



## wwPDB EM Validation Summary Report ⓘ

Dec 18, 2022 – 10:17 AM JST

PDB ID : 6L4U  
EMDB ID : EMD-0835  
Title : Structure of the PSI-FCPI supercomplex from diatom  
Authors : Nagao, R.; Kato, K.; Miyazaki, N.; Akita, F.; Shen, J.R.  
Deposited on : 2019-10-21  
Resolution : 2.40 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](mailto: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>.

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

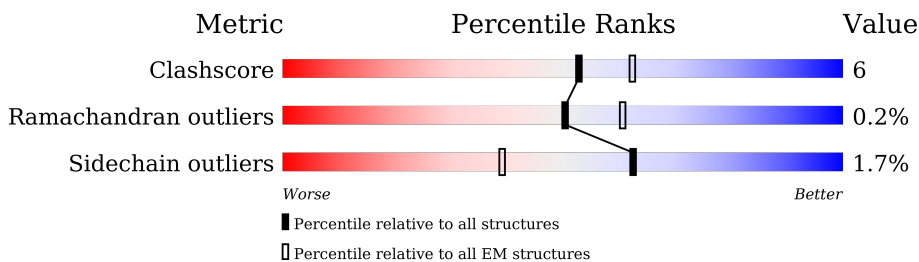
EMDB validation analysis : 0.0.1.dev43  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal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

# 1 Overall quality at a glance

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

The reported resolution of this entry is 2.40 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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	751	
2	B	733	
3	C	81	
4	D	139	
5	E	67	
6	F	185	
7	I	36	
8	J	41	

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Mol	Chain	Length	Quality of chain
9	L	151	
10	M	30	
11	1u	130	
12	2u	121	
13	1	227	
14	2	205	
15	3	200	
16	4	215	
17	5	266	
18	6	208	
19	7	296	
20	8	270	
21	9	214	
22	10	207	
23	11	229	
24	12	204	
25	13	244	
26	14	249	
27	15	281	
28	16	218	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
29	CL0	A	801	X	-	-	-
30	CLA	1	301	X	-	-	-
30	CLA	1	302	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
30	CLA	1	303	X	-	-	-
30	CLA	1	304	X	-	-	-
30	CLA	1	305	X	-	-	-
30	CLA	10	303	X	-	-	-
30	CLA	10	304	X	-	-	-
30	CLA	10	305	X	-	-	-
30	CLA	10	307	X	-	-	-
30	CLA	10	308	X	-	-	-
30	CLA	10	309	X	-	-	-
30	CLA	11	304	X	-	-	-
30	CLA	11	306	X	-	-	-
30	CLA	11	308	X	-	-	-
30	CLA	11	310	X	-	-	-
30	CLA	12	303	X	-	-	-
30	CLA	12	304	X	-	-	-
30	CLA	12	306	X	-	-	-
30	CLA	12	307	X	-	-	-
30	CLA	12	308	X	-	-	-
30	CLA	12	312	X	-	-	-
30	CLA	12	321	X	-	-	-
30	CLA	13	301	X	-	-	-
30	CLA	13	302	X	-	-	-
30	CLA	13	307	X	-	-	-
30	CLA	13	309	X	-	-	-
30	CLA	14	302	X	-	-	-
30	CLA	14	303	X	-	-	-
30	CLA	14	304	X	-	-	-
30	CLA	14	305	X	-	-	-
30	CLA	14	309	X	-	-	-
30	CLA	14	310	X	-	-	-
30	CLA	14	313	X	-	-	-
30	CLA	15	303	X	-	-	-
30	CLA	15	304	X	-	-	-
30	CLA	15	305	X	-	-	-
30	CLA	15	306	X	-	-	-
30	CLA	15	307	X	-	-	-
30	CLA	15	308	X	-	-	-
30	CLA	15	310	X	-	-	-
30	CLA	15	311	X	-	-	-
30	CLA	15	312	X	-	-	-
30	CLA	16	302	X	-	-	-
30	CLA	16	303	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
30	CLA	16	305	X	-	-	-
30	CLA	16	306	X	-	-	-
30	CLA	16	307	X	-	-	-
30	CLA	16	308	X	-	-	-
30	CLA	16	310	X	-	-	-
30	CLA	2	301	X	-	-	-
30	CLA	2	304	X	-	-	-
30	CLA	2	305	X	-	-	-
30	CLA	2	307	X	-	-	-
30	CLA	2	309	X	-	-	-
30	CLA	2	310	X	-	-	-
30	CLA	2u	202	X	-	-	-
30	CLA	3	301	X	-	-	-
30	CLA	3	302	X	-	-	-
30	CLA	3	303	X	-	-	-
30	CLA	3	305	X	-	-	-
30	CLA	3	306	X	-	-	-
30	CLA	3	307	X	-	-	-
30	CLA	4	301	X	-	-	-
30	CLA	4	302	X	-	-	-
30	CLA	4	303	X	-	-	-
30	CLA	4	304	X	-	-	-
30	CLA	4	305	X	-	-	-
30	CLA	4	306	X	-	-	-
30	CLA	4	309	X	-	-	-
30	CLA	4	311	X	-	-	-
30	CLA	5	302	X	-	-	-
30	CLA	5	303	X	-	-	-
30	CLA	5	304	X	-	-	-
30	CLA	5	307	X	-	-	-
30	CLA	5	309	X	-	-	-
30	CLA	5	311	X	-	-	-
30	CLA	6	304	X	-	-	-
30	CLA	6	305	X	-	-	-
30	CLA	6	306	X	-	-	-
30	CLA	6	307	X	-	-	-
30	CLA	6	309	X	-	-	-
30	CLA	6	310	X	-	-	-
30	CLA	6	315	X	-	-	-
30	CLA	6	316	X	-	-	-
30	CLA	6	317	X	-	-	-
30	CLA	7	303	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
30	CLA	7	304	X	-	-	-
30	CLA	7	305	X	-	-	-
30	CLA	7	306	X	-	-	-
30	CLA	7	309	X	-	-	-
30	CLA	7	311	X	-	-	-
30	CLA	7	312	X	-	-	-
30	CLA	8	301	X	-	-	-
30	CLA	8	302	X	-	-	-
30	CLA	8	304	X	-	-	-
30	CLA	8	308	X	-	-	-
30	CLA	9	301	X	-	-	-
30	CLA	9	302	X	-	-	-
30	CLA	9	305	X	-	-	-
30	CLA	9	306	X	-	-	-
30	CLA	9	307	X	-	-	-
30	CLA	9	308	X	-	-	-
30	CLA	9	309	X	-	-	-
30	CLA	A	802	X	-	-	-
30	CLA	A	803	X	-	-	-
30	CLA	A	804	X	-	-	-
30	CLA	A	805	X	-	-	-
30	CLA	A	806	X	-	-	-
30	CLA	A	807	X	-	-	-
30	CLA	A	808	X	-	-	-
30	CLA	A	809	X	-	-	-
30	CLA	A	810	X	-	-	-
30	CLA	A	811	X	-	-	-
30	CLA	A	812	X	-	-	-
30	CLA	A	813	X	-	-	-
30	CLA	A	814	X	-	-	-
30	CLA	A	815	X	-	-	-
30	CLA	A	816	X	-	-	-
30	CLA	A	820	X	-	-	-
30	CLA	A	821	X	-	-	-
30	CLA	A	822	X	-	-	-
30	CLA	A	824	X	-	-	-
30	CLA	A	825	X	-	-	-
30	CLA	A	826	X	-	-	-
30	CLA	A	827	X	-	-	-
30	CLA	A	828	X	-	-	-
30	CLA	A	829	X	-	-	-
30	CLA	A	830	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
30	CLA	A	831	X	-	-	-
30	CLA	A	833	X	-	-	-
30	CLA	A	834	X	-	-	-
30	CLA	A	835	X	-	-	-
30	CLA	A	836	X	-	-	-
30	CLA	A	837	X	-	-	-
30	CLA	A	838	X	-	-	-
30	CLA	A	839	X	-	-	-
30	CLA	A	840	X	-	-	-
30	CLA	A	841	X	-	-	-
30	CLA	A	842	X	-	-	-
30	CLA	A	843	X	-	-	-
30	CLA	A	844	X	-	-	-
30	CLA	B	801	X	-	-	-
30	CLA	B	802	X	-	-	-
30	CLA	B	803	X	-	-	-
30	CLA	B	804	X	-	-	-
30	CLA	B	805	X	-	-	-
30	CLA	B	806	X	-	-	-
30	CLA	B	807	X	-	-	-
30	CLA	B	808	X	-	-	-
30	CLA	B	809	X	-	-	-
30	CLA	B	810	X	-	-	-
30	CLA	B	811	X	-	-	-
30	CLA	B	812	X	-	-	-
30	CLA	B	813	X	-	-	-
30	CLA	B	814	X	-	-	-
30	CLA	B	815	X	-	-	-
30	CLA	B	817	X	-	-	-
30	CLA	B	818	X	-	-	-
30	CLA	B	819	X	-	-	-
30	CLA	B	821	X	-	-	-
30	CLA	B	823	X	-	-	-
30	CLA	B	824	X	-	-	-
30	CLA	B	825	X	-	-	-
30	CLA	B	826	X	-	-	-
30	CLA	B	827	X	-	-	-
30	CLA	B	828	X	-	-	-
30	CLA	B	829	X	-	-	-
30	CLA	B	830	X	-	-	-
30	CLA	B	832	X	-	-	-
30	CLA	B	833	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
30	CLA	B	834	X	-	-	-
30	CLA	B	835	X	-	-	-
30	CLA	B	836	X	-	-	-
30	CLA	B	837	X	-	-	-
30	CLA	B	838	X	-	-	-
30	CLA	B	839	X	-	-	-
30	CLA	F	201	X	-	-	-
30	CLA	F	202	X	-	-	-
30	CLA	F	203	X	-	-	-
30	CLA	J	101	X	-	-	-
30	CLA	L	202	X	-	-	-
30	CLA	L	203	X	-	-	-



