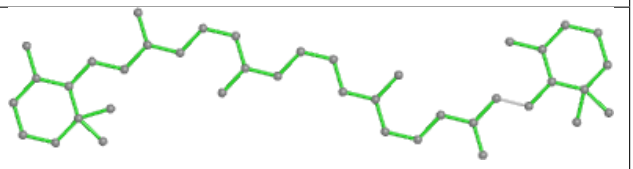


Rings

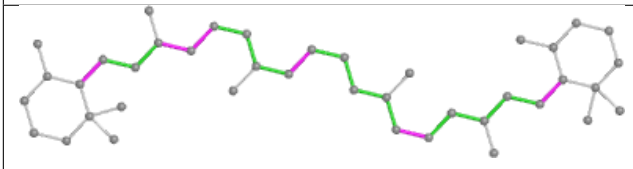
Ligand 8CT B 851



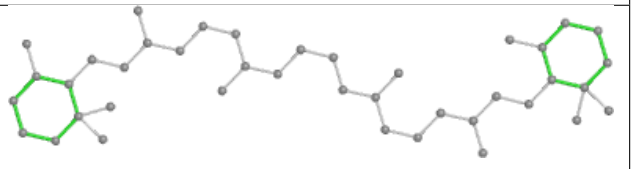
Bond lengths



Bond angles

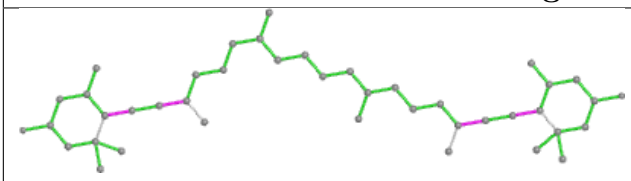


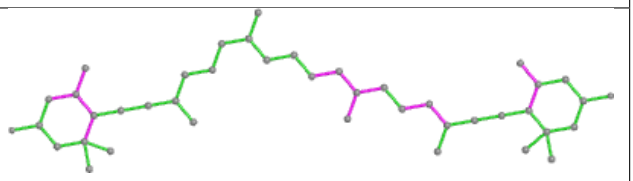
Torsions

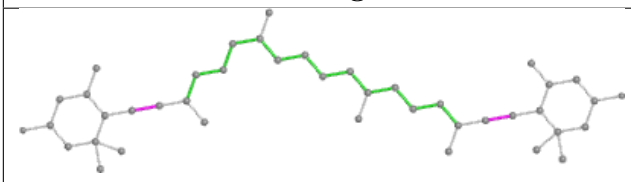


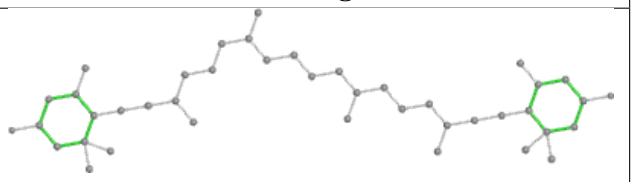
Rings

Ligand II0 5 617

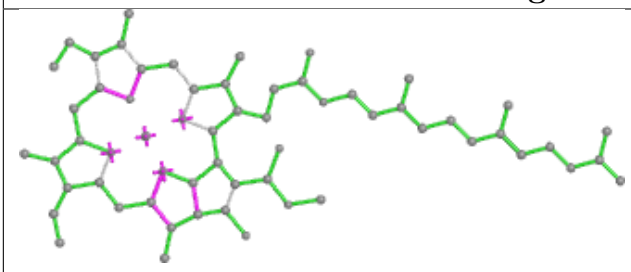

Bond lengths

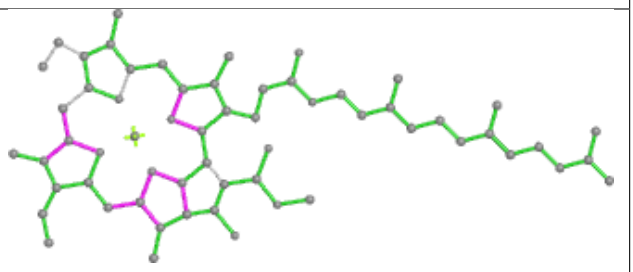

Bond angles

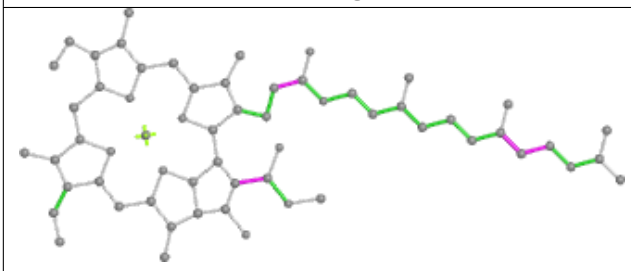

Torsions

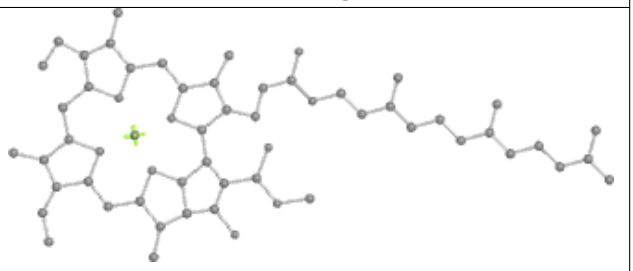

Rings

Ligand CLA 2 605

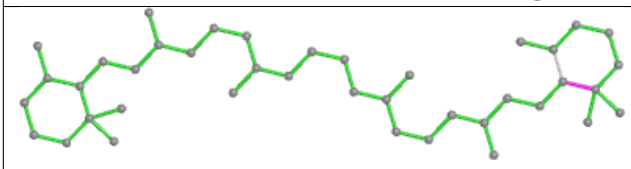

Bond lengths

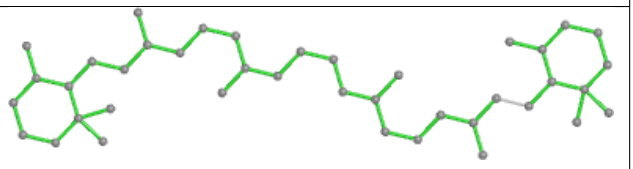

Bond angles

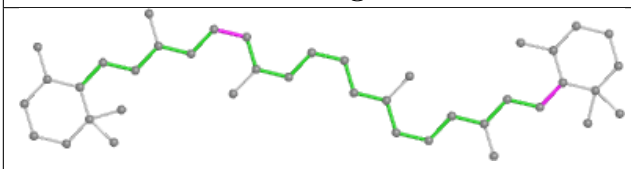

Torsions

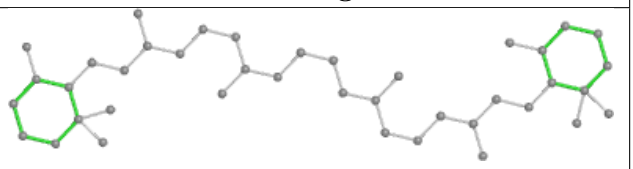

Rings

Ligand 8CT F 201

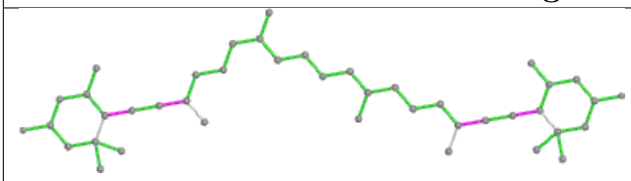

Bond lengths


Bond angles

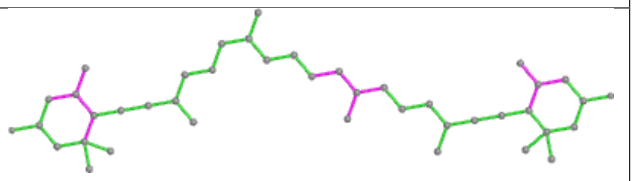

Torsions


Rings

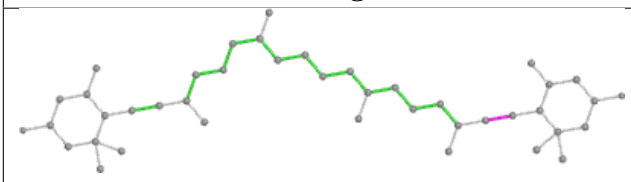
Ligand II0 5 620



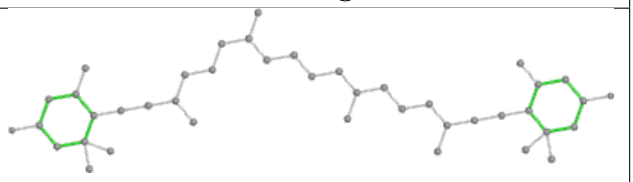
Bond lengths



Bond angles

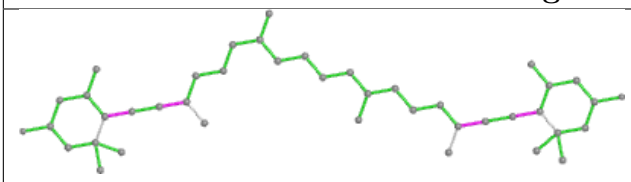


Torsions

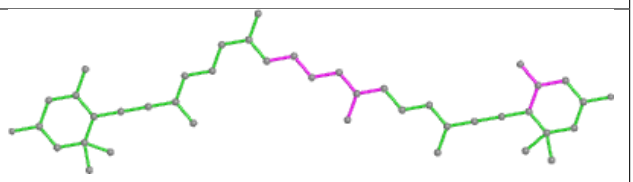


Rings

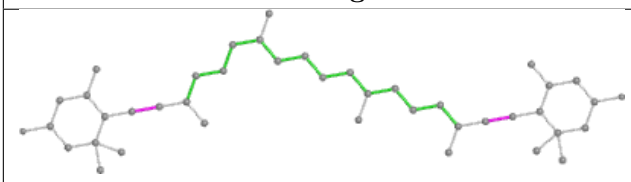
Ligand II0 6 615



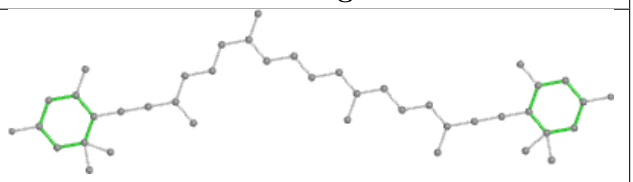
Bond lengths



Bond angles

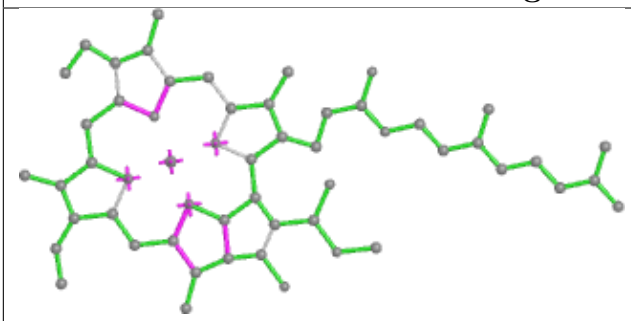


Torsions

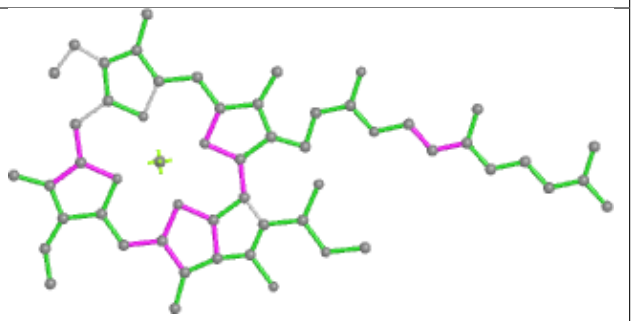


Rings

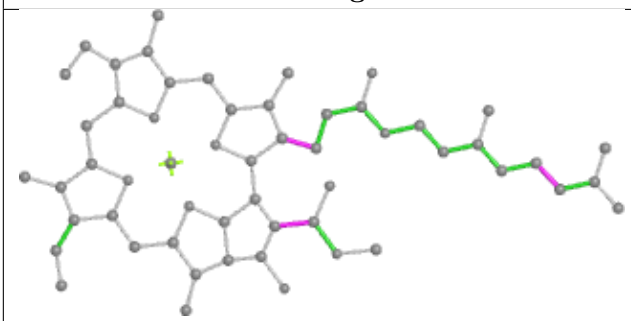
Ligand CLA A 812



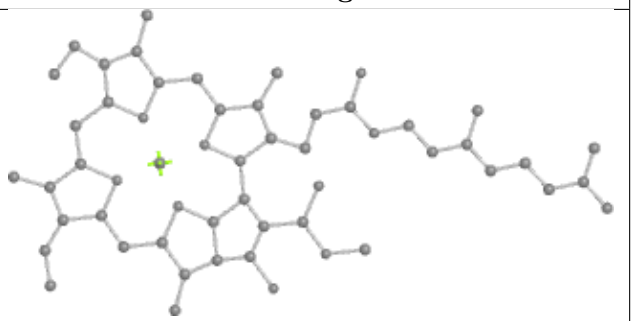
Bond lengths



Bond angles

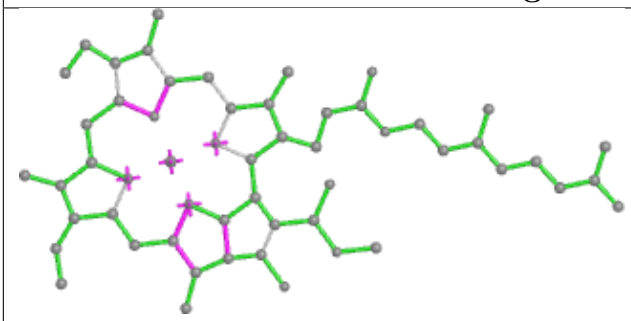


Torsions

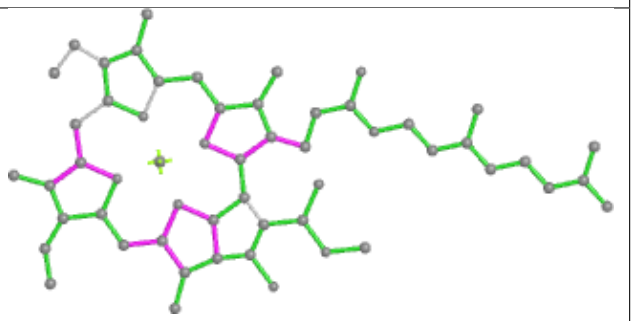


Rings

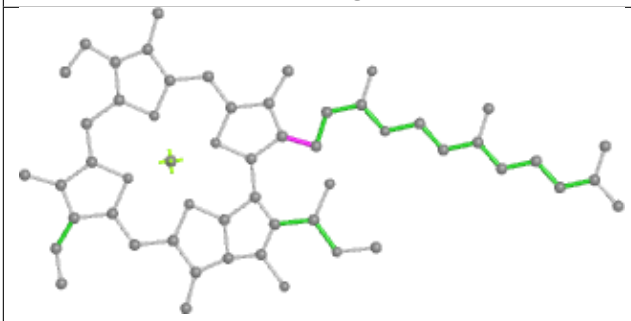
Ligand CLA A 808



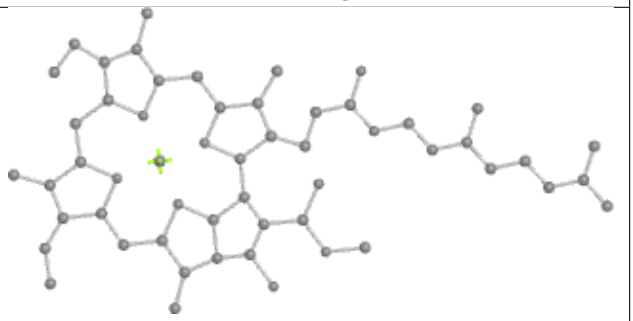
Bond lengths



Bond angles

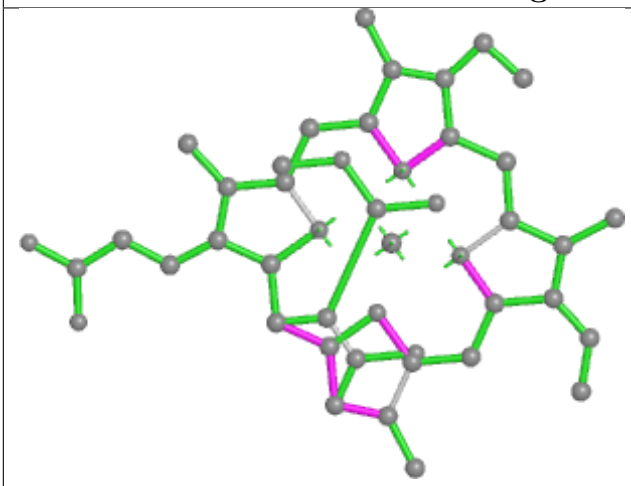


Torsions

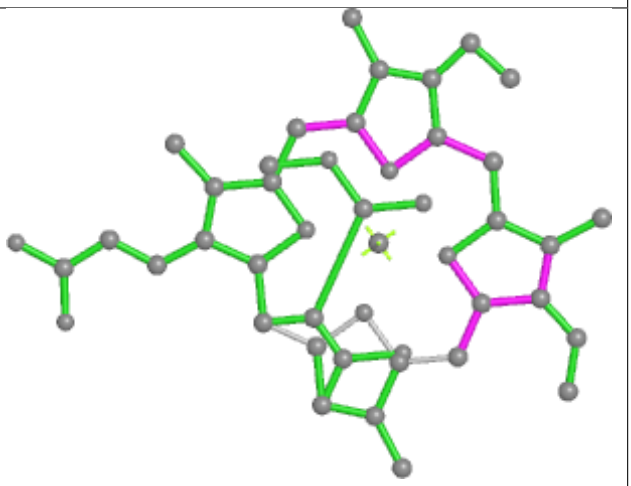


Rings

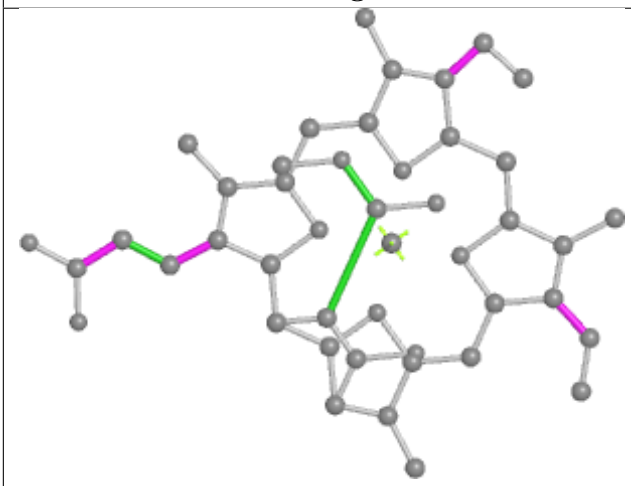
Ligand KC2 4 605



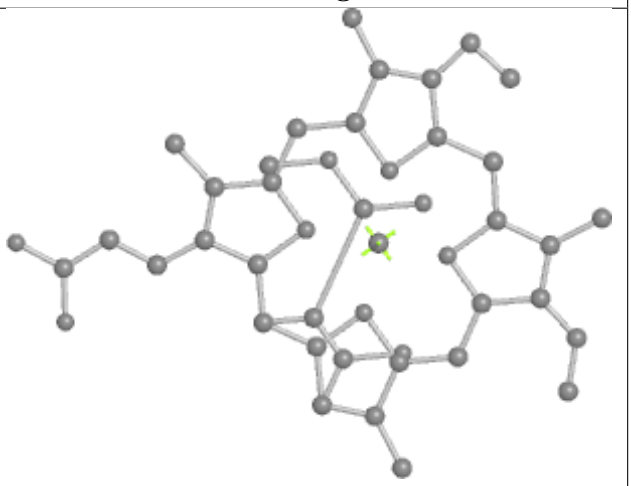
Bond lengths



Bond angles

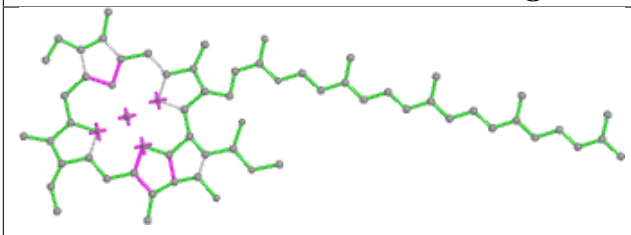


Torsions

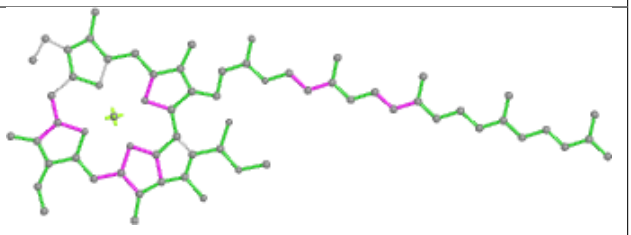


Rings

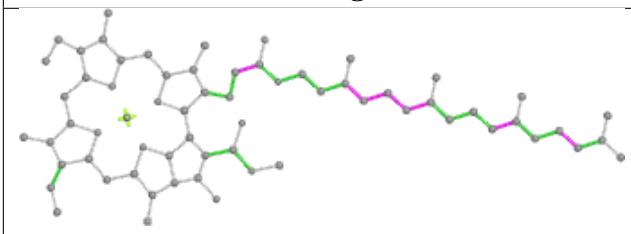
Ligand CLA B 806



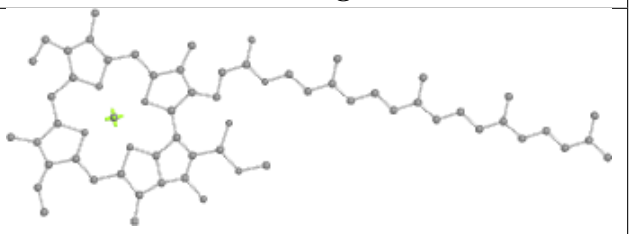
Bond lengths



Bond angles

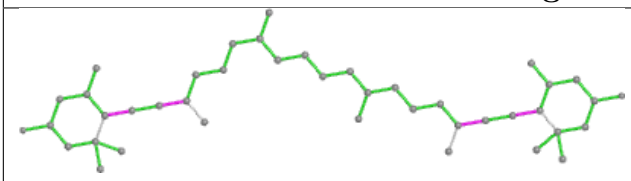


Torsions

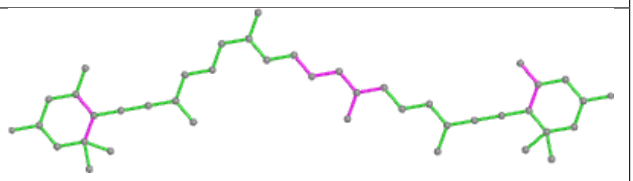


Rings

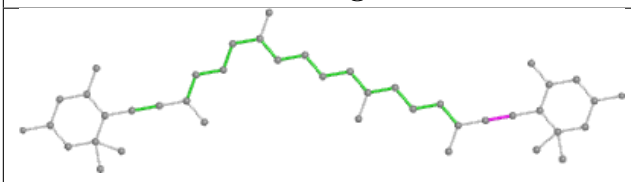
Ligand II0 4 615



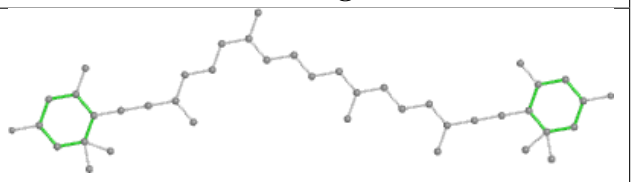
Bond lengths



Bond angles

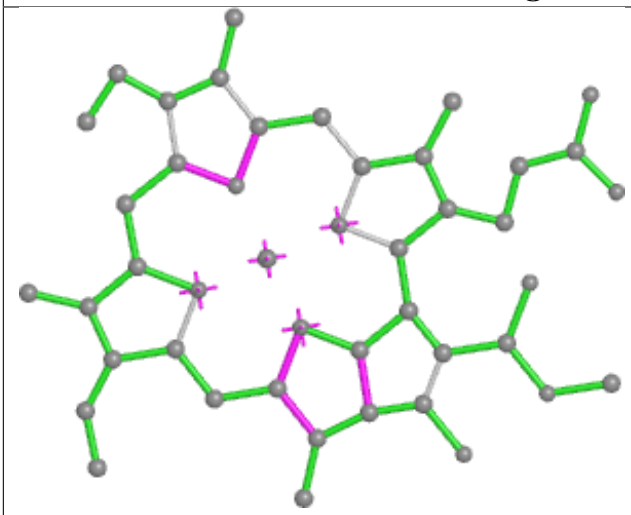


Torsions

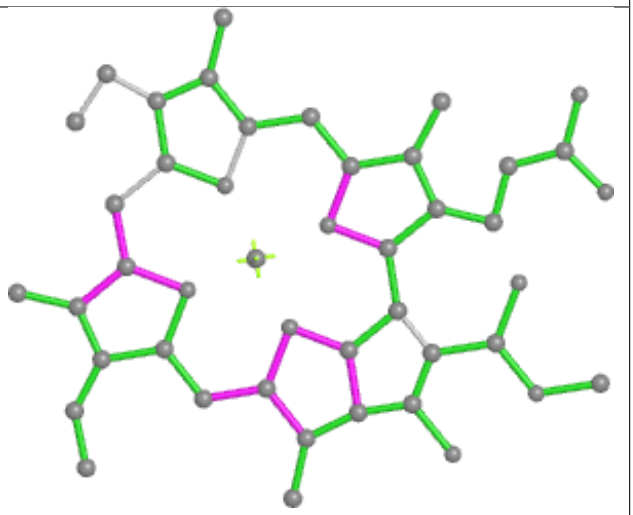


Rings

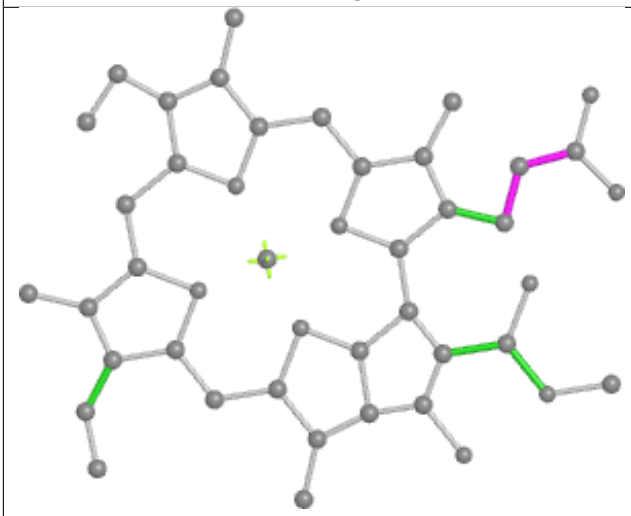
Ligand CLA B 804



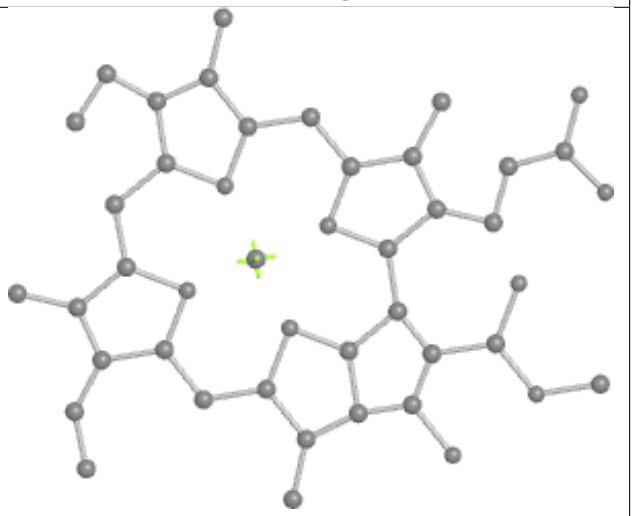
Bond lengths



Bond angles

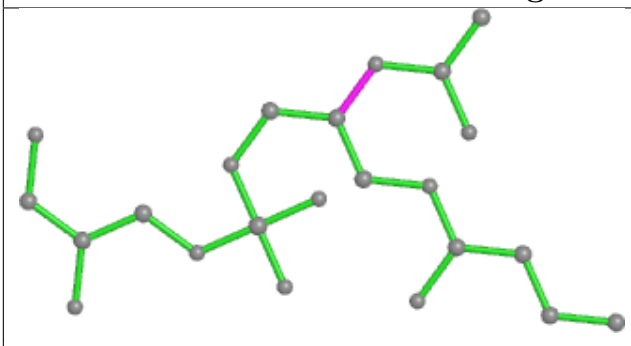


Torsions

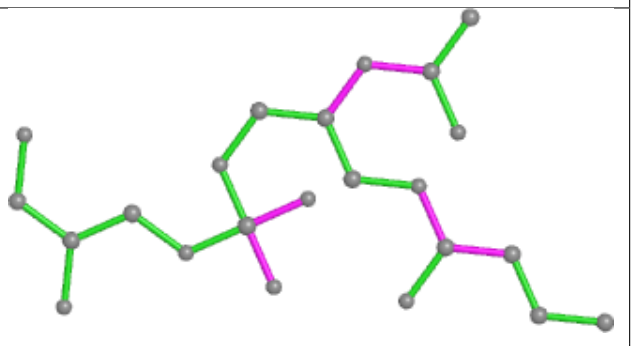


Rings

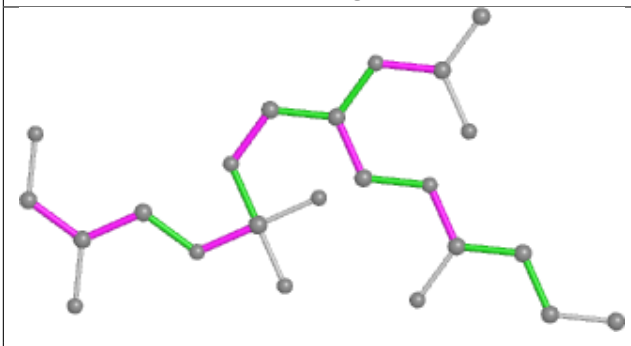
Ligand LHG 5 619



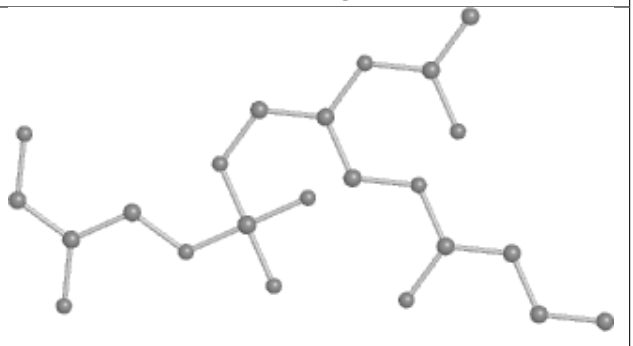
Bond lengths



Bond angles

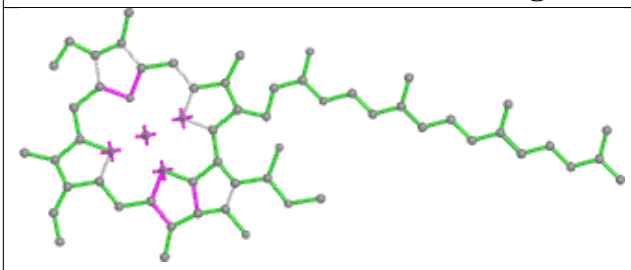


Torsions

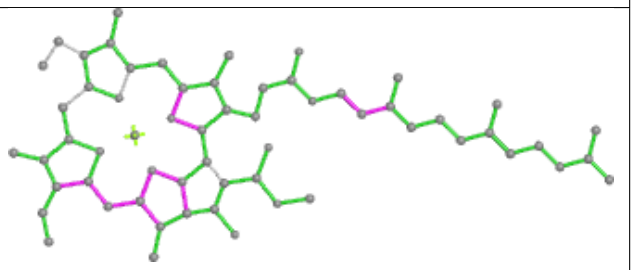


Rings

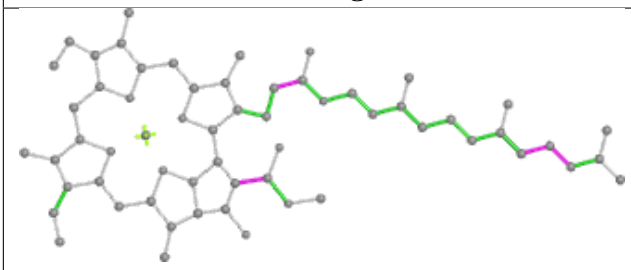
Ligand CLA 2 608



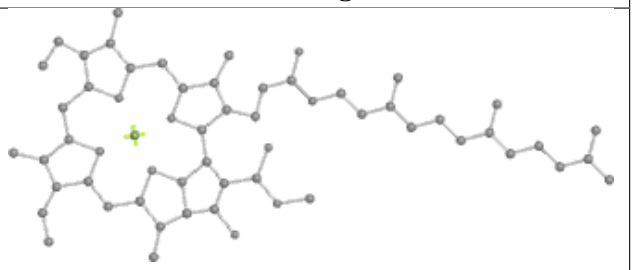
Bond lengths



Bond angles

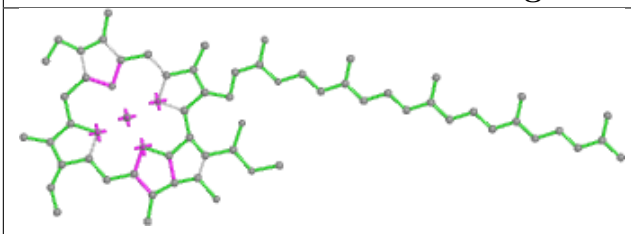


Torsions

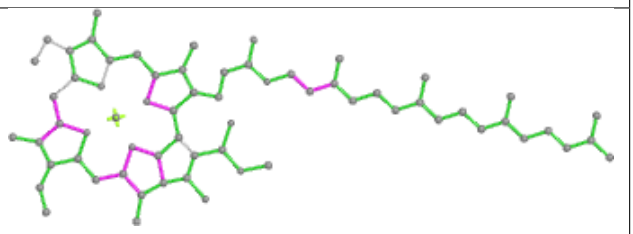


Rings

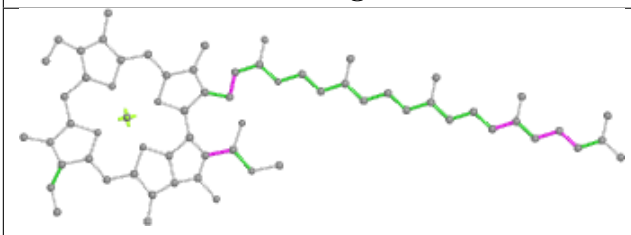
Ligand CLA B 807



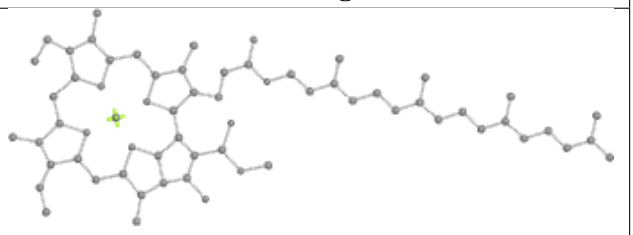
Bond lengths



Bond angles

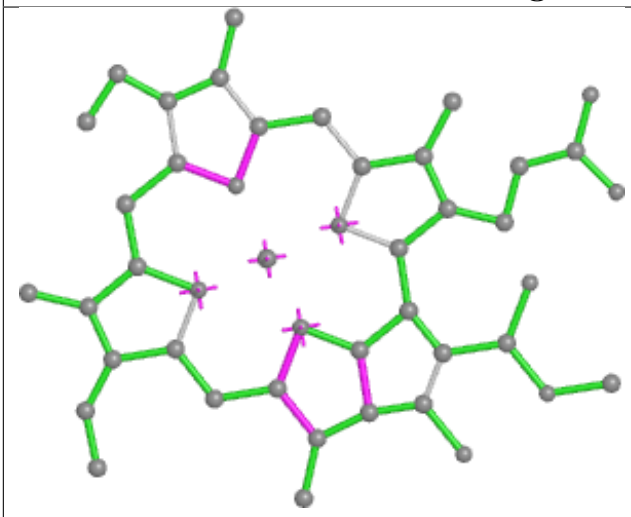


Torsions

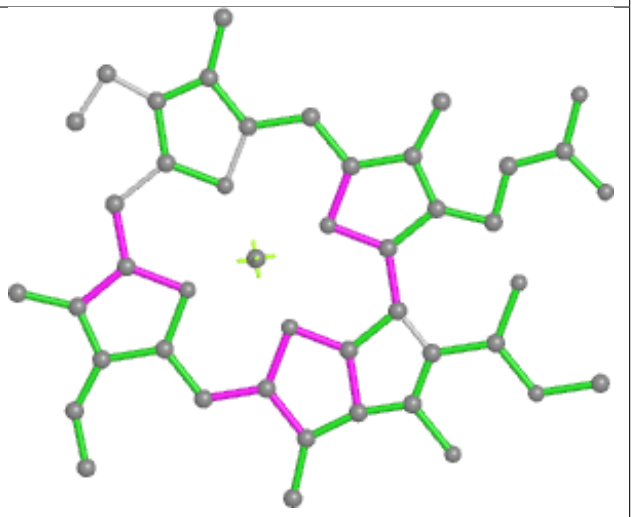


Rings

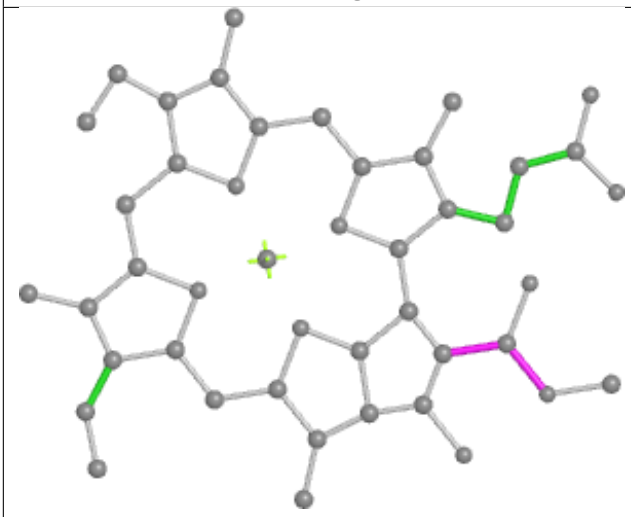
Ligand CLA 1 613



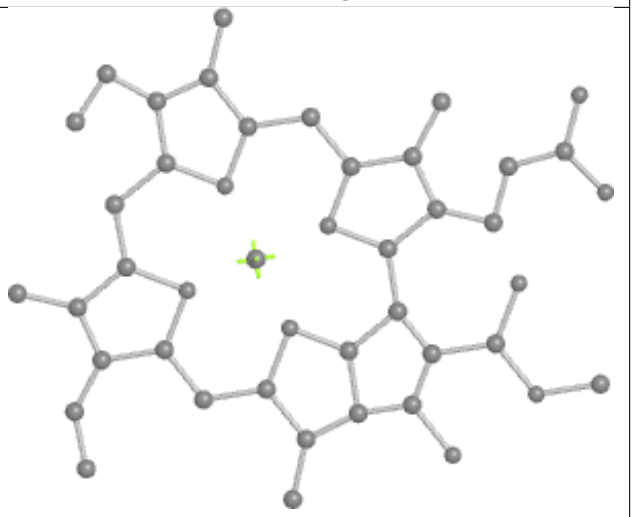
Bond lengths



Bond angles

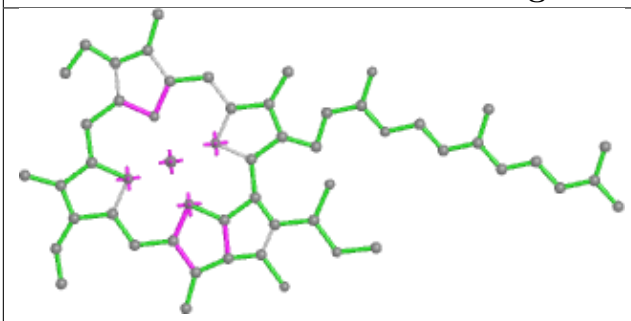


Torsions

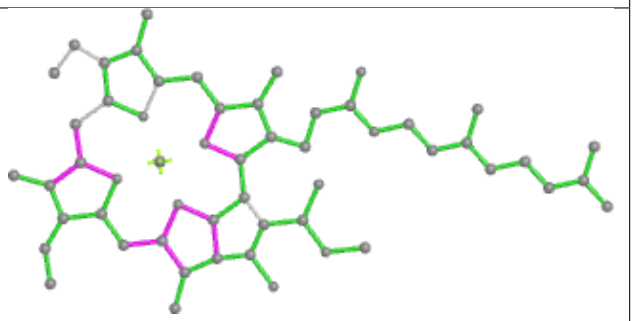


Rings

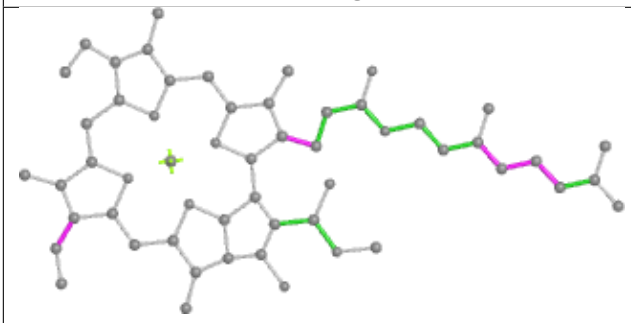
Ligand CLA 4 601



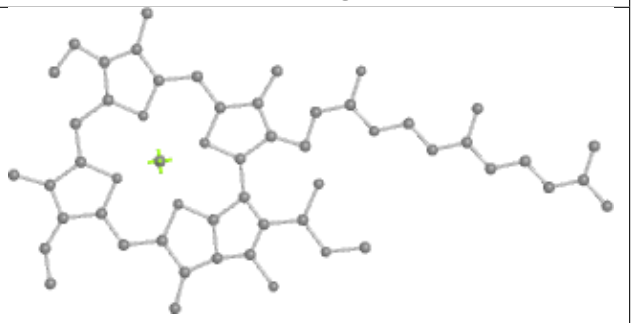
Bond lengths



Bond angles

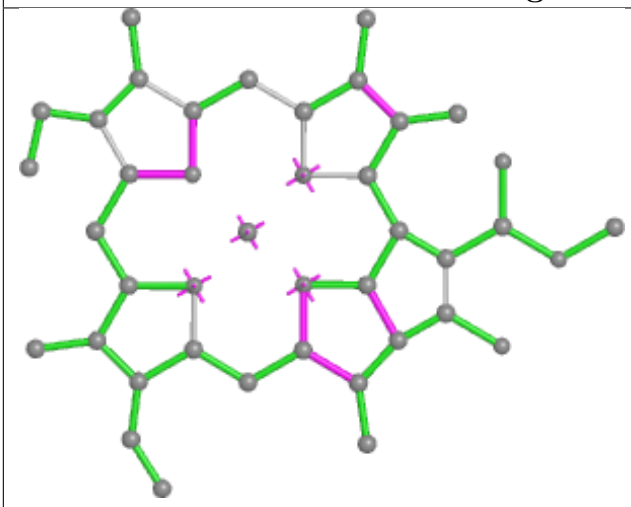


Torsions

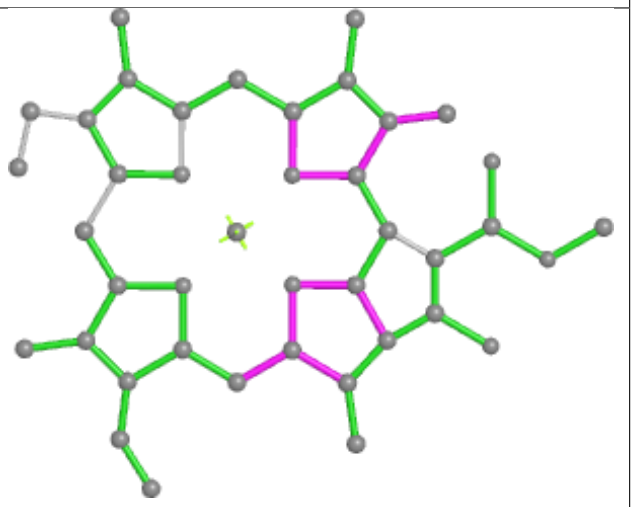


Rings

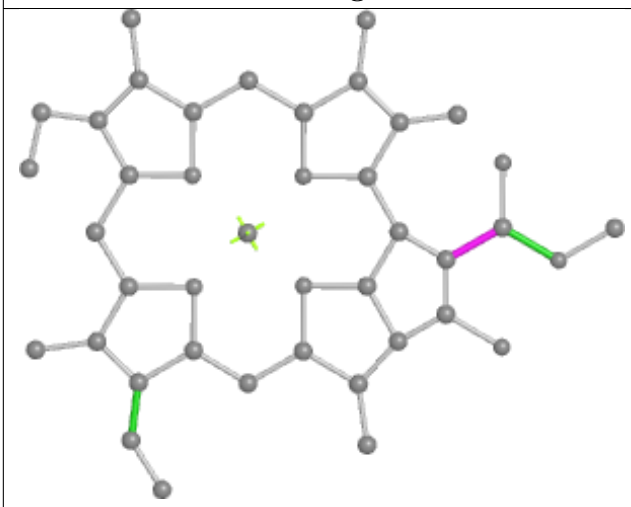
Ligand CLA L 207



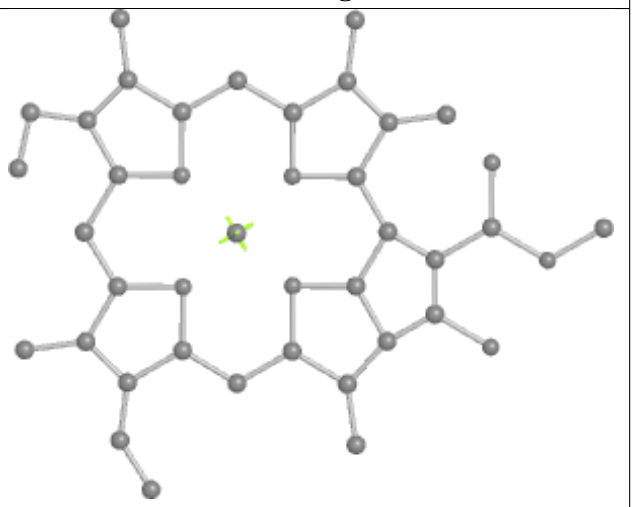
Bond lengths



Bond angles

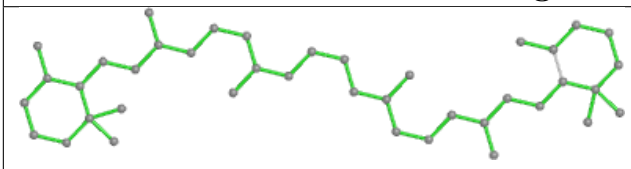


Torsions

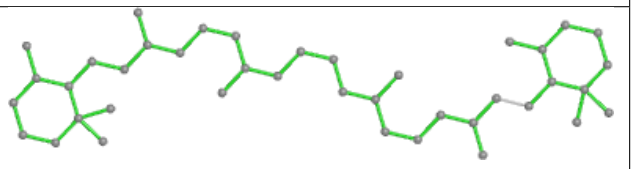


Rings

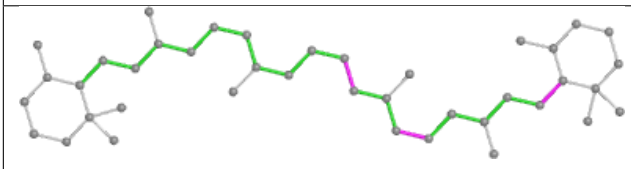
Ligand 8CT I 101



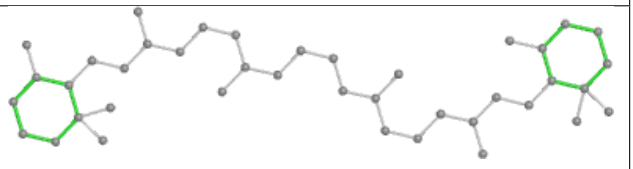
Bond lengths



Bond angles

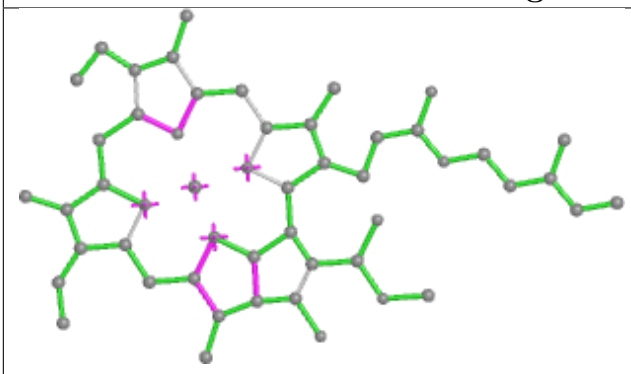


Torsions

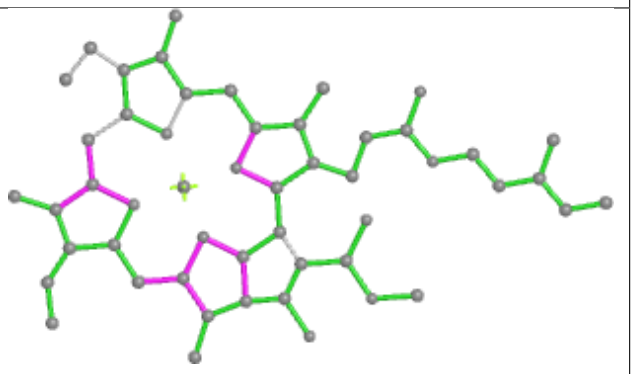


Rings

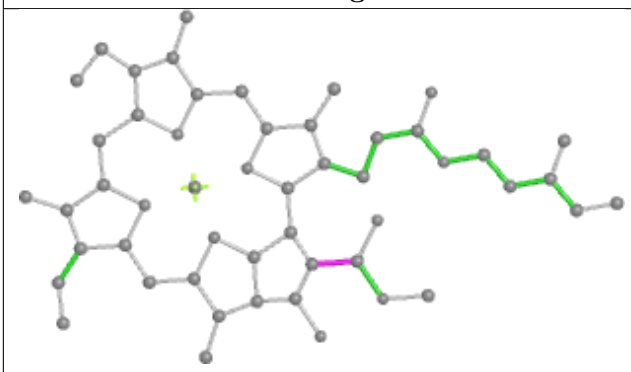
Ligand CLA L 202



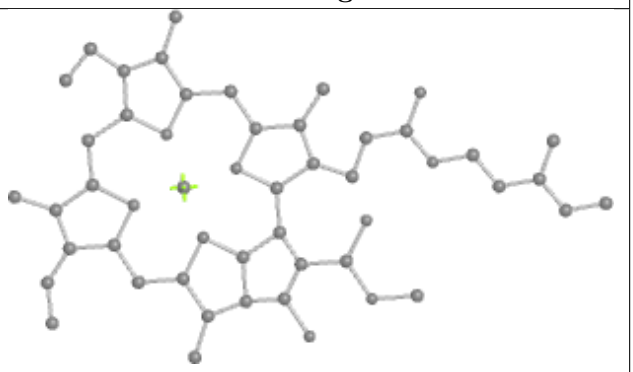
Bond lengths



Bond angles

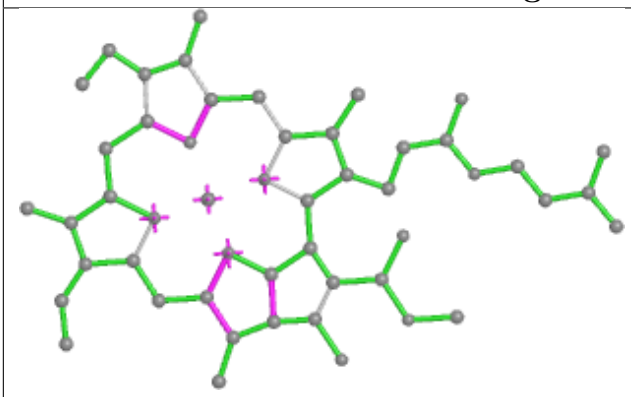


Torsions

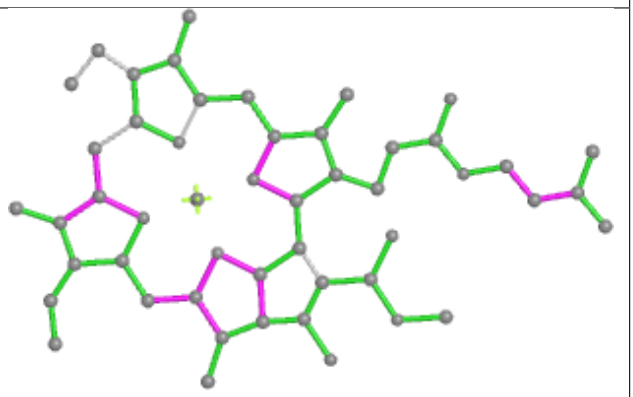


Rings

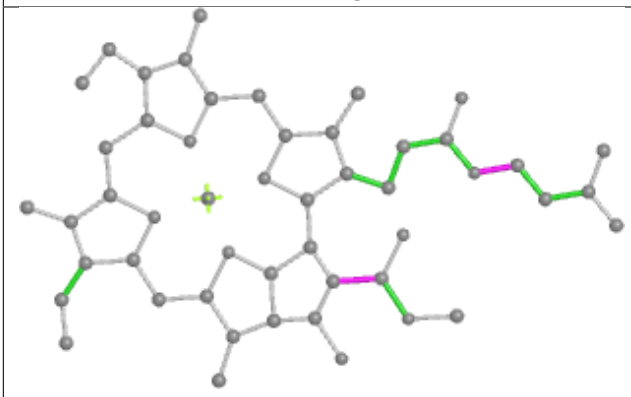
Ligand CLA A 807



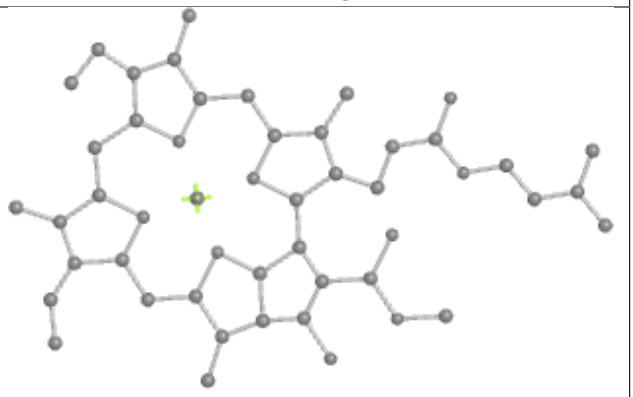
Bond lengths



Bond angles

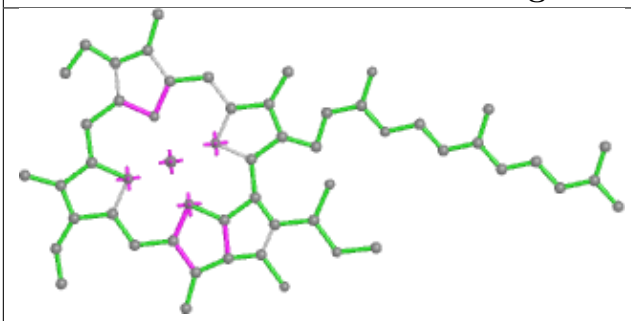


Torsions

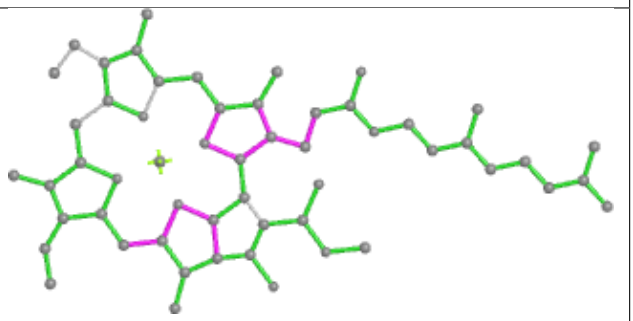


Rings

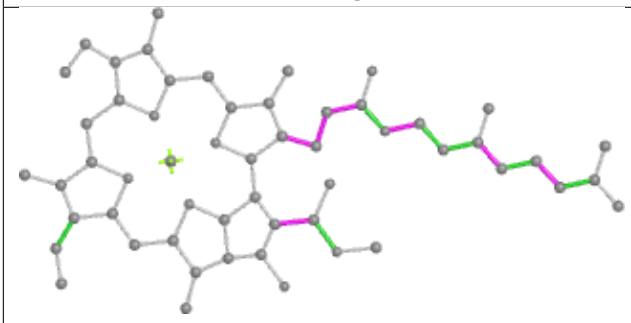
Ligand CLA a 602



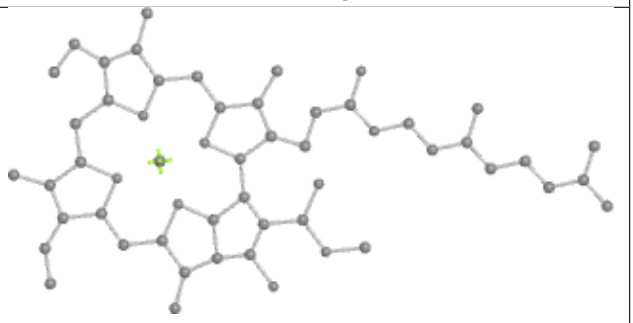
Bond lengths



Bond angles

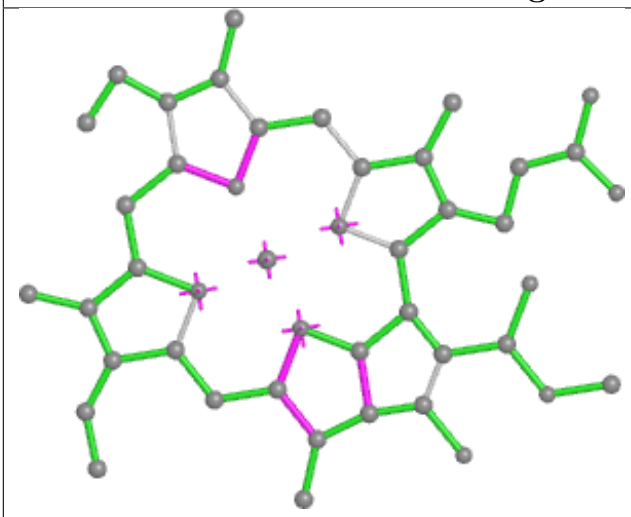


Torsions

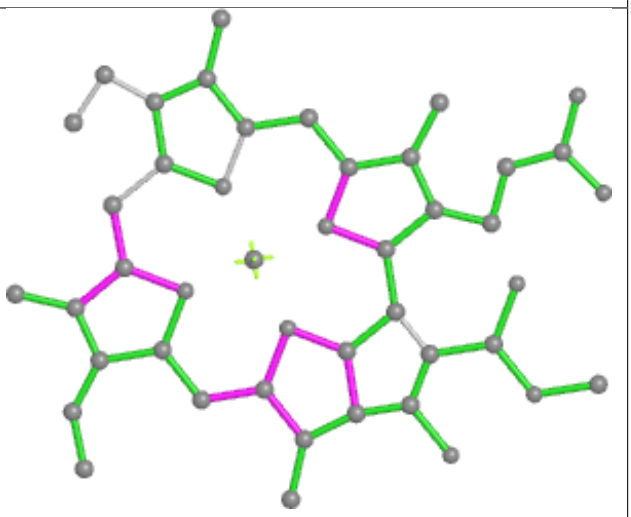


Rings

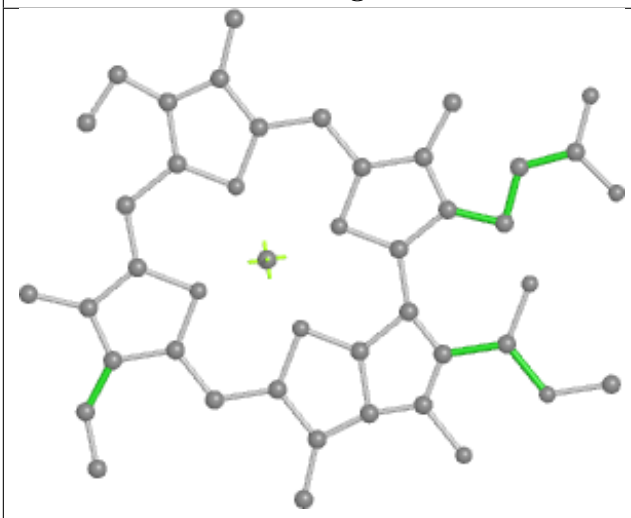
Ligand CLA 5 607



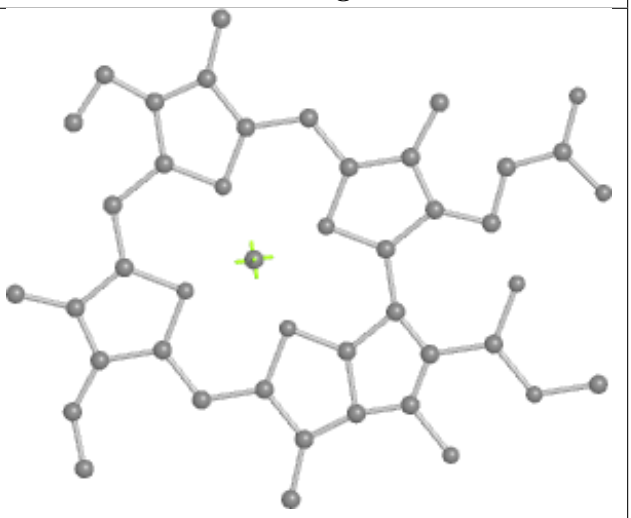
Bond lengths



Bond angles

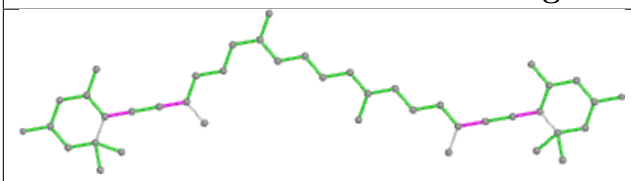


Torsions

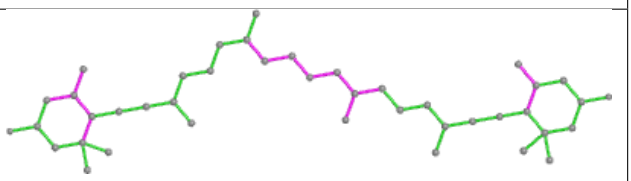


Rings

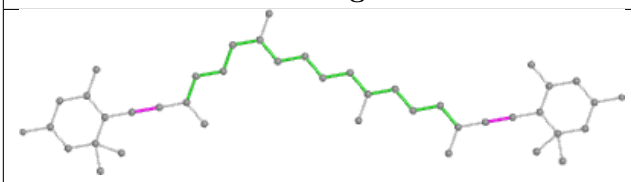
Ligand II0 4 612



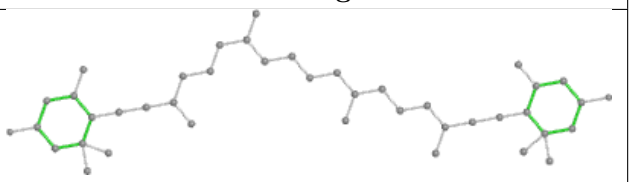
Bond lengths



Bond angles

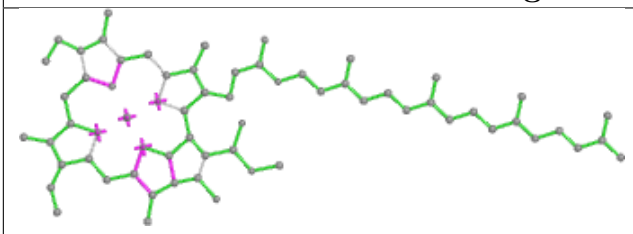


Torsions

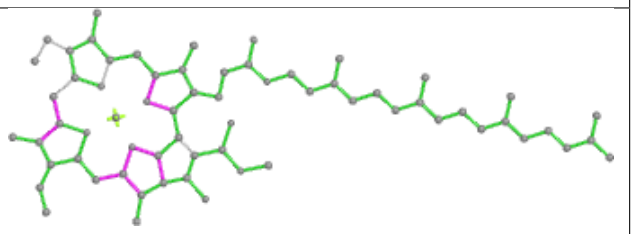


Rings

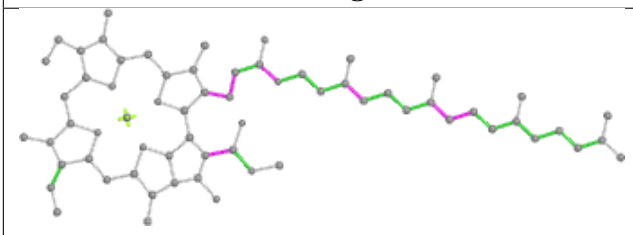
Ligand CLA A 843



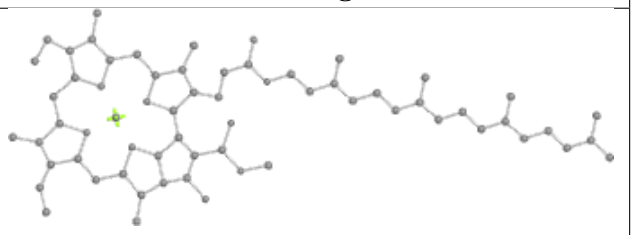
Bond lengths



Bond angles

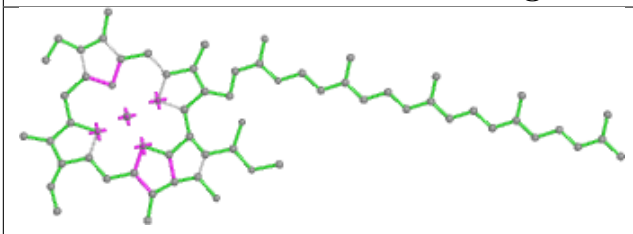


Torsions

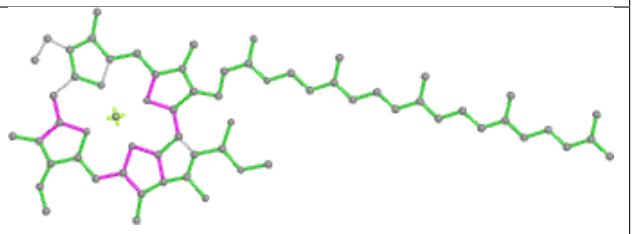


Rings

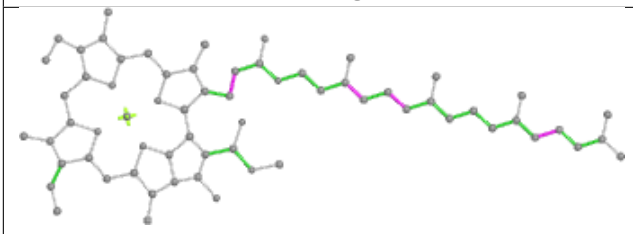
Ligand CLA A 827



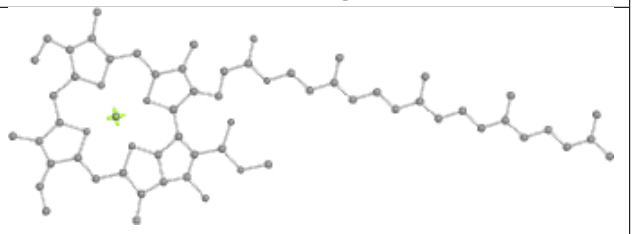
Bond lengths



Bond angles

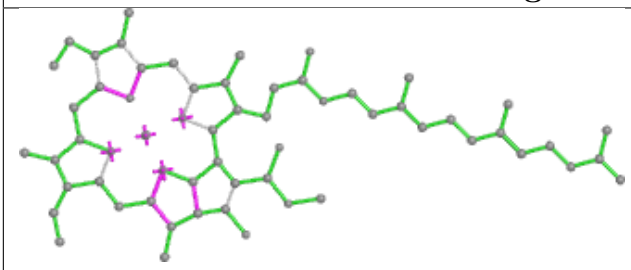


Torsions

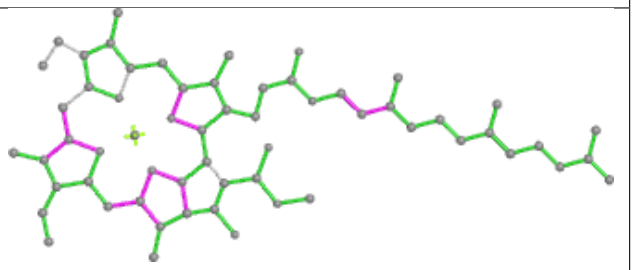


Rings

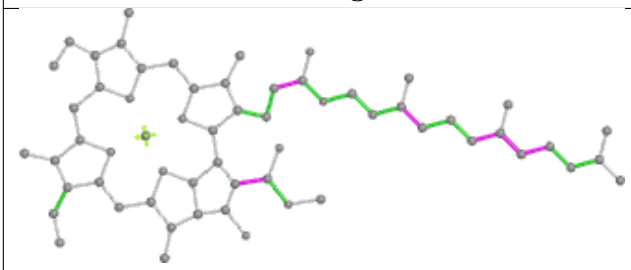
Ligand CLA B 821



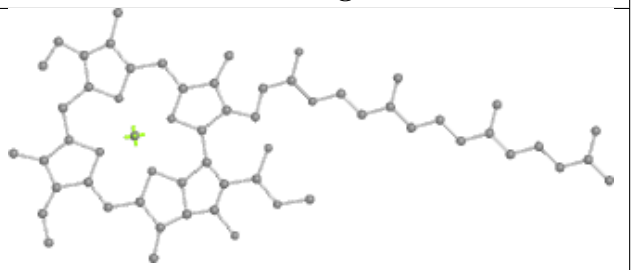
Bond lengths



Bond angles

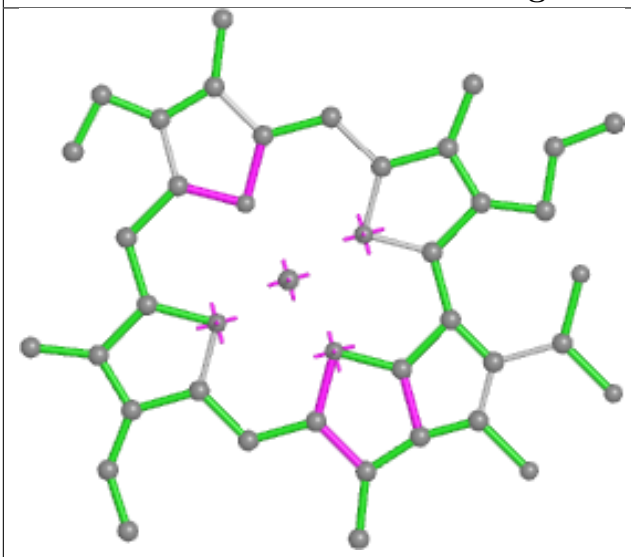


Torsions

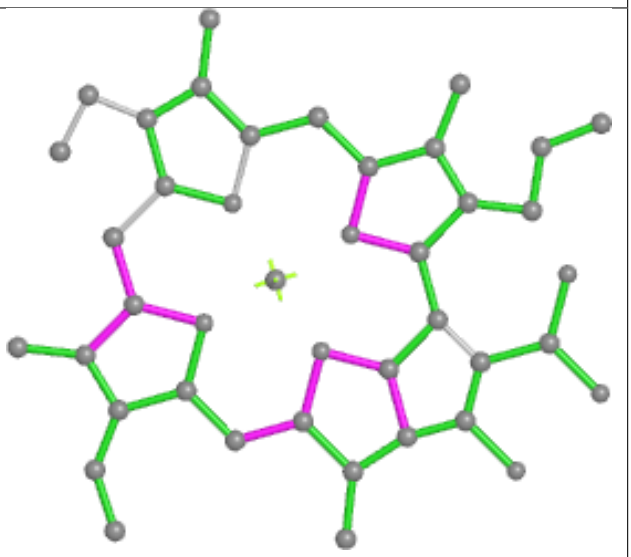


Rings

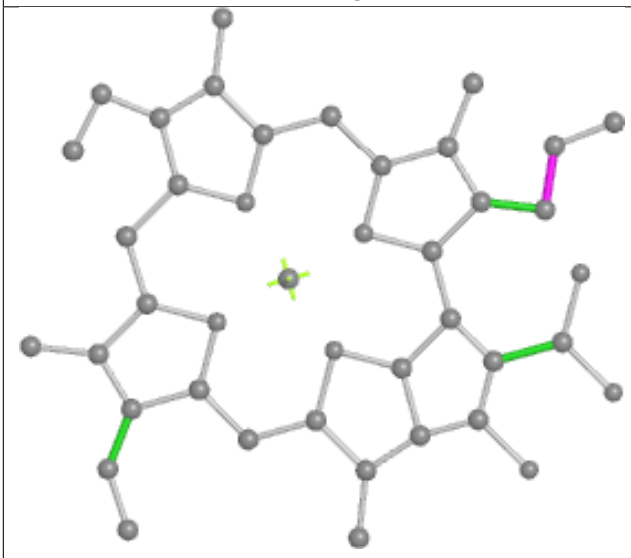
Ligand CLA 1 605



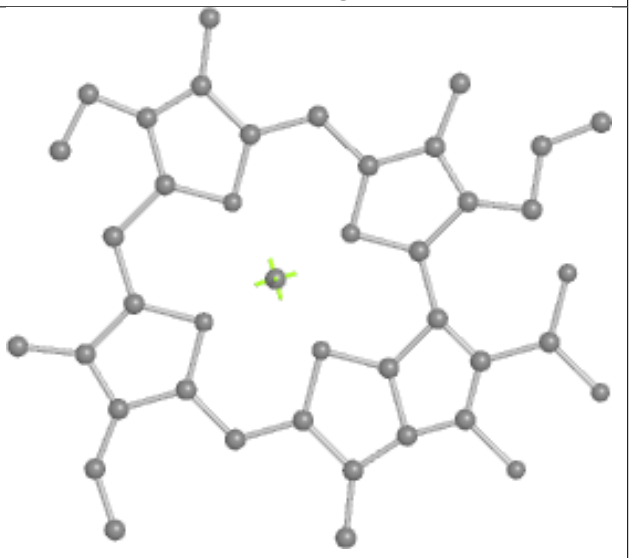
Bond lengths



Bond angles

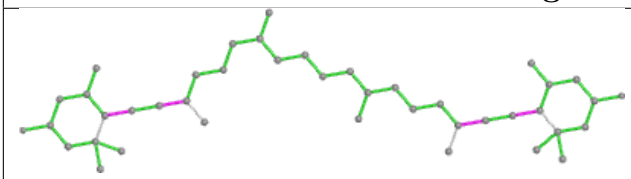


Torsions

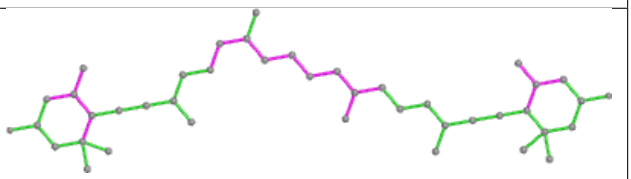


Rings

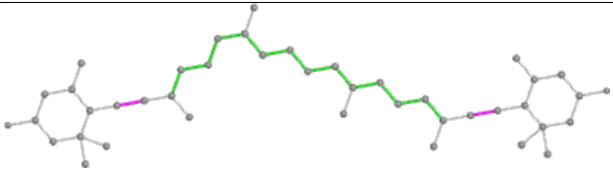
Ligand II0 7 615



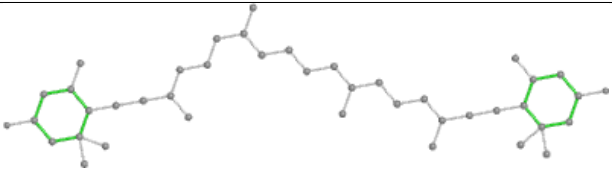
Bond lengths



Bond angles

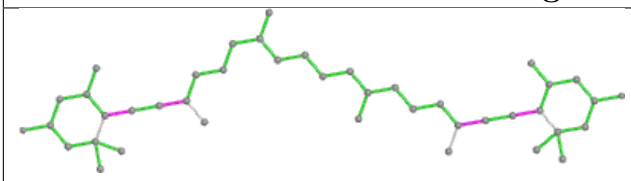


Torsions

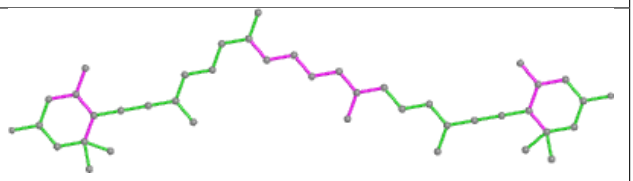


Rings

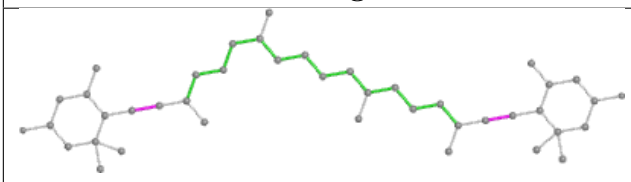
Ligand II0 2 615



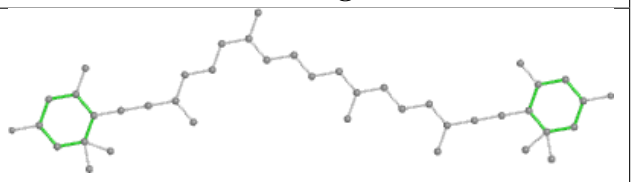
Bond lengths



Bond angles

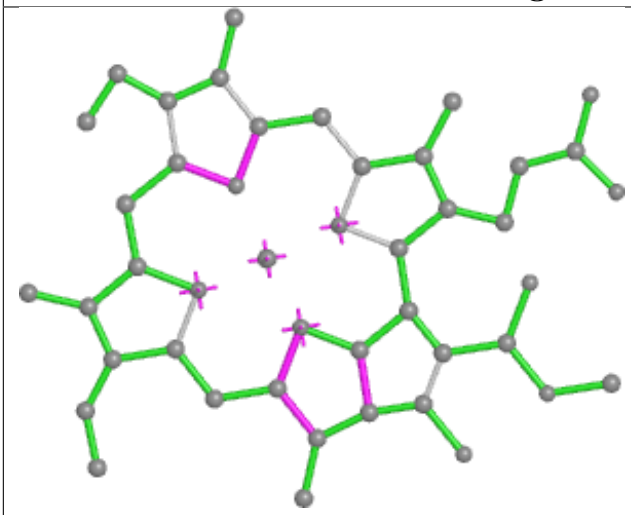


Torsions

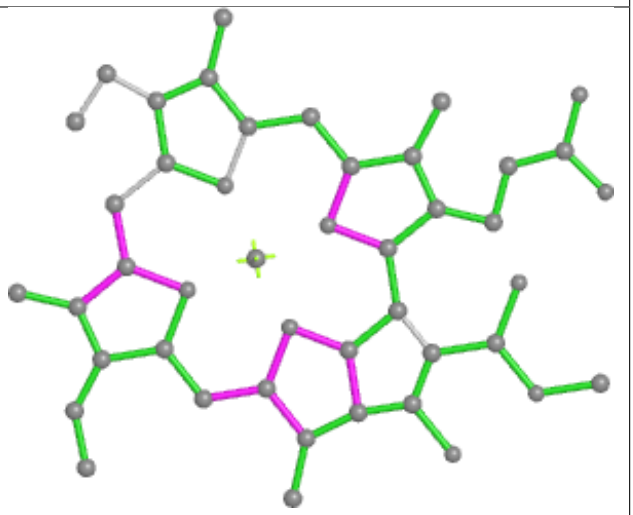


Rings

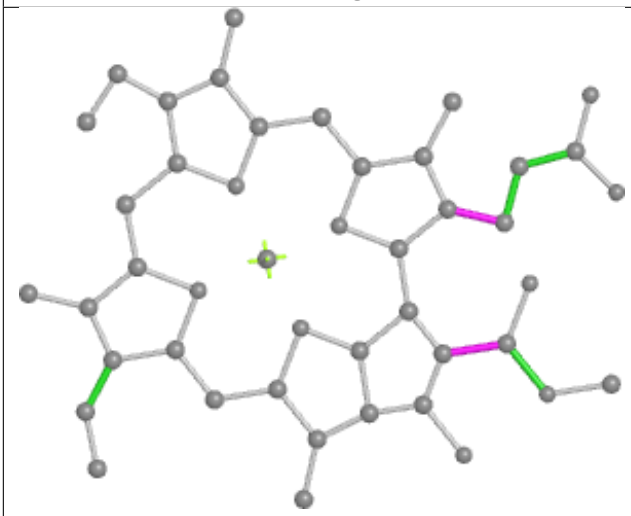
Ligand CLA 2 612



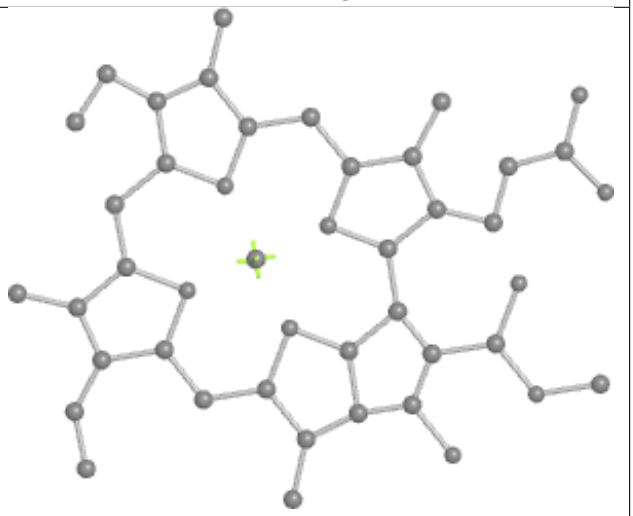
Bond lengths



Bond angles

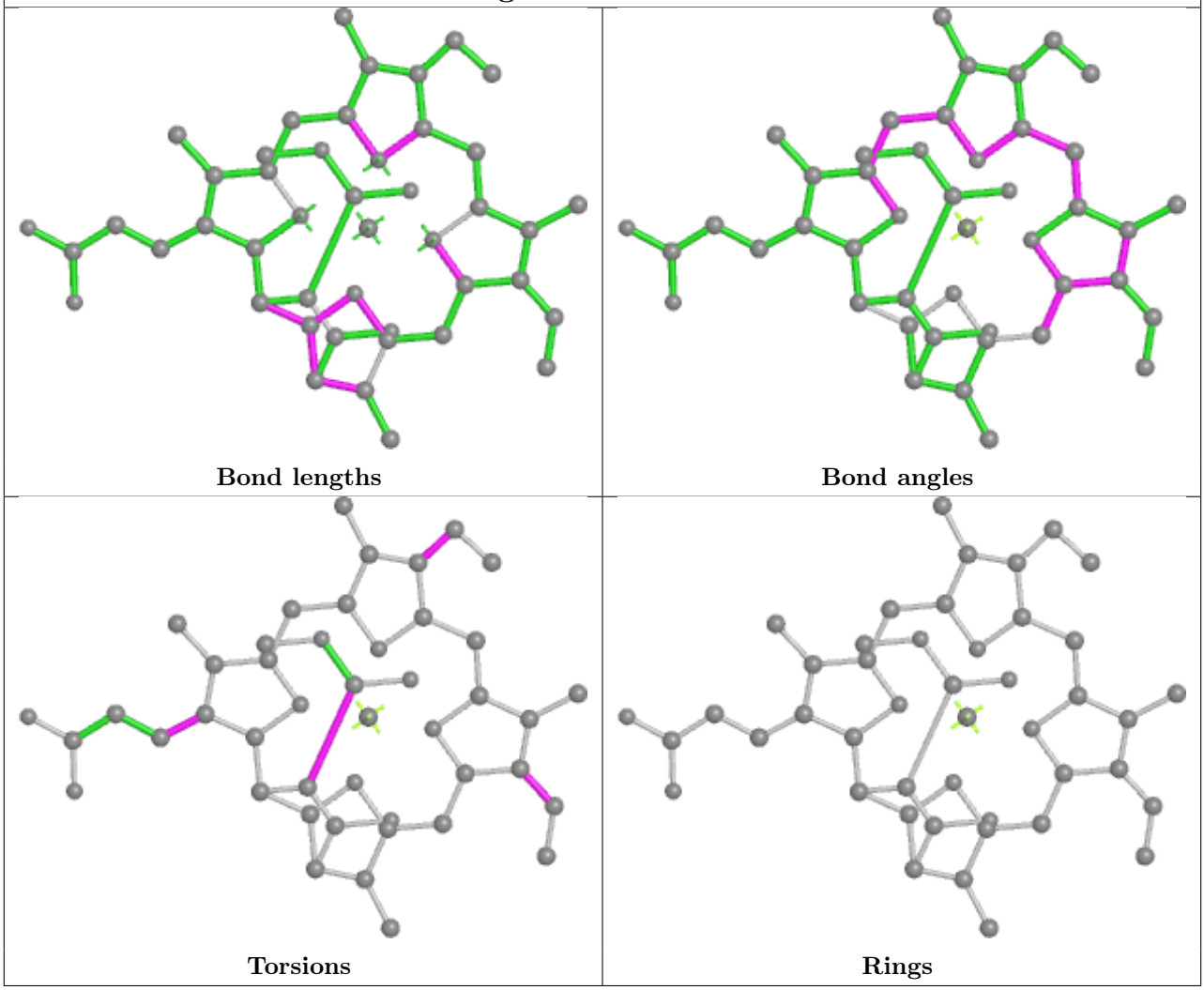


Torsions

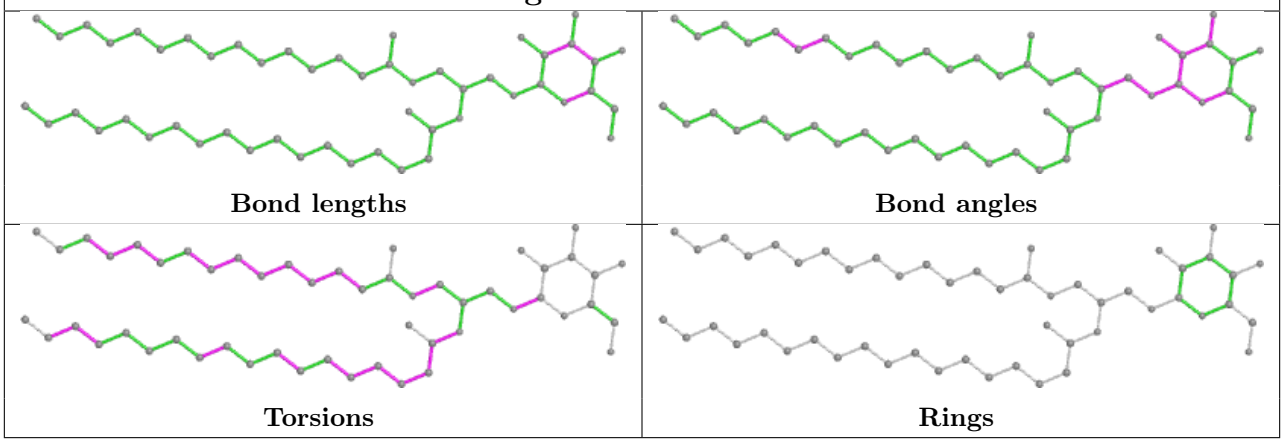


Rings

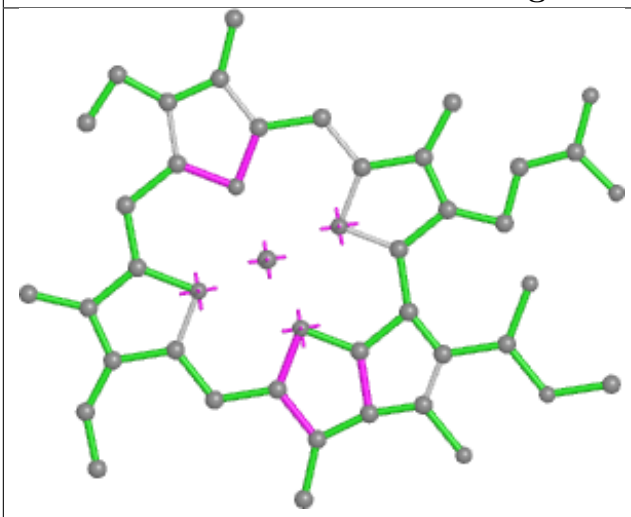
Ligand KC2 3 606



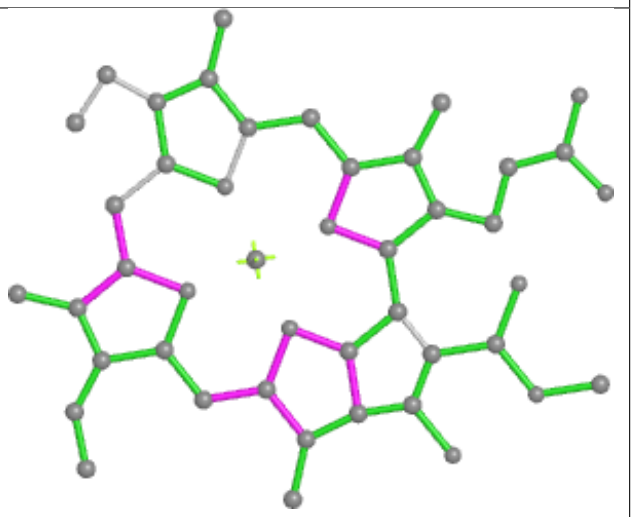
Ligand LMG 8 614



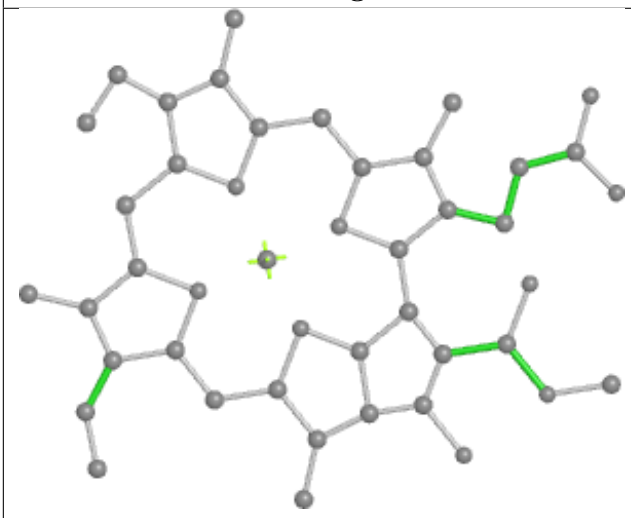
Ligand CLA 7 601



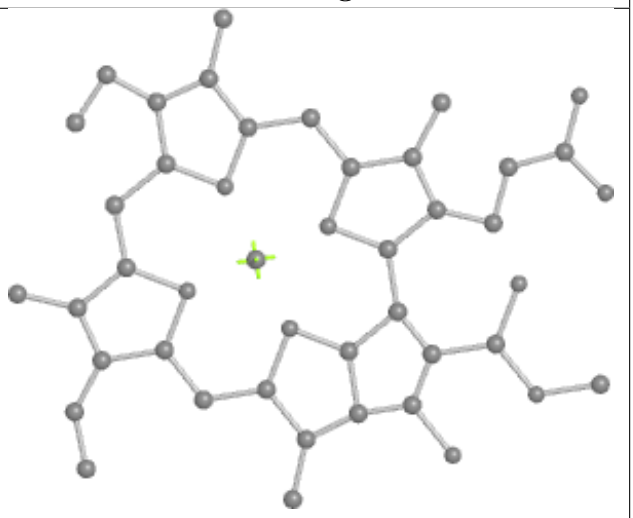
Bond lengths



Bond angles

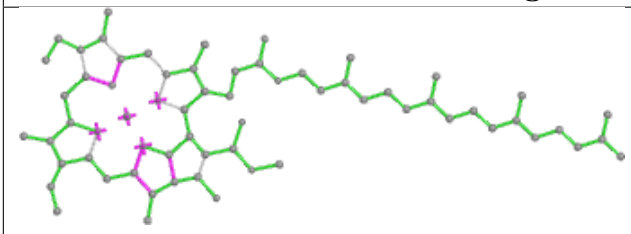


Torsions

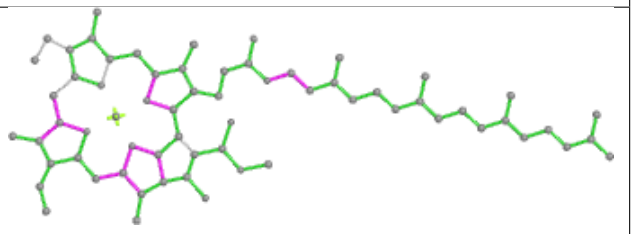


Rings

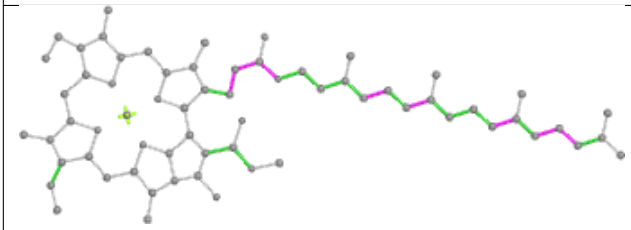
Ligand CLA A 839



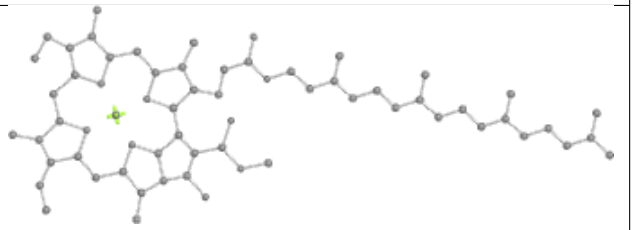
Bond lengths



Bond angles

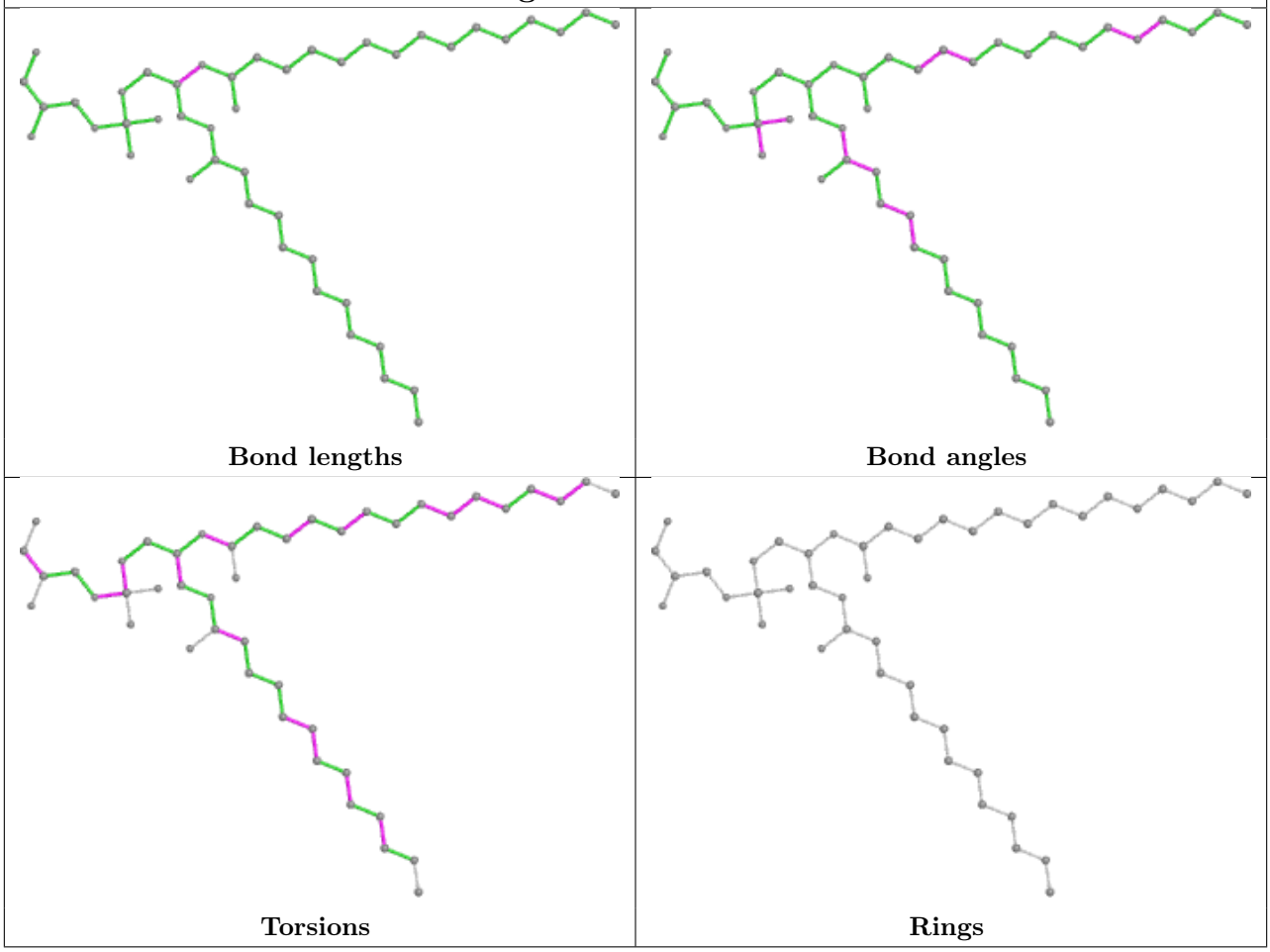


Torsions

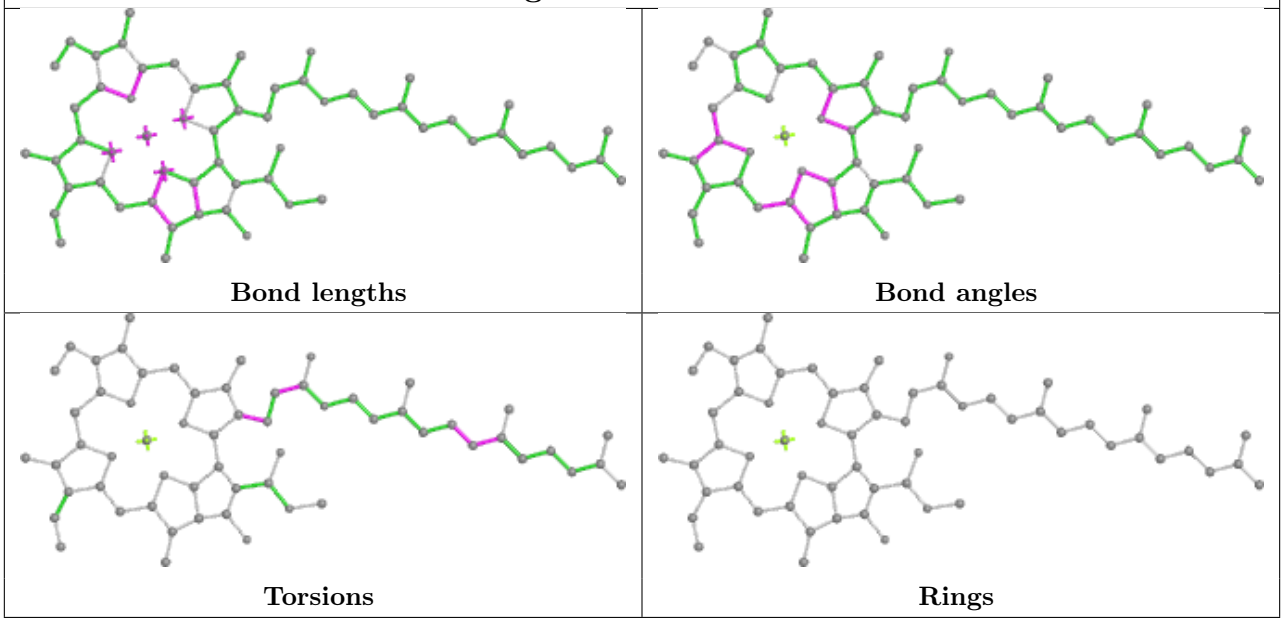


Rings

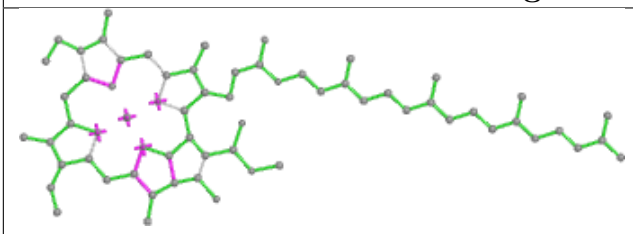
Ligand LHG B 849



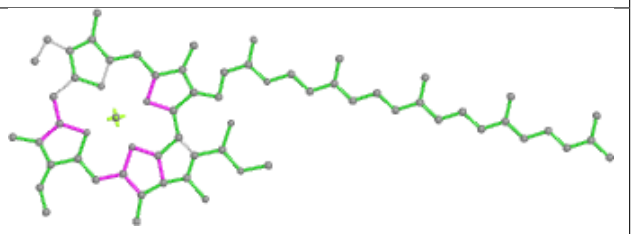
Ligand CLA A 816



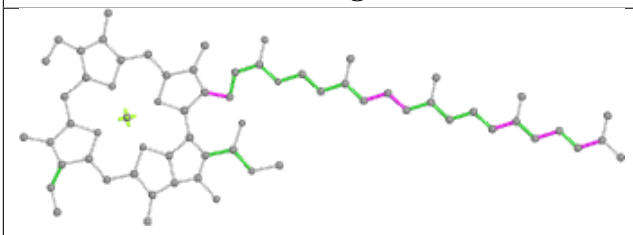
Ligand CLA A 831



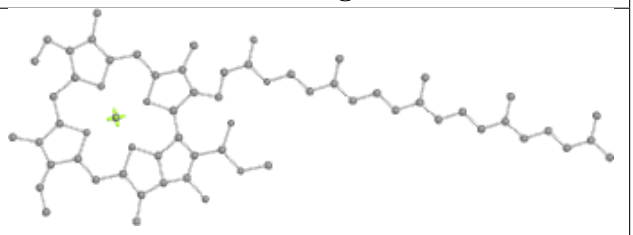
Bond lengths



Bond angles

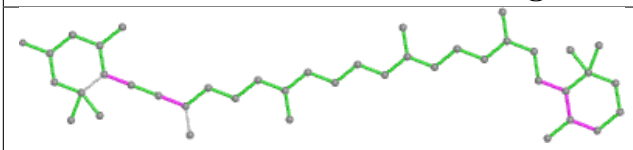


Torsions

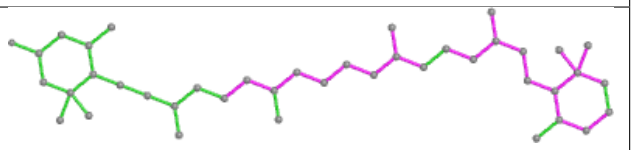


Rings

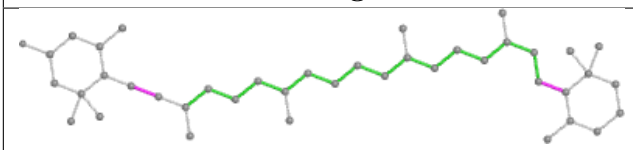
Ligand IHT K 104



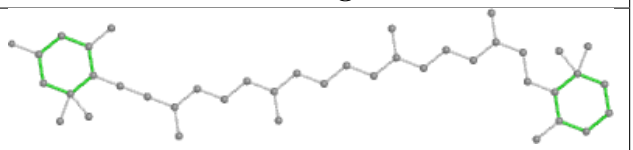
Bond lengths



Bond angles

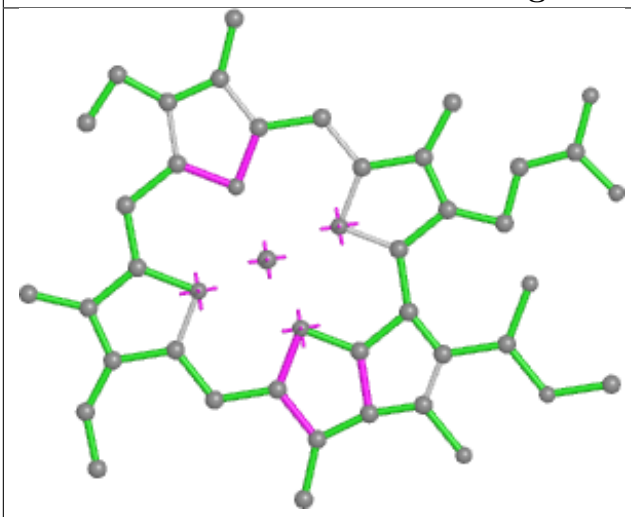


Torsions

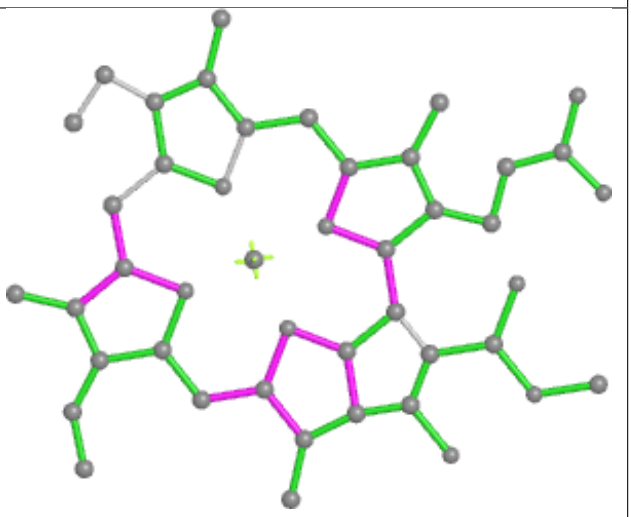


Rings

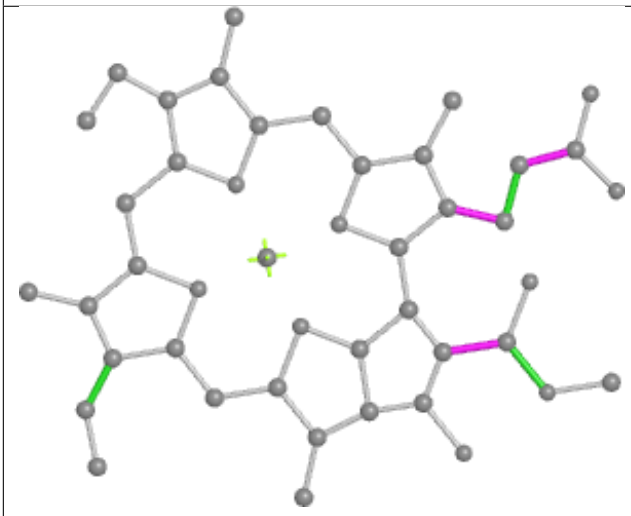
Ligand CLA 1 601



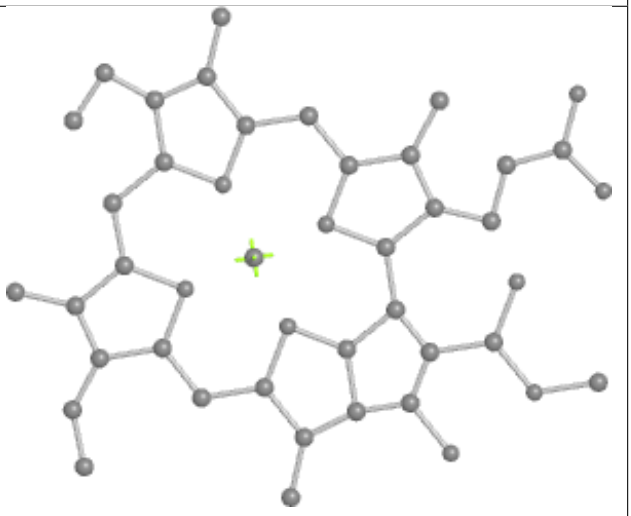
Bond lengths



Bond angles

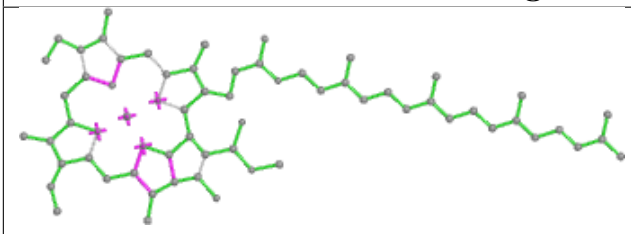


Torsions

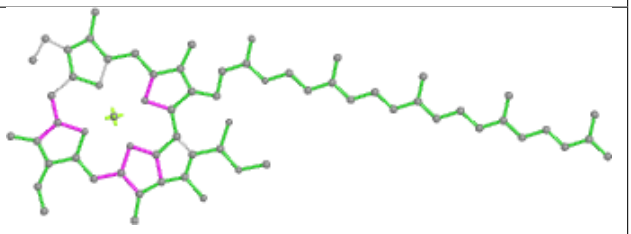


Rings

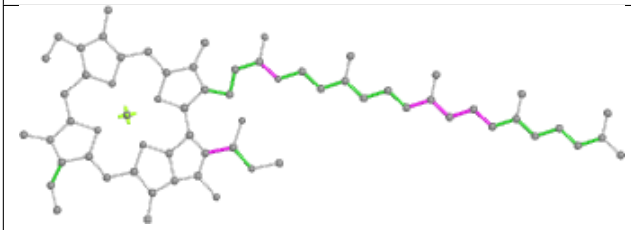
