wwPDB EM Validation Summary Report (i)

Nov 29, 2022 – 01:32 PM JST

PDB ID	:	7WG5
EMDB ID	:	EMD-32477
Title	:	Cyclic electron transport supercomplex NDH-PSI from Arabidopsis
Authors	:	Pan, X.W.; Li, M.
Deposited on	:	2021-12-28
Resolution	:	3.89 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 (i) 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 (i)) were used in the production of this report:

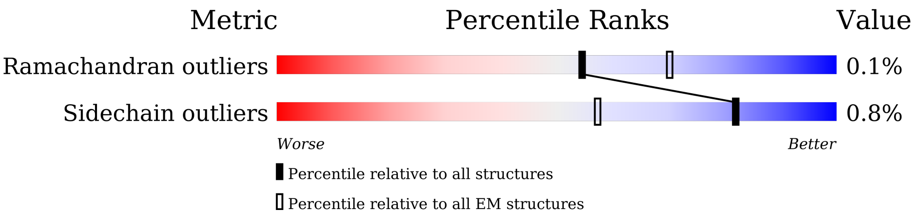
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

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 3.89 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)
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	AA	750	• 98% • •
1	BA	750	7% 98% • •
2	AB	734	• 99% •
2	BB	734	5% 99% •
3	AC	81	• 99% •
3	BC	81	• 99% •
4	AD	204	• 69% 31%
4	BD	204	8% 68% • 30%
5	AE	143	• 47% 53%

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Mol	Chain	Length	Quality of chain
5	BE	143	8% 48% 52%
6	AF	221	• 69% 31%
6	BF	221	5% 70% 30%
7	AG	160	• 60% • 38%
7	BG	160	16% 57% • 41%
8	AH	145	5% 65% • 34%
8	BH	145	13% 65% • 34%
9	AI	37	89% 11%
9	BI	37	24% 86% • 11%
10	AJ	44	95% 5%
10	BJ	44	7% 98% •
11	AK	130	6% 50% 50%
11	BK	130	11% 49% 51%
12	AL	219	• 70% • 28%
12	BL	219	15% 72% 27%
13	A1	241	• 80% • 19%
13	B1	241	6% 71% 29%
14	A3	273	• 80% 20%
14	B3	273	13% 81% 19%
15	A4	251	• 77% • 22%
16	A6	270	• 78% • 21%
17	B2	257	11% 81% 19%
18	B5	256	• 79% • 20%
19	A	360	15% 85% 15%
20	B	512	• 95% 5%

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Mol	Chain	Length	Quality of chain
21	C	120	18% 78% 22%
22	D	506	98%
23	E	101	5% 88% 12%
24	F	746	6% 90% 9%
25	G	176	6% 95% 5%
26	a	461	73% 26%
27	b	348	5% 88% 12%
28	c	204	5% 63% 37%
29	d	161	58% 42%
30	e	212	71% 29%
31	f	238	64% 36%
32	g	190	61% 39%
33	h	220	66% 34%
34	i	217	67% 33%
35	j	255	67% 32%
36	H	393	87% 90% 9%
37	I	172	66% 91% 7%
38	J	158	87% 97%
39	K	225	59% 74% 26%
40	L	191	13% 40% 60%
41	M	217	49% 50% 49%
42	N	209	60% 69% 30%
43	O	158	44% 47% 53%
44	T	122	80% 100%

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
45	CLA	A1	304	X	-	-	-
45	CLA	A1	305	X	-	-	-
45	CLA	A1	306	X	-	-	-
45	CLA	A1	307	X	-	-	-
45	CLA	A1	309	X	-	-	-
45	CLA	A1	310	X	-	-	-
45	CLA	A1	311	X	-	-	-
45	CLA	A1	312	X	-	-	-
45	CLA	A1	313	X	-	-	-
45	CLA	A1	314	X	-	-	-
45	CLA	A1	315	X	-	-	-
45	CLA	A1	316	X	-	-	-
45	CLA	A3	302	X	-	-	-
45	CLA	A3	303	X	-	-	-
45	CLA	A3	304	X	-	-	-
45	CLA	A3	305	X	-	-	-
45	CLA	A3	306	X	-	-	-
45	CLA	A3	308	X	-	-	-
45	CLA	A3	309	X	-	-	-
45	CLA	A3	310	X	-	-	-
45	CLA	A3	311	X	-	-	-
45	CLA	A3	312	X	-	-	-
45	CLA	A3	314	X	-	-	-
45	CLA	A3	315	X	-	-	-
45	CLA	A4	301	X	-	-	-
45	CLA	A4	302	X	-	-	-
45	CLA	A4	303	X	-	-	-
45	CLA	A4	307	X	-	-	-
45	CLA	A4	308	X	-	-	-
45	CLA	A4	309	X	-	-	-
45	CLA	A4	310	X	-	-	-
45	CLA	A4	311	X	-	-	-
45	CLA	A4	312	X	-	-	-
45	CLA	A4	313	X	-	-	-
45	CLA	A6	601	X	-	-	-
45	CLA	A6	603	X	-	-	-
45	CLA	A6	604	X	-	-	-
45	CLA	A6	605	X	-	-	-
45	CLA	A6	609	X	-	-	-
45	CLA	A6	610	X	-	-	-
45	CLA	A6	611	X	-	-	-
45	CLA	A6	612	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
45	CLA	A6	613	X	-	-	-
45	CLA	A6	614	X	-	-	-
45	CLA	AA	801	X	-	-	-
45	CLA	AA	802	X	-	-	-
45	CLA	AA	803	X	-	-	-
45	CLA	AA	805	X	-	-	-
45	CLA	AA	806	X	-	-	-
45	CLA	AA	807	X	-	-	-
45	CLA	AA	808	X	-	-	-
45	CLA	AA	809	X	-	-	-
45	CLA	AA	810	X	-	-	-
45	CLA	AA	811	X	-	-	-
45	CLA	AA	812	X	-	-	-
45	CLA	AA	813	X	-	-	-
45	CLA	AA	814	X	-	-	-
45	CLA	AA	816	X	-	-	-
45	CLA	AA	817	X	-	-	-
45	CLA	AA	819	X	-	-	-
45	CLA	AA	820	X	-	-	-
45	CLA	AA	821	X	-	-	-
45	CLA	AA	822	X	-	-	-
45	CLA	AA	823	X	-	-	-
45	CLA	AA	824	X	-	-	-
45	CLA	AA	825	X	-	-	-
45	CLA	AA	826	X	-	-	-
45	CLA	AA	827	X	-	-	-
45	CLA	AA	828	X	-	-	-
45	CLA	AA	829	X	-	-	-
45	CLA	AA	830	X	-	-	-
45	CLA	AA	831	X	-	-	-
45	CLA	AA	832	X	-	-	-
45	CLA	AA	833	X	-	-	-
45	CLA	AA	835	X	-	-	-
45	CLA	AA	837	X	-	-	-
45	CLA	AA	840	X	-	-	-
45	CLA	AA	842	X	-	-	-
45	CLA	AB	801	X	-	-	-
45	CLA	AB	802	X	-	-	-
45	CLA	AB	803	X	-	-	-
45	CLA	AB	804	X	-	-	-
45	CLA	AB	805	X	-	-	-
45	CLA	AB	806	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
45	CLA	AB	807	X	-	-	-
45	CLA	AB	809	X	-	-	-
45	CLA	AB	810	X	-	-	-
45	CLA	AB	811	X	-	-	-
45	CLA	AB	812	X	-	-	-
45	CLA	AB	813	X	-	-	-
45	CLA	AB	814	X	-	-	-
45	CLA	AB	815	X	-	-	-
45	CLA	AB	816	X	-	-	-
45	CLA	AB	817	X	-	-	-
45	CLA	AB	818	X	-	-	-
45	CLA	AB	819	X	-	-	-
45	CLA	AB	820	X	-	-	-
45	CLA	AB	821	X	-	-	-
45	CLA	AB	822	X	-	-	-
45	CLA	AB	824	X	-	-	-
45	CLA	AB	825	X	-	-	-
45	CLA	AB	826	X	-	-	-
45	CLA	AB	827	X	-	-	-
45	CLA	AB	828	X	-	-	-
45	CLA	AB	829	X	-	-	-
45	CLA	AB	830	X	-	-	-
45	CLA	AB	831	X	-	-	-
45	CLA	AB	833	X	-	-	-
45	CLA	AB	834	X	-	-	-
45	CLA	AB	837	X	-	-	-
45	CLA	AB	839	X	-	-	-
45	CLA	AB	840	X	-	-	-
45	CLA	AB	841	X	-	-	-
45	CLA	AB	842	X	-	-	-
45	CLA	AF	802	X	-	-	-
45	CLA	AF	803	X	-	-	-
45	CLA	AF	804	X	-	-	-
45	CLA	AG	201	X	-	-	-
45	CLA	AG	203	X	-	-	-
45	CLA	AG	204	X	-	-	-
45	CLA	AH	201	X	-	-	-
45	CLA	AJ	102	X	-	-	-
45	CLA	AK	201	X	-	-	-
45	CLA	AK	202	X	-	-	-
45	CLA	AK	203	X	-	-	-
45	CLA	AL	303	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
45	CLA	AL	305	X	-	-	-
45	CLA	B1	304	X	-	-	-
45	CLA	B1	305	X	-	-	-
45	CLA	B1	306	X	-	-	-
45	CLA	B1	307	X	-	-	-
45	CLA	B1	310	X	-	-	-
45	CLA	B1	311	X	-	-	-
45	CLA	B1	312	X	-	-	-
45	CLA	B1	313	X	-	-	-
45	CLA	B1	314	X	-	-	-
45	CLA	B1	315	X	-	-	-
45	CLA	B2	602	X	-	-	-
45	CLA	B2	603	X	-	-	-
45	CLA	B2	604	X	-	-	-
45	CLA	B2	608	X	-	-	-
45	CLA	B2	609	X	-	-	-
45	CLA	B2	610	X	-	-	-
45	CLA	B2	611	X	-	-	-
45	CLA	B2	612	X	-	-	-
45	CLA	B2	613	X	-	-	-
45	CLA	B3	301	X	-	-	-
45	CLA	B3	302	X	-	-	-
45	CLA	B3	303	X	-	-	-
45	CLA	B3	304	X	-	-	-
45	CLA	B3	305	X	-	-	-
45	CLA	B3	307	X	-	-	-
45	CLA	B3	308	X	-	-	-
45	CLA	B3	309	X	-	-	-
45	CLA	B3	310	X	-	-	-
45	CLA	B3	311	X	-	-	-
45	CLA	B3	312	X	-	-	-
45	CLA	B3	313	X	-	-	-
45	CLA	B3	314	X	-	-	-
45	CLA	B5	601	X	-	-	-
45	CLA	B5	603	X	-	-	-
45	CLA	B5	604	X	-	-	-
45	CLA	B5	608	X	-	-	-
45	CLA	B5	609	X	-	-	-
45	CLA	B5	611	X	-	-	-
45	CLA	B5	612	X	-	-	-
45	CLA	B5	613	X	-	-	-
45	CLA	BA	801	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
45	CLA	BA	802	X	-	-	-
45	CLA	BA	803	X	-	-	-
45	CLA	BA	805	X	-	-	-
45	CLA	BA	806	X	-	-	-
45	CLA	BA	807	X	-	-	-
45	CLA	BA	808	X	-	-	-
45	CLA	BA	810	X	-	-	-
45	CLA	BA	811	X	-	-	-
45	CLA	BA	812	X	-	-	-
45	CLA	BA	813	X	-	-	-
45	CLA	BA	814	X	-	-	-
45	CLA	BA	816	X	-	-	-
45	CLA	BA	819	X	-	-	-
45	CLA	BA	820	X	-	-	-
45	CLA	BA	822	X	-	-	-
45	CLA	BA	823	X	-	-	-
45	CLA	BA	824	X	-	-	-
45	CLA	BA	825	X	-	-	-
45	CLA	BA	827	X	-	-	-
45	CLA	BA	828	X	-	-	-
45	CLA	BA	829	X	-	-	-
45	CLA	BA	830	X	-	-	-
45	CLA	BA	831	X	-	-	-
45	CLA	BA	833	X	-	-	-
45	CLA	BA	835	X	-	-	-
45	CLA	BA	837	X	-	-	-
45	CLA	BA	838	X	-	-	-
45	CLA	BA	840	X	-	-	-
45	CLA	BA	841	X	-	-	-
45	CLA	BA	842	X	-	-	-
45	CLA	BA	844	X	-	-	-
45	CLA	BB	801	X	-	-	-
45	CLA	BB	802	X	-	-	-
45	CLA	BB	804	X	-	-	-
45	CLA	BB	805	X	-	-	-
45	CLA	BB	806	X	-	-	-
45	CLA	BB	807	X	-	-	-
45	CLA	BB	808	X	-	-	-
45	CLA	BB	810	X	-	-	-
45	CLA	BB	811	X	-	-	-
45	CLA	BB	812	X	-	-	-
45	CLA	BB	813	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
45	CLA	BB	814	X	-	-	-
45	CLA	BB	815	X	-	-	-
45	CLA	BB	816	X	-	-	-
45	CLA	BB	817	X	-	-	-
45	CLA	BB	818	X	-	-	-
45	CLA	BB	819	X	-	-	-
45	CLA	BB	820	X	-	-	-
45	CLA	BB	821	X	-	-	-
45	CLA	BB	822	X	-	-	-
45	CLA	BB	823	X	-	-	-
45	CLA	BB	825	X	-	-	-
45	CLA	BB	826	X	-	-	-
45	CLA	BB	828	X	-	-	-
45	CLA	BB	829	X	-	-	-
45	CLA	BB	830	X	-	-	-
45	CLA	BB	831	X	-	-	-
45	CLA	BB	832	X	-	-	-
45	CLA	BB	835	X	-	-	-
45	CLA	BB	837	X	-	-	-
45	CLA	BB	838	X	-	-	-
45	CLA	BB	841	X	-	-	-
45	CLA	BB	842	X	-	-	-
45	CLA	BB	843	X	-	-	-
45	CLA	BF	301	X	-	-	-
45	CLA	BF	302	X	-	-	-
45	CLA	BF	303	X	-	-	-
45	CLA	BG	201	X	-	-	-
45	CLA	BG	202	X	-	-	-
45	CLA	BH	201	X	-	-	-
45	CLA	BJ	102	X	-	-	-
45	CLA	BK	201	X	-	-	-
45	CLA	BK	202	X	-	-	-
45	CLA	BK	203	X	-	-	-
45	CLA	BL	304	X	-	-	-
54	CHL	A1	303	X	-	-	-
54	CHL	A1	308	X	-	-	-
54	CHL	A3	307	X	-	-	-
54	CHL	A4	304	X	-	-	-
54	CHL	A4	305	X	-	-	-
54	CHL	A4	306	X	-	-	-
54	CHL	A4	314	X	-	-	-
54	CHL	A6	602	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	CHL	A6	606	X	-	-	-
54	CHL	A6	607	X	-	-	-
54	CHL	A6	608	X	-	-	-
54	CHL	B1	303	X	-	-	-
54	CHL	B1	308	X	-	-	-
54	CHL	B2	601	X	-	-	-
54	CHL	B2	605	X	-	-	-
54	CHL	B2	606	X	-	-	-
54	CHL	B2	607	X	-	-	-
54	CHL	B2	614	X	-	-	-
54	CHL	B3	306	X	-	-	-
54	CHL	B5	605	X	-	-	-
54	CHL	B5	606	X	-	-	-
54	CHL	B5	607	X	-	-	-

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 112687 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 Photosystem I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AA	742	Total 5839	C 3826	N 992	O 1003	S 18	0	0
1	BA	742	Total 5841	C 3828	N 992	O 1003	S 18	0	0

- Molecule 2 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	AB	734	Total 5862	C 3847	N 999	O 1001	S 15	0	0
2	BB	733	Total 5854	C 3842	N 998	O 1000	S 14	0	0

- Molecule 3 is a protein called Photosystem I iron-sulfur center.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	AC	80	Total 615	C 381	N 107	O 116	S 11	0	0
3	BC	80	Total 615	C 381	N 107	O 116	S 11	0	0

- Molecule 4 is a protein called Photosystem I reaction center subunit II-2, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AD	141	Total 1112	C 712	N 193	O 203	S 4	0	0
4	BD	143	Total 1127	C 723	N 195	O 205	S 4	0	0

- Molecule 5 is a protein called Photosystem I reaction center subunit IV A, chloroplastic.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	AE	67	Total 530	C 341	N 94	O 95	0	0
5	BE	69	Total 546	C 352	N 97	O 97	0	0

- Molecule 6 is a protein called Photosystem I reaction center subunit III, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AF	153	Total 1213	C 792	N 208	O 210	S 3	0	0
6	BF	154	Total 1220	C 797	N 209	O 211	S 3	0	0

- Molecule 7 is a protein called Photosystem I reaction center subunit V, chloroplastic.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	AG	99	Total 771	C 501	N 126	O 144	0	0
7	BG	94	Total 733	C 474	N 121	O 138	0	0

- Molecule 8 is a protein called Photosystem I reaction center subunit VI-2, chloroplastic.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	AH	95	Total 730	C 476	N 119	O 135	0	0
8	BH	95	Total 730	C 476	N 119	O 135	0	0

- Molecule 9 is a protein called Photosystem I reaction center subunit VIII.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AI	33	Total 257	C 175	N 41	O 40	S 1	0	0
9	BI	33	Total 257	C 175	N 41	O 40	S 1	0	0

- Molecule 10 is a protein called Photosystem I reaction center subunit IX.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AJ	42	Total 338	C 230	N 51	O 56	S 1	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	BJ	43	Total 344	C 233	N 52	O 58	S 1	0	0

- Molecule 11 is a protein called Photosystem I reaction center subunit psaK, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AK	65	Total 451	C 290	N 74	O 84	S 3	0	0
11	BK	64	Total 445	C 285	N 73	O 84	S 3	0	0

- Molecule 12 is a protein called Photosystem I reaction center subunit XI, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AL	157	Total 1173	C 775	N 187	O 209	S 2	0	0
12	BL	159	Total 1184	C 781	N 190	O 211	S 2	0	0

- Molecule 13 is a protein called Chlorophyll a-b binding protein 6, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	A1	196	Total 1511	C 984	N 251	O 271	S 5	0	0
13	B1	172	Total 1339	C 873	N 221	O 240	S 5	0	0

- Molecule 14 is a protein called Photosystem I chlorophyll a/b-binding protein 3-1, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	A3	219	Total 1675	C 1096	N 272	O 302	S 5	0	0
14	B3	221	Total 1696	C 1111	N 276	O 304	S 5	0	0

- Molecule 15 is a protein called Chlorophyll a-b binding protein 4, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	A4	197	Total 1562	C 1022	N 254	O 283	S 3	0	0

- Molecule 16 is a protein called Photosystem I chlorophyll a/b-binding protein 6, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	A6	212	Total 1671	C 1088	N 272	O 299	S 12	0	0

- Molecule 17 is a protein called Photosystem I chlorophyll a/b-binding protein 2, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	B2	208	Total 1607	C 1051	N 261	O 291	S 4	0	0

- Molecule 18 is a protein called Photosystem I chlorophyll a/b-binding protein 5, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	B5	206	Total 1599	C 1045	N 263	O 285	S 6	0	0

- Molecule 19 is a protein called NAD(P)H-quinone oxidoreductase subunit 1, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	A	305	Total 2372	C 1593	N 366	O 409	S 4	0	0

- Molecule 20 is a protein called NAD(P)H-quinone oxidoreductase subunit 2, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	B	486	Total 3780	C 2495	N 577	O 679	S 29	0	0

- Molecule 21 is a protein called NAD(P)H-quinone oxidoreductase subunit 3, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	C	94	Total 776	C 544	N 109	O 121	S 2	0	0

- Molecule 22 is a protein called NAD(P)H-quinone oxidoreductase chain 4, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	D	497	Total 3946	C 2656	N 599	O 666	S 25	0	0

- Molecule 23 is a protein called NAD(P)H-quinone oxidoreductase subunit 4L, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	E	89	Total 695	C 458	N 112	O 119	S 6	0	0

- Molecule 24 is a protein called NAD(P)H-quinone oxidoreductase subunit 5, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	F	677	Total 5330	C 3558	N 829	O 915	S 28	0	0

- Molecule 25 is a protein called NAD(P)H-quinone oxidoreductase subunit 6, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	G	167	Total 1281	C 858	N 194	O 224	S 5	0	0

- Molecule 26 is a protein called Photosynthetic NDH subunit of subcomplex B 1, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	a	341	Total 2655	C 1692	N 450	O 500	S 13	0	0

- Molecule 27 is a protein called Photosynthetic NDH subunit of subcomplex B 2, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	b	307	Total 2367	C 1508	N 392	O 452	S 15	0	0

- Molecule 28 is a protein called Photosynthetic NDH subunit of subcomplex B 3, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	c	128	Total 1005	C 636	N 180	O 183	S 6	0	0

- Molecule 29 is a protein called NDH dependent flow 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	d	93	Total 762	C 497	N 119	O 138	S 8	0	0

- Molecule 30 is a protein called Photosynthetic NDH subunit of subcomplex B 5, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	e	150	1206	780	183	236	7	0	0

- Molecule 31 is a protein called Photosynthetic NDH subunit of lumenal location 1, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	f	153	1277	823	219	233	2	0	0

- Molecule 32 is a protein called Photosynthetic NDH subunit of lumenal location 2, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	g	115	965	620	159	180	6	0	0

- Molecule 33 is a protein called Photosynthetic NDH subunit of lumenal location 3, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	h	145	1170	753	191	221	5	0	0

- Molecule 34 is a protein called Photosynthetic NDH subunit of lumenal location 4, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	i	145	1098	698	190	204	6	0	0

- Molecule 35 is a protein called Isoform 2 of Photosynthetic NDH subunit of lumenal location 5, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	j	173	1331	840	236	248	7	0	0

- Molecule 36 is a protein called NAD(P)H-quinone oxidoreductase subunit H, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	H	356	Total 2812	C 1830	N 465	O 499	S 18	0	0

- Molecule 37 is a protein called NAD(P)H-quinone oxidoreductase subunit I, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	I	160	Total 1236	C 776	N 214	O 233	S 13	0	0

- Molecule 38 is a protein called NAD(P)H-quinone oxidoreductase subunit J, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	J	155	Total 1116	C 722	N 189	O 202	S 3	0	0

- Molecule 39 is a protein called NAD(P)H-quinone oxidoreductase subunit K, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	K	167	Total 1199	C 765	N 203	O 221	S 10	0	0

- Molecule 40 is a protein called NAD(P)H-quinone oxidoreductase subunit L, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	L	77	Total 646	C 437	N 106	O 99	S 4	0	0

- Molecule 41 is a protein called NAD(P)H-quinone oxidoreductase subunit M, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	M	110	Total 771	C 494	N 132	O 143	S 2	0	0

- Molecule 42 is a protein called NAD(P)H-quinone oxidoreductase subunit N, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	N	146	Total 908	C 584	N 156	O 166	S 2	0	0

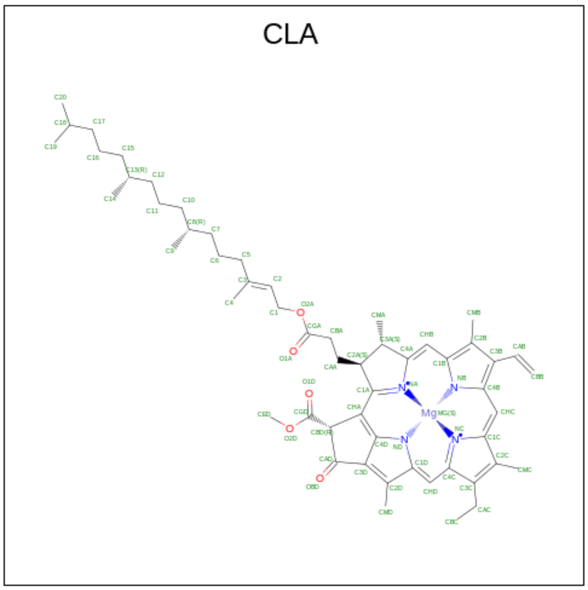
- Molecule 43 is a protein called NdhO.

Mol	Chain	Residues	Atoms				AltConf	Trace
43	O	75	Total 520	C 334	N 90	O 96	0	0

- Molecule 44 is a protein called NdhT.

Mol	Chain	Residues	Atoms				AltConf	Trace
44	T	122	Total 610	C 366	N 122	O 122	0	0

- Molecule 45 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$).



Mol	Chain	Residues	Atoms					AltConf
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45	AA	1	Total 2411	C 1998	Mg 42	N 168	O 203	0
45	AA	1	Total 2411	C 1998	Mg 42	N 168	O 203	0
45	AA	1	Total 2411	C 1998	Mg 42	N 168	O 203	0
45	AA	1	Total 2411	C 1998	Mg 42	N 168	O 203	0
45	AA	1	Total 2411	C 1998	Mg 42	N 168	O 203	0
45	AA	1	Total 2411	C 1998	Mg 42	N 168	O 203	0
45	AA	1	Total 2411	C 1998	Mg 42	N 168	O 203	0

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Mol	Chain	Residues	Atoms					AltConf
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Mol	Chain	Residues	Atoms					AltConf
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45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0
45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0
45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0
45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0

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Mol	Chain	Residues	Atoms					AltConf
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45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0
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45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0
45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0
45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0
45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0
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45	AB	1	Total 2452	C 2045	Mg 42	N 168	O 197	0

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Mol	Chain	Residues	Atoms	AltConf
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45	AB	1	Total C Mg N O 2452 2045 42 168 197	0
45	AB	1	Total C Mg N O 2452 2045 42 168 197	0
45	AB	1	Total C Mg N O 2452 2045 42 168 197	0
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45	AB	1	Total C Mg N O 2452 2045 42 168 197	0
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45	AG	1	Total C Mg N O 131 103 3 12 13	0
45	AG	1	Total C Mg N O 131 103 3 12 13	0
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45	AH	1	Total C Mg N O 60 50 1 4 5	0
45	AJ	1	Total C Mg N O 42 34 1 4 3	0

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Mol	Chain	Residues	Atoms	AltConf
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45	AK	1	Total C Mg N O 126 100 3 12 11	0
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45	AL	1	Total C Mg N O 143 117 3 12 11	0
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45	A1	1	Total C Mg N O 575 463 12 48 52	0
45	A1	1	Total C Mg N O 575 463 12 48 52	0
45	A1	1	Total C Mg N O 575 463 12 48 52	0
45	A1	1	Total C Mg N O 575 463 12 48 52	0
45	A1	1	Total C Mg N O 575 463 12 48 52	0
45	A1	1	Total C Mg N O 575 463 12 48 52	0
45	A1	1	Total C Mg N O 575 463 12 48 52	0
45	A1	1	Total C Mg N O 575 463 12 48 52	0
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Mol	Chain	Residues	Atoms					AltConf
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45	A6	1	Total 485	C 393	Mg 10	N 40	O 42	0

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Mol	Chain	Residues	Atoms	AltConf
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45	A6	1	Total C Mg N O 485 393 10 40 42	0
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45	A6	1	Total C Mg N O 485 393 10 40 42	0
45	A6	1	Total C Mg N O 485 393 10 40 42	0
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Mol	Chain	Residues	Atoms					AltConf
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Mol	Chain	Residues	Atoms					AltConf
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45	BB	1	Total 2422	C 2016	Mg 42	N 168	O 196	0
45	BB	1	Total 2422	C 2016	Mg 42	N 168	O 196	0

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Mol	Chain	Residues	Atoms					AltConf
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45	BB	1	Total 2422	C 2016	Mg 42	N 168	O 196	0
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Mol	Chain	Residues	Atoms					AltConf
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45	BB	1	Total 2422	C 2016	Mg 42	N 168	O 196	0
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45	BB	1	Total 2422	C 2016	Mg 42	N 168	O 196	0
45	BB	1	Total 2422	C 2016	Mg 42	N 168	O 196	0
45	BB	1	Total 2422	C 2016	Mg 42	N 168	O 196	0
45	BF	1	Total 138	C 113	Mg 3	N 12	O 10	0
45	BF	1	Total 138	C 113	Mg 3	N 12	O 10	0
45	BF	1	Total 138	C 113	Mg 3	N 12	O 10	0
45	BG	1	Total 87	C 69	Mg 2	N 8	O 8	0
45	BG	1	Total 87	C 69	Mg 2	N 8	O 8	0
45	BH	1	Total 60	C 50	Mg 1	N 4	O 5	0
45	BJ	1	Total 42	C 34	Mg 1	N 4	O 3	0
45	BK	1	Total 127	C 101	Mg 3	N 12	O 11	0
45	BK	1	Total 127	C 101	Mg 3	N 12	O 11	0
45	BK	1	Total 127	C 101	Mg 3	N 12	O 11	0
45	BL	1	Total 148	C 120	Mg 3	N 12	O 13	0

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Mol	Chain	Residues	Atoms					AltConf
45	BL	1	Total 148	C 120	Mg 3	N 12	O 13	0
45	BL	1	Total 148	C 120	Mg 3	N 12	O 13	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B1	1	Total 519	C 420	Mg 11	N 44	O 44	0
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0

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Mol	Chain	Residues	Atoms					AltConf
45	B2	1	Total 442	C 357	Mg 9	N 36	O 40	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B3	1	Total 578	C 466	Mg 13	N 52	O 47	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0

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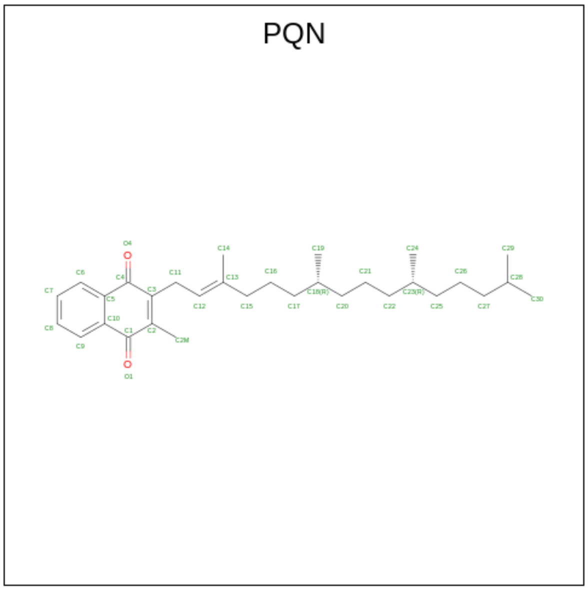
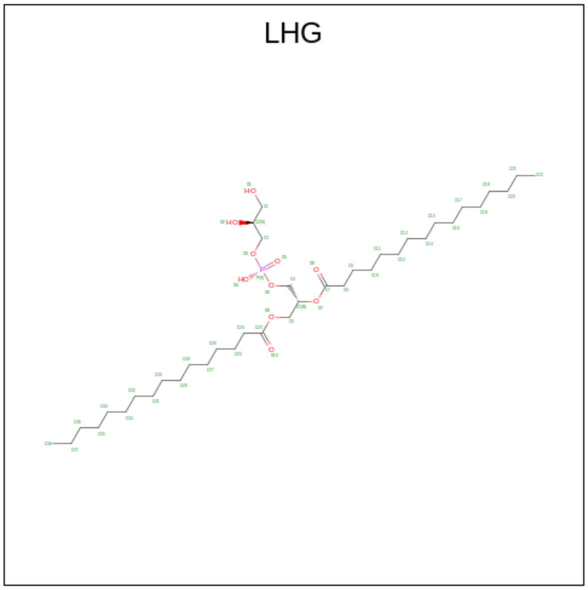
Mol	Chain	Residues	Atoms					AltConf
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0
45	B5	1	Total 476	C 380	Mg 10	N 40	O 46	0

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



Mol	Chain	Residues	Atoms			AltConf
46	AA	1	Total 33	C 31	O 2	0
46	AB	1	Total 33	C 31	O 2	0
46	BA	1	Total 33	C 31	O 2	0
46	BB	1	Total 33	C 31	O 2	0

- Molecule 47 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$).



Mol	Chain	Residues	Atoms	AltConf
47	AA	1	Total C O P 49 38 10 1	0
47	AJ	1	Total C O P 40 29 10 1	0
47	A1	1	Total C O P 123 90 30 3	0
47	A1	1	Total C O P 123 90 30 3	0
47	A1	1	Total C O P 123 90 30 3	0
47	A3	1	Total C O P 59 37 20 2	0
47	A3	1	Total C O P 59 37 20 2	0
47	A6	1	Total C O P 36 25 10 1	0
47	BA	1	Total C O P 76 54 20 2	0
47	BA	1	Total C O P 76 54 20 2	0
47	BF	1	Total C O P 45 34 10 1	0
47	B1	1	Total C O P 116 83 30 3	0
47	B1	1	Total C O P 116 83 30 3	0
47	B1	1	Total C O P 116 83 30 3	0

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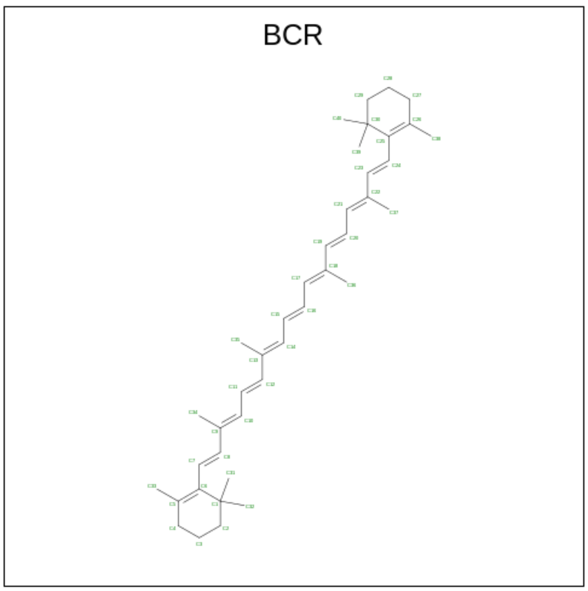
Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
47	B2	1	35	24	10	1	0
47	B3	1	23	12	10	1	0
47	B5	1	30	19	10	1	0
47	F	1	37	26	10	1	0
47	a	1	29	18	10	1	0

- Molecule 48 is BETA-CAROTENE (three-letter code: BCR) (formula: $C_{40}H_{56}$).



Mol	Chain	Residues	Atoms		AltConf
			Total	C	
48	AA	1	240	240	0
48	AA	1	240	240	0
48	AA	1	240	240	0
48	AA	1	240	240	0
48	AA	1	240	240	0
48	AA	1	240	240	0

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Mol	Chain	Residues	Atoms	AltConf
48	AB	1	Total C 240 240	0
48	AB	1	Total C 240 240	0
48	AB	1	Total C 240 240	0
48	AB	1	Total C 240 240	0
48	AB	1	Total C 240 240	0
48	AB	1	Total C 240 240	0
48	AF	1	Total C 80 80	0
48	AF	1	Total C 80 80	0
48	AG	1	Total C 40 40	0
48	AI	1	Total C 80 80	0
48	AI	1	Total C 80 80	0
48	AJ	1	Total C 80 80	0
48	AJ	1	Total C 80 80	0
48	AK	1	Total C 40 40	0
48	AL	1	Total C 80 80	0
48	AL	1	Total C 80 80	0
48	A1	1	Total C 40 40	0
48	A3	1	Total C 40 40	0
48	A4	1	Total C 40 40	0
48	A6	1	Total C 40 40	0
48	BA	1	Total C 280 280	0

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Mol	Chain	Residues	Atoms	AltConf
48	BA	1	Total C 280 280	0
48	BA	1	Total C 280 280	0
48	BA	1	Total C 280 280	0
48	BA	1	Total C 280 280	0
48	BA	1	Total C 280 280	0
48	BA	1	Total C 280 280	0
48	BB	1	Total C 240 240	0
48	BB	1	Total C 240 240	0
48	BB	1	Total C 240 240	0
48	BB	1	Total C 240 240	0
48	BB	1	Total C 240 240	0
48	BB	1	Total C 240 240	0
48	BF	1	Total C 40 40	0
48	BG	1	Total C 40 40	0
48	BI	1	Total C 40 40	0
48	BJ	1	Total C 80 80	0
48	BJ	1	Total C 80 80	0
48	BK	1	Total C 40 40	0
48	BL	1	Total C 120 120	0
48	BL	1	Total C 120 120	0
48	BL	1	Total C 120 120	0

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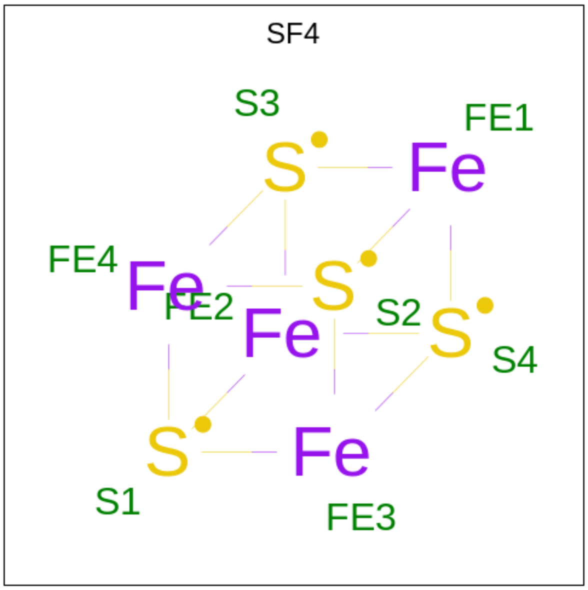
Mol	Chain	Residues	Atoms	AltConf
48	B2	1	Total C 40 40	0
48	B3	1	Total C 40 40	0
48	B5	1	Total C 40 40	0

- Molecule 49 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4).



Mol	Chain	Residues	Atoms	AltConf
49	AA	1	Total Fe S 8 4 4	0
49	AC	1	Total Fe S 16 8 8	0
49	AC	1	Total Fe S 16 8 8	0
49	BA	1	Total Fe S 8 4 4	0
49	BC	1	Total Fe S 16 8 8	0
49	BC	1	Total Fe S 16 8 8	0
49	I	1	Total Fe S 16 8 8	0
49	I	1	Total Fe S 16 8 8	0

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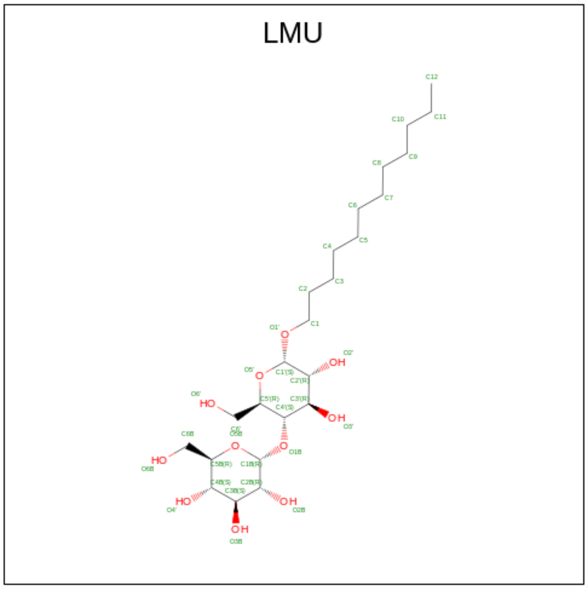
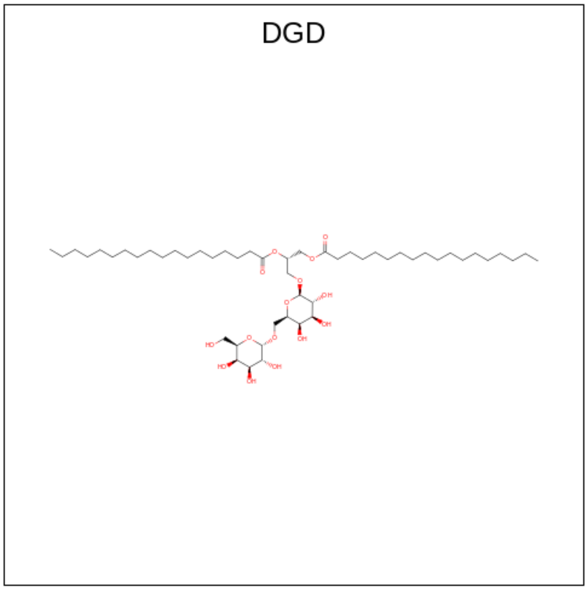
Mol	Chain	Residues	Atoms	AltConf
49	K	1	Total Fe S 8 4 4	0

- Molecule 50 is DODECYL-ALPHA-D-MALTOSIDE (three-letter code: LMU) (formula: $C_{24}H_{46}O_{11}$).



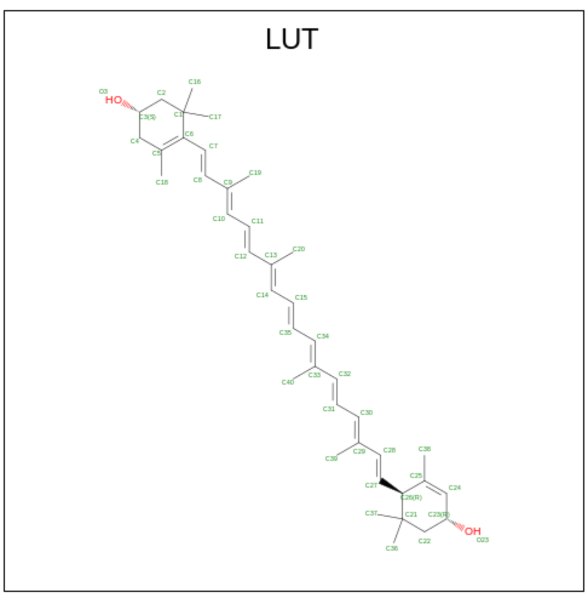
Mol	Chain	Residues	Atoms	AltConf
50	AA	1	Total C O 35 24 11	0
50	AB	1	Total C O 105 72 33	0
50	AB	1	Total C O 105 72 33	0
50	AB	1	Total C O 105 72 33	0
50	AL	1	Total C O 34 23 11	0
50	BA	1	Total C O 67 45 22	0
50	BA	1	Total C O 67 45 22	0
50	BB	1	Total C O 35 24 11	0

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



Mol	Chain	Residues	Atoms			AltConf
51	AB	1	Total 66	C 51	O 15	0
51	BB	1	Total 66	C 51	O 15	0

- Molecule 52 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3 ,3'-DIOL (three-letter code: LUT) (formula: $C_{40}H_{56}O_2$).



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

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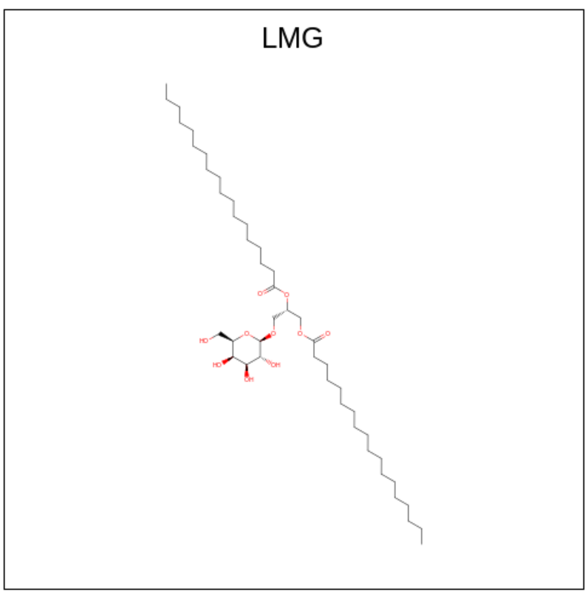
Mol	Chain	Residues	Atoms			AltConf
52	A1	1	Total 42	C 40	O 2	0
52	A3	1	Total 42	C 40	O 2	0
52	A4	1	Total 42	C 40	O 2	0
52	A6	1	Total 42	C 40	O 2	0
52	B1	1	Total 42	C 40	O 2	0
52	B2	1	Total 42	C 40	O 2	0
52	B3	1	Total 42	C 40	O 2	0
52	B5	1	Total 42	C 40	O 2	0

- Molecule 53 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: $C_{45}H_{86}O_{10}$).



Mol	Chain	Residues	Atoms			AltConf
53	AG	1	Total 38	C 28	O 10	0
53	A1	1	Total 44	C 34	O 10	0
53	A4	1	Total 39	C 29	O 10	0

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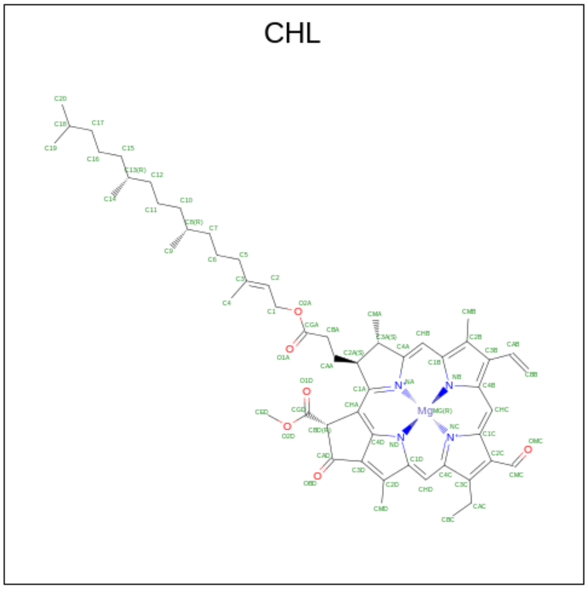
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
53	B5	1	33	23	10	0

- Molecule 54 is CHLOROPHYLL B (three-letter code: CHL) (formula: $C_{55}H_{70}MgN_4O_6$).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
54	A1	1	92	72	2	8	10	0
54	A1	1	92	72	2	8	10	0
54	A3	1	45	35	1	4	5	0
54	A4	1	169	132	4	16	17	0
54	A4	1	169	132	4	16	17	0
54	A4	1	169	132	4	16	17	0
54	A4	1	169	132	4	16	17	0
54	A6	1	187	148	4	16	19	0
54	A6	1	187	148	4	16	19	0
54	A6	1	187	148	4	16	19	0

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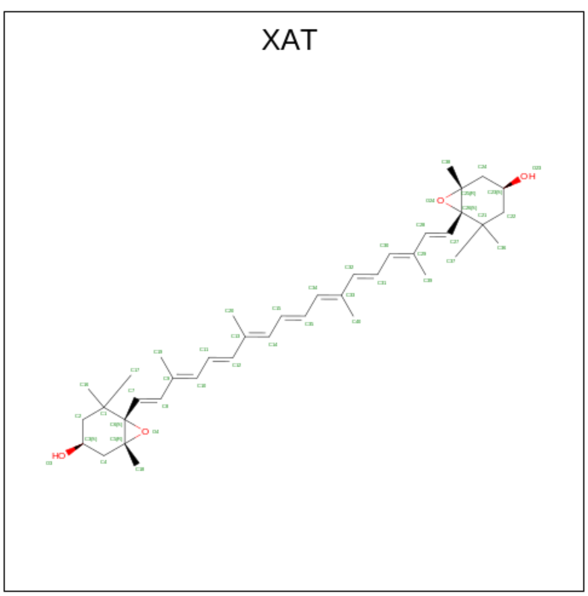
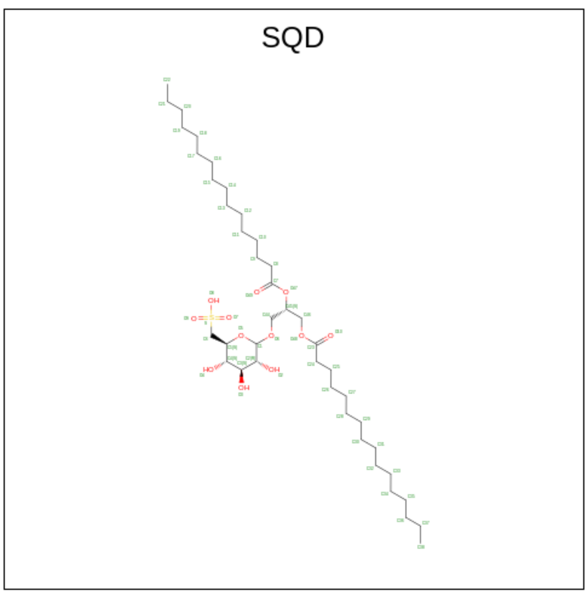
Mol	Chain	Residues	Atoms	AltConf
54	A6	1	Total C Mg N O 187 148 4 16 19	0
54	B1	1	Total C Mg N O 91 71 2 8 10	0
54	B1	1	Total C Mg N O 91 71 2 8 10	0
54	B2	1	Total C Mg N O 227 178 5 20 24	0
54	B2	1	Total C Mg N O 227 178 5 20 24	0
54	B2	1	Total C Mg N O 227 178 5 20 24	0
54	B2	1	Total C Mg N O 227 178 5 20 24	0
54	B2	1	Total C Mg N O 227 178 5 20 24	0
54	B3	1	Total C Mg N O 45 35 1 4 5	0
54	B5	1	Total C Mg N O 126 98 3 12 13	0
54	B5	1	Total C Mg N O 126 98 3 12 13	0
54	B5	1	Total C Mg N O 126 98 3 12 13	0

- Molecule 55 is (3S,5R,6S,3'S,5'R,6'S)-5,6,5',6'-DIEPOXY-5,6,5',6'- TETRAHYDRO-BETA ,BETA-CAROTENE-3,3'-DIOL (three-letter code: XAT) (formula: $C_{40}H_{56}O_4$).



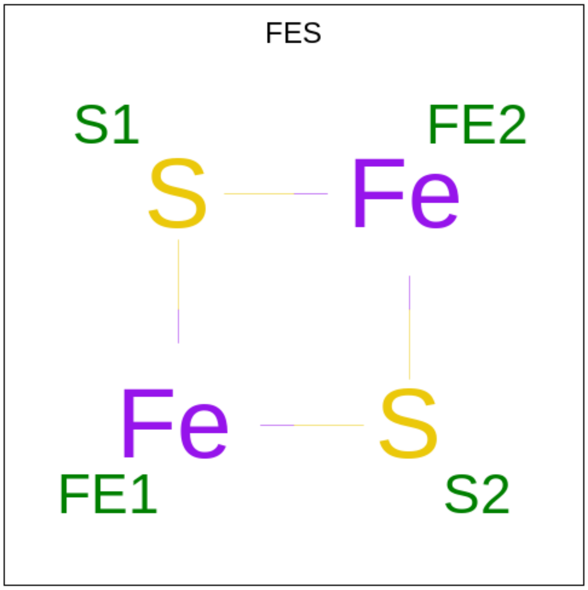
Mol	Chain	Residues	Atoms			AltConf
55	A1	1	Total 44	C 40	O 4	0
55	A3	1	Total 44	C 40	O 4	0
55	A4	1	Total 44	C 40	O 4	0
55	A6	1	Total 44	C 40	O 4	0
55	B1	1	Total 44	C 40	O 4	0
55	B2	1	Total 44	C 40	O 4	0
55	B3	1	Total 44	C 40	O 4	0
55	B5	1	Total 44	C 40	O 4	0

- Molecule 56 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
56	BJ	1	Total 47	C 34	O 12	S 1	0
56	e	1	Total 34	C 21	O 12	S 1	0

- Molecule 57 is FE2/S2 (INORGANIC) CLUSTER (three-letter code: FES) (formula: Fe_2S_2).

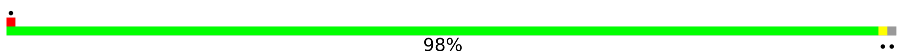


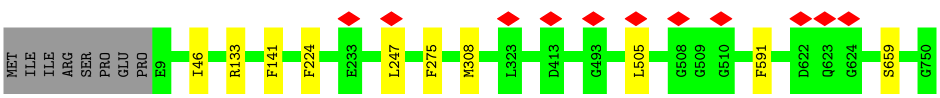
Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
57	c	1	4	2	2	0

3 Residue-property plots (i)

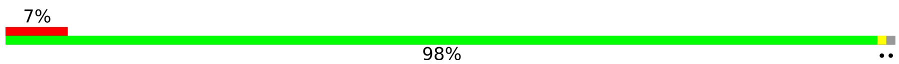
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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.

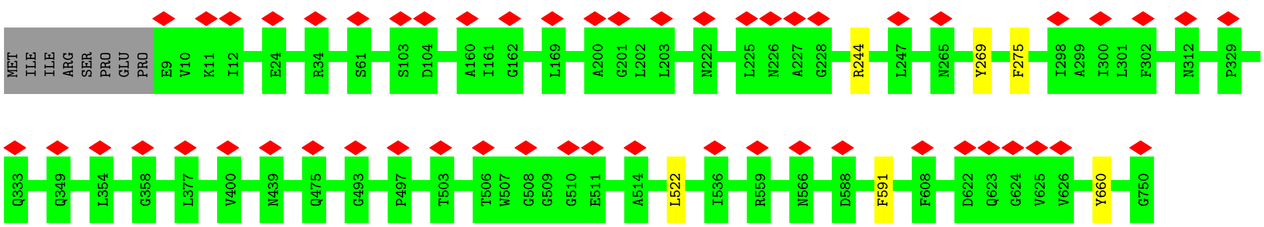
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1

Chain AA:


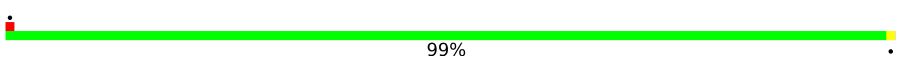


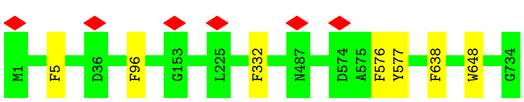
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1

Chain BA:


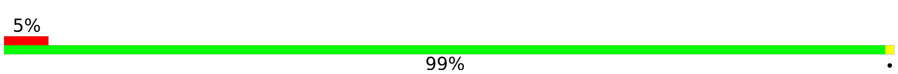


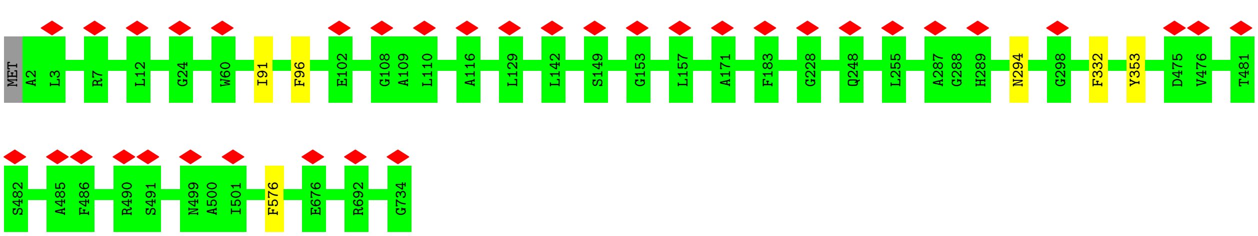
- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

Chain AB:




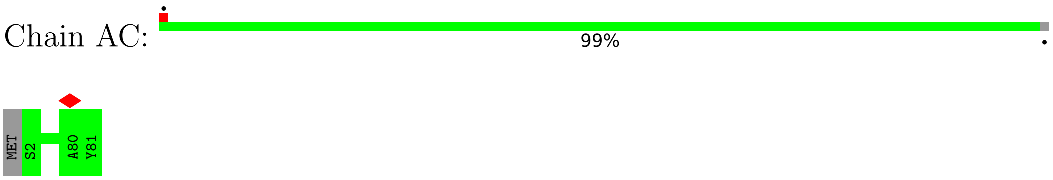
- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

Chain BB:




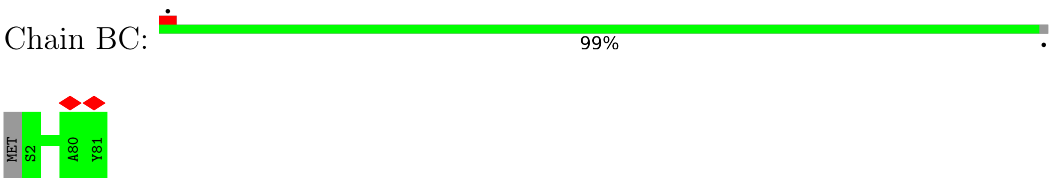
- Molecule 3: Photosystem I iron-sulfur center

Chain AC:



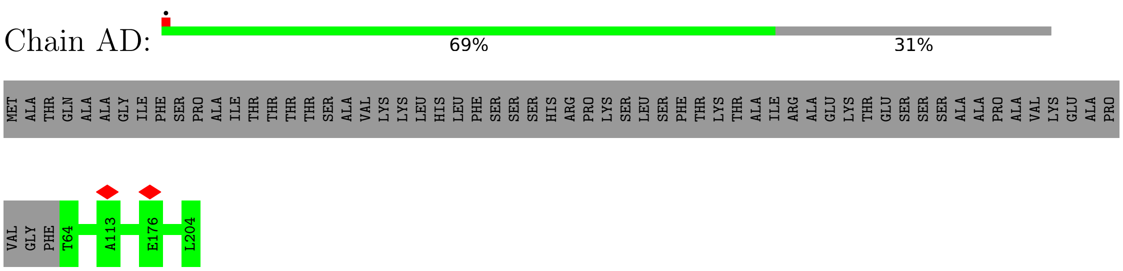
- Molecule 3: Photosystem I iron-sulfur center

Chain BC:



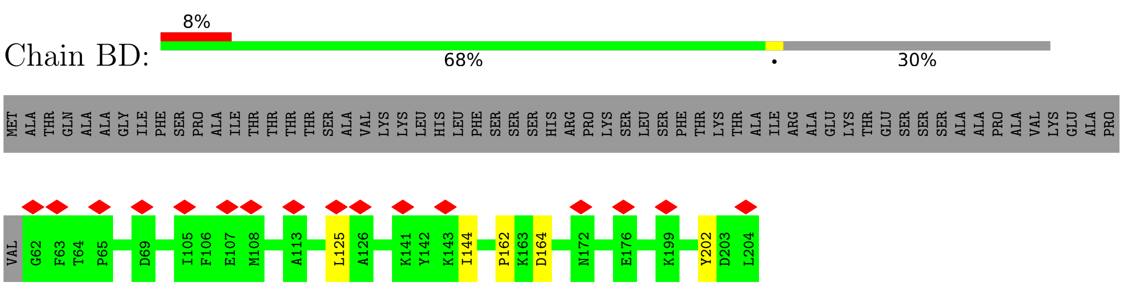
- Molecule 4: Photosystem I reaction center subunit II-2, chloroplastic

Chain AD:



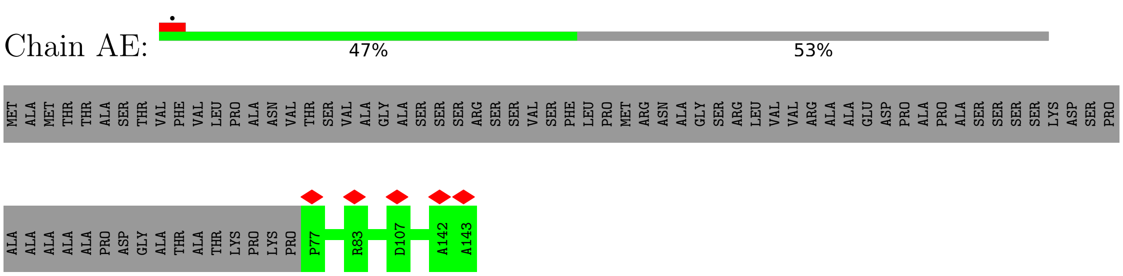
- Molecule 4: Photosystem I reaction center subunit II-2, chloroplastic

Chain BD:



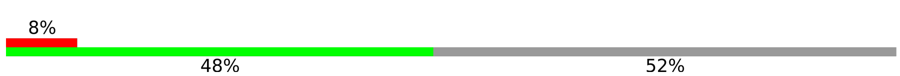
- Molecule 5: Photosystem I reaction center subunit IV A, chloroplastic

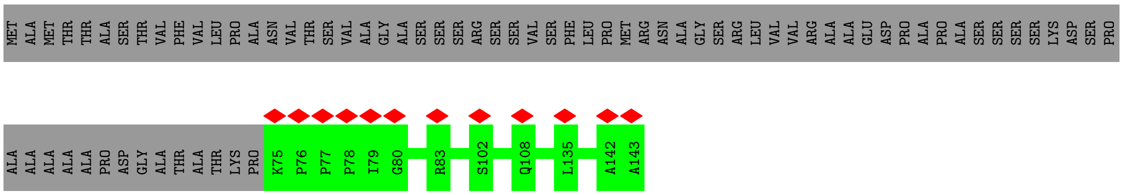
Chain AE:



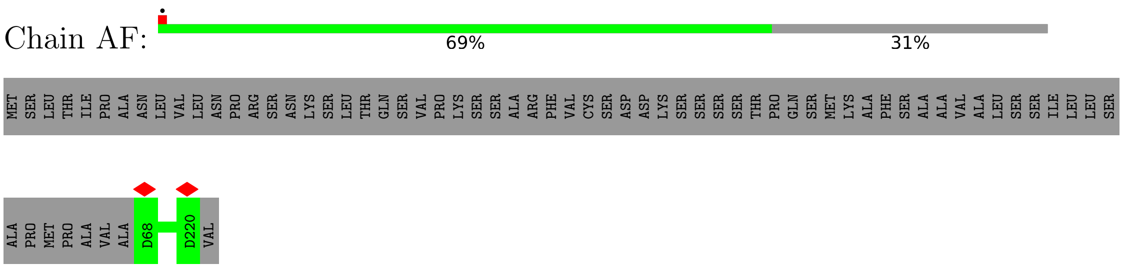
- Molecule 5: Photosystem I reaction center subunit IV A, chloroplastic

Chain BE:

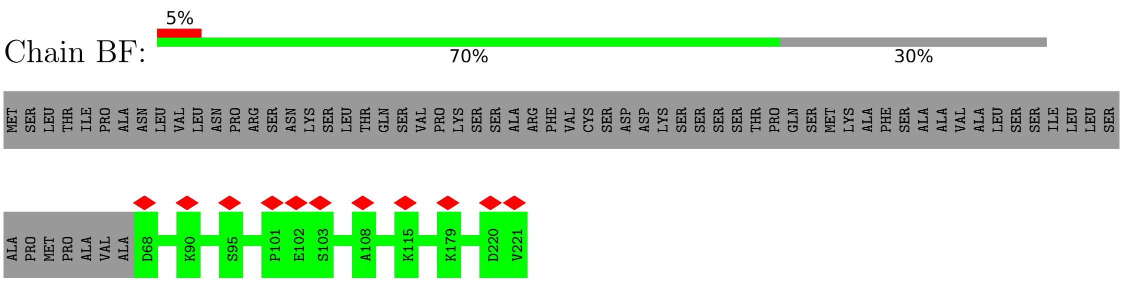




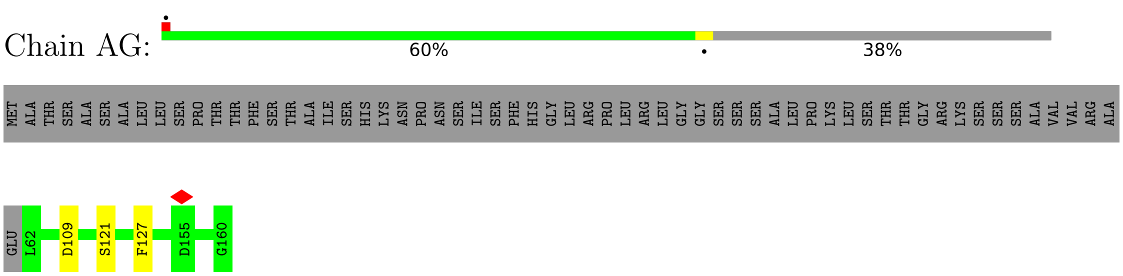
• Molecule 6: Photosystem I reaction center subunit III, chloroplastic



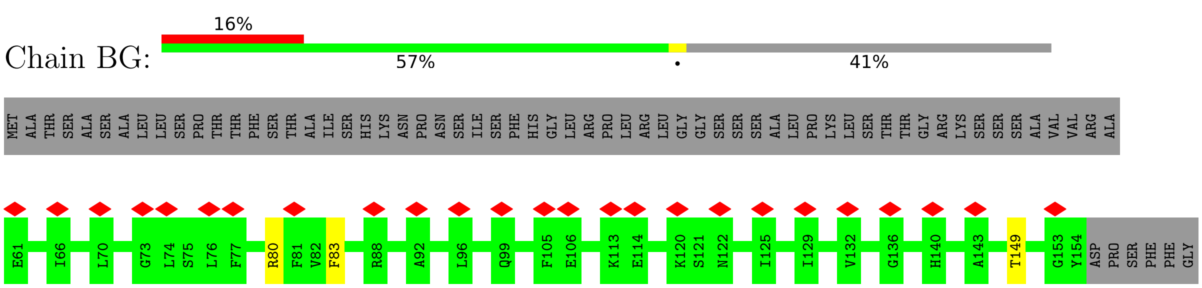
• Molecule 6: Photosystem I reaction center subunit III, chloroplastic



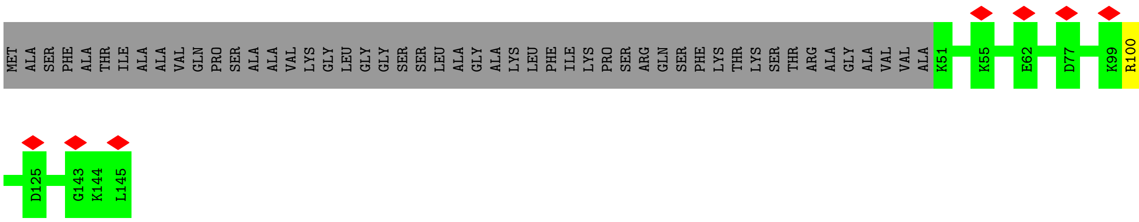
• Molecule 7: Photosystem I reaction center subunit V, chloroplastic



• Molecule 7: Photosystem I reaction center subunit V, chloroplastic

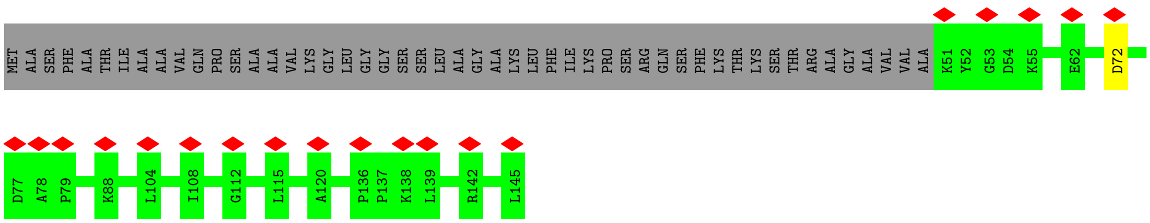


• Molecule 8: Photosystem I reaction center subunit VI-2, chloroplastic



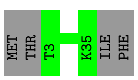
• Molecule 8: Photosystem I reaction center subunit VI-2, chloroplastic

Chain BH:



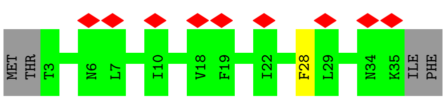
• Molecule 9: Photosystem I reaction center subunit VIII

Chain AI:



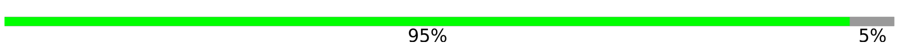
• Molecule 9: Photosystem I reaction center subunit VIII

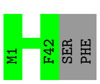
Chain BI:



• Molecule 10: Photosystem I reaction center subunit IX

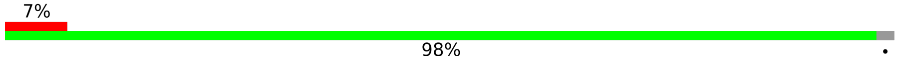
Chain AJ:

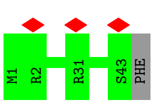




• Molecule 10: Photosystem I reaction center subunit IX

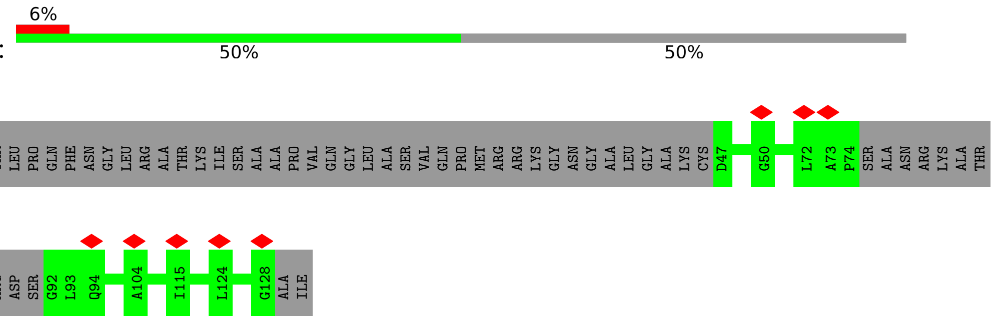
Chain BJ:





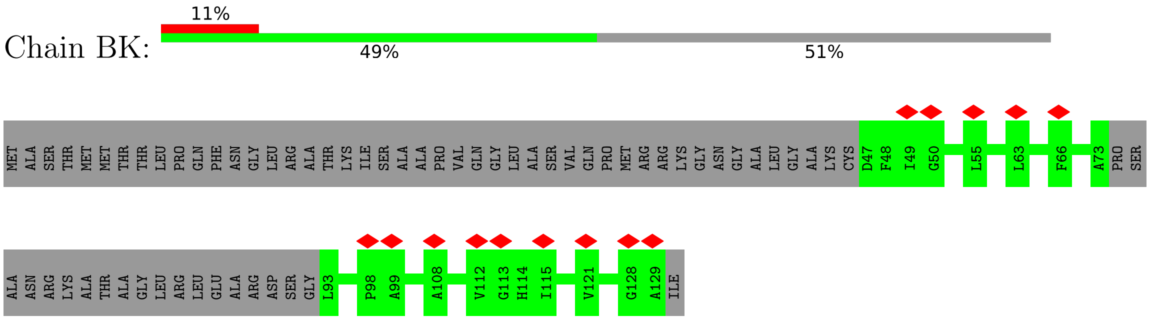
• Molecule 11: Photosystem I reaction center subunit psaK, chloroplastic

Chain AK:



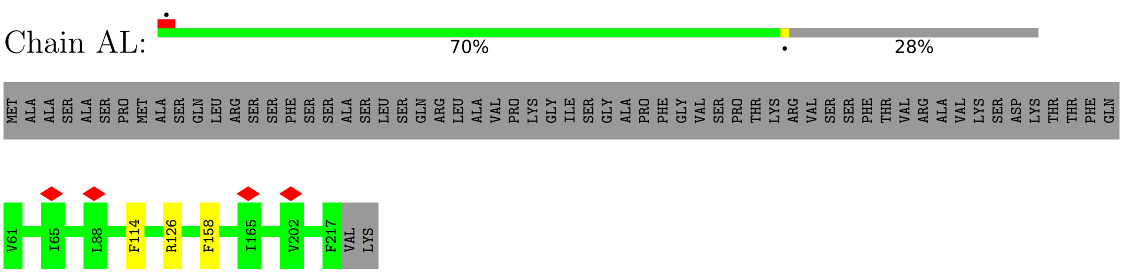
• Molecule 11: Photosystem I reaction center subunit psaK, chloroplastic

Chain BK:



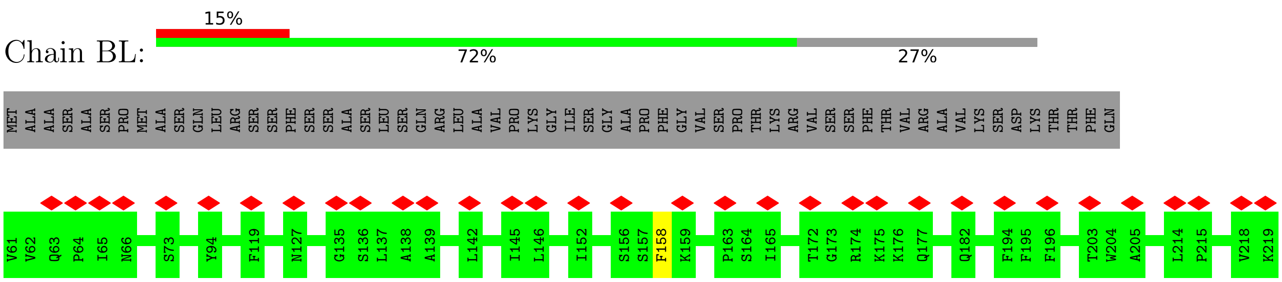
• Molecule 12: Photosystem I reaction center subunit XI, chloroplastic

Chain AL:



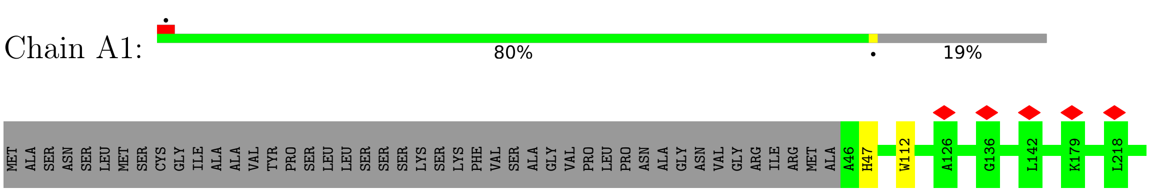
• Molecule 12: Photosystem I reaction center subunit XI, chloroplastic

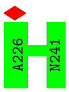
Chain BL:



• Molecule 13: Chlorophyll a-b binding protein 6, chloroplastic

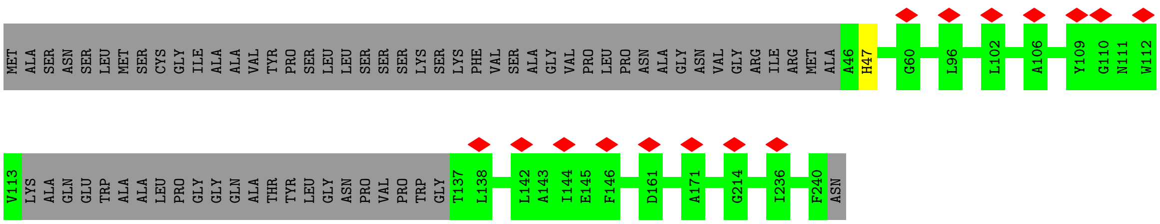
Chain A1:





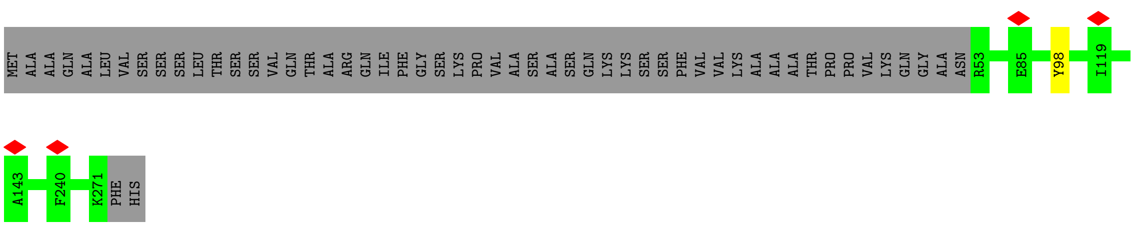
• Molecule 13: Chlorophyll a-b binding protein 6, chloroplastic

Chain B1:



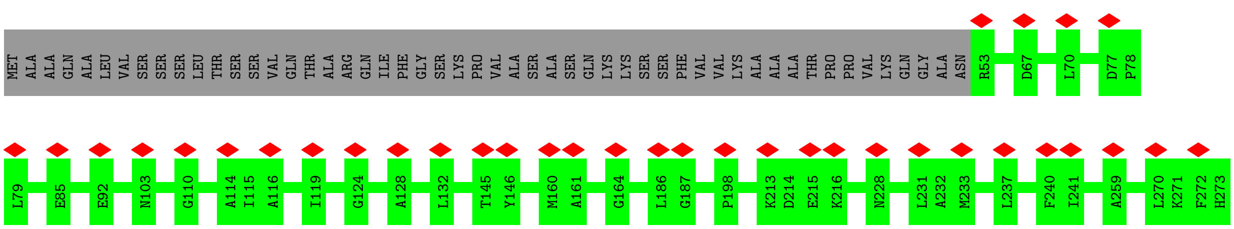
• Molecule 14: Photosystem I chlorophyll a/b-binding protein 3-1, chloroplastic

Chain A3:



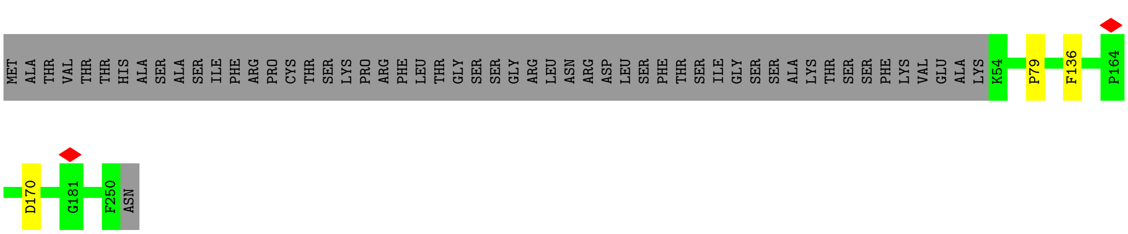
• Molecule 14: Photosystem I chlorophyll a/b-binding protein 3-1, chloroplastic

Chain B3:



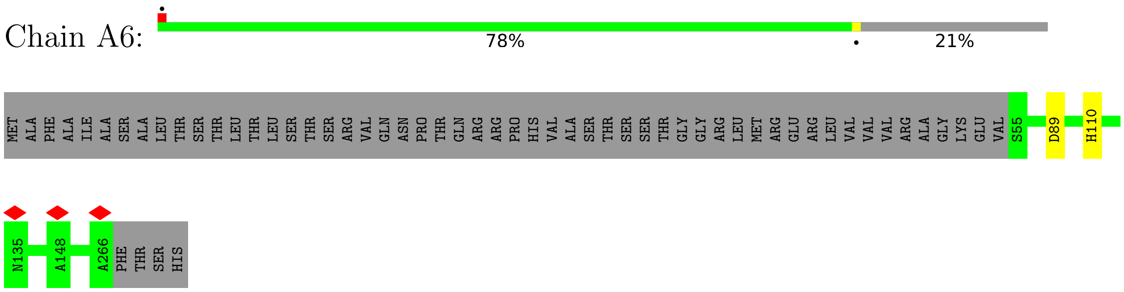
• Molecule 15: Chlorophyll a-b binding protein 4, chloroplastic

Chain A4:



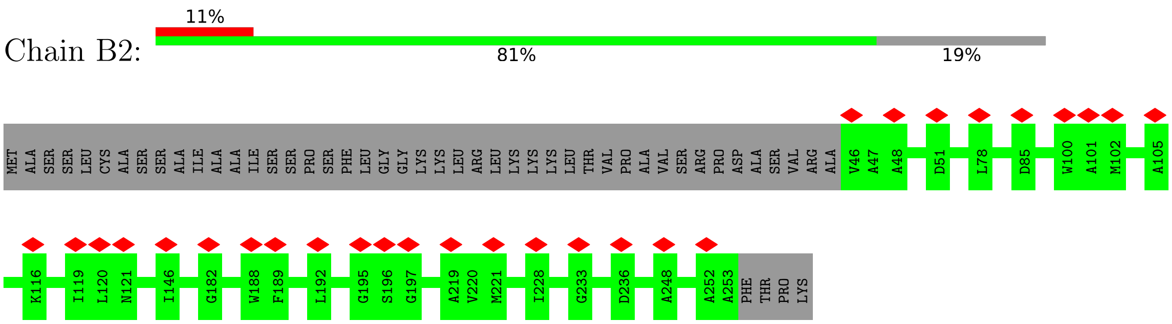
• Molecule 16: Photosystem I chlorophyll a/b-binding protein 6, chloroplastic

Chain A6:



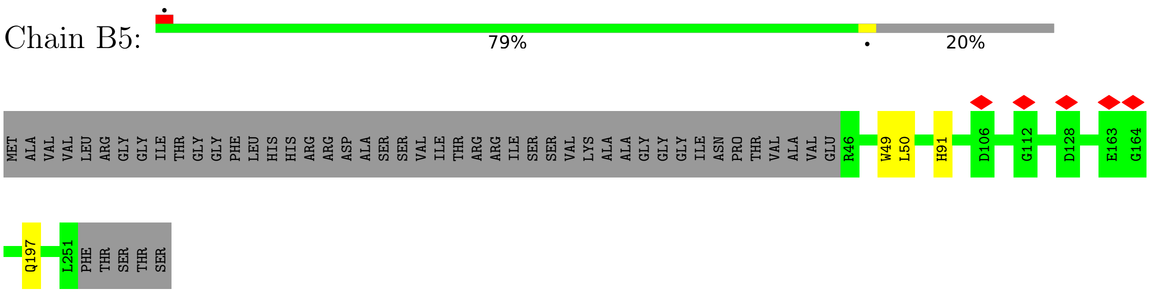
• Molecule 17: Photosystem I chlorophyll a/b-binding protein 2, chloroplastic

Chain B2:



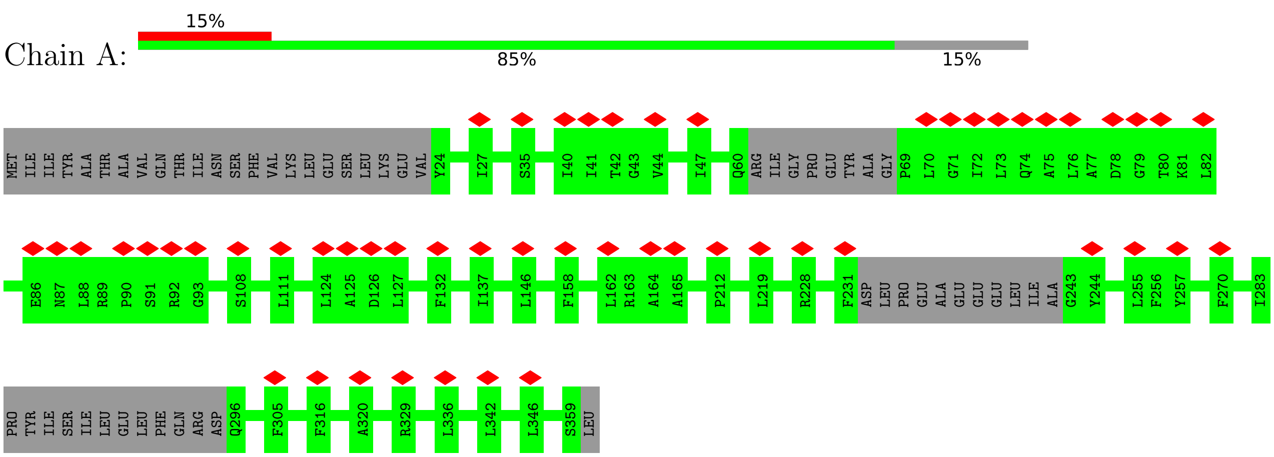
• Molecule 18: Photosystem I chlorophyll a/b-binding protein 5, chloroplastic

Chain B5:



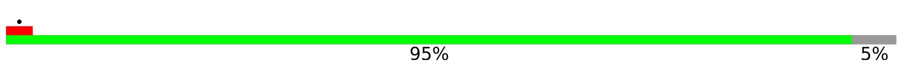
• Molecule 19: NAD(P)H-quinone oxidoreductase subunit 1, chloroplastic

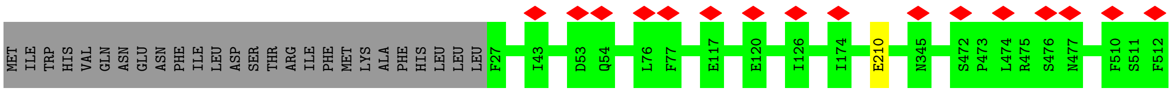
Chain A:



• Molecule 20: NAD(P)H-quinone oxidoreductase subunit 2, chloroplastic

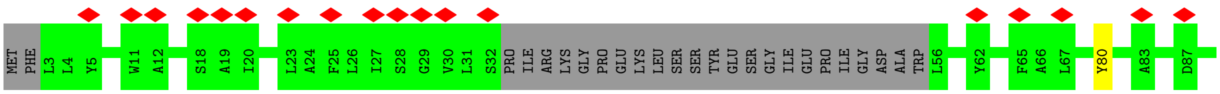
Chain B:

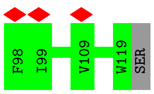




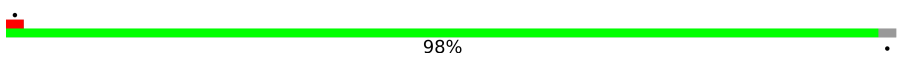
• Molecule 21: NAD(P)H-quinone oxidoreductase subunit 3, chloroplastic

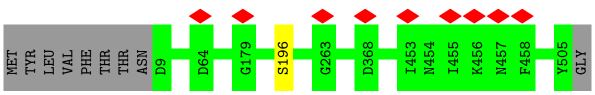
Chain C:



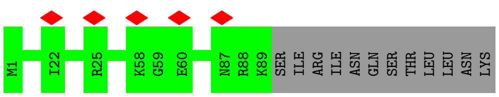
• Molecule 22: NAD(P)H-quinone oxidoreductase chain 4, chloroplastic

Chain D:


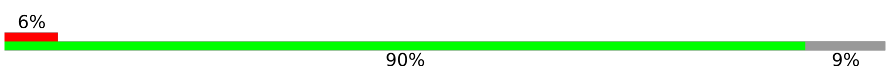


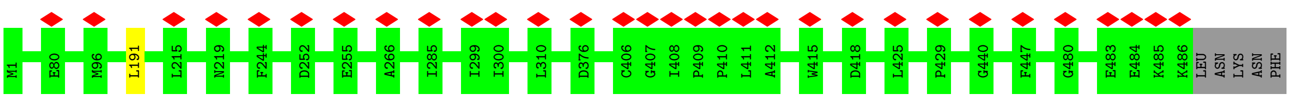
• Molecule 23: NAD(P)H-quinone oxidoreductase subunit 4L, chloroplastic

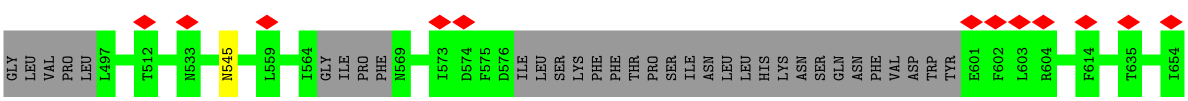
Chain E:

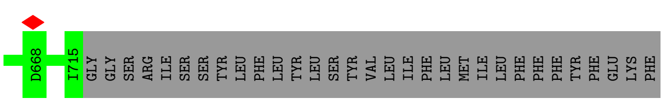



• Molecule 24: NAD(P)H-quinone oxidoreductase subunit 5, chloroplastic

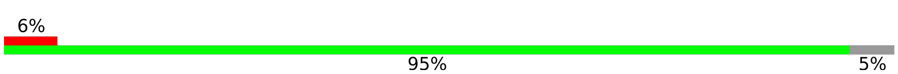
Chain F:


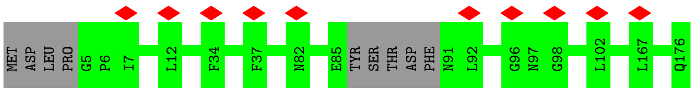






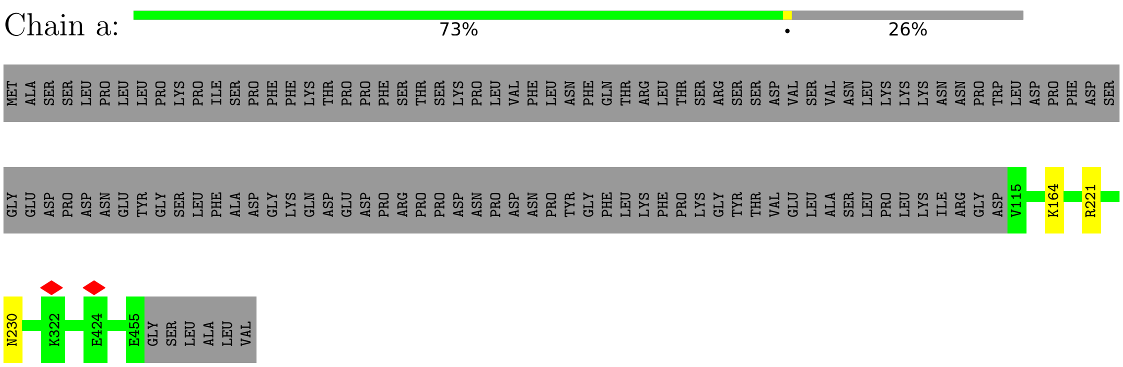
• Molecule 25: NAD(P)H-quinone oxidoreductase subunit 6, chloroplastic

Chain G:




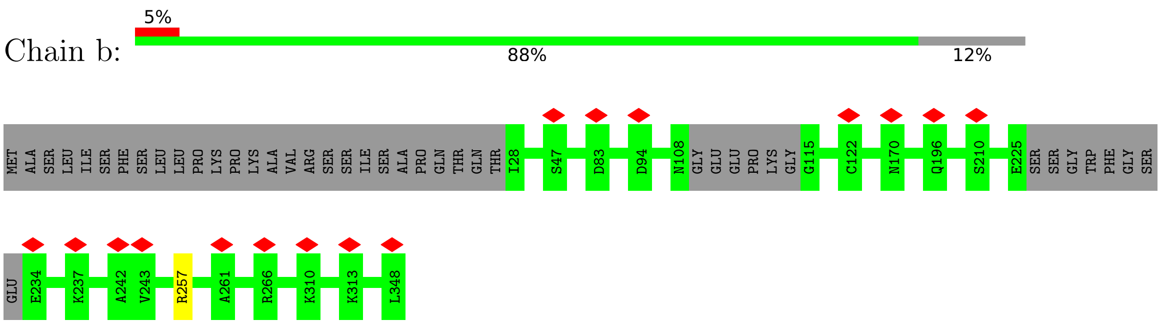
• Molecule 26: Photosynthetic NDH subunit of subcomplex B 1, chloroplastic

Chain a:



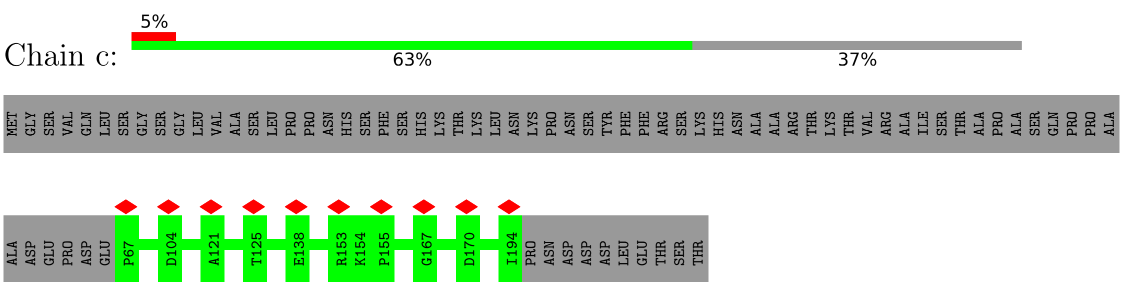
• Molecule 27: Photosynthetic NDH subunit of subcomplex B 2, chloroplastic

Chain b:



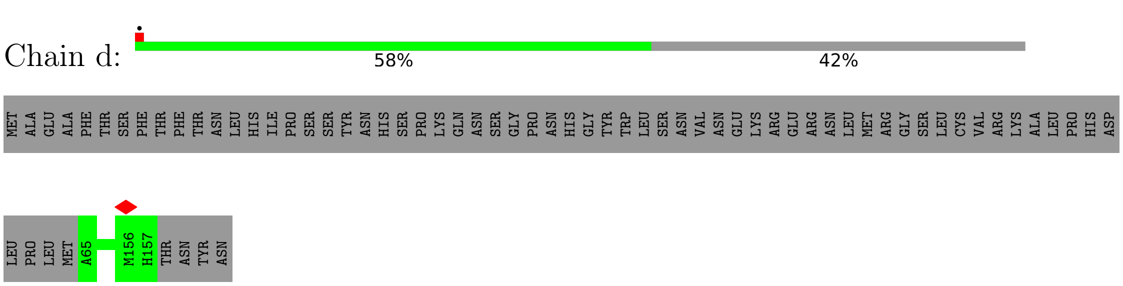
• Molecule 28: Photosynthetic NDH subunit of subcomplex B 3, chloroplastic

Chain c:

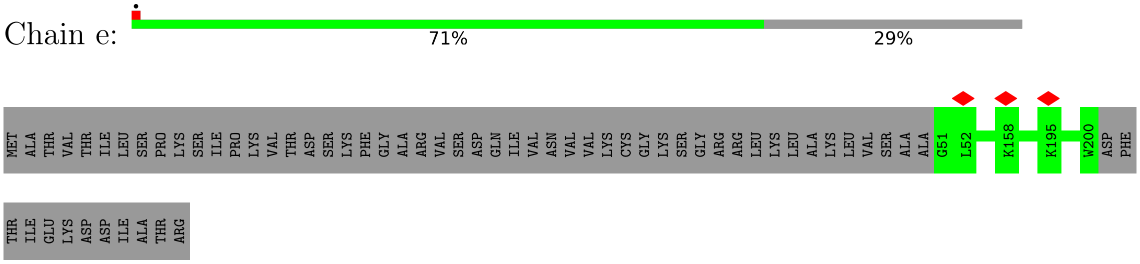


• Molecule 29: NDH dependent flow 6

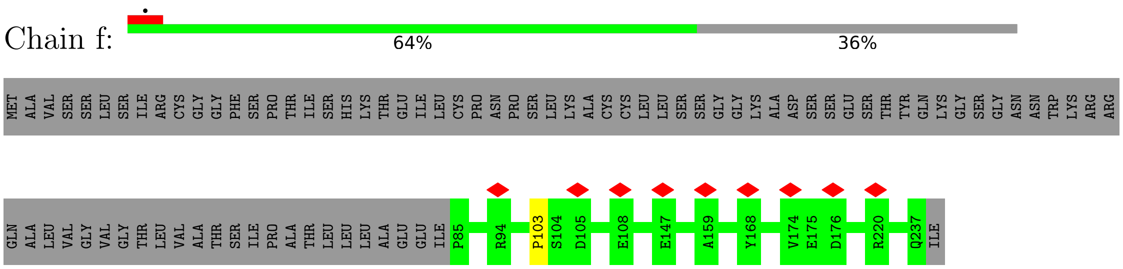
Chain d:



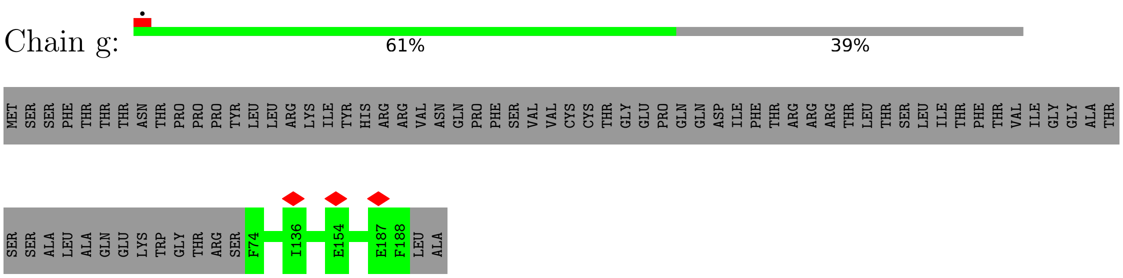
• Molecule 30: Photosynthetic NDH subunit of subcomplex B 5, chloroplastic



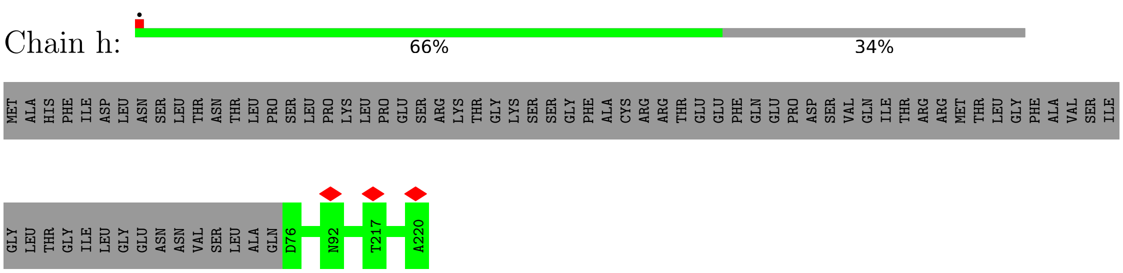
• Molecule 31: Photosynthetic NDH subunit of lumenal location 1, chloroplastic



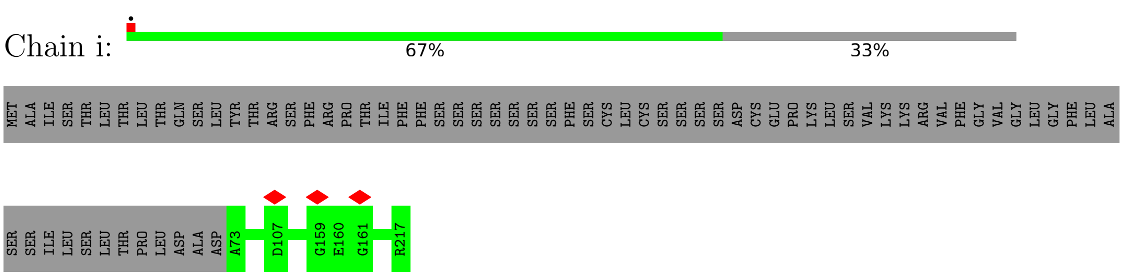
• Molecule 32: Photosynthetic NDH subunit of lumenal location 2, chloroplastic



• Molecule 33: Photosynthetic NDH subunit of lumenal location 3, chloroplastic



• Molecule 34: Photosynthetic NDH subunit of lumenal location 4, chloroplastic



• Molecule 35: Isoform 2 of Photosynthetic NDH subunit of lumenal location 5, chloroplastic

Chain j: 67% 32%

MET ALA THR LEU SER MET THR LEU SER LEU SER ALA PRO PRO ARG ARG LEU SER PRO ILE ASN THR SER ALA PHE THR SER THR SER PHE ARG LEU ARG THR LYS SER SER PHE ASP SER ILE SER PHE SER SER SER THR PRO PHE SER ALA SER SER LEU LEU LEU HIS THR SER TYR

THR LYS ARG ASN HIS ARG CYS PHE SER VAL GLN SER ASN ALA GLU VAL VAL THR GLU PRO Q81 T126 G127 E128 G160 N172 F173 K174 G209 P251 M252 S253 GLU ALA

• Molecule 36: NAD(P)H-quinone oxidoreductase subunit H, chloroplastic

Chain H: 87% 90% • 9%

MET LYS ARG PRO VAL THR GLY LYS ASP L10 M11 I12 V13 N14 M15 G16 P17 H18 H19 P20 S21 M22 H23 G24 V25 L26 R27 L28 I29 V30 T31 L32 D33 G34 E35 D36 V37 V38 D39 C40 E41 P42 I43 L44 G45 Y46 L47 H48 R49 G50 M51 E52 K53 I54 A55 E56 N57 R58 A59 I60

I61 Q62 Y63 L64 P65 Y66 V67 T68 R69 W70 D71 Y72 L73 A74 T75 M76 F77 T78 E79 A80 I81 T82 V83 N84 G85 P86 E87 Q88 L89 G90 N91 I92 Q93 V94 P95 K96 R97 A98 S99 Y100 I101 R102 V103 I104 M105 L106 E107 L108 S109 R110 I111 A112 S113 H114 L115 L116 W117 L118 G119 P120

F121 M122 A123 D124 I125 GLY ALA GLN THR P130 F131 F132 Y133 I134 F135 R136 E137 R138 E139 F140 V141 Y142 D143 L144 F145 E146 A147 A148 T149 G150 M151 R152 M153 M154 H155 N156 F157 F158 R159 I160 G161 G162 I163 A164 A165 D166 L167 P168 Y169 G170 W171 I172 D173 K174 C175 L176 D177 F178 C179 D180

Y181 F182 L183 T184 E185 V186 V187 E188 Y189 Q190 K191 L192 I193 I198 F199 L200 E201 R202 V203 E204 G205 V206 G207 I208 I209 G210 G211 E212 E213 A214 I215 N216 W217 G218 L219 S220 G221 P222 M223 L224 R225 A226 S227 G228 I229 P230 W231 D232 L233 R234 K235 I236 D237 R238 Y239 E240 S241 Y242 D243

E244 F245 E246 W247 E248 I249 Q250 W251 Q252 K253 Q254 G255 D256 S257 L258 A259 R260 Y261 L262 V263 R264 L265 S266 E267 M268 T269 E270 S271 I272 K273 I274 I275 Q276 Q277 A278 L279 E280 G281 L282 P283 GLY GLY PRO TYR GLU ASN LEU GLU SER ARG GLY PHE ASP ARG LYS ARG ASN PRO GLU TRP

ASN ASP PHE GLU Y308 R309 F310 I311 S312 K313 K314 P315 S316 P317 T318 F319 E320 L321 S322 K323 Q324 E325 L326 Y327 V328 R329 V330 E331 A332 P333 K334 G335 E336 L337 G338 I339 F340 L341 I342 G343 D344 Q345 S346 G347 F348 P349 W350 R351 W352 K353 I354 R355 P356 P357 G358 F359 I360 N361 L362 Q363

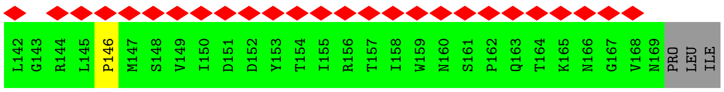
I364 L365 P366 E367 L368 V369 K370 R371 M372 K373 L374 A375 D376 I377 M378 T379 I380 L381 G382 S383 I384 D385 I386 I387 M388 G389 E390 V391 D392 R393

• Molecule 37: NAD(P)H-quinone oxidoreductase subunit I, chloroplastic

Chain I: 66% 91% •• 7%

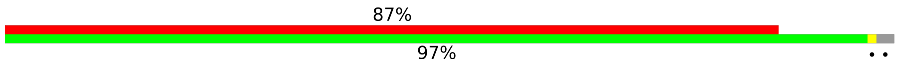
MET LEU PRO MET ILE T6 Y11 T15 L16 R17 A18 A19 I28 T29 L30 S31 H32 T33 N34 R35 L36 P37 V38 T39 I40 Q41 Y42 P43 Y44 GLU LYS LEU ILE T49 S50 E51 R52 F53 R56 I57 H58 F59 E60 F61 D62 K63 C64 I65 A66 C67 C70 V71 R72 P75

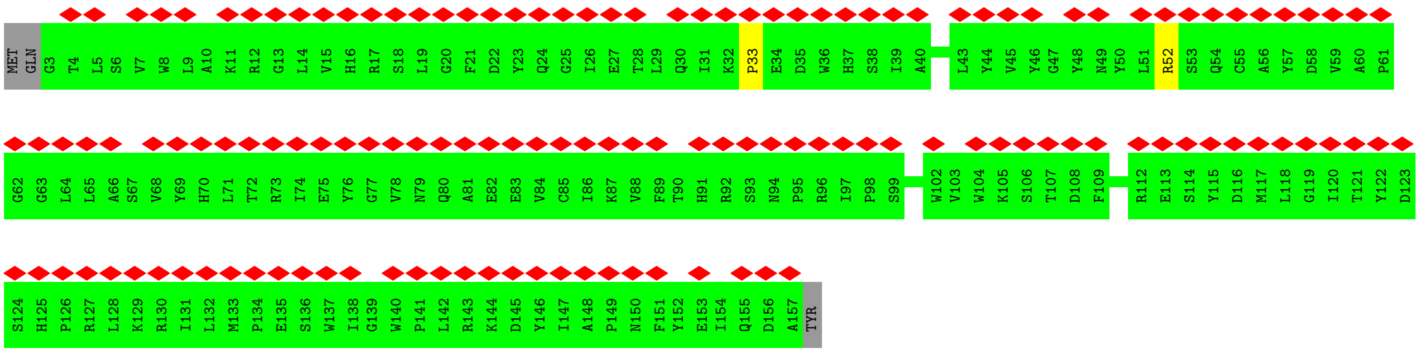
L78 P79 V80 V81 D82 W83 K84 L85 E86 T87 N88 I89 R90 K91 K92 R93 L94 L95 N96 Y97 S98 I99 D100 F101 G102 I103 C104 I105 N109 C110 V111 E112 Y113 N117 S120 M121 T122 E123 E124 Y125 E126 F127 S128 T129 Y130 D131 R132 H133 E134 L135 N136 Y137 N138 Q139 I140 A141



- Molecule 38: NAD(P)H-quinone oxidoreductase subunit J, chloroplastic

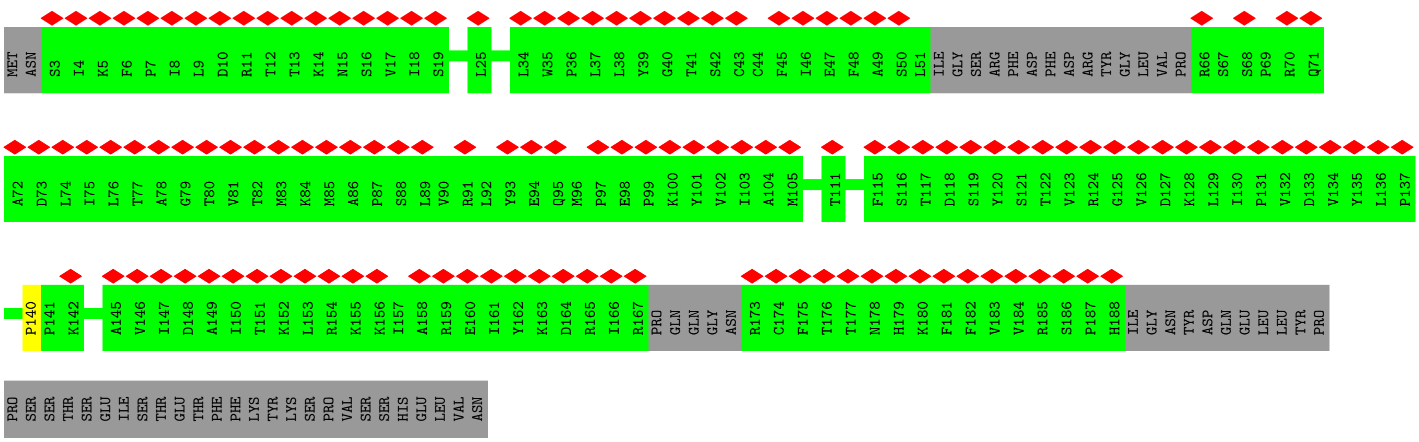
Chain J:





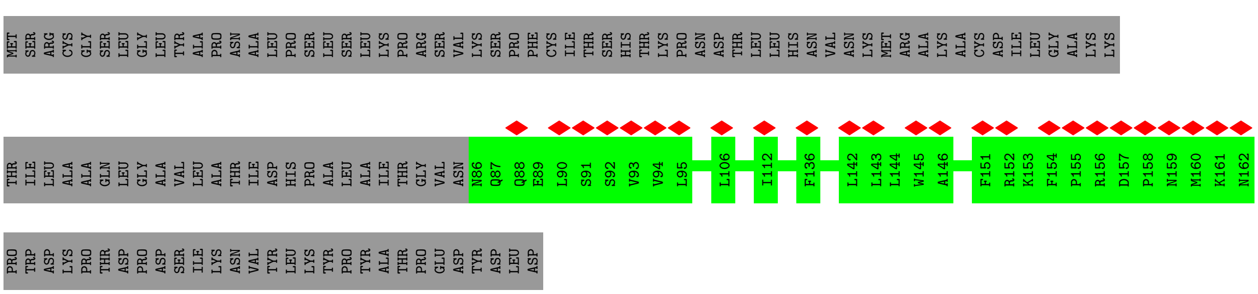
- Molecule 39: NAD(P)H-quinone oxidoreductase subunit K, chloroplastic

Chain K:

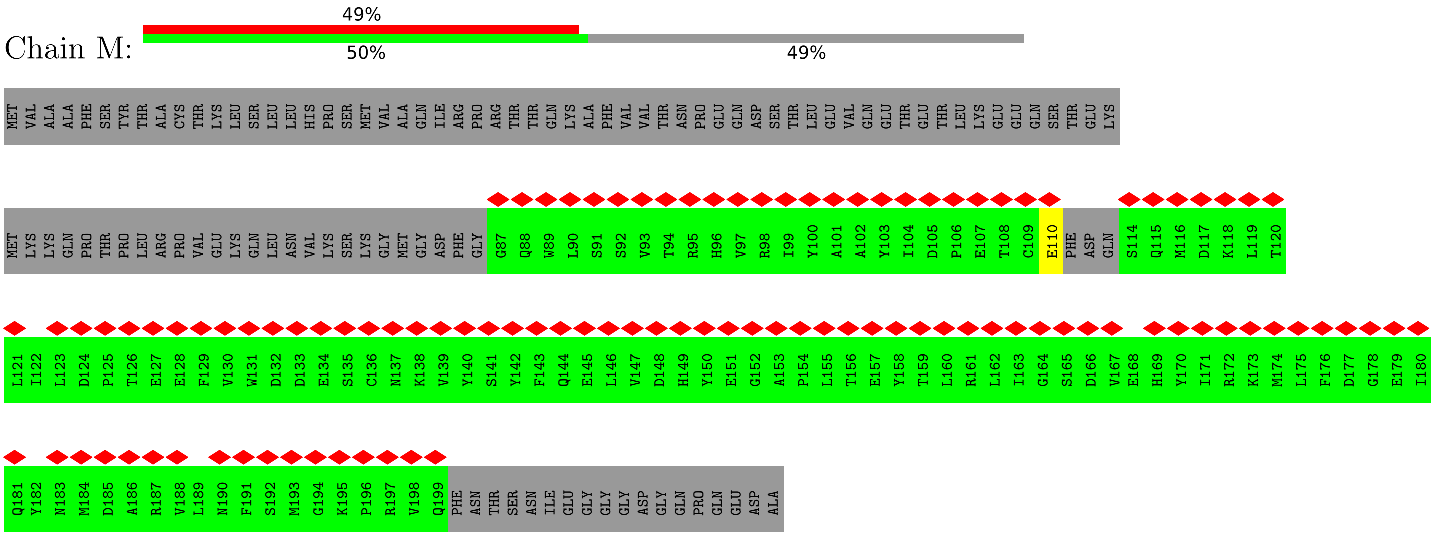


- Molecule 40: NAD(P)H-quinone oxidoreductase subunit L, chloroplastic

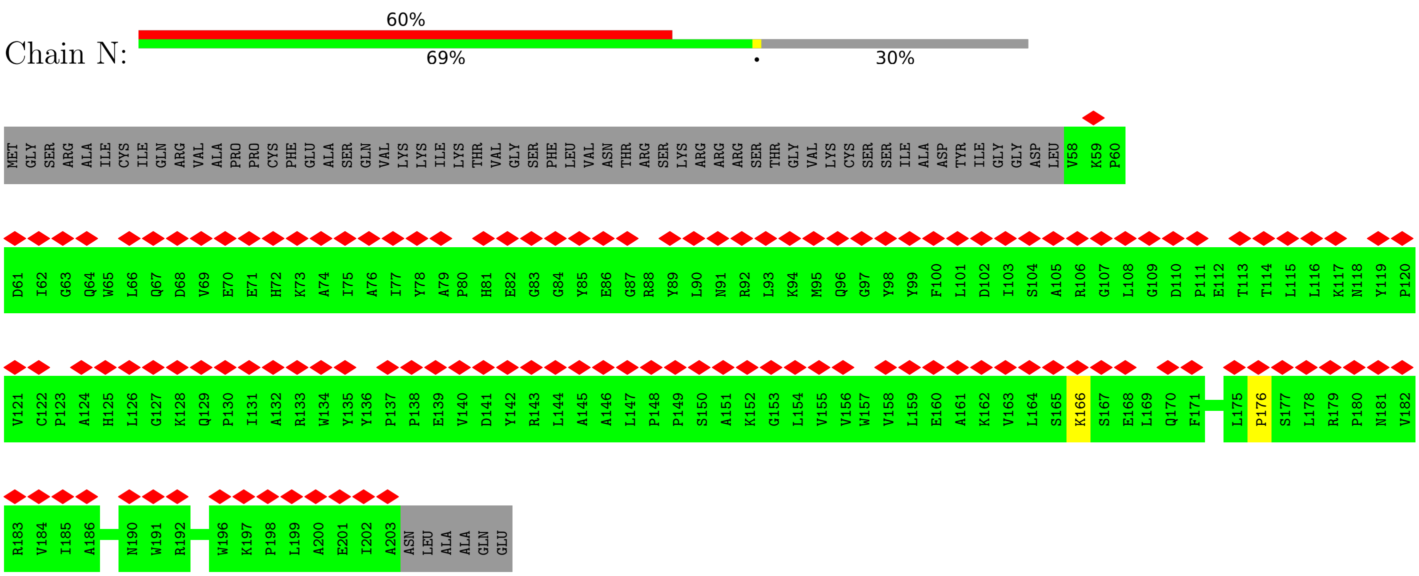
Chain L:



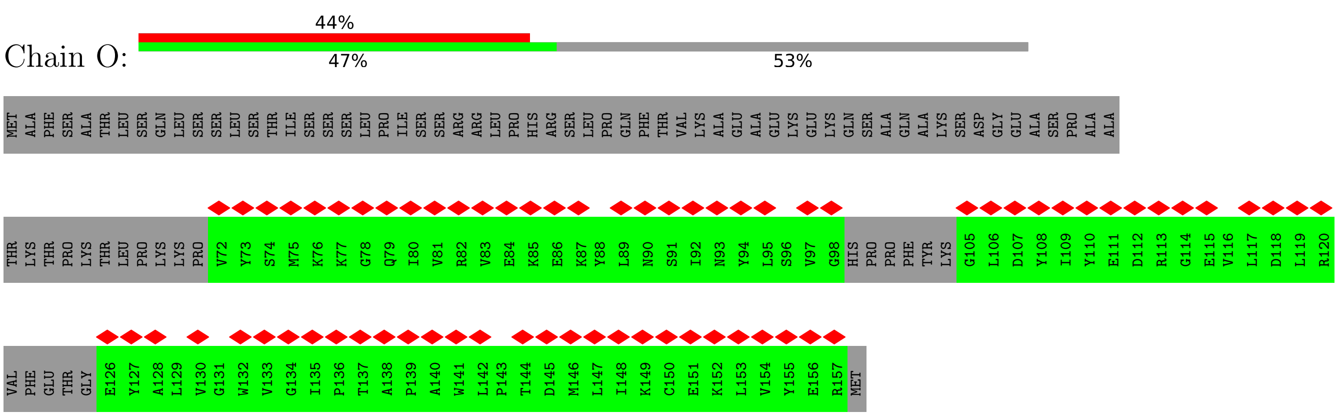
- Molecule 41: NAD(P)H-quinone oxidoreductase subunit M, chloroplastic



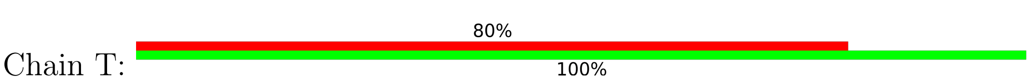
• Molecule 42: NAD(P)H-quinone oxidoreductase subunit N, chloroplastic



• Molecule 43: NdhO



• Molecule 44: NdhT




X1 X2 X3 X4 X5 X6 X7 X8 X9 X10 X11 X12 X13 X14 X15 X16 X17 X18 X19 X20 X21 X22 X23 X24 X25 X26 X27 X28 X29 X30 X31 X32 X33 X34 X35 X36 X37 X38 X39 X40 X41 X42 X43 X44 X45 X46 X47 X48 X49 X50 X51 X52 X53 X54 X55 X56 X57 X58 X59 X60
X61 X62 X63 X64 X65 X66 X67 X68 X69 X70 X71 X72 X73 X74 X75 X76 X77 X78 X79 X80 X81 X82 X83 X84 X85 X86 X87 X88 X89 X90 X91 X92 X93 X94 X95 X96 X97
X103
X110 X111 X112 X113 X114
X120 X121 X122

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	136022	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 $(e^-/\text{Å}^2)$	60.0	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.261	Depositor
Minimum map value	-0.089	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.02	Depositor
Map size (Å)	416.0, 416.0, 416.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.04, 1.04, 1.04	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: CHL, PQN, LUT, XAT, LMG, DGD, FES, CLA, LHG, SQD, SF4, BCR, LMU

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	AA	0.37	0/6037	0.53	0/8236
1	BA	0.36	0/6039	0.54	0/8239
2	AB	0.36	0/6073	0.53	0/8291
2	BB	0.37	0/6065	0.54	0/8281
3	AC	0.37	0/628	0.61	0/852
3	BC	0.38	0/628	0.60	0/852
4	AD	0.31	0/1140	0.58	0/1542
4	BD	0.34	0/1156	0.61	0/1563
5	AE	0.32	0/542	0.50	0/736
5	BE	0.30	0/559	0.50	0/760
6	AF	0.31	0/1243	0.53	0/1677
6	BF	0.31	0/1250	0.55	0/1687
7	AG	0.37	0/791	0.51	0/1072
7	BG	0.32	0/750	0.50	0/1016
8	AH	0.30	0/751	0.52	0/1018
8	BH	0.31	0/751	0.52	0/1018
9	AI	0.30	0/264	0.45	0/359
9	BI	0.37	0/264	0.56	0/359
10	AJ	0.37	0/348	0.58	0/474
10	BJ	0.33	0/354	0.67	0/482
11	AK	0.31	0/456	0.53	0/617
11	BK	0.35	0/449	0.60	0/607
12	AL	0.31	0/1208	0.52	0/1650
12	BL	0.33	0/1218	0.53	0/1663
13	A1	0.31	0/1562	0.51	0/2131
13	B1	0.29	0/1381	0.51	0/1879
14	A3	0.31	0/1726	0.51	0/2347
14	B3	0.31	0/1749	0.51	0/2378
15	A4	0.33	0/1611	0.52	0/2194
16	A6	0.32	0/1732	0.55	0/2363
17	B2	0.29	0/1663	0.53	0/2277
18	B5	0.30	0/1646	0.54	0/2239

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
19	A	0.31	0/2430	0.60	0/3312
20	B	0.37	0/3872	0.62	0/5263
21	C	0.38	0/802	0.56	0/1094
22	D	0.41	0/4058	0.63	0/5509
23	E	0.33	0/705	0.56	0/952
24	F	0.36	0/5478	0.58	0/7446
25	G	0.31	0/1307	0.62	0/1785
26	a	0.37	0/2708	0.62	0/3668
27	b	0.31	0/2417	0.57	0/3265
28	c	0.33	0/1030	0.62	0/1401
29	d	0.41	0/784	0.59	0/1057
30	e	0.34	0/1241	0.59	0/1685
31	f	0.30	0/1312	0.57	0/1777
32	g	0.28	0/986	0.51	0/1329
33	h	0.32	0/1193	0.59	0/1610
34	i	0.32	0/1124	0.56	0/1523
35	j	0.32	0/1357	0.57	0/1823
36	H	0.28	0/2877	0.55	0/3894
37	I	0.32	0/1256	0.57	0/1701
38	J	0.26	0/1142	0.50	0/1545
39	K	0.32	0/1222	0.57	0/1656
40	L	0.32	0/669	0.58	0/911
41	M	0.34	0/783	0.56	0/1062
42	N	0.41	0/921	0.53	0/1252
43	O	0.35	0/525	0.51	0/705
All	All	0.34	0/94233	0.56	0/128084

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)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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	AA	740/750 (99%)	686 (93%)	53 (7%)	1 (0%)	51	84
1	BA	740/750 (99%)	692 (94%)	48 (6%)	0	100	100
2	AB	732/734 (100%)	695 (95%)	37 (5%)	0	100	100
2	BB	731/734 (100%)	696 (95%)	35 (5%)	0	100	100
3	AC	78/81 (96%)	72 (92%)	6 (8%)	0	100	100
3	BC	78/81 (96%)	73 (94%)	5 (6%)	0	100	100
4	AD	139/204 (68%)	126 (91%)	13 (9%)	0	100	100
4	BD	141/204 (69%)	121 (86%)	18 (13%)	2 (1%)	11	46
5	AE	65/143 (46%)	58 (89%)	7 (11%)	0	100	100
5	BE	67/143 (47%)	61 (91%)	6 (9%)	0	100	100
6	AF	151/221 (68%)	144 (95%)	7 (5%)	0	100	100
6	BF	152/221 (69%)	149 (98%)	3 (2%)	0	100	100
7	AG	97/160 (61%)	90 (93%)	7 (7%)	0	100	100
7	BG	92/160 (58%)	84 (91%)	8 (9%)	0	100	100
8	AH	93/145 (64%)	89 (96%)	4 (4%)	0	100	100
8	BH	93/145 (64%)	87 (94%)	6 (6%)	0	100	100
9	AI	31/37 (84%)	30 (97%)	1 (3%)	0	100	100
9	BI	31/37 (84%)	29 (94%)	2 (6%)	0	100	100
10	AJ	40/44 (91%)	38 (95%)	2 (5%)	0	100	100
10	BJ	41/44 (93%)	38 (93%)	3 (7%)	0	100	100
11	AK	61/130 (47%)	57 (93%)	4 (7%)	0	100	100
11	BK	60/130 (46%)	53 (88%)	7 (12%)	0	100	100
12	AL	155/219 (71%)	145 (94%)	10 (6%)	0	100	100
12	BL	157/219 (72%)	149 (95%)	8 (5%)	0	100	100
13	A1	194/241 (80%)	178 (92%)	16 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	B1	168/241 (70%)	160 (95%)	8 (5%)	0	100	100
14	A3	217/273 (80%)	192 (88%)	25 (12%)	0	100	100
14	B3	219/273 (80%)	206 (94%)	13 (6%)	0	100	100
15	A4	195/251 (78%)	185 (95%)	10 (5%)	0	100	100
16	A6	210/270 (78%)	197 (94%)	13 (6%)	0	100	100
17	B2	206/257 (80%)	191 (93%)	15 (7%)	0	100	100
18	B5	204/256 (80%)	188 (92%)	15 (7%)	1 (0%)	29	67
19	A	297/360 (82%)	279 (94%)	18 (6%)	0	100	100
20	B	484/512 (94%)	443 (92%)	40 (8%)	1 (0%)	47	79
21	C	90/120 (75%)	87 (97%)	3 (3%)	0	100	100
22	D	495/506 (98%)	453 (92%)	42 (8%)	0	100	100
23	E	87/101 (86%)	79 (91%)	8 (9%)	0	100	100
24	F	669/746 (90%)	614 (92%)	55 (8%)	0	100	100
25	G	163/176 (93%)	151 (93%)	12 (7%)	0	100	100
26	a	339/461 (74%)	277 (82%)	61 (18%)	1 (0%)	41	75
27	b	301/348 (86%)	267 (89%)	34 (11%)	0	100	100
28	c	126/204 (62%)	109 (86%)	17 (14%)	0	100	100
29	d	91/161 (56%)	78 (86%)	13 (14%)	0	100	100
30	e	148/212 (70%)	122 (82%)	26 (18%)	0	100	100
31	f	151/238 (63%)	132 (87%)	18 (12%)	1 (1%)	22	60
32	g	113/190 (60%)	113 (100%)	0	0	100	100
33	h	143/220 (65%)	130 (91%)	13 (9%)	0	100	100
34	i	143/217 (66%)	125 (87%)	18 (13%)	0	100	100
35	j	171/255 (67%)	150 (88%)	21 (12%)	0	100	100
36	H	350/393 (89%)	315 (90%)	35 (10%)	0	100	100
37	I	156/172 (91%)	132 (85%)	22 (14%)	2 (1%)	12	48
38	J	153/158 (97%)	134 (88%)	19 (12%)	0	100	100
39	K	161/225 (72%)	137 (85%)	23 (14%)	1 (1%)	25	63
40	L	75/191 (39%)	67 (89%)	8 (11%)	0	100	100
41	M	106/217 (49%)	94 (89%)	12 (11%)	0	100	100
42	N	144/209 (69%)	128 (89%)	15 (10%)	1 (1%)	22	60

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	O	69/158 (44%)	62 (90%)	7 (10%)	0	100	100
All	All	11603/14548 (80%)	10637 (92%)	955 (8%)	11 (0%)	54	84

5 of 11 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	BD	164	ASP
39	K	140	PRO
26	a	230	ASN
42	N	166	LYS
18	B5	49	TRP

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	AA	600/610 (98%)	591 (98%)	9 (2%)	65	80
1	BA	601/610 (98%)	595 (99%)	6 (1%)	76	86
2	AB	598/600 (100%)	591 (99%)	7 (1%)	71	83
2	BB	597/600 (100%)	591 (99%)	6 (1%)	76	86
3	AC	70/71 (99%)	70 (100%)	0	100	100
3	BC	70/71 (99%)	70 (100%)	0	100	100
4	AD	120/170 (71%)	120 (100%)	0	100	100
4	BD	121/170 (71%)	118 (98%)	3 (2%)	47	69
5	AE	56/114 (49%)	56 (100%)	0	100	100
5	BE	58/114 (51%)	58 (100%)	0	100	100
6	AF	125/185 (68%)	125 (100%)	0	100	100
6	BF	126/185 (68%)	126 (100%)	0	100	100
7	AG	83/133 (62%)	80 (96%)	3 (4%)	35	61
7	BG	79/133 (59%)	76 (96%)	3 (4%)	33	59
8	AH	77/113 (68%)	76 (99%)	1 (1%)	69	82

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	BH	77/113 (68%)	76 (99%)	1 (1%)	69	82
9	AI	29/33 (88%)	29 (100%)	0	100	100
9	BI	29/33 (88%)	28 (97%)	1 (3%)	37	62
10	AJ	37/39 (95%)	37 (100%)	0	100	100
10	BJ	38/39 (97%)	38 (100%)	0	100	100
11	AK	47/95 (50%)	47 (100%)	0	100	100
11	BK	46/95 (48%)	46 (100%)	0	100	100
12	AL	119/174 (68%)	116 (98%)	3 (2%)	47	69
12	BL	120/174 (69%)	119 (99%)	1 (1%)	81	89
13	A1	151/190 (80%)	149 (99%)	2 (1%)	69	82
13	B1	138/190 (73%)	137 (99%)	1 (1%)	84	90
14	A3	168/211 (80%)	167 (99%)	1 (1%)	86	91
14	B3	170/211 (81%)	170 (100%)	0	100	100
15	A4	164/210 (78%)	161 (98%)	3 (2%)	59	77
16	A6	177/226 (78%)	175 (99%)	2 (1%)	73	84
17	B2	165/205 (80%)	165 (100%)	0	100	100
18	B5	166/205 (81%)	163 (98%)	3 (2%)	59	77
19	A	258/312 (83%)	258 (100%)	0	100	100
20	B	420/446 (94%)	420 (100%)	0	100	100
21	C	78/103 (76%)	77 (99%)	1 (1%)	69	82
22	D	430/439 (98%)	429 (100%)	1 (0%)	93	96
23	E	75/87 (86%)	75 (100%)	0	100	100
24	F	561/661 (85%)	559 (100%)	2 (0%)	91	94
25	G	145/154 (94%)	145 (100%)	0	100	100
26	a	288/397 (72%)	286 (99%)	2 (1%)	84	90
27	b	263/297 (89%)	262 (100%)	1 (0%)	91	94
28	c	112/177 (63%)	112 (100%)	0	100	100
29	d	81/143 (57%)	81 (100%)	0	100	100
30	e	125/178 (70%)	125 (100%)	0	100	100
31	f	134/207 (65%)	134 (100%)	0	100	100
32	g	104/172 (60%)	104 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	h	127/192 (66%)	127 (100%)	0	100	100
34	i	114/180 (63%)	114 (100%)	0	100	100
35	j	143/219 (65%)	142 (99%)	1 (1%)	84	90
36	H	291/342 (85%)	287 (99%)	4 (1%)	67	81
37	I	132/159 (83%)	129 (98%)	3 (2%)	50	71
38	J	87/140 (62%)	85 (98%)	2 (2%)	50	71
39	K	114/205 (56%)	114 (100%)	0	100	100
40	L	66/171 (39%)	66 (100%)	0	100	100
41	M	58/195 (30%)	57 (98%)	1 (2%)	60	78
42	N	49/174 (28%)	48 (98%)	1 (2%)	55	74
43	O	36/138 (26%)	36 (100%)	0	100	100
All	All	9513/12210 (78%)	9438 (99%)	75 (1%)	82	89

5 of 75 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
22	D	196	SER
38	J	33	PRO
24	F	545	ASN
36	H	329	ARG
13	A1	112	TRP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 70 such sidechains are listed below:

Mol	Chain	Res	Type
30	e	193	ASN
31	f	179	ASN
34	i	198	ASN
13	B1	208	GLN
11	BK	94	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)

423 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	$\#\|Z\| > 2$
45	CLA	A3	302	14	60,68,73	1.57	8 (13%)	70,107,113	1.22	9 (12%)
45	CLA	AK	203	-	46,54,73	1.78	9 (19%)	53,90,113	1.47	7 (13%)
45	CLA	BB	809	-	52,60,73	1.69	8 (15%)	60,97,113	1.33	7 (11%)
55	XAT	B1	317	-	39,47,47	0.93	2 (5%)	54,74,74	2.43	18 (33%)
45	CLA	A6	610	16	55,63,73	1.67	9 (16%)	64,101,113	1.33	10 (15%)
45	CLA	A6	613	16	64,72,73	1.53	8 (12%)	74,111,113	1.28	7 (9%)
45	CLA	B2	603	-	43,52,73	1.85	7 (16%)	49,88,113	1.58	8 (16%)
48	BCR	BJ	103	-	41,41,41	0.75	0	56,56,56	2.37	21 (37%)
45	CLA	BA	802	-	65,73,73	1.54	9 (13%)	76,113,113	1.38	6 (7%)
54	CHL	A4	306	-	46,54,74	2.32	17 (36%)	49,90,114	2.85	21 (42%)
45	CLA	AF	802	-	57,65,73	1.58	11 (19%)	66,103,113	1.43	9 (13%)
54	CHL	A6	606	-	42,50,74	2.35	15 (35%)	45,85,114	2.88	20 (44%)
45	CLA	BB	827	-	62,70,73	1.52	8 (12%)	72,109,113	1.27	8 (11%)
45	CLA	BB	816	-	64,72,73	1.51	9 (14%)	75,112,113	1.35	8 (10%)
45	CLA	BA	821	-	65,73,73	1.50	9 (13%)	76,113,113	1.39	10 (13%)
45	CLA	B1	304	13	61,69,73	1.52	7 (11%)	71,108,113	1.39	8 (11%)
45	CLA	AA	826	-	59,67,73	1.56	9 (15%)	68,105,113	1.28	8 (11%)
48	BCR	BL	306	-	41,41,41	0.88	1 (2%)	56,56,56	11.27	26 (46%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
45	CLA	AB	801	-	65,73,73	1.47	9 (13%)	76,113,113	1.59	14 (18%)
54	CHL	A4	304	-	40,49,74	2.45	16 (40%)	42,84,114	2.82	20 (47%)
45	CLA	A4	303	-	43,51,73	1.86	7 (16%)	54,87,113	1.59	9 (16%)
47	LHG	A1	320	45	48,48,48	0.93	2 (4%)	51,54,54	0.84	2 (3%)
47	LHG	A3	319	45	22,22,48	1.44	2 (9%)	25,28,54	1.27	2 (8%)
45	CLA	B3	302	14	55,63,73	1.61	7 (12%)	64,101,113	1.34	8 (12%)
45	CLA	A3	312	-	53,62,73	1.67	7 (13%)	61,100,113	1.39	8 (13%)
45	CLA	AA	830	-	65,73,73	1.52	9 (13%)	76,113,113	1.31	8 (10%)
45	CLA	BA	810	-	65,73,73	1.50	9 (13%)	76,113,113	1.22	7 (9%)
45	CLA	AB	840	-	65,73,73	1.54	9 (13%)	76,113,113	1.25	7 (9%)
45	CLA	AB	842	47	65,73,73	1.46	8 (12%)	76,113,113	1.37	10 (13%)
48	BCR	BB	803	-	41,41,41	0.85	0	56,56,56	1.99	19 (33%)
45	CLA	B2	611	17	44,52,73	1.85	7 (15%)	51,88,113	1.42	7 (13%)
54	CHL	B2	606	-	43,51,74	2.40	16 (37%)	45,86,114	2.78	17 (37%)
45	CLA	BK	202	-	45,53,73	1.81	6 (13%)	52,89,113	1.47	7 (13%)
45	CLA	B2	612	17	65,73,73	1.52	7 (10%)	76,113,113	1.29	8 (10%)
45	CLA	A1	305	-	55,63,73	1.63	7 (12%)	64,101,113	1.60	10 (15%)
45	CLA	BA	826	-	53,61,73	1.62	7 (13%)	61,98,113	1.40	10 (16%)
45	CLA	AB	807	2	65,73,73	1.45	10 (15%)	76,113,113	1.35	8 (10%)
49	SF4	BA	852	1,2	0,12,12	-	-	-		
54	CHL	B2	601	17	53,61,74	2.20	16 (30%)	57,98,114	2.66	25 (43%)
45	CLA	BA	819	-	65,73,73	1.48	9 (13%)	76,113,113	1.34	9 (11%)
45	CLA	BB	811	2	65,73,73	1.48	10 (15%)	76,113,113	1.37	9 (11%)
45	CLA	AL	304	-	60,68,73	1.57	9 (15%)	70,107,113	1.41	10 (14%)
45	CLA	AA	834	-	65,73,73	1.47	10 (15%)	76,113,113	1.48	14 (18%)
45	CLA	BA	825	-	65,73,73	1.47	7 (10%)	76,113,113	1.31	6 (7%)
45	CLA	BB	835	-	65,73,73	1.53	9 (13%)	76,113,113	1.14	5 (6%)
45	CLA	BB	810	-	65,73,73	1.50	8 (12%)	76,113,113	1.33	12 (15%)
45	CLA	BA	840	-	65,73,73	1.44	8 (12%)	76,113,113	1.33	8 (10%)
48	BCR	BJ	101	-	41,41,41	0.89	0	56,56,56	1.70	14 (25%)
45	CLA	AA	802	-	65,73,73	1.53	10 (15%)	76,113,113	1.42	6 (7%)
52	LUT	B1	316	-	42,43,43	1.60	8 (19%)	51,60,60	1.51	10 (19%)
50	LMU	BB	851	-	36,36,36	1.10	2 (5%)	47,47,47	0.89	0
45	CLA	AA	808	1	65,73,73	1.50	7 (10%)	76,113,113	1.34	9 (11%)
45	CLA	BA	833	-	65,73,73	1.51	7 (10%)	76,113,113	1.30	8 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
56	SQD	e	301	-	33,34,54	1.20	6 (18%)	42,45,65	1.77	10 (23%)
45	CLA	AF	803	-	42,50,73	1.88	8 (19%)	48,85,113	1.57	8 (16%)
45	CLA	AL	303	12	41,49,73	1.91	7 (17%)	47,84,113	1.46	8 (17%)
45	CLA	BA	814	-	45,53,73	1.81	9 (20%)	52,89,113	1.51	8 (15%)
45	CLA	AA	829	-	65,73,73	1.46	9 (13%)	76,113,113	1.49	11 (14%)
45	CLA	AB	834	-	65,73,73	1.49	9 (13%)	76,113,113	1.23	9 (11%)
45	CLA	B2	609	17	55,63,73	1.66	8 (14%)	64,101,113	1.34	10 (15%)
48	BCR	AJ	101	-	41,41,41	0.89	1 (2%)	56,56,56	1.98	16 (28%)
45	CLA	BB	819	-	59,67,73	1.57	9 (15%)	68,105,113	1.40	9 (13%)
45	CLA	AB	825	-	65,73,73	1.49	10 (15%)	76,113,113	1.34	9 (11%)
45	CLA	A6	601	15	46,54,73	1.73	8 (17%)	53,90,113	1.46	8 (15%)
45	CLA	AB	833	-	65,73,73	1.49	9 (13%)	76,113,113	1.18	7 (9%)
53	LMG	AG	202	-	38,38,55	1.14	3 (7%)	46,46,63	1.07	2 (4%)
48	BCR	BA	856	-	41,41,41	0.93	1 (2%)	56,56,56	2.15	17 (30%)
47	LHG	AA	844	-	48,48,48	0.93	2 (4%)	51,54,54	0.89	2 (3%)
45	CLA	AB	808	-	51,59,73	1.67	9 (17%)	58,95,113	1.45	7 (12%)
45	CLA	BA	830	-	65,73,73	1.53	9 (13%)	76,113,113	1.23	8 (10%)
48	BCR	BB	845	-	41,41,41	0.93	1 (2%)	56,56,56	2.19	18 (32%)
50	LMU	AB	853	-	36,36,36	1.13	2 (5%)	47,47,47	1.05	2 (4%)
45	CLA	BB	831	-	56,64,73	1.63	9 (16%)	65,102,113	1.38	6 (9%)
45	CLA	AA	833	-	65,73,73	1.51	7 (10%)	76,113,113	1.38	9 (11%)
45	CLA	BK	203	-	46,54,73	1.73	6 (13%)	53,90,113	1.54	6 (11%)
45	CLA	BA	844	47	41,49,73	1.90	5 (12%)	47,84,113	1.43	8 (17%)
48	BCR	AB	846	-	41,41,41	0.86	0	56,56,56	2.07	16 (28%)
45	CLA	B1	311	13	59,67,73	1.59	6 (10%)	69,106,113	1.22	8 (11%)
45	CLA	AA	841	-	65,73,73	1.50	9 (13%)	76,113,113	1.34	8 (10%)
45	CLA	B5	609	18	54,62,73	1.67	9 (16%)	62,99,113	1.26	8 (12%)
45	CLA	A3	303	14	55,63,73	1.67	9 (16%)	64,101,113	1.46	9 (14%)
47	LHG	AJ	104	-	39,39,48	1.06	2 (5%)	42,45,54	0.92	2 (4%)
49	SF4	I	201	37	0,12,12	-	-	-		
45	CLA	BF	301	-	55,63,73	1.58	7 (12%)	62,100,113	1.37	7 (11%)
45	CLA	B3	305	-	41,49,73	1.89	7 (17%)	51,84,113	1.73	11 (21%)
45	CLA	B2	608	17	45,53,73	1.80	7 (15%)	52,89,113	1.39	8 (15%)
56	SQD	BJ	104	-	46,47,54	1.28	5 (10%)	55,58,65	4.16	12 (21%)
45	CLA	A6	609	16	45,53,73	1.80	7 (15%)	52,89,113	1.42	7 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
45	CLA	BB	830	-	65,73,73	1.50	9 (13%)	76,113,113	1.26	8 (10%)
48	BCR	BF	304	-	41,41,41	0.87	1 (2%)	56,56,56	1.94	19 (33%)
45	CLA	AG	203	-	42,50,73	1.85	6 (14%)	48,85,113	1.44	7 (14%)
46	PQN	AA	843	-	34,34,34	3.42	10 (29%)	42,45,45	1.74	8 (19%)
45	CLA	B1	306	-	41,49,73	1.86	5 (12%)	47,84,113	1.45	7 (14%)
45	CLA	BA	832	-	56,64,73	1.59	8 (14%)	65,102,113	1.31	8 (12%)
54	CHL	B5	606	-	40,48,74	2.31	13 (32%)	50,83,114	2.83	21 (42%)
52	LUT	B3	315	-	42,43,43	0.97	1 (2%)	51,60,60	2.10	17 (33%)
45	CLA	A4	310	15	40,49,73	1.90	8 (20%)	45,84,113	1.47	7 (15%)
45	CLA	BB	818	-	55,63,73	1.61	8 (14%)	64,101,113	1.33	8 (12%)
45	CLA	BA	801	-	65,73,73	1.50	7 (10%)	76,113,113	1.20	6 (7%)
45	CLA	A3	304	-	41,50,73	1.94	7 (17%)	51,86,113	1.50	9 (17%)
45	CLA	AA	825	-	65,73,73	1.48	6 (9%)	76,113,113	1.33	6 (7%)
48	BCR	B5	616	-	41,41,41	0.79	0	56,56,56	2.31	23 (41%)
45	CLA	AA	812	-	54,62,73	1.61	9 (16%)	62,99,113	1.51	8 (12%)
45	CLA	AB	839	-	47,55,73	1.74	8 (17%)	54,91,113	1.56	7 (12%)
45	CLA	BA	818	-	56,64,73	1.64	8 (14%)	65,102,113	1.32	8 (12%)
45	CLA	AA	809	1	50,58,73	1.77	9 (18%)	58,95,113	1.48	11 (18%)
45	CLA	AB	841	-	65,73,73	1.54	9 (13%)	76,113,113	1.22	6 (7%)
45	CLA	B1	310	13	38,47,73	1.99	7 (18%)	47,82,113	1.54	10 (21%)
48	BCR	AF	805	-	41,41,41	0.81	0	56,56,56	1.86	14 (25%)
45	CLA	BL	302	12	45,53,73	1.85	8 (17%)	52,89,113	1.60	11 (21%)
47	LHG	A3	301	-	35,35,48	1.09	2 (5%)	38,41,54	1.01	2 (5%)
45	CLA	BA	813	-	65,73,73	1.46	7 (10%)	76,113,113	1.33	8 (10%)
45	CLA	BB	808	2	65,73,73	1.47	9 (13%)	76,113,113	1.33	7 (9%)
48	BCR	BA	849	-	41,41,41	0.84	0	56,56,56	2.01	18 (32%)
45	CLA	B5	603	-	44,52,73	1.87	7 (15%)	55,88,113	1.58	8 (14%)
48	BCR	BG	203	-	41,41,41	0.91	2 (4%)	56,56,56	6.99	26 (46%)
54	CHL	A4	314	15	40,49,74	2.26	13 (32%)	45,84,114	2.77	17 (37%)
45	CLA	B2	604	-	43,51,73	1.84	6 (13%)	48,86,113	1.43	7 (14%)
48	BCR	AK	204	-	41,41,41	1.02	3 (7%)	56,56,56	2.06	14 (25%)
45	CLA	A3	313	-	39,48,73	1.91	7 (17%)	44,83,113	1.46	8 (18%)
46	PQN	BA	843	-	34,34,34	3.47	12 (35%)	42,45,45	1.62	5 (11%)
52	LUT	A6	615	-	42,43,43	0.90	1 (2%)	51,60,60	1.59	12 (23%)
50	LMU	AL	301	-	35,35,36	1.23	2 (5%)	46,46,47	1.05	5 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
53	LMG	B5	617	-	33,33,55	1.18	2 (6%)	41,41,63	1.20	4 (9%)
54	CHL	A1	303	13	50,59,74	2.22	15 (30%)	53,96,114	2.68	24 (45%)
48	BCR	AI	101	-	41,41,41	0.92	1 (2%)	56,56,56	2.05	20 (35%)
45	CLA	BA	807	-	50,58,73	1.70	7 (14%)	58,95,113	1.34	7 (12%)
45	CLA	BB	806	-	41,49,73	1.80	7 (17%)	47,84,113	1.58	9 (19%)
54	CHL	B3	306	-	45,53,74	2.28	16 (35%)	52,89,114	2.69	20 (38%)
52	LUT	A1	317	-	42,43,43	0.94	1 (2%)	51,60,60	1.88	13 (25%)
45	CLA	B1	307	-	39,48,73	1.94	5 (12%)	45,82,113	1.55	7 (15%)
45	CLA	BB	801	-	65,73,73	1.47	9 (13%)	76,113,113	1.47	13 (17%)
48	BCR	AA	846	-	41,41,41	0.82	0	56,56,56	2.12	21 (37%)
45	CLA	BB	807	-	65,73,73	1.49	7 (10%)	76,113,113	1.33	10 (13%)
45	CLA	AA	811	-	65,73,73	1.49	7 (10%)	76,113,113	1.31	8 (10%)
45	CLA	AH	201	-	60,68,73	1.60	7 (11%)	70,107,113	1.36	10 (14%)
48	BCR	AI	102	-	41,41,41	0.86	0	56,56,56	2.54	18 (32%)
45	CLA	AA	824	-	53,62,73	1.68	8 (15%)	61,100,113	1.50	11 (18%)
47	LHG	B3	318	45	22,22,48	1.49	2 (9%)	25,28,54	1.38	2 (8%)
52	LUT	B2	615	-	42,43,43	0.81	0	51,60,60	1.98	15 (29%)
45	CLA	AA	814	-	45,53,73	1.81	9 (20%)	52,89,113	1.45	8 (15%)
52	LUT	A4	315	-	42,43,43	0.95	2 (4%)	51,60,60	1.84	15 (29%)
45	CLA	BA	803	-	65,73,73	1.41	7 (10%)	76,113,113	1.37	10 (13%)
47	LHG	A6	618	45	35,35,48	1.05	2 (5%)	38,41,54	0.97	2 (5%)
45	CLA	A1	310	13	40,48,73	1.92	7 (17%)	50,83,113	1.65	10 (20%)
49	SF4	BC	102	3	0,12,12	-	-	-		
45	CLA	AB	823	-	65,73,73	1.50	9 (13%)	76,113,113	1.31	9 (11%)
45	CLA	AB	836	-	42,50,73	1.86	7 (16%)	48,85,113	1.52	7 (14%)
45	CLA	AB	817	-	55,63,73	1.63	8 (14%)	64,101,113	1.34	7 (10%)
45	CLA	BB	802	-	65,73,73	1.55	9 (13%)	76,113,113	1.42	8 (10%)
48	BCR	BA	855	-	41,41,41	0.77	0	56,56,56	2.19	24 (42%)
45	CLA	BA	812	-	54,62,73	1.59	9 (16%)	62,99,113	1.46	8 (12%)
45	CLA	AA	822	-	42,50,73	1.86	6 (14%)	48,85,113	1.50	8 (16%)
45	CLA	BB	828	-	62,70,73	1.51	7 (11%)	72,109,113	1.48	11 (15%)
45	CLA	AA	842	-	65,73,73	1.48	8 (12%)	76,113,113	1.41	11 (14%)
45	CLA	AA	831	-	47,55,73	1.78	9 (19%)	54,91,113	1.43	7 (12%)
45	CLA	AB	816	-	43,51,73	1.80	7 (16%)	49,86,113	1.42	6 (12%)
48	BCR	B2	617	-	41,41,41	0.89	1 (2%)	56,56,56	2.47	23 (41%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
45	CLA	B1	315	-	37,46,73	2.00	7 (18%)	46,81,113	1.61	9 (19%)
48	BCR	A4	317	-	41,41,41	0.82	0	56,56,56	2.37	23 (41%)
45	CLA	AB	805	-	41,49,73	1.81	6 (14%)	47,84,113	1.55	8 (17%)
45	CLA	BA	828	-	65,73,73	1.45	7 (10%)	76,113,113	1.45	11 (14%)
48	BCR	BL	305	-	41,41,41	0.78	0	56,56,56	2.22	20 (35%)
55	XAT	A1	318	-	39,47,47	0.91	2 (5%)	54,74,74	2.42	24 (44%)
48	BCR	BB	849	-	41,41,41	0.90	1 (2%)	56,56,56	1.86	16 (28%)
54	CHL	B1	308	-	40,49,74	2.55	18 (45%)	41,84,114	2.79	17 (41%)
45	CLA	A3	310	47	36,45,73	1.97	6 (16%)	43,79,113	1.48	8 (18%)
49	SF4	BC	101	3	0,12,12	-	-	-		
50	LMU	AA	851	-	36,36,36	1.16	2 (5%)	47,47,47	1.04	2 (4%)
47	LHG	BA	846	45	26,26,48	1.06	2 (7%)	29,32,54	1.00	1 (3%)
45	CLA	B3	314	-	39,48,73	1.87	6 (15%)	44,83,113	1.46	7 (15%)
47	LHG	A1	302	-	35,35,48	1.10	2 (5%)	38,41,54	1.04	2 (5%)
47	LHG	B2	618	45	34,34,48	1.04	2 (5%)	37,40,54	0.96	2 (5%)
45	CLA	A1	311	13	59,67,73	1.57	7 (11%)	69,106,113	1.27	8 (11%)
48	BCR	A3	318	-	41,41,41	0.98	1 (2%)	56,56,56	2.77	20 (35%)
55	XAT	A6	616	-	39,47,47	0.98	2 (5%)	54,74,74	2.49	21 (38%)
50	LMU	BA	853	-	35,35,36	1.15	2 (5%)	46,46,47	0.93	0
45	CLA	BA	816	-	45,53,73	1.81	7 (15%)	52,89,113	1.45	8 (15%)
45	CLA	AK	201	11	37,43,73	2.45	10 (27%)	45,75,113	1.48	8 (17%)
48	BCR	BB	848	-	41,41,41	0.81	0	56,56,56	2.15	19 (33%)
45	CLA	AB	814	-	65,73,73	1.49	10 (15%)	76,113,113	1.30	7 (9%)
45	CLA	BB	826	-	65,73,73	1.51	10 (15%)	76,113,113	1.30	7 (9%)
47	LHG	A1	301	45	37,37,48	1.07	2 (5%)	40,43,54	0.97	3 (7%)
45	CLA	B3	309	47	39,48,73	1.93	5 (12%)	44,83,113	1.40	7 (15%)
45	CLA	BB	840	-	47,55,73	1.71	7 (14%)	54,91,113	1.43	8 (14%)
45	CLA	AA	836	1	45,53,73	1.85	7 (15%)	52,89,113	1.47	8 (15%)
57	FES	c	301	28	0,4,4	-	-	-		
48	BCR	AB	848	-	41,41,41	0.89	1 (2%)	56,56,56	1.97	18 (32%)
45	CLA	BL	303	-	60,68,73	1.58	8 (13%)	70,107,113	1.37	10 (14%)
54	CHL	A6	608	-	50,58,74	2.26	16 (32%)	58,95,114	2.64	21 (36%)
45	CLA	AA	832	-	56,64,73	1.60	6 (10%)	65,102,113	1.36	10 (15%)
45	CLA	AB	812	-	54,62,73	1.66	8 (14%)	67,100,113	1.52	12 (17%)
47	LHG	BF	305	-	44,44,48	0.97	2 (4%)	47,50,54	1.09	3 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
45	CLA	B5	602	18	60,68,73	1.62	9 (15%)	70,107,113	1.29	6 (8%)
45	CLA	B3	304	-	40,49,73	1.91	7 (17%)	45,84,113	1.44	7 (15%)
45	CLA	BB	804	-	65,73,73	1.49	9 (13%)	76,113,113	1.27	8 (10%)
45	CLA	BF	302	-	42,50,73	1.85	8 (19%)	48,85,113	1.57	8 (16%)
45	CLA	B1	314	-	60,68,73	1.60	7 (11%)	70,107,113	1.24	10 (14%)
45	CLA	AA	805	-	65,73,73	1.48	8 (12%)	76,113,113	1.40	12 (15%)
45	CLA	A4	313	-	50,58,73	1.72	8 (16%)	58,95,113	1.47	10 (17%)
45	CLA	A6	604	-	41,50,73	1.90	6 (14%)	46,85,113	1.60	7 (15%)
48	BCR	A6	617	-	41,41,41	0.99	2 (4%)	56,56,56	2.01	16 (28%)
45	CLA	AB	827	-	62,70,73	1.50	7 (11%)	72,109,113	1.50	9 (12%)
45	CLA	AB	815	-	65,73,73	1.46	8 (12%)	76,113,113	1.39	9 (11%)
49	SF4	AA	850	1,2	0,12,12	-	-	-		
45	CLA	B1	312	47	37,46,73	1.97	7 (18%)	46,81,113	1.60	9 (19%)
45	CLA	BA	822	-	42,50,73	1.83	6 (14%)	48,85,113	1.56	7 (14%)
48	BCR	BA	851	-	41,41,41	0.87	1 (2%)	56,56,56	1.99	20 (35%)
45	CLA	A4	312	-	45,53,73	1.81	7 (15%)	52,89,113	1.40	7 (13%)
45	CLA	BG	201	-	42,50,73	1.85	7 (16%)	48,85,113	1.28	7 (14%)
45	CLA	B5	613	-	45,53,73	1.80	7 (15%)	52,89,113	1.37	7 (13%)
45	CLA	B3	311	-	53,62,73	1.69	7 (13%)	61,100,113	1.25	6 (9%)
45	CLA	AA	816	-	45,53,73	1.82	9 (20%)	52,89,113	1.58	9 (17%)
45	CLA	BA	820	-	45,53,73	1.73	7 (15%)	52,89,113	1.50	6 (11%)
45	CLA	AB	835	-	60,68,73	1.55	8 (13%)	70,107,113	1.37	8 (11%)
47	LHG	B1	301	45	37,37,48	1.08	2 (5%)	40,43,54	1.01	3 (7%)
45	CLA	BA	834	-	65,73,73	1.49	9 (13%)	76,113,113	1.47	10 (13%)
45	CLA	AA	813	-	65,73,73	1.47	9 (13%)	76,113,113	1.38	8 (10%)
45	CLA	AA	821	-	65,73,73	1.49	7 (10%)	76,113,113	1.40	9 (11%)
49	SF4	AC	101	3	0,12,12	-	-	-		
47	LHG	BA	845	-	48,48,48	0.88	2 (4%)	51,54,54	0.97	3 (5%)
45	CLA	A3	314	-	37,44,73	1.97	8 (21%)	42,77,113	1.42	7 (16%)
54	CHL	A3	307	-	45,53,74	2.29	16 (35%)	52,89,114	2.69	21 (40%)
45	CLA	AG	204	7	45,53,73	1.84	7 (15%)	52,89,113	1.46	7 (13%)
50	LMU	BA	854	-	34,34,36	1.18	2 (5%)	45,45,47	0.91	2 (4%)
45	CLA	BA	829	-	65,73,73	1.49	9 (13%)	76,113,113	1.31	9 (11%)
45	CLA	AA	818	-	59,67,73	1.58	9 (15%)	68,105,113	1.33	8 (11%)
45	CLA	AK	202	-	45,53,73	1.82	6 (13%)	52,89,113	1.41	7 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
52	LUT	AF	806	-	42,43,43	1.03	3 (7%)	51,60,60	1.72	12 (23%)
45	CLA	AA	823	-	41,49,73	1.93	7 (17%)	47,84,113	1.46	8 (17%)
48	BCR	AB	844	-	41,41,41	0.86	0	56,56,56	2.28	23 (41%)
45	CLA	A3	308	14	45,53,73	1.80	8 (17%)	52,89,113	1.43	8 (15%)
45	CLA	BB	829	-	65,73,73	1.46	9 (13%)	76,113,113	1.32	7 (9%)
48	BCR	AL	302	-	41,41,41	0.78	0	56,56,56	2.22	22 (39%)
45	CLA	A1	307	-	39,48,73	1.89	9 (23%)	45,82,113	1.74	11 (24%)
50	LMU	AB	850	-	36,36,36	1.13	2 (5%)	47,47,47	1.08	4 (8%)
45	CLA	A3	315	-	39,48,73	1.86	6 (15%)	44,83,113	1.42	7 (15%)
45	CLA	BB	805	-	65,73,73	1.43	10 (15%)	76,113,113	1.56	12 (15%)
46	PQN	AB	843	-	34,34,34	3.39	11 (32%)	42,45,45	1.83	6 (14%)
45	CLA	A3	309	14	41,49,73	1.88	8 (19%)	47,84,113	1.49	10 (21%)
52	LUT	B5	614	-	42,43,43	0.83	1 (2%)	51,60,60	1.85	15 (29%)
45	CLA	AA	820	-	45,53,73	1.78	8 (17%)	52,89,113	1.46	7 (13%)
48	BCR	AG	205	-	41,41,41	0.93	0	56,56,56	2.00	18 (32%)
48	BCR	AL	306	-	41,41,41	0.94	1 (2%)	56,56,56	2.01	21 (37%)
48	BCR	BI	101	-	41,41,41	0.92	2 (4%)	56,56,56	2.15	21 (37%)
55	XAT	A4	316	-	39,47,47	0.95	2 (5%)	54,74,74	2.29	16 (29%)
45	CLA	AB	824	-	43,51,73	1.77	10 (23%)	49,86,113	1.57	8 (16%)
48	BCR	AB	847	-	41,41,41	0.87	0	56,56,56	2.02	14 (25%)
45	CLA	A1	309	-	43,52,73	1.87	6 (13%)	49,88,113	1.42	9 (18%)
45	CLA	AB	802	-	64,72,73	1.60	8 (12%)	79,112,113	1.34	9 (11%)
54	CHL	B2	605	-	42,50,74	2.37	16 (38%)	45,85,114	2.84	18 (40%)
45	CLA	BA	808	1	65,73,73	1.49	8 (12%)	76,113,113	1.23	8 (10%)
48	BCR	A1	319	-	41,41,41	0.90	1 (2%)	56,56,56	3.13	20 (35%)
54	CHL	A4	305	-	41,49,74	2.25	13 (31%)	51,84,114	2.78	20 (39%)
54	CHL	B2	614	17	43,51,74	2.35	15 (34%)	45,86,114	2.87	19 (42%)
45	CLA	A4	307	15	45,53,73	1.85	7 (15%)	52,89,113	1.36	7 (13%)
45	CLA	BJ	102	10	42,50,73	1.84	5 (11%)	48,85,113	1.48	7 (14%)
45	CLA	AA	827	-	65,73,73	1.48	7 (10%)	76,113,113	1.34	8 (10%)
51	DGD	BB	850	-	67,67,67	0.81	2 (2%)	81,81,81	0.98	4 (4%)
55	XAT	B2	616	-	39,47,47	1.01	1 (2%)	54,74,74	2.30	20 (37%)
45	CLA	BA	831	-	47,55,73	1.79	8 (17%)	54,91,113	1.49	10 (18%)
45	CLA	AB	830	-	56,64,73	1.62	9 (16%)	65,102,113	1.39	7 (10%)
45	CLA	B3	310	14	43,51,73	1.82	5 (11%)	49,86,113	1.44	8 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
48	BCR	BA	848	-	41,41,41	0.80	0	56,56,56	2.03	17 (30%)
45	CLA	AB	822	-	47,55,73	1.77	7 (14%)	54,91,113	1.35	7 (12%)
48	BCR	AB	845	-	41,41,41	0.85	1 (2%)	56,56,56	1.93	17 (30%)
45	CLA	BB	843	47	65,73,73	1.52	9 (13%)	76,113,113	1.27	7 (9%)
47	LHG	B1	318	45	41,41,48	1.01	2 (4%)	44,47,54	0.95	2 (4%)
45	CLA	AA	819	-	65,73,73	1.48	10 (15%)	76,113,113	1.43	9 (11%)
45	CLA	BB	820	-	60,68,73	1.51	7 (11%)	70,107,113	1.62	11 (15%)
45	CLA	AA	835	-	43,52,73	1.85	8 (18%)	49,88,113	1.47	7 (14%)
45	CLA	AB	838	-	65,73,73	1.46	7 (10%)	76,113,113	1.34	8 (10%)
49	SF4	I	202	37	0,12,12	-	-	-		
45	CLA	AL	305	-	42,50,73	1.85	8 (19%)	48,85,113	1.57	8 (16%)
45	CLA	BA	805	-	65,73,73	1.48	8 (12%)	76,113,113	1.36	9 (11%)
45	CLA	B5	601	18	46,54,73	1.75	8 (17%)	53,90,113	1.37	7 (13%)
45	CLA	A6	614	-	43,51,73	1.89	6 (13%)	49,86,113	1.47	7 (14%)
47	LHG	a	501	-	28,28,48	0.89	1 (3%)	31,34,54	1.24	2 (6%)
48	BCR	AF	801	-	41,41,41	0.86	1 (2%)	56,56,56	1.56	10 (17%)
54	CHL	A1	308	13	40,49,74	2.48	18 (45%)	41,84,114	2.86	17 (41%)
45	CLA	AA	804	-	52,60,73	1.65	8 (15%)	60,97,113	1.54	7 (11%)
45	CLA	BB	825	-	45,53,73	1.79	8 (17%)	52,89,113	1.37	6 (11%)
45	CLA	BA	809	1	50,58,73	1.73	8 (16%)	58,95,113	1.44	10 (17%)
45	CLA	AB	811	-	65,73,73	1.46	8 (12%)	76,113,113	1.48	10 (13%)
53	LMG	A1	321	-	44,44,55	1.03	2 (4%)	52,52,63	1.19	5 (9%)
54	CHL	A6	602	16	51,60,74	2.24	18 (35%)	54,97,114	2.65	26 (48%)
45	CLA	BB	812	-	65,73,73	1.47	7 (10%)	76,113,113	1.37	10 (13%)
45	CLA	BF	303	-	41,49,73	1.86	6 (14%)	47,84,113	1.47	8 (17%)
45	CLA	AA	839	-	52,60,73	1.66	8 (15%)	60,97,113	1.37	7 (11%)
45	CLA	A6	611	47	38,45,73	2.88	9 (23%)	41,76,113	1.68	9 (21%)
45	CLA	AB	832	-	65,73,73	1.50	10 (15%)	76,113,113	1.30	9 (11%)
45	CLA	B2	602	17	65,73,73	1.51	9 (13%)	76,113,113	1.26	10 (13%)
45	CLA	A6	612	16	44,52,73	1.84	7 (15%)	51,88,113	1.37	6 (11%)
45	CLA	AA	806	1	65,73,73	1.49	9 (13%)	76,113,113	1.38	8 (10%)
45	CLA	BA	838	-	55,62,73	1.69	8 (14%)	59,99,113	1.45	11 (18%)
48	BCR	AA	848	-	41,41,41	0.77	1 (2%)	56,56,56	1.97	16 (28%)
48	BCR	BB	846	-	41,41,41	0.85	1 (2%)	56,56,56	2.14	19 (33%)
45	CLA	BB	823	-	45,54,73	1.75	6 (13%)	51,90,113	1.31	8 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
45	CLA	B3	308	14	41,49,73	1.85	8 (19%)	47,84,113	1.45	7 (14%)
45	CLA	AA	810	-	65,72,73	1.55	9 (13%)	71,111,113	1.29	7 (9%)
45	CLA	AB	818	-	59,67,73	1.58	8 (13%)	68,105,113	1.34	10 (14%)
45	CLA	A3	305	-	40,49,73	1.90	7 (17%)	45,84,113	1.45	7 (15%)
45	CLA	BA	836	1	45,53,73	1.81	6 (13%)	52,89,113	1.53	8 (15%)
45	CLA	A1	313	13	45,53,73	1.78	7 (15%)	52,89,113	1.57	7 (13%)
45	CLA	A4	308	15	54,62,73	1.67	8 (14%)	62,99,113	1.29	9 (14%)
45	CLA	AJ	102	10	42,50,73	1.84	5 (11%)	48,85,113	1.48	7 (14%)
45	CLA	BA	817	-	60,68,73	1.52	6 (10%)	70,107,113	1.37	11 (15%)
49	SF4	K	301	39	0,12,12	-	-	-		
45	CLA	B3	312	-	39,48,73	1.93	6 (15%)	44,83,113	1.40	7 (15%)
45	CLA	AG	201	-	43,52,73	1.87	7 (16%)	49,88,113	1.48	7 (14%)
45	CLA	A4	309	-	42,50,73	1.79	5 (11%)	48,85,113	1.53	7 (14%)
45	CLA	A1	312	47	37,46,73	2.01	7 (18%)	46,81,113	1.43	10 (21%)
47	LHG	B5	618	45	29,29,48	1.17	2 (6%)	32,35,54	1.20	3 (9%)
45	CLA	BB	833	-	43,51,73	1.80	7 (16%)	49,86,113	1.65	8 (16%)
45	CLA	A3	311	14	43,51,73	1.82	5 (11%)	49,86,113	1.48	7 (14%)
45	CLA	BA	823	-	41,49,73	1.86	6 (14%)	47,84,113	1.49	9 (19%)
45	CLA	A6	605	-	43,51,73	1.83	8 (18%)	48,86,113	1.40	7 (14%)
45	CLA	B3	303	-	41,50,73	1.94	7 (17%)	51,86,113	1.55	9 (17%)
54	CHL	B1	303	13	49,58,74	2.23	17 (34%)	52,95,114	2.63	22 (42%)
53	LMG	A4	318	-	39,39,55	1.00	2 (5%)	47,47,63	1.40	7 (14%)
45	CLA	BA	837	-	51,59,73	1.63	8 (15%)	59,96,113	1.47	7 (11%)
45	CLA	BB	837	-	42,50,73	1.86	5 (11%)	48,85,113	1.45	7 (14%)
55	XAT	B5	615	-	39,47,47	0.99	2 (5%)	54,74,74	2.41	18 (33%)
45	CLA	AB	810	2	65,73,73	1.48	11 (16%)	76,113,113	1.38	6 (7%)
45	CLA	A3	306	14	41,49,73	1.90	7 (17%)	51,84,113	1.67	9 (17%)
45	CLA	B2	613	-	43,51,73	1.81	6 (13%)	49,86,113	1.44	8 (16%)
45	CLA	AA	838	-	55,63,73	1.61	9 (16%)	64,101,113	1.29	10 (15%)
45	CLA	B1	313	13	45,53,73	1.78	7 (15%)	52,89,113	1.51	6 (11%)
48	BCR	AA	845	-	41,41,41	1.03	2 (4%)	56,56,56	1.91	13 (23%)
45	CLA	BB	817	-	41,50,73	1.80	7 (17%)	46,85,113	1.48	7 (15%)
45	CLA	AB	821	-	50,58,73	1.70	8 (16%)	58,95,113	1.49	8 (13%)
45	CLA	BB	842	-	65,73,73	1.50	9 (13%)	76,113,113	1.30	7 (9%)
54	CHL	A6	607	-	43,51,74	2.34	16 (37%)	45,86,114	2.83	19 (42%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
45	CLA	AB	826	-	62,70,73	1.52	9 (14%)	72,109,113	1.32	7 (9%)
48	BCR	AJ	103	-	41,41,41	0.74	0	56,56,56	2.38	22 (39%)
55	XAT	B3	316	-	39,47,47	0.97	1 (2%)	54,74,74	2.48	21 (38%)
45	CLA	A1	306	-	49,57,73	1.71	7 (14%)	55,93,113	1.45	8 (14%)
45	CLA	AB	828	-	65,73,73	1.46	8 (12%)	76,113,113	1.43	8 (10%)
45	CLA	BA	811	-	65,73,73	1.50	8 (12%)	76,113,113	1.28	8 (10%)
48	BCR	BK	204	-	41,41,41	0.88	1 (2%)	56,56,56	2.14	21 (37%)
52	LUT	A3	316	-	42,43,43	0.84	0	51,60,60	1.78	14 (27%)
45	CLA	BA	842	-	65,73,73	1.50	7 (10%)	76,113,113	1.31	7 (9%)
45	CLA	B5	608	18	44,52,73	1.86	9 (20%)	51,88,113	1.44	7 (13%)
54	CHL	B2	607	-	46,54,74	2.33	17 (36%)	49,90,114	2.82	20 (40%)
45	CLA	A1	315	-	37,46,73	1.99	7 (18%)	46,81,113	1.69	11 (23%)
45	CLA	AA	801	-	65,73,73	1.50	7 (10%)	76,113,113	1.27	8 (10%)
45	CLA	BB	824	-	65,73,73	1.48	8 (12%)	76,113,113	1.34	10 (13%)
45	CLA	B1	309	-	43,52,73	1.85	7 (16%)	49,88,113	1.44	7 (14%)
45	CLA	B5	611	18	40,49,73	1.87	8 (20%)	45,84,113	1.47	7 (15%)
45	CLA	BG	202	7	45,53,73	1.81	6 (13%)	52,89,113	1.56	7 (13%)
45	CLA	B3	313	-	37,44,73	1.95	9 (24%)	42,77,113	1.35	7 (16%)
48	BCR	BA	850	-	41,41,41	0.78	0	56,56,56	2.09	11 (19%)
49	SF4	AC	102	3	0,12,12	-	-	-		
50	LMU	AB	852	-	36,36,36	1.14	2 (5%)	47,47,47	0.94	1 (2%)
45	CLA	BL	304	-	43,51,73	1.78	6 (13%)	49,86,113	1.47	7 (14%)
45	CLA	BB	839	-	65,73,73	1.49	8 (12%)	76,113,113	1.28	6 (7%)
45	CLA	A6	603	16	65,73,73	1.51	9 (13%)	76,113,113	1.29	9 (11%)
45	CLA	AB	804	-	65,73,73	1.45	10 (15%)	76,113,113	1.69	15 (19%)
54	CHL	B5	607	-	45,53,74	2.37	17 (37%)	49,89,114	2.81	19 (38%)
48	BCR	AA	847	-	41,41,41	1.00	2 (4%)	56,56,56	2.28	24 (42%)
45	CLA	BB	822	-	41,49,73	1.83	8 (19%)	47,84,113	1.56	7 (14%)
45	CLA	BA	839	-	51,59,73	1.69	8 (15%)	59,96,113	1.41	8 (13%)
45	CLA	B1	305	-	54,62,73	1.64	8 (14%)	62,99,113	1.53	10 (16%)
45	CLA	B5	610	47	42,50,73	1.86	7 (16%)	48,85,113	1.47	7 (14%)
45	CLA	BB	814	-	43,51,73	1.78	6 (13%)	49,86,113	1.48	8 (16%)
48	BCR	AB	849	-	41,41,41	0.83	0	56,56,56	2.41	24 (42%)
45	CLA	B5	612	18	57,65,73	1.62	8 (14%)	66,103,113	1.28	7 (10%)
46	PQN	BB	844	-	34,34,34	3.42	10 (29%)	42,45,45	1.66	8 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
45	CLA	AA	807	-	50,58,73	1.69	8 (16%)	58,95,113	1.43	6 (10%)
45	CLA	AA	815	-	40,49,73	1.79	5 (12%)	44,83,113	1.62	8 (18%)
45	CLA	BA	804	-	52,60,73	1.66	7 (13%)	60,97,113	1.56	11 (18%)
45	CLA	AB	813	-	43,51,73	1.78	6 (13%)	49,86,113	1.44	8 (16%)
45	CLA	BA	815	-	42,50,73	1.79	8 (19%)	48,85,113	1.51	6 (12%)
45	CLA	AB	829	-	65,73,73	1.50	9 (13%)	76,113,113	1.33	9 (11%)
45	CLA	BB	832	-	43,51,73	1.83	8 (18%)	49,86,113	1.30	6 (12%)
45	CLA	B5	604	-	43,51,73	1.91	7 (16%)	54,87,113	1.53	10 (18%)
45	CLA	AA	828	-	65,73,73	1.45	7 (10%)	76,113,113	1.56	9 (11%)
45	CLA	A1	304	13	60,68,73	1.52	9 (15%)	69,106,113	1.33	8 (11%)
45	CLA	AB	831	-	43,51,73	1.84	9 (20%)	49,86,113	1.33	8 (16%)
48	BCR	BB	847	-	41,41,41	0.87	1 (2%)	56,56,56	1.93	11 (19%)
45	CLA	AA	840	-	65,73,73	1.51	8 (12%)	76,113,113	1.31	10 (13%)
45	CLA	BB	836	-	60,68,73	1.56	8 (13%)	70,107,113	1.38	7 (10%)
45	CLA	BB	838	-	50,58,73	1.67	7 (14%)	58,95,113	1.50	9 (15%)
48	BCR	B3	317	-	41,41,41	0.84	0	56,56,56	3.61	28 (50%)
45	CLA	AA	803	-	65,73,73	1.47	10 (15%)	76,113,113	1.36	11 (14%)
45	CLA	AB	806	-	65,73,73	1.47	6 (9%)	76,113,113	1.36	9 (11%)
45	CLA	AB	809	-	65,73,73	1.52	8 (12%)	76,113,113	1.36	10 (13%)
45	CLA	BA	835	-	45,53,73	1.81	7 (15%)	52,89,113	1.43	6 (11%)
45	CLA	A4	302	15	44,52,73	1.85	8 (18%)	55,88,113	1.61	9 (16%)
54	CHL	B5	605	-	40,49,74	2.42	17 (42%)	42,84,114	2.80	18 (42%)
45	CLA	A4	311	-	55,64,73	1.64	7 (12%)	63,102,113	1.31	7 (11%)
45	CLA	BB	834	-	65,73,73	1.51	10 (15%)	76,113,113	1.31	8 (10%)
51	DGD	AB	851	-	67,67,67	0.80	2 (2%)	81,81,81	0.99	4 (4%)
45	CLA	BA	824	-	55,63,73	1.63	9 (16%)	64,101,113	1.39	8 (12%)
48	BCR	BA	847	-	41,41,41	0.99	1 (2%)	56,56,56	1.63	11 (19%)
45	CLA	BK	201	11	37,44,73	2.00	7 (18%)	46,77,113	1.73	9 (19%)
48	BCR	BL	301	-	41,41,41	0.87	1 (2%)	56,56,56	2.36	14 (25%)
45	CLA	AB	837	-	50,58,73	1.69	9 (18%)	58,95,113	1.51	8 (13%)
45	CLA	B3	307	14	45,53,73	1.79	6 (13%)	52,89,113	1.50	8 (15%)
45	CLA	BB	815	-	65,73,73	1.47	9 (13%)	76,113,113	1.49	11 (14%)
45	CLA	AA	837	-	51,59,73	1.62	7 (13%)	59,96,113	1.59	9 (15%)
45	CLA	B2	610	47	38,45,73	2.83	10 (26%)	41,76,113	1.61	9 (21%)
45	CLA	AB	819	-	60,68,73	1.53	9 (15%)	70,107,113	1.64	12 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
45	CLA	AB	803	-	65,73,73	1.49	8 (12%)	76,113,113	1.23	7 (9%)
45	CLA	B3	301	14	60,68,73	1.58	9 (15%)	70,107,113	1.22	8 (11%)
45	CLA	BB	813	-	54,62,73	1.66	8 (14%)	67,100,113	1.50	11 (16%)
45	CLA	AF	804	-	41,49,73	1.87	7 (17%)	47,84,113	1.59	8 (17%)
45	CLA	A1	314	-	63,72,73	1.52	8 (12%)	73,112,113	1.30	9 (12%)
45	CLA	A1	316	13	43,51,73	1.89	7 (16%)	54,87,113	1.63	9 (16%)
47	LHG	F	801	-	36,36,48	0.73	1 (2%)	39,42,54	1.22	3 (7%)
45	CLA	BA	806	1	65,73,73	1.50	8 (12%)	76,113,113	1.33	7 (9%)
45	CLA	AA	817	-	60,68,73	1.55	6 (10%)	70,107,113	1.36	9 (12%)
45	CLA	BH	201	-	60,68,73	1.60	7 (11%)	70,107,113	1.29	8 (11%)
45	CLA	BB	821	-	55,63,73	1.64	8 (14%)	64,101,113	1.14	5 (7%)
45	CLA	A4	301	15	60,68,73	1.55	9 (15%)	70,107,113	1.33	10 (14%)
48	BCR	AA	852	-	41,41,41	0.94	2 (4%)	56,56,56	2.19	17 (30%)
47	LHG	B1	302	-	35,35,48	1.09	2 (5%)	38,41,54	0.99	2 (5%)
45	CLA	AB	820	-	55,63,73	1.70	8 (14%)	64,101,113	1.28	6 (9%)
45	CLA	BA	827	-	65,73,73	1.47	6 (9%)	76,113,113	1.23	7 (9%)
45	CLA	BA	841	-	65,73,73	1.47	8 (12%)	76,113,113	1.55	11 (14%)
55	XAT	A3	317	-	39,47,47	0.97	1 (2%)	54,74,74	2.31	19 (35%)
45	CLA	BB	841	-	65,73,73	1.48	9 (13%)	76,113,113	1.30	7 (9%)
48	BCR	AA	849	-	41,41,41	0.91	2 (4%)	56,56,56	2.12	20 (35%)