## 2 Entry composition [i](#)

There are 40 unique types of molecules in this entry. The entry contains 62199 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Photosystem I P700 chlorophyll a apoprotein A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	741	5841	3816	991	1005	29	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	731	5801	3814	977	992	18	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	80	599	368	103	118	10	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	131	1037	663	177	194	3	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
5	E	60	478	302	86	90	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	161	1257	806	213	234	4	0	0

- Molecule 7 is a protein called Photosystem I reaction center subunit VIII.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	I	35	273	190	37	44	2	0	0

- Molecule 8 is a protein called Photosystem I reaction center subunit IX.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	J	41	344	236	50	55	3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	L	137	1030	680	169	179	2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	M	30	227	151	35	40	1	0	0

- Molecule 11 is a protein called Unknown protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
11	1u	130	650	390	130	130	0	0

- Molecule 12 is a protein called Photosystem I reaction center subunit Psa28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	2u	89	674	438	110	120	6	0	0

- Molecule 13 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcr15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	1	141	1086	692	184	201	9	0	0

- Molecule 14 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcr8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	2	172	1310	846	216	238	10	0	0

- Molecule 15 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcr2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	3	164	1275	825	213	232	5	0	0

- Molecule 16 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcr9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	4	179	1368	878	227	250	13	0	0

- Molecule 17 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcr11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	5	169	1304	834	222	236	12	0	0

- Molecule 18 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcr12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	6	174	1354	884	216	246	8	0	0

- Molecule 19 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcr10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	7	188	1416	894	240	266	16	0	0

- Molecule 20 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcr4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	8	213	1660	1075	274	302	9	0	0

- Molecule 21 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcf6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	9	163	1267	816	211	233	7	0	0

- Molecule 22 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhc3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	10	169	1302	849	212	233	8	0	0

- Molecule 23 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcq13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	11	191	1479	958	243	270	8	0	0

- Molecule 24 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcq3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	12	173	1274	814	209	243	8	0	0

- Molecule 25 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcq11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	13	150	1148	736	203	204	5	0	0

- Molecule 26 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcq10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	14	208	1609	1049	262	292	6	0	0

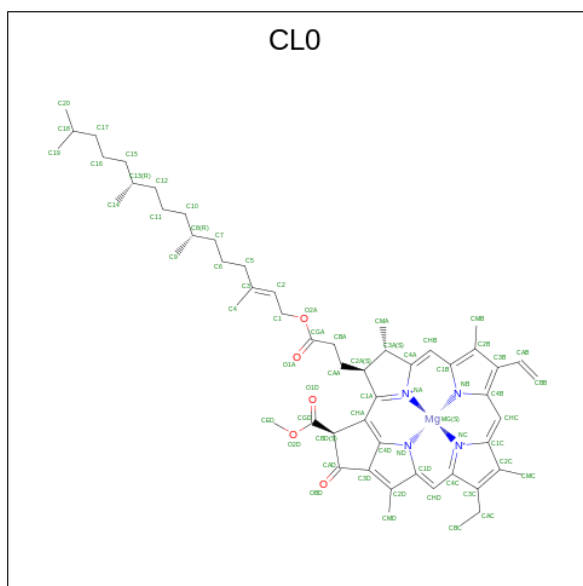
- Molecule 27 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcq8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	15	211	1654	1077	273	298	6	0	0

- Molecule 28 is a protein called Fucoxanthin chlorophyll a/c-binding protein Lhcq5.

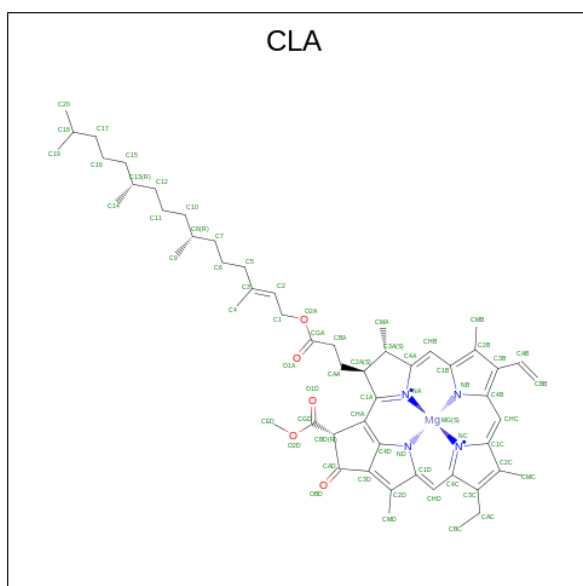
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	16	174	1313	846	217	242	8	0	0

- Molecule 29 is CHLOROPHYLL A ISOMER (three-letter code: CLO) (formula:  $C_{55}H_{72}MgN_4O_5$ ).



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

- Molecule 30 is CHLOROPHYLL A (three-letter code: CLA) (formula:  $C_{55}H_{72}MgN_4O_5$ ).



Mol	Chain	Residues	Atoms					AltConf
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0
30	A	1	Total 2614	C 2184	Mg 43	N 172	O 215	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0
30	B	1	2465	2065	40	160	200	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	B	1	Total 2465	C 2065	Mg 40	N 160	O 200	0
30	F	1	Total 175	C 145	Mg 3	N 12	O 15	0
30	F	1	Total 175	C 145	Mg 3	N 12	O 15	0

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Mol	Chain	Residues	Atoms					AltConf
30	F	1	Total	C	Mg	N	O	0
			175	145	3	12	15	
30	J	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
30	L	1	Total	C	Mg	N	O	0
			110	90	2	8	10	
30	L	1	Total	C	Mg	N	O	0
			110	90	2	8	10	
30	2u	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
30	1	1	Total	C	Mg	N	O	0
			390	330	6	24	30	
30	1	1	Total	C	Mg	N	O	0
			390	330	6	24	30	
30	1	1	Total	C	Mg	N	O	0
			390	330	6	24	30	
30	1	1	Total	C	Mg	N	O	0
			390	330	6	24	30	
30	1	1	Total	C	Mg	N	O	0
			390	330	6	24	30	
30	1	1	Total	C	Mg	N	O	0
			390	330	6	24	30	
30	1	1	Total	C	Mg	N	O	0
			390	330	6	24	30	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	
30	2	1	Total	C	Mg	N	O	0
			620	520	10	40	50	

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Mol	Chain	Residues	Atoms					AltConf
30	3	1	Total	C	Mg	N	O	0
			472	392	8	32	40	
30	3	1	Total	C	Mg	N	O	0
			472	392	8	32	40	
30	3	1	Total	C	Mg	N	O	0
			472	392	8	32	40	
30	3	1	Total	C	Mg	N	O	0
			472	392	8	32	40	
30	3	1	Total	C	Mg	N	O	0
			472	392	8	32	40	
30	3	1	Total	C	Mg	N	O	0
			472	392	8	32	40	
30	3	1	Total	C	Mg	N	O	0
			472	392	8	32	40	
30	4	1	Total	C	Mg	N	O	0
			484	404	8	32	40	
30	4	1	Total	C	Mg	N	O	0
			484	404	8	32	40	
30	4	1	Total	C	Mg	N	O	0
			484	404	8	32	40	
30	4	1	Total	C	Mg	N	O	0
			484	404	8	32	40	
30	4	1	Total	C	Mg	N	O	0
			484	404	8	32	40	
30	4	1	Total	C	Mg	N	O	0
			484	404	8	32	40	
30	4	1	Total	C	Mg	N	O	0
			484	404	8	32	40	
30	4	1	Total	C	Mg	N	O	0
			484	404	8	32	40	
30	5	1	Total	C	Mg	N	O	0
			455	385	7	28	35	
30	5	1	Total	C	Mg	N	O	0
			455	385	7	28	35	
30	5	1	Total	C	Mg	N	O	0
			455	385	7	28	35	
30	5	1	Total	C	Mg	N	O	0
			455	385	7	28	35	
30	5	1	Total	C	Mg	N	O	0
			455	385	7	28	35	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
30	5	1	Total 455	C 385	Mg 7	N 28	O 35	0
30	5	1	Total 455	C 385	Mg 7	N 28	O 35	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	6	1	Total 620	C 520	Mg 10	N 40	O 50	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	7	1	Total 566	C 476	Mg 9	N 36	O 45	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
30	8	1	420	350	7	28	35	0
30	8	1	420	350	7	28	35	0
30	8	1	420	350	7	28	35	0
30	8	1	420	350	7	28	35	0
30	8	1	420	350	7	28	35	0
30	8	1	420	350	7	28	35	0
30	8	1	420	350	7	28	35	0
30	8	1	420	350	7	28	35	0
30	9	1	486	406	8	32	40	0
30	9	1	486	406	8	32	40	0
30	9	1	486	406	8	32	40	0
30	9	1	486	406	8	32	40	0
30	9	1	486	406	8	32	40	0
30	9	1	486	406	8	32	40	0
30	9	1	486	406	8	32	40	0
30	9	1	486	406	8	32	40	0
30	9	1	486	406	8	32	40	0
30	10	1	435	365	7	28	35	0
30	10	1	435	365	7	28	35	0
30	10	1	435	365	7	28	35	0
30	10	1	435	365	7	28	35	0
30	10	1	435	365	7	28	35	0
30	10	1	435	365	7	28	35	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
30	10	1	Total 435	C 365	Mg 7	N 28	O 35	0
30	11	1	Total 315	C 265	Mg 5	N 20	O 25	0
30	11	1	Total 315	C 265	Mg 5	N 20	O 25	0
30	11	1	Total 315	C 265	Mg 5	N 20	O 25	0
30	11	1	Total 315	C 265	Mg 5	N 20	O 25	0
30	11	1	Total 315	C 265	Mg 5	N 20	O 25	0
30	11	1	Total 315	C 265	Mg 5	N 20	O 25	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	12	1	Total 566	C 476	Mg 9	N 36	O 45	0
30	13	1	Total 350	C 290	Mg 6	N 24	O 30	0
30	13	1	Total 350	C 290	Mg 6	N 24	O 30	0
30	13	1	Total 350	C 290	Mg 6	N 24	O 30	0
30	13	1	Total 350	C 290	Mg 6	N 24	O 30	0
30	13	1	Total 350	C 290	Mg 6	N 24	O 30	0
30	13	1	Total 350	C 290	Mg 6	N 24	O 30	0

