



wwPDB EM Validation Summary Report ⓘ

Dec 11, 2023 – 02:56 PM JST

PDB ID : 8J5K
EMDB ID : EMD-35987
Title : Structural insights into photosystem II supercomplex and trimeric FCP antennae of a centric diatom *Cyclotella meneghiniana*
Authors : Shen, L.L.; Li, Z.H.; Shen, J.R.; Wang, W.D.
Deposited on : 2023-04-23
Resolution : 2.93 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

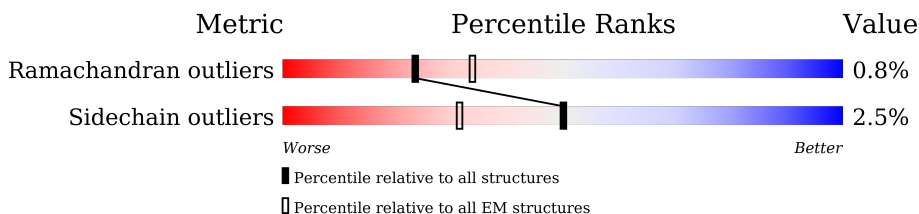
EMDB validation analysis : 0.0.1.dev70
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

1 Overall quality at a glance

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

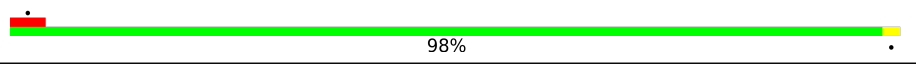
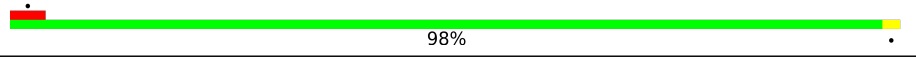
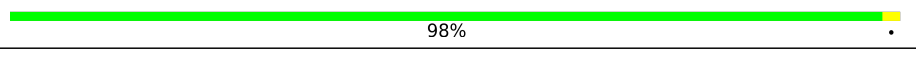
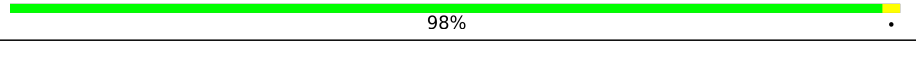
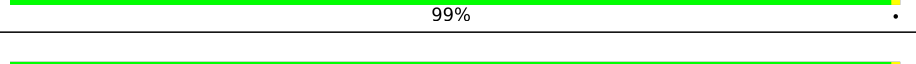
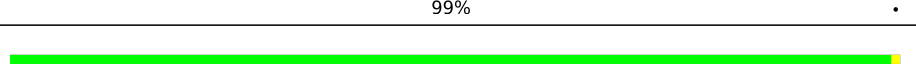
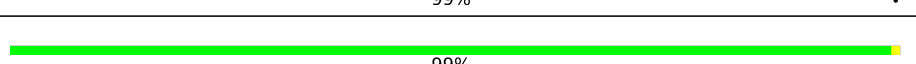
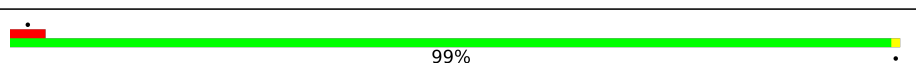

The reported resolution of this entry is 2.93 Å.

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.



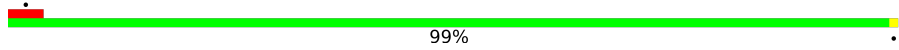


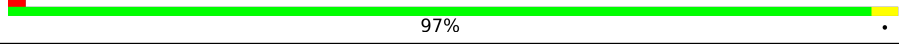
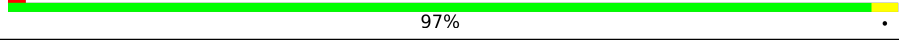
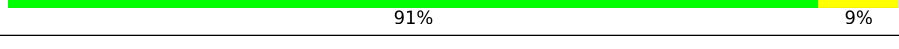
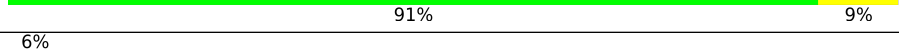
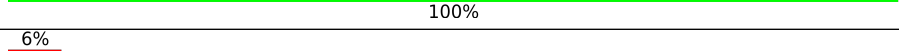
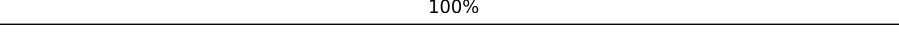
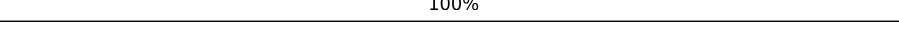
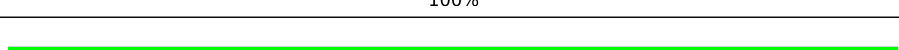
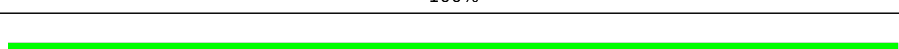
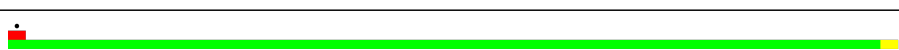
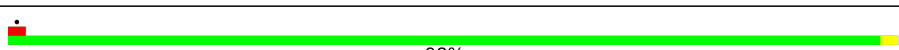
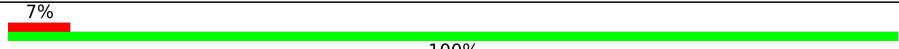

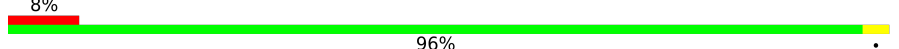
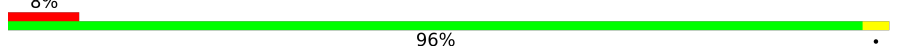


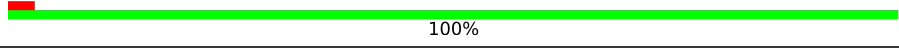
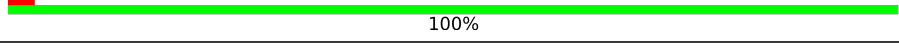
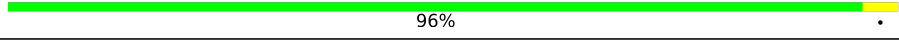
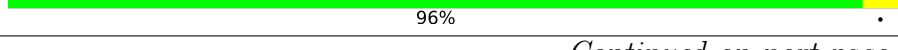

Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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 $\leq 5\%$. 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	A	333	 98% .
1	a	333	 98% .
2	B	481	 98% .
2	b	481	 98% .
3	C	450	 99% .
3	c	450	 99% .
4	D	340	 99% .
4	d	340	 99% .
5	E	75	 99% .

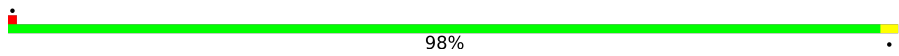
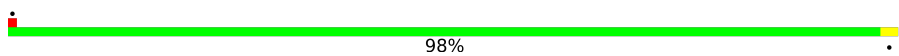
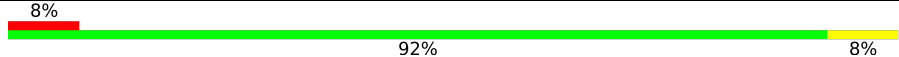
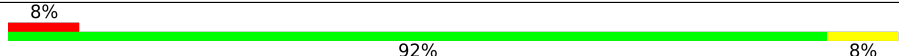
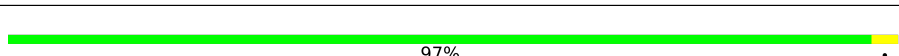
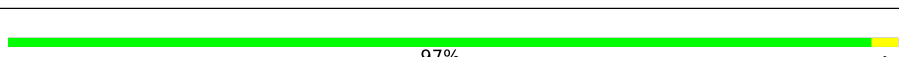
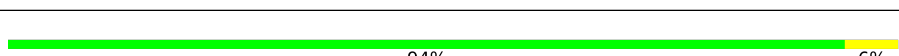
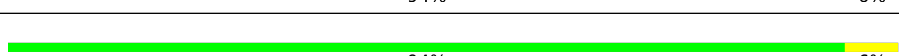
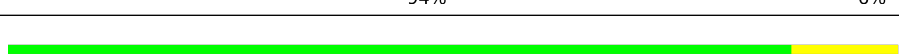

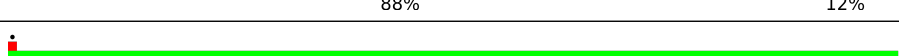
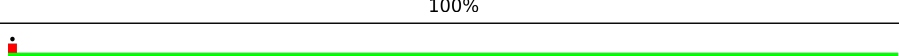
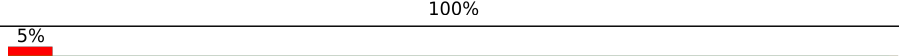
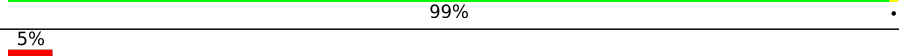
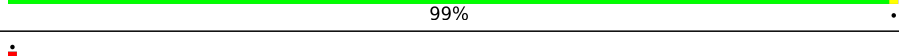
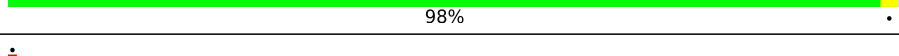
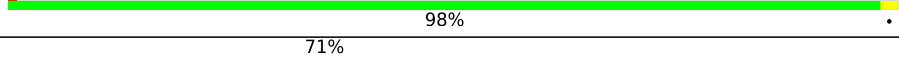
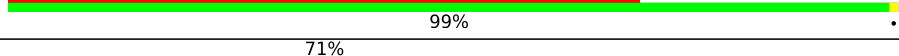
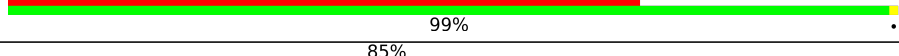
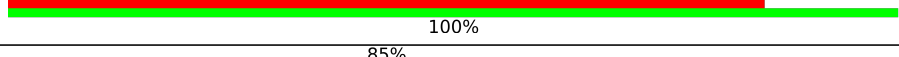
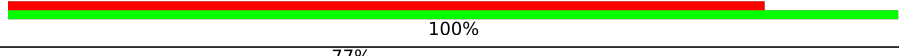
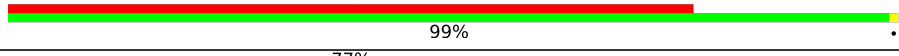
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Mol	Chain	Length	Quality of chain
5	e	75	 99%
6	F	31	 87% 13%
6	f	31	 87% 13%
7	H	65	 97%
7	h	65	 97%
8	I	34	 91% 9%
8	i	34	 91% 9%
9	J	34	 6% 100%
9	j	34	 6% 100%
10	K	37	 100%
10	k	37	 100%
11	L	37	 100%
11	l	37	 100%
12	M	41	 98%
12	m	41	 98%
13	N	30	 7% 100%
13	n	30	 10% 100%
14	O	248	 8% 96%
14	o	248	 8% 96%
15	Q	145	 31% 89% 8%
15	q	145	 33% 89% 8%
16	T	29	 100%
16	t	29	 100%
17	U	92	 96%
17	u	92	 96%

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Mol	Chain	Length	Quality of chain
18	V	136	 98%
18	v	136	 98%
19	W	50	 8% 92% 8%
19	w	50	 8% 92% 8%
20	X	34	 97%
20	x	34	 97%
21	Y	33	 94% 6%
21	y	33	 94% 6%
22	Z	59	 88% 12%
22	z	59	 88% 12%
23	0	169	 100%
23	5	169	 100%
24	2	164	 5% 99%
24	7	164	 5% 99%
25	1	164	 98%
25	6	164	 98%
26	P	214	 71% 99%
26	p	214	 71% 99%
27	4	153	 85% 100%
27	9	153	 85% 100%
28	3	163	 77% 99%
28	8	163	 77% 99%

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
31	CLA	0	304	X	-	-	-
31	CLA	0	305	X	-	-	-
31	CLA	0	306	X	-	-	-
31	CLA	0	307	X	-	-	-
31	CLA	0	308	X	-	-	-
31	CLA	0	309	X	-	-	-
31	CLA	0	310	X	-	-	-
31	CLA	0	311	X	-	-	-
31	CLA	0	312	X	-	-	-
31	CLA	0	313	X	-	-	-
31	CLA	0	314	X	-	-	-
31	CLA	1	201	X	-	-	-
31	CLA	1	205	X	-	-	-
31	CLA	1	206	X	-	-	-
31	CLA	1	207	X	-	-	-
31	CLA	1	208	X	-	-	-
31	CLA	1	209	X	-	-	-
31	CLA	1	210	X	-	-	-
31	CLA	1	211	X	-	-	-
31	CLA	1	212	X	-	-	-
31	CLA	1	213	X	-	-	-
31	CLA	1	214	X	-	-	-
31	CLA	1	215	X	-	-	-
31	CLA	1	216	X	-	-	-
31	CLA	2	305	X	-	-	-
31	CLA	2	306	X	-	-	-
31	CLA	2	307	X	-	-	-
31	CLA	2	308	X	-	-	-
31	CLA	2	309	X	-	-	-
31	CLA	2	310	X	-	-	-
31	CLA	2	311	X	-	-	-
31	CLA	2	312	X	-	-	-
31	CLA	2	313	X	-	-	-
31	CLA	2	314	X	-	-	-
31	CLA	2	315	X	-	-	-
31	CLA	2	316	X	-	-	-
31	CLA	3	304	X	-	-	-
31	CLA	3	305	X	-	-	-
31	CLA	3	306	X	-	-	-
31	CLA	3	307	X	-	-	-
31	CLA	3	308	X	-	-	-
31	CLA	3	309	X	-	-	-
31	CLA	3	310	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	3	311	X	-	-	-
31	CLA	3	312	X	-	-	-
31	CLA	3	313	X	-	-	-
31	CLA	3	314	X	-	-	-
31	CLA	4	204	X	-	-	-
31	CLA	4	205	X	-	-	-
31	CLA	4	206	X	-	-	-
31	CLA	4	207	X	-	-	-
31	CLA	4	208	X	-	-	-
31	CLA	4	209	X	-	-	-
31	CLA	4	210	X	-	-	-
31	CLA	4	211	X	-	-	-
31	CLA	4	212	X	-	-	-
31	CLA	4	213	X	-	-	-
31	CLA	5	304	X	-	-	-
31	CLA	5	305	X	-	-	-
31	CLA	5	306	X	-	-	-
31	CLA	5	307	X	-	-	-
31	CLA	5	308	X	-	-	-
31	CLA	5	309	X	-	-	-
31	CLA	5	310	X	-	-	-
31	CLA	5	311	X	-	-	-
31	CLA	5	312	X	-	-	-
31	CLA	5	313	X	-	-	-
31	CLA	5	314	X	-	-	-
31	CLA	6	201	X	-	-	-
31	CLA	6	205	X	-	-	-
31	CLA	6	206	X	-	-	-
31	CLA	6	207	X	-	-	-
31	CLA	6	208	X	-	-	-
31	CLA	6	209	X	-	-	-
31	CLA	6	210	X	-	-	-
31	CLA	6	211	X	-	-	-
31	CLA	6	212	X	-	-	-
31	CLA	6	213	X	-	-	-
31	CLA	6	214	X	-	-	-
31	CLA	6	215	X	-	-	-
31	CLA	6	216	X	-	-	-
31	CLA	7	305	X	-	-	-
31	CLA	7	306	X	-	-	-
31	CLA	7	307	X	-	-	-
31	CLA	7	308	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	7	309	X	-	-	-
31	CLA	7	310	X	-	-	-
31	CLA	7	311	X	-	-	-
31	CLA	7	312	X	-	-	-
31	CLA	7	313	X	-	-	-
31	CLA	7	314	X	-	-	-
31	CLA	7	315	X	-	-	-
31	CLA	7	316	X	-	-	-
31	CLA	8	304	X	-	-	-
31	CLA	8	305	X	-	-	-
31	CLA	8	306	X	-	-	-
31	CLA	8	307	X	-	-	-
31	CLA	8	308	X	-	-	-
31	CLA	8	309	X	-	-	-
31	CLA	8	310	X	-	-	-
31	CLA	8	311	X	-	-	-
31	CLA	8	312	X	-	-	-
31	CLA	8	313	X	-	-	-
31	CLA	8	314	X	-	-	-
31	CLA	9	204	X	-	-	-
31	CLA	9	205	X	-	-	-
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31	CLA	B	503	X	-	-	-
31	CLA	B	504	X	-	-	-
31	CLA	B	505	X	-	-	-
31	CLA	B	506	X	-	-	-
31	CLA	B	507	X	-	-	-
31	CLA	B	508	X	-	-	-
31	CLA	B	509	X	-	-	-
31	CLA	B	510	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	B	511	X	-	-	-
31	CLA	B	512	X	-	-	-
31	CLA	B	513	X	-	-	-
31	CLA	B	514	X	-	-	-
31	CLA	B	515	X	-	-	-
31	CLA	B	516	X	-	-	-
31	CLA	C	502	X	-	-	-
31	CLA	C	503	X	-	-	-
31	CLA	C	504	X	-	-	-
31	CLA	C	505	X	-	-	-
31	CLA	C	506	X	-	-	-
31	CLA	C	507	X	-	-	-
31	CLA	C	508	X	-	-	-
31	CLA	C	509	X	-	-	-
31	CLA	C	510	X	-	-	-
31	CLA	C	511	X	-	-	-
31	CLA	C	512	X	-	-	-
31	CLA	C	513	X	-	-	-
31	CLA	C	514	X	-	-	-
31	CLA	D	401	X	-	-	-
31	CLA	D	403	X	-	-	-
31	CLA	D	404	X	-	-	-
31	CLA	P	601	X	-	-	-
31	CLA	P	602	X	-	-	-
31	CLA	P	603	X	-	-	-
31	CLA	P	604	X	-	-	-
31	CLA	P	605	X	-	-	-
31	CLA	P	606	X	-	-	-
31	CLA	P	607	X	-	-	-
31	CLA	P	608	X	-	-	-
31	CLA	P	609	X	-	-	-
31	CLA	W	202	X	-	-	-
31	CLA	Z	101	X	-	-	-
31	CLA	a	403	X	-	-	-
31	CLA	a	404	X	-	-	-
31	CLA	a	407	X	-	-	-
31	CLA	b	502	X	-	-	-
31	CLA	b	503	X	-	-	-
31	CLA	b	504	X	-	-	-
31	CLA	b	505	X	-	-	-
31	CLA	b	506	X	-	-	-
31	CLA	b	507	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	b	508	X	-	-	-
31	CLA	b	509	X	-	-	-
31	CLA	b	510	X	-	-	-
31	CLA	b	511	X	-	-	-
31	CLA	b	512	X	-	-	-
31	CLA	b	513	X	-	-	-
31	CLA	b	514	X	-	-	-
31	CLA	b	515	X	-	-	-
31	CLA	b	516	X	-	-	-
31	CLA	b	517	X	-	-	-
31	CLA	c	502	X	-	-	-
31	CLA	c	503	X	-	-	-
31	CLA	c	504	X	-	-	-
31	CLA	c	505	X	-	-	-
31	CLA	c	506	X	-	-	-
31	CLA	c	507	X	-	-	-
31	CLA	c	508	X	-	-	-
31	CLA	c	509	X	-	-	-
31	CLA	c	510	X	-	-	-
31	CLA	c	511	X	-	-	-
31	CLA	c	512	X	-	-	-
31	CLA	c	513	X	-	-	-
31	CLA	c	514	X	-	-	-
31	CLA	d	401	X	-	-	-
31	CLA	d	403	X	-	-	-
31	CLA	d	404	X	-	-	-
31	CLA	p	601	X	-	-	-
31	CLA	p	602	X	-	-	-
31	CLA	p	603	X	-	-	-
31	CLA	p	604	X	-	-	-
31	CLA	p	605	X	-	-	-
31	CLA	p	606	X	-	-	-
31	CLA	p	607	X	-	-	-
31	CLA	p	608	X	-	-	-
31	CLA	p	609	X	-	-	-
31	CLA	w	202	X	-	-	-
31	CLA	z	101	X	-	-	-

2 Entry composition [i](#)

There are 44 unique types of molecules in this entry. The entry contains 71446 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 PsbA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	333	Total	C	N	O	S	0	0
			2530	1656	421	439	14		
1	a	333	Total	C	N	O	S	0	0
			2530	1656	421	439	14		

- Molecule 2 is a protein called PsbB.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	481	Total	C	N	O	S	0	0
			3748	2456	635	646	11		
2	b	481	Total	C	N	O	S	0	0
			3748	2456	635	646	11		

- Molecule 3 is a protein called PsbC.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	450	Total	C	N	O	S	0	0
			3437	2252	579	595	11		
3	c	450	Total	C	N	O	S	0	0
			3437	2252	579	595	11		

- Molecule 4 is a protein called PsbD.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	340	Total	C	N	O	S	0	0
			2667	1765	437	455	10		
4	d	340	Total	C	N	O	S	0	0
			2667	1765	437	455	10		

- Molecule 5 is a protein called PsbE.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	E	75	Total	C	N	O	0	0
			602	392	101	109		
5	e	75	Total	C	N	O	0	0
			602	392	101	109		

- Molecule 6 is a protein called PsbF.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	F	31	Total	C	N	O	0	0
			242	166	41	35		
6	f	31	Total	C	N	O	0	0
			242	166	41	35		

- Molecule 7 is a protein called PsbH.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	H	65	Total	C	N	O	S	0	0
			499	331	82	85	1		
7	h	65	Total	C	N	O	S	0	0
			499	331	82	85	1		

- Molecule 8 is a protein called PsbI.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	I	34	Total	C	N	O	S	0	0
			266	179	40	46	1		
8	i	34	Total	C	N	O	S	0	0
			266	179	40	46	1		

- Molecule 9 is a protein called PsbJ.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	J	34	Total	C	N	O	0	0
			247	167	38	42		
9	j	34	Total	C	N	O	0	0
			247	167	38	42		

- Molecule 10 is a protein called PsbK.

Mol	Chain	Residues	Atoms				AltConf	Trace
10	K	37	Total	C	N	O	0	0
			294	205	44	45		

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Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
10	k	37	294	205	44	45	0	0

- Molecule 11 is a protein called PsbL.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
11	L	37	294	197	46	51	0	0
11	l	37	294	197	46	51	0	0

- Molecule 12 is a protein called PsbM.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
12	M	41	295	193	49	53	0	0
12	m	41	295	193	49	53	0	0

- Molecule 13 is a protein called Psb34.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
13	N	30	150	90	30	30	0	0
13	n	30	150	90	30	30	0	0

- Molecule 14 is a protein called PsbO.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	O	248	1824	1151	304	362	7	0	0
14	o	248	1824	1151	304	362	7	0	0

- Molecule 15 is a protein called PsbQ'.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
15	Q	145	1050	654	182	214	0	0
15	q	145	1050	654	182	214	0	0

- Molecule 16 is a protein called PsbT.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	T	29	Total	C	N	O	S	0	0
			234	164	32	36	2		
16	t	29	Total	C	N	O	S	0	0
			234	164	32	36	2		

- Molecule 17 is a protein called PsbU.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	U	92	Total	C	N	O	S	0	0
			678	436	111	130	1		
17	u	92	Total	C	N	O	S	0	0
			678	436	111	130	1		

- Molecule 18 is a protein called PsbV.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	V	136	Total	C	N	O	S	0	0
			979	612	169	194	4		
18	v	136	Total	C	N	O	S	0	0
			979	612	169	194	4		

- Molecule 19 is a protein called PsbW.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	W	50	Total	C	N	O	S	0	0
			338	211	56	68	3		
19	w	50	Total	C	N	O	S	0	0
			338	211	56	68	3		

- Molecule 20 is a protein called PsbX.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	X	34	Total	C	N	O	S	0	0
			233	150	39	43	1		
20	x	34	Total	C	N	O	S	0	0
			233	150	39	43	1		

- Molecule 21 is a protein called PsbY.

Mol	Chain	Residues	Atoms				AltConf	Trace
21	Y	33	Total	C	N	O	0	0
			216	137	39	40		
21	y	33	Total	C	N	O	0	0
			216	137	39	40		

- Molecule 22 is a protein called PsbZ.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	Z	59	Total	C	N	O	S	0	0
			413	270	65	77	1		
22	z	59	Total	C	N	O	S	0	0
			413	270	65	77	1		

- Molecule 23 is a protein called FCPII-G, fucoxanthin chlorophyll a/c binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	5	169	Total	C	N	O	S	0	0
			1280	827	211	239	3		
23	0	169	Total	C	N	O	S	0	0
			1280	827	211	239	3		

- Molecule 24 is a protein called FCPII-H2, fucoxanthin chlorophyll a/c binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	7	164	Total	C	N	O	S	0	0
			1222	808	198	212	4		
24	2	164	Total	C	N	O	S	0	0
			1222	808	198	212	4		

- Molecule 25 is a protein called FCPII-H1, fucoxanthin chlorophyll a/c binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	6	164	Total	C	N	O	S	0	0
			1209	796	210	201	2		
25	1	164	Total	C	N	O	S	0	0
			1209	796	210	201	2		

- Molecule 26 is a protein called FCPII-I, fucoxanthin chlorophyll a/c binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	p	214	Total	C	N	O	S	0	0
			1265	789	230	245	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	P	214	1265	789	230	245	1	0	0

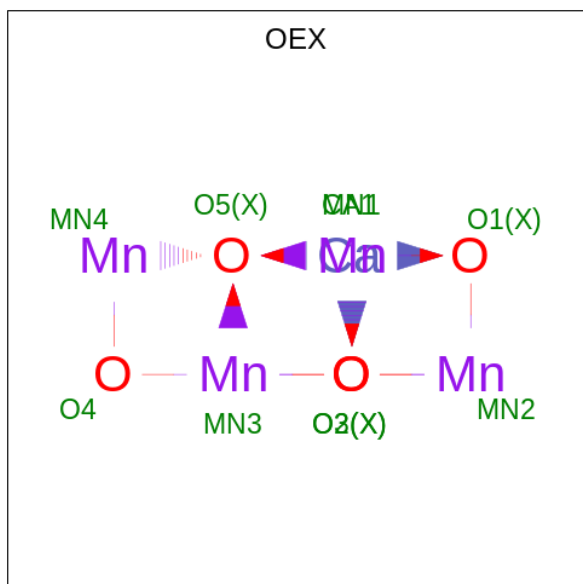
- Molecule 27 is a protein called FCPII-K, fucoxanthin chlorophyll a/c binding protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
27	4	153	765	459	153	153	0	0
27	9	153	765	459	153	153	0	0

- Molecule 28 is a protein called FCPII-J, fucoxanthin chlorophyll a/c binding protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
28	3	163	992	616	192	184	0	0
28	8	163	992	616	192	184	0	0

- Molecule 29 is CA-MN4-O5 CLUSTER (three-letter code: OEX) (formula: CaMn_4O_5) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	Ca	Mn	O	
29	A	1	10	1	4	5	0

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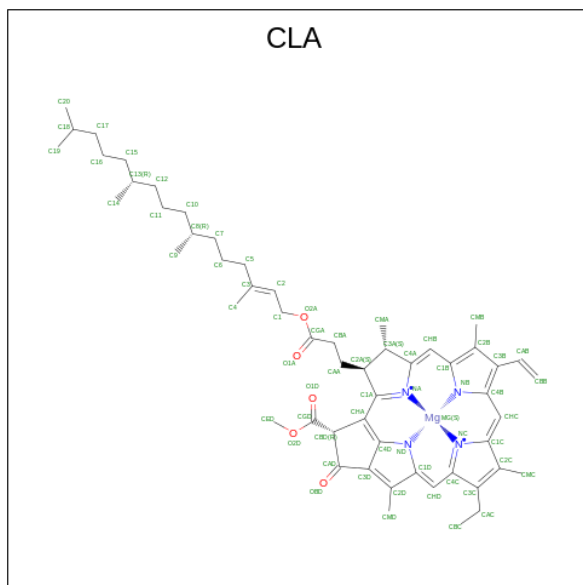
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Mol	Chain	Residues	Atoms				AltConf
			Total	Ca	Mn	O	
29	a	1	10	1	4	5	0

- Molecule 30 is FE (II) ION (three-letter code: FE2) (formula: Fe).

Mol	Chain	Residues	Atoms		AltConf
			Total	Fe	
30	A	1	1	1	0
30	a	1	1	1	0

- Molecule 31 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf	
			Total	C	Mg	N		O
31	A	1	65	55	1	4	5	0
31	A	1	49	39	1	4	5	0
31	A	1	60	50	1	4	5	0
31	B	1	43	35	1	4	3	0
31	B	1	61	52	1	4	4	0
31	B	1	64	54	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	B	1	Total 41	C 33	Mg 1	N 4	O 3	0
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	B	1	Total 64	C 54	Mg 1	N 4	O 5	0
31	B	1	Total 41	C 33	Mg 1	N 4	O 3	0
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	B	1	Total 60	C 50	Mg 1	N 4	O 5	0
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	B	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	C	1	Total 64	C 54	Mg 1	N 4	O 5	0
31	C	1	Total 51	C 41	Mg 1	N 4	O 5	0
31	C	1	Total 64	C 54	Mg 1	N 4	O 5	0
31	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	C	1	Total 45	C 35	Mg 1	N 4	O 5	0
31	C	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	C	1	Total 65	C 55	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	C	1	65	55	1	4	5	0
31	C	1	65	55	1	4	5	0
31	C	1	65	55	1	4	5	0
31	C	1	64	54	1	4	5	0
31	C	1	49	39	1	4	5	0
31	D	1	59	49	1	4	5	0
31	D	1	62	52	1	4	5	0
31	D	1	65	55	1	4	5	0
31	W	1	45	35	1	4	5	0
31	Z	1	51	41	1	4	5	0
31	a	1	65	55	1	4	5	0
31	a	1	49	39	1	4	5	0
31	a	1	60	50	1	4	5	0
31	b	1	43	35	1	4	3	0
31	b	1	61	52	1	4	4	0
31	b	1	64	54	1	4	5	0
31	b	1	65	55	1	4	5	0
31	b	1	65	55	1	4	5	0
31	b	1	65	55	1	4	5	0
31	b	1	41	33	1	4	3	0
31	b	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	b	1	Total 64	C 54	Mg 1	N 4	O 5	0
31	b	1	Total 41	C 33	Mg 1	N 4	O 3	0
31	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	b	1	Total 60	C 50	Mg 1	N 4	O 5	0
31	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	b	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	c	1	Total 64	C 54	Mg 1	N 4	O 5	0
31	c	1	Total 51	C 41	Mg 1	N 4	O 5	0
31	c	1	Total 64	C 54	Mg 1	N 4	O 5	0
31	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	c	1	Total 45	C 35	Mg 1	N 4	O 5	0
31	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	c	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	c	1	Total 64	C 54	Mg 1	N 4	O 5	0
31	c	1	Total 49	C 39	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	d	1	59	49	1	4	5	0
31	d	1	62	52	1	4	5	0
31	d	1	65	55	1	4	5	0
31	w	1	45	35	1	4	5	0
31	z	1	51	41	1	4	5	0
31	5	1	41	33	1	4	3	0
31	5	1	61	51	1	4	5	0
31	5	1	45	35	1	4	5	0
31	5	1	61	51	1	4	5	0
31	5	1	61	51	1	4	5	0
31	5	1	41	33	1	4	3	0
31	5	1	55	45	1	4	5	0
31	5	1	45	35	1	4	5	0
31	5	1	42	34	1	4	3	0
31	5	1	38	32	1	4	1	0
31	5	1	38	32	1	4	1	0
31	7	1	41	33	1	4	3	0
31	7	1	45	35	1	4	5	0
31	7	1	47	37	1	4	5	0
31	7	1	44	34	1	4	5	0
31	7	1	59	49	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
31	7	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
31	7	1	Total	C	Mg	N	O	0
			43	35	1	4	3	
31	7	1	Total	C	Mg	N	O	0
			36	30	1	4	1	
31	7	1	Total	C	Mg	N	O	0
			38	32	1	4	1	
31	7	1	Total	C	Mg	N	O	0
			38	32	1	4	1	
31	7	1	Total	C	Mg	N	O	0
			38	32	1	4	1	
31	7	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
31	6	1	Total	C	Mg	N	O	0
			44	34	1	4	5	
31	6	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
31	6	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
31	6	1	Total	C	Mg	N	O	0
			44	34	1	4	5	
31	6	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
31	6	1	Total	C	Mg	N	O	0
			44	34	1	4	5	
31	6	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
31	6	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
31	6	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
31	6	1	Total	C	Mg	N	O	0
			40	32	1	4	3	
31	6	1	Total	C	Mg	N	O	0
			38	32	1	4	1	
31	6	1	Total	C	Mg	N	O	0
			38	32	1	4	1	
31	6	1	Total	C	Mg	N	O	0
			38	32	1	4	1	
31	p	1	Total	C	Mg	N	O	0
			36	30	1	4	1	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	p	1	41	33	1	4	3	0
31	p	1	37	31	1	4	1	0
31	p	1	40	32	1	4	3	0
31	p	1	37	31	1	4	1	0
31	p	1	37	31	1	4	1	0
31	p	1	36	30	1	4	1	0
31	p	1	38	30	1	4	3	0
31	p	1	39	32	1	4	2	0
31	4	1	38	32	1	4	1	0
31	4	1	35	29	1	4	1	0
31	4	1	37	31	1	4	1	0
31	4	1	38	32	1	4	1	0
31	4	1	40	32	1	4	3	0
31	4	1	41	33	1	4	3	0
31	4	1	38	32	1	4	1	0
31	4	1	34	28	1	4	1	0
31	4	1	36	30	1	4	1	0
31	4	1	35	29	1	4	1	0
31	3	1	34	28	1	4	1	0
31	3	1	41	33	1	4	3	0
31	3	1	33	27	1	4	1	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	3	1	42	34	1	4	3	0
31	3	1	36	30	1	4	1	0
31	3	1	40	32	1	4	3	0
31	3	1	35	29	1	4	1	0
31	3	1	40	32	1	4	3	0
31	3	1	41	33	1	4	3	0
31	3	1	39	33	1	4	1	0
31	3	1	35	29	1	4	1	0
31	P	1	36	30	1	4	1	0
31	P	1	41	33	1	4	3	0
31	P	1	37	31	1	4	1	0
31	P	1	40	32	1	4	3	0
31	P	1	37	31	1	4	1	0
31	P	1	37	31	1	4	1	0
31	P	1	36	30	1	4	1	0
31	P	1	38	30	1	4	3	0
31	P	1	39	32	1	4	2	0
31	9	1	38	32	1	4	1	0
31	9	1	35	29	1	4	1	0
31	9	1	37	31	1	4	1	0
31	9	1	38	32	1	4	1	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	9	1	40	32	1	4	3	0
31	9	1	41	33	1	4	3	0
31	9	1	38	32	1	4	1	0
31	9	1	34	28	1	4	1	0
31	9	1	36	30	1	4	1	0
31	9	1	35	29	1	4	1	0
31	8	1	34	28	1	4	1	0
31	8	1	41	33	1	4	3	0
31	8	1	33	27	1	4	1	0
31	8	1	42	34	1	4	3	0
31	8	1	36	30	1	4	1	0
31	8	1	40	32	1	4	3	0
31	8	1	35	29	1	4	1	0
31	8	1	40	32	1	4	3	0
31	8	1	41	33	1	4	3	0
31	8	1	39	33	1	4	1	0
31	8	1	35	29	1	4	1	0
31	0	1	41	33	1	4	3	0
31	0	1	61	51	1	4	5	0
31	0	1	45	35	1	4	5	0
31	0	1	61	51	1	4	5	0

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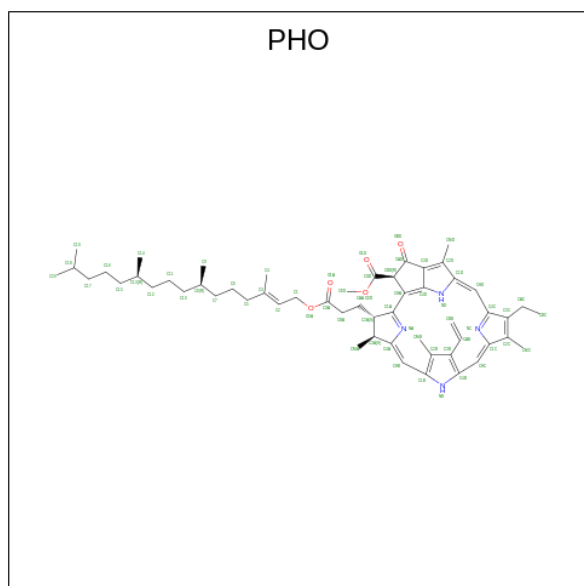
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	0	1	Total 61	C 51	Mg 1	N 4	O 5	0
31	0	1	Total 41	C 33	Mg 1	N 4	O 3	0
31	0	1	Total 55	C 45	Mg 1	N 4	O 5	0
31	0	1	Total 45	C 35	Mg 1	N 4	O 5	0
31	0	1	Total 42	C 34	Mg 1	N 4	O 3	0
31	0	1	Total 38	C 32	Mg 1	N 4	O 1	0
31	0	1	Total 38	C 32	Mg 1	N 4	O 1	0
31	2	1	Total 41	C 33	Mg 1	N 4	O 3	0
31	2	1	Total 45	C 35	Mg 1	N 4	O 5	0
31	2	1	Total 47	C 37	Mg 1	N 4	O 5	0
31	2	1	Total 44	C 34	Mg 1	N 4	O 5	0
31	2	1	Total 59	C 49	Mg 1	N 4	O 5	0
31	2	1	Total 55	C 45	Mg 1	N 4	O 5	0
31	2	1	Total 43	C 35	Mg 1	N 4	O 3	0
31	2	1	Total 36	C 30	Mg 1	N 4	O 1	0
31	2	1	Total 38	C 32	Mg 1	N 4	O 1	0
31	2	1	Total 38	C 32	Mg 1	N 4	O 1	0
31	2	1	Total 38	C 32	Mg 1	N 4	O 1	0
31	2	1	Total 41	C 33	Mg 1	N 4	O 3	0
31	1	1	Total 44	C 34	Mg 1	N 4	O 5	0
31	1	1	Total 41	C 33	Mg 1	N 4	O 3	0

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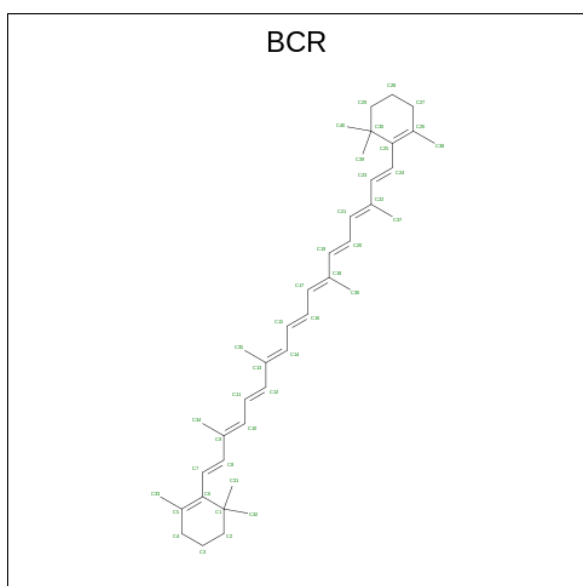
Mol	Chain	Residues	Atoms					AltConf
31	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
31	1	1	Total	C	Mg	N	O	0
			44	34	1	4	5	
31	1	1	Total	C	Mg	N	O	0
			47	37	1	4	5	
31	1	1	Total	C	Mg	N	O	0
			44	34	1	4	5	
31	1	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
31	1	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
31	1	1	Total	C	Mg	N	O	0
			41	33	1	4	3	
31	1	1	Total	C	Mg	N	O	0
			40	32	1	4	3	
31	1	1	Total	C	Mg	N	O	0
			38	32	1	4	1	
31	1	1	Total	C	Mg	N	O	0
			38	32	1	4	1	
31	1	1	Total	C	Mg	N	O	0
			38	32	1	4	1	

- Molecule 32 is PHEOPHYTIN A (three-letter code: PHO) (formula: $C_{55}H_{74}N_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
32	A	1	Total	C	N	O	0
			64	55	4	5	
32	A	1	Total	C	N	O	0
			64	55	4	5	
32	a	1	Total	C	N	O	0
			64	55	4	5	
32	a	1	Total	C	N	O	0
			64	55	4	5	

- Molecule 33 is BETA-CAROTENE (three-letter code: BCR) (formula: C₄₀H₅₆).



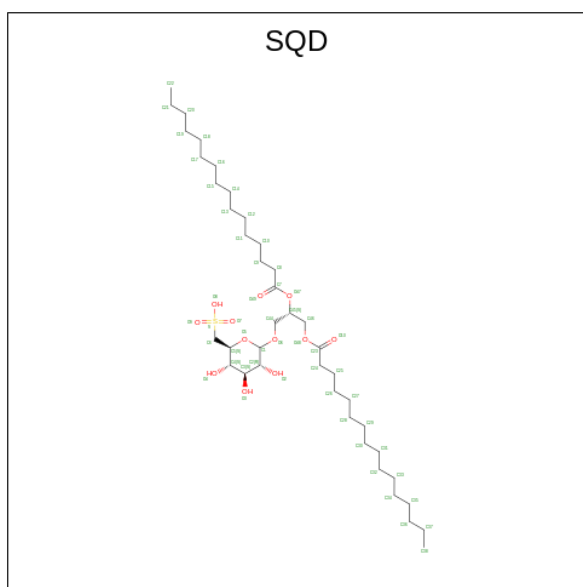
Mol	Chain	Residues	Atoms		AltConf
33	A	1	Total	C	0
			40	40	
33	B	1	Total	C	0
			40	40	
33	B	1	Total	C	0
			40	40	
33	B	1	Total	C	0
			40	40	
33	C	1	Total	C	0
			40	40	
33	C	1	Total	C	0
			40	40	
33	C	1	Total	C	0
			40	40	
33	D	1	Total	C	0
			40	40	

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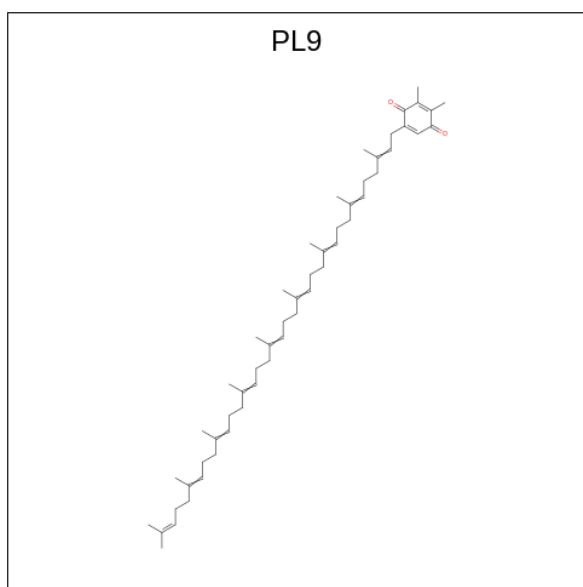
Mol	Chain	Residues	Atoms	AltConf
33	H	1	Total C 40 40	0
33	K	1	Total C 40 40	0
33	a	1	Total C 40 40	0
33	b	1	Total C 40 40	0
33	b	1	Total C 40 40	0
33	b	1	Total C 40 40	0
33	c	1	Total C 40 40	0
33	c	1	Total C 40 40	0
33	c	1	Total C 40 40	0
33	d	1	Total C 40 40	0
33	h	1	Total C 40 40	0
33	k	1	Total C 40 40	0

- Molecule 34 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: C₄₁H₇₈O₁₂S) (labeled as "Ligand of Interest" by depositor).



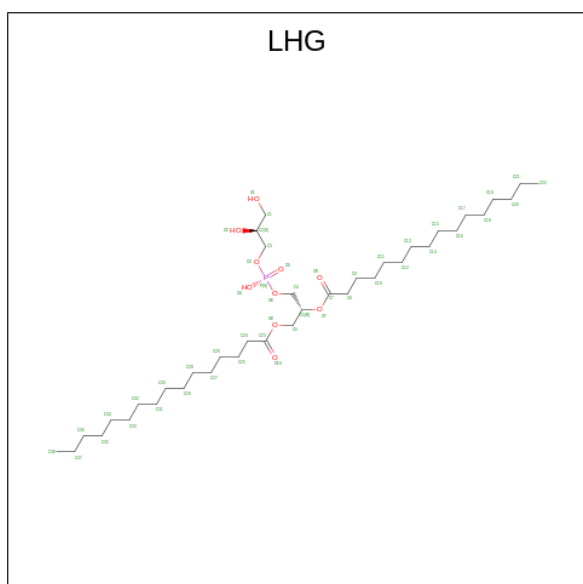
Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	S	
34	A	1	54	41	12	1	0
34	A	1	54	41	12	1	0
34	B	1	54	41	12	1	0
34	B	1	40	27	12	1	0
34	a	1	54	41	12	1	0
34	b	1	40	27	12	1	0
34	5	1	48	35	12	1	0
34	0	1	48	35	12	1	0

- Molecule 35 is 2,3-DIMETHYL-5-(3,7,11,15,19,23,27,31,35-NONAMETHYL-2,6,10,14,18,22,26,30,34-HEXATRIACONTANONAENYL-2,5-CYCLOHEXADIENE-1,4-DIONE-2,3-DIMETHYL-5-SOLANESYL-1,4-BENZOQUINONE (three-letter code: PL9) (formula: $C_{53}H_{80}O_2$) (labeled as "Ligand of Interest" by depositor).



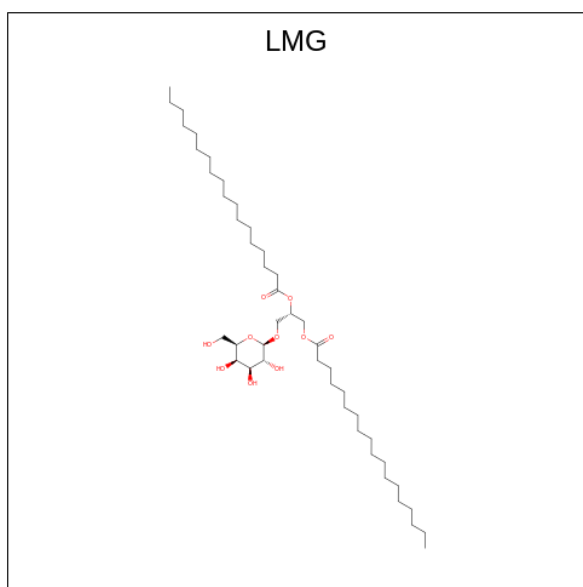
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
35	A	1	32	30	2	0
35	D	1	55	53	2	0
35	a	1	32	30	2	0
35	d	1	55	53	2	0

- Molecule 36 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
36	A	1	Total	C	O	P	0
			43	32	10	1	
36	A	1	Total	C	O	P	0
			26	15	10	1	
36	B	1	Total	C	O	P	0
			49	38	10	1	
36	D	1	Total	C	O	P	0
			48	38	9	1	
36	D	1	Total	C	O	P	0
			34	23	10	1	
36	D	1	Total	C	O	P	0
			28	19	8	1	
36	H	1	Total	C	O	P	0
			42	31	10	1	
36	a	1	Total	C	O	P	0
			43	32	10	1	
36	a	1	Total	C	O	P	0
			26	15	10	1	
36	b	1	Total	C	O	P	0
			49	38	10	1	
36	d	1	Total	C	O	P	0
			48	38	9	1	
36	d	1	Total	C	O	P	0
			34	23	10	1	
36	d	1	Total	C	O	P	0
			28	19	8	1	
36	h	1	Total	C	O	P	0
			42	31	10	1	

- Molecule 37 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C₄₅H₈₆O₁₀) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
37	B	1	28	18	10	0
37	C	1	51	41	10	0
37	D	1	46	36	10	0
37	D	1	37	27	10	0
37	D	1	40	30	10	0
37	J	1	50	40	10	0
37	M	1	51	41	10	0
37	M	1	40	30	10	0
37	W	1	48	38	10	0
37	Y	1	46	36	10	0
37	b	1	28	18	10	0
37	c	1	51	41	10	0
37	d	1	46	36	10	0
37	d	1	37	27	10	0

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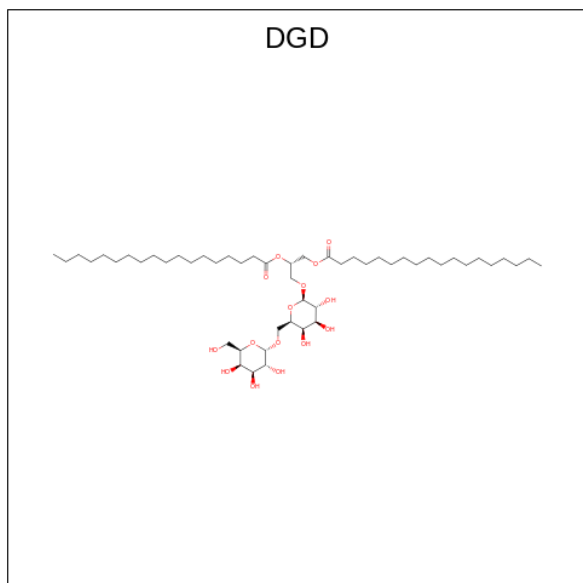
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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
37	d	1	40	30	10	0
37	j	1	50	40	10	0
37	m	1	51	41	10	0
37	m	1	40	30	10	0
37	w	1	48	38	10	0
37	y	1	46	36	10	0
37	5	1	48	38	10	0
37	0	1	48	38	10	0

- Molecule 38 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

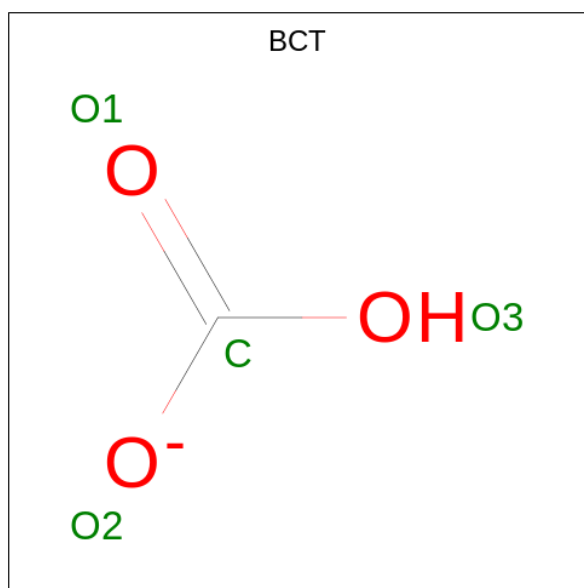
Mol	Chain	Residues	Atoms		AltConf
			Total	Cl	
38	C	1	1	1	0
38	c	1	1	1	0

- Molecule 39 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: C₅₁H₉₆O₁₅) (labeled as "Ligand of Interest" by depositor).



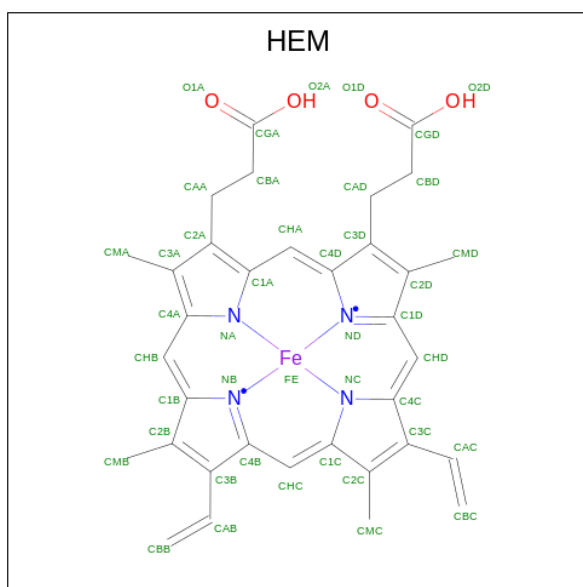
Mol	Chain	Residues	Atoms			AltConf
39	C	1	Total	C	O	0
			55	40	15	
39	C	1	Total	C	O	0
			62	47	15	
39	C	1	Total	C	O	0
			62	47	15	
39	H	1	Total	C	O	0
			62	47	15	
39	c	1	Total	C	O	0
			55	40	15	
39	c	1	Total	C	O	0
			62	47	15	
39	c	1	Total	C	O	0
			62	47	15	
39	h	1	Total	C	O	0
			62	47	15	

- Molecule 40 is BICARBONATE ION (three-letter code: BCT) (formula: CHO_3).



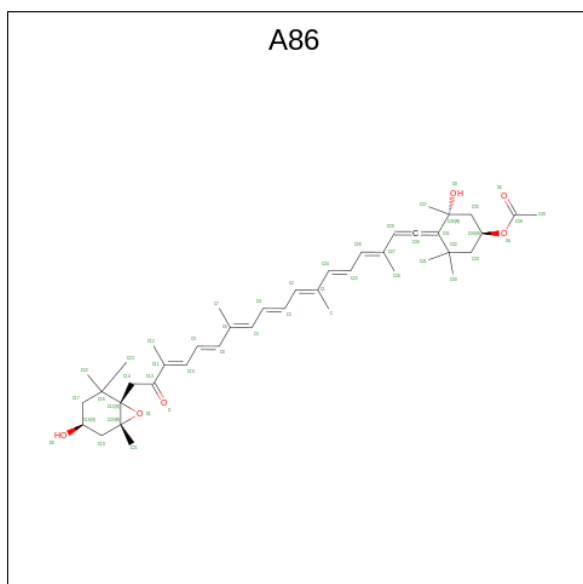
Mol	Chain	Residues	Atoms			AltConf
40	D	1	Total	C	O	0
			4	1	3	
40	d	1	Total	C	O	0
			4	1	3	

- Molecule 41 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: $\text{C}_{34}\text{H}_{32}\text{FeN}_4\text{O}_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf	
			Total	C	Fe	N		O
41	F	1	43	34	1	4	4	0
41	V	1	43	34	1	4	4	0
41	f	1	43	34	1	4	4	0
41	v	1	43	34	1	4	4	0

- Molecule 42 is (3S,3'S,5R,5'R,6S,6'R,8'R)-3,5'-dihydroxy-8-oxo-6',7'-didehydro-5,5',6,6',7,8-hexahydro-5,6-epoxy-beta,beta-caroten-3'-yl acetate (three-letter code: A86) (formula: C₄₂H₅₈O₆) (labeled as "Ligand of Interest" by depositor).



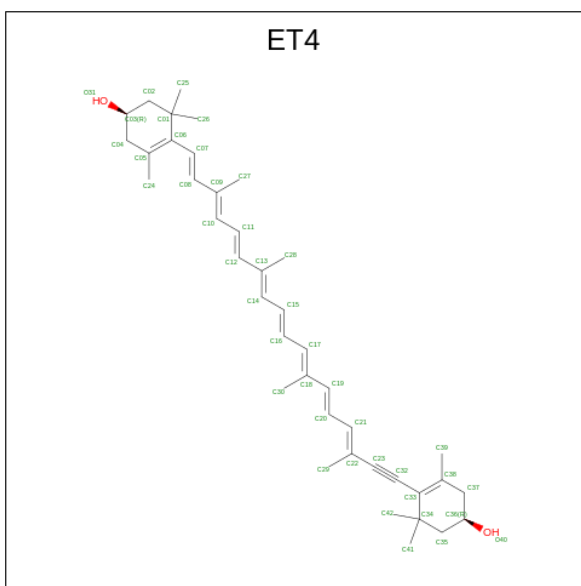
Mol	Chain	Residues	Atoms			AltConf
42	5	1	Total	C	O	0
			48	42	6	
42	5	1	Total	C	O	0
			48	42	6	
42	5	1	Total	C	O	0
			48	42	6	
42	7	1	Total	C	O	0
			48	42	6	
42	7	1	Total	C	O	0
			48	42	6	
42	6	1	Total	C	O	0
			48	42	6	
42	p	1	Total	C	O	0
			48	42	6	
42	4	1	Total	C	O	0
			48	42	6	
42	4	1	Total	C	O	0
			48	42	6	
42	4	1	Total	C	O	0
			48	42	6	
42	3	1	Total	C	O	0
			48	42	6	
42	3	1	Total	C	O	0
			48	42	6	
42	P	1	Total	C	O	0
			48	42	6	
42	9	1	Total	C	O	0
			48	42	6	
42	9	1	Total	C	O	0
			48	42	6	
42	9	1	Total	C	O	0
			48	42	6	
42	8	1	Total	C	O	0
			48	42	6	
42	8	1	Total	C	O	0
			48	42	6	
42	0	1	Total	C	O	0
			48	42	6	
42	0	1	Total	C	O	0
			48	42	6	
42	0	1	Total	C	O	0
			48	42	6	
42	2	1	Total	C	O	0
			48	42	6	

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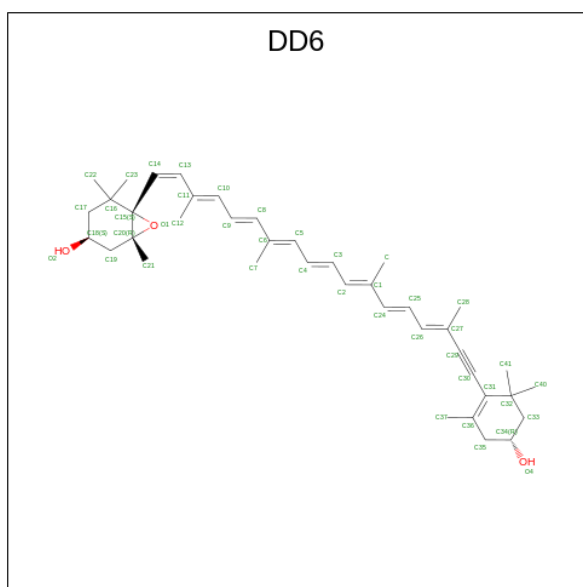
Mol	Chain	Residues	Atoms			AltConf
42	2	1	Total	C	O	0
			48	42	6	
42	1	1	Total	C	O	0
			48	42	6	

- Molecule 43 is (1 {R})-3,5,5-trimethyl-4-[(1 {E},3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E})-3,7,12,16-tetramethyl-18-[(4 {R})-2,6,6-trimethyl-4-oxidanyl-cyclohexen-1-yl]octadeca-1,3,5,7,9,11,13,15-octaen-17-ynyl]cyclohex-3-en-1-ol (three-letter code: ET4) (formula: C₄₀H₅₄O₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
43	5	1	Total	C	O	0
			42	40	2	
43	0	1	Total	C	O	0
			42	40	2	

- Molecule 44 is (3S,3'R,5R,6S,7cis)-7',8'-didehydro-5,6-dihydro-5,6-epoxy-beta,beta-carotene-3,3'-diol (three-letter code: DD6) (formula: C₄₀H₅₄O₃) (labeled as "Ligand of Interest" by depositor).

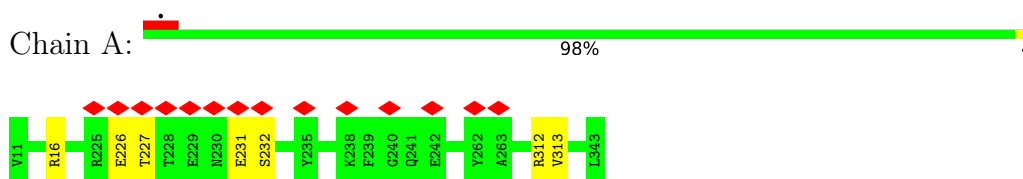


Mol	Chain	Residues	Atoms			AltConf
44	7	1	Total	C	O	0
			43	40	3	
44	7	1	Total	C	O	0
			43	40	3	
44	6	1	Total	C	O	0
			43	40	3	
44	6	1	Total	C	O	0
			43	40	3	
44	p	1	Total	C	O	0
			43	40	3	
44	3	1	Total	C	O	0
			43	40	3	
44	P	1	Total	C	O	0
			43	40	3	
44	8	1	Total	C	O	0
			43	40	3	
44	2	1	Total	C	O	0
			43	40	3	
44	2	1	Total	C	O	0
			43	40	3	
44	1	1	Total	C	O	0
			43	40	3	
44	1	1	Total	C	O	0
			43	40	3	

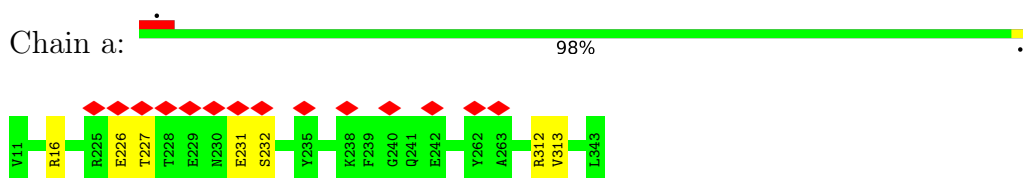
3 Residue-property plots [i](#)

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.

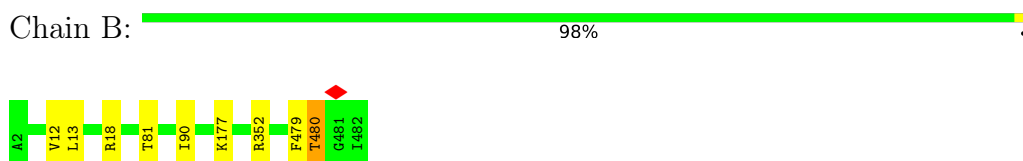
- Molecule 1: PsbA



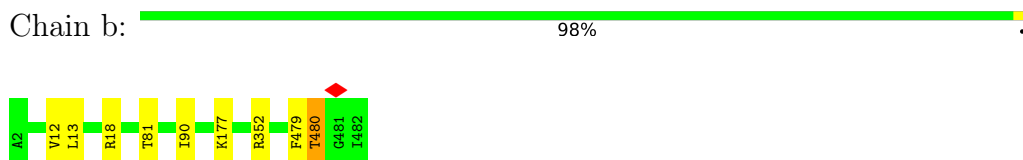
- Molecule 1: PsbA



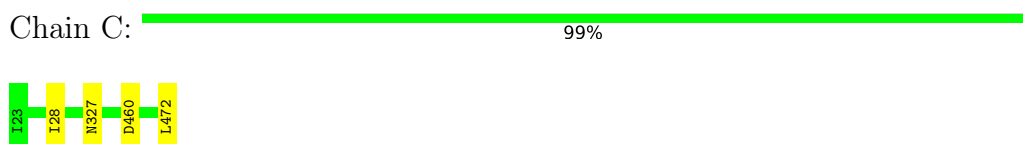
- Molecule 2: PsbB



- Molecule 2: PsbB



- Molecule 3: PsbC



- Molecule 3: PsbC

Chain c:  99%



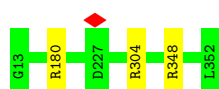
• Molecule 4: PsbD

Chain D:  99%



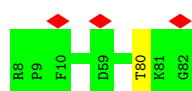
• Molecule 4: PsbD

Chain d:  99%



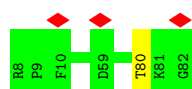
• Molecule 5: PsbE

Chain E:  99%




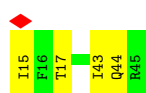
• Molecule 5: PsbE

Chain e:  99%




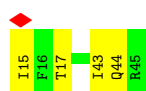
• Molecule 6: PsbF

Chain F:  87% 13%



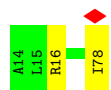
• Molecule 6: PsbF

Chain f:  87% 13%



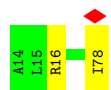
- Molecule 7: PsbH

Chain H:  97%




- Molecule 7: PsbH

Chain h:  97%




- Molecule 8: PsbI

Chain I:  91% 9%



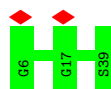
- Molecule 8: PsbI

Chain i:  91% 9%



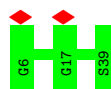
- Molecule 9: PsbJ

Chain J:  6% 100%



- Molecule 9: PsbJ

Chain j:  6% 100%



- Molecule 10: PsbK

Chain K:  100%

There are no outlier residues recorded for this chain.

- Molecule 10: PsbK

Chain k:  100%

There are no outlier residues recorded for this chain.

- Molecule 11: PsbL

Chain L:  100%

There are no outlier residues recorded for this chain.

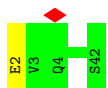
- Molecule 11: PsbL

Chain l:  100%

There are no outlier residues recorded for this chain.

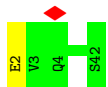
- Molecule 12: PsbM

Chain M:  98%



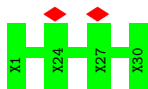
- Molecule 12: PsbM

Chain m:  98%



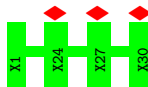
- Molecule 13: Psb34

Chain N:  7% 100%



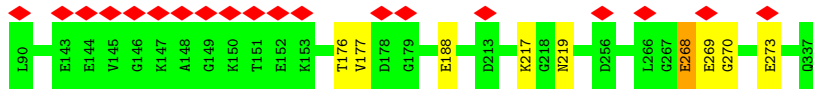
- Molecule 13: Psb34

Chain n:  10% 100%

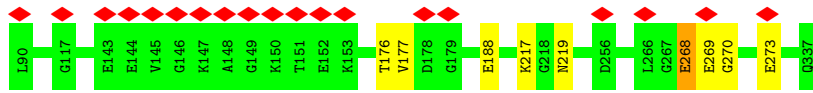


- Molecule 14: PsbO

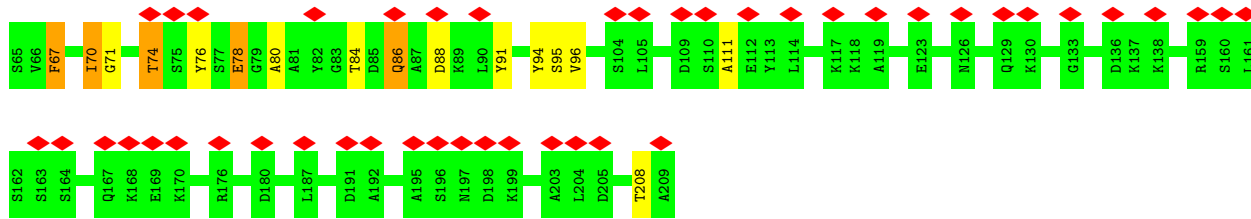
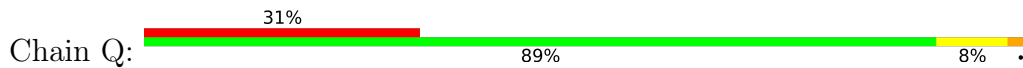
Chain O:  8% 96%



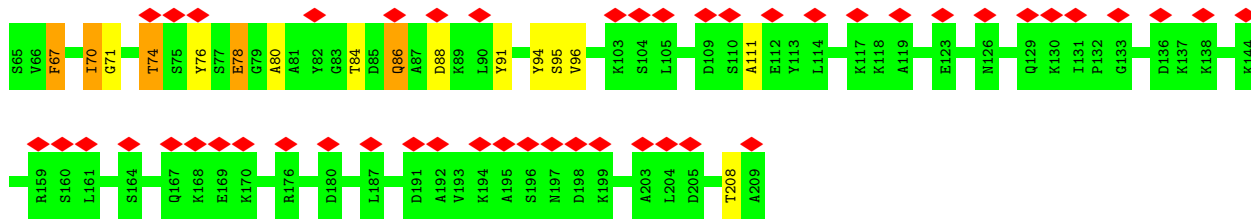
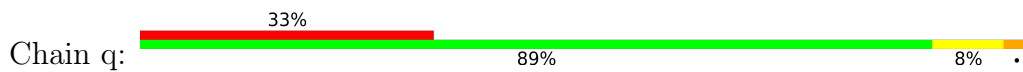
• Molecule 14: PsbO



• Molecule 15: PsbQ'



• Molecule 15: PsbQ'



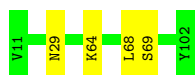
• Molecule 16: PsbT



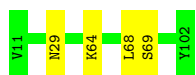
• Molecule 16: PsbT



• Molecule 17: PsbU



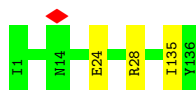
• Molecule 17: PsbU



• Molecule 18: PsbV



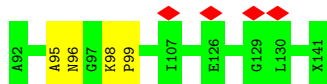
• Molecule 18: PsbV



• Molecule 19: PsbW



• Molecule 19: PsbW



• Molecule 20: PsbX



• Molecule 20: PsbX

Chain x:  97%



- Molecule 21: PsbY

Chain Y:  94% 6%




- Molecule 21: PsbY

Chain y:  94% 6%




- Molecule 22: PsbZ

Chain Z:  88% 12%



- Molecule 22: PsbZ

Chain z:  88% 12%



- Molecule 23: FCPII-G, fucoxanthin chlorophyll a/c binding protein

Chain 5:  100%

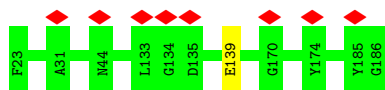


- Molecule 23: FCPII-G, fucoxanthin chlorophyll a/c binding protein

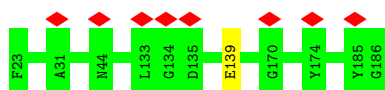
Chain 0:  100%



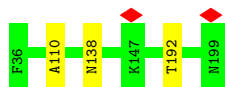
- Molecule 24: FCPII-H2, fucoxanthin chlorophyll a/c binding protein



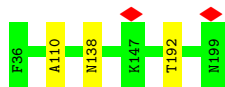
• Molecule 24: FCP-II-H2, fucoxanthin chlorophyll a/c binding protein



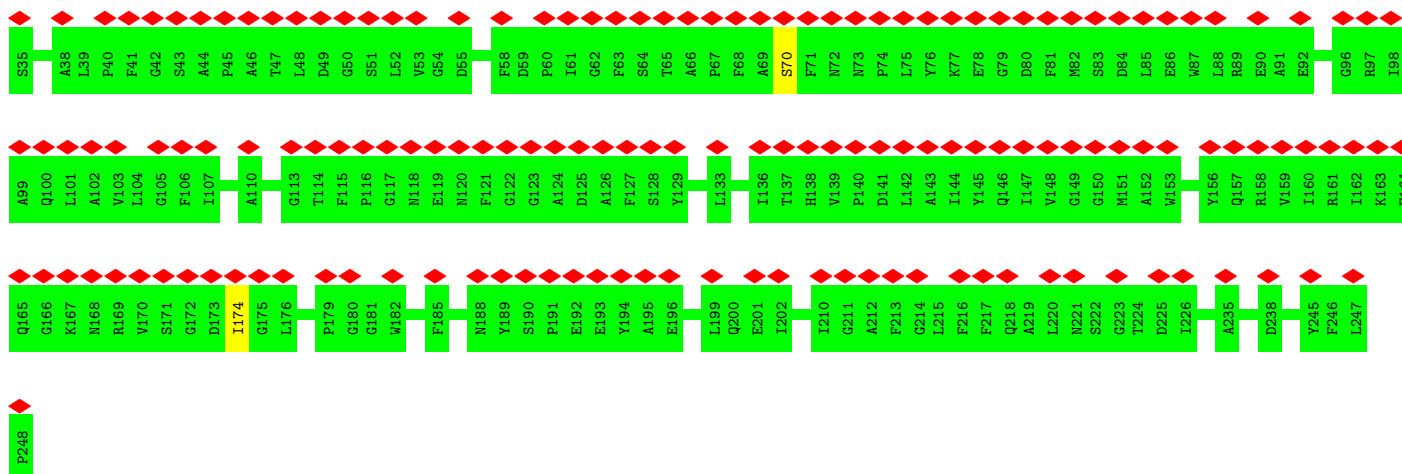
• Molecule 25: FCP-II-H1, fucoxanthin chlorophyll a/c binding protein



• Molecule 25: FCP-II-H1, fucoxanthin chlorophyll a/c binding protein



• Molecule 26: FCP-II-I, fucoxanthin chlorophyll a/c binding protein

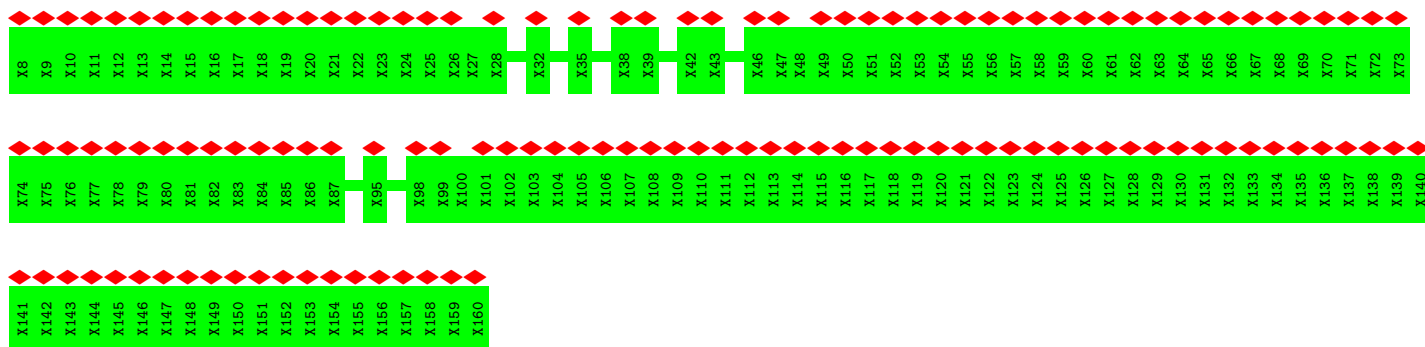
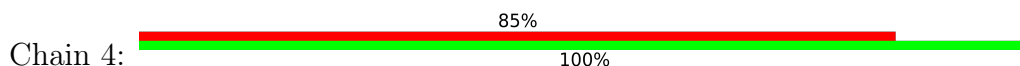


• Molecule 26: FCP-II-I, fucoxanthin chlorophyll a/c binding protein

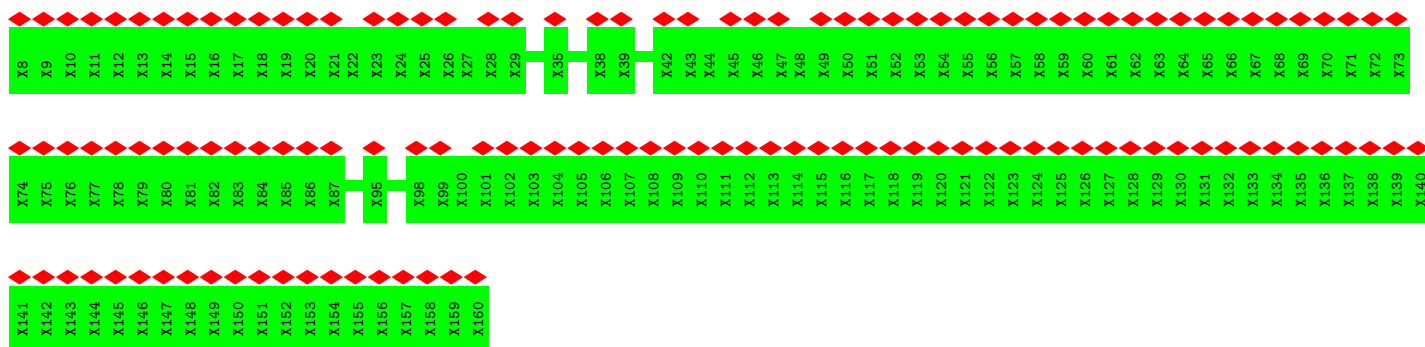
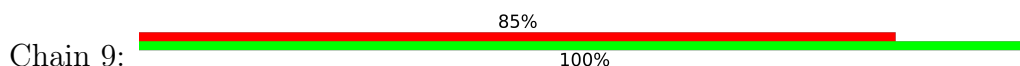




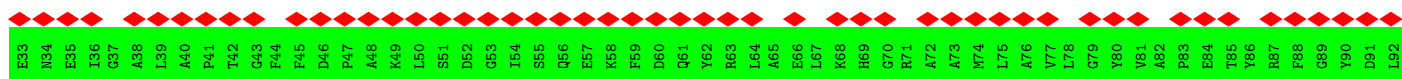
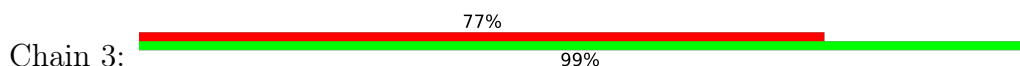
• Molecule 27: FCPHII-K, fucoxanthin chlorophyll a/c binding protein

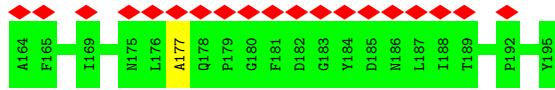
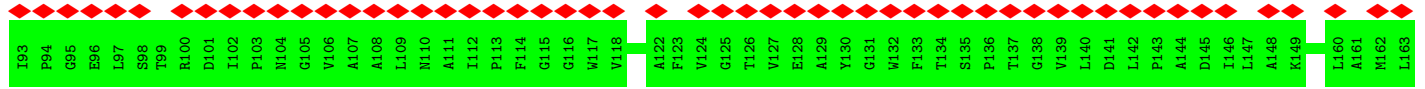


• Molecule 27: FCPHII-K, fucoxanthin chlorophyll a/c binding protein

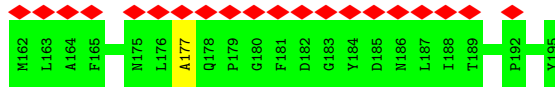
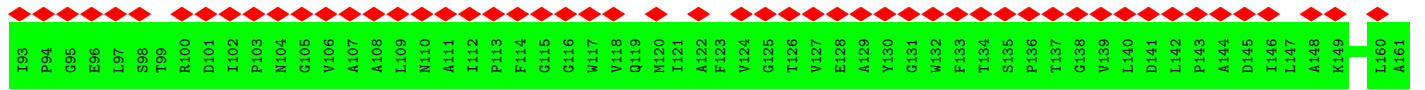
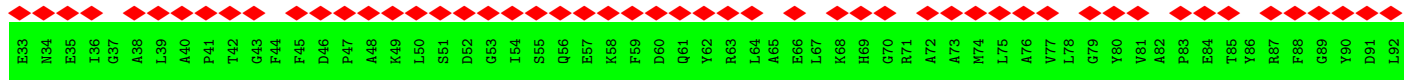
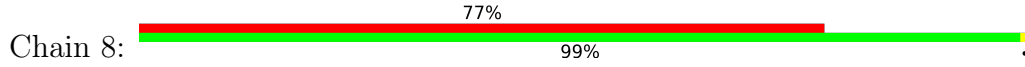


• Molecule 28: FCPHII-J, fucoxanthin chlorophyll a/c binding protein





• Molecule 28: FCPHII-J, fucoxanthin chlorophyll a/c binding protein



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	153326	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 ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.709	Depositor
Minimum map value	-0.314	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.018	Depositor
Recommended contour level	0.158	Depositor
Map size (\AA)	542.72, 542.72, 542.72	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.06, 1.06, 1.06	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: FE2, BCR, OEX, A86, PHO, PL9, CL, LMG, HEM, ET4, SQD, LHG, DD6, CLA, BCT, DGD

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	A	0.32	0/2609	0.47	0/3563
1	a	0.32	0/2609	0.47	0/3563
2	B	0.31	0/3878	0.48	0/5282
2	b	0.31	0/3878	0.48	0/5282
3	C	0.31	0/3553	0.47	0/4850
3	c	0.31	0/3553	0.47	0/4850
4	D	0.32	0/2759	0.49	0/3766
4	d	0.32	0/2759	0.49	0/3766
5	E	0.28	0/620	0.48	0/847
5	e	0.29	0/620	0.48	0/847
6	F	0.41	0/250	0.53	0/340
6	f	0.41	0/250	0.52	0/340
7	H	0.32	0/509	0.47	0/696
7	h	0.32	0/509	0.47	0/696
8	I	0.36	0/273	0.54	0/371
8	i	0.36	0/273	0.54	0/371
9	J	0.62	0/253	0.71	0/344
9	j	0.62	0/253	0.71	0/344
10	K	0.41	0/305	0.48	0/420
10	k	0.41	0/305	0.49	0/420
11	L	0.34	0/303	0.41	0/415
11	l	0.34	0/303	0.42	0/415
12	M	0.33	0/299	0.44	0/404
12	m	0.33	0/299	0.44	0/404
14	O	0.29	0/1853	0.49	0/2505
14	o	0.29	0/1853	0.49	0/2505
15	Q	0.32	0/1065	0.53	0/1439
15	q	0.32	0/1065	0.53	0/1439
16	T	0.33	0/240	0.43	0/325
16	t	0.33	0/240	0.43	0/325
17	U	0.29	0/693	0.47	0/945
17	u	0.29	0/693	0.47	0/945

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
18	V	0.31	0/996	0.48	0/1364
18	v	0.31	0/996	0.48	0/1364
19	W	0.38	0/310	0.70	0/421
19	w	0.36	0/310	0.70	0/421
20	X	0.31	0/233	0.42	0/315
20	x	0.31	0/233	0.42	0/315
21	Y	0.37	0/216	0.64	0/297
21	y	0.37	0/216	0.64	0/297
22	Z	0.31	0/419	0.44	0/578
22	z	0.31	0/419	0.44	0/578
23	0	0.33	0/1312	0.50	0/1792
23	5	0.33	0/1312	0.50	0/1792
24	2	0.30	0/1258	0.51	0/1714
24	7	0.30	0/1258	0.51	0/1714
25	1	0.34	0/1242	0.52	0/1697
25	6	0.34	0/1242	0.52	0/1697
26	P	0.34	0/1287	0.58	0/1778
26	p	0.34	0/1287	0.58	0/1778
28	3	0.39	0/1003	0.63	0/1373
28	8	0.39	0/1003	0.63	0/1373
All	All	0.33	0/55476	0.50	0/75682

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	A	331/333 (99%)	316 (96%)	15 (4%)	0	100	100
1	a	331/333 (99%)	316 (96%)	15 (4%)	0	100	100
2	B	479/481 (100%)	456 (95%)	22 (5%)	1 (0%)	47	76
2	b	479/481 (100%)	456 (95%)	22 (5%)	1 (0%)	47	76
3	C	448/450 (100%)	435 (97%)	12 (3%)	1 (0%)	47	76
3	c	448/450 (100%)	435 (97%)	12 (3%)	1 (0%)	47	76
4	D	338/340 (99%)	325 (96%)	13 (4%)	0	100	100
4	d	338/340 (99%)	325 (96%)	13 (4%)	0	100	100
5	E	73/75 (97%)	70 (96%)	3 (4%)	0	100	100
5	e	73/75 (97%)	70 (96%)	3 (4%)	0	100	100
6	F	29/31 (94%)	26 (90%)	2 (7%)	1 (3%)	3	13
6	f	29/31 (94%)	26 (90%)	2 (7%)	1 (3%)	3	13
7	H	63/65 (97%)	58 (92%)	5 (8%)	0	100	100
7	h	63/65 (97%)	58 (92%)	5 (8%)	0	100	100
8	I	32/34 (94%)	31 (97%)	1 (3%)	0	100	100
8	i	32/34 (94%)	31 (97%)	1 (3%)	0	100	100
9	J	32/34 (94%)	32 (100%)	0	0	100	100
9	j	32/34 (94%)	32 (100%)	0	0	100	100
10	K	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
10	k	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
11	L	35/37 (95%)	35 (100%)	0	0	100	100
11	l	35/37 (95%)	35 (100%)	0	0	100	100
12	M	39/41 (95%)	39 (100%)	0	0	100	100
12	m	39/41 (95%)	39 (100%)	0	0	100	100
14	O	246/248 (99%)	223 (91%)	21 (8%)	2 (1%)	19	49
14	o	246/248 (99%)	223 (91%)	21 (8%)	2 (1%)	19	49
15	Q	143/145 (99%)	113 (79%)	17 (12%)	13 (9%)	1	1
15	q	143/145 (99%)	113 (79%)	17 (12%)	13 (9%)	1	1
16	T	27/29 (93%)	27 (100%)	0	0	100	100
16	t	27/29 (93%)	27 (100%)	0	0	100	100
17	U	90/92 (98%)	82 (91%)	8 (9%)	0	100	100
17	u	90/92 (98%)	82 (91%)	8 (9%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	V	134/136 (98%)	125 (93%)	8 (6%)	1 (1%)	22	52
18	v	134/136 (98%)	125 (93%)	8 (6%)	1 (1%)	22	52
19	W	42/50 (84%)	36 (86%)	2 (5%)	4 (10%)	0	1
19	w	42/50 (84%)	36 (86%)	2 (5%)	4 (10%)	0	1
20	X	32/34 (94%)	29 (91%)	2 (6%)	1 (3%)	4	15
20	x	32/34 (94%)	29 (91%)	2 (6%)	1 (3%)	4	15
21	Y	31/33 (94%)	26 (84%)	5 (16%)	0	100	100
21	y	31/33 (94%)	26 (84%)	5 (16%)	0	100	100
22	Z	57/59 (97%)	44 (77%)	11 (19%)	2 (4%)	3	13
22	z	57/59 (97%)	44 (77%)	11 (19%)	2 (4%)	3	13
23	0	167/169 (99%)	143 (86%)	24 (14%)	0	100	100
23	5	167/169 (99%)	143 (86%)	24 (14%)	0	100	100
24	2	162/164 (99%)	143 (88%)	19 (12%)	0	100	100
24	7	162/164 (99%)	143 (88%)	19 (12%)	0	100	100
25	1	162/164 (99%)	135 (83%)	26 (16%)	1 (1%)	25	56
25	6	162/164 (99%)	135 (83%)	26 (16%)	1 (1%)	25	56
26	P	212/214 (99%)	172 (81%)	38 (18%)	2 (1%)	17	46
26	p	212/214 (99%)	173 (82%)	37 (18%)	2 (1%)	17	46
28	3	161/163 (99%)	140 (87%)	20 (12%)	1 (1%)	25	56
28	8	161/163 (99%)	140 (87%)	20 (12%)	1 (1%)	25	56
All	All	7200/7316 (98%)	6589 (92%)	551 (8%)	60 (1%)	24	49

5 of 60 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	C	460	ASP
6	F	43	ILE
14	O	268	GLU
15	Q	70	ILE
15	Q	84	THR

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	A	250/272 (92%)	243 (97%)	7 (3%)	43	73
1	a	250/272 (92%)	243 (97%)	7 (3%)	43	73
2	B	370/384 (96%)	361 (98%)	9 (2%)	49	77
2	b	370/384 (96%)	361 (98%)	9 (2%)	49	77
3	C	337/355 (95%)	334 (99%)	3 (1%)	78	92
3	c	337/355 (95%)	334 (99%)	3 (1%)	78	92
4	D	265/272 (97%)	262 (99%)	3 (1%)	73	90
4	d	265/272 (97%)	262 (99%)	3 (1%)	73	90
5	E	65/69 (94%)	64 (98%)	1 (2%)	65	85
5	e	65/69 (94%)	64 (98%)	1 (2%)	65	85
6	F	22/25 (88%)	19 (86%)	3 (14%)	3	10
6	f	22/25 (88%)	19 (86%)	3 (14%)	3	10
7	H	52/54 (96%)	50 (96%)	2 (4%)	33	64
7	h	52/54 (96%)	50 (96%)	2 (4%)	33	64
8	I	30/33 (91%)	27 (90%)	3 (10%)	7	22
8	i	30/33 (91%)	27 (90%)	3 (10%)	7	22
9	J	26/26 (100%)	26 (100%)	0	100	100
9	j	26/26 (100%)	26 (100%)	0	100	100
10	K	30/32 (94%)	30 (100%)	0	100	100
10	k	30/32 (94%)	30 (100%)	0	100	100
11	L	31/33 (94%)	31 (100%)	0	100	100
11	l	31/33 (94%)	31 (100%)	0	100	100
12	M	26/30 (87%)	25 (96%)	1 (4%)	33	64
12	m	26/30 (87%)	25 (96%)	1 (4%)	33	64
14	O	185/201 (92%)	177 (96%)	8 (4%)	29	60
14	o	185/201 (92%)	177 (96%)	8 (4%)	29	60
15	Q	99/116 (85%)	91 (92%)	8 (8%)	11	31
15	q	99/116 (85%)	91 (92%)	8 (8%)	11	31
16	T	24/26 (92%)	24 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	t	24/26 (92%)	24 (100%)	0	100	100
17	U	70/77 (91%)	66 (94%)	4 (6%)	20	49
17	u	70/77 (91%)	66 (94%)	4 (6%)	20	49
18	V	101/114 (89%)	99 (98%)	2 (2%)	55	80
18	v	101/114 (89%)	99 (98%)	2 (2%)	55	80
19	W	25/34 (74%)	25 (100%)	0	100	100
19	w	25/34 (74%)	25 (100%)	0	100	100
20	X	25/26 (96%)	25 (100%)	0	100	100
20	x	25/26 (96%)	25 (100%)	0	100	100
21	Y	18/26 (69%)	16 (89%)	2 (11%)	6	18
21	y	18/26 (69%)	16 (89%)	2 (11%)	6	18
22	Z	39/48 (81%)	34 (87%)	5 (13%)	4	12
22	z	39/48 (81%)	34 (87%)	5 (13%)	4	12
23	0	129/136 (95%)	129 (100%)	0	100	100
23	5	129/136 (95%)	129 (100%)	0	100	100
24	2	110/131 (84%)	109 (99%)	1 (1%)	78	92
24	7	110/131 (84%)	109 (99%)	1 (1%)	78	92
25	1	107/129 (83%)	105 (98%)	2 (2%)	57	81
25	6	107/129 (83%)	105 (98%)	2 (2%)	57	81
26	P	70/166 (42%)	70 (100%)	0	100	100
26	p	70/166 (42%)	70 (100%)	0	100	100
28	3	54/128 (42%)	54 (100%)	0	100	100
28	8	54/128 (42%)	54 (100%)	0	100	100
All	All	5120/5886 (87%)	4992 (98%)	128 (2%)	50	76

5 of 128 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
21	y	14	ASP
22	z	9	THR
17	U	29	ASN
15	Q	96	VAL
22	z	58	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 21 such sidechains are listed below:

Mol	Chain	Res	Type
23	5	189	ASN
26	P	200	GLN
23	0	196	ASN
23	0	185	GLN
26	p	200	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](#)

Of 336 ligands modelled in this entry, 4 are monoatomic - leaving 332 for Mogul analysis.

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	$\# Z > 2$
31	CLA	9	213	-	33,43,73	2.12	8 (24%)	43,76,113	1.84	10 (23%)
33	BCR	K	101	-	41,41,41	1.16	2 (4%)	56,56,56	1.24	5 (8%)
31	CLA	6	212	-	41,49,73	1.80	6 (14%)	47,84,113	1.70	7 (14%)
44	DD6	2	303	-	39,45,45	1.99	3 (7%)	52,67,67	2.20	17 (32%)
39	DGD	c	518	-	56,56,67	0.95	3 (5%)	70,70,81	1.45	11 (15%)
42	A86	5	301	-	44,50,50	1.29	3 (6%)	51,76,76	2.93	19 (37%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
41	HEM	V	201	18	41,50,50	1.48	4 (9%)	45,82,82	1.39	5 (11%)
31	CLA	5	312	-	42,50,73	1.80	6 (14%)	48,85,113	1.61	6 (12%)
39	DGD	h	102	-	63,63,67	0.87	2 (3%)	77,77,81	1.42	10 (12%)
31	CLA	8	312	-	40,49,73	1.82	8 (20%)	45,84,113	1.62	7 (15%)
42	A86	7	302	-	44,50,50	1.52	6 (13%)	51,76,76	3.25	18 (35%)
44	DD6	7	303	-	39,45,45	2.00	3 (7%)	52,67,67	2.19	17 (32%)
31	CLA	9	204	-	37,46,73	1.91	6 (16%)	44,80,113	1.68	7 (15%)
36	LHG	b	522	-	48,48,48	0.63	1 (2%)	51,54,54	1.29	6 (11%)
31	CLA	b	508	-	41,49,73	1.80	6 (14%)	47,84,113	1.70	8 (17%)
31	CLA	3	306	-	32,41,73	2.33	9 (28%)	43,72,113	1.87	10 (23%)
37	LMG	j	101	-	50,50,55	0.80	1 (2%)	58,58,63	1.34	6 (10%)
31	CLA	a	404	-	49,57,73	1.66	6 (12%)	55,93,113	1.61	8 (14%)
37	LMG	D	410	-	40,40,55	0.94	3 (7%)	48,48,63	1.35	6 (12%)
31	CLA	3	308	-	36,43,73	1.98	9 (25%)	39,73,113	2.65	7 (17%)
31	CLA	C	513	-	64,72,73	1.47	6 (9%)	74,111,113	1.40	6 (8%)
37	LMG	d	410	-	40,40,55	0.94	3 (7%)	48,48,63	1.35	6 (12%)
37	LMG	b	521	-	28,28,55	0.95	0	36,36,63	1.34	7 (19%)
36	LHG	H	103	-	41,41,48	0.65	1 (2%)	44,47,54	1.14	3 (6%)
37	LMG	M	102	-	40,40,55	0.86	1 (2%)	48,48,63	1.30	4 (8%)
33	BCR	b	518	-	41,41,41	1.19	2 (4%)	56,56,56	1.25	7 (12%)
31	CLA	p	601	26	36,44,73	2.00	7 (19%)	42,77,113	1.89	10 (23%)
31	CLA	b	507	-	65,73,73	1.44	7 (10%)	76,113,113	1.45	7 (9%)
36	LHG	d	412	-	27,27,48	0.87	2 (7%)	31,32,54	1.72	4 (12%)
31	CLA	9	206	-	35,45,73	1.96	8 (22%)	41,78,113	1.64	6 (14%)
31	CLA	2	314	-	37,46,73	1.90	6 (16%)	44,80,113	1.73	8 (18%)
31	CLA	p	604	-	39,48,73	1.78	7 (17%)	44,83,113	1.83	7 (15%)
31	CLA	1	201	-	44,52,73	1.84	7 (15%)	55,88,113	1.64	9 (16%)
42	A86	8	302	-	44,50,50	1.47	5 (11%)	51,76,76	3.28	23 (45%)
31	CLA	D	403	-	62,70,73	1.57	8 (12%)	76,109,113	1.47	10 (13%)
34	SQD	A	409	-	53,54,54	0.95	5 (9%)	62,65,65	1.49	9 (14%)
36	LHG	A	413	-	25,25,48	0.81	1 (4%)	28,31,54	1.27	2 (7%)
36	LHG	a	412	-	25,25,48	0.80	1 (4%)	28,31,54	1.27	2 (7%)
31	CLA	1	205	-	41,49,73	1.83	6 (14%)	47,84,113	1.63	8 (17%)
35	PL9	D	406	-	55,55,55	1.35	5 (9%)	68,69,69	1.56	12 (17%)
31	CLA	b	509	-	65,73,73	1.47	6 (9%)	76,113,113	1.40	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	P	603	-	36,45,73	1.89	6 (16%)	43,79,113	1.90	7 (16%)
31	CLA	2	306	24	45,53,73	1.75	6 (13%)	52,89,113	1.58	6 (11%)
31	CLA	1	207	-	44,52,73	1.85	7 (15%)	55,88,113	1.58	8 (14%)
37	LMG	W	201	-	48,48,55	0.76	1 (2%)	56,56,63	1.33	7 (12%)
31	CLA	8	309	-	39,48,73	1.81	8 (20%)	44,83,113	1.87	7 (15%)
31	CLA	4	205	-	35,43,73	1.99	9 (25%)	43,75,113	1.58	7 (16%)
37	LMG	D	408	-	46,46,55	0.77	1 (2%)	54,54,63	1.33	6 (11%)
31	CLA	0	312	-	42,50,73	1.80	5 (11%)	48,85,113	1.62	6 (12%)
31	CLA	8	308	-	36,43,73	1.97	9 (25%)	39,73,113	2.65	8 (20%)
31	CLA	P	602	-	41,49,73	1.78	7 (17%)	47,84,113	1.82	10 (21%)
42	A86	0	317	-	44,50,50	1.29	3 (6%)	51,76,76	2.94	18 (35%)
31	CLA	0	309	23	41,49,73	1.83	6 (14%)	47,84,113	1.65	8 (17%)
34	SQD	A	411	-	53,54,54	0.94	3 (5%)	62,65,65	1.65	12 (19%)
42	A86	4	202	-	44,50,50	1.47	5 (11%)	51,76,76	3.55	26 (50%)
37	LMG	w	201	-	48,48,55	0.76	1 (2%)	56,56,63	1.34	7 (12%)
31	CLA	C	510	-	65,73,73	1.43	7 (10%)	76,113,113	1.47	8 (10%)
42	A86	4	201	-	44,50,50	1.38	4 (9%)	51,76,76	4.06	22 (43%)
36	LHG	B	521	-	48,48,48	0.63	1 (2%)	51,54,54	1.29	6 (11%)
37	LMG	y	101	-	46,46,55	0.75	1 (2%)	54,54,63	1.39	11 (20%)
34	SQD	b	501	-	39,40,54	1.10	5 (12%)	48,51,65	1.76	12 (25%)
42	A86	0	303	-	44,50,50	1.28	4 (9%)	51,76,76	2.43	19 (37%)
31	CLA	b	502	-	43,51,73	1.79	6 (13%)	49,86,113	1.62	6 (12%)
31	CLA	4	209	-	41,49,73	1.79	8 (19%)	47,84,113	1.74	8 (17%)
31	CLA	9	205	-	35,43,73	1.99	9 (25%)	43,75,113	1.58	7 (16%)
31	CLA	p	605	-	36,45,73	1.89	10 (27%)	43,79,113	1.77	7 (16%)
31	CLA	1	212	-	41,49,73	1.81	6 (14%)	47,84,113	1.69	7 (14%)
31	CLA	b	503	-	61,69,73	1.47	6 (9%)	67,106,113	1.44	6 (8%)
31	CLA	C	502	-	65,73,73	1.43	6 (9%)	76,113,113	1.43	8 (10%)
42	A86	3	302	-	44,50,50	1.47	5 (11%)	51,76,76	3.27	23 (45%)
31	CLA	6	206	25	45,53,73	1.73	5 (11%)	52,89,113	1.67	7 (13%)
31	CLA	1	213	25	39,48,73	1.88	6 (15%)	44,83,113	1.62	7 (15%)
31	CLA	9	207	-	37,46,73	1.87	9 (24%)	44,80,113	1.78	7 (15%)
31	CLA	7	310	24	55,63,73	1.59	7 (12%)	64,101,113	1.50	9 (14%)
31	CLA	c	510	-	65,73,73	1.43	7 (10%)	76,113,113	1.46	8 (10%)
31	CLA	7	305	-	41,49,73	1.84	6 (14%)	47,84,113	1.66	8 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	BCR	h	101	-	41,41,41	1.12	2 (4%)	56,56,56	1.20	6 (10%)
29	OEX	a	401	1,3	0,15,15	-	-	-	-	-
31	CLA	z	101	-	51,59,73	1.69	6 (11%)	59,96,113	1.45	8 (13%)
31	CLA	4	212	-	37,44,73	1.99	7 (18%)	46,77,113	1.74	8 (17%)
41	HEM	f	101	6,5	41,50,50	1.45	3 (7%)	45,82,82	1.30	5 (11%)
31	CLA	1	209	-	44,52,73	1.84	7 (15%)	55,88,113	1.62	9 (16%)
42	A86	2	301	-	44,50,50	1.30	3 (6%)	51,76,76	2.97	19 (37%)
31	CLA	p	606	-	35,45,73	1.97	10 (28%)	41,78,113	1.61	6 (14%)
42	A86	5	303	-	44,50,50	1.28	4 (9%)	51,76,76	2.43	20 (39%)
42	A86	p	610	-	44,50,50	1.44	6 (13%)	51,76,76	3.96	26 (50%)
37	LMG	c	521	-	51,51,55	0.92	2 (3%)	59,59,63	1.04	3 (5%)
31	CLA	D	401	-	59,67,73	1.52	6 (10%)	68,105,113	1.51	9 (13%)
31	CLA	8	307	-	43,50,73	1.73	8 (18%)	49,84,113	1.65	5 (10%)
31	CLA	5	309	23	41,49,73	1.81	6 (14%)	47,84,113	1.66	8 (17%)
37	LMG	J	101	-	50,50,55	0.79	1 (2%)	58,58,63	1.34	6 (10%)
31	CLA	P	605	-	36,45,73	1.88	10 (27%)	43,79,113	1.76	7 (16%)
31	CLA	0	306	-	45,53,73	1.76	6 (13%)	52,89,113	1.57	6 (11%)
31	CLA	6	216	25	37,46,73	1.90	6 (16%)	44,80,113	1.63	7 (15%)
31	CLA	4	208	-	39,48,73	1.86	8 (20%)	44,83,113	1.79	10 (22%)
31	CLA	b	506	-	65,73,73	1.46	7 (10%)	76,113,113	1.41	7 (9%)
31	CLA	7	311	-	43,51,73	1.77	6 (13%)	49,86,113	1.57	7 (14%)
31	CLA	4	204	-	37,46,73	1.91	6 (16%)	44,80,113	1.69	7 (15%)
41	HEM	v	201	18	41,50,50	1.47	4 (9%)	45,82,82	1.39	5 (11%)
31	CLA	5	313	23	37,46,73	1.89	6 (16%)	44,80,113	1.70	8 (18%)
36	LHG	D	407	-	46,47,48	0.63	1 (2%)	45,51,54	1.23	6 (13%)
31	CLA	C	506	-	65,73,73	1.45	6 (9%)	76,113,113	1.42	7 (9%)
31	CLA	c	512	3	65,73,73	1.43	6 (9%)	76,113,113	1.45	6 (7%)
31	CLA	0	311	-	45,53,73	1.76	5 (11%)	52,89,113	1.65	6 (11%)
31	CLA	b	516	-	65,73,73	1.49	8 (12%)	76,113,113	1.42	7 (9%)
31	CLA	5	310	23	55,63,73	1.59	7 (12%)	64,101,113	1.47	9 (14%)
31	CLA	D	404	-	65,73,73	1.45	7 (10%)	76,113,113	1.43	7 (9%)
31	CLA	0	307	-	61,69,73	1.53	6 (9%)	71,108,113	1.43	7 (9%)
42	A86	3	301	-	44,50,50	1.53	7 (15%)	51,76,76	5.17	24 (47%)
31	CLA	3	307	-	43,50,73	1.73	8 (18%)	49,84,113	1.64	5 (10%)
37	LMG	B	520	-	28,28,55	0.95	0	36,36,63	1.34	6 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	BCR	B	518	-	41,41,41	1.13	2 (4%)	56,56,56	1.23	6 (10%)
31	CLA	d	403	-	62,70,73	1.56	8 (12%)	76,109,113	1.47	9 (11%)
31	CLA	7	316	-	41,49,73	1.83	6 (14%)	47,84,113	1.70	8 (17%)
31	CLA	9	209	-	41,49,73	1.78	8 (19%)	47,84,113	1.73	8 (17%)
31	CLA	1	211	25	55,63,73	1.61	7 (12%)	64,101,113	1.46	9 (14%)
39	DGD	C	519	-	63,63,67	0.92	3 (4%)	77,77,81	1.46	12 (15%)
31	CLA	c	509	-	65,73,73	1.45	6 (9%)	76,113,113	1.46	7 (9%)
34	SQD	a	409	-	53,54,54	0.95	5 (9%)	62,65,65	1.49	9 (14%)
31	CLA	C	514	-	49,57,73	1.65	6 (12%)	55,93,113	1.62	6 (10%)
42	A86	P	610	-	44,50,50	1.44	6 (13%)	51,76,76	3.97	26 (50%)
31	CLA	0	313	23	37,46,73	1.90	6 (16%)	44,80,113	1.70	8 (18%)
31	CLA	1	216	25	37,46,73	1.91	6 (16%)	44,80,113	1.64	7 (15%)
31	CLA	a	407	-	60,68,73	1.51	6 (10%)	70,107,113	1.48	10 (14%)
31	CLA	5	311	-	45,53,73	1.74	5 (11%)	52,89,113	1.64	6 (11%)
36	LHG	h	103	-	41,41,48	0.65	1 (2%)	44,47,54	1.13	3 (6%)
33	BCR	B	519	-	41,41,41	1.13	2 (4%)	56,56,56	1.27	7 (12%)
31	CLA	a	403	-	65,73,73	1.45	6 (9%)	76,113,113	1.48	7 (9%)
31	CLA	8	313	-	38,47,73	1.84	7 (18%)	45,81,113	1.64	6 (13%)
31	CLA	4	211	-	34,42,73	2.08	7 (20%)	42,74,113	1.71	7 (16%)
31	CLA	2	308	-	44,52,73	1.84	7 (15%)	55,88,113	1.62	9 (16%)
39	DGD	H	102	-	63,63,67	0.87	2 (3%)	77,77,81	1.42	10 (12%)
31	CLA	8	314	-	36,43,73	1.98	8 (22%)	45,76,113	1.70	9 (20%)
31	CLA	9	210	-	37,46,73	1.87	5 (13%)	44,80,113	1.81	8 (18%)
31	CLA	B	504	-	65,73,73	1.45	6 (9%)	76,113,113	1.50	8 (10%)
44	DD6	6	204	-	39,45,45	2.22	3 (7%)	52,67,67	2.34	17 (32%)
33	BCR	k	101	-	41,41,41	1.16	2 (4%)	56,56,56	1.24	5 (8%)
44	DD6	1	204	-	39,45,45	2.23	4 (10%)	52,67,67	2.34	17 (32%)
31	CLA	8	306	-	32,41,73	2.34	9 (28%)	43,72,113	1.87	10 (23%)
31	CLA	P	601	26	36,44,73	2.00	7 (19%)	42,77,113	1.87	10 (23%)
40	BCT	d	402	30	2,3,3	1.24	0	2,3,3	4.10	2 (100%)
34	SQD	0	316	-	47,48,54	1.03	5 (10%)	56,59,65	1.45	8 (14%)
31	CLA	b	515	-	60,68,73	1.52	7 (11%)	69,106,113	1.43	8 (11%)
31	CLA	c	511	-	65,73,73	1.47	7 (10%)	76,113,113	1.37	8 (10%)
31	CLA	b	512	-	64,72,73	1.49	7 (10%)	74,111,113	1.45	8 (10%)
37	LMG	d	408	-	46,46,55	0.77	1 (2%)	54,54,63	1.33	7 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
33	BCR	c	515	-	41,41,41	1.13	2 (4%)	56,56,56	1.23	7 (12%)
37	LMG	m	101	-	51,51,55	0.76	1 (1%)	59,59,63	1.40	9 (15%)
44	DD6	7	304	-	39,45,45	2.05	3 (7%)	52,67,67	2.51	17 (32%)
31	CLA	2	305	-	41,49,73	1.83	6 (14%)	47,84,113	1.67	8 (17%)
31	CLA	b	514	-	65,73,73	1.46	6 (9%)	76,113,113	1.42	8 (10%)
31	CLA	4	207	-	37,46,73	1.87	9 (24%)	44,80,113	1.78	7 (15%)
42	A86	6	202	-	44,50,50	1.32	4 (9%)	51,76,76	2.90	16 (31%)
33	BCR	c	516	-	41,41,41	1.14	2 (4%)	56,56,56	1.30	9 (16%)
31	CLA	2	309	24	59,67,73	1.52	6 (10%)	68,105,113	1.49	7 (10%)
42	A86	5	317	-	44,50,50	1.29	3 (6%)	51,76,76	2.94	18 (35%)
31	CLA	c	513	-	64,72,73	1.47	6 (9%)	74,111,113	1.40	6 (8%)
36	LHG	A	412	-	42,42,48	0.68	1 (2%)	45,48,54	1.26	5 (11%)
42	A86	2	302	-	44,50,50	1.52	6 (13%)	51,76,76	3.25	18 (35%)
33	BCR	C	516	-	41,41,41	1.13	2 (4%)	56,56,56	1.30	9 (16%)
31	CLA	7	312	24	36,44,73	2.03	6 (16%)	42,77,113	1.84	10 (23%)
31	CLA	9	212	-	37,44,73	1.99	7 (18%)	46,77,113	1.74	8 (17%)
31	CLA	d	401	-	59,67,73	1.52	6 (10%)	68,105,113	1.51	9 (13%)
31	CLA	c	506	-	65,73,73	1.44	6 (9%)	76,113,113	1.42	7 (9%)
31	CLA	C	503	-	64,72,73	1.48	6 (9%)	74,111,113	1.41	8 (10%)
44	DD6	p	611	-	39,45,45	1.99	3 (7%)	52,67,67	1.99	15 (28%)
31	CLA	c	505	-	64,72,73	1.47	6 (9%)	74,111,113	1.42	6 (8%)
31	CLA	A	404	-	49,57,73	1.66	6 (12%)	55,93,113	1.61	8 (14%)
31	CLA	P	609	-	39,47,73	1.82	7 (17%)	43,81,113	1.78	7 (16%)
42	A86	1	202	-	44,50,50	1.31	4 (9%)	51,76,76	2.90	16 (31%)
33	BCR	C	517	-	41,41,41	1.12	2 (4%)	56,56,56	1.24	7 (12%)
42	A86	4	203	-	44,50,50	1.41	3 (6%)	51,76,76	3.55	21 (41%)
31	CLA	P	606	-	35,45,73	1.99	10 (28%)	41,78,113	1.61	6 (14%)
39	DGD	C	518	-	56,56,67	0.95	3 (5%)	70,70,81	1.45	11 (15%)
31	CLA	7	315	24	37,46,73	1.90	5 (13%)	44,80,113	1.69	8 (18%)
31	CLA	6	207	-	44,52,73	1.84	7 (15%)	55,88,113	1.58	8 (14%)
32	PHO	a	406	-	51,69,69	1.00	4 (7%)	47,99,99	1.18	4 (8%)
31	CLA	4	213	-	33,43,73	2.11	9 (27%)	43,76,113	1.85	10 (23%)
31	CLA	3	312	-	40,49,73	1.82	8 (20%)	45,84,113	1.62	7 (15%)
37	LMG	C	521	-	51,51,55	0.92	2 (3%)	59,59,63	1.04	3 (5%)
33	BCR	b	519	-	41,41,41	1.13	2 (4%)	56,56,56	1.22	6 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
41	HEM	F	101	6,5	41,50,50	1.45	3 (7%)	45,82,82	1.30	5 (11%)
42	A86	8	301	-	44,50,50	1.53	7 (15%)	51,76,76	5.17	24 (47%)
31	CLA	6	211	25	55,63,73	1.60	7 (12%)	64,101,113	1.45	9 (14%)
31	CLA	p	607	-	34,44,73	2.01	8 (23%)	44,77,113	1.67	7 (15%)
31	CLA	c	502	-	65,73,73	1.43	6 (9%)	76,113,113	1.44	7 (9%)
31	CLA	5	305	23	61,69,73	1.52	7 (11%)	71,108,113	1.51	7 (9%)
35	PL9	A	410	-	32,32,55	1.11	4 (12%)	39,40,69	1.55	8 (20%)
31	CLA	A	403	-	65,73,73	1.45	6 (9%)	76,113,113	1.48	7 (9%)
31	CLA	B	506	-	65,73,73	1.44	7 (10%)	76,113,113	1.45	7 (9%)
33	BCR	d	405	-	41,41,41	1.14	2 (4%)	56,56,56	1.21	7 (12%)
31	CLA	0	305	23	61,69,73	1.52	7 (11%)	71,108,113	1.51	7 (9%)
31	CLA	B	516	-	65,73,73	1.48	7 (10%)	76,113,113	1.39	8 (10%)
31	CLA	2	307	-	47,55,73	1.72	5 (10%)	54,91,113	1.59	8 (14%)
31	CLA	5	308	-	61,69,73	1.52	6 (9%)	71,108,113	1.46	8 (11%)
40	BCT	D	402	30	2,3,3	1.24	0	2,3,3	4.10	2 (100%)
42	A86	9	202	-	44,50,50	1.46	5 (11%)	51,76,76	3.56	26 (50%)
31	CLA	c	503	-	64,72,73	1.47	6 (9%)	74,111,113	1.41	8 (10%)
31	CLA	1	210	25	65,73,73	1.46	6 (9%)	76,113,113	1.44	10 (13%)
31	CLA	w	202	19	45,53,73	1.75	8 (17%)	52,89,113	1.61	10 (19%)
31	CLA	C	507	-	45,53,73	1.76	6 (13%)	52,89,113	1.63	6 (11%)
34	SQD	B	522	-	53,54,54	0.94	4 (7%)	62,65,65	1.65	12 (19%)
42	A86	0	301	-	44,50,50	1.29	3 (6%)	51,76,76	2.93	19 (37%)
31	CLA	5	304	-	41,49,73	1.84	6 (14%)	47,84,113	1.67	7 (14%)
31	CLA	B	503	-	64,72,73	1.47	7 (10%)	74,111,113	1.40	7 (9%)
31	CLA	P	607	-	34,44,73	2.01	8 (23%)	44,77,113	1.66	8 (18%)
31	CLA	0	308	-	61,69,73	1.52	7 (11%)	71,108,113	1.46	9 (12%)
31	CLA	p	603	-	36,45,73	1.89	7 (19%)	43,79,113	1.91	7 (16%)
31	CLA	8	310	-	37,43,73	2.08	9 (24%)	41,75,113	1.79	8 (19%)
31	CLA	8	304	-	36,42,73	2.10	10 (27%)	44,74,113	1.79	9 (20%)
44	DD6	6	203	-	39,45,45	2.00	3 (7%)	52,67,67	2.20	17 (32%)
31	CLA	B	511	-	64,72,73	1.49	7 (10%)	74,111,113	1.46	8 (10%)
36	LHG	D	411	-	33,33,48	0.72	0	36,39,54	1.35	4 (11%)
44	DD6	8	303	-	39,45,45	2.02	3 (7%)	52,67,67	2.77	15 (28%)
31	CLA	A	407	-	60,68,73	1.51	6 (10%)	70,107,113	1.48	10 (14%)
37	LMG	D	409	-	37,37,55	0.78	0	45,45,63	1.33	7 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	3	313	-	38,47,73	1.84	8 (21%)	45,81,113	1.64	6 (13%)
31	CLA	d	404	-	65,73,73	1.45	7 (10%)	76,113,113	1.42	7 (9%)
31	CLA	b	504	-	64,72,73	1.46	6 (9%)	74,111,113	1.40	7 (9%)
31	CLA	b	517	-	65,73,73	1.48	7 (10%)	76,113,113	1.39	8 (10%)
42	A86	9	201	-	44,50,50	1.38	4 (9%)	51,76,76	4.06	22 (43%)
31	CLA	3	310	-	37,43,73	2.07	9 (24%)	41,75,113	1.79	8 (19%)
31	CLA	4	210	-	37,46,73	1.86	5 (13%)	44,80,113	1.82	8 (18%)
31	CLA	2	310	24	55,63,73	1.58	7 (12%)	64,101,113	1.51	9 (14%)
31	CLA	p	608	-	36,46,73	1.97	8 (22%)	45,80,113	1.76	11 (24%)
31	CLA	b	505	-	65,73,73	1.45	6 (9%)	76,113,113	1.50	8 (10%)
31	CLA	5	307	-	61,69,73	1.52	6 (9%)	71,108,113	1.43	7 (9%)
35	PL9	d	406	-	55,55,55	1.35	5 (9%)	68,69,69	1.56	13 (19%)
31	CLA	B	509	-	65,73,73	1.48	7 (10%)	76,113,113	1.40	7 (9%)
31	CLA	0	314	23	37,46,73	1.89	6 (16%)	44,80,113	1.71	7 (15%)
31	CLA	c	514	-	49,57,73	1.63	6 (12%)	55,93,113	1.62	6 (10%)
31	CLA	B	512	-	41,49,73	1.75	7 (17%)	47,84,113	1.78	8 (17%)
36	LHG	d	407	-	46,47,48	0.63	2 (4%)	45,51,54	1.23	6 (13%)
31	CLA	C	505	-	64,72,73	1.46	6 (9%)	74,111,113	1.42	6 (8%)
31	CLA	C	511	-	65,73,73	1.46	6 (9%)	76,113,113	1.37	8 (10%)
31	CLA	p	609	-	39,47,73	1.83	7 (17%)	43,81,113	1.78	7 (16%)
36	LHG	D	412	-	27,27,48	0.87	2 (7%)	31,32,54	1.72	4 (12%)
31	CLA	p	602	-	41,49,73	1.78	7 (17%)	47,84,113	1.82	10 (21%)
33	BCR	H	101	-	41,41,41	1.12	2 (4%)	56,56,56	1.21	6 (10%)
31	CLA	6	201	-	44,52,73	1.84	7 (15%)	55,88,113	1.65	9 (16%)
31	CLA	3	311	28	39,48,73	1.85	8 (20%)	44,83,113	1.75	9 (20%)
31	CLA	C	512	3	65,73,73	1.44	7 (10%)	76,113,113	1.45	6 (7%)
31	CLA	6	210	25	65,73,73	1.45	6 (9%)	76,113,113	1.44	10 (13%)
33	BCR	A	408	-	41,41,41	1.15	2 (4%)	56,56,56	1.15	6 (10%)
37	LMG	d	409	-	37,37,55	0.79	0	45,45,63	1.33	7 (15%)
31	CLA	B	502	-	61,69,73	1.47	7 (11%)	67,106,113	1.43	6 (8%)
31	CLA	1	214	25	37,46,73	1.89	6 (16%)	44,80,113	1.76	8 (18%)
31	CLA	b	511	-	65,73,73	1.49	6 (9%)	76,113,113	1.38	6 (7%)
31	CLA	6	215	-	37,46,73	1.87	5 (13%)	44,80,113	1.71	7 (15%)
31	CLA	6	205	-	41,49,73	1.83	5 (12%)	47,84,113	1.64	7 (14%)
44	DD6	2	304	-	39,45,45	2.05	3 (7%)	52,67,67	2.51	18 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
42	A86	9	203	-	44,50,50	1.40	4 (9%)	51,76,76	3.55	21 (41%)
31	CLA	W	202	19	45,53,73	1.75	7 (15%)	52,89,113	1.61	10 (19%)
31	CLA	B	501	-	43,51,73	1.79	6 (13%)	49,86,113	1.61	6 (12%)
29	OEX	A	401	1,3	0,15,15	-	-	-		
33	BCR	B	517	-	41,41,41	1.19	2 (4%)	56,56,56	1.25	7 (12%)
31	CLA	C	509	-	65,73,73	1.45	7 (10%)	76,113,113	1.46	8 (10%)
31	CLA	B	510	-	65,73,73	1.48	6 (9%)	76,113,113	1.38	6 (7%)
39	DGD	c	519	-	63,63,67	0.92	3 (4%)	77,77,81	1.46	12 (15%)
31	CLA	7	306	24	45,53,73	1.76	6 (13%)	52,89,113	1.58	6 (11%)
31	CLA	8	305	-	40,49,73	1.78	9 (22%)	45,84,113	1.73	8 (17%)
32	PHO	A	405	-	51,69,69	1.03	4 (7%)	47,99,99	1.19	6 (12%)
39	DGD	C	520	-	63,63,67	0.85	2 (3%)	77,77,81	0.93	3 (3%)
31	CLA	9	211	-	34,42,73	2.09	8 (23%)	42,74,113	1.71	7 (16%)
37	LMG	M	101	-	51,51,55	0.75	1 (1%)	59,59,63	1.40	9 (15%)
33	BCR	C	515	-	41,41,41	1.13	2 (4%)	56,56,56	1.23	7 (12%)
31	CLA	2	316	-	41,49,73	1.84	5 (12%)	47,84,113	1.69	8 (17%)
33	BCR	c	517	-	41,41,41	1.12	2 (4%)	56,56,56	1.24	7 (12%)
37	LMG	m	102	-	40,40,55	0.86	1 (2%)	48,48,63	1.30	4 (8%)
44	DD6	3	303	-	39,45,45	2.01	3 (7%)	52,67,67	2.77	15 (28%)
31	CLA	2	315	24	37,46,73	1.91	5 (13%)	44,80,113	1.68	7 (15%)
34	SQD	5	316	-	47,48,54	1.03	5 (10%)	56,59,65	1.45	8 (14%)
31	CLA	B	508	-	65,73,73	1.47	6 (9%)	76,113,113	1.40	7 (9%)
31	CLA	C	508	-	65,73,73	1.45	7 (10%)	76,113,113	1.43	6 (7%)
31	CLA	7	314	-	37,46,73	1.90	6 (16%)	44,80,113	1.74	8 (18%)
31	CLA	1	215	-	37,46,73	1.87	5 (13%)	44,80,113	1.71	7 (15%)
39	DGD	c	520	-	63,63,67	0.85	2 (3%)	77,77,81	0.93	3 (3%)
31	CLA	0	310	23	55,63,73	1.60	7 (12%)	64,101,113	1.47	8 (12%)
31	CLA	P	604	-	39,48,73	1.79	7 (17%)	44,83,113	1.84	7 (15%)
31	CLA	Z	101	-	51,59,73	1.69	6 (11%)	59,96,113	1.46	8 (13%)
31	CLA	5	314	23	37,46,73	1.90	6 (16%)	44,80,113	1.70	7 (15%)
31	CLA	6	214	25	37,46,73	1.88	6 (16%)	44,80,113	1.75	8 (18%)
31	CLA	b	510	-	65,73,73	1.47	7 (10%)	76,113,113	1.41	7 (9%)
31	CLA	6	208	-	47,55,73	1.72	5 (10%)	54,91,113	1.57	7 (12%)
32	PHO	a	405	-	51,69,69	1.03	4 (7%)	47,99,99	1.19	6 (12%)
31	CLA	B	513	-	65,73,73	1.45	6 (9%)	76,113,113	1.41	8 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
36	LHG	d	411	-	33,33,48	0.72	0	36,39,54	1.34	4 (11%)
31	CLA	4	206	-	35,45,73	1.98	8 (22%)	41,78,113	1.63	6 (14%)
31	CLA	3	314	-	36,43,73	1.98	8 (22%)	45,76,113	1.70	9 (20%)
31	CLA	1	208	-	47,55,73	1.73	5 (10%)	54,91,113	1.58	7 (12%)
31	CLA	C	504	-	51,59,73	1.64	6 (11%)	59,96,113	1.61	8 (13%)
31	CLA	c	508	-	65,73,73	1.45	7 (10%)	76,113,113	1.43	6 (7%)
31	CLA	7	309	24	59,67,73	1.52	6 (10%)	68,105,113	1.48	7 (10%)
34	SQD	B	523	-	39,40,54	1.10	5 (12%)	48,51,65	1.76	12 (25%)
33	BCR	a	408	-	41,41,41	1.14	2 (4%)	56,56,56	1.16	5 (8%)
43	ET4	0	302	-	41,43,43	1.73	11 (26%)	54,60,60	2.22	17 (31%)
37	LMG	5	315	-	48,48,55	0.77	0	56,56,63	1.29	6 (10%)
31	CLA	P	608	-	36,46,73	1.96	8 (22%)	45,80,113	1.74	11 (24%)
35	PL9	a	410	-	32,32,55	1.10	4 (12%)	39,40,69	1.55	8 (20%)
31	CLA	6	209	-	44,52,73	1.83	7 (15%)	55,88,113	1.61	9 (16%)
31	CLA	8	311	28	39,48,73	1.85	9 (23%)	44,83,113	1.76	8 (18%)
37	LMG	0	315	-	48,48,55	0.77	0	56,56,63	1.29	6 (10%)
31	CLA	c	504	-	51,59,73	1.64	7 (13%)	59,96,113	1.61	8 (13%)
31	CLA	b	513	-	41,49,73	1.75	7 (17%)	47,84,113	1.78	8 (17%)
44	DD6	1	203	-	39,45,45	2.00	3 (7%)	52,67,67	2.20	17 (32%)
31	CLA	B	507	-	41,49,73	1.80	6 (14%)	47,84,113	1.71	7 (14%)
37	LMG	Y	101	-	46,46,55	0.75	1 (2%)	54,54,63	1.38	10 (18%)
43	ET4	5	302	-	41,43,43	1.73	11 (26%)	54,60,60	2.22	17 (31%)
31	CLA	2	313	24	37,46,73	1.91	6 (16%)	44,80,113	1.66	7 (15%)
31	CLA	3	304	-	36,42,73	2.10	10 (27%)	44,74,113	1.80	9 (20%)
31	CLA	7	308	-	44,52,73	1.86	6 (13%)	55,88,113	1.63	8 (14%)
31	CLA	3	305	-	40,49,73	1.79	9 (22%)	45,84,113	1.73	7 (15%)
31	CLA	B	514	-	60,68,73	1.51	7 (11%)	69,106,113	1.43	8 (11%)
31	CLA	2	311	-	43,51,73	1.78	6 (13%)	49,86,113	1.56	6 (12%)
31	CLA	2	312	24	36,44,73	2.02	6 (16%)	42,77,113	1.82	9 (21%)
31	CLA	6	213	25	39,48,73	1.88	5 (12%)	44,83,113	1.63	7 (15%)
42	A86	7	301	-	44,50,50	1.30	3 (6%)	51,76,76	2.97	19 (37%)
33	BCR	b	520	-	41,41,41	1.13	2 (4%)	56,56,56	1.27	8 (14%)
36	LHG	a	411	-	42,42,48	0.68	1 (2%)	45,48,54	1.26	5 (11%)
31	CLA	B	515	-	65,73,73	1.49	7 (10%)	76,113,113	1.41	7 (9%)
32	PHO	A	406	-	51,69,69	1.00	4 (7%)	47,99,99	1.18	4 (8%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	7	307	-	47,55,73	1.72	5 (10%)	54,91,113	1.59	8 (14%)
31	CLA	c	507	-	45,53,73	1.75	6 (13%)	52,89,113	1.63	6 (11%)
31	CLA	0	304	-	41,49,73	1.84	6 (14%)	47,84,113	1.69	7 (14%)
31	CLA	1	206	25	45,53,73	1.72	6 (13%)	52,89,113	1.66	8 (15%)
31	CLA	9	208	-	39,48,73	1.86	9 (23%)	44,83,113	1.79	10 (22%)
31	CLA	B	505	-	65,73,73	1.46	7 (10%)	76,113,113	1.40	7 (9%)
31	CLA	7	313	24	37,46,73	1.91	5 (13%)	44,80,113	1.65	7 (15%)
44	DD6	P	611	-	39,45,45	1.99	2 (5%)	52,67,67	1.99	15 (28%)
33	BCR	D	405	-	41,41,41	1.14	2 (4%)	56,56,56	1.20	7 (12%)
31	CLA	5	306	-	45,53,73	1.76	6 (13%)	52,89,113	1.58	6 (11%)
31	CLA	3	309	-	39,48,73	1.82	8 (20%)	44,83,113	1.86	7 (15%)