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
45	CLA	A3	302	14	1/1/14/20	6/31/109/115	-
45	CLA	AK	203	-	1/1/11/20	7/15/93/115	-
45	CLA	BB	809	-	-	5/22/100/115	-
55	XAT	B1	317	-	-	0/31/93/93	0/4/4/4
45	CLA	A6	610	16	1/1/13/20	4/25/103/115	-
45	CLA	A6	613	16	1/1/14/20	7/35/113/115	-
45	CLA	B2	603	-	1/1/11/20	4/11/89/115	-
48	BCR	BJ	103	-	-	5/29/63/63	0/2/2/2
45	CLA	BA	802	-	1/1/15/20	4/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	CHL	A4	306	-	3/3/16/26	2/15/113/137	-
45	CLA	AF	802	-	1/1/13/20	10/28/106/115	-
54	CHL	A6	606	-	3/3/15/26	2/10/108/137	-
45	CLA	BB	827	-	-	8/34/112/115	-
45	CLA	BB	816	-	1/1/15/20	15/35/113/115	-
45	CLA	BA	821	-	-	12/37/115/115	-
45	CLA	B1	304	13	1/1/14/20	7/33/111/115	-
45	CLA	AA	826	-	1/1/13/20	11/30/108/115	-
48	BCR	BL	306	-	-	15/29/63/63	0/2/2/2
45	CLA	AB	801	-	1/1/15/20	17/37/115/115	-
54	CHL	A4	304	-	3/3/15/26	1/8/106/137	-
45	CLA	A4	303	-	1/1/11/20	4/11/87/115	-
47	LHG	A1	320	45	-	16/53/53/53	-
47	LHG	A3	319	45	-	14/26/26/53	-
45	CLA	B3	302	14	1/1/13/20	6/25/103/115	-
45	CLA	A3	312	-	1/1/13/20	11/23/101/115	-
45	CLA	AA	830	-	1/1/15/20	14/37/115/115	-
45	CLA	BA	810	-	1/1/15/20	12/37/115/115	-
45	CLA	AB	840	-	1/1/15/20	7/37/115/115	-
45	CLA	AB	842	47	1/1/15/20	18/37/115/115	-
48	BCR	BB	803	-	-	4/29/63/63	0/2/2/2
45	CLA	B2	611	17	1/1/11/20	7/11/89/115	-
54	CHL	B2	606	-	3/3/15/26	2/12/110/137	-
45	CLA	BK	202	-	1/1/11/20	6/13/91/115	-
45	CLA	B2	612	17	1/1/15/20	13/37/115/115	-
45	CLA	A1	305	-	1/1/13/20	7/25/103/115	-
45	CLA	BA	826	-	-	6/23/101/115	-
45	CLA	AB	807	2	1/1/15/20	11/37/115/115	-
49	SF4	BA	852	1,2	-	-	0/6/5/5
54	CHL	B2	601	17	3/3/17/26	9/24/122/137	-
45	CLA	BA	819	-	1/1/15/20	13/37/115/115	-
45	CLA	BB	811	2	1/1/15/20	15/37/115/115	-
45	CLA	AL	304	-	-	9/31/109/115	-
45	CLA	AA	834	-	-	15/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
45	CLA	BA	825	-	1/1/15/20	15/37/115/115	-
45	CLA	BB	835	-	1/1/15/20	16/37/115/115	-
45	CLA	BB	810	-	1/1/15/20	15/37/115/115	-
45	CLA	BA	840	-	1/1/15/20	13/37/115/115	-
48	BCR	BJ	101	-	-	0/29/63/63	0/2/2/2
45	CLA	AA	802	-	1/1/15/20	8/37/115/115	-
52	LUT	B1	316	-	-	14/29/67/67	0/2/2/2
50	LMU	BB	851	-	-	10/21/61/61	0/2/2/2
45	CLA	AA	808	1	1/1/15/20	10/37/115/115	-
45	CLA	BA	833	-	1/1/15/20	15/37/115/115	-
56	SQD	e	301	-	-	10/29/49/69	0/1/1/1
45	CLA	AF	803	-	1/1/10/20	2/10/88/115	-
45	CLA	AL	303	12	1/1/10/20	5/8/86/115	-
45	CLA	BA	814	-	1/1/11/20	6/13/91/115	-
45	CLA	AA	829	-	1/1/15/20	18/37/115/115	-
45	CLA	AB	834	-	1/1/15/20	16/37/115/115	-
45	CLA	B2	609	17	1/1/13/20	6/25/103/115	-
48	BCR	AJ	101	-	-	1/29/63/63	0/2/2/2
45	CLA	BB	819	-	1/1/13/20	12/30/108/115	-
45	CLA	AB	825	-	1/1/15/20	14/37/115/115	-
45	CLA	A6	601	15	1/1/11/20	2/15/93/115	-
45	CLA	AB	833	-	1/1/15/20	10/37/115/115	-
53	LMG	AG	202	-	-	5/33/53/70	0/1/1/1
48	BCR	BA	856	-	-	5/29/63/63	0/2/2/2
47	LHG	AA	844	-	-	18/53/53/53	-
45	CLA	AB	808	-	-	5/20/98/115	-
45	CLA	BA	830	-	1/1/15/20	13/37/115/115	-
48	BCR	BB	845	-	-	4/29/63/63	0/2/2/2
50	LMU	AB	853	-	-	13/21/61/61	0/2/2/2
45	CLA	BB	831	-	1/1/13/20	8/27/105/115	-
45	CLA	AA	833	-	1/1/15/20	19/37/115/115	-
45	CLA	BK	203	-	1/1/11/20	5/15/93/115	-
45	CLA	BA	844	47	1/1/10/20	4/8/86/115	-
48	BCR	AB	846	-	-	6/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
45	CLA	B1	311	13	1/1/14/20	3/29/107/115	-
45	CLA	AA	841	-	-	10/37/115/115	-
45	CLA	B5	609	18	1/1/12/20	3/24/102/115	-
45	CLA	A3	303	14	1/1/13/20	8/25/103/115	-
47	LHG	AJ	104	-	-	16/44/44/53	-
49	SF4	I	201	37	-	-	0/6/5/5
45	CLA	BF	301	-	1/1/12/20	8/24/102/115	-
45	CLA	B3	305	-	1/1/10/20	2/10/86/115	-
45	CLA	B2	608	17	1/1/11/20	3/13/91/115	-
56	SQD	BJ	104	-	-	21/42/62/69	0/1/1/1
45	CLA	A6	609	16	1/1/11/20	3/13/91/115	-
45	CLA	BB	830	-	1/1/15/20	11/37/115/115	-
48	BCR	BF	304	-	-	7/29/63/63	0/2/2/2
46	PQN	AA	843	-	-	6/23/43/43	0/2/2/2
45	CLA	AG	203	-	1/1/10/20	3/10/88/115	-
45	CLA	B1	306	-	1/1/10/20	3/8/86/115	-
45	CLA	BA	832	-	-	7/27/105/115	-
54	CHL	B5	606	-	3/3/15/26	2/8/104/137	-
52	LUT	B3	315	-	-	4/29/67/67	0/2/2/2
45	CLA	A4	310	15	1/1/10/20	5/8/86/115	-
45	CLA	BB	818	-	1/1/13/20	8/25/103/115	-
45	CLA	BA	801	-	1/1/15/20	9/37/115/115	-
45	CLA	A3	304	-	1/1/11/20	0/9/85/115	-
45	CLA	AA	825	-	1/1/15/20	10/37/115/115	-
48	BCR	B5	616	-	-	2/29/63/63	0/2/2/2
45	CLA	AA	812	-	1/1/12/20	9/24/102/115	-
45	CLA	AB	839	-	1/1/11/20	3/16/94/115	-
45	CLA	BA	818	-	-	6/27/105/115	-
45	CLA	AA	809	1	1/1/12/20	5/19/97/115	-
45	CLA	AB	841	-	1/1/15/20	7/37/115/115	-
45	CLA	B1	310	13	1/1/10/20	3/6/82/115	-
48	BCR	AF	805	-	-	6/29/63/63	0/2/2/2
45	CLA	BL	302	12	-	4/13/91/115	-
47	LHG	A3	301	-	-	11/40/40/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
45	CLA	BA	813	-	1/1/15/20	17/37/115/115	-
45	CLA	BB	808	2	1/1/15/20	10/37/115/115	-
48	BCR	BA	849	-	-	4/29/63/63	0/2/2/2
45	CLA	B5	603	-	1/1/11/20	4/13/89/115	-
48	BCR	BG	203	-	-	6/29/63/63	0/2/2/2
54	CHL	A4	314	15	3/3/15/26	0/10/106/137	-
45	CLA	B2	604	-	1/1/10/20	4/9/88/115	-
48	BCR	AK	204	-	-	6/29/63/63	0/2/2/2
45	CLA	A3	313	-	-	1/6/84/115	-
46	PQN	BA	843	-	-	8/23/43/43	0/2/2/2
52	LUT	A6	615	-	-	0/29/67/67	0/2/2/2
50	LMU	AL	301	-	-	11/20/60/61	0/2/2/2
53	LMG	B5	617	-	-	14/28/48/70	0/1/1/1
54	CHL	A1	303	13	3/3/17/26	4/21/119/137	-
48	BCR	AI	101	-	-	7/29/63/63	0/2/2/2
45	CLA	BA	807	-	1/1/12/20	4/19/97/115	-
45	CLA	BB	806	-	1/1/10/20	2/8/86/115	-
54	CHL	B3	306	-	3/3/16/26	5/13/111/137	-
52	LUT	A1	317	-	-	0/29/67/67	0/2/2/2
45	CLA	B1	307	-	1/1/9/20	4/8/82/115	-
45	CLA	BB	801	-	1/1/15/20	17/37/115/115	-
48	BCR	AA	846	-	-	6/29/63/63	0/2/2/2
45	CLA	BB	807	-	1/1/15/20	13/37/115/115	-
45	CLA	AA	811	-	1/1/15/20	11/37/115/115	-
45	CLA	AH	201	-	1/1/14/20	10/31/109/115	-
48	BCR	AI	102	-	-	3/29/63/63	0/2/2/2
45	CLA	AA	824	-	1/1/13/20	7/23/101/115	-
47	LHG	B3	318	45	-	11/26/26/53	-
52	LUT	B2	615	-	-	0/29/67/67	0/2/2/2
45	CLA	AA	814	-	1/1/11/20	5/13/91/115	-
52	LUT	A4	315	-	-	1/29/67/67	0/2/2/2
45	CLA	BA	803	-	1/1/15/20	18/37/115/115	-
47	LHG	A6	618	45	-	17/40/40/53	-
45	CLA	A1	310	13	1/1/10/20	2/8/84/115	-
49	SF4	BC	102	3	-	-	0/6/5/5

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
45	CLA	AB	823	-	-	19/37/115/115	-
45	CLA	AB	836	-	-	2/10/88/115	-
45	CLA	AB	817	-	1/1/13/20	8/25/103/115	-
45	CLA	BB	802	-	1/1/15/20	16/37/115/115	-
48	BCR	BA	855	-	-	4/29/63/63	0/2/2/2
45	CLA	BA	812	-	1/1/12/20	5/24/102/115	-
45	CLA	AA	822	-	1/1/10/20	3/10/88/115	-
45	CLA	BB	828	-	1/1/14/20	9/34/112/115	-
45	CLA	AA	842	-	1/1/15/20	18/37/115/115	-
45	CLA	AA	831	-	1/1/11/20	7/16/94/115	-
45	CLA	AB	816	-	1/1/10/20	4/11/89/115	-
48	BCR	B2	617	-	-	0/29/63/63	0/2/2/2
45	CLA	B1	315	-	1/1/10/20	0/4/80/115	-
48	BCR	A4	317	-	-	2/29/63/63	0/2/2/2
45	CLA	AB	805	-	1/1/10/20	2/8/86/115	-
45	CLA	BA	828	-	1/1/15/20	14/37/115/115	-
48	BCR	BL	305	-	-	2/29/63/63	0/2/2/2
55	XAT	A1	318	-	-	0/31/93/93	0/4/4/4
48	BCR	BB	849	-	-	2/29/63/63	0/2/2/2
54	CHL	B1	308	-	3/3/15/26	0/8/106/137	-
45	CLA	A3	310	47	1/1/9/20	0/0/78/115	-
50	LMU	AA	851	-	-	10/21/61/61	0/2/2/2
49	SF4	BC	101	3	-	-	0/6/5/5
47	LHG	BA	846	45	-	7/30/30/53	-
45	CLA	B3	314	-	1/1/10/20	0/6/84/115	-
47	LHG	A1	302	-	-	15/40/40/53	-
47	LHG	B2	618	45	-	22/39/39/53	-
45	CLA	A1	311	13	1/1/14/20	3/29/107/115	-
48	BCR	A3	318	-	-	4/29/63/63	0/2/2/2
55	XAT	A6	616	-	-	0/31/93/93	0/4/4/4
50	LMU	BA	853	-	-	9/20/60/61	0/2/2/2
45	CLA	BA	816	-	1/1/11/20	2/13/91/115	-
45	CLA	AK	201	11	1/1/8/20	0/2/74/115	-
48	BCR	BB	848	-	-	2/29/63/63	0/2/2/2
45	CLA	AB	814	-	1/1/15/20	14/37/115/115	-
45	CLA	BB	826	-	1/1/15/20	10/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
47	LHG	A1	301	45	-	11/42/42/53	-
45	CLA	B3	309	47	1/1/10/20	0/6/84/115	-
45	CLA	BB	840	-	-	4/16/94/115	-
45	CLA	AA	836	1	-	7/13/91/115	-
57	FES	c	301	28	-	-	0/1/1/1
48	BCR	AB	848	-	-	2/29/63/63	0/2/2/2
45	CLA	BL	303	-	-	7/31/109/115	-
54	CHL	A6	608	-	3/3/17/26	8/19/117/137	-
45	CLA	AA	832	-	1/1/13/20	7/27/105/115	-
45	CLA	AB	812	-	1/1/13/20	8/25/101/115	-
47	LHG	BF	305	-	-	18/49/49/53	-
45	CLA	B5	602	18	-	9/31/109/115	-
45	CLA	B3	304	-	1/1/10/20	4/8/86/115	-
45	CLA	BB	804	-	1/1/15/20	15/37/115/115	-
45	CLA	BF	302	-	1/1/10/20	3/10/88/115	-
45	CLA	B1	314	-	1/1/14/20	9/31/109/115	-
45	CLA	AA	805	-	1/1/15/20	17/37/115/115	-
45	CLA	A4	313	-	1/1/12/20	9/19/97/115	-
45	CLA	A6	604	-	1/1/10/20	2/9/87/115	-
48	BCR	A6	617	-	-	2/29/63/63	0/2/2/2
45	CLA	AB	827	-	1/1/14/20	14/34/112/115	-
45	CLA	AB	815	-	1/1/15/20	17/37/115/115	-
49	SF4	AA	850	1,2	-	-	0/6/5/5
45	CLA	B1	312	47	1/1/10/20	0/4/80/115	-
45	CLA	BA	822	-	1/1/10/20	8/10/88/115	-
48	BCR	BA	851	-	-	8/29/63/63	0/2/2/2
45	CLA	A4	312	-	1/1/11/20	4/13/91/115	-
45	CLA	BG	201	-	1/1/10/20	7/10/88/115	-
45	CLA	B5	613	-	1/1/11/20	5/13/91/115	-
45	CLA	B3	311	-	1/1/13/20	7/23/101/115	-
45	CLA	AA	816	-	1/1/11/20	6/13/91/115	-
45	CLA	BA	820	-	1/1/11/20	4/13/91/115	-
45	CLA	AB	835	-	-	7/31/109/115	-
47	LHG	B1	301	45	-	7/42/42/53	-
45	CLA	BA	834	-	-	11/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
45	CLA	AA	813	-	1/1/15/20	17/37/115/115	-
45	CLA	AA	821	-	1/1/15/20	15/37/115/115	-
49	SF4	AC	101	3	-	-	0/6/5/5
47	LHG	BA	845	-	-	29/53/53/53	-
45	CLA	A3	314	-	1/1/8/20	0/0/74/115	-
54	CHL	A3	307	-	3/3/16/26	4/13/111/137	-
45	CLA	AG	204	7	1/1/11/20	4/13/91/115	-
50	LMU	BA	854	-	-	8/19/59/61	0/2/2/2
45	CLA	BA	829	-	1/1/15/20	11/37/115/115	-
45	CLA	AA	818	-	-	7/30/108/115	-
45	CLA	AK	202	-	1/1/11/20	5/13/91/115	-
52	LUT	AF	806	-	-	0/29/67/67	0/2/2/2
45	CLA	AA	823	-	1/1/10/20	4/8/86/115	-
48	BCR	AB	844	-	-	5/29/63/63	0/2/2/2
45	CLA	A3	308	14	1/1/11/20	5/13/91/115	-
45	CLA	BB	829	-	1/1/15/20	17/37/115/115	-
48	BCR	AL	302	-	-	5/29/63/63	0/2/2/2
45	CLA	A1	307	-	1/1/9/20	4/8/82/115	-
50	LMU	AB	850	-	-	9/21/61/61	0/2/2/2
45	CLA	A3	315	-	1/1/10/20	0/6/84/115	-
45	CLA	BB	805	-	1/1/15/20	14/37/115/115	-
46	PQN	AB	843	-	-	8/23/43/43	0/2/2/2
45	CLA	A3	309	14	1/1/10/20	3/8/86/115	-
52	LUT	B5	614	-	-	1/29/67/67	0/2/2/2
45	CLA	AA	820	-	1/1/11/20	3/13/91/115	-
48	BCR	AG	205	-	-	2/29/63/63	0/2/2/2
48	BCR	AL	306	-	-	5/29/63/63	0/2/2/2
48	BCR	BI	101	-	-	6/29/63/63	0/2/2/2
55	XAT	A4	316	-	-	0/31/93/93	0/4/4/4
45	CLA	AB	824	-	1/1/10/20	4/11/89/115	-
48	BCR	AB	847	-	-	0/29/63/63	0/2/2/2
45	CLA	A1	309	-	1/1/11/20	5/11/89/115	-
45	CLA	AB	802	-	1/1/15/20	16/37/113/115	-
54	CHL	B2	605	-	3/3/15/26	3/10/108/137	-
45	CLA	BA	808	1	1/1/15/20	10/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
48	BCR	A1	319	-	-	4/29/63/63	0/2/2/2
54	CHL	A4	305	-	3/3/15/26	0/10/106/137	-
54	CHL	B2	614	17	3/3/15/26	0/12/110/137	-
45	CLA	A4	307	15	1/1/11/20	1/13/91/115	-
45	CLA	BJ	102	10	1/1/10/20	4/10/88/115	-
45	CLA	AA	827	-	1/1/15/20	18/37/115/115	-
51	DGD	BB	850	-	-	13/55/95/95	0/2/2/2
55	XAT	B2	616	-	-	0/31/93/93	0/4/4/4
45	CLA	BA	831	-	1/1/11/20	7/16/94/115	-
45	CLA	AB	830	-	1/1/13/20	10/27/105/115	-
45	CLA	B3	310	14	1/1/10/20	2/11/89/115	-
48	BCR	BA	848	-	-	4/29/63/63	0/2/2/2
45	CLA	AB	822	-	1/1/11/20	5/16/94/115	-
48	BCR	AB	845	-	-	6/29/63/63	0/2/2/2
45	CLA	BB	843	47	1/1/15/20	11/37/115/115	-
47	LHG	B1	318	45	-	12/46/46/53	-
45	CLA	AA	819	-	1/1/15/20	14/37/115/115	-
45	CLA	BB	820	-	1/1/14/20	12/31/109/115	-
45	CLA	AA	835	-	1/1/11/20	0/11/89/115	-
45	CLA	AB	838	-	-	7/37/115/115	-
49	SF4	I	202	37	-	-	0/6/5/5
45	CLA	AL	305	-	1/1/10/20	5/10/88/115	-
45	CLA	BA	805	-	1/1/15/20	22/37/115/115	-
45	CLA	B5	601	18	1/1/11/20	8/15/93/115	-
45	CLA	A6	614	-	1/1/10/20	2/11/89/115	-
47	LHG	a	501	-	-	17/33/33/53	-
54	CHL	A1	308	13	3/3/15/26	2/8/106/137	-
48	BCR	AF	801	-	-	2/29/63/63	0/2/2/2
45	CLA	AA	804	-	-	7/22/100/115	-
45	CLA	BB	825	-	1/1/11/20	6/13/91/115	-
45	CLA	BA	809	1	-	9/19/97/115	-
45	CLA	AB	811	-	1/1/15/20	15/37/115/115	-
53	LMG	A1	321	-	-	17/39/59/70	0/1/1/1
54	CHL	A6	602	16	3/3/17/26	6/22/120/137	-
45	CLA	BB	812	-	1/1/15/20	13/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
45	CLA	BF	303	-	1/1/10/20	2/8/86/115	-
45	CLA	AA	839	-	-	6/22/100/115	-
45	CLA	A6	611	47	1/1/7/20	6/10/70/115	-
45	CLA	AB	832	-	-	7/37/115/115	-
45	CLA	B2	602	17	1/1/15/20	9/37/115/115	-
45	CLA	A6	612	16	1/1/11/20	6/11/89/115	-
45	CLA	AA	806	1	1/1/15/20	13/37/115/115	-
45	CLA	BA	838	-	1/1/12/20	11/25/99/115	-
48	BCR	AA	848	-	-	4/29/63/63	0/2/2/2
48	BCR	BB	846	-	-	6/29/63/63	0/2/2/2
45	CLA	BB	823	-	1/1/11/20	4/14/92/115	-
45	CLA	B3	308	14	1/1/10/20	3/8/86/115	-
45	CLA	AA	810	-	1/1/14/20	10/37/111/115	-
45	CLA	AB	818	-	1/1/13/20	10/30/108/115	-
45	CLA	A3	305	-	1/1/10/20	4/8/86/115	-
45	CLA	BA	836	1	-	6/13/91/115	-
45	CLA	A1	313	13	1/1/11/20	4/13/91/115	-
45	CLA	A4	308	15	1/1/12/20	4/24/102/115	-
45	CLA	AJ	102	10	1/1/10/20	3/10/88/115	-
45	CLA	BA	817	-	-	9/31/109/115	-
49	SF4	K	301	39	-	-	0/6/5/5
45	CLA	B3	312	-	1/1/10/20	0/6/84/115	-
45	CLA	AG	201	-	1/1/11/20	3/11/89/115	-
45	CLA	A4	309	-	1/1/10/20	3/10/88/115	-
45	CLA	A1	312	47	1/1/10/20	0/4/80/115	-
47	LHG	B5	618	45	-	13/34/34/53	-
45	CLA	BB	833	-	-	4/11/89/115	-
45	CLA	A3	311	14	1/1/10/20	0/11/89/115	-
45	CLA	BA	823	-	1/1/10/20	4/8/86/115	-
45	CLA	A6	605	-	1/1/10/20	1/9/88/115	-
45	CLA	B3	303	-	1/1/11/20	2/9/85/115	-
54	CHL	B1	303	13	3/3/17/26	3/19/117/137	-
53	LMG	A4	318	-	-	15/34/54/70	0/1/1/1
45	CLA	BA	837	-	1/1/12/20	3/21/99/115	-
45	CLA	BB	837	-	1/1/10/20	4/10/88/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	XAT	B5	615	-	-	0/31/93/93	0/4/4/4
45	CLA	AB	810	2	1/1/15/20	16/37/115/115	-
45	CLA	A3	306	14	1/1/10/20	0/10/86/115	-
45	CLA	B2	613	-	1/1/10/20	1/11/89/115	-
45	CLA	AA	838	-	-	6/25/103/115	-
45	CLA	B1	313	13	1/1/11/20	5/13/91/115	-
48	BCR	AA	845	-	-	2/29/63/63	0/2/2/2
45	CLA	BB	817	-	1/1/10/20	4/9/87/115	-
45	CLA	AB	821	-	1/1/12/20	7/19/97/115	-
45	CLA	BB	842	-	1/1/15/20	9/37/115/115	-
54	CHL	A6	607	-	3/3/15/26	2/12/110/137	-
45	CLA	AB	826	-	1/1/14/20	6/34/112/115	-
48	BCR	AJ	103	-	-	5/29/63/63	0/2/2/2
55	XAT	B3	316	-	-	0/31/93/93	0/4/4/4
45	CLA	A1	306	-	1/1/11/20	9/18/96/115	-
45	CLA	AB	828	-	1/1/15/20	13/37/115/115	-
45	CLA	BA	811	-	1/1/15/20	14/37/115/115	-
48	BCR	BK	204	-	-	1/29/63/63	0/2/2/2
52	LUT	A3	316	-	-	0/29/67/67	0/2/2/2
45	CLA	BA	842	-	1/1/15/20	13/37/115/115	-
45	CLA	B5	608	18	1/1/11/20	4/11/89/115	-
54	CHL	B2	607	-	3/3/16/26	4/15/113/137	-
45	CLA	A1	315	-	1/1/10/20	0/4/80/115	-
45	CLA	AA	801	-	1/1/15/20	13/37/115/115	-
45	CLA	BB	824	-	-	18/37/115/115	-
45	CLA	B1	309	-	-	2/11/89/115	-
45	CLA	B5	611	18	1/1/10/20	4/8/86/115	-
45	CLA	BG	202	7	1/1/11/20	6/13/91/115	-
45	CLA	B3	313	-	1/1/8/20	0/0/74/115	-
48	BCR	BA	850	-	-	3/29/63/63	0/2/2/2
49	SF4	AC	102	3	-	-	0/6/5/5
50	LMU	AB	852	-	-	9/21/61/61	0/2/2/2
45	CLA	BL	304	-	1/1/10/20	5/11/89/115	-
45	CLA	BB	839	-	-	8/37/115/115	-
45	CLA	A6	603	16	1/1/15/20	9/37/115/115	-
45	CLA	AB	804	-	1/1/15/20	16/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	CHL	B5	607	-	3/3/16/26	5/13/111/137	-
48	BCR	AA	847	-	-	13/29/63/63	0/2/2/2
45	CLA	BB	822	-	1/1/10/20	2/8/86/115	-
45	CLA	BA	839	-	-	6/21/99/115	-
45	CLA	B1	305	-	1/1/12/20	6/23/101/115	-
45	CLA	B5	610	47	-	4/10/88/115	-
45	CLA	BB	814	-	1/1/10/20	1/11/89/115	-
48	BCR	AB	849	-	-	5/29/63/63	0/2/2/2
45	CLA	B5	612	18	1/1/13/20	8/28/106/115	-
46	PQN	BB	844	-	-	9/23/43/43	0/2/2/2
45	CLA	AA	807	-	1/1/12/20	4/19/97/115	-
45	CLA	AA	815	-	-	3/10/88/115	-
45	CLA	BA	804	-	-	5/22/100/115	-
45	CLA	AB	813	-	1/1/10/20	3/11/89/115	-
45	CLA	BA	815	-	-	4/10/88/115	-
45	CLA	AB	829	-	1/1/15/20	15/37/115/115	-
45	CLA	BB	832	-	1/1/10/20	4/11/89/115	-
45	CLA	B5	604	-	1/1/11/20	3/11/87/115	-
45	CLA	AA	828	-	1/1/15/20	15/37/115/115	-
45	CLA	A1	304	13	1/1/13/20	11/31/109/115	-
45	CLA	AB	831	-	1/1/10/20	3/11/89/115	-
48	BCR	BB	847	-	-	6/29/63/63	0/2/2/2
45	CLA	AA	840	-	1/1/15/20	14/37/115/115	-
45	CLA	BB	836	-	-	11/31/109/115	-
45	CLA	BB	838	-	1/1/12/20	5/19/97/115	-
48	BCR	B3	317	-	-	6/29/63/63	0/2/2/2
45	CLA	AA	803	-	1/1/15/20	15/37/115/115	-
45	CLA	AB	806	-	1/1/15/20	15/37/115/115	-
45	CLA	AB	809	-	1/1/15/20	16/37/115/115	-
45	CLA	BA	835	-	1/1/11/20	6/13/91/115	-
45	CLA	A4	302	15	1/1/11/20	5/13/89/115	-
54	CHL	B5	605	-	3/3/15/26	2/8/106/137	-
45	CLA	A4	311	-	1/1/13/20	7/26/104/115	-
45	CLA	BB	834	-	-	9/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
51	DGD	AB	851	-	-	21/55/95/95	0/2/2/2
45	CLA	BA	824	-	1/1/13/20	8/25/103/115	-
48	BCR	BA	847	-	-	5/29/63/63	0/2/2/2
45	CLA	BK	201	11	1/1/8/20	0/2/74/115	-
48	BCR	BL	301	-	-	6/29/63/63	0/2/2/2
45	CLA	AB	837	-	1/1/12/20	7/19/97/115	-
45	CLA	B3	307	14	1/1/11/20	3/13/91/115	-
45	CLA	BB	815	-	1/1/15/20	20/37/115/115	-
45	CLA	AA	837	-	1/1/12/20	6/21/99/115	-
45	CLA	B2	610	47	1/1/7/20	7/10/70/115	-
45	CLA	AB	819	-	1/1/14/20	14/31/109/115	-
45	CLA	AB	803	-	1/1/15/20	17/37/115/115	-
45	CLA	B3	301	14	1/1/14/20	5/31/109/115	-
45	CLA	BB	813	-	1/1/13/20	4/25/101/115	-
45	CLA	AF	804	-	1/1/10/20	2/8/86/115	-
45	CLA	A1	314	-	1/1/15/20	12/35/113/115	-
45	CLA	A1	316	13	1/1/11/20	9/11/87/115	-
47	LHG	F	801	-	-	21/41/41/53	-
45	CLA	BA	806	1	1/1/15/20	18/37/115/115	-
45	CLA	AA	817	-	1/1/14/20	6/31/109/115	-
45	CLA	BH	201	-	1/1/14/20	11/31/109/115	-
45	CLA	BB	821	-	1/1/13/20	6/25/103/115	-
45	CLA	A4	301	15	1/1/14/20	8/31/109/115	-
48	BCR	AA	852	-	-	5/29/63/63	0/2/2/2
47	LHG	B1	302	-	-	14/40/40/53	-
45	CLA	AB	820	-	1/1/13/20	8/25/103/115	-
45	CLA	BA	827	-	1/1/15/20	14/37/115/115	-
45	CLA	BA	841	-	1/1/15/20	15/37/115/115	-
55	XAT	A3	317	-	-	0/31/93/93	0/4/4/4
45	CLA	BB	841	-	1/1/15/20	7/37/115/115	-
48	BCR	AA	849	-	-	8/29/63/63	0/2/2/2

The worst 5 of 2732 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	A6	611	CLA	C1A-NA	12.32	1.40	1.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	B2	610	CLA	C1A-NA	11.85	1.40	1.29
46	BB	844	PQN	C12-C13	9.75	1.56	1.33
46	AA	843	PQN	C12-C13	9.56	1.55	1.33
46	BA	843	PQN	C12-C13	9.52	1.55	1.33

The worst 5 of 4157 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BL	306	BCR	C37-C22-C21	-32.50	77.40	122.92
48	BL	306	BCR	C35-C13-C14	-31.52	78.78	122.92
48	BL	306	BCR	C34-C9-C10	-29.92	81.01	122.92
48	BG	203	BCR	C35-C13-C14	-29.72	81.29	122.92
48	BL	306	BCR	C37-C22-C23	-27.87	74.16	118.08

5 of 310 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
45	AA	801	CLA	ND
45	AA	802	CLA	ND
45	AA	803	CLA	ND
45	AA	805	CLA	ND
45	AA	806	CLA	ND

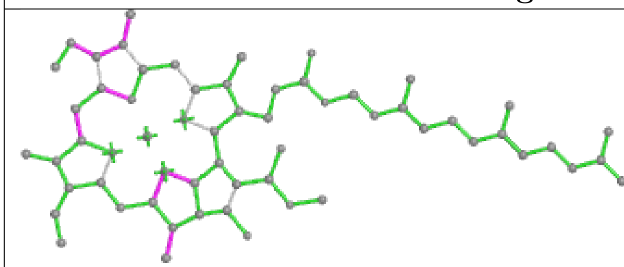
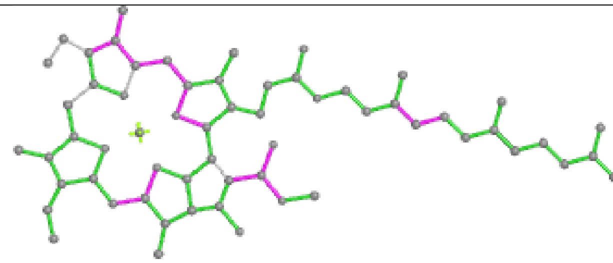
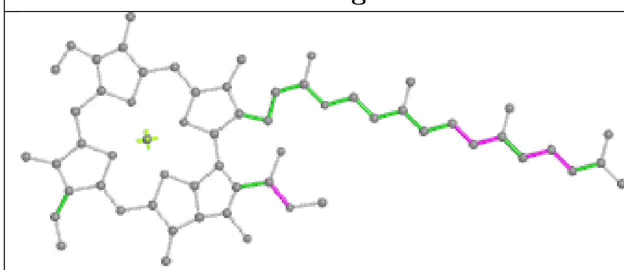
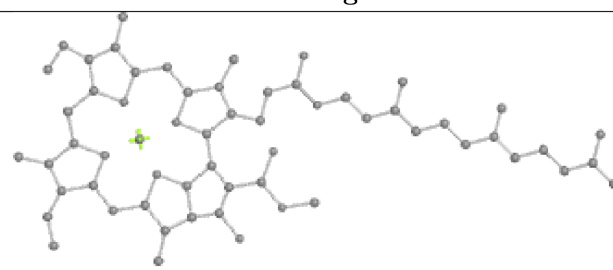
5 of 3005 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
45	AA	801	CLA	CBD-CGD-O2D-CED
45	AA	802	CLA	CBD-CGD-O2D-CED
45	AA	804	CLA	C1A-C2A-CAA-CBA
45	AA	804	CLA	C3A-C2A-CAA-CBA
45	AA	805	CLA	CHA-CBD-CGD-O1D

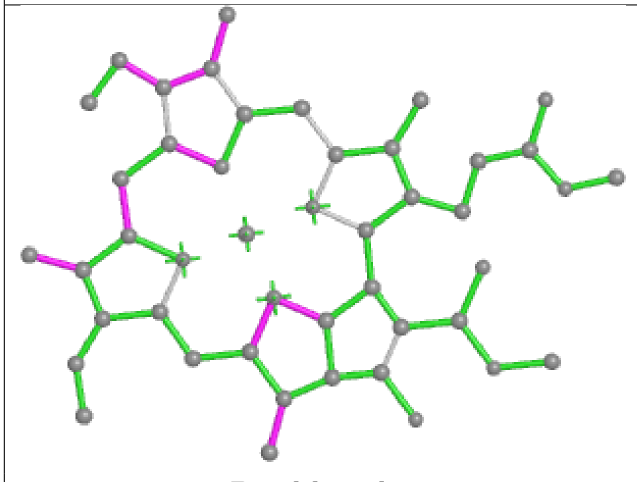
There are no ring outliers.

No monomer is involved in short contacts.

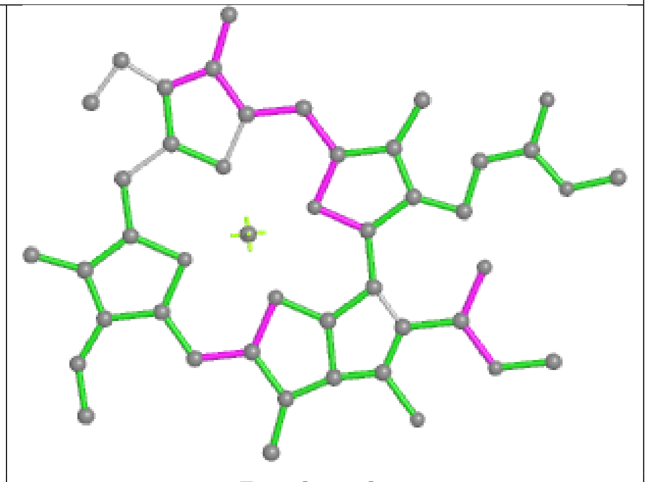
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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 A3 302	
 **Bond lengths**	 **Bond angles**
 **Torsions**	 **Rings**

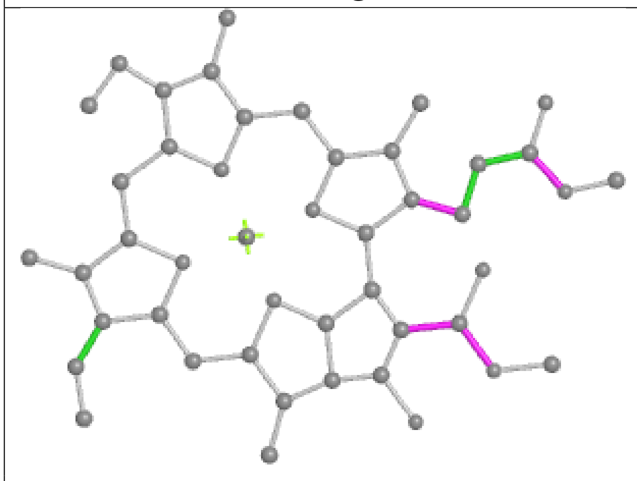
Ligand CLA AK 203



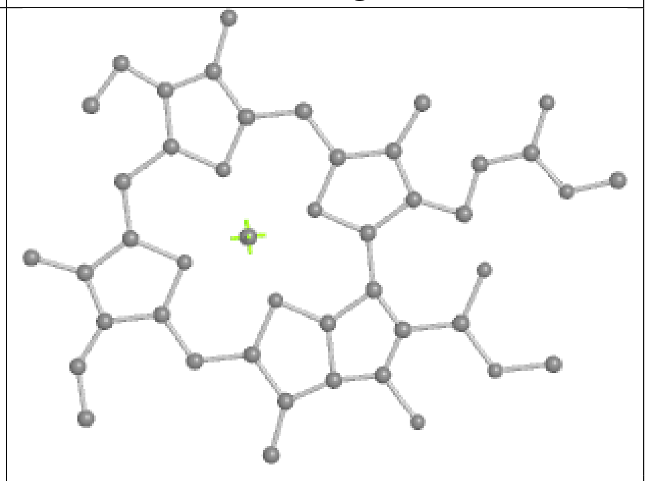
Bond lengths



Bond angles

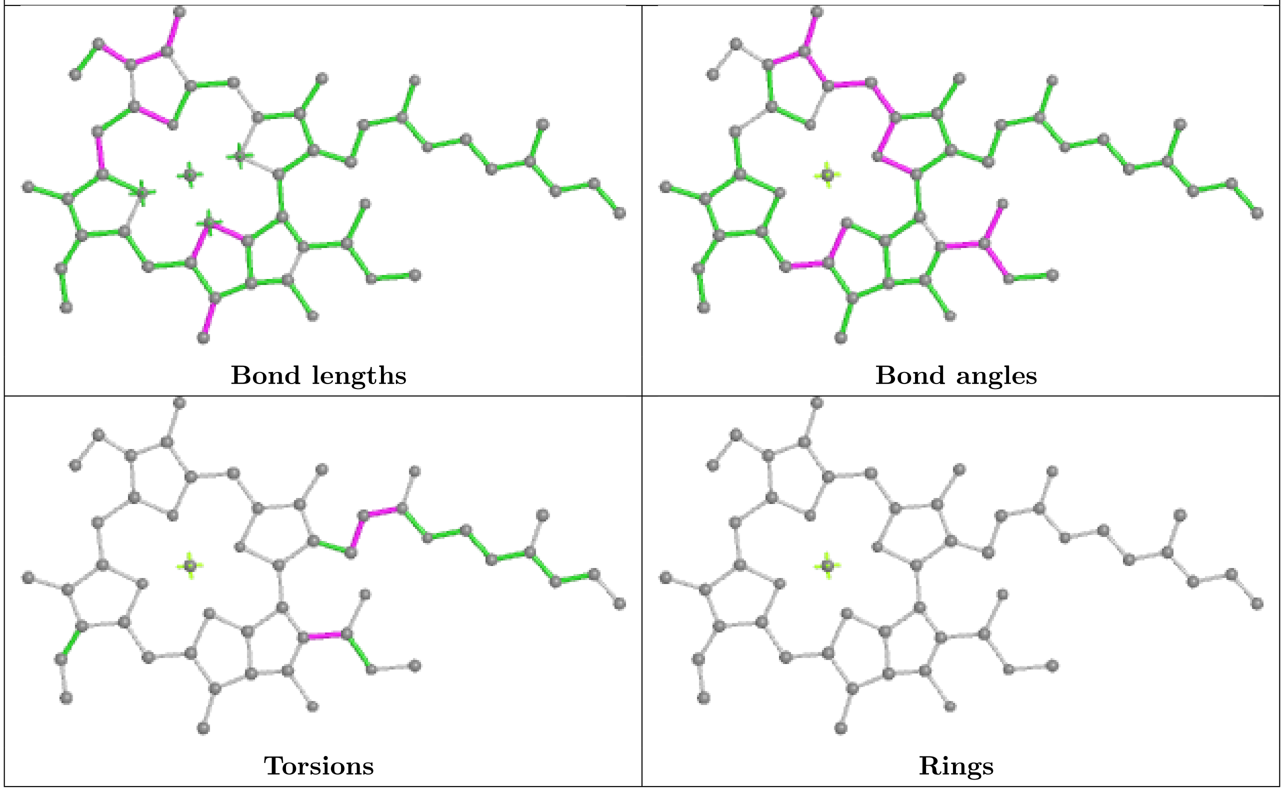


Torsions

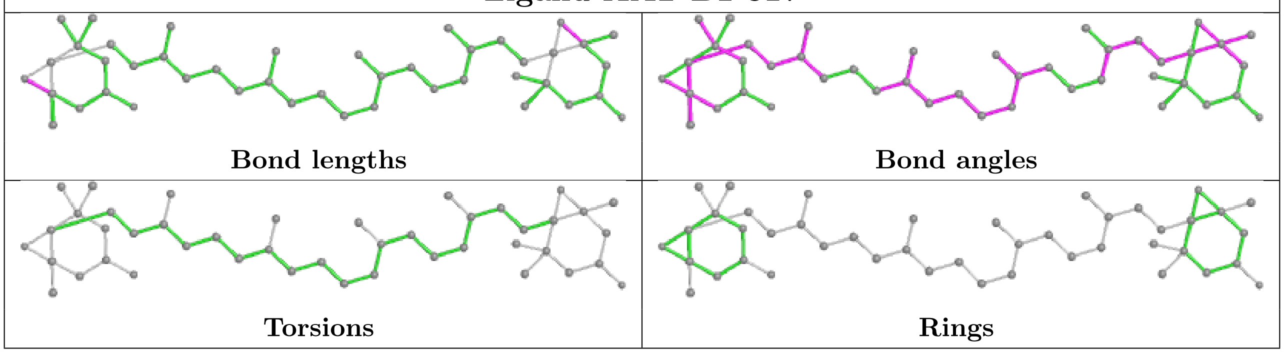


Rings

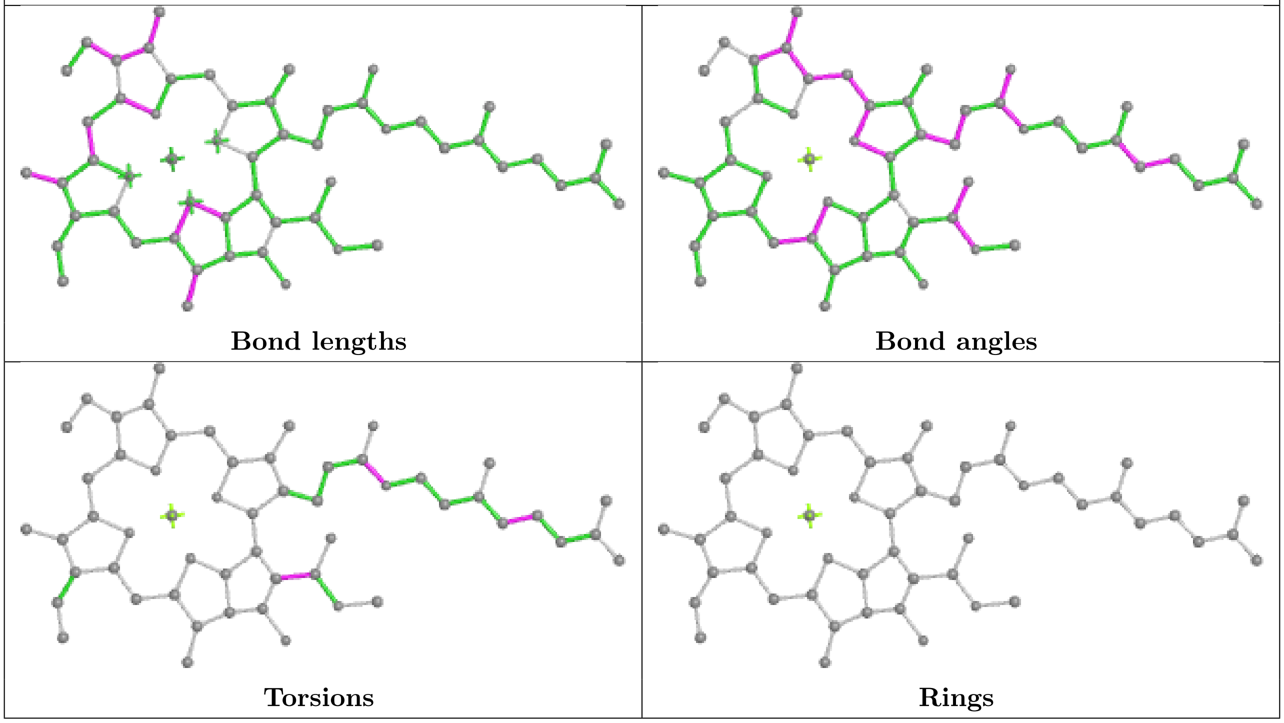
Ligand CLA BB 809



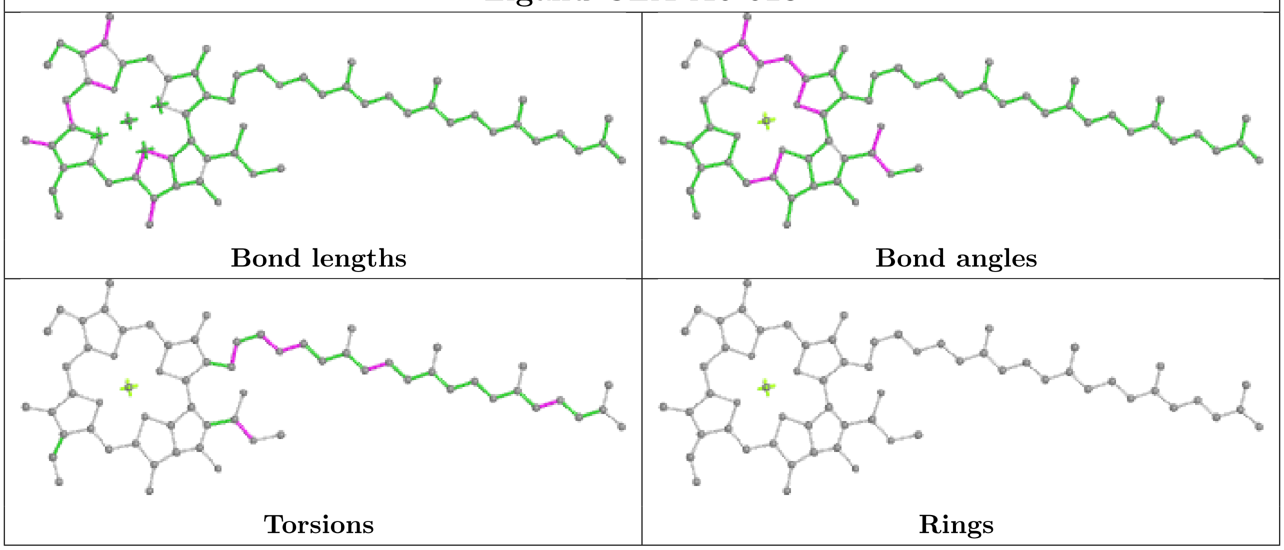
Ligand XAT B1 317



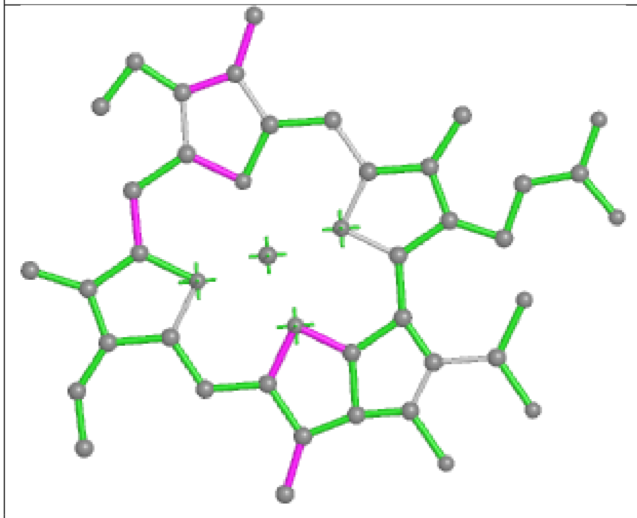
Ligand CLA A6 610



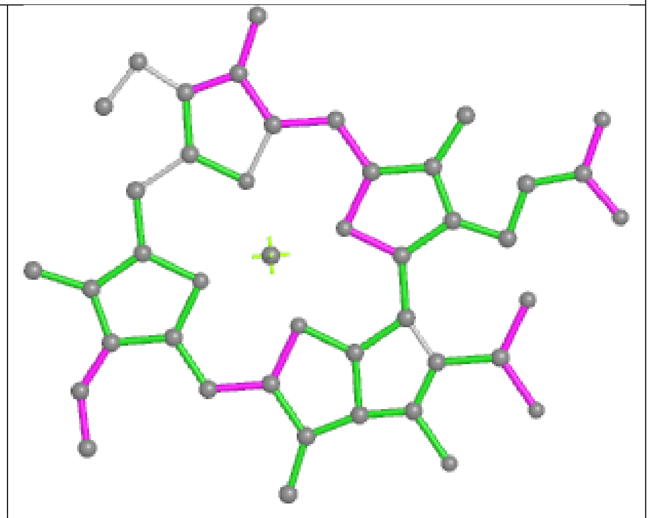
Ligand CLA A6 613



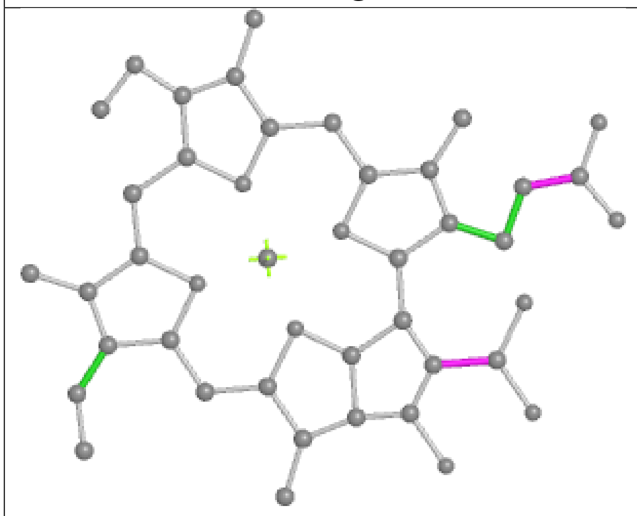
Ligand CLA B2 603



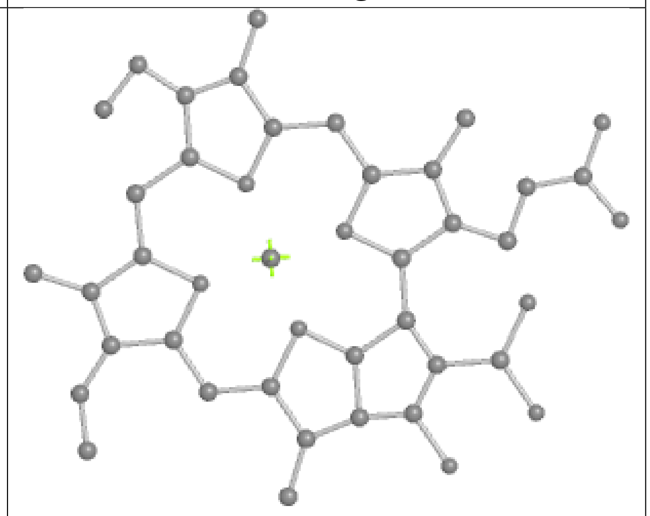
Bond lengths



Bond angles

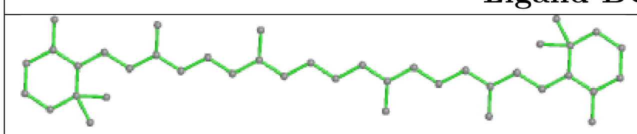


Torsions

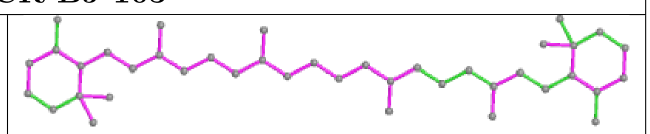


Rings

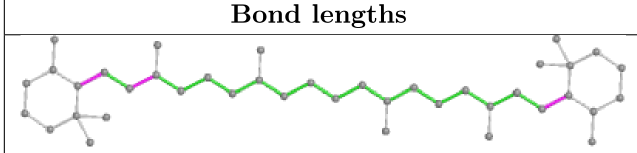
Ligand BCR BJ 103



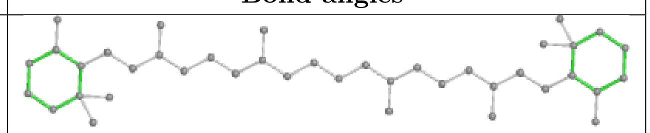
Bond lengths



Bond angles

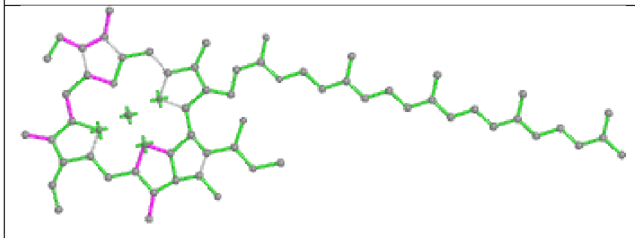


Torsions



Rings

Ligand CLA BA 802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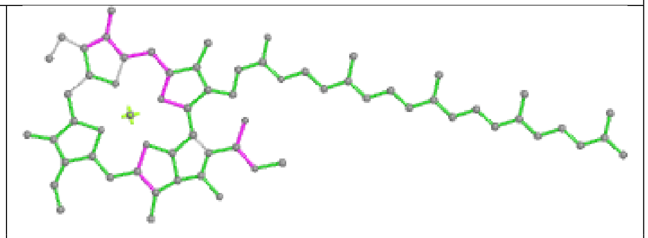
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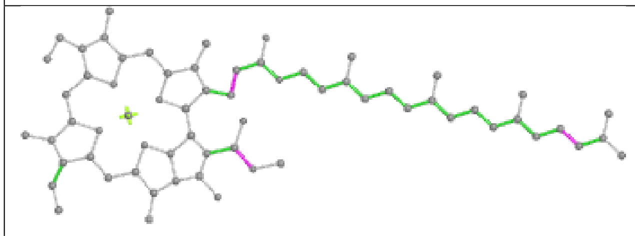
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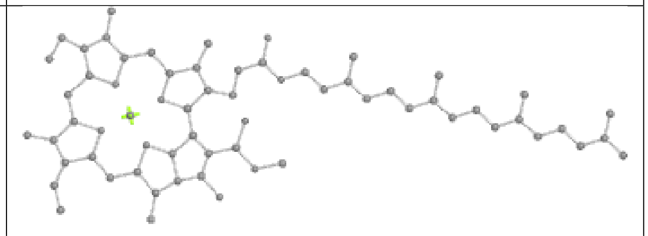
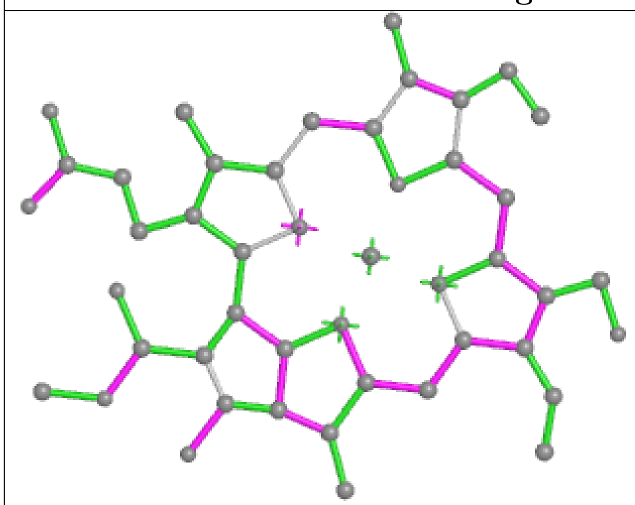

Rings

Ligand CHL A4 306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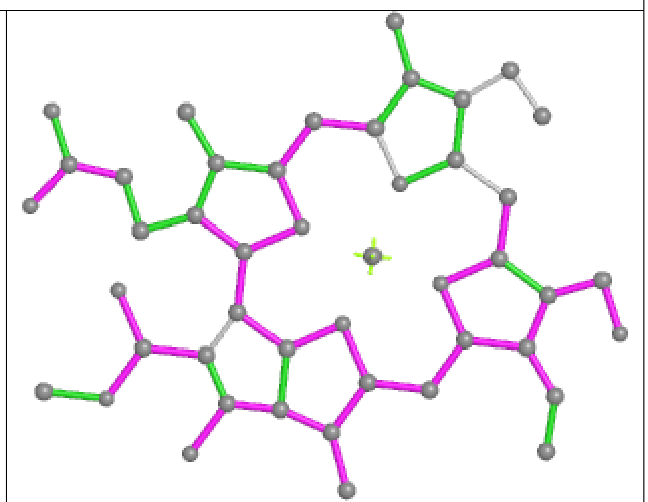
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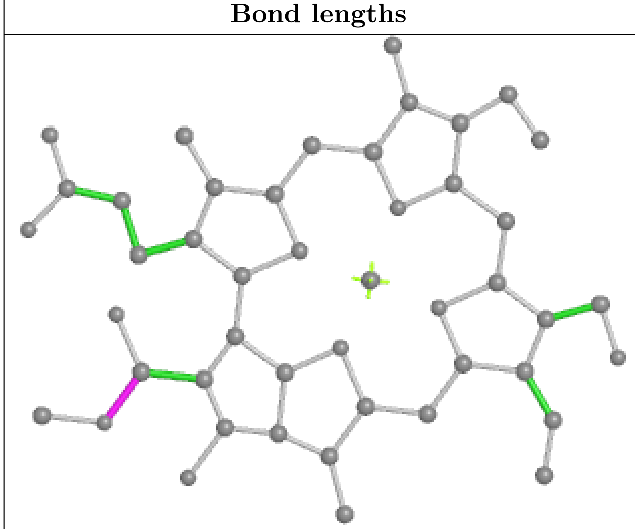
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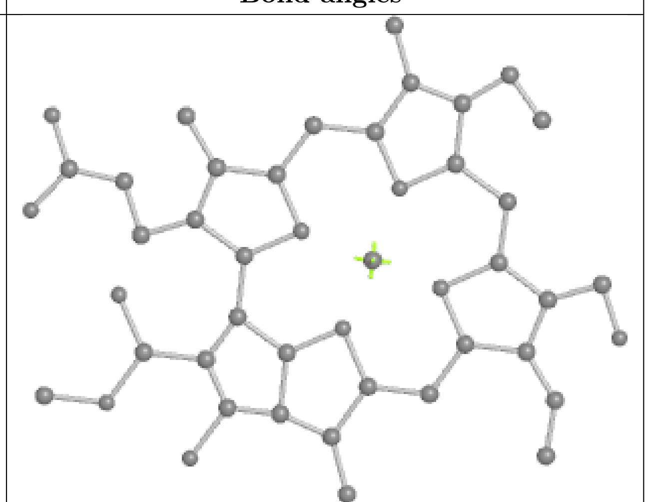
Rings

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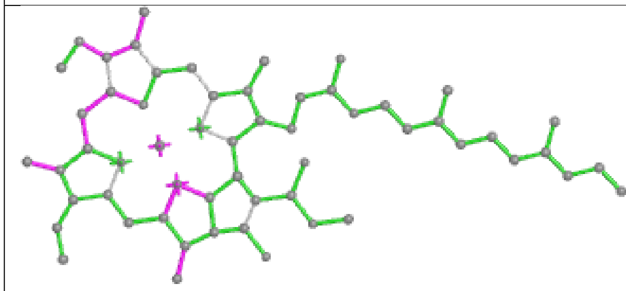
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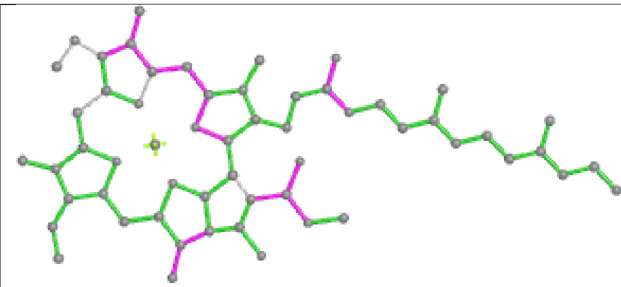
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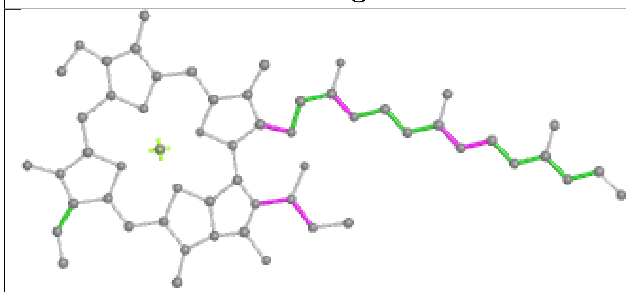
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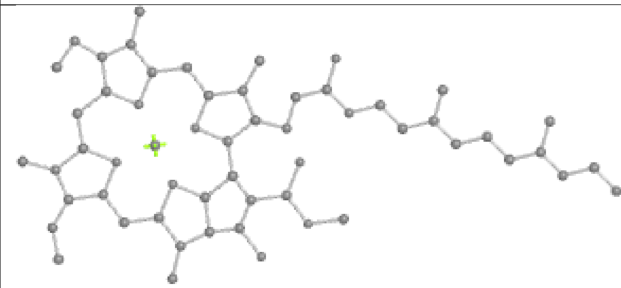
Rings

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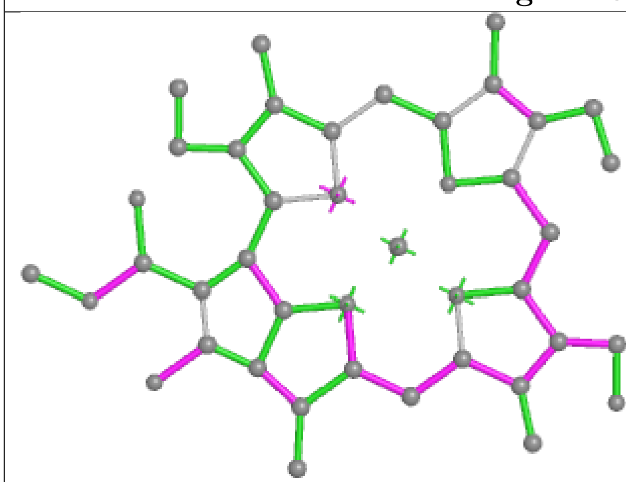
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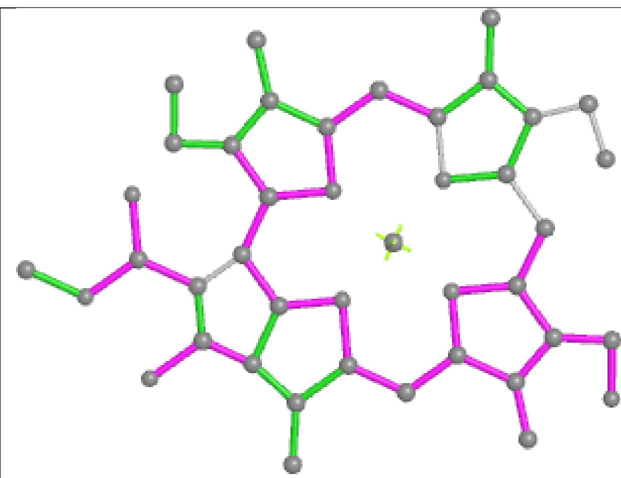
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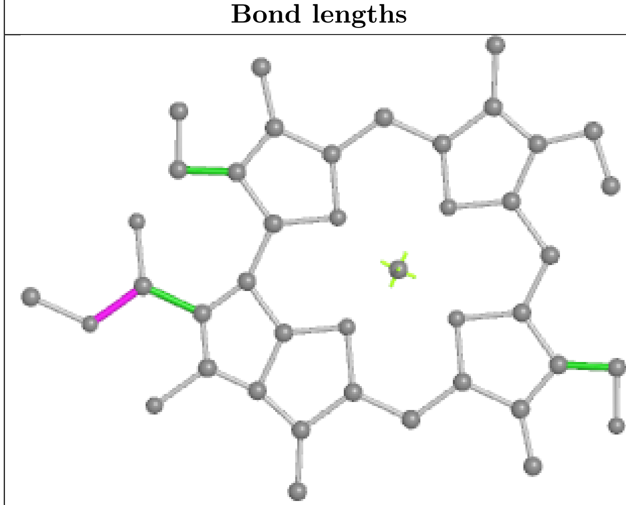
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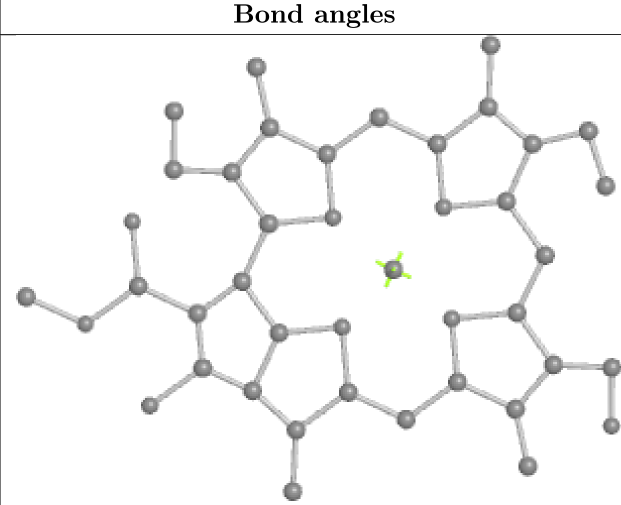
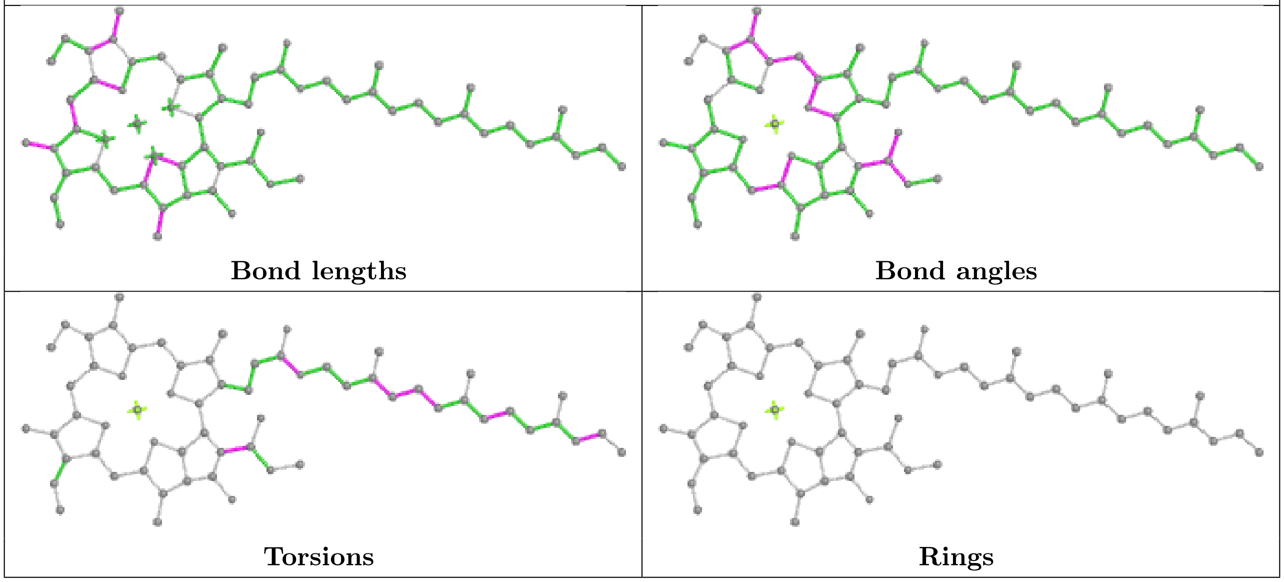

Rings

Ligand CLA BB 827



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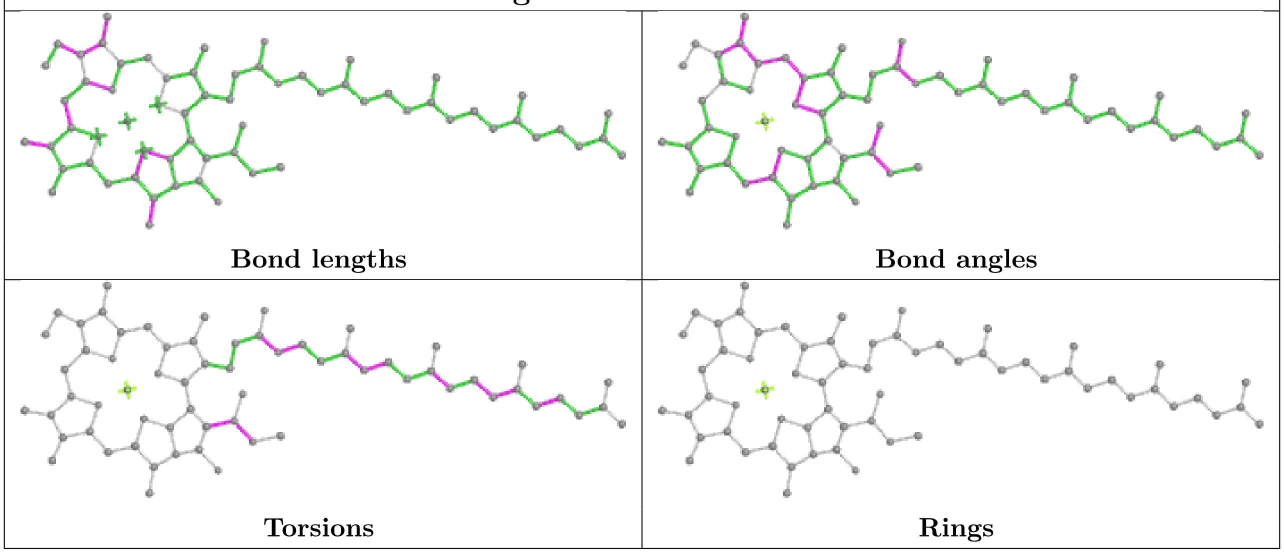

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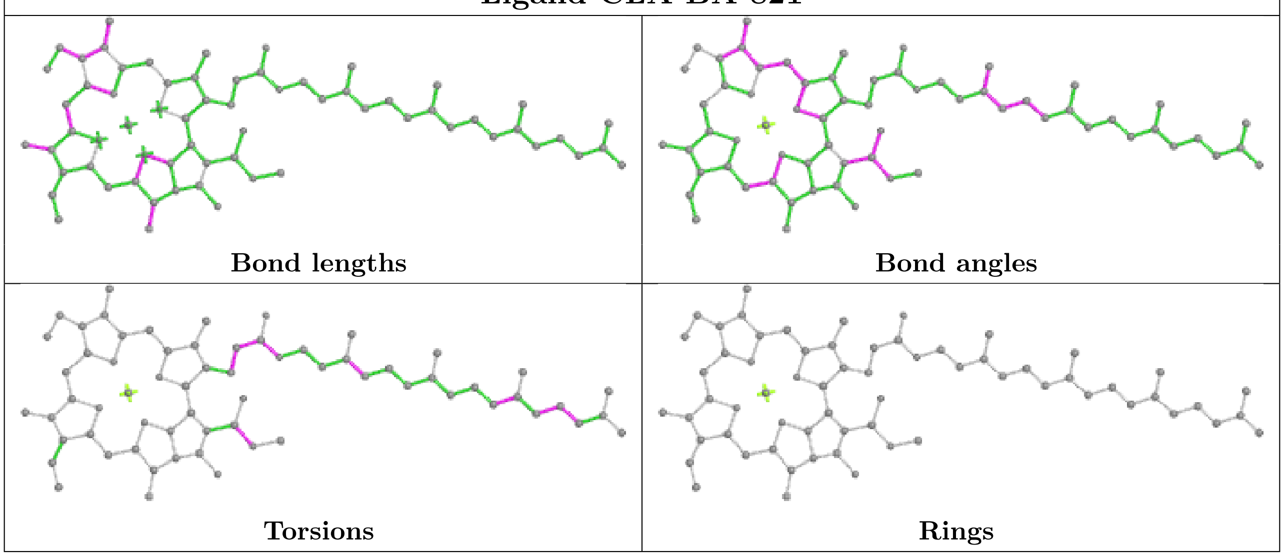
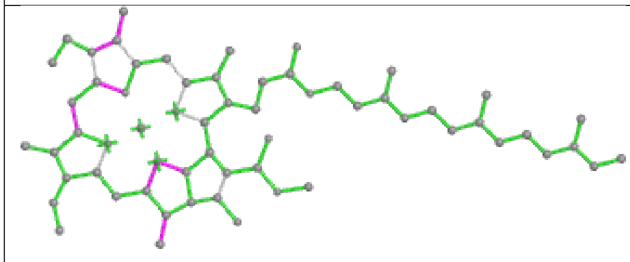


Ligand CLA B1 304



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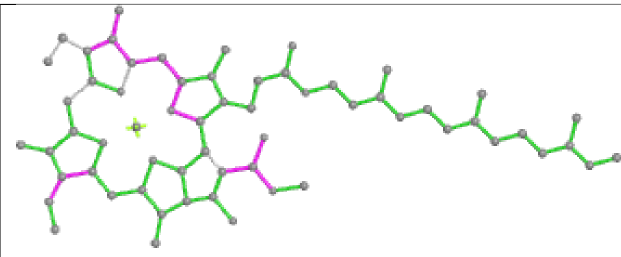
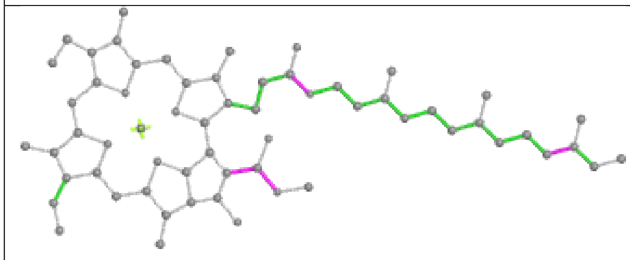


Bond angles



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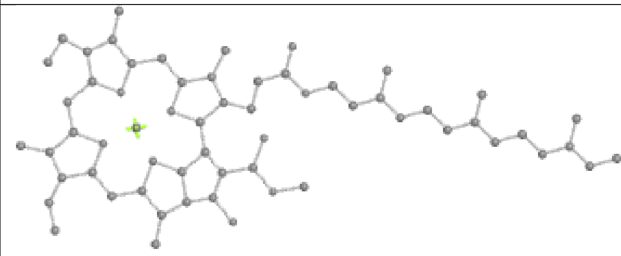

Rings

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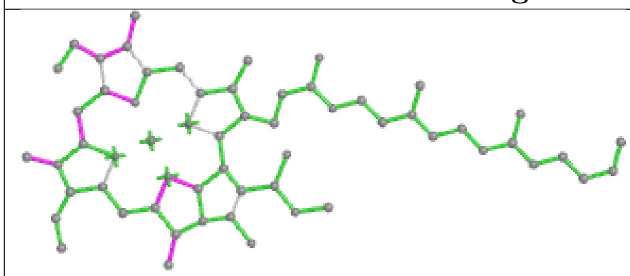

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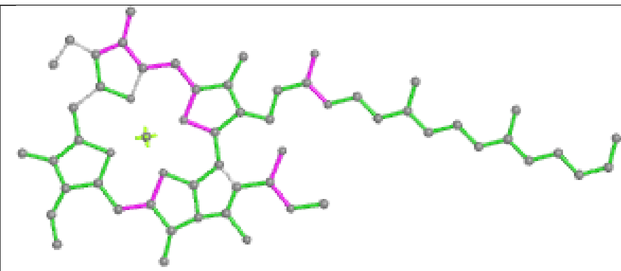
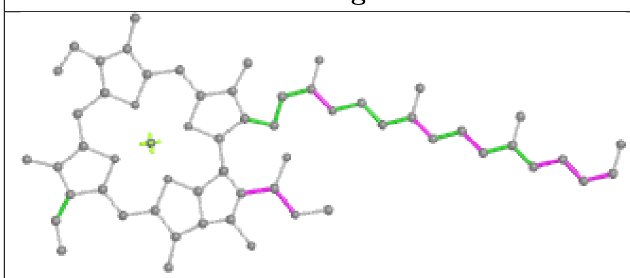


Bond angles



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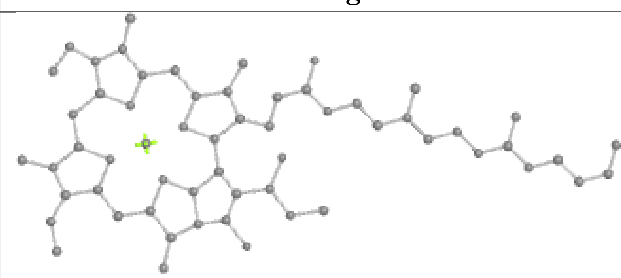
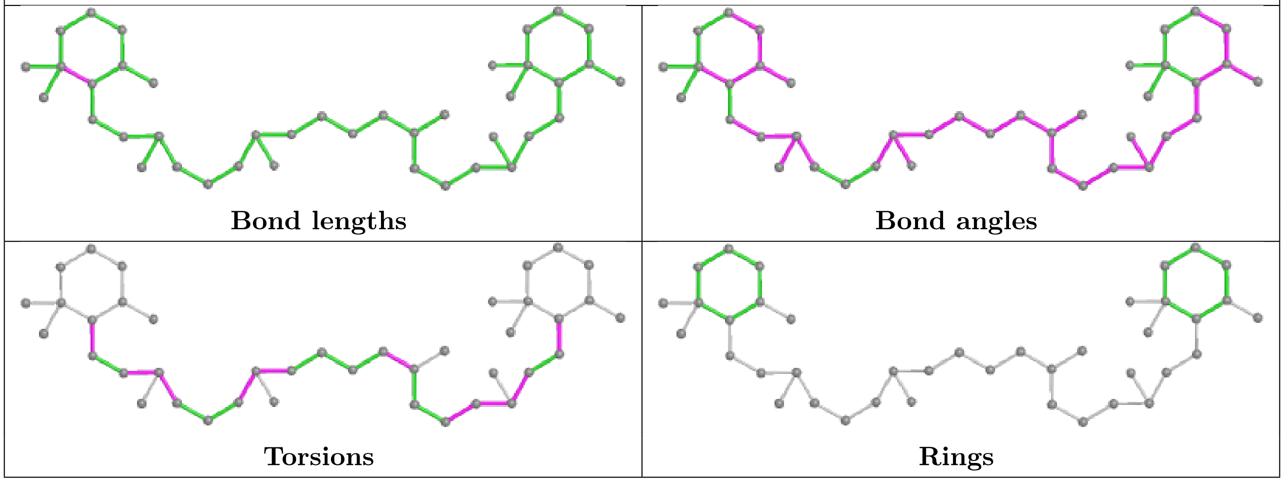
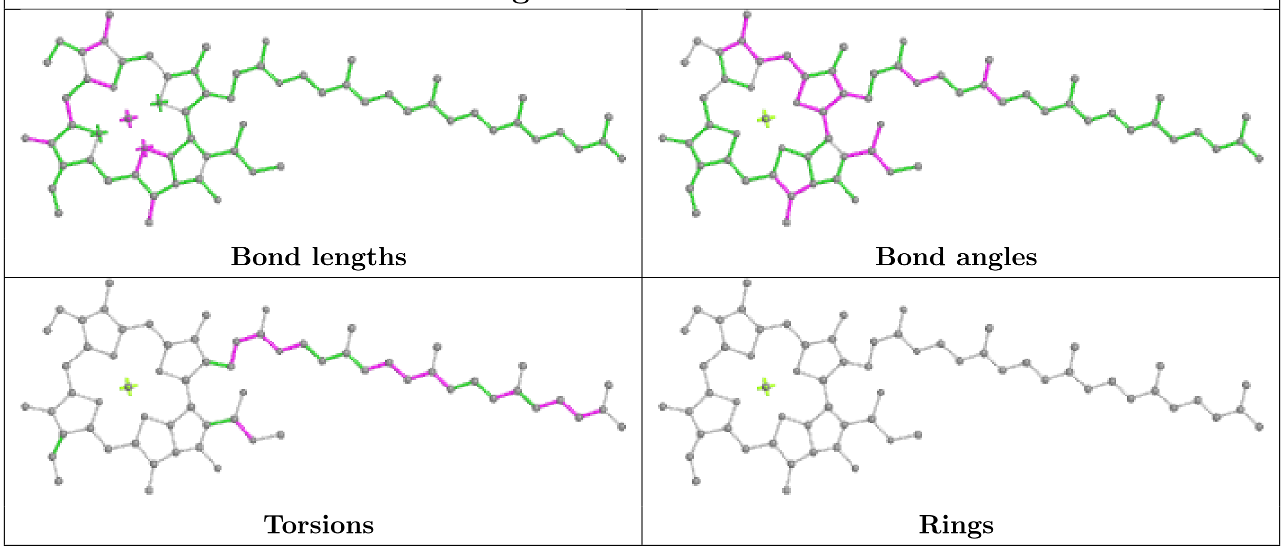


Rings

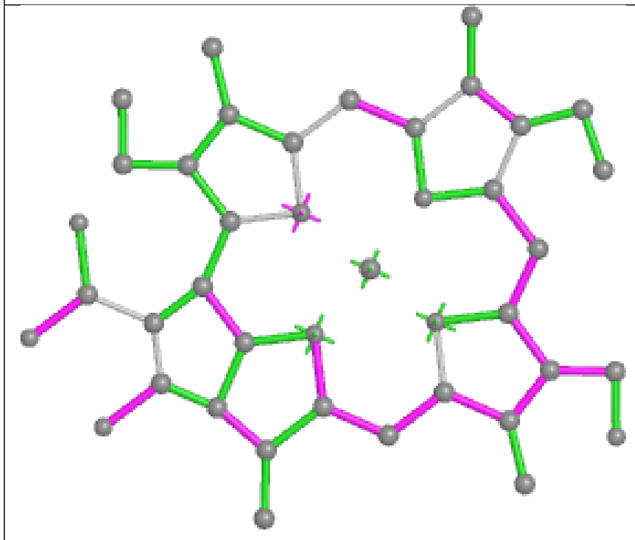
Ligand BCR BL 306



Ligand CLA AB 801



Ligand CHL A4 304



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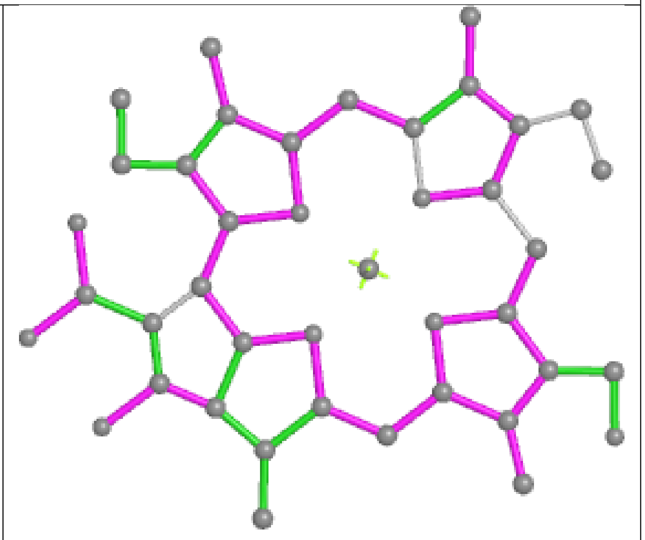

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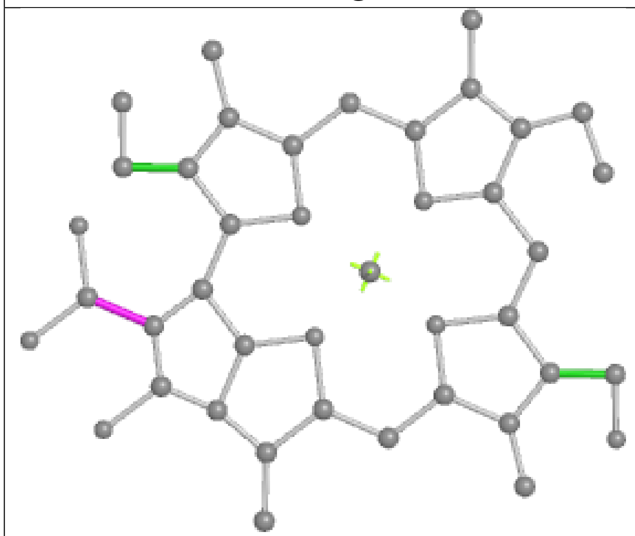

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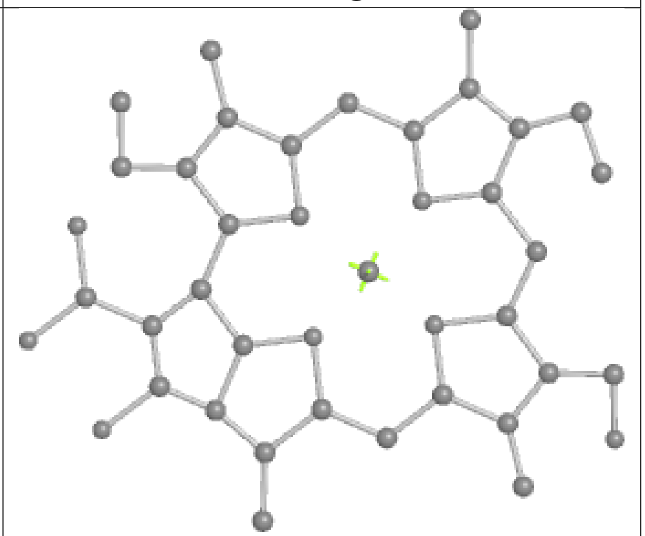

Rings

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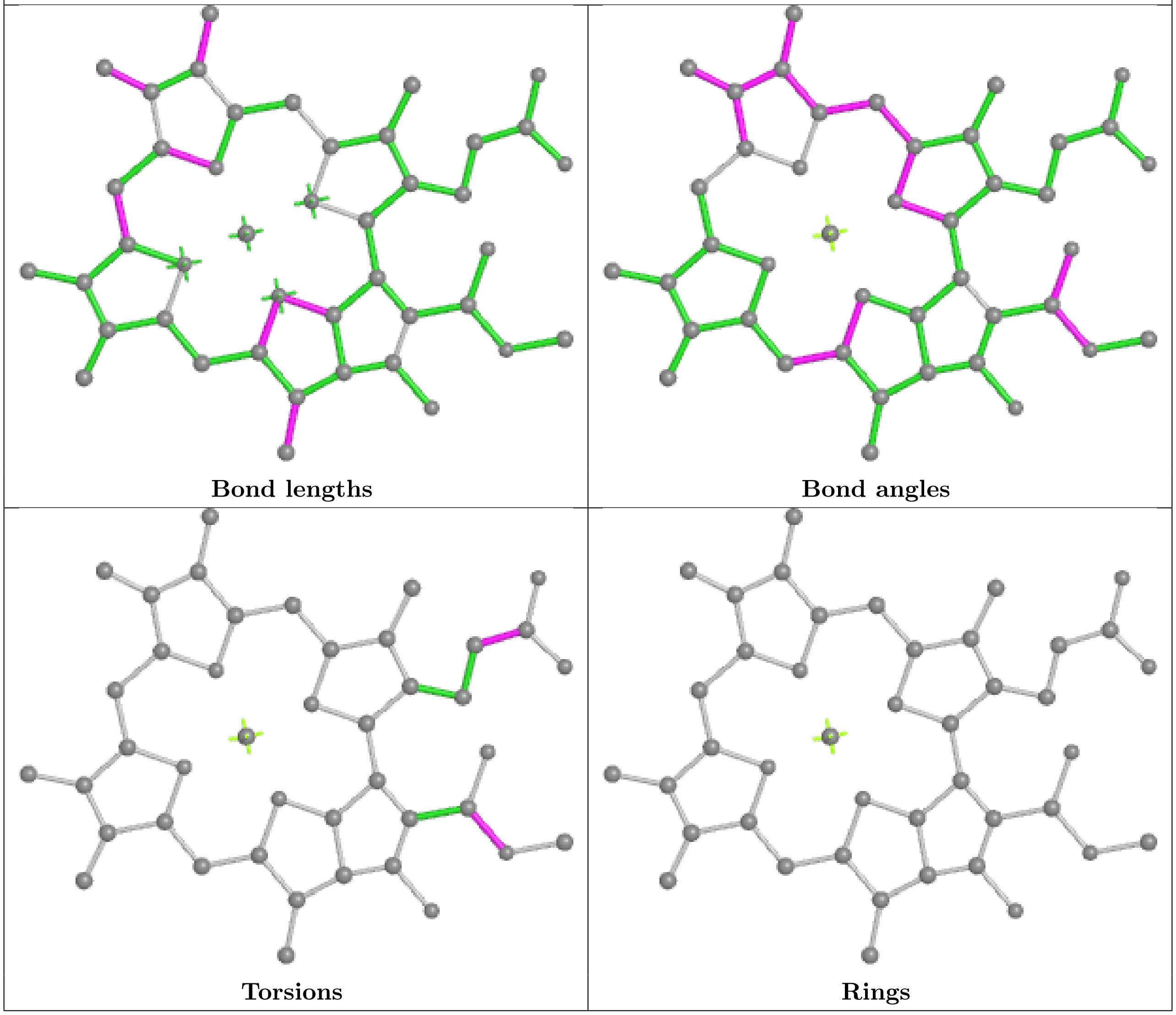
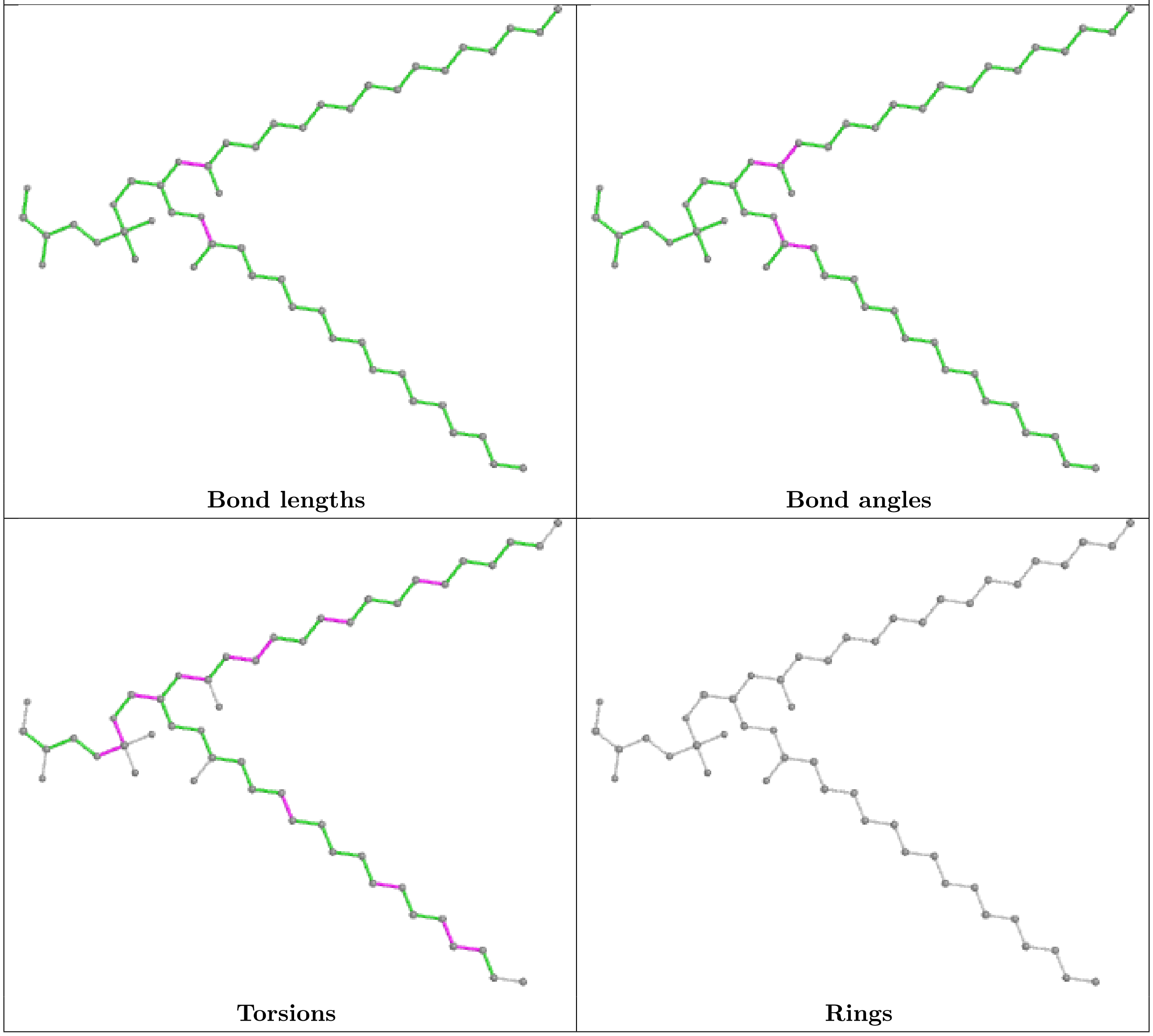


Ligand LHG A1 320



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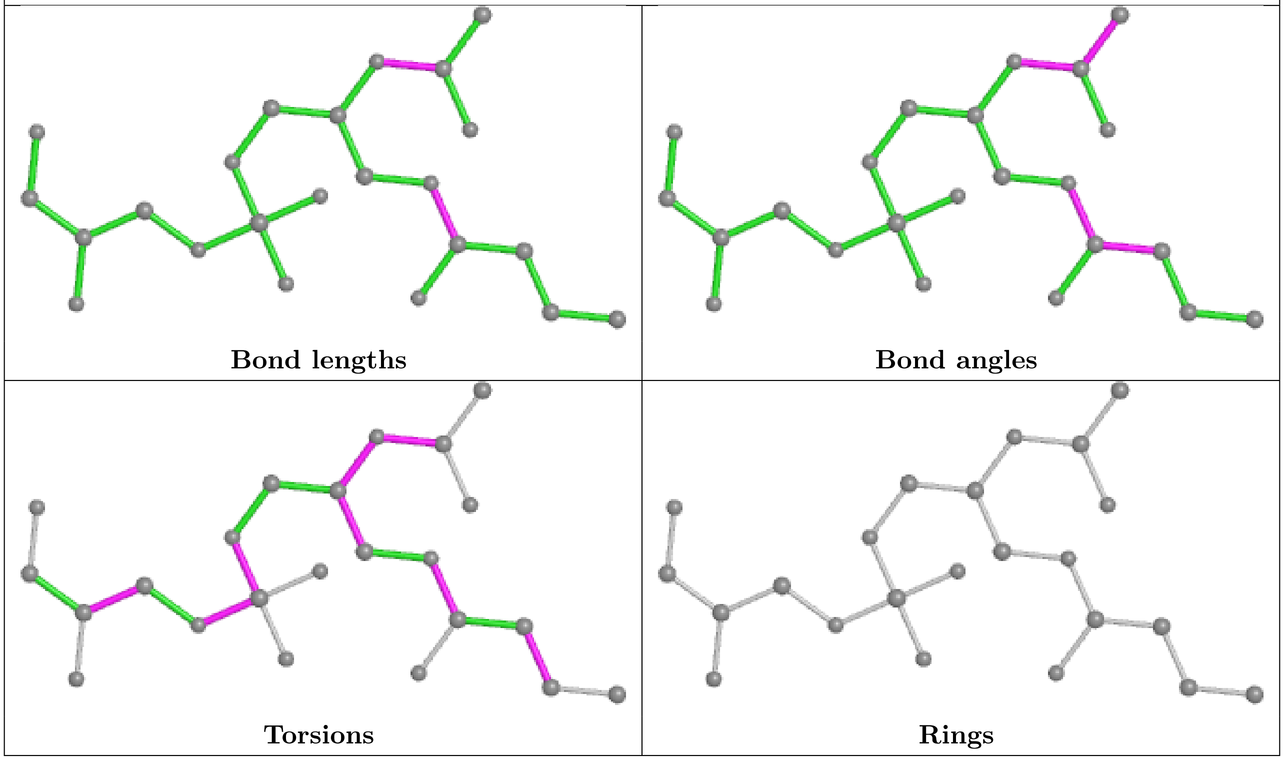

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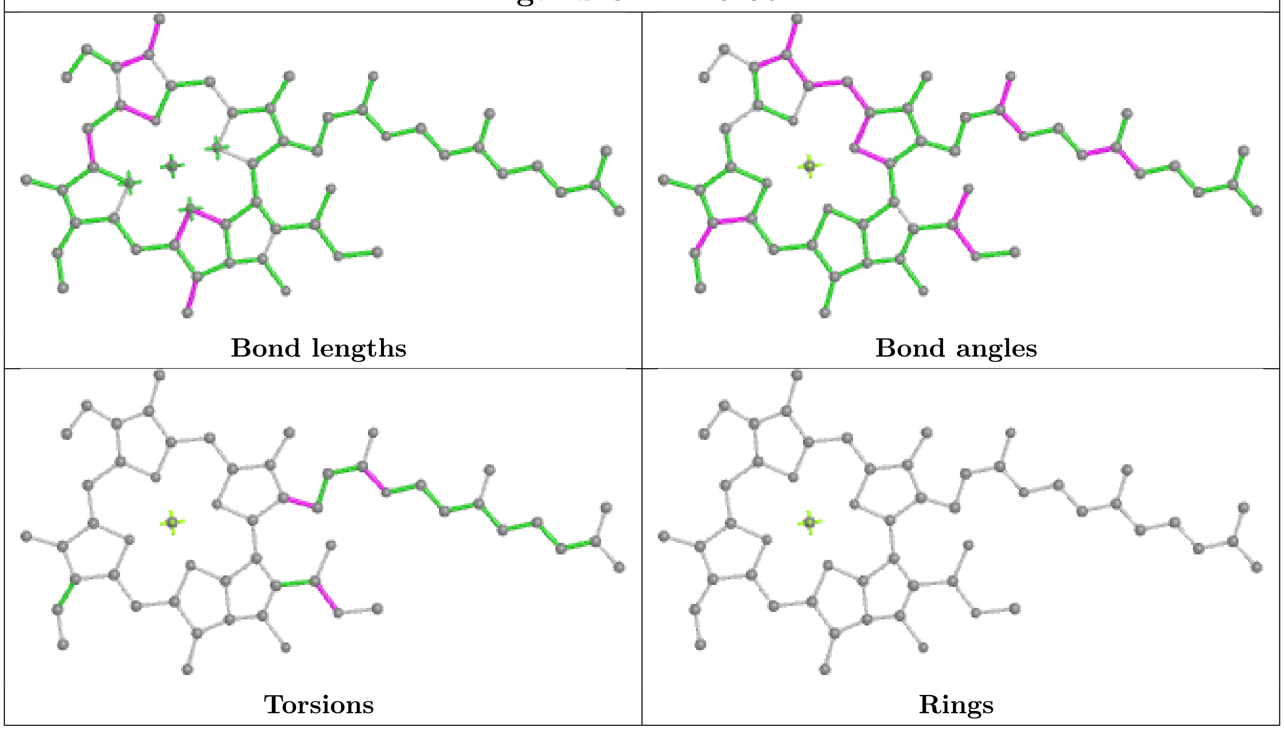
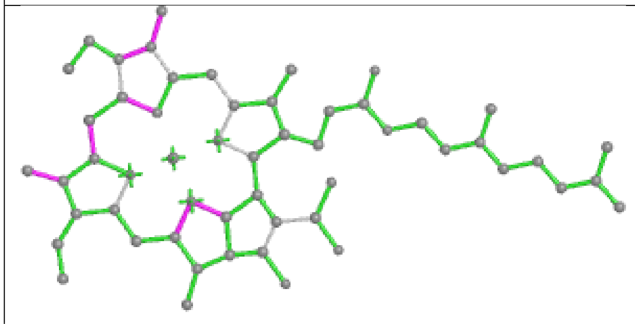


Ligand CLA A3 312



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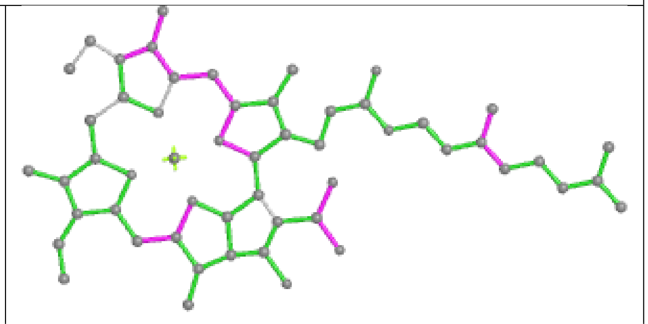
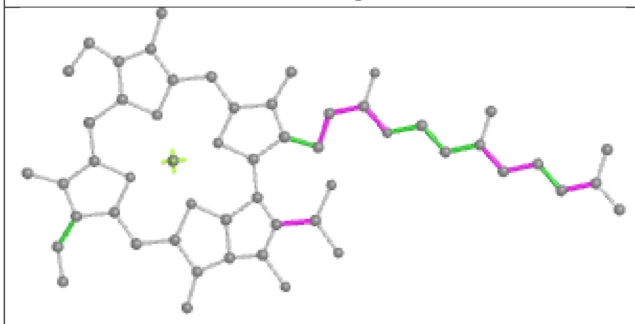


Bond angles



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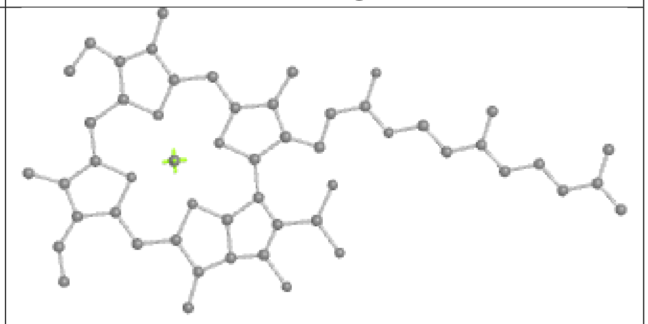
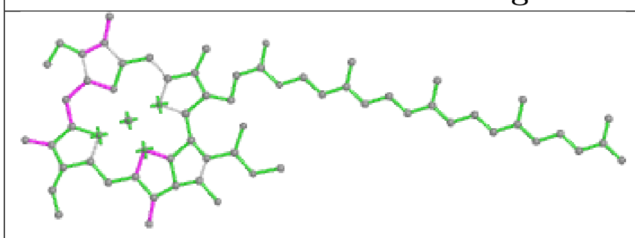


Rings

Ligand CLA AA 830



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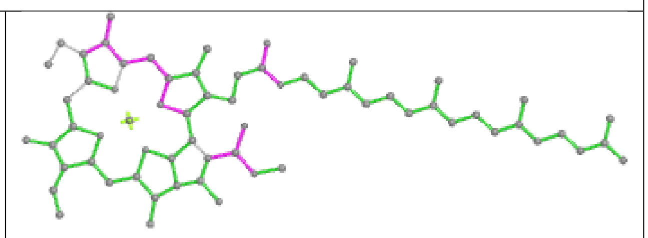
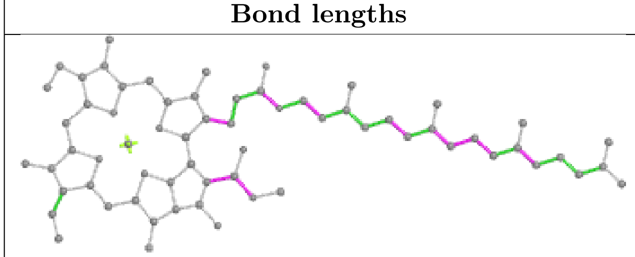


Bond angles



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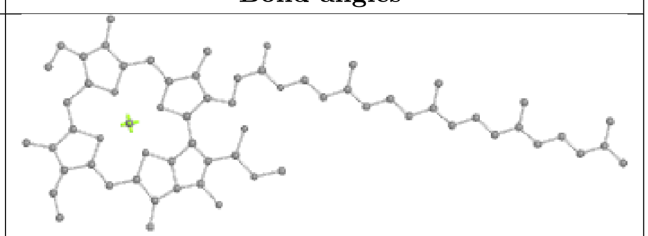
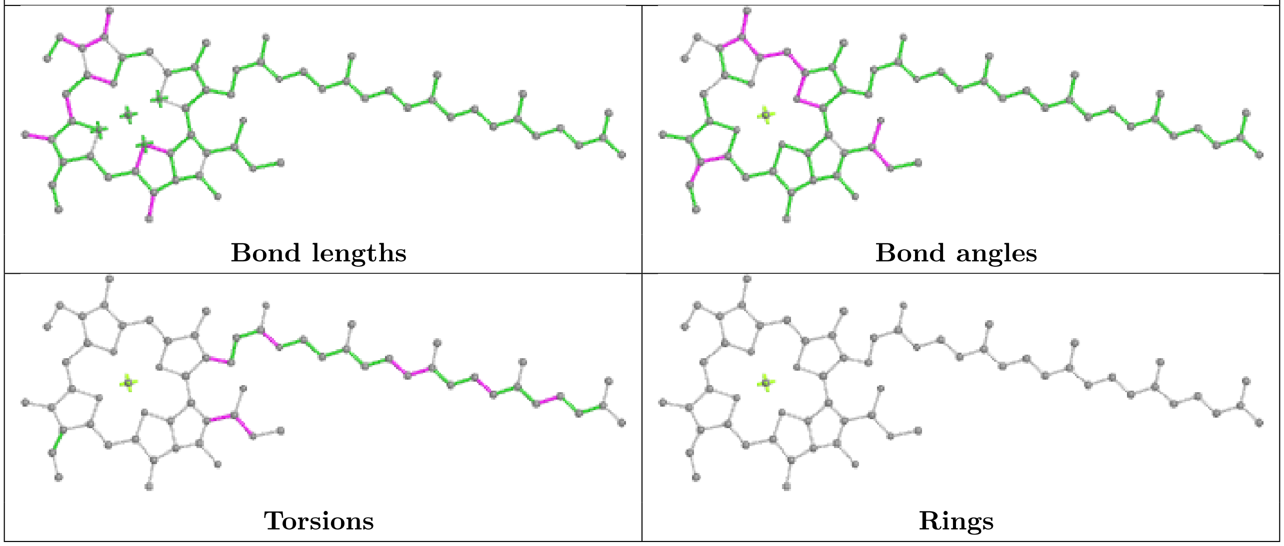
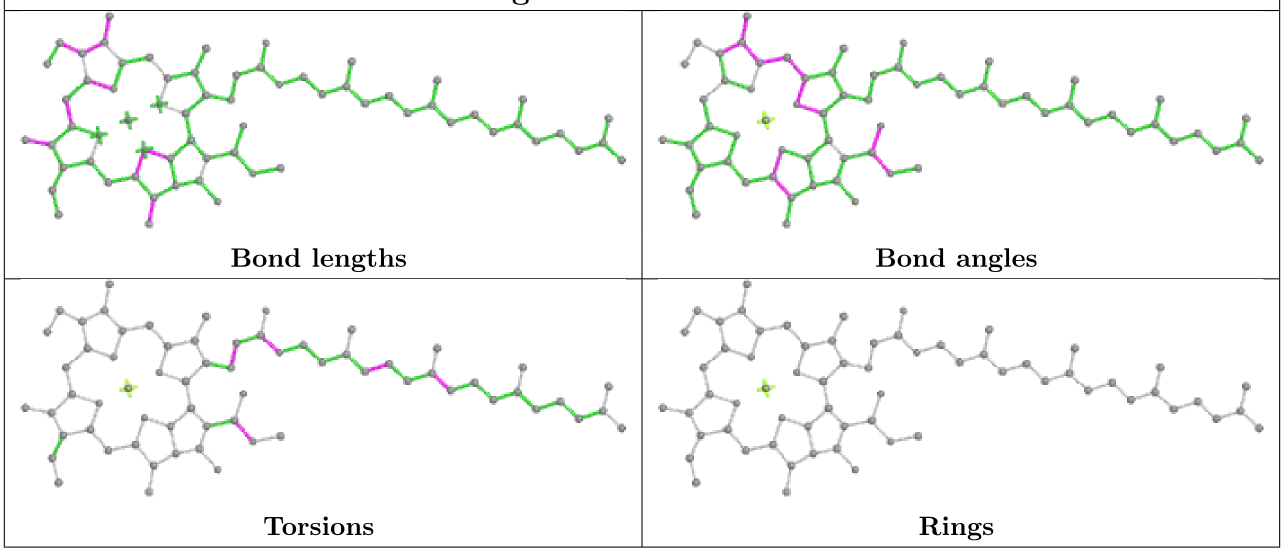


Rings

Ligand CLA BA 810



Ligand CLA AB 840



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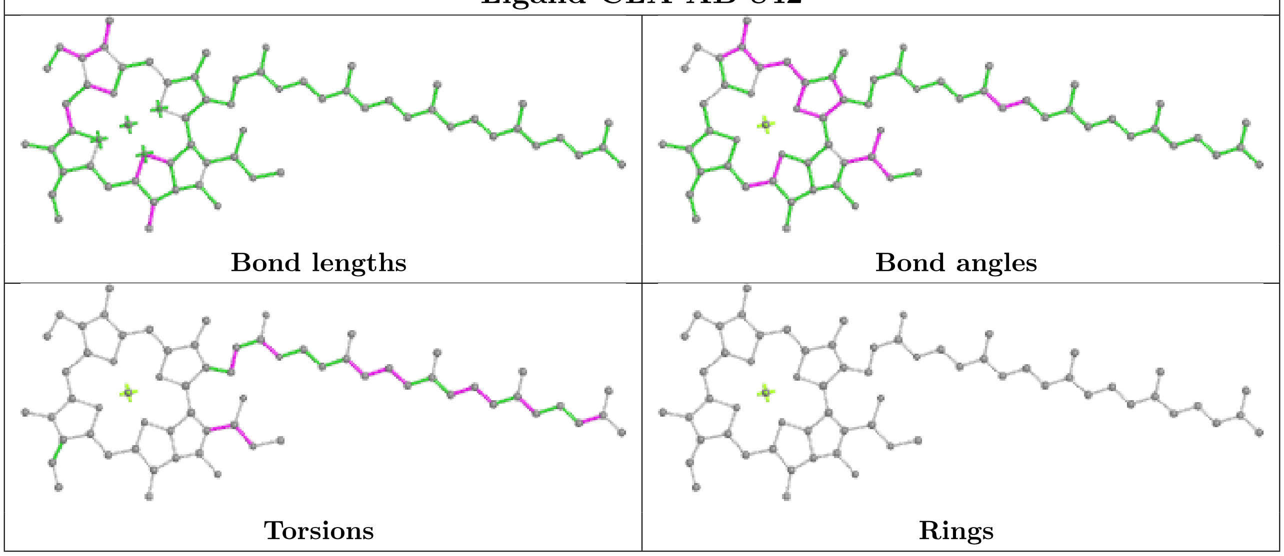
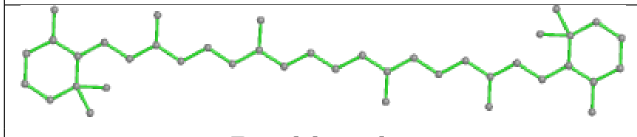


Ligand BCR BB 803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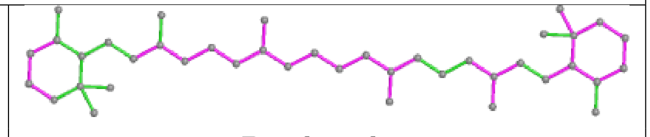
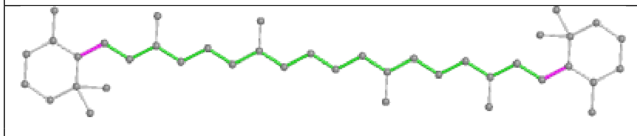

Bond angles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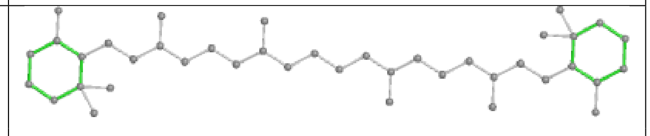
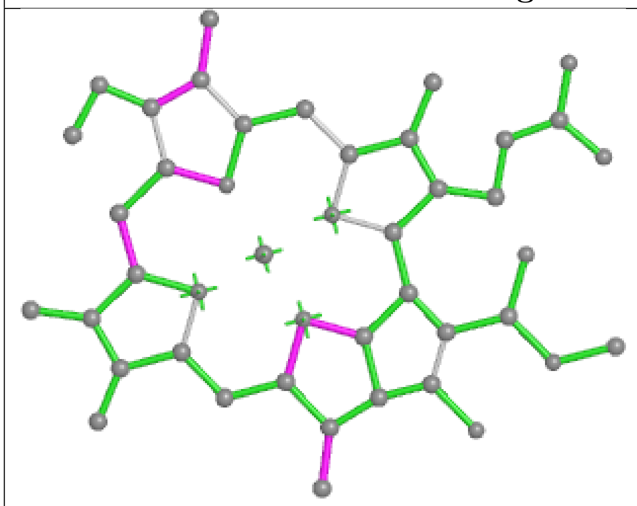

Rings

Ligand CLA B2 611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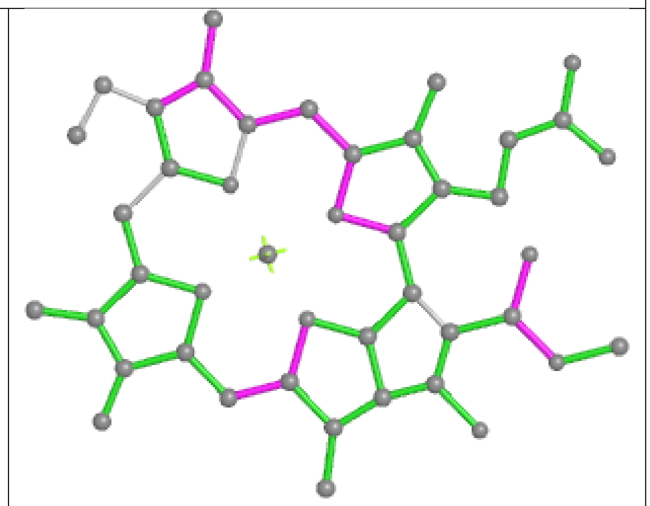
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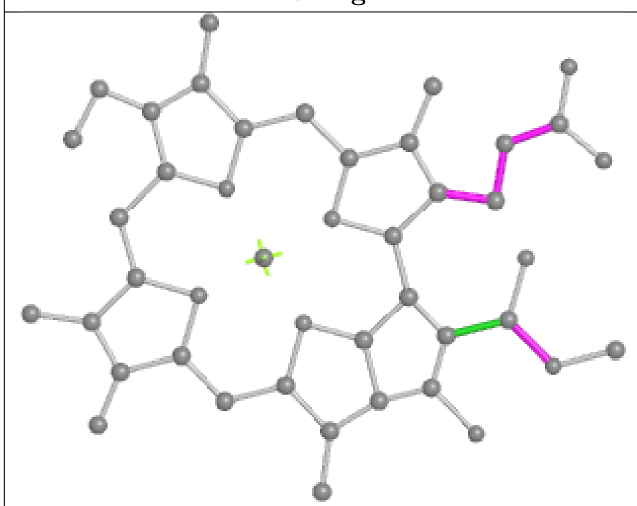
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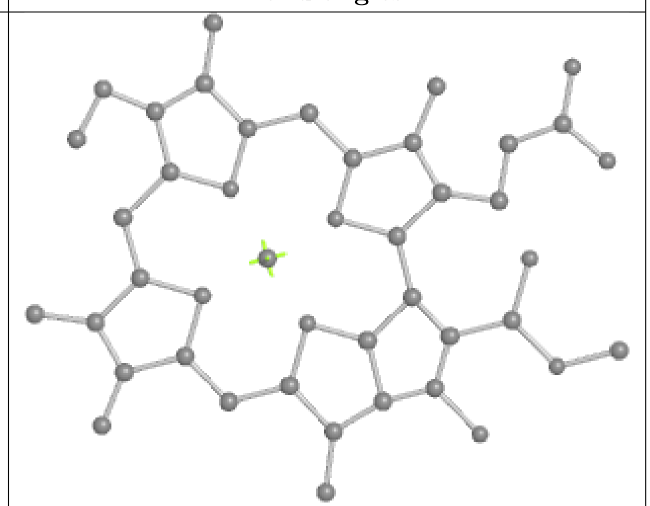
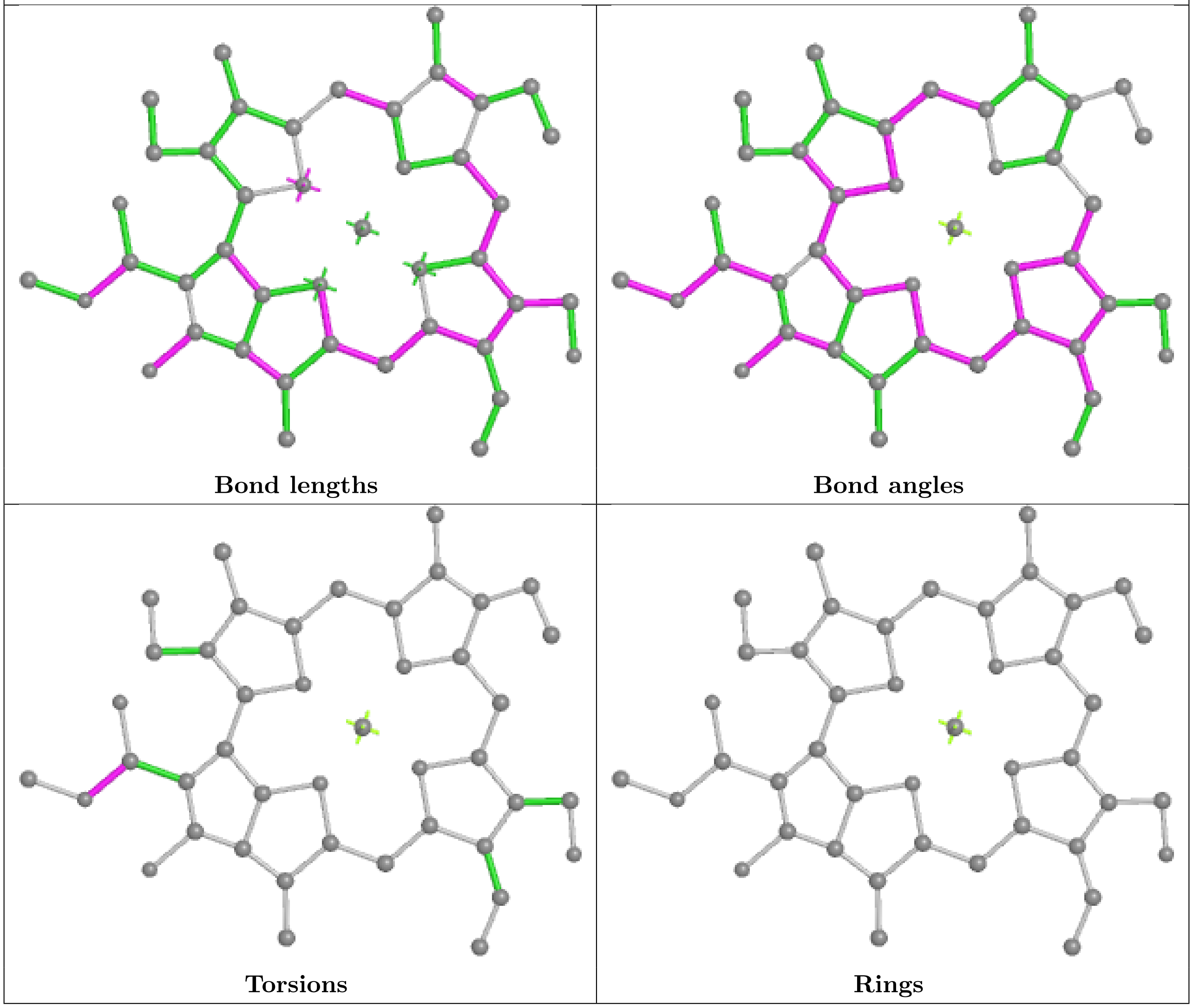
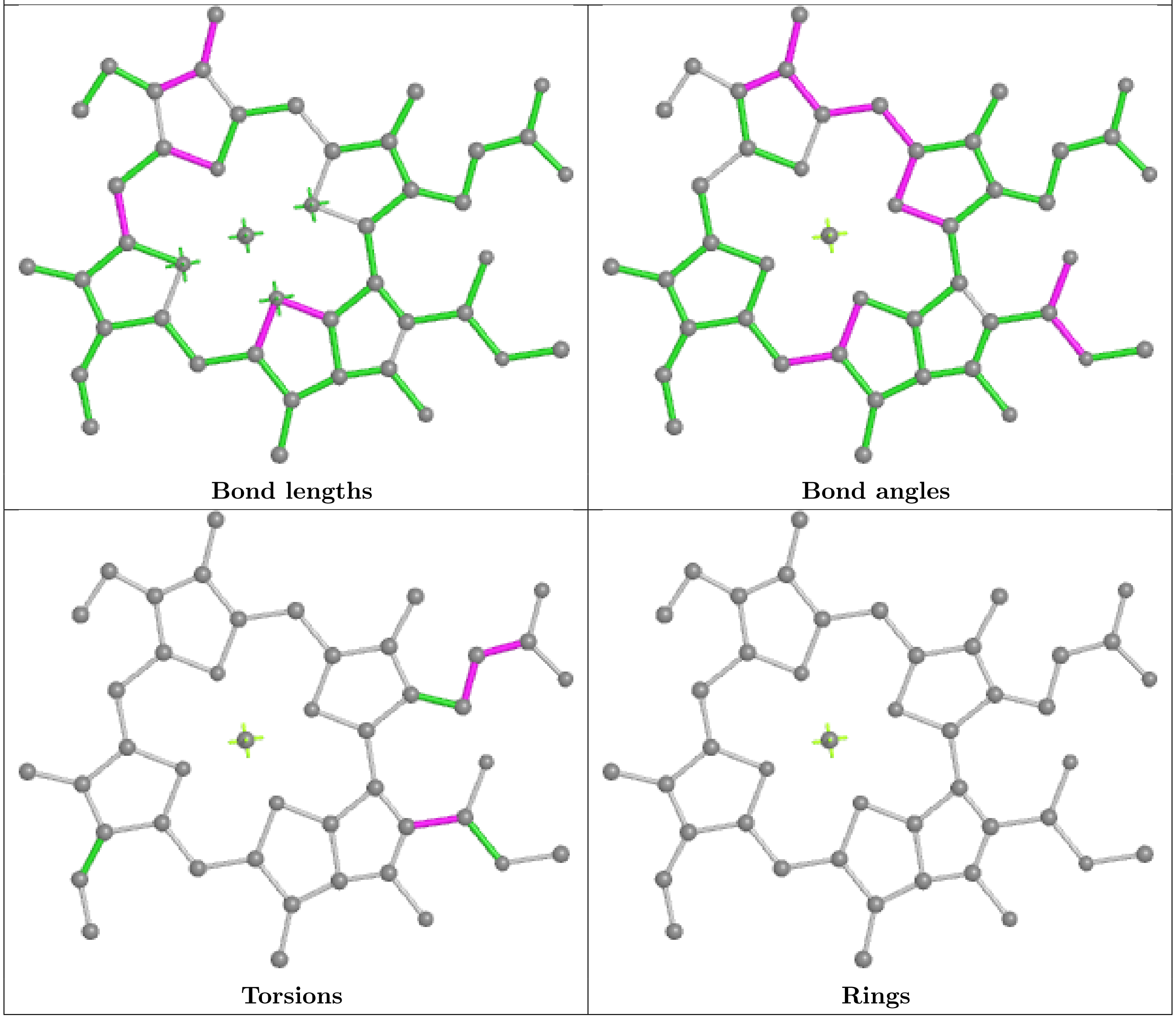

Rings

Ligand CHL B2 606



Ligand CLA BK 202



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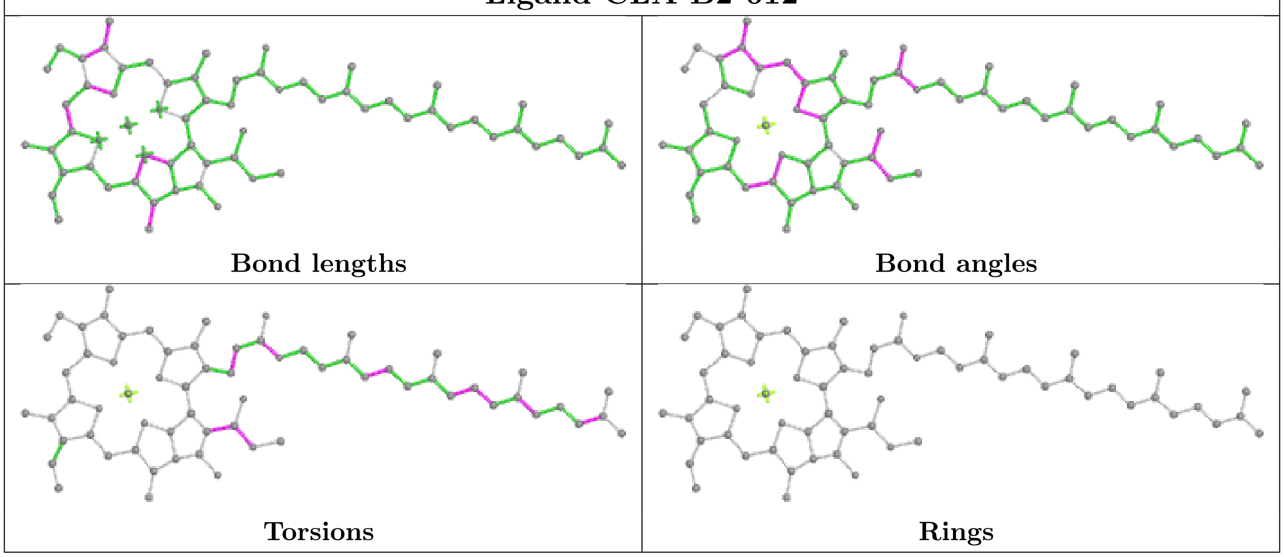
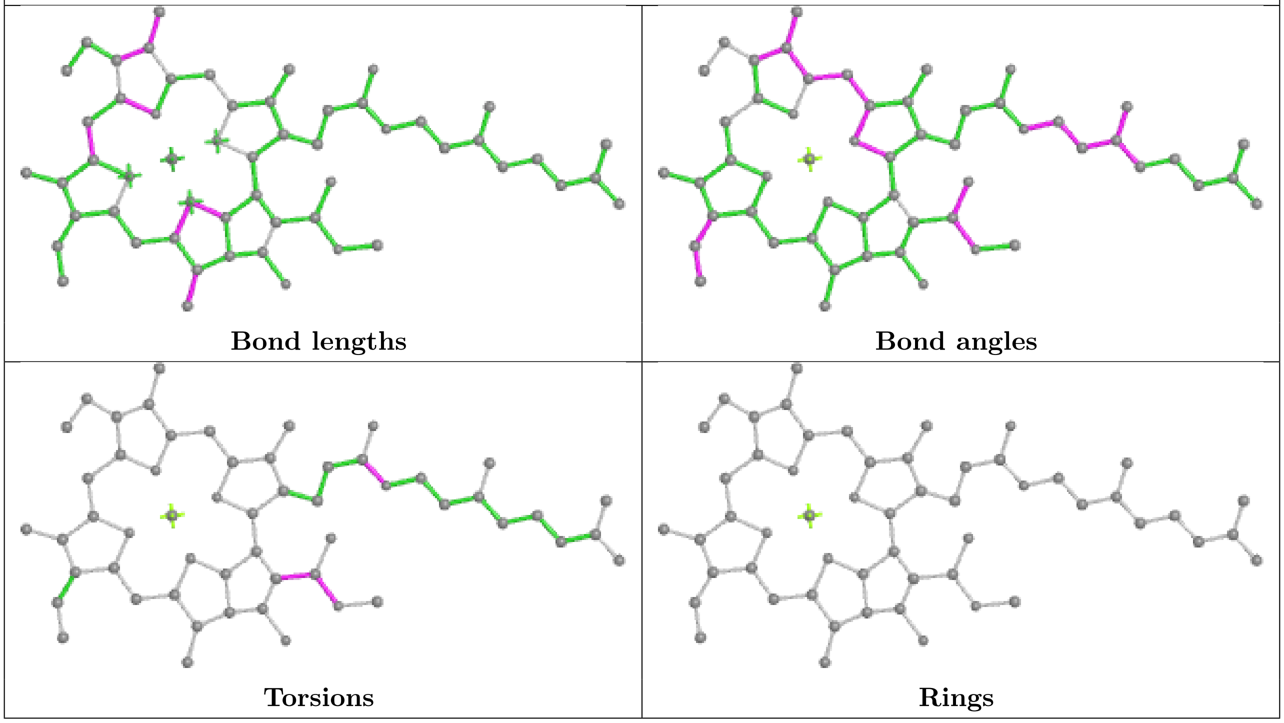


Ligand CLA A1 305



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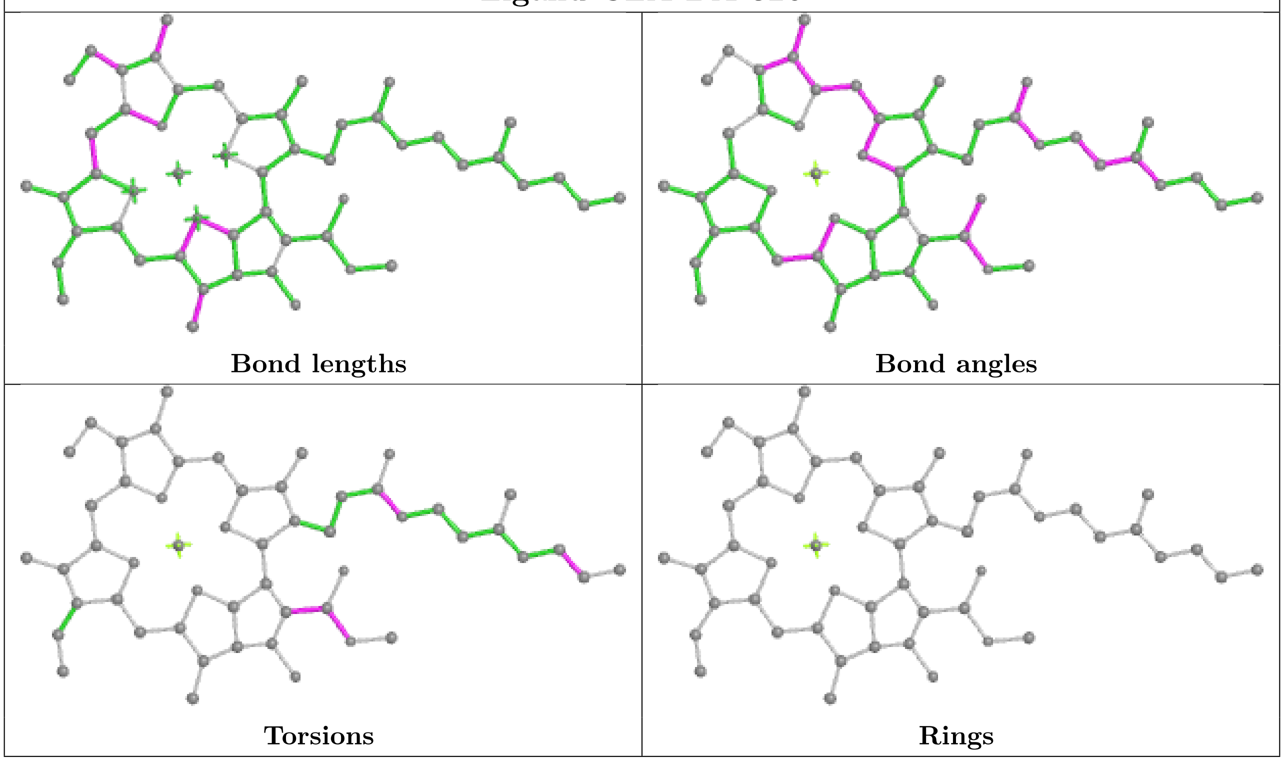

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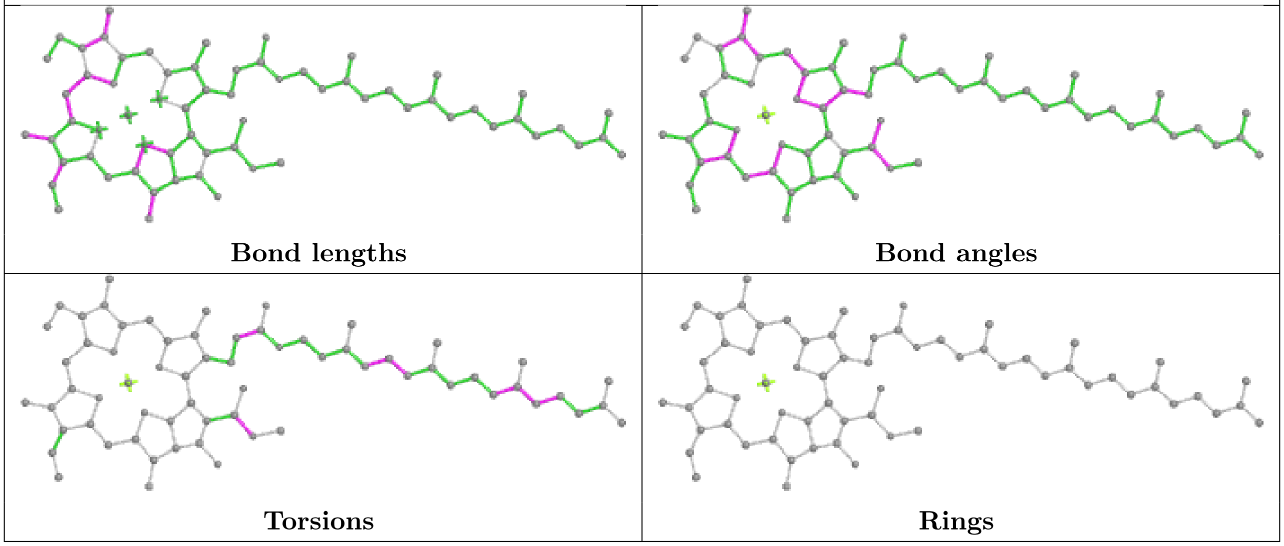

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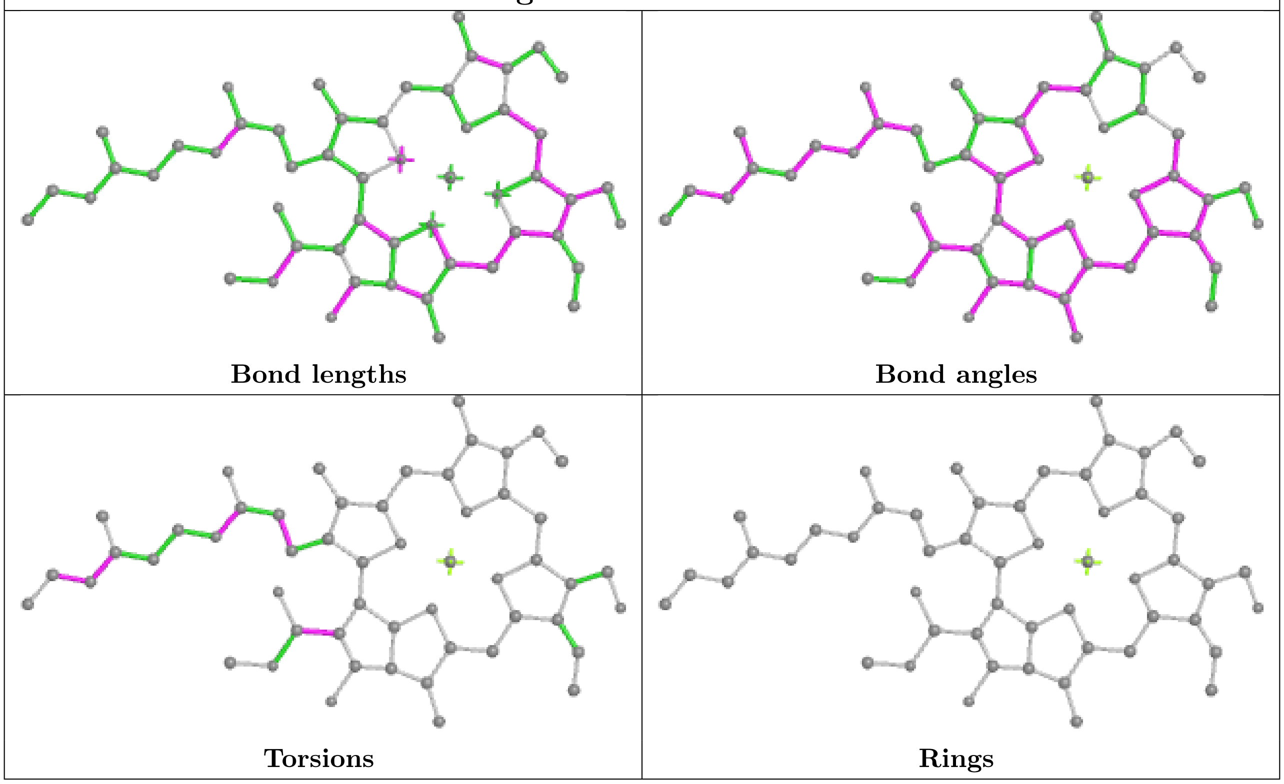

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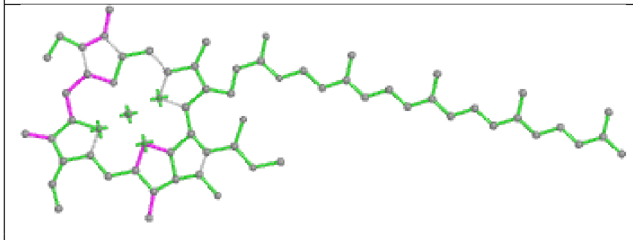
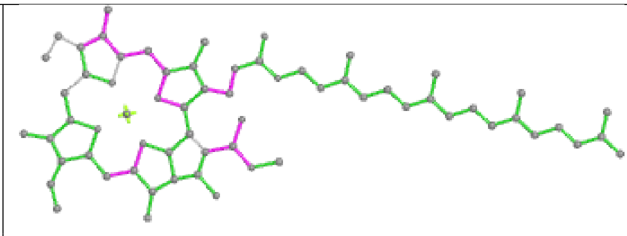
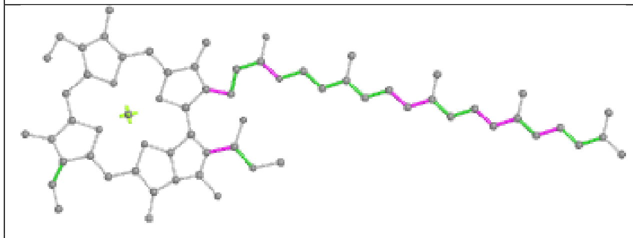


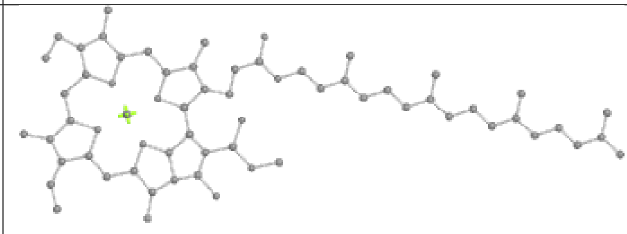
Bond lengths



Bond angles

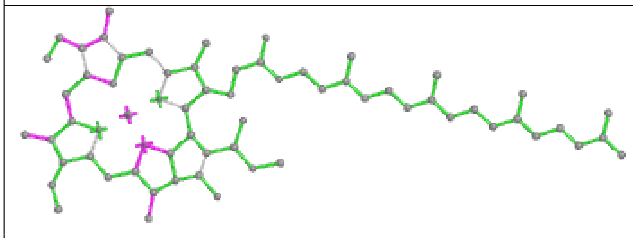


Torsions



Rings

Ligand CLA BB 811



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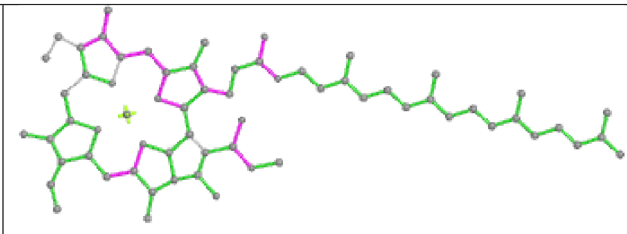
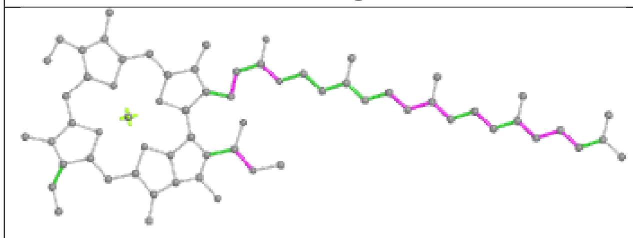
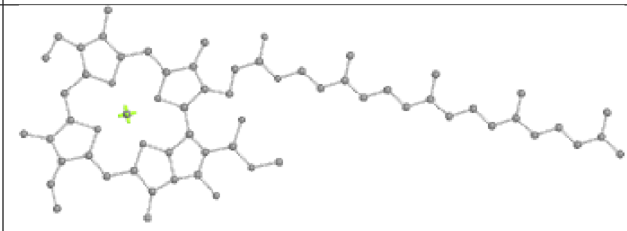


Bond angles

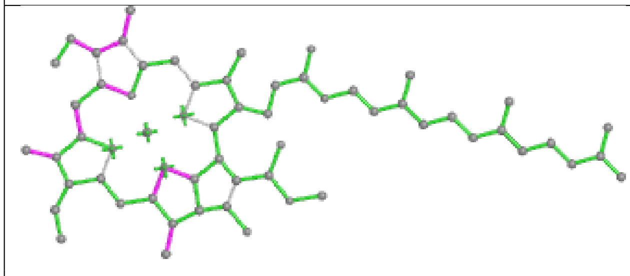


Torsions

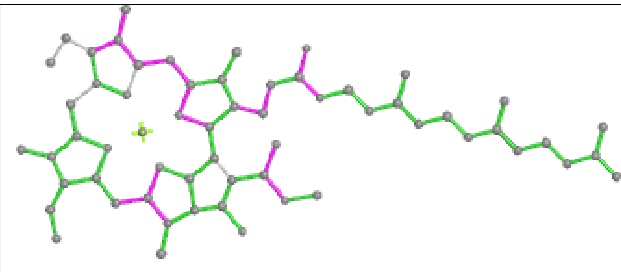


Rings

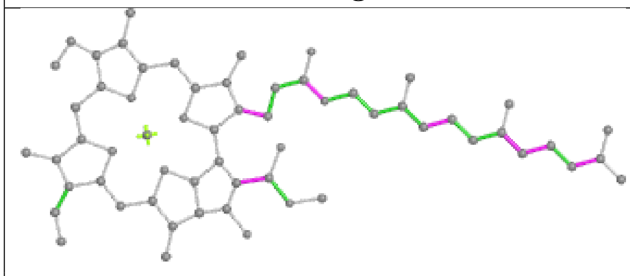
Ligand CLA AL 304



Bond lengths



Bond angles



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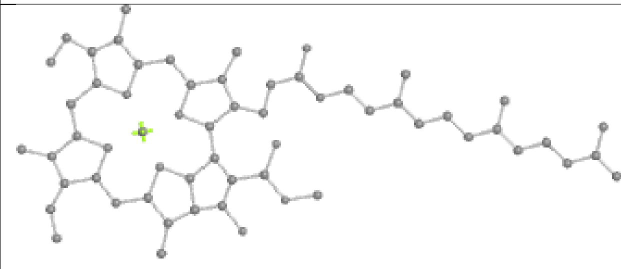
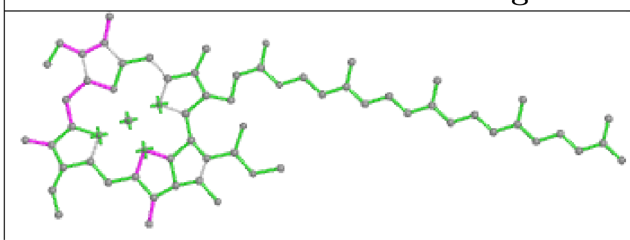


Rings

Ligand CLA AA 834



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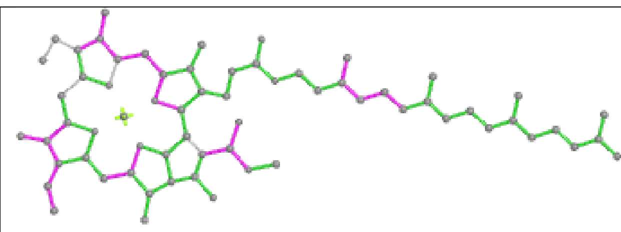
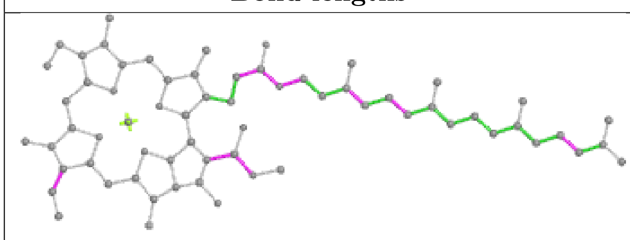


Bond angles



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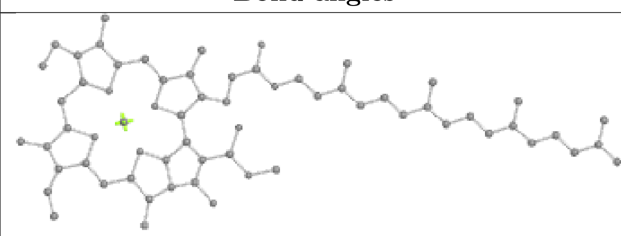
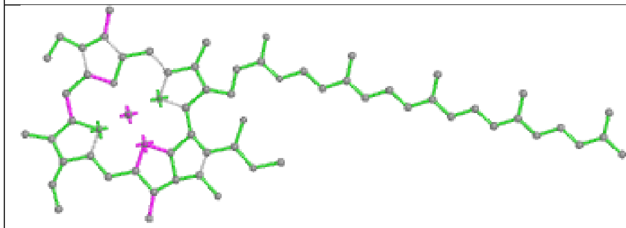
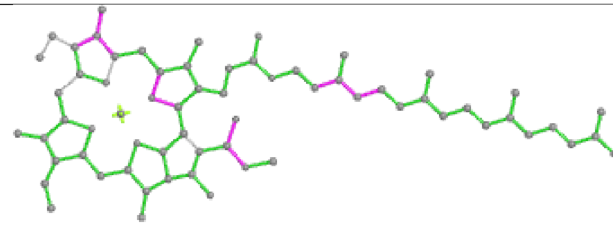
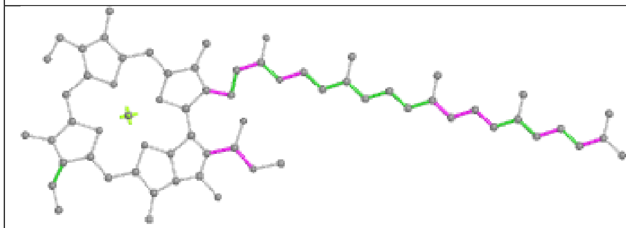


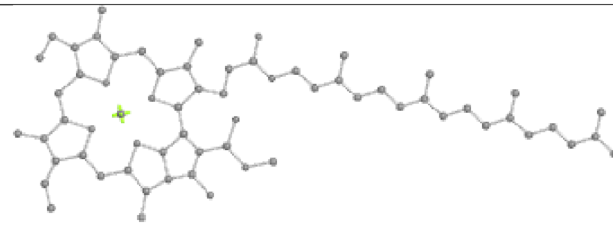
Rings

Ligand CLA BA 825


Bond lengths


Bond angles


Torsions


Rings

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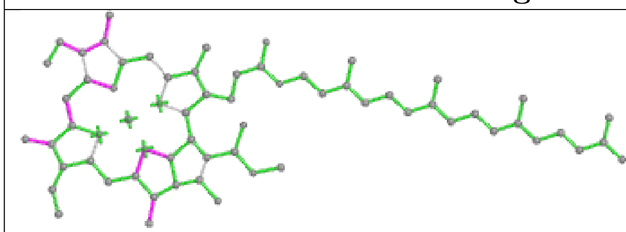
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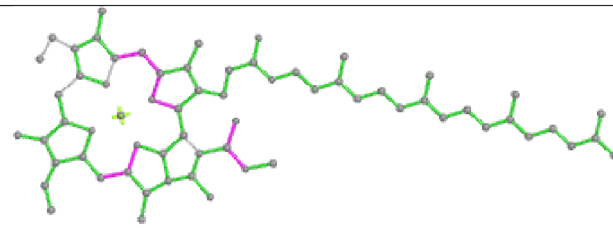
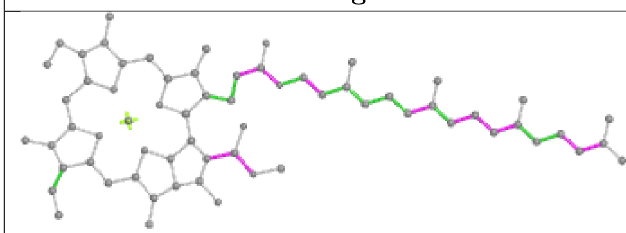

Bond angles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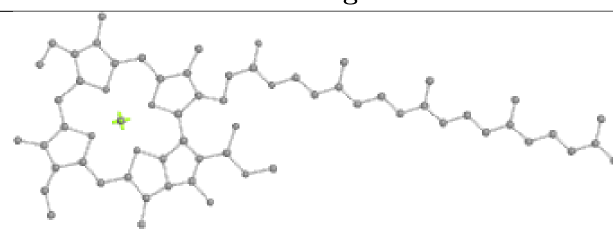
Rings

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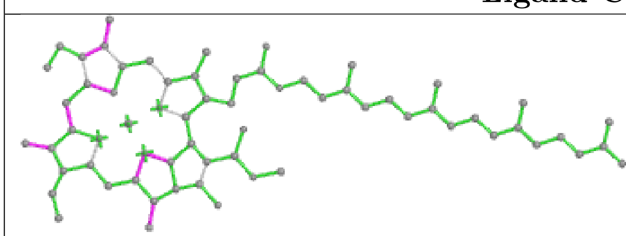
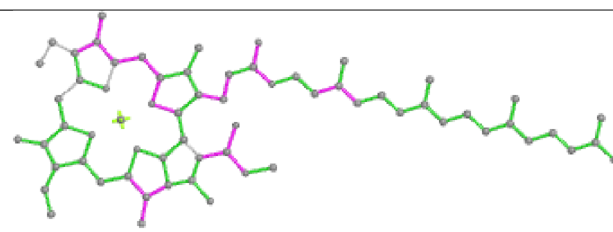
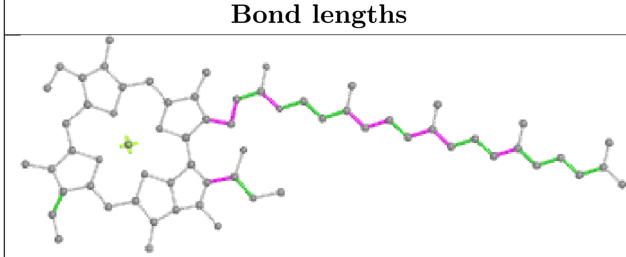
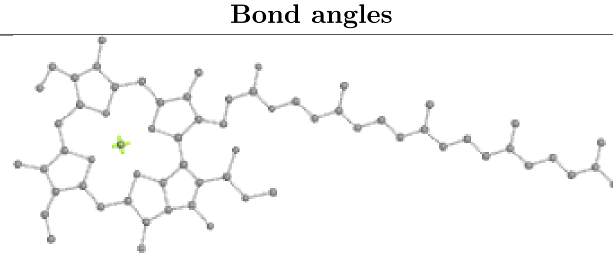
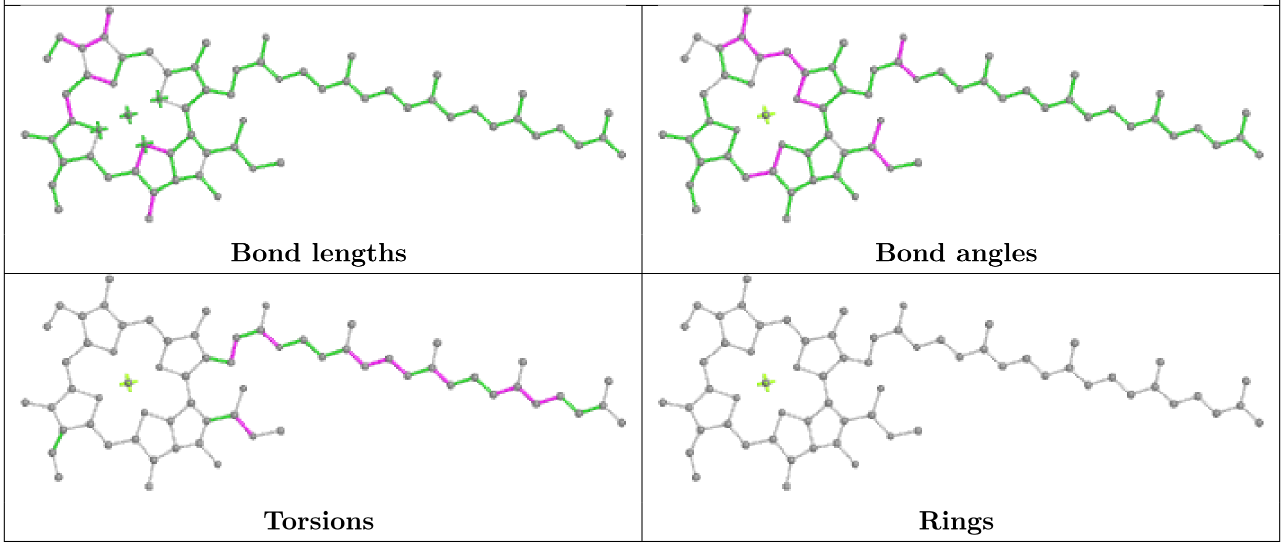

Bond lengths


Bond angles

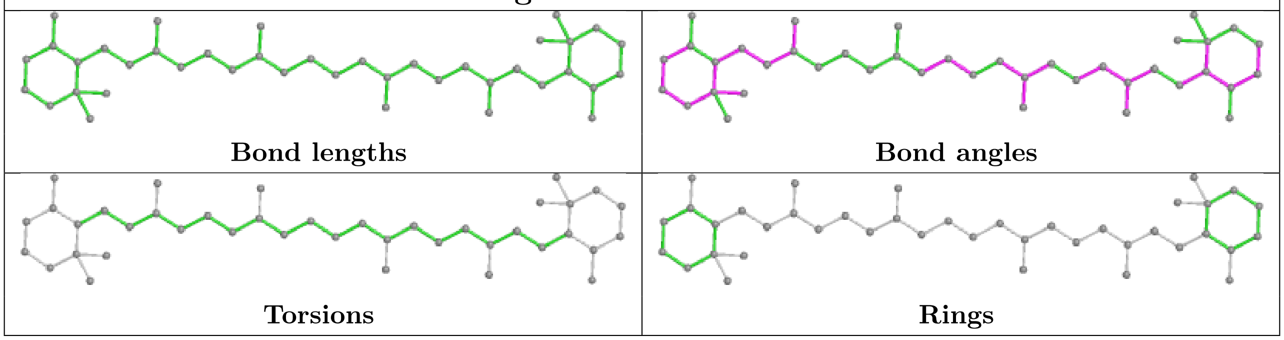

Torsions


Rings

Ligand CLA BA 840



Ligand BCR BJ 101



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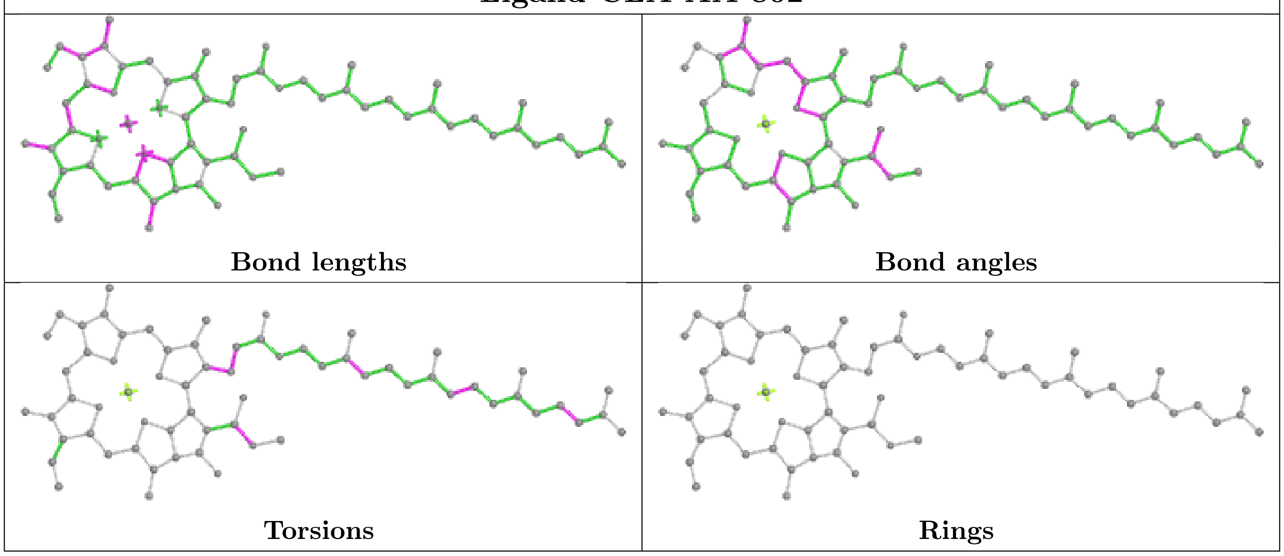
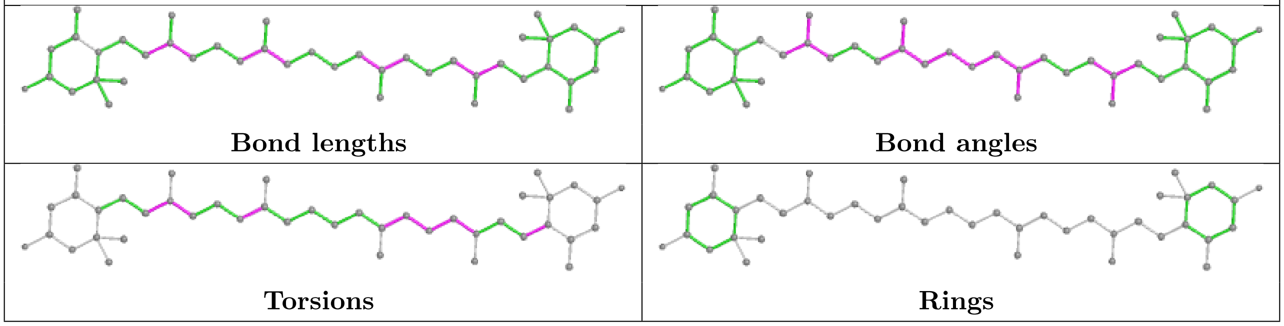
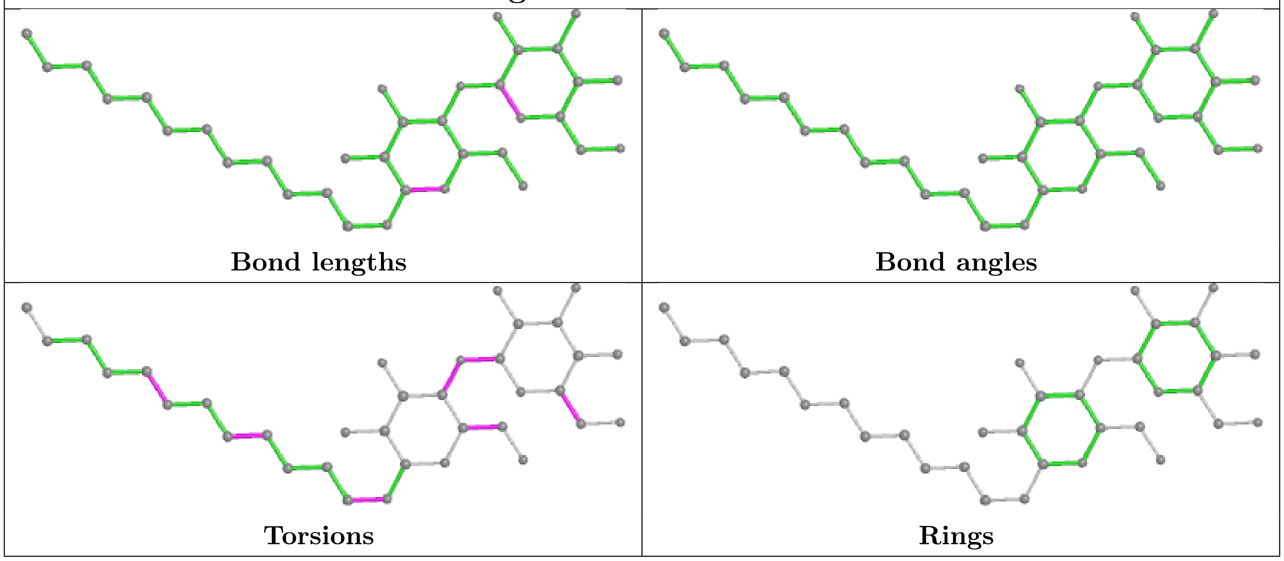


Ligand LUT B1 316



Ligand LMU BB 851



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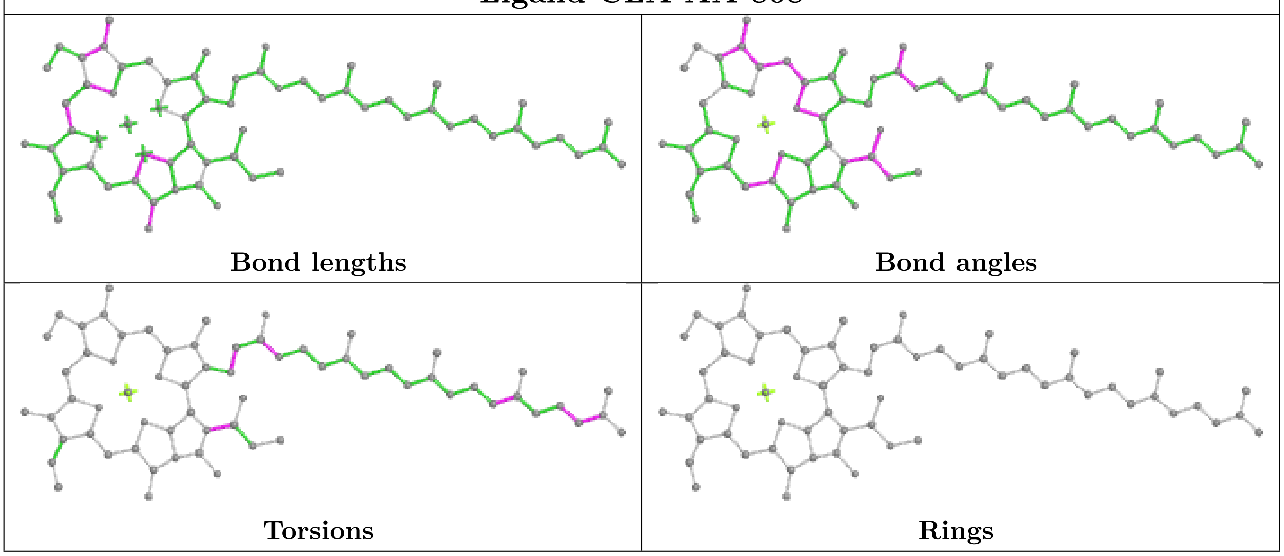

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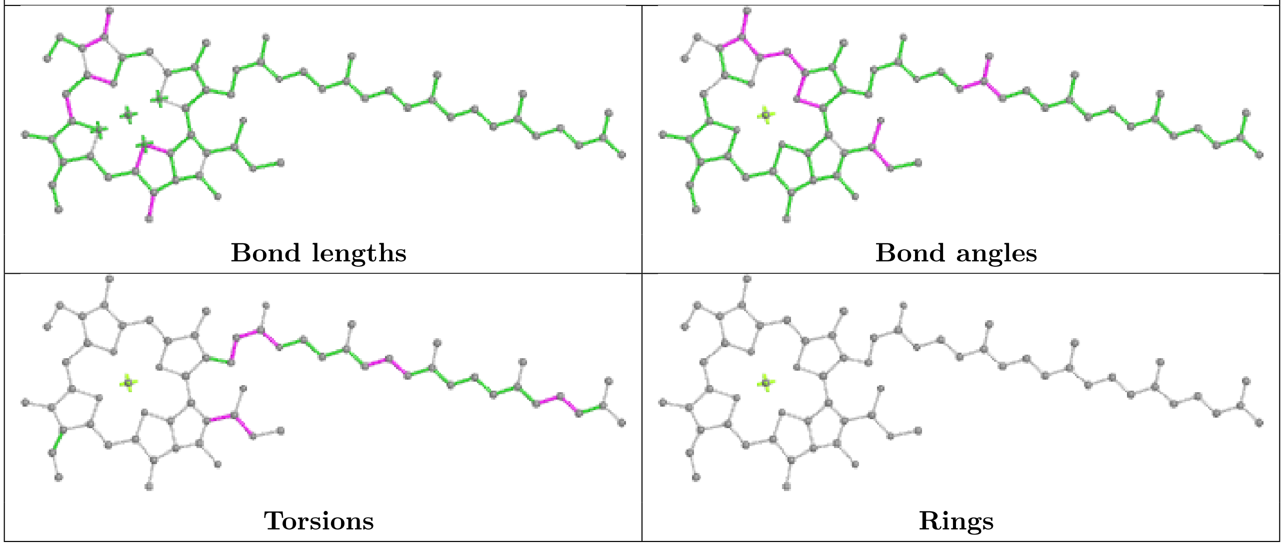
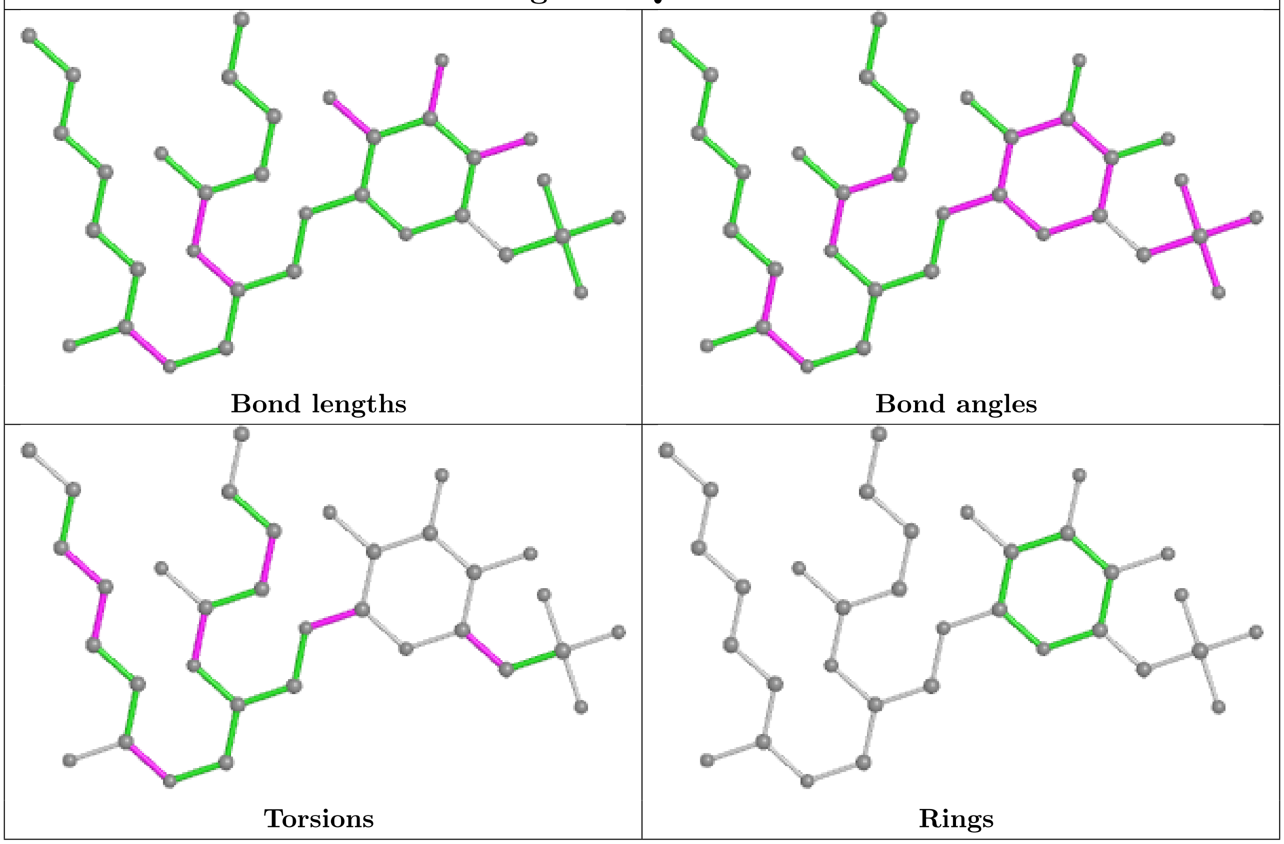
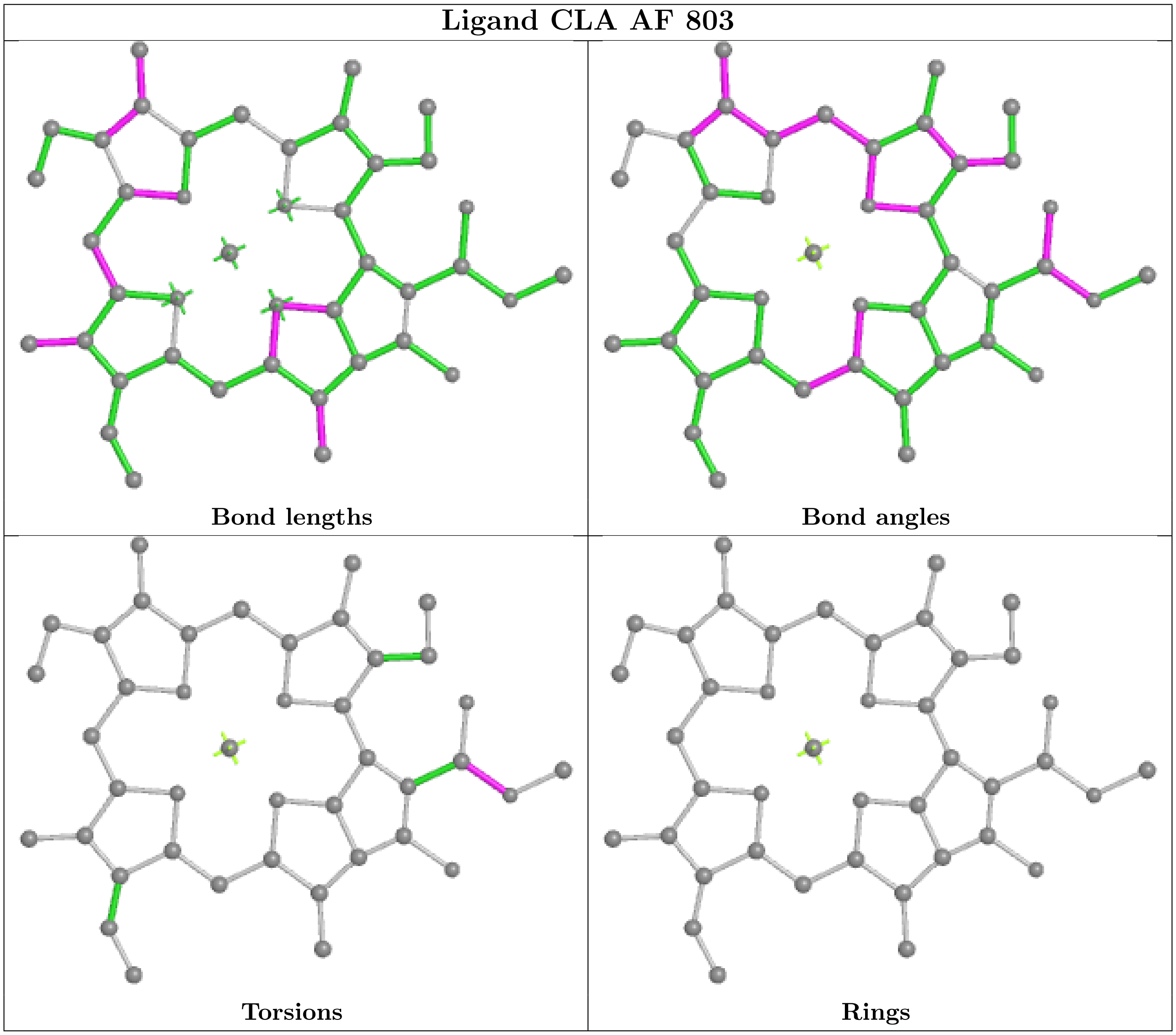
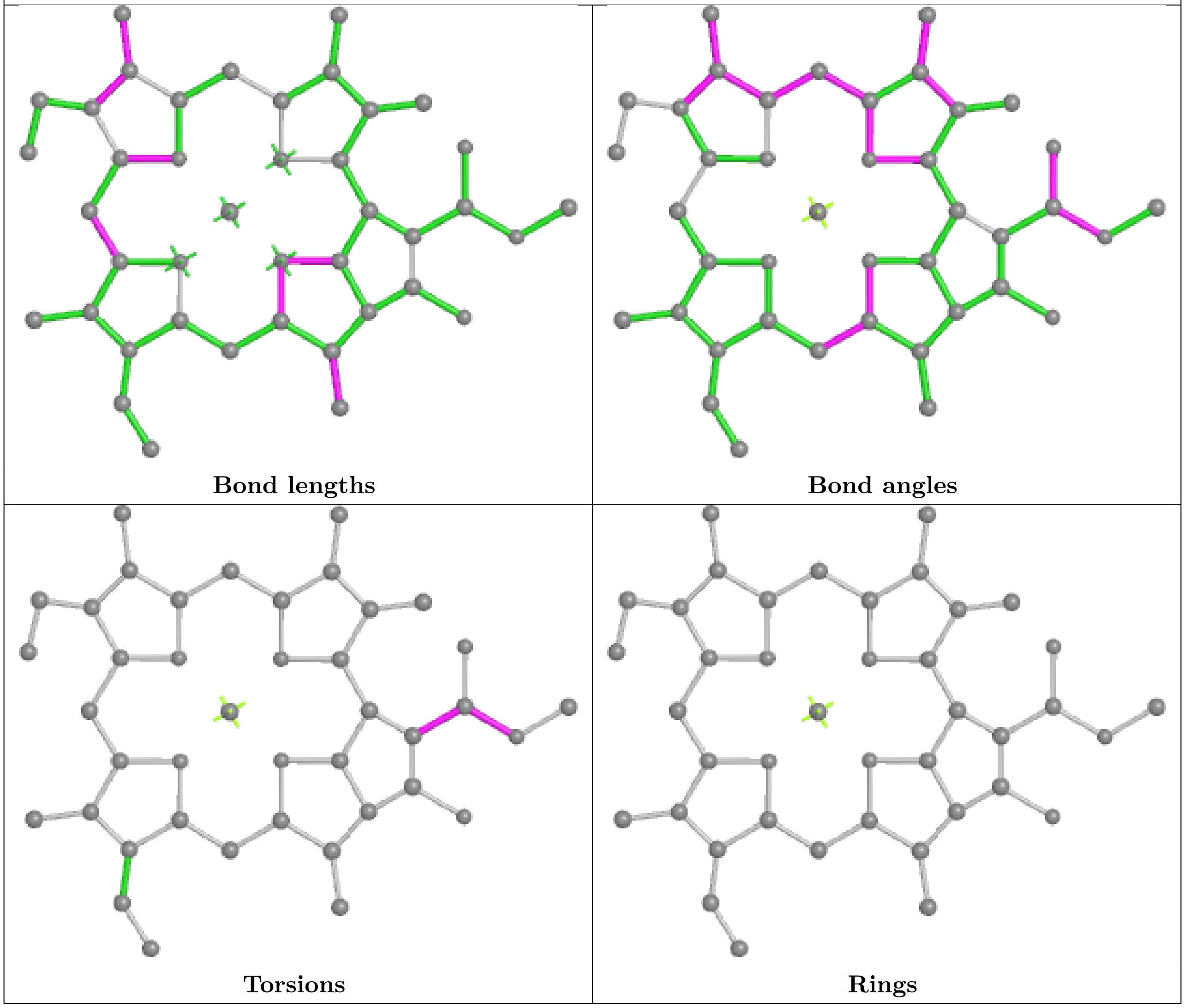