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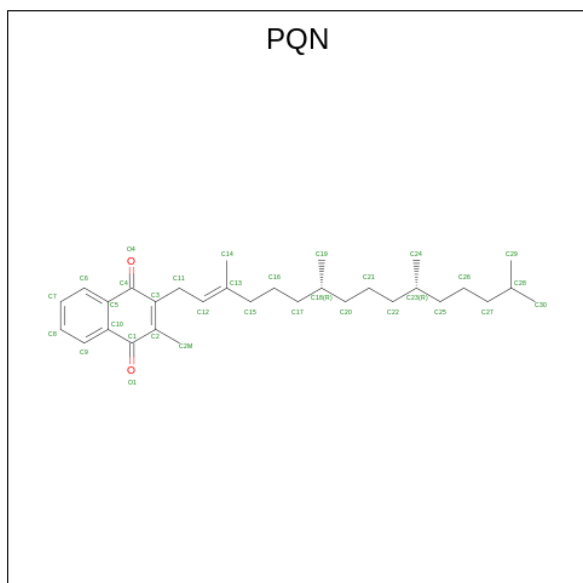
Mol	Chain	Residues	Atoms					AltConf
30	14	1	Total	C	Mg	N	O	0
			468	378	9	36	45	
30	14	1	Total	C	Mg	N	O	0
			468	378	9	36	45	
30	14	1	Total	C	Mg	N	O	0
			468	378	9	36	45	
30	14	1	Total	C	Mg	N	O	0
			468	378	9	36	45	
30	14	1	Total	C	Mg	N	O	0
			468	378	9	36	45	
30	14	1	Total	C	Mg	N	O	0
			468	378	9	36	45	
30	14	1	Total	C	Mg	N	O	0
			468	378	9	36	45	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	
30	15	1	Total	C	Mg	N	O	0
			685	555	13	52	65	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
30	15	1	Total 685	C 555	Mg 13	N 52	O 65	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0
30	16	1	Total 478	C 388	Mg 9	N 36	O 45	0

- Molecule 31 is PHYLLOQUINONE (three-letter code: PQN) (formula: C<sub>31</sub>H<sub>46</sub>O<sub>2</sub>).



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

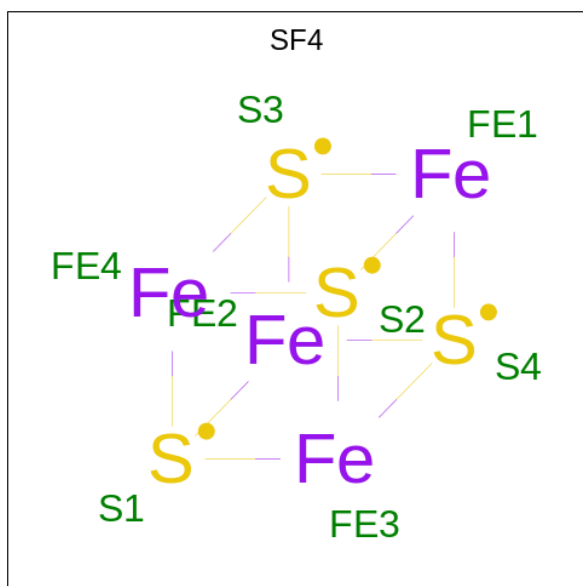
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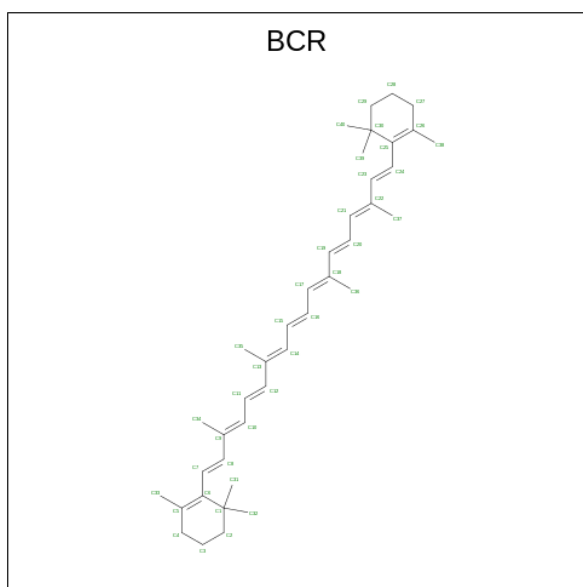
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
31	B	1	33	31	2	0

- Molecule 32 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe<sub>4</sub>S<sub>4</sub>).



Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
32	A	1	8	4	4	0
32	C	1	16	8	8	0
32	C	1	16	8	8	0

- Molecule 33 is BETA-CAROTENE (three-letter code: BCR) (formula: C<sub>40</sub>H<sub>56</sub>).



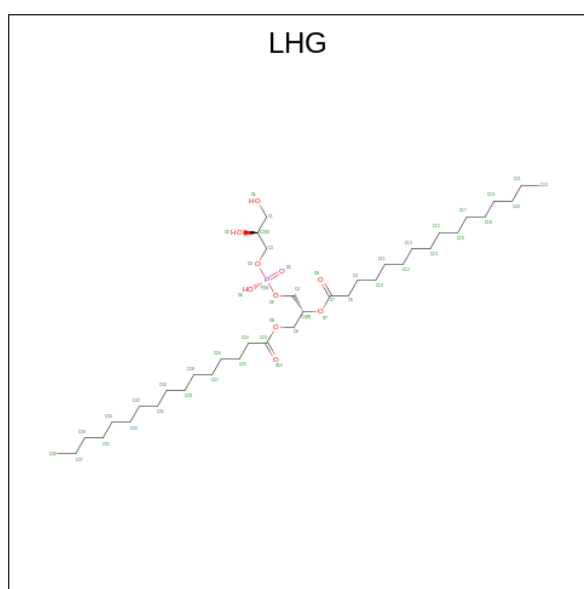
Mol	Chain	Residues	Atoms	AltConf
33	A	1	Total C 200 200	0
33	A	1	Total C 200 200	0
33	A	1	Total C 200 200	0
33	A	1	Total C 200 200	0
33	A	1	Total C 200 200	0
33	B	1	Total C 240 240	0
33	B	1	Total C 240 240	0
33	B	1	Total C 240 240	0
33	B	1	Total C 240 240	0
33	B	1	Total C 240 240	0
33	B	1	Total C 240 240	0
33	F	1	Total C 40 40	0
33	I	1	Total C 40 40	0
33	J	1	Total C 80 80	0

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Mol	Chain	Residues	Atoms		AltConf
33	J	1	Total	C	0
			80	80	
33	L	1	Total	C	0
			120	120	
33	L	1	Total	C	0
			120	120	
33	L	1	Total	C	0
			120	120	
33	M	1	Total	C	0
			40	40	
33	2u	1	Total	C	0
			40	40	

- Molecule 34 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula:  $C_{38}H_{75}O_{10}P$ ).



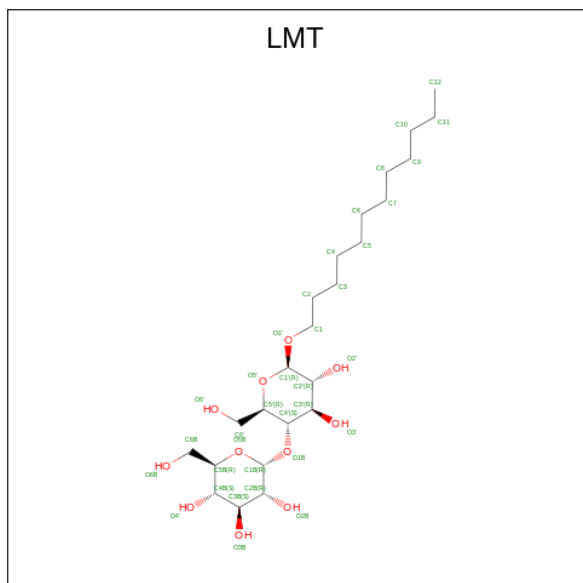
Mol	Chain	Residues	Atoms				AltConf
34	A	1	Total	C	O	P	0
			76	54	20	2	
34	A	1	Total	C	O	P	0
			76	54	20	2	
34	B	1	Total	C	O	P	0
			27	16	10	1	
34	2	1	Total	C	O	P	0
			27	16	10	1	
34	5	1	Total	C	O	P	0
			27	16	10	1	

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
34	6	1	Total	C	O	P	0
			27	16	10	1	
34	9	1	Total	C	O	P	0
			34	23	10	1	

- Molecule 35 is DODECYL-BETA-D-MALTOSE (three-letter code: LMT) (formula:  $C_{24}H_{46}O_{11}$ ).