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
31	CLA	9	213	-	1/1/8/20	-	-
33	BCR	K	101	-	-	16/29/63/63	0/2/2/2
31	CLA	6	212	-	1/1/10/20	4/8/86/115	-
44	DD6	2	303	-	-	2/26/80/80	0/3/3/3
39	DGD	c	518	-	-	19/44/84/95	0/2/2/2
42	A86	5	301	-	-	10/34/90/90	0/3/3/3
41	HEM	V	201	18	-	5/12/54/54	-
31	CLA	5	312	-	1/1/10/20	8/10/88/115	-
39	DGD	h	102	-	-	16/51/91/95	0/2/2/2
31	CLA	8	312	-	1/1/10/20	2/8/86/115	-
42	A86	7	302	-	-	8/34/90/90	0/3/3/3
44	DD6	7	303	-	-	2/26/80/80	0/3/3/3
31	CLA	9	204	-	1/1/9/20	0/2/80/115	-
36	LHG	b	522	-	-	18/53/53/53	-
31	CLA	b	508	-	1/1/10/20	2/8/86/115	-
31	CLA	3	306	-	1/1/7/20	-	-
37	LMG	j	101	-	-	29/45/65/70	0/1/1/1
31	CLA	a	404	-	1/1/11/20	2/18/96/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
37	LMG	D	410	-	-	16/35/55/70	0/1/1/1
31	CLA	3	308	-	1/1/6/20	2/4/66/115	-
31	CLA	C	513	-	1/1/14/20	17/35/113/115	-
37	LMG	d	410	-	-	16/35/55/70	0/1/1/1
37	LMG	b	521	-	-	5/23/43/70	0/1/1/1
36	LHG	H	103	-	-	10/46/46/53	-
37	LMG	M	102	-	-	12/35/55/70	0/1/1/1
33	BCR	b	518	-	-	5/29/63/63	0/2/2/2
31	CLA	p	601	26	1/1/9/20	0/0/78/115	-
31	CLA	b	507	-	1/1/15/20	6/37/115/115	-
36	LHG	d	412	-	-	17/29/29/53	-
31	CLA	9	206	-	1/1/8/20	0/2/76/115	-
31	CLA	2	314	-	1/1/9/20	0/2/80/115	-
31	CLA	p	604	-	1/1/10/20	2/6/84/115	-
31	CLA	1	201	-	1/1/11/20	4/13/89/115	-
42	A86	8	302	-	-	5/34/90/90	0/3/3/3
31	CLA	D	403	-	1/1/14/20	7/33/109/115	-
34	SQD	A	409	-	-	16/49/69/69	0/1/1/1
36	LHG	A	413	-	-	13/29/29/53	-
36	LHG	a	412	-	-	13/29/29/53	-
31	CLA	1	205	-	1/1/10/20	2/8/86/115	-
35	PL9	D	406	-	-	8/53/73/73	0/1/1/1
31	CLA	b	509	-	1/1/15/20	8/37/115/115	-
31	CLA	P	603	-	1/1/9/20	0/0/78/115	-
31	CLA	2	306	24	1/1/11/20	3/13/91/115	-
31	CLA	1	207	-	1/1/11/20	6/13/89/115	-
37	LMG	W	201	-	-	26/43/63/70	0/1/1/1
31	CLA	8	309	-	1/1/10/20	1/6/84/115	-
31	CLA	4	205	-	1/1/7/20	0/2/70/115	-
37	LMG	D	408	-	-	16/41/61/70	0/1/1/1
31	CLA	0	312	-	1/1/10/20	8/10/88/115	-
31	CLA	8	308	-	1/1/6/20	2/4/66/115	-
31	CLA	P	602	-	1/1/10/20	2/8/86/115	-
42	A86	0	317	-	-	8/34/90/90	0/3/3/3
31	CLA	0	309	23	1/1/10/20	2/8/86/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	SQD	A	411	-	-	17/49/69/69	0/1/1/1
42	A86	4	202	-	-	7/34/90/90	0/3/3/3
37	LMG	w	201	-	-	26/43/63/70	0/1/1/1
31	CLA	C	510	-	1/1/15/20	6/37/115/115	-
42	A86	4	201	-	-	7/34/90/90	1/3/3/3
36	LHG	B	521	-	-	18/53/53/53	-
37	LMG	y	101	-	-	18/41/61/70	0/1/1/1
34	SQD	b	501	-	-	14/35/55/69	0/1/1/1
42	A86	0	303	-	-	5/34/90/90	0/3/3/3
31	CLA	b	502	-	1/1/10/20	5/11/89/115	-
31	CLA	4	209	-	1/1/10/20	4/8/86/115	-
31	CLA	9	205	-	1/1/7/20	0/2/70/115	-
31	CLA	p	605	-	1/1/9/20	0/0/78/115	-
31	CLA	1	212	-	1/1/10/20	4/8/86/115	-
31	CLA	b	503	-	1/1/12/20	13/27/107/115	-
31	CLA	C	502	-	1/1/15/20	14/37/115/115	-
42	A86	3	302	-	-	5/34/90/90	0/3/3/3
31	CLA	6	206	25	1/1/11/20	8/13/91/115	-
31	CLA	1	213	25	1/1/10/20	4/6/84/115	-
31	CLA	9	207	-	1/1/9/20	0/2/80/115	-
31	CLA	7	310	24	1/1/13/20	10/25/103/115	-
31	CLA	c	510	-	1/1/15/20	6/37/115/115	-
31	CLA	7	305	-	1/1/10/20	4/8/86/115	-
33	BCR	h	101	-	-	6/29/63/63	0/2/2/2
31	CLA	z	101	-	1/1/12/20	6/21/99/115	-
31	CLA	4	212	-	1/1/8/20	0/2/74/115	-
41	HEM	f	101	6,5	-	4/12/54/54	-
31	CLA	1	209	-	1/1/11/20	6/13/89/115	-
42	A86	2	301	-	-	8/34/90/90	0/3/3/3
31	CLA	p	606	-	1/1/8/20	0/2/76/115	-
42	A86	5	303	-	-	5/34/90/90	0/3/3/3
42	A86	p	610	-	-	9/34/90/90	0/3/3/3
37	LMG	c	521	-	-	27/46/66/70	0/1/1/1
31	CLA	D	401	-	1/1/13/20	4/30/108/115	-
31	CLA	8	307	-	1/1/9/20	2/9/83/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	5	309	23	1/1/10/20	2/8/86/115	-
37	LMG	J	101	-	-	29/45/65/70	0/1/1/1
31	CLA	P	605	-	1/1/9/20	0/0/78/115	-
31	CLA	0	306	-	1/1/11/20	4/13/91/115	-
31	CLA	6	216	25	1/1/9/20	0/2/80/115	-
31	CLA	4	208	-	1/1/10/20	0/6/84/115	-
31	CLA	b	506	-	1/1/15/20	12/37/115/115	-
31	CLA	7	311	-	1/1/10/20	7/11/89/115	-
31	CLA	4	204	-	1/1/9/20	0/2/80/115	-
41	HEM	v	201	18	-	5/12/54/54	-
31	CLA	5	313	23	1/1/9/20	0/2/80/115	-
36	LHG	D	407	-	-	23/47/51/53	-
31	CLA	C	506	-	1/1/15/20	18/37/115/115	-
31	CLA	c	512	3	1/1/15/20	10/37/115/115	-
31	CLA	0	311	-	1/1/11/20	9/13/91/115	-
31	CLA	b	516	-	1/1/15/20	6/37/115/115	-
31	CLA	5	310	23	1/1/13/20	5/25/103/115	-
31	CLA	D	404	-	1/1/15/20	9/37/115/115	-
31	CLA	0	307	-	1/1/14/20	19/33/111/115	-
42	A86	3	301	-	-	11/34/90/90	0/3/3/3
31	CLA	3	307	-	1/1/9/20	2/9/83/115	-
37	LMG	B	520	-	-	5/23/43/70	0/1/1/1
33	BCR	B	518	-	-	5/29/63/63	0/2/2/2
31	CLA	d	403	-	1/1/14/20	7/33/109/115	-
31	CLA	7	316	-	1/1/10/20	2/8/86/115	-
31	CLA	9	209	-	1/1/10/20	4/8/86/115	-
31	CLA	1	211	25	1/1/13/20	5/25/103/115	-
39	DGD	C	519	-	-	21/51/91/95	0/2/2/2
31	CLA	c	509	-	1/1/15/20	13/37/115/115	-
34	SQD	a	409	-	-	16/49/69/69	0/1/1/1
31	CLA	C	514	-	1/1/11/20	4/18/96/115	-
42	A86	P	610	-	-	9/34/90/90	0/3/3/3
31	CLA	0	313	23	1/1/9/20	0/2/80/115	-
31	CLA	1	216	25	1/1/9/20	0/2/80/115	-
31	CLA	a	407	-	1/1/14/20	4/31/109/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	5	311	-	1/1/11/20	9/13/91/115	-
36	LHG	h	103	-	-	10/46/46/53	-
33	BCR	B	519	-	-	11/29/63/63	0/2/2/2
31	CLA	a	403	-	1/1/15/20	12/37/115/115	-
31	CLA	8	313	-	1/1/9/20	1/4/82/115	-
31	CLA	4	211	-	1/1/7/20	-	-
31	CLA	2	308	-	1/1/11/20	7/13/89/115	-
39	DGD	H	102	-	-	16/51/91/95	0/2/2/2
31	CLA	8	314	-	1/1/8/20	-	-
31	CLA	9	210	-	1/1/9/20	0/2/80/115	-
31	CLA	B	504	-	1/1/15/20	15/37/115/115	-
44	DD6	6	204	-	-	5/26/80/80	0/3/3/3
33	BCR	k	101	-	-	16/29/63/63	0/2/2/2
44	DD6	1	204	-	-	5/26/80/80	0/3/3/3
31	CLA	8	306	-	1/1/7/20	-	-
31	CLA	P	601	26	1/1/9/20	0/0/78/115	-
34	SQD	0	316	-	-	18/43/63/69	0/1/1/1
31	CLA	b	515	-	1/1/13/20	13/31/109/115	-
31	CLA	c	511	-	1/1/15/20	13/37/115/115	-
31	CLA	b	512	-	1/1/14/20	11/35/113/115	-
37	LMG	d	408	-	-	16/41/61/70	0/1/1/1
33	BCR	c	515	-	-	3/29/63/63	0/2/2/2
37	LMG	m	101	-	-	18/46/66/70	0/1/1/1
44	DD6	7	304	-	-	10/26/80/80	0/3/3/3
31	CLA	2	305	-	1/1/10/20	4/8/86/115	-
31	CLA	b	514	-	1/1/15/20	7/37/115/115	-
31	CLA	4	207	-	1/1/9/20	0/2/80/115	-
42	A86	6	202	-	-	7/34/90/90	0/3/3/3
33	BCR	c	516	-	-	6/29/63/63	0/2/2/2
31	CLA	2	309	24	1/1/13/20	10/30/108/115	-
42	A86	5	317	-	-	8/34/90/90	0/3/3/3
31	CLA	c	513	-	1/1/14/20	17/35/113/115	-
36	LHG	A	412	-	-	13/47/47/53	-
42	A86	2	302	-	-	8/34/90/90	0/3/3/3
33	BCR	C	516	-	-	6/29/63/63	0/2/2/2
31	CLA	7	312	24	1/1/9/20	0/0/78/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	9	212	-	1/1/8/20	0/2/74/115	-
31	CLA	d	401	-	1/1/13/20	4/30/108/115	-
31	CLA	c	506	-	1/1/15/20	18/37/115/115	-
31	CLA	C	503	-	1/1/14/20	14/35/113/115	-
44	DD6	p	611	-	-	5/26/80/80	0/3/3/3
31	CLA	c	505	-	1/1/14/20	10/35/113/115	-
31	CLA	A	404	-	1/1/11/20	2/18/96/115	-
31	CLA	P	609	-	1/1/9/20	2/4/82/115	-
42	A86	1	202	-	-	7/34/90/90	0/3/3/3
33	BCR	C	517	-	-	3/29/63/63	0/2/2/2
42	A86	4	203	-	-	5/34/90/90	0/3/3/3
31	CLA	P	606	-	1/1/8/20	0/2/76/115	-
39	DGD	C	518	-	-	19/44/84/95	0/2/2/2
31	CLA	7	315	24	1/1/9/20	0/2/80/115	-
31	CLA	6	207	-	1/1/11/20	6/13/89/115	-
32	PHO	a	406	-	-	11/37/103/103	0/5/6/6
31	CLA	4	213	-	1/1/8/20	-	-
31	CLA	3	312	-	1/1/10/20	2/8/86/115	-
37	LMG	C	521	-	-	27/46/66/70	0/1/1/1
33	BCR	b	519	-	-	5/29/63/63	0/2/2/2
41	HEM	F	101	6,5	-	4/12/54/54	-
42	A86	8	301	-	-	11/34/90/90	0/3/3/3
31	CLA	6	211	25	1/1/13/20	5/25/103/115	-
31	CLA	p	607	-	1/1/8/20	0/2/74/115	-
31	CLA	c	502	-	1/1/15/20	14/37/115/115	-
31	CLA	5	305	23	1/1/14/20	17/33/111/115	-
35	PL9	A	410	-	-	13/25/45/73	0/1/1/1
31	CLA	A	403	-	1/1/15/20	12/37/115/115	-
31	CLA	B	506	-	1/1/15/20	6/37/115/115	-
33	BCR	d	405	-	-	5/29/63/63	0/2/2/2
31	CLA	0	305	23	1/1/14/20	17/33/111/115	-
31	CLA	B	516	-	1/1/15/20	11/37/115/115	-
31	CLA	2	307	-	1/1/11/20	5/16/94/115	-
31	CLA	5	308	-	1/1/14/20	14/33/111/115	-
42	A86	9	202	-	-	7/34/90/90	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	c	503	-	1/1/14/20	14/35/113/115	-
31	CLA	1	210	25	1/1/15/20	16/37/115/115	-
31	CLA	w	202	19	1/1/11/20	2/13/91/115	-
31	CLA	C	507	-	1/1/11/20	5/13/91/115	-
34	SQD	B	522	-	-	17/49/69/69	0/1/1/1
42	A86	0	301	-	-	10/34/90/90	0/3/3/3
31	CLA	5	304	-	1/1/10/20	2/8/86/115	-
31	CLA	B	503	-	1/1/14/20	12/35/113/115	-
31	CLA	P	607	-	1/1/8/20	0/2/74/115	-
31	CLA	0	308	-	1/1/14/20	14/33/111/115	-
31	CLA	p	603	-	1/1/9/20	0/0/78/115	-
31	CLA	8	310	-	1/1/8/20	0/0/74/115	-
31	CLA	8	304	-	1/1/8/20	-	-
44	DD6	6	203	-	-	2/26/80/80	0/3/3/3
31	CLA	B	511	-	1/1/14/20	11/35/113/115	-
36	LHG	D	411	-	-	26/38/38/53	-
44	DD6	8	303	-	-	2/26/80/80	0/3/3/3
31	CLA	A	407	-	1/1/14/20	4/31/109/115	-
37	LMG	D	409	-	-	13/32/52/70	0/1/1/1
31	CLA	3	313	-	1/1/9/20	1/4/82/115	-
31	CLA	d	404	-	1/1/15/20	9/37/115/115	-
31	CLA	b	504	-	1/1/14/20	12/35/113/115	-
31	CLA	b	517	-	1/1/15/20	11/37/115/115	-
42	A86	9	201	-	-	7/34/90/90	1/3/3/3
31	CLA	3	310	-	1/1/8/20	0/0/74/115	-
31	CLA	4	210	-	1/1/9/20	0/2/80/115	-
31	CLA	2	310	24	1/1/13/20	10/25/103/115	-
31	CLA	p	608	-	1/1/9/20	3/6/78/115	-
31	CLA	b	505	-	1/1/15/20	15/37/115/115	-
31	CLA	5	307	-	1/1/14/20	19/33/111/115	-
35	PL9	d	406	-	-	8/53/73/73	0/1/1/1
31	CLA	B	509	-	1/1/15/20	12/37/115/115	-
31	CLA	0	314	23	1/1/9/20	0/2/80/115	-
31	CLA	c	514	-	1/1/11/20	4/18/96/115	-
31	CLA	B	512	-	1/1/10/20	2/8/86/115	-
36	LHG	d	407	-	-	23/47/51/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	C	505	-	1/1/14/20	10/35/113/115	-
31	CLA	C	511	-	1/1/15/20	13/37/115/115	-
31	CLA	p	609	-	1/1/9/20	2/4/82/115	-
36	LHG	D	412	-	-	17/29/29/53	-
31	CLA	p	602	-	1/1/10/20	2/8/86/115	-
33	BCR	H	101	-	-	6/29/63/63	0/2/2/2
31	CLA	6	201	-	1/1/11/20	4/13/89/115	-
31	CLA	3	311	28	1/1/10/20	0/6/84/115	-
31	CLA	C	512	3	1/1/15/20	10/37/115/115	-
31	CLA	6	210	25	1/1/15/20	16/37/115/115	-
33	BCR	A	408	-	-	4/29/63/63	0/2/2/2
37	LMG	d	409	-	-	13/32/52/70	0/1/1/1
31	CLA	B	502	-	1/1/12/20	13/27/107/115	-
31	CLA	1	214	25	1/1/9/20	0/2/80/115	-
31	CLA	b	511	-	1/1/15/20	9/37/115/115	-
31	CLA	6	215	-	1/1/9/20	0/2/80/115	-
31	CLA	6	205	-	1/1/10/20	2/8/86/115	-
44	DD6	2	304	-	-	10/26/80/80	0/3/3/3
42	A86	9	203	-	-	5/34/90/90	0/3/3/3
31	CLA	W	202	19	1/1/11/20	2/13/91/115	-
31	CLA	B	501	-	1/1/10/20	5/11/89/115	-
33	BCR	B	517	-	-	5/29/63/63	0/2/2/2
31	CLA	C	509	-	1/1/15/20	13/37/115/115	-
31	CLA	B	510	-	1/1/15/20	9/37/115/115	-
39	DGD	c	519	-	-	21/51/91/95	0/2/2/2
31	CLA	7	306	24	1/1/11/20	3/13/91/115	-
31	CLA	8	305	-	1/1/10/20	1/8/86/115	-
32	PHO	A	405	-	-	10/37/103/103	0/5/6/6
39	DGD	C	520	-	-	9/51/91/95	0/2/2/2
31	CLA	9	211	-	1/1/7/20	-	-
37	LMG	M	101	-	-	18/46/66/70	0/1/1/1
33	BCR	C	515	-	-	3/29/63/63	0/2/2/2
31	CLA	2	316	-	1/1/10/20	2/8/86/115	-
33	BCR	c	517	-	-	3/29/63/63	0/2/2/2
37	LMG	m	102	-	-	12/35/55/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
44	DD6	3	303	-	-	3/26/80/80	0/3/3/3
31	CLA	2	315	24	1/1/9/20	0/2/80/115	-
34	SQD	5	316	-	-	18/43/63/69	0/1/1/1
31	CLA	B	508	-	1/1/15/20	8/37/115/115	-
31	CLA	C	508	-	1/1/15/20	16/37/115/115	-
31	CLA	7	314	-	1/1/9/20	0/2/80/115	-
31	CLA	1	215	-	1/1/9/20	0/2/80/115	-
39	DGD	c	520	-	-	9/51/91/95	0/2/2/2
31	CLA	0	310	23	1/1/13/20	5/25/103/115	-
31	CLA	P	604	-	1/1/10/20	2/6/84/115	-
31	CLA	Z	101	-	1/1/12/20	6/21/99/115	-
31	CLA	5	314	23	1/1/9/20	0/2/80/115	-
31	CLA	6	214	25	1/1/9/20	0/2/80/115	-
31	CLA	b	510	-	1/1/15/20	12/37/115/115	-
31	CLA	6	208	-	1/1/11/20	7/16/94/115	-
32	PHO	a	405	-	-	10/37/103/103	0/5/6/6
31	CLA	B	513	-	1/1/15/20	7/37/115/115	-
36	LHG	d	411	-	-	26/38/38/53	-
31	CLA	4	206	-	1/1/8/20	0/2/76/115	-
31	CLA	3	314	-	1/1/8/20	-	-
31	CLA	1	208	-	1/1/11/20	7/16/94/115	-
31	CLA	C	504	-	1/1/12/20	5/21/99/115	-
31	CLA	c	508	-	1/1/15/20	16/37/115/115	-
31	CLA	7	309	24	1/1/13/20	10/30/108/115	-
34	SQD	B	523	-	-	14/35/55/69	0/1/1/1
33	BCR	a	408	-	-	4/29/63/63	0/2/2/2
43	ET4	0	302	-	-	9/25/67/67	0/2/2/2
37	LMG	5	315	-	-	25/43/63/70	0/1/1/1
31	CLA	P	608	-	1/1/9/20	3/6/78/115	-
35	PL9	a	410	-	-	13/25/45/73	0/1/1/1
31	CLA	6	209	-	1/1/11/20	6/13/89/115	-
31	CLA	8	311	28	1/1/10/20	0/6/84/115	-
37	LMG	0	315	-	-	25/43/63/70	0/1/1/1
31	CLA	c	504	-	1/1/12/20	5/21/99/115	-
31	CLA	b	513	-	1/1/10/20	2/8/86/115	-
44	DD6	1	203	-	-	2/26/80/80	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	B	507	-	1/1/10/20	2/8/86/115	-
37	LMG	Y	101	-	-	18/41/61/70	0/1/1/1
43	ET4	5	302	-	-	9/25/67/67	0/2/2/2
31	CLA	2	313	24	1/1/9/20	0/2/80/115	-
31	CLA	3	304	-	1/1/8/20	-	-
31	CLA	7	308	-	1/1/11/20	7/13/89/115	-
31	CLA	3	305	-	1/1/10/20	1/8/86/115	-
31	CLA	B	514	-	1/1/13/20	13/31/109/115	-
31	CLA	2	311	-	1/1/10/20	7/11/89/115	-
31	CLA	2	312	24	1/1/9/20	0/0/78/115	-
31	CLA	6	213	25	1/1/10/20	4/6/84/115	-
42	A86	7	301	-	-	8/34/90/90	0/3/3/3
33	BCR	b	520	-	-	11/29/63/63	0/2/2/2
36	LHG	a	411	-	-	13/47/47/53	-
31	CLA	B	515	-	1/1/15/20	6/37/115/115	-
32	PHO	A	406	-	-	11/37/103/103	0/5/6/6
31	CLA	7	307	-	1/1/11/20	5/16/94/115	-
31	CLA	c	507	-	1/1/11/20	5/13/91/115	-
31	CLA	0	304	-	1/1/10/20	2/8/86/115	-
31	CLA	1	206	25	1/1/11/20	8/13/91/115	-
31	CLA	9	208	-	1/1/10/20	0/6/84/115	-
31	CLA	B	505	-	1/1/15/20	12/37/115/115	-
31	CLA	7	313	24	1/1/9/20	0/2/80/115	-
44	DD6	P	611	-	-	5/26/80/80	0/3/3/3
33	BCR	D	405	-	-	5/29/63/63	0/2/2/2
31	CLA	5	306	-	1/1/11/20	4/13/91/115	-
31	CLA	3	309	-	1/1/10/20	1/6/84/115	-

The worst 5 of 1741 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
44	1	204	DD6	C29-C27	-9.33	1.24	1.42
44	6	204	DD6	C29-C27	-9.29	1.24	1.42
44	7	304	DD6	C29-C27	-8.72	1.25	1.42
44	2	304	DD6	C29-C27	-8.68	1.25	1.42
44	3	303	DD6	C29-C27	-8.61	1.26	1.42

The worst 5 of 2878 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	8	301	A86	O1-C20-C19	-20.74	97.80	113.38
42	3	301	A86	O1-C20-C19	-20.71	97.83	113.38
42	3	301	A86	C40-C32-C31	-17.41	94.89	110.47
42	8	301	A86	C40-C32-C31	-17.36	94.94	110.47
42	p	610	A86	O1-C15-C14	-15.87	81.36	113.21

5 of 206 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
31	A	403	CLA	ND
31	A	404	CLA	ND
31	A	407	CLA	ND
31	B	501	CLA	ND
31	B	502	CLA	ND

5 of 2485 torsion outliers are listed below:

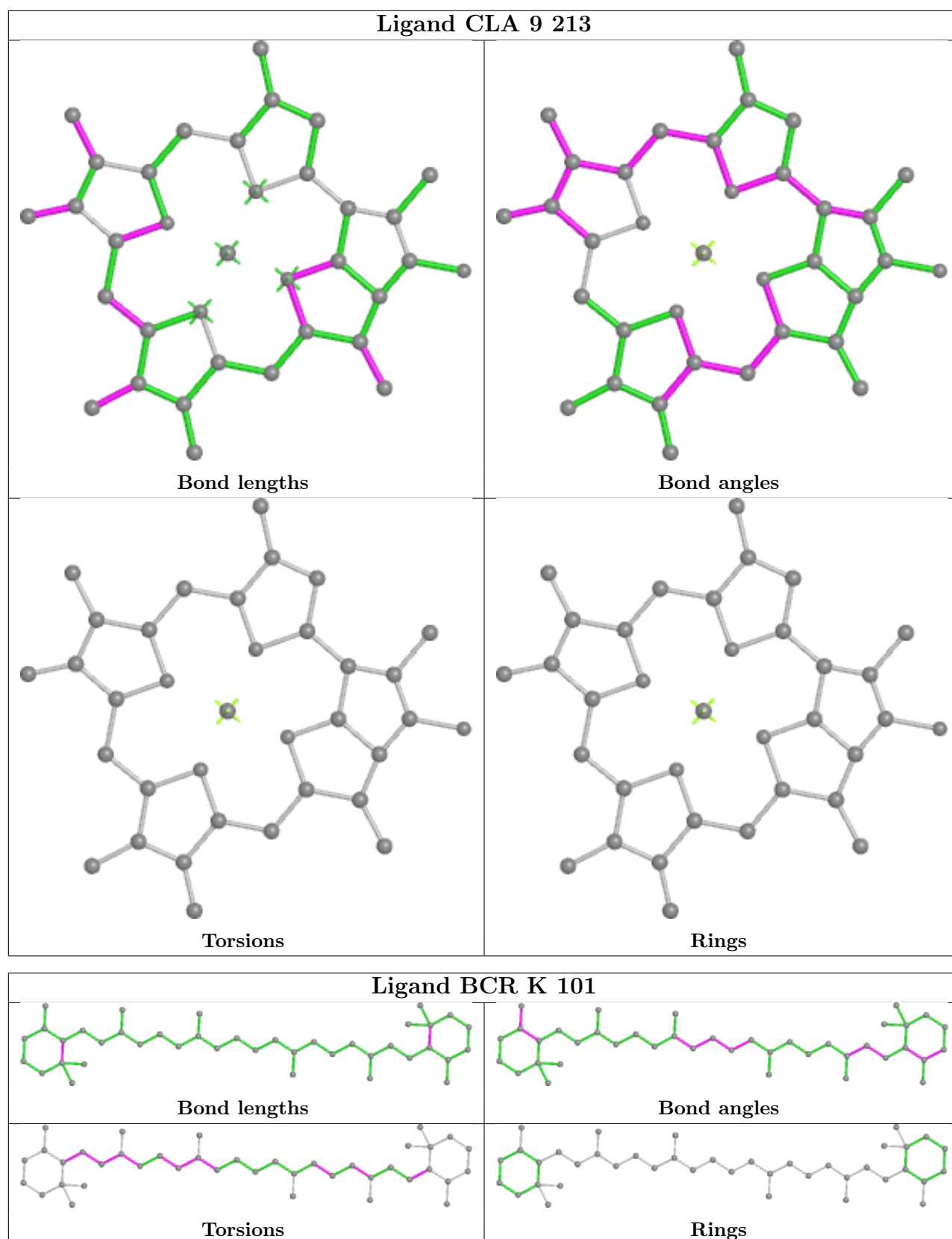
Mol	Chain	Res	Type	Atoms
31	B	501	CLA	CAD-CBD-CGD-O1D
31	B	501	CLA	CAD-CBD-CGD-O2D
31	C	502	CLA	CHA-CBD-CGD-O1D
31	C	502	CLA	CHA-CBD-CGD-O2D
31	C	502	CLA	CAD-CBD-CGD-O1D

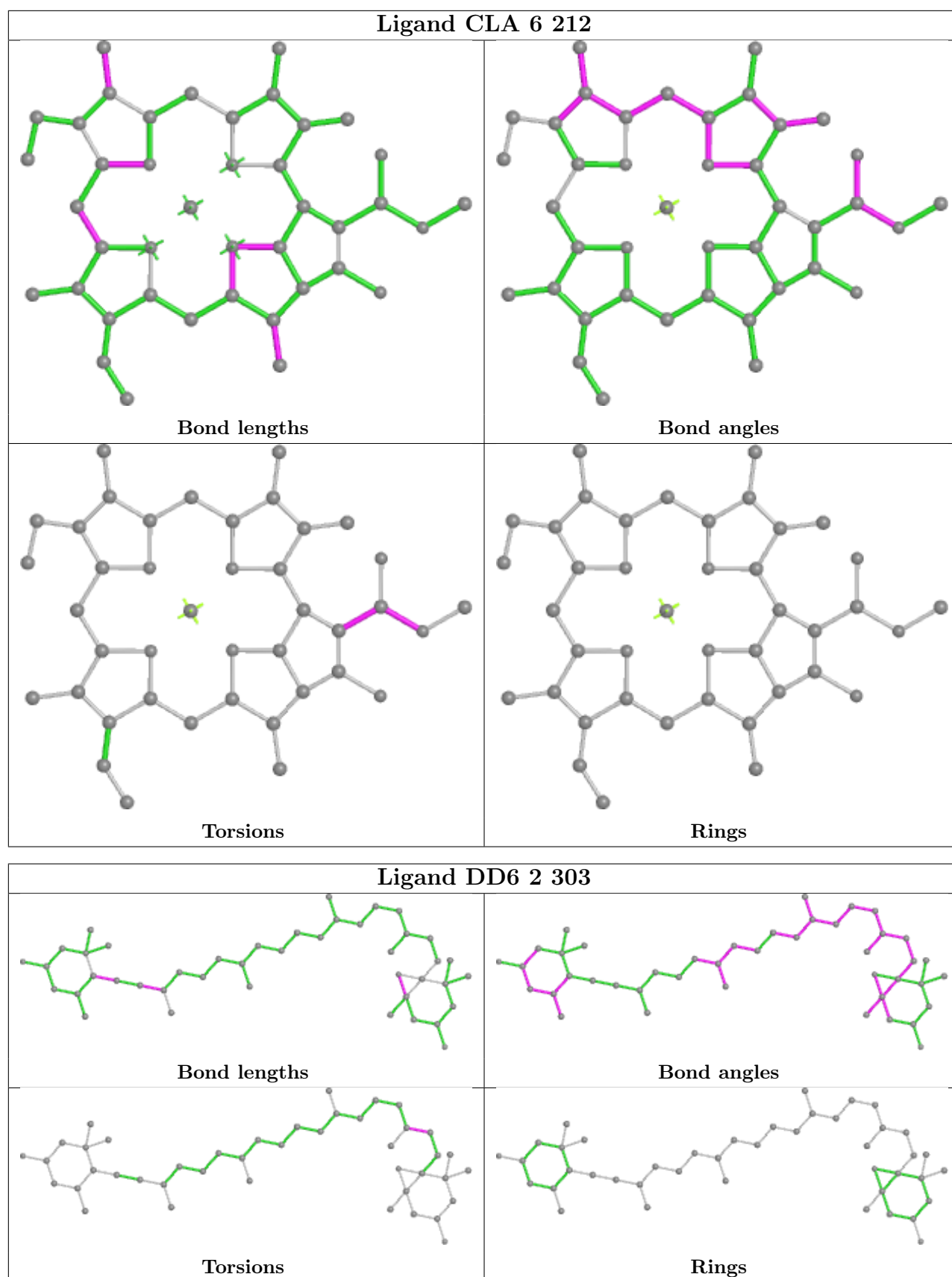
All (2) ring outliers are listed below:

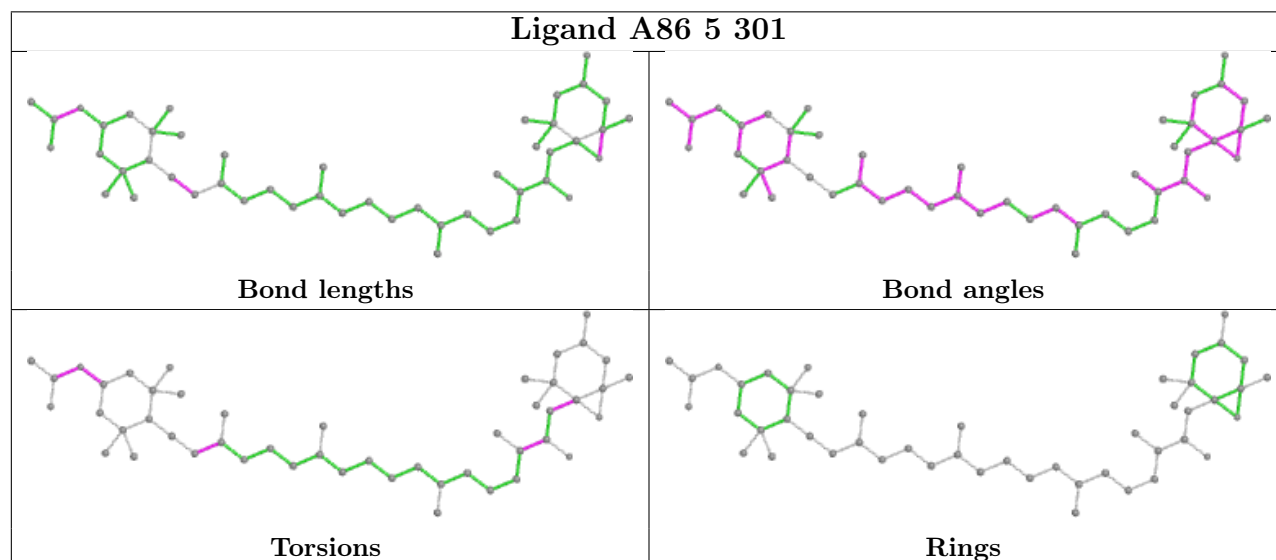
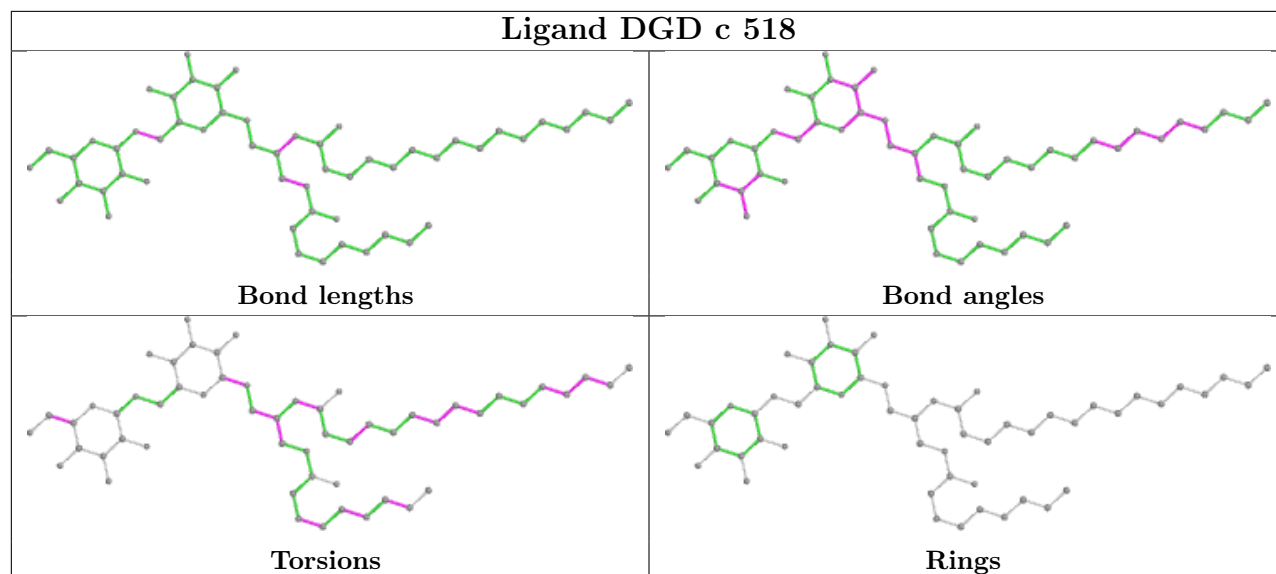
Mol	Chain	Res	Type	Atoms
42	4	201	A86	C31-C32-C33-C34-C35-C36
42	9	201	A86	C31-C32-C33-C34-C35-C36

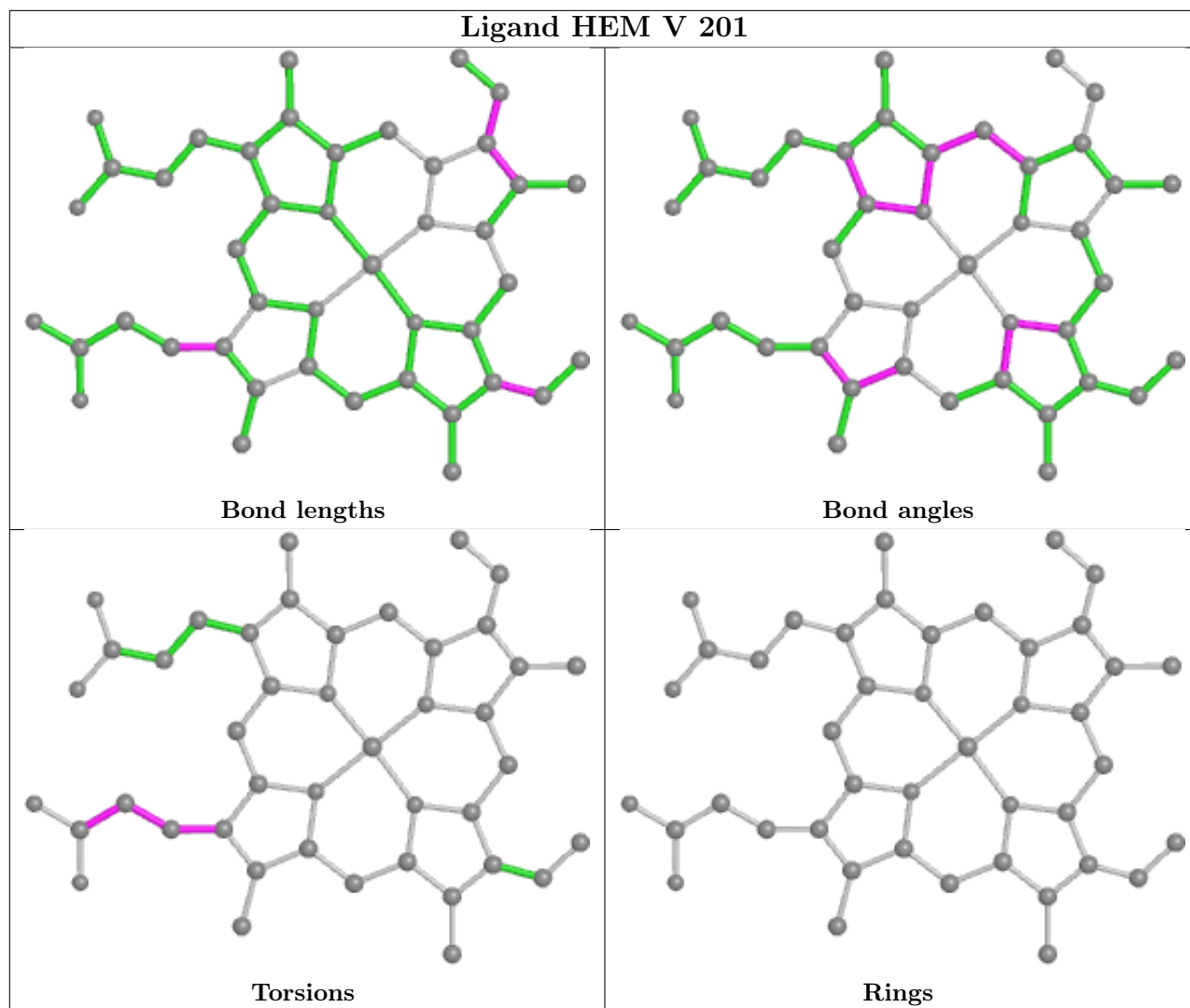
No monomer is involved in short contacts.

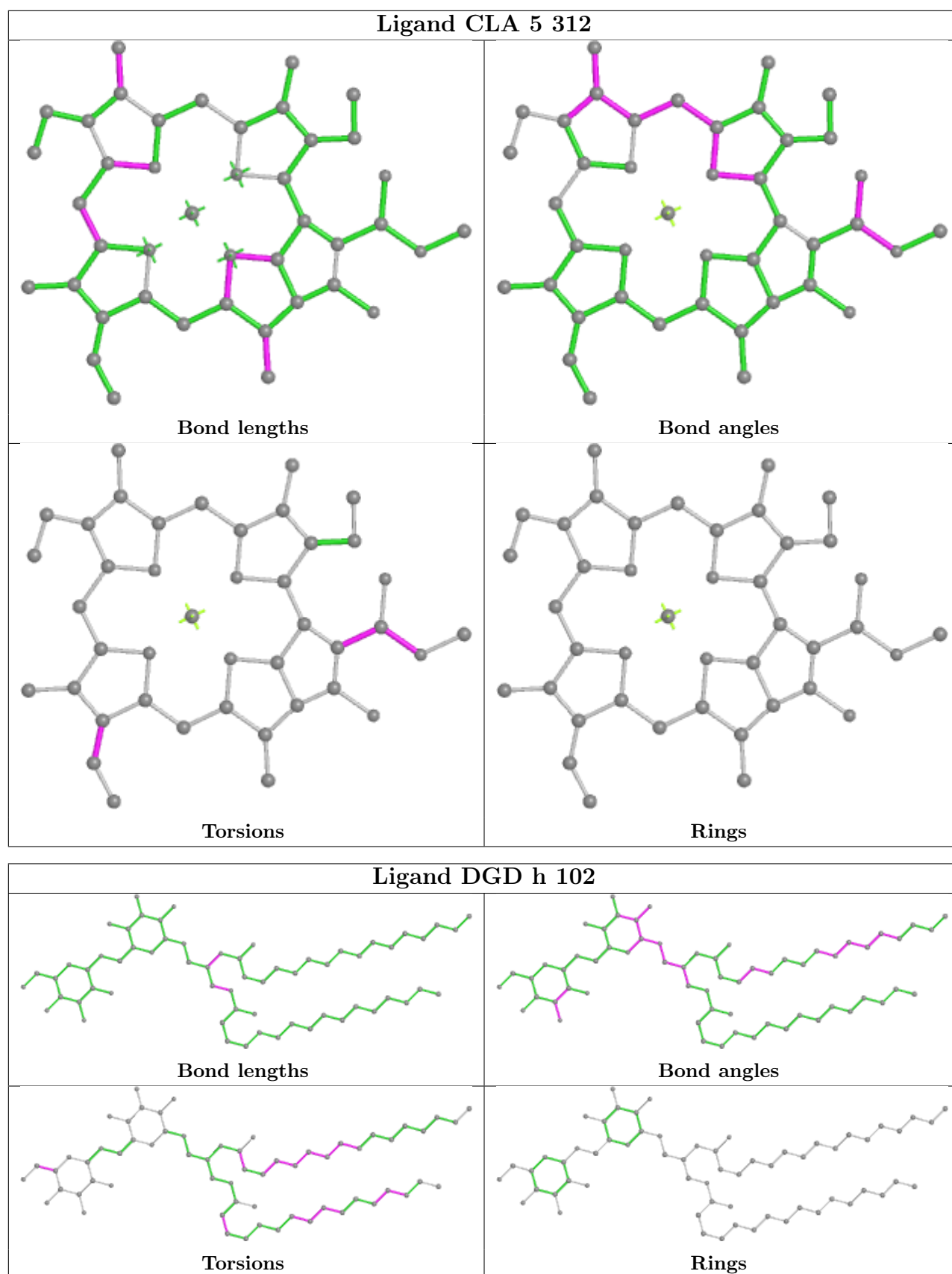
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

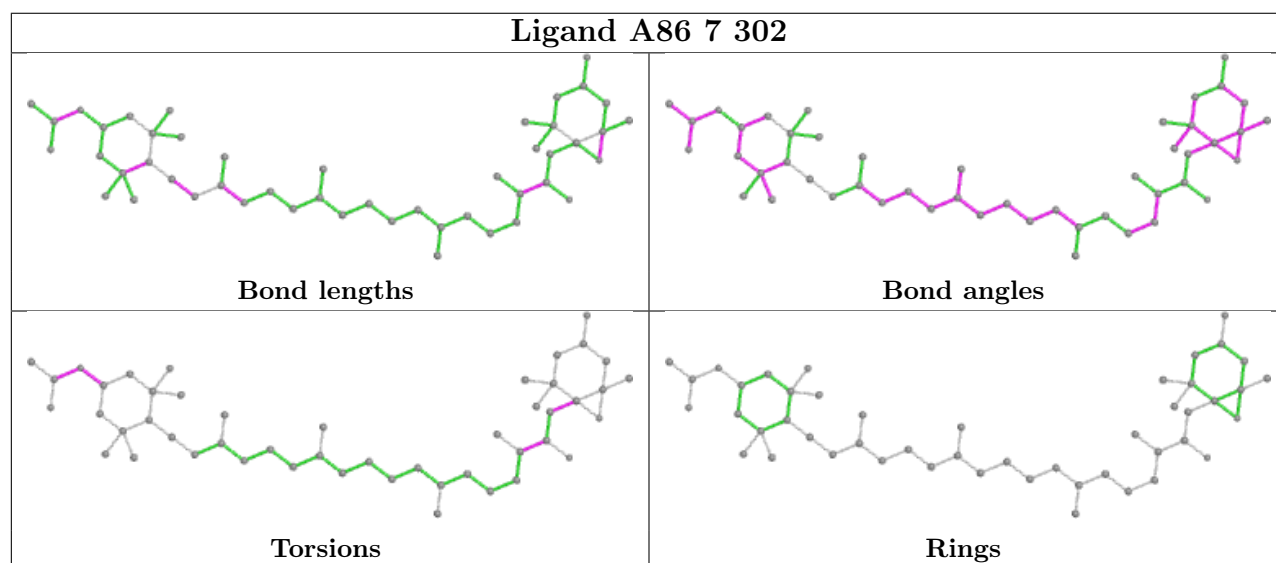
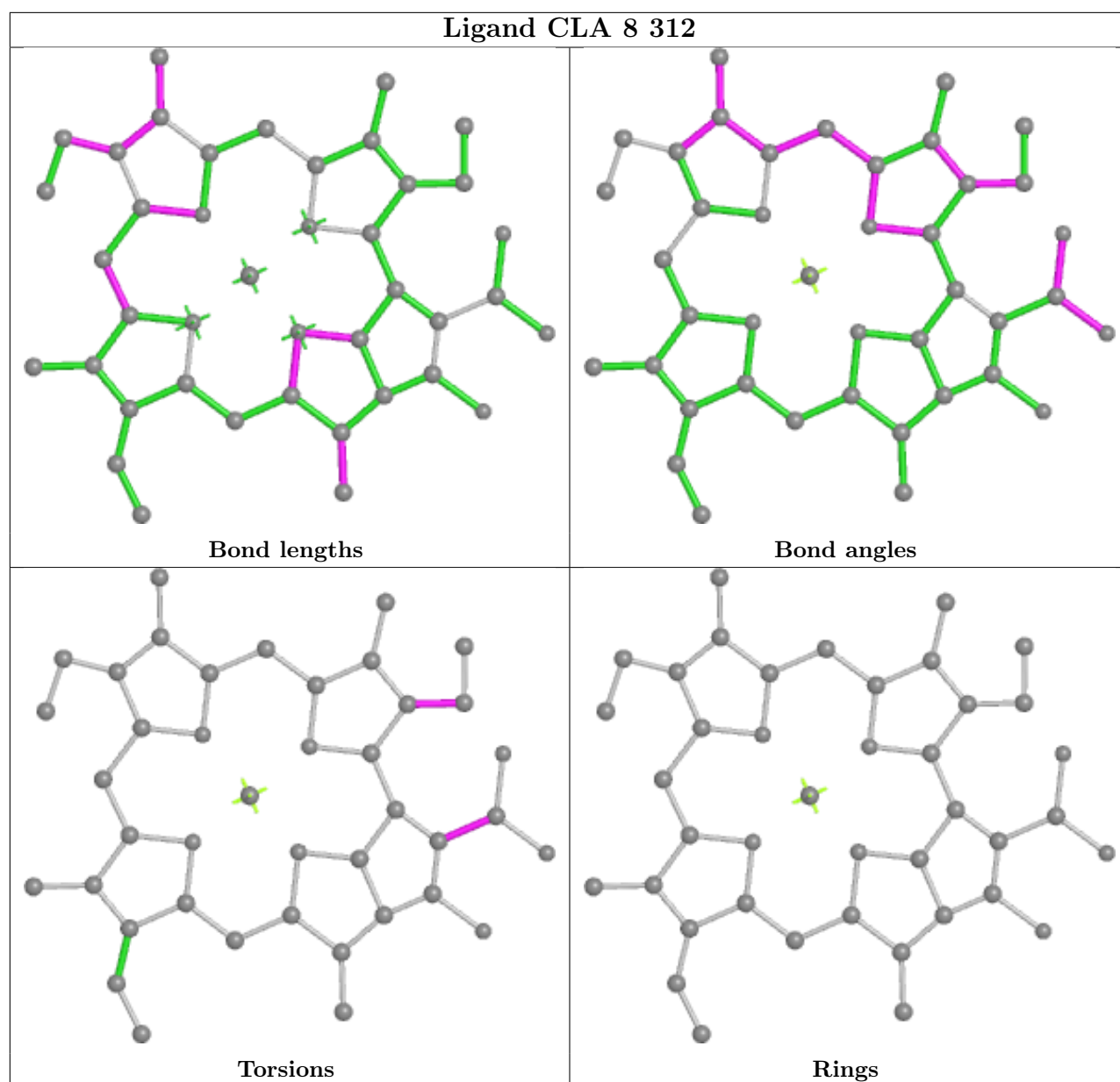


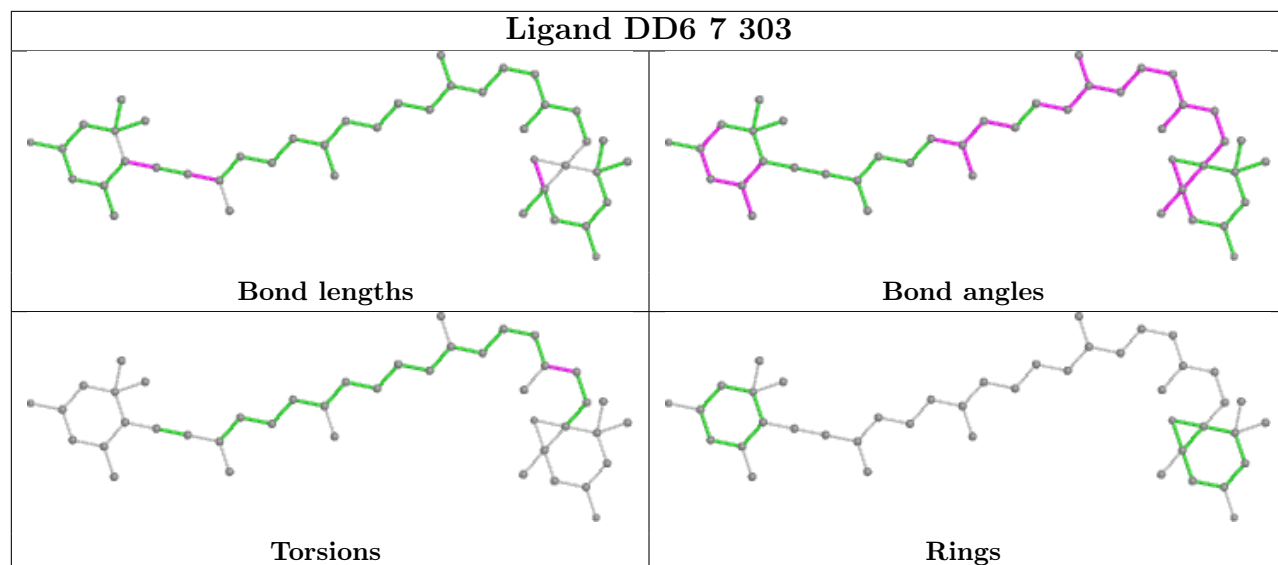




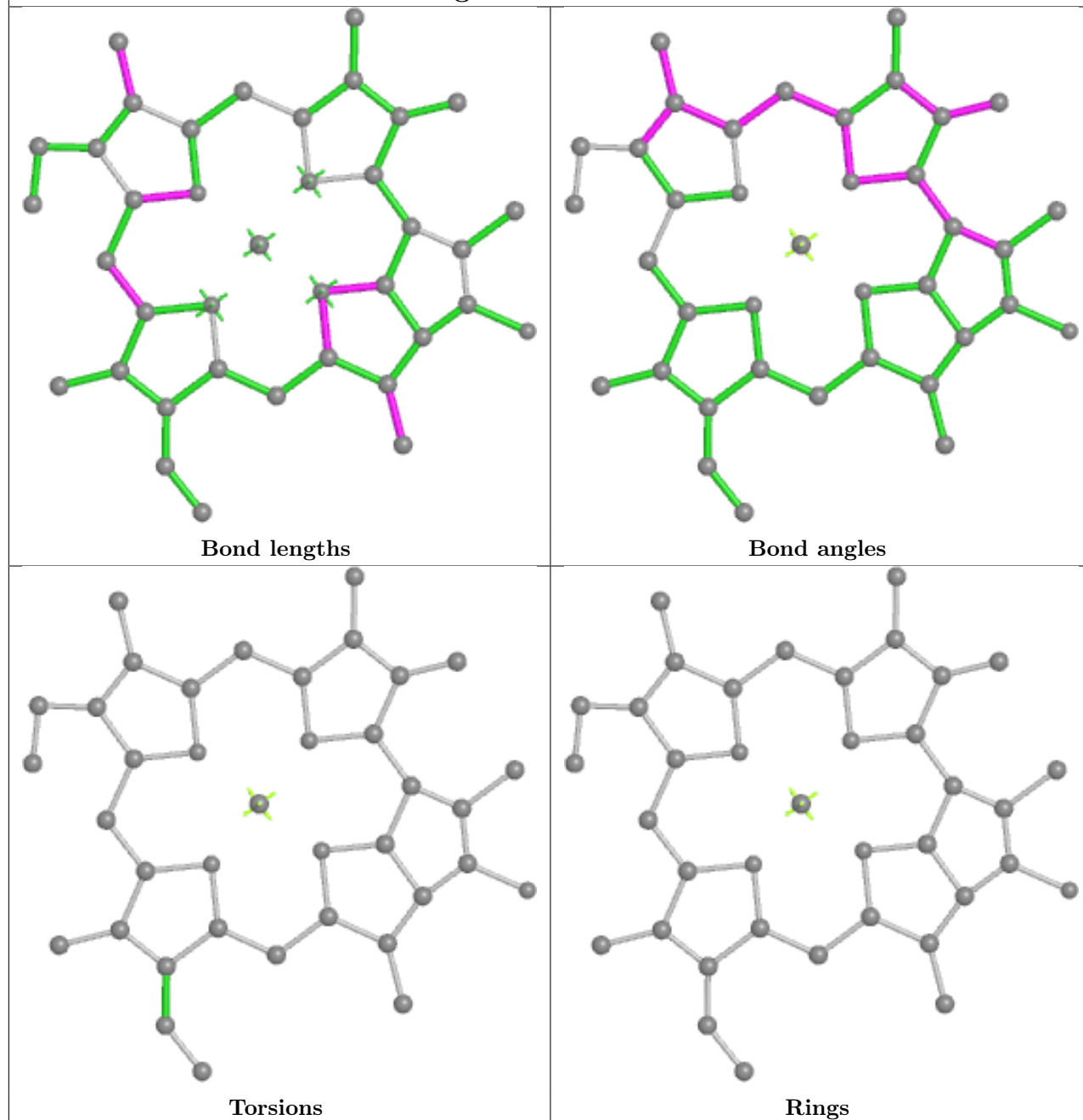


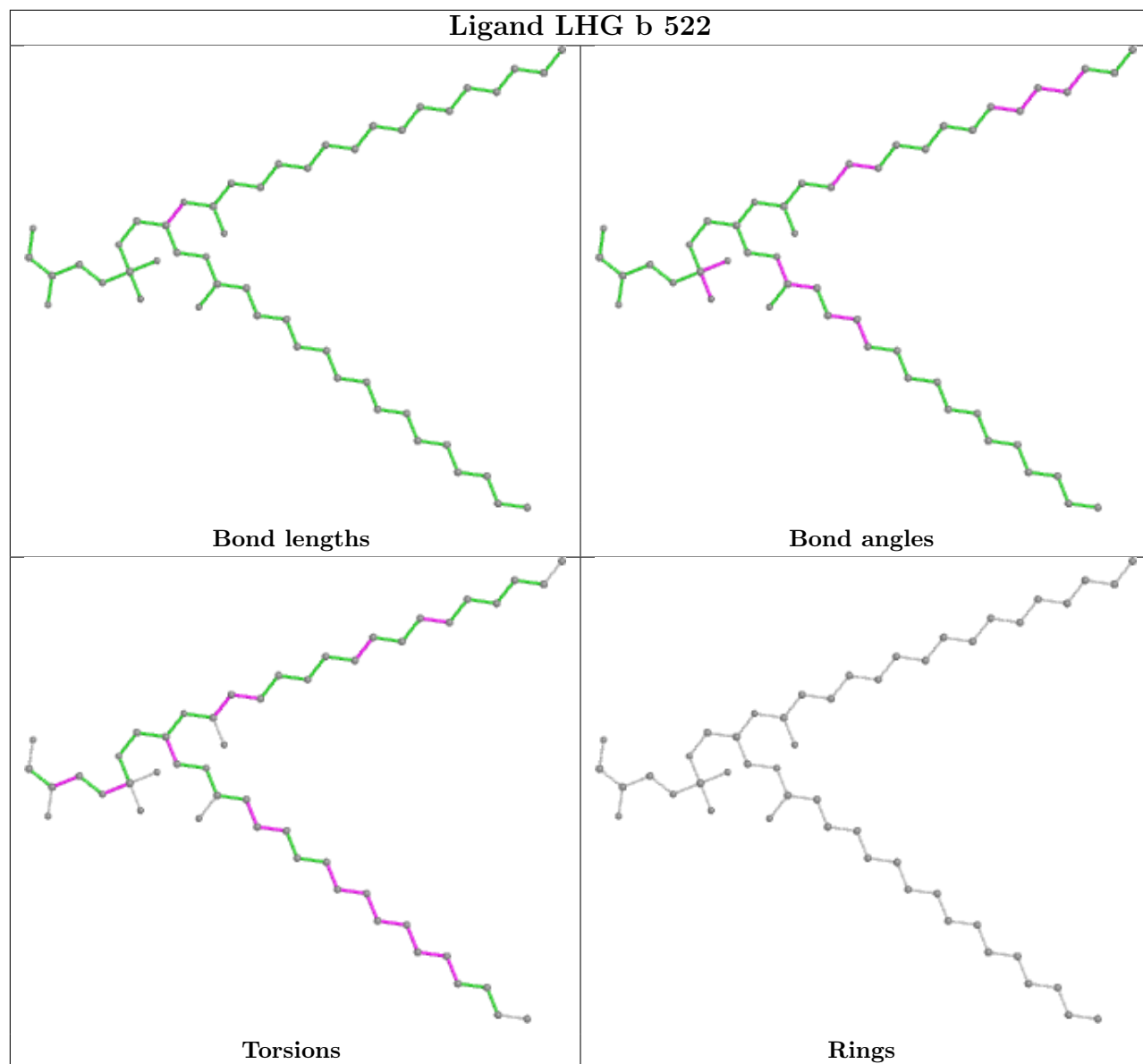


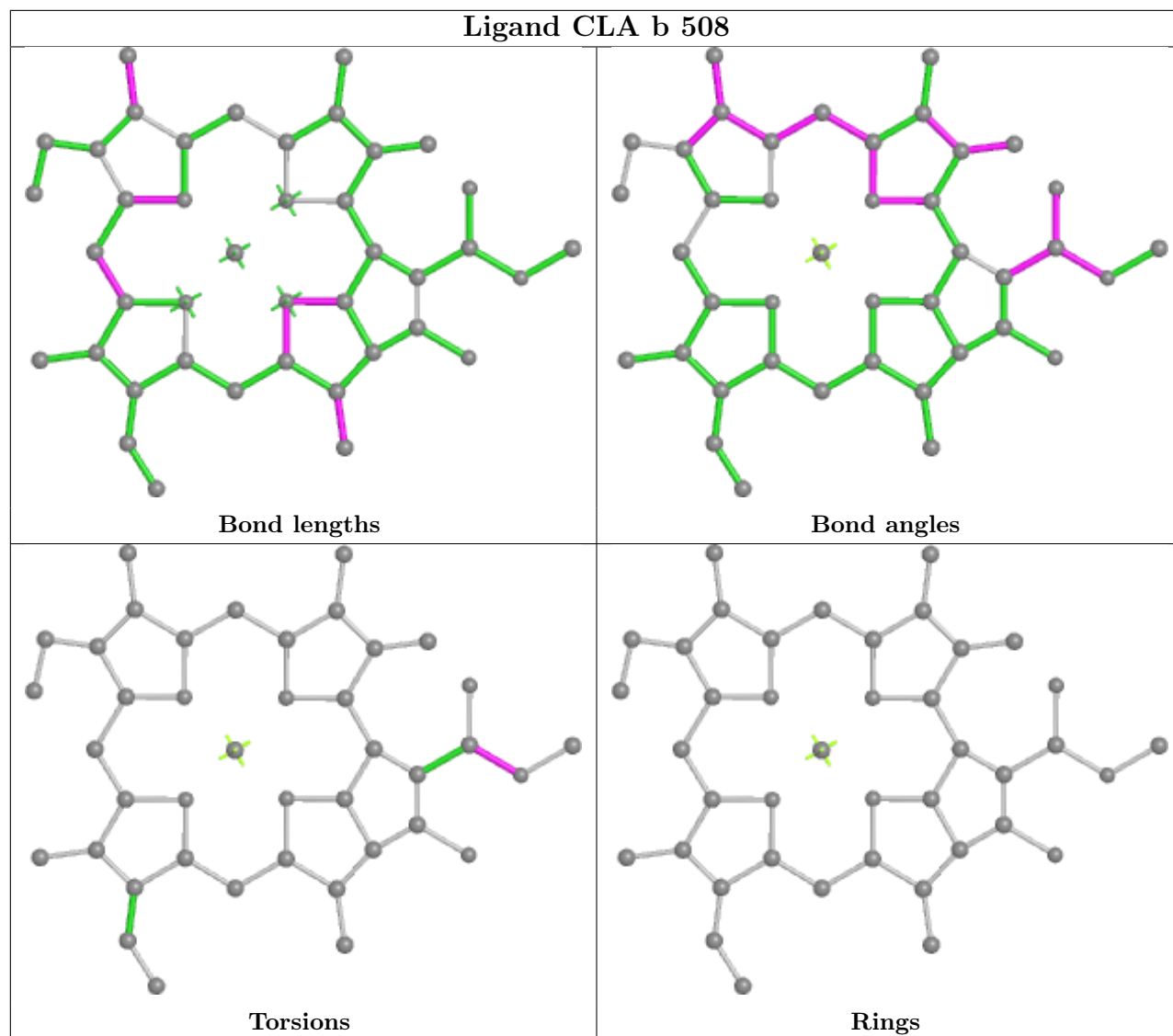


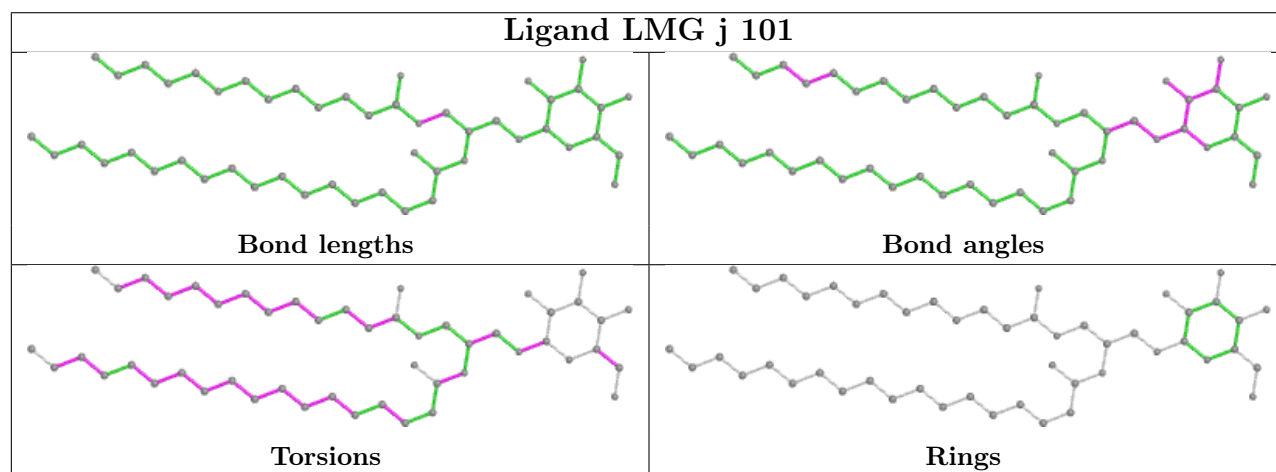
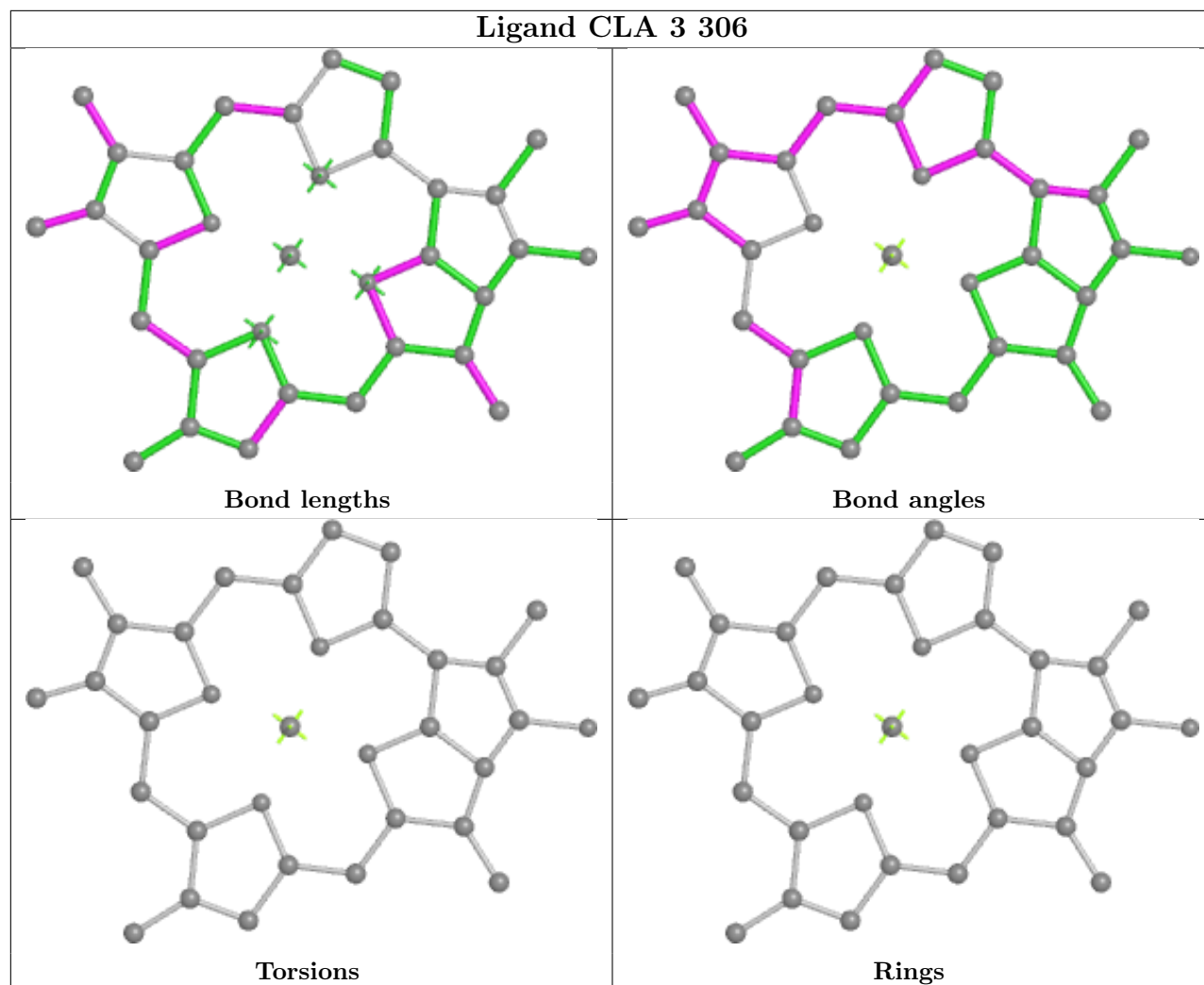


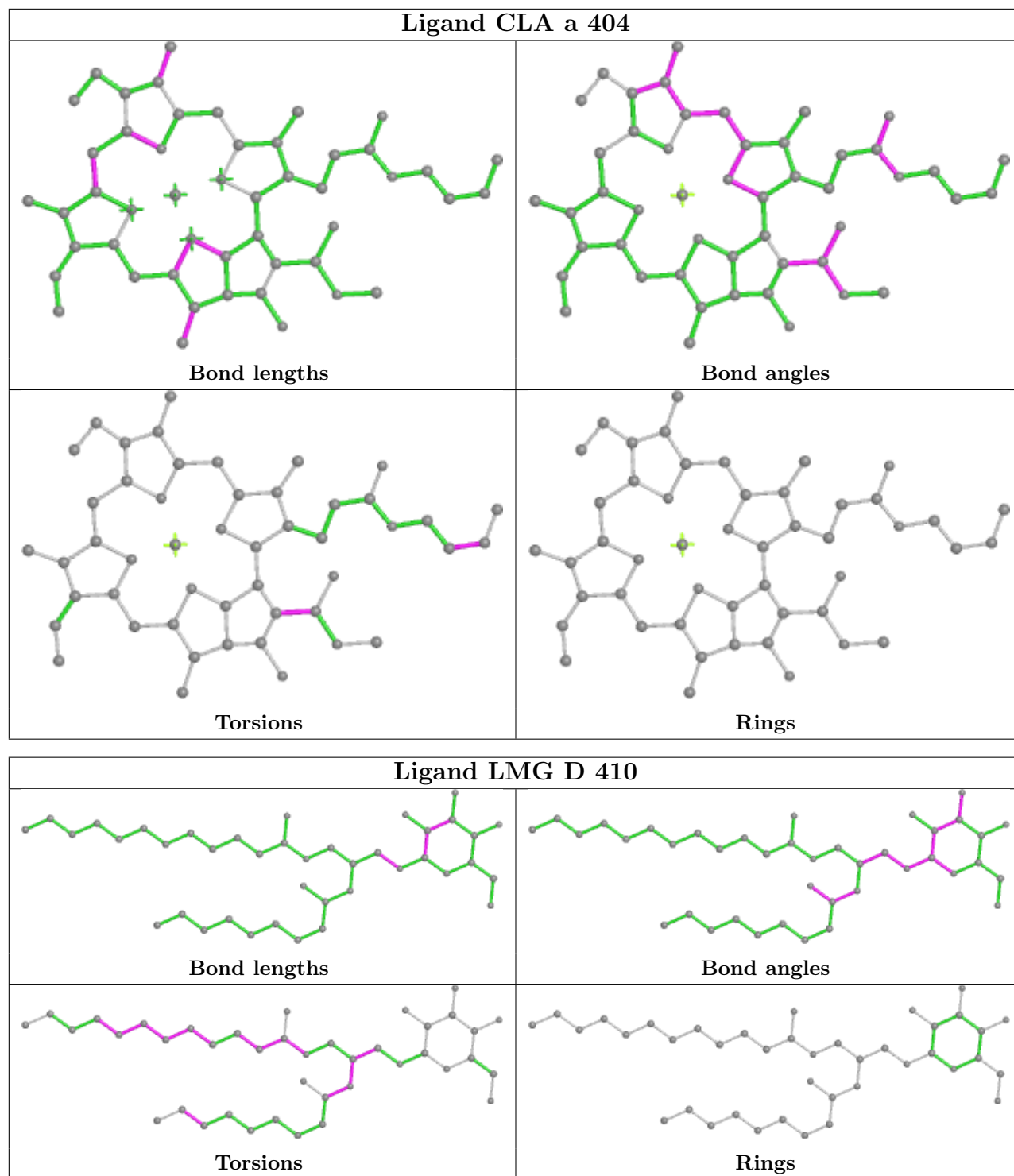
Ligand CLA 9 204

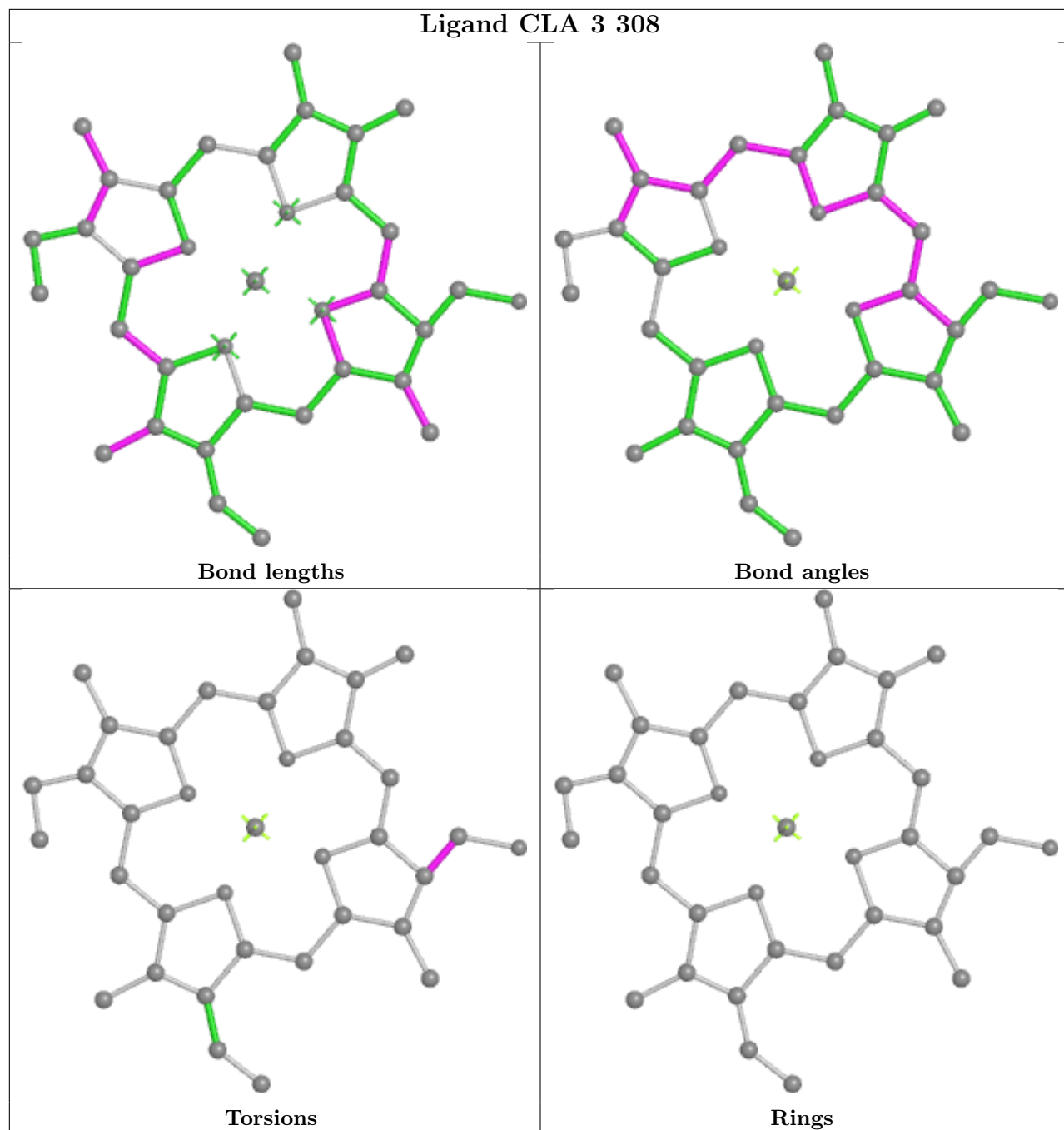


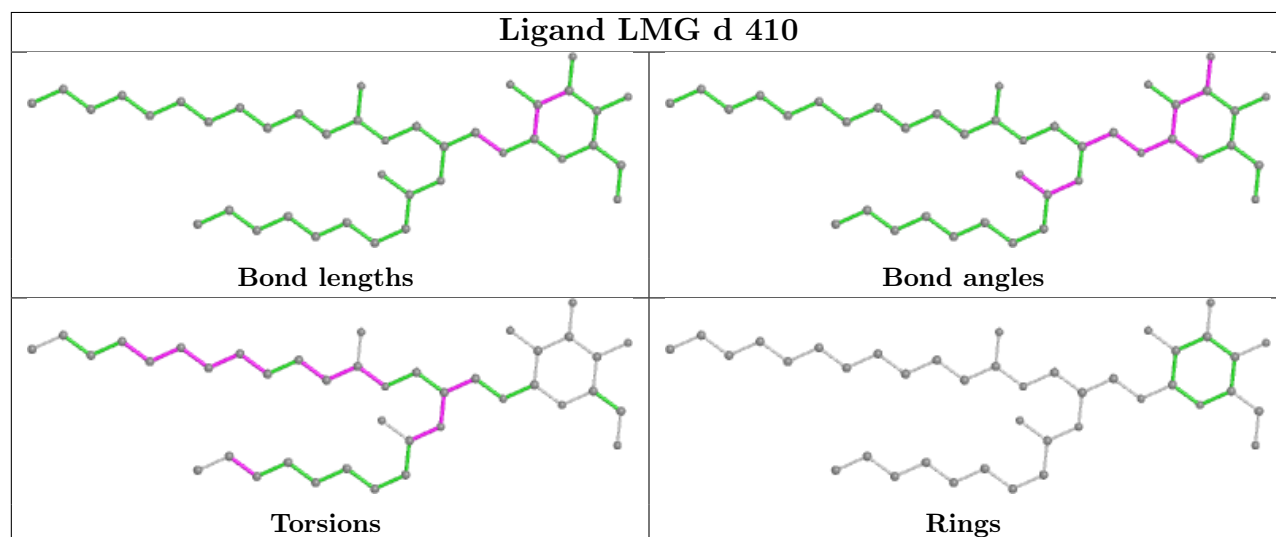
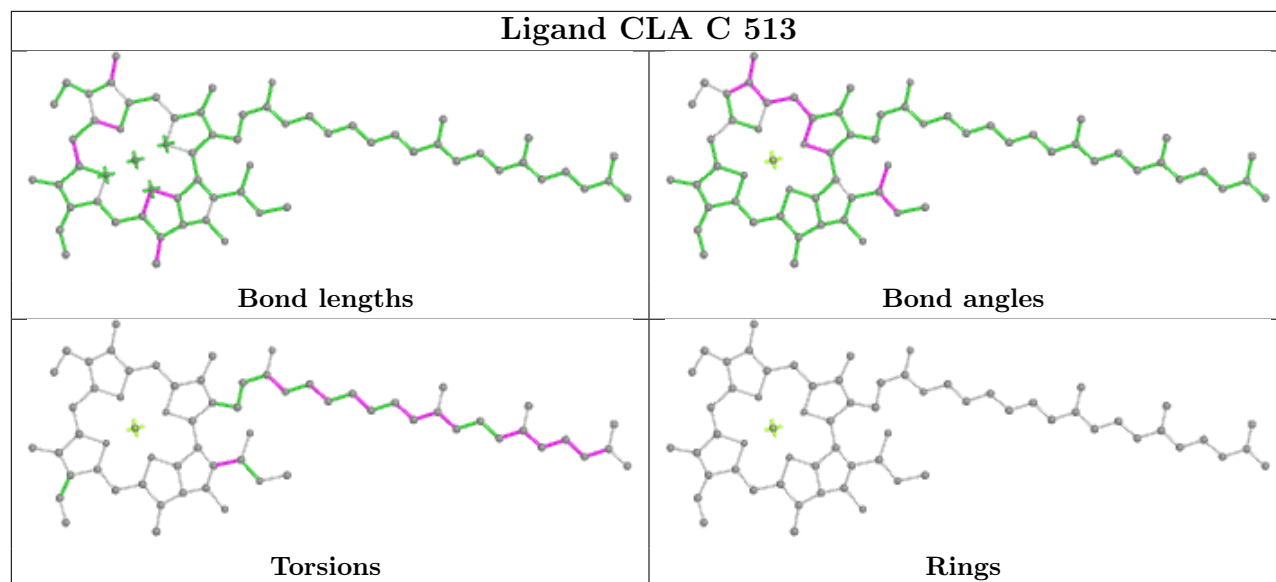


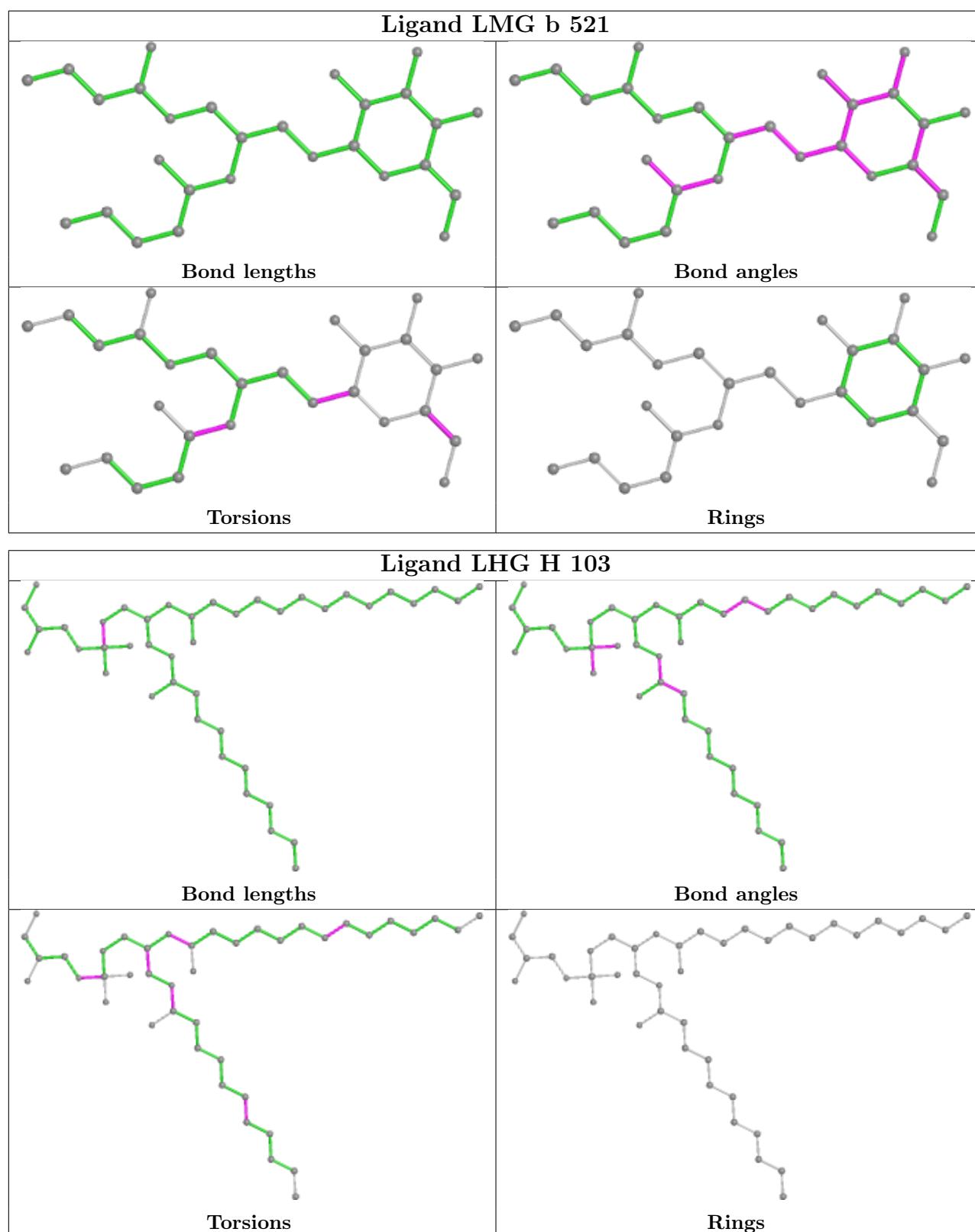


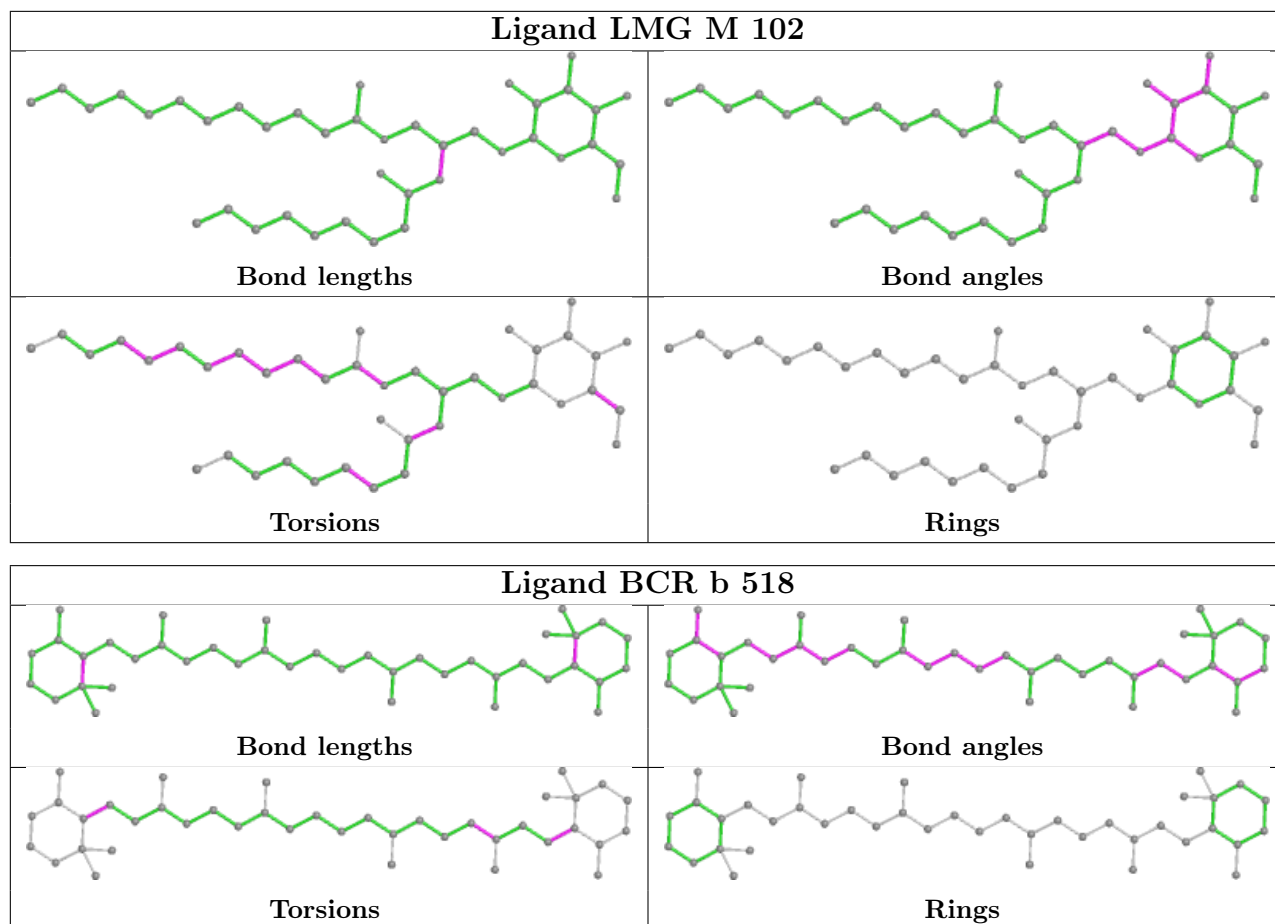


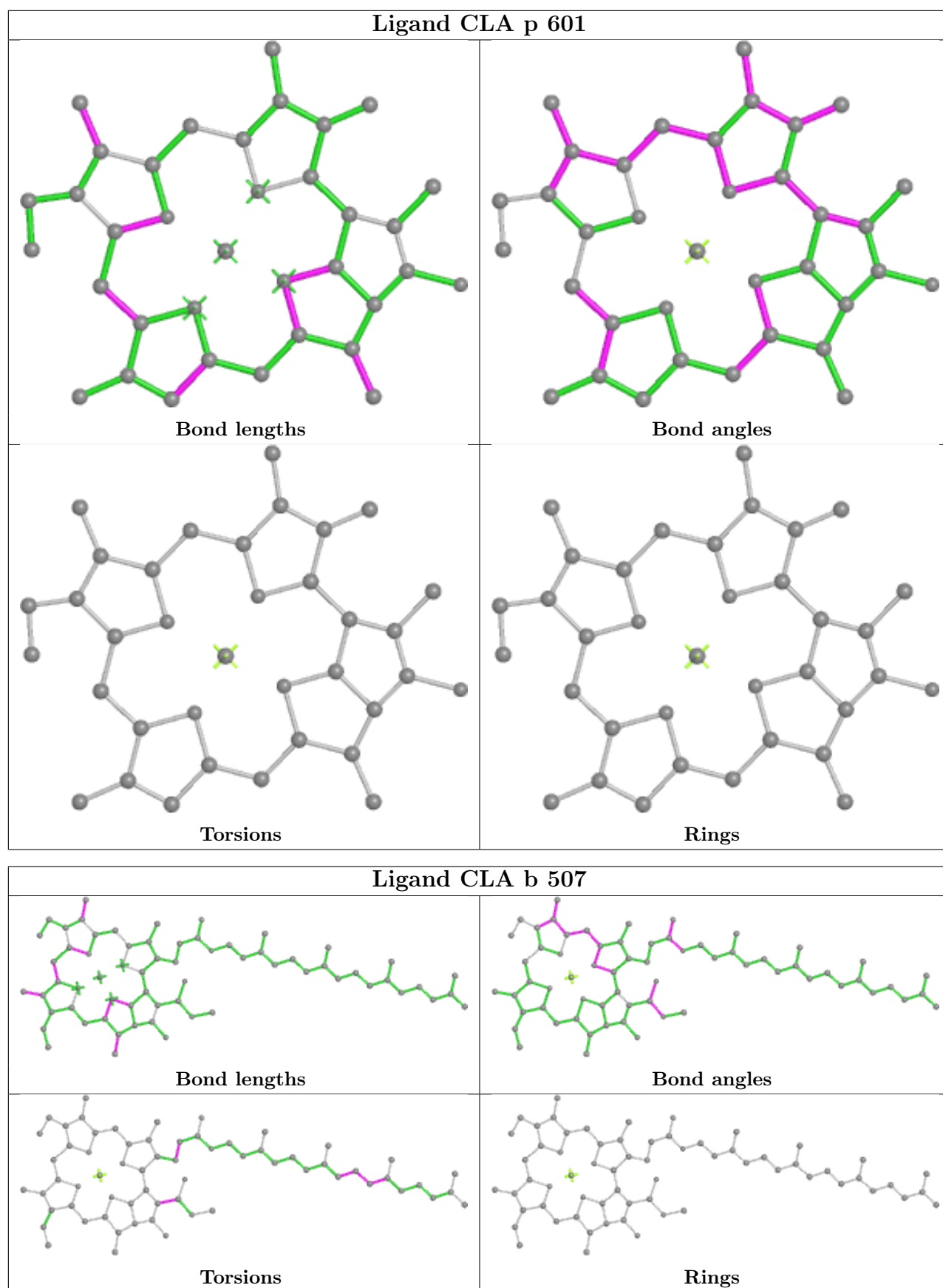


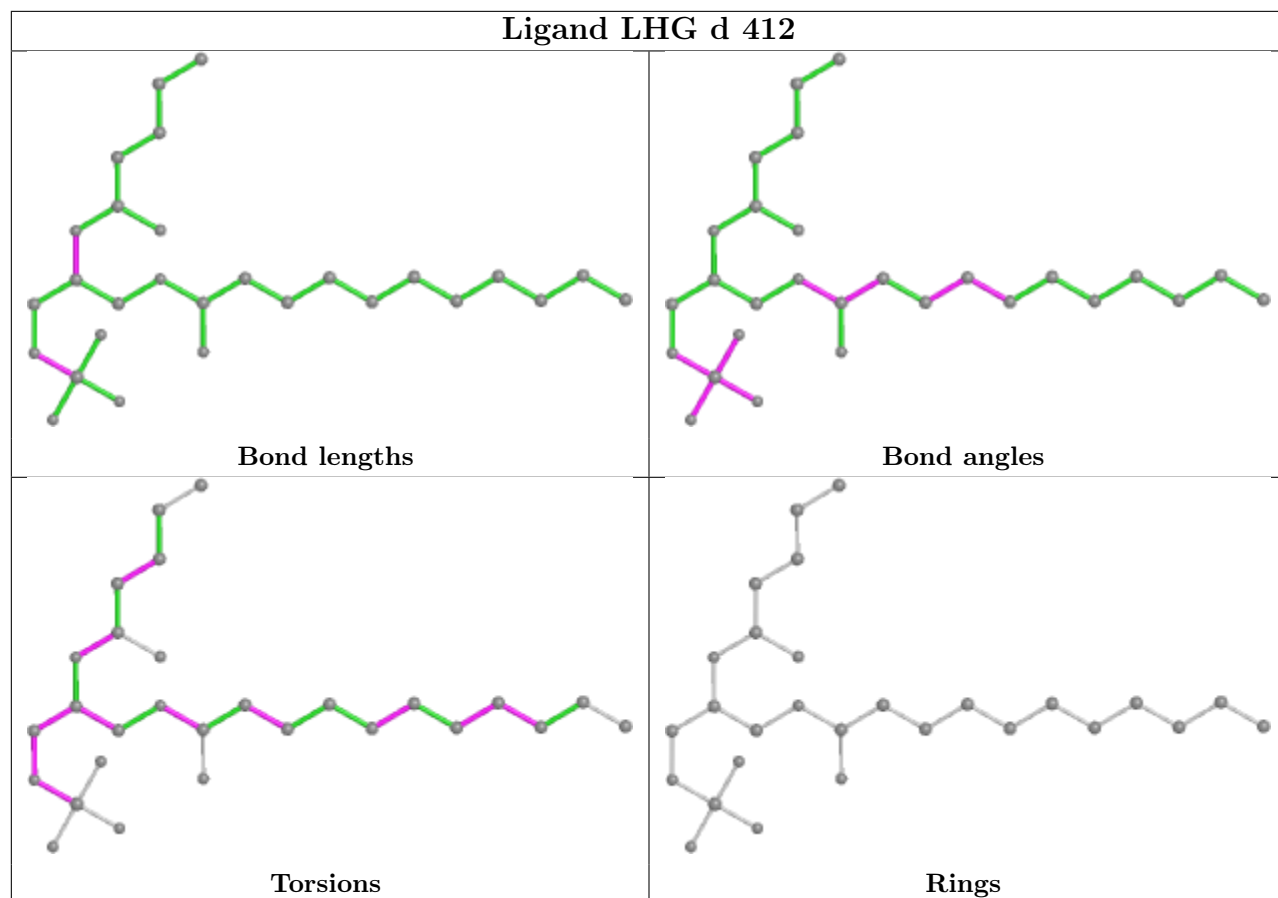




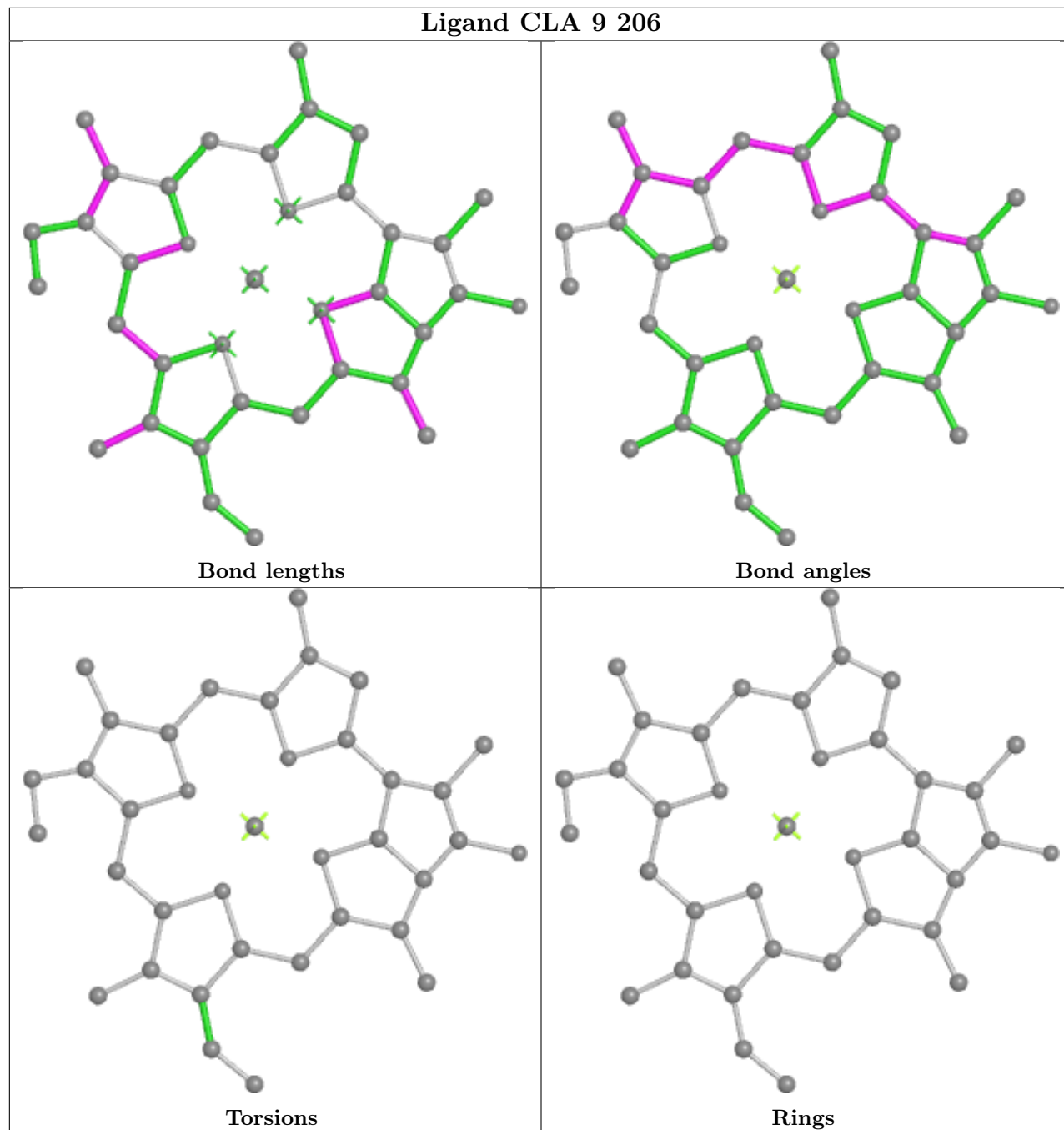




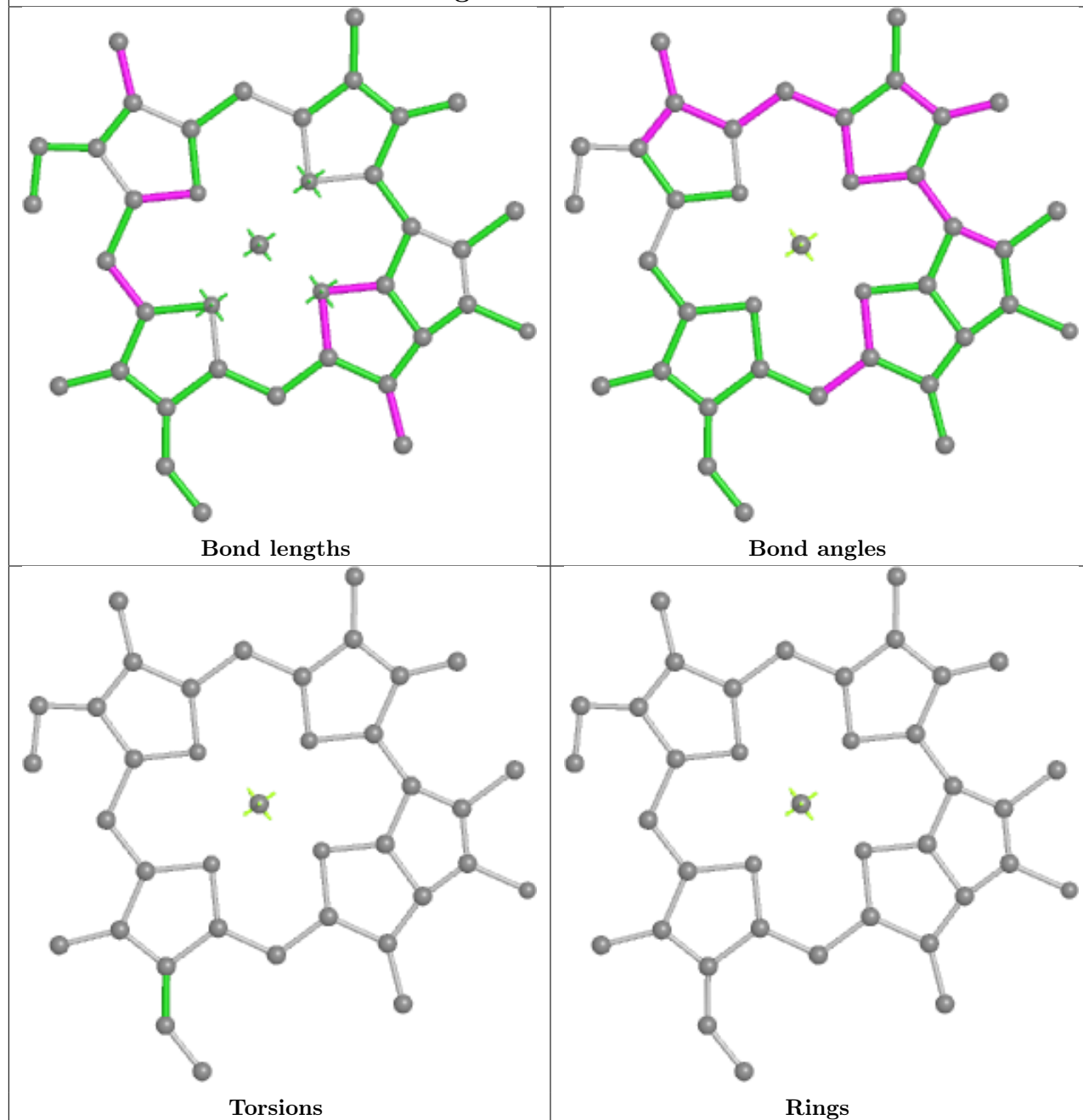


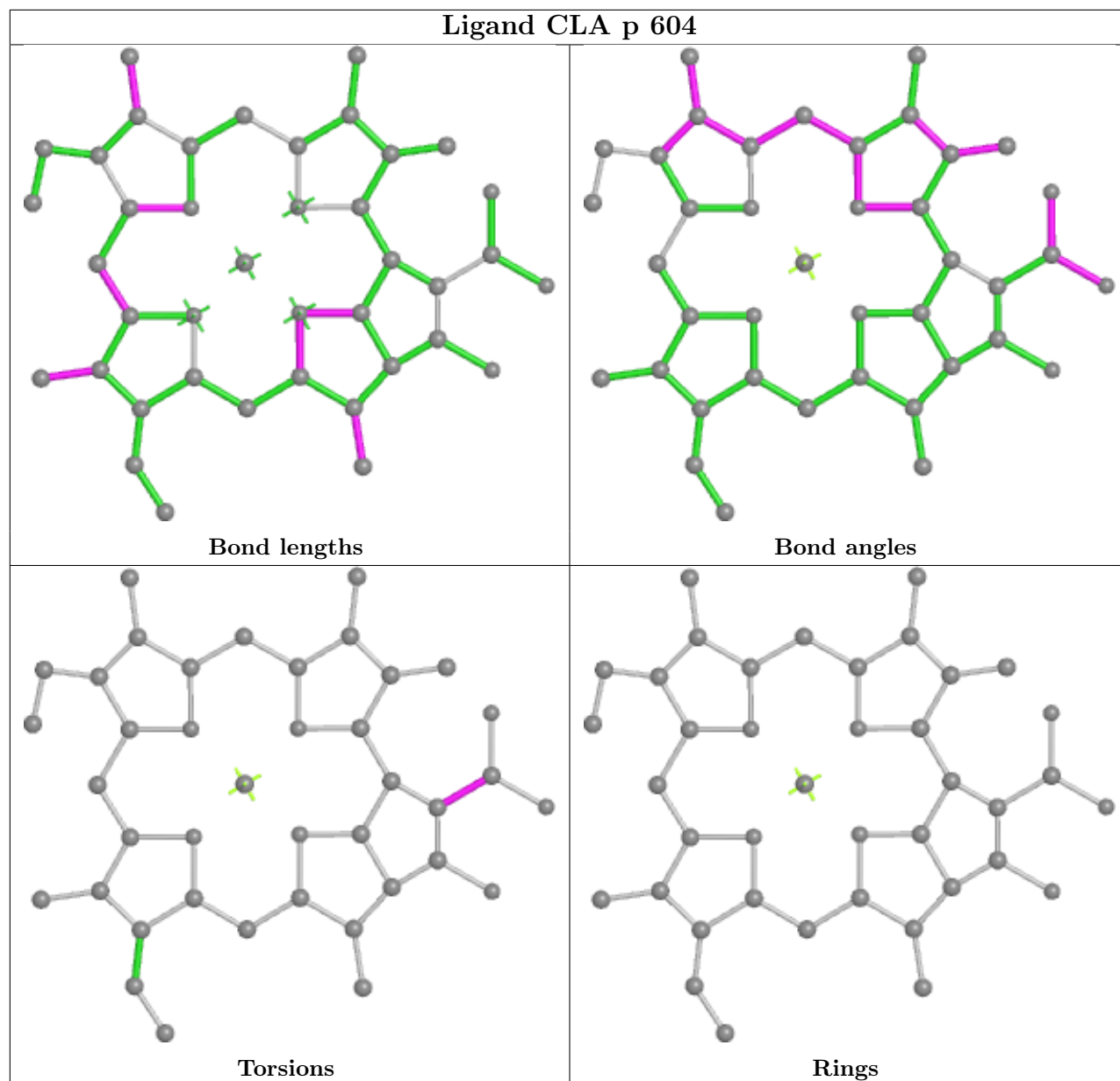


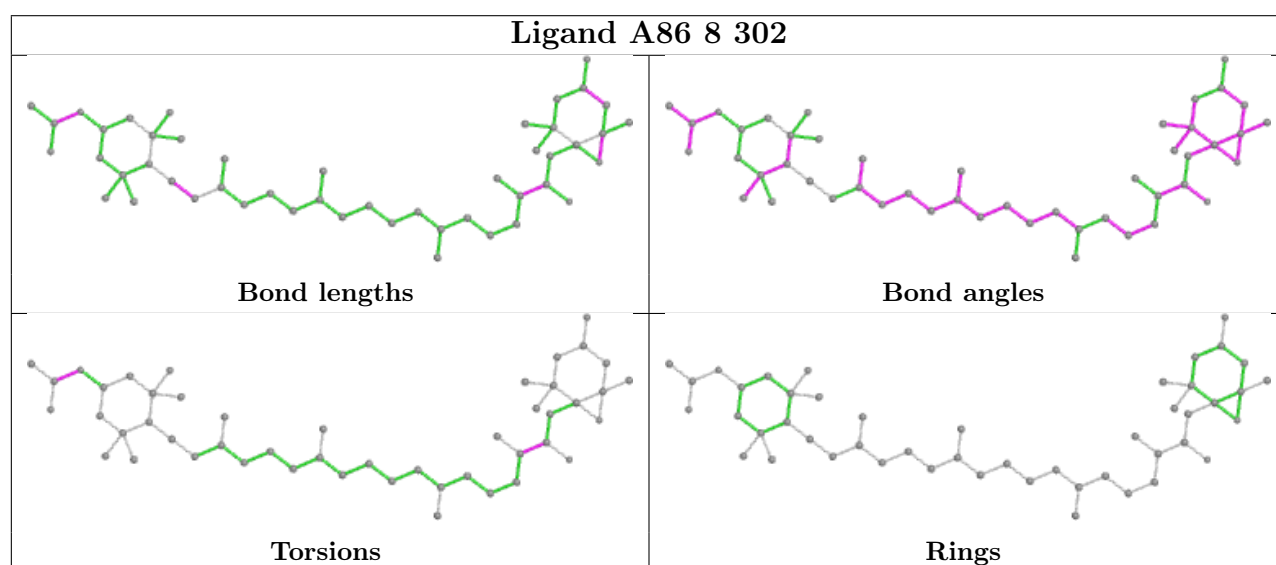
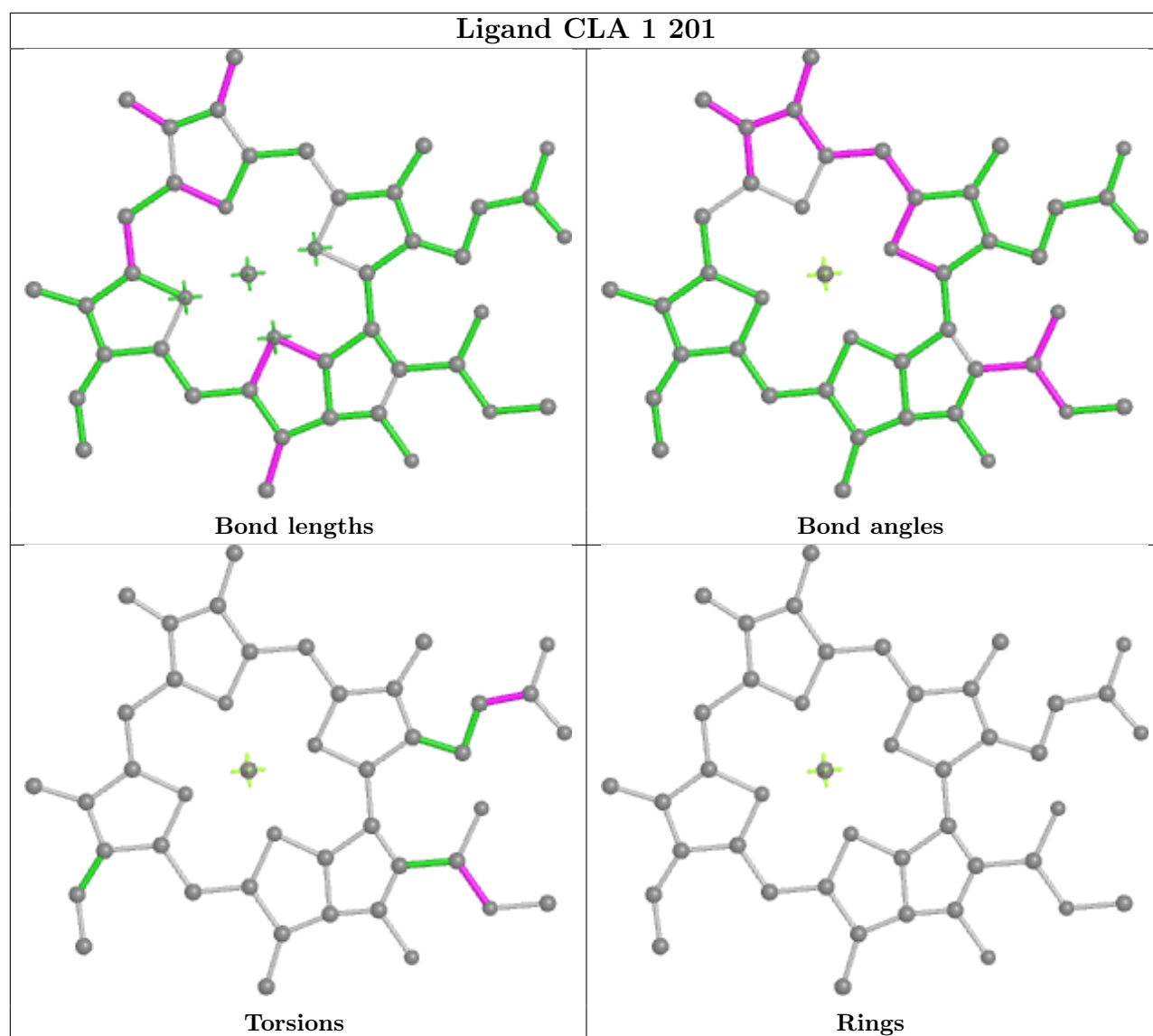
Ligand CLA 9 206

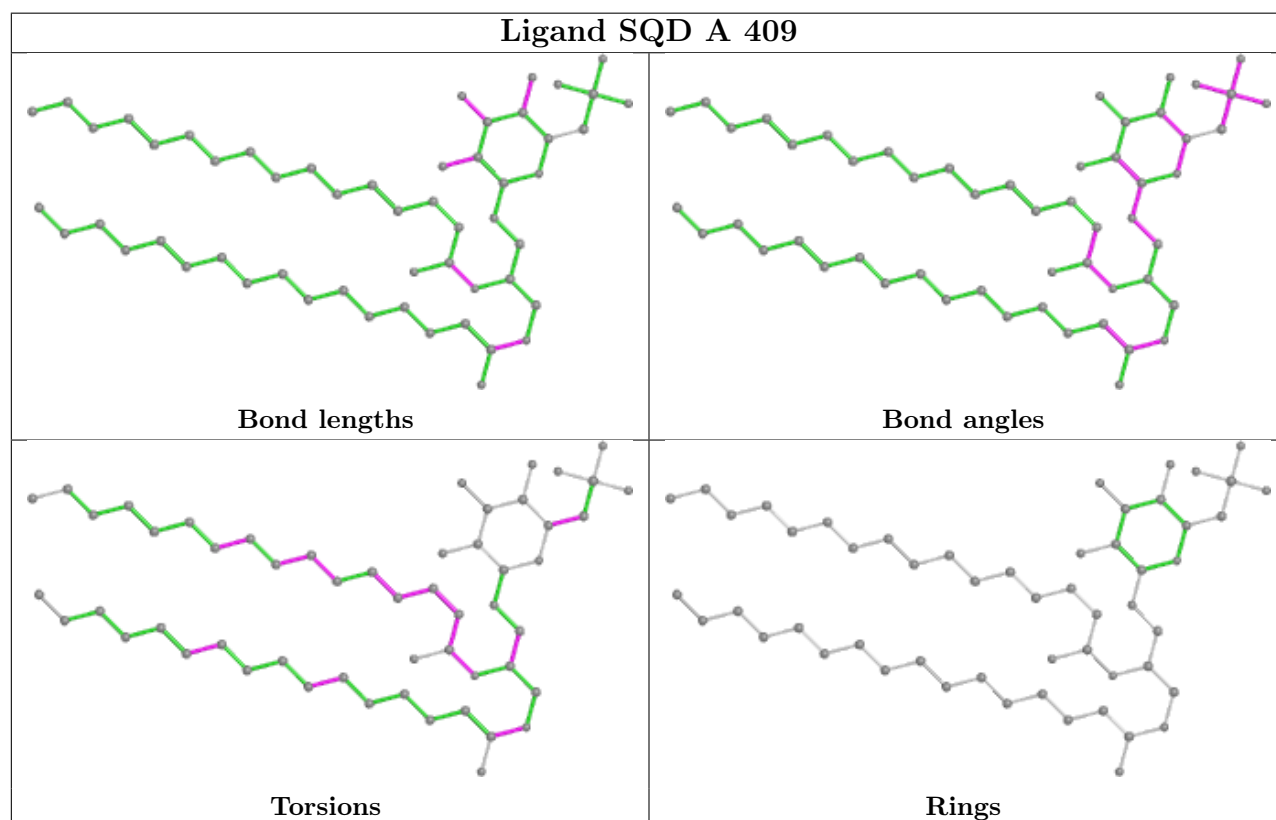
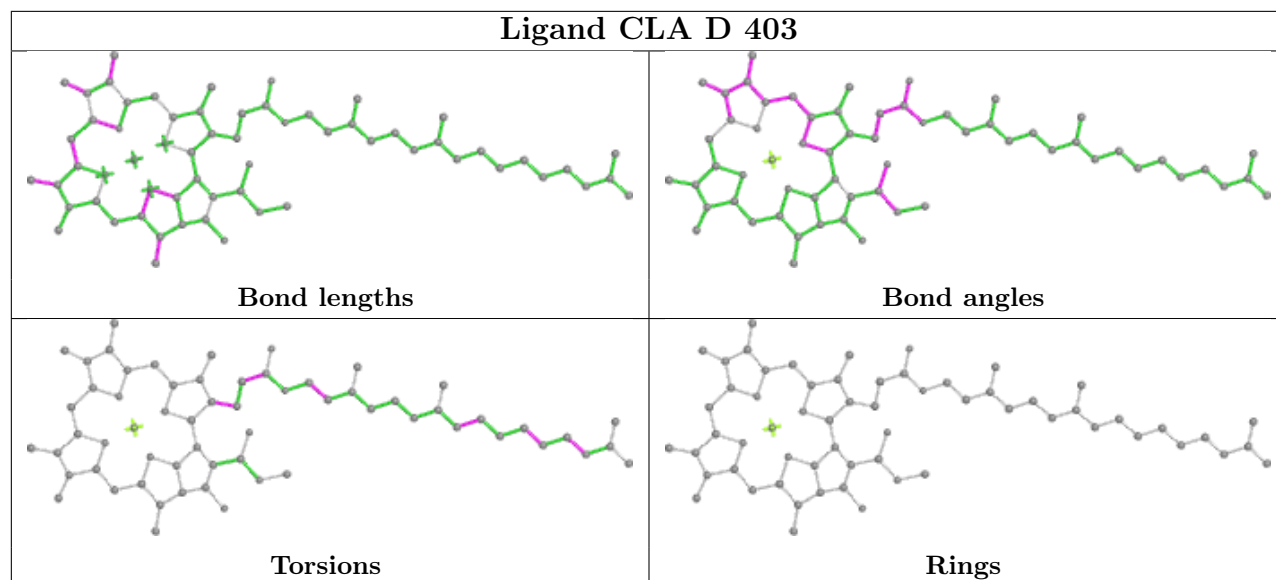


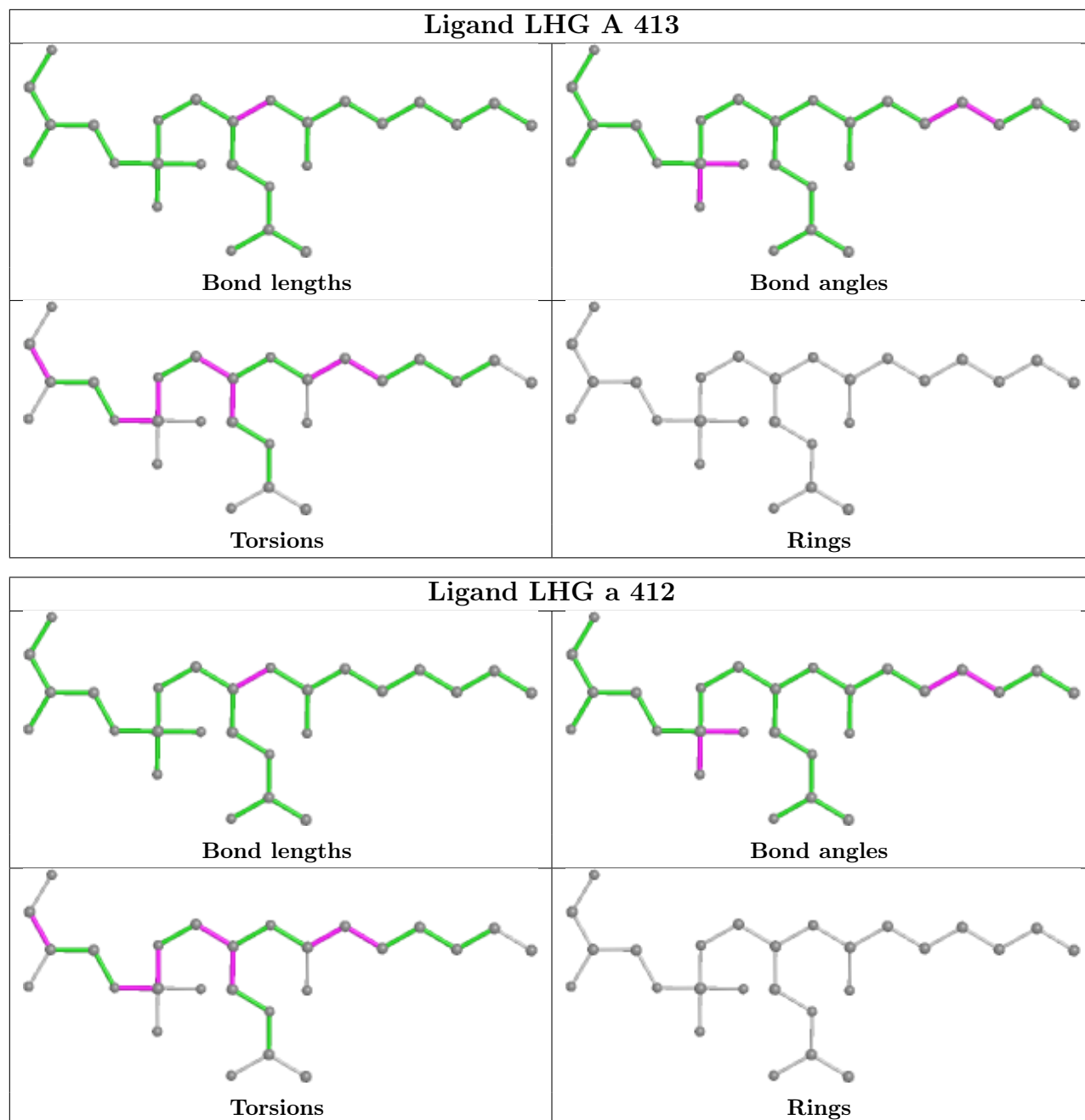
Ligand CLA 2 314

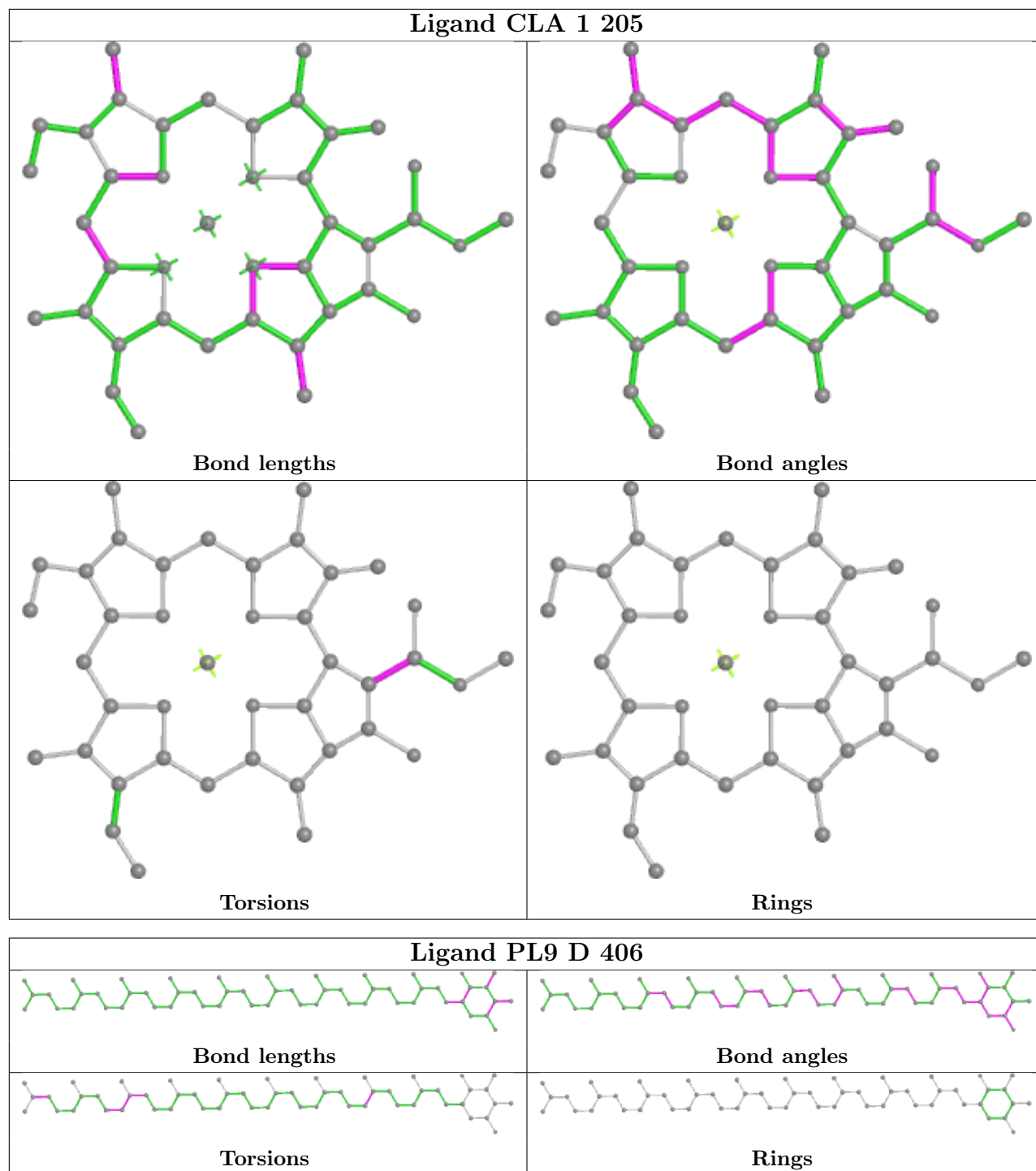


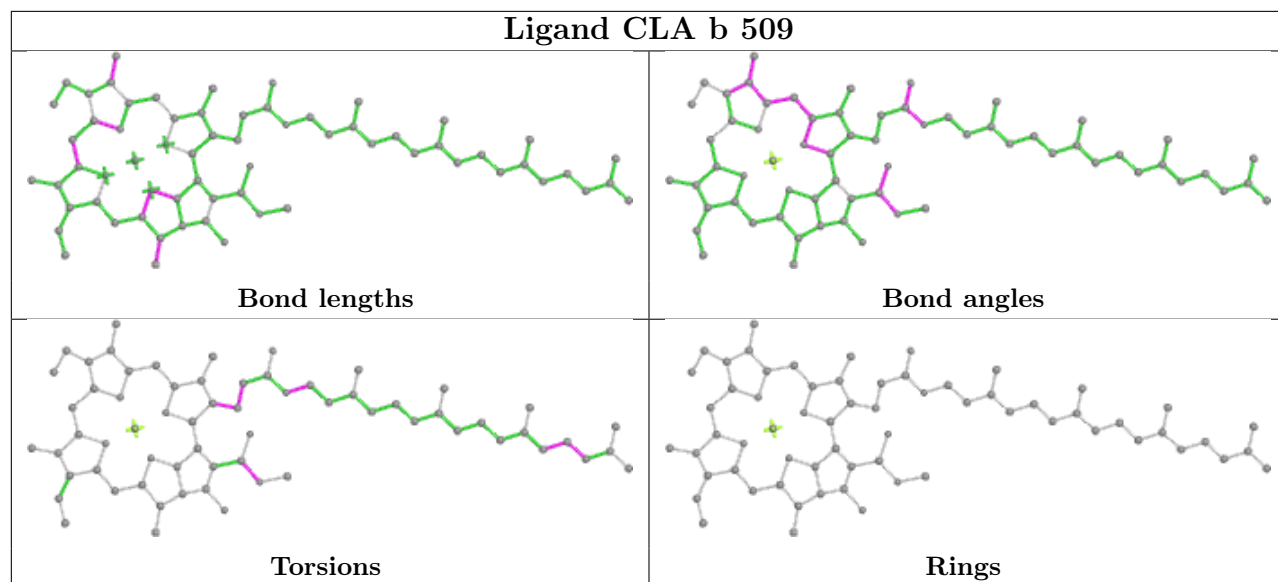


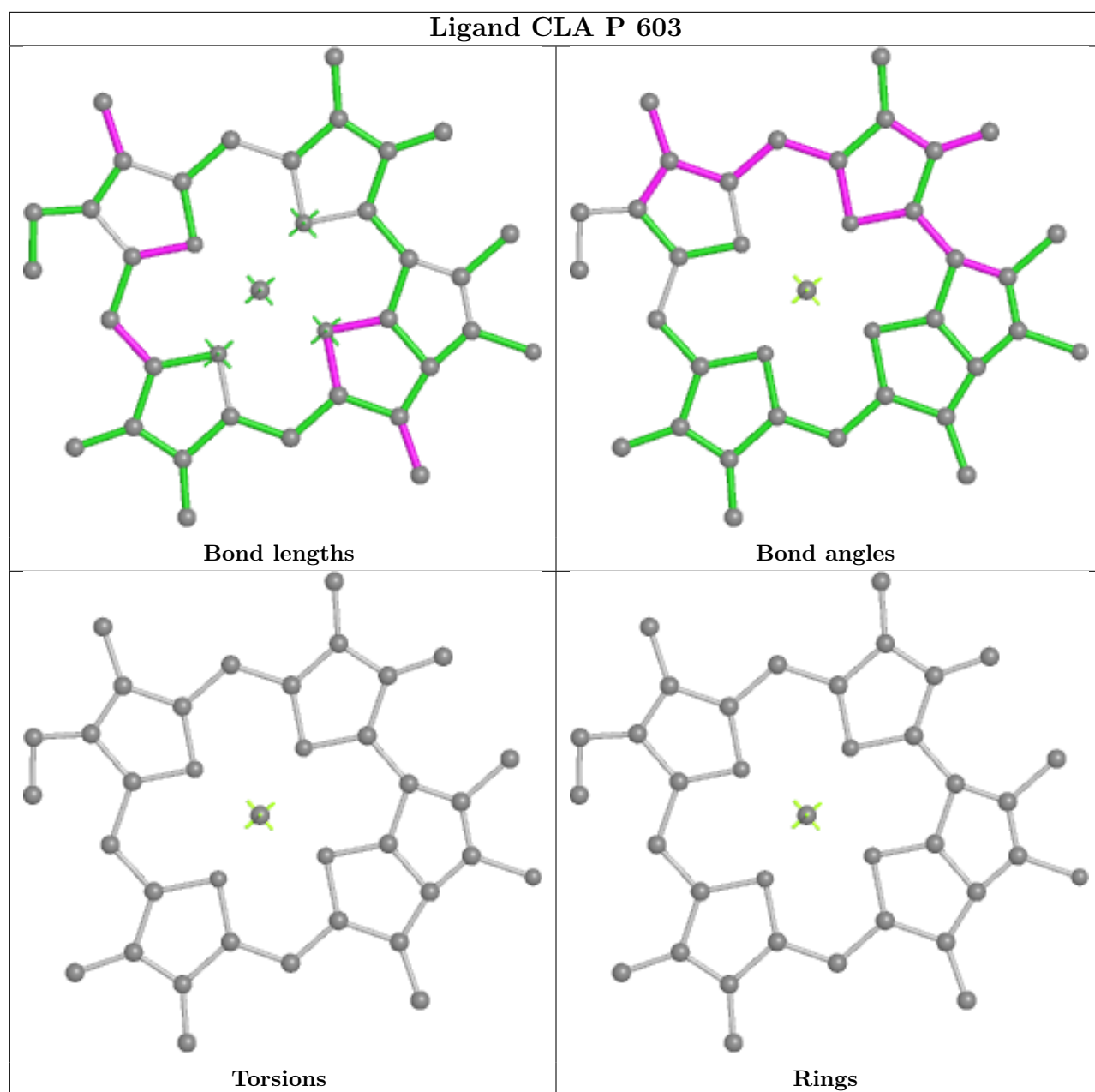


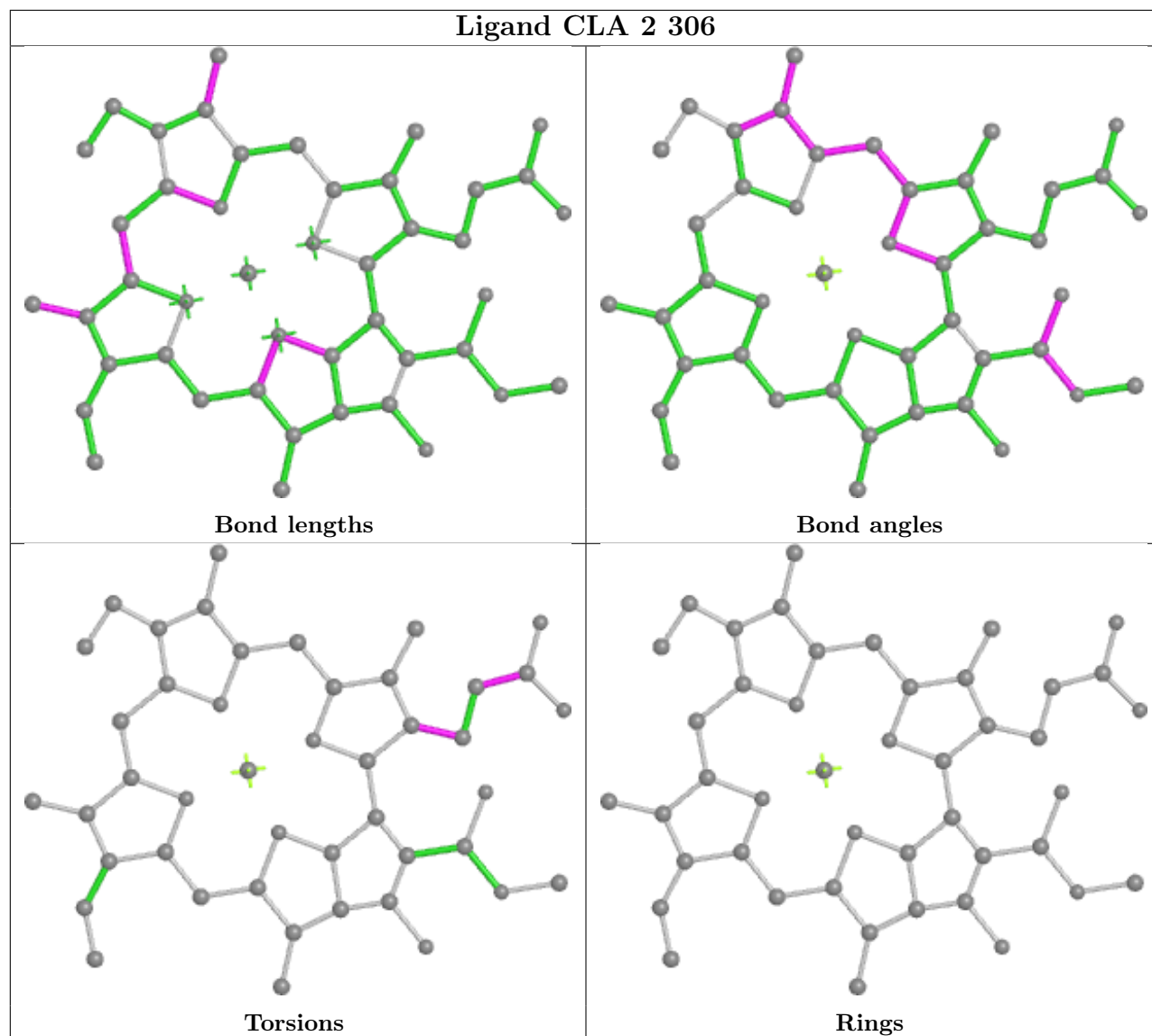


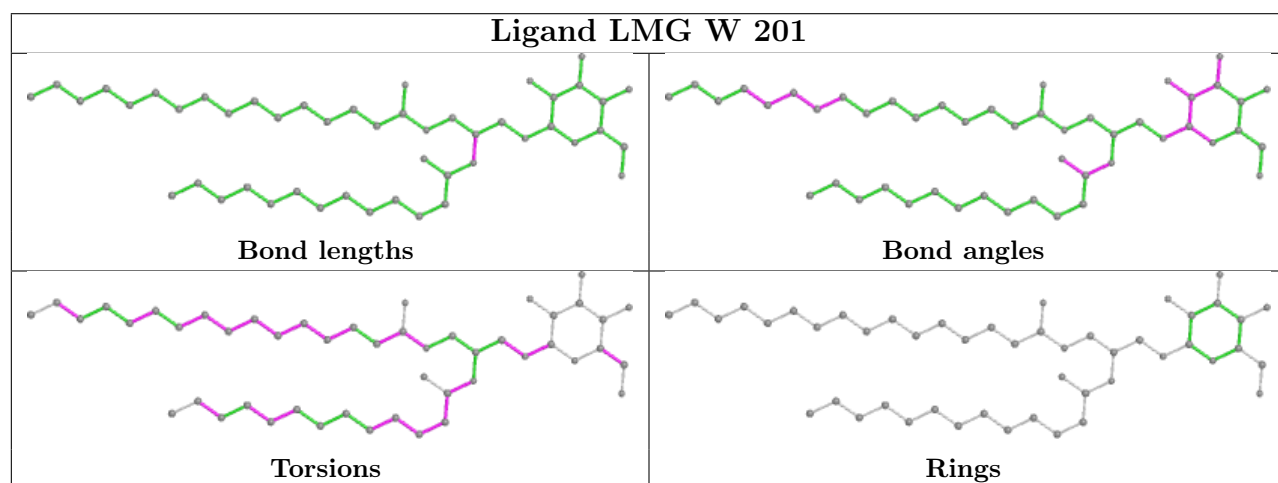
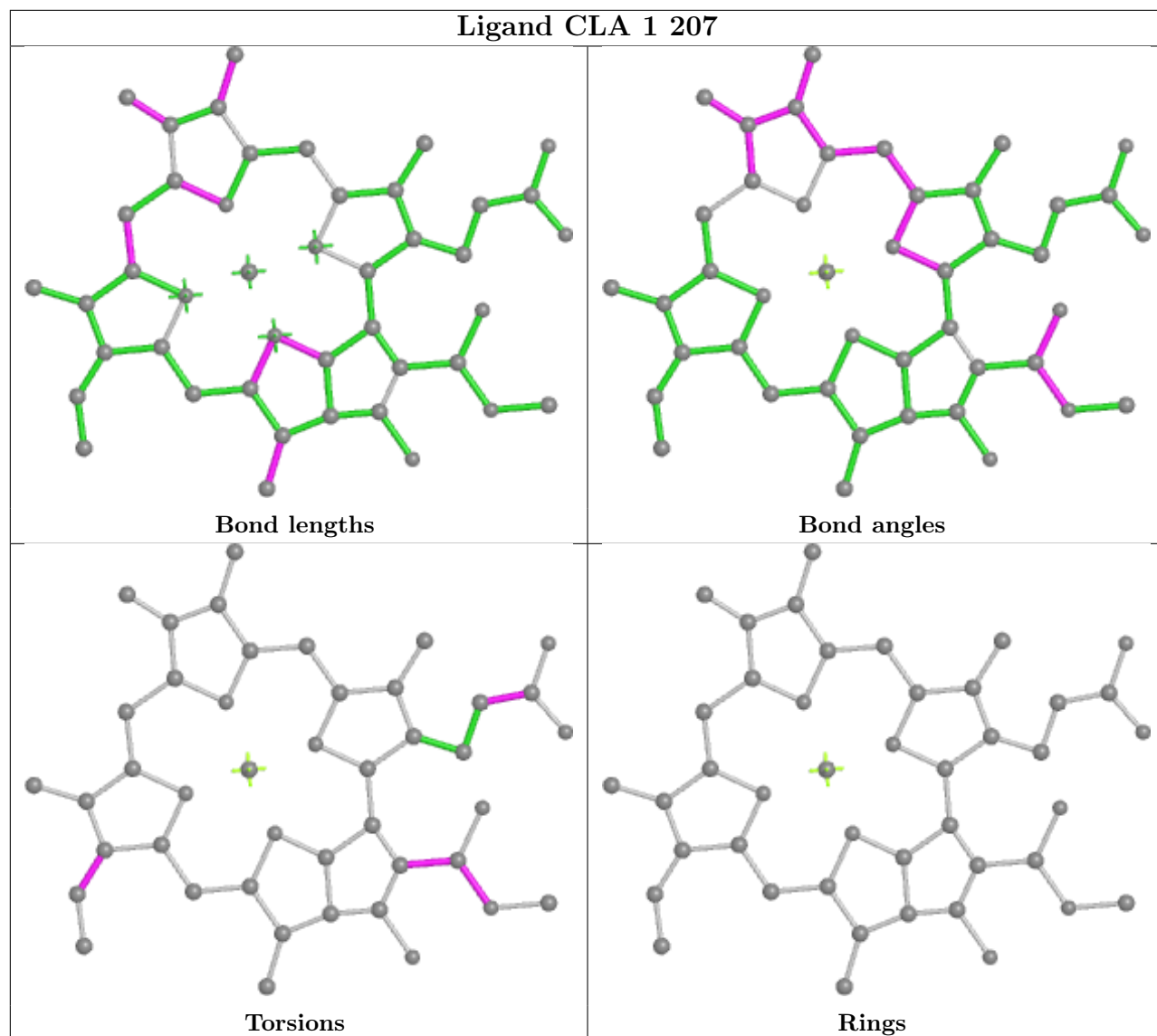