Ligand CLA B 828



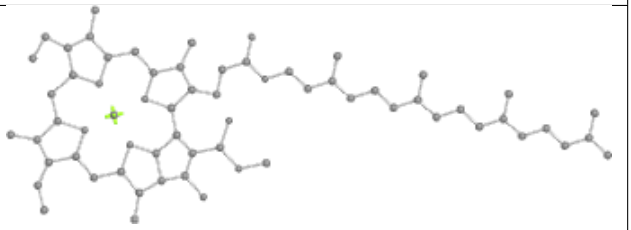
Bond lengths



Bond angles

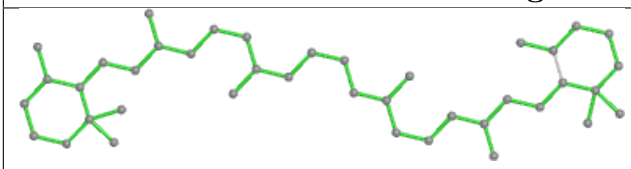


Torsions

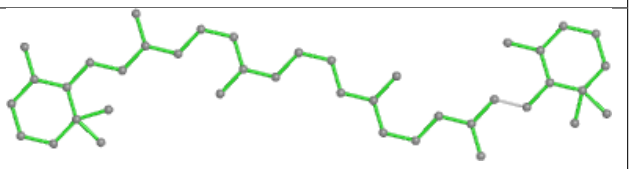


Rings

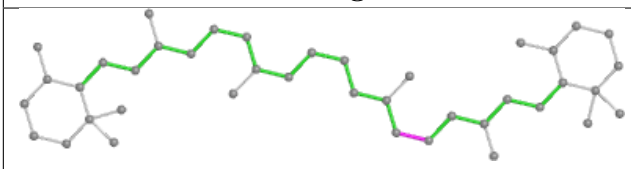
Ligand 8CT A 845



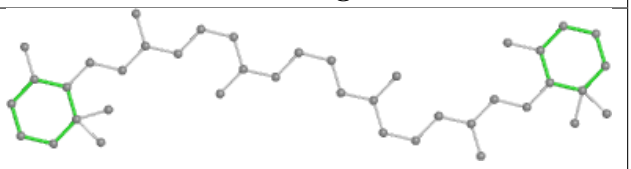
Bond lengths



Bond angles

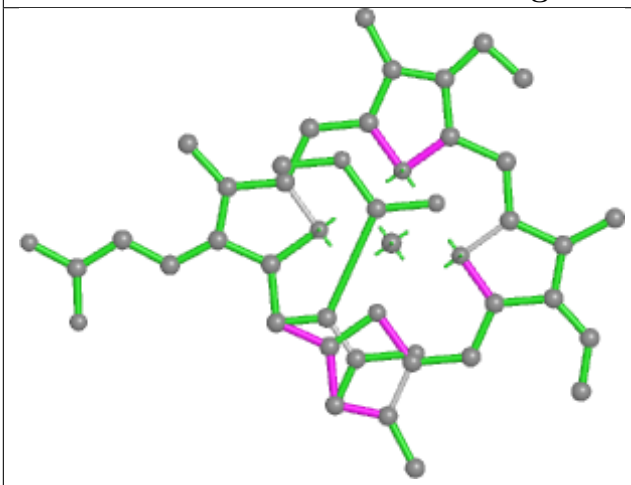


Torsions

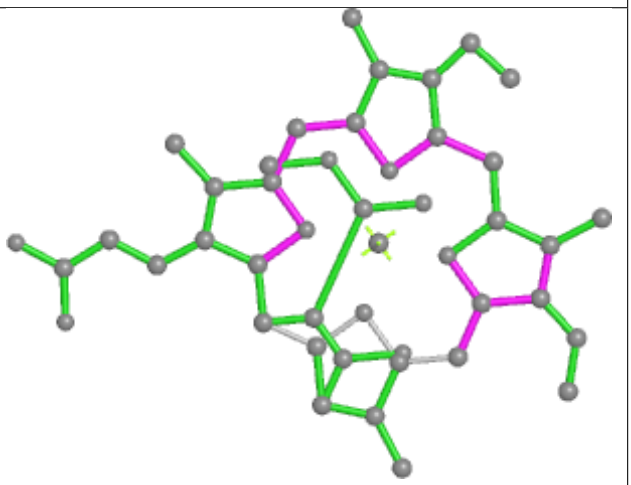


Rings

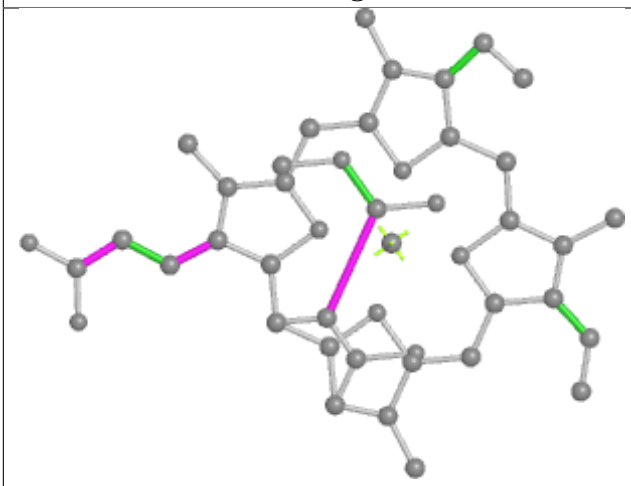
Ligand KC2 c 610



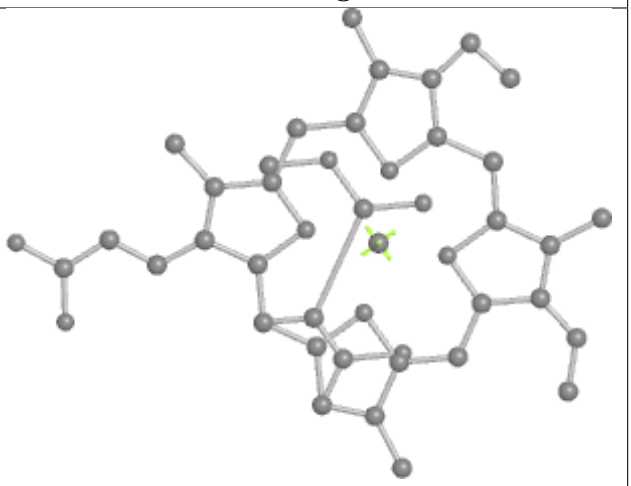
Bond lengths



Bond angles

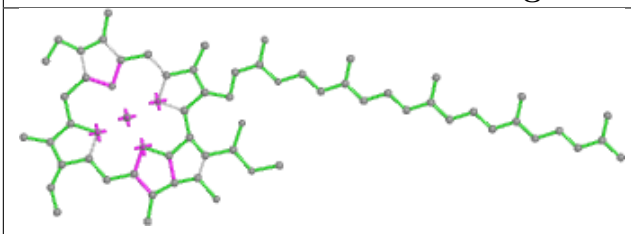


Torsions

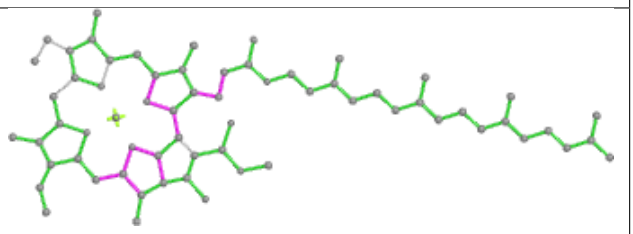


Rings

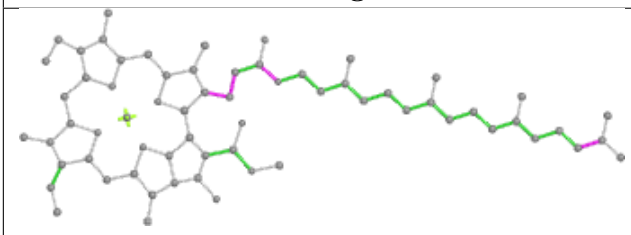
Ligand CLA A 844



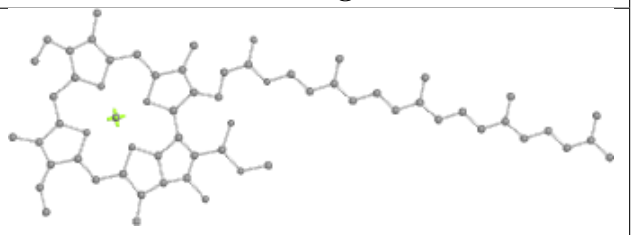
Bond lengths



Bond angles

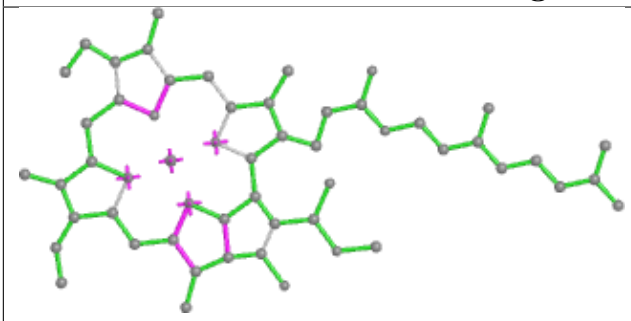


Torsions

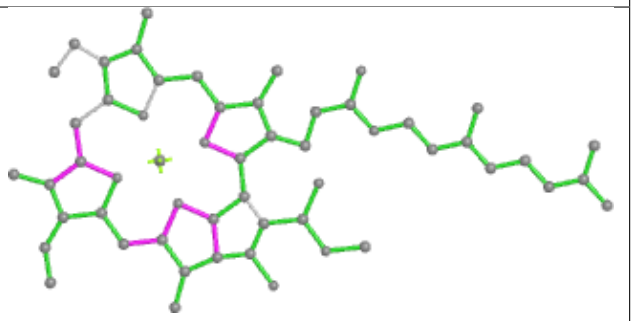


Rings

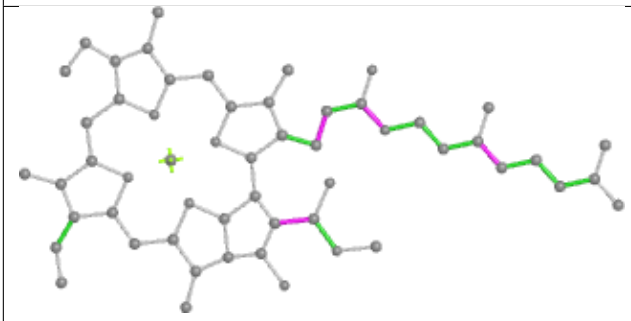
Ligand CLA c 614



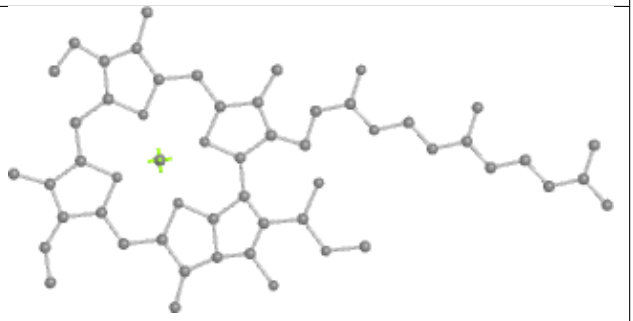
Bond lengths



Bond angles

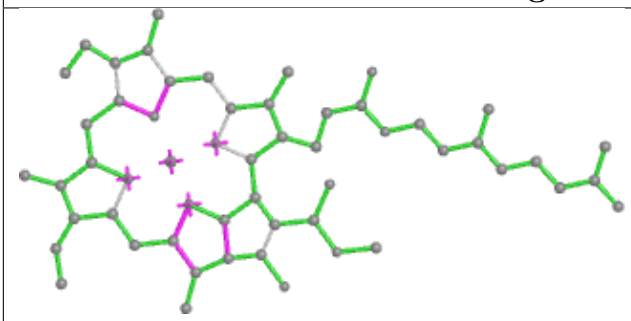


Torsions

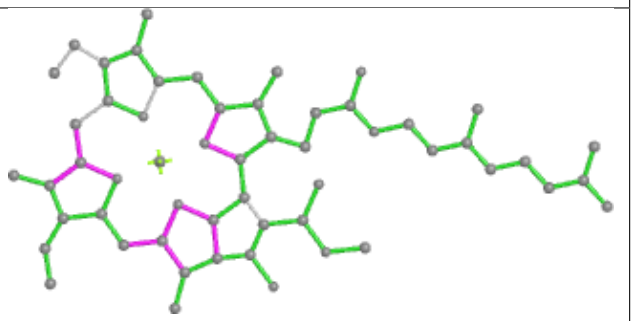


Rings

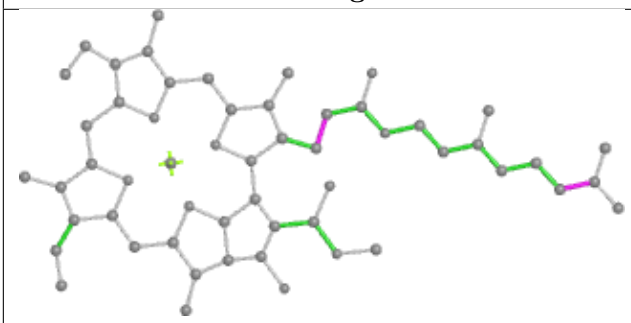
Ligand CLA 9 604



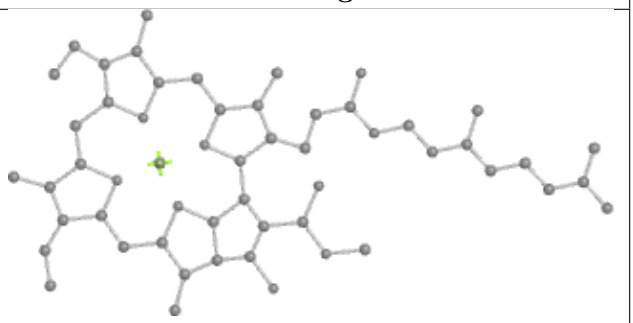
Bond lengths



Bond angles

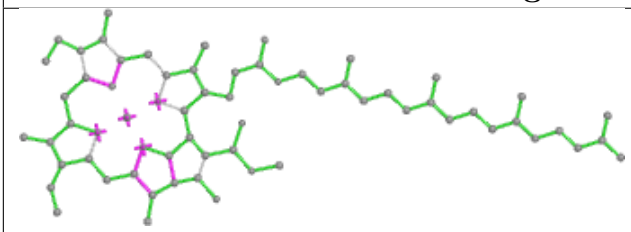


Torsions

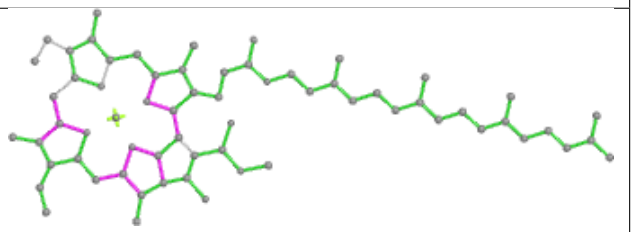


Rings

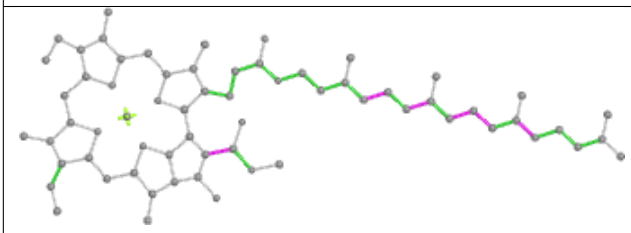
Ligand CLA A 806



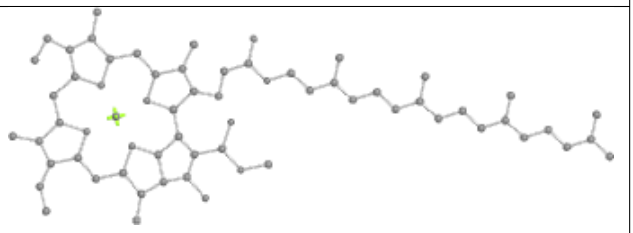
Bond lengths



Bond angles

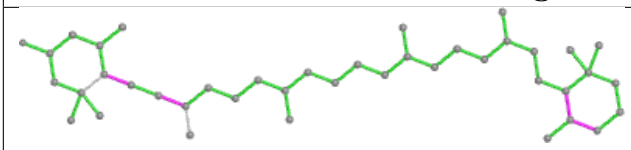


Torsions

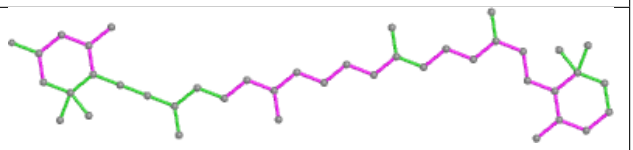


Rings

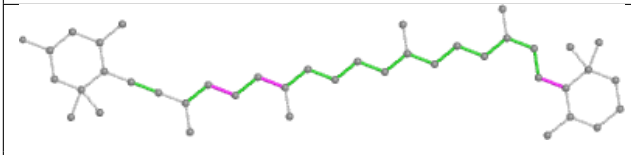
Ligand IHT a 617



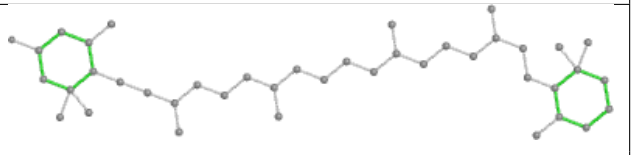
Bond lengths



Bond angles

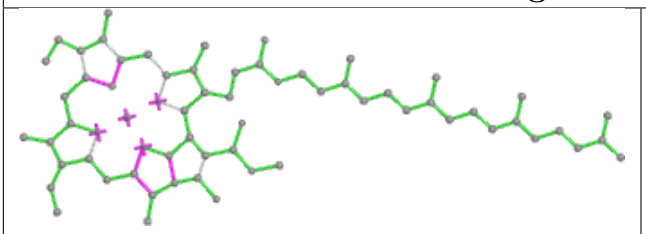


Torsions

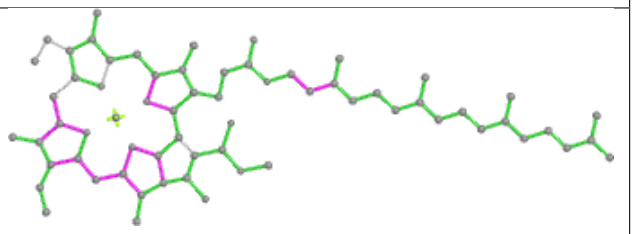


Rings

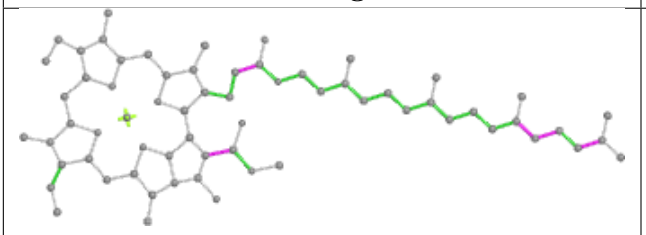
Ligand CLA 7 602



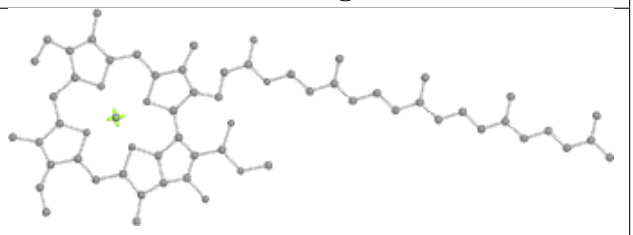
Bond lengths



Bond angles

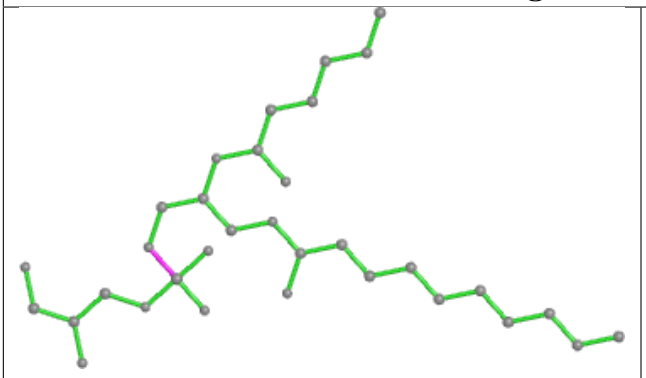


Torsions

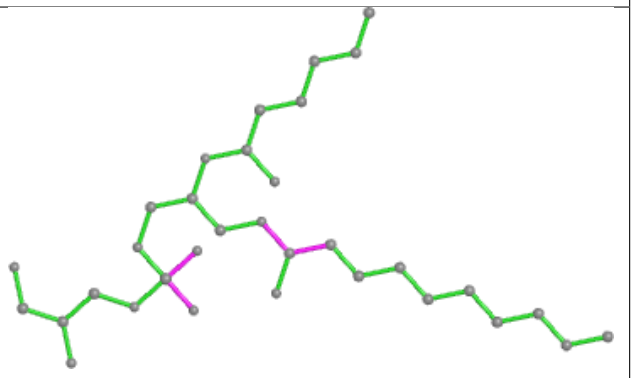


Rings

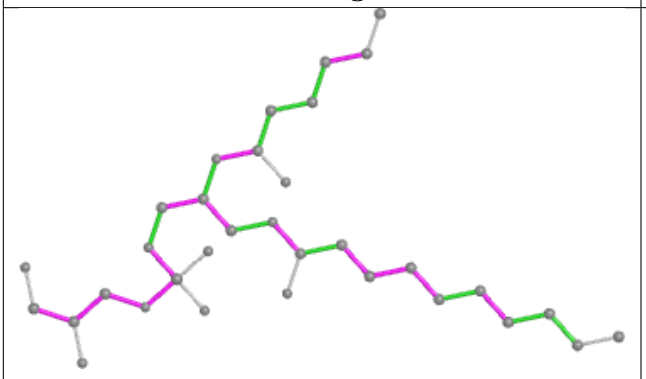
Ligand LHG 8 613



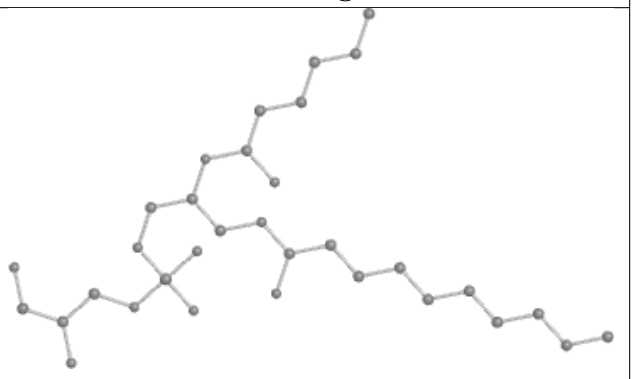
Bond lengths



Bond angles

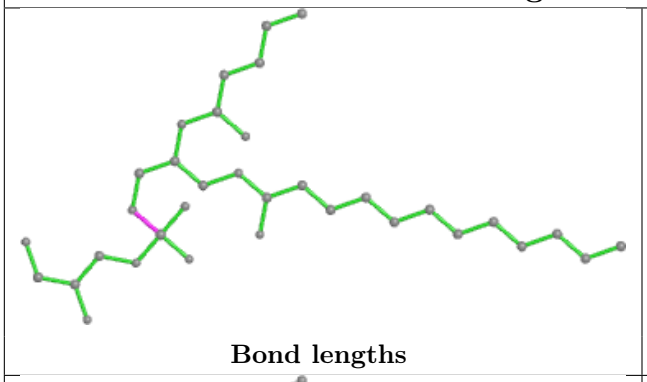


Torsions

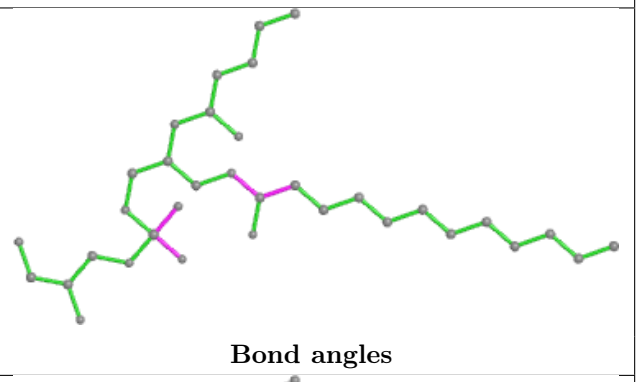


Rings

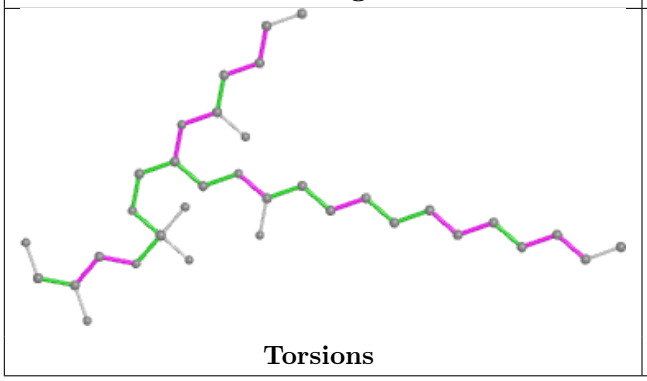
Ligand LHG L 208



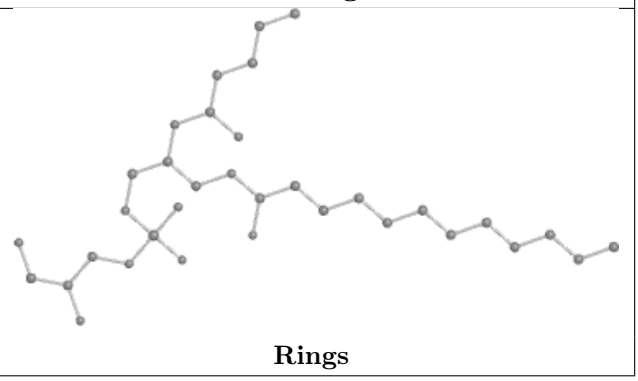
Bond lengths



Bond angles

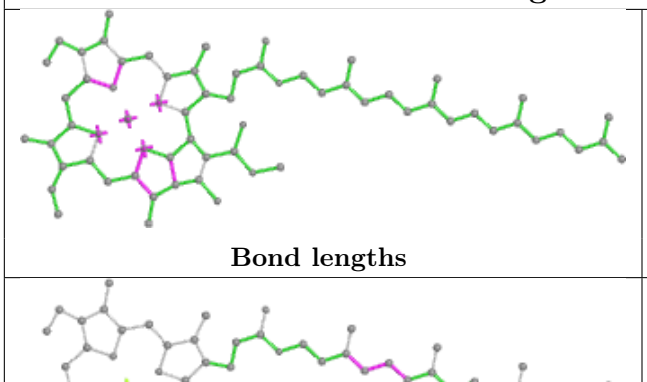


Torsions

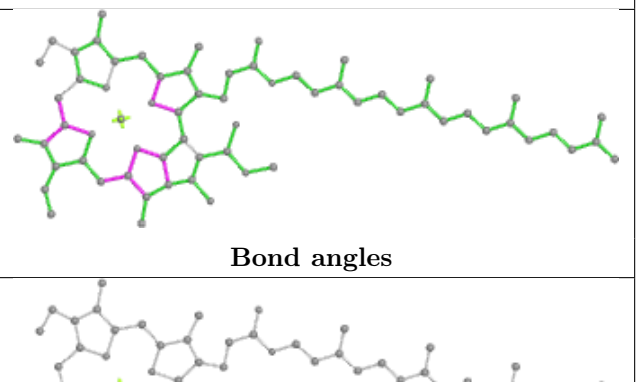


Rings

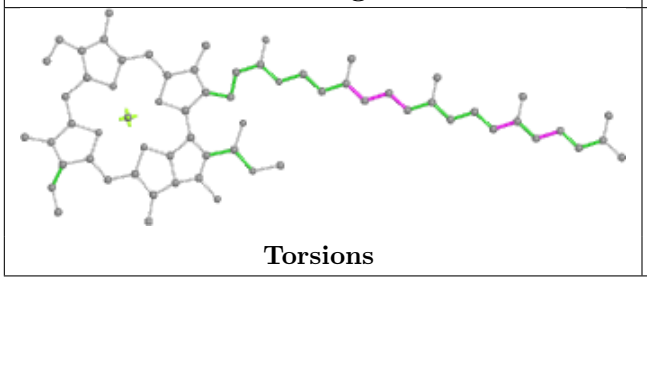
Ligand CLA 4 610



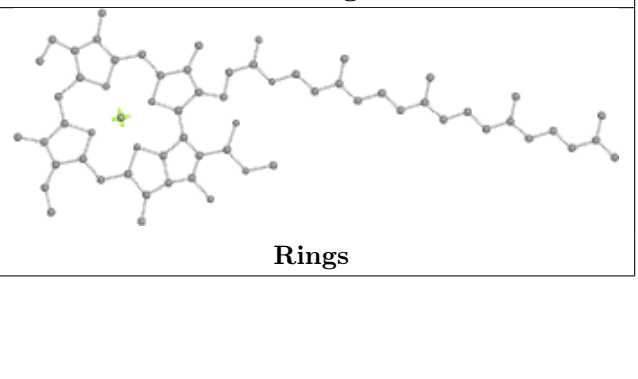
Bond lengths



Bond angles

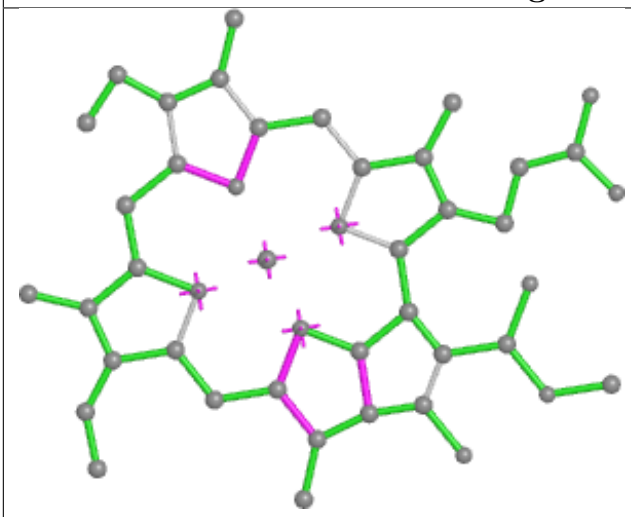


Torsions

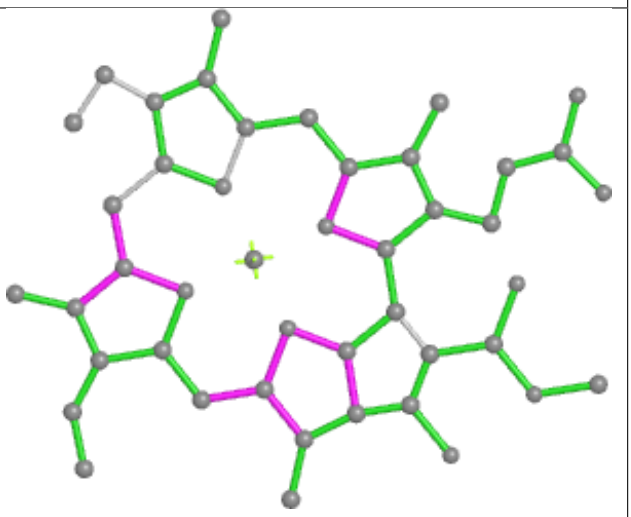


Rings

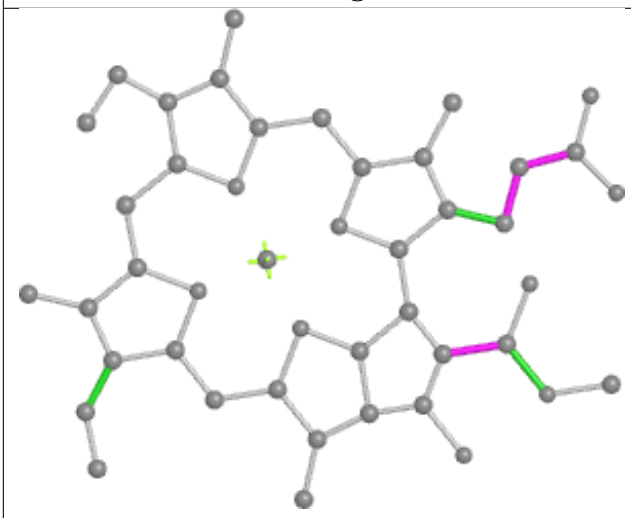
Ligand CLA 9 603



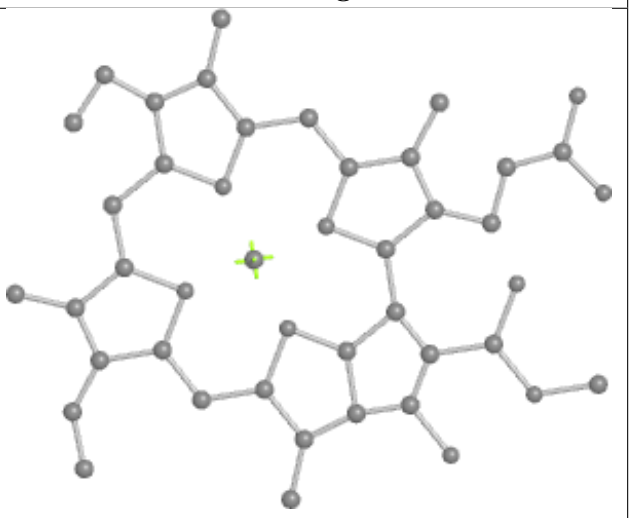
Bond lengths



Bond angles

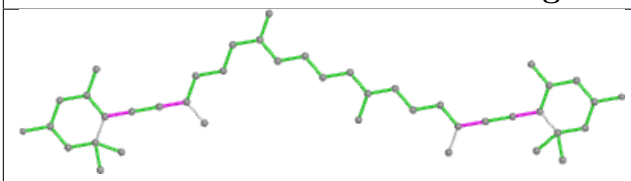


Torsions

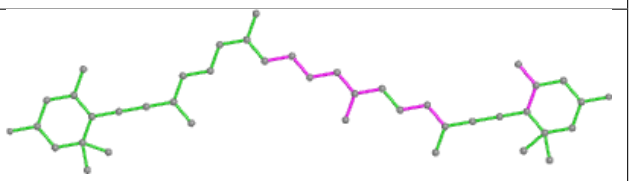


Rings

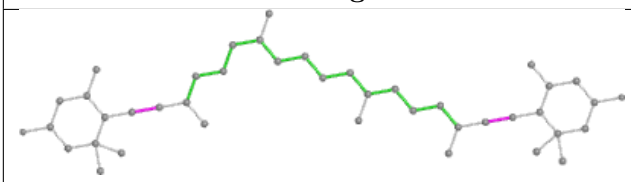
Ligand II0 3 613



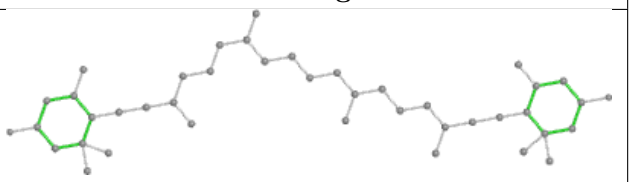
Bond lengths



Bond angles

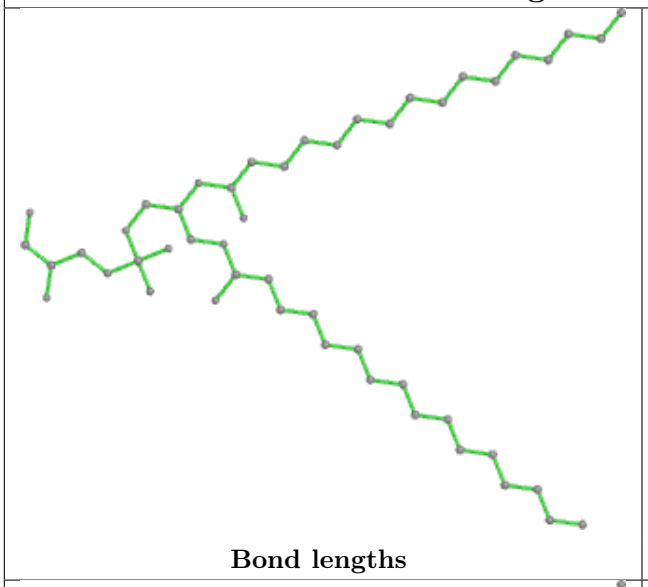


Torsions

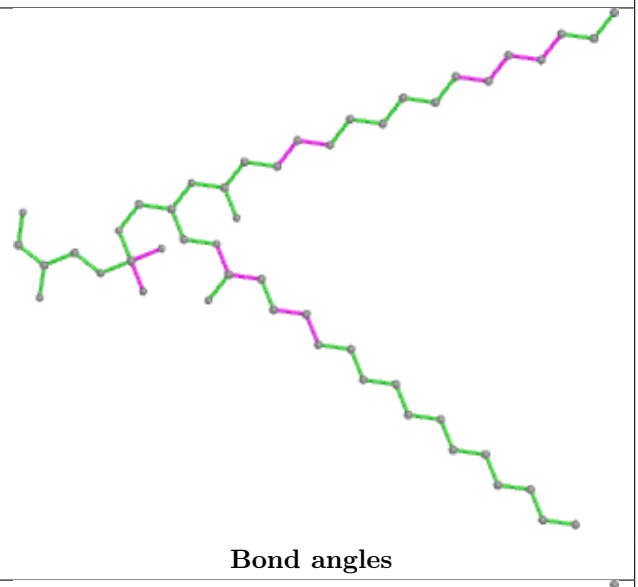


Rings

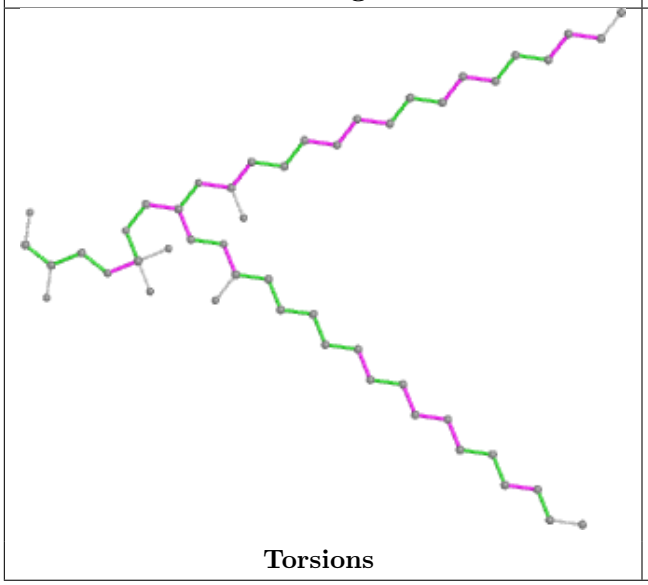
Ligand LHG 3 619



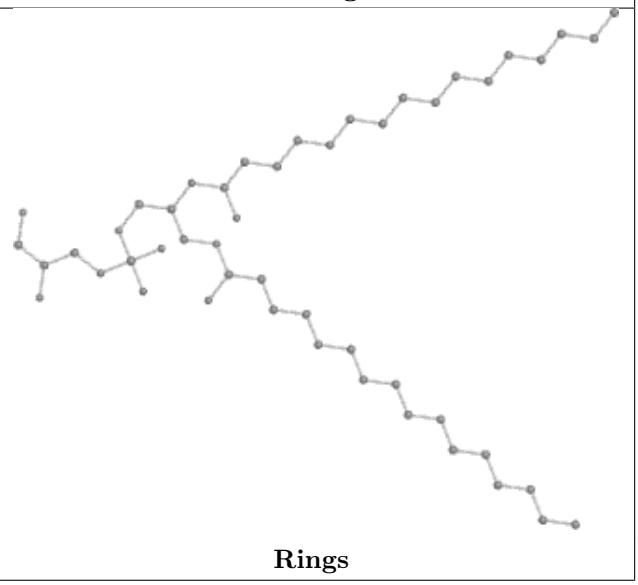
Bond lengths



Bond angles

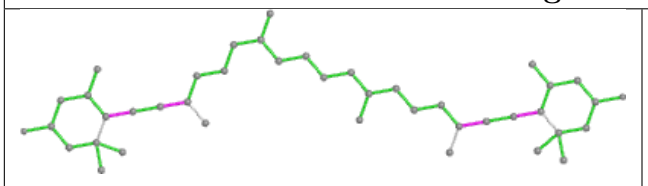


Torsions

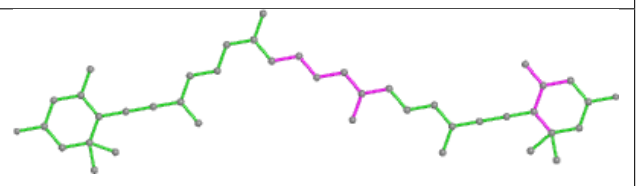


Rings

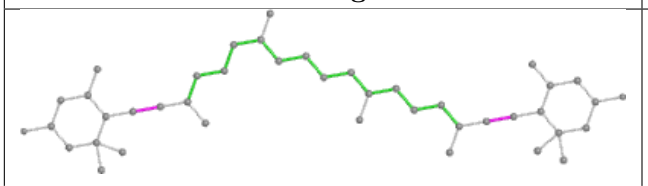
Ligand II0 9 617



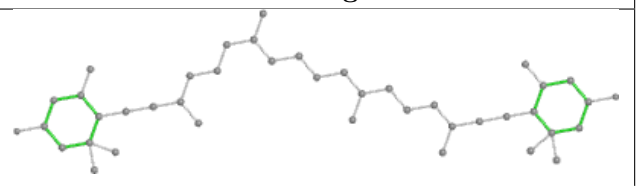
Bond lengths



Bond angles

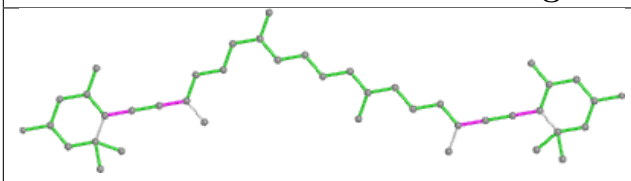


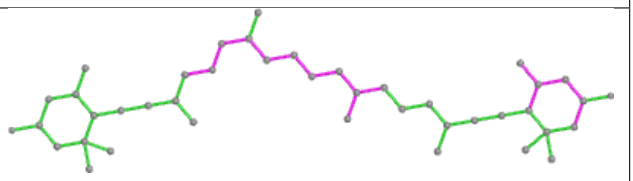
Torsions

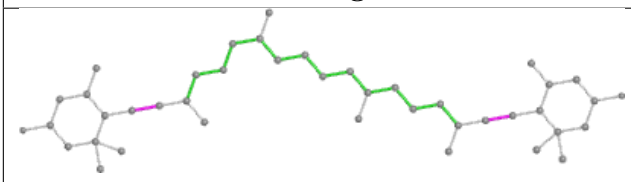


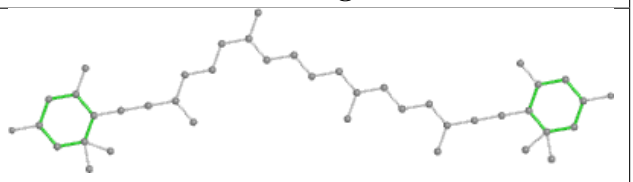
Rings

Ligand II0 7 616

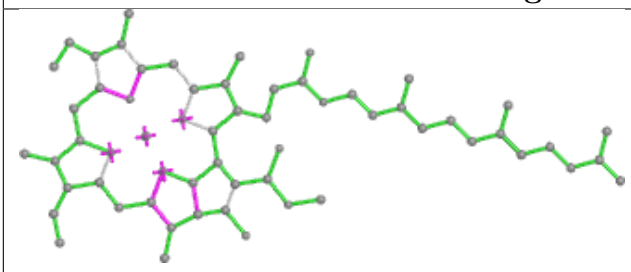

Bond lengths

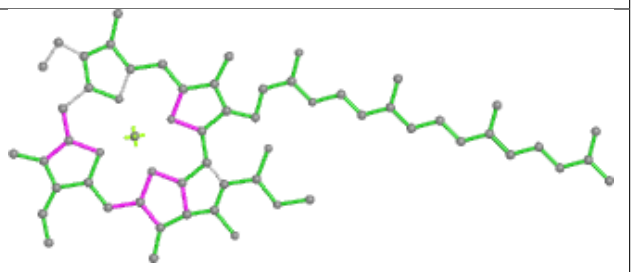

Bond angles

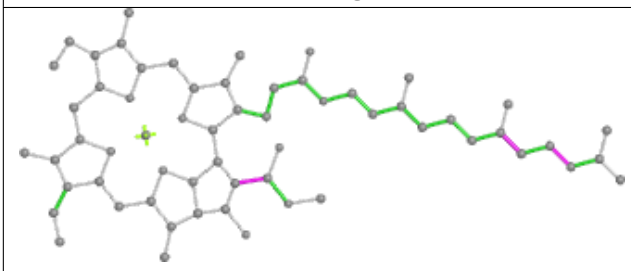

Torsions

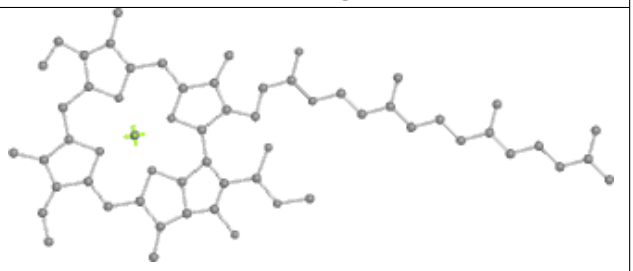

Rings

Ligand CLA B 824

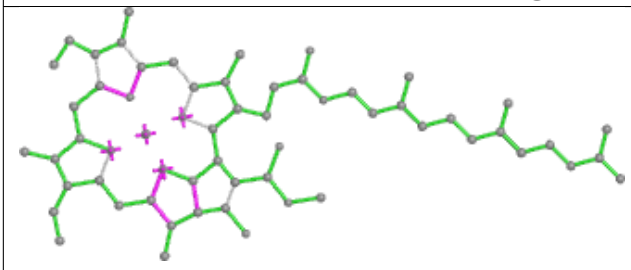

Bond lengths

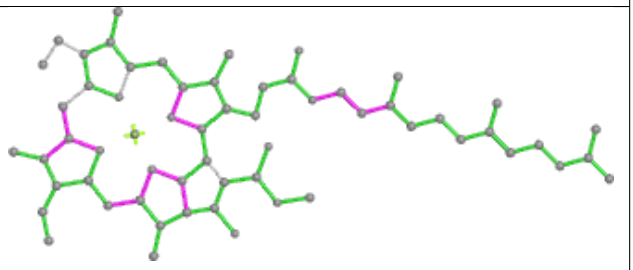

Bond angles

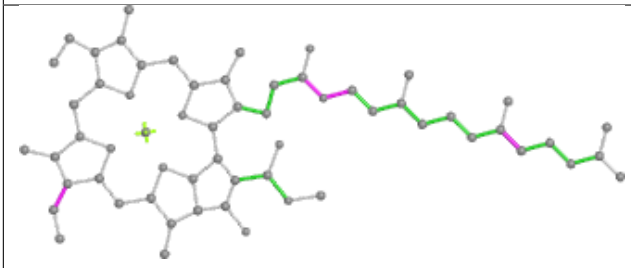

Torsions

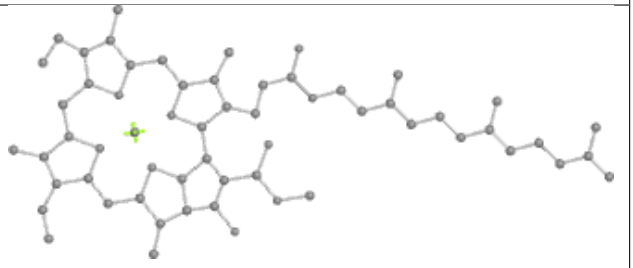

Rings

Ligand CLA a 609

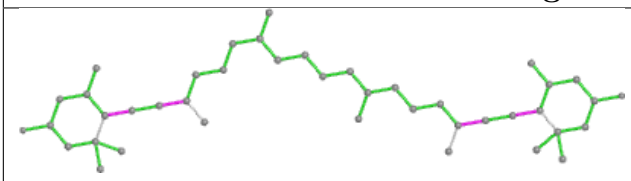

Bond lengths


Bond angles

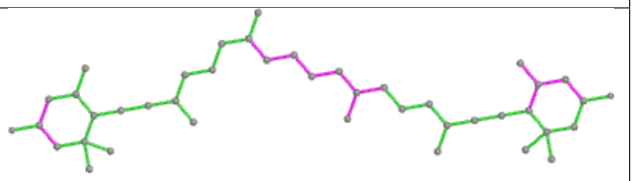

Torsions


Rings

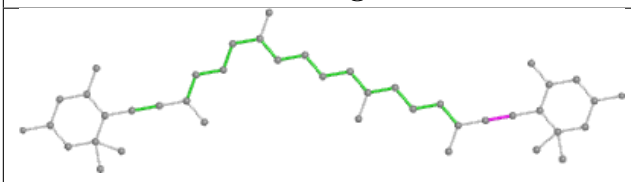
Ligand II0 a 616



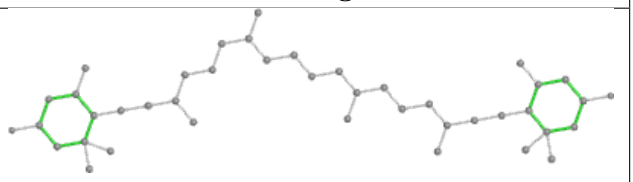
Bond lengths



Bond angles

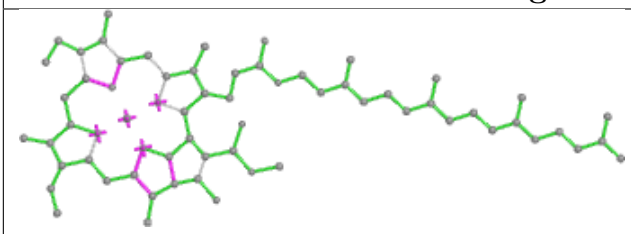


Torsions

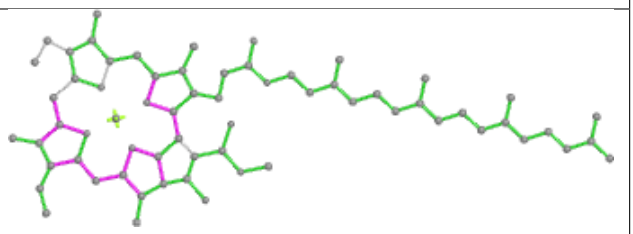


Rings

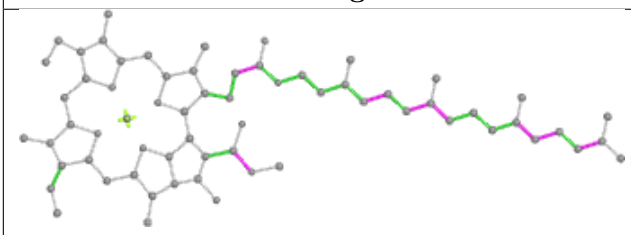
Ligand CLA c 603



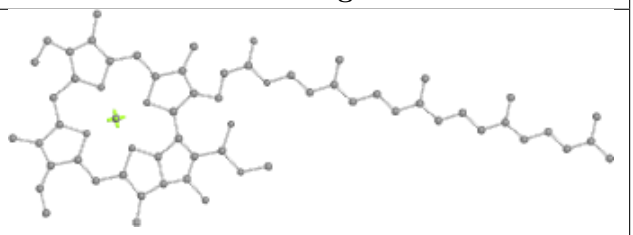
Bond lengths



Bond angles

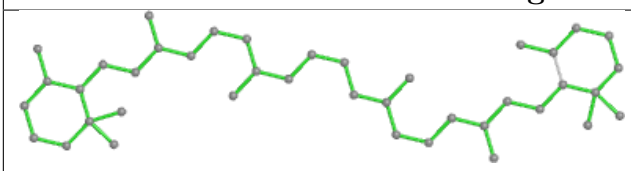


Torsions

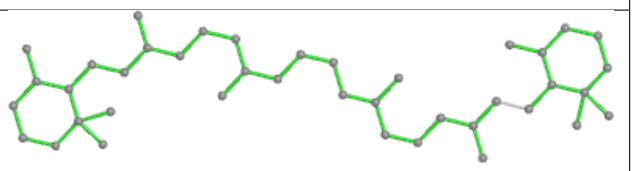


Rings

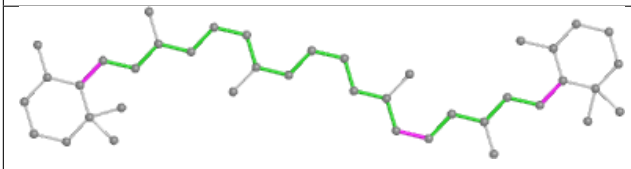
Ligand 8CT B 847



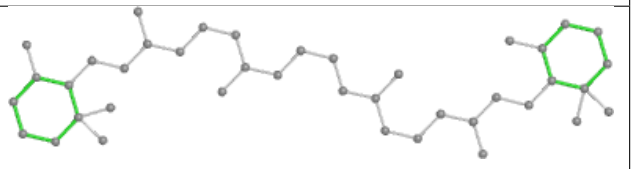
Bond lengths



Bond angles

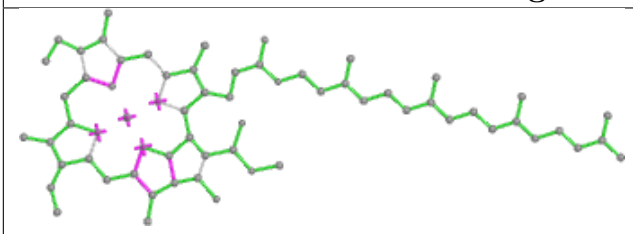


Torsions

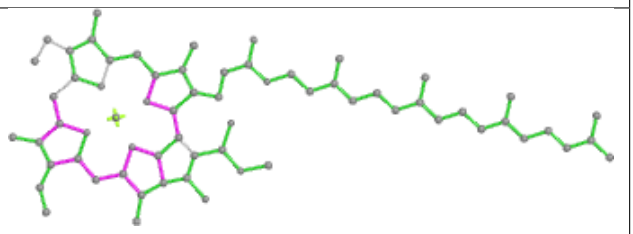


Rings

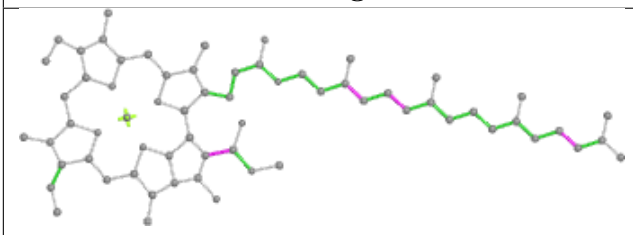
Ligand CLA 8 604



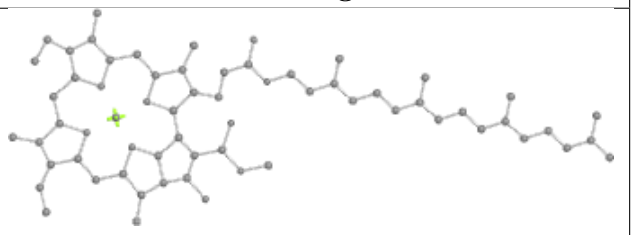
Bond lengths



Bond angles

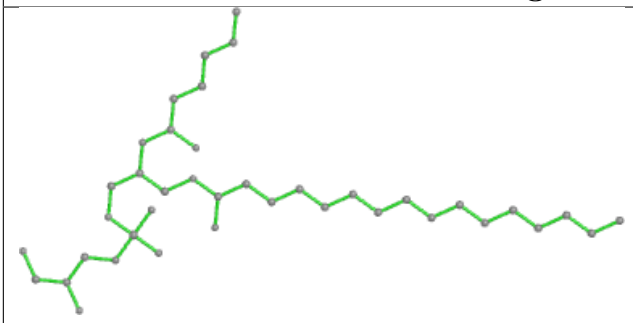


Torsions

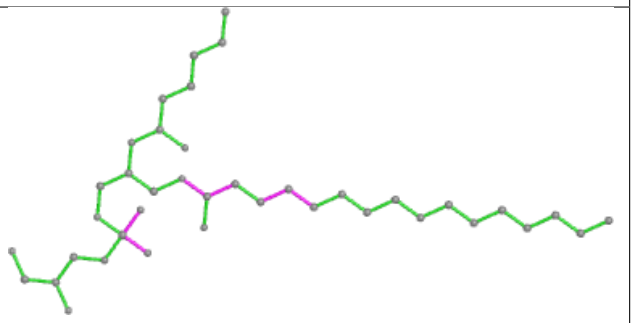


Rings

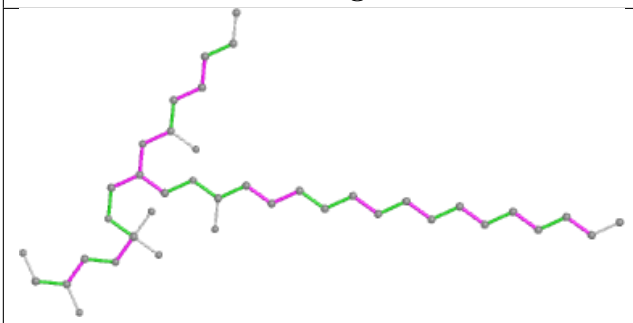
Ligand LHG 7 619



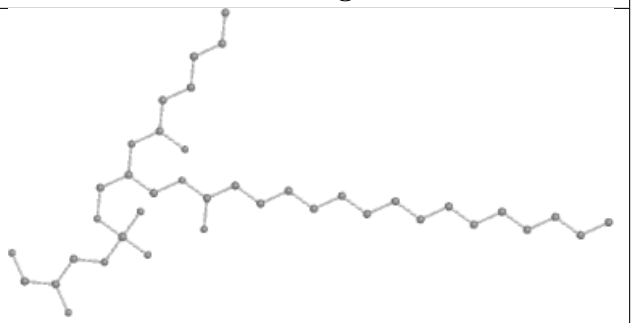
Bond lengths



Bond angles

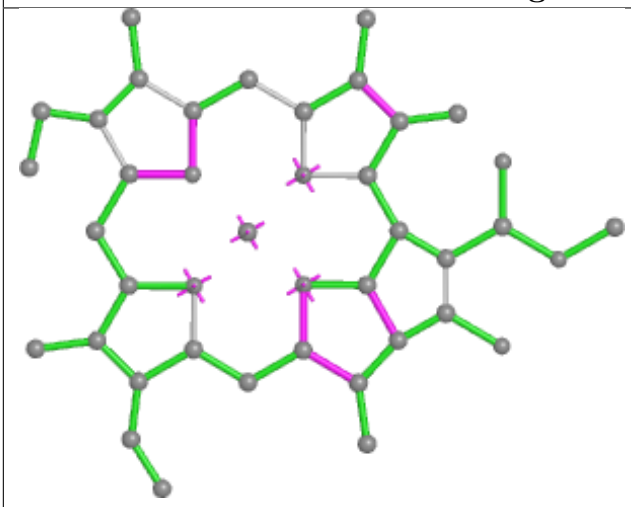


Torsions

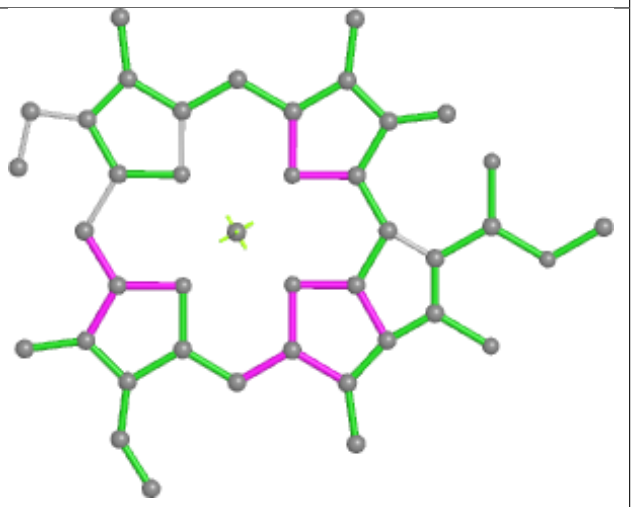


Rings

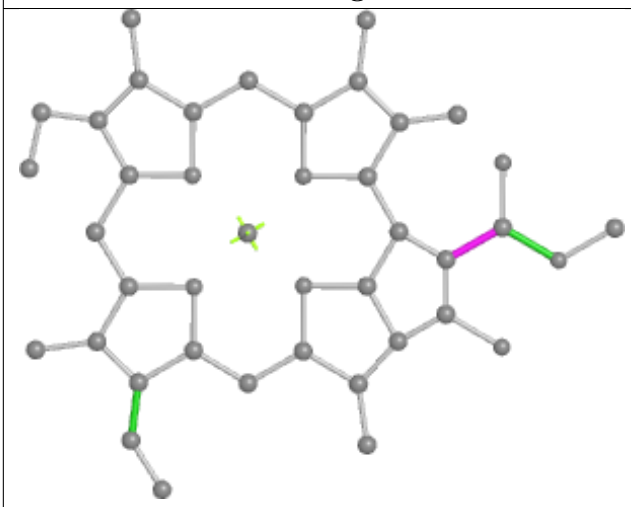
Ligand CLA 1 609



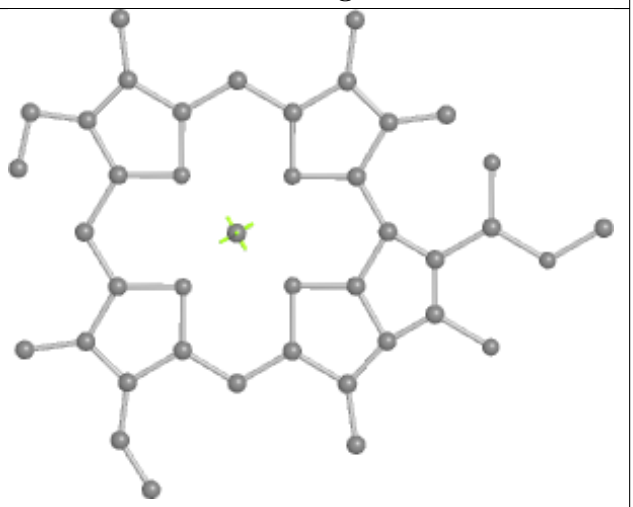
Bond lengths



Bond angles

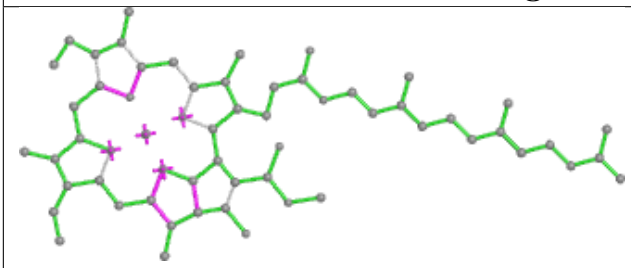


Torsions

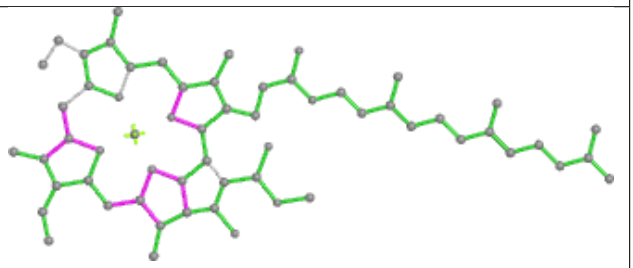


Rings

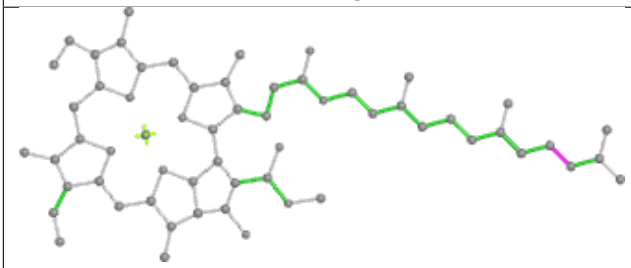
Ligand CLA B 817



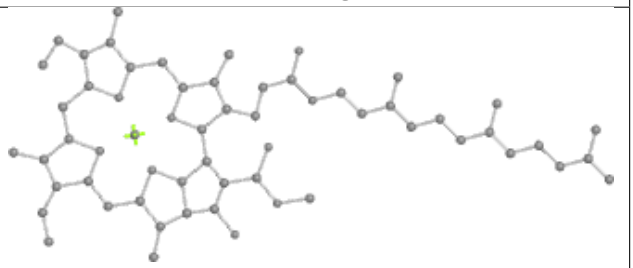
Bond lengths



Bond angles

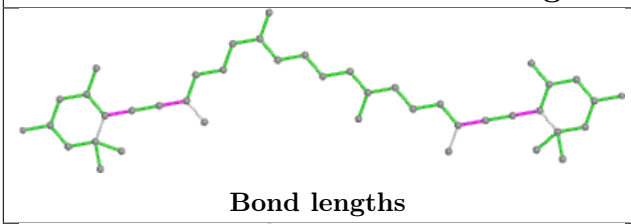


Torsions

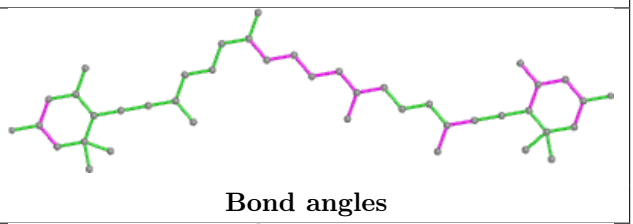


Rings

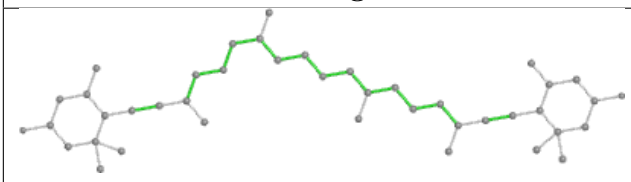
Ligand II0 e 612



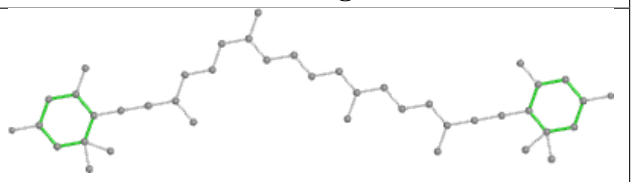
Bond lengths



Bond angles

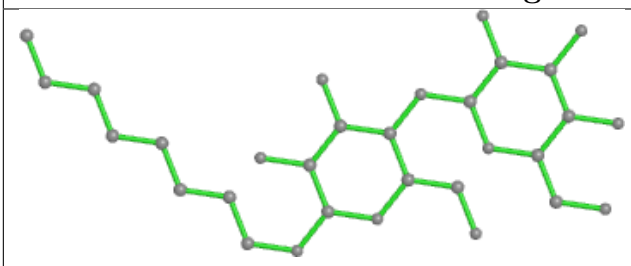


Torsions

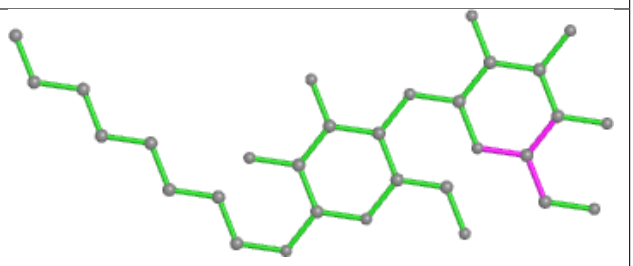


Rings

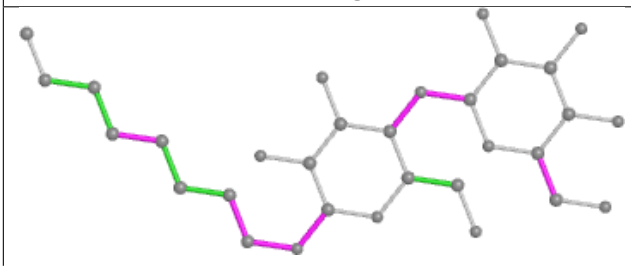
Ligand LMU J 104



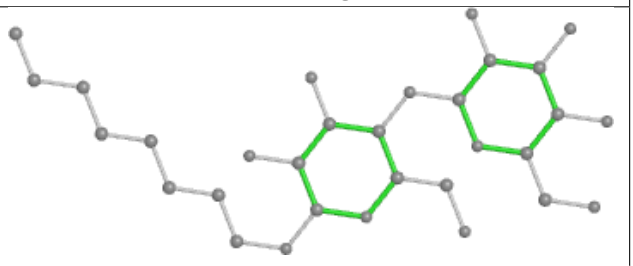
Bond lengths



Bond angles

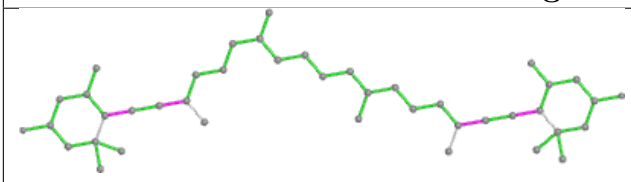


Torsions

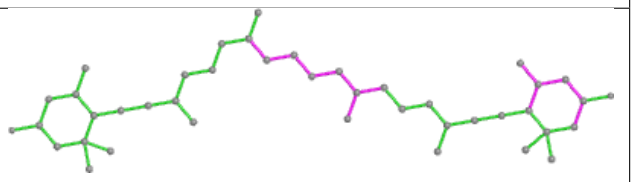


Rings

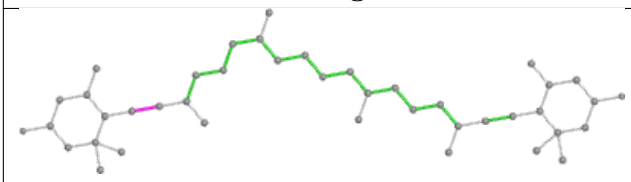
Ligand II0 a 619



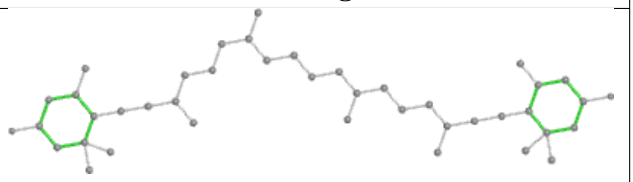
Bond lengths



Bond angles

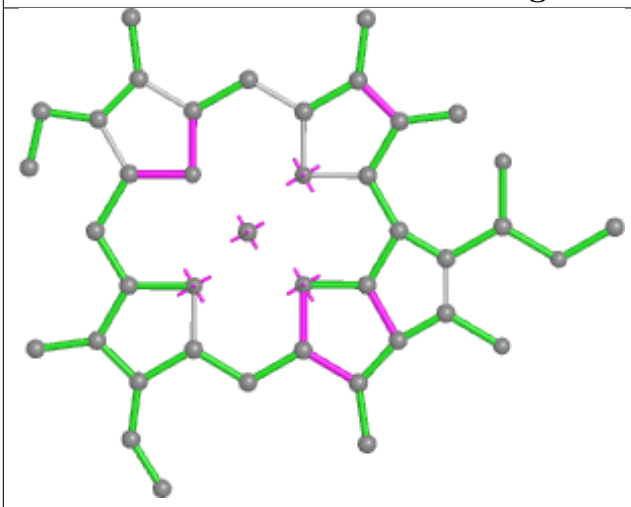


Torsions

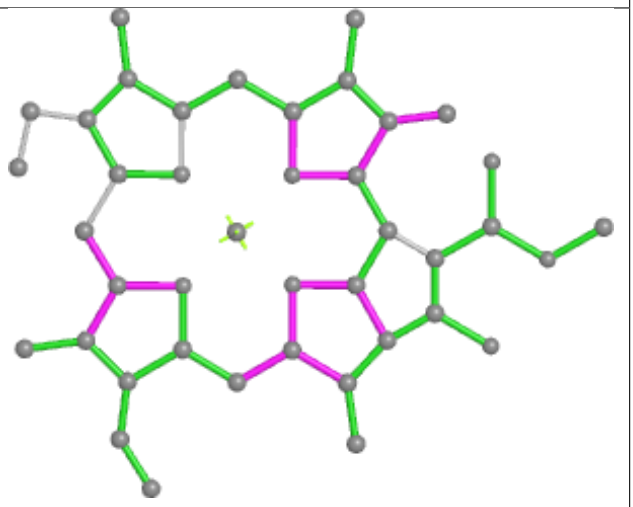


Rings

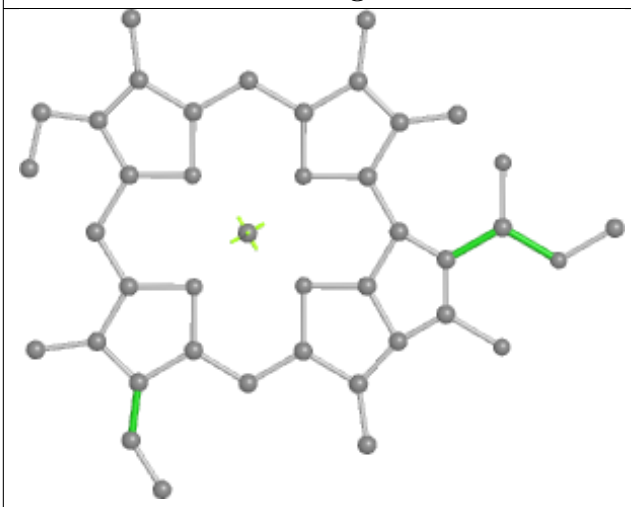
Ligand CLA e 608



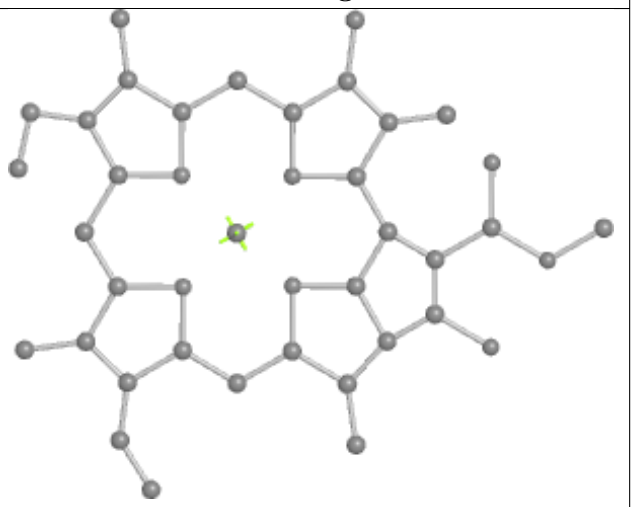
Bond lengths



Bond angles

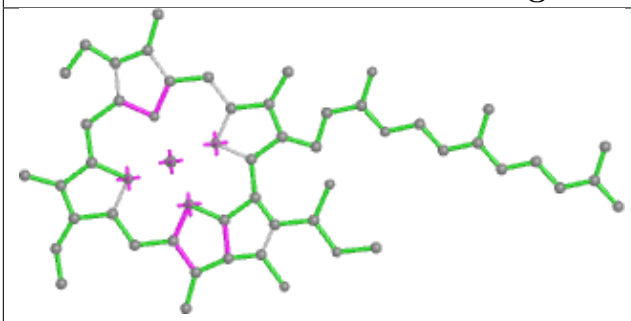


Torsions

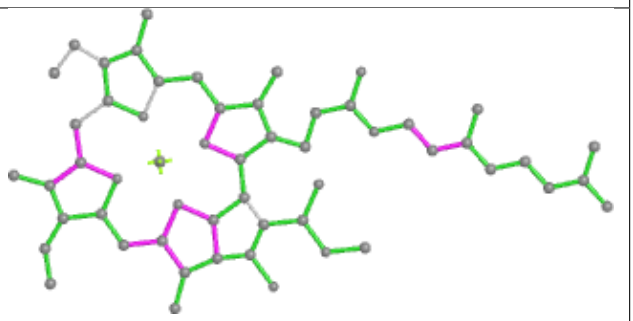


Rings

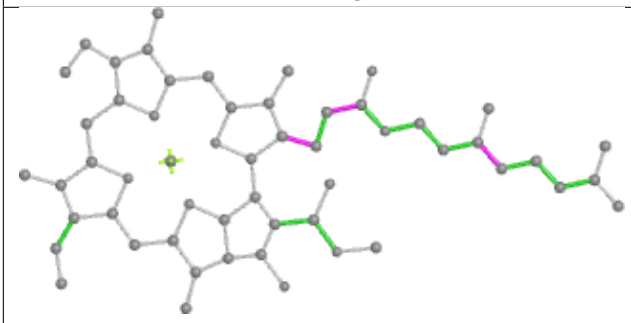
Ligand CLA 6 605



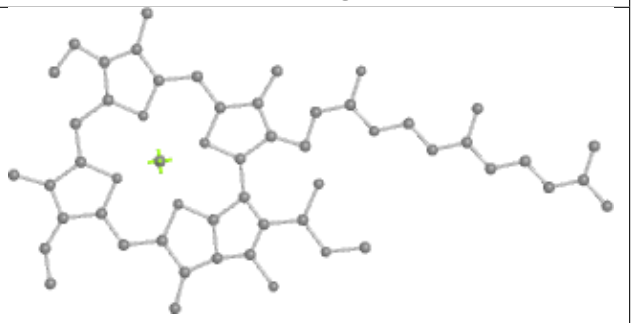
Bond lengths



Bond angles

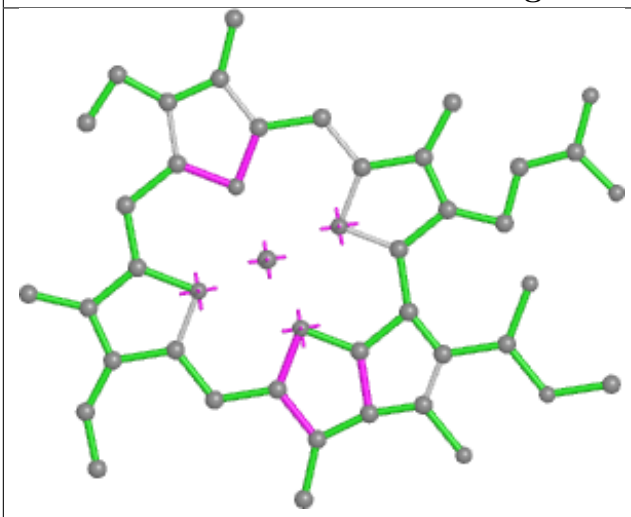


Torsions

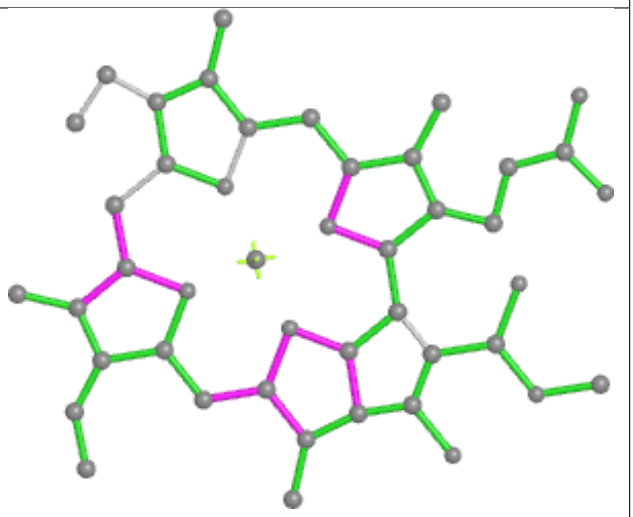


Rings

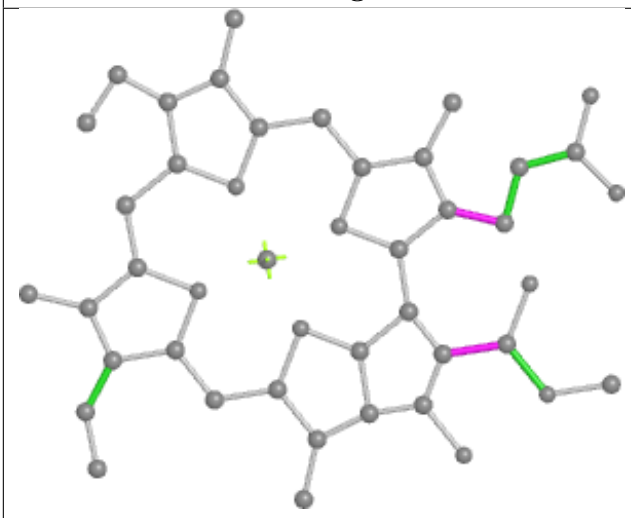
Ligand CLA B 833



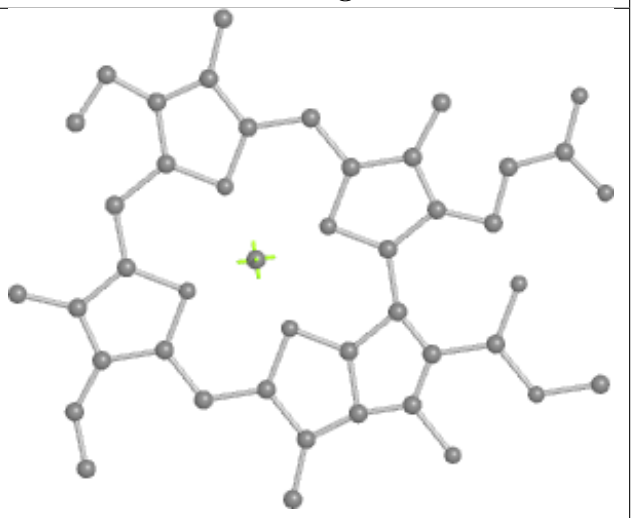
Bond lengths



Bond angles

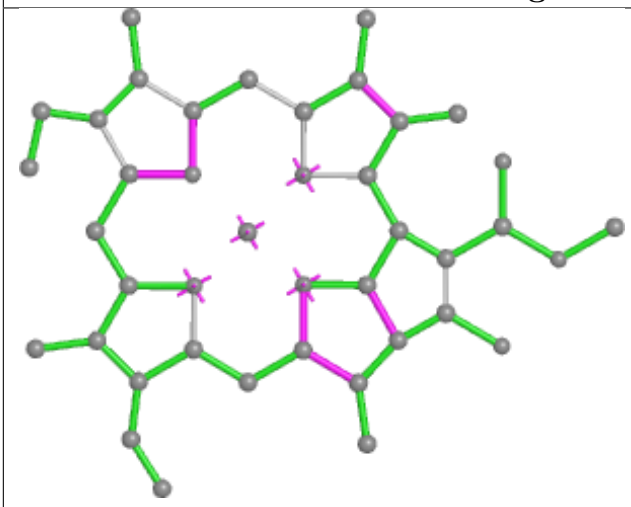


Torsions

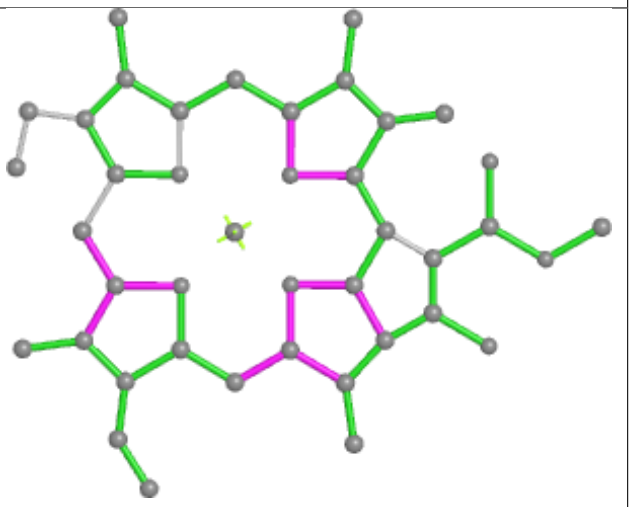


Rings

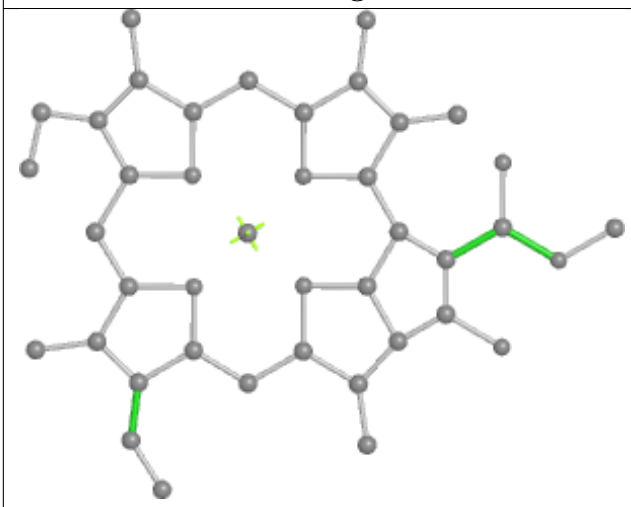
Ligand CLA 6 609



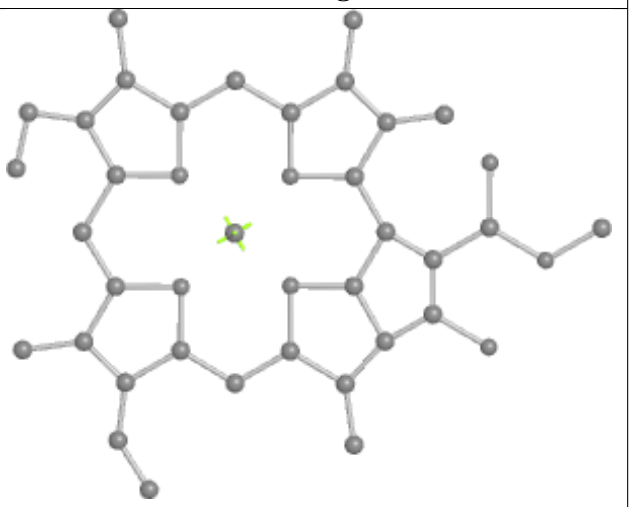
Bond lengths



Bond angles

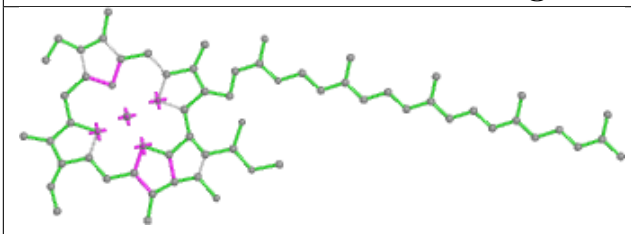


Torsions

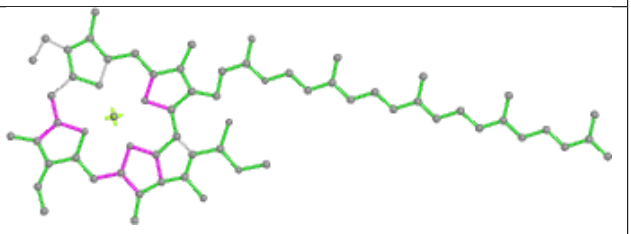


Rings

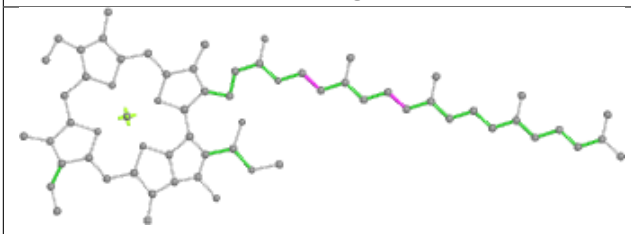
Ligand CLA 4 608



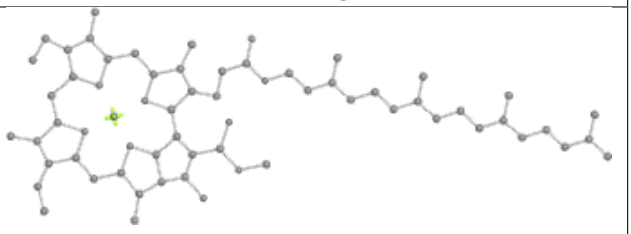
Bond lengths



Bond angles

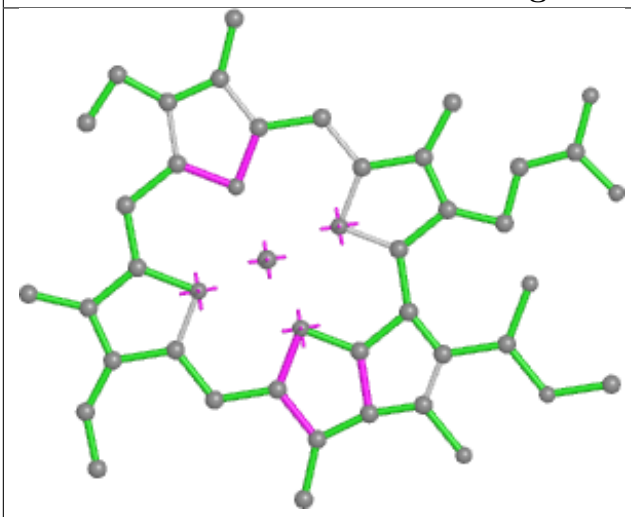


Torsions

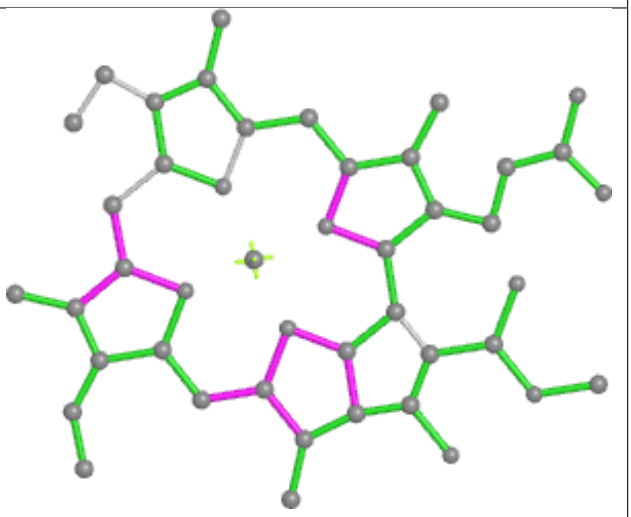


Rings

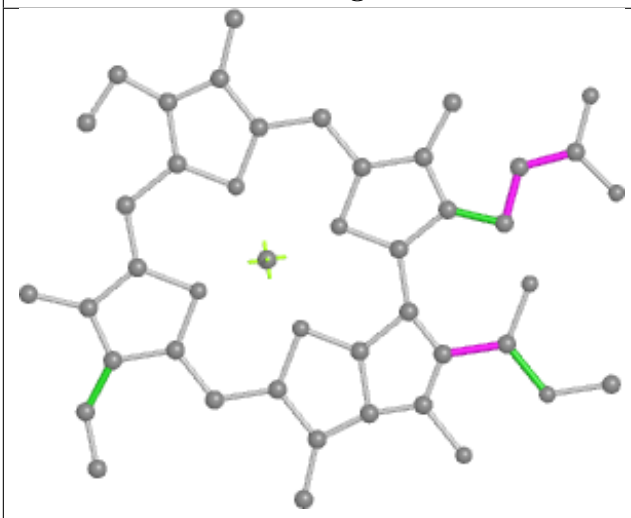
Ligand CLA c 613



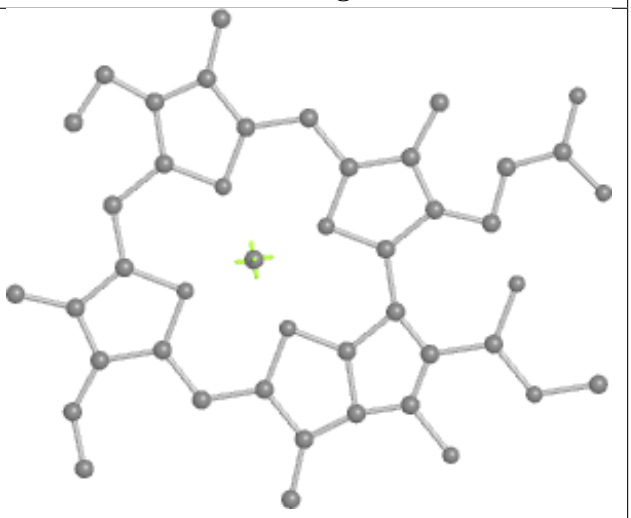
Bond lengths



Bond angles

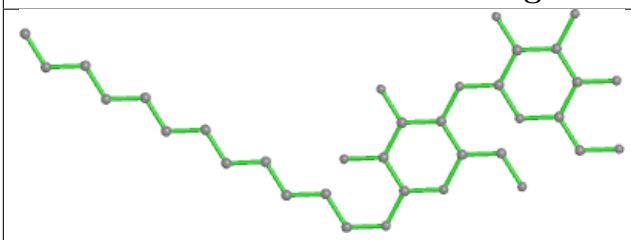


Torsions

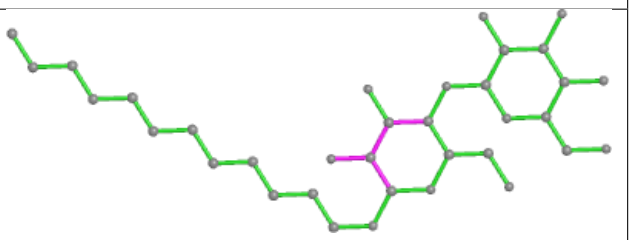


Rings

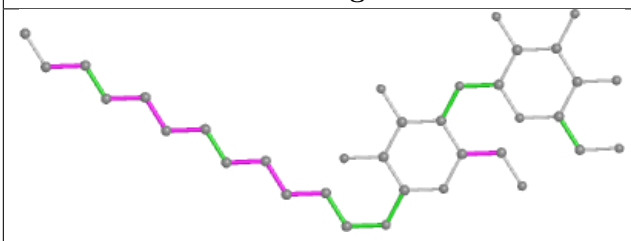
Ligand LMU 7 620



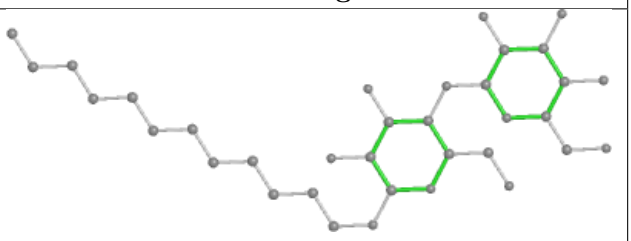
Bond lengths



Bond angles

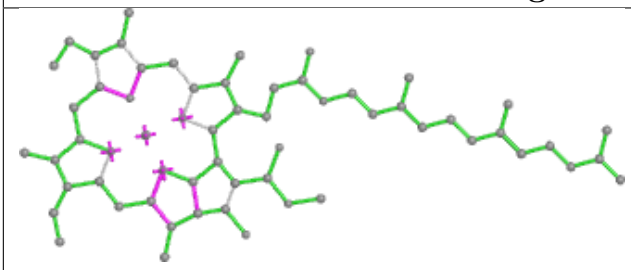


Torsions

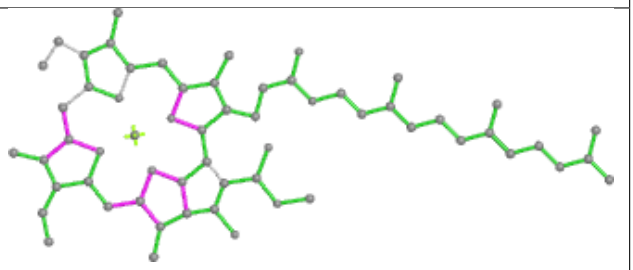


Rings

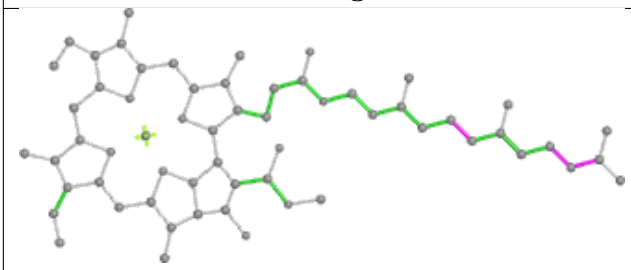
Ligand CLA 3 603



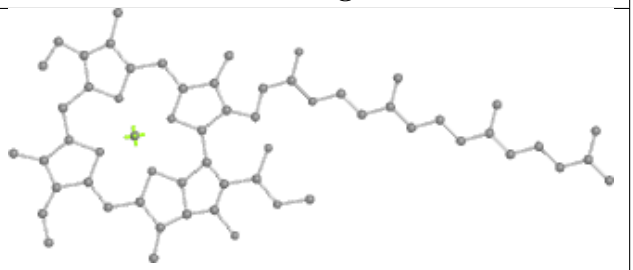
Bond lengths



Bond angles

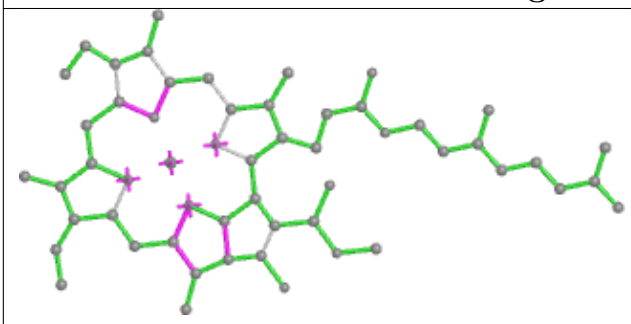


Torsions

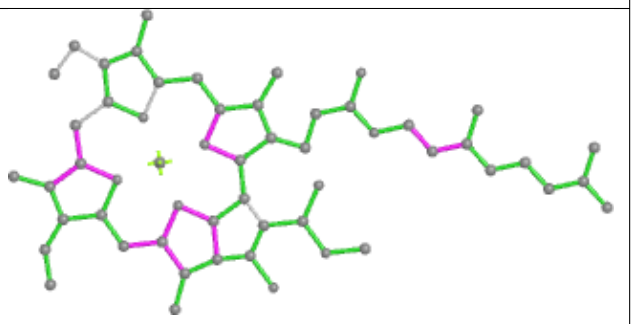


Rings

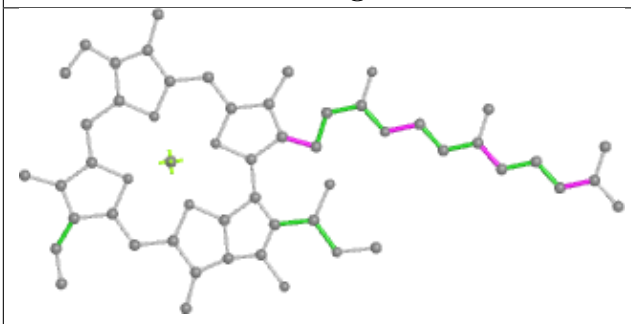
Ligand CLA a 611



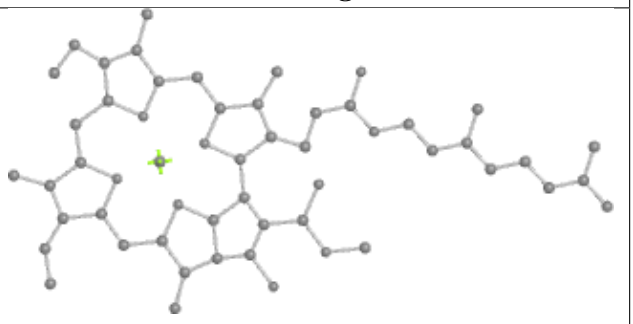
Bond lengths