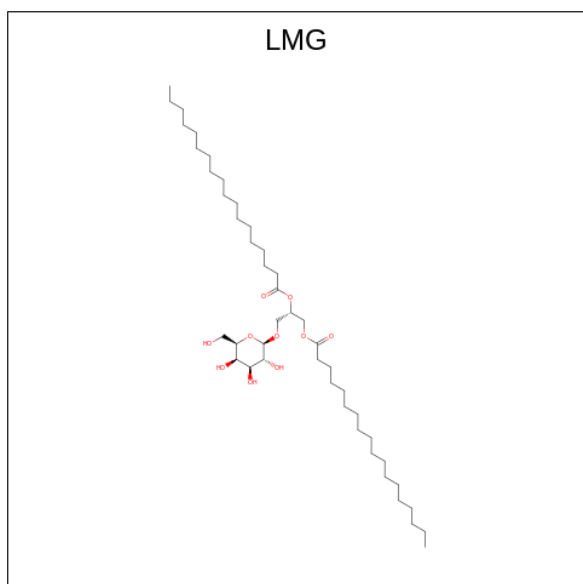
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
35	A	1	Total	C	O	0
			105	72	33	
35	A	1	Total	C	O	0
			105	72	33	
35	A	1	Total	C	O	0
			105	72	33	
35	B	1	Total	C	O	0
			70	48	22	
35	B	1	Total	C	O	0
			70	48	22	
35	1	1	Total	C	O	0
			35	24	11	
35	6	1	Total	C	O	0
			31	20	11	
35	7	1	Total	C	O	0
			70	48	22	
35	7	1	Total	C	O	0
			70	48	22	

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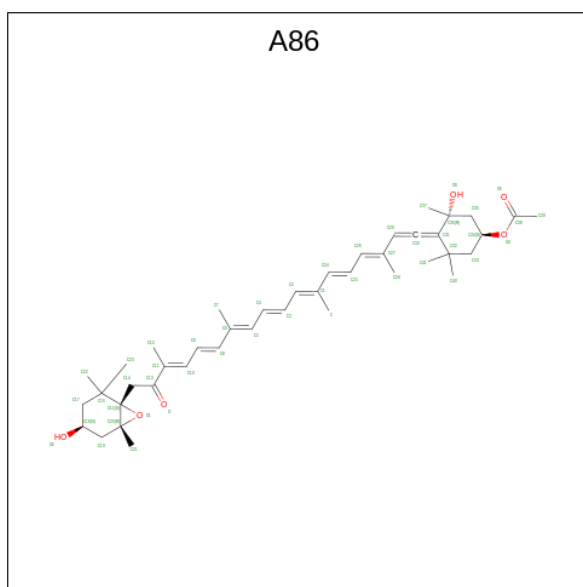
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
35	8	1	Total 35	C 24	O 11	0
35	9	1	Total 32	C 21	O 11	0
35	11	1	Total 140	C 96	O 44	0
35	11	1	Total 140	C 96	O 44	0
35	11	1	Total 140	C 96	O 44	0
35	11	1	Total 140	C 96	O 44	0
35	12	1	Total 140	C 96	O 44	0
35	12	1	Total 140	C 96	O 44	0
35	12	1	Total 140	C 96	O 44	0
35	12	1	Total 140	C 96	O 44	0
35	12	1	Total 140	C 96	O 44	0
35	15	1	Total 35	C 24	O 11	0
35	16	1	Total 35	C 24	O 11	0

- Molecule 36 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula:  $C_{45}H_{86}O_{10}$ ).



Mol	Chain	Residues	Atoms			AltConf
36	A	1	Total	C	O	0
			34	24	10	
36	B	1	Total	C	O	0
			98	78	20	
36	B	1	Total	C	O	0
			98	78	20	
36	F	1	Total	C	O	0
			27	17	10	
36	2u	1	Total	C	O	0
			31	21	10	
36	3	1	Total	C	O	0
			37	27	10	
36	5	1	Total	C	O	0
			33	23	10	
36	6	1	Total	C	O	0
			33	23	10	
36	7	1	Total	C	O	0
			37	27	10	
36	8	1	Total	C	O	0
			108	78	30	
36	8	1	Total	C	O	0
			108	78	30	
36	8	1	Total	C	O	0
			108	78	30	
36	14	1	Total	C	O	0
			38	28	10	

- Molecule 37 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: C<sub>42</sub>H<sub>58</sub>O<sub>6</sub>).



Mol	Chain	Residues	Atoms			AltConf
37	2u	1	Total	C	O	0
			96	84	12	
37	2u	1	Total	C	O	0
			96	84	12	
37	1	1	Total	C	O	0
			48	42	6	
37	2	1	Total	C	O	0
			144	126	18	
37	2	1	Total	C	O	0
			144	126	18	
37	2	1	Total	C	O	0
			144	126	18	
37	3	1	Total	C	O	0
			96	84	12	
37	3	1	Total	C	O	0
			96	84	12	
37	4	1	Total	C	O	0
			192	168	24	
37	4	1	Total	C	O	0
			192	168	24	
37	4	1	Total	C	O	0
			192	168	24	
37	4	1	Total	C	O	0
			192	168	24	
37	5	1	Total	C	O	0
			144	126	18	
37	5	1	Total	C	O	0
			144	126	18	

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
37	5	1	144	126	18	0
37	6	1	48	42	6	0
37	7	1	144	126	18	0
37	7	1	144	126	18	0
37	7	1	144	126	18	0
37	8	1	96	84	12	0
37	8	1	96	84	12	0
37	9	1	144	126	18	0
37	9	1	144	126	18	0
37	9	1	144	126	18	0
37	10	1	240	210	30	0
37	10	1	240	210	30	0
37	10	1	240	210	30	0
37	10	1	240	210	30	0
37	10	1	240	210	30	0
37	11	1	192	168	24	0
37	11	1	192	168	24	0
37	11	1	192	168	24	0
37	11	1	192	168	24	0
37	12	1	96	84	12	0
37	12	1	96	84	12	0

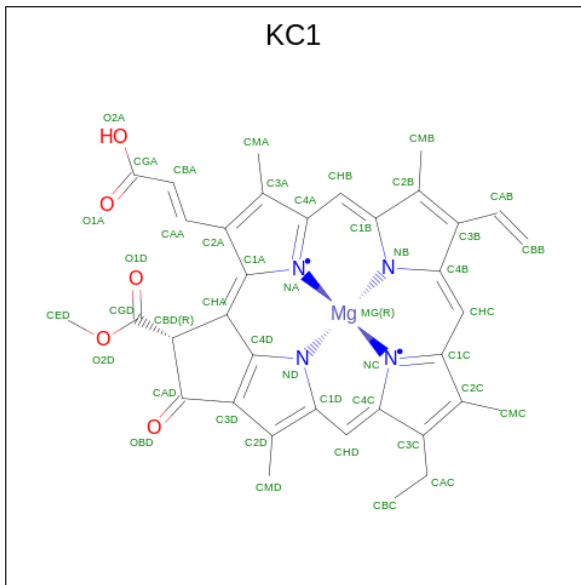
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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
37	13	1	93	82	11	0
37	13	1	93	82	11	0
37	14	1	384	336	48	0
37	14	1	384	336	48	0
37	14	1	384	336	48	0
37	14	1	384	336	48	0
37	14	1	384	336	48	0
37	14	1	384	336	48	0
37	14	1	384	336	48	0
37	14	1	384	336	48	0
37	14	1	384	336	48	0
37	15	1	336	294	42	0
37	15	1	336	294	42	0
37	15	1	336	294	42	0
37	15	1	336	294	42	0
37	15	1	336	294	42	0
37	15	1	336	294	42	0
37	15	1	336	294	42	0
37	15	1	336	294	42	0
37	16	1	96	84	12	0
37	16	1	96	84	12	0

- Molecule 38 is Chlorophyll c1 (three-letter code: KC1) (formula:  $C_{35}H_{30}MgN_4O_5$ ).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
38	1	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
38	1	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
38	2	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	2	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	2	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	3	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	3	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	3	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	4	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	4	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	4	1	Total	C	Mg	N	O	0
			135	105	3	12	15	
38	5	1	Total	C	Mg	N	O	0
			180	140	4	16	20	
38	5	1	Total	C	Mg	N	O	0
			180	140	4	16	20	
38	5	1	Total	C	Mg	N	O	0
			180	140	4	16	20	