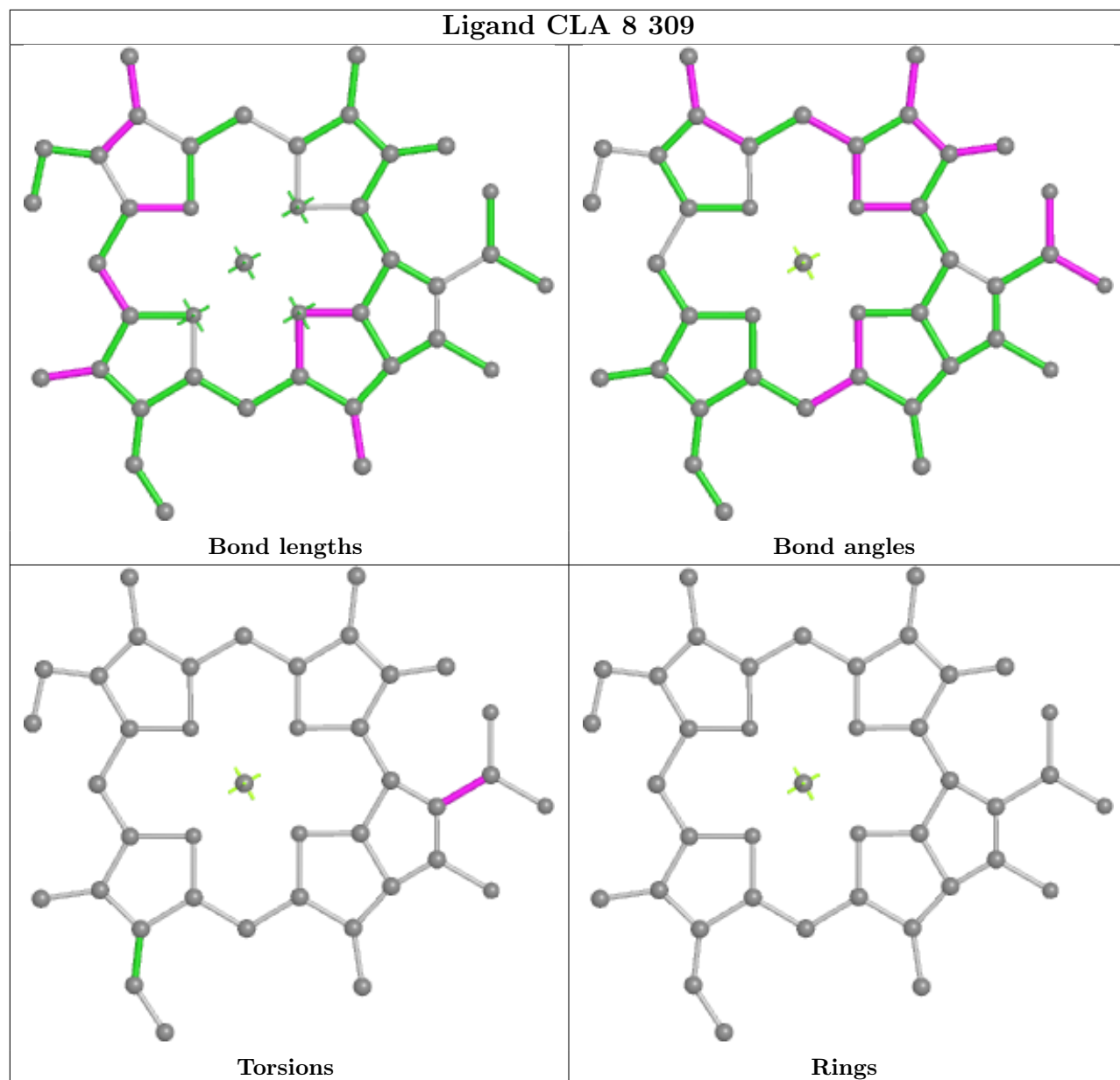


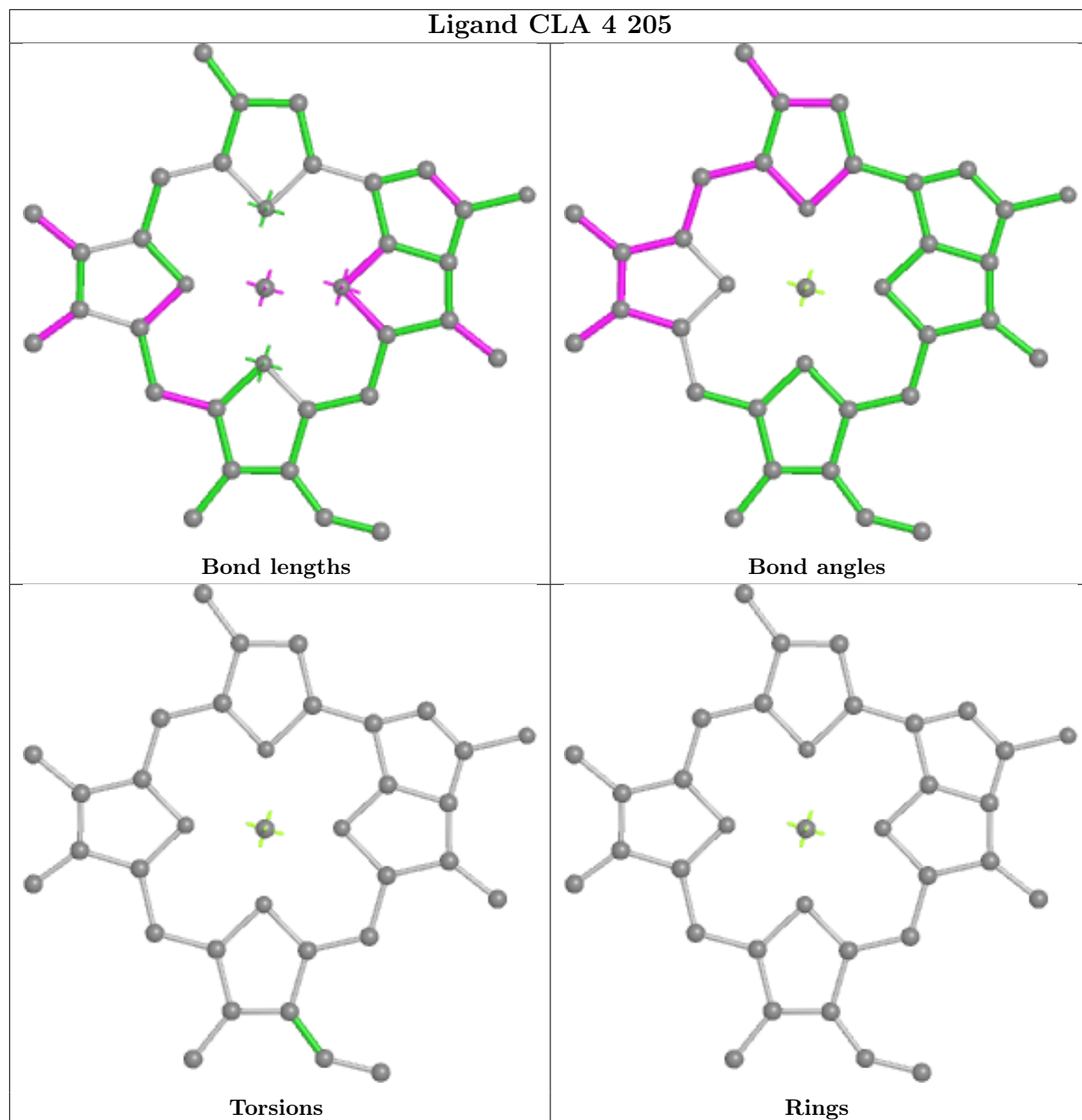


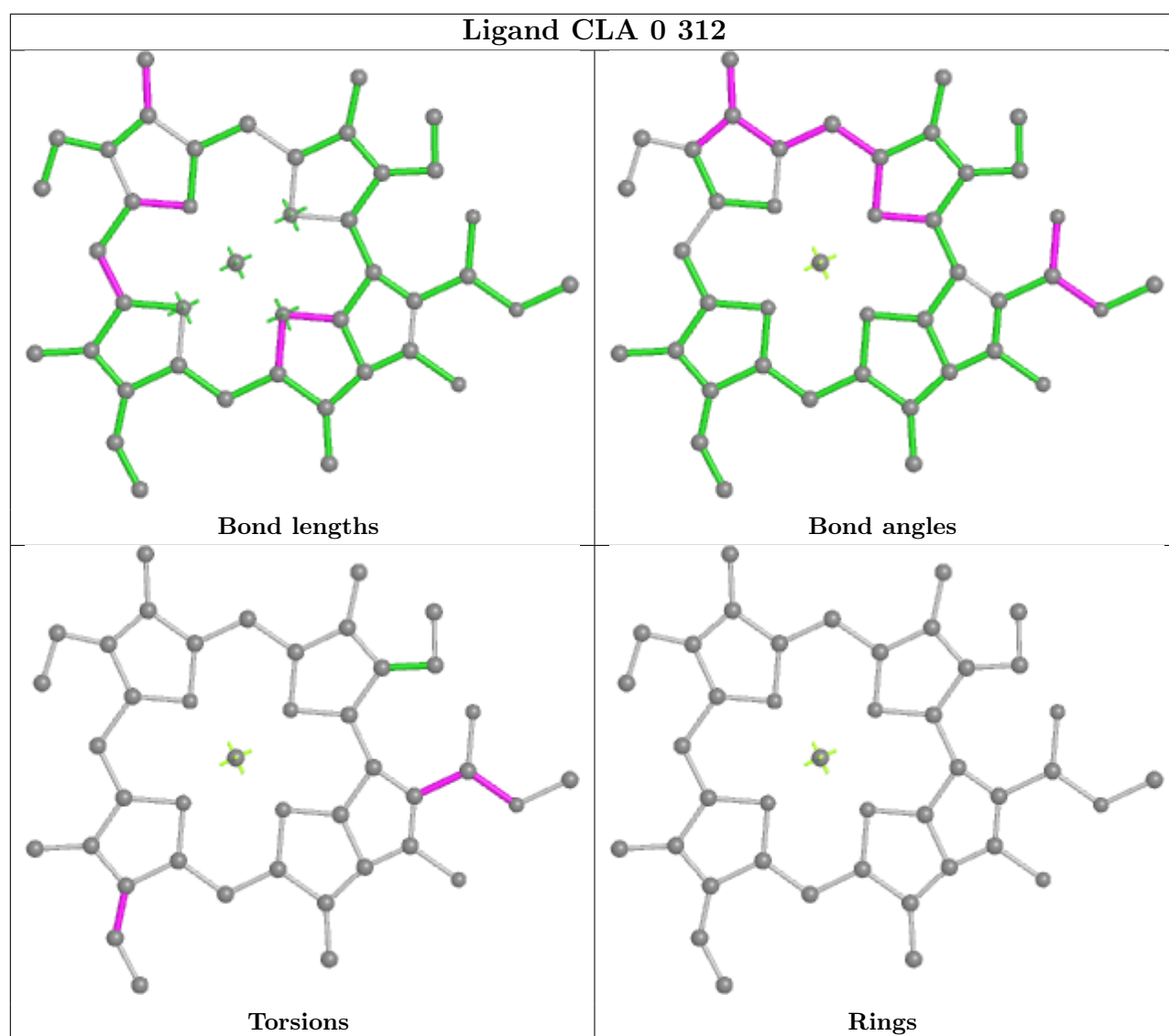
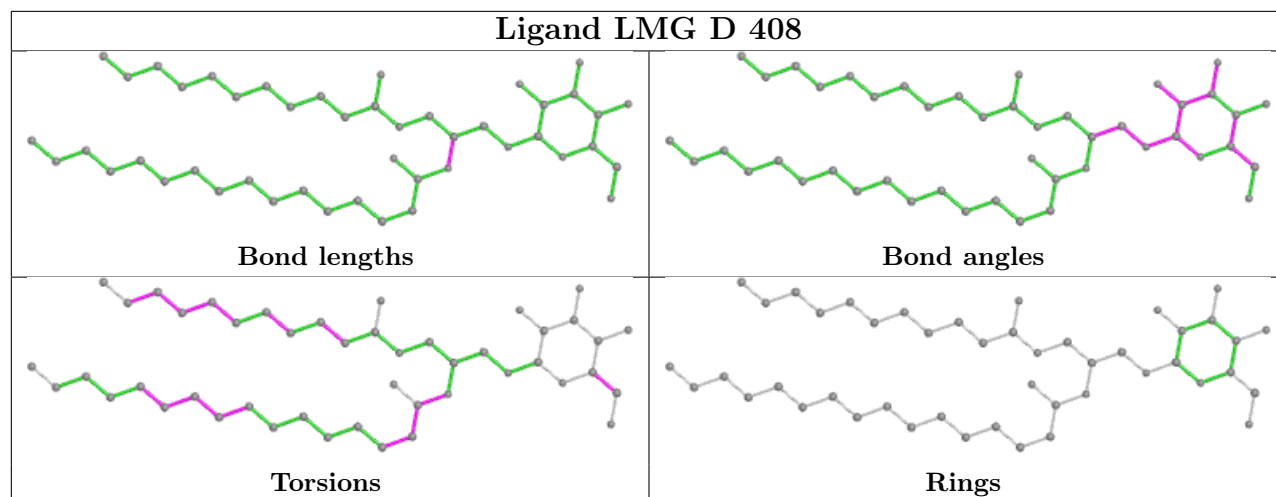


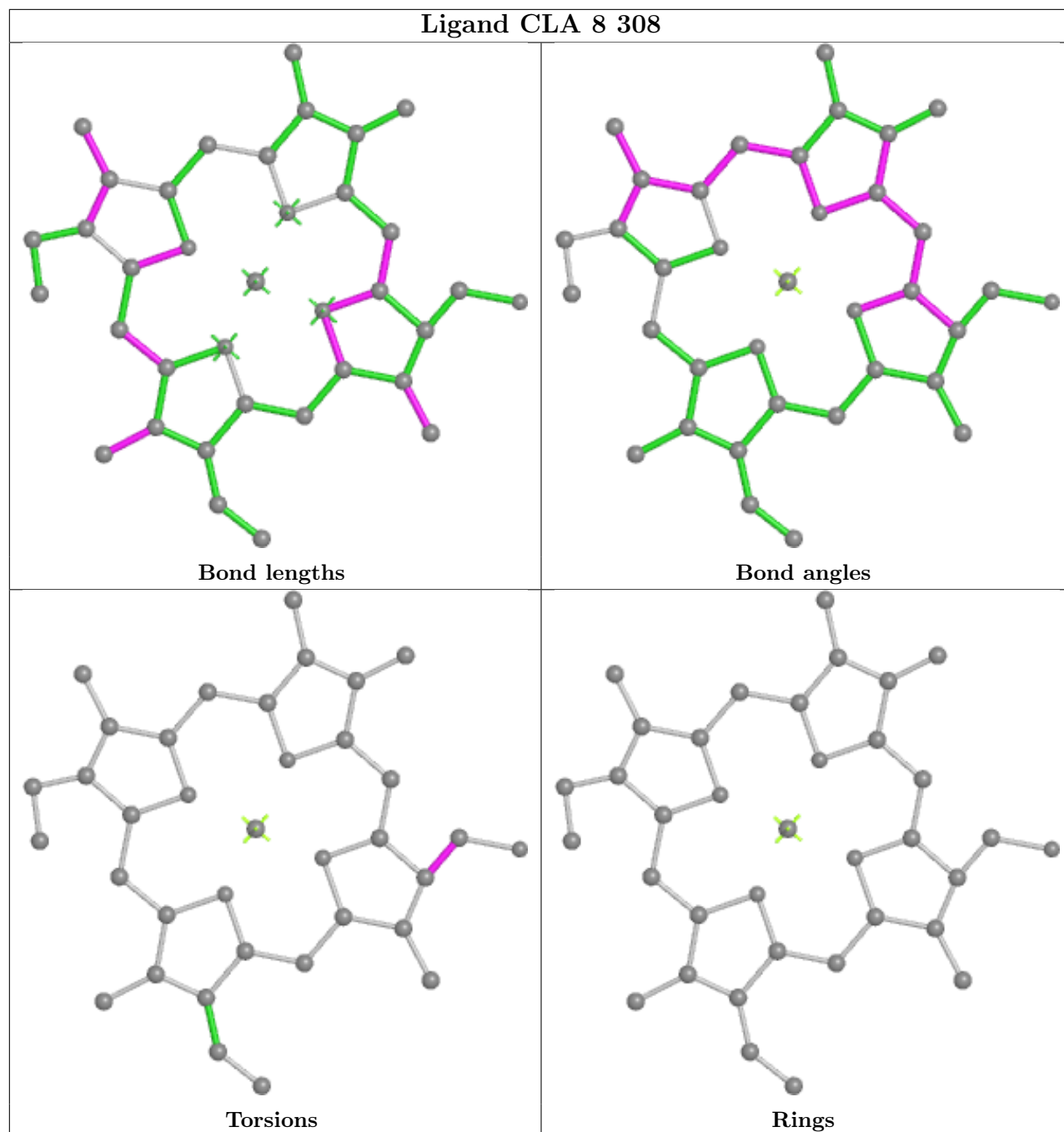


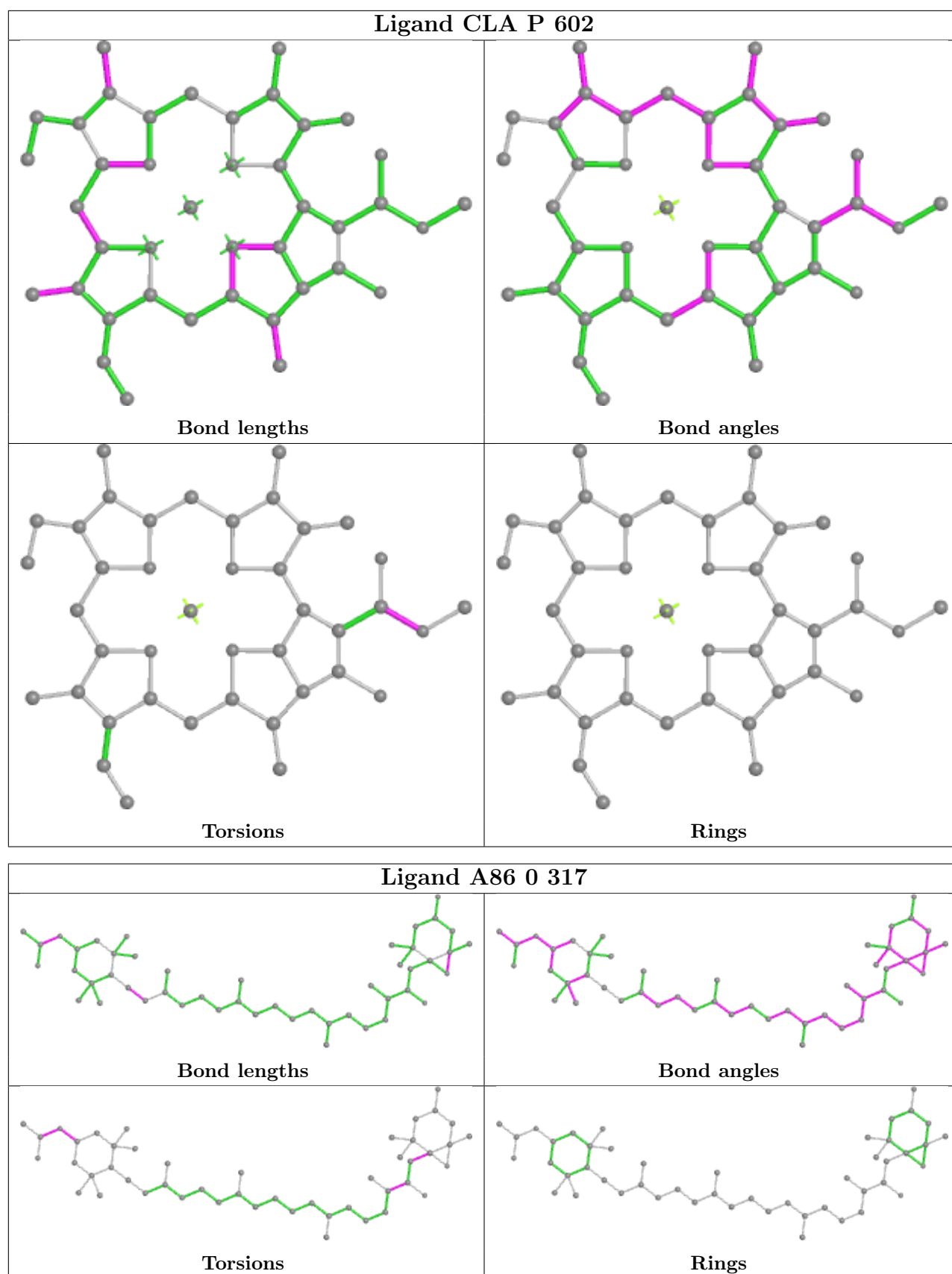


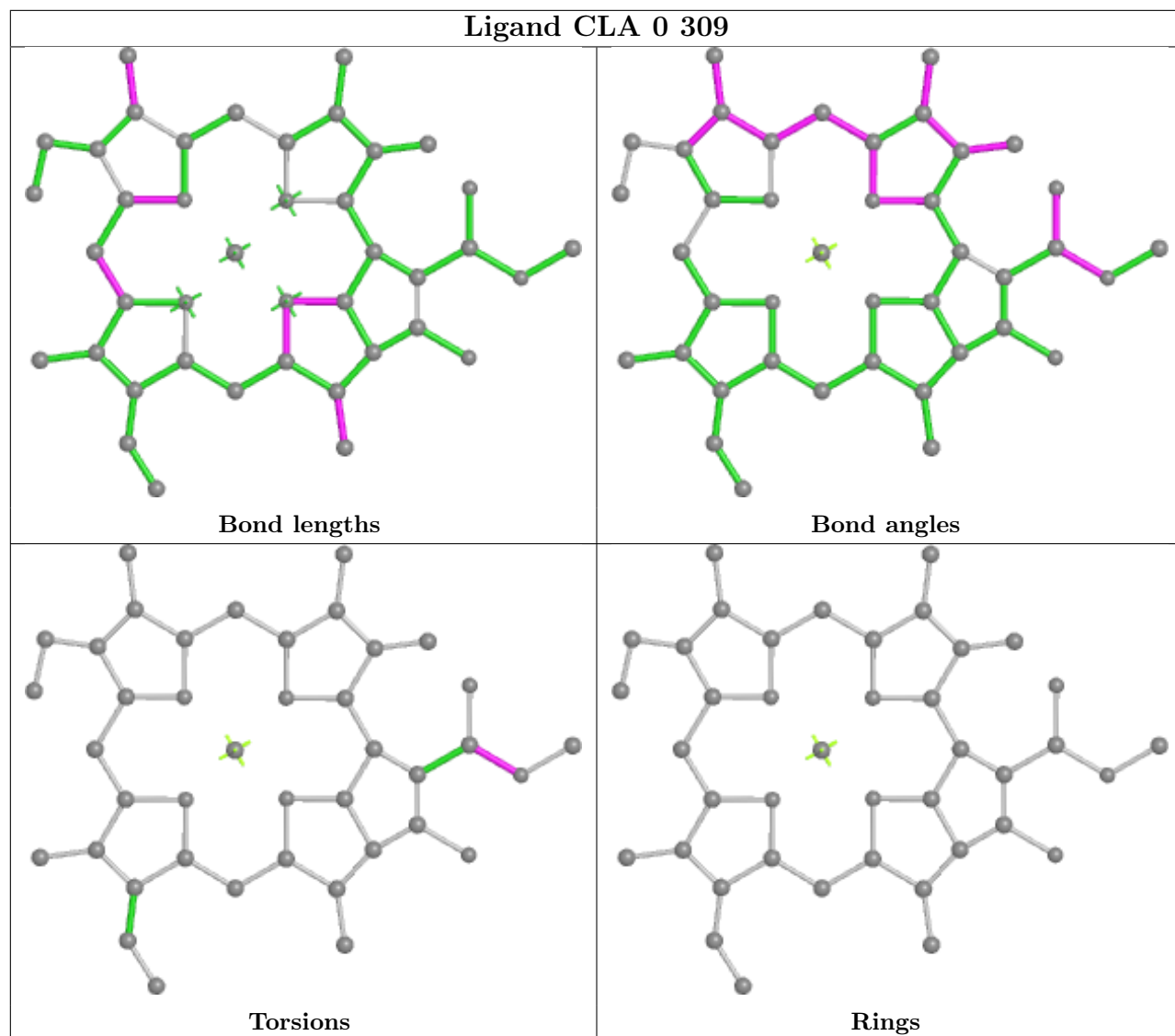


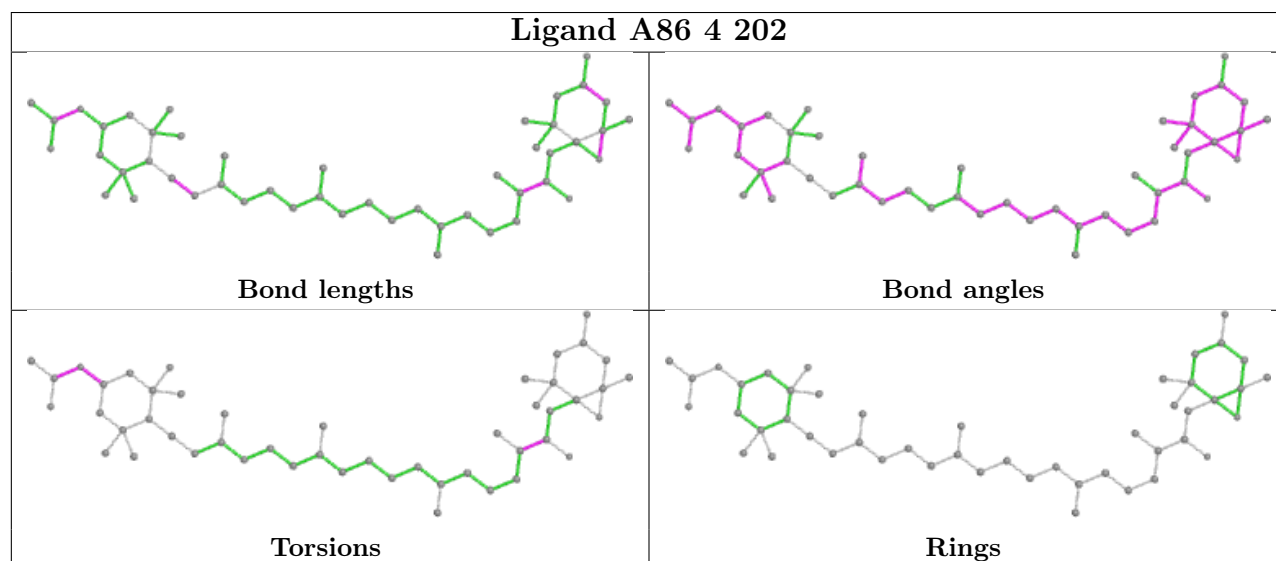
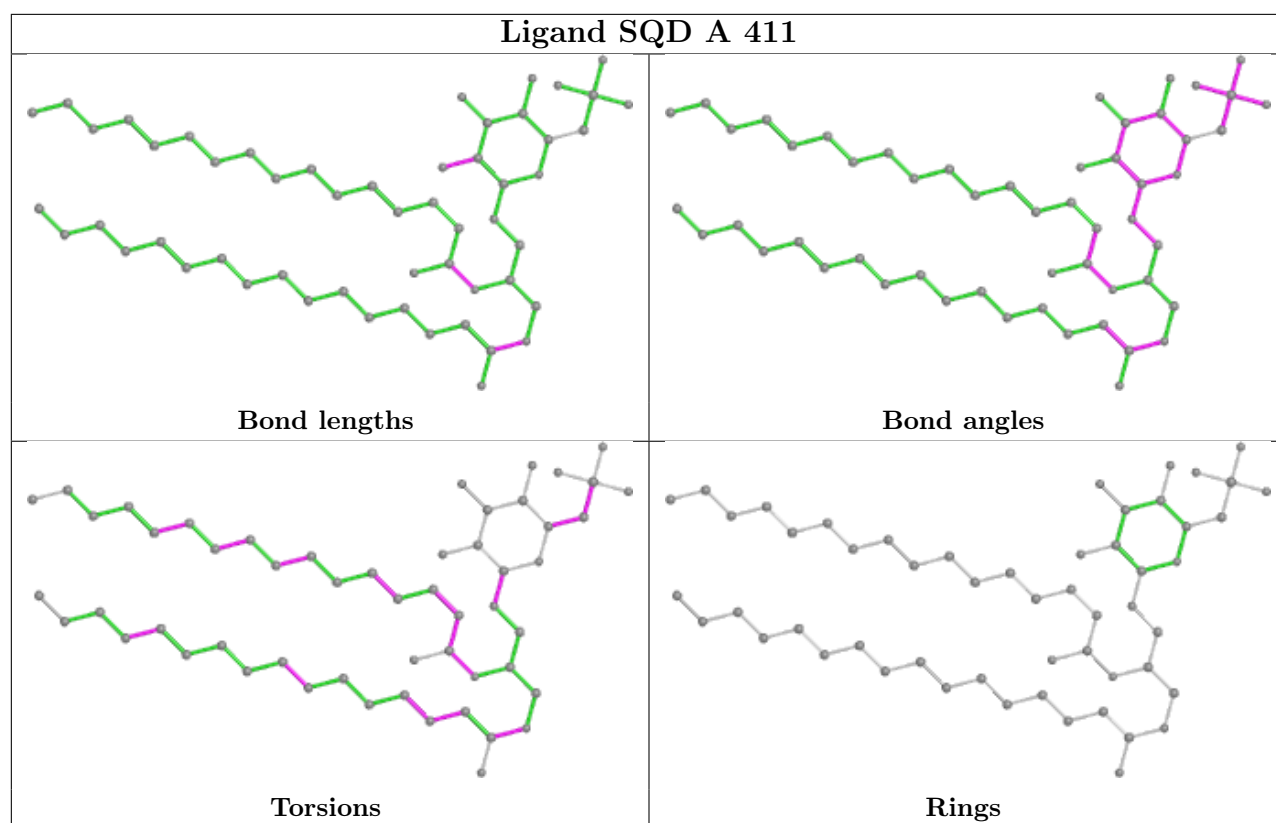


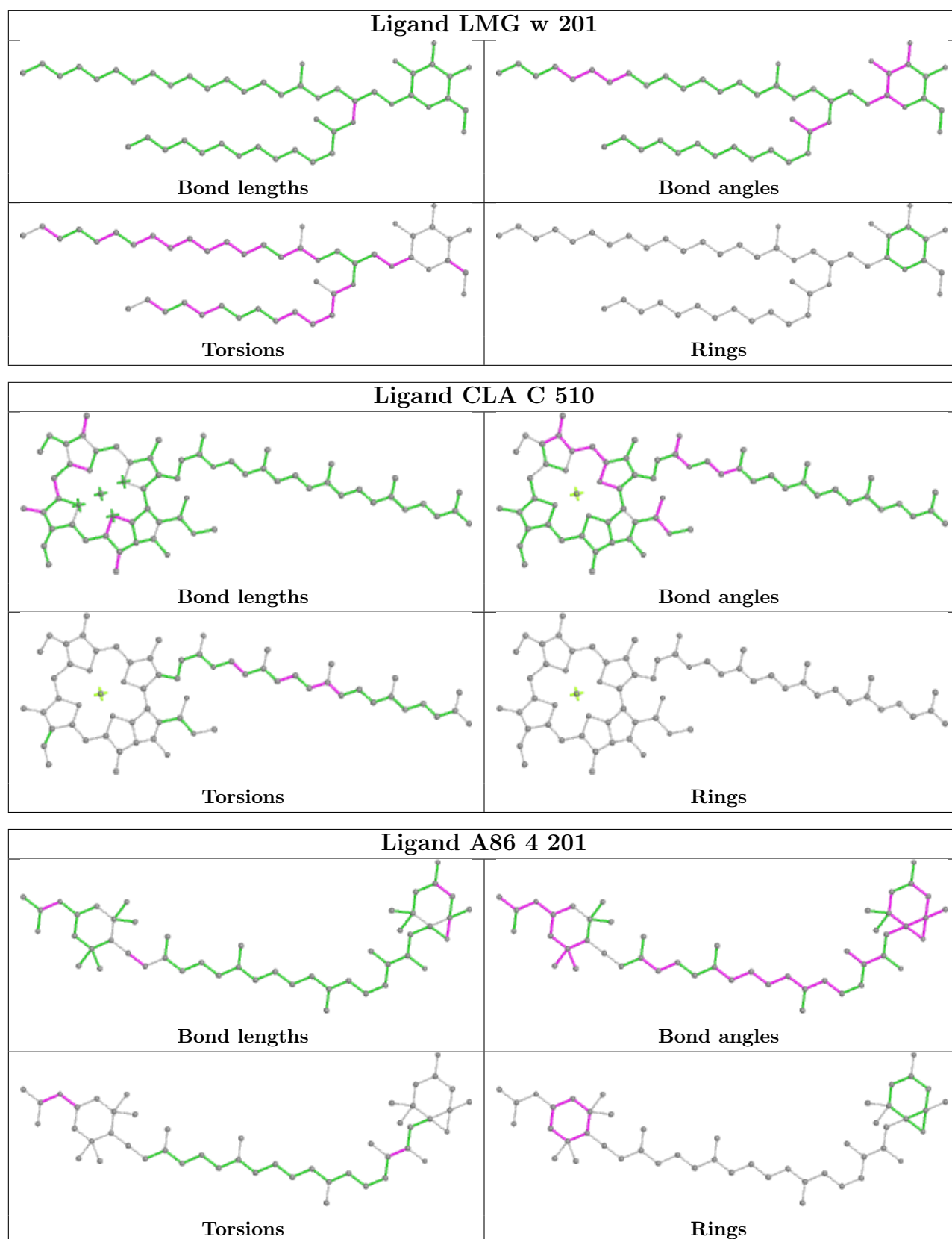


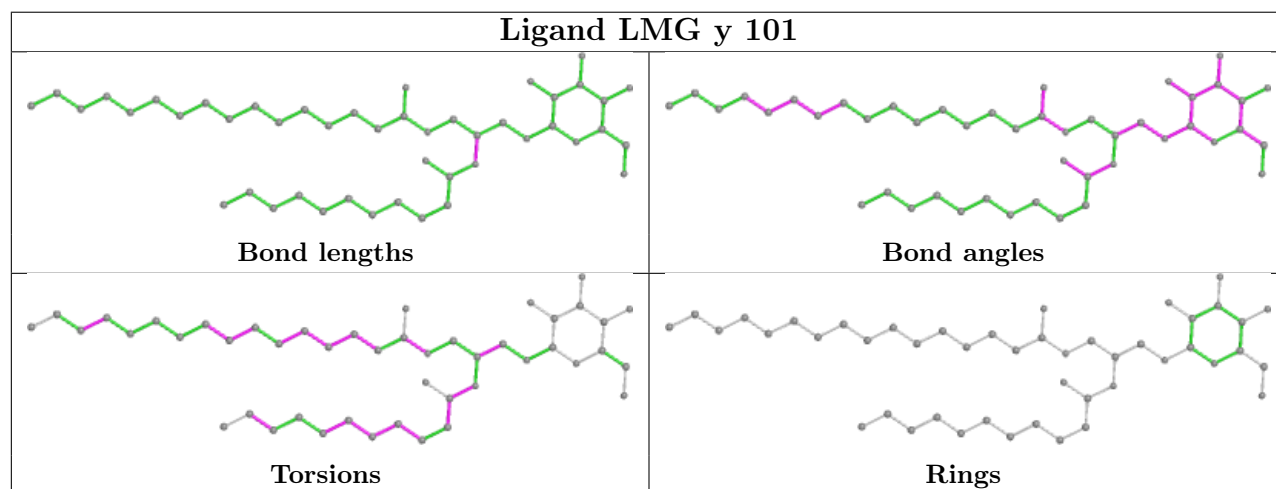
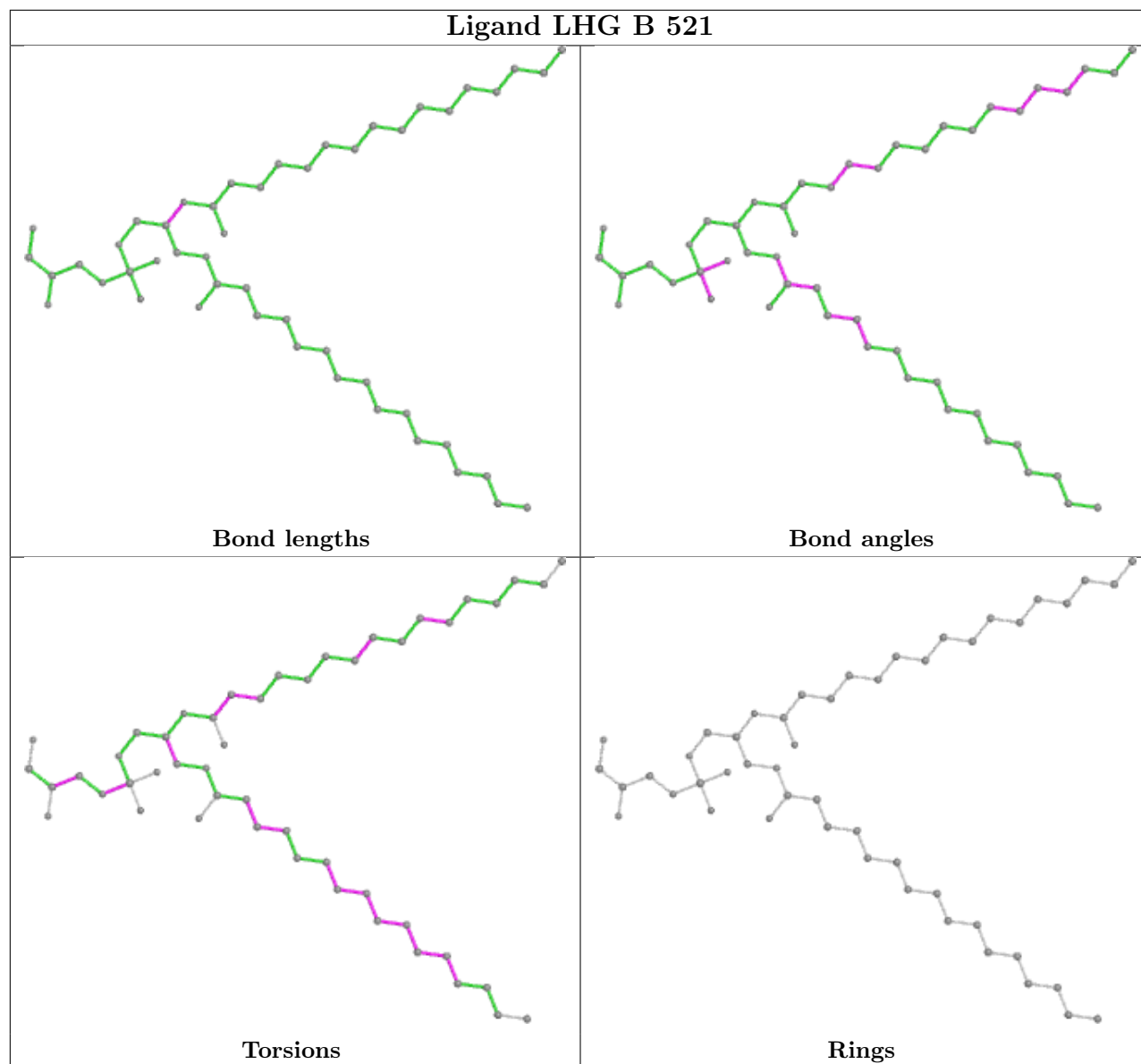


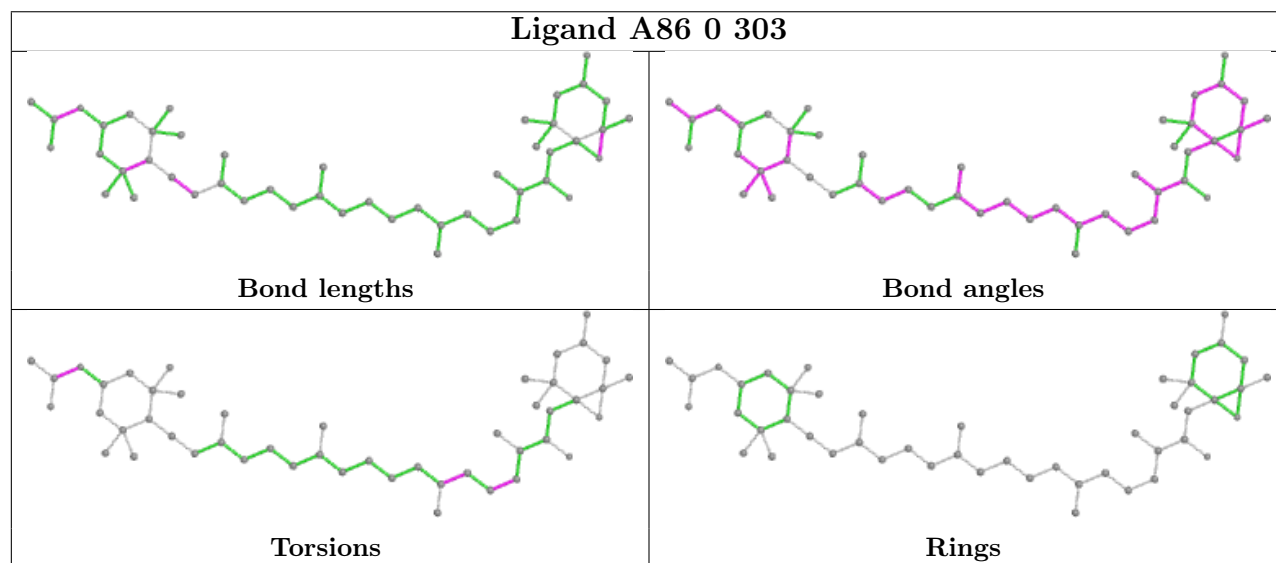
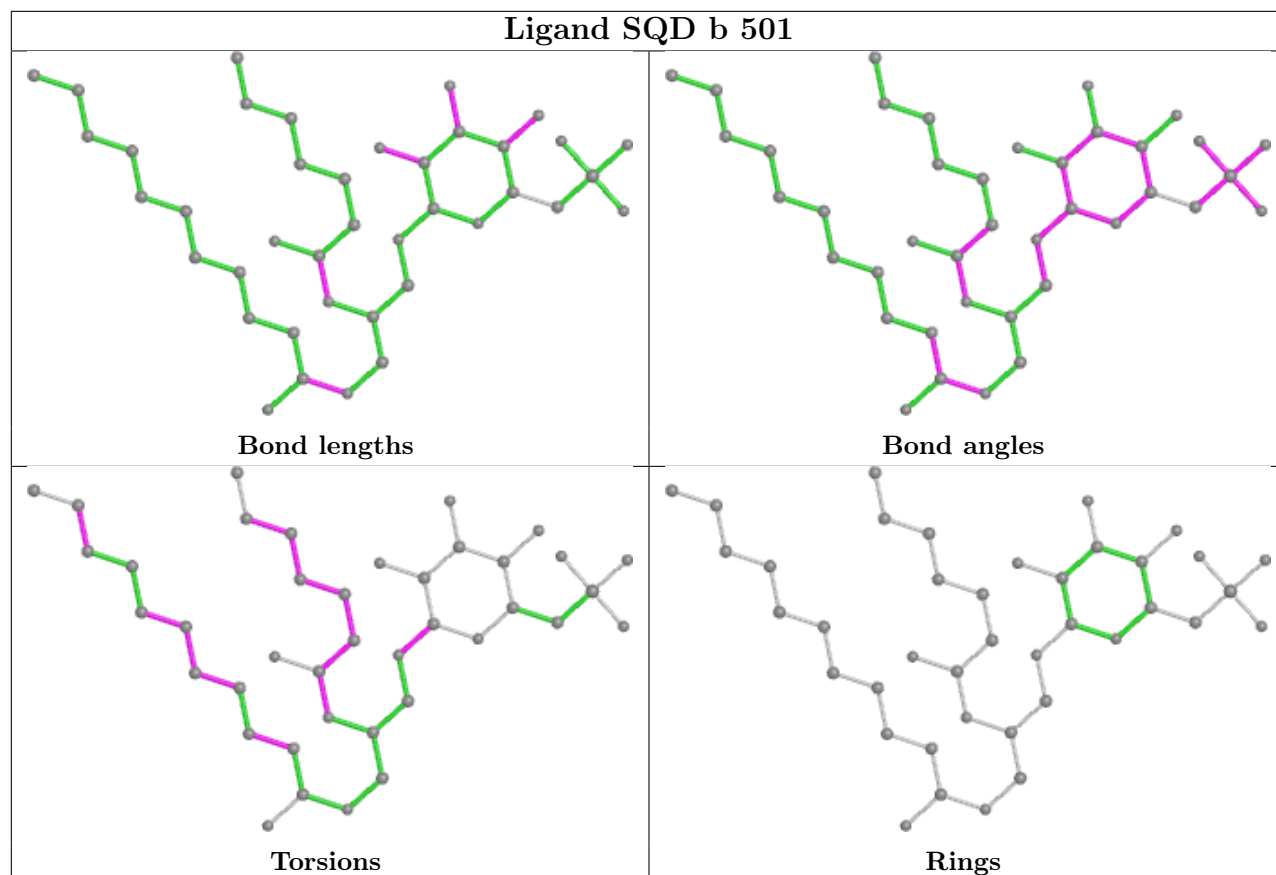


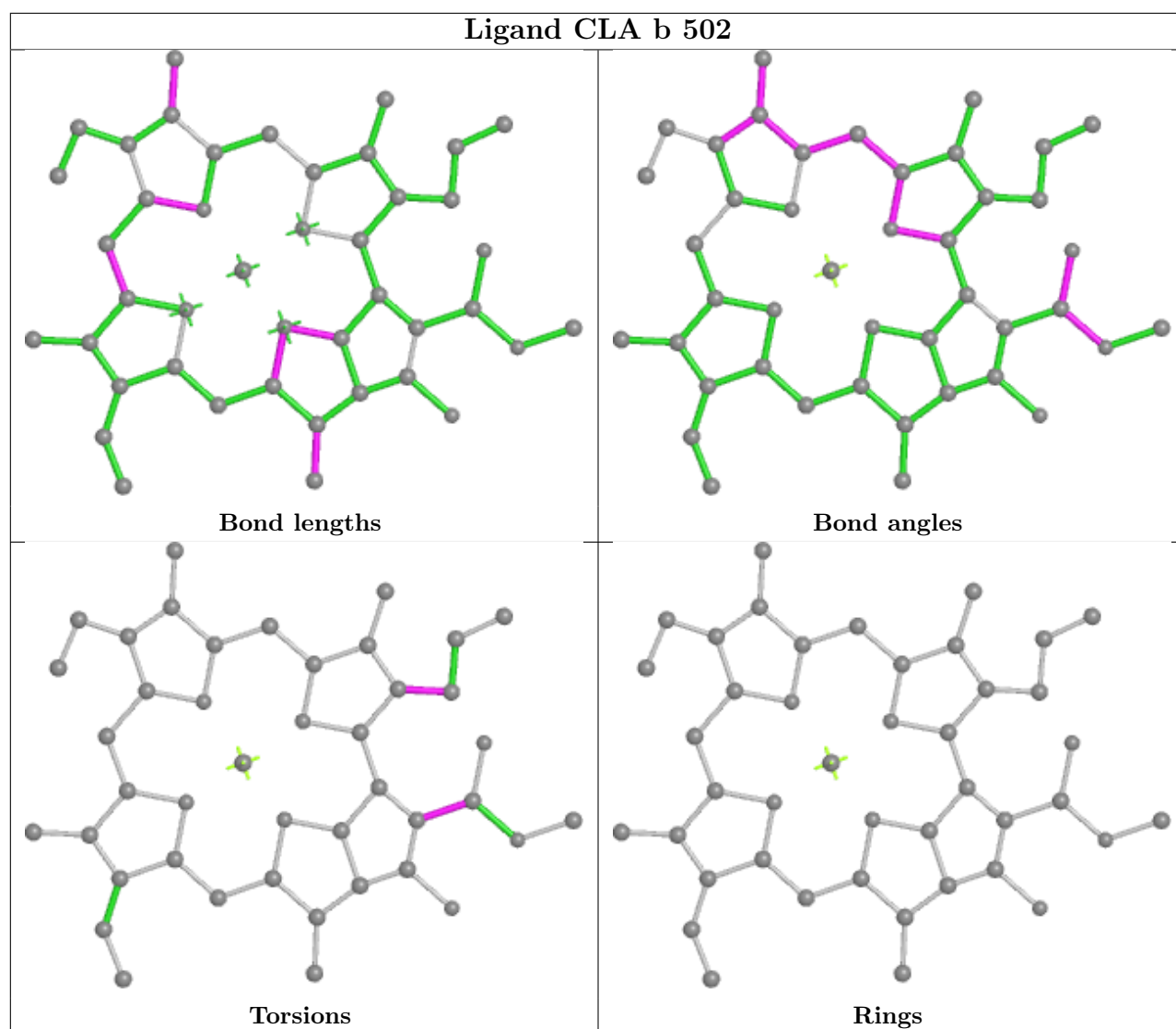


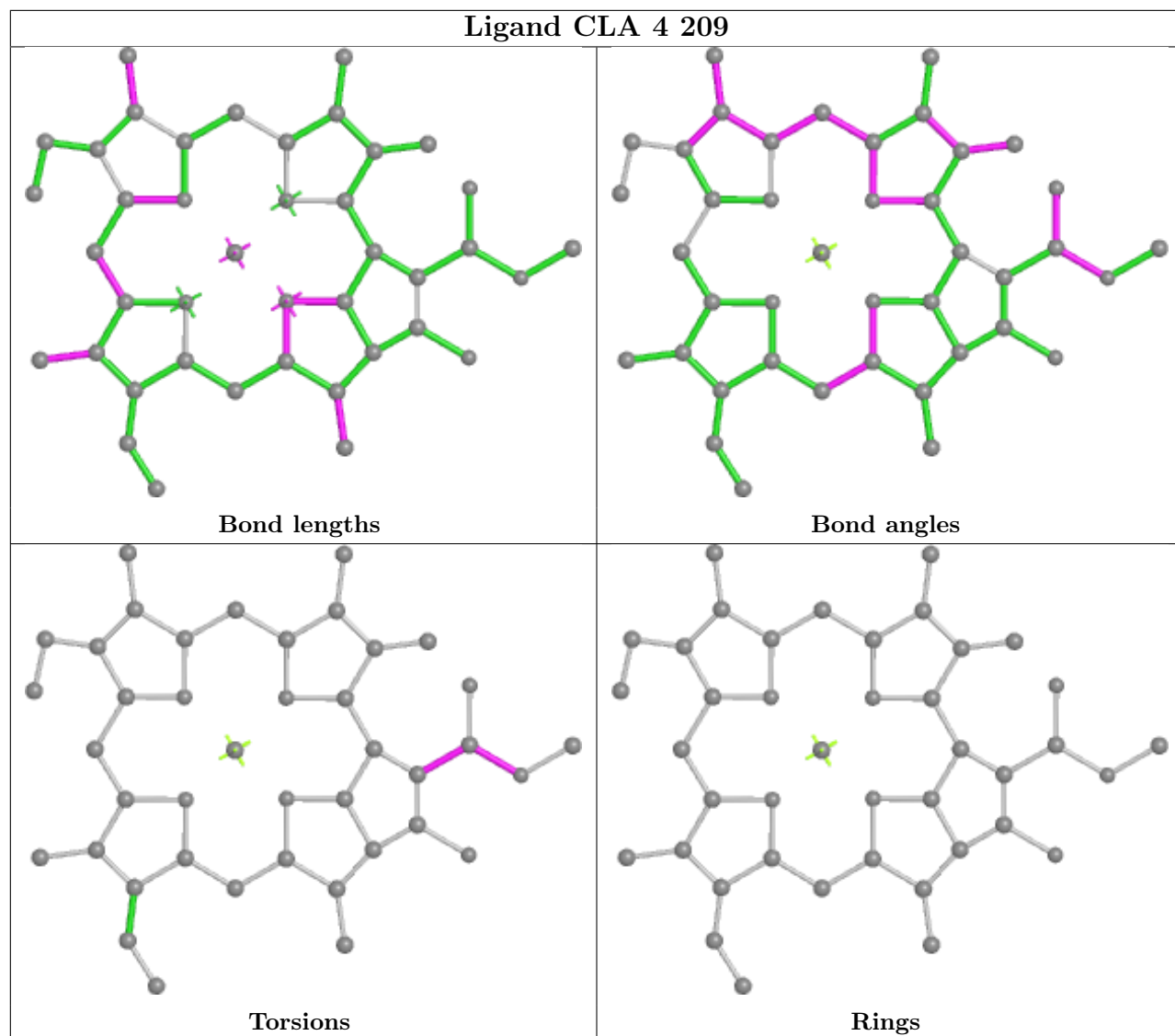


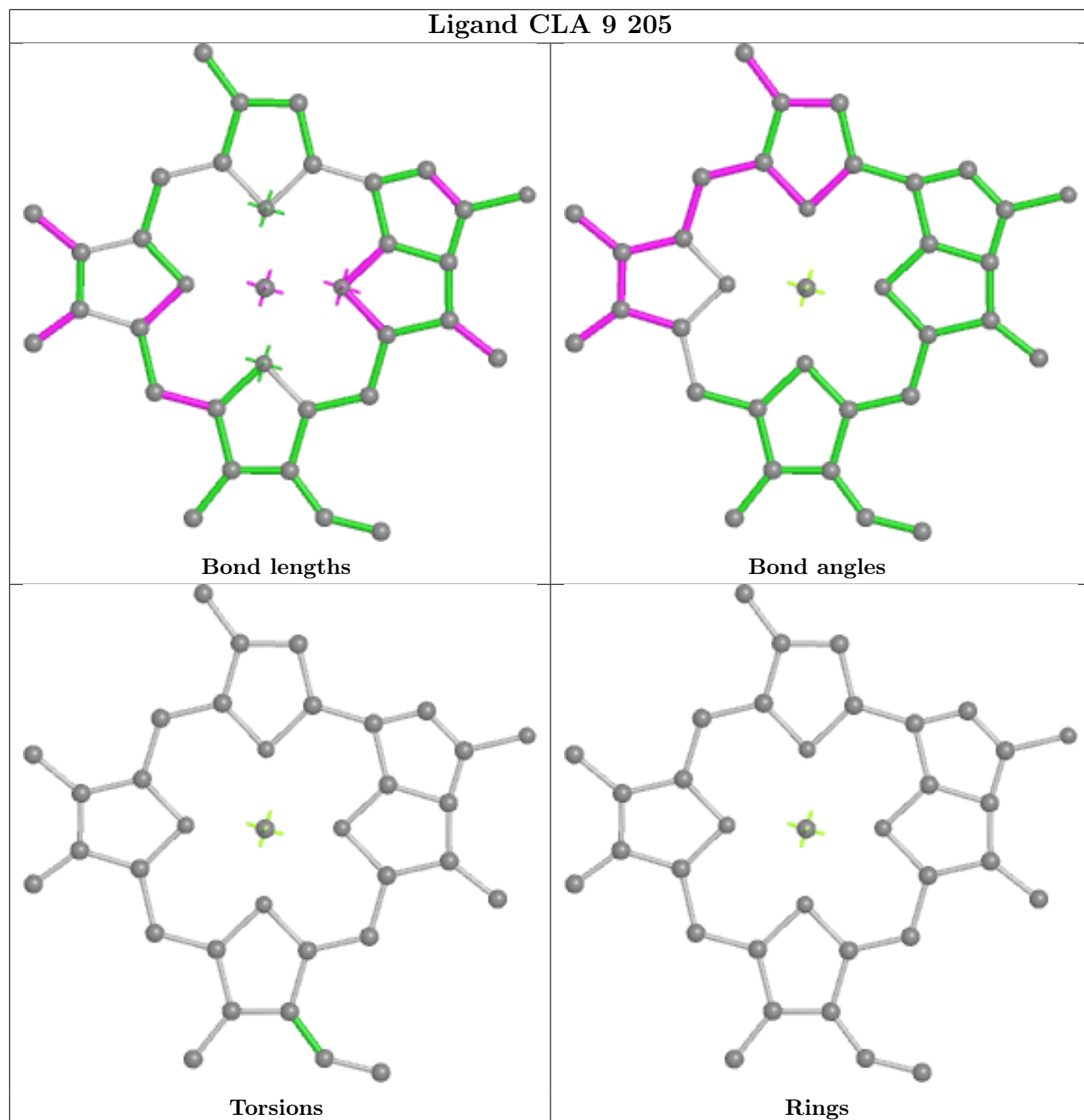


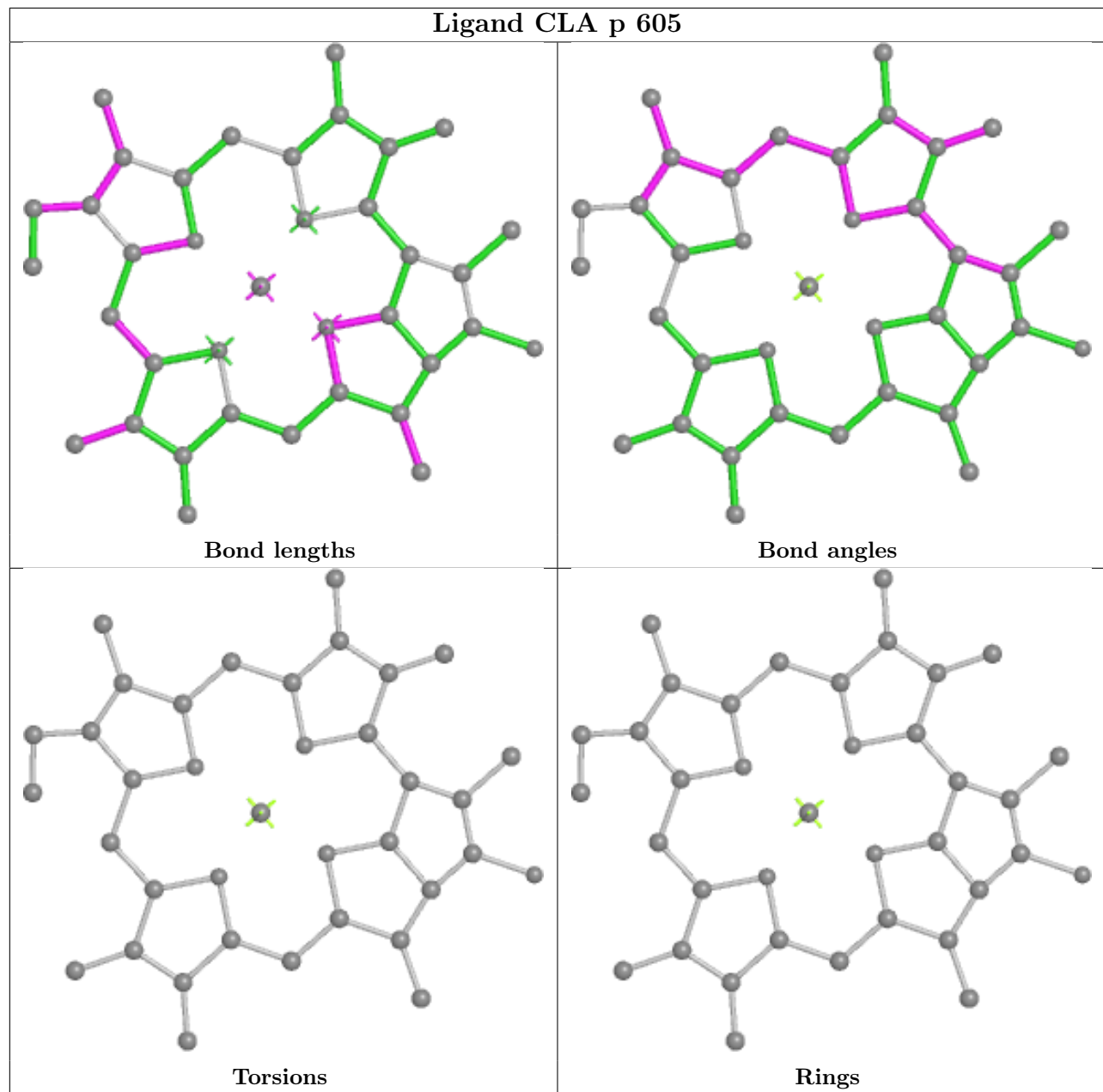


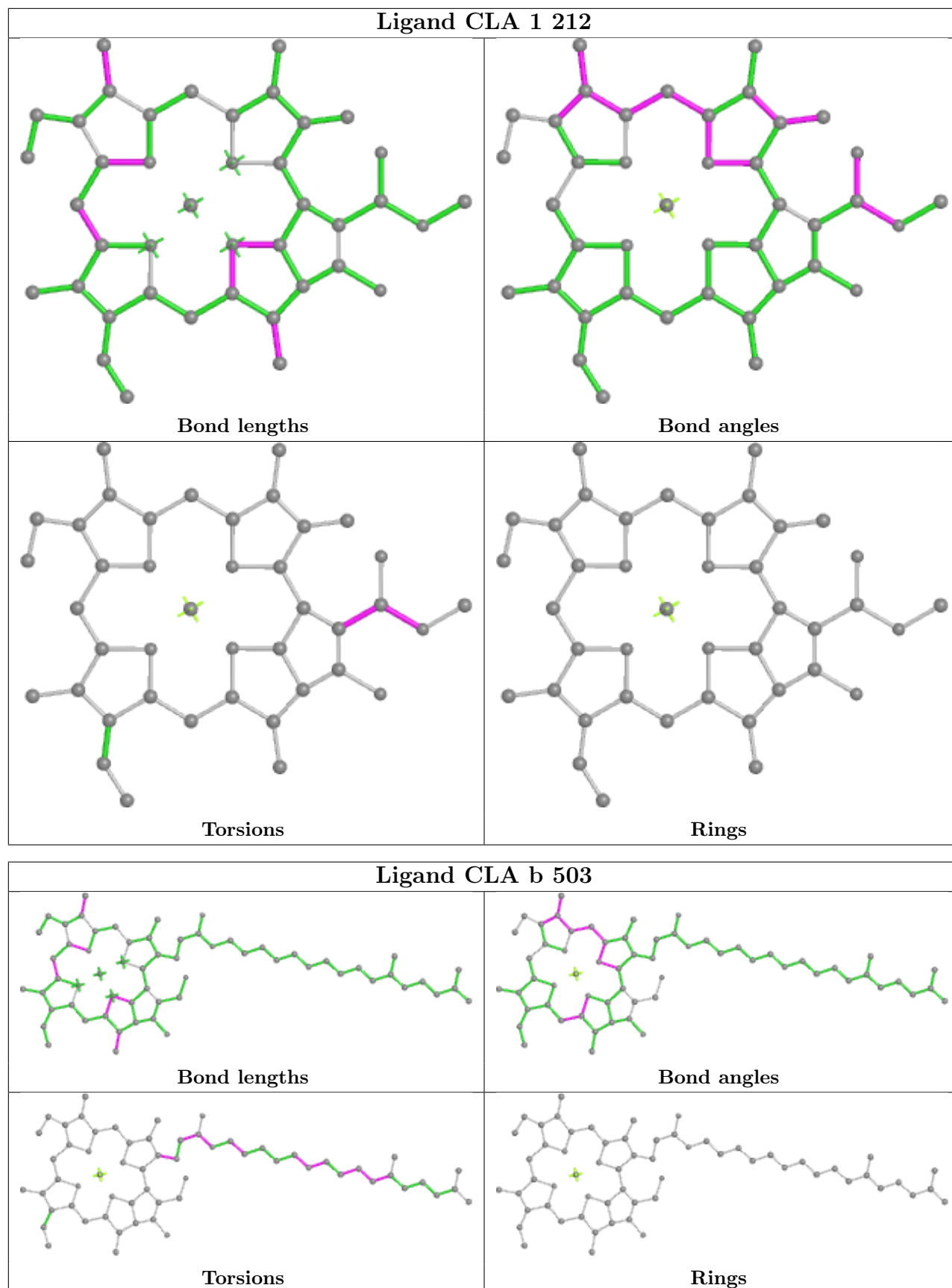


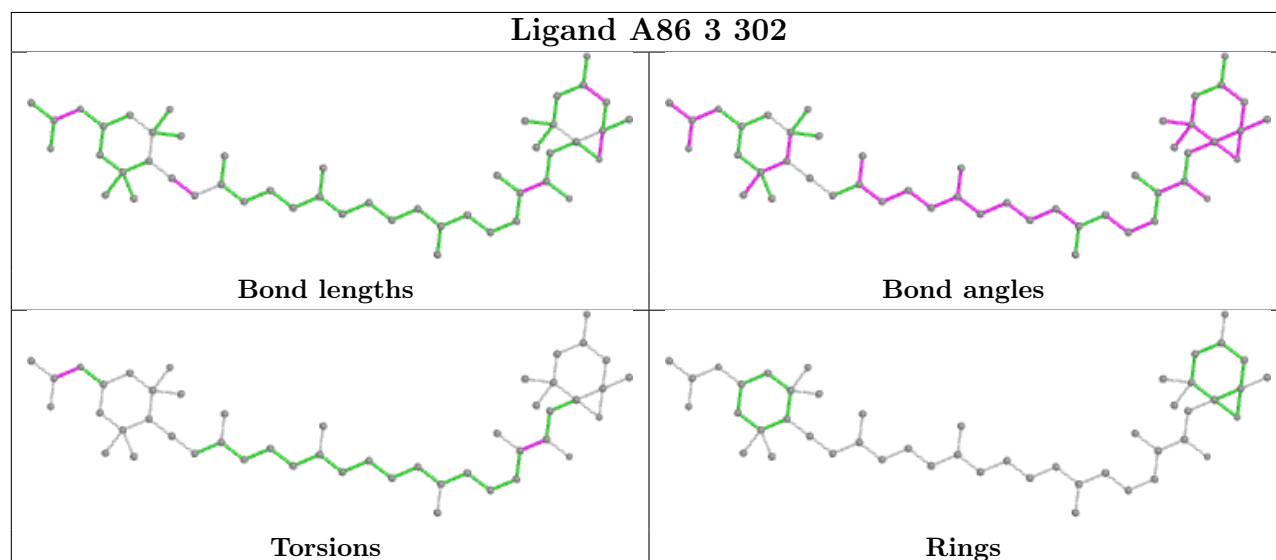
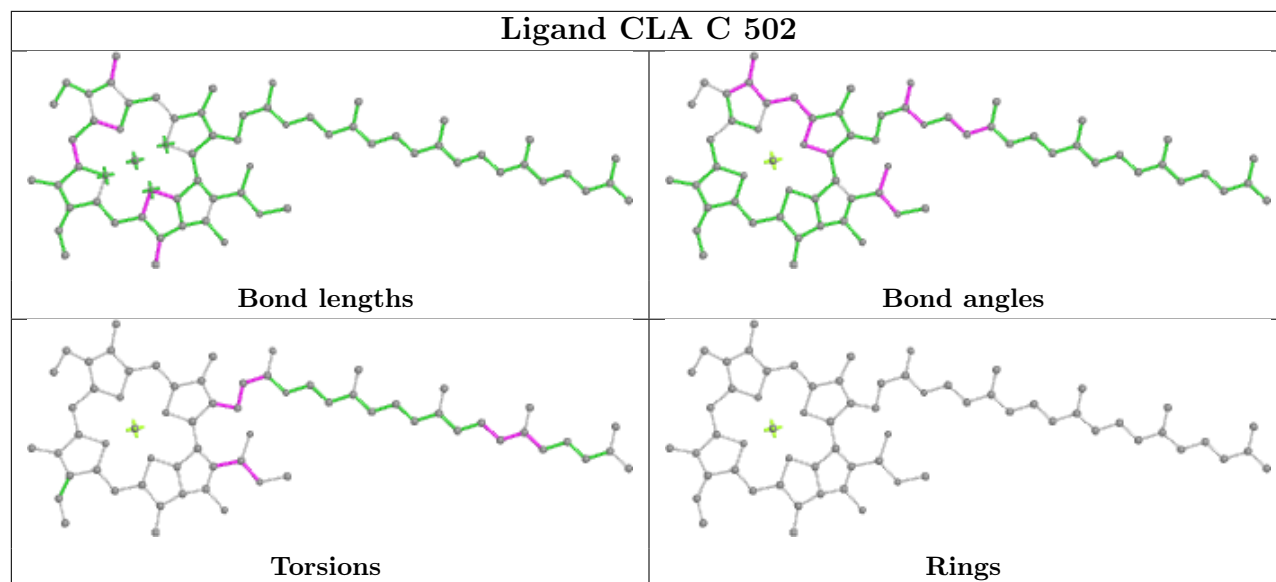


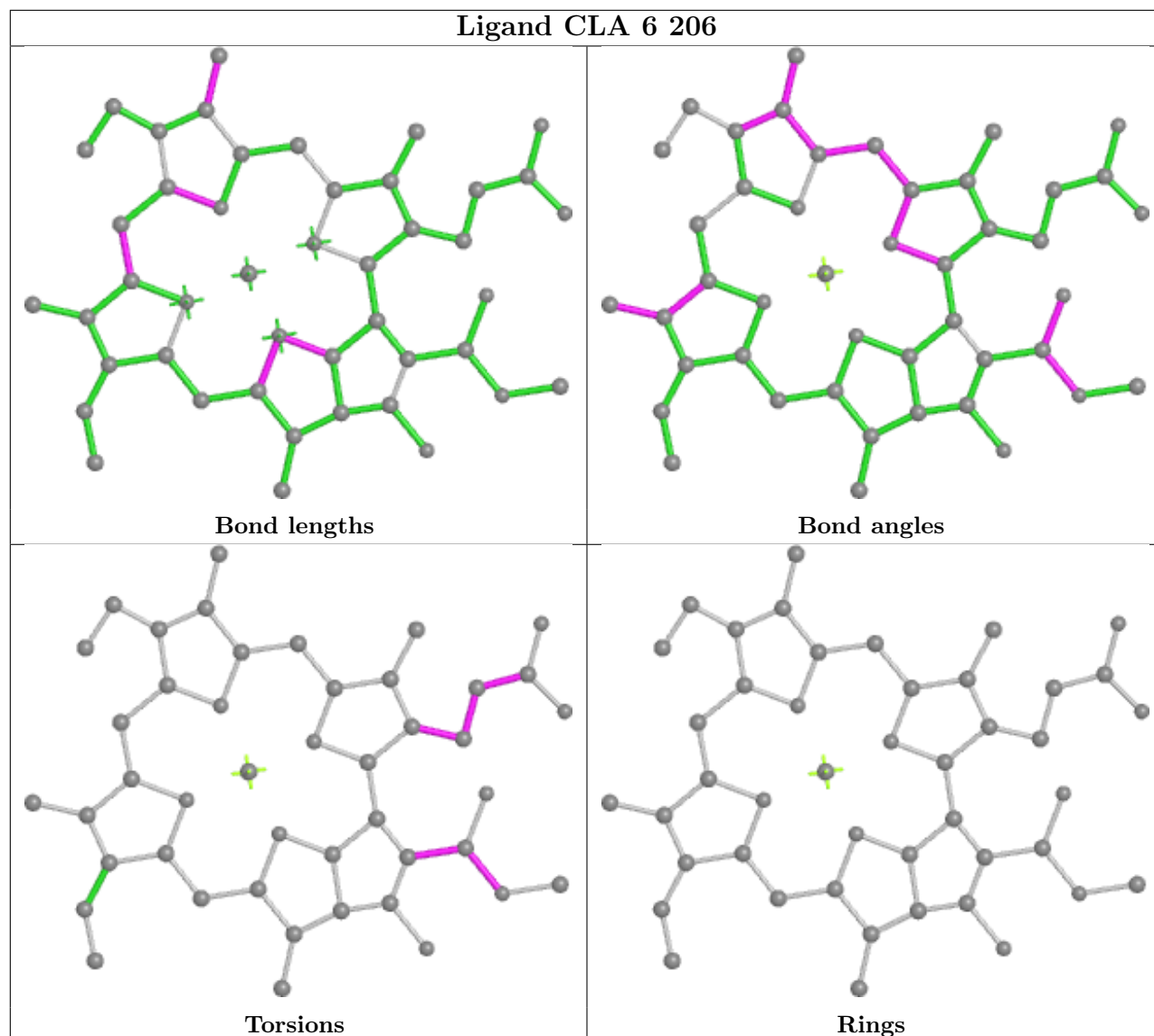


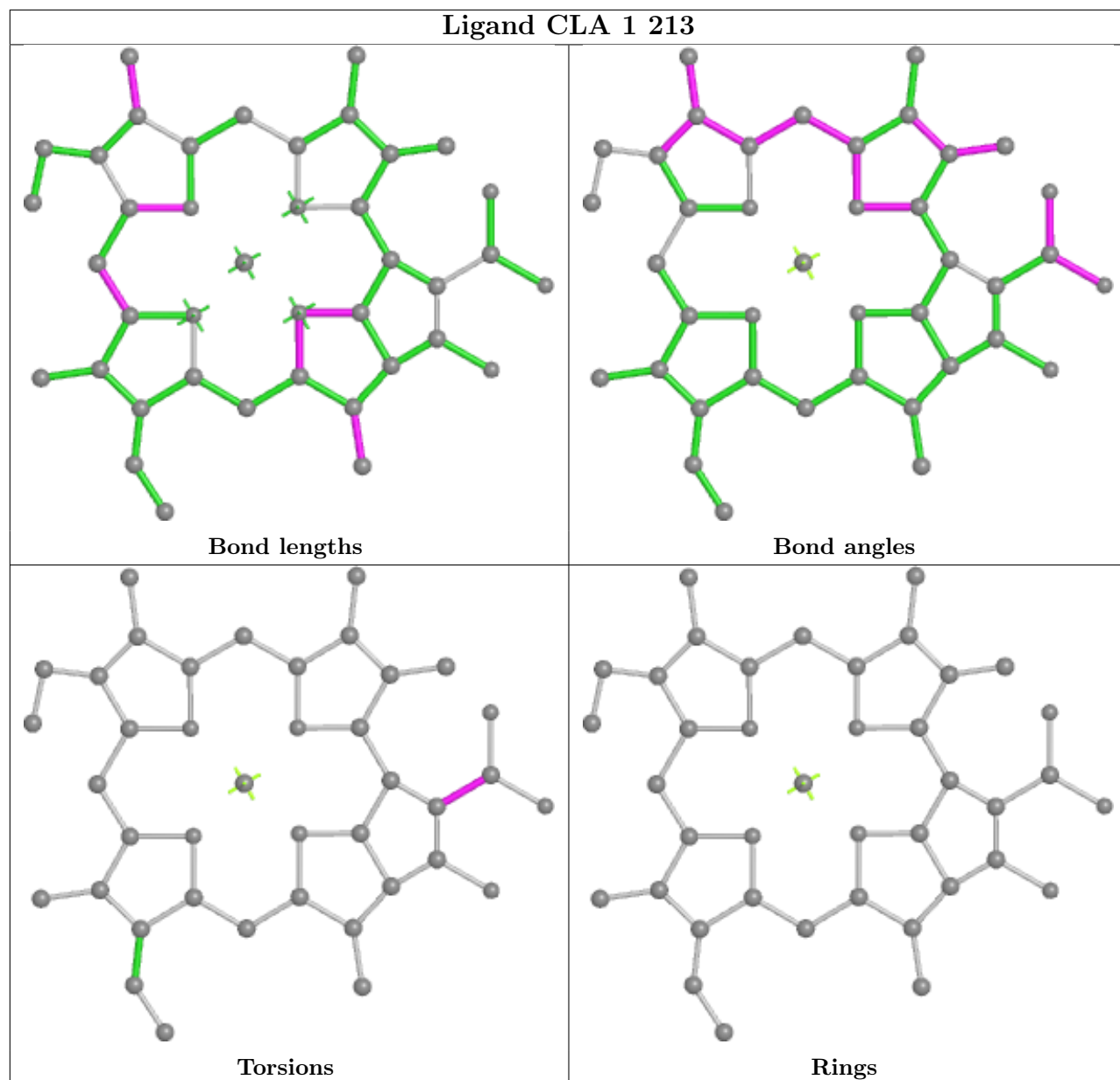




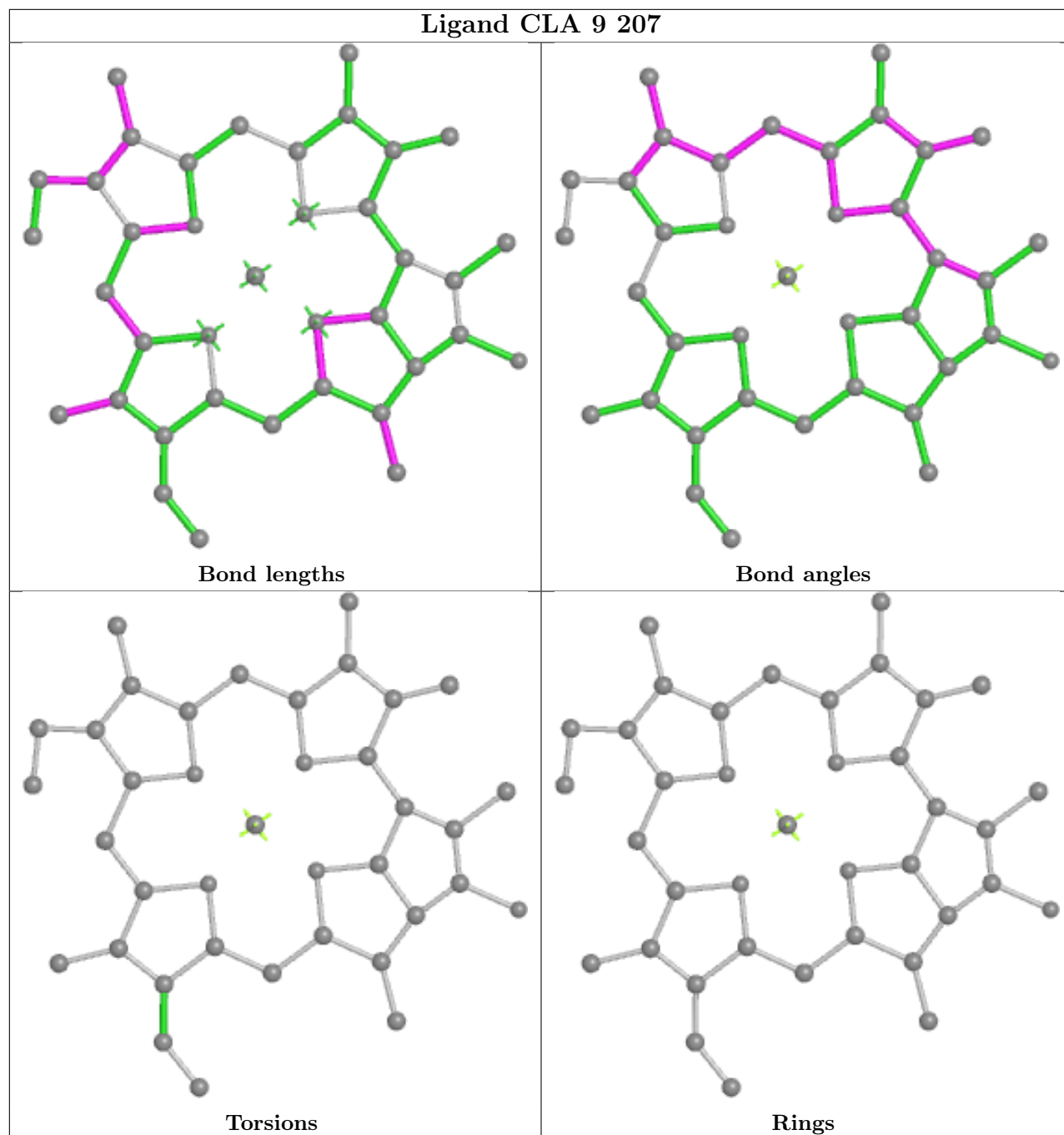




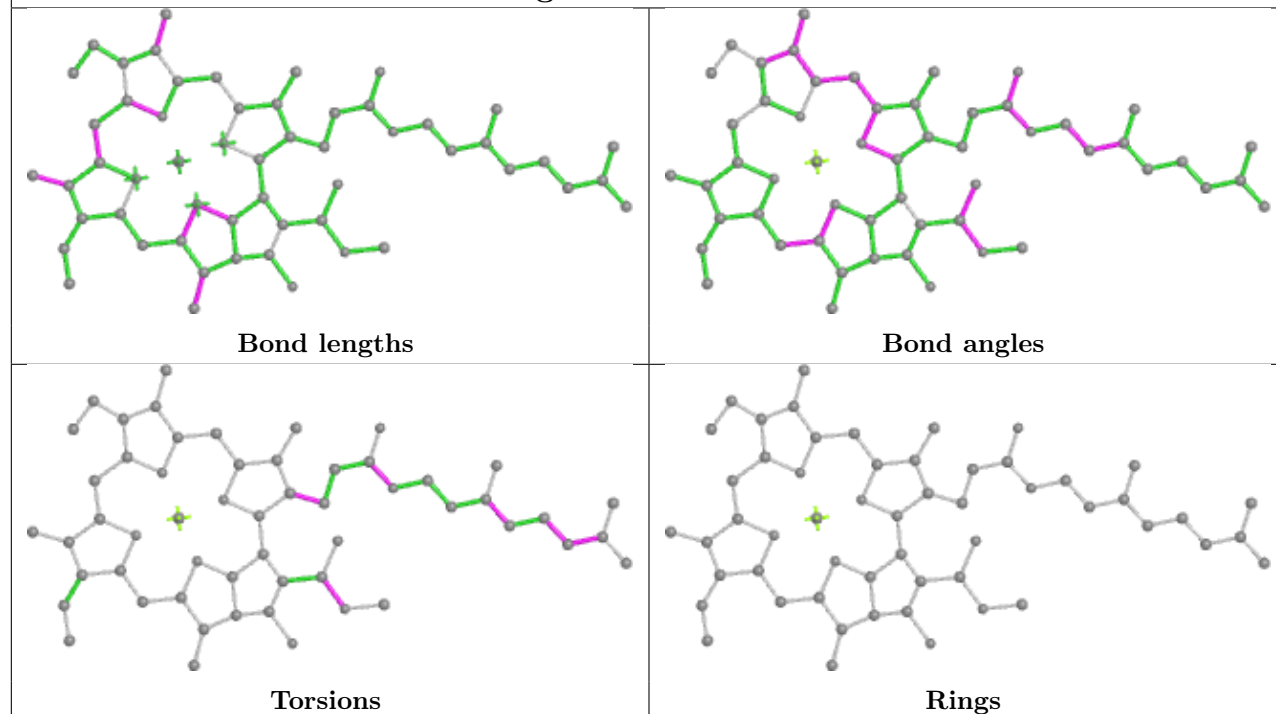




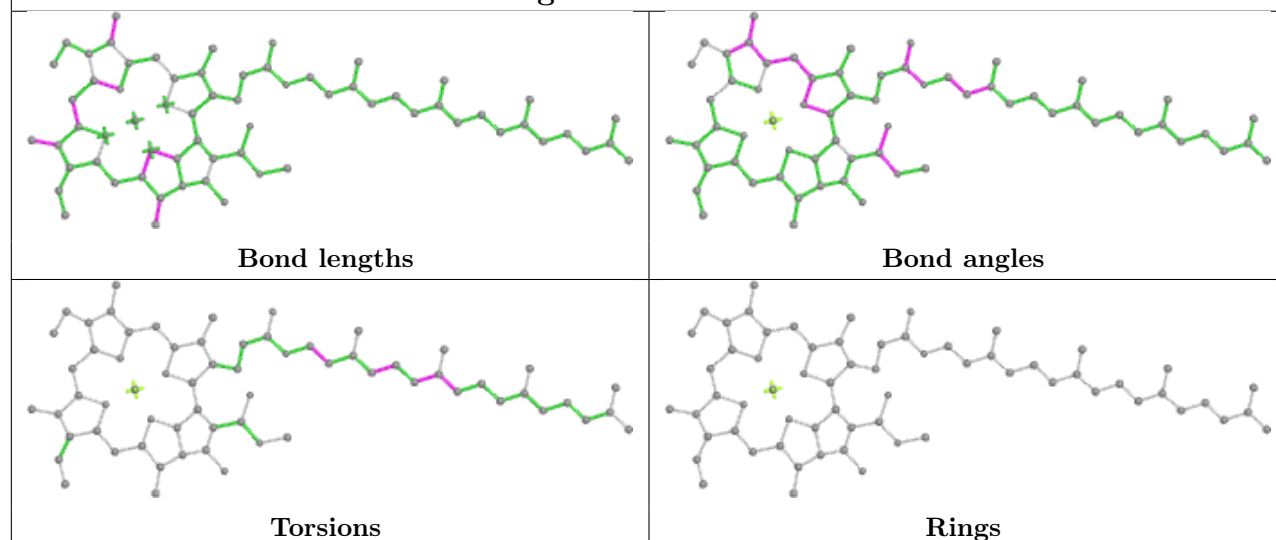
Ligand CLA 9 207

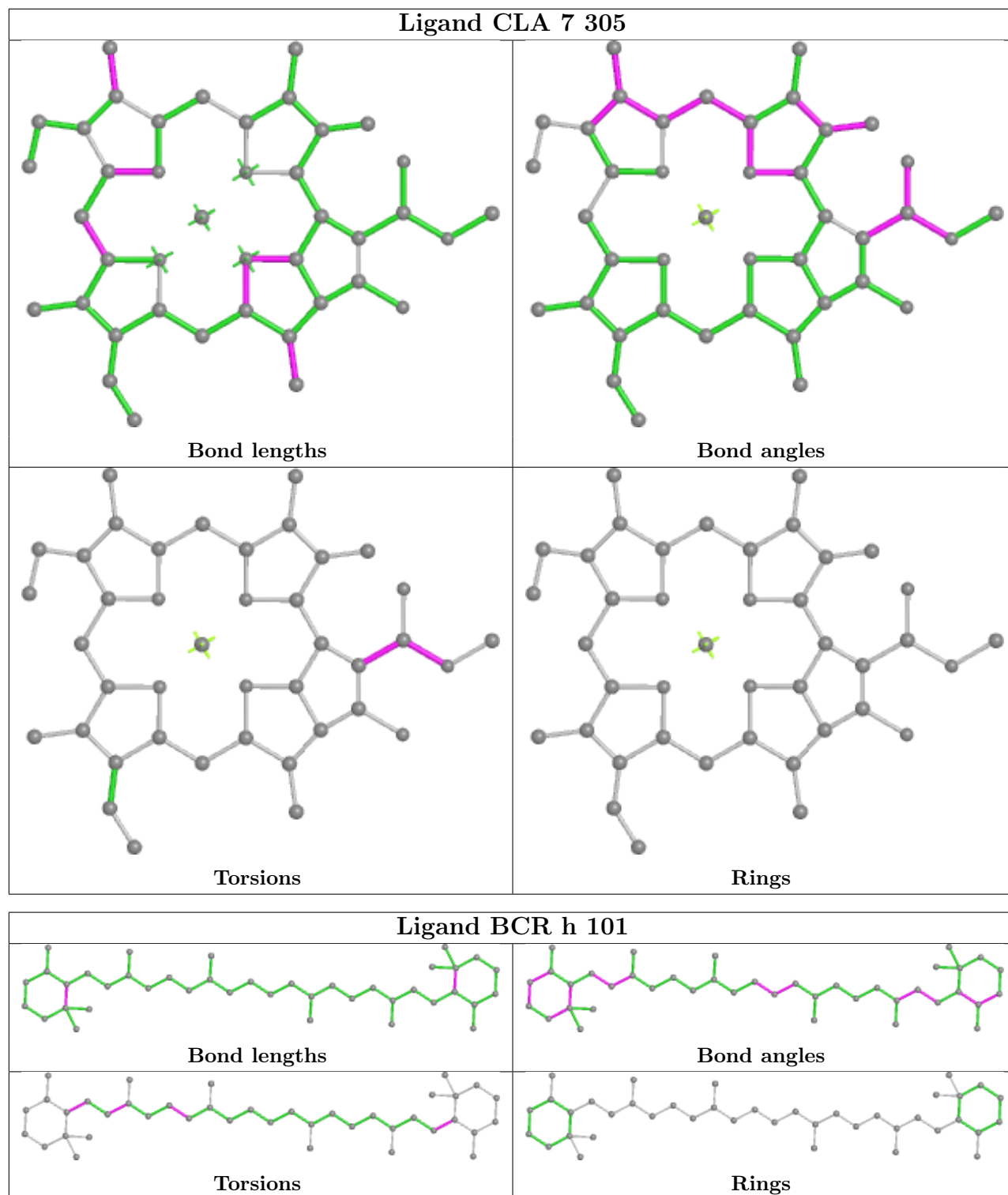


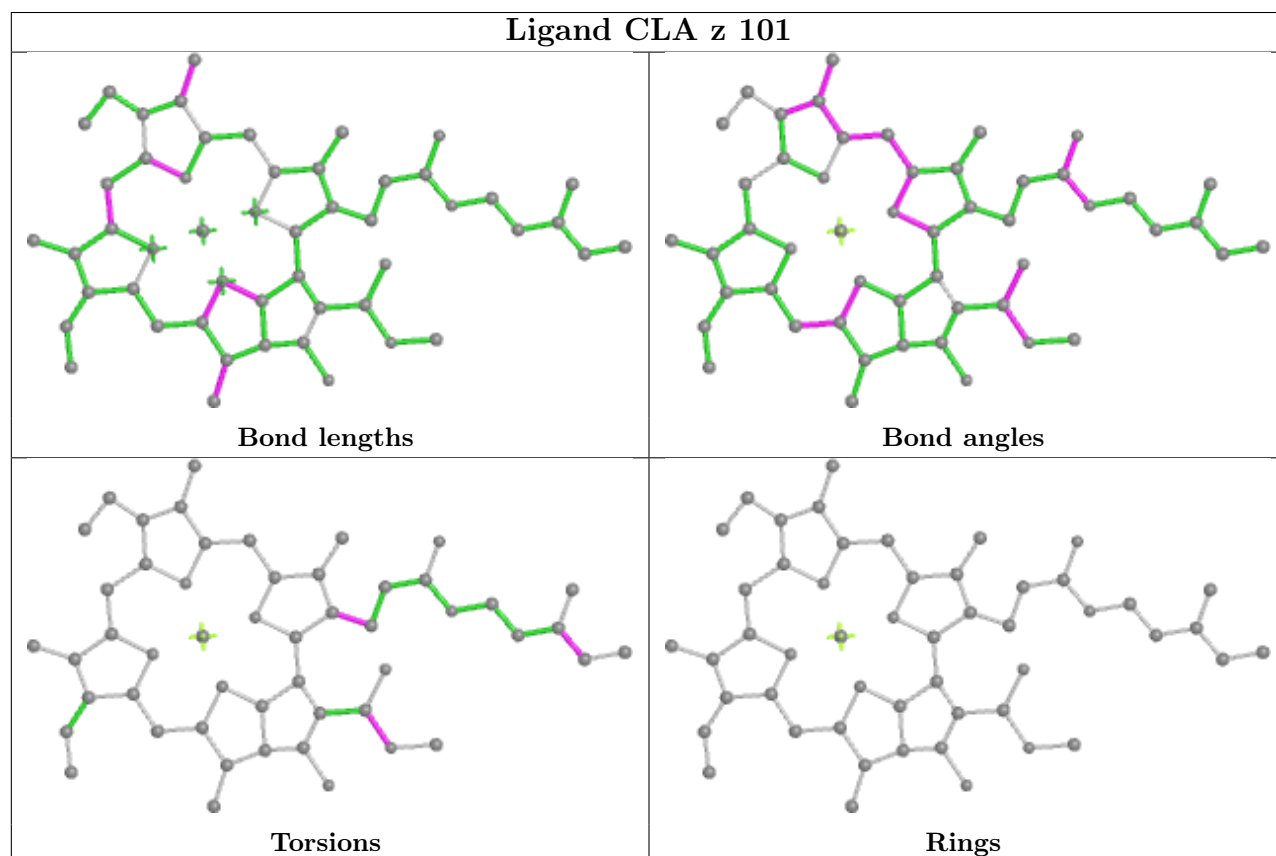
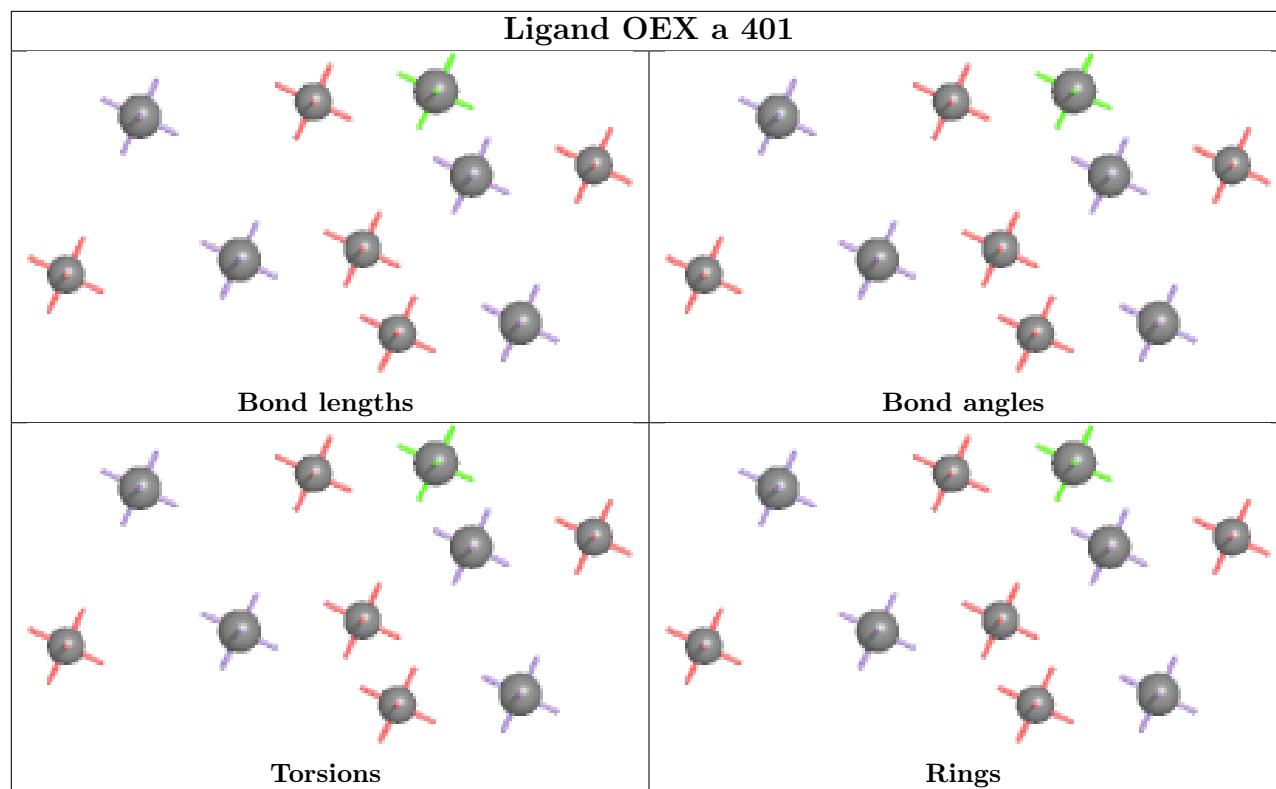
Ligand CLA 7 310



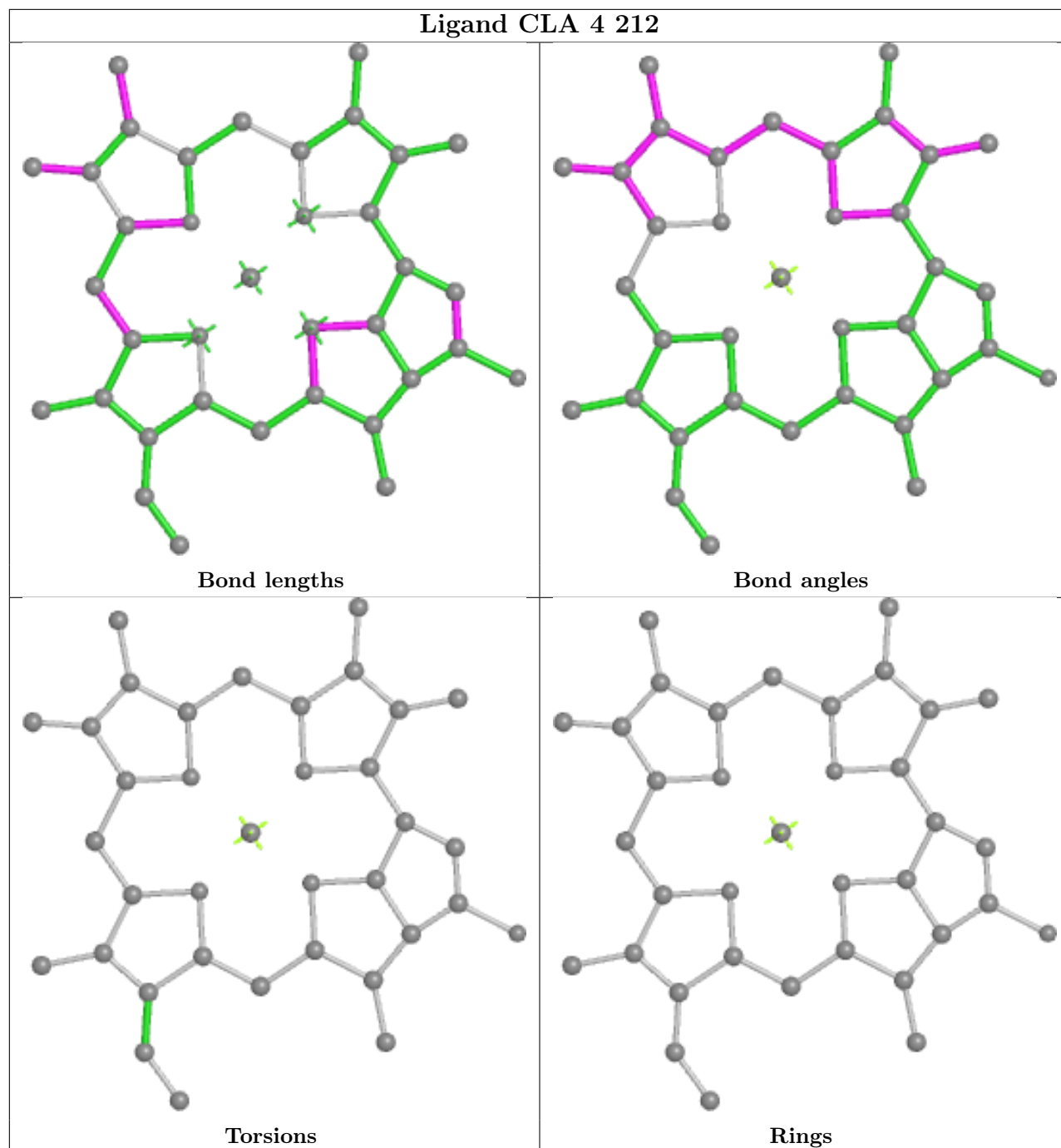
Ligand CLA c 510

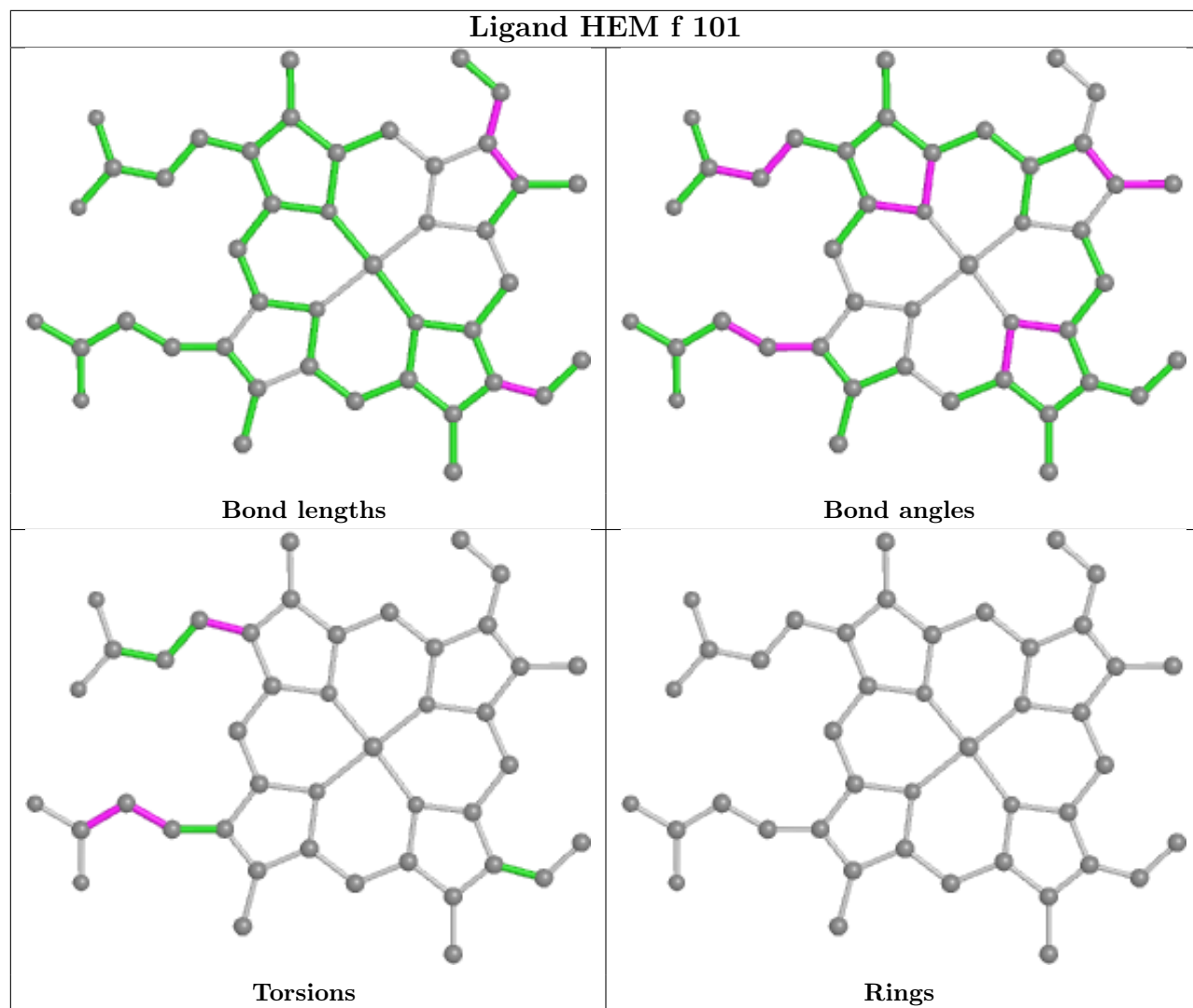


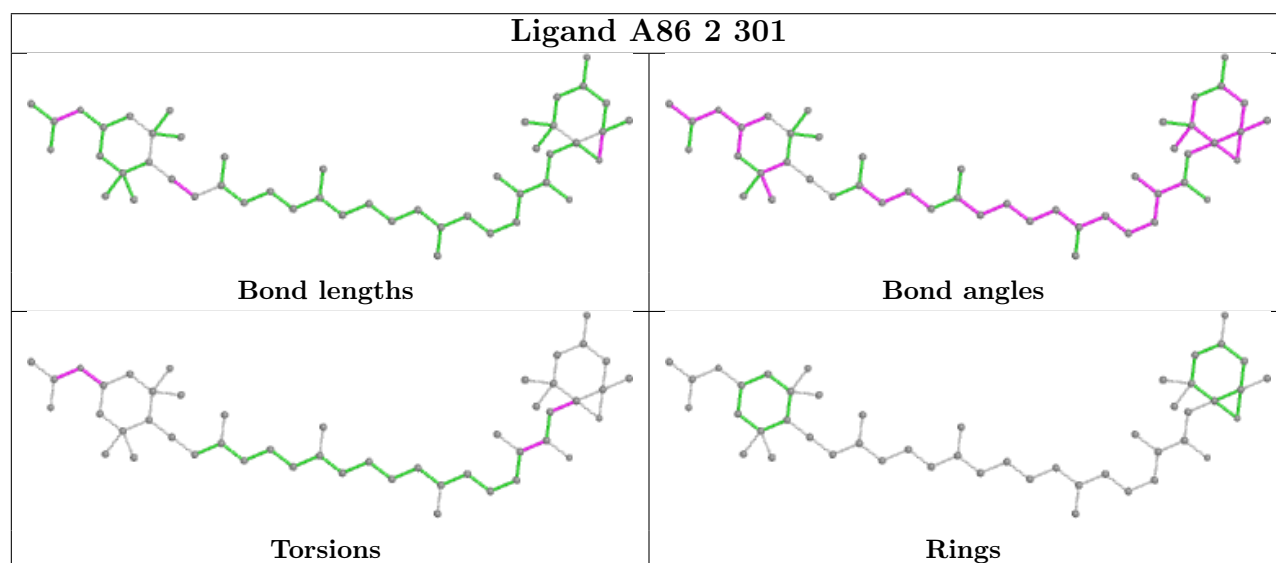
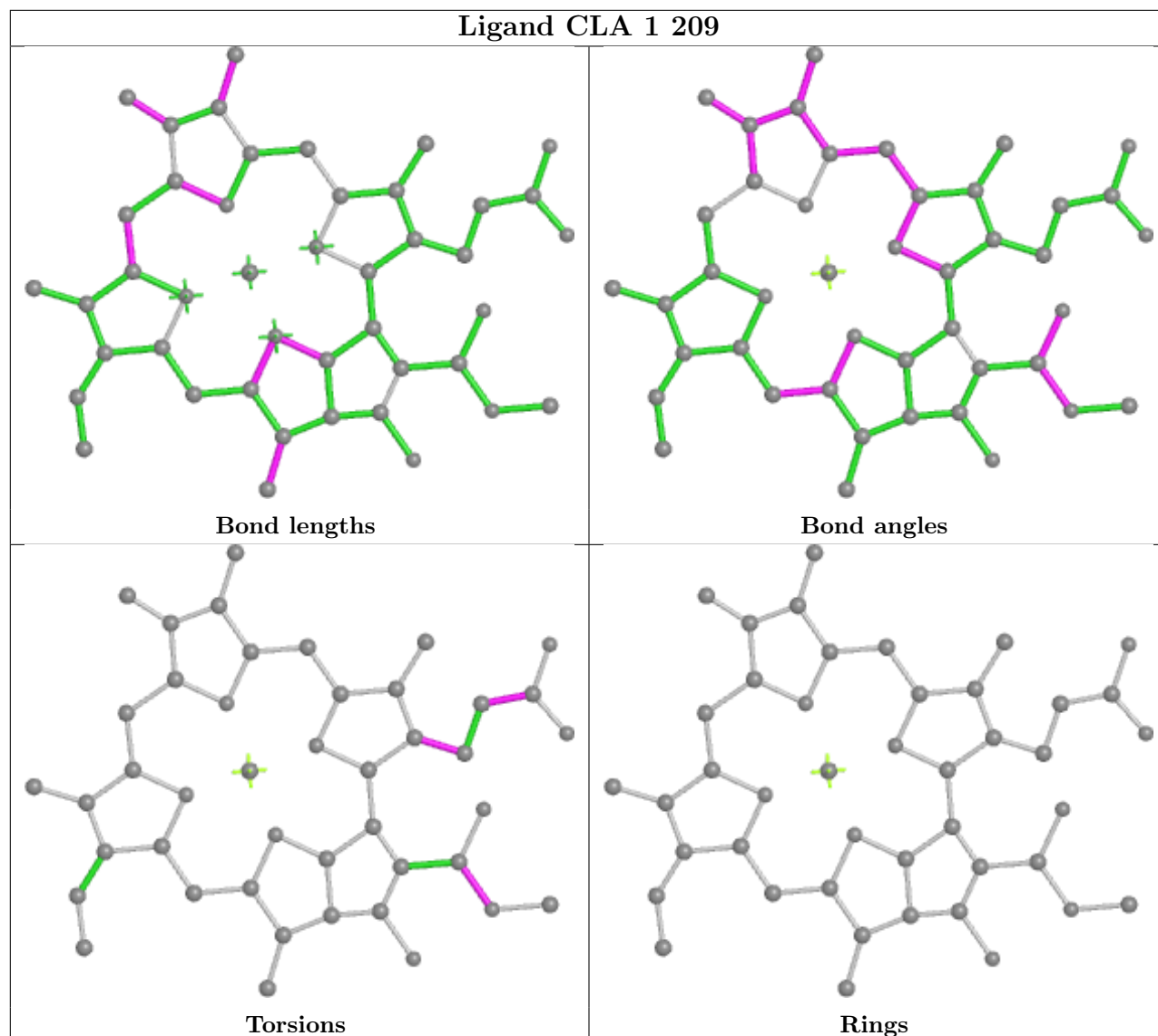