Bond angles

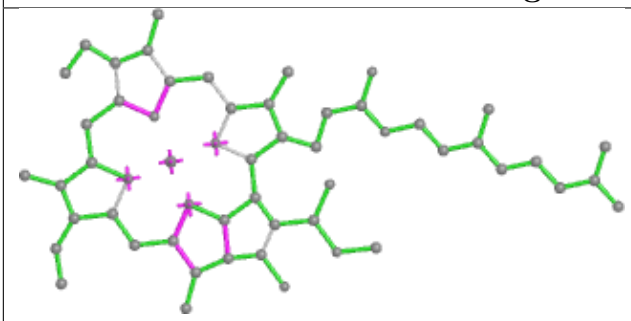


Torsions

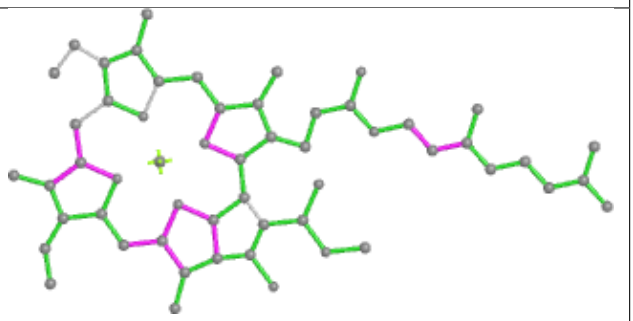


Rings

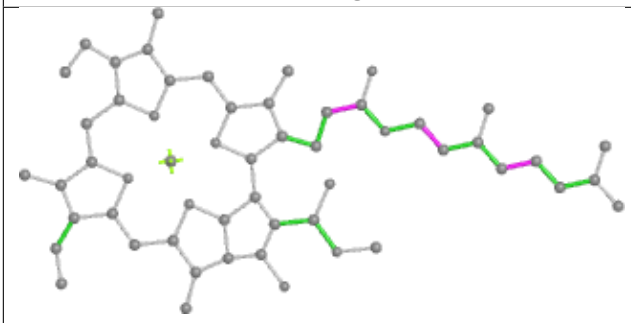
Ligand CLA O 201



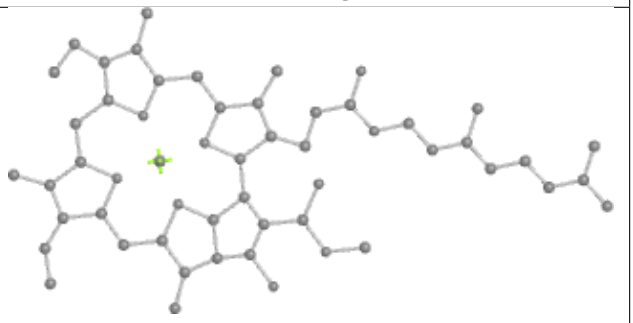
Bond lengths



Bond angles

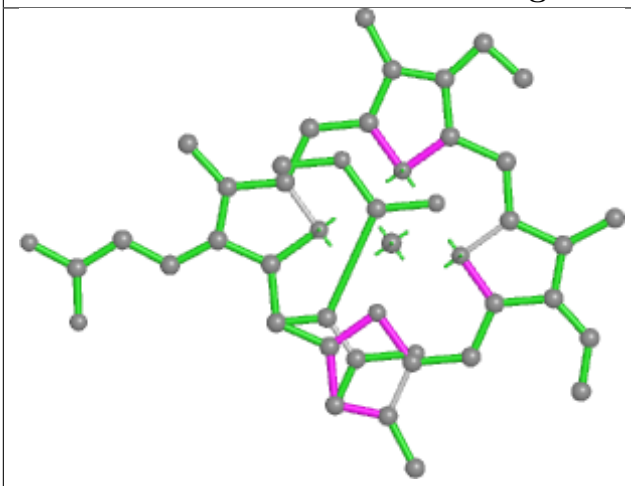


Torsions

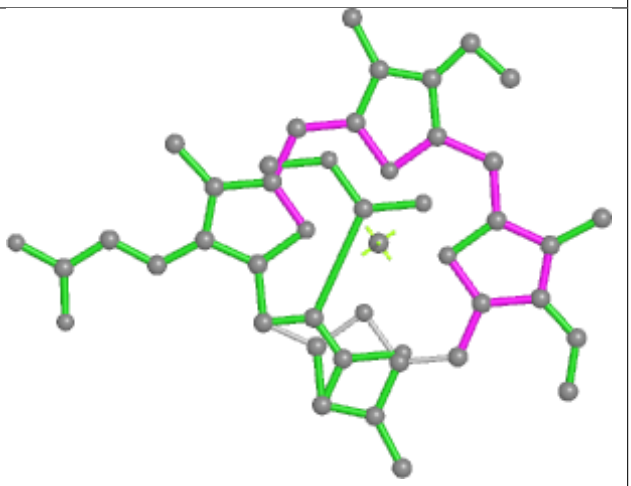


Rings

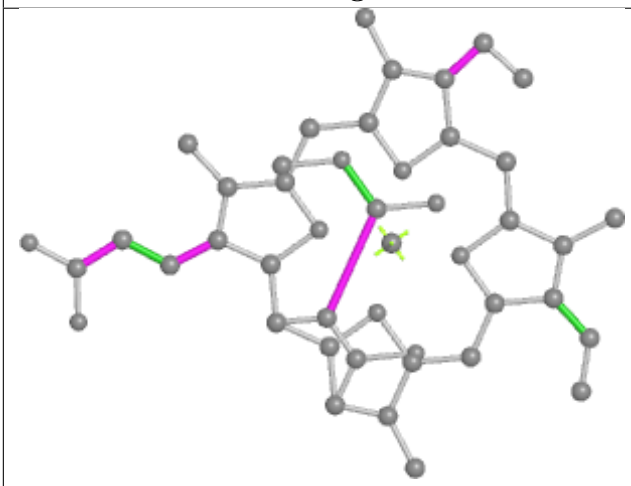
Ligand KC2 b 605



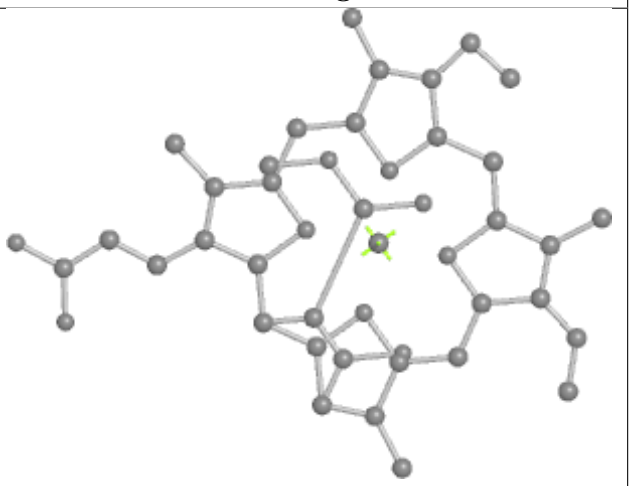
Bond lengths



Bond angles

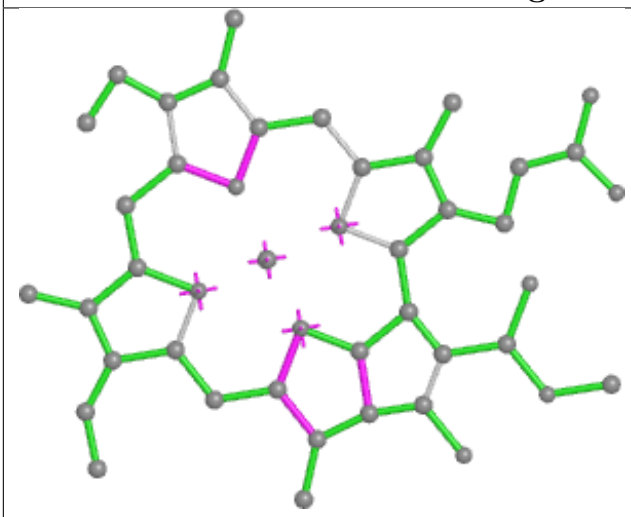


Torsions

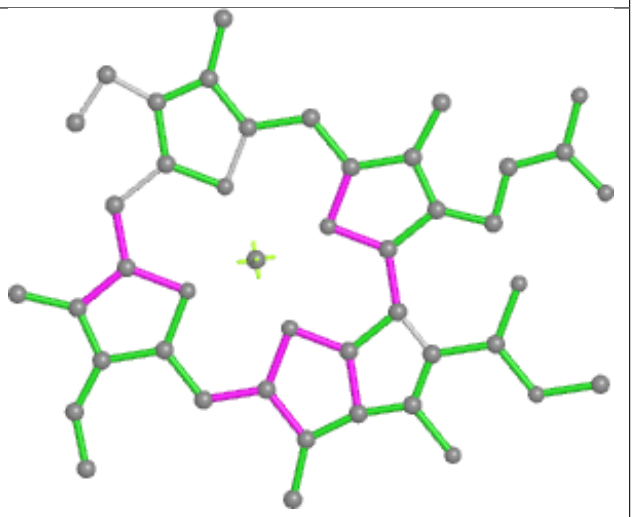


Rings

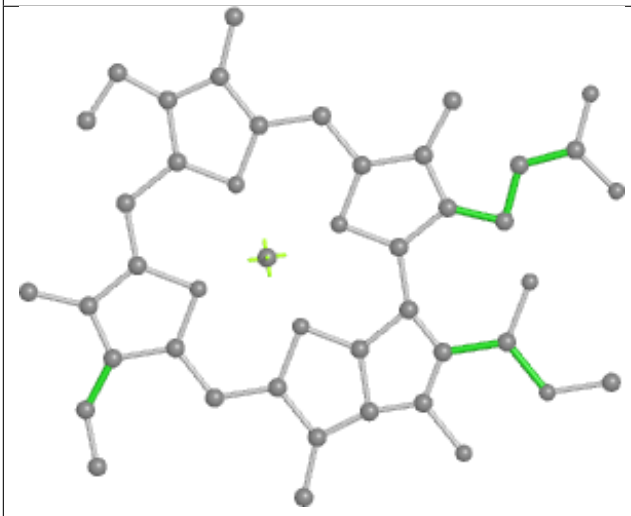
Ligand CLA 2 607



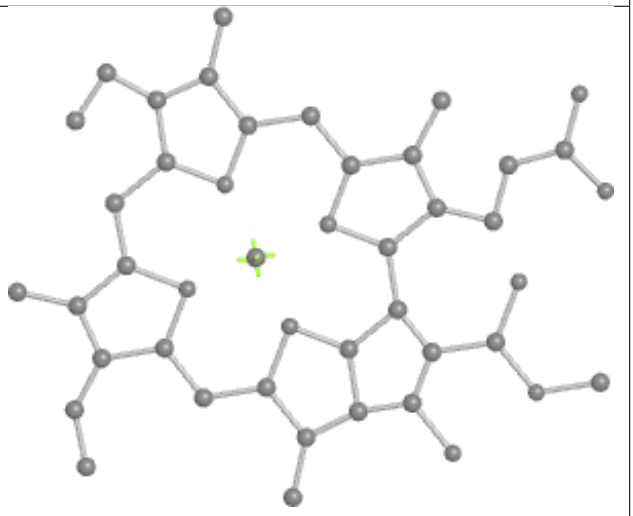
Bond lengths



Bond angles

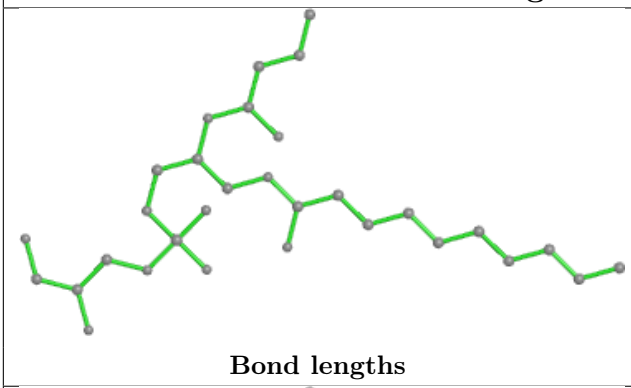


Torsions

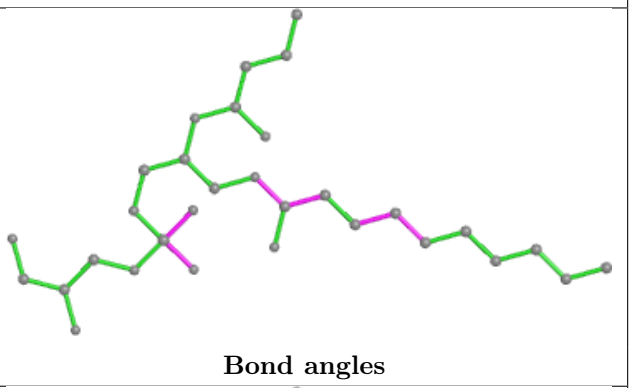


Rings

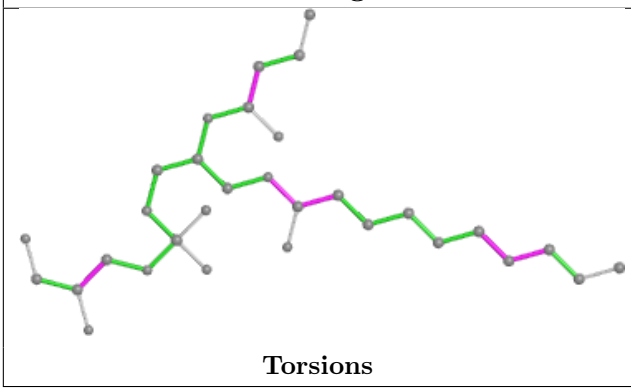
Ligand LHG 7 618



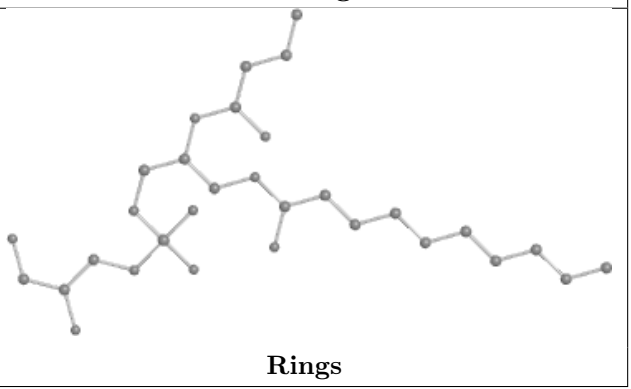
Bond lengths



Bond angles

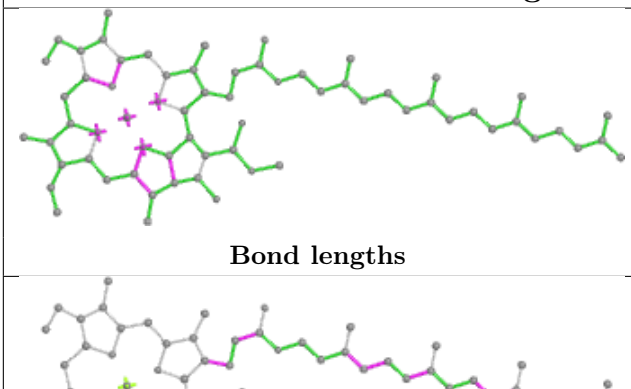


Torsions

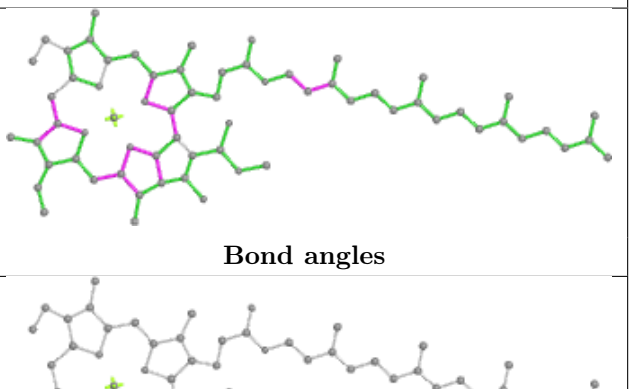


Rings

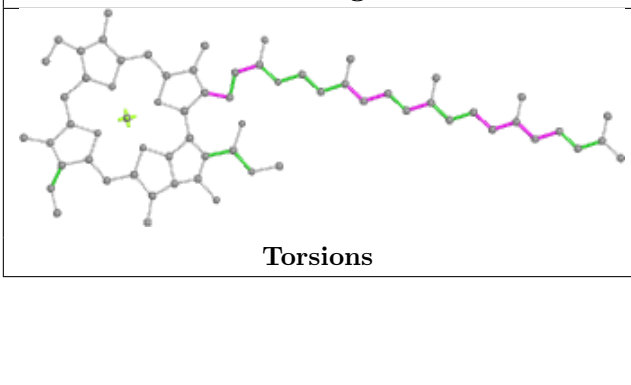
Ligand CLA A 804



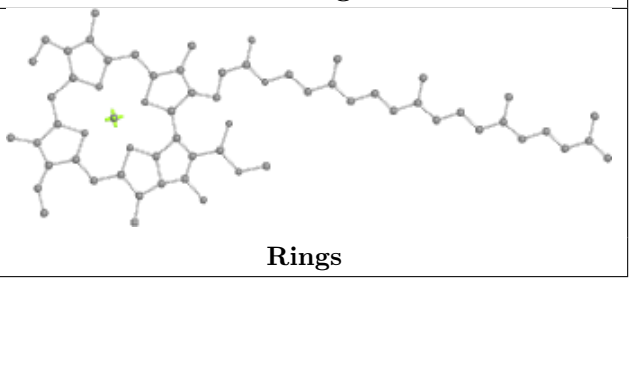
Bond lengths



Bond angles

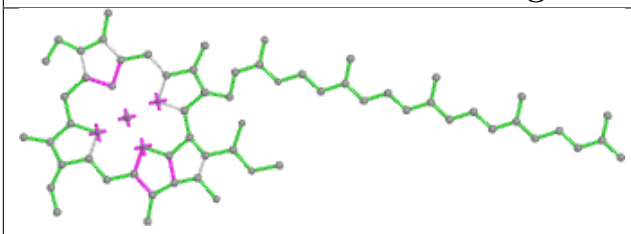


Torsions

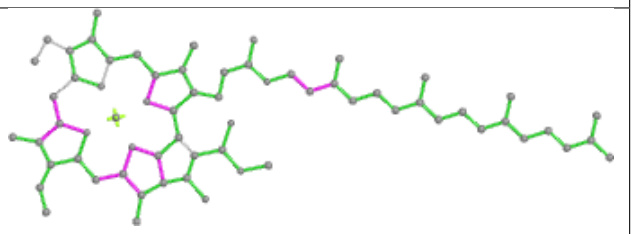


Rings

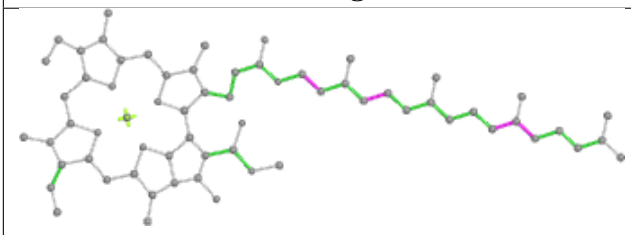
Ligand CLA d 607



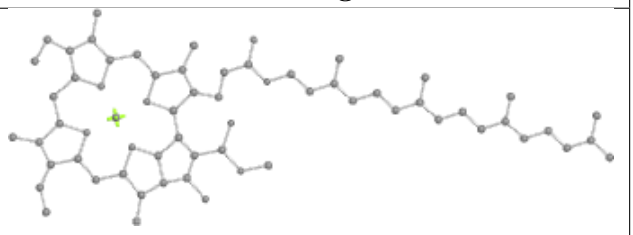
Bond lengths



Bond angles

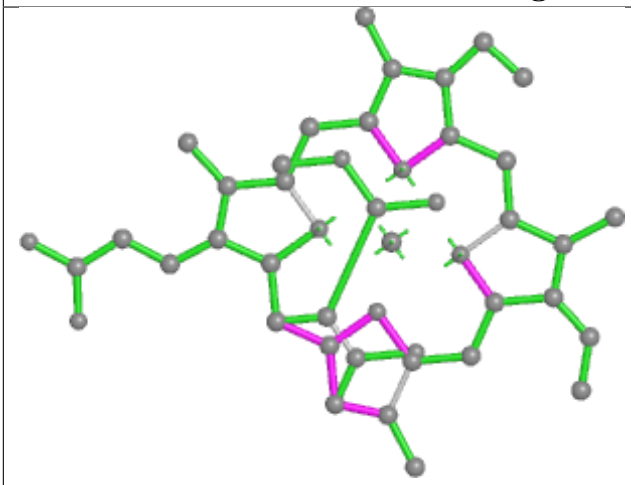


Torsions

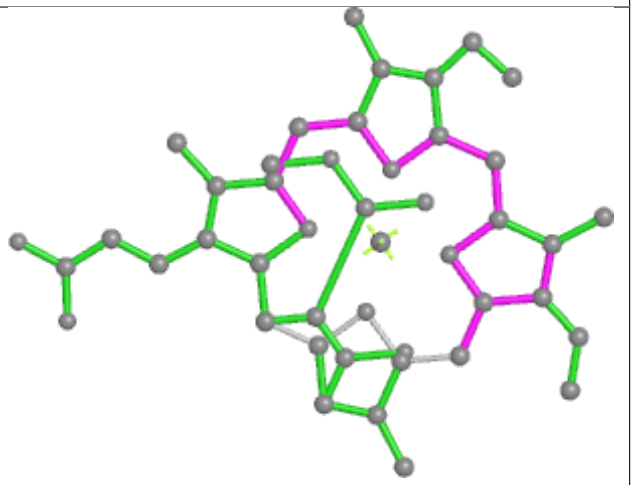


Rings

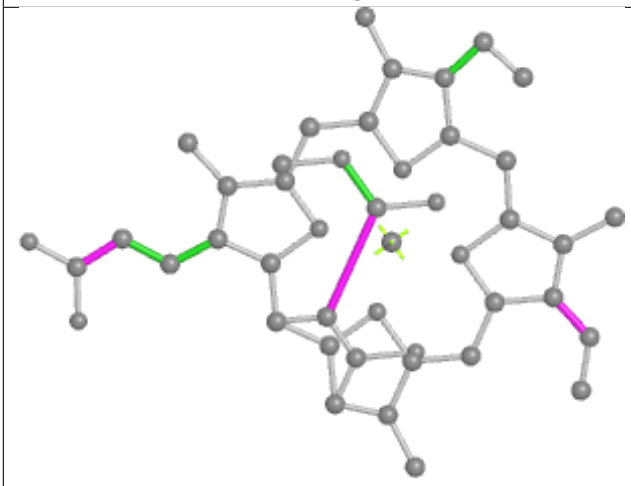
Ligand KC2 9 610



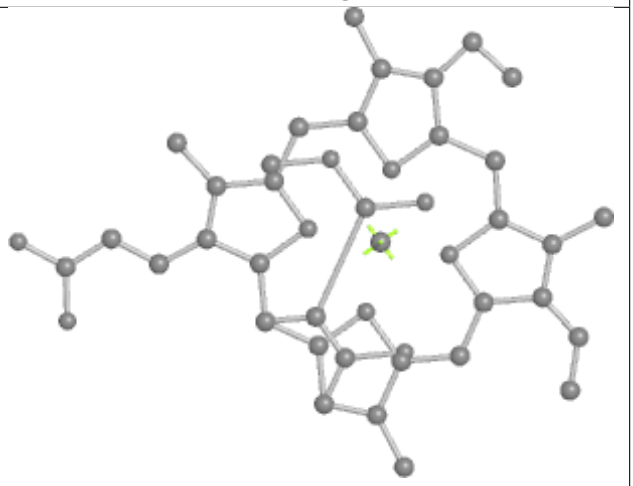
Bond lengths



Bond angles

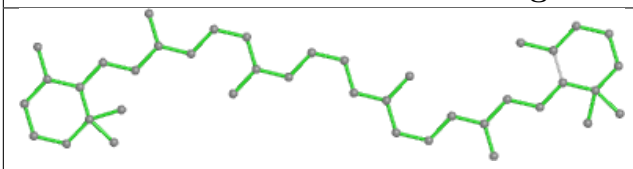


Torsions

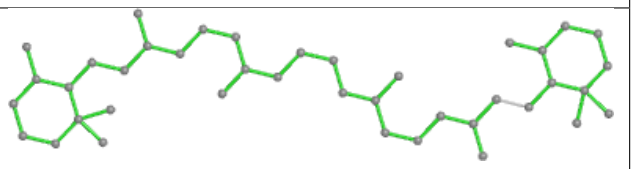


Rings

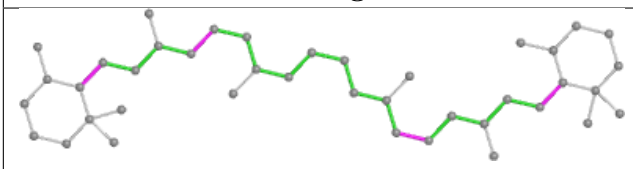
Ligand 8CT b 615



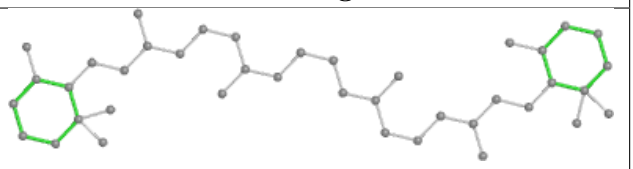
Bond lengths



Bond angles

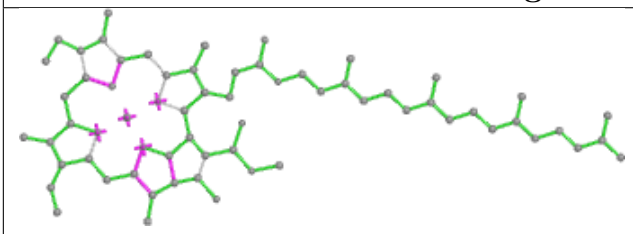


Torsions

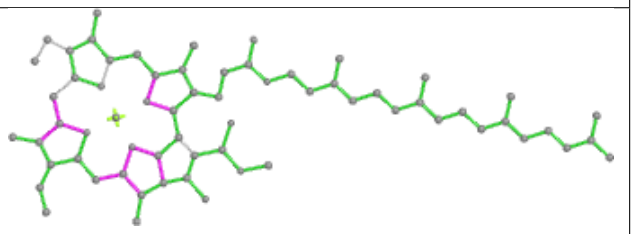


Rings

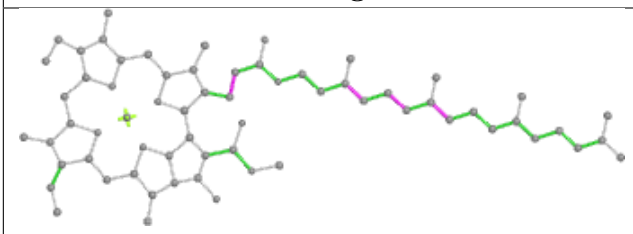
Ligand CLA B 837



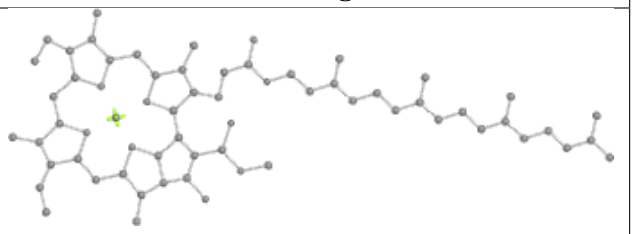
Bond lengths



Bond angles

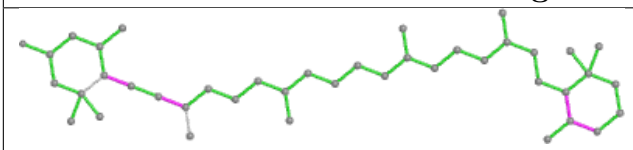


Torsions

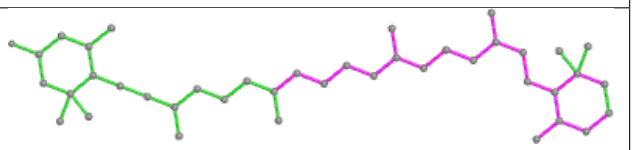


Rings

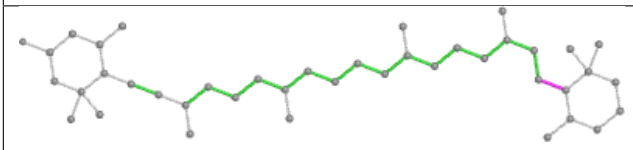
Ligand IHT d 617



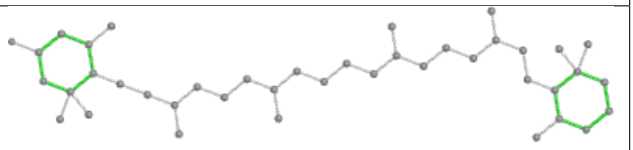
Bond lengths



Bond angles

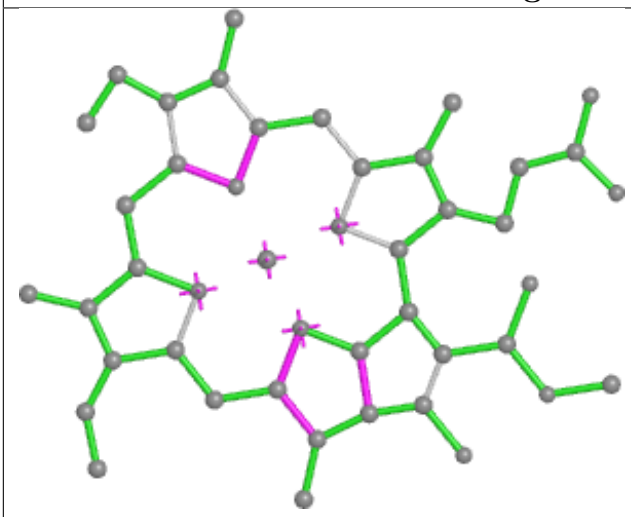


Torsions

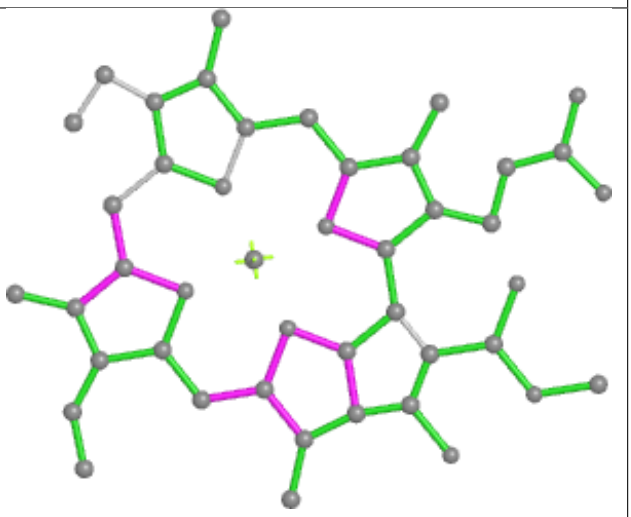


Rings

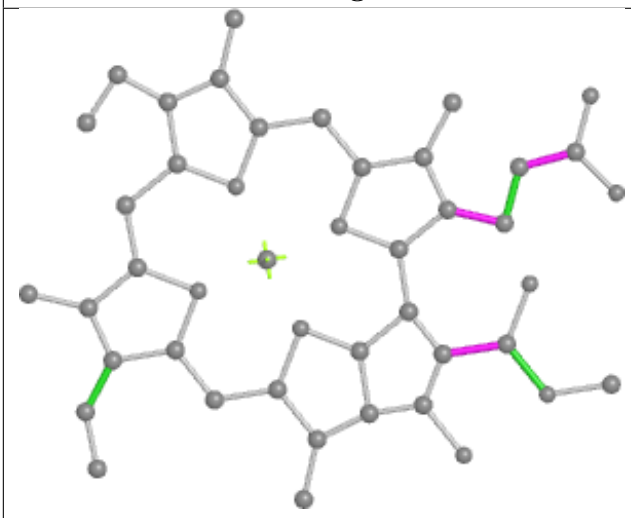
Ligand CLA A 814



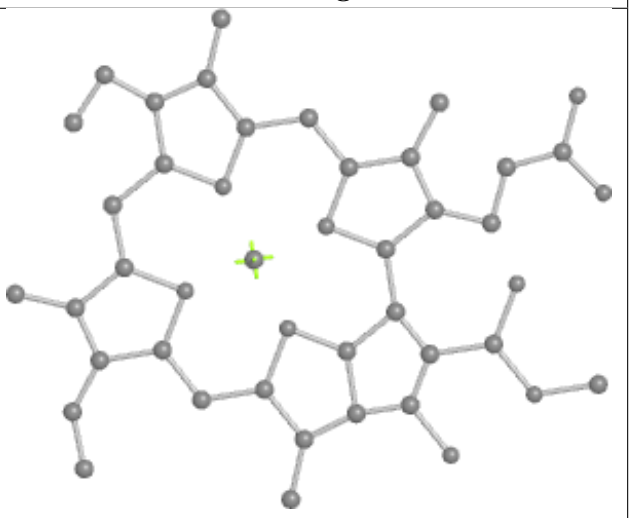
Bond lengths



Bond angles

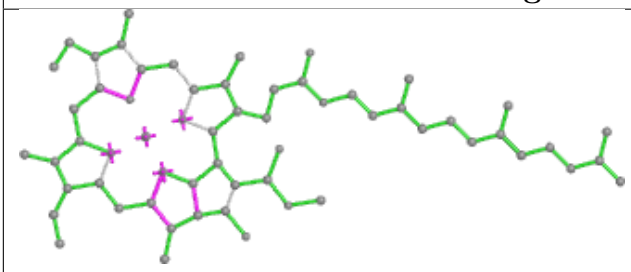


Torsions

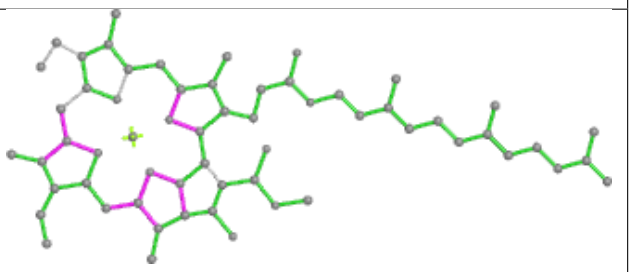


Rings

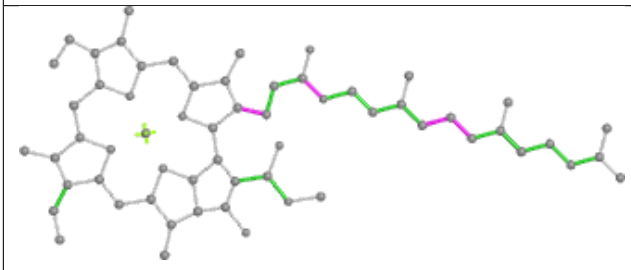
Ligand CLA A 830



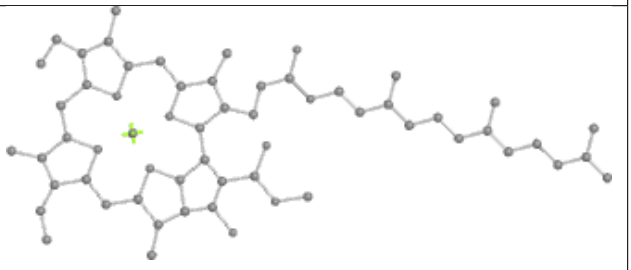
Bond lengths



Bond angles

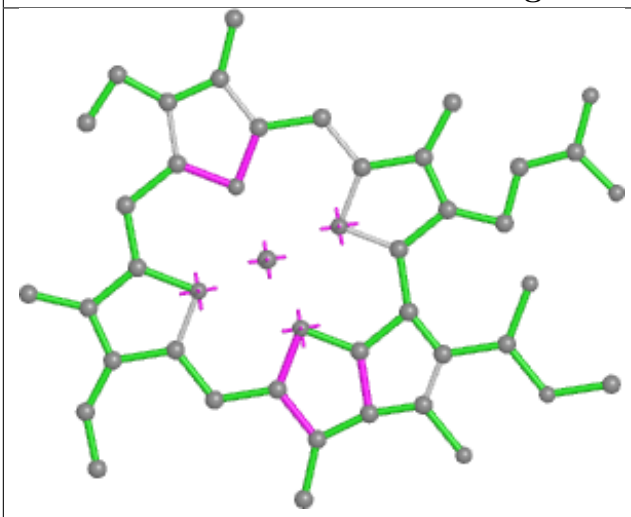


Torsions

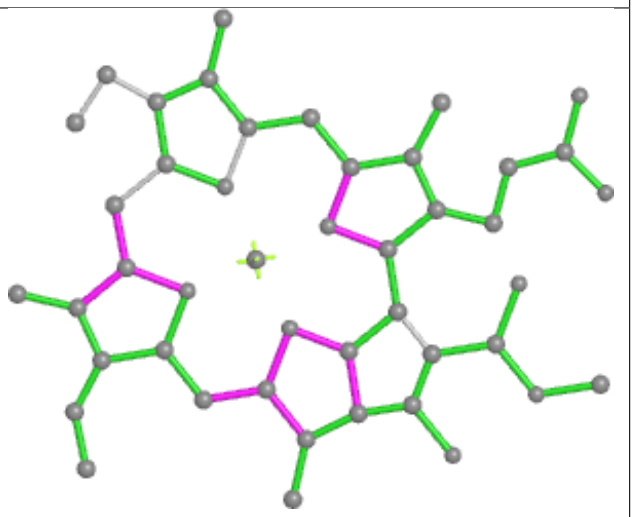


Rings

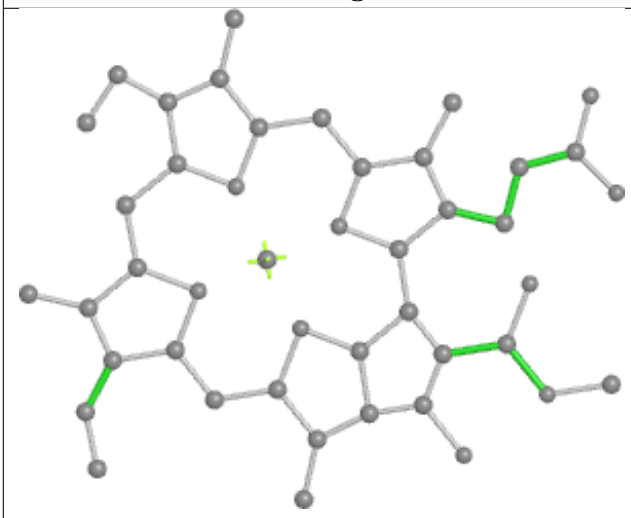
Ligand CLA B 829



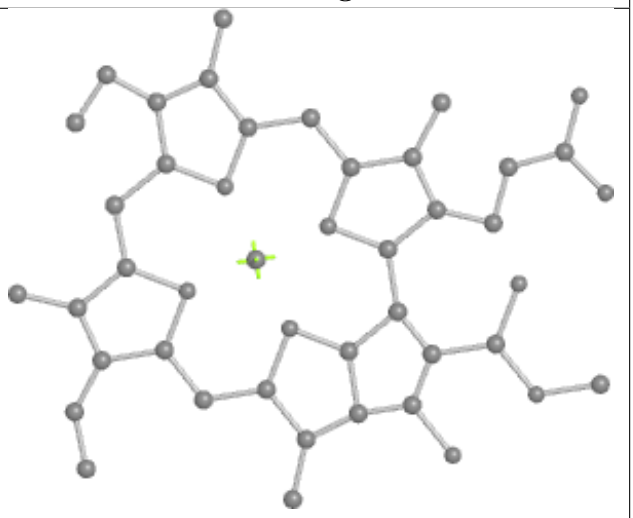
Bond lengths



Bond angles

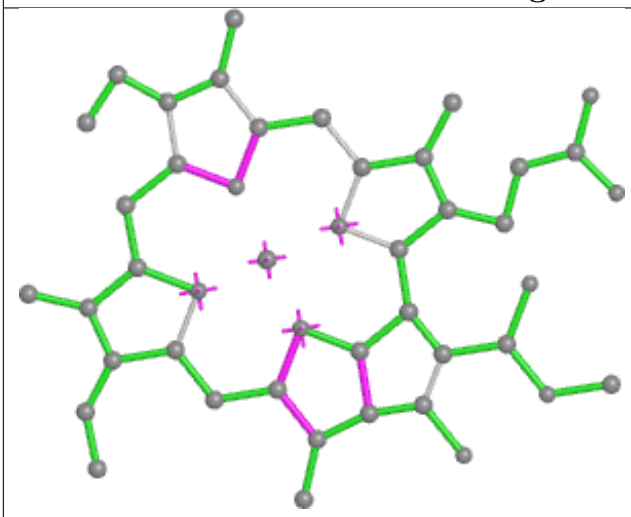


Torsions

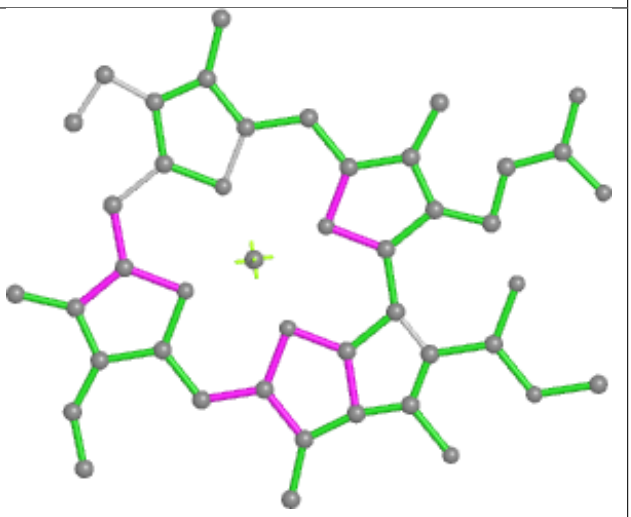


Rings

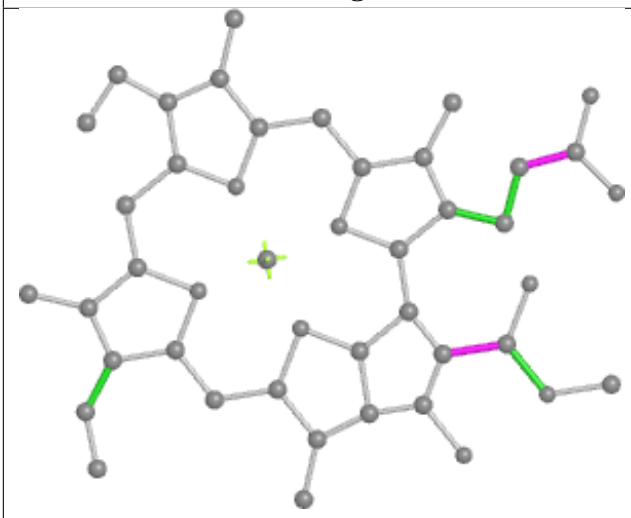
Ligand CLA e 601



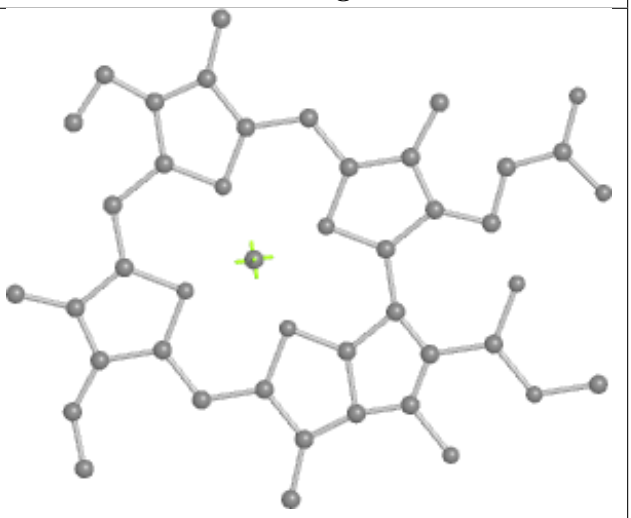
Bond lengths



Bond angles

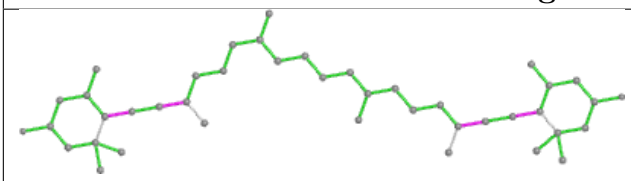


Torsions

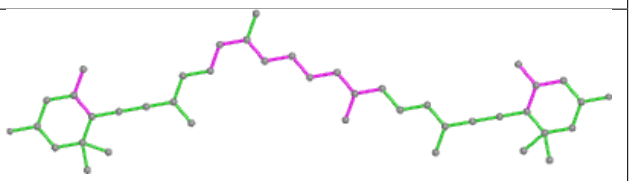


Rings

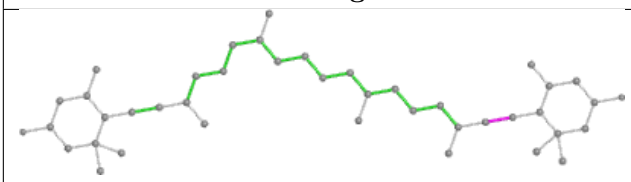
Ligand II0 R 204



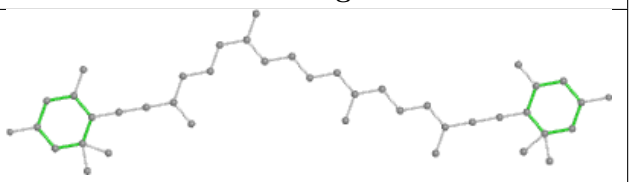
Bond lengths



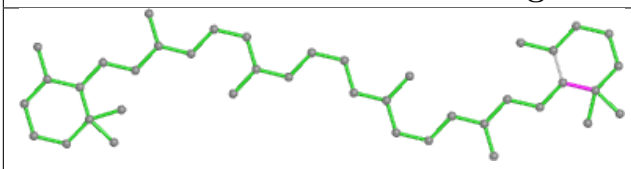
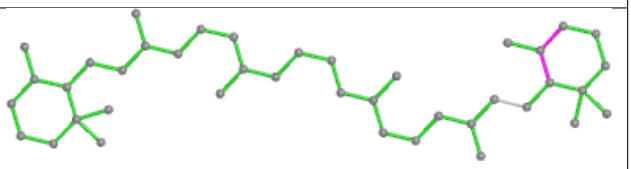
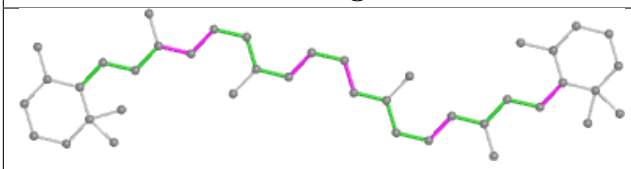
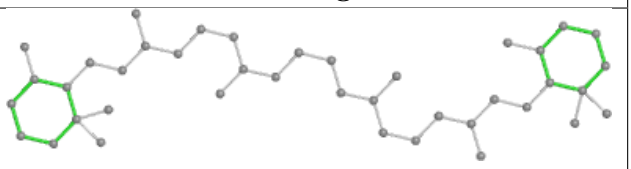
Bond angles

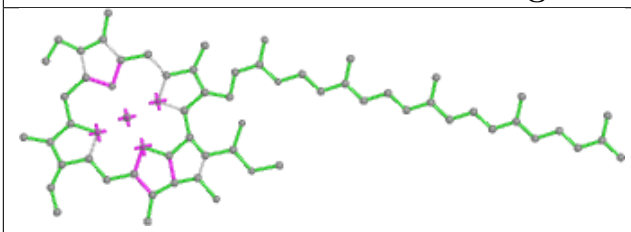
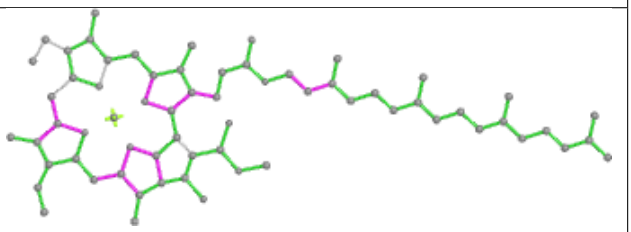
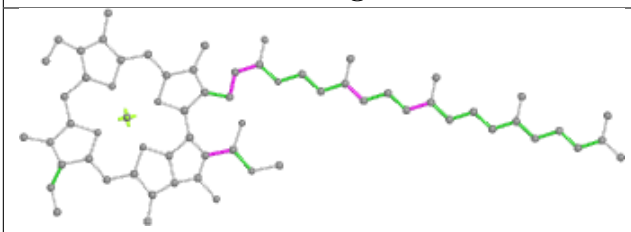
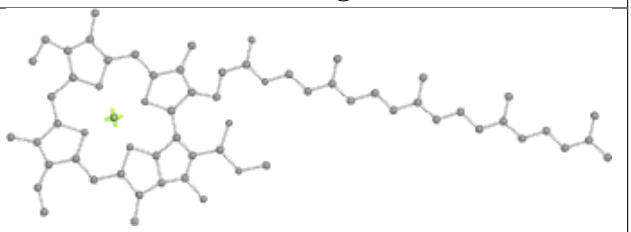


Torsions

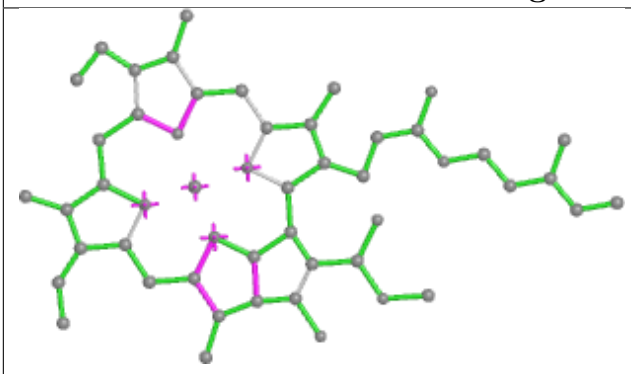


Rings

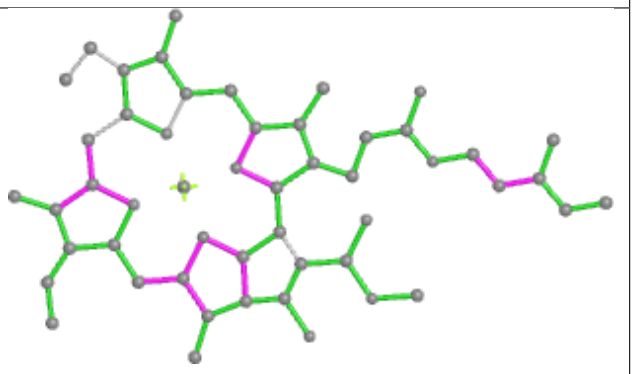
Ligand 8CT B 845	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA 3 610	
 Bond lengths	 Bond angles
 Torsions	 Rings

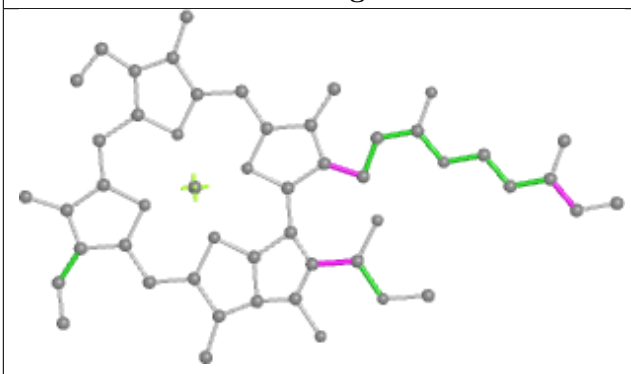
Ligand CLA e 610



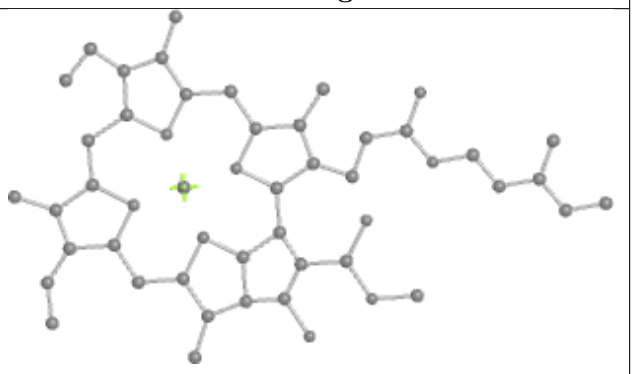
Bond lengths



Bond angles

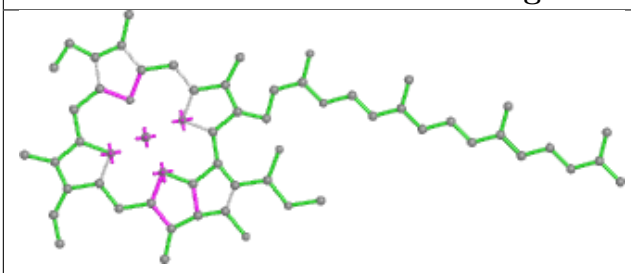


Torsions

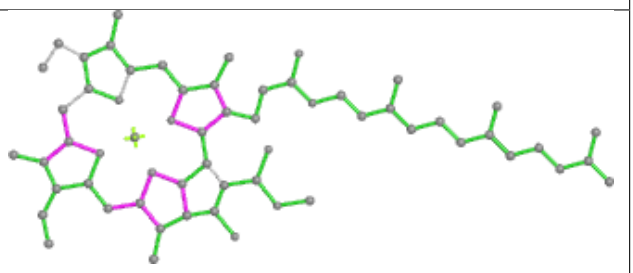


Rings

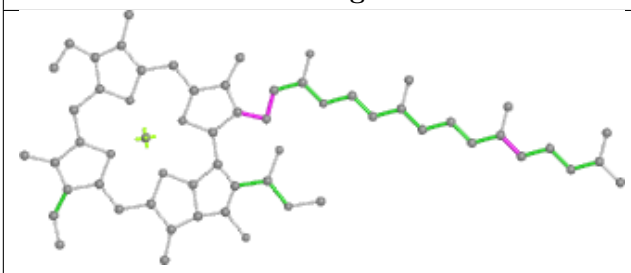
Ligand CLA A 809



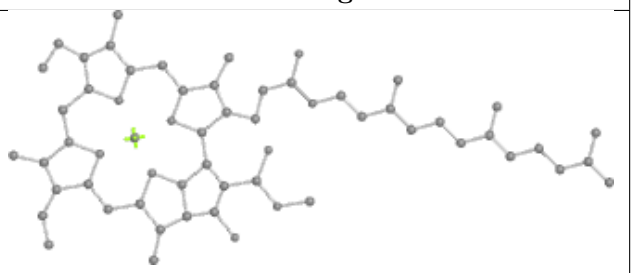
Bond lengths



Bond angles

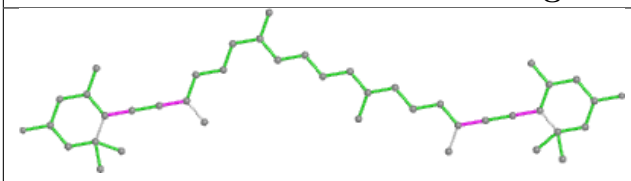


Torsions

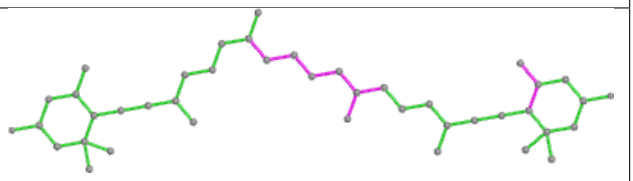


Rings

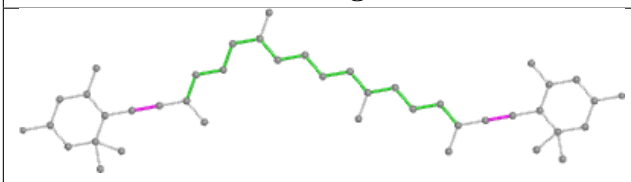
Ligand II0 c 616



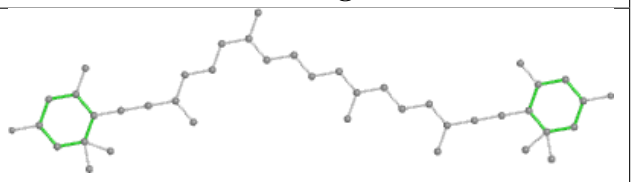
Bond lengths



Bond angles

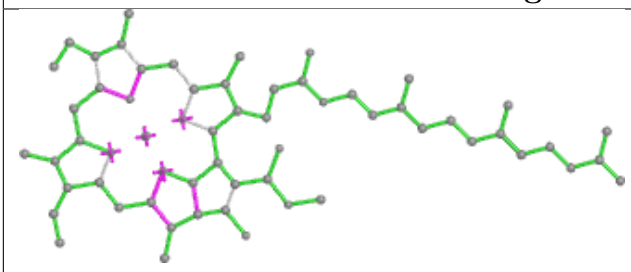


Torsions

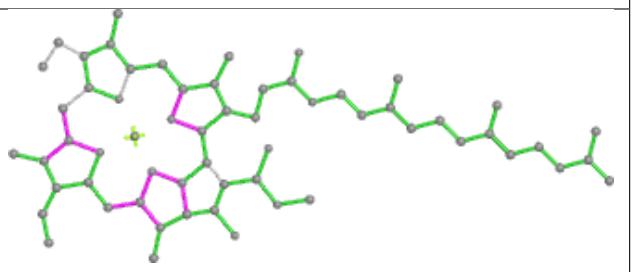


Rings

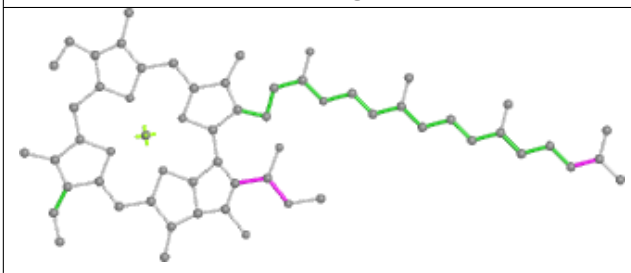
Ligand CLA B 818



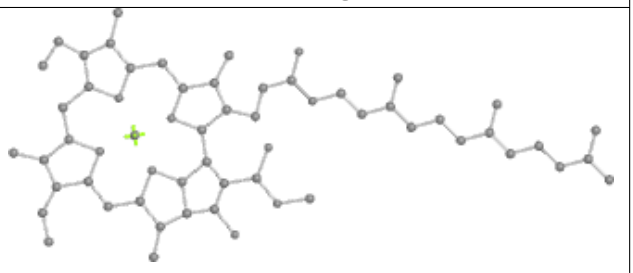
Bond lengths



Bond angles

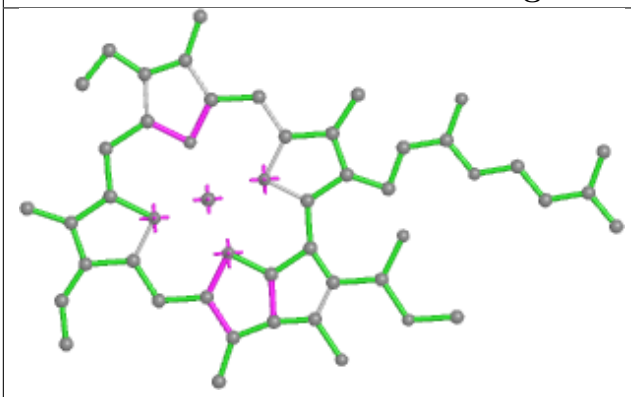


Torsions

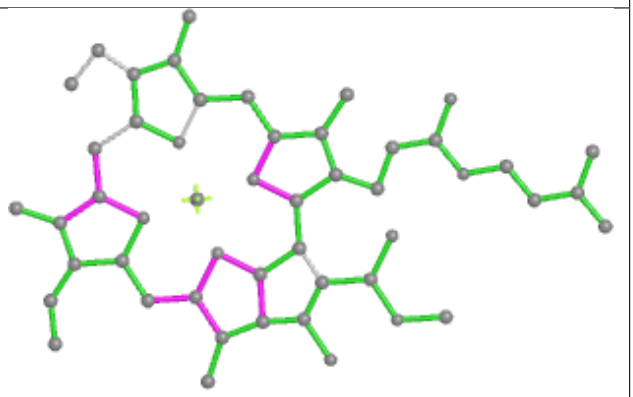


Rings

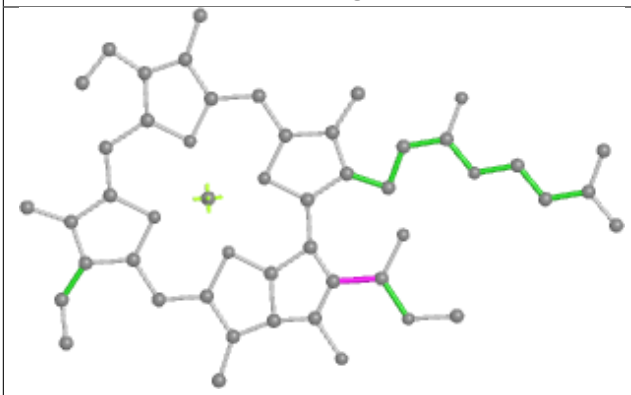
Ligand CLA A 805



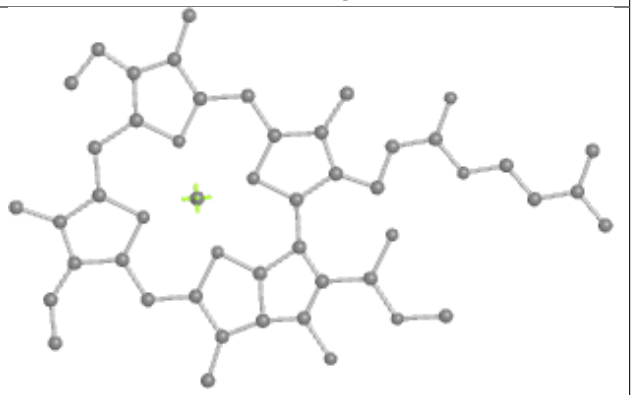
Bond lengths



Bond angles

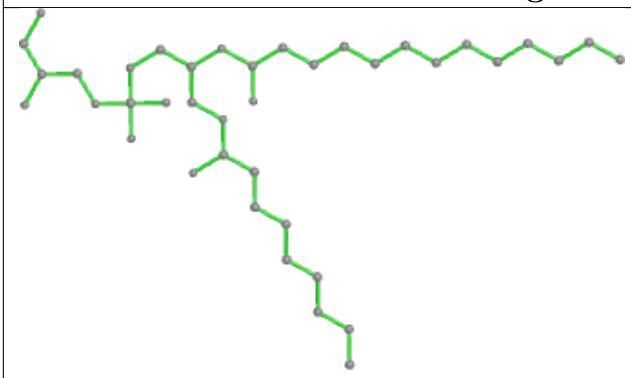


Torsions

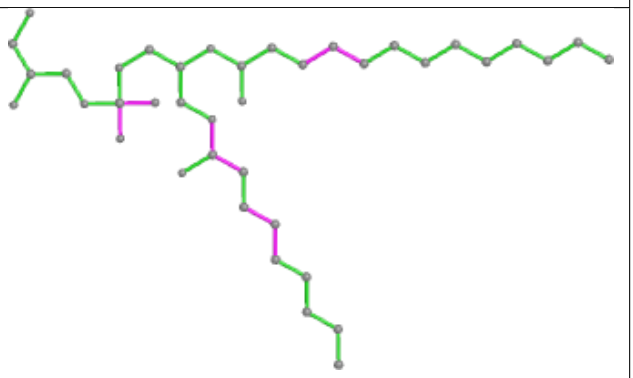


Rings

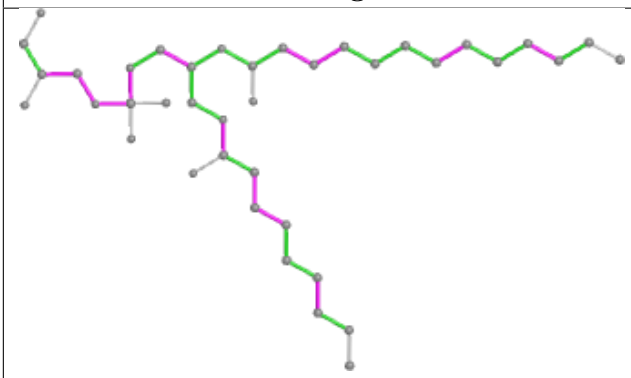
Ligand LHG 2 619



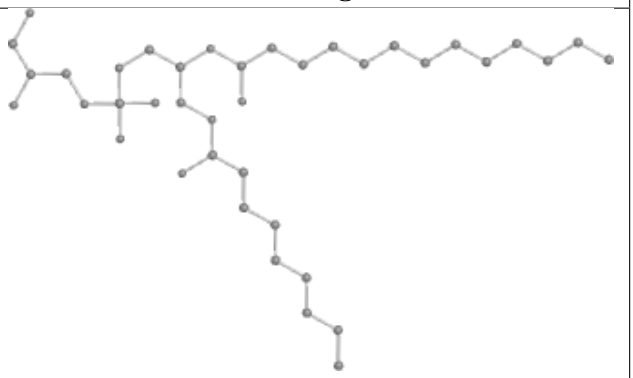
Bond lengths



Bond angles

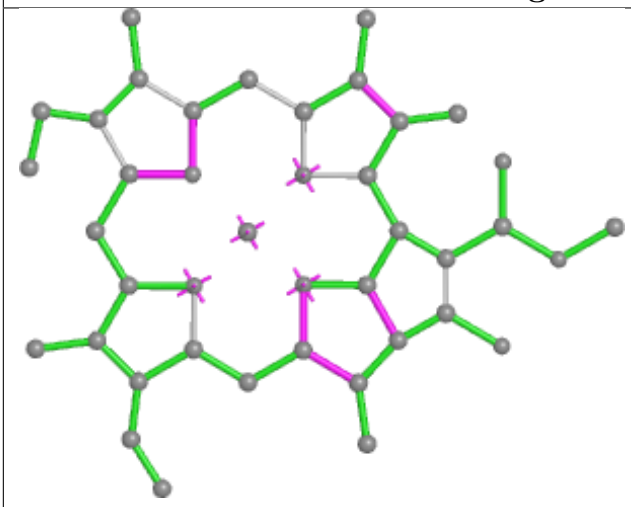


Torsions

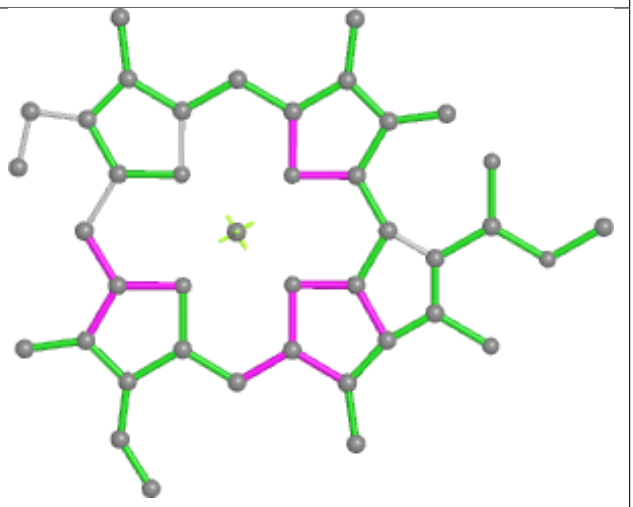


Rings

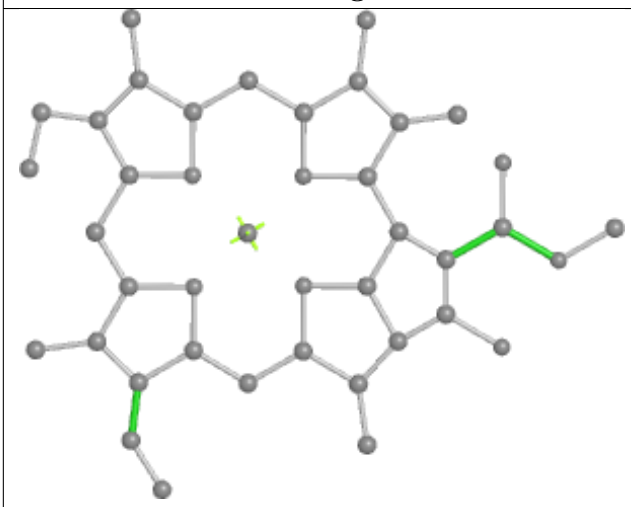
Ligand CLA 7 609



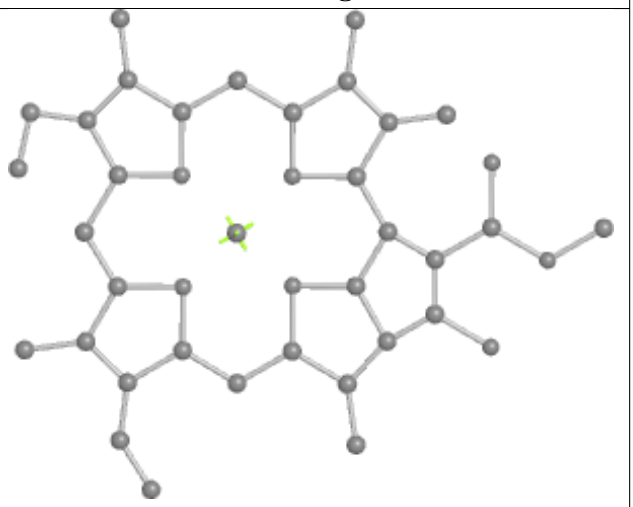
Bond lengths



Bond angles

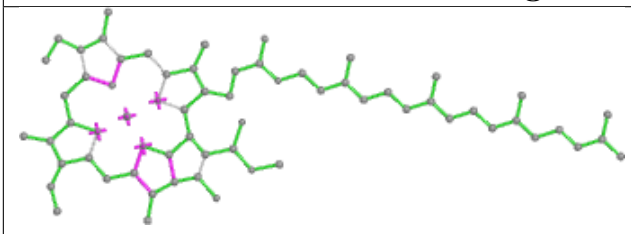


Torsions

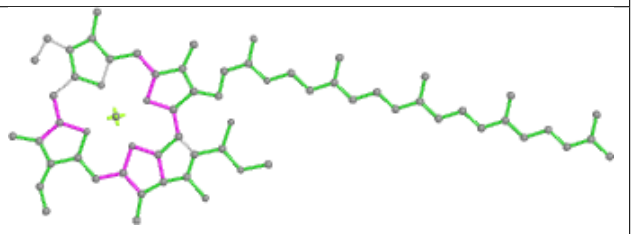


Rings

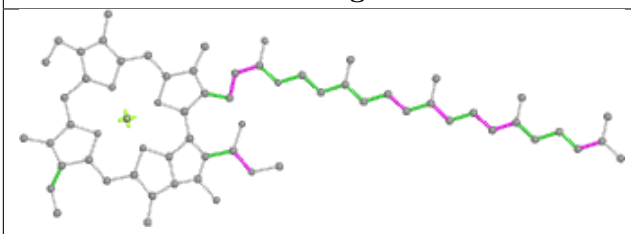
Ligand CLA B 803



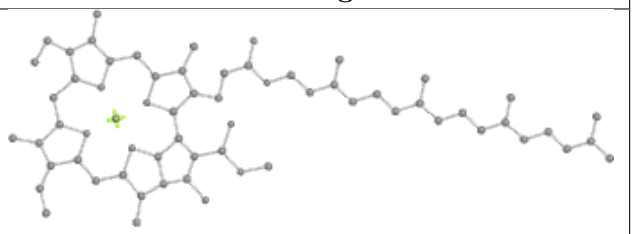
Bond lengths



Bond angles

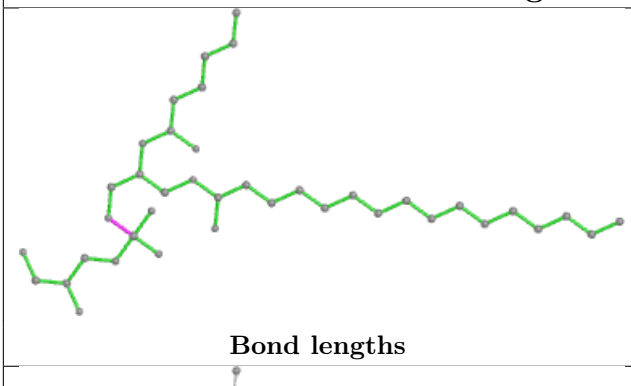


Torsions

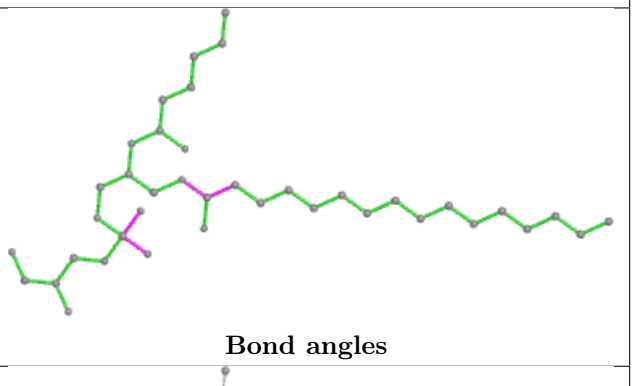


Rings

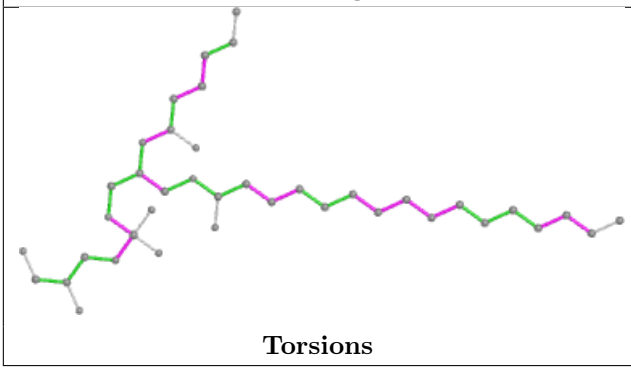
Ligand LHG d 619



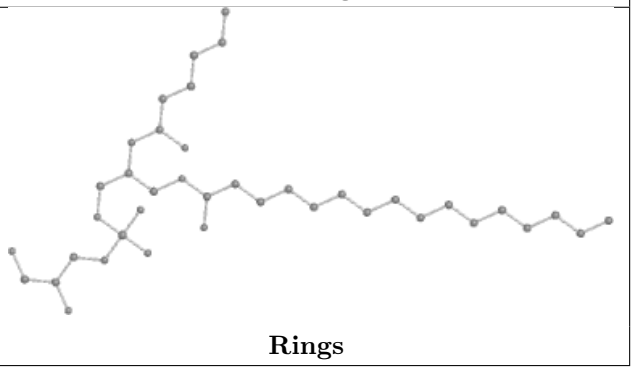
Bond lengths



Bond angles

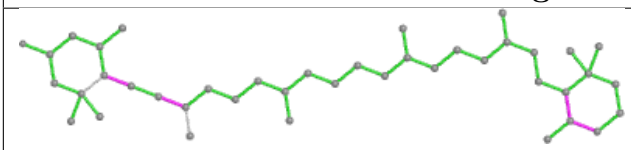


Torsions

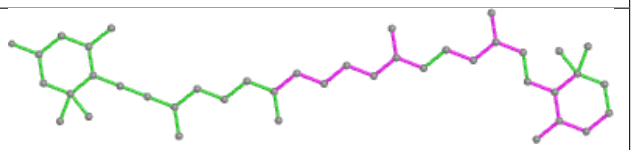


Rings

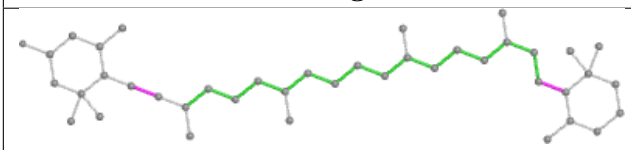
Ligand IHT 1 618



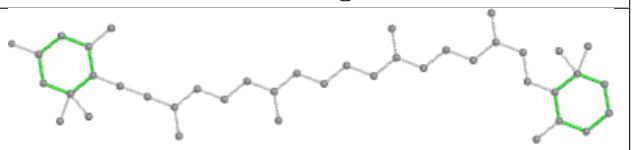
Bond lengths



Bond angles

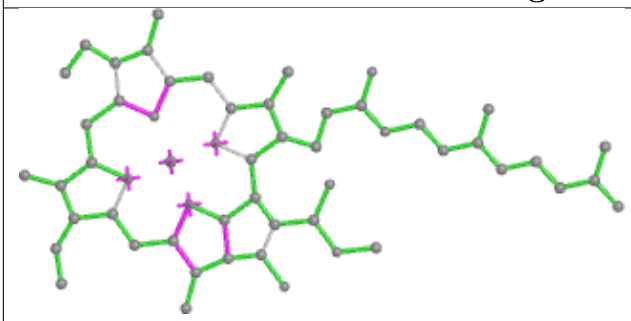


Torsions

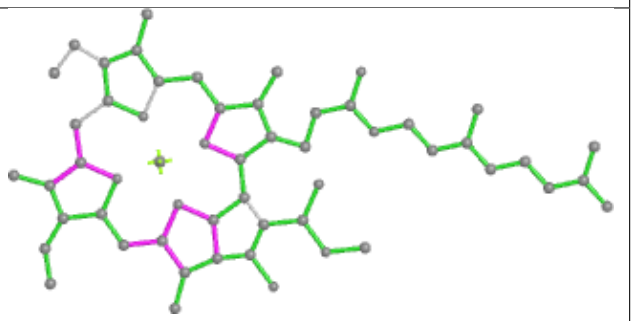


Rings

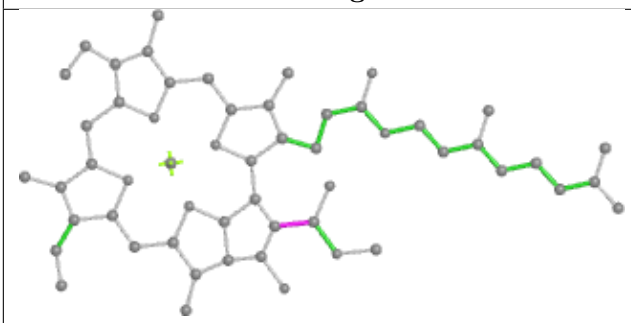
Ligand CLA 3 602



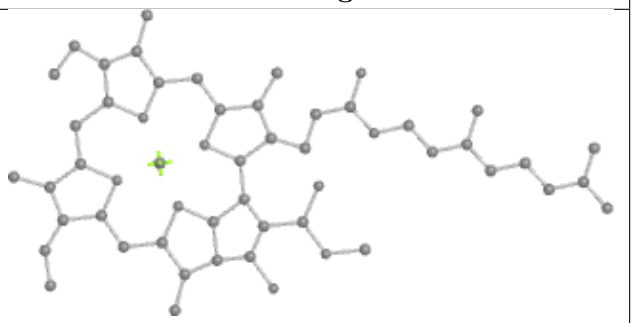
Bond lengths



Bond angles

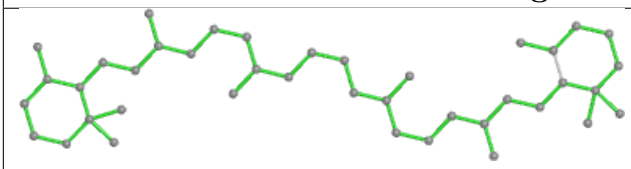


Torsions

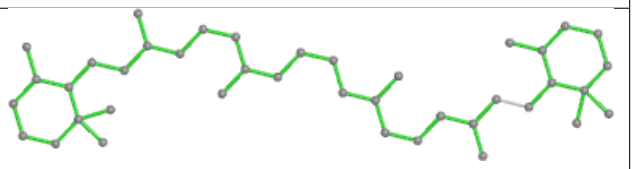


Rings

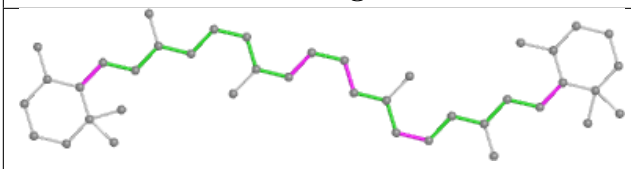
Ligand 8CT J 103



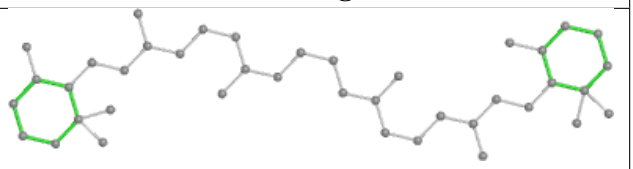
Bond lengths



Bond angles

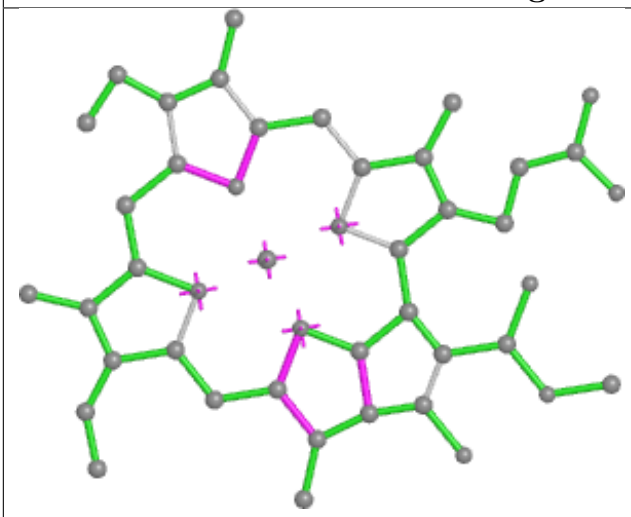


Torsions

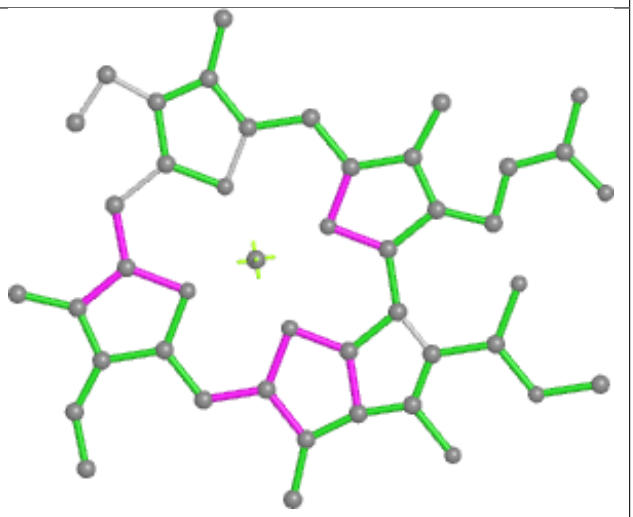


Rings

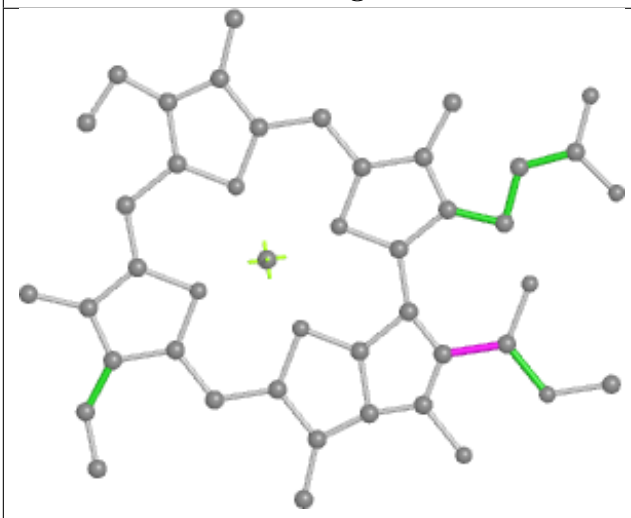
Ligand CLA 2 606



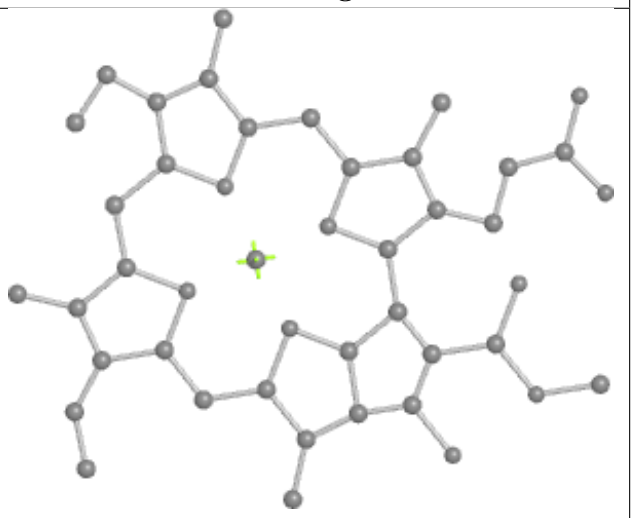
Bond lengths



Bond angles

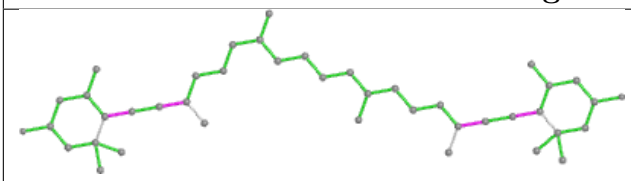


Torsions

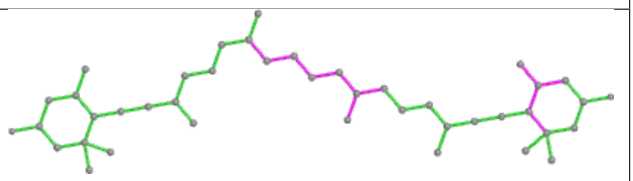


Rings

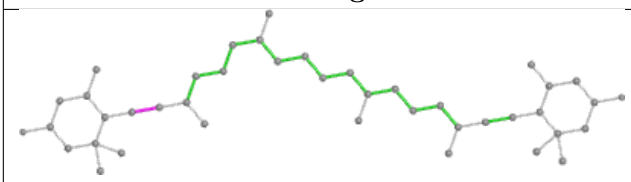
Ligand II0 6 614



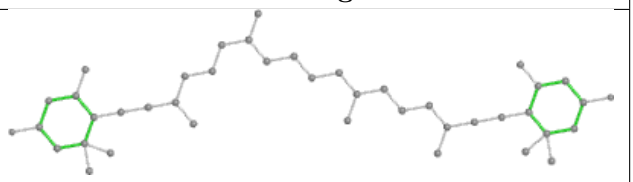
Bond lengths



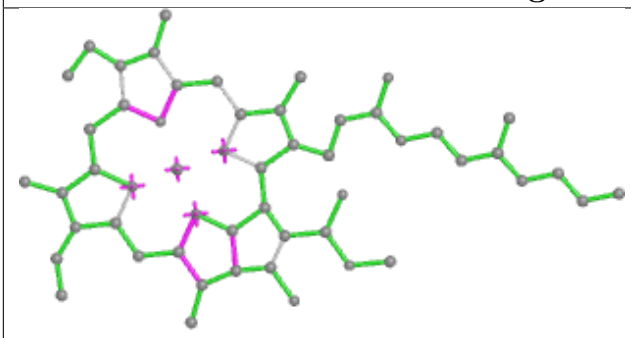
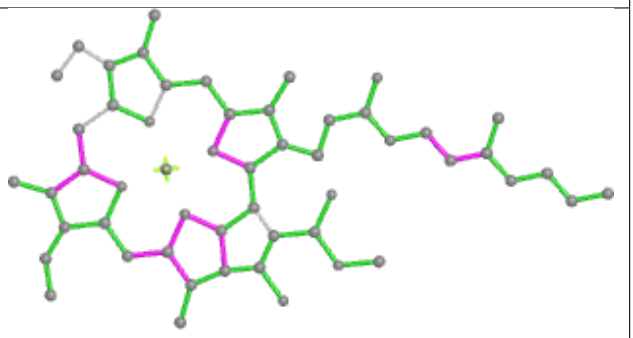
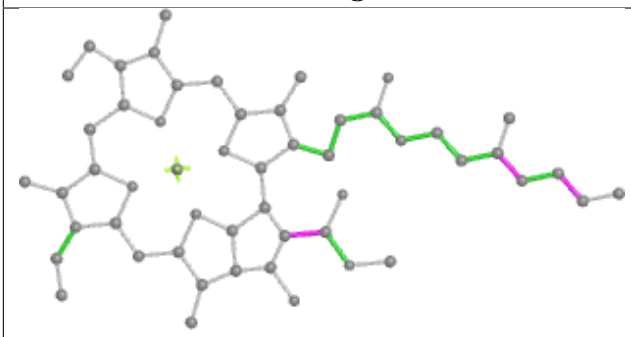
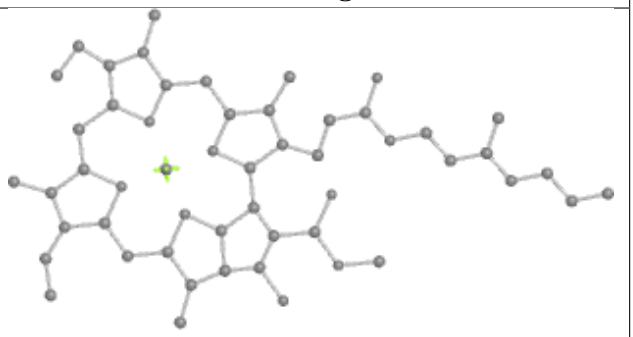
Bond angles

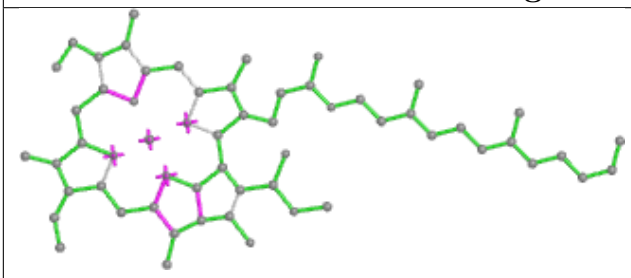
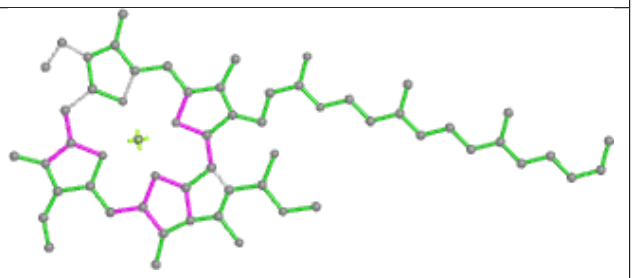
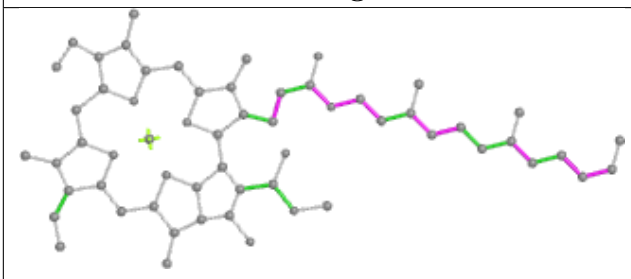
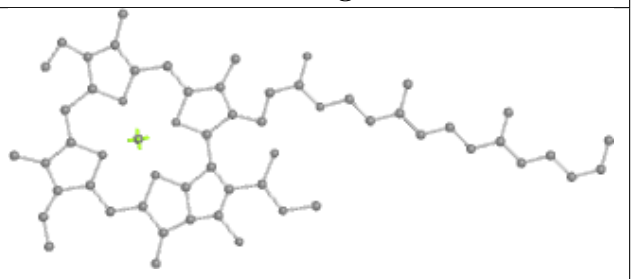


Torsions

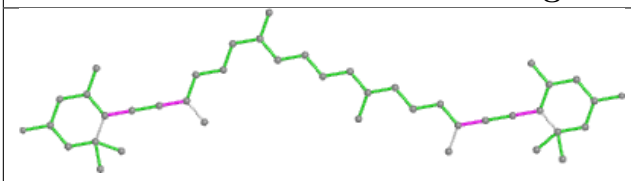


Rings

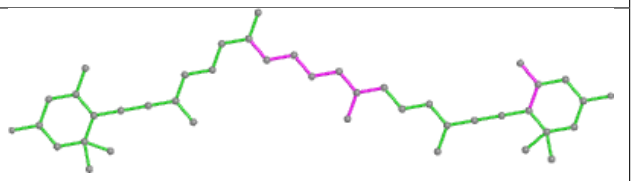
Ligand CLA 7 604	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA B 816	
 Bond lengths	 Bond angles
 Torsions	 Rings

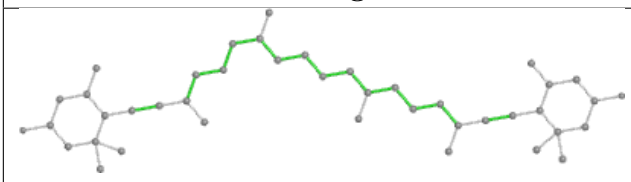
Ligand II0 e 615



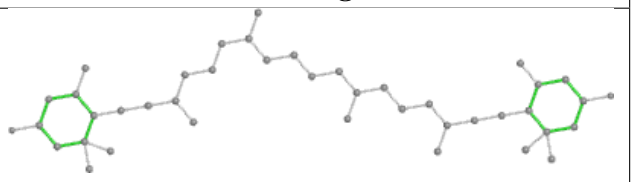
Bond lengths



Bond angles

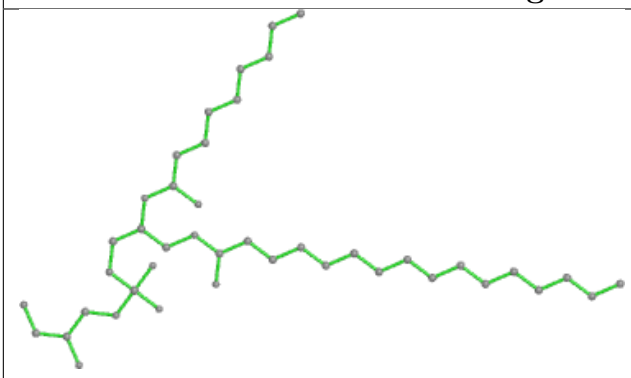


Torsions

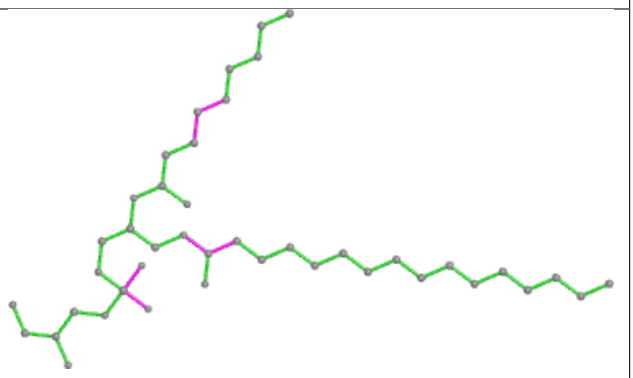


Rings

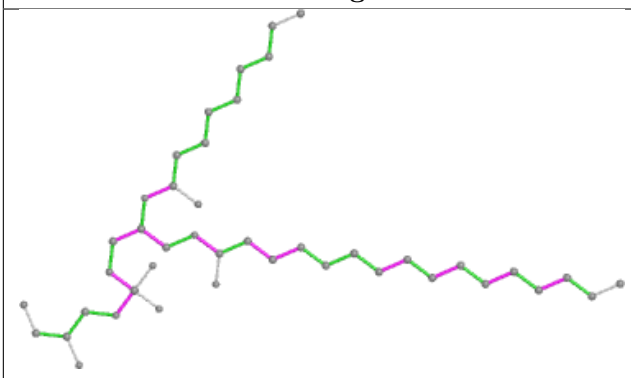
Ligand LHG 2 620



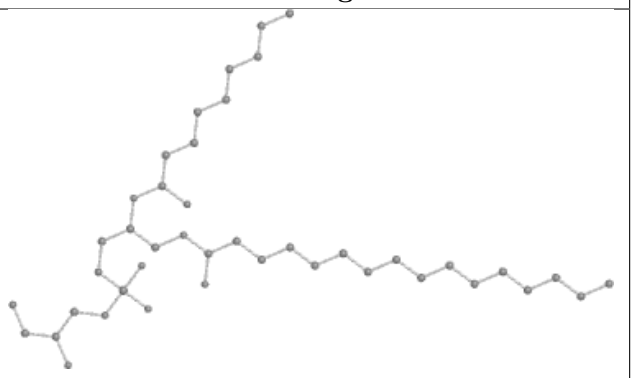
Bond lengths



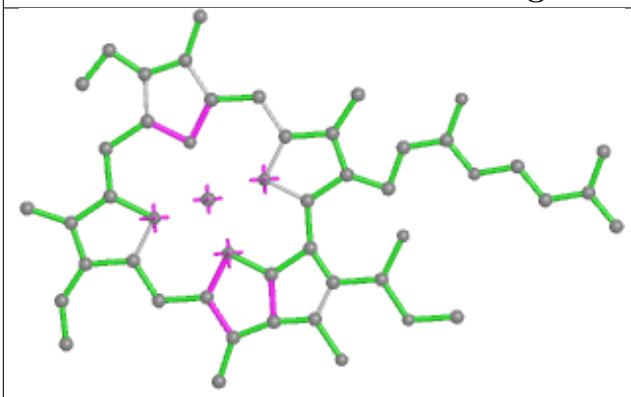
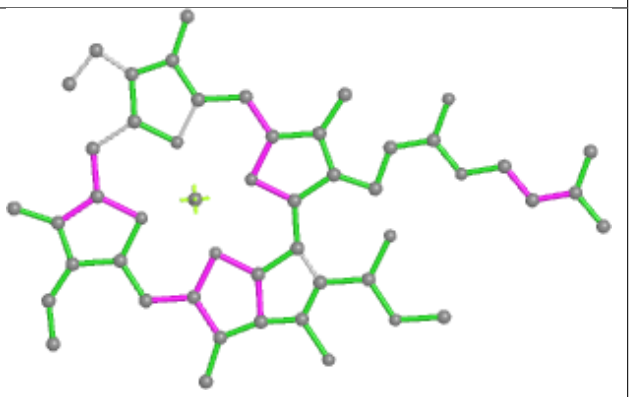
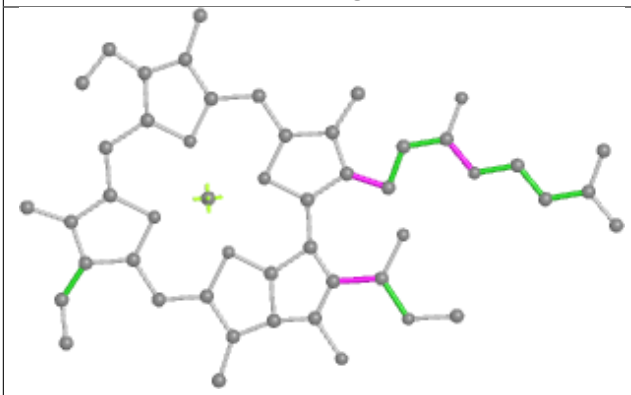
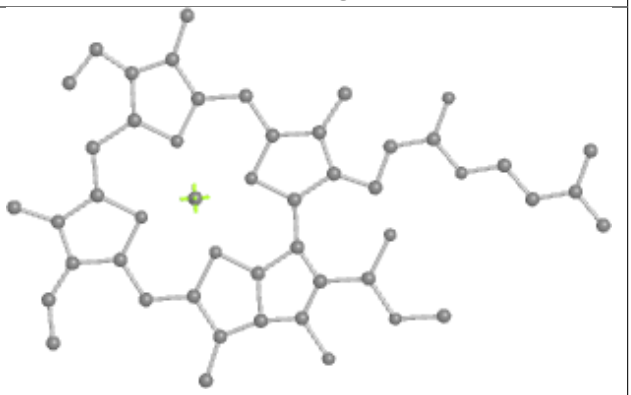
Bond angles

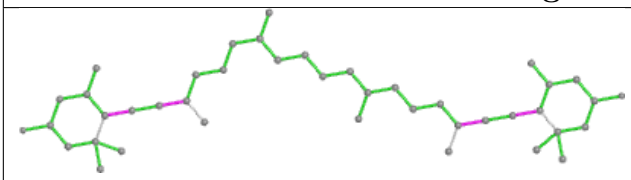
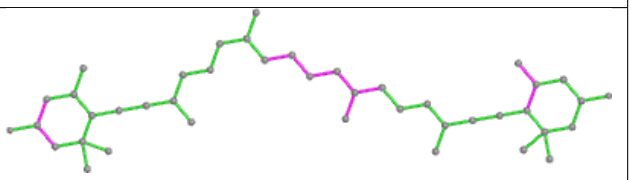
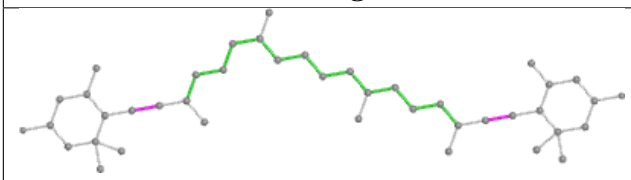
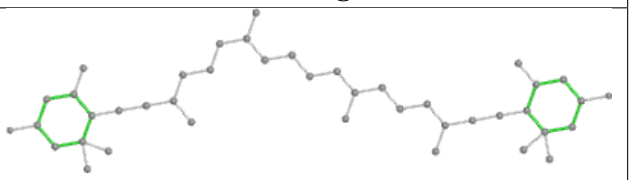


Torsions

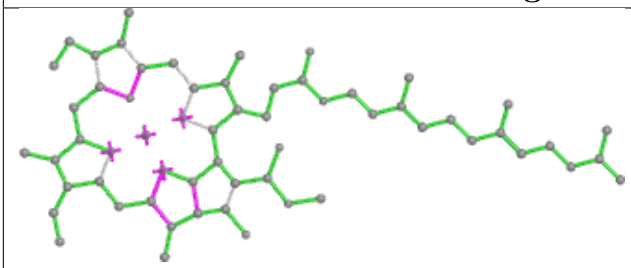


Rings

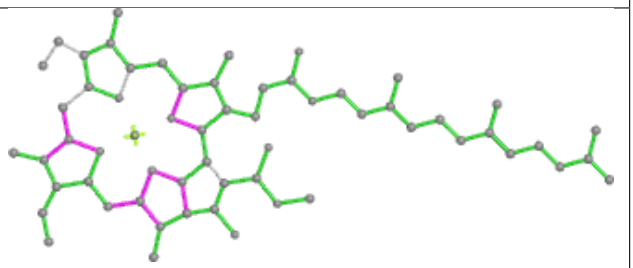
Ligand CLA d 611	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand II0 3 616	
 Bond lengths	 Bond angles
 Torsions	 Rings