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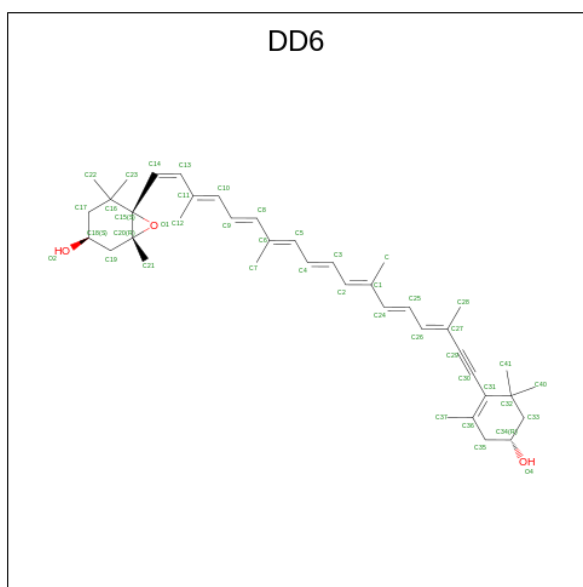
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
38	5	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	6	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	6	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	6	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	6	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	7	1	Total 90	C 70	Mg 2	N 8	O 10	0
38	7	1	Total 90	C 70	Mg 2	N 8	O 10	0
38	8	1	Total 315	C 245	Mg 7	N 28	O 35	0
38	8	1	Total 315	C 245	Mg 7	N 28	O 35	0
38	8	1	Total 315	C 245	Mg 7	N 28	O 35	0
38	8	1	Total 315	C 245	Mg 7	N 28	O 35	0
38	8	1	Total 315	C 245	Mg 7	N 28	O 35	0
38	8	1	Total 315	C 245	Mg 7	N 28	O 35	0
38	8	1	Total 315	C 245	Mg 7	N 28	O 35	0
38	8	1	Total 315	C 245	Mg 7	N 28	O 35	0
38	9	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	9	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	9	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	9	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	10	1	Total 135	C 105	Mg 3	N 12	O 15	0
38	10	1	Total 135	C 105	Mg 3	N 12	O 15	0
38	10	1	Total 135	C 105	Mg 3	N 12	O 15	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
38	11	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	11	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	11	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	11	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	12	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	12	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	12	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	12	1	Total 180	C 140	Mg 4	N 16	O 20	0
38	13	1	Total 270	C 210	Mg 6	N 24	O 30	0
38	13	1	Total 270	C 210	Mg 6	N 24	O 30	0
38	13	1	Total 270	C 210	Mg 6	N 24	O 30	0
38	13	1	Total 270	C 210	Mg 6	N 24	O 30	0
38	13	1	Total 270	C 210	Mg 6	N 24	O 30	0
38	13	1	Total 270	C 210	Mg 6	N 24	O 30	0
38	13	1	Total 270	C 210	Mg 6	N 24	O 30	0
38	14	1	Total 135	C 105	Mg 3	N 12	O 15	0
38	14	1	Total 135	C 105	Mg 3	N 12	O 15	0
38	14	1	Total 135	C 105	Mg 3	N 12	O 15	0
38	16	1	Total 90	C 70	Mg 2	N 8	O 10	0
38	16	1	Total 90	C 70	Mg 2	N 8	O 10	0

- Molecule 39 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: C<sub>40</sub>H<sub>54</sub>O<sub>3</sub>).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
39	1	1	43	40	3	0
39	2	1	129	120	9	0
39	2	1	129	120	9	0
39	2	1	129	120	9	0
39	3	1	129	120	9	0
39	3	1	129	120	9	0
39	3	1	129	120	9	0
39	4	1	86	80	6	0
39	4	1	86	80	6	0
39	5	1	86	80	6	0
39	5	1	86	80	6	0
39	6	1	172	160	12	0
39	6	1	172	160	12	0
39	6	1	172	160	12	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
39	6	1	172	160	12	0
39	7	1	172	160	12	0
39	7	1	172	160	12	0
39	7	1	172	160	12	0
39	7	1	172	160	12	0
39	8	1	86	80	6	0
39	8	1	86	80	6	0
39	9	1	43	40	3	0
39	10	1	86	80	6	0
39	10	1	86	80	6	0
39	11	1	43	40	3	0
39	12	1	86	80	6	0
39	12	1	86	80	6	0
39	13	1	43	40	3	0
39	15	1	86	80	6	0
39	15	1	86	80	6	0
39	16	1	43	40	3	0

- Molecule 40 is water.

Mol	Chain	Residues	Atoms		AltConf
40	A	42	42	42	0
40	B	53	53	53	0

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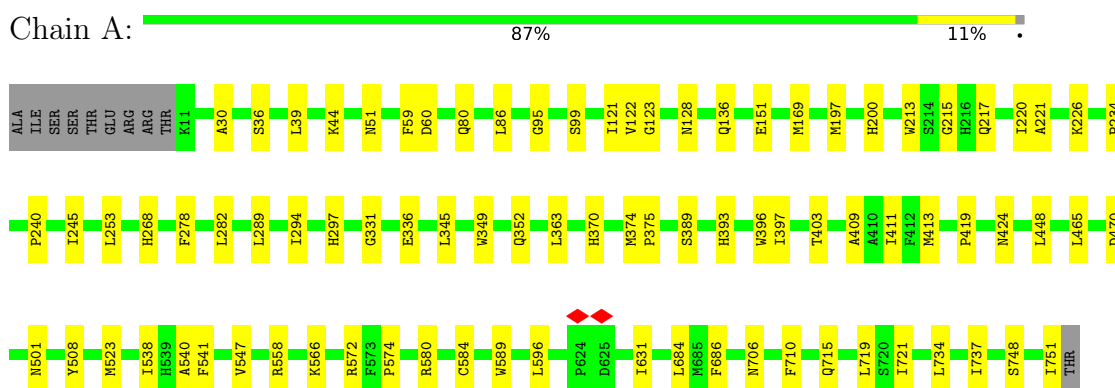
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Mol	Chain	Residues	Atoms		AltConf
40	C	15	Total 15	O 15	0
40	D	13	Total 13	O 13	0
40	E	3	Total 3	O 3	0
40	F	3	Total 3	O 3	0
40	I	1	Total 1	O 1	0
40	L	8	Total 8	O 8	0
40	1	1	Total 1	O 1	0
40	2	2	Total 2	O 2	0
40	3	1	Total 1	O 1	0
40	5	1	Total 1	O 1	0
40	6	2	Total 2	O 2	0
40	7	2	Total 2	O 2	0
40	8	4	Total 4	O 4	0
40	9	1	Total 1	O 1	0
40	10	1	Total 1	O 1	0
40	11	1	Total 1	O 1	0
40	12	2	Total 2	O 2	0

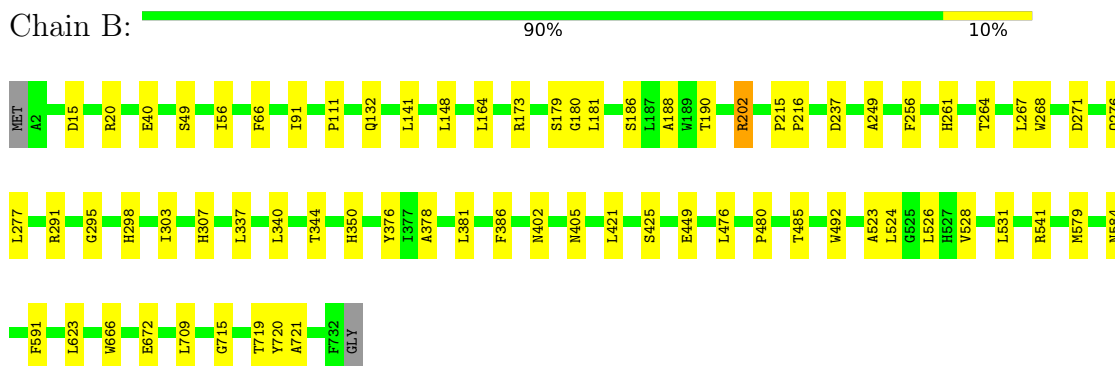
### 3 Residue-property plots

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

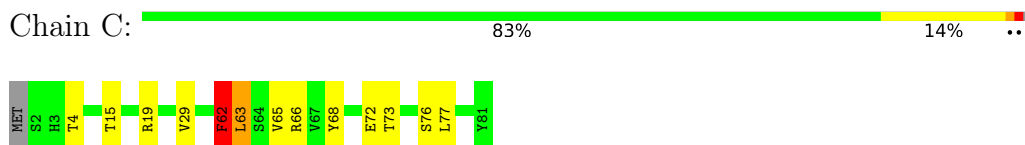
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1



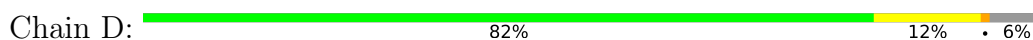
- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2



- Molecule 3: Photosystem I iron-sulfur center



- Molecule 4: Photosystem I reaction center subunit II

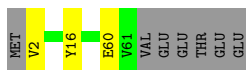






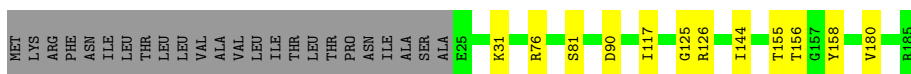
- Molecule 5: Photosystem I reaction center subunit IV

Chain E: 85% 10%



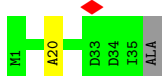
- Molecule 6: Photosystem I reaction center subunit III

Chain F: 81% 6% 13%



- Molecule 7: Photosystem I reaction center subunit VIII

Chain I: 94%



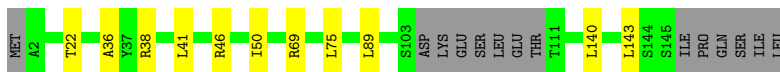
- Molecule 8: Photosystem I reaction center subunit IX

Chain J: 76% 24%



- Molecule 9: Photosystem I reaction center subunit XI

Chain L: 83% 7% 9%



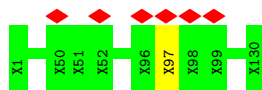
- Molecule 10: Photosystem I reaction center subunit XII