Ligand SQD e 301

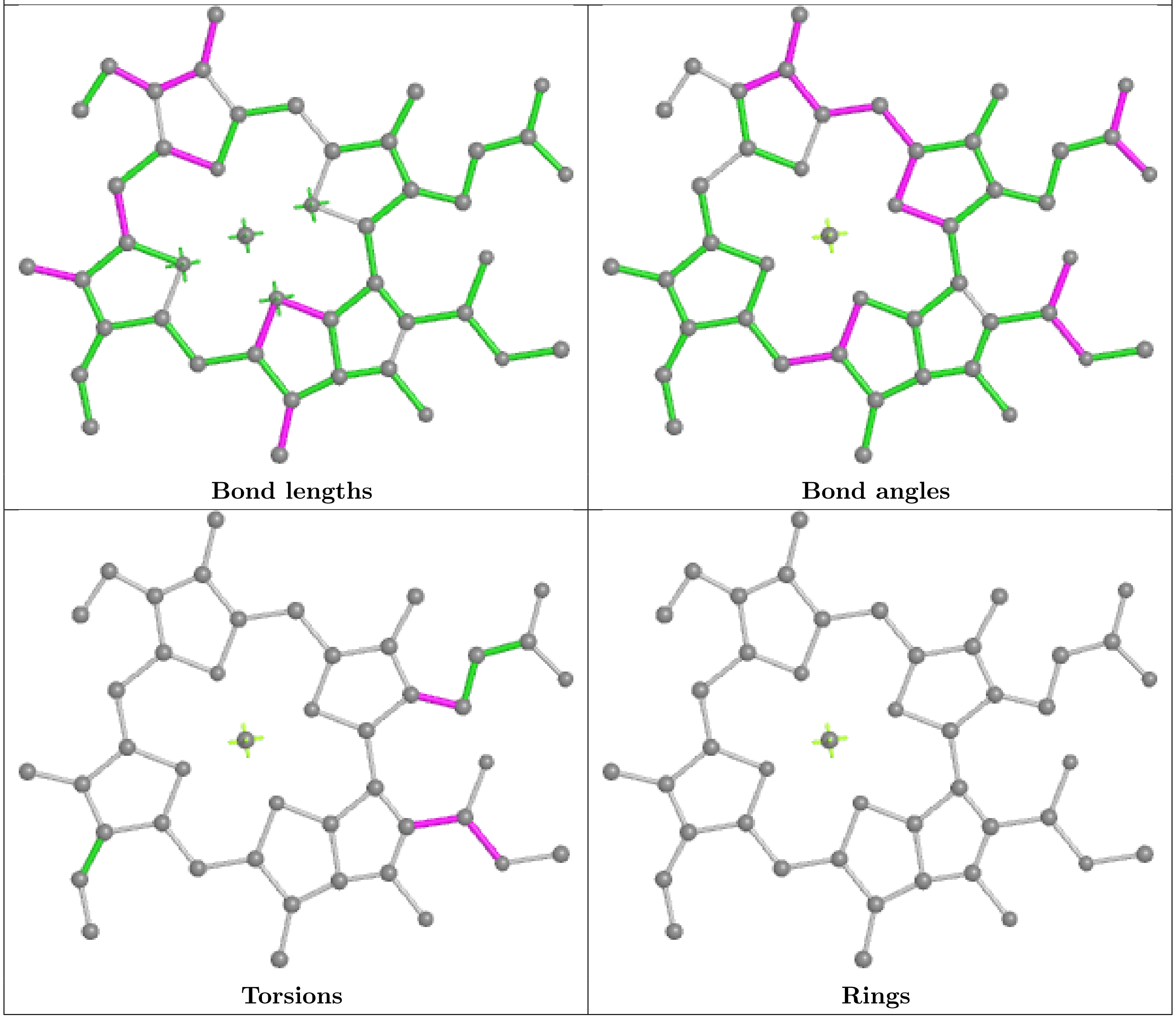



Ligand CLA AF 803
Bond lengths
Bond angles
Torsions
Rings

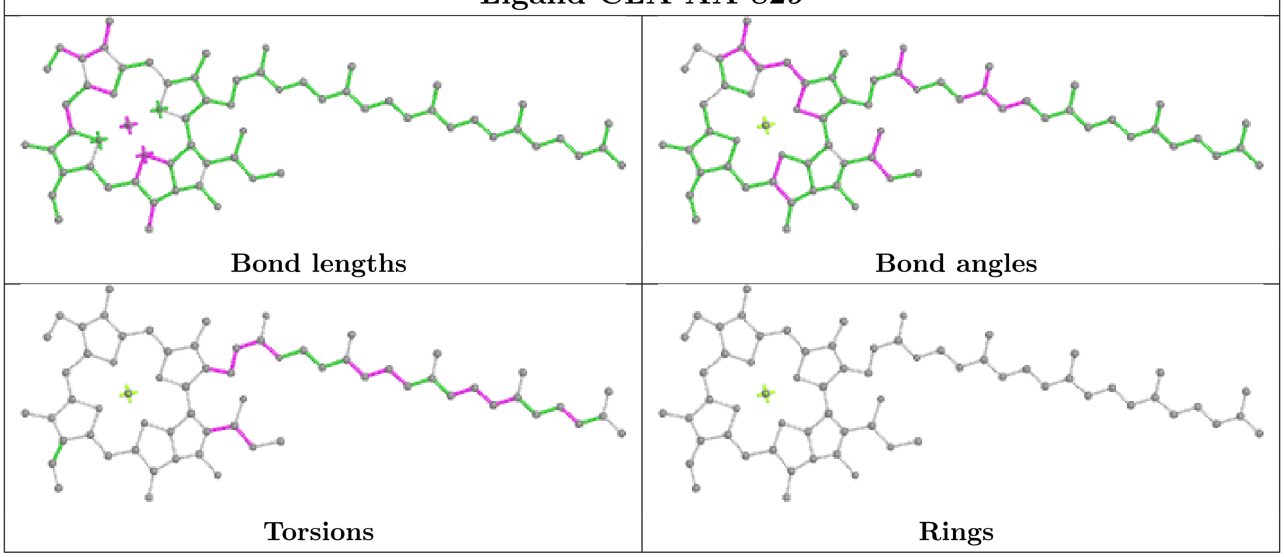
Ligand CLA AL 303



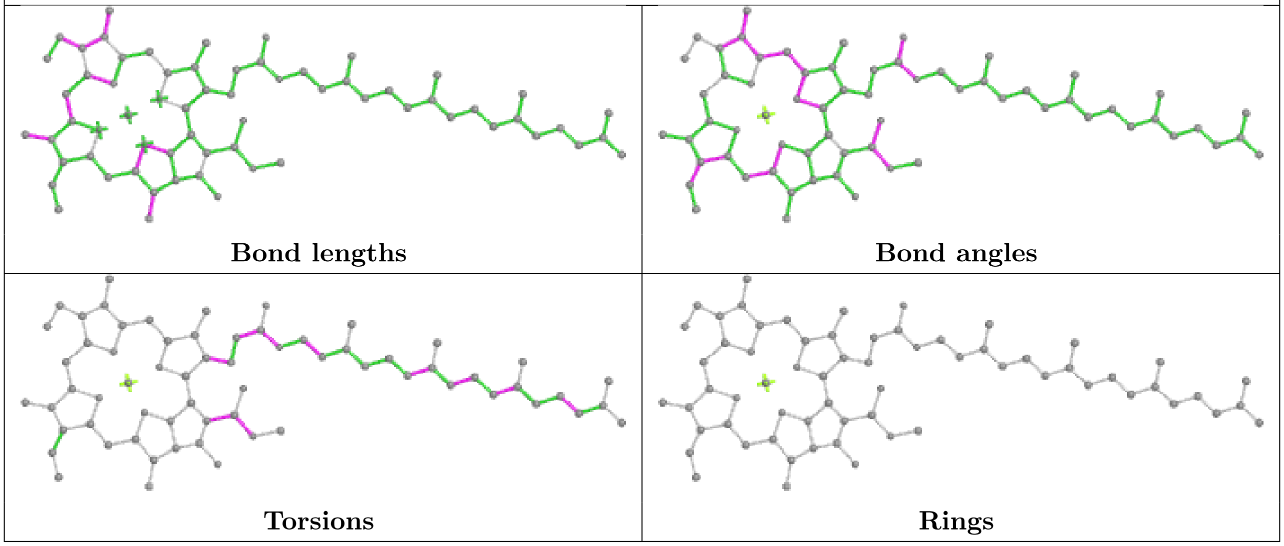
Ligand CLA BA 814



Ligand CLA AA 829



Ligand CLA AB 834



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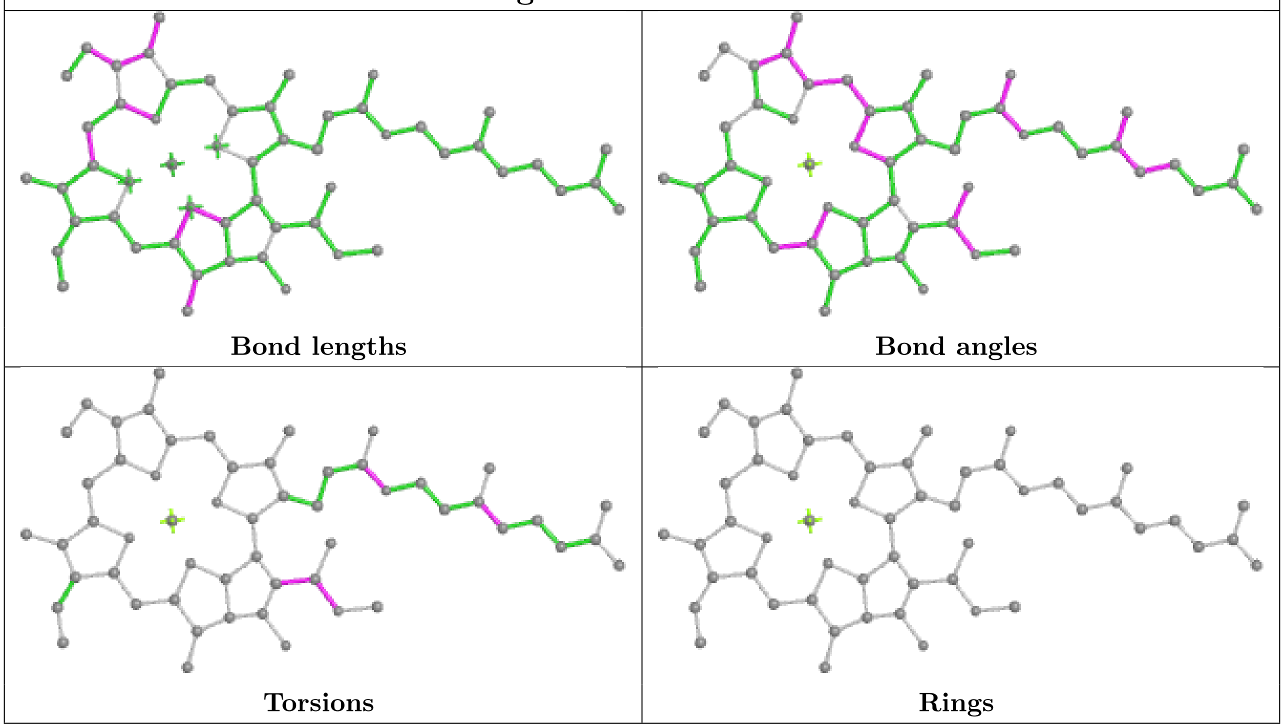
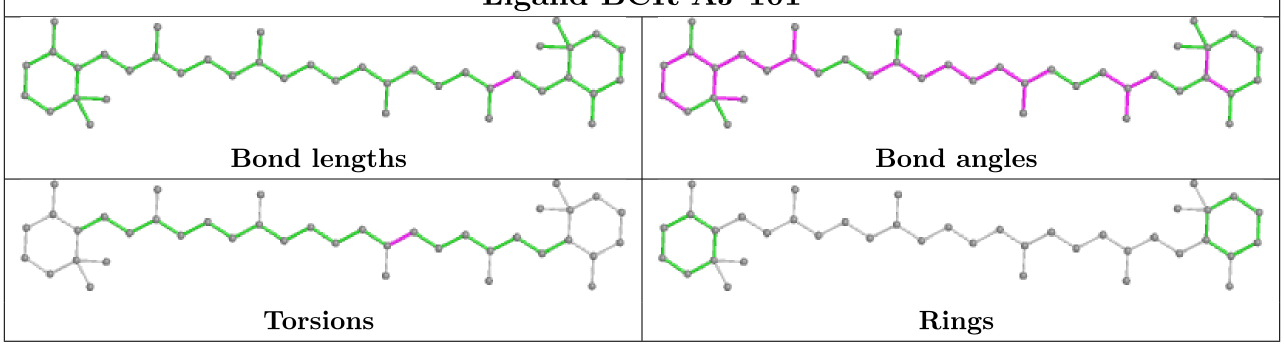
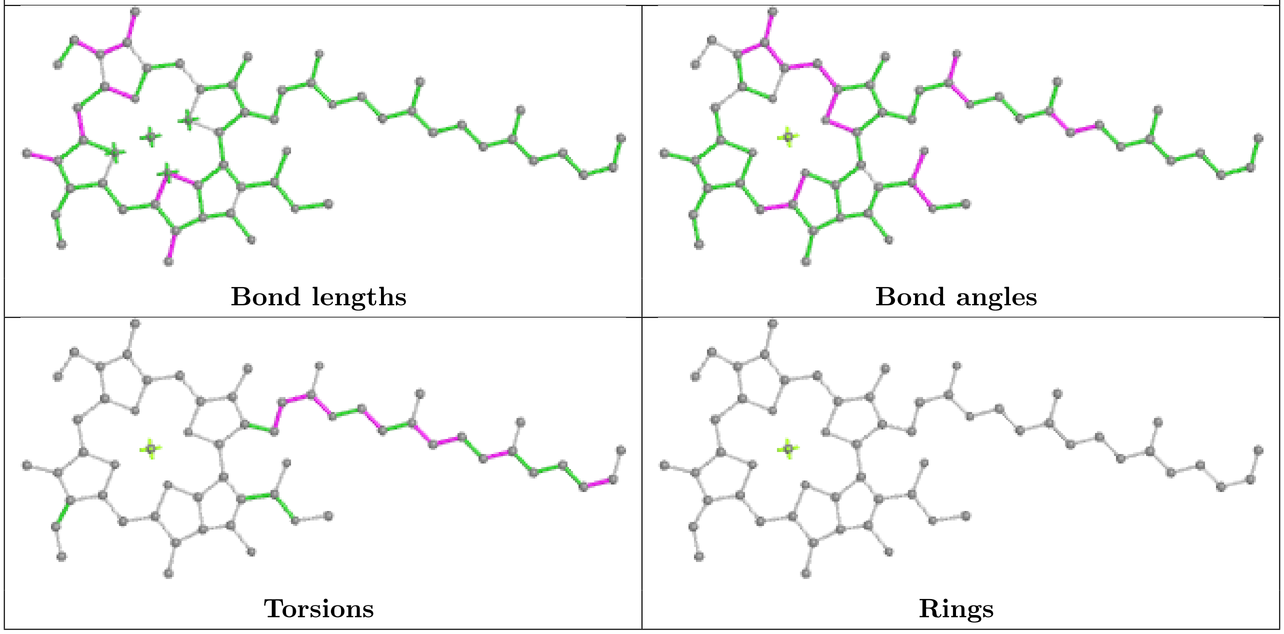


Ligand BCR AJ 101



Ligand CLA BB 819



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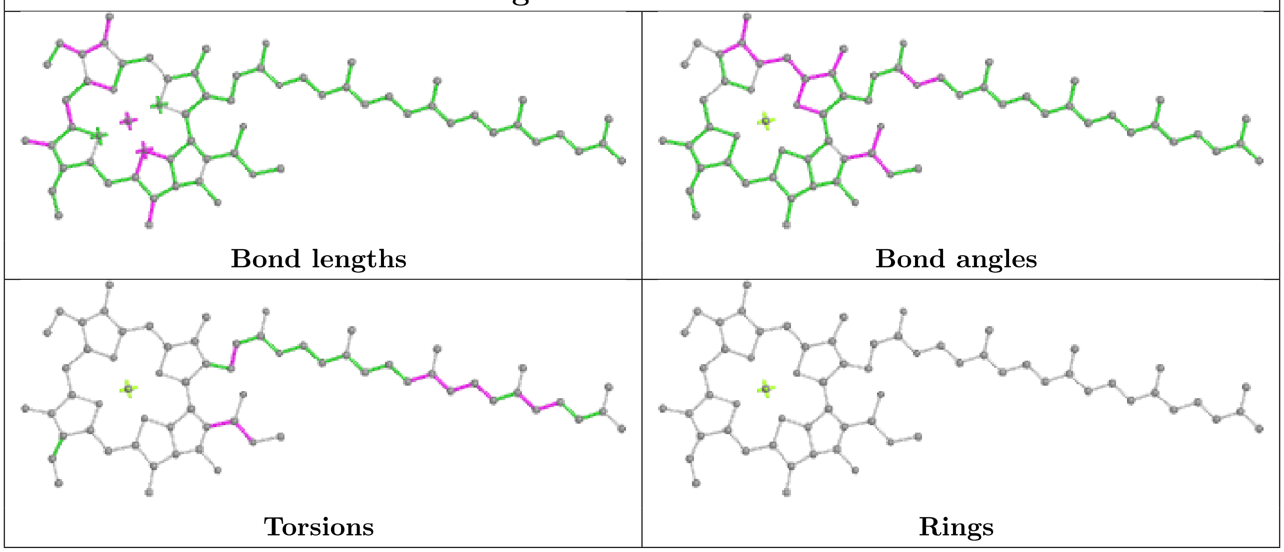
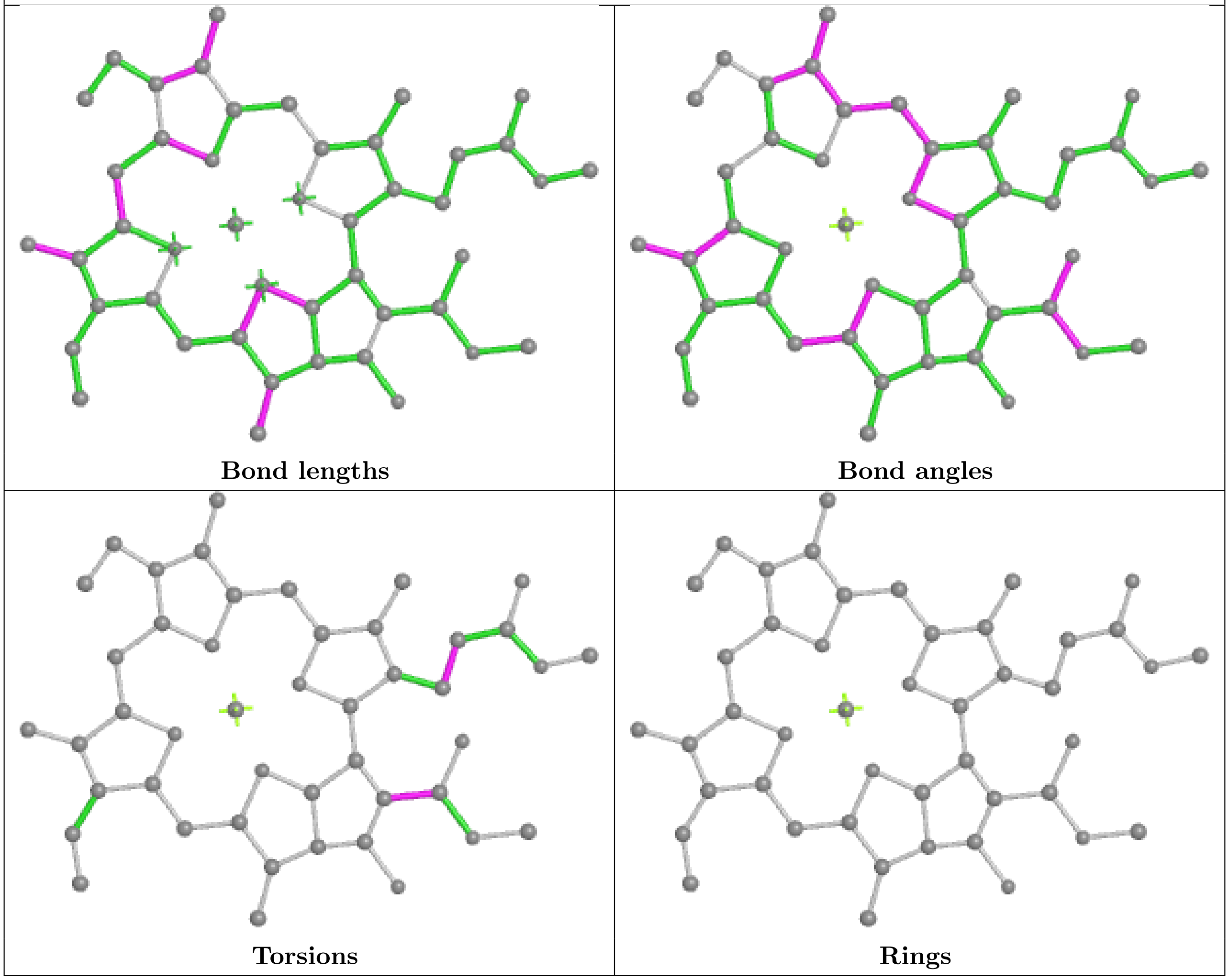
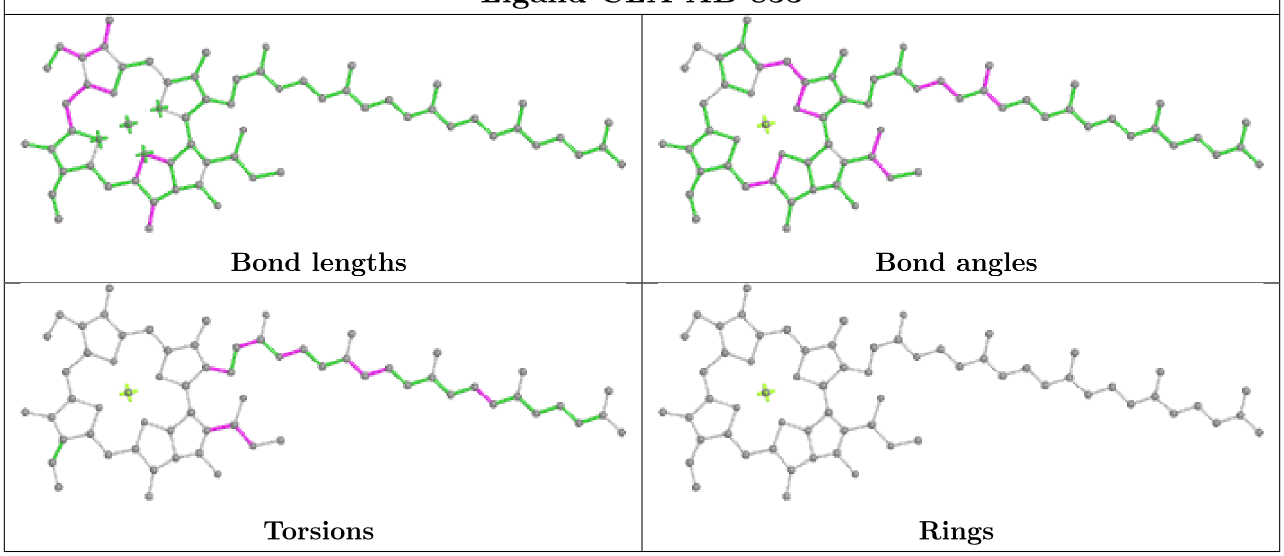


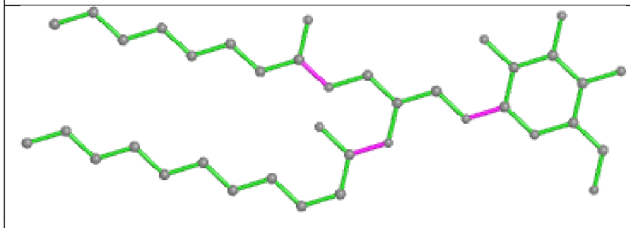
Ligand CLA A6 601



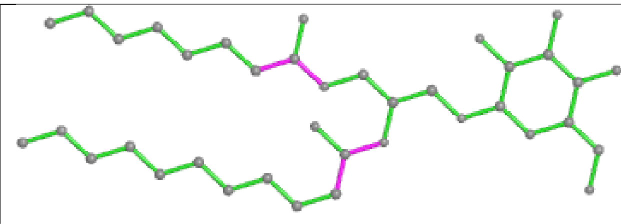
Ligand CLA AB 833



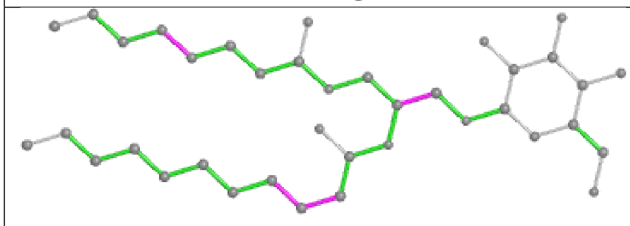
Ligand LMG AG 202



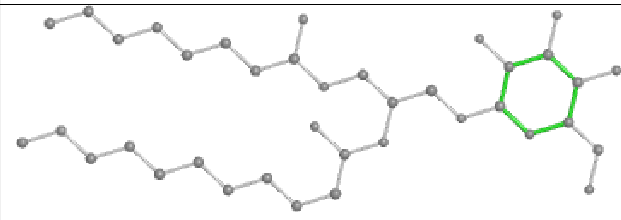
Bond lengths



Bond angles

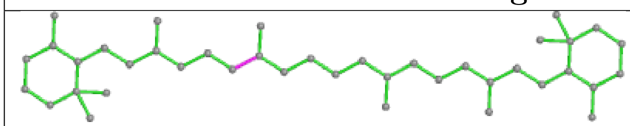


Torsions

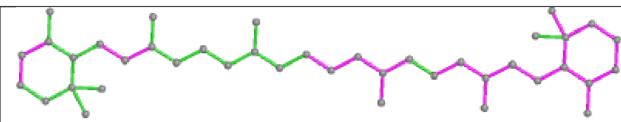


Rings

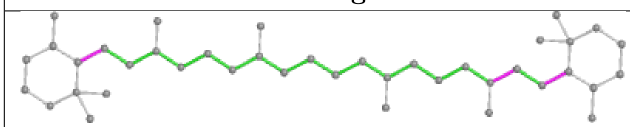
Ligand BCR BA 856



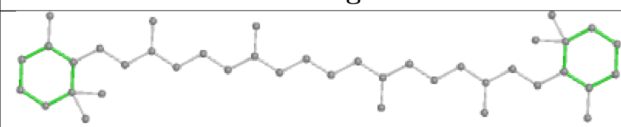
Bond lengths



Bond angles

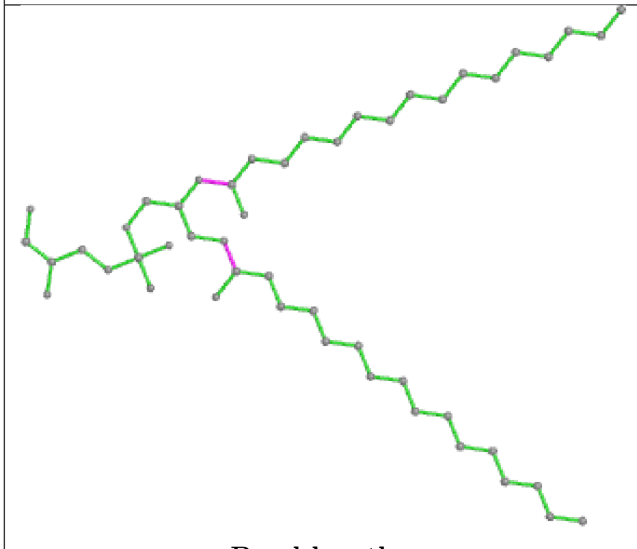


Torsions

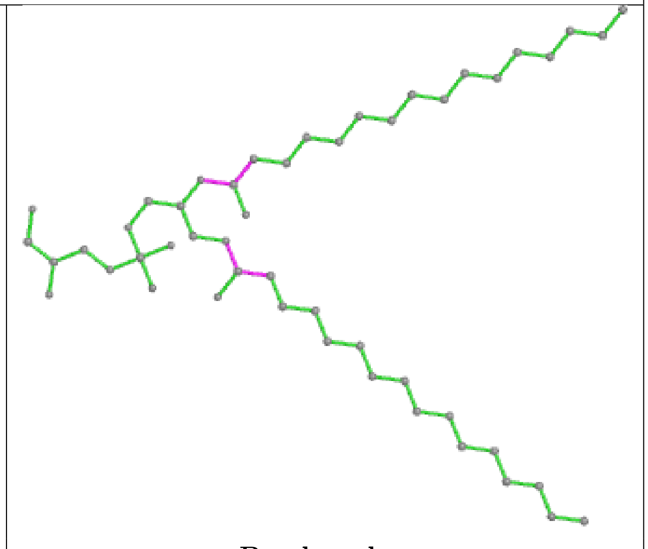


Rings

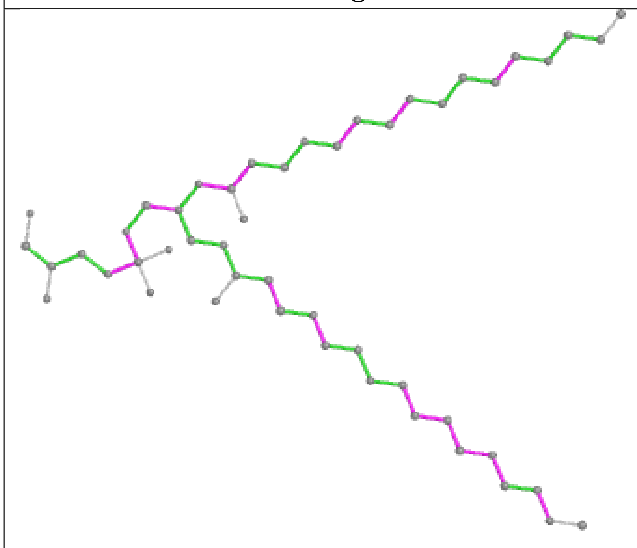
Ligand LHG AA 844



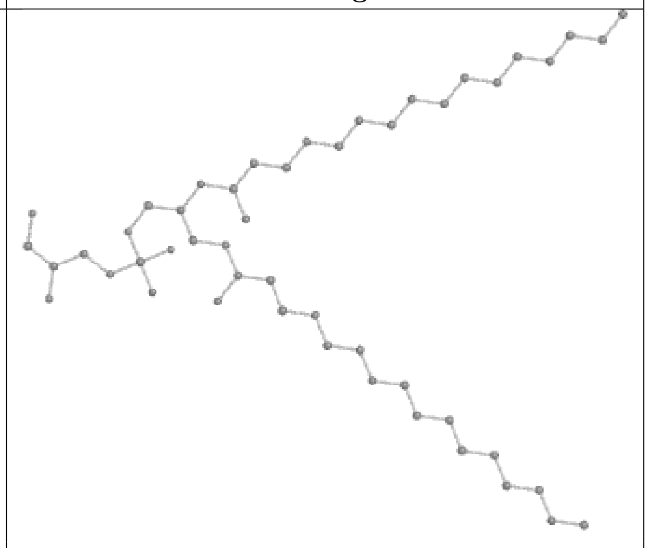
Bond lengths



Bond angles

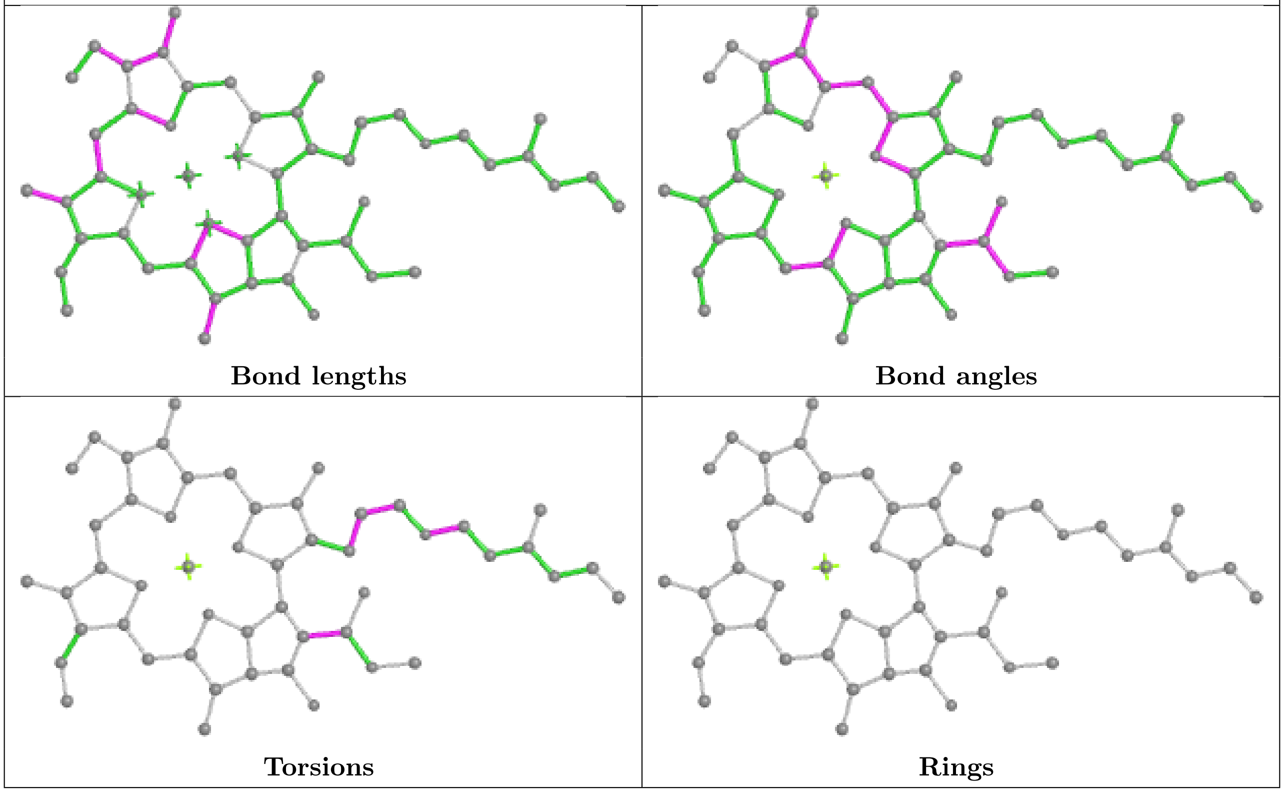


Torsions

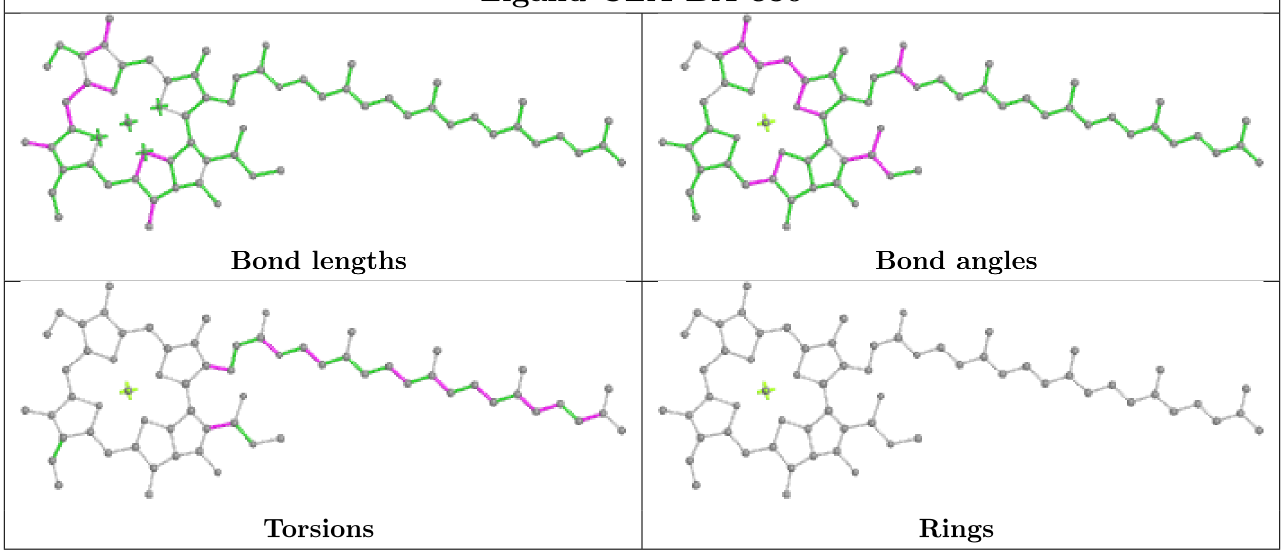


Rings

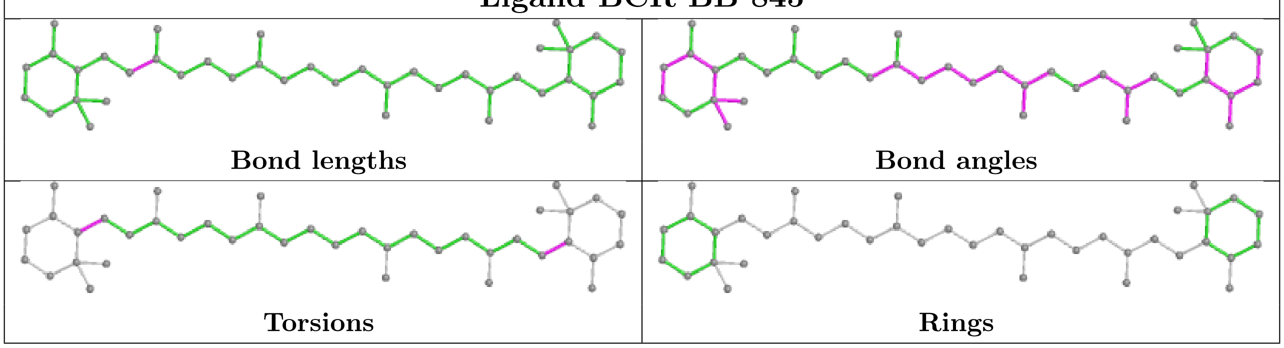
Ligand CLA AB 808



Ligand CLA BA 830



Ligand BCR BB 845



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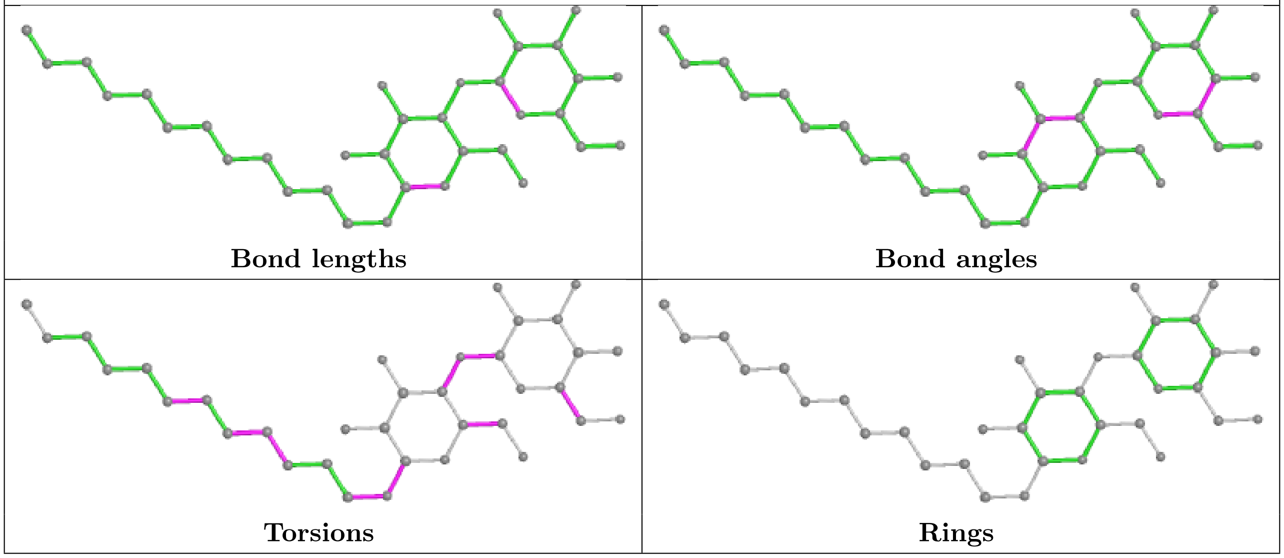

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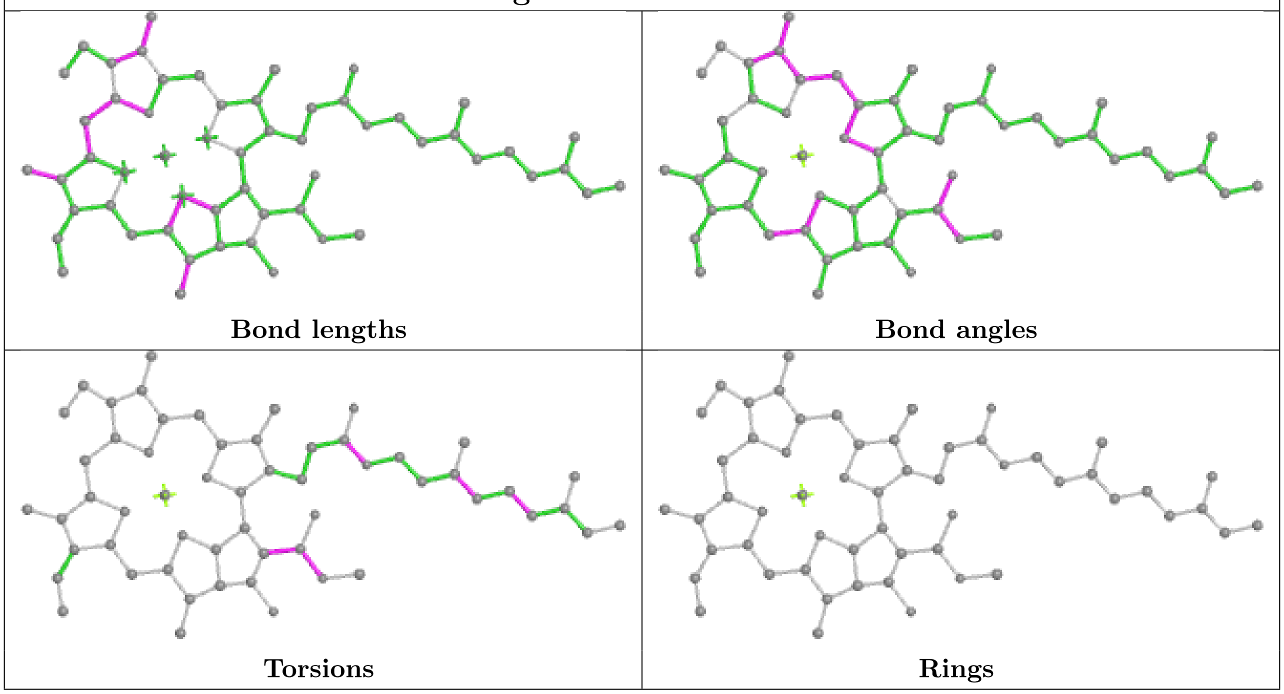

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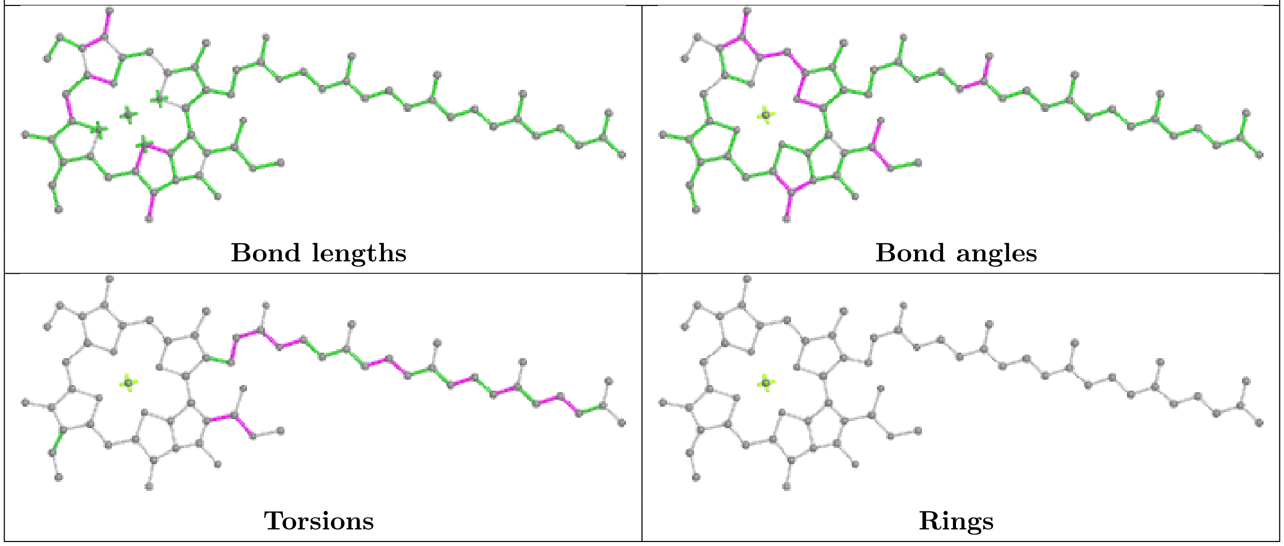

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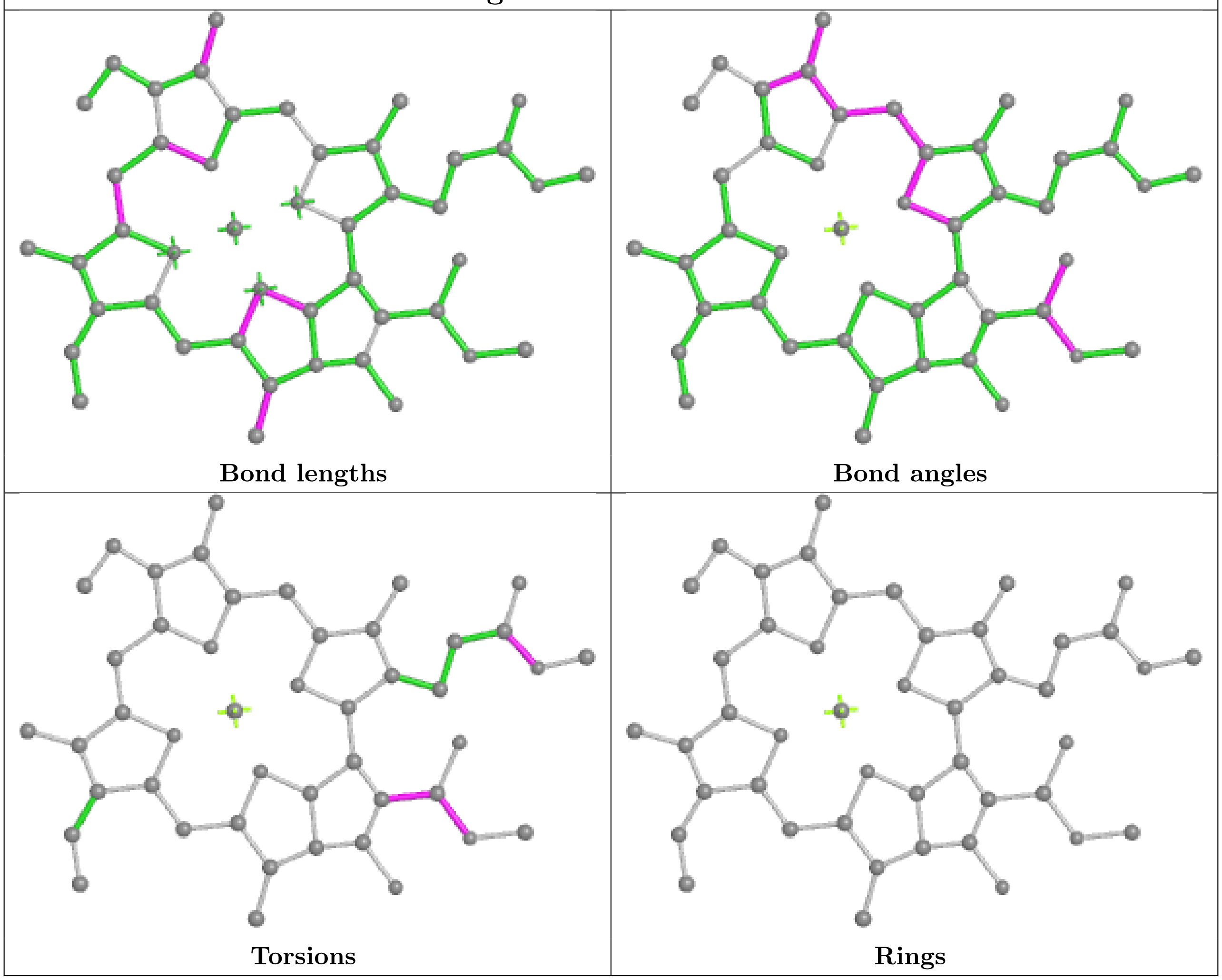

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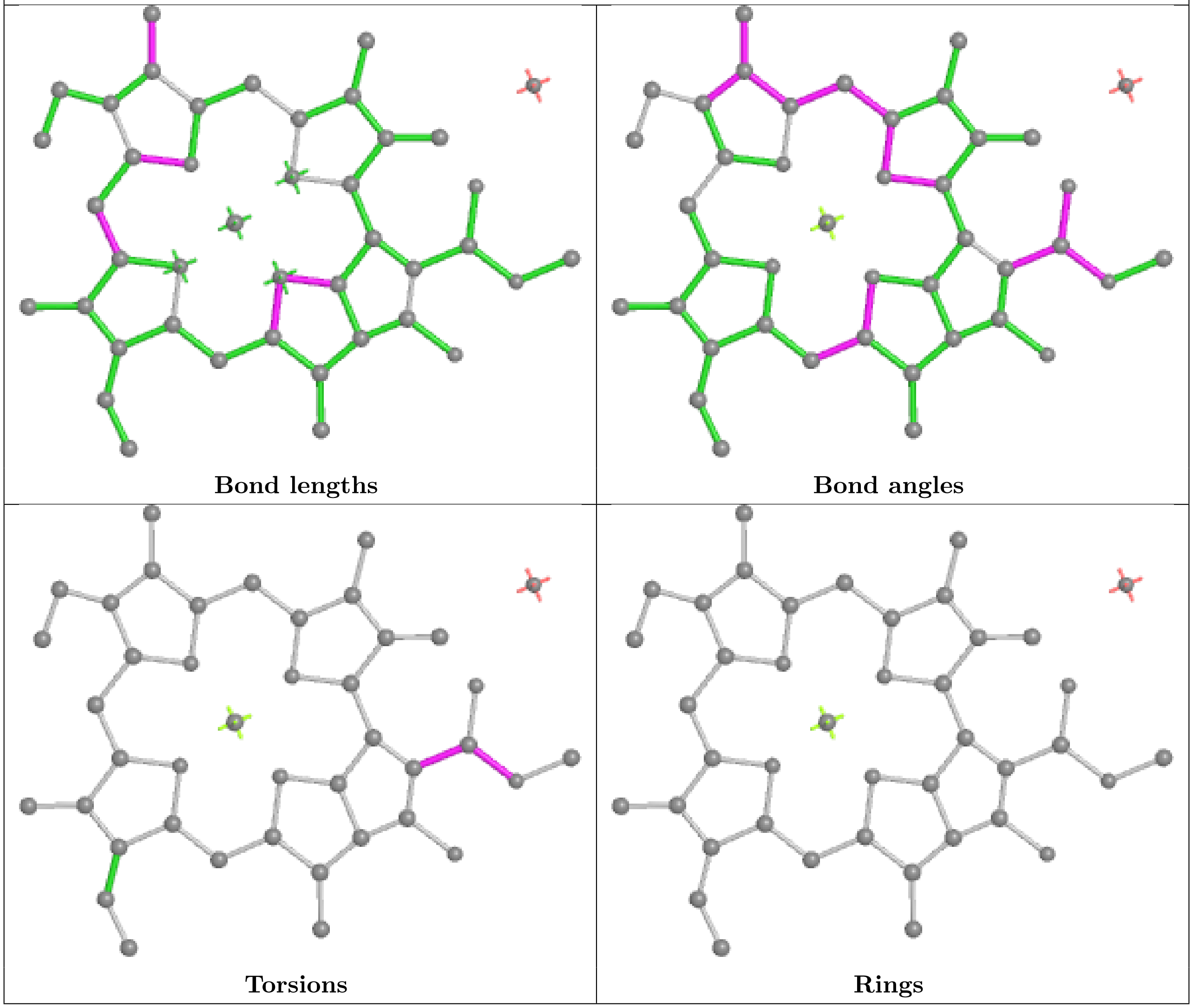

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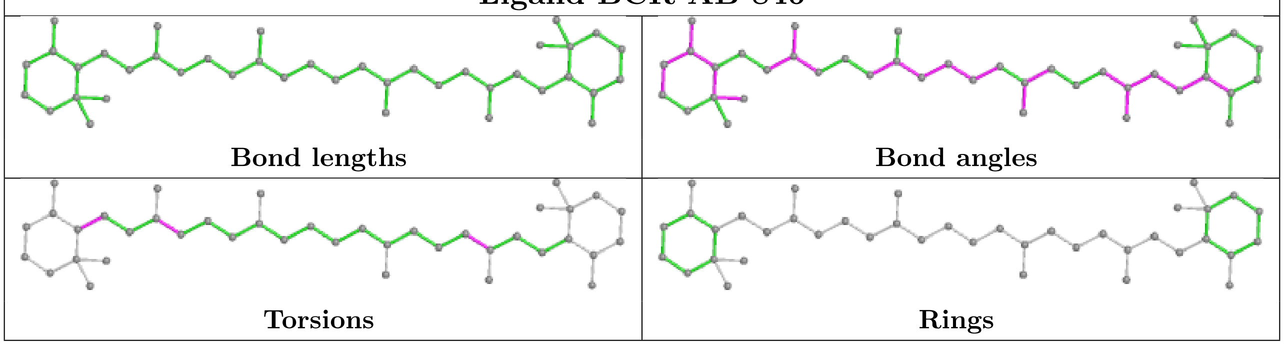
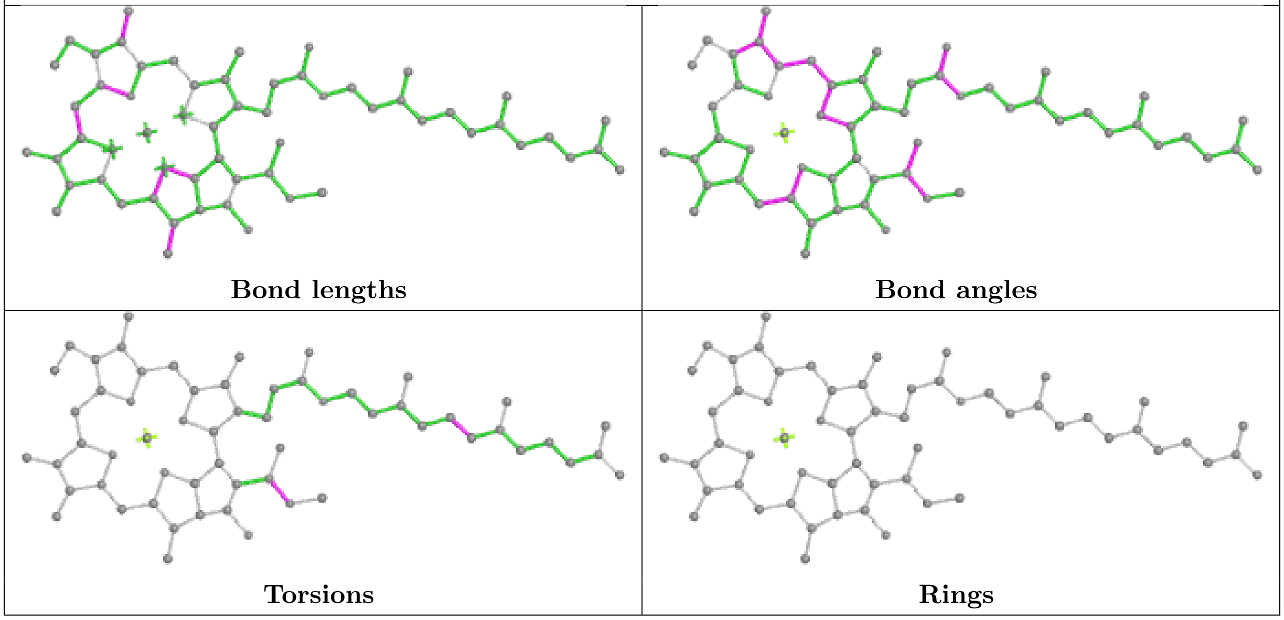
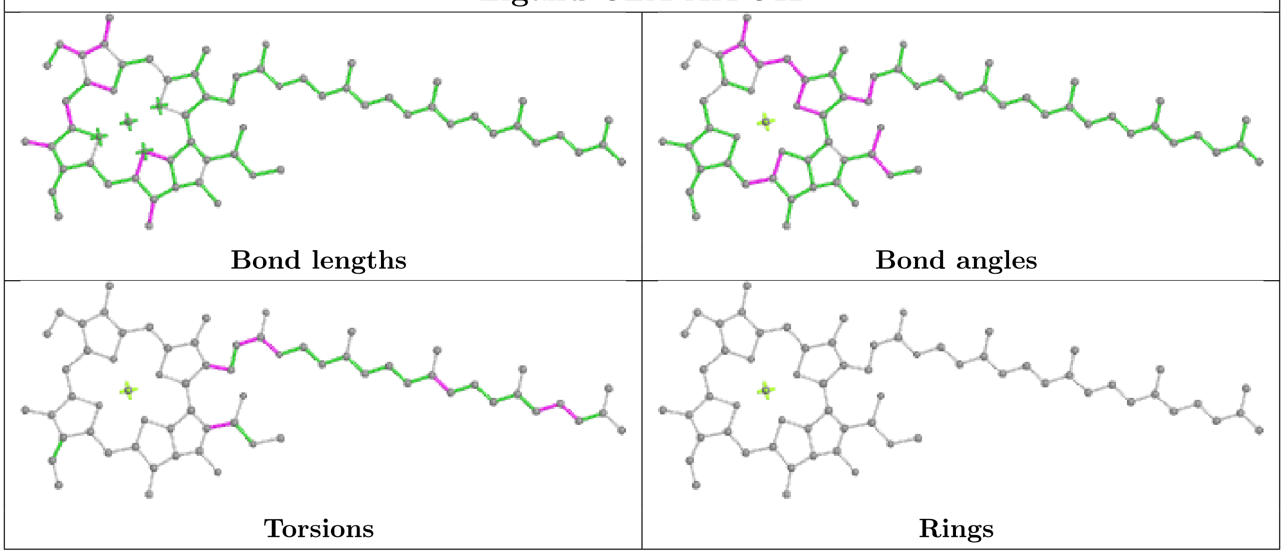


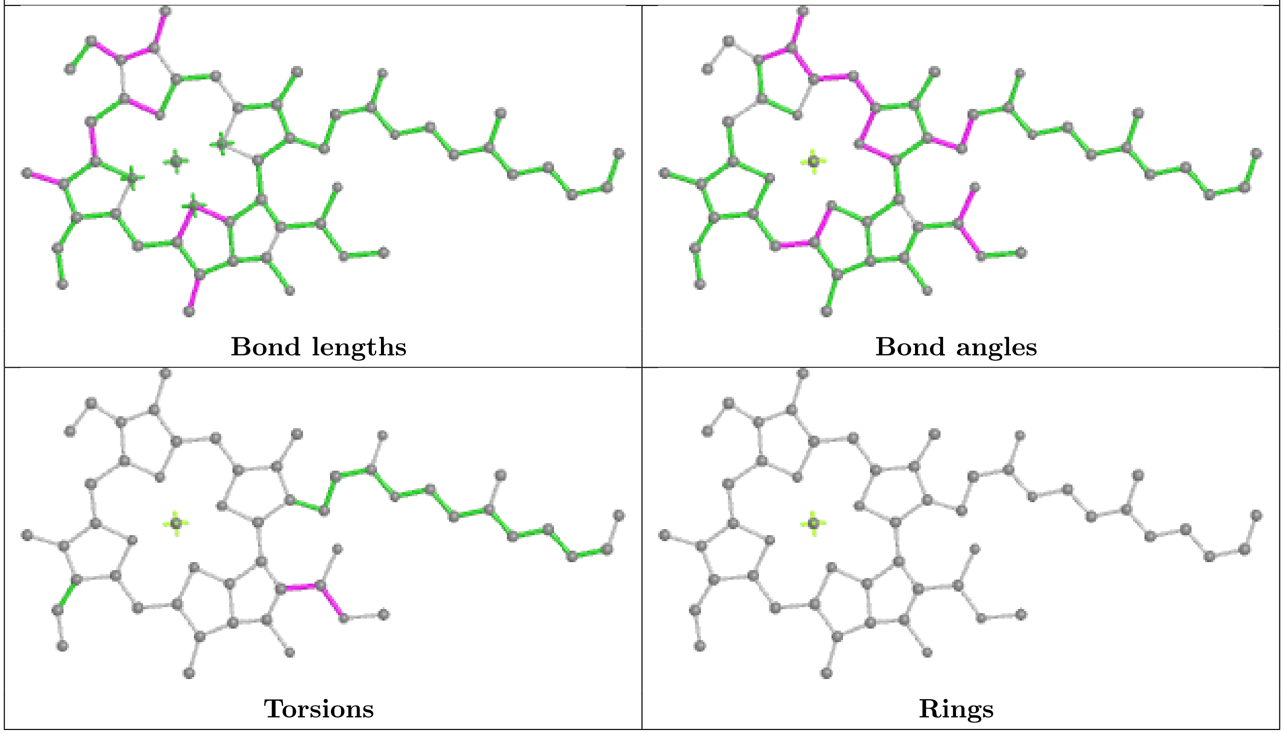
Ligand CLA B1 311



Ligand CLA AA 841



Ligand CLA B5 609



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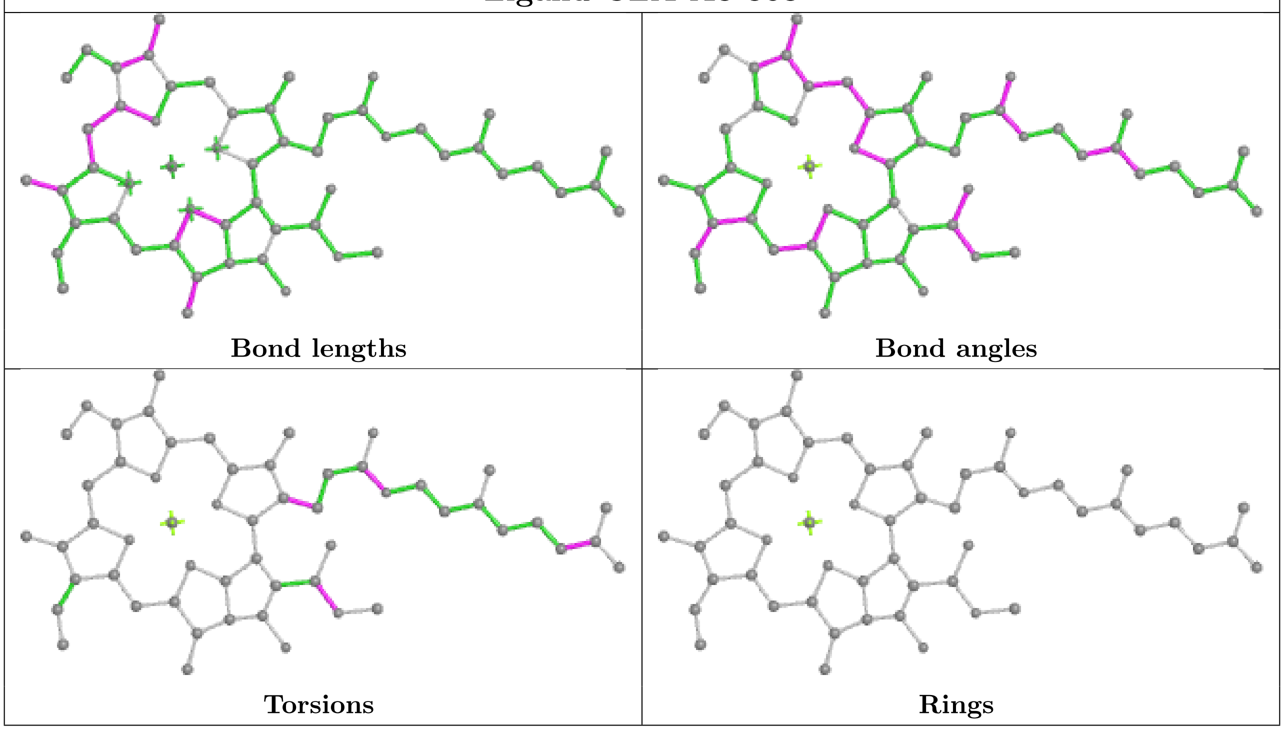
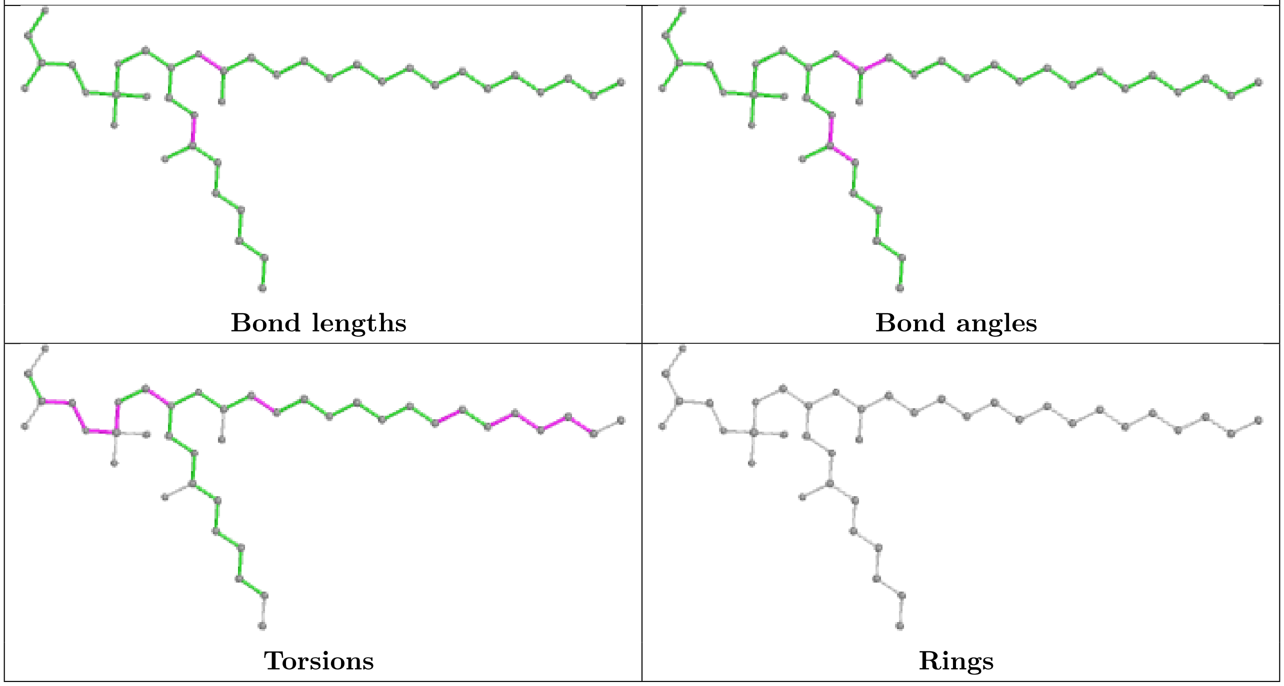


Ligand LHG AJ 104



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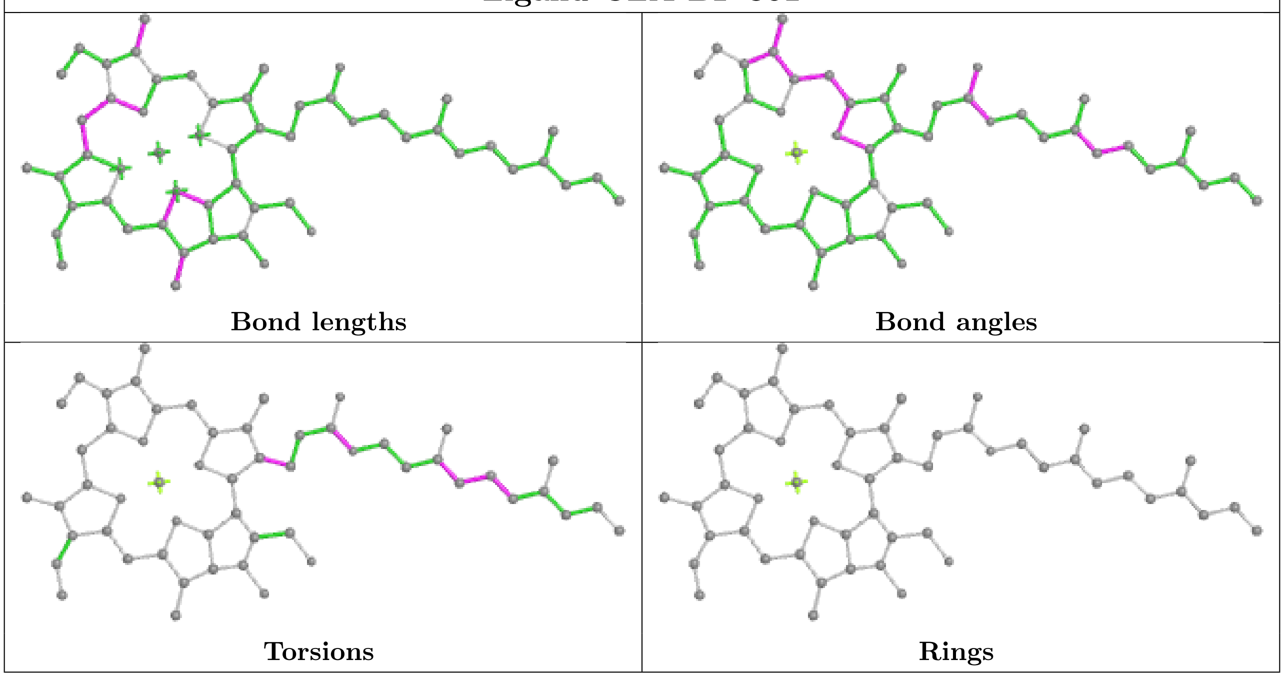

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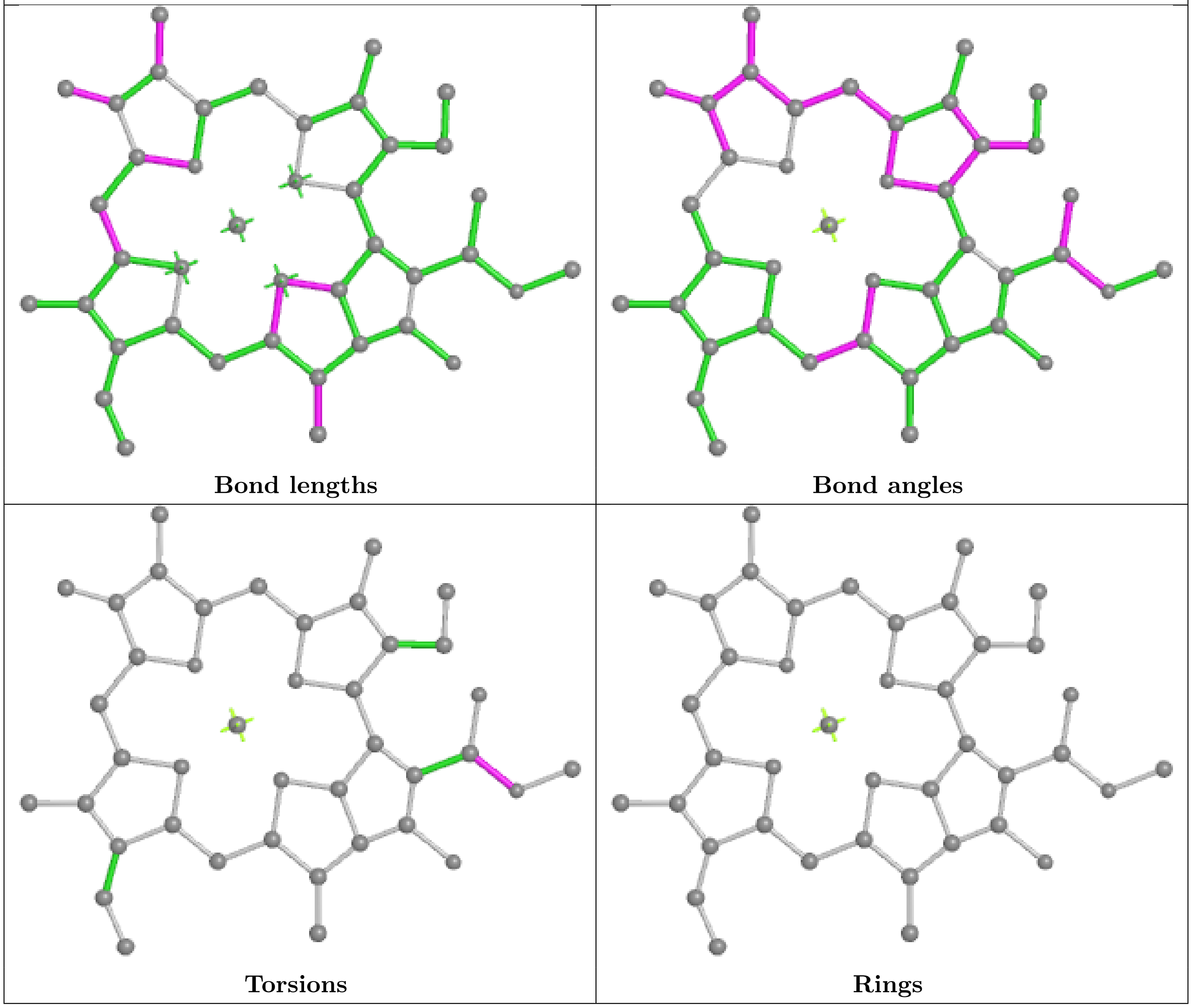

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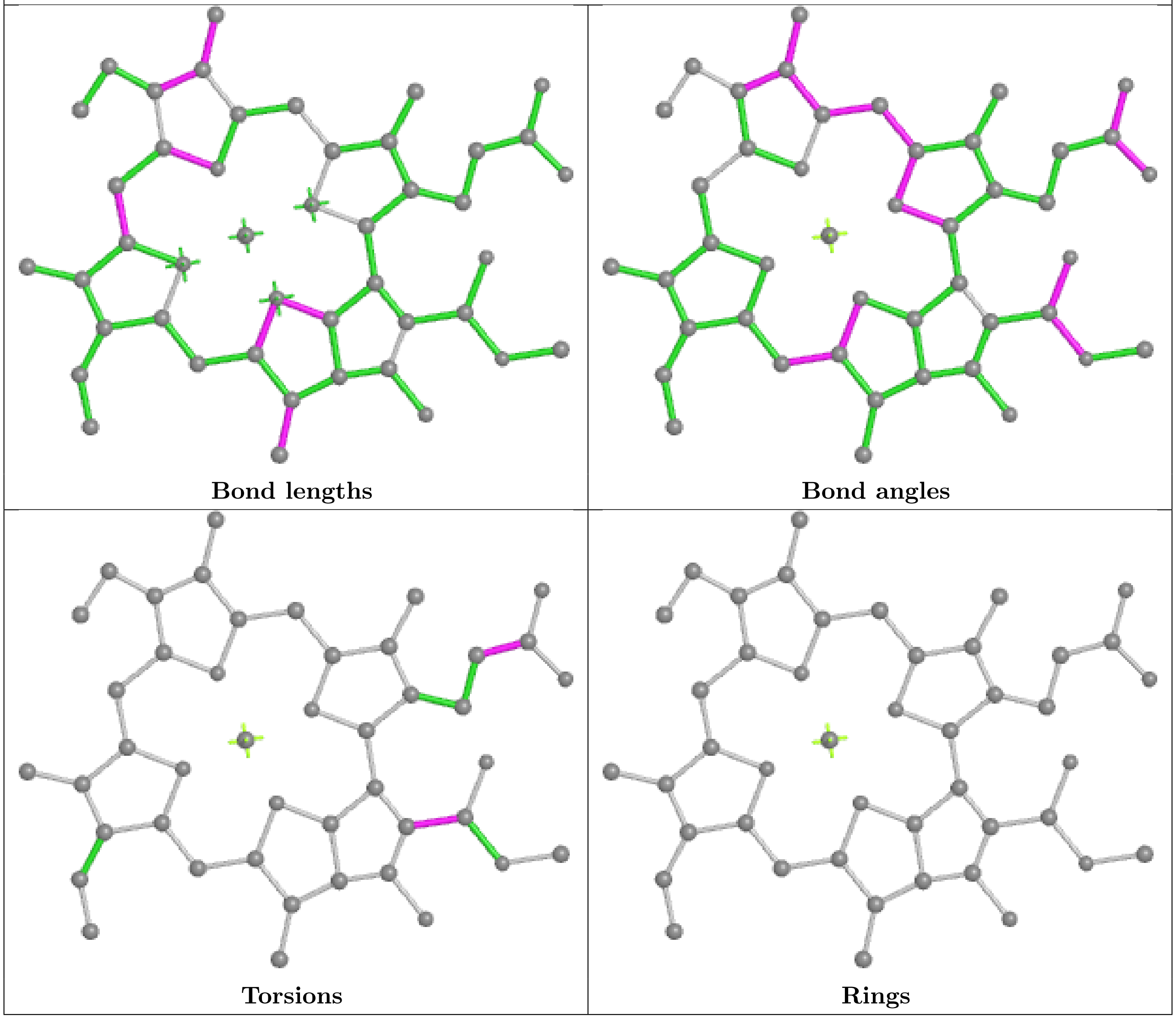
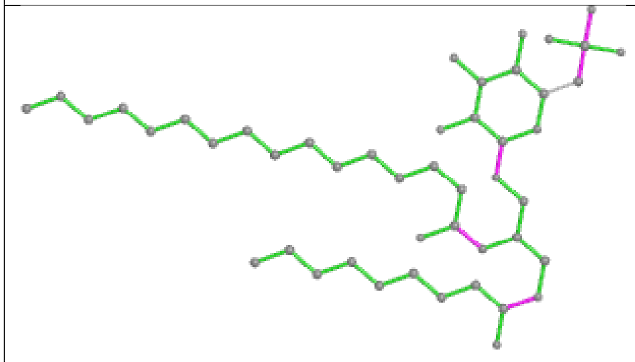
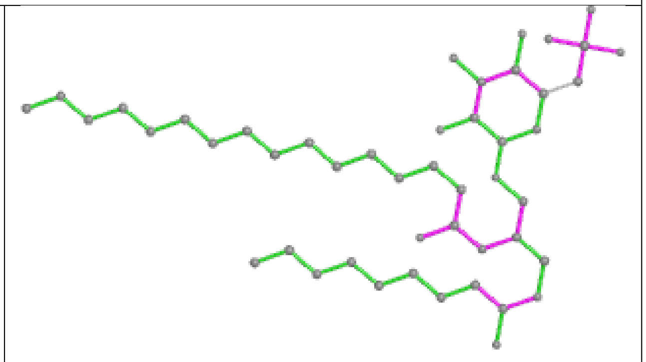


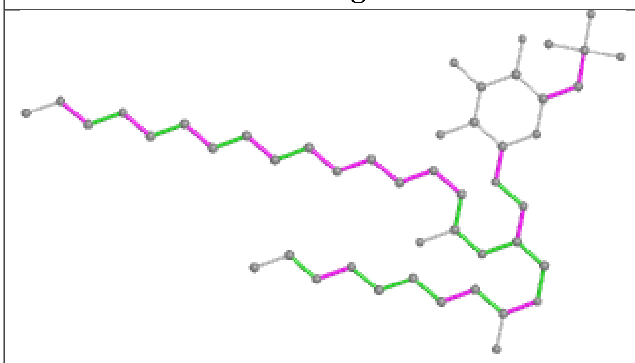
Ligand SQD BJ 104



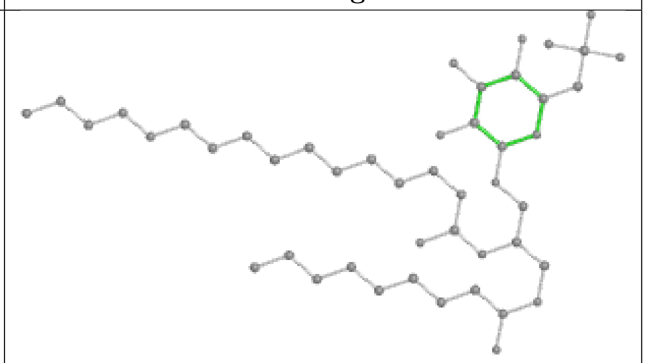
Bond lengths



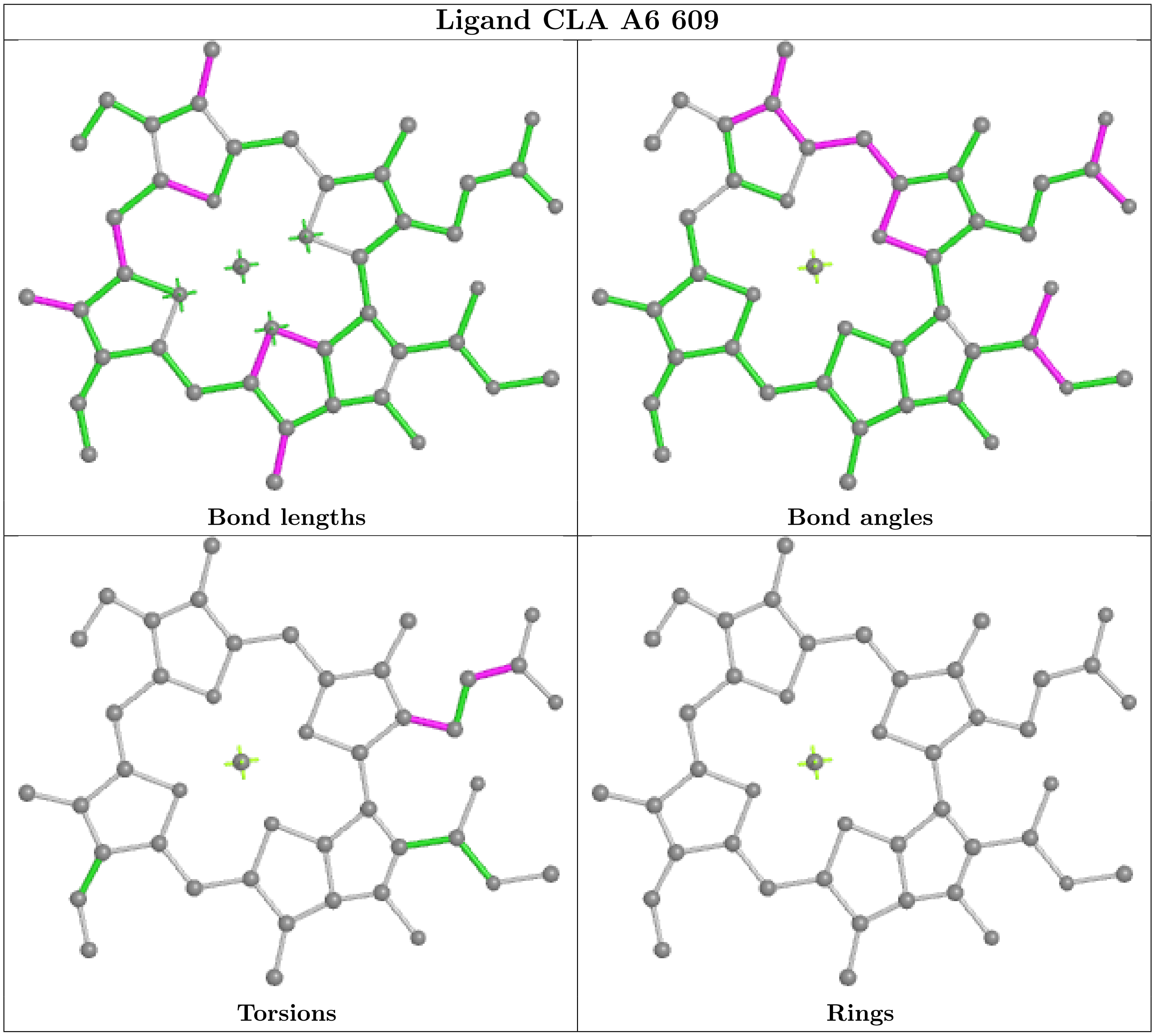
Bond angles

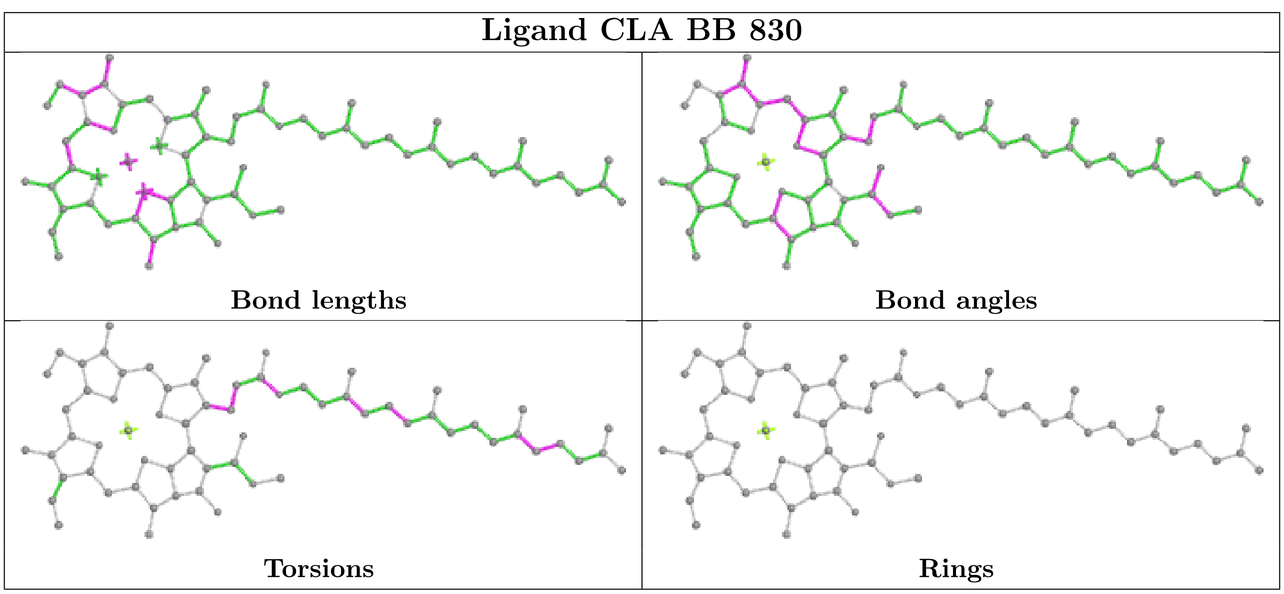


Torsions



Rings


Ligand CLA A6 609
Bond lengths
Bond angles
Torsions
Rings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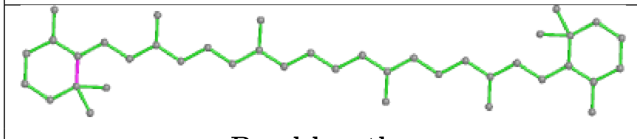
Bond lengths
Bond angles
Torsions
Rings

Ligand BCR BF 304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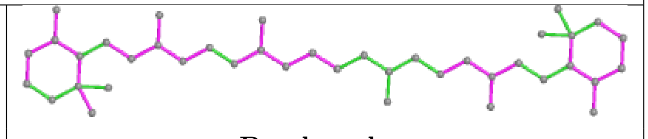
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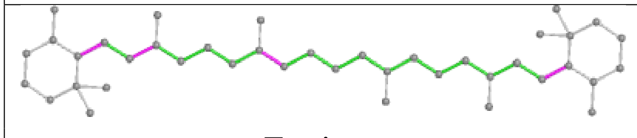
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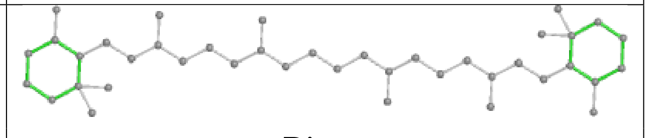
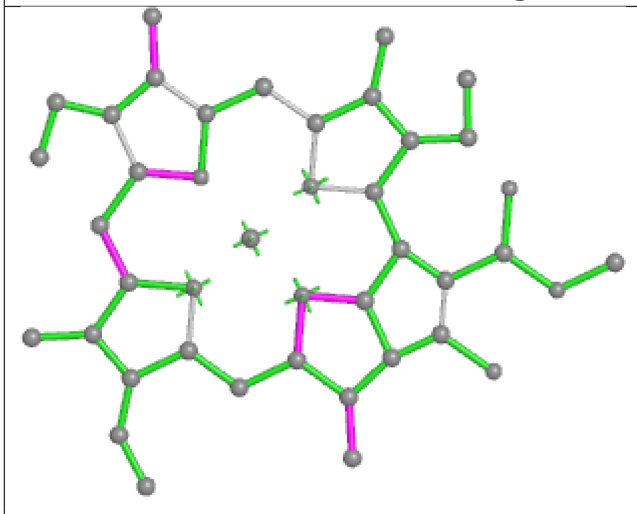

Rings

Ligand CLA AG 203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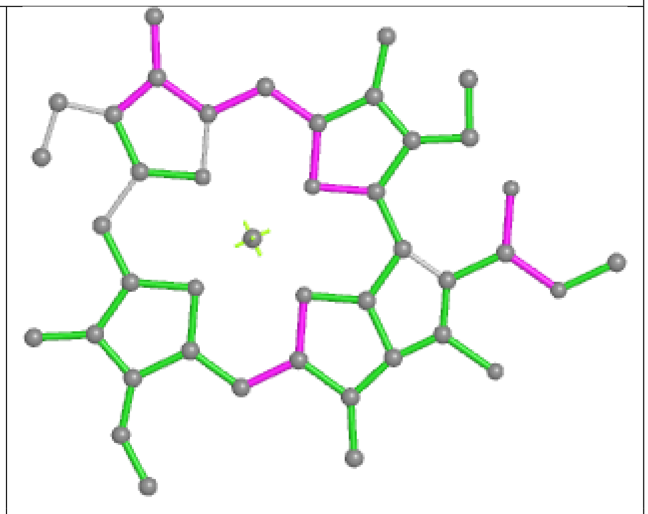
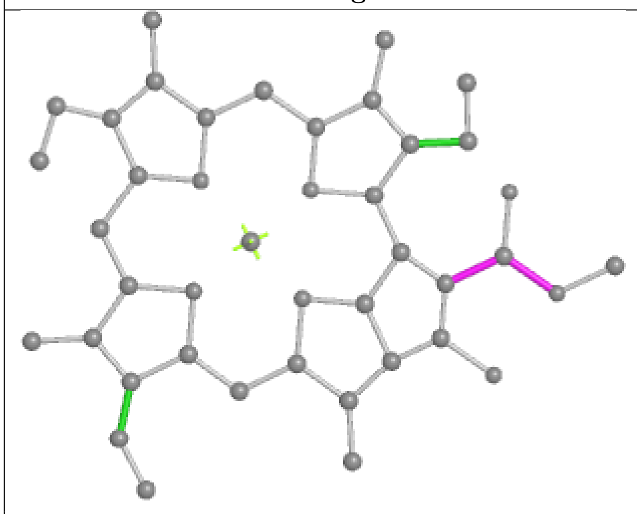
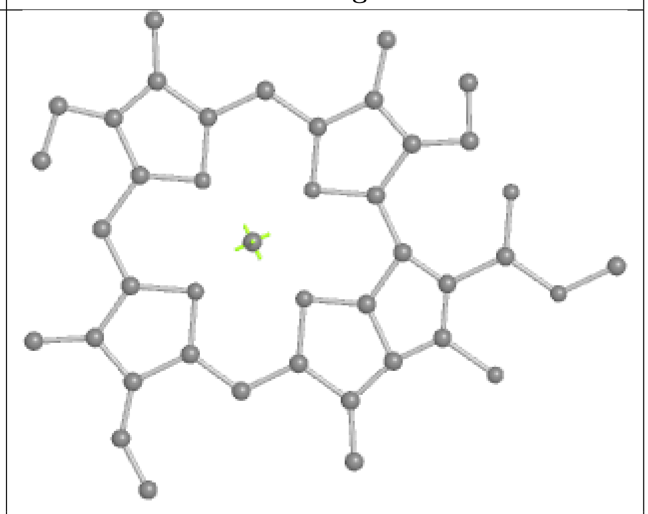
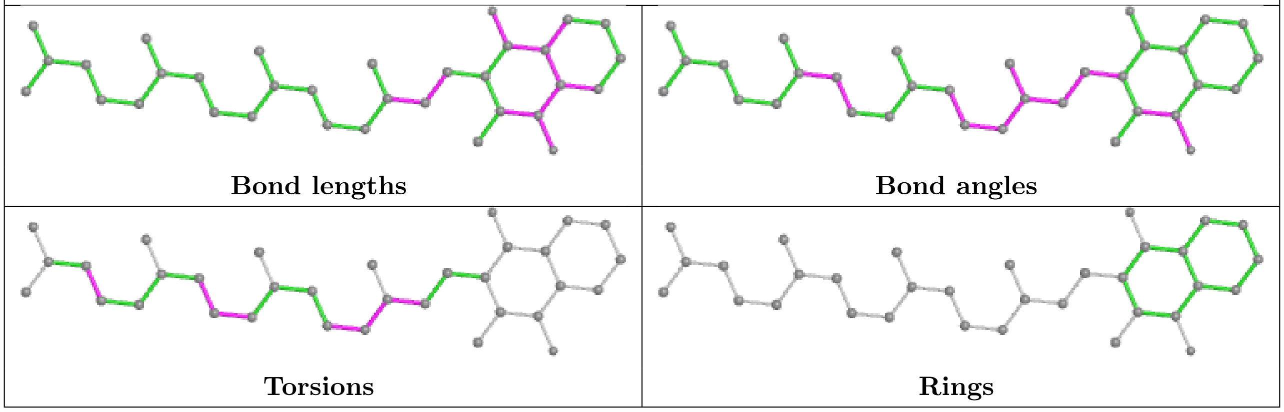

Bond angles


Torsions


Rings

Ligand PQN AA 843



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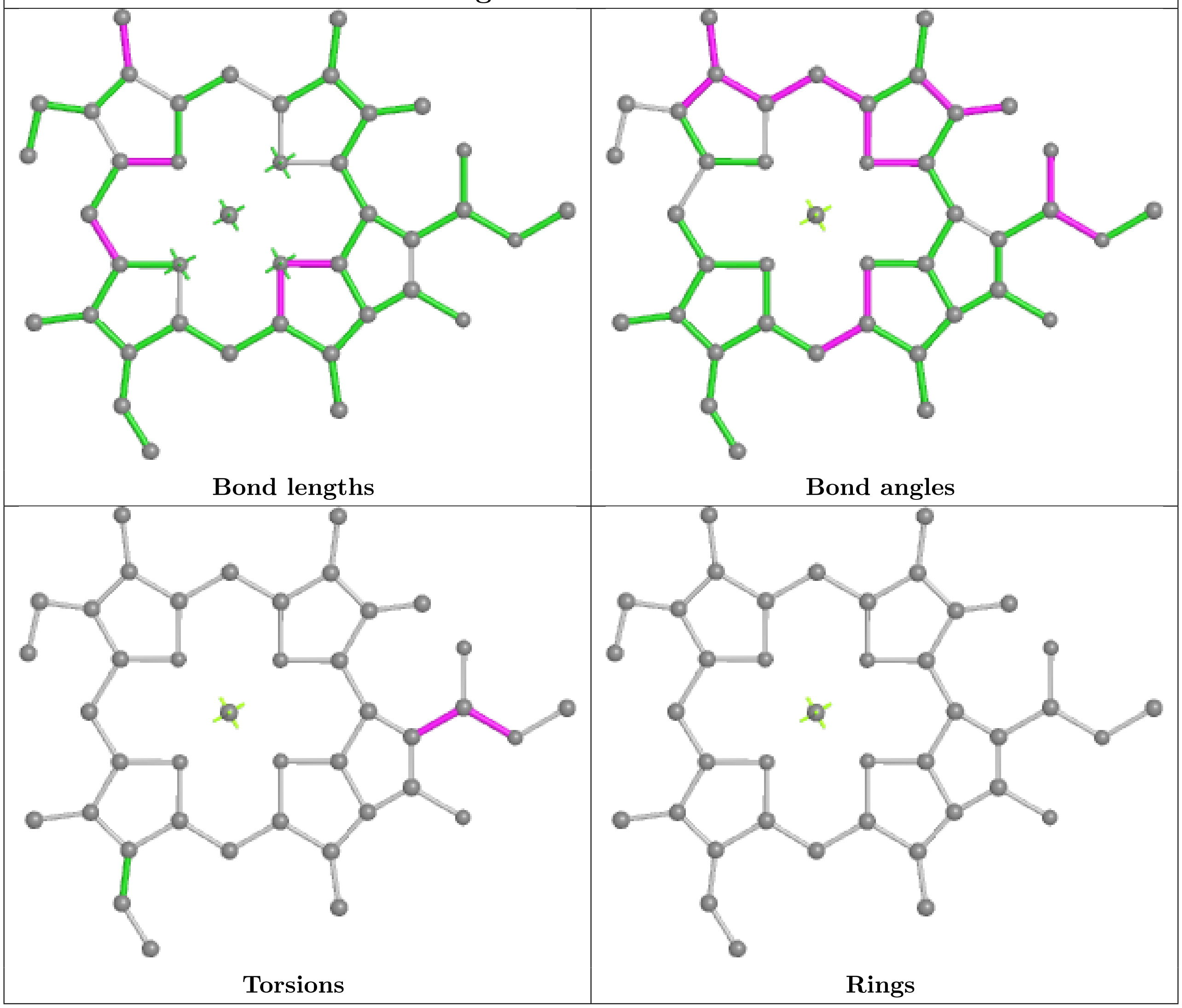

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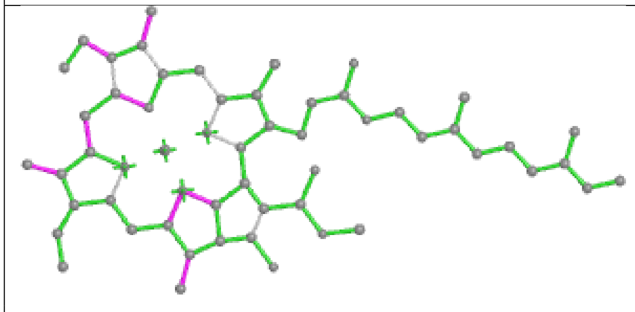

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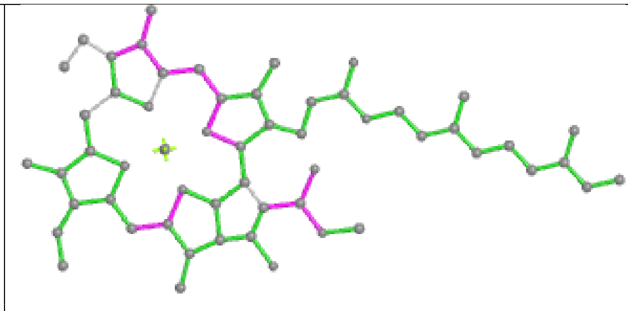

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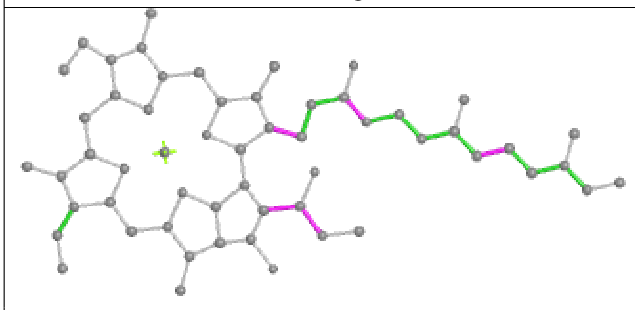

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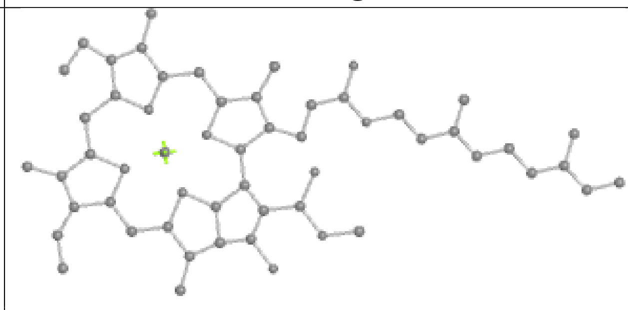
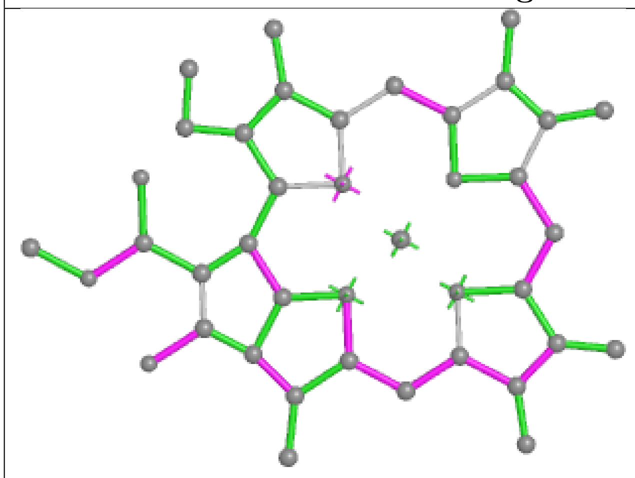


Rings

Ligand CHL B5 606



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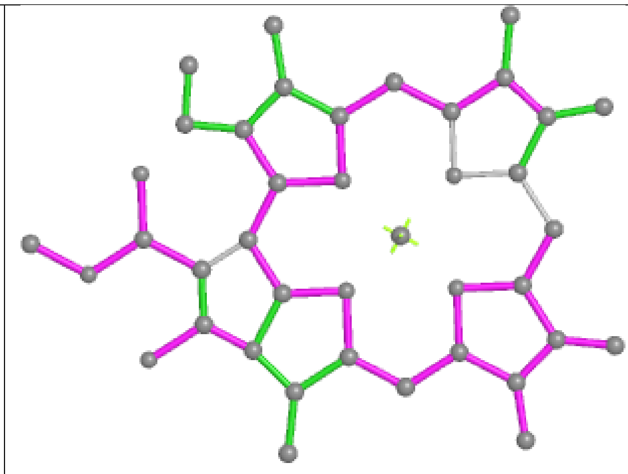
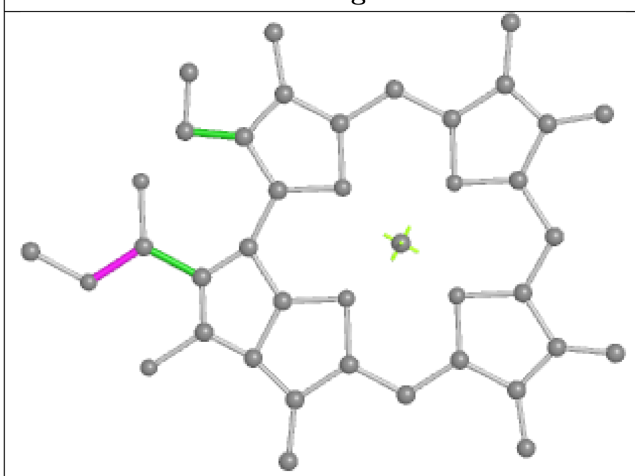


Bond angles



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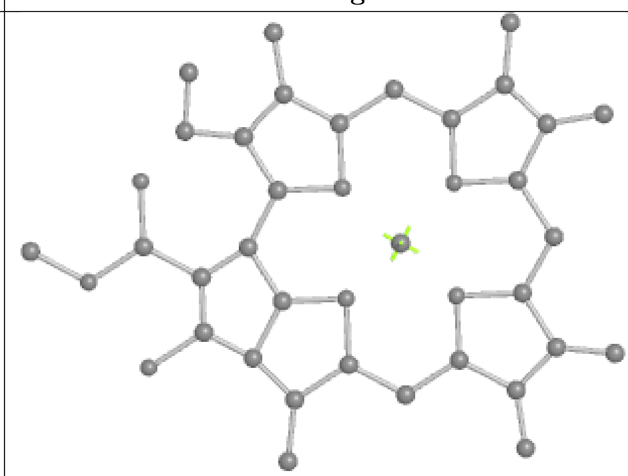
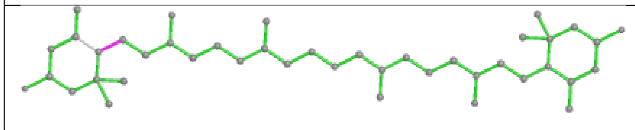


Rings

Ligand LUT B3 315



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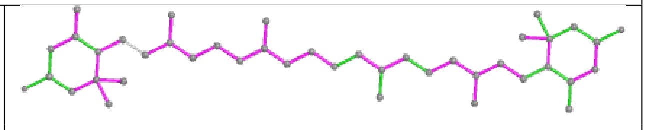

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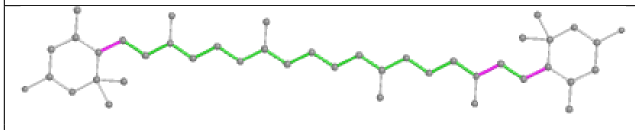

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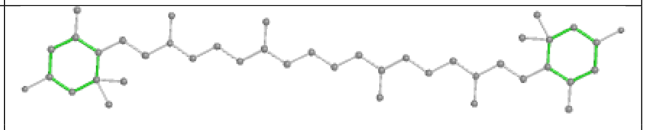
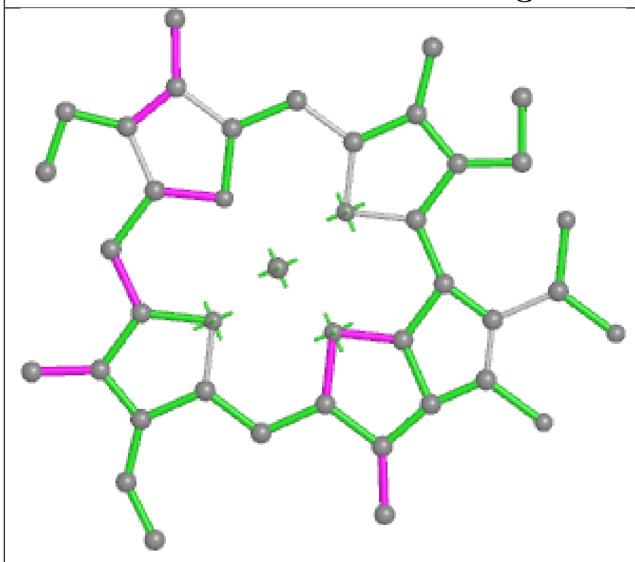


Rings

Ligand CLA A4 310



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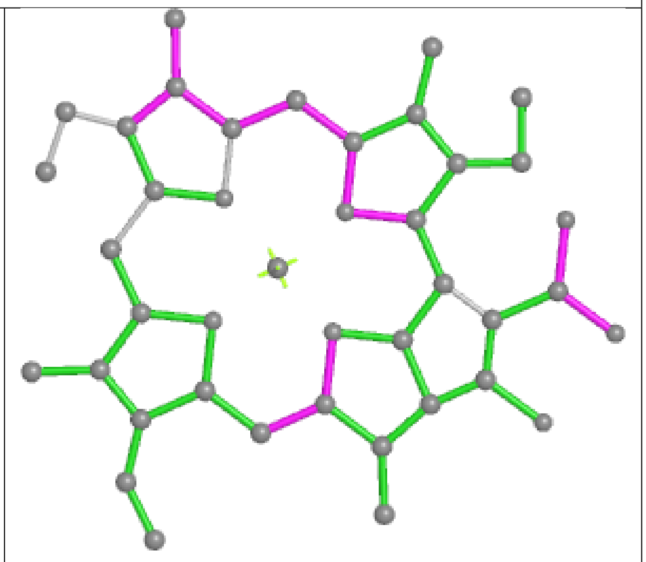
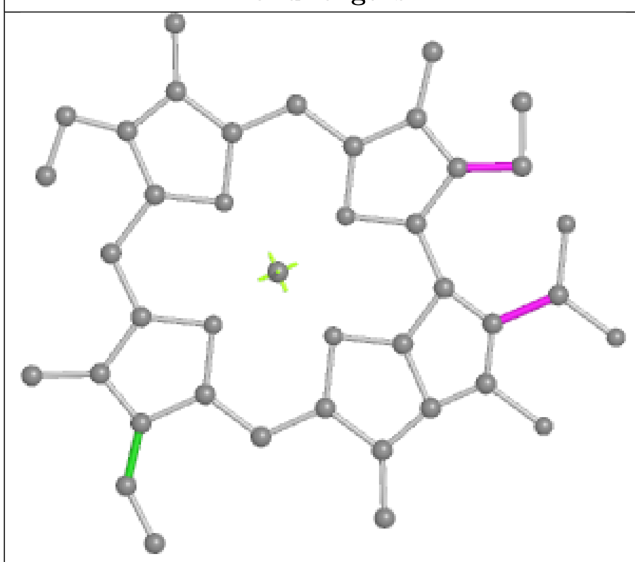


Bond angles



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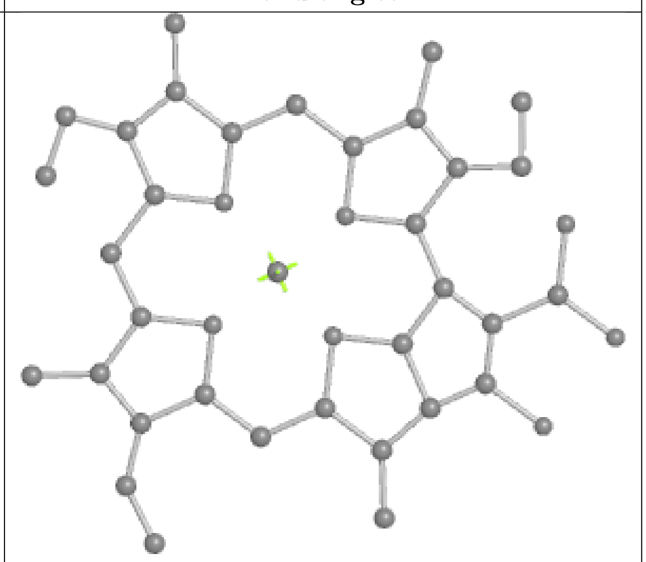
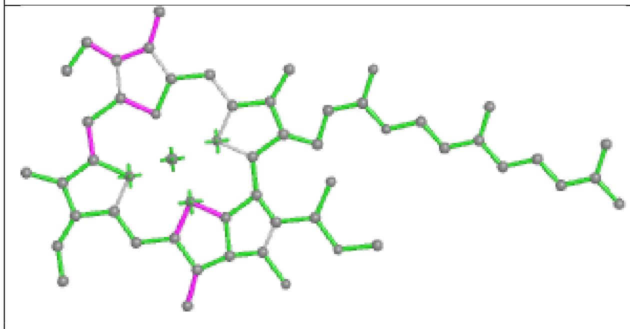


Rings

Ligand CLA BB 818



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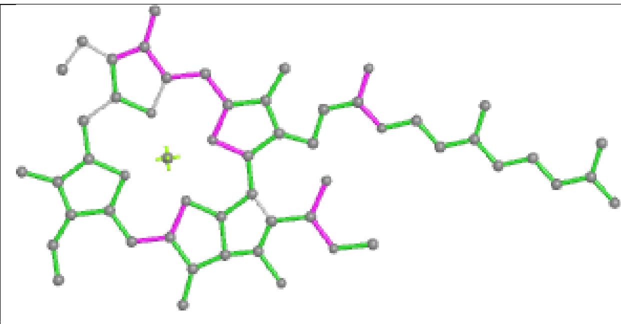
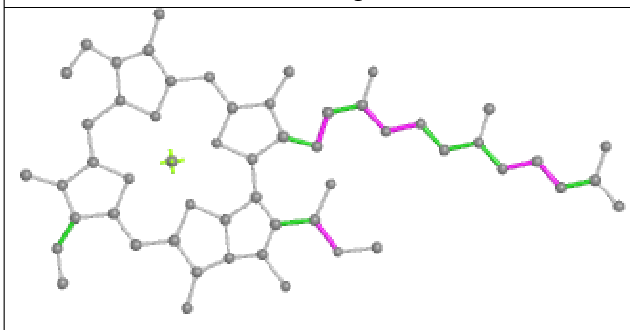


Bond angles



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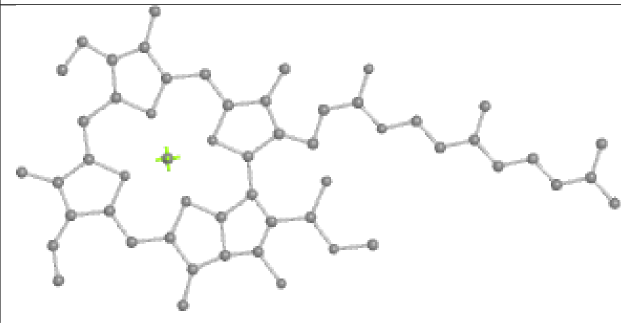

Rings

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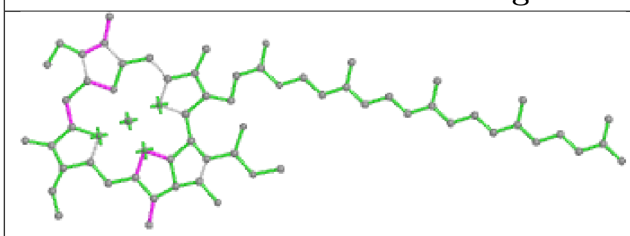

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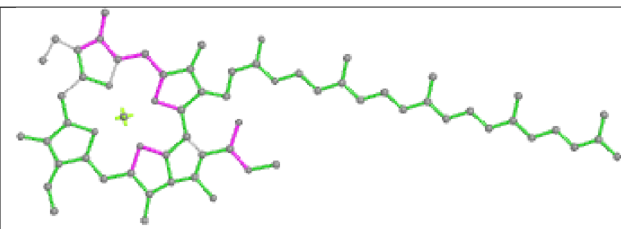

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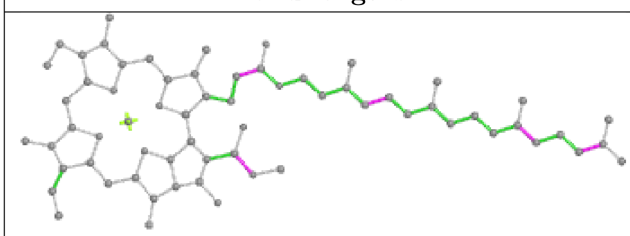

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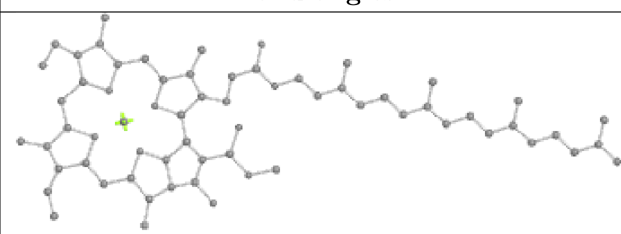
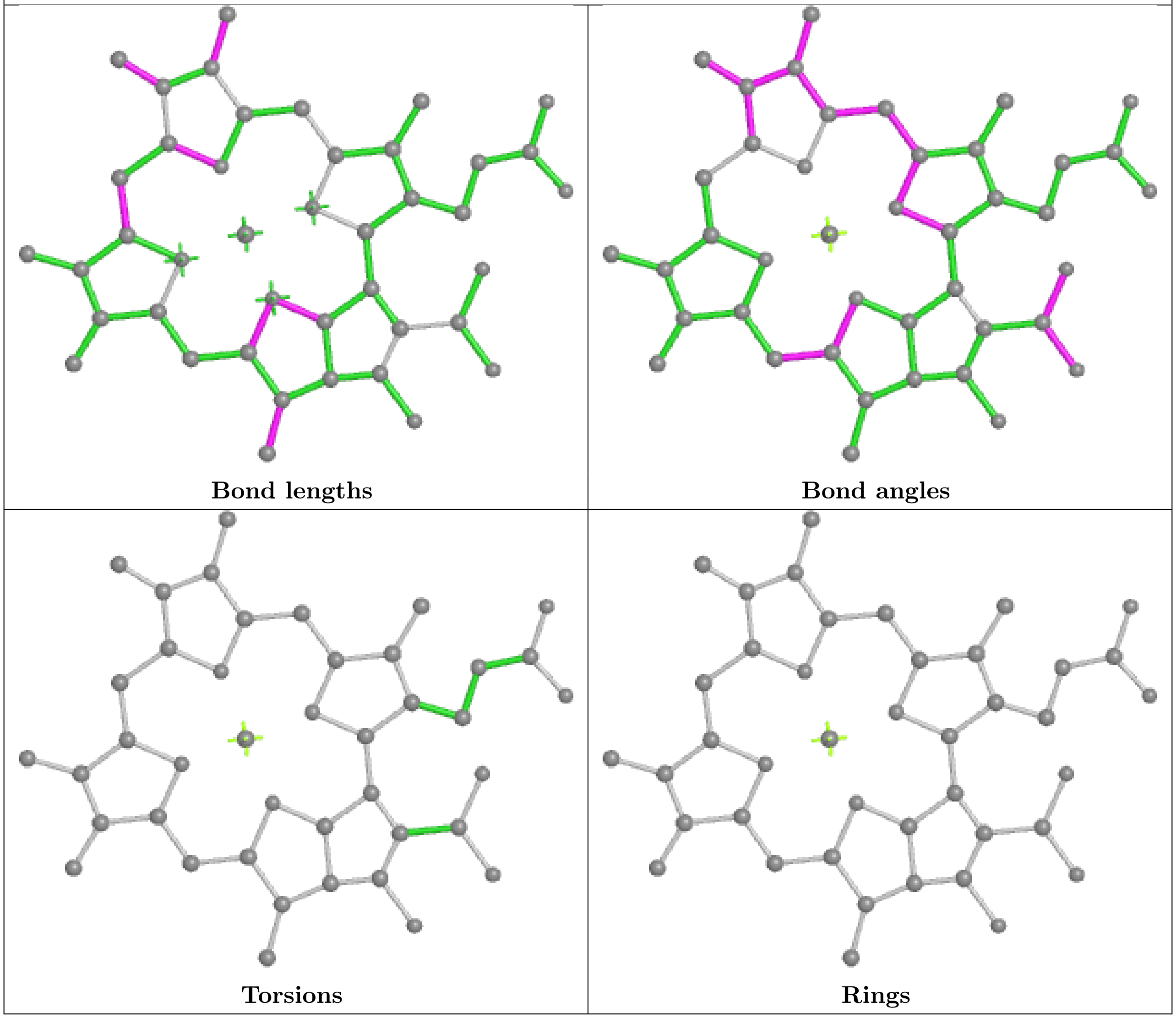


Rings

Ligand CLA A3 304



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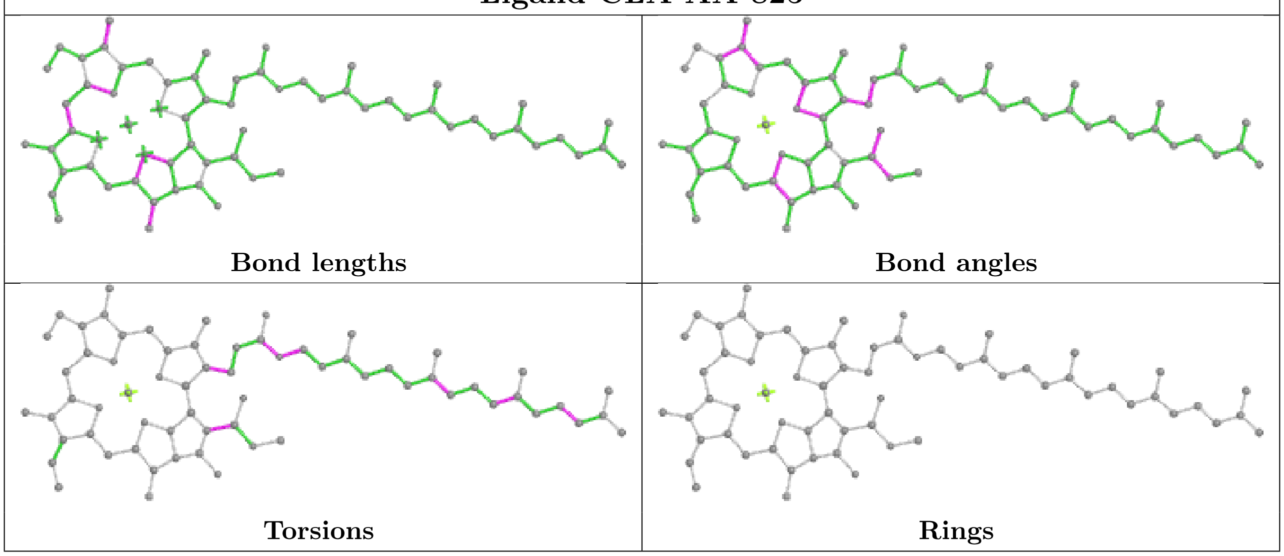
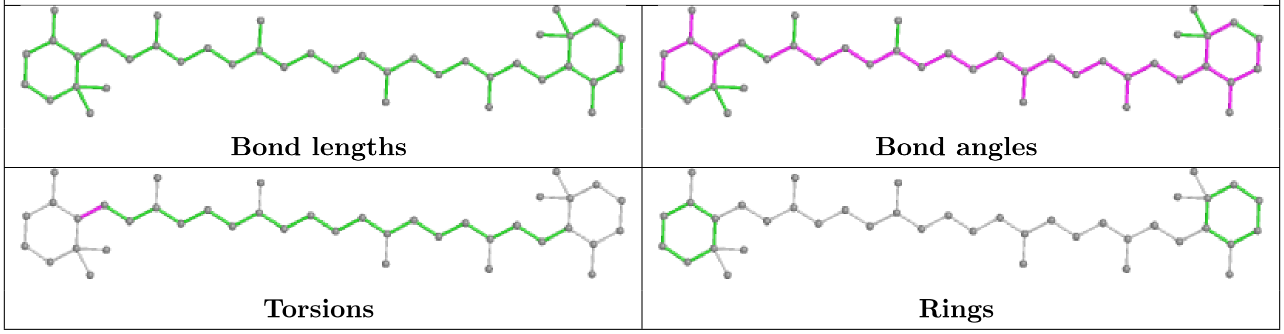


Ligand BCR B5 616



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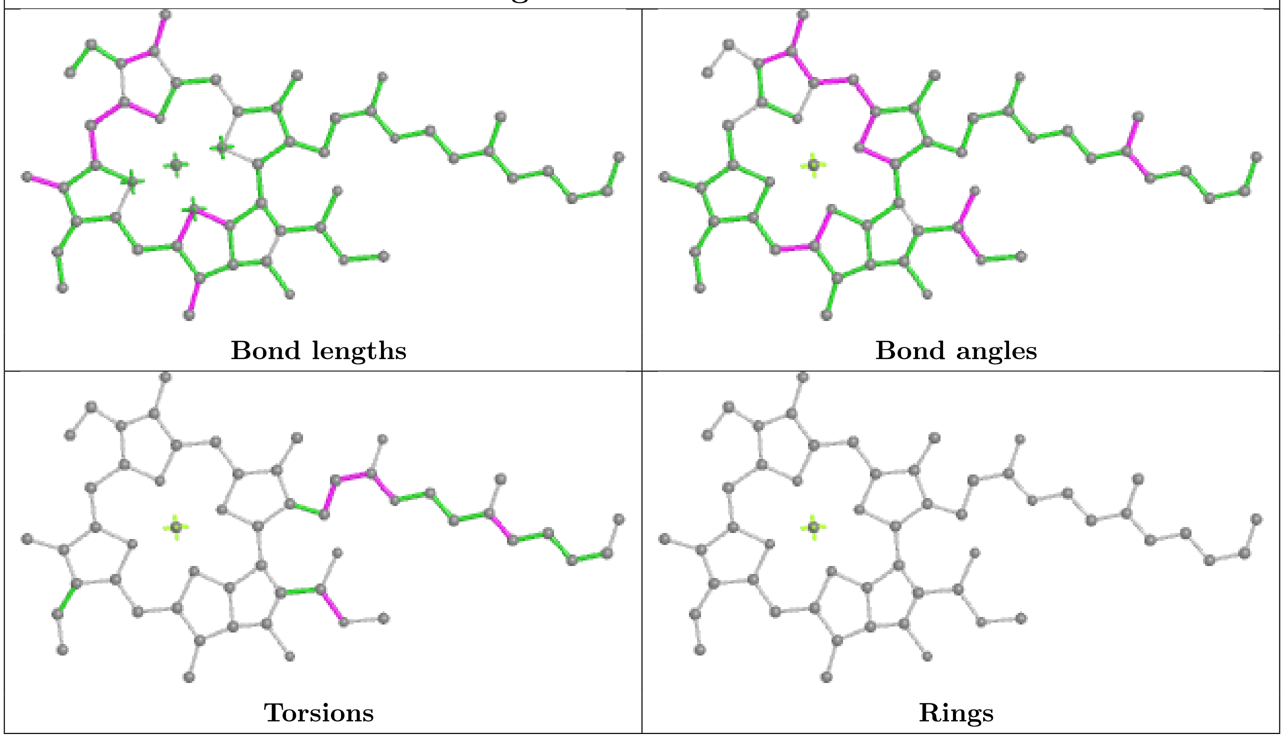

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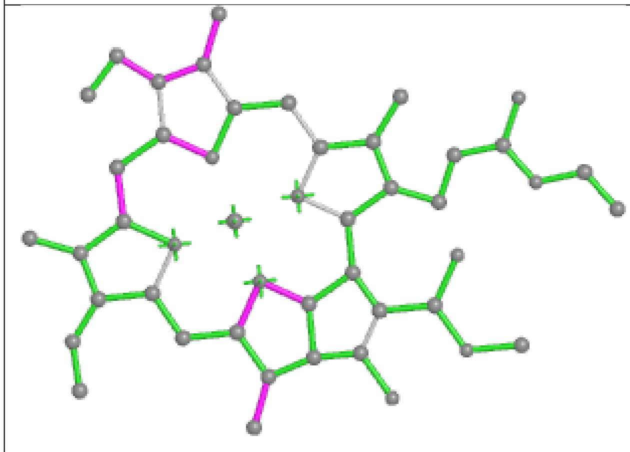

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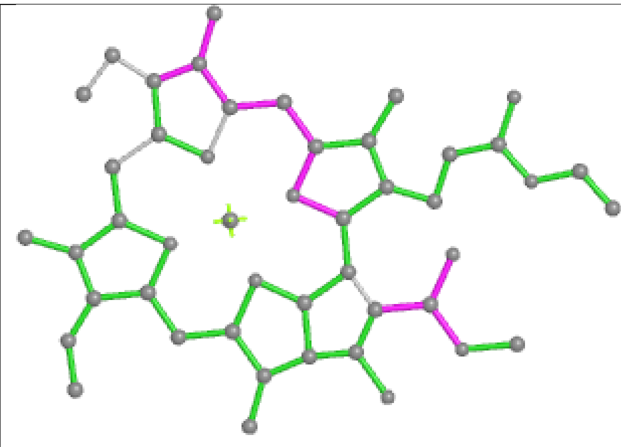
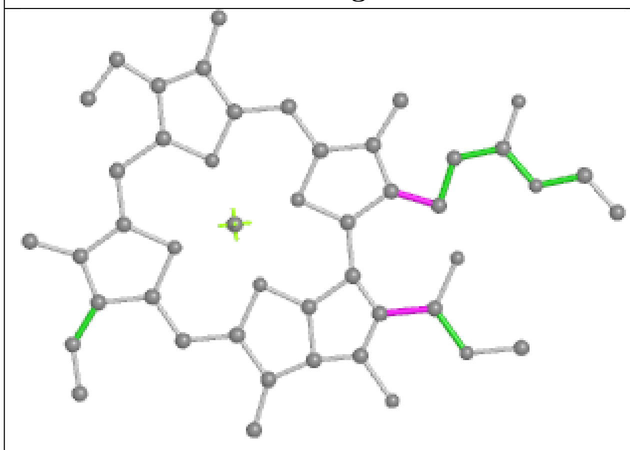


Bond angles



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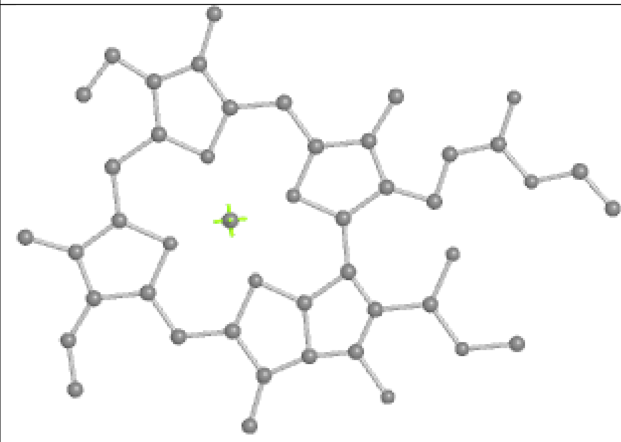

Rings

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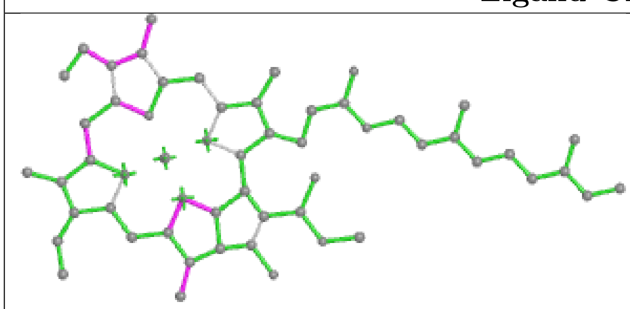

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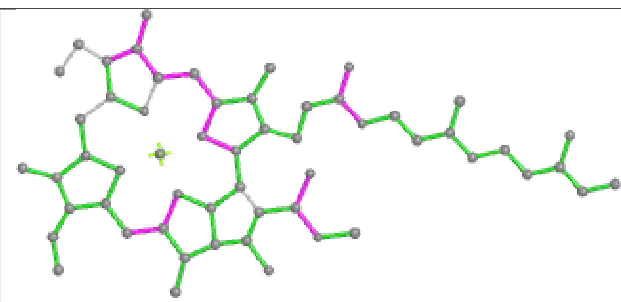

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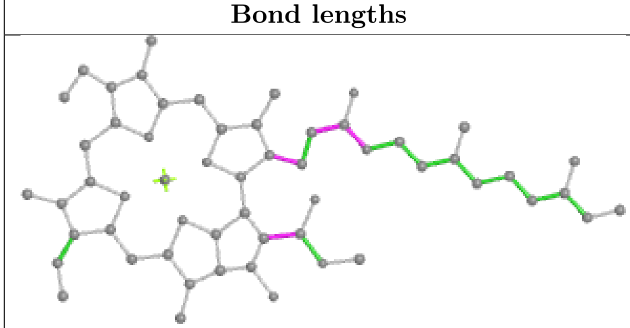

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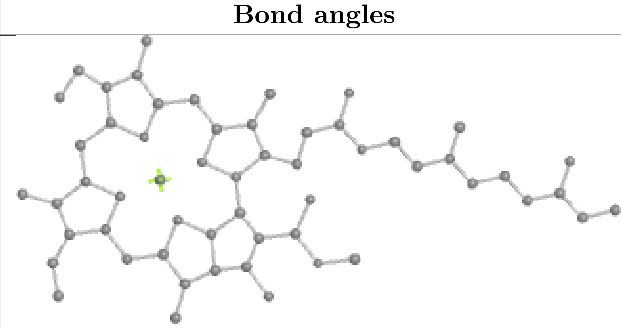

Rings

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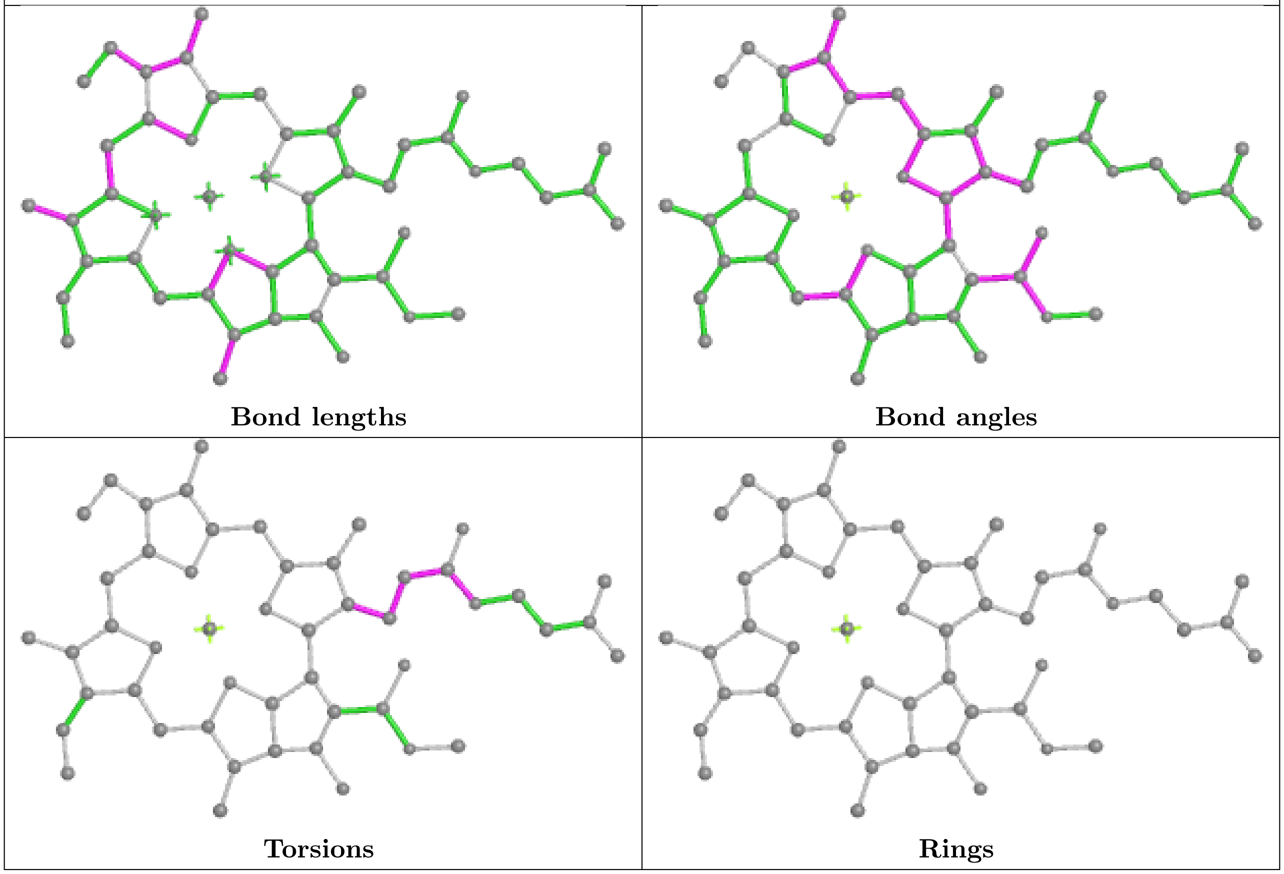

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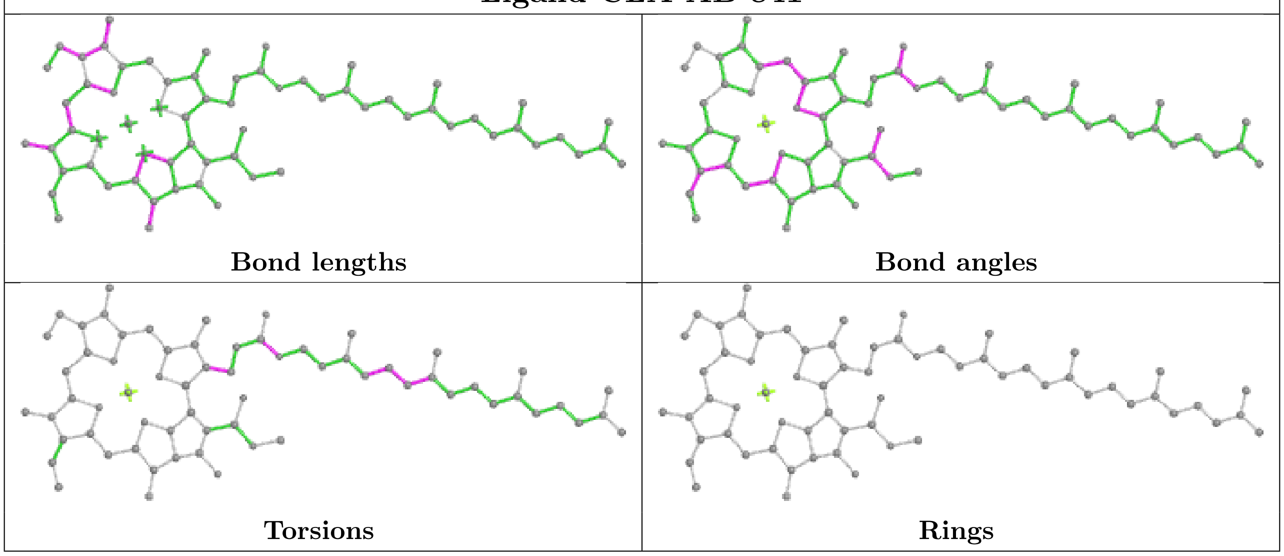

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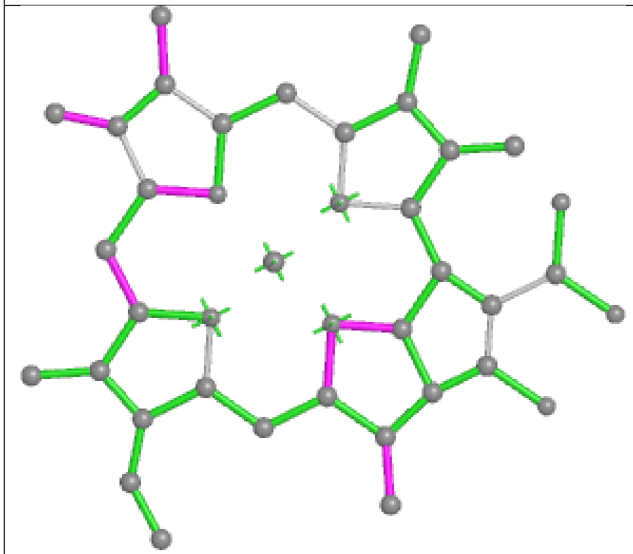

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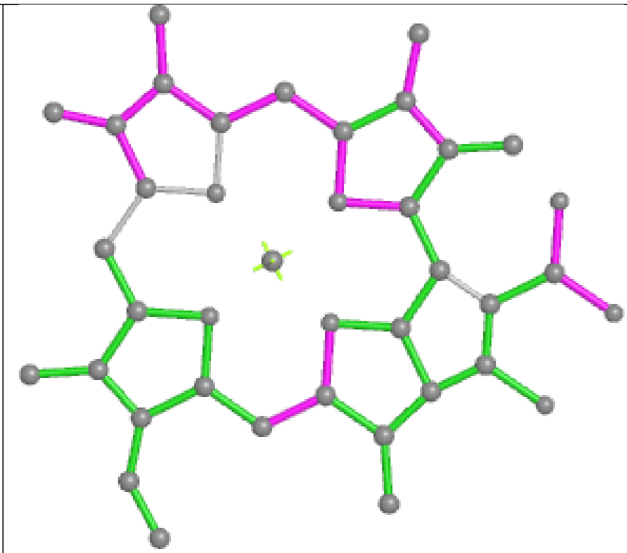

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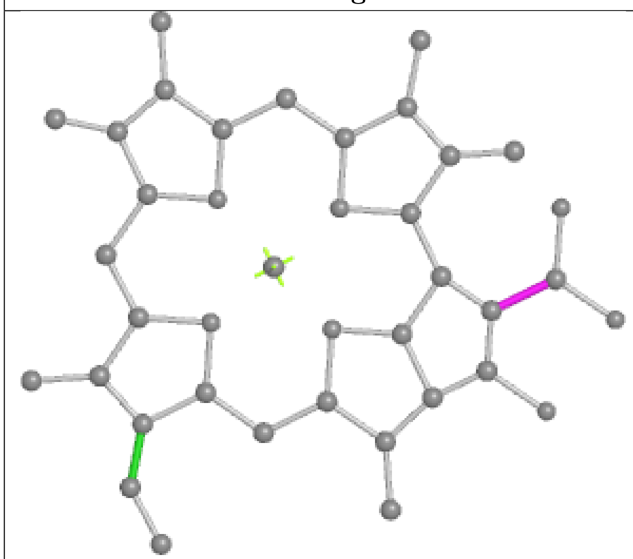

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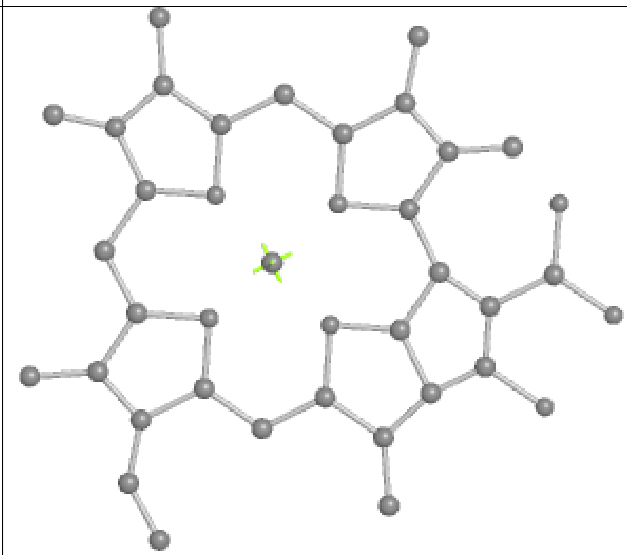
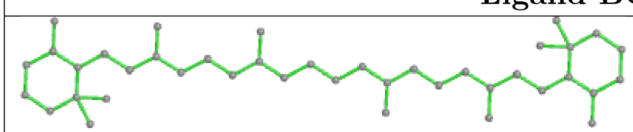


Rings

Ligand BCR AF 805



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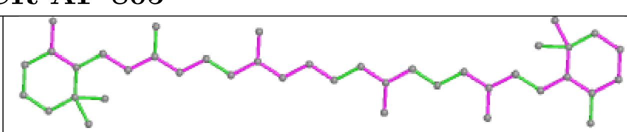
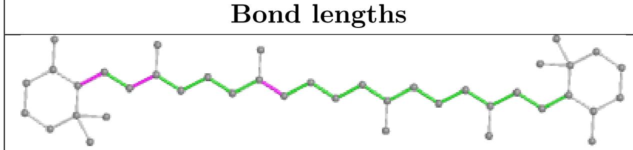


Bond angles



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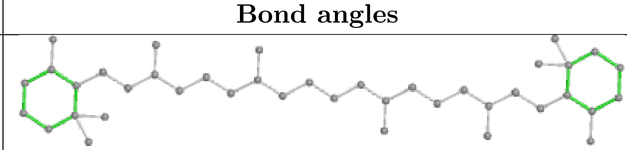
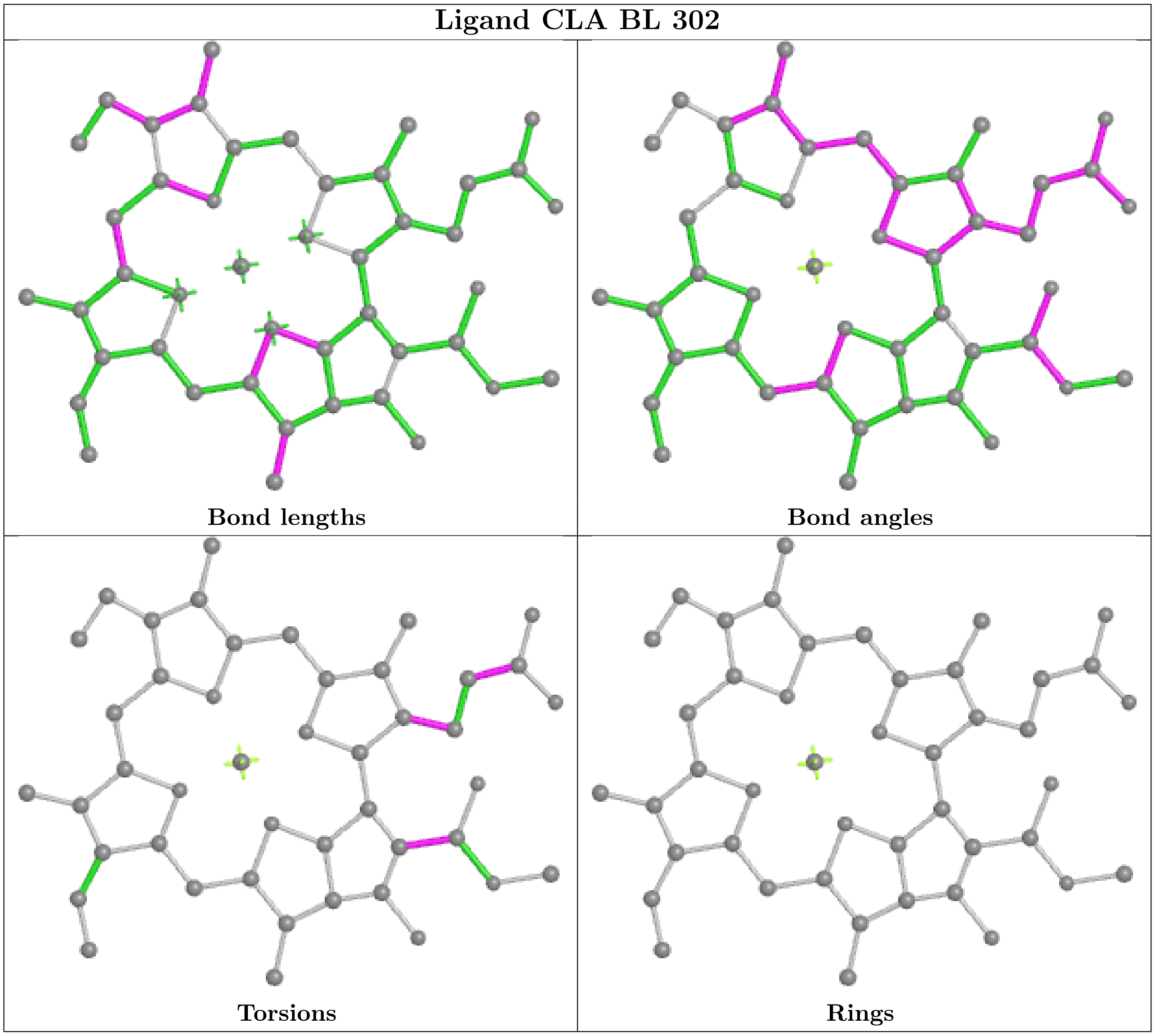


Rings


Ligand CLA BL 302
Bond lengths
Bond angles
Torsions
Rings

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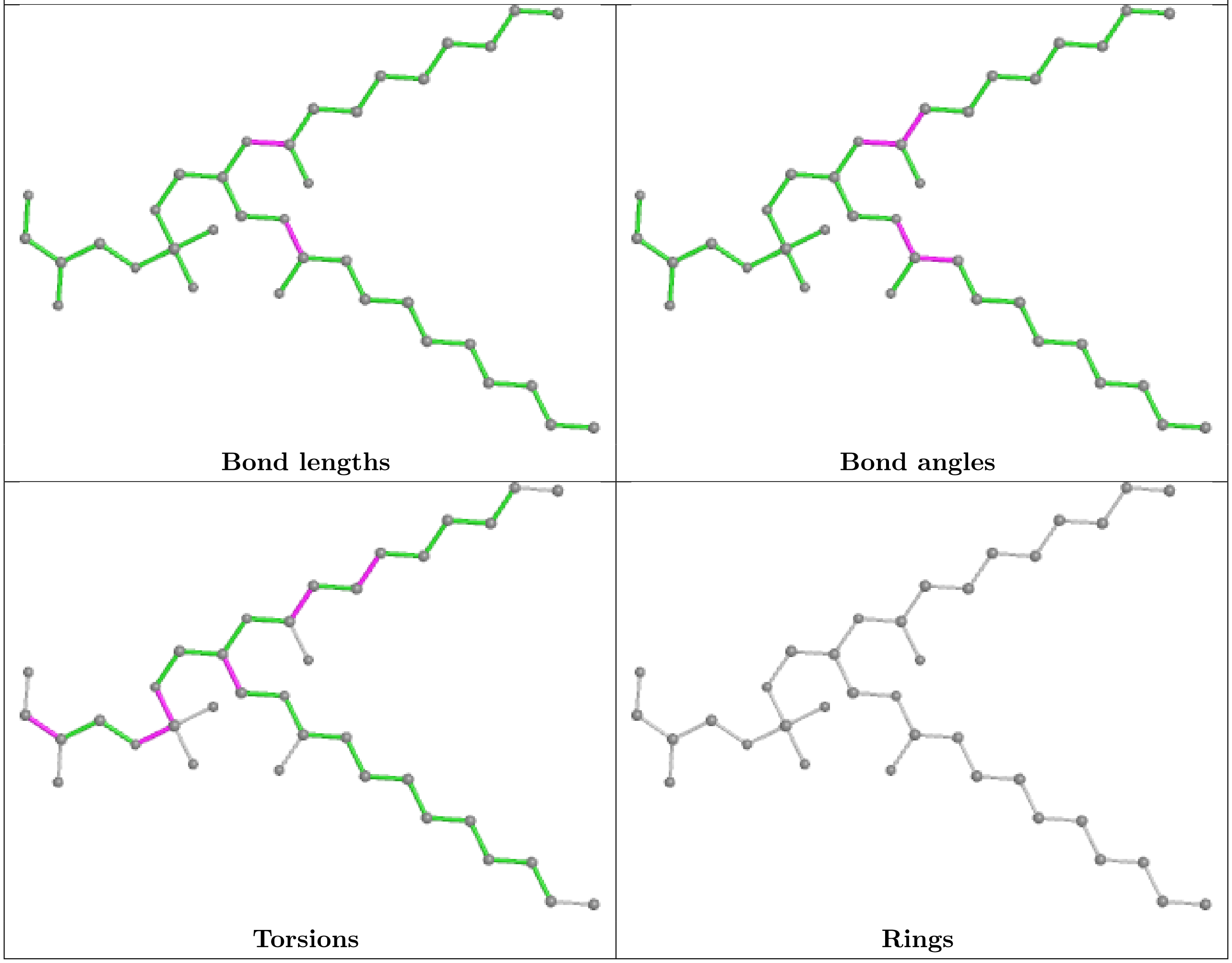

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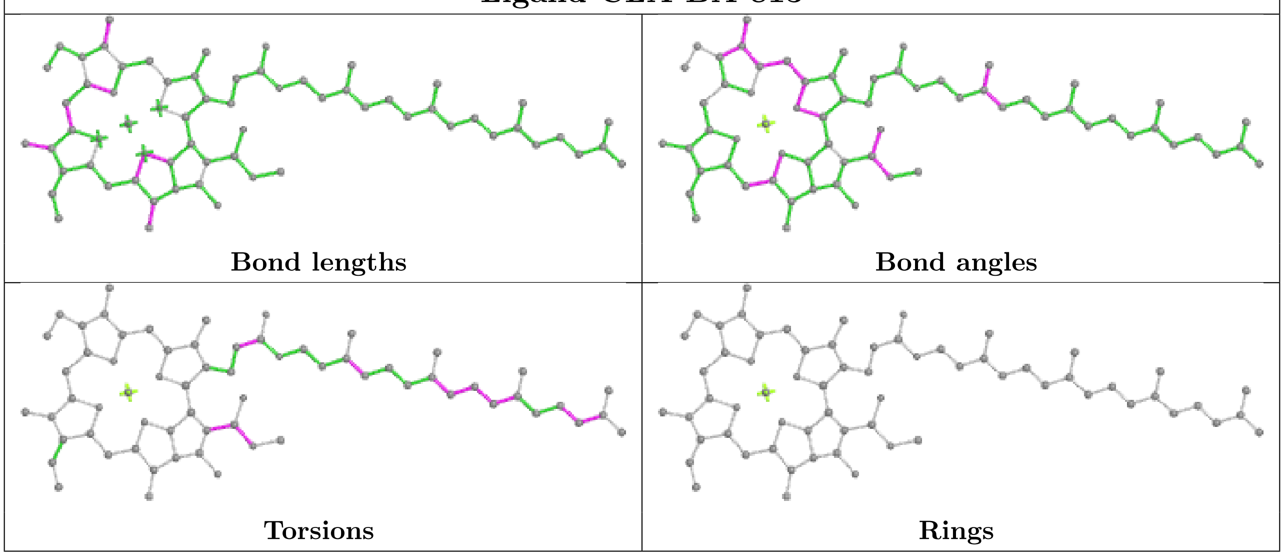

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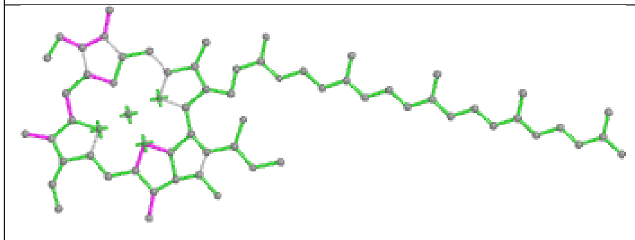

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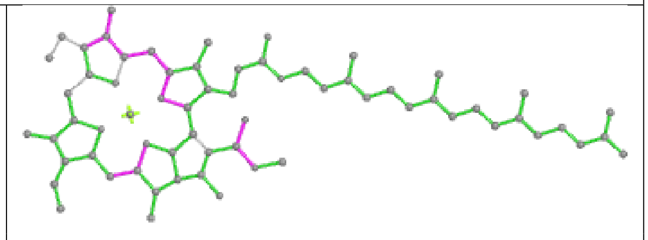
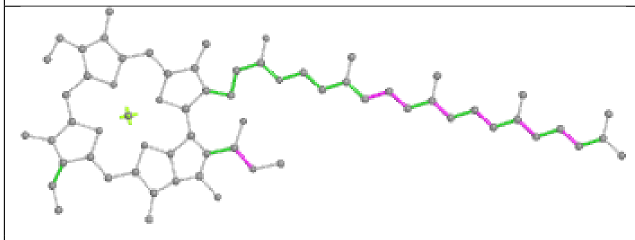


Bond angles



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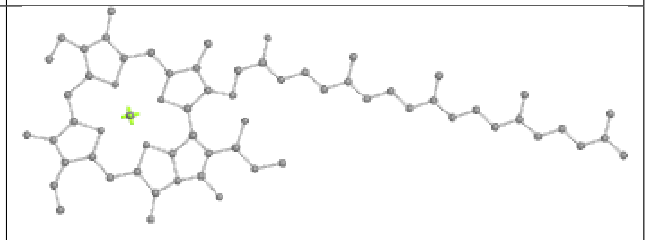
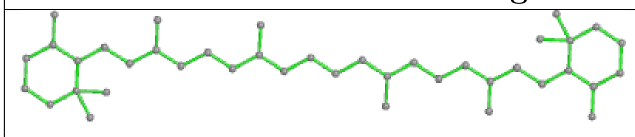


Rings

Ligand BCR BA 849



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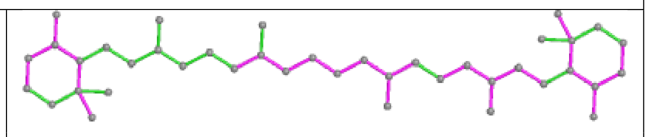

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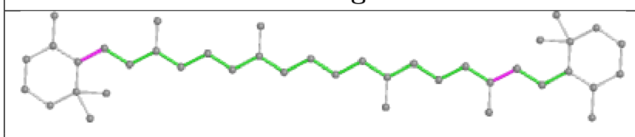

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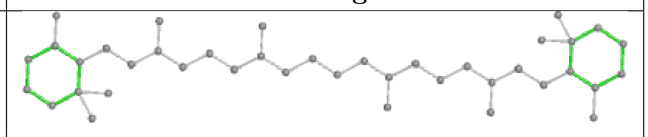
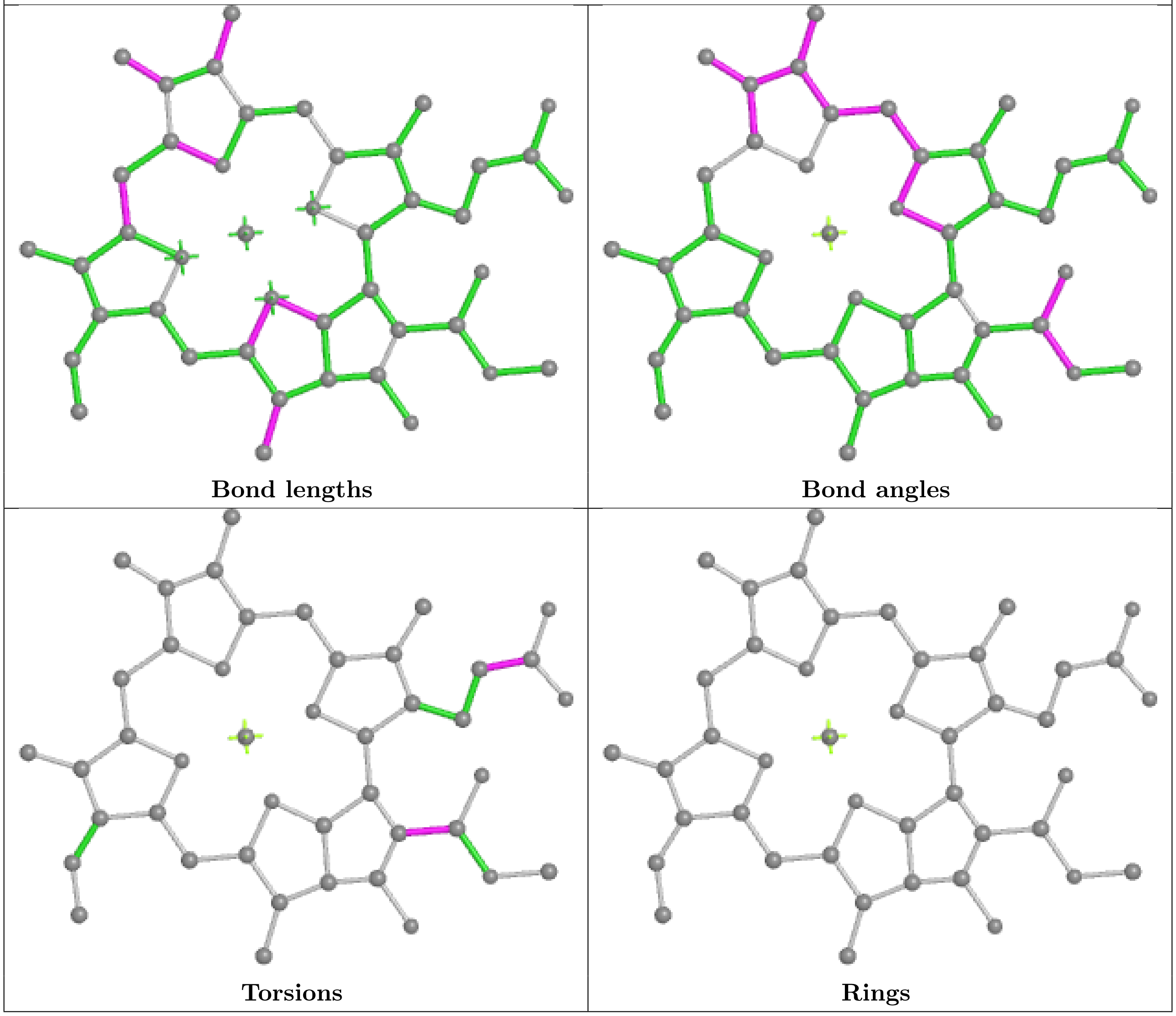
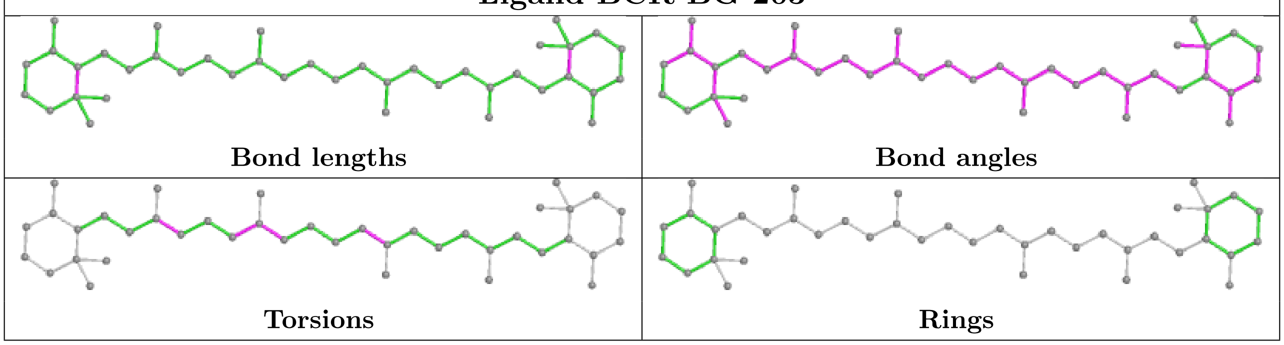


Rings

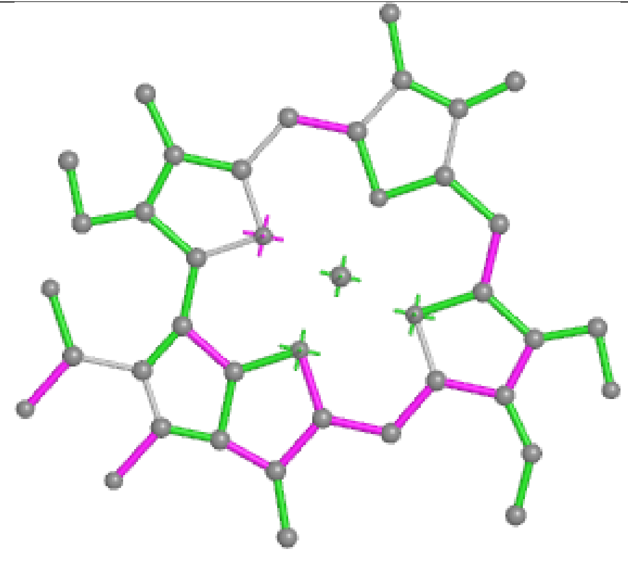
Ligand CLA B5 603



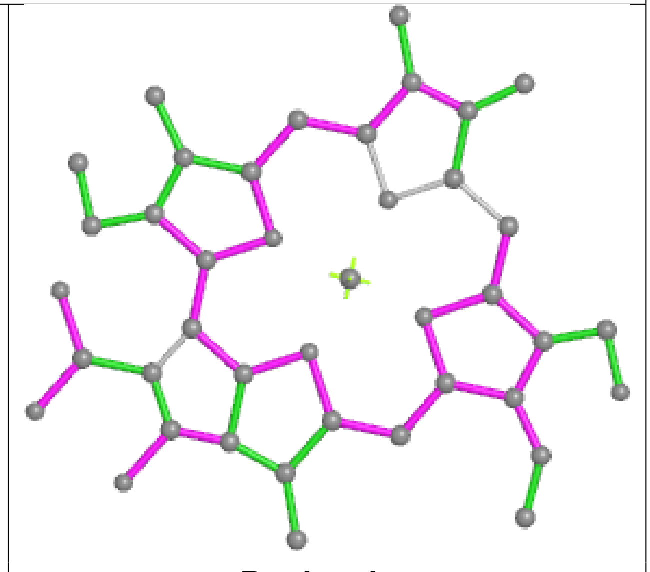
Ligand BCR BG 203



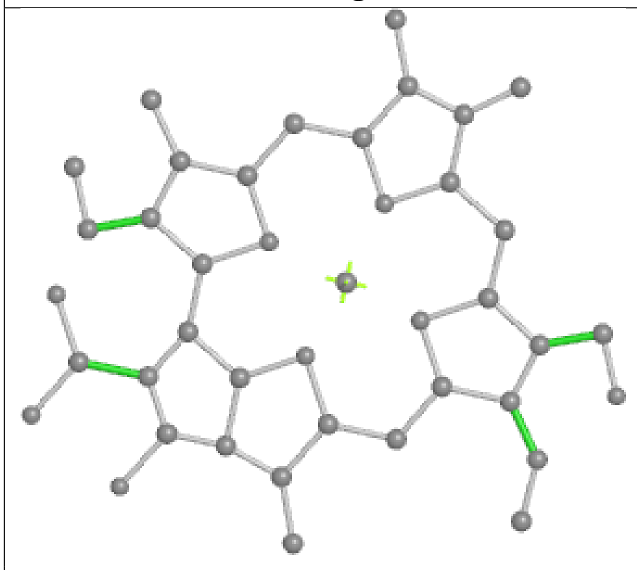
Ligand CHL A4 314



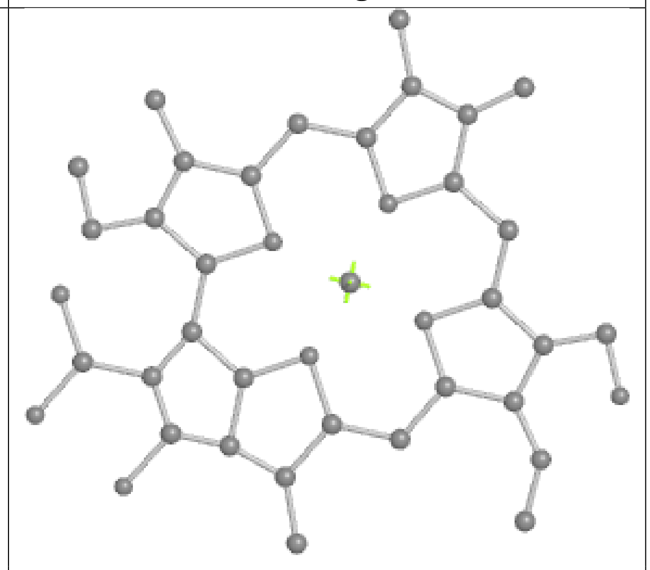
Bond lengths



Bond angles

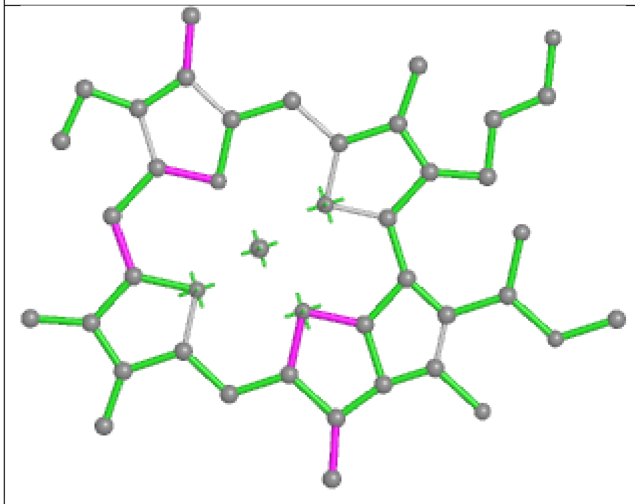


Torsions

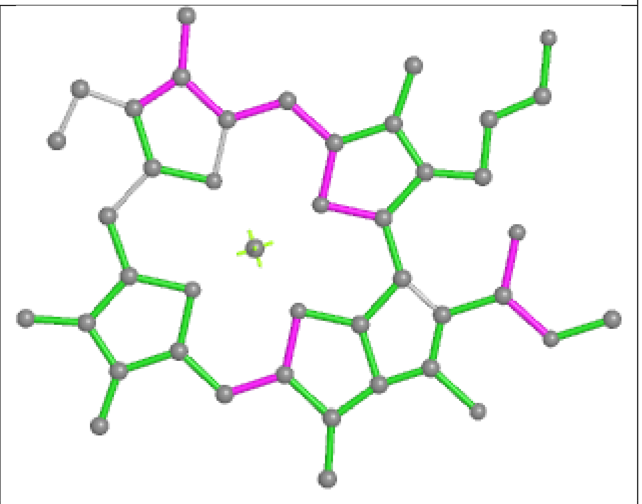


Rings

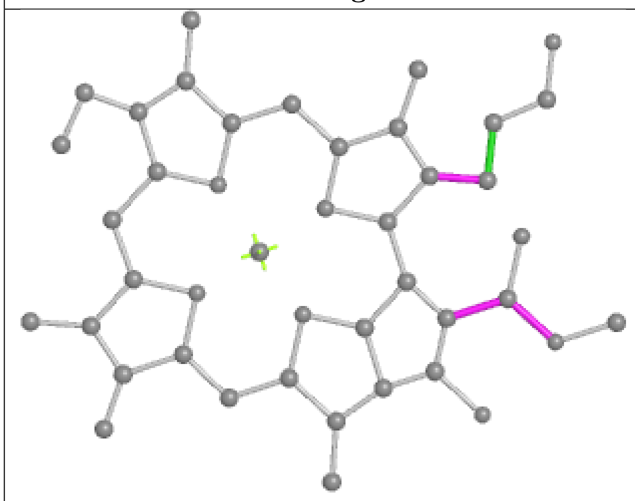
Ligand CLA B2 604



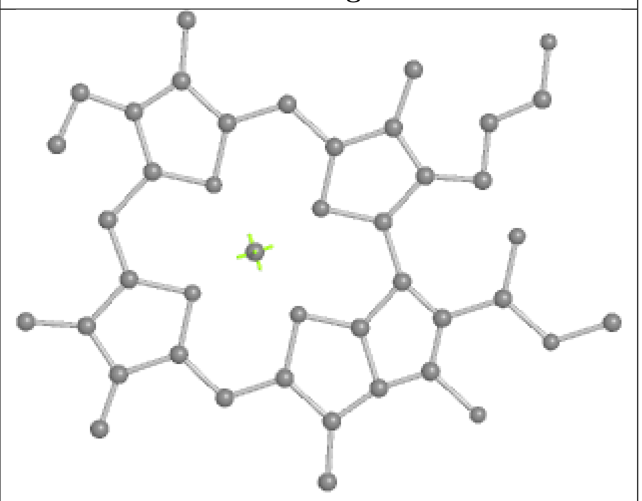
Bond lengths



Bond angles

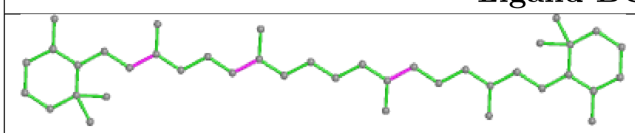


Torsions



Rings

Ligand BCR AK 204



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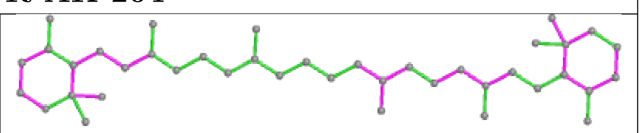
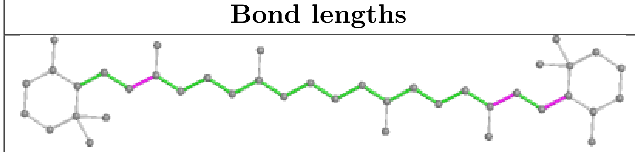
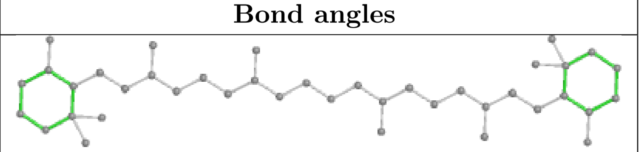