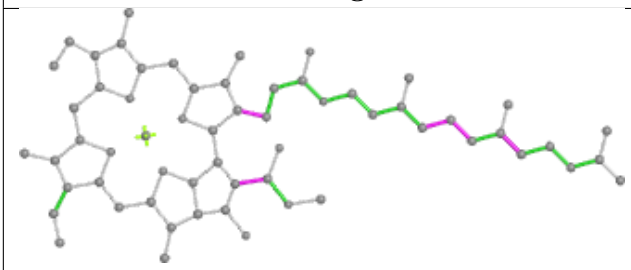
Ligand CLA A 835



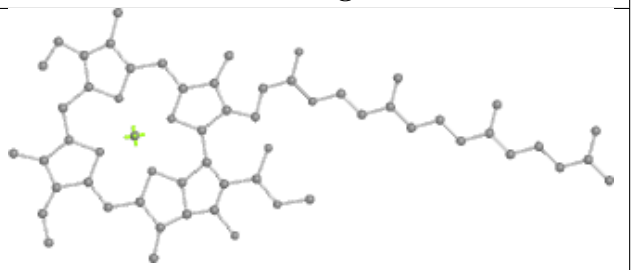
Bond lengths



Bond angles

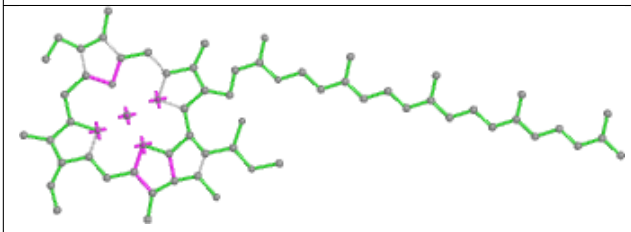


Torsions

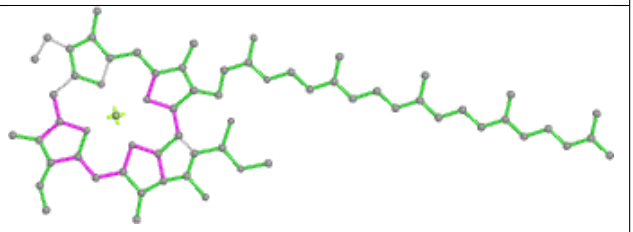


Rings

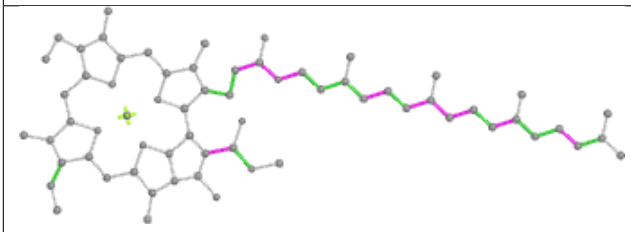
Ligand CLA A 823



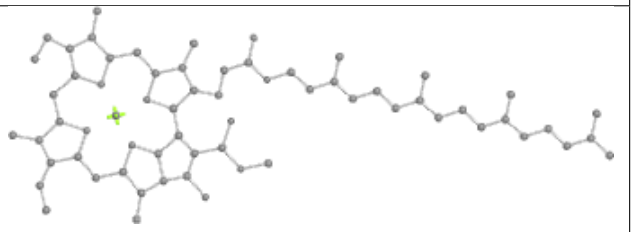
Bond lengths



Bond angles

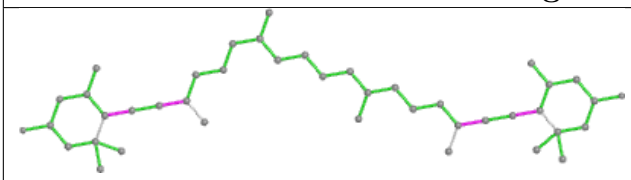


Torsions

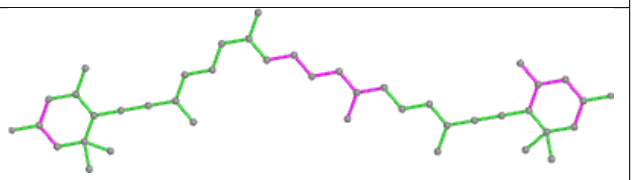


Rings

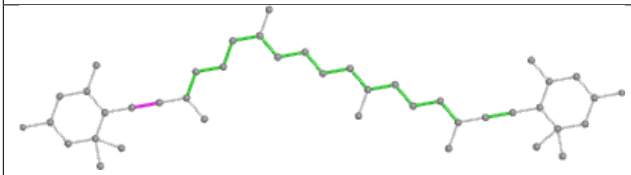
Ligand II0 1 616



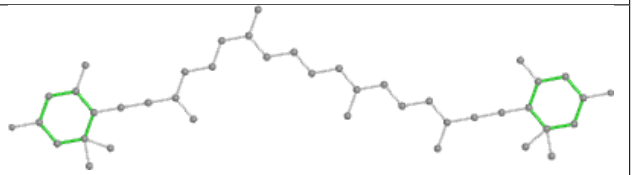
Bond lengths



Bond angles

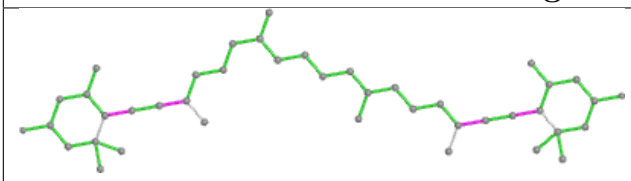


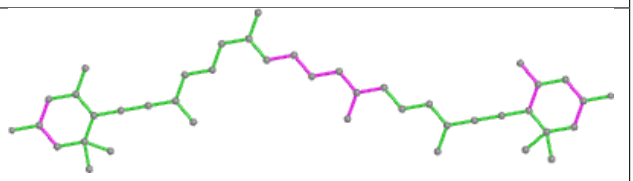
Torsions

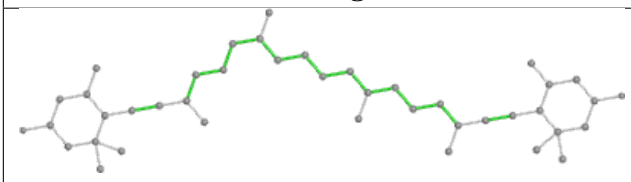


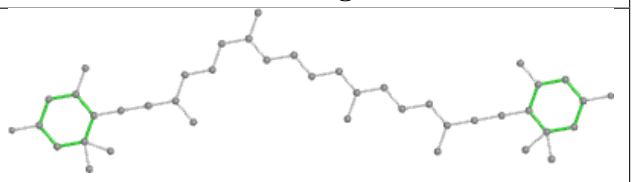
Rings

Ligand II0 c 617

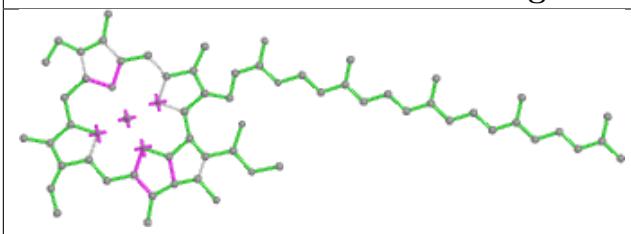

Bond lengths

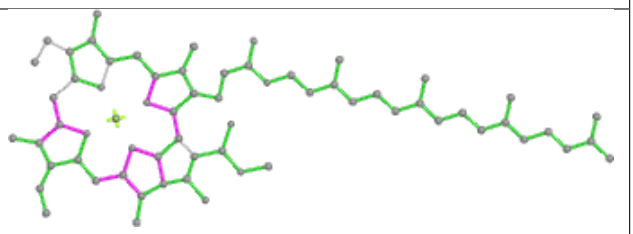

Bond angles

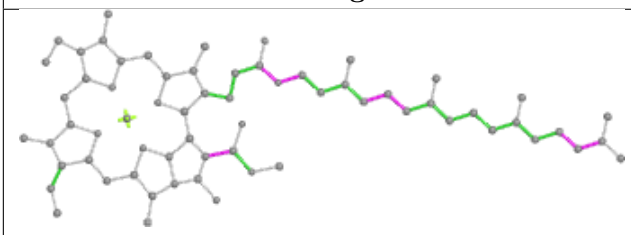

Torsions

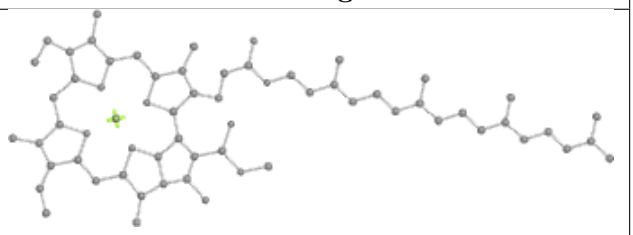

Rings

Ligand CLA 4 611

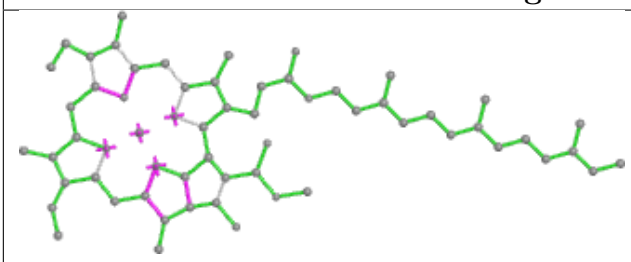

Bond lengths

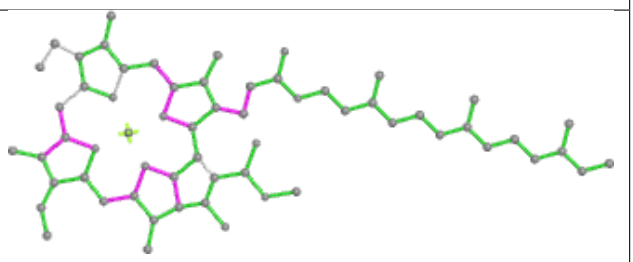

Bond angles

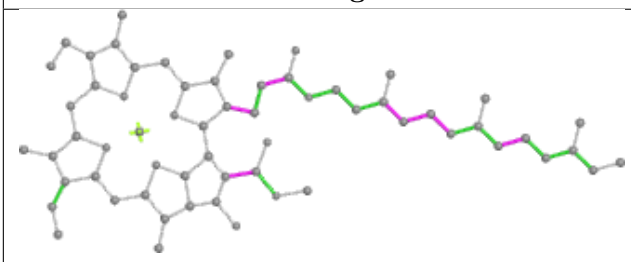

Torsions

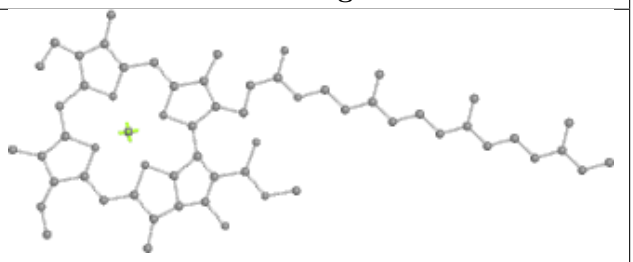

Rings

Ligand CLA B 813

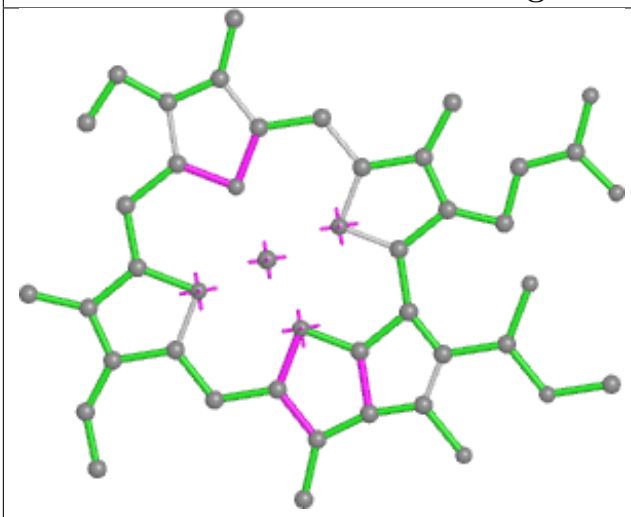

Bond lengths


Bond angles

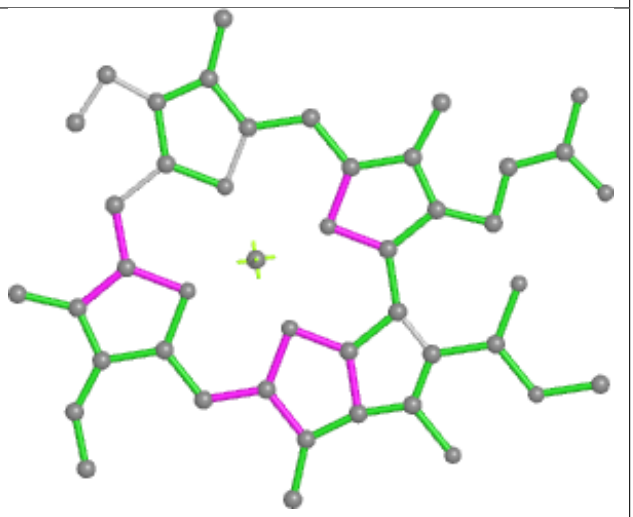

Torsions


Rings

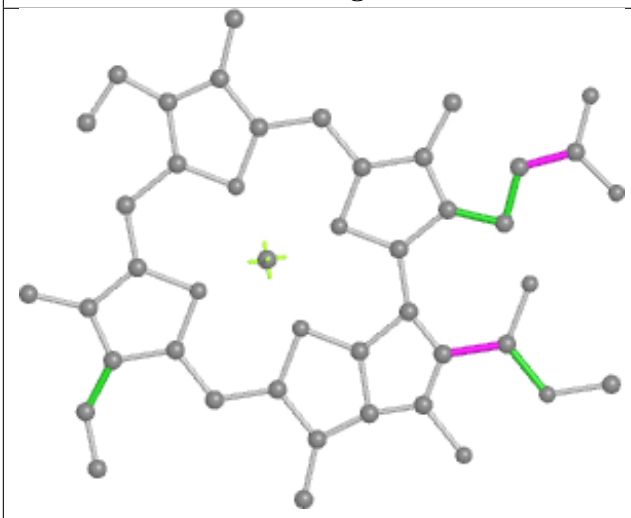
Ligand CLA d 601



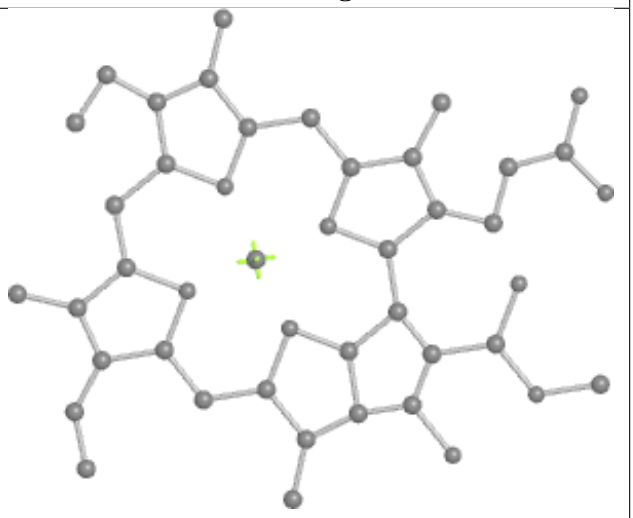
Bond lengths



Bond angles

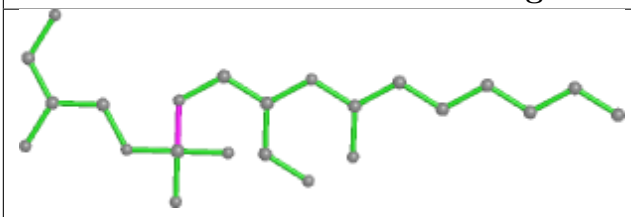


Torsions

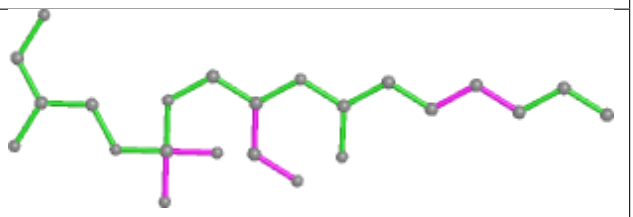


Rings

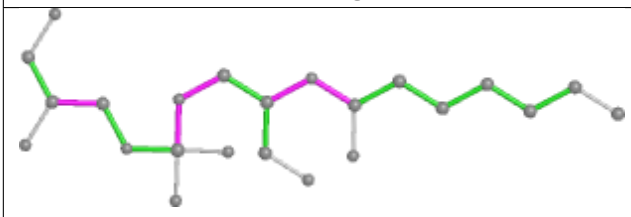
Ligand LHG d 618



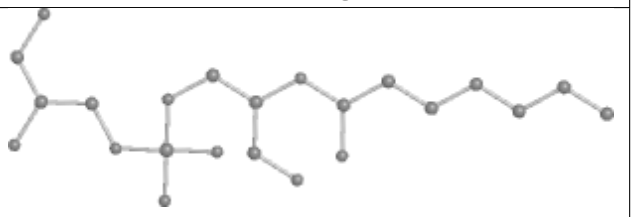
Bond lengths



Bond angles

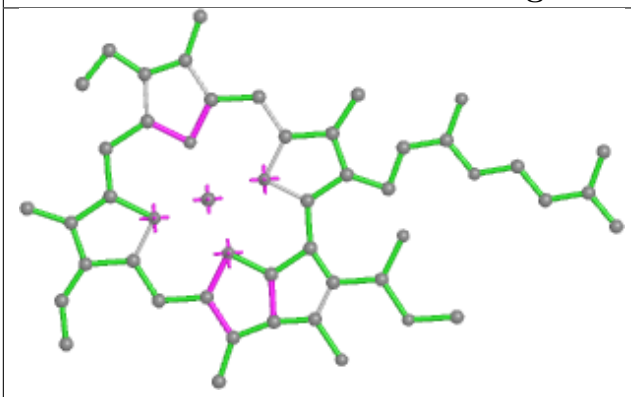


Torsions

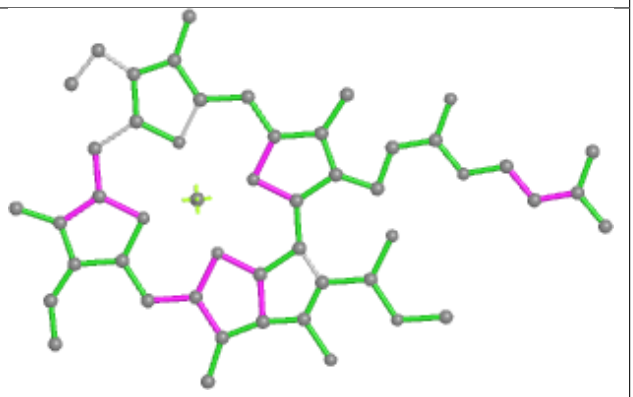


Rings

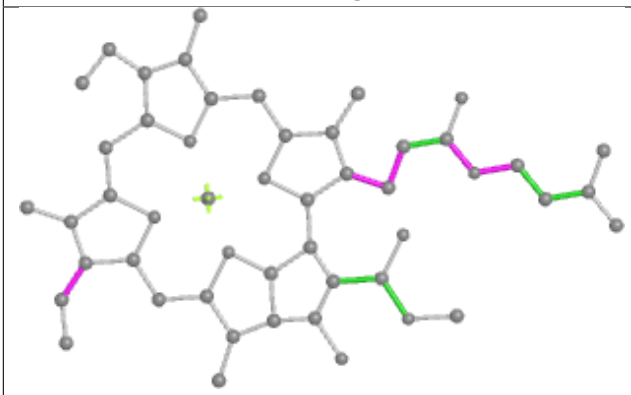
Ligand CLA L 204



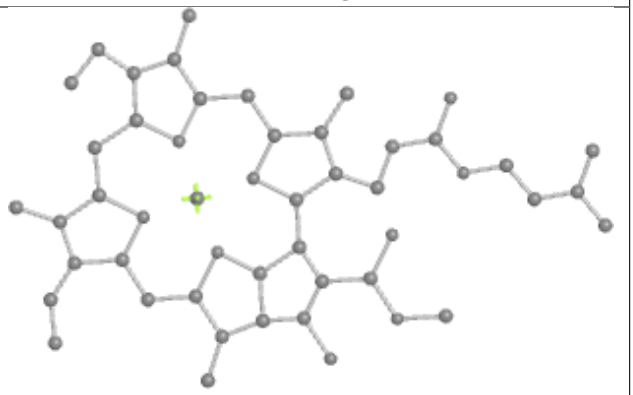
Bond lengths



Bond angles

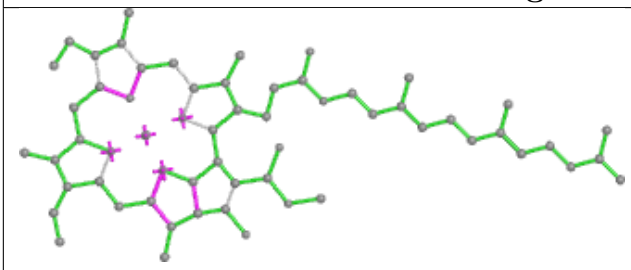


Torsions

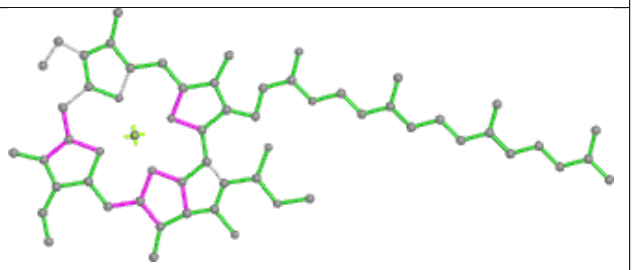


Rings

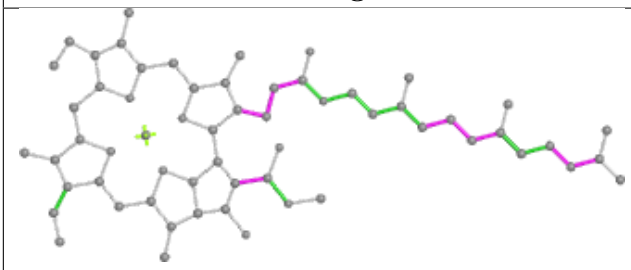
Ligand CLA Z 306



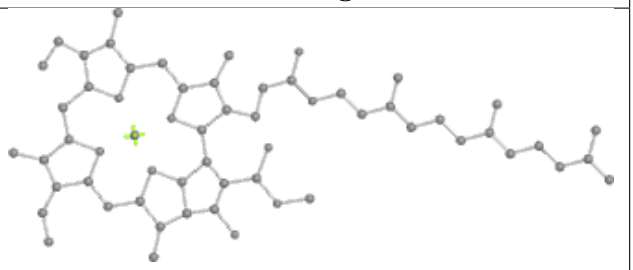
Bond lengths



Bond angles

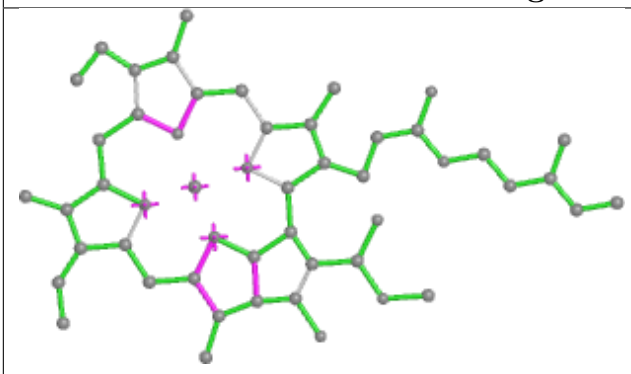


Torsions

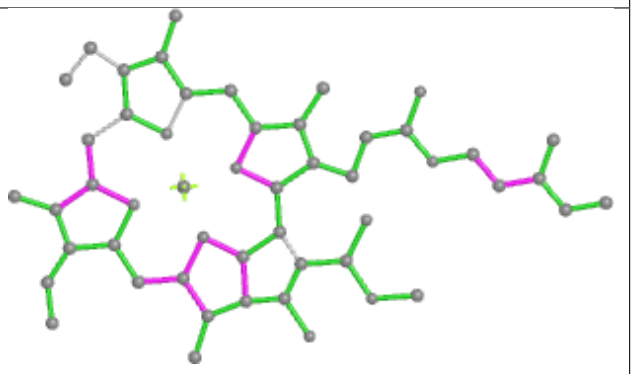


Rings

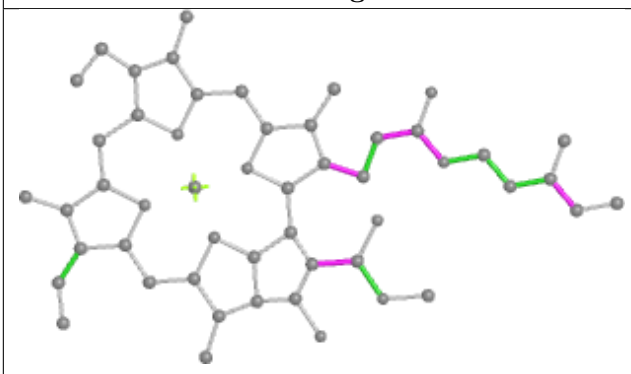
Ligand CLA b 610



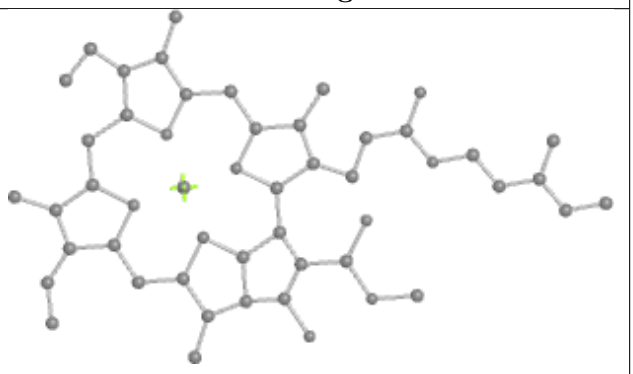
Bond lengths



Bond angles

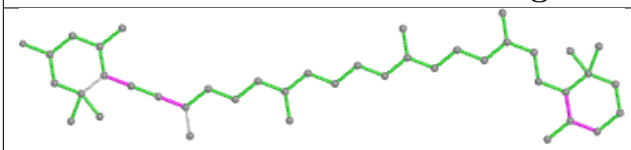


Torsions

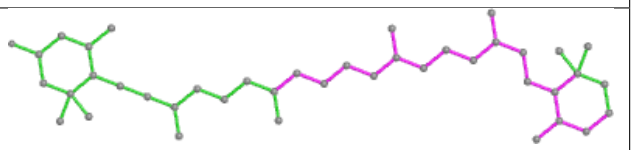


Rings

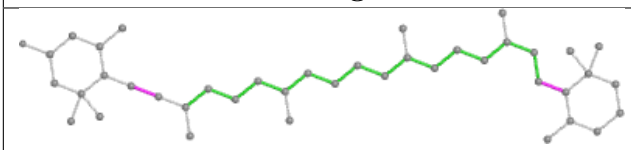
Ligand IHT L 205



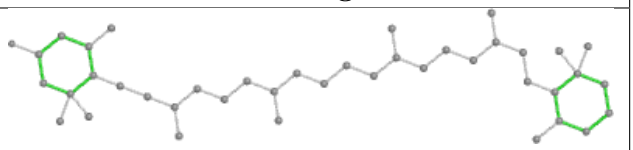
Bond lengths



Bond angles

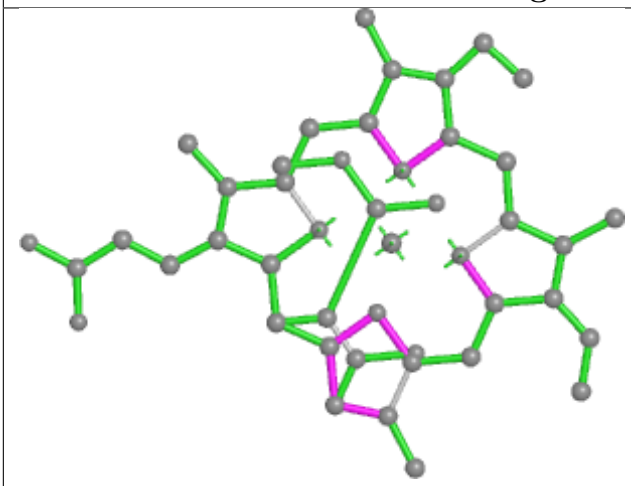


Torsions

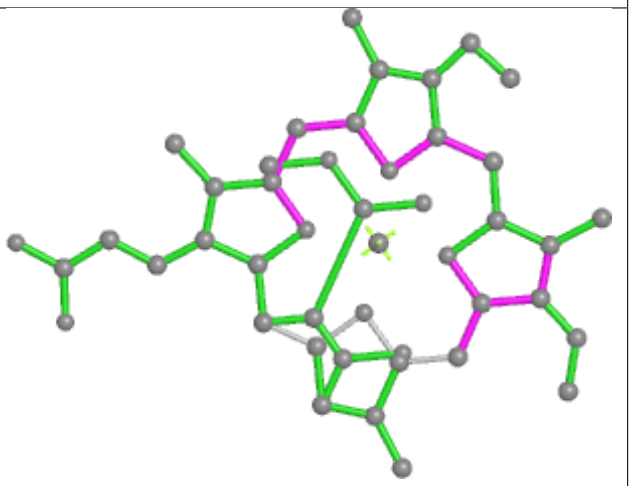


Rings

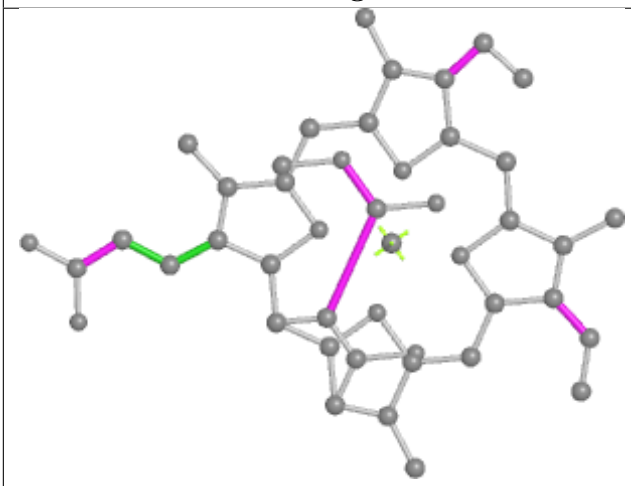
Ligand KC2 7 606



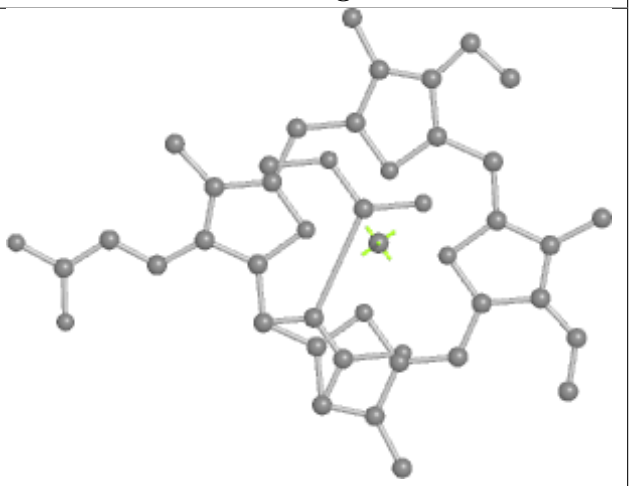
Bond lengths



Bond angles

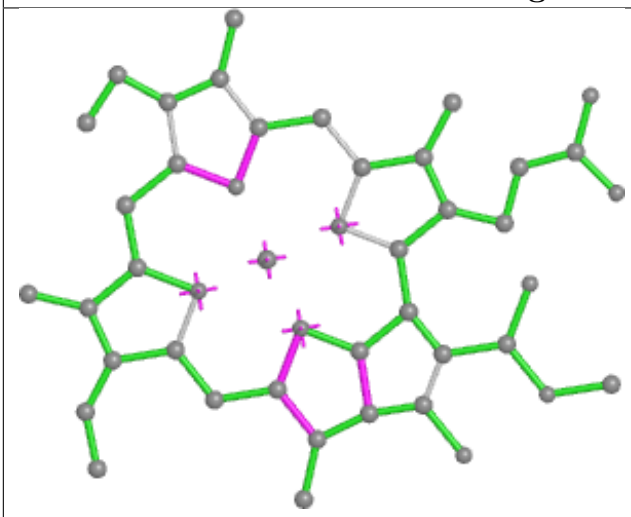


Torsions

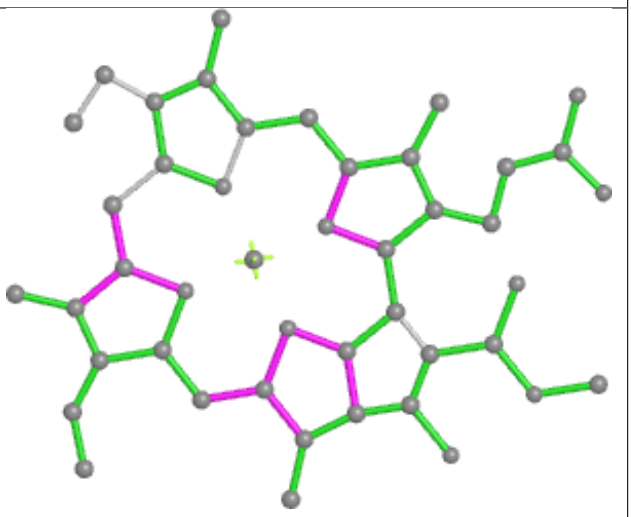


Rings

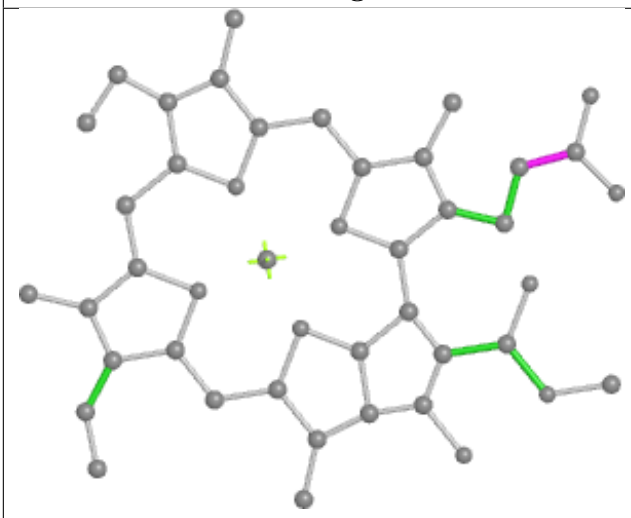
Ligand CLA 8 601



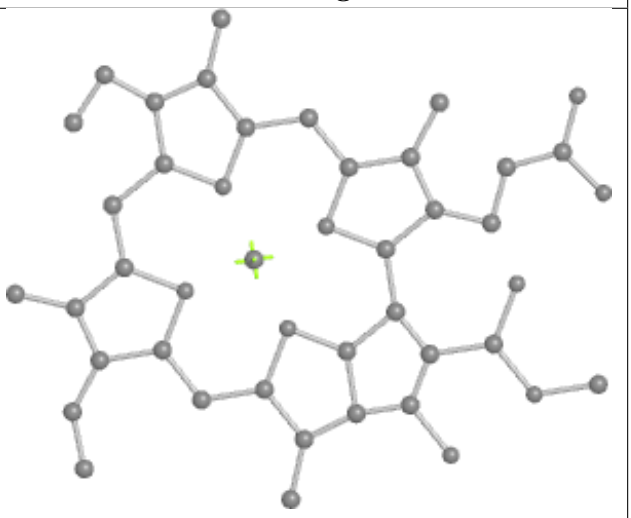
Bond lengths



Bond angles

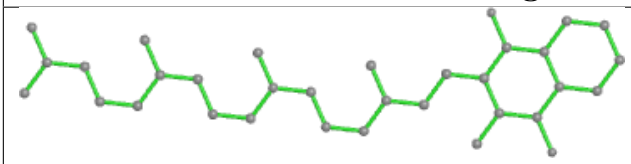


Torsions

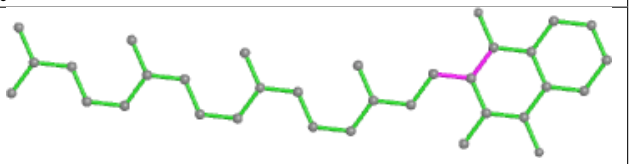


Rings

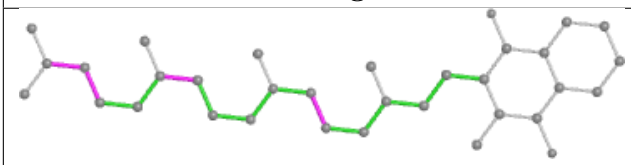
Ligand PQN B 842



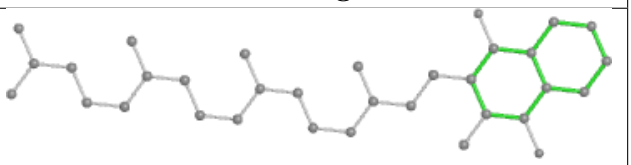
Bond lengths



Bond angles

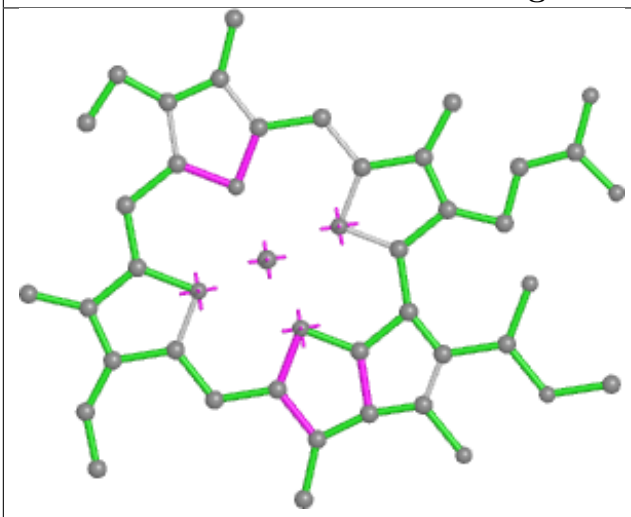


Torsions

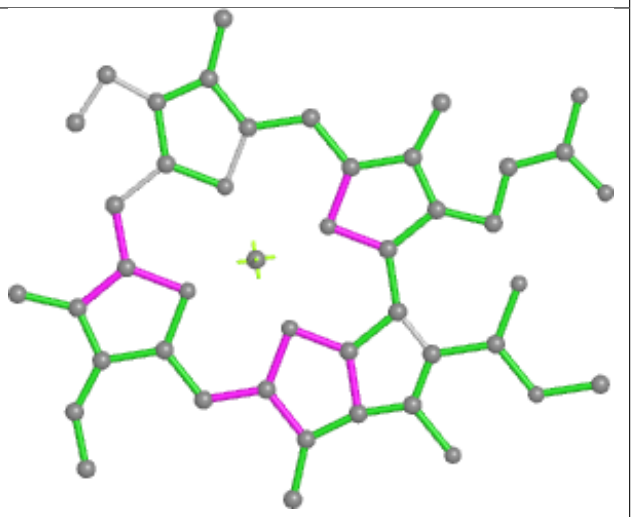


Rings

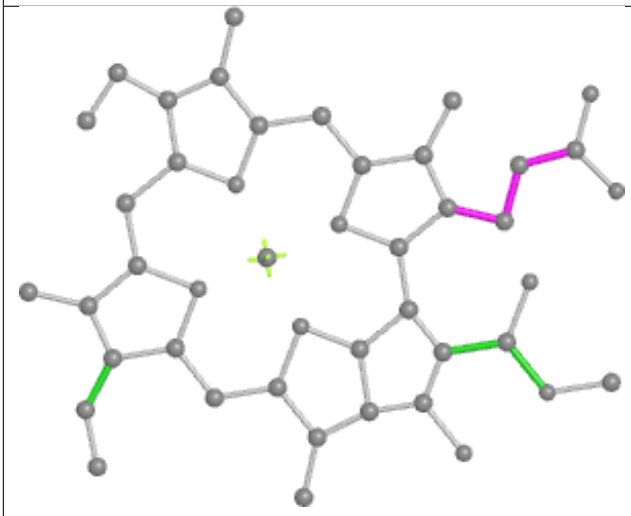
Ligand CLA 6 603



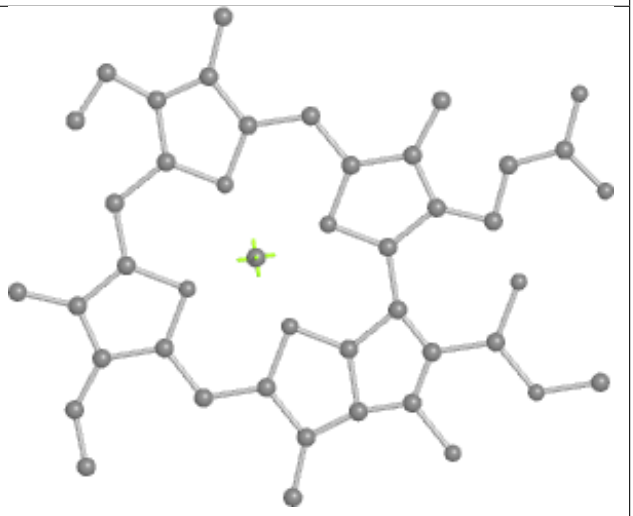
Bond lengths



Bond angles

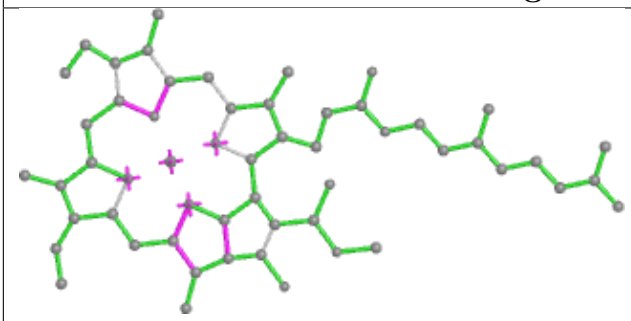


Torsions

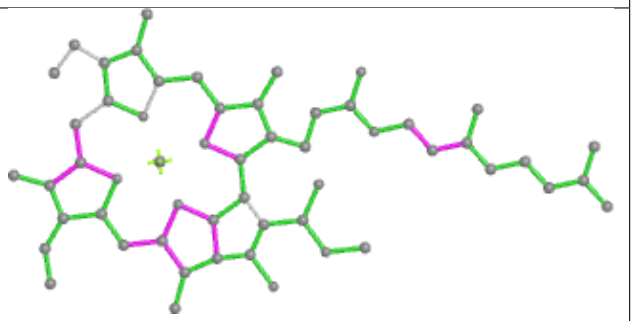


Rings

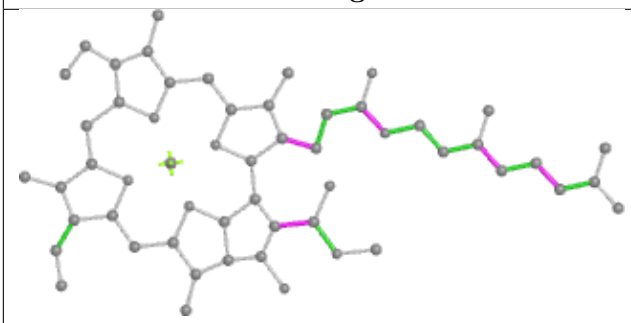
Ligand CLA B 831



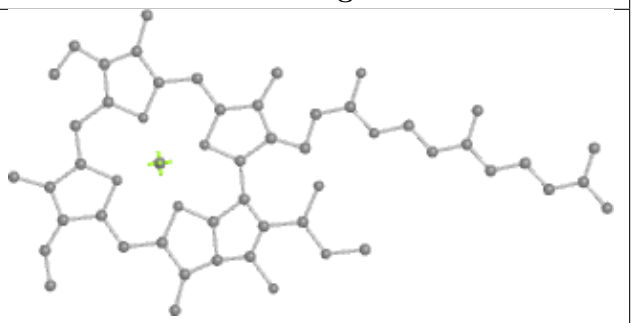
Bond lengths



Bond angles

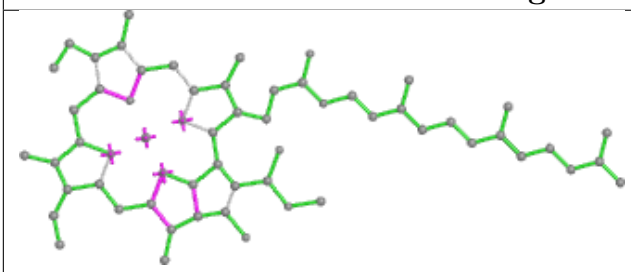


Torsions

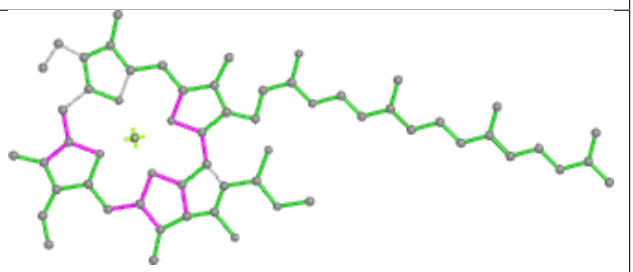


Rings

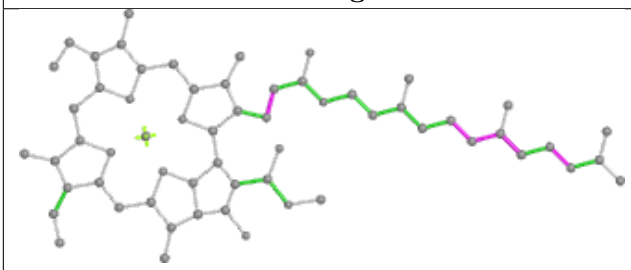
Ligand CLA a 603



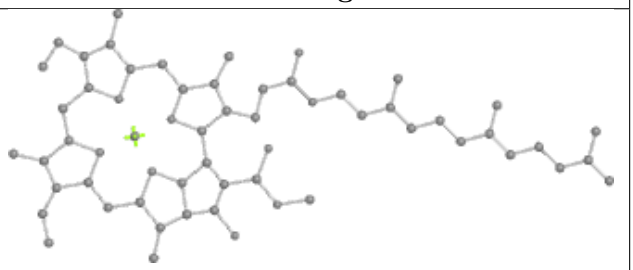
Bond lengths



Bond angles

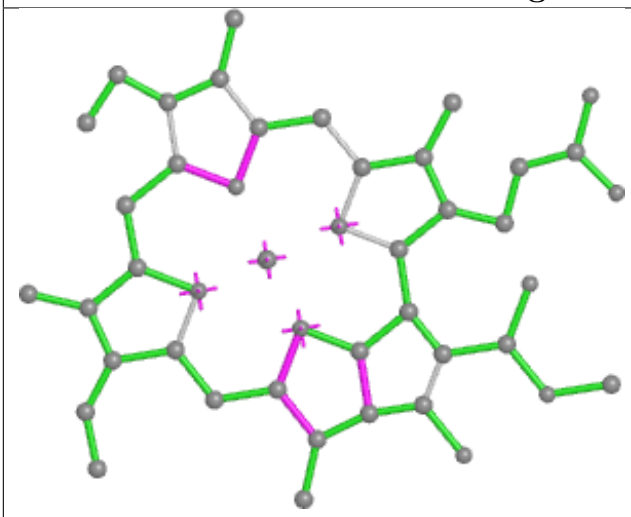


Torsions

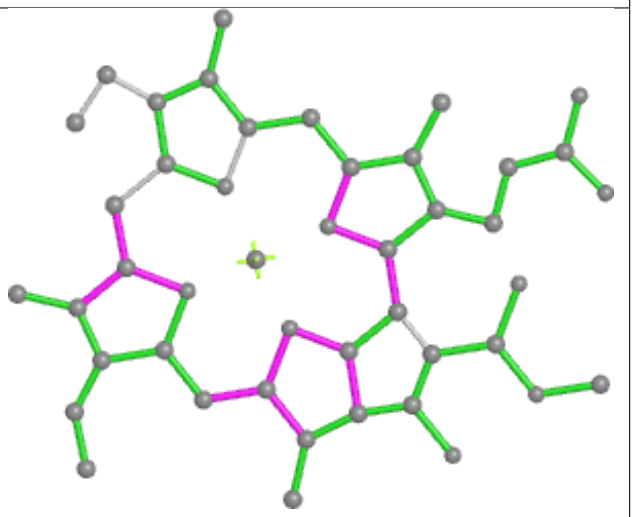


Rings

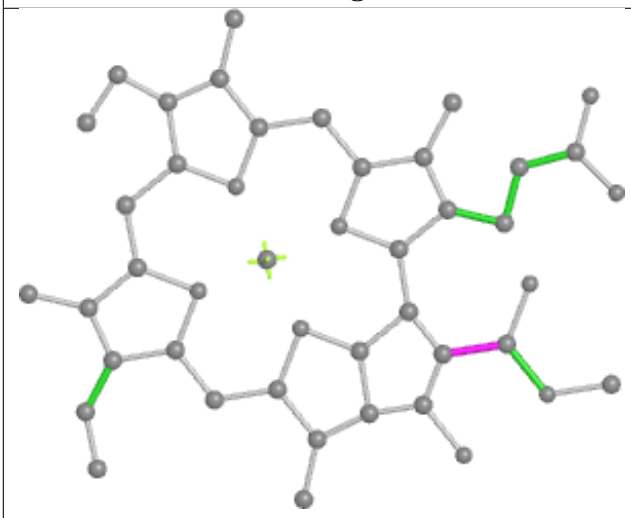
Ligand CLA 2 611



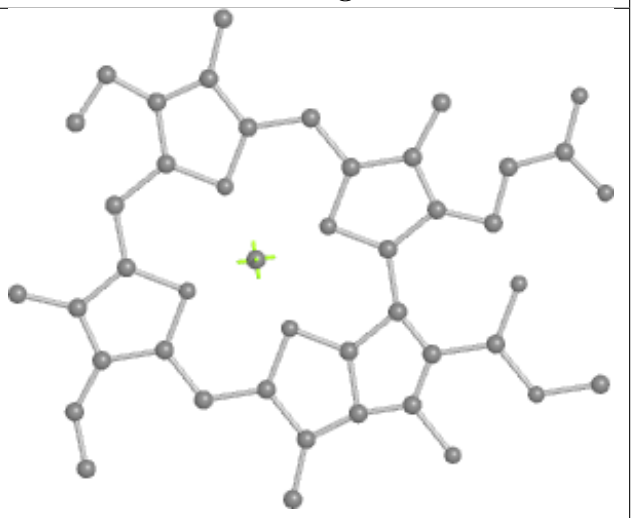
Bond lengths



Bond angles

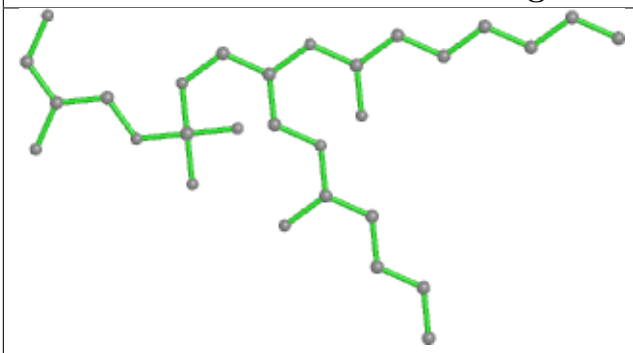


Torsions

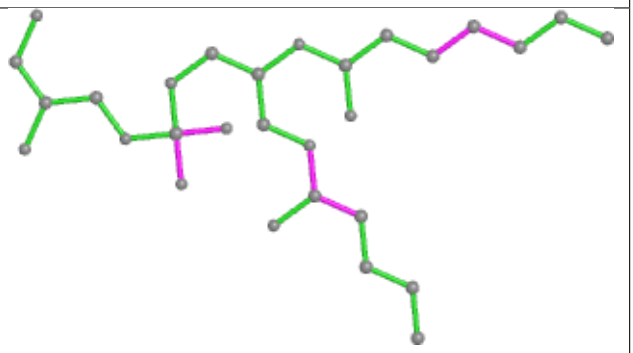


Rings

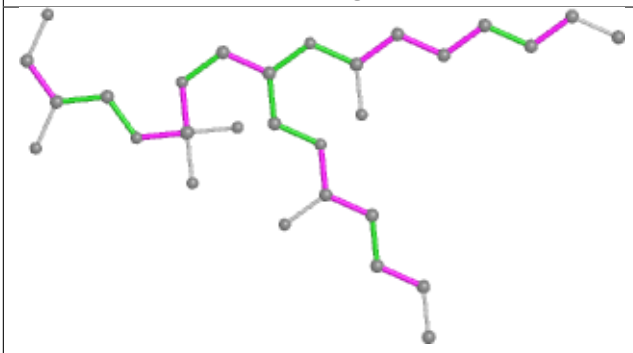
Ligand LHG c 621



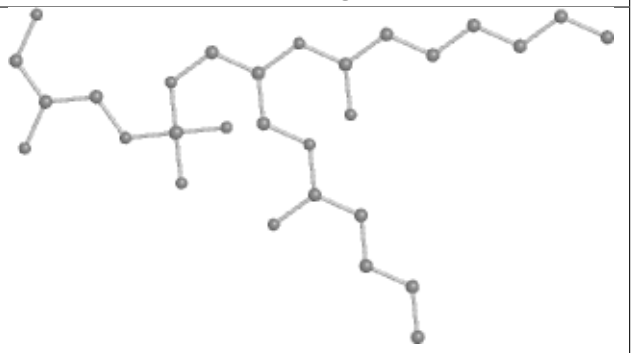
Bond lengths



Bond angles

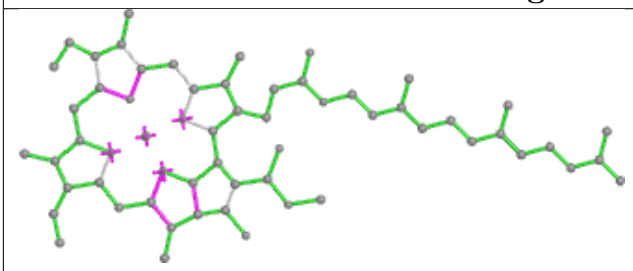


Torsions

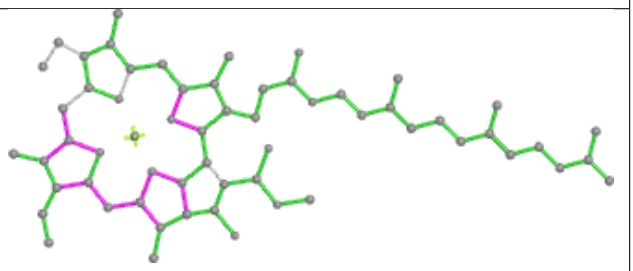


Rings

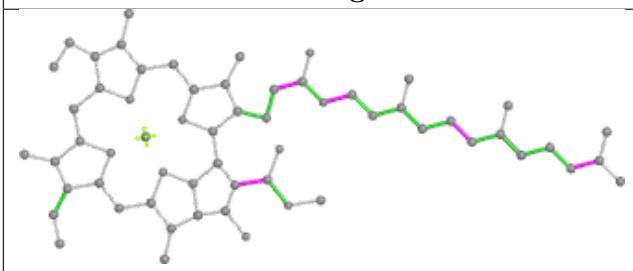
Ligand CLA b 607



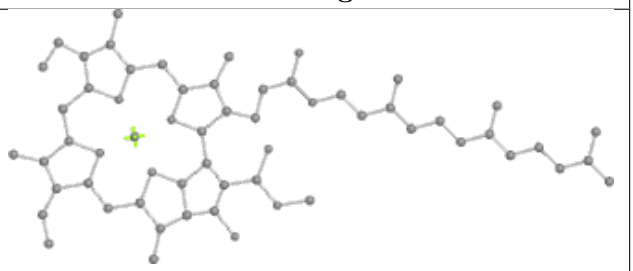
Bond lengths



Bond angles

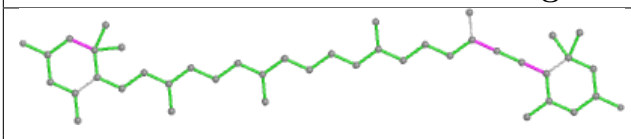


Torsions

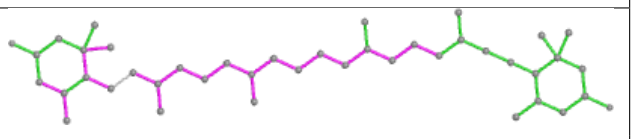


Rings

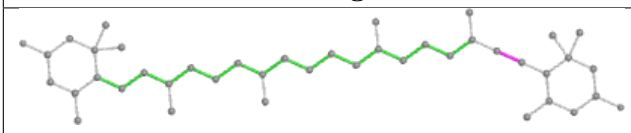
Ligand II3 b 613



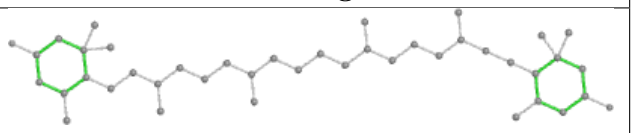
Bond lengths



Bond angles

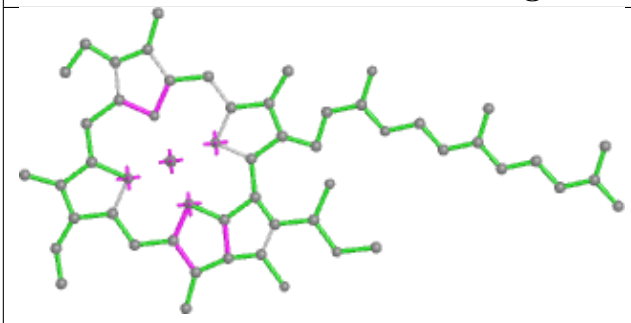


Torsions

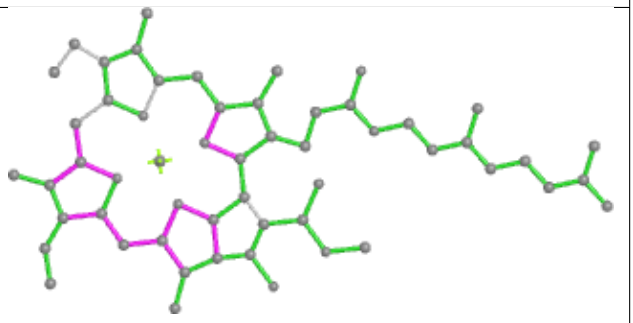


Rings

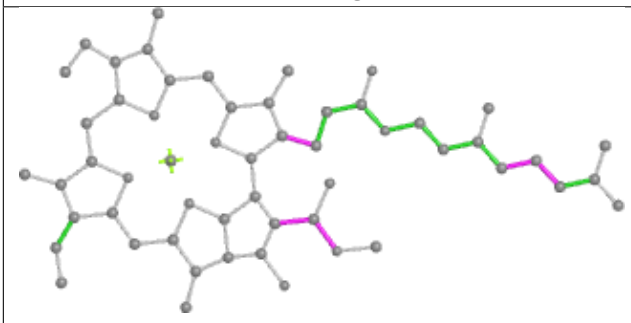
Ligand CLA O 202



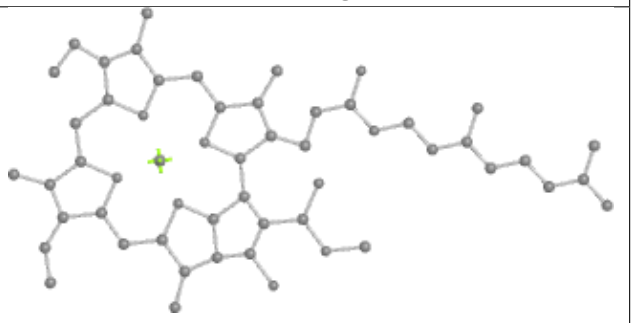
Bond lengths



Bond angles

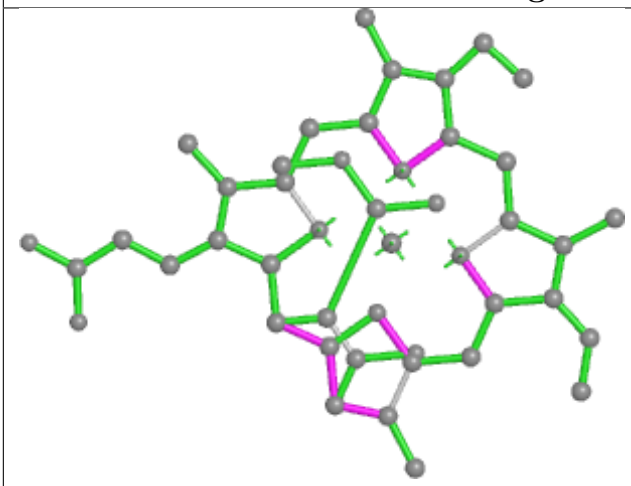


Torsions

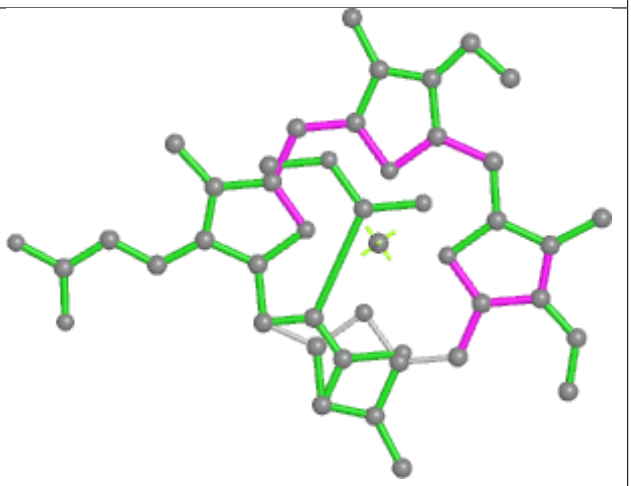


Rings

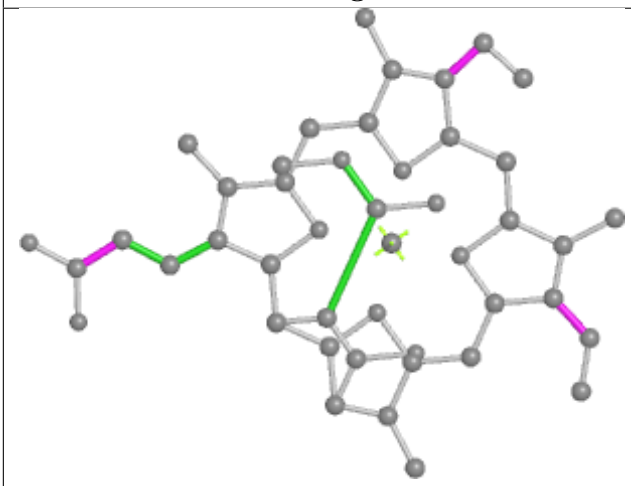
Ligand KC2 Z 307



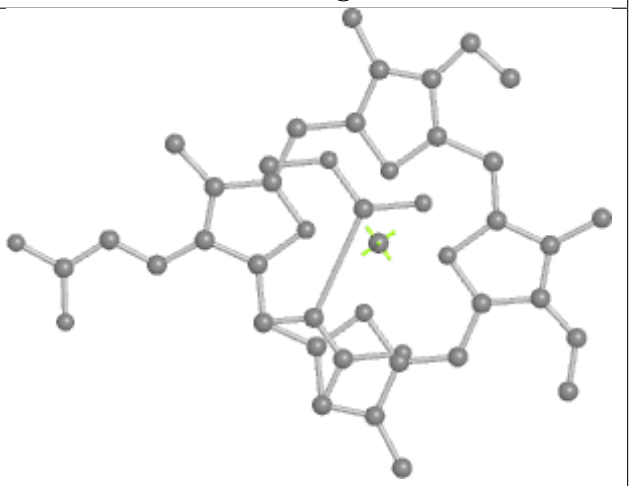
Bond lengths



Bond angles

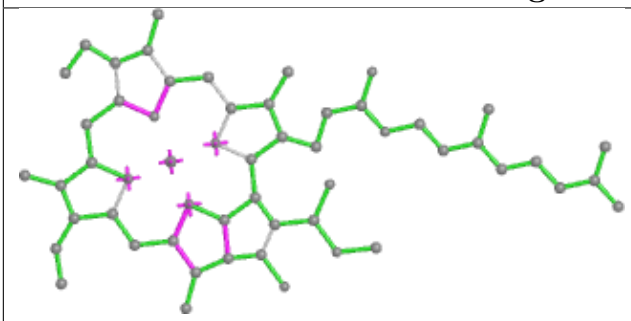


Torsions

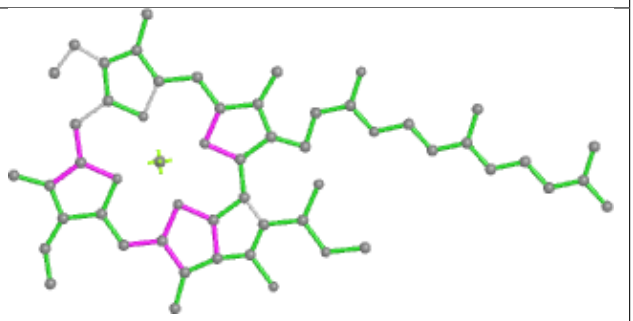


Rings

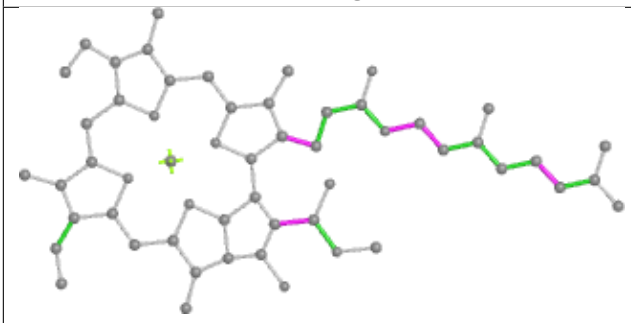
Ligand CLA 7 611



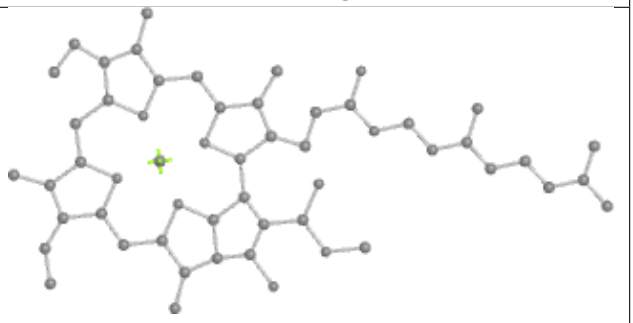
Bond lengths



Bond angles

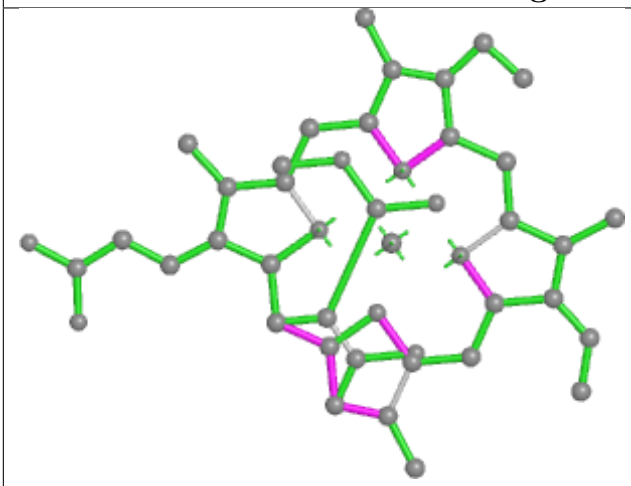


Torsions

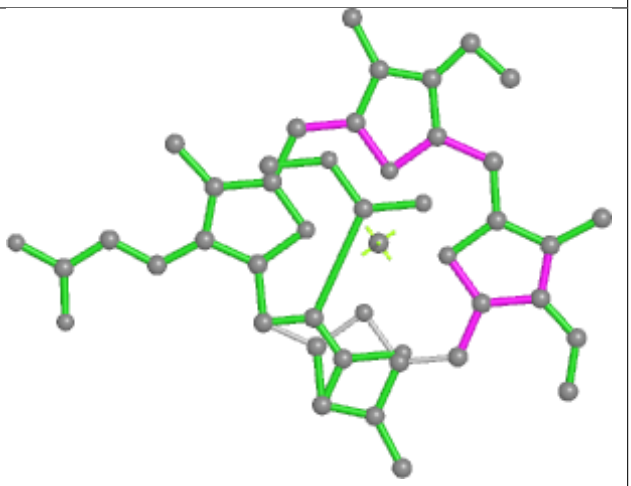


Rings

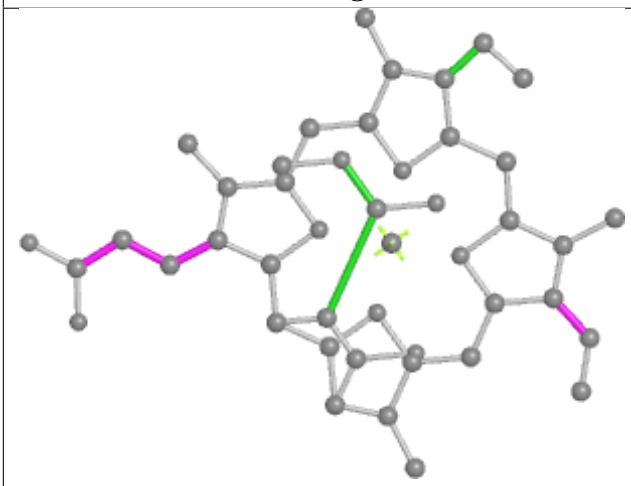
Ligand KC2 6 610



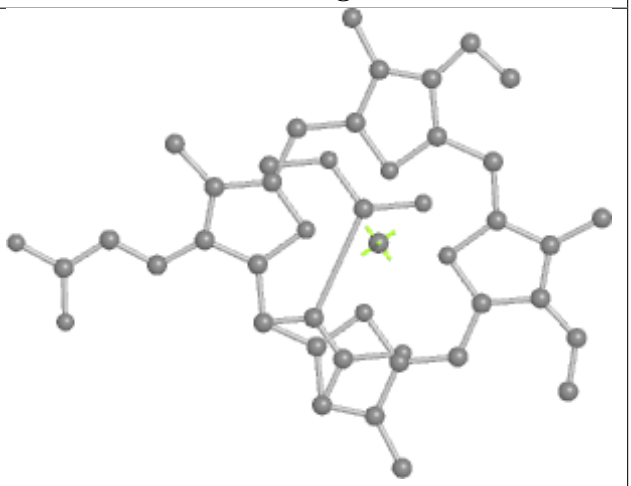
Bond lengths



Bond angles

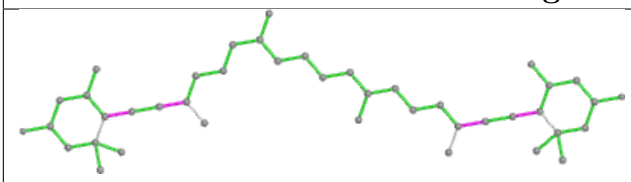


Torsions

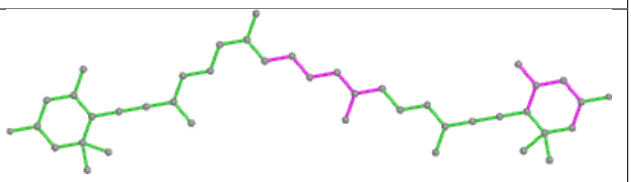


Rings

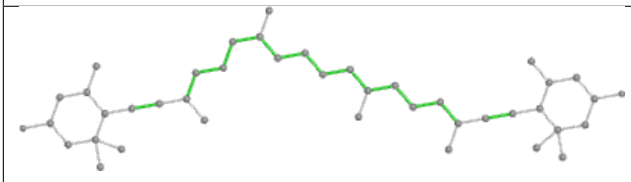
Ligand II0 2 614



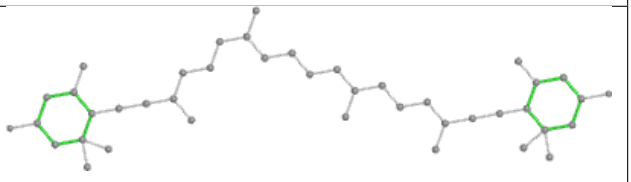
Bond lengths



Bond angles

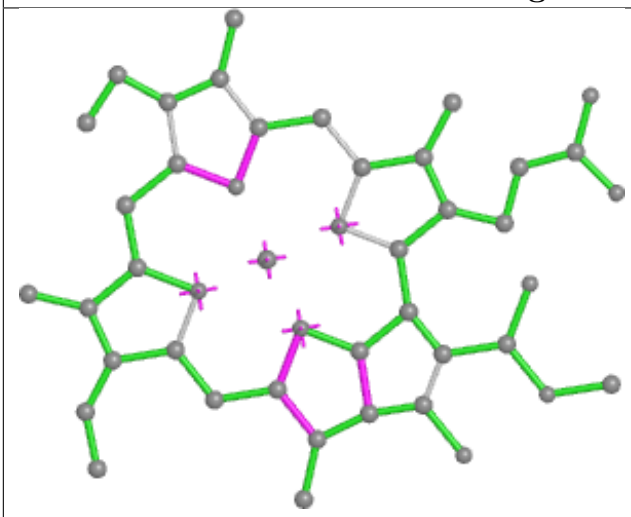


Torsions

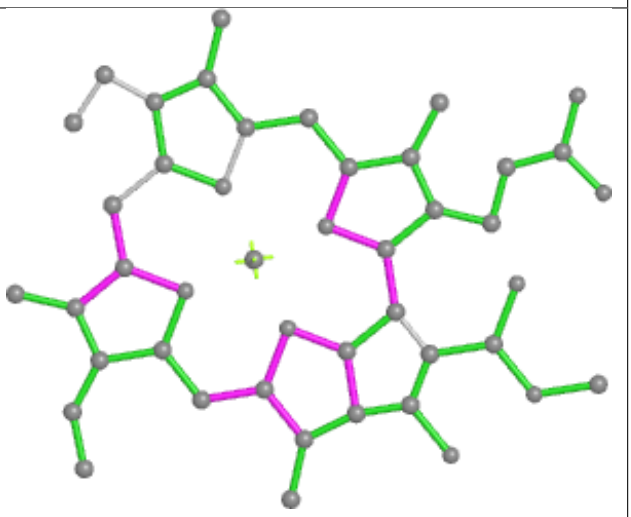


Rings

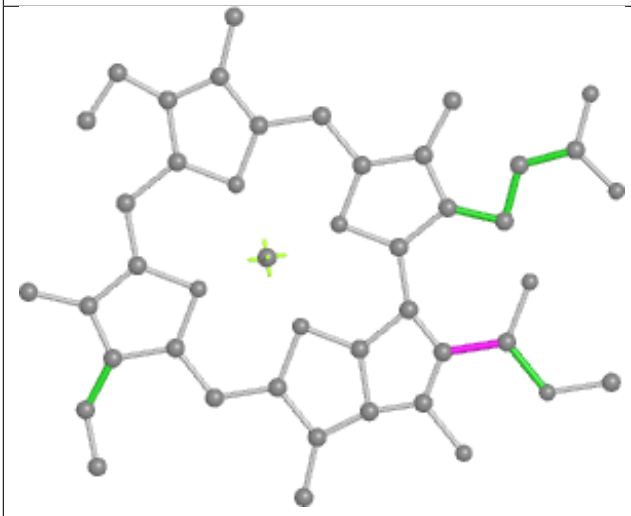
Ligand CLA 5 605



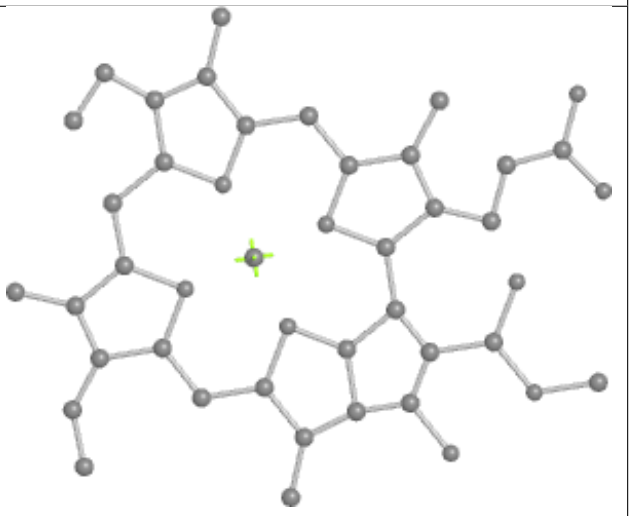
Bond lengths



Bond angles

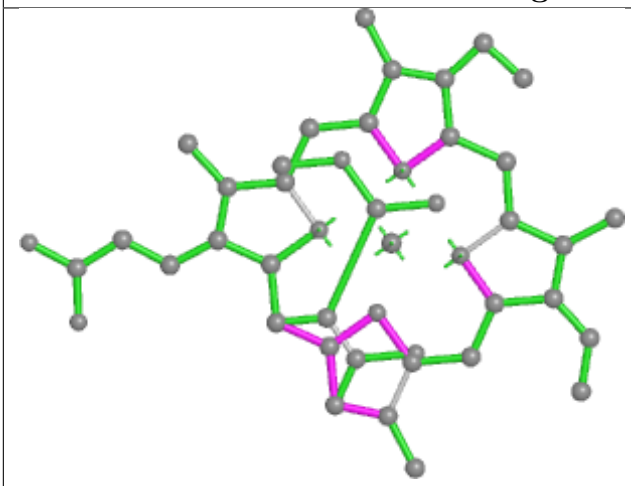


Torsions

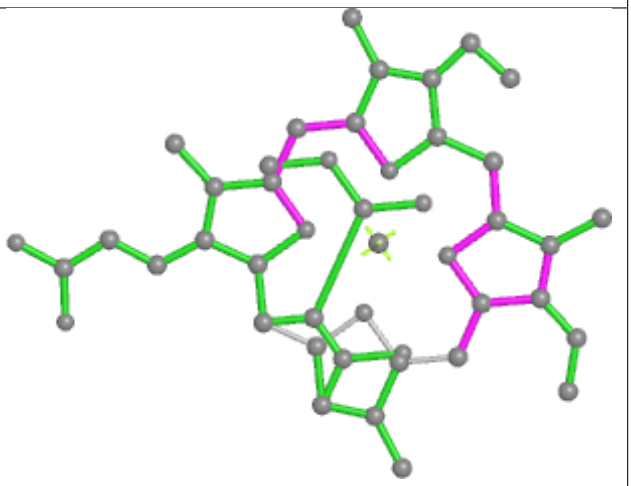


Rings

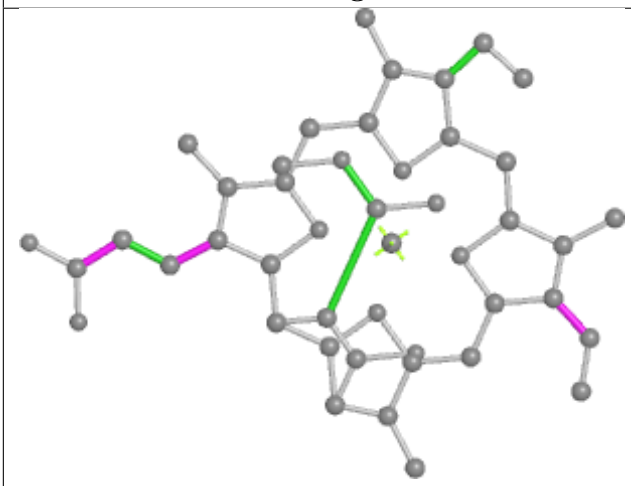
Ligand KC2 c 611



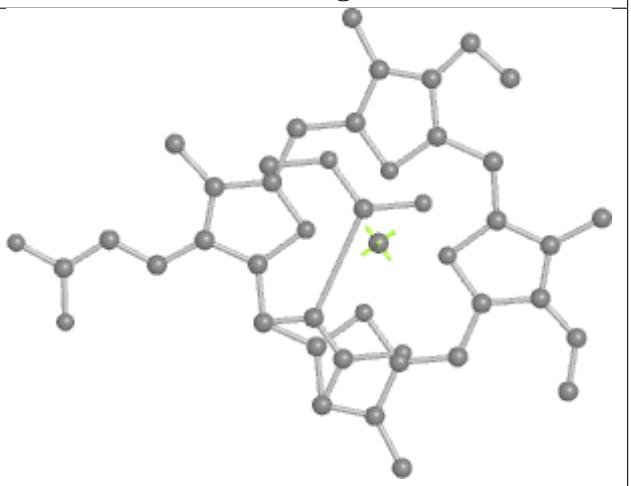
Bond lengths



Bond angles

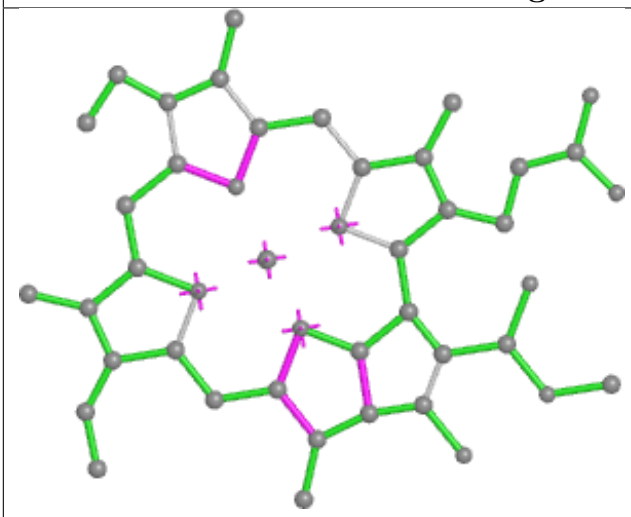


Torsions

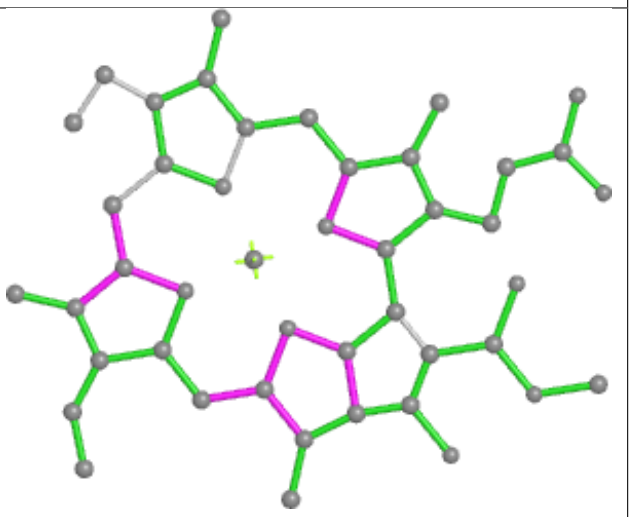


Rings

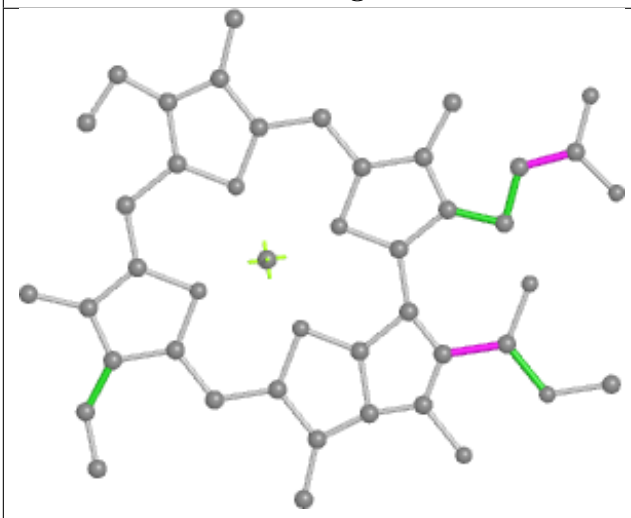
Ligand CLA 1 611



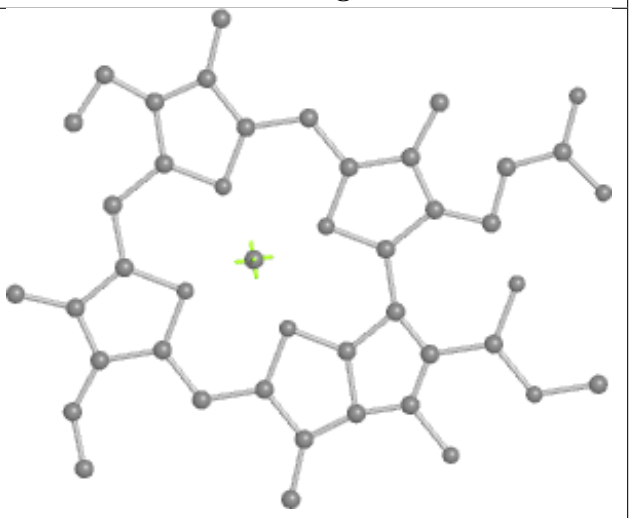
Bond lengths



Bond angles

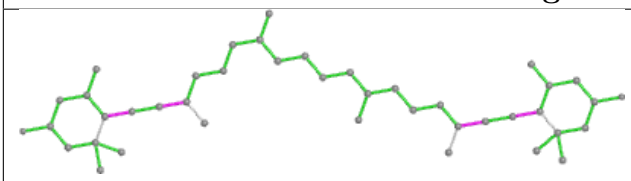


Torsions

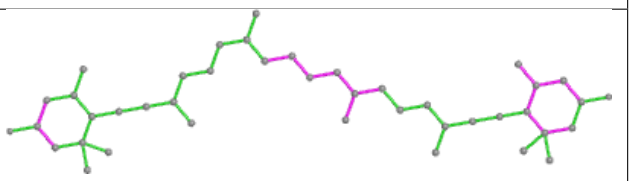


Rings

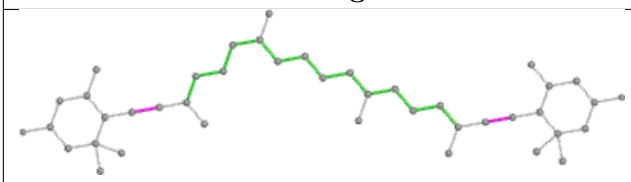
Ligand II0 9 615



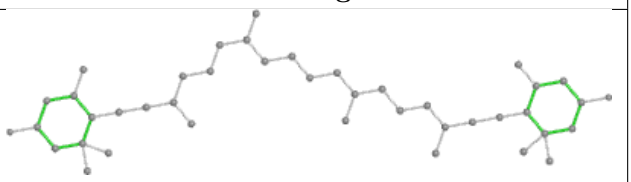
Bond lengths



Bond angles

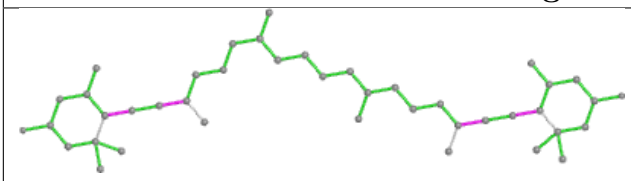


Torsions

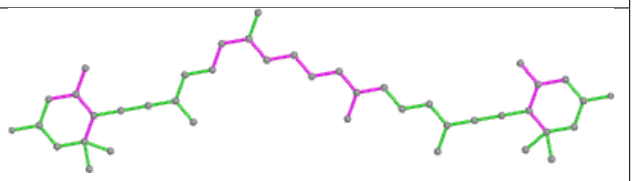


Rings

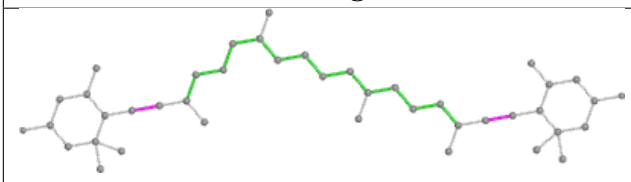
Ligand II0 1 619



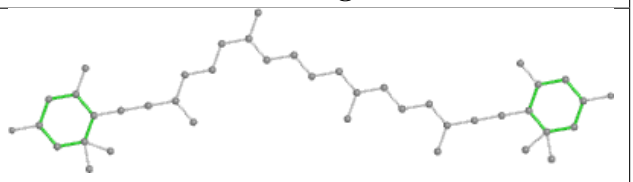
Bond lengths



Bond angles

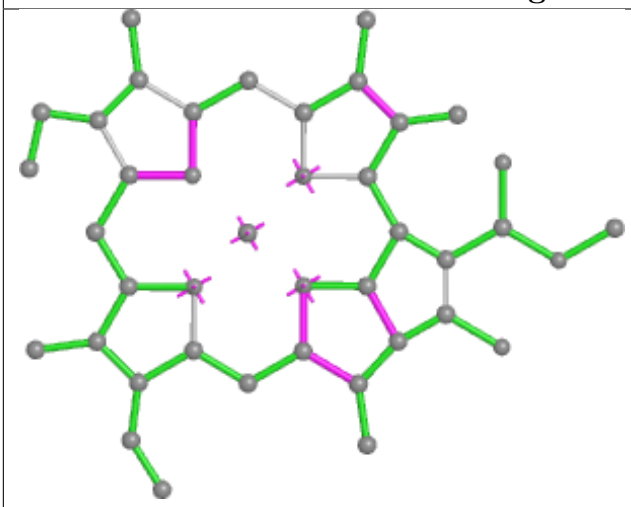


Torsions

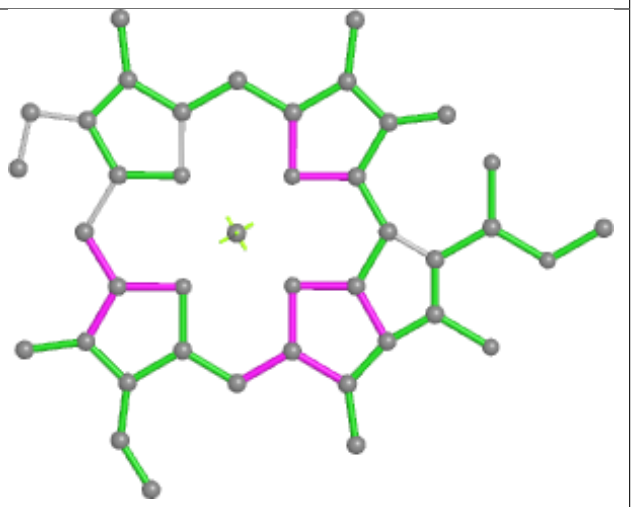


Rings

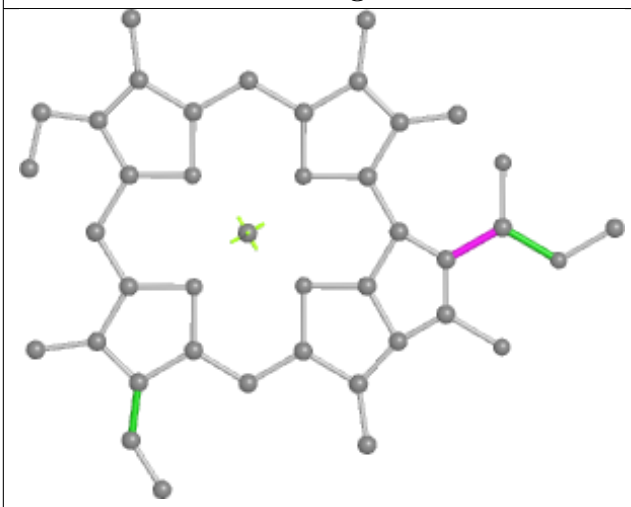
Ligand CLA 5 609



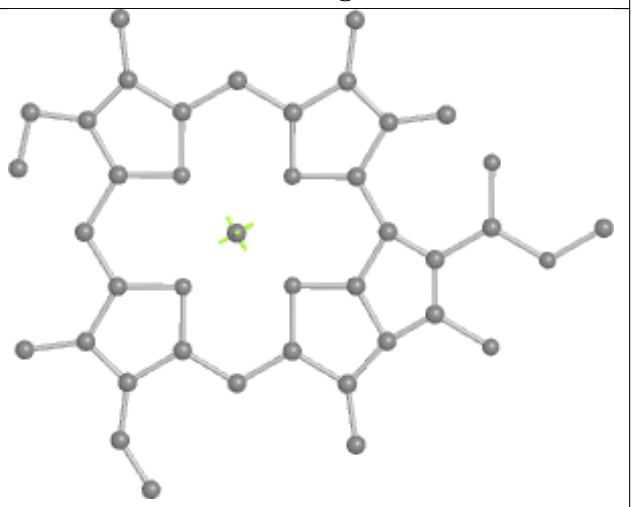
Bond lengths



Bond angles

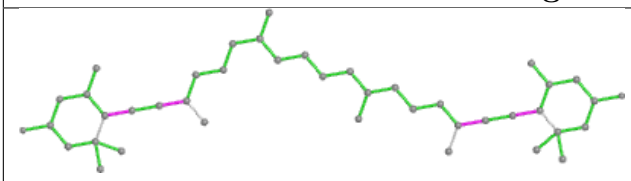


Torsions

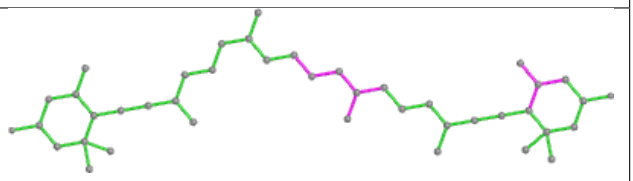


Rings

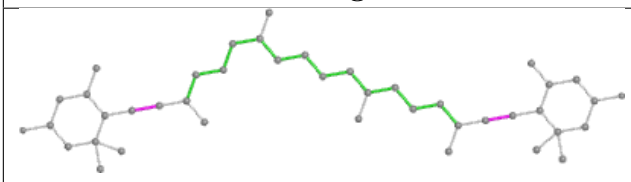
Ligand II0 3 617



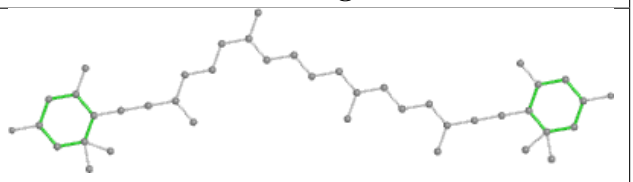
Bond lengths



Bond angles

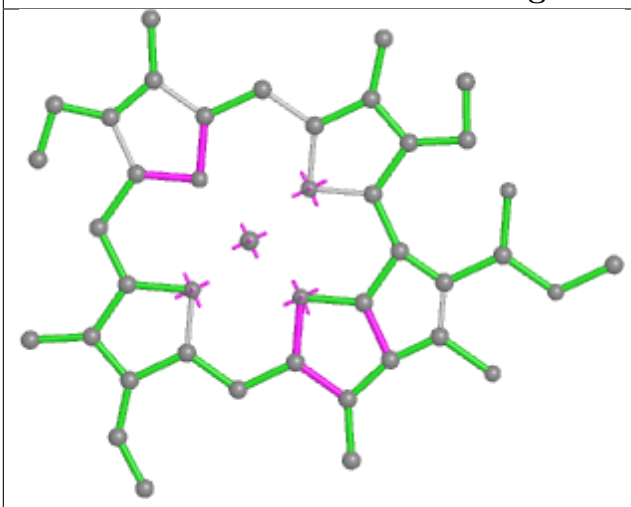


Torsions

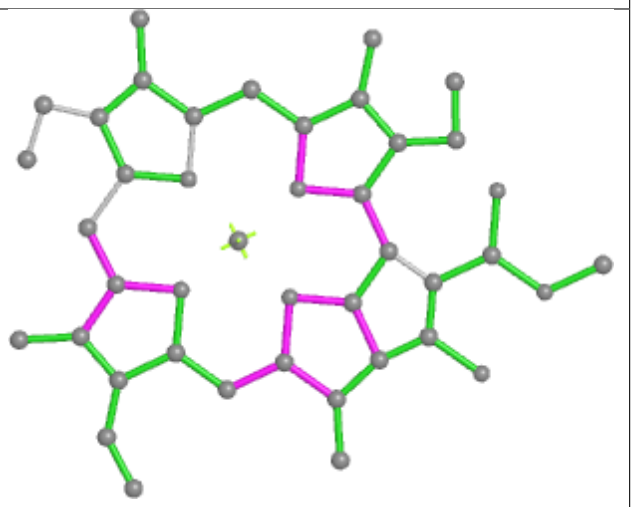


Rings

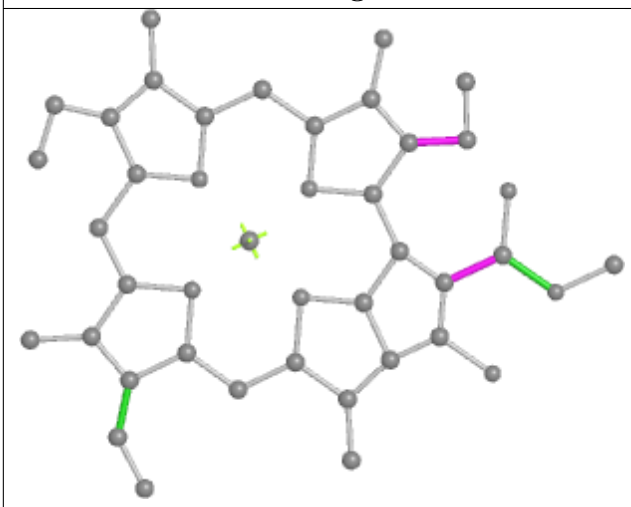
Ligand CLA 2 601



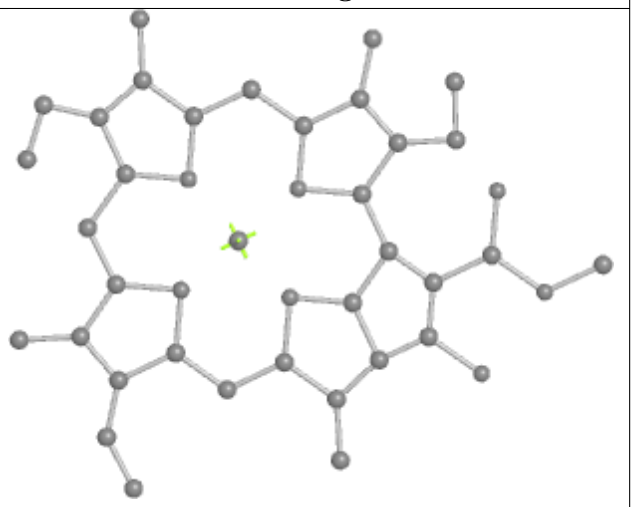
Bond lengths



Bond angles

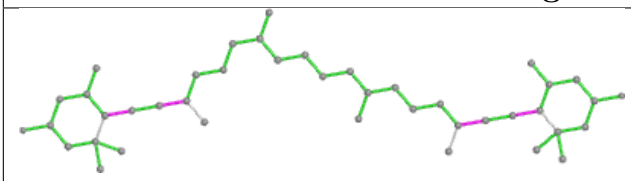


Torsions

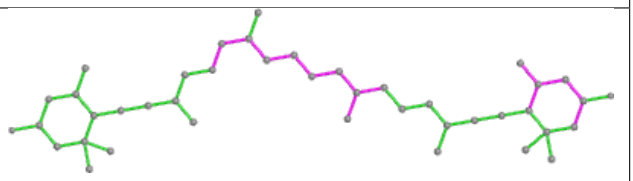


Rings

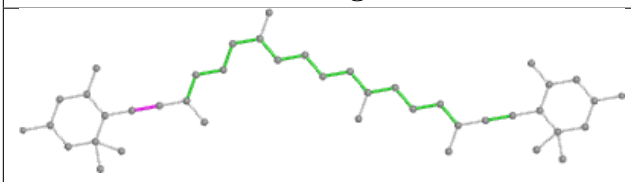
Ligand II0 1 617



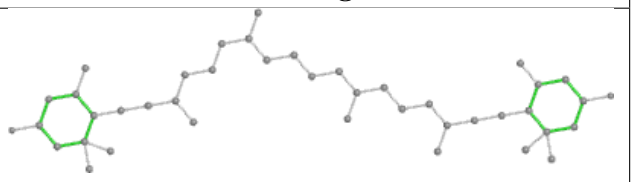
Bond lengths



Bond angles

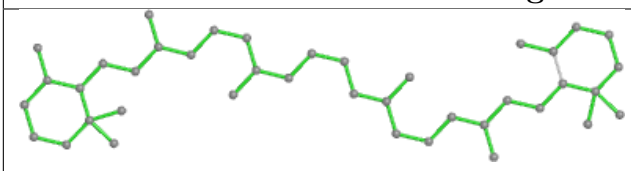


Torsions

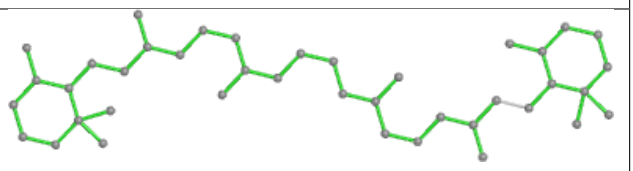


Rings

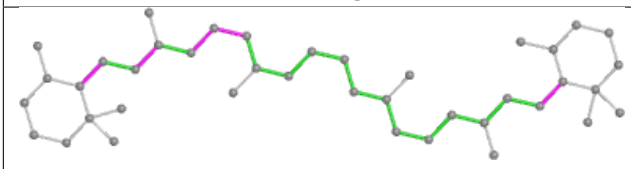
Ligand 8CT R 201



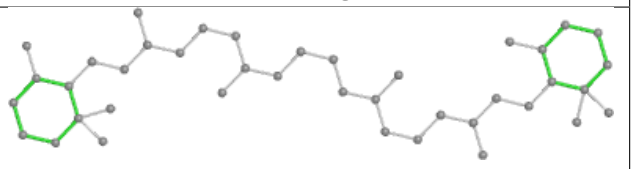
Bond lengths



Bond angles

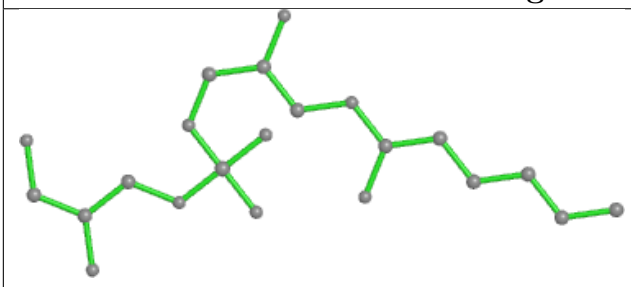


Torsions

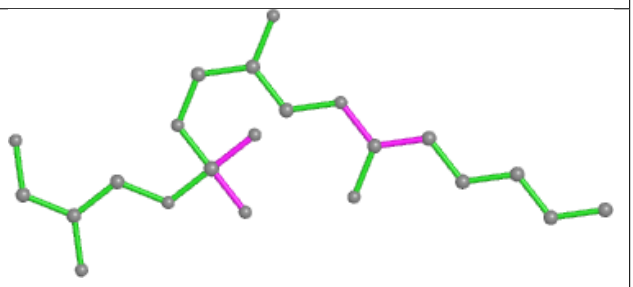


Rings

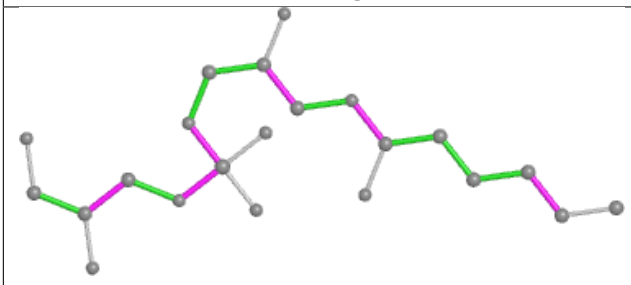
Ligand LHG 2 618



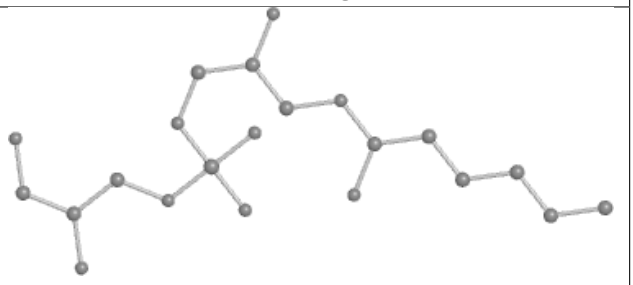
Bond lengths



Bond angles

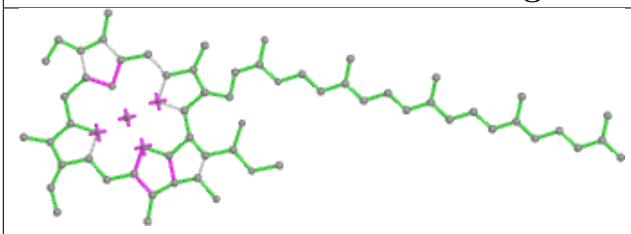


Torsions

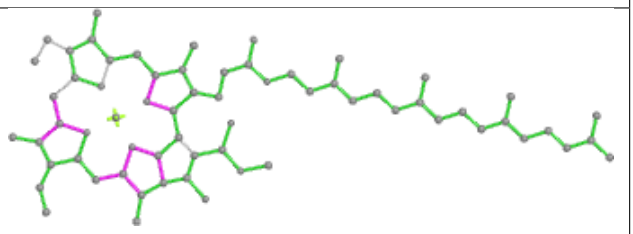


Rings

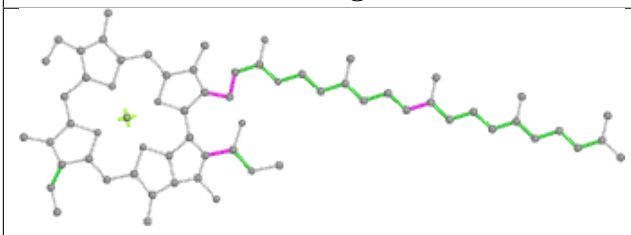
Ligand CLA A 824



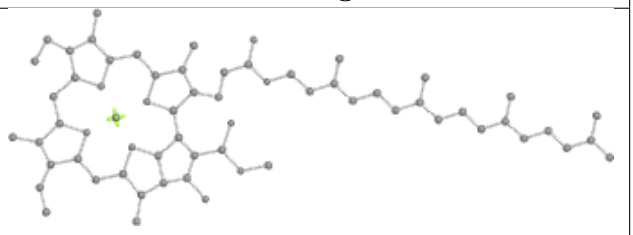
Bond lengths



Bond angles

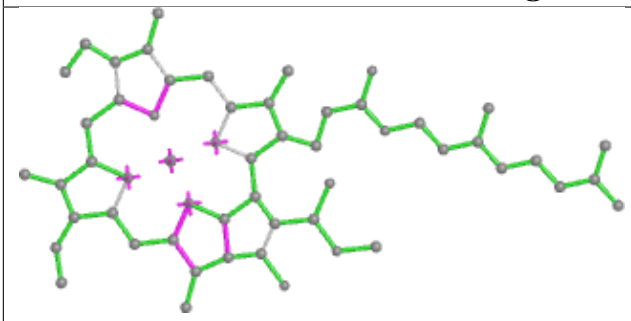


Torsions

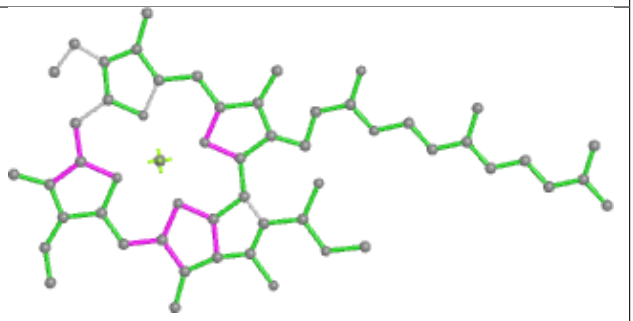


Rings

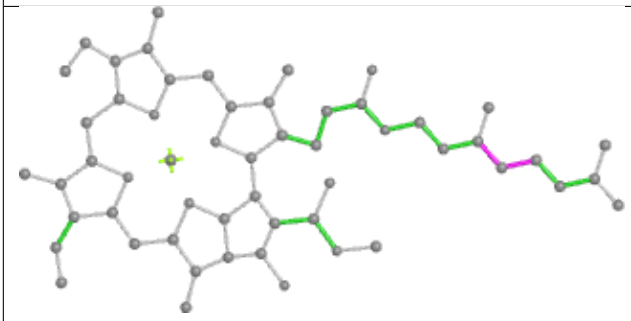
Ligand CLA B 834



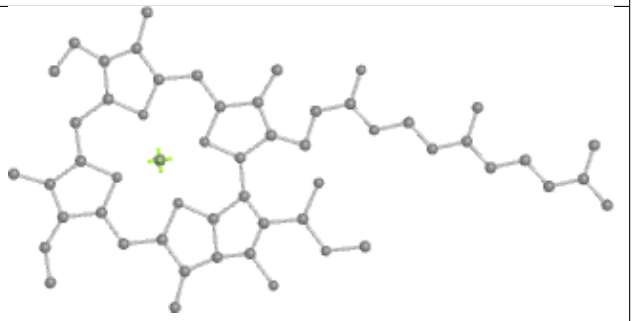
Bond lengths



Bond angles

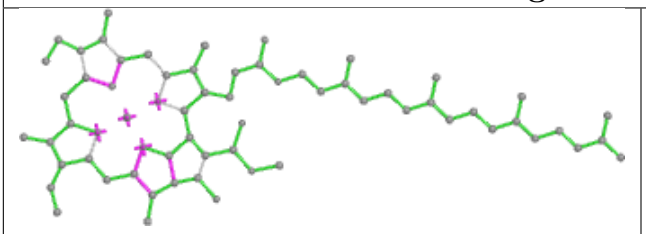


Torsions

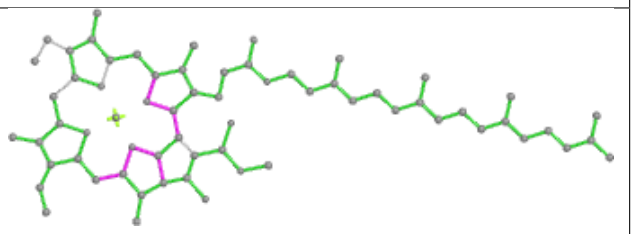


Rings

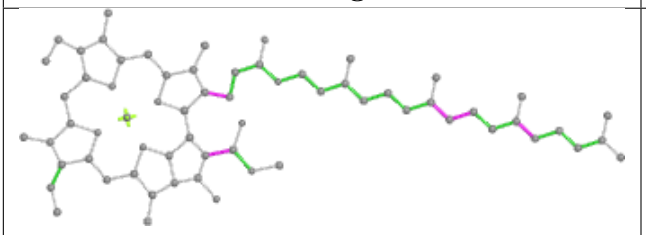
Ligand CLA 6 602



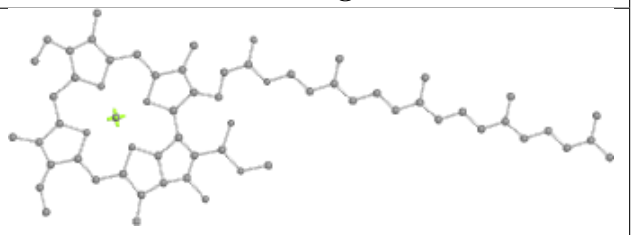
Bond lengths



Bond angles

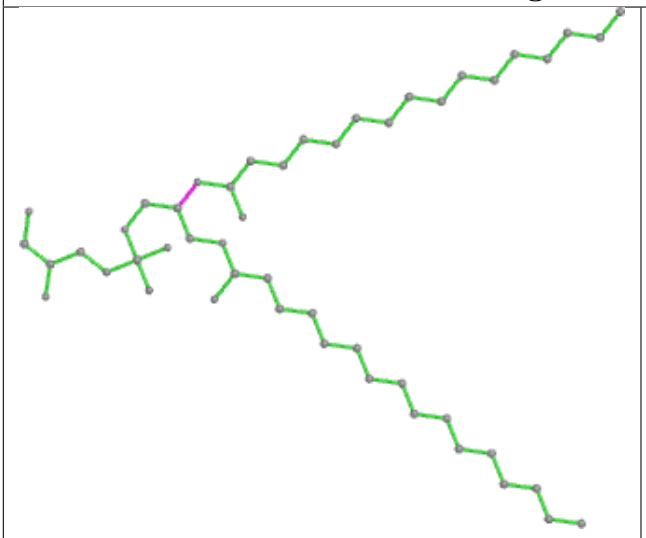


Torsions

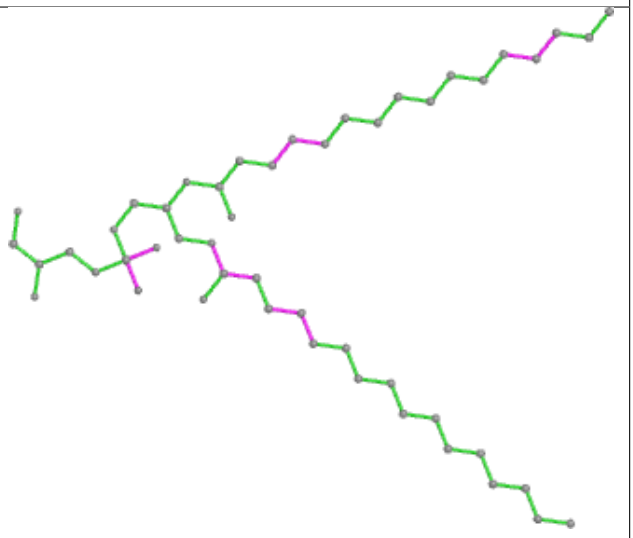


Rings

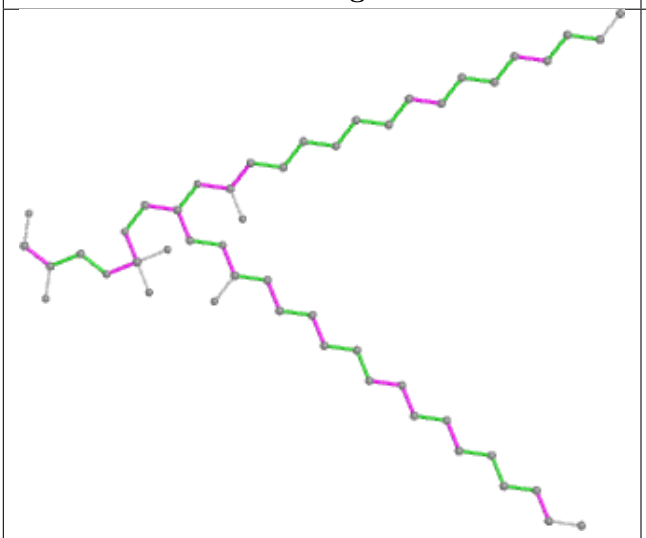
Ligand LHG 3 623



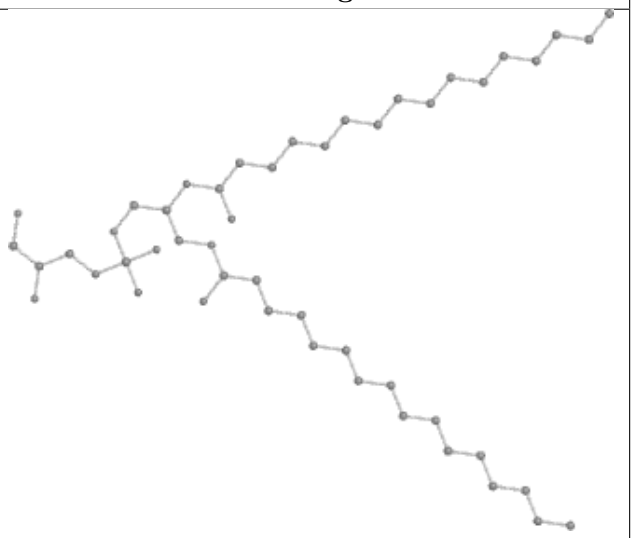
Bond lengths



Bond angles

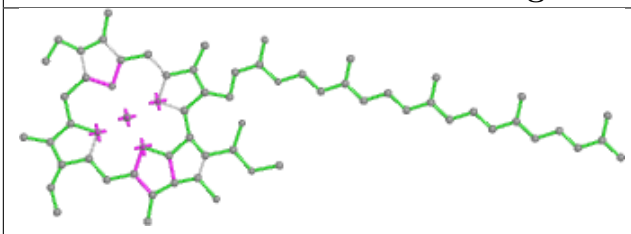


Torsions

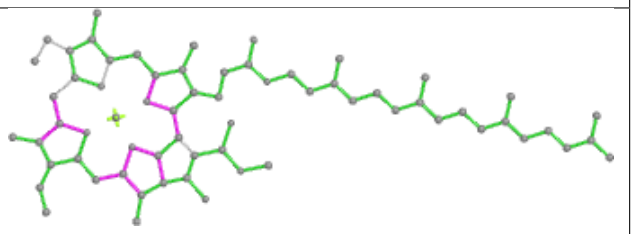


Rings

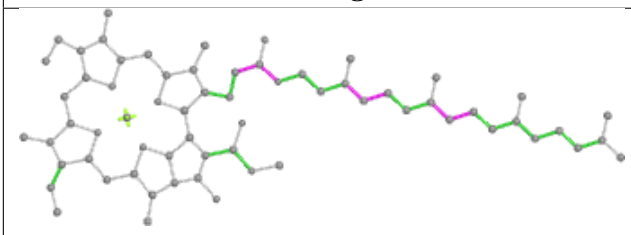
Ligand CLA b 608



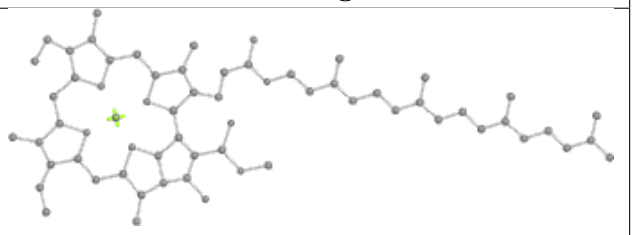
Bond lengths



Bond angles

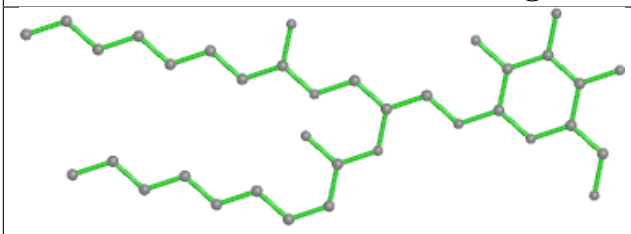


Torsions

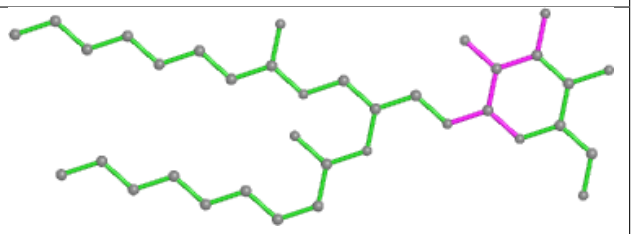


Rings

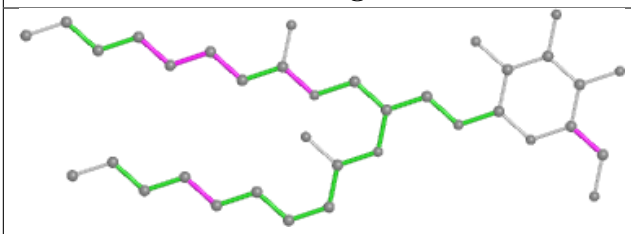
Ligand LMG 2 617



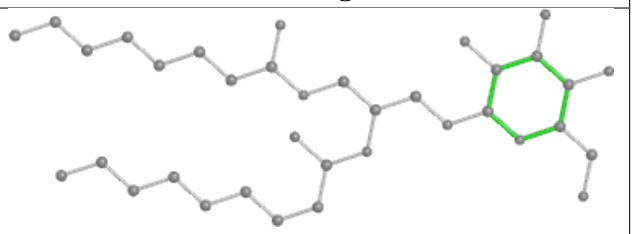
Bond lengths



Bond angles

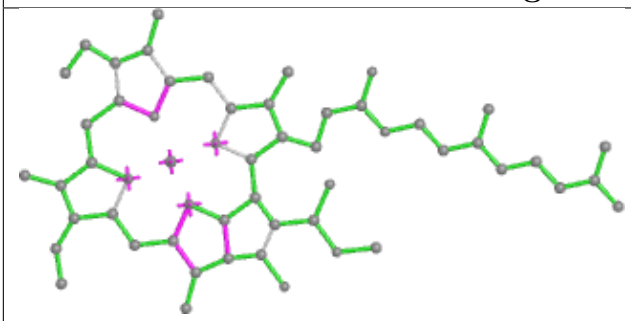


Torsions

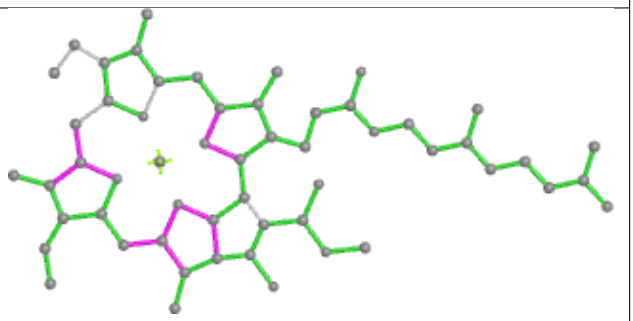


Rings

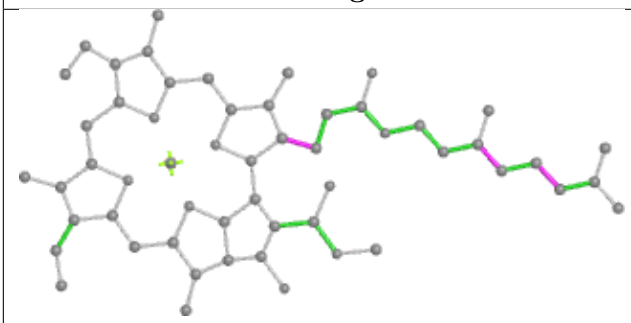
Ligand CLA A 821



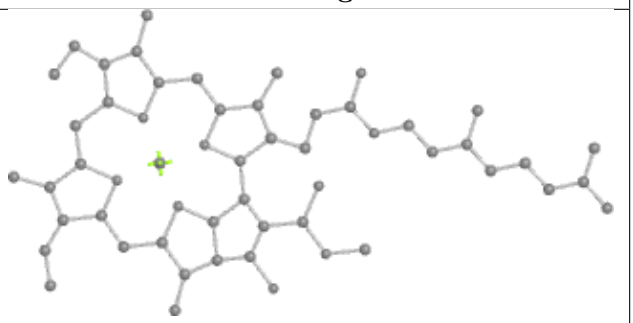
Bond lengths



Bond angles

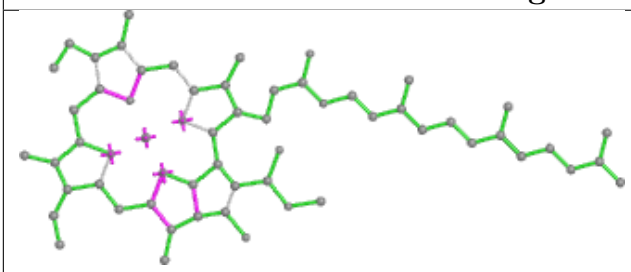


Torsions

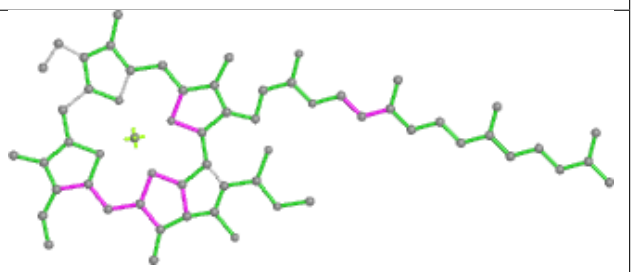


Rings

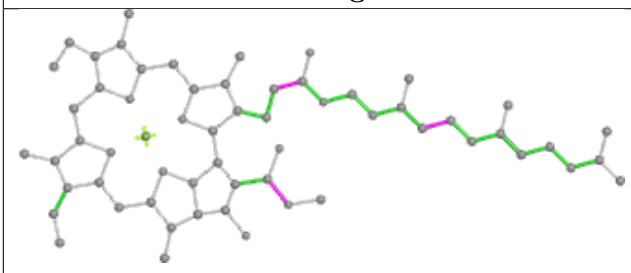
Ligand CLA 1 608



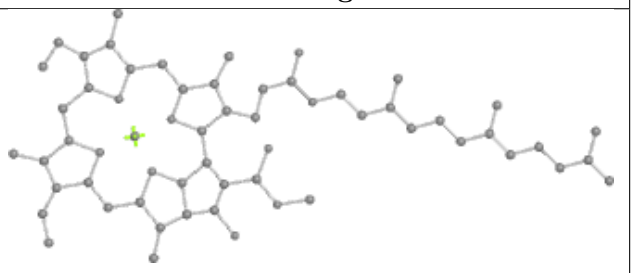
Bond lengths



Bond angles

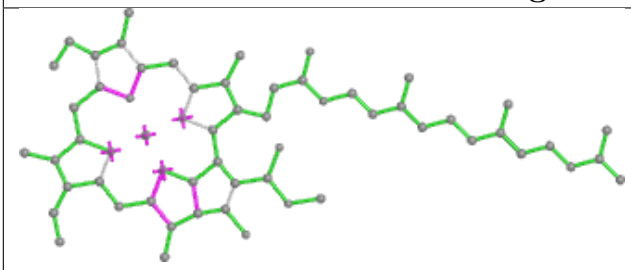


Torsions

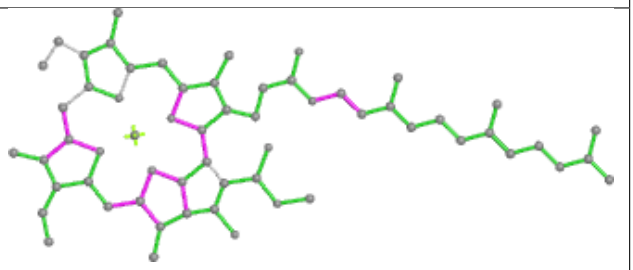


Rings

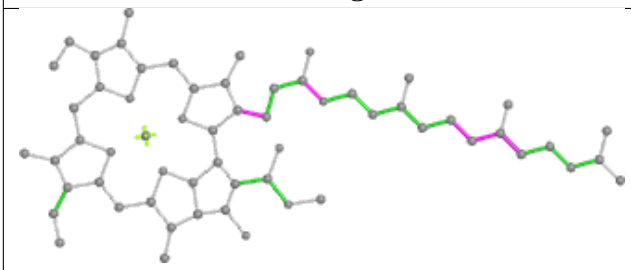
Ligand CLA e 606



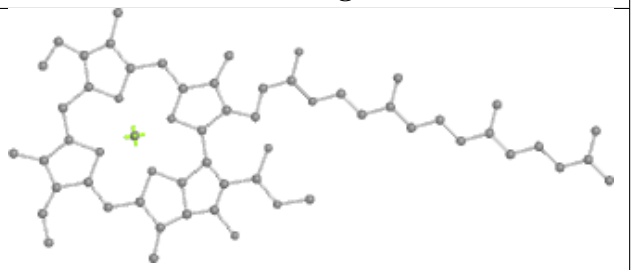
Bond lengths



Bond angles

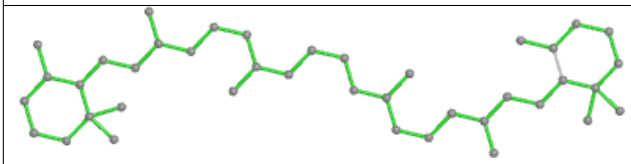


Torsions

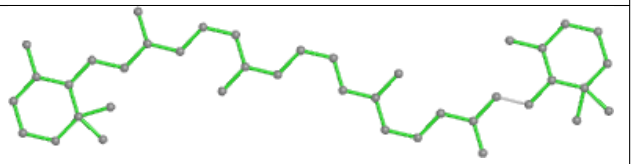


Rings

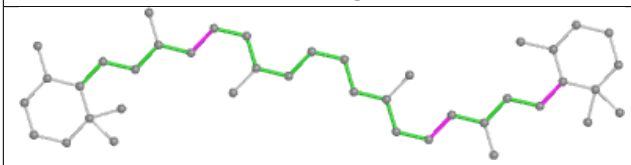
Ligand 8CT B 844



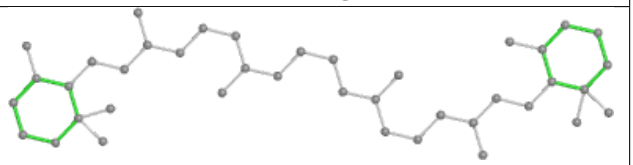
Bond lengths



Bond angles

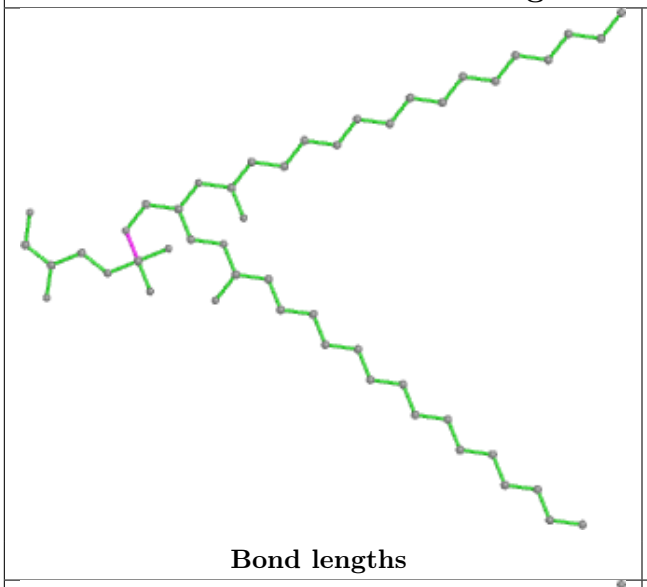


Torsions

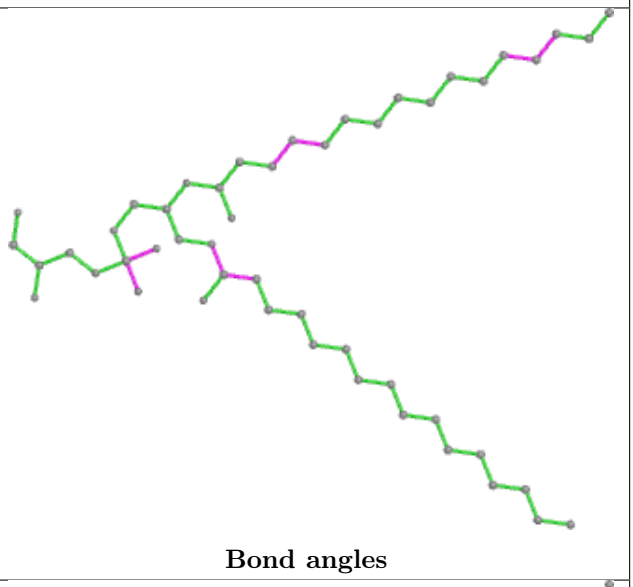


Rings

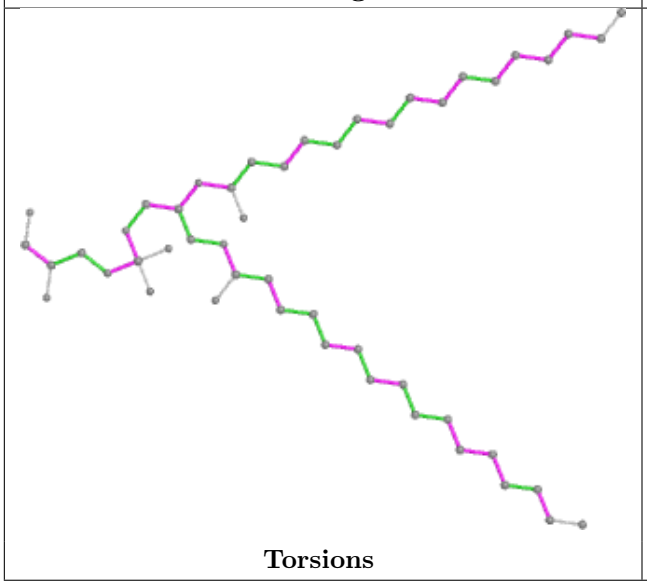
Ligand LHG b 616



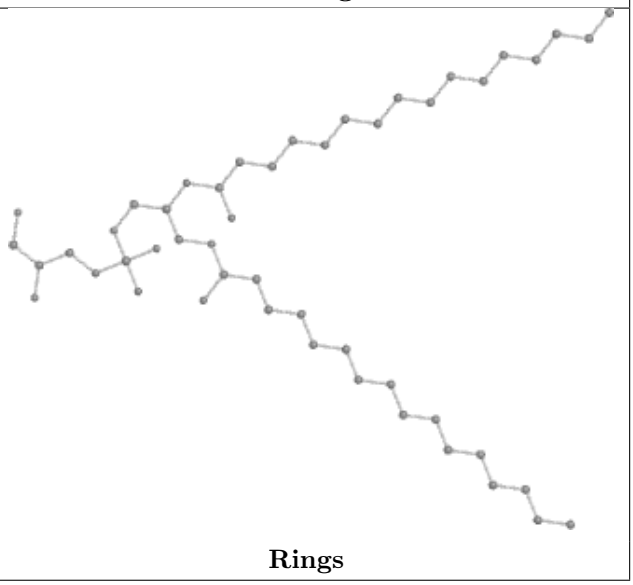
Bond lengths



Bond angles

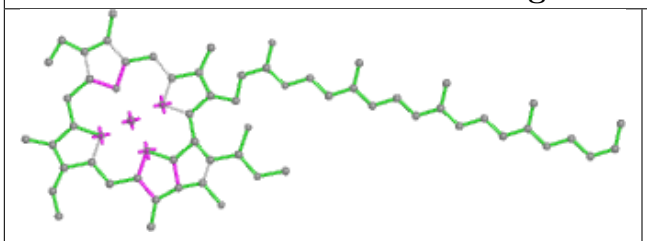