Chain M: 93% 7%

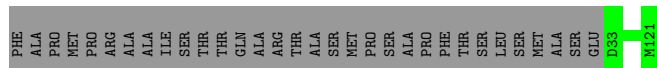
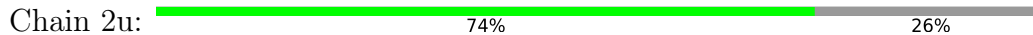


- Molecule 11: Unknown protein 1

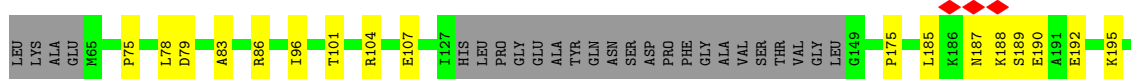
Chain 1u: 5% 99%



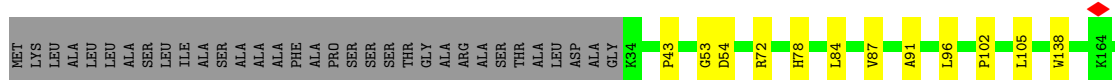
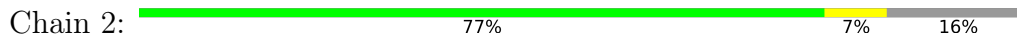
• Molecule 12: Photosystem I reaction center subunit Psa28



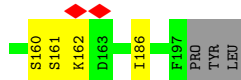
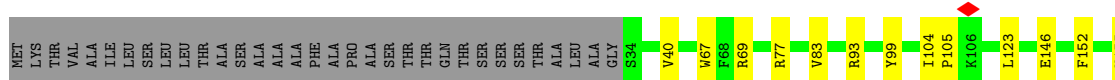
• Molecule 13: Fucoxanthin chlorophyll a/c-binding protein Lhcr15



• Molecule 14: Fucoxanthin chlorophyll a/c-binding protein Lhcr8

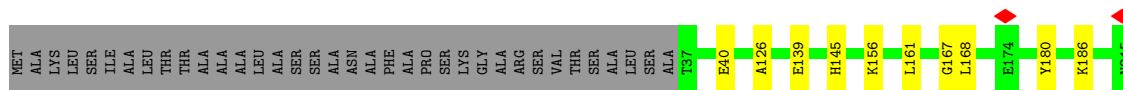


• Molecule 15: Fucoxanthin chlorophyll a/c-binding protein Lhcr2

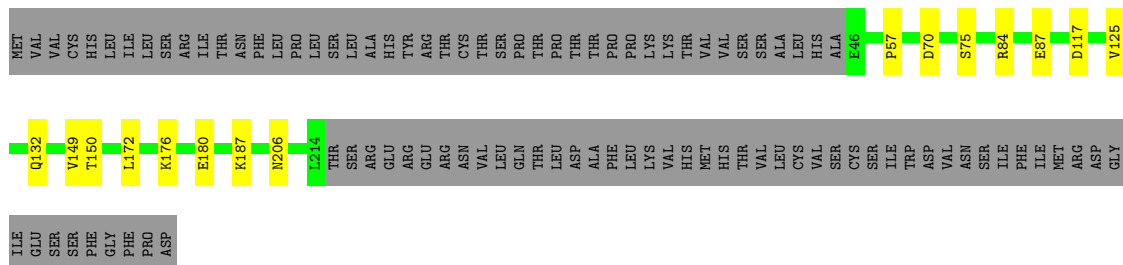


• Molecule 16: Fucoxanthin chlorophyll a/c-binding protein Lhcr9

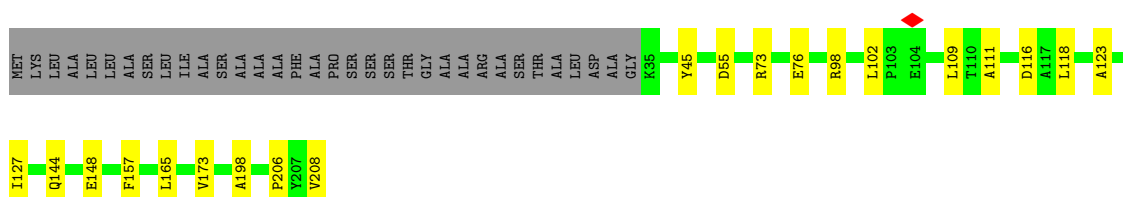




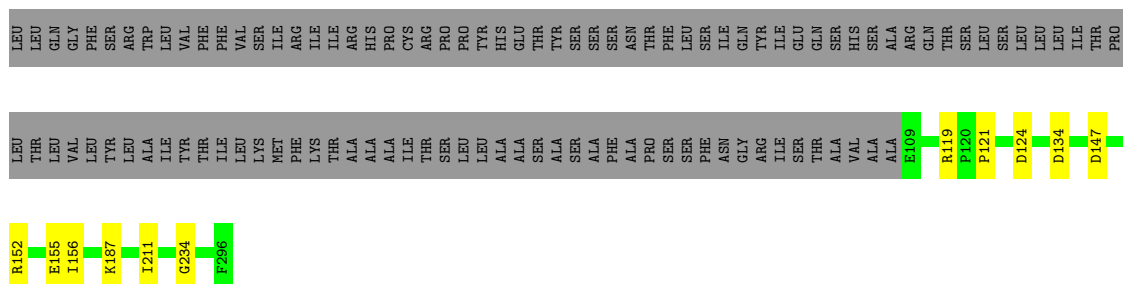
• Molecule 17: Fucoxanthin chlorophyll a/c-binding protein Lher11



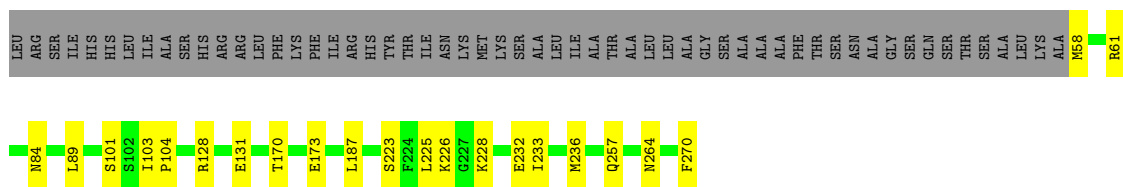
• Molecule 18: Fucoxanthin chlorophyll a/c-binding protein Lher12



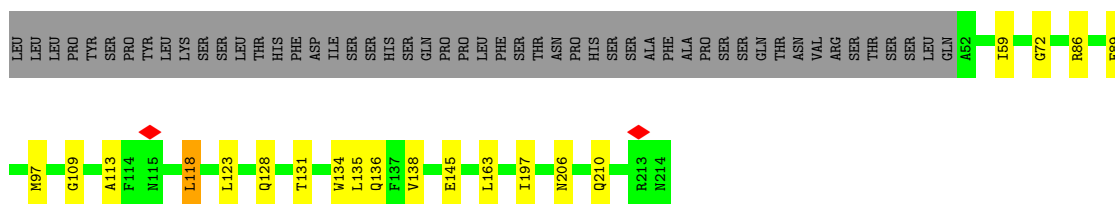
• Molecule 19: Fucoxanthin chlorophyll a/c-binding protein Lher10



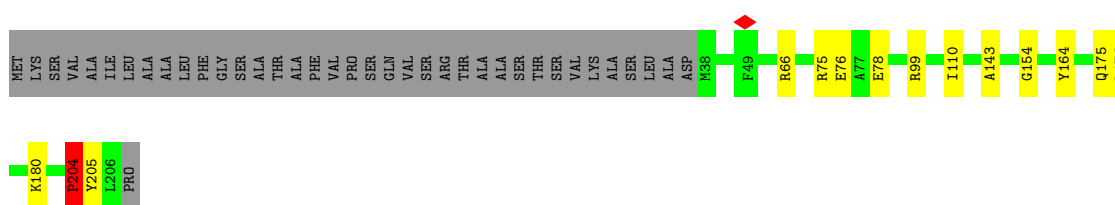
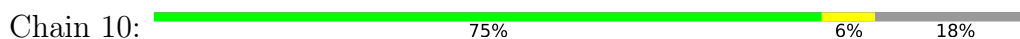
• Molecule 20: Fucoxanthin chlorophyll a/c-binding protein Lher4



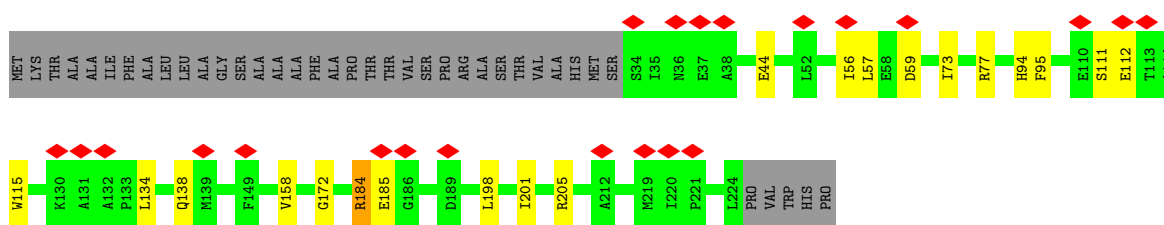
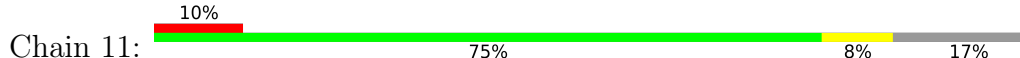
• Molecule 21: Fucoxanthin chlorophyll a/c-binding protein Lhcf6