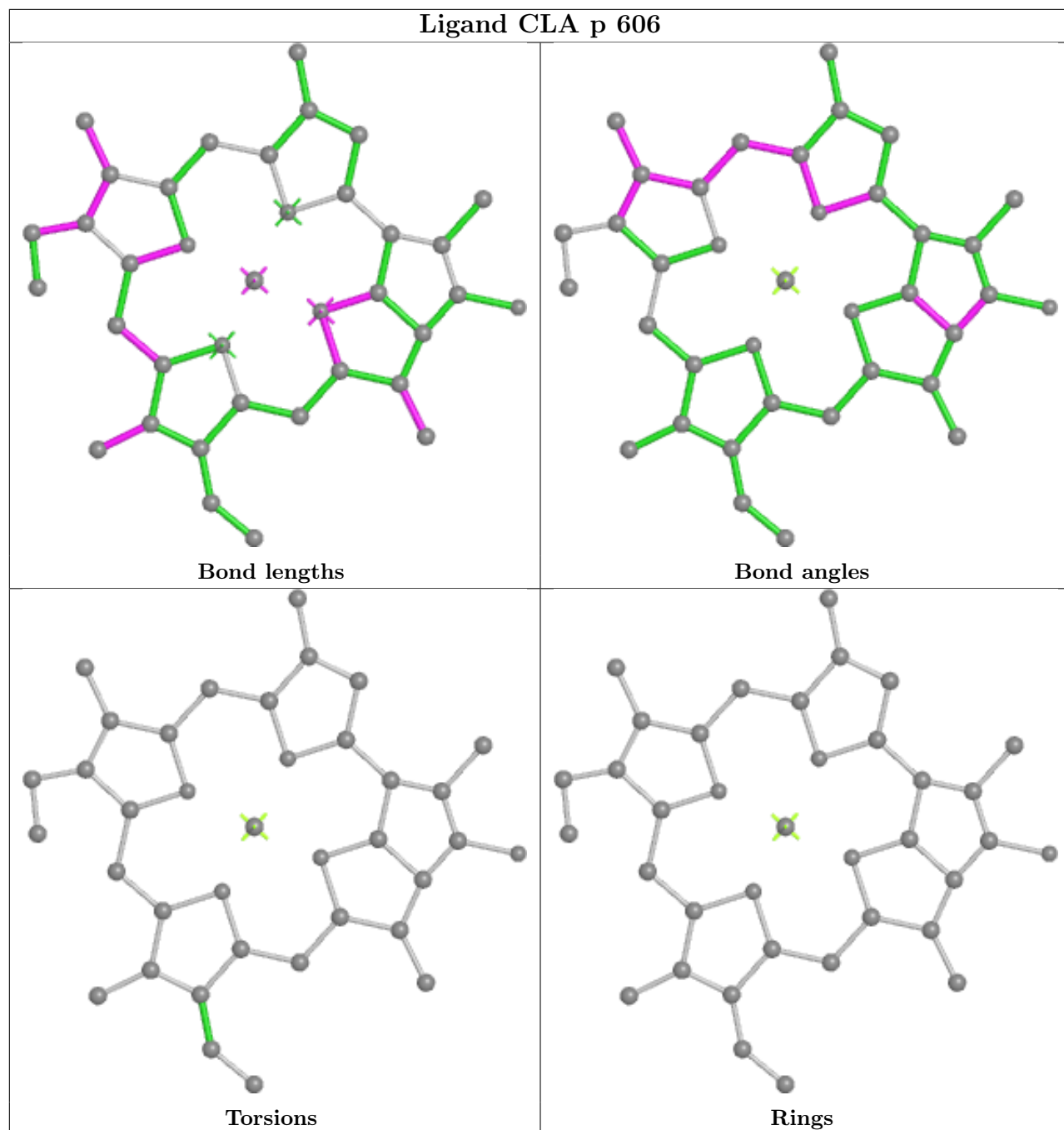


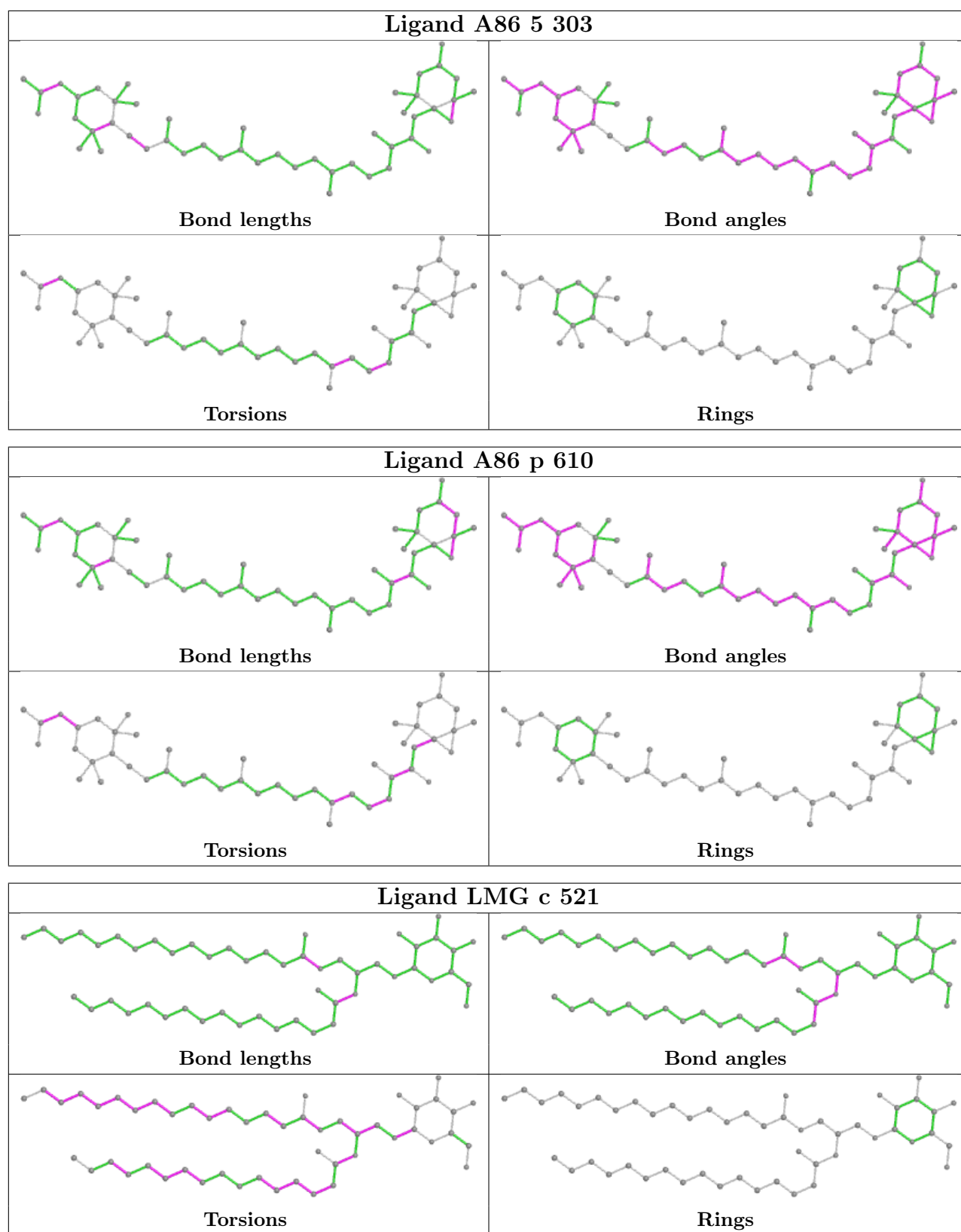
Ligand CLA 4 212

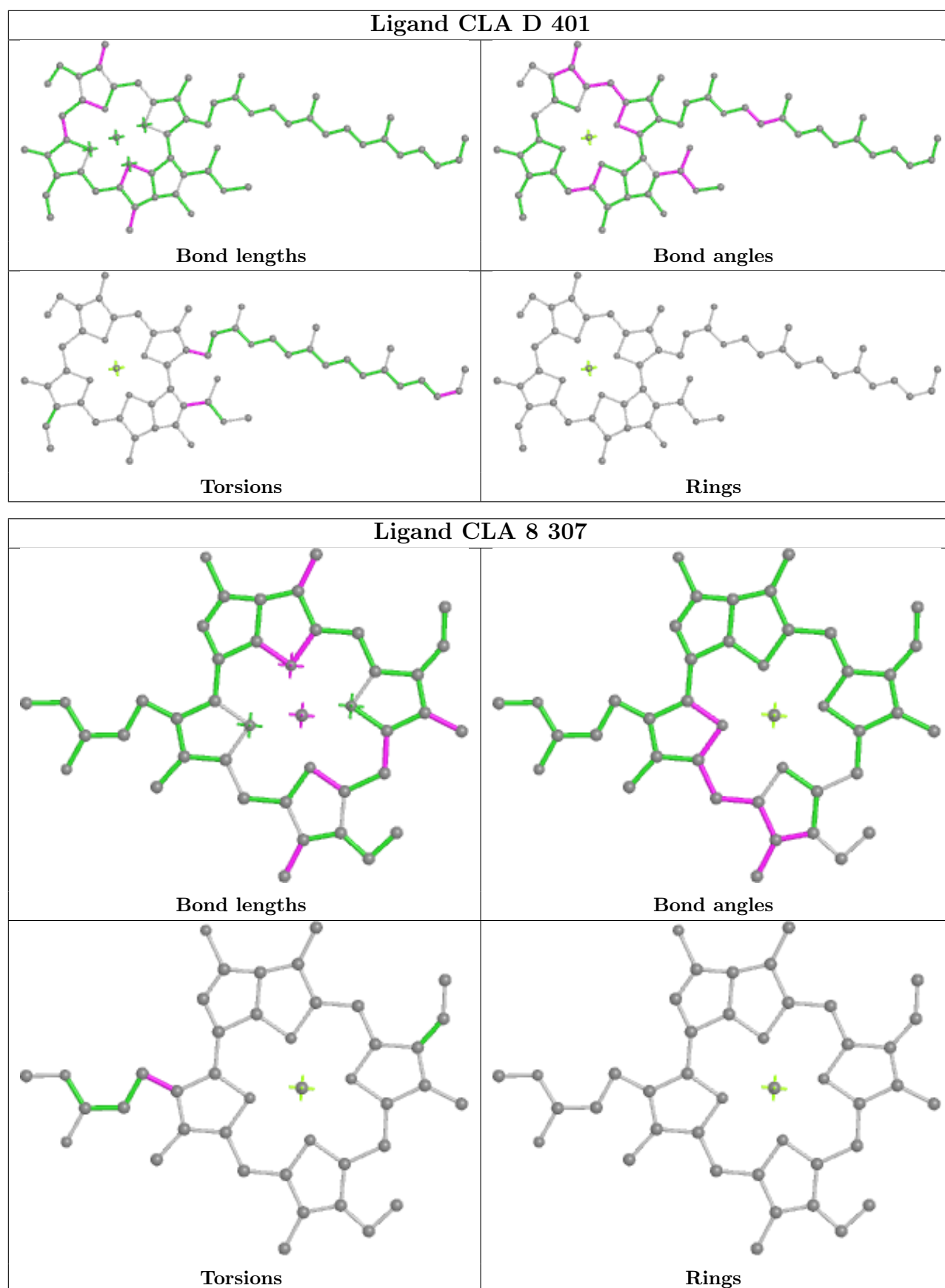


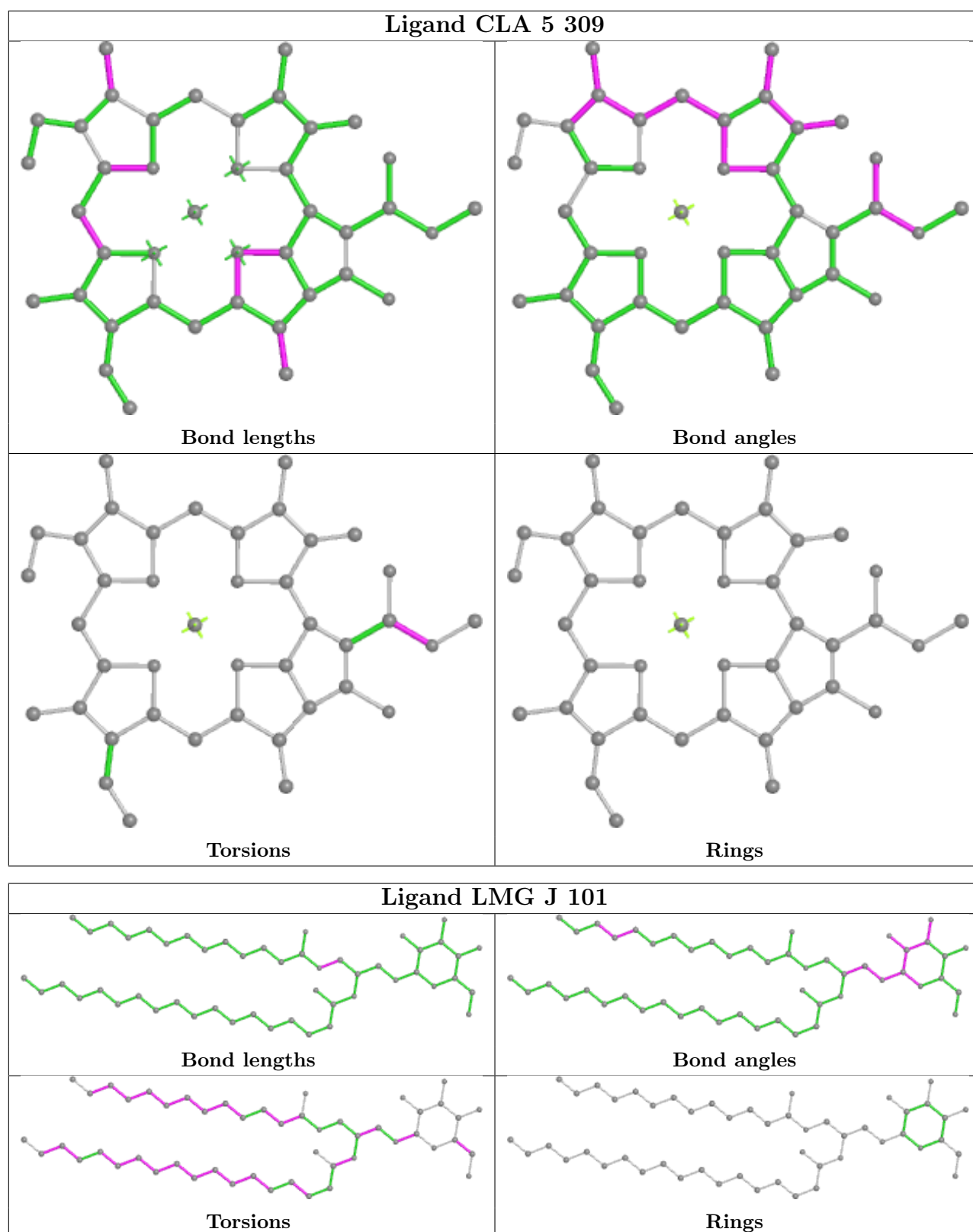


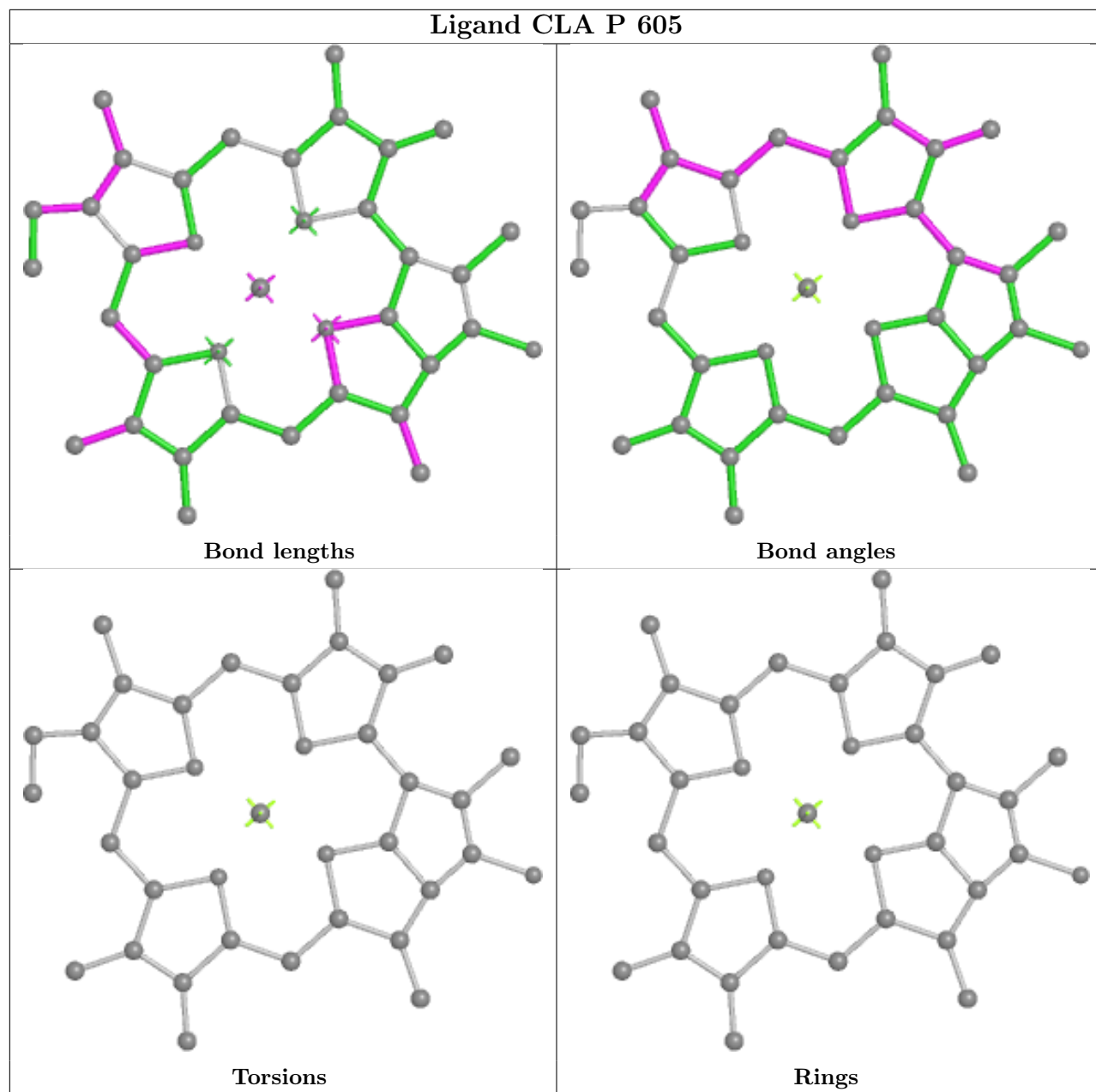


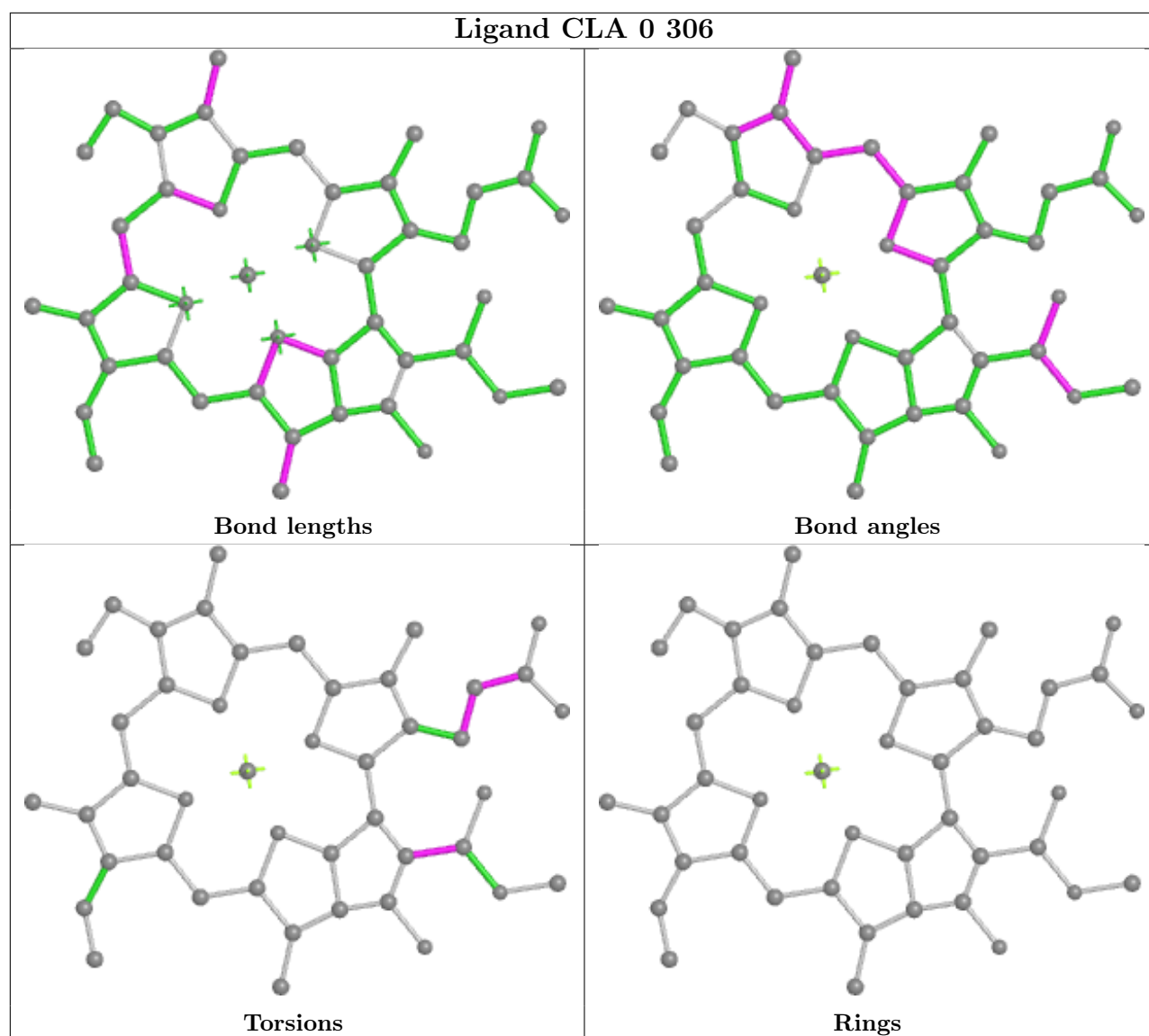




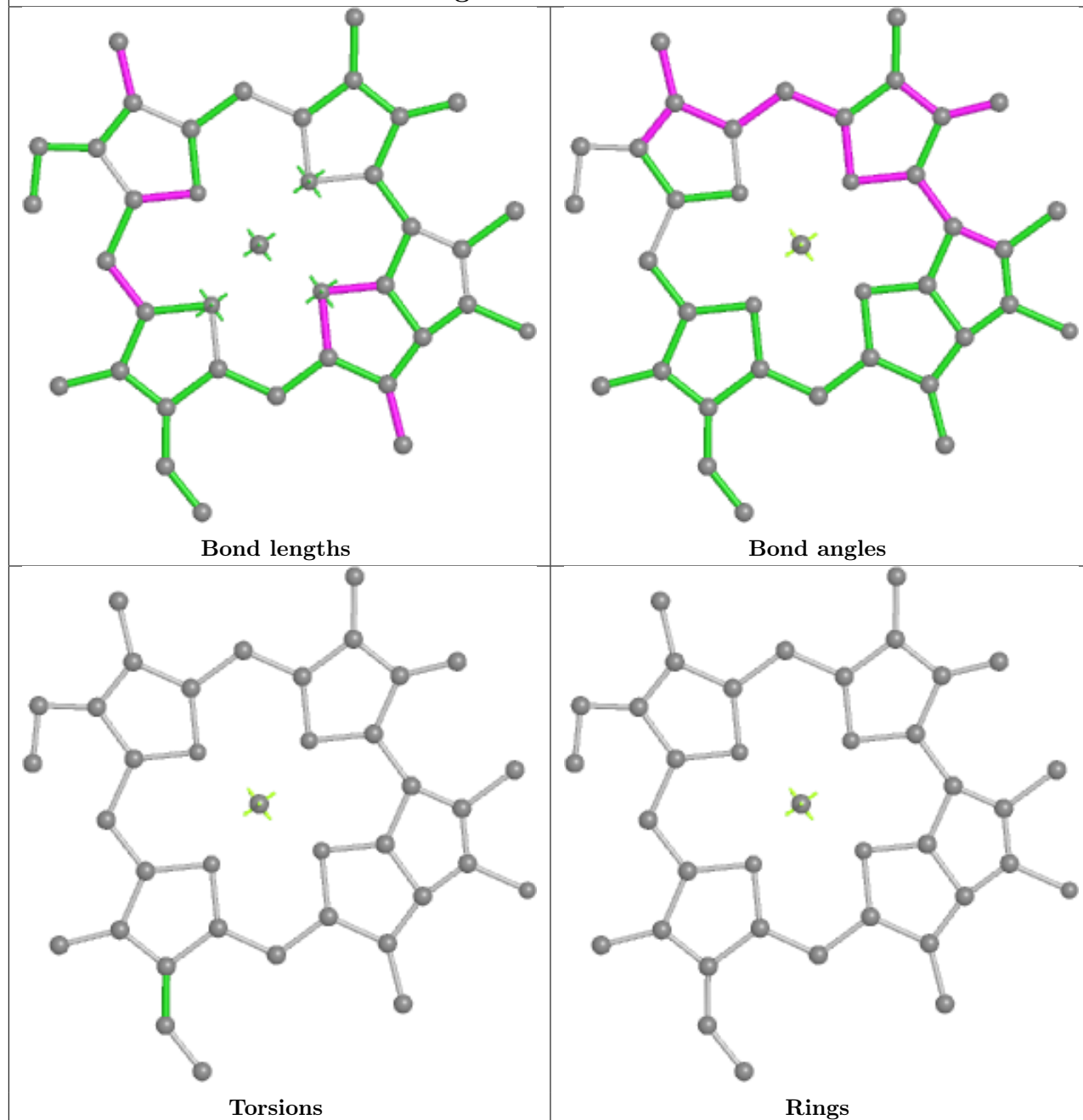


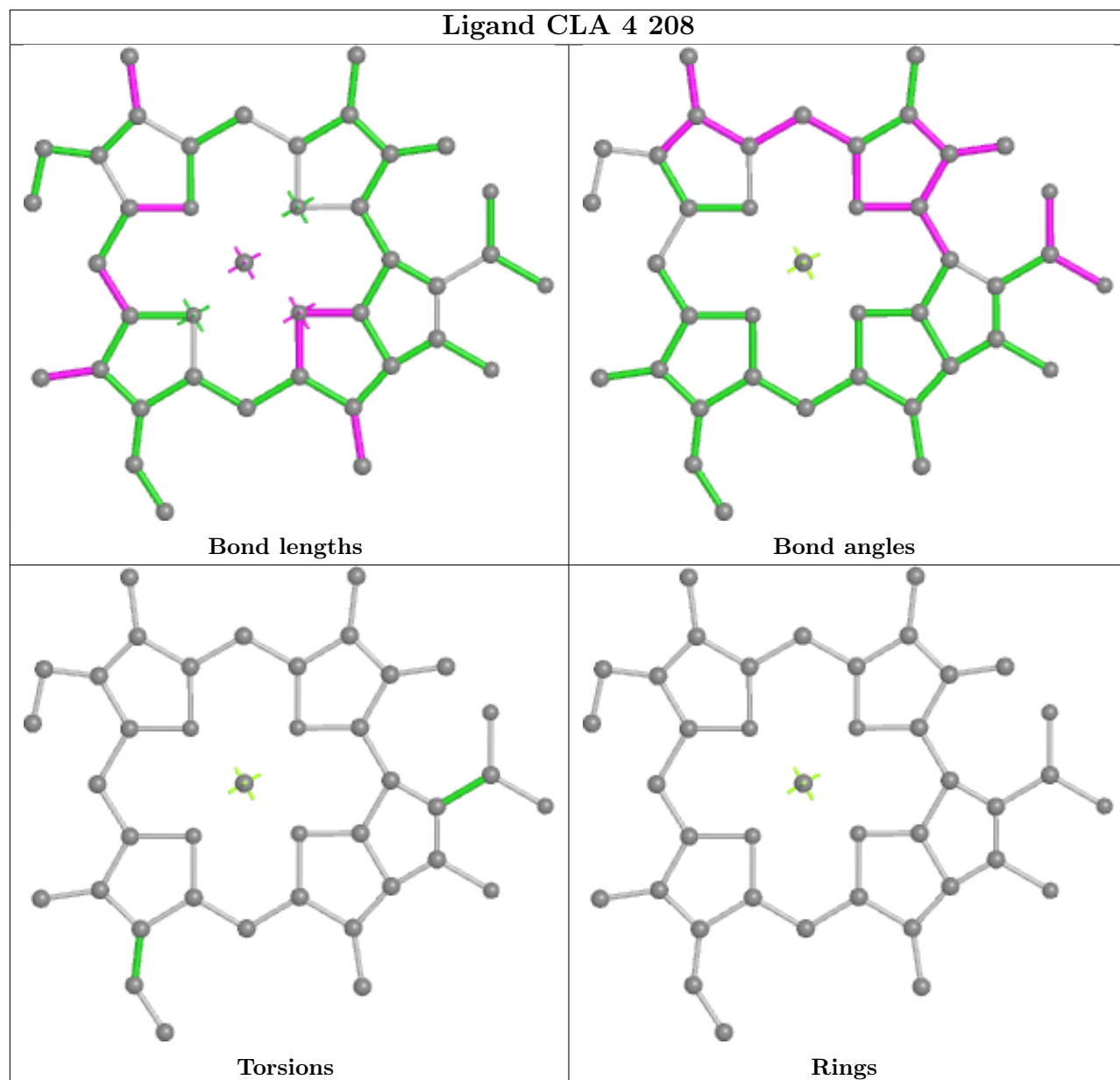


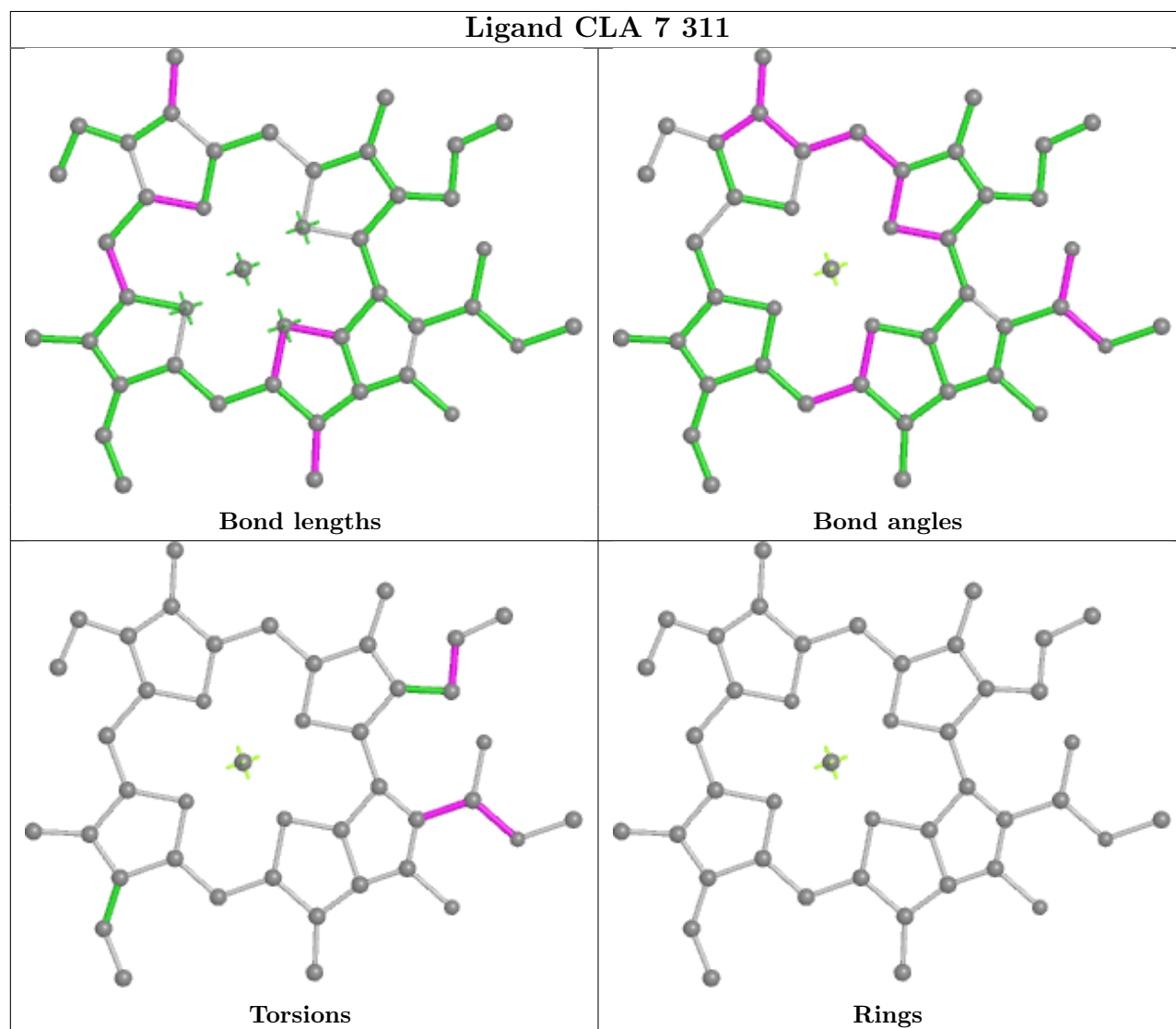
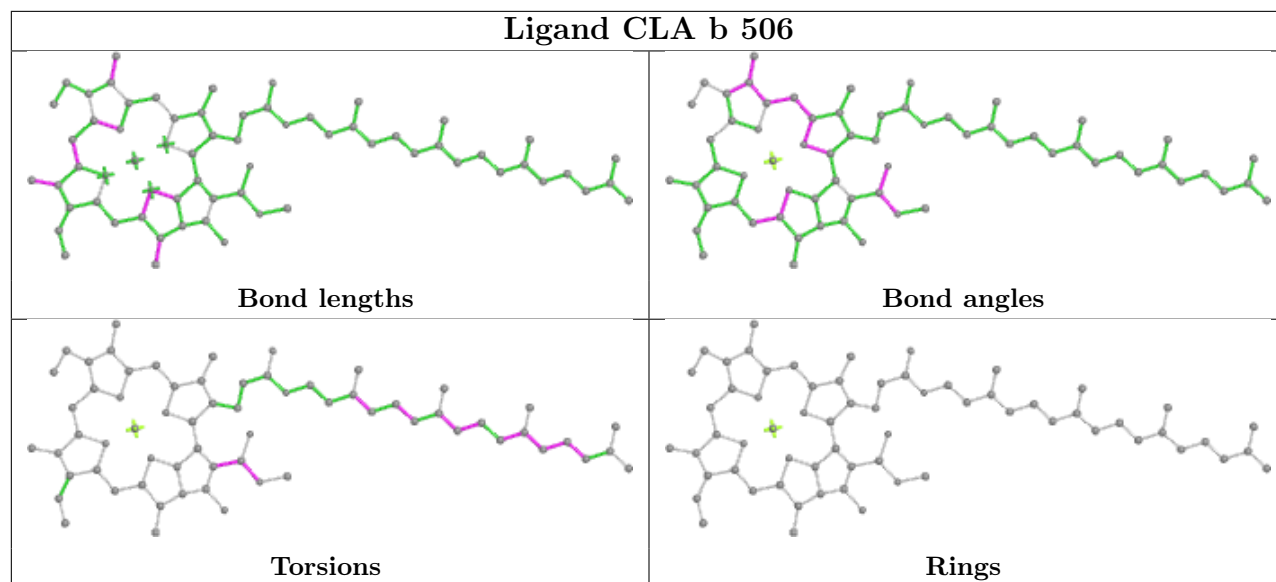


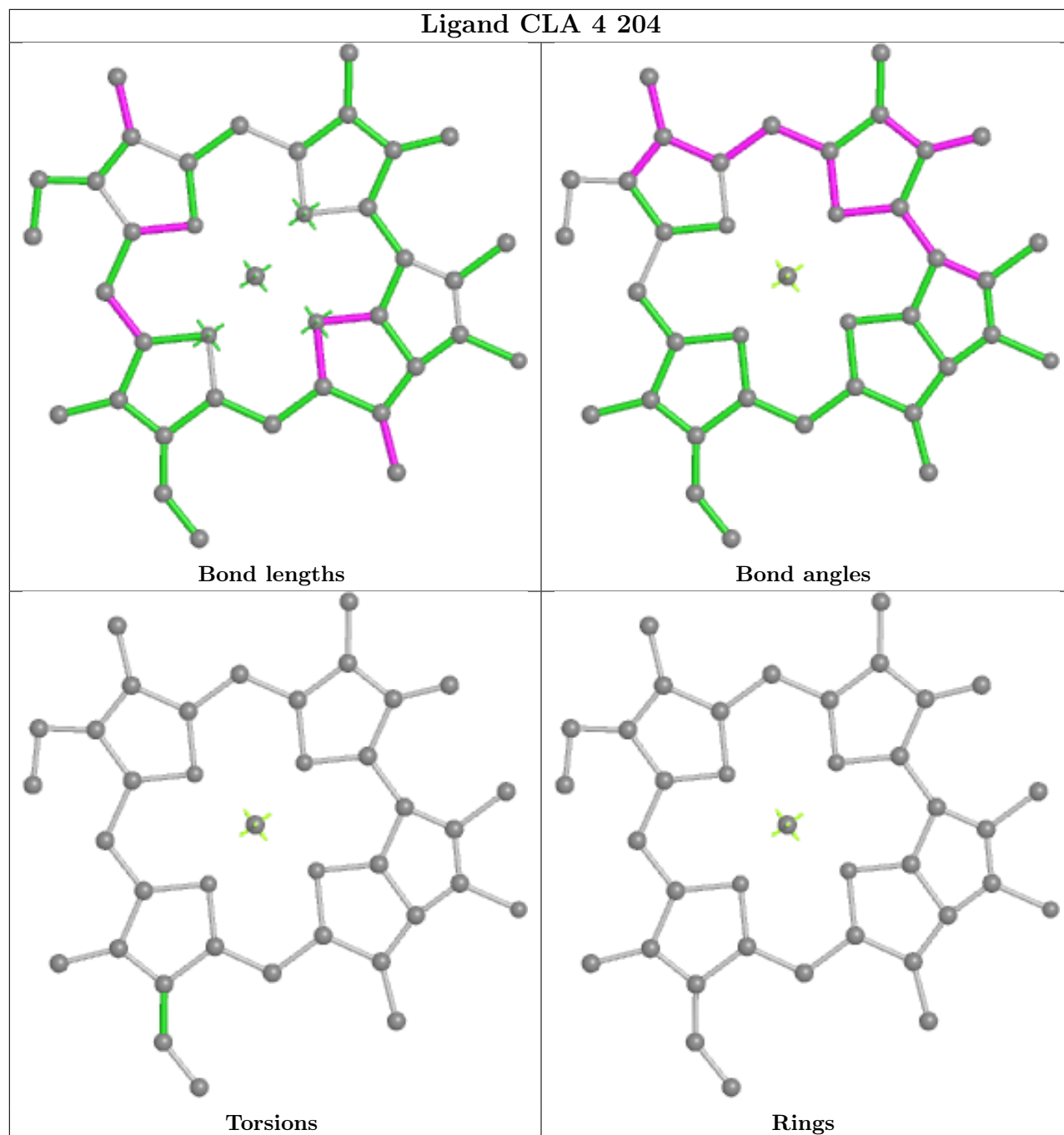


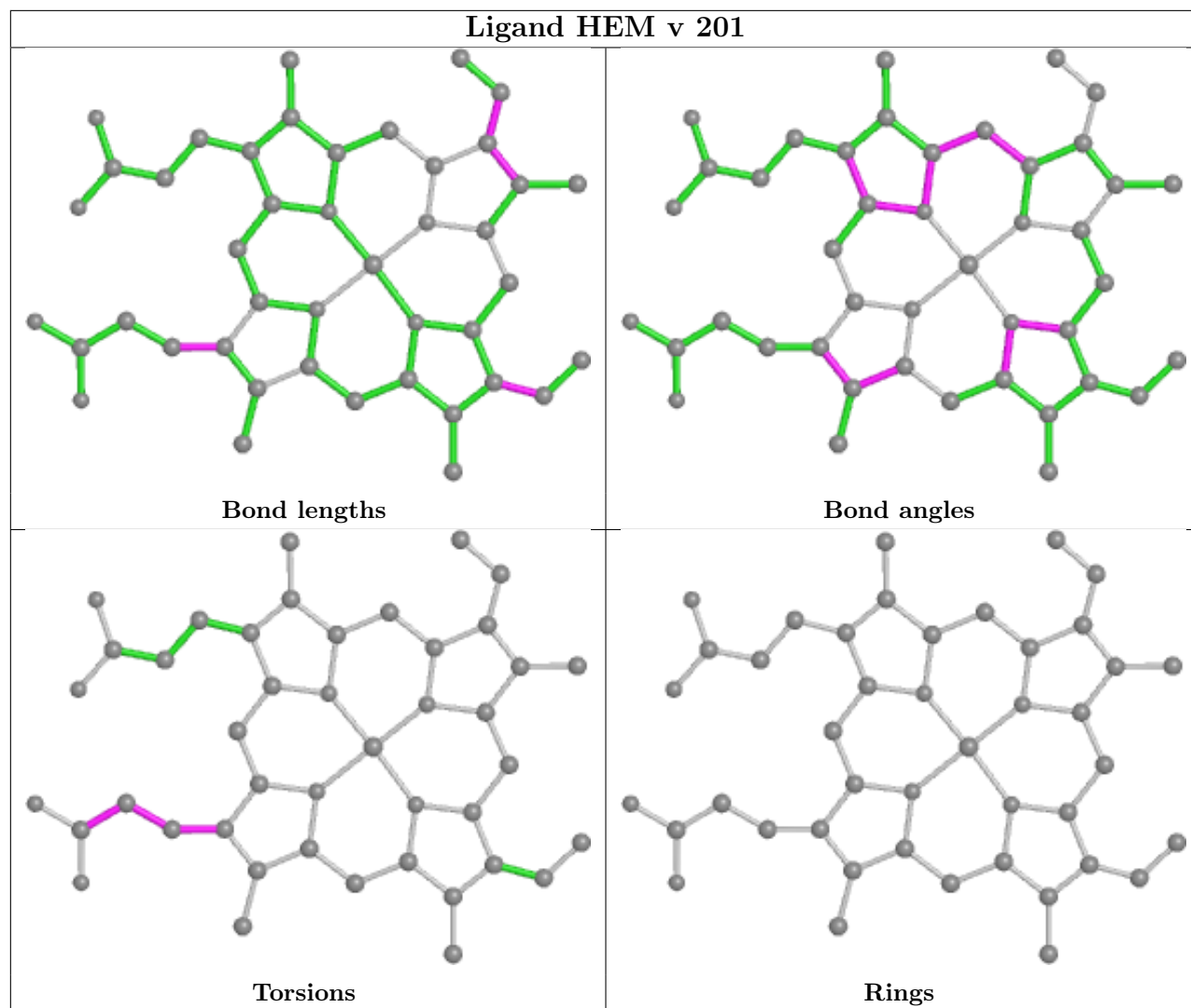
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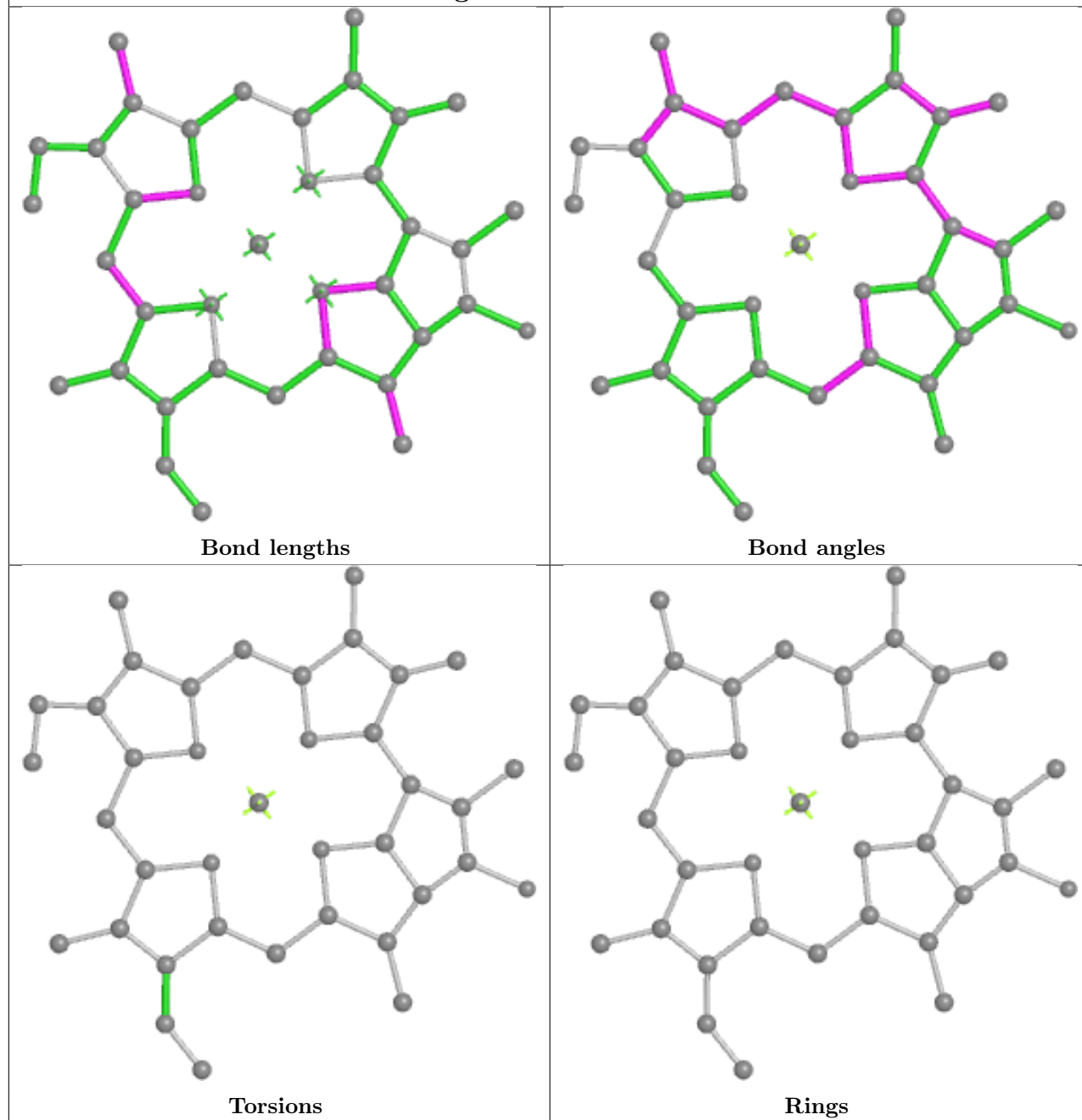


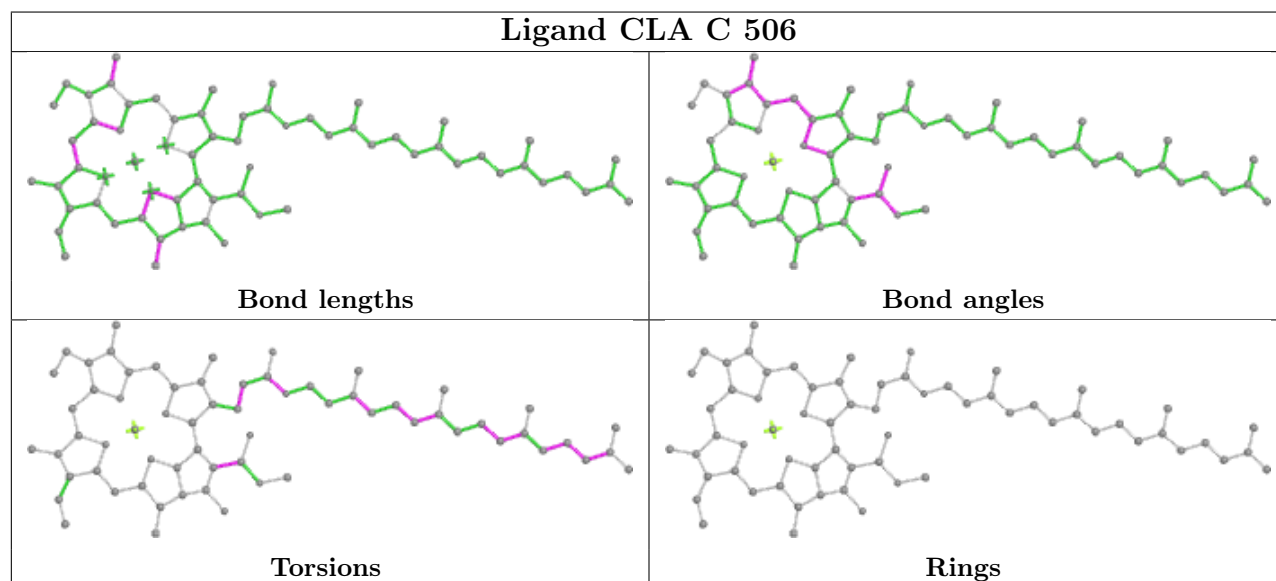
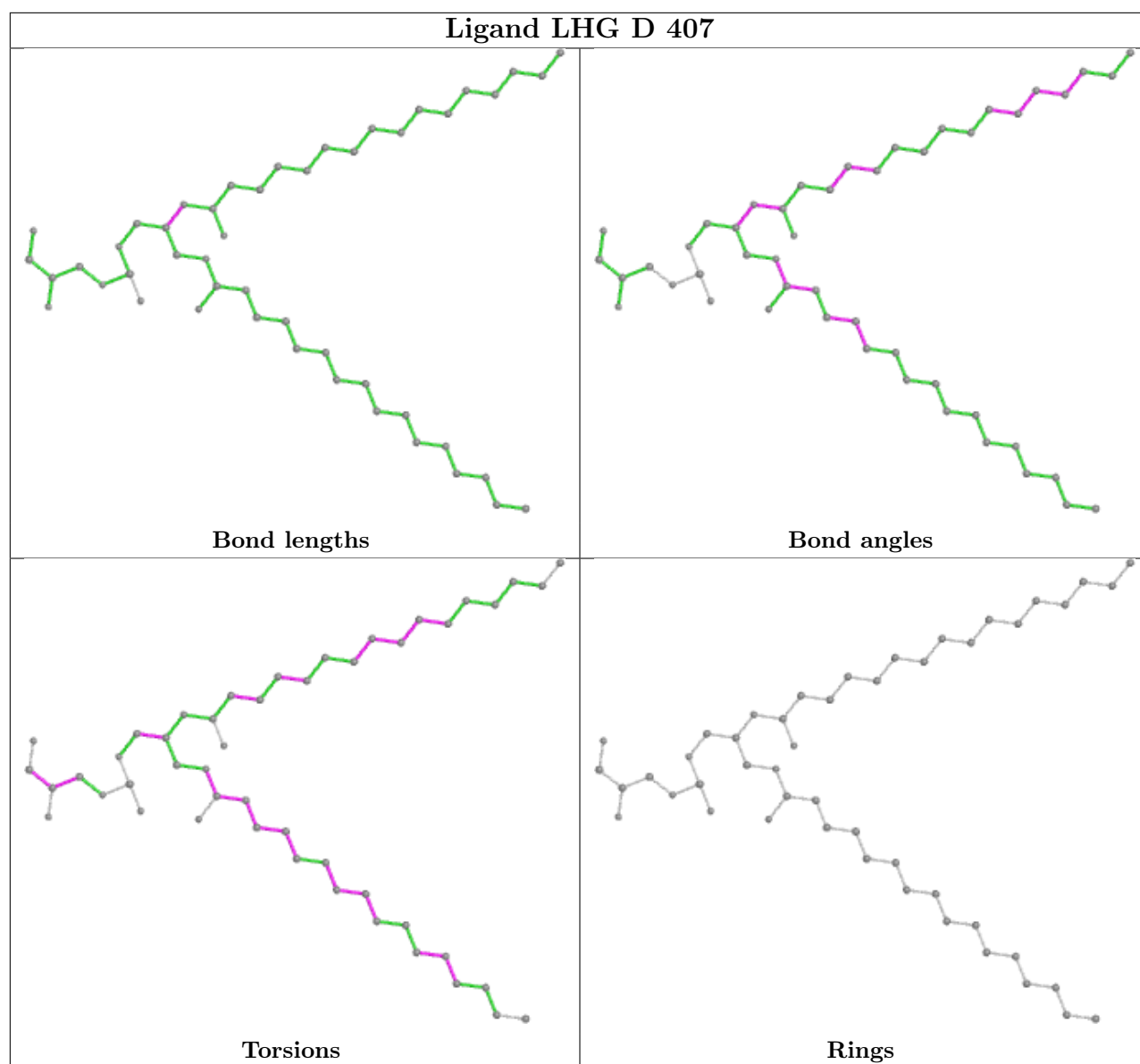


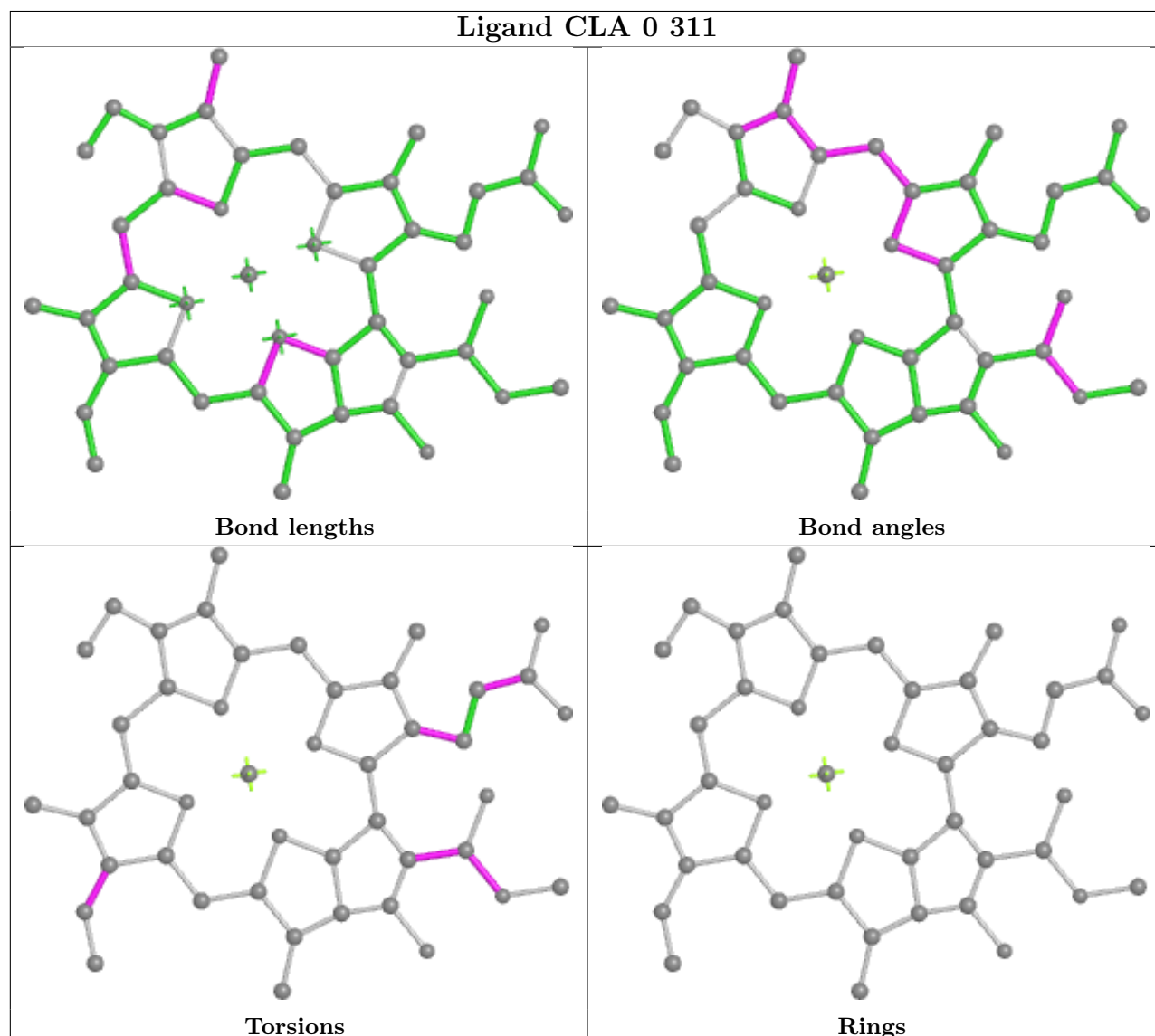
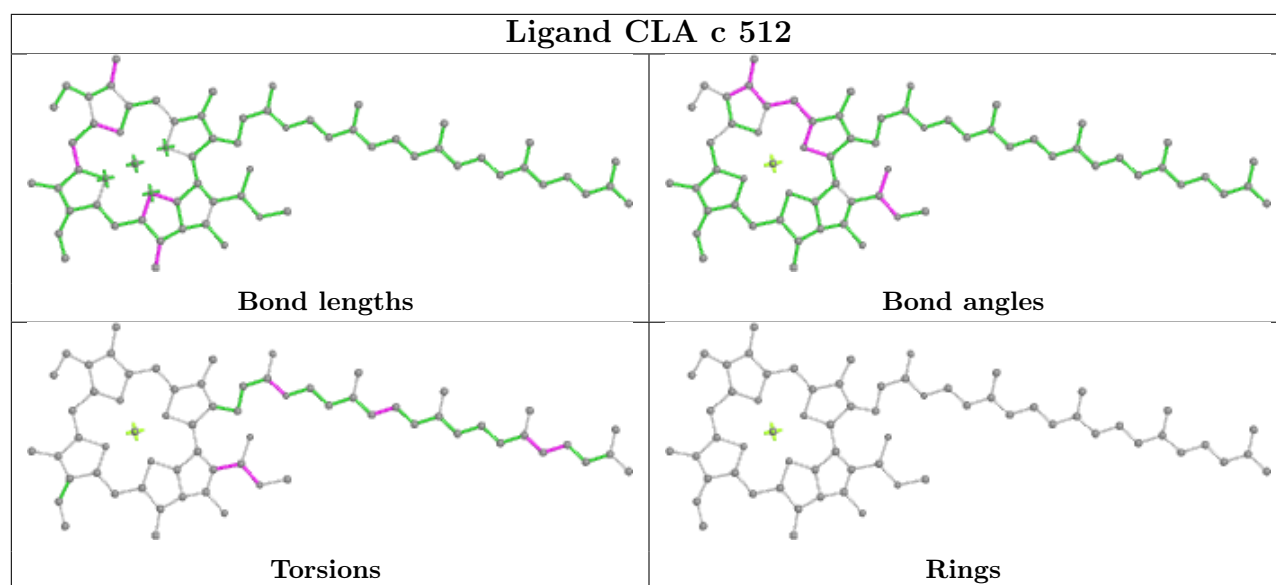


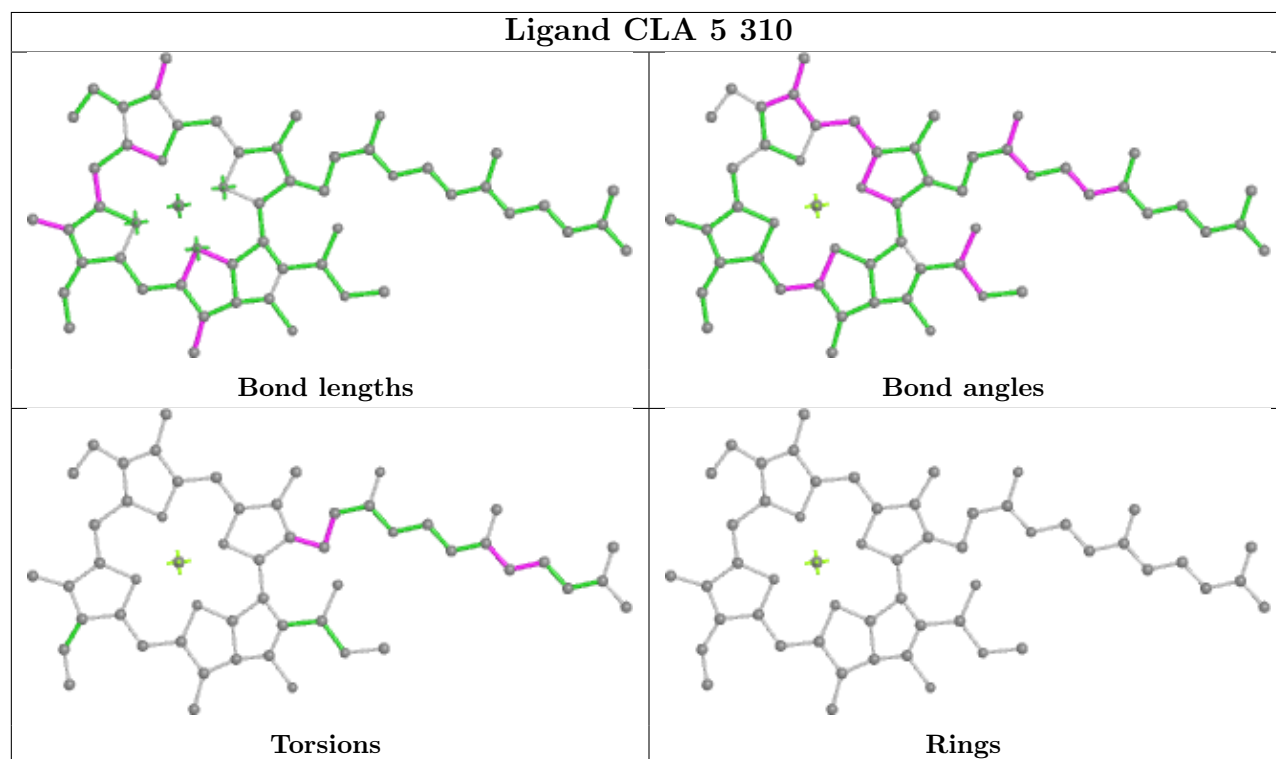
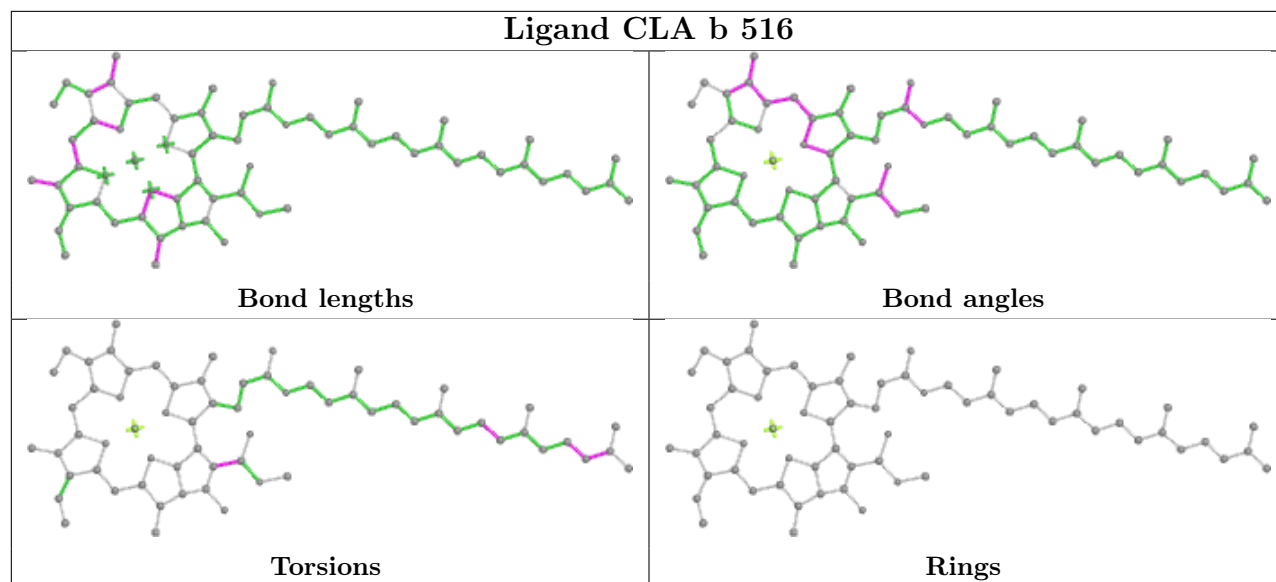


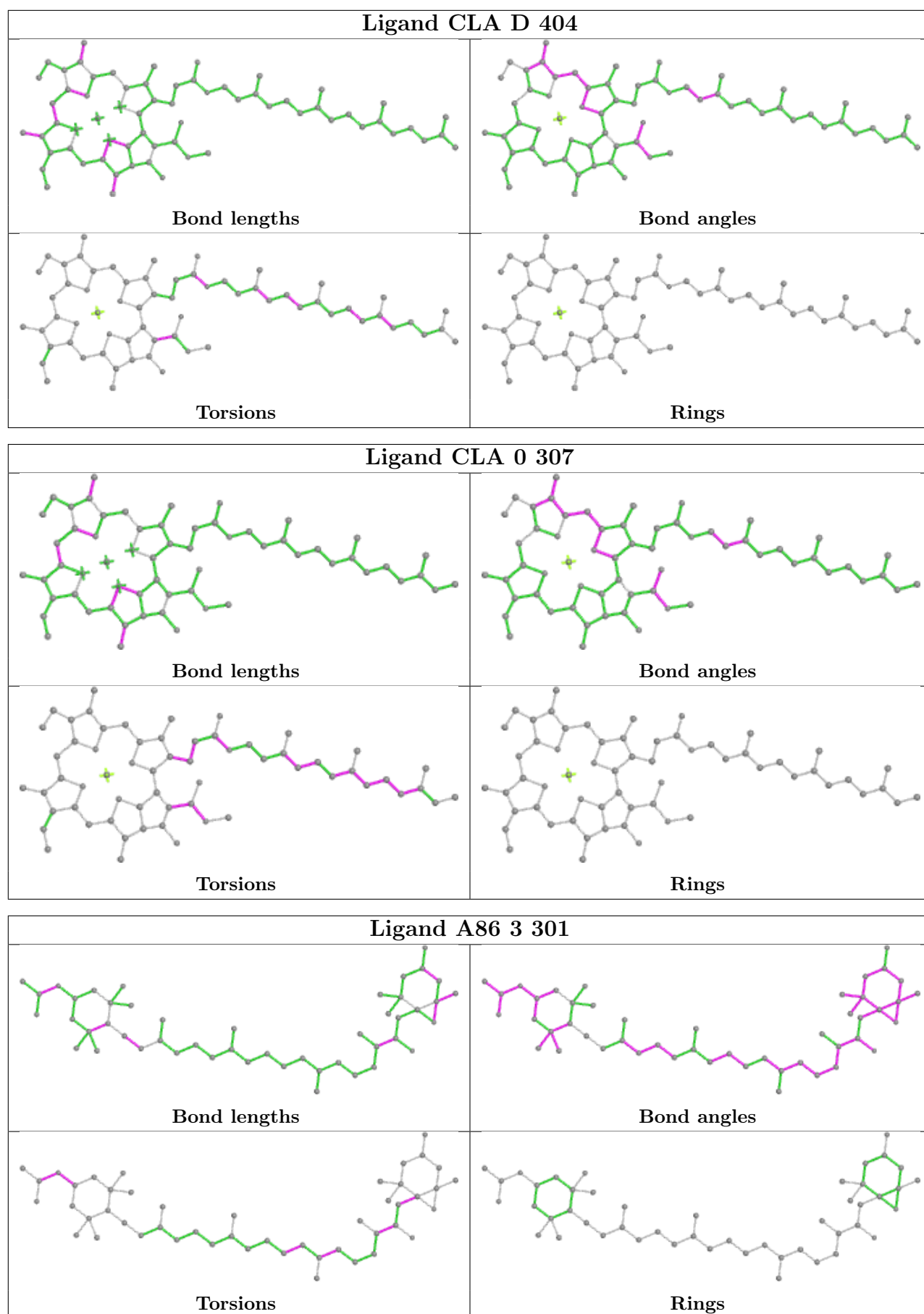
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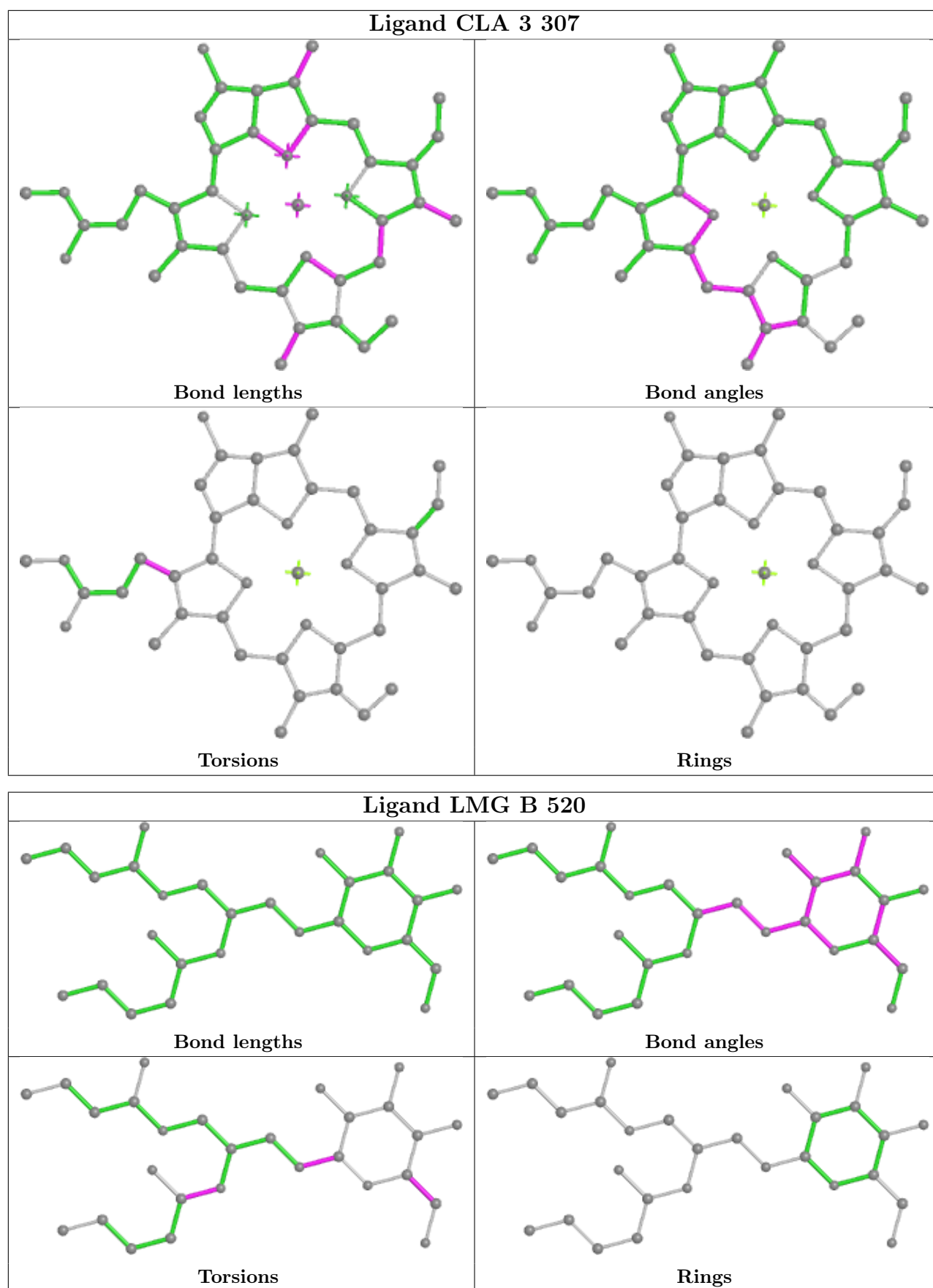


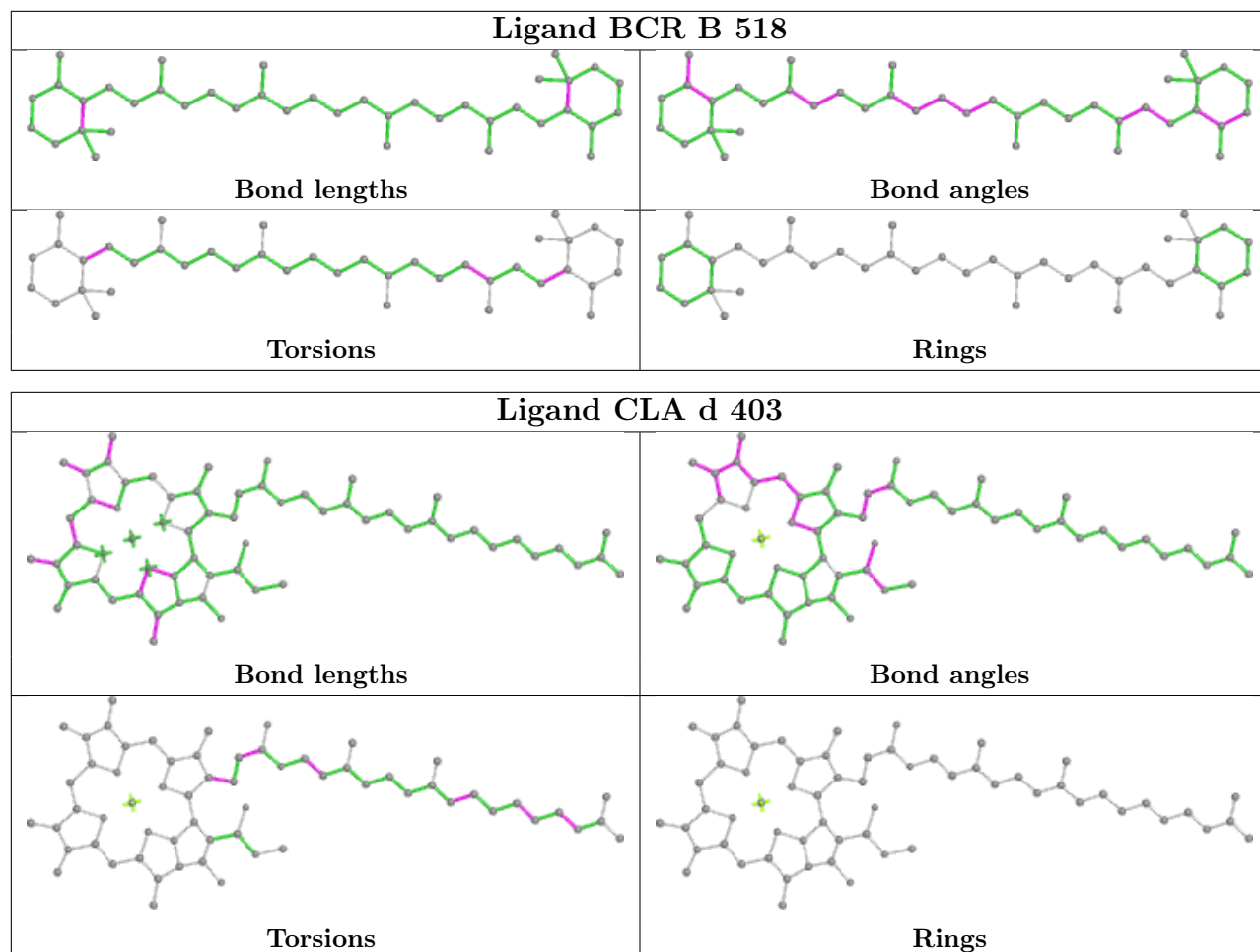


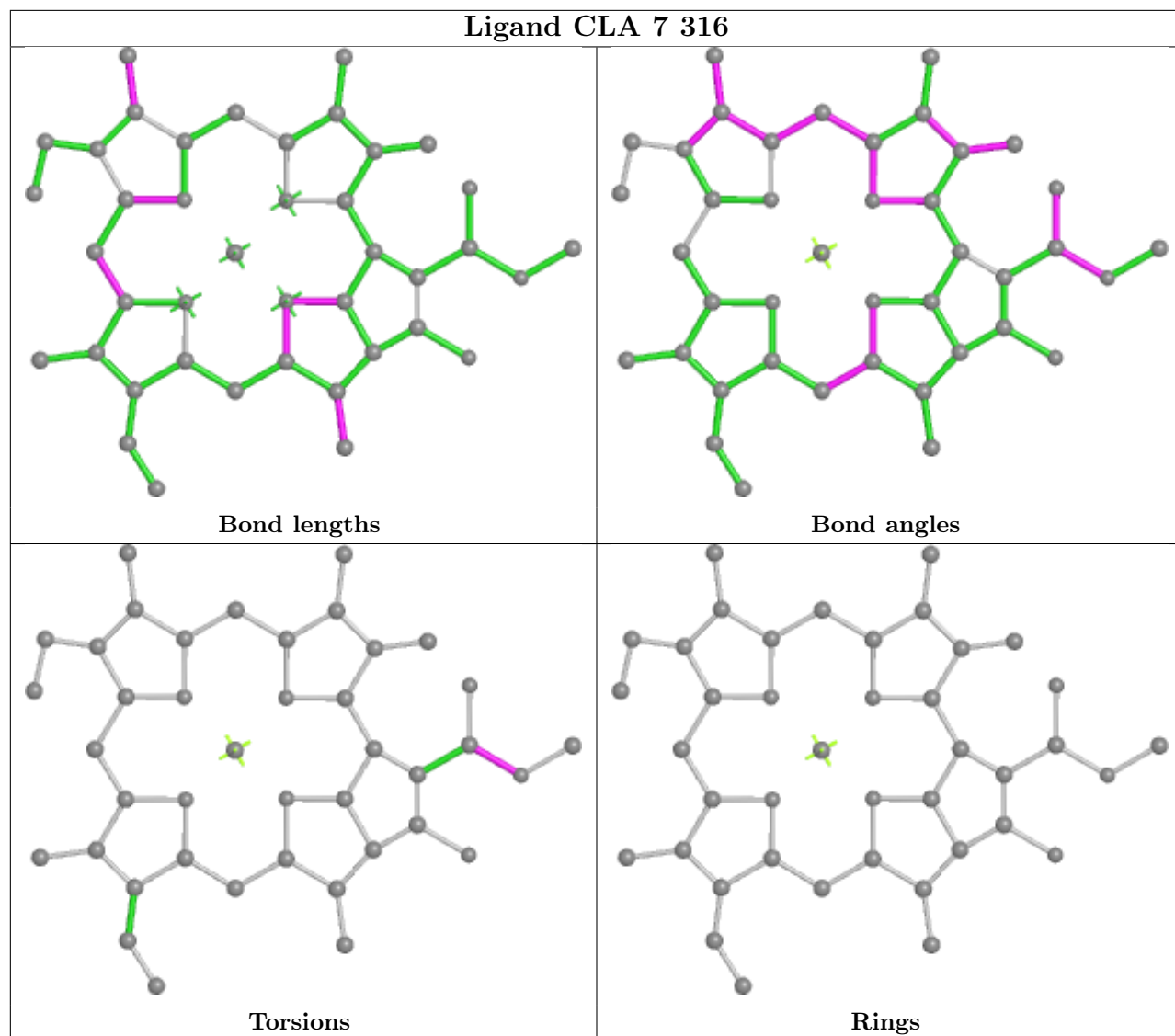


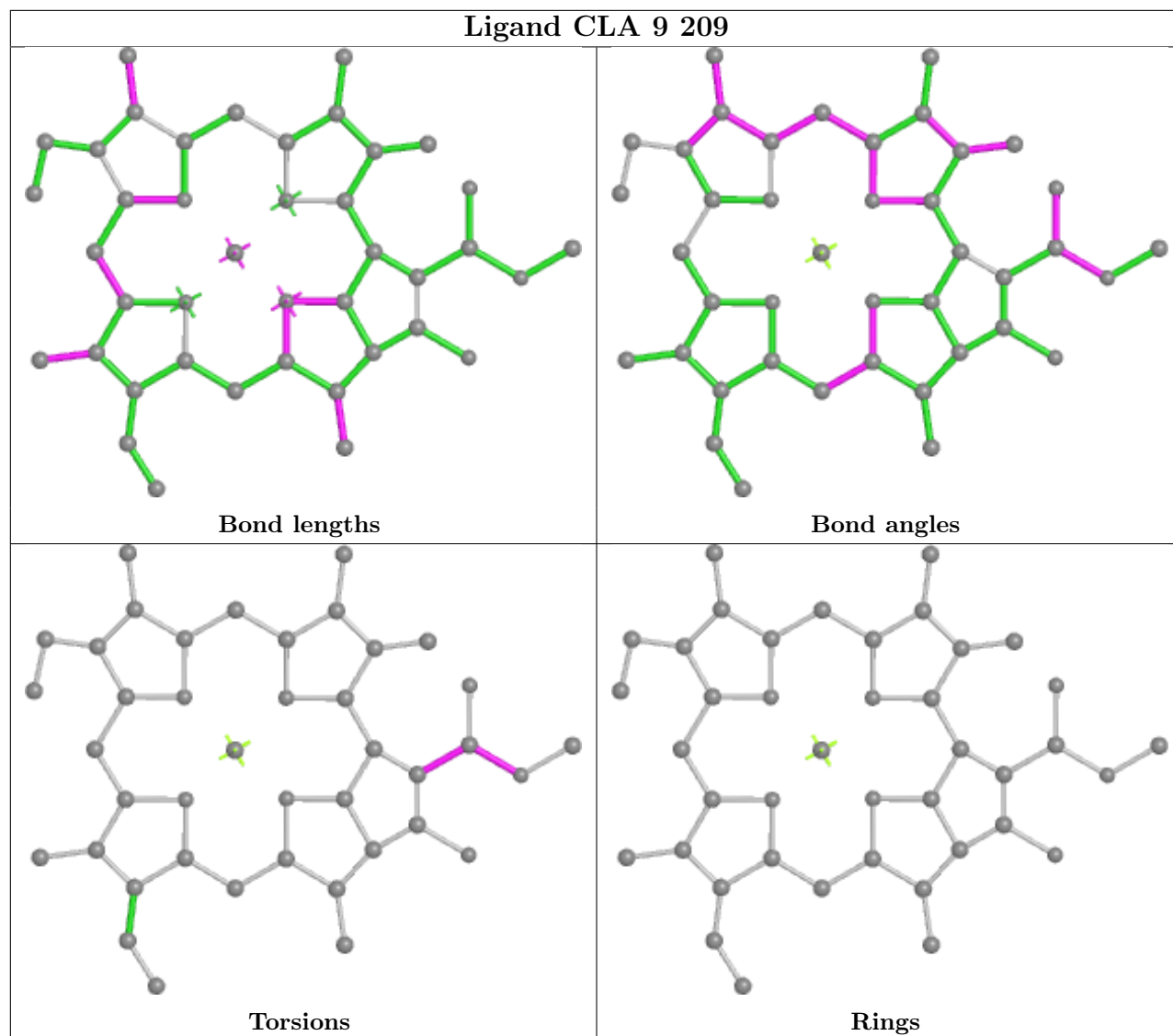


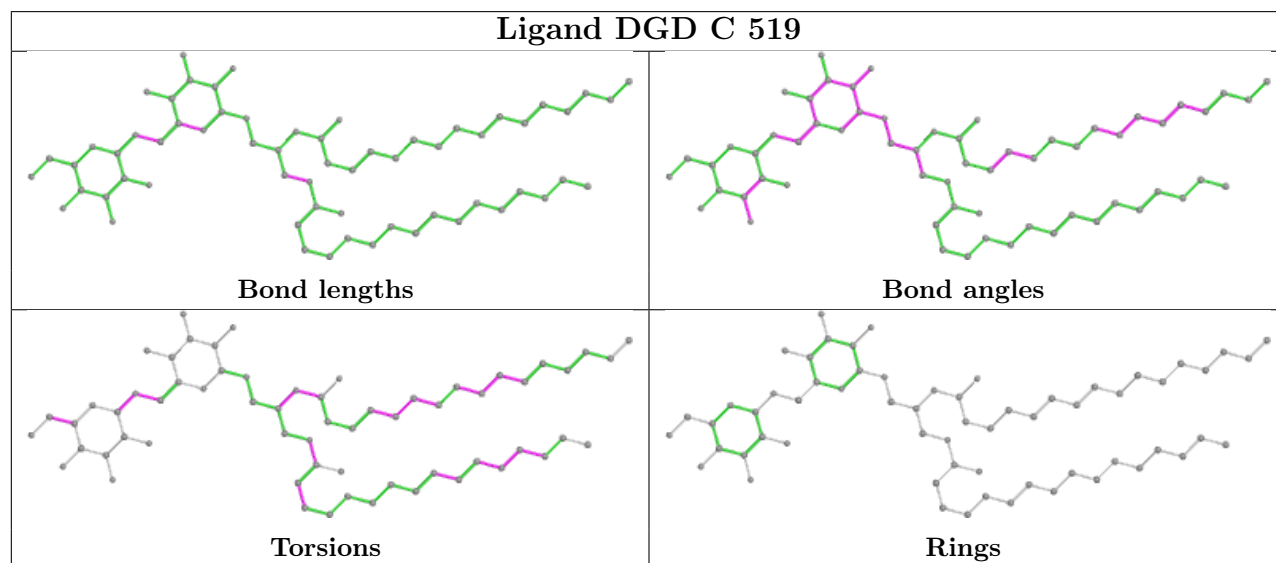
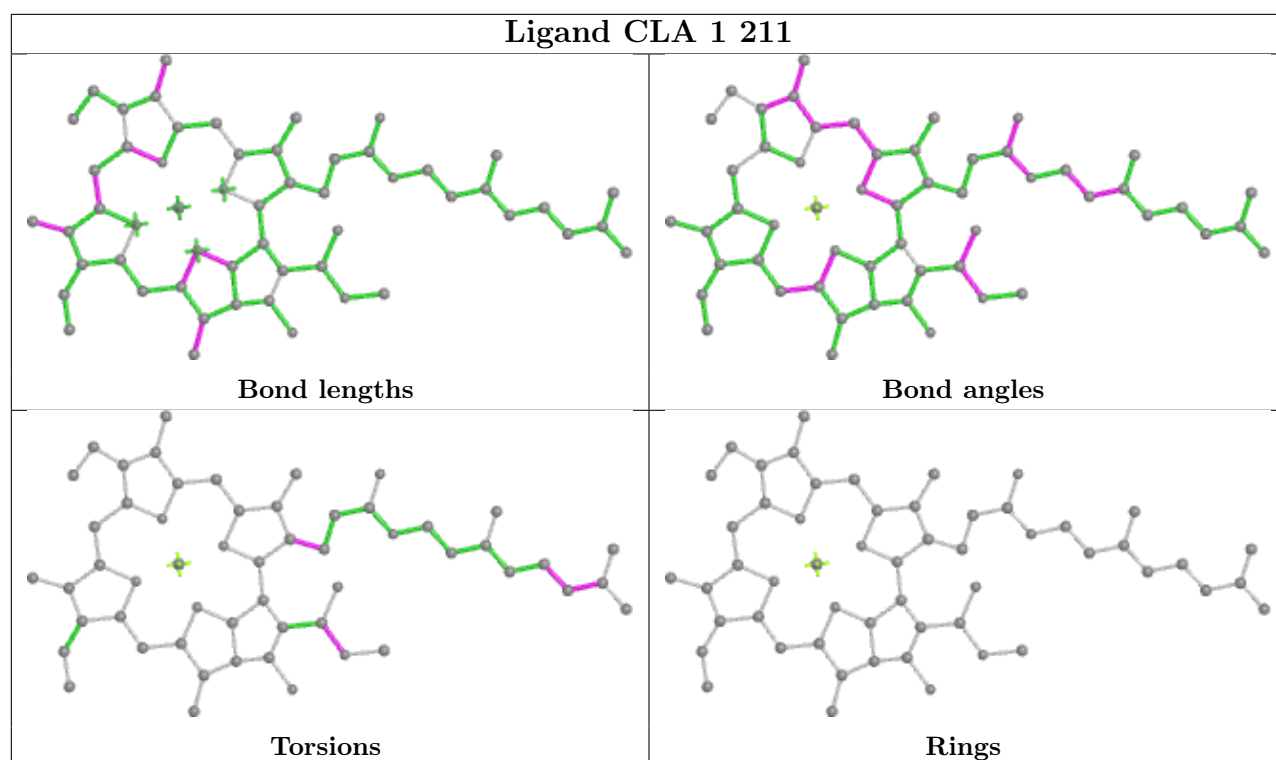


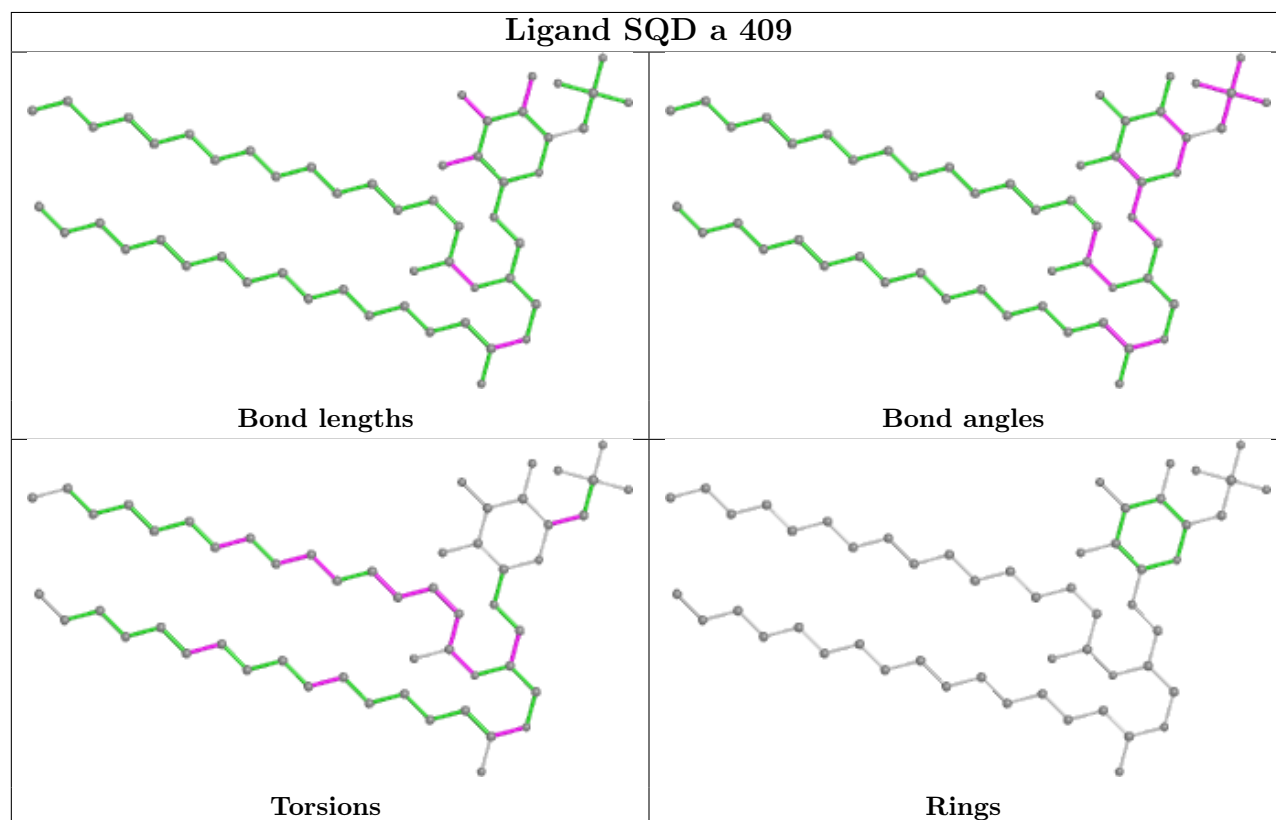
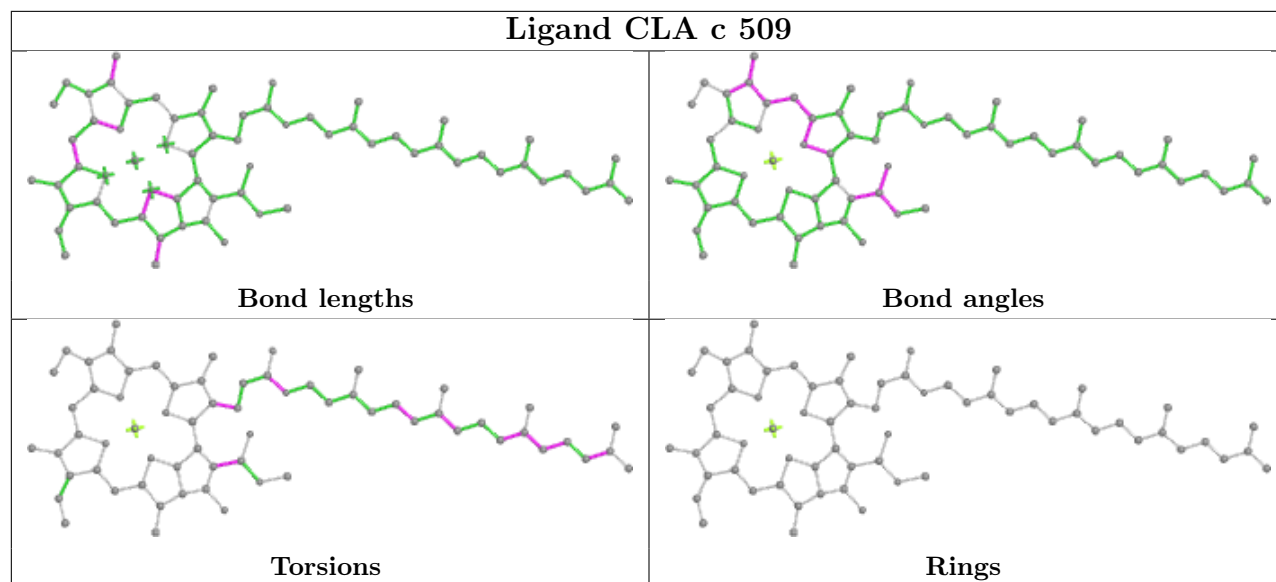


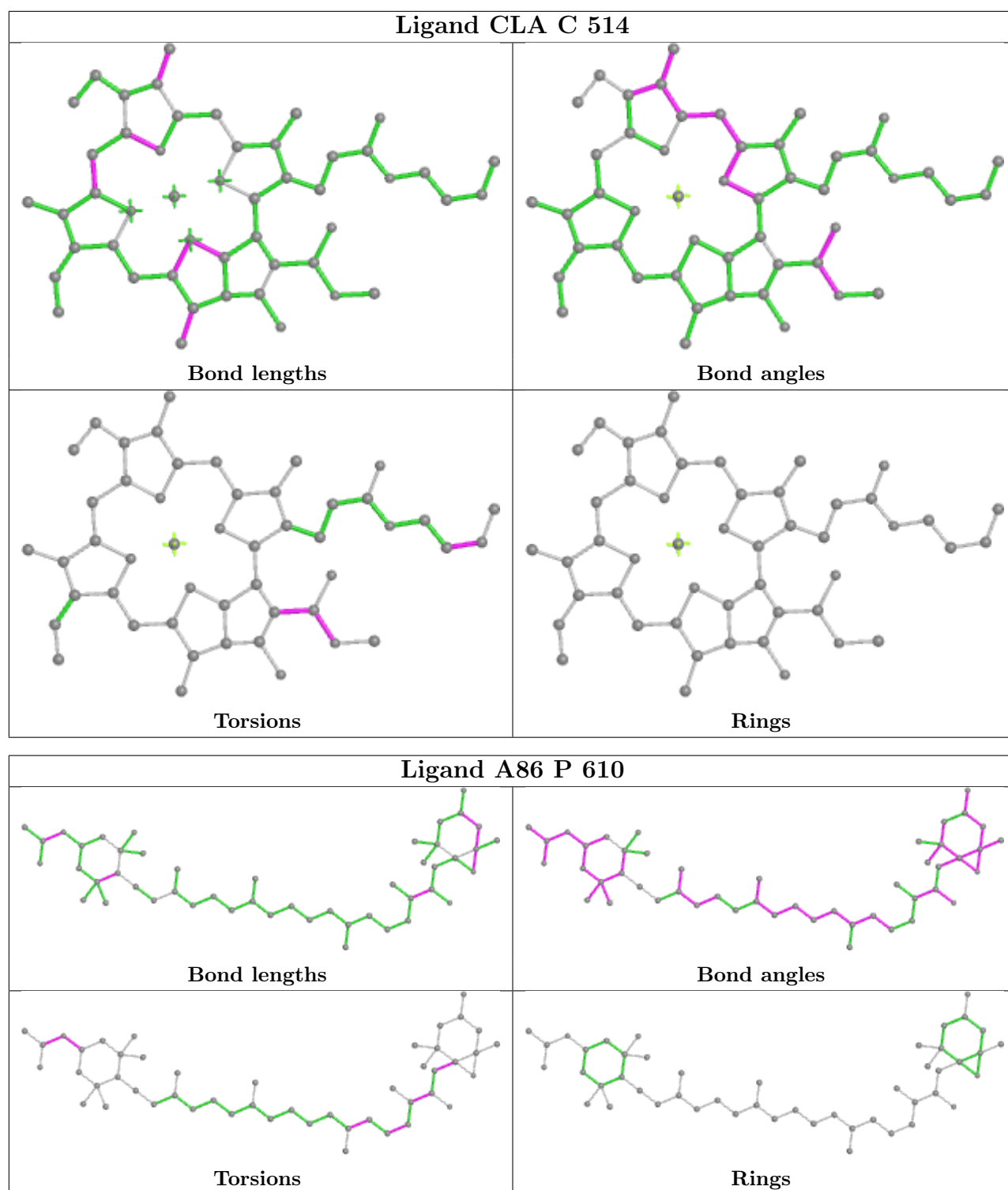




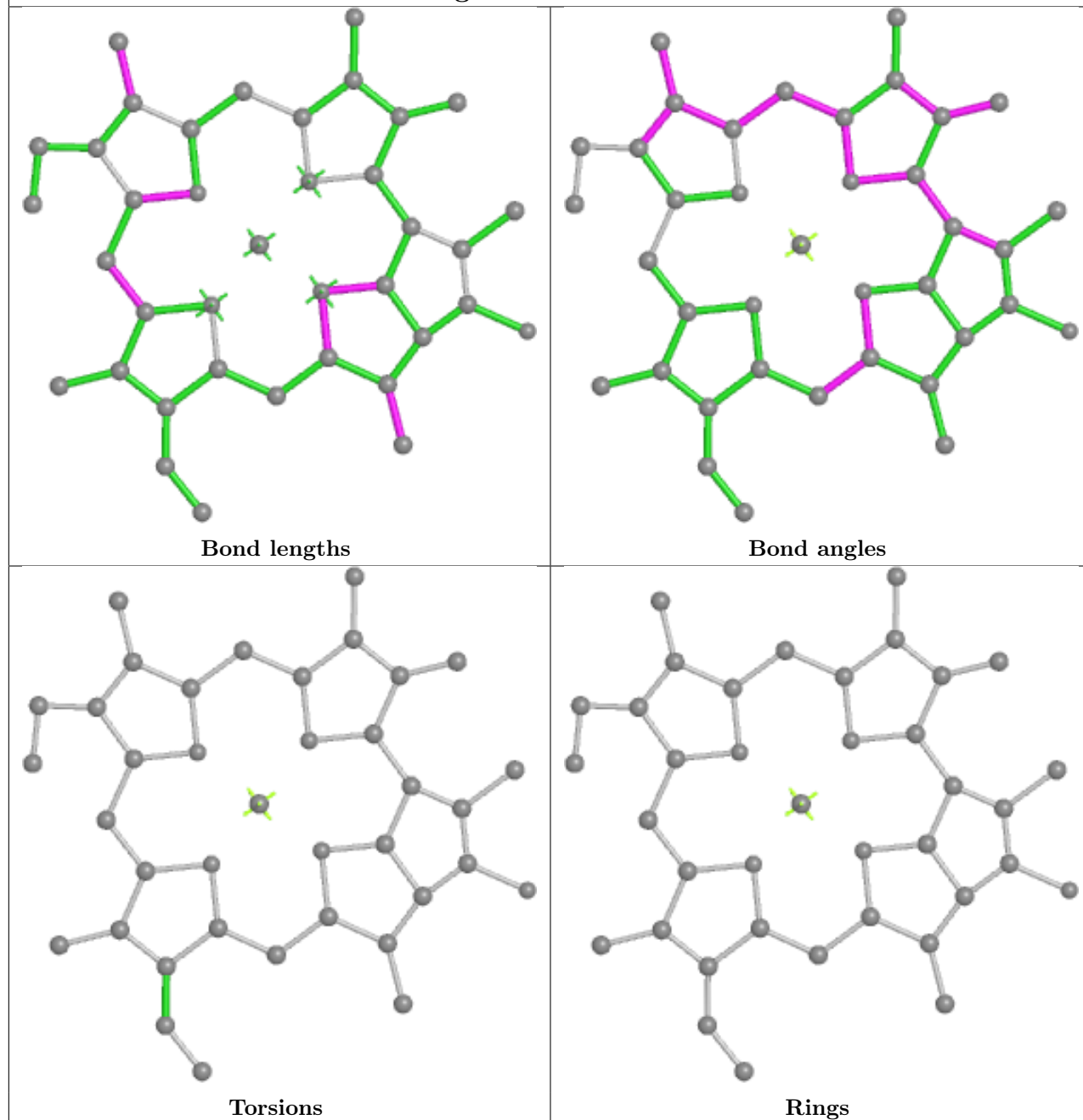




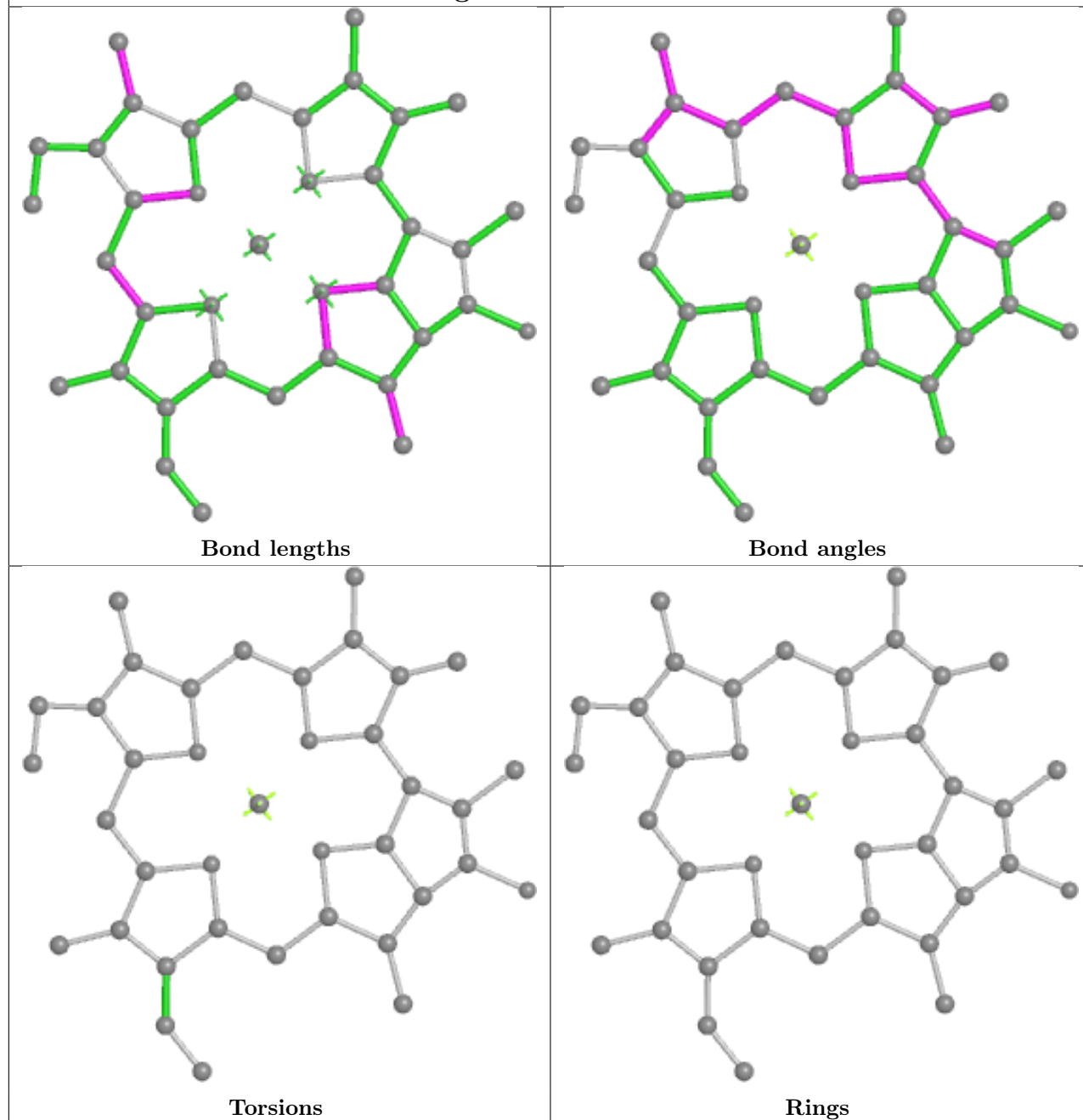


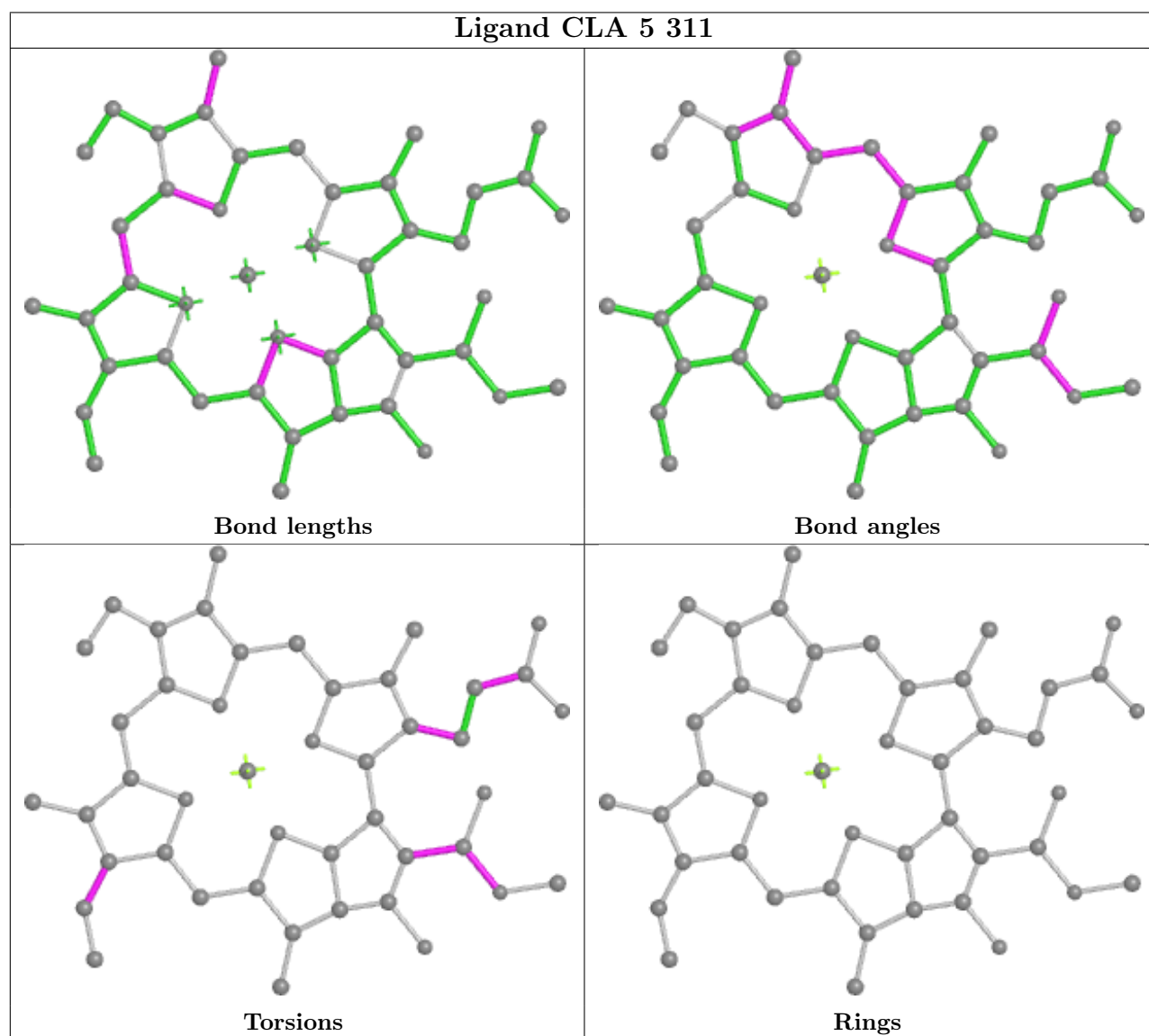
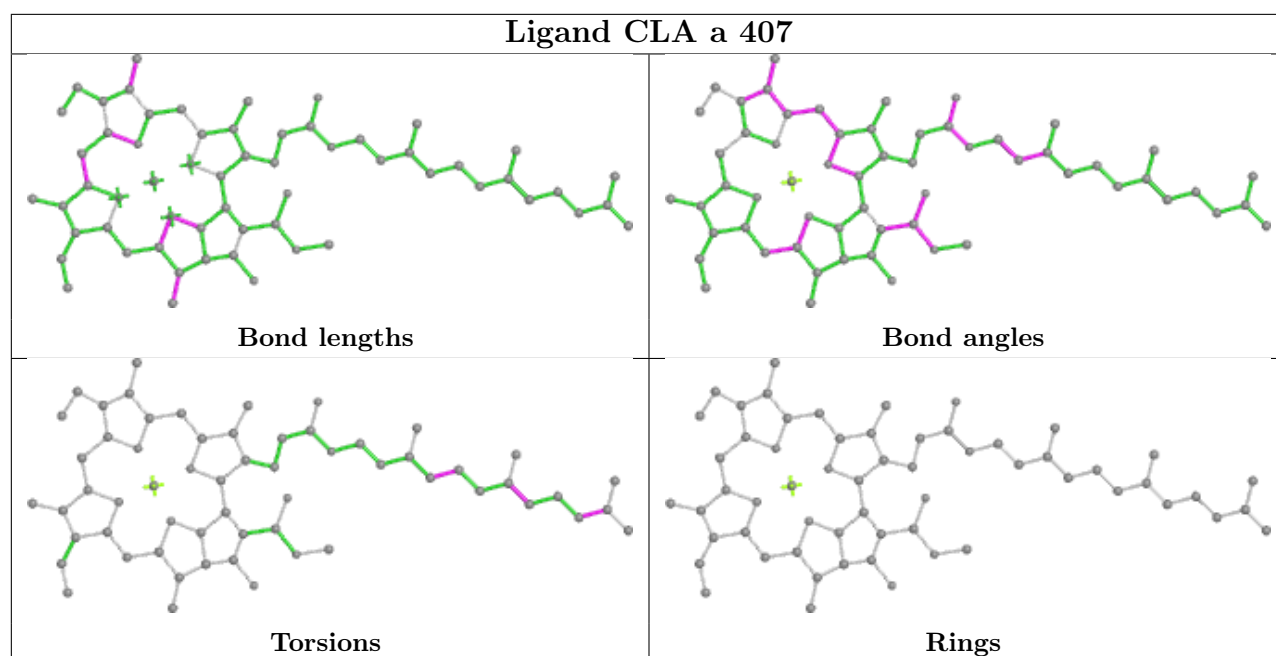


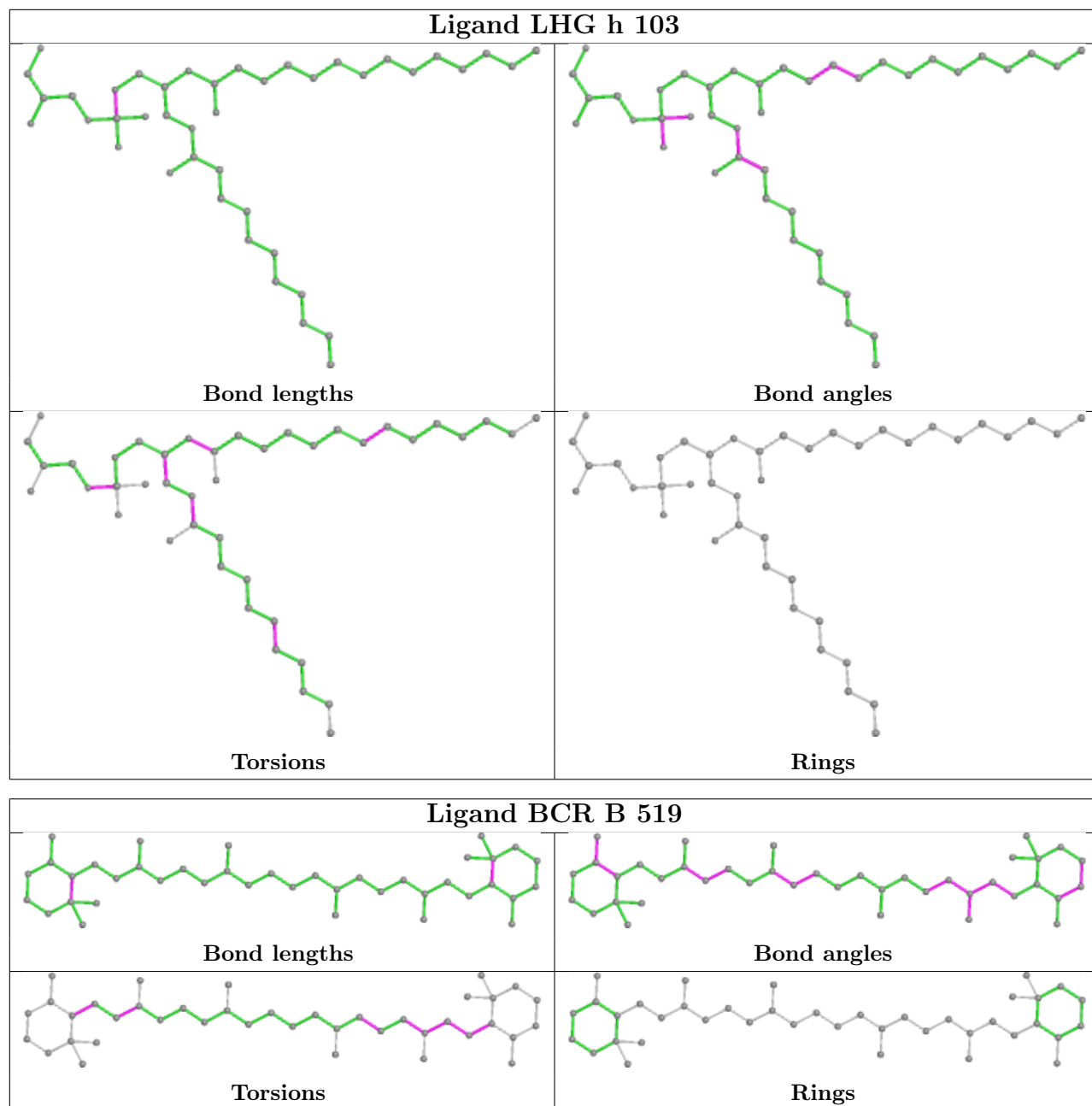
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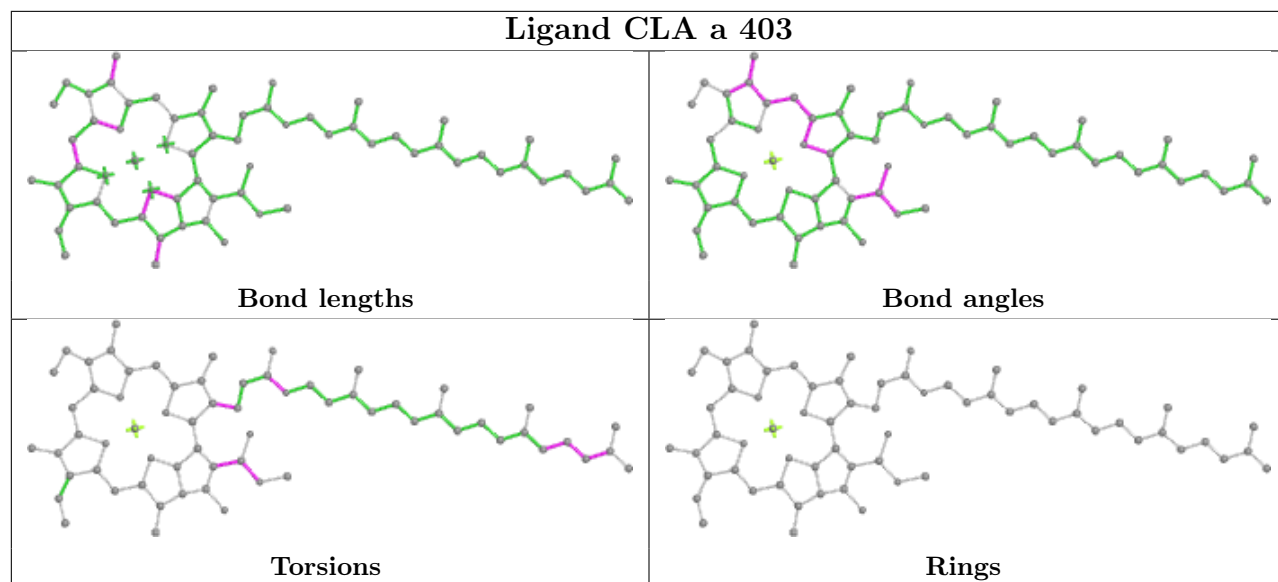


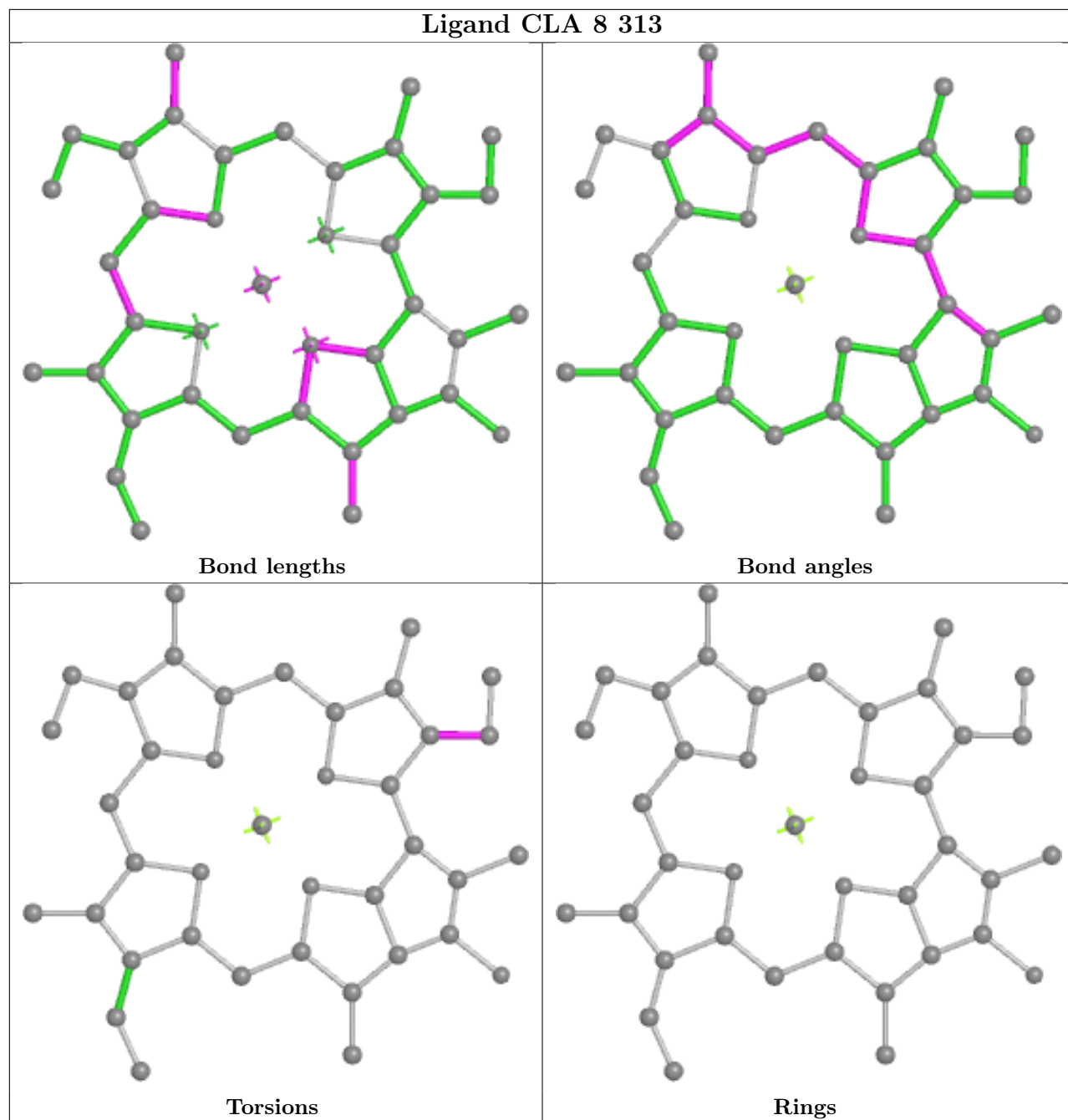
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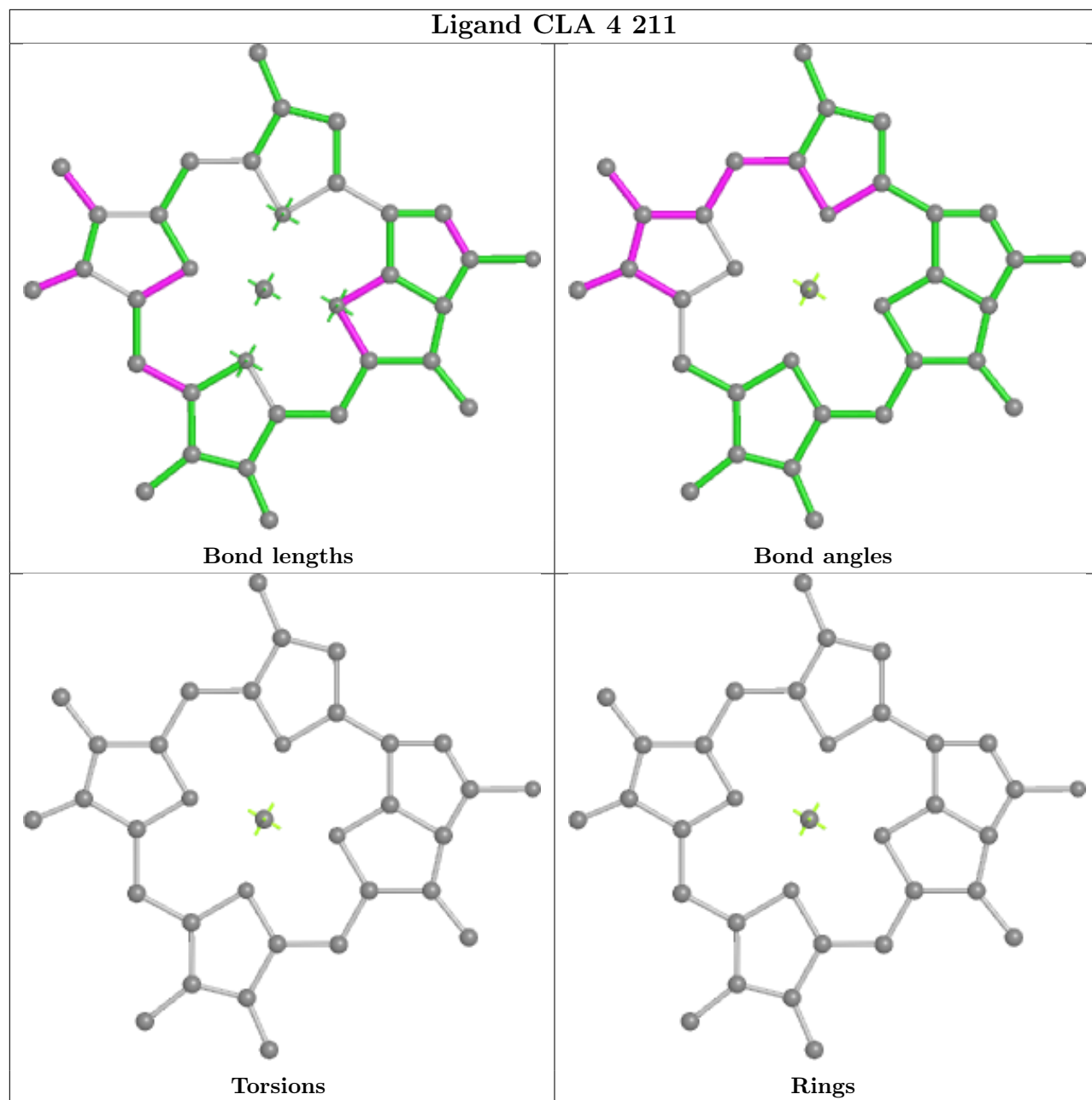


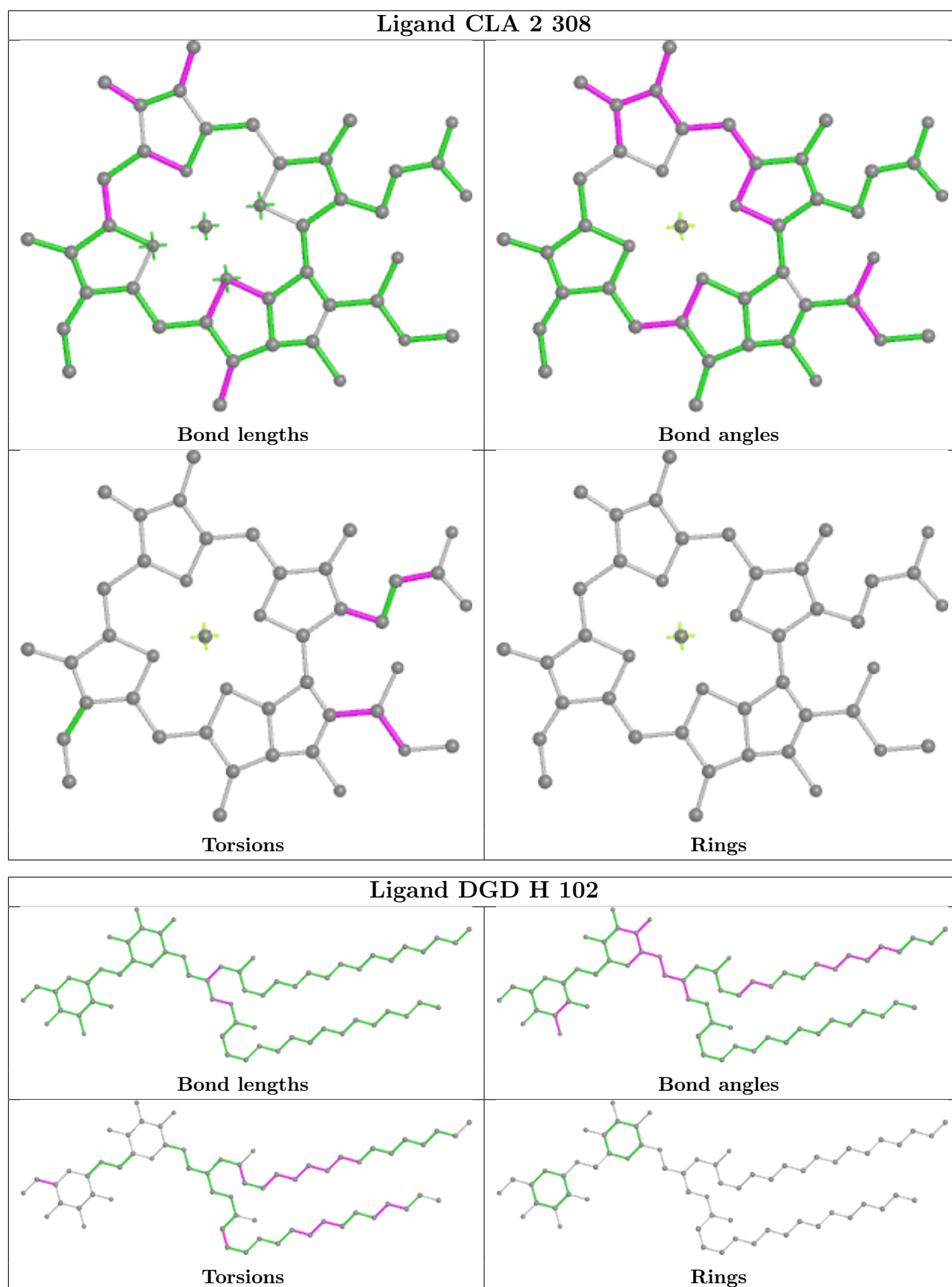


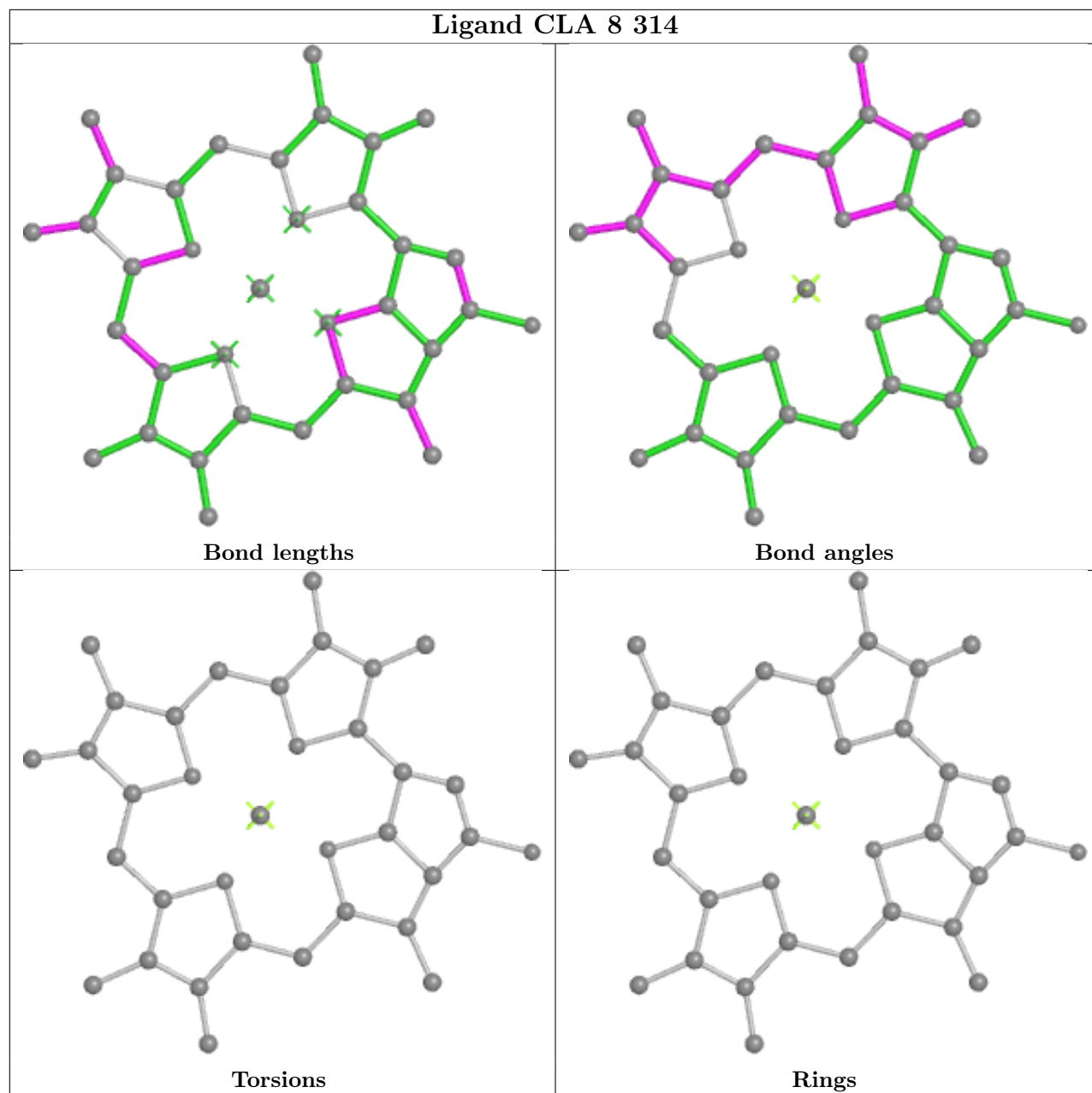




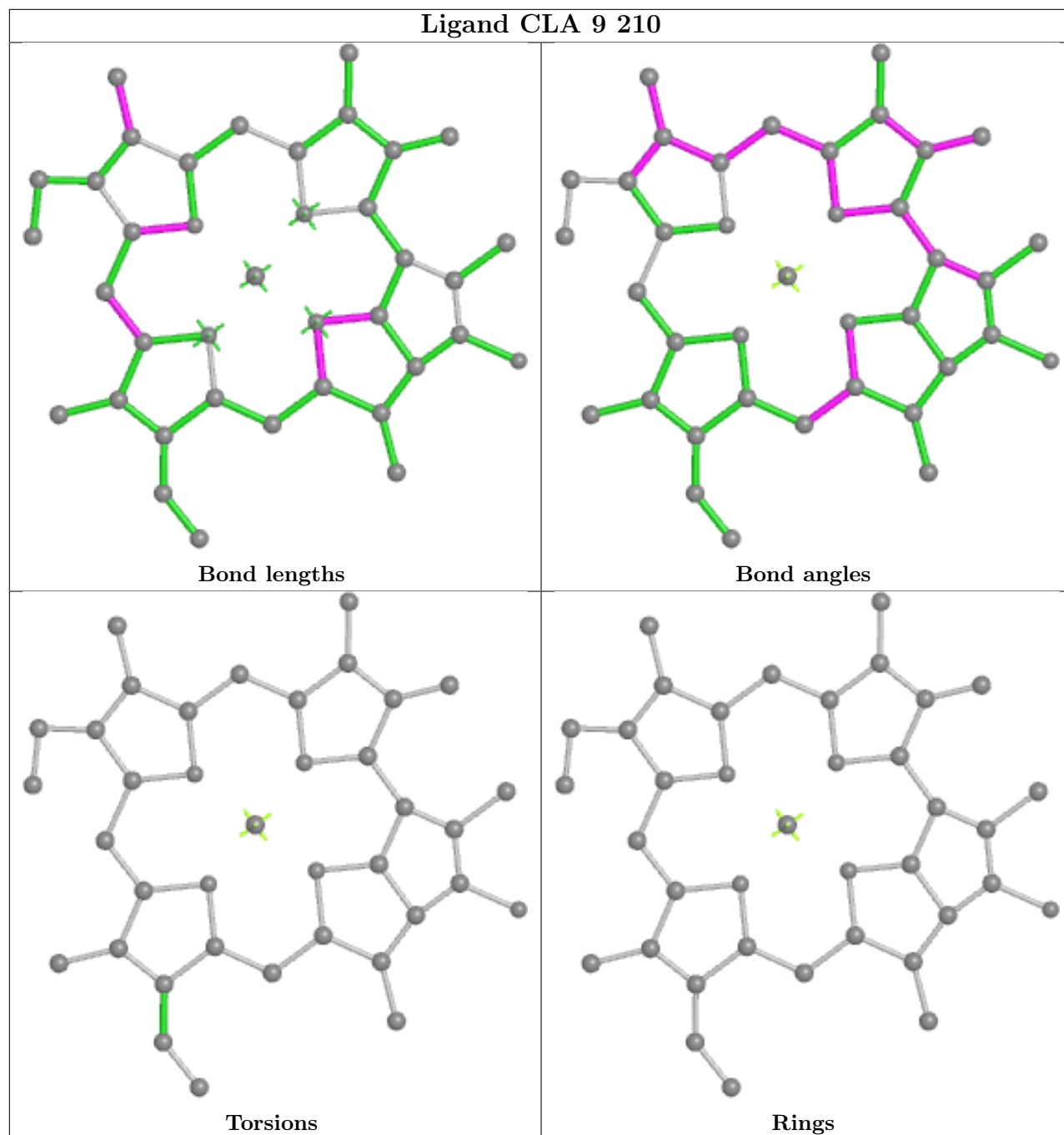


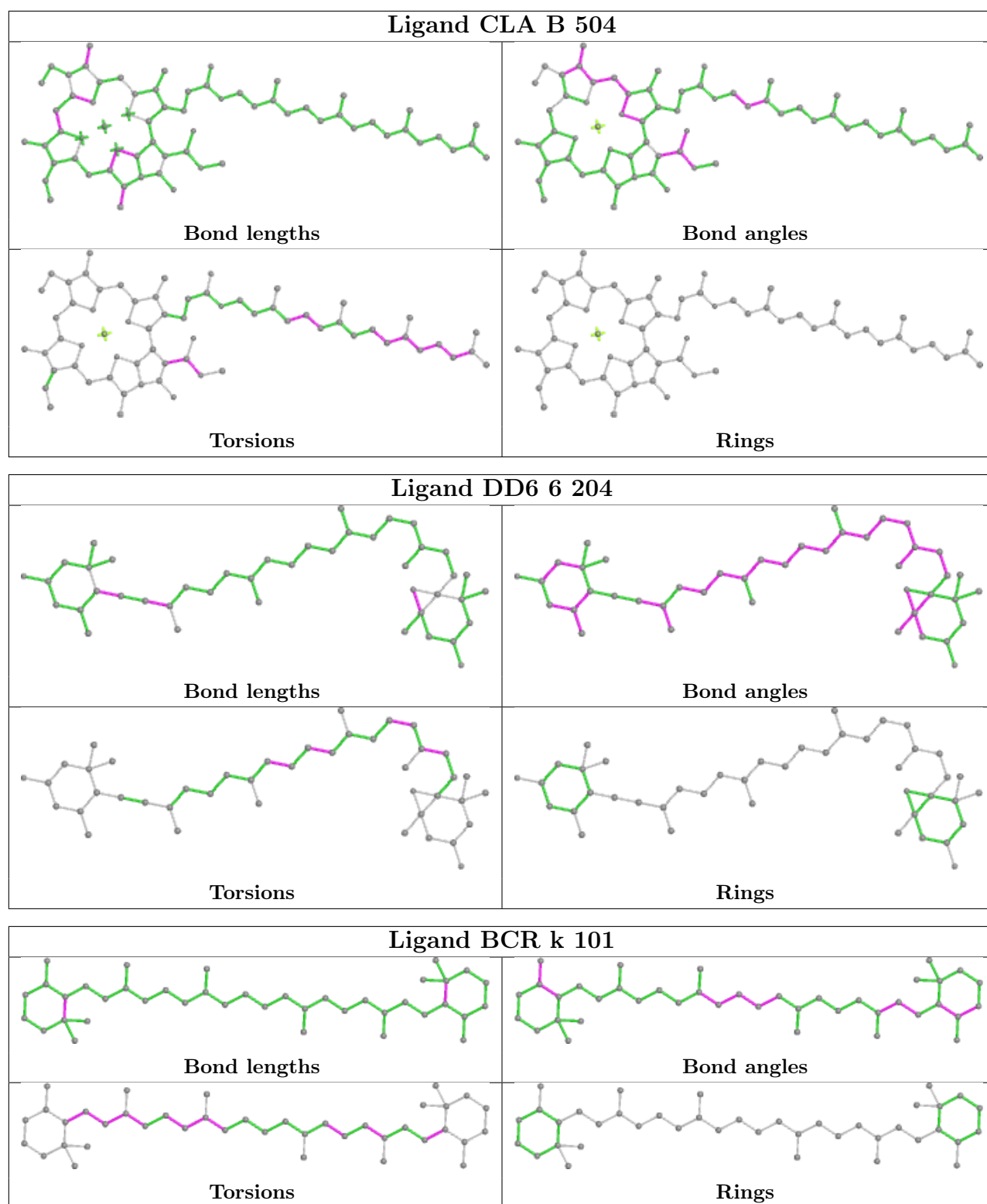


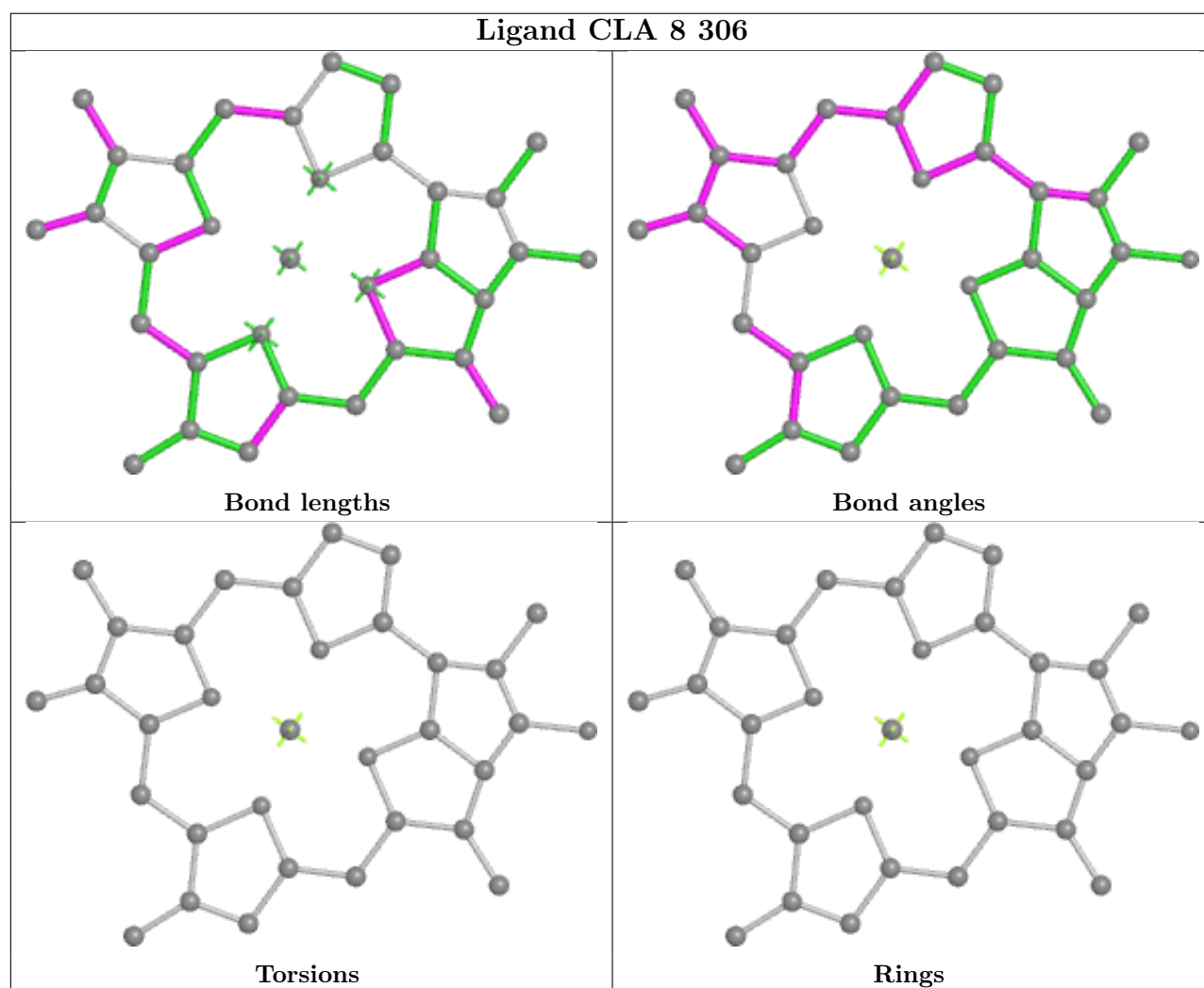
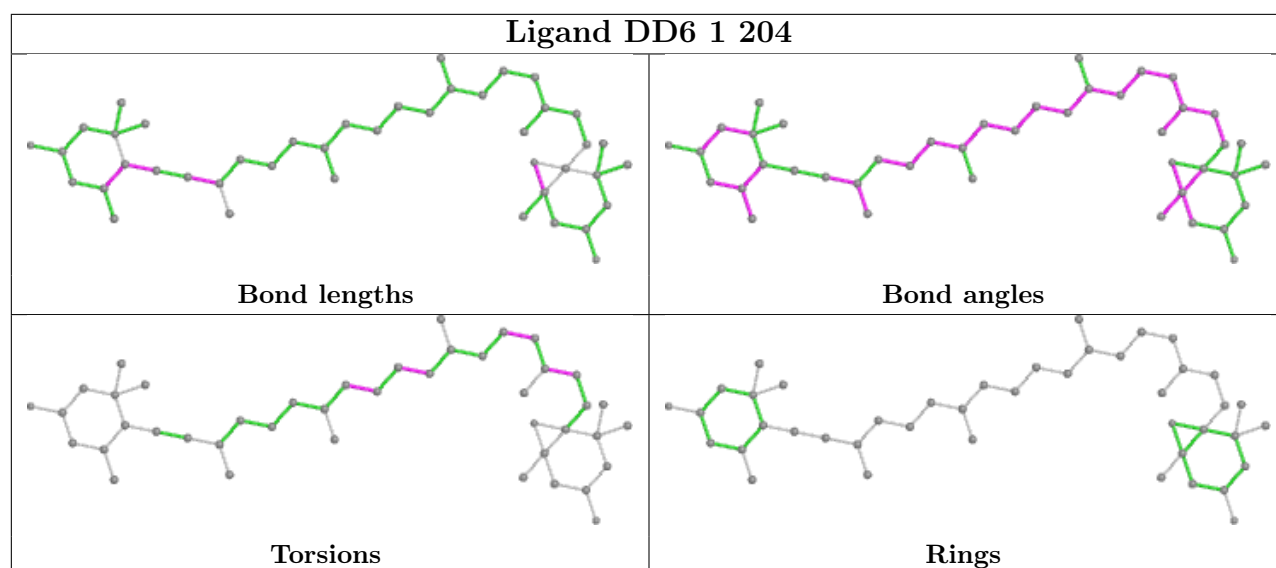