Bond angles

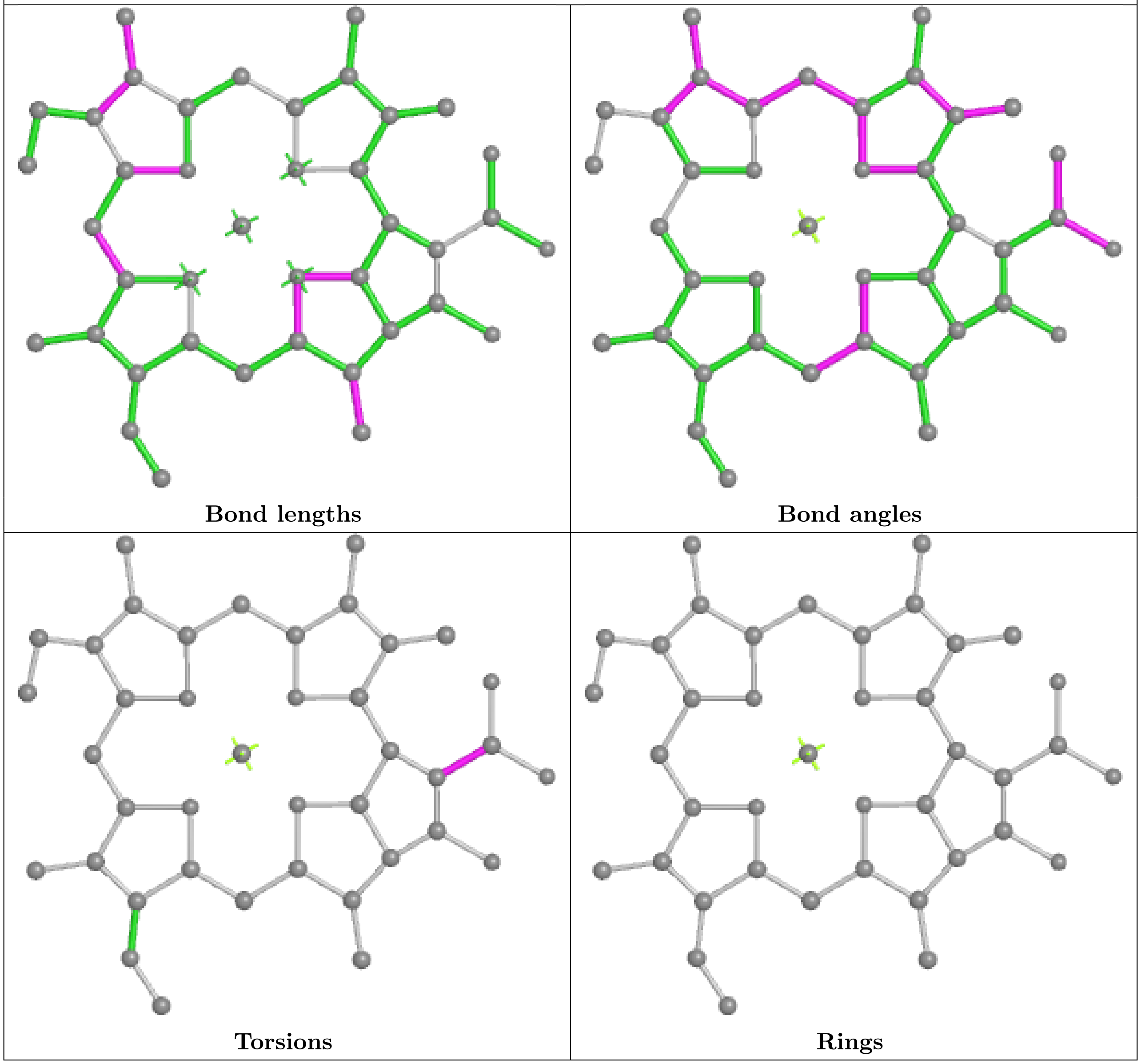


Torsions

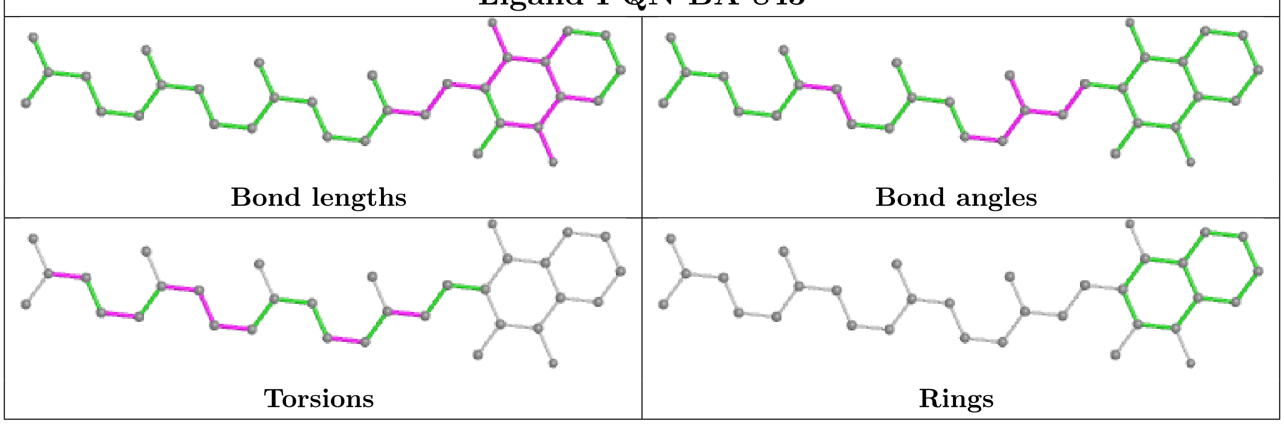


Rings

Ligand CLA A3 313



Ligand PQN BA 843



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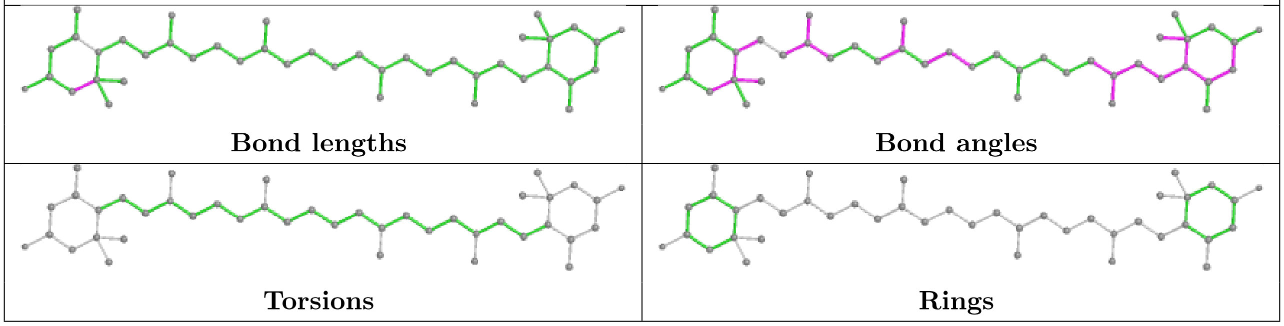
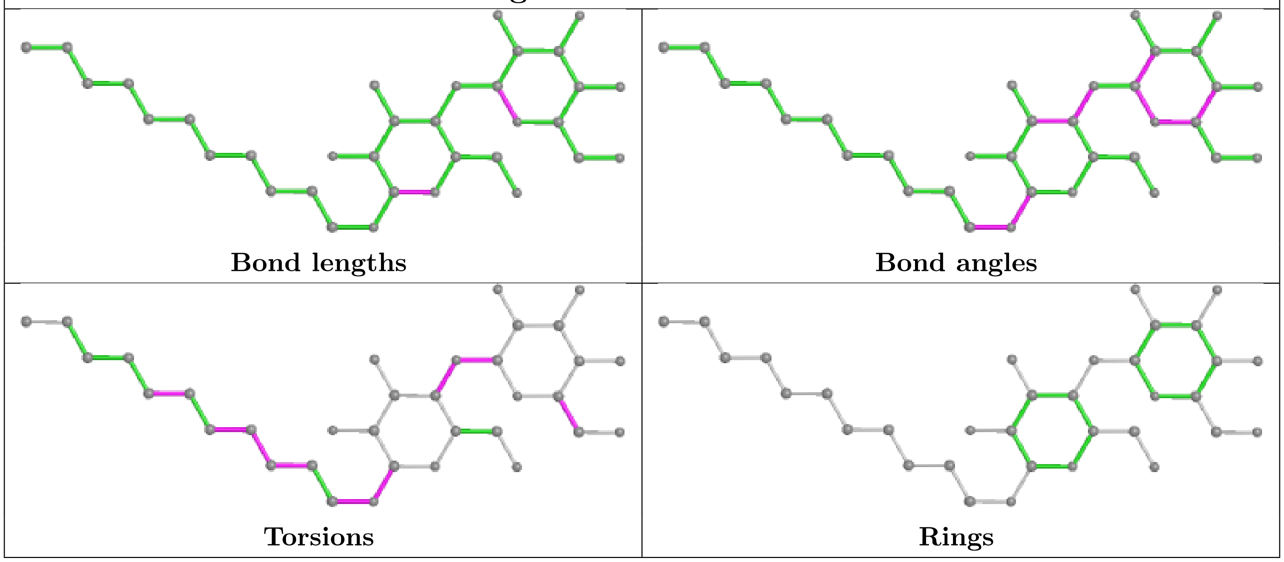


Ligand LMU AL 301



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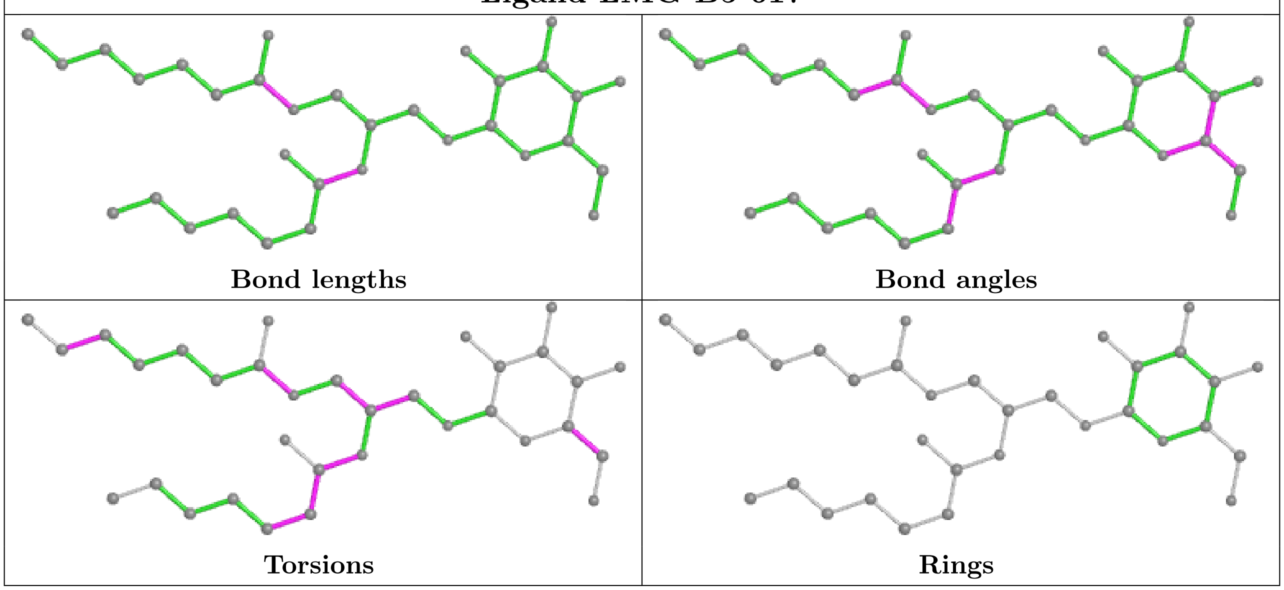
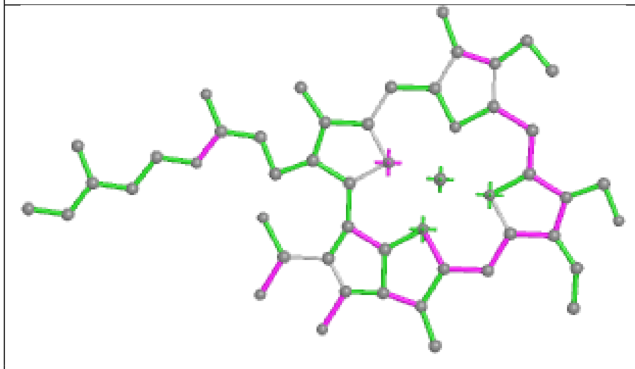
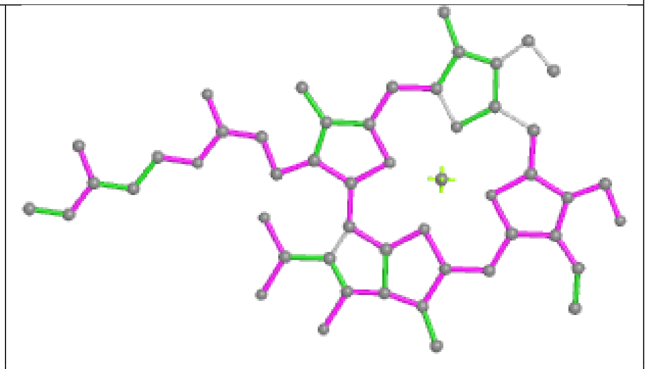


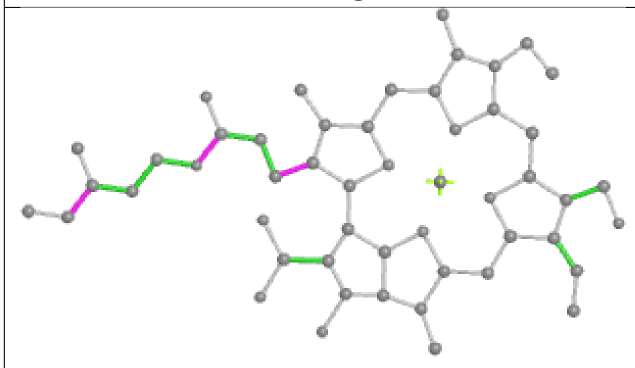
Ligand CHL A1 303



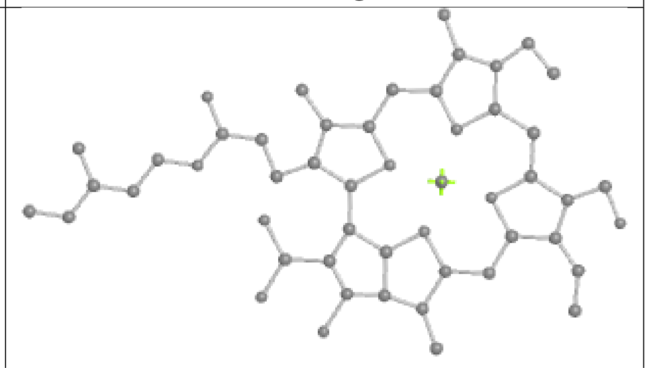
Bond lengths



Bond angles

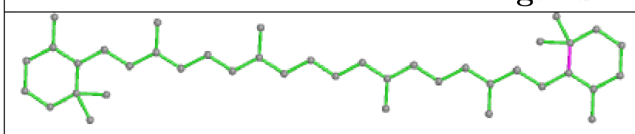


Torsions



Rings

Ligand BCR AI 101



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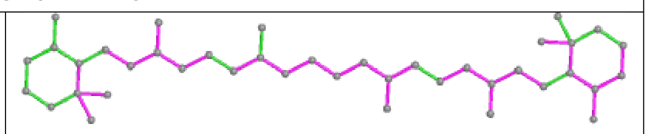
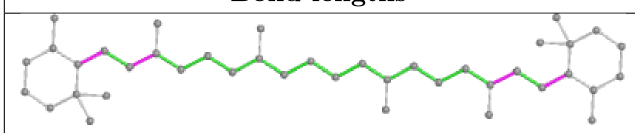


Bond angles



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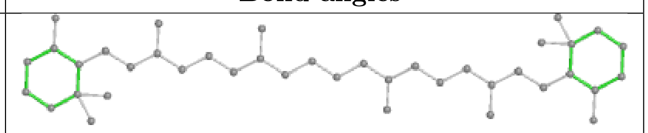
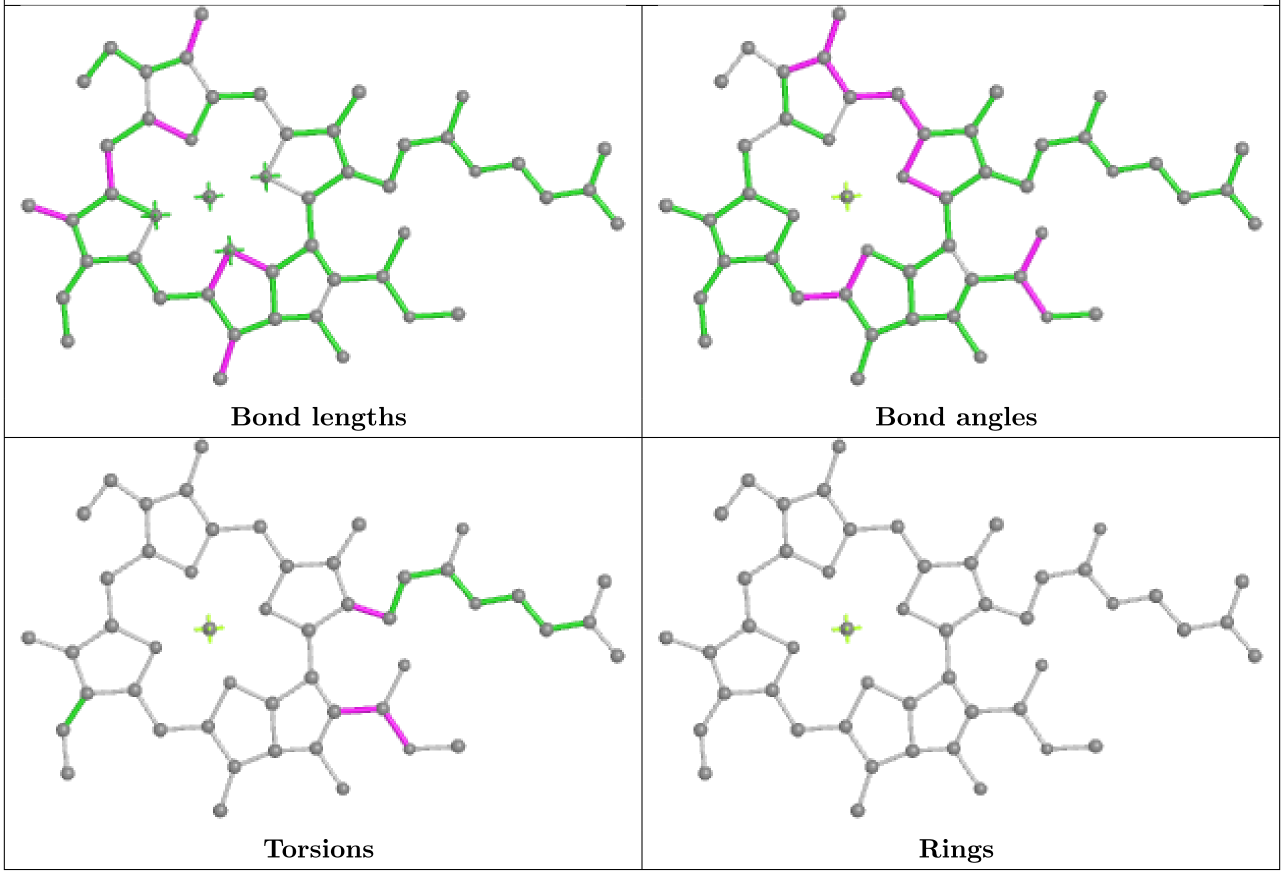
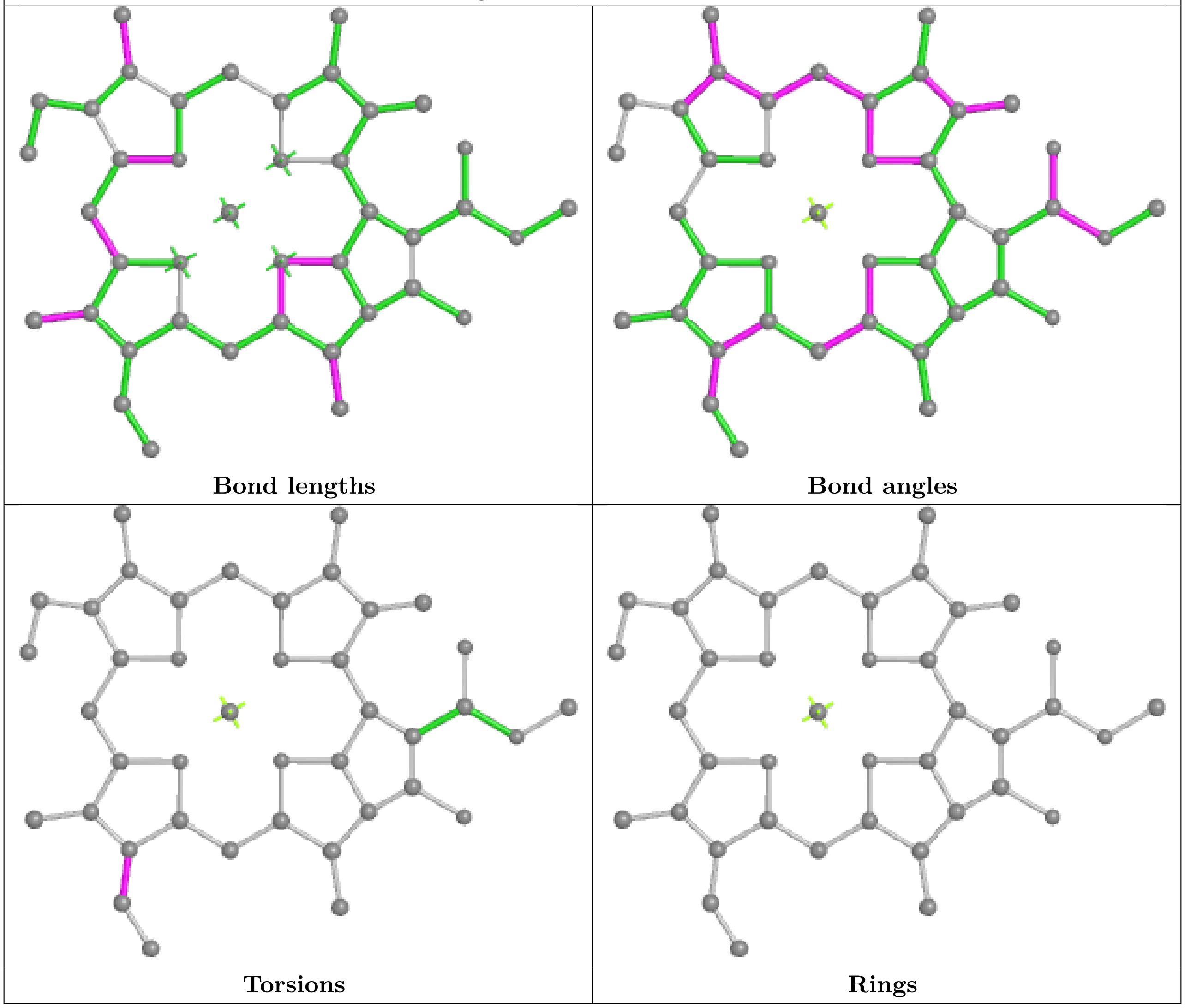


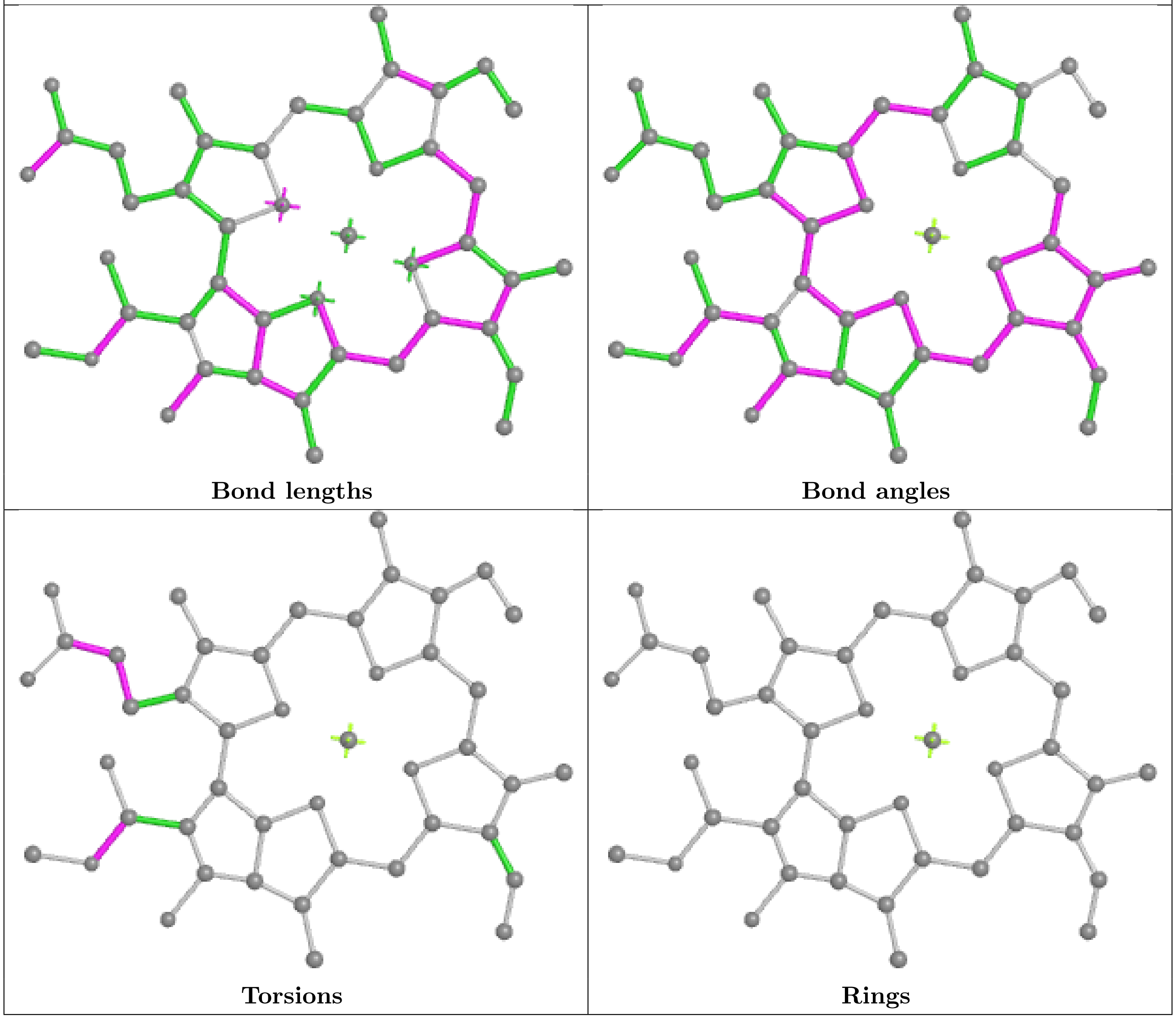
Rings

Ligand CLA BA 807

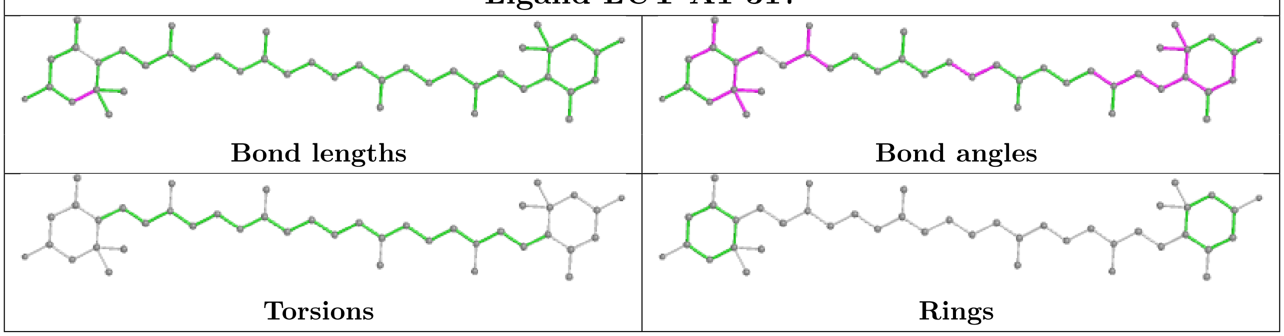


Ligand CLA BB 806	
	

Ligand CHL B3 306



Ligand LUT A1 317



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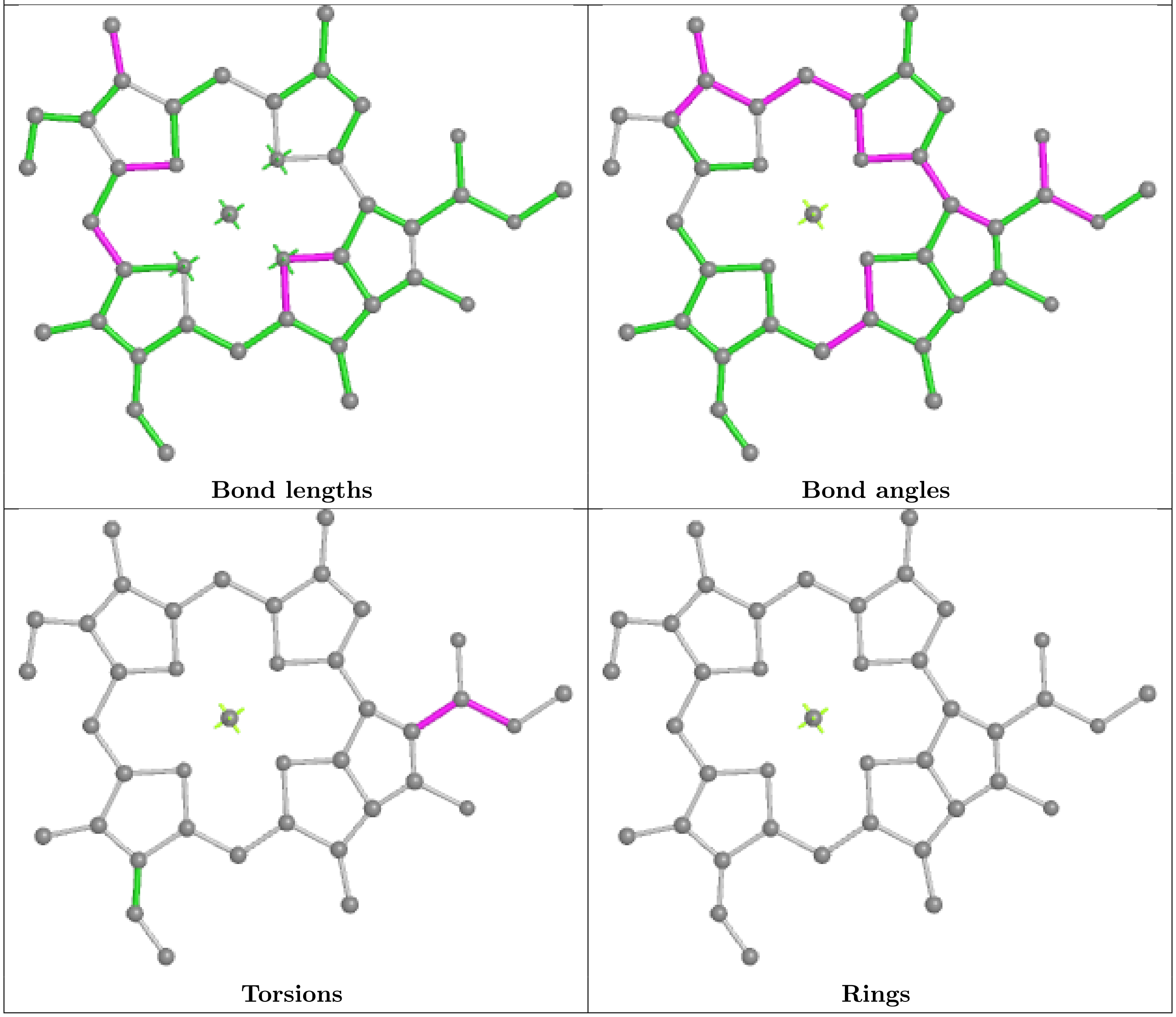


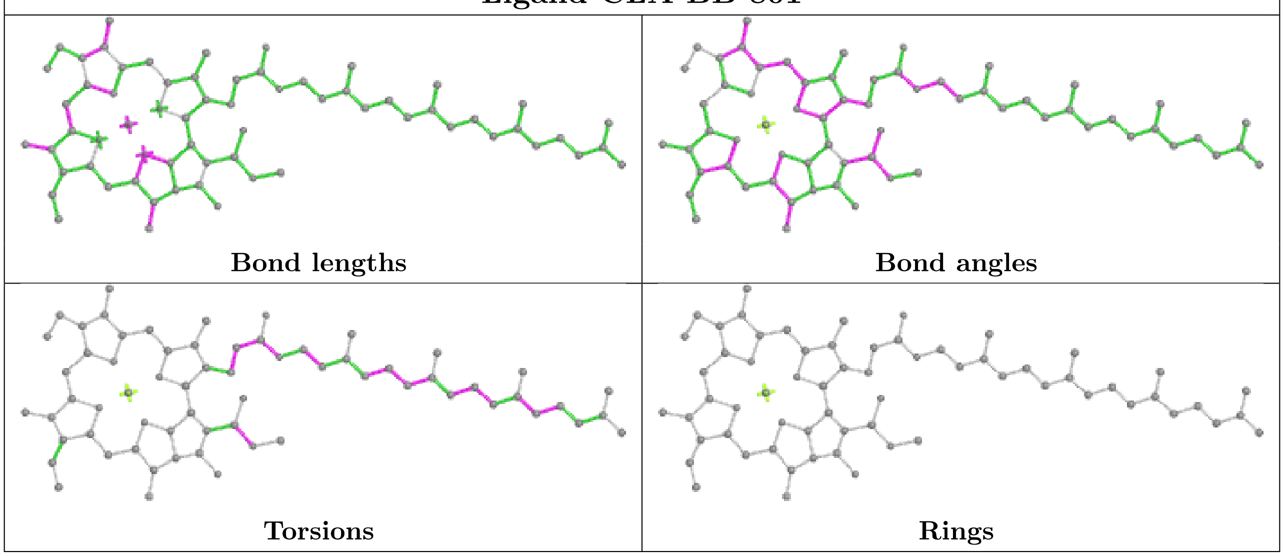
Bond lengths

Bond angles

Torsions

Rings

Ligand CLA BB 801



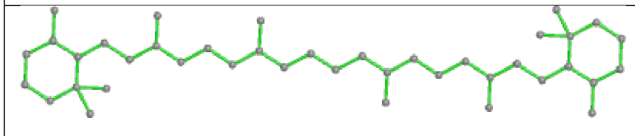
Bond lengths

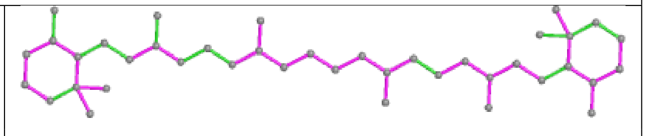
Bond angles

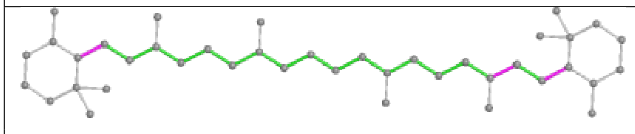
Torsions

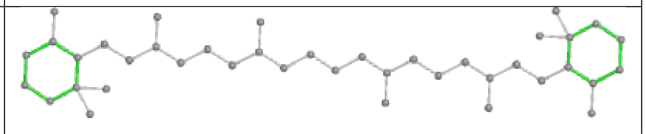
Rings

Ligand BCR AA 846


Bond lengths


Bond angles


Torsions


Rings

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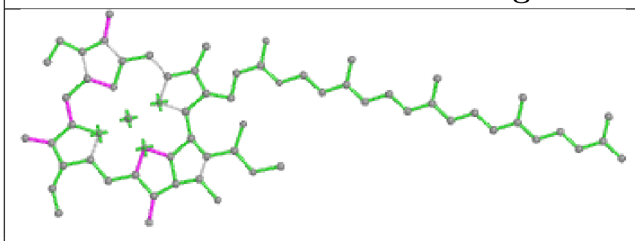
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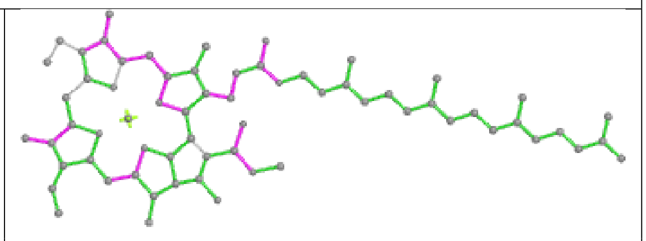
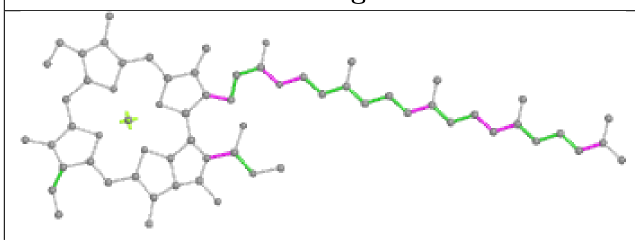

Bond angles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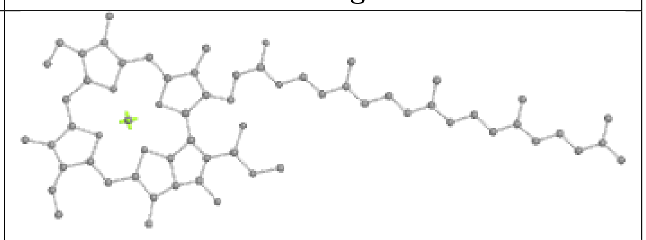
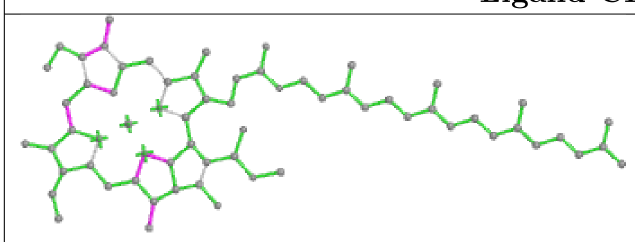
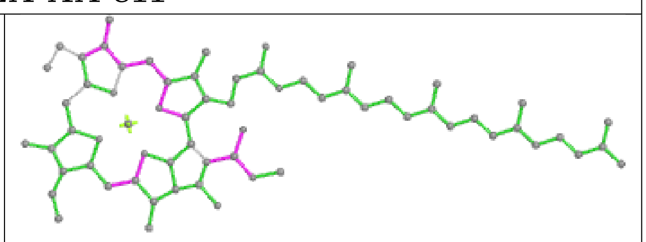
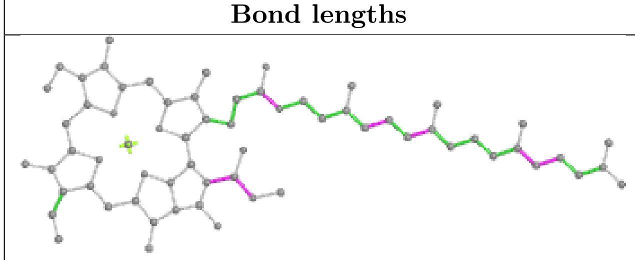
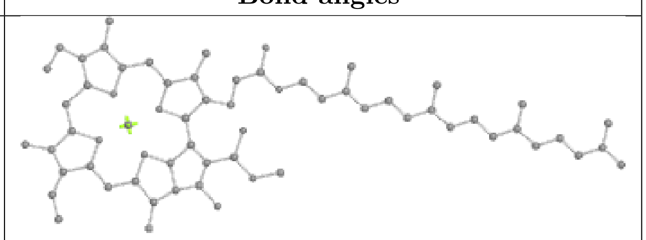

Rings

Ligand CLA AA 811

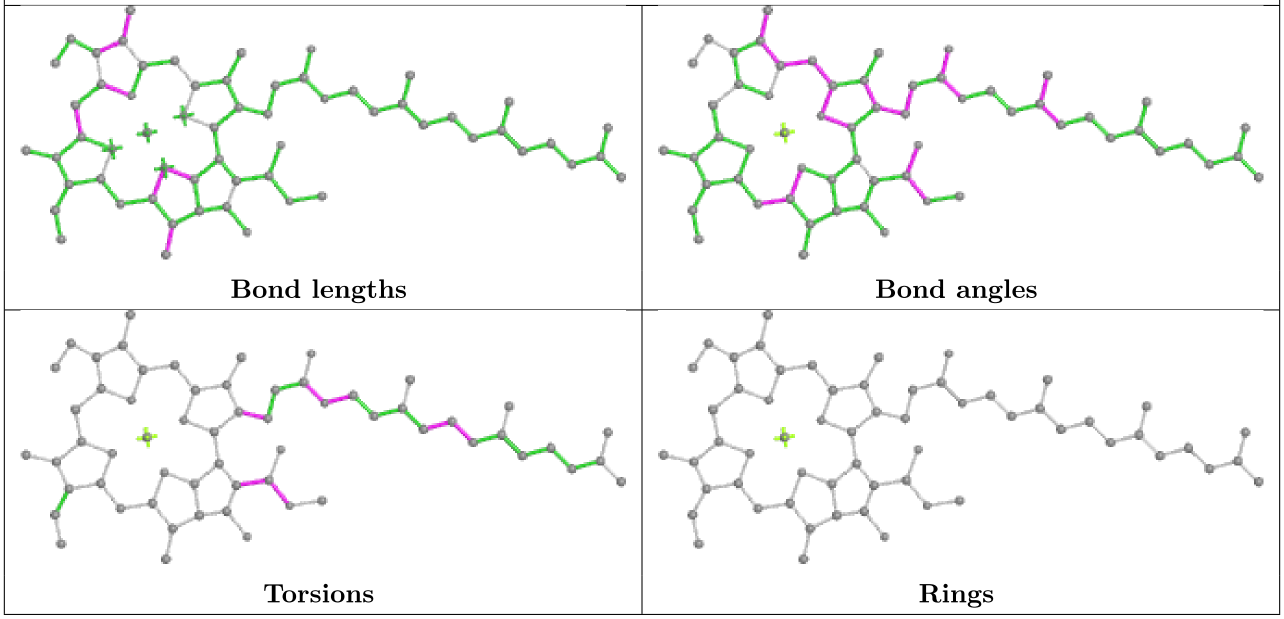

Bond lengths


Bond angles

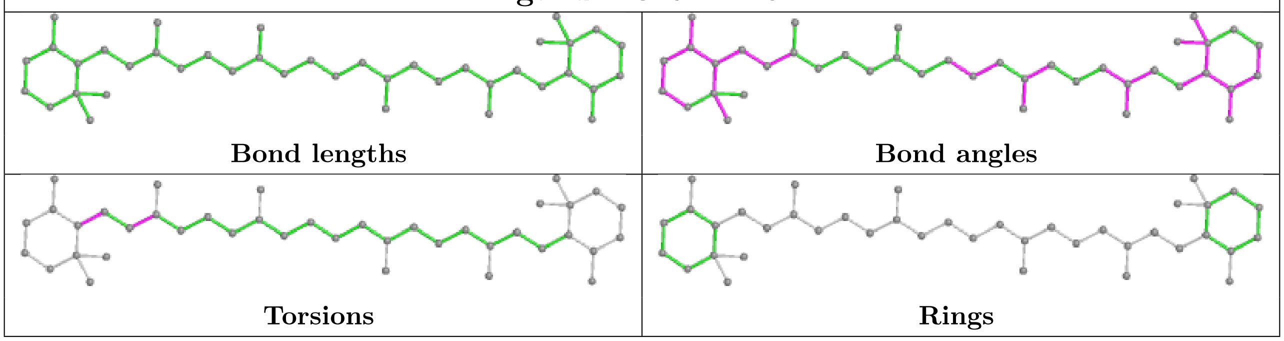

Torsions


Rings

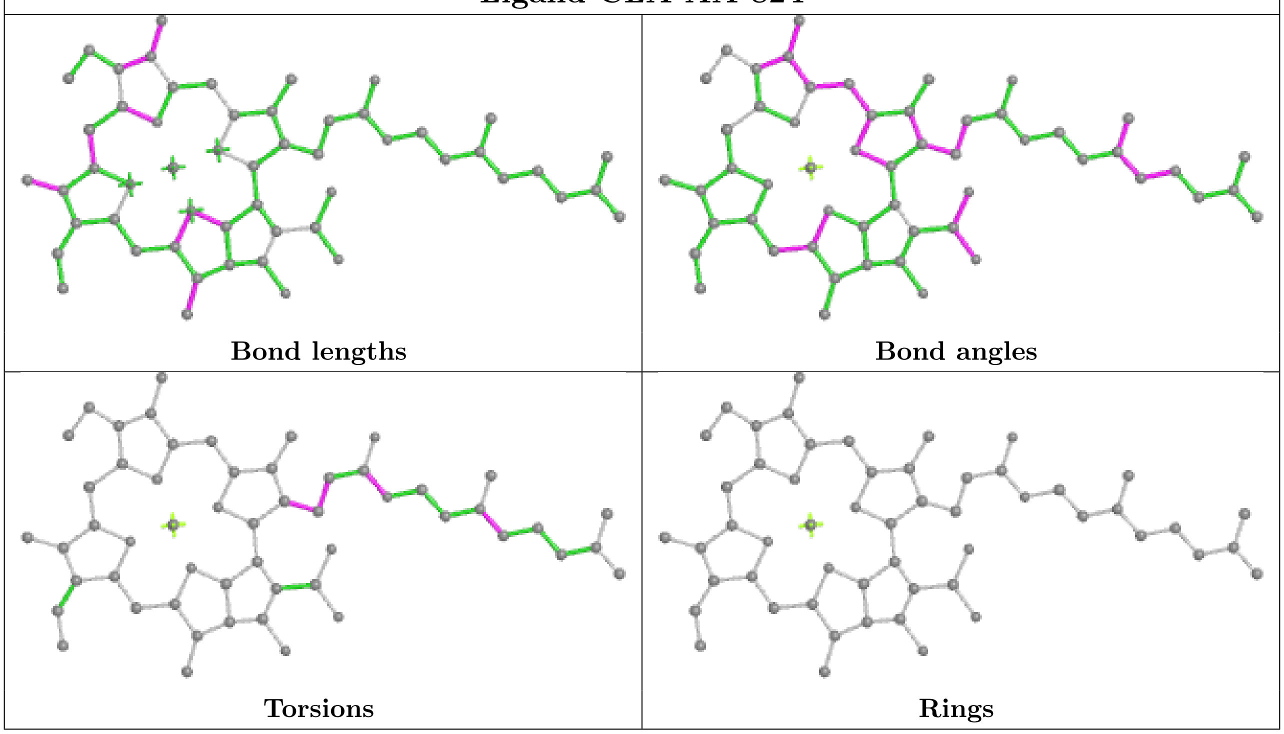
Ligand CLA AH 201



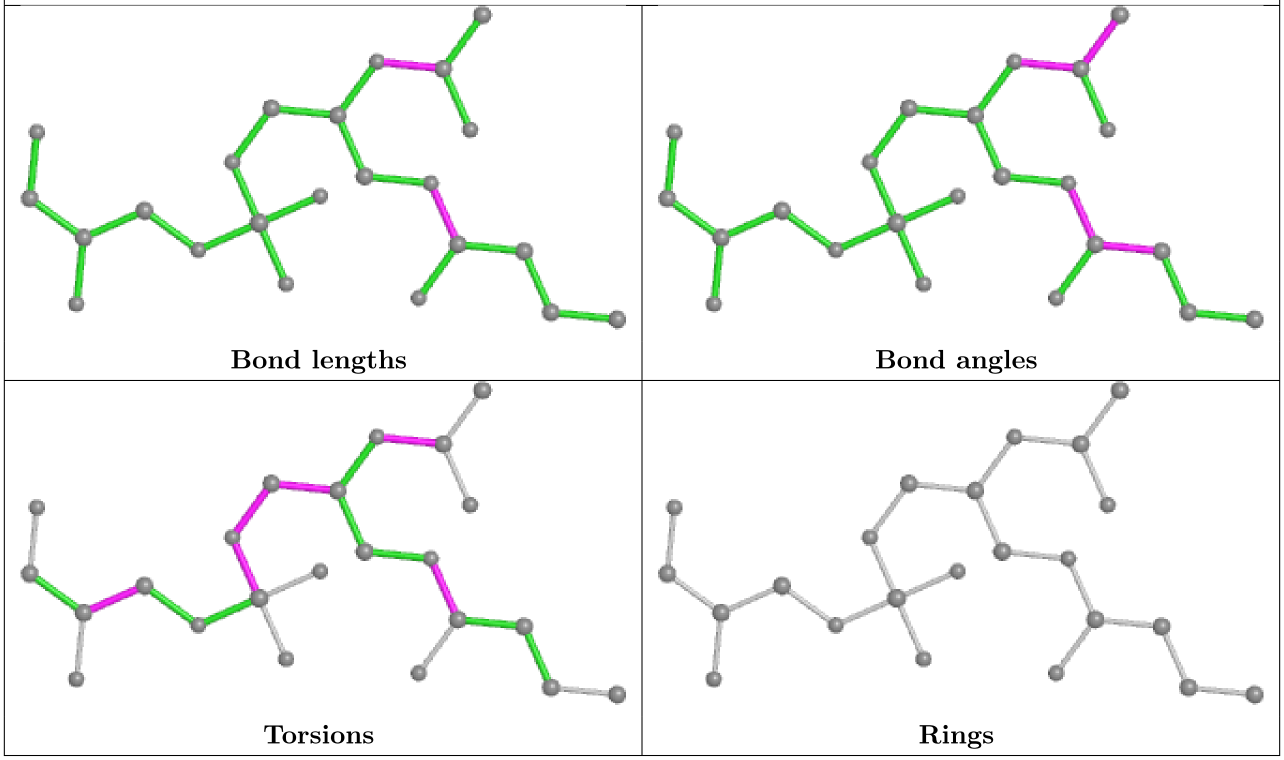
Ligand BCR AI 102



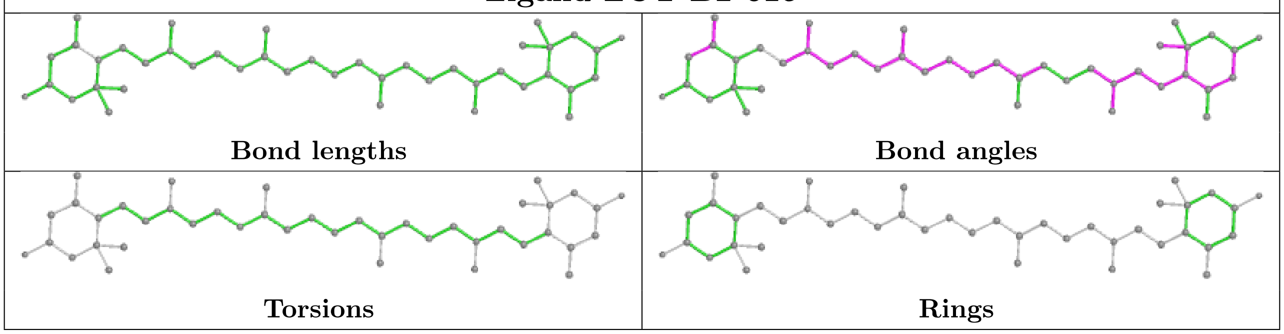
Ligand CLA AA 824



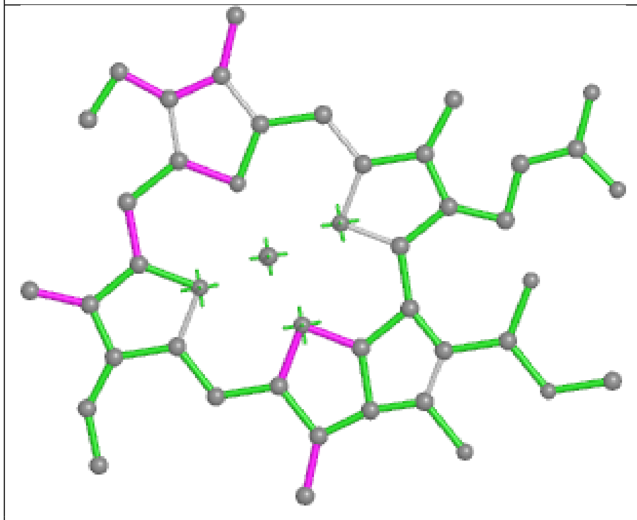
Ligand LHG B3 318



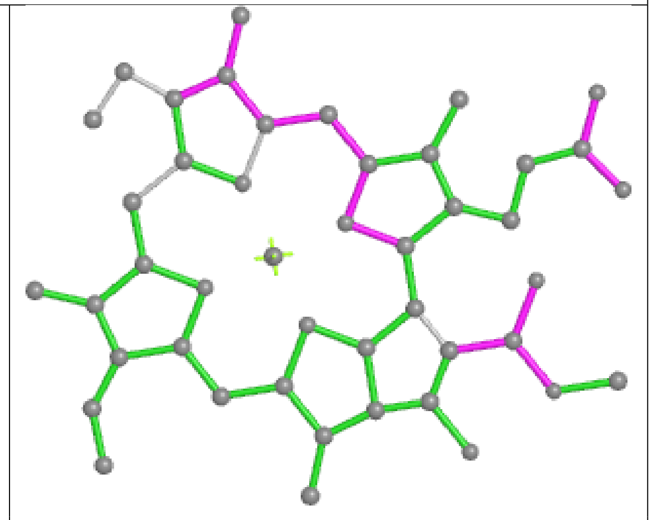
Ligand LUT B2 615



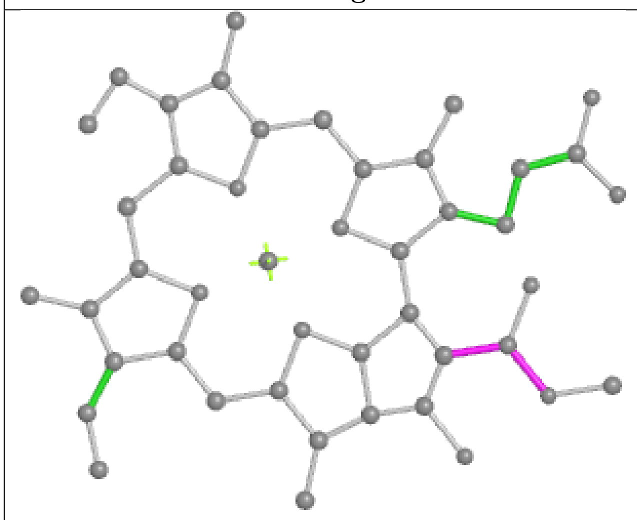
Ligand CLA AA 814



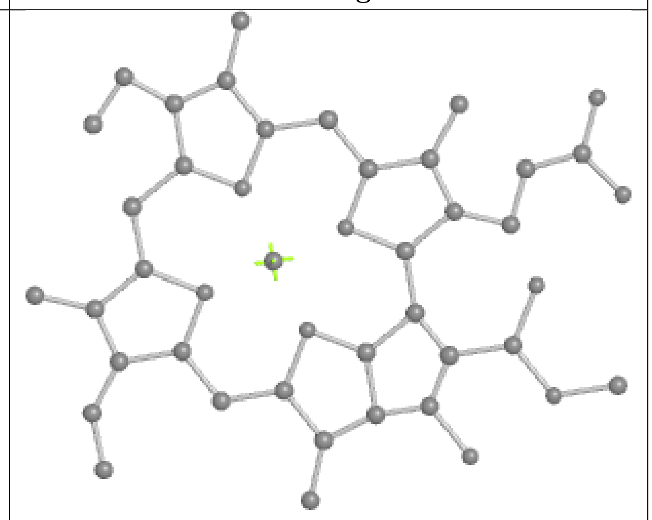
Bond lengths



Bond angles

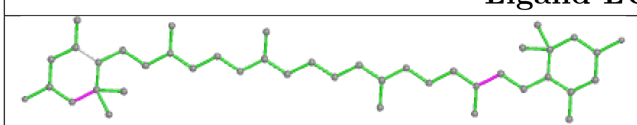


Torsions

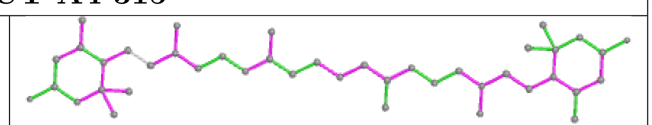


Rings

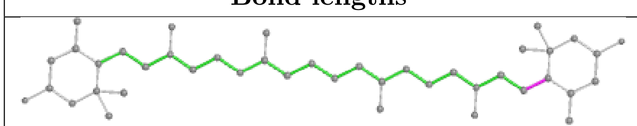
Ligand LUT A4 315



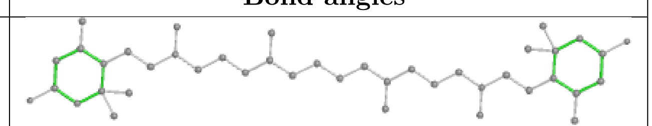
Bond lengths



Bond angles

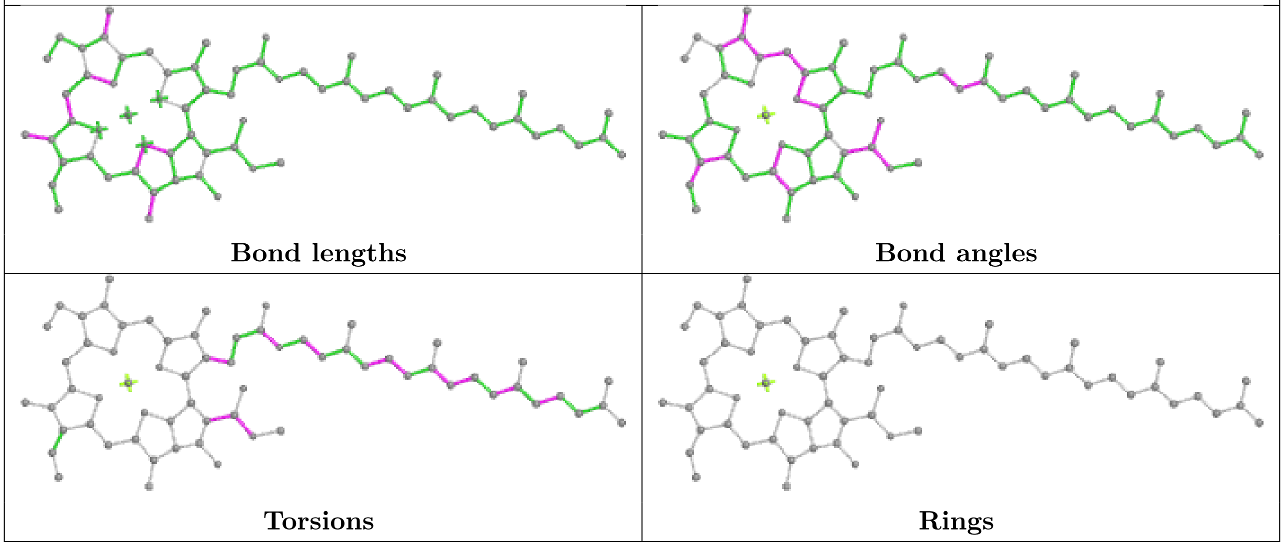


Torsions

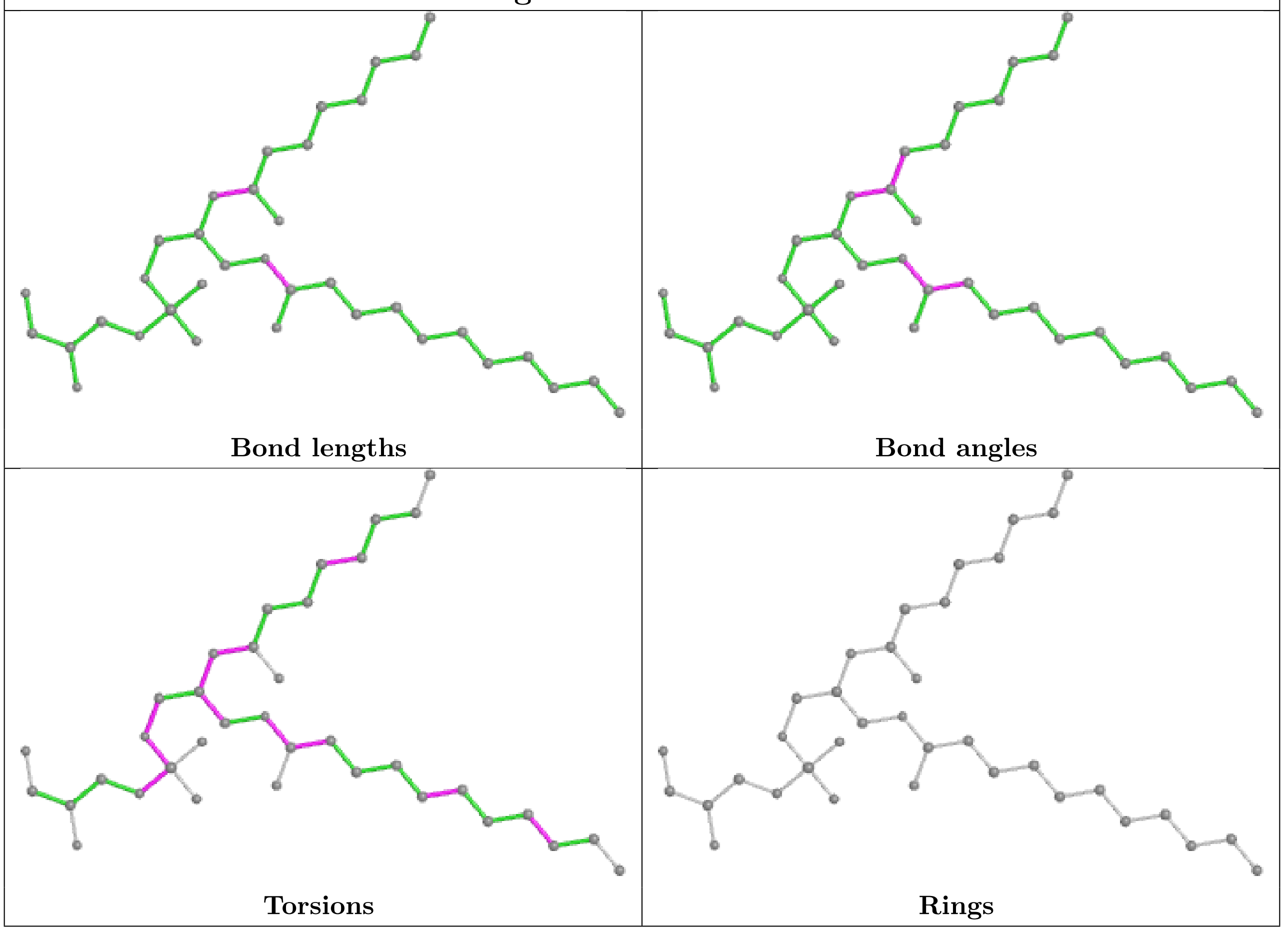


Rings

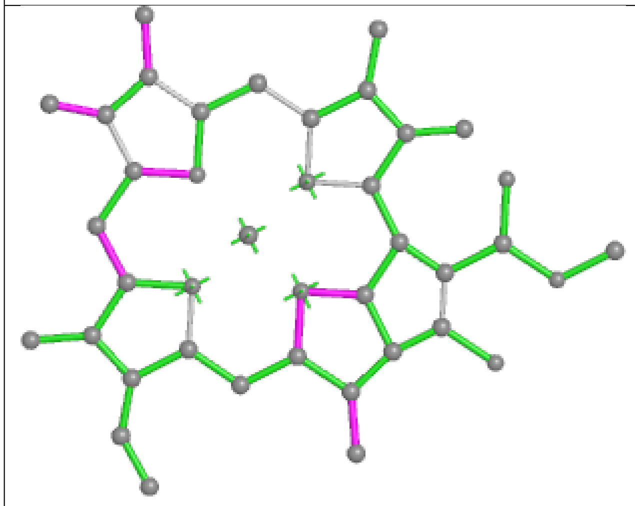
Ligand CLA BA 803



Ligand LHG A6 618



Ligand CLA A1 310



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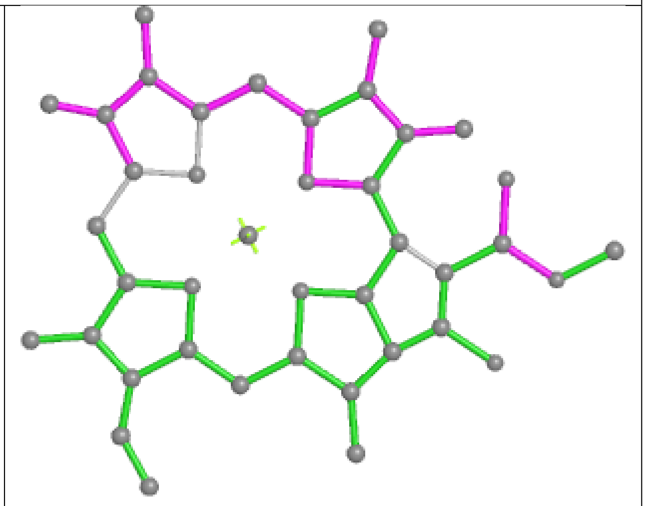
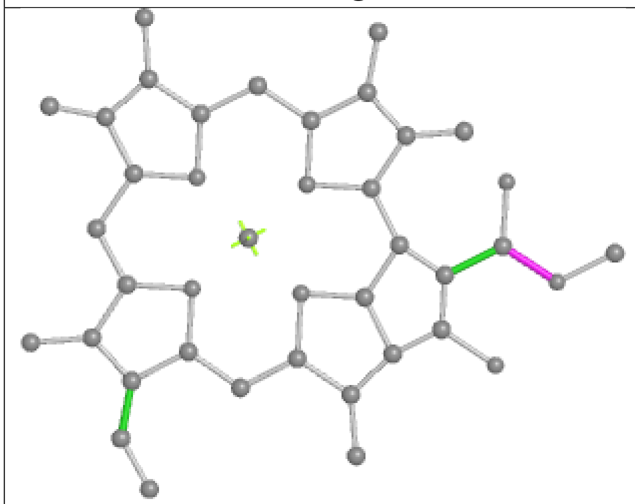
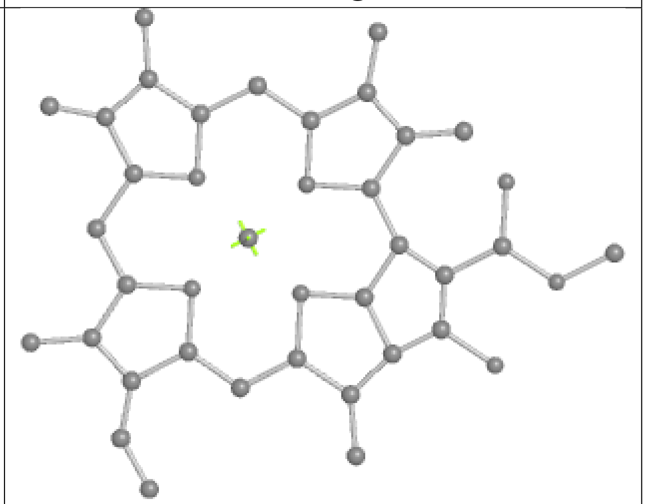


Bond angles

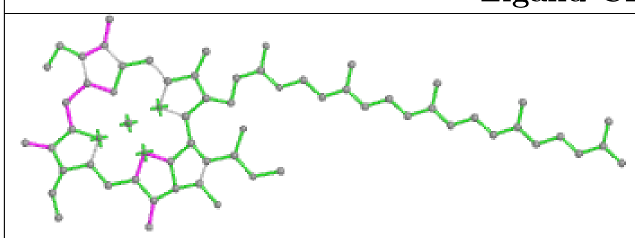


Torsions

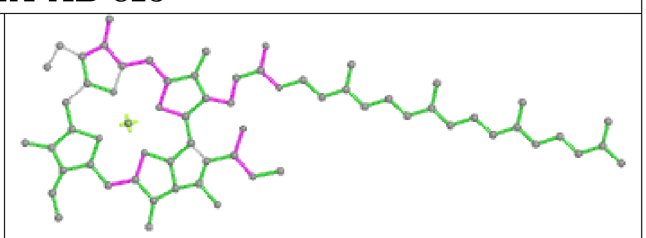


Rings

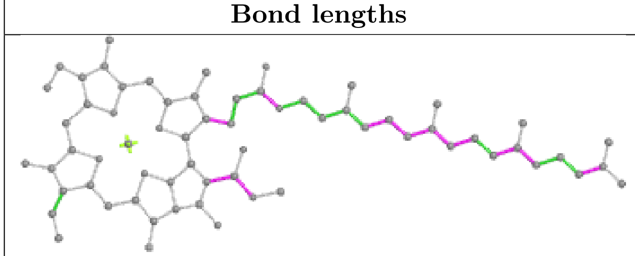
Ligand CLA AB 823



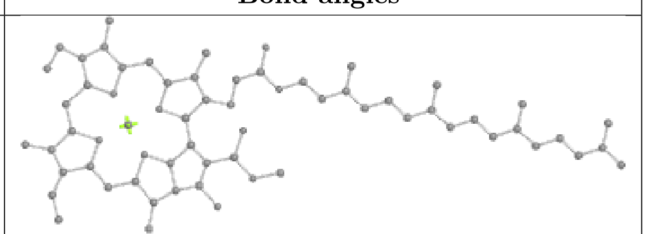
Bond lengths



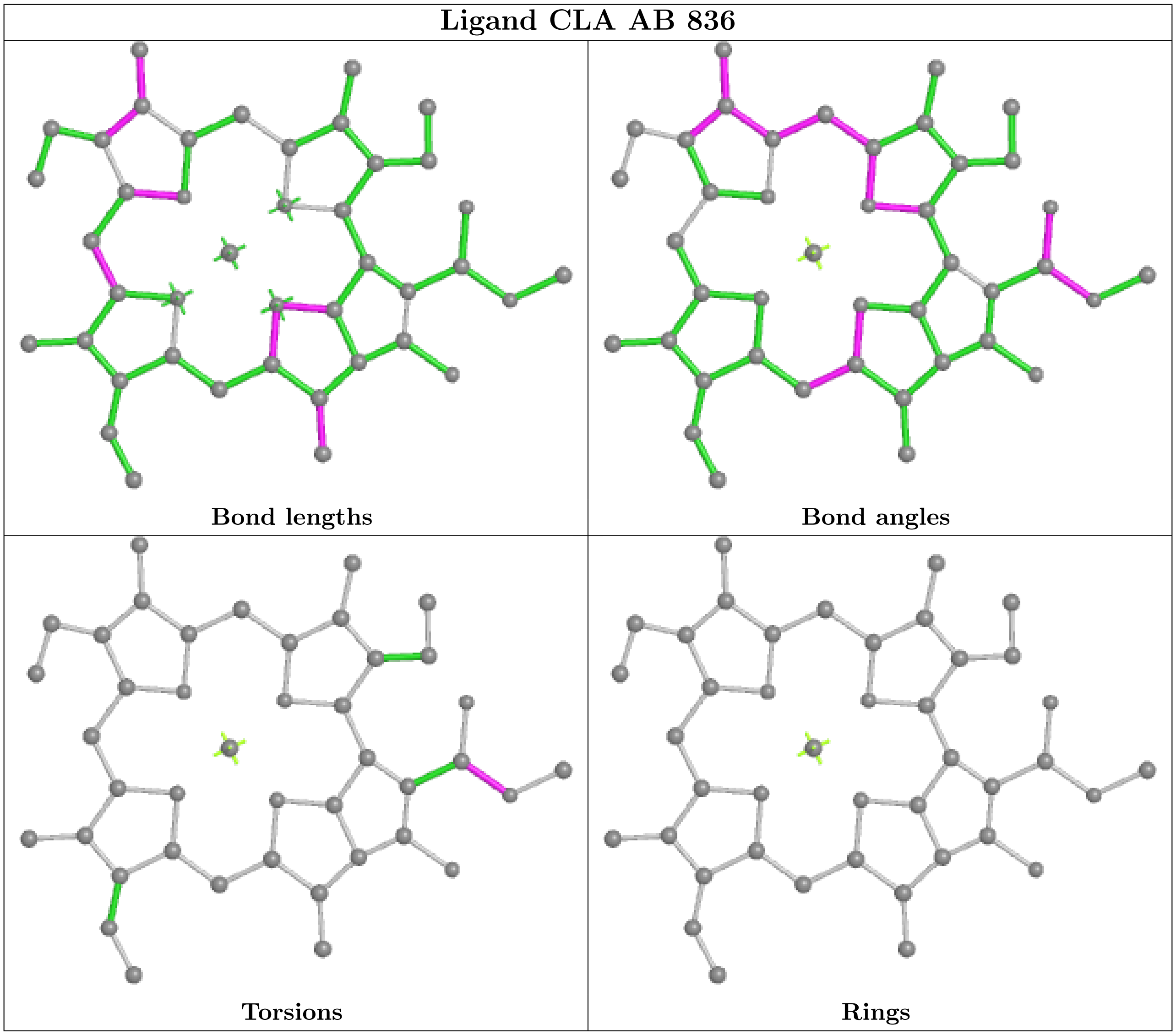
Bond angles



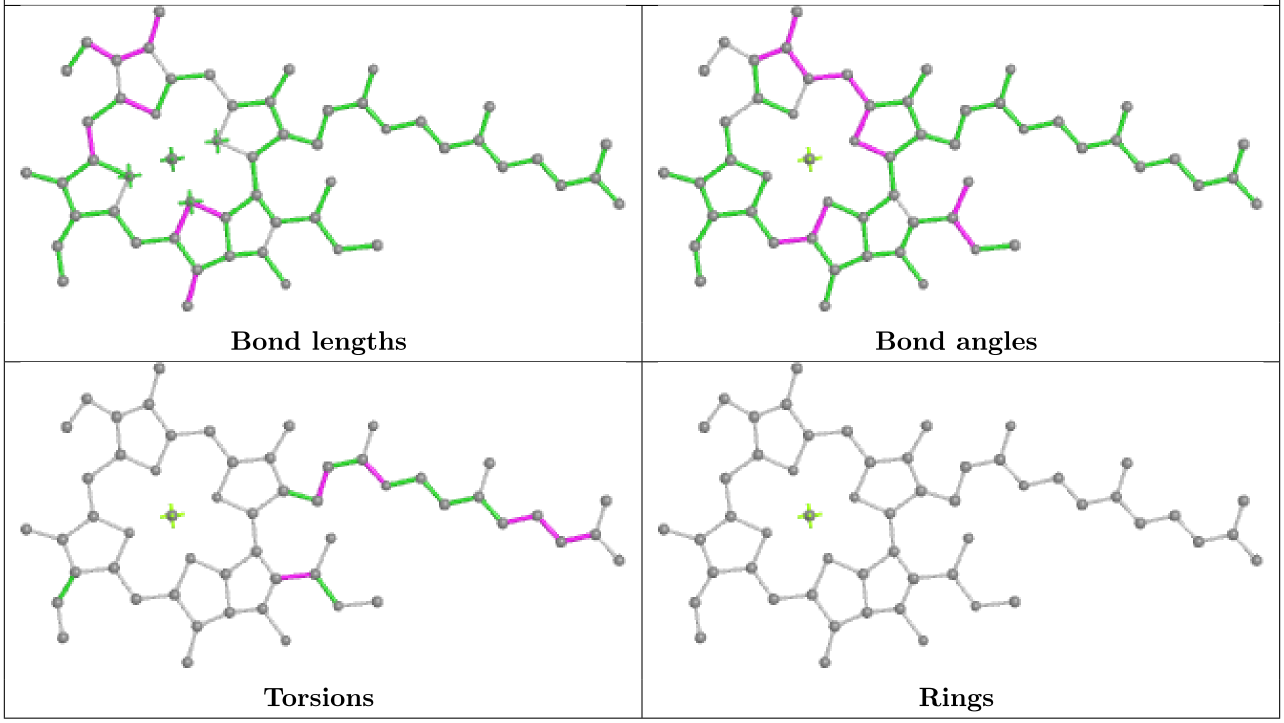
Torsions



Rings


Ligand CLA AB 836
Bond lengths
Bond angles
Torsions
Rings

Ligand CLA AB 817



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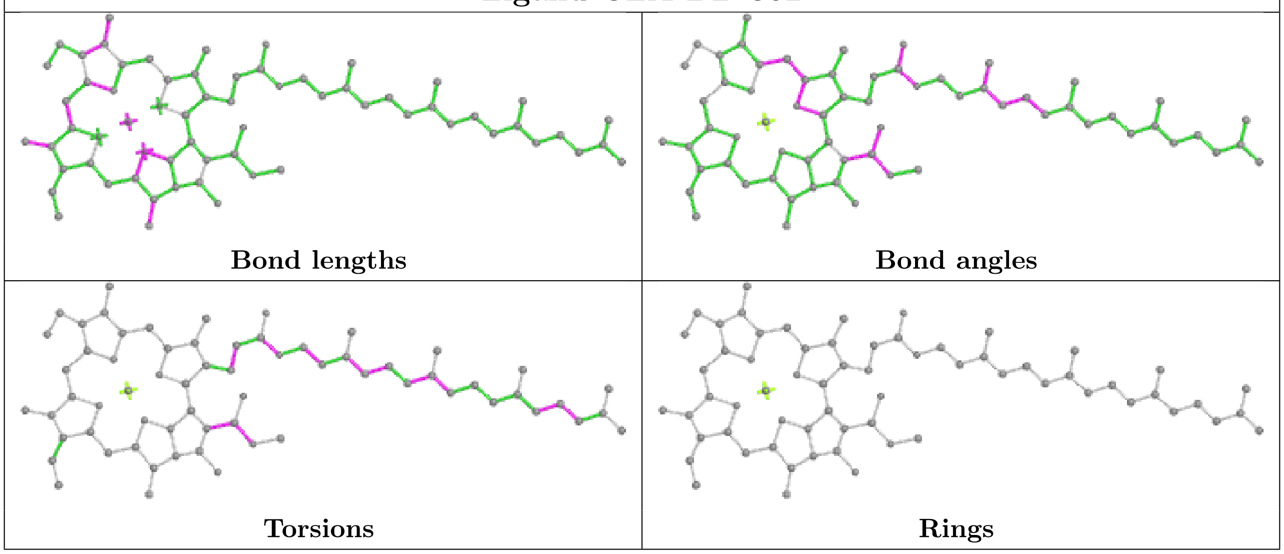
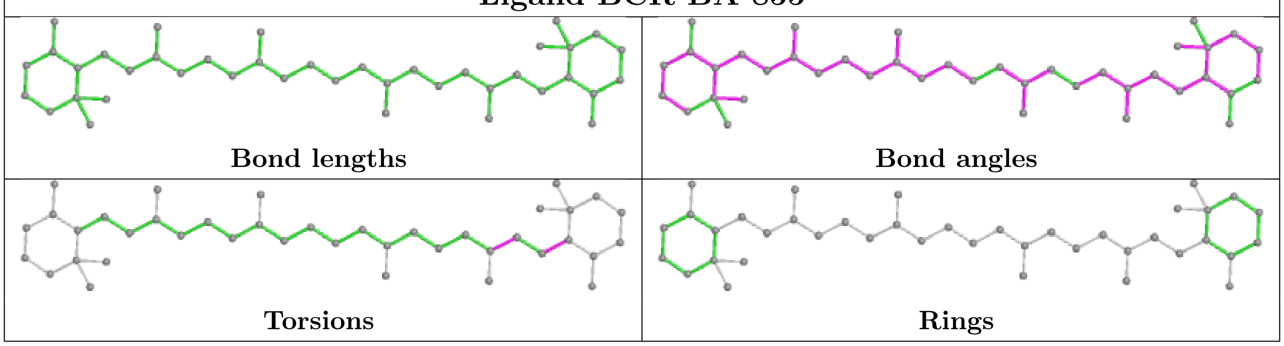
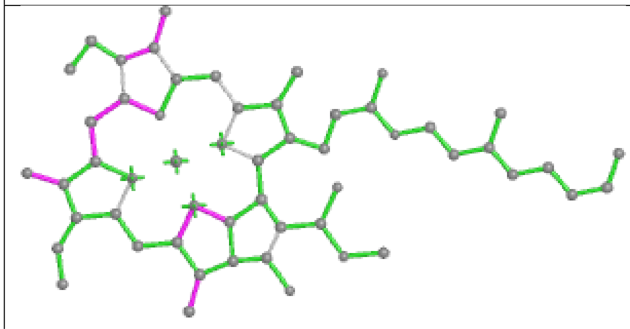
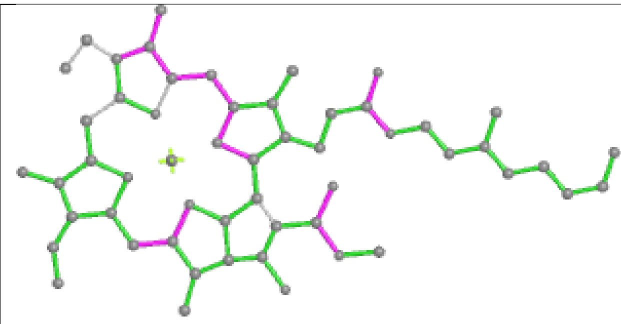
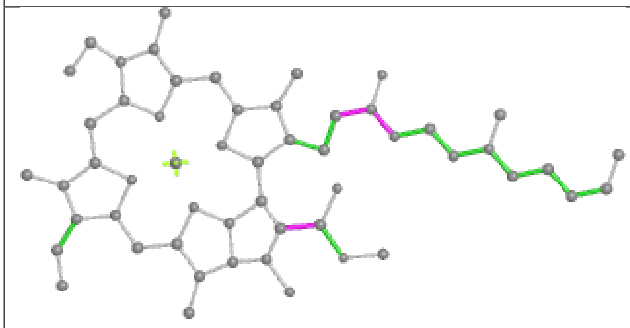
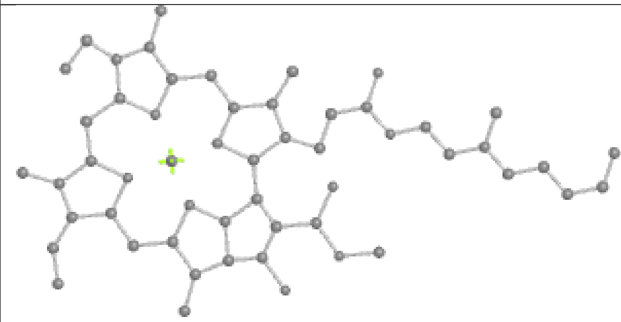


Ligand BCR BA 855



Ligand CLA BA 812	
 Bond lengths	 Bond angles
 Torsions	 Rings

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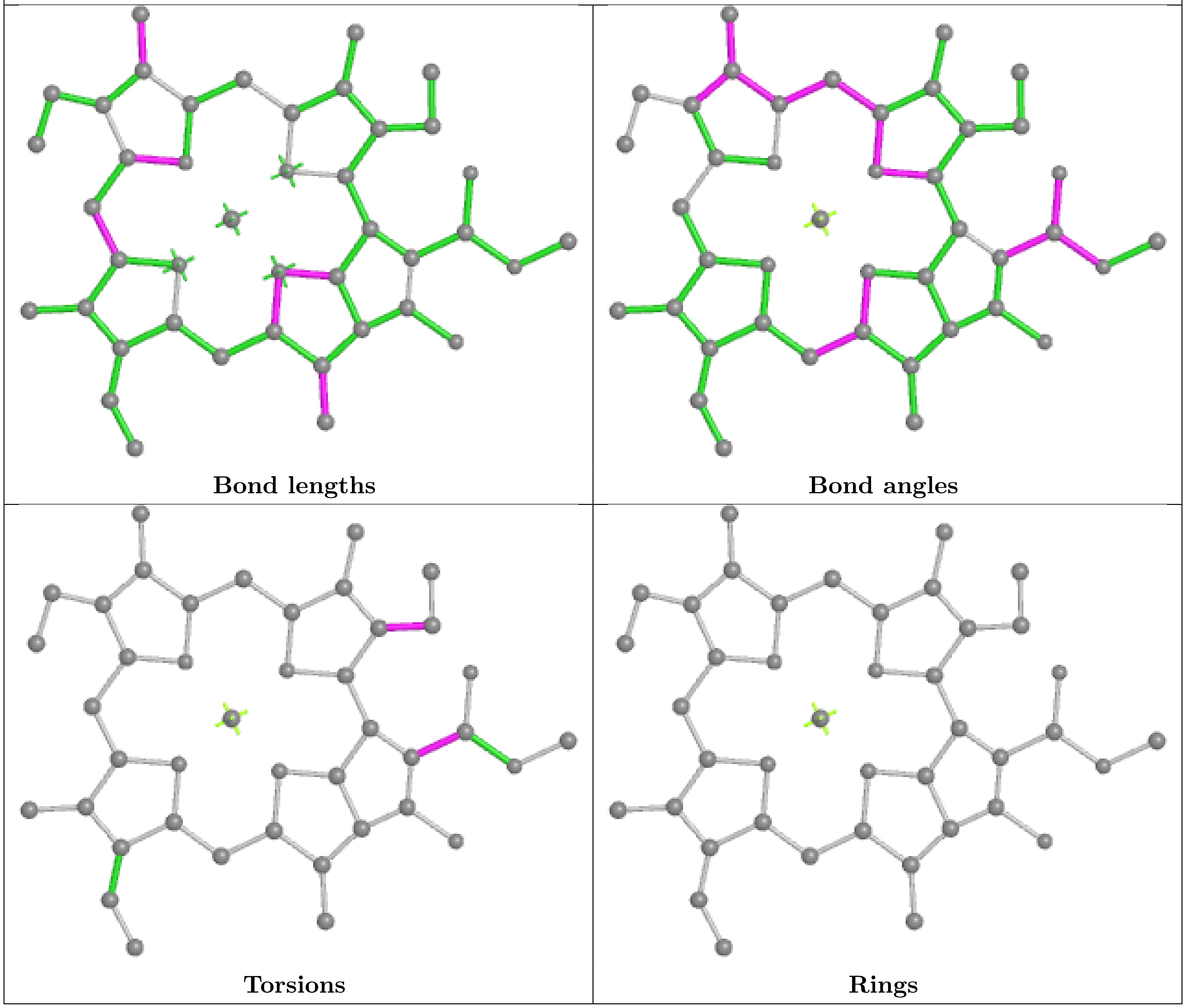

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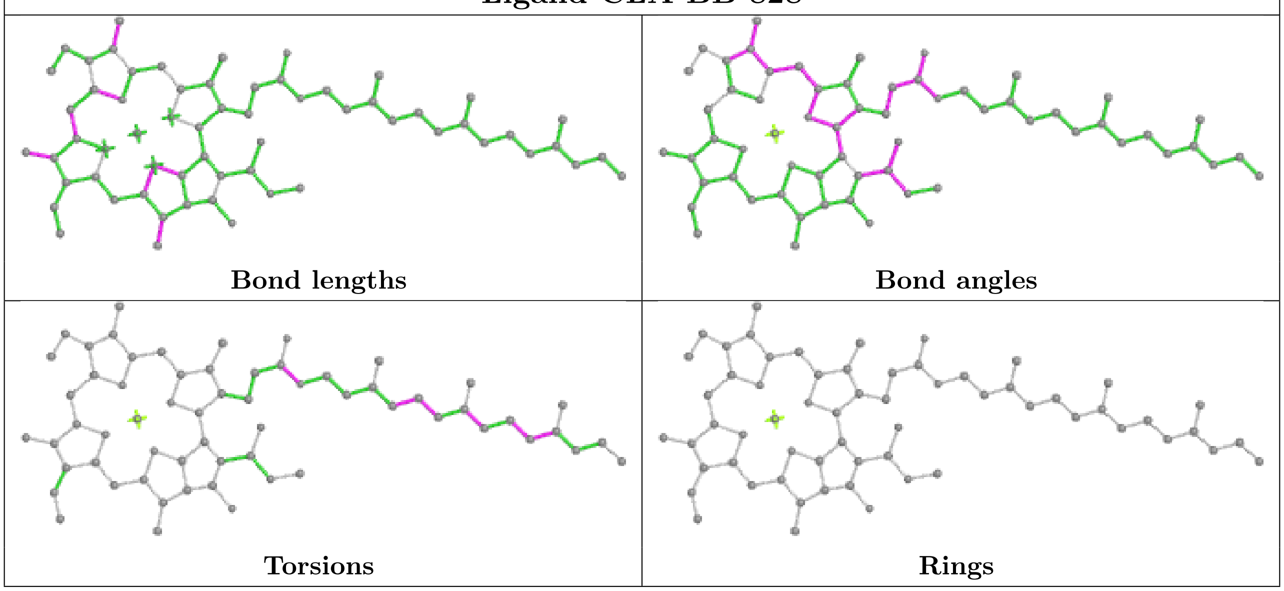

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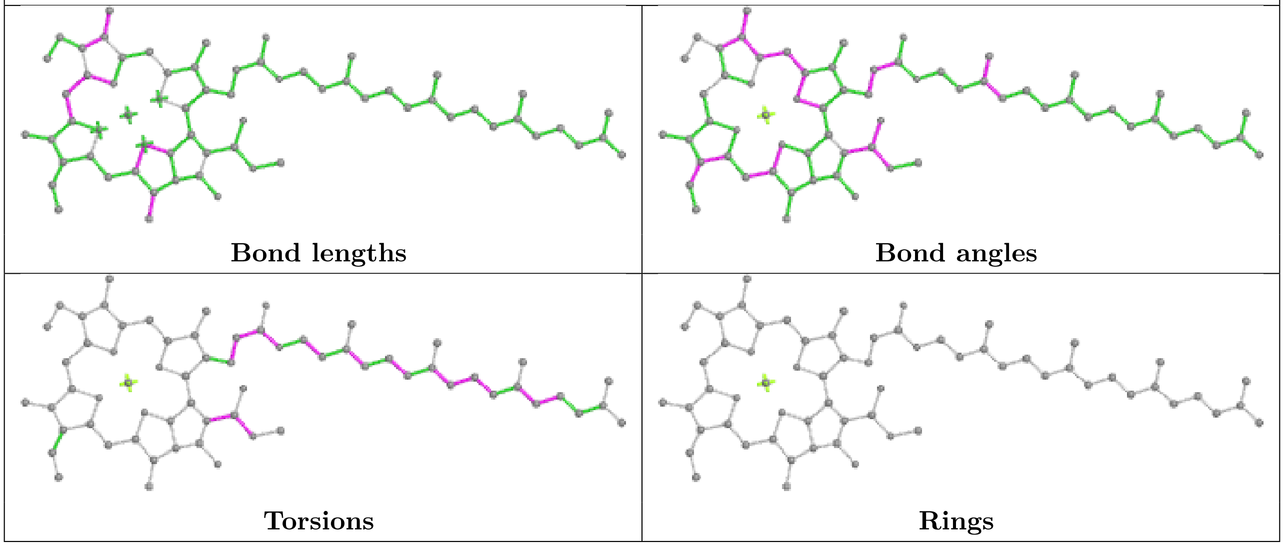

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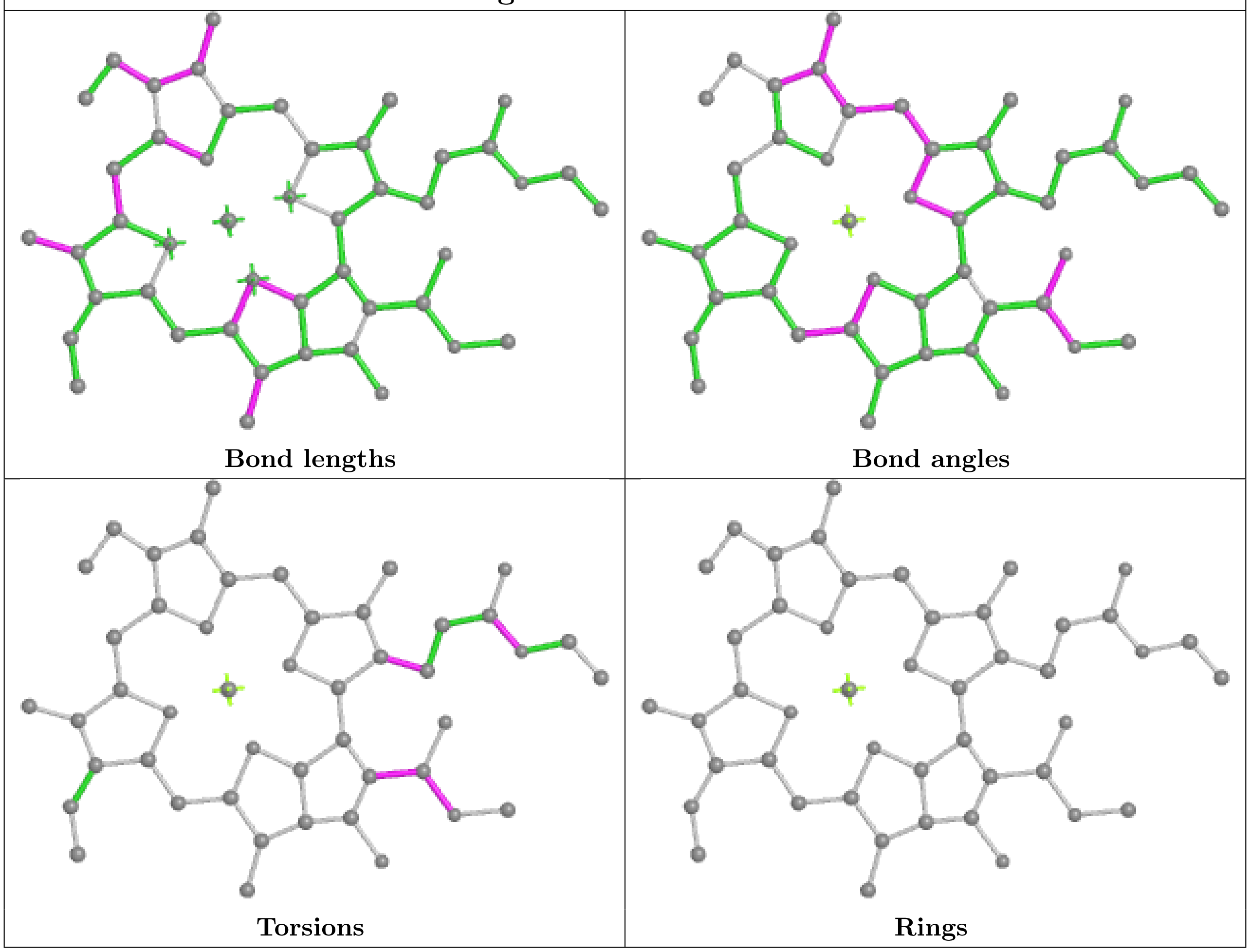

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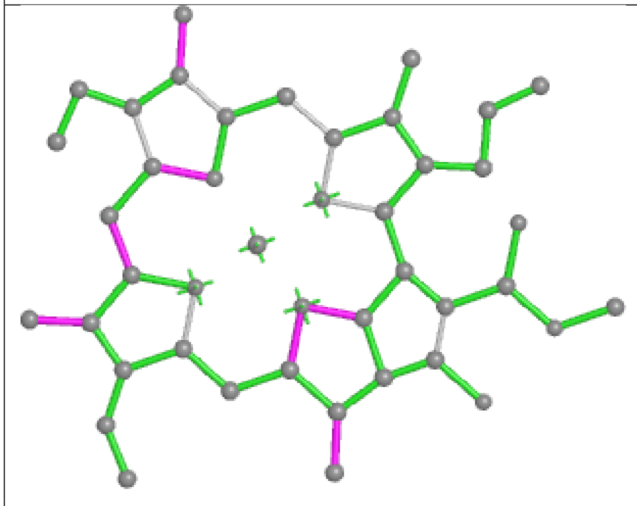
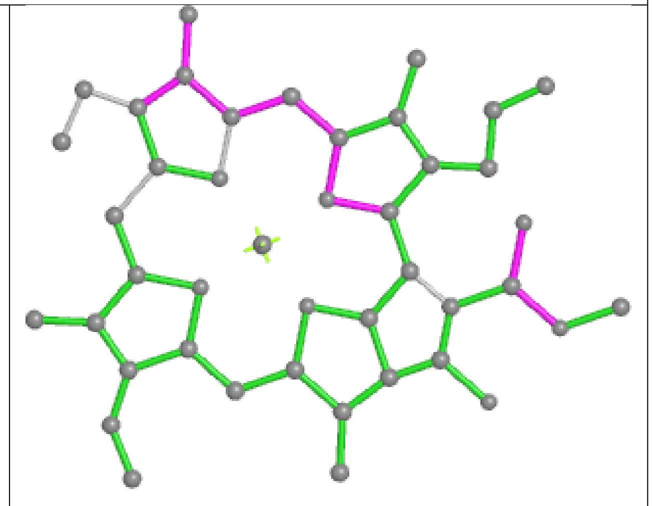


Bond lengths



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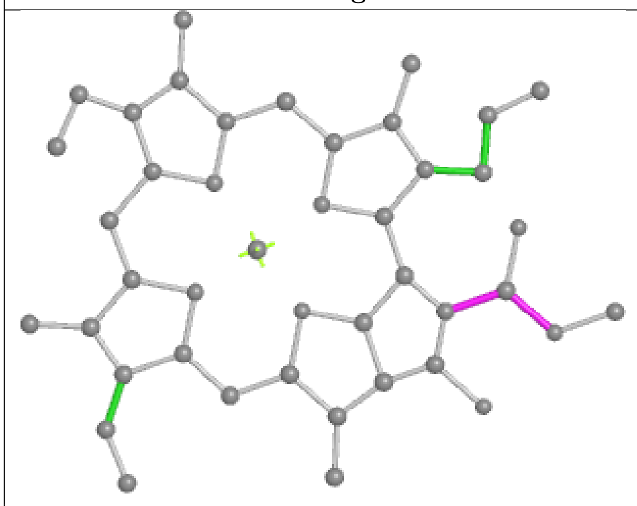
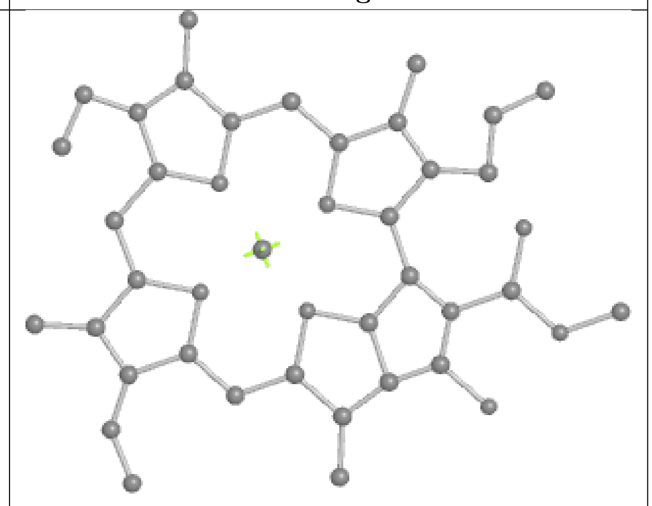
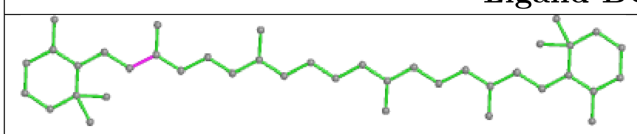


Torsions



Rings

Ligand BCR B2 617



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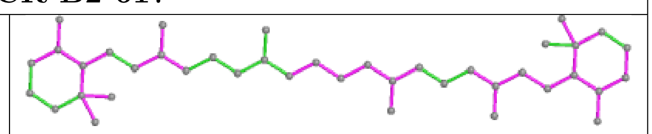
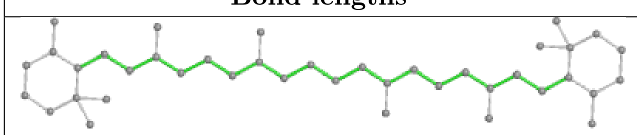


Bond angles



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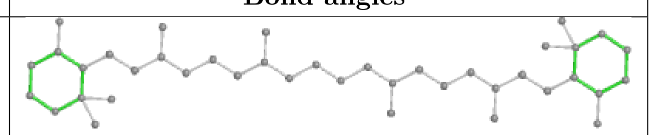
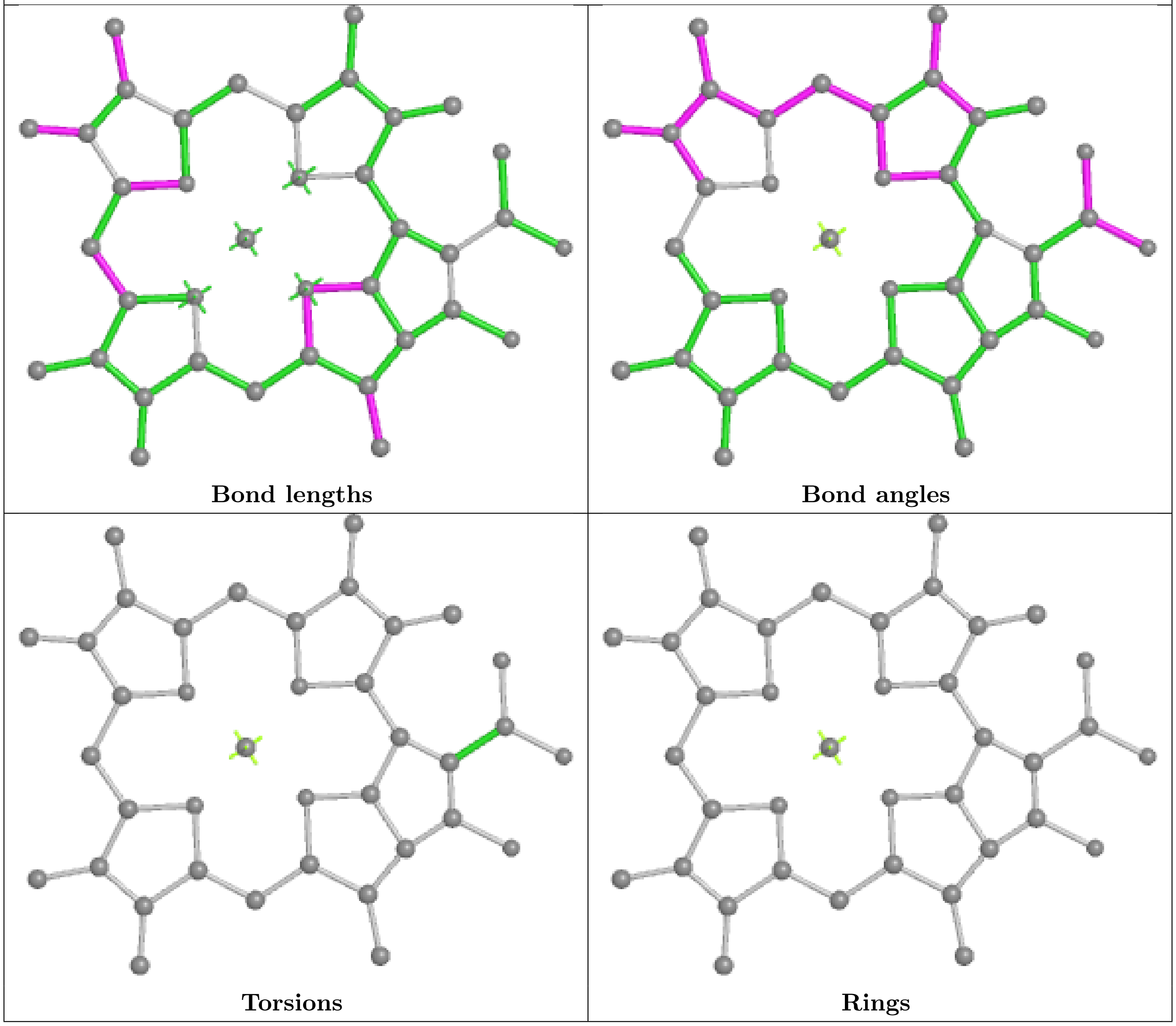
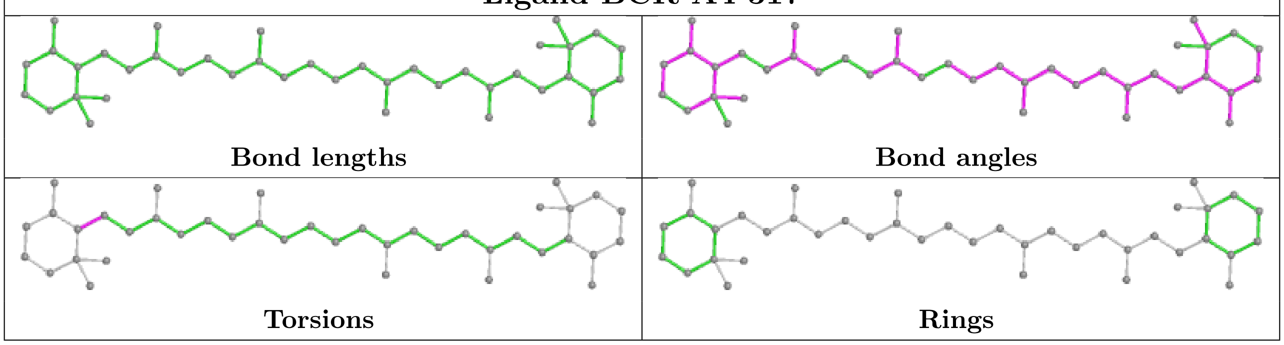


Rings

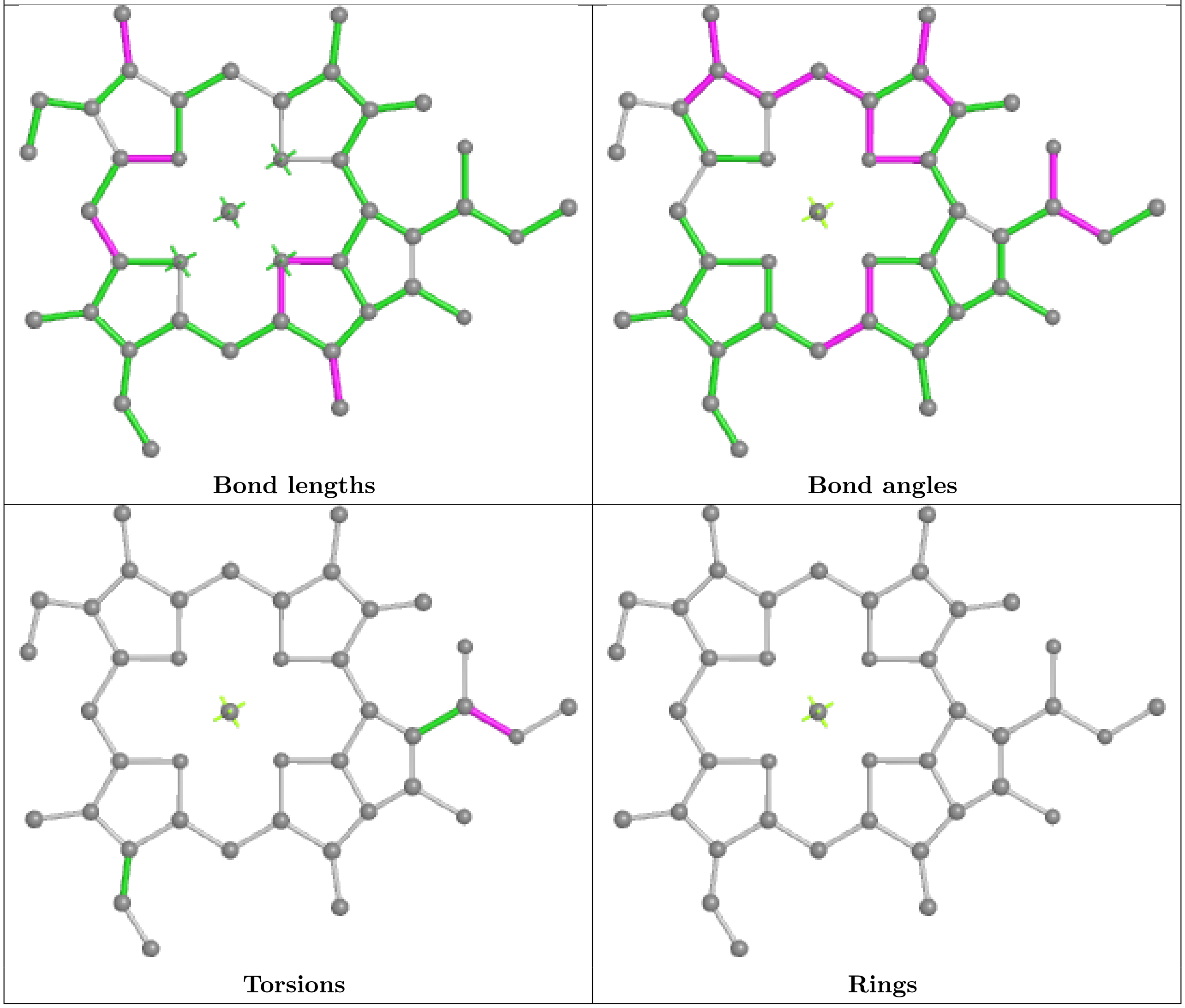
Ligand CLA B1 315



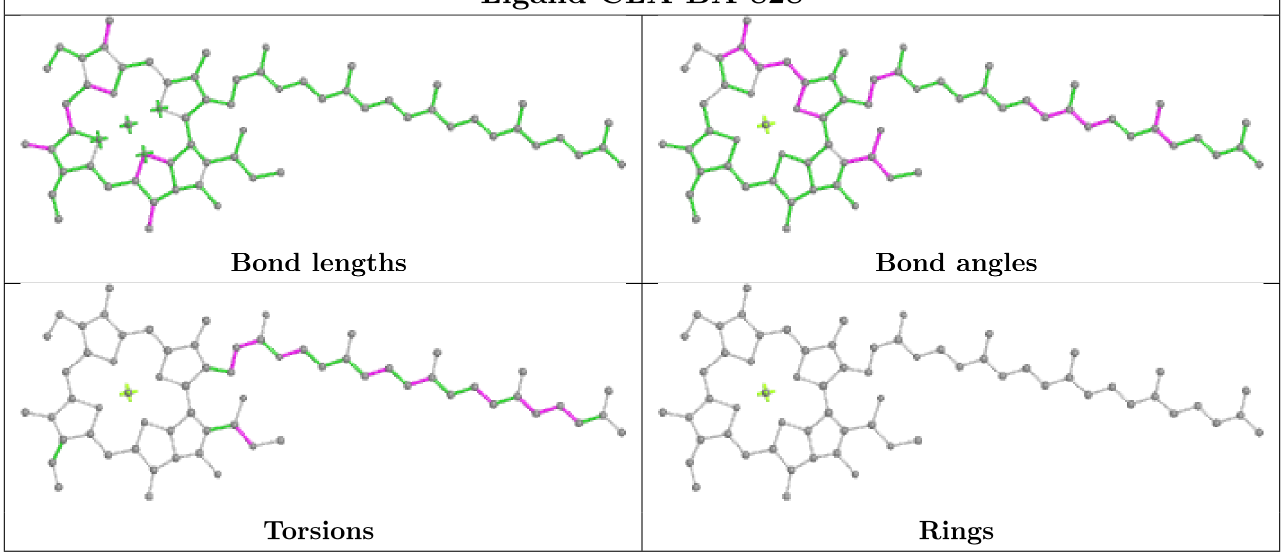
Ligand BCR A4 317



Ligand CLA AB 805



Ligand CLA BA 828



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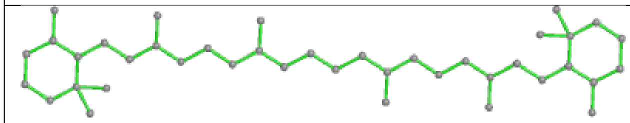
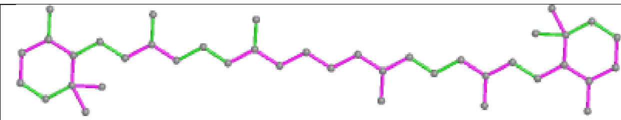
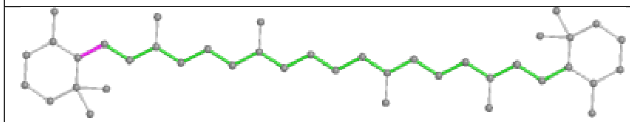


Bond lengths



Bond angles



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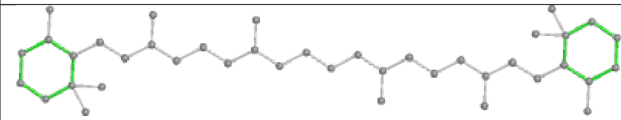
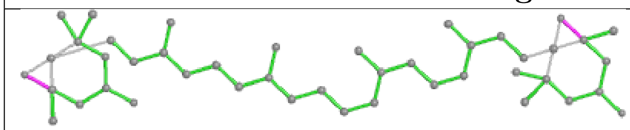


Rings

Ligand XAT A1 318



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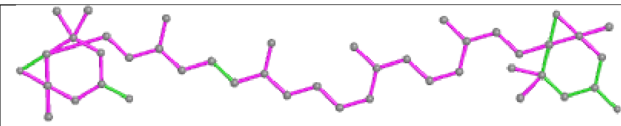

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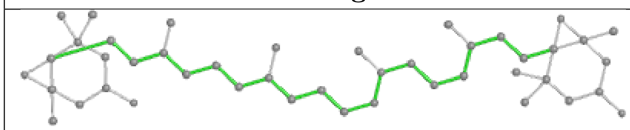

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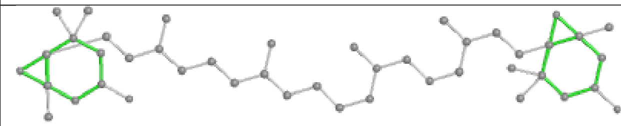
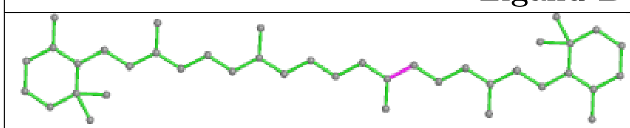


Rings

Ligand BCR BB 849



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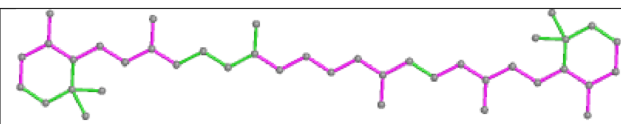
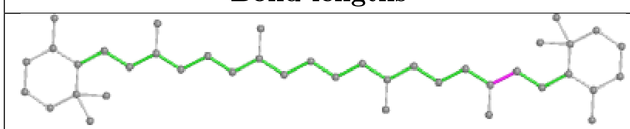


Bond angles



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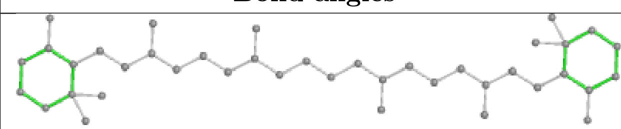
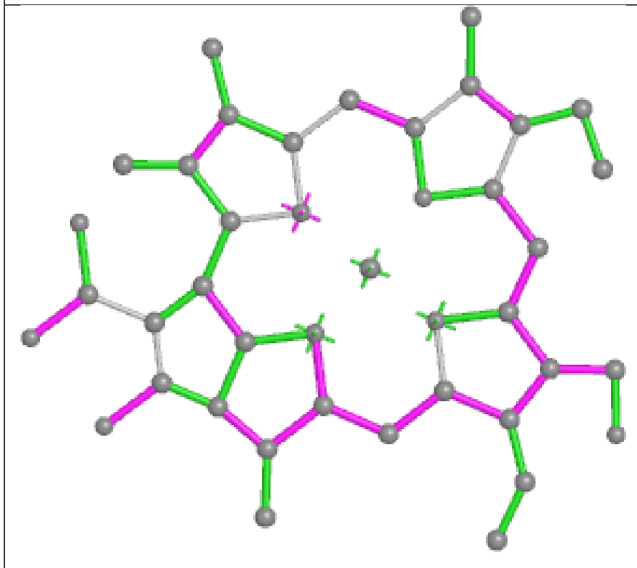


Rings

Ligand CHL B1 308



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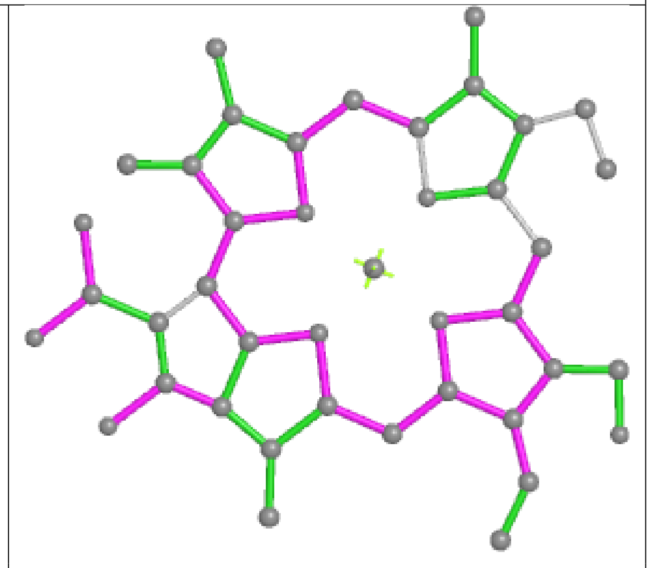

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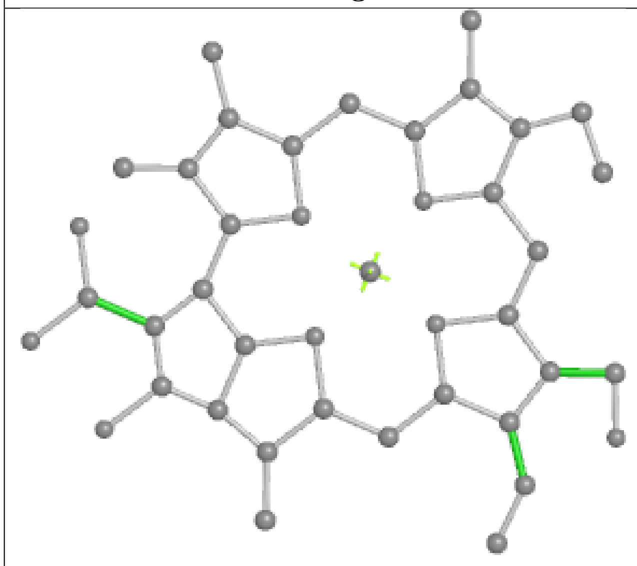
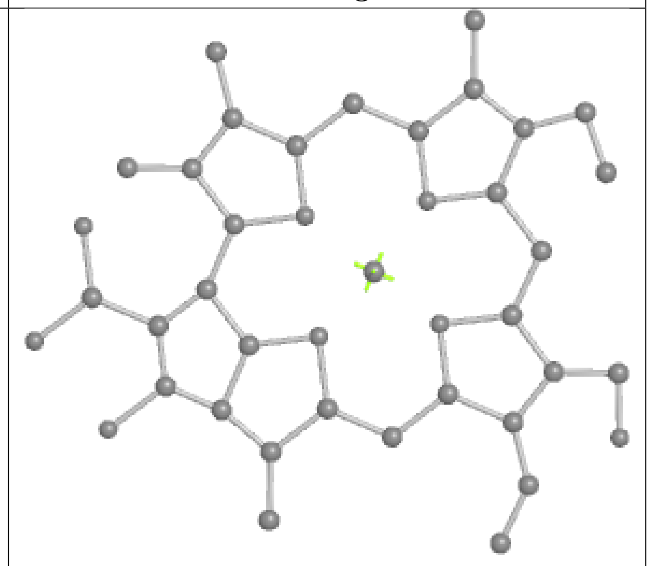
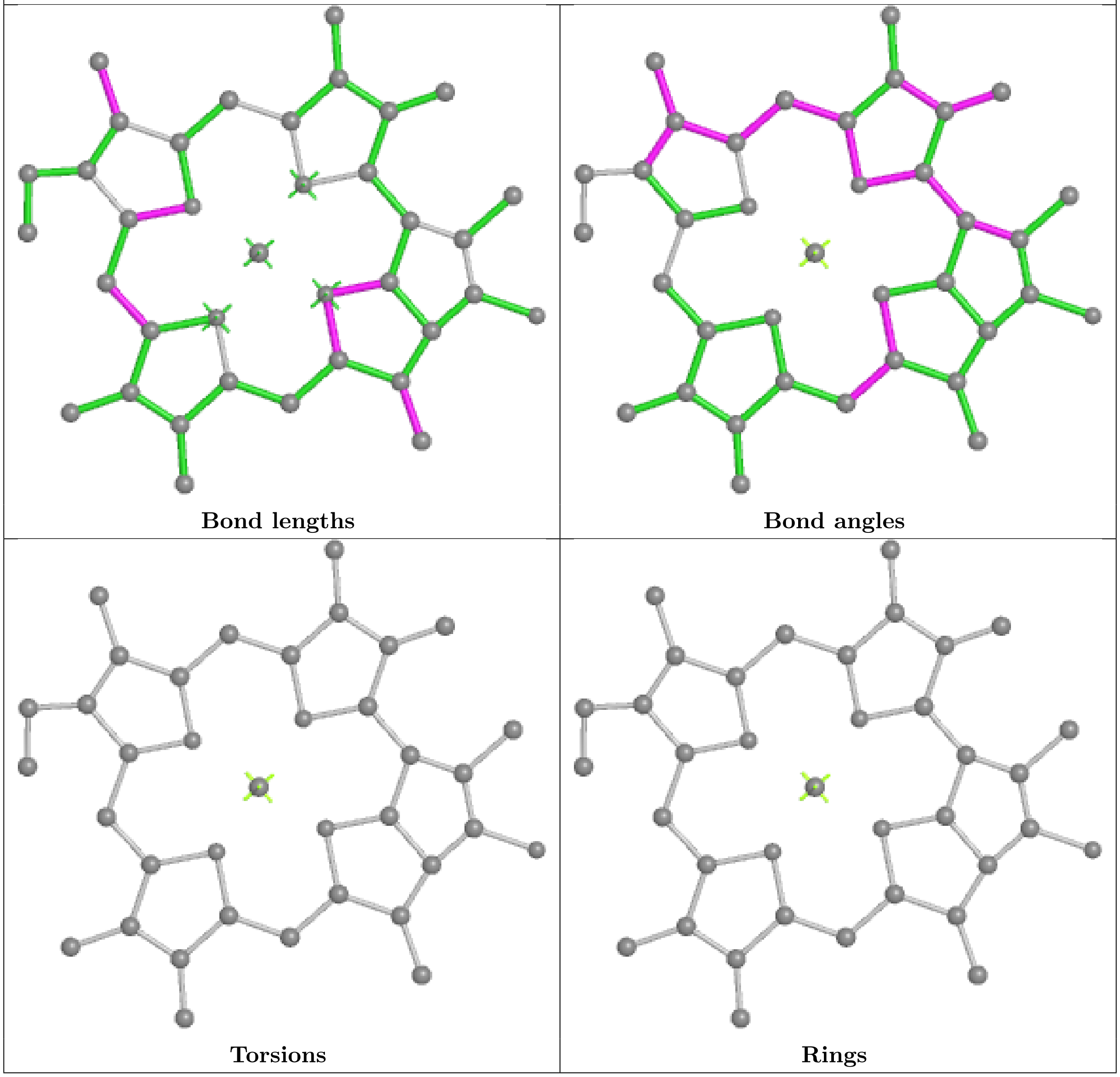


Torsions

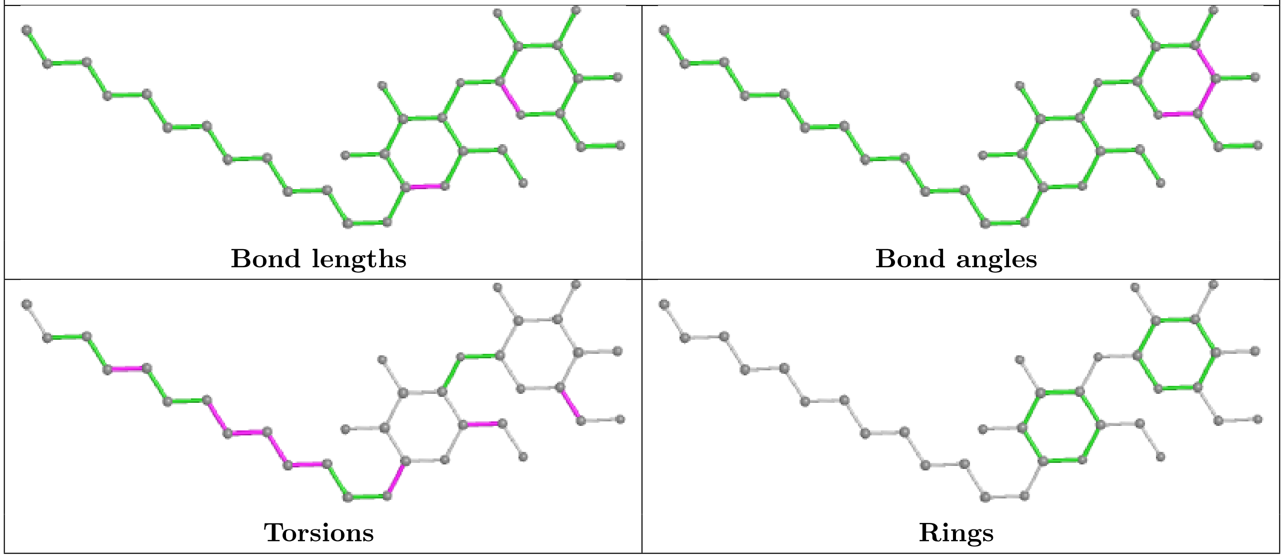


Rings

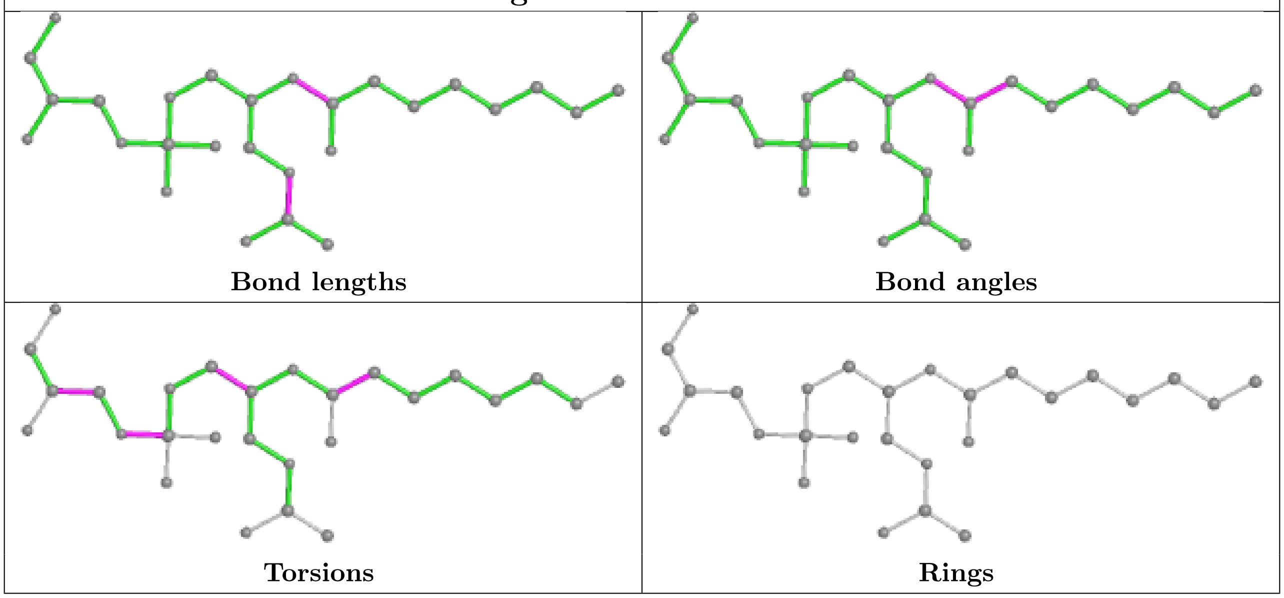
Ligand CLA A3 310

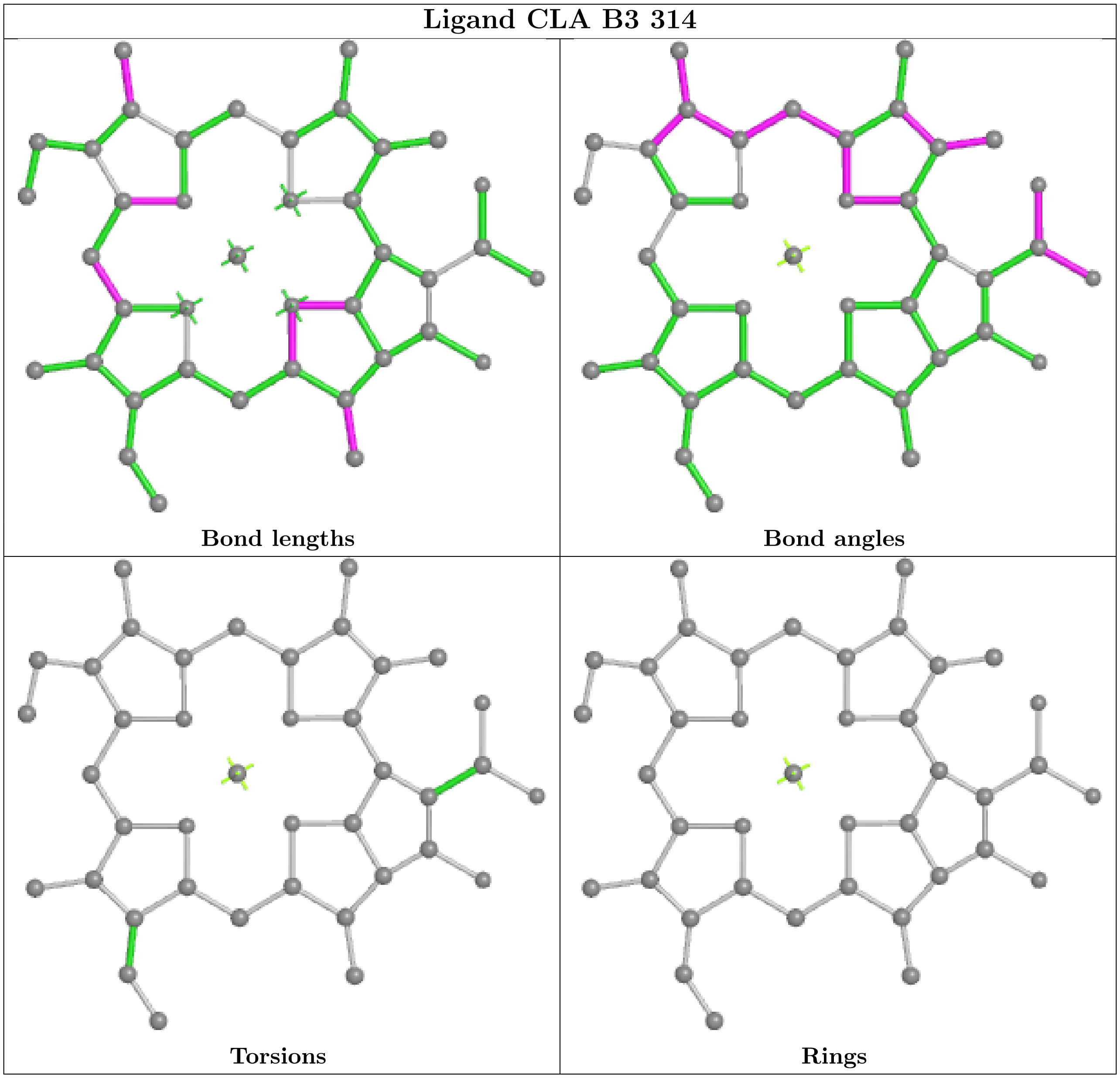


Ligand LMU AA 851

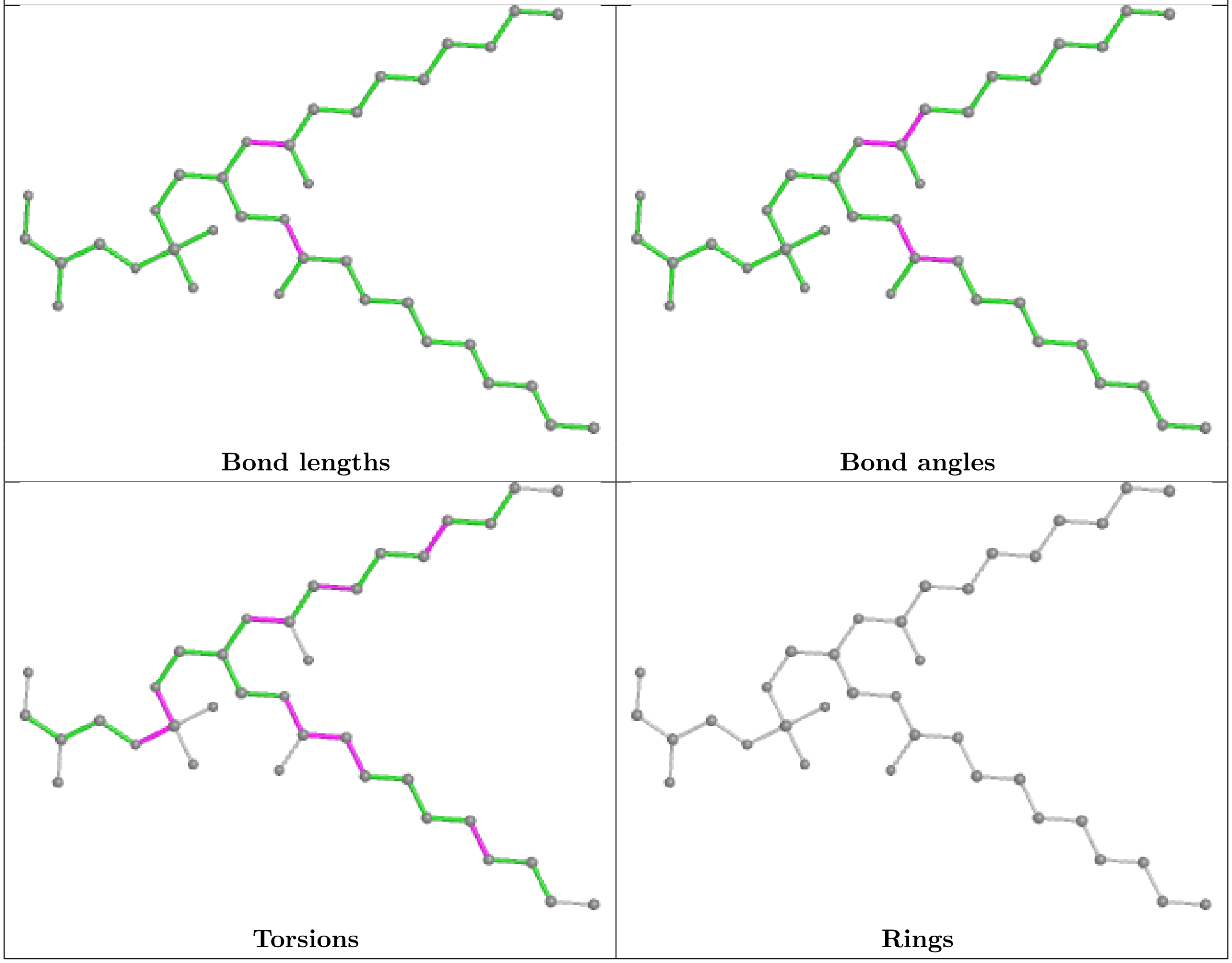


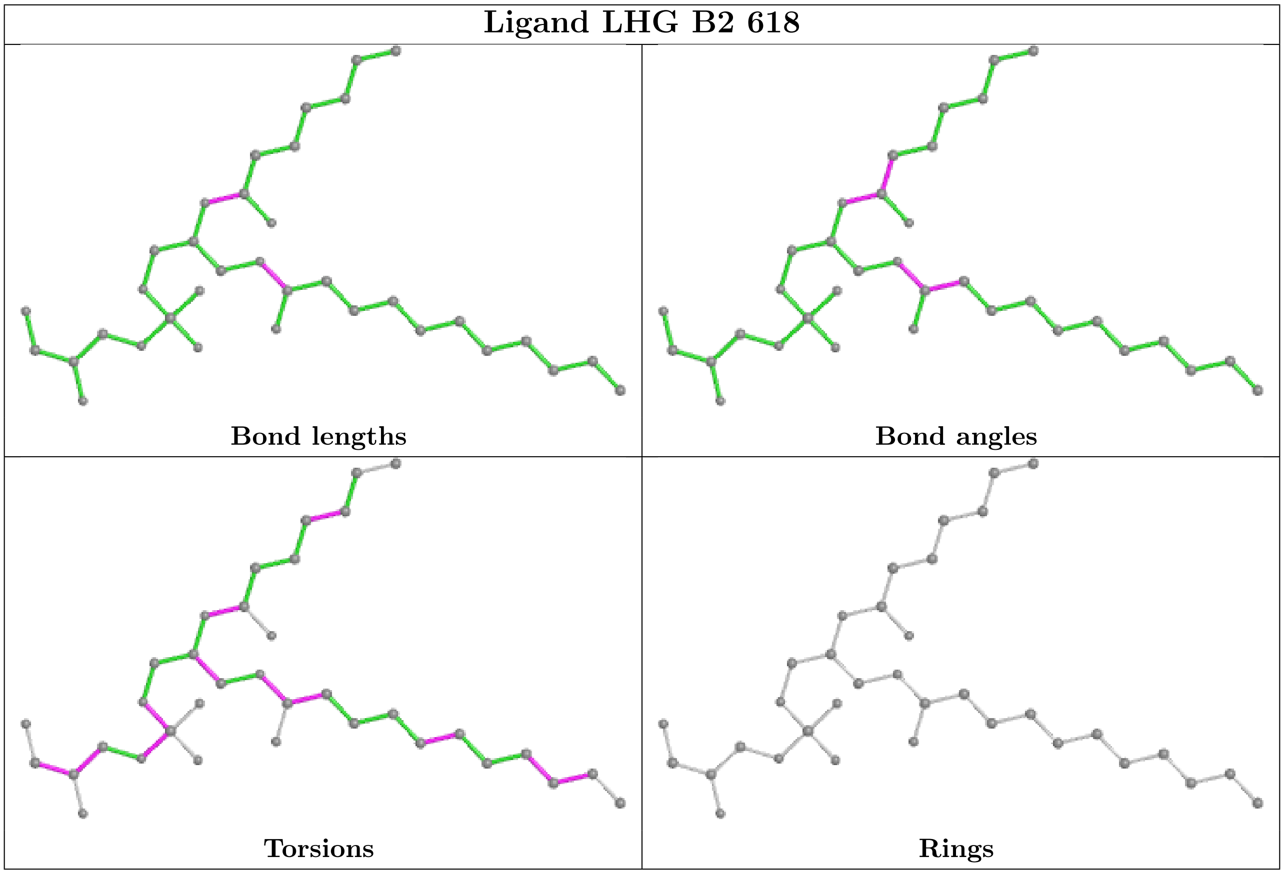
Ligand LHG BA 846

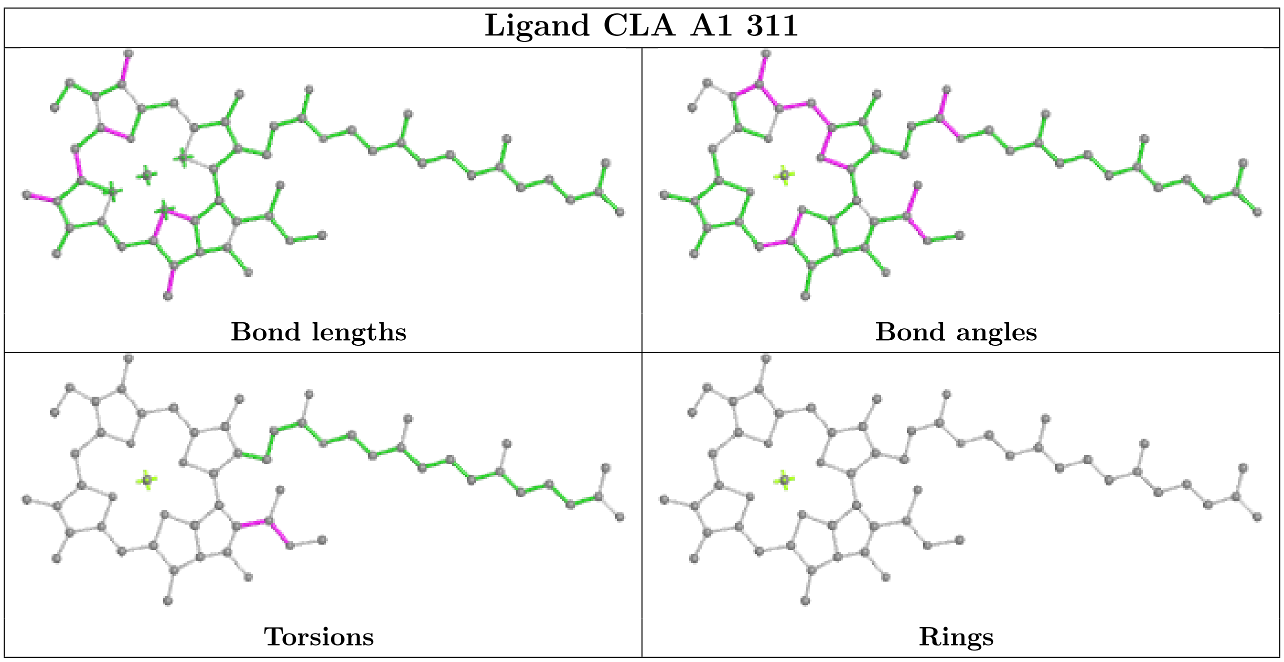



Ligand CLA B3 314
Bond lengths
Bond angles
Torsions
Rings

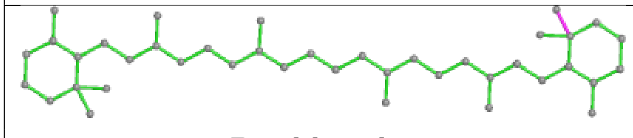
Ligand LHG A1 302

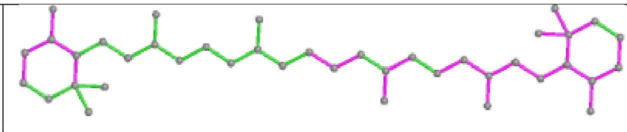


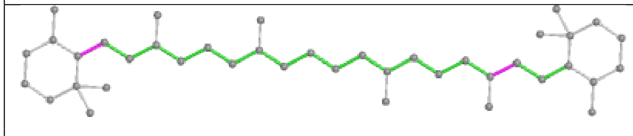

Ligand LHG B2 618
Bond lengths
Bond angles
Torsions
Rings

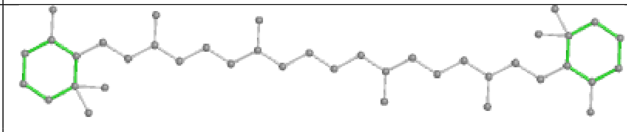

Ligand CLA A1 311
Bond lengths
Bond angles
Torsions
Rings

Ligand BCR A3 318

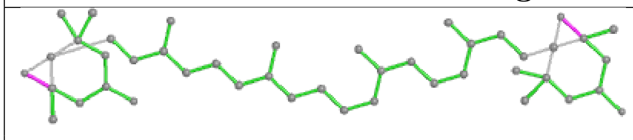

Bond lengths

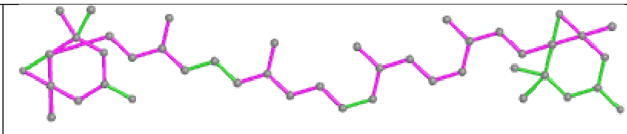

Bond angles

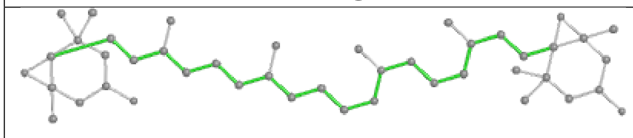

Torsions

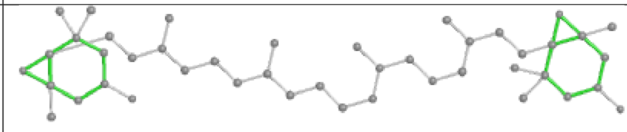

Rings

Ligand XAT A6 616

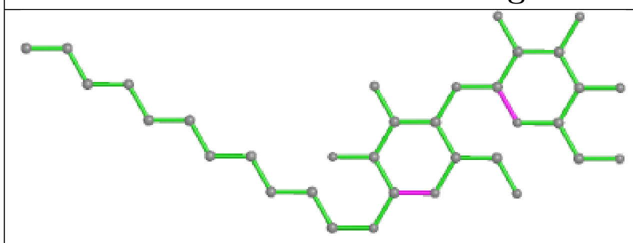

Bond lengths

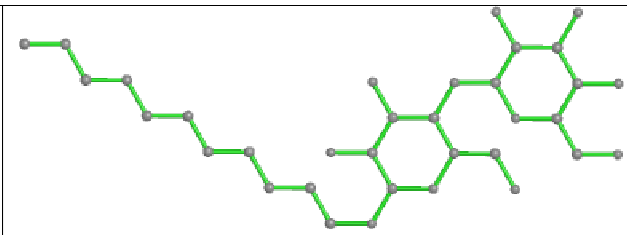

Bond angles

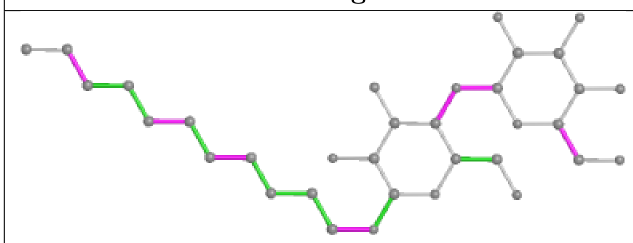

Torsions

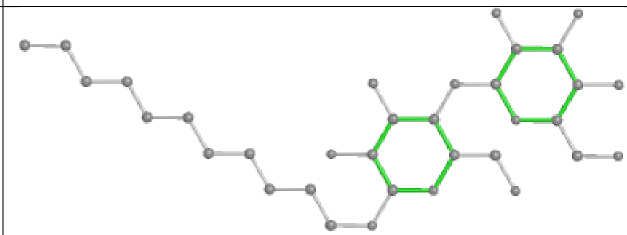

Rings

Ligand LMU BA 853

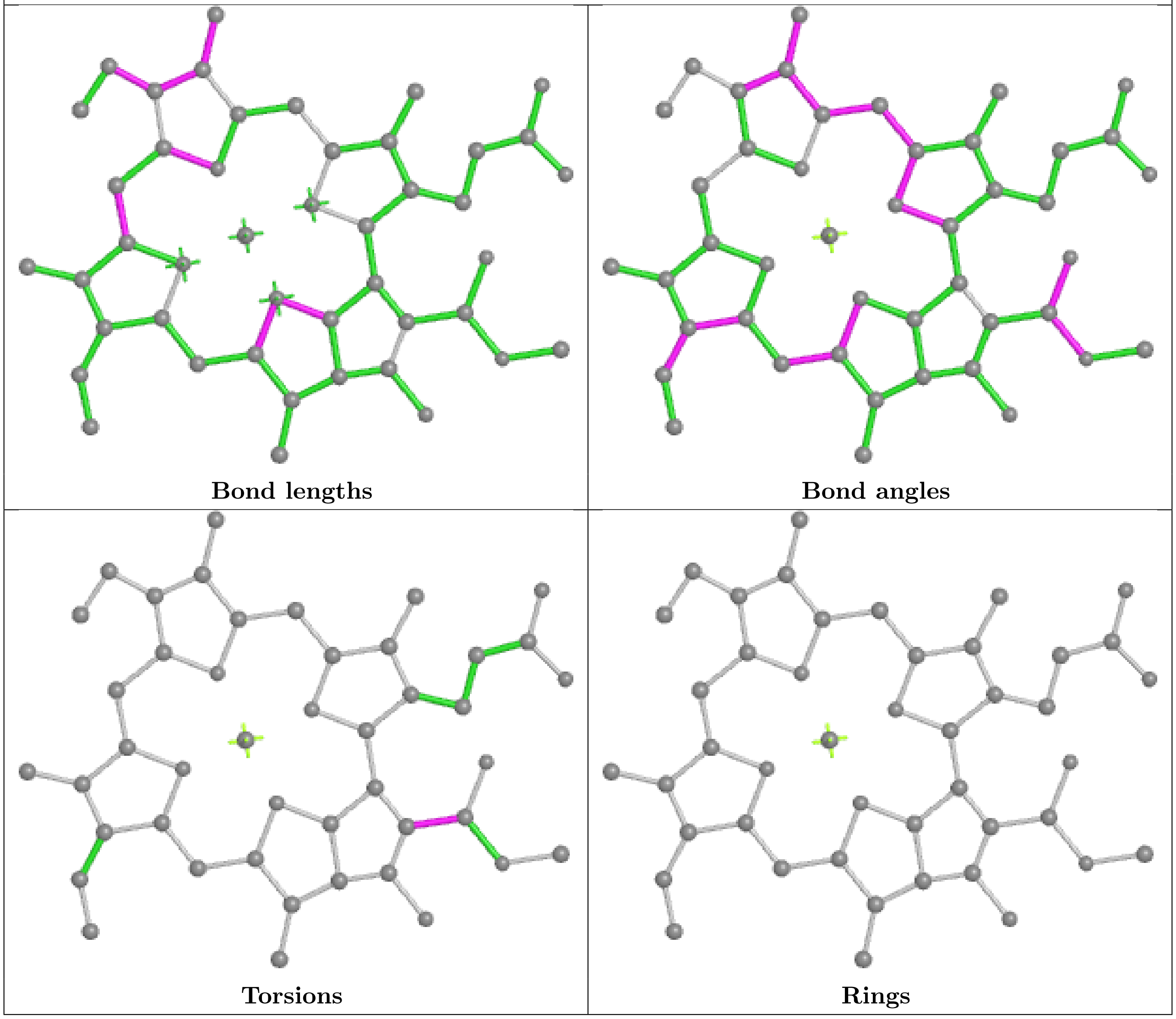

Bond lengths


Bond angles

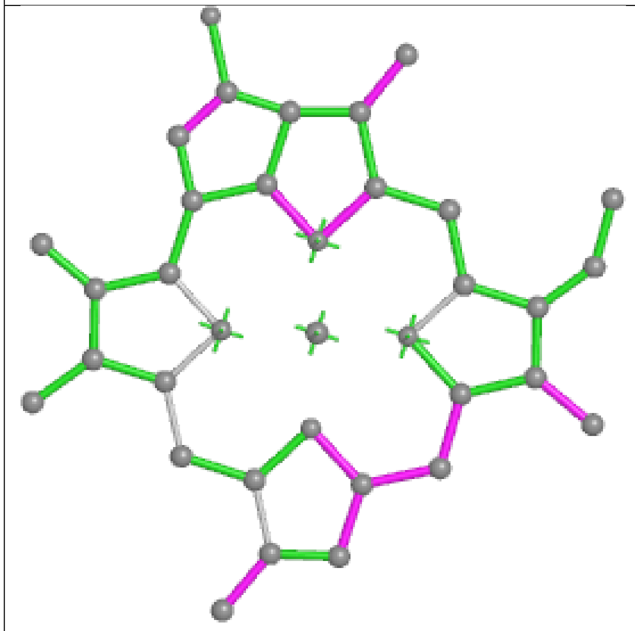

Torsions


Rings

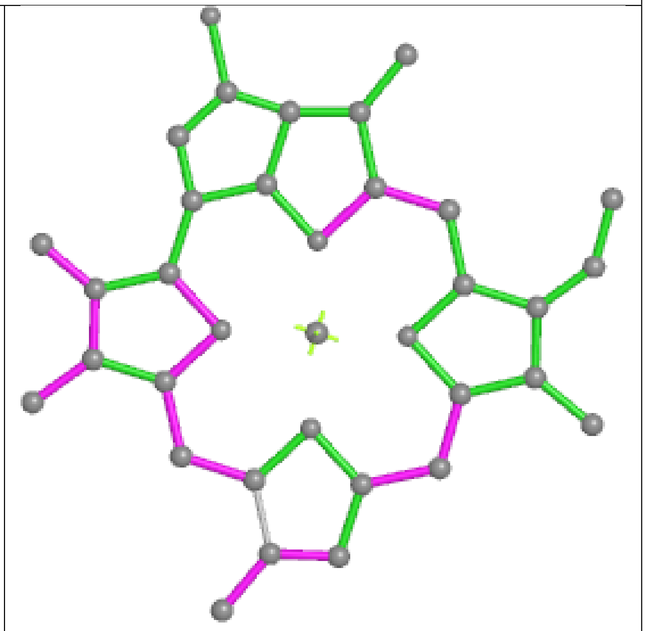
Ligand CLA BA 816



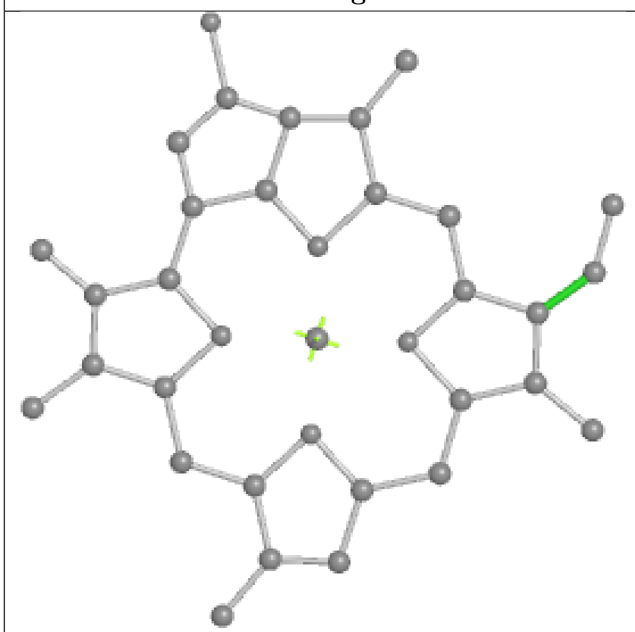
Ligand CLA AK 201



Bond lengths



Bond angles



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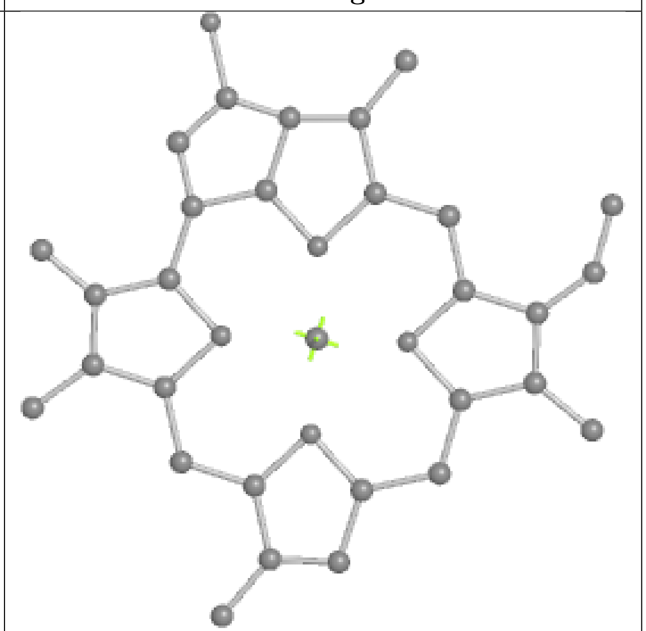
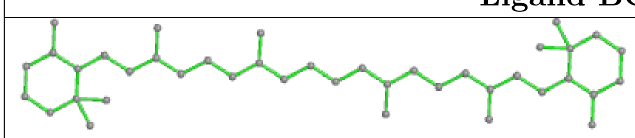
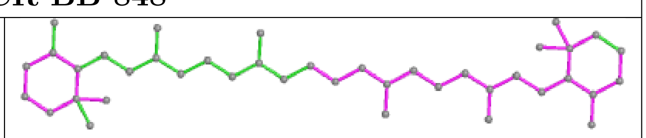


Rings

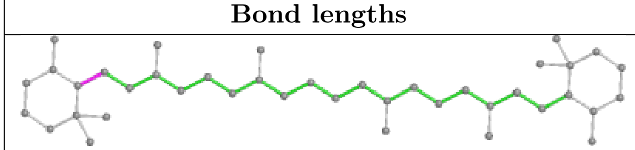
Ligand BCR BB 848



Bond lengths



Bond angles



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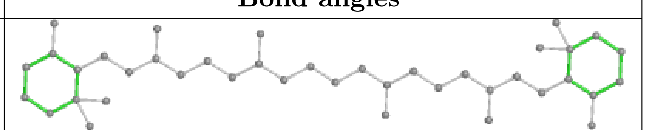
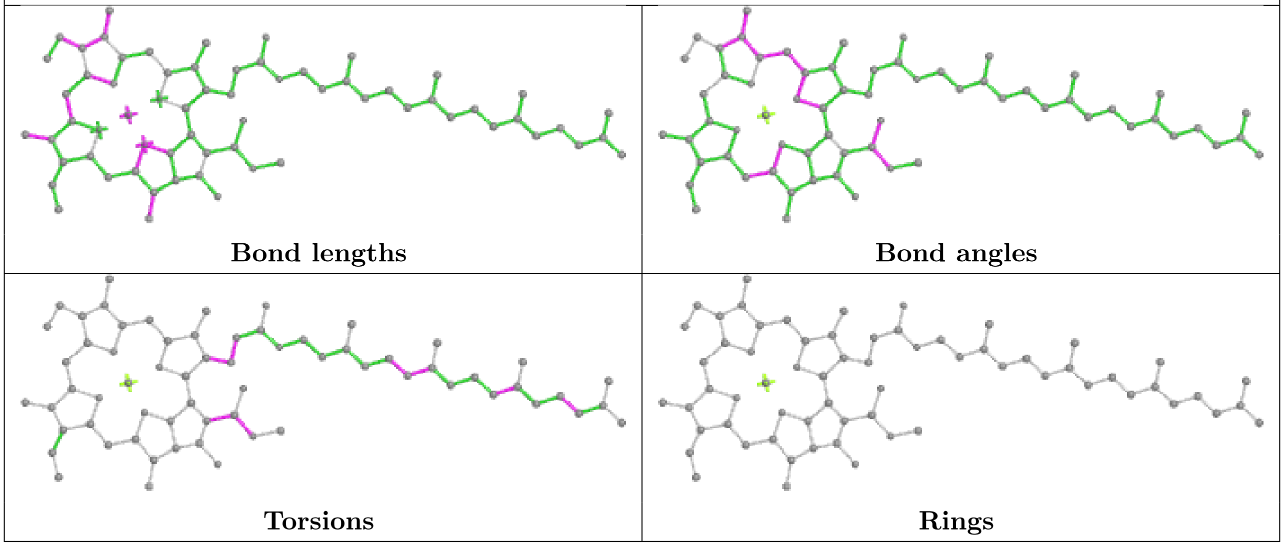
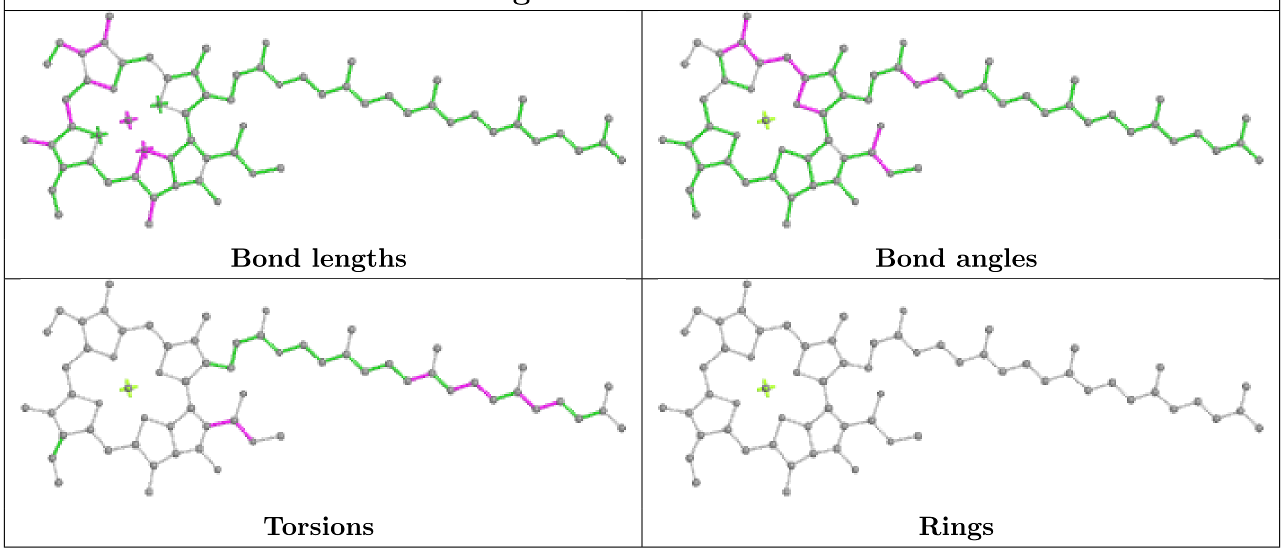


Rings

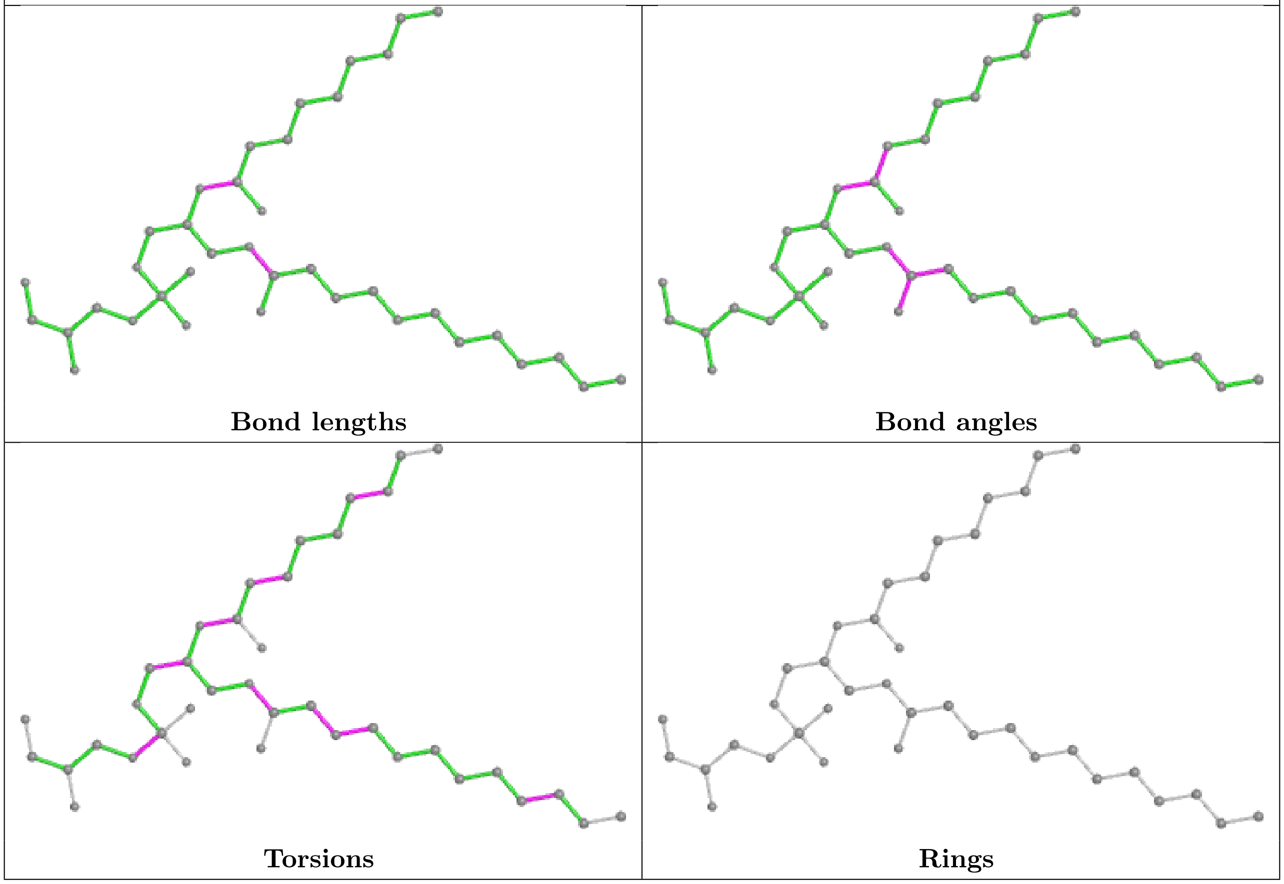
Ligand CLA AB 814



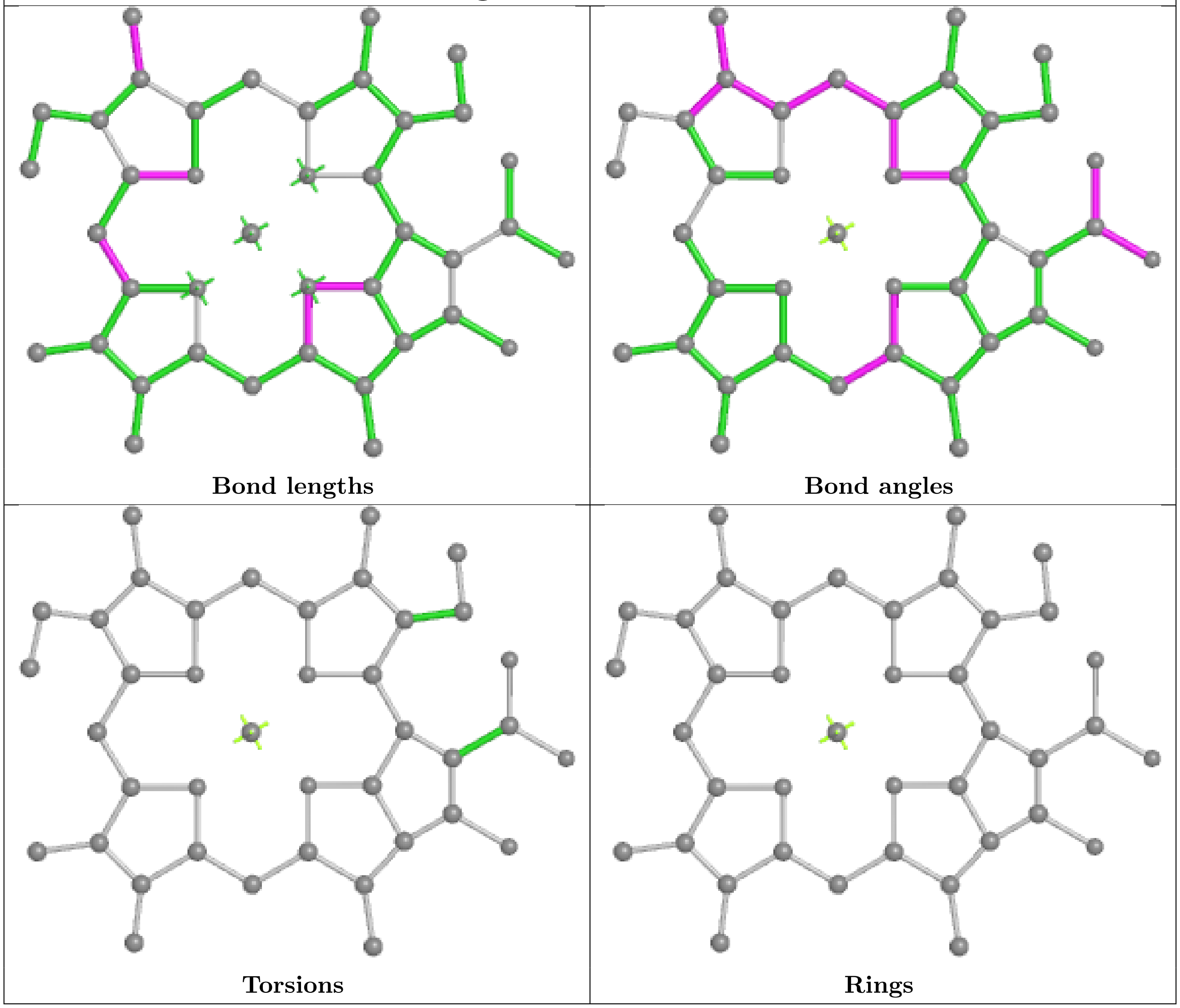
Ligand CLA BB 826



Ligand LHG A1 301



Ligand CLA B3 309



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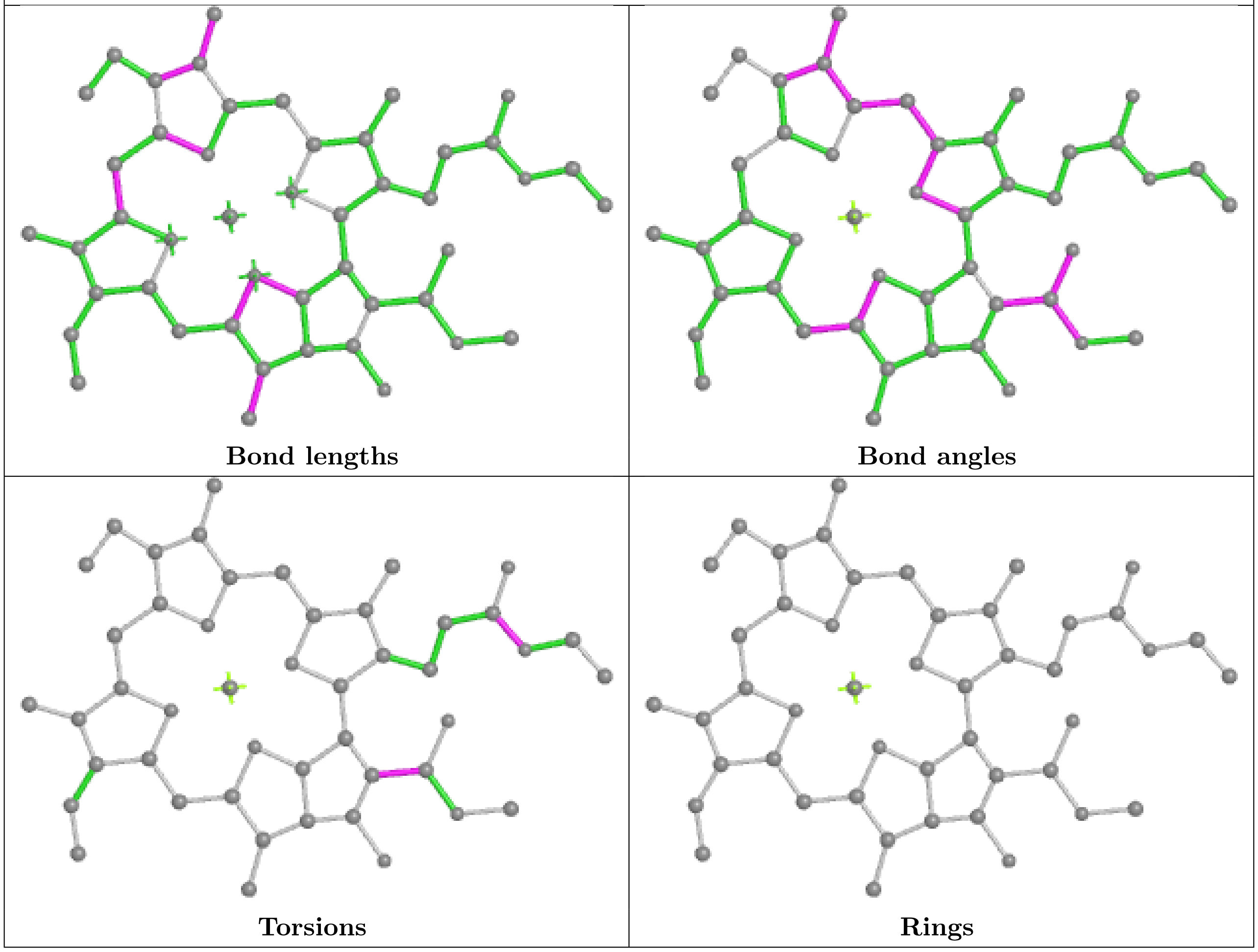