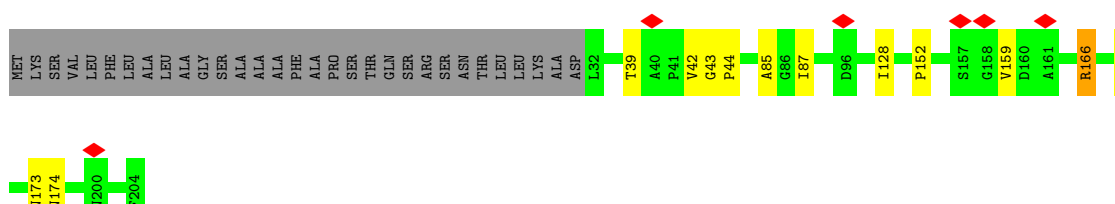
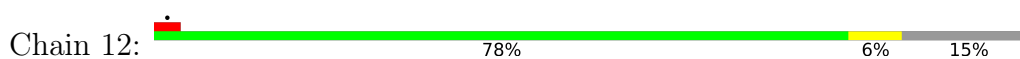
• Molecule 22: Fucoxanthin chlorophyll a/c-binding protein Lhcr3



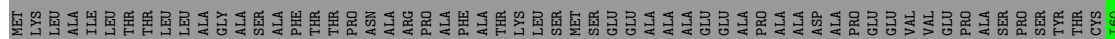
• Molecule 23: Fucoxanthin chlorophyll a/c-binding protein Lhcq13

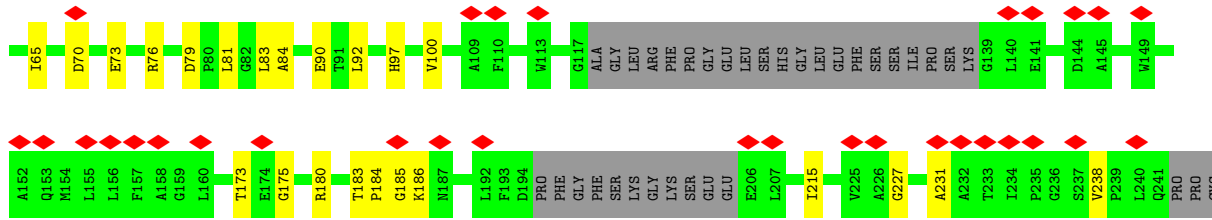


• Molecule 24: Fucoxanthin chlorophyll a/c-binding protein Lhcq3

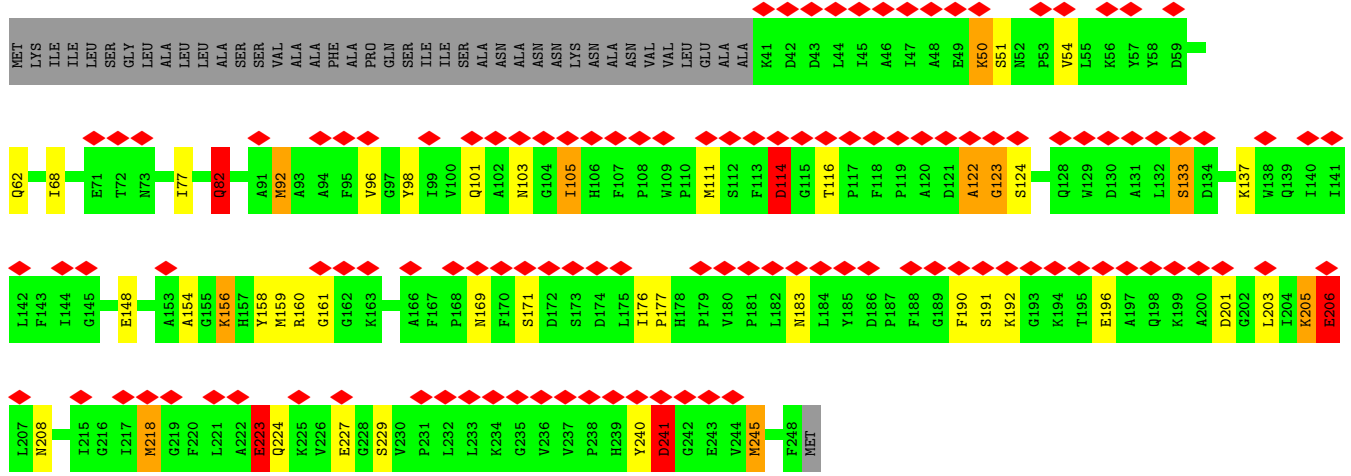


• Molecule 25: Fucoxanthin chlorophyll a/c-binding protein Lhcq11

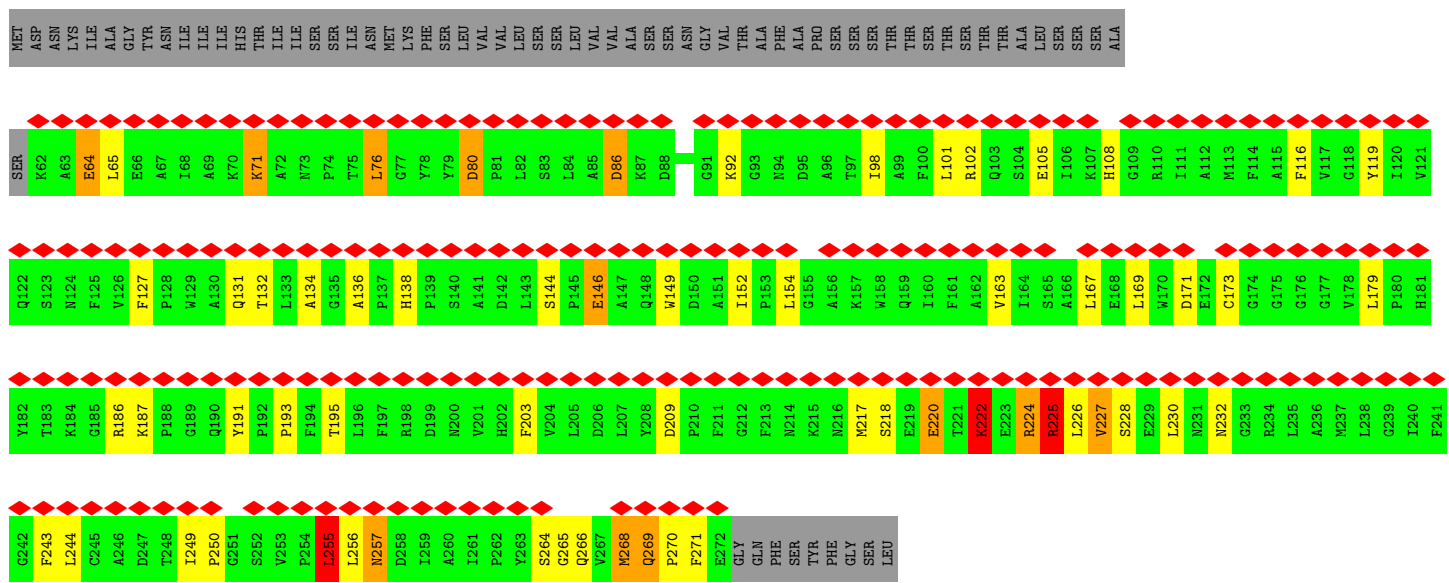
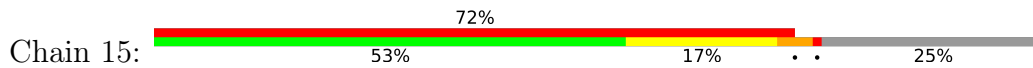




• Molecule 26: Fucoxanthin chlorophyll a/c-binding protein Lhcq10

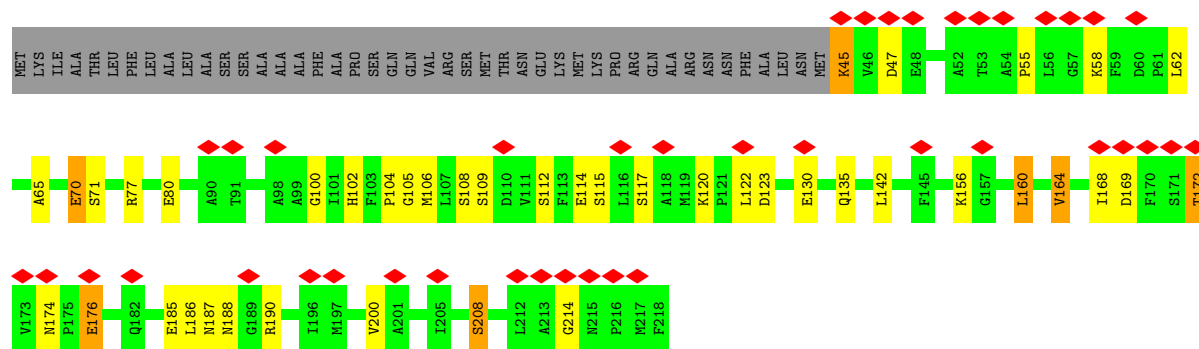


• Molecule 27: Fucoxanthin chlorophyll a/c-binding protein Lhcq8



• Molecule 28: Fucoxanthin chlorophyll a/c-binding protein Lhcq5





## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	470801	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)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	0.401	Depositor
Minimum map value	-0.141	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.045	Depositor
Map size (Å)	560.952, 560.952, 560.952	wwPDB
Map dimensions	504, 504, 504	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.113, 1.113, 1.113	Depositor

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: LHG, DD6, LMG, KC1, CL0, SF4, A86, CLA, LMT, BCR, PQN