Torsions

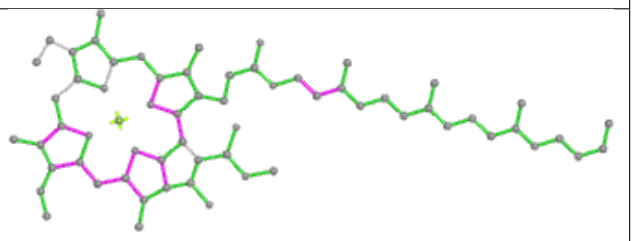


Rings

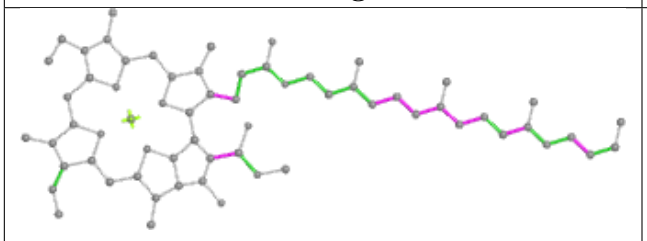
Ligand CLA b 602



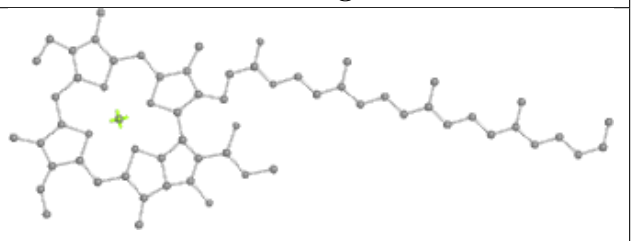
Bond lengths



Bond angles

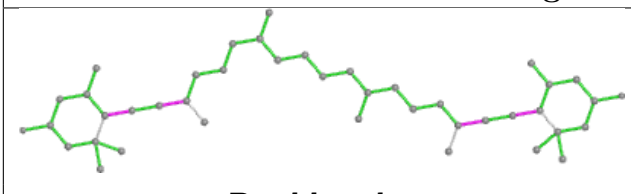


Torsions

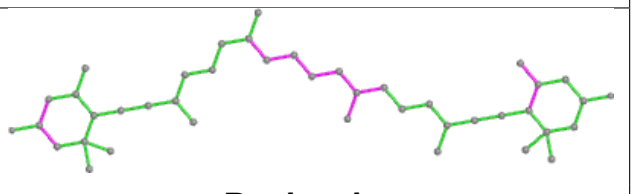


Rings

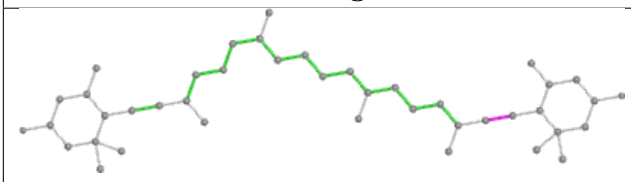
Ligand II0 a 614



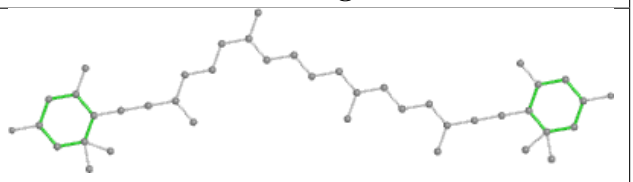
Bond lengths



Bond angles

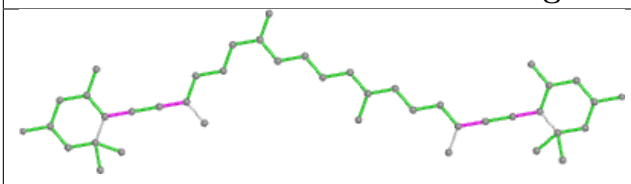


Torsions

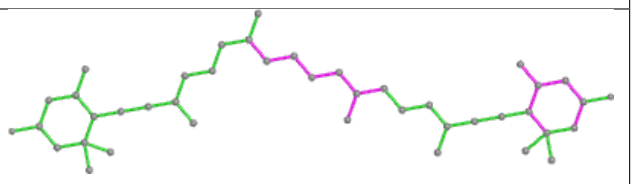


Rings

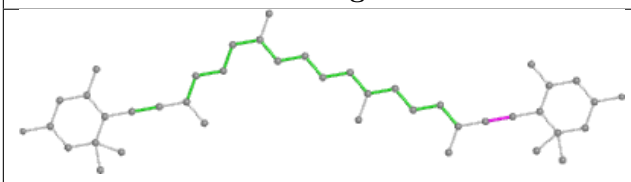
Ligand II0 e 614



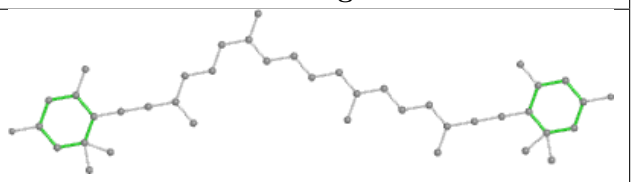
Bond lengths



Bond angles

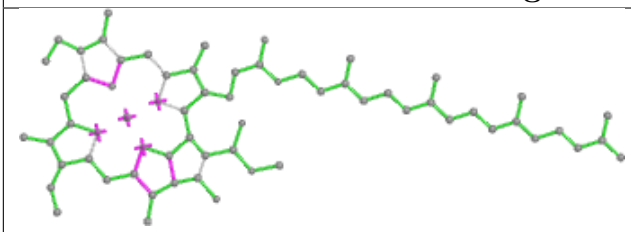


Torsions

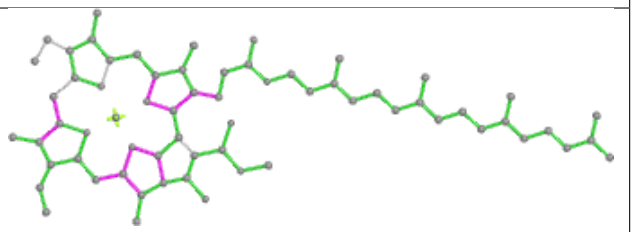


Rings

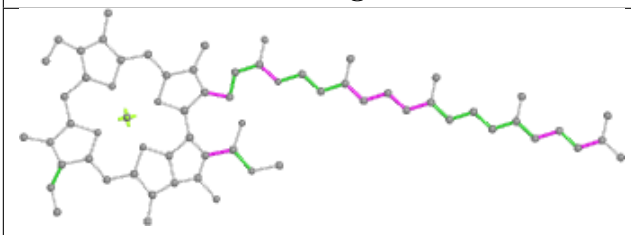
Ligand CLA A 817



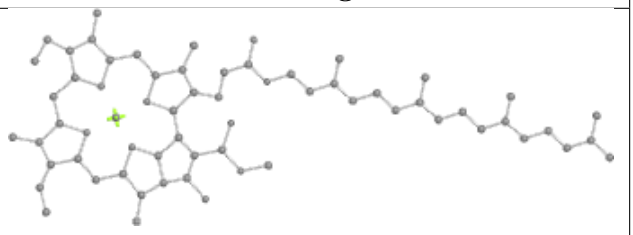
Bond lengths



Bond angles

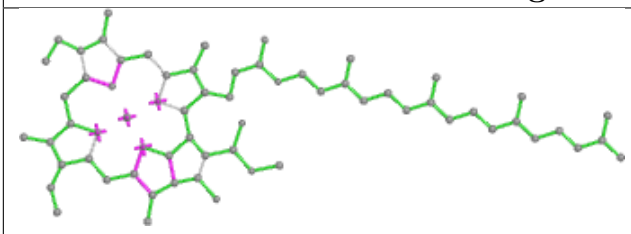


Torsions

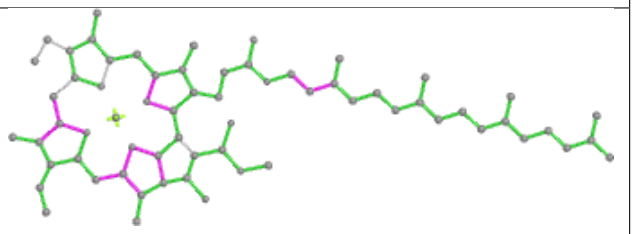


Rings

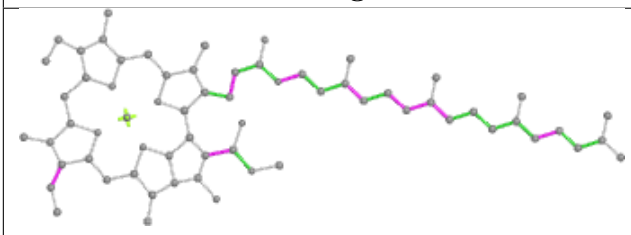
Ligand CLA 9 607



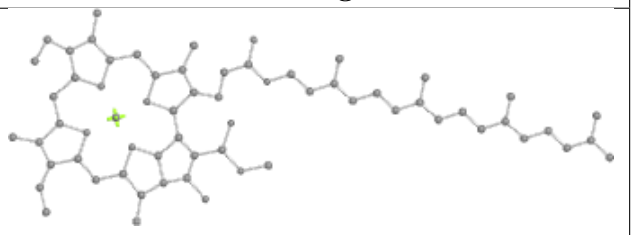
Bond lengths



Bond angles

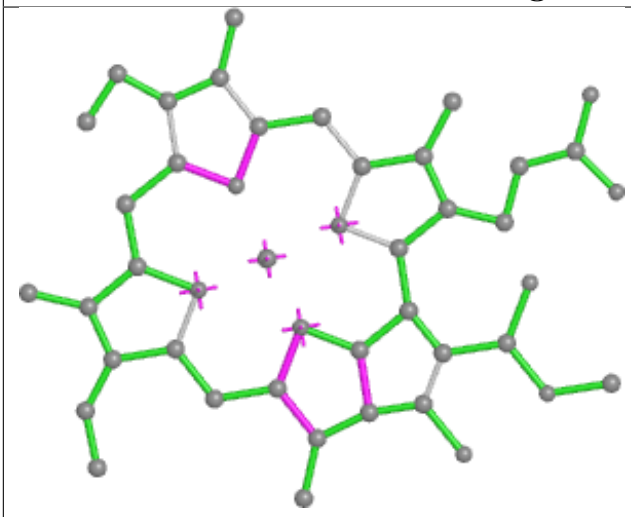


Torsions

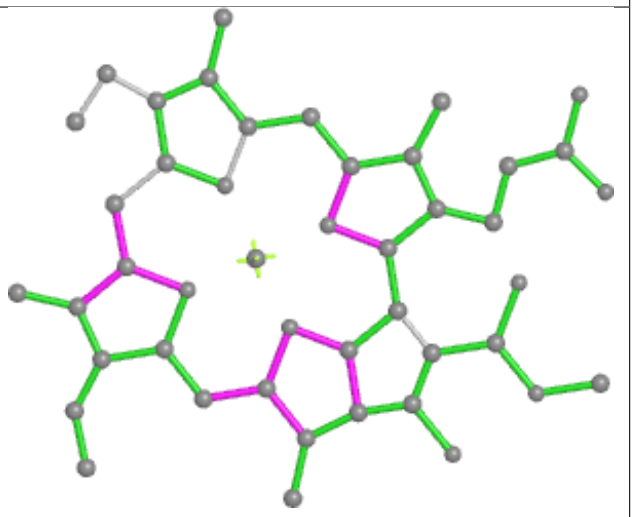


Rings

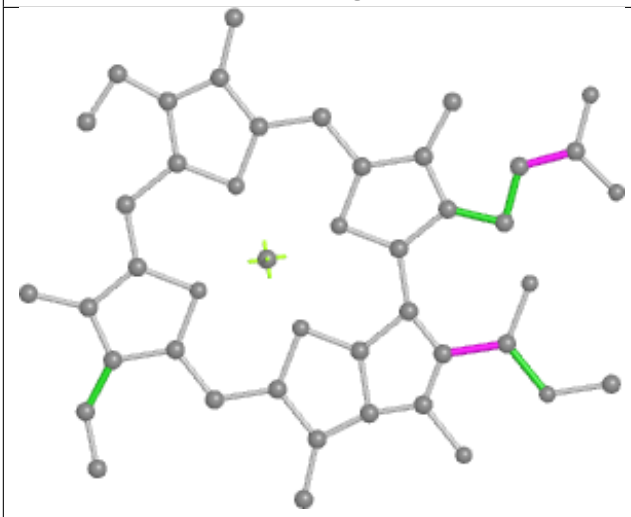
Ligand CLA 7 605



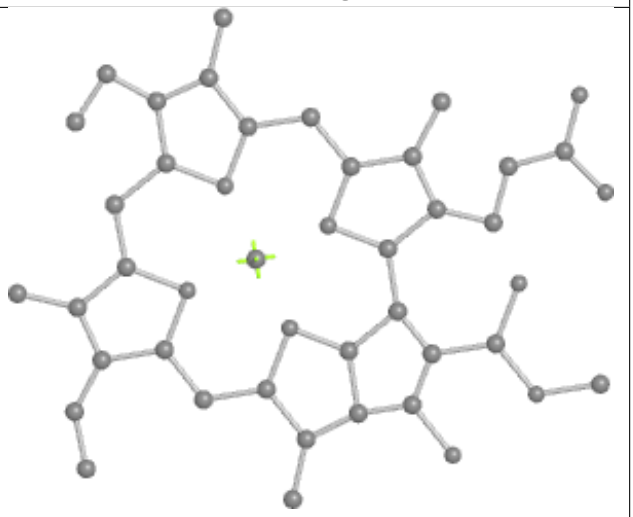
Bond lengths



Bond angles

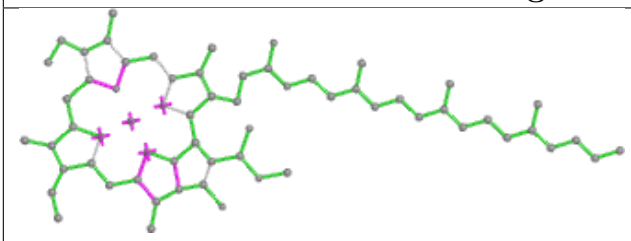


Torsions

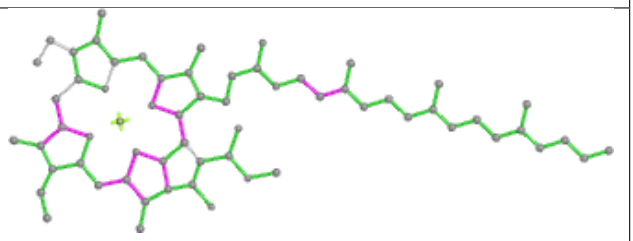


Rings

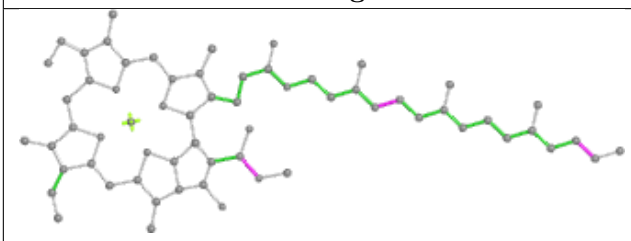
Ligand CLA d 612



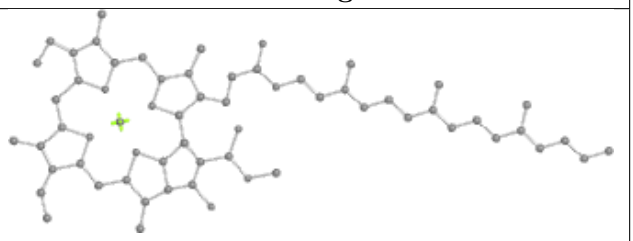
Bond lengths



Bond angles

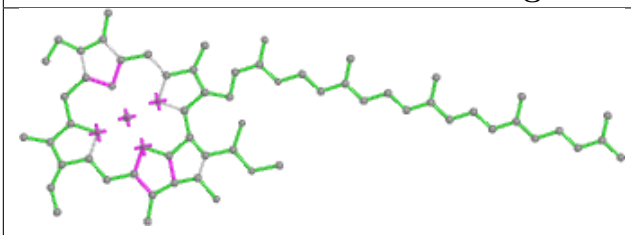


Torsions

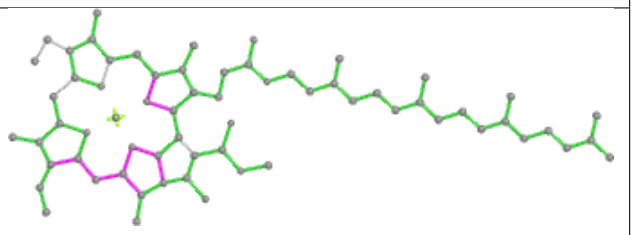


Rings

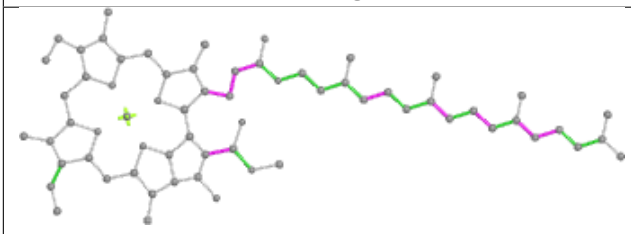
Ligand CLA A 811



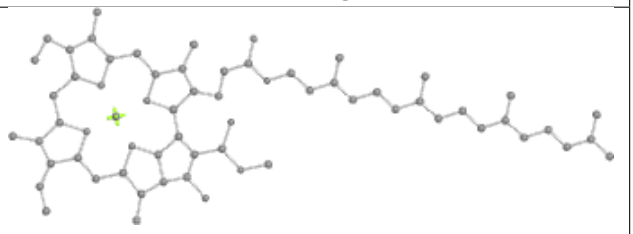
Bond lengths



Bond angles

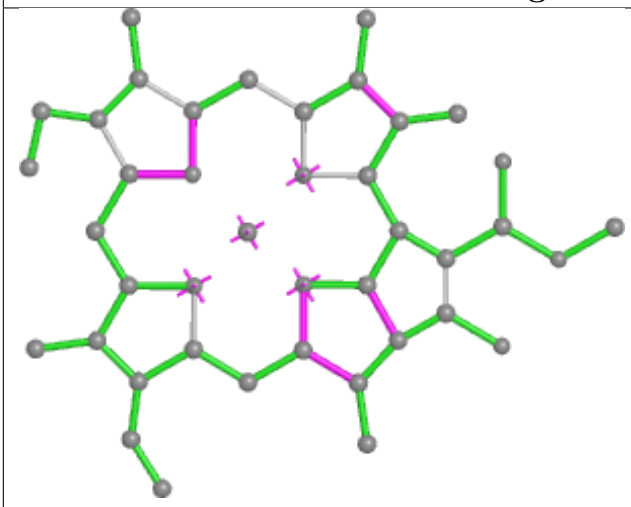


Torsions

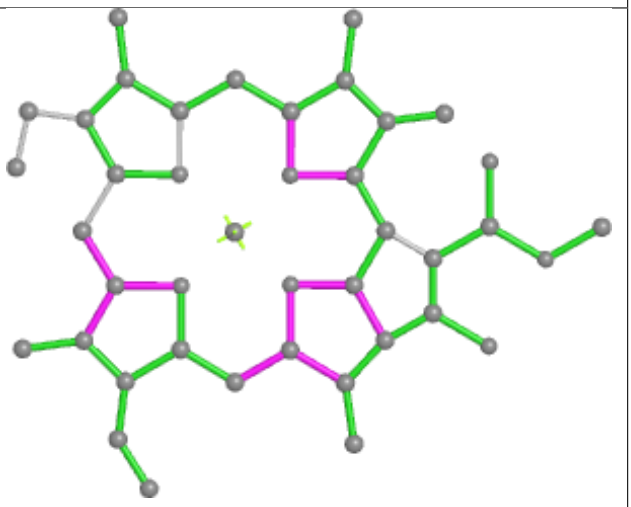


Rings

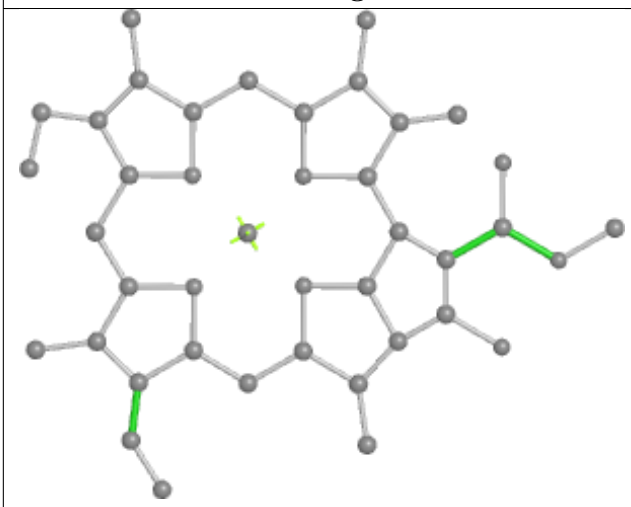
Ligand CLA 5 601



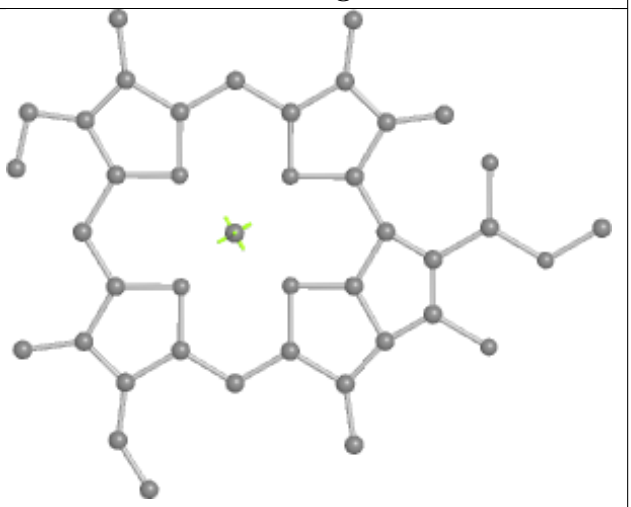
Bond lengths



Bond angles

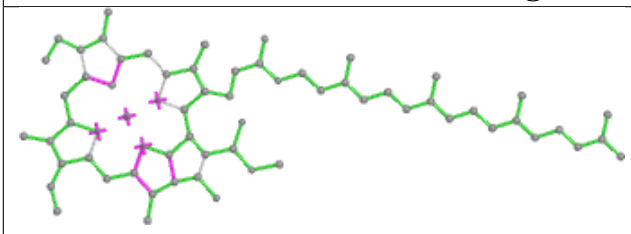


Torsions

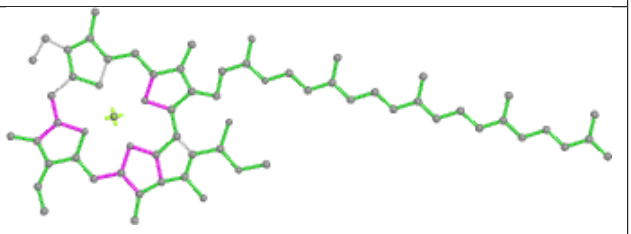


Rings

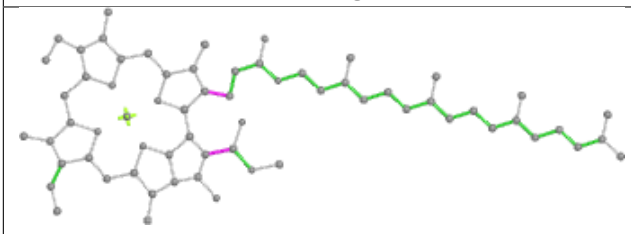
Ligand CLA B 840



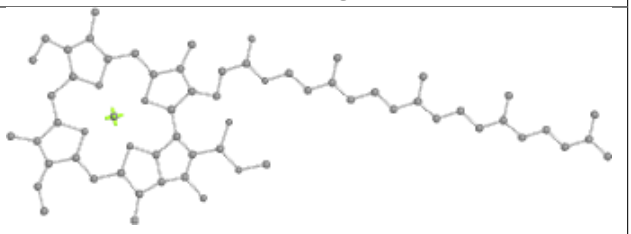
Bond lengths



Bond angles

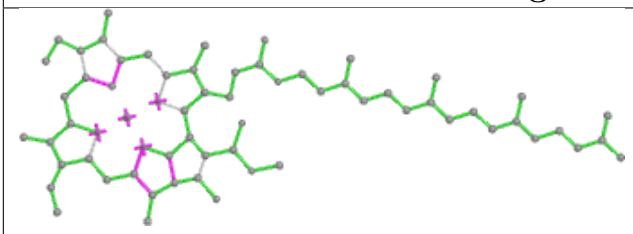


Torsions

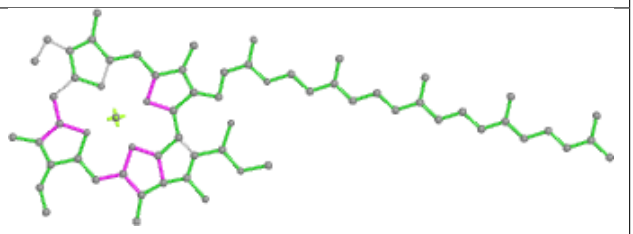


Rings

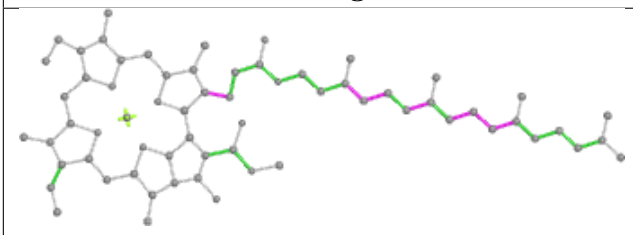
Ligand CLA c 607



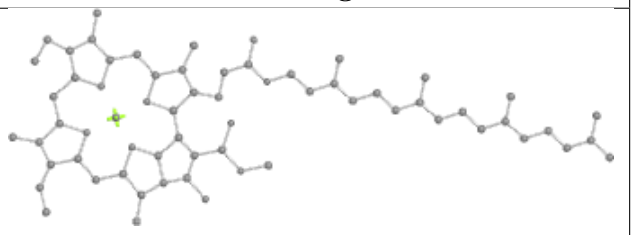
Bond lengths



Bond angles

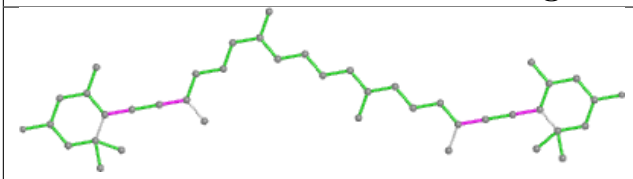


Torsions

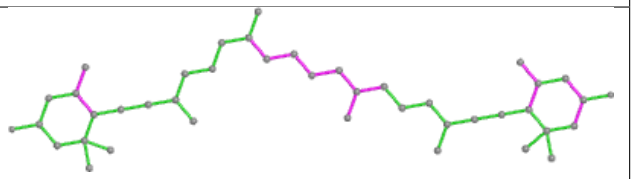


Rings

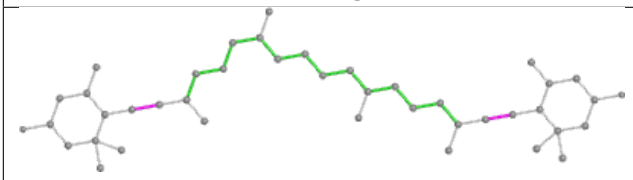
Ligand II0 9 618



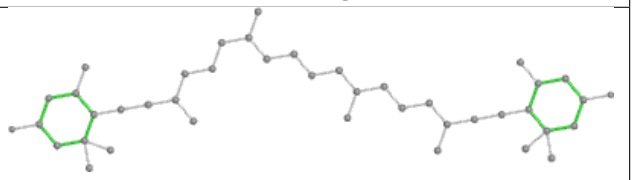
Bond lengths



Bond angles

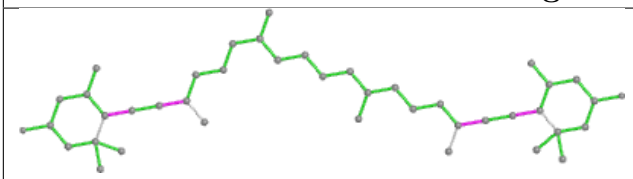


Torsions

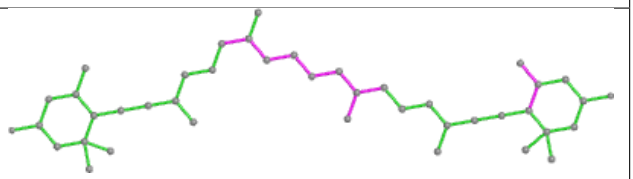


Rings

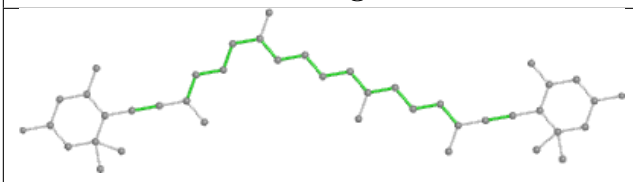
Ligand II0 3 614



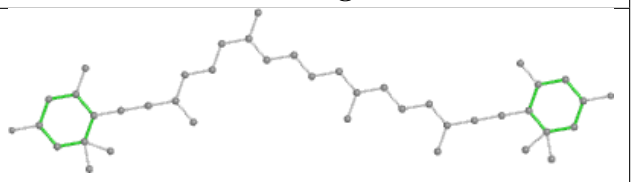
Bond lengths



Bond angles

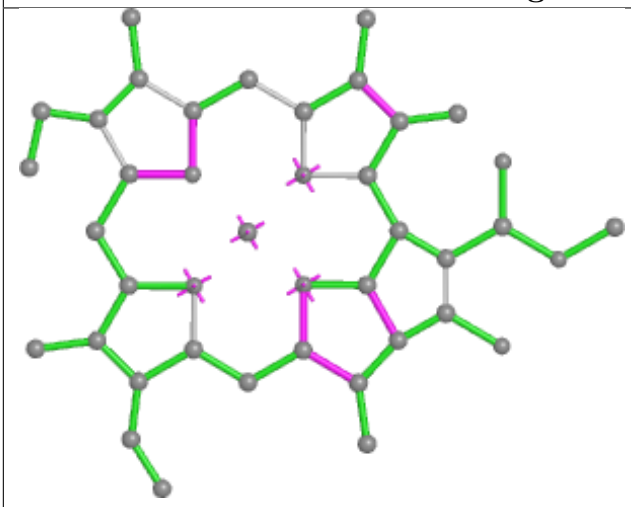


Torsions

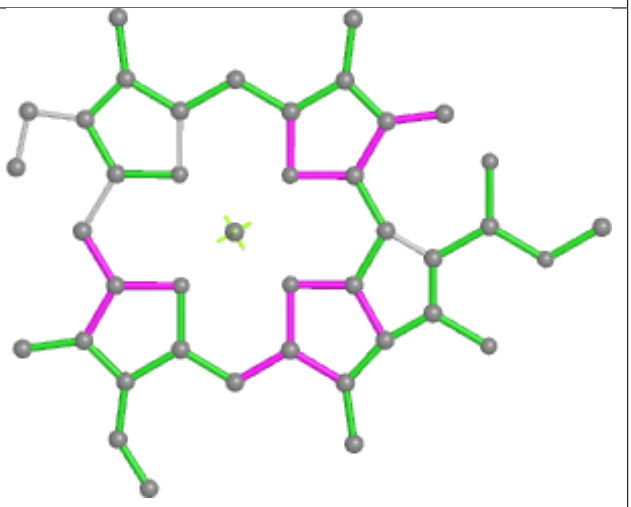


Rings

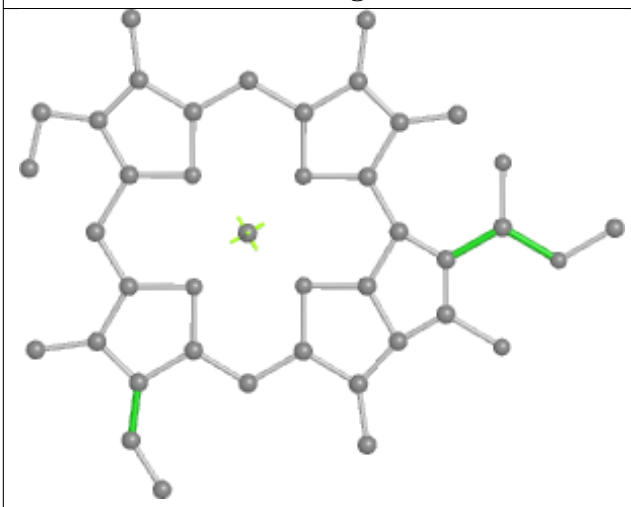
Ligand CLA d 609



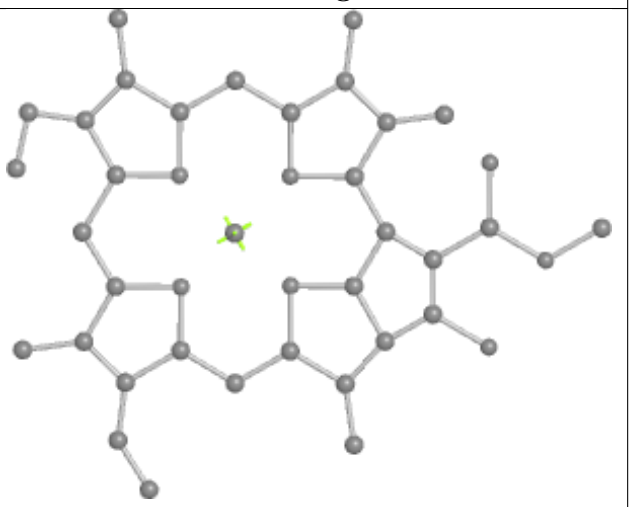
Bond lengths



Bond angles

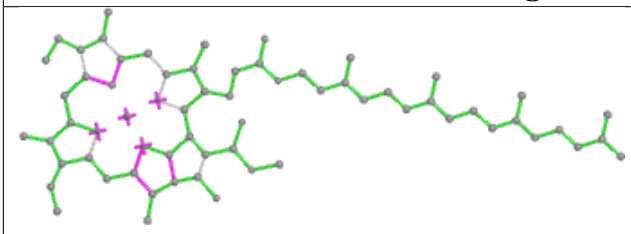


Torsions

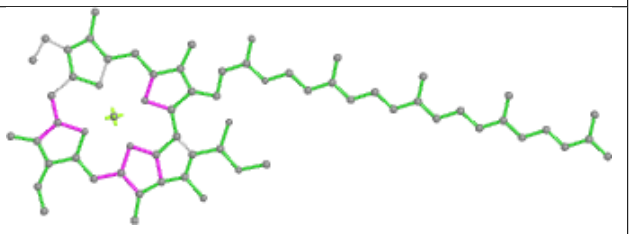


Rings

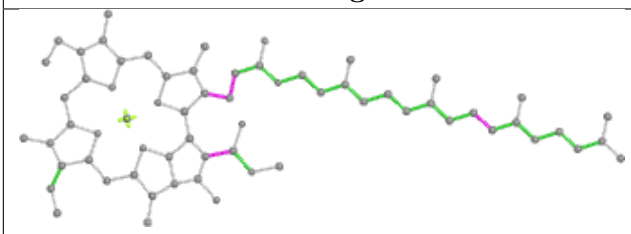
Ligand CLA A 842



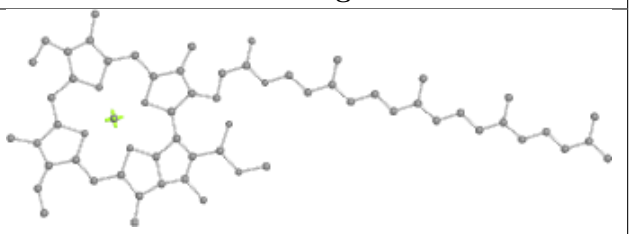
Bond lengths



Bond angles

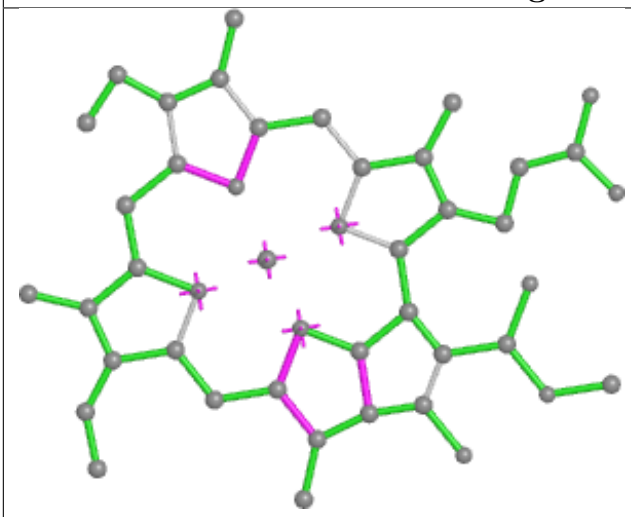


Torsions

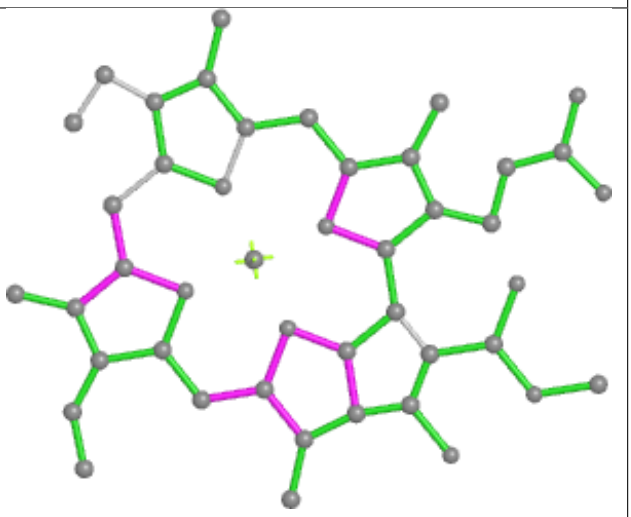


Rings

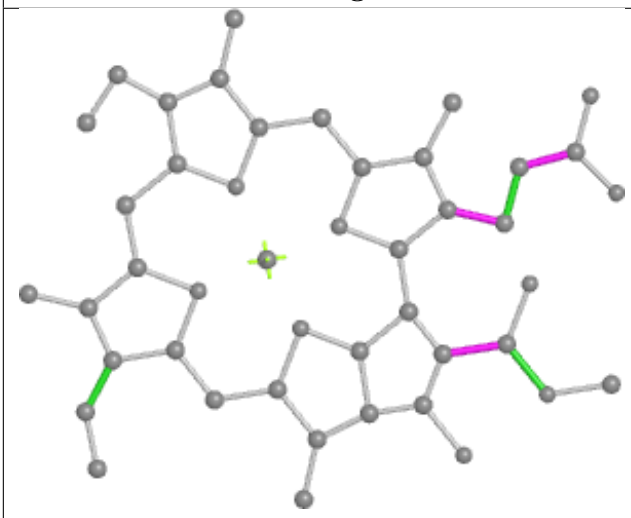
Ligand CLA 5 606



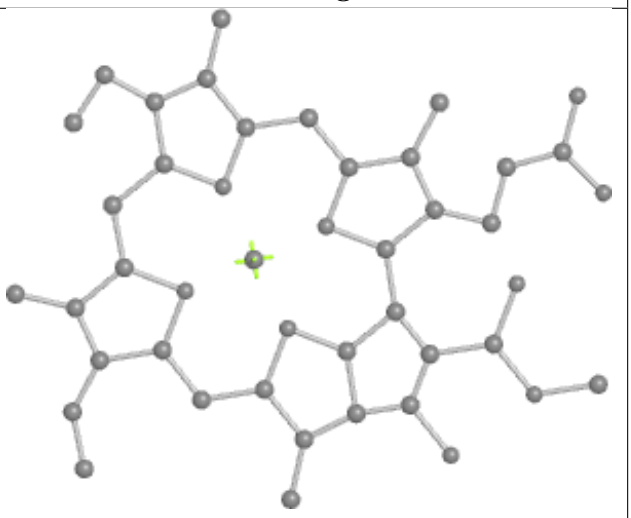
Bond lengths



Bond angles

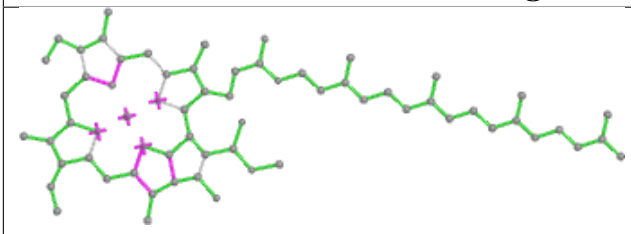


Torsions

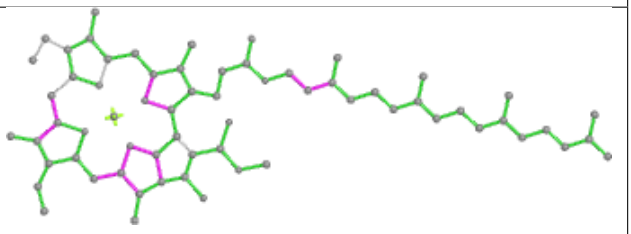


Rings

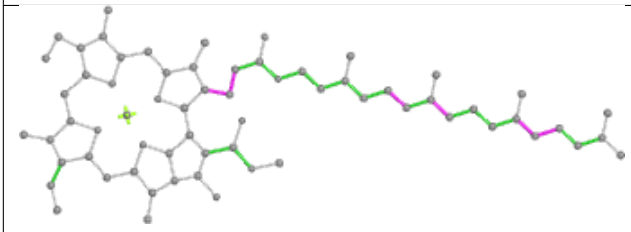
Ligand CLA B 835



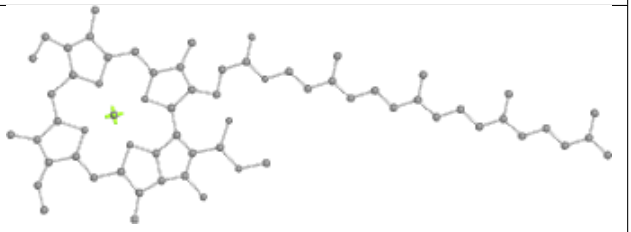
Bond lengths



Bond angles

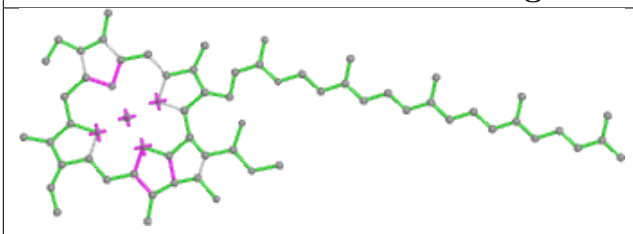


Torsions

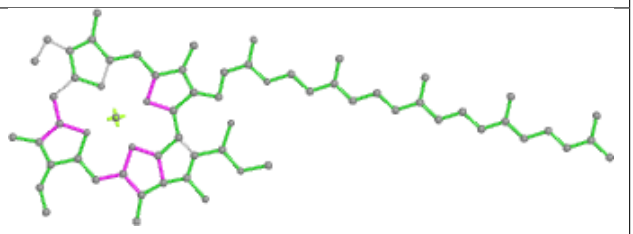


Rings

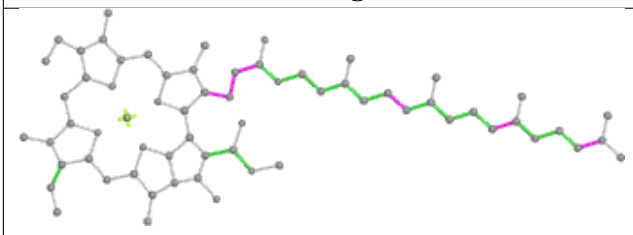
Ligand CLA B 809



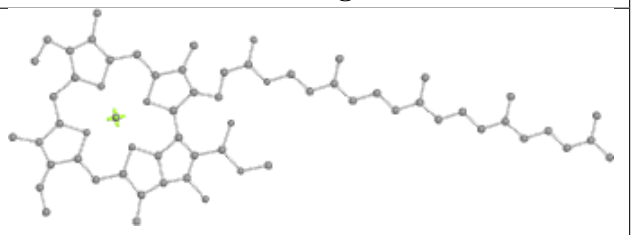
Bond lengths



Bond angles

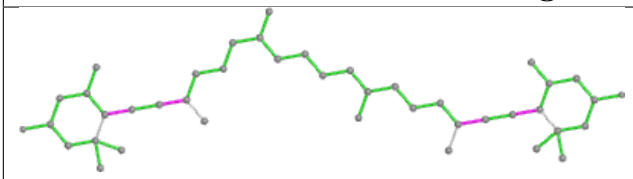


Torsions

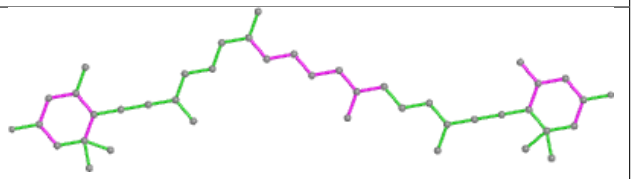


Rings

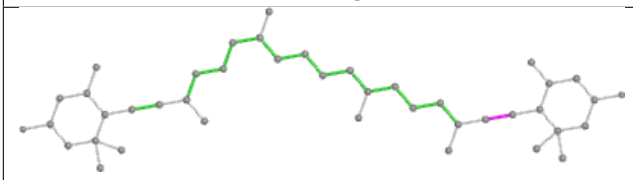
Ligand II0 O 205



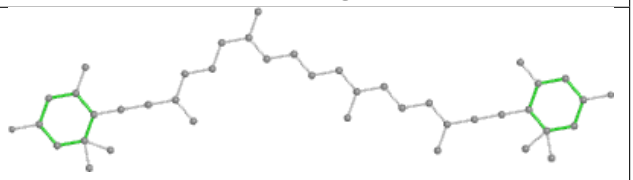
Bond lengths



Bond angles

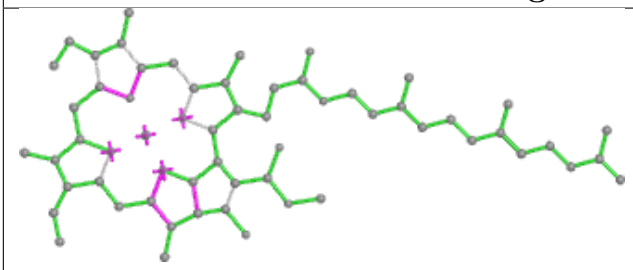


Torsions

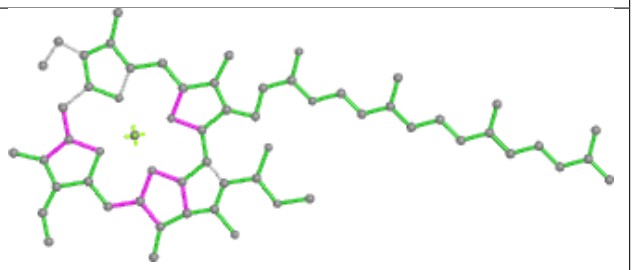


Rings

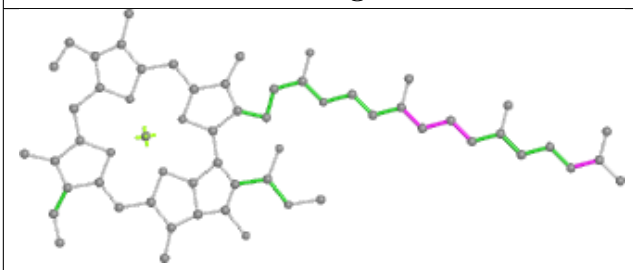
Ligand CLA 3 607



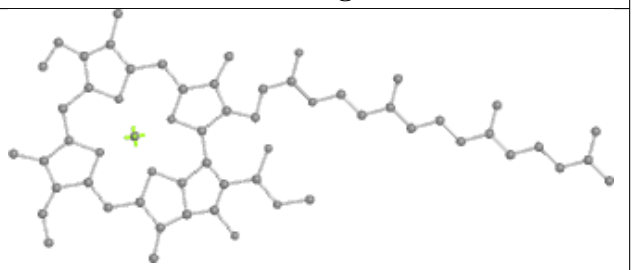
Bond lengths



Bond angles

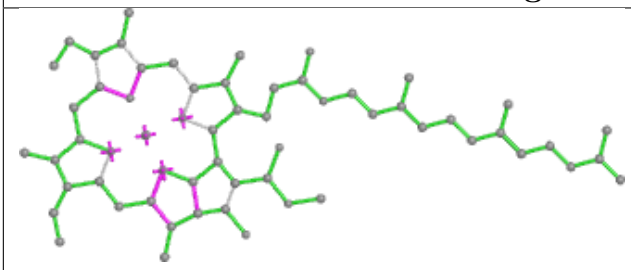


Torsions

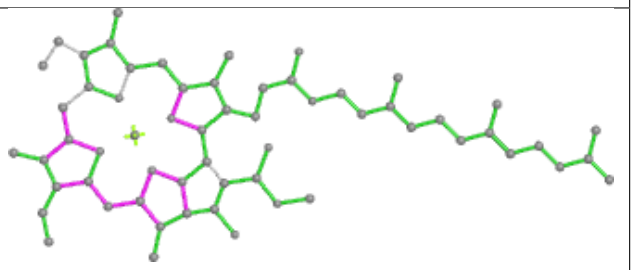


Rings

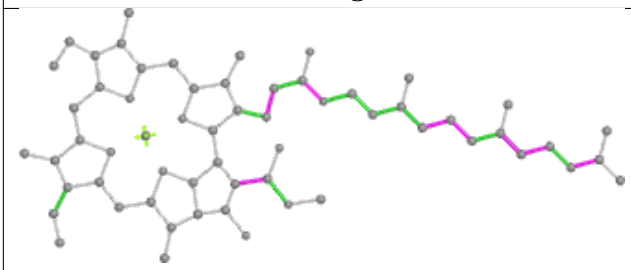
Ligand CLA B 820



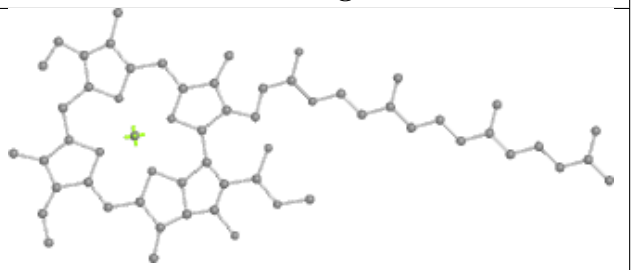
Bond lengths



Bond angles

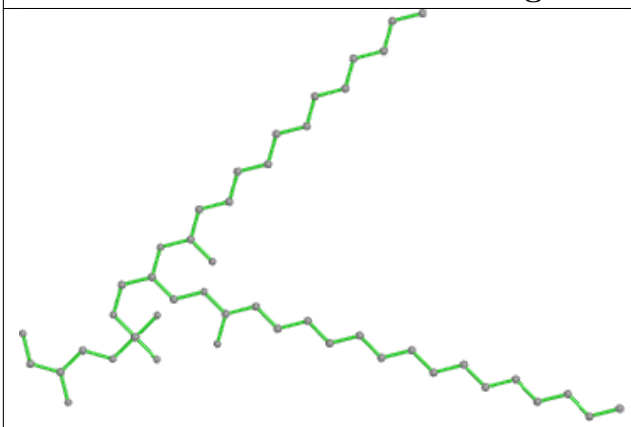


Torsions

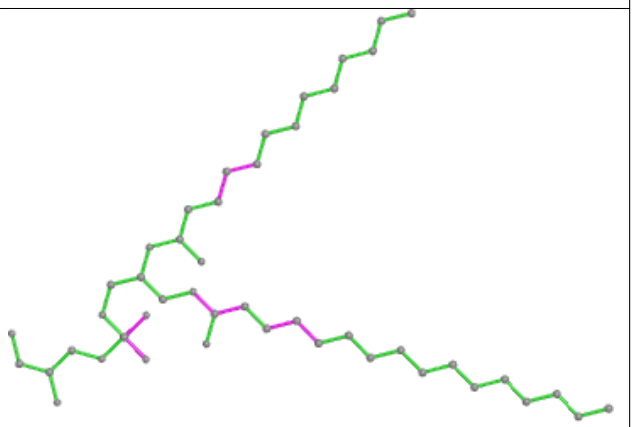


Rings

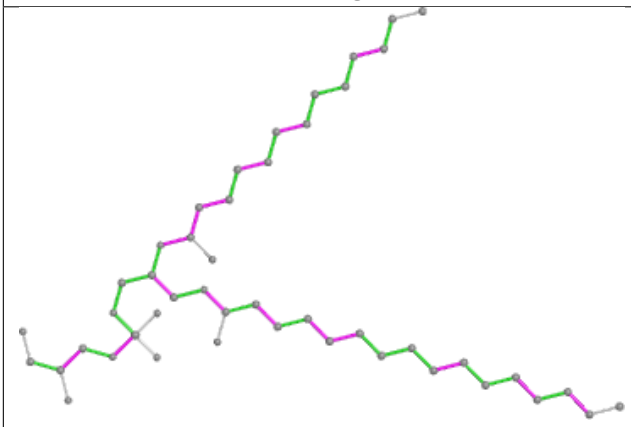
Ligand LHG Z 310



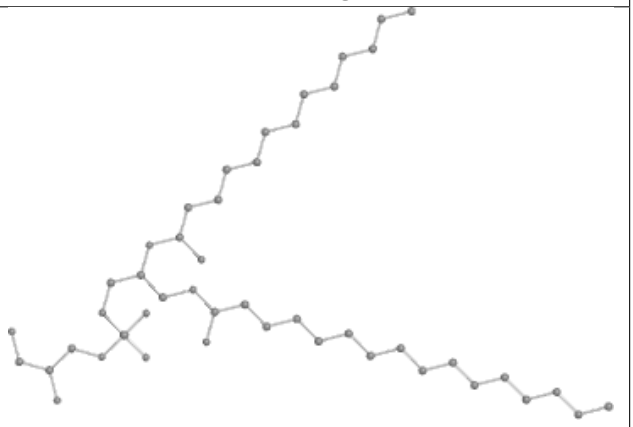
Bond lengths



Bond angles

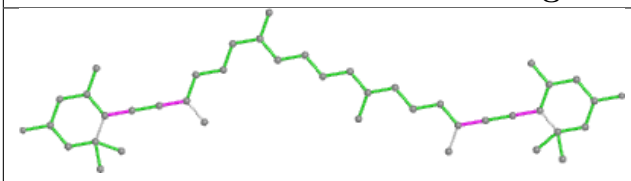


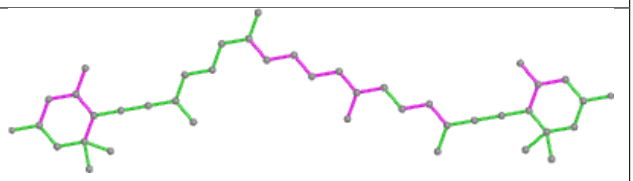
Torsions

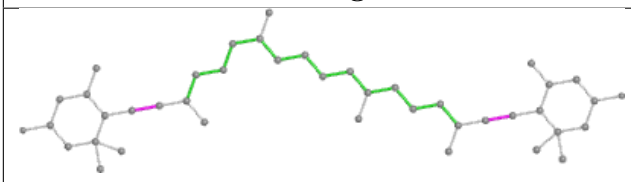


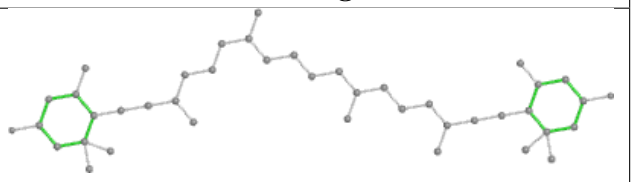
Rings

Ligand II0 6 616

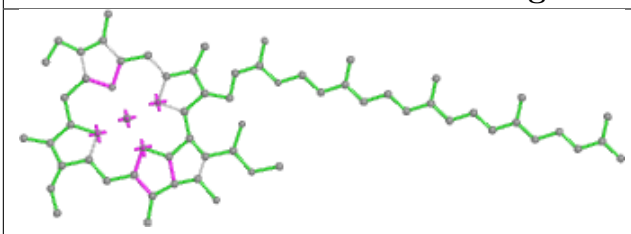

Bond lengths

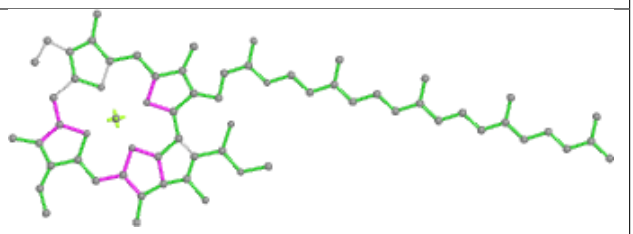

Bond angles

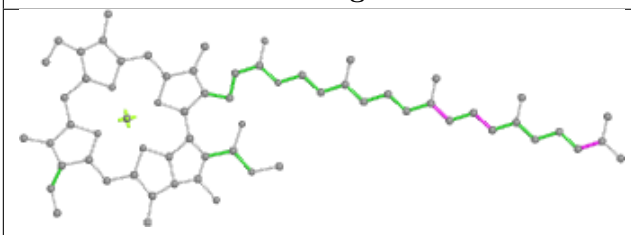

Torsions

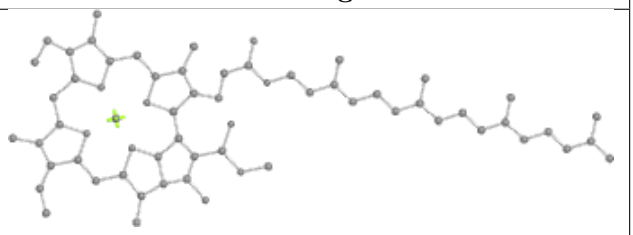

Rings

Ligand CLA 8 608

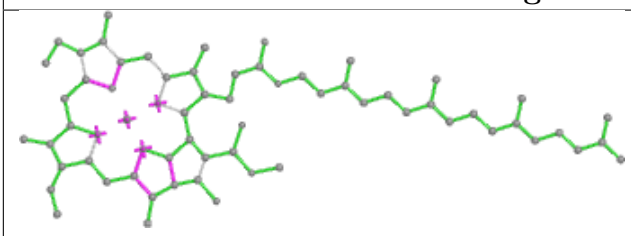

Bond lengths

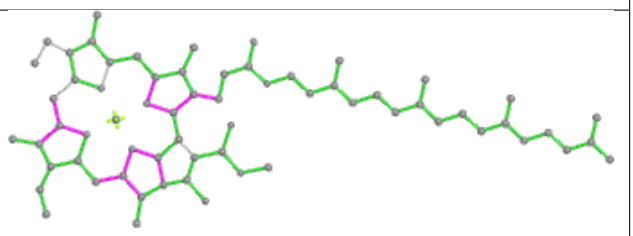

Bond angles

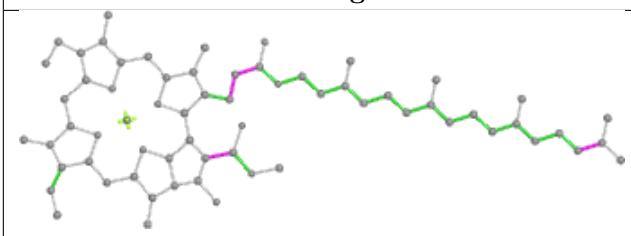

Torsions

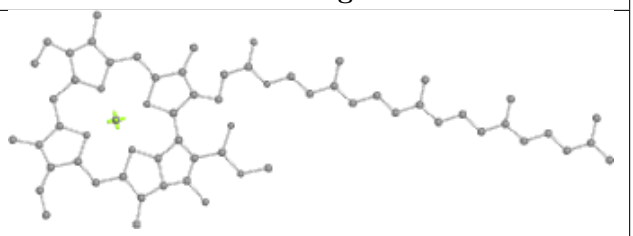

Rings

Ligand CLA A 803

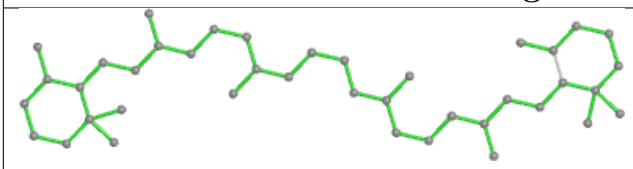

Bond lengths


Bond angles

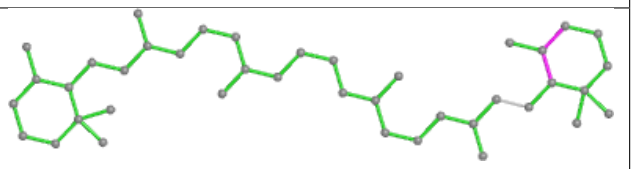

Torsions


Rings

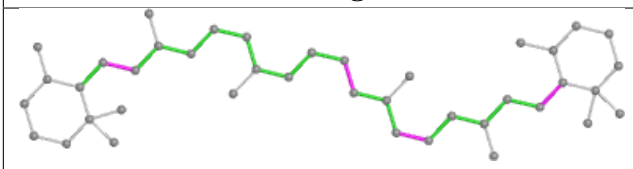
Ligand 8CT M 101



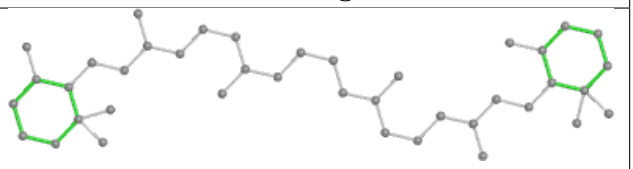
Bond lengths



Bond angles

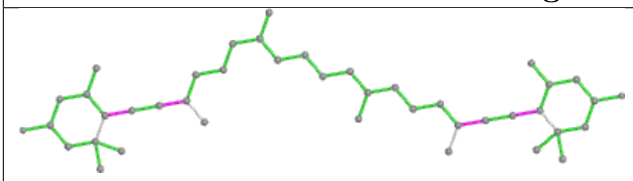


Torsions

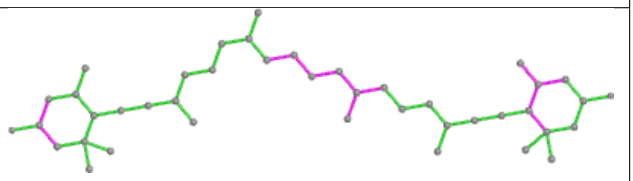


Rings

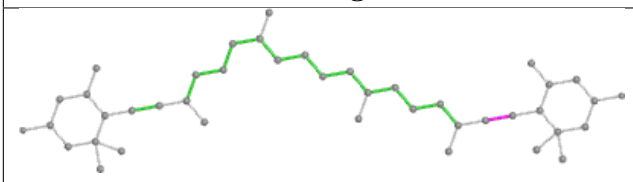
Ligand II0 7 613



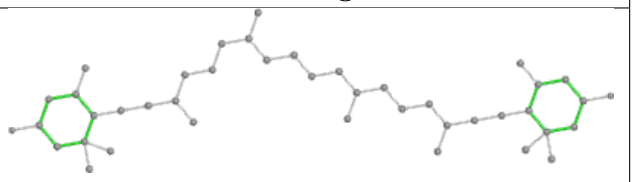
Bond lengths



Bond angles

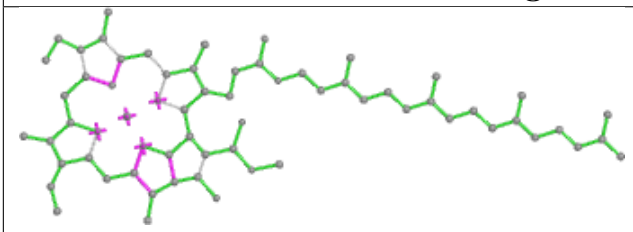


Torsions

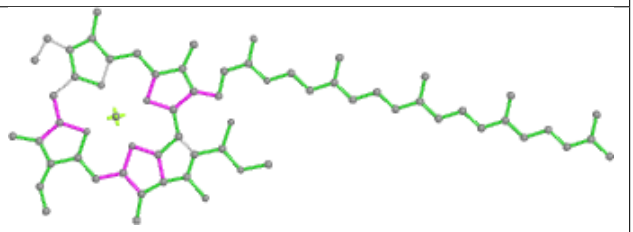


Rings

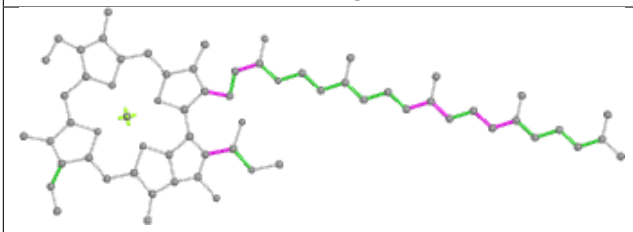
Ligand CLA B 805



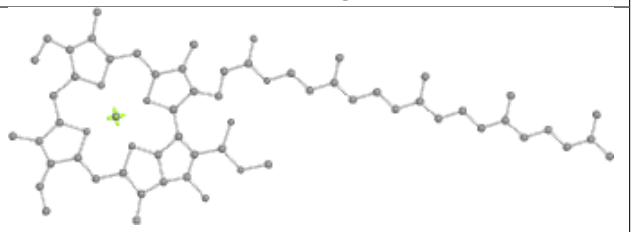
Bond lengths



Bond angles

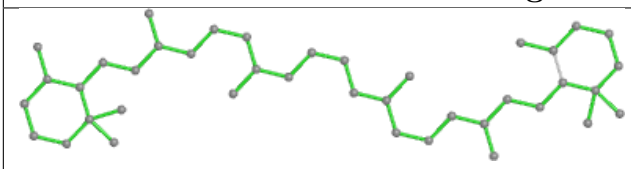


Torsions

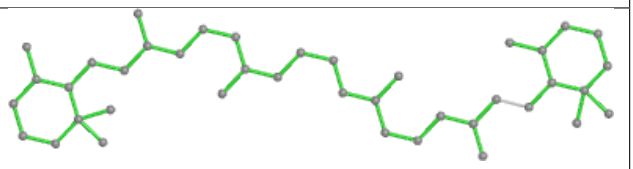


Rings

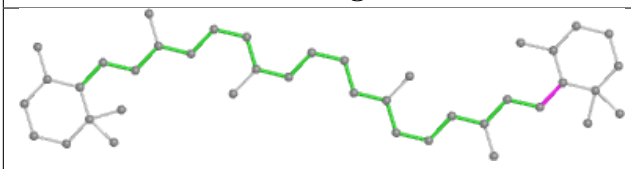
Ligand 8CT K 103



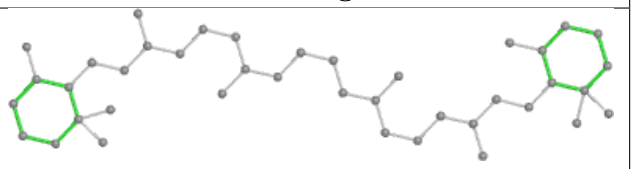
Bond lengths



Bond angles

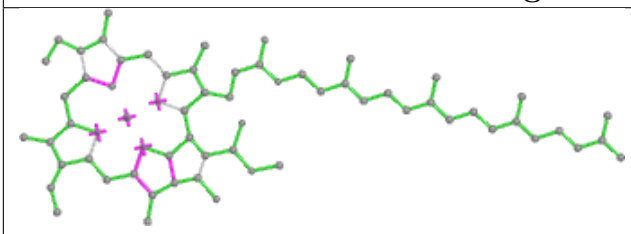


Torsions

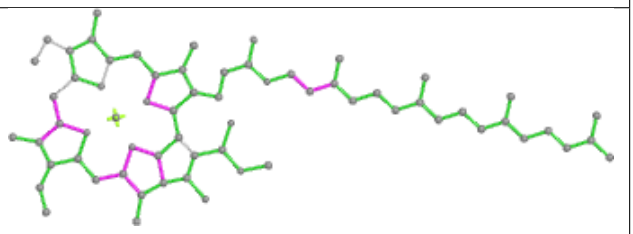


Rings

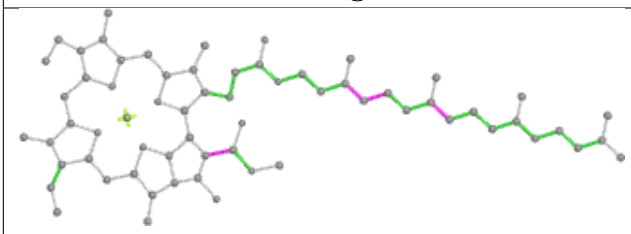
Ligand CLA A 819



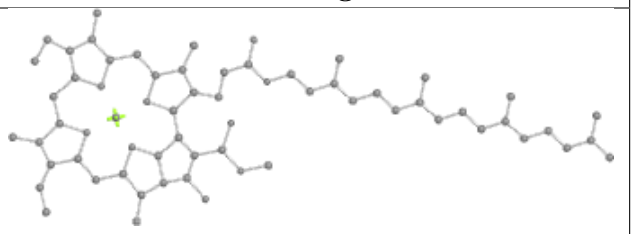
Bond lengths



Bond angles

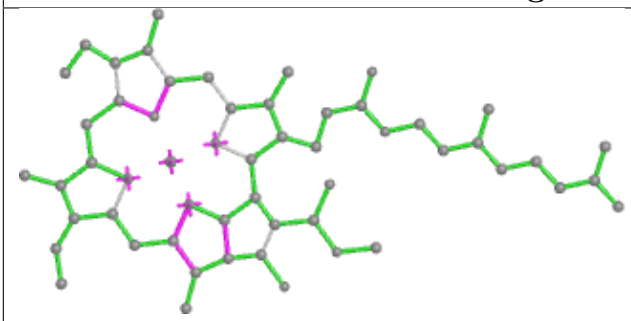


Torsions

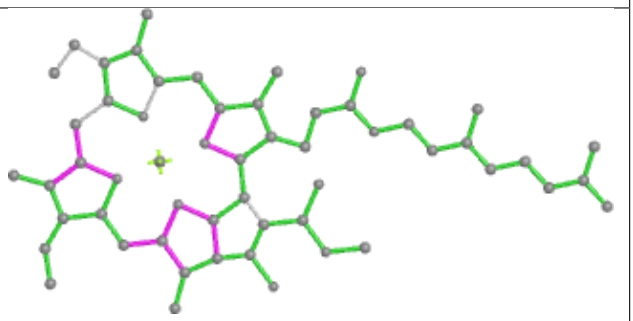


Rings

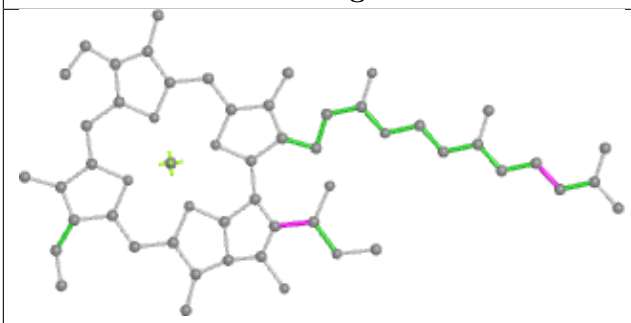
Ligand CLA b 611



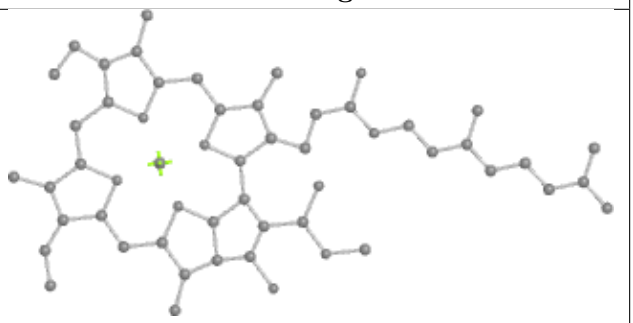
Bond lengths



Bond angles

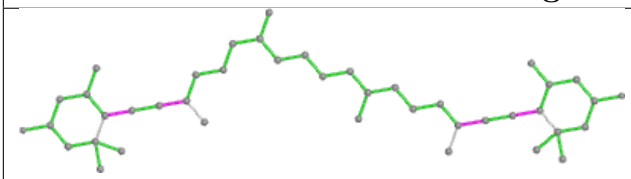


Torsions

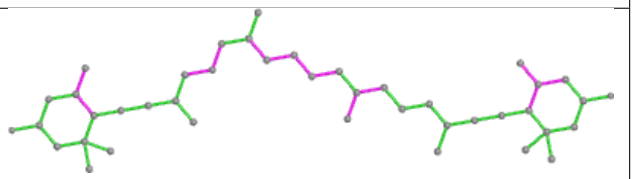


Rings

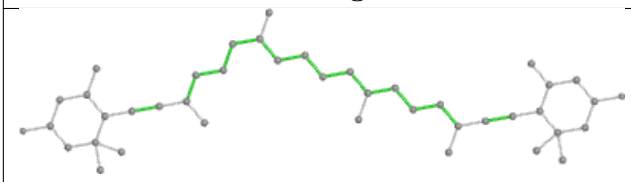
Ligand II0 8 616



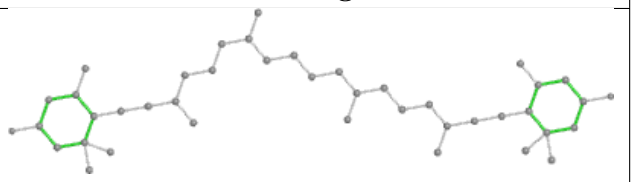
Bond lengths



Bond angles

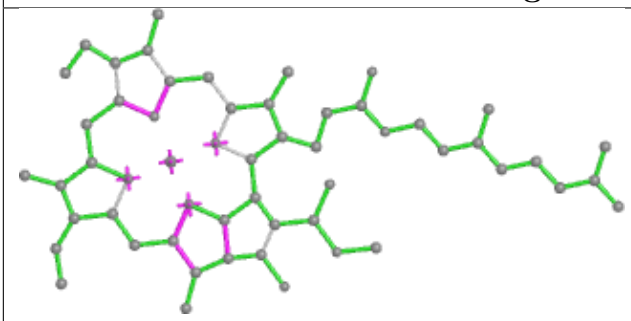


Torsions

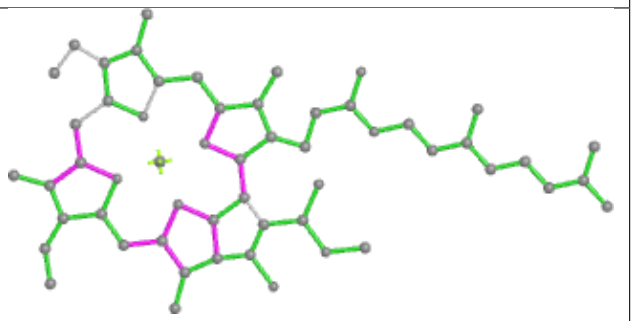


Rings

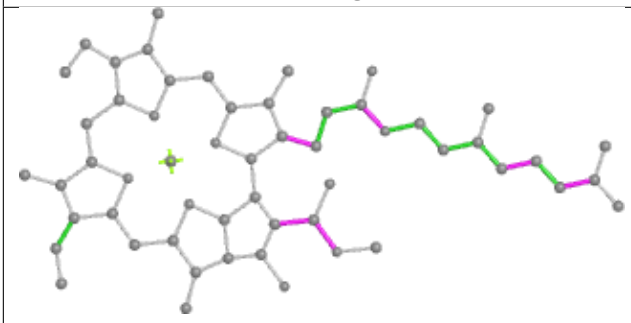
Ligand CLA O 203



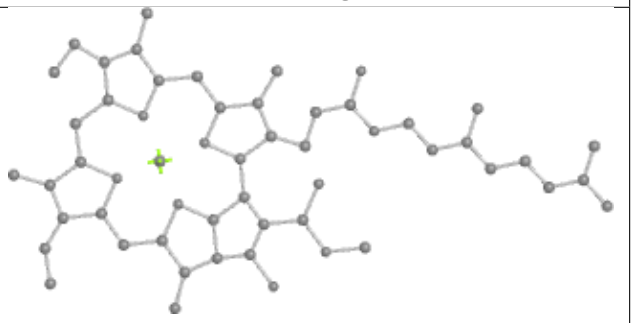
Bond lengths



Bond angles

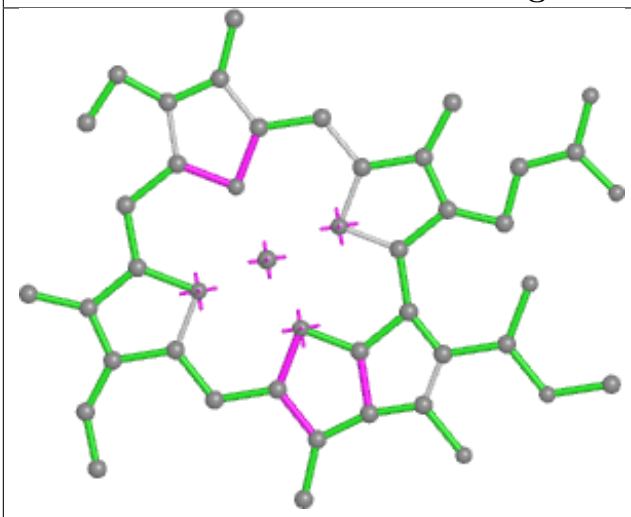


Torsions

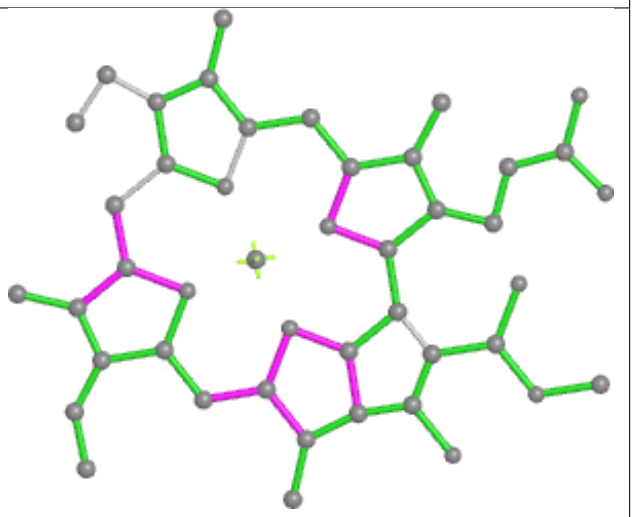


Rings

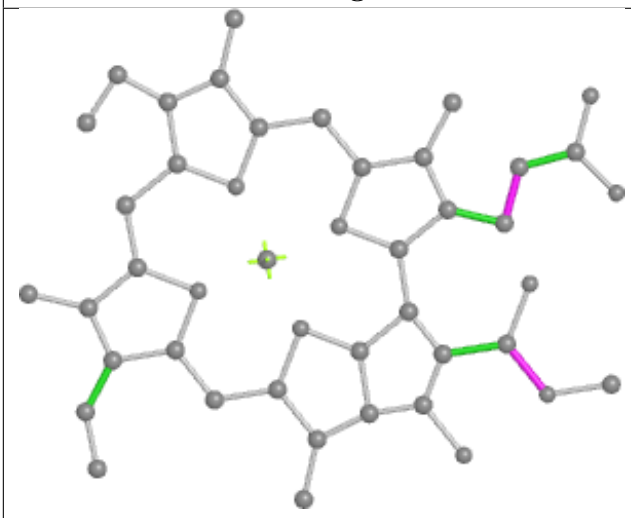
Ligand CLA 9 613



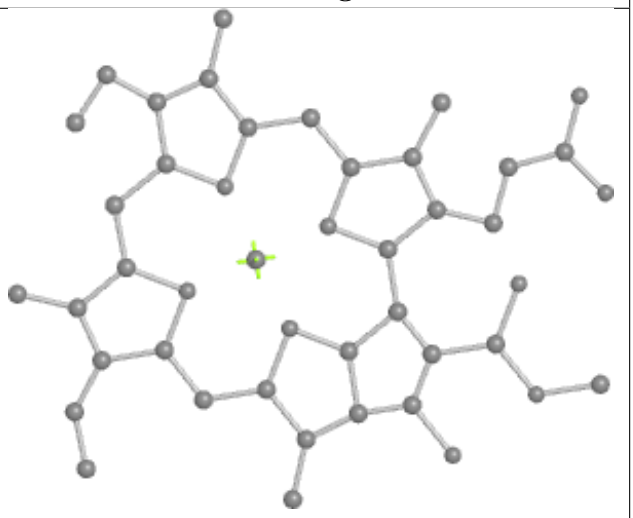
Bond lengths



Bond angles

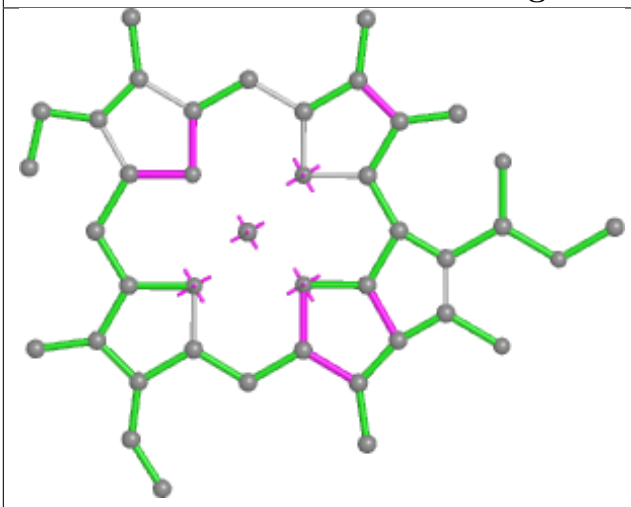


Torsions

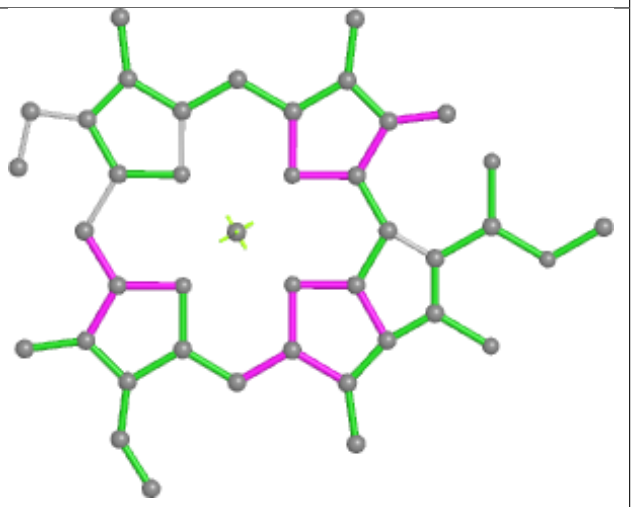


Rings

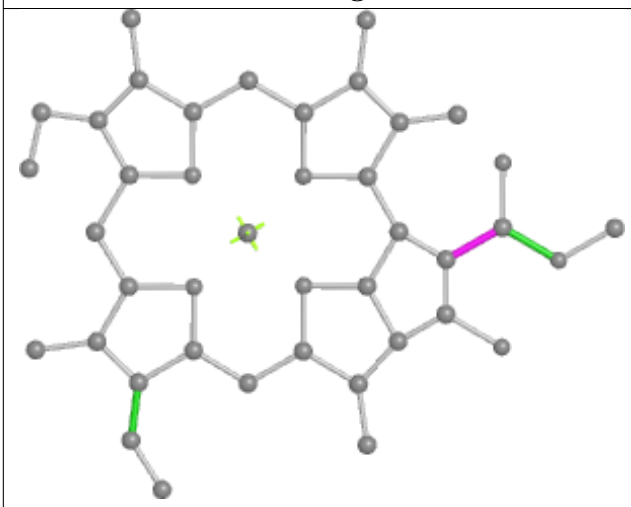
Ligand CLA 8 607



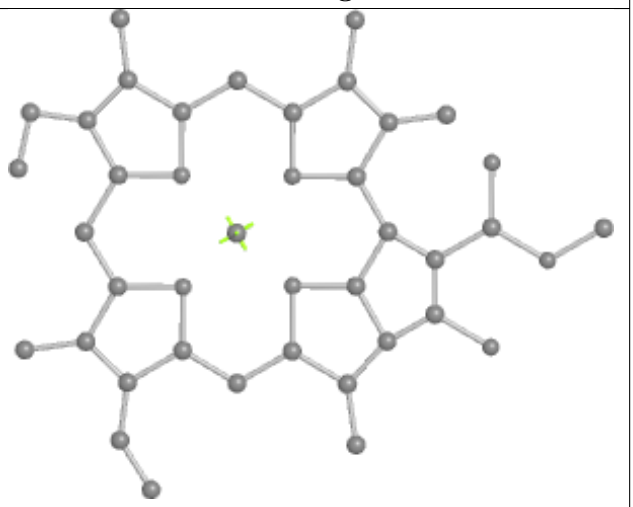
Bond lengths



Bond angles

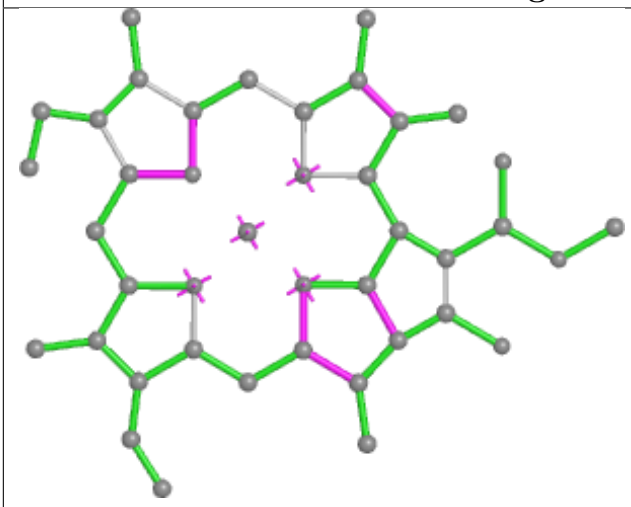


Torsions

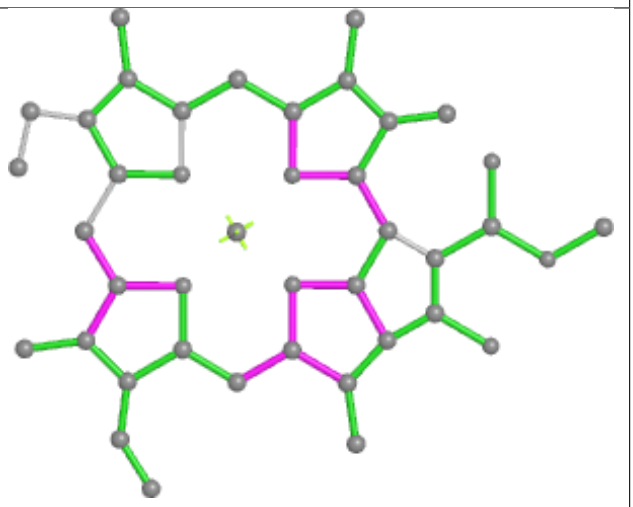


Rings

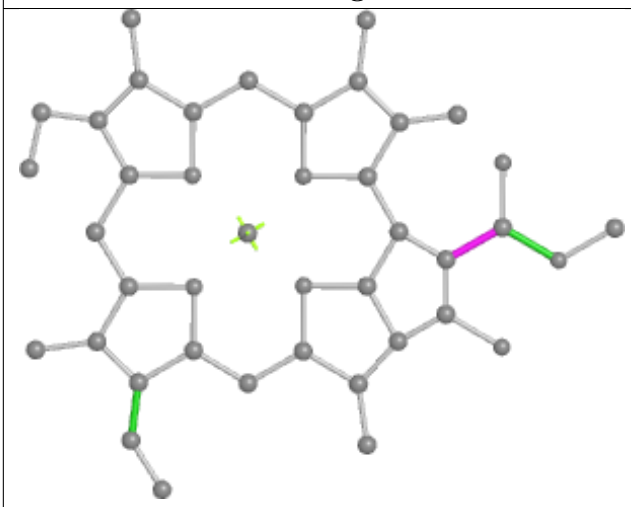
Ligand CLA 9 614



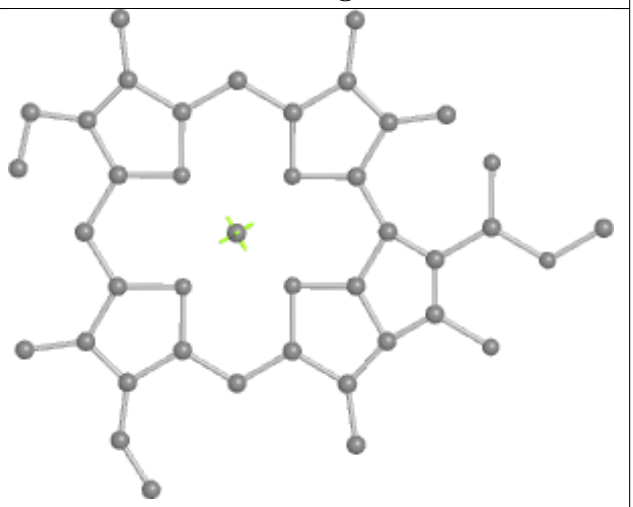
Bond lengths



Bond angles

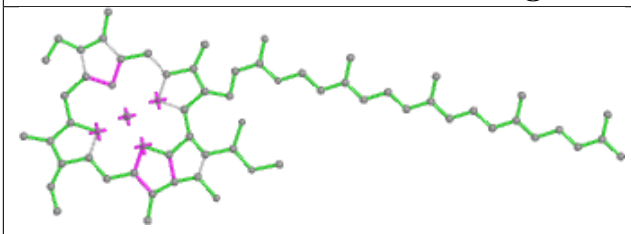


Torsions

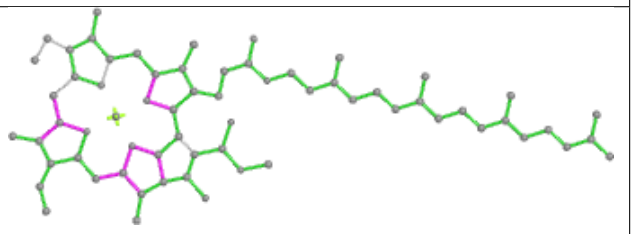


Rings

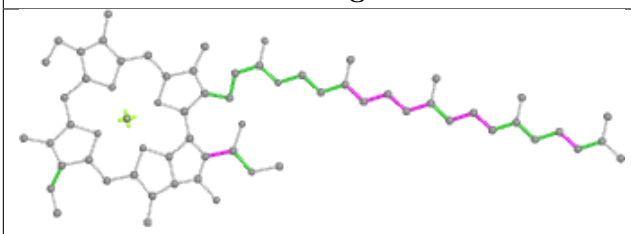
Ligand CLA B 808



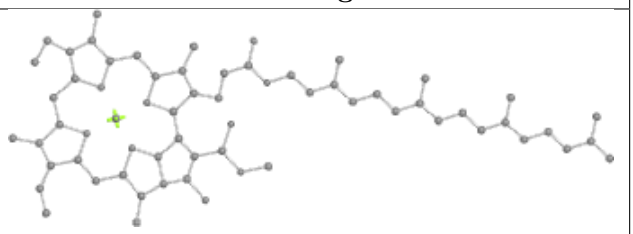
Bond lengths



Bond angles

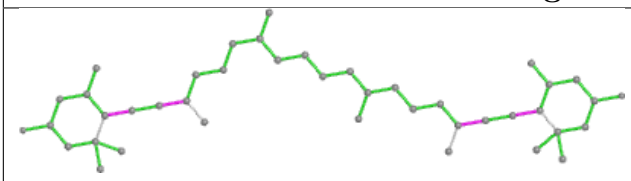


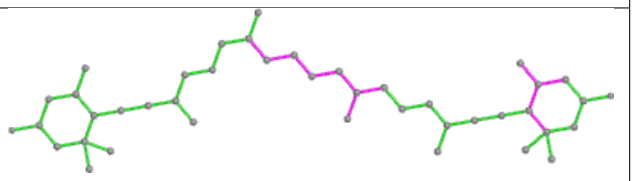
Torsions

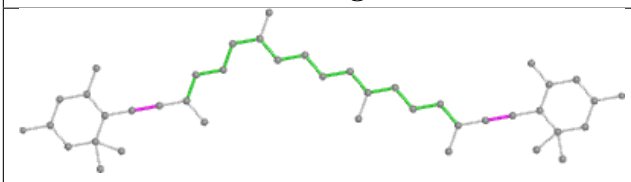


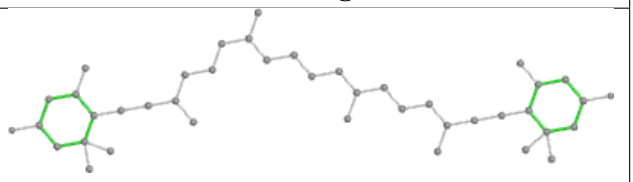
Rings

Ligand II0 c 619

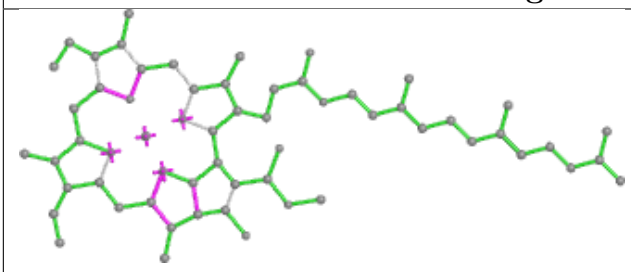

Bond lengths

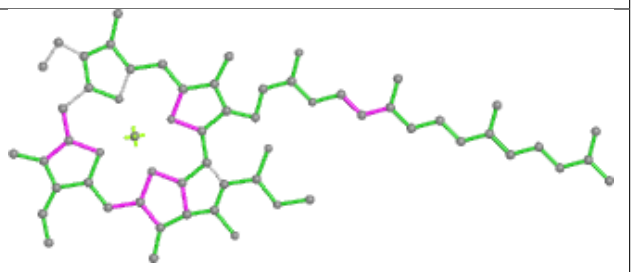

Bond angles

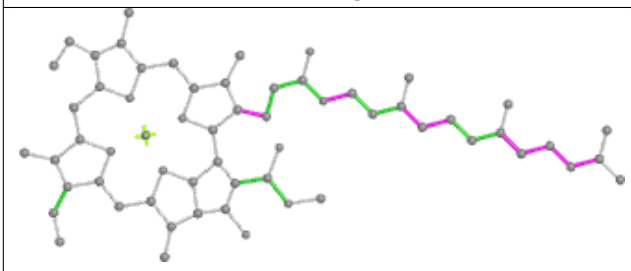

Torsions

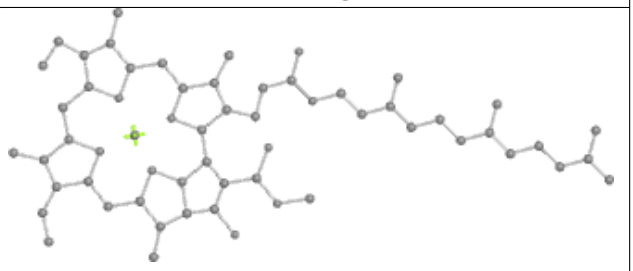

Rings

Ligand CLA F 202

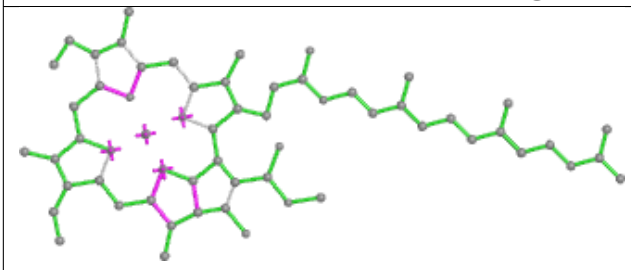

Bond lengths

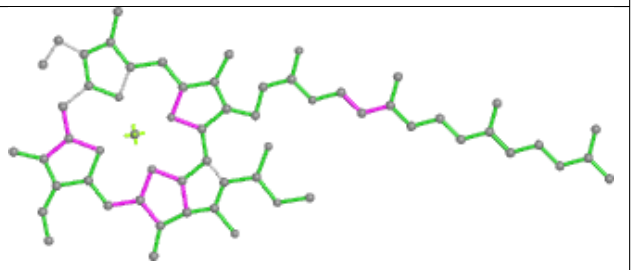

Bond angles

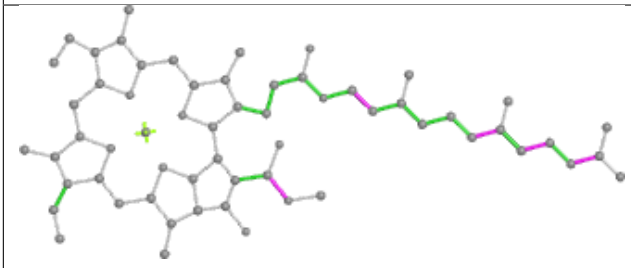

Torsions

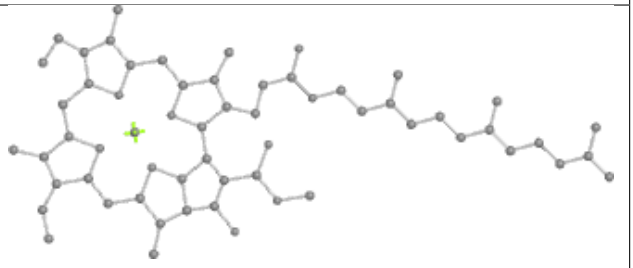

Rings

Ligand CLA 1 612

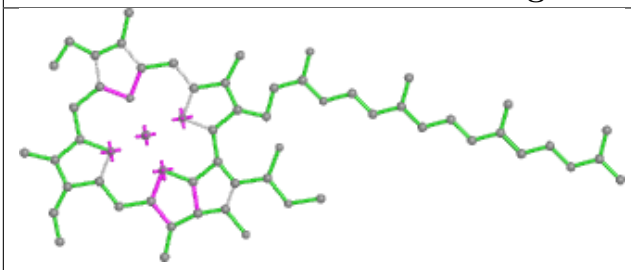

Bond lengths


Bond angles

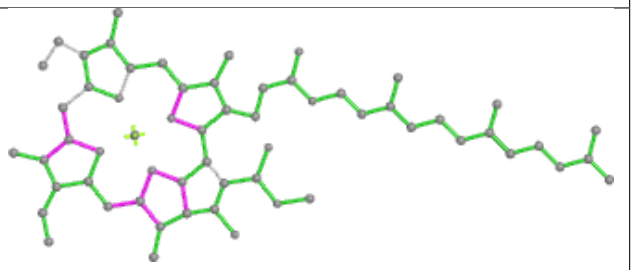

Torsions


Rings

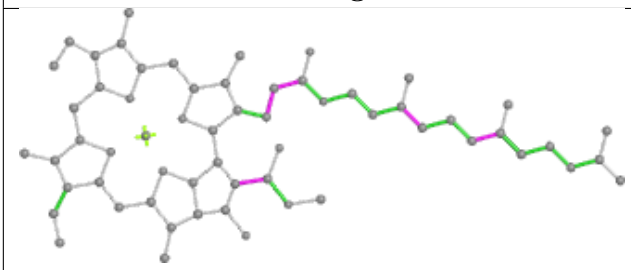
Ligand CLA b 603



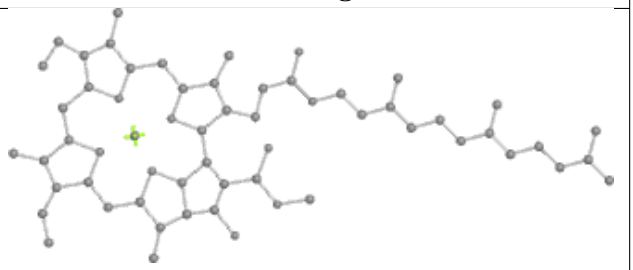
Bond lengths



Bond angles

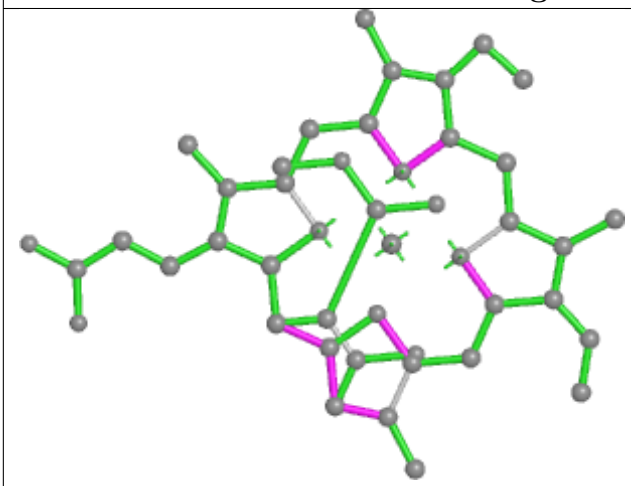


Torsions

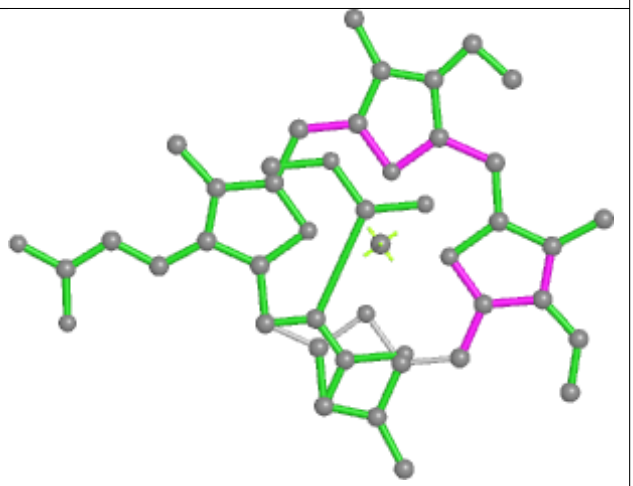


Rings

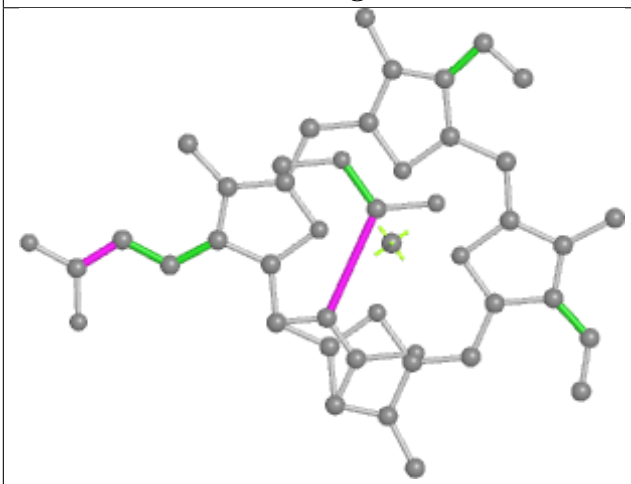
Ligand KC2 5 610



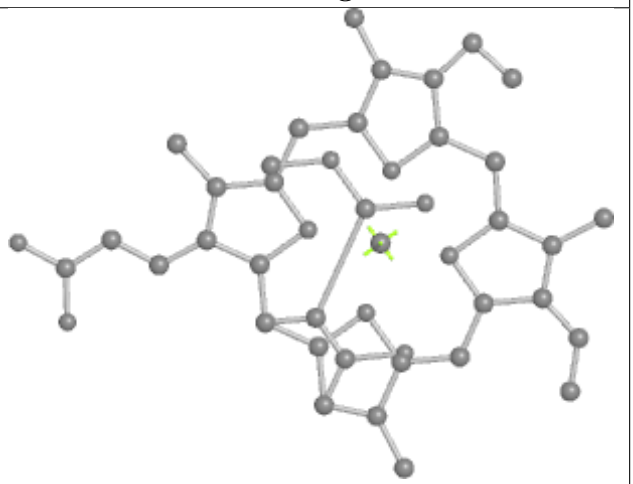
Bond lengths



Bond angles

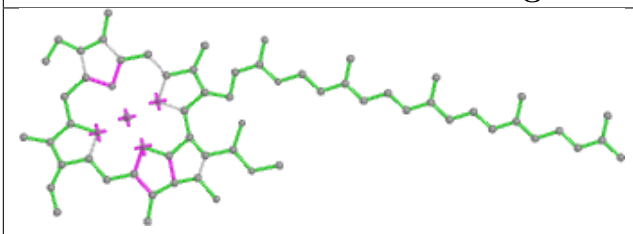


Torsions

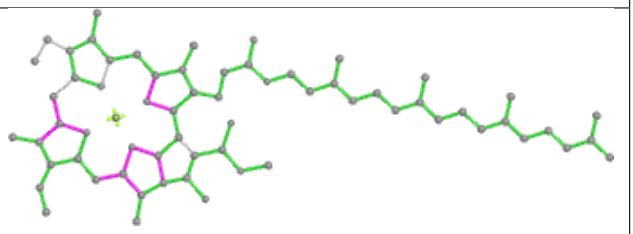


Rings

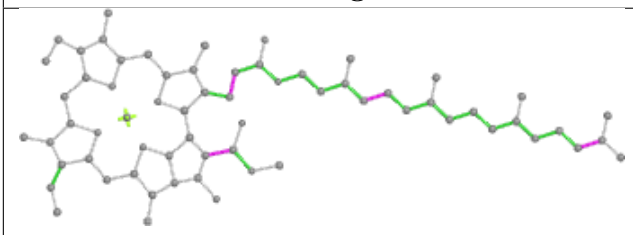
Ligand CLA A 838



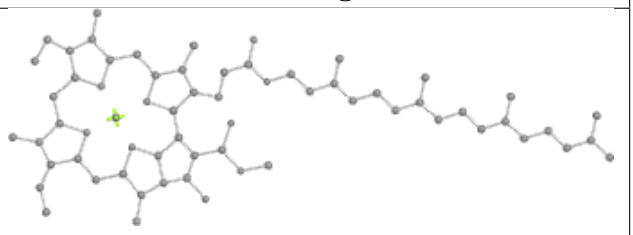
Bond lengths



Bond angles

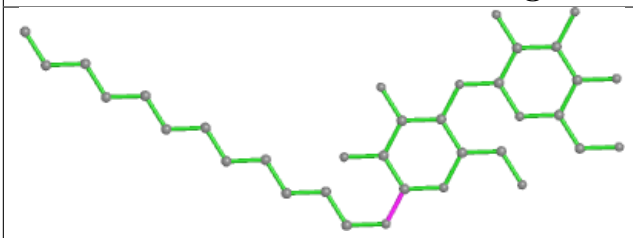


Torsions

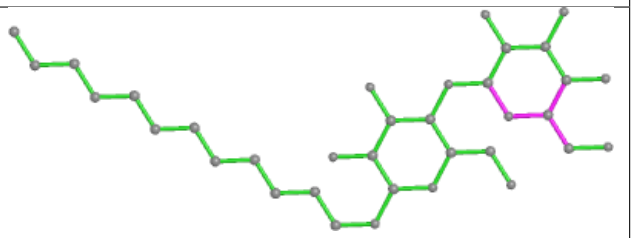


Rings

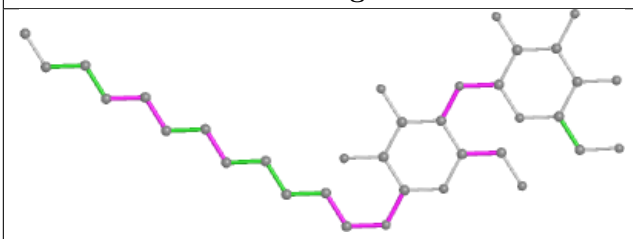
Ligand LMU 4 618



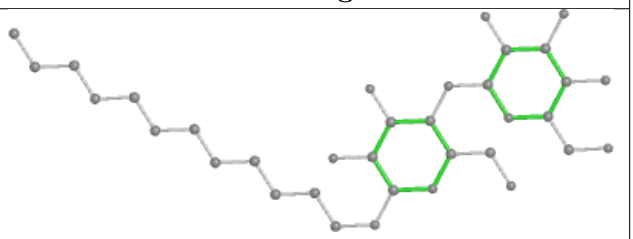
Bond lengths



Bond angles

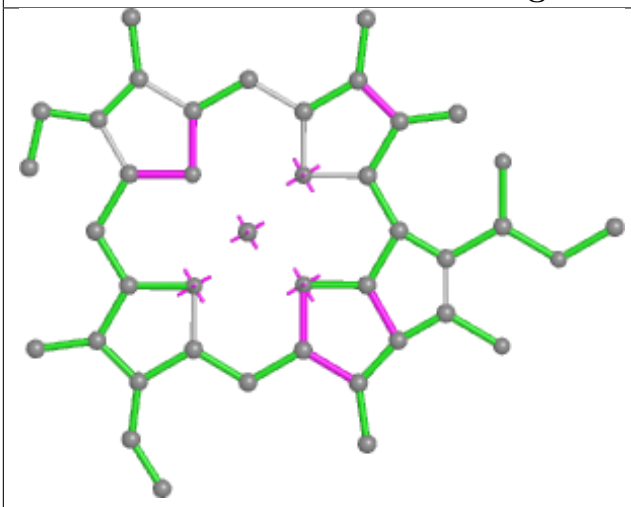


Torsions

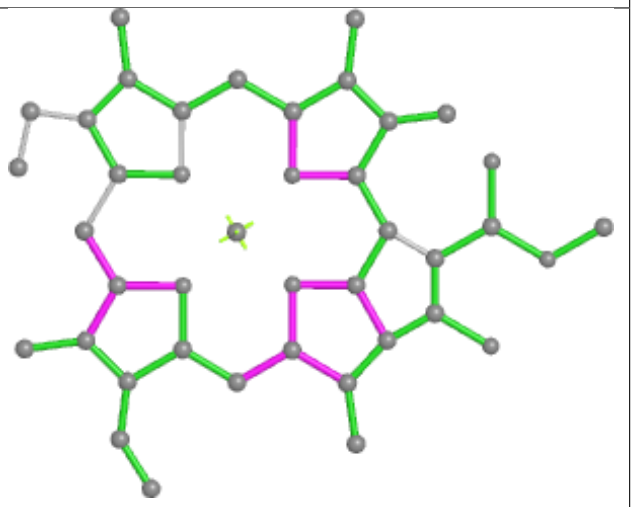


Rings

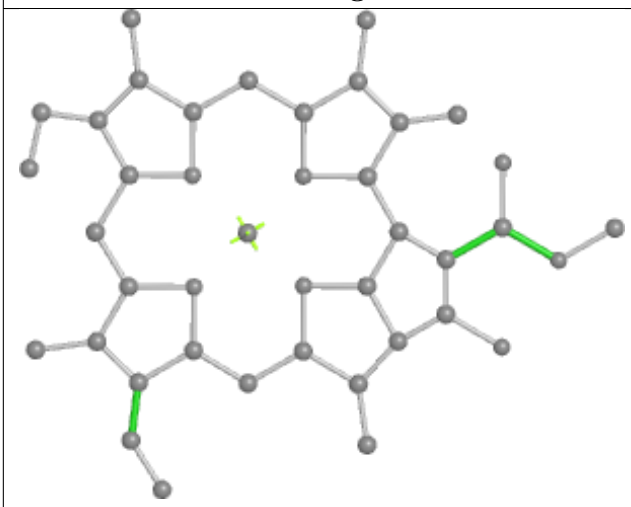
Ligand CLA 2 609



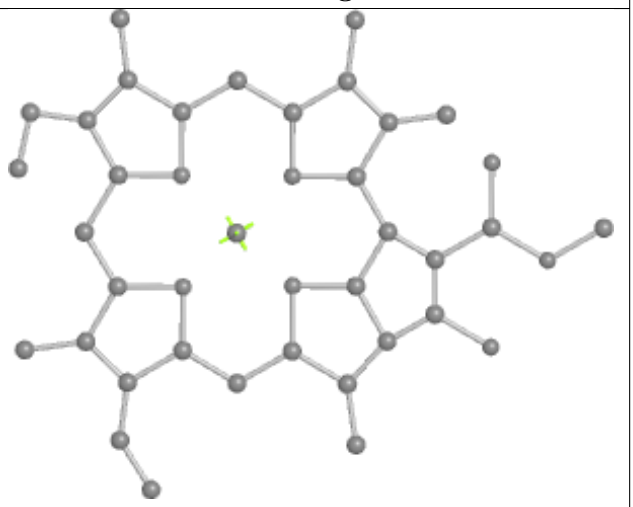
Bond lengths



Bond angles

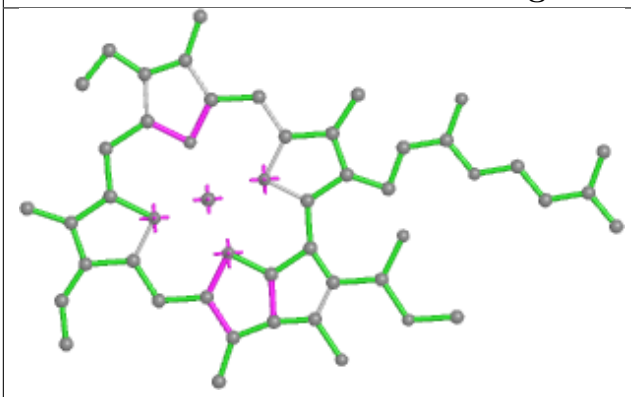


Torsions

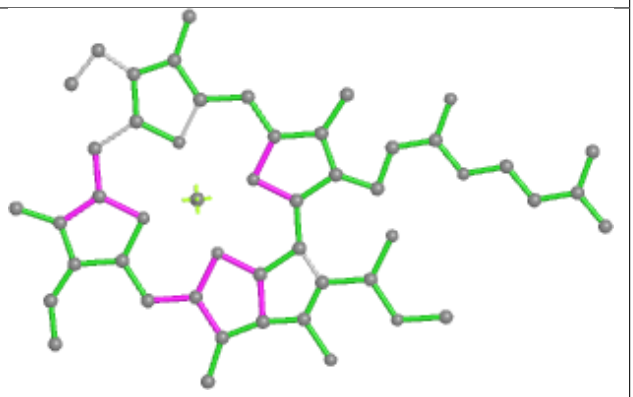


Rings

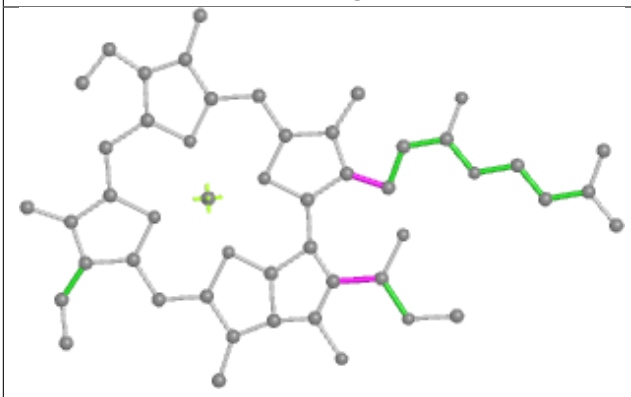
Ligand CLA 3 611



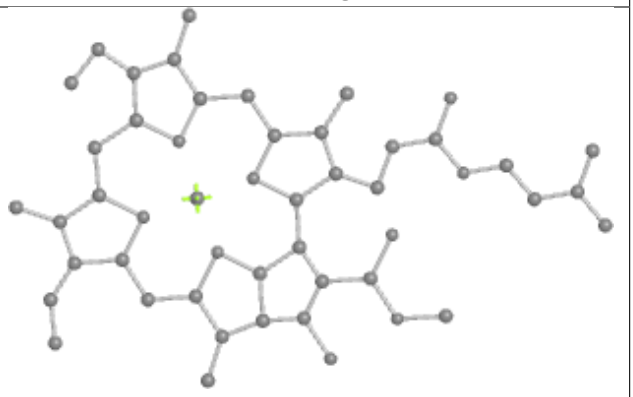
Bond lengths



Bond angles

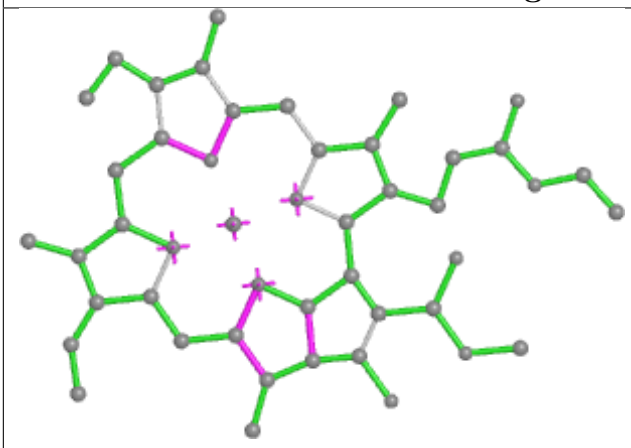


Torsions

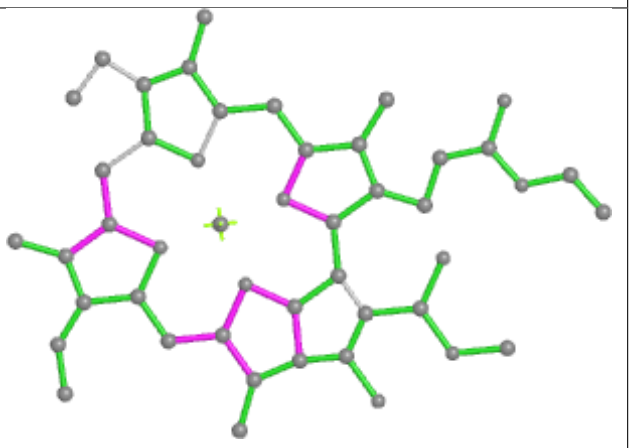


Rings

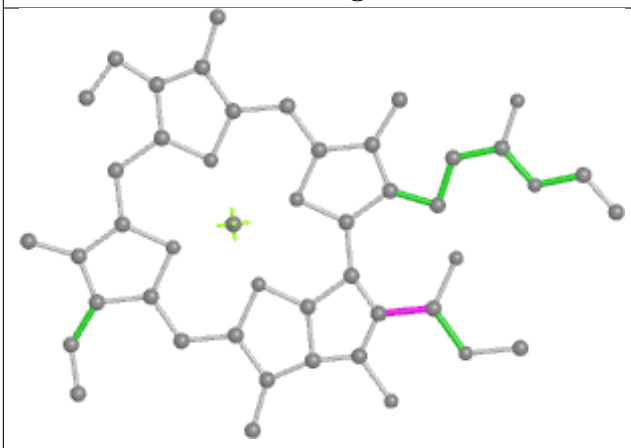
Ligand CLA B 836



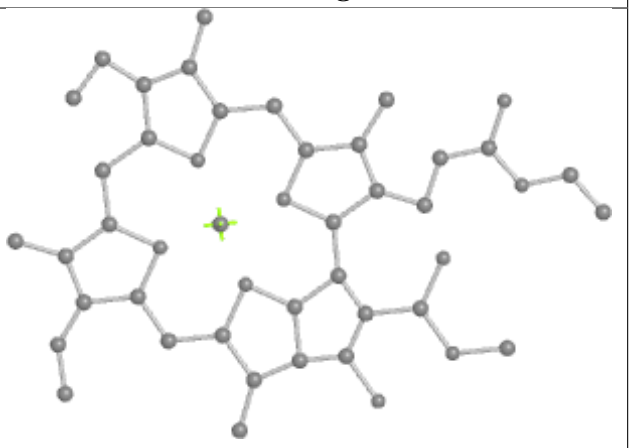
Bond lengths



Bond angles

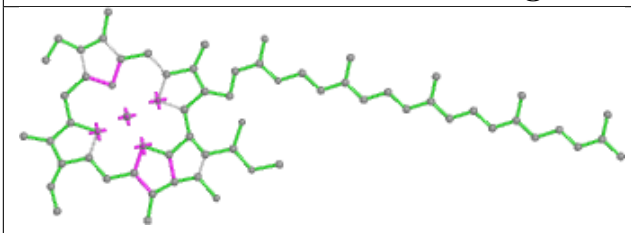


Torsions

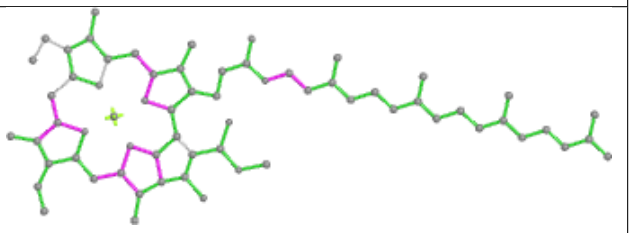


Rings

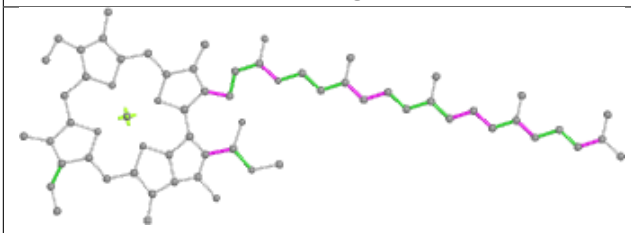
Ligand CLA B 822



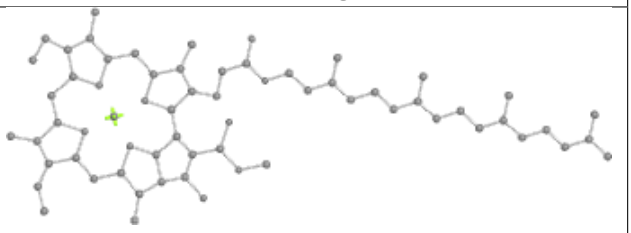
Bond lengths



Bond angles

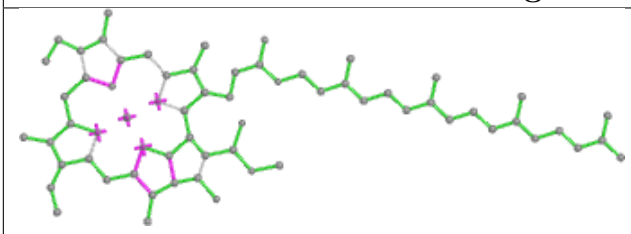


Torsions

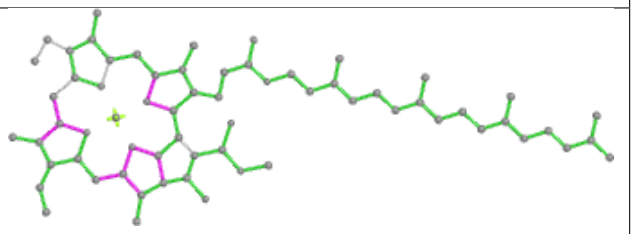


Rings

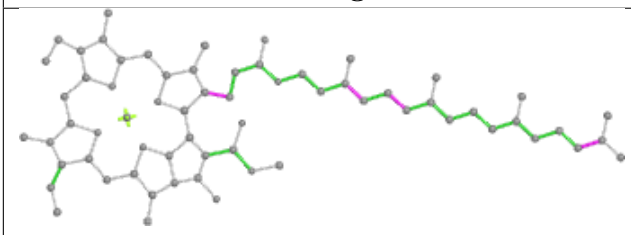
Ligand CLA B 827



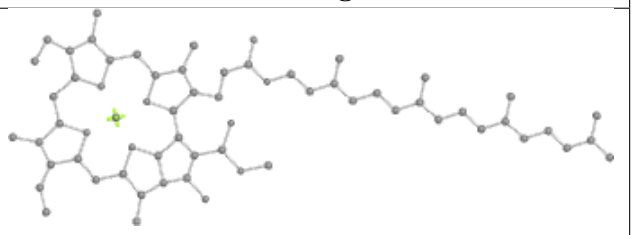