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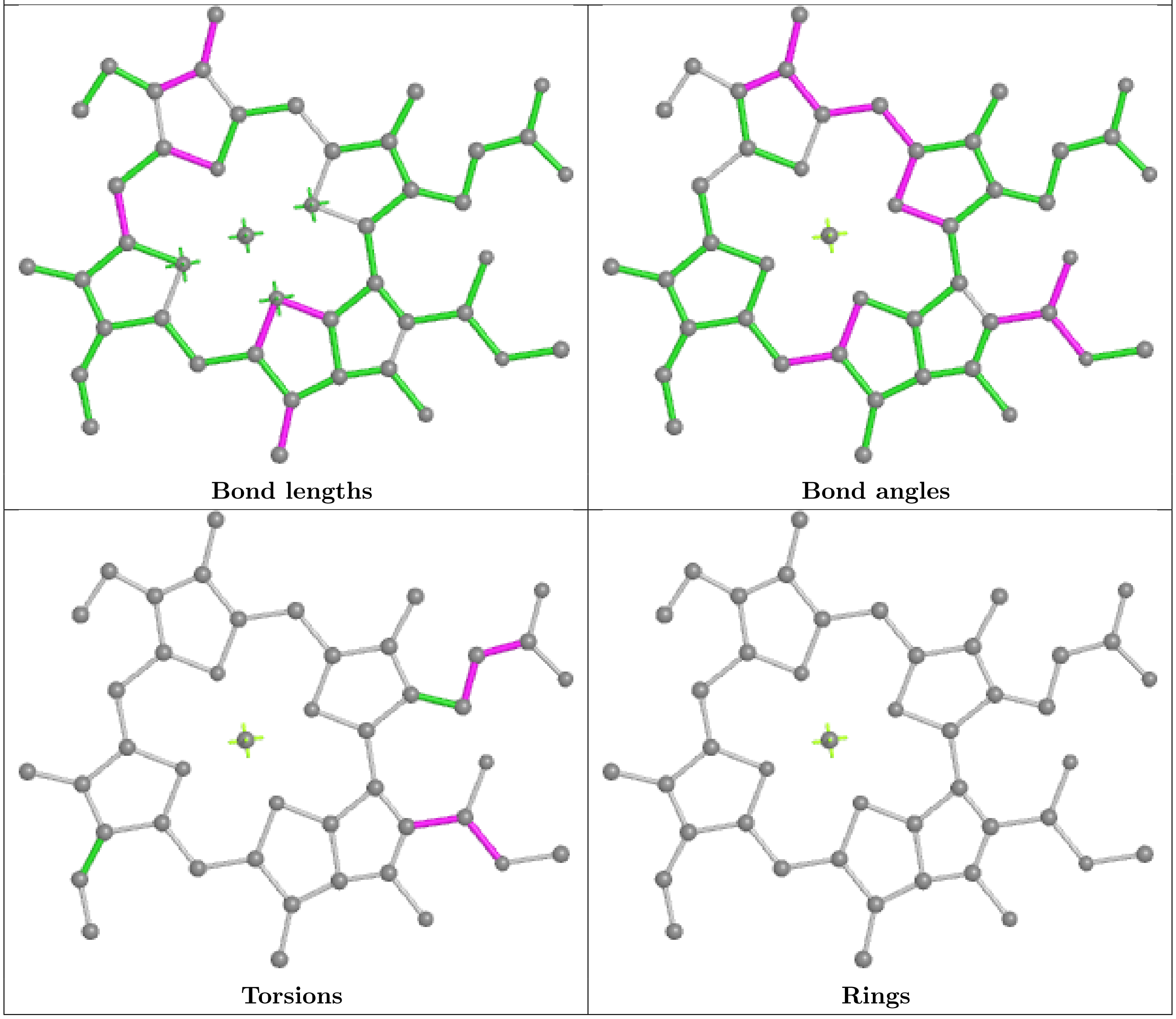
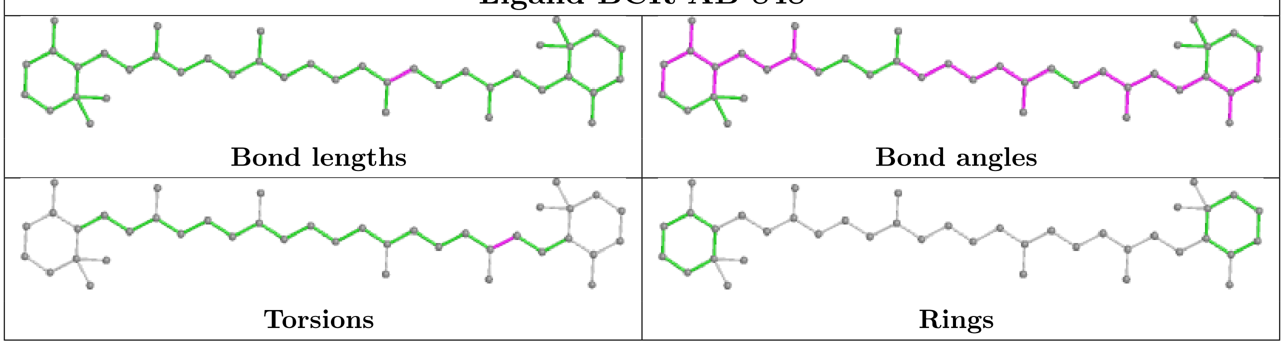


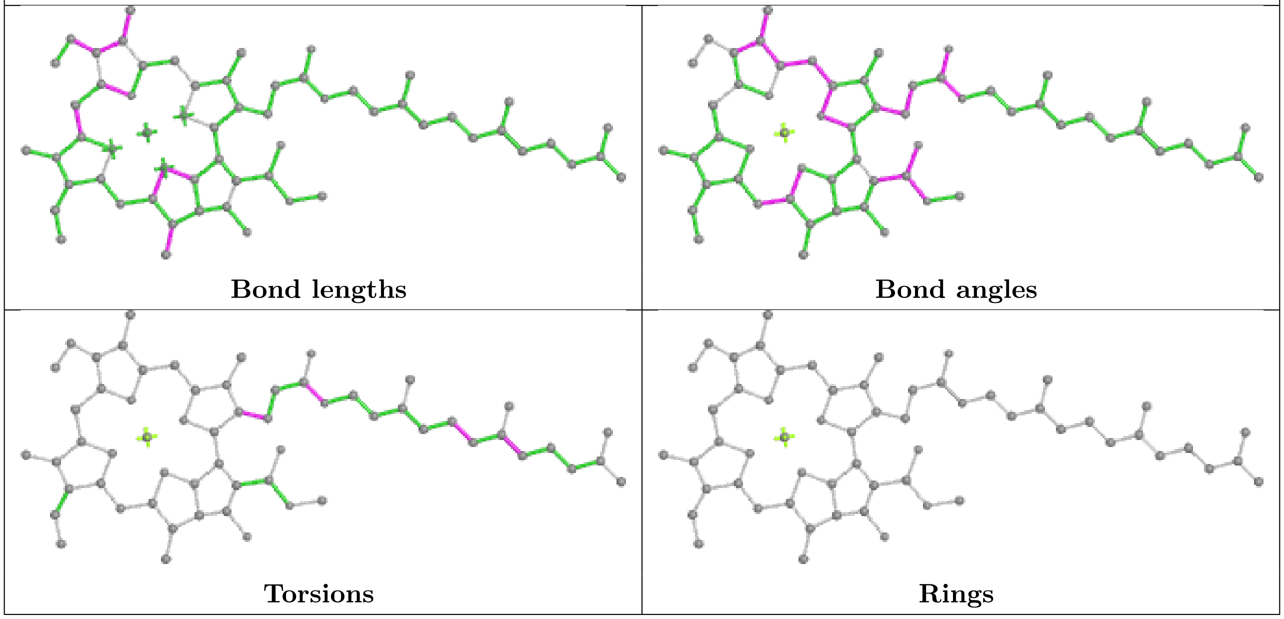
Bond lengths | Bond angles | Torsions | Rings

Ligand BCR AB 848

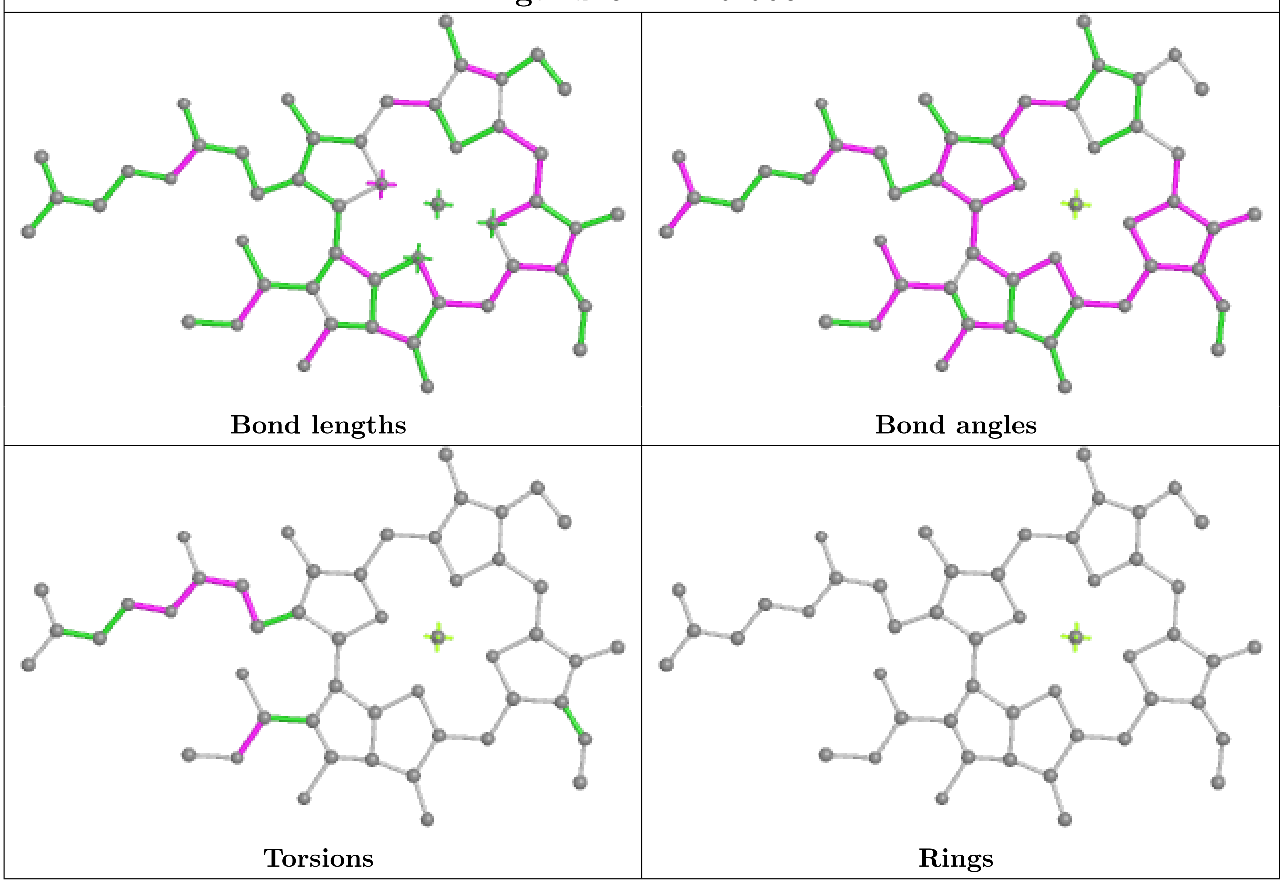


Bond lengths | Bond angles | Torsions | Rings

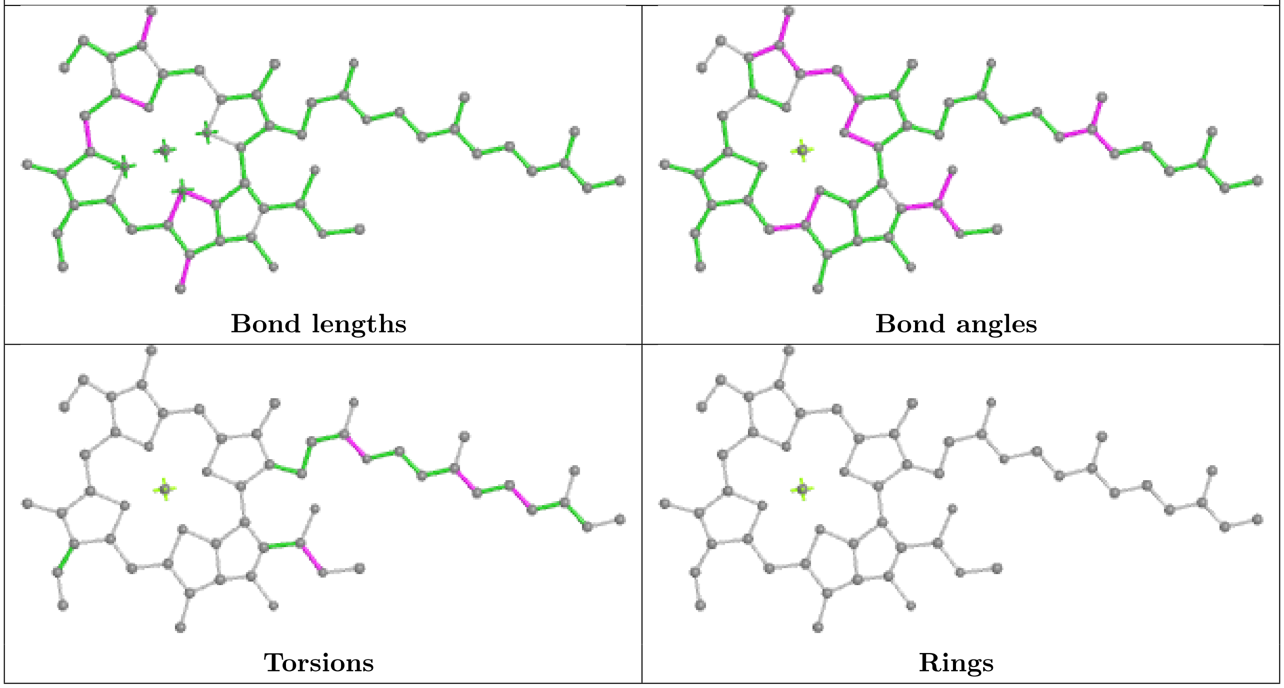
Ligand CLA BL 303



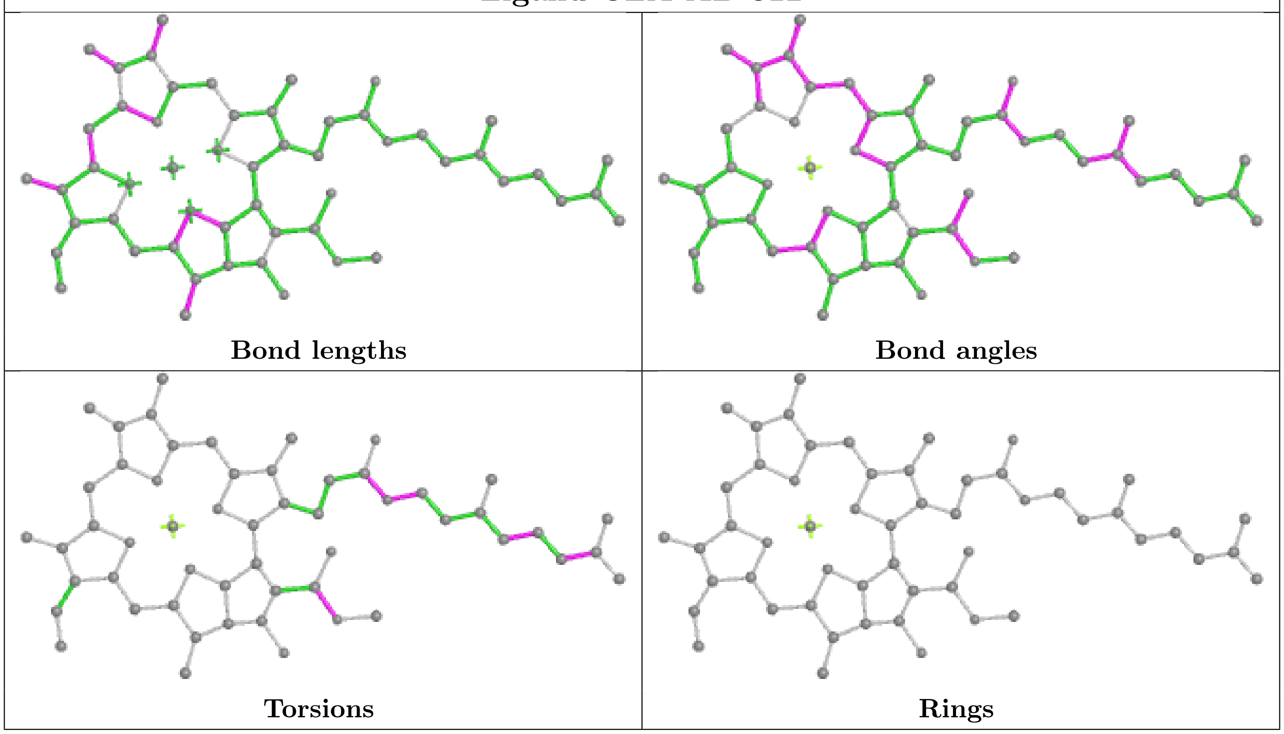
Ligand CHL A6 608



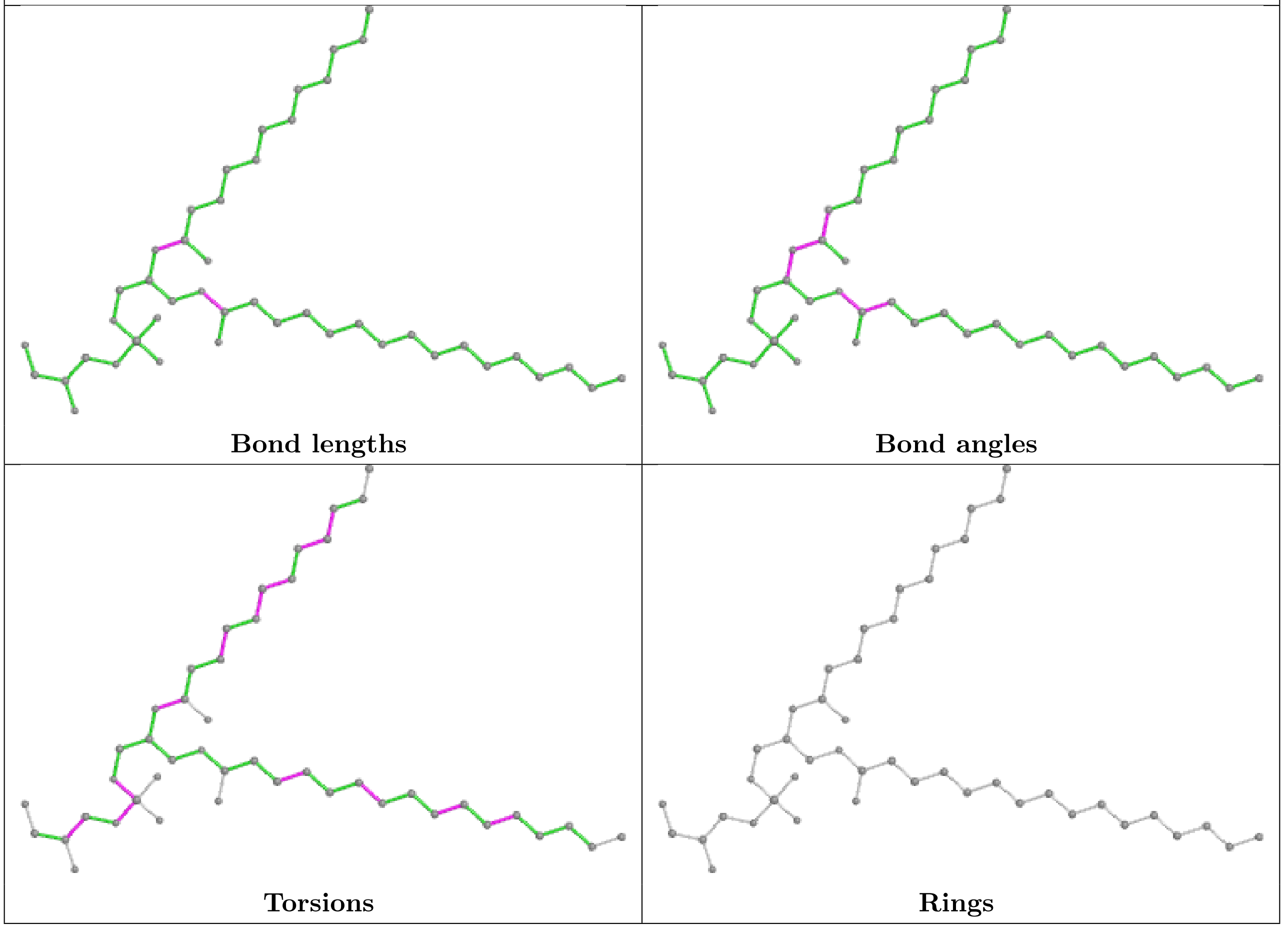
Ligand CLA AA 832



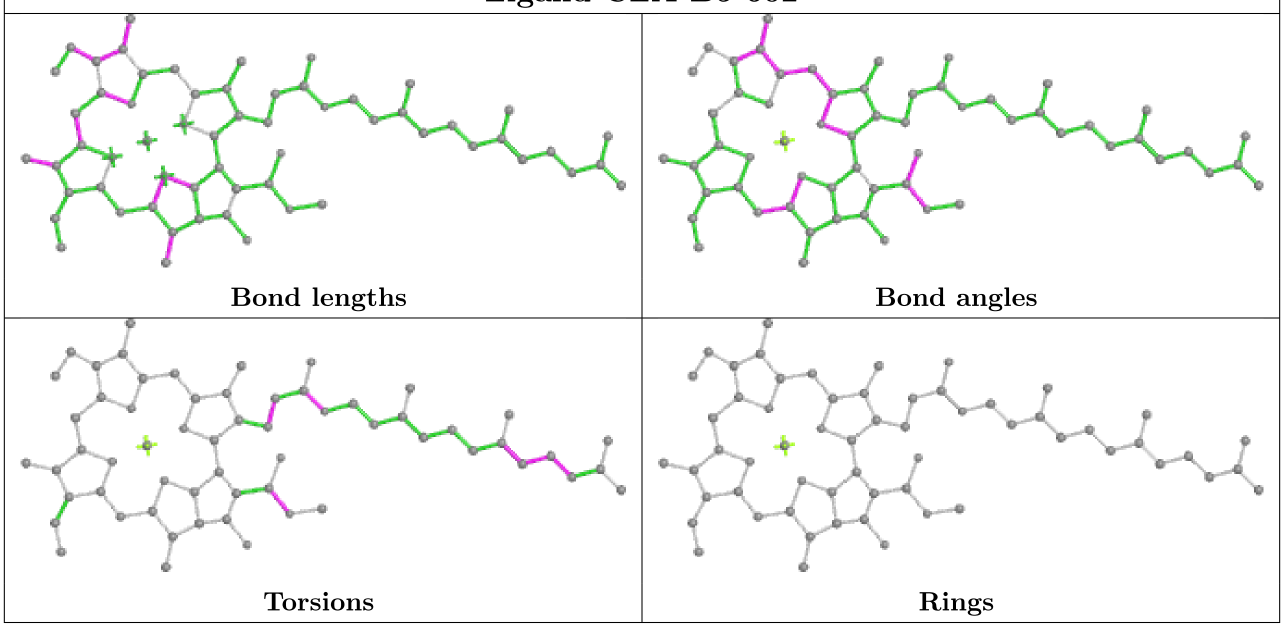
Ligand CLA AB 812



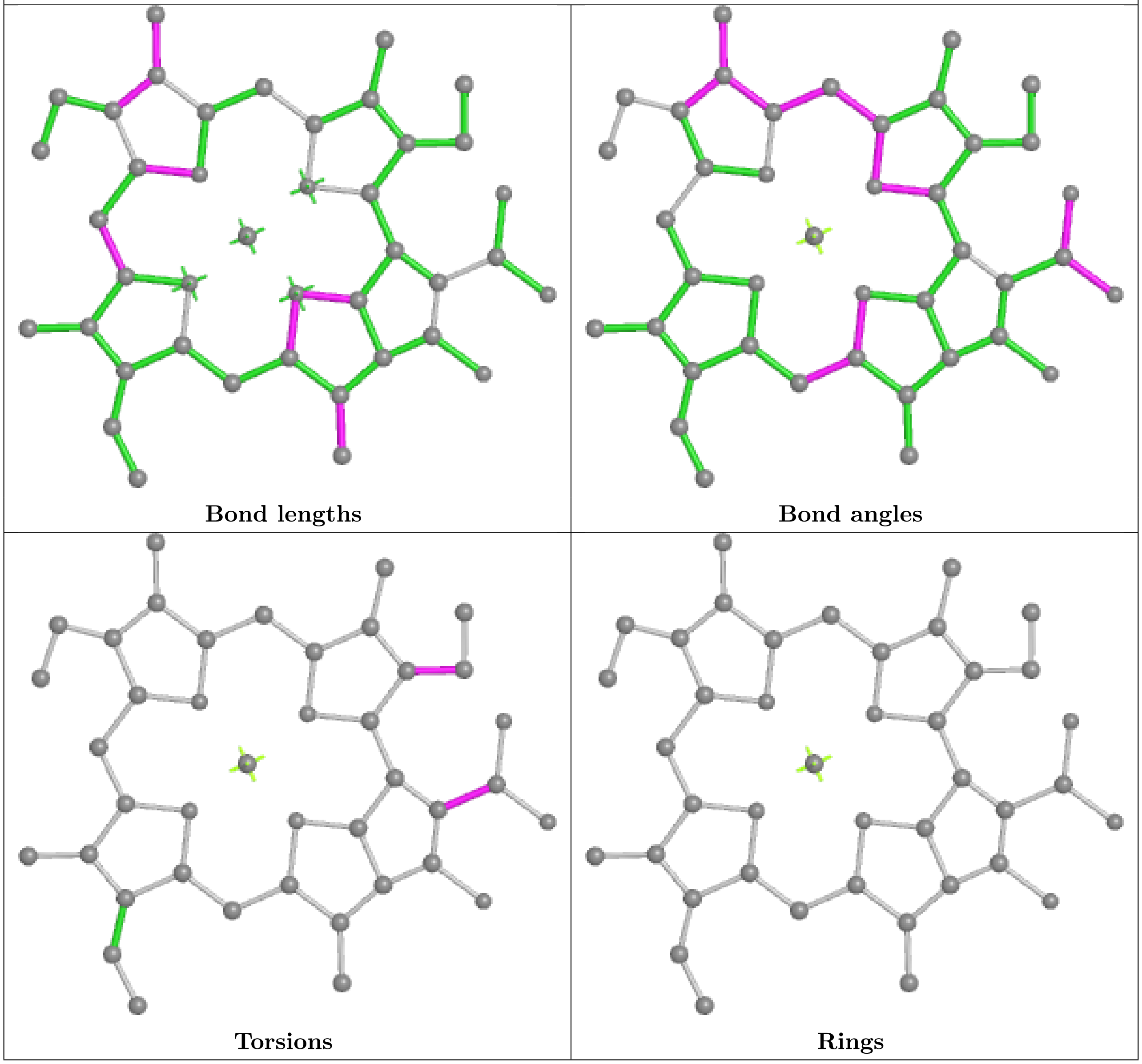
Ligand LHG BF 305



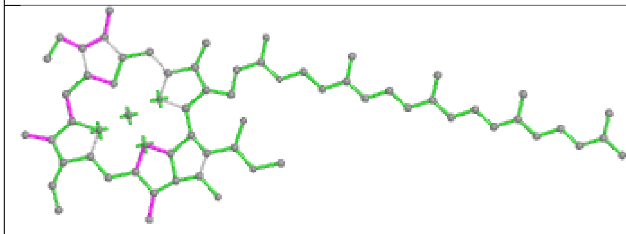
Ligand CLA B5 602

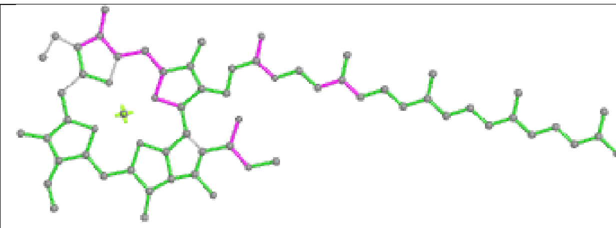


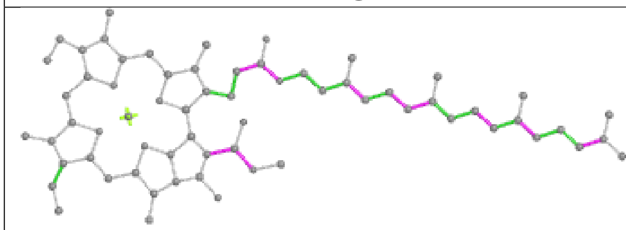
Ligand CLA B3 304

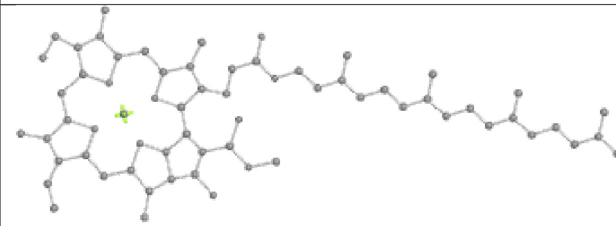


Ligand CLA BB 804

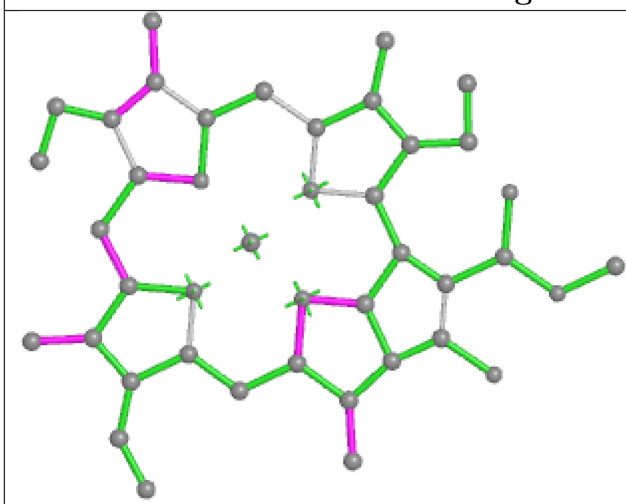

Bond lengths

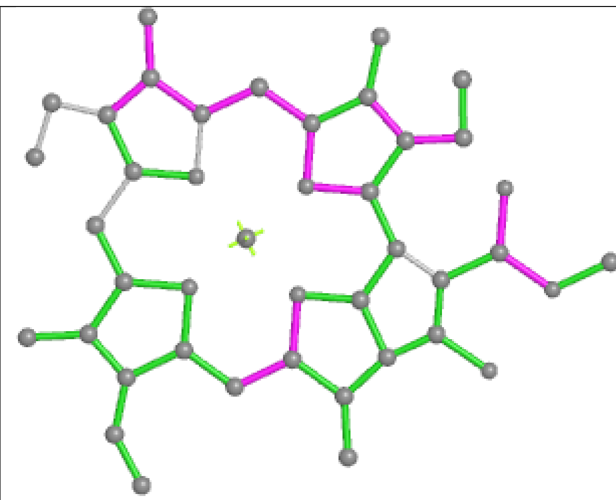

Bond angles

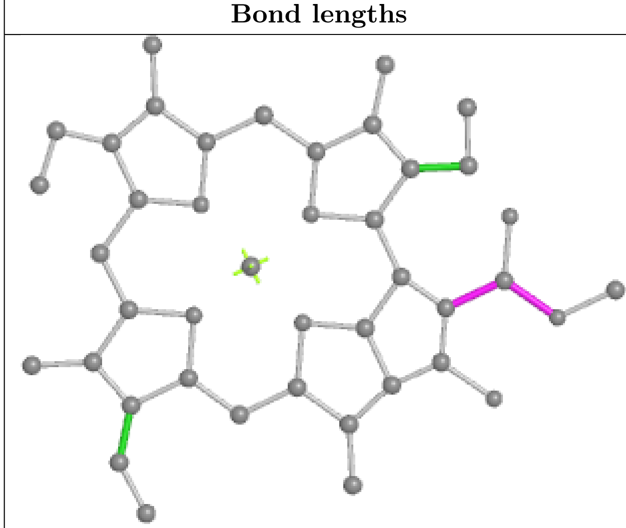

Torsions

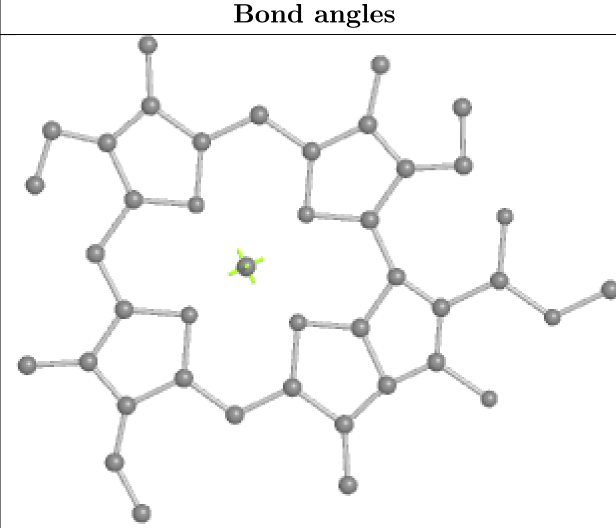

Rings

Ligand CLA BF 302

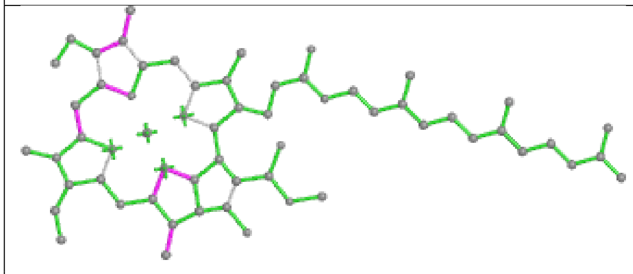

Bond lengths


Bond angles

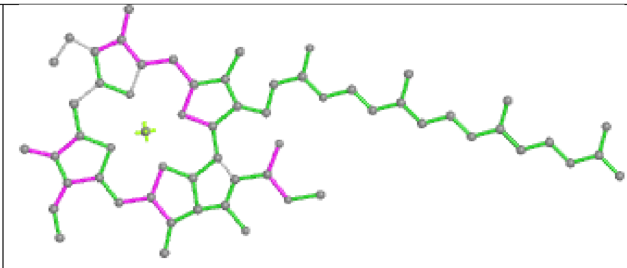

Torsions


Rings

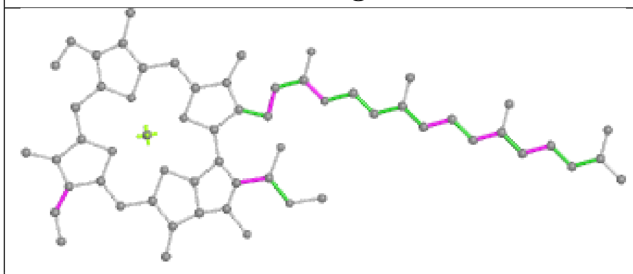
Ligand CLA B1 314



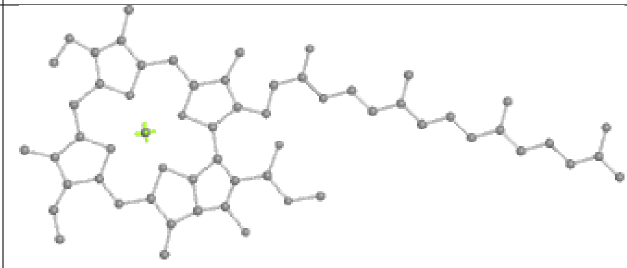
Bond lengths



Bond angles

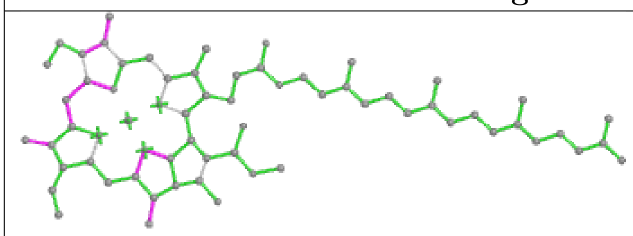


Torsions

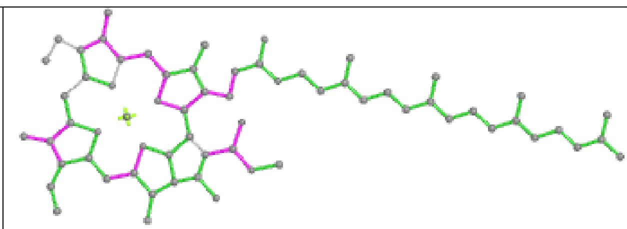


Rings

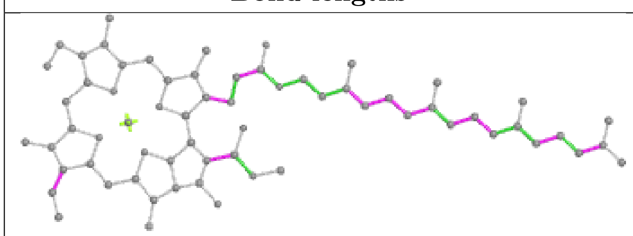
Ligand CLA AA 805



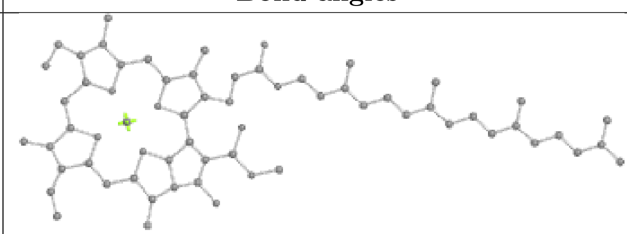
Bond lengths



Bond angles

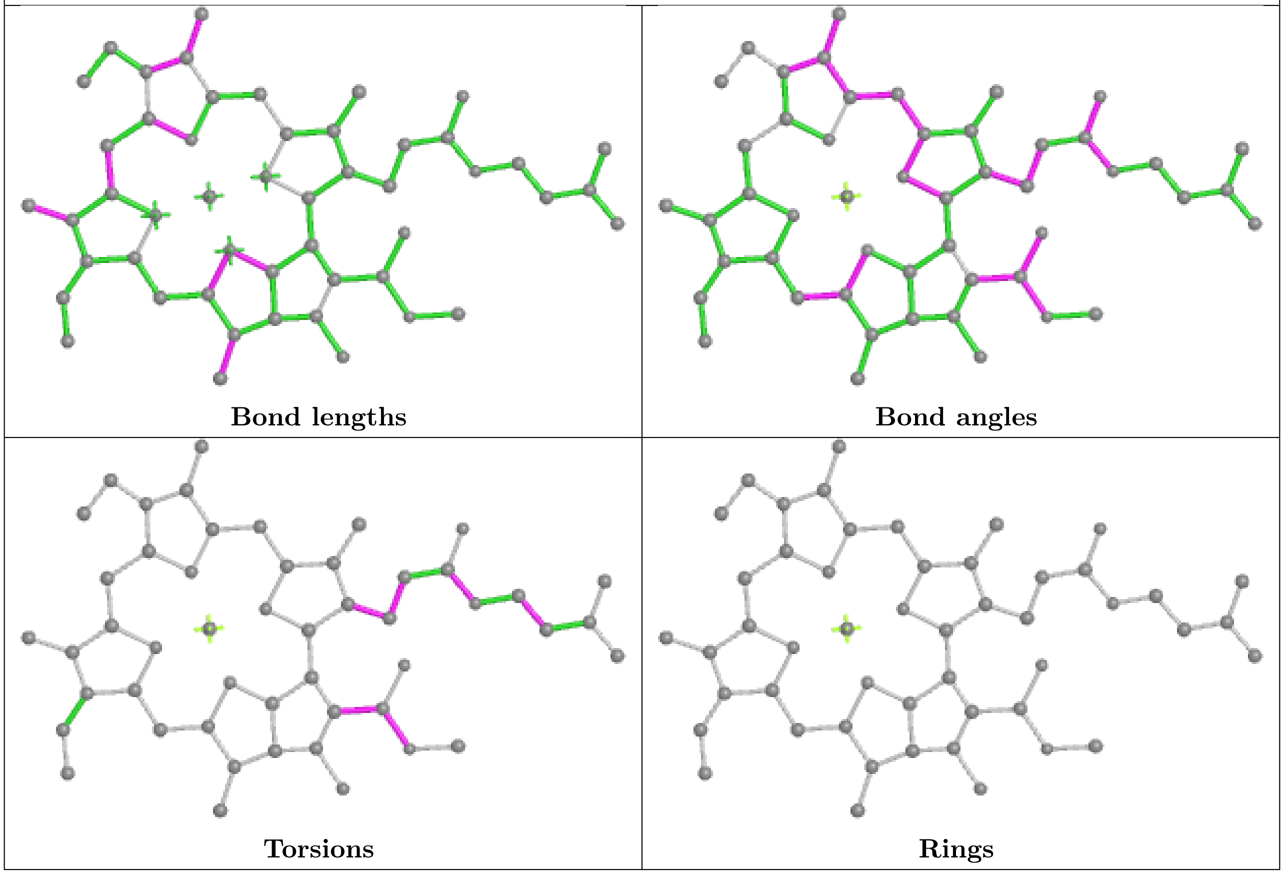


Torsions



Rings

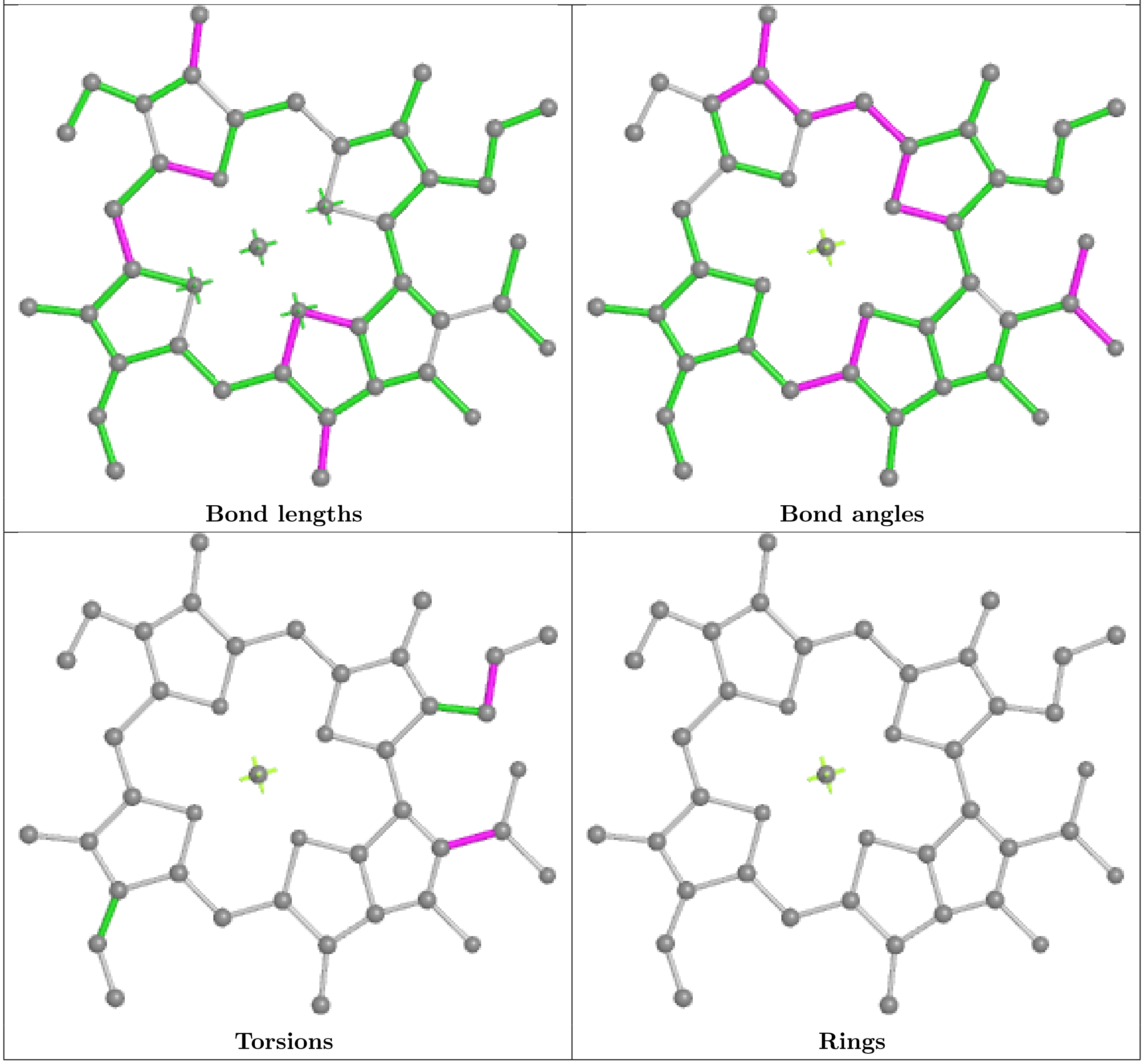
Ligand CLA A4 313



Bond lengths | Bond angles

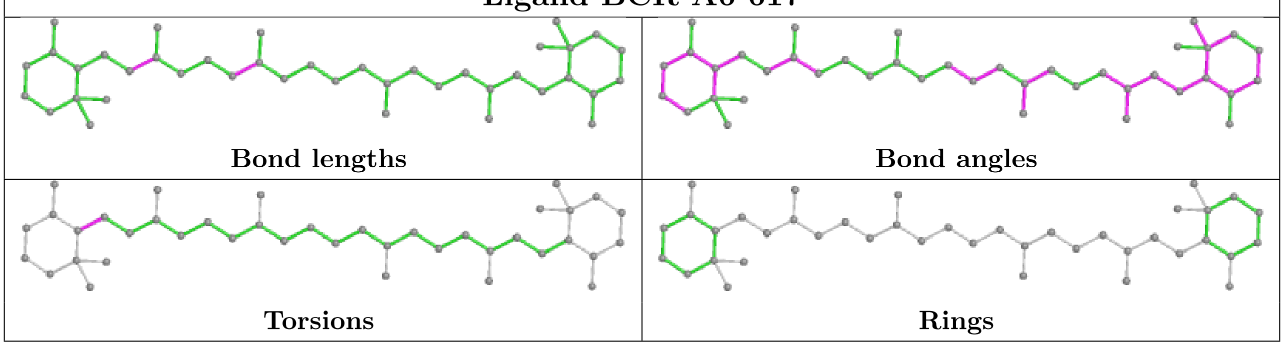
Torsions | Rings

Ligand CLA A6 604



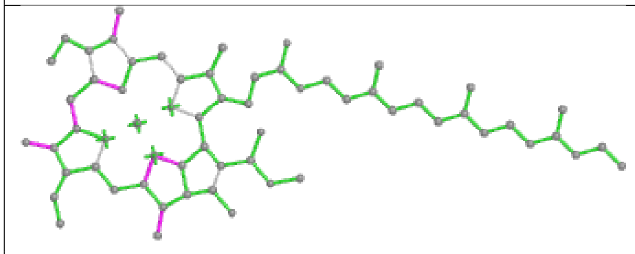
Bond lengths | Bond angles | Torsions | Rings

Ligand BCR A6 617

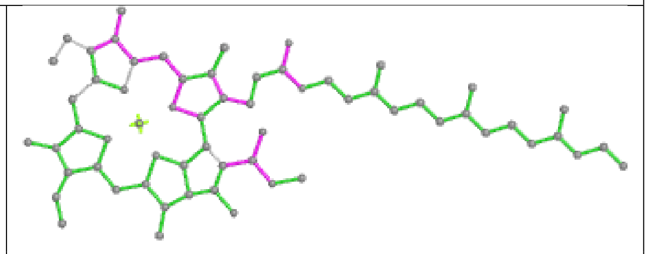


Bond lengths | Bond angles | Torsions | Rings

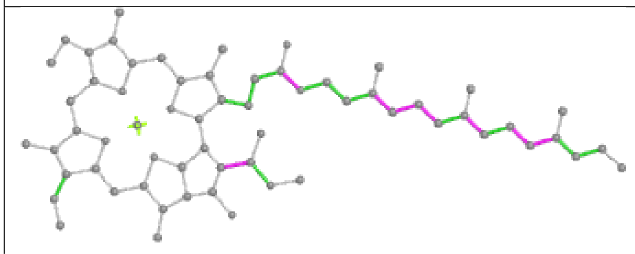
Ligand CLA AB 827



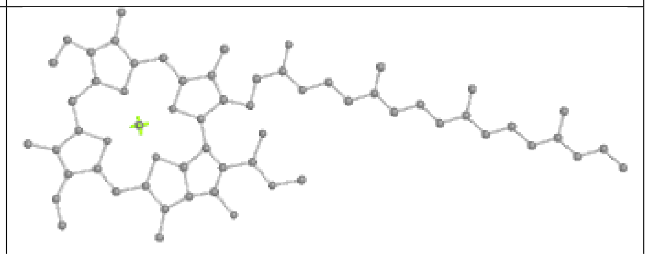
Bond lengths



Bond angles

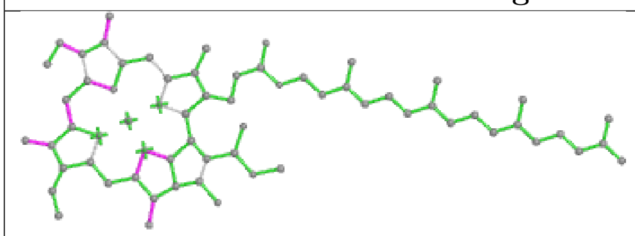


Torsions

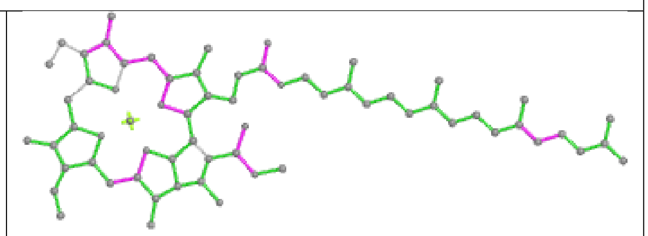


Rings

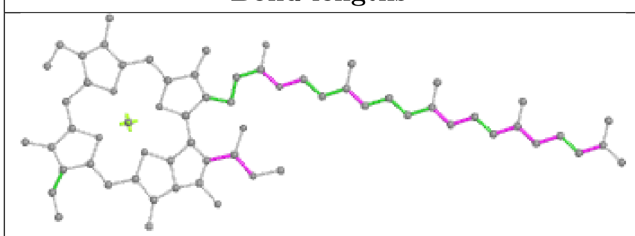
Ligand CLA AB 815



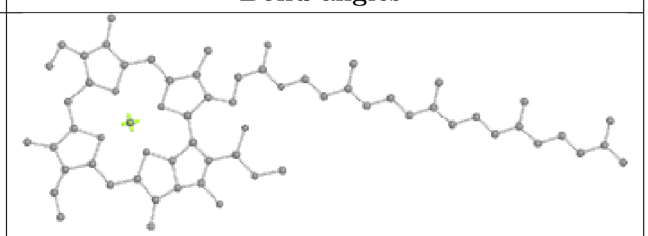
Bond lengths



Bond angles

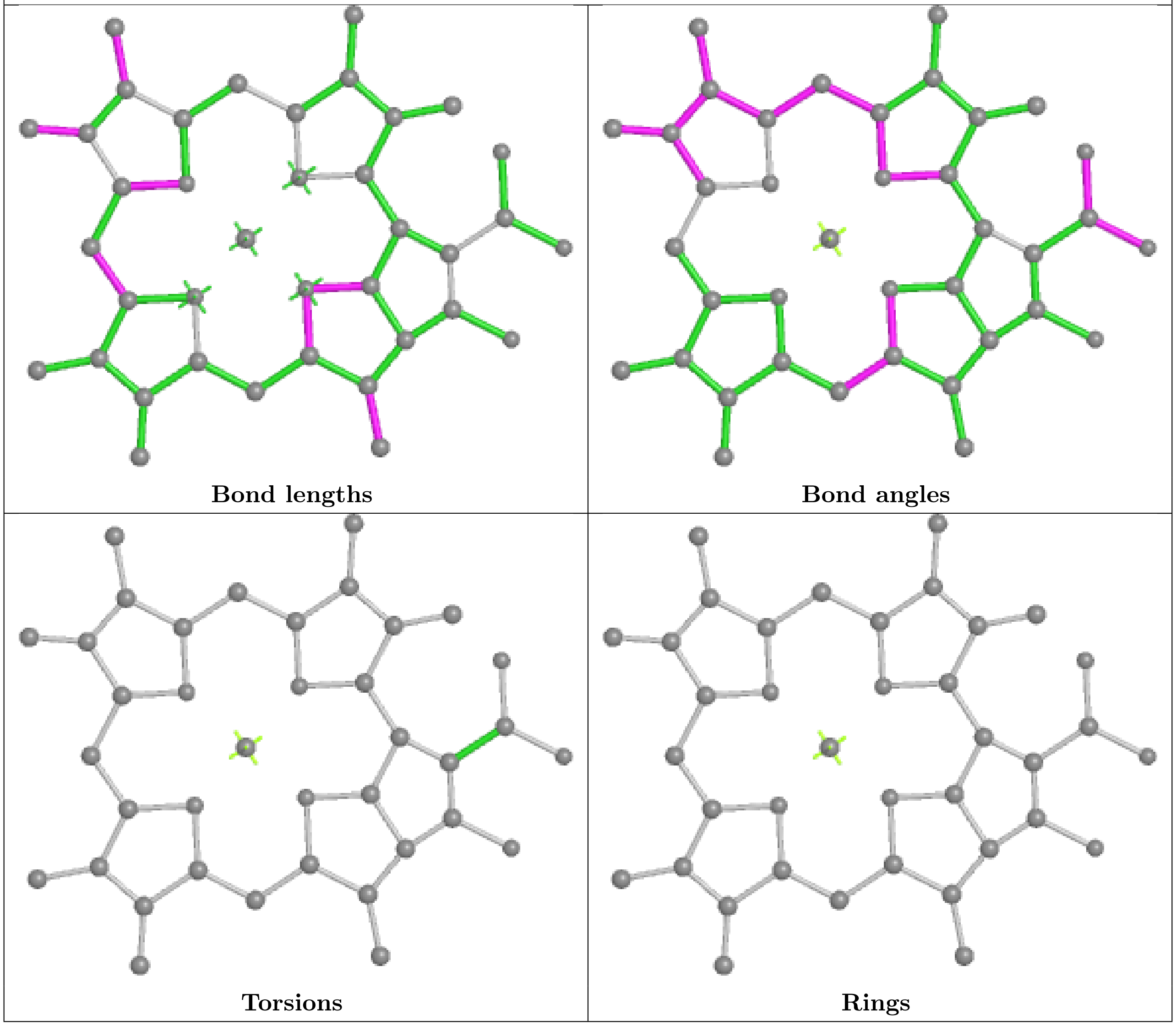


Torsions

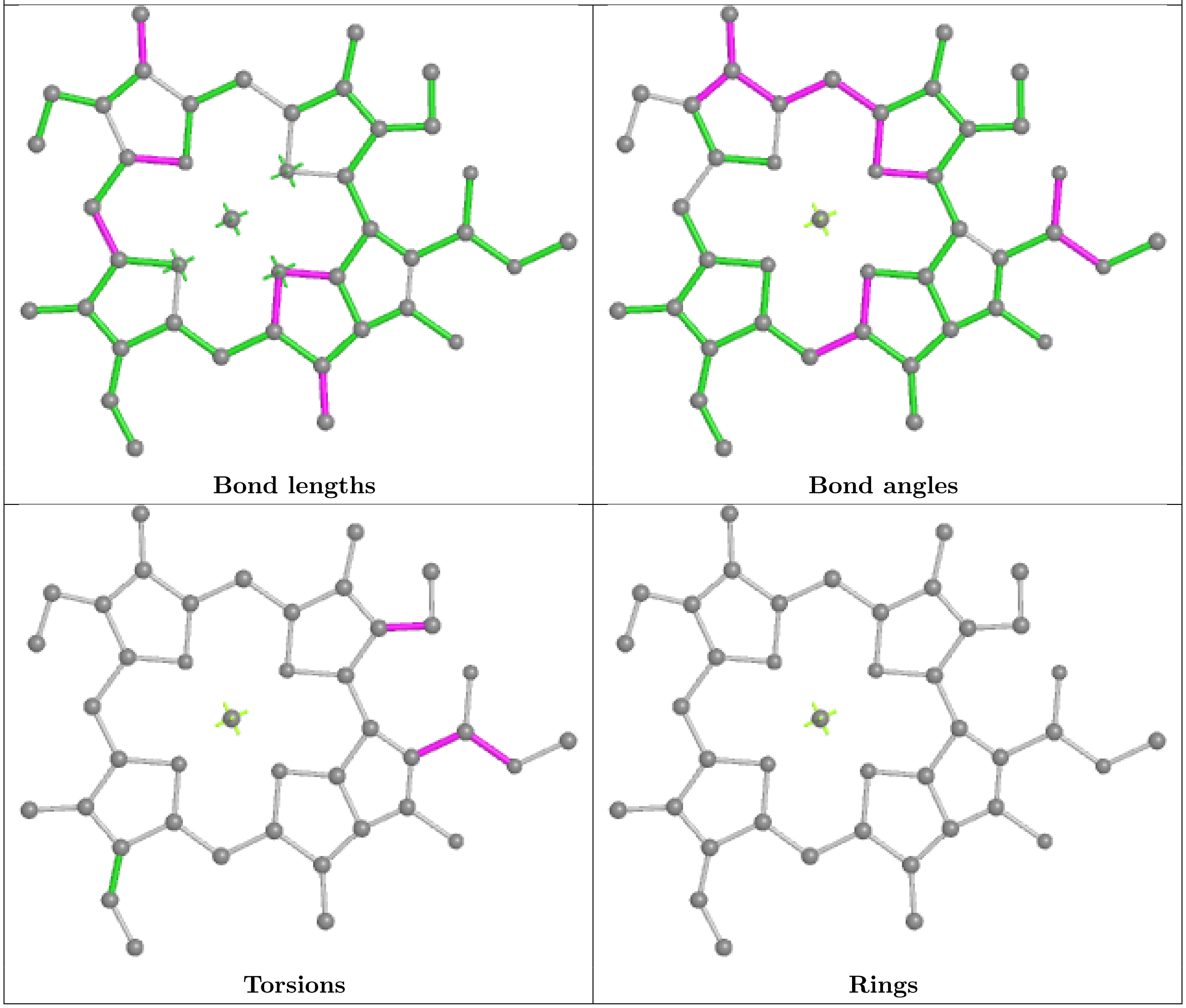


Rings

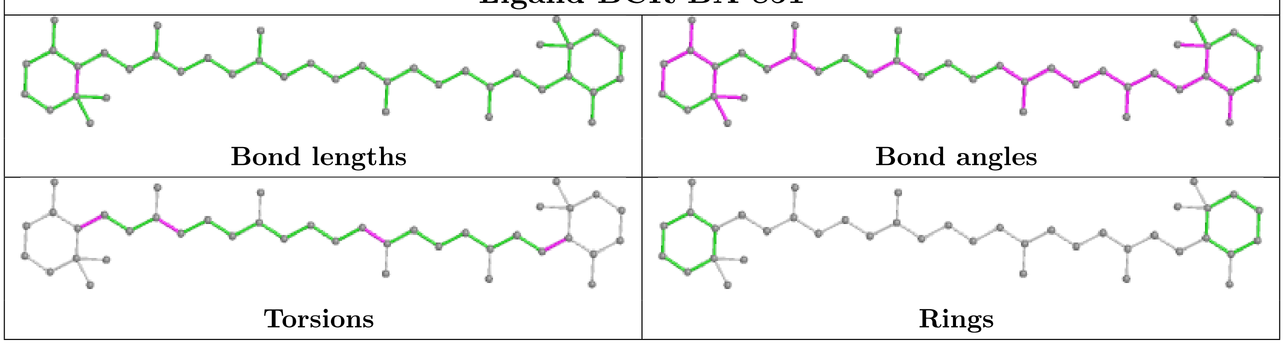
Ligand CLA B1 312



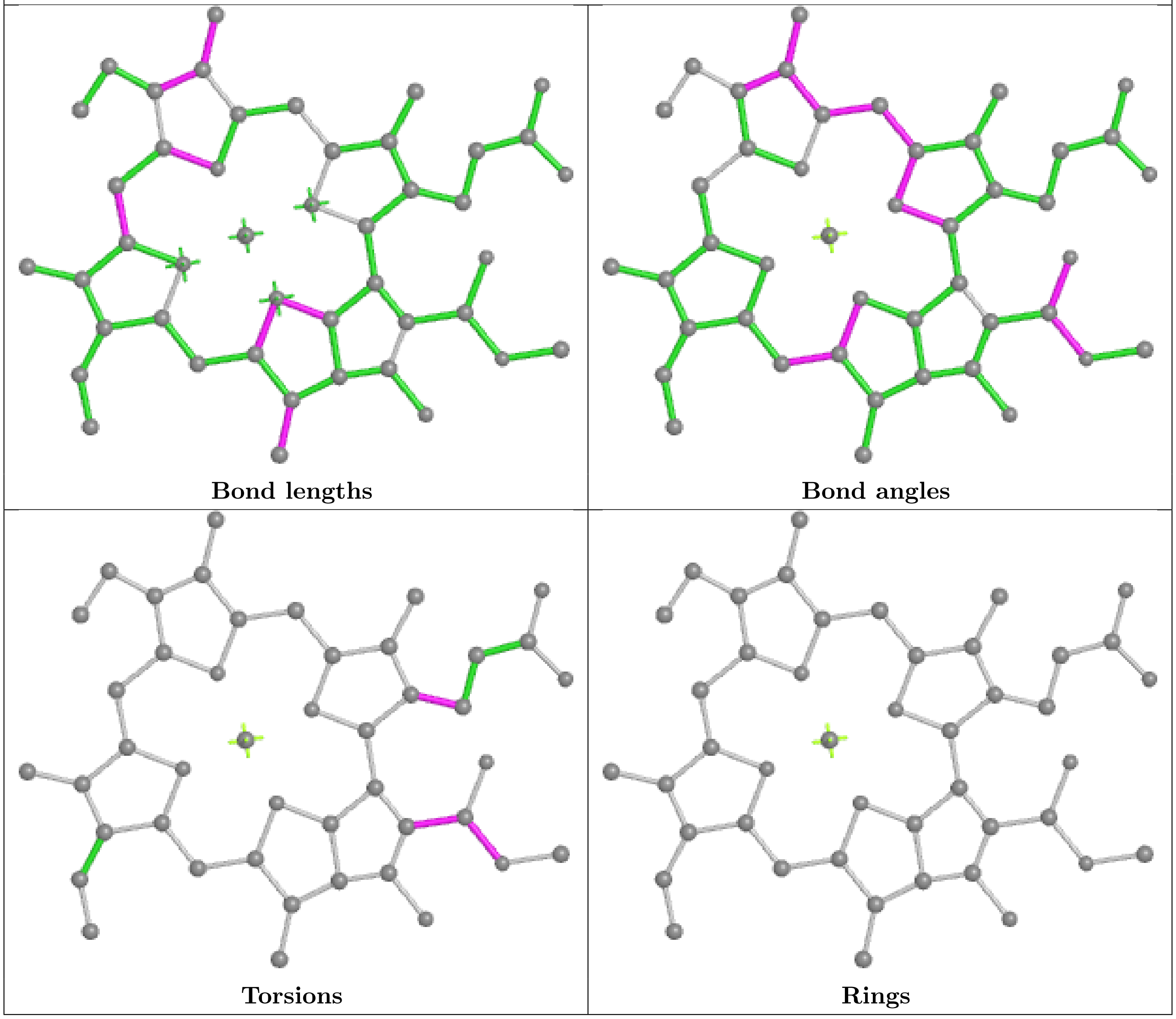
Ligand CLA BA 822



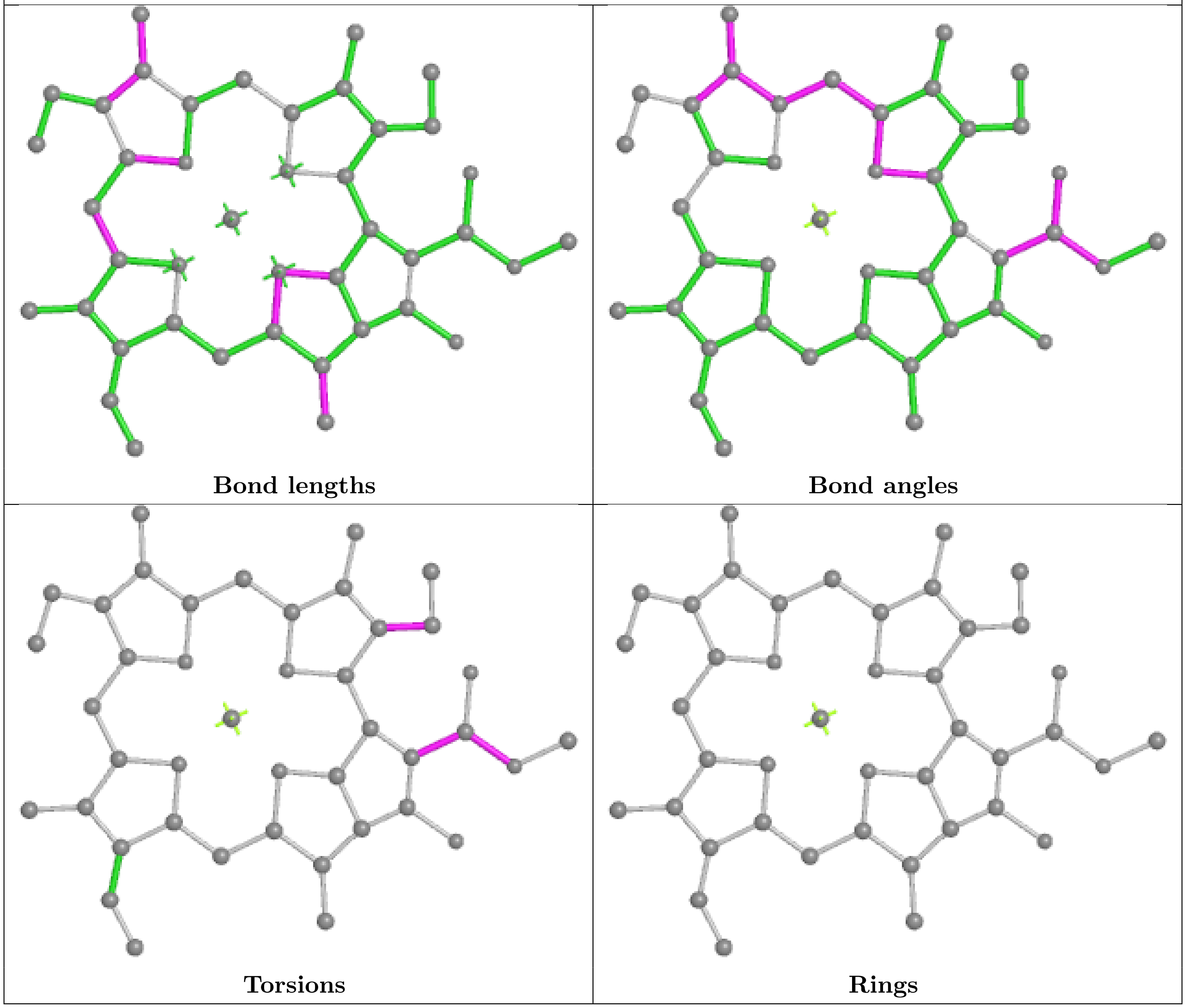
Ligand BCR BA 851



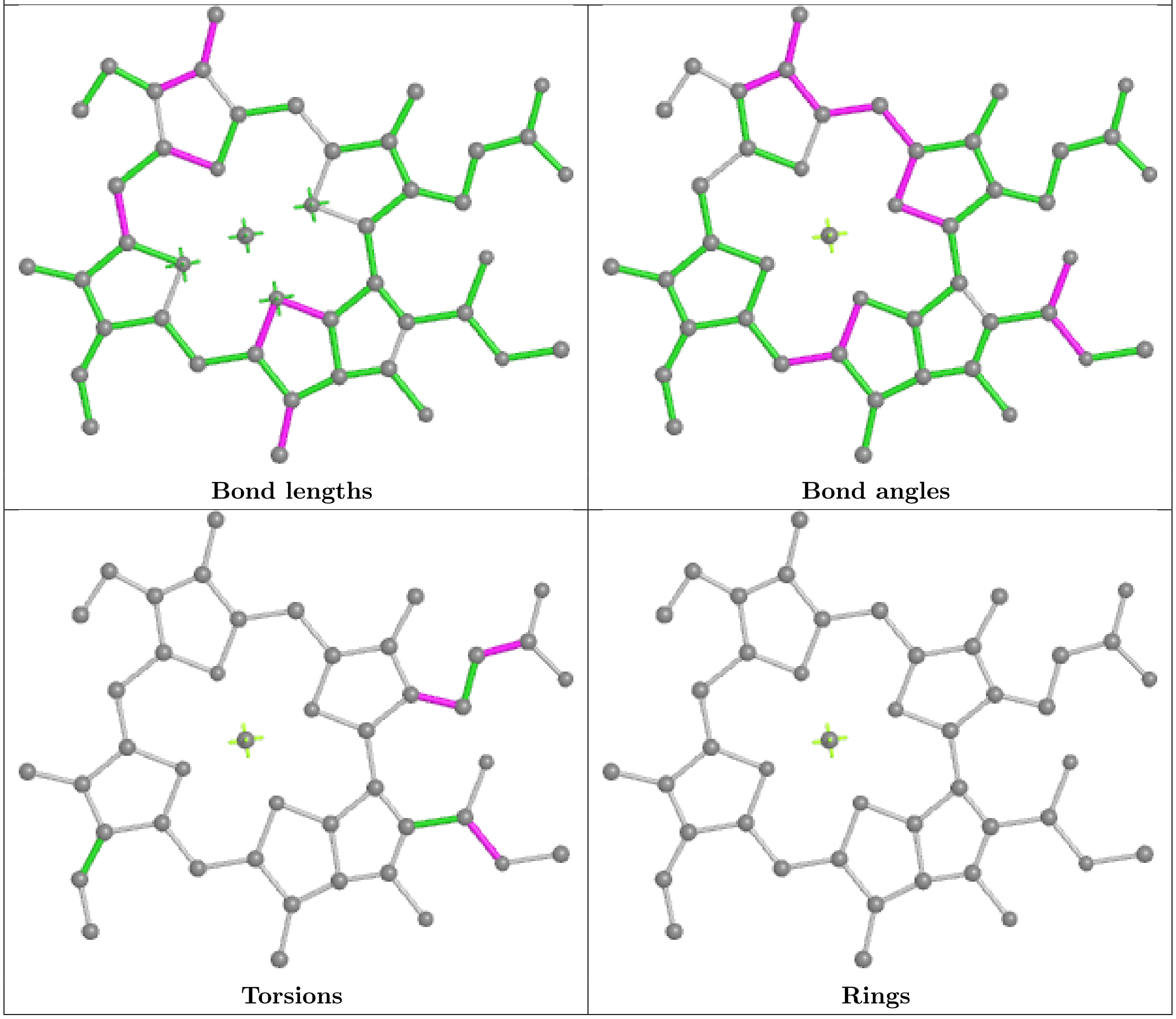
Ligand CLA A4 312



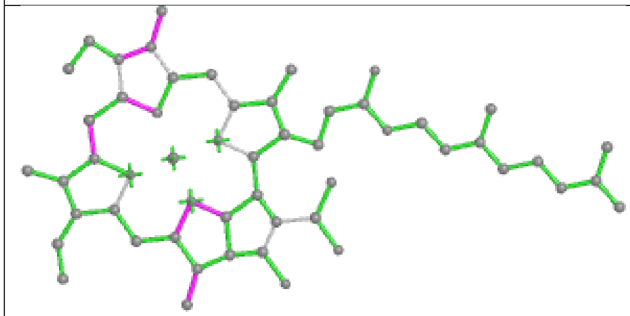
Ligand CLA BG 201



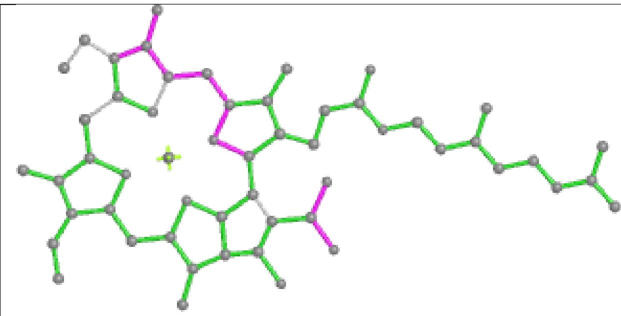
Ligand CLA B5 613



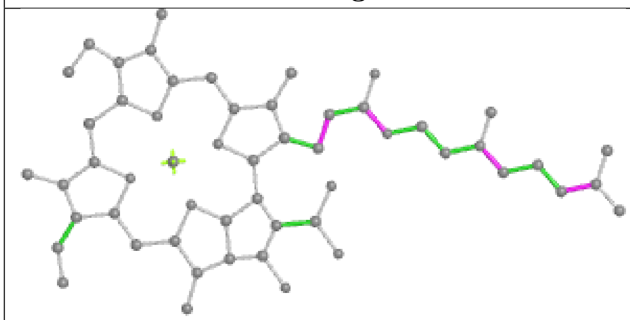
Ligand CLA B3 311



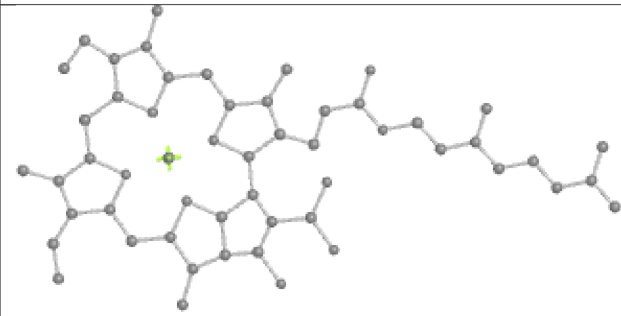
Bond lengths



Bond angles

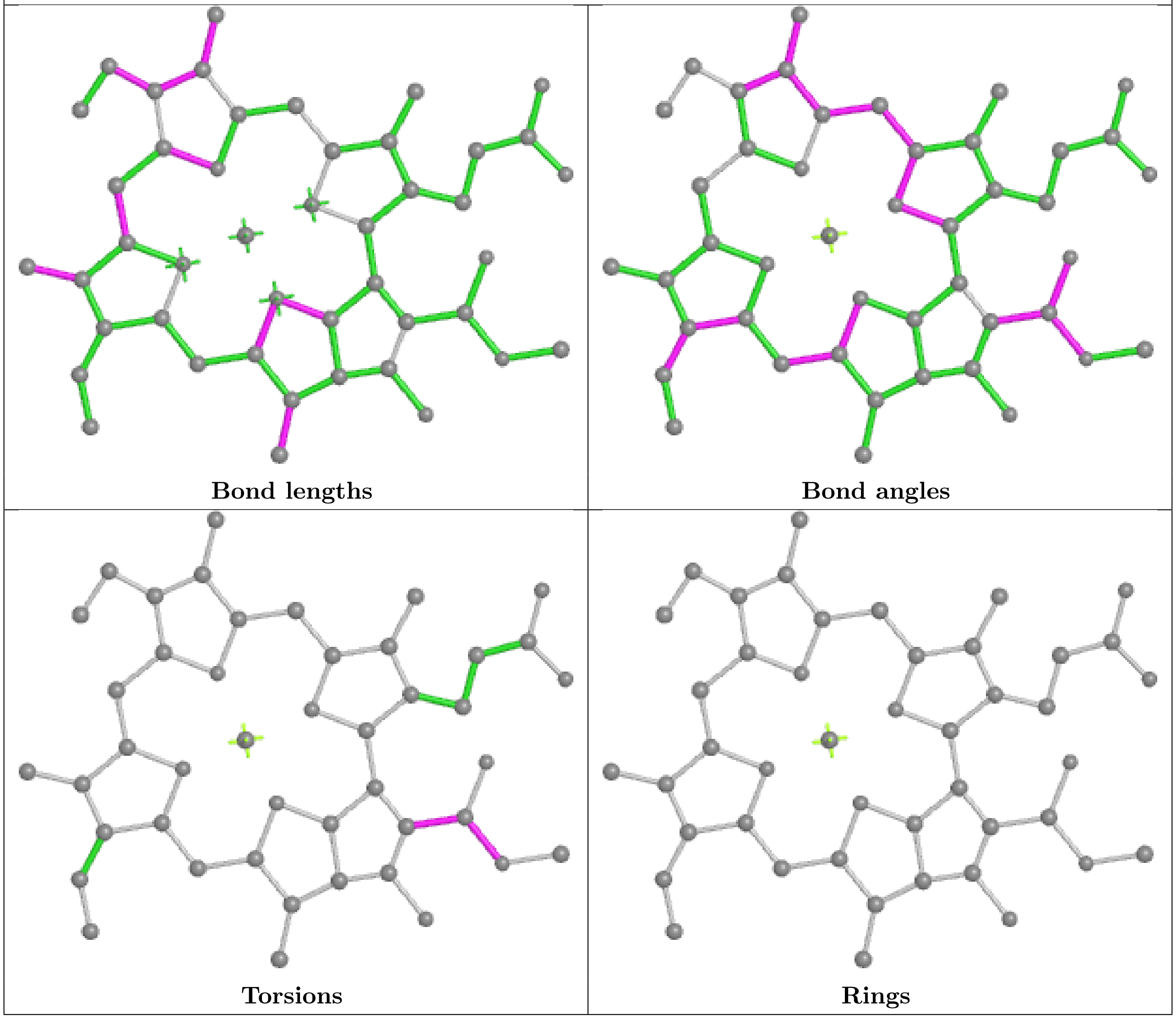


Torsions



Rings

Ligand CLA AA 816



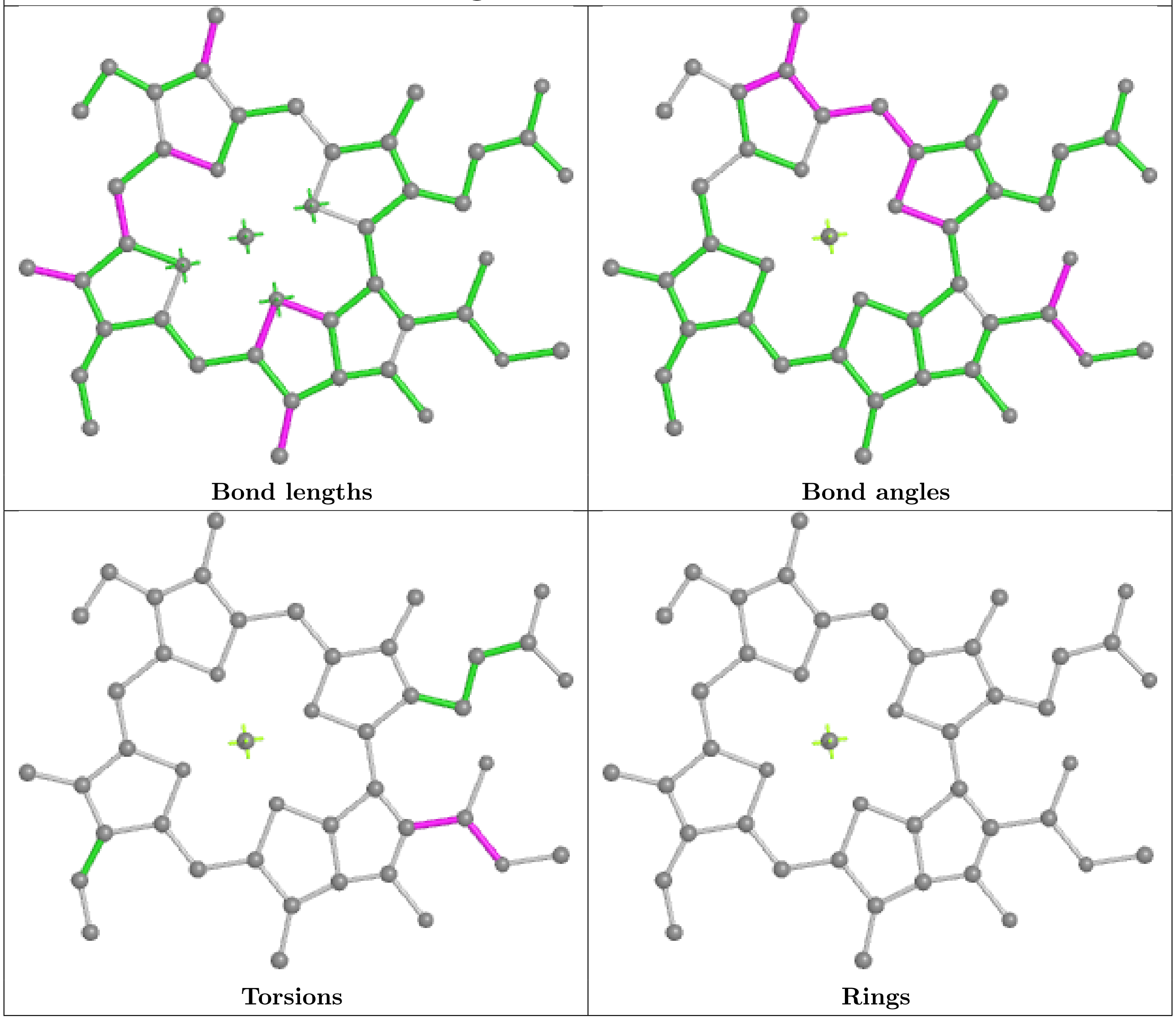
Bond lengths

Bond angles

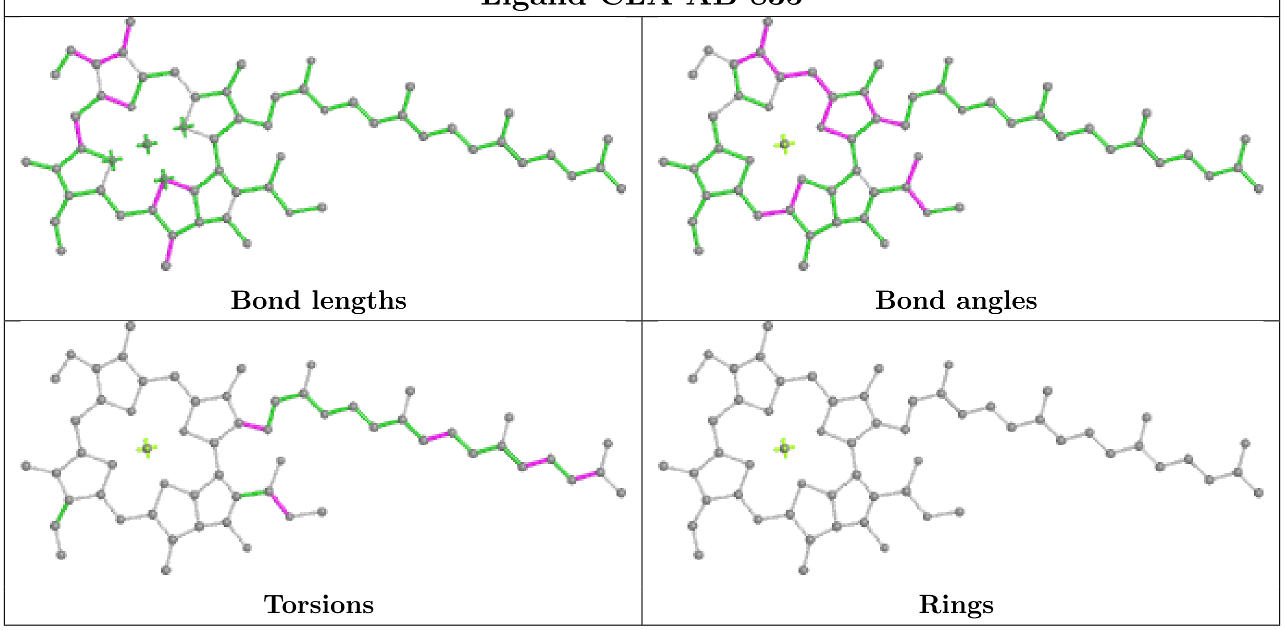
Torsions

Rings

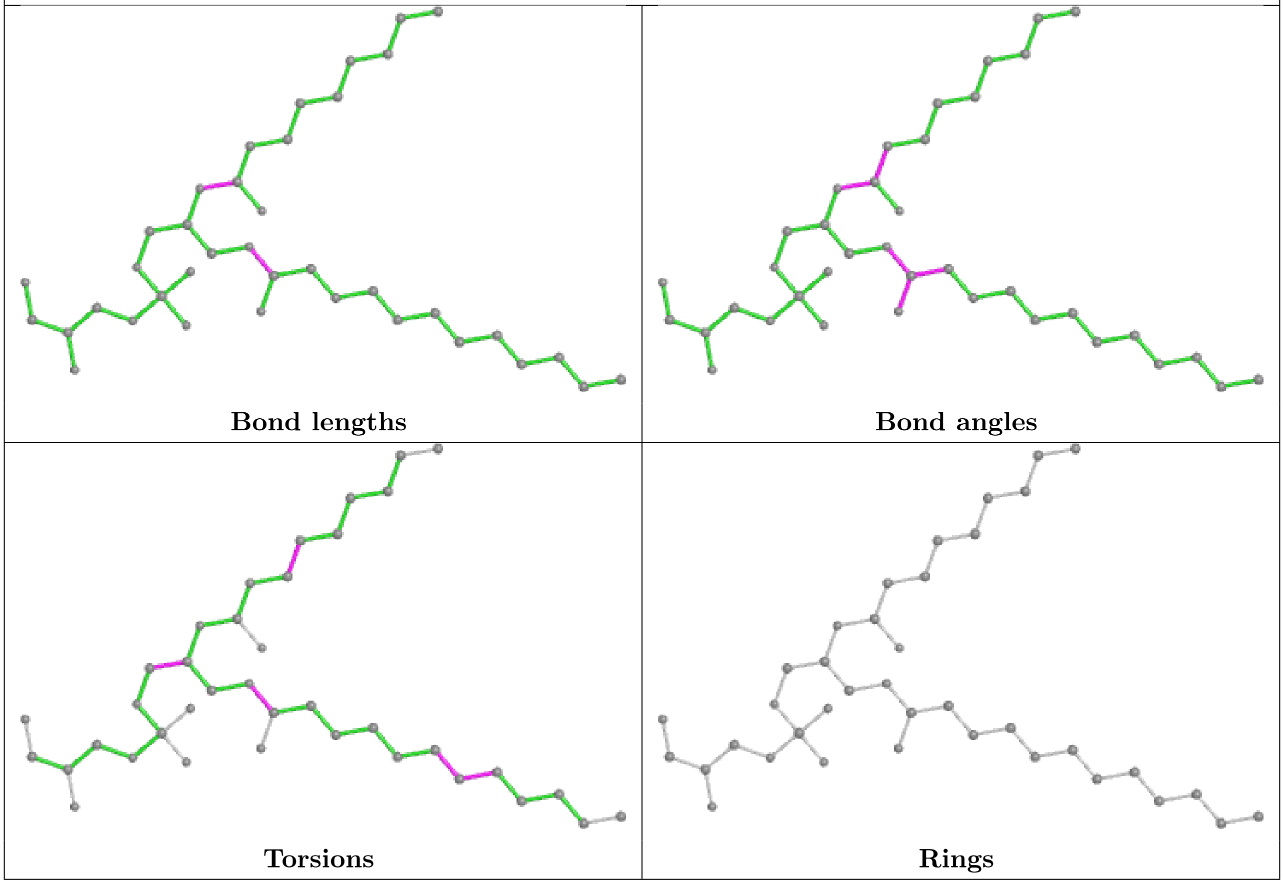
Ligand CLA BA 820



Ligand CLA AB 835



Ligand LHG B1 301



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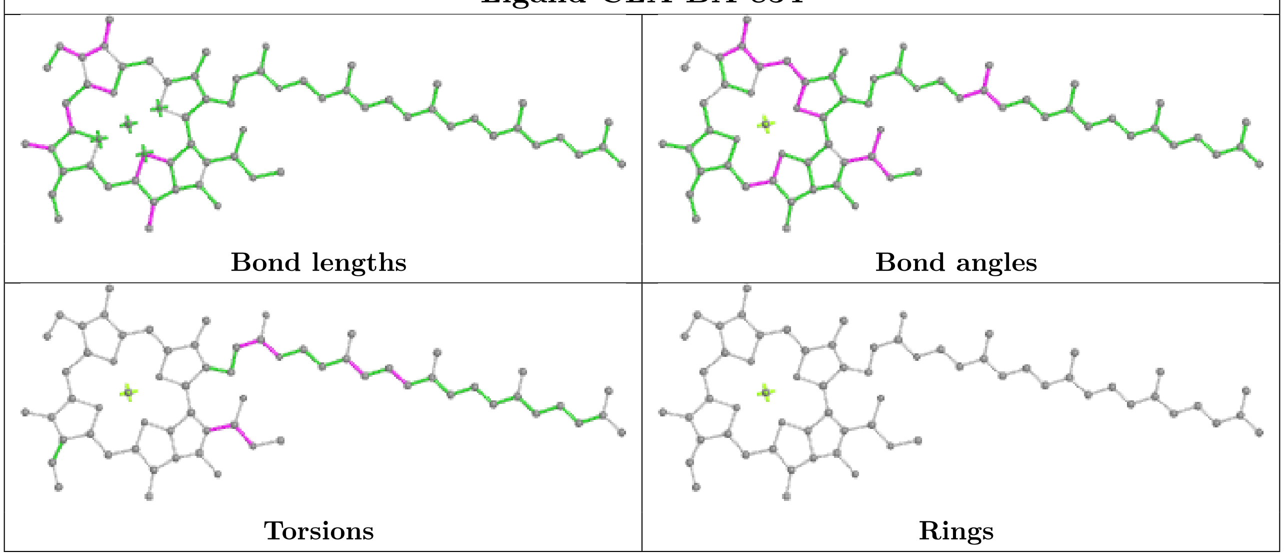
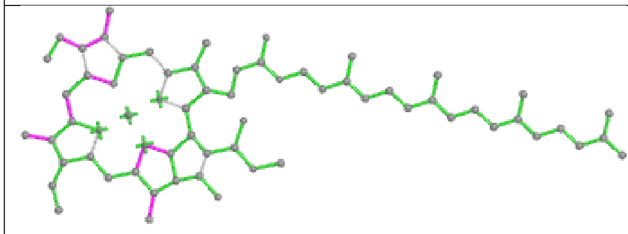
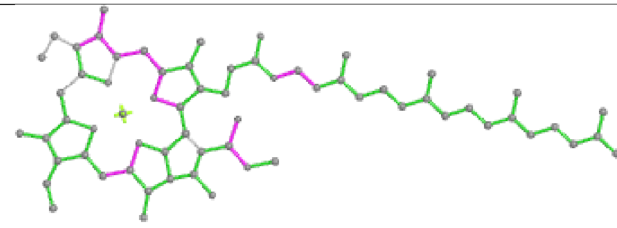
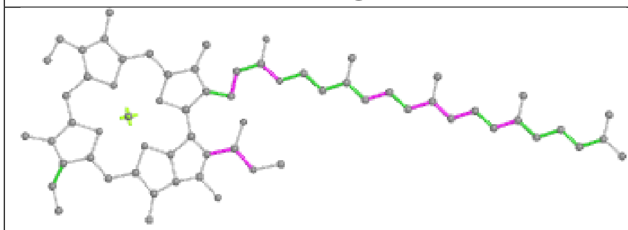
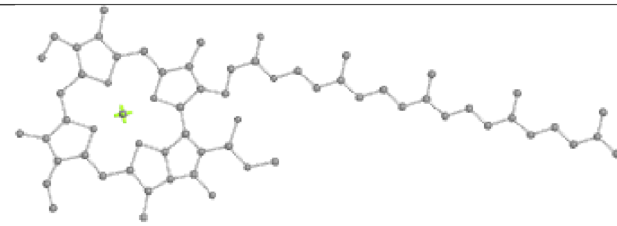


Ligand CLA AA 813	
 Bond lengths	 Bond angles
 Torsions	 Rings

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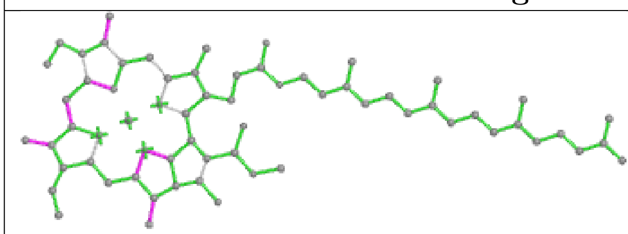
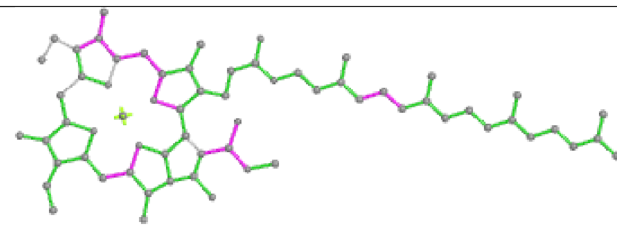
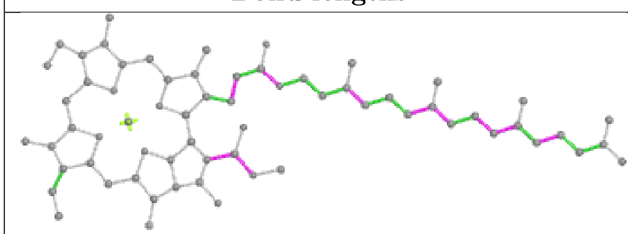
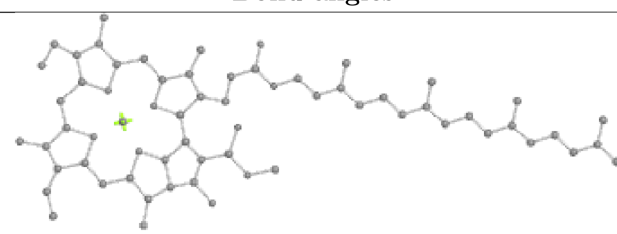
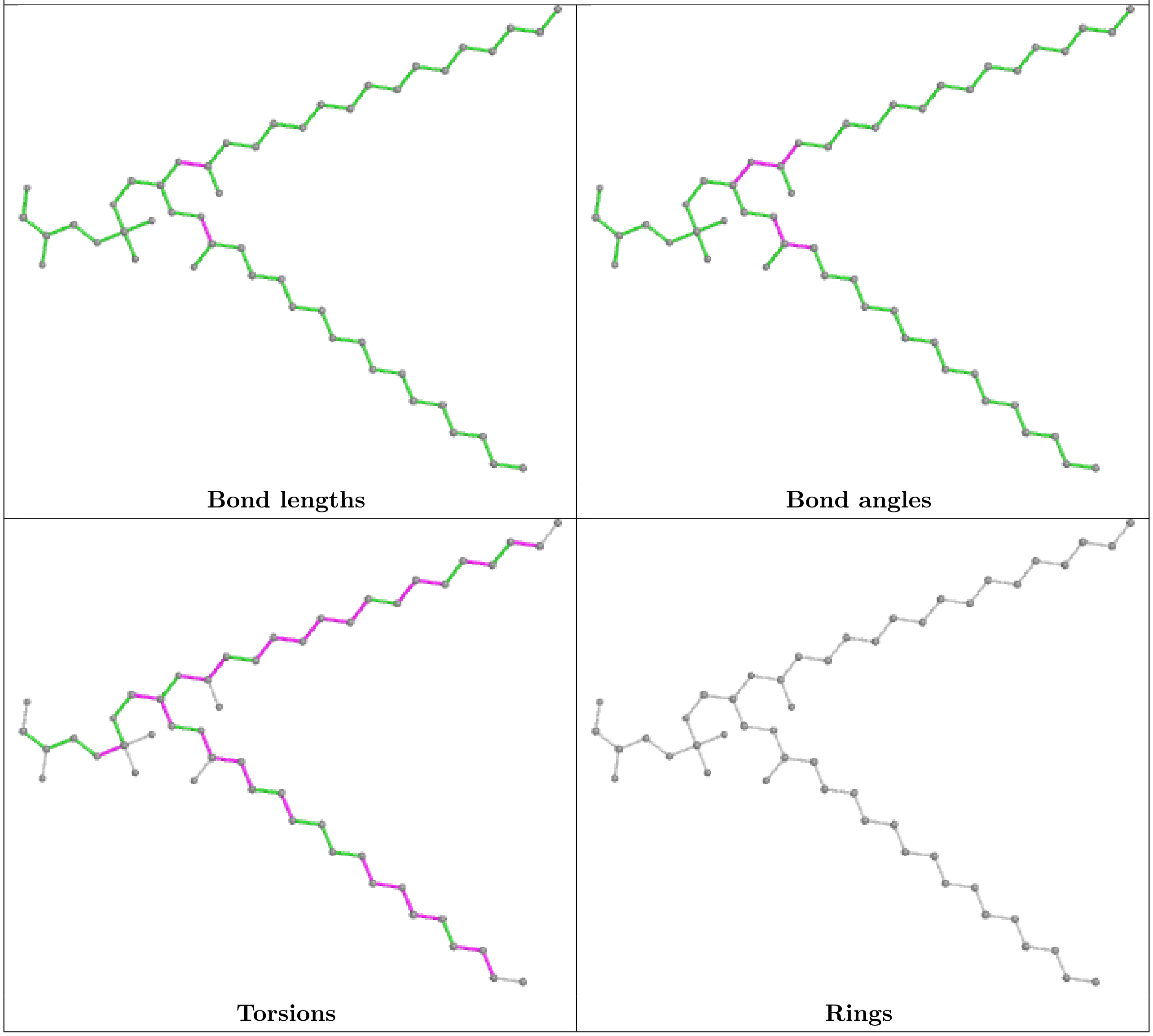
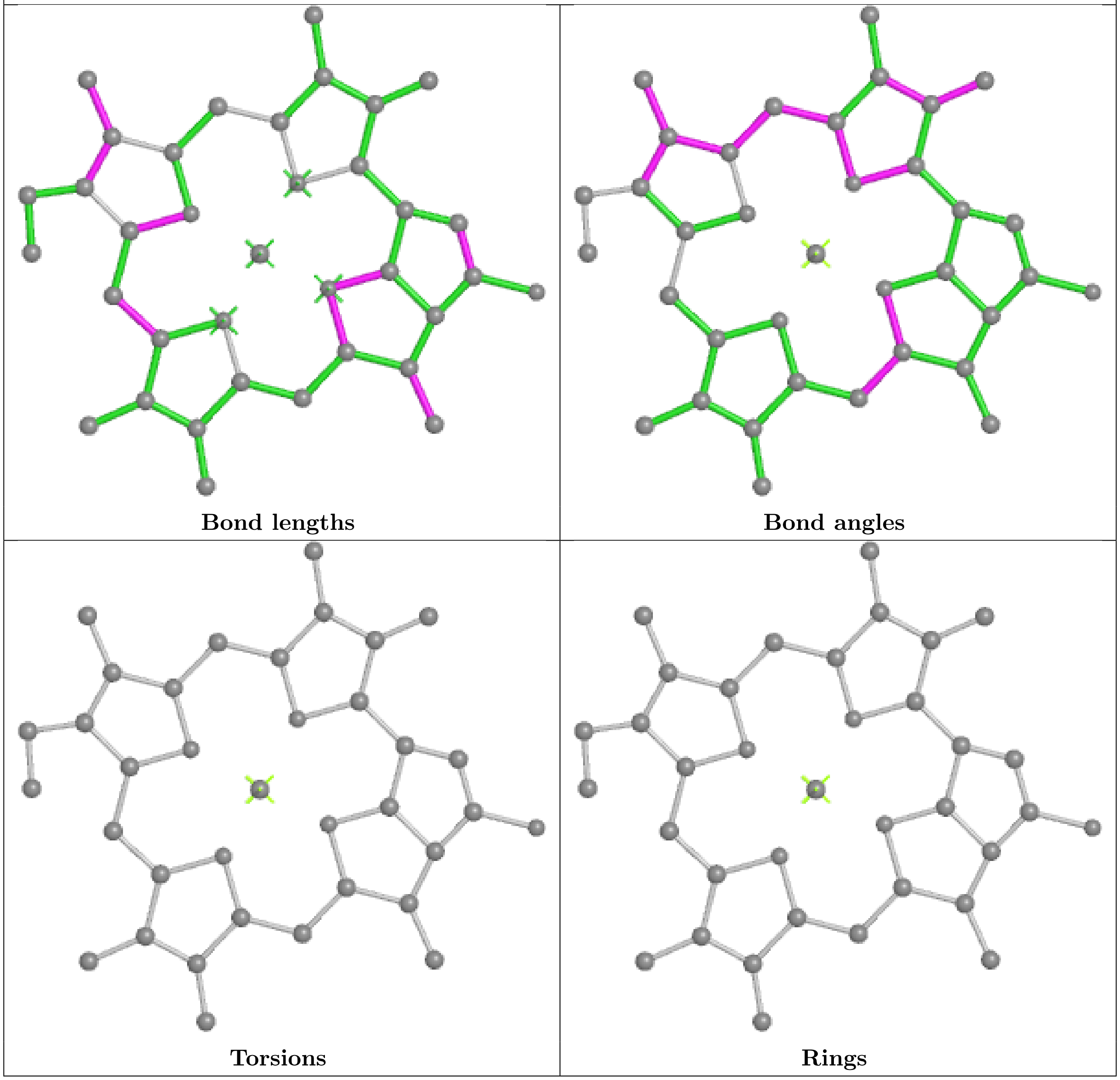
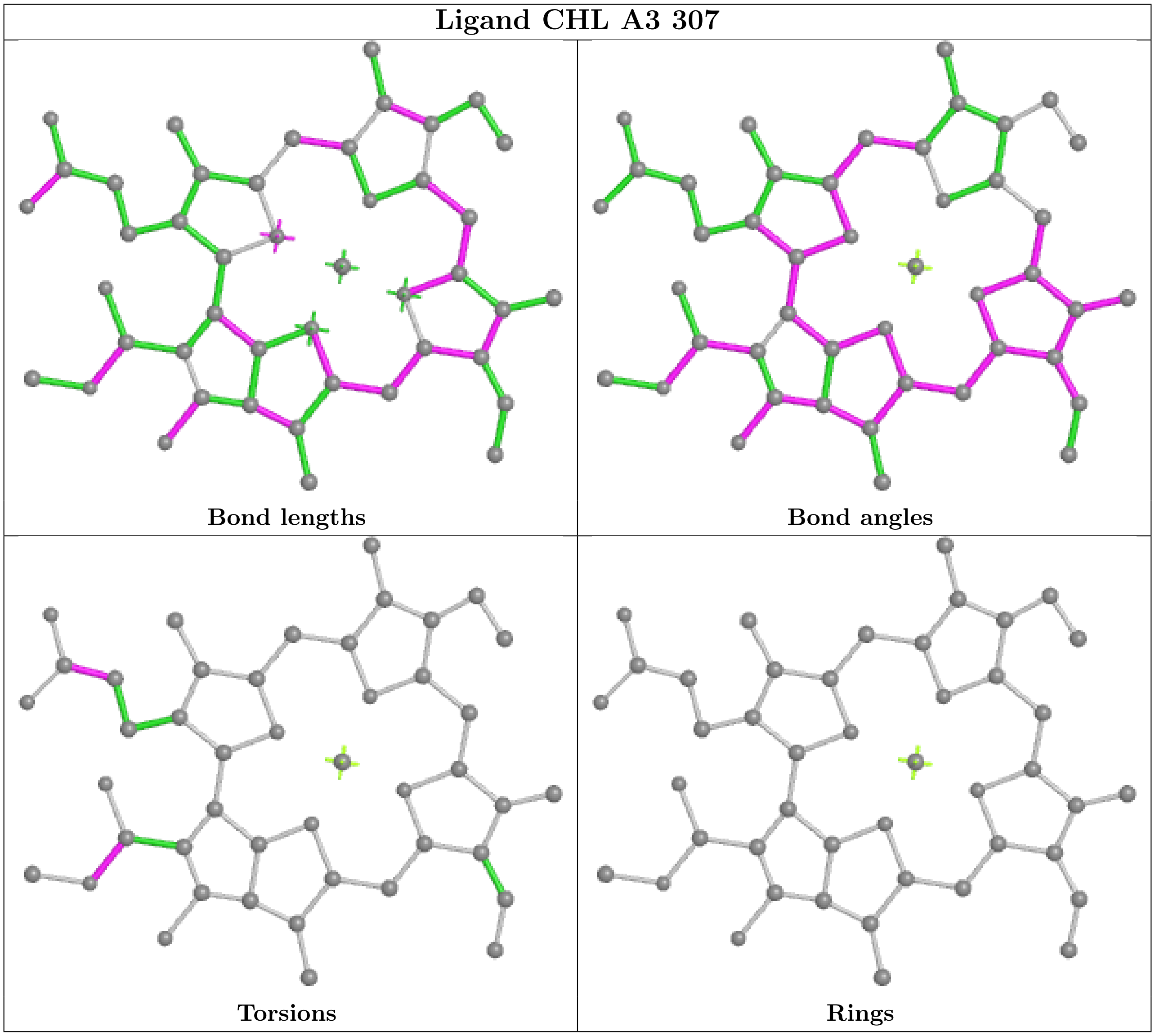
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand LHG BA 845

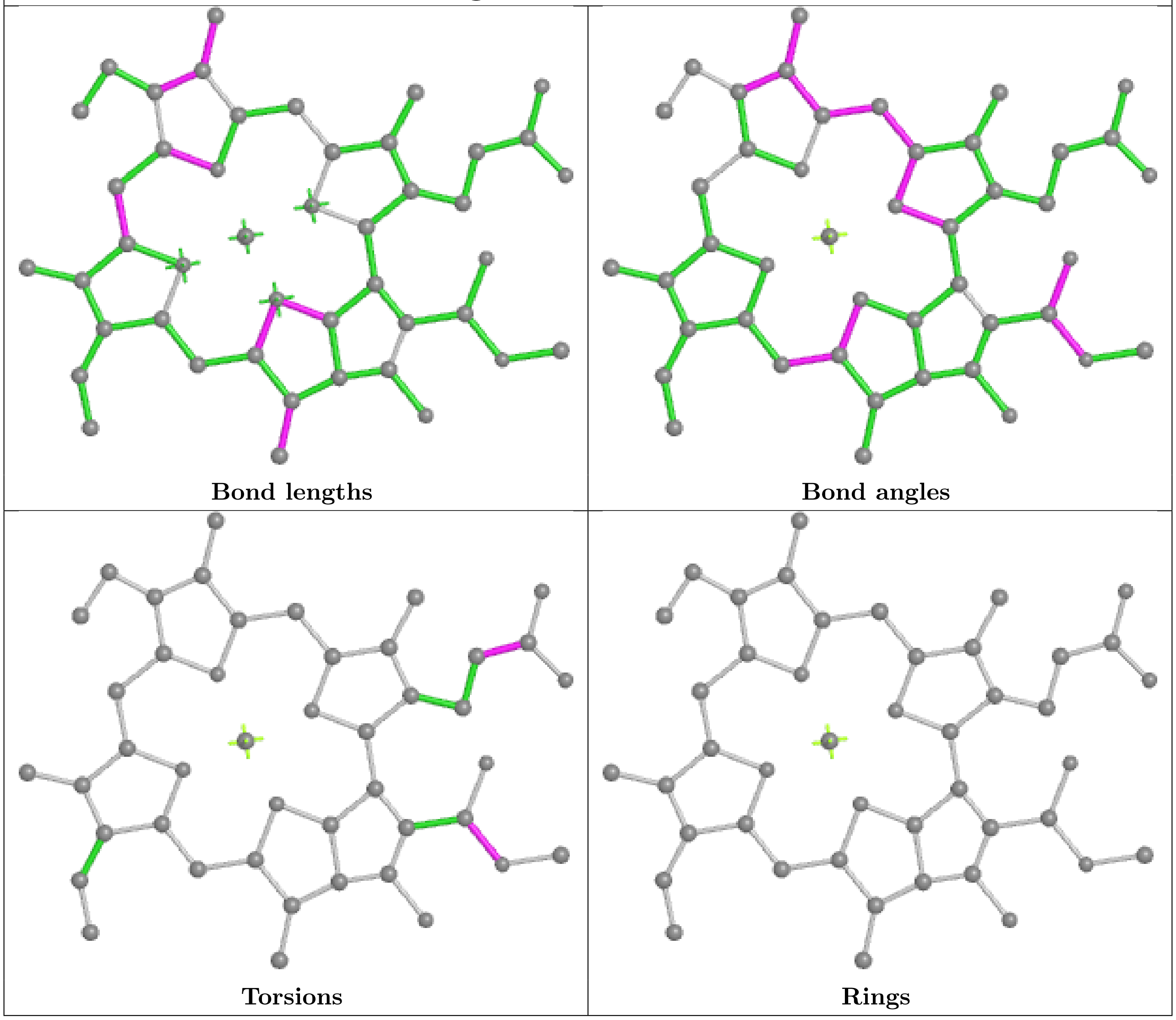


Ligand CLA A3 314




Ligand CHL A3 307
Bond lengths
Bond angles
Torsions
Rings

Ligand CLA AG 204



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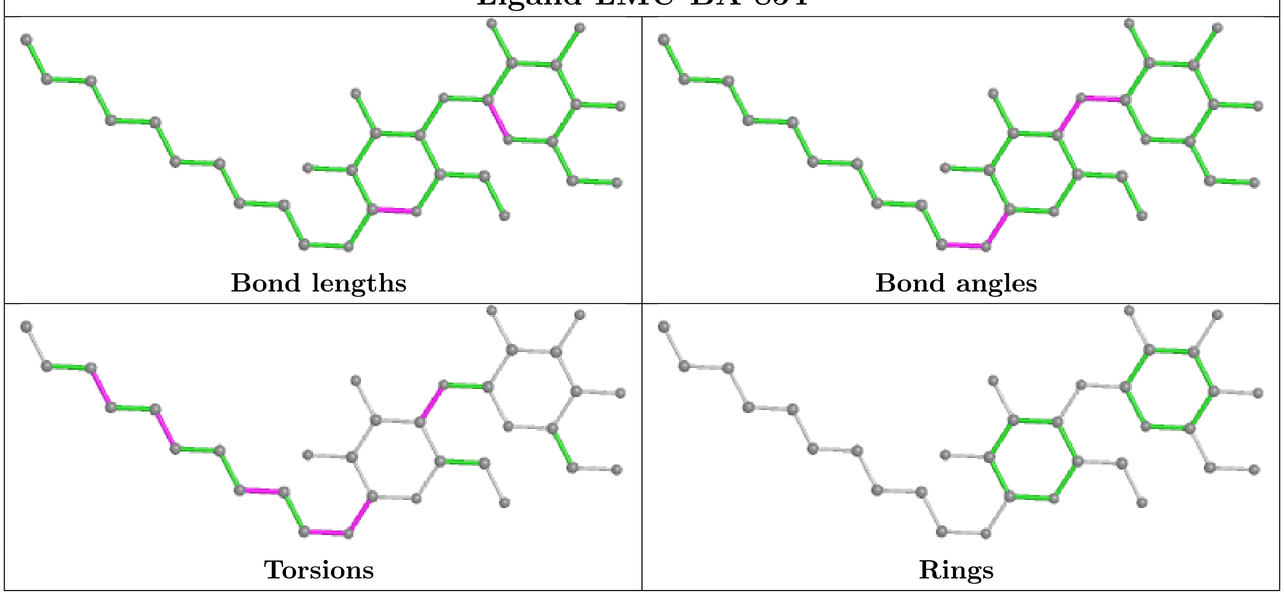
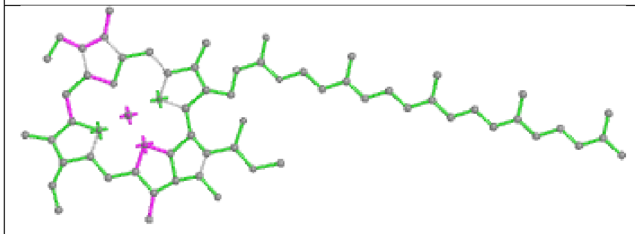
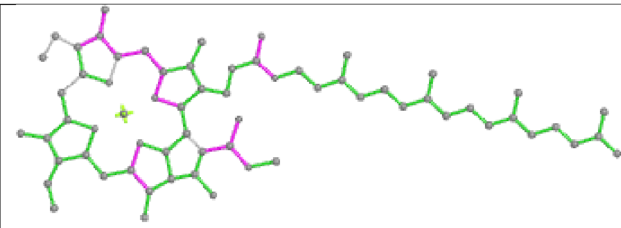


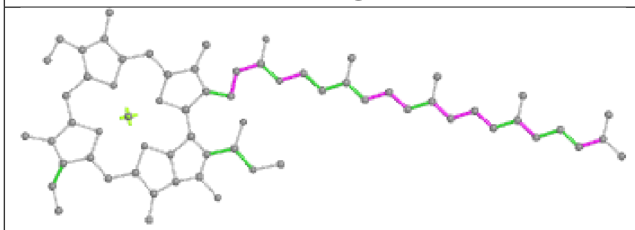
Ligand CLA BA 829



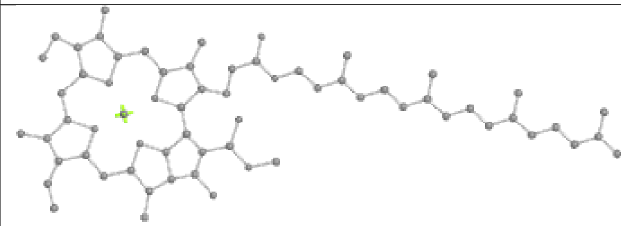
Bond lengths



Bond angles

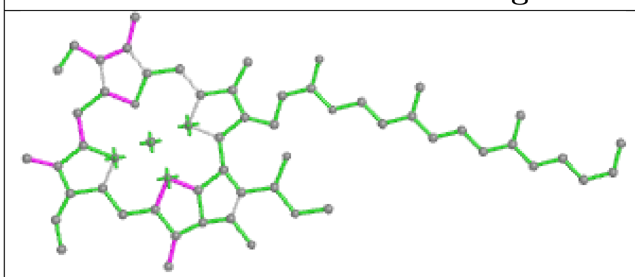


Torsions

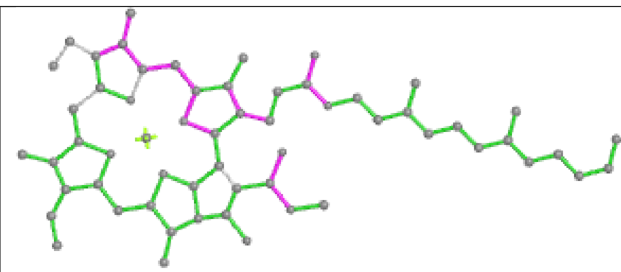


Rings

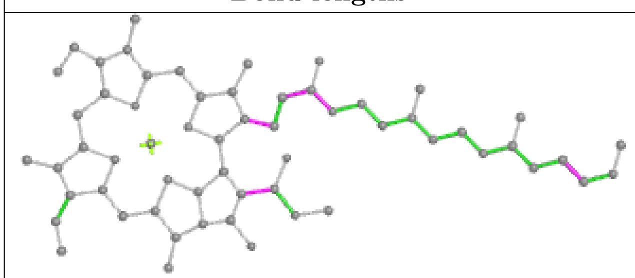
Ligand CLA AA 818



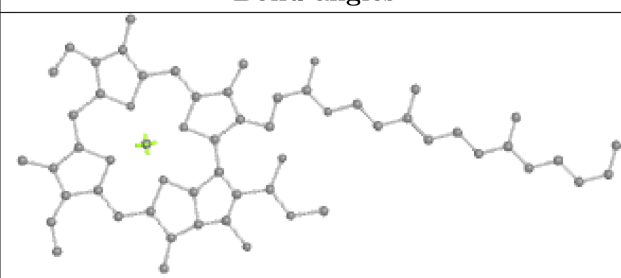
Bond lengths



Bond angles

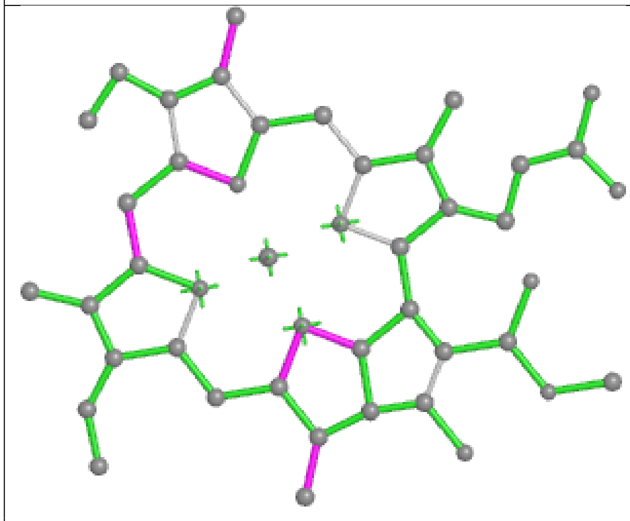


Torsions

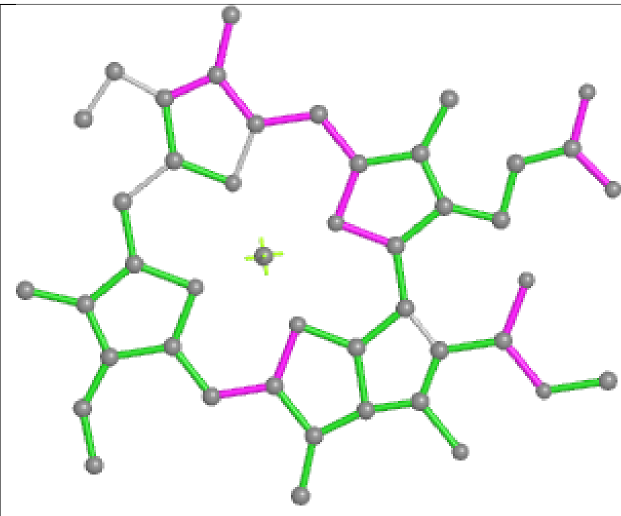


Rings

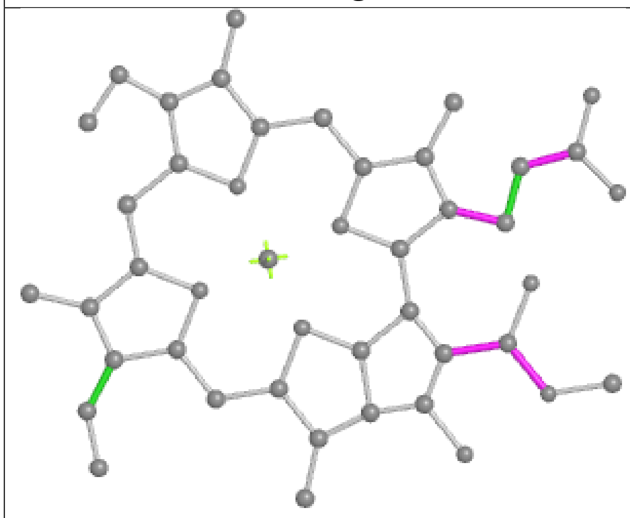
Ligand CLA AK 202



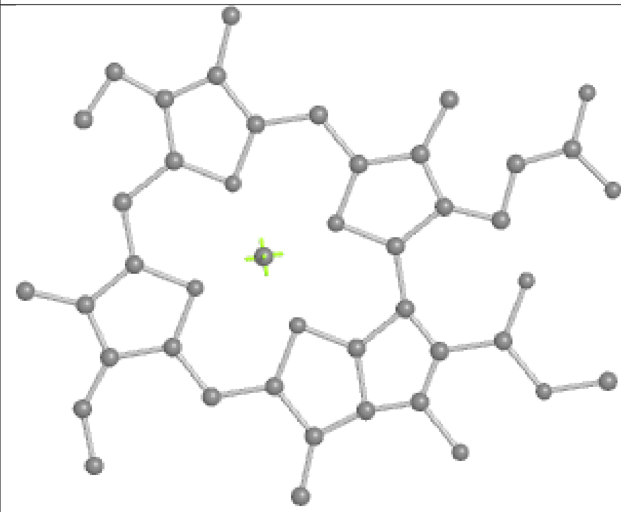
Bond lengths



Bond angles

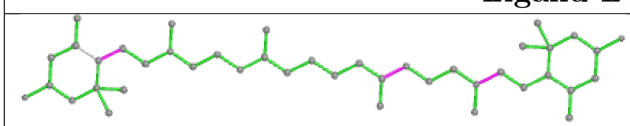


Torsions

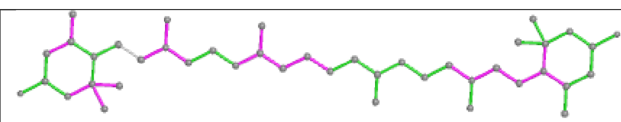


Rings

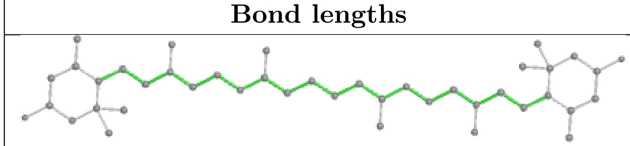
Ligand LUT AF 806



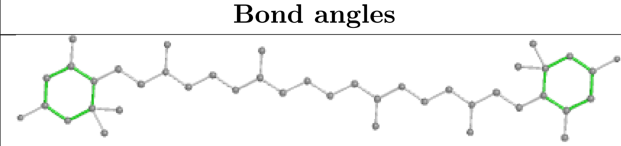
Bond lengths



Bond angles

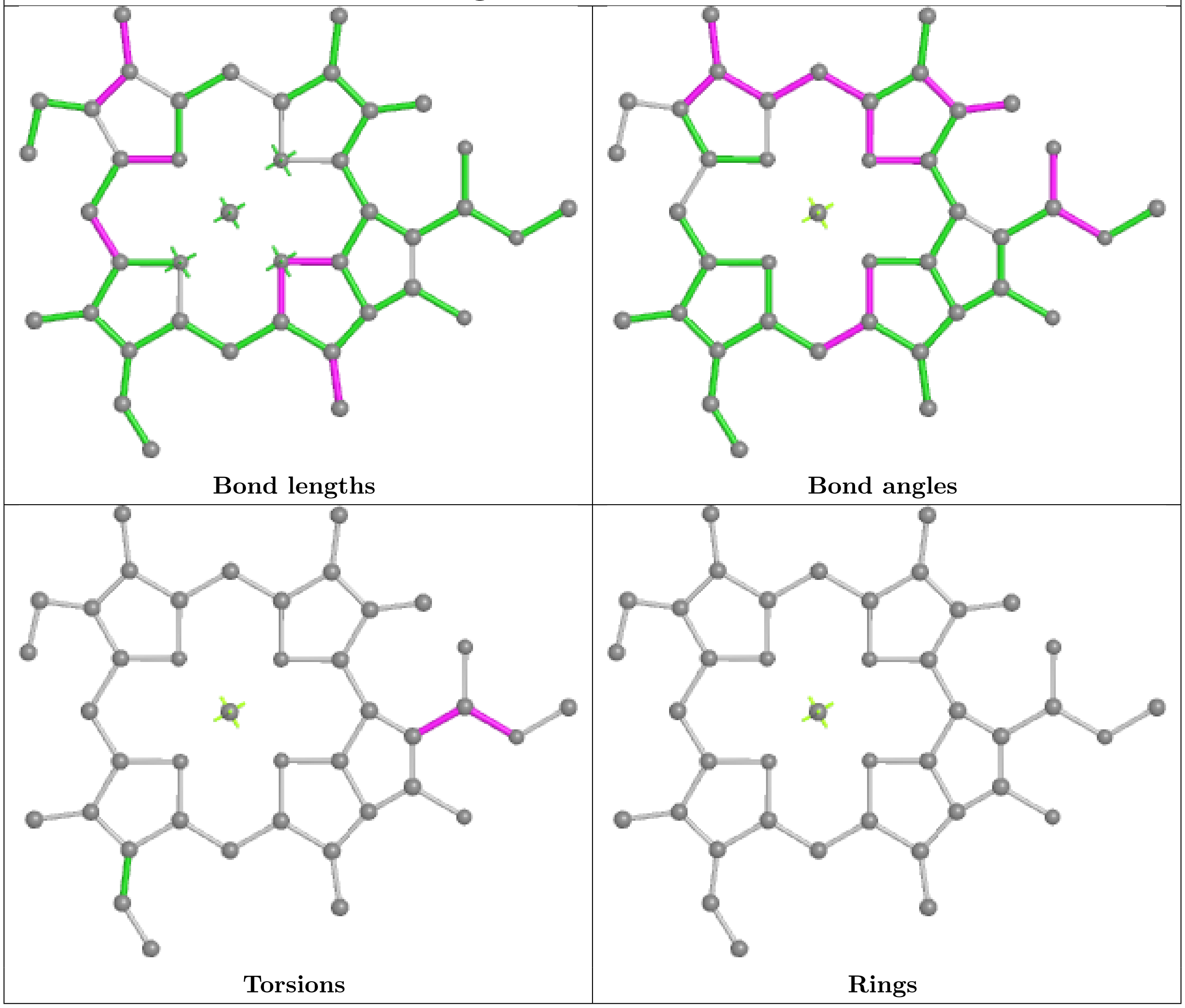


Torsions

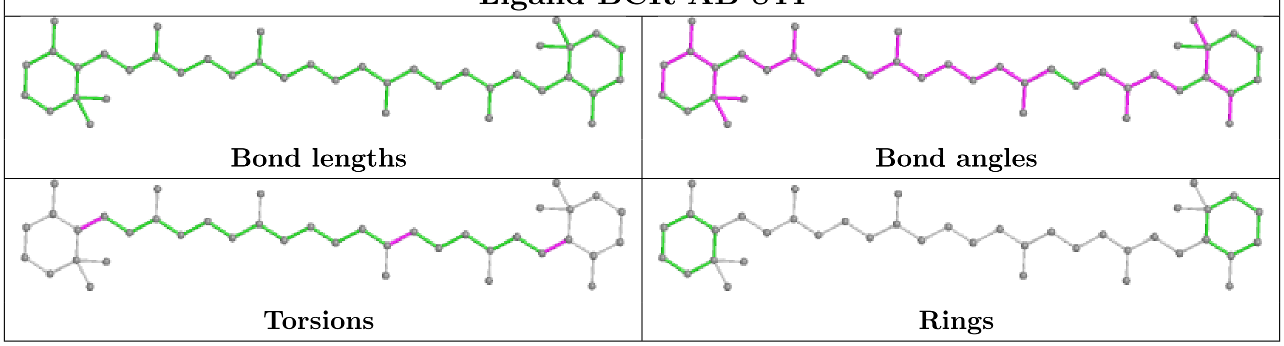


Rings

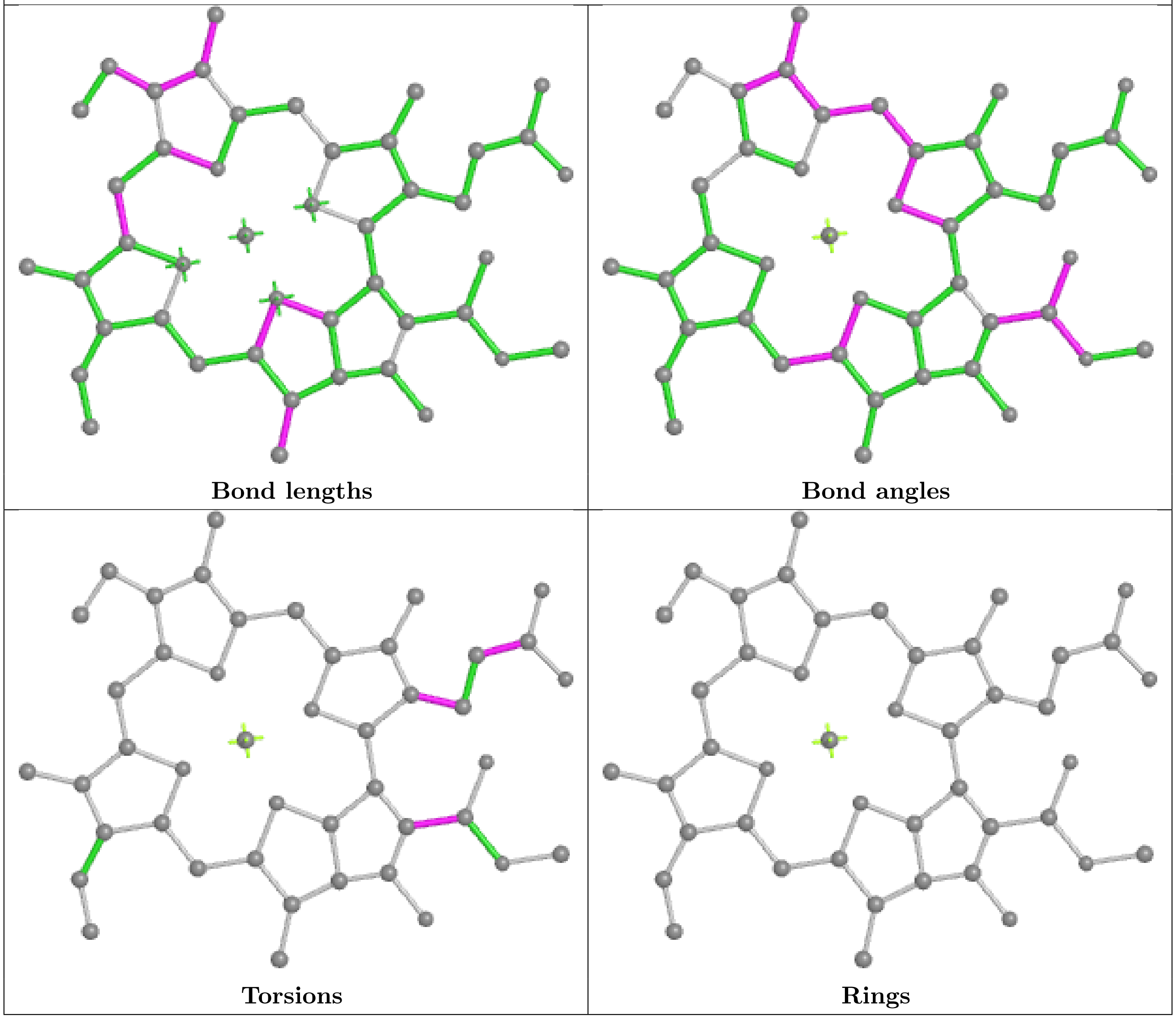
Ligand CLA AA 823



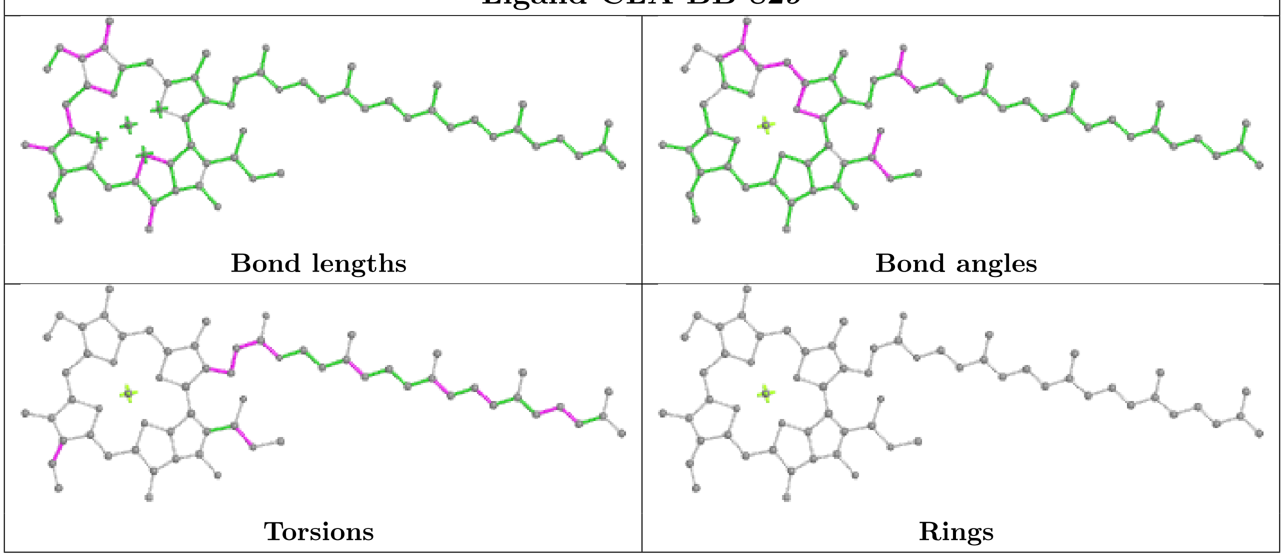
Ligand BCR AB 844



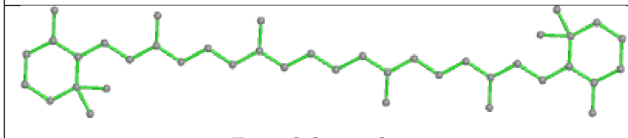
Ligand CLA A3 308



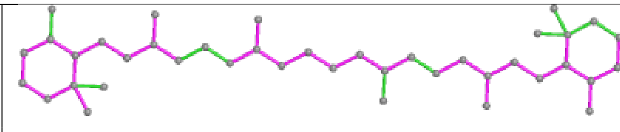
Ligand CLA BB 829



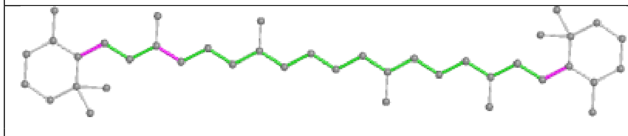
Ligand BCR AL 302



Bond lengths



Bond angles



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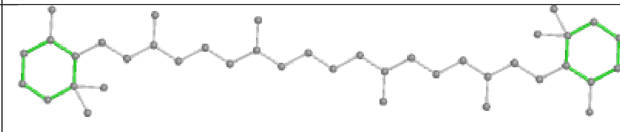
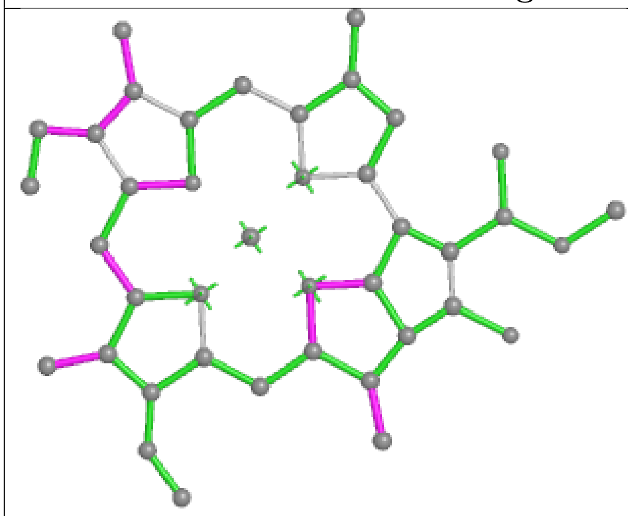
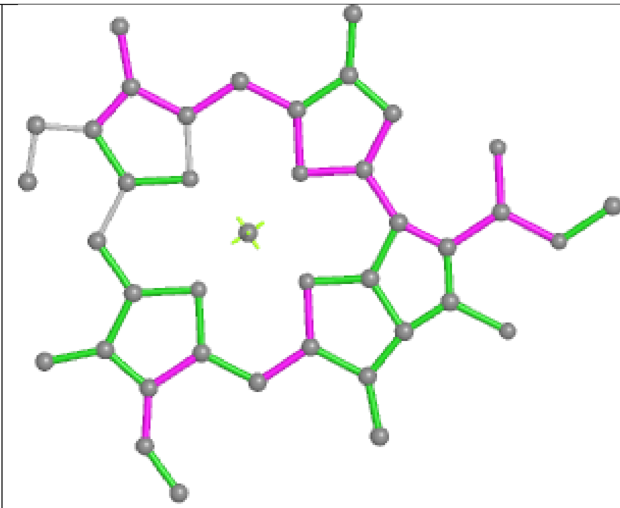


Rings

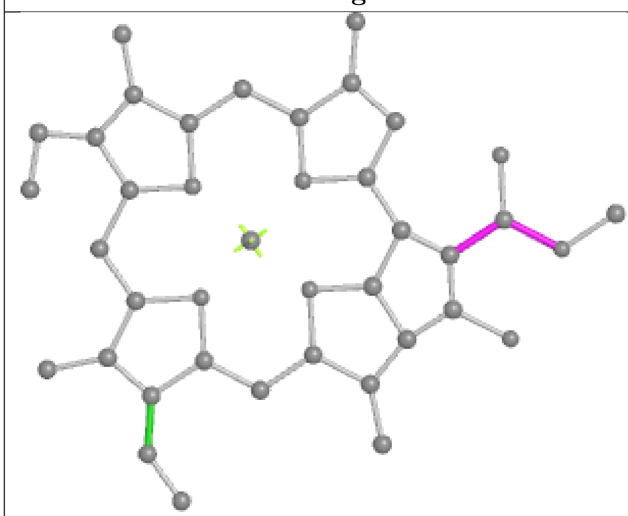
Ligand CLA A1 307



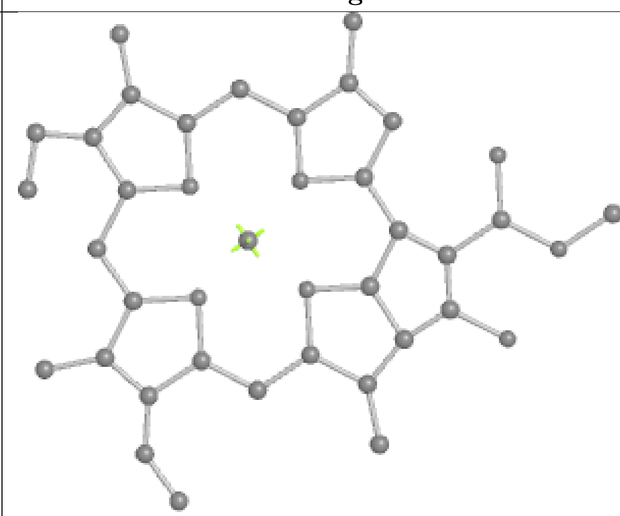
Bond lengths



Bond angles

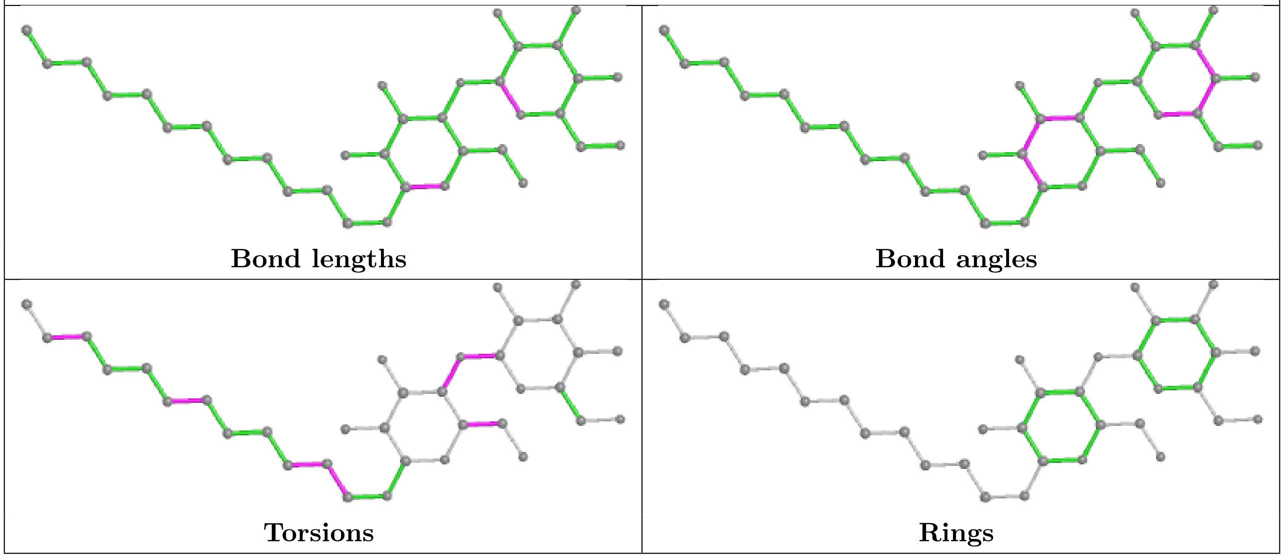


Torsions

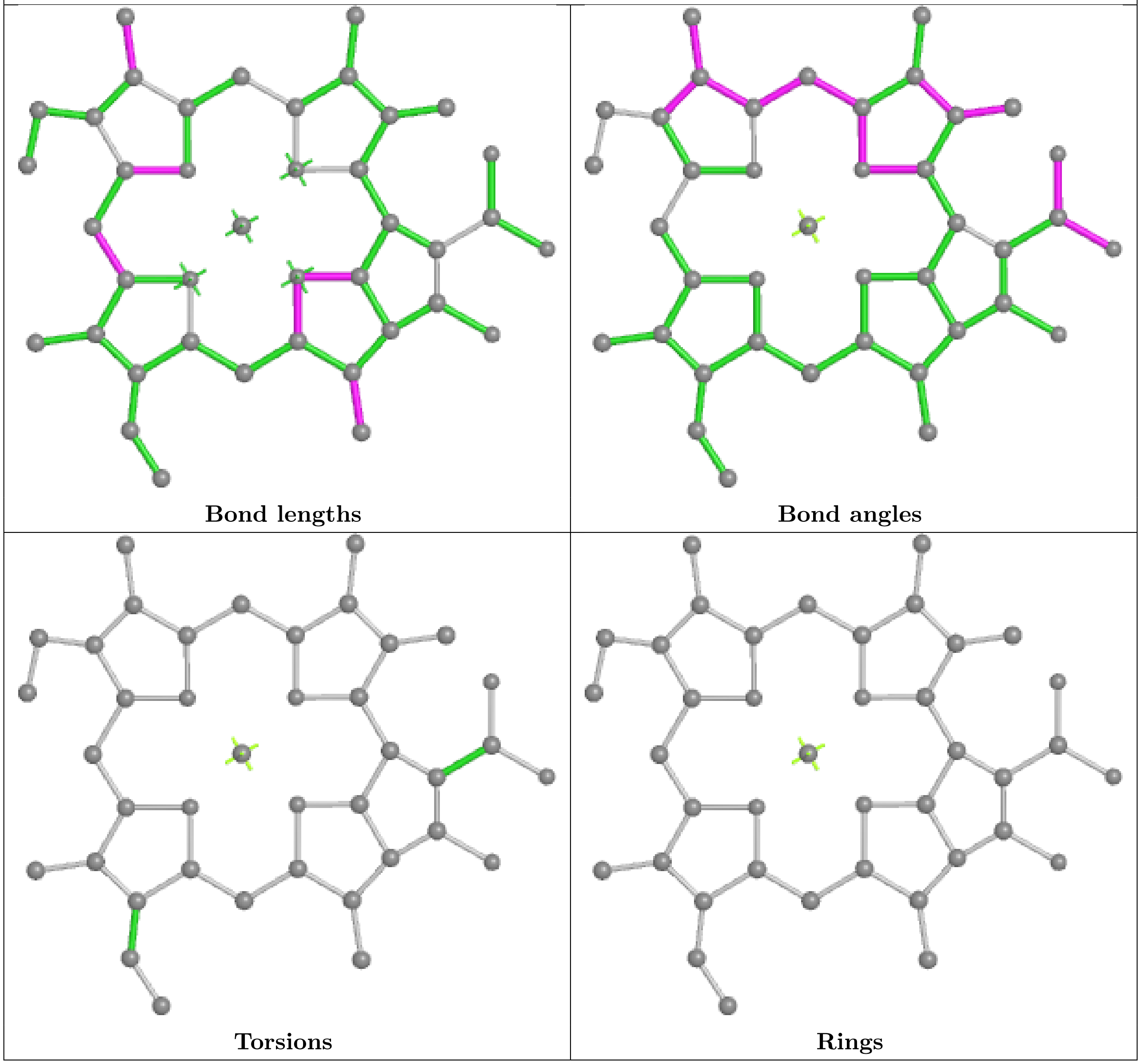


Rings

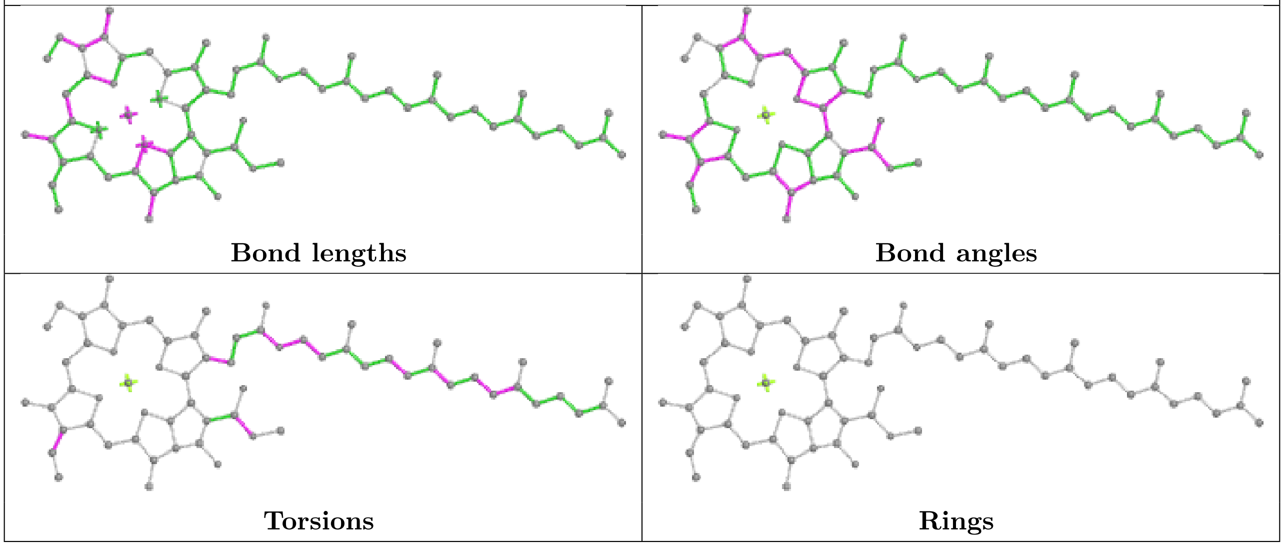
Ligand LMU AB 850



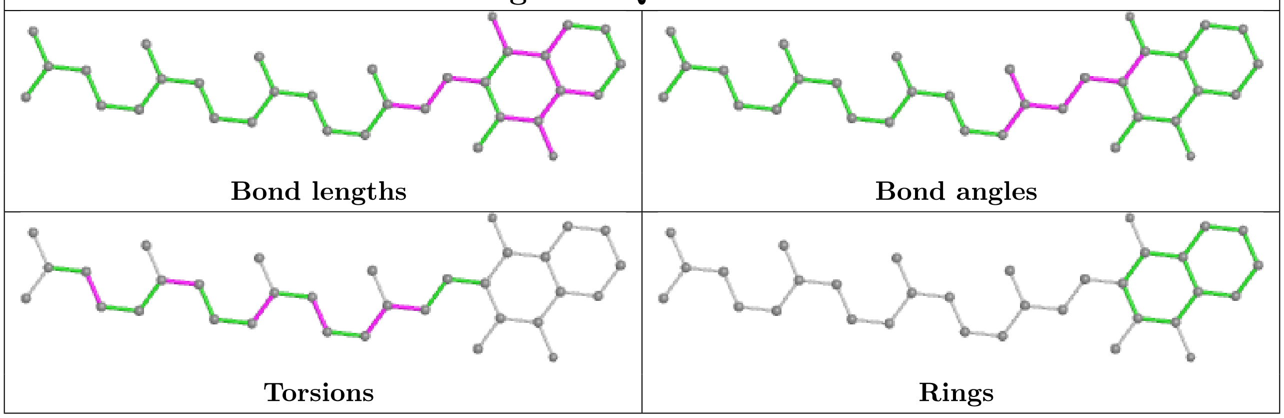
Ligand CLA A3 315



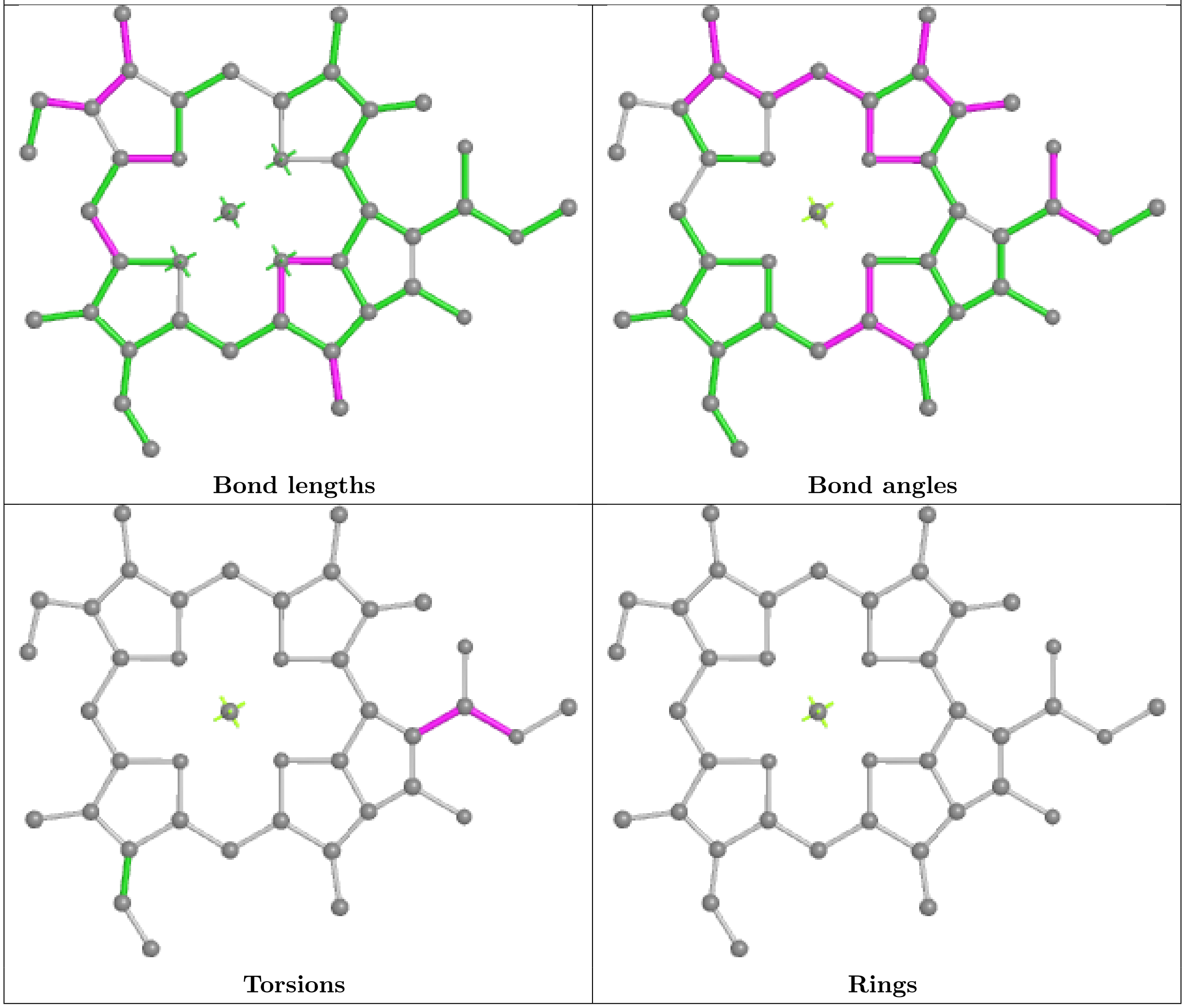
Ligand CLA BB 805



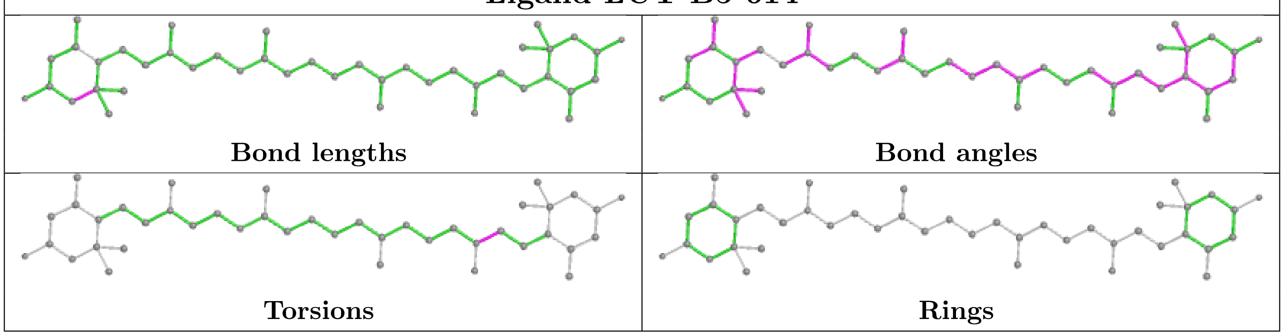
Ligand PQN AB 843



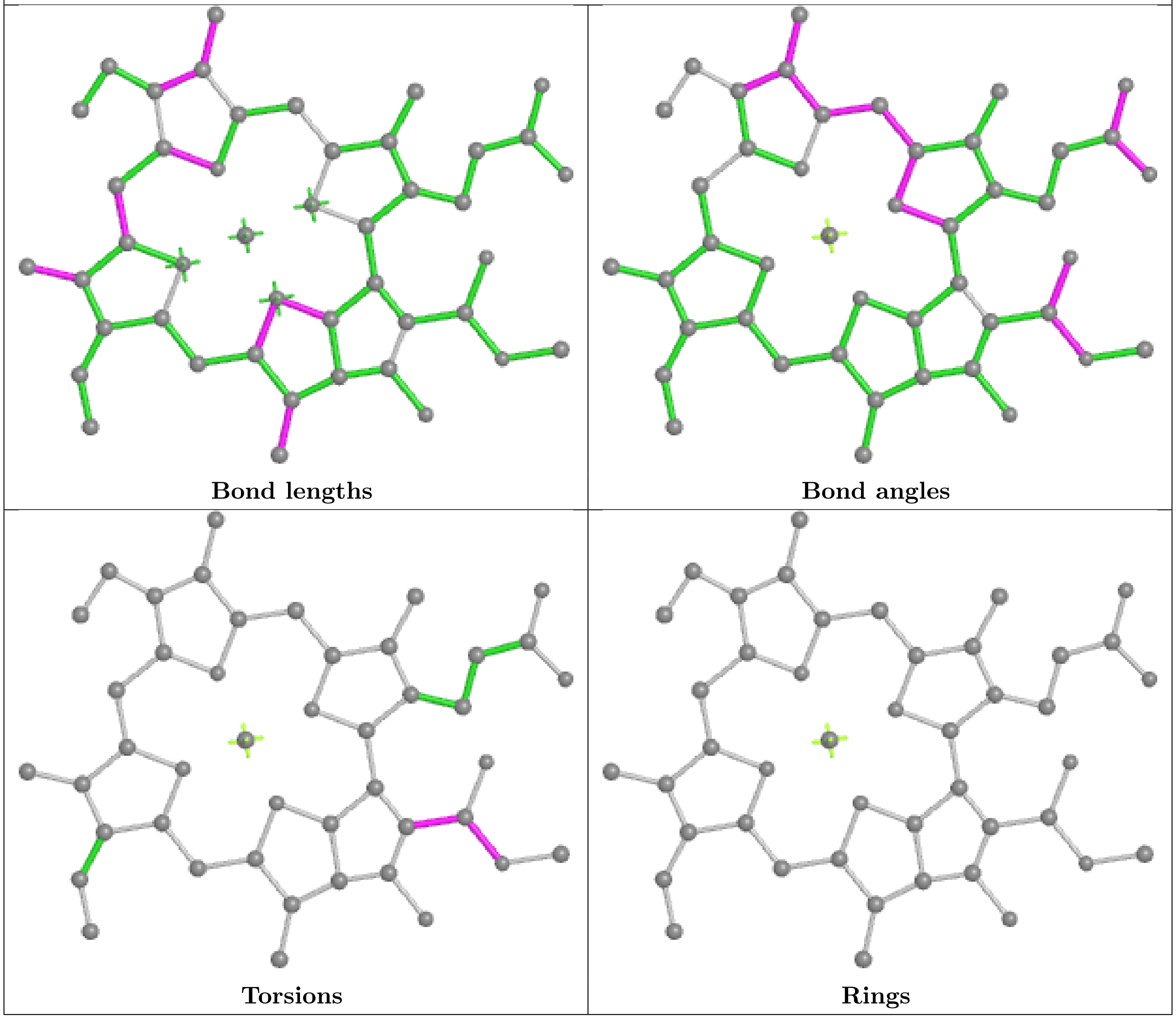
Ligand CLA A3 309



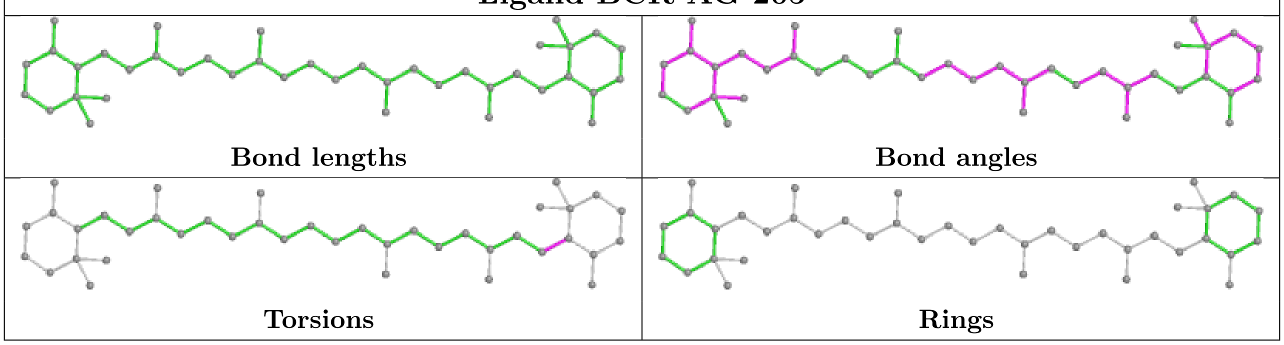
Ligand LUT B5 614



Ligand CLA AA 820



Ligand BCR AG 205



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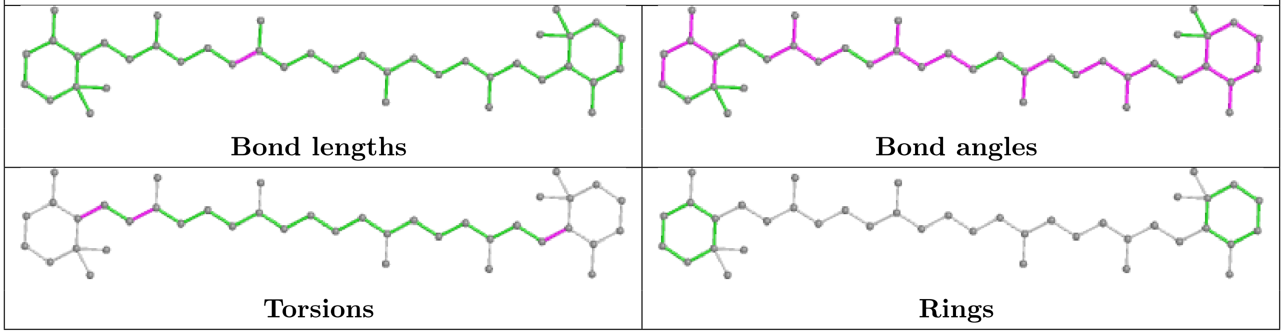
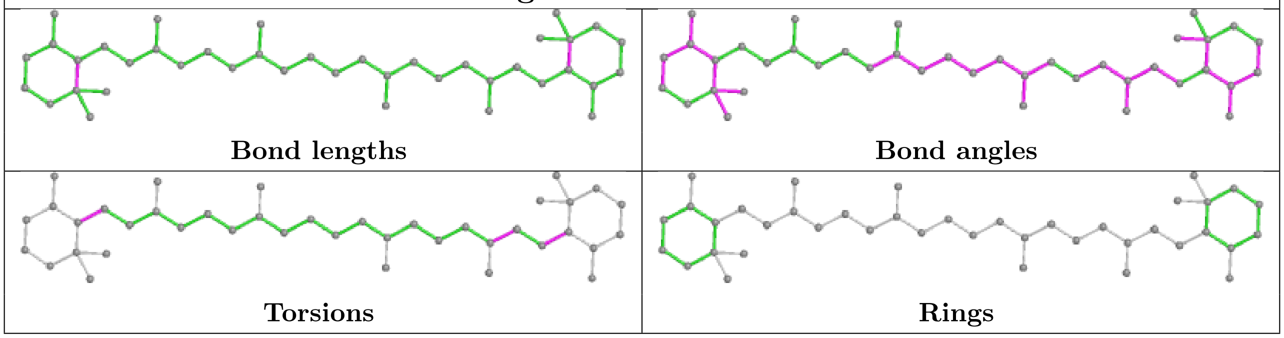
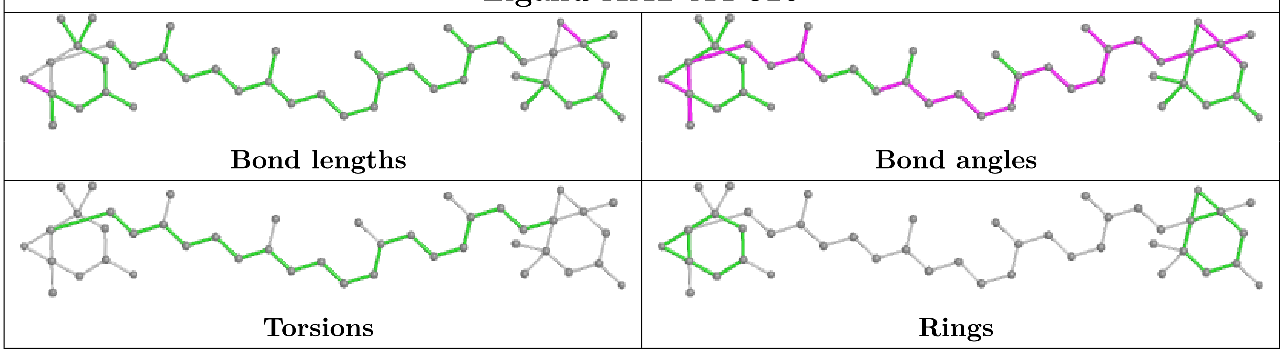


Ligand BCR BI 101



Ligand XAT A4 316



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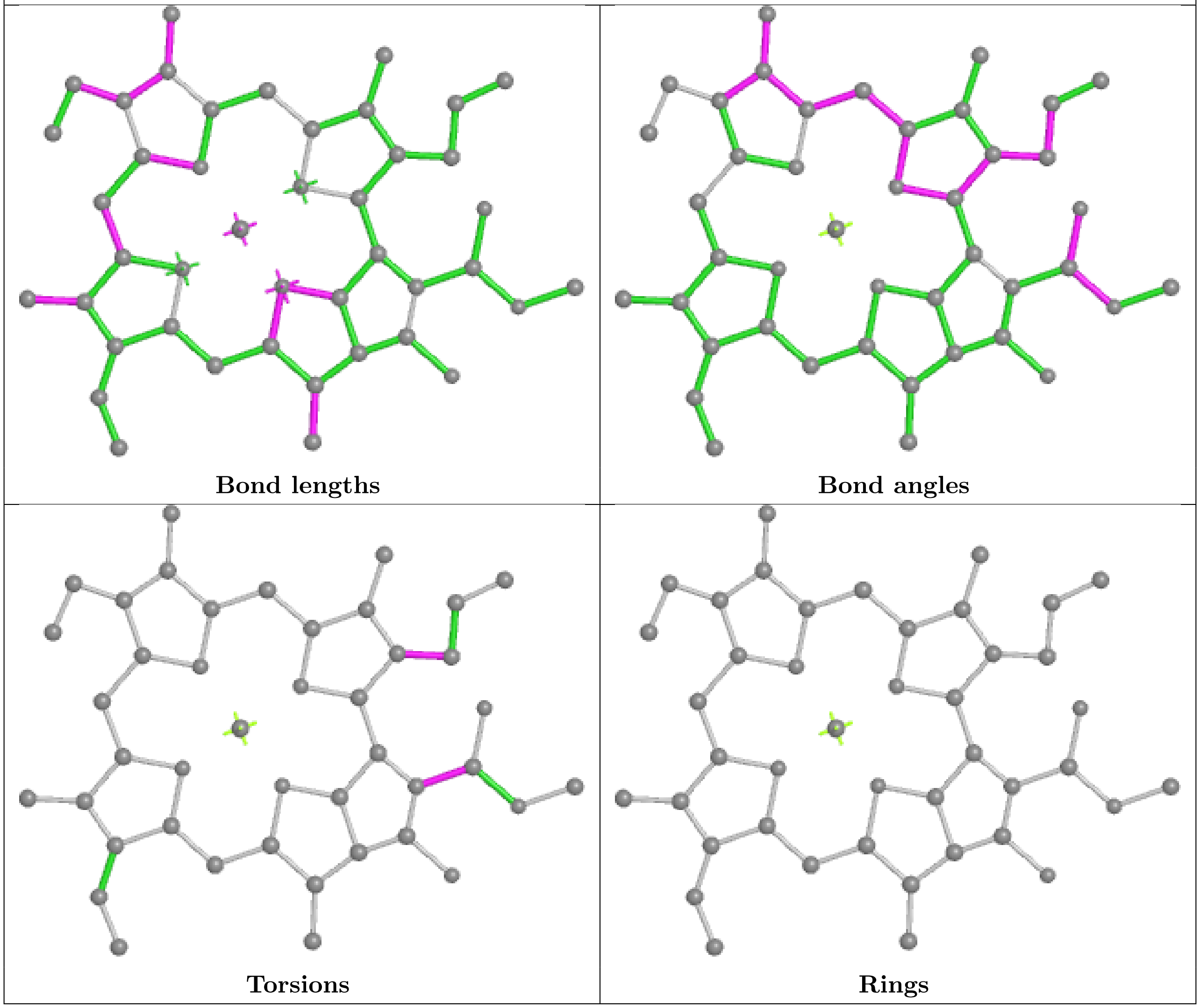

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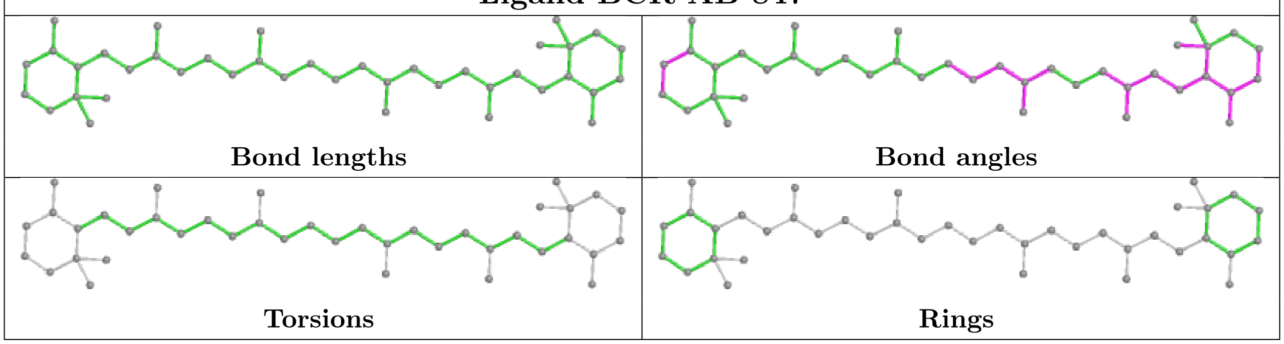
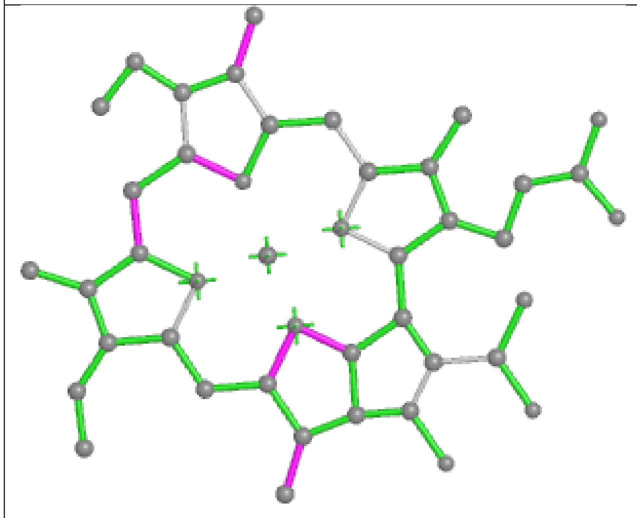
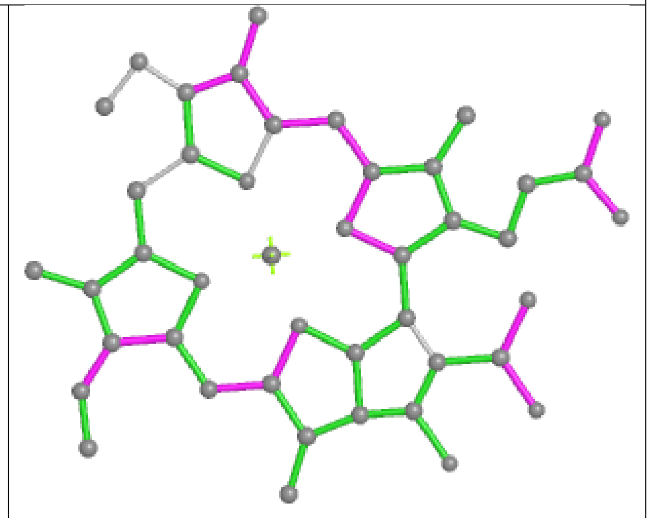