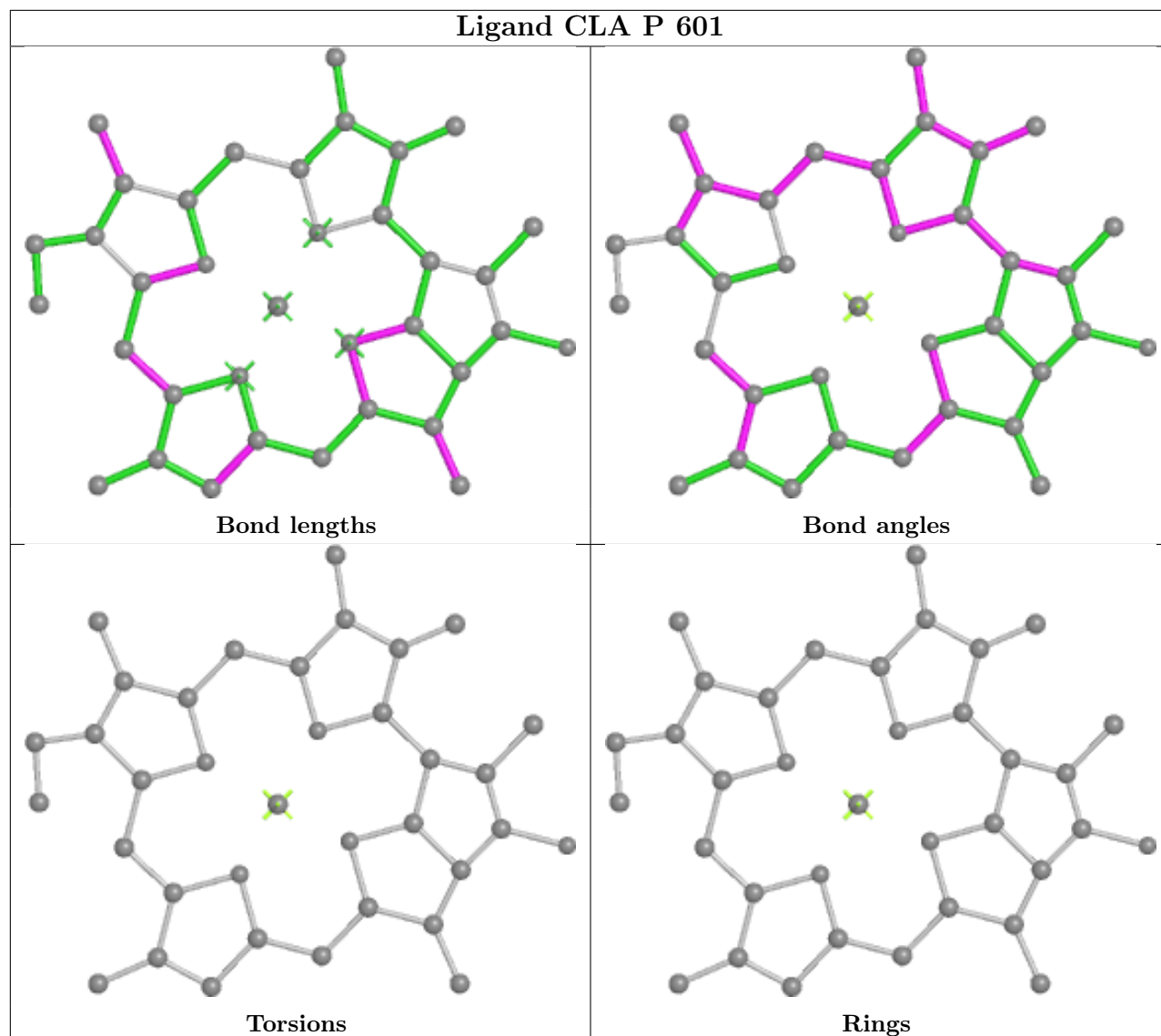


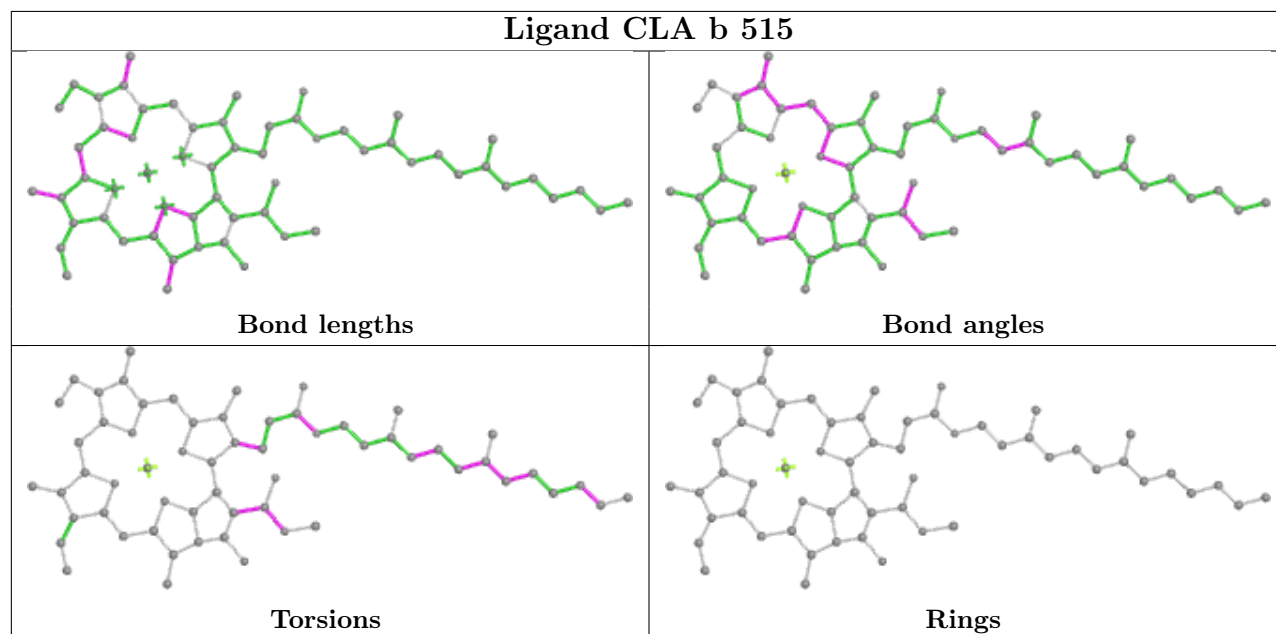
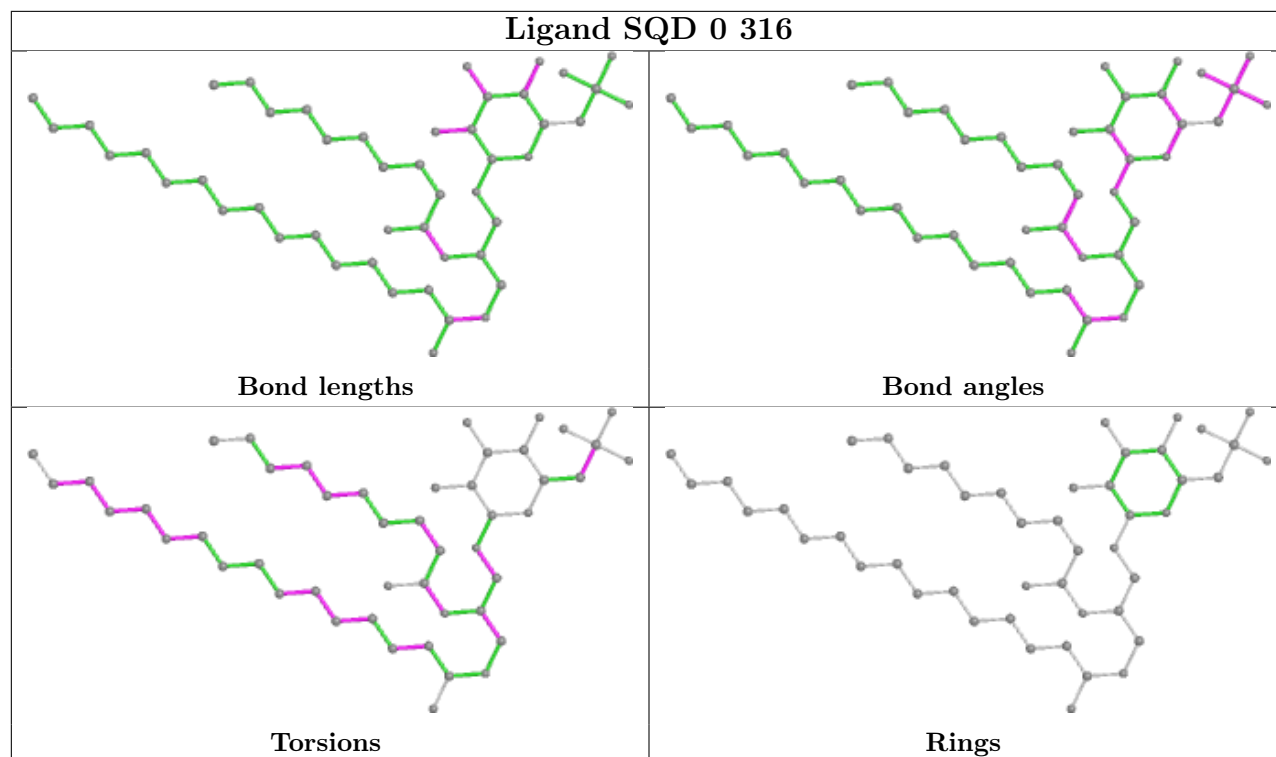
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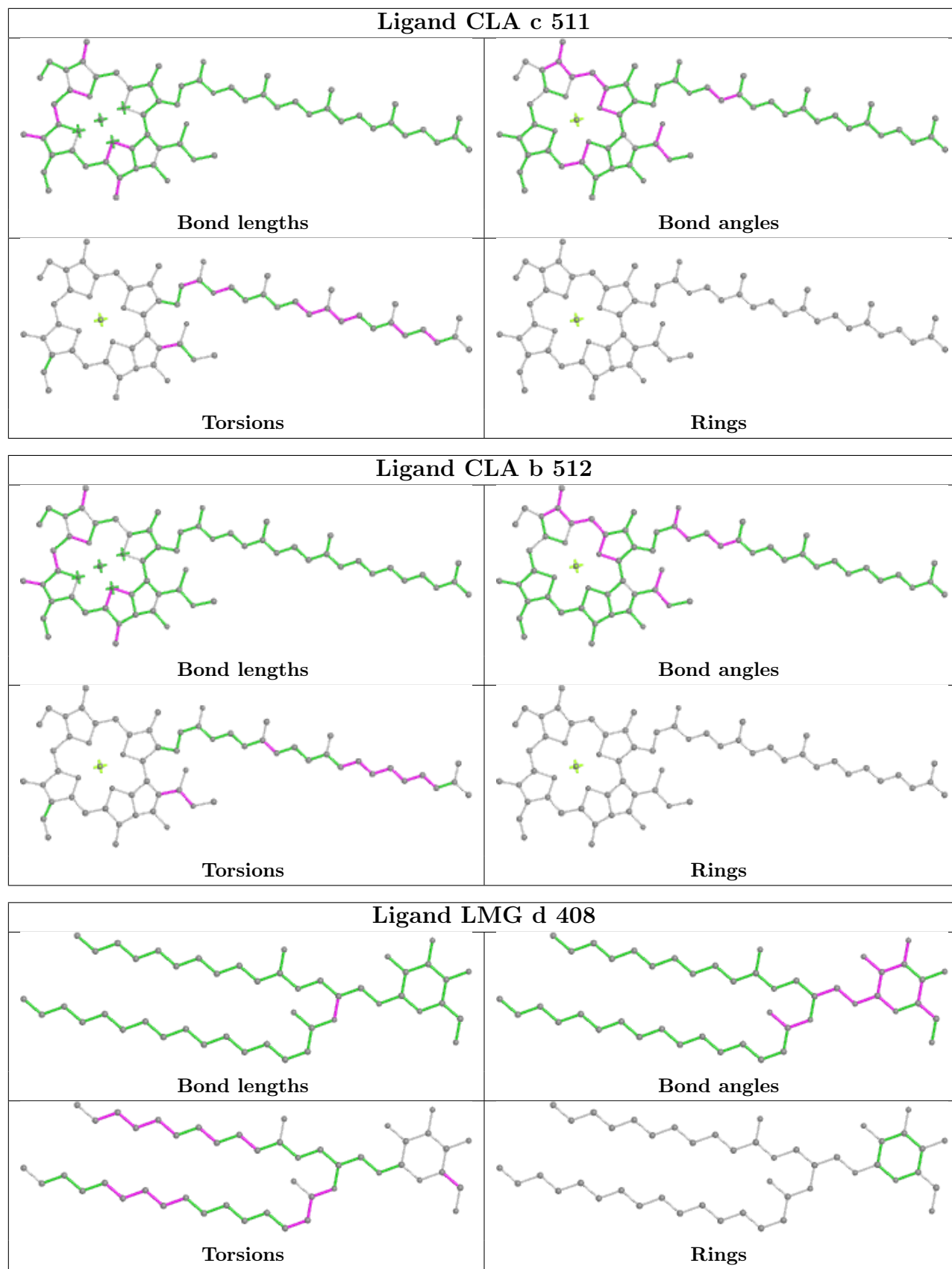


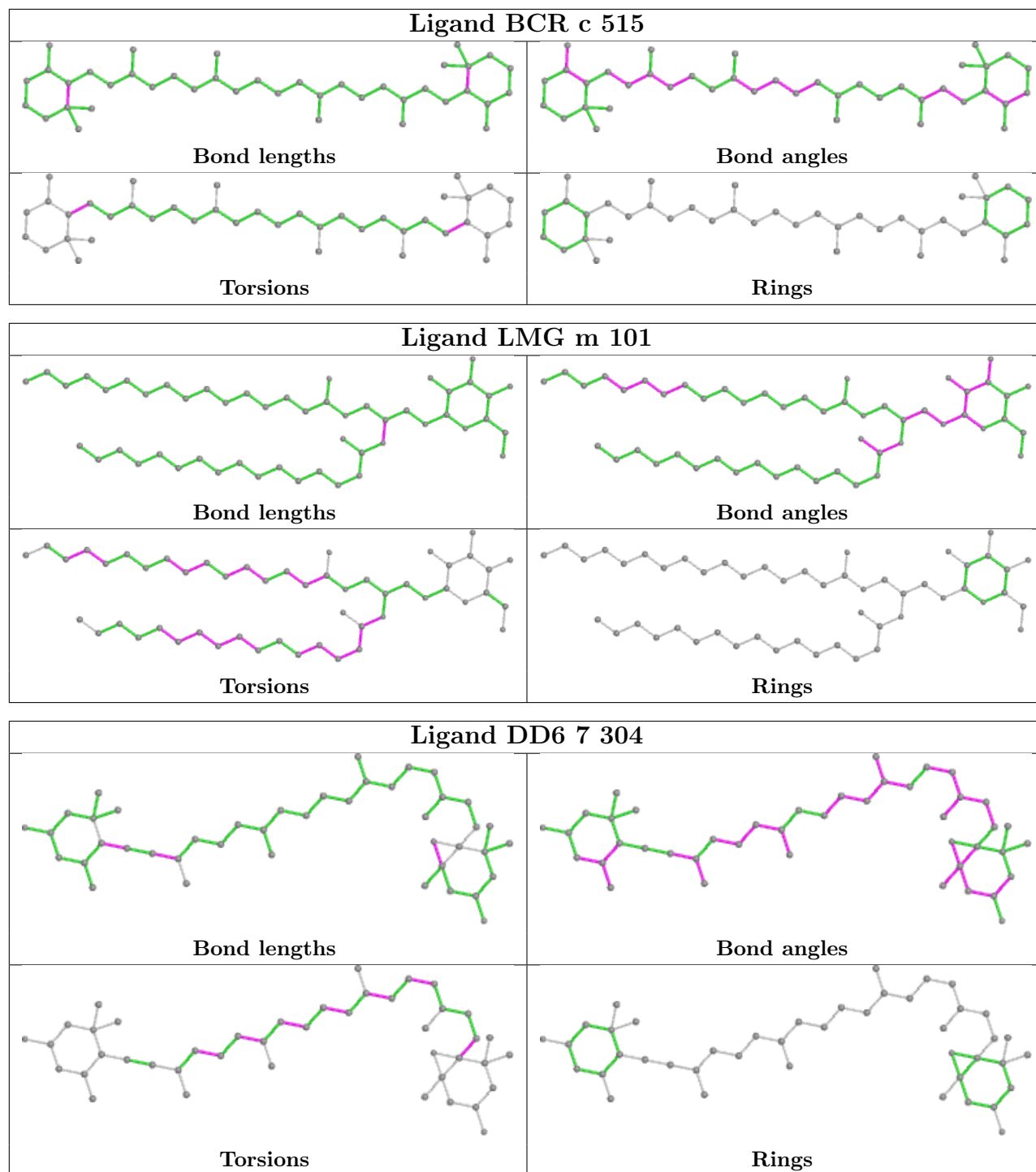


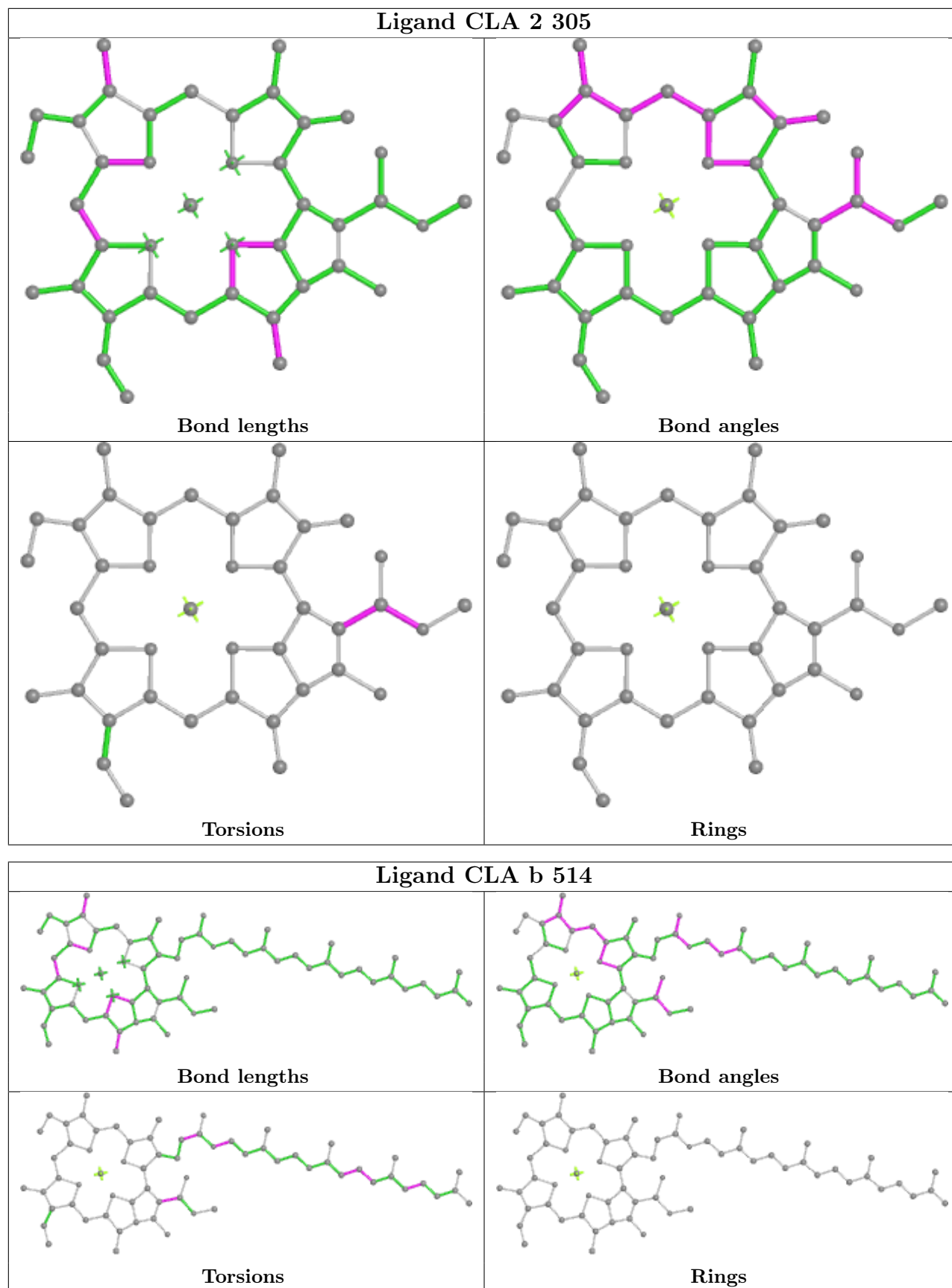




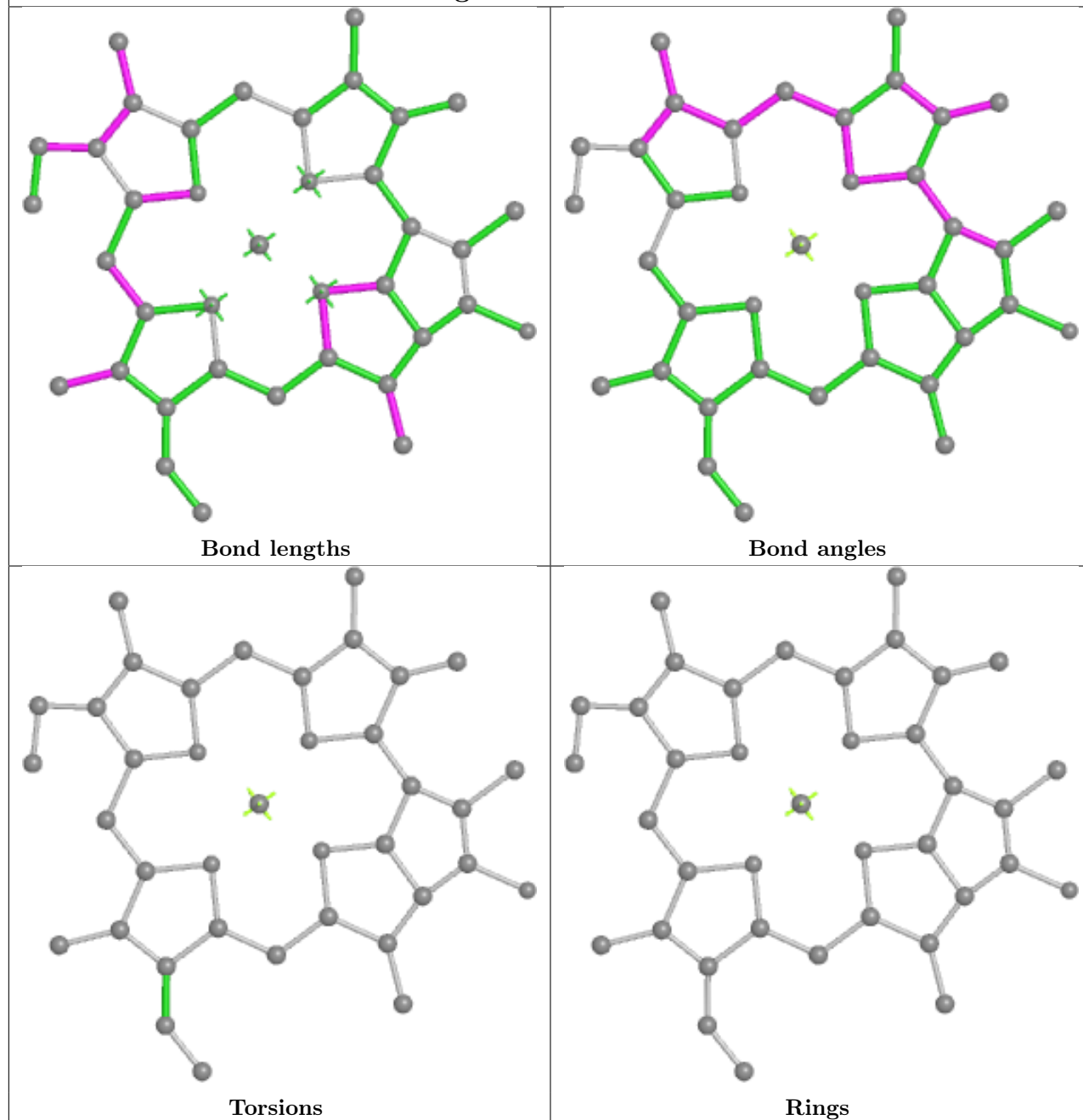


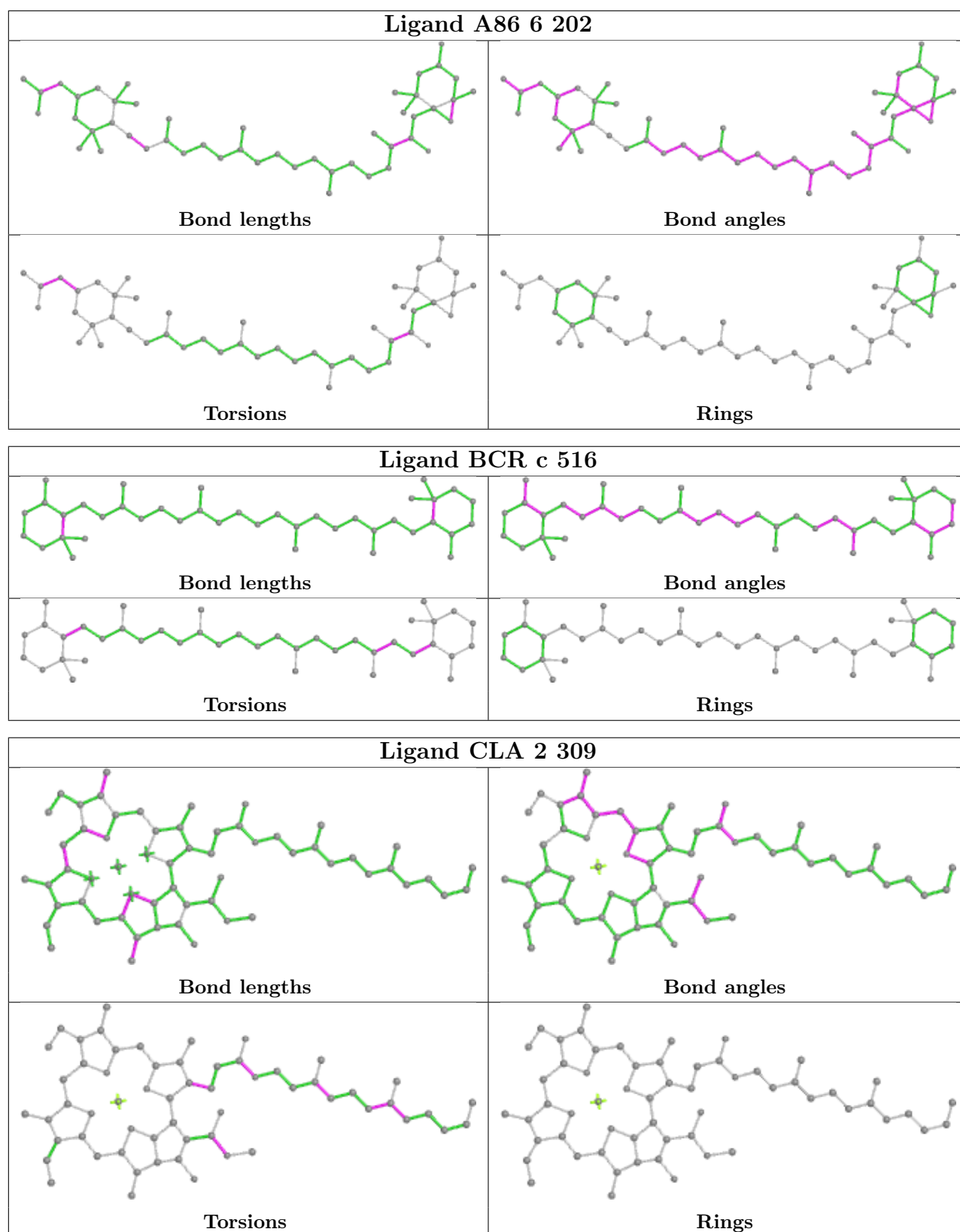


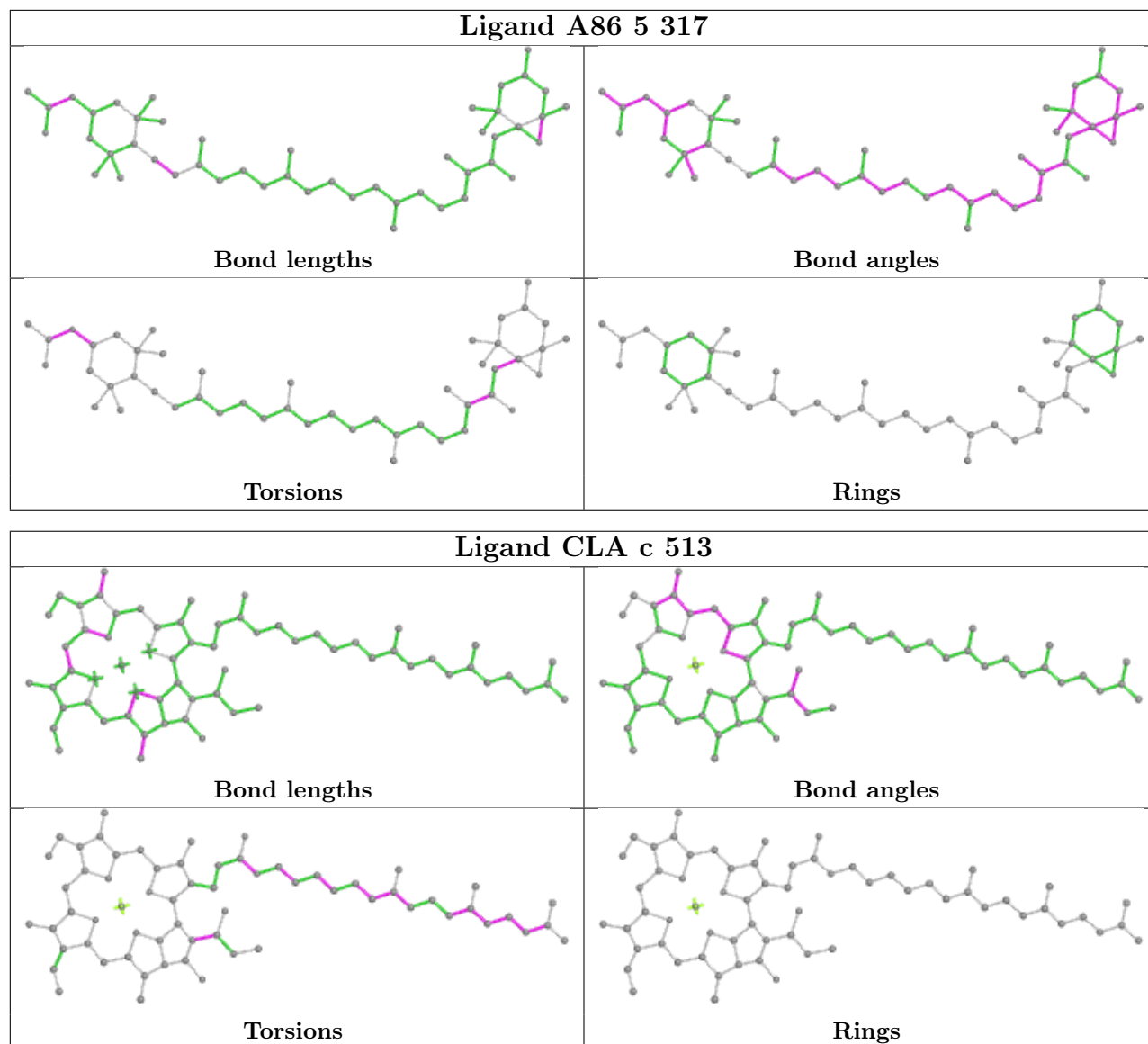


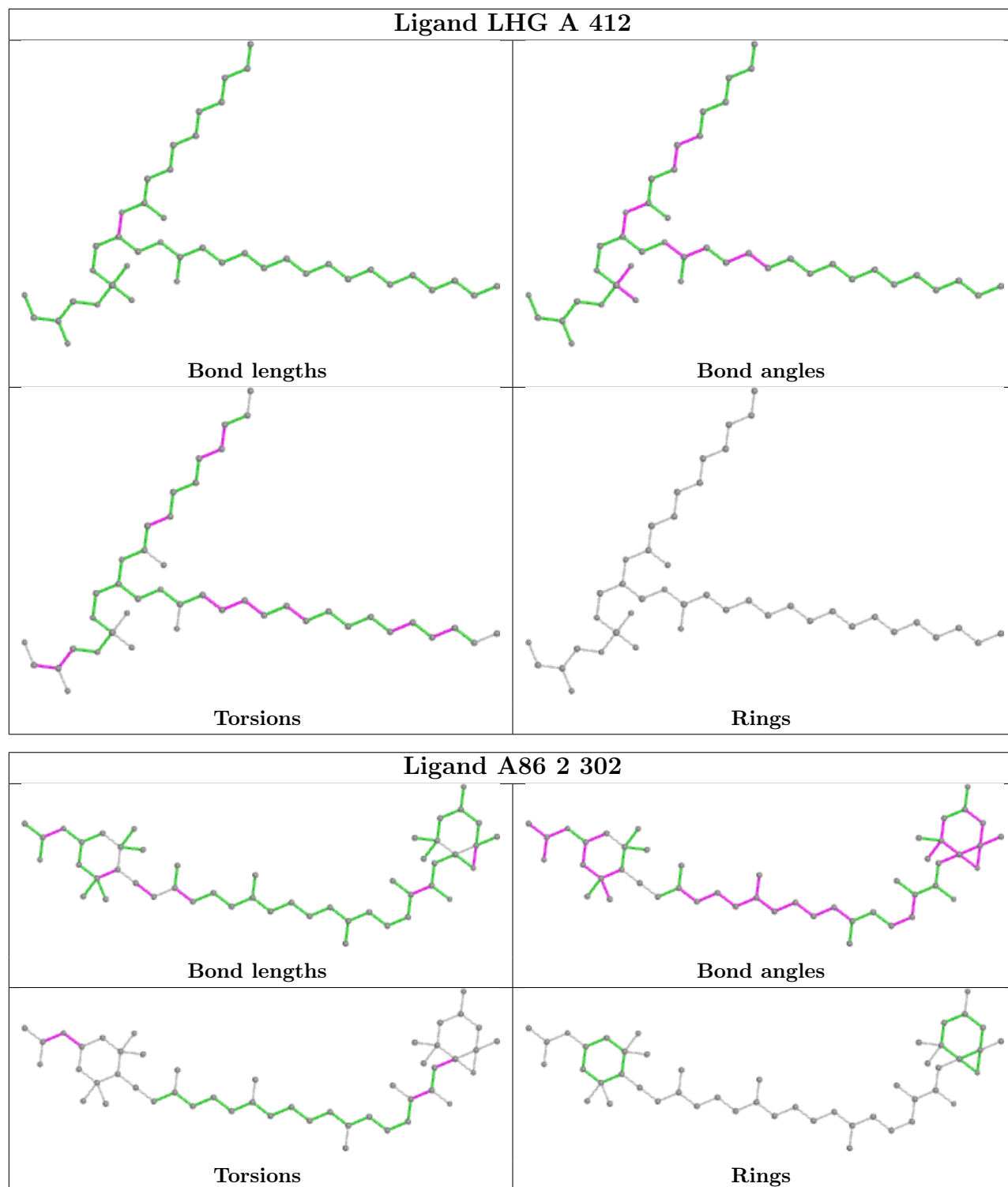


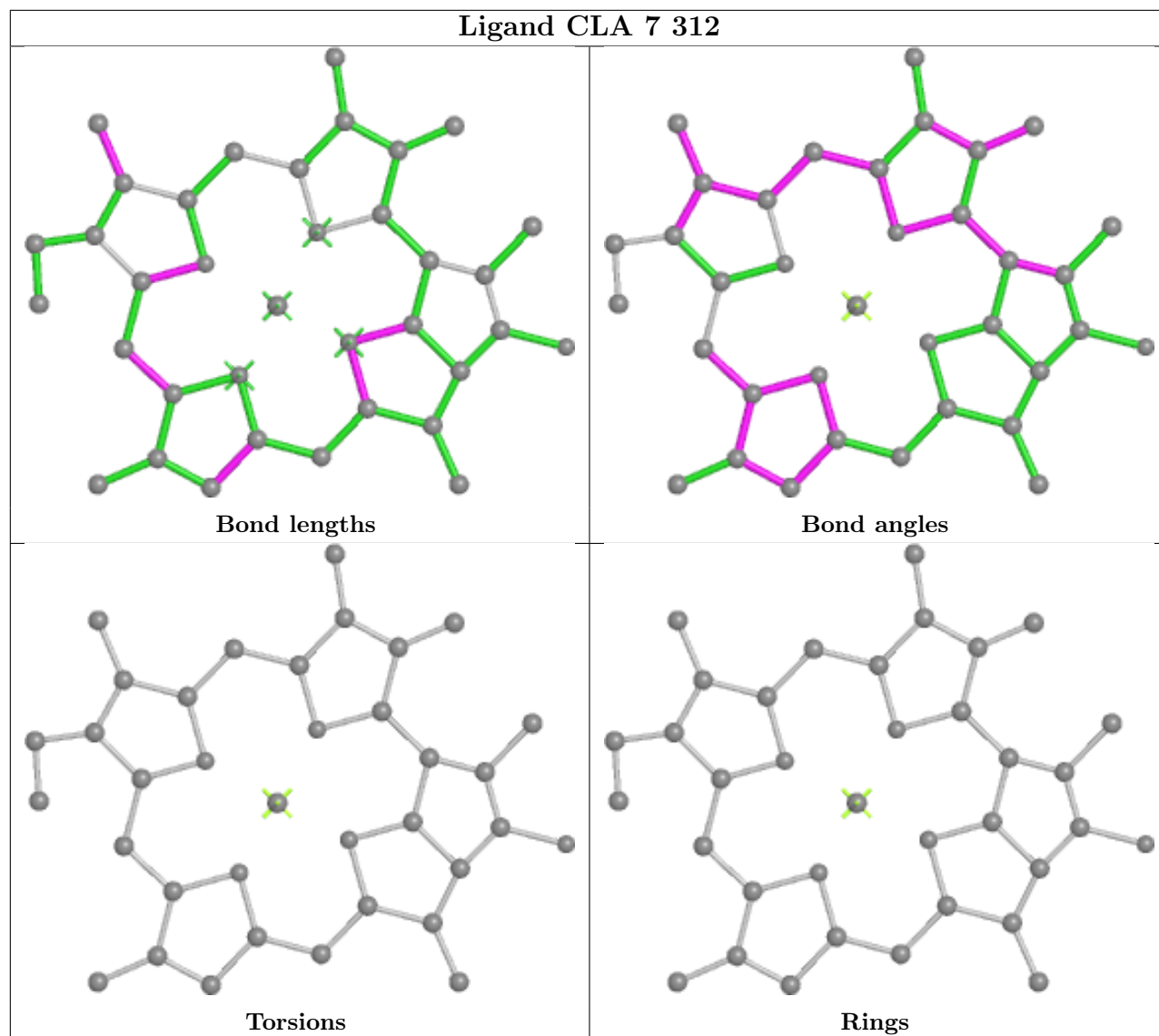
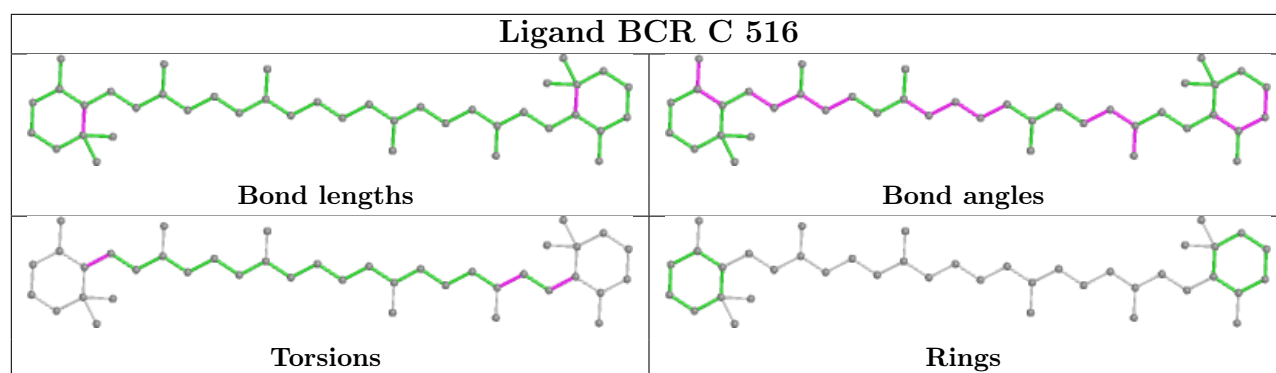
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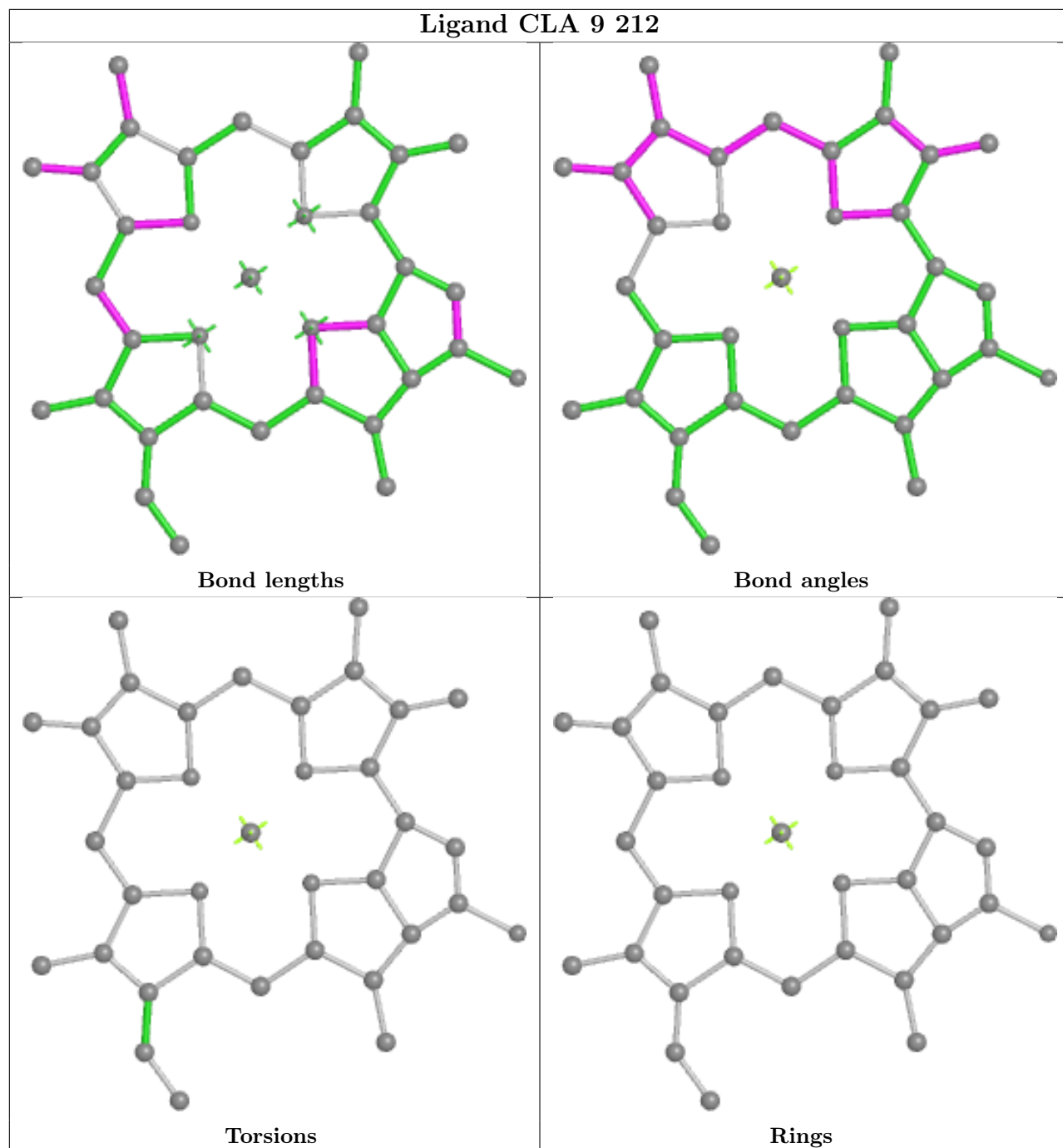


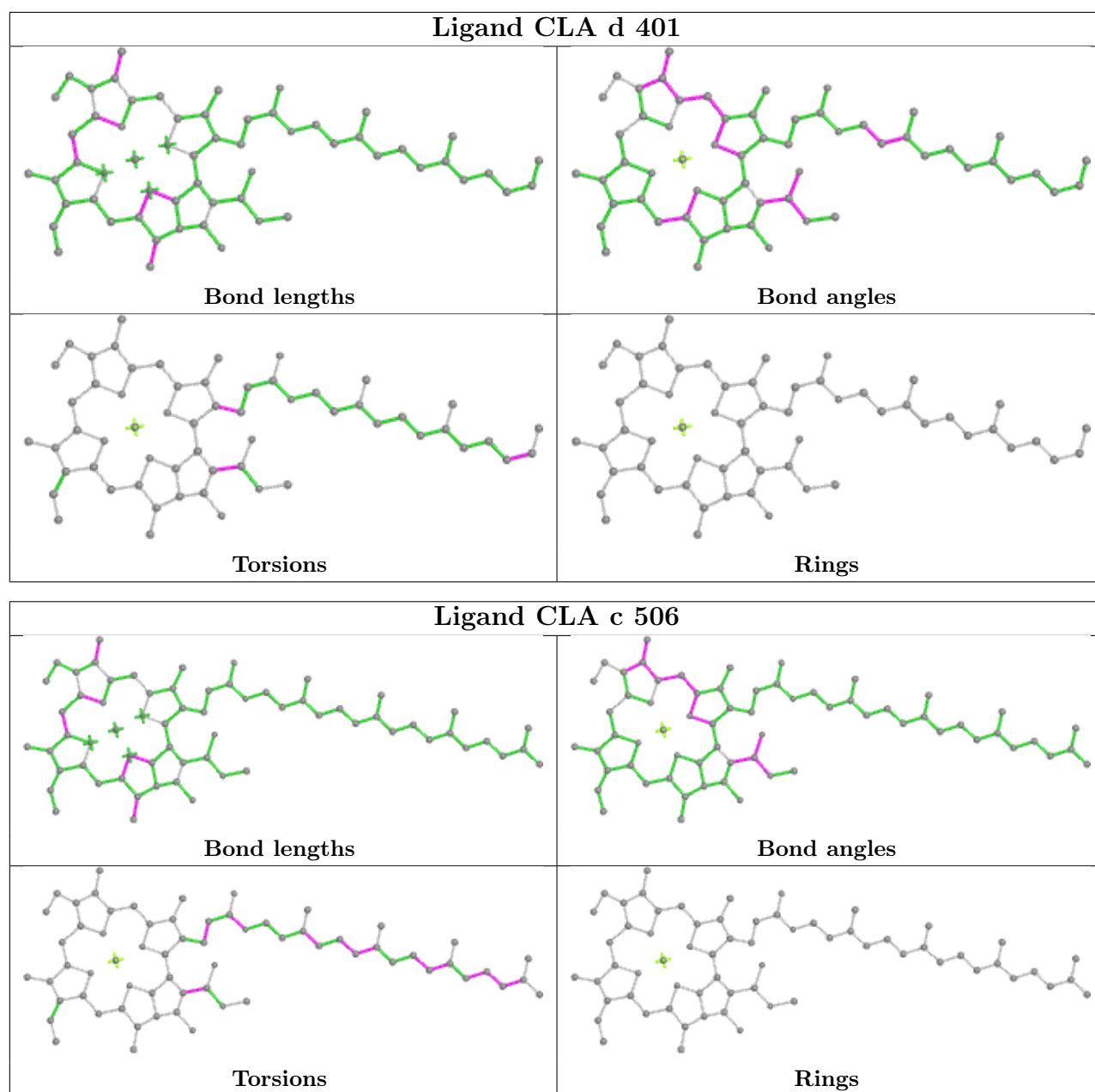


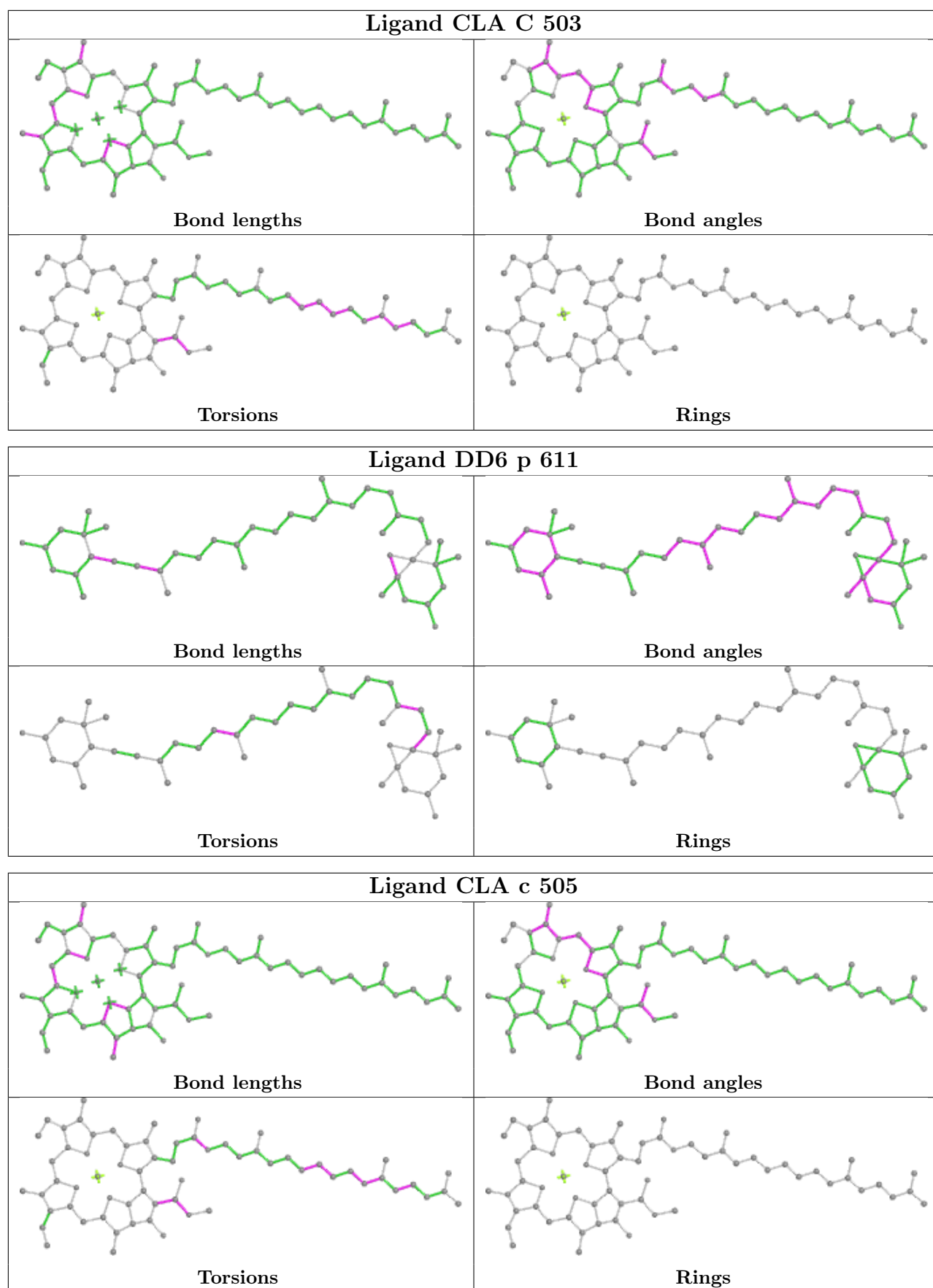


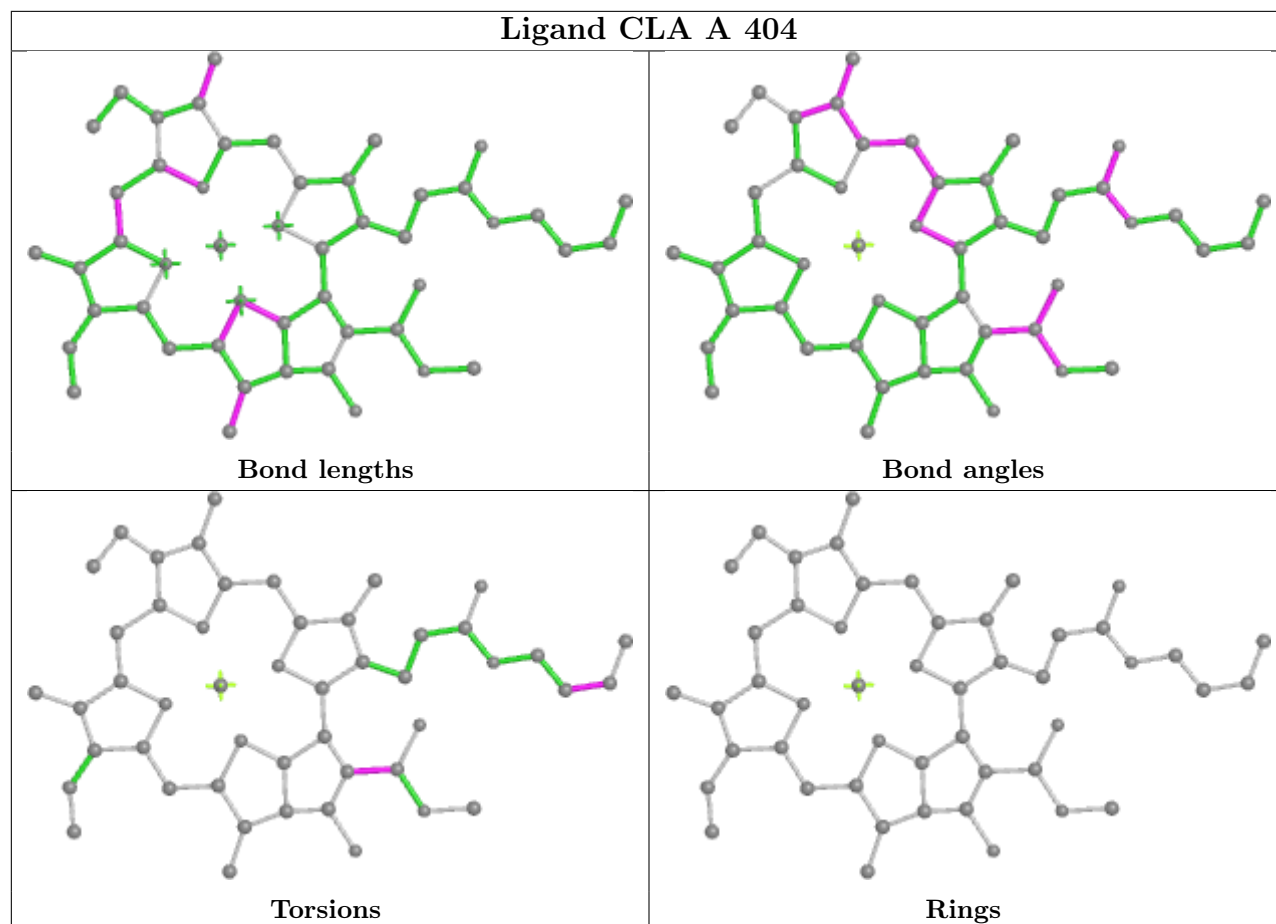


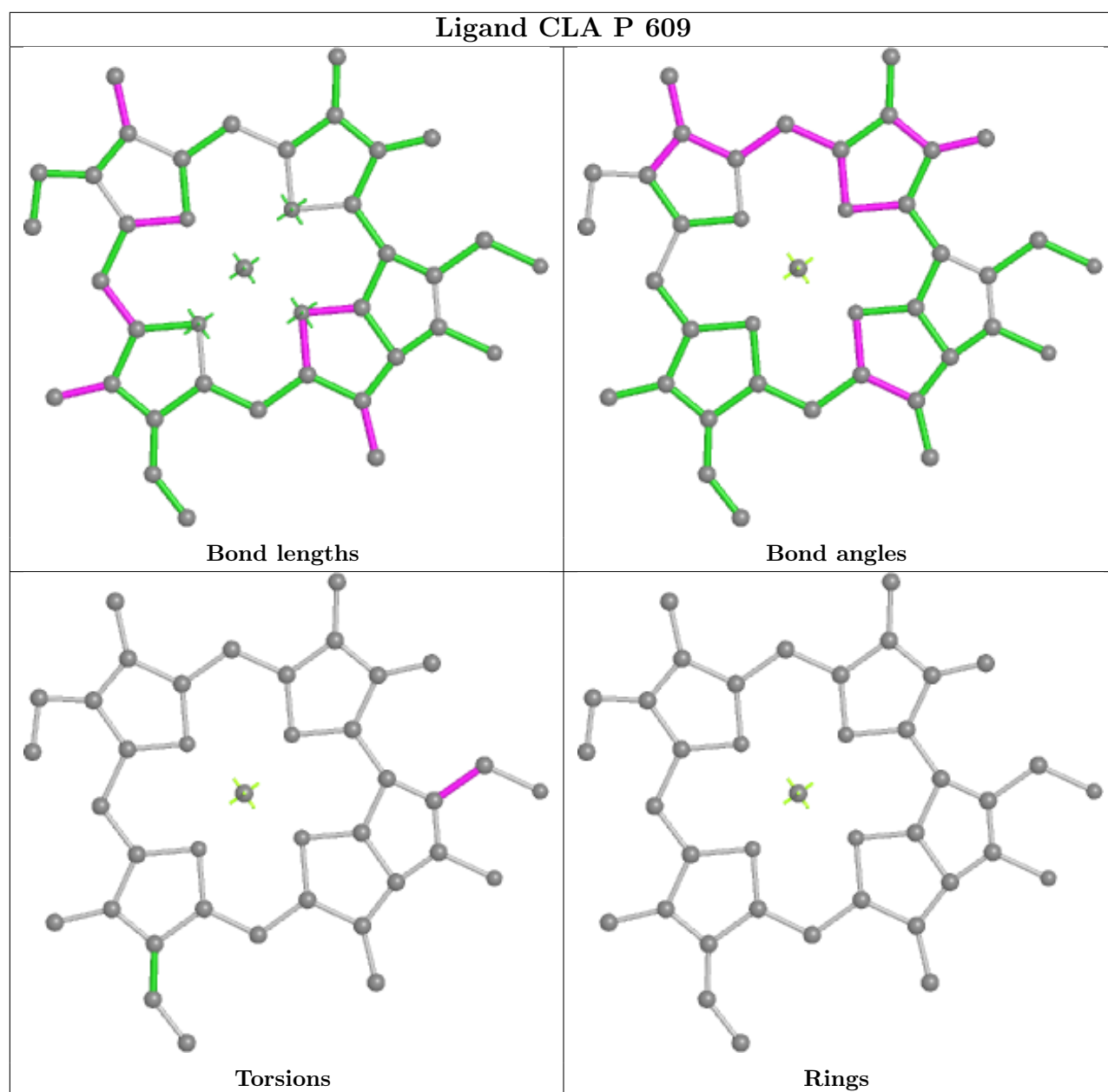


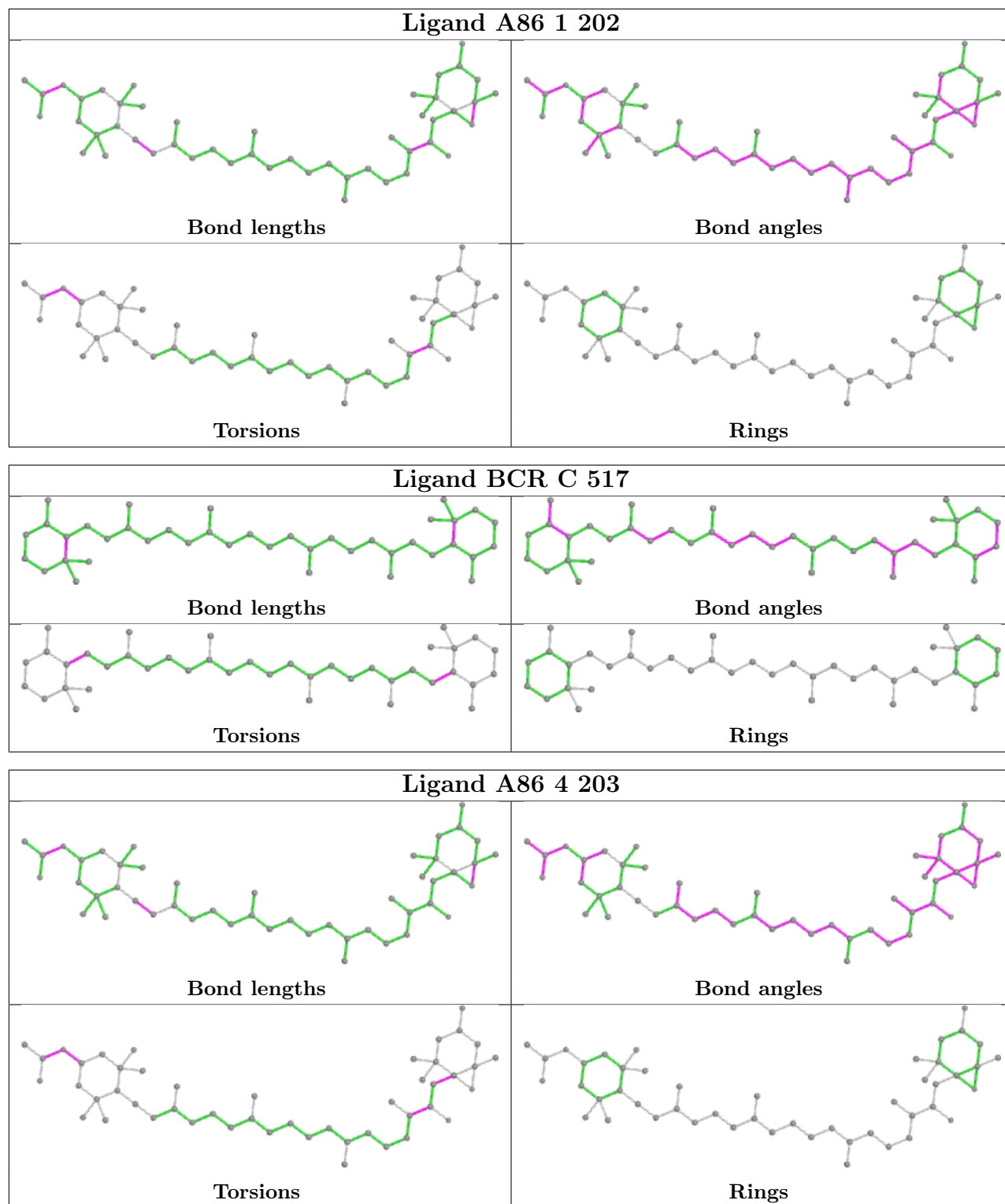


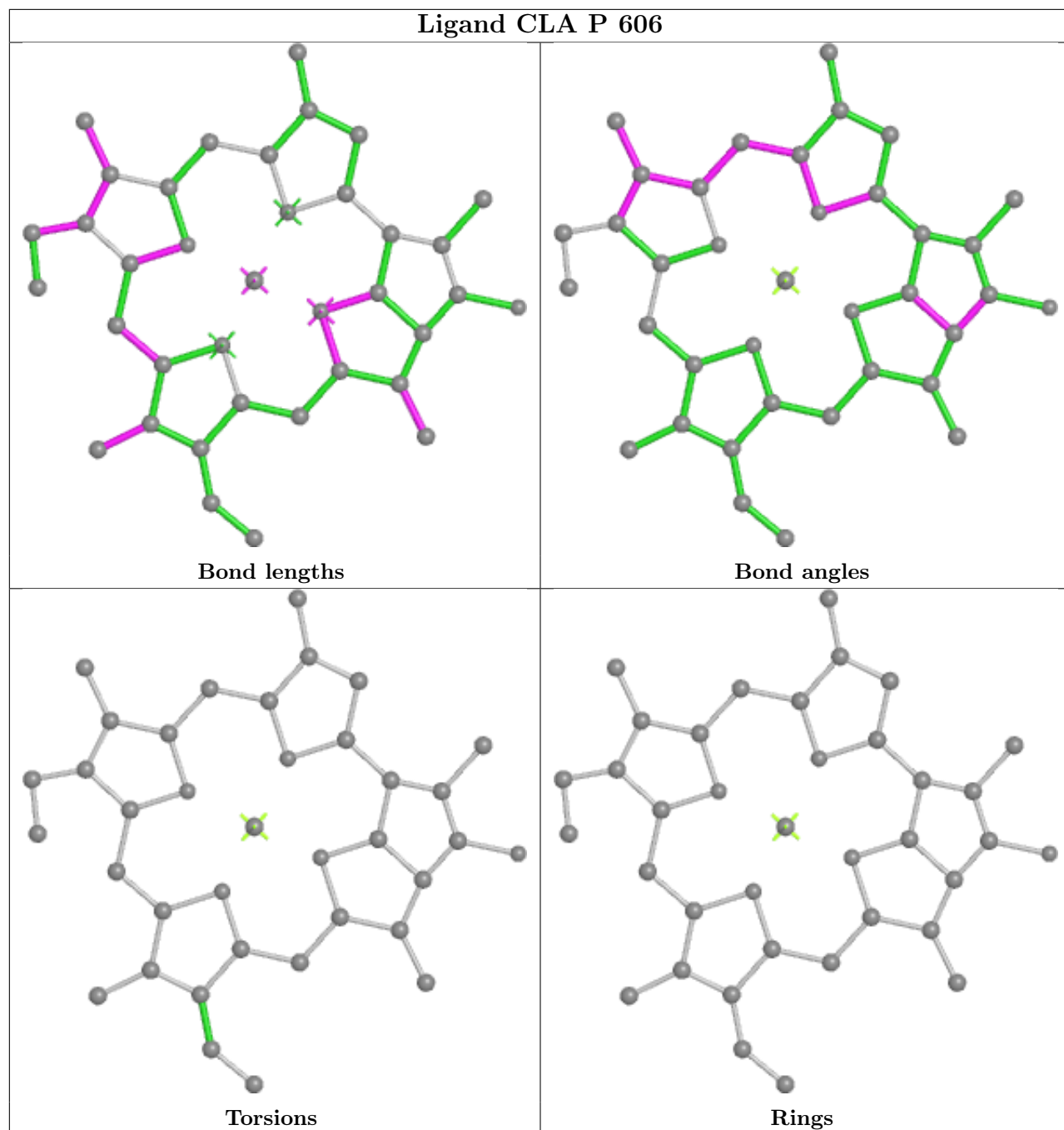


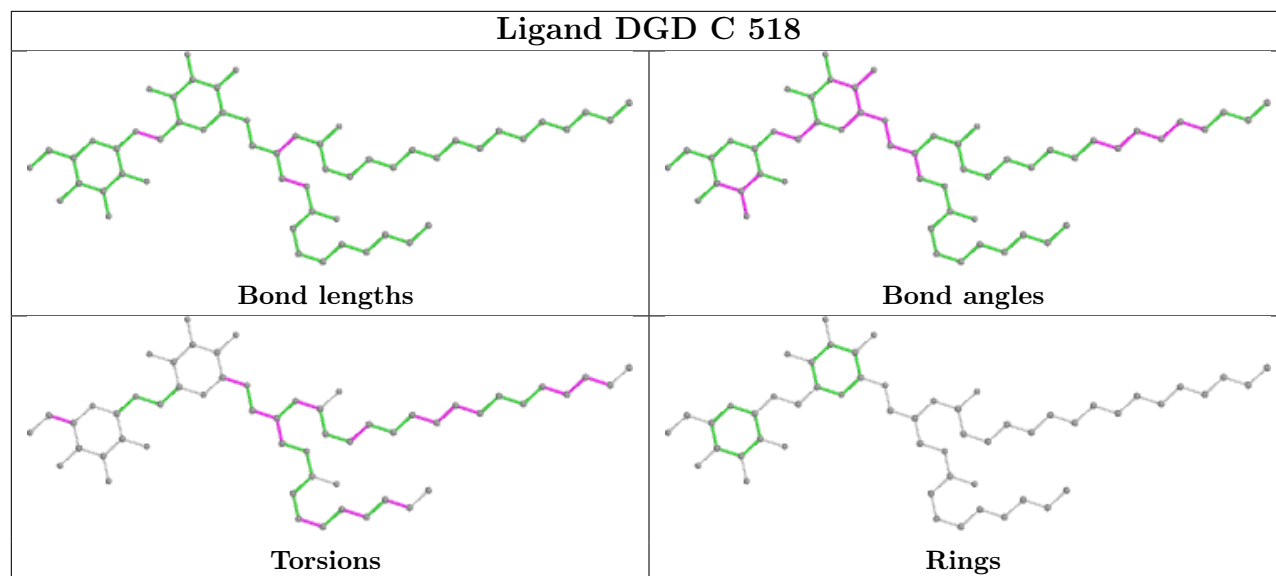




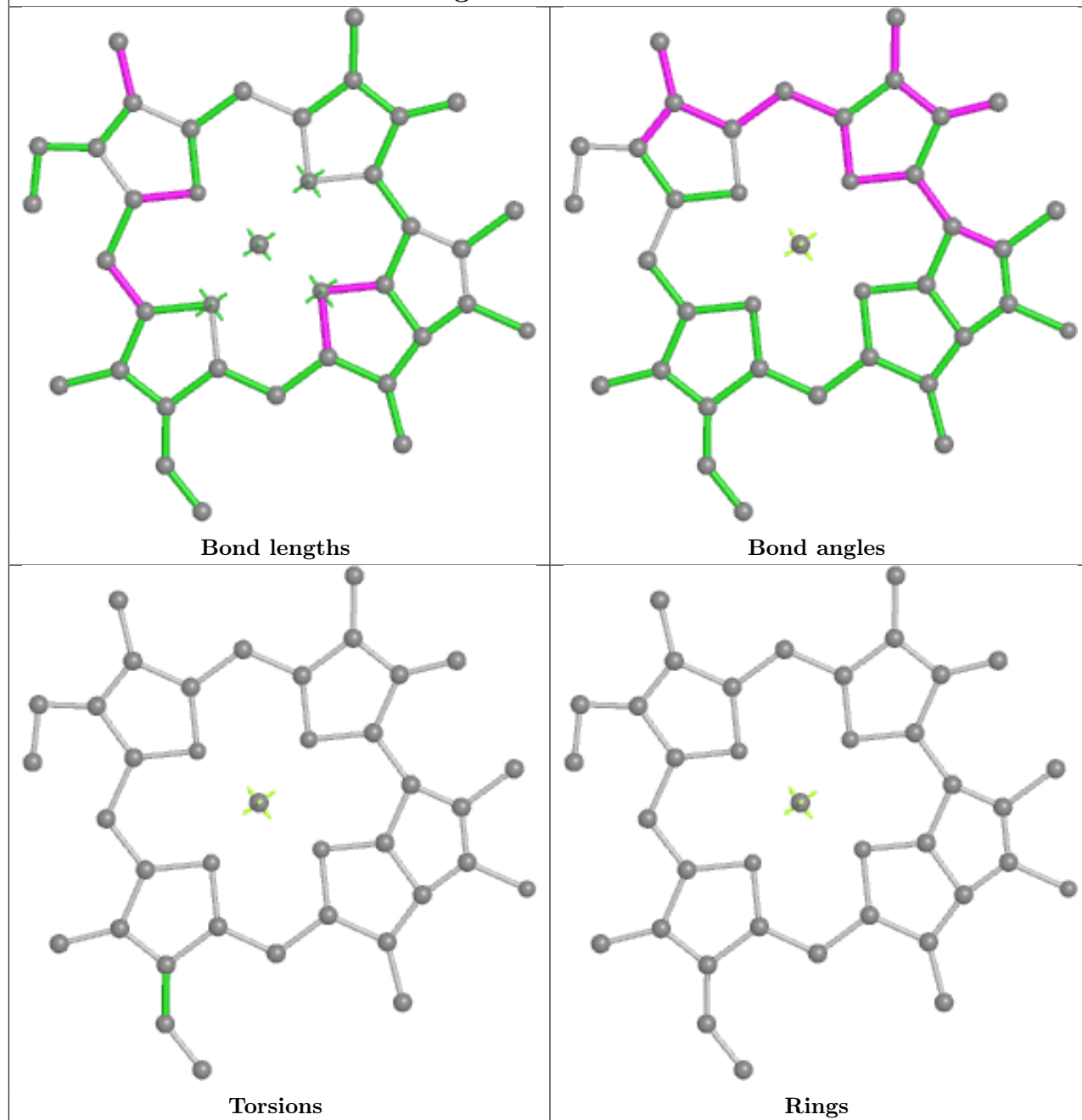


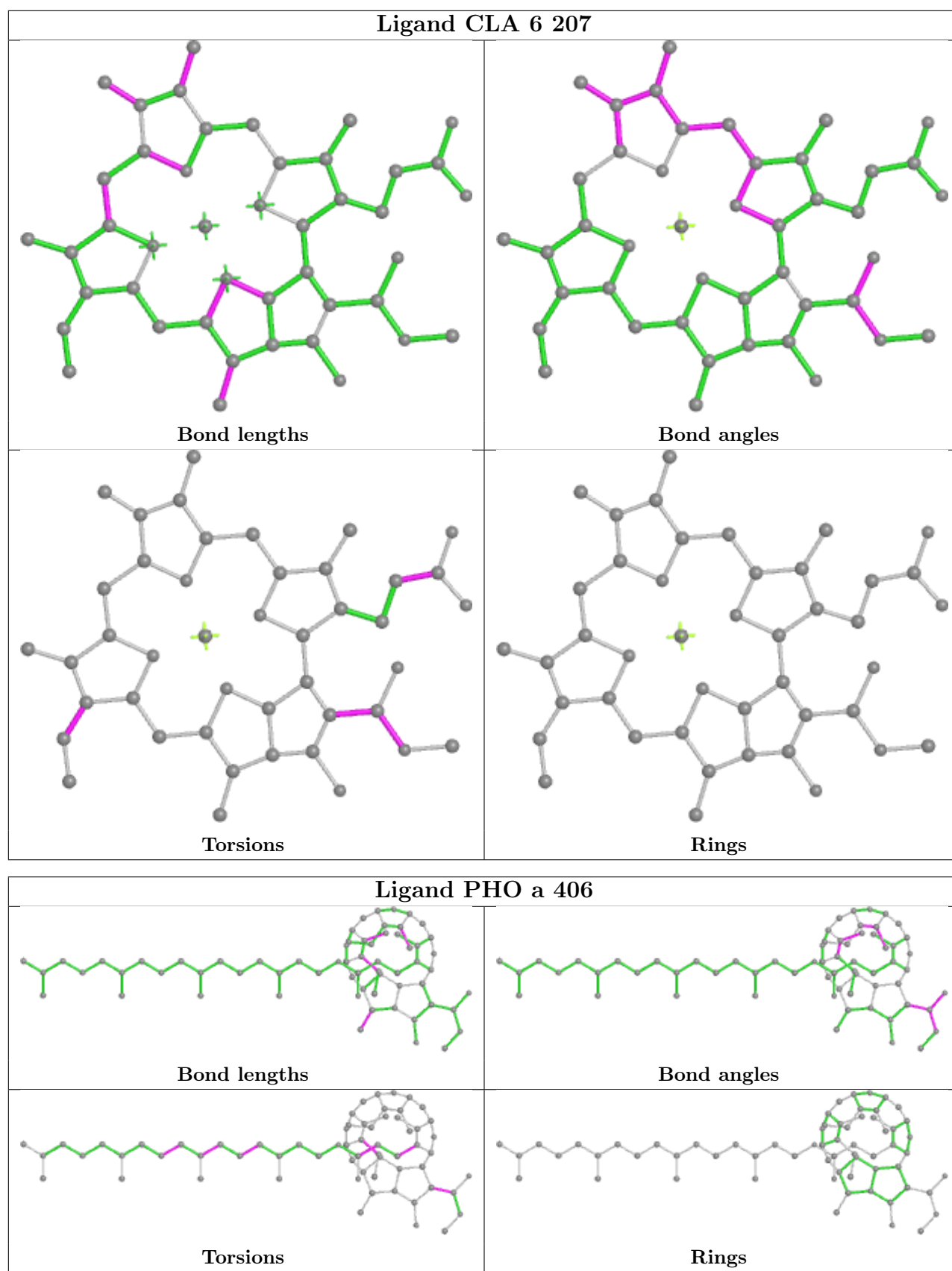


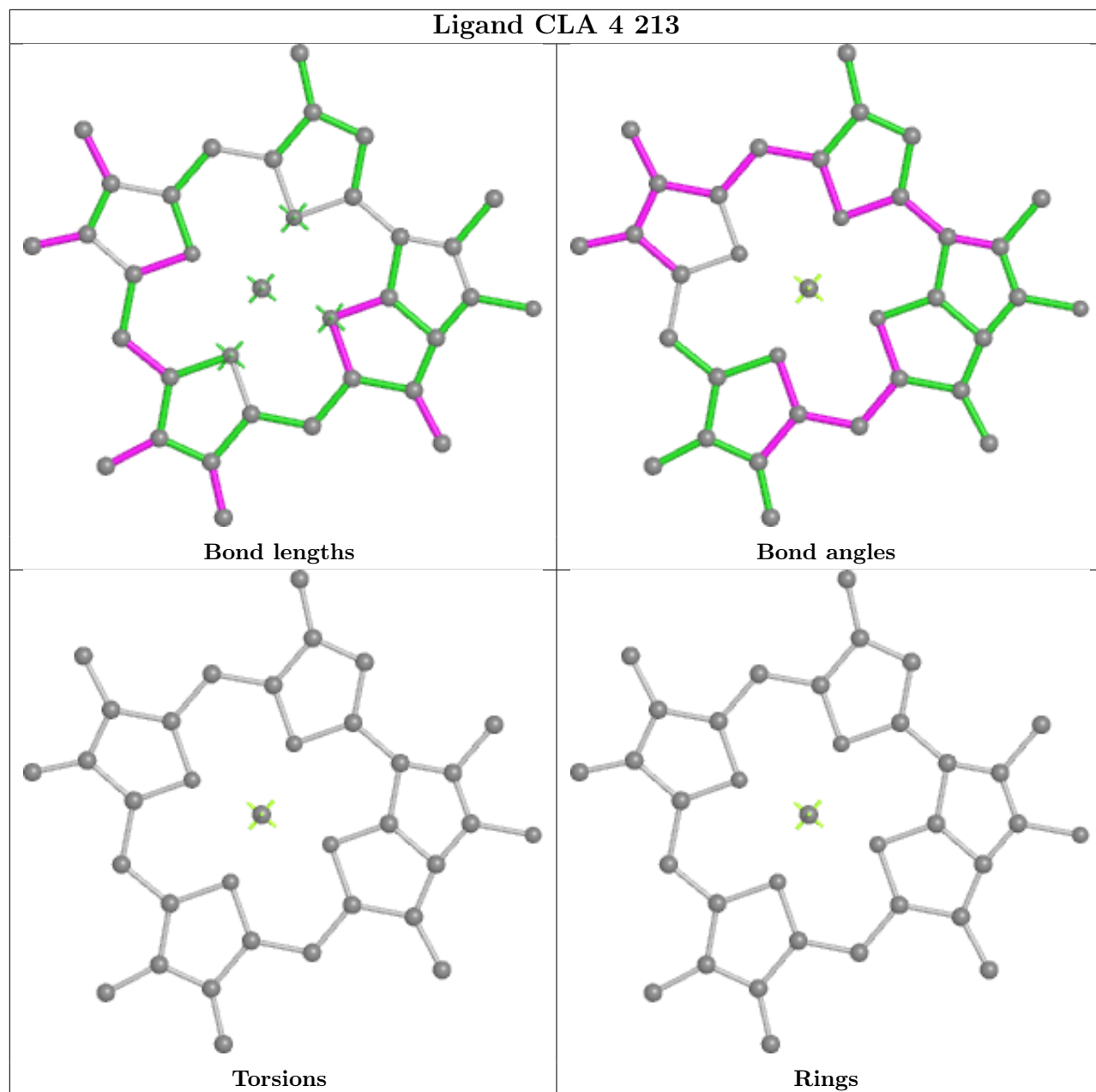


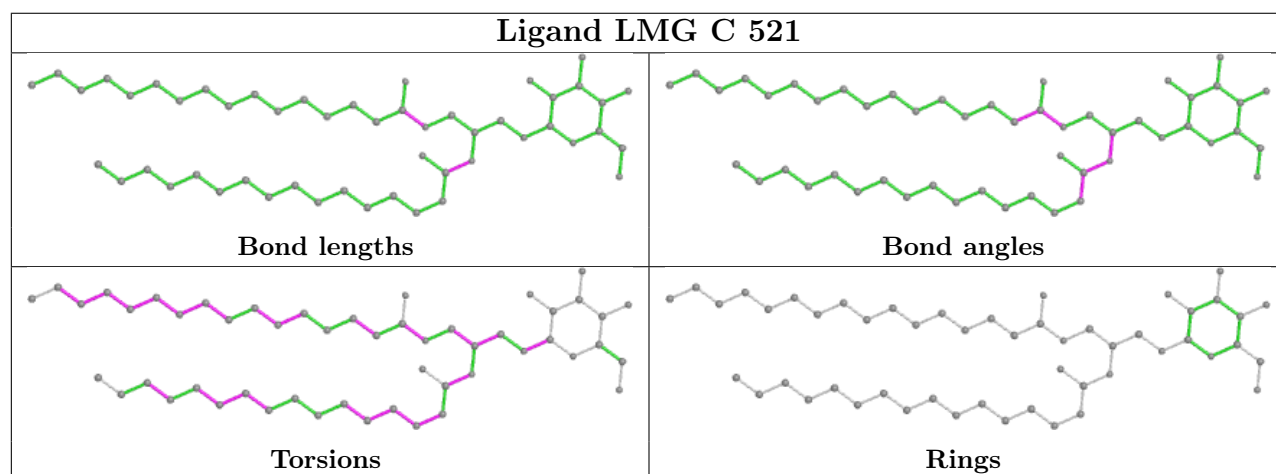
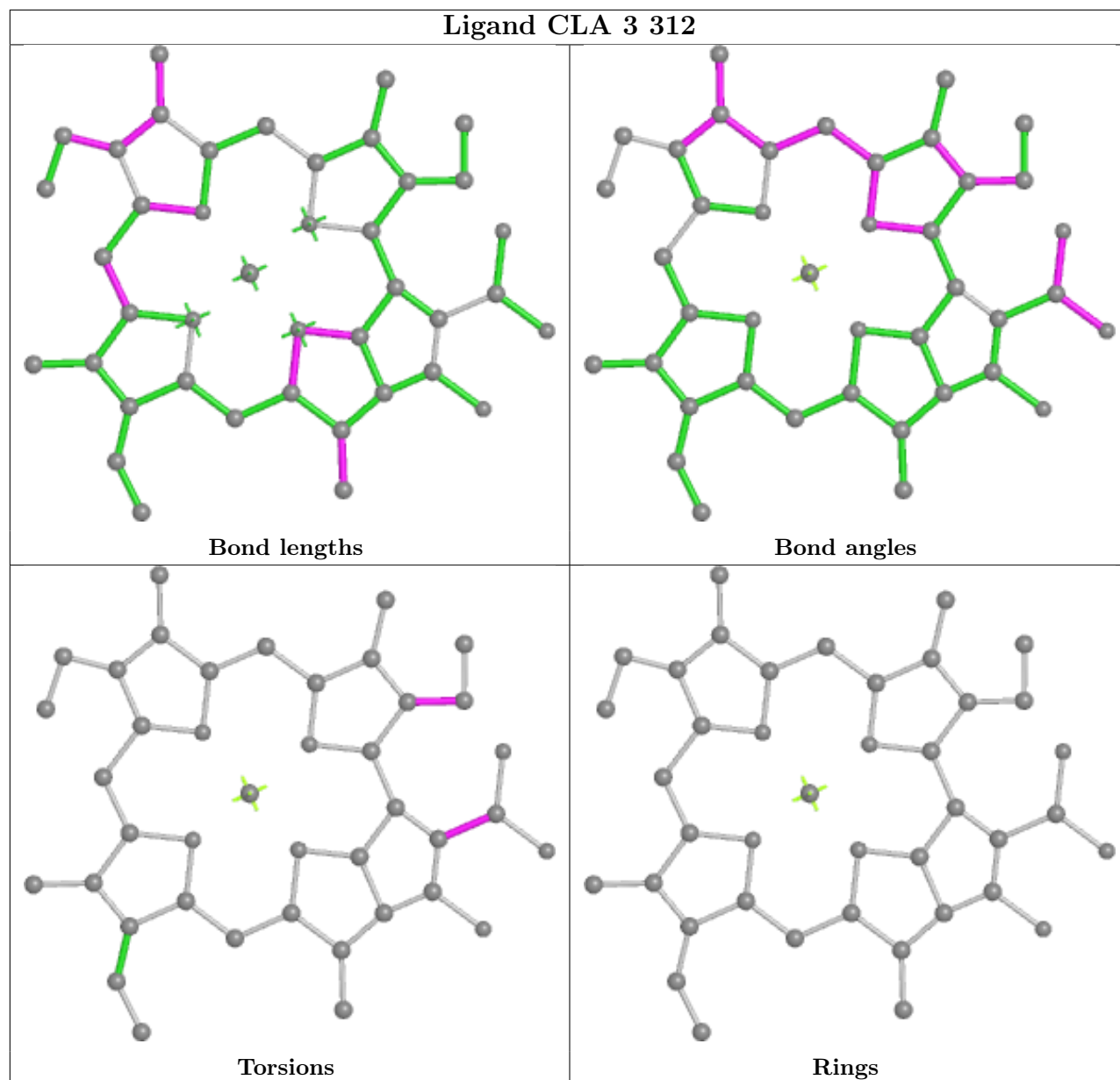


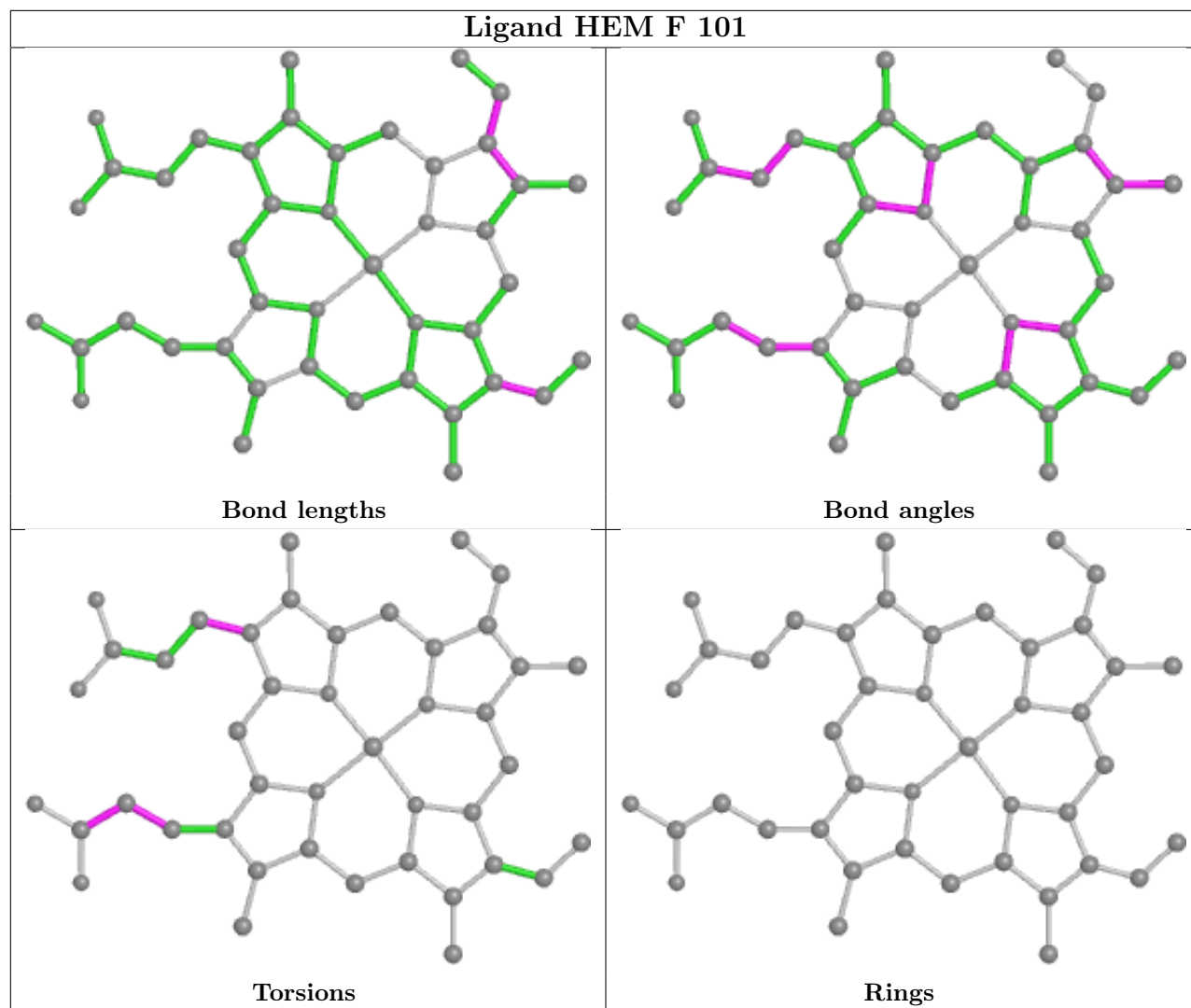
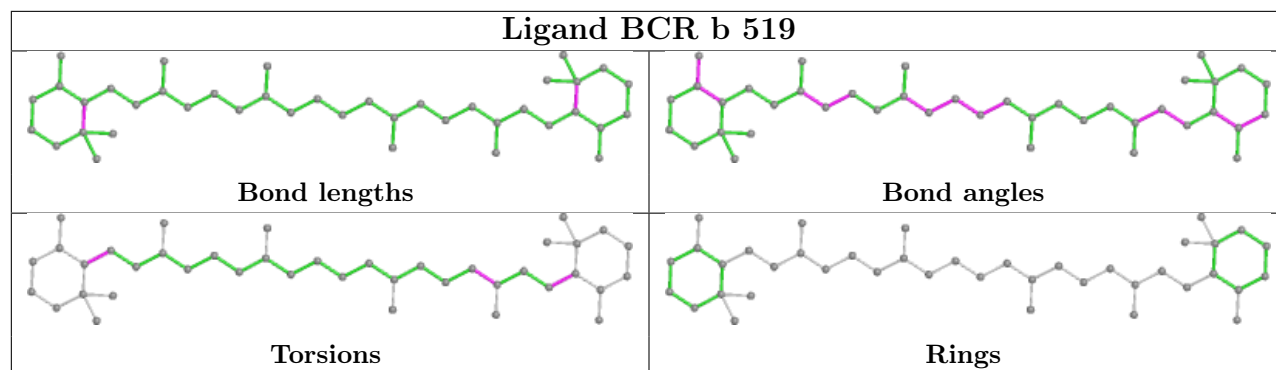
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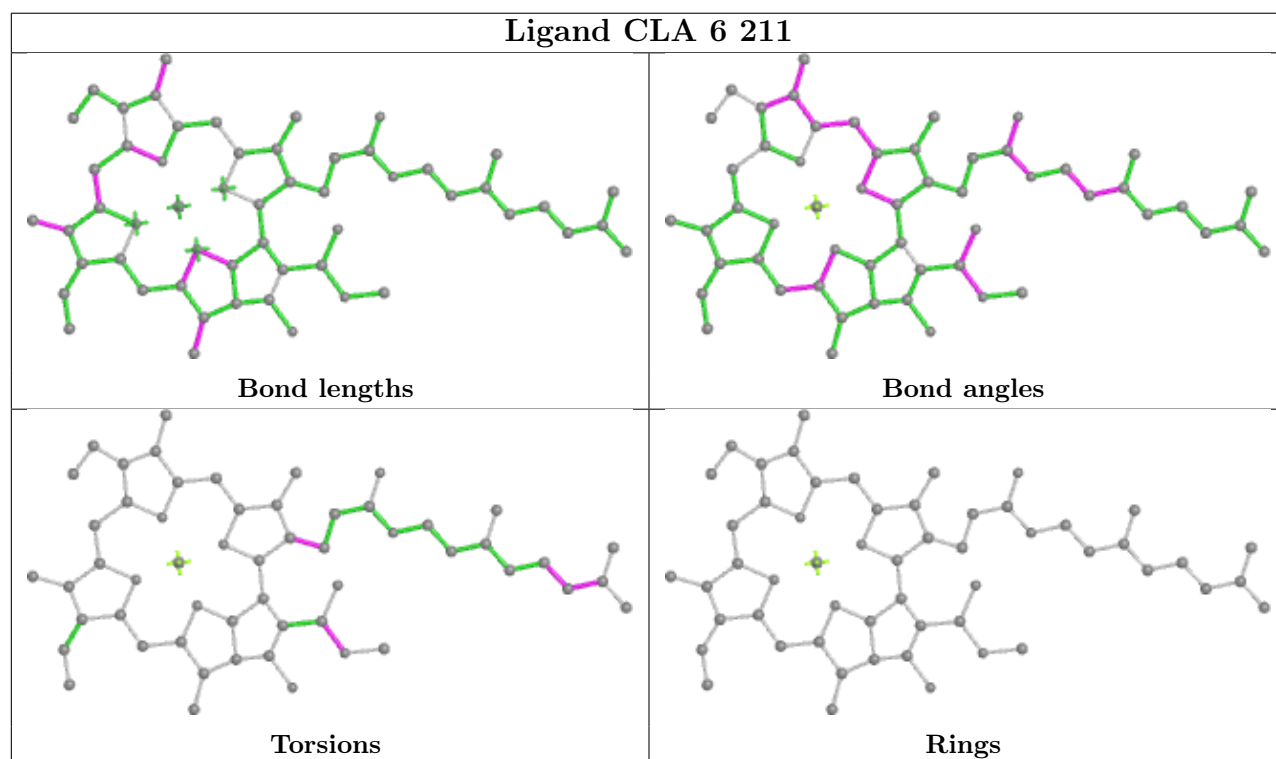
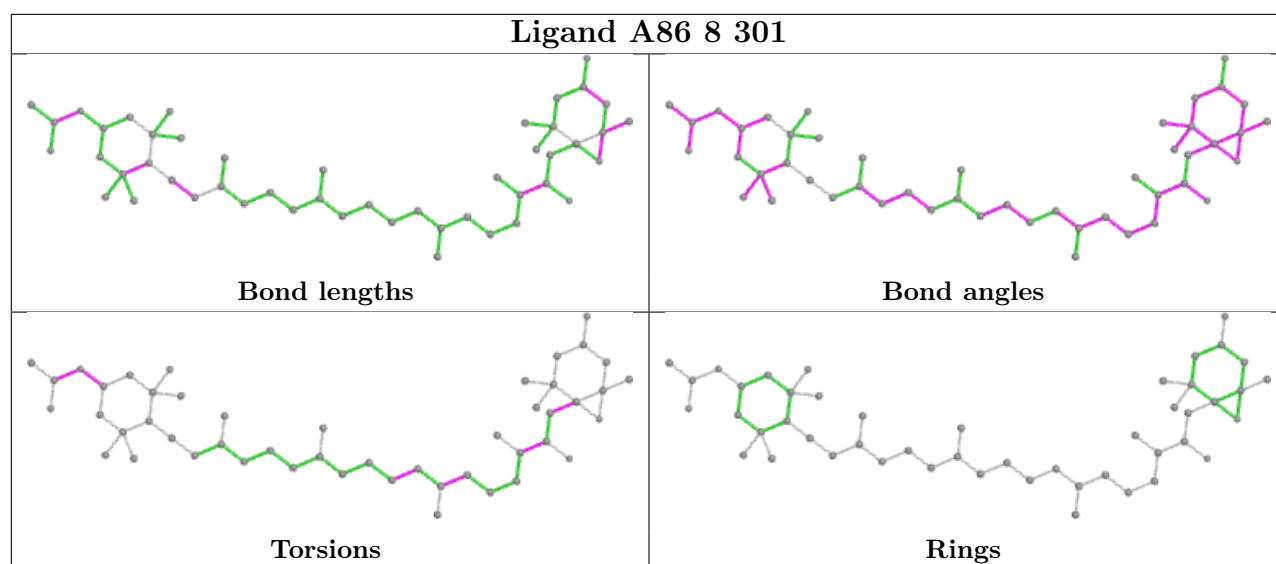


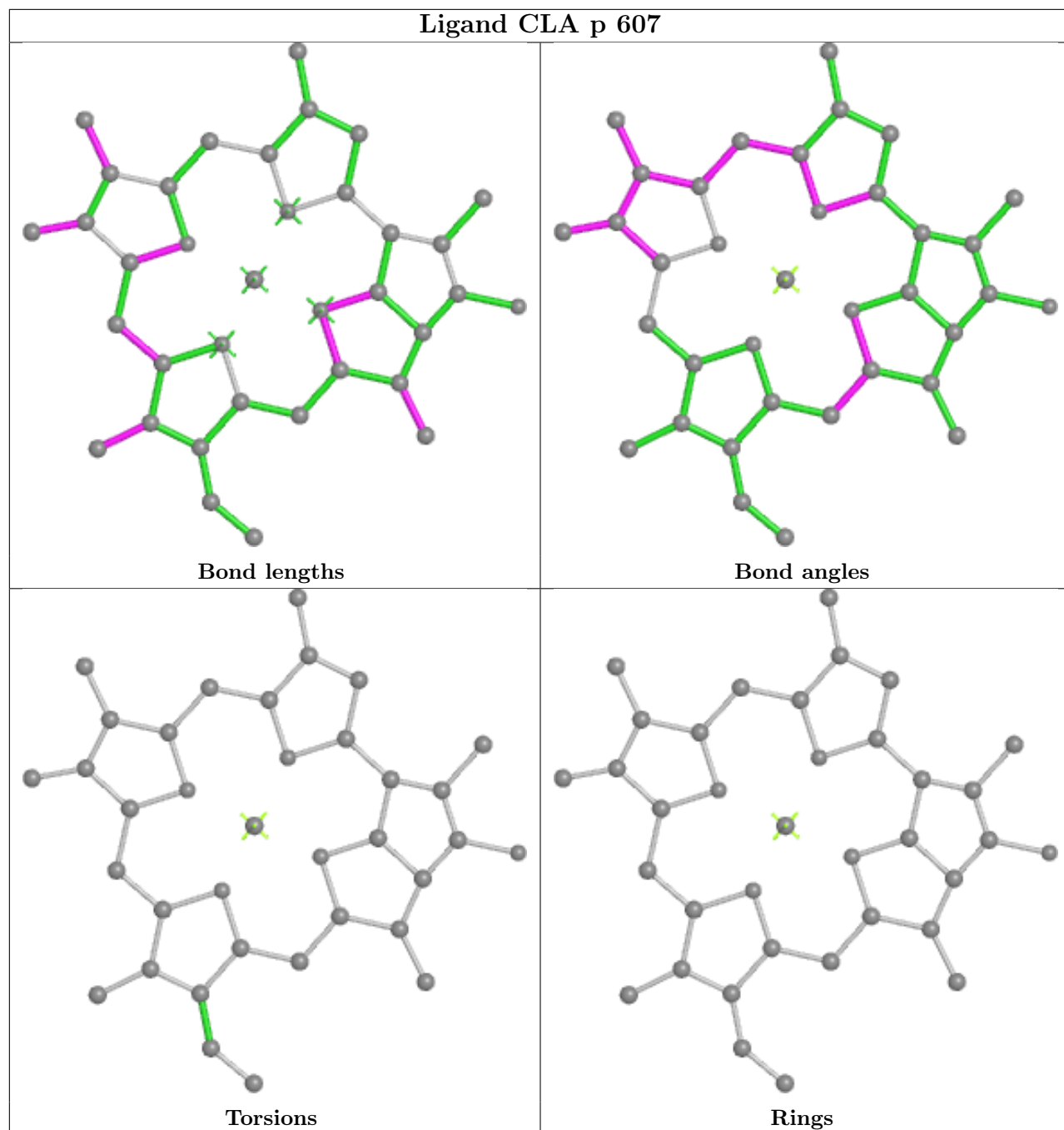


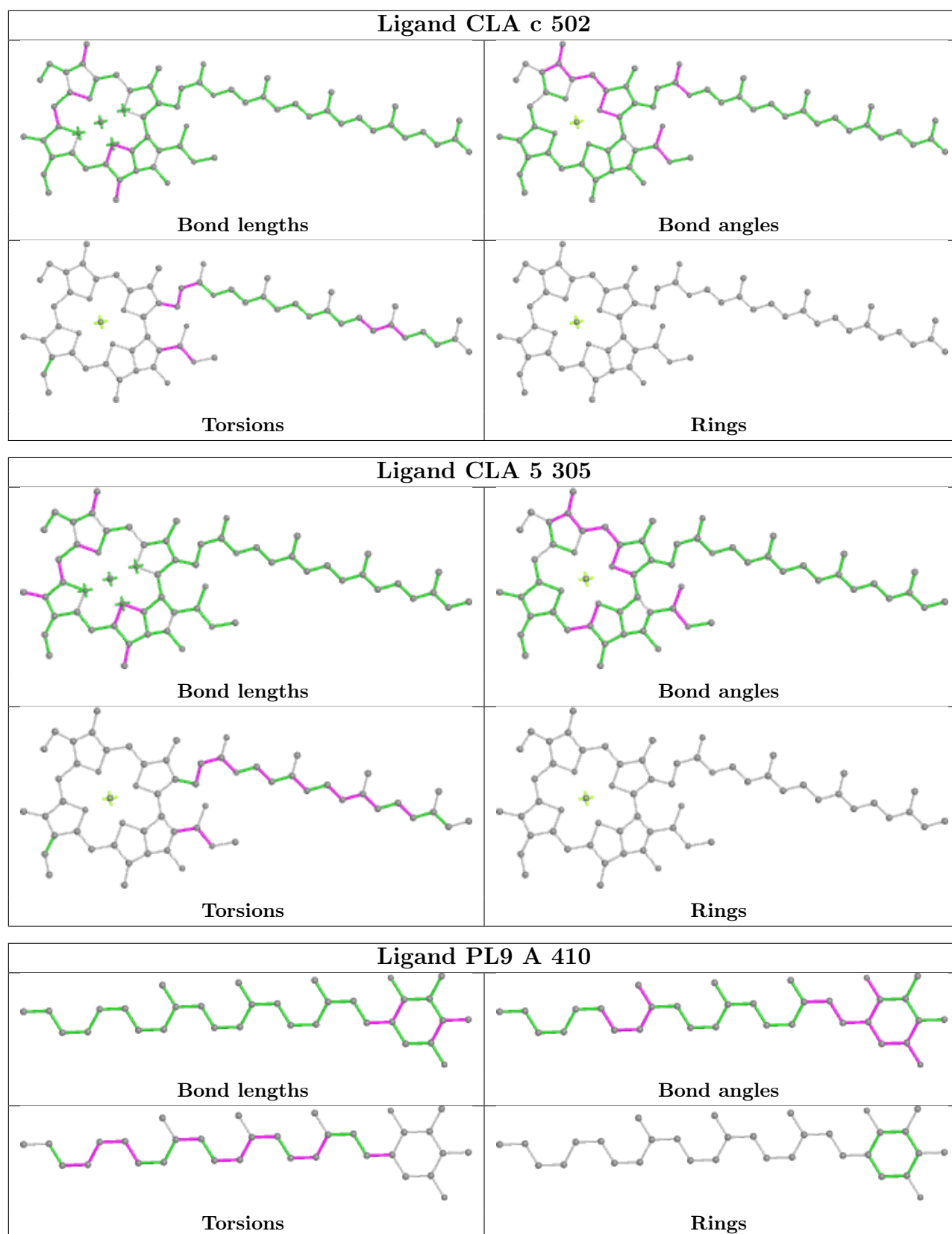


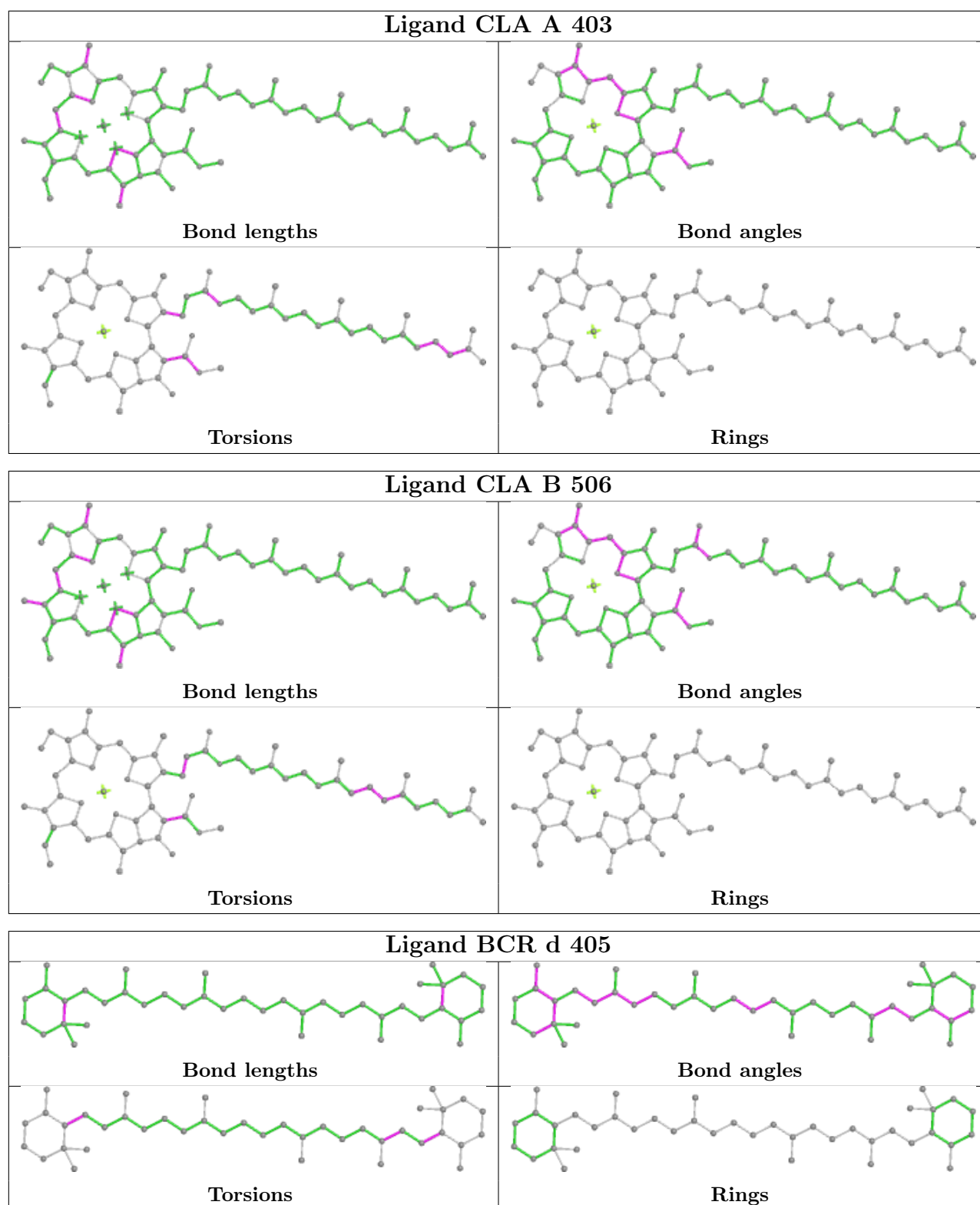


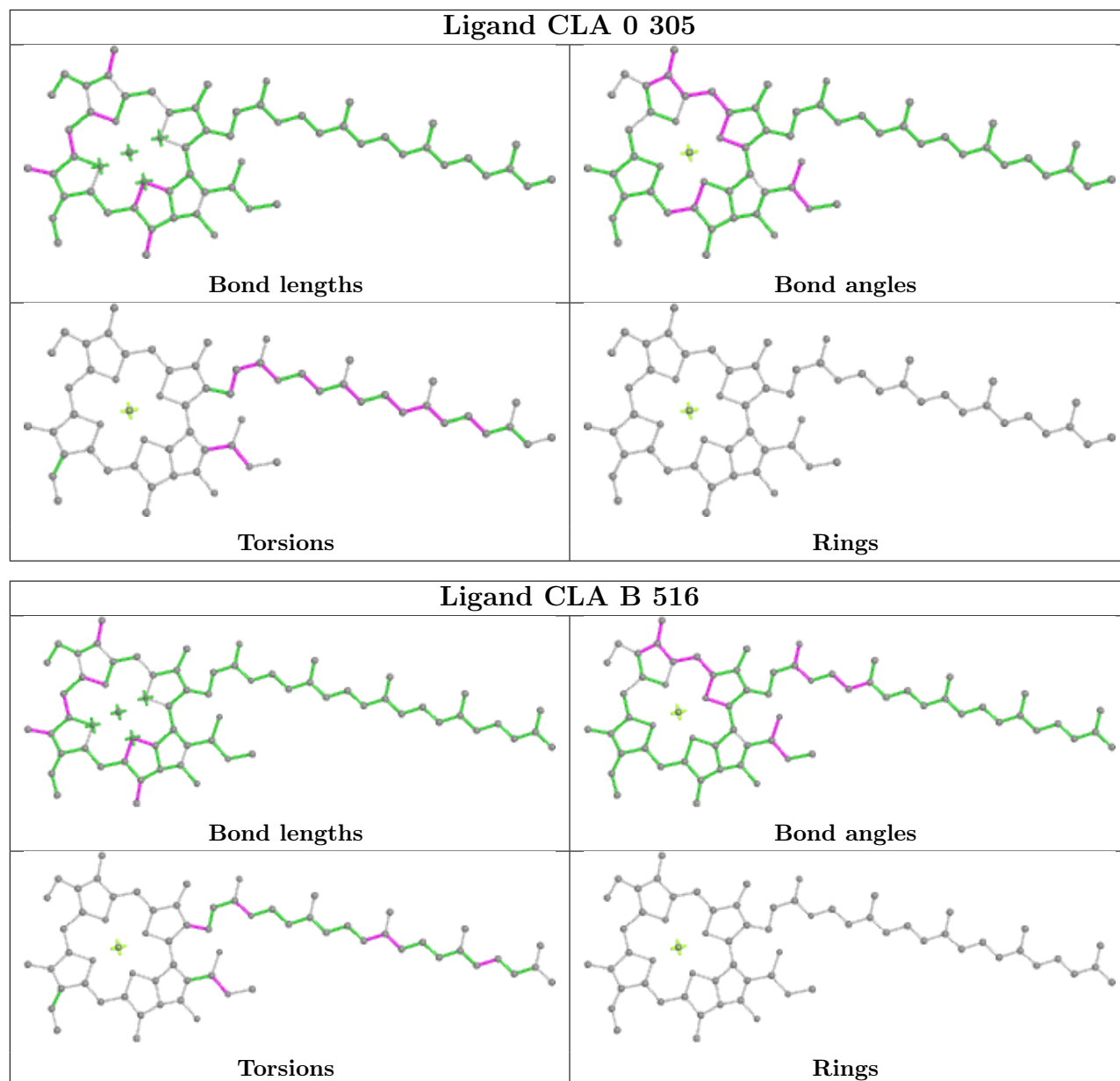


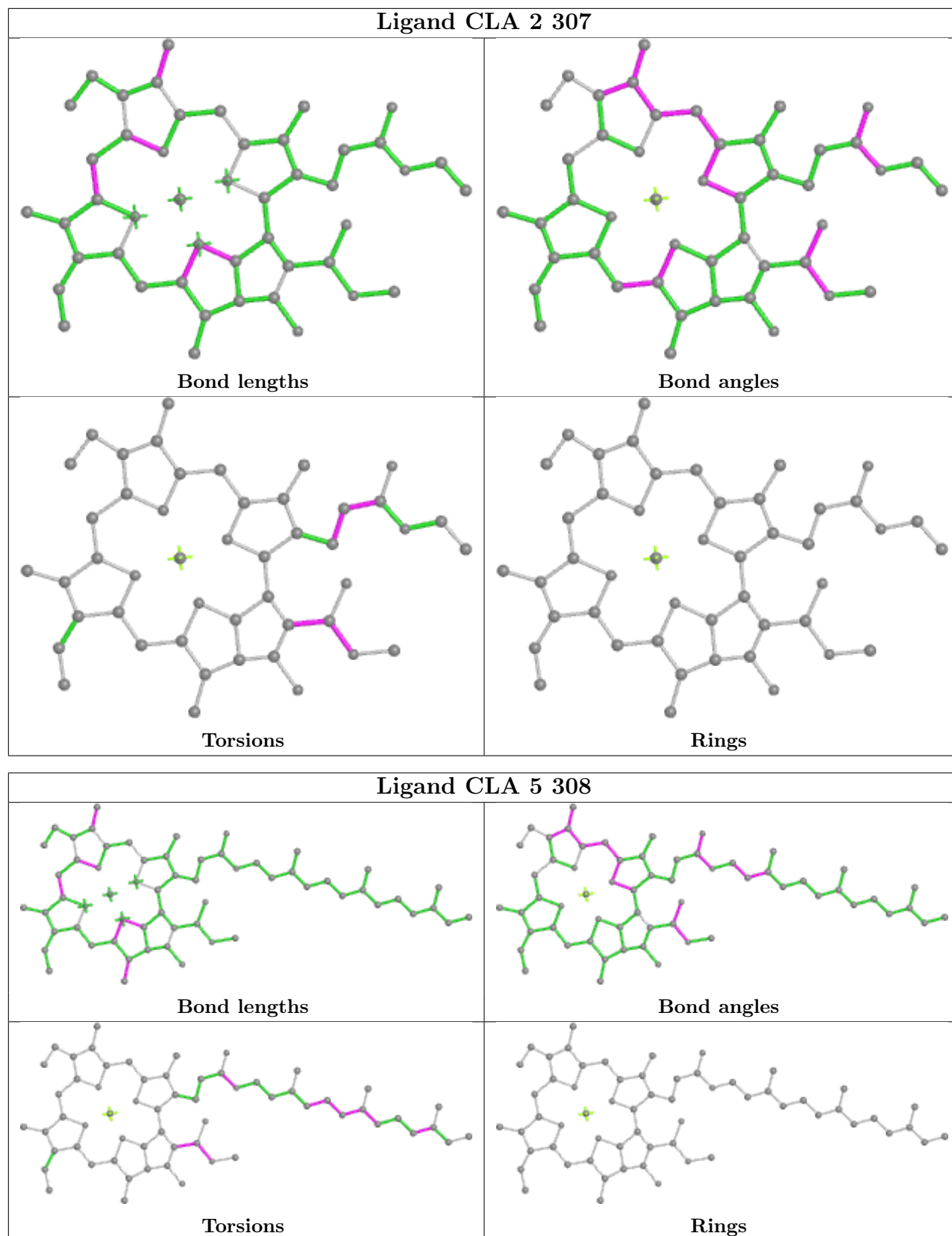


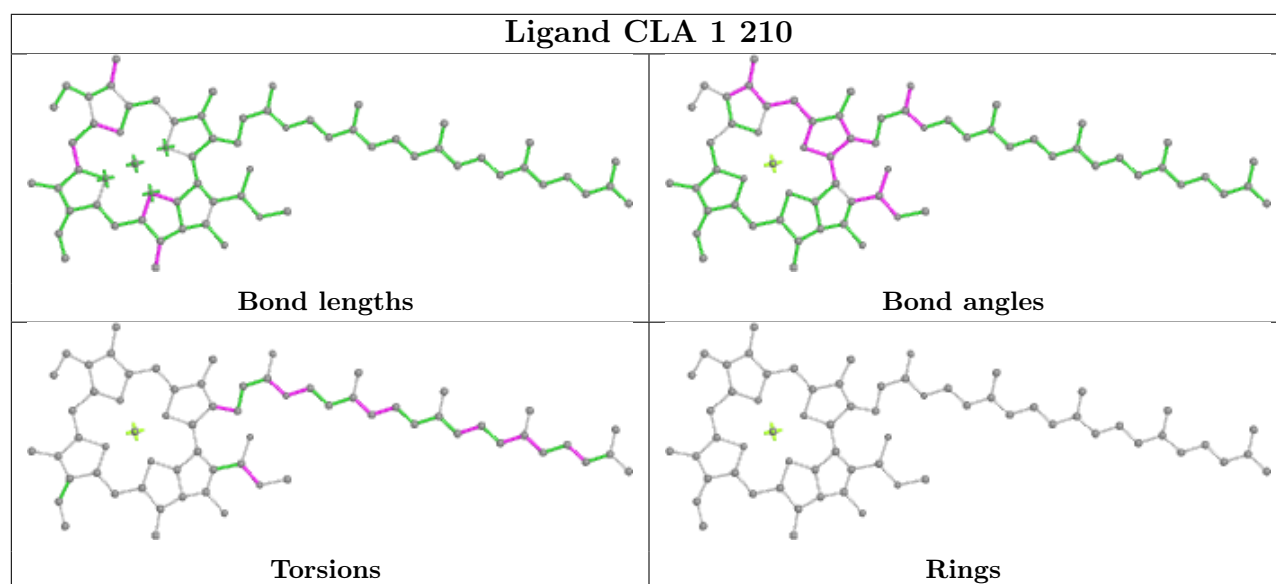
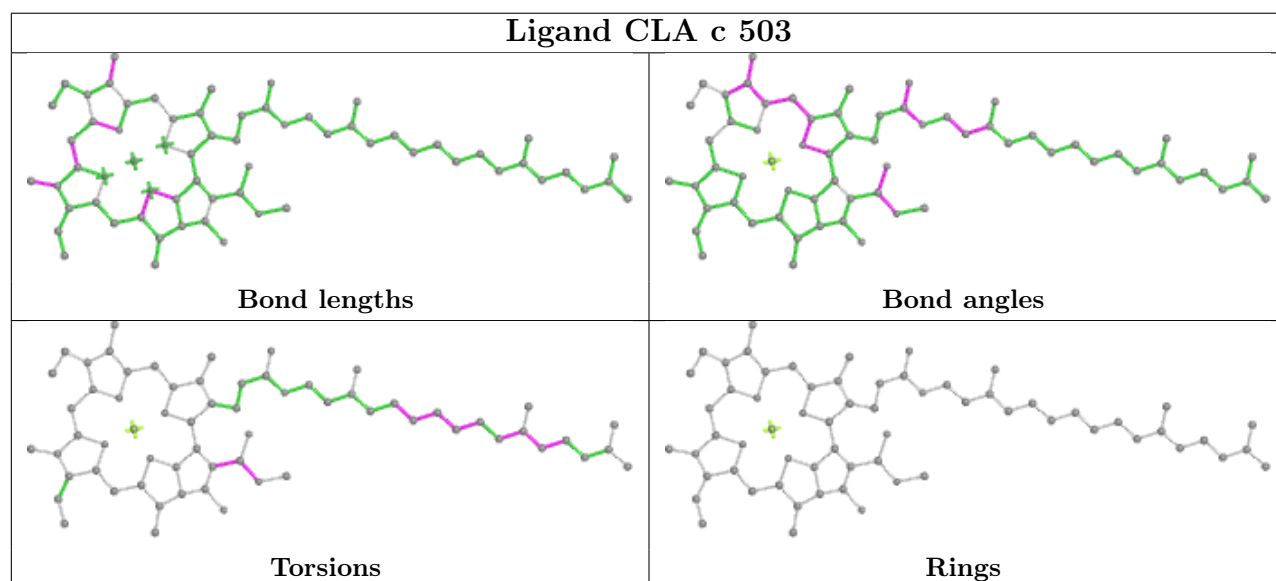
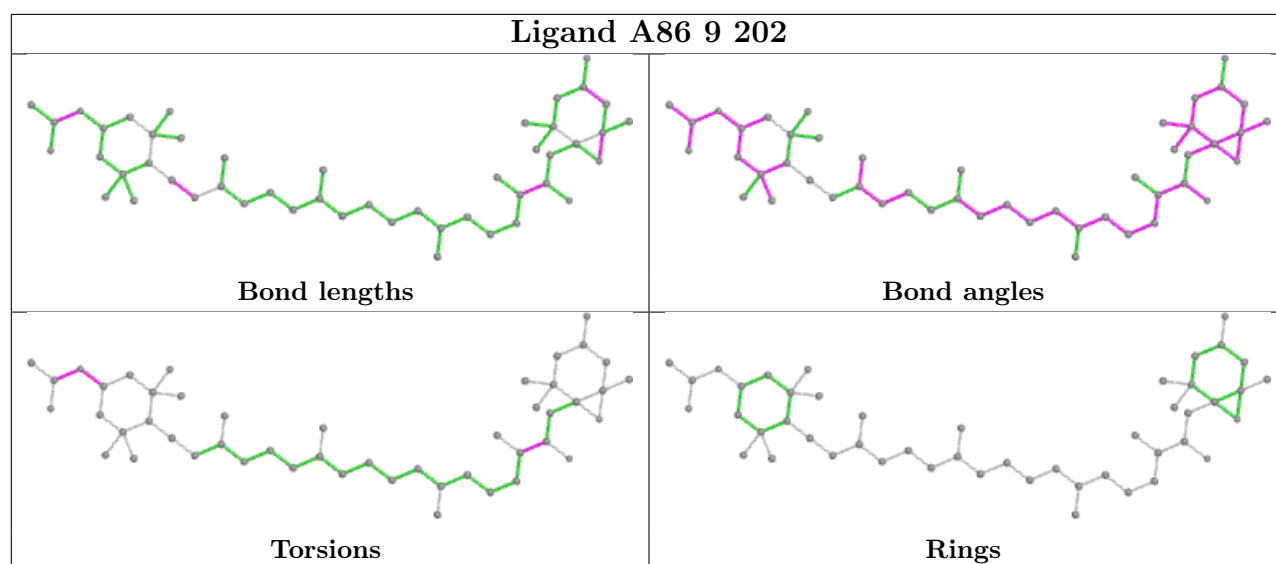