Bond lengths



Bond angles

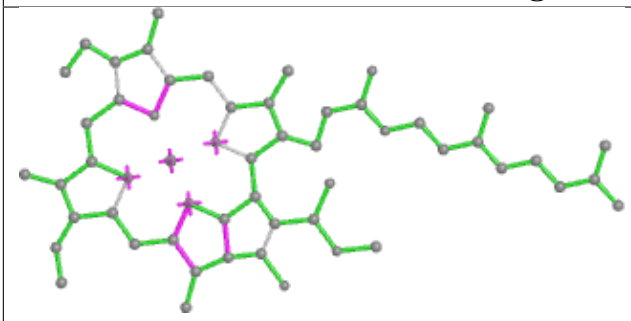


Torsions

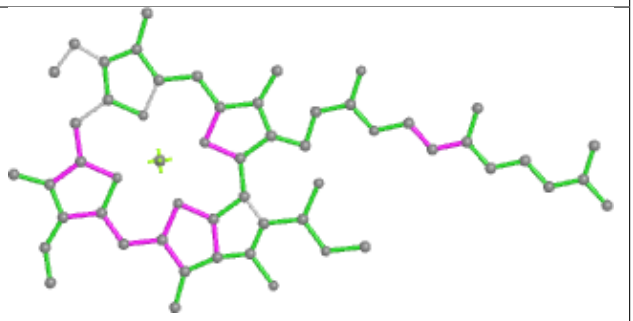


Rings

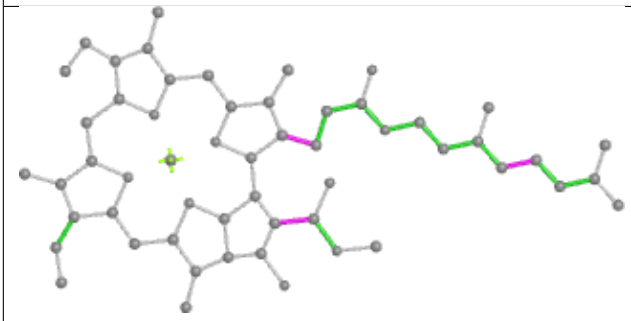
Ligand CLA 6 611



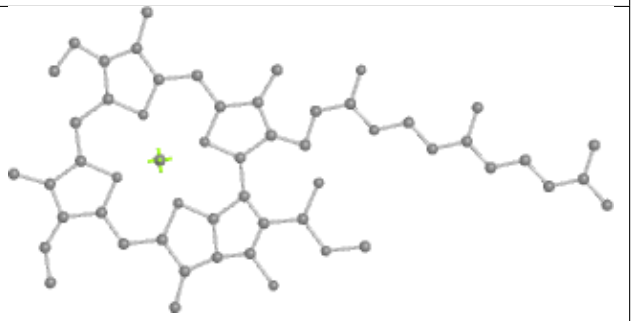
Bond lengths



Bond angles

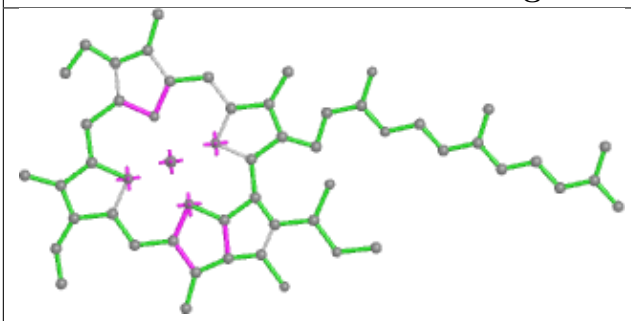


Torsions

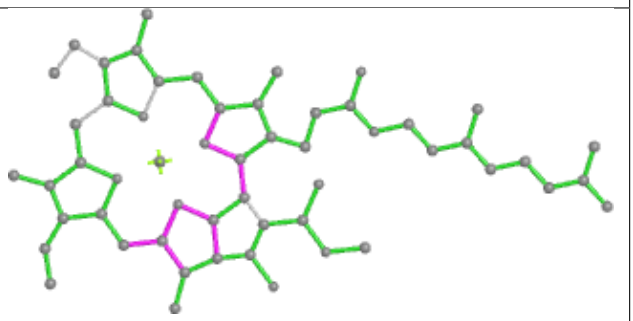


Rings

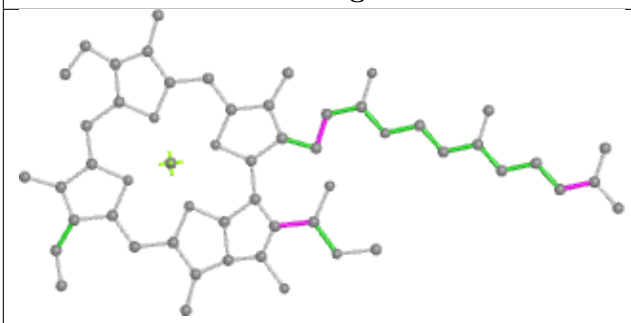
Ligand CLA A 840



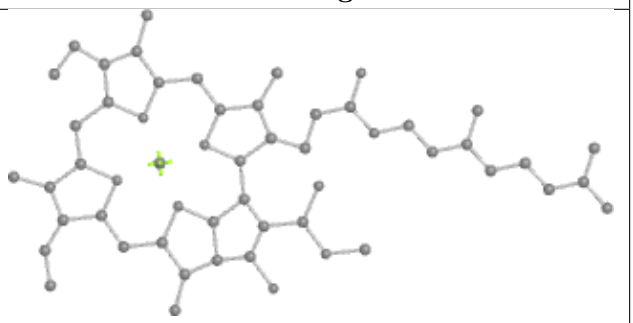
Bond lengths



Bond angles

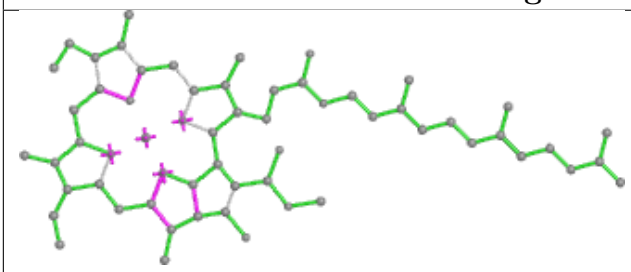


Torsions

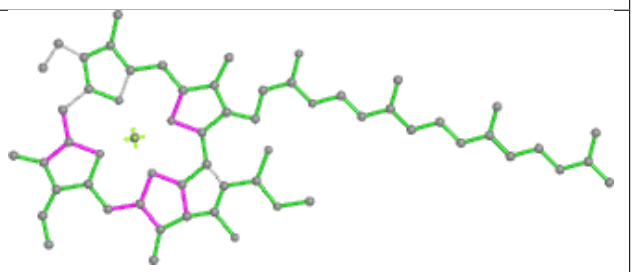


Rings

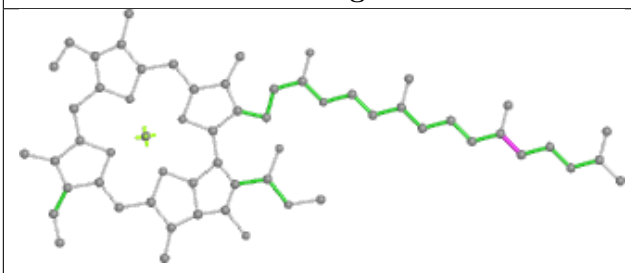
Ligand CLA B 830



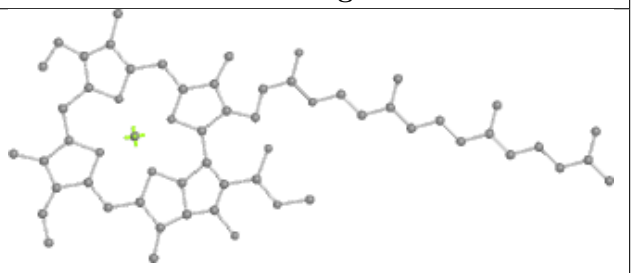
Bond lengths



Bond angles

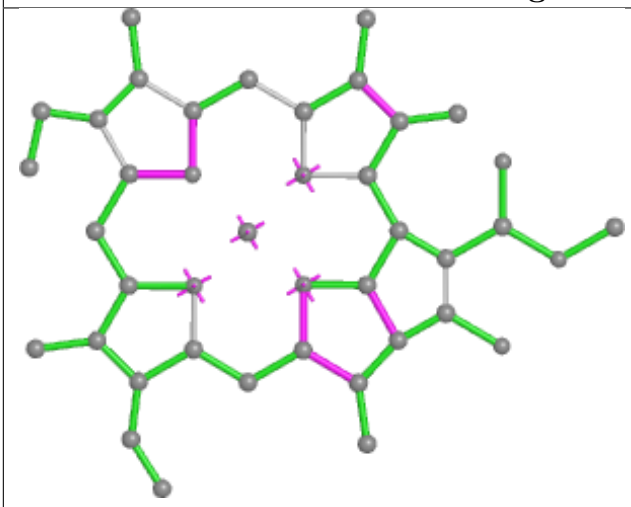


Torsions

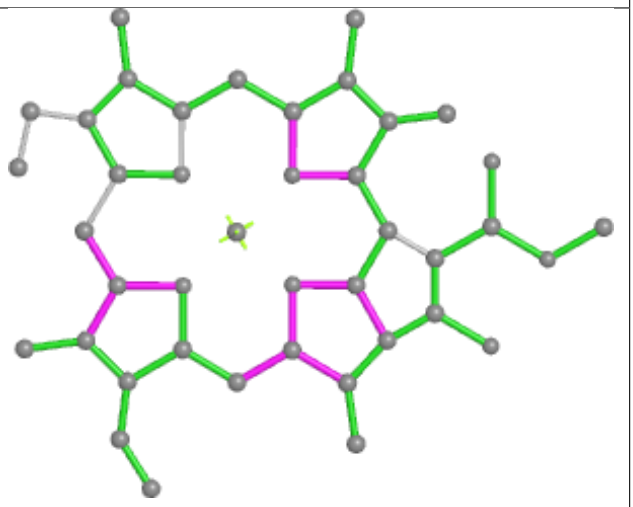


Rings

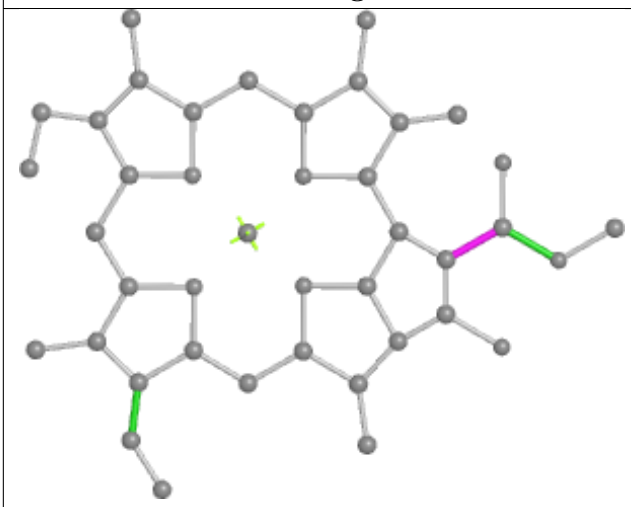
Ligand CLA 9 611



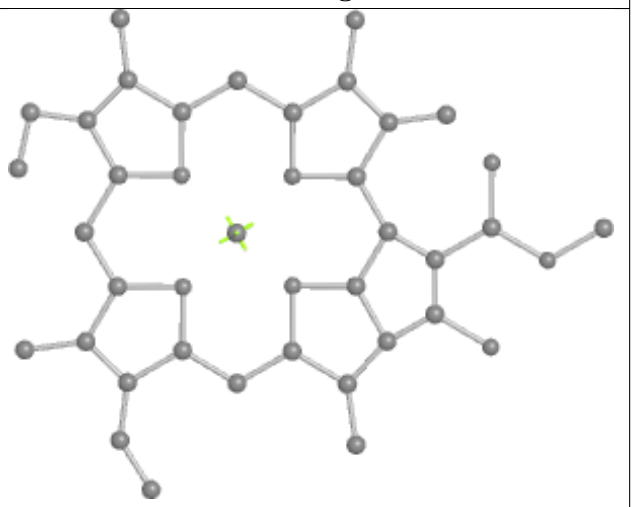
Bond lengths



Bond angles

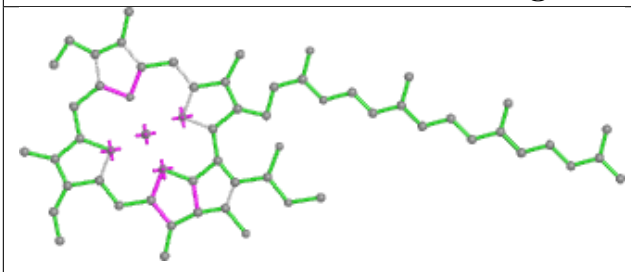


Torsions

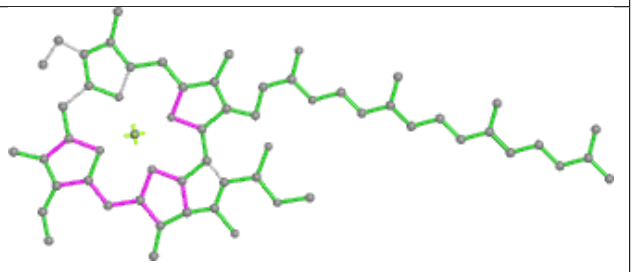


Rings

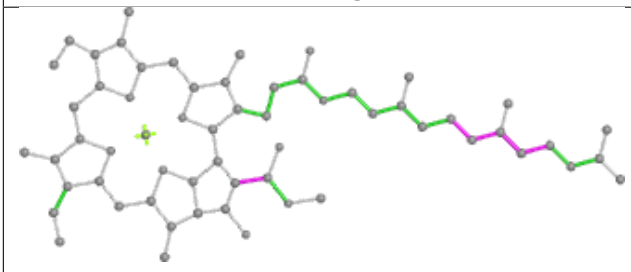
Ligand CLA c 608



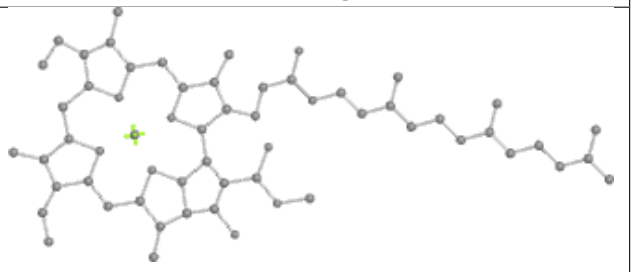
Bond lengths



Bond angles

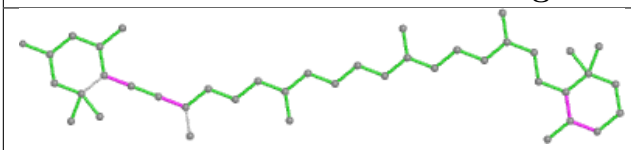


Torsions

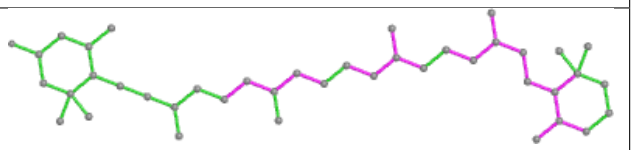


Rings

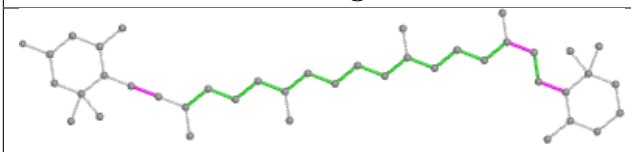
Ligand IHT 9 619



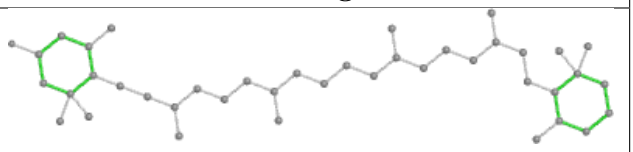
Bond lengths



Bond angles

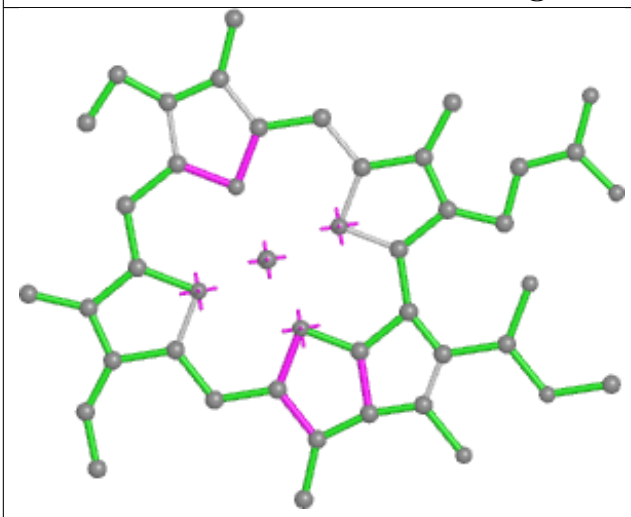


Torsions

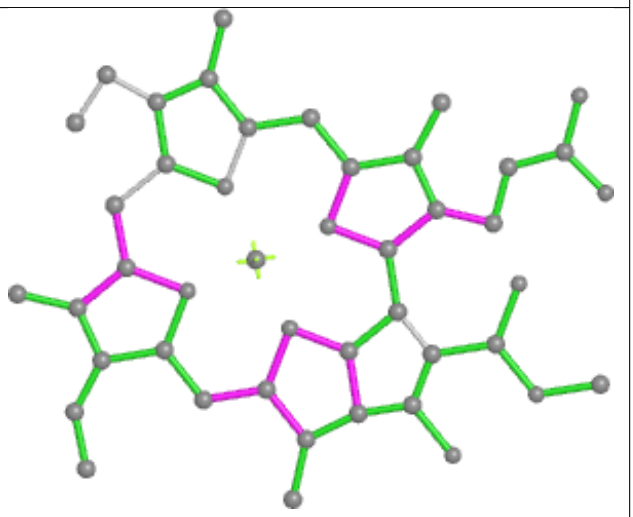


Rings

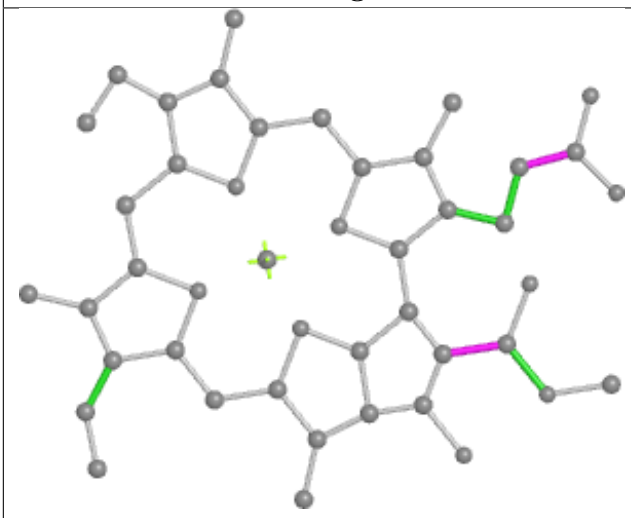
Ligand CLA 5 603



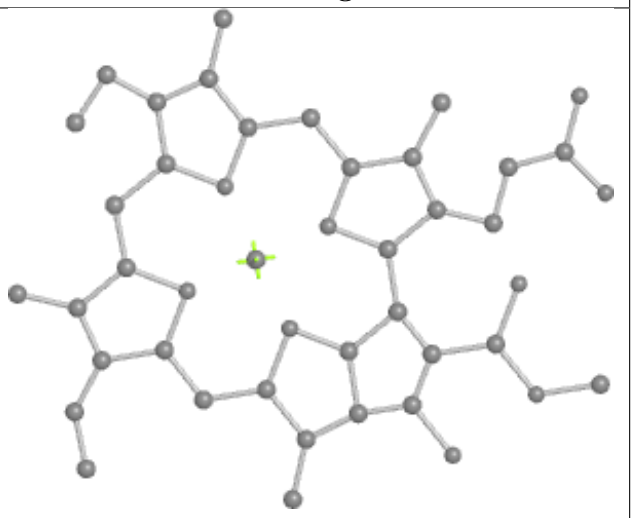
Bond lengths



Bond angles

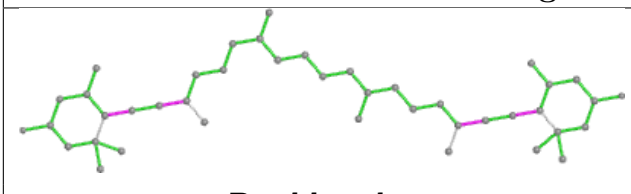


Torsions

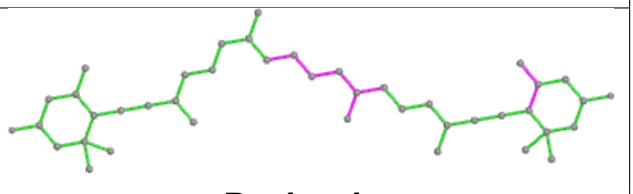


Rings

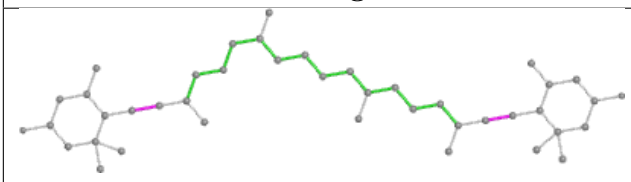
Ligand II0 B 843



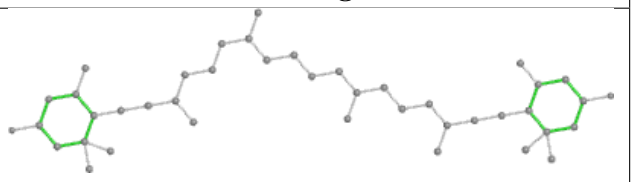
Bond lengths



Bond angles

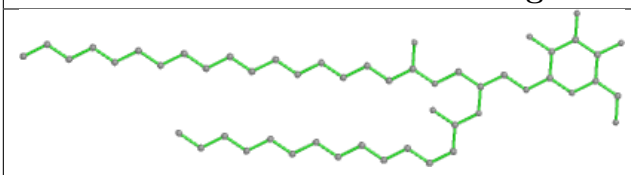


Torsions

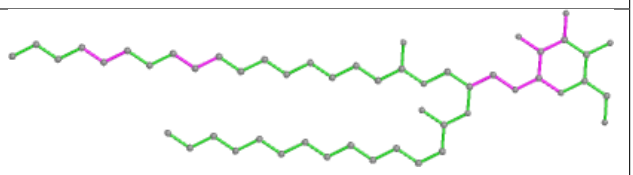


Rings

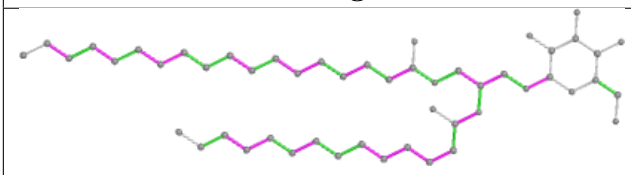
Ligand LMG I 102



Bond lengths



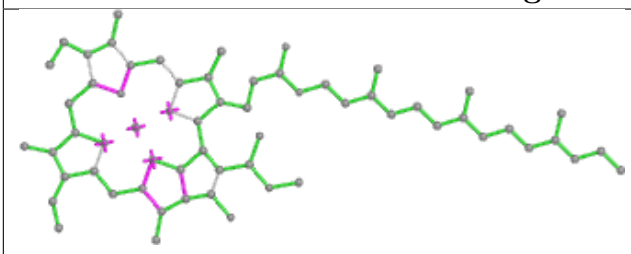
Bond angles



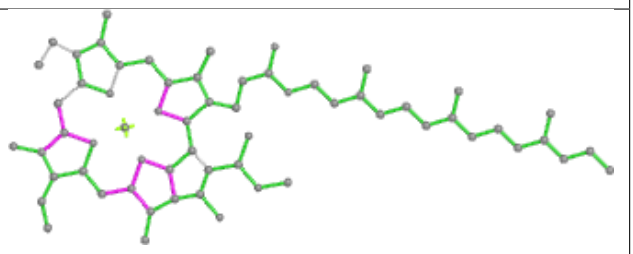
Torsions

Rings

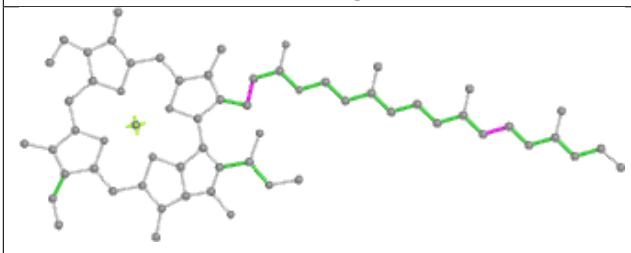
Ligand CLA A 815



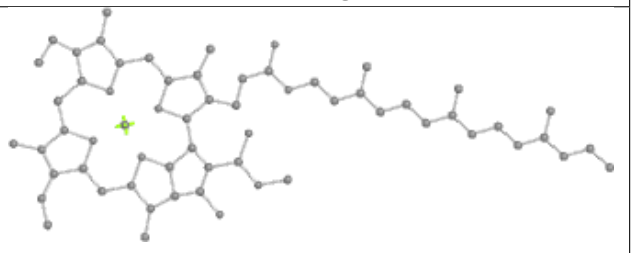
Bond lengths



Bond angles

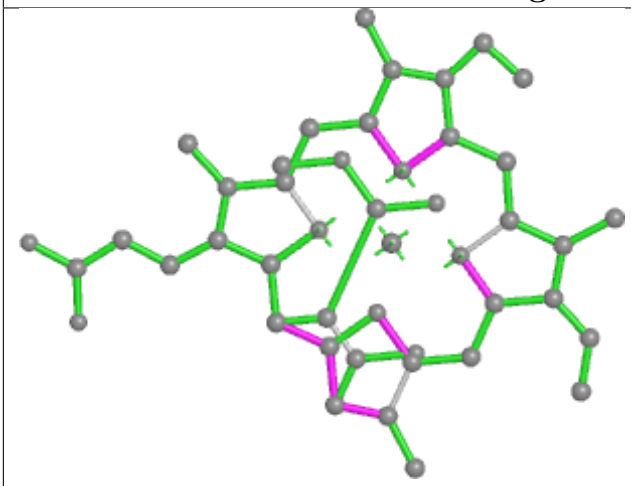


Torsions

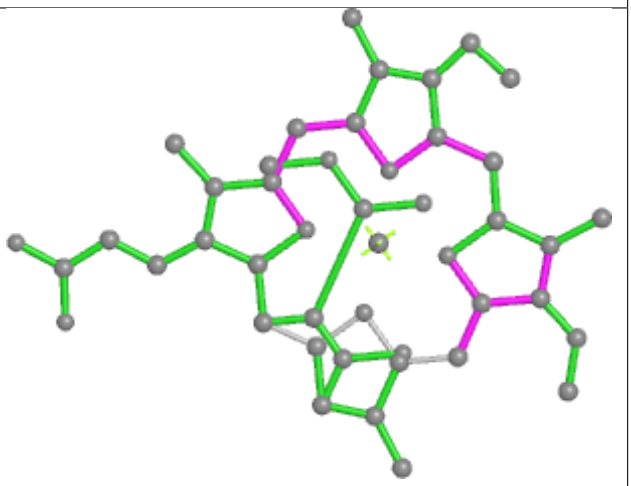


Rings

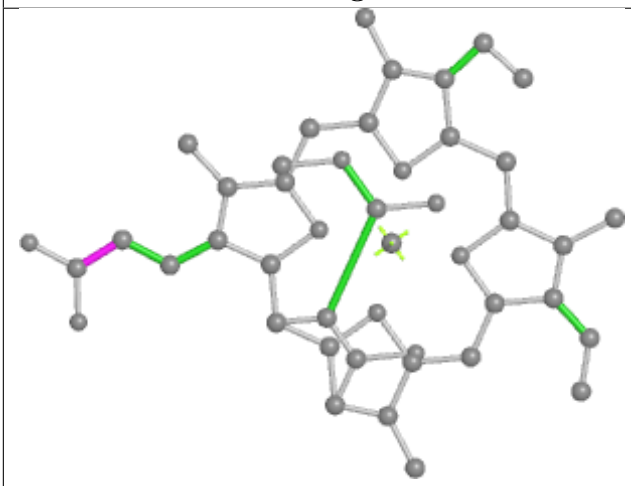
Ligand KC2 b 609



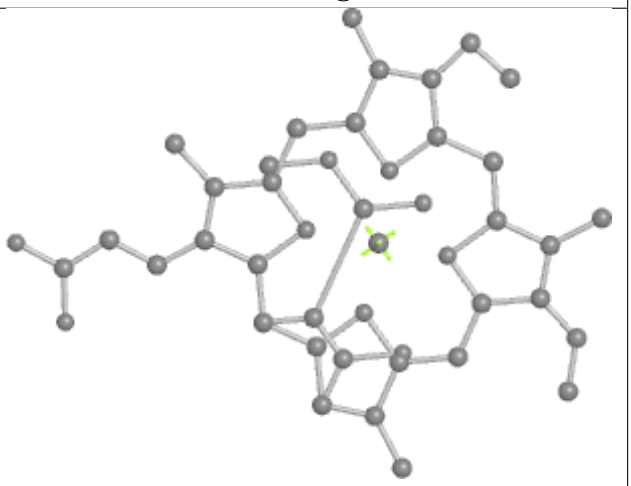
Bond lengths



Bond angles

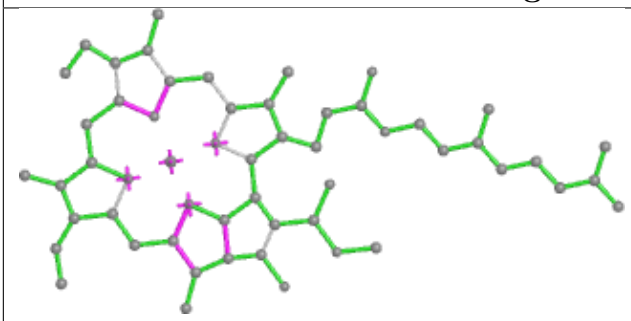


Torsions

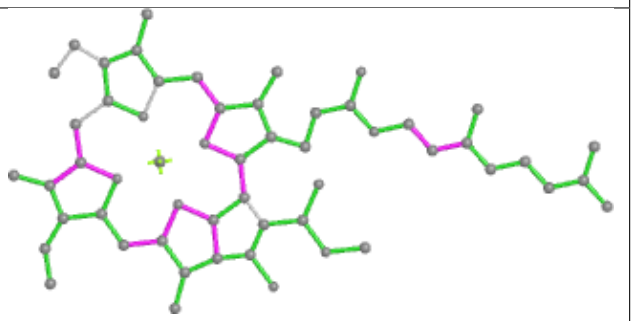


Rings

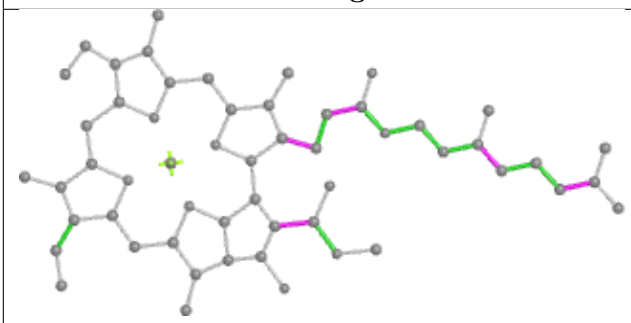
Ligand CLA R 202



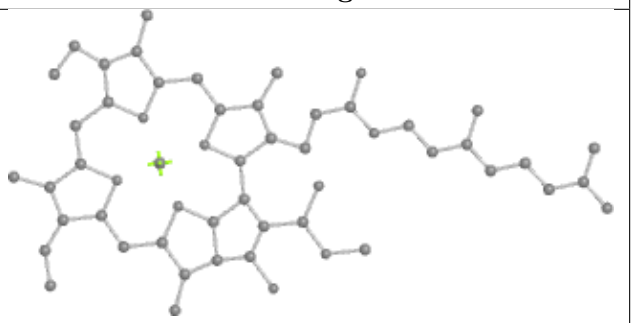
Bond lengths



Bond angles

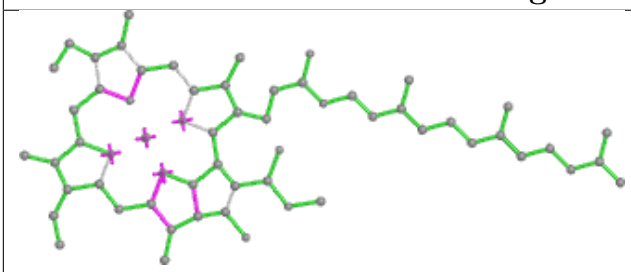


Torsions

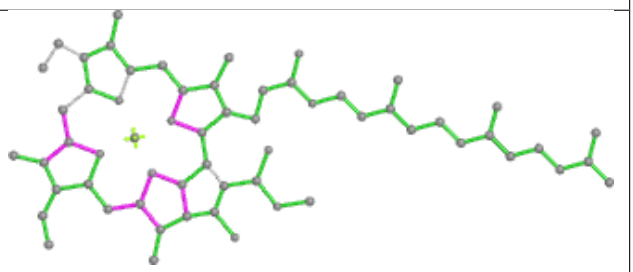


Rings

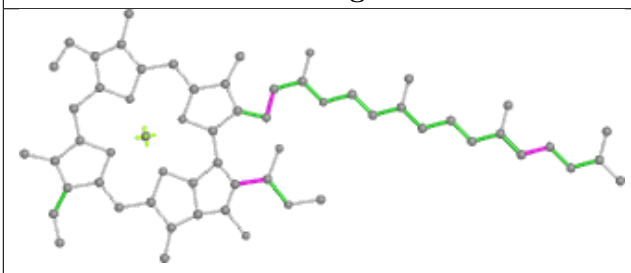
Ligand CLA c 604



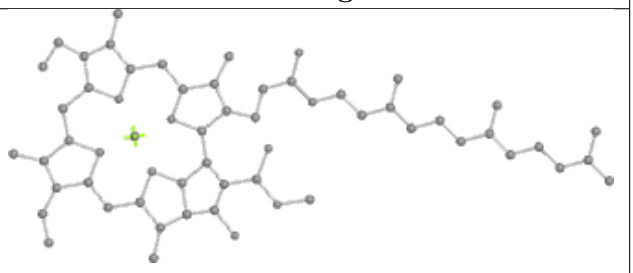
Bond lengths



Bond angles

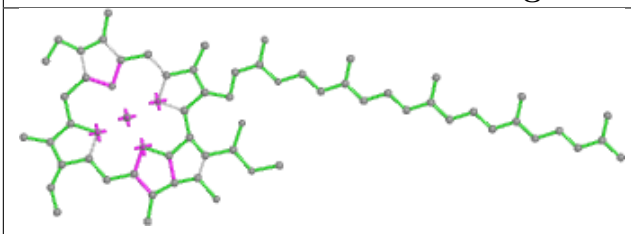


Torsions

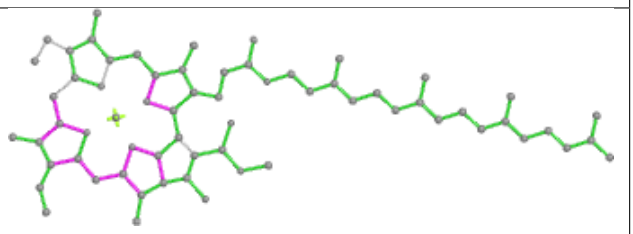


Rings

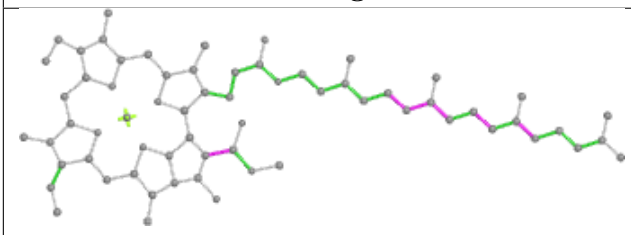
Ligand CLA A 825



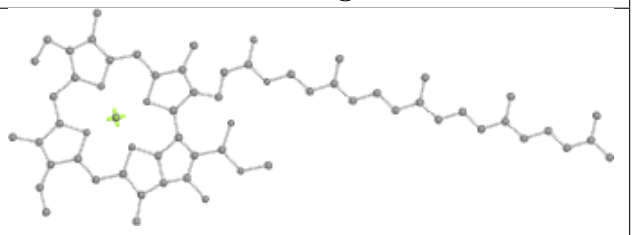
Bond lengths



Bond angles

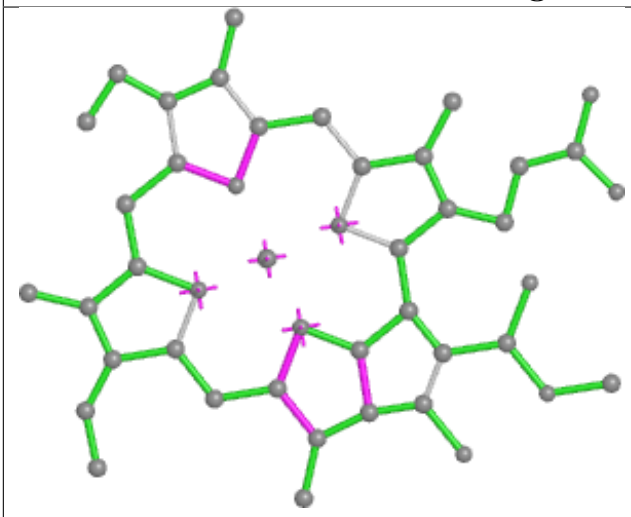


Torsions

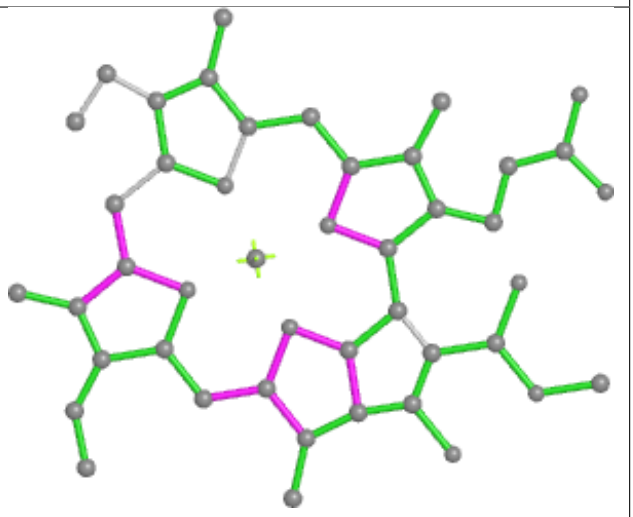


Rings

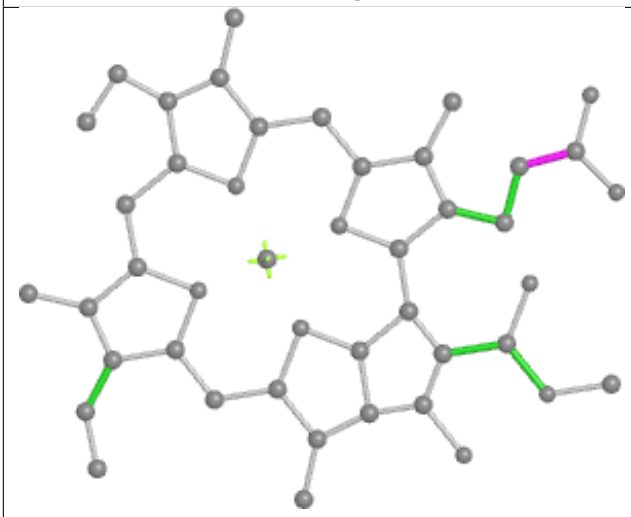
Ligand CLA 7 607



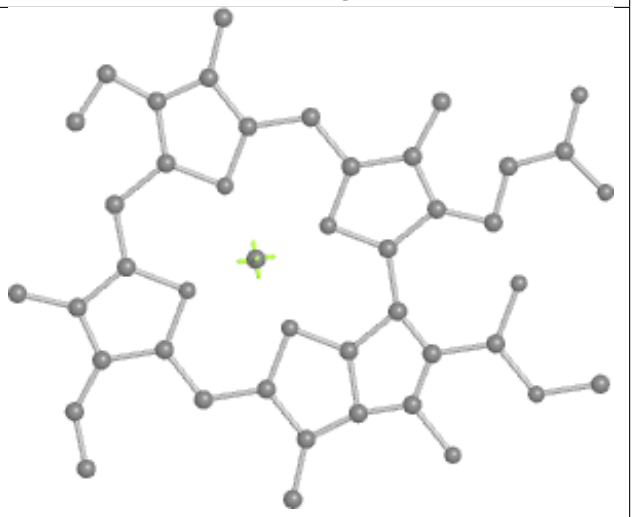
Bond lengths



Bond angles

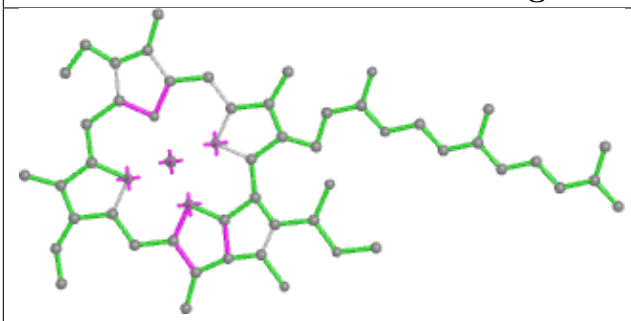


Torsions

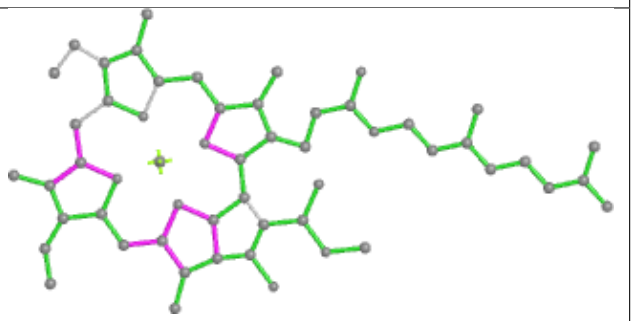


Rings

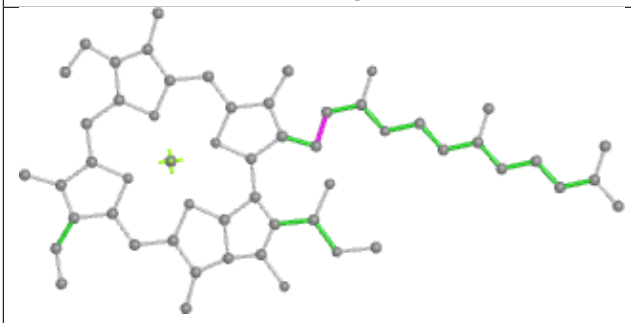
Ligand CLA 2 604



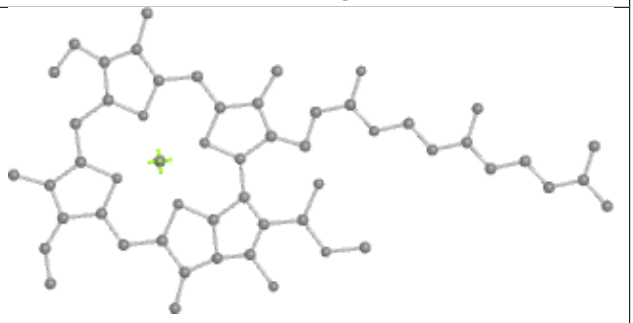
Bond lengths



Bond angles

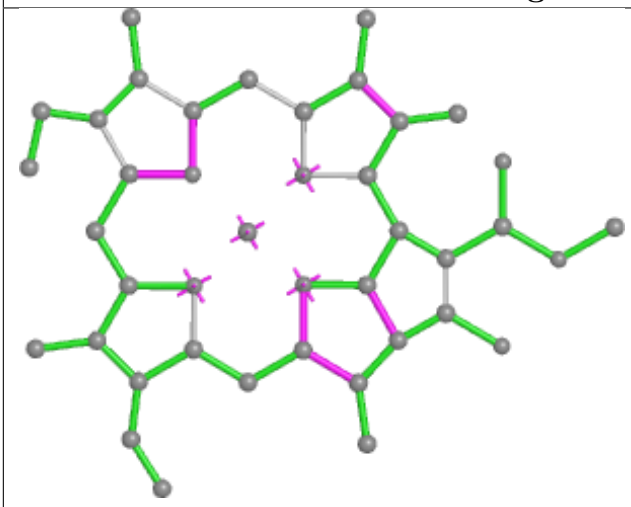


Torsions

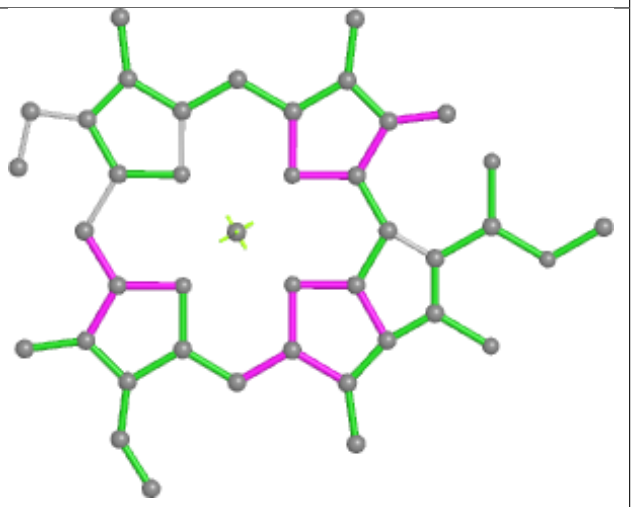


Rings

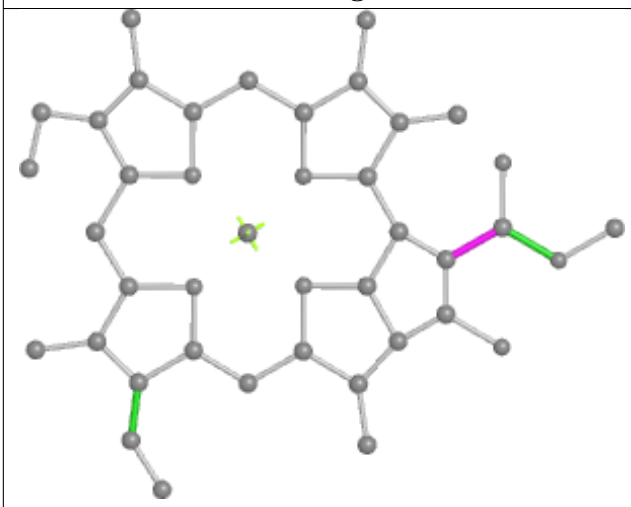
Ligand CLA d 606



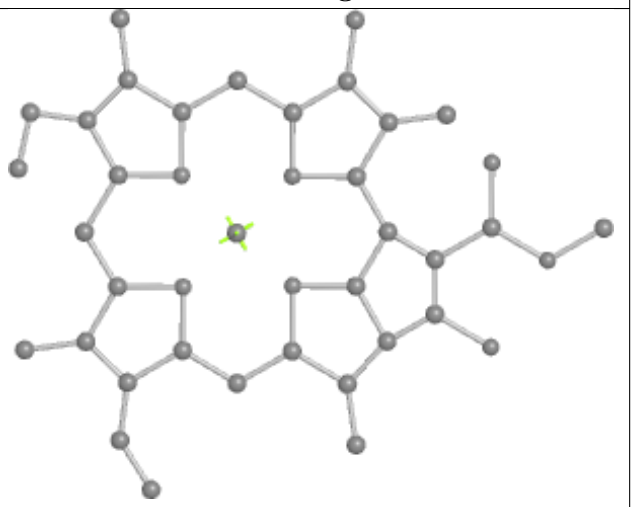
Bond lengths



Bond angles

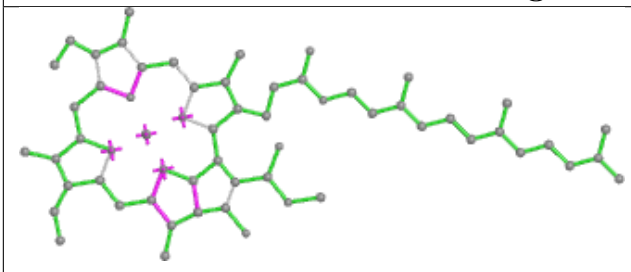


Torsions

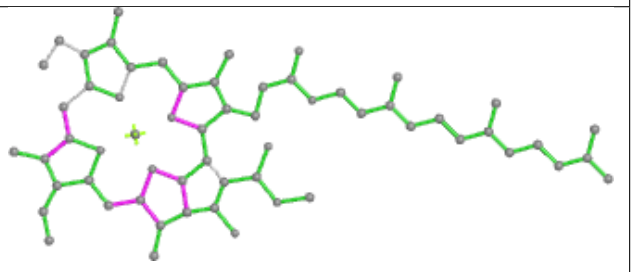


Rings

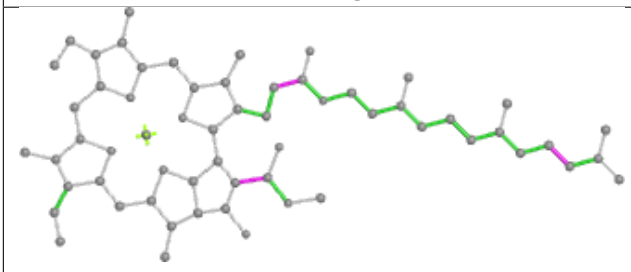
Ligand CLA d 604



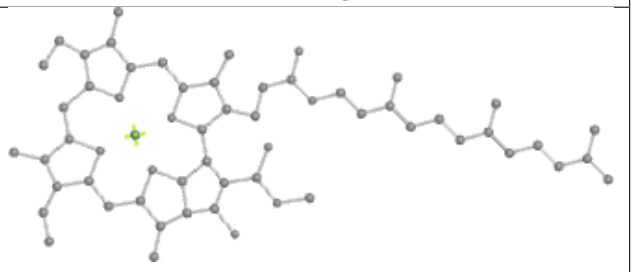
Bond lengths



Bond angles

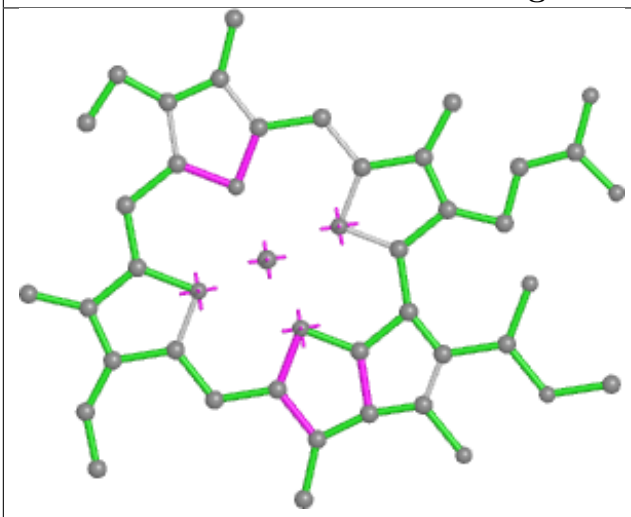


Torsions

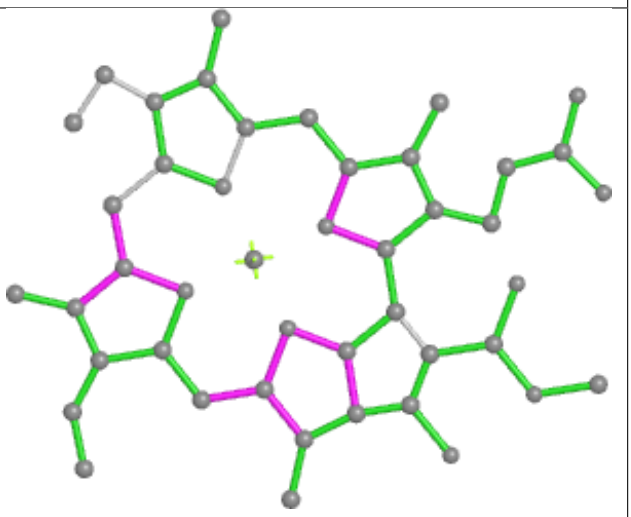


Rings

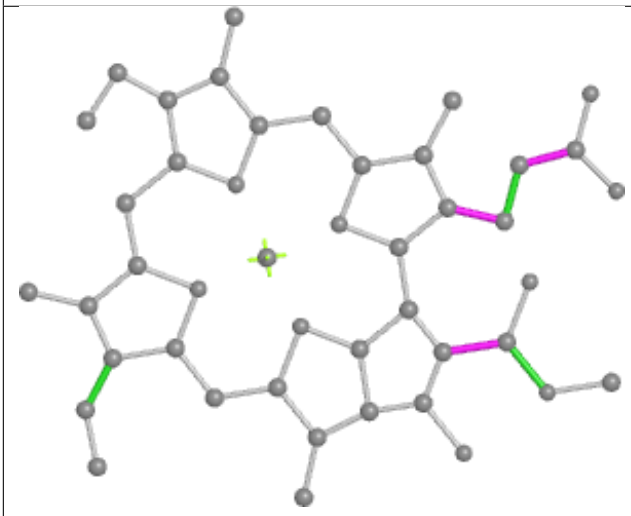
Ligand CLA a 601



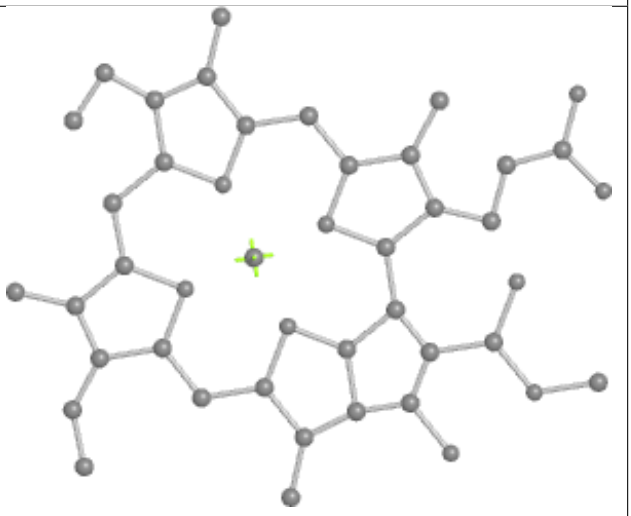
Bond lengths



Bond angles

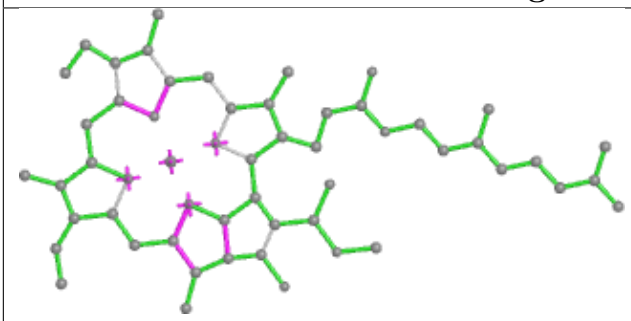


Torsions

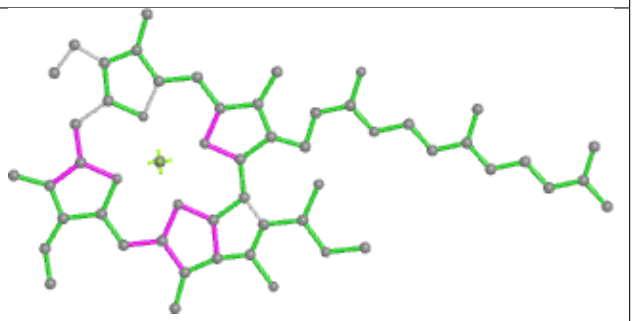


Rings

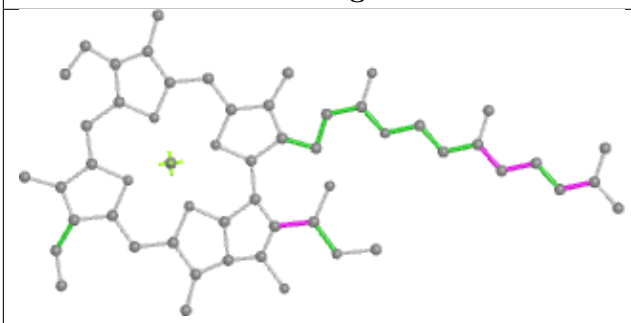
Ligand CLA 4 604



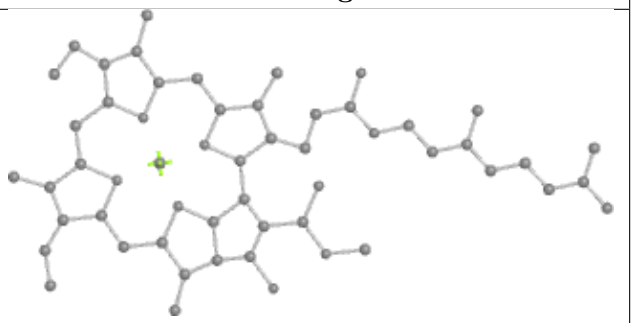
Bond lengths



Bond angles

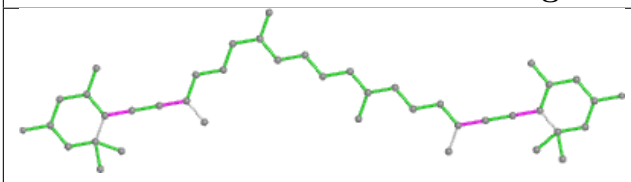


Torsions

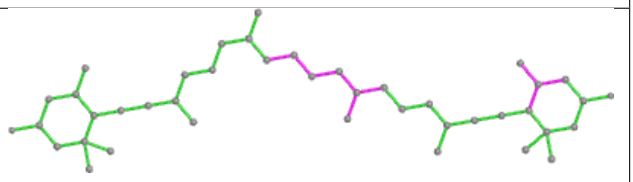


Rings

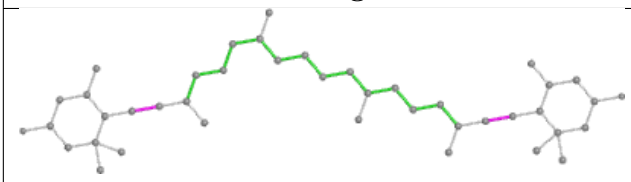
Ligand II0 d 613



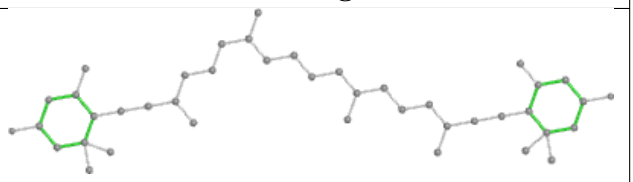
Bond lengths



Bond angles

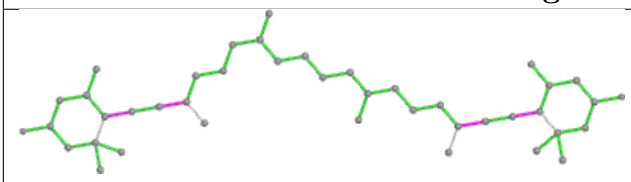


Torsions

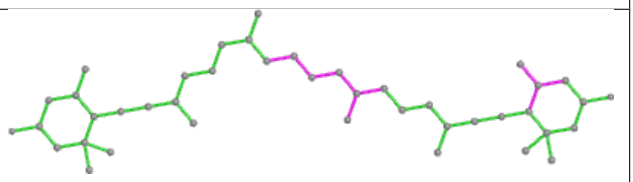


Rings

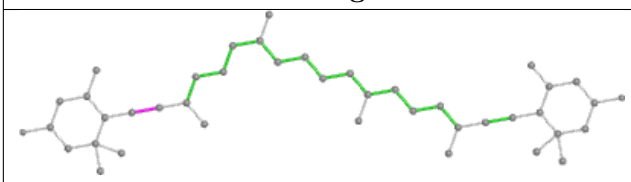
Ligand II0 4 614



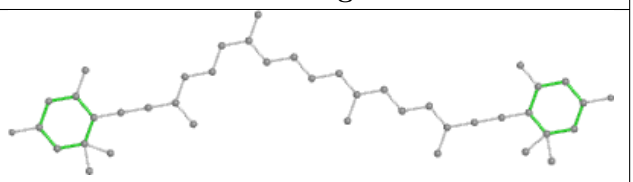
Bond lengths



Bond angles

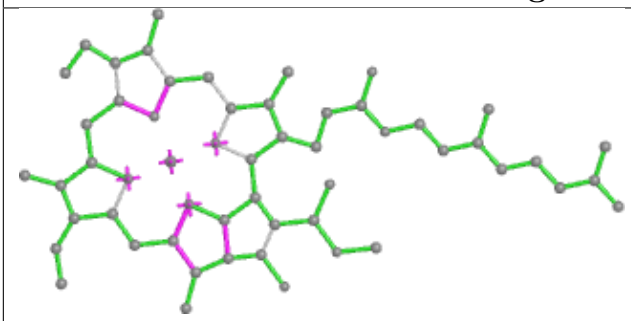


Torsions

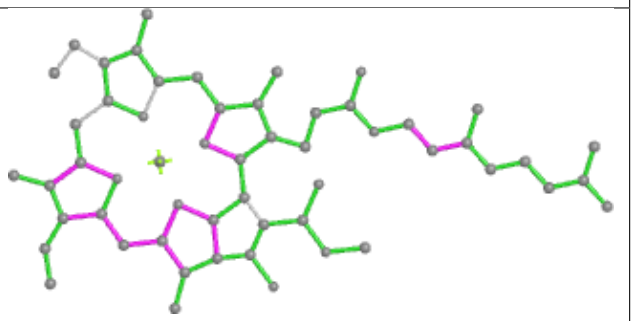


Rings

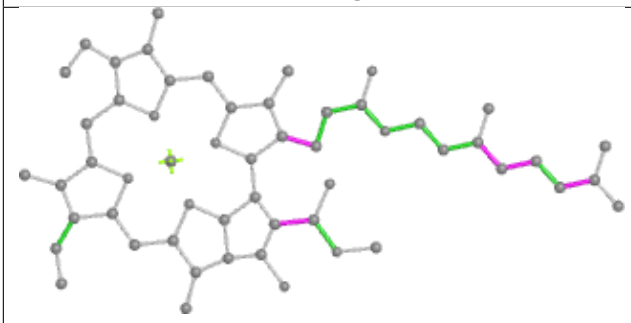
Ligand CLA 9 608



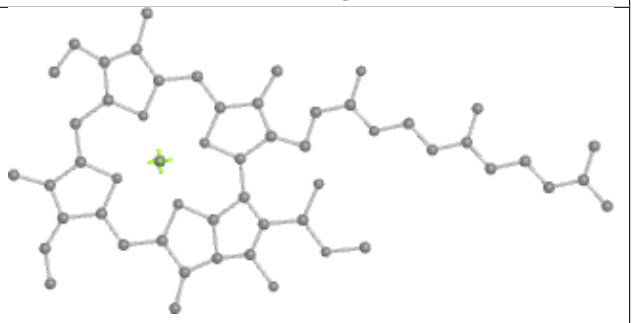
Bond lengths



Bond angles

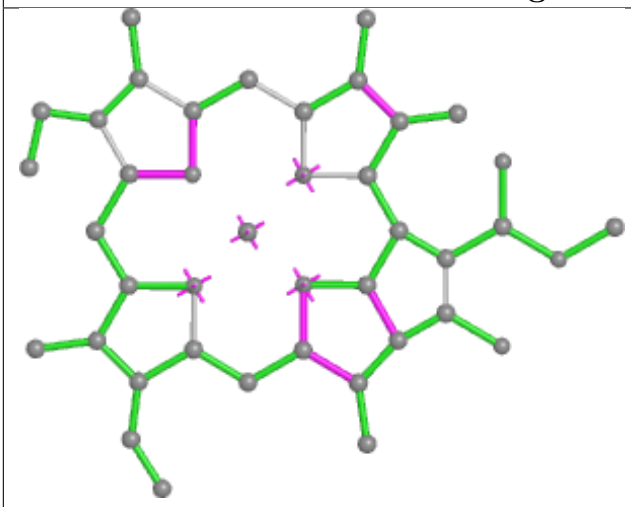


Torsions

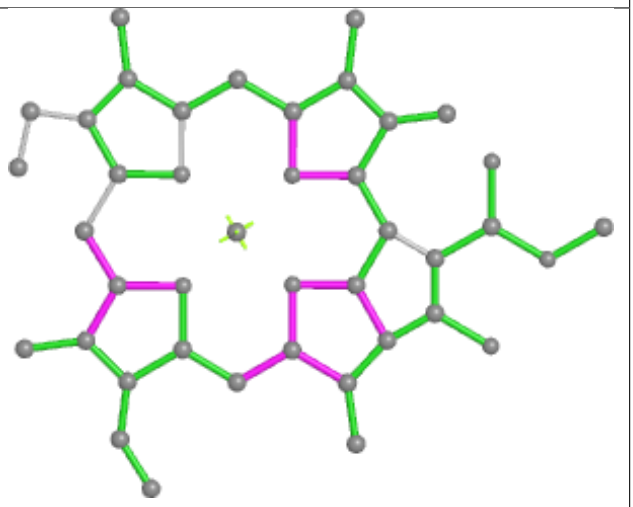


Rings

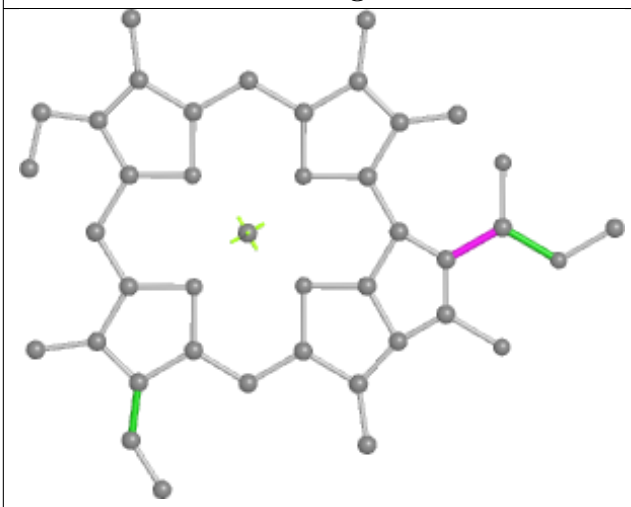
Ligand CLA 5 613



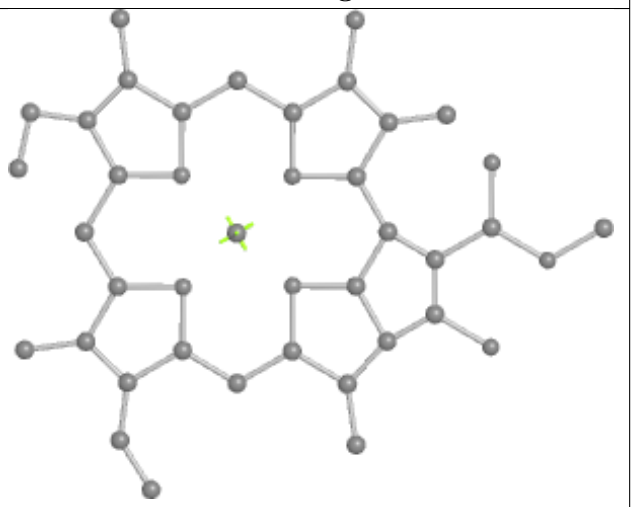
Bond lengths



Bond angles

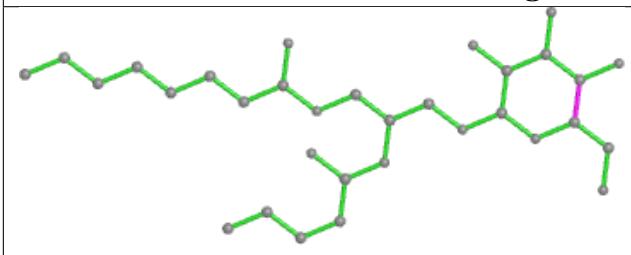


Torsions

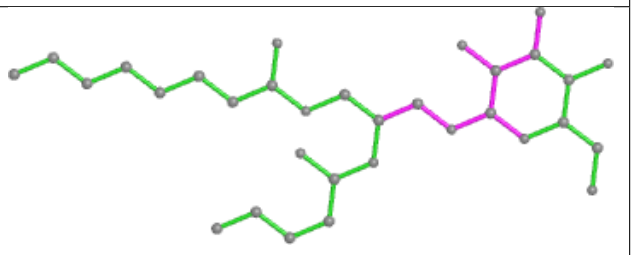


Rings

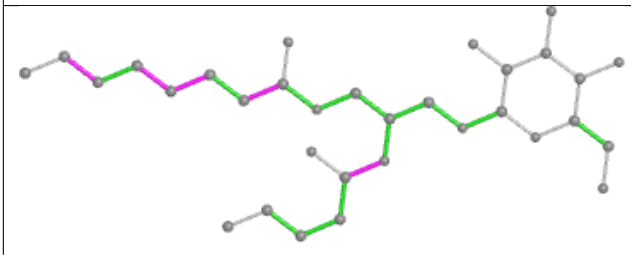
Ligand LMG 6 619



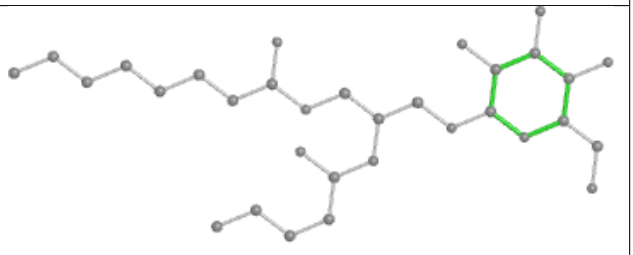
Bond lengths



Bond angles

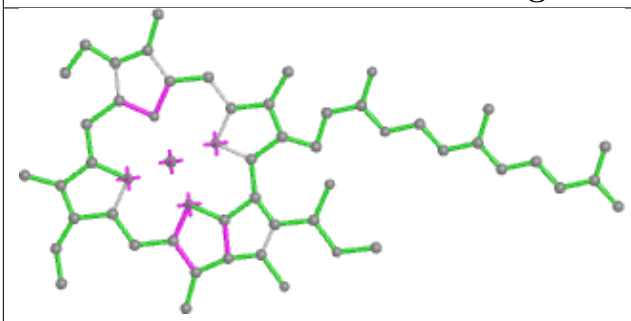


Torsions

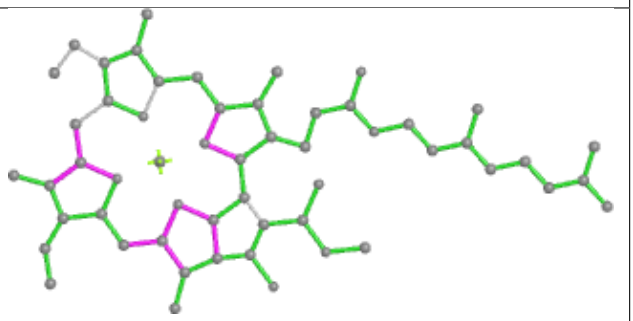


Rings

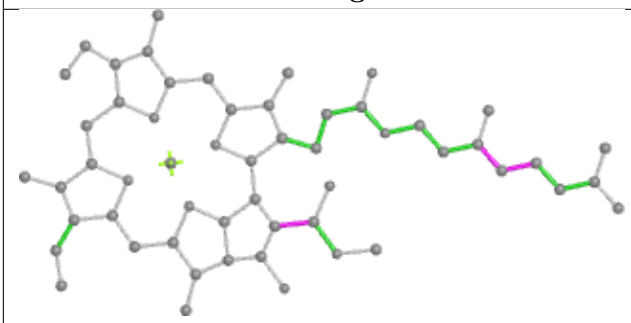
Ligand CLA 5 602



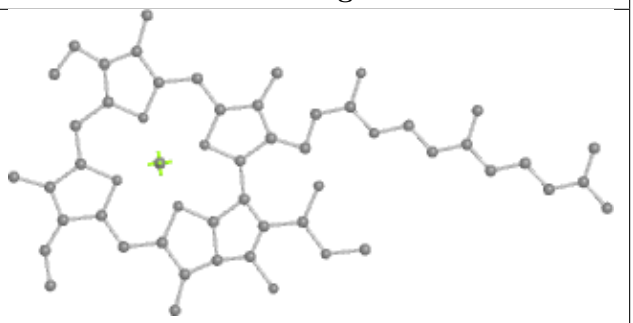
Bond lengths



Bond angles

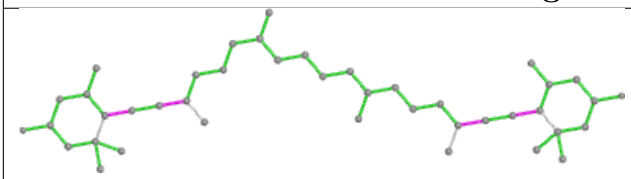


Torsions

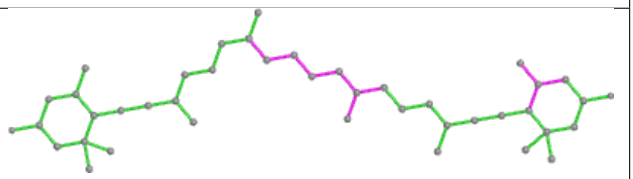


Rings

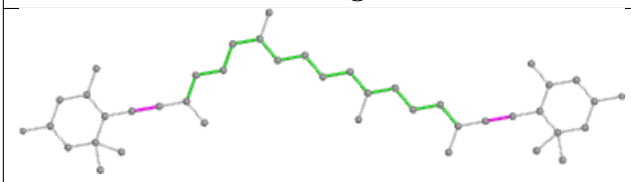
Ligand II0 8 611



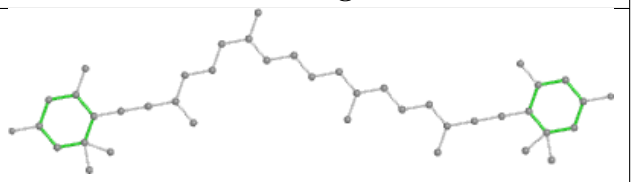
Bond lengths



Bond angles

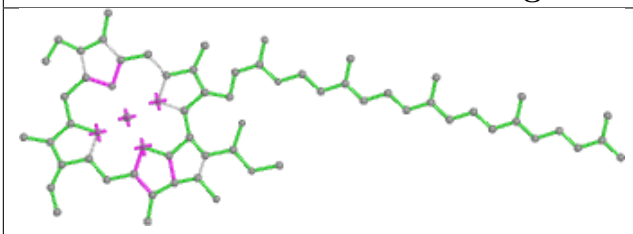


Torsions

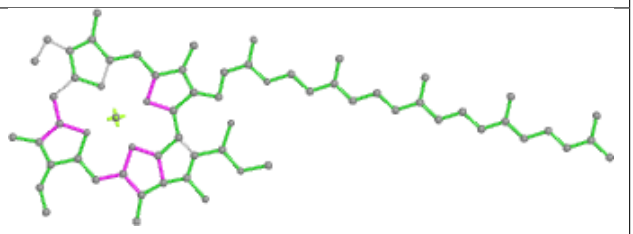


Rings

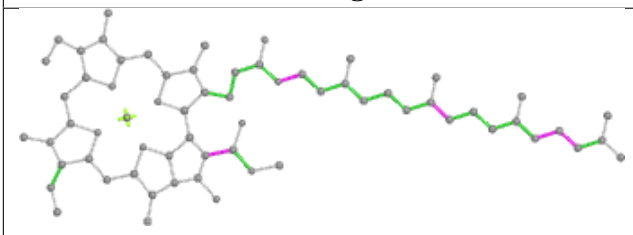
Ligand CLA A 832



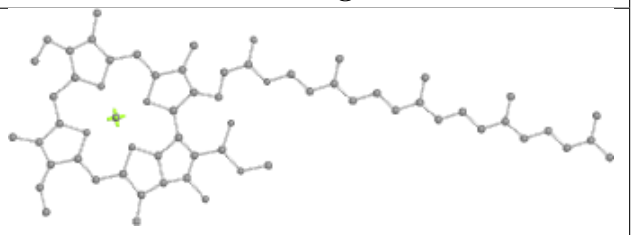
Bond lengths



Bond angles

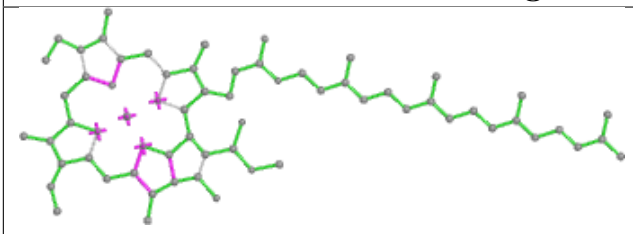


Torsions

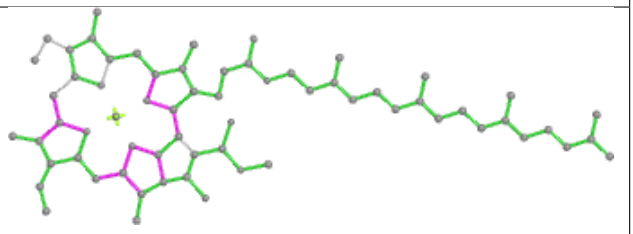


Rings

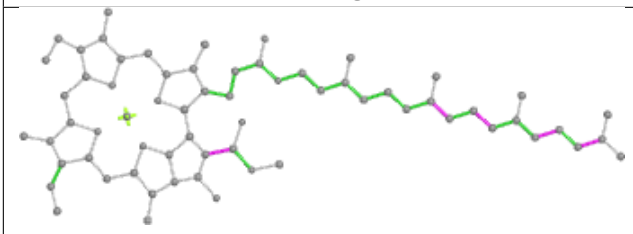
Ligand CLA B 839



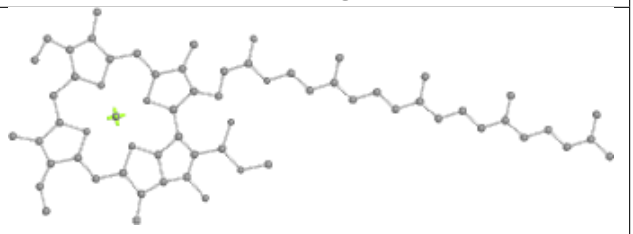
Bond lengths



Bond angles

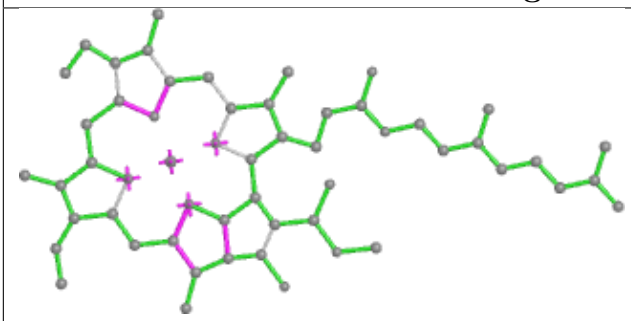


Torsions

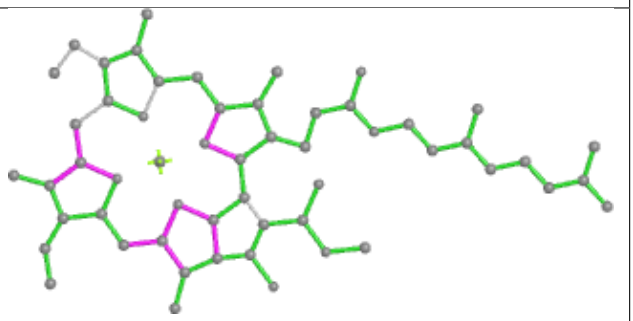


Rings

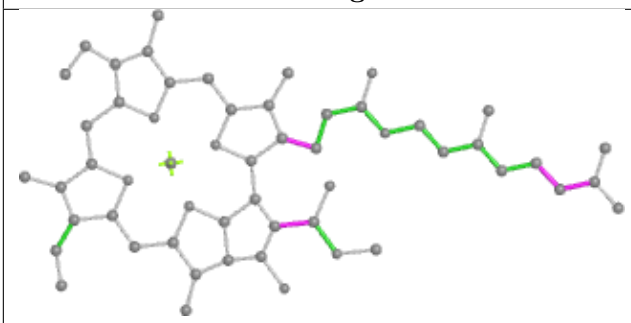
Ligand CLA A 802



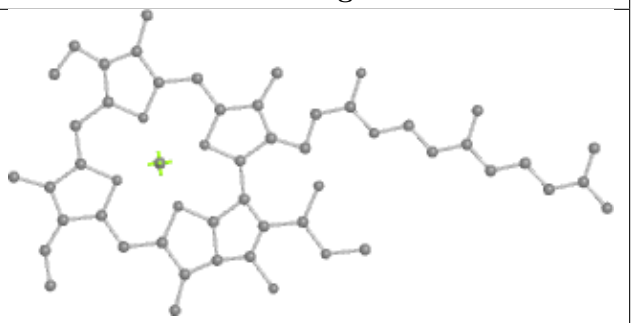
Bond lengths



Bond angles

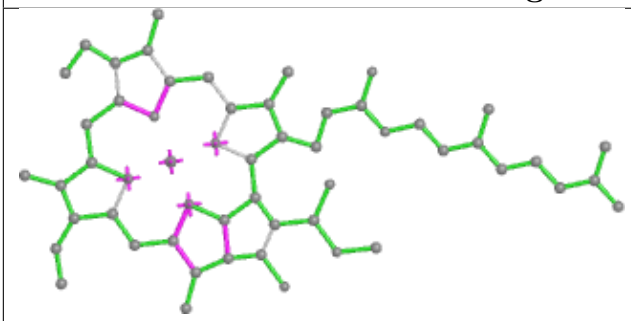


Torsions

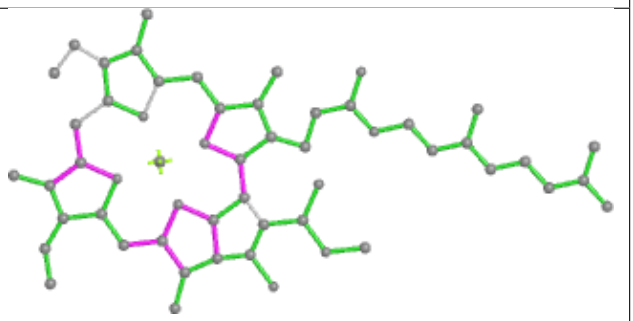


Rings

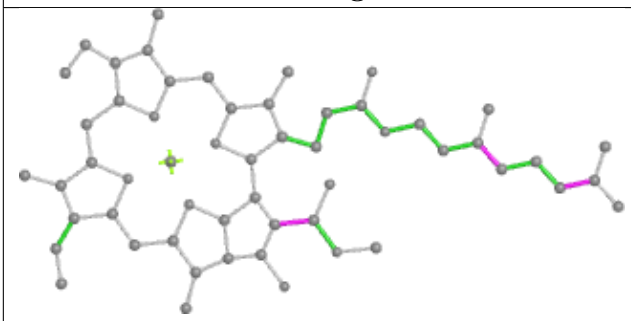
Ligand CLA F 204



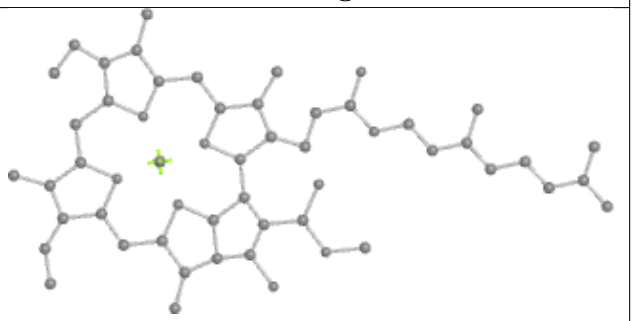
Bond lengths



Bond angles

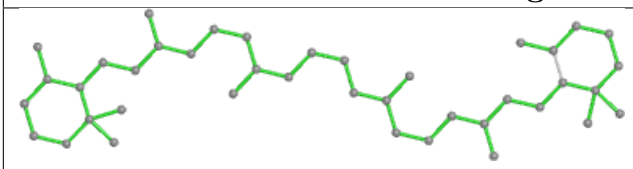


Torsions

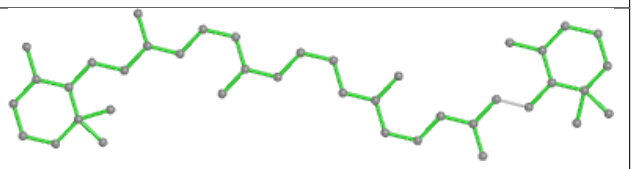


Rings

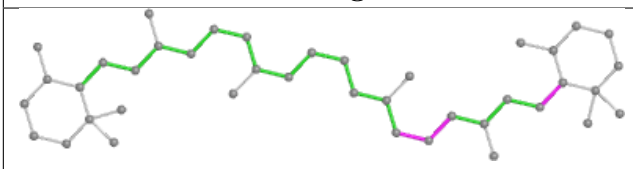
Ligand 8CT A 846



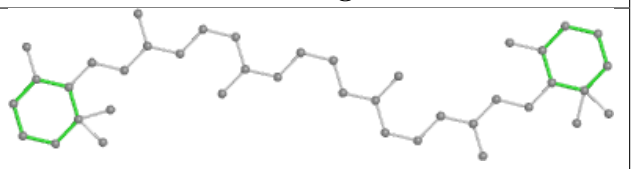
Bond lengths



Bond angles

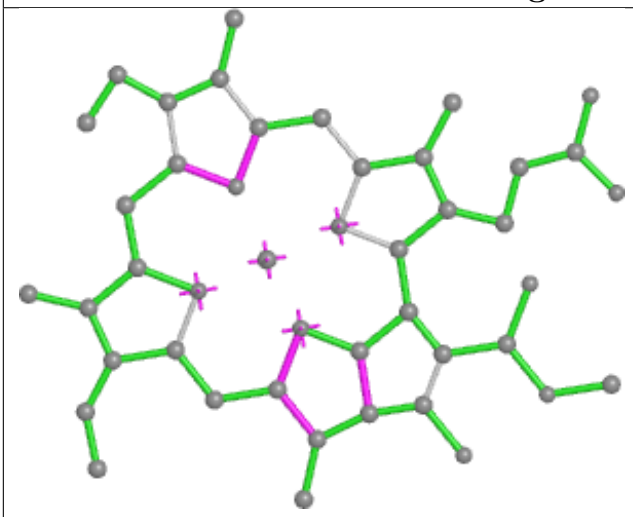


Torsions

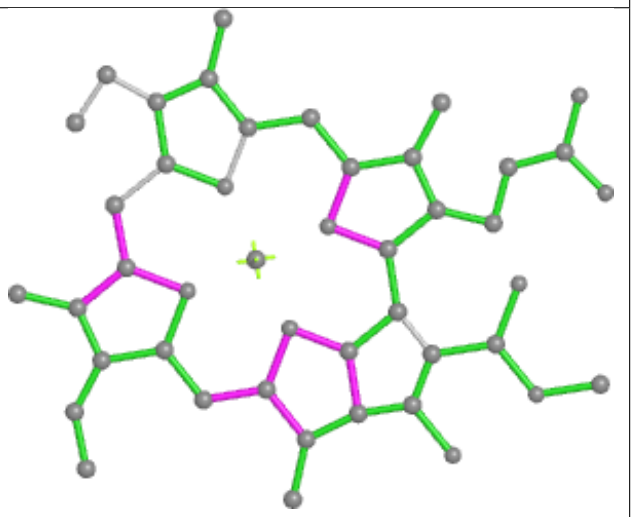


Rings

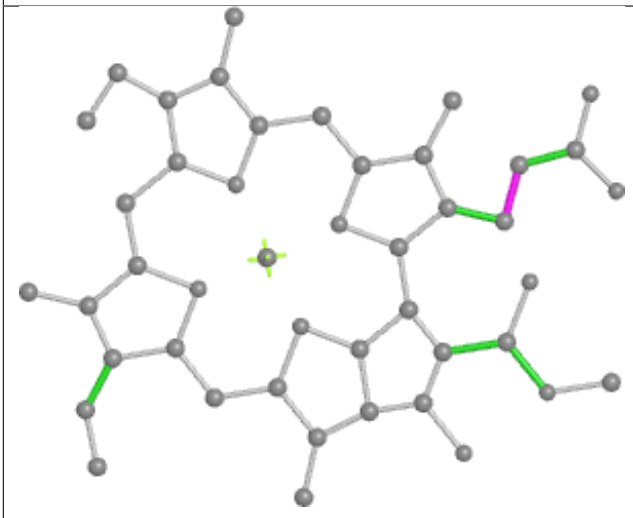
Ligand CLA 1 604



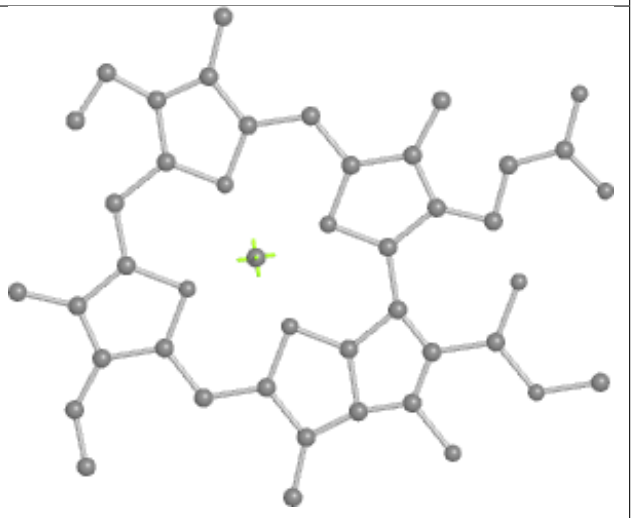
Bond lengths



Bond angles

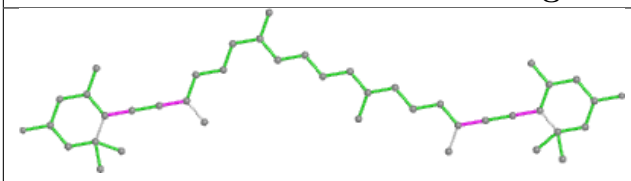


Torsions

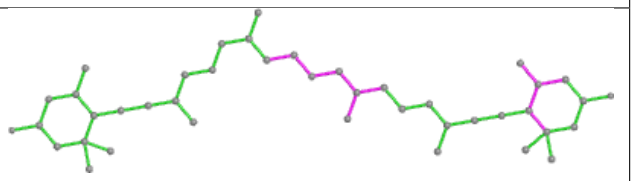


Rings

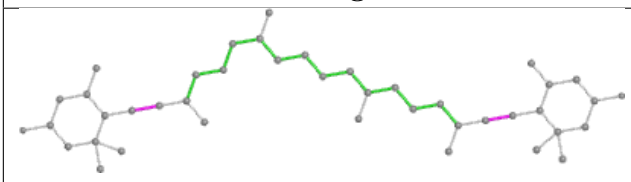
Ligand II0 5 615



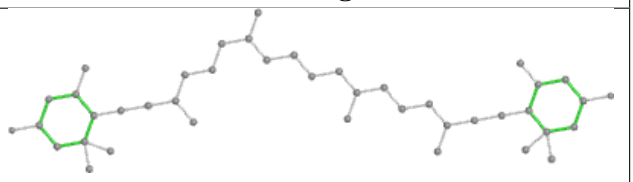
Bond lengths



Bond angles

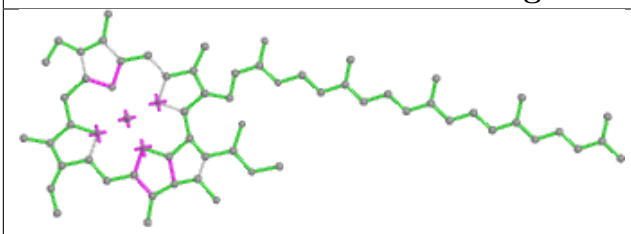


Torsions

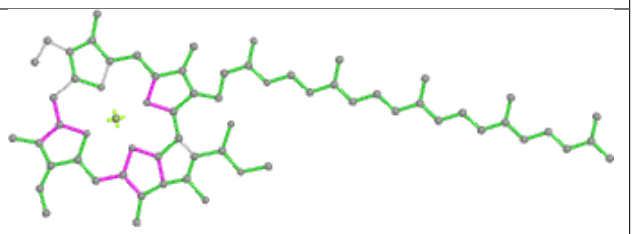


Rings

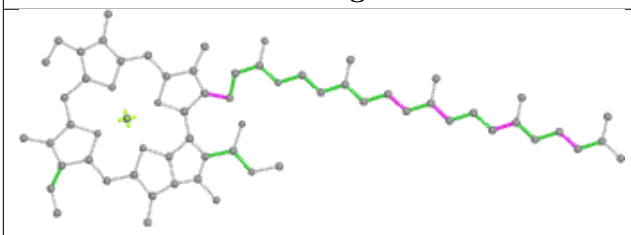
Ligand CLA A 828



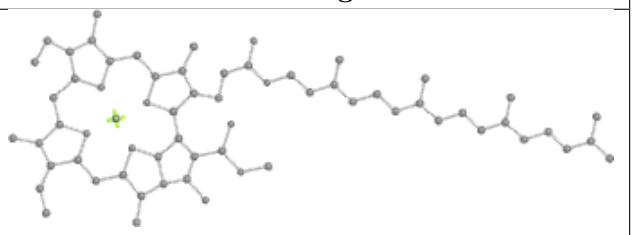
Bond lengths



Bond angles

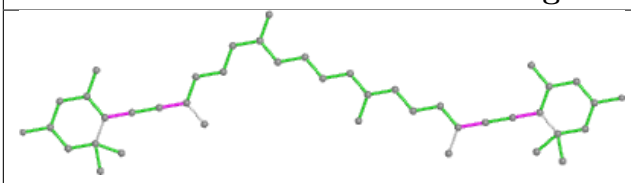


Torsions

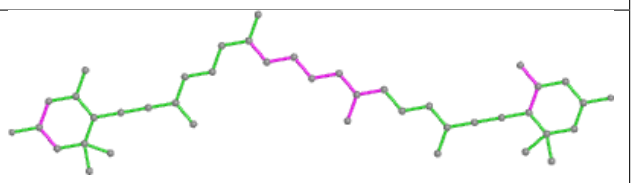


Rings

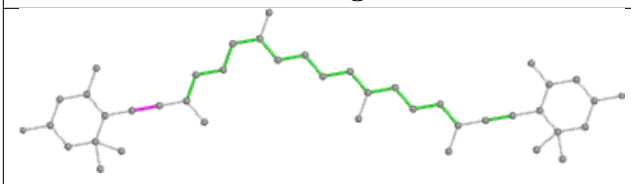
Ligand II0 1 614



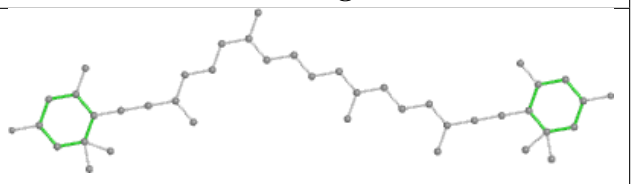
Bond lengths



Bond angles

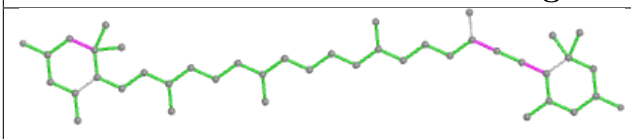


Torsions

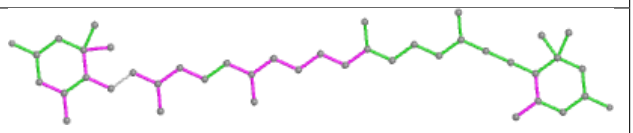


Rings

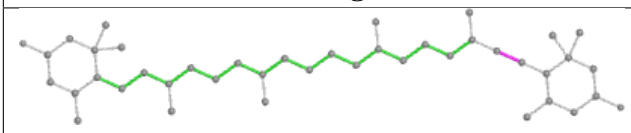
Ligand II3 1 615



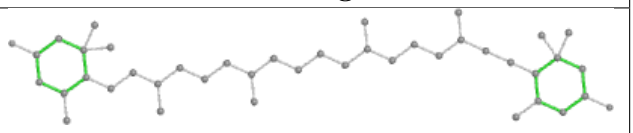
Bond lengths



Bond angles

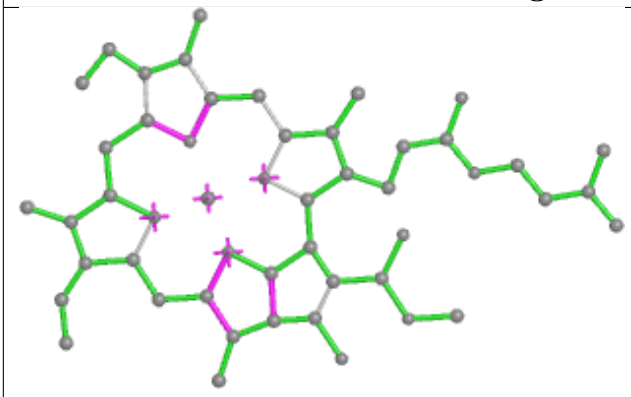


Torsions

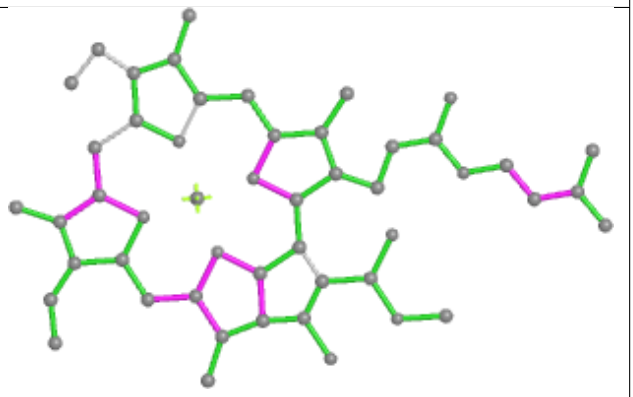


Rings

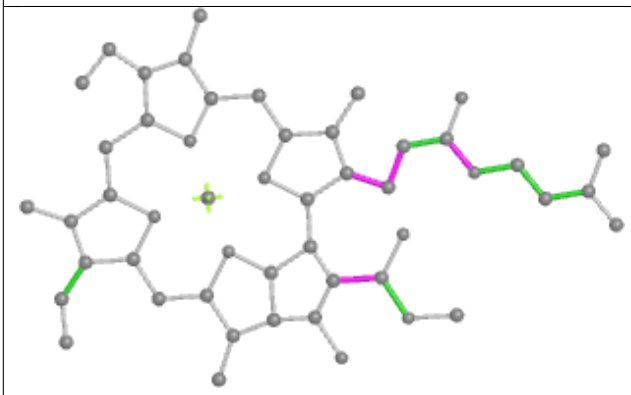
Ligand CLA 2 603



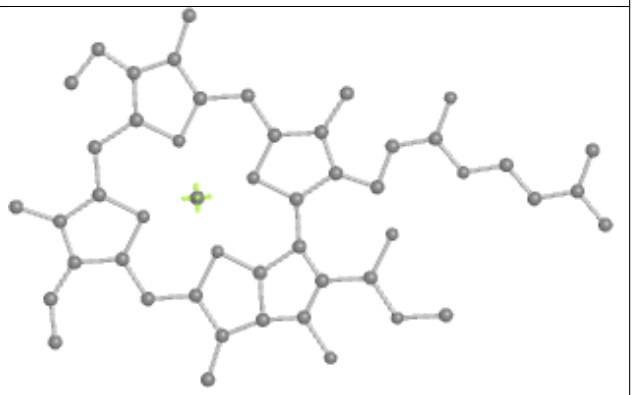
Bond lengths



Bond angles

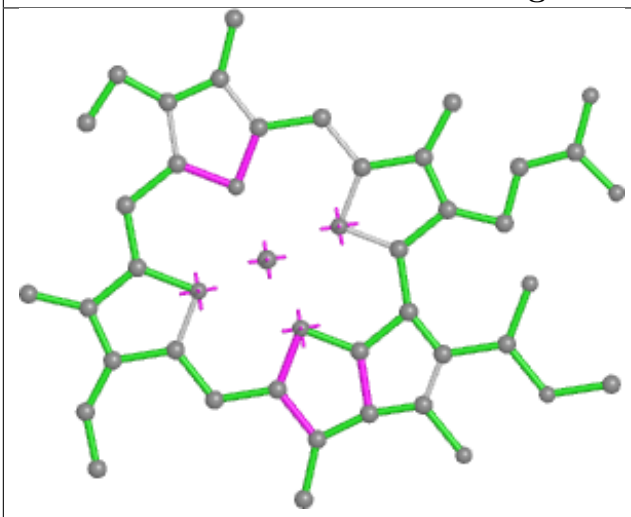


Torsions

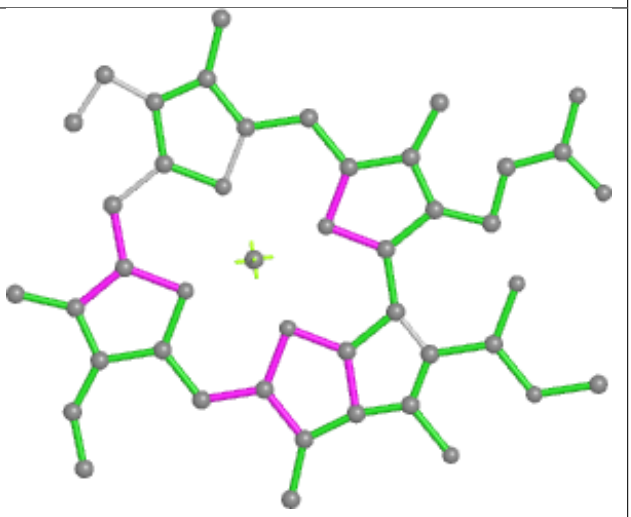


Rings

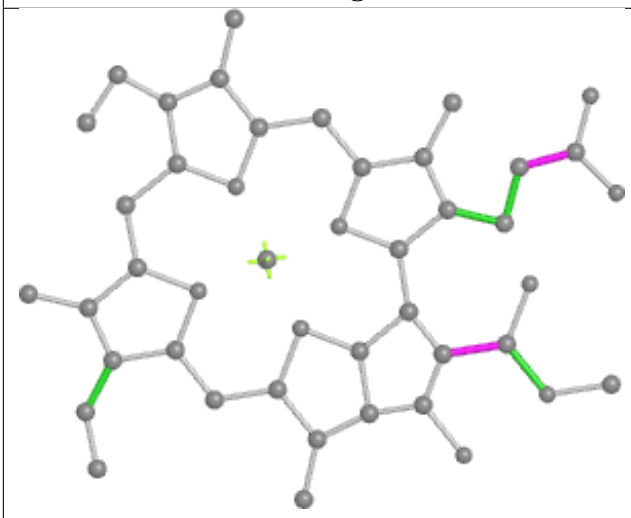
Ligand CLA 9 612



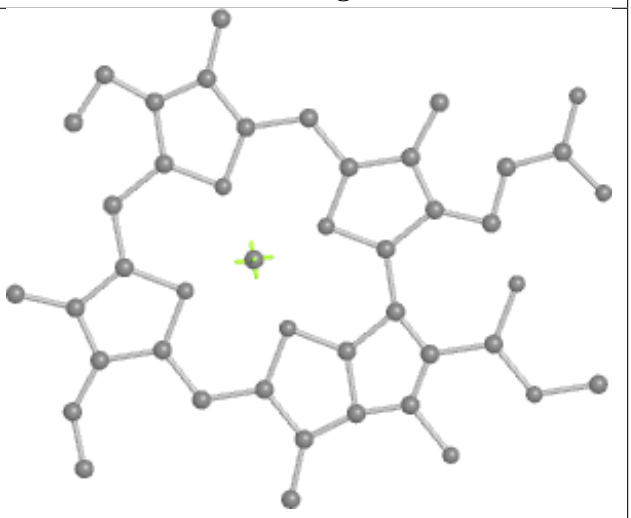
Bond lengths



Bond angles

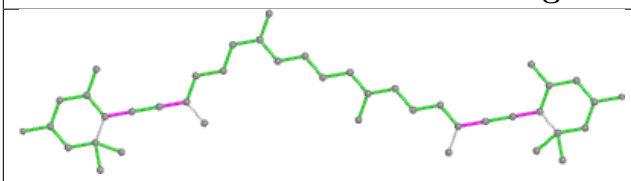


Torsions

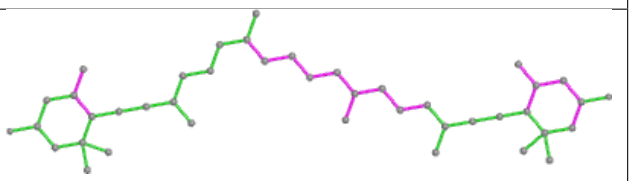


Rings

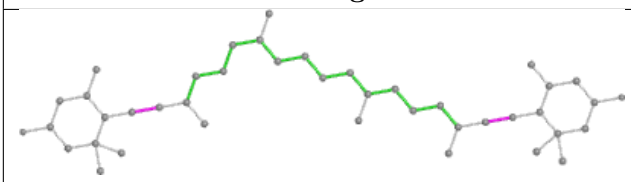
Ligand II0 2 613



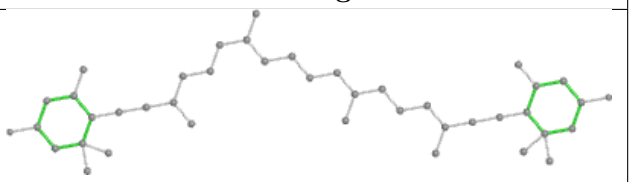
Bond lengths



Bond angles

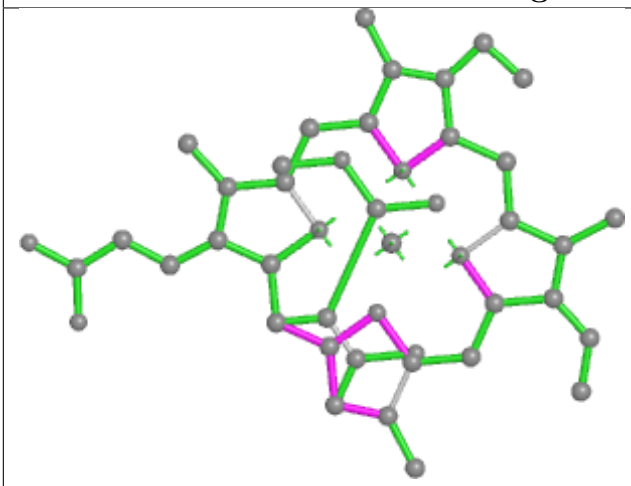


Torsions

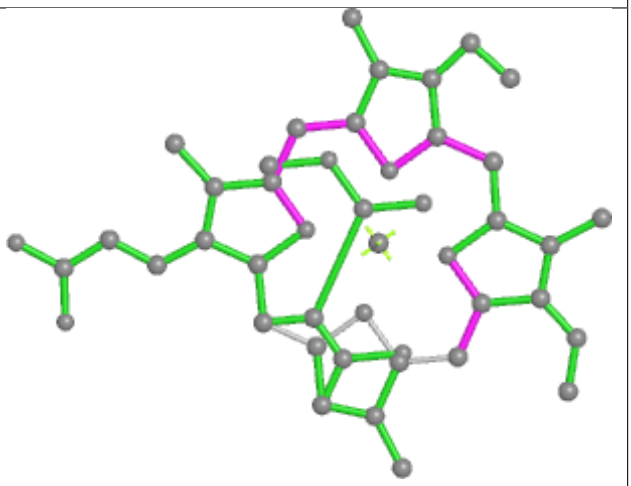


Rings

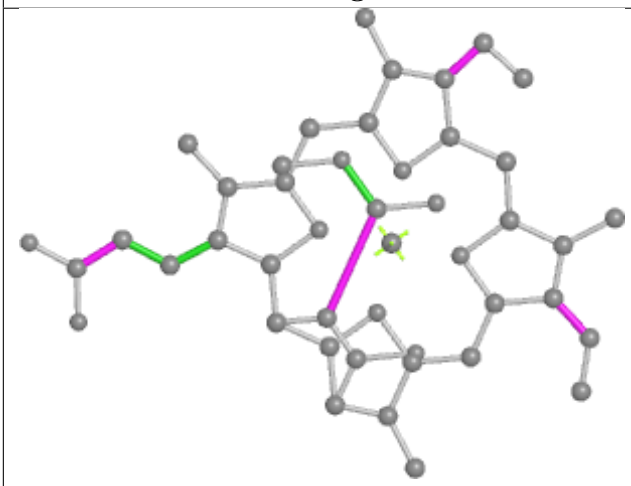
Ligand KC2 e 609



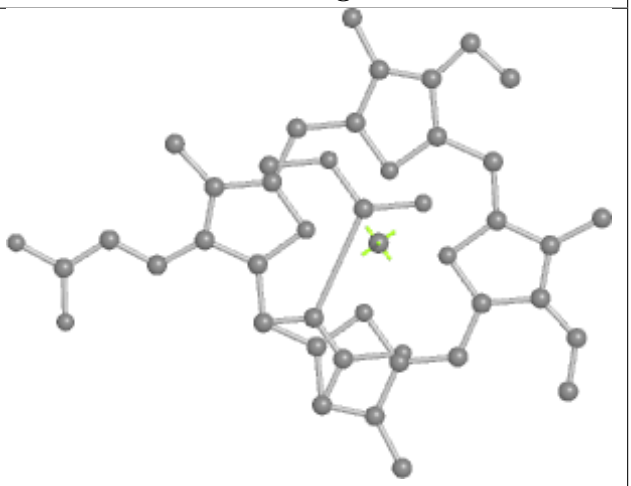
Bond lengths



Bond angles

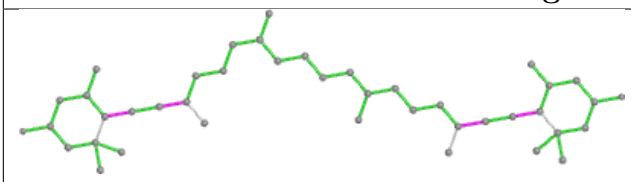


Torsions

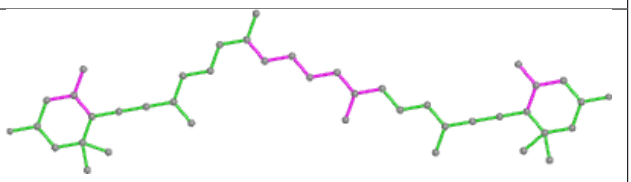


Rings

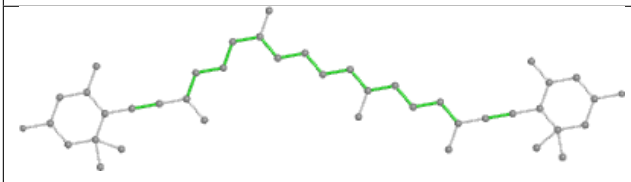
Ligand II0 5 616



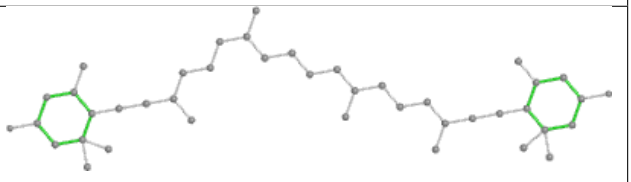
Bond lengths



Bond angles

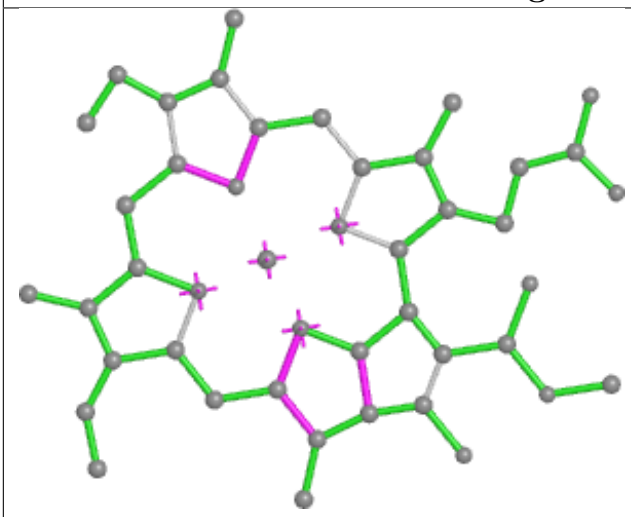


Torsions

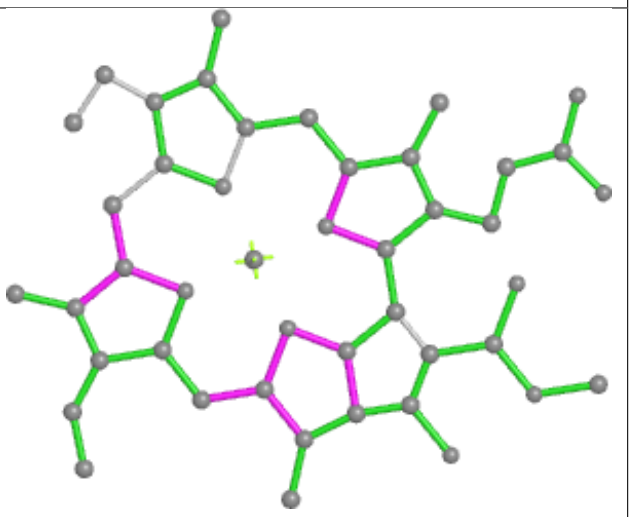


Rings

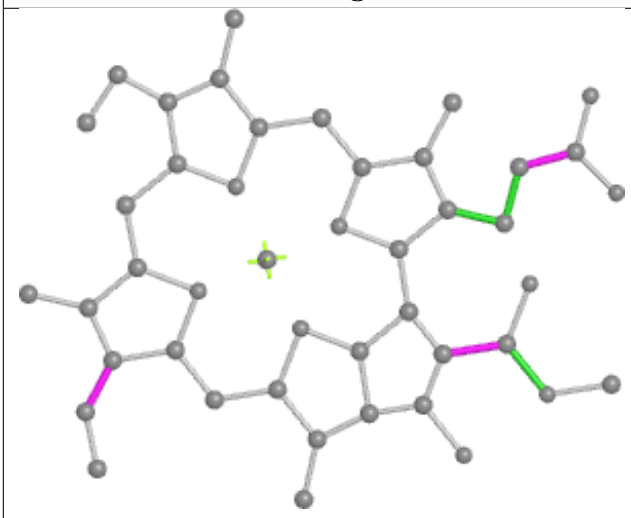
Ligand CLA 9 601



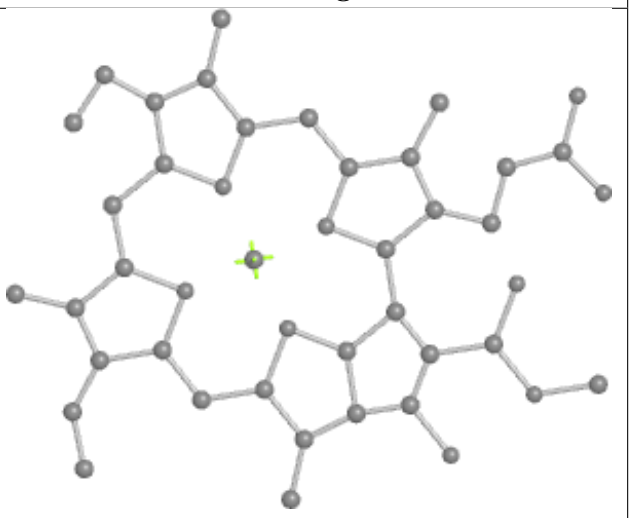
Bond lengths



Bond angles

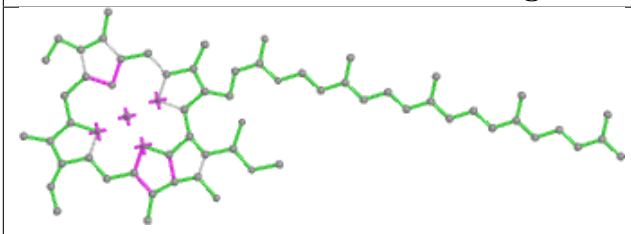


Torsions

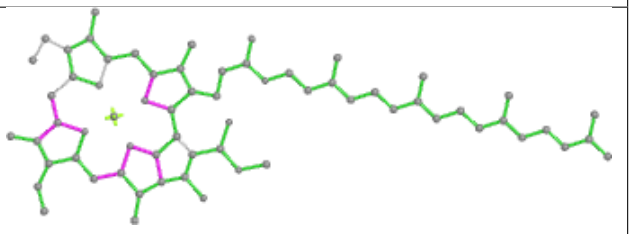


Rings

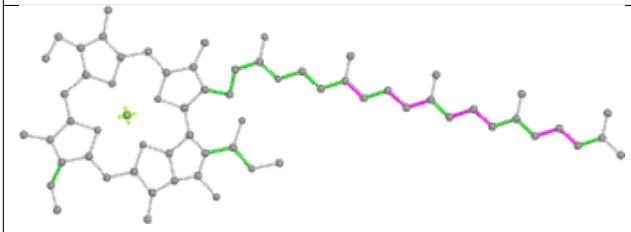
Ligand CLA K 101



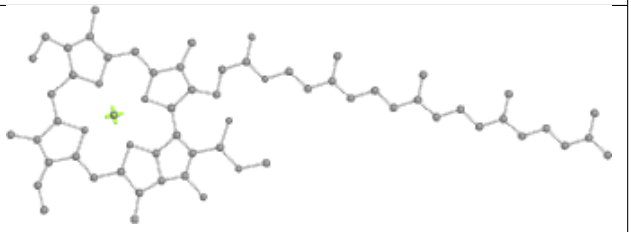
Bond lengths



Bond angles

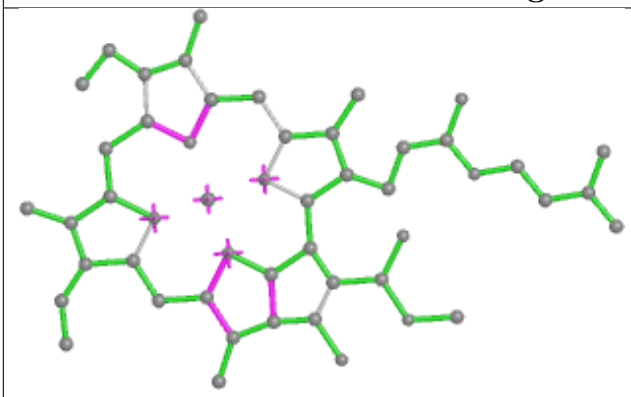


Torsions

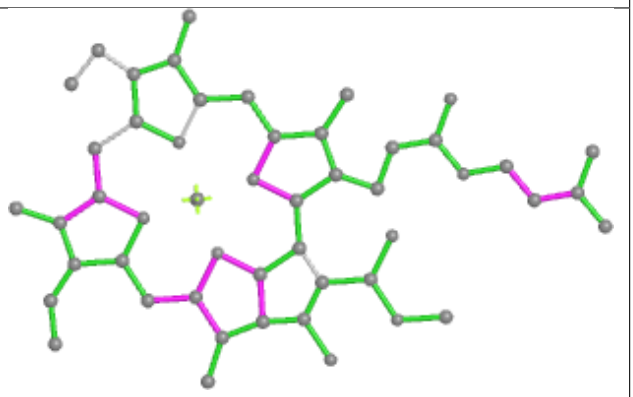


Rings

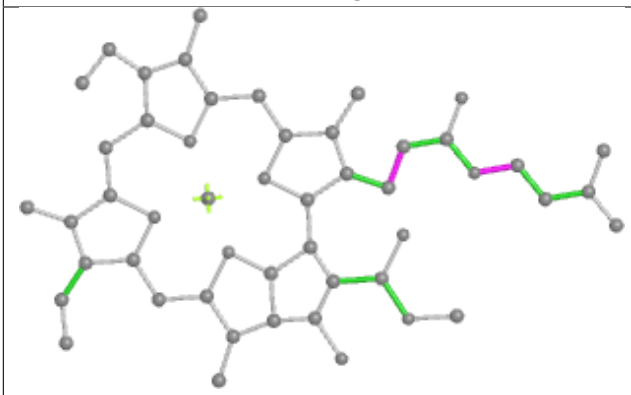
Ligand CLA d 603



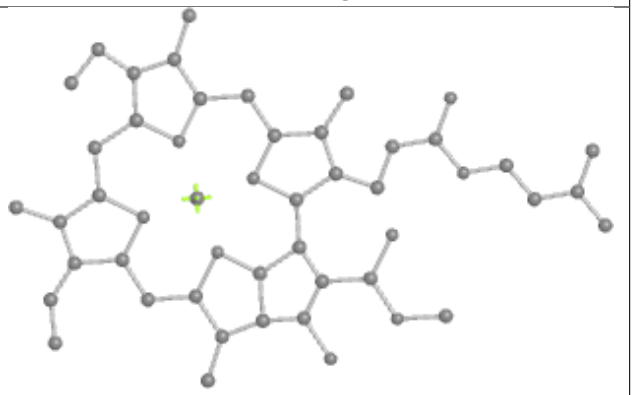
Bond lengths



Bond angles

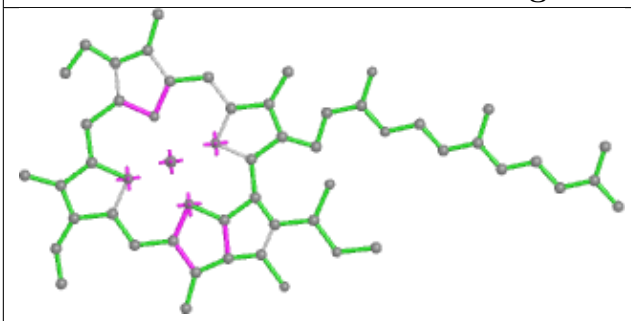


Torsions

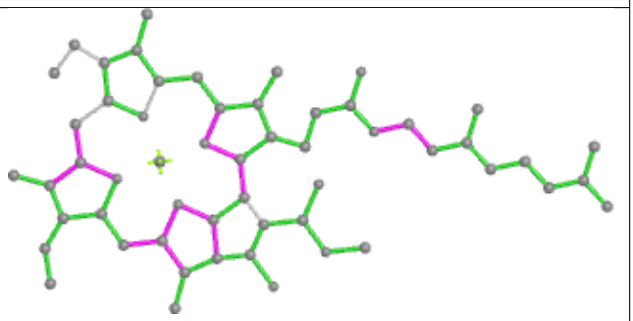


Rings

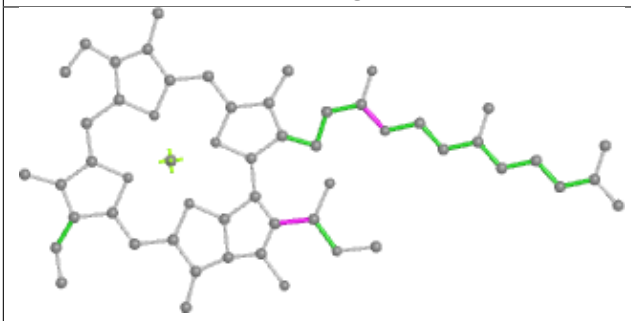
Ligand CLA c 612



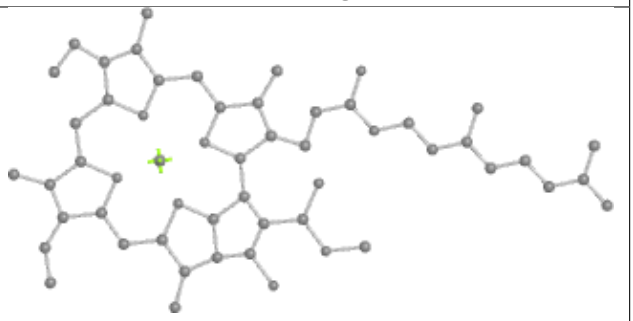
Bond lengths



Bond angles

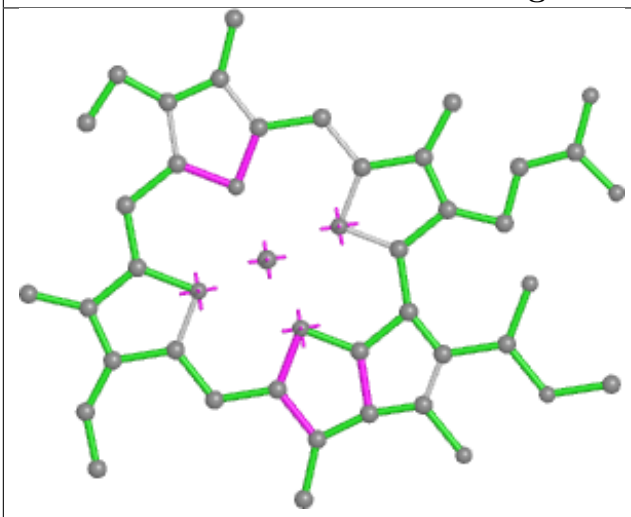


Torsions

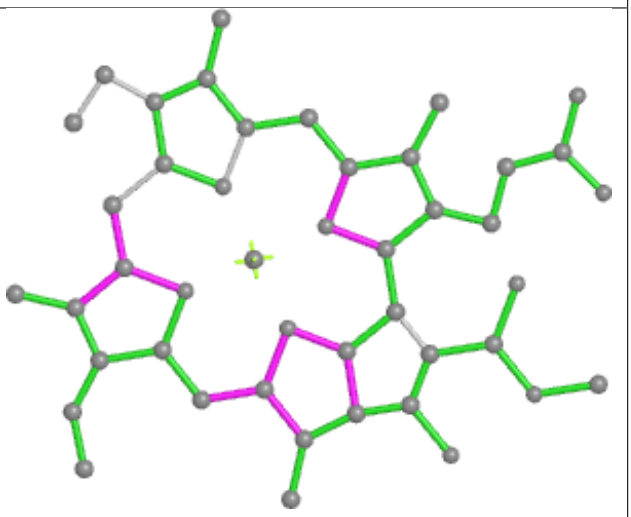


Rings

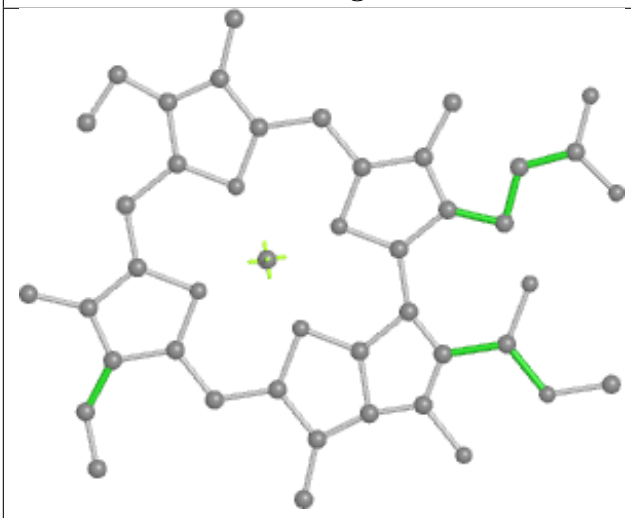
Ligand CLA 1 607



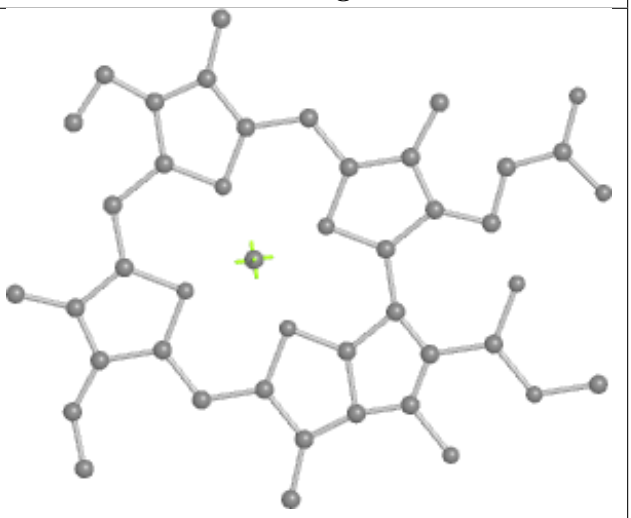
Bond lengths



Bond angles

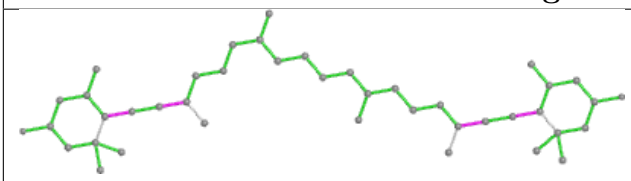


Torsions

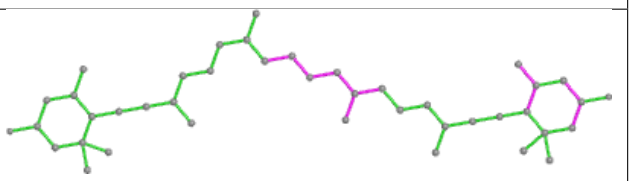


Rings

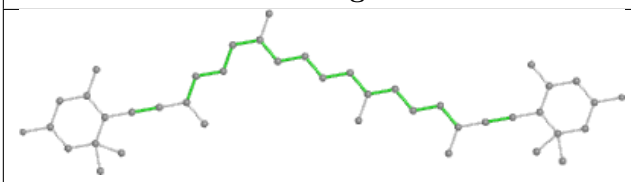
Ligand II0 4 613



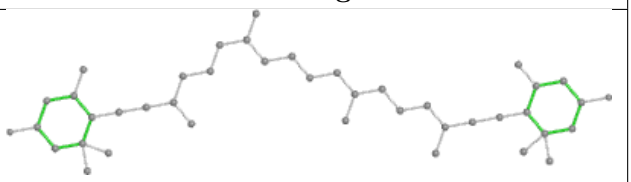
Bond lengths



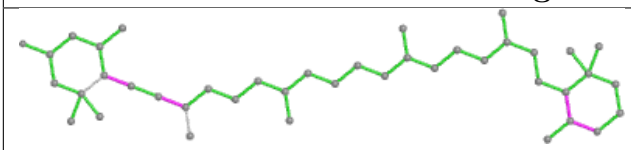
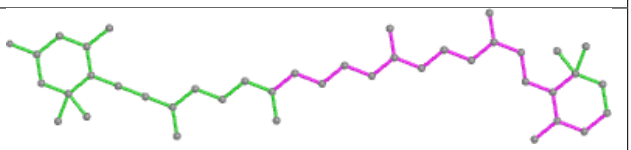
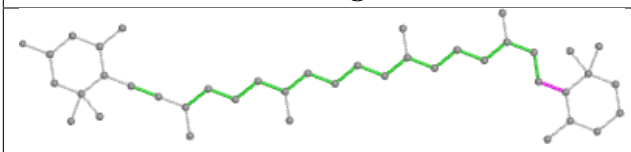
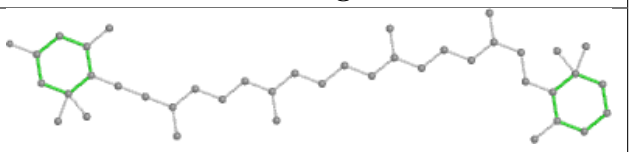
Bond angles