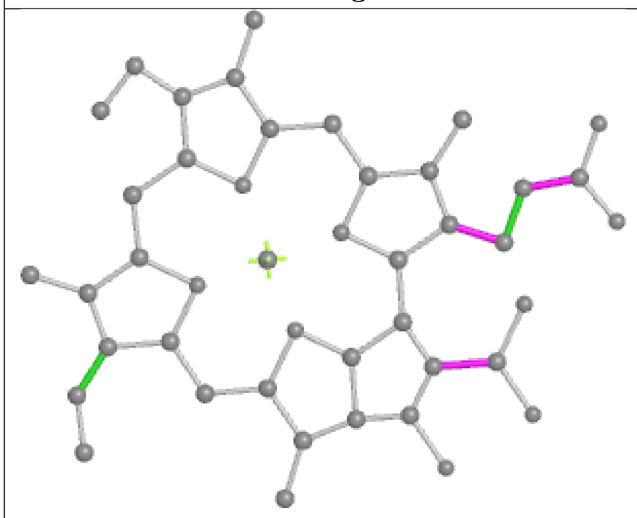
Ligand CLA A1 309



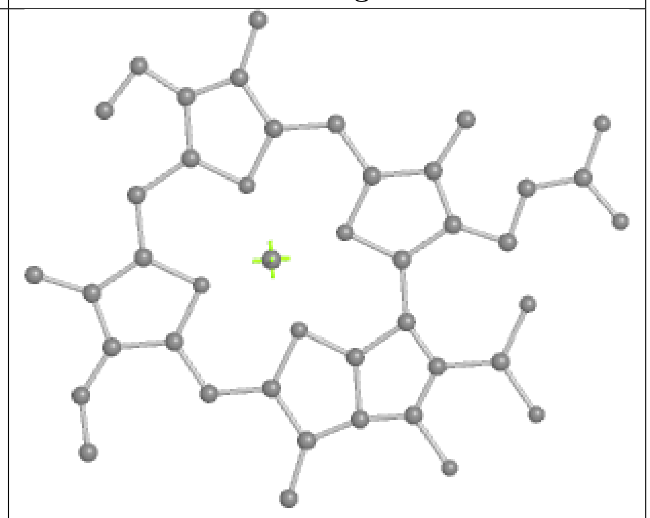
Bond lengths



Bond angles

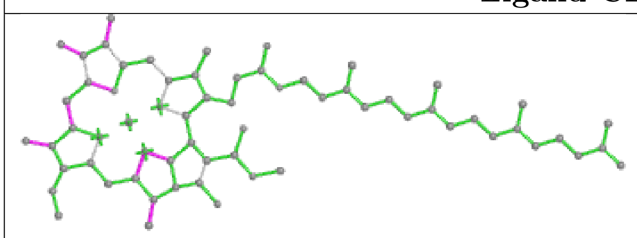


Torsions



Rings

Ligand CLA AB 802



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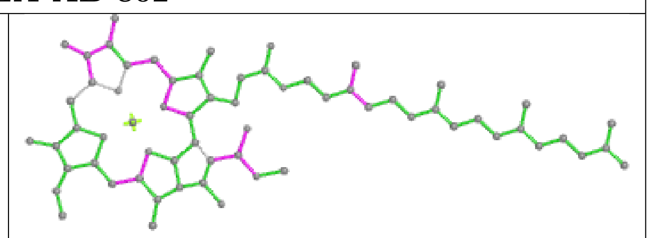
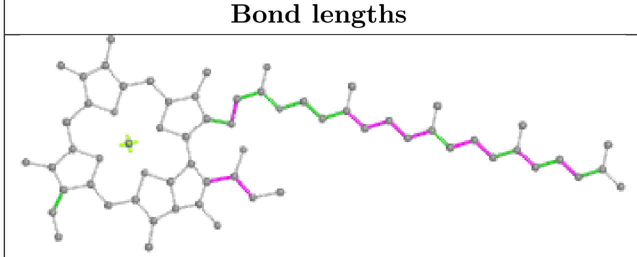
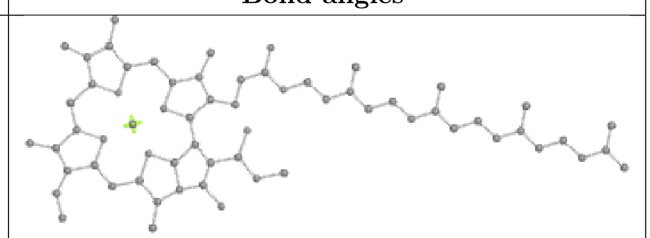


Bond angles

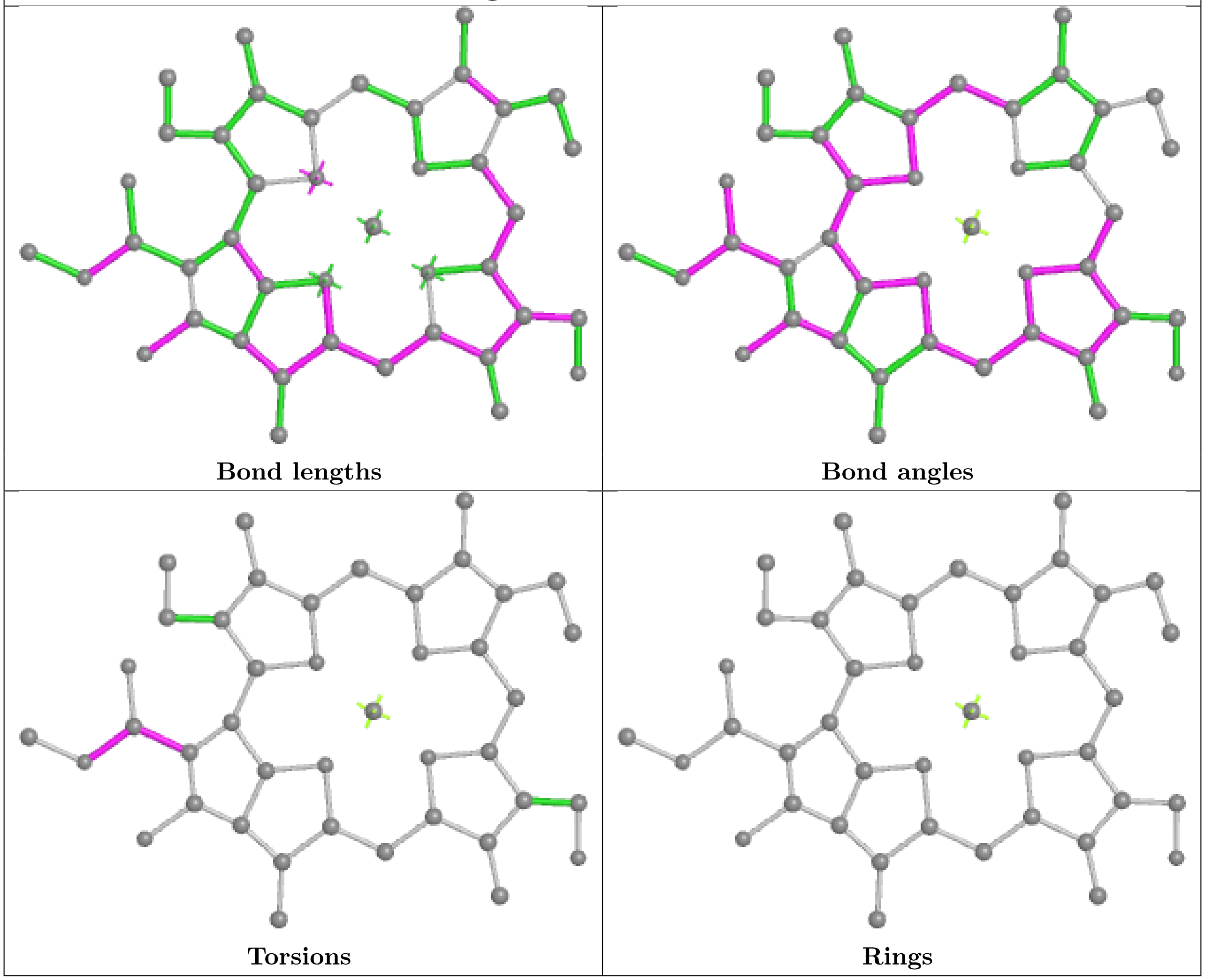


Torsions

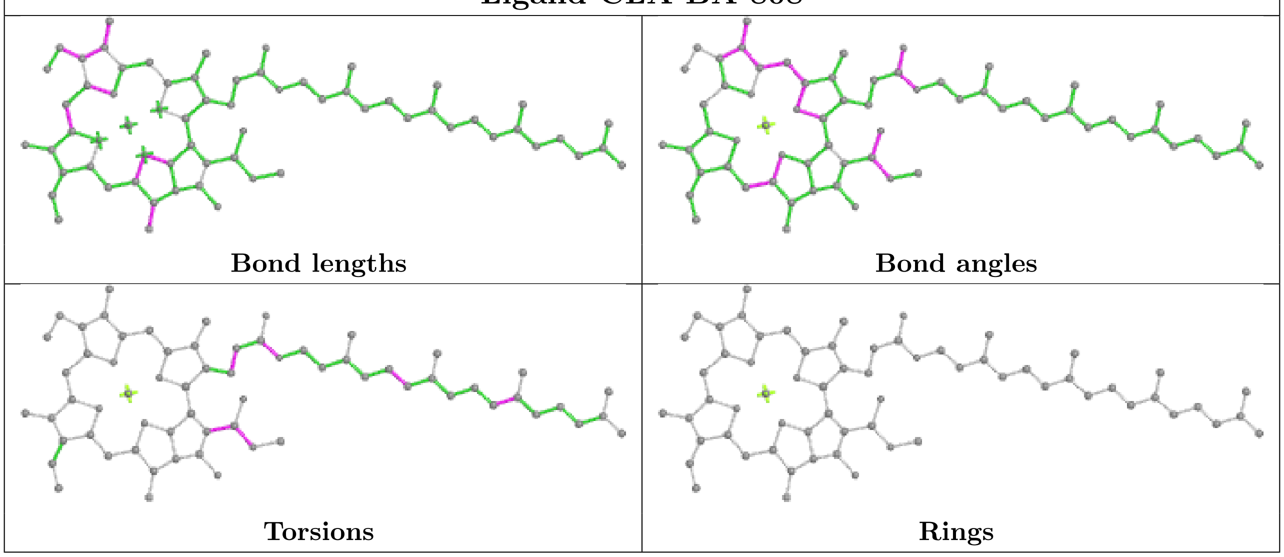


Rings

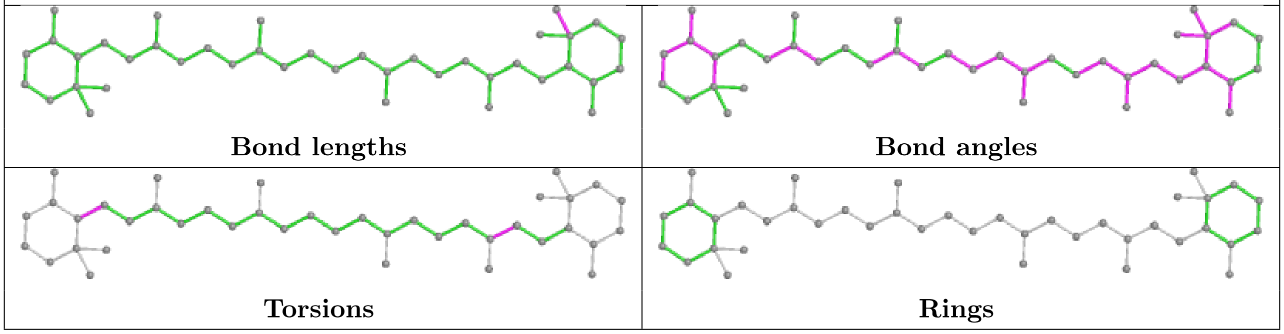
Ligand CHL B2 605



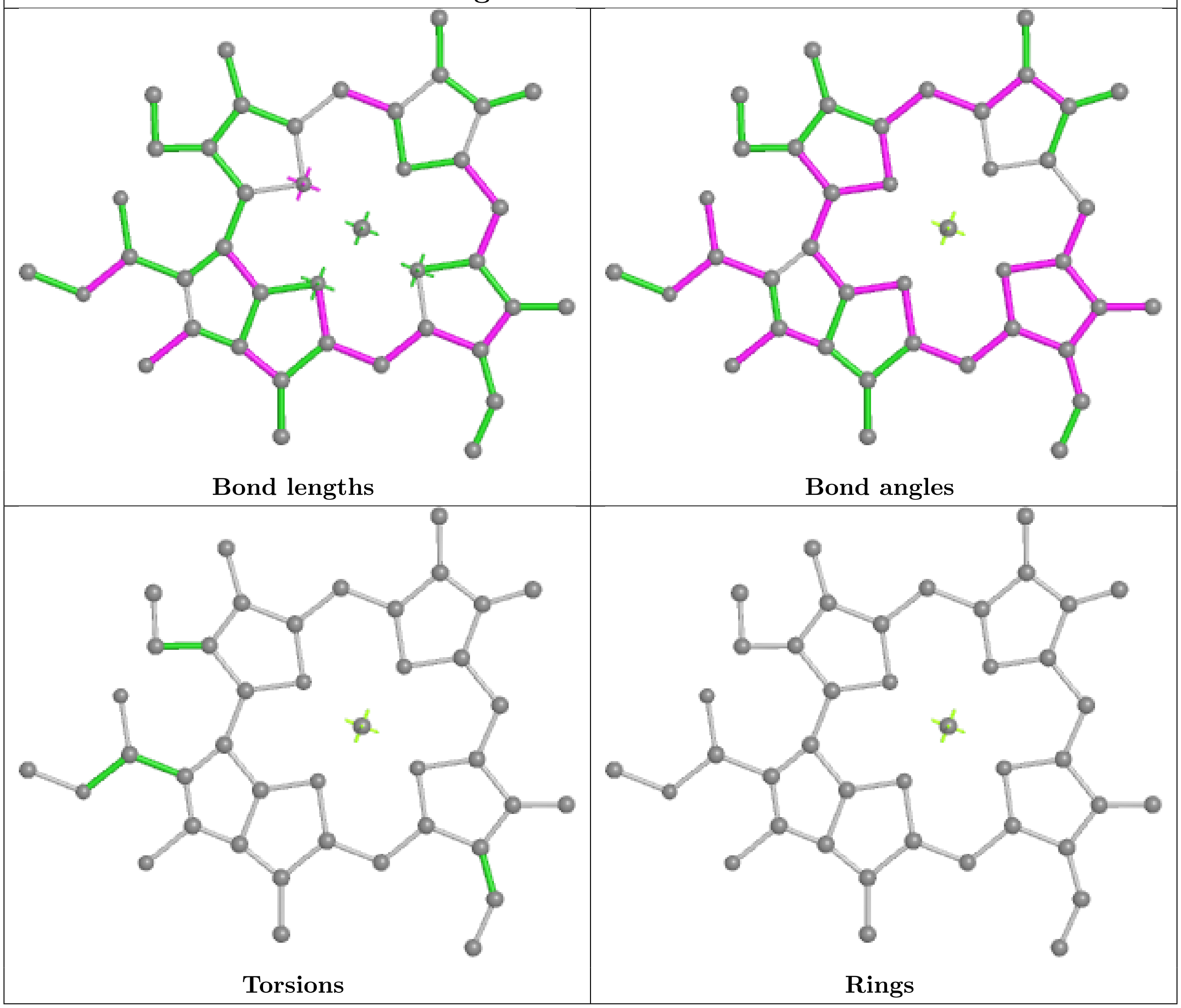
Ligand CLA BA 808



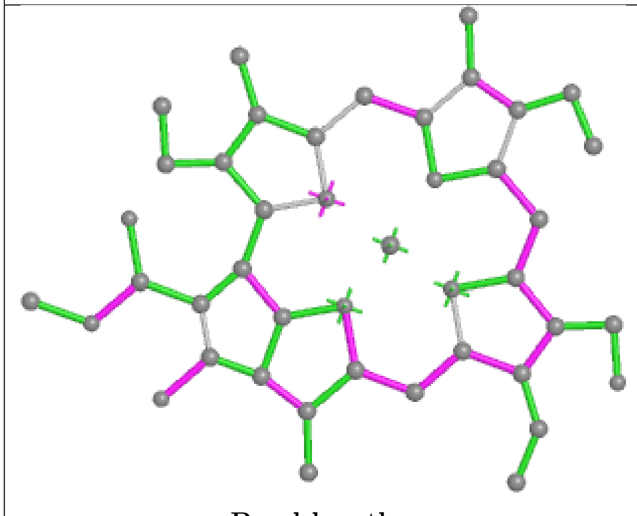
Ligand BCR A1 319



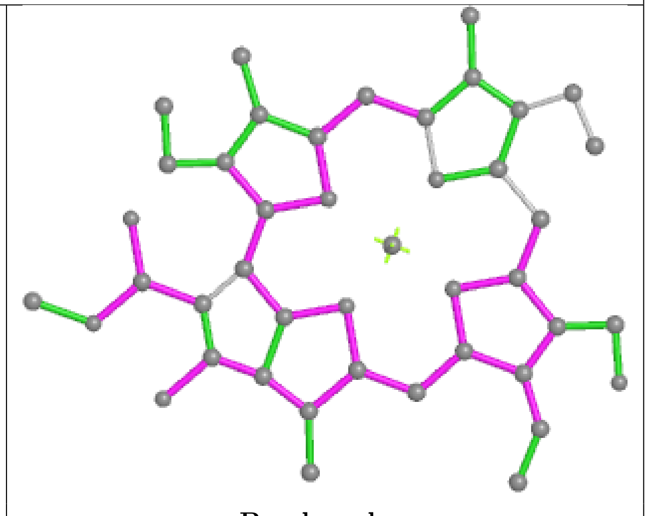
Ligand CHL A4 305



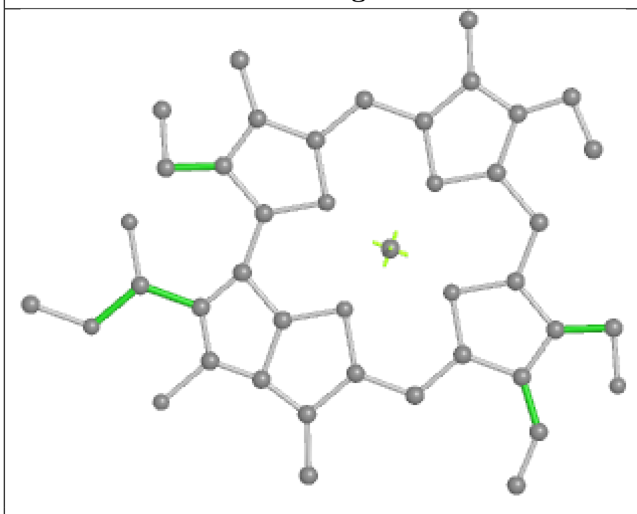
Ligand CHL B2 614



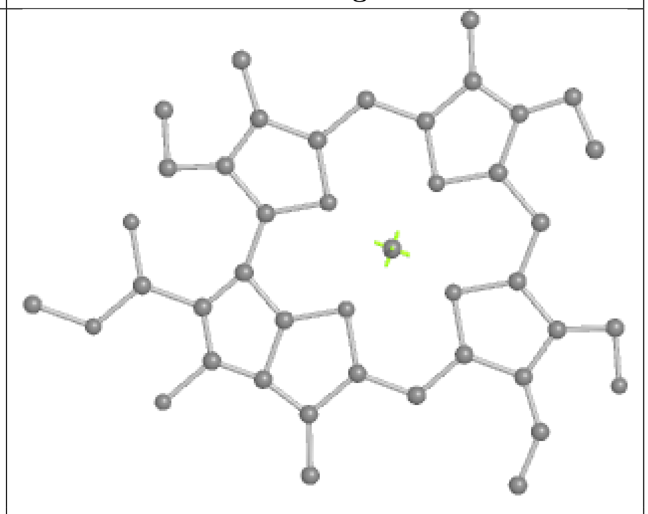
Bond lengths



Bond angles

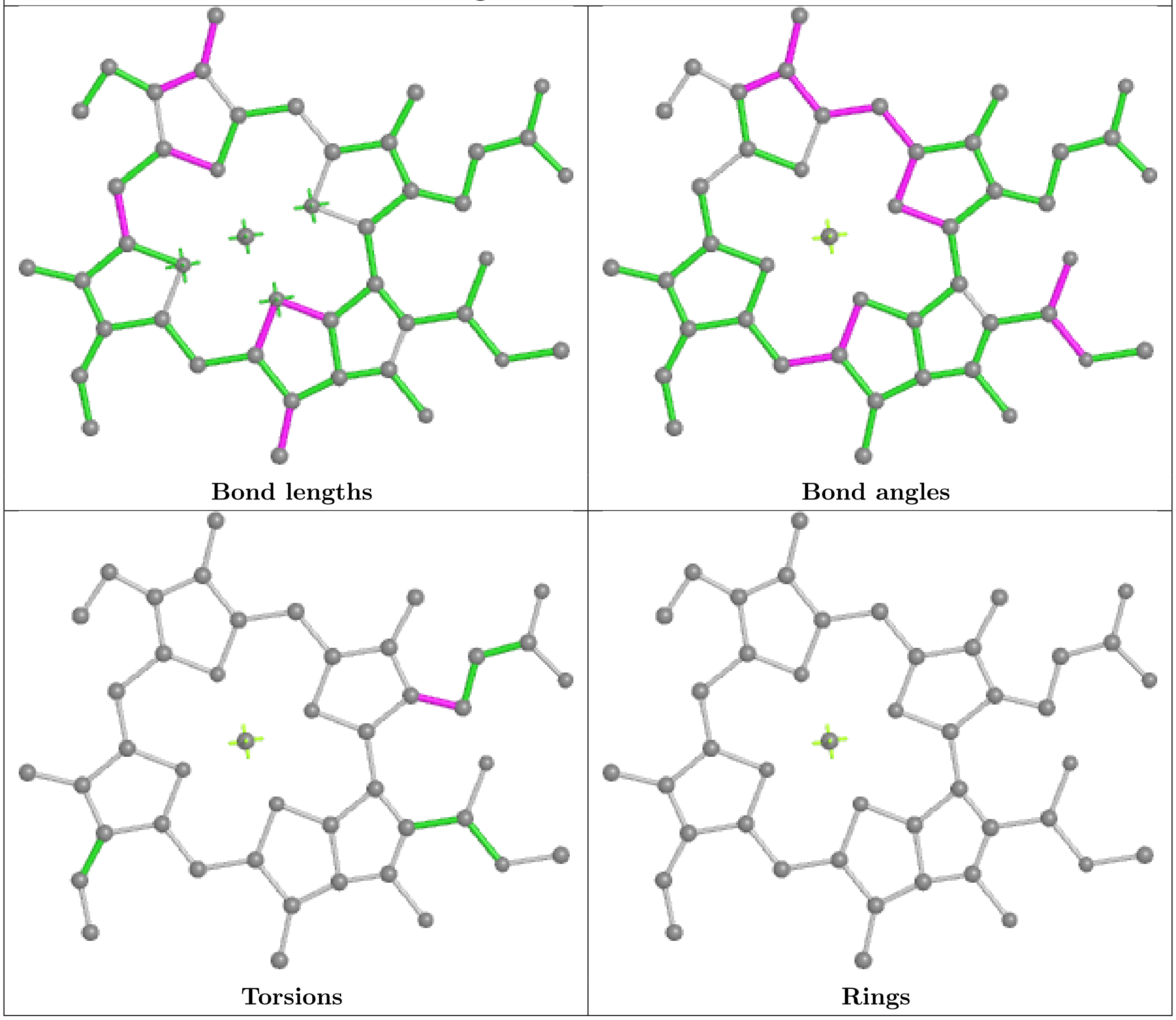


Torsions

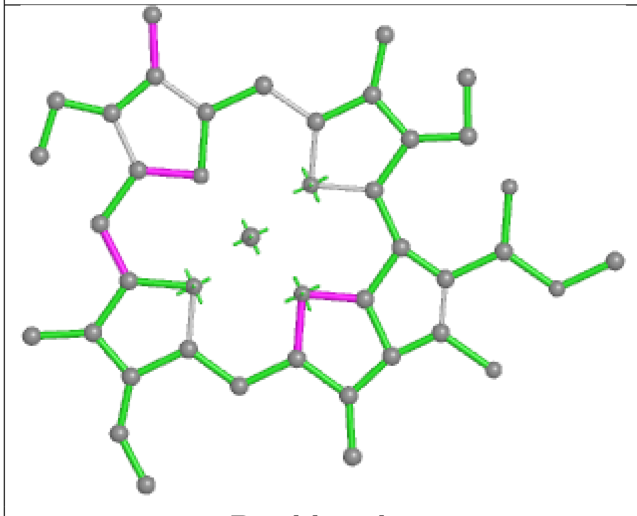


Rings

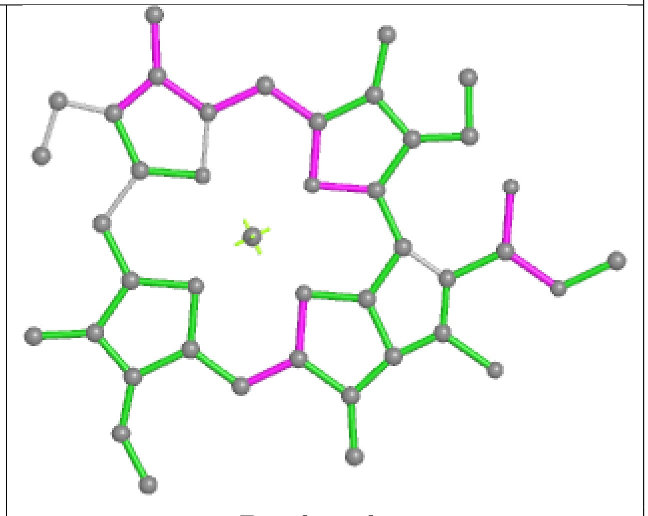
Ligand CLA A4 307



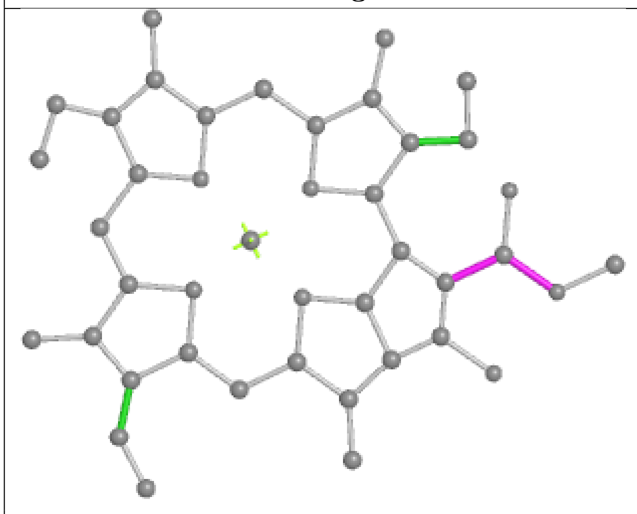
Ligand CLA BJ 102



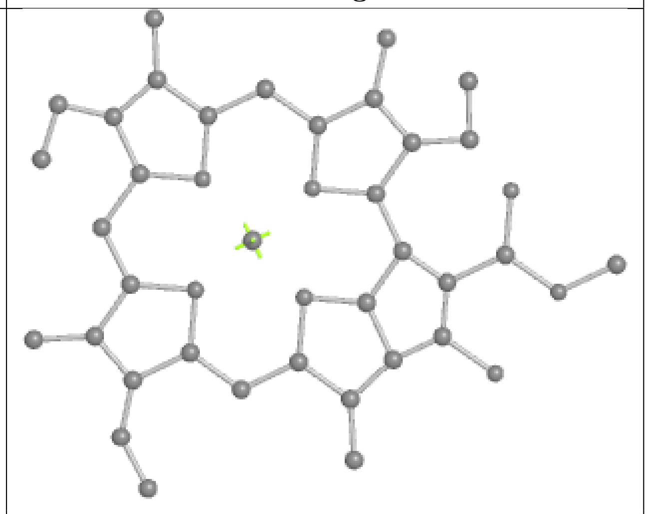
Bond lengths



Bond angles

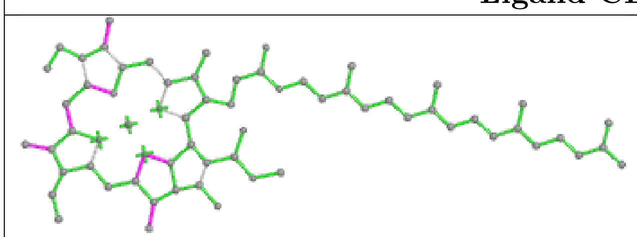


Torsions

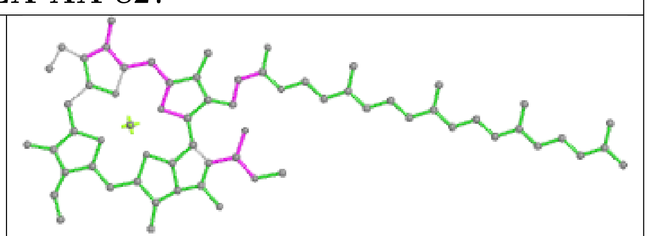


Rings

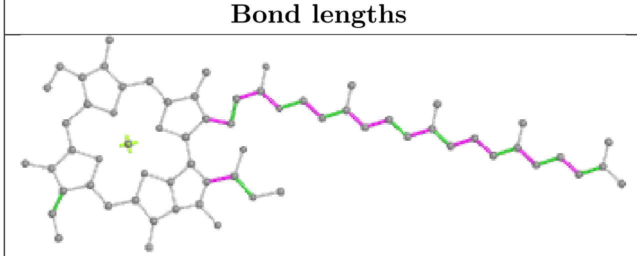
Ligand CLA AA 827



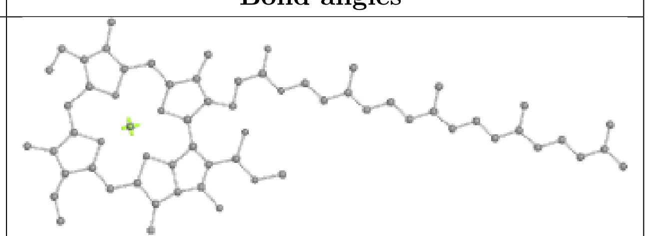
Bond lengths



Bond angles

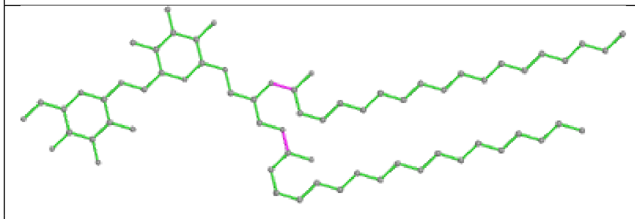


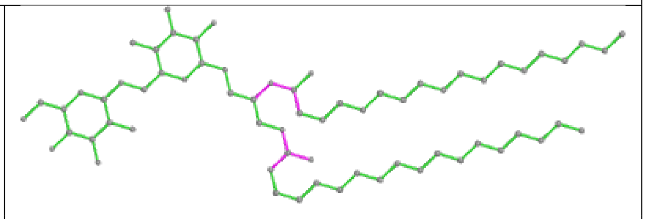
Torsions

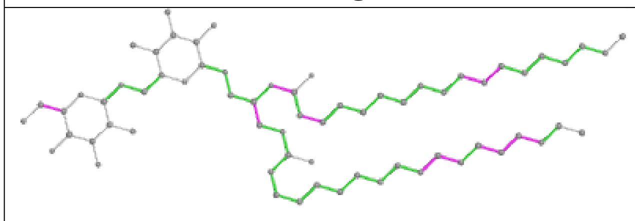


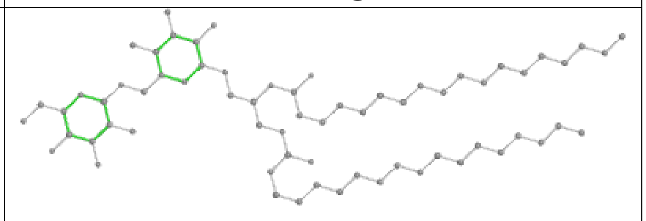
Rings

Ligand DGD BB 850

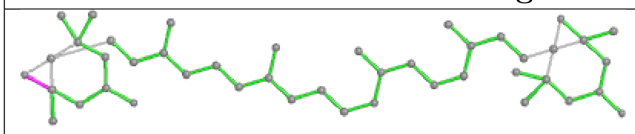

Bond lengths

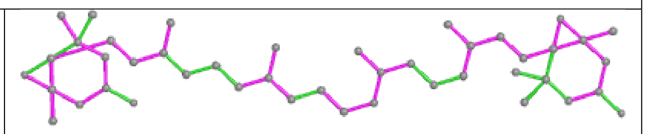

Bond angles

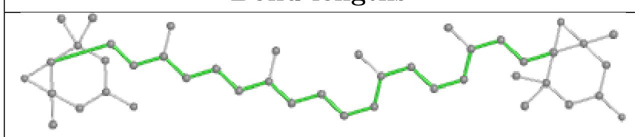

Torsions

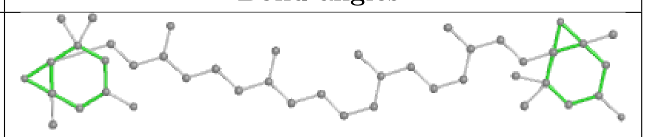

Rings

Ligand XAT B2 616

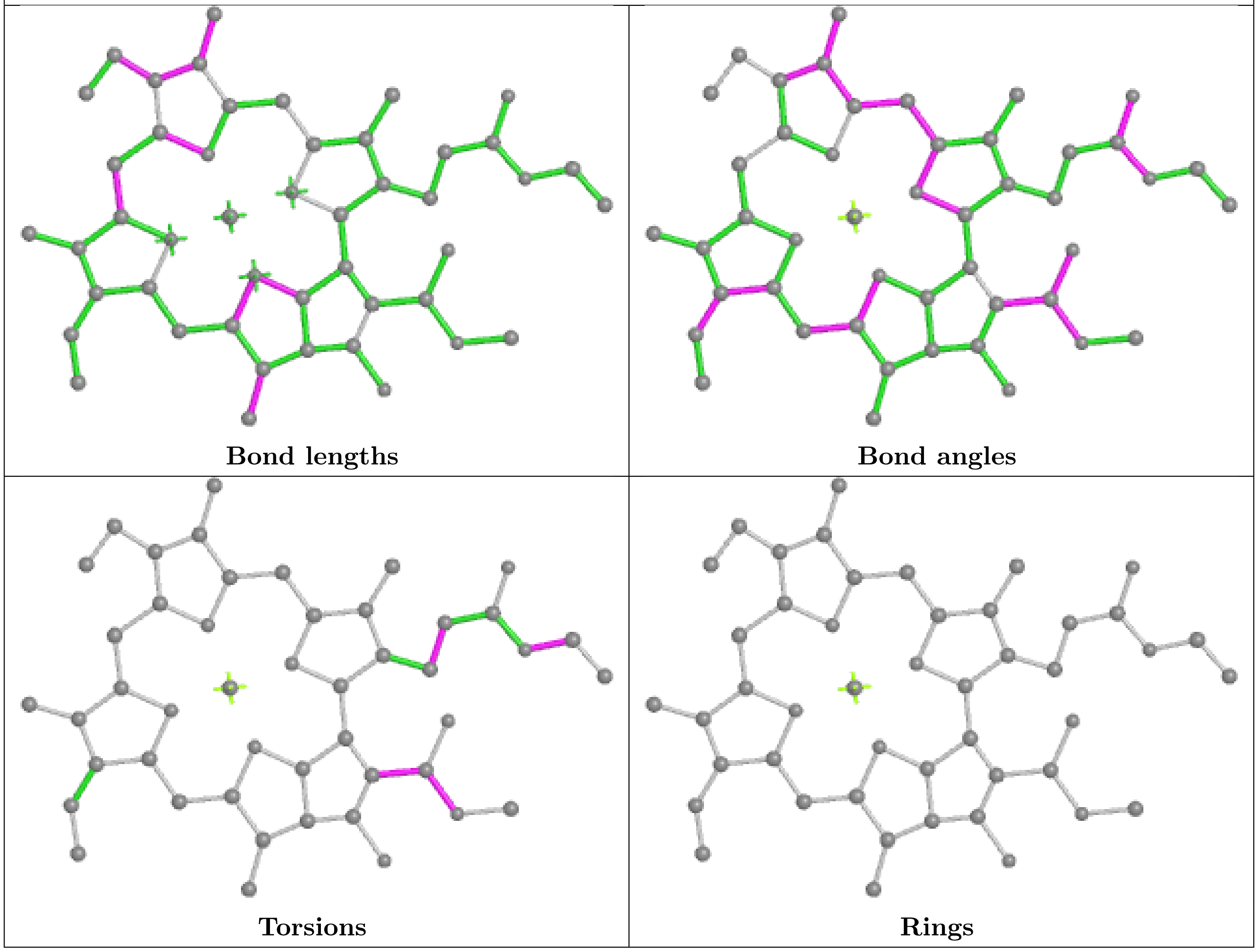

Bond lengths


Bond angles

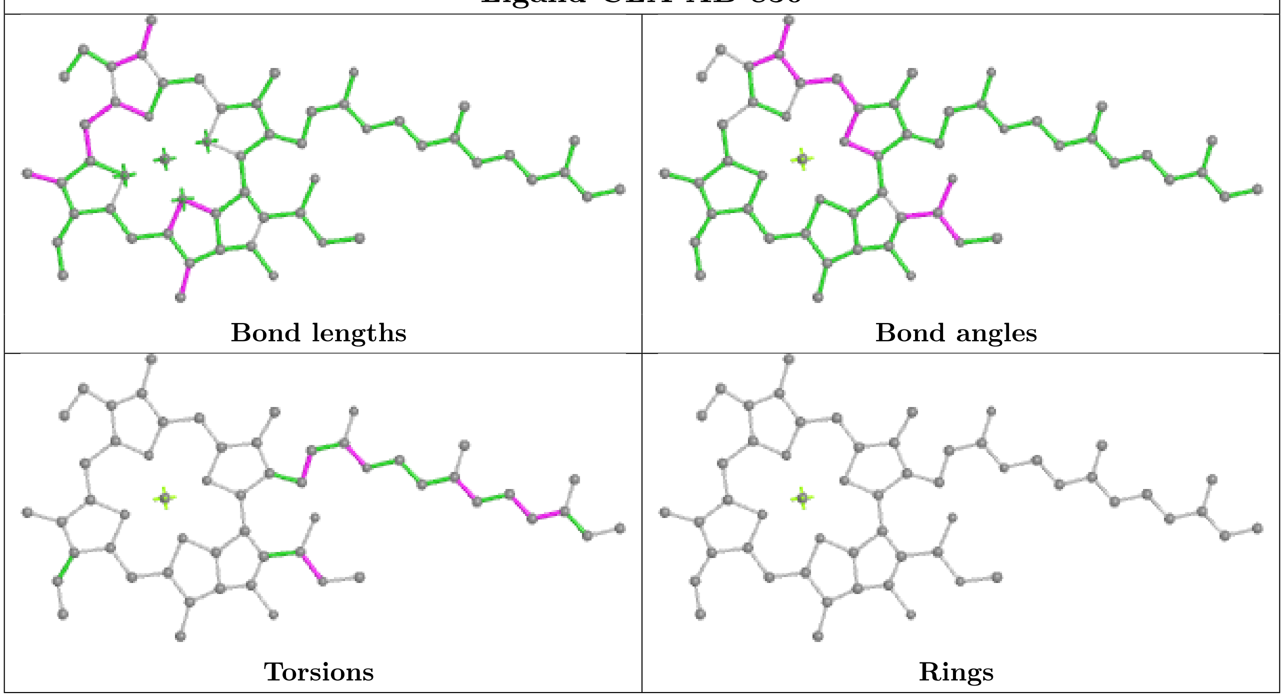

Torsions


Rings

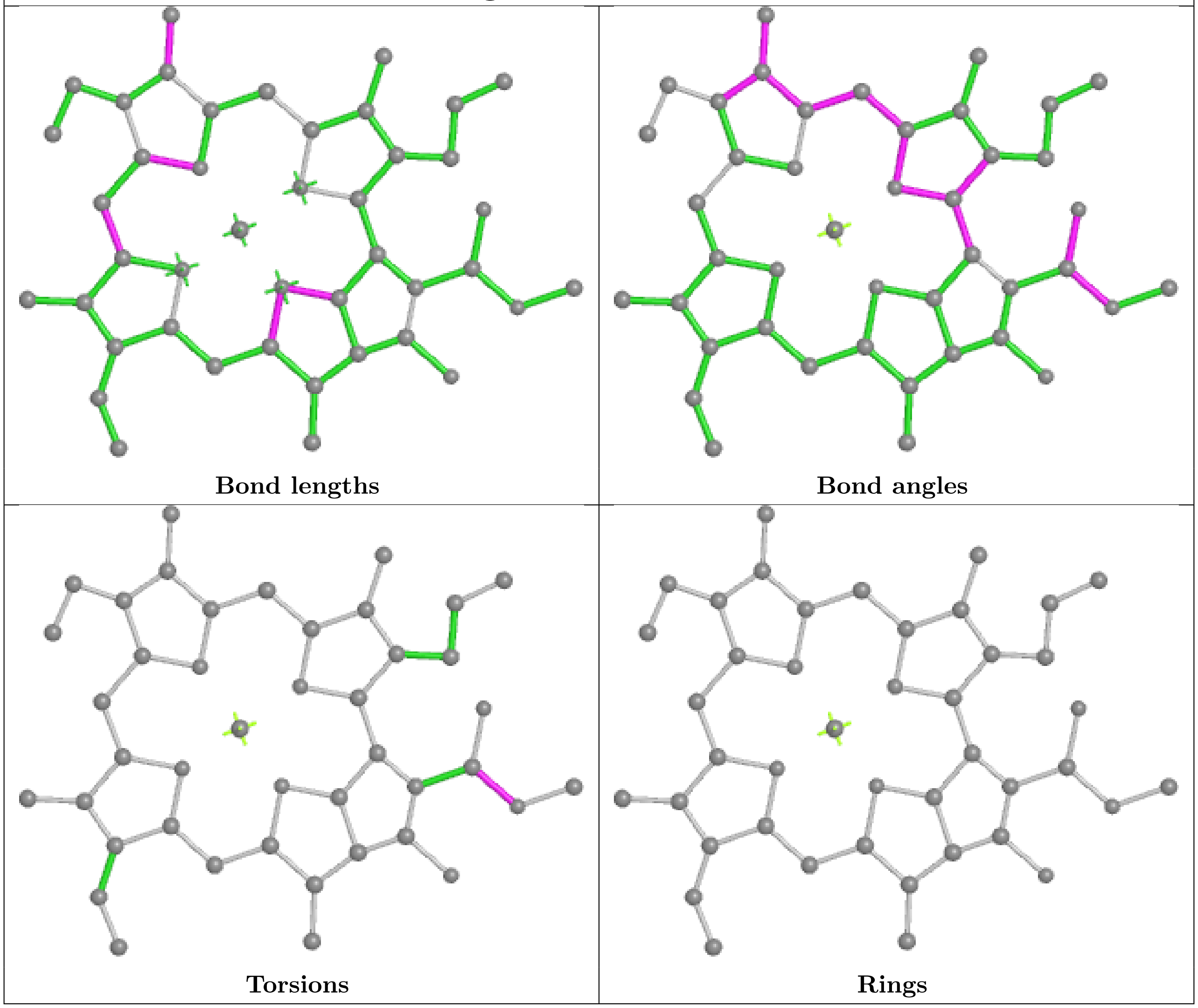
Ligand CLA BA 831



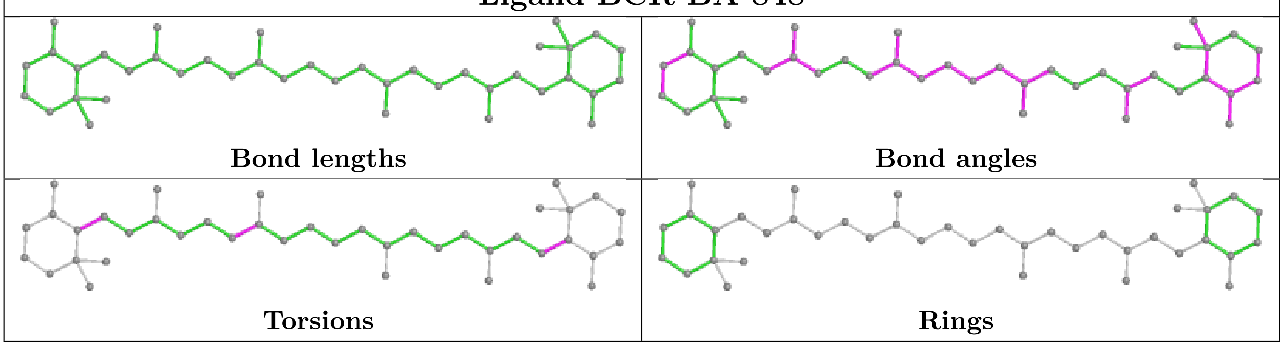
Ligand CLA AB 830



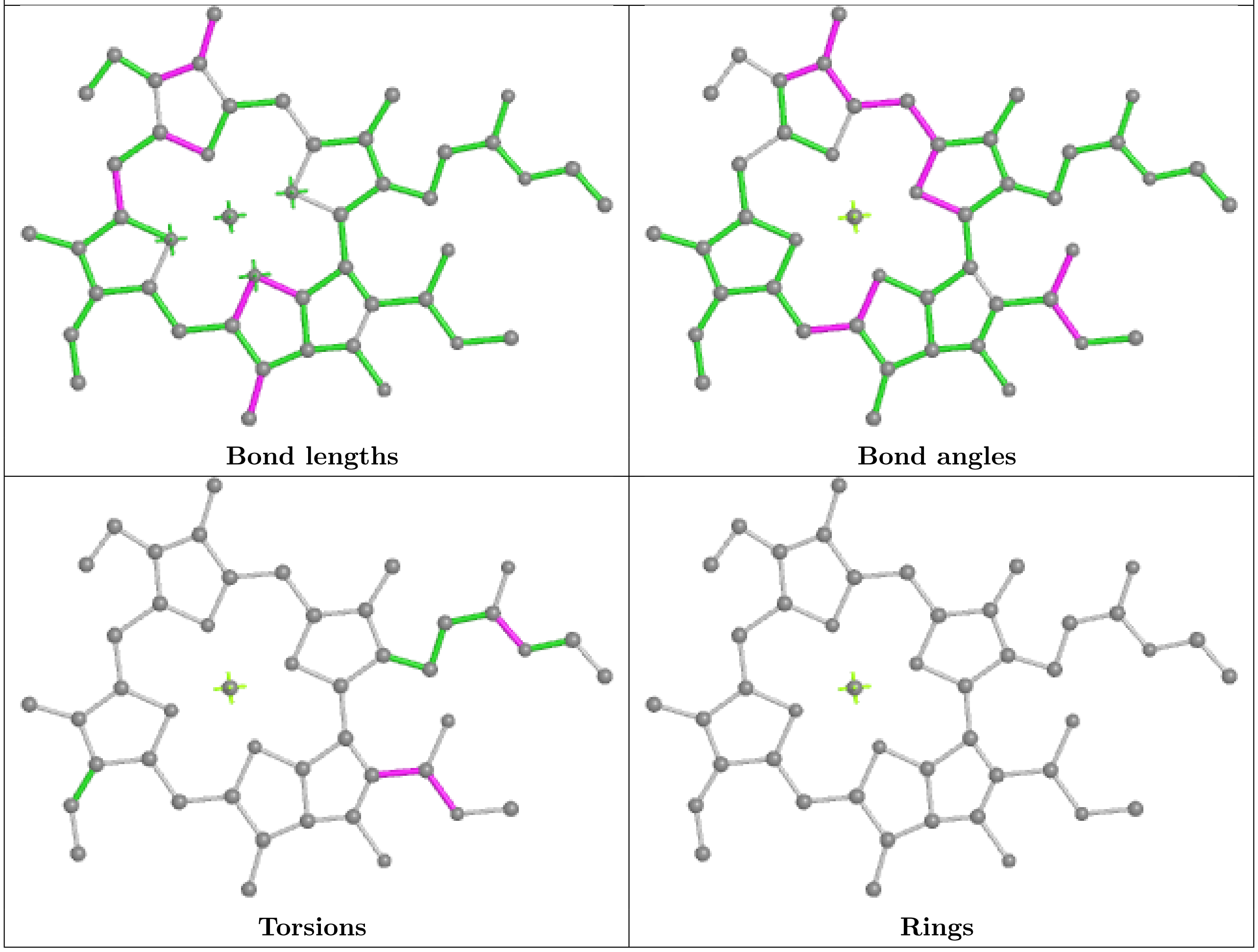
Ligand CLA B3 310



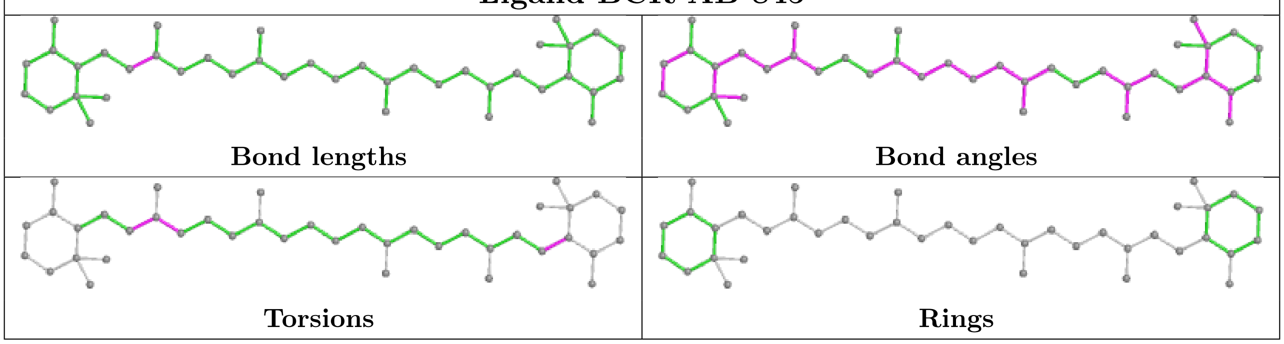
Ligand BCR BA 848



Ligand CLA AB 822



Ligand BCR AB 845



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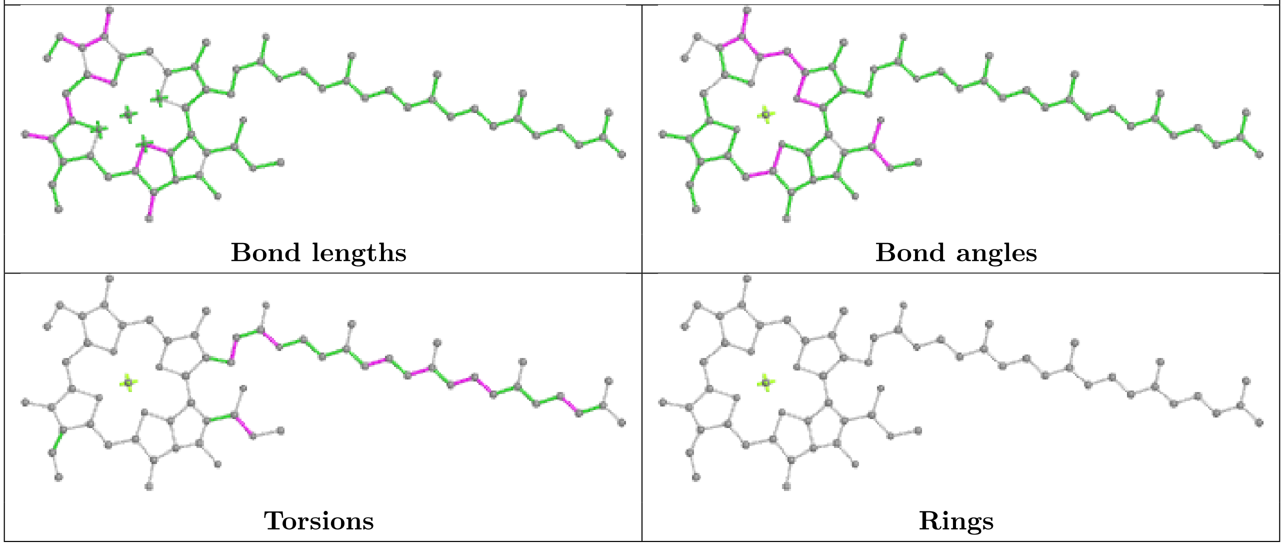
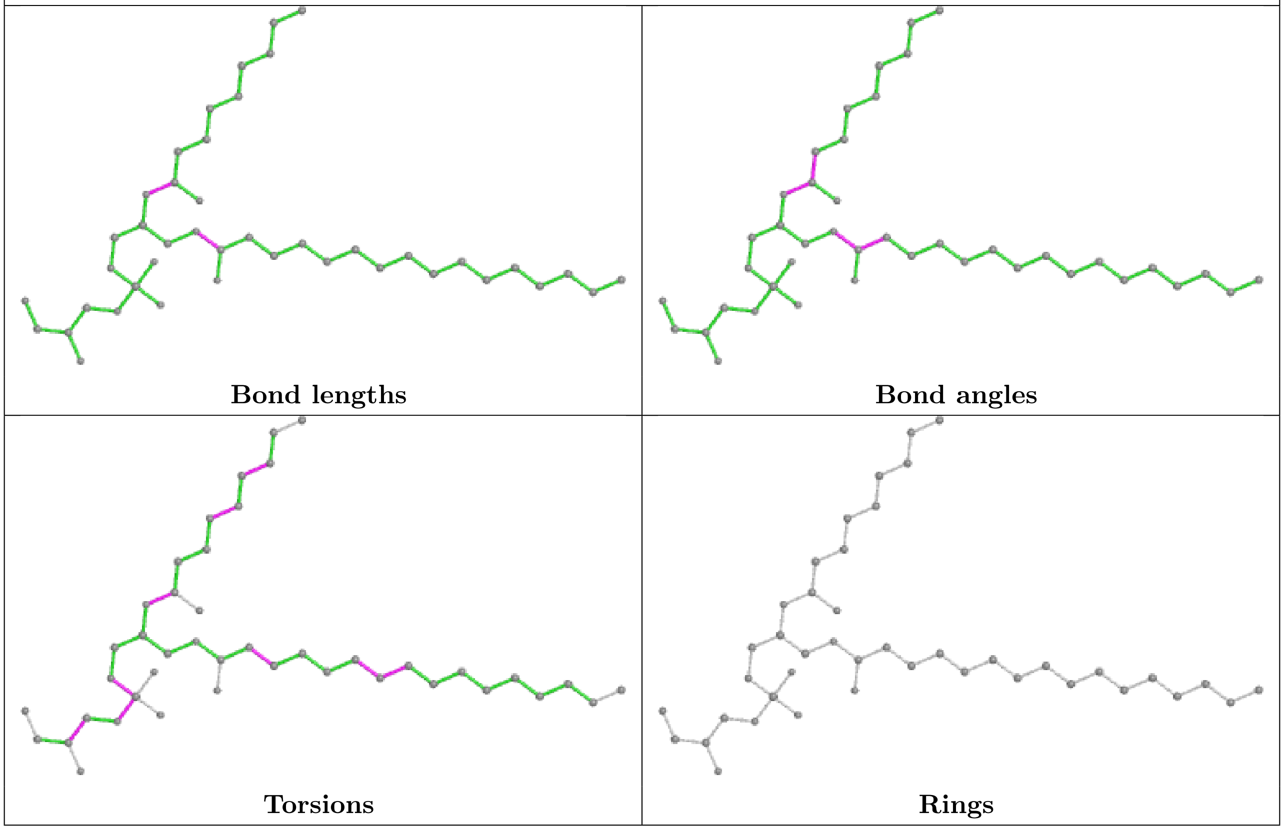
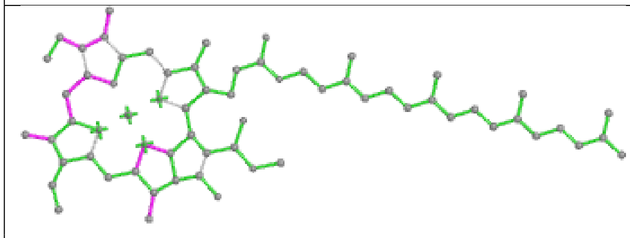


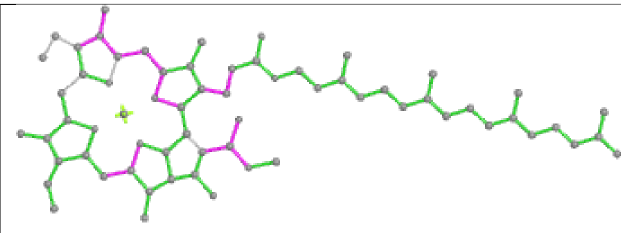
Ligand LHG B1 318



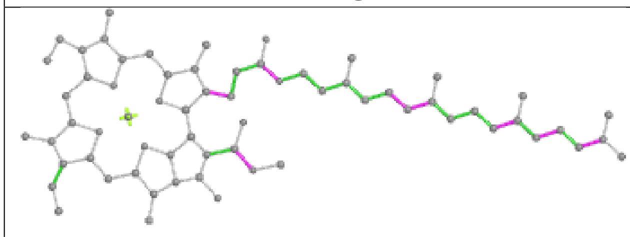
Ligand CLA AA 819



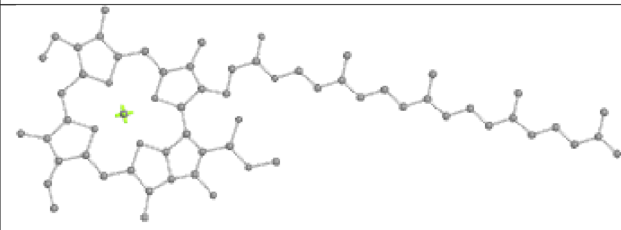
Bond lengths



Bond angles

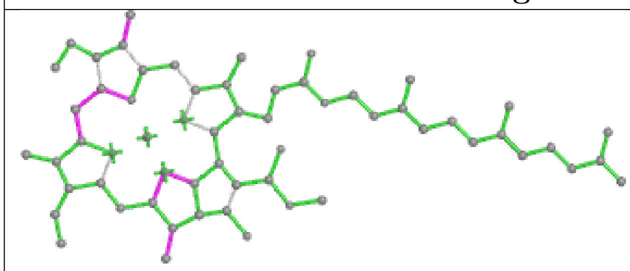


Torsions



Rings

Ligand CLA BB 820



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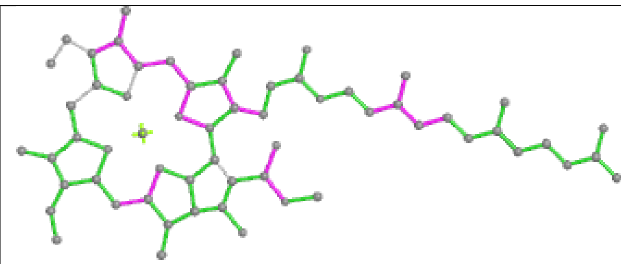
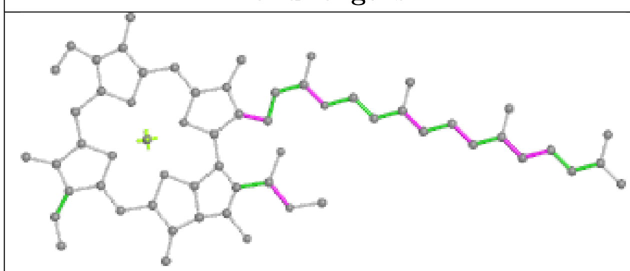


Bond angles



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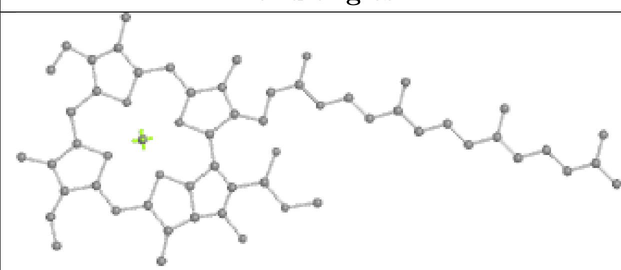

Rings

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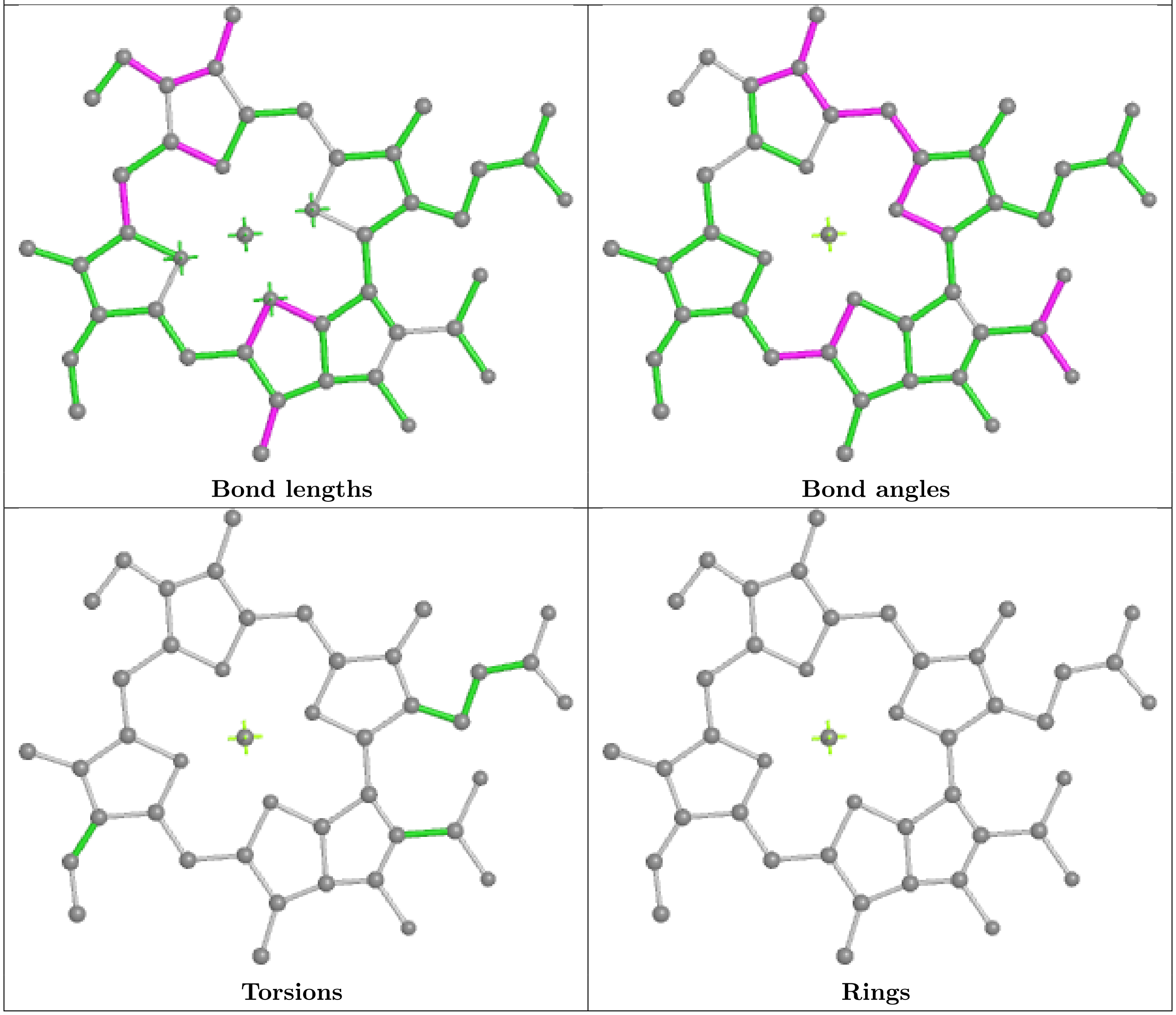

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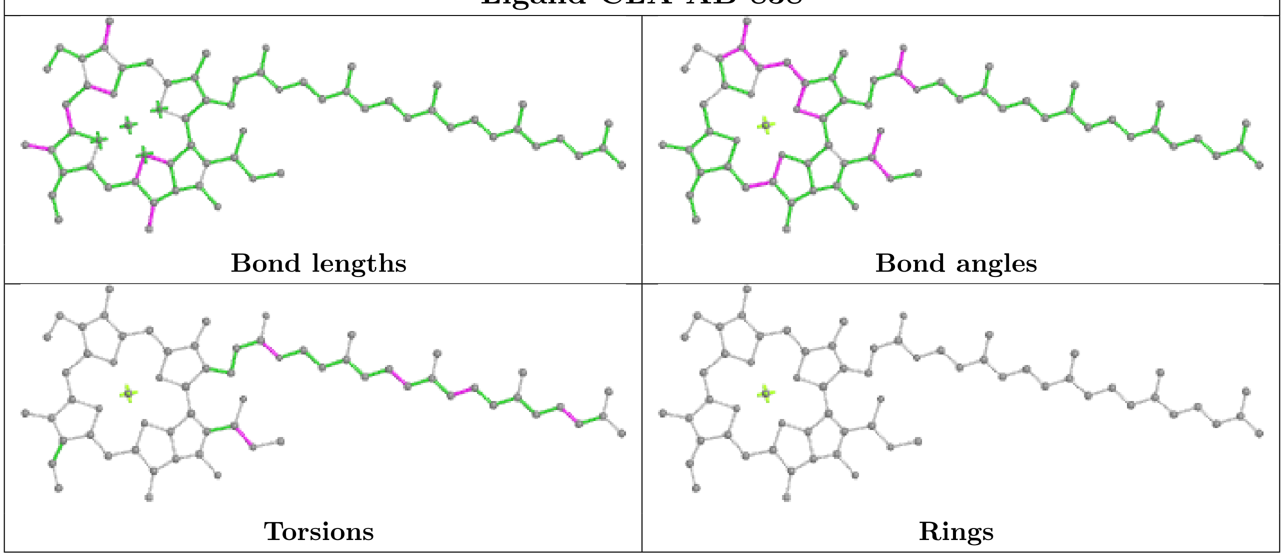
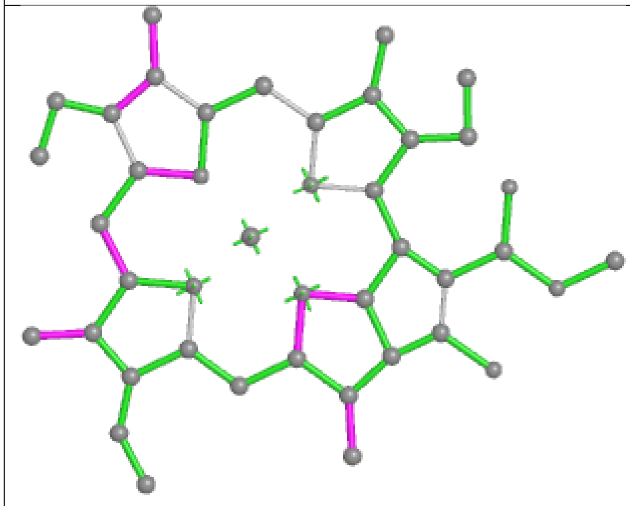
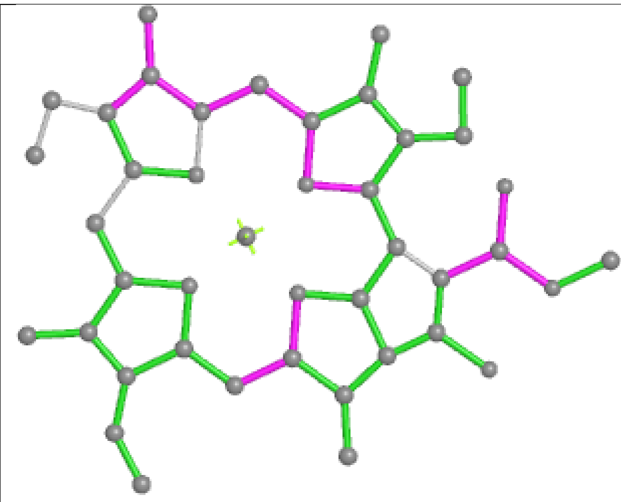
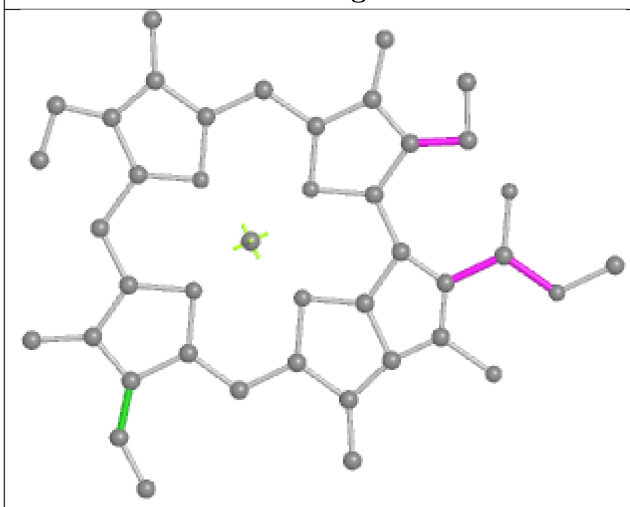


Ligand CLA AL 305


Bond lengths


Bond angles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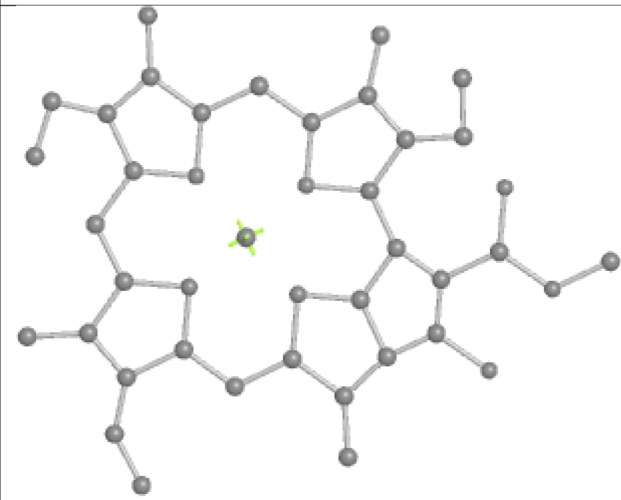
Rings

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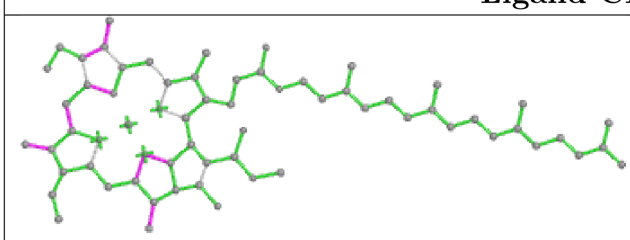
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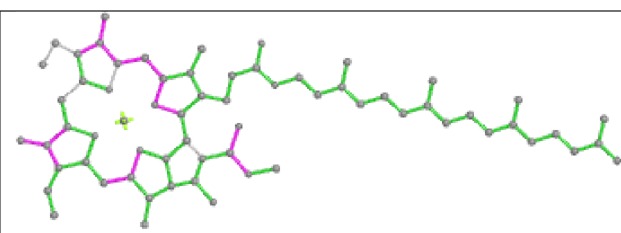
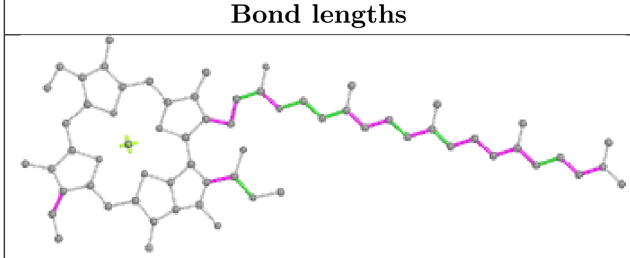
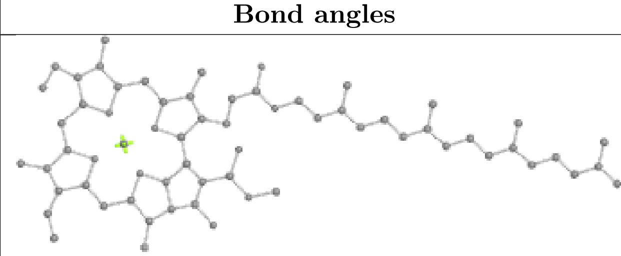
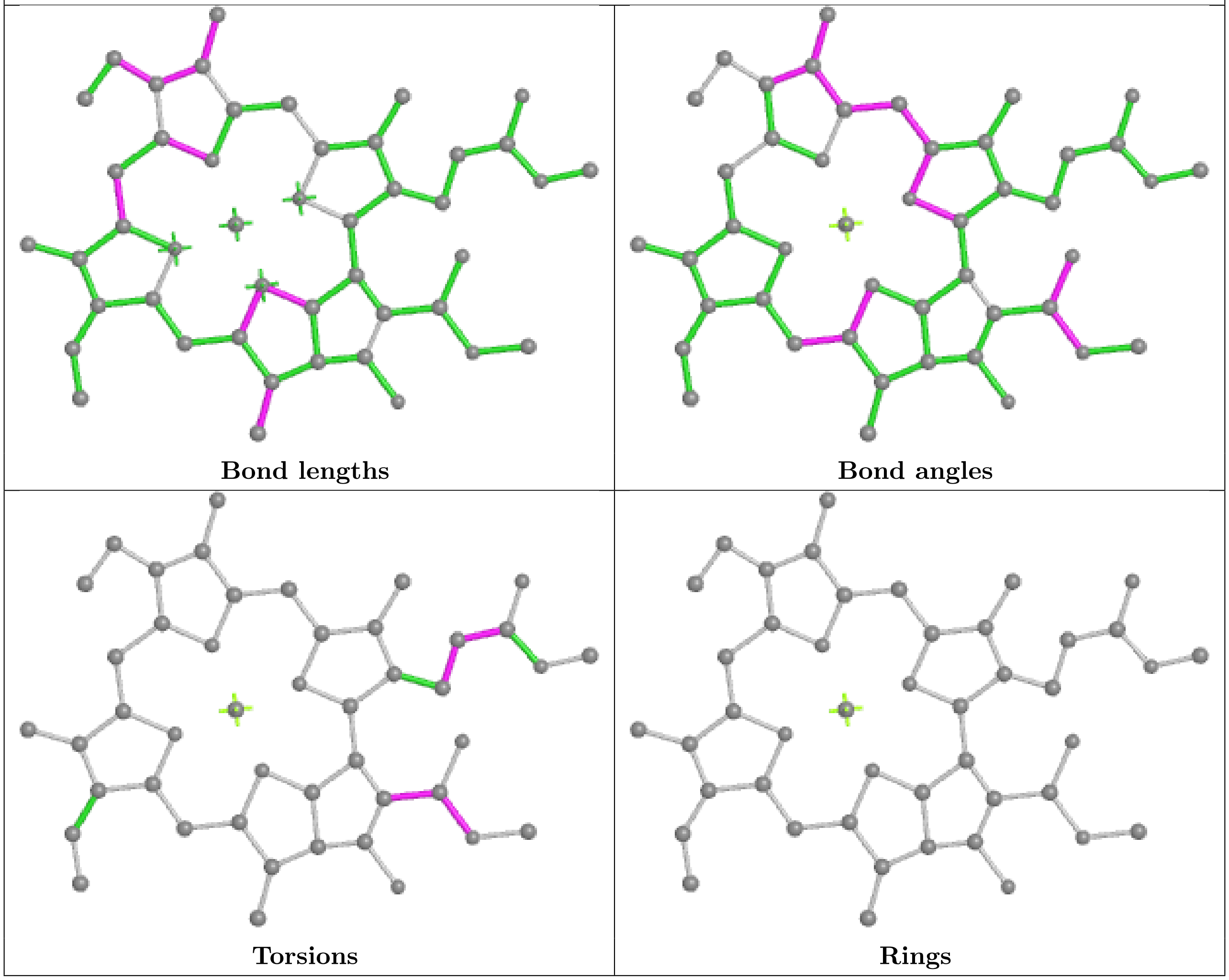
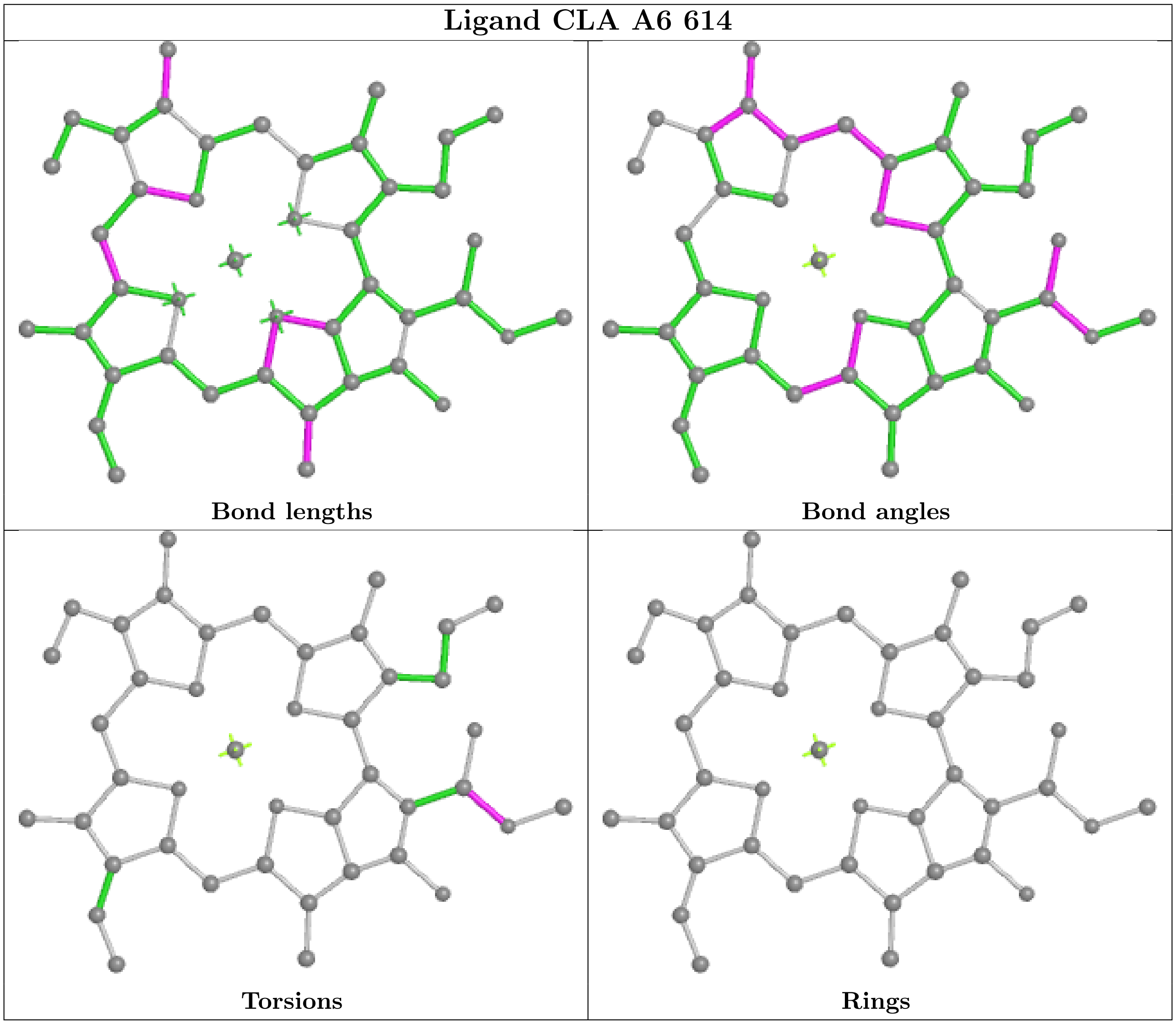

Bond angles


Torsions

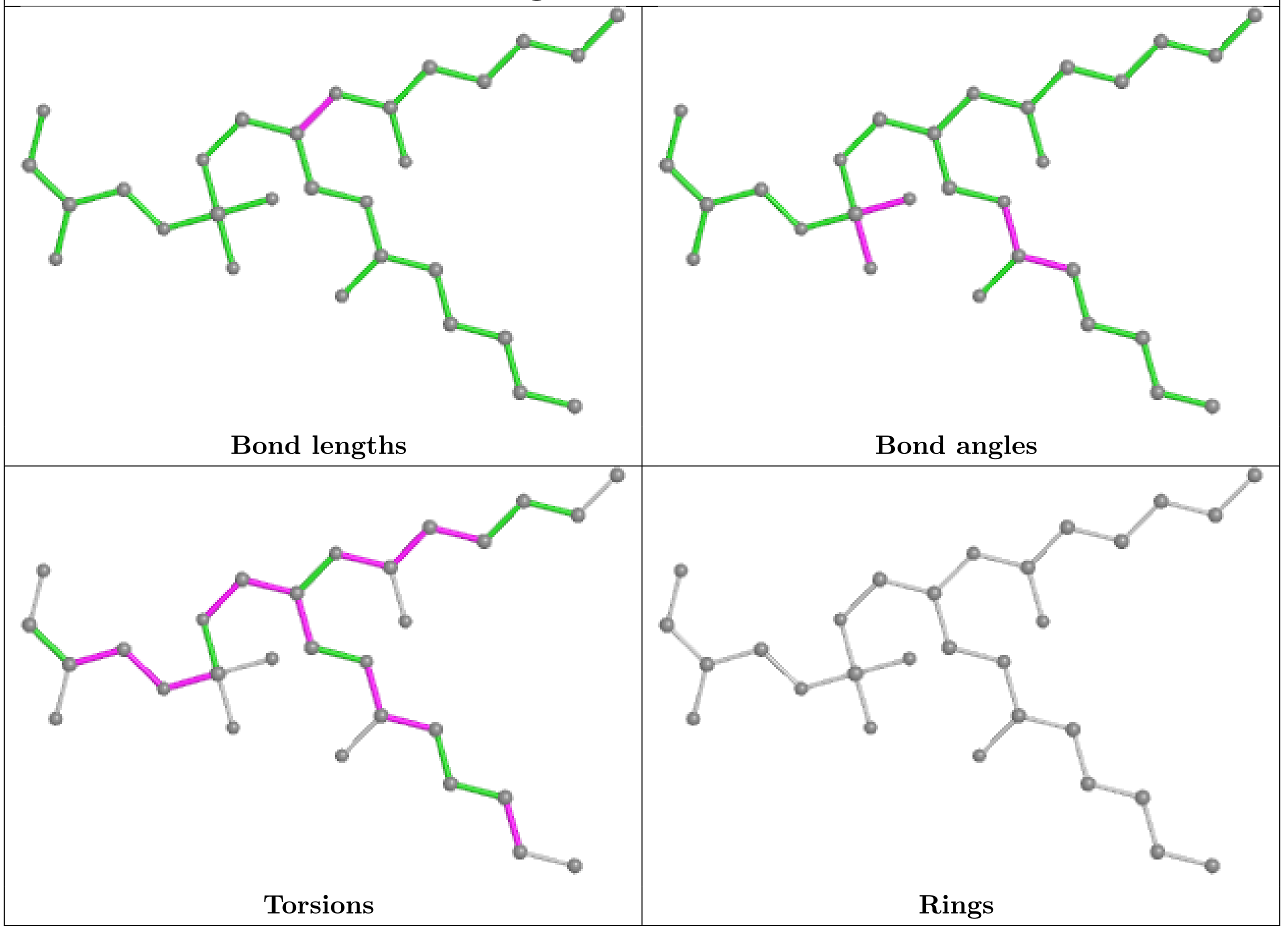

Rings

Ligand CLA B5 601

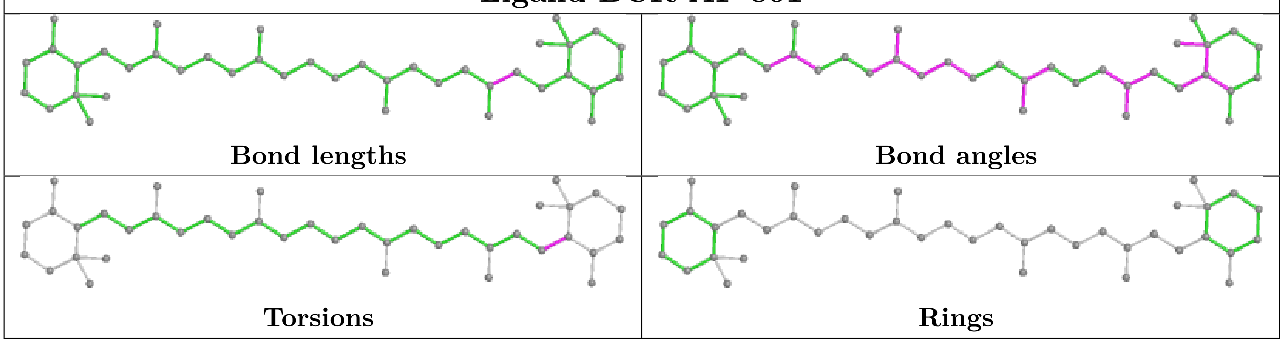



Ligand CLA A6 614
Bond lengths
Bond angles
Torsions
Rings

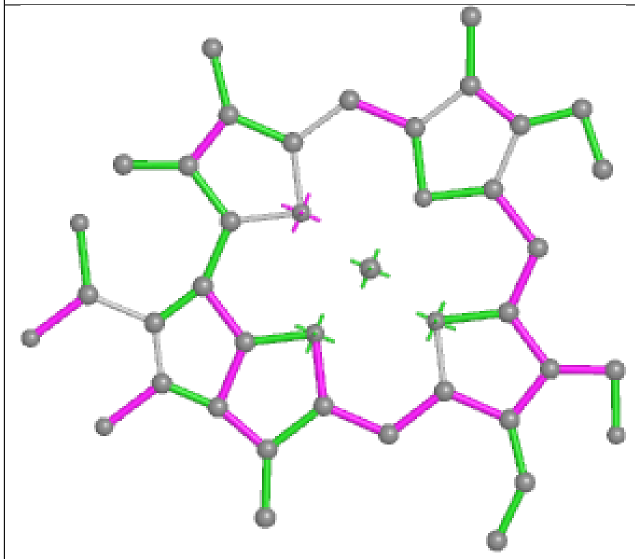
Ligand LHG a 501



Ligand BCR AF 801



Ligand CHL A1 308



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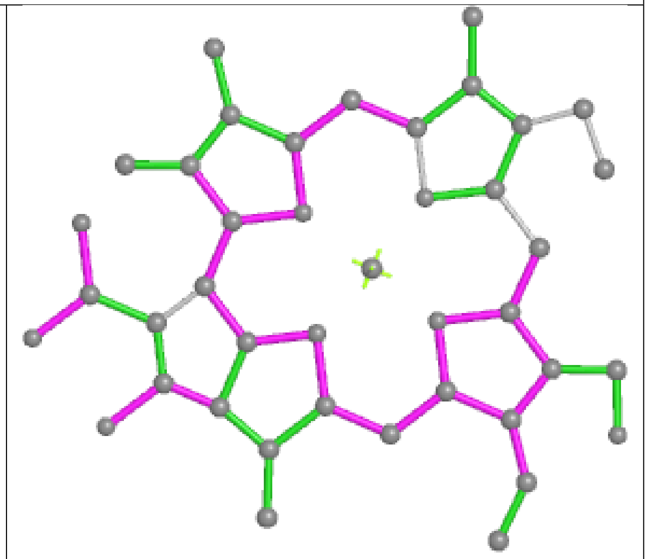
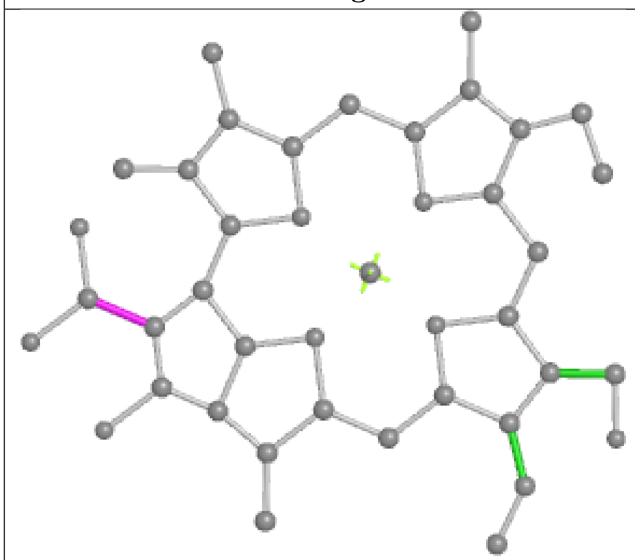


Bond angles



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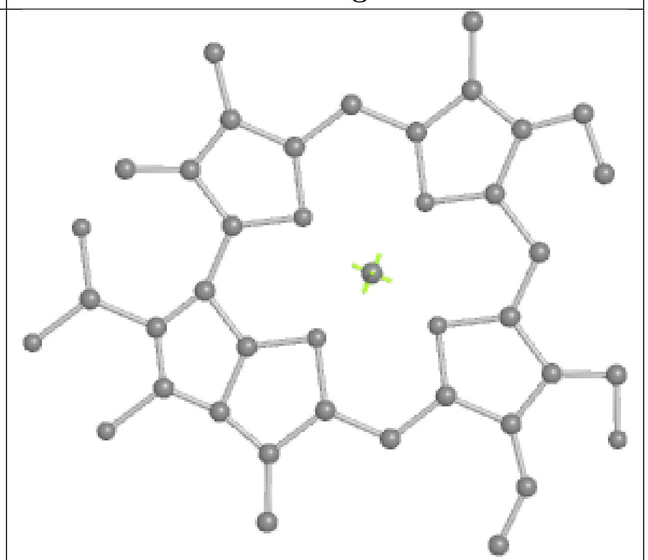
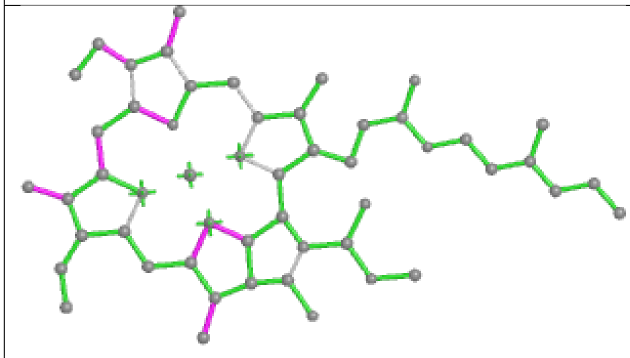
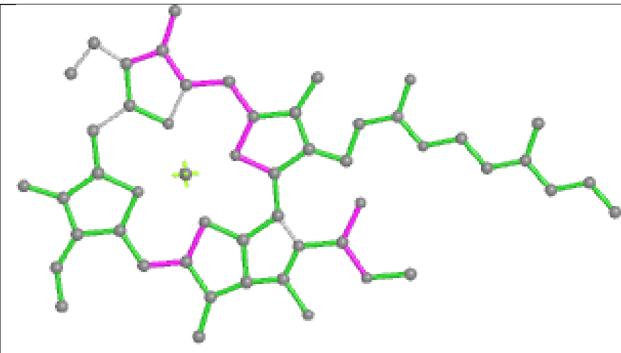
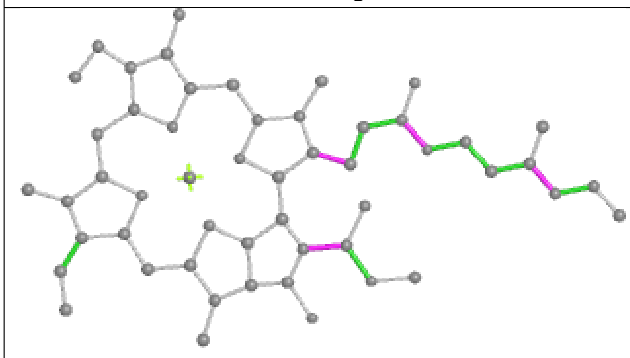
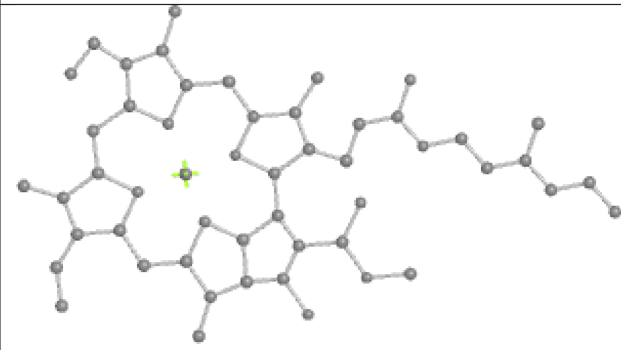
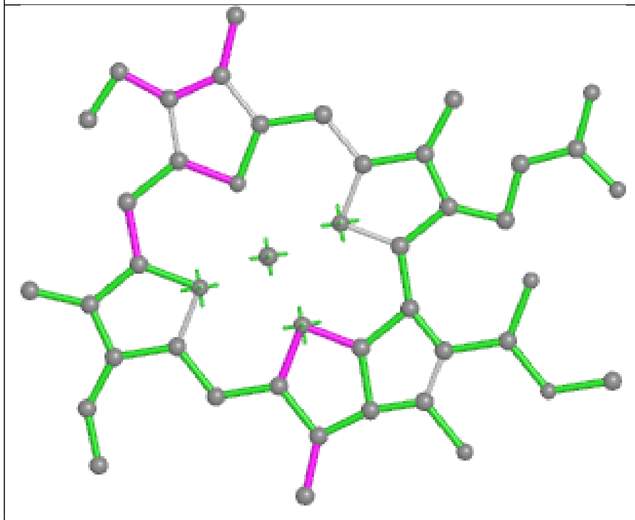


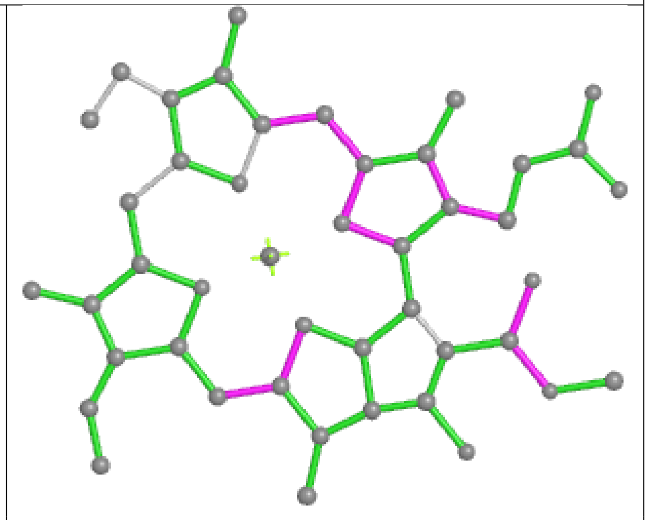
Rings

Ligand CLA AA 804	
 Bond lengths	 Bond angles
 Torsions	 Rings

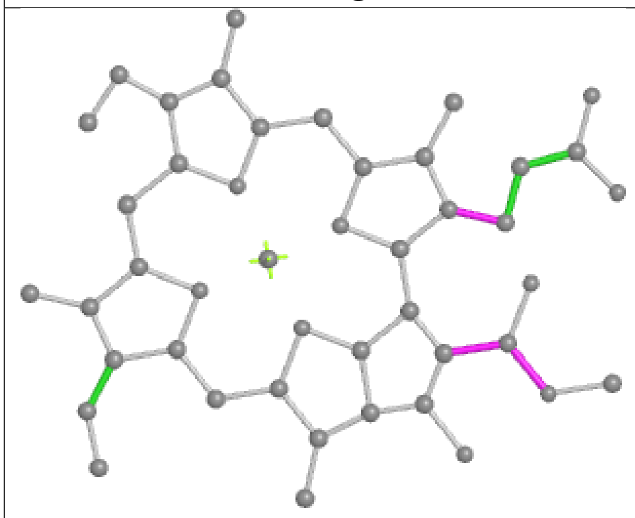
Ligand CLA BB 825



Bond lengths



Bond angles



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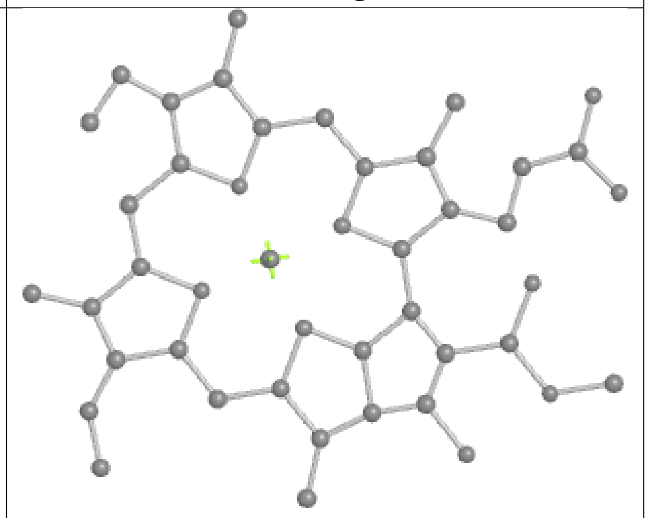
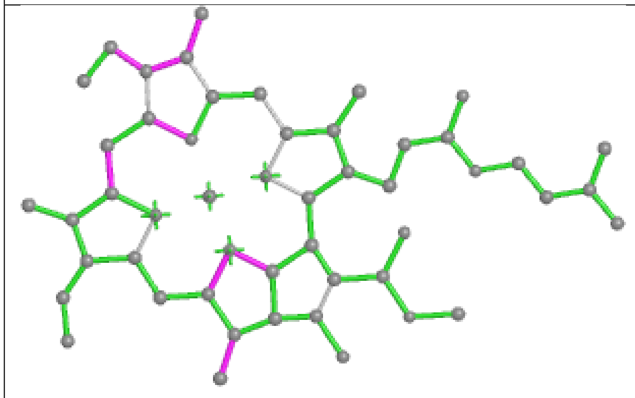


Rings

Ligand CLA BA 809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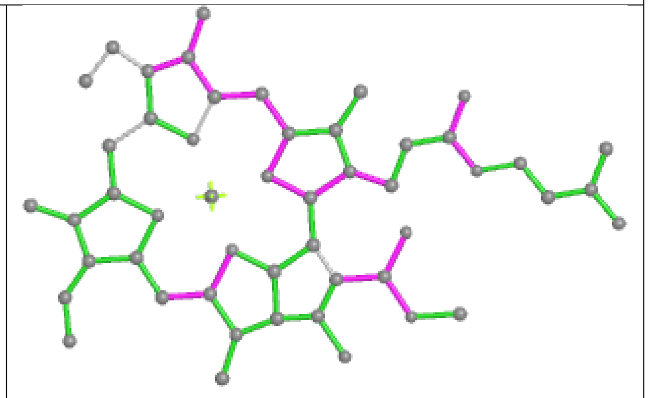
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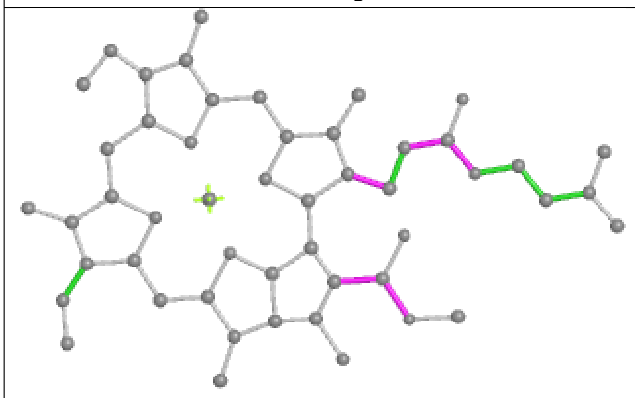
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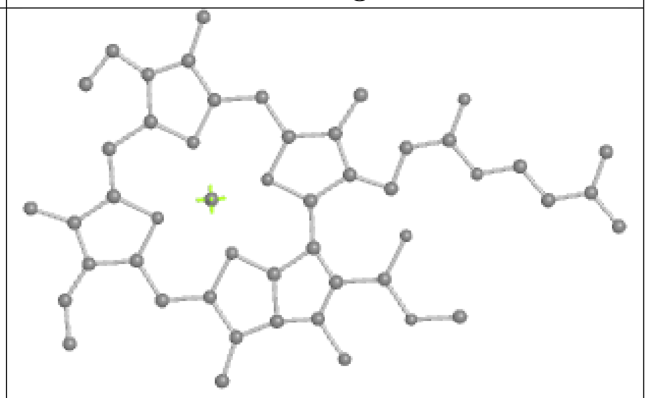
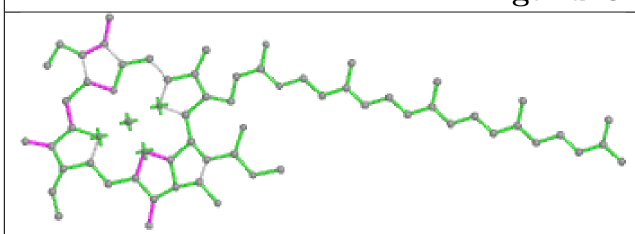

Rings

Ligand CLA AB 811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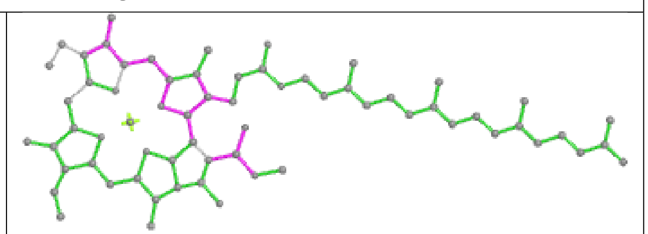
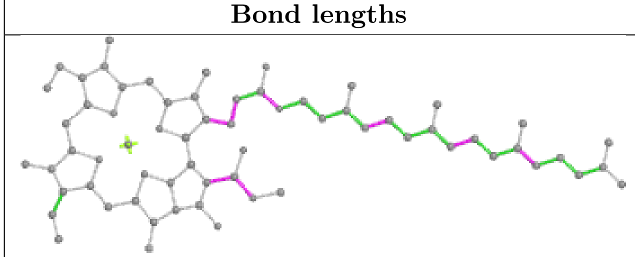
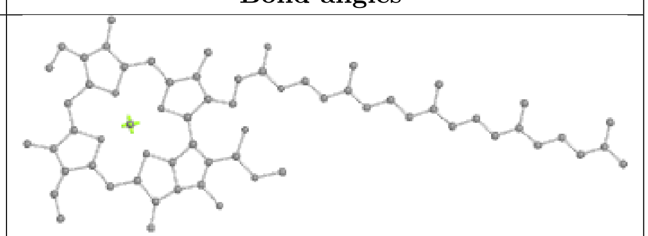
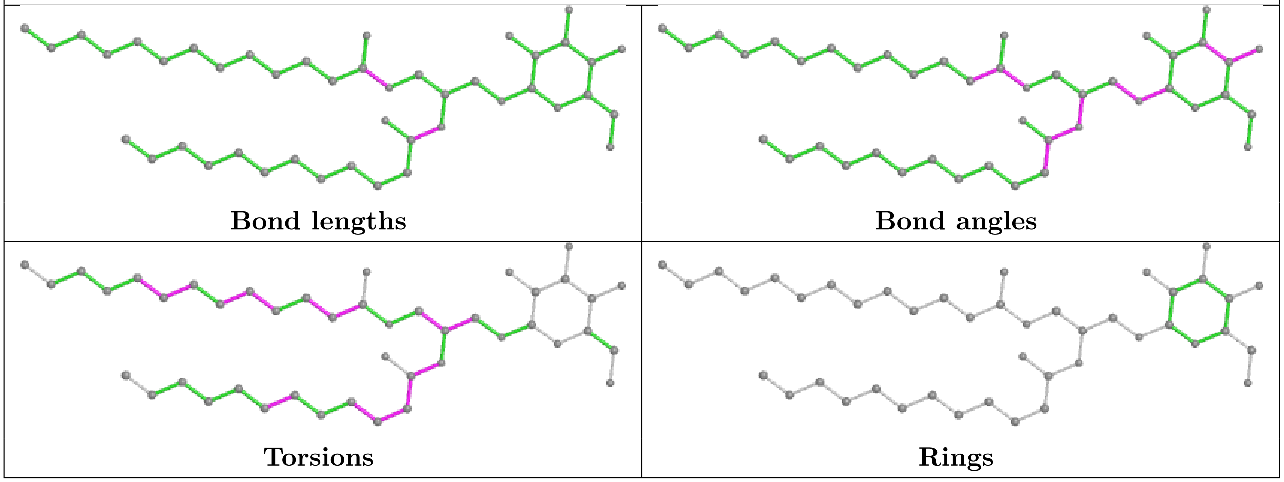

Bond angles

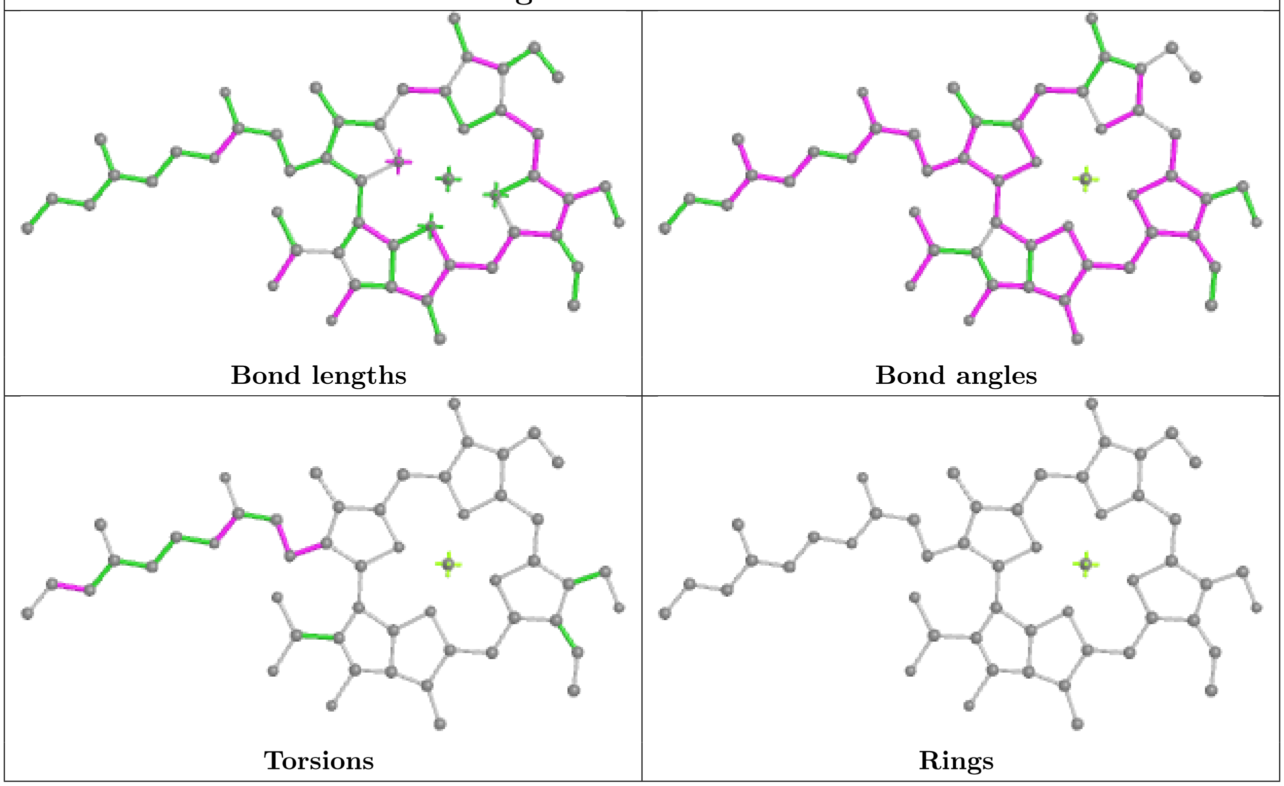

Torsions


Rings

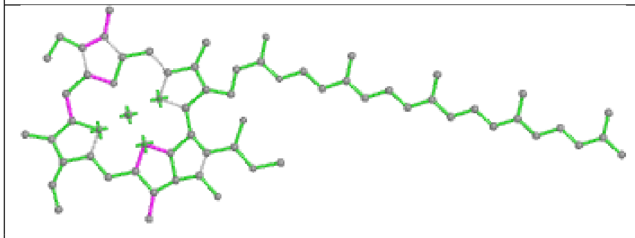
Ligand LMG A1 321



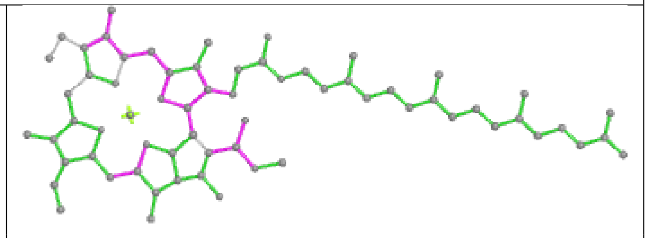
Ligand CHL A6 602



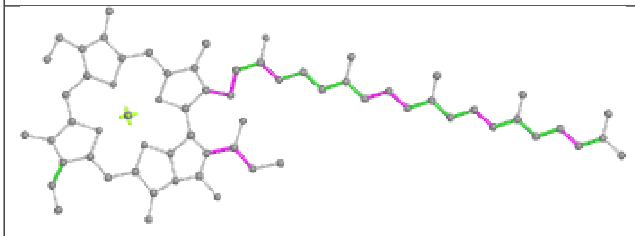
Ligand CLA BB 812



Bond lengths



Bond angles



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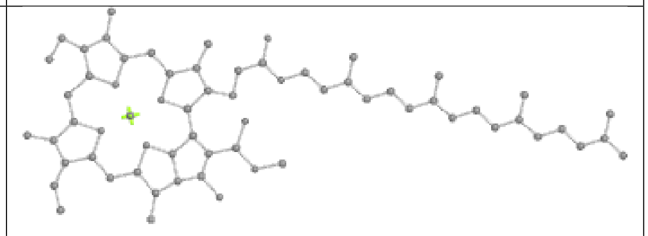
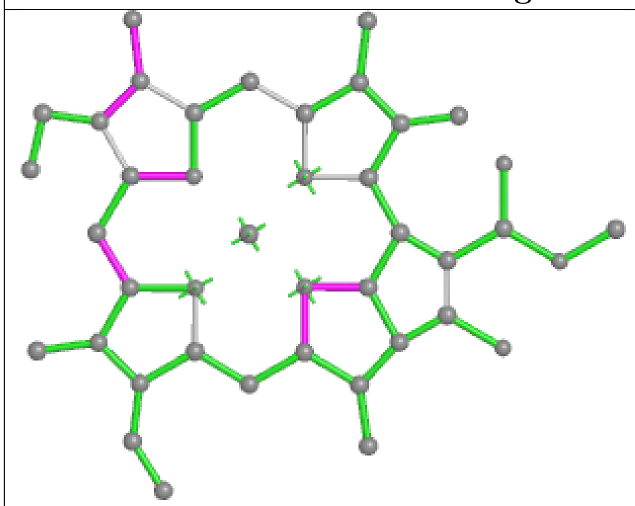


Rings

Ligand CLA BF 303



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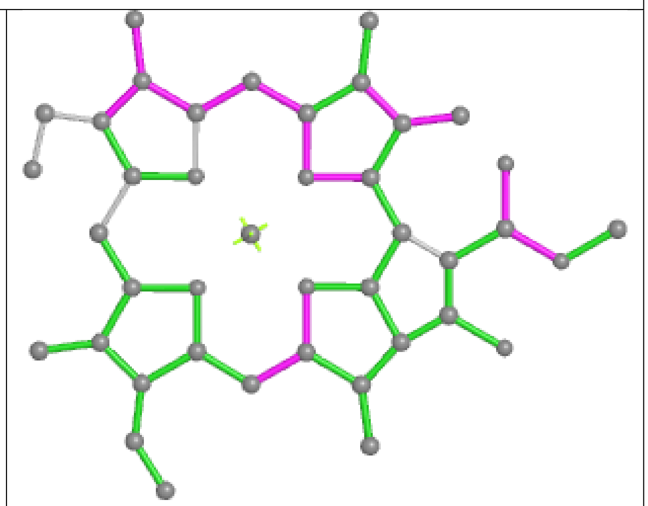
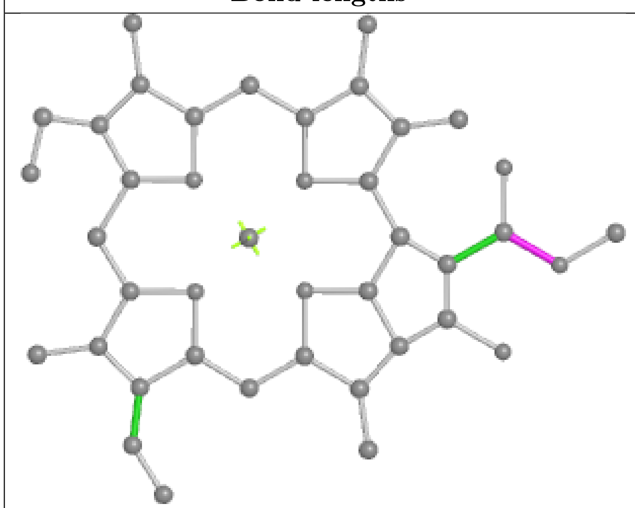
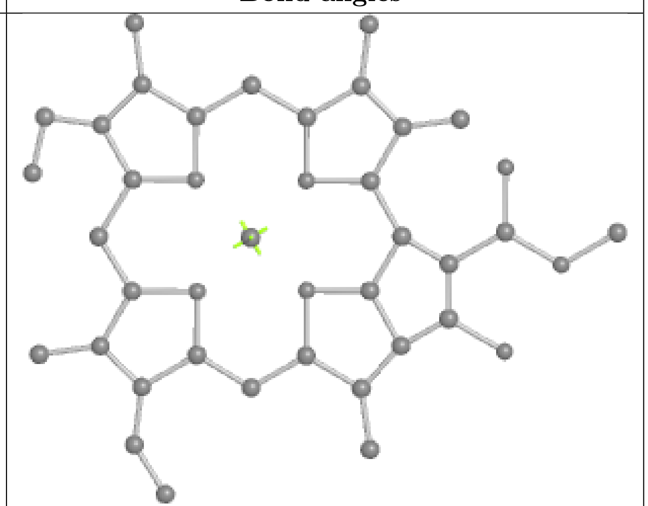


Bond angles

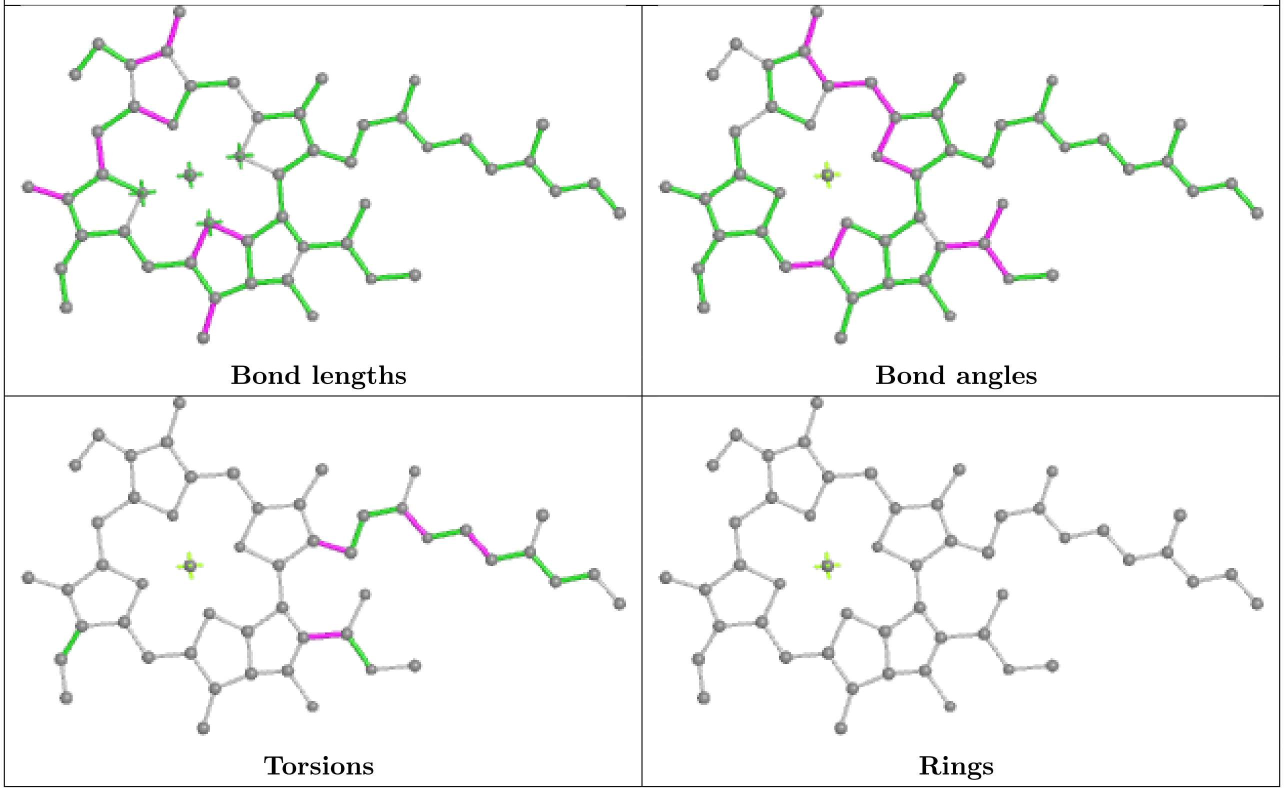


Torsions

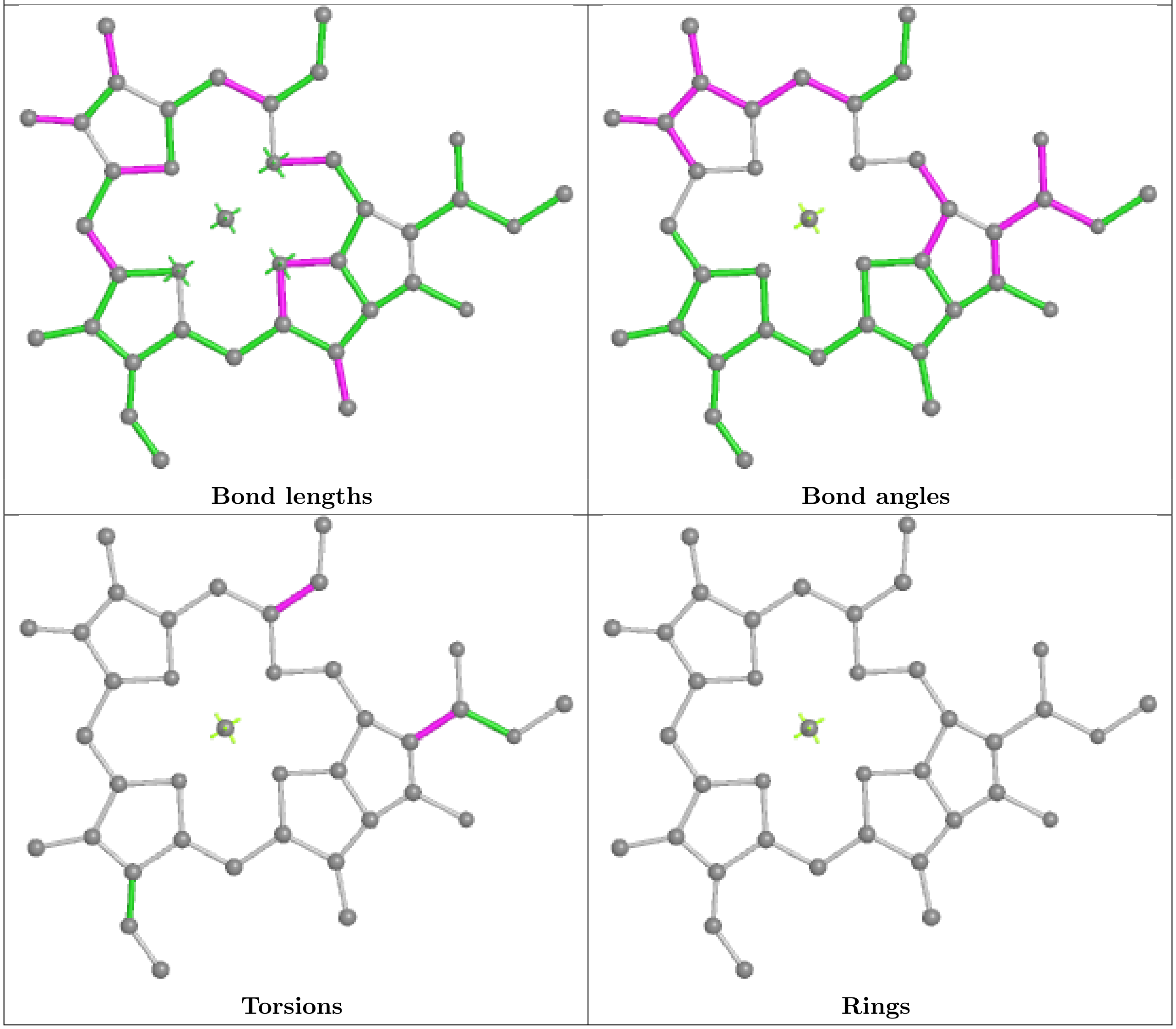


Rings

Ligand CLA AA 839



Ligand CLA A6 611



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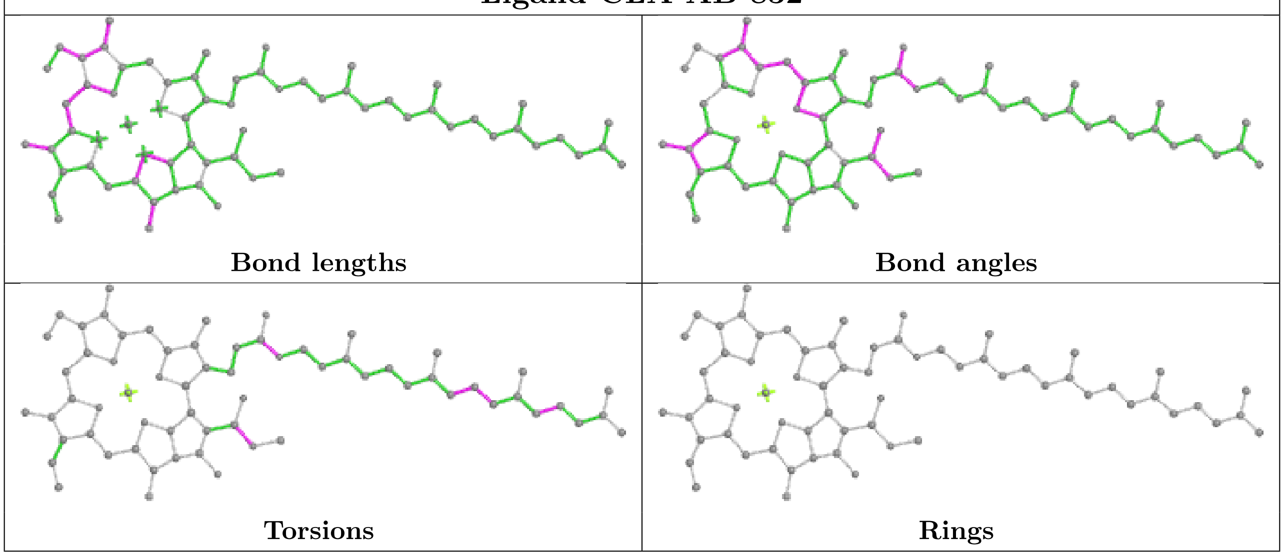
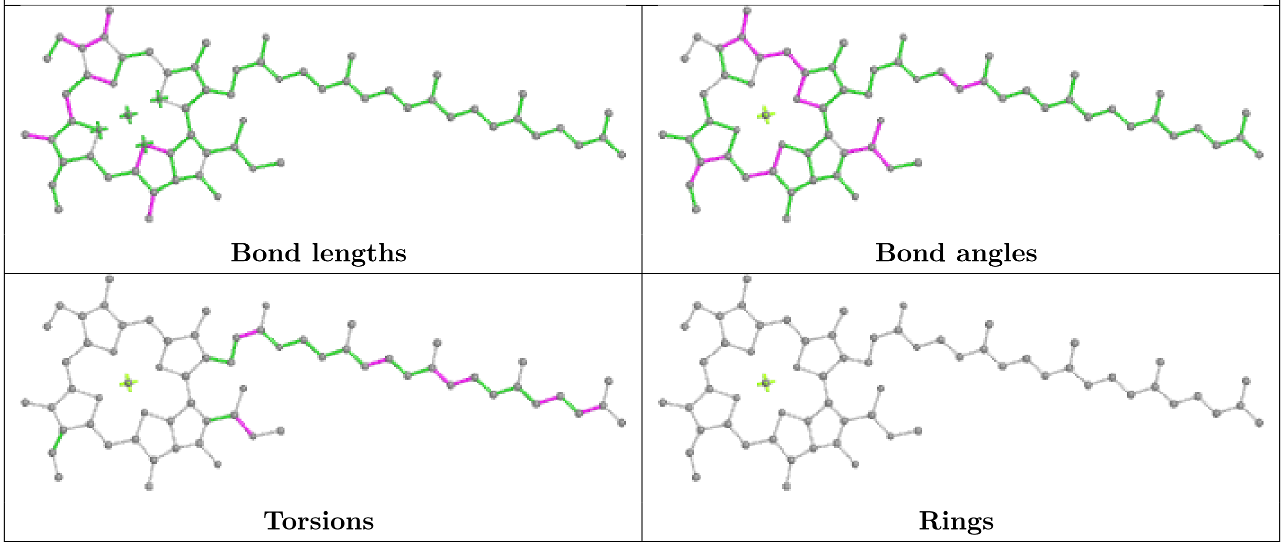


Ligand CLA B2 602



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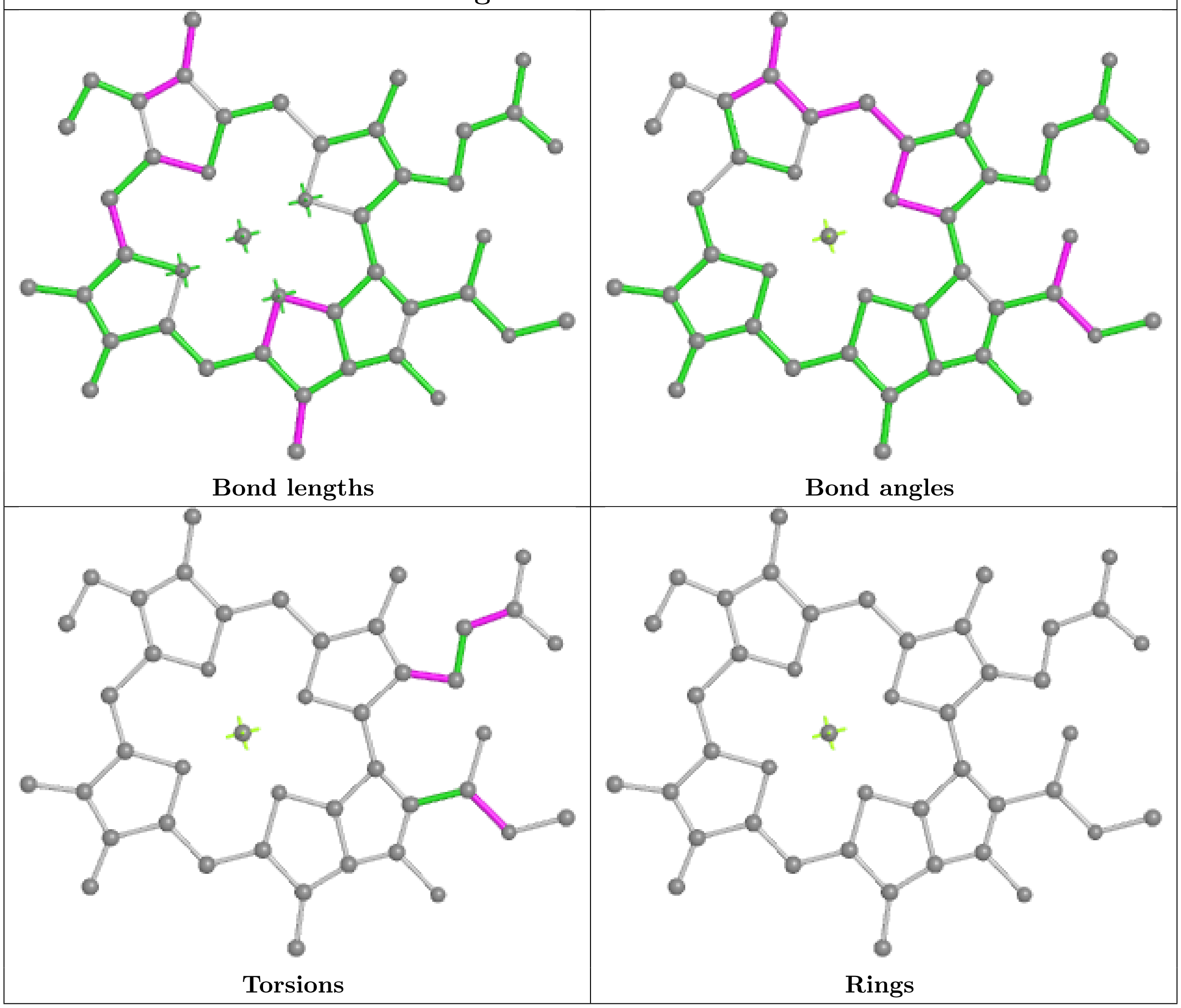

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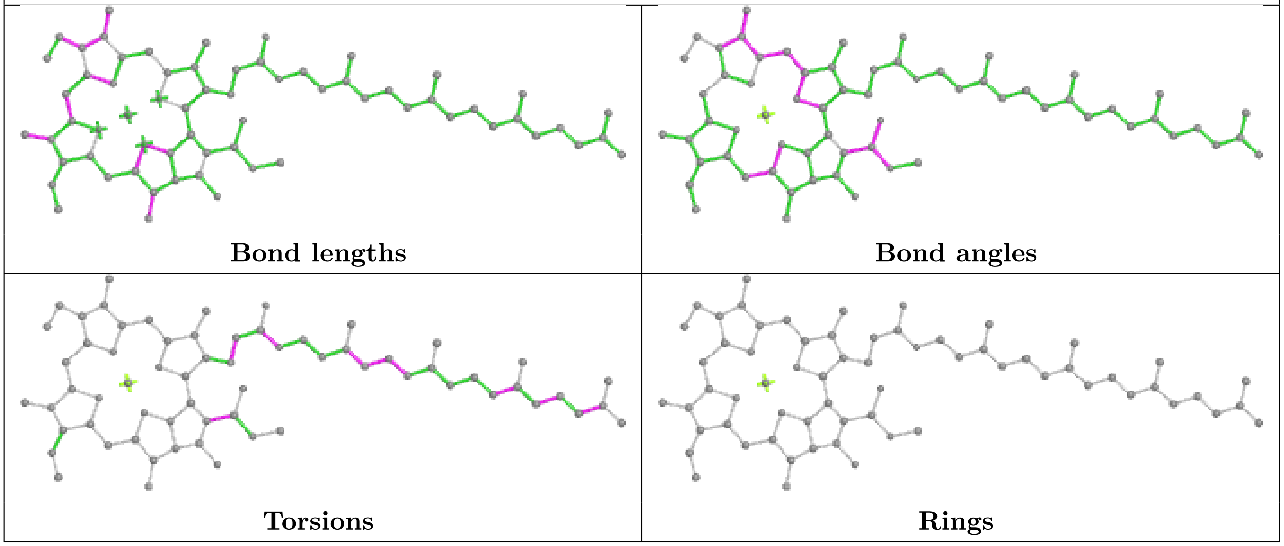

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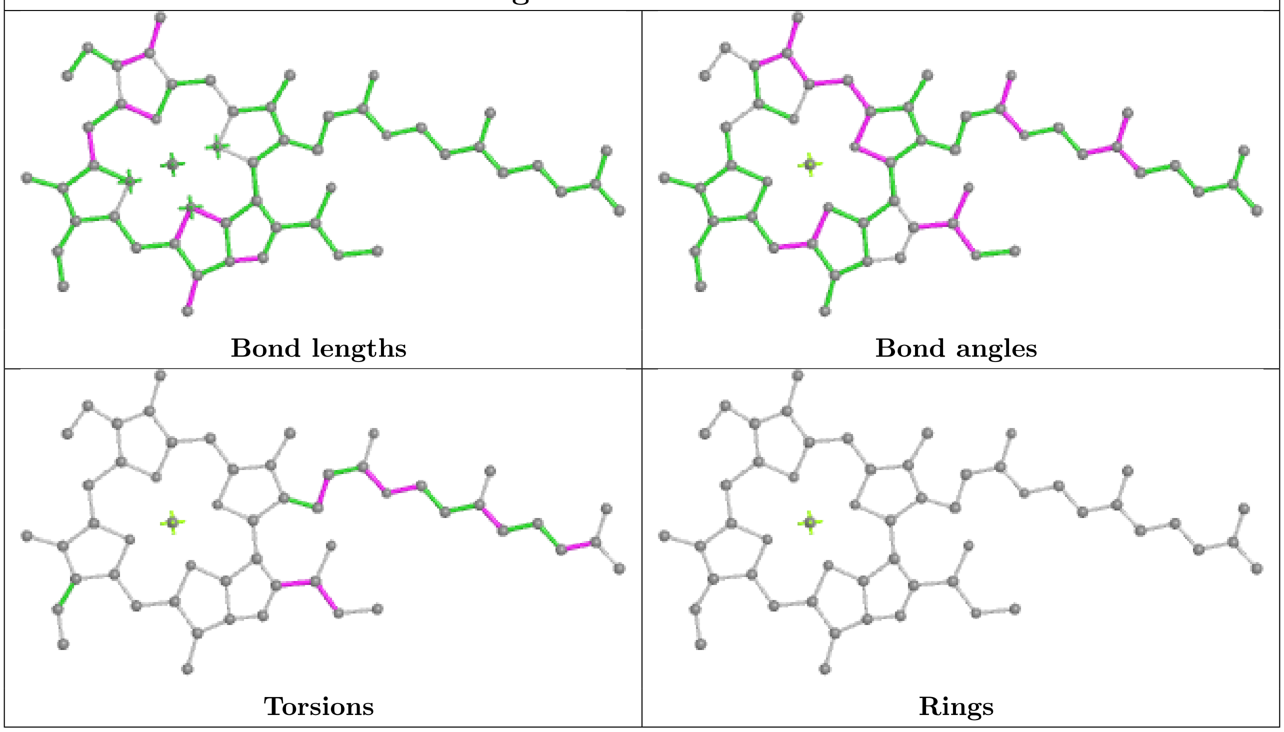
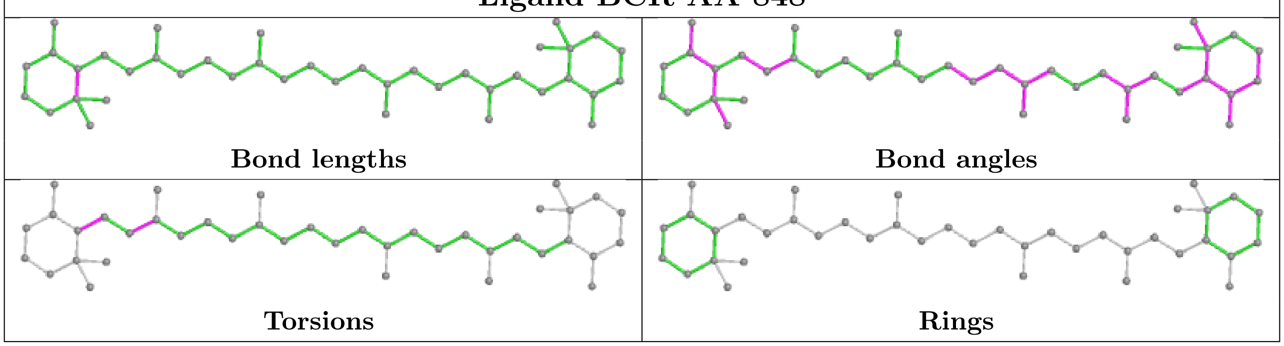


Ligand BCR AA 848



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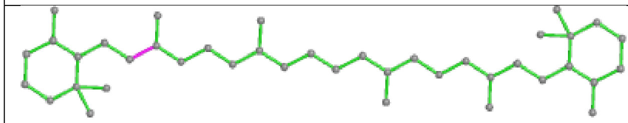
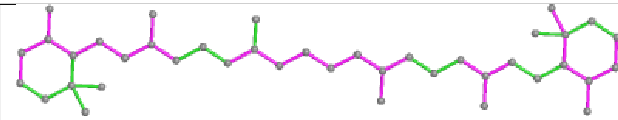
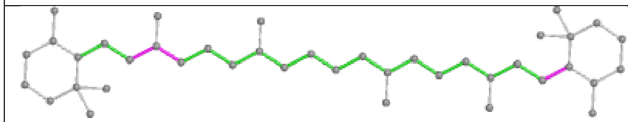


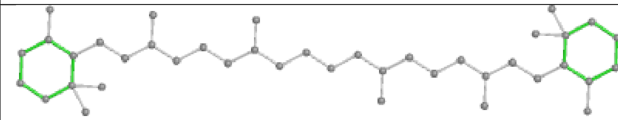
Bond lengths



Bond angles

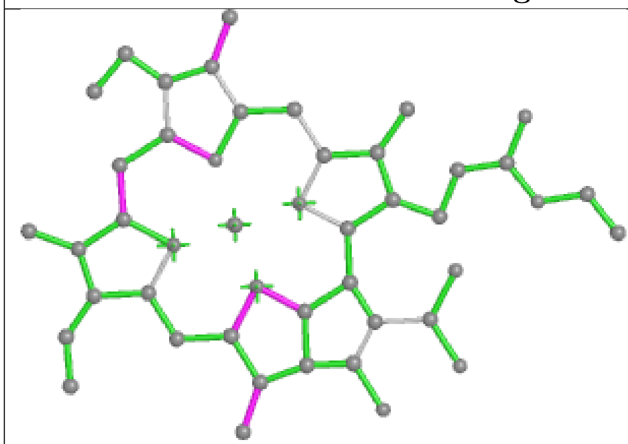


Torsions



Rings

Ligand CLA BB 823



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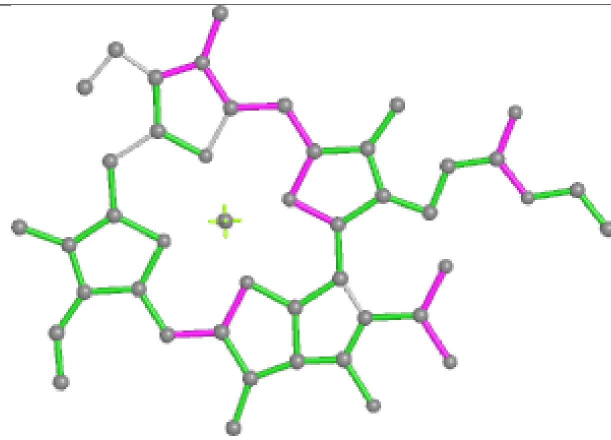
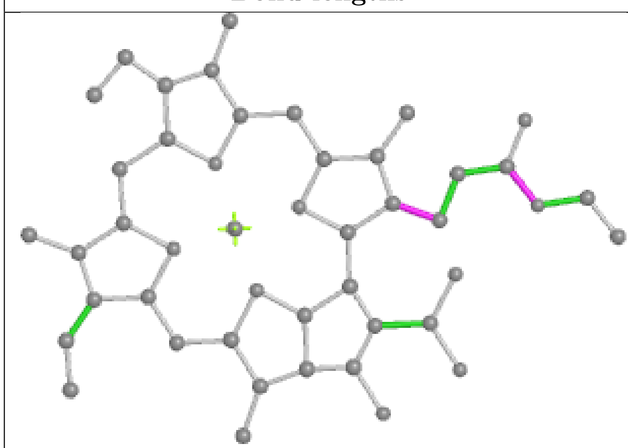


Bond angles



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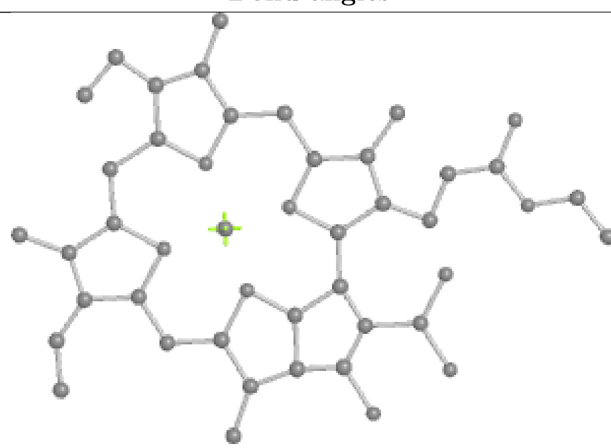
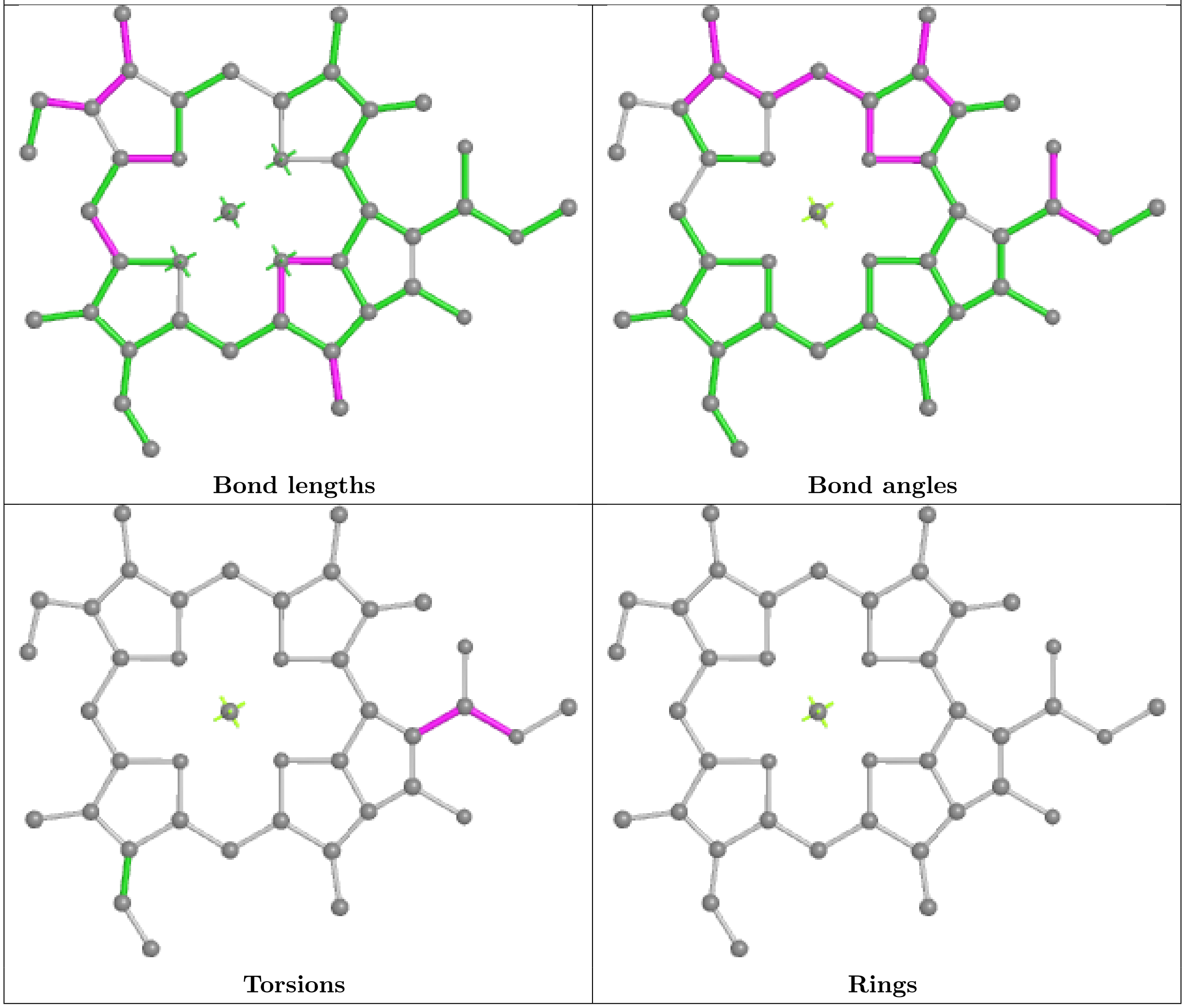
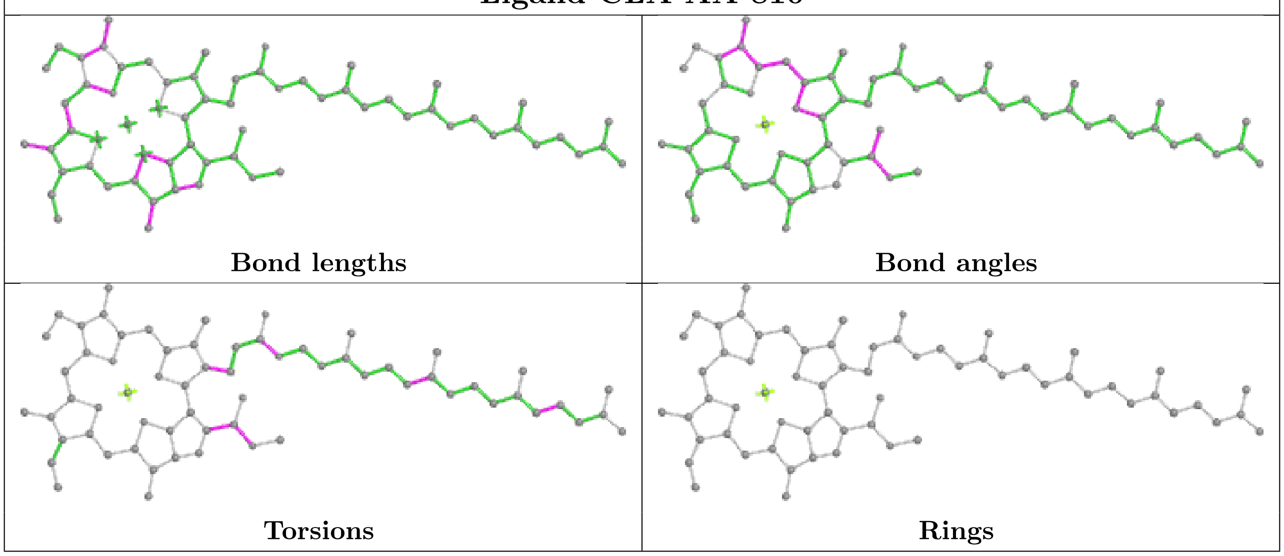


Rings

Ligand CLA B3 308



Ligand CLA AA 810



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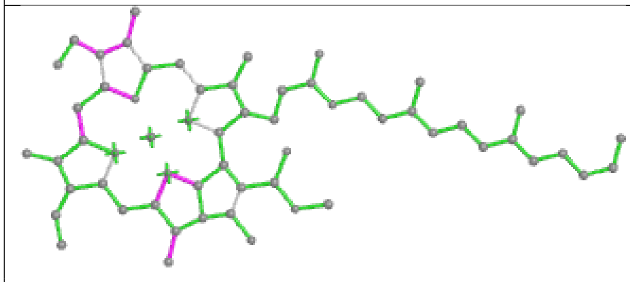
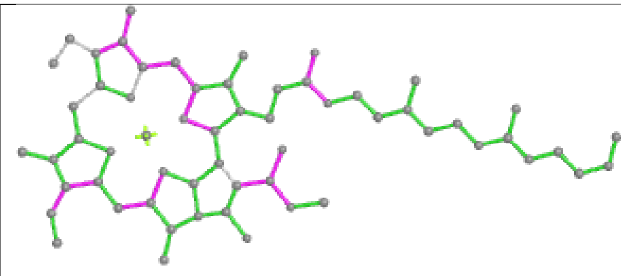
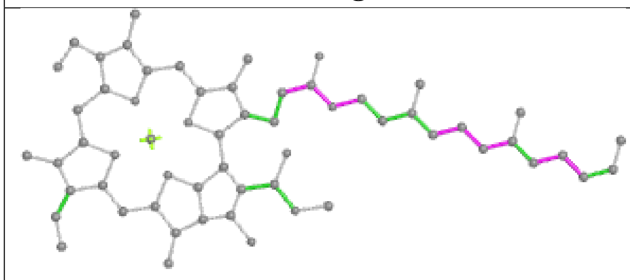


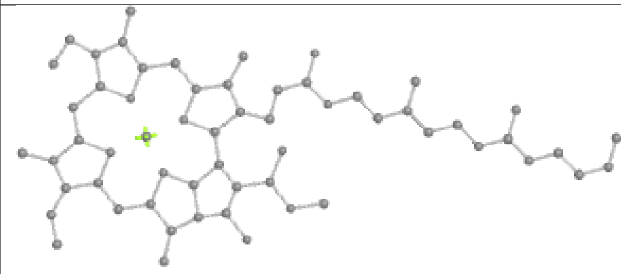
Bond lengths



Bond angles

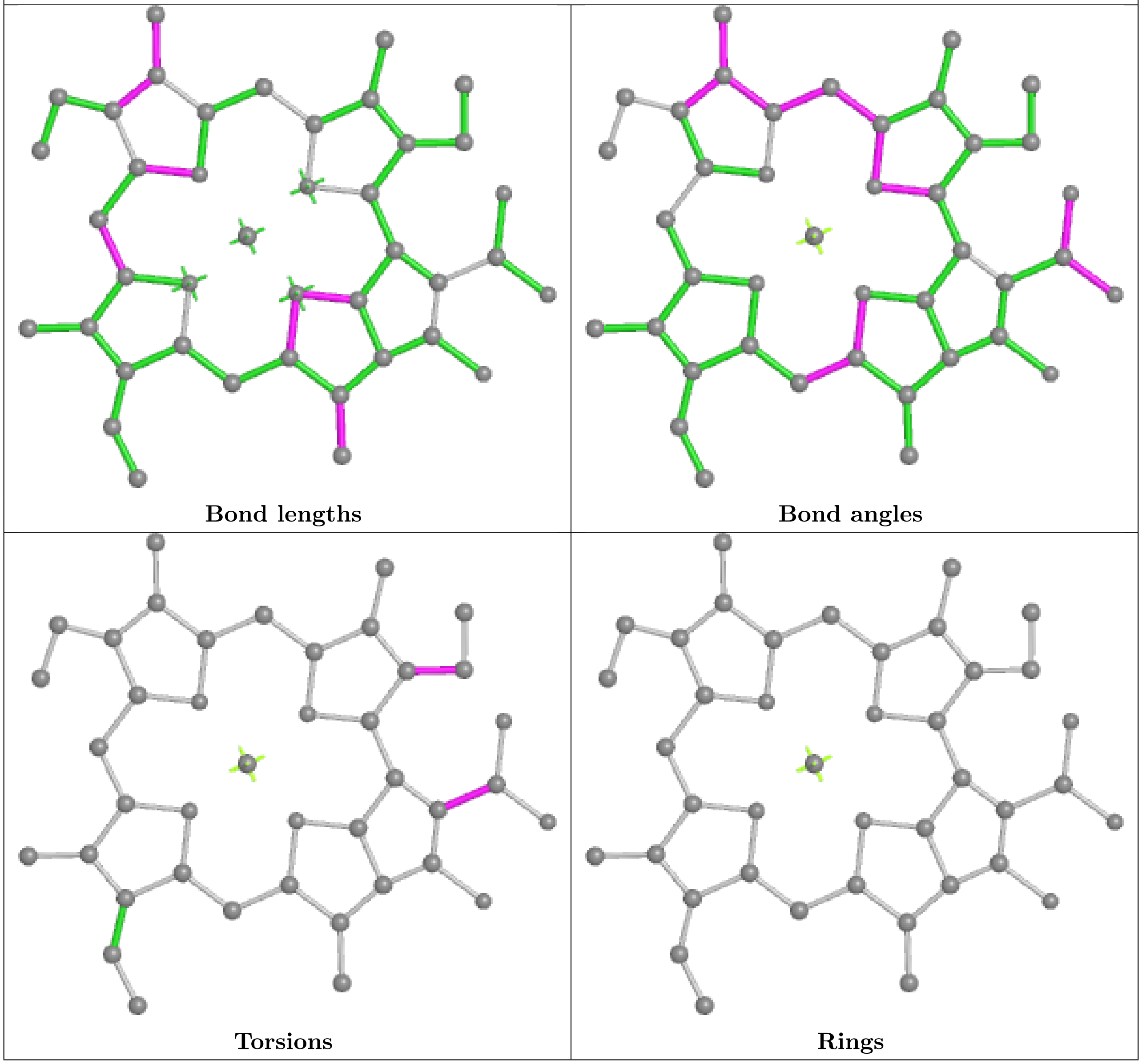


Torsions

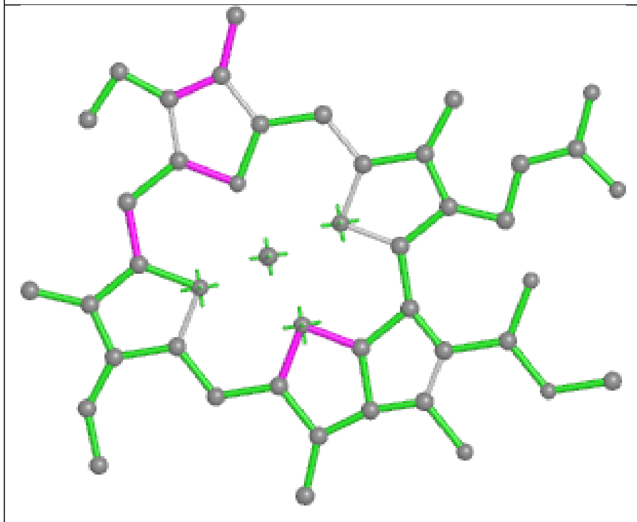


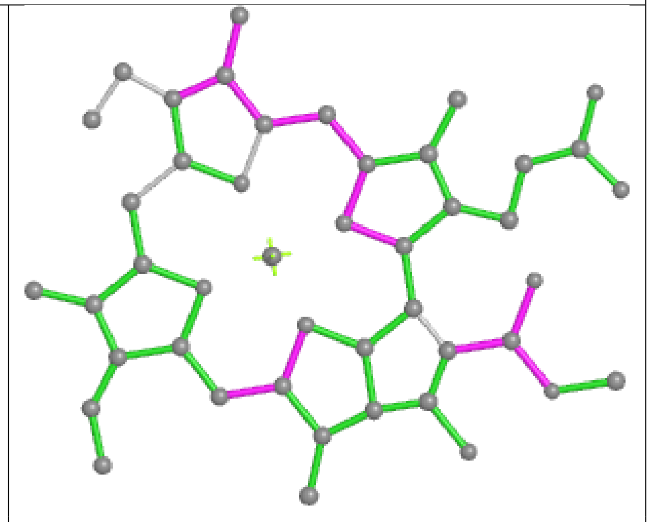
Rings

Ligand CLA A3 305



Ligand CLA BA 836


Bond lengths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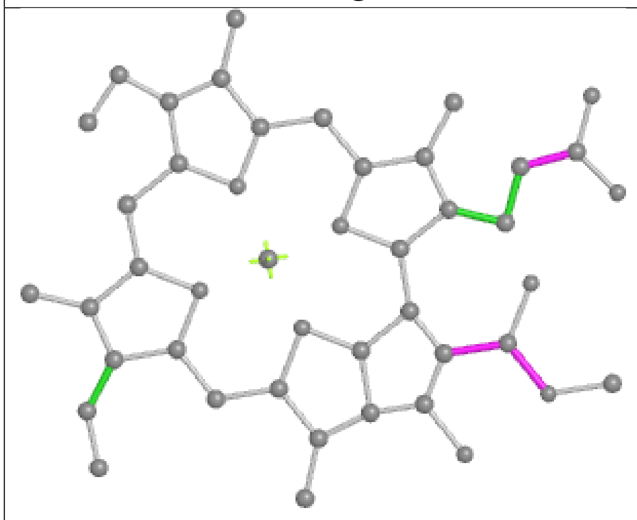
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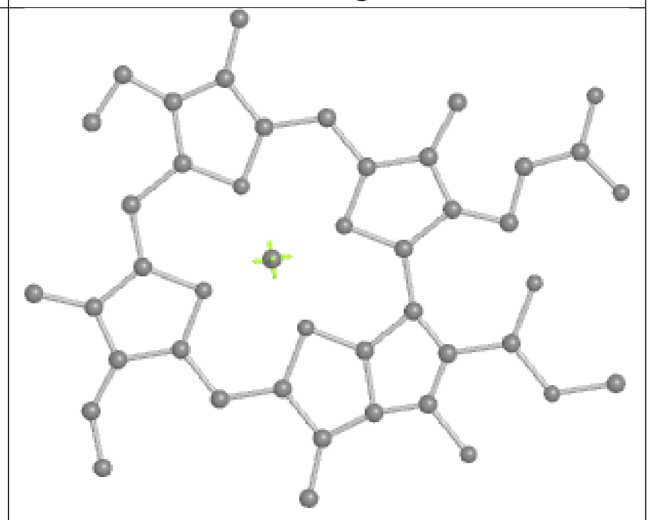
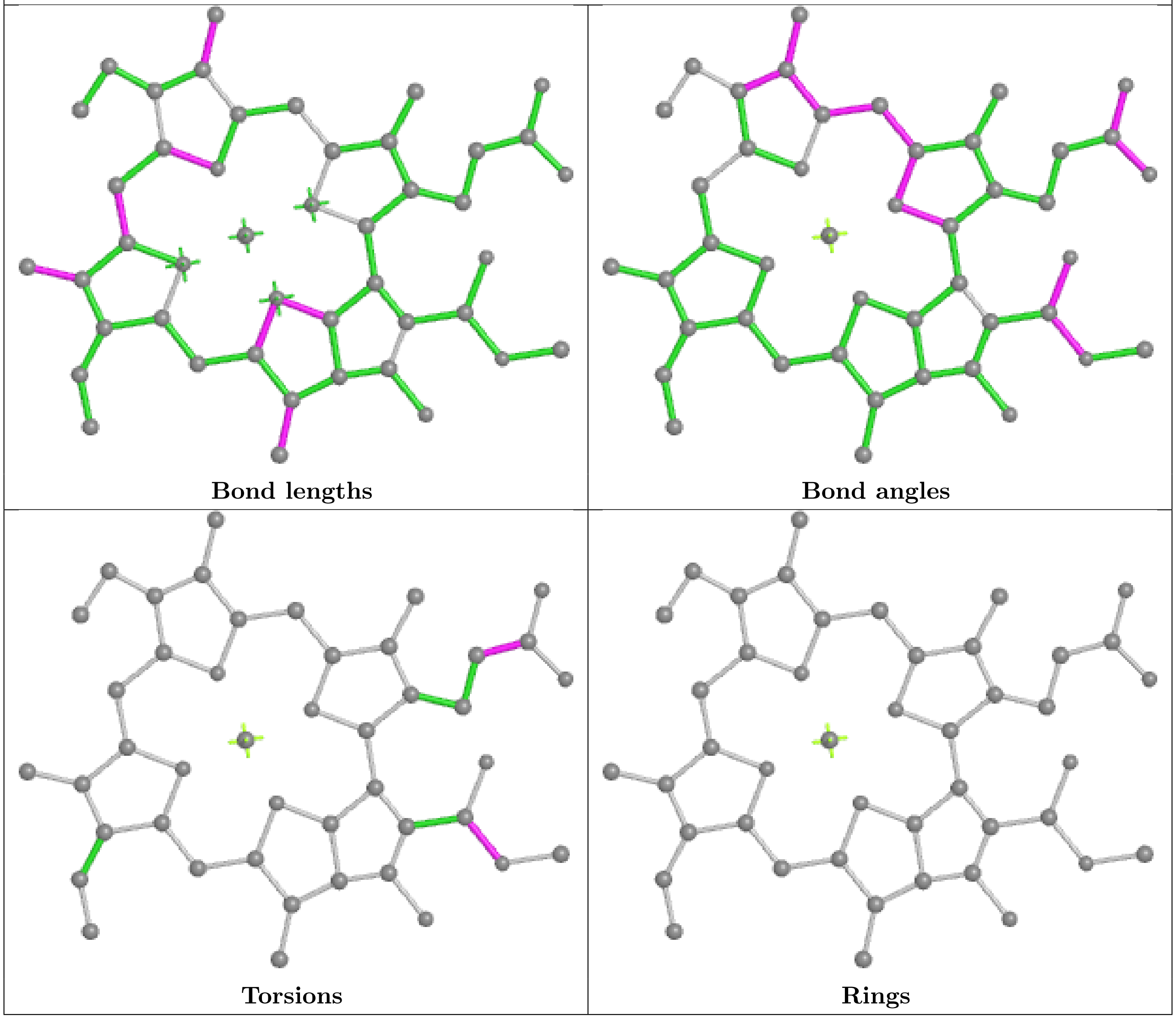
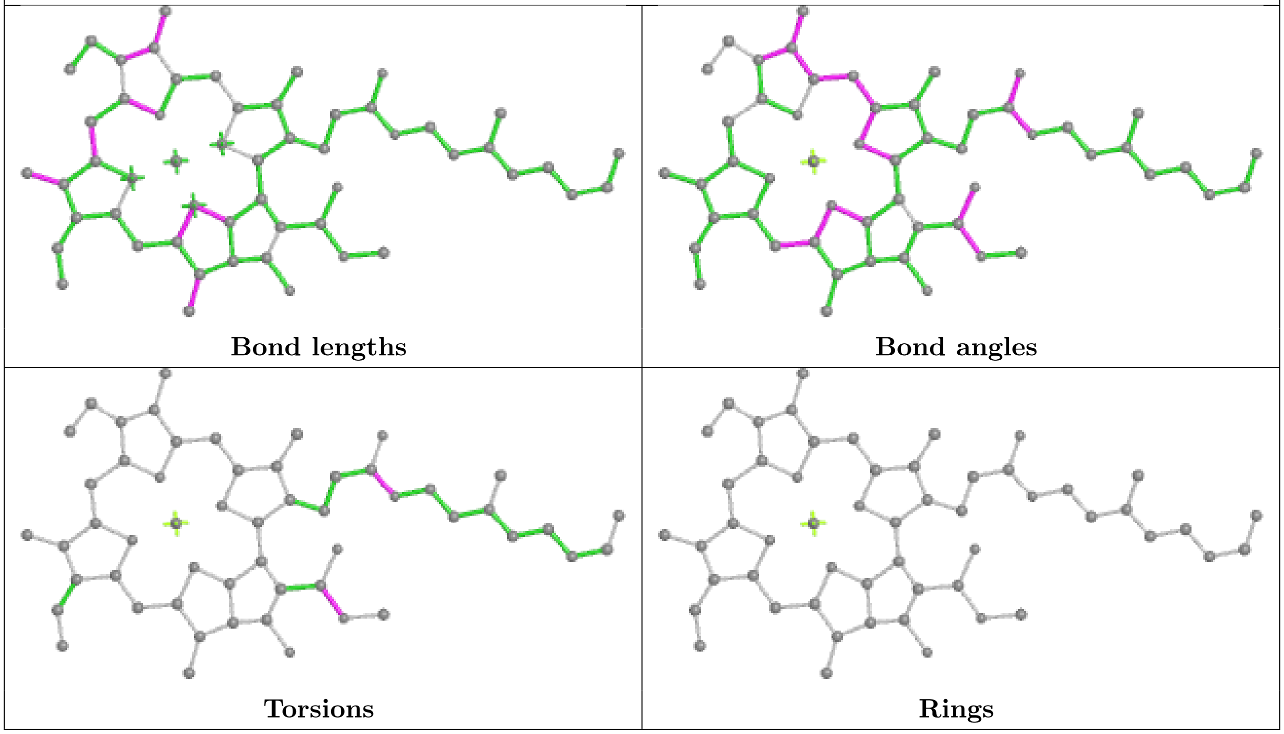