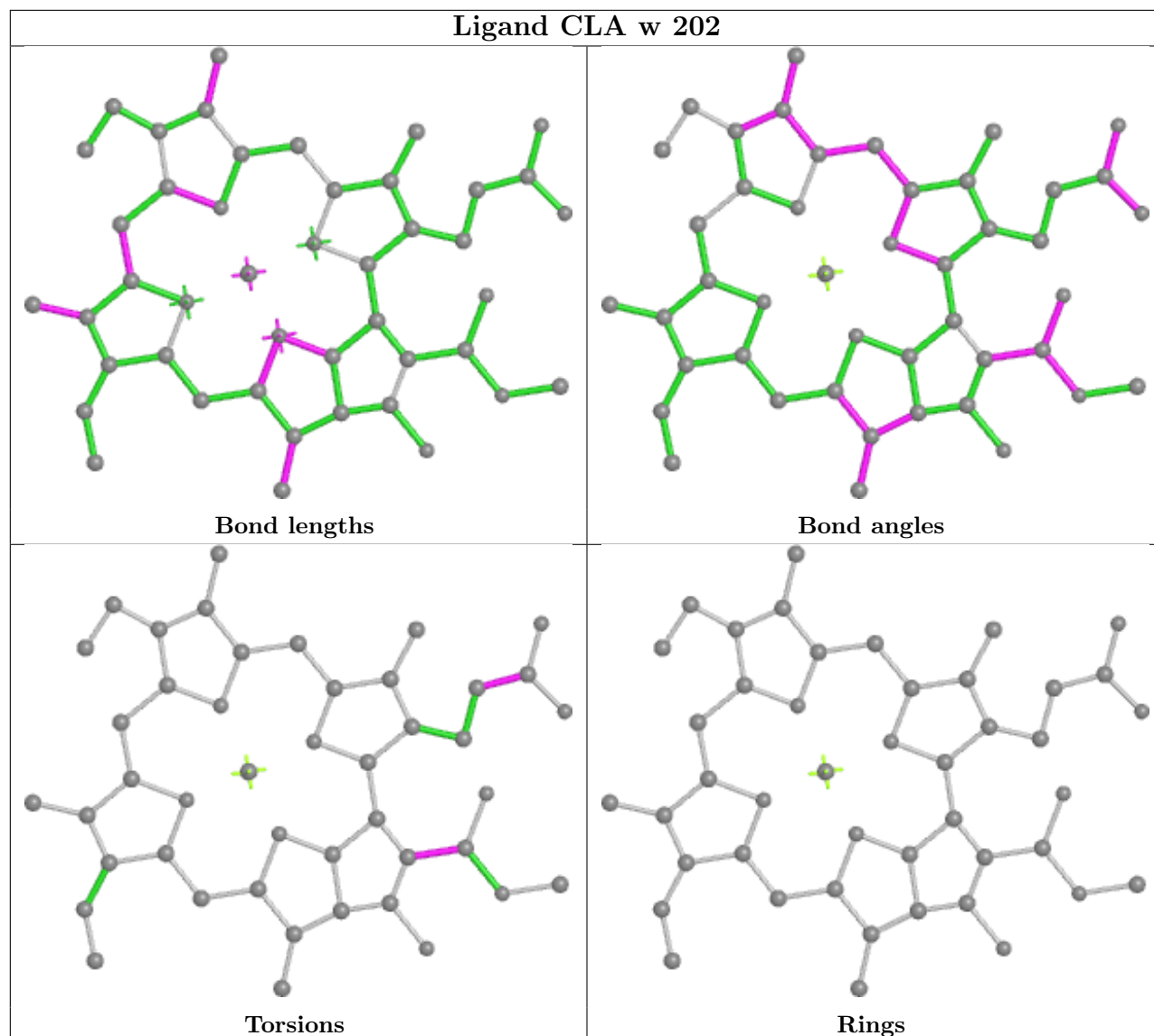


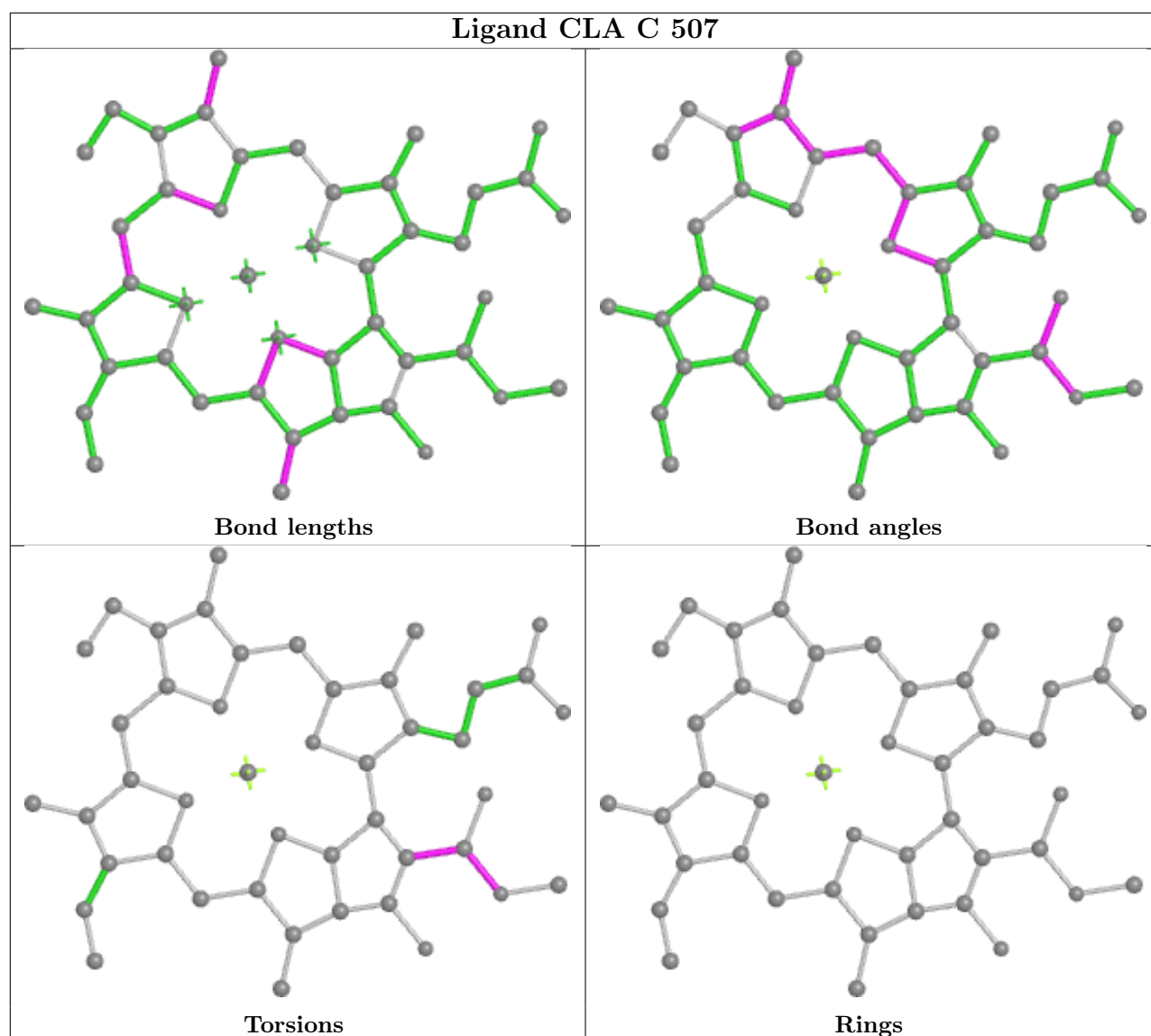


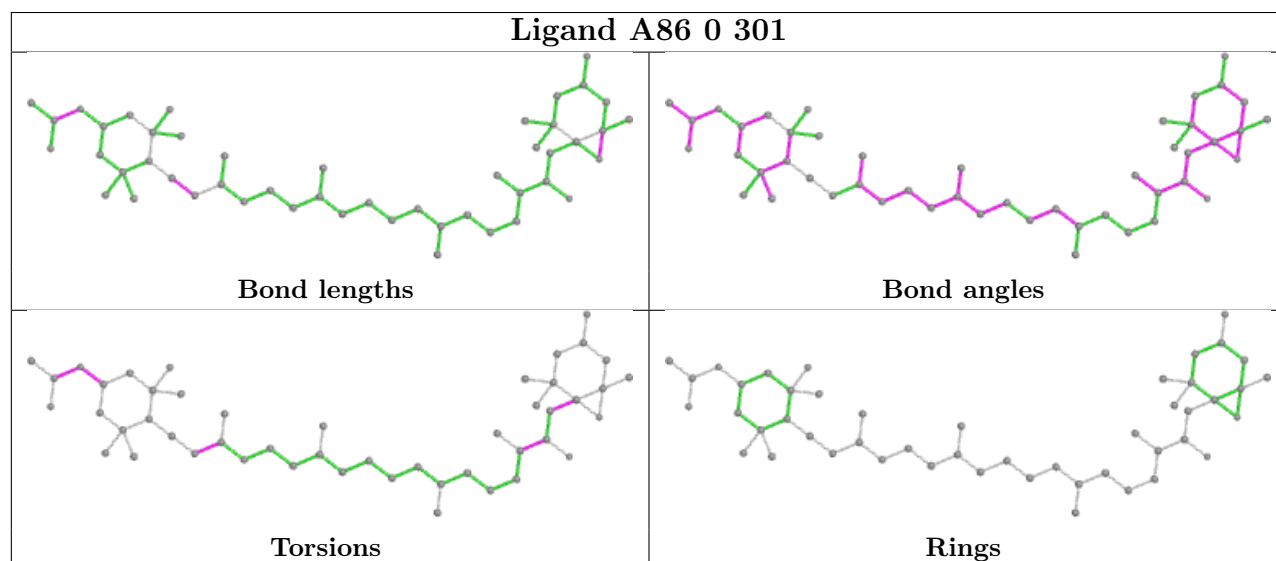
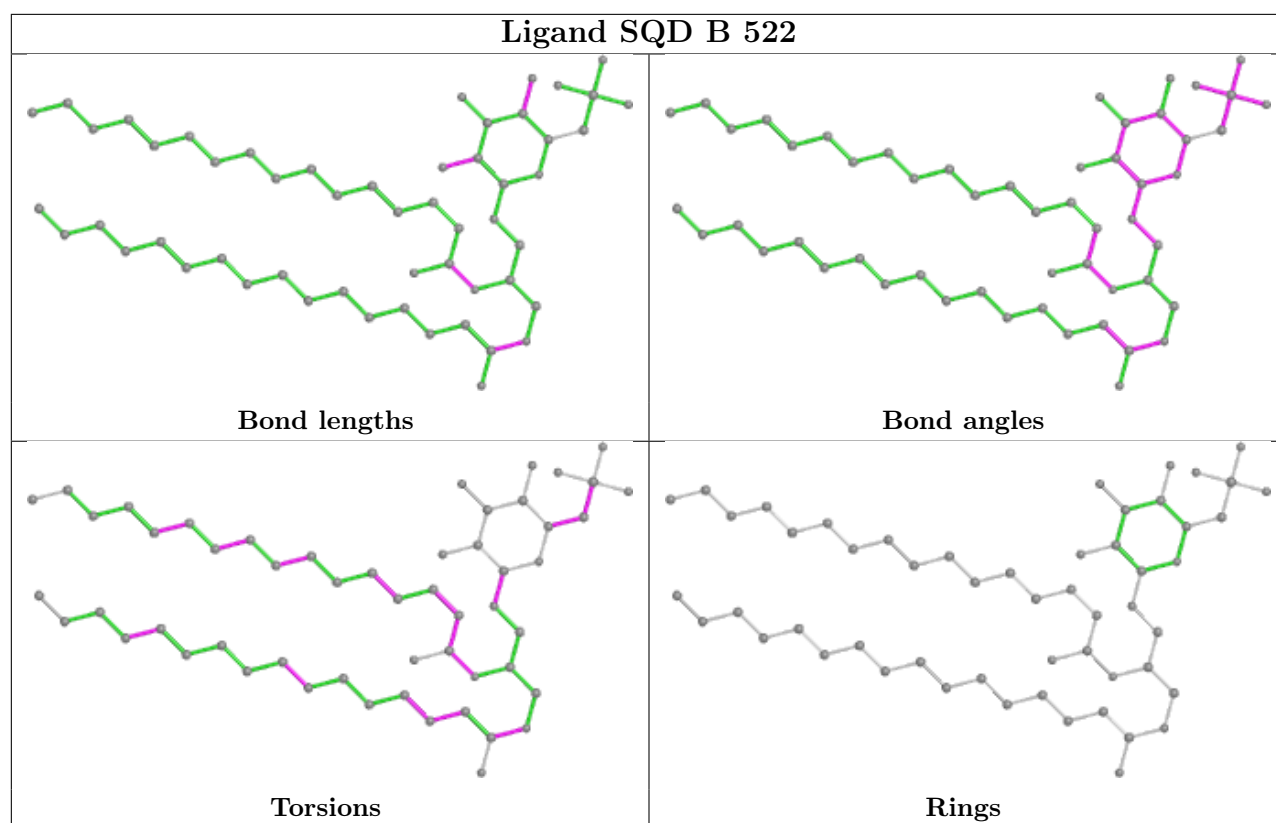


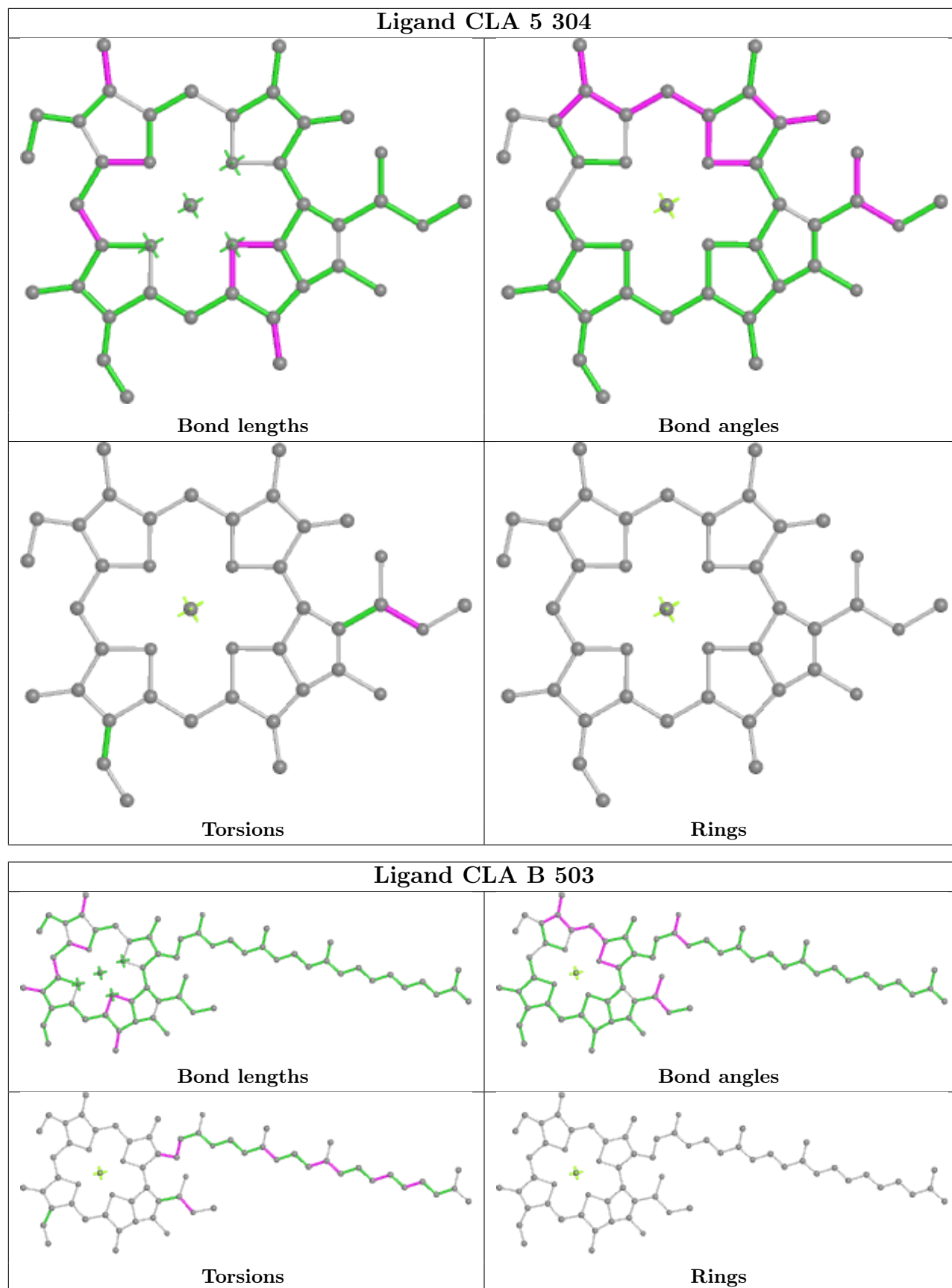


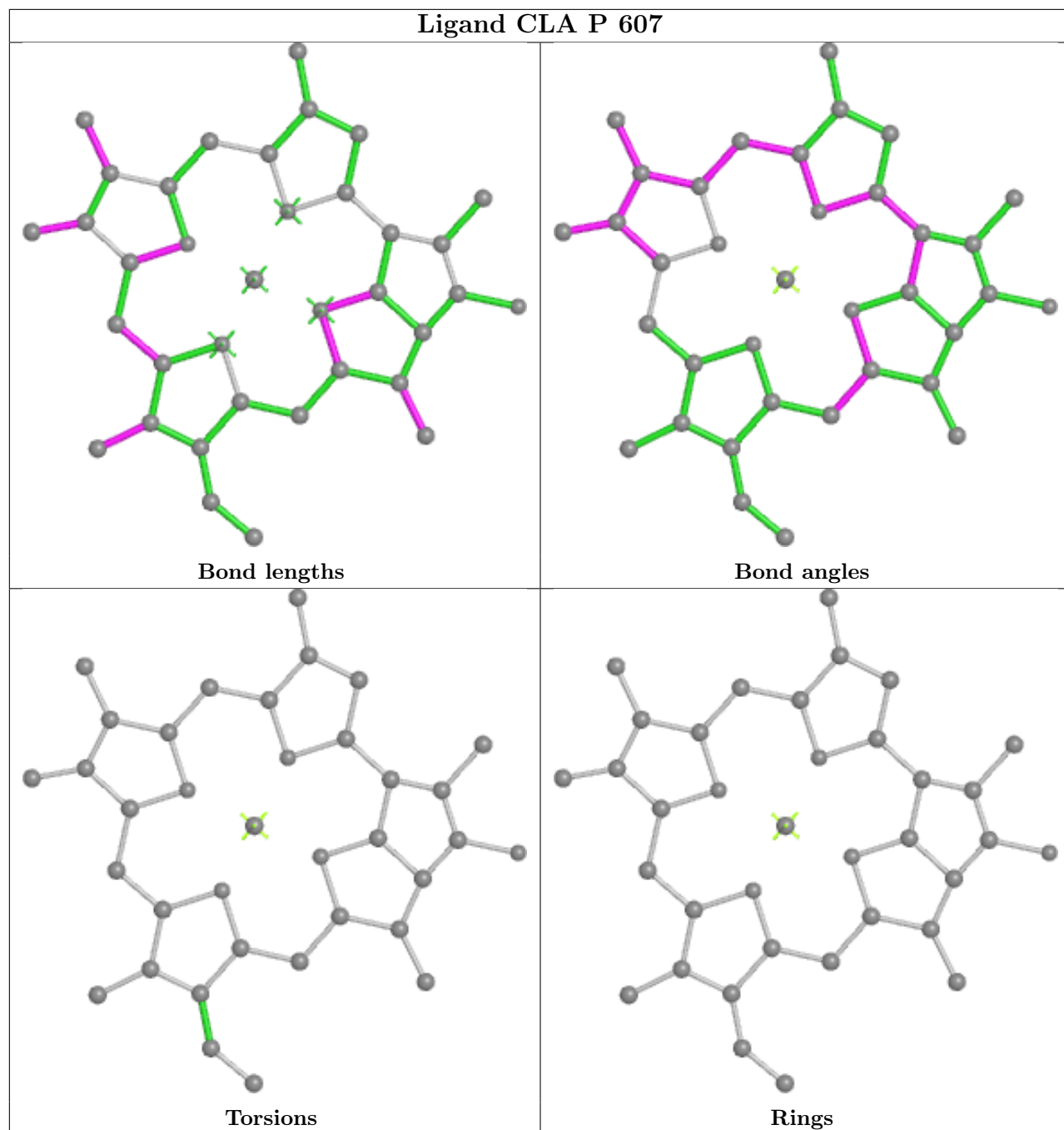


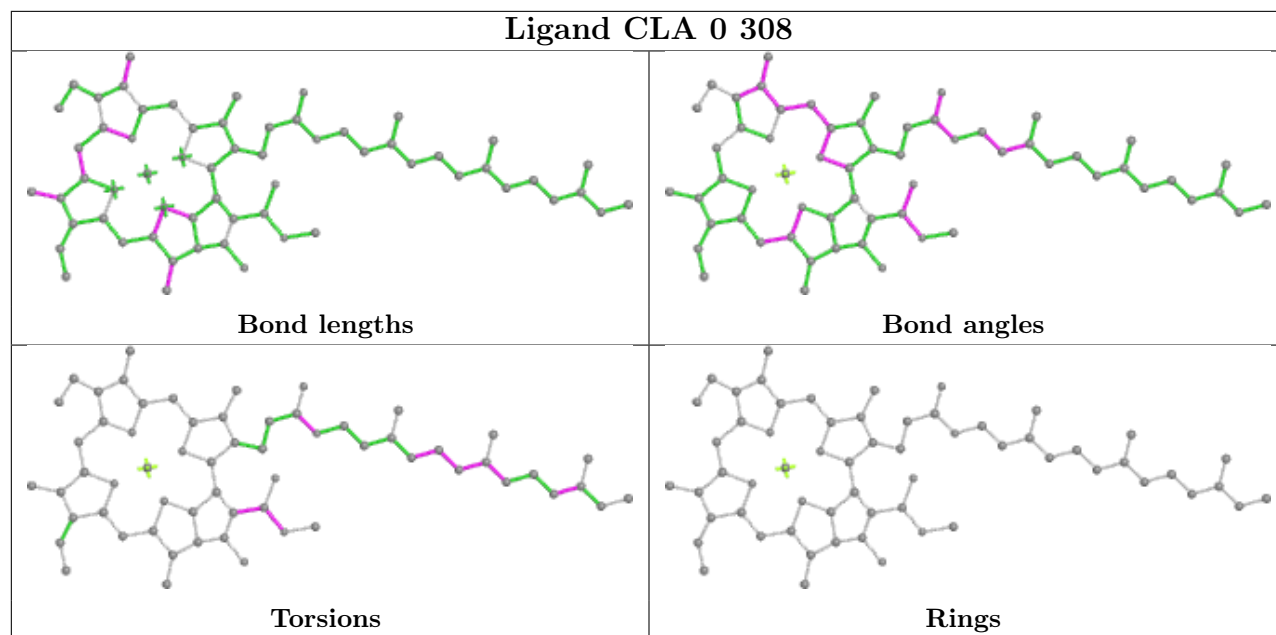


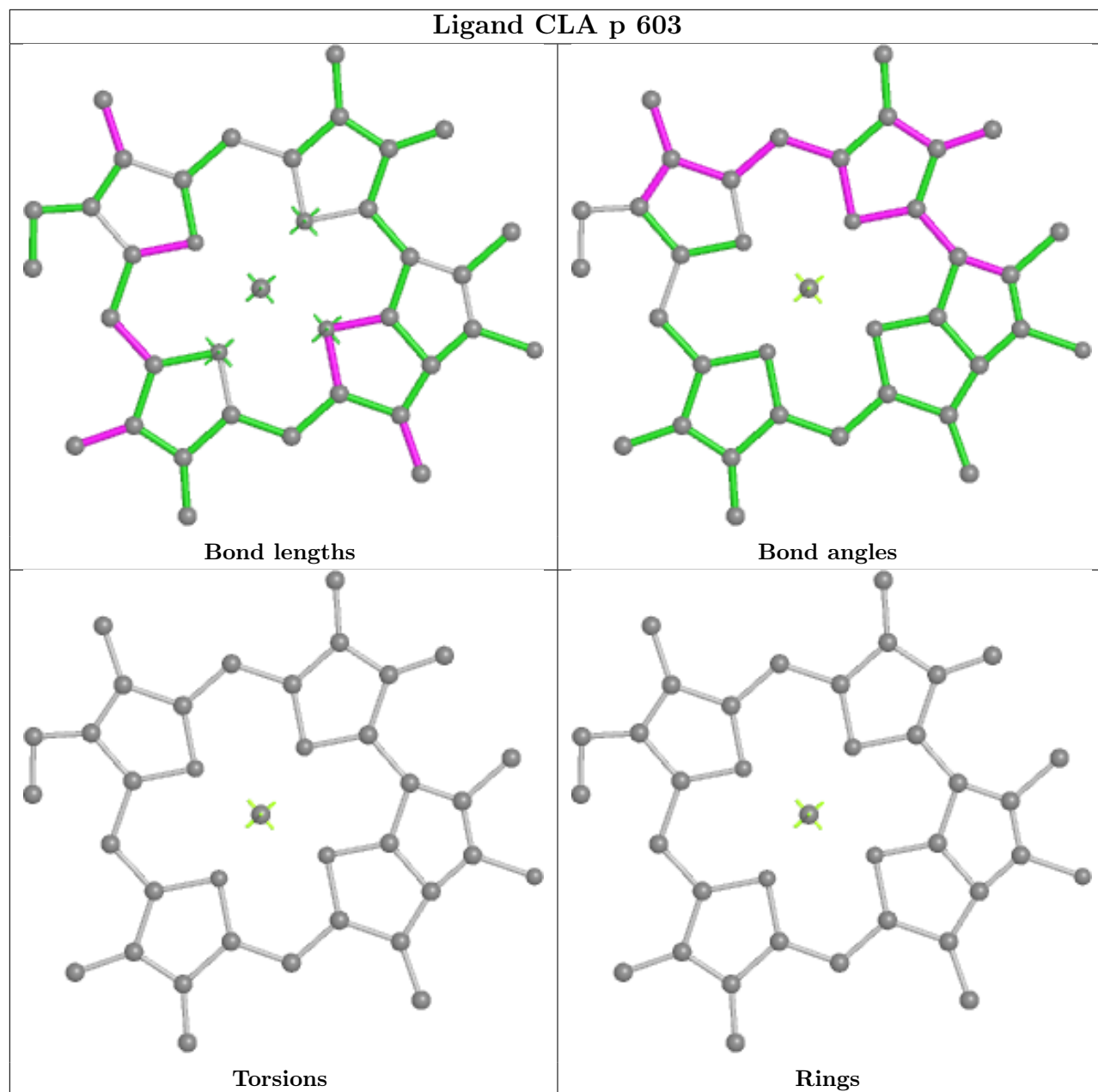


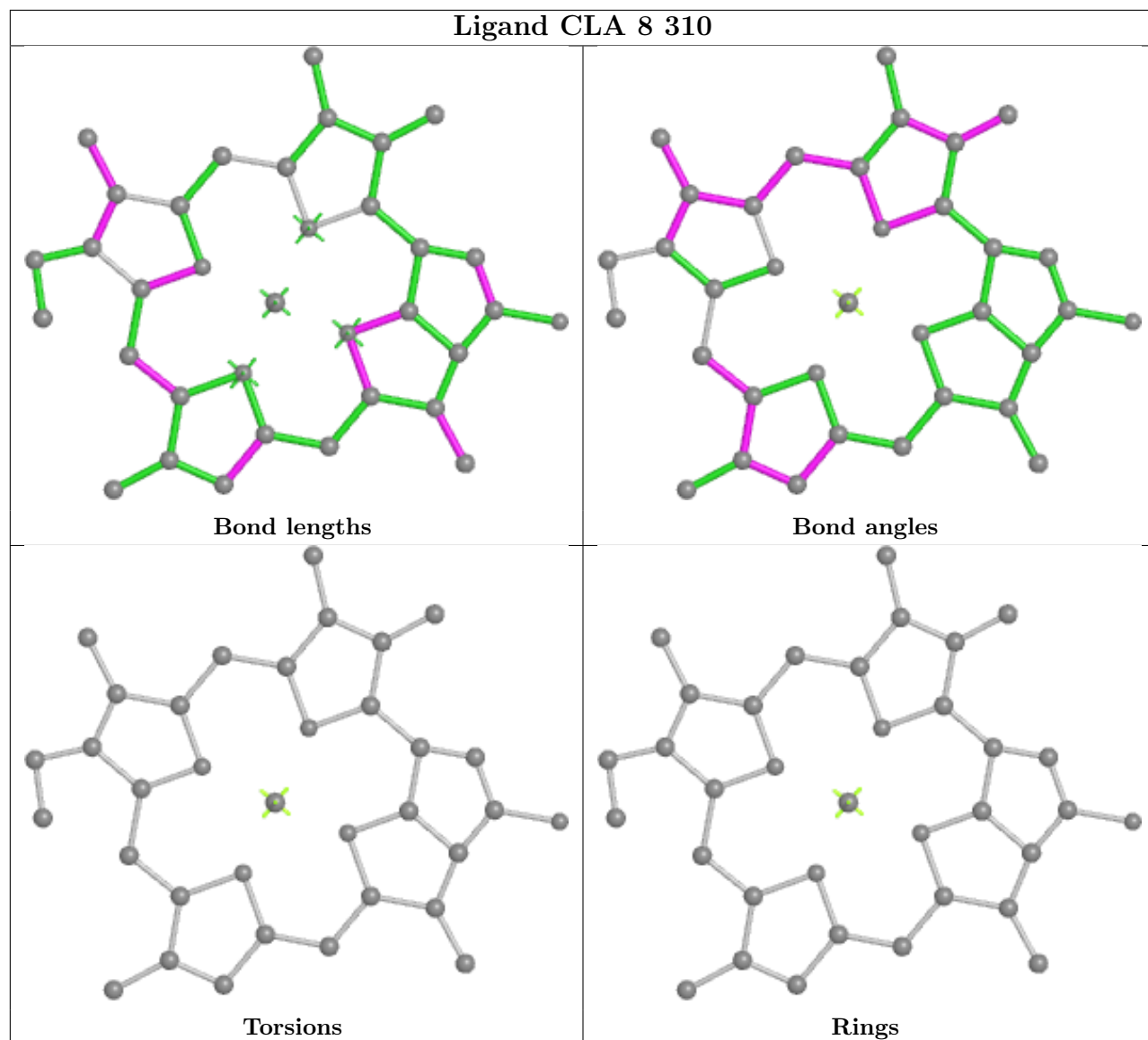




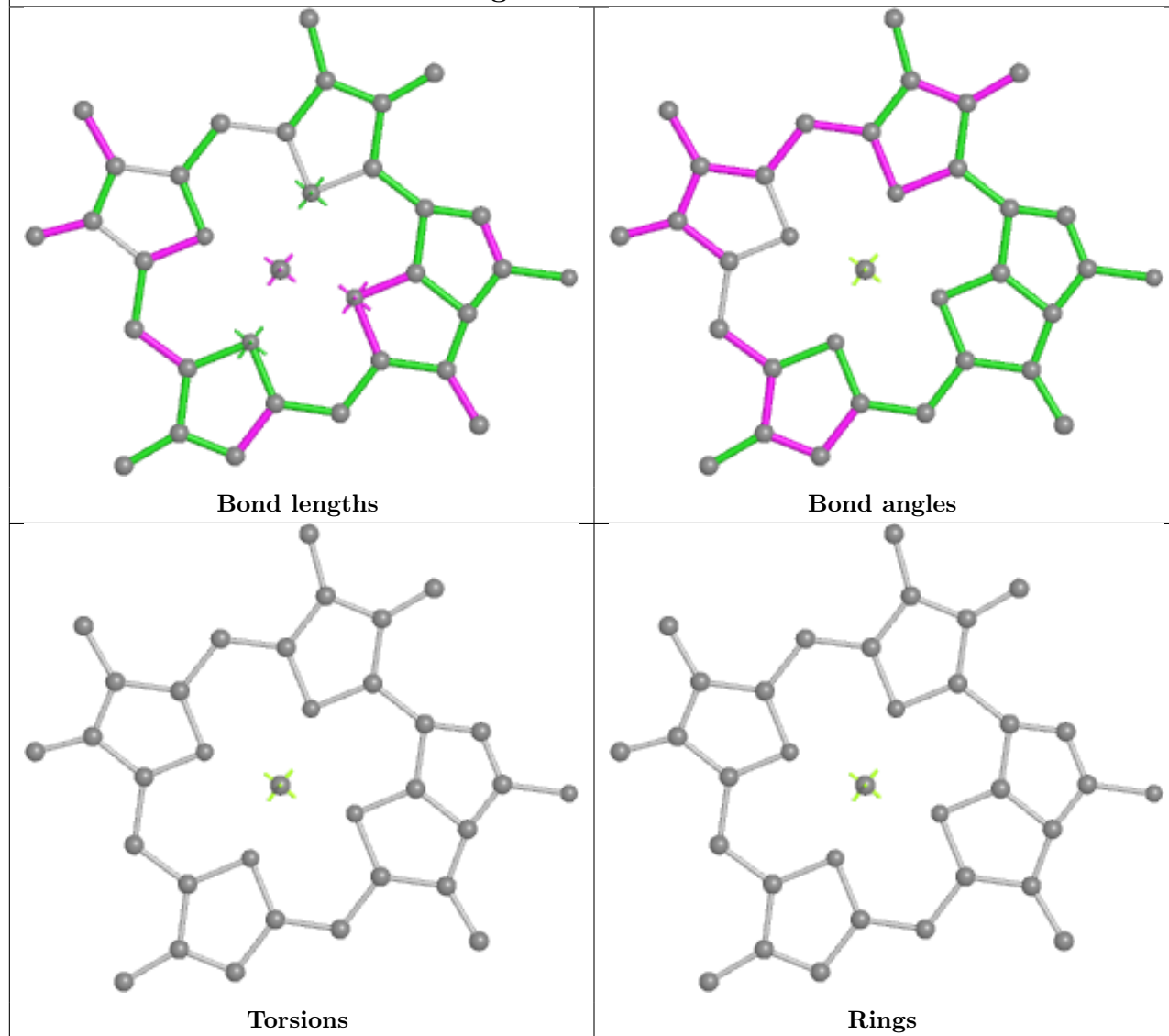




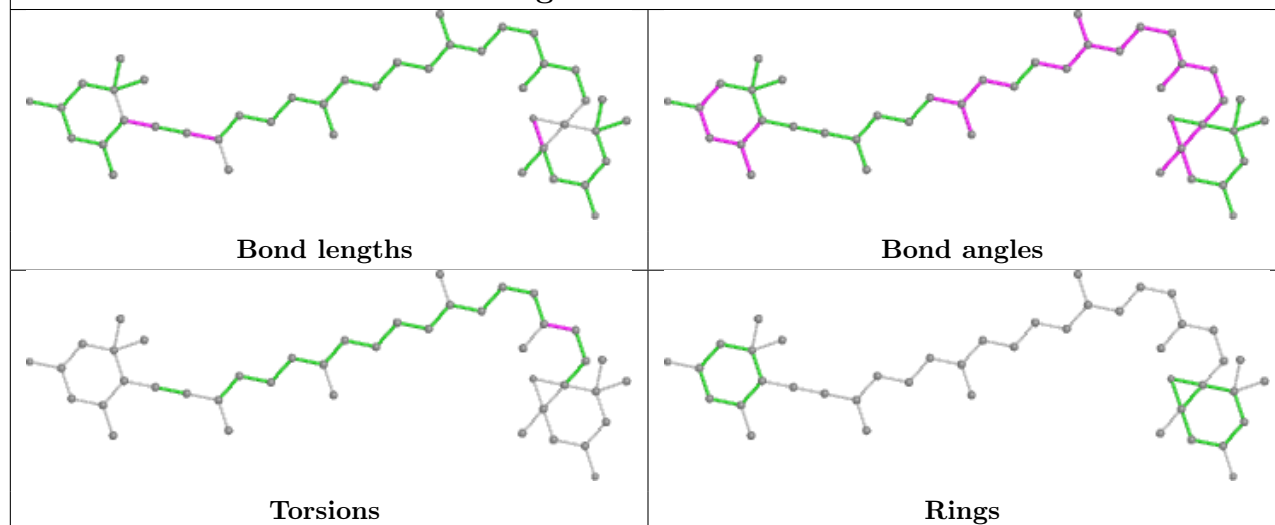


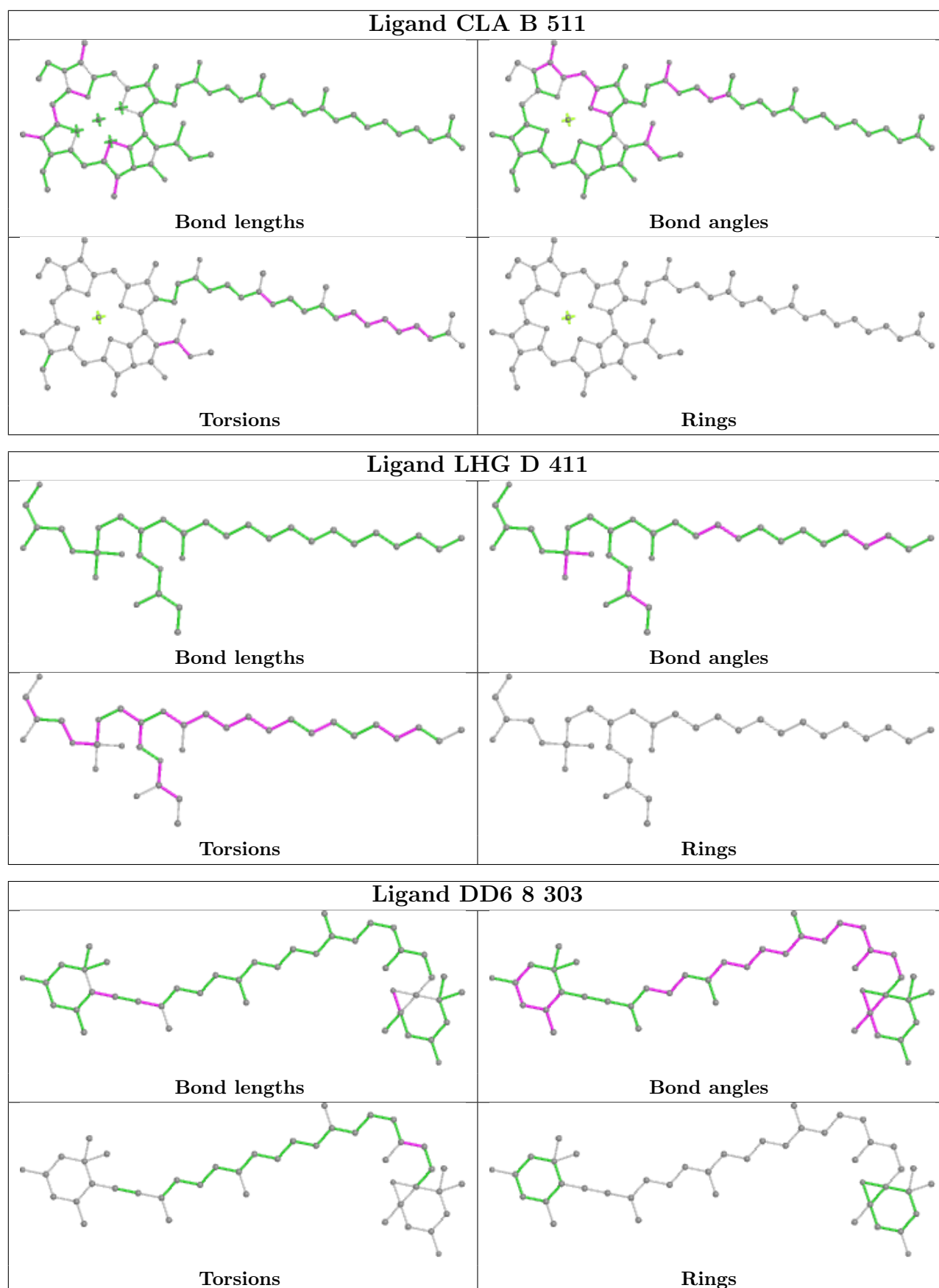


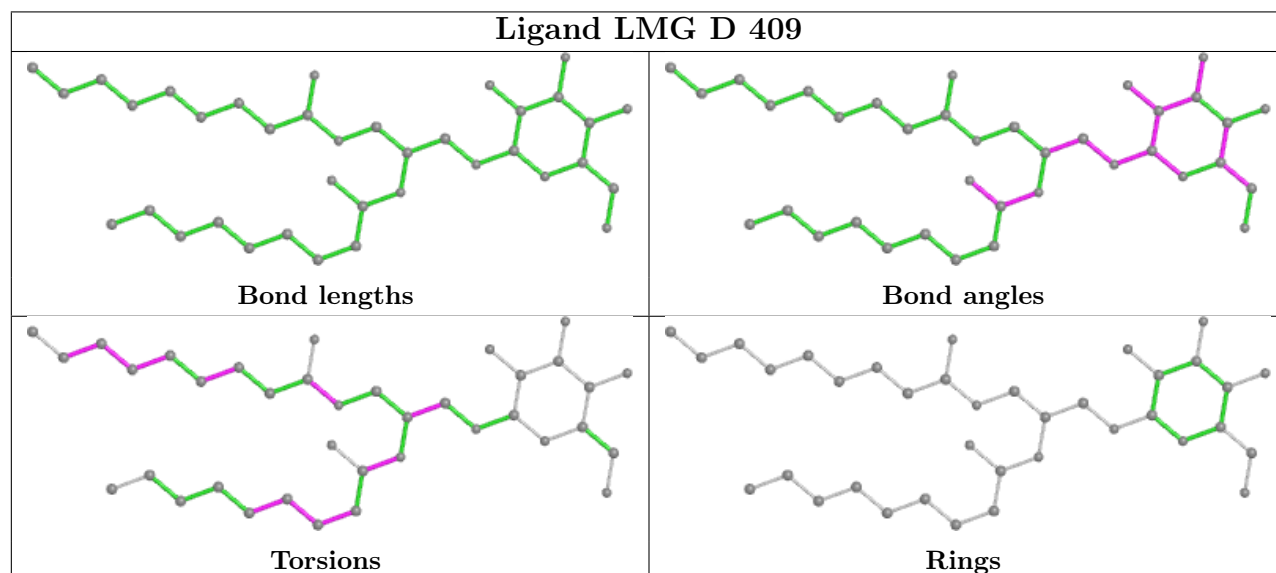
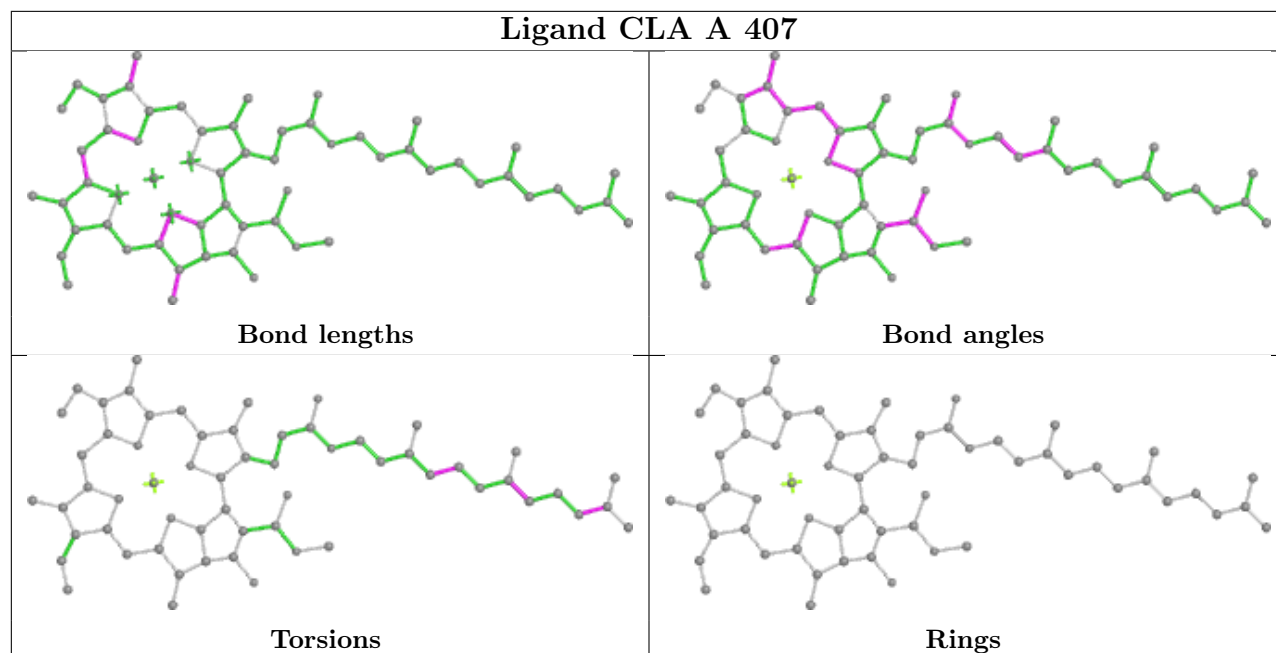
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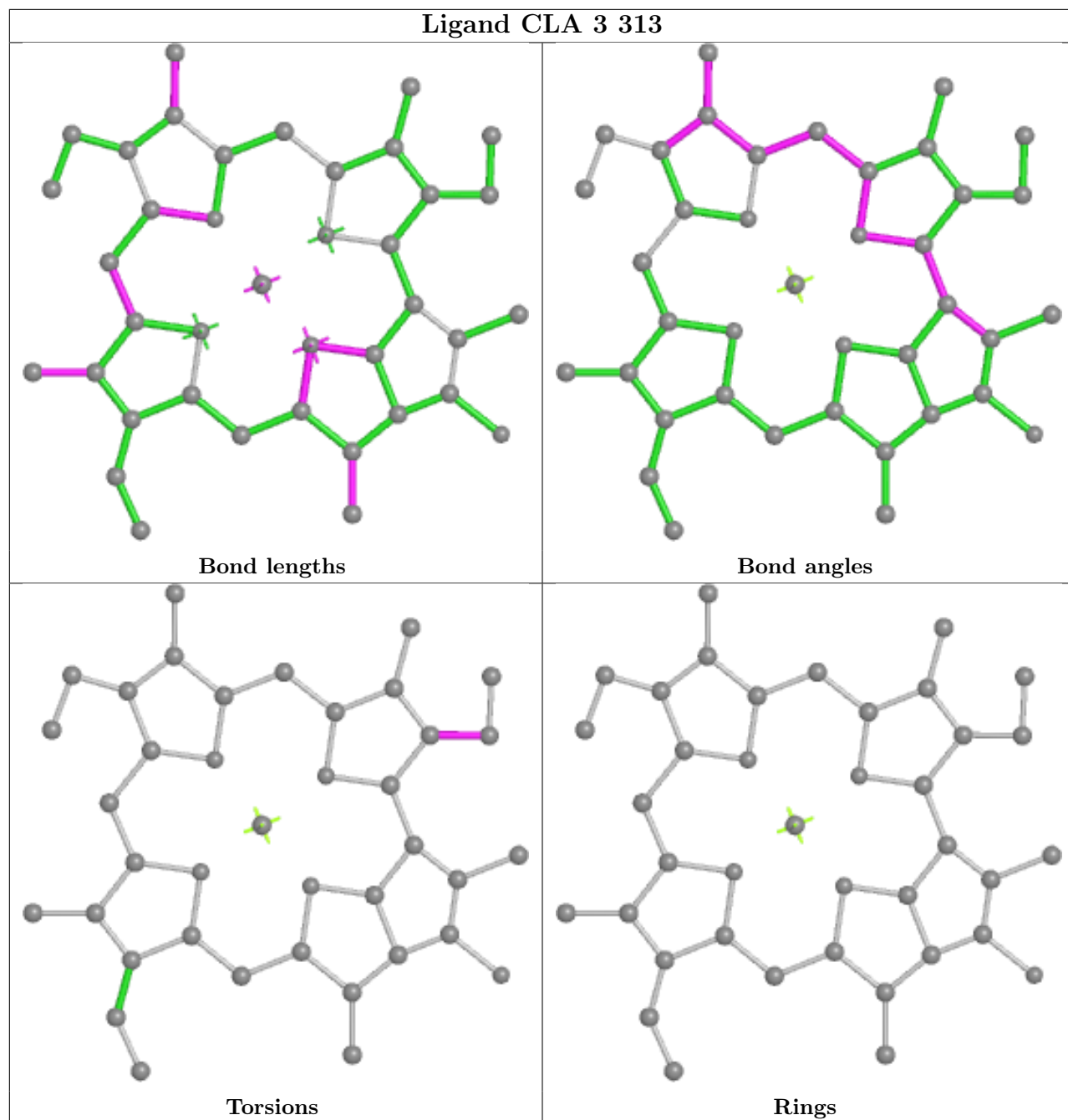


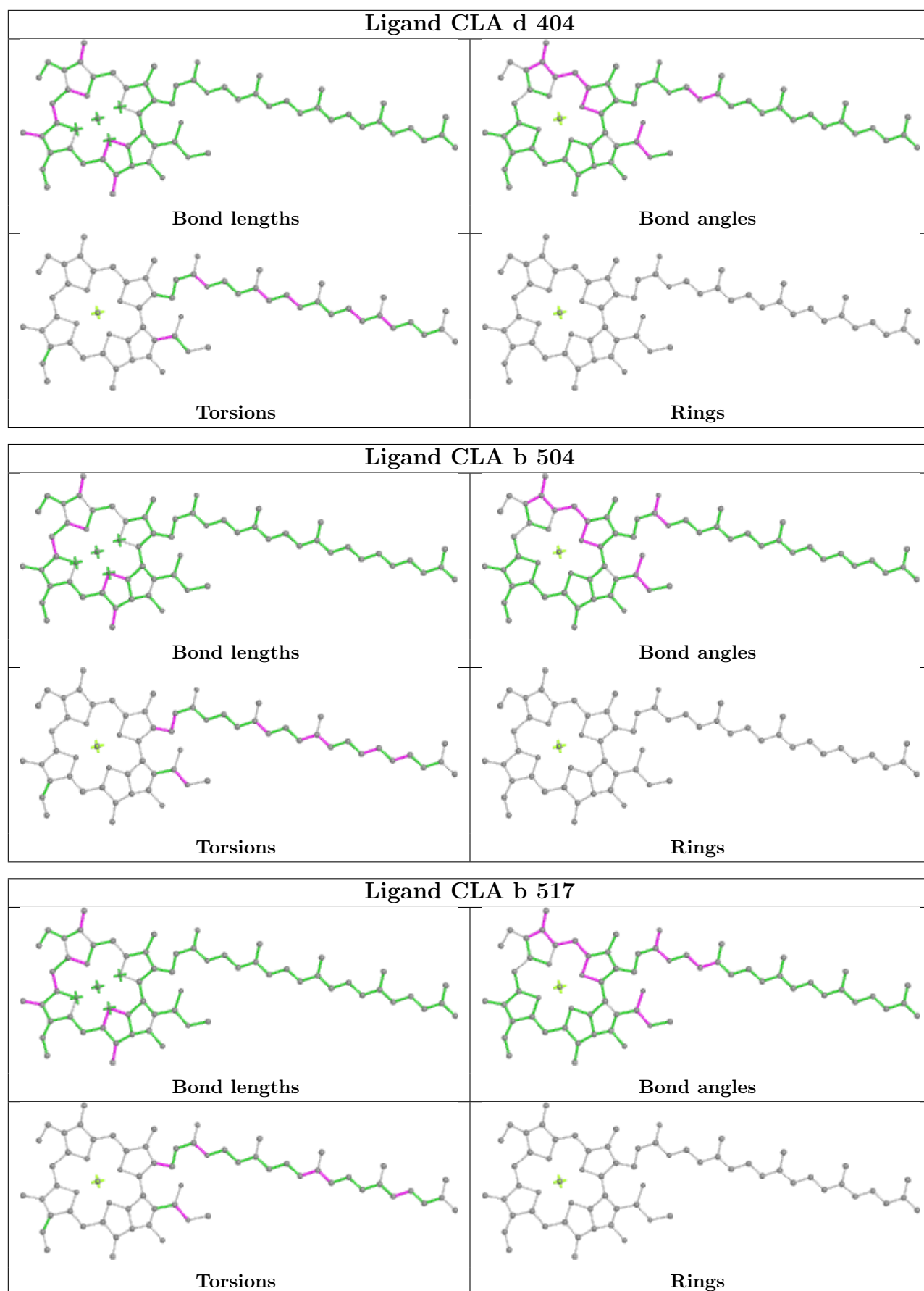
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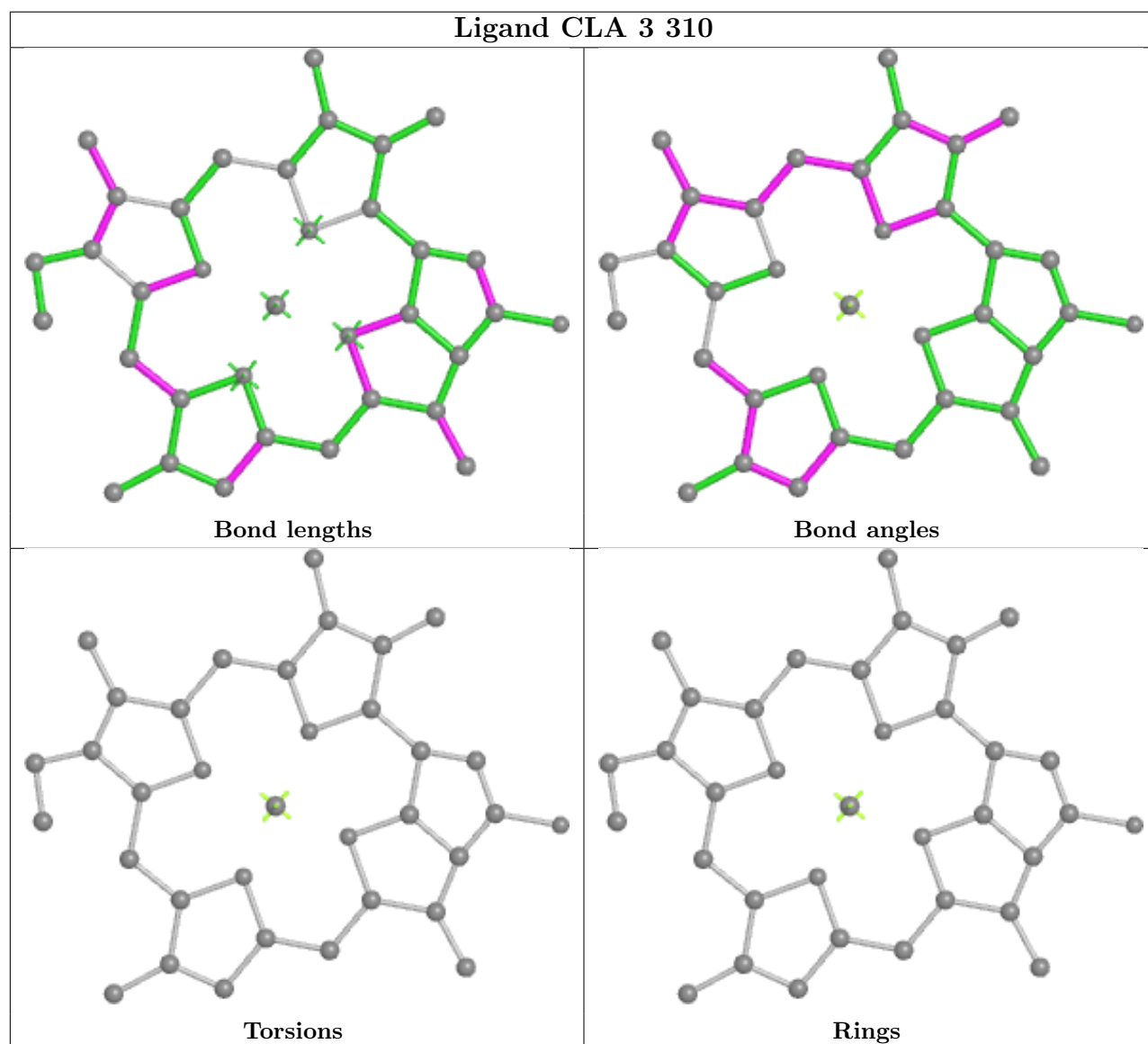
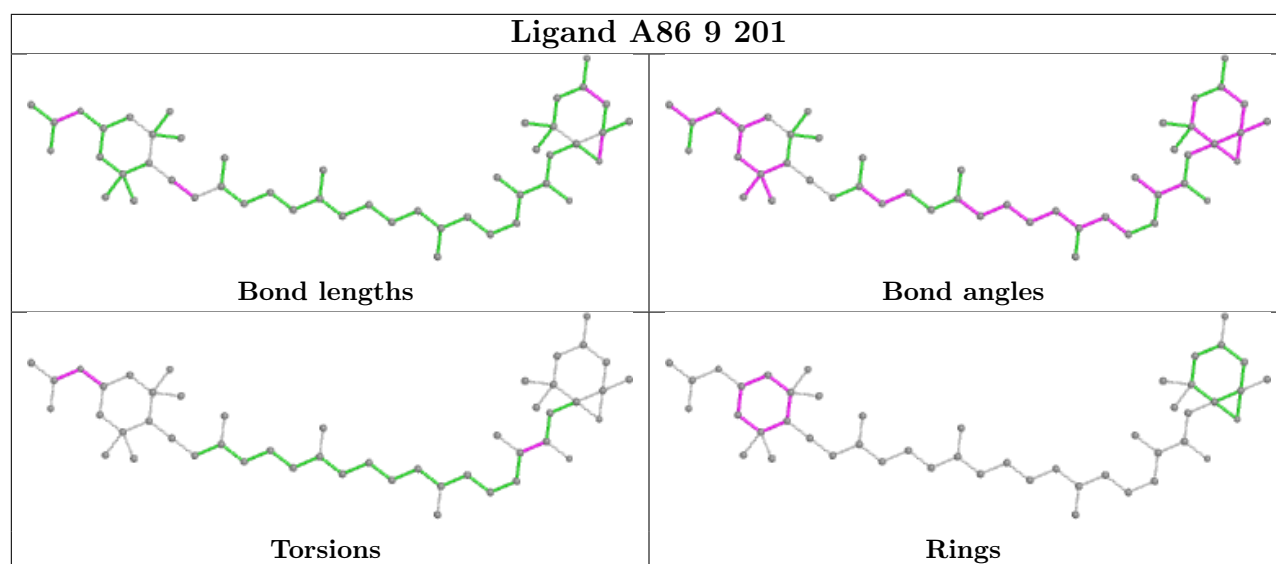




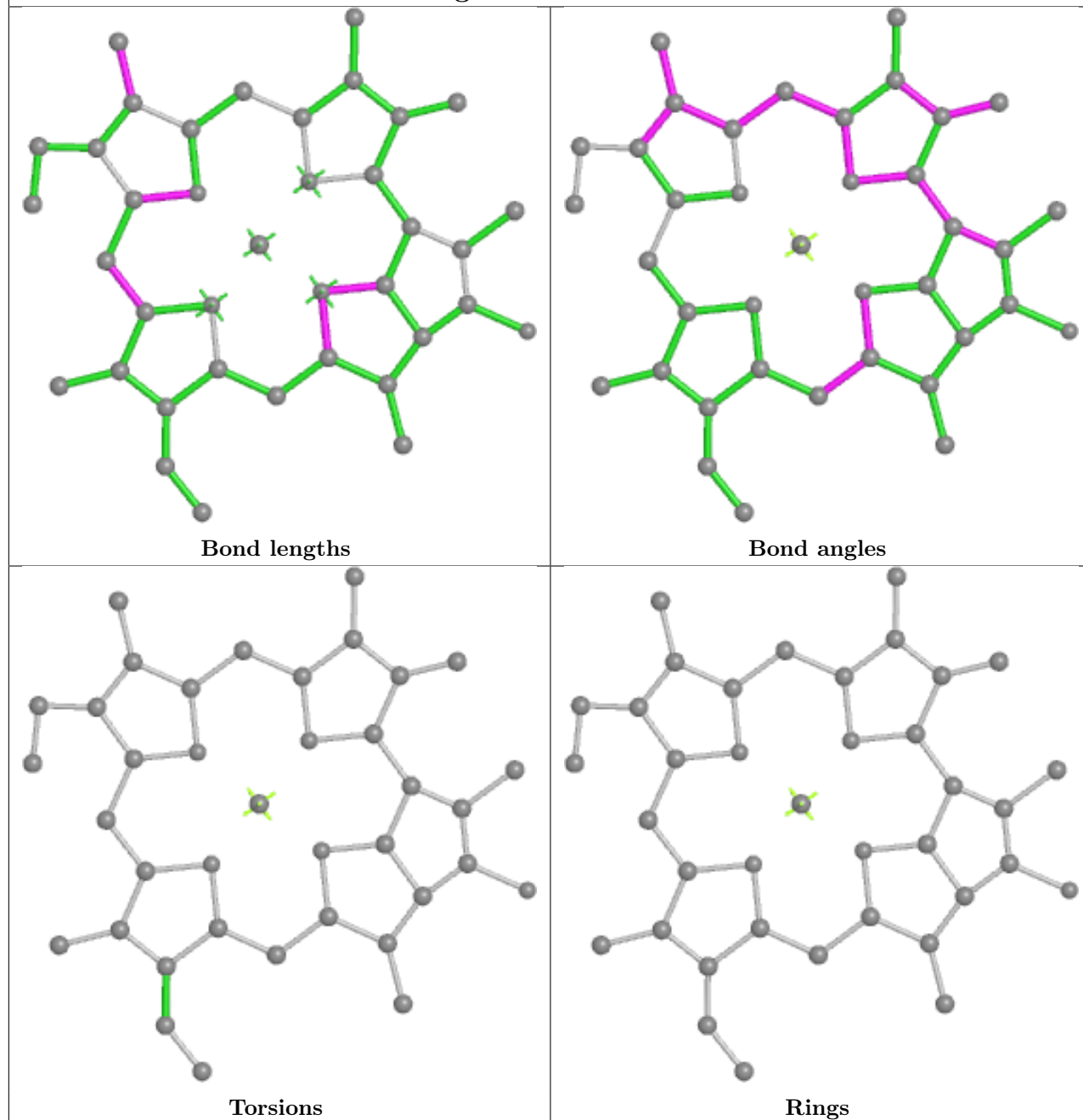


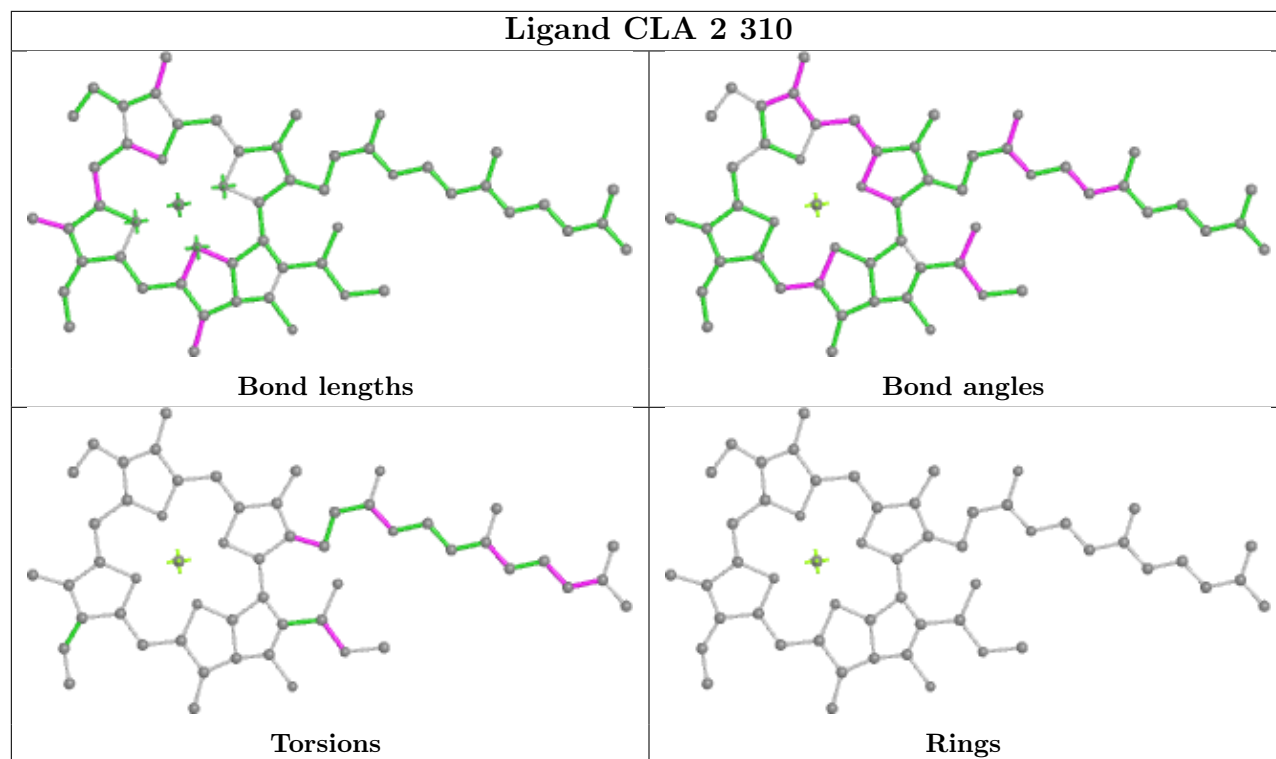


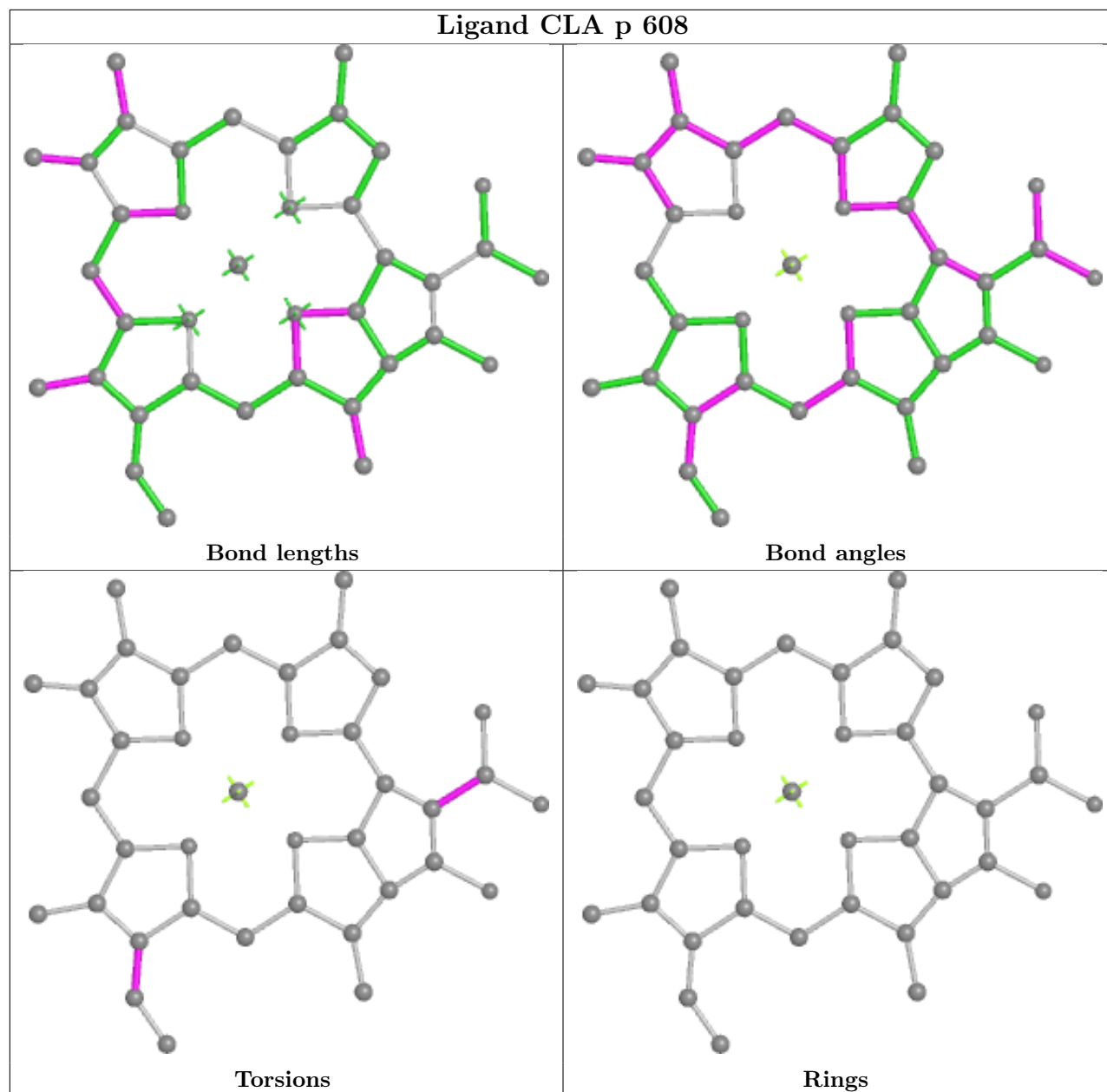


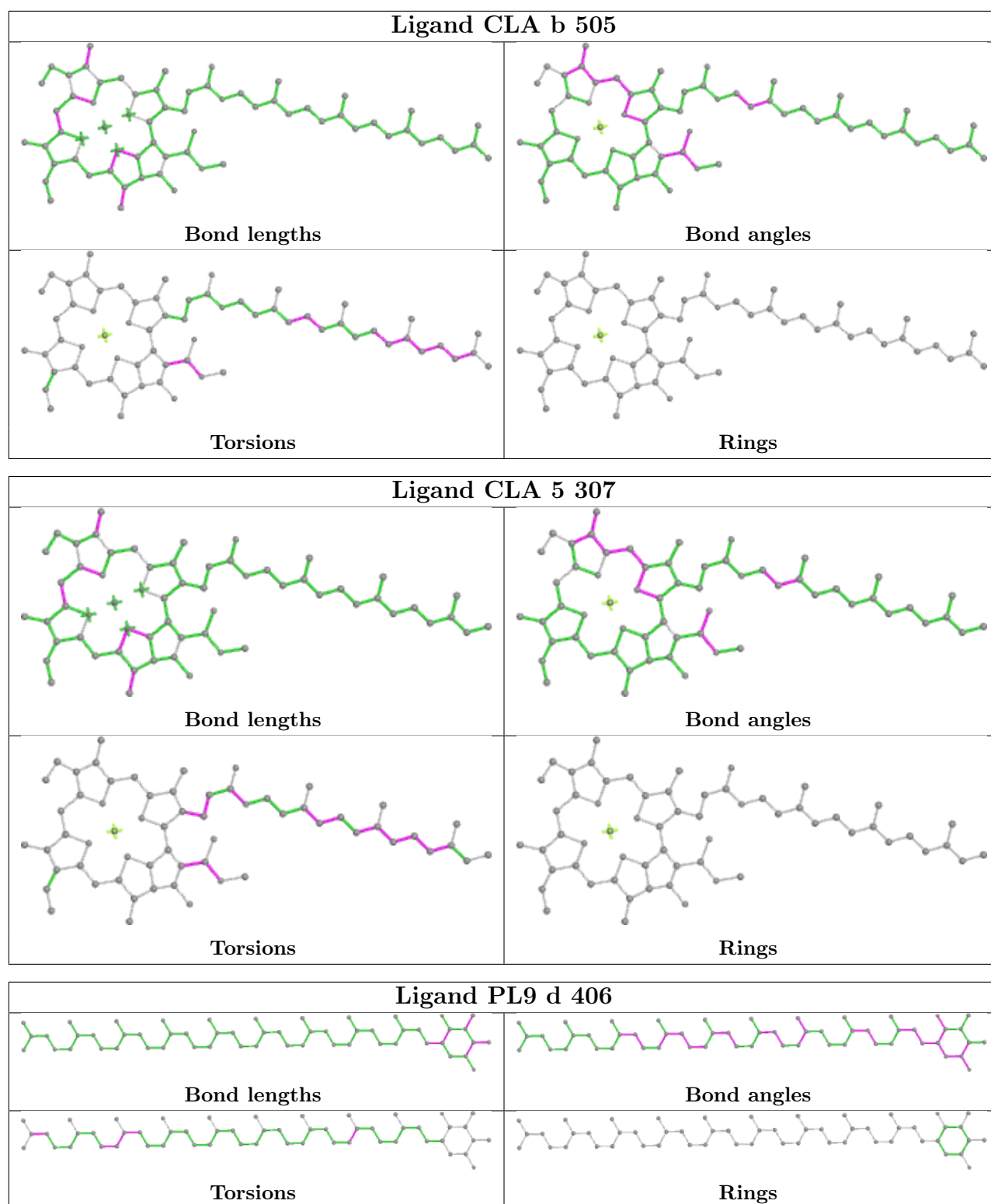


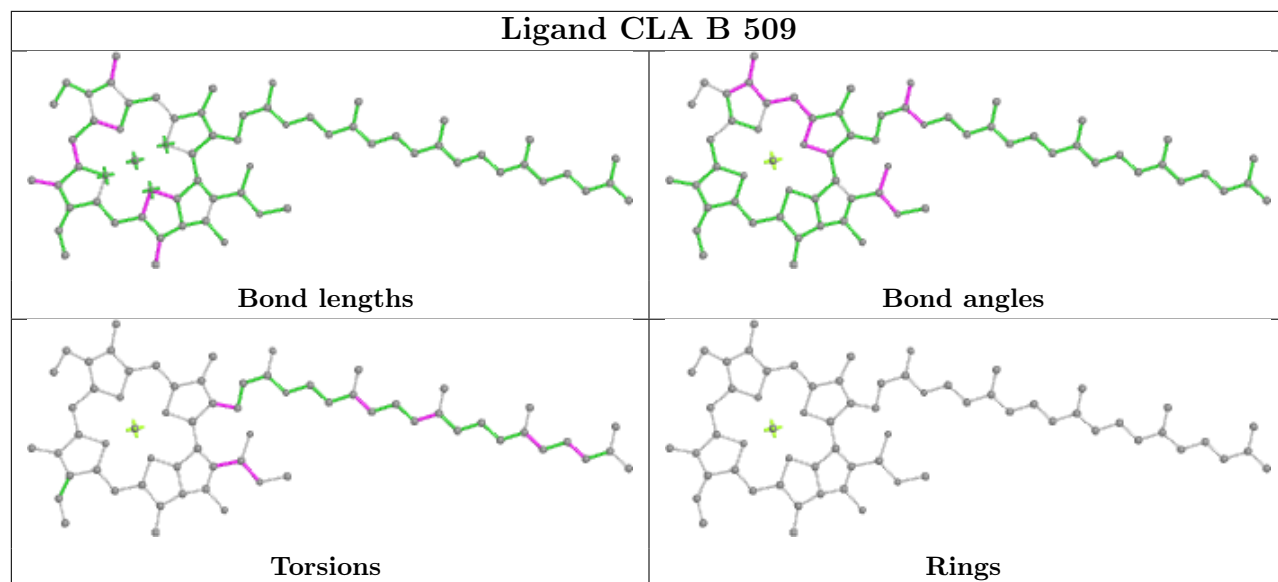
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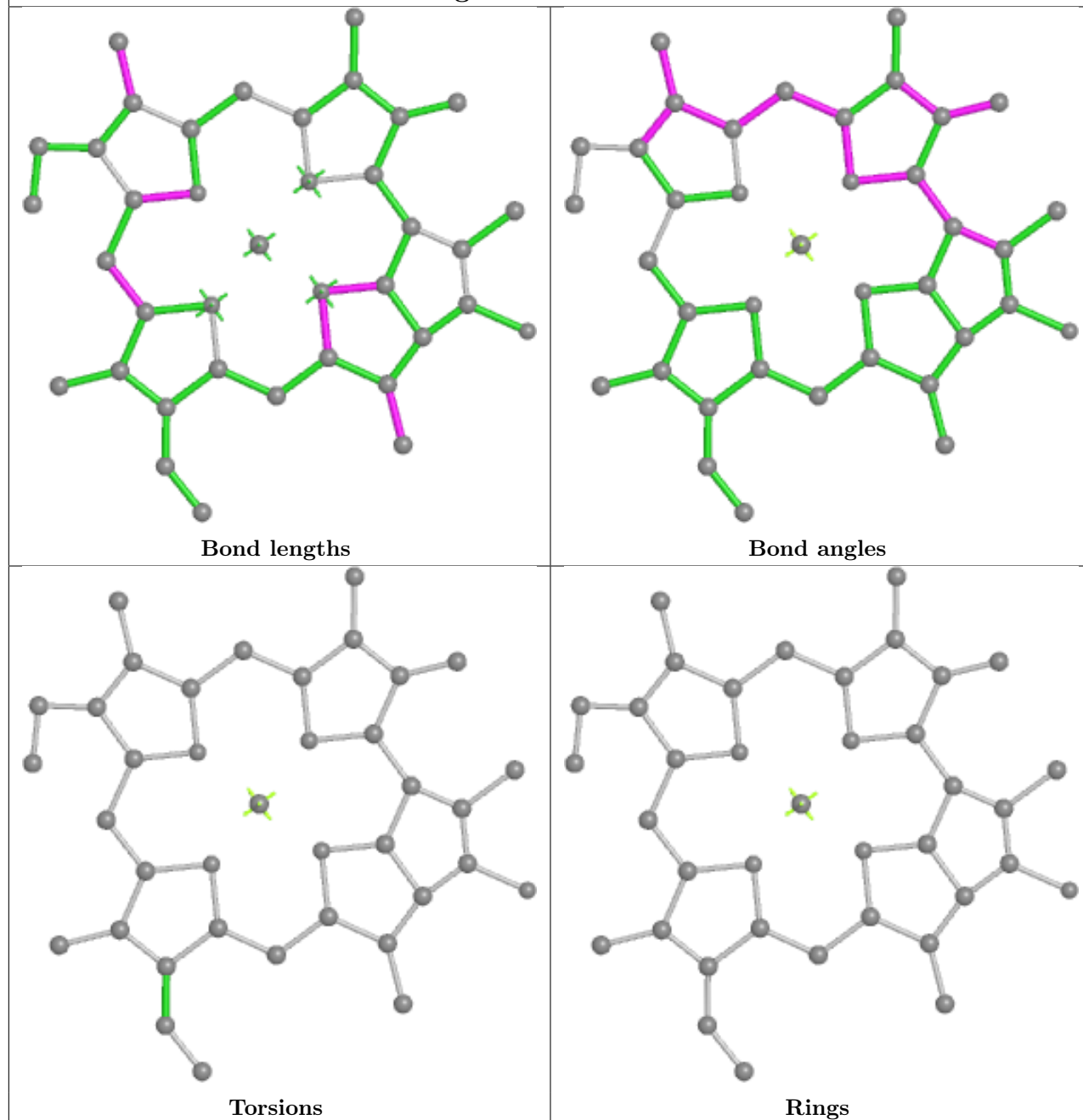


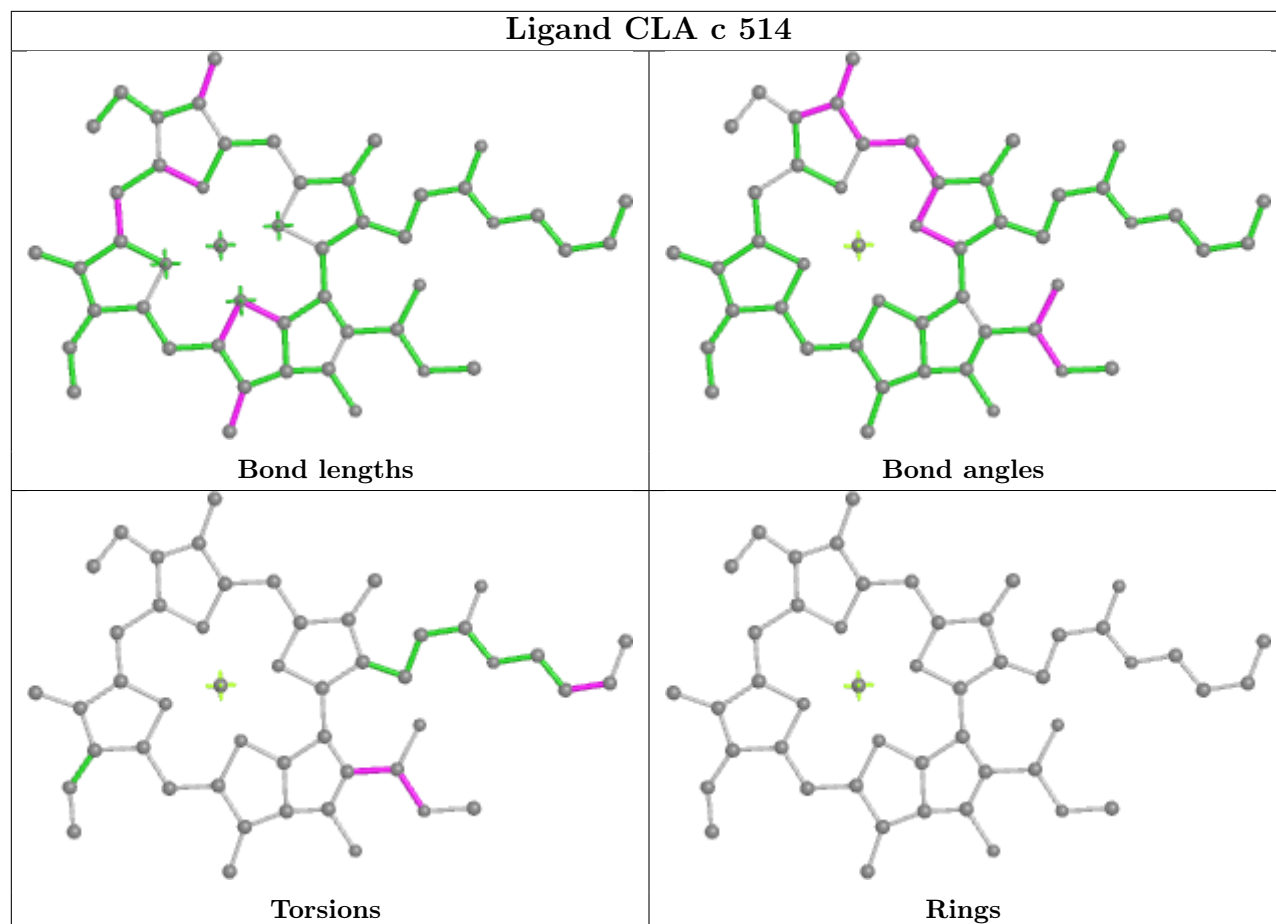


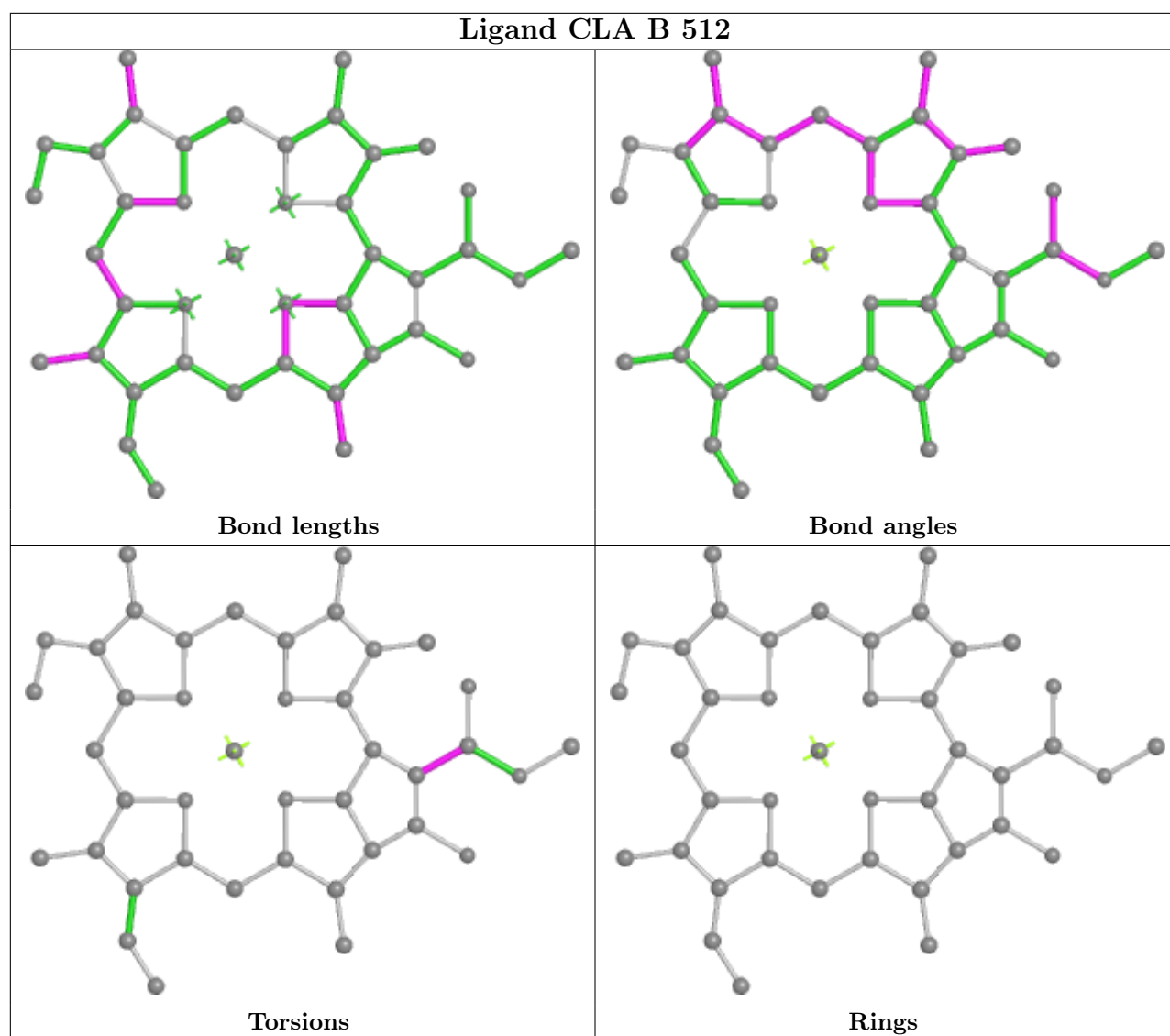


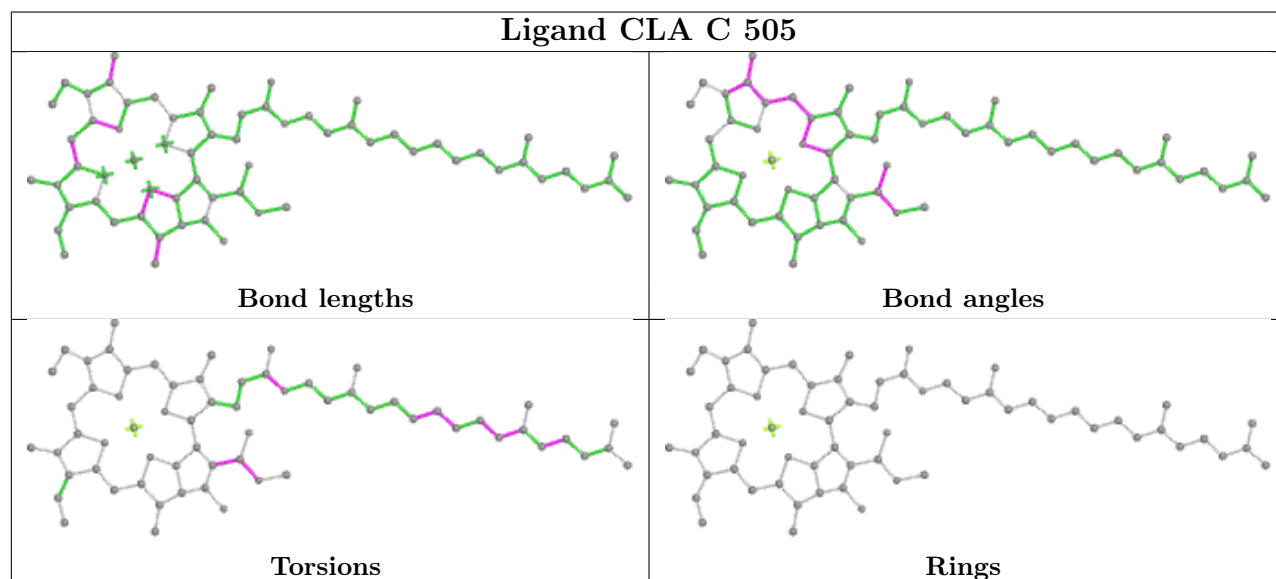
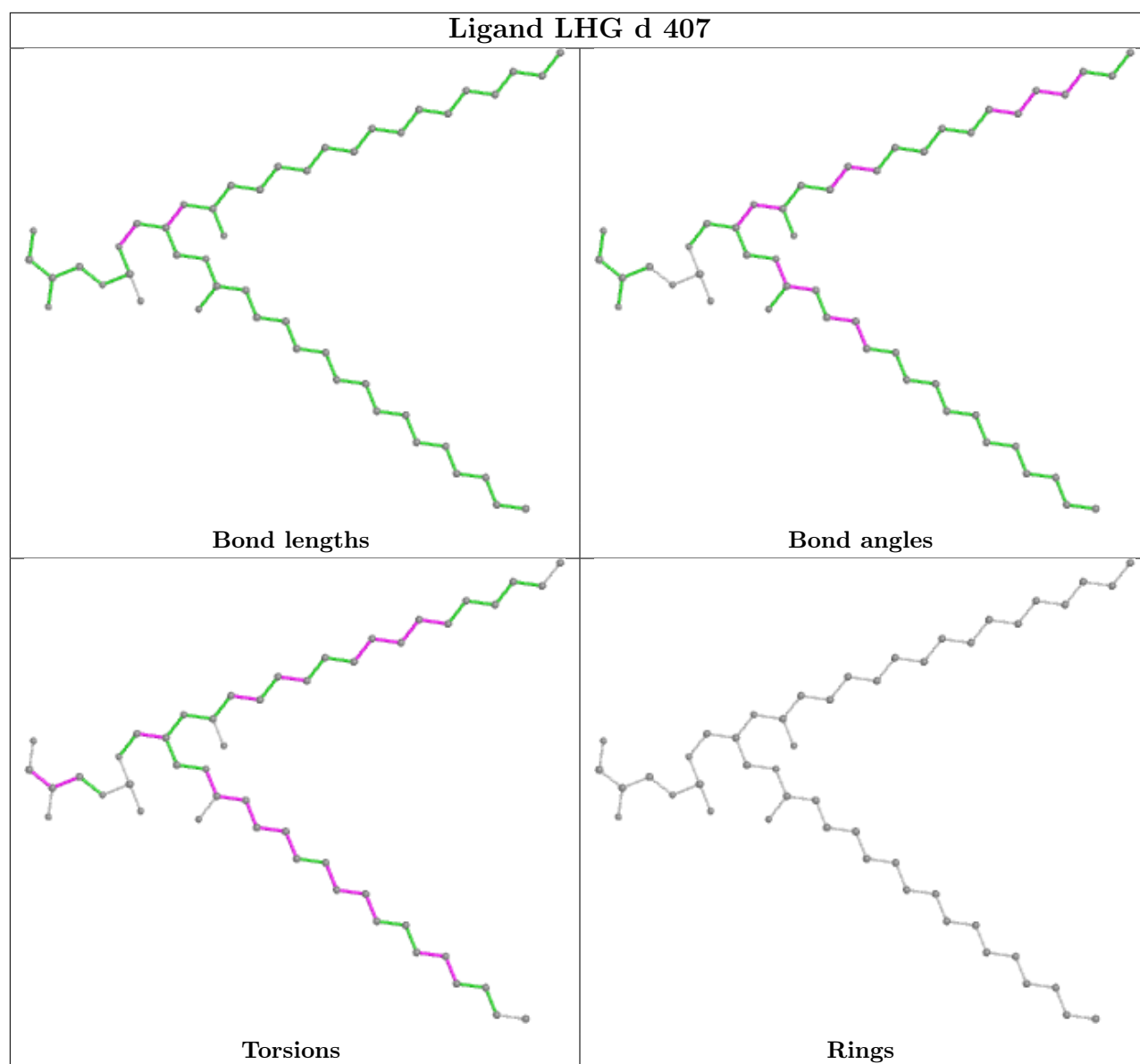


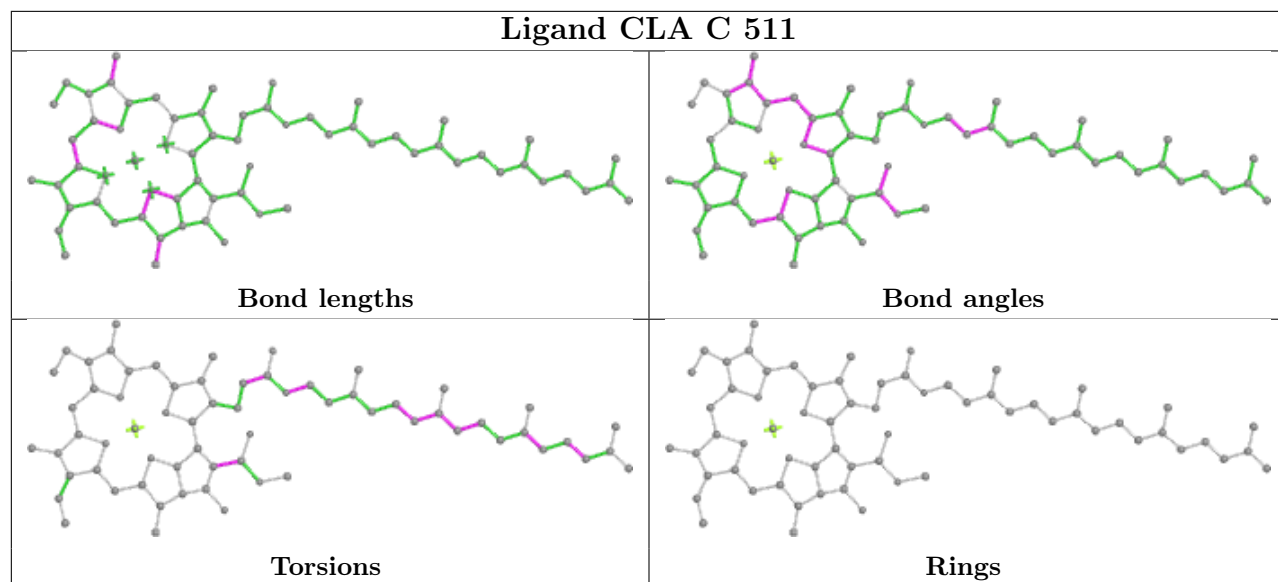
Ligand CLA 0 314

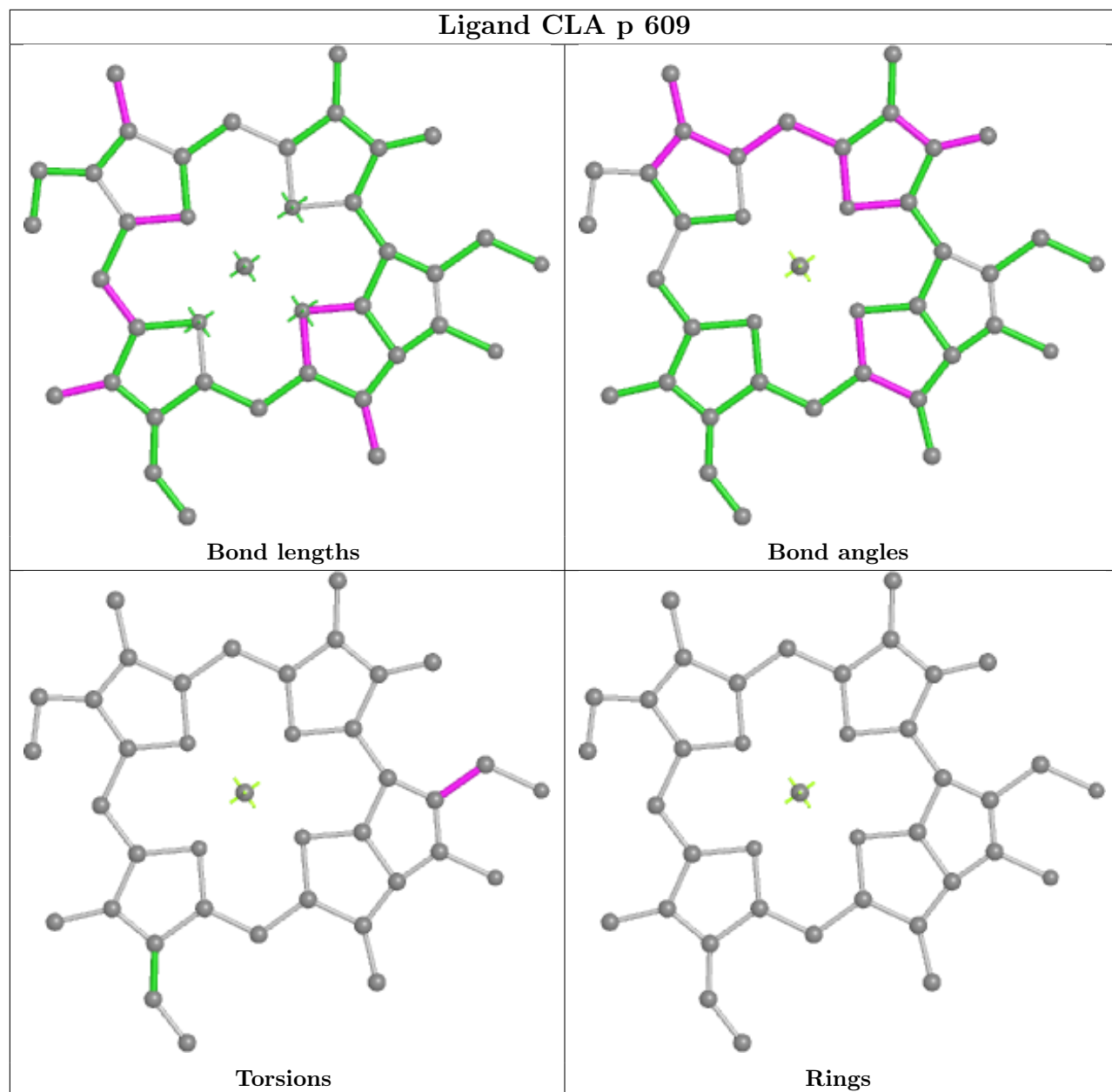


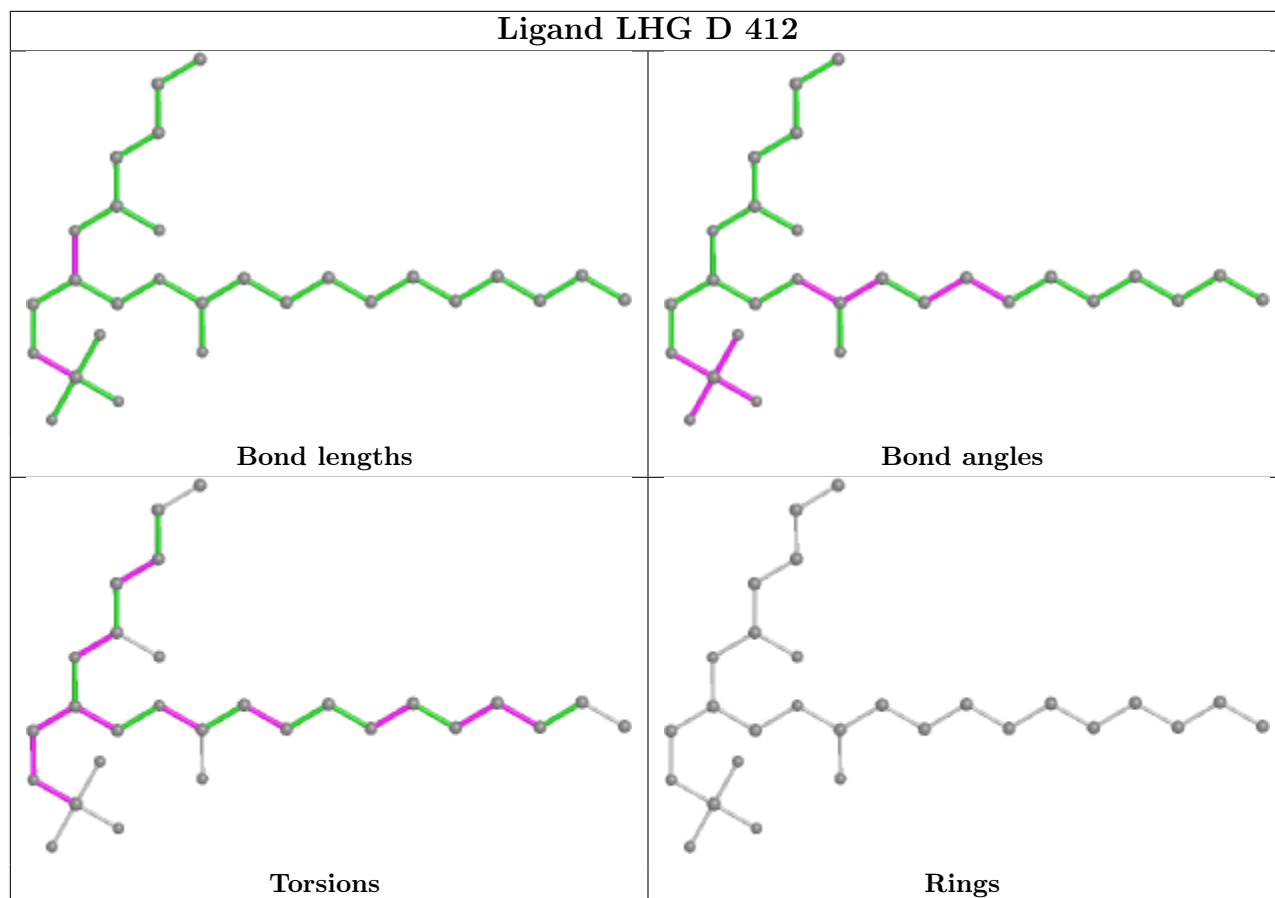


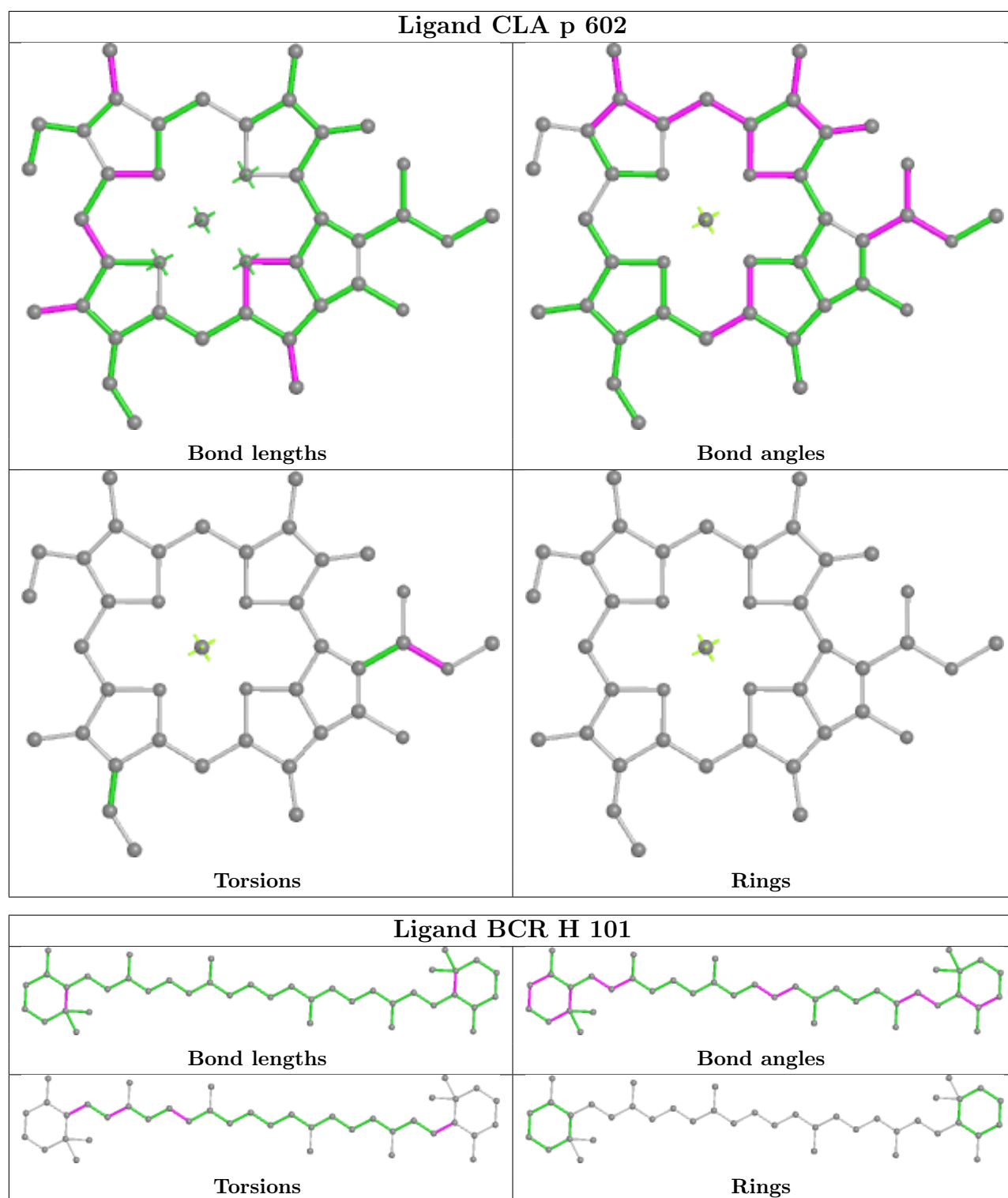


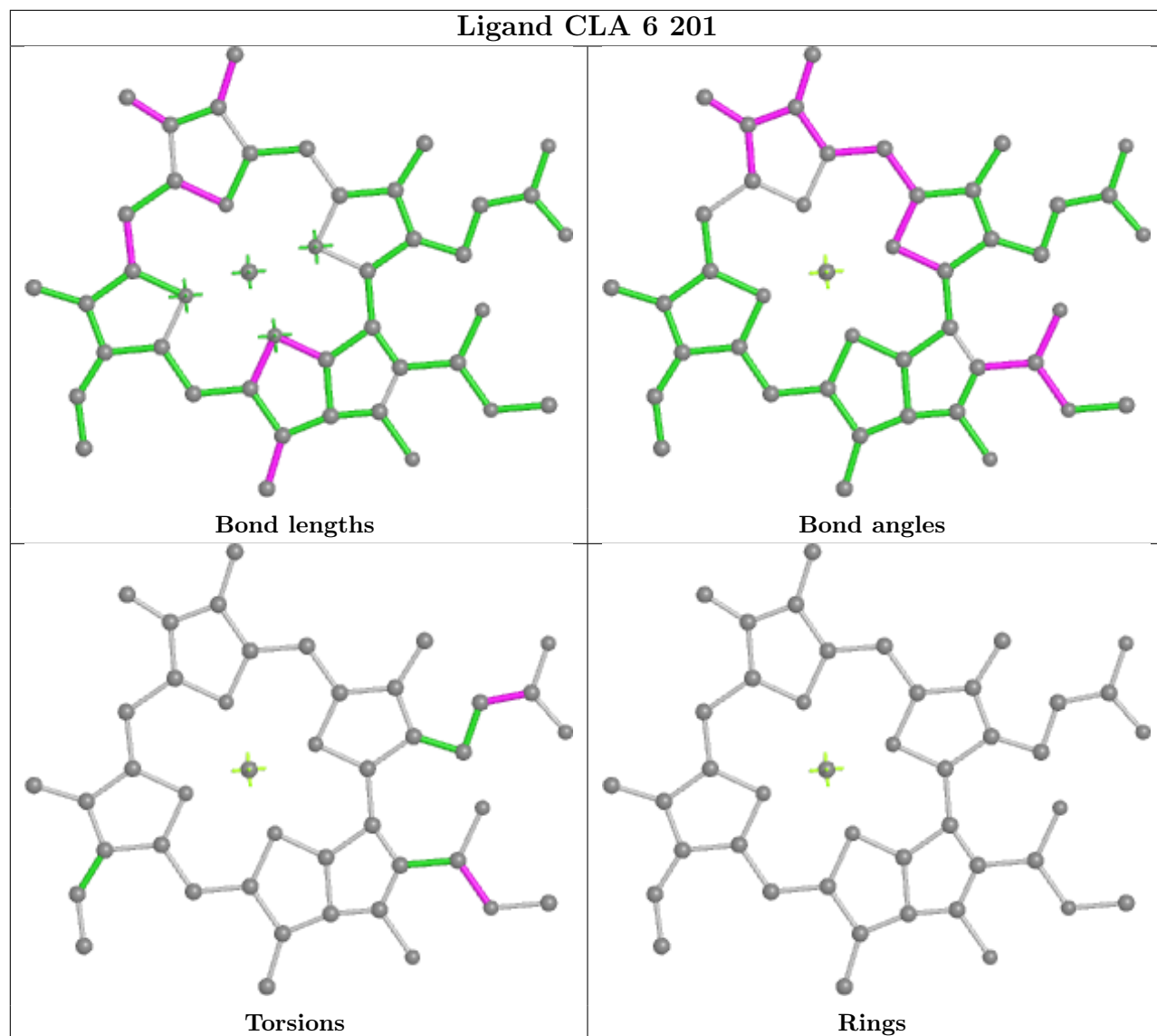


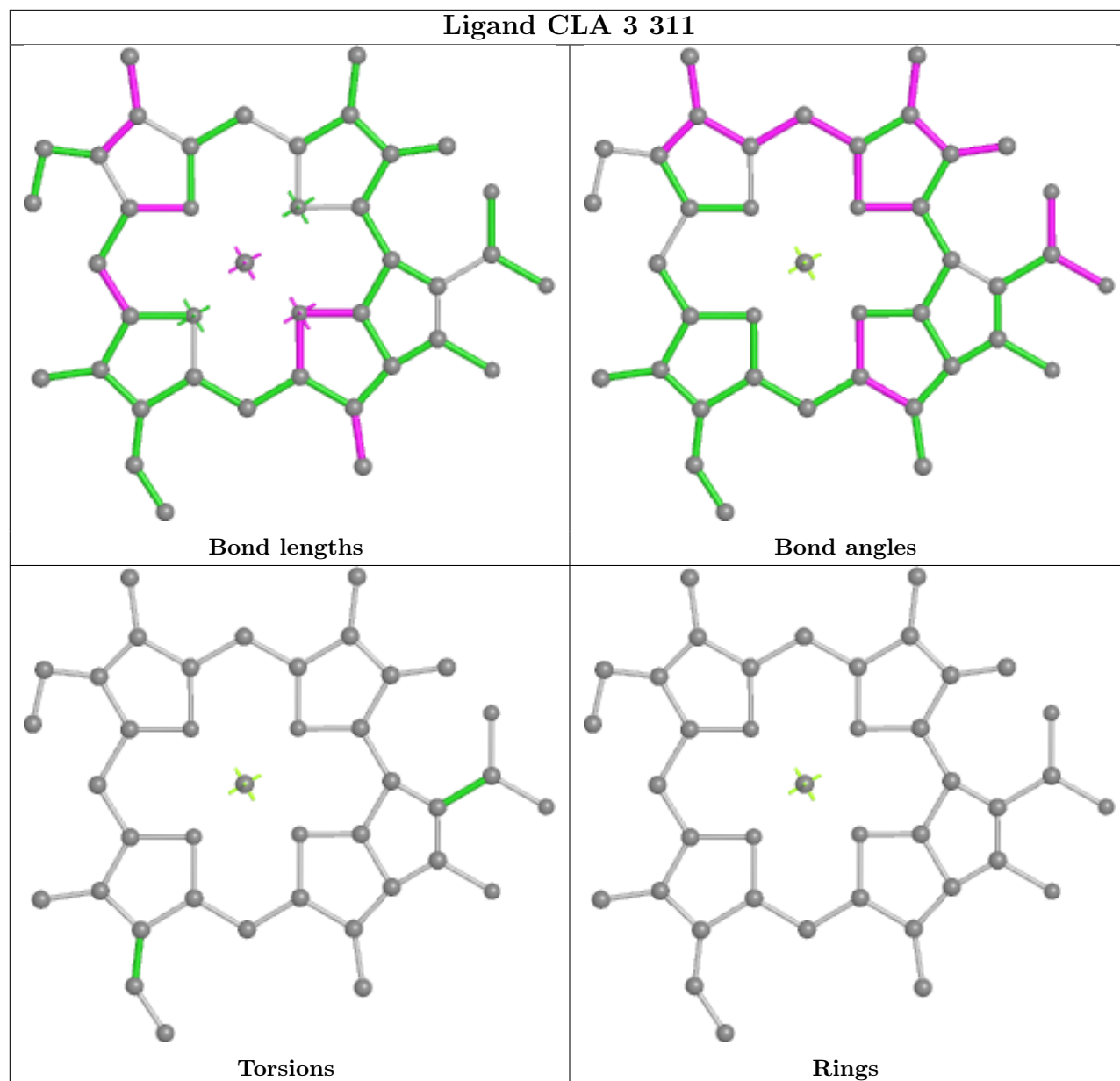


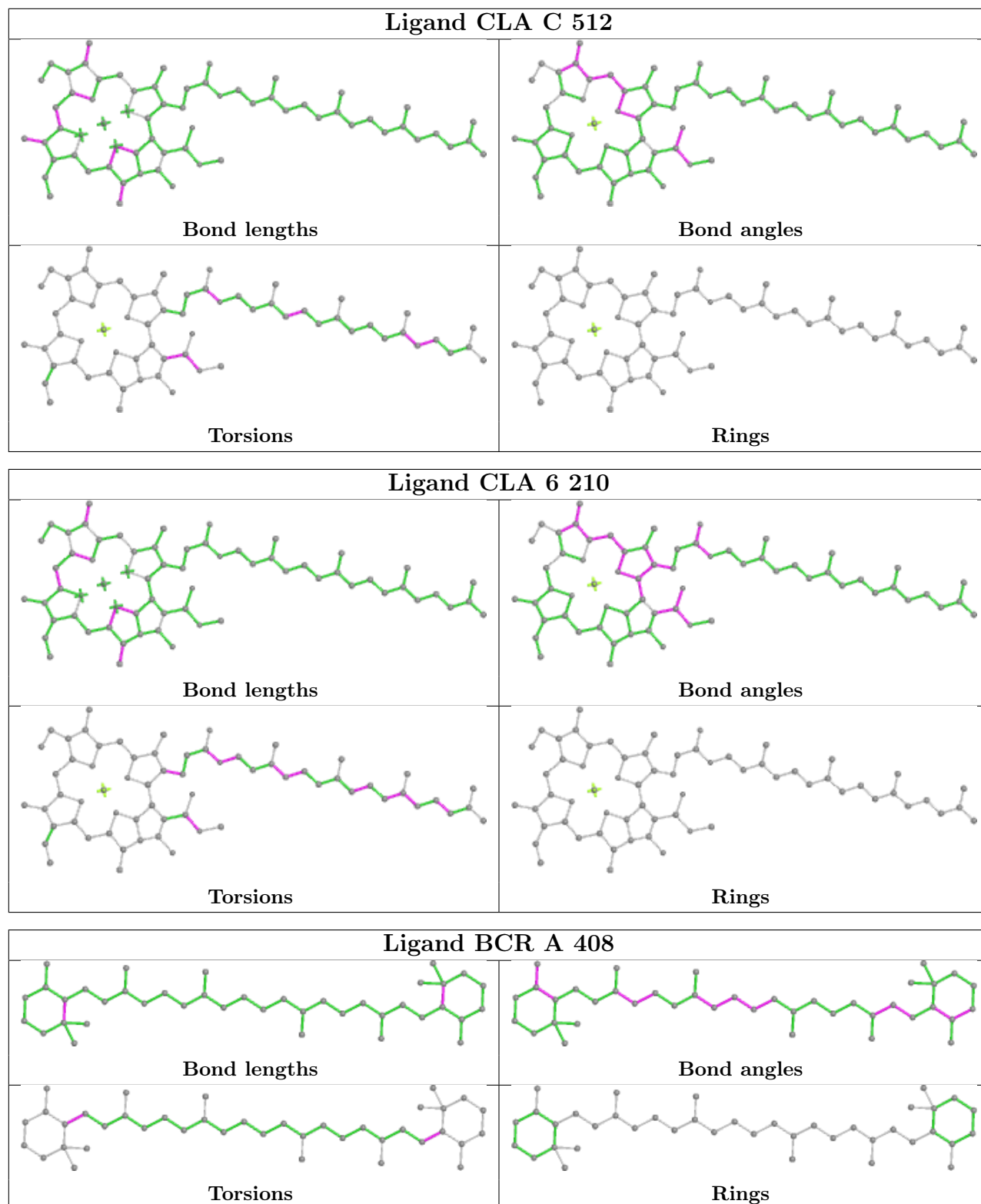


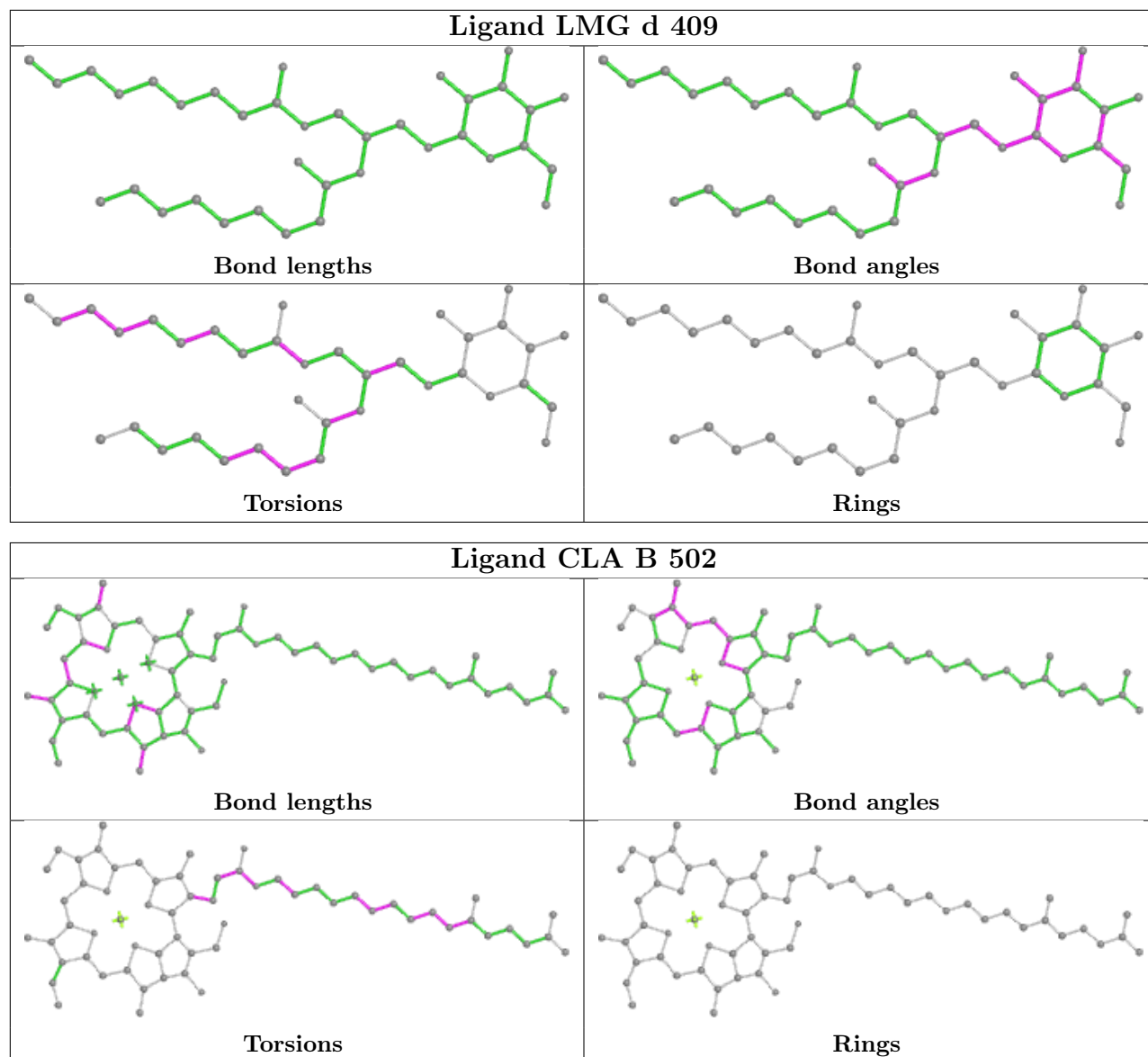




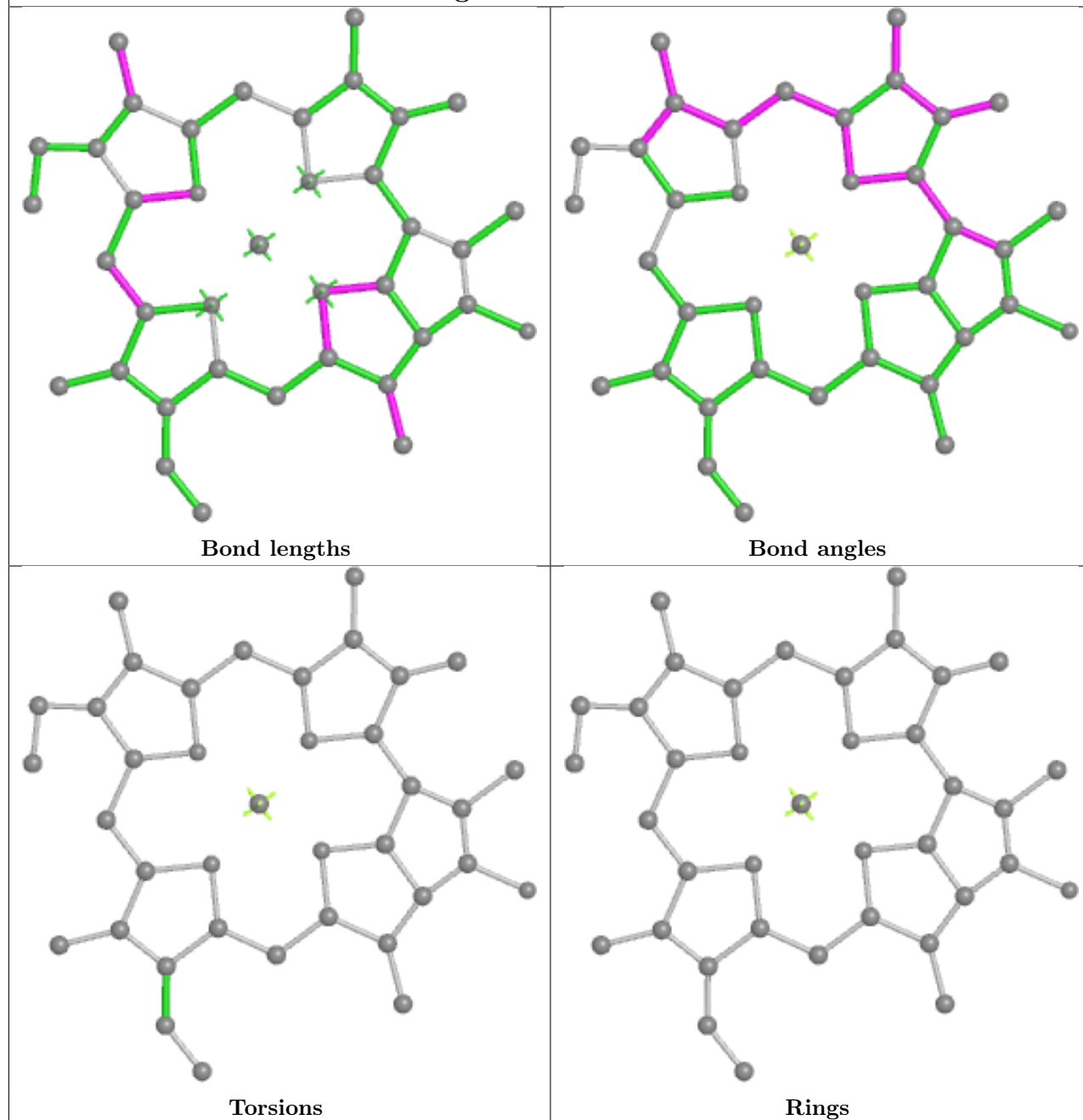


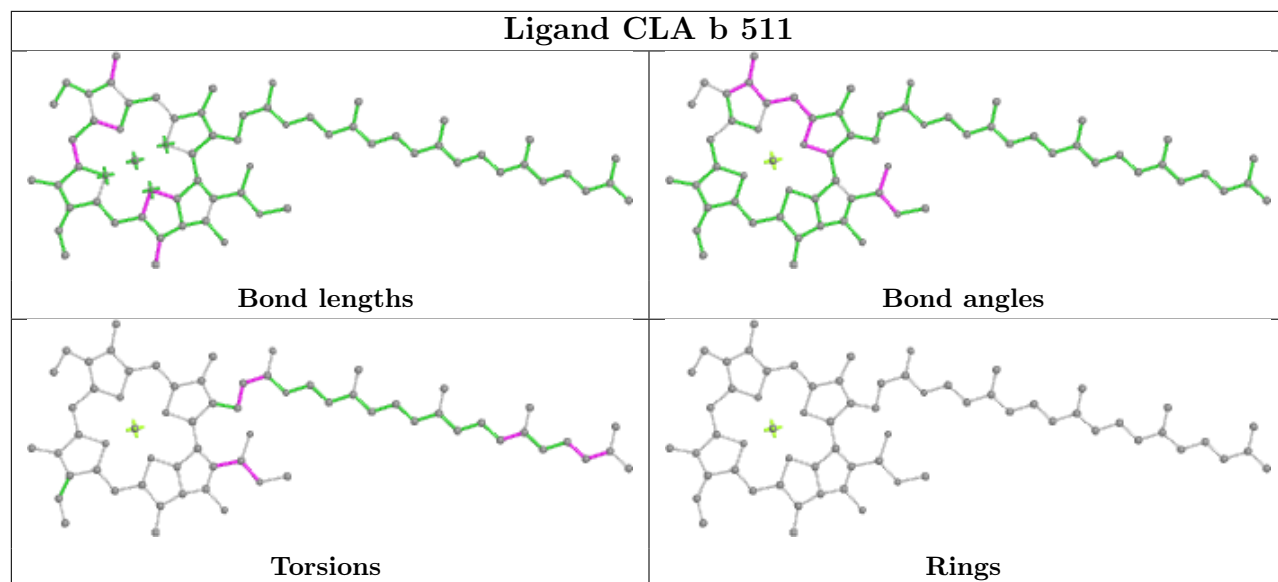




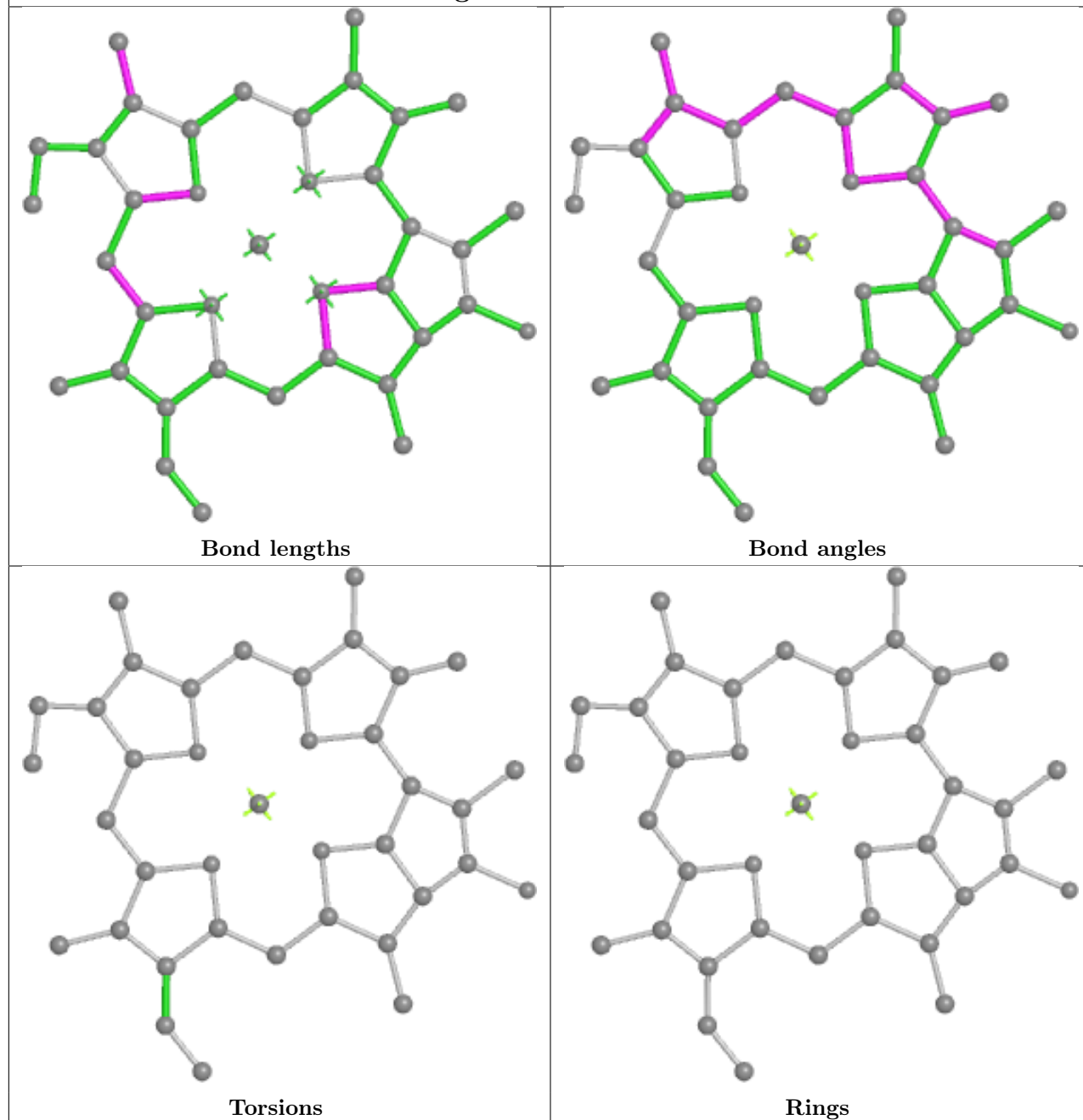


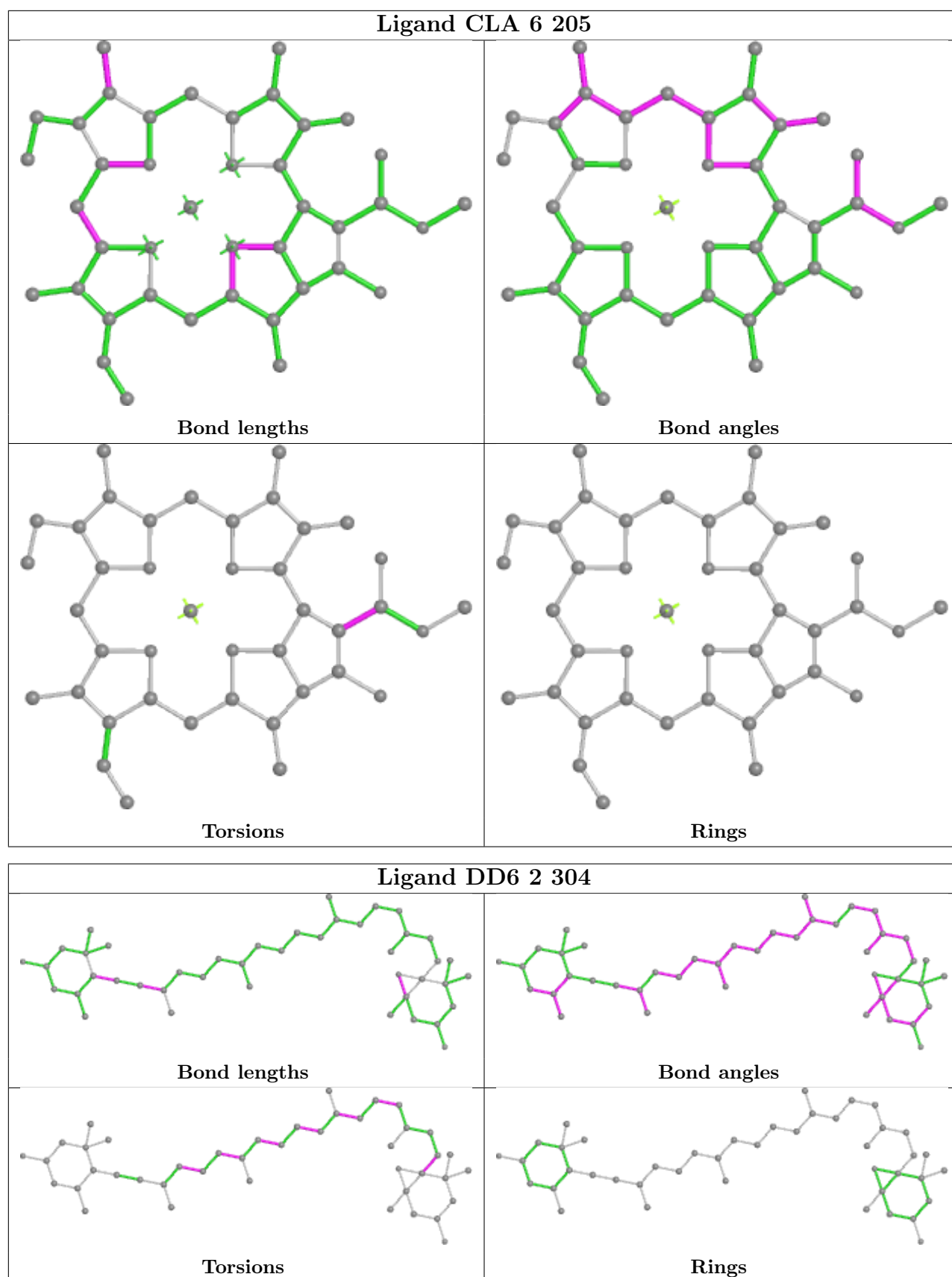
Ligand CLA 1 214

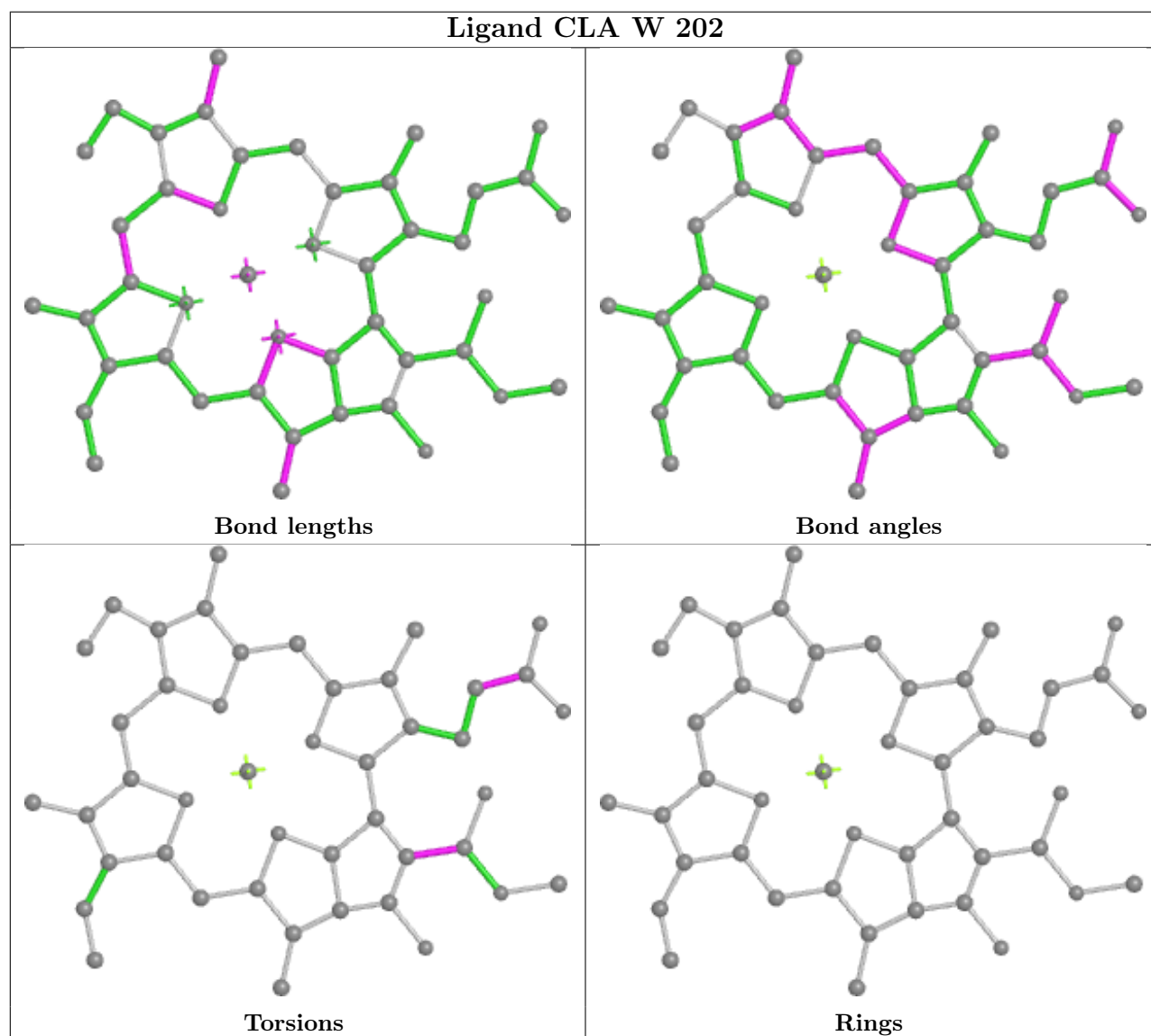
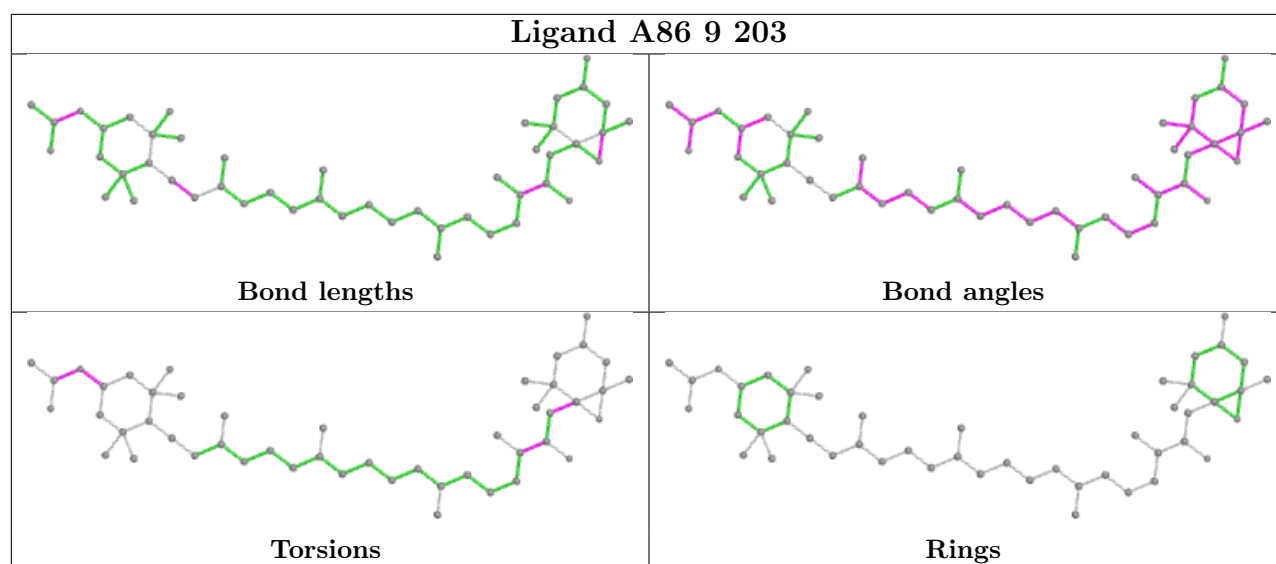