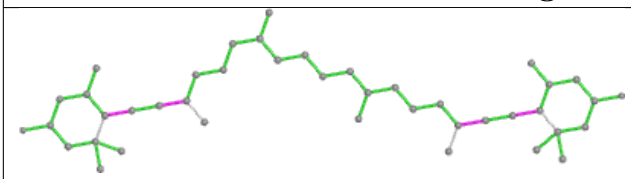
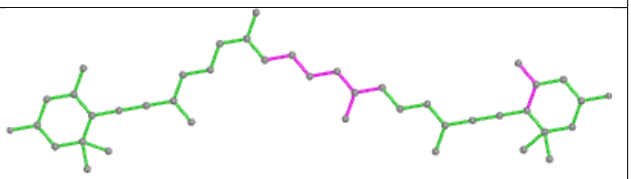
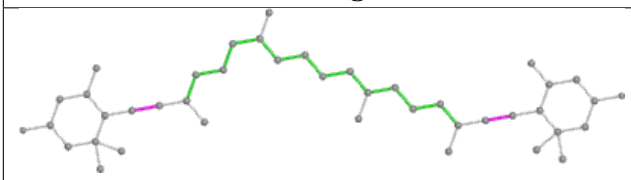
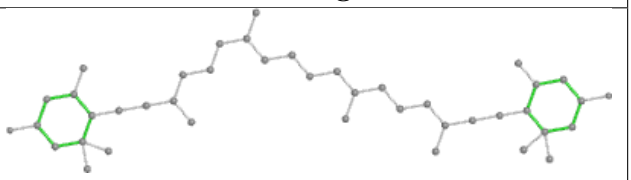


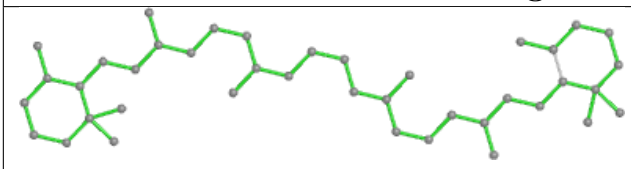
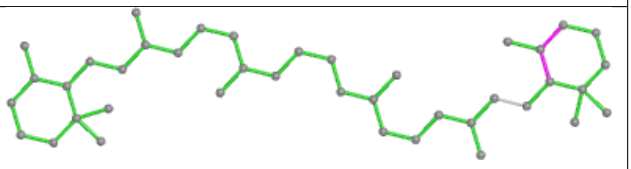
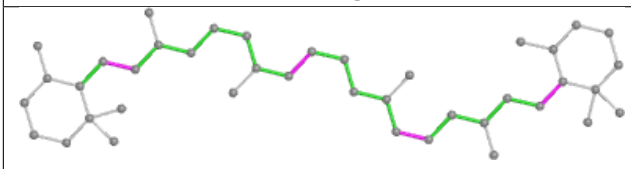
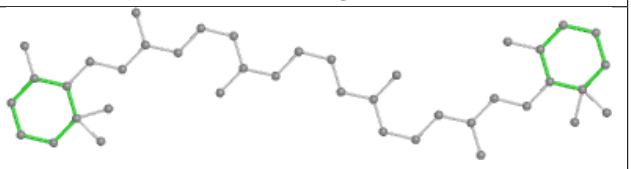
Torsions



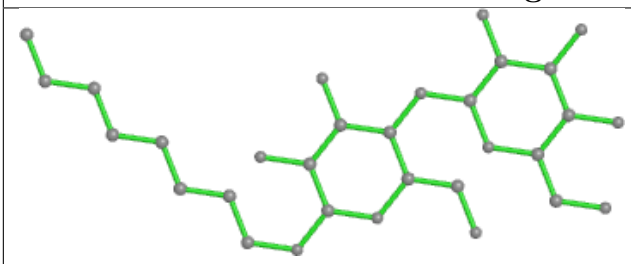
Rings

Ligand IHT c 620	
 Bond lengths	 Bond angles
 Torsions	 Rings

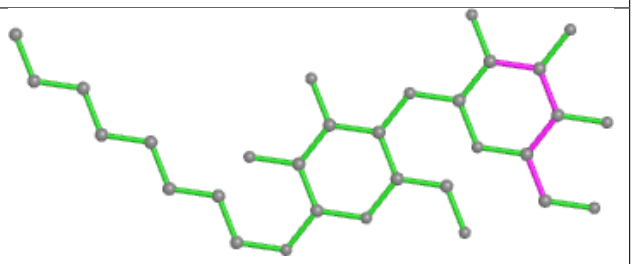
Ligand II0 O 204	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand 8CT R 203	
 Bond lengths	 Bond angles
 Torsions	 Rings

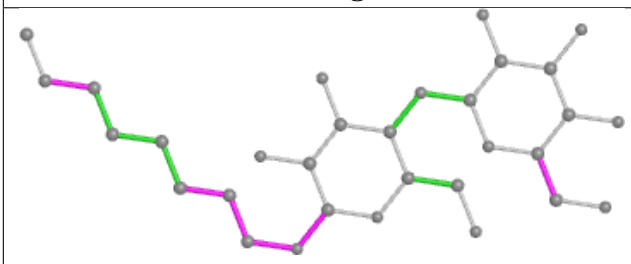
Ligand LMU e 617



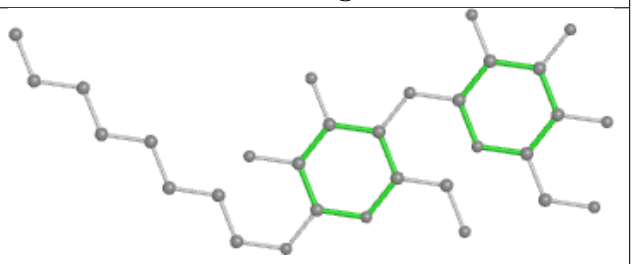
Bond lengths



Bond angles

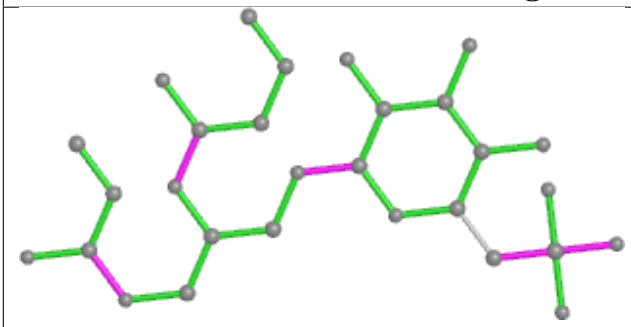


Torsions

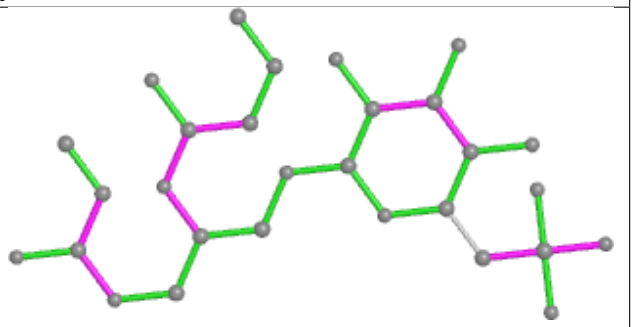


Rings

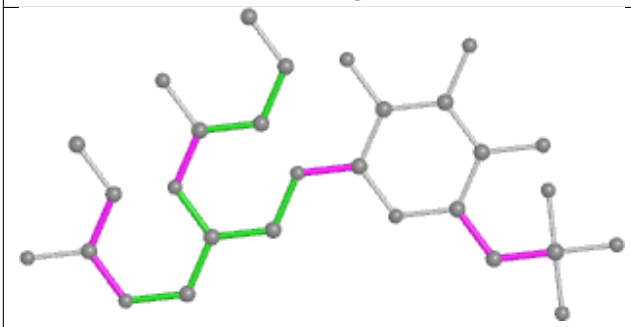
Ligand SQD O 206



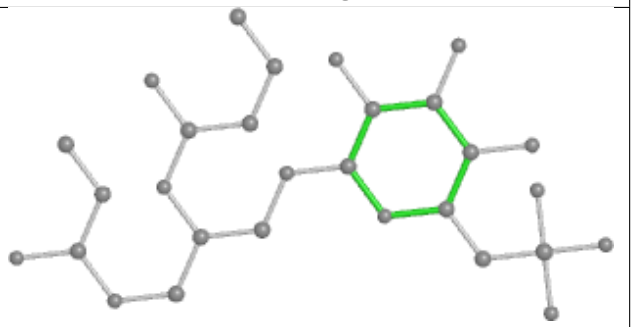
Bond lengths



Bond angles

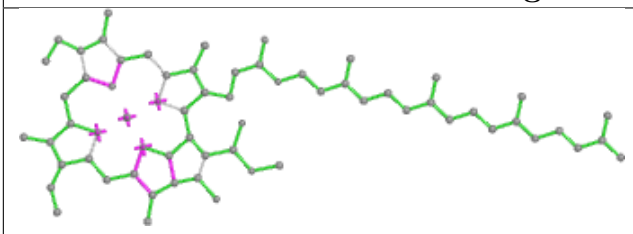


Torsions

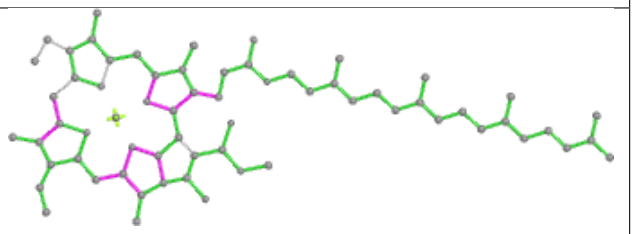


Rings

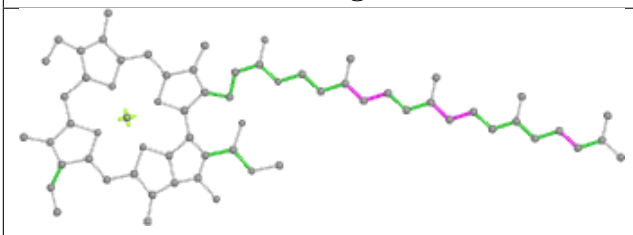
Ligand CLA A 841



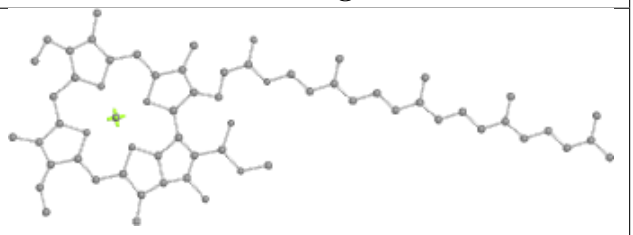
Bond lengths



Bond angles

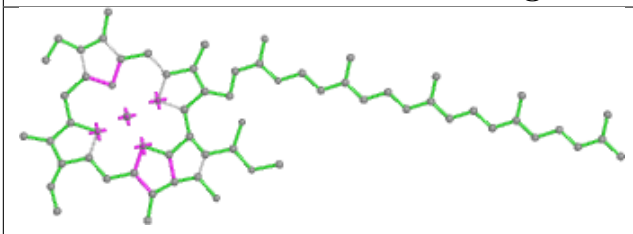


Torsions

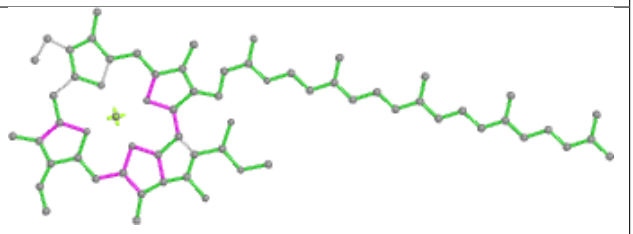


Rings

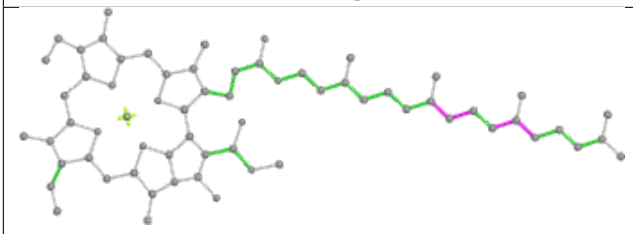
Ligand CLA A 826



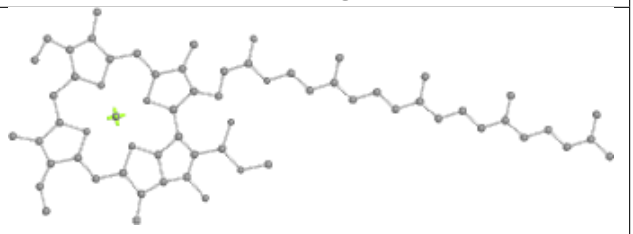
Bond lengths



Bond angles

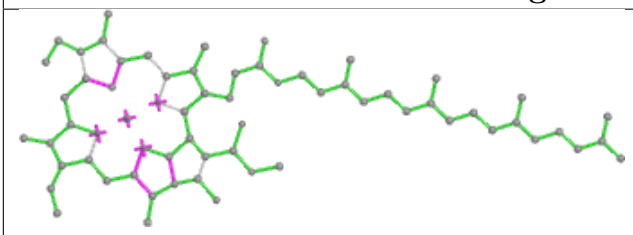


Torsions

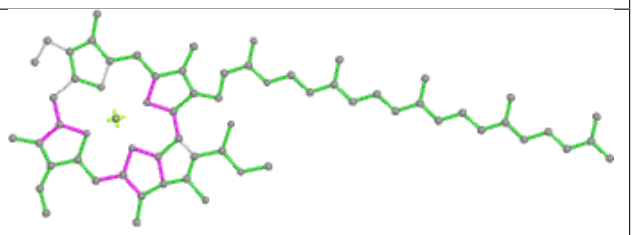


Rings

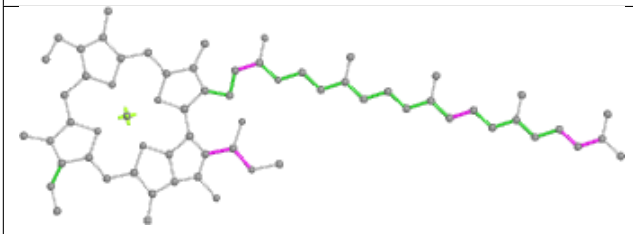
Ligand CLA e 611



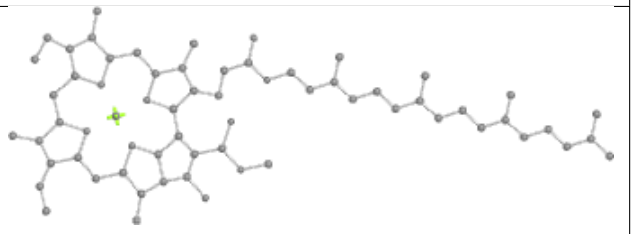
Bond lengths



Bond angles

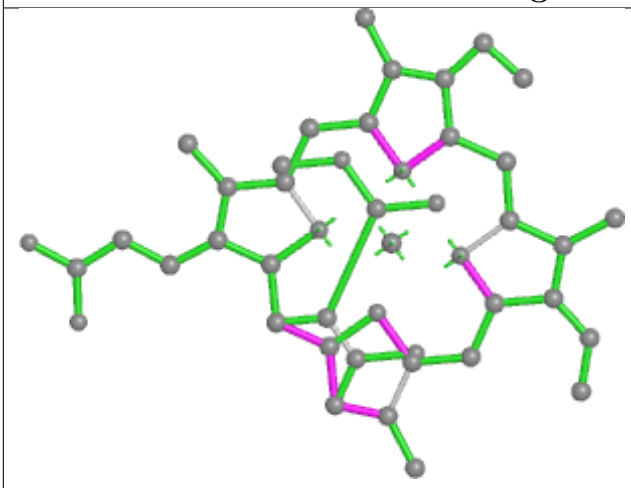


Torsions

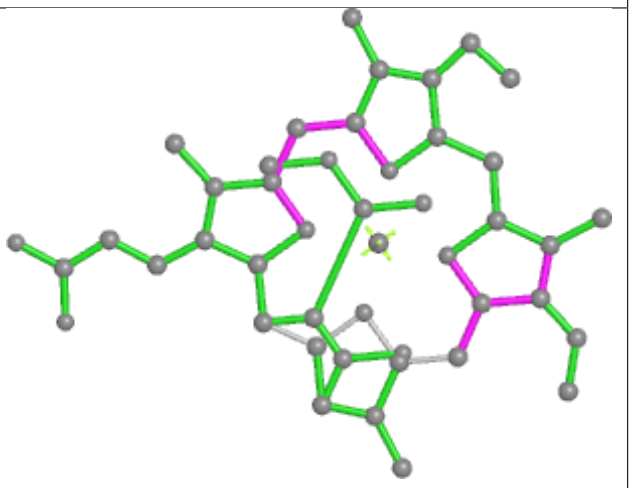


Rings

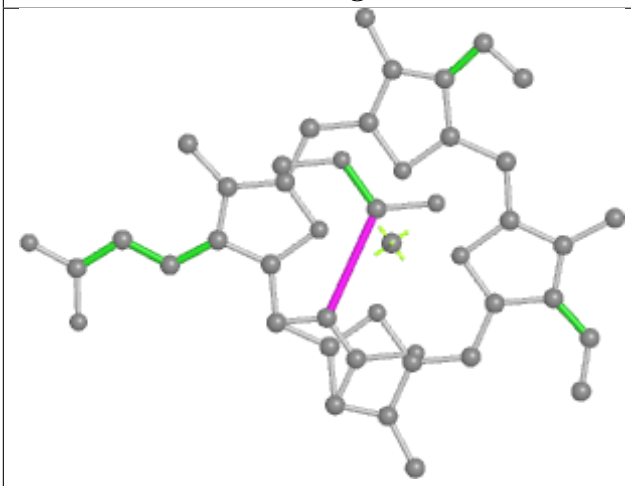
Ligand KC2 a 610



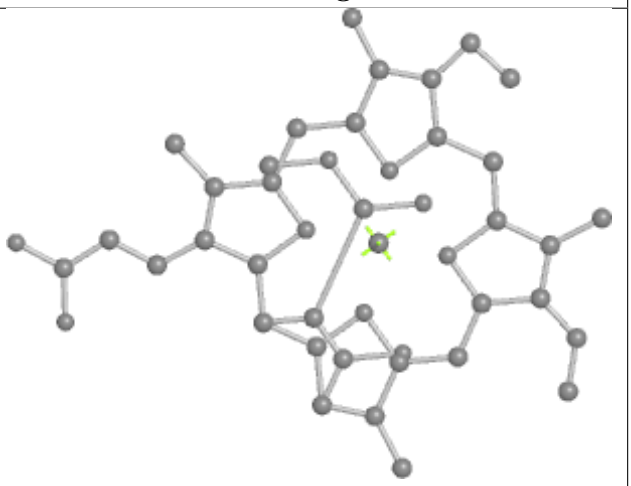
Bond lengths



Bond angles

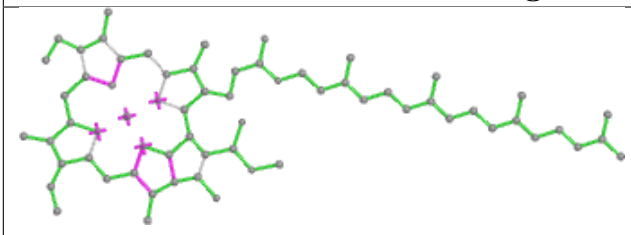


Torsions

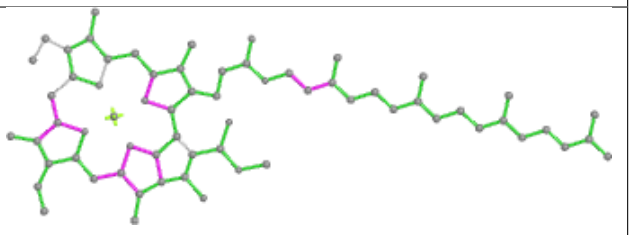


Rings

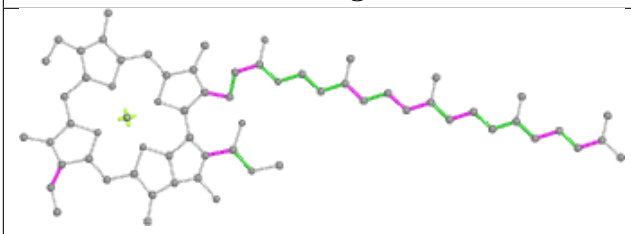
Ligand CLA B 812



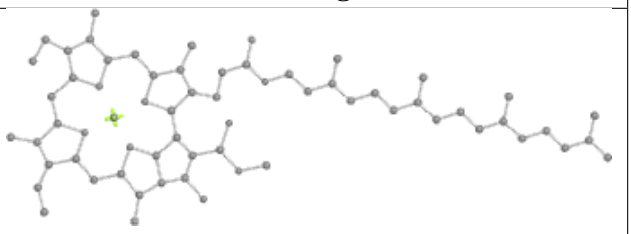
Bond lengths



Bond angles

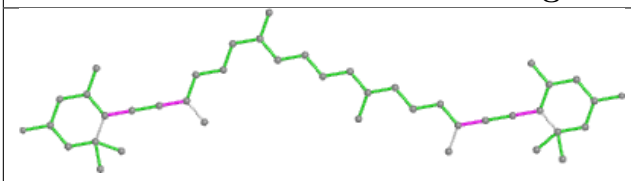


Torsions

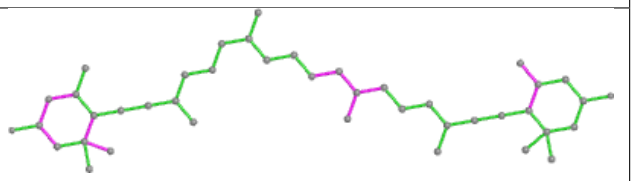


Rings

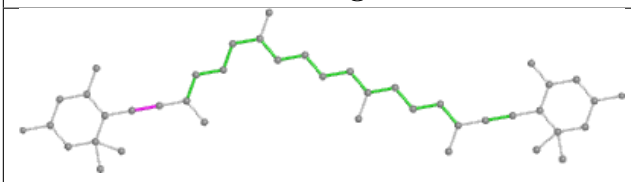
Ligand II0 7 614



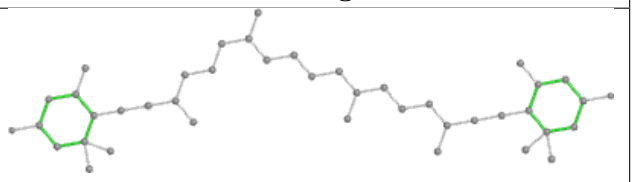
Bond lengths



Bond angles

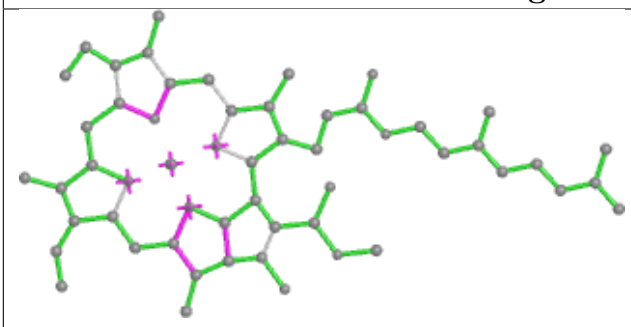


Torsions

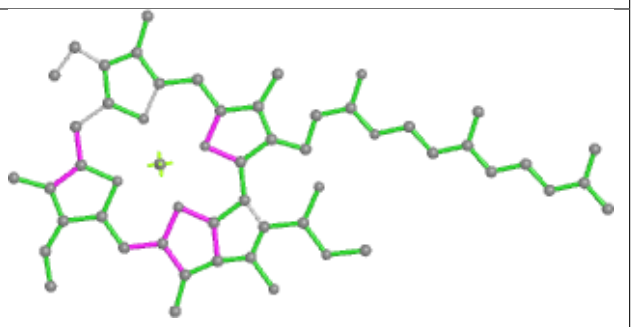


Rings

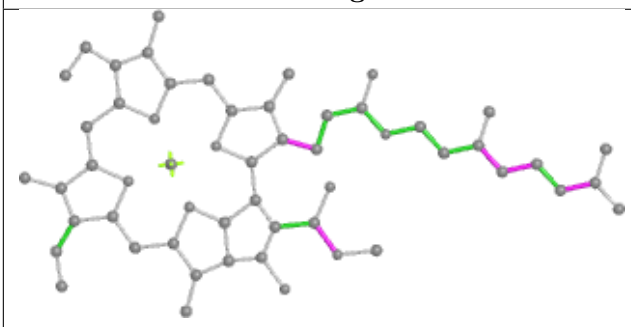
Ligand CLA 5 604



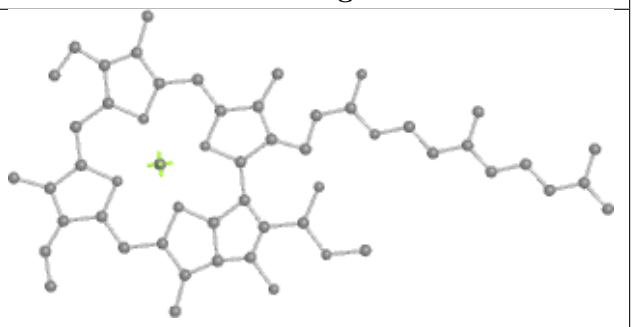
Bond lengths



Bond angles

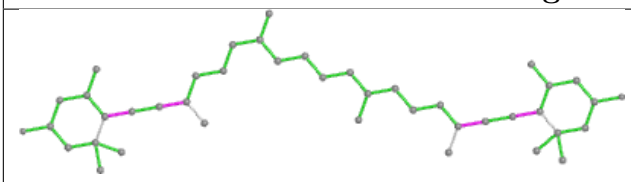


Torsions

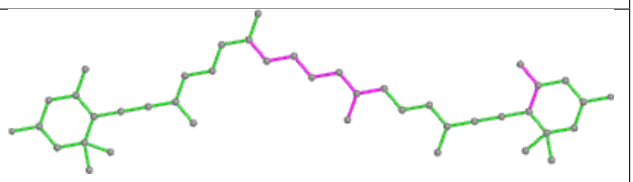


Rings

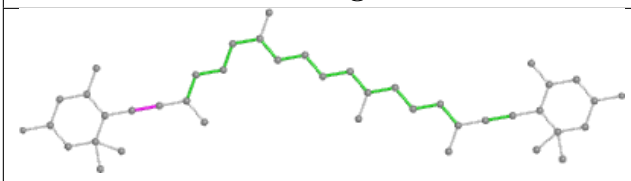
Ligand II0 8 612



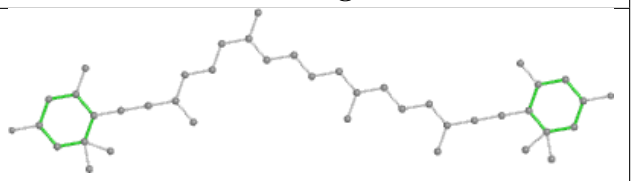
Bond lengths



Bond angles

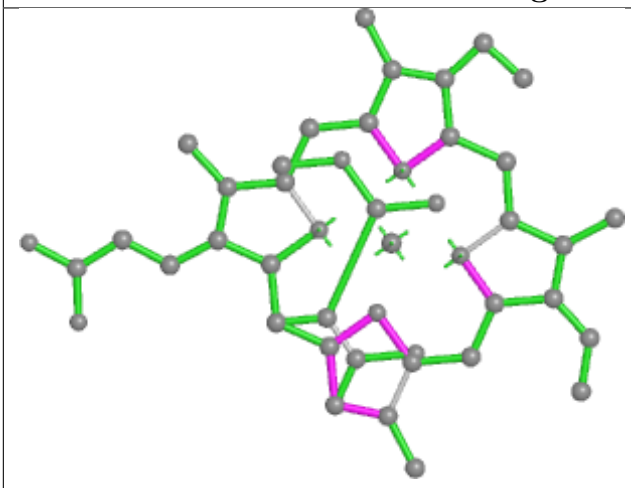


Torsions

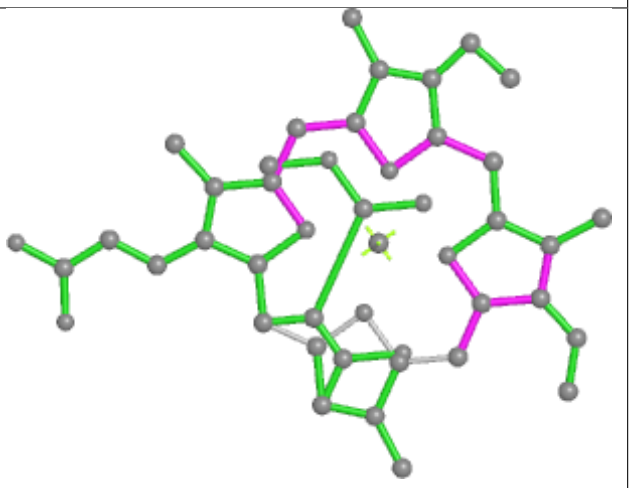


Rings

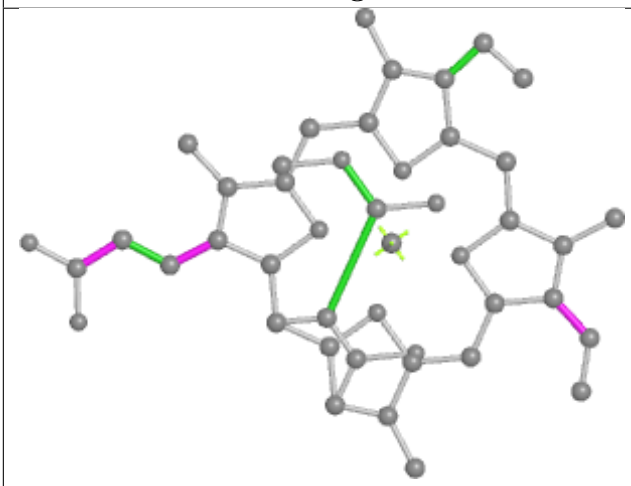
Ligand KC2 e 605



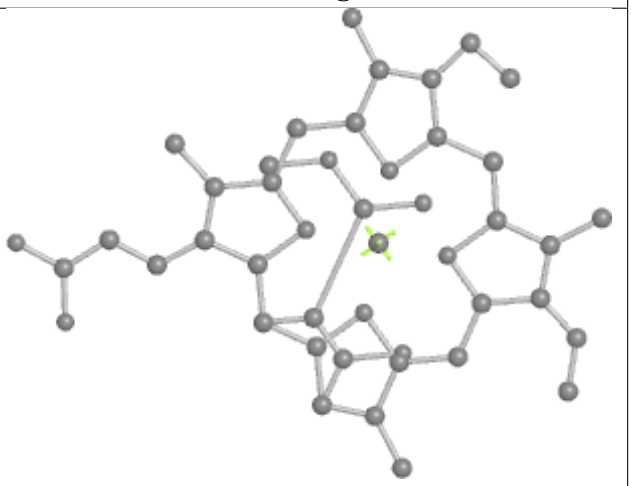
Bond lengths



Bond angles

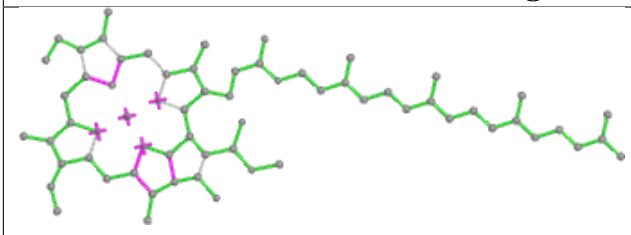


Torsions

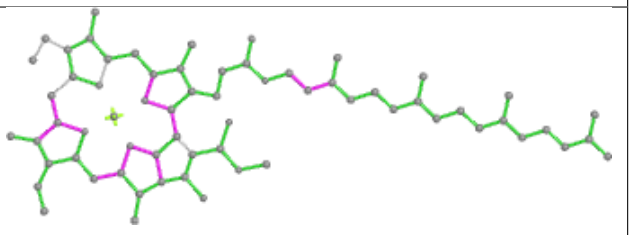


Rings

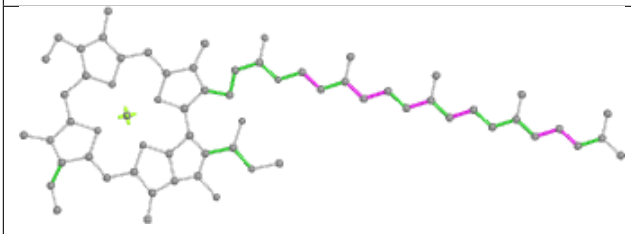
Ligand CLA B 823



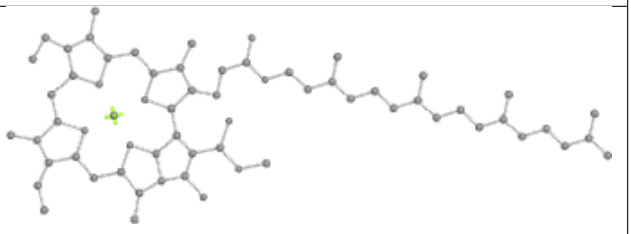
Bond lengths



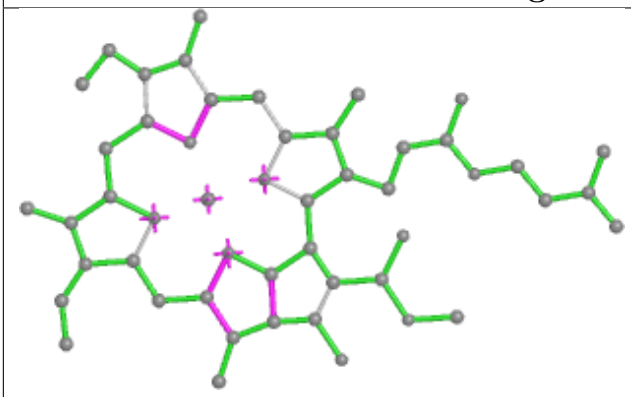
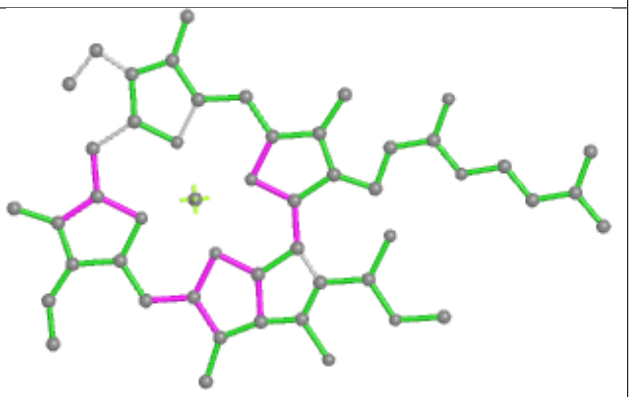
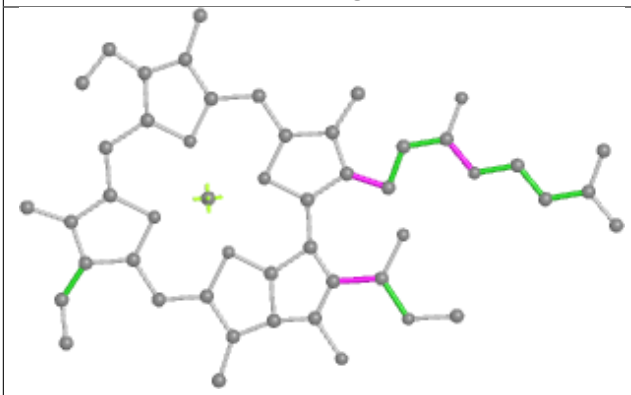
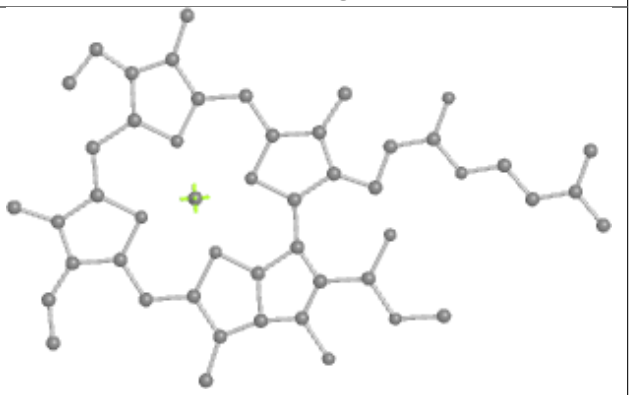
Bond angles

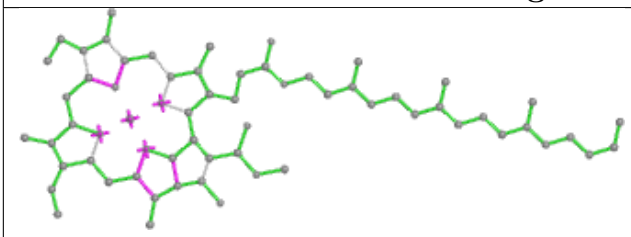
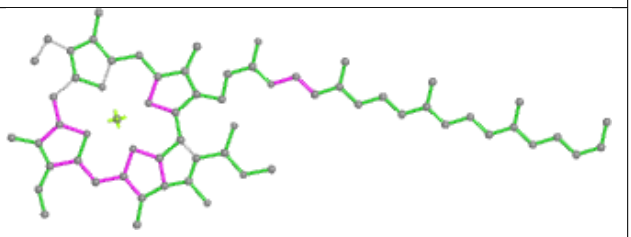
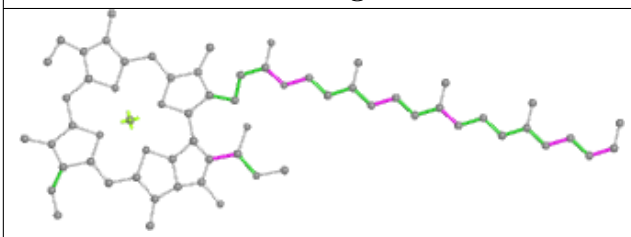
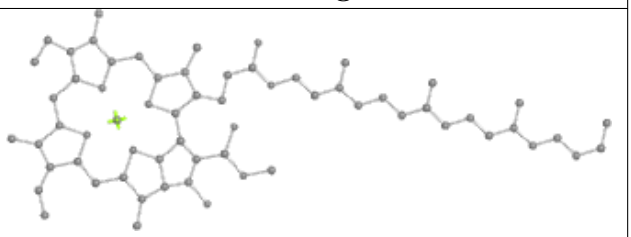


Torsions

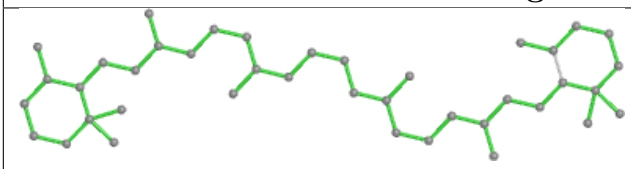


Rings

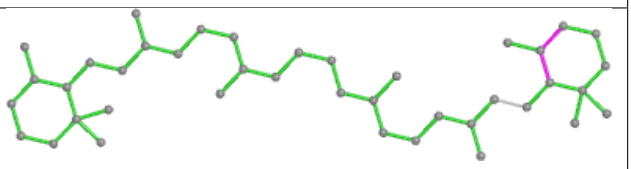
Ligand CLA 7 612	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand CLA d 602	
	