Rings

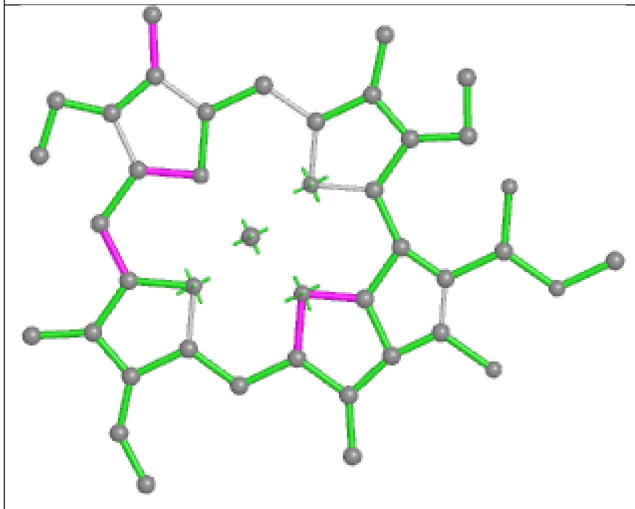
Ligand CLA A1 313



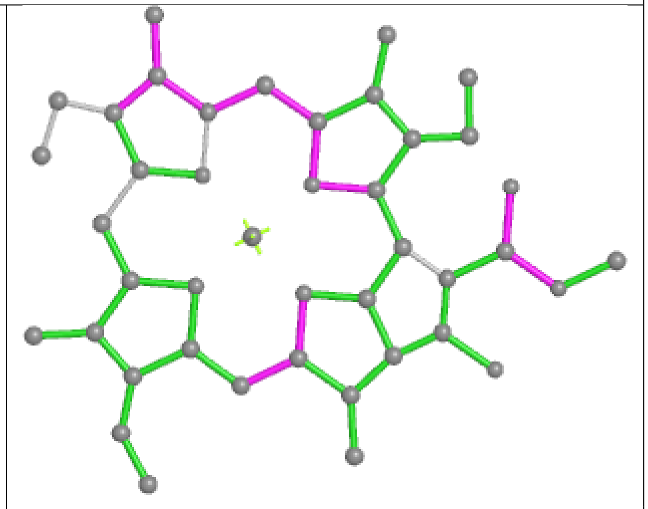
Ligand CLA A4 308



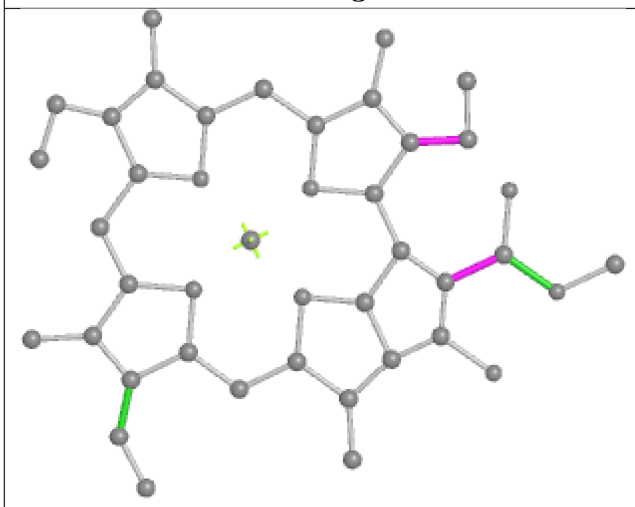
Ligand CLA AJ 102



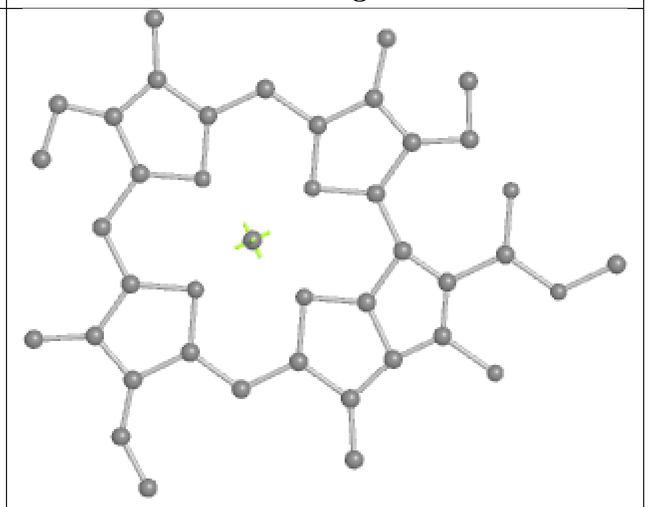
Bond lengths



Bond angles

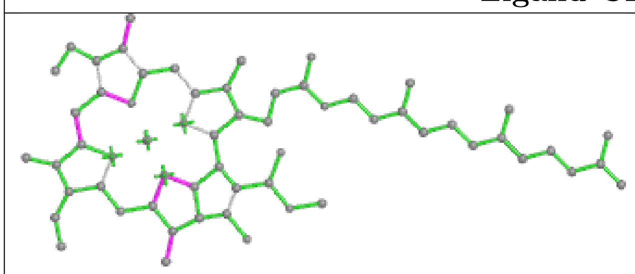


Torsions

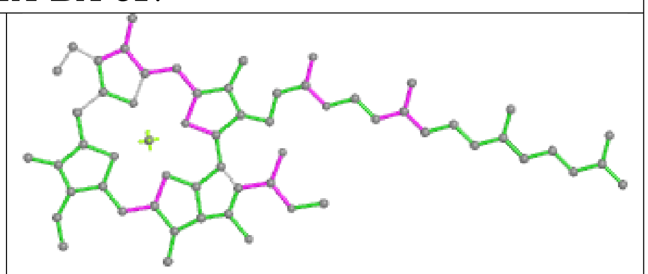


Rings

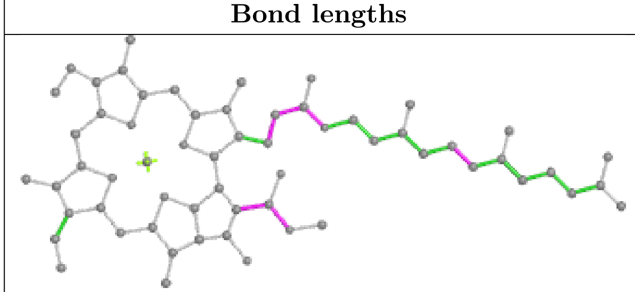
Ligand CLA BA 817



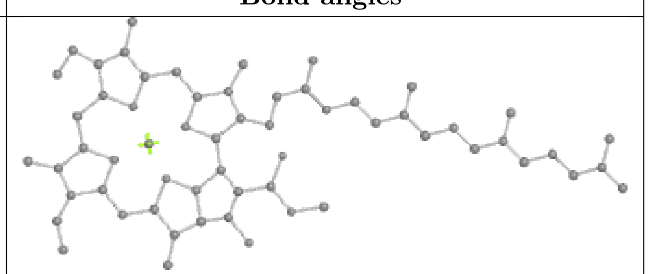
Bond lengths



Bond angles

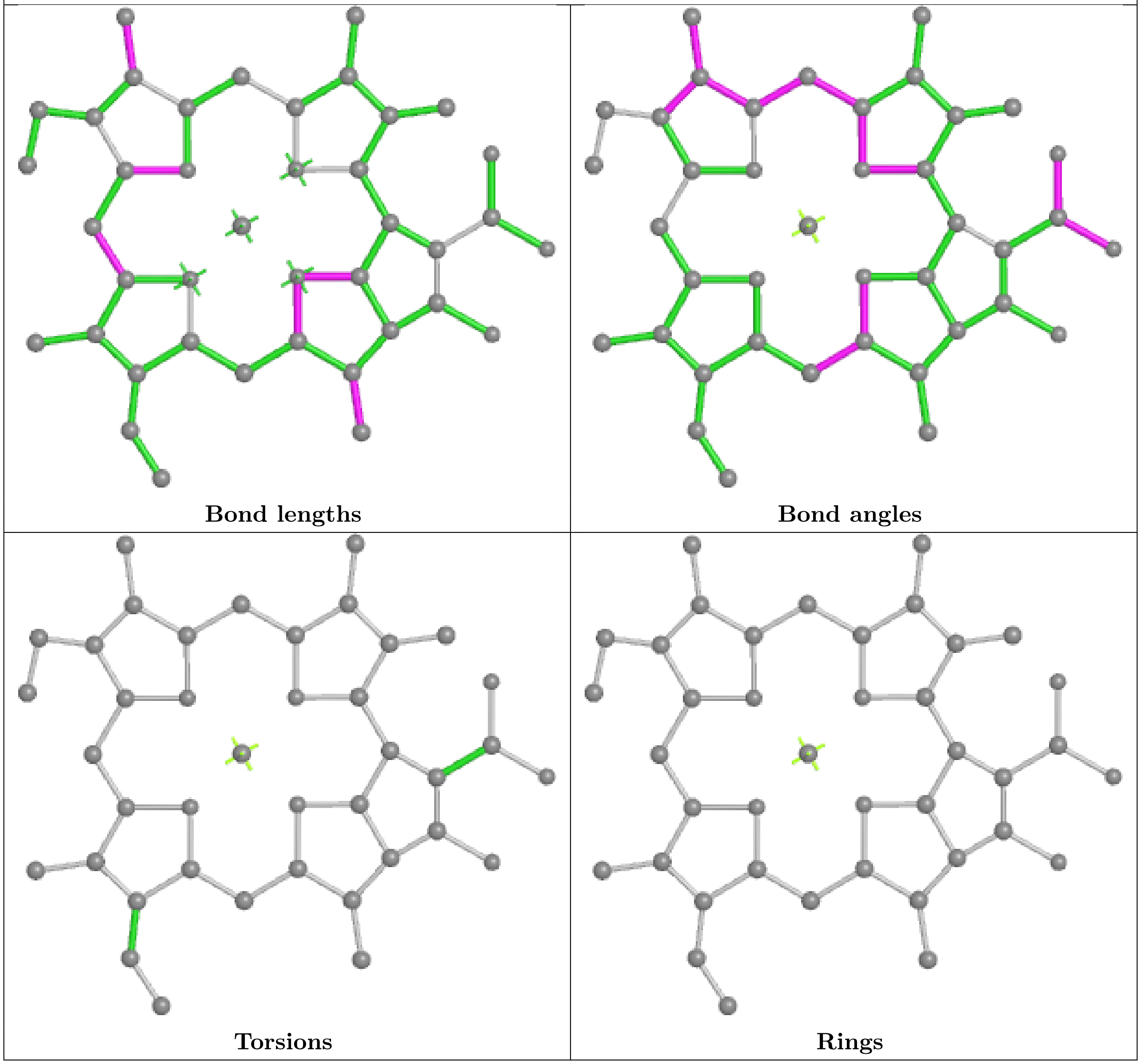


Torsions

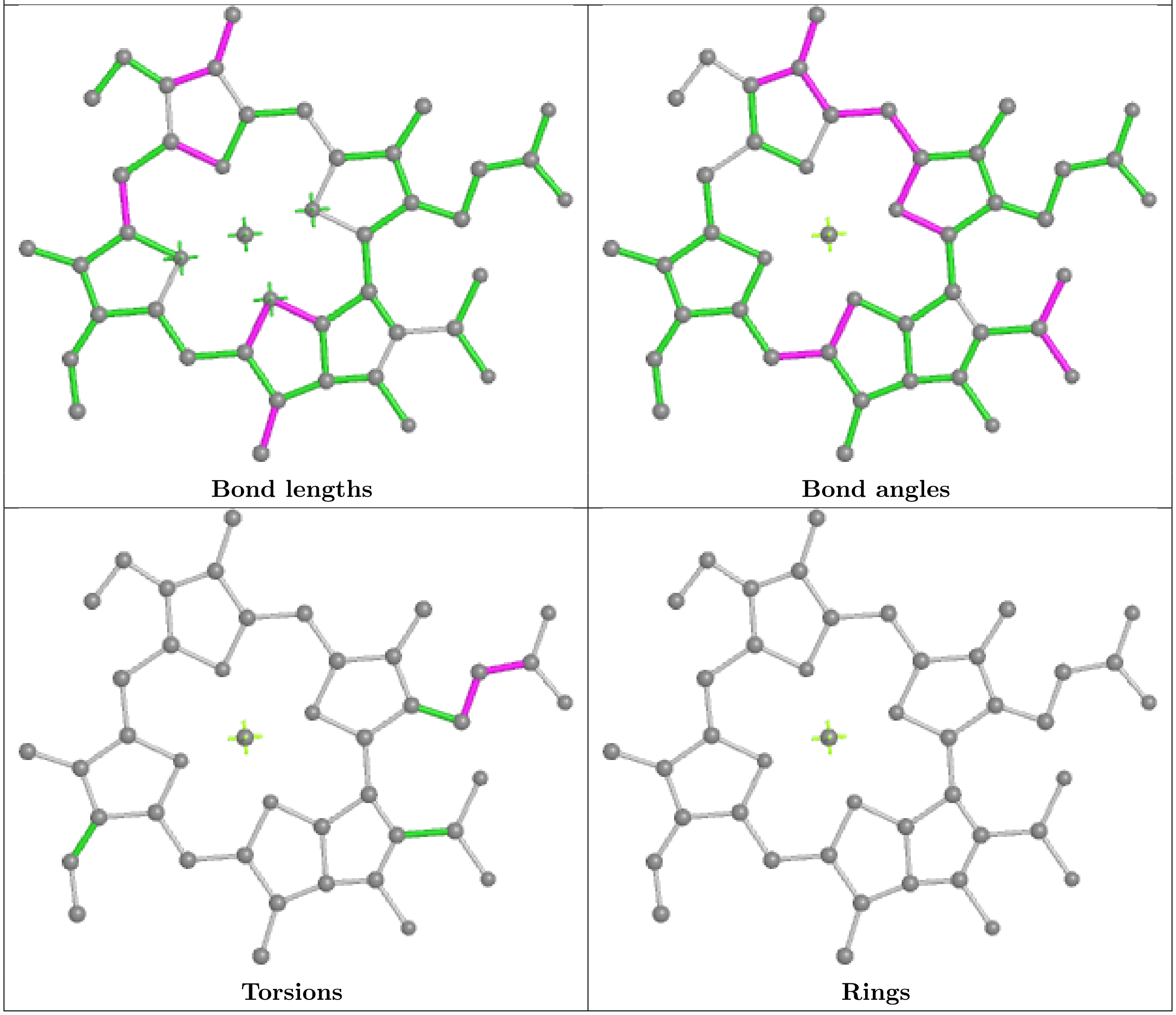


Rings

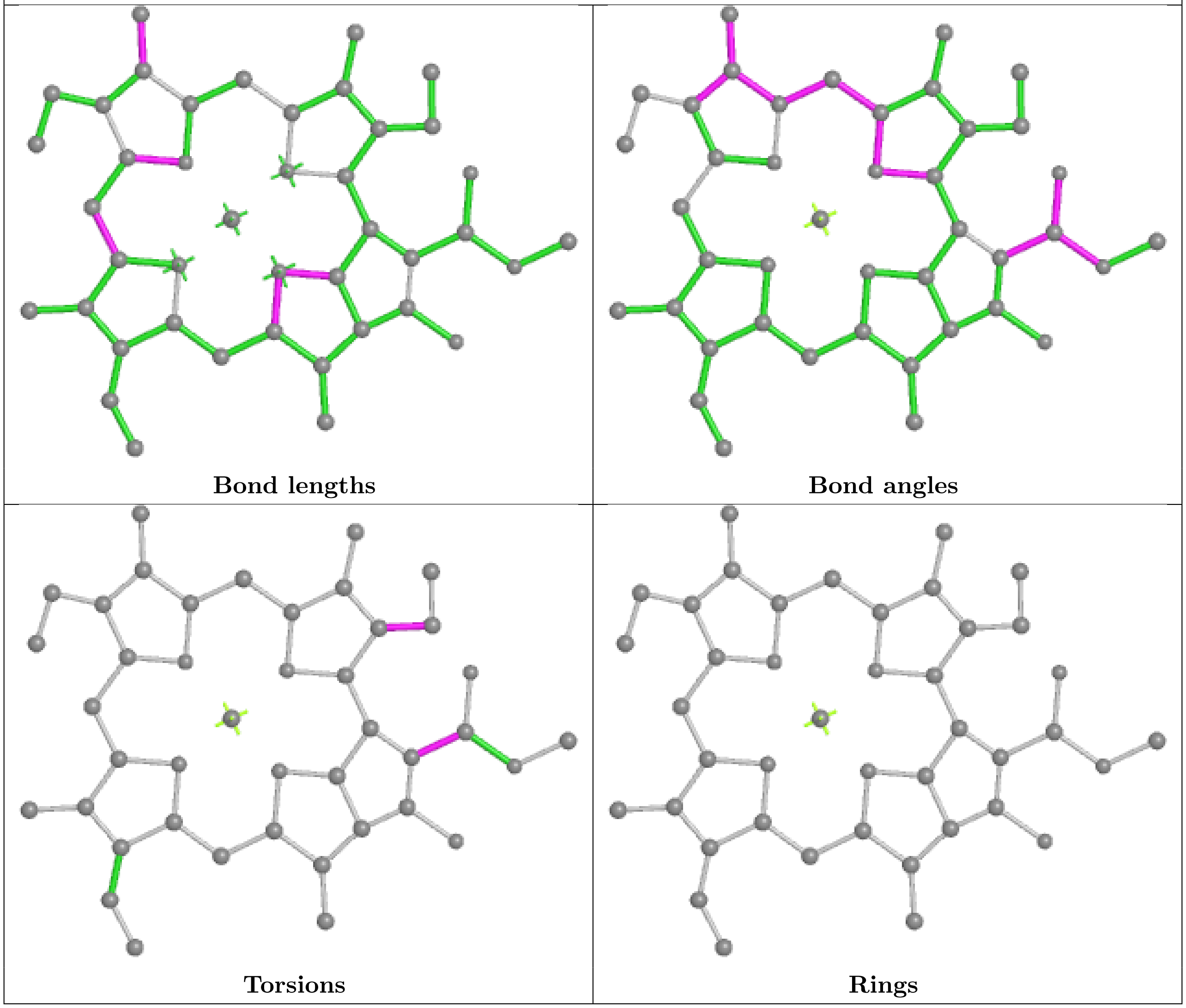
Ligand CLA B3 312



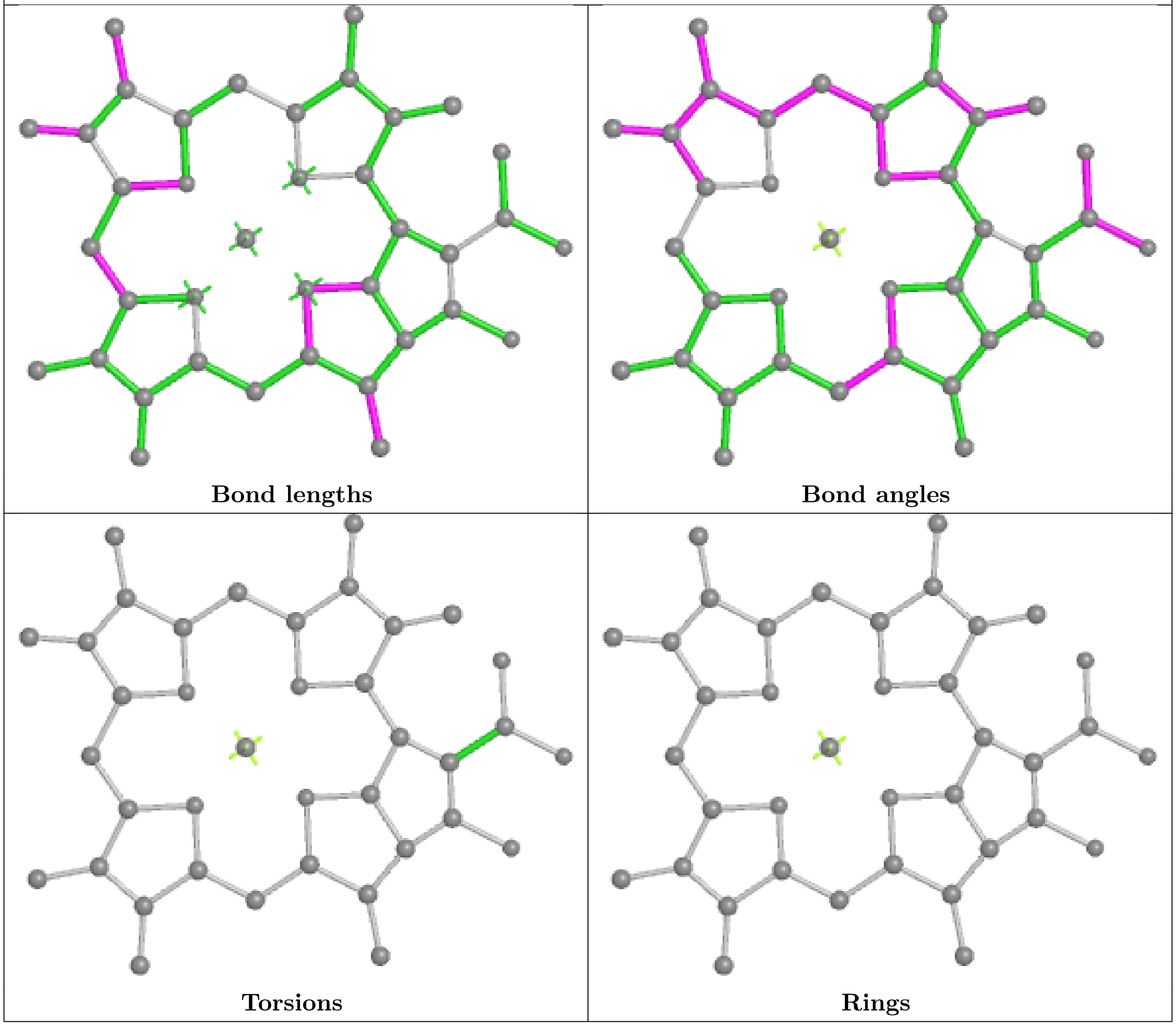
Ligand CLA AG 201

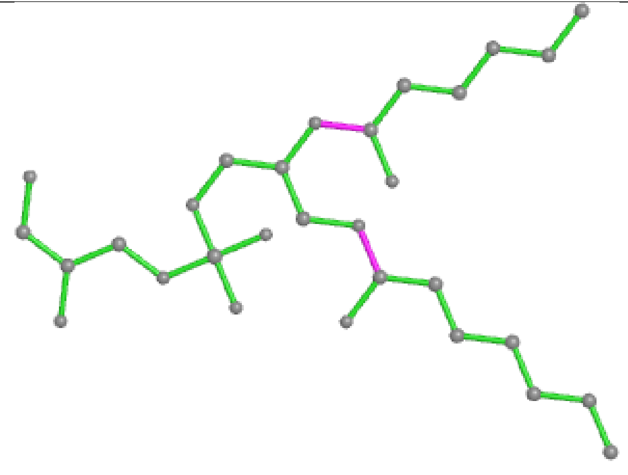
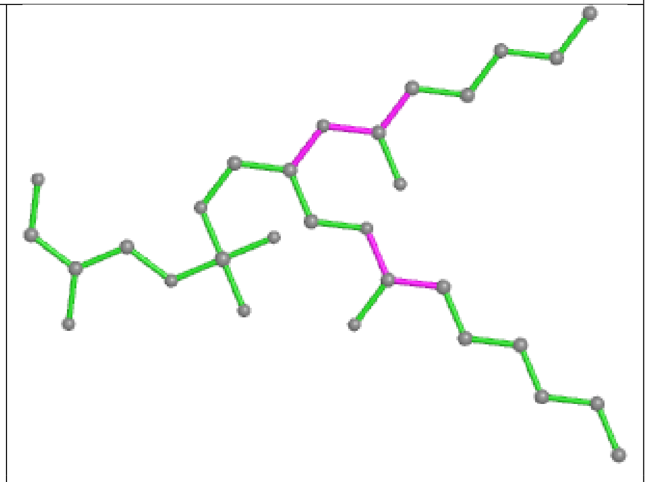
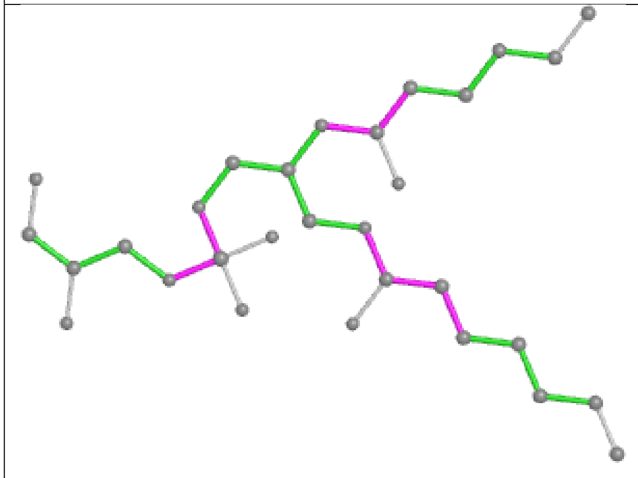
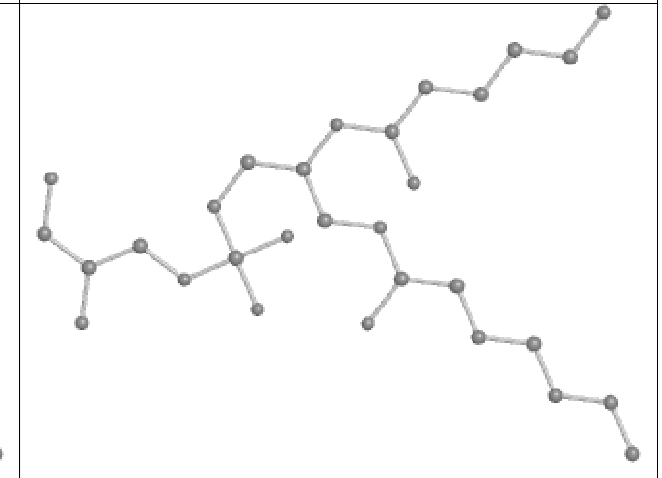


Ligand CLA A4 309

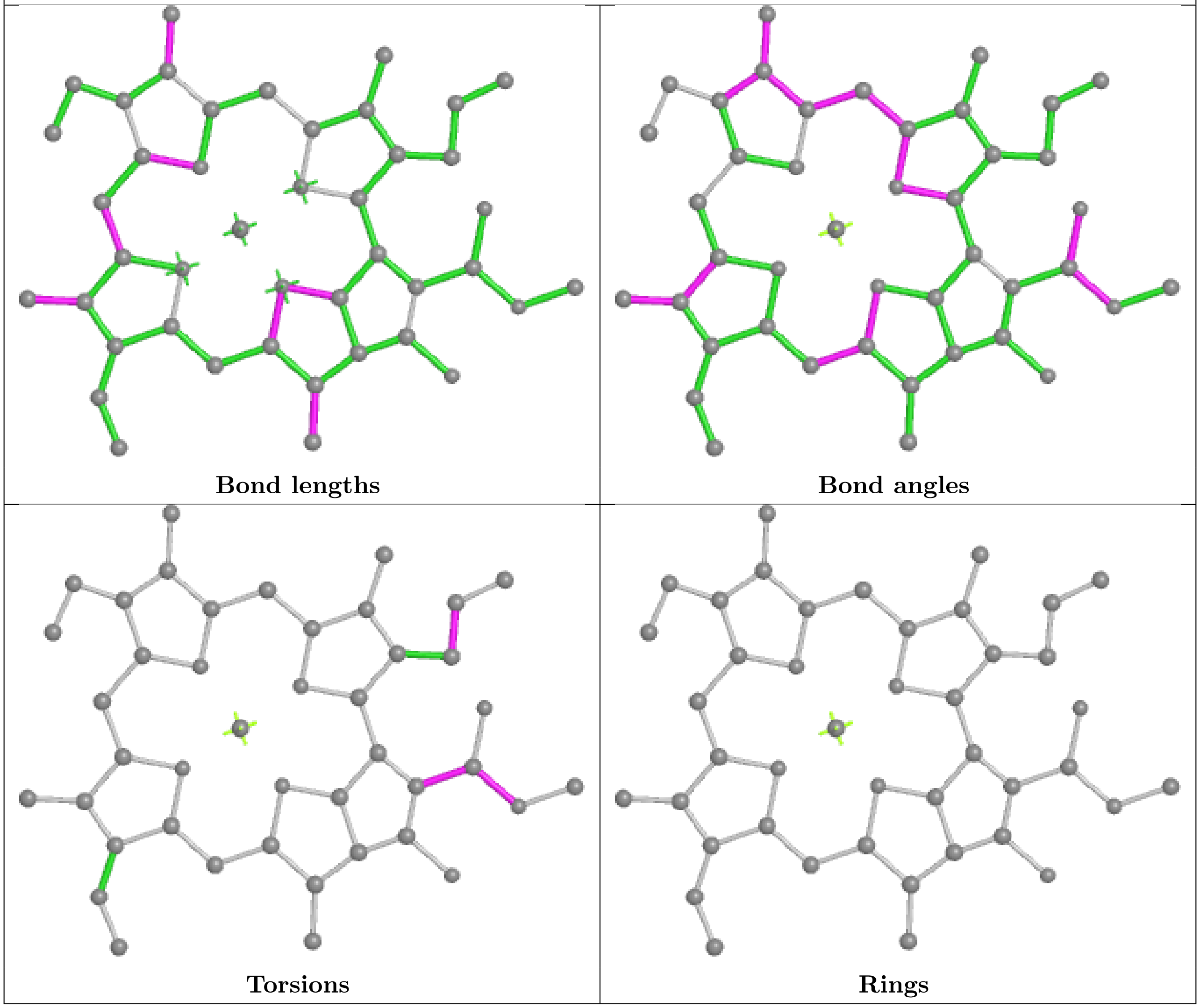


Ligand CLA A1 312



Ligand LHG B5 618	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA BB 833



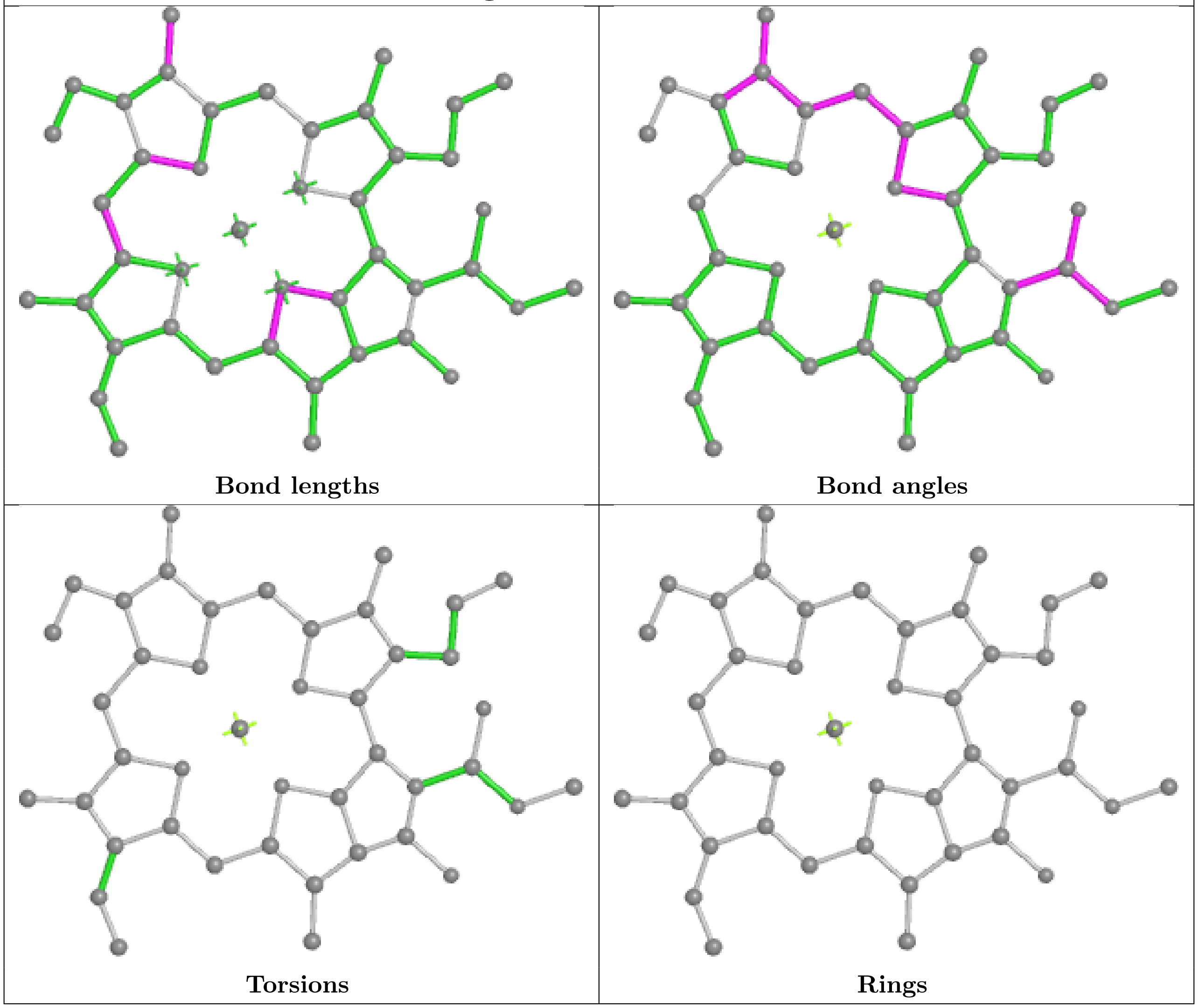
Bond lengths

Bond angles

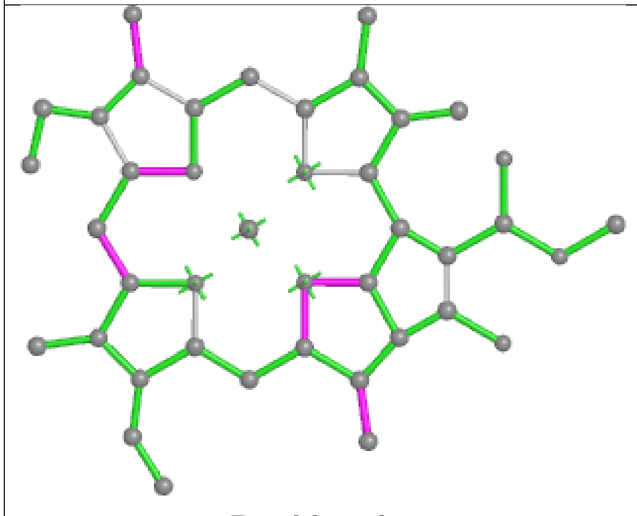
Torsions

Rings

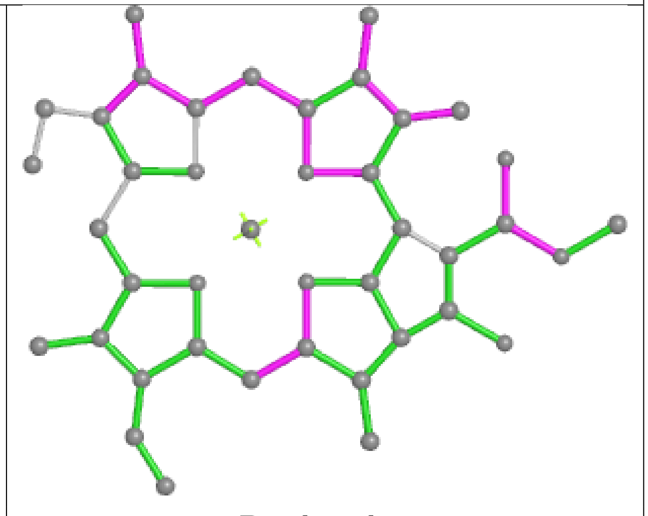
Ligand CLA A3 311



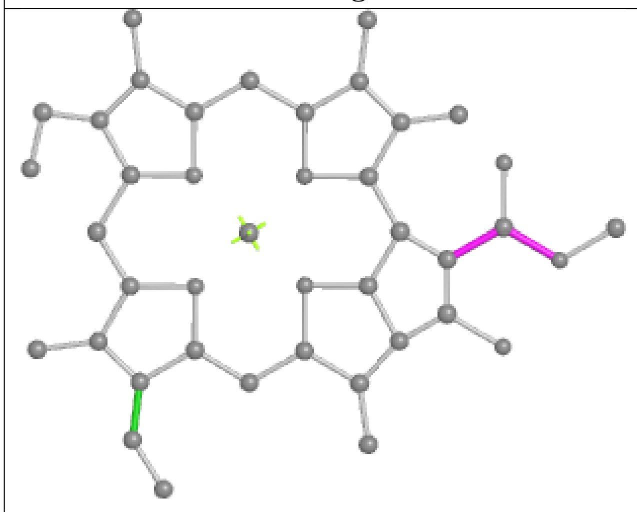
Ligand CLA BA 823



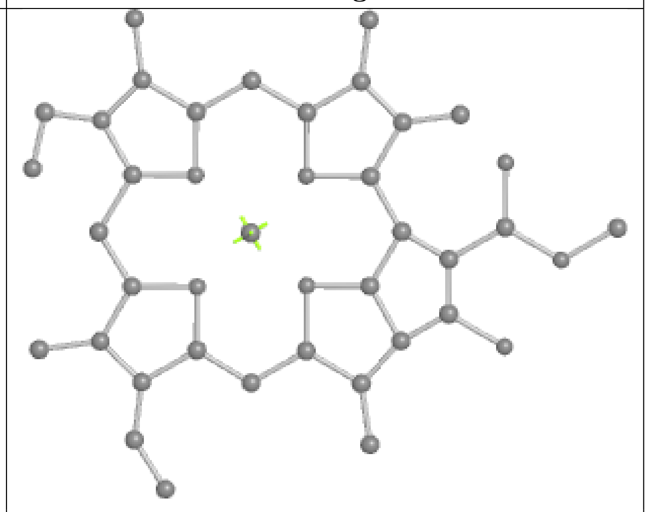
Bond lengths



Bond angles

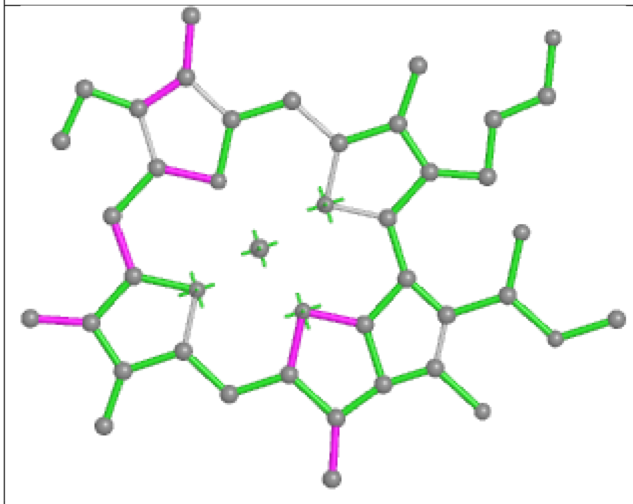


Torsions

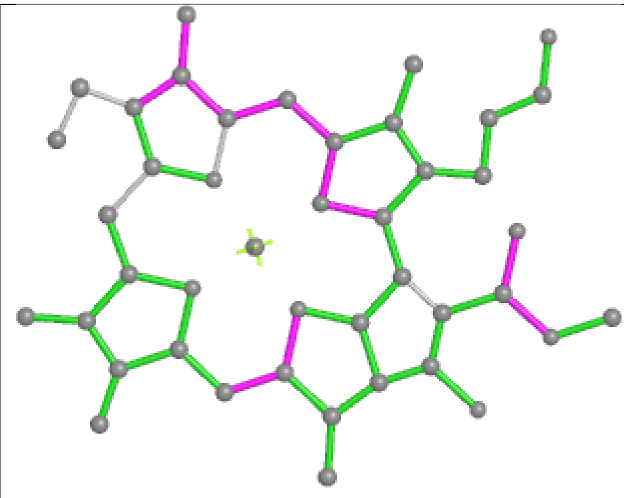


Rings

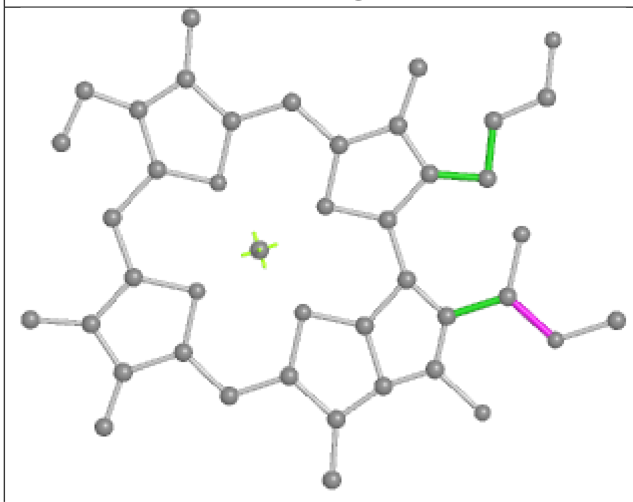
Ligand CLA A6 605



Bond lengths



Bond angles



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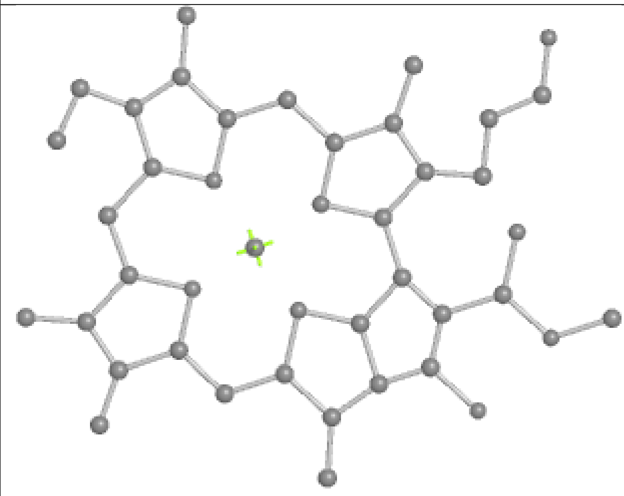
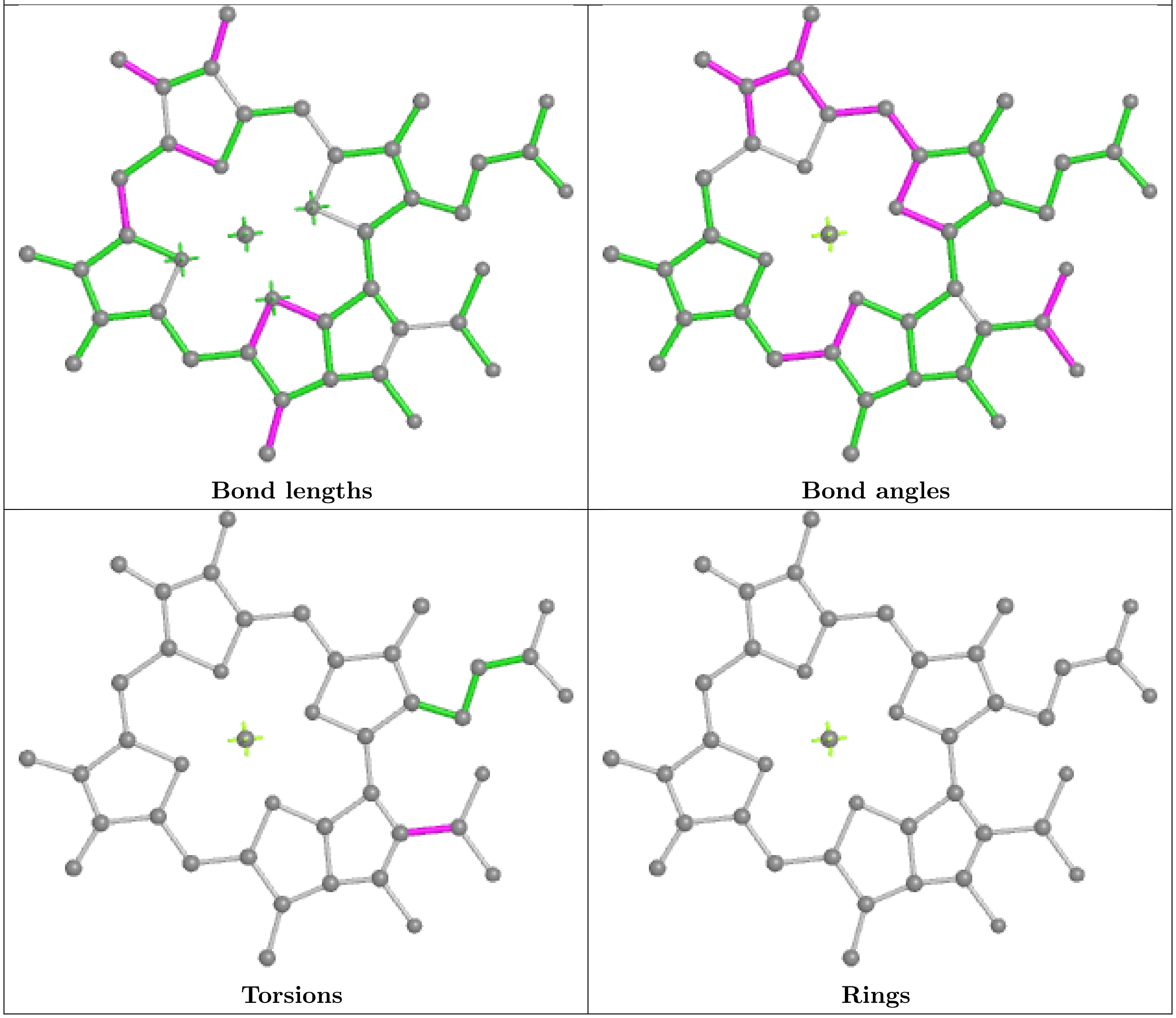
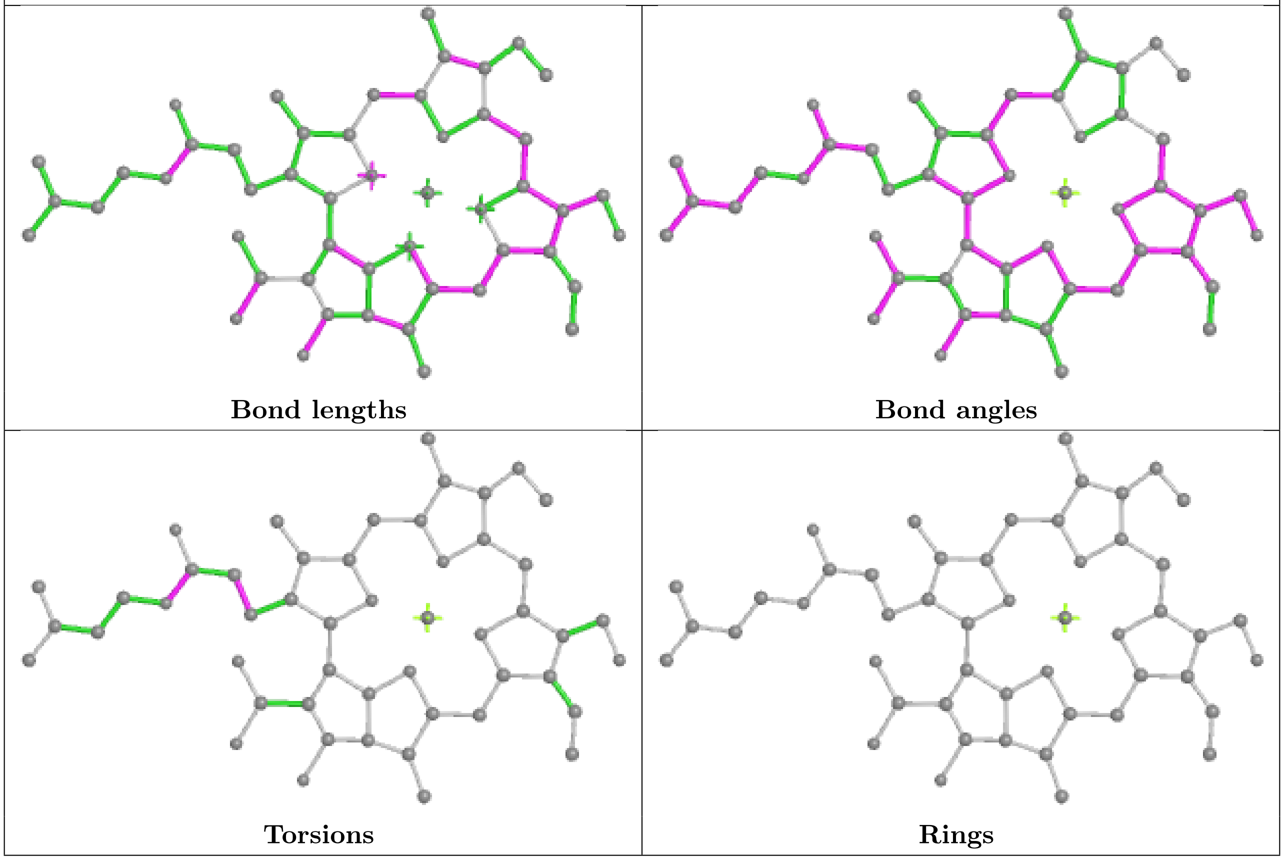


Rings

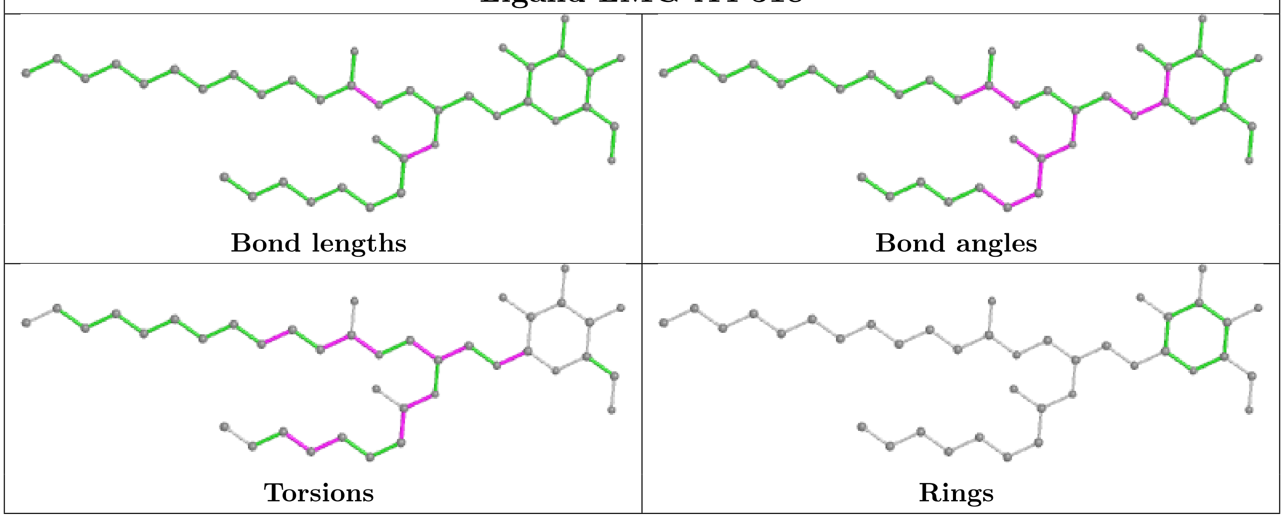
Ligand CLA B3 303

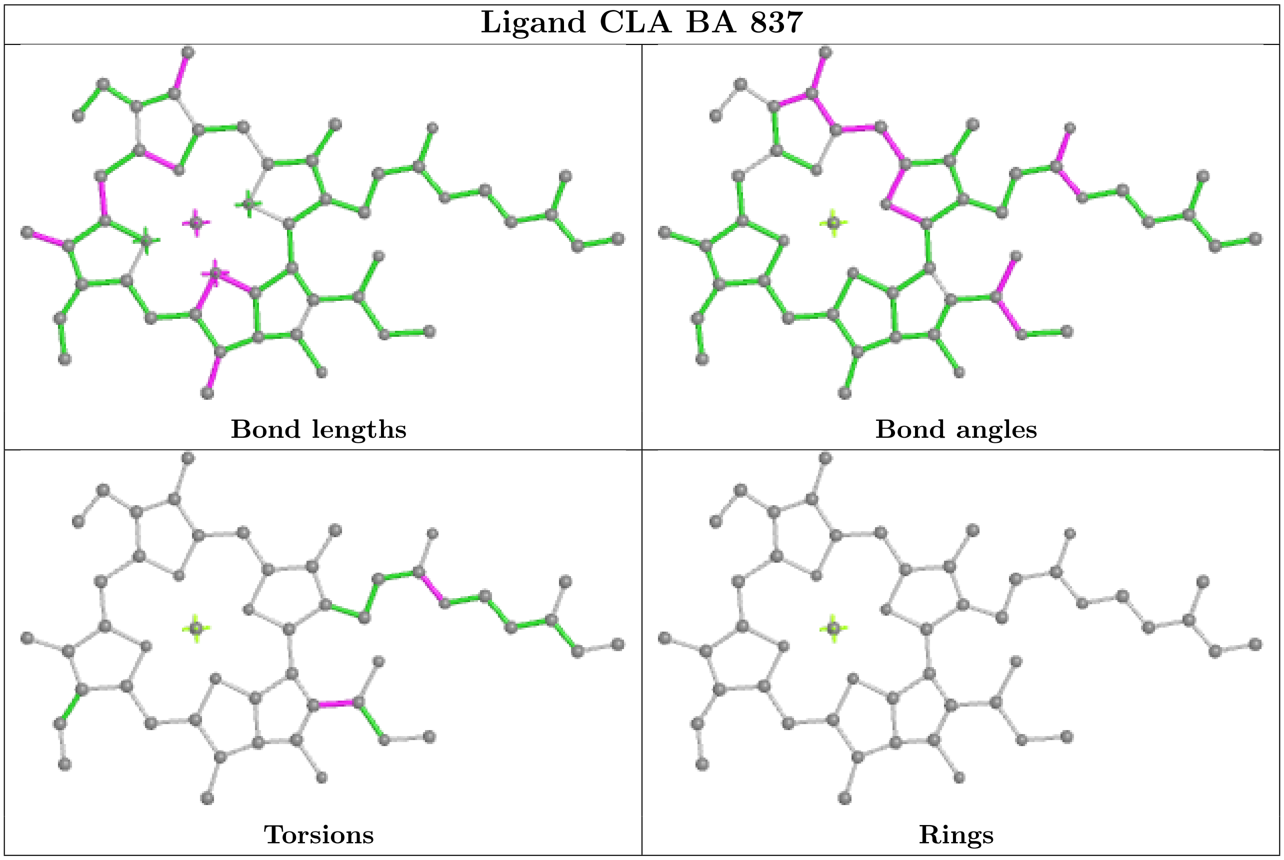


Ligand CHL B1 303

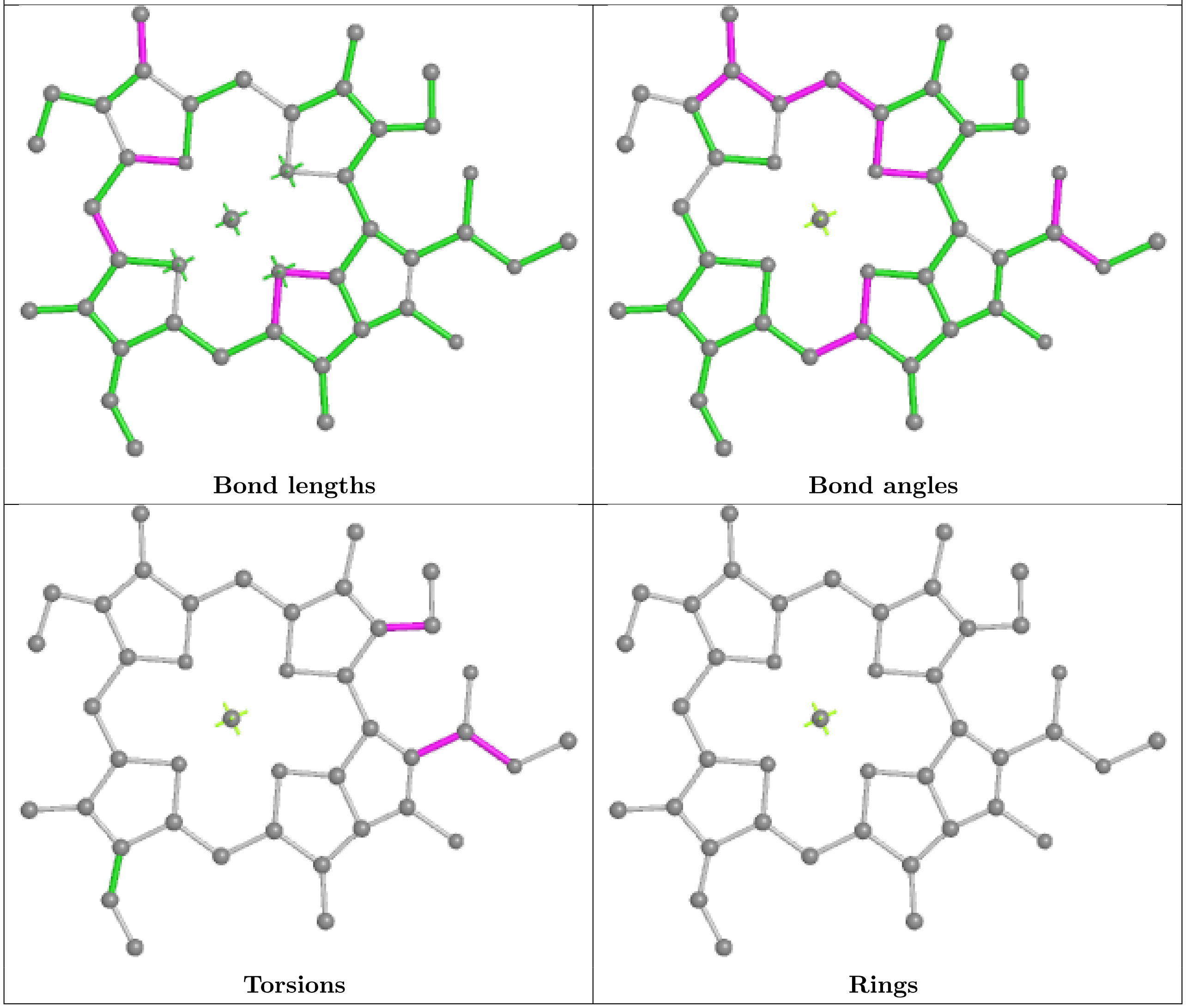


Ligand LMG A4 318

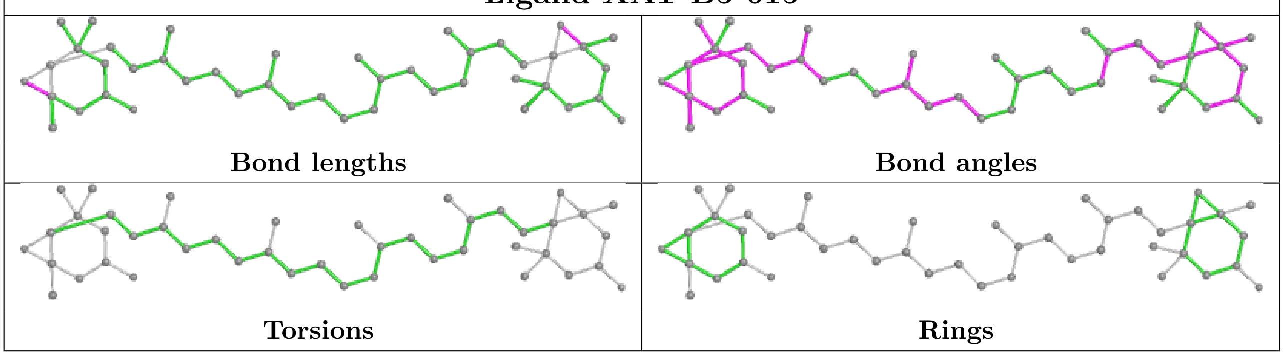



Ligand CLA BA 837
Bond lengths
Bond angles
Torsions
Rings

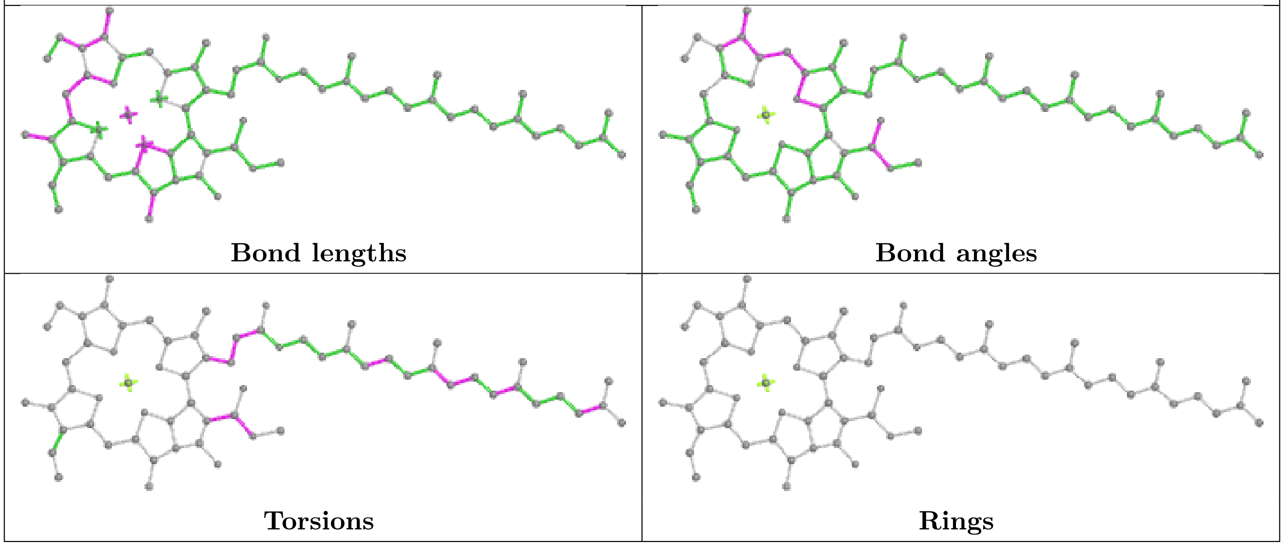
Ligand CLA BB 837



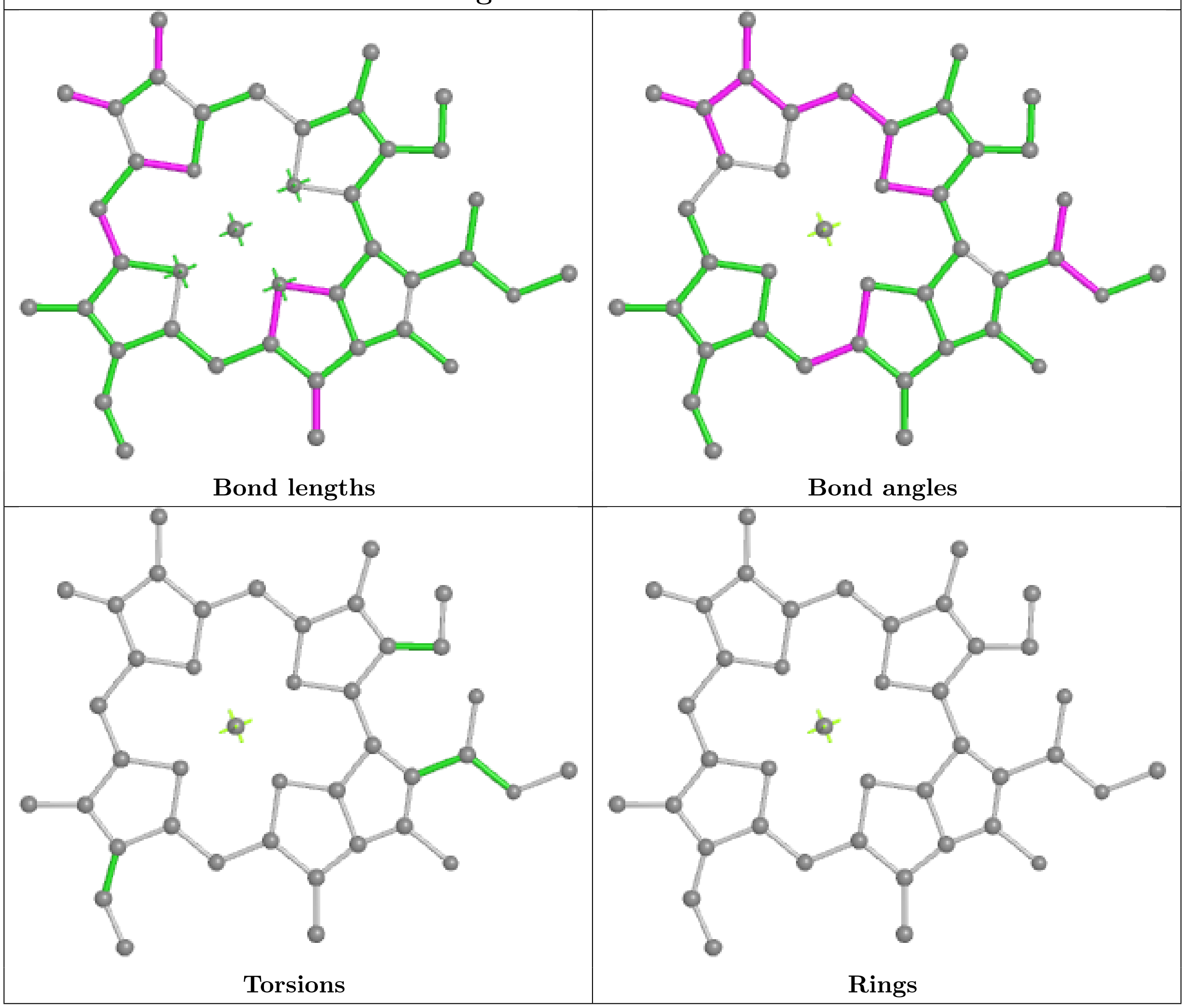
Ligand XAT B5 615



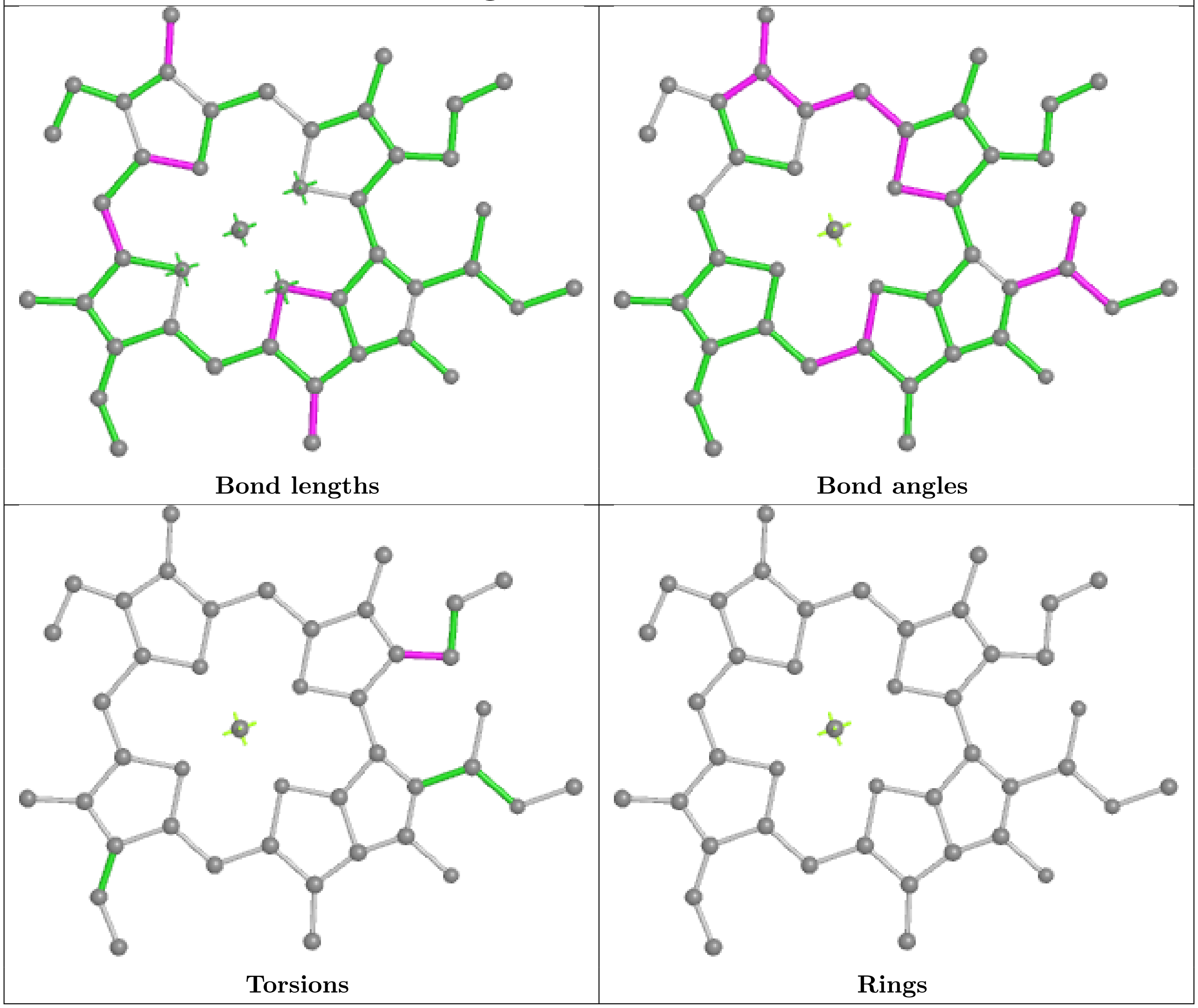
Ligand CLA AB 810



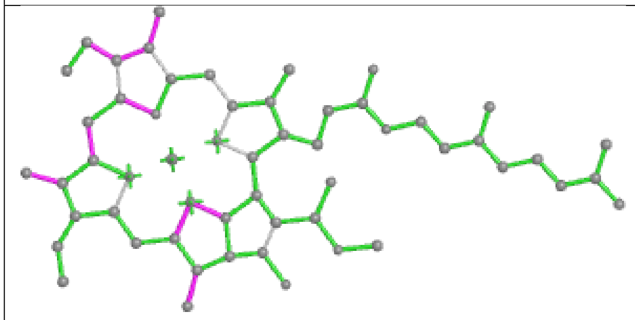
Ligand CLA A3 306



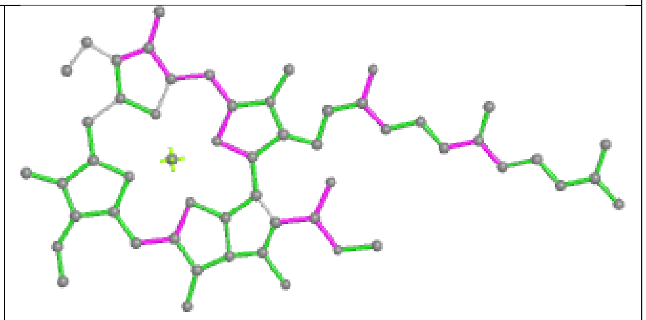
Ligand CLA B2 613



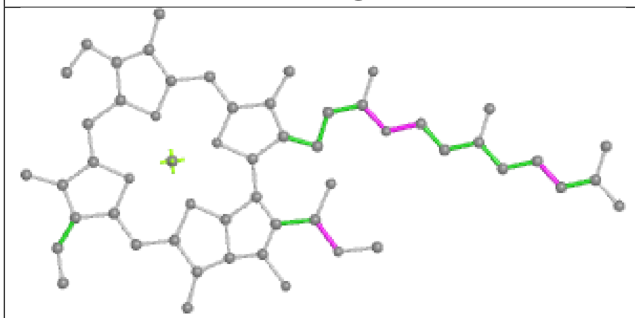
Ligand CLA AA 838



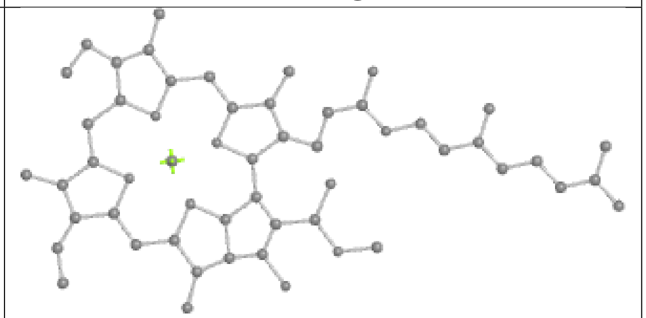
Bond lengths



Bond angles

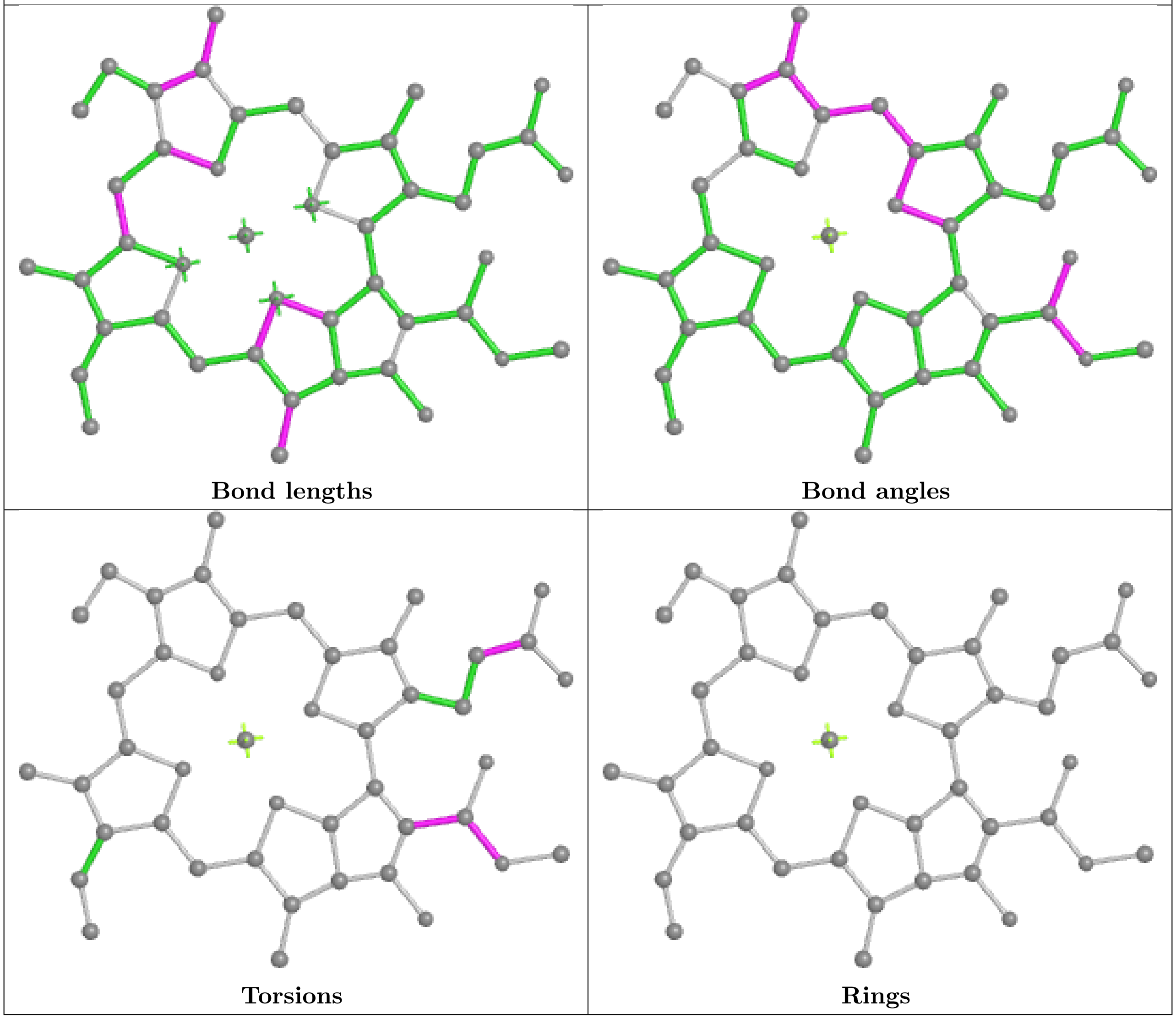


Torsions

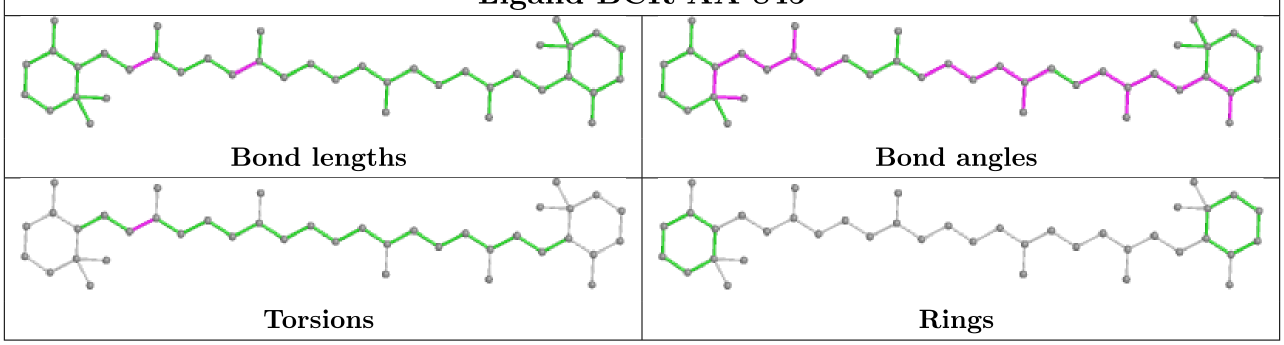


Rings

Ligand CLA B1 313



Ligand BCR AA 845



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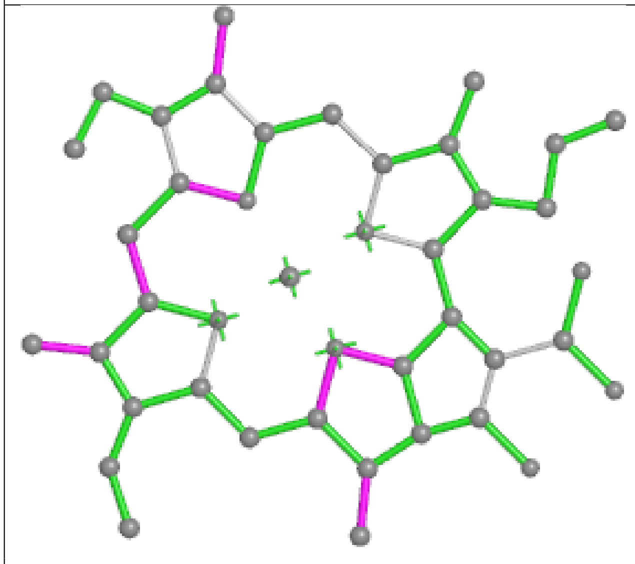
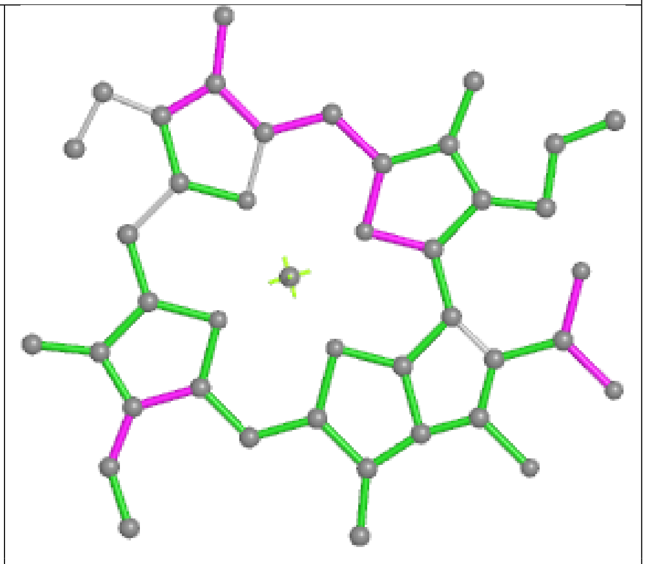
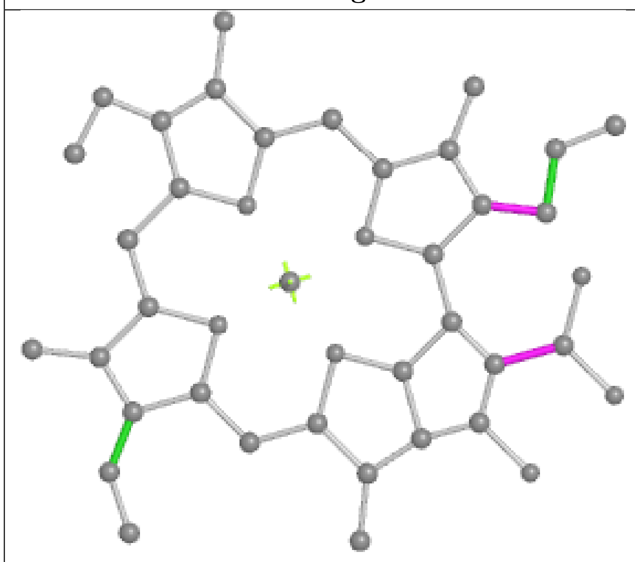

Bond lengths


Bond angles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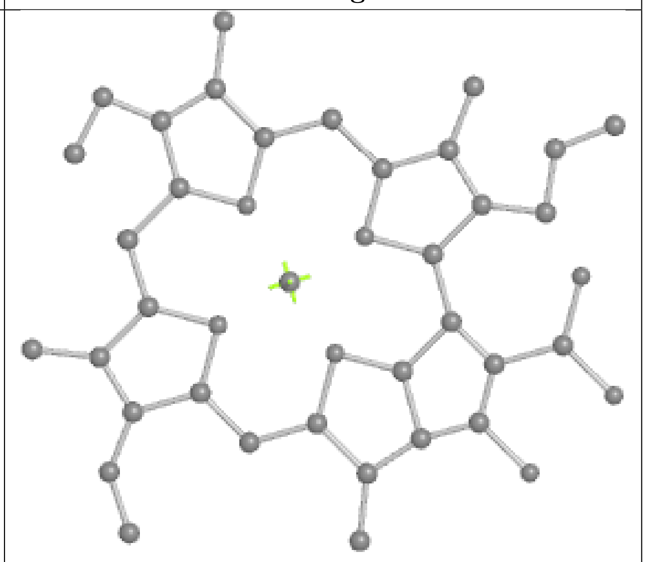
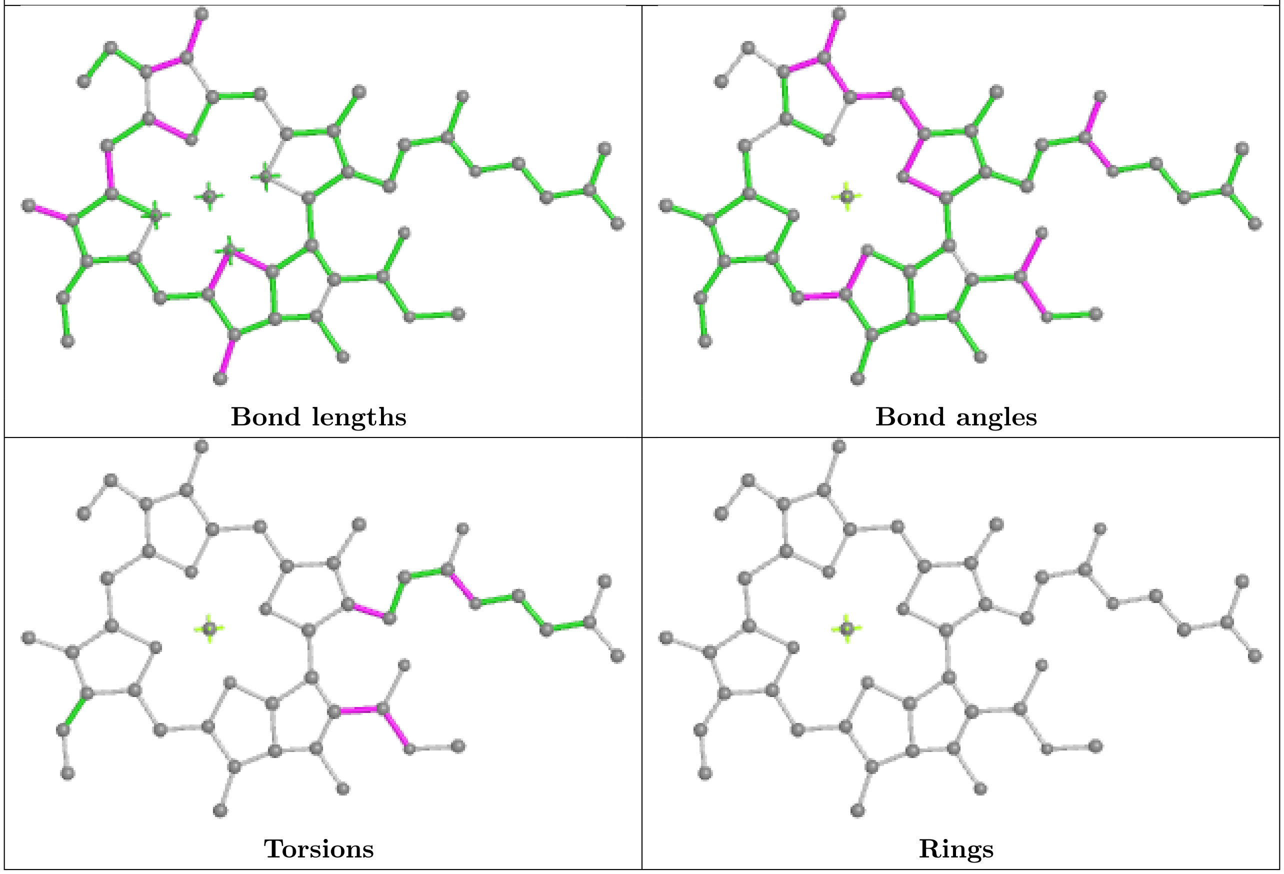

Rings

Ligand CLA AB 821



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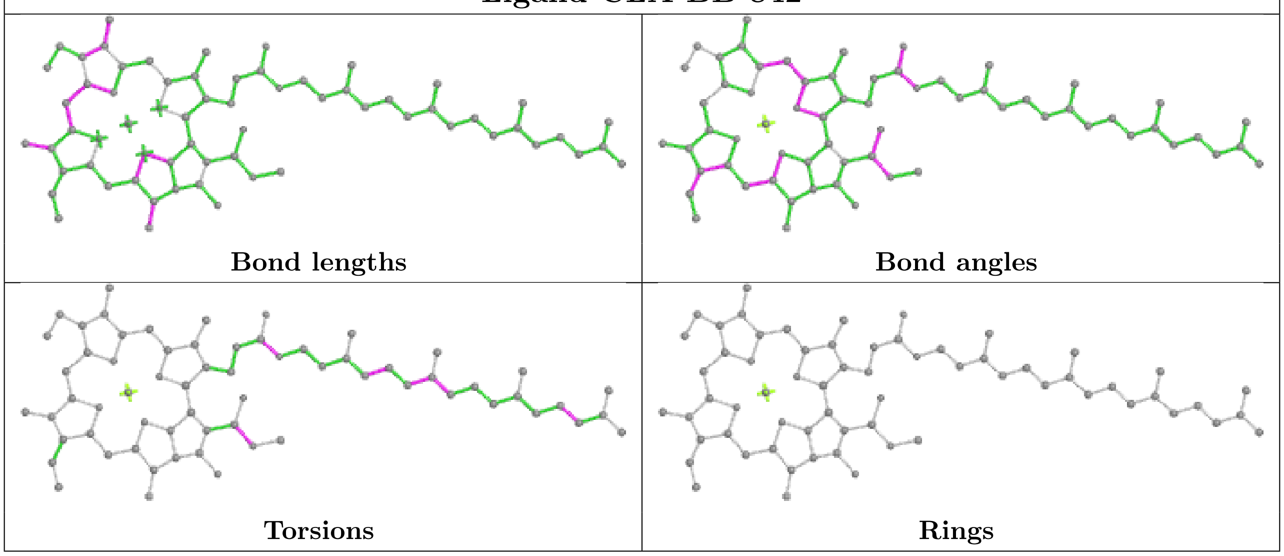
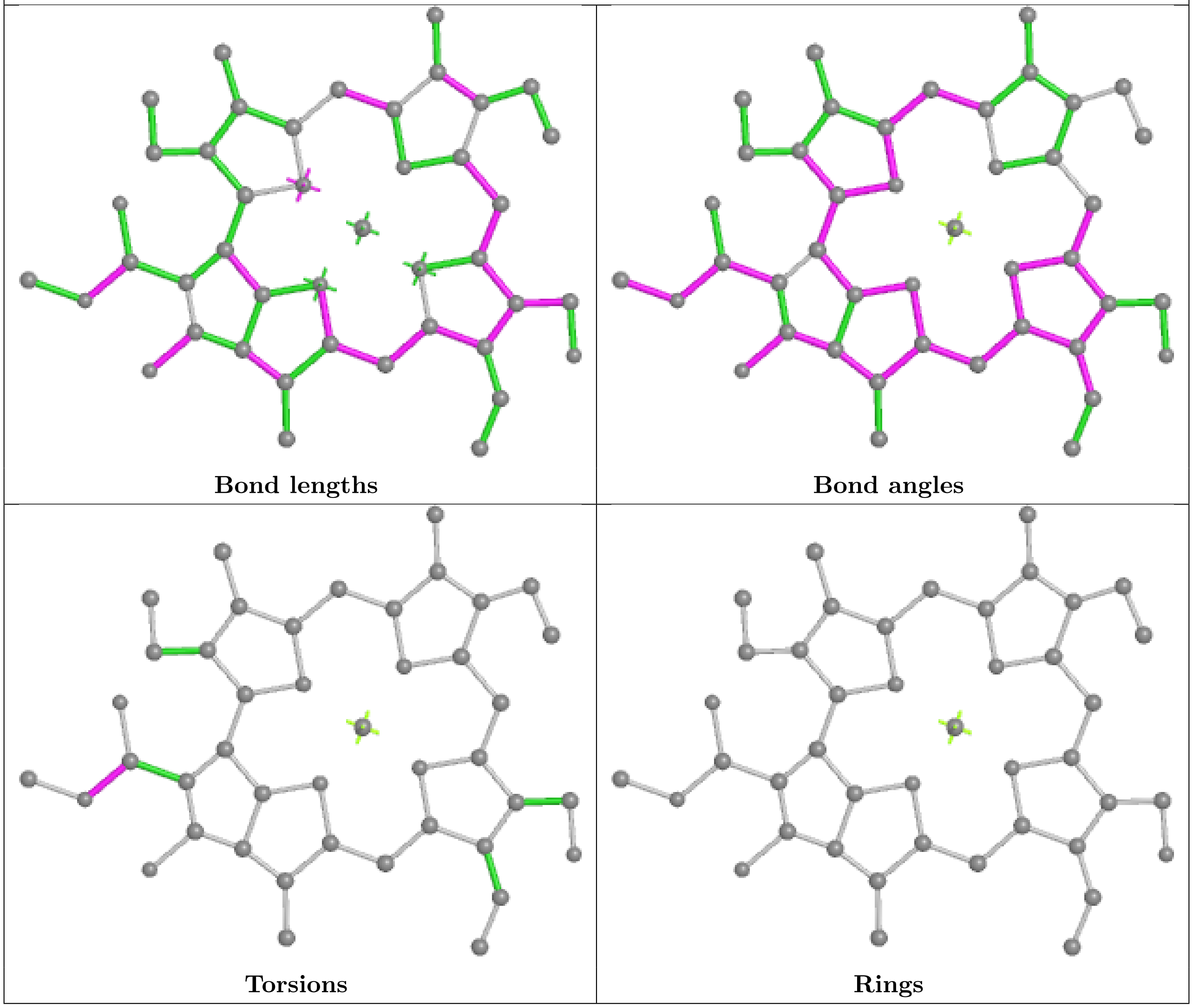


Ligand CHL A6 607



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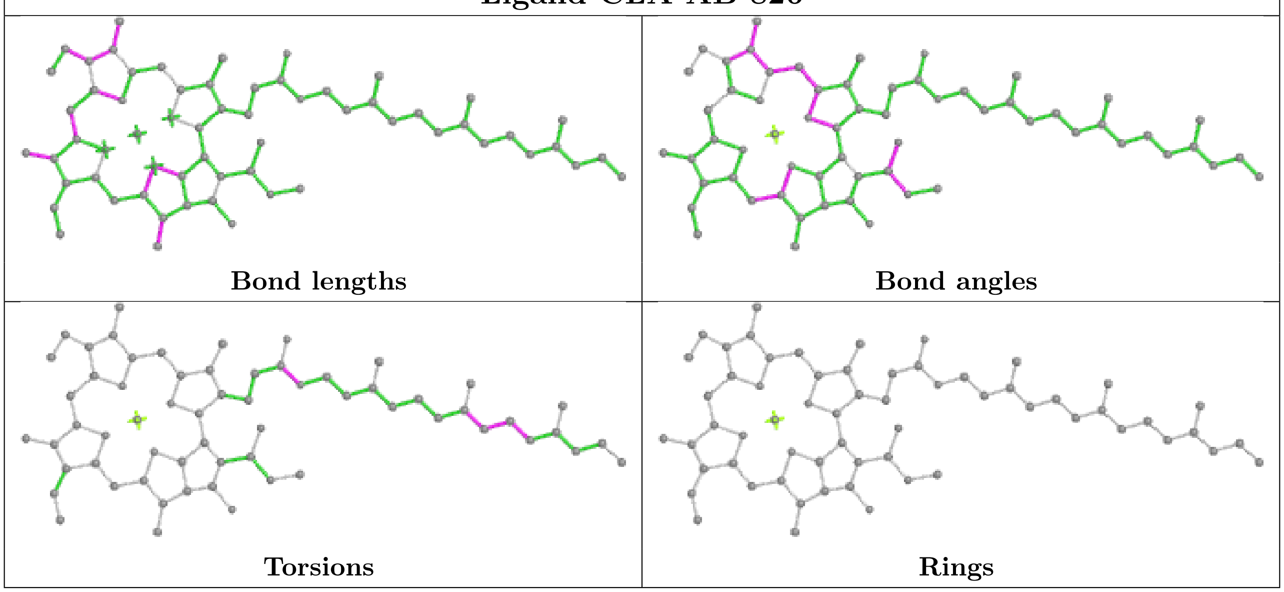
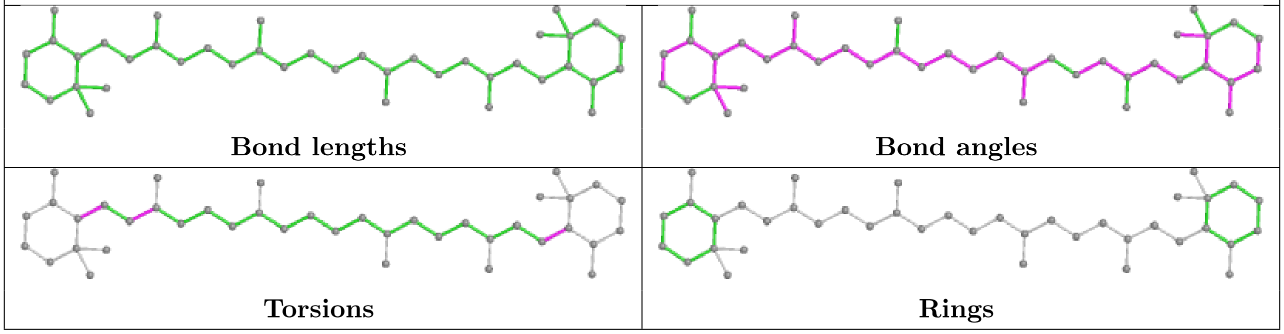
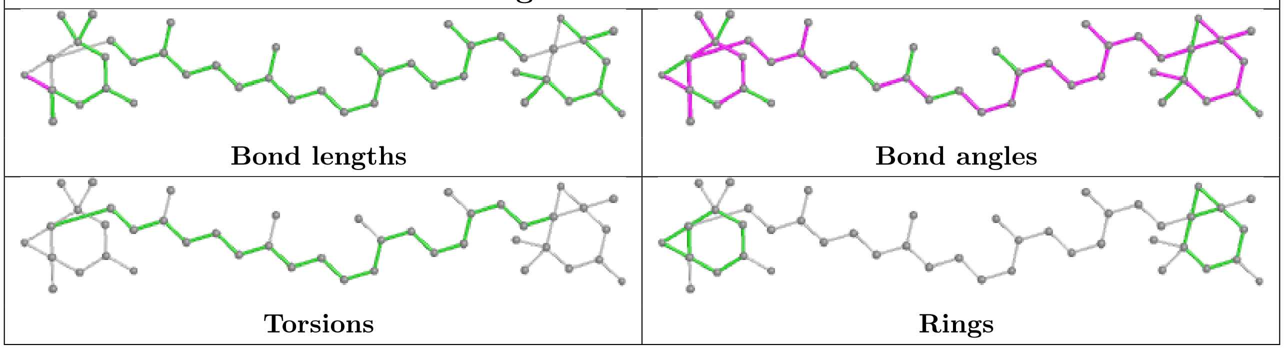


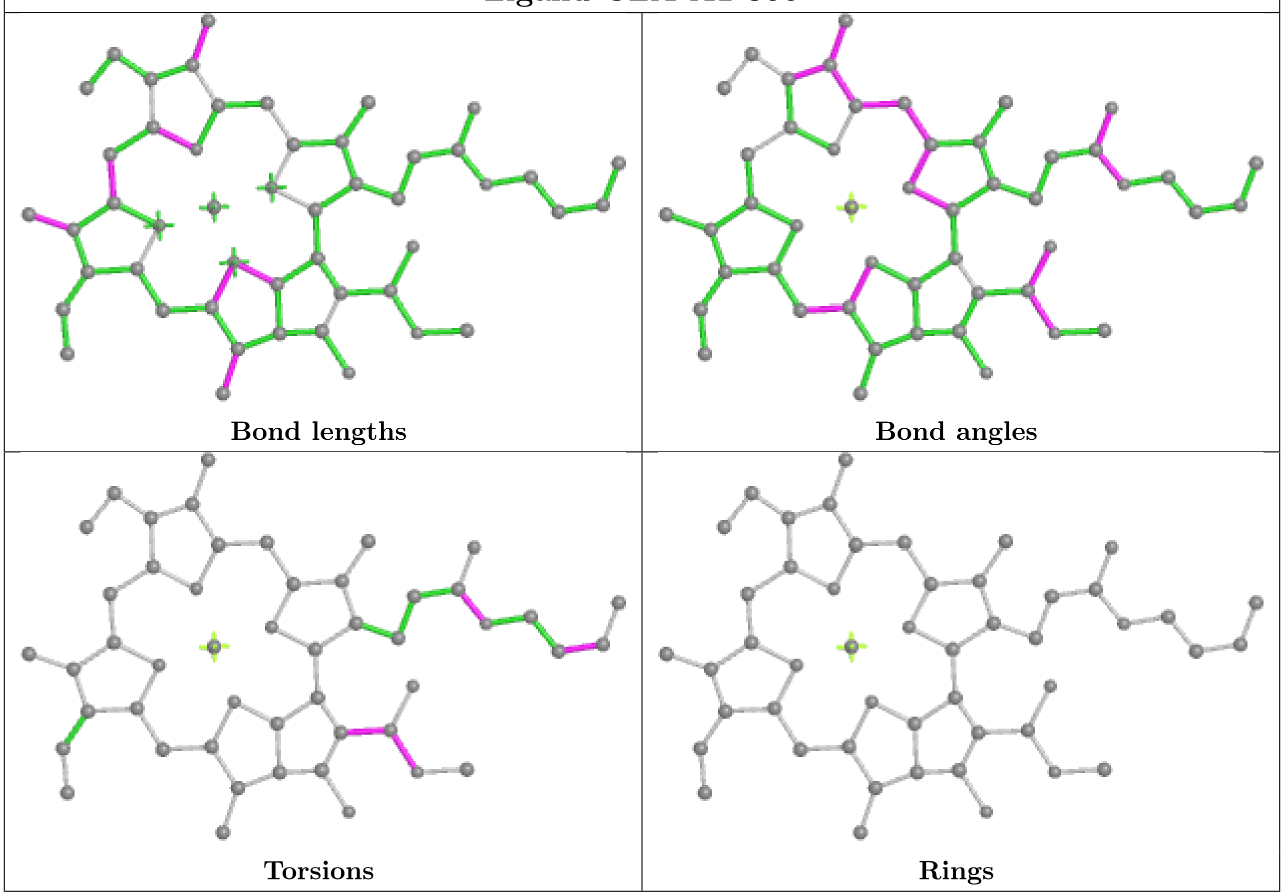
Ligand BCR AJ 103



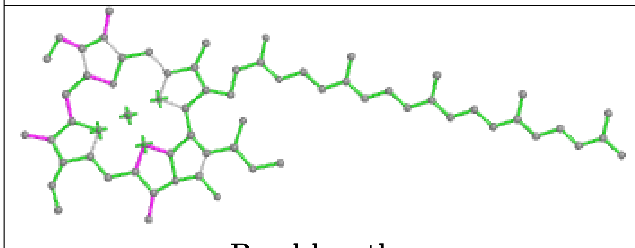
Ligand XAT B3 316

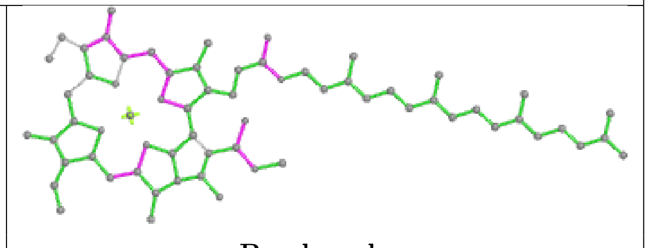


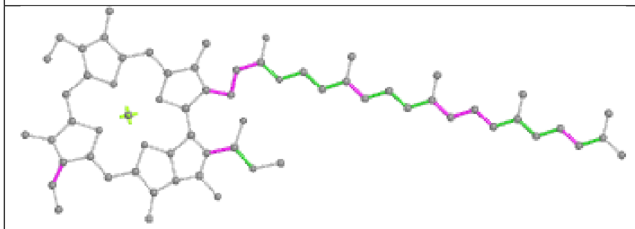
Ligand CLA A1 306

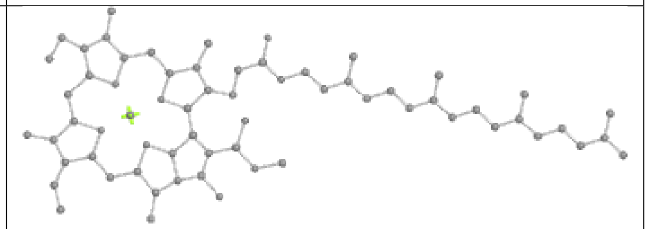


Ligand CLA AB 828

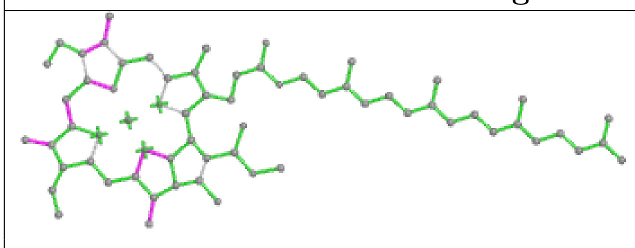

Bond lengths


Bond angles


Torsions


Rings

Ligand CLA BA 811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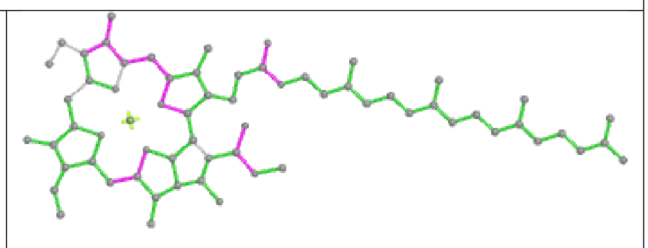
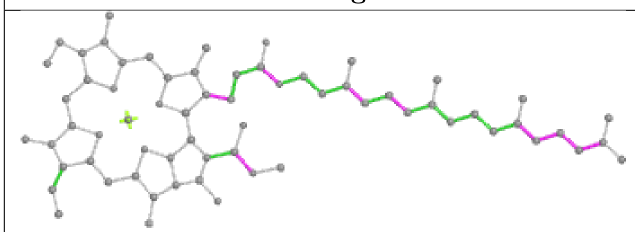

Bond angles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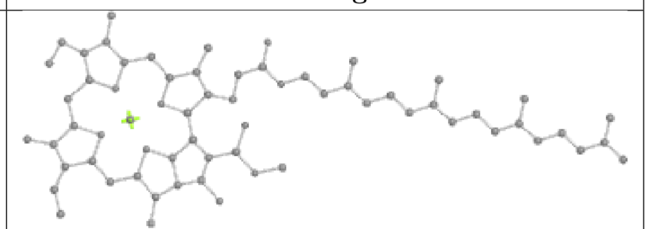
Rings

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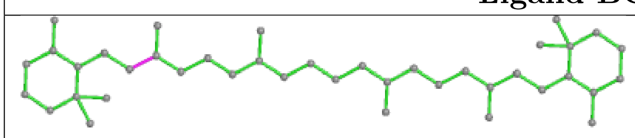
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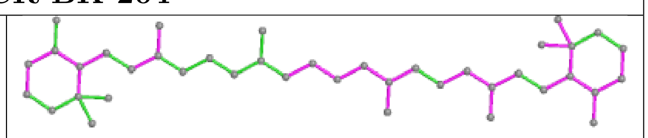
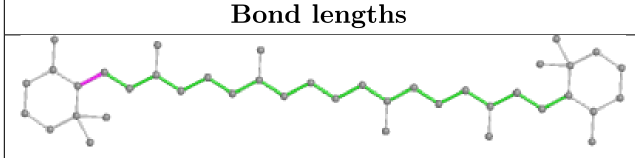
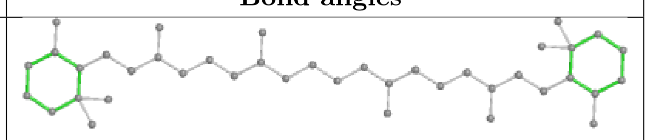
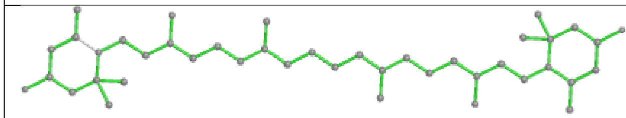
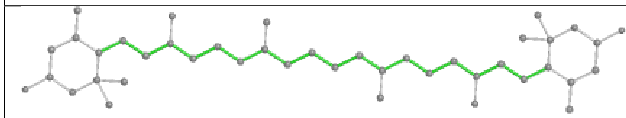
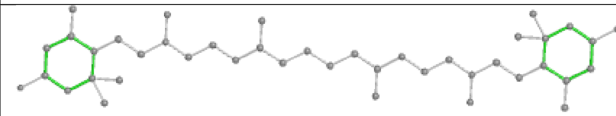
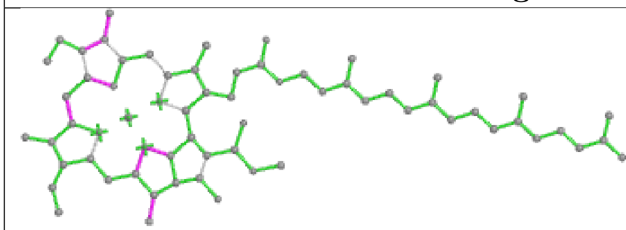
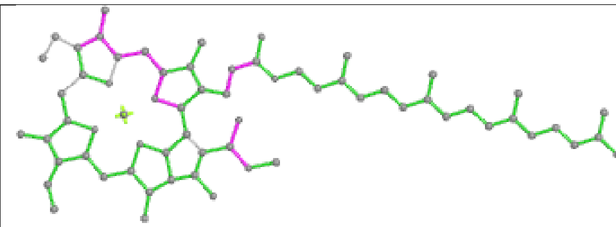
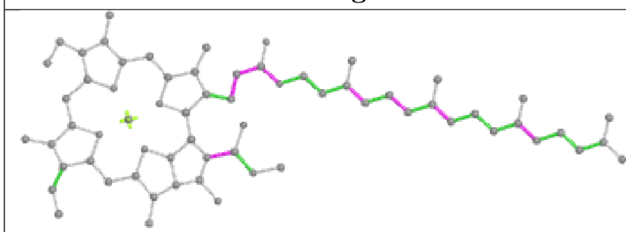
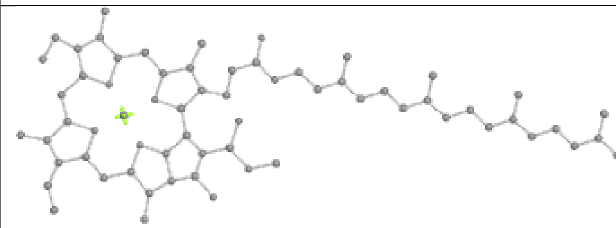

Bond angles

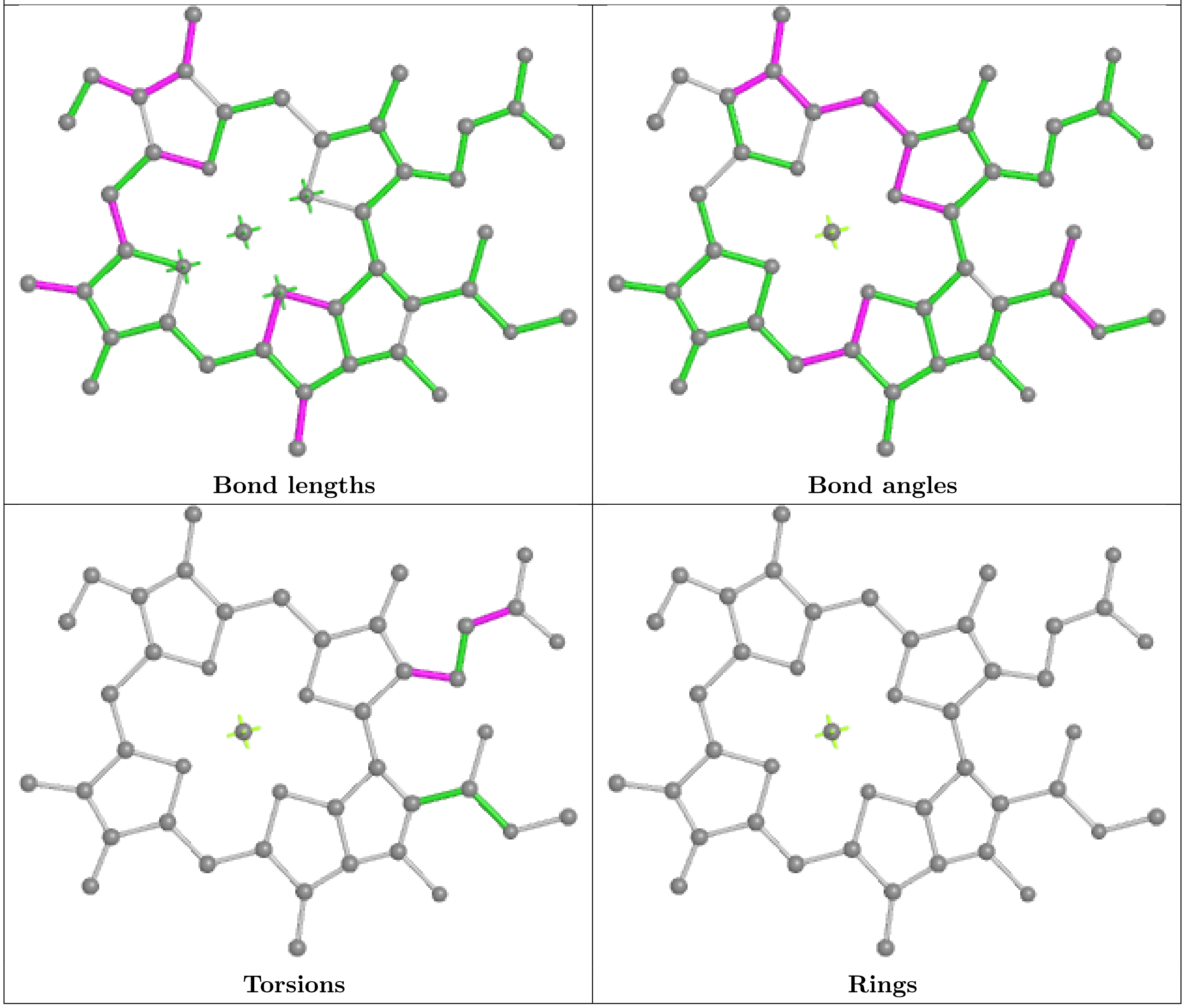

Torsions


Rings

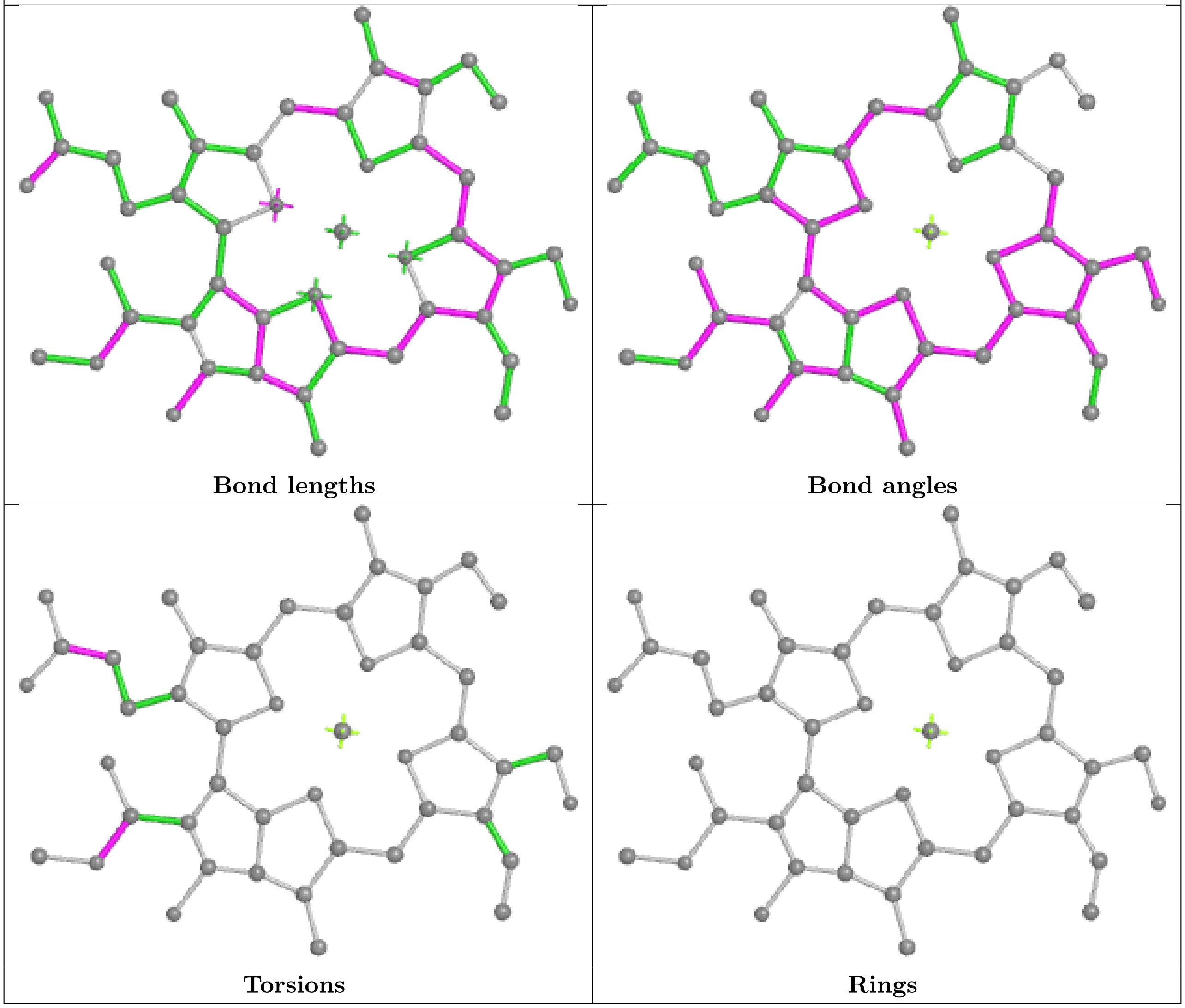
Ligand LUT A3 316	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand CLA BA 842	
 Bond lengths	 Bond angles
 Torsions	 Rings

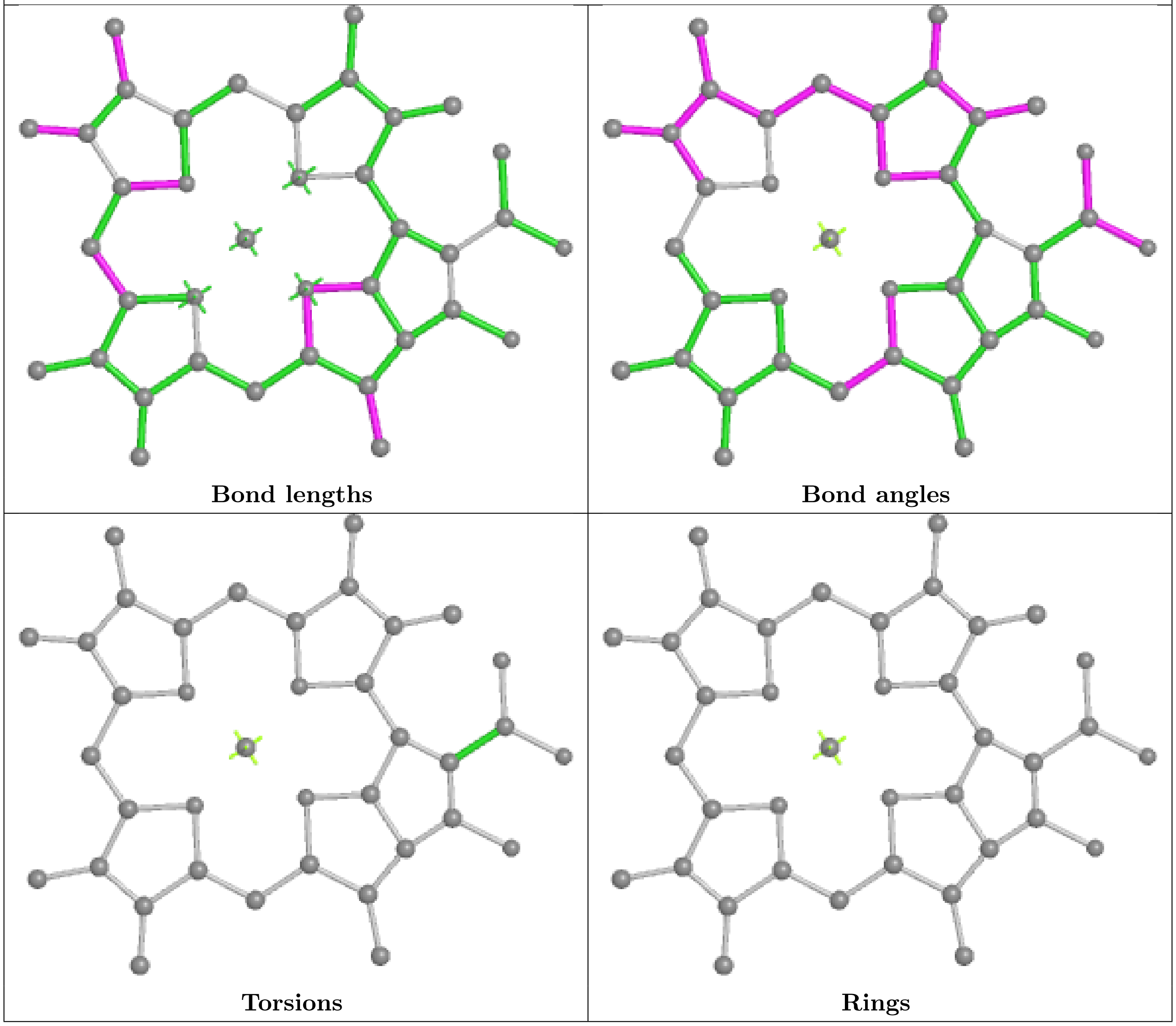
Ligand CLA B5 608



Ligand CHL B2 607



Ligand CLA A1 315



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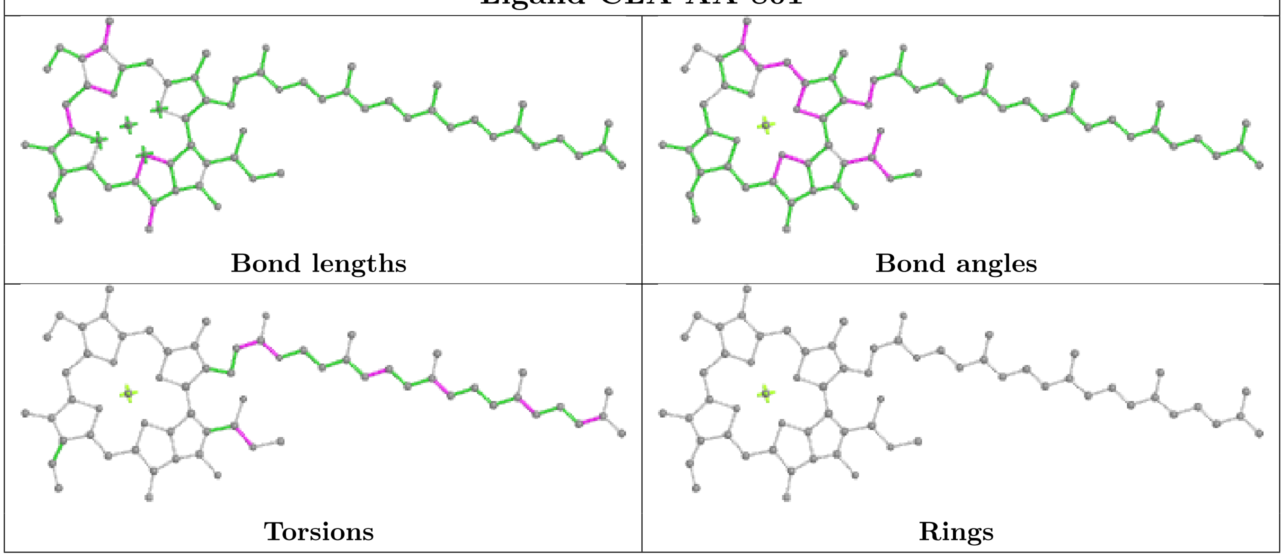

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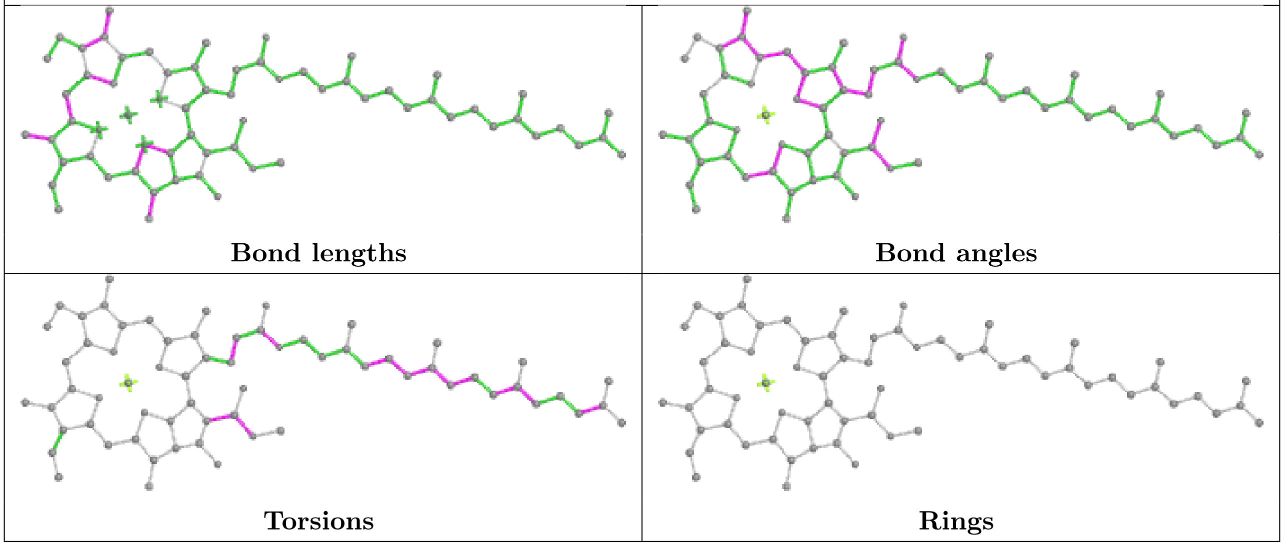
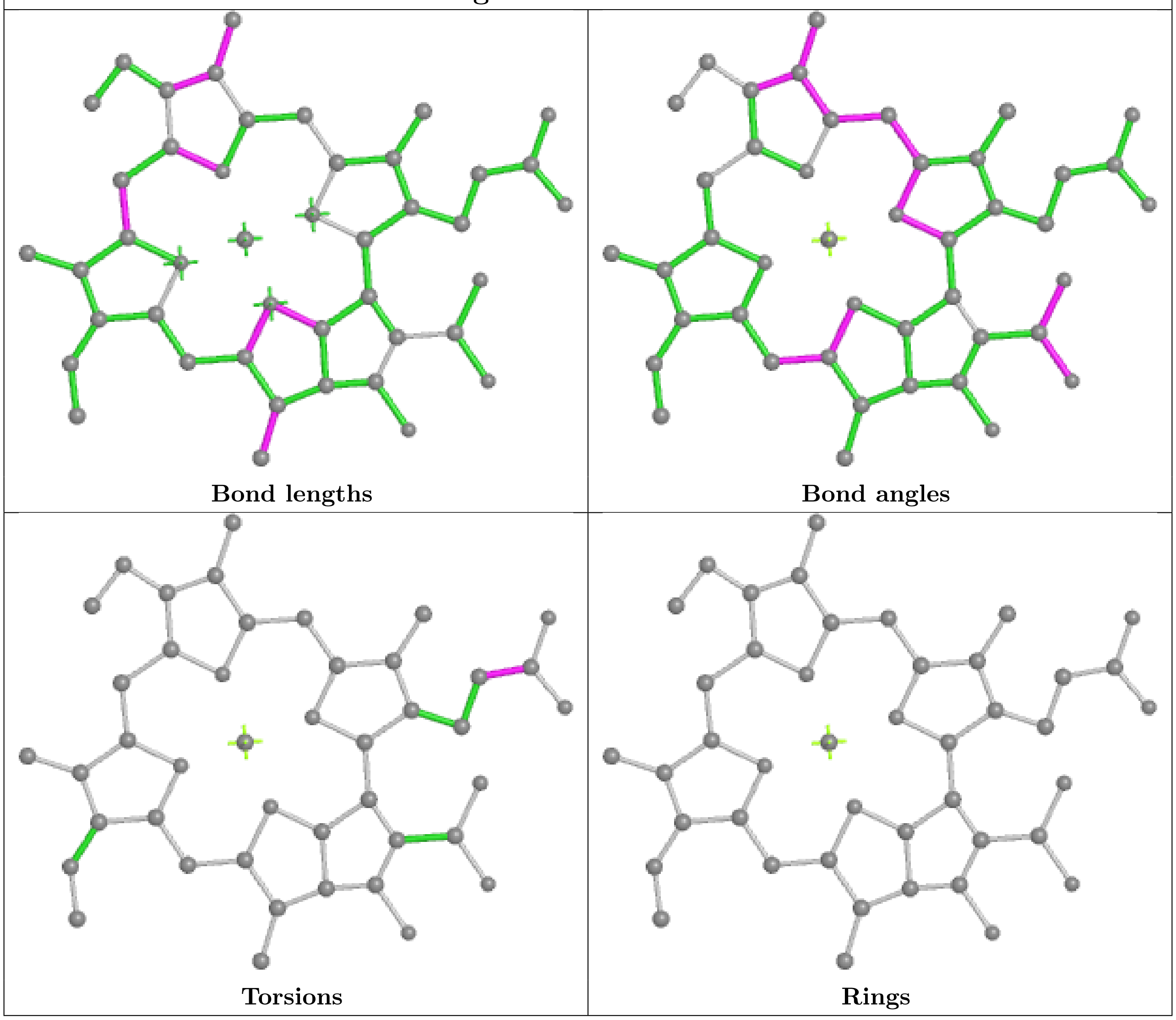
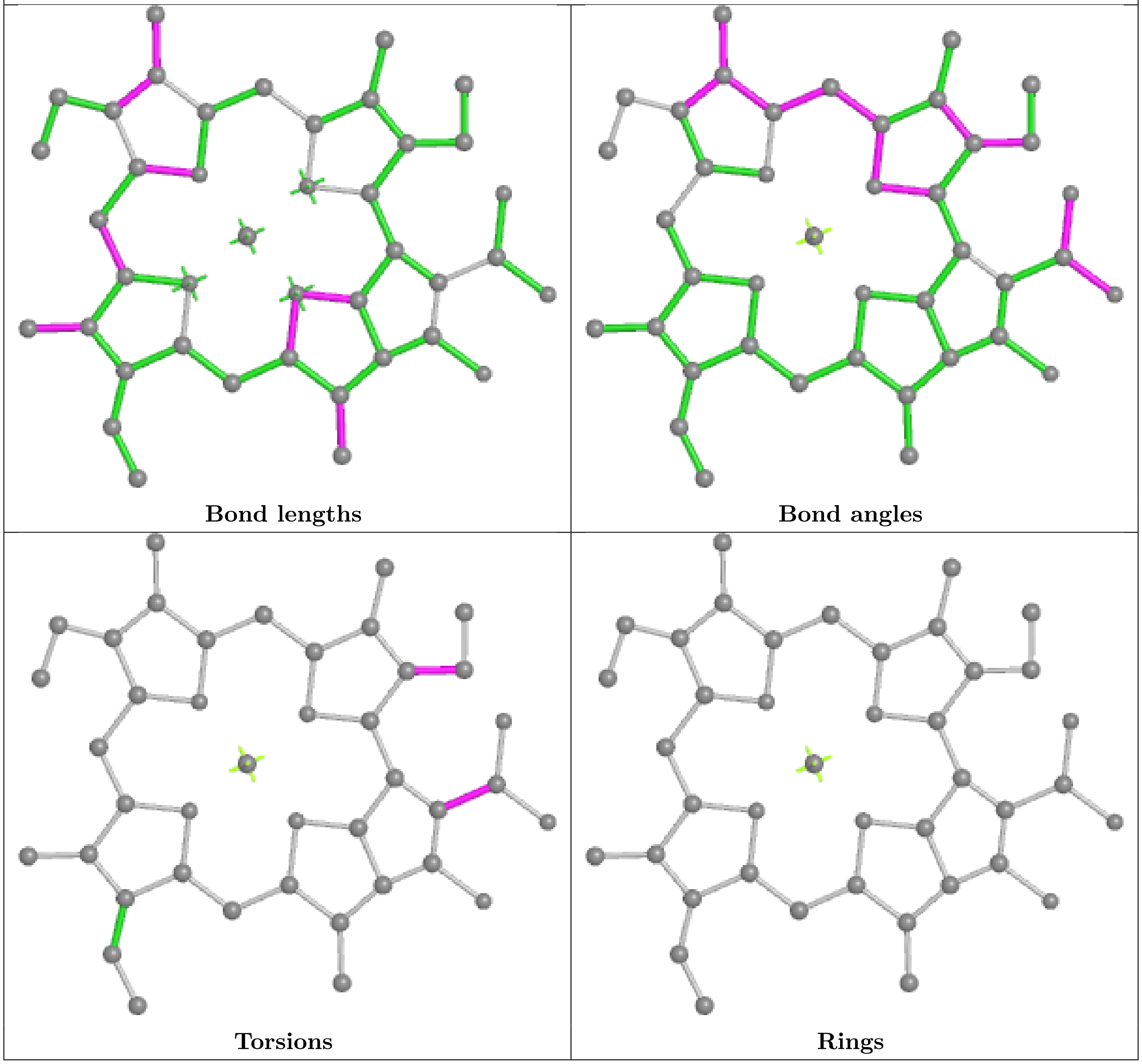


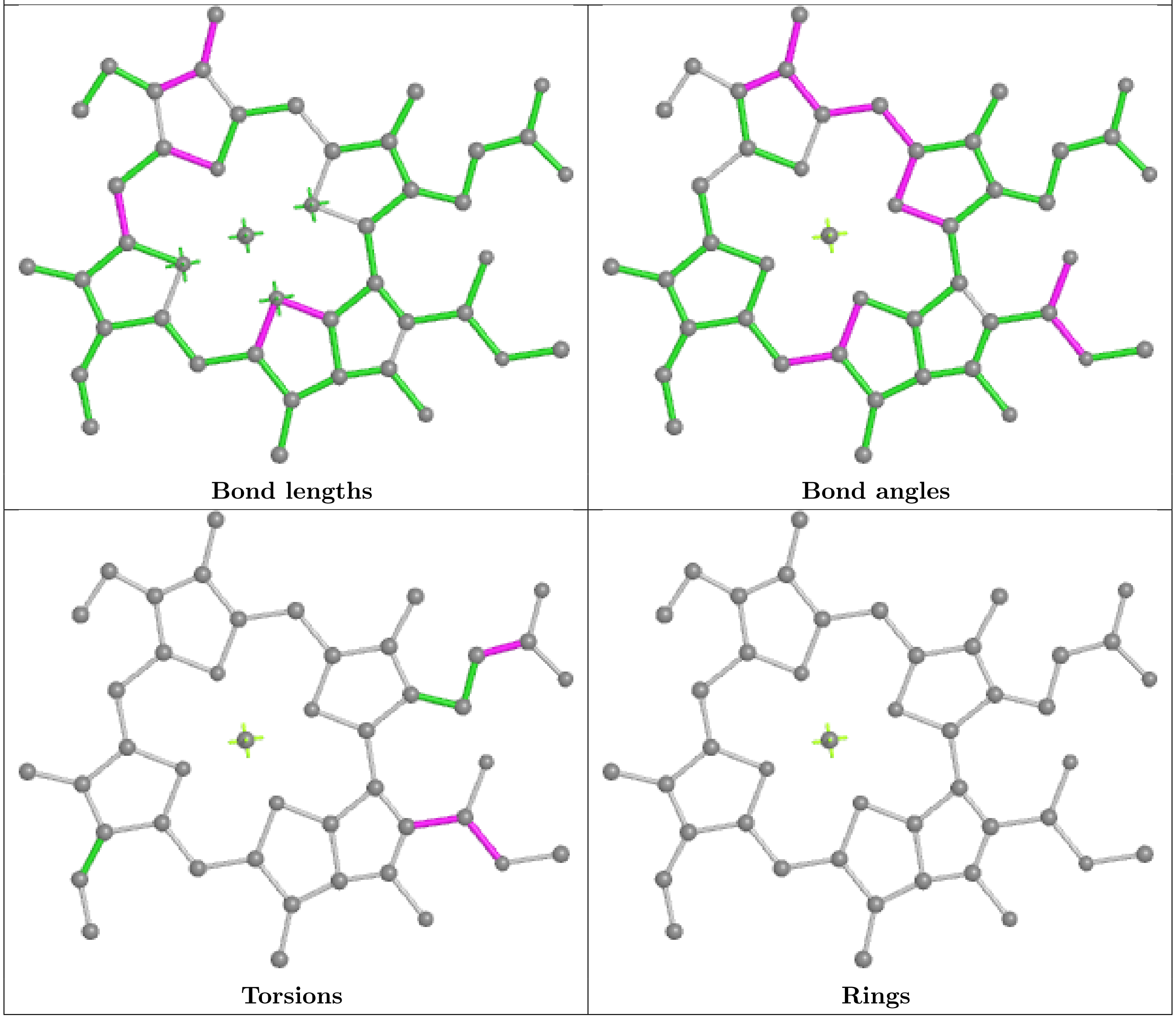
Ligand CLA B1 309



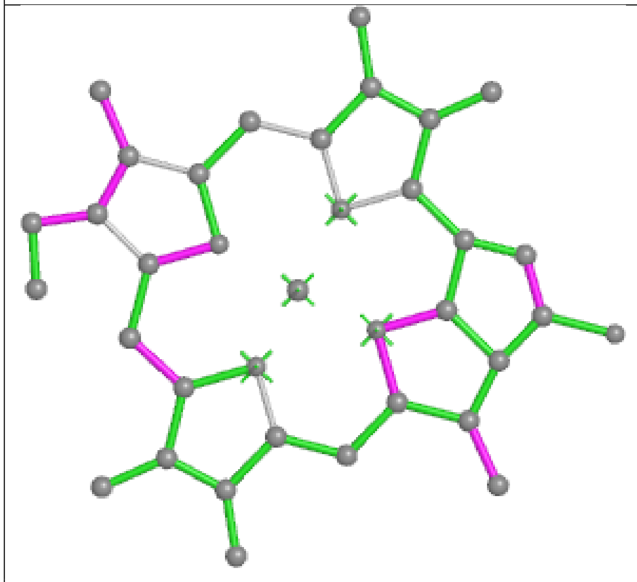
Ligand CLA B5 611



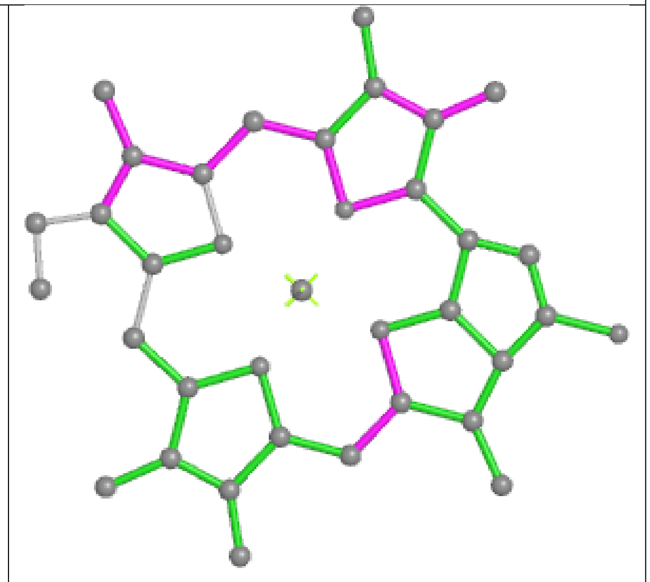
Ligand CLA BG 202



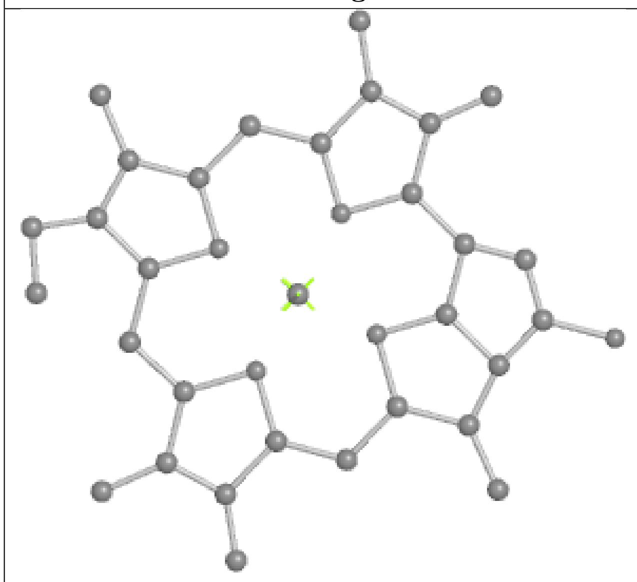
Ligand CLA B3 313



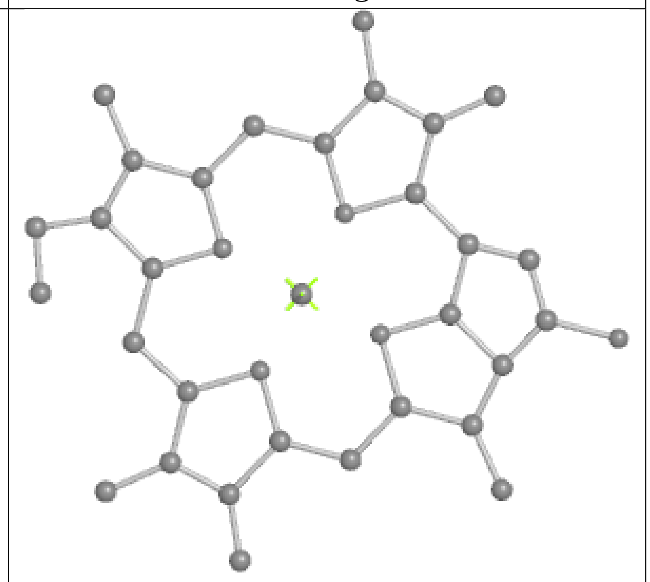
Bond lengths



Bond angles

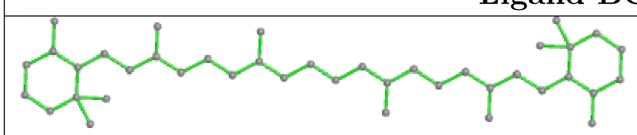


Torsions

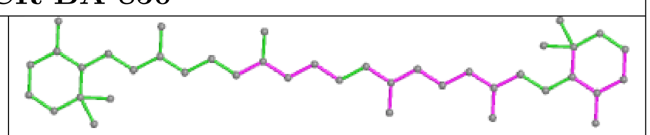


Rings

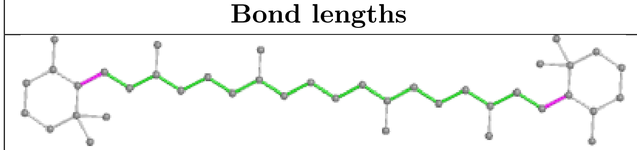
Ligand BCR BA 850



Bond lengths



Bond angles



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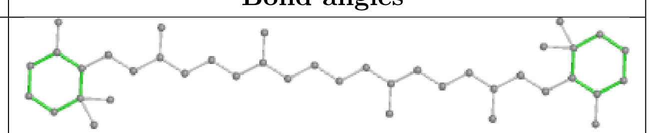
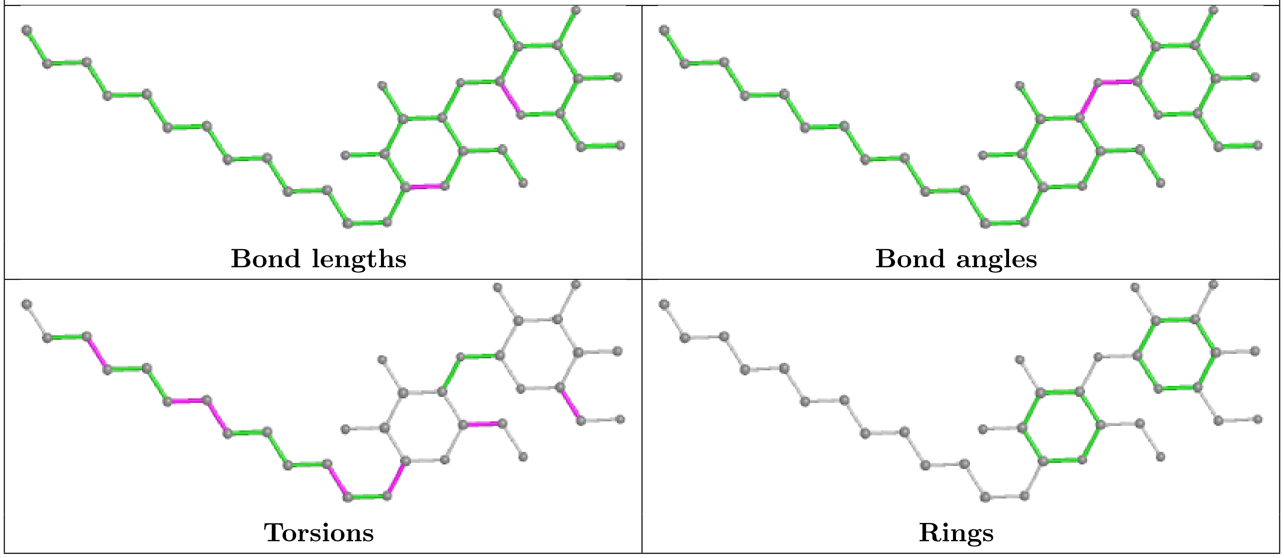
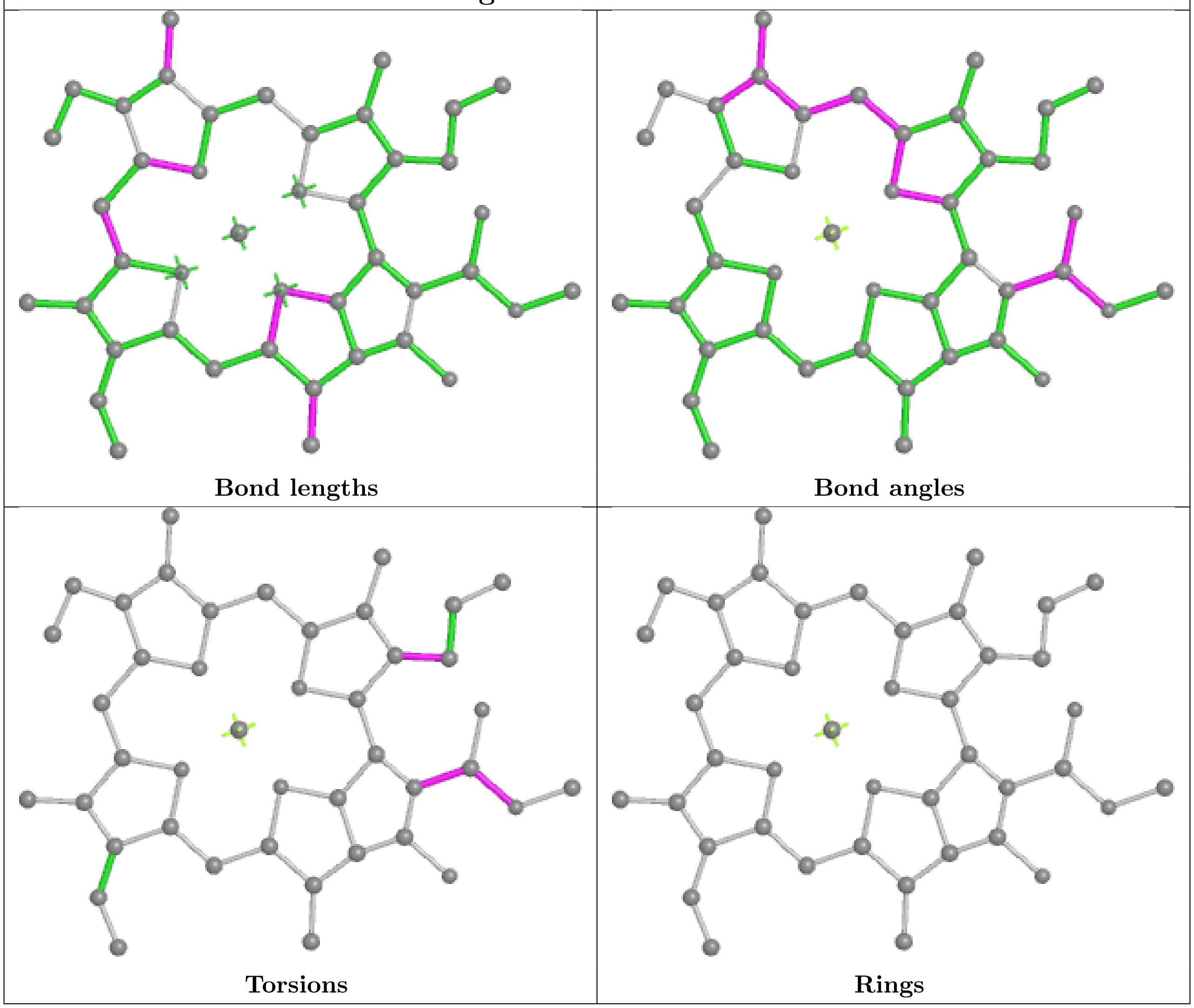


Rings

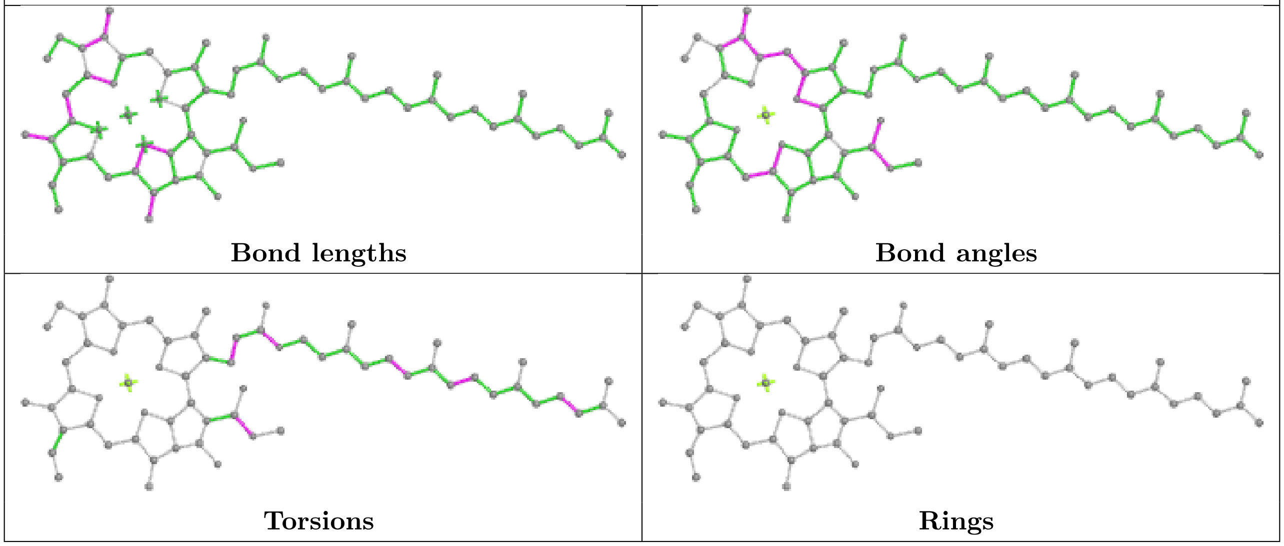
Ligand LMU AB 852



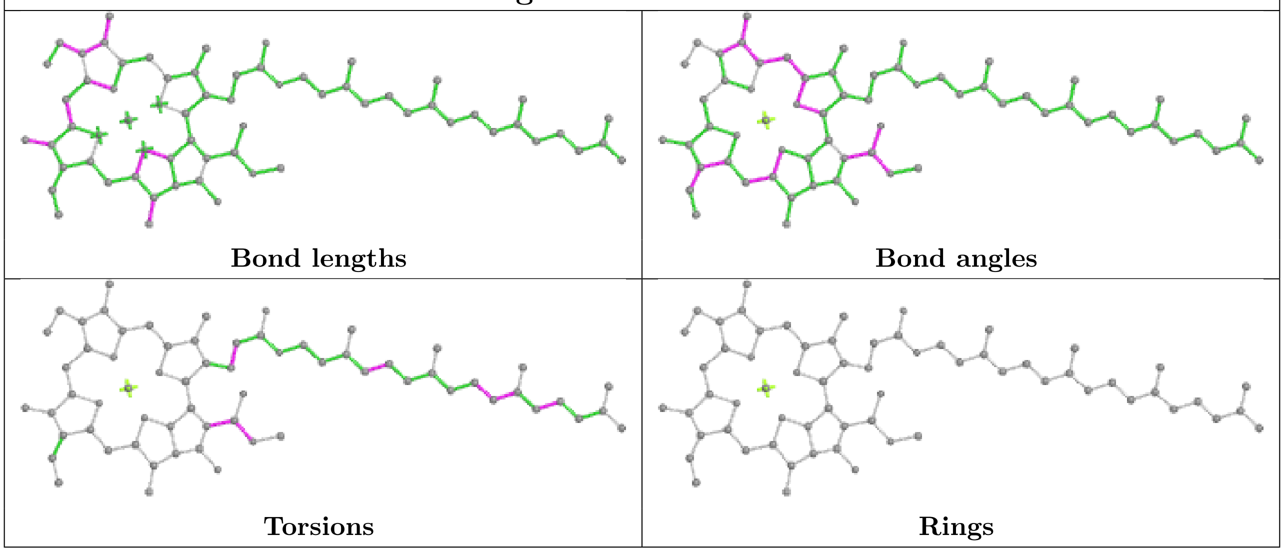
Ligand CLA BL 304



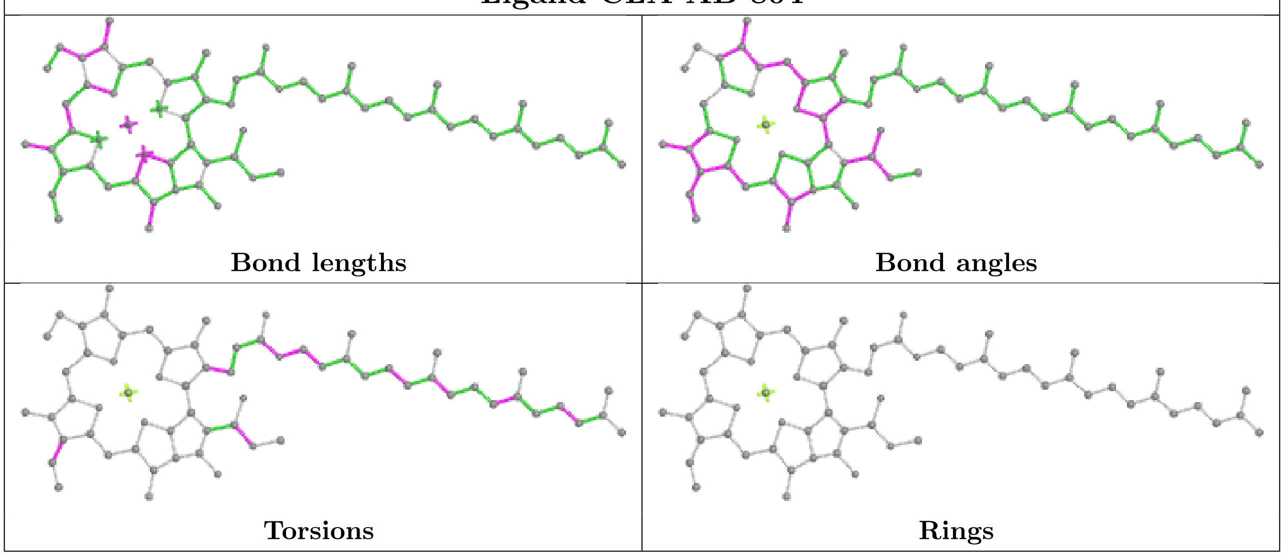
Ligand CLA BB 839



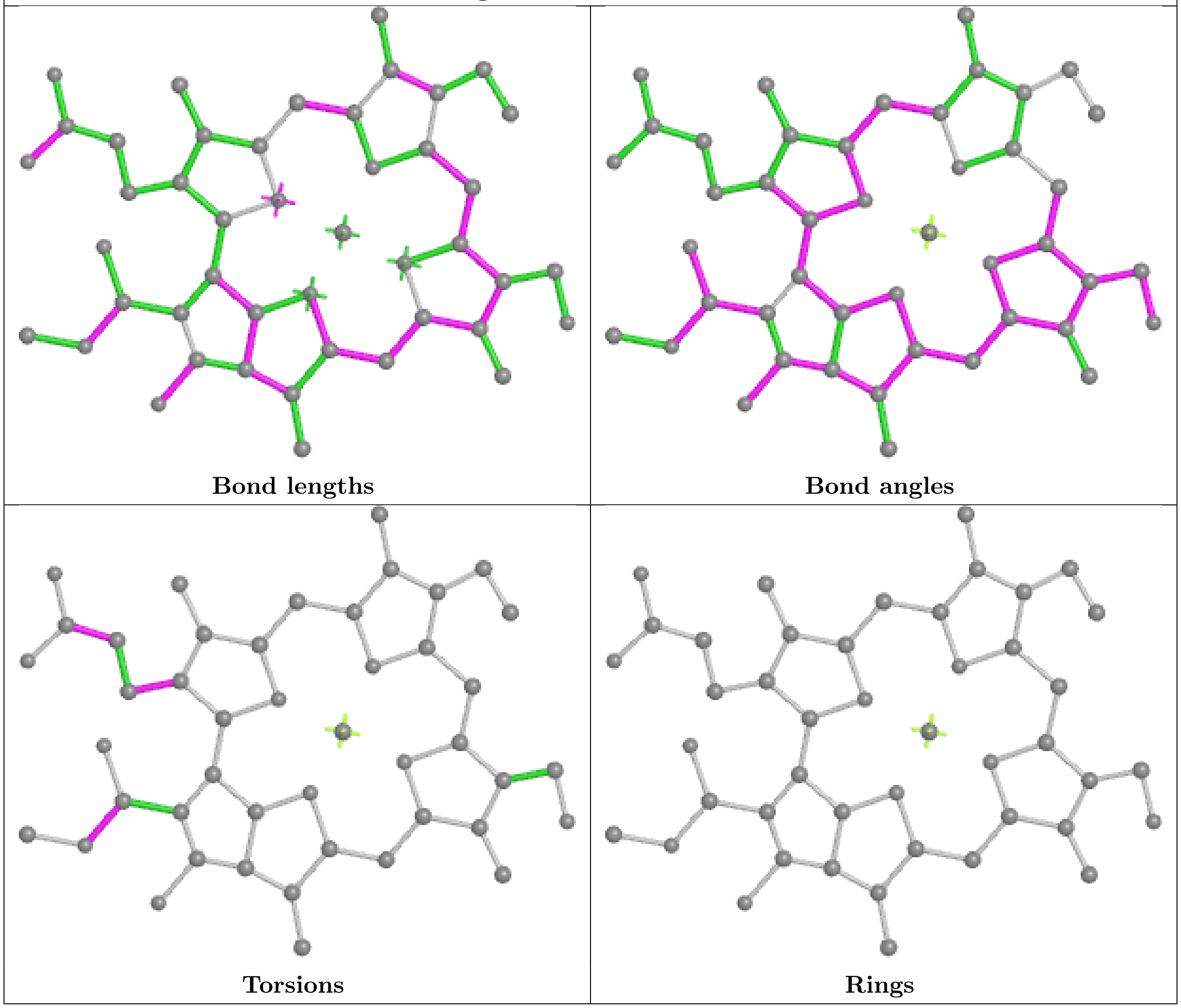
Ligand CLA A6 603



Ligand CLA AB 804



Ligand CHL B5 607



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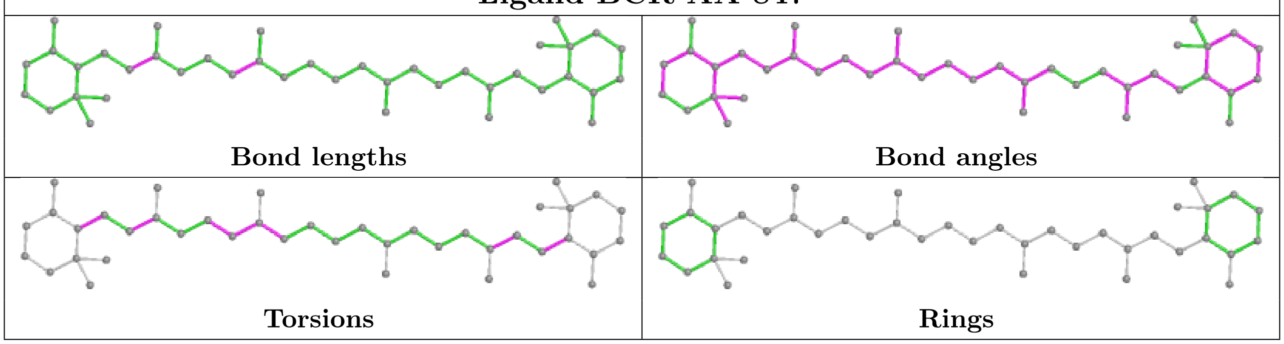

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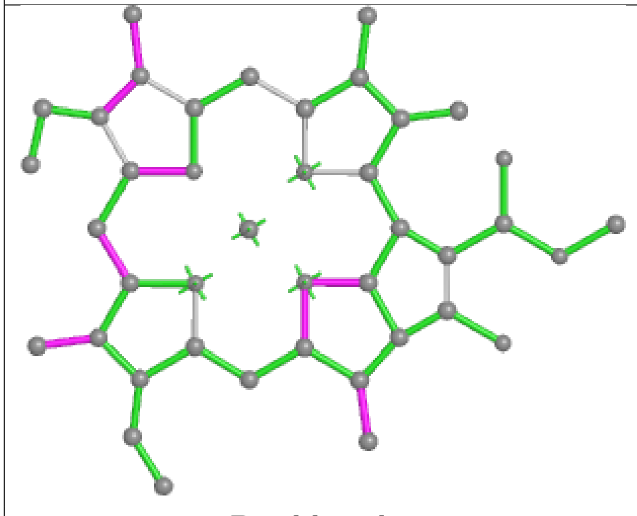
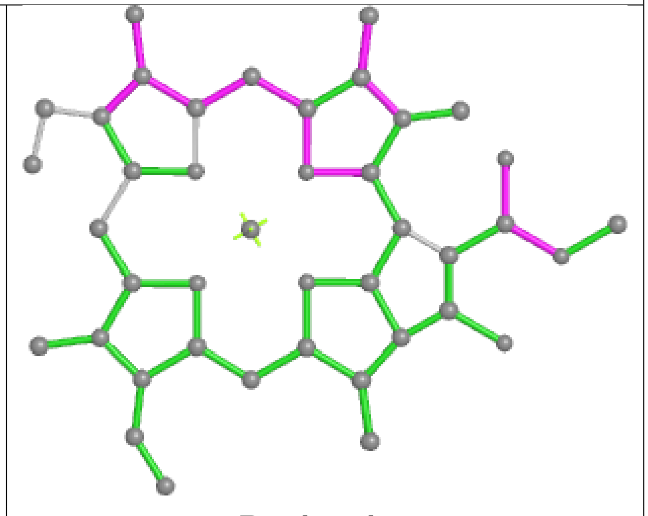
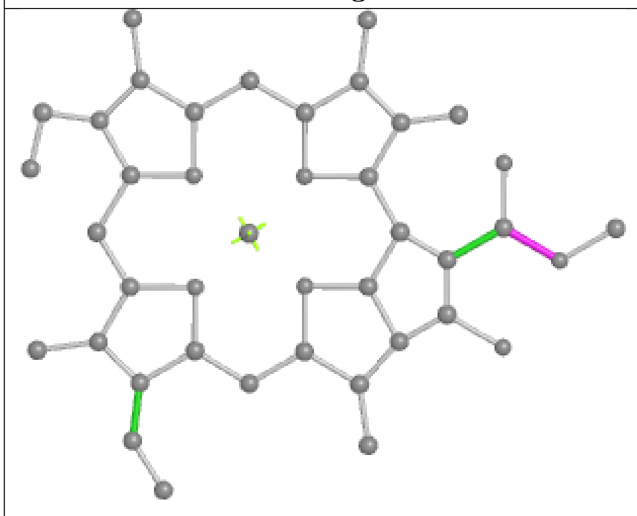


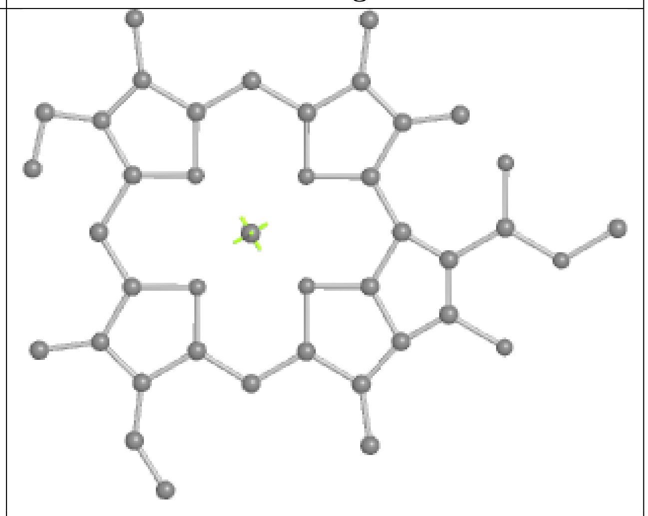
Bond lengths



Bond angles

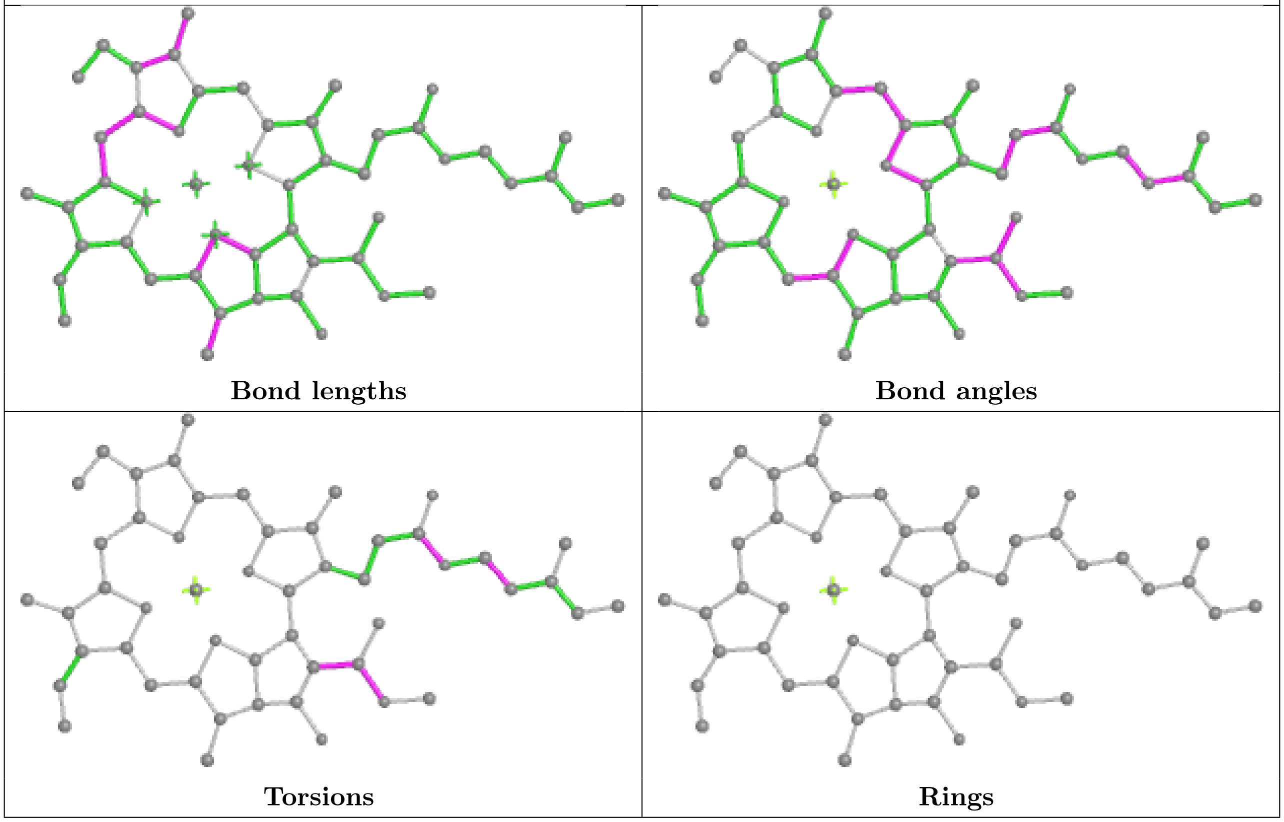


Torsions

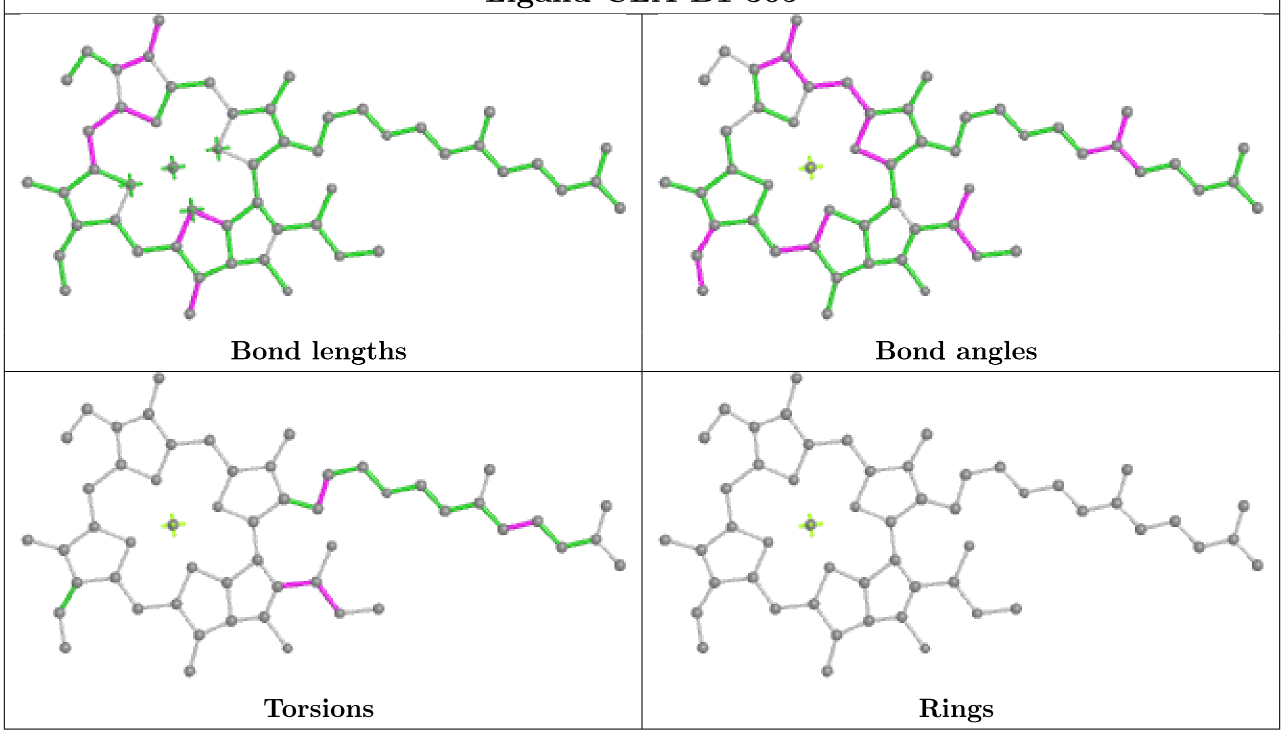


Rings

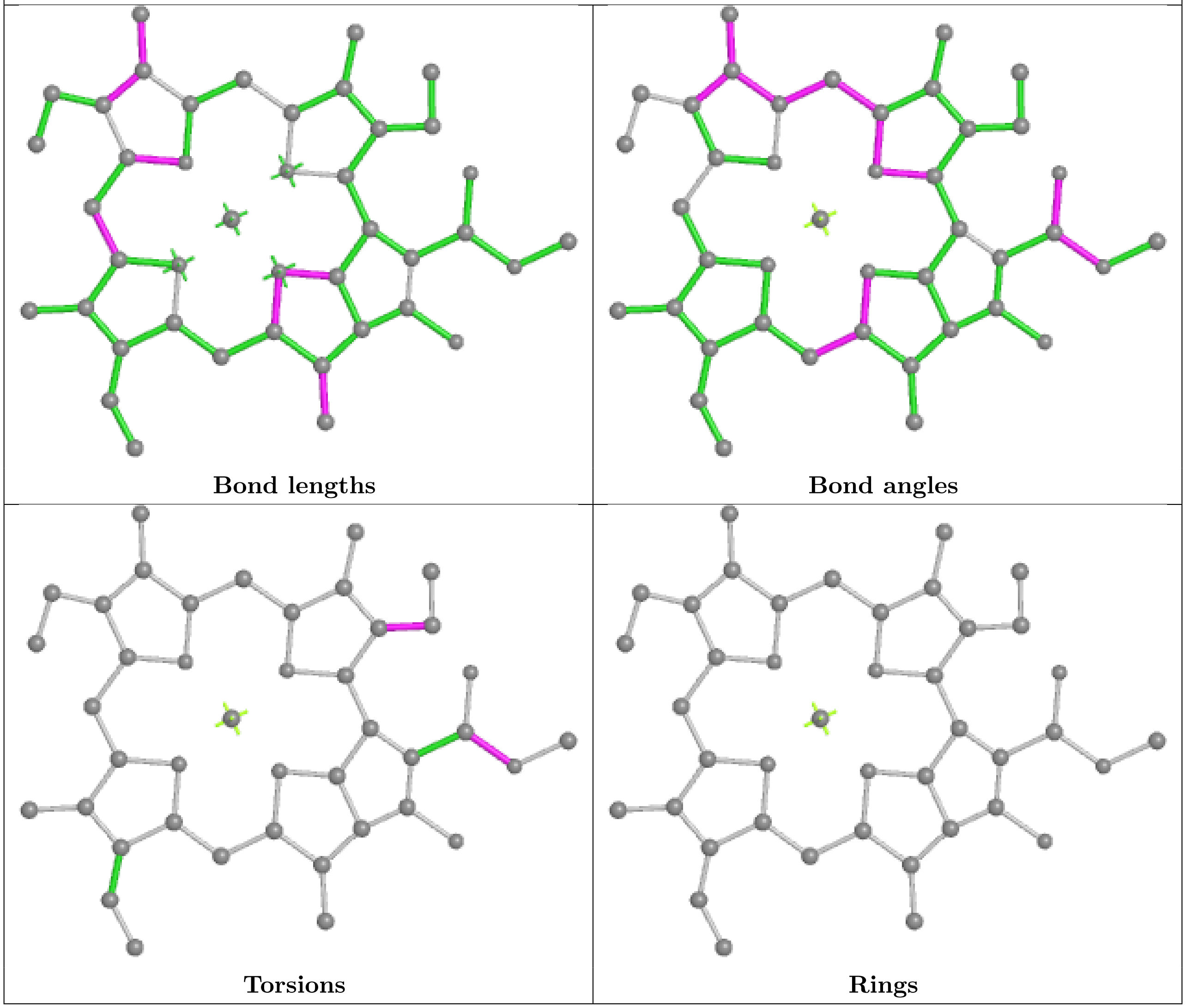
Ligand CLA BA 839



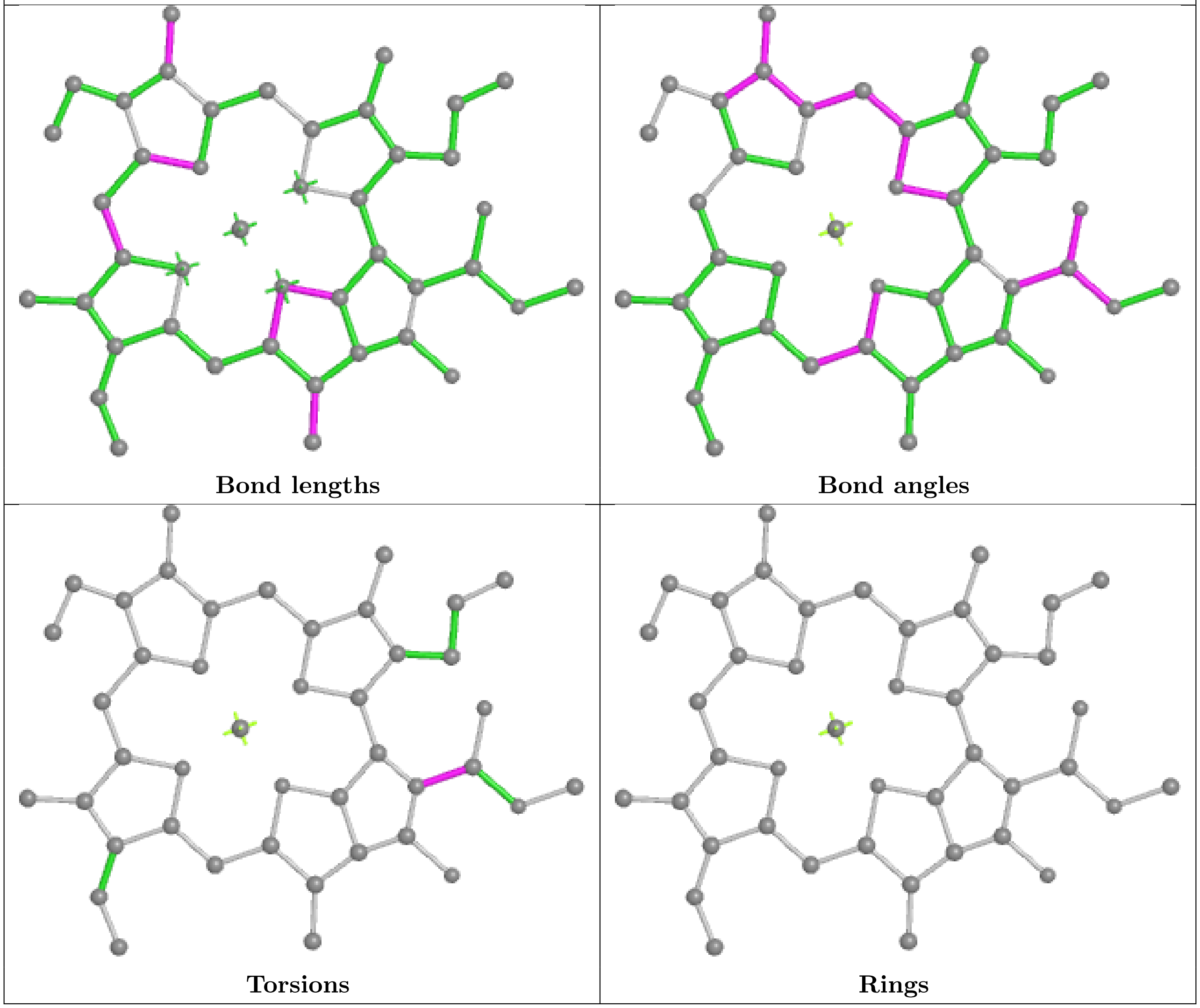
Ligand CLA B1 305



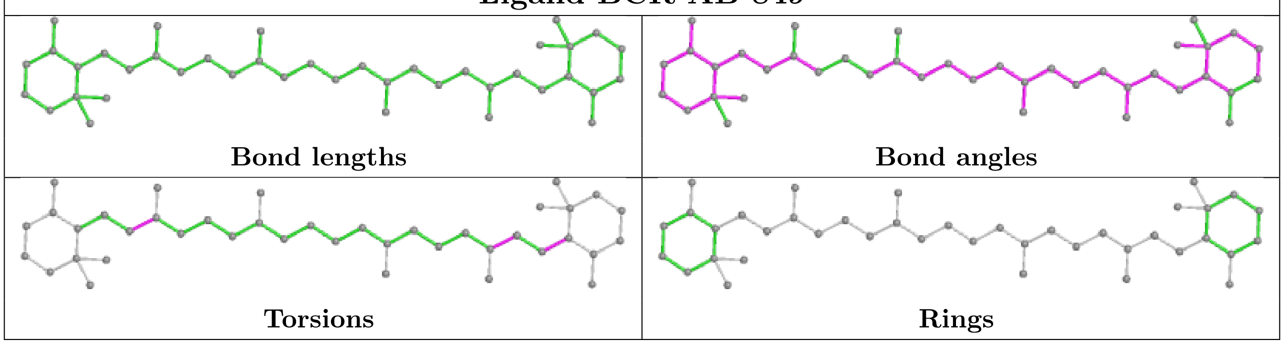
Ligand CLA B5 610



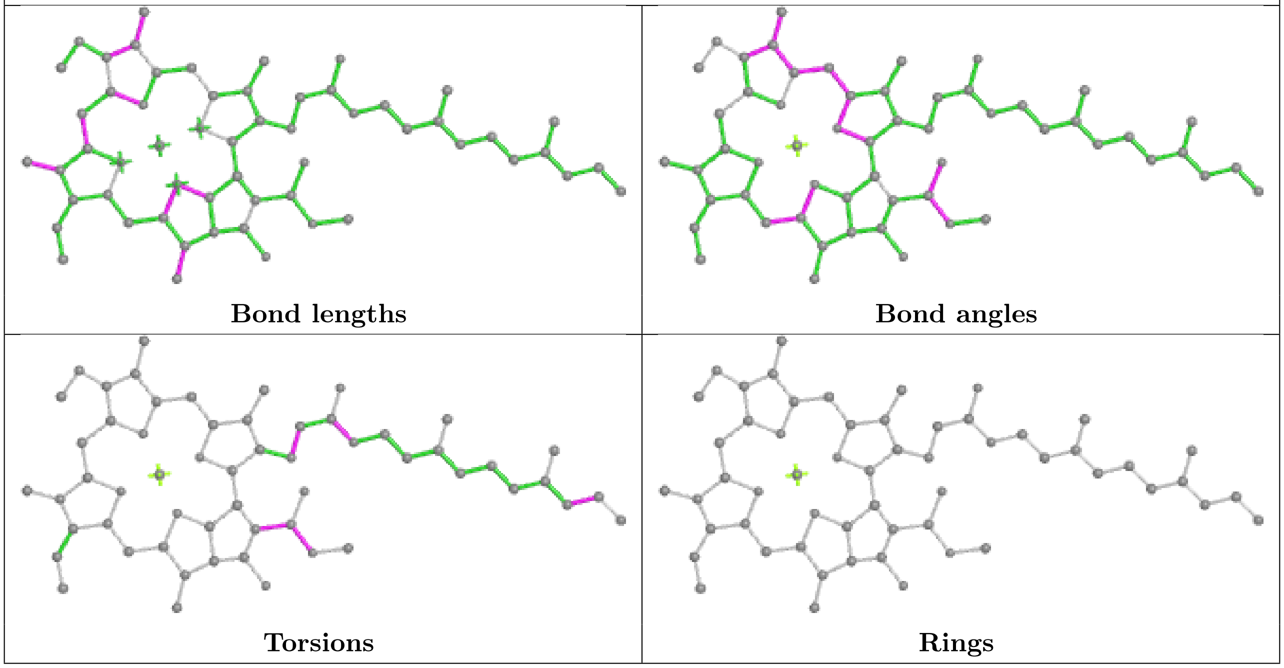
Ligand CLA BB 814



Ligand BCR AB 849



Ligand CLA B5 612



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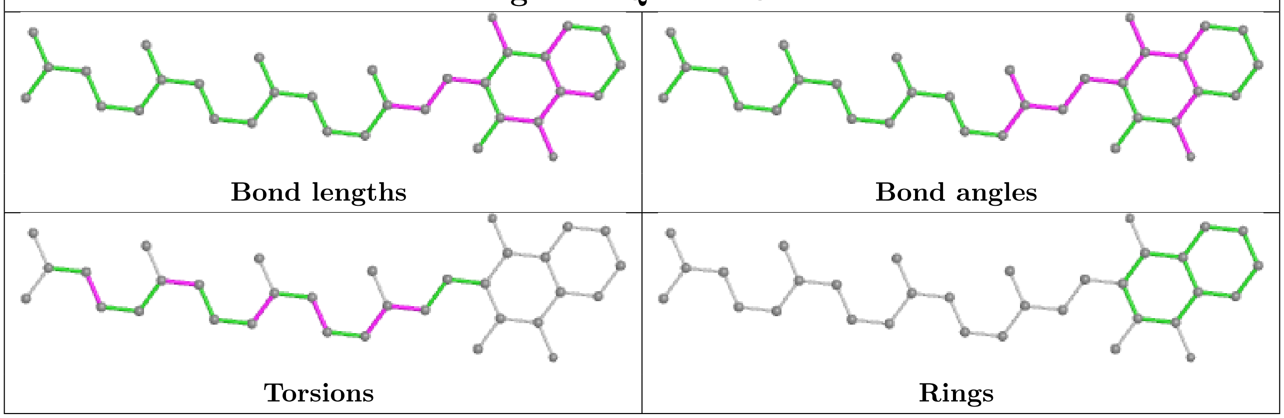

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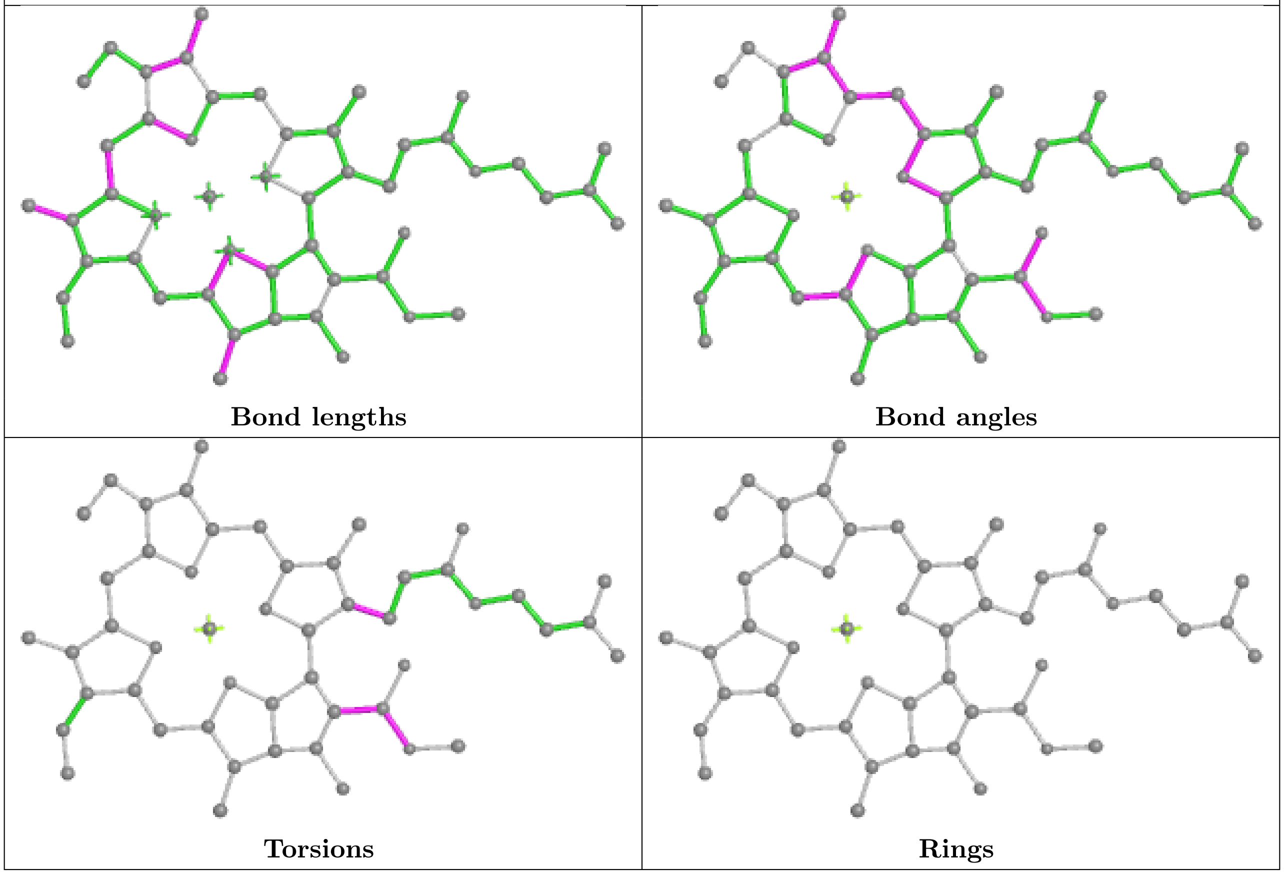