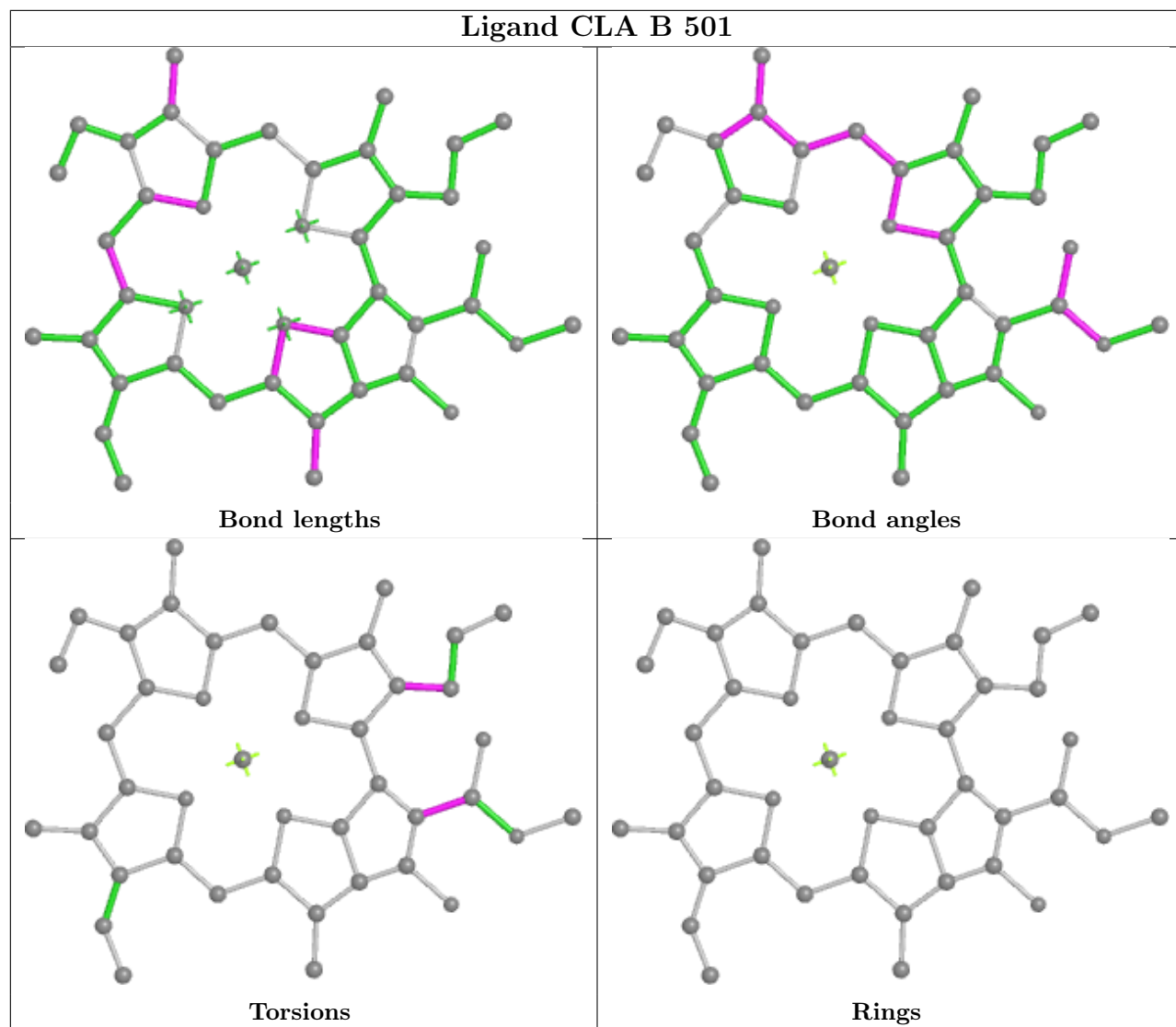


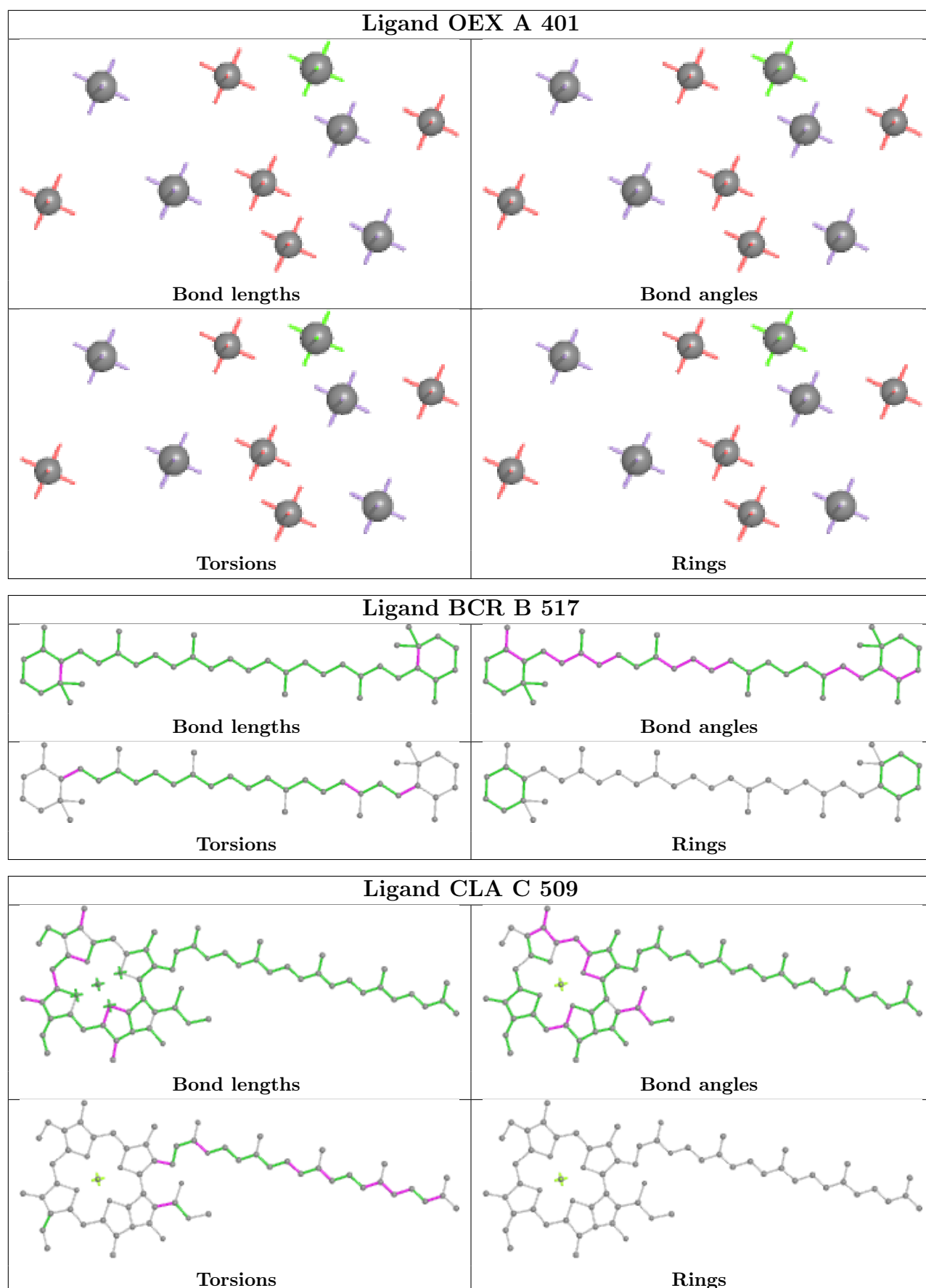
Ligand CLA 6 215

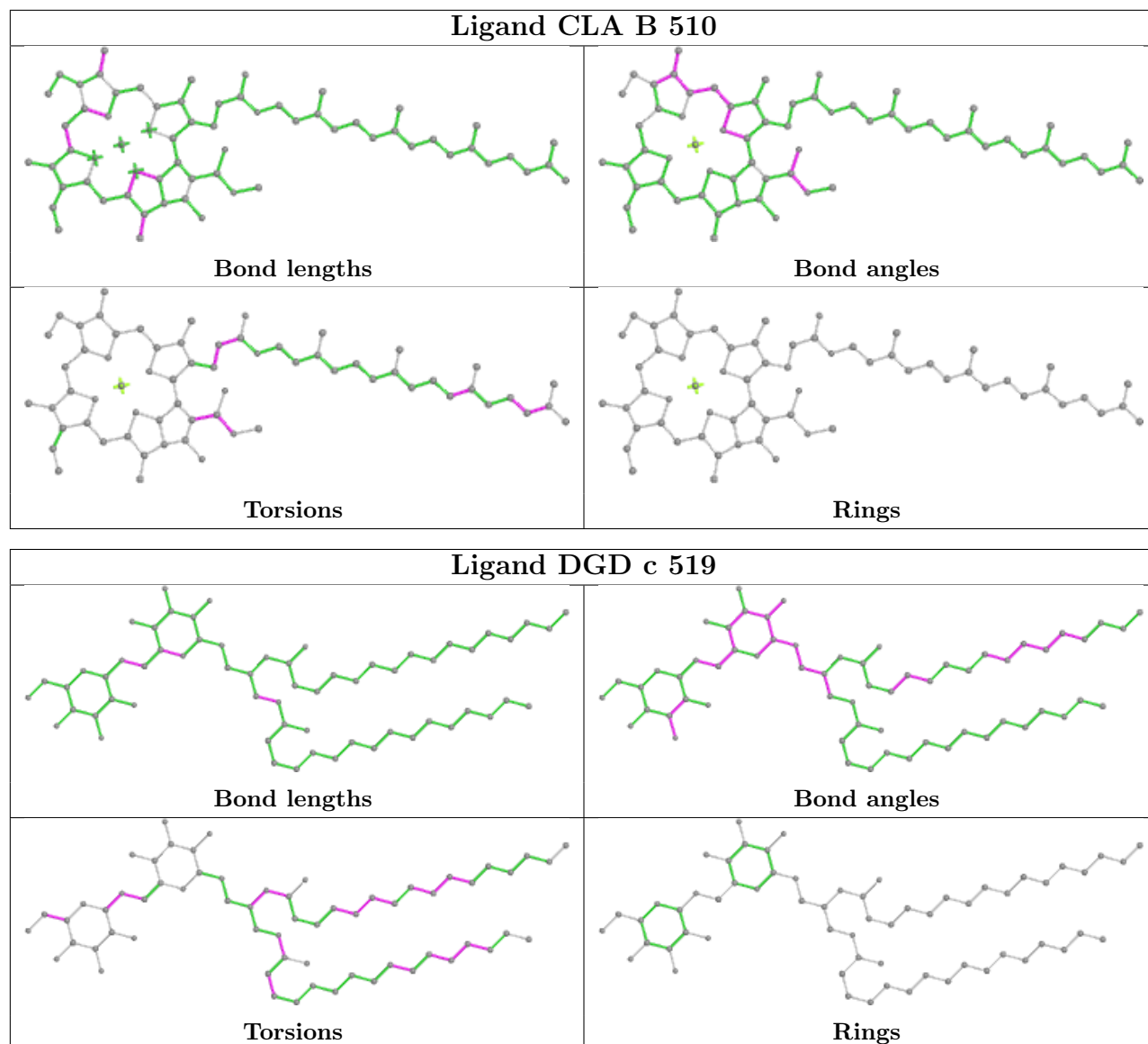


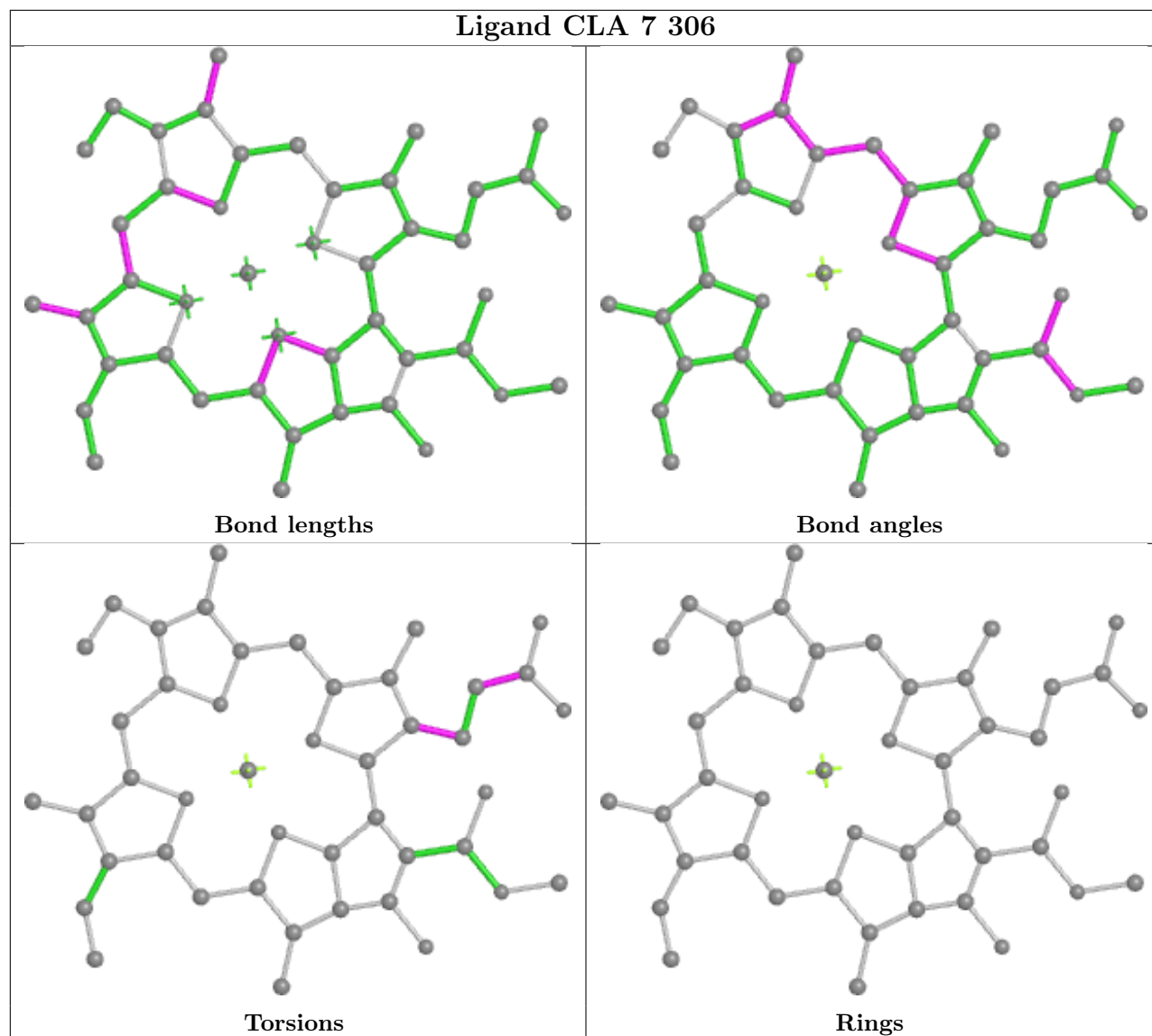


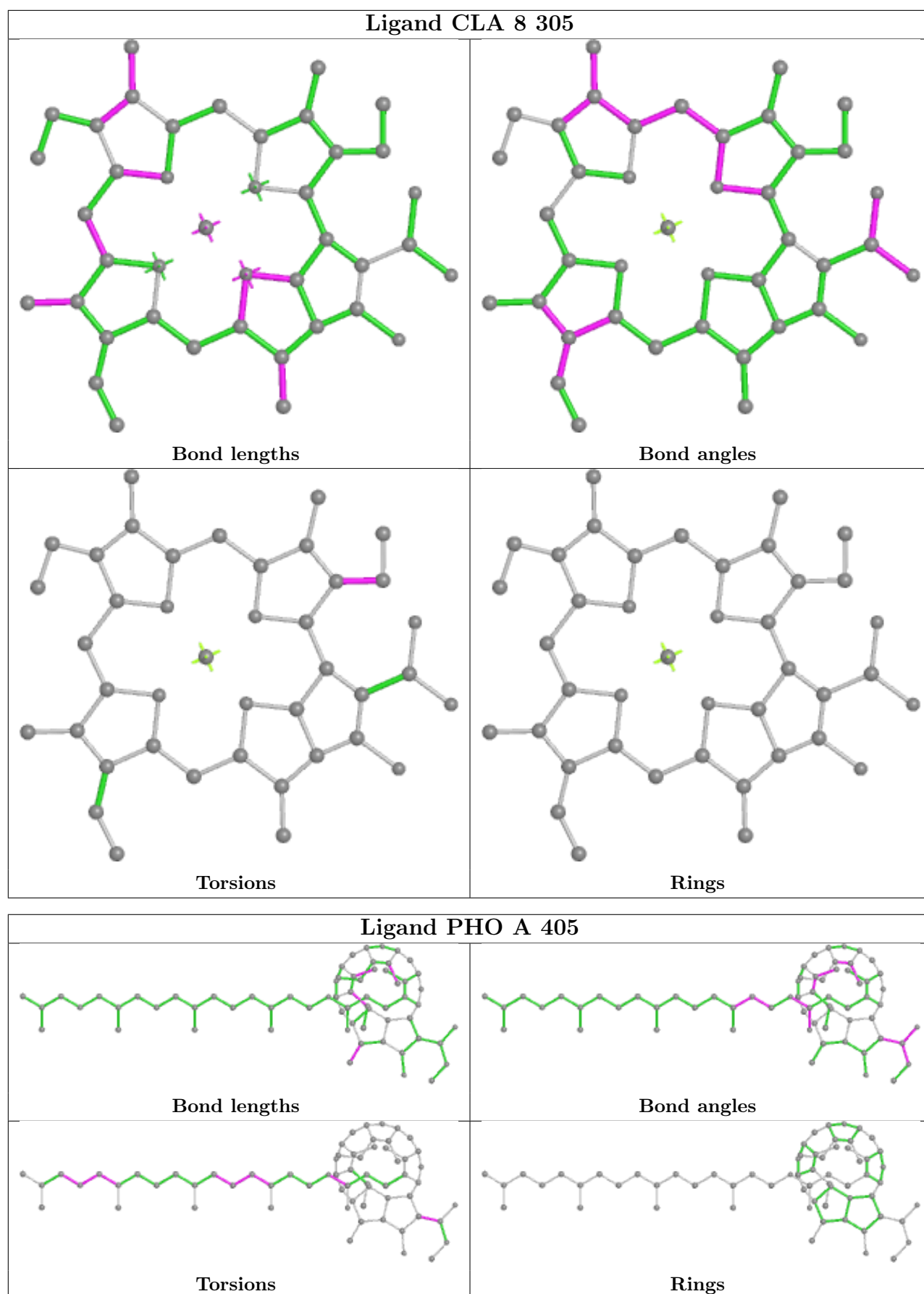


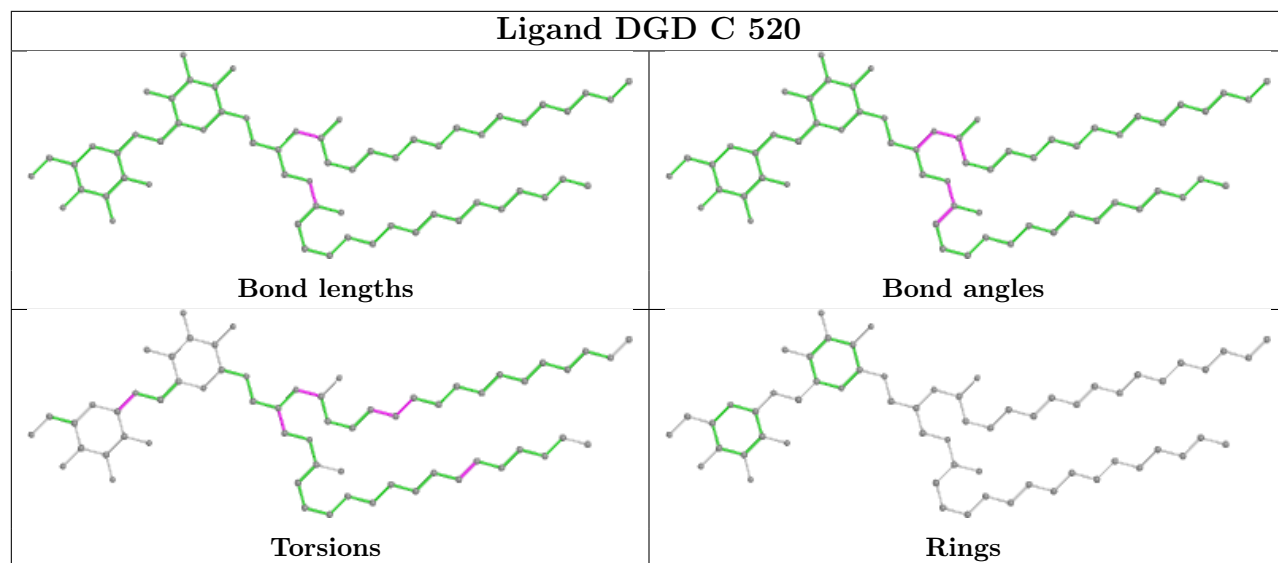


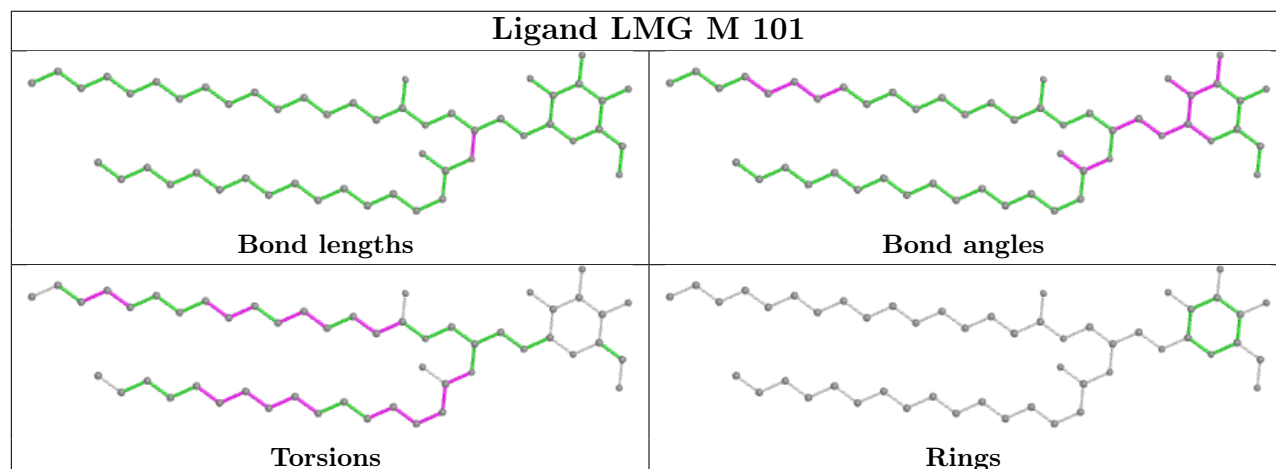
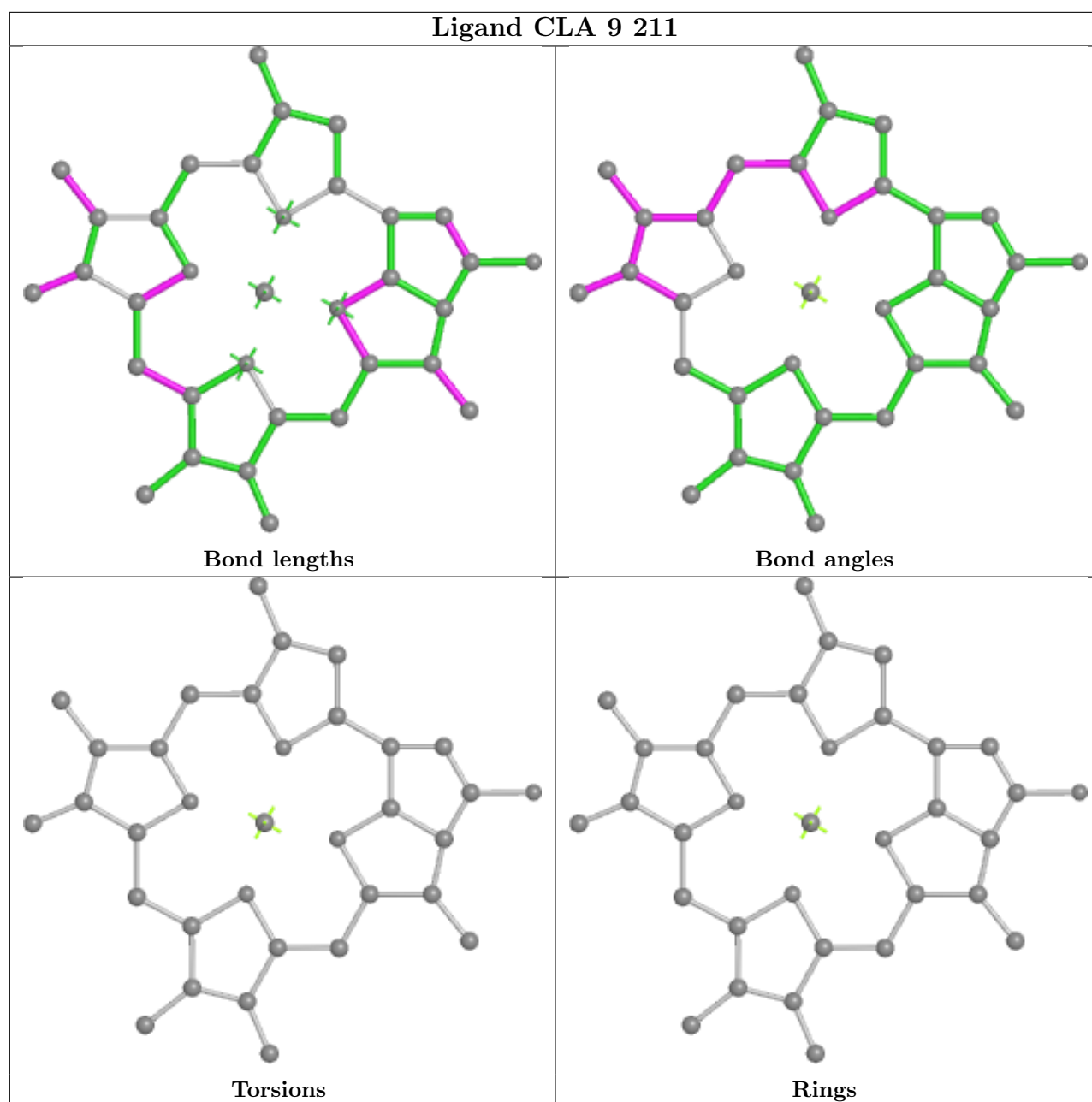


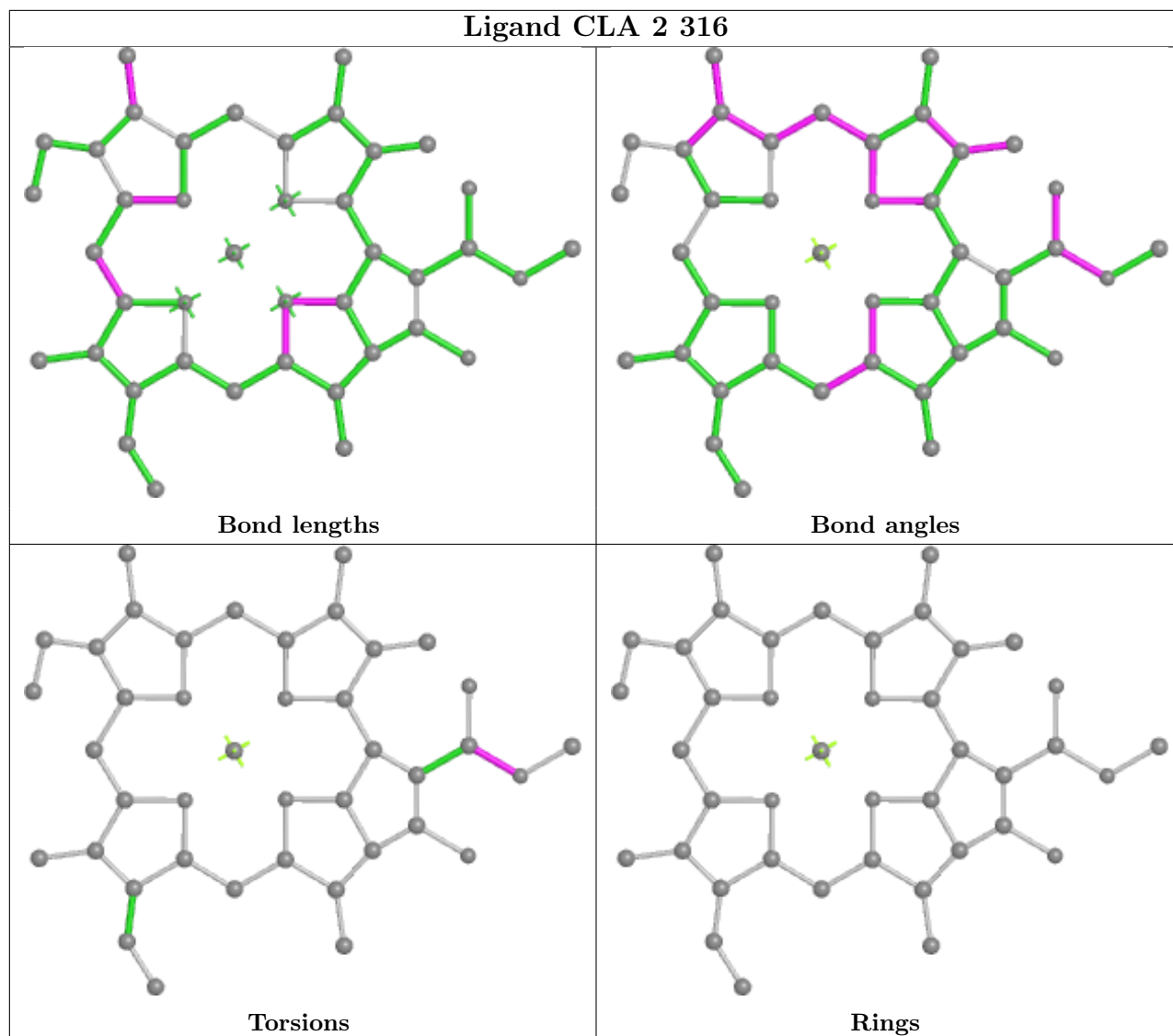
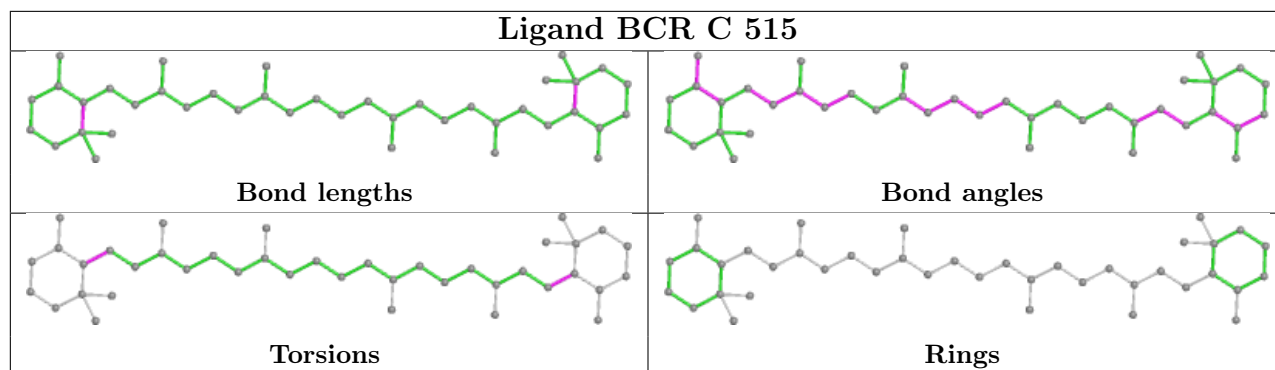


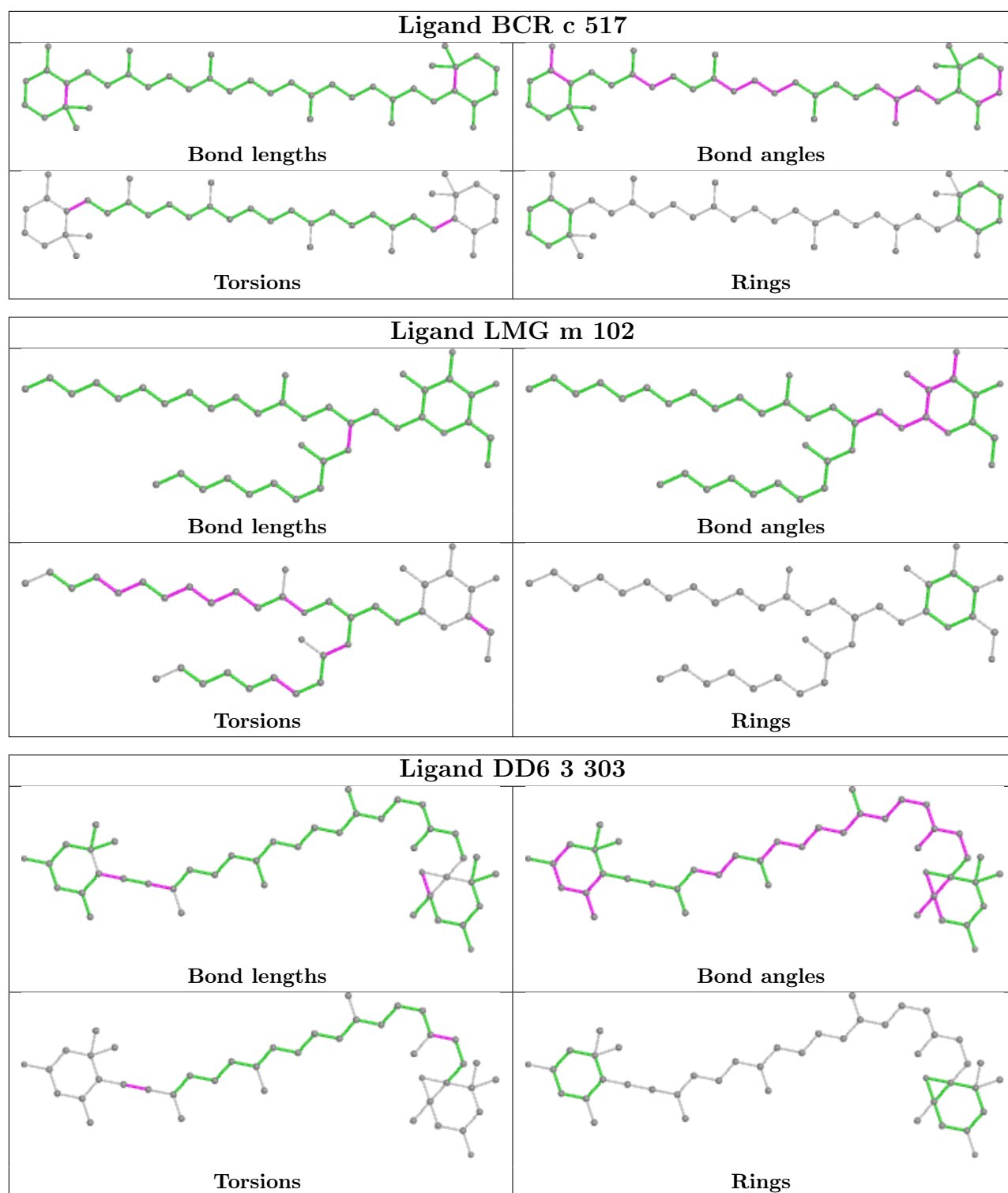




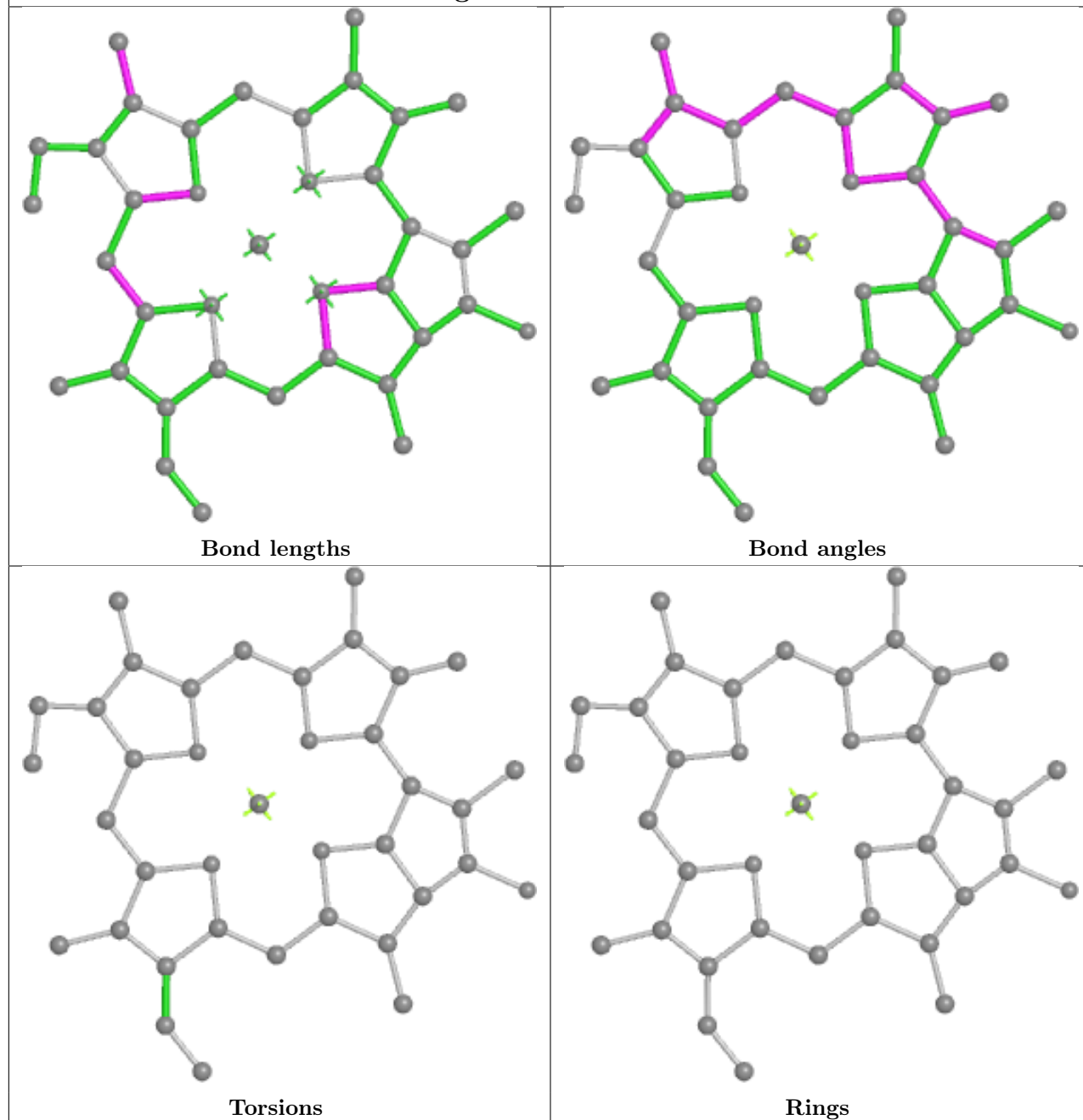


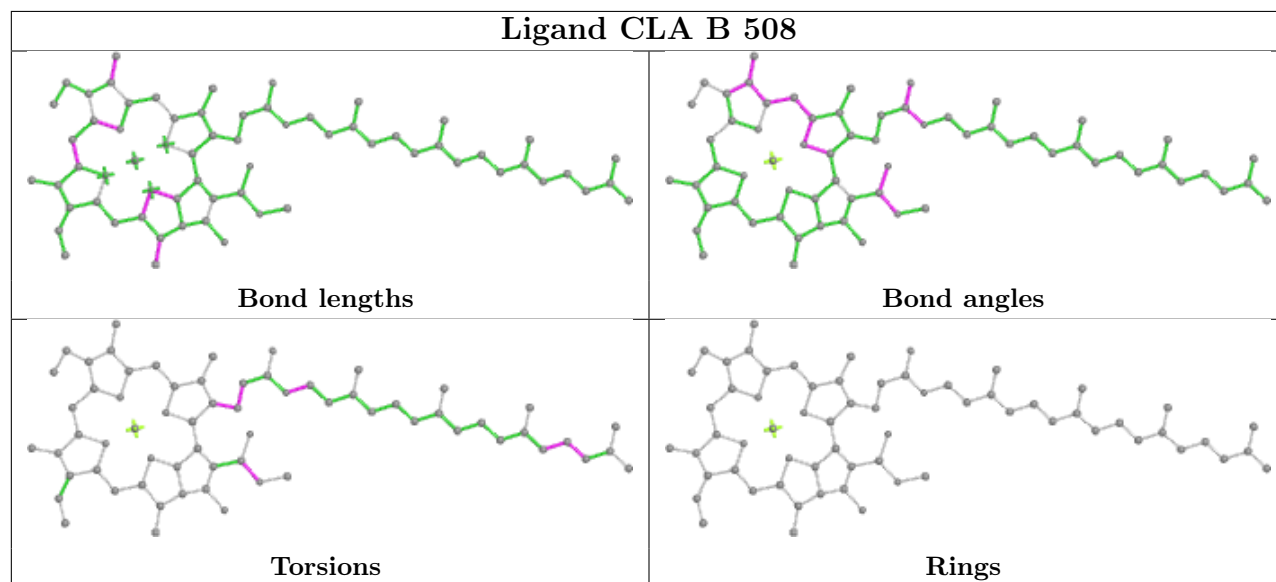
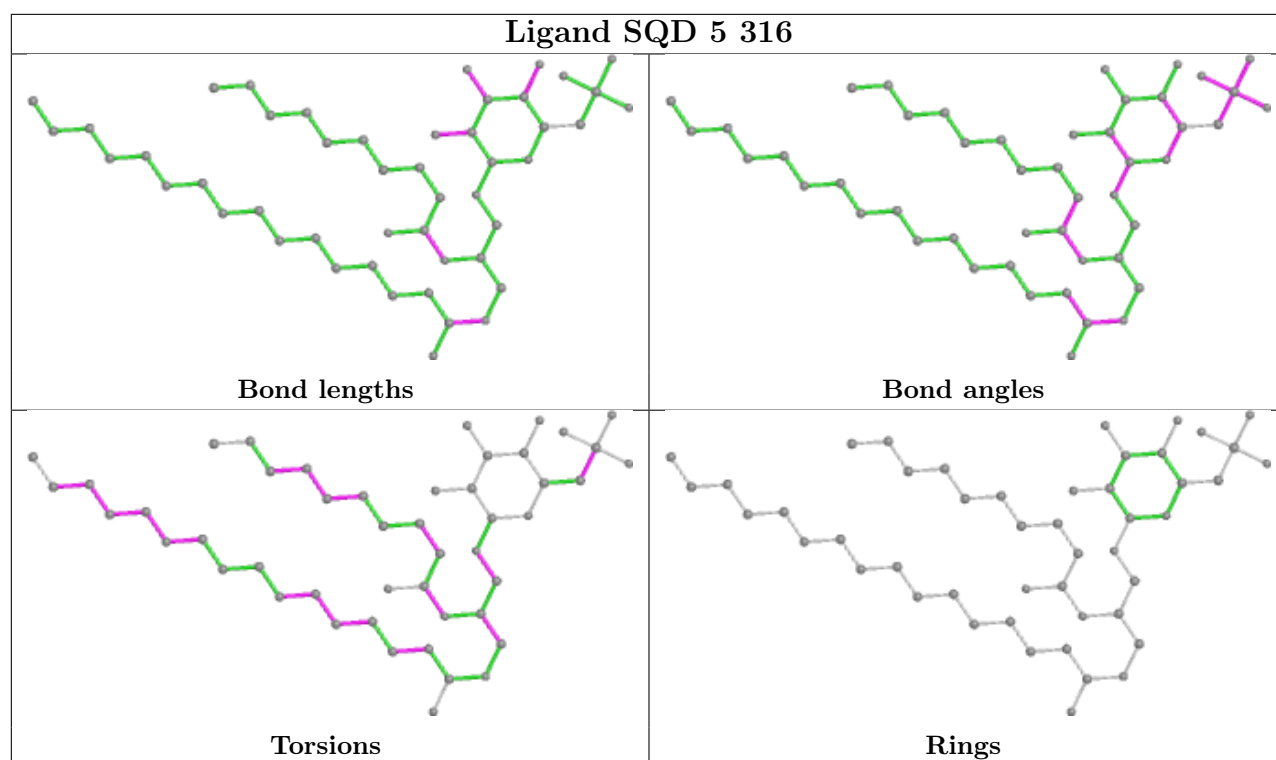


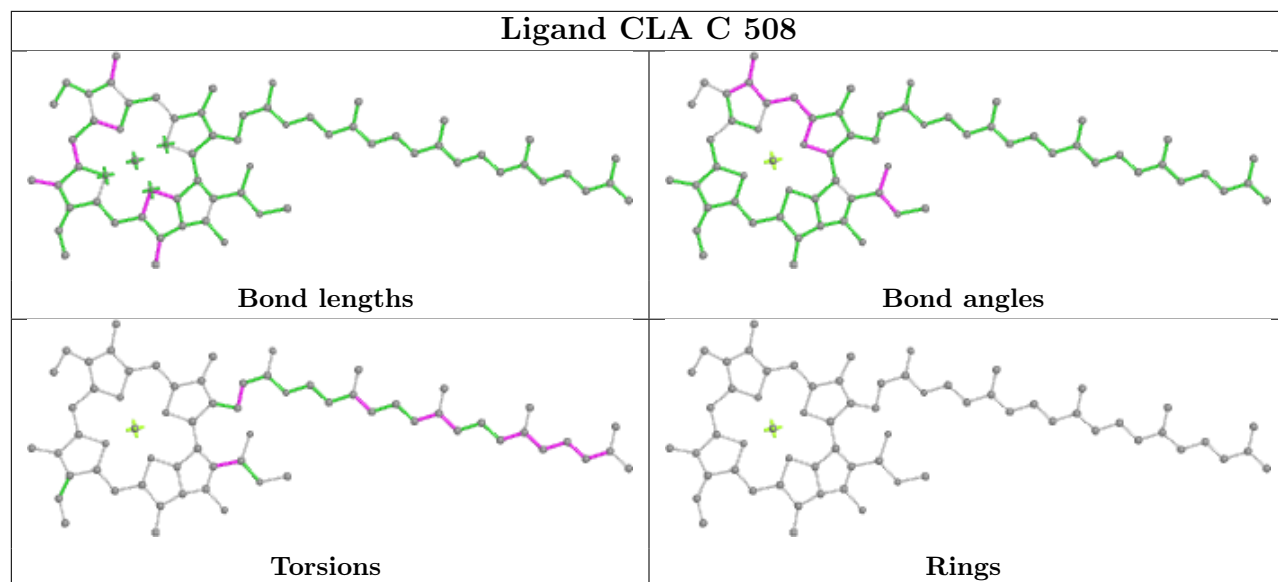




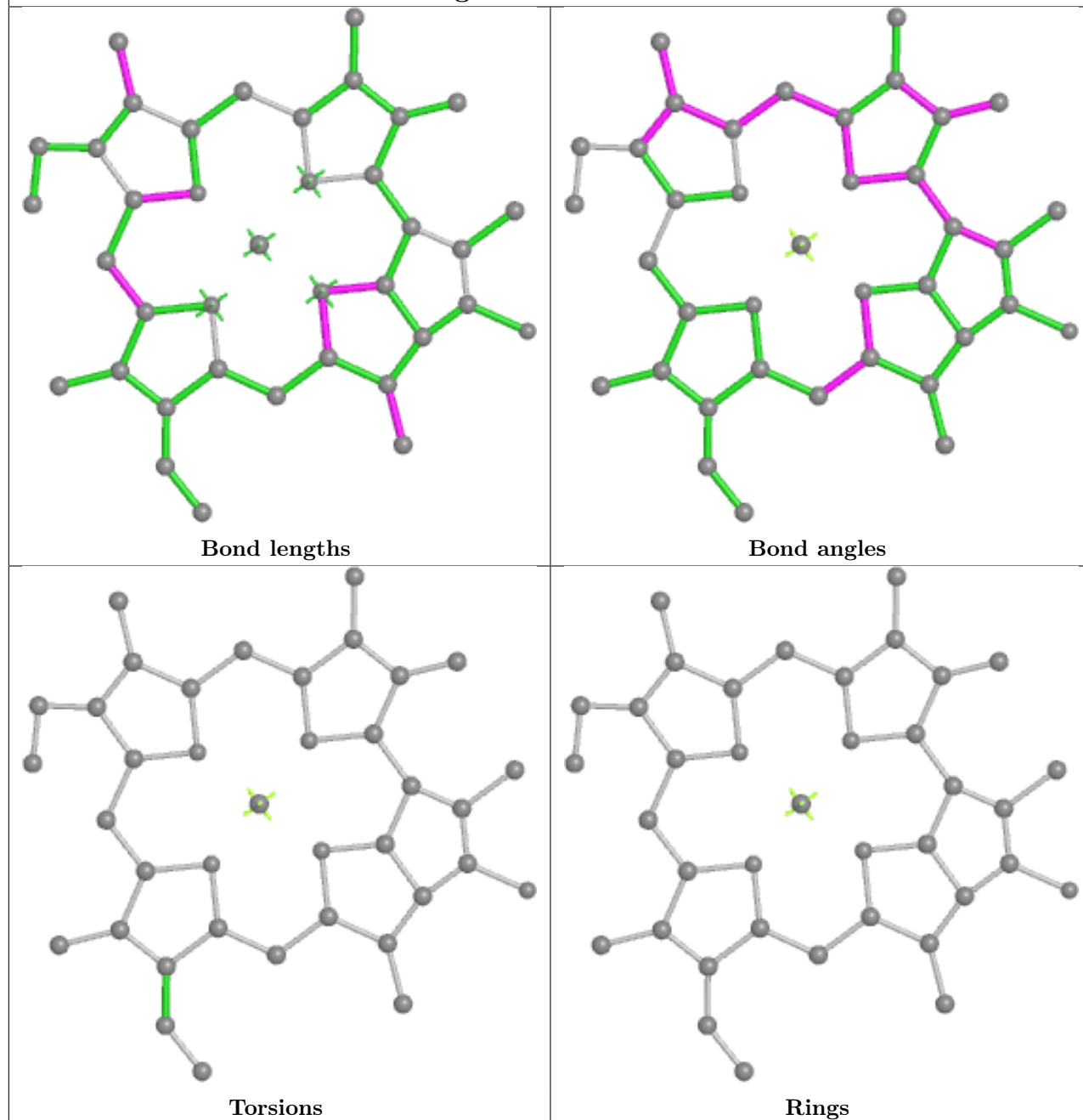
Ligand CLA 2 315



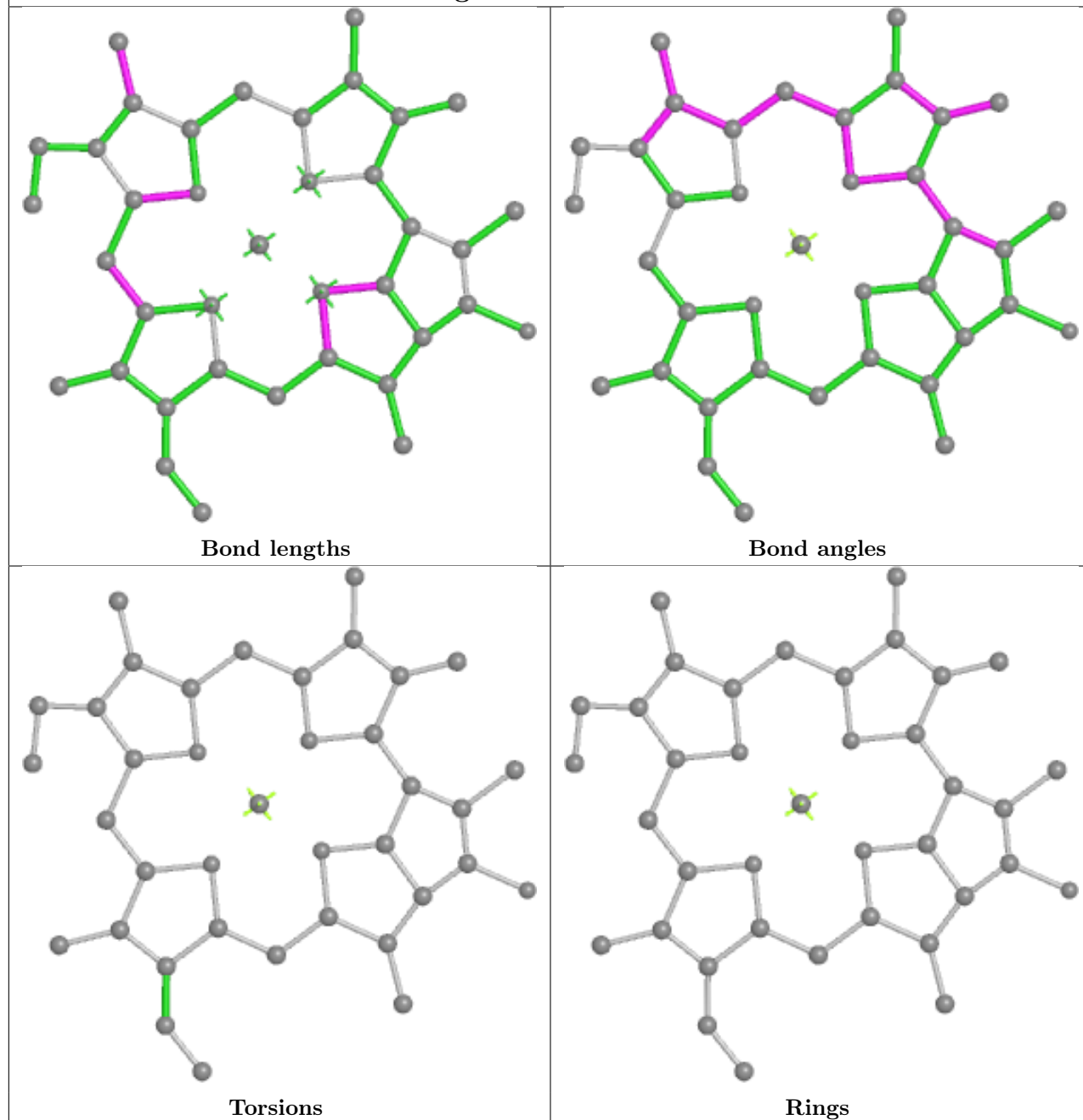


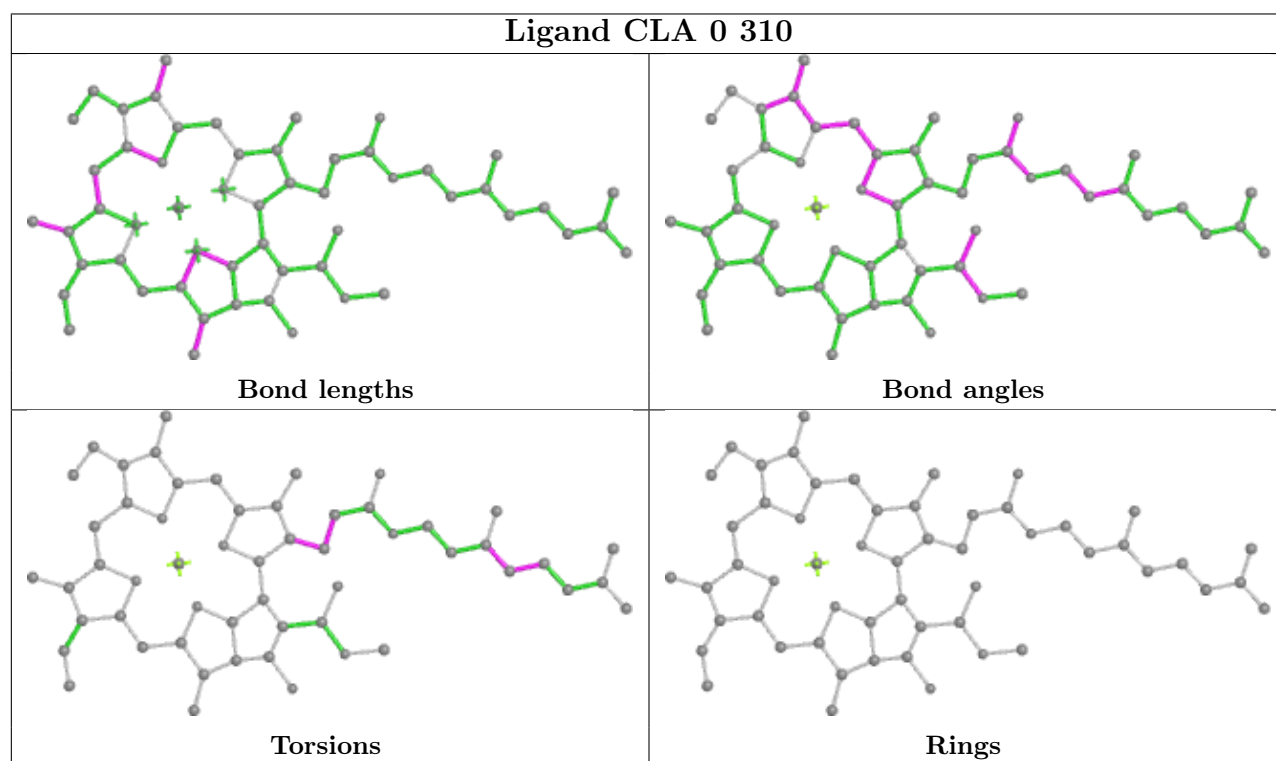
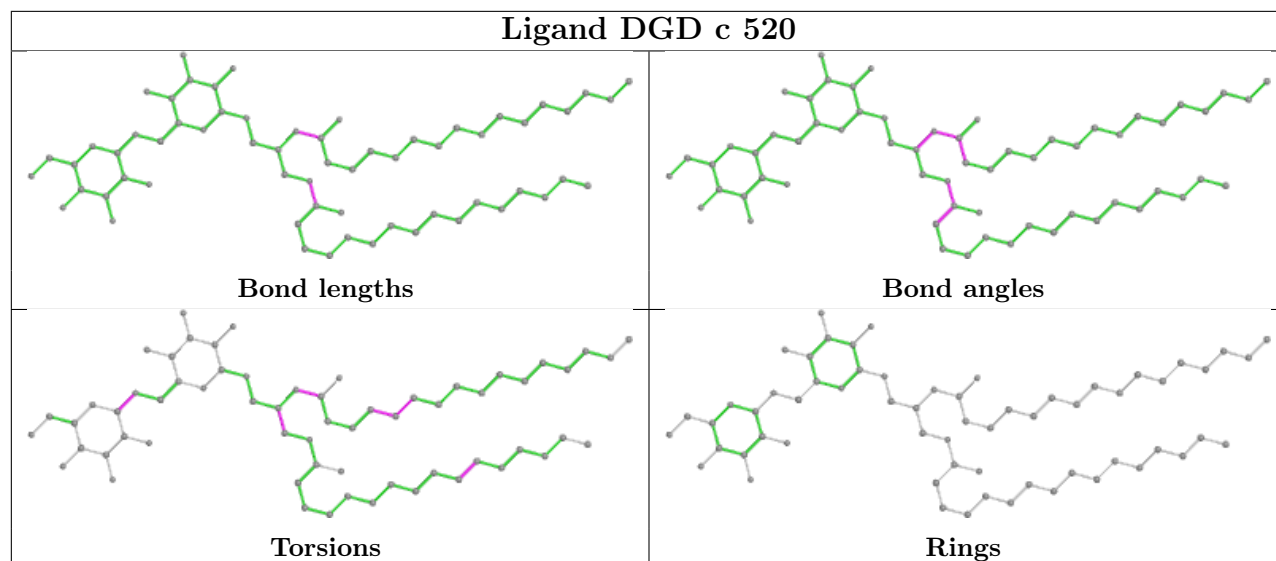


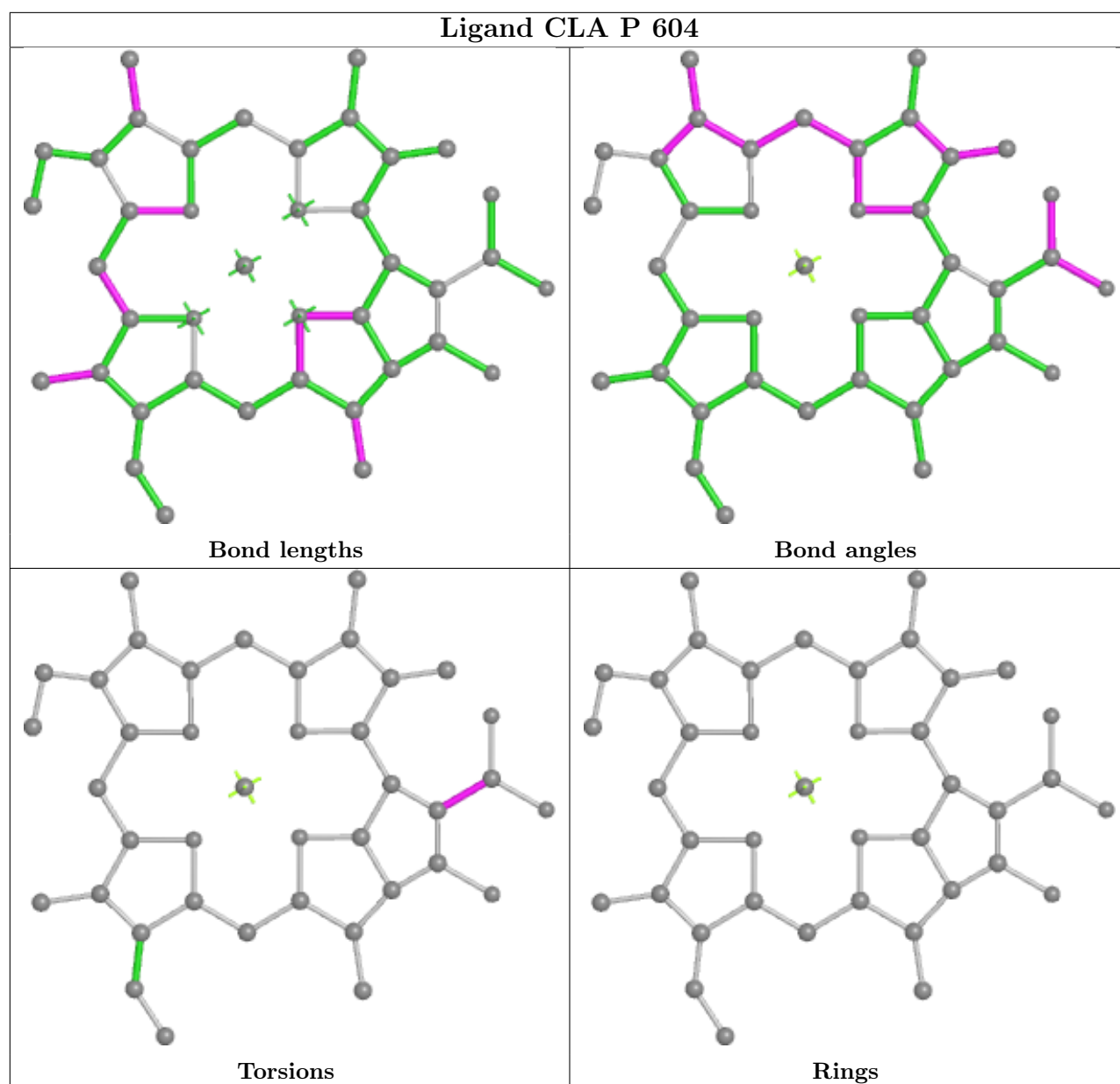
Ligand CLA 7 314

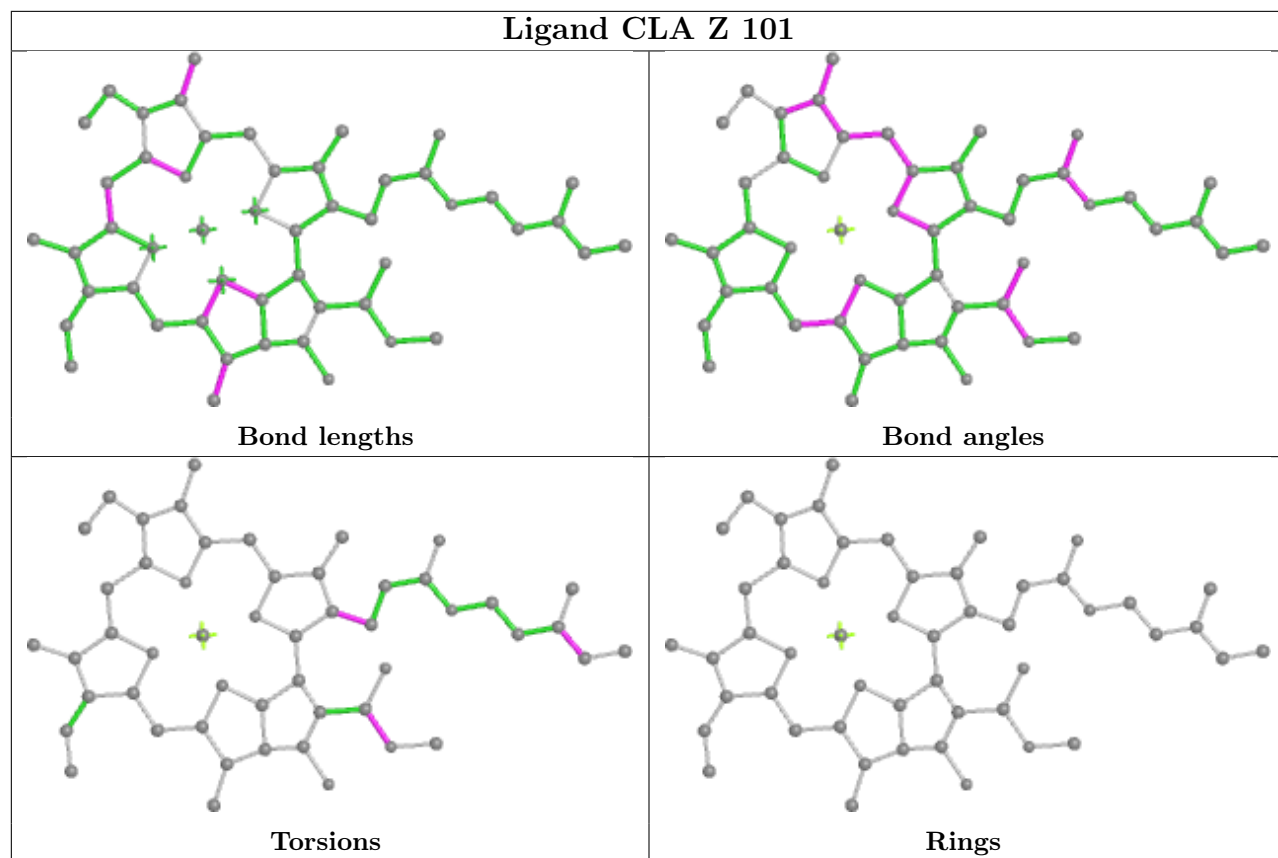


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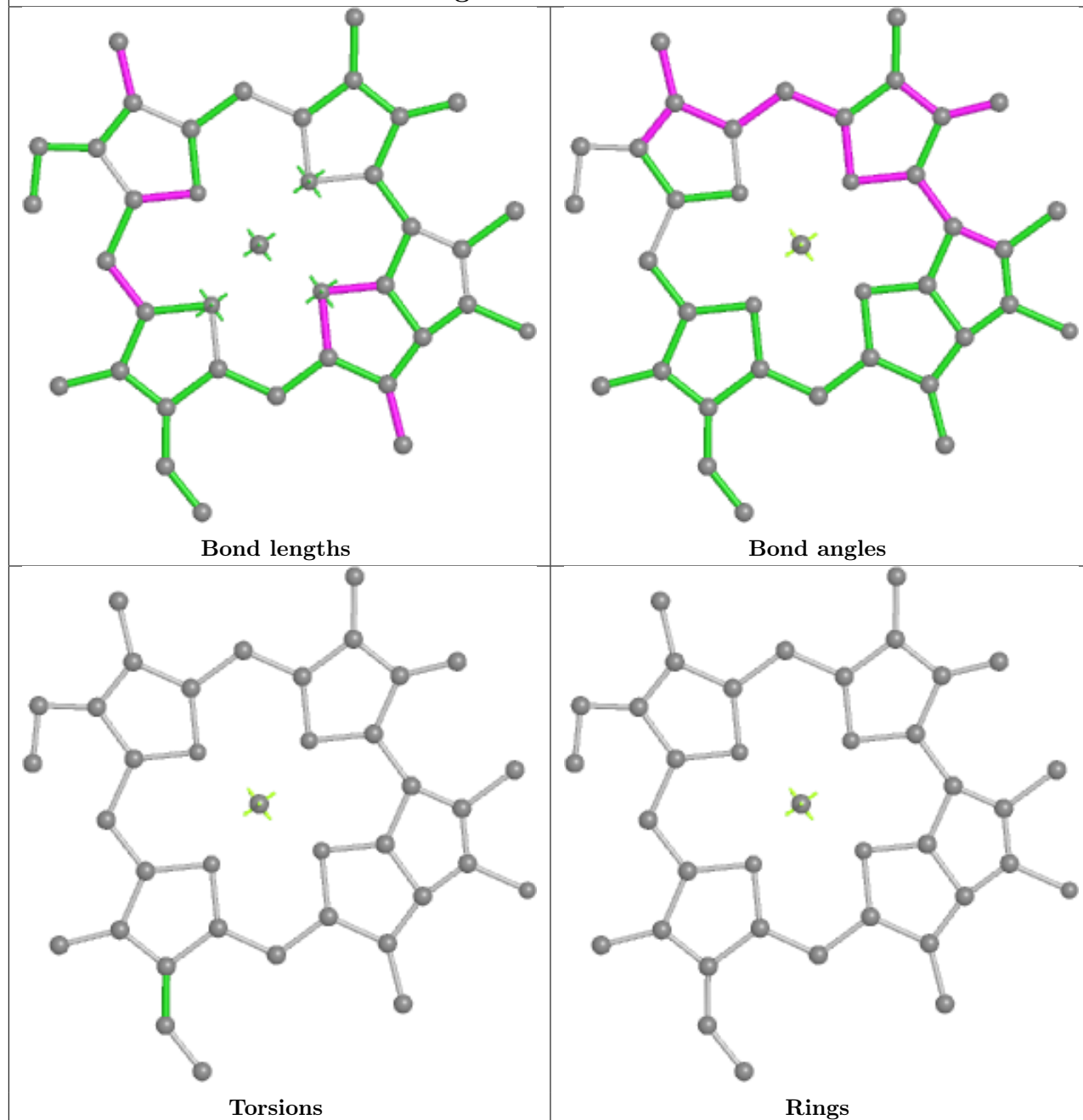




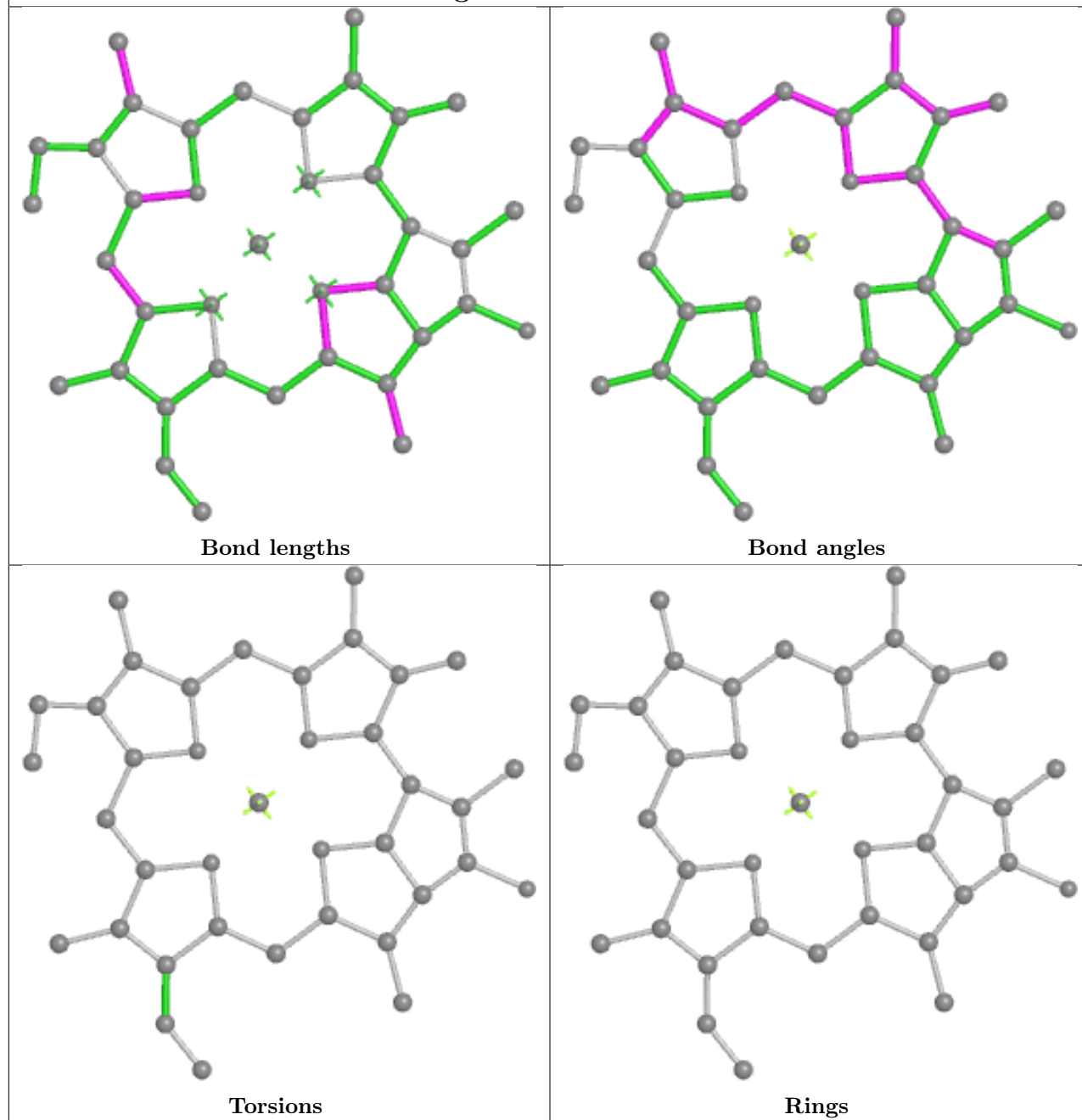


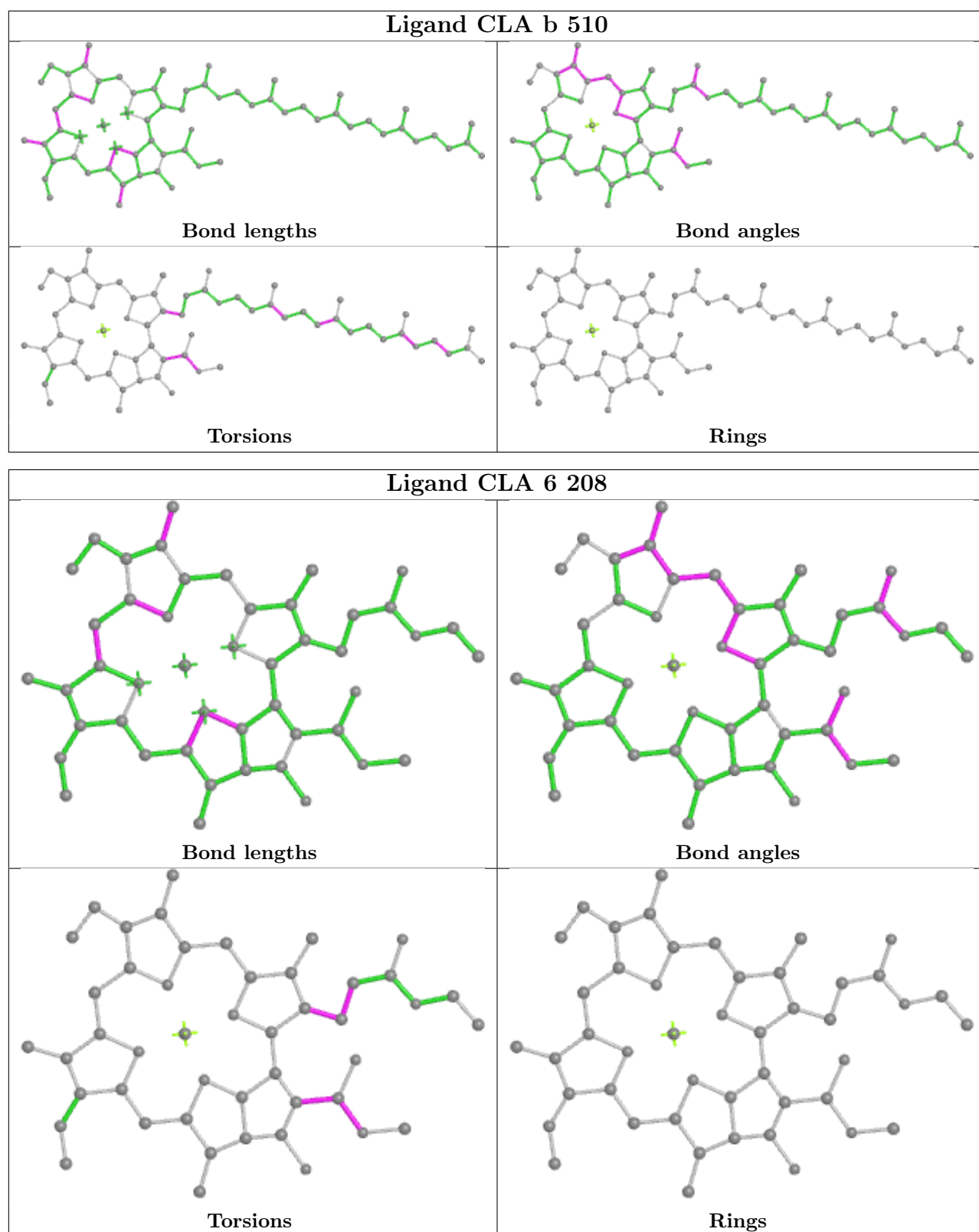


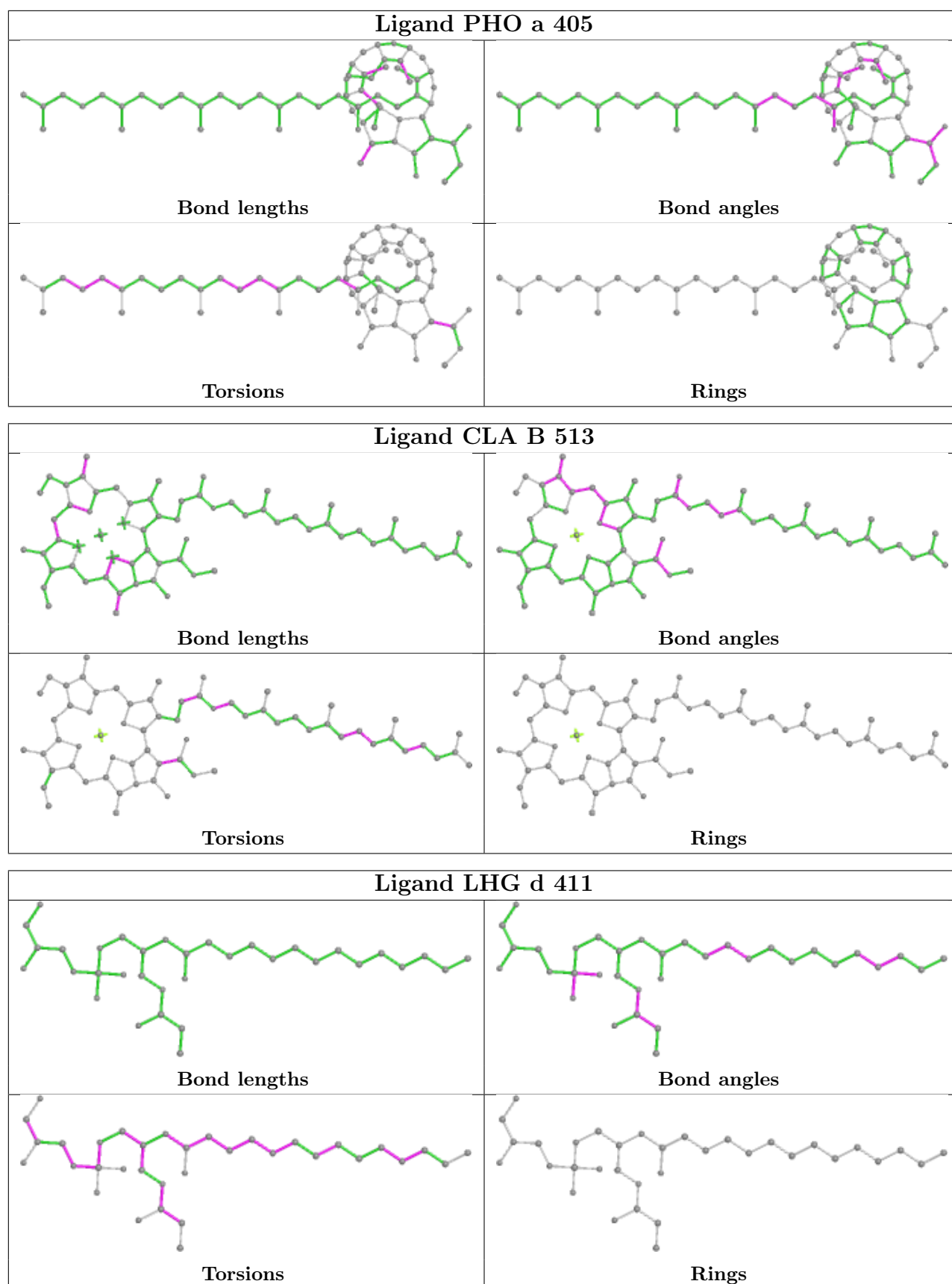
Ligand CLA 5 314

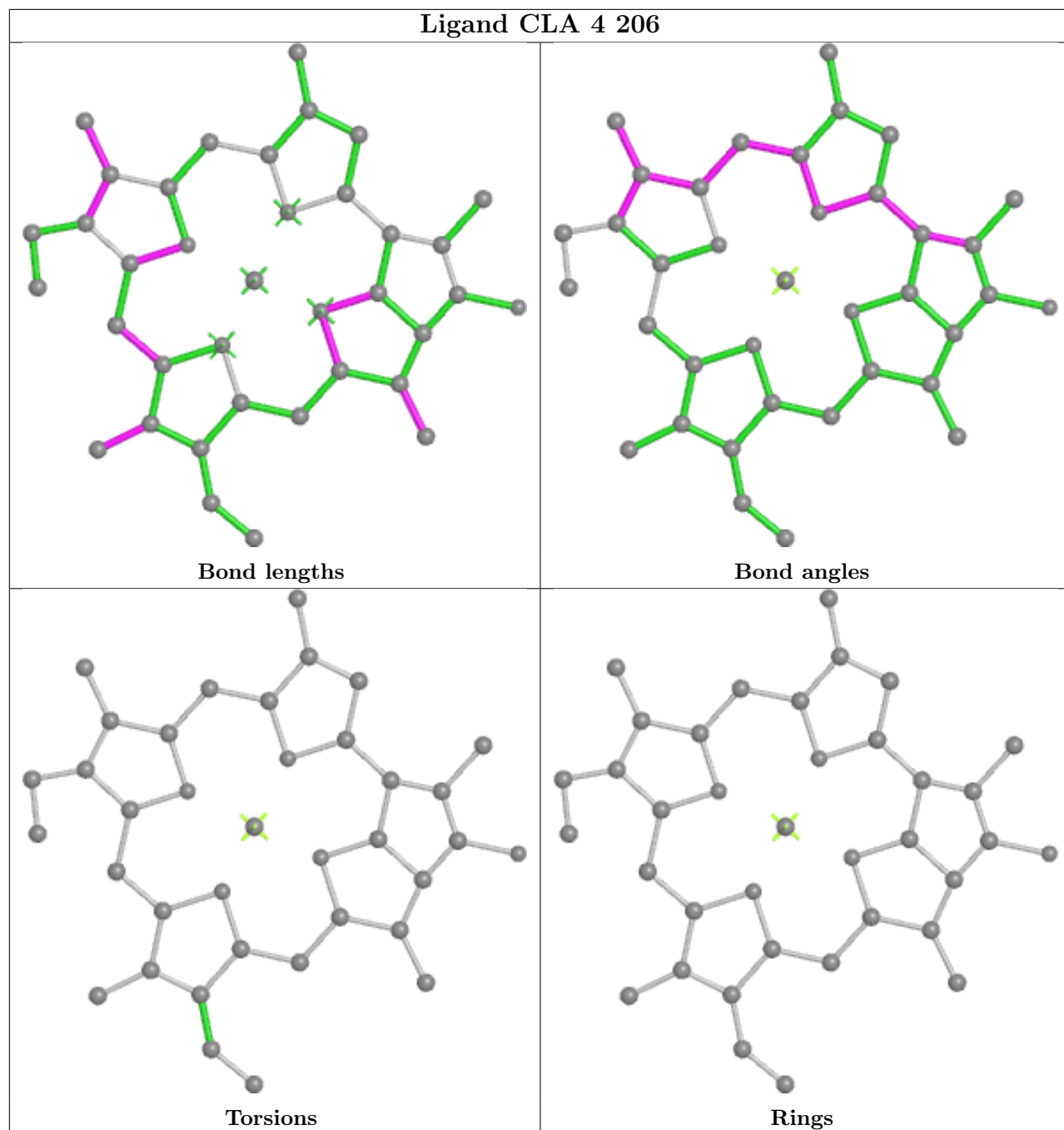


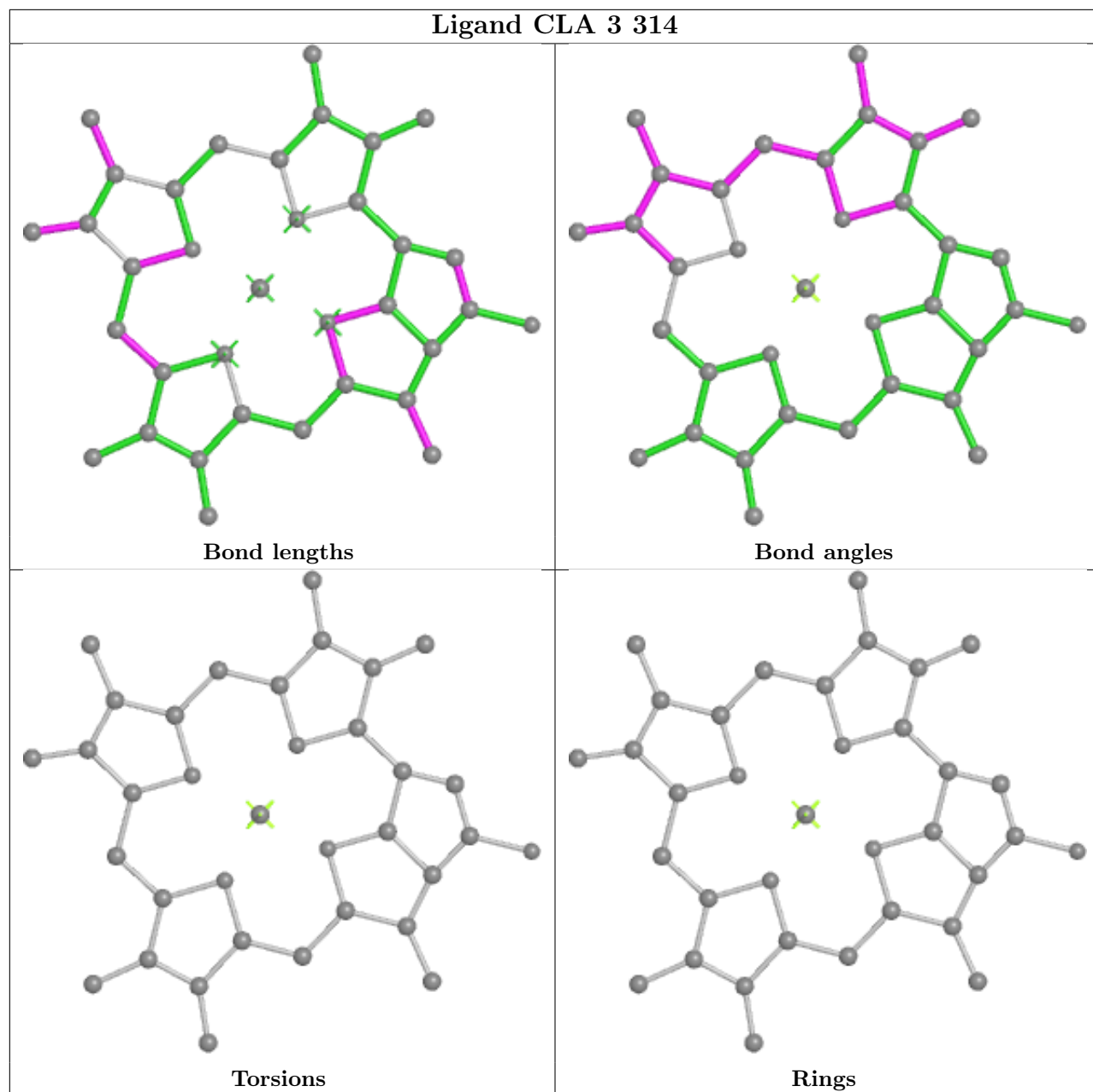
Ligand CLA 6 214

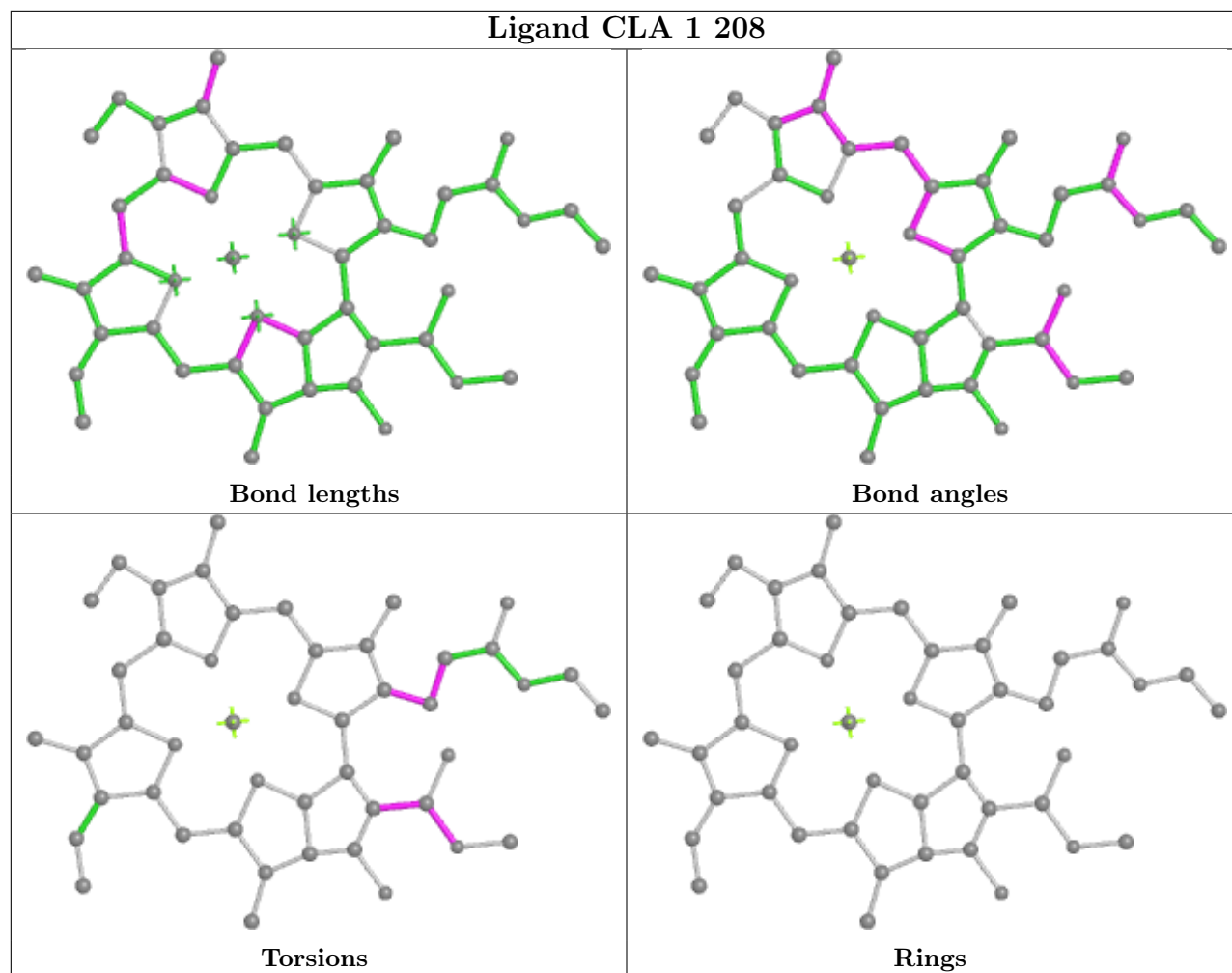


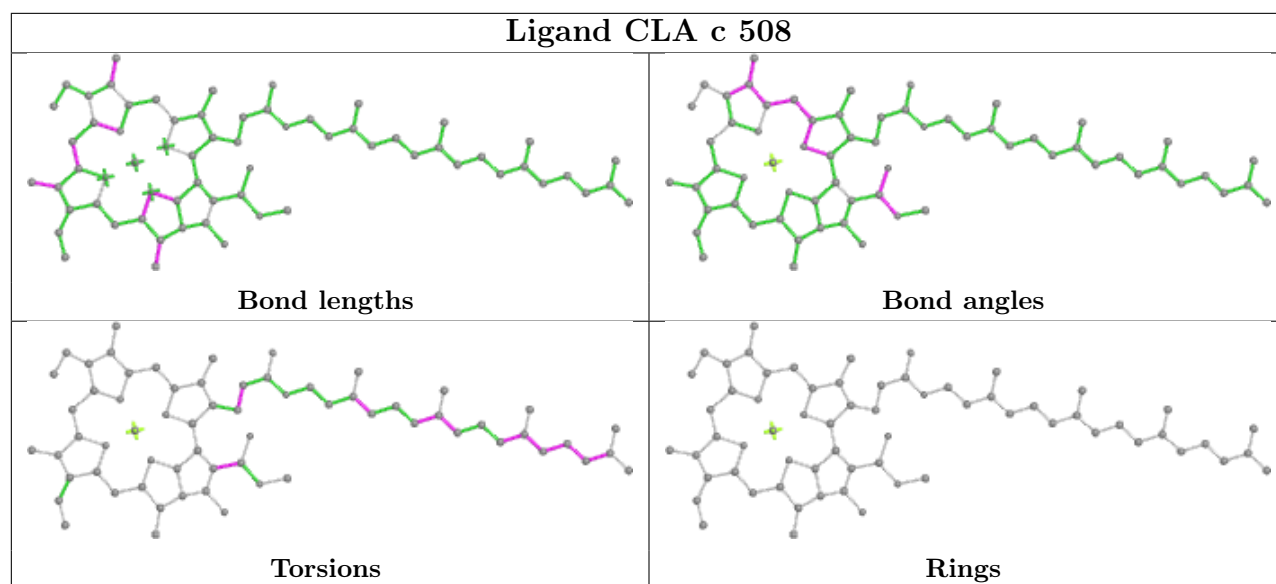
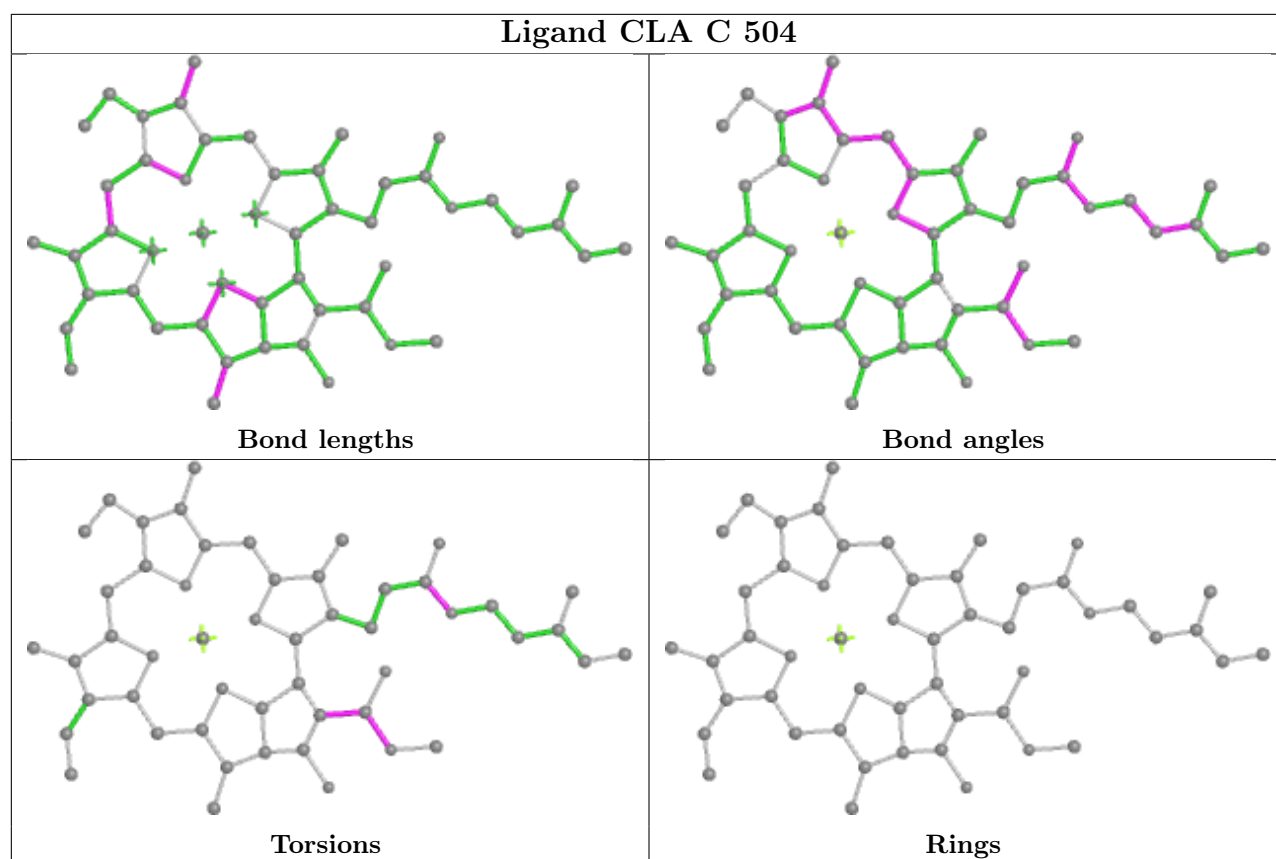


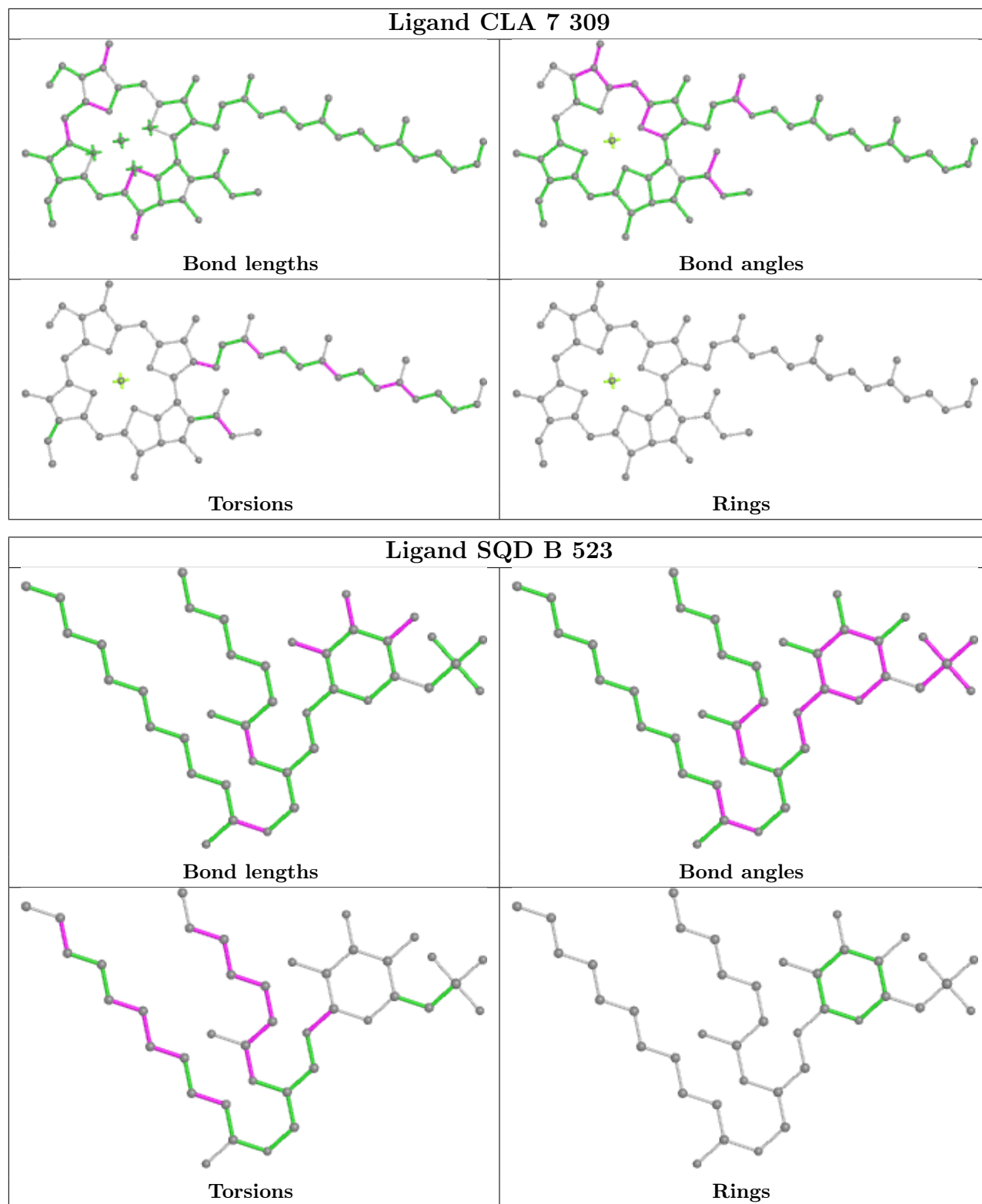


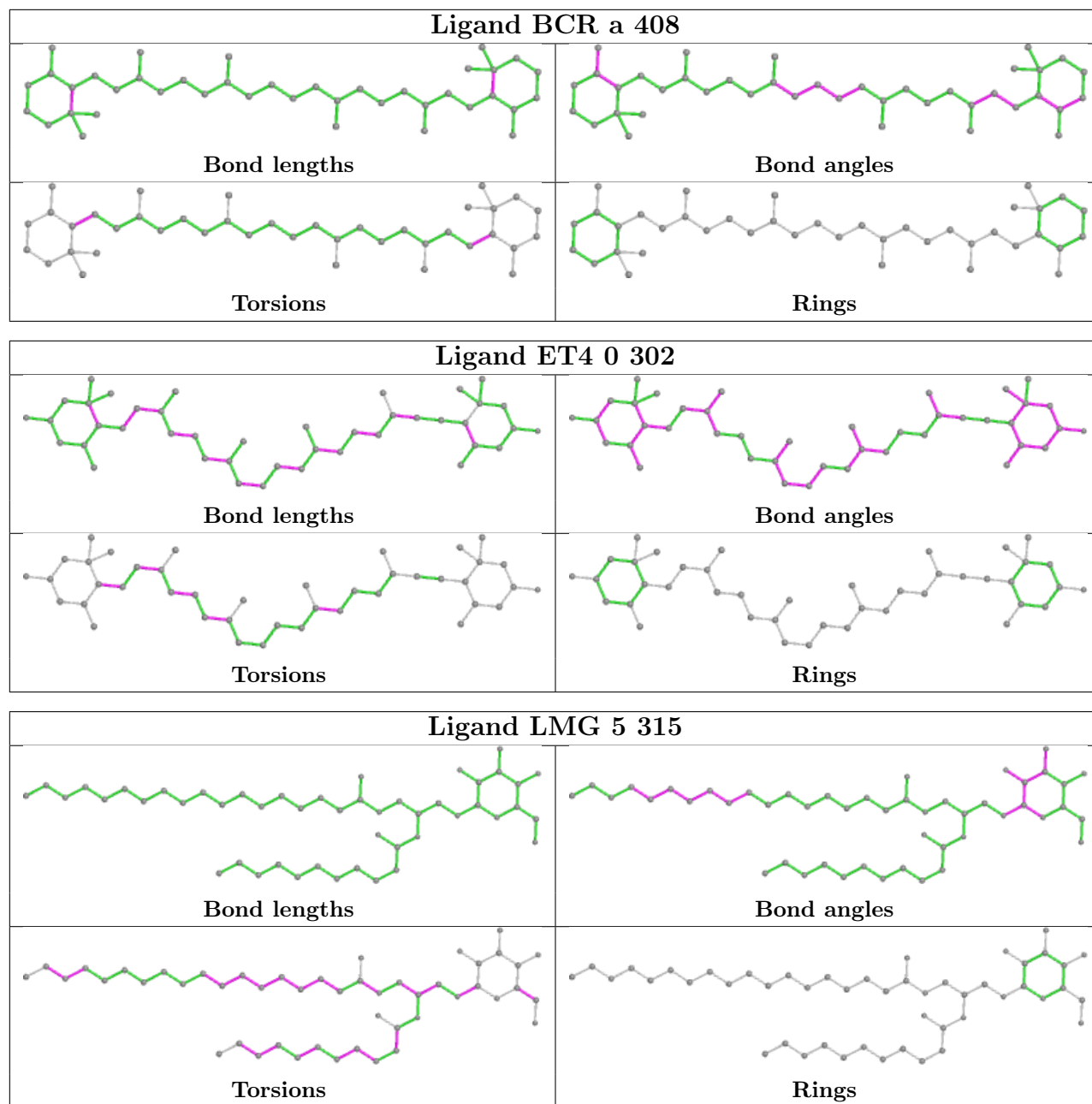


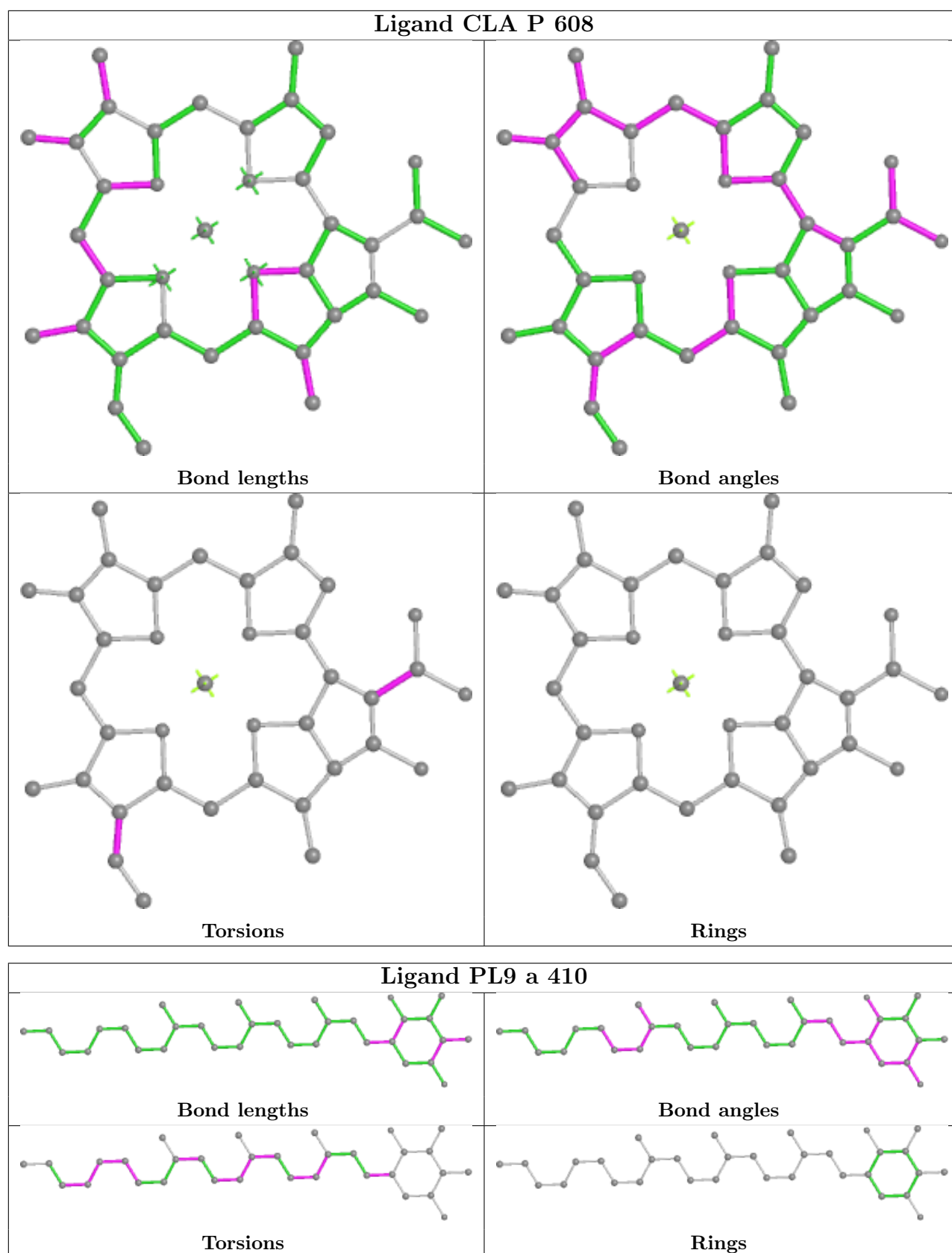


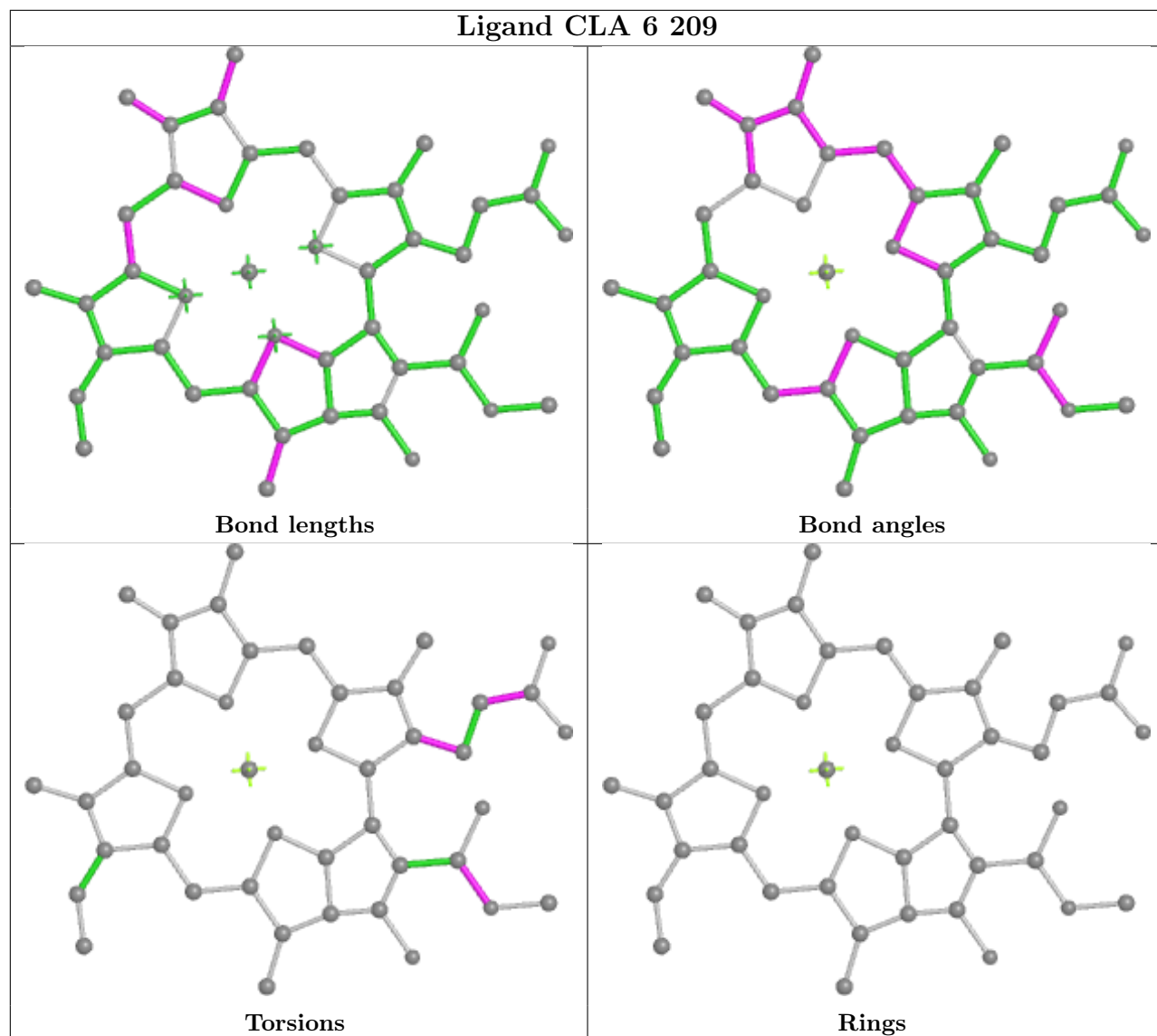


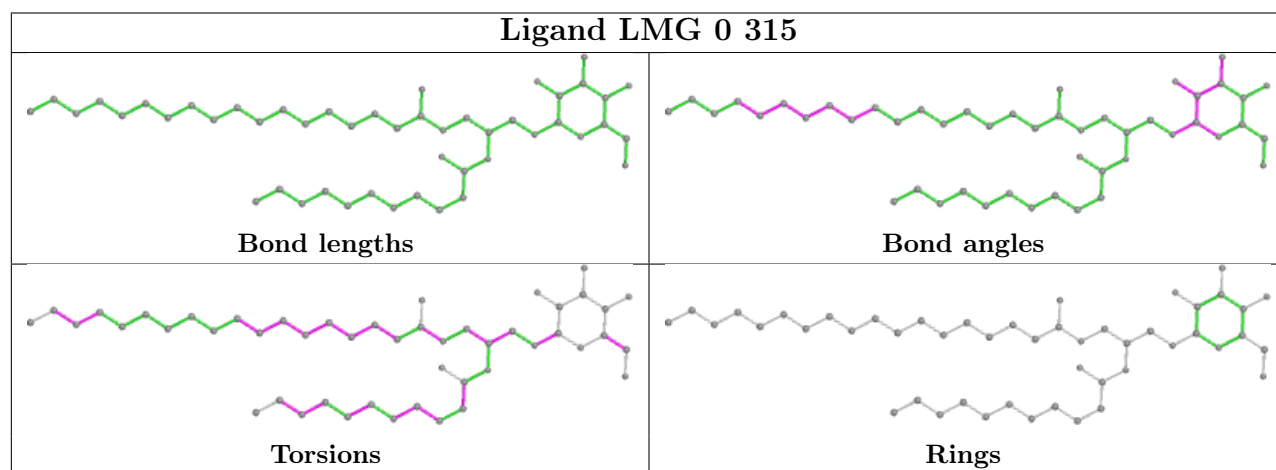
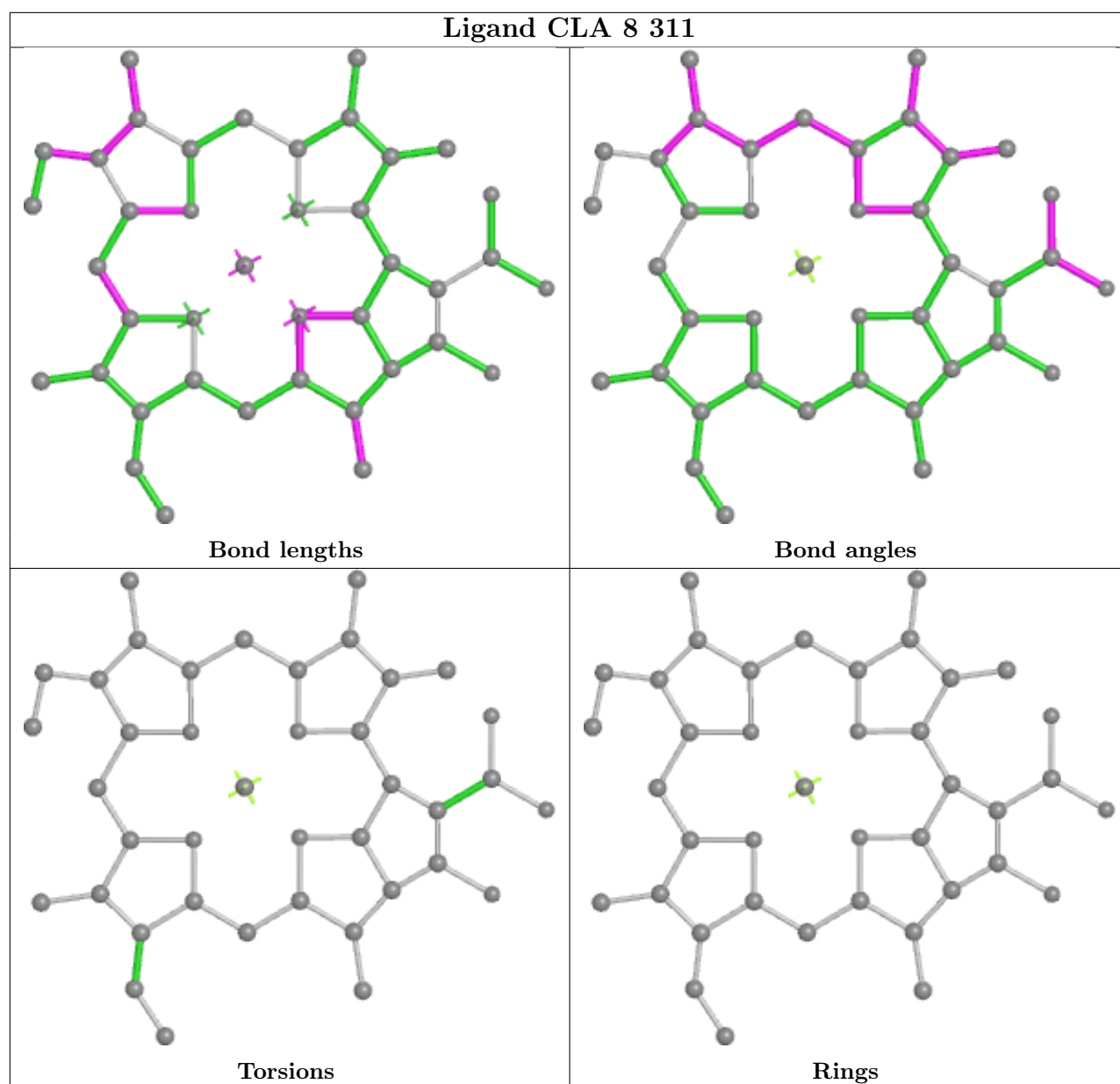