Bond lengths	Bond angles
	
Torsions	Rings

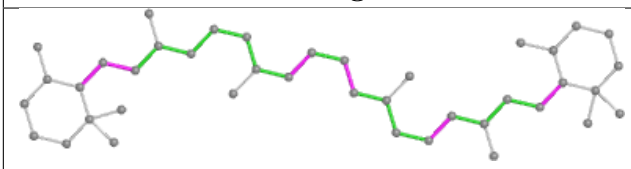
Ligand 8CT A 847



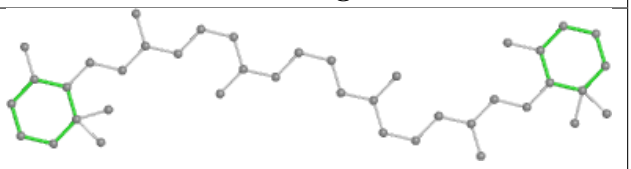
Bond lengths



Bond angles

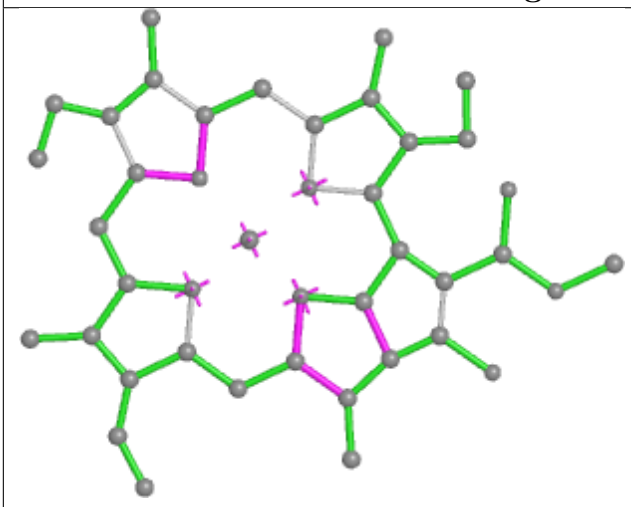


Torsions

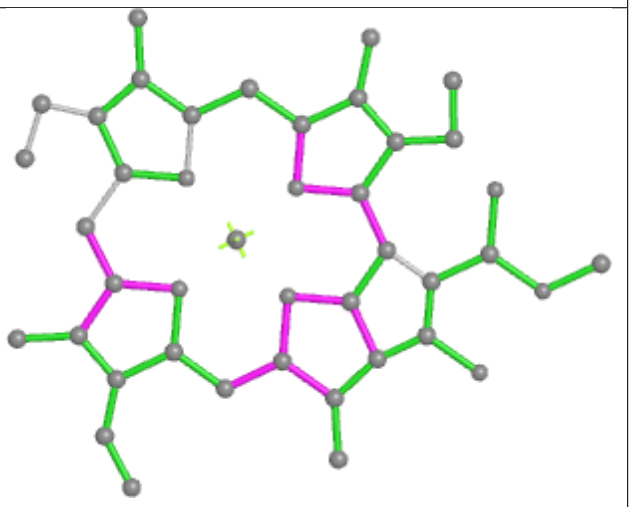


Rings

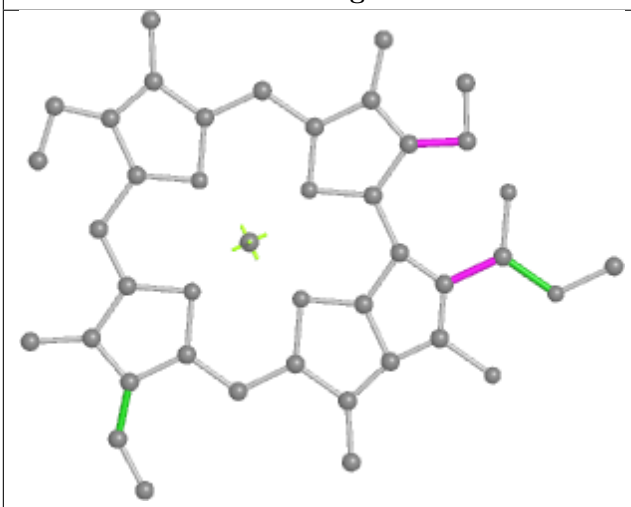
Ligand CLA B 814



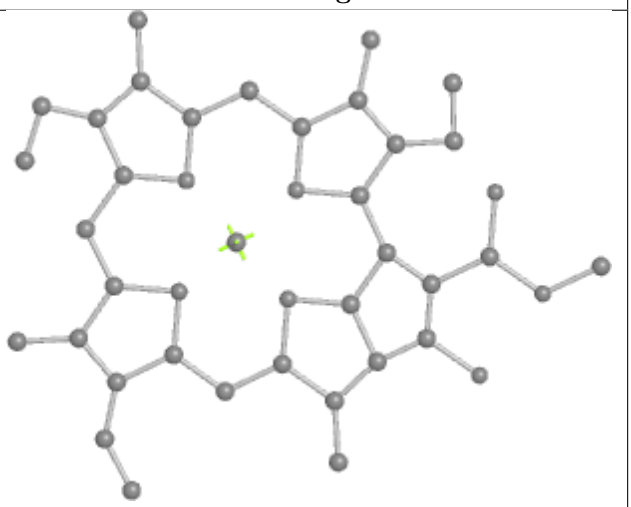
Bond lengths



Bond angles

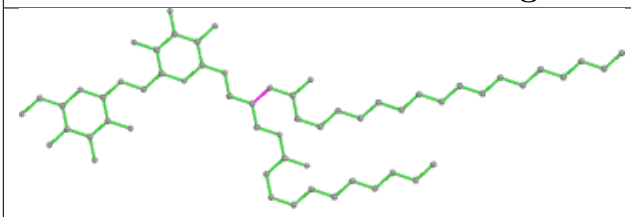


Torsions

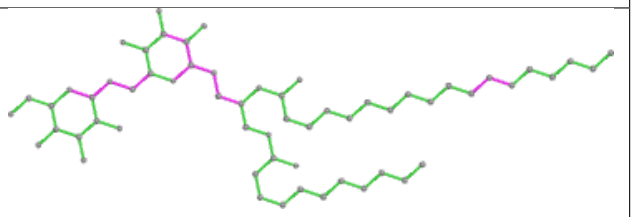


Rings

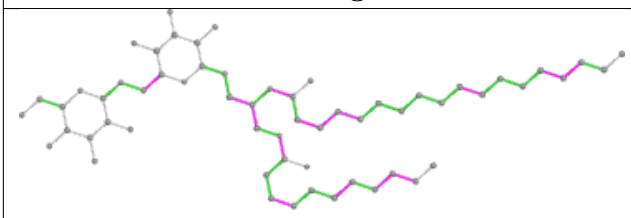
Ligand DGD B 848



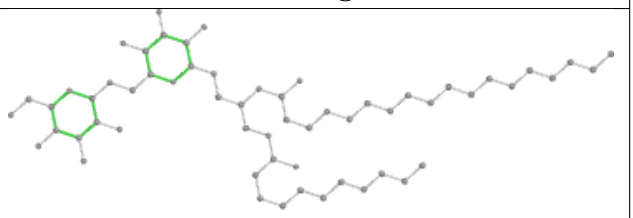
Bond lengths



Bond angles

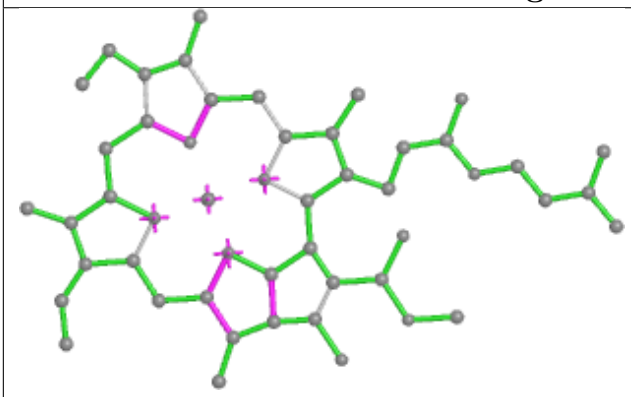


Torsions

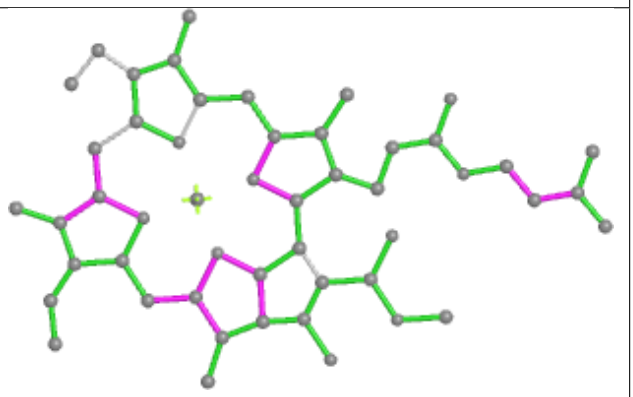


Rings

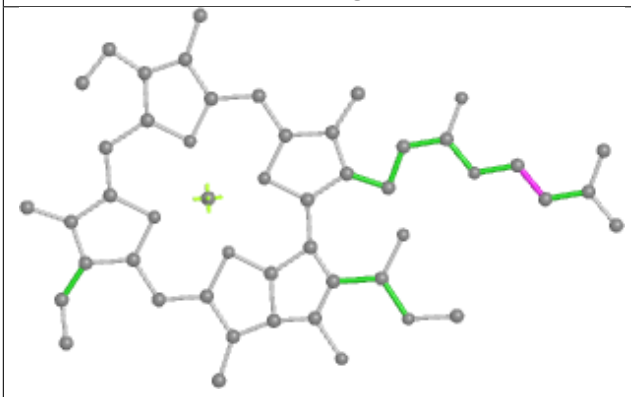
Ligand CLA Z 305



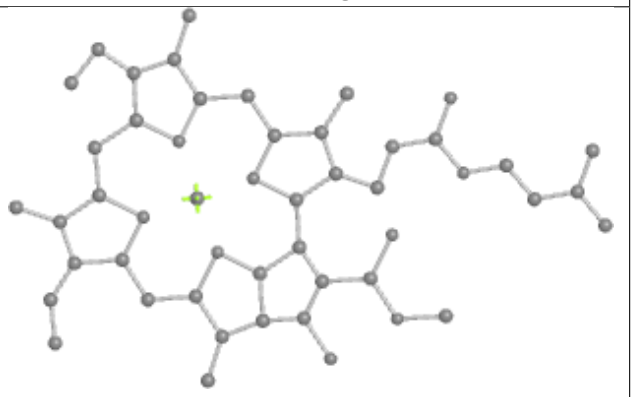
Bond lengths



Bond angles

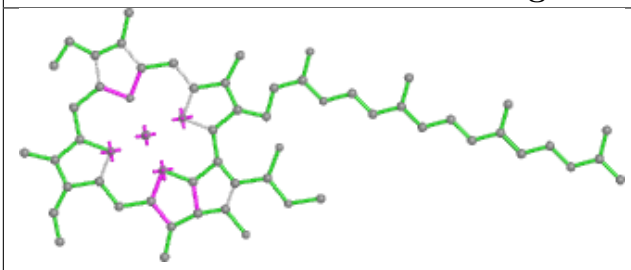


Torsions

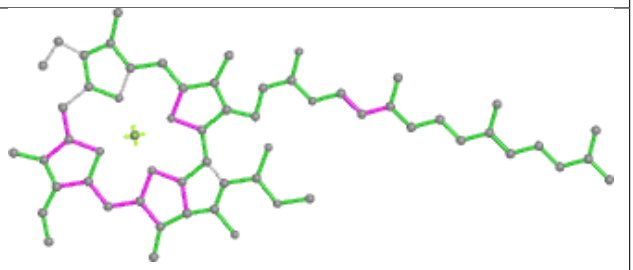


Rings

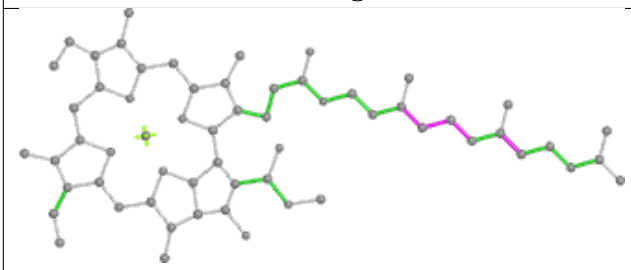
Ligand CLA 4 607



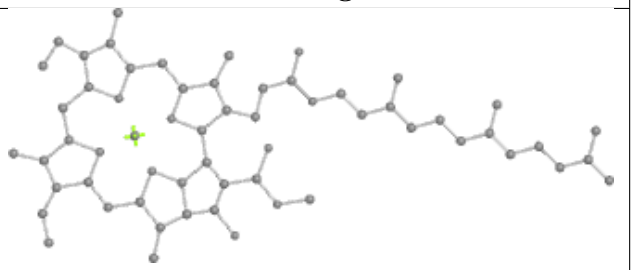
Bond lengths



Bond angles

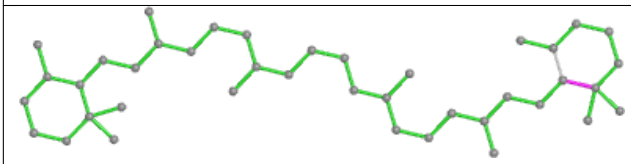


Torsions

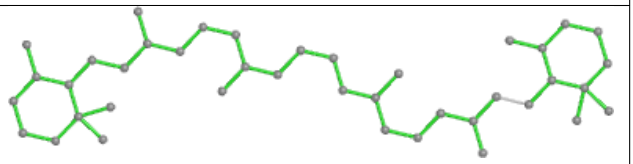


Rings

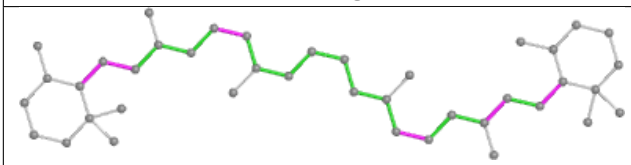
Ligand 8CT 7 617



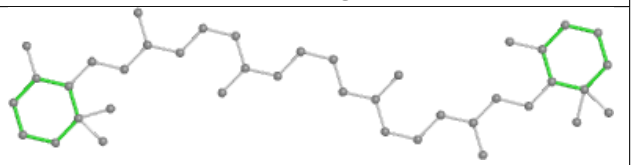
Bond lengths



Bond angles

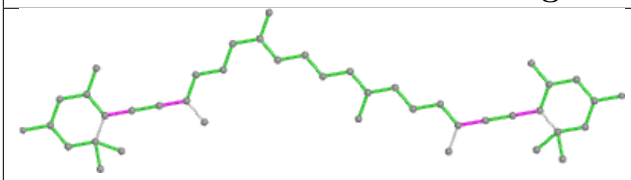


Torsions

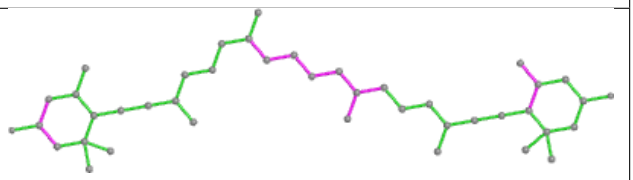


Rings

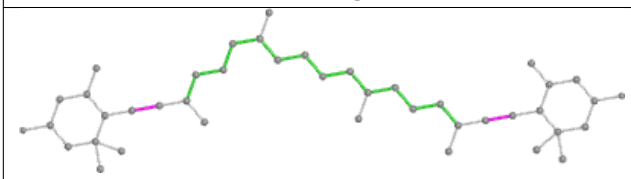
Ligand II0 d 614



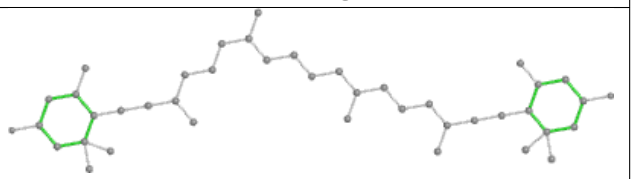
Bond lengths



Bond angles

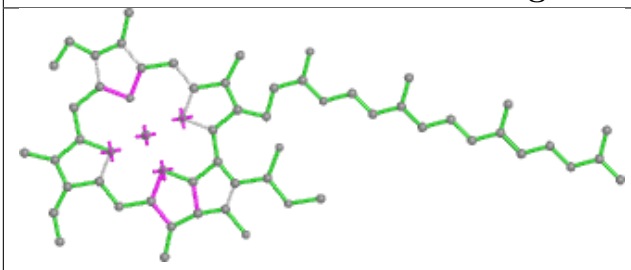


Torsions

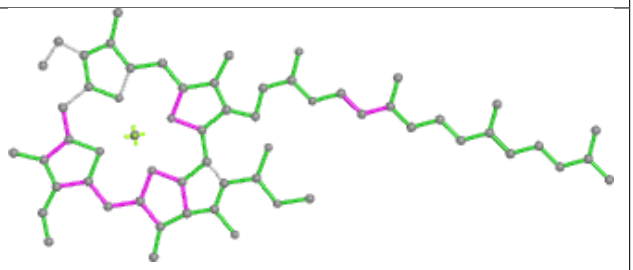


Rings

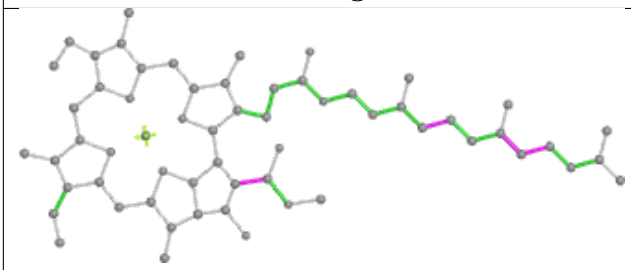
Ligand CLA 6 608



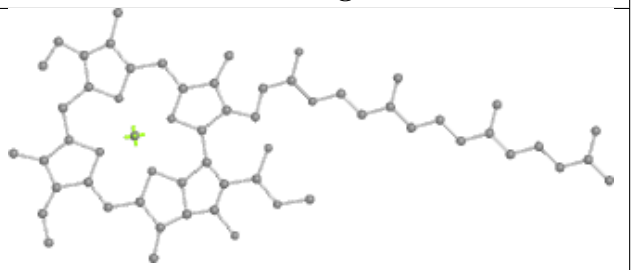
Bond lengths



Bond angles

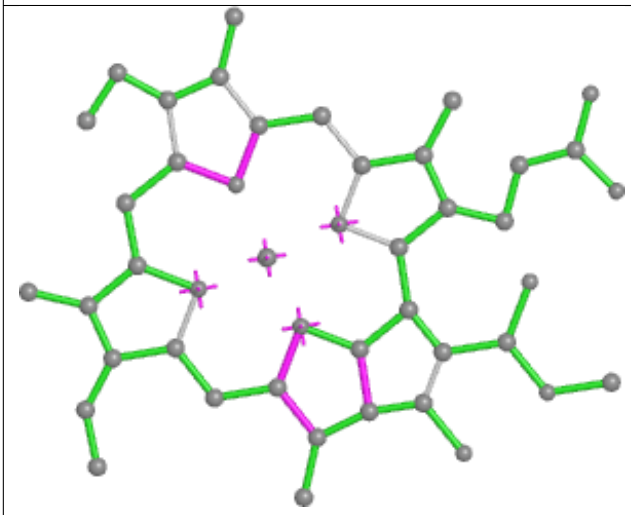


Torsions

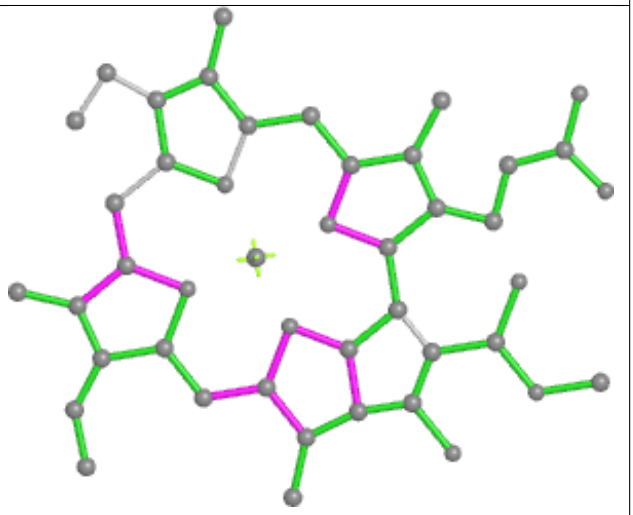


Rings

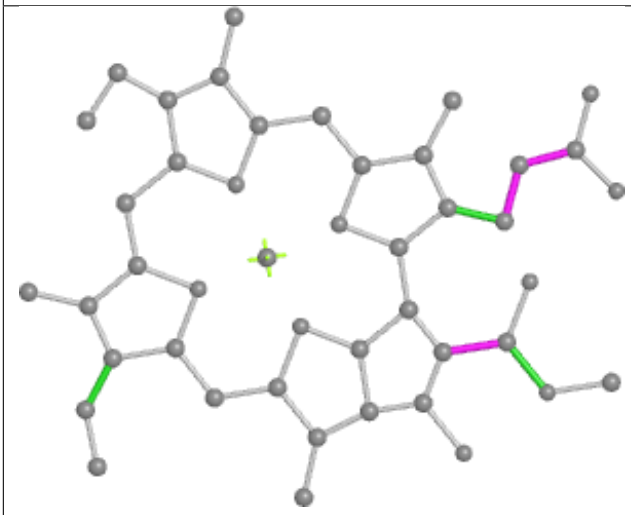
Ligand CLA c 605



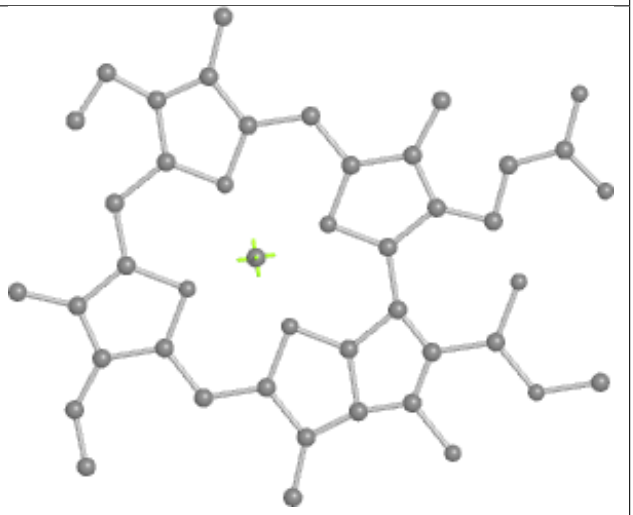
Bond lengths



Bond angles

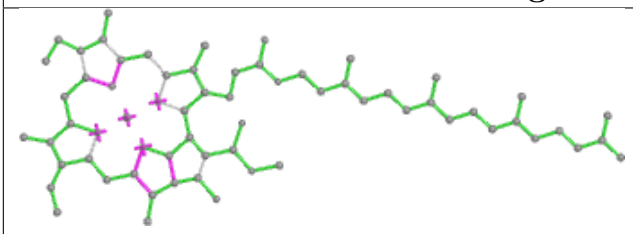


Torsions

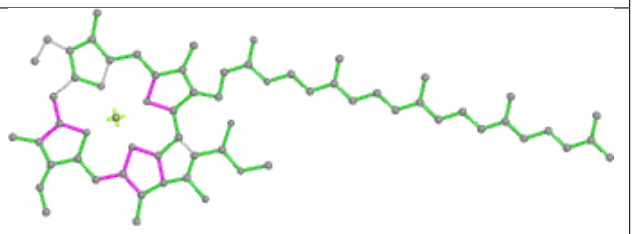


Rings

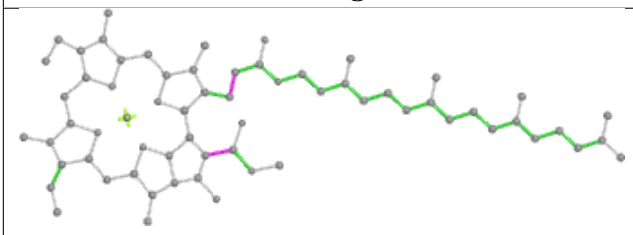
Ligand CLA 3 604



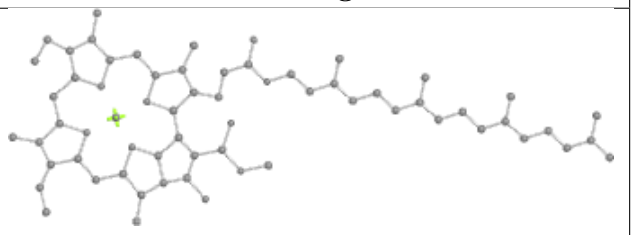
Bond lengths



Bond angles

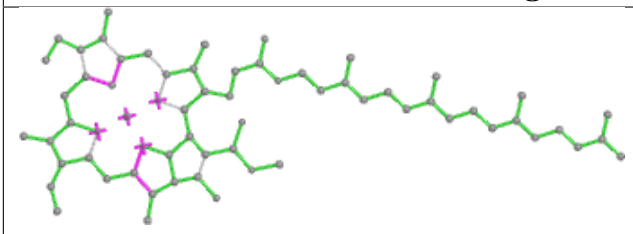


Torsions

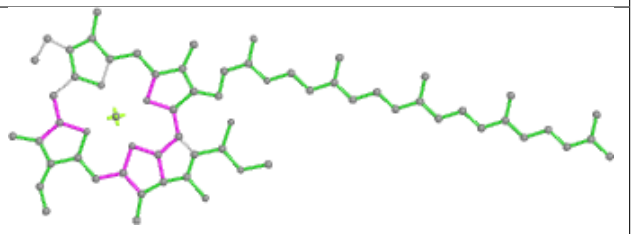


Rings

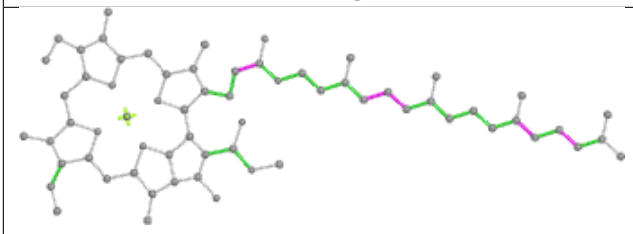
Ligand CLA A 801



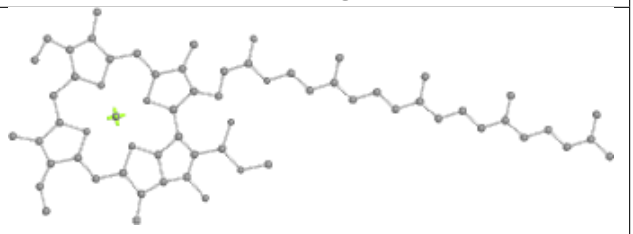
Bond lengths



Bond angles

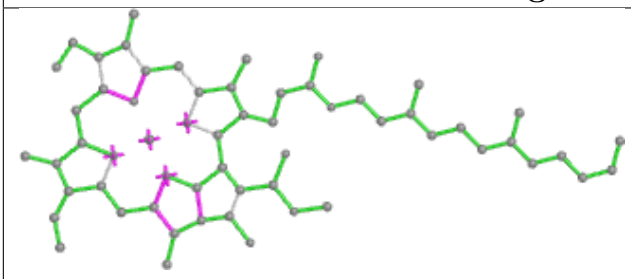


Torsions

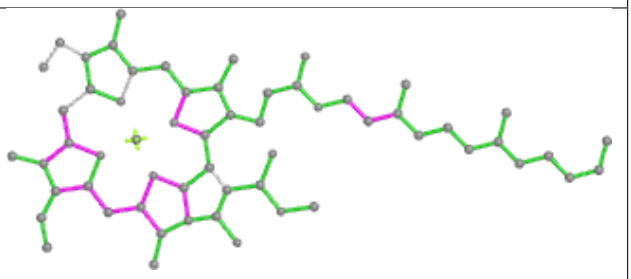


Rings

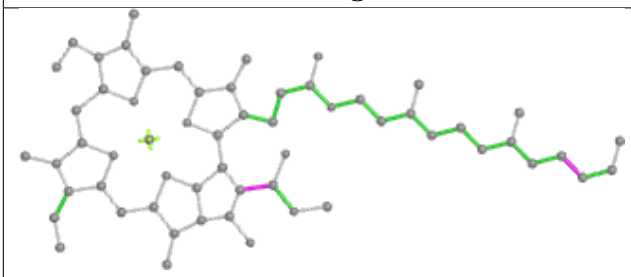
Ligand CLA 4 602



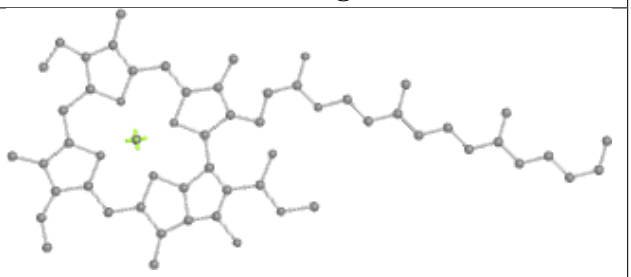
Bond lengths



Bond angles

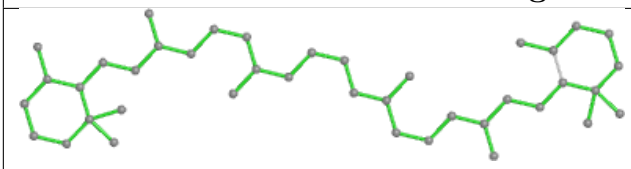


Torsions

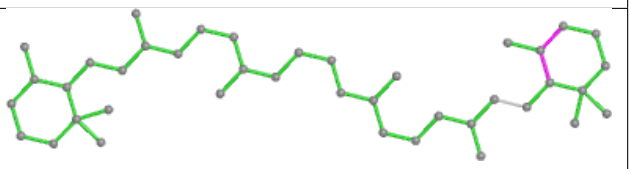


Rings

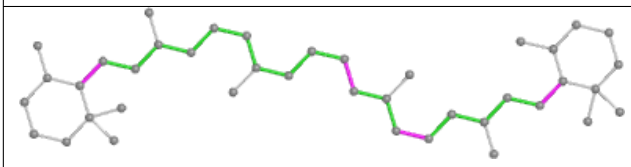
Ligand 8CT Z 309



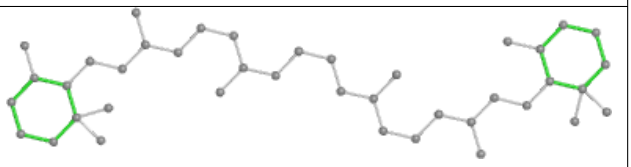
Bond lengths



Bond angles

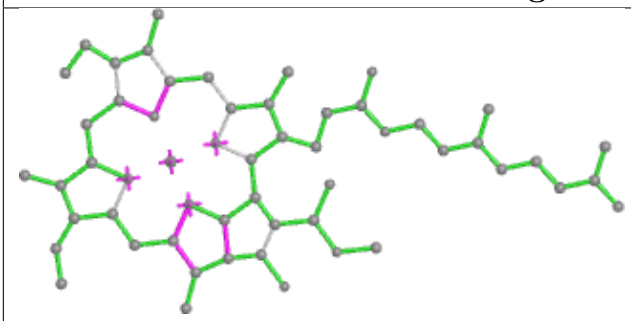


Torsions

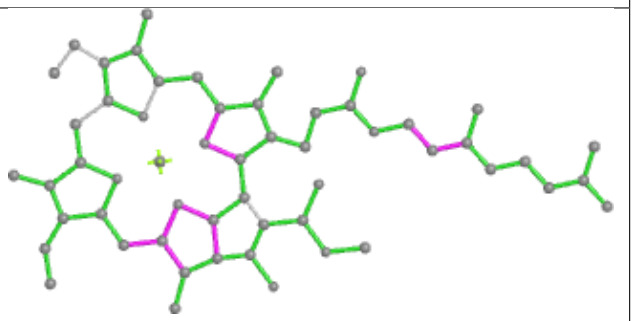


Rings

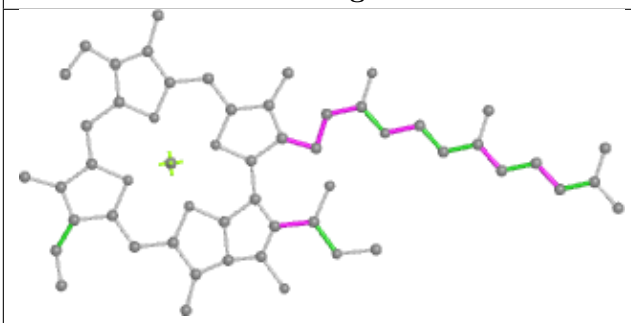
Ligand CLA 7 608



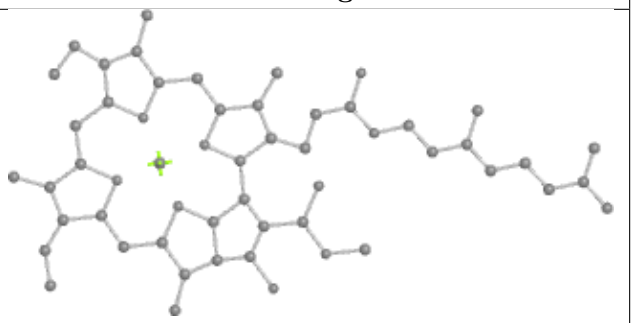
Bond lengths



Bond angles

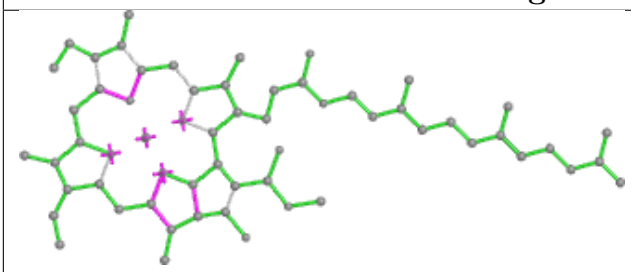


Torsions

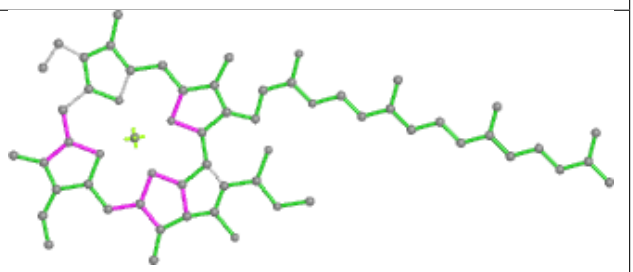


Rings

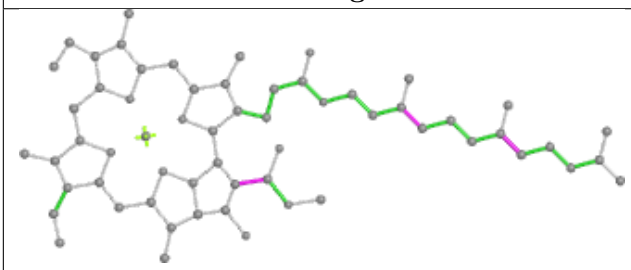
Ligand CLA 6 604



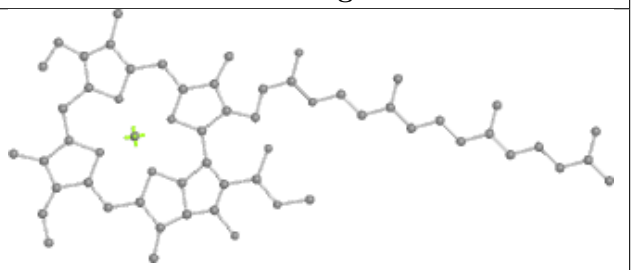
Bond lengths



Bond angles

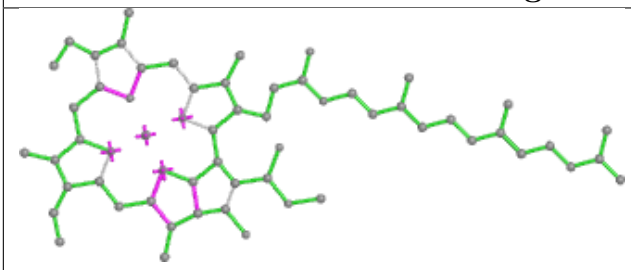


Torsions

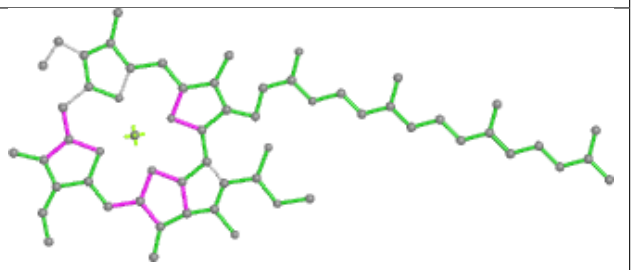


Rings

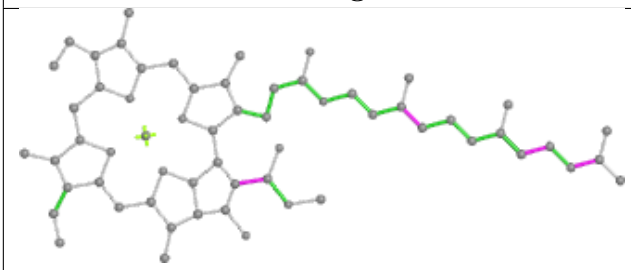
Ligand CLA B 810



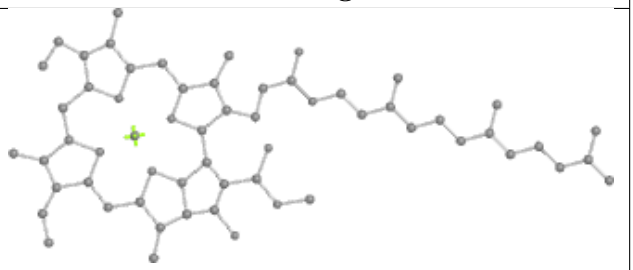
Bond lengths



Bond angles

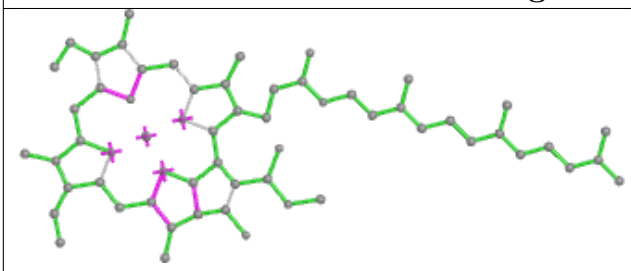


Torsions

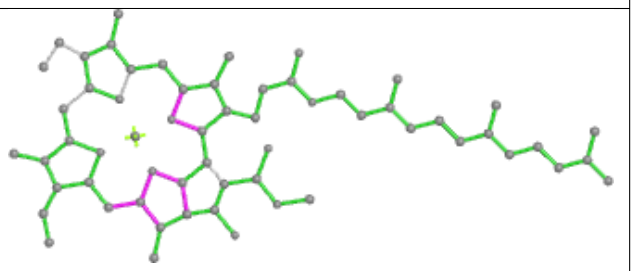


Rings

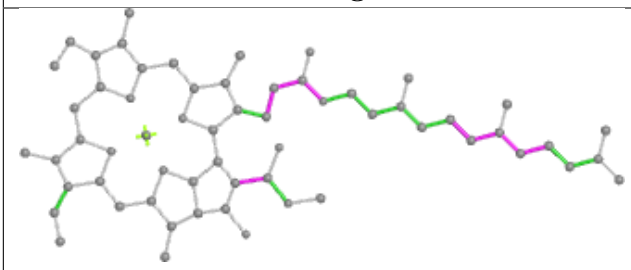
Ligand CLA a 604



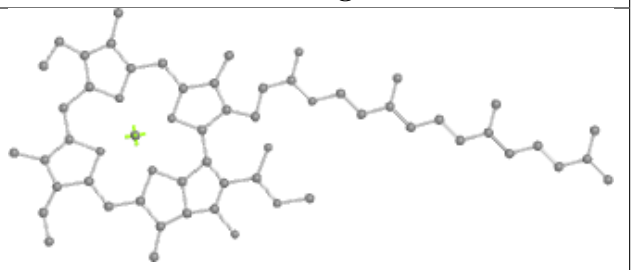
Bond lengths



Bond angles

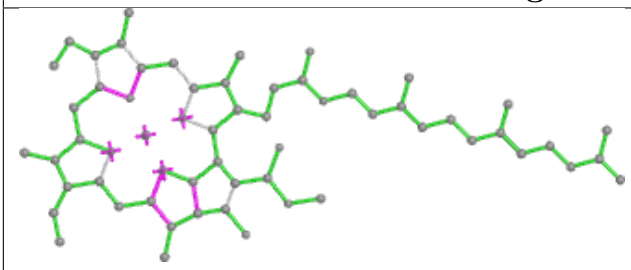


Torsions

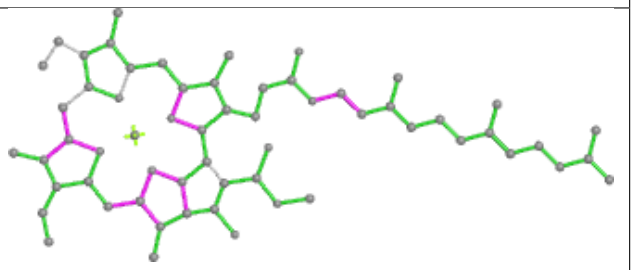


Rings

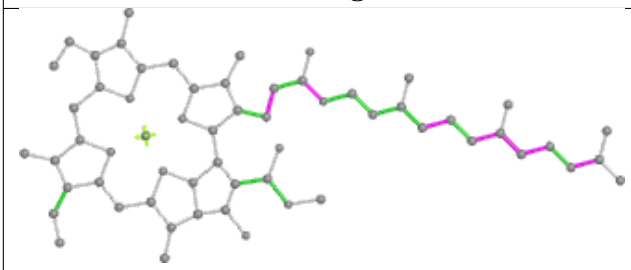
Ligand CLA Z 301



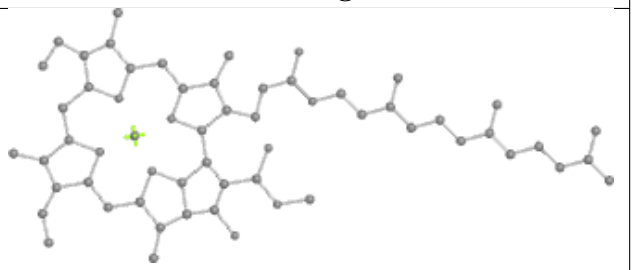
Bond lengths



Bond angles

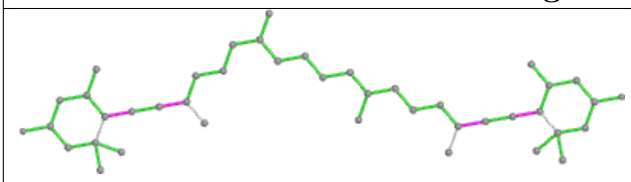


Torsions

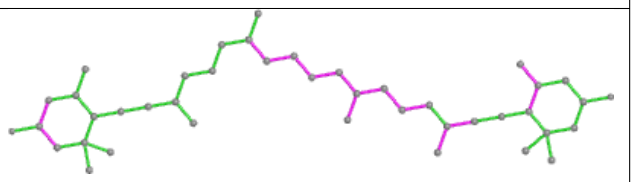


Rings

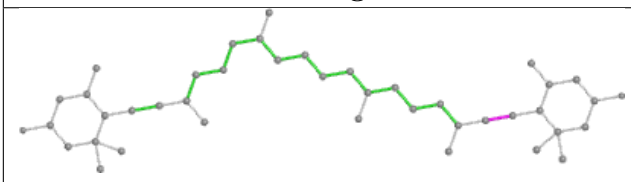
Ligand II0 a 615



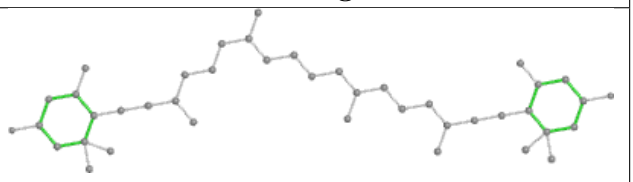
Bond lengths



Bond angles

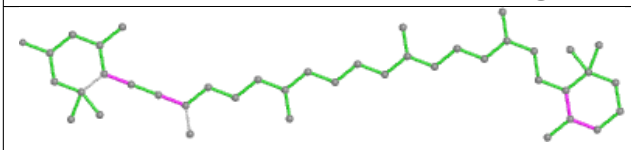


Torsions

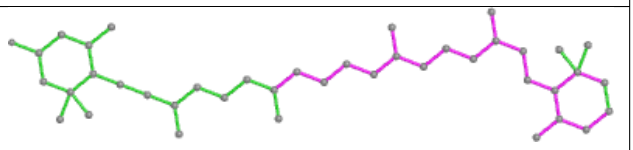


Rings

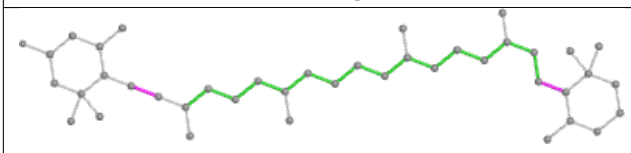
Ligand IHT 6 617



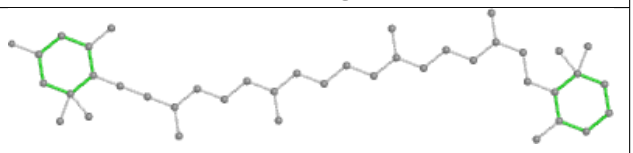
Bond lengths



Bond angles

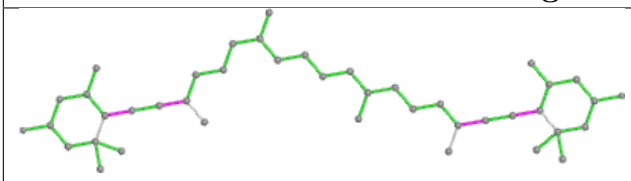


Torsions

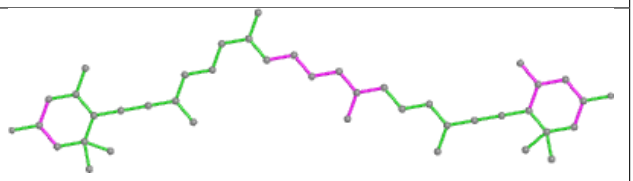


Rings

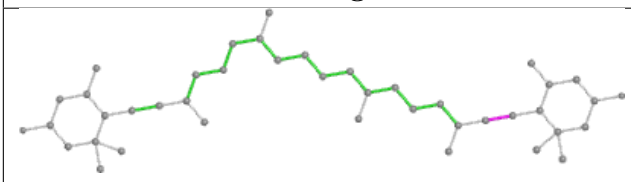
Ligand II0 b 612



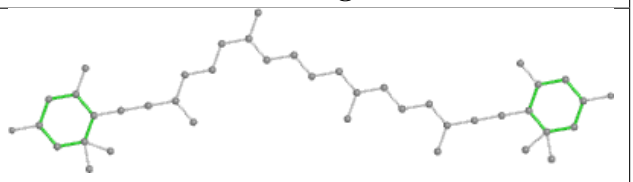
Bond lengths



Bond angles

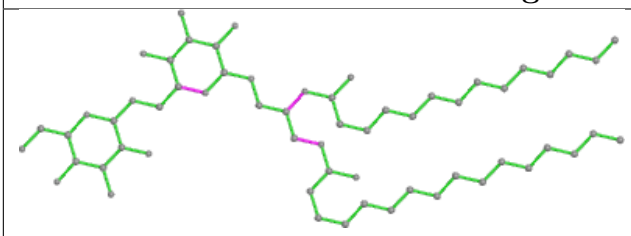


Torsions

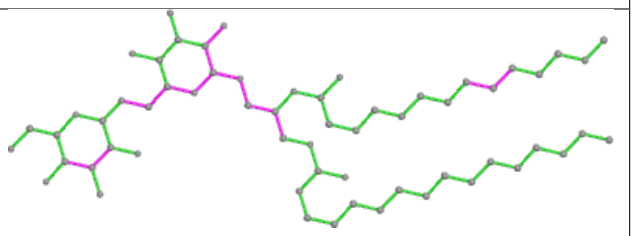


Rings

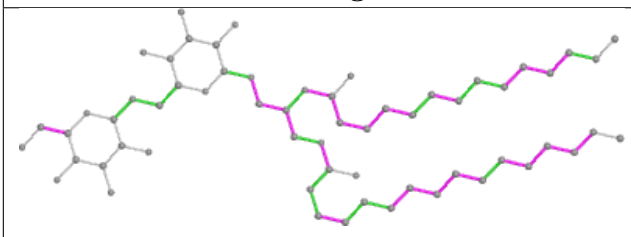
Ligand DGD Z 303



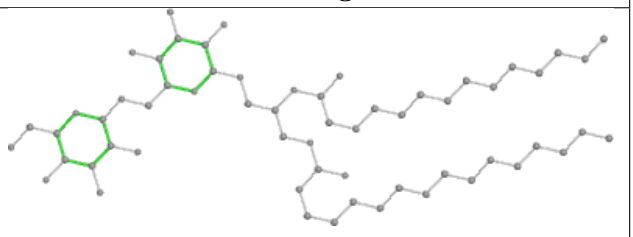
Bond lengths



Bond angles

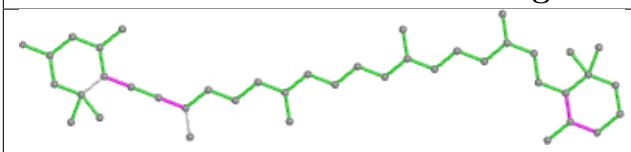


Torsions

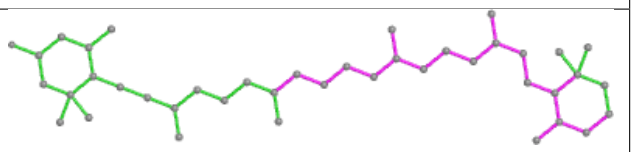


Rings

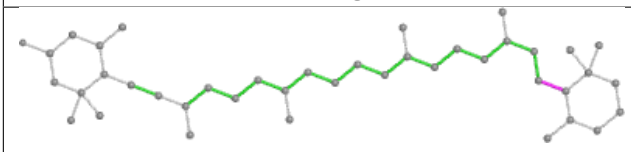
Ligand IHT 8 609



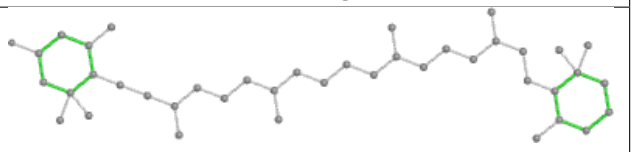
Bond lengths



Bond angles

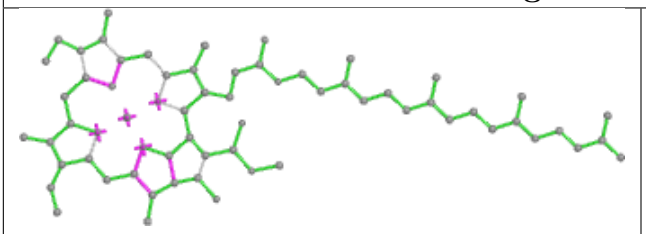


Torsions

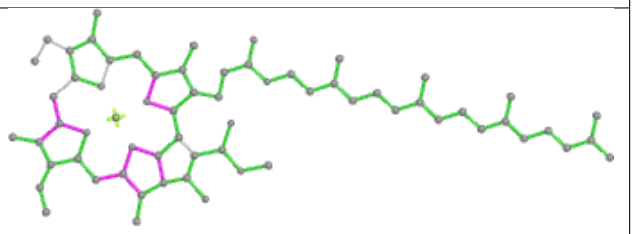


Rings

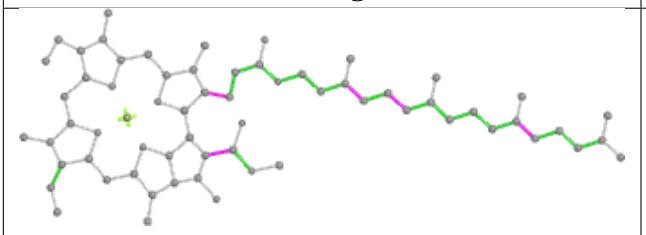
Ligand CLA A 822



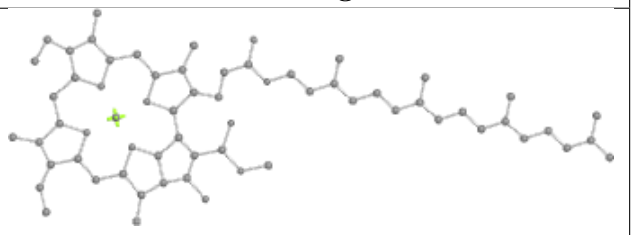
Bond lengths



Bond angles

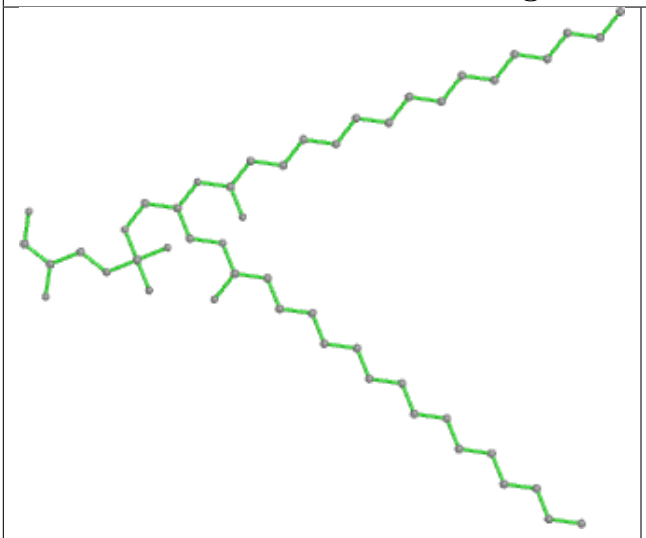


Torsions

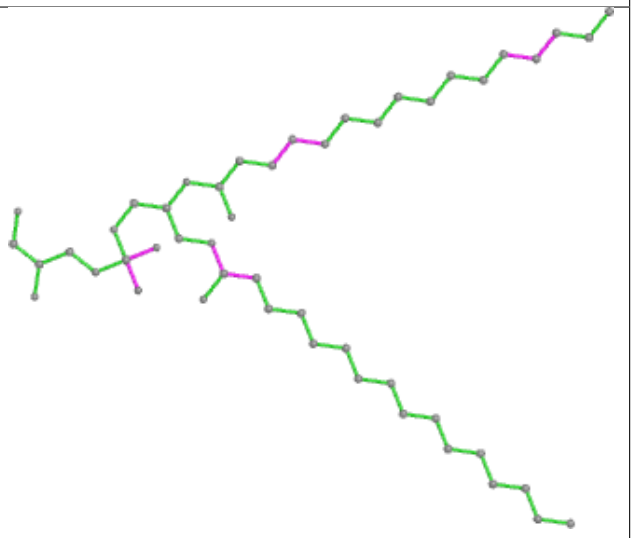


Rings

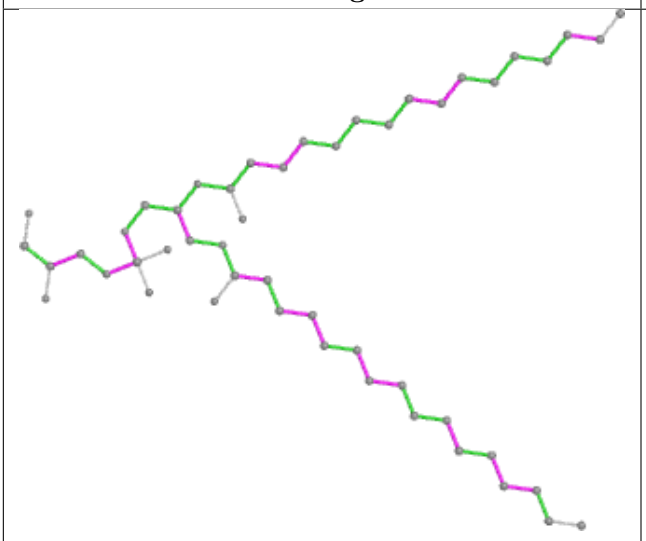
Ligand LHG A 850



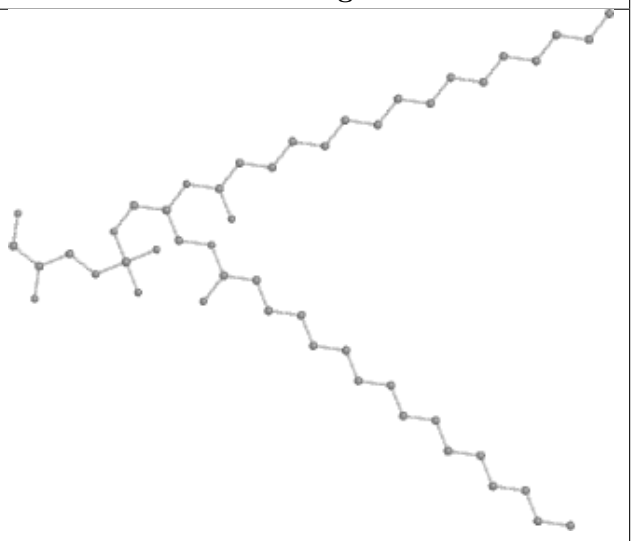
Bond lengths



Bond angles

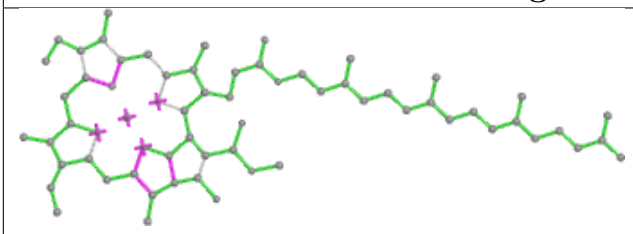


Torsions

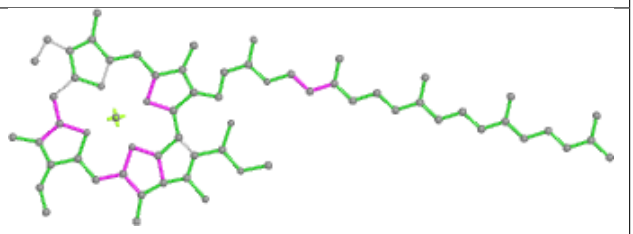


Rings

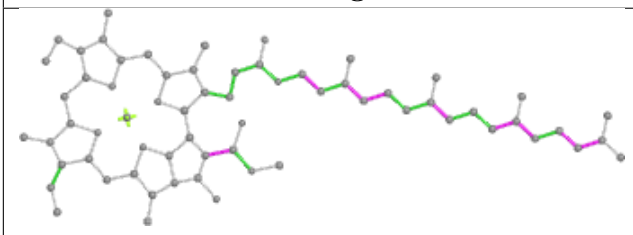
Ligand CLA c 606



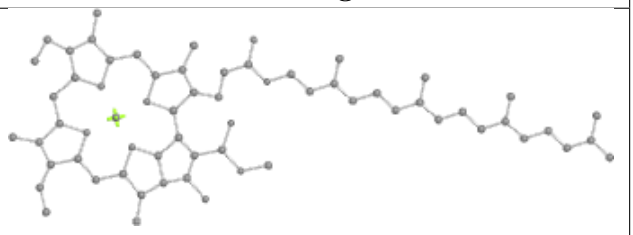
Bond lengths



Bond angles

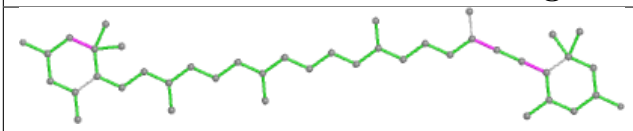


Torsions

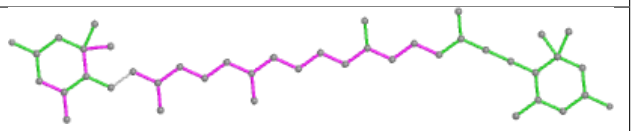


Rings

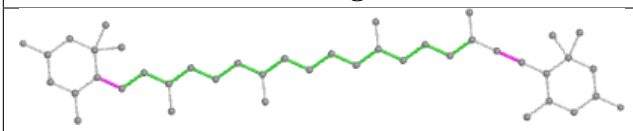
Ligand II3 e 613



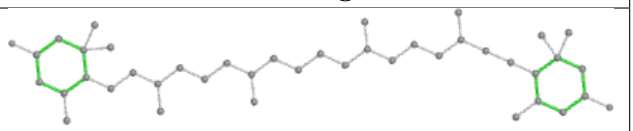
Bond lengths



Bond angles

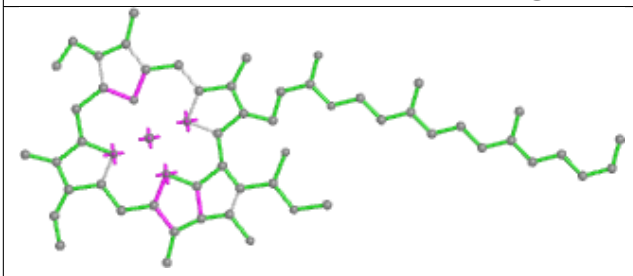


Torsions

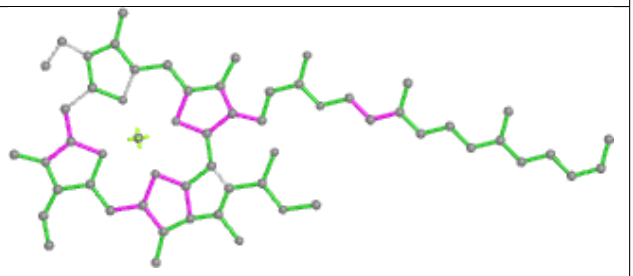


Rings

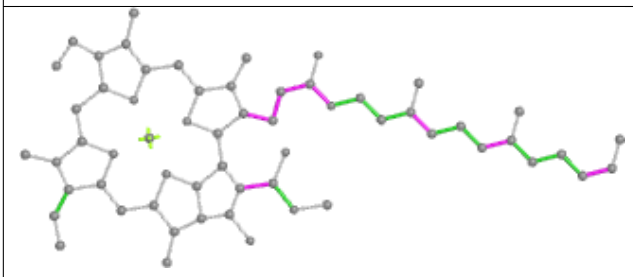
Ligand CLA 2 602



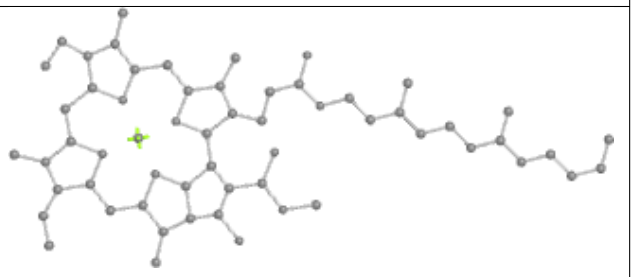
Bond lengths



Bond angles

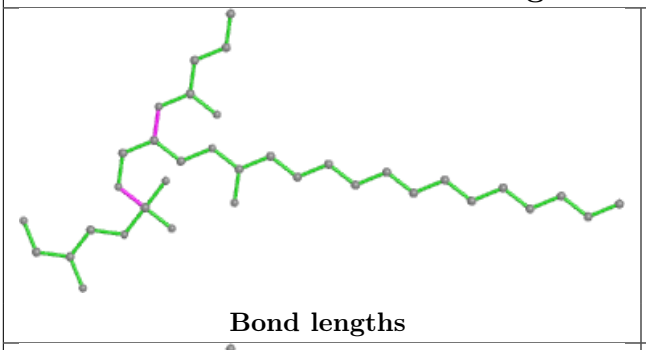


Torsions

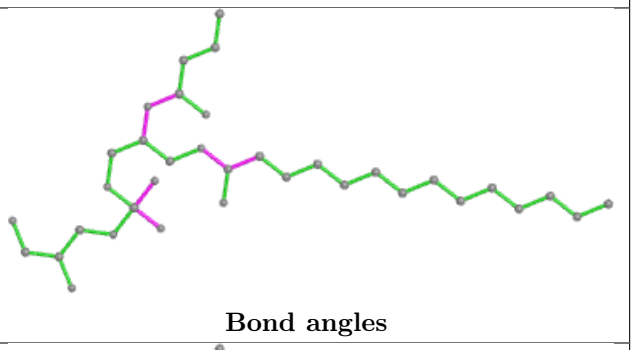


Rings

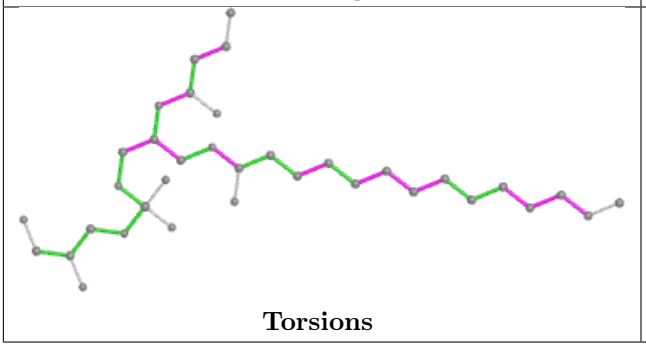
Ligand LHG 6 618



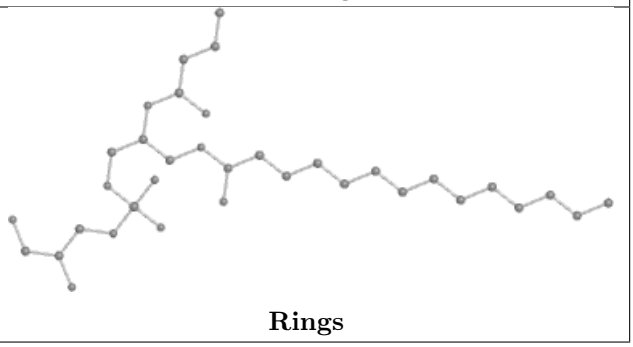
Bond lengths



Bond angles

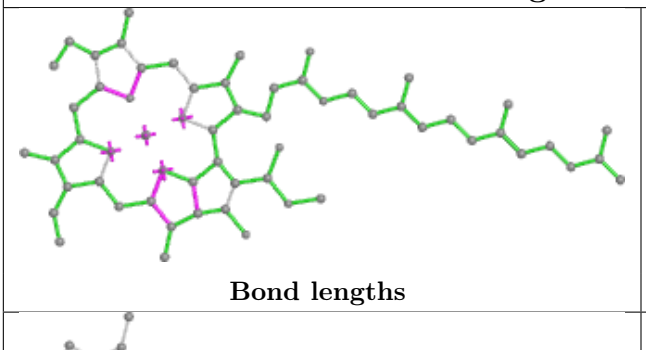


Torsions

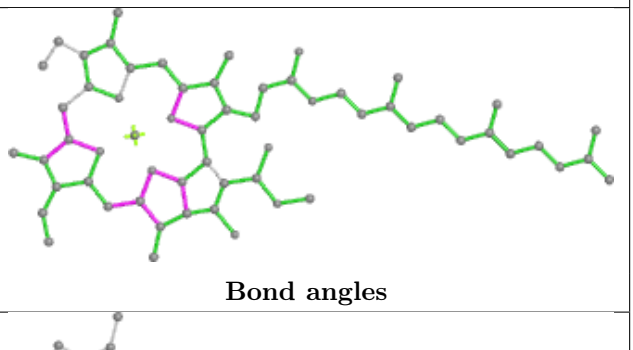


Rings

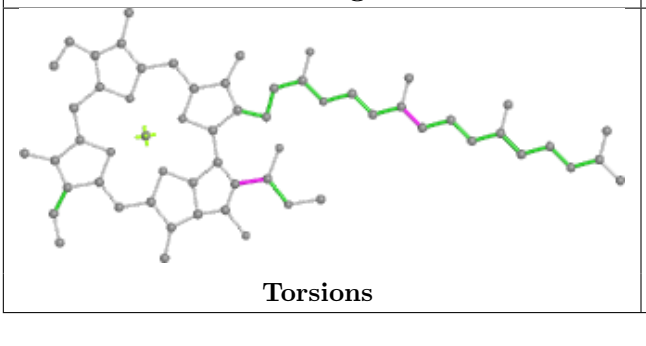
Ligand CLA e 604



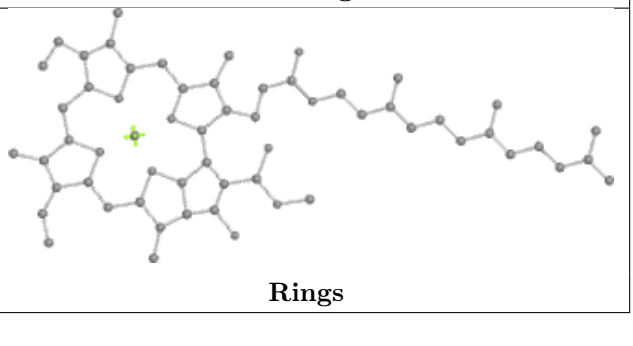
Bond lengths



Bond angles

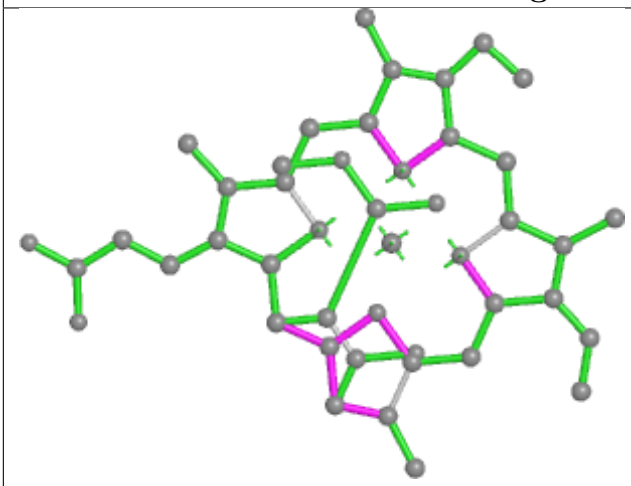


Torsions

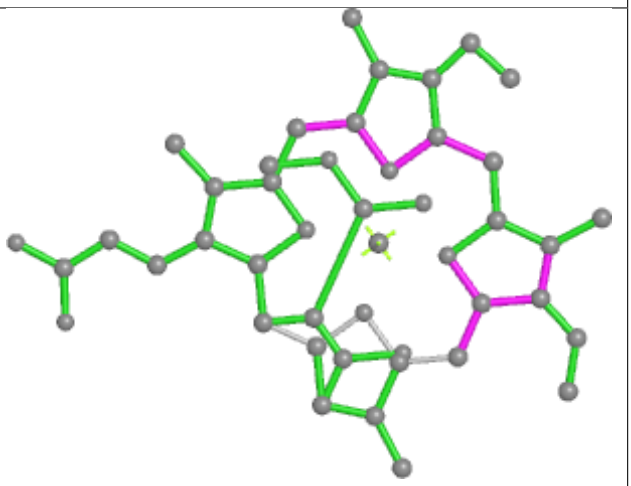


Rings

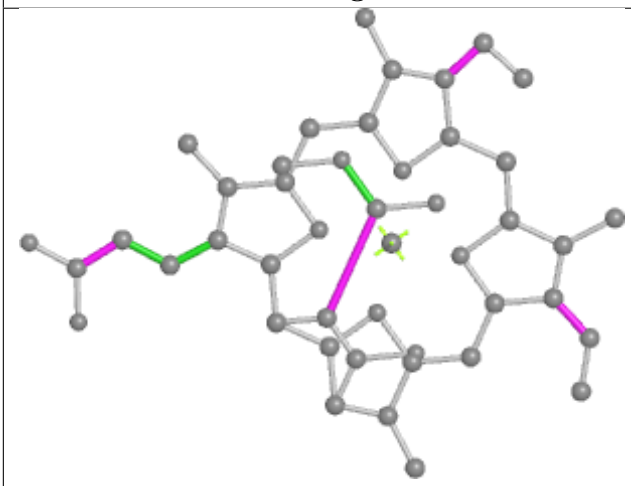
Ligand KC2 6 613



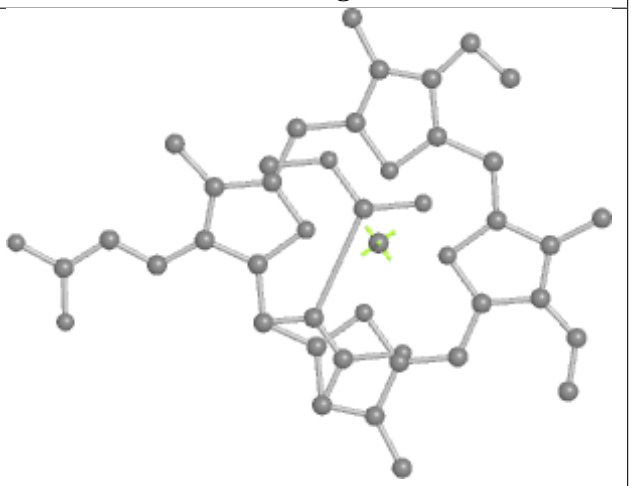
Bond lengths



Bond angles

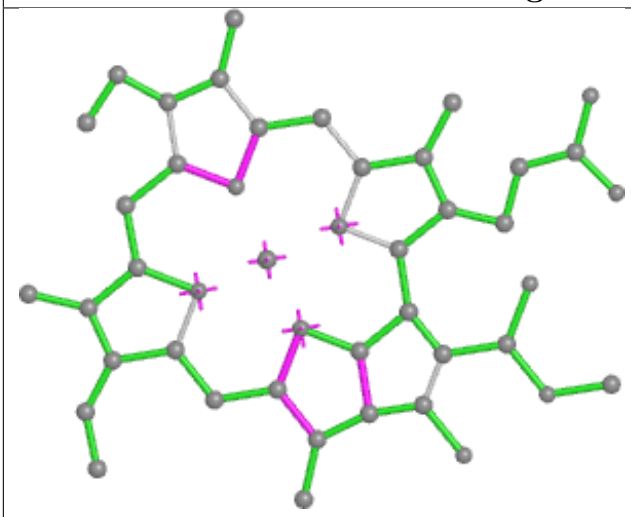


Torsions

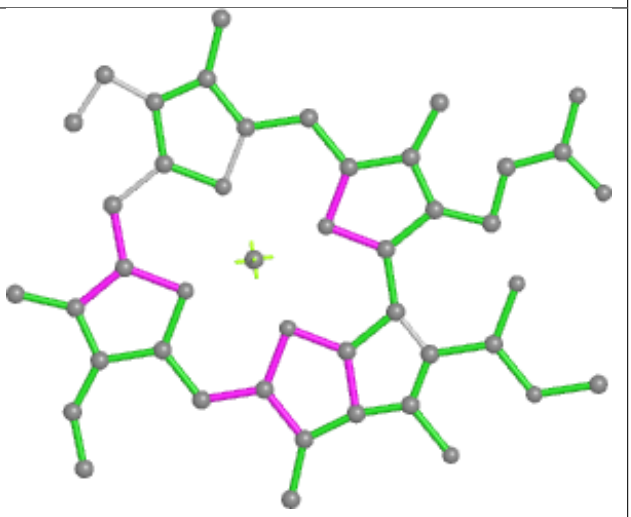


Rings

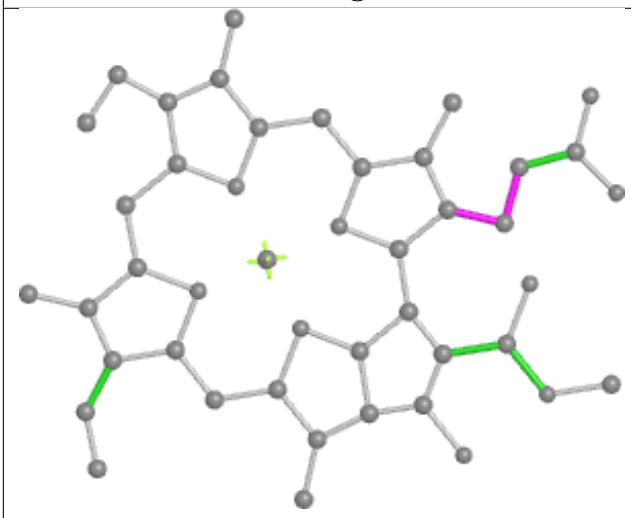
Ligand CLA F 203



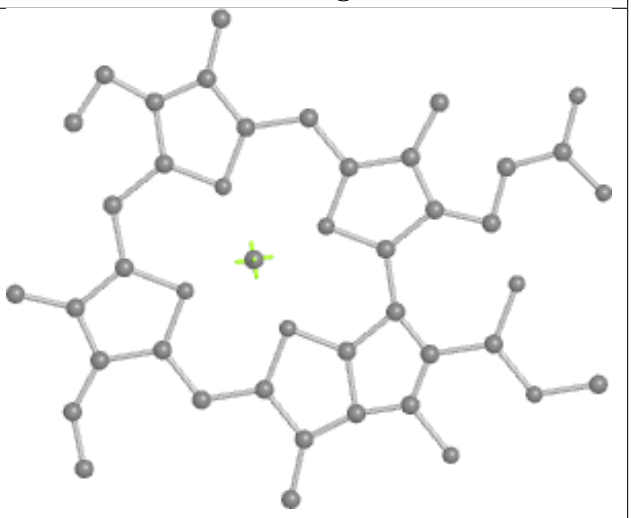
Bond lengths



Bond angles

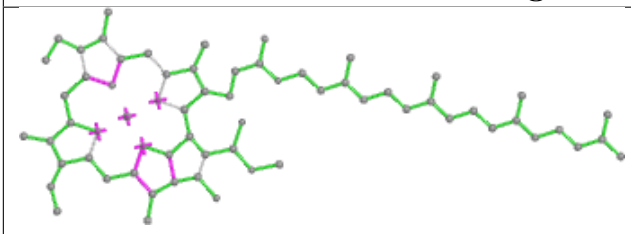


Torsions

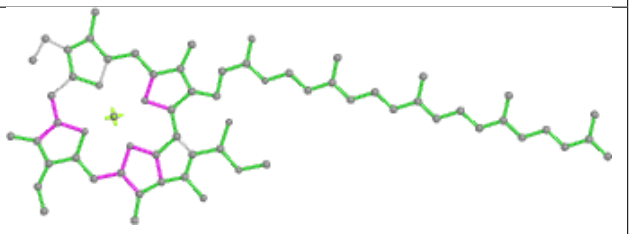


Rings

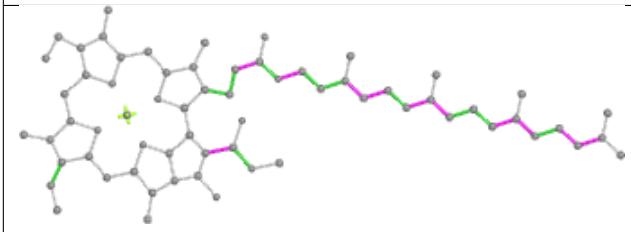
Ligand CLA b 604



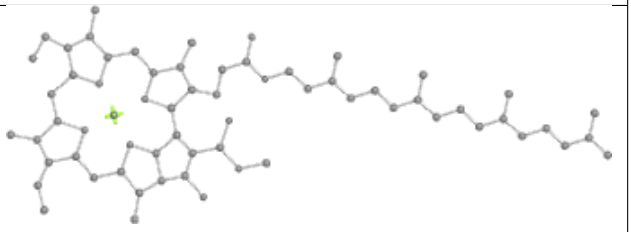
Bond lengths



Bond angles

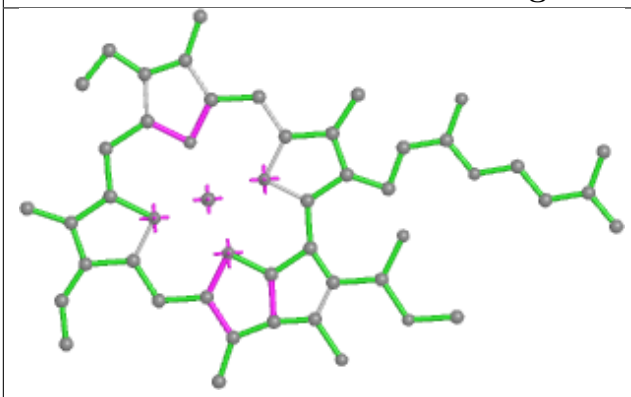


Torsions

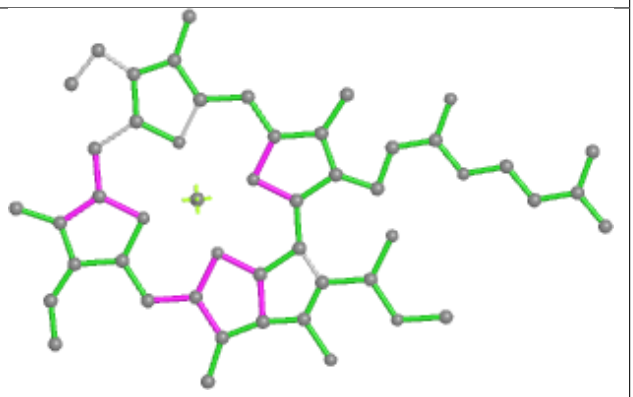


Rings

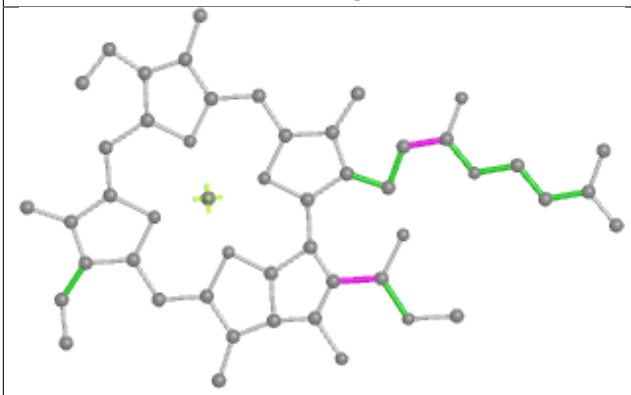
Ligand CLA e 603



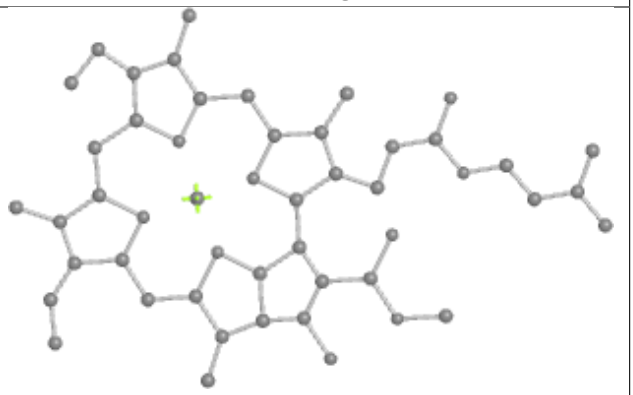
Bond lengths



Bond angles

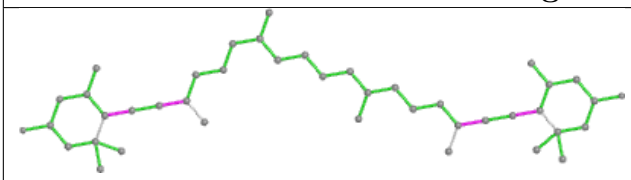


Torsions

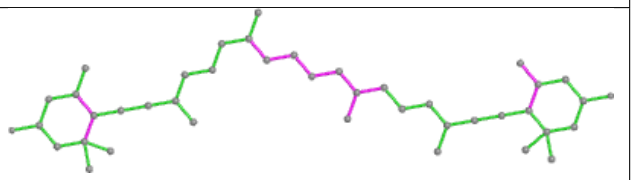


Rings

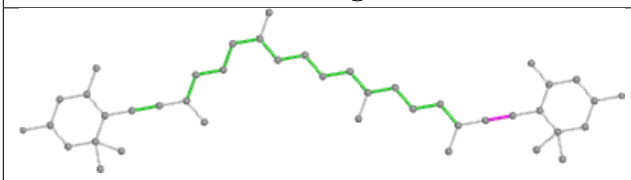
Ligand II0 b 614



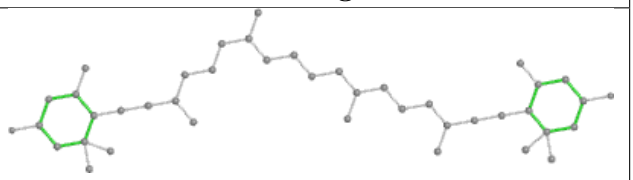
Bond lengths



Bond angles

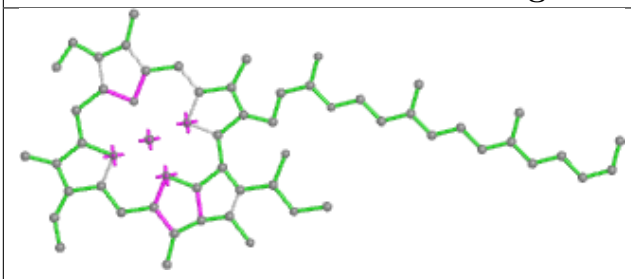


Torsions

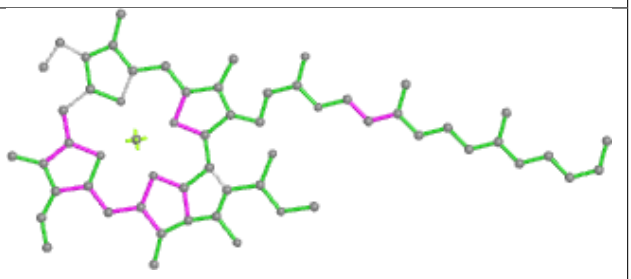


Rings

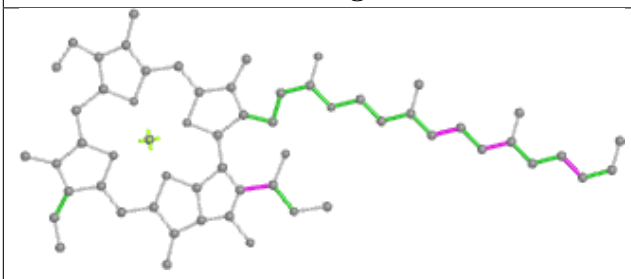
Ligand CLA 1 602



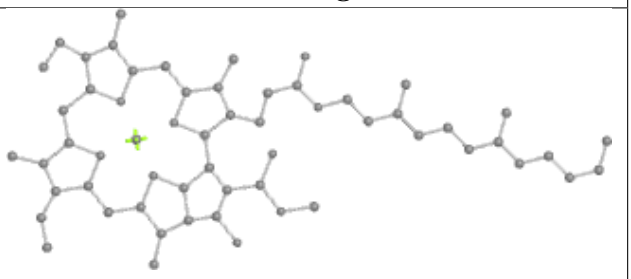
Bond lengths



Bond angles

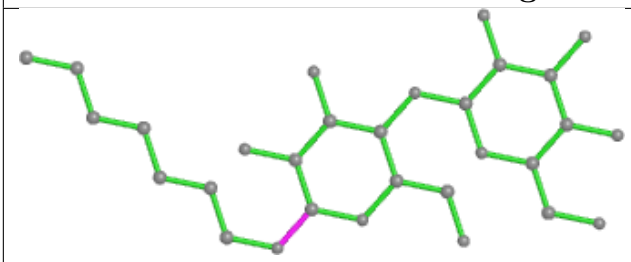


Torsions

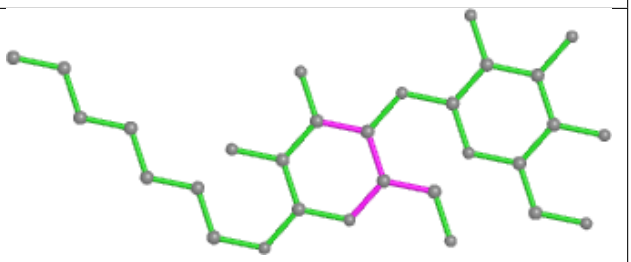


Rings

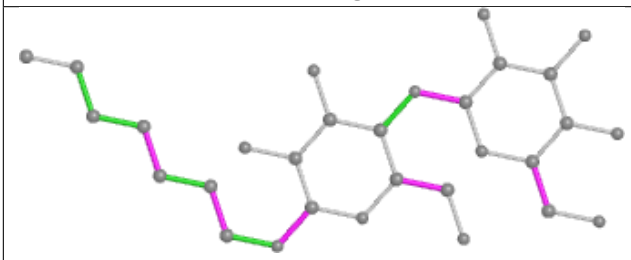
Ligand LMU O 207



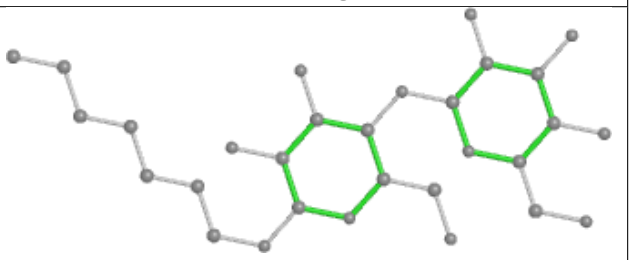
Bond lengths



Bond angles

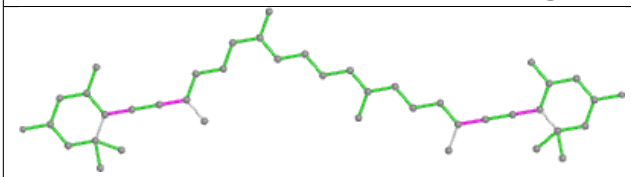


Torsions

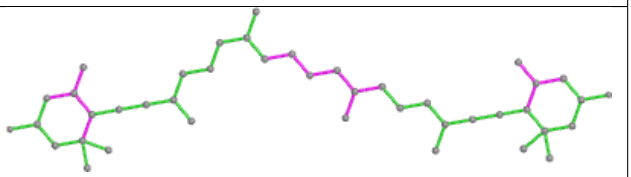


Rings

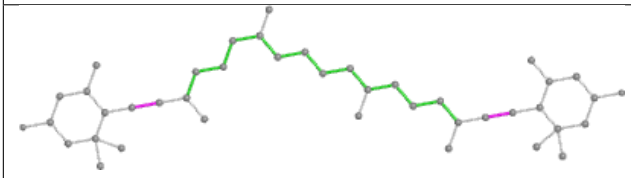
Ligand II0 d 615



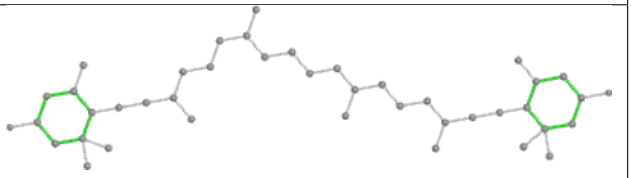
Bond lengths



Bond angles

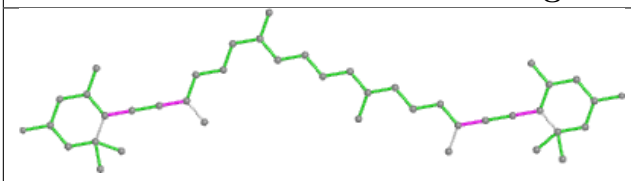


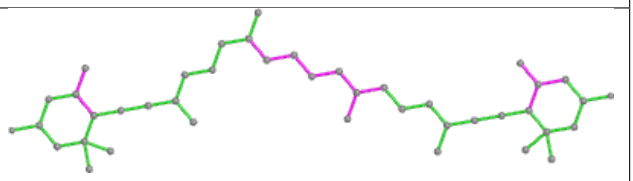
Torsions

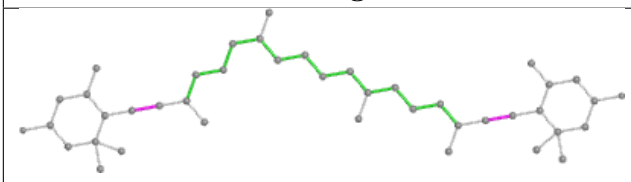


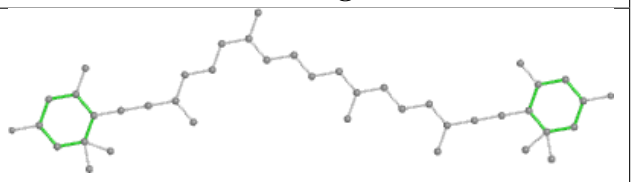
Rings

Ligand II0 c 618

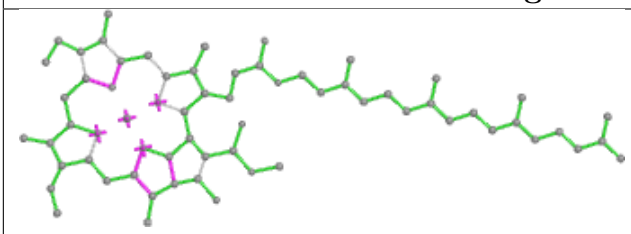

Bond lengths

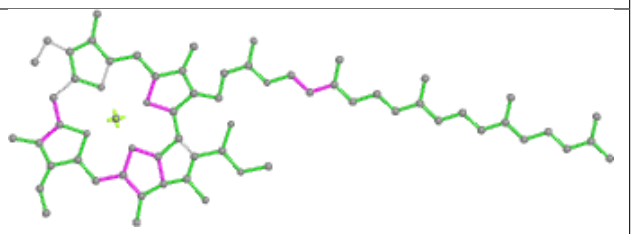

Bond angles

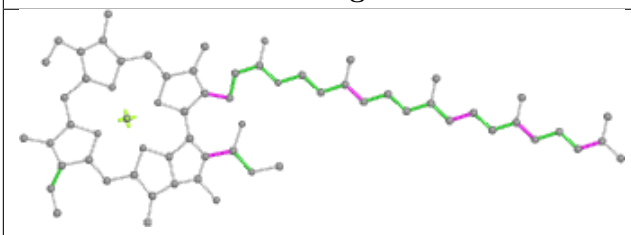

Torsions

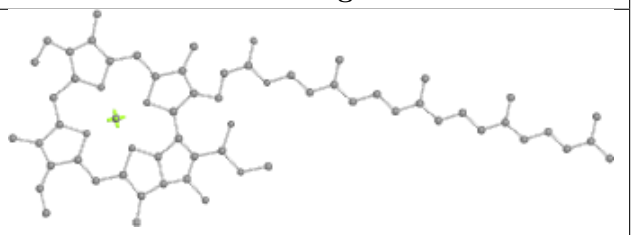

Rings

Ligand CLA B 815

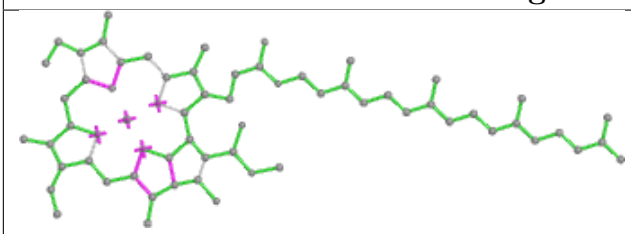

Bond lengths

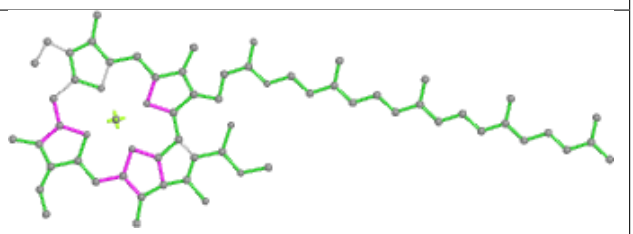

Bond angles

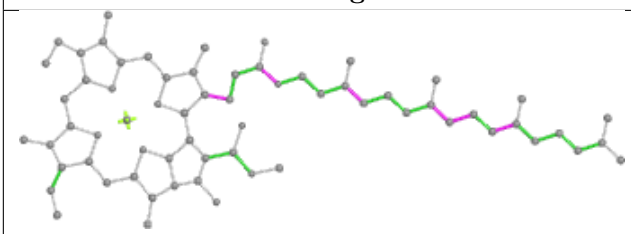

Torsions

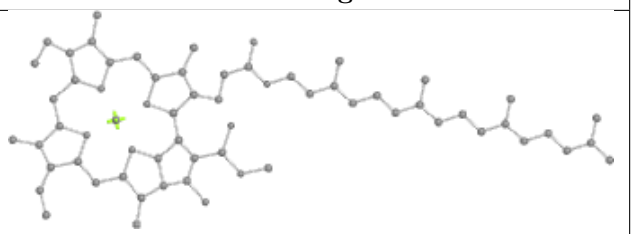

Rings

Ligand CLA 8 603

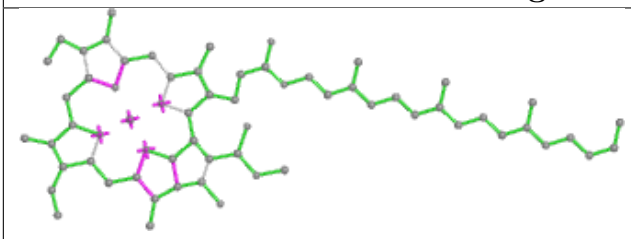

Bond lengths


Bond angles

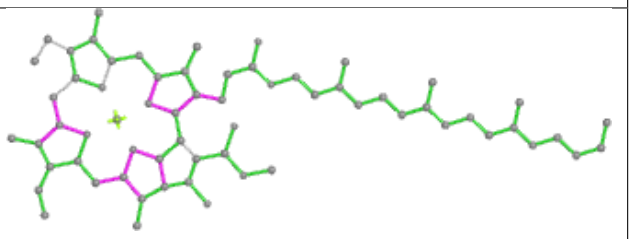

Torsions


Rings

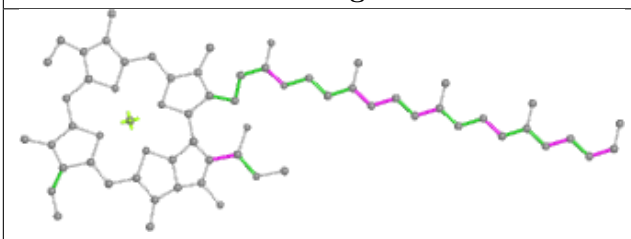
Ligand CLA 9 606



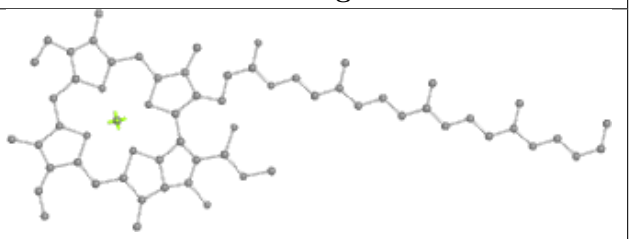
Bond lengths



Bond angles

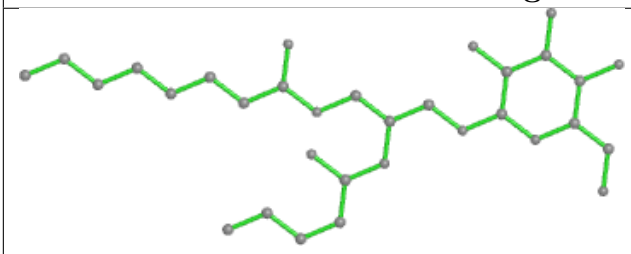


Torsions

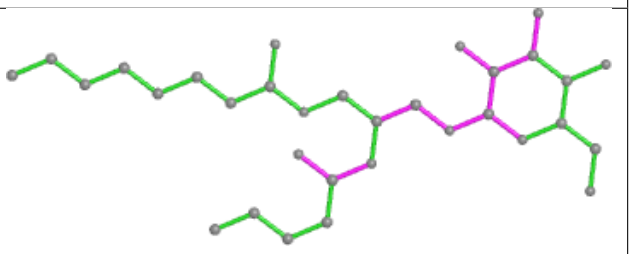


Rings

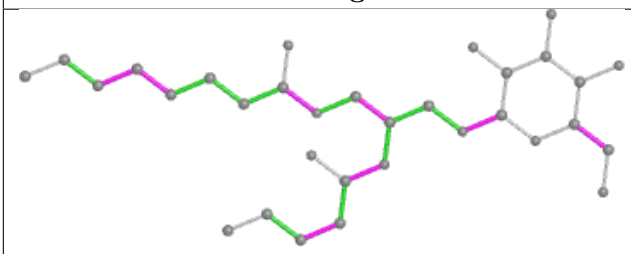
Ligand LMG 3 620



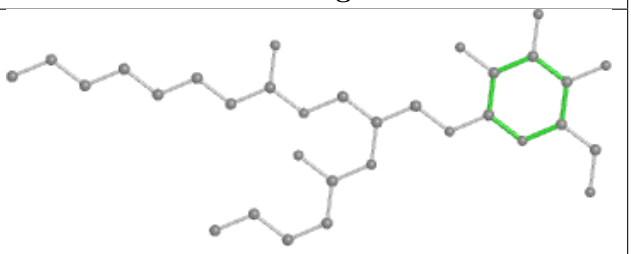
Bond lengths



Bond angles

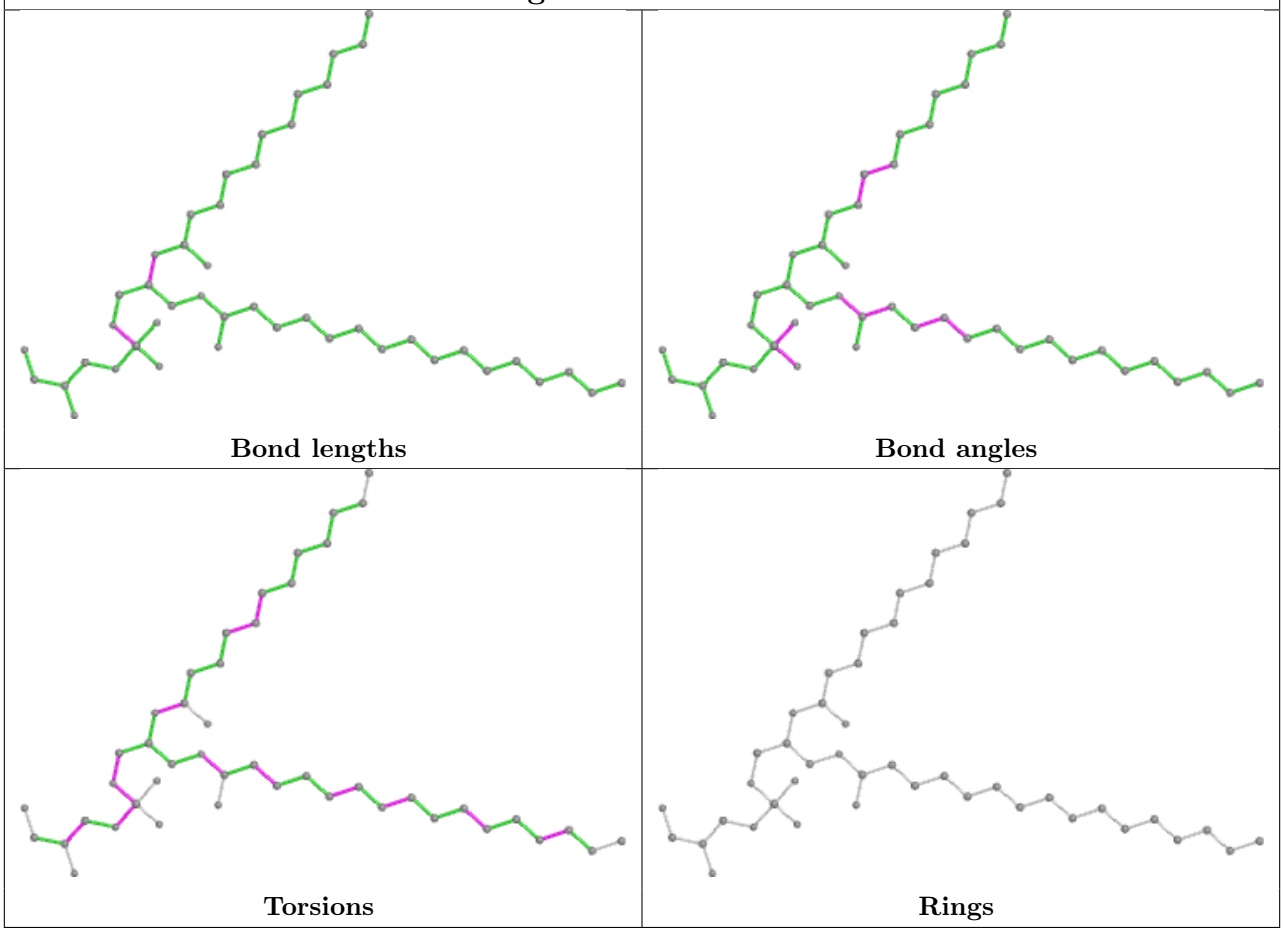


Torsions

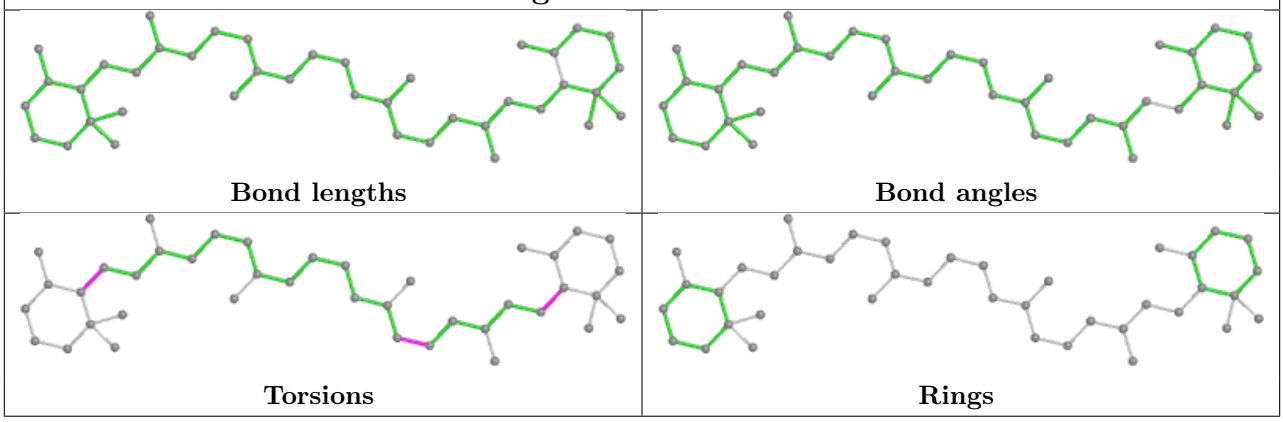


Rings

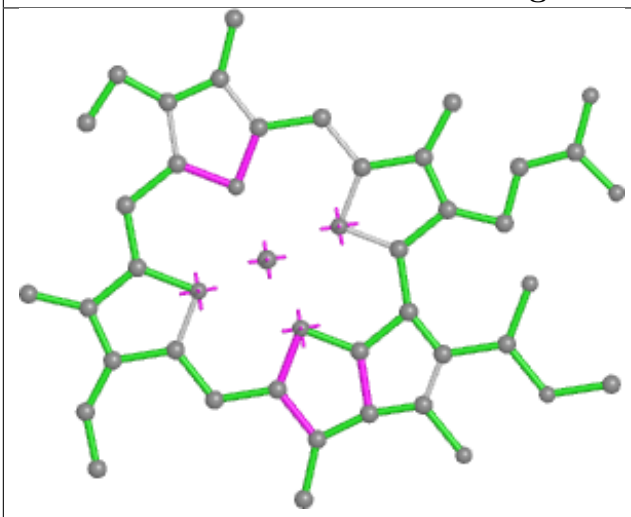
Ligand LHG 4 619



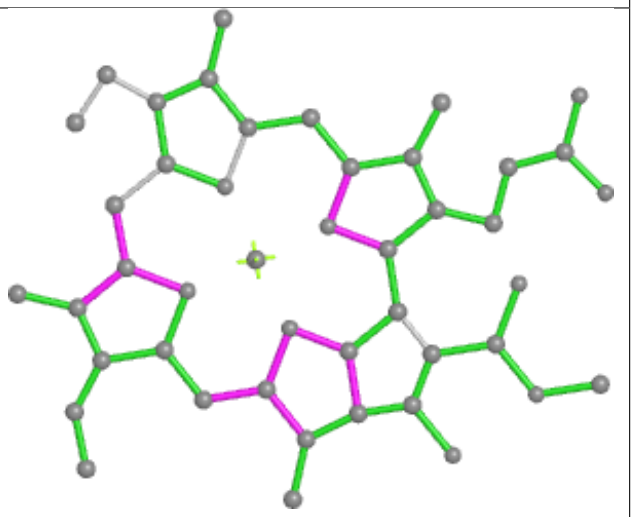
Ligand 8CT 4 616



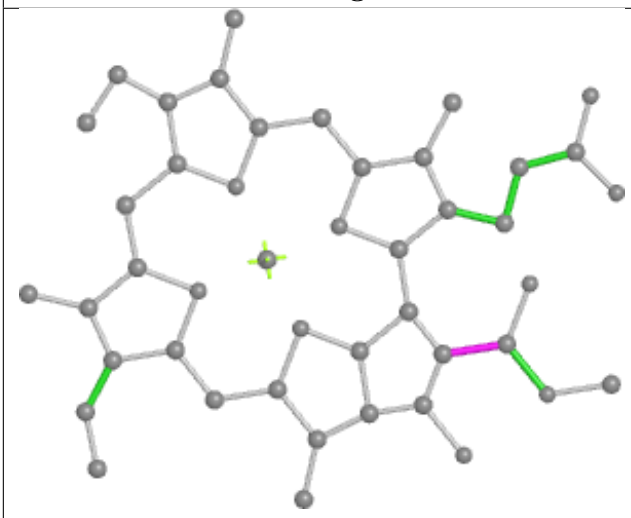
Ligand CLA c 601



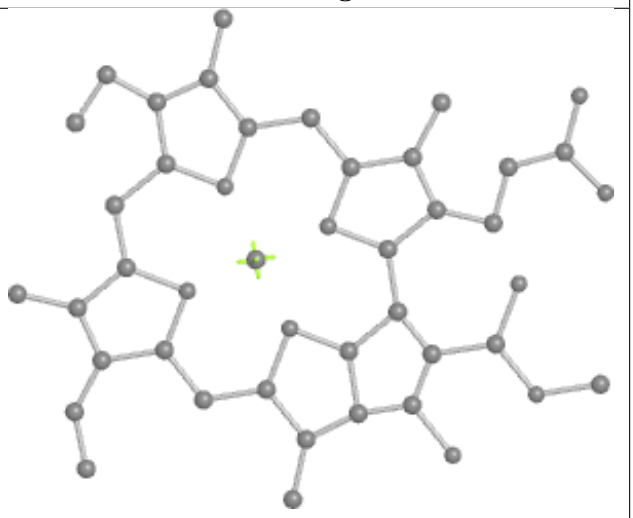
Bond lengths



Bond angles

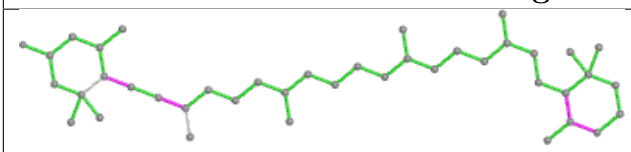


Torsions

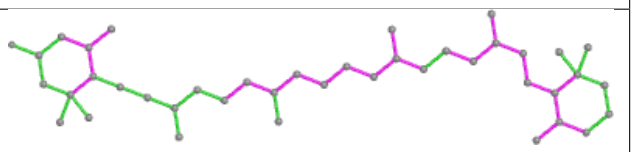


Rings

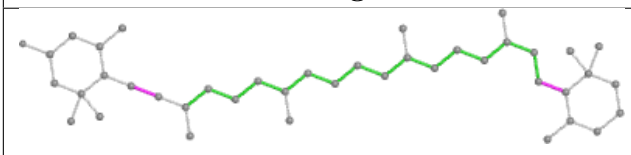
Ligand IHT 2 616



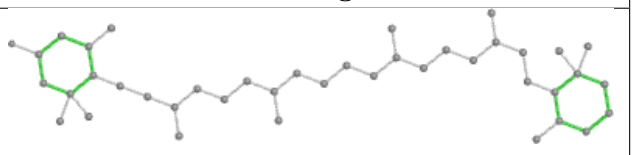
Bond lengths



Bond angles

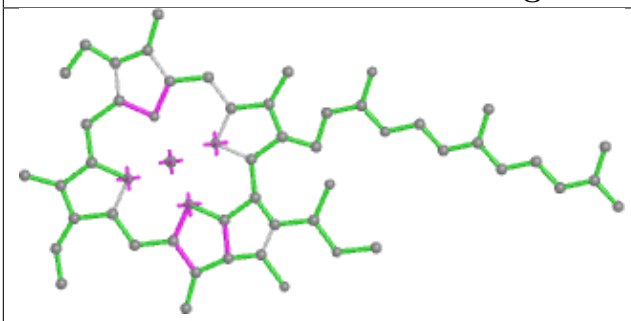


Torsions

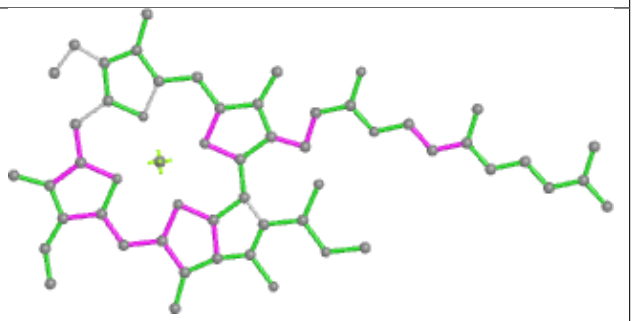


Rings

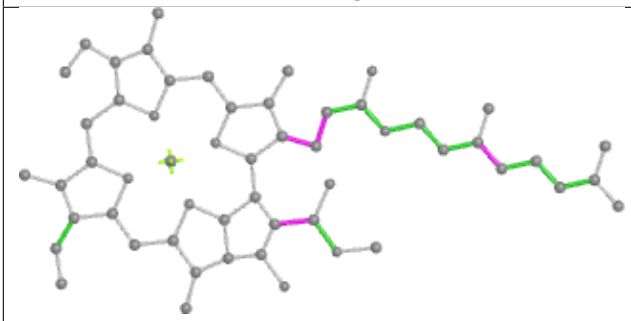
Ligand CLA A 834



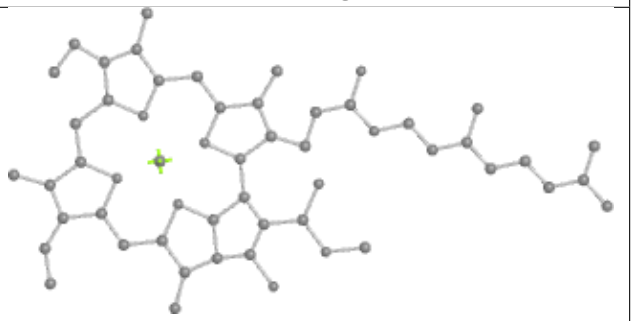
Bond lengths



Bond angles

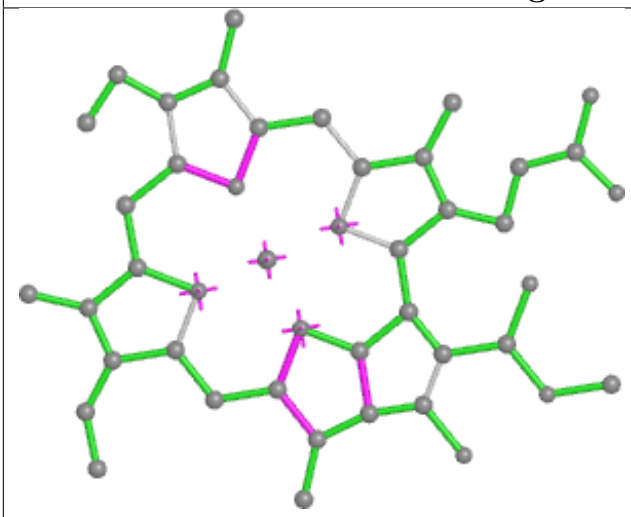


Torsions

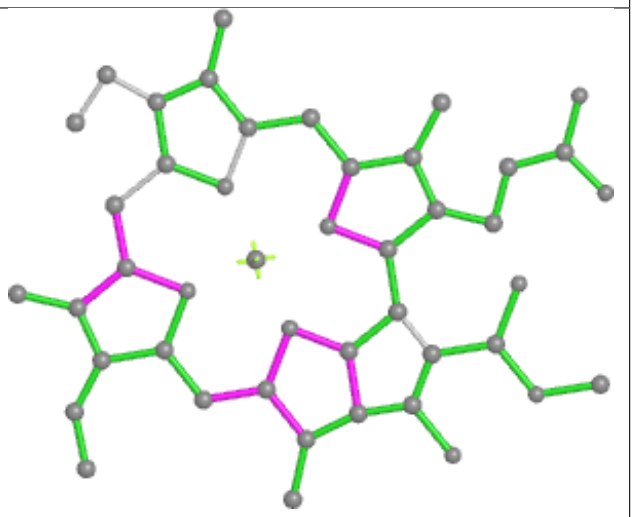


Rings

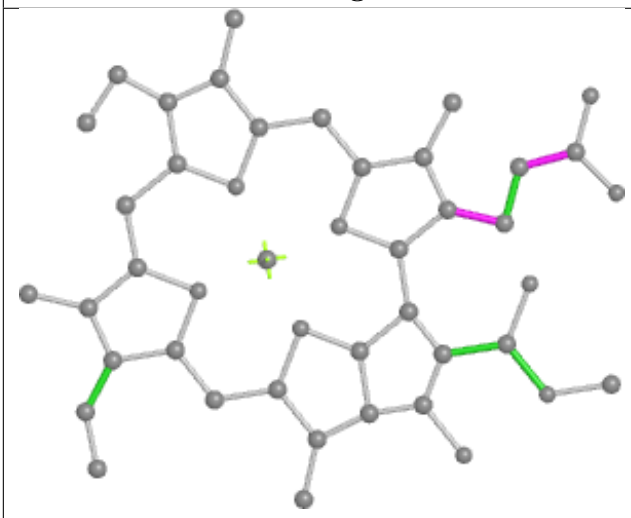
Ligand CLA 6 612



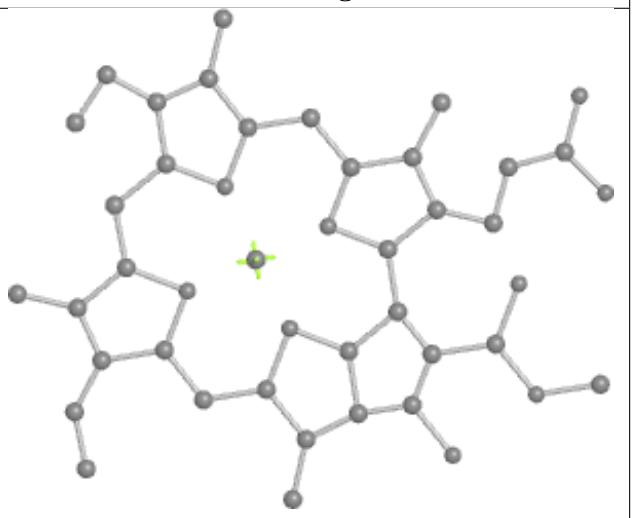
Bond lengths



Bond angles

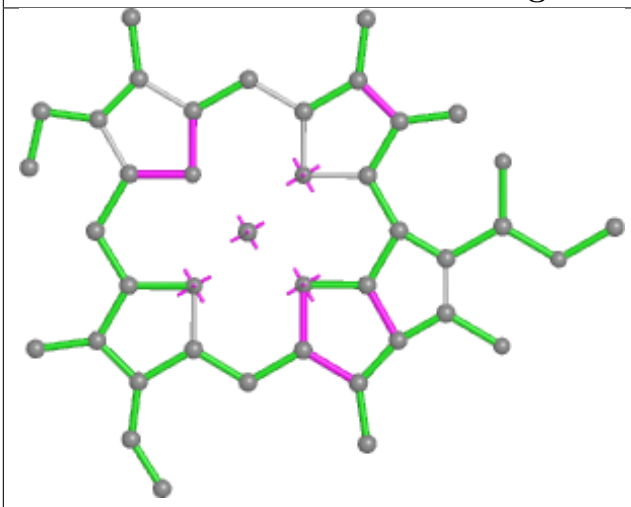


Torsions

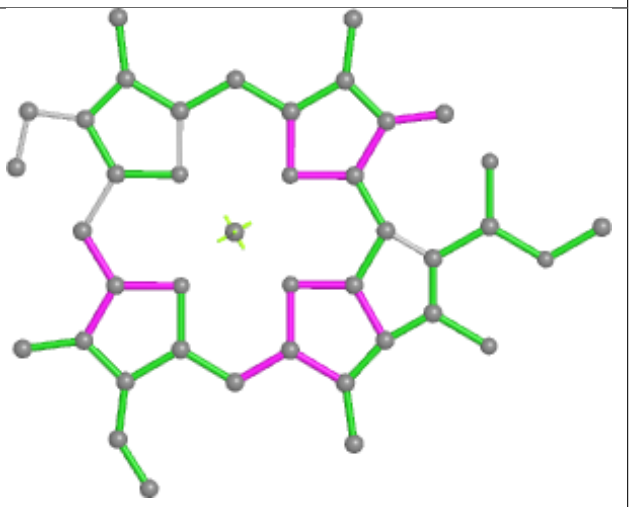


Rings

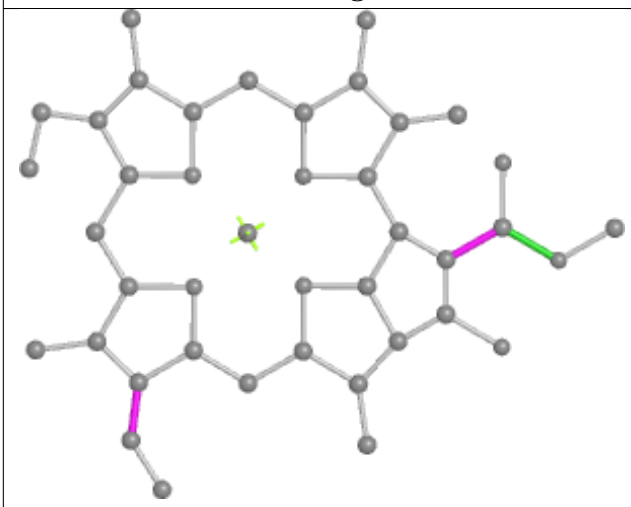
Ligand CLA 9 609



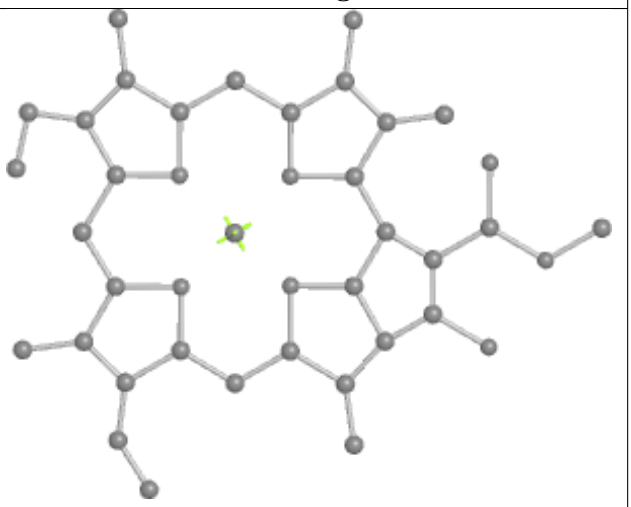
Bond lengths



Bond angles

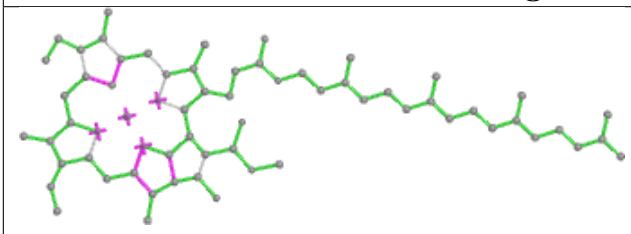


Torsions

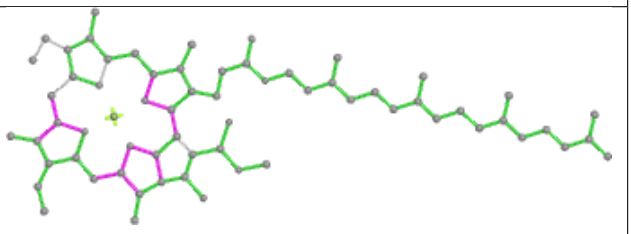


Rings

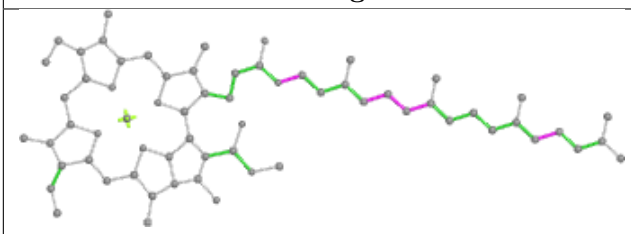
Ligand CLA B 802



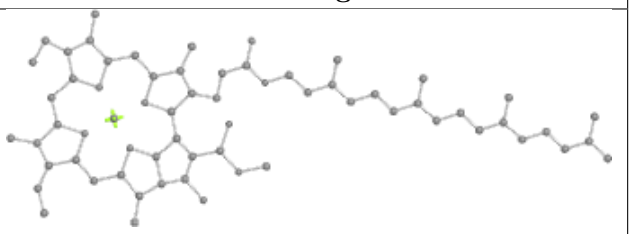
Bond lengths



Bond angles

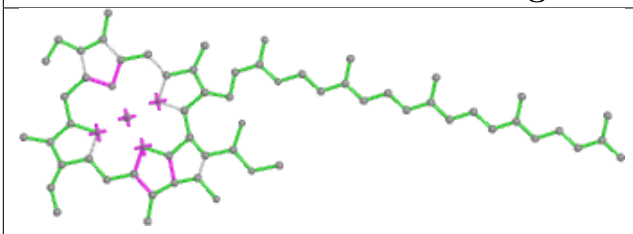


Torsions

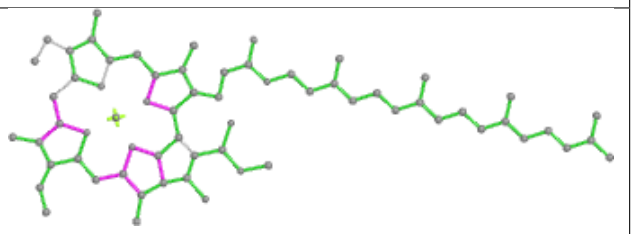


Rings

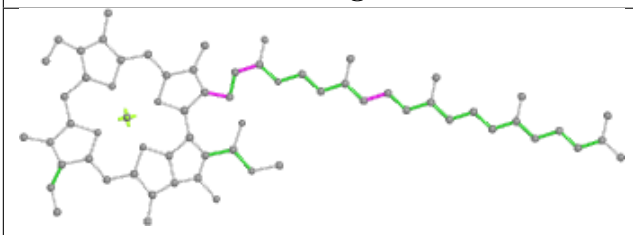
Ligand CLA a 612



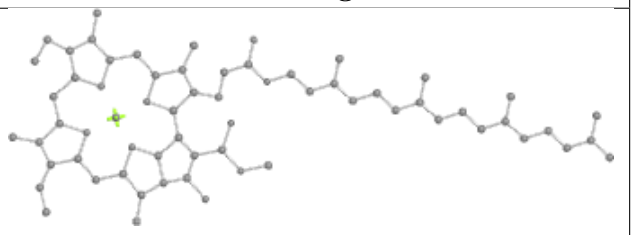
Bond lengths



Bond angles

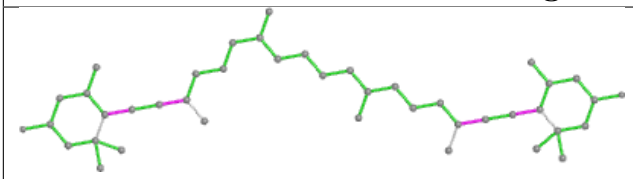


Torsions

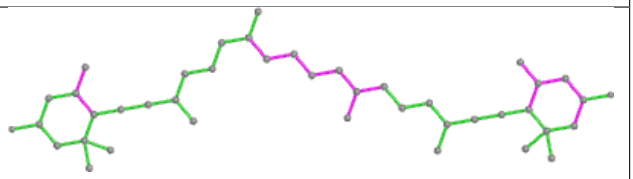


Rings

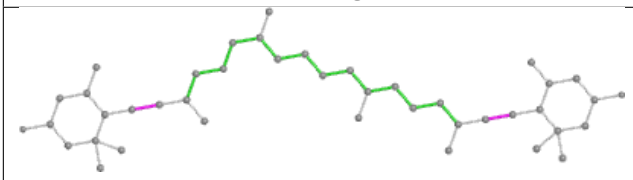
Ligand II0 9 616



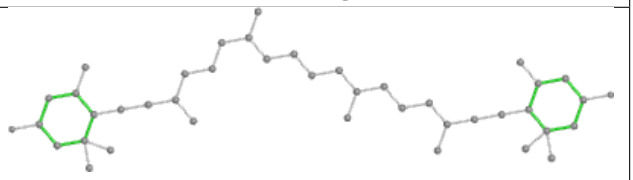
Bond lengths



Bond angles

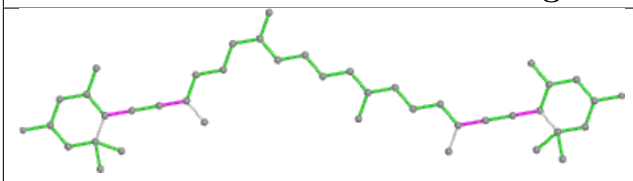


Torsions

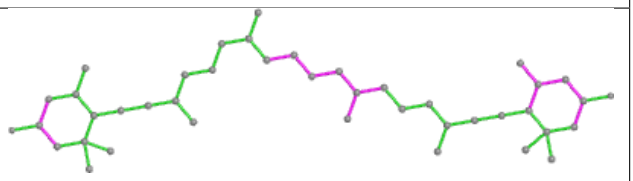


Rings

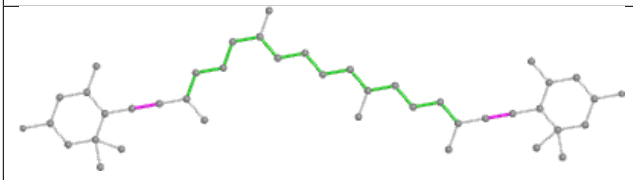
Ligand II0 5 614



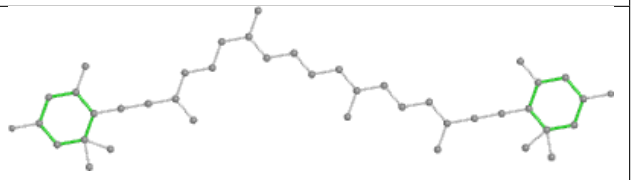
Bond lengths



Bond angles

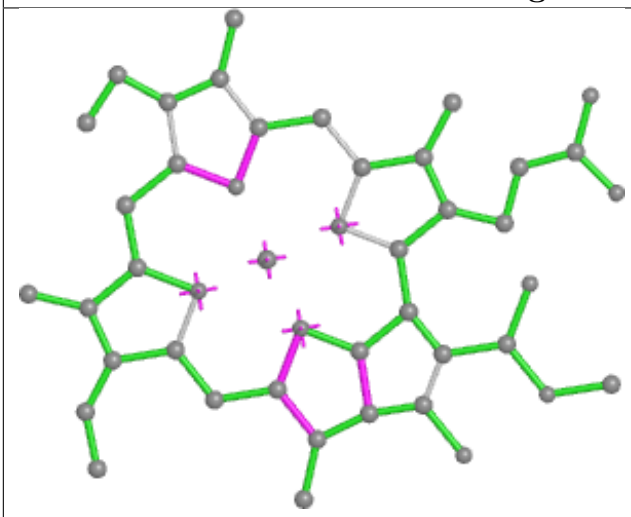


Torsions

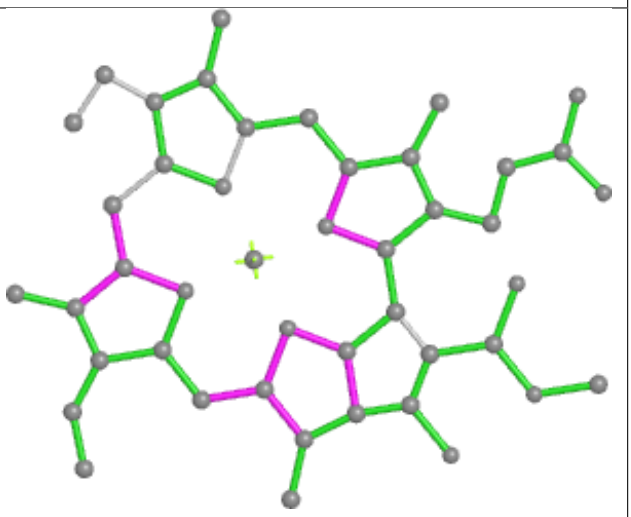


Rings

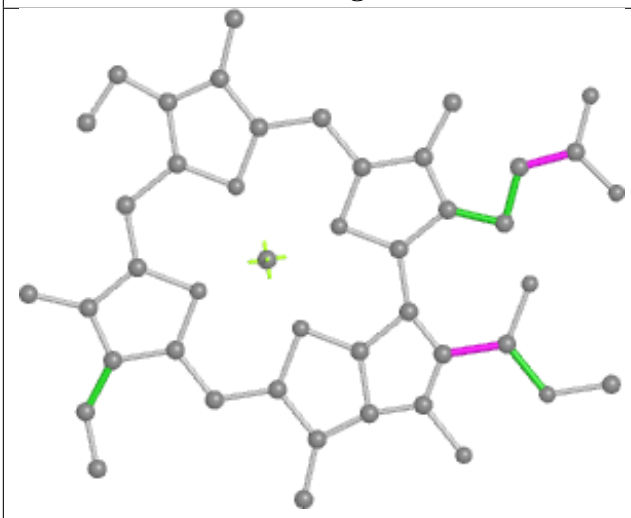
Ligand CLA 3 601



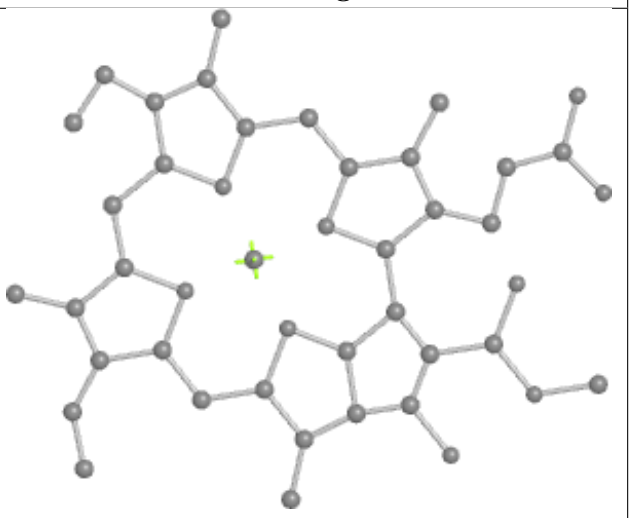
Bond lengths



Bond angles

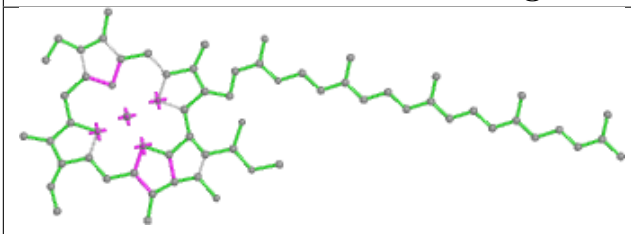


Torsions

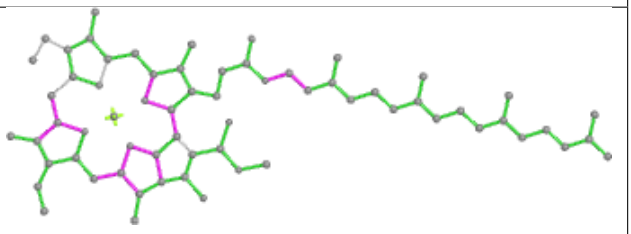


Rings

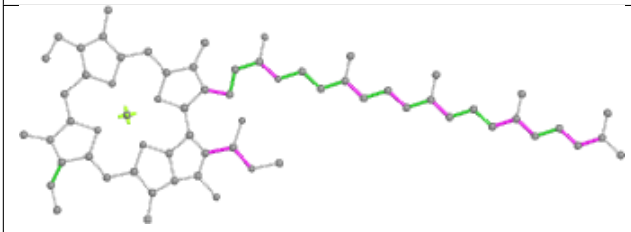
Ligand CLA A 810



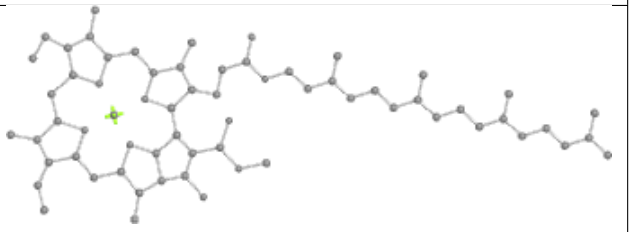
Bond lengths



Bond angles

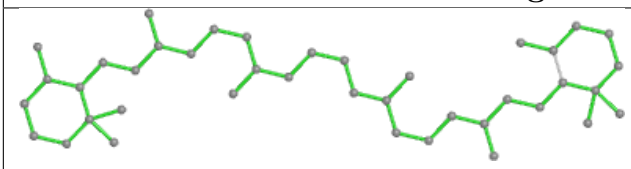


Torsions

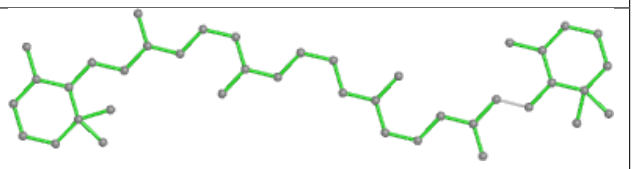


Rings

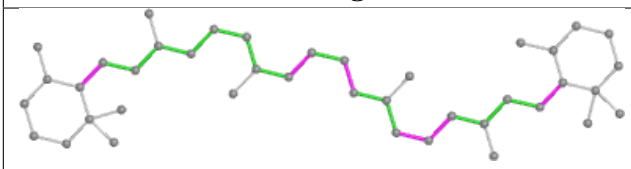
Ligand 8CT B 846



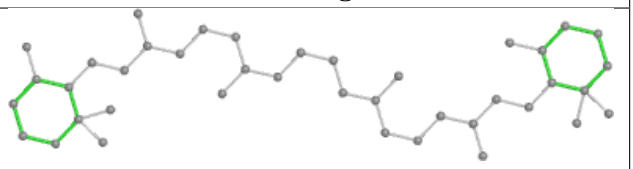
Bond lengths



Bond angles

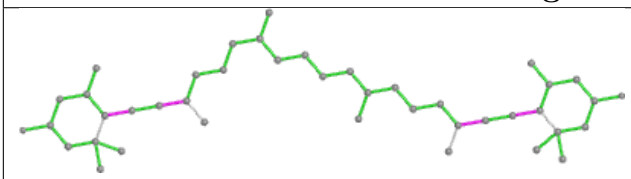


Torsions

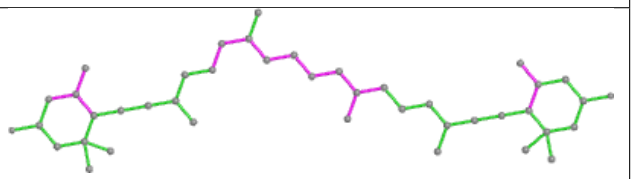


Rings

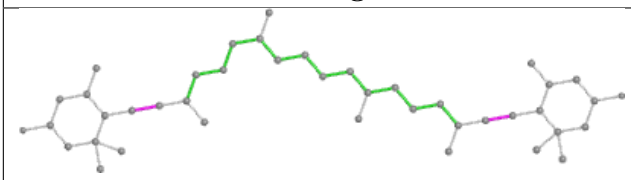
Ligand II0 8 610



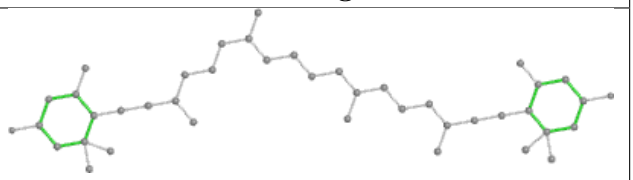
Bond lengths



Bond angles

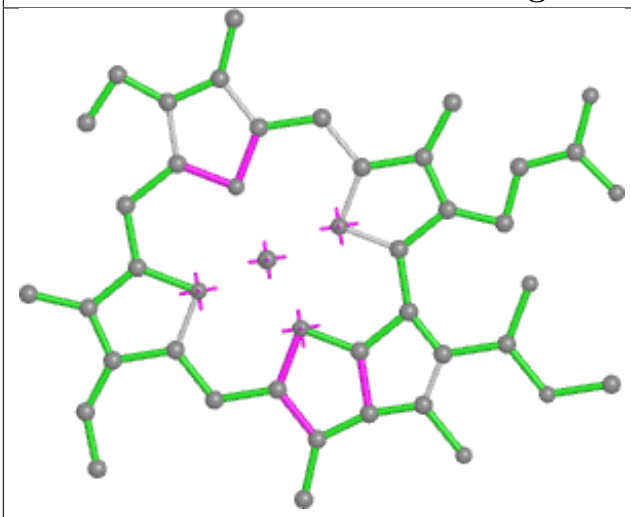


Torsions

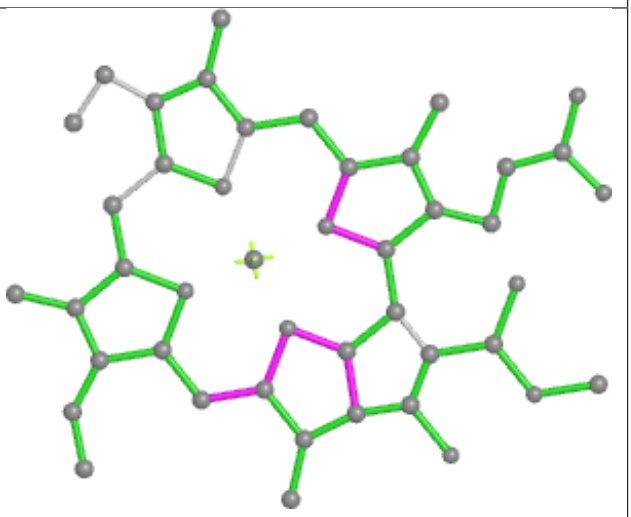


Rings

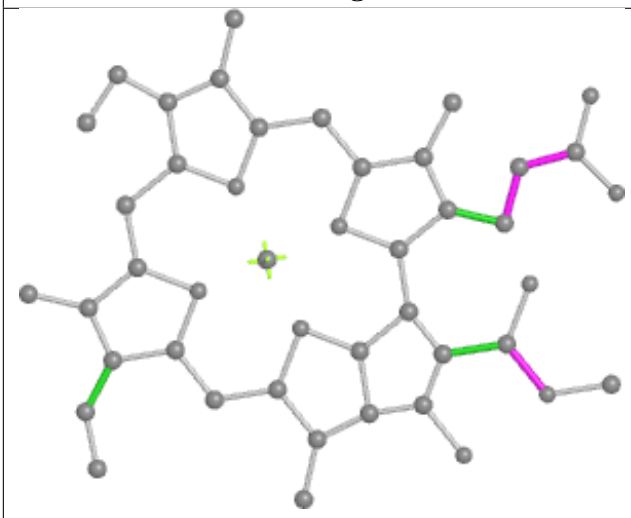
Ligand CLA 8 602



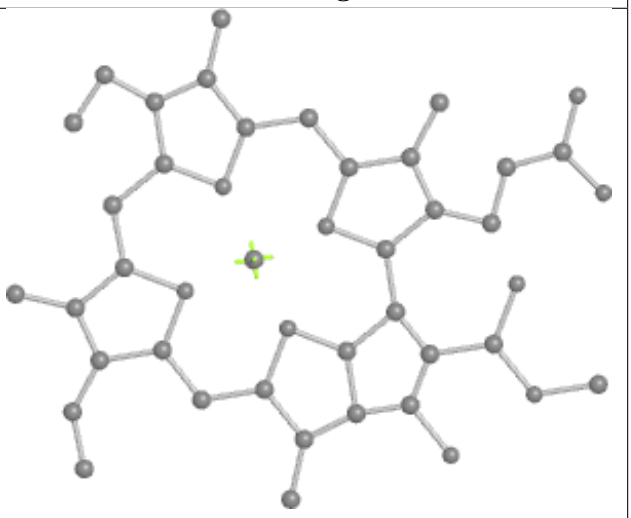
Bond lengths



Bond angles

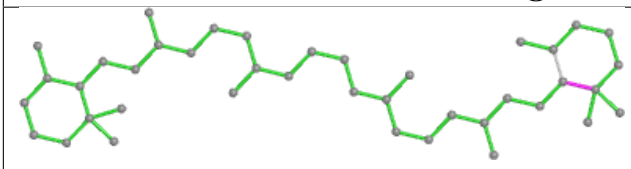


Torsions

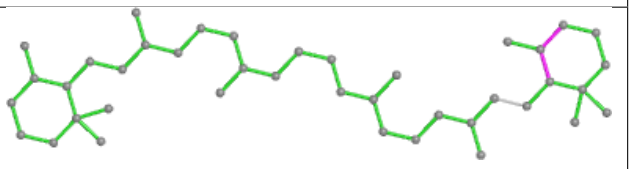


Rings

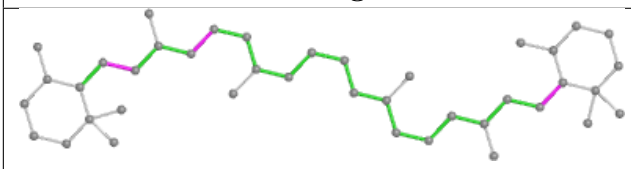
Ligand 8CT B 850



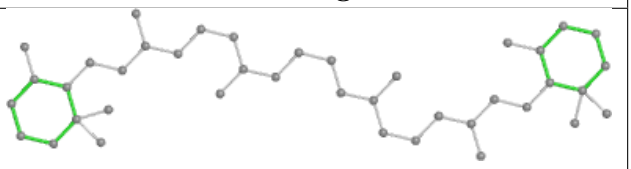
Bond lengths



Bond angles

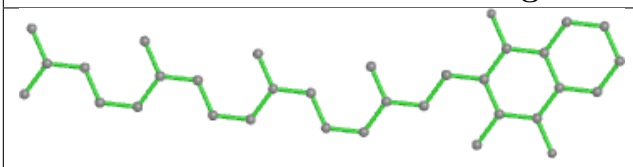


Torsions

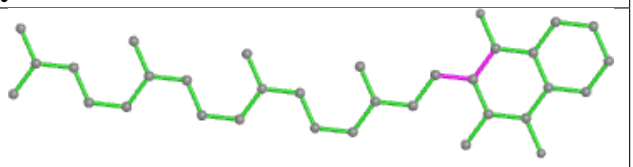


Rings

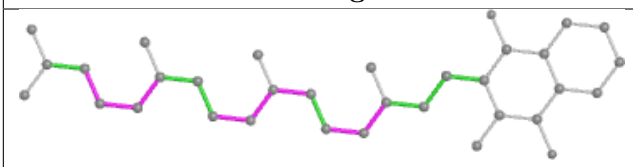
Ligand PQN A 849



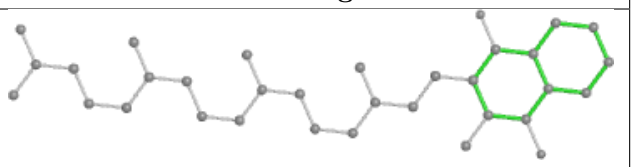
Bond lengths



Bond angles

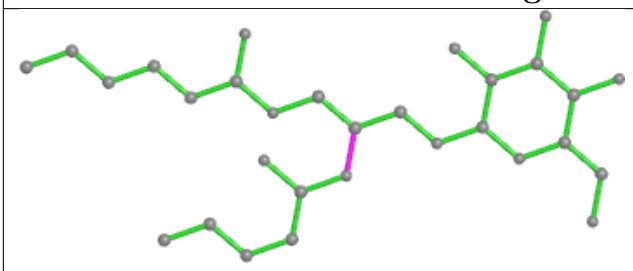


Torsions

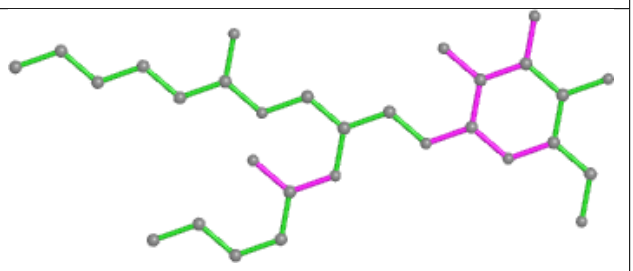


Rings

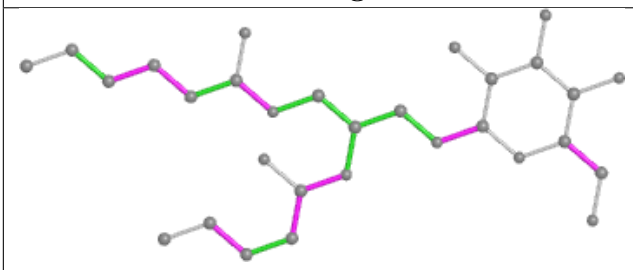
Ligand LMG 3 618



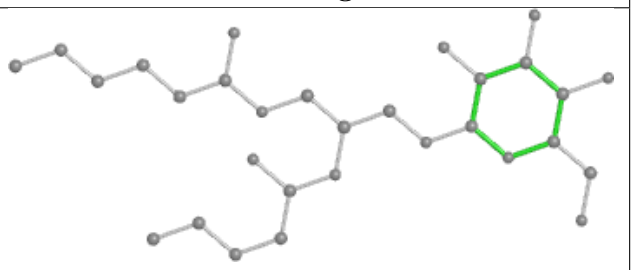
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

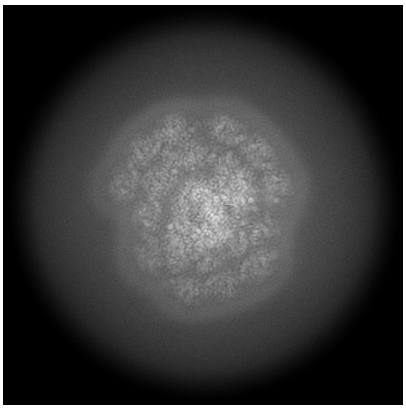
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-33659. These allow visual inspection of the internal detail of the map and identification of artifacts.

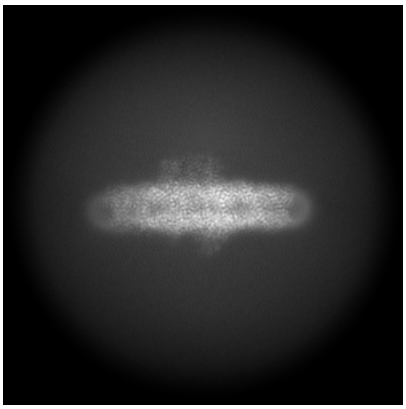
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

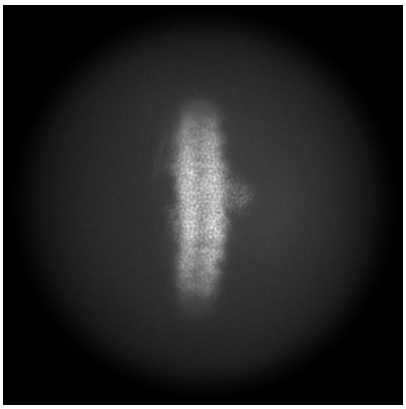
6.1.1 Primary map



X

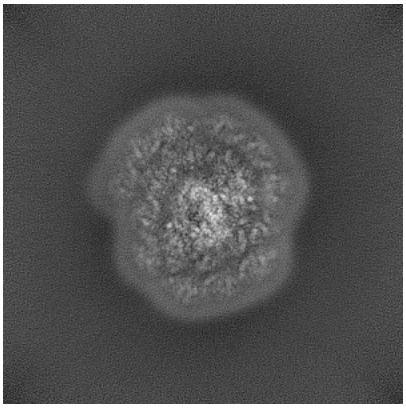


Y

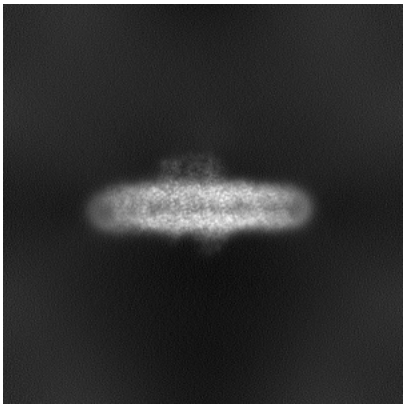


Z

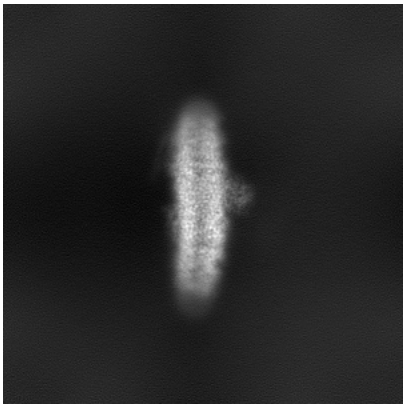
6.1.2 Raw map



X



Y

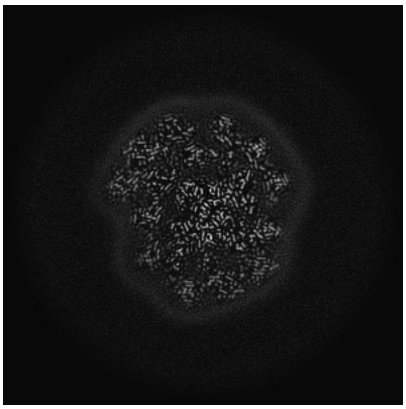


Z

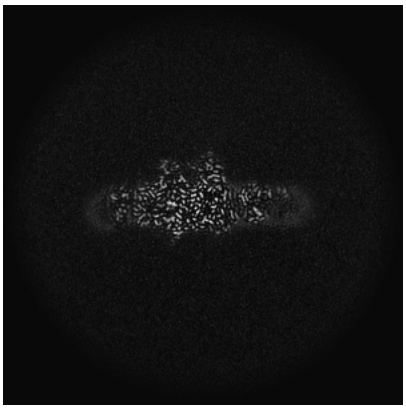
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

6.2.1 Primary map



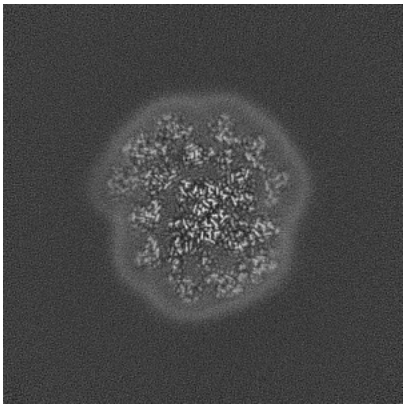
X Index: 200



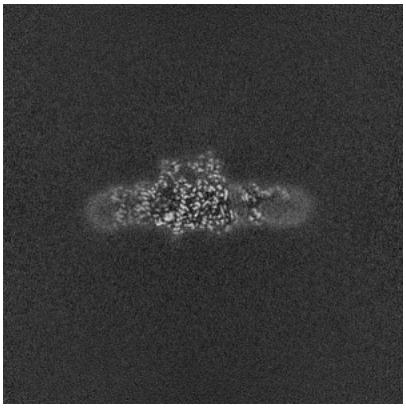
Y Index: 200

Z Index: 200

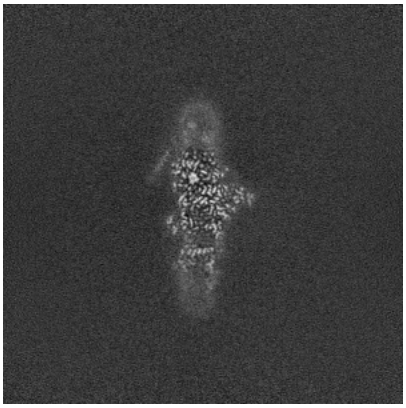
6.2.2 Raw map



X Index: 200



Y Index: 200

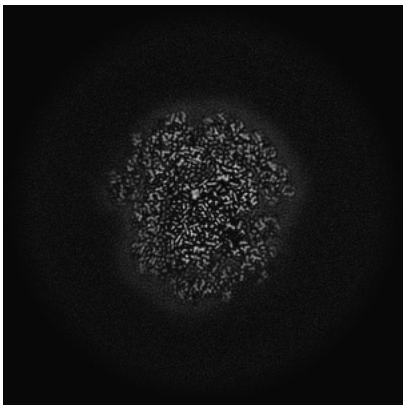


Z Index: 200

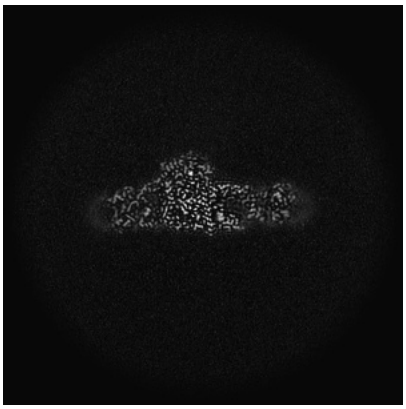
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

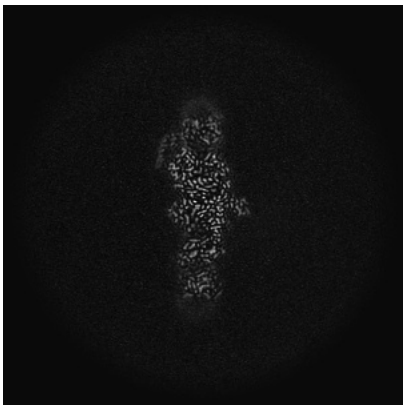
6.3.1 Primary map



X Index: 210

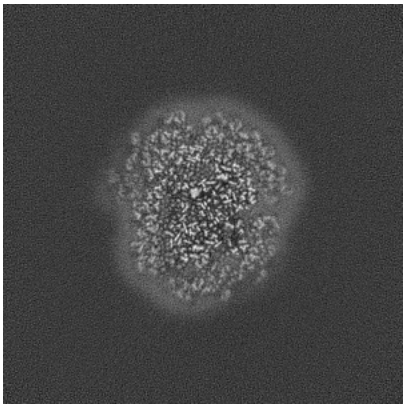


Y Index: 212

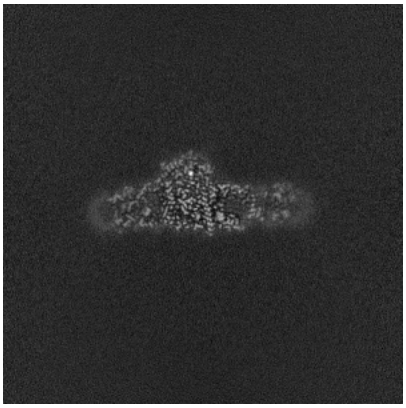


Z Index: 215

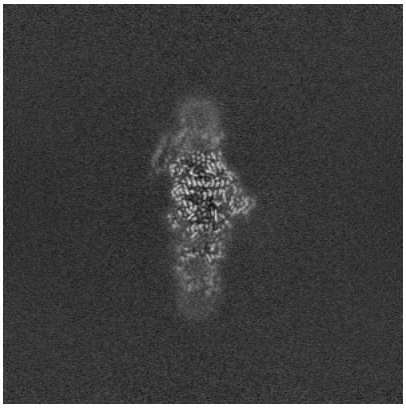
6.3.2 Raw map



X Index: 209



Y Index: 211

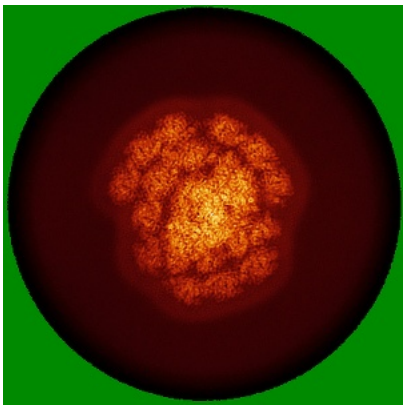


Z Index: 207

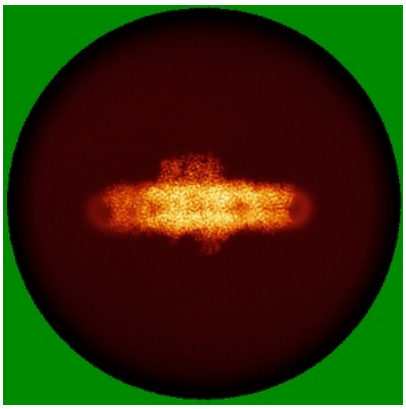
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

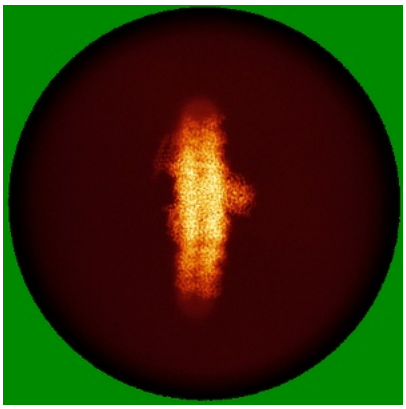
6.4.1 Primary map



X

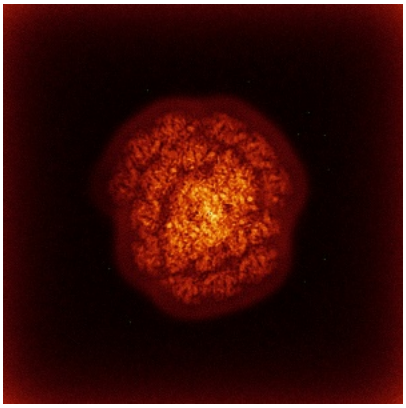


Y

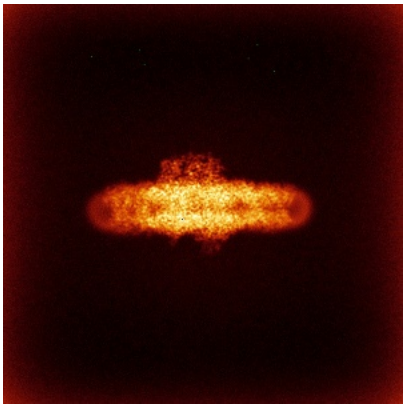


Z

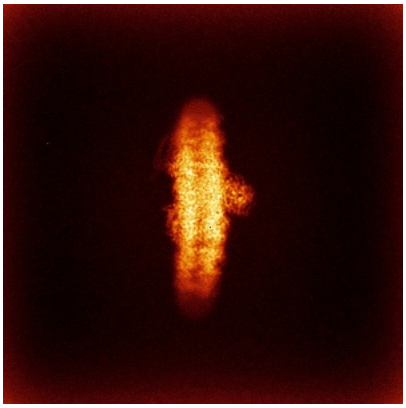
6.4.2 Raw map



X



Y

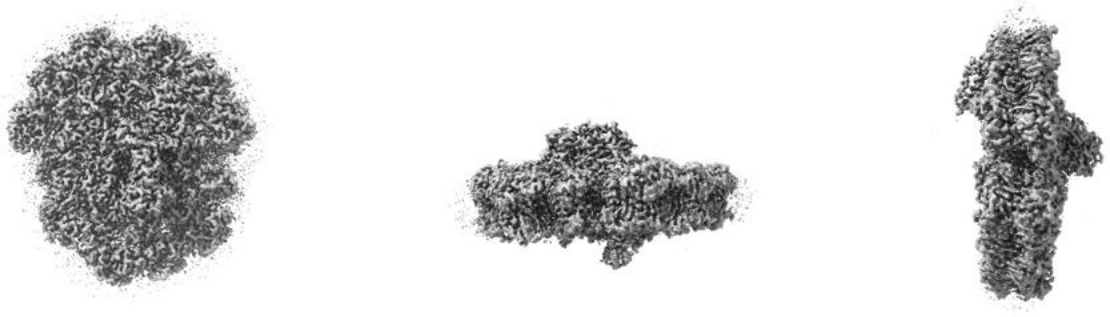


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

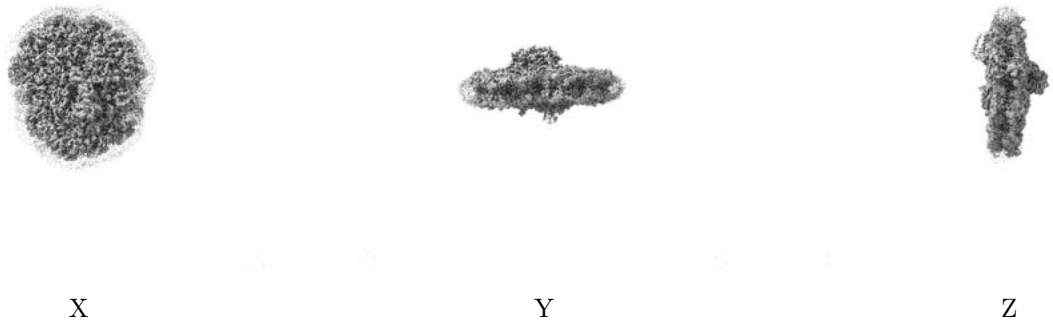
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.35. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

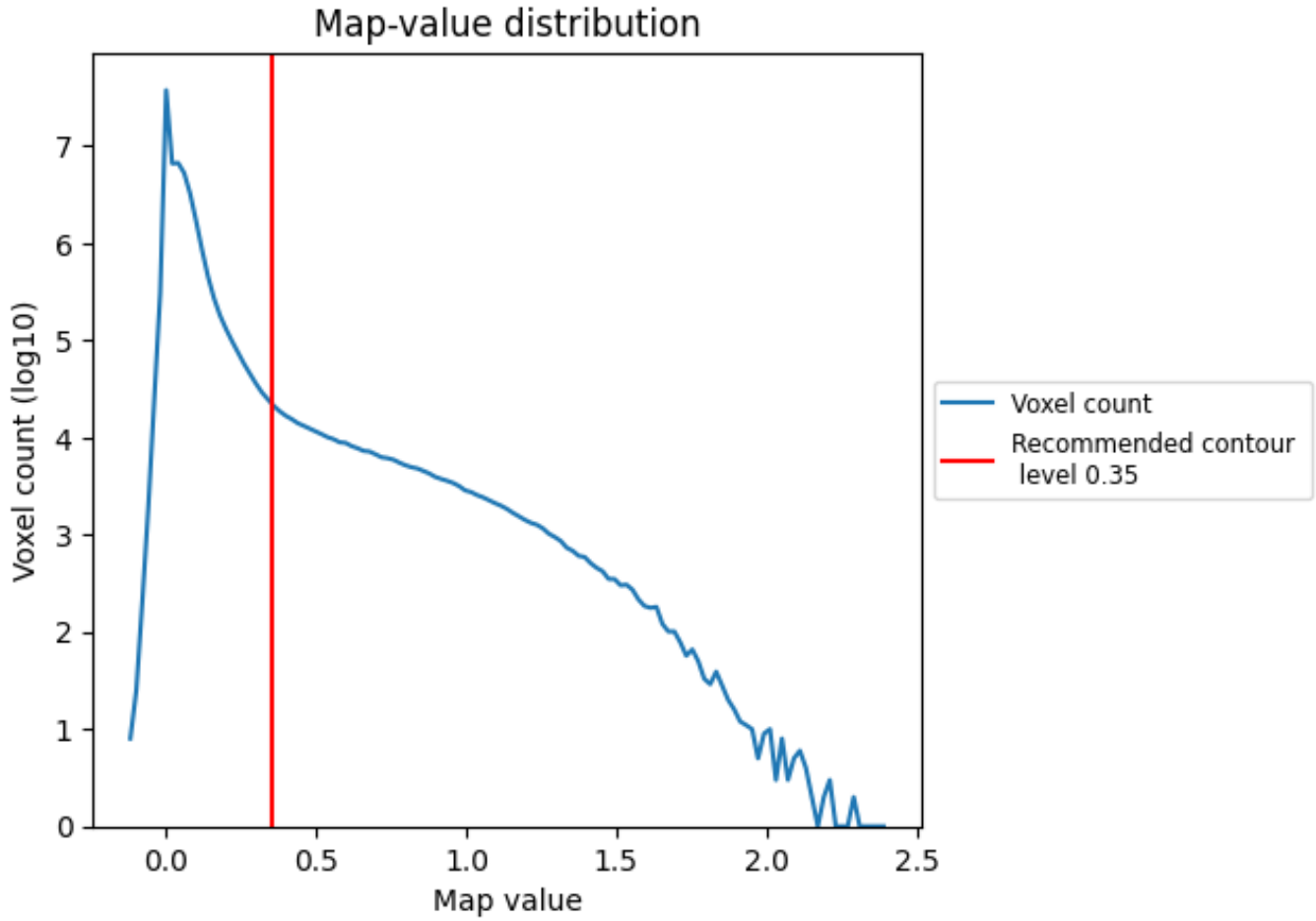
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

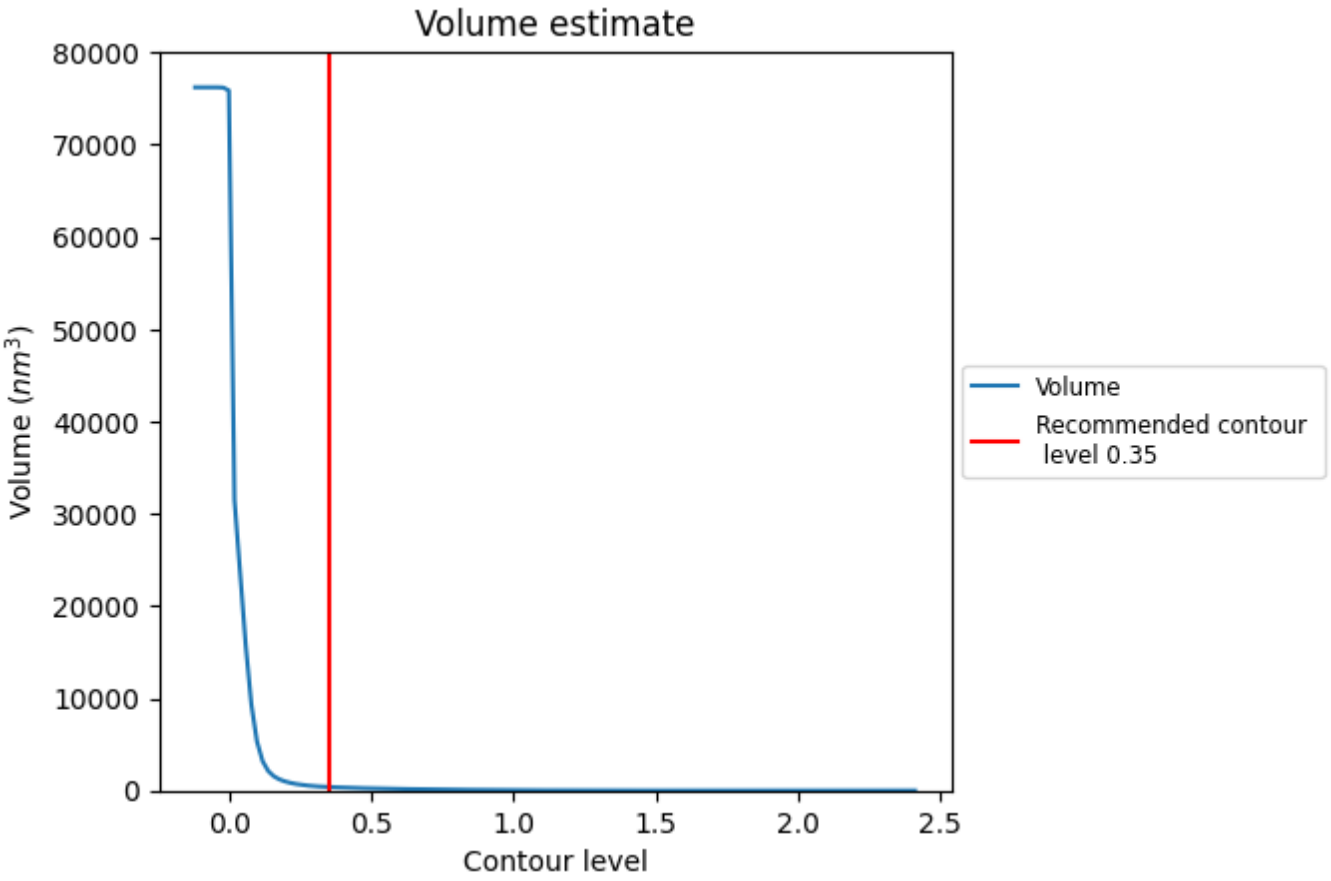
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

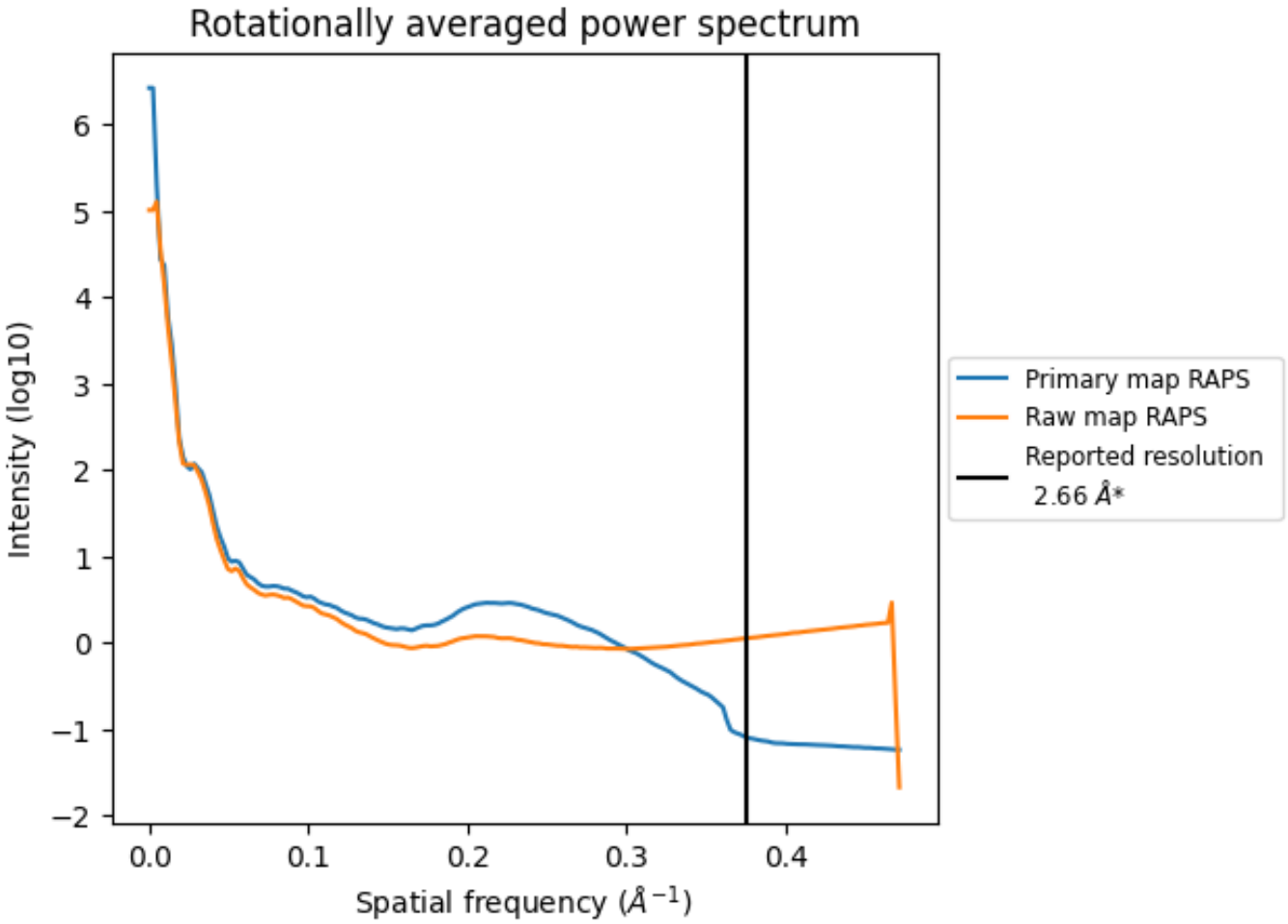
7.2 Volume estimate



The volume at the recommended contour level is 384 nm^3; this corresponds to an approximate mass of 347 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

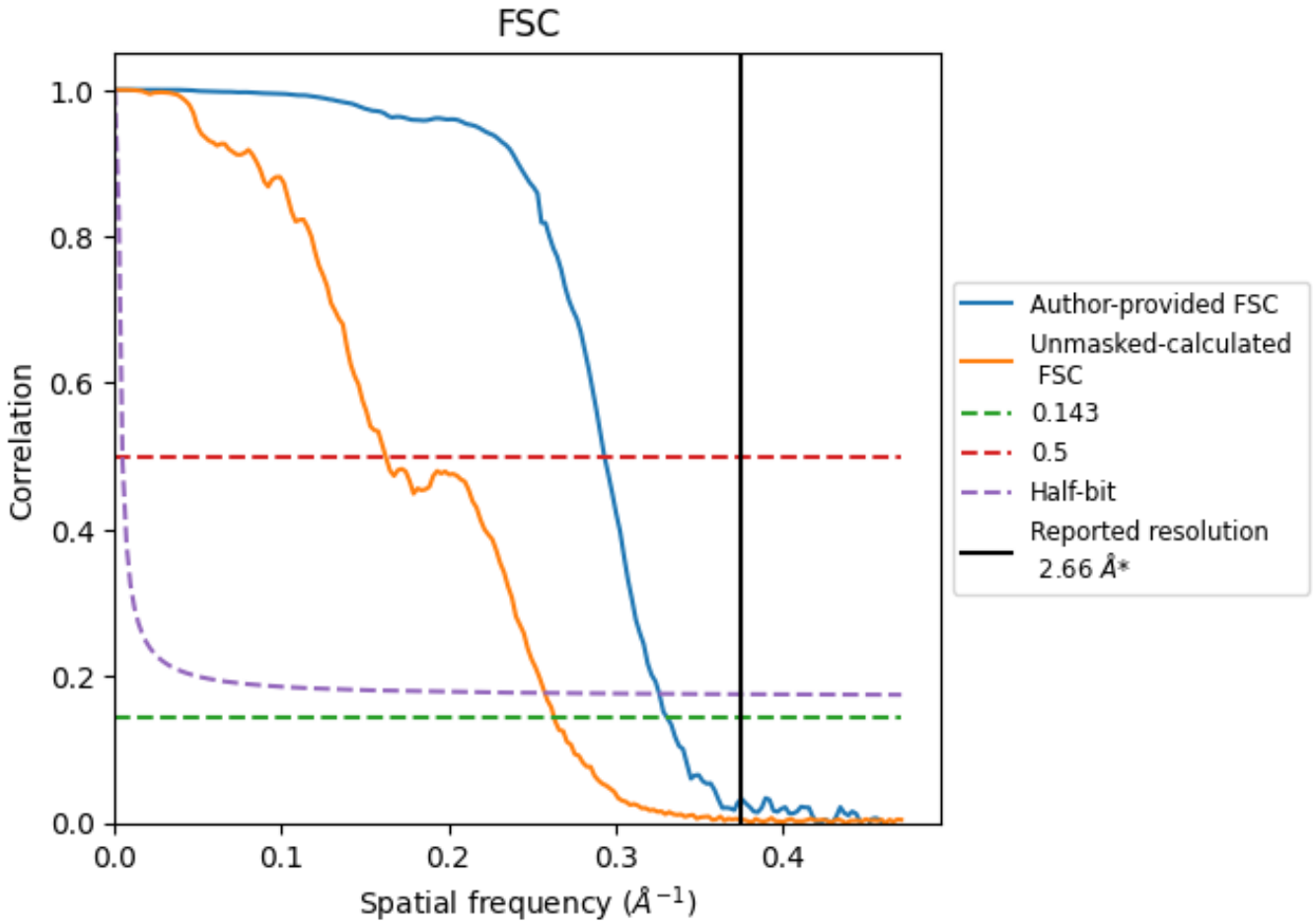


*Reported resolution corresponds to spatial frequency of 0.376 $Å^{-1}$

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.376 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.66	-	-
Author-provided FSC curve	3.02	3.41	3.06
Unmasked-calculated*	3.80	6.16	3.88

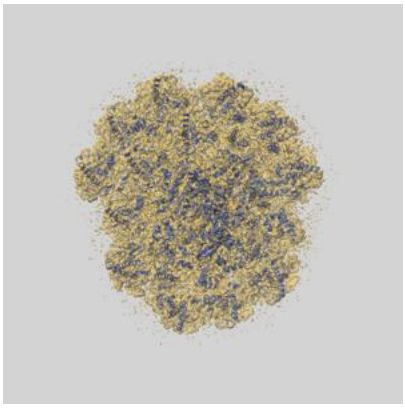
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from author-provided FSC intersecting FSC 0.143 CUT-OFF 3.02 differs from the reported value 2.66 by more than 10 %

The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.80 differs from the reported value 2.66 by more than 10 %

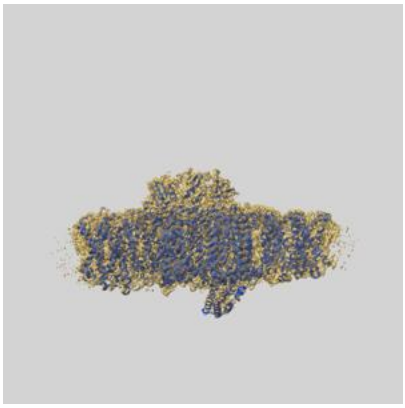
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-33659 and PDB model 7Y7B. Per-residue inclusion information can be found in section 3 on page 41.

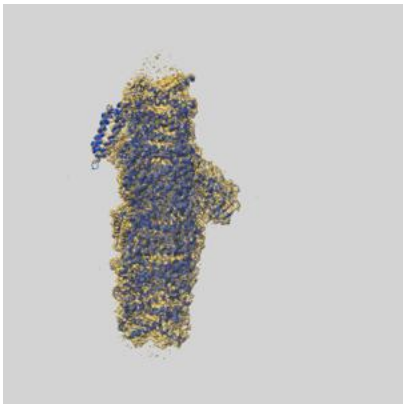
9.1 Map-model overlay



X



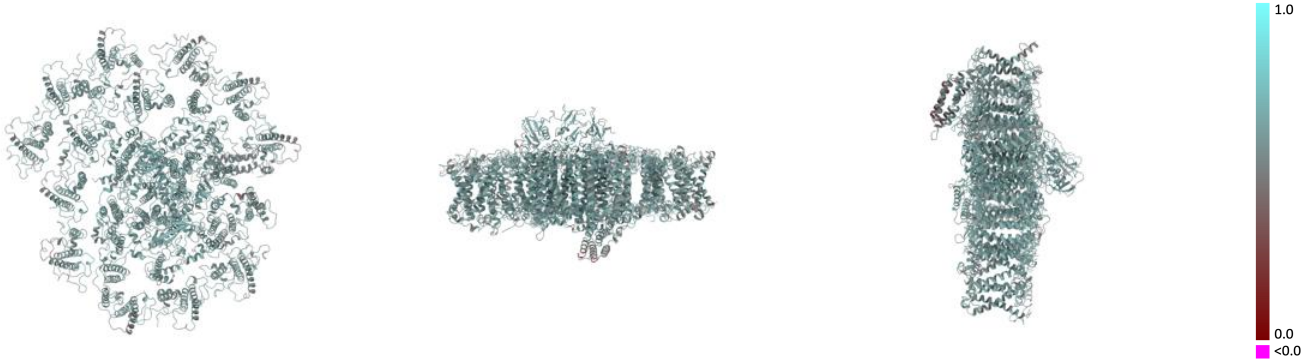
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.35 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

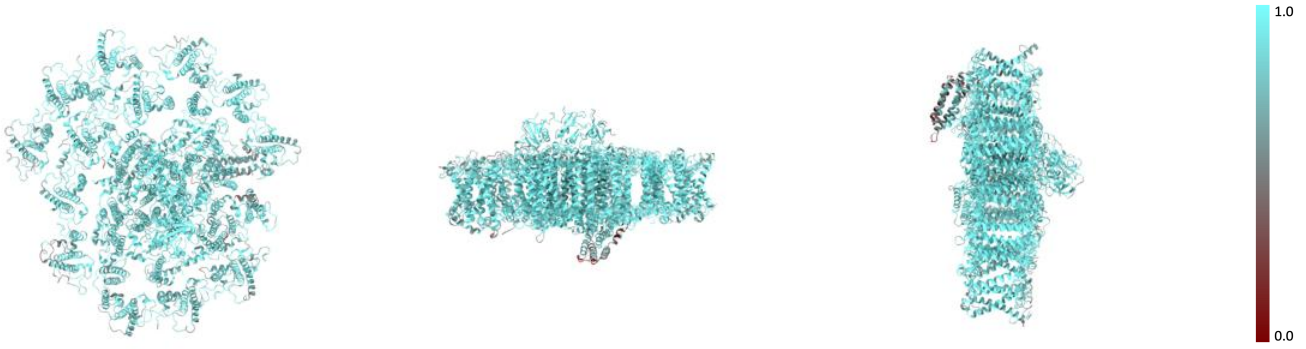
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

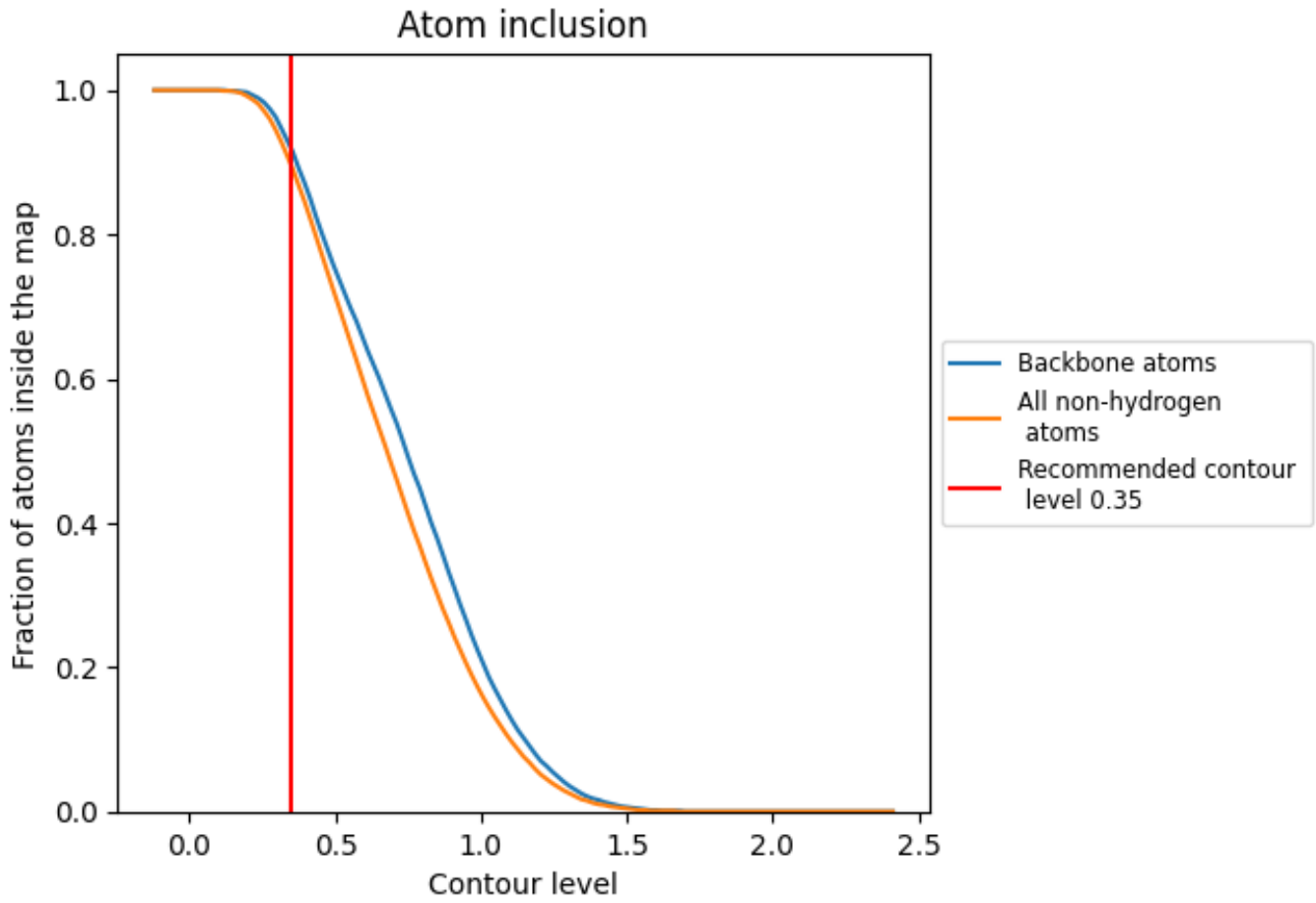
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.35).

9.4 Atom inclusion (i)



At the recommended contour level, 92% of all backbone atoms, 90% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.35) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8950	0.6070
1	0.7250	0.5490
2	0.9010	0.6030
3	0.9390	0.6270
4	0.9380	0.6130
5	0.8570	0.5600
6	0.8970	0.5810
7	0.8520	0.5580
8	0.8610	0.5920
9	0.7980	0.5750
A	0.9650	0.6450
B	0.9720	0.6440
C	0.9490	0.6110
D	0.8930	0.6030
E	0.8550	0.6070
F	0.9160	0.6230
I	0.9370	0.6280
J	0.9430	0.6340
K	0.8640	0.6050
L	0.9120	0.6160
M	0.9510	0.6260
O	0.8750	0.6090
R	0.9350	0.6080
X	0.6110	0.5150
Z	0.8810	0.6030
a	0.8970	0.5970
b	0.9060	0.5930
c	0.8000	0.5840
d	0.8270	0.5950
e	0.8160	0.5770