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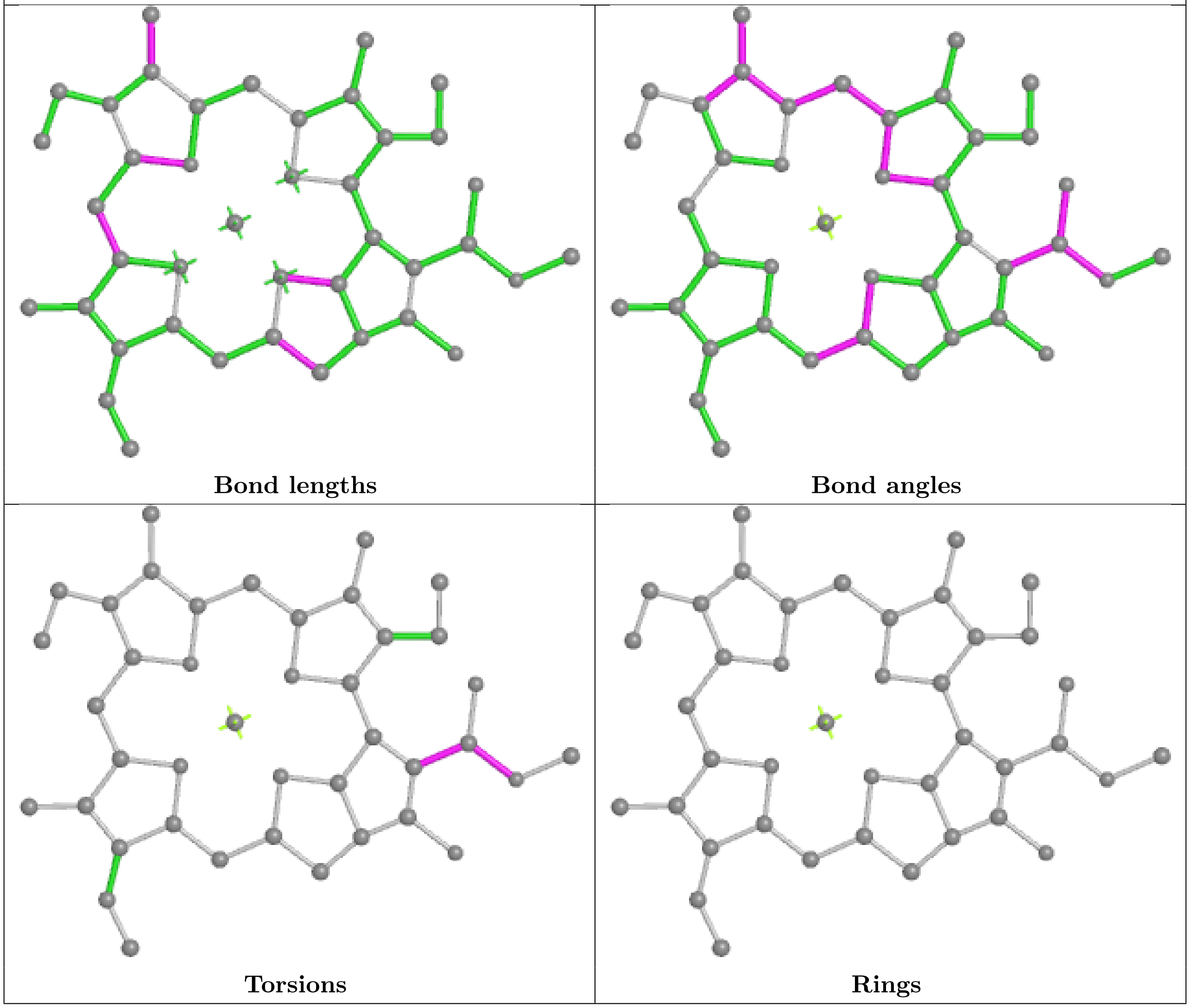
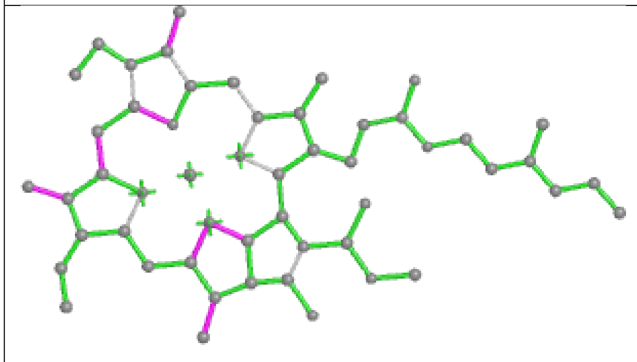
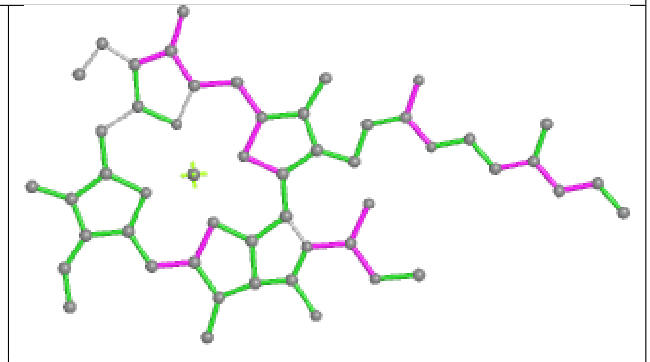


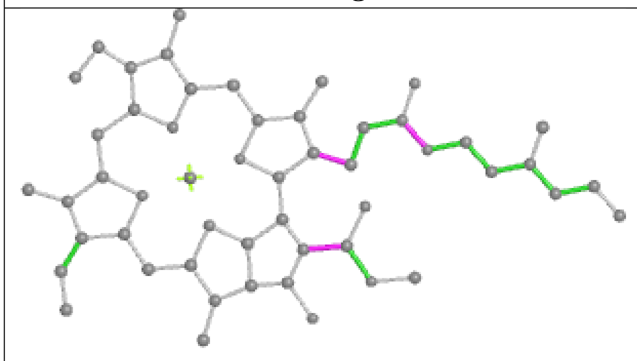
Ligand CLA BA 804



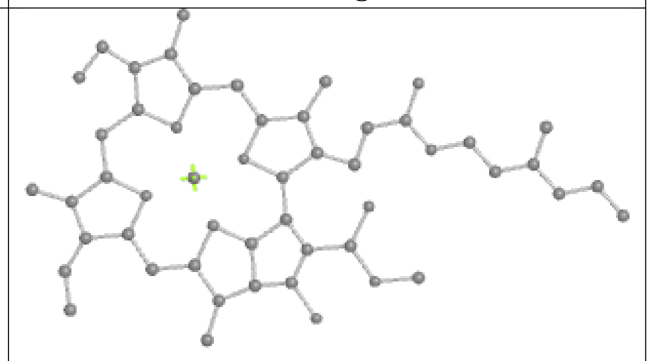
Bond lengths



Bond angles

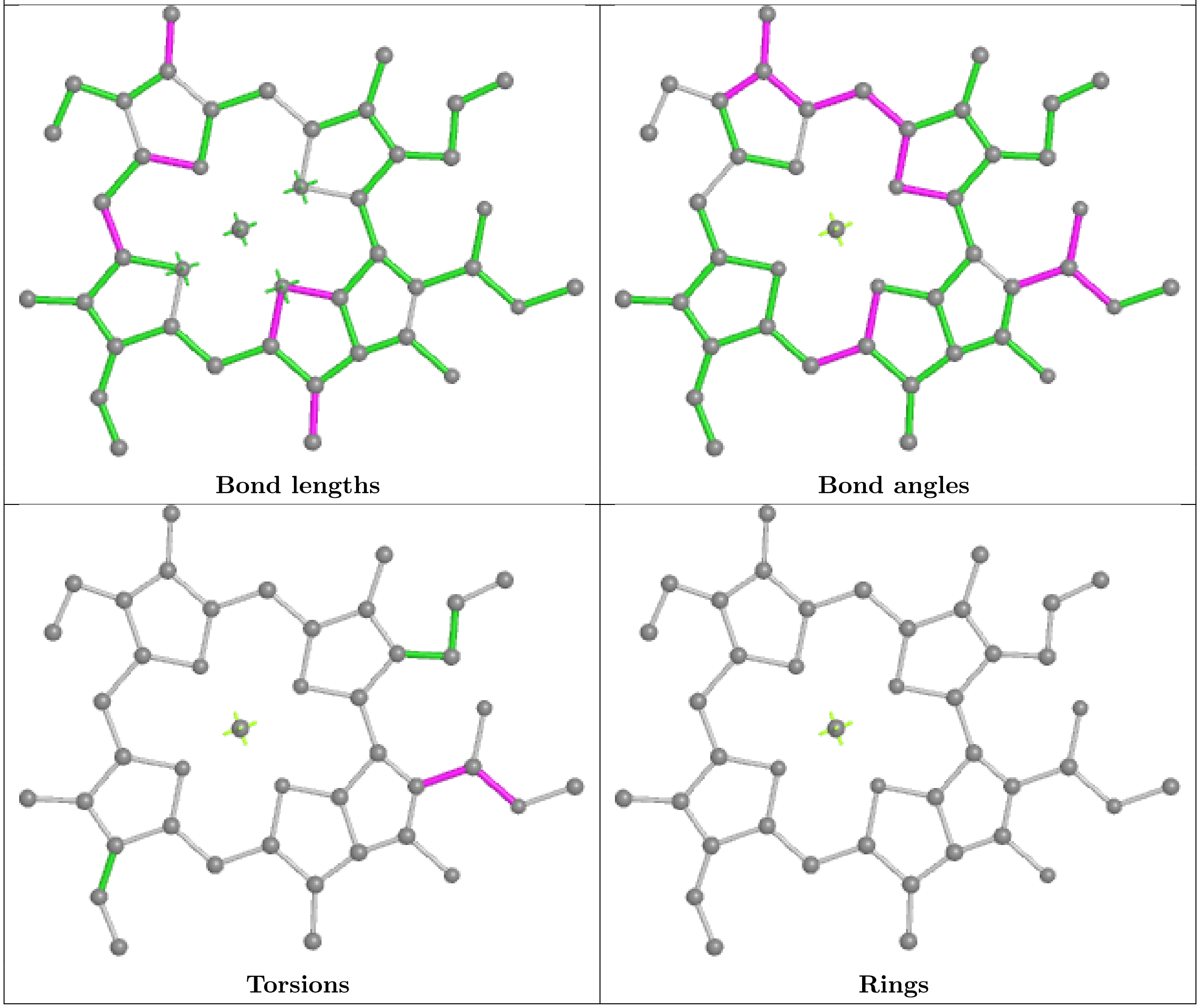


Torsions



Rings

Ligand CLA AB 813



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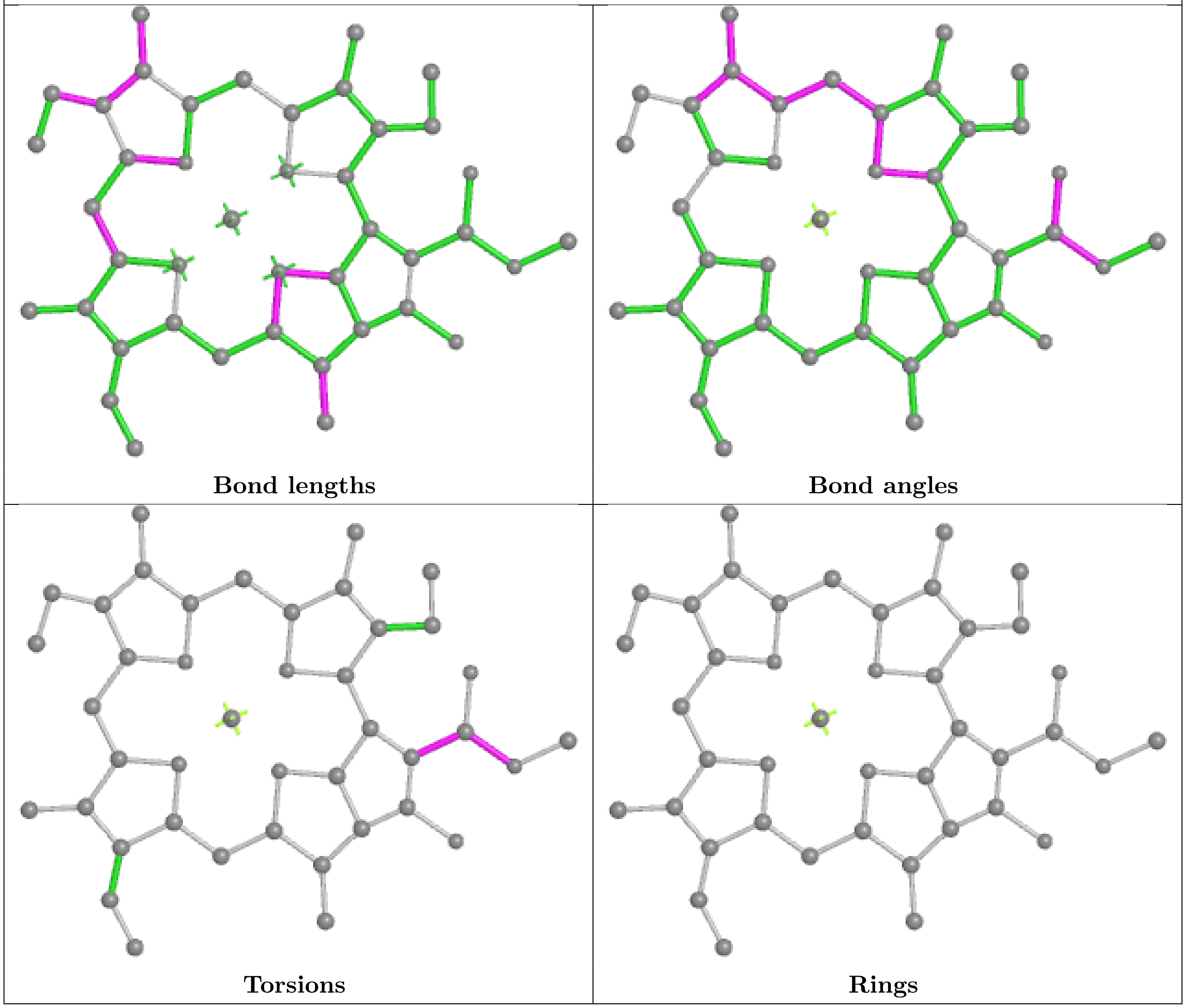
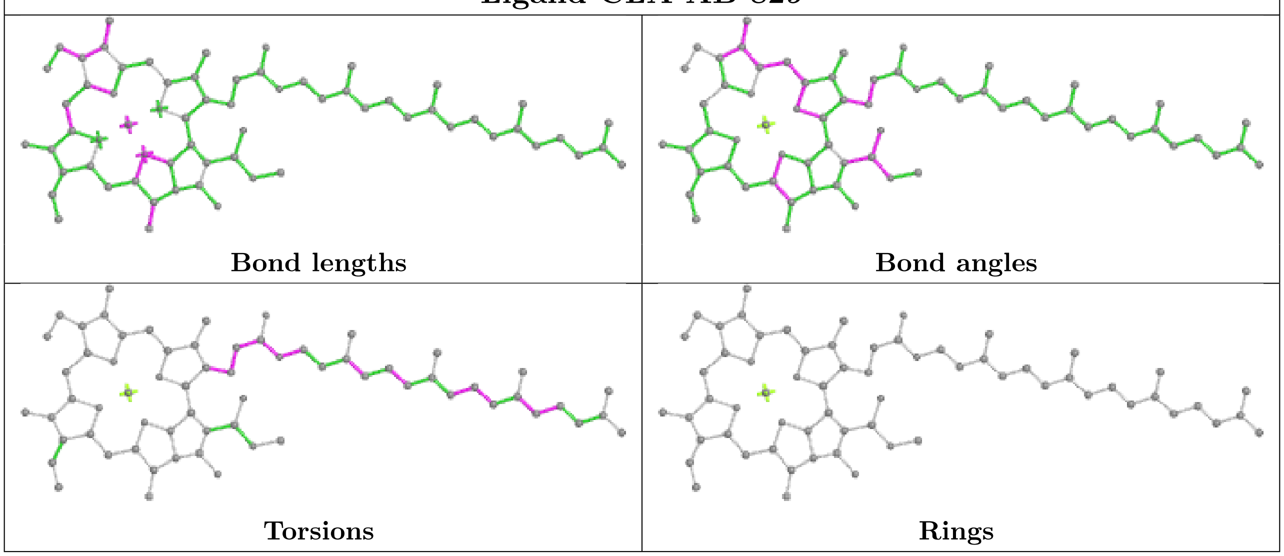


Ligand CLA AB 829



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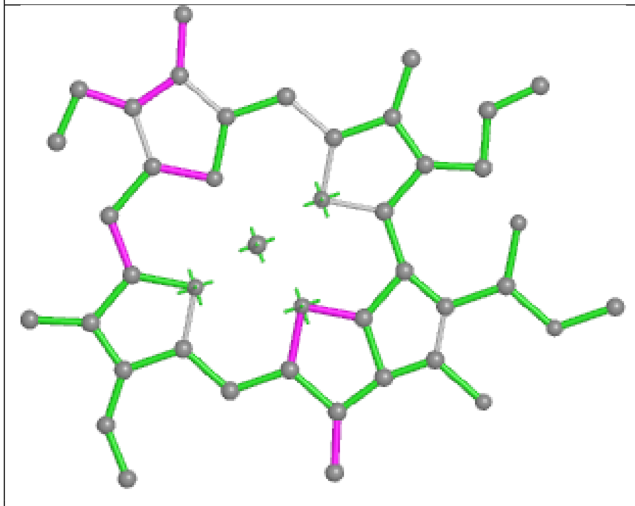
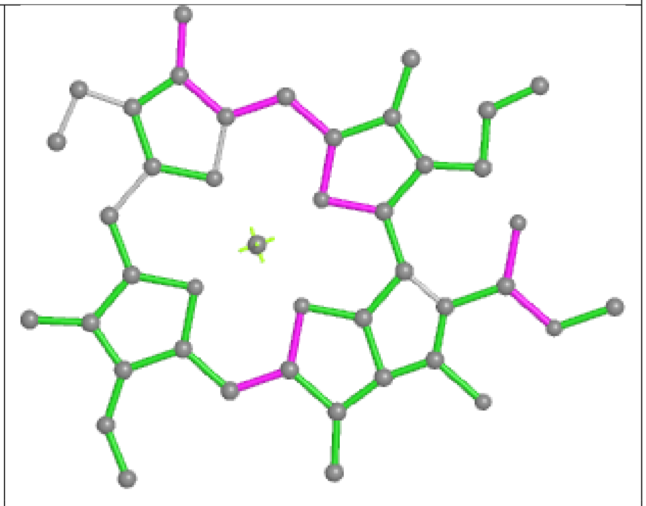
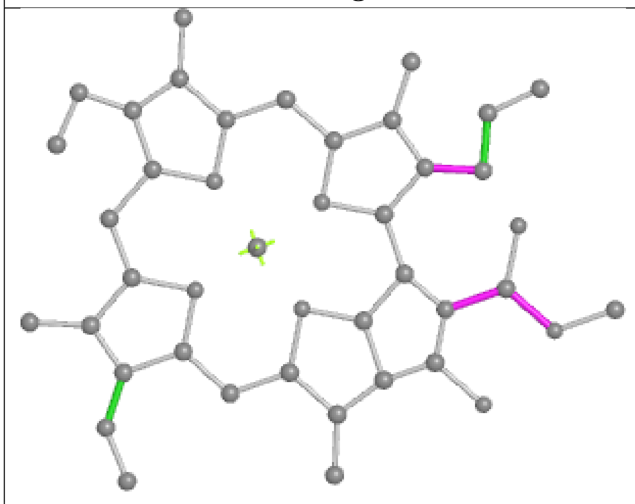
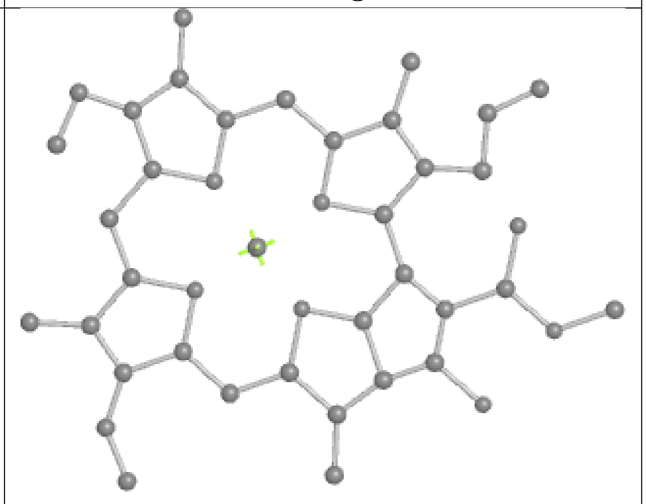
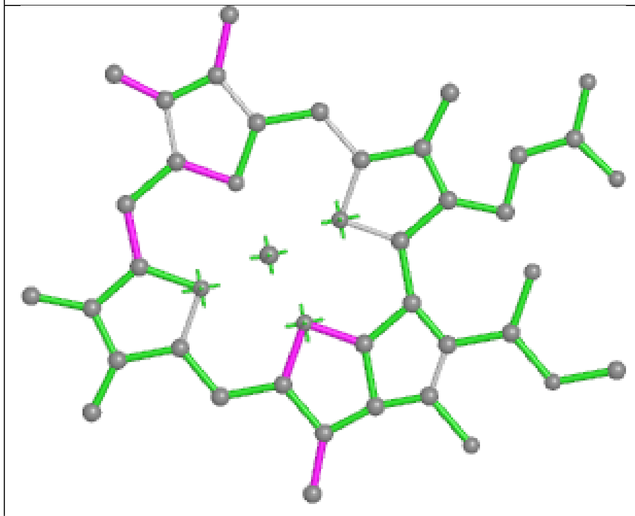
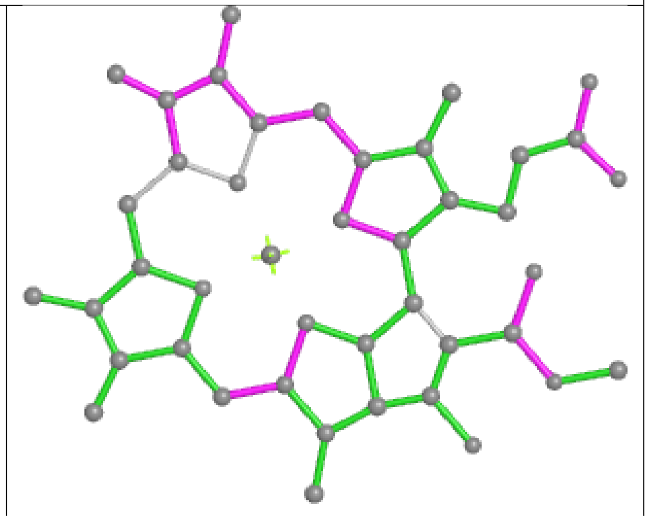
 Bond lengths	 Bond angles
 Torsions	 Rings

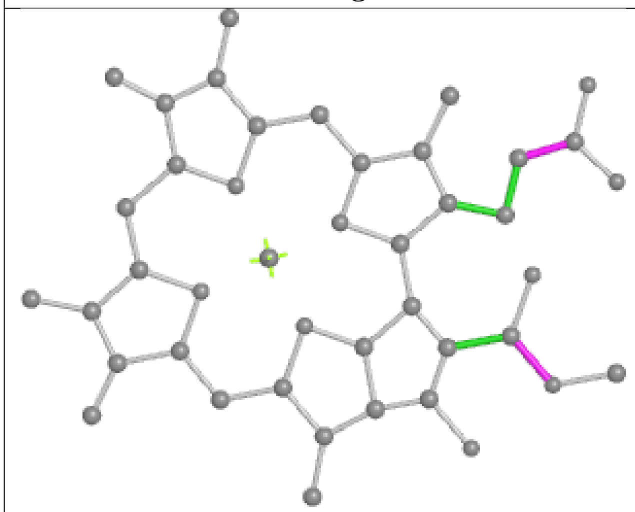
Ligand CLA B5 604



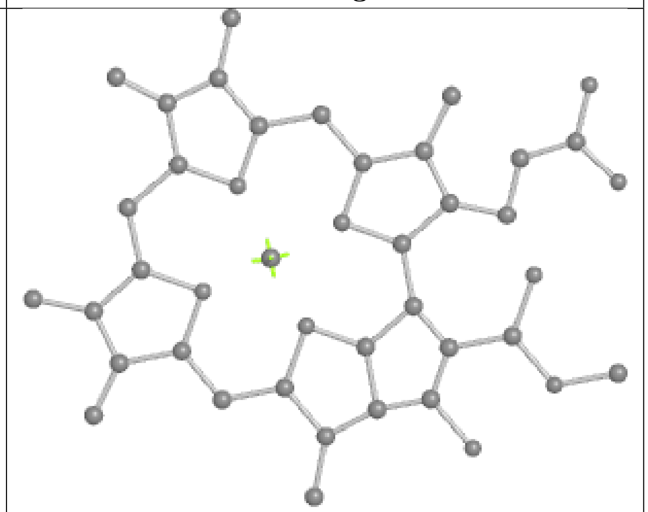
Bond lengths



Bond angles

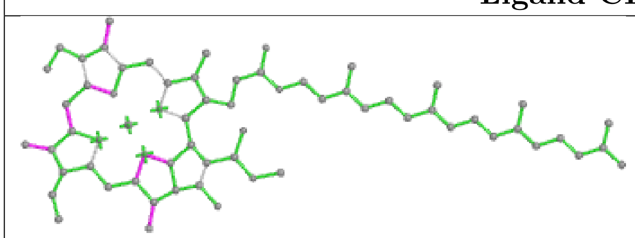


Torsions

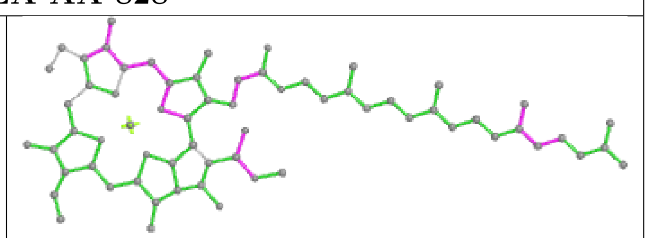


Rings

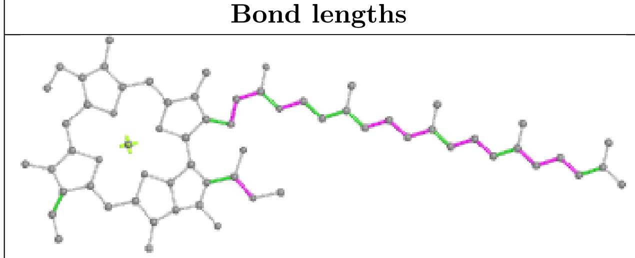
Ligand CLA AA 828



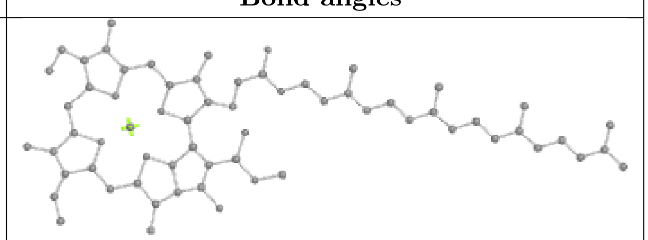
Bond lengths



Bond angles

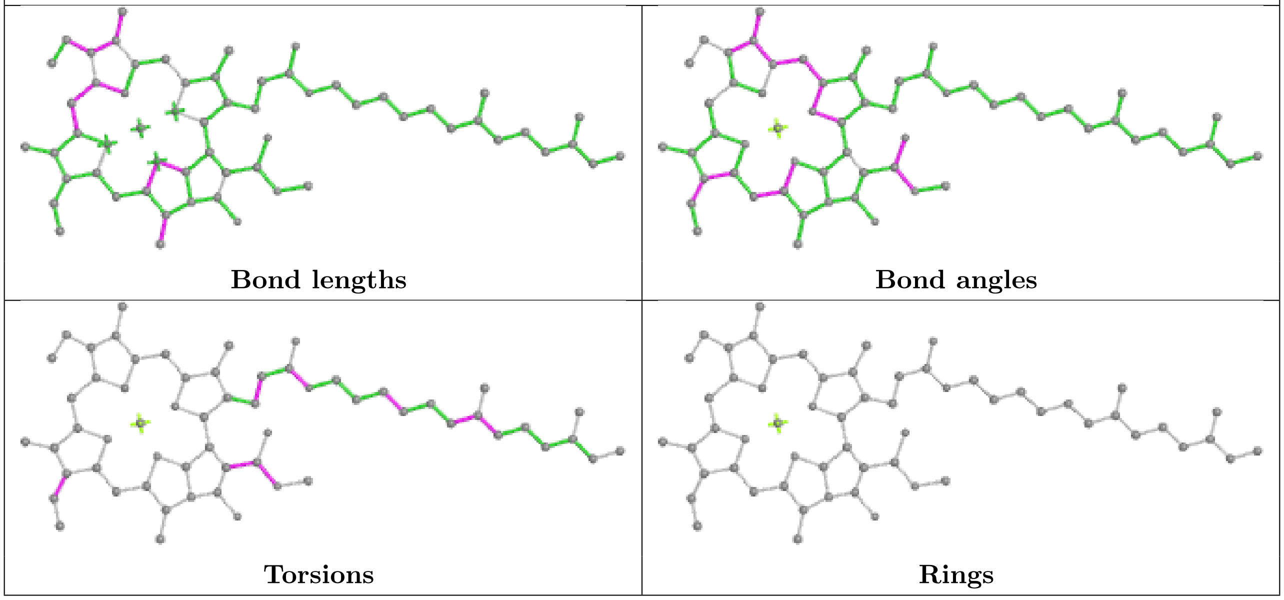


Torsions

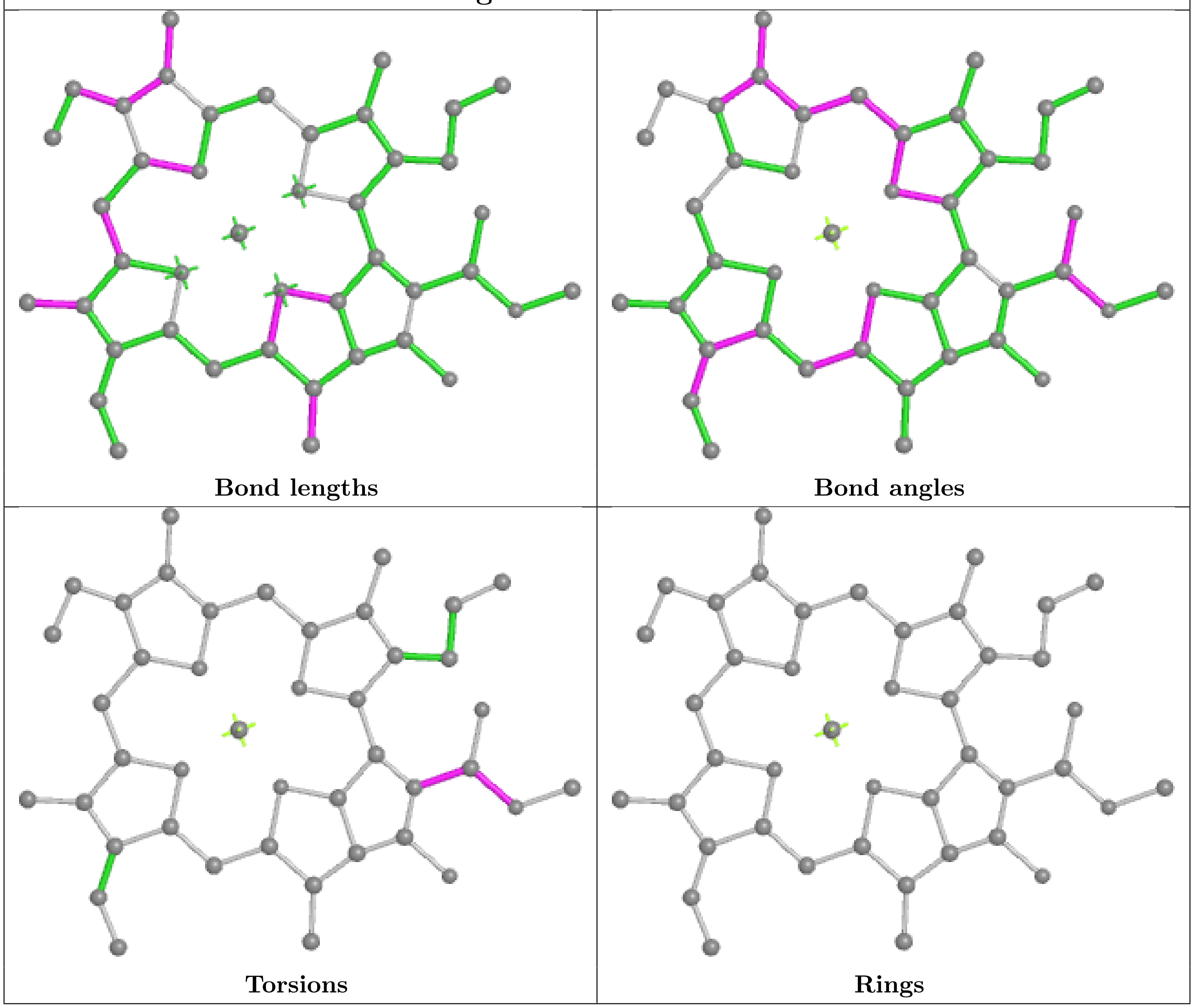


Rings

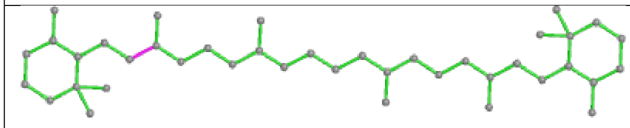
Ligand CLA A1 304

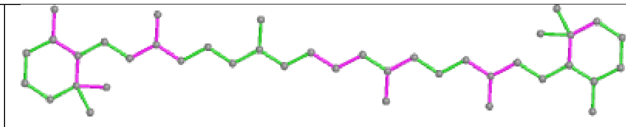


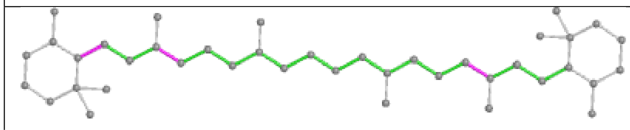
Ligand CLA AB 831



Ligand BCR BB 847


Bond lengths


Bond angles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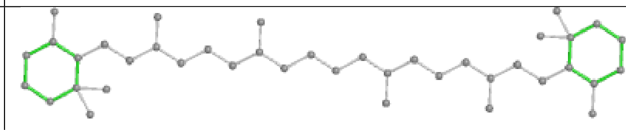
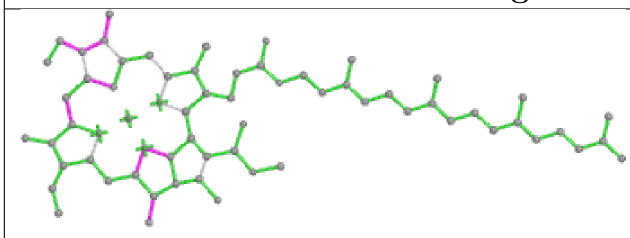
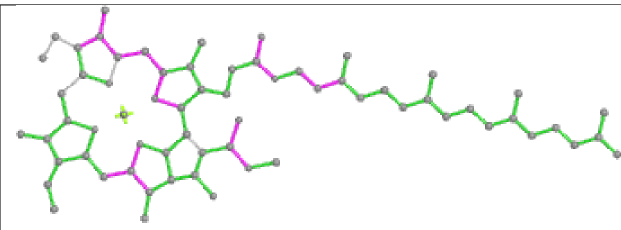
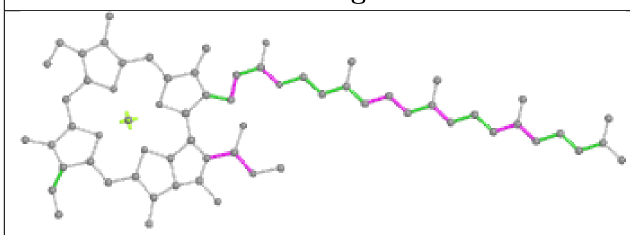
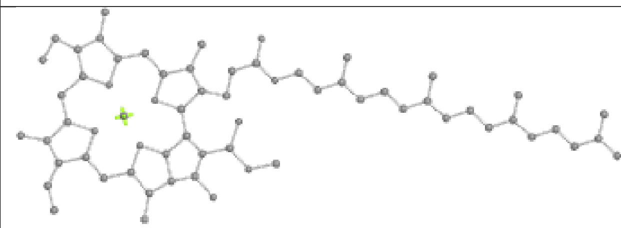

Rings

Ligand CLA AA 840

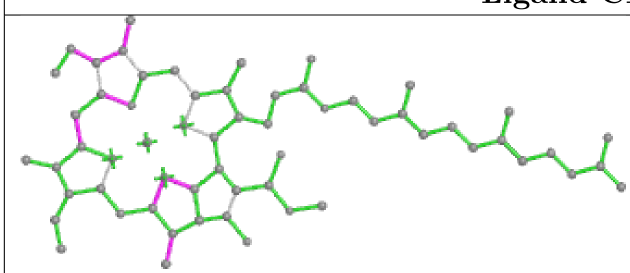

Bond lengths

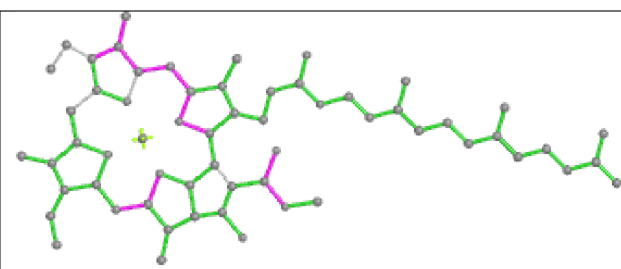

Bond angles

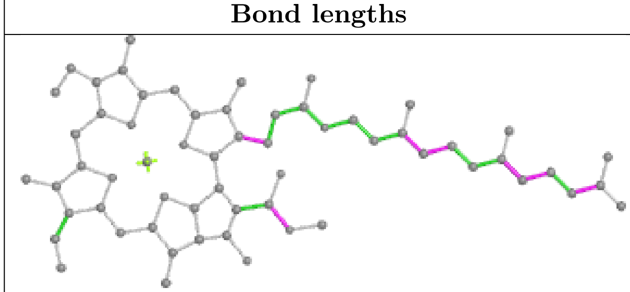

Torsions

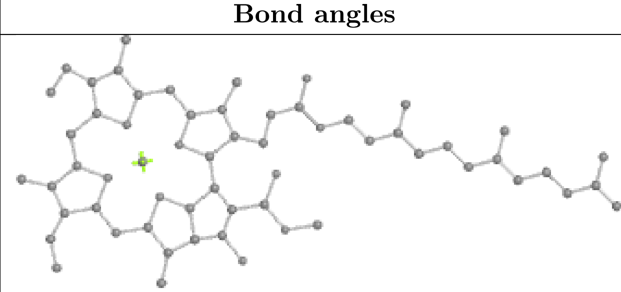

Rings

Ligand CLA BB 836

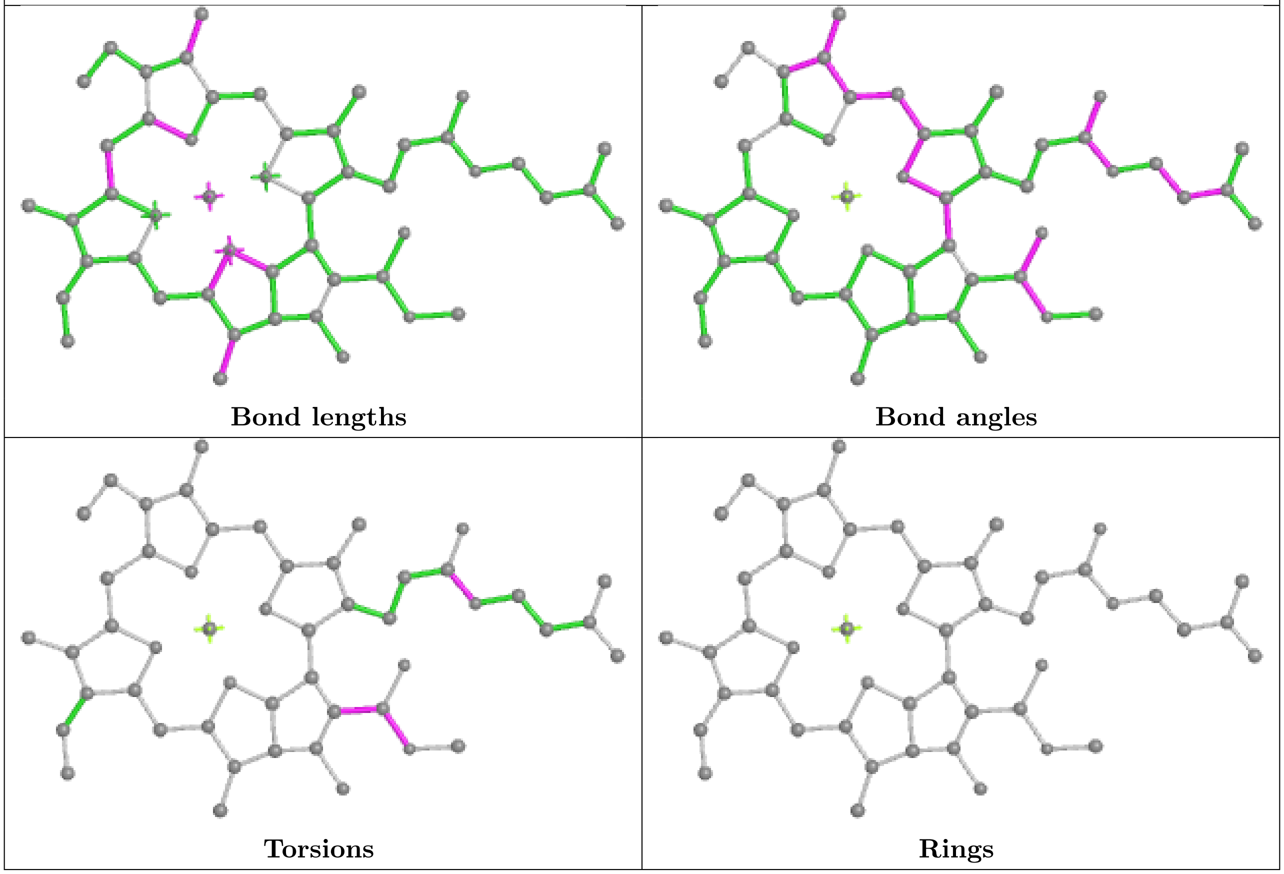

Bond lengths


Bond angles


Torsions


Rings

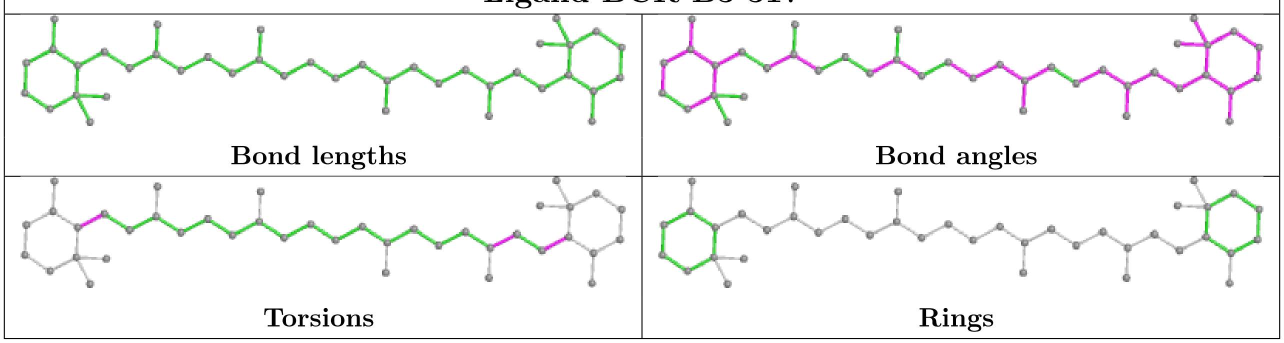
Ligand CLA BB 838



Bond lengths | Bond angles

Torsions | Rings

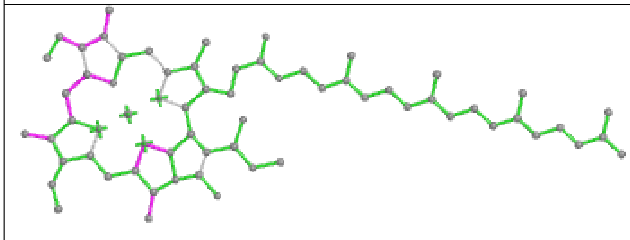
Ligand BCR B3 317



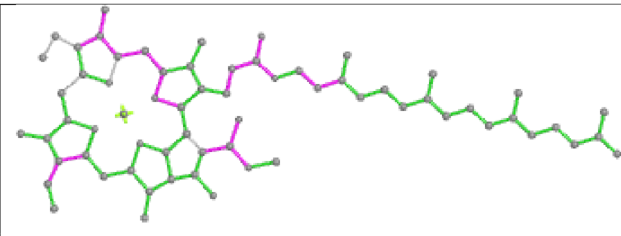
Bond lengths | Bond angles

Torsions | Rings

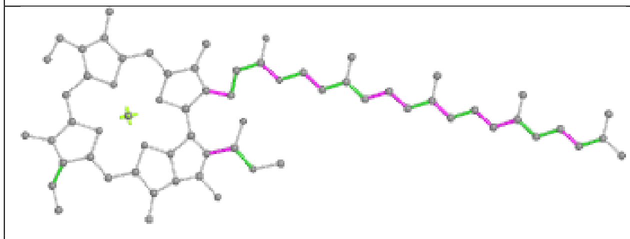
Ligand CLA AA 803



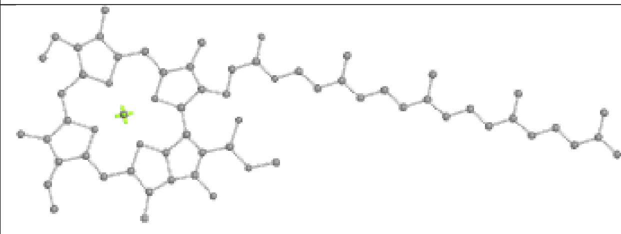
Bond lengths



Bond angles

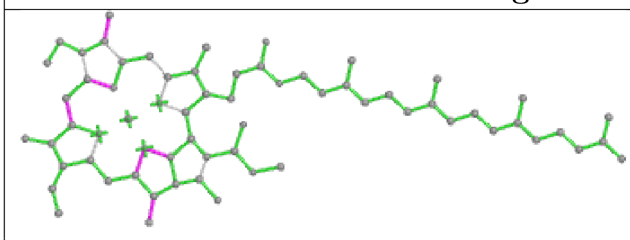


Torsions

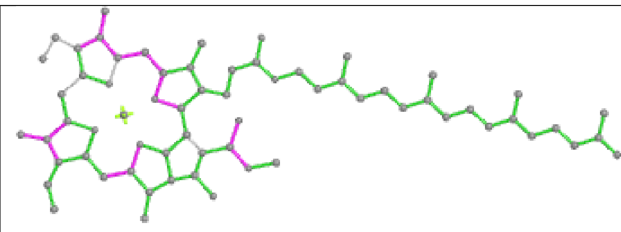


Rings

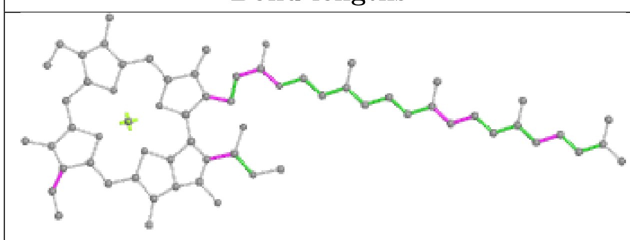
Ligand CLA AB 806



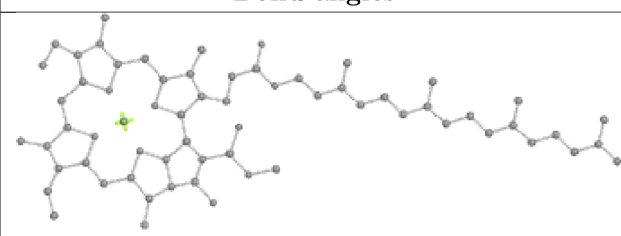
Bond lengths



Bond angles

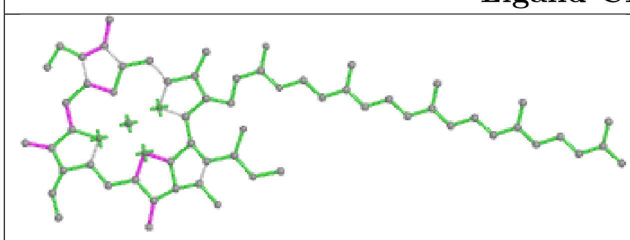


Torsions

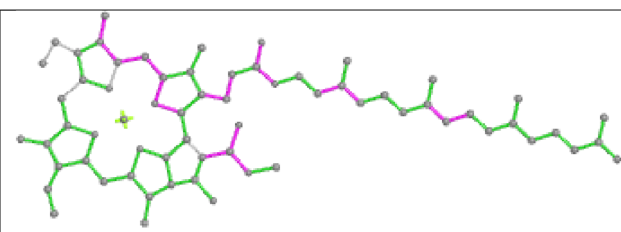


Rings

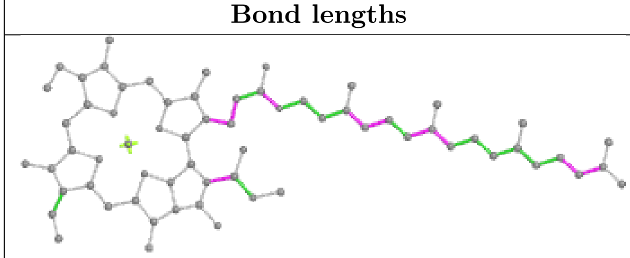
Ligand CLA AB 809



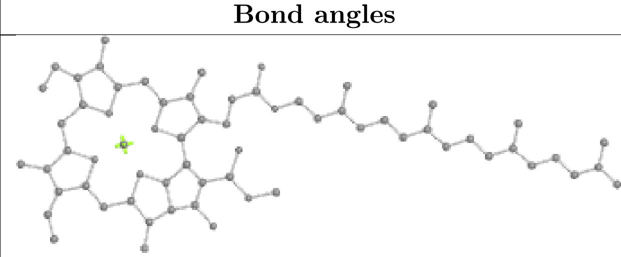
Bond lengths



Bond angles

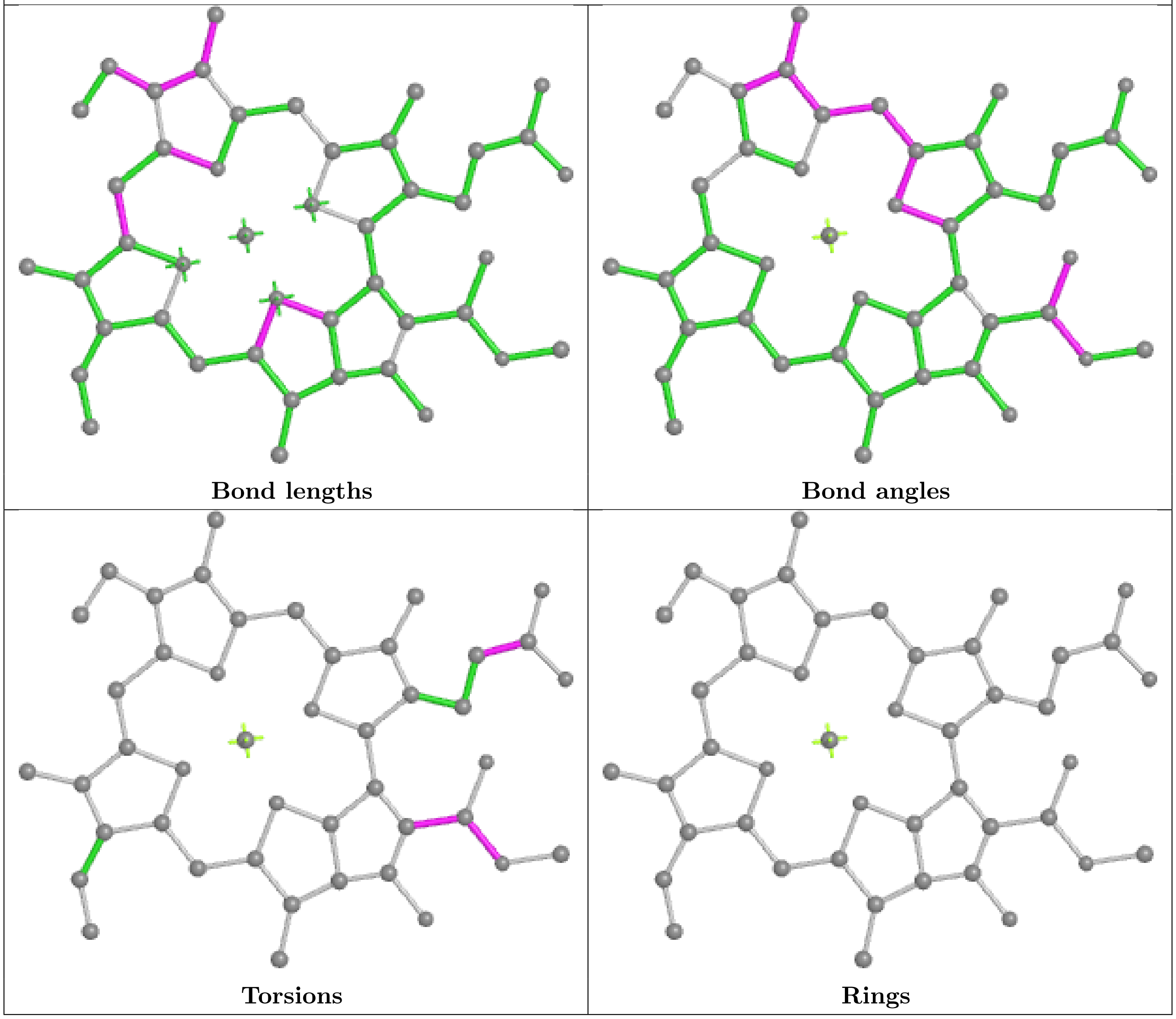


Torsions

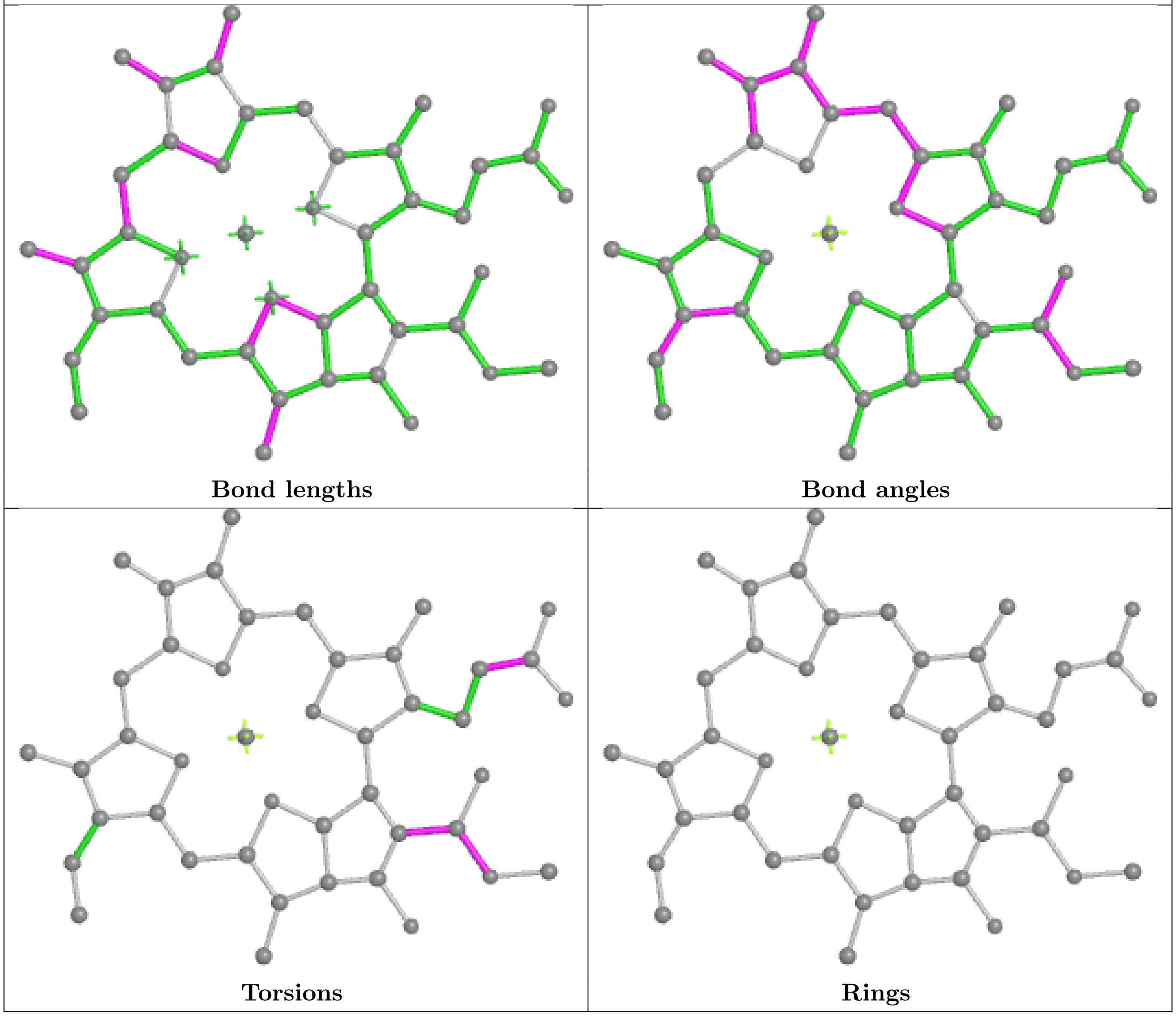


Rings

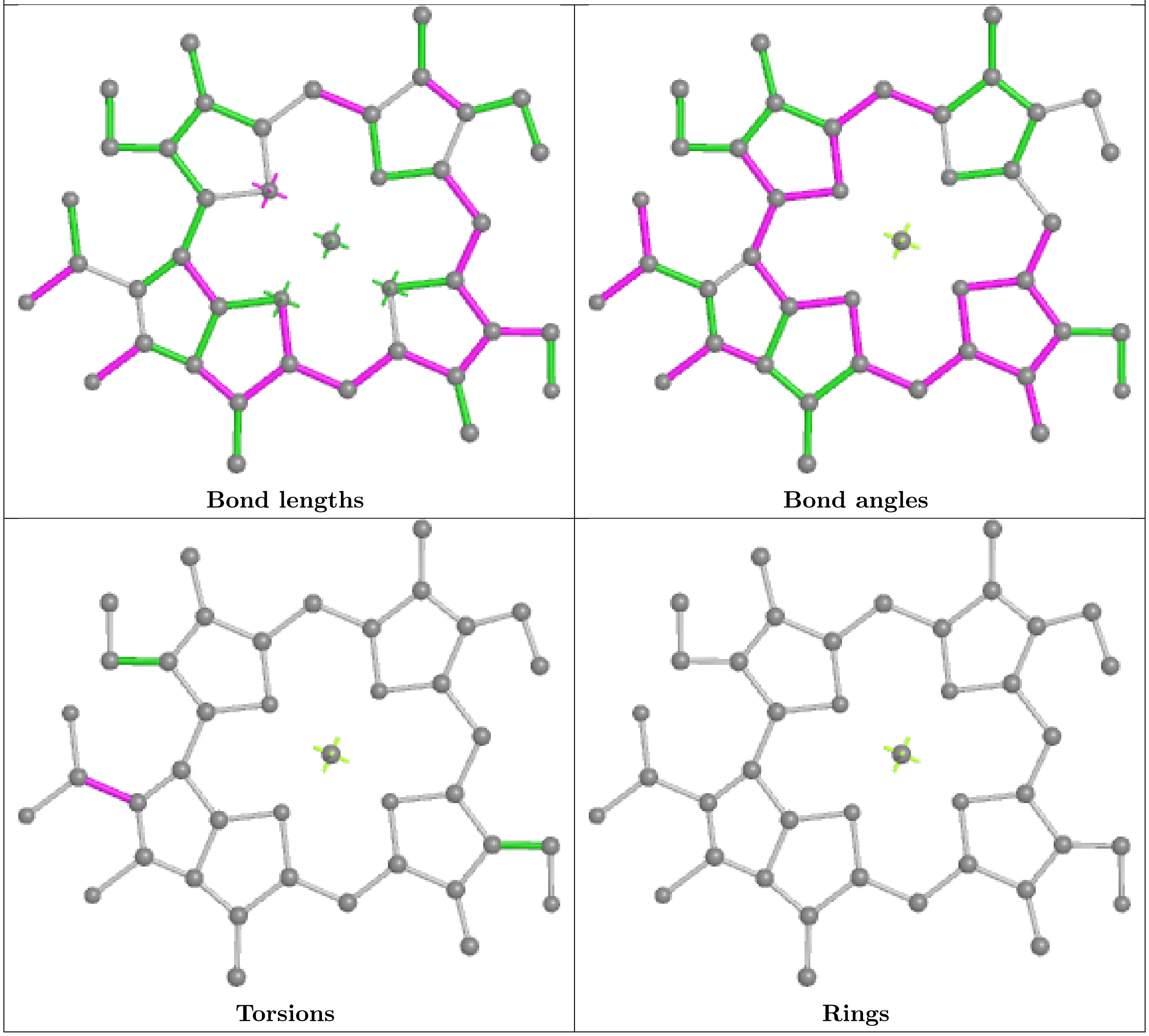
Ligand CLA BA 835



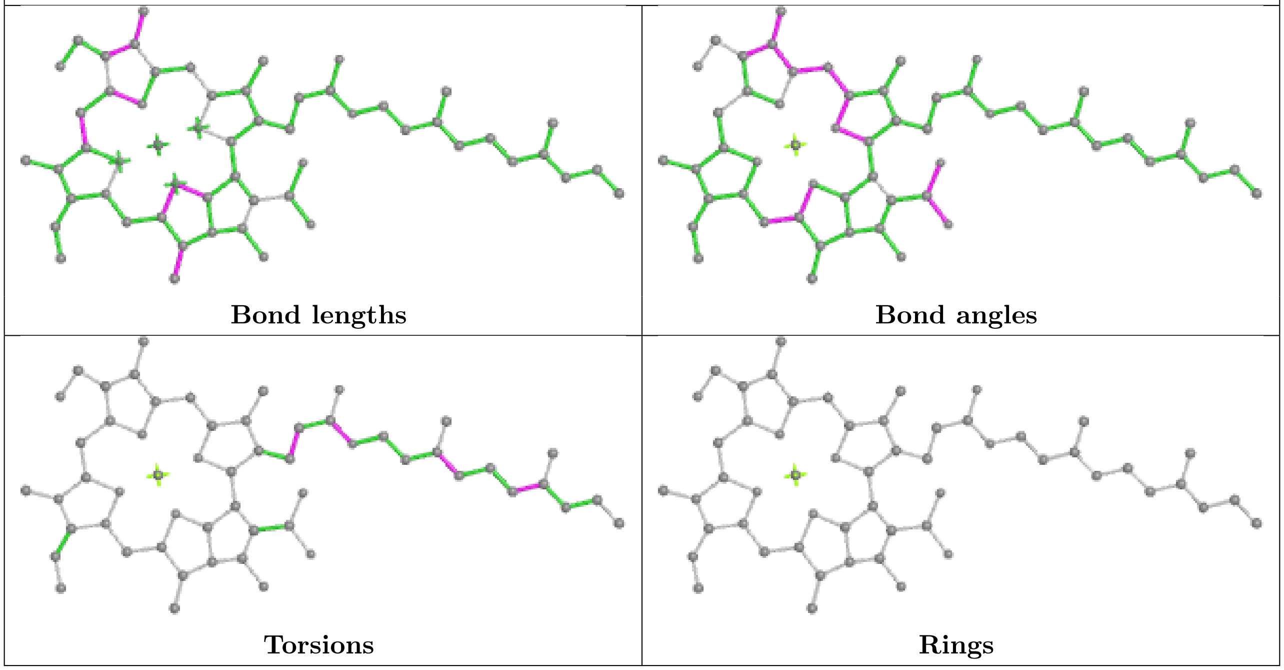
Ligand CLA A4 302



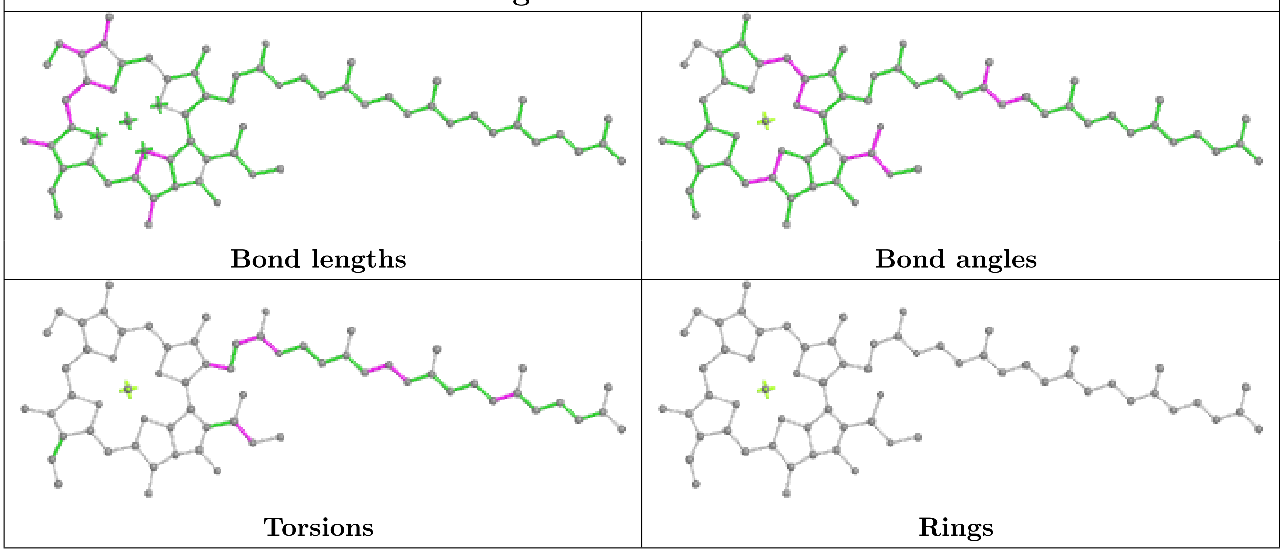
Ligand CHL B5 605



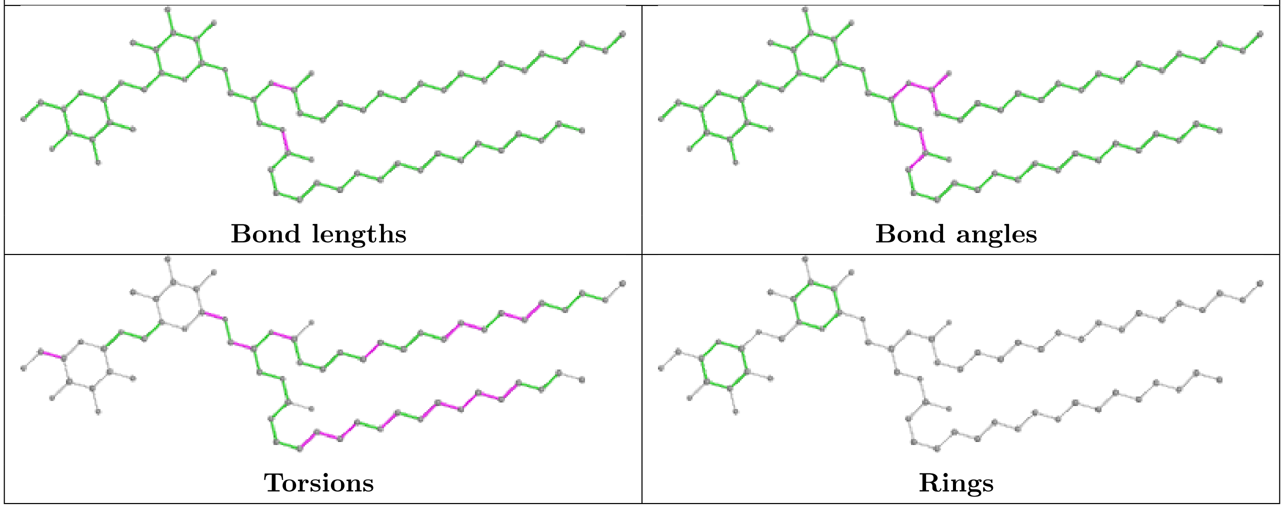
Ligand CLA A4 311



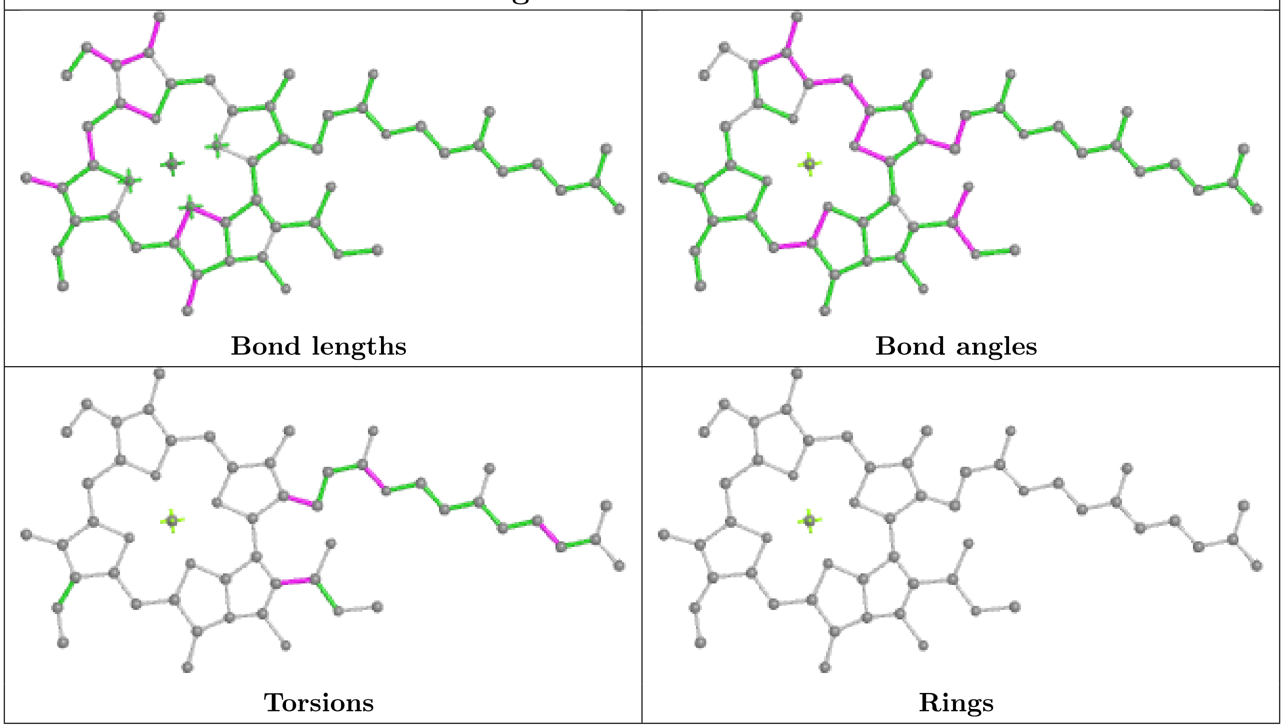
Ligand CLA BB 834



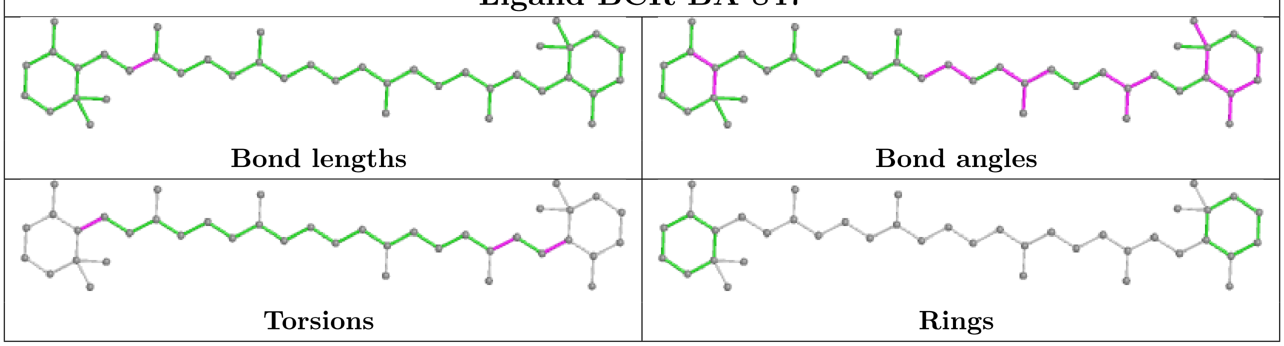
Ligand DGD AB 851



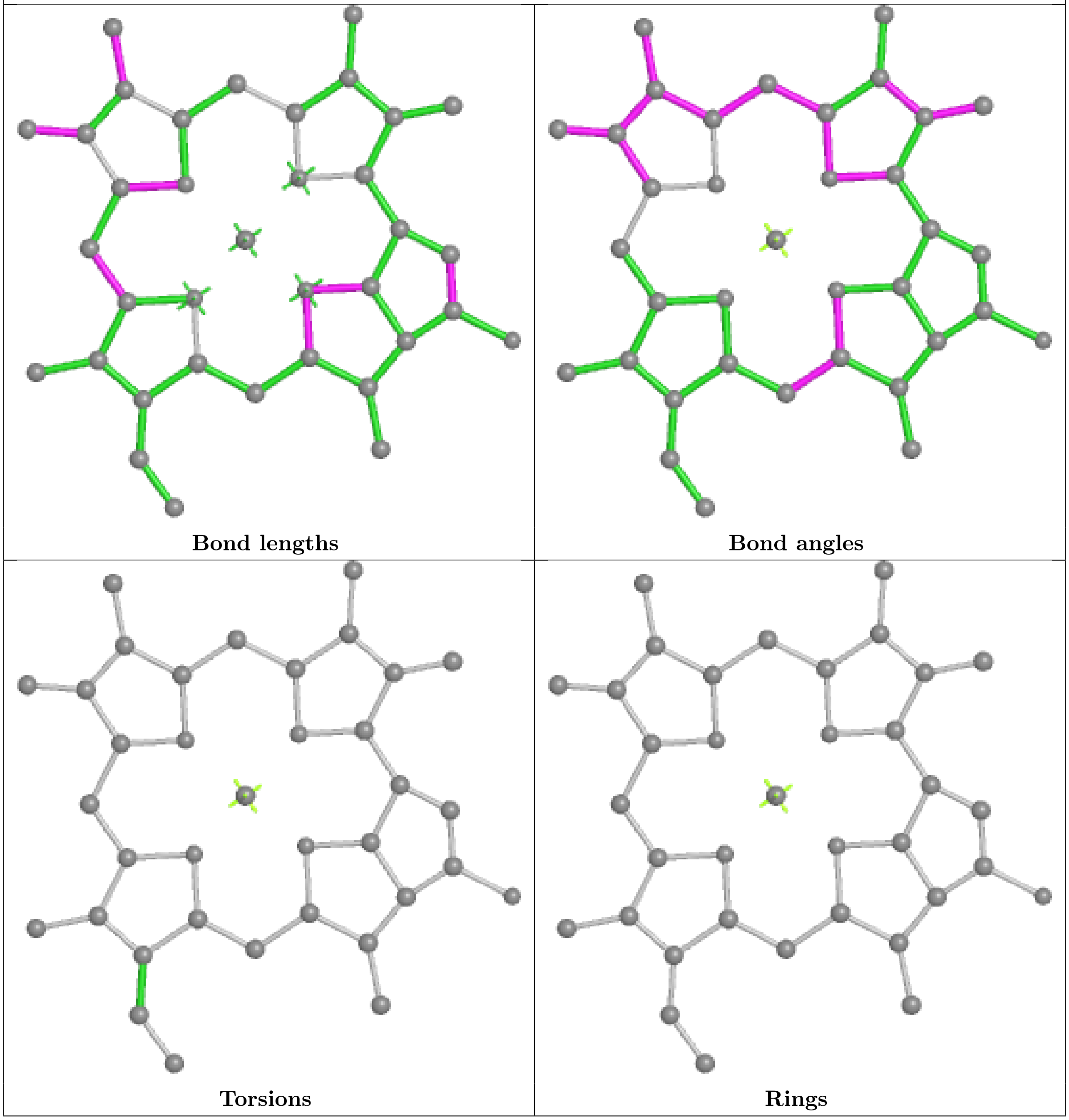
Ligand CLA BA 824



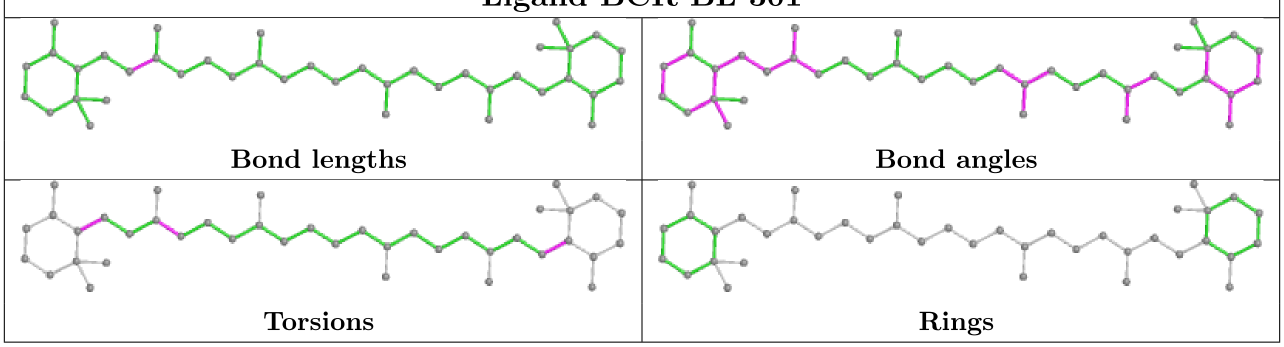
Ligand BCR BA 847



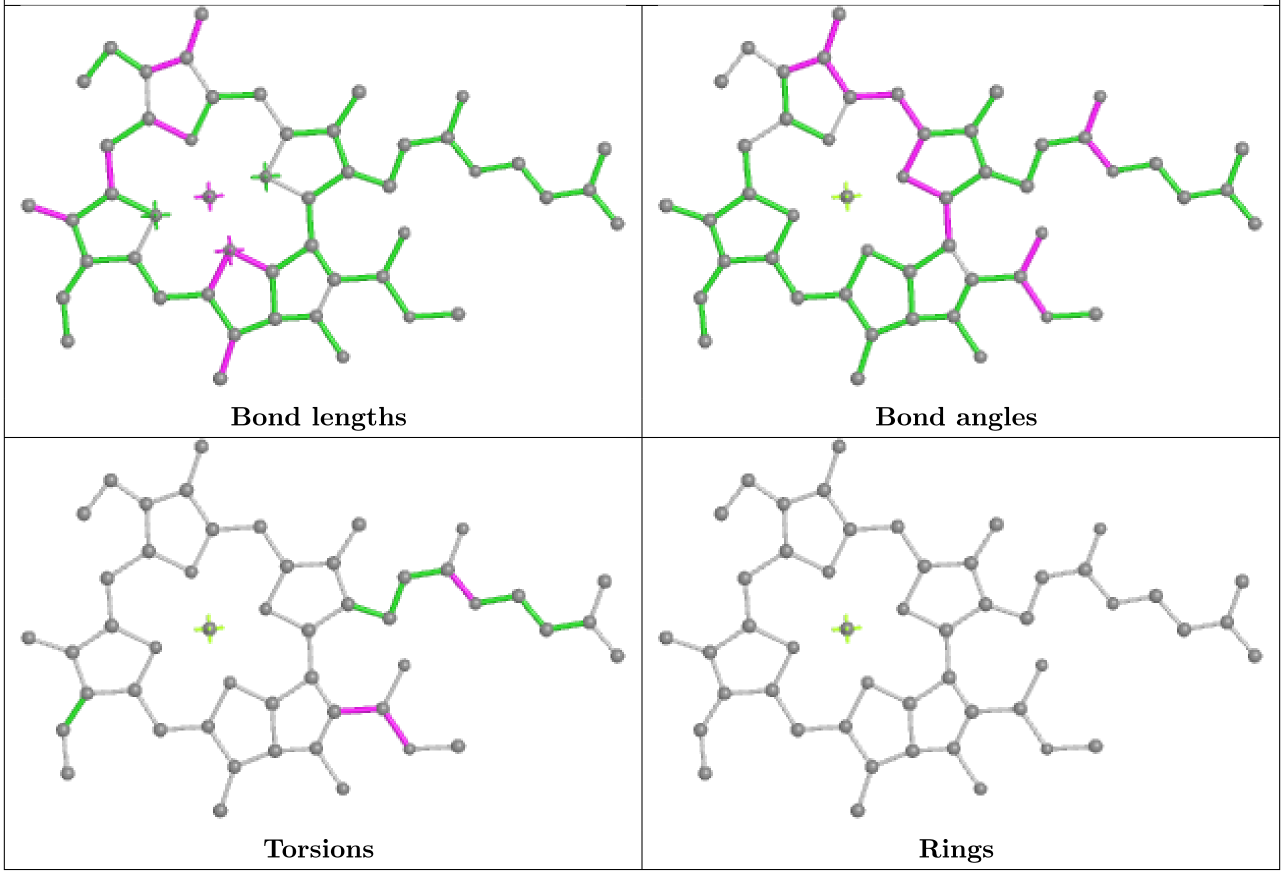
Ligand CLA BK 201



Ligand BCR BL 301



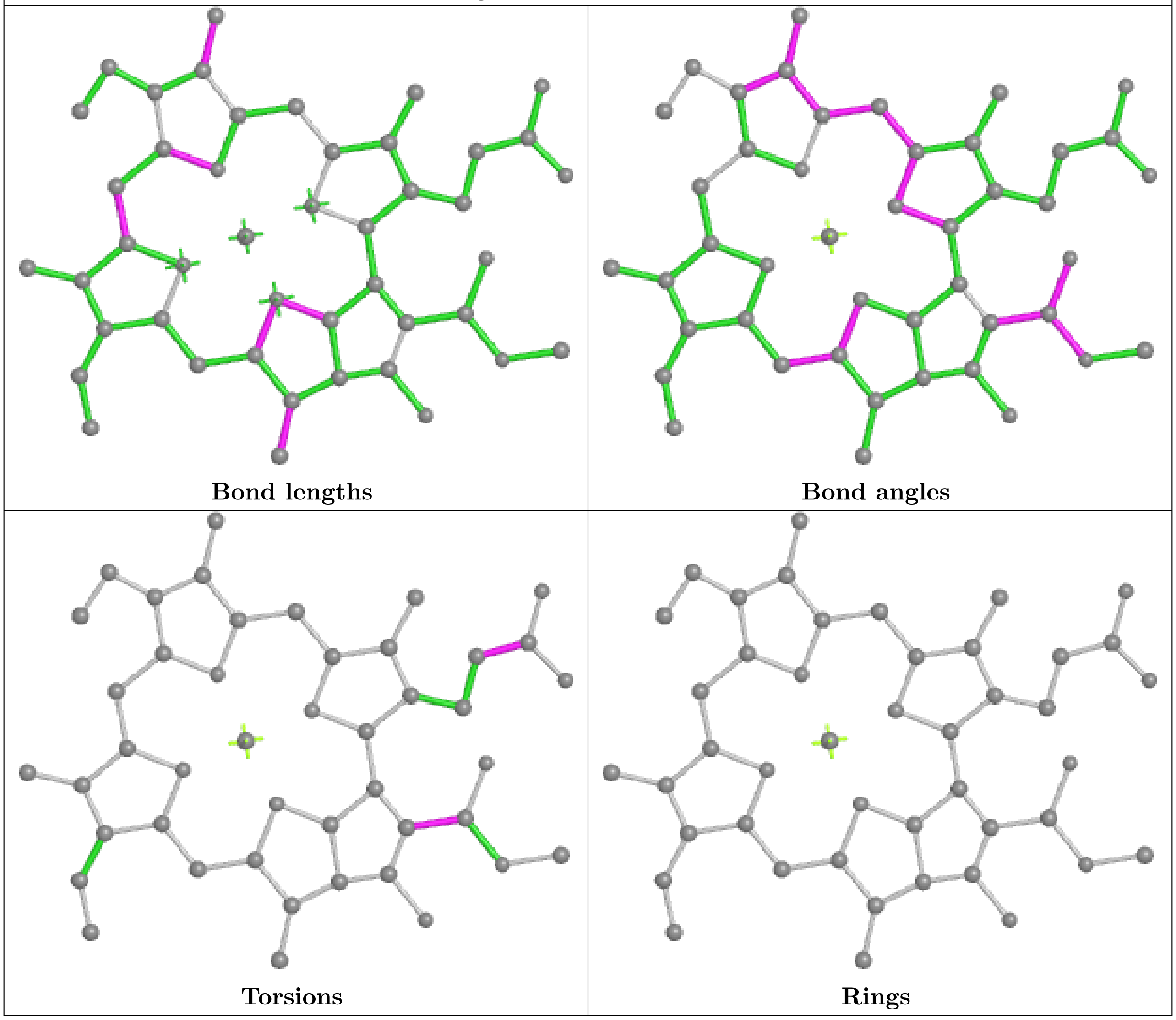
Ligand CLA AB 837



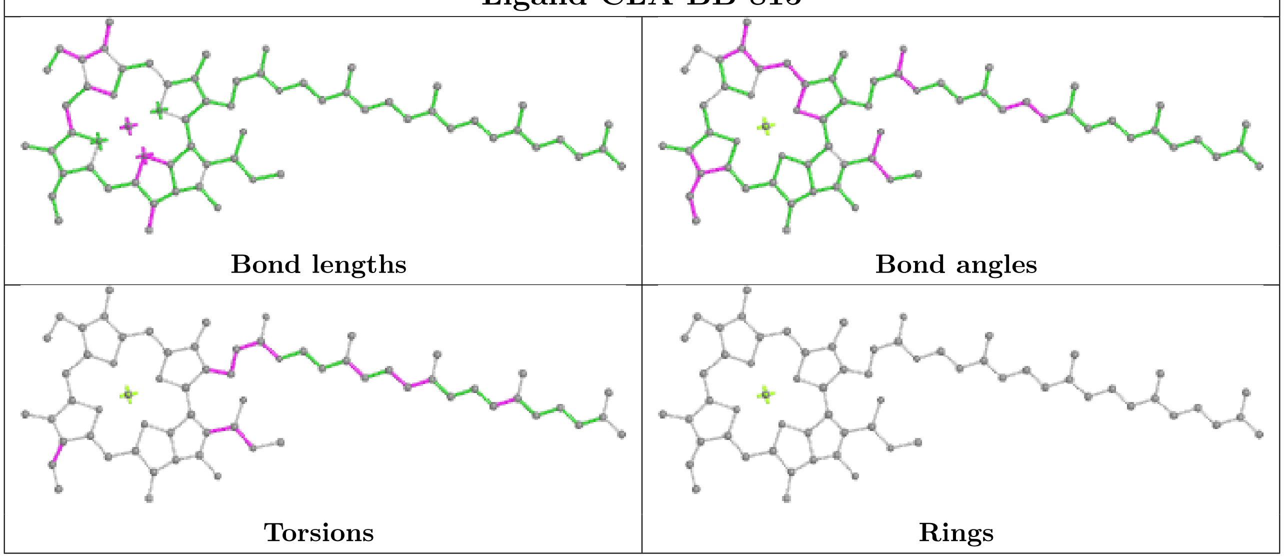
Bond lengths | Bond angles

Torsions | Rings

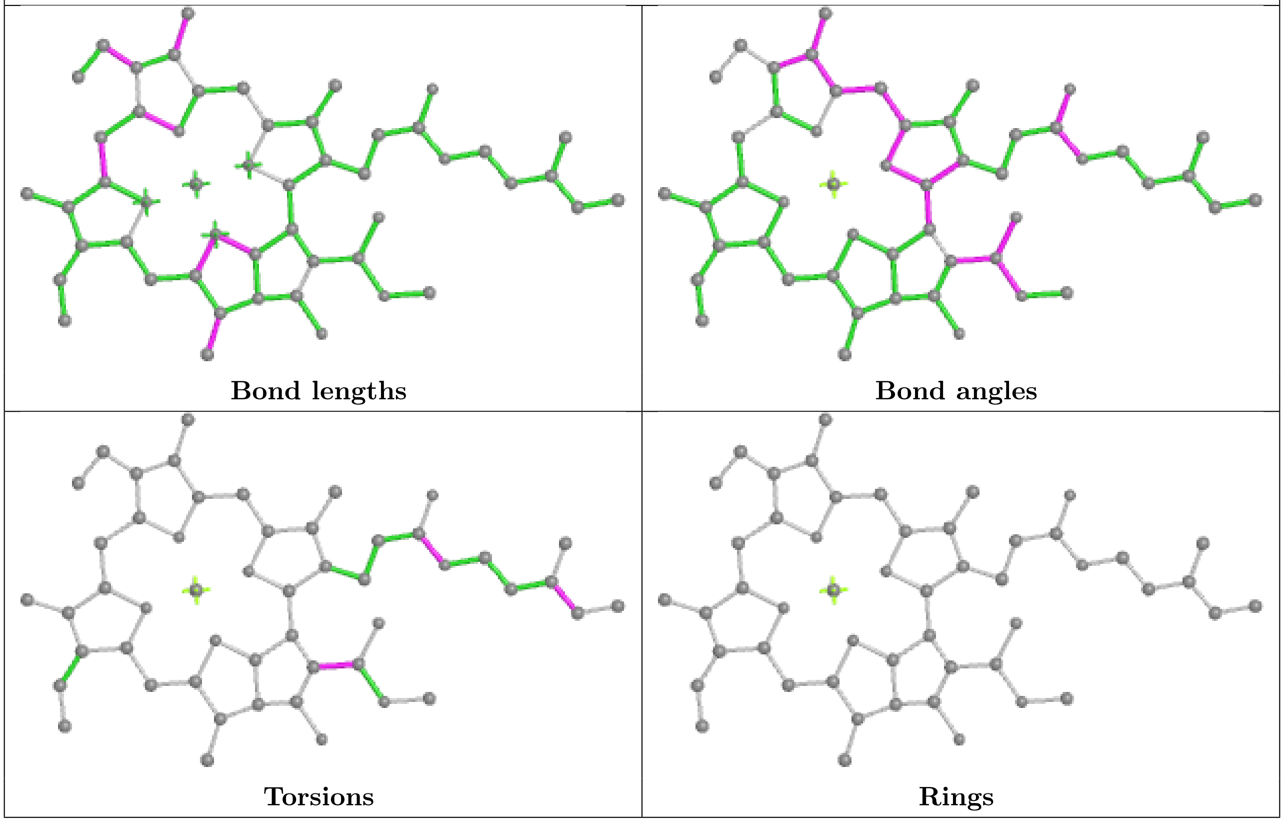
Ligand CLA B3 307



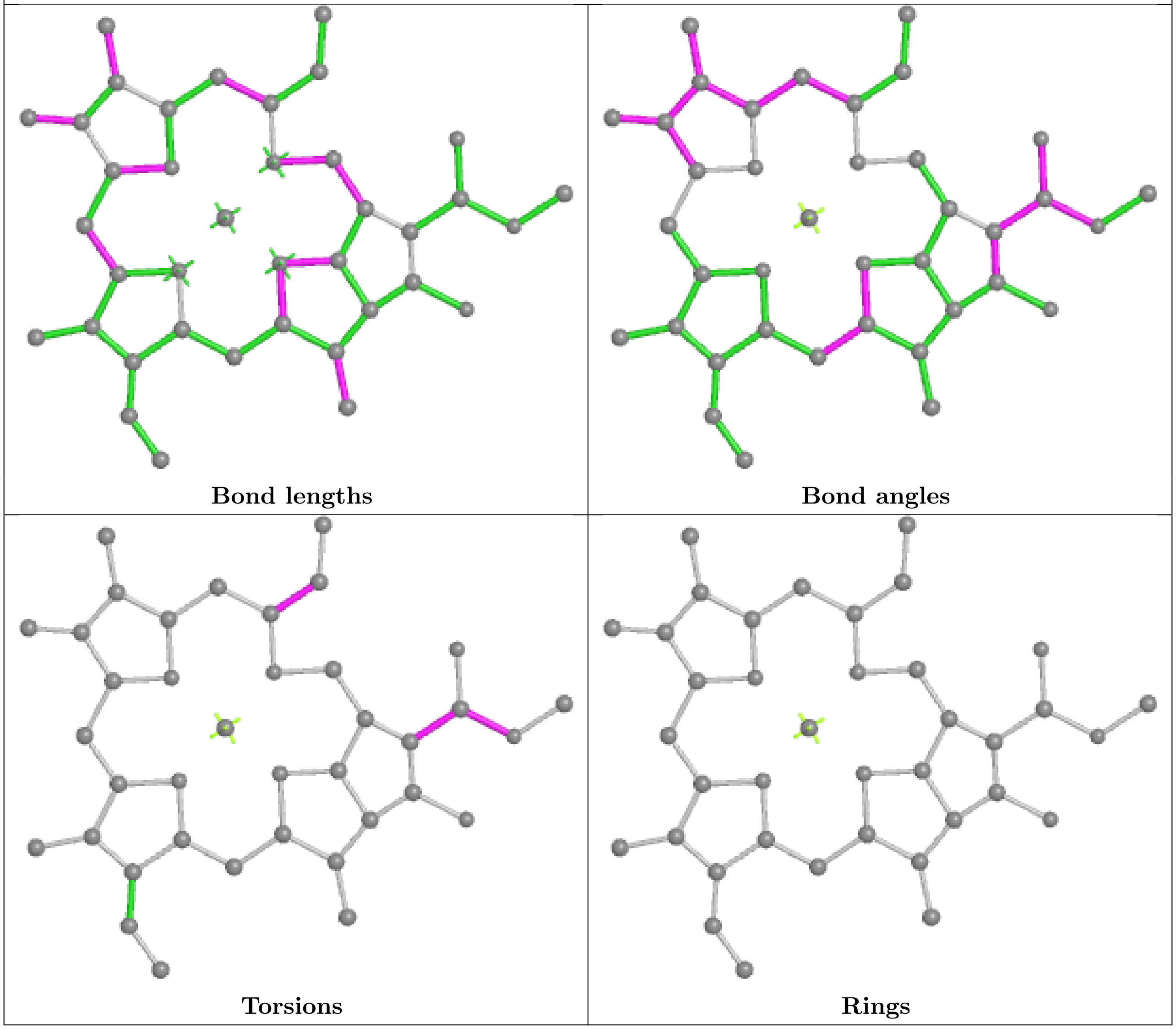
Ligand CLA BB 815



Ligand CLA AA 837



Ligand CLA B2 610



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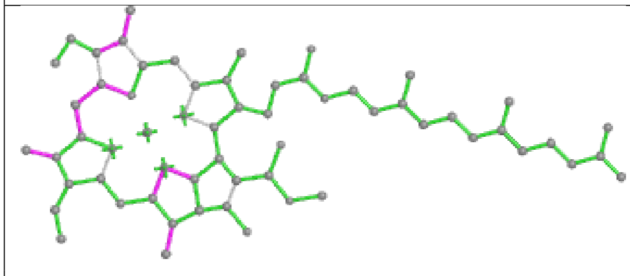
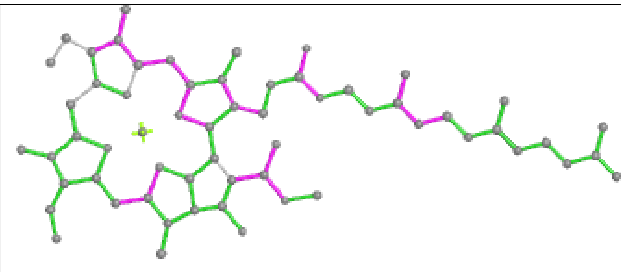
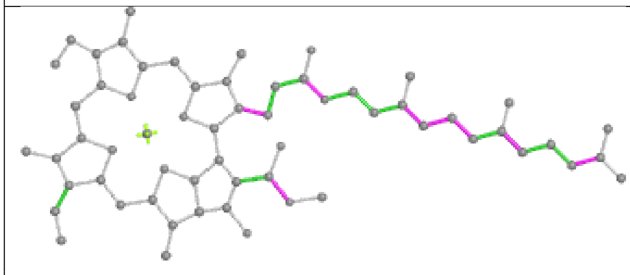


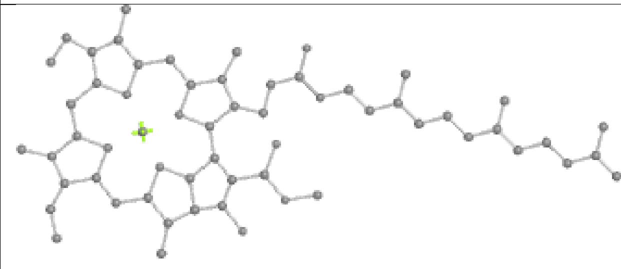
Bond lengths



Bond angles

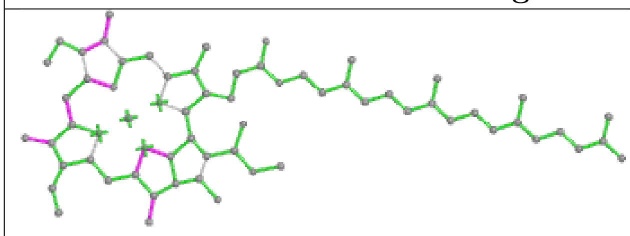


Torsions

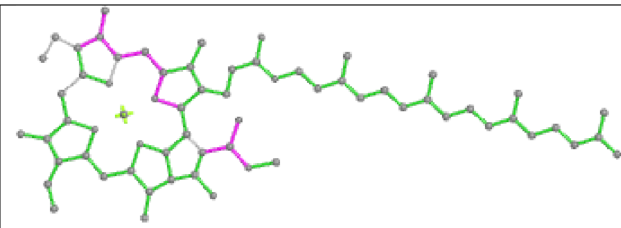


Rings

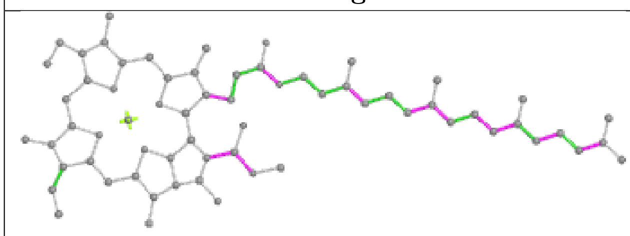
Ligand CLA AB 803



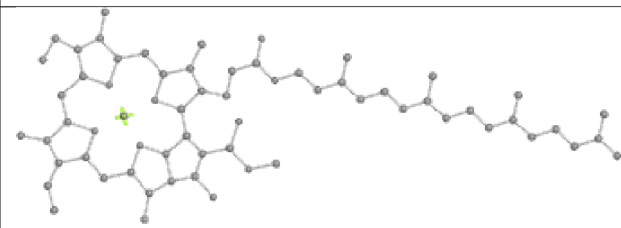
Bond lengths



Bond angles

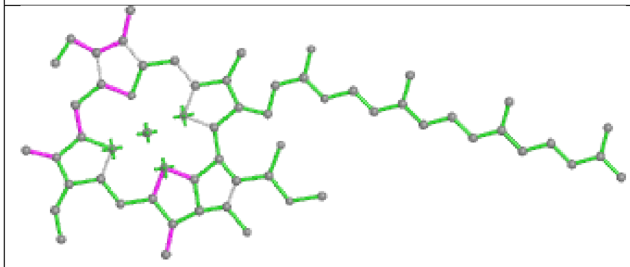


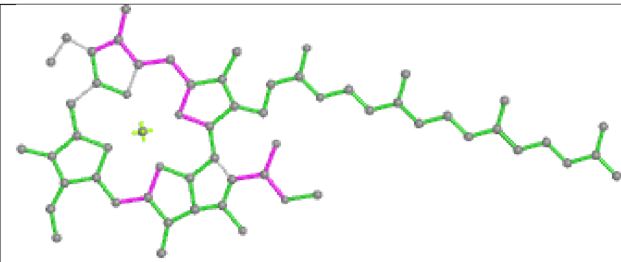
Torsions

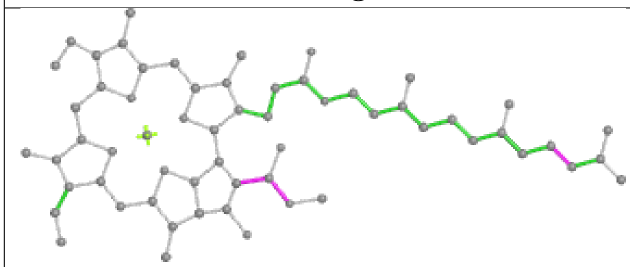


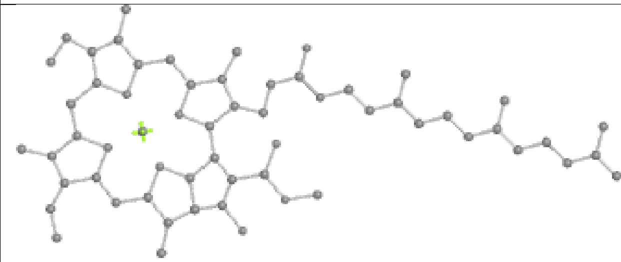
Rings

Ligand CLA B3 301

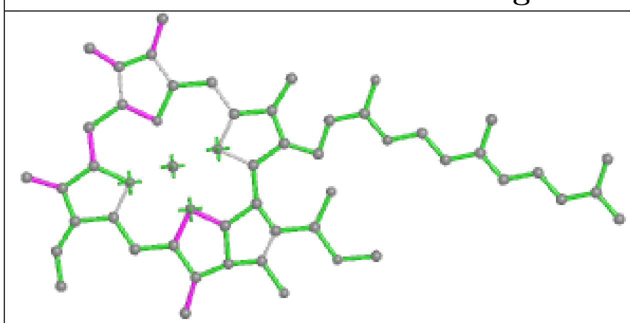

Bond lengths

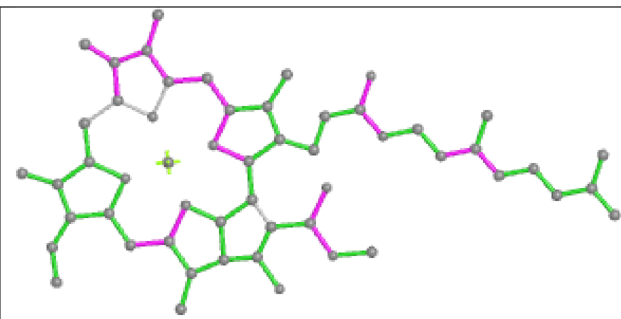

Bond angles

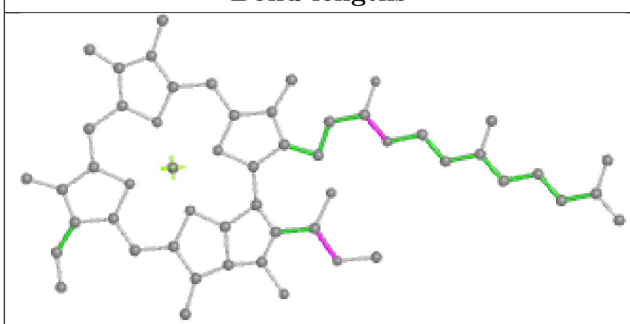

Torsions

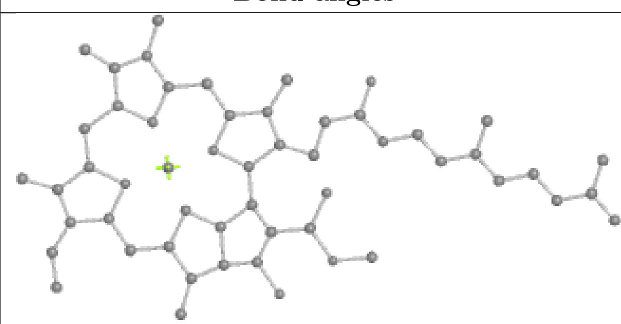

Rings

Ligand CLA BB 813

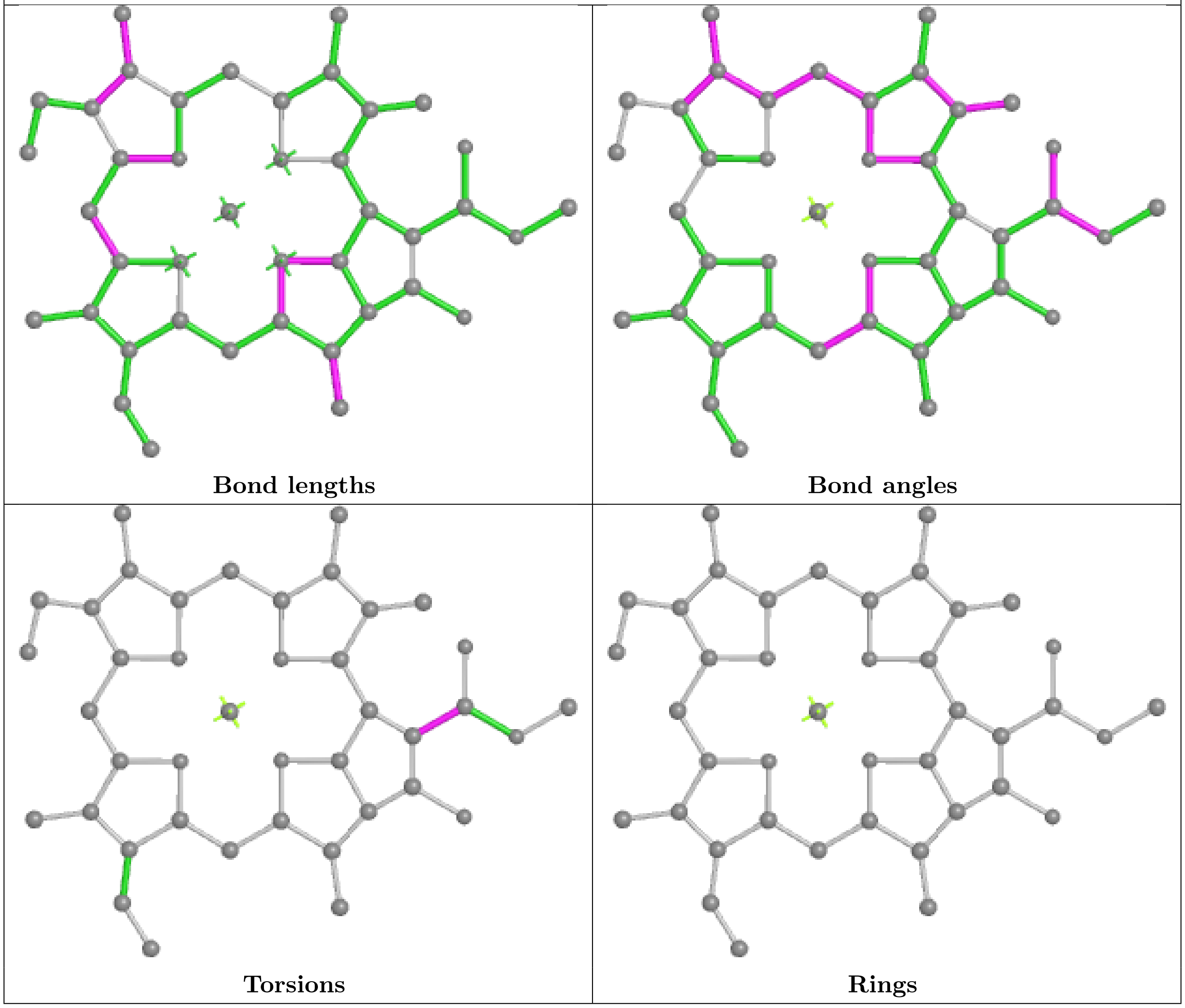

Bond lengths


Bond angles

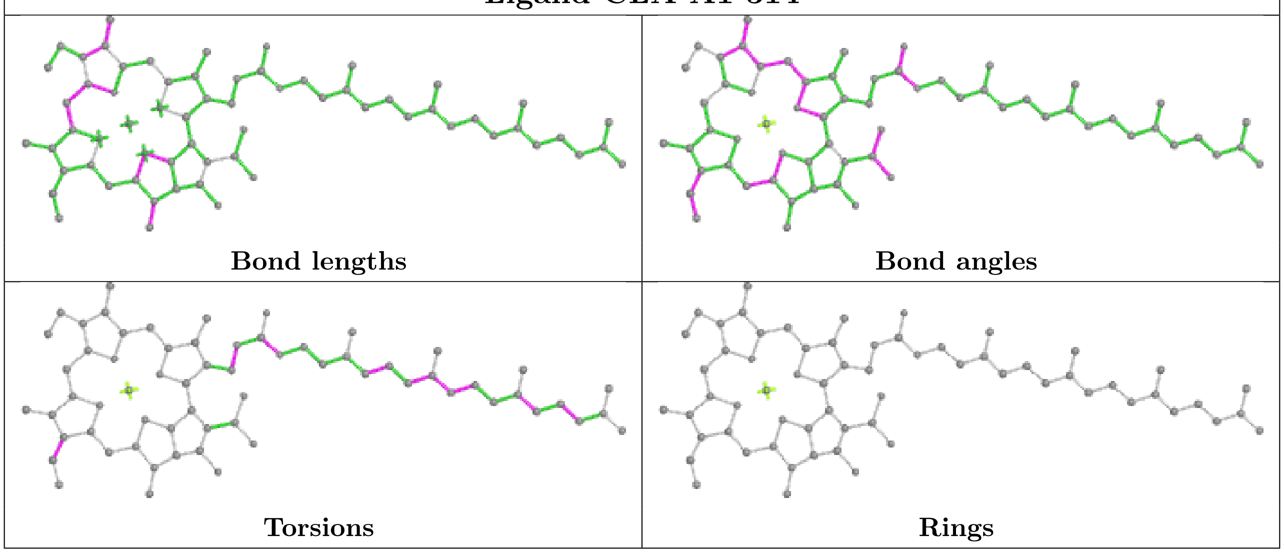

Torsions


Rings

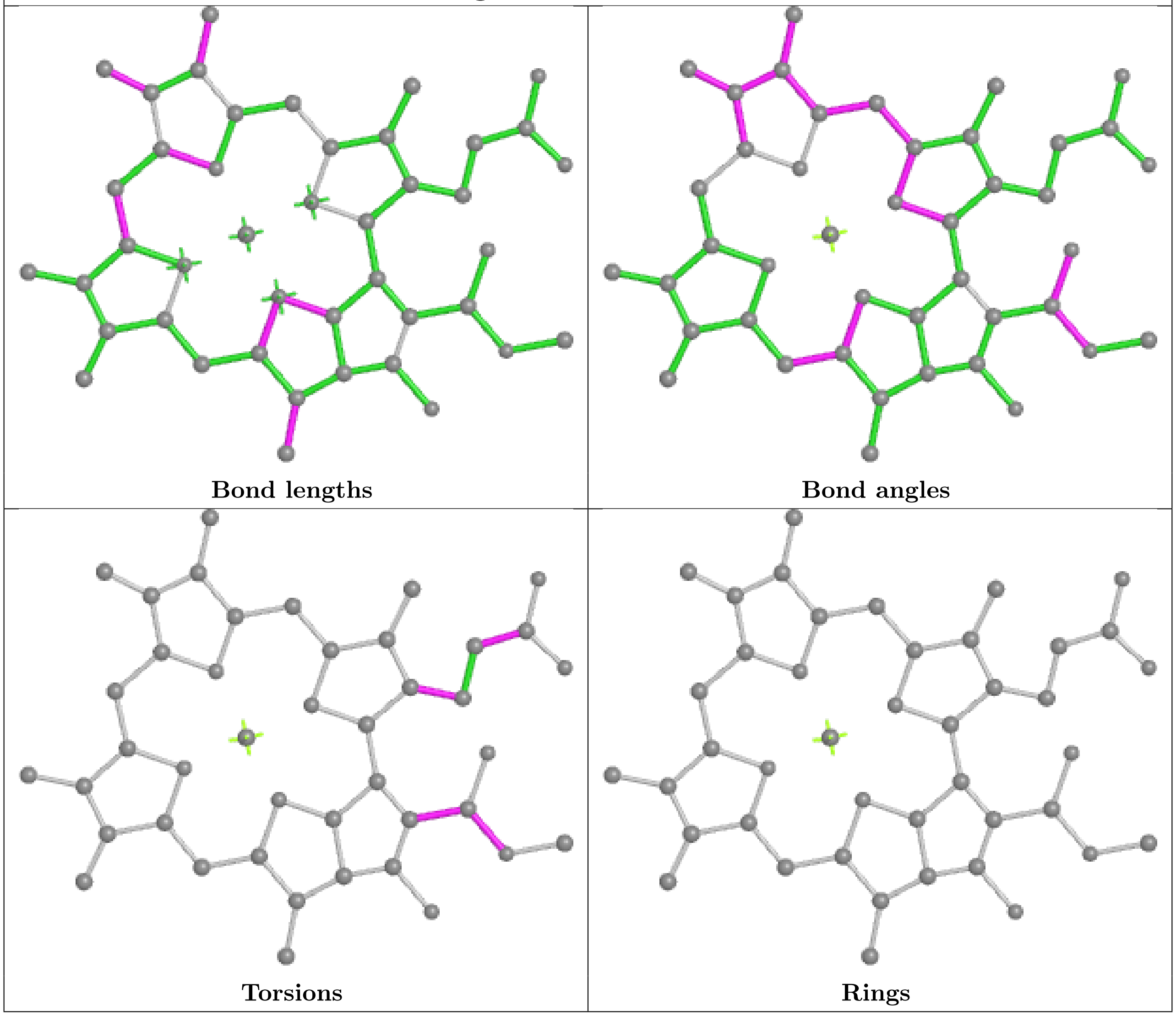
Ligand CLA AF 804



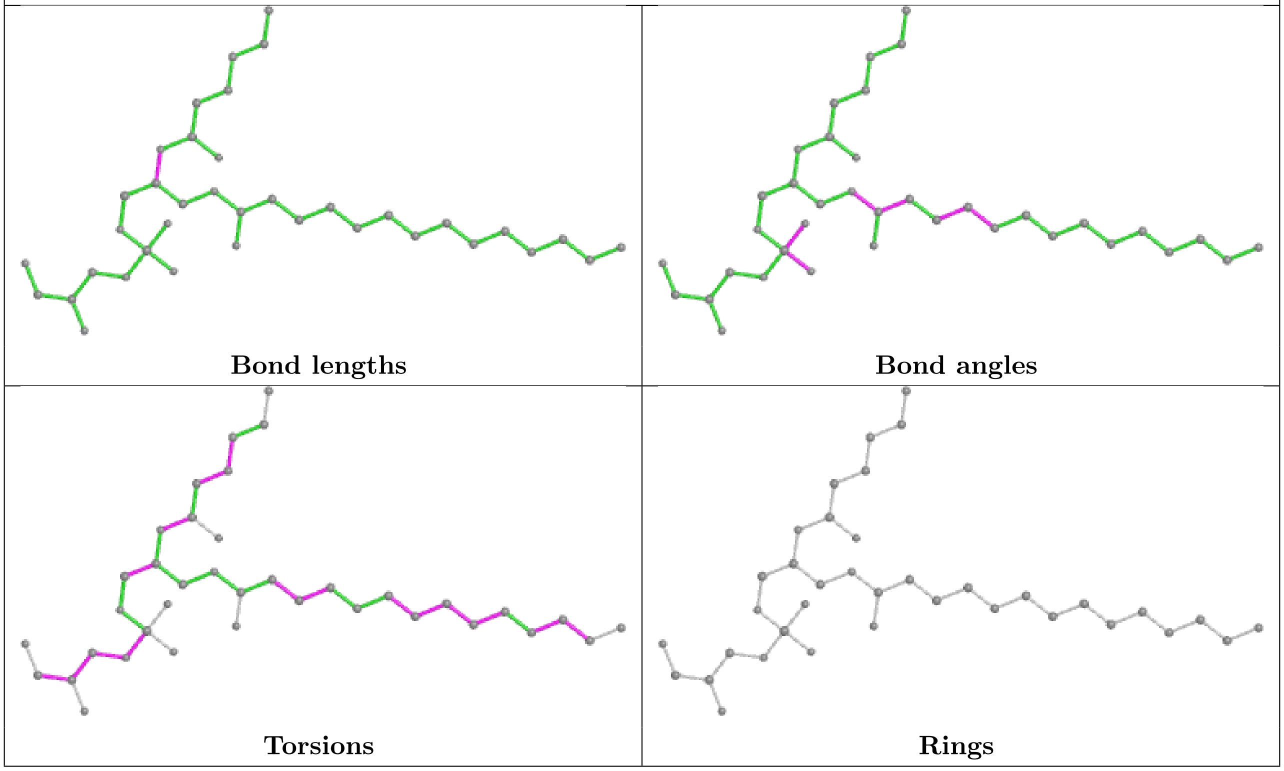
Ligand CLA A1 314



Ligand CLA A1 316



Ligand LHG F 801



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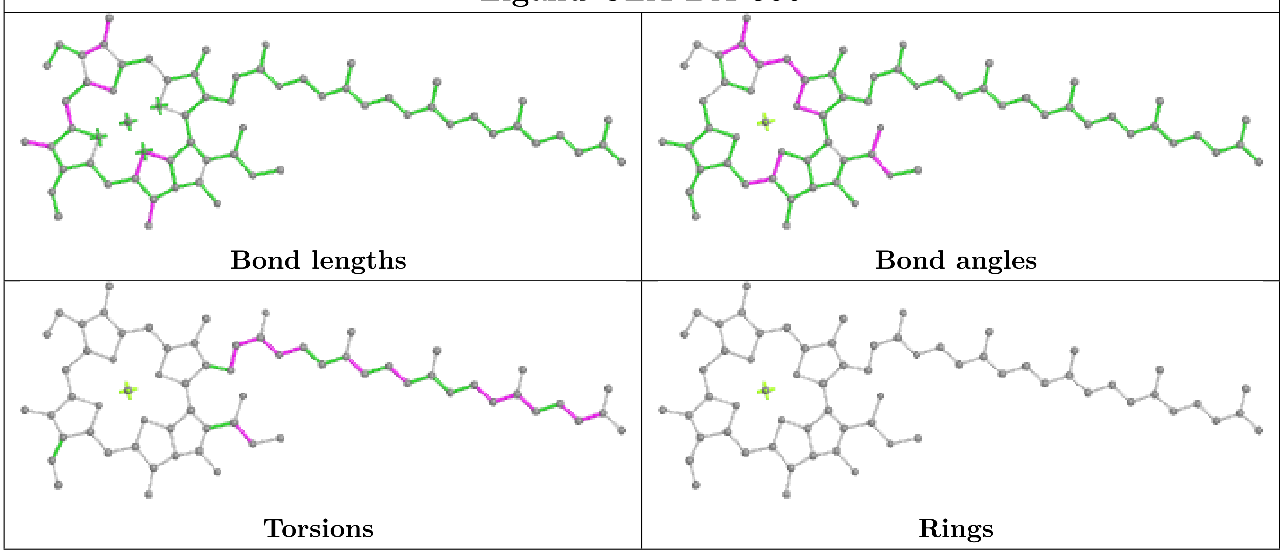
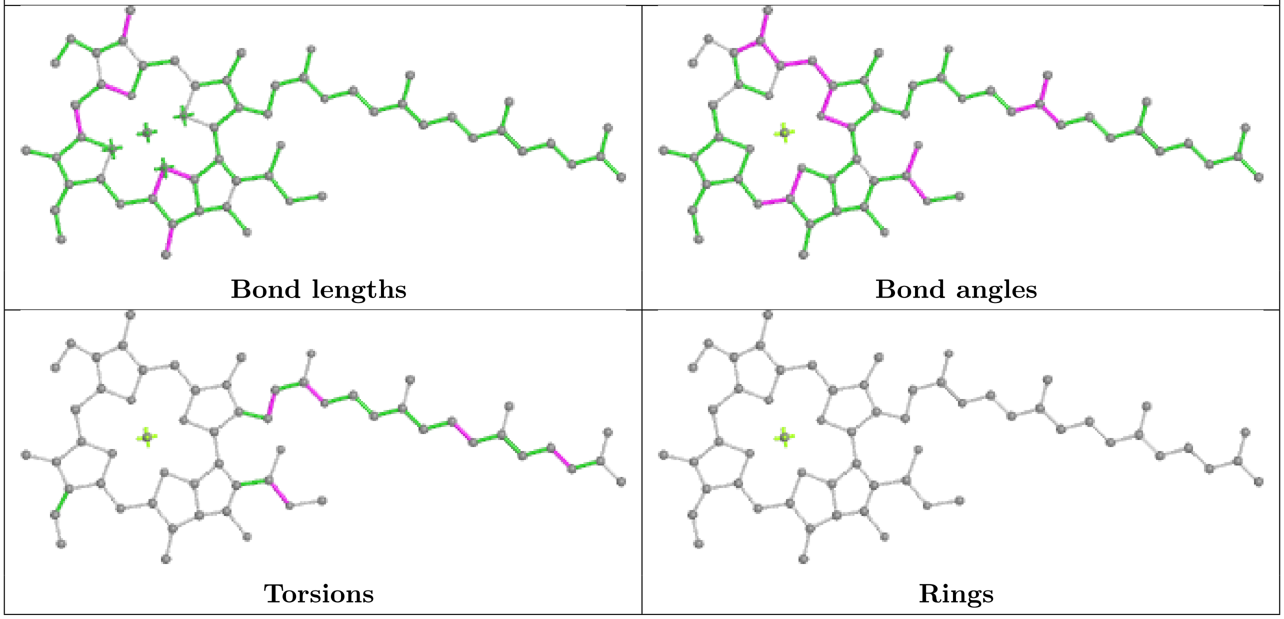
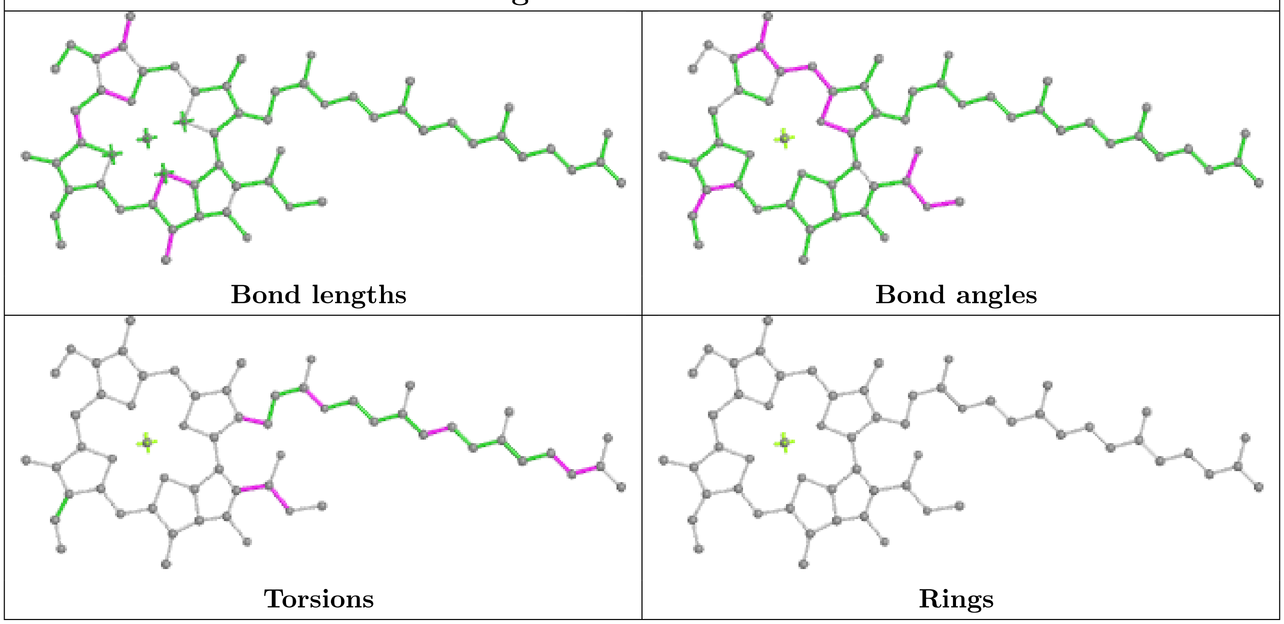


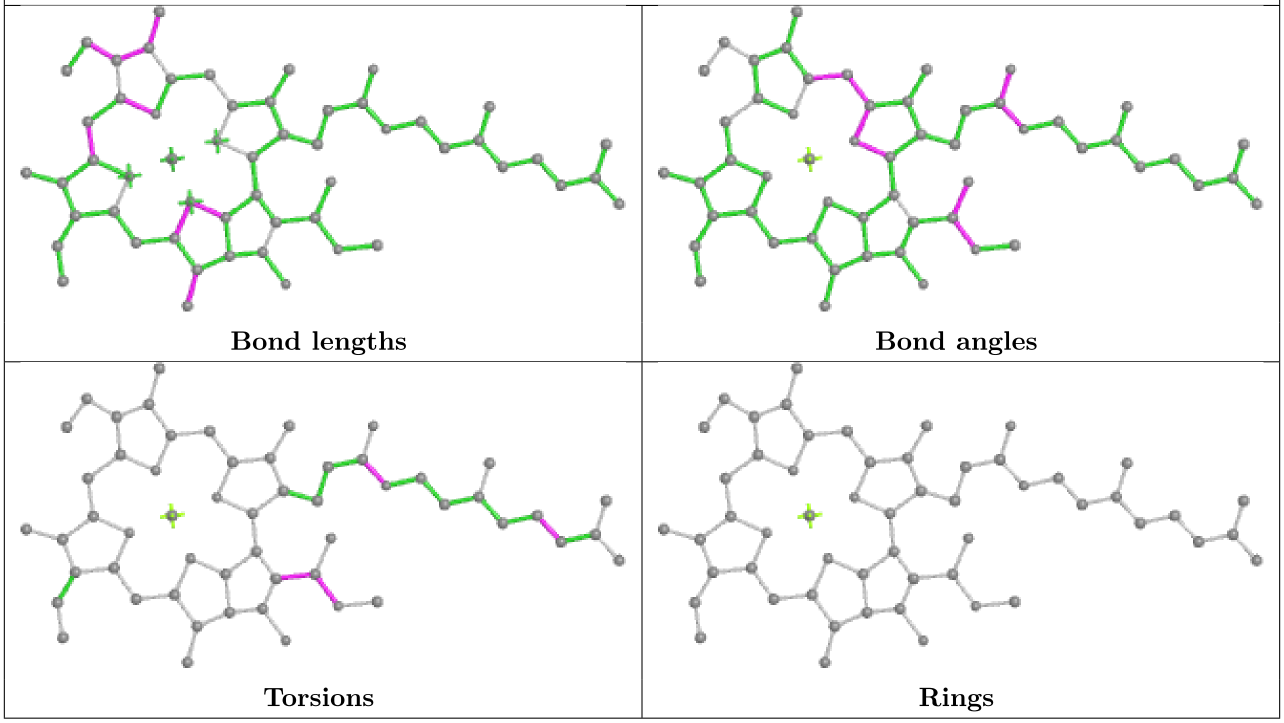
Ligand CLA AA 817



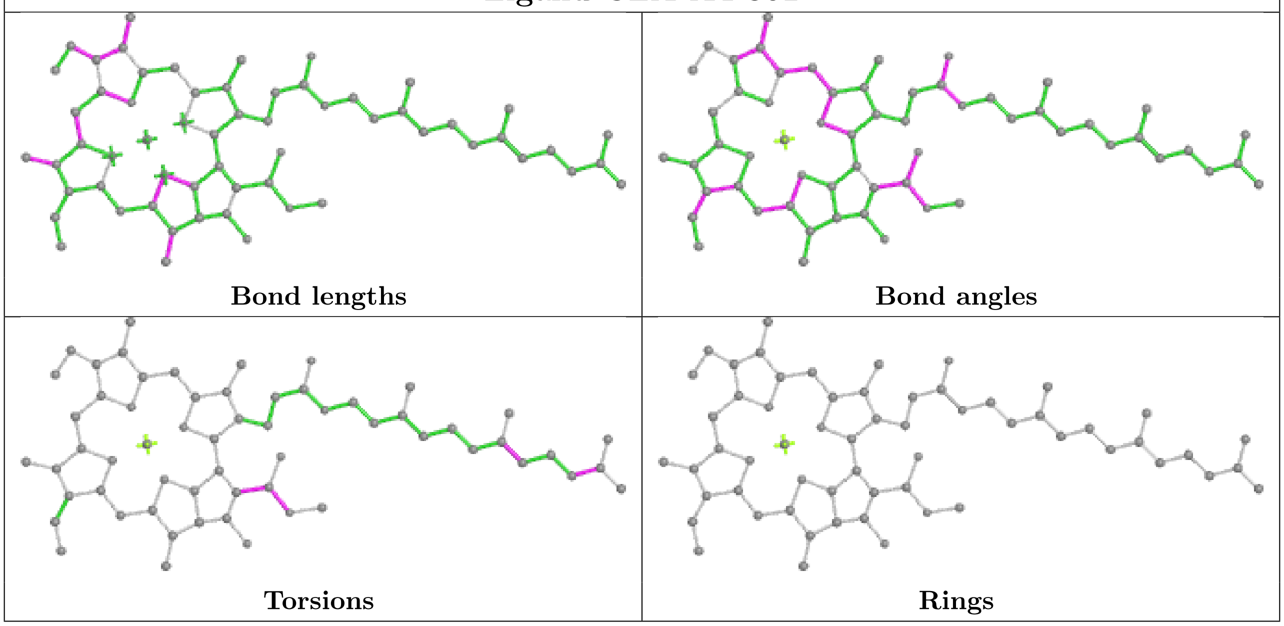
Ligand CLA BH 201



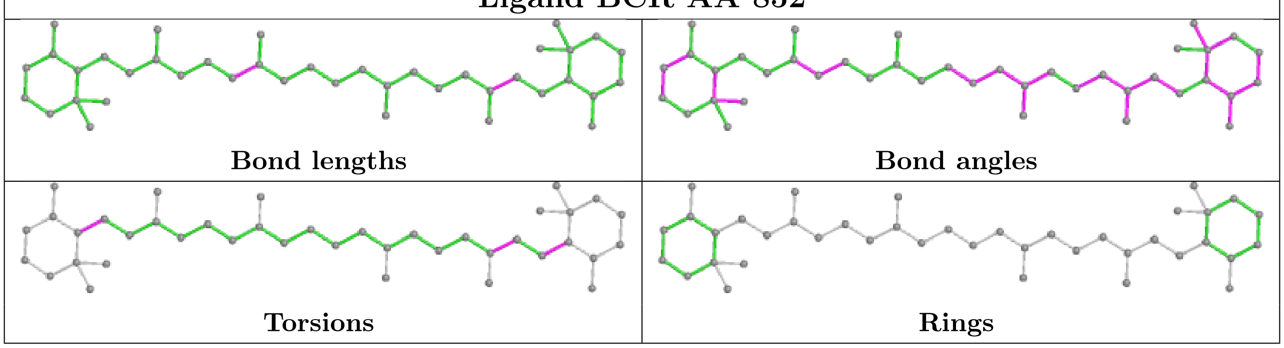
Ligand CLA BB 821



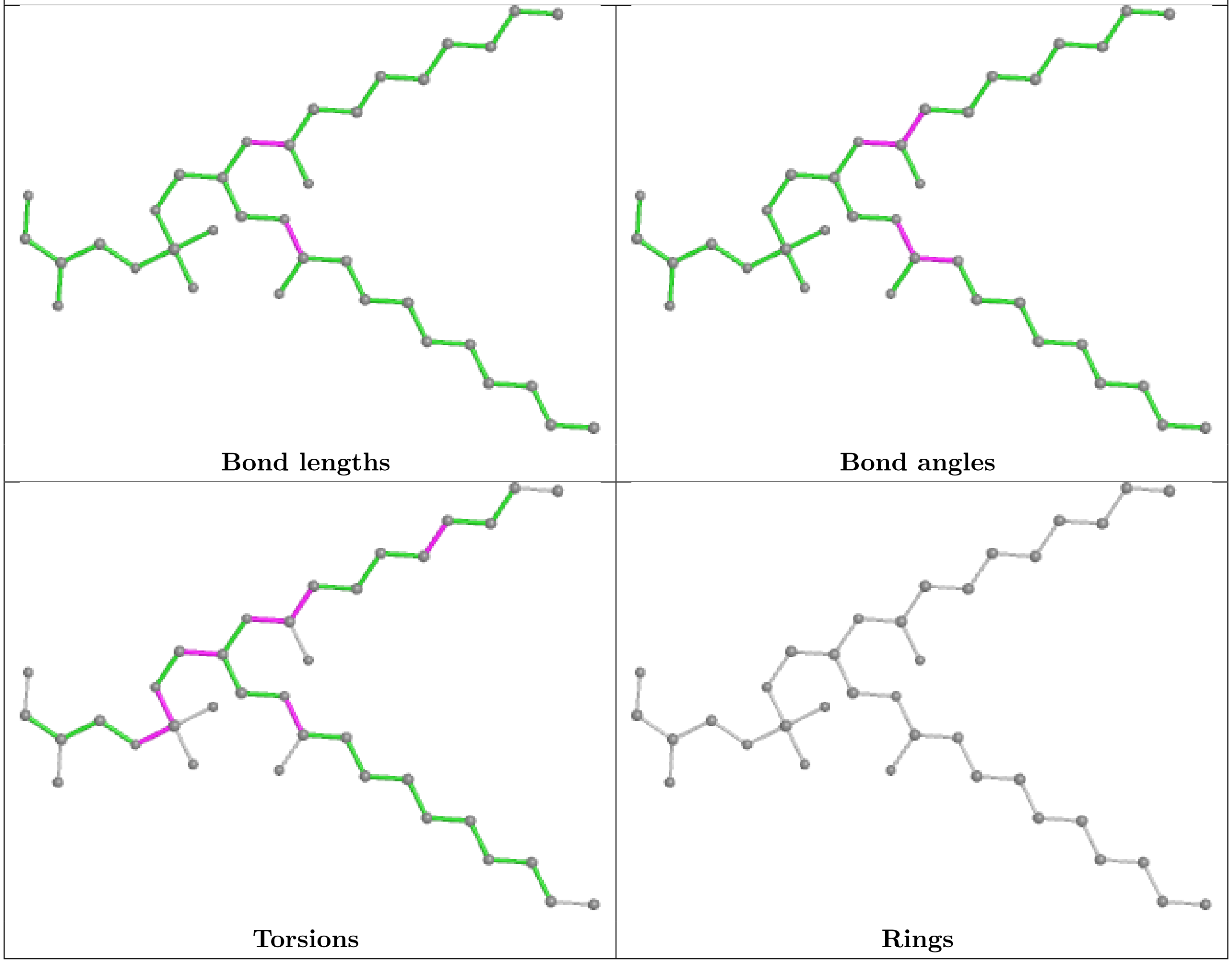
Ligand CLA A4 301



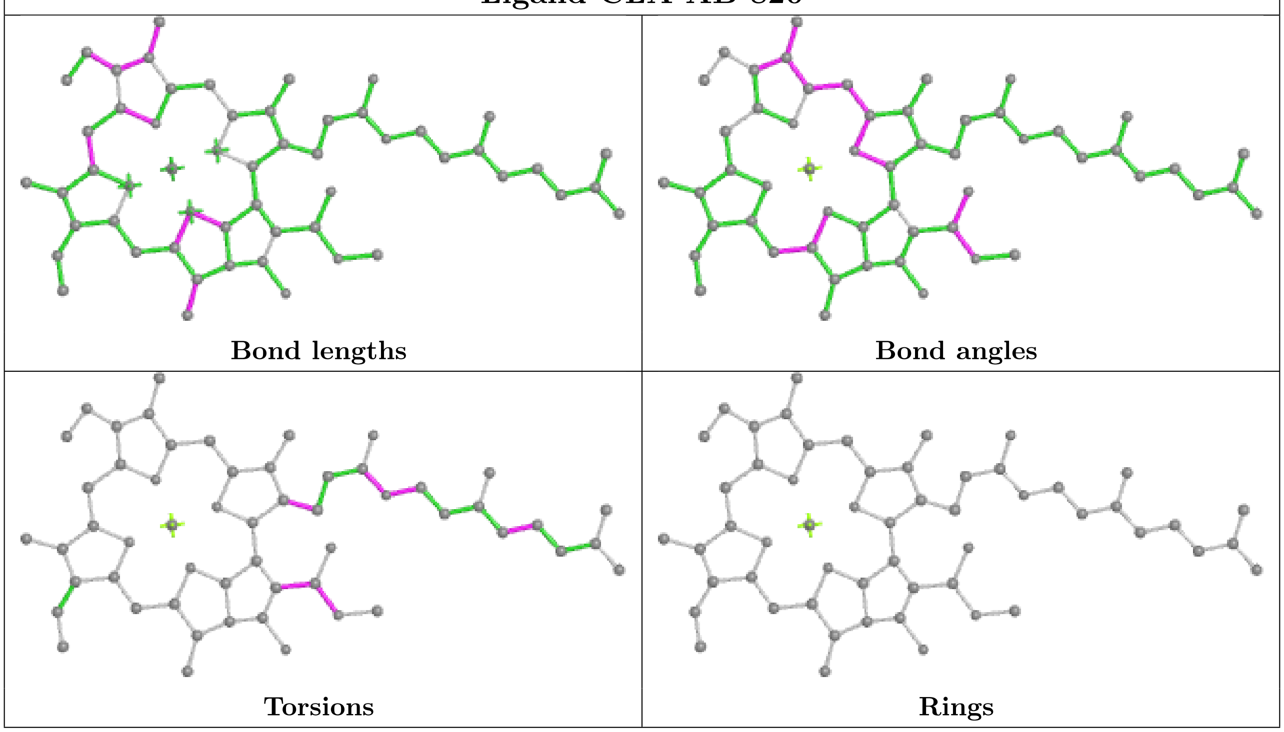
Ligand BCR AA 852



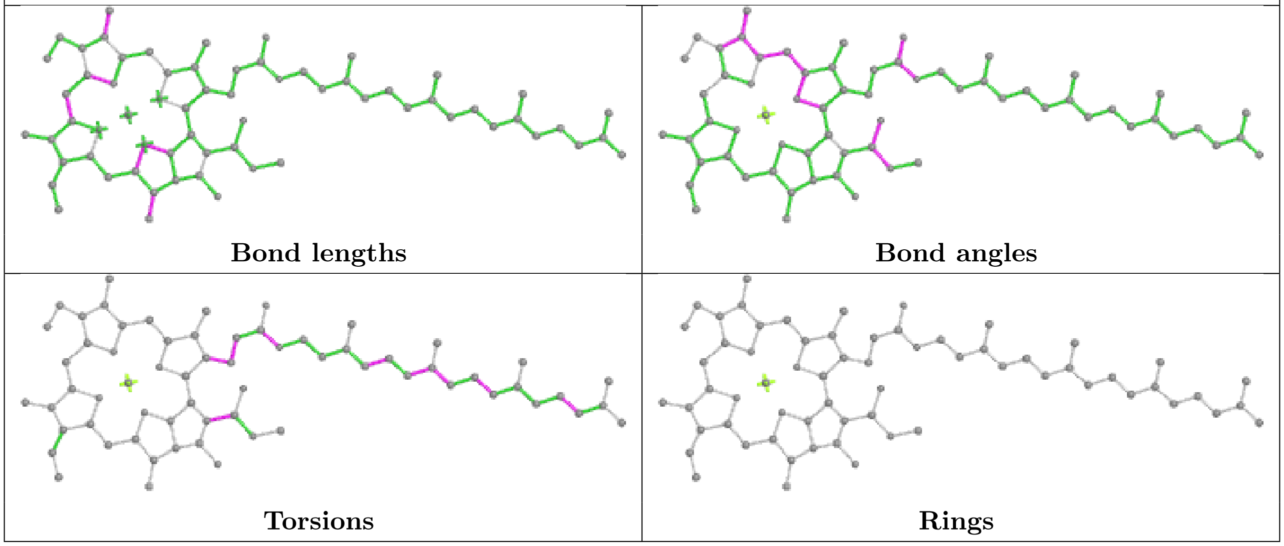
Ligand LHG B1 302



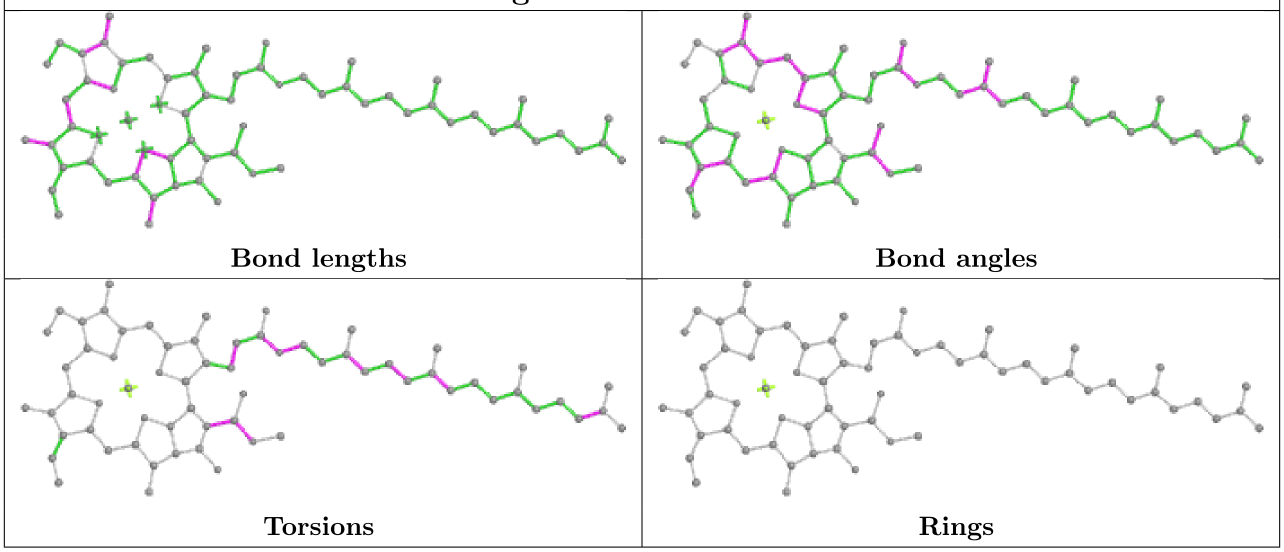
Ligand CLA AB 820



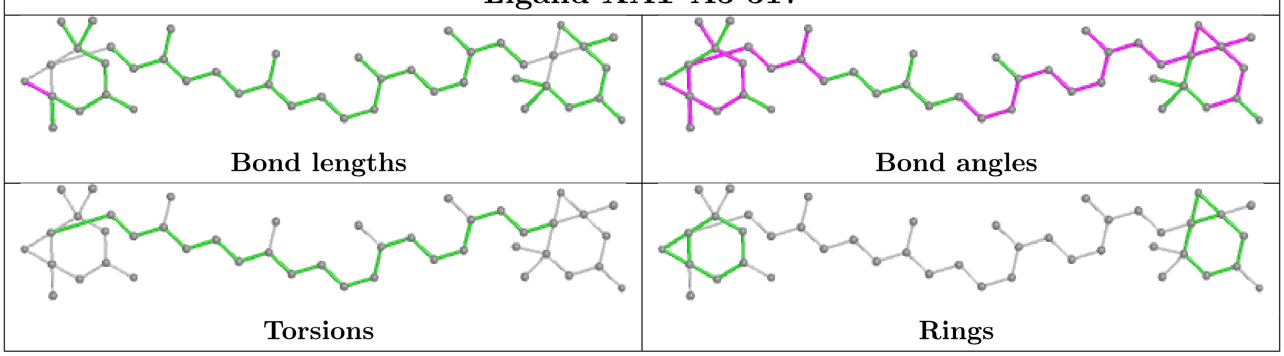
Ligand CLA BA 827



Ligand CLA BA 841



Ligand XAT A3 317



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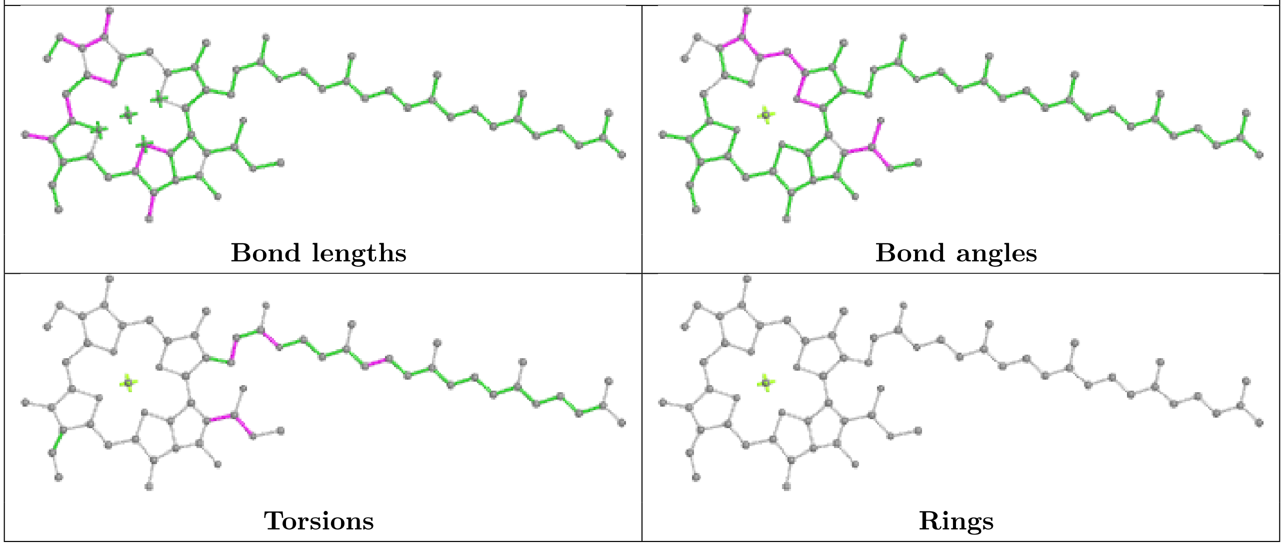

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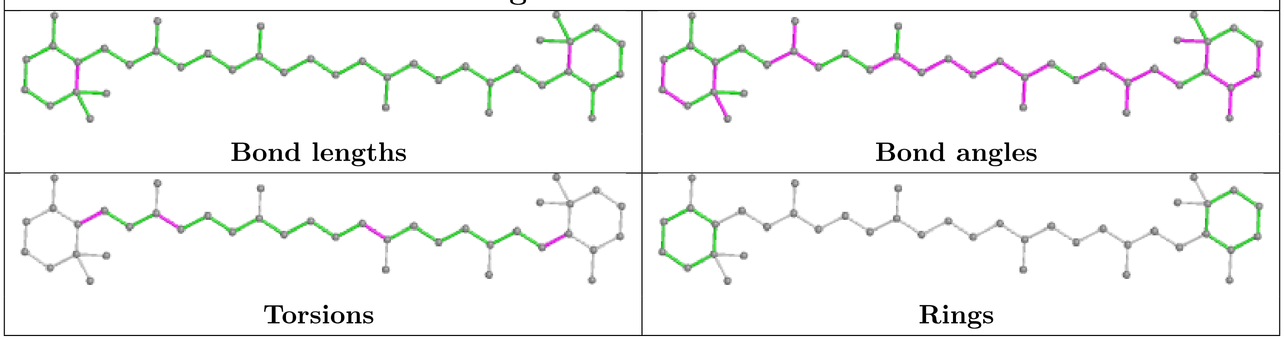


5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

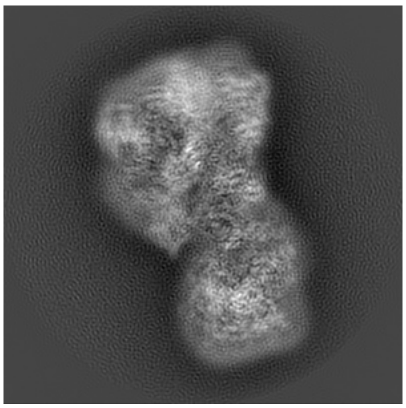
6 Map visualisation (i)

This section contains visualisations of the EMDB entry EMD-32477. These allow visual inspection of the internal detail of the map and identification of artifacts.

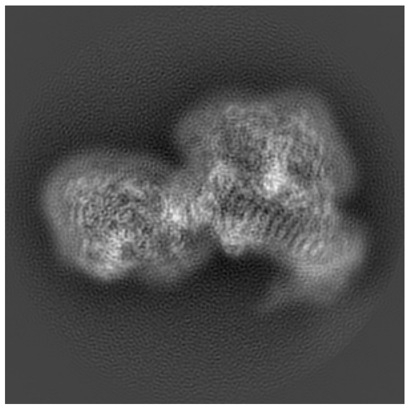
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections (i)

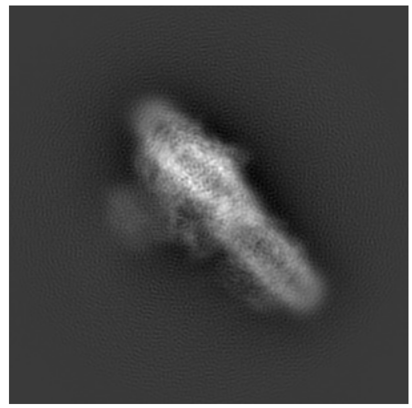
6.1.1 Primary map



X



Y

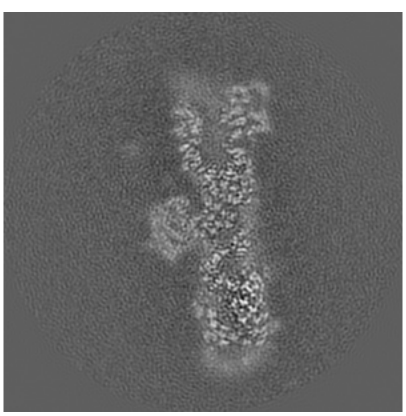


Z

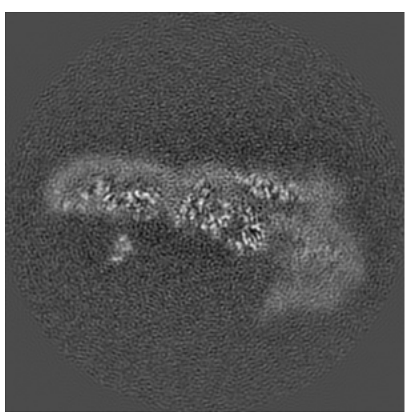
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

6.2.1 Primary map



X Index: 200



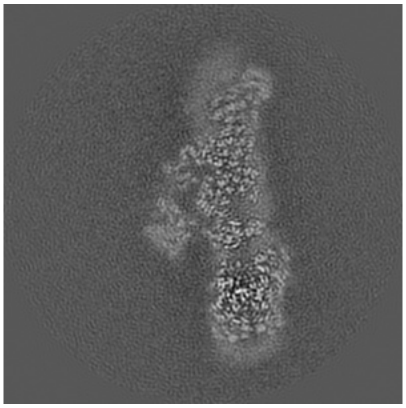
Y Index: 200

Z Index: 200

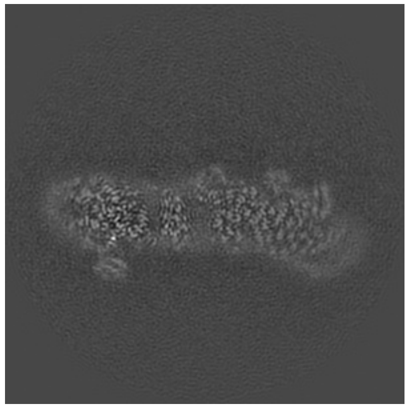
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

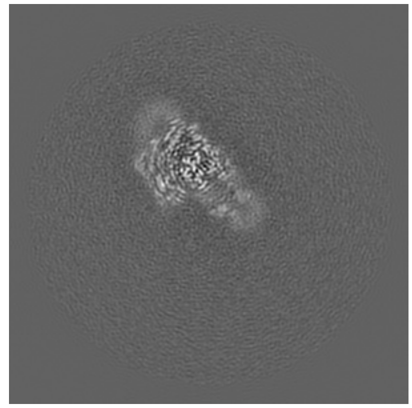
6.3.1 Primary map



X Index: 185



Y Index: 235



Z Index: 112

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

6.4 Orthogonal surface views (i)

6.4.1 Primary map

X

Y

Z

The images above show the 3D surface view of the map at the recommended contour level 0.02. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

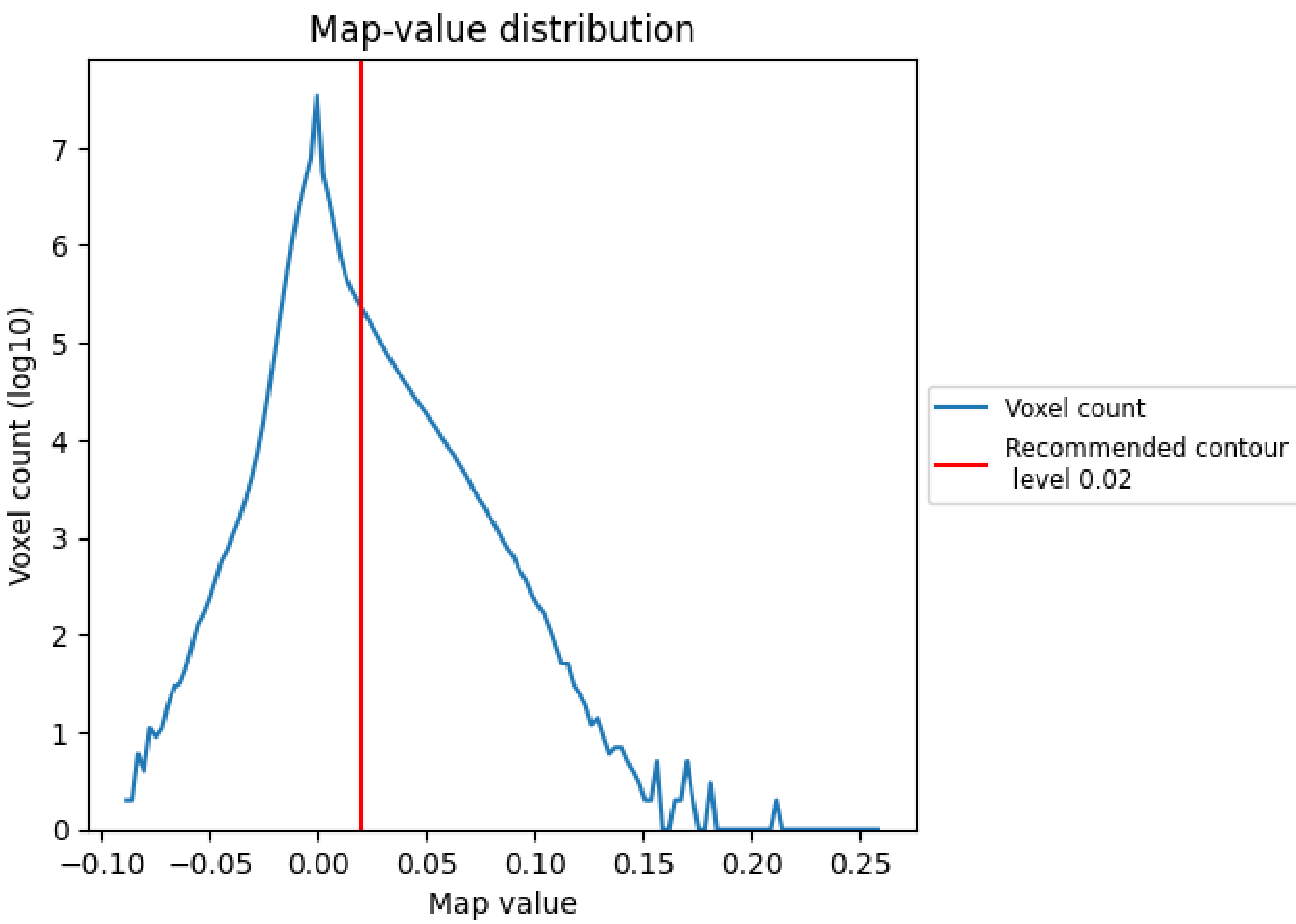
6.5 Mask visualisation (i)

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

7 Map analysis (i)

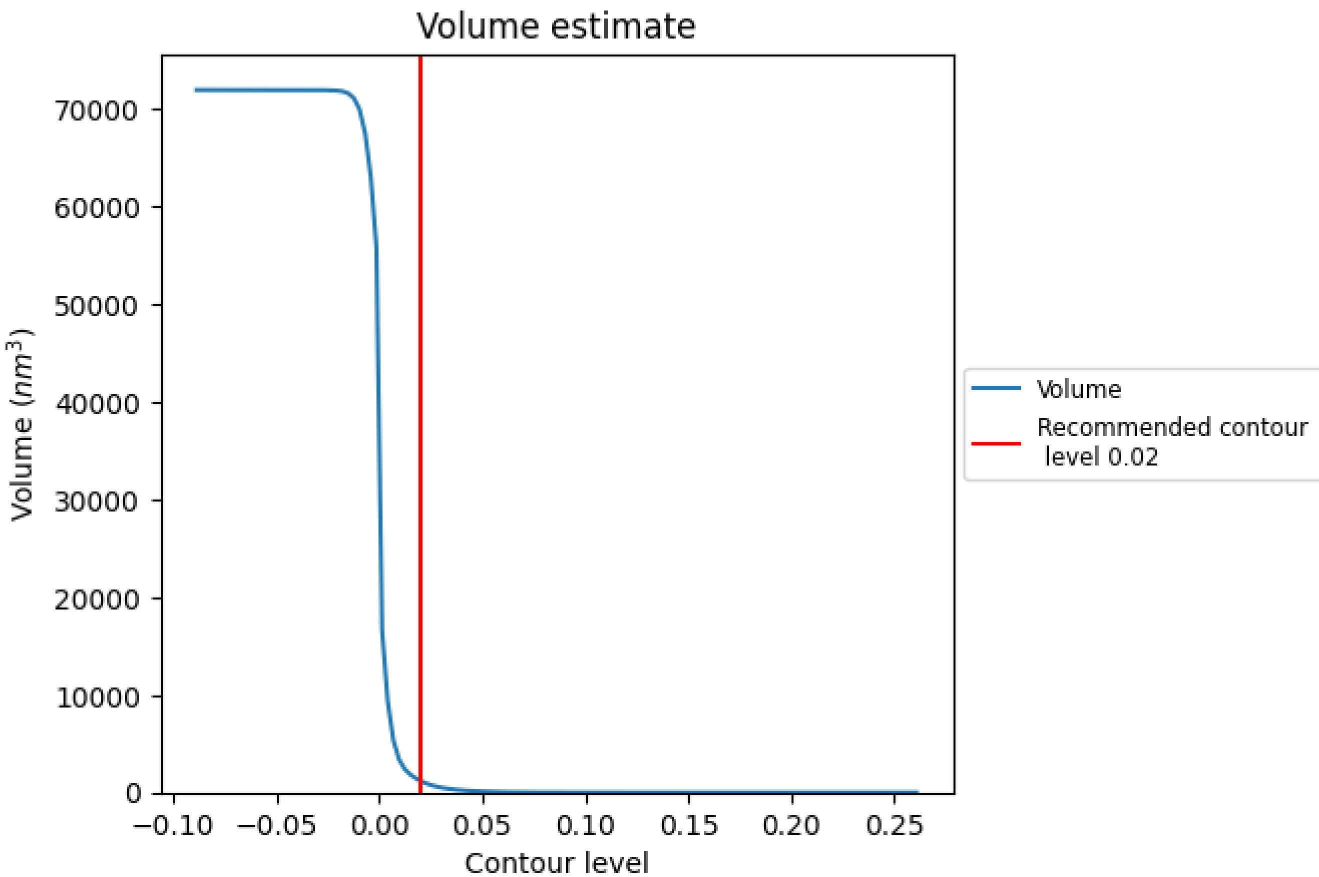
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution (i)



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.

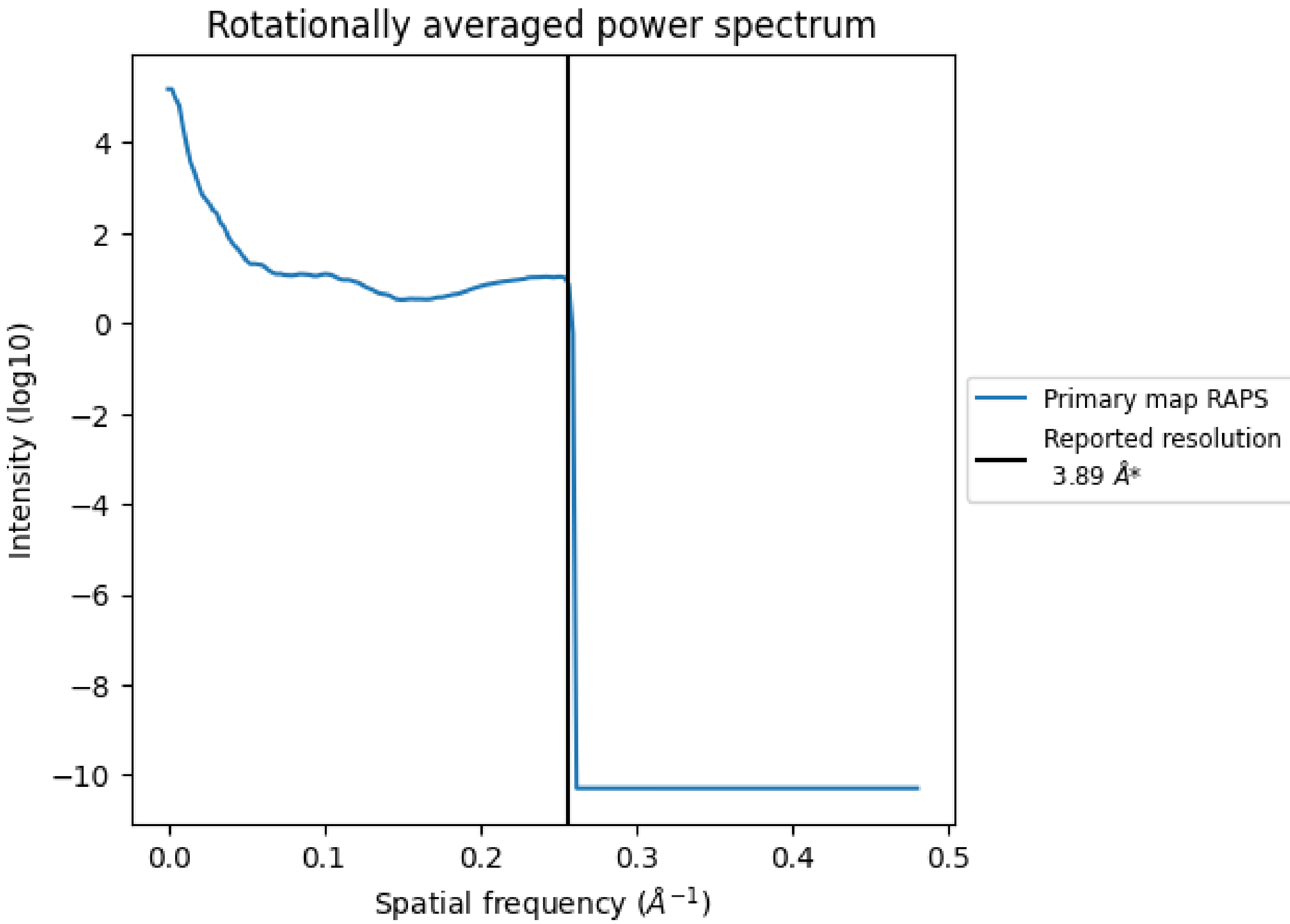
7.2 Volume estimate (i)



The volume at the recommended contour level is 1193 nm^3; this corresponds to an approximate mass of 1078 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 0.257 $\AA^{-1}$

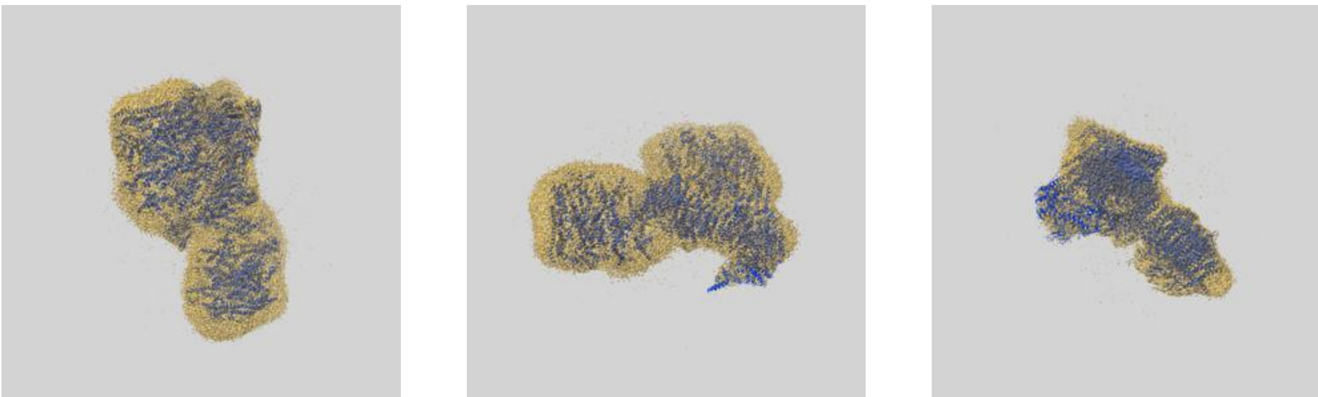
8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-32477 and PDB model 7WG5. Per-residue inclusion information can be found in section 3 on page 46.

9.1 Map-model overlay (i)



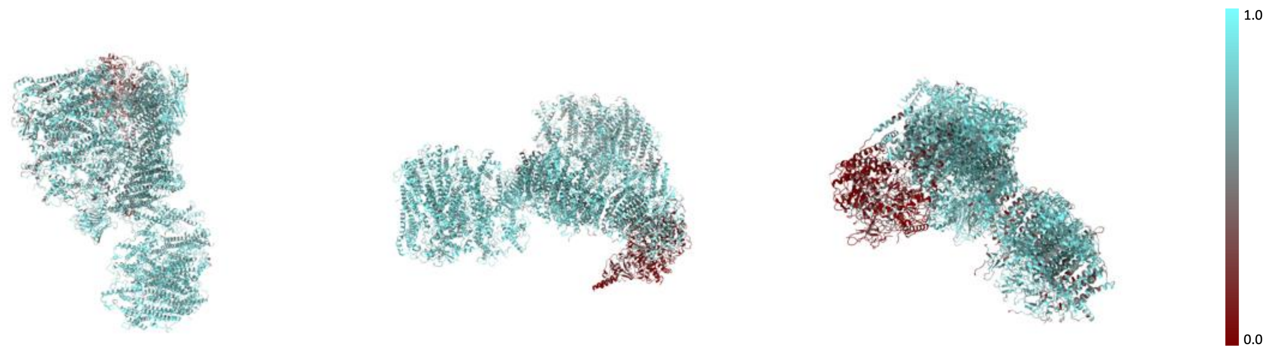
X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.02 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 (i)

This section was not generated.

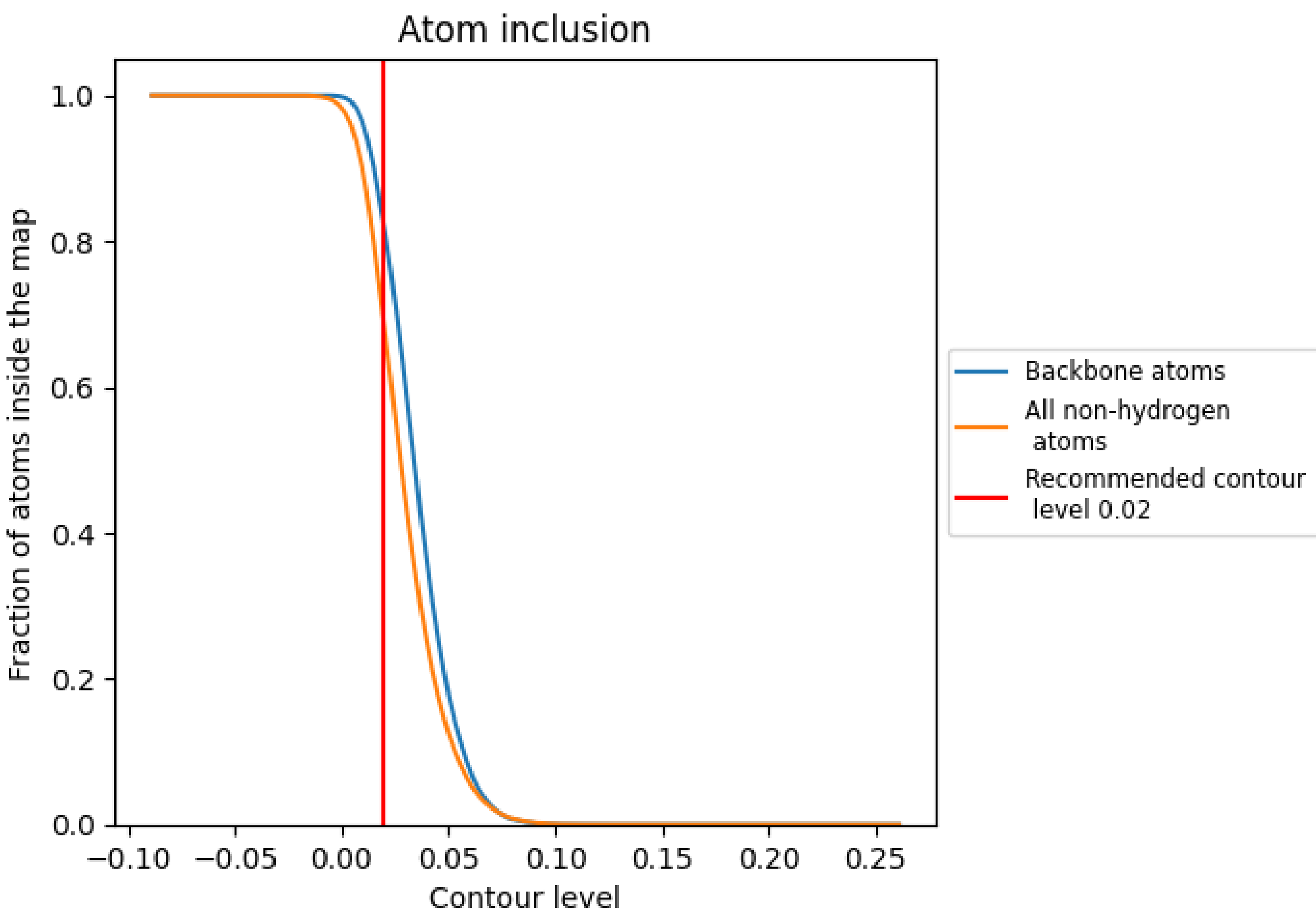
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.02).

9.4 Atom inclusion (i)



At the recommended contour level, 82% of all backbone atoms, 68% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.02) and Q-score for the entire model and for each chain.

Chain	Atom inclusion
All	0.6831
A	0.6079
A1	0.7366
A3	0.7696
A4	0.7717
A6	0.7981
AA	0.7716
AB	0.7770
AC	0.8604
AD	0.7987
AE	0.7825
AF	0.8031
AG	0.7628
AH	0.7183
AI	0.6973
AJ	0.7653
AK	0.6716
AL	0.7300
B	0.7496
B1	0.6835
B2	0.6624
B3	0.6674
B5	0.7598
BA	0.6660
BB	0.6892
BC	0.7825
BD	0.6809
BE	0.6535
BF	0.7310
BG	0.5696
BH	0.6434
BI	0.5084
BJ	0.6879
BK	0.5585
BL	0.5591

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Chain	Atom inclusion
C	0.5987
D	0.7975
E	0.7003
F	0.7413
G	0.6921
H	0.0956
I	0.2629
J	0.1658
K	0.2175
L	0.5278
M	0.1135
N	0.1754
O	0.1098
T	0.2426
a	0.7995
b	0.7734
c	0.7427
d	0.8275
e	0.7899
f	0.7526
g	0.7559
h	0.8009
i	0.7867
j	0.7607