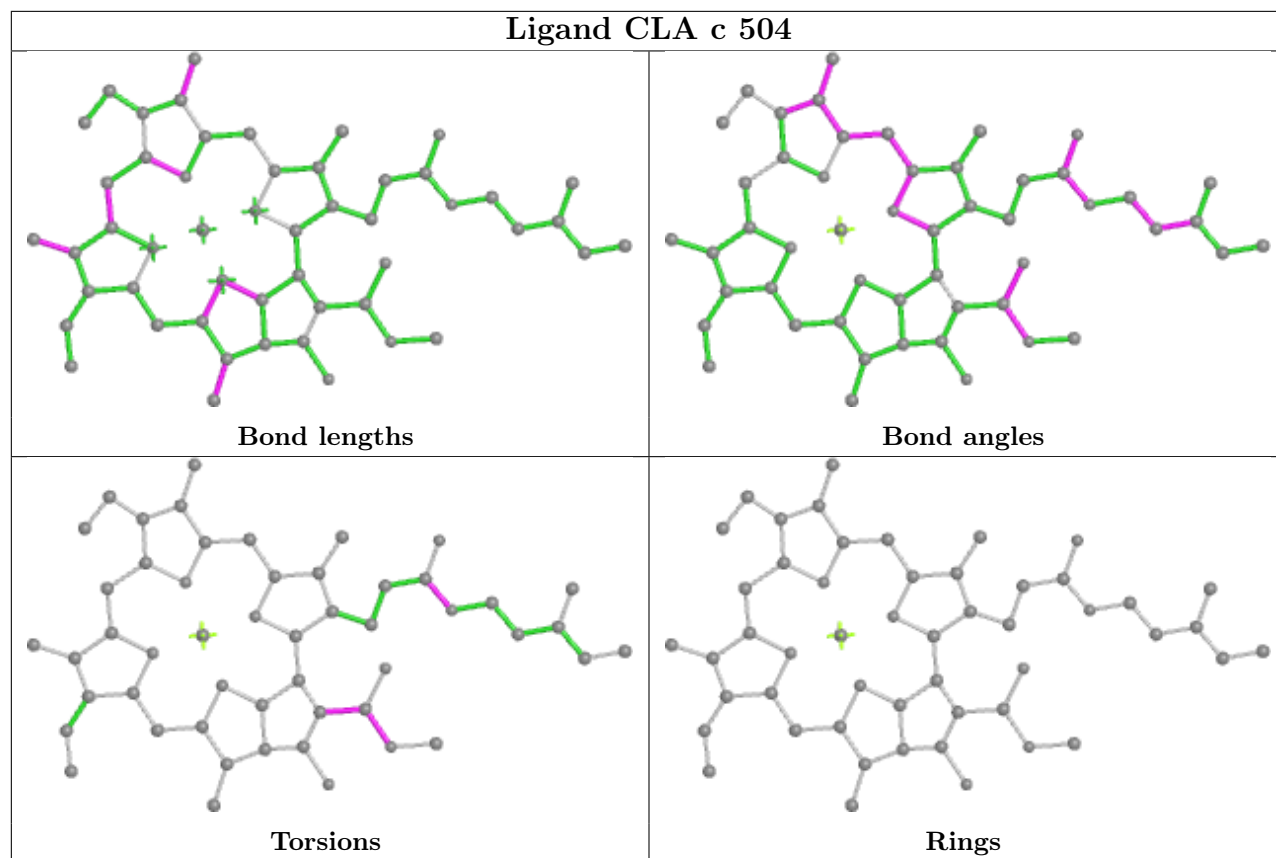


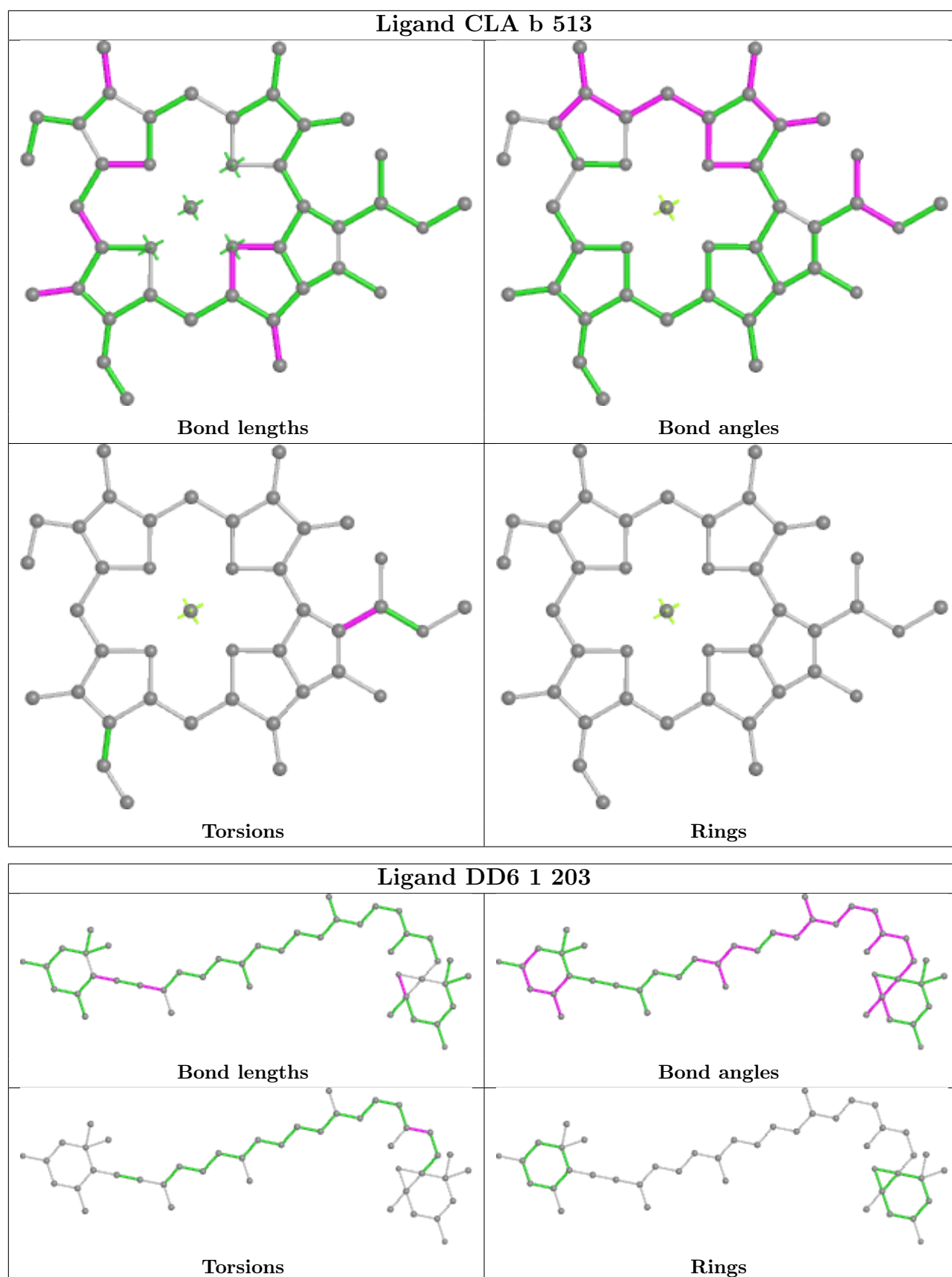


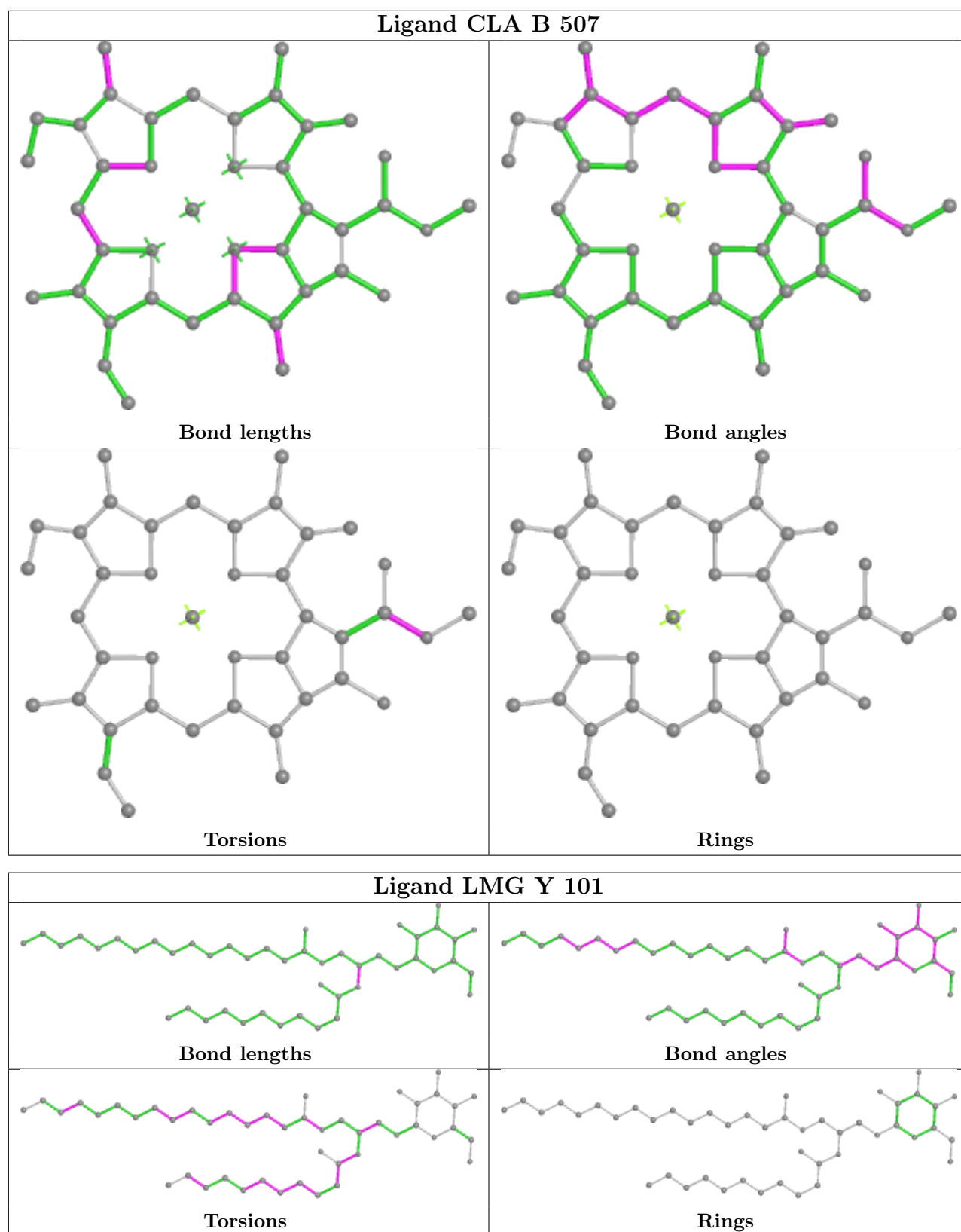


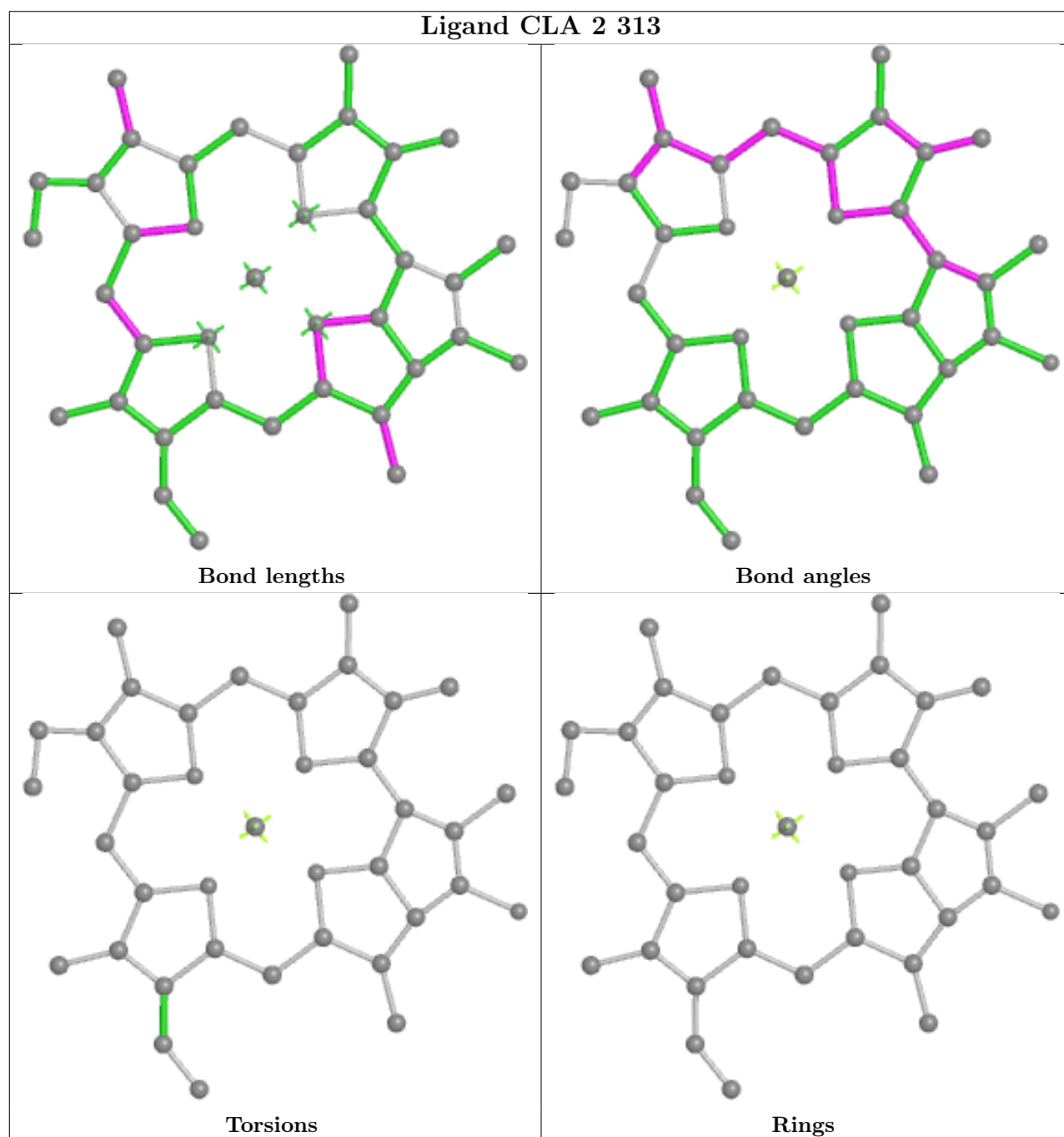
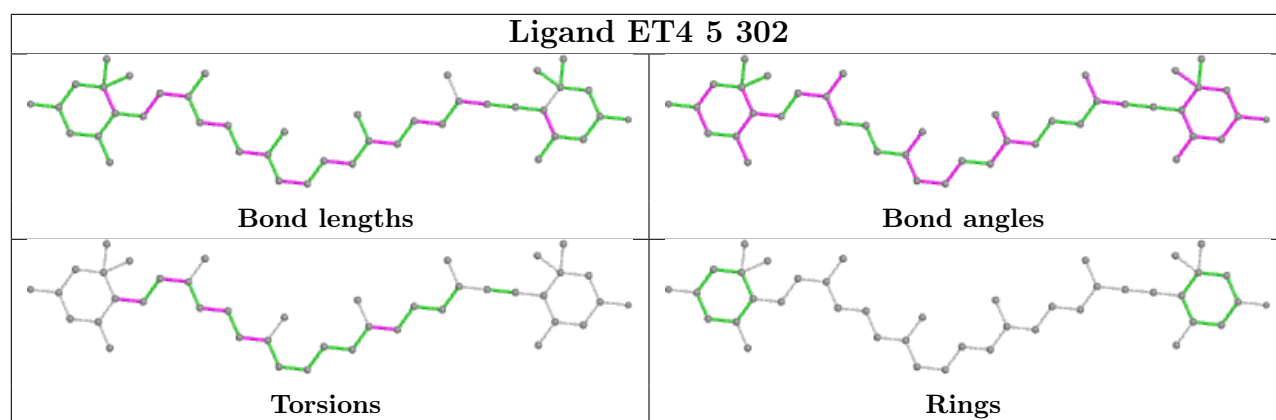


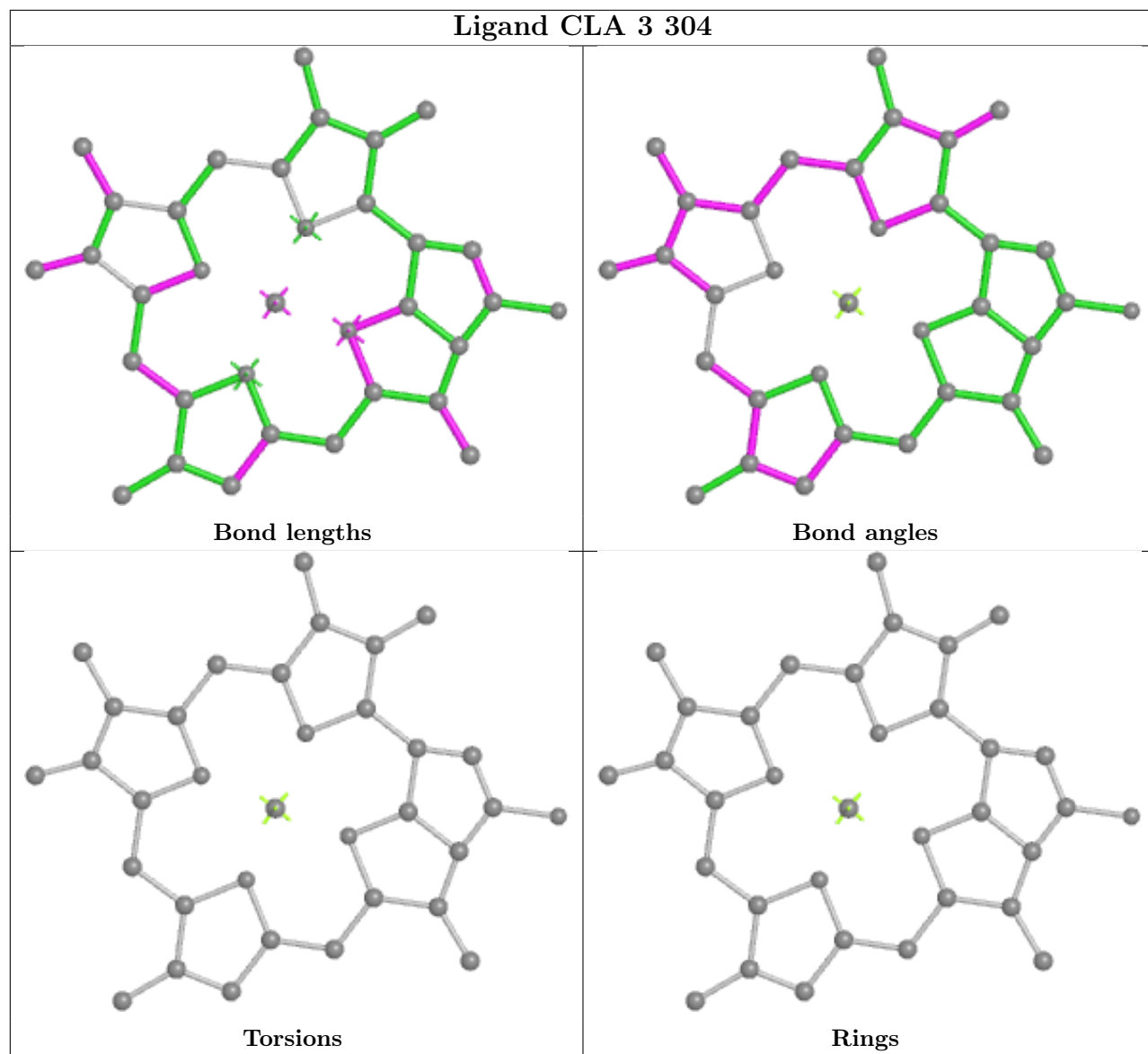


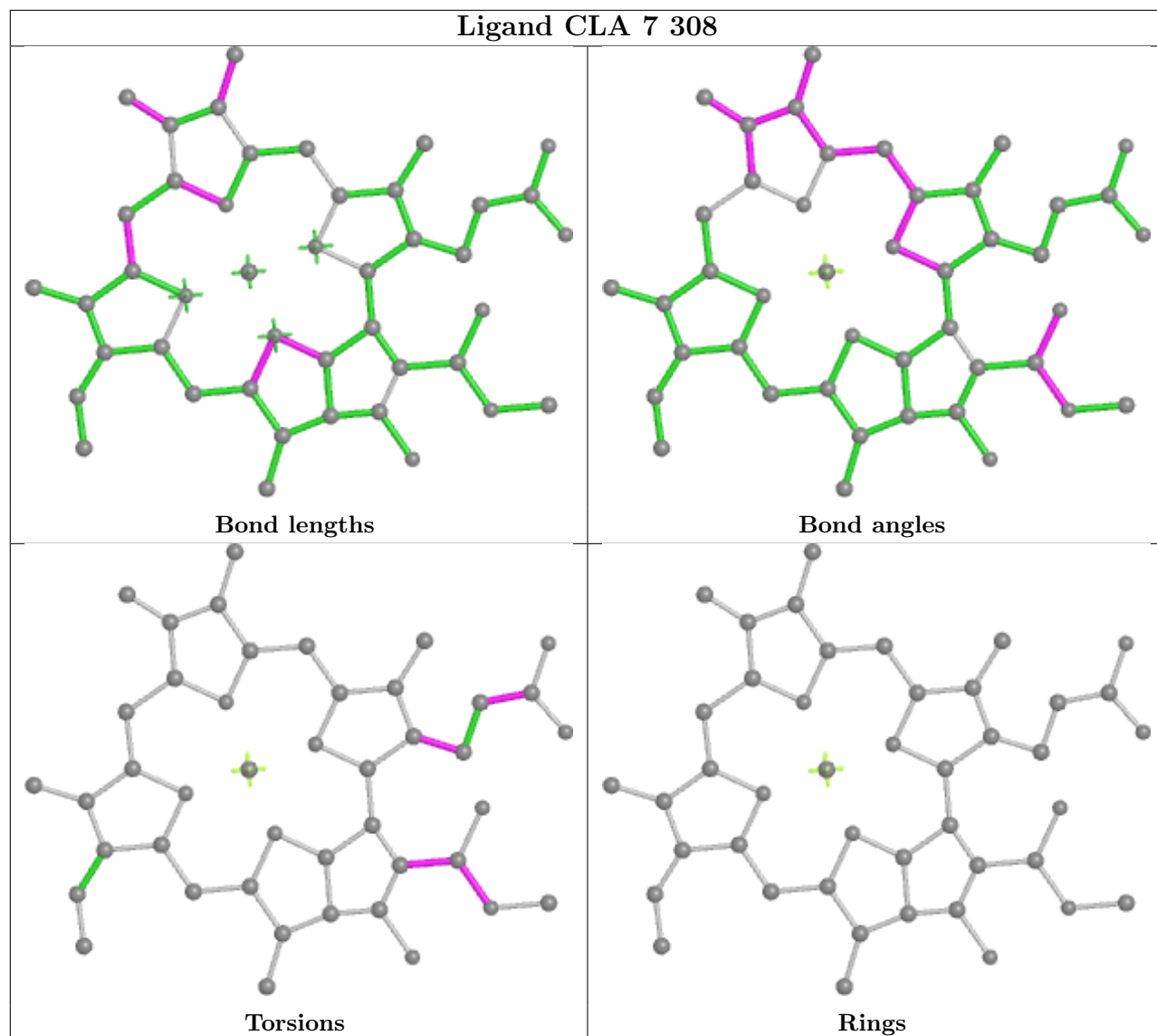


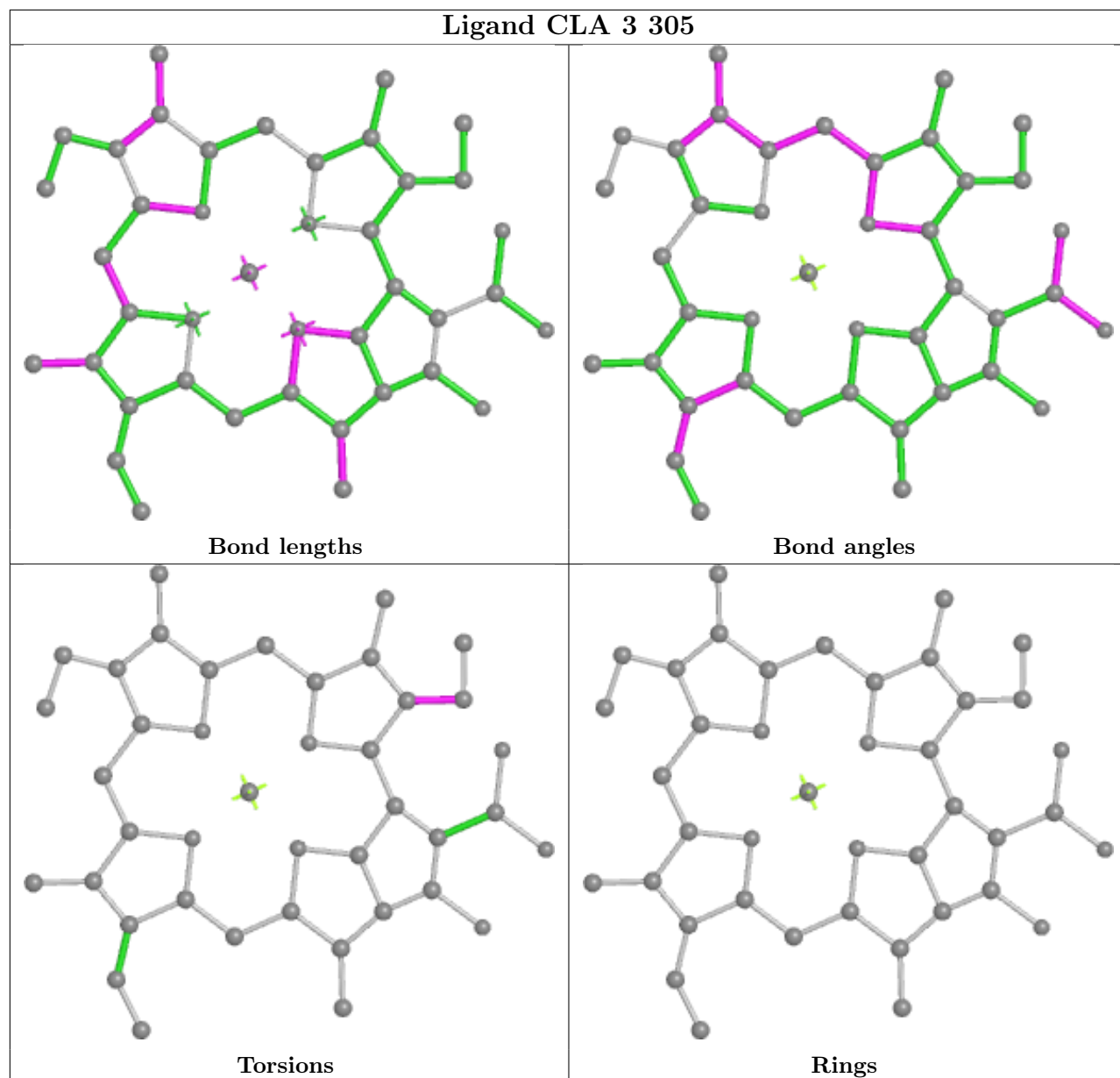


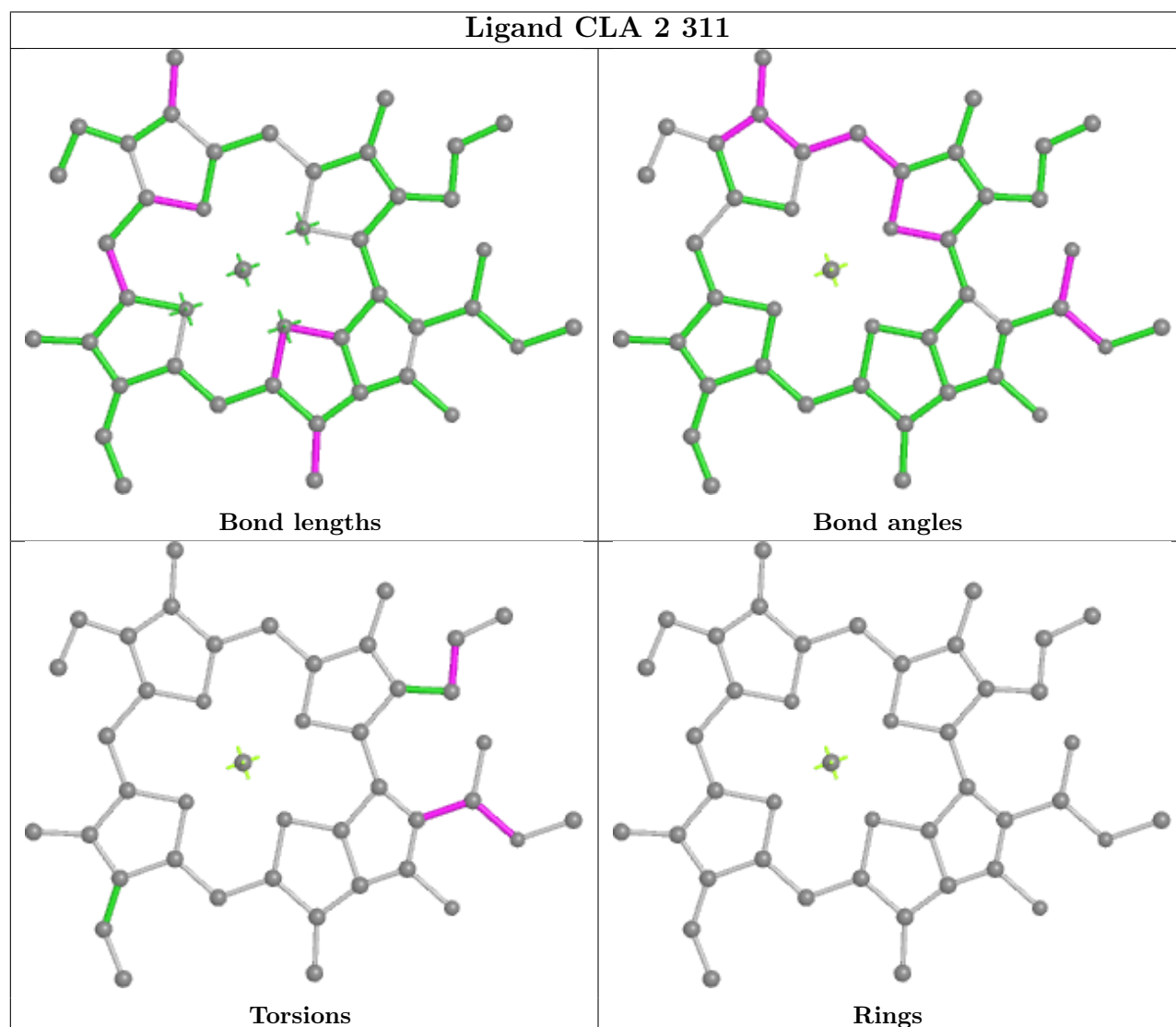
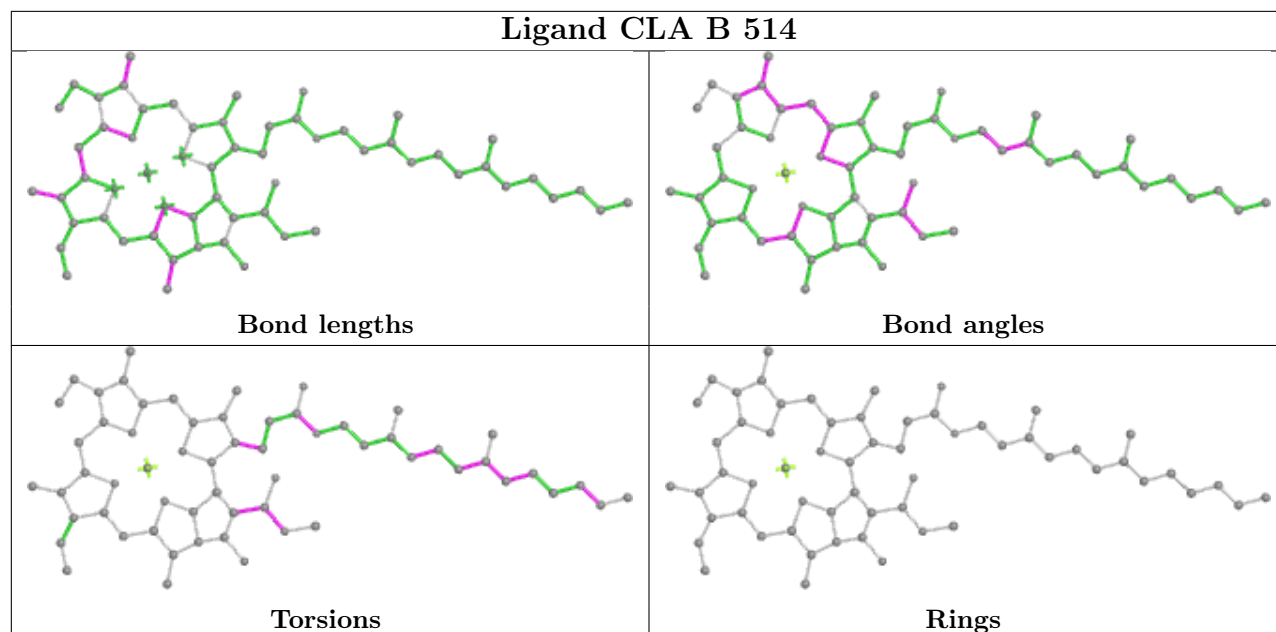


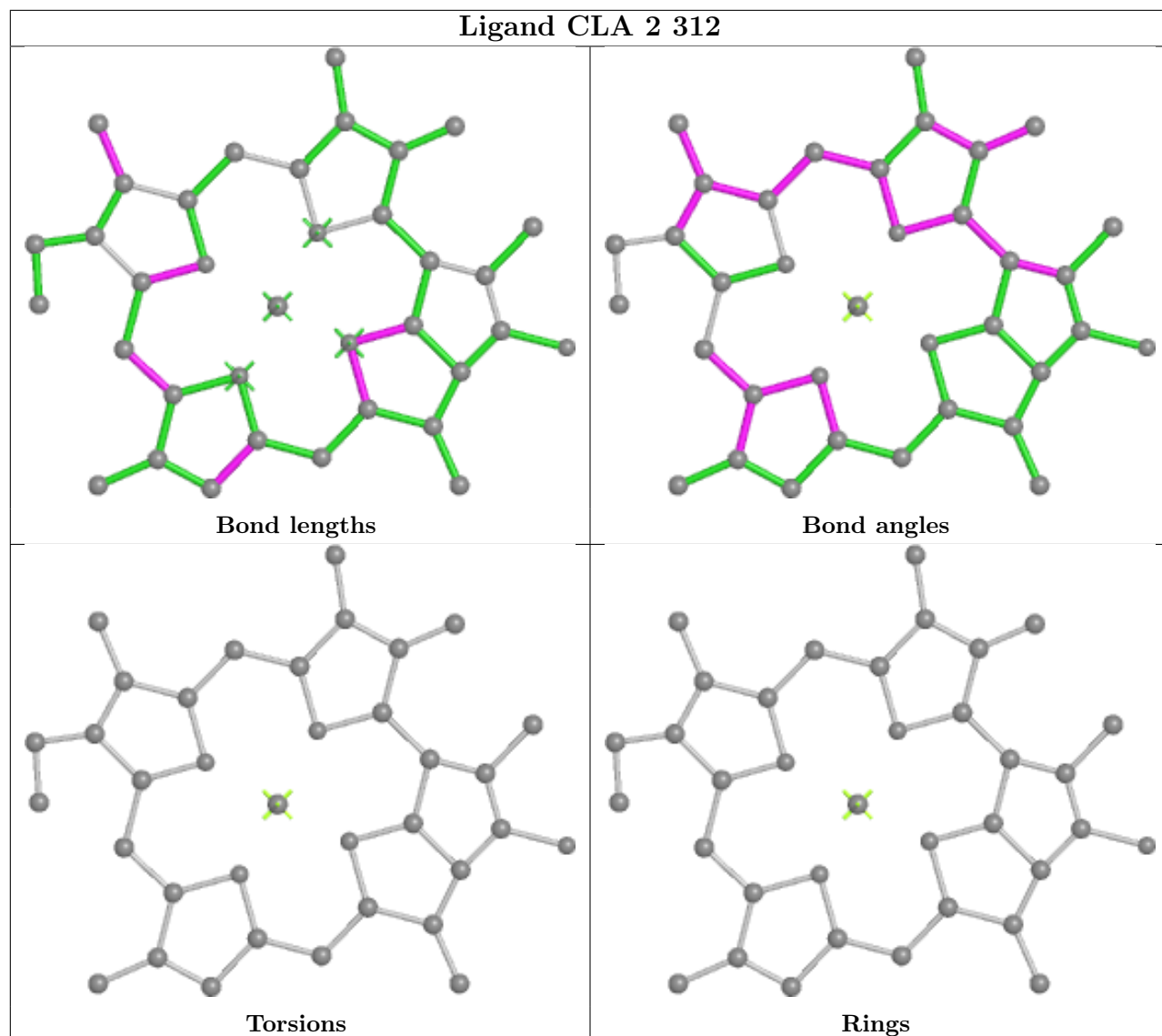


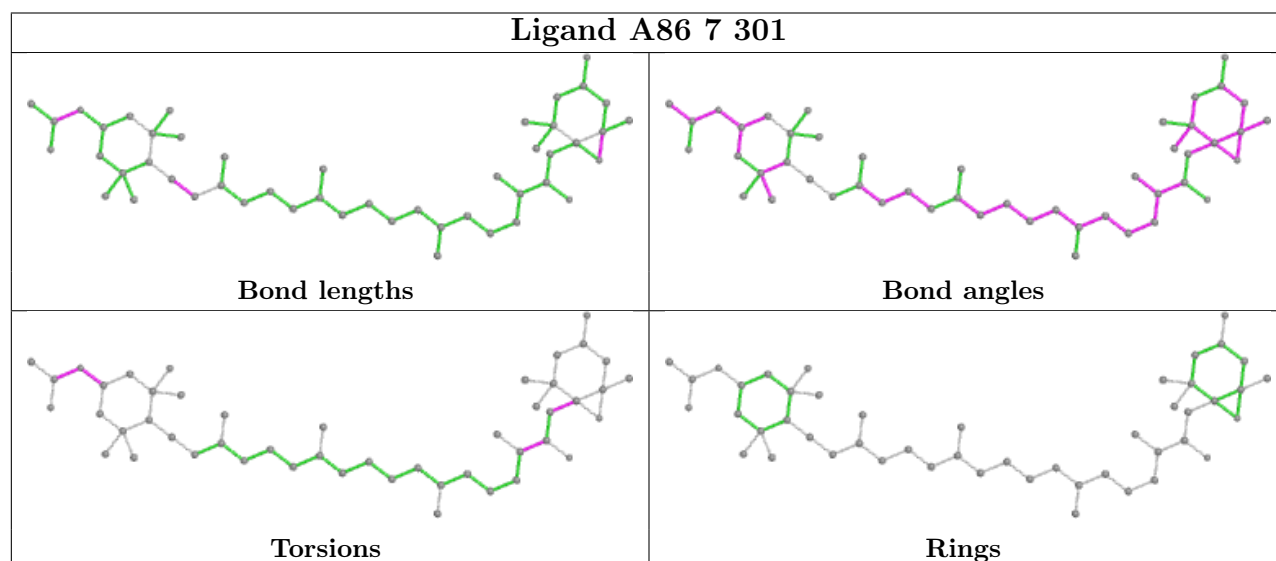
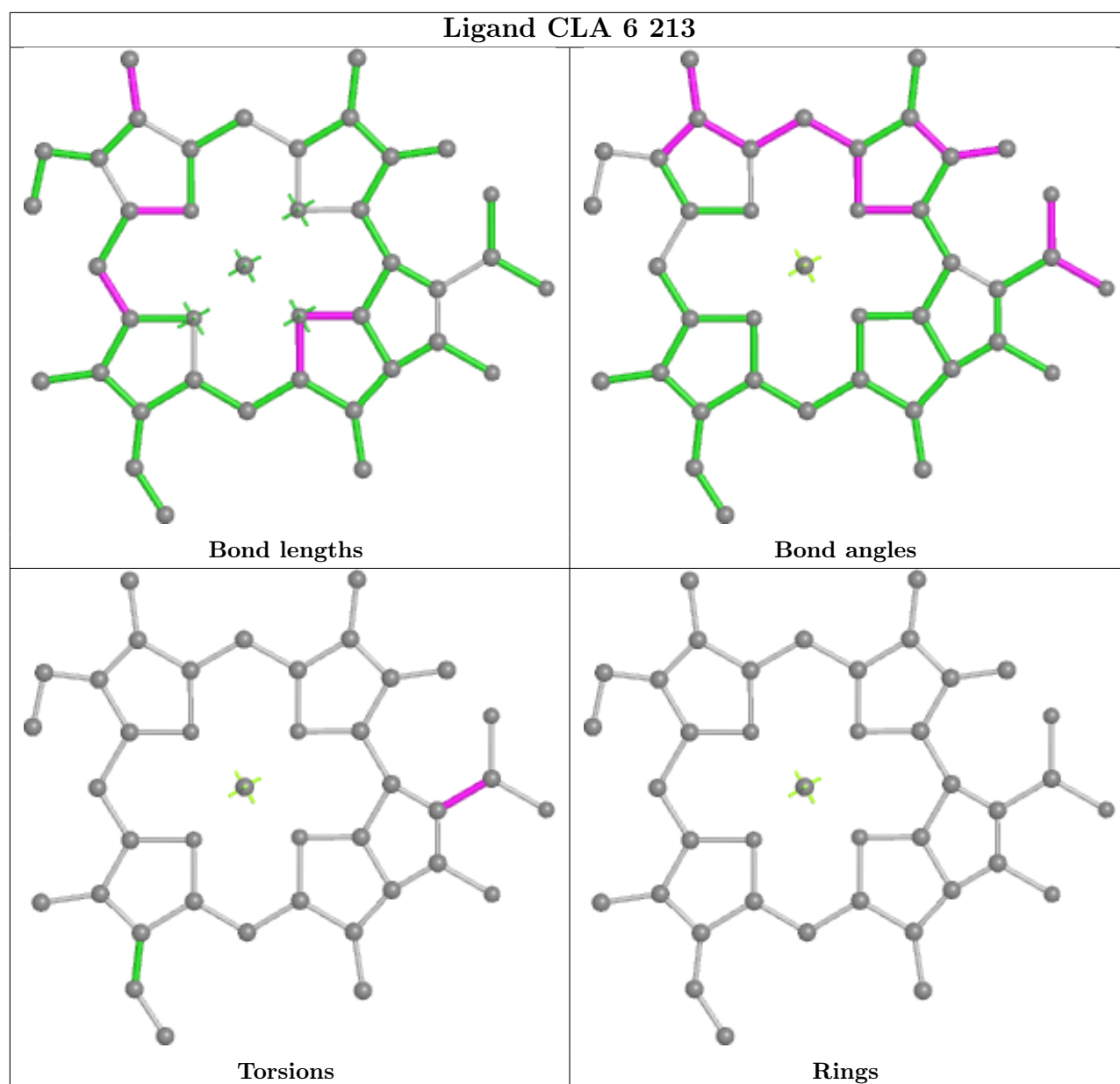


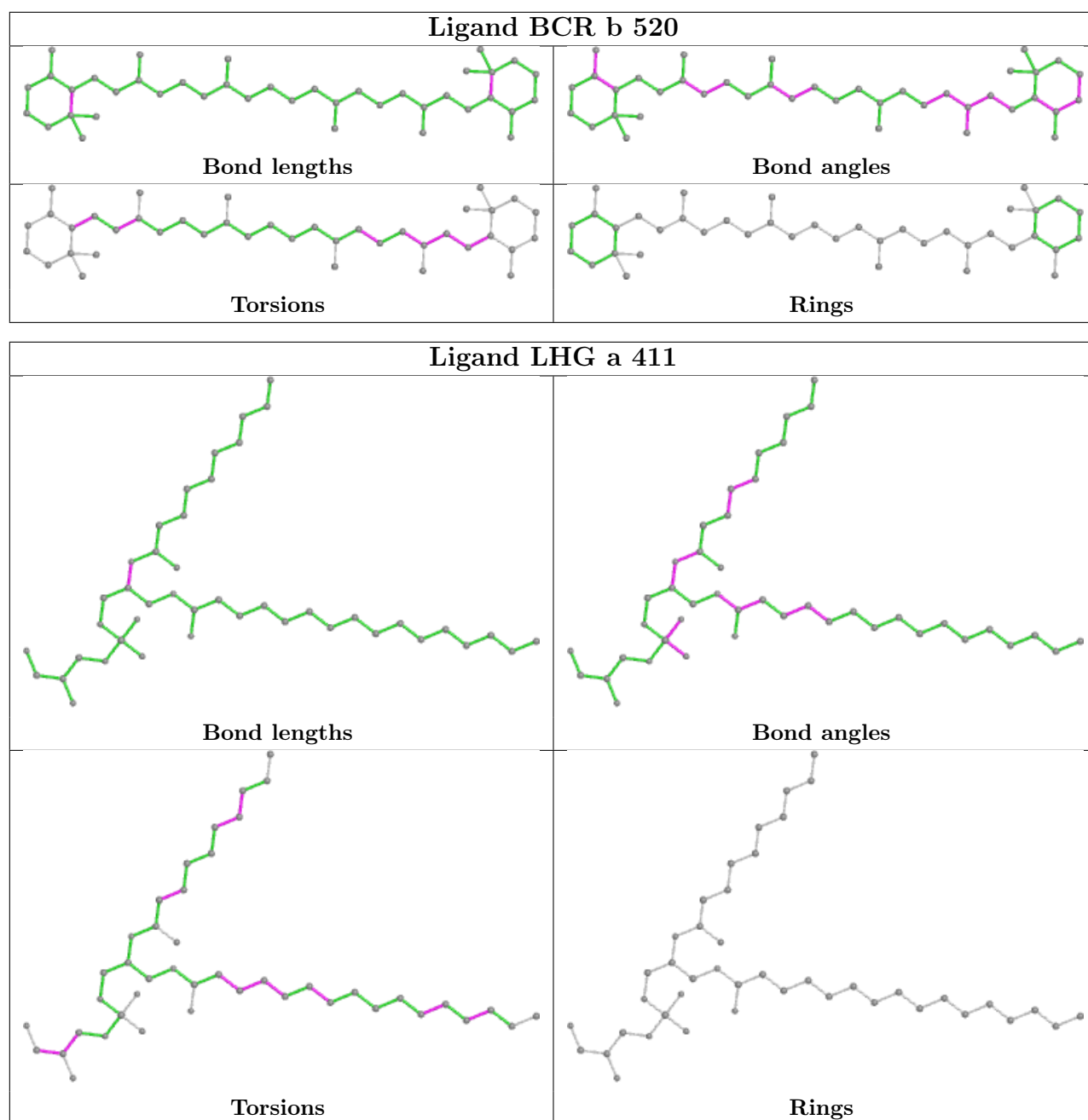


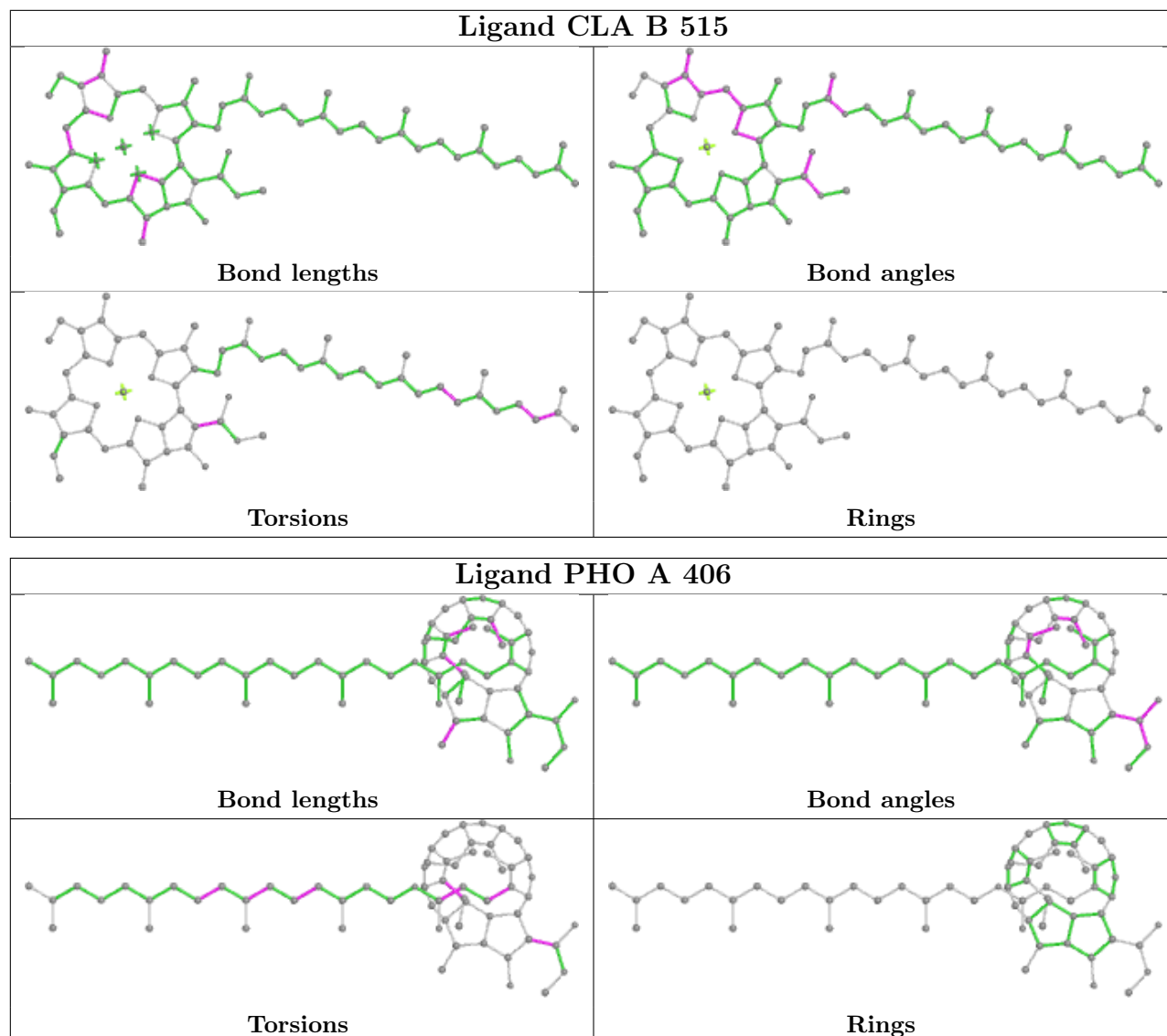


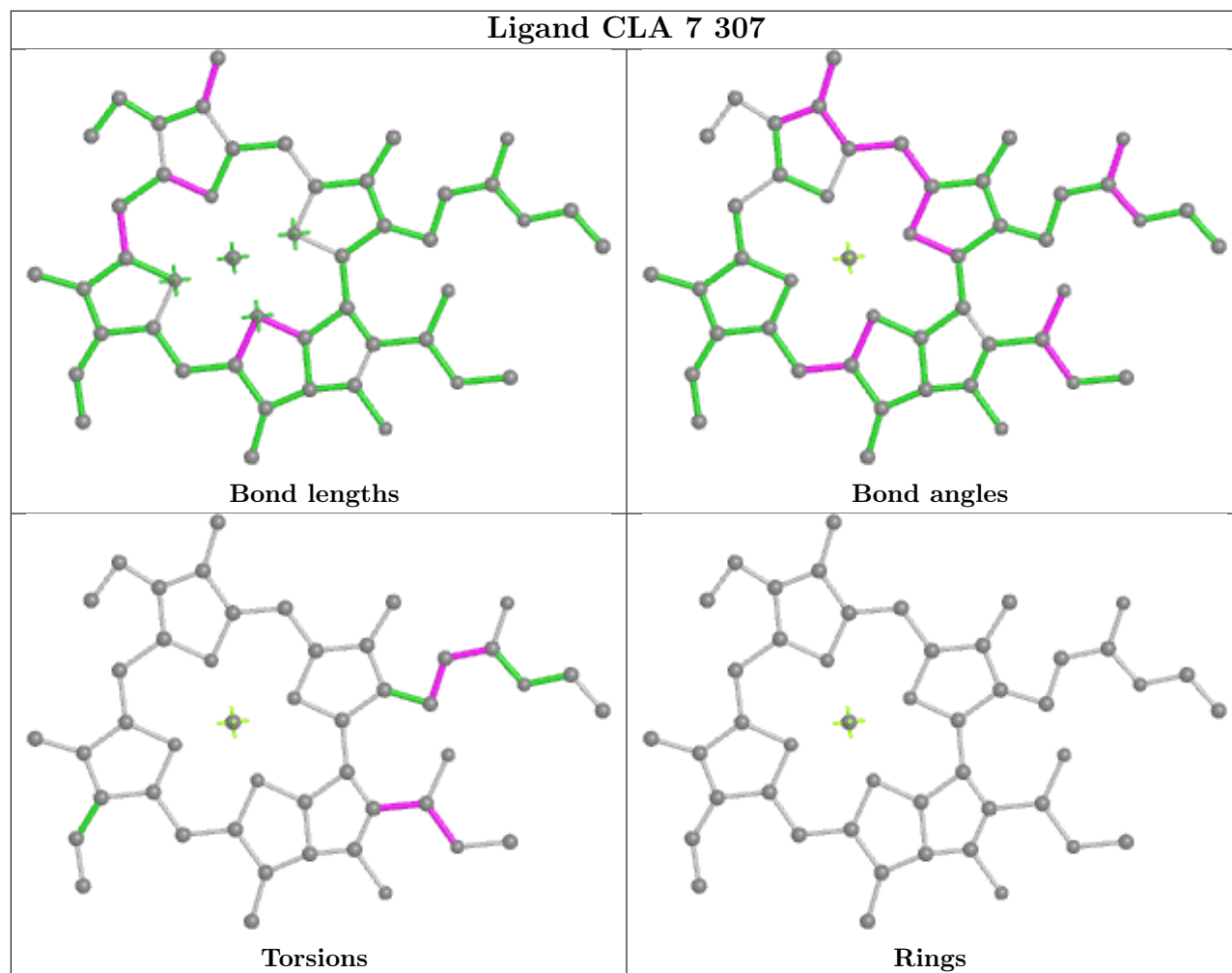


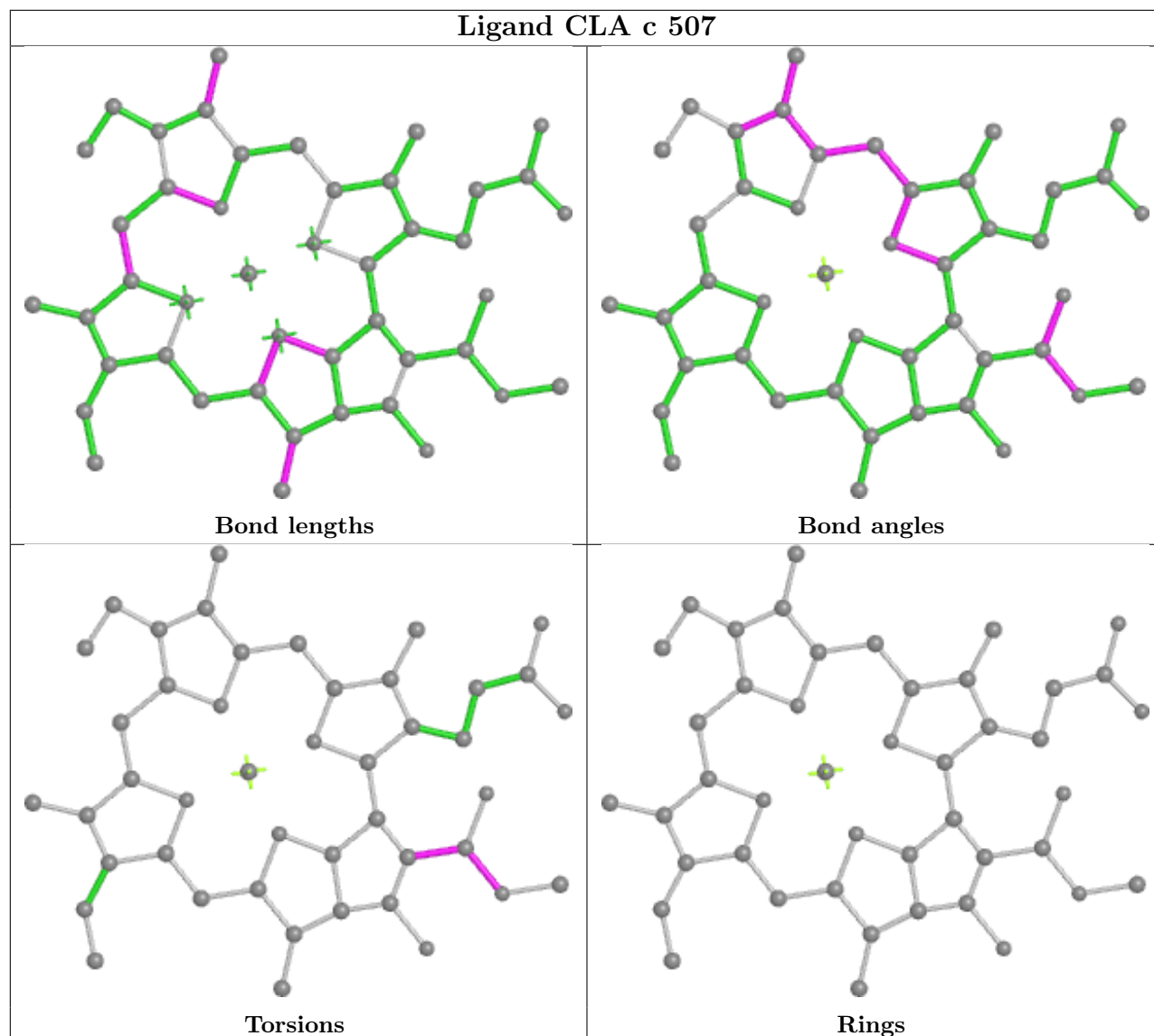


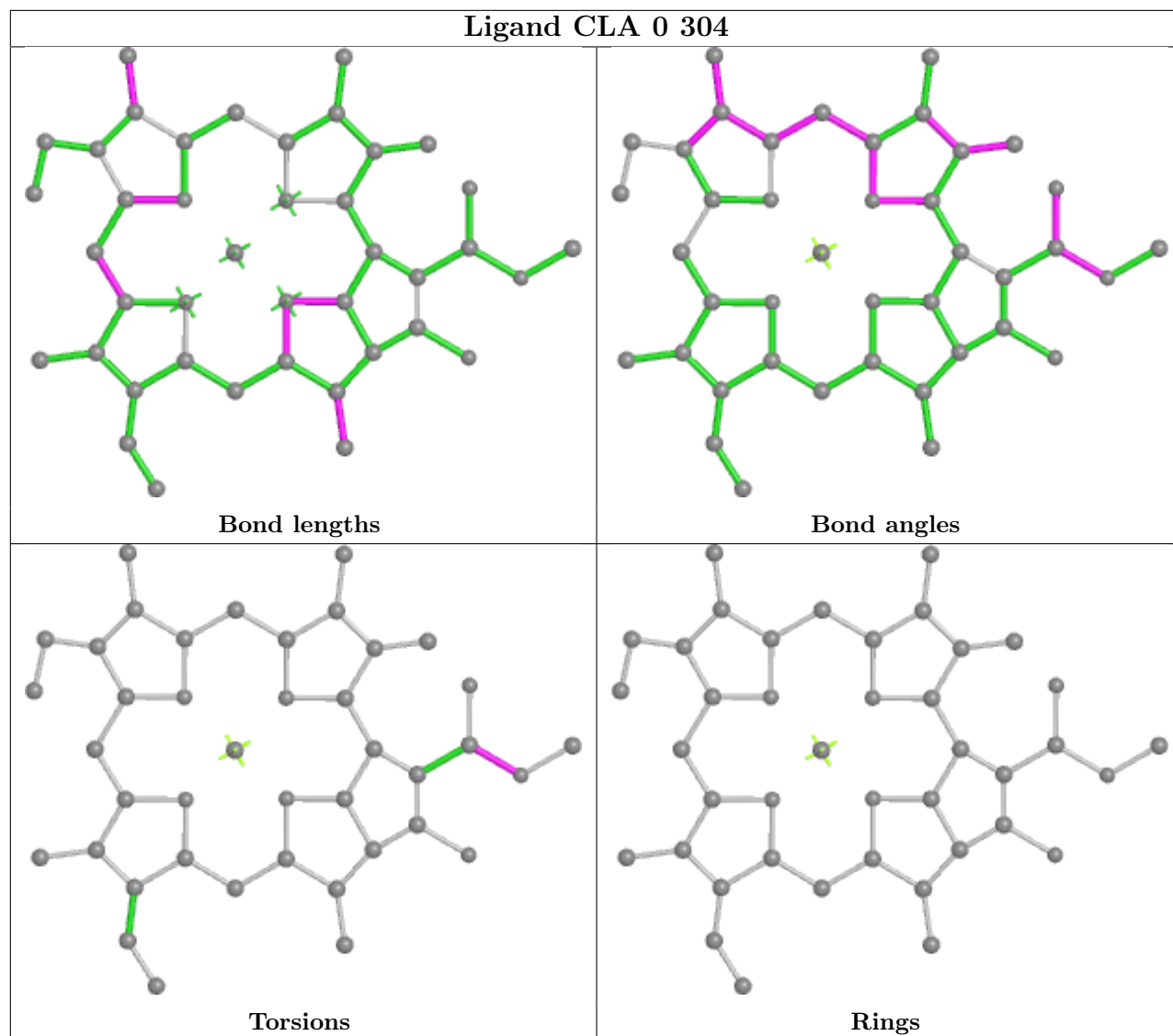


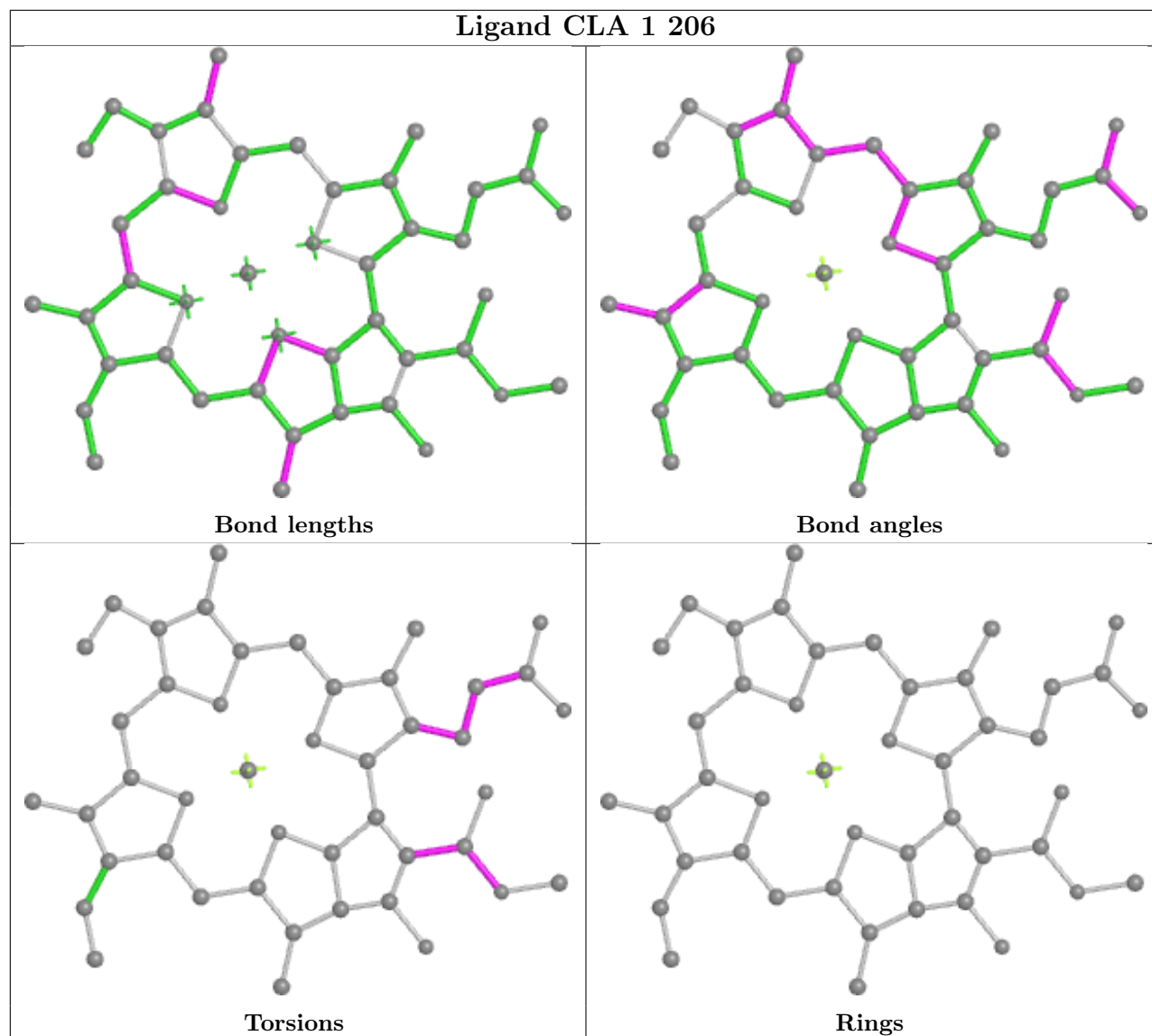


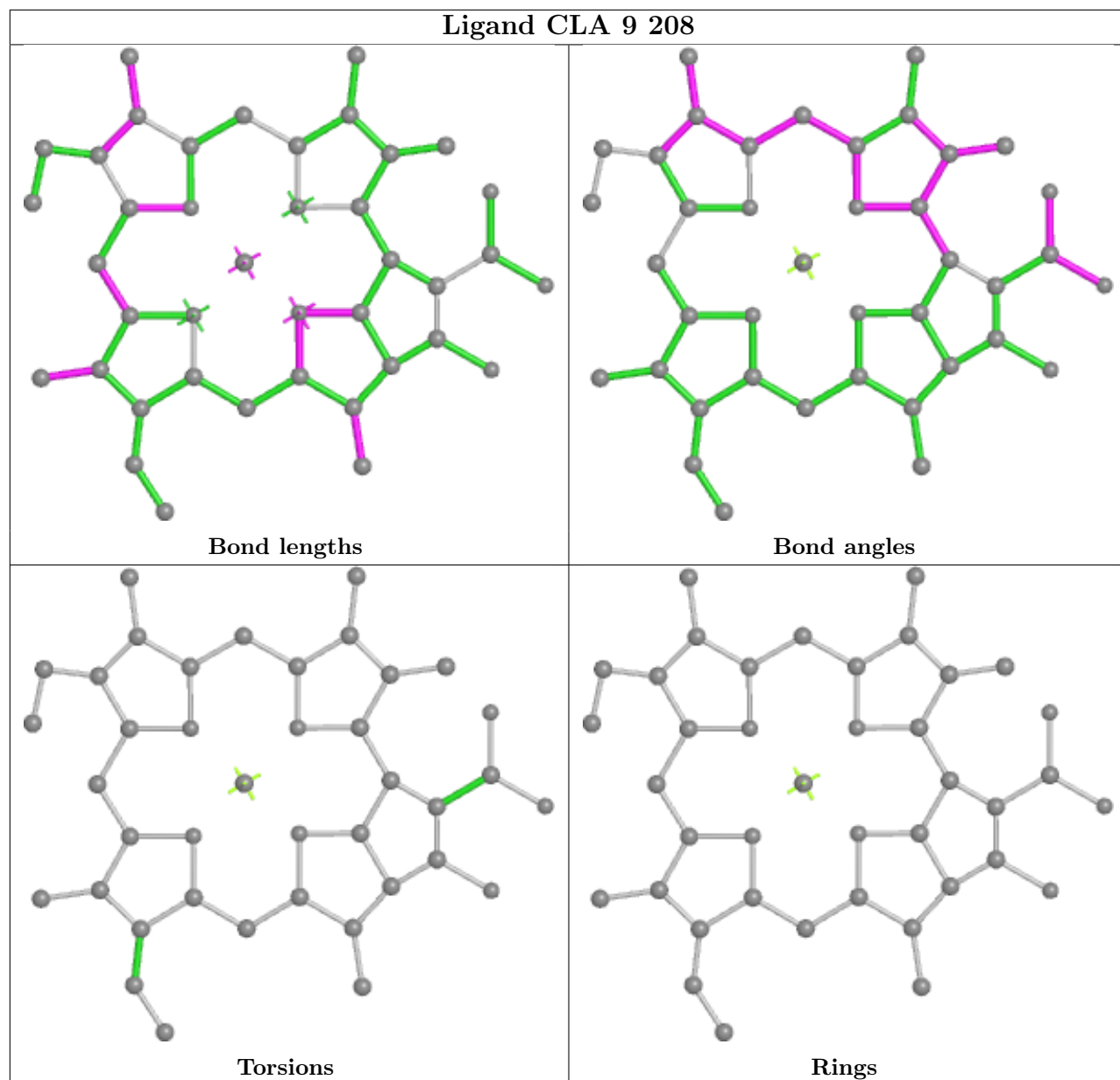


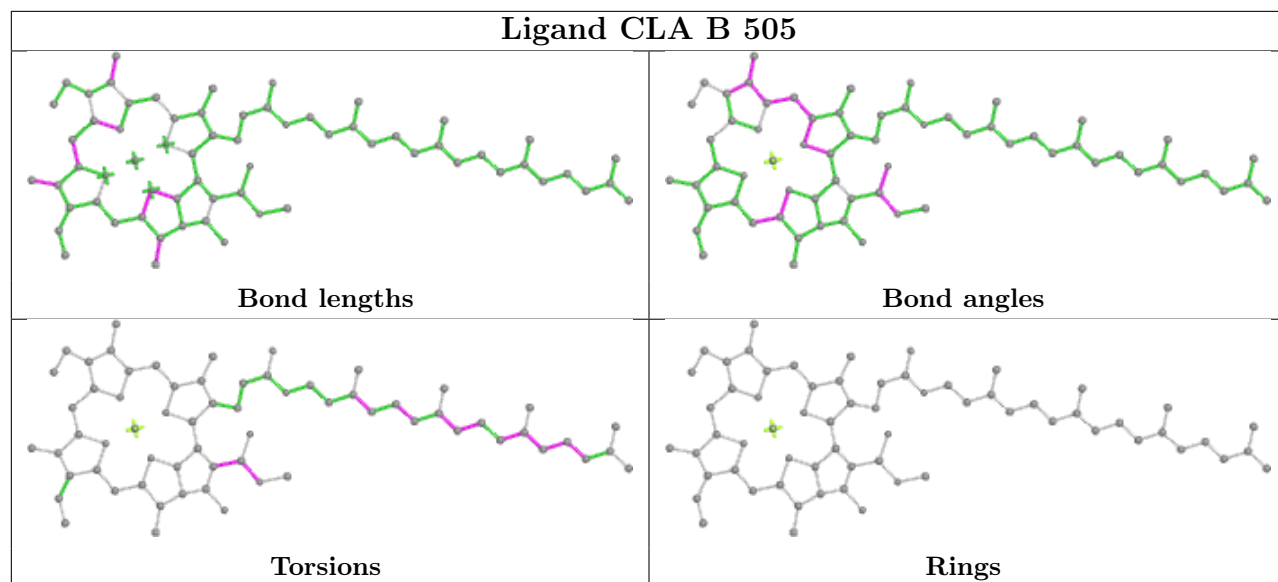




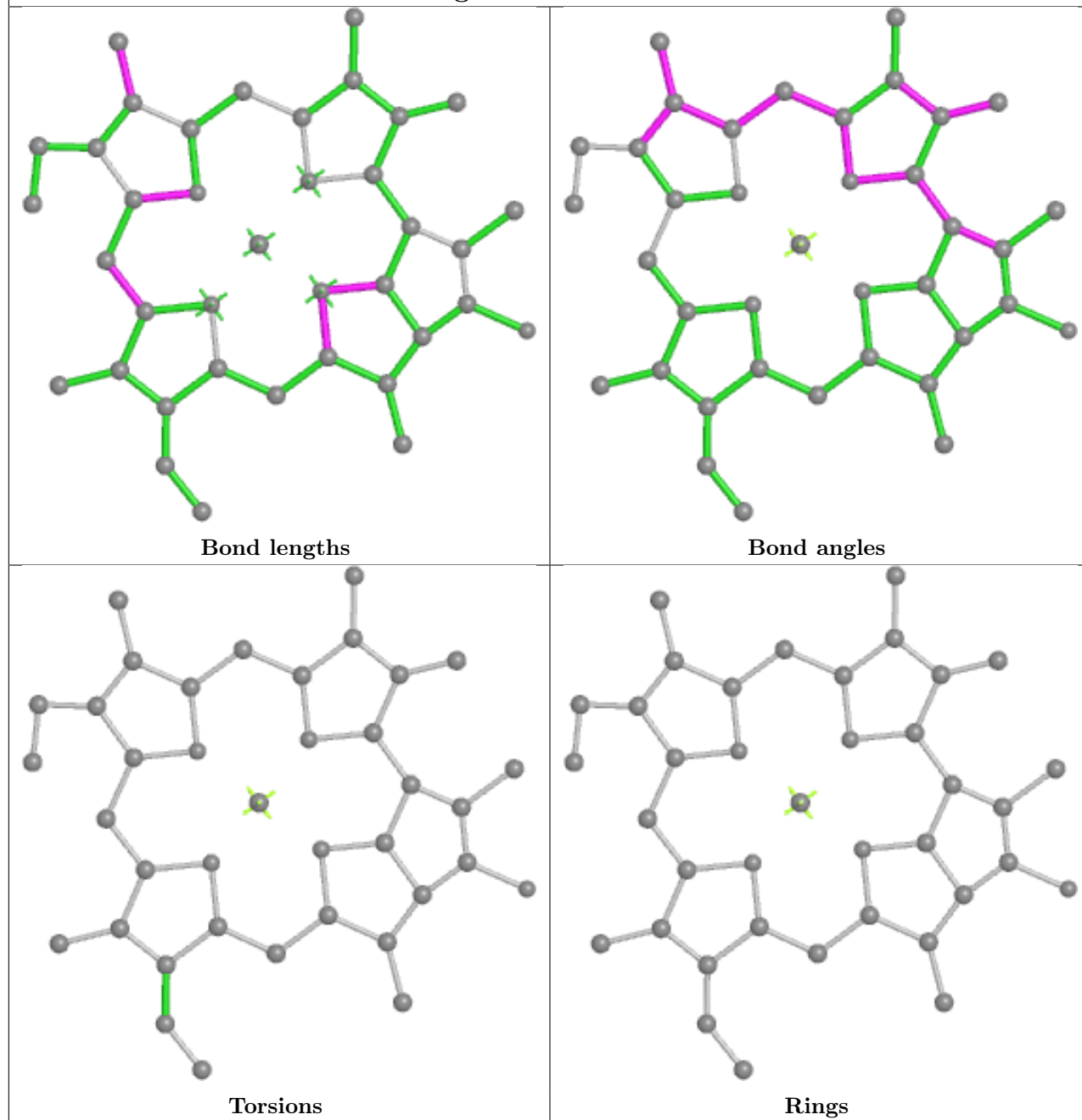


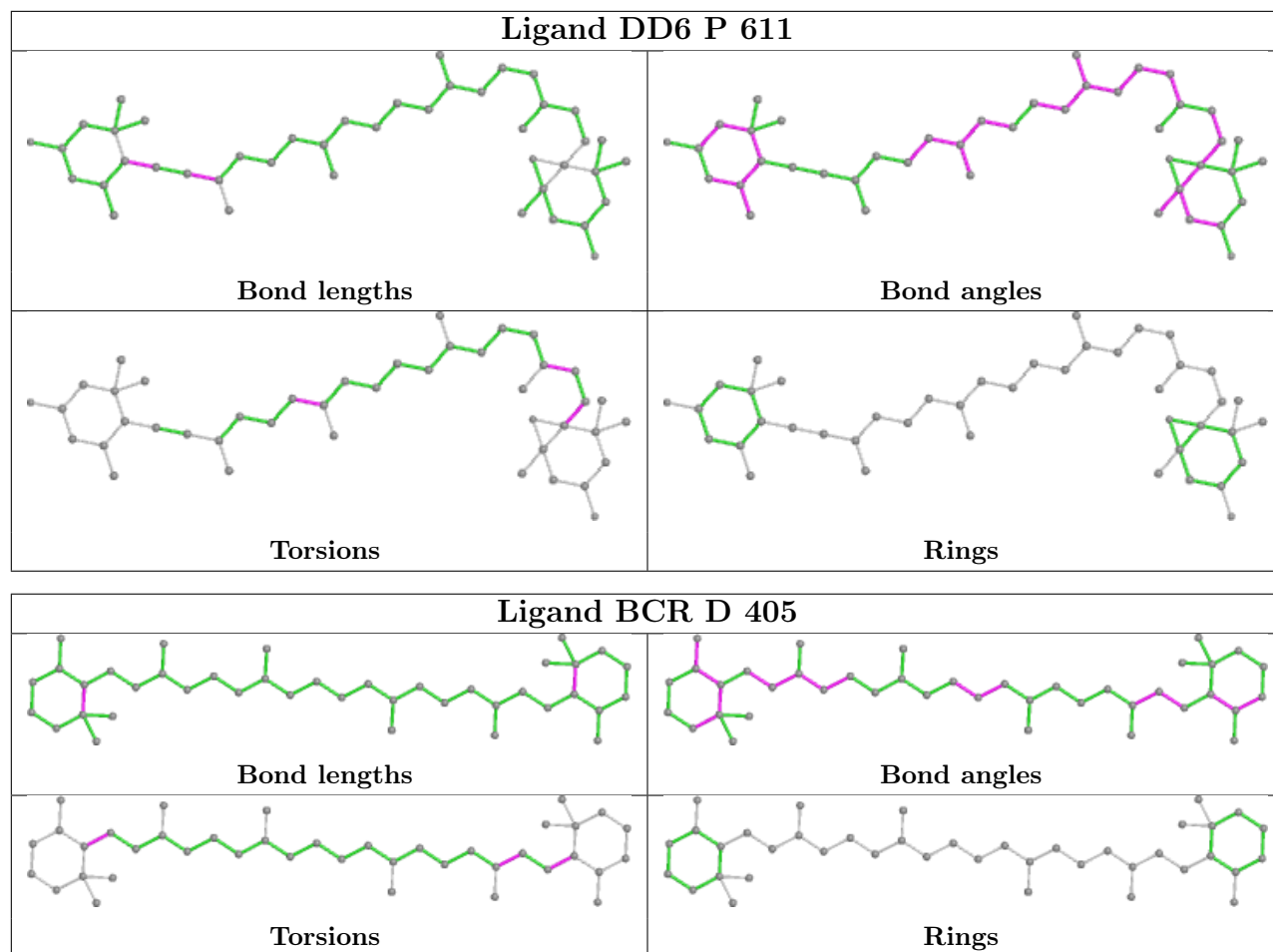


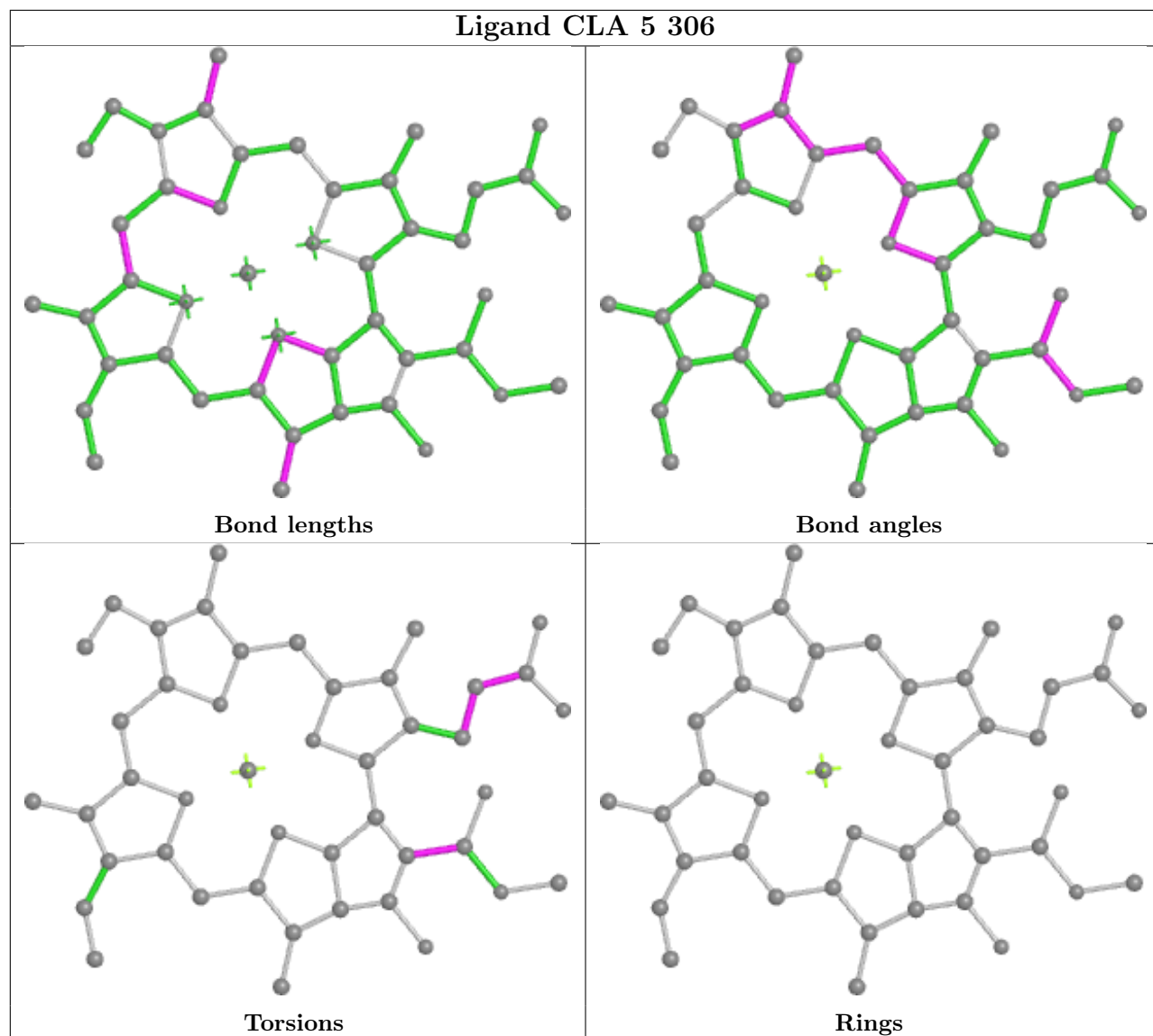


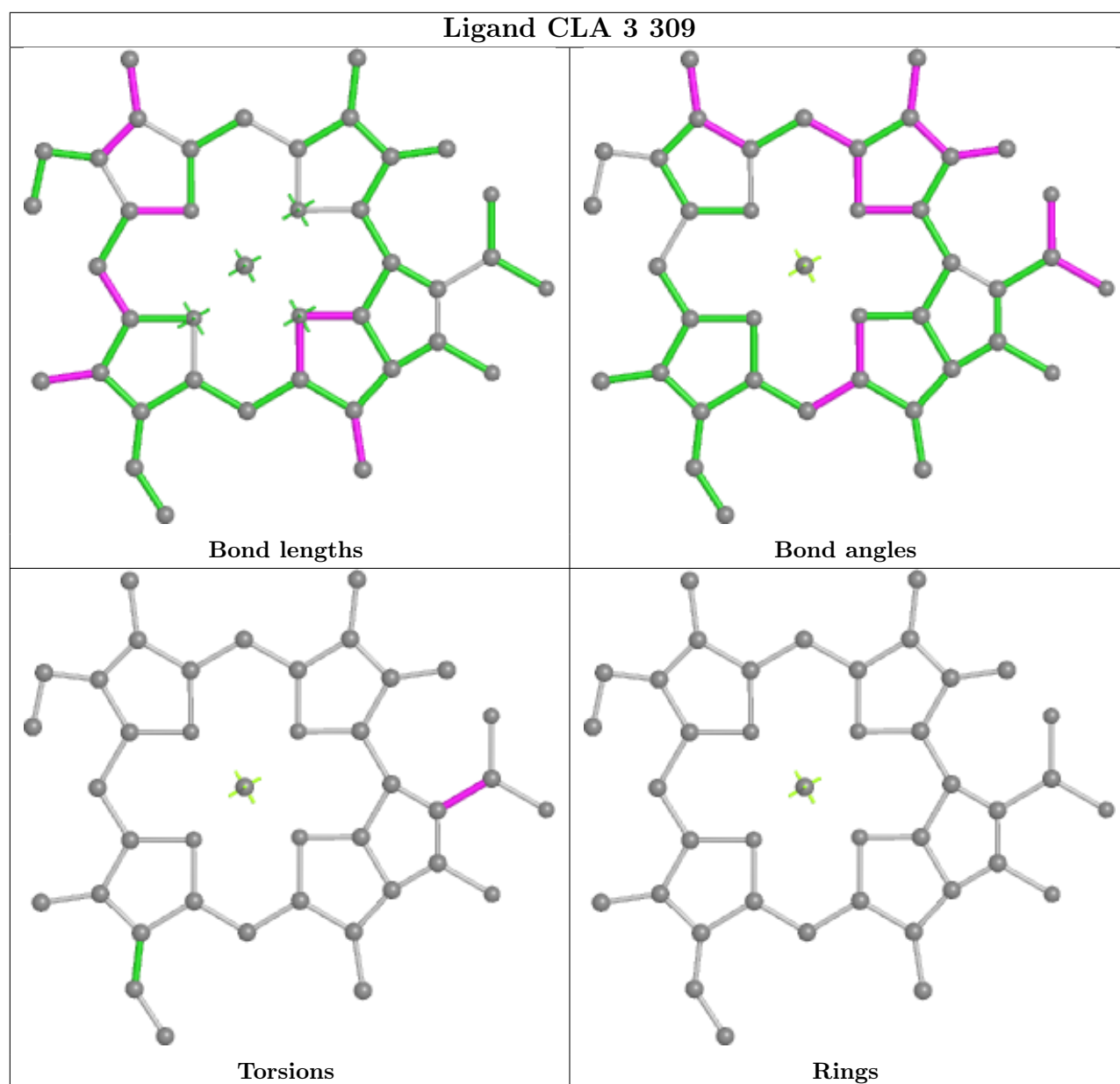


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5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

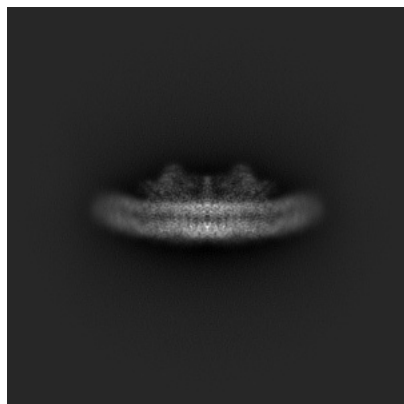
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-35987. These allow visual inspection of the internal detail of the map and identification of artifacts.

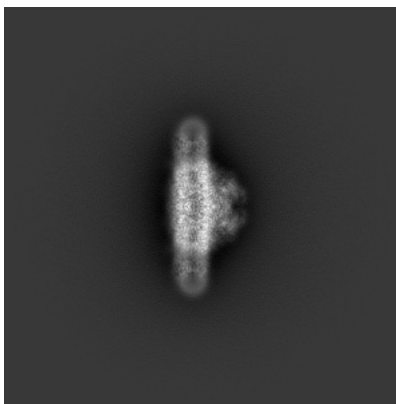
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

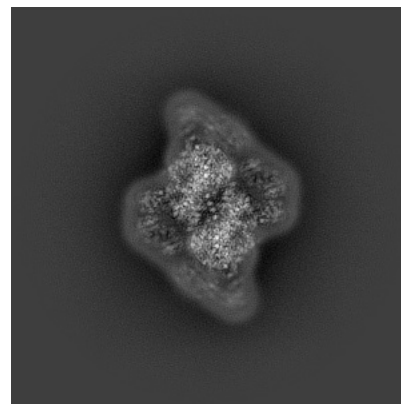
6.1.1 Primary map



X

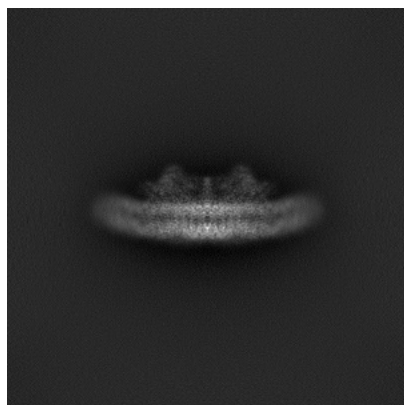


Y

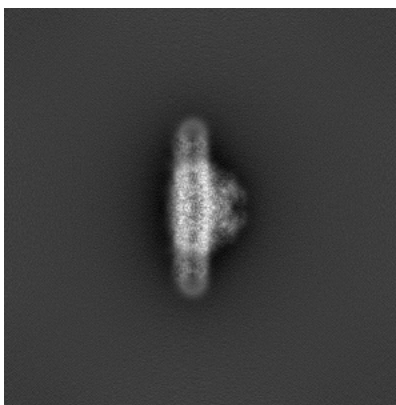


Z

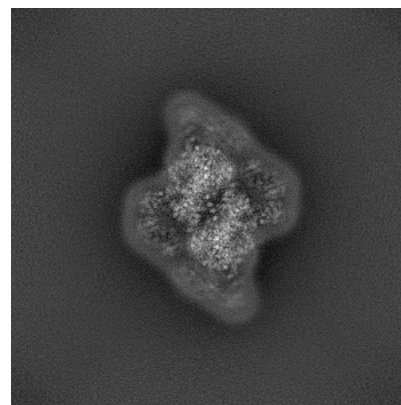
6.1.2 Raw map



X



Y

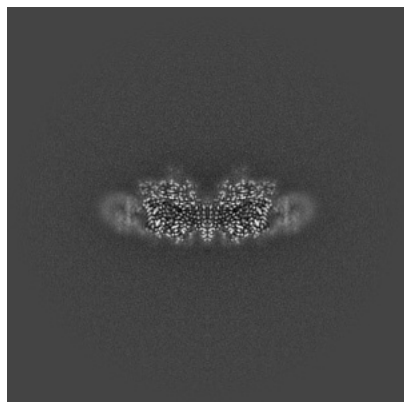


Z

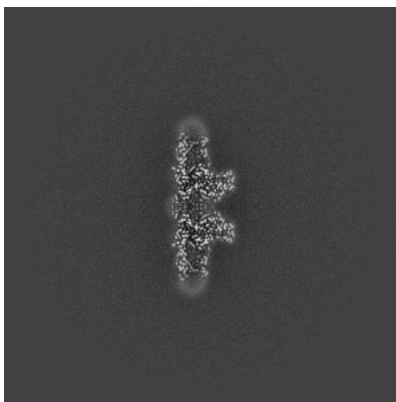
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

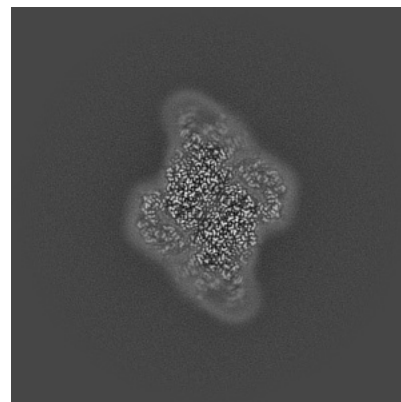
6.2.1 Primary map



X Index: 256

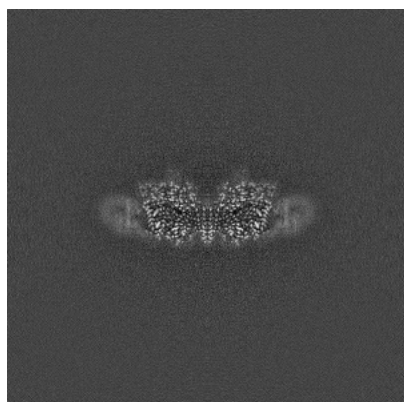


Y Index: 256

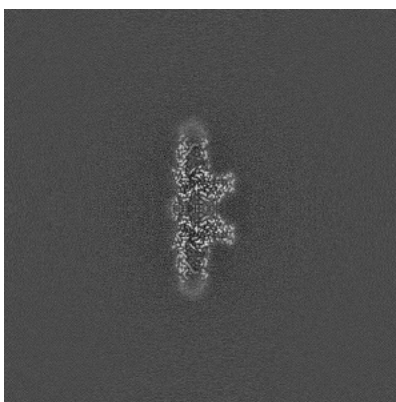


Z Index: 256

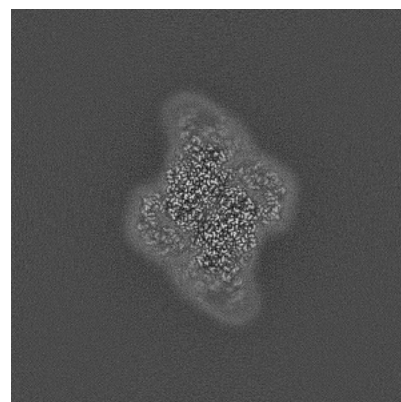
6.2.2 Raw map



X Index: 256



Y Index: 256

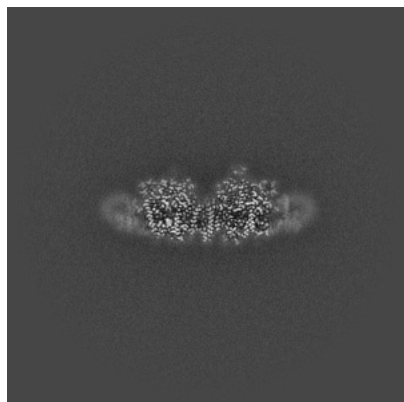


Z Index: 256

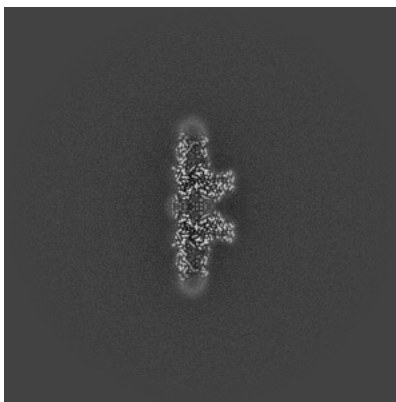
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

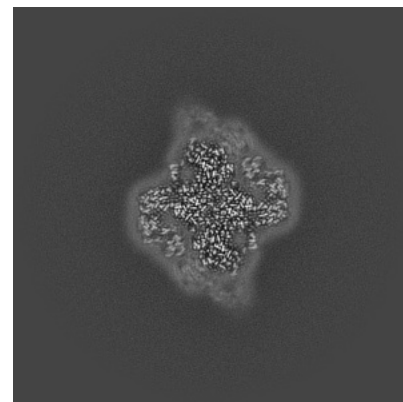
6.3.1 Primary map



X Index: 254

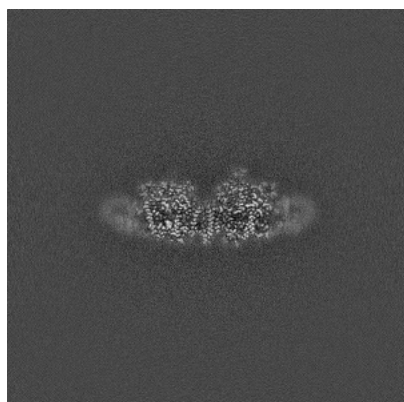


Y Index: 256

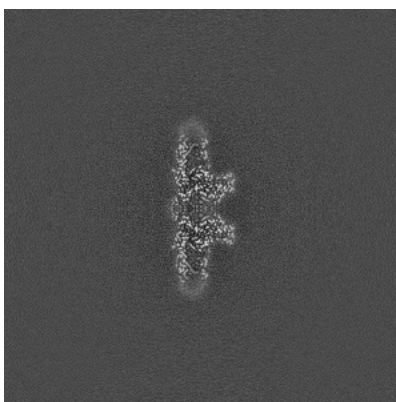


Z Index: 230

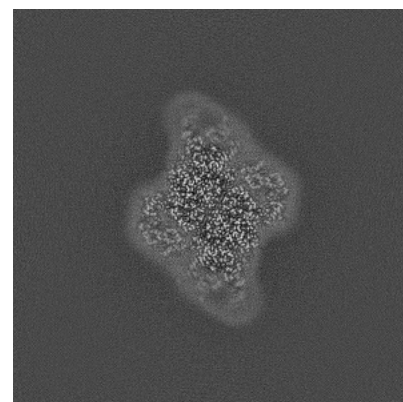
6.3.2 Raw map



X Index: 254



Y Index: 256

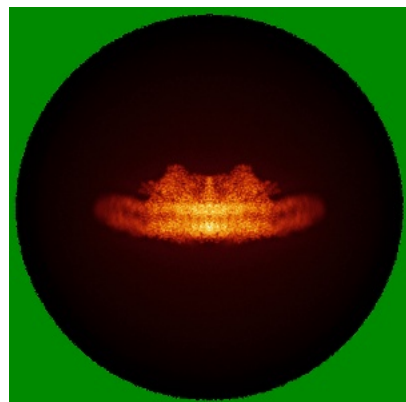


Z Index: 255

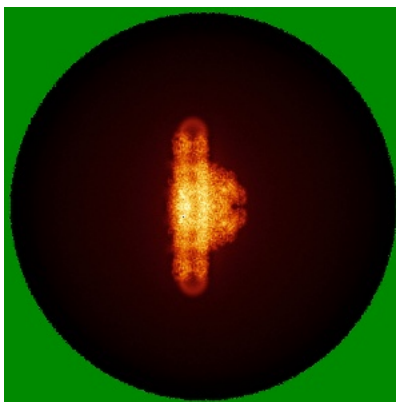
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

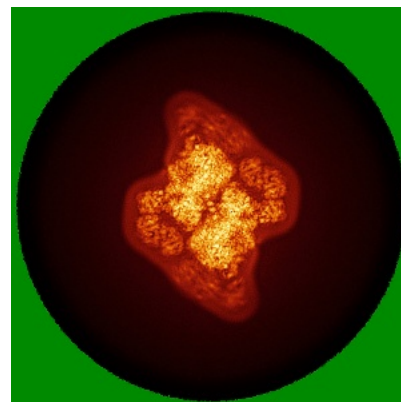
6.4.1 Primary map



X

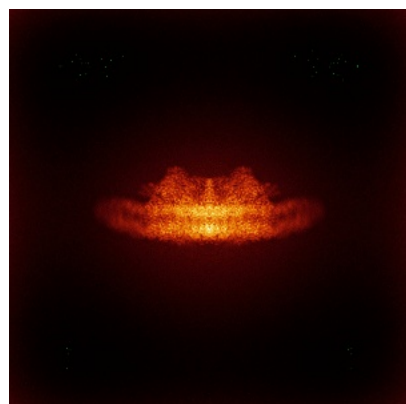


Y

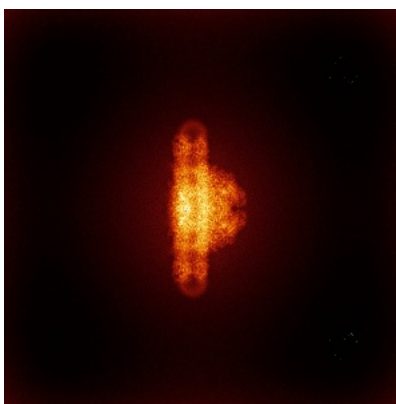


Z

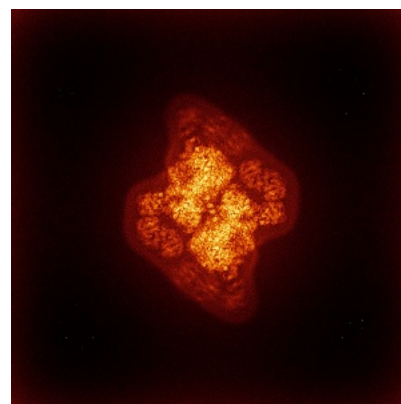
6.4.2 Raw map



X



Y

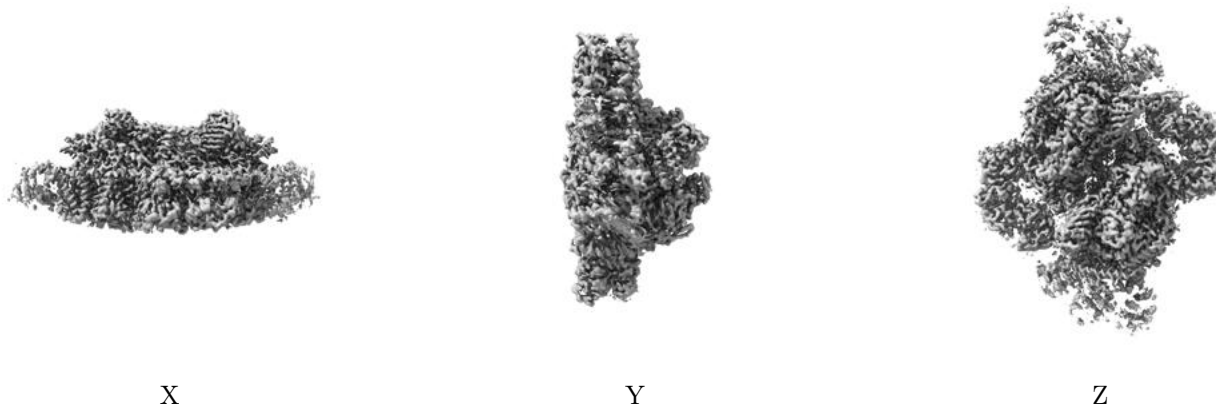


Z

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

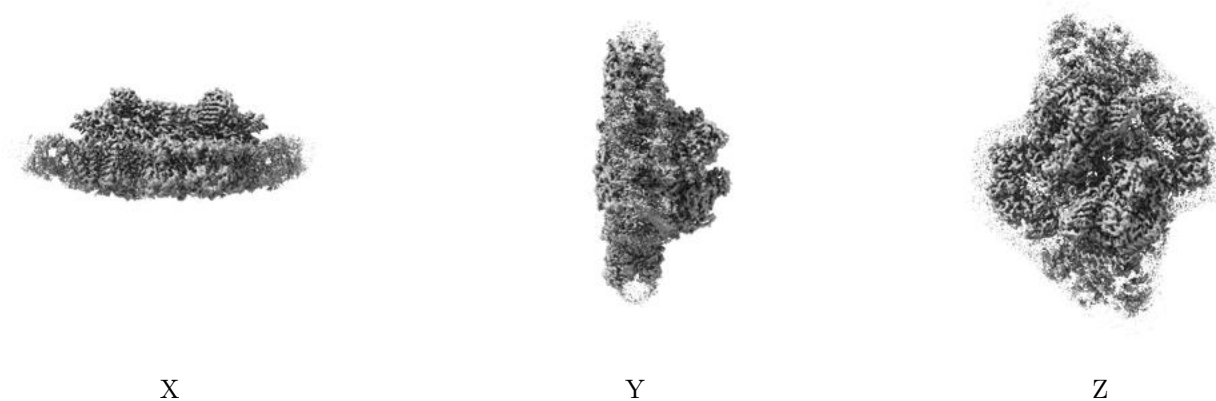
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.158. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

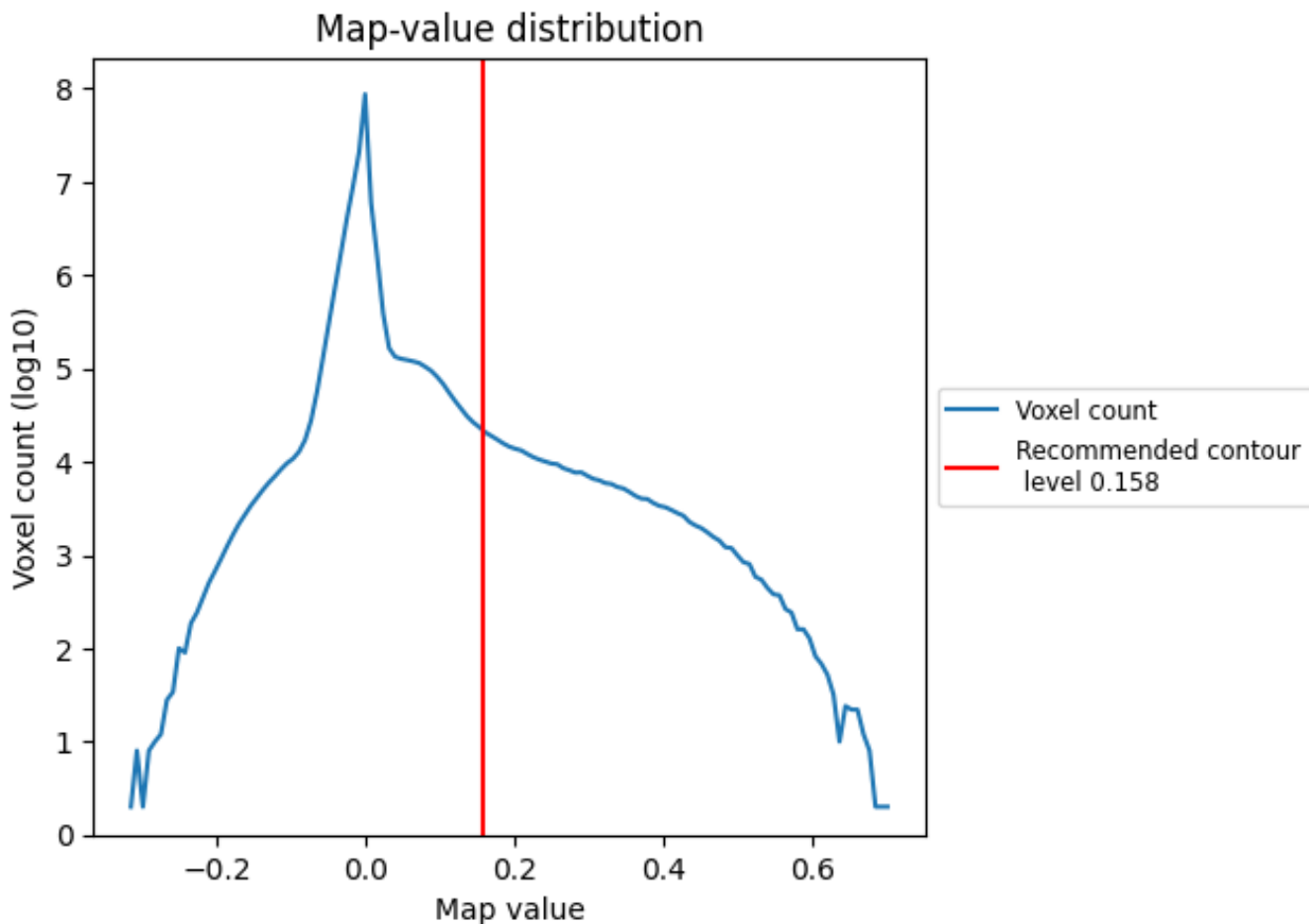
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

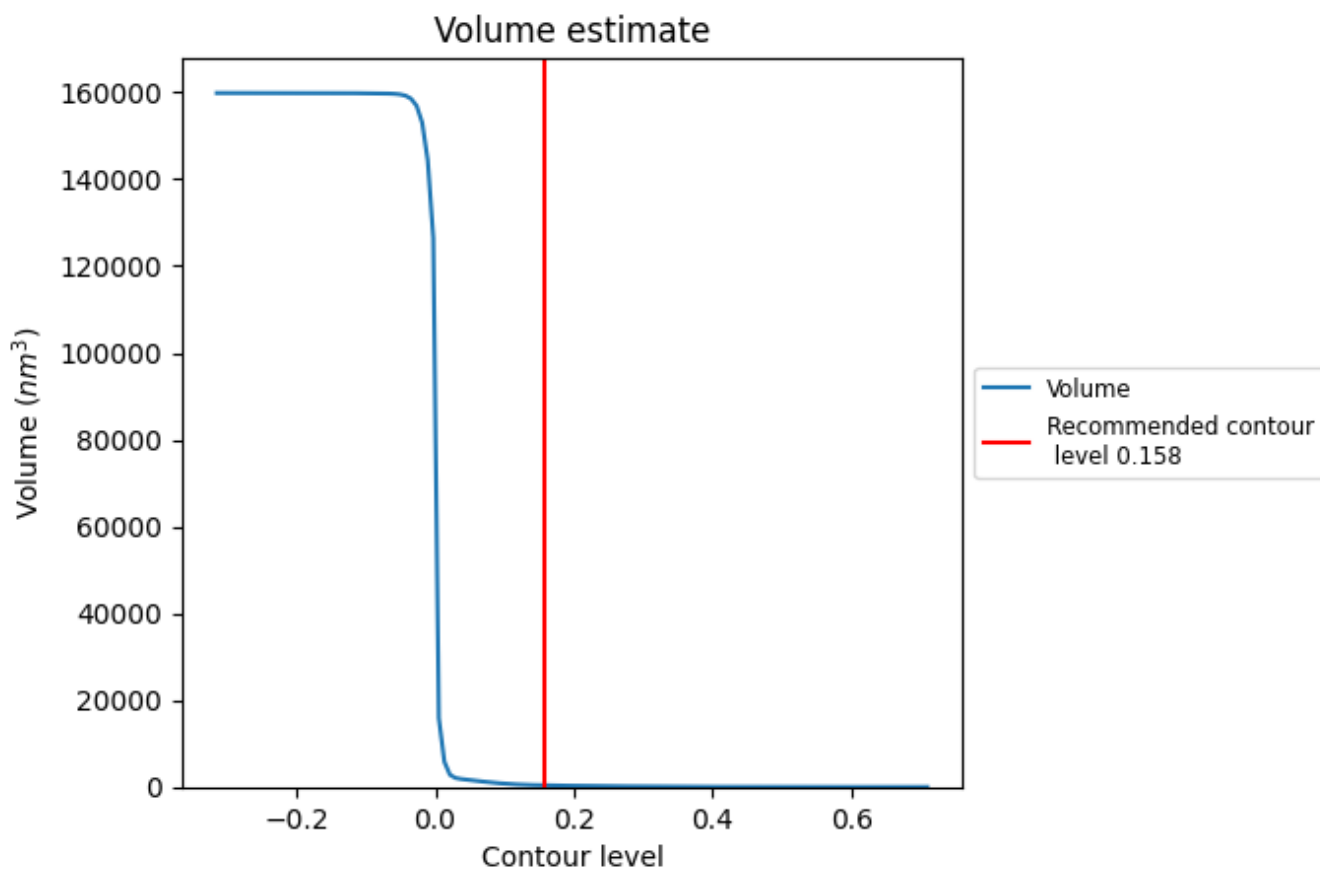
This section contains the results of statistical analysis of the map.

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.

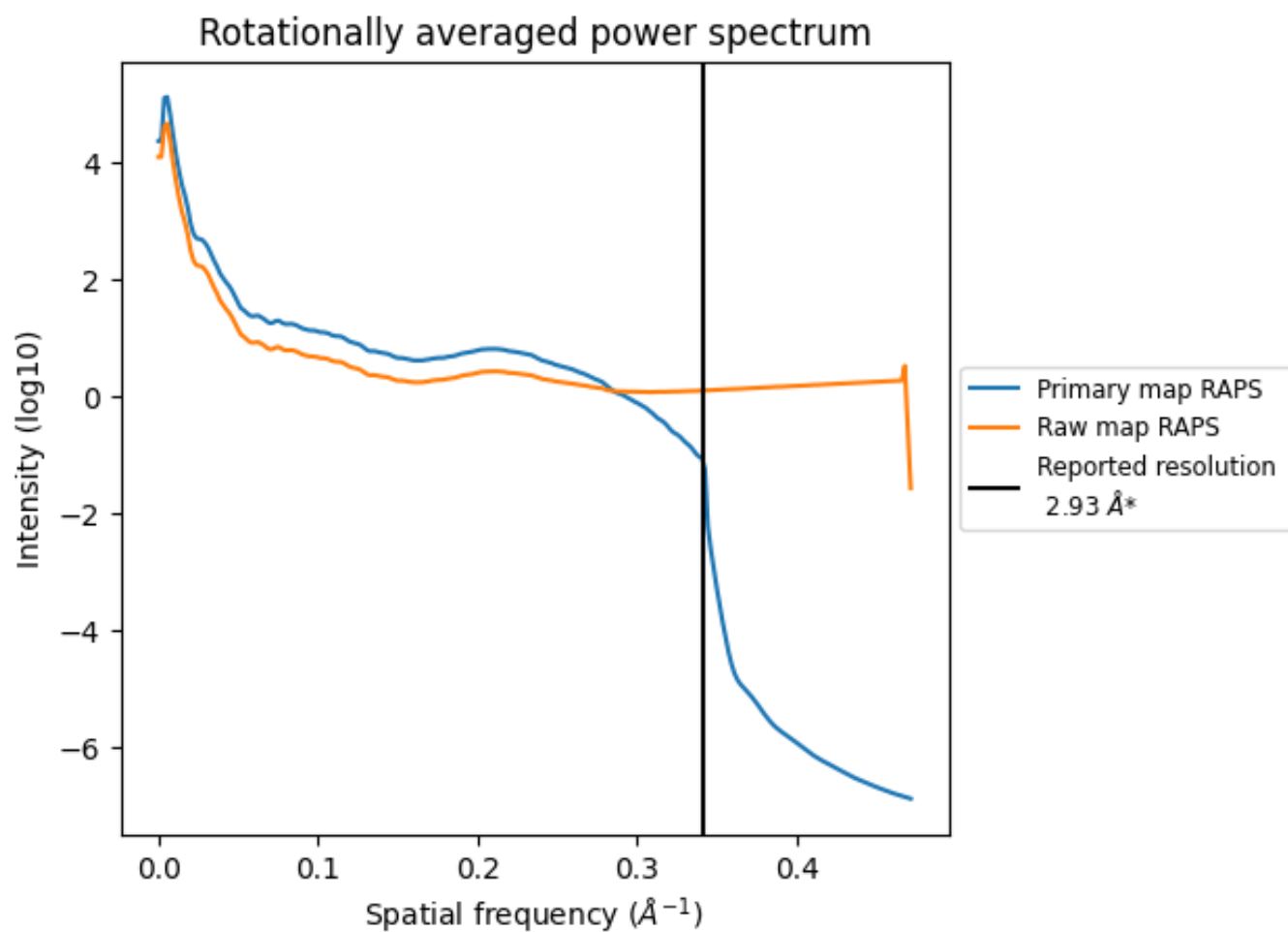
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 376 nm³; this corresponds to an approximate mass of 339 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

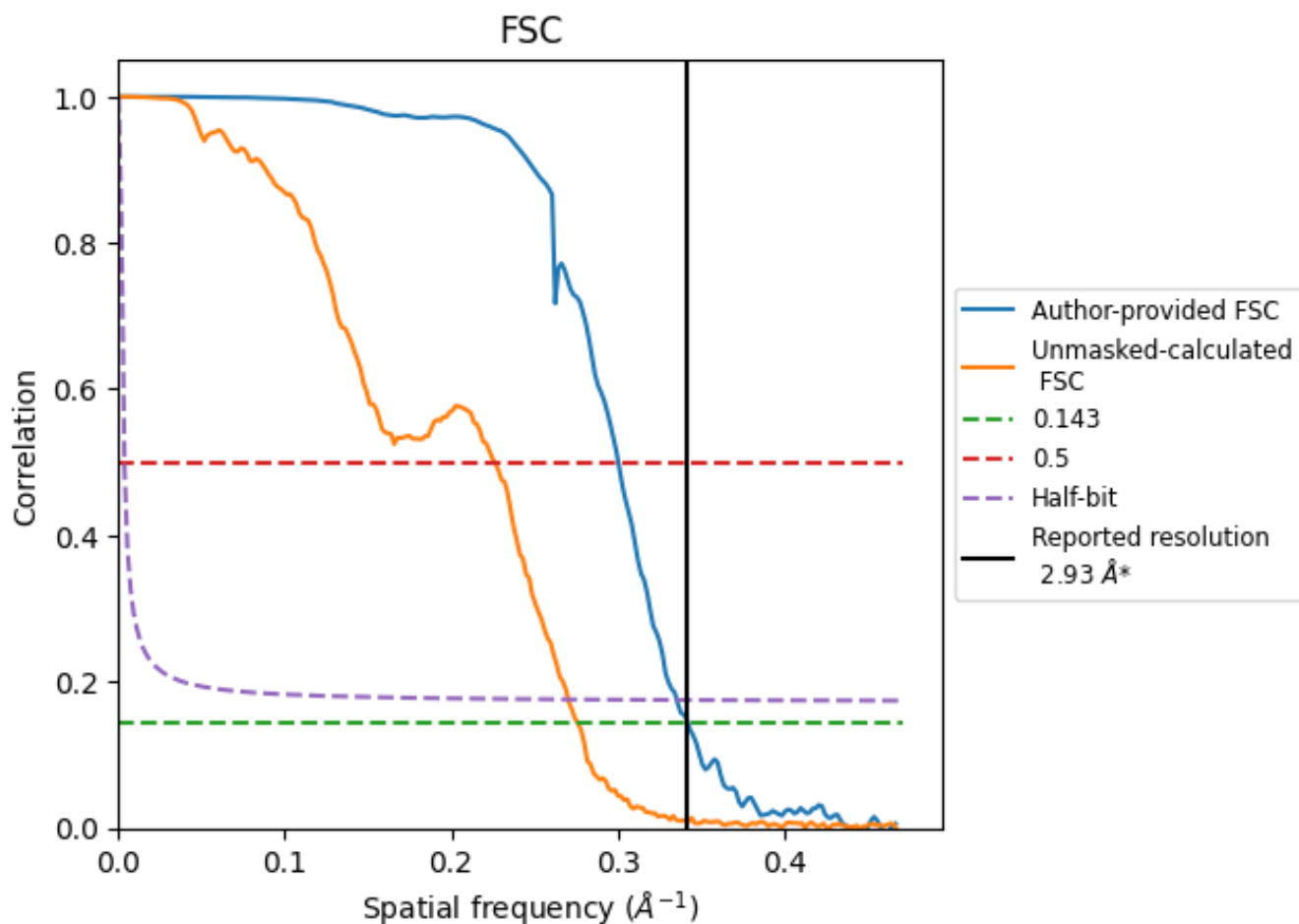


*Reported resolution corresponds to spatial frequency of 0.341 \AA^{-1}

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.341 Å⁻¹

8.2 Resolution estimates [i](#)

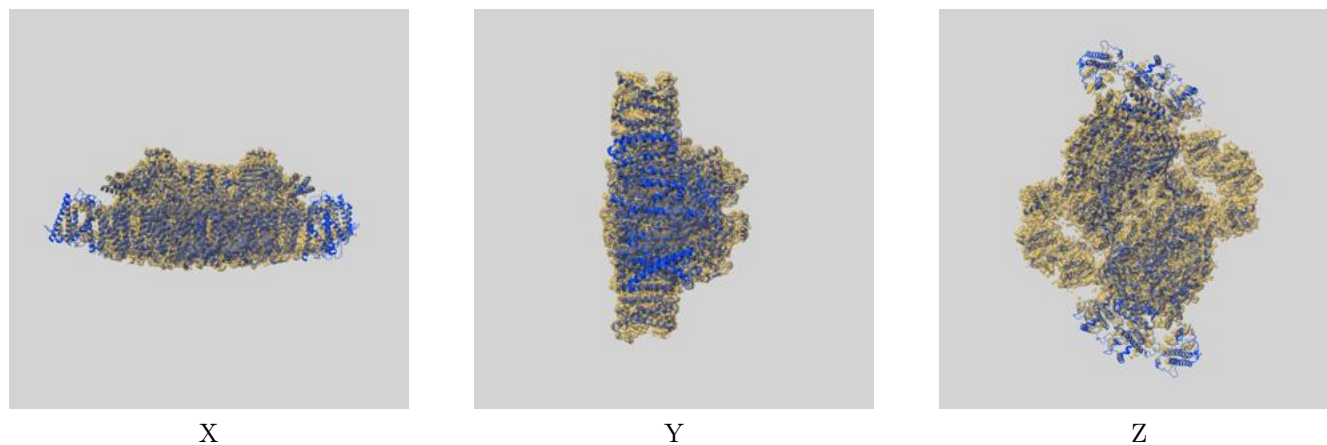
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.93	-	-
Author-provided FSC curve	2.92	3.33	2.98
Unmasked-calculated*	3.62	4.42	3.70

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.62 differs from the reported value 2.93 by more than 10 %

9 Map-model fit [i](#)

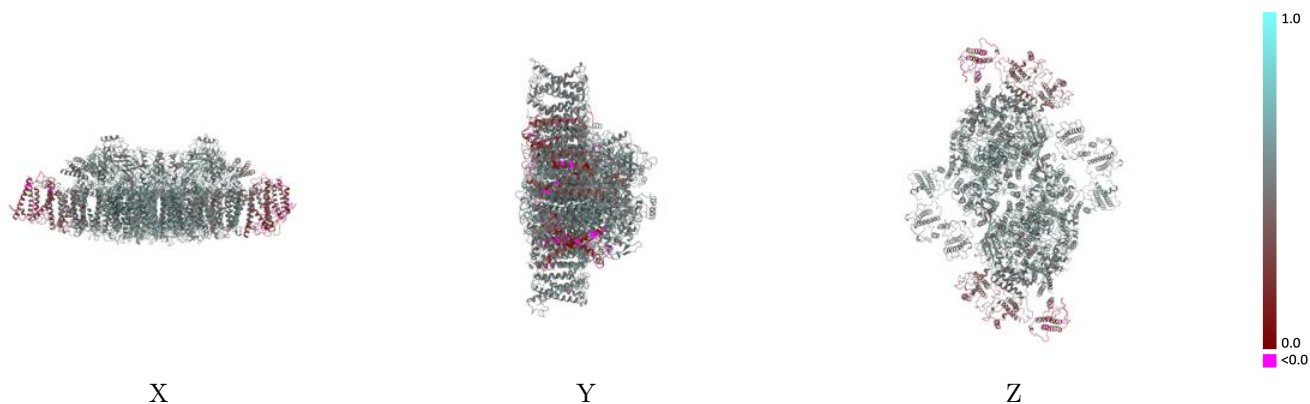
This section contains information regarding the fit between EMDB map EMD-35987 and PDB model 8J5K. Per-residue inclusion information can be found in section 3 on page 39.

9.1 Map-model overlay [i](#)



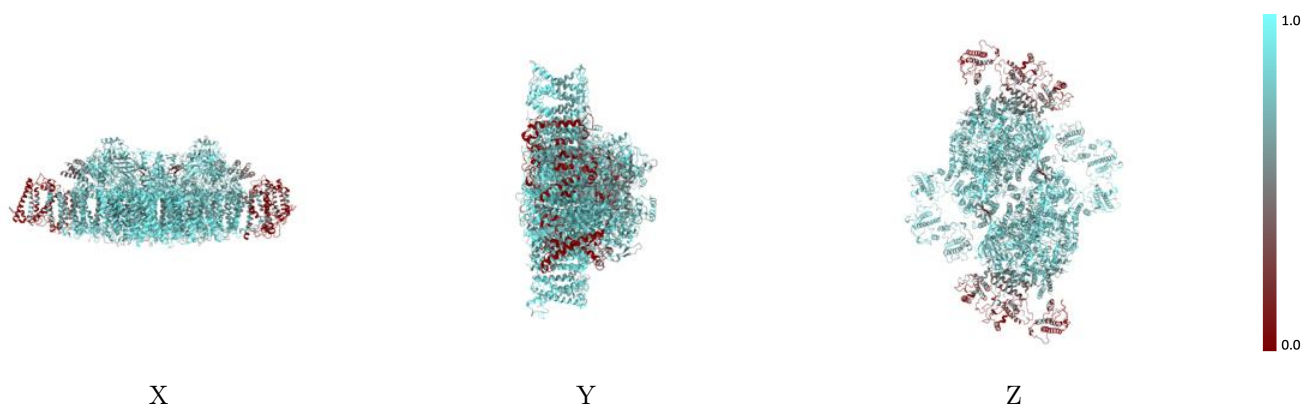
The images above show the 3D surface view of the map at the recommended contour level 0.158 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



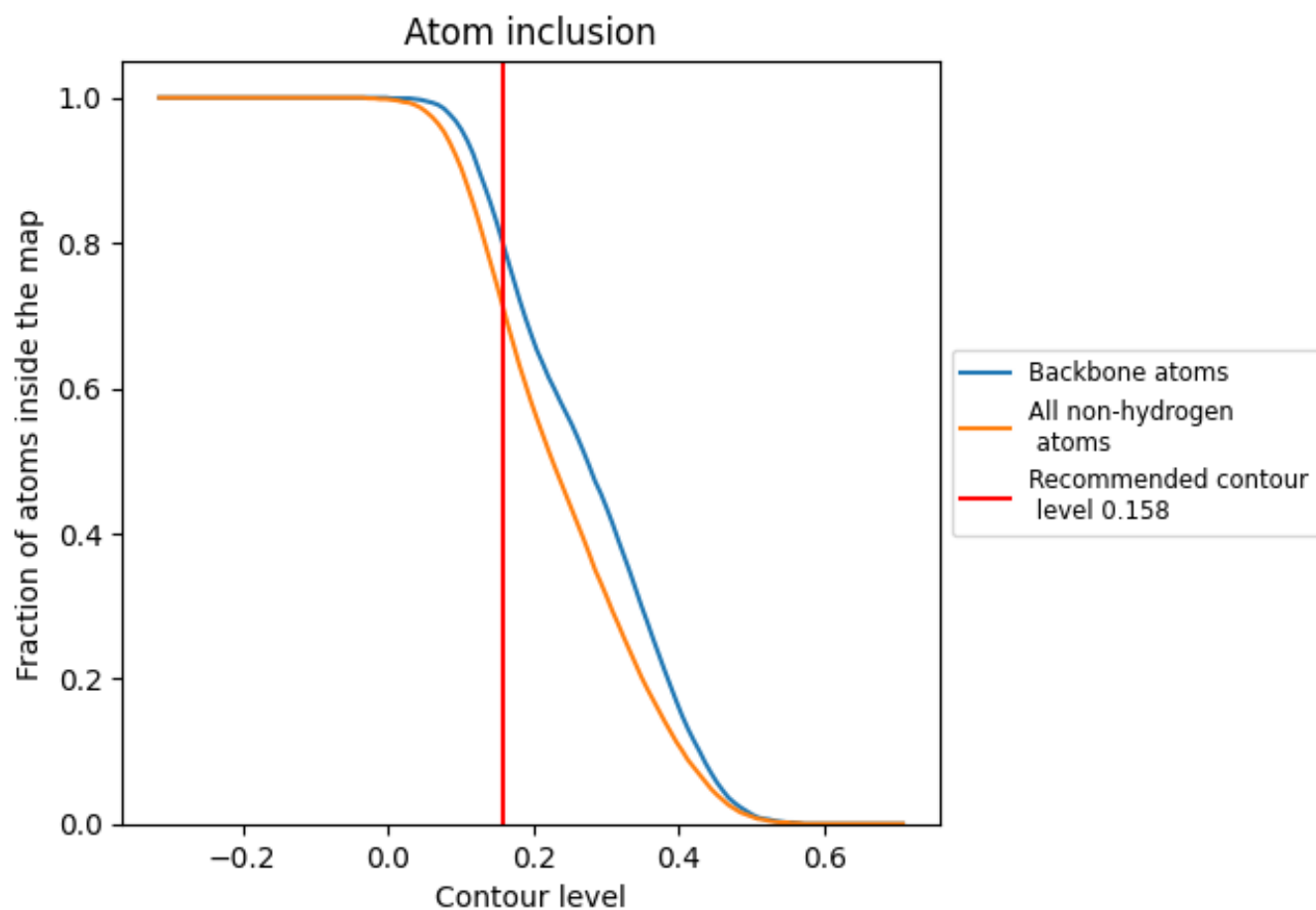
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



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 (0.158).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 80% of all backbone atoms, 71% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary













































The table lists the average atom inclusion at the recommended contour level (0.158) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7130	 0.5040
0	 0.7910	 0.5330
1	 0.7530	 0.5000
2	 0.6890	 0.4730
3	 0.2070	 0.2790
4	 0.1270	 0.1640
5	 0.7910	 0.5340
6	 0.7530	 0.5000
7	 0.6880	 0.4740
8	 0.2140	 0.2820
9	 0.1320	 0.1850
A	 0.8080	 0.5680
B	 0.8430	 0.5670
C	 0.8320	 0.5600
D	 0.8480	 0.5720
E	 0.7890	 0.5110
F	 0.8080	 0.5150
H	 0.8140	 0.5580
I	 0.8520	 0.5500
J	 0.6470	 0.5260
K	 0.7820	 0.5170
L	 0.8580	 0.5820
M	 0.7210	 0.5590
N	 0.7000	 0.4400
O	 0.7150	 0.5260
P	 0.2690	 0.2840
Q	 0.5210	 0.4800
T	 0.7490	 0.5580
U	 0.7670	 0.5160
V	 0.7710	 0.5320
W	 0.7160	 0.4810
X	 0.7790	 0.5410
Y	 0.6610	 0.4860
Z	 0.7290	 0.4790
a	 0.8200	 0.5700



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Chain	Atom inclusion	Q-score
b	 0.8480	 0.5690
c	 0.8310	 0.5600
d	 0.8460	 0.5730
e	 0.7840	 0.5110
f	 0.8080	 0.5160
h	 0.8090	 0.5590
i	 0.8440	 0.5450
j	 0.6400	 0.5240
k	 0.7820	 0.5120
l	 0.8510	 0.5740
m	 0.7260	 0.5600
n	 0.7130	 0.4310
o	 0.7190	 0.5250
p	 0.2710	 0.2870
q	 0.5150	 0.4750
t	 0.7530	 0.5600
u	 0.7590	 0.5170
v	 0.7800	 0.5300
w	 0.7180	 0.4830
x	 0.7880	 0.5390
y	 0.6580	 0.4930
z	 0.7310	 0.4820