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	0.39	0/6039	0.50	0/8220
2	B	0.38	0/6011	0.51	0/8209
3	C	0.44	0/609	0.63	1/826 (0.1%)
4	D	0.38	0/1064	0.62	0/1437
5	E	0.37	0/486	0.53	0/656
6	F	0.36	0/1287	0.50	0/1745
7	I	0.37	0/281	0.60	0/383
8	J	0.34	0/355	0.56	0/480
9	L	0.34	0/1054	0.49	0/1432
10	M	0.32	0/229	0.48	0/313
12	2u	0.32	0/696	0.45	0/948
13	1	0.30	0/1106	0.45	0/1490
14	2	0.35	0/1344	0.55	0/1818
15	3	0.32	0/1309	0.57	2/1767 (0.1%)
16	4	0.35	0/1404	0.51	0/1897
17	5	0.33	0/1336	0.52	0/1804
18	6	0.36	0/1391	0.48	0/1886
19	7	0.33	0/1445	0.48	0/1952
20	8	0.35	0/1706	0.49	0/2310
21	9	0.32	0/1302	0.54	1/1769 (0.1%)
22	10	0.32	0/1344	0.51	0/1824
23	11	0.30	0/1522	0.52	0/2070
24	12	0.32	0/1305	0.51	0/1776
25	13	0.31	0/1177	0.52	0/1592
26	14	0.55	4/1660 (0.2%)	1.29	23/2255 (1.0%)
27	15	0.61	2/1705 (0.1%)	1.46	33/2319 (1.4%)
28	16	0.48	1/1347 (0.1%)	0.98	12/1833 (0.7%)
All	All	0.38	7/40514 (0.0%)	0.65	72/55011 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected



by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
4	D	0	1
11	1u	0	1
16	4	0	1
21	9	0	2
22	10	0	1
26	14	0	7
27	15	0	8
28	16	0	1
All	All	0	22

The worst 5 of 7 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	15	146	GLU	CB-CG	-10.73	1.31	1.52
28	16	70	GLU	CB-CG	-7.53	1.37	1.52
26	14	50	LYS	CD-CE	-6.61	1.34	1.51
26	14	206	GLU	CG-CD	-5.84	1.43	1.51
27	15	224	ARG	CB-CG	-5.79	1.36	1.52

The worst 5 of 72 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	14	92	MET	CA-CB-CG	25.47	156.60	113.30
27	15	224	ARG	NE-CZ-NH1	-23.93	108.33	120.30
27	15	224	ARG	NE-CZ-NH2	22.70	131.65	120.30
27	15	146	GLU	CA-CB-CG	16.51	149.72	113.40
26	14	92	MET	CB-CG-SD	13.82	153.87	112.40

There are no chirality outliers.

5 of 22 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	1u	97	UNK	Peptide
16	4	145	HIS	Sidechain
21	9	109	GLY	Peptide
21	9	113	ALA	Peptide
4	D	91	GLU	Peptide

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5841	0	5666	71	0
2	B	5801	0	5614	50	0
3	C	599	0	579	6	0
4	D	1037	0	1023	10	0
5	E	478	0	473	2	0
6	F	1257	0	1259	11	0
7	I	273	0	285	1	0
8	J	344	0	351	10	0
9	L	1030	0	1063	11	0
10	M	227	0	247	2	0
11	1u	650	0	138	0	0
12	2u	674	0	658	0	0
13	1	1086	0	1089	13	0
14	2	1310	0	1287	13	0
15	3	1275	0	1239	9	0
16	4	1368	0	1344	8	0
17	5	1304	0	1286	10	0
18	6	1354	0	1328	13	0
19	7	1416	0	1379	8	0
20	8	1660	0	1625	16	0
21	9	1267	0	1210	12	0
22	10	1302	0	1274	8	0
23	11	1479	0	1452	16	0
24	12	1274	0	1267	10	0
25	13	1148	0	1130	16	0
26	14	1609	0	1568	22	0
27	15	1654	0	1613	21	0
28	16	1313	0	1309	22	0
29	A	65	0	72	3	0
30	1	390	0	425	12	0
30	10	435	0	465	7	0
30	11	315	0	337	11	0
30	12	566	0	604	12	0
30	13	350	0	354	11	0
30	14	468	0	400	8	0
30	15	685	0	589	16	0
30	16	478	0	429	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	2	620	0	649	16	0
30	2u	65	0	72	0	0
30	3	472	0	474	8	0
30	4	484	0	495	14	0
30	5	455	0	499	12	0
30	6	620	0	656	13	0
30	7	566	0	609	14	0
30	8	420	0	427	8	0
30	9	486	0	503	12	0
30	A	2614	0	2694	105	0
30	B	2465	0	2570	91	0
30	F	175	0	177	9	0
30	J	45	0	33	1	0
30	L	110	0	105	7	0
31	A	33	0	46	5	0
31	B	33	0	46	1	0
32	A	8	0	0	0	0
32	C	16	0	0	0	0
33	2u	40	0	56	0	0
33	A	200	0	280	13	0
33	B	240	0	336	12	0
33	F	40	0	56	3	0
33	I	40	0	56	2	0
33	J	80	0	112	7	0
33	L	120	0	168	10	0
33	M	40	0	56	3	0
34	2	27	0	24	0	0
34	5	27	0	24	1	0
34	6	27	0	24	0	0
34	9	34	0	38	0	0
34	A	76	0	98	2	0
34	B	27	0	24	0	0
35	1	35	0	46	0	0
35	11	140	0	184	5	0
35	12	140	0	184	4	0
35	15	35	0	46	0	0
35	16	35	0	46	0	0
35	6	31	0	35	2	0
35	7	70	0	91	2	0
35	8	35	0	46	0	0
35	9	32	0	37	0	0
35	A	105	0	138	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	B	70	0	92	0	0
36	14	38	0	46	2	0
36	2u	31	0	31	0	0
36	3	37	0	44	2	0
36	5	33	0	36	0	0
36	6	33	0	34	1	0
36	7	37	0	44	0	0
36	8	108	0	123	1	0
36	A	34	0	38	2	0
36	B	98	0	141	3	0
36	F	27	0	24	0	0
37	1	48	0	0	0	0
37	10	240	0	0	0	0
37	11	192	0	0	2	0
37	12	96	0	0	0	0
37	13	93	0	0	0	0
37	14	384	0	0	2	0
37	15	336	0	0	0	0
37	16	96	0	0	0	0
37	2	144	0	0	0	0
37	2u	96	0	0	0	0
37	3	96	0	0	0	0
37	4	192	0	0	1	0
37	5	144	0	0	1	0
37	6	48	0	0	0	0
37	7	144	0	0	1	0
37	8	96	0	0	1	0
37	9	144	0	0	1	0
38	1	90	0	0	0	0
38	10	135	0	0	0	0
38	11	180	0	0	0	0
38	12	180	0	0	1	0
38	13	270	0	0	0	0
38	14	135	0	0	0	0
38	16	90	0	0	1	0
38	2	135	0	0	0	0
38	3	135	0	0	1	0
38	4	135	0	0	1	0
38	5	180	0	0	2	0
38	6	180	0	0	0	0
38	7	90	0	0	0	0
38	8	315	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	9	180	0	0	0	0
39	1	43	0	0	0	0
39	10	86	0	0	1	0
39	11	43	0	0	0	0
39	12	86	0	0	0	0
39	13	43	0	0	1	0
39	15	86	0	0	0	0
39	16	43	0	0	0	0
39	2	129	0	0	0	0
39	3	129	0	0	0	0
39	4	86	0	0	0	0
39	5	86	0	0	0	0
39	6	172	0	0	3	0
39	7	172	0	0	0	0
39	8	86	0	0	0	0
39	9	43	0	0	0	0
40	1	1	0	0	0	0
40	10	1	0	0	0	0
40	11	1	0	0	0	0
40	12	2	0	0	0	0
40	2	2	0	0	0	0
40	3	1	0	0	0	0
40	5	1	0	0	0	0
40	6	2	0	0	0	0
40	7	2	0	0	0	0
40	8	4	0	0	0	0
40	9	1	0	0	0	0
40	A	42	0	0	2	0
40	B	53	0	0	0	0
40	C	15	0	0	0	0
40	D	13	0	0	0	0
40	E	3	0	0	0	0
40	F	3	0	0	0	0
40	I	1	0	0	0	0
40	L	8	0	0	0	0
All	All	62199	0	55344	644	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 6.

The worst 5 of 644 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:14:101:GLN:OE1	30:14:303:CLA:NA	2.01	0.94
23:11:44:GLU:OE1	30:11:310:CLA:NC	2.10	0.84
25:13:73:GLU:OE1	30:13:307:CLA:NC	2.11	0.83
27:15:105:GLU:OE1	30:15:302:CLA:NB	2.21	0.74
30:B:815:CLA:HBB1	33:B:841:BCR:H333	1.74	0.70

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	739/751 (98%)	712 (96%)	25 (3%)	2 (0%)	41	55
2	B	729/733 (100%)	699 (96%)	29 (4%)	1 (0%)	51	68
3	C	78/81 (96%)	73 (94%)	3 (4%)	2 (3%)	5	5
4	D	129/139 (93%)	109 (84%)	18 (14%)	2 (2%)	9	13
5	E	58/67 (87%)	55 (95%)	3 (5%)	0	100	100
6	F	159/185 (86%)	152 (96%)	7 (4%)	0	100	100
7	I	33/36 (92%)	30 (91%)	3 (9%)	0	100	100
8	J	39/41 (95%)	39 (100%)	0	0	100	100
9	L	133/151 (88%)	128 (96%)	5 (4%)	0	100	100
10	M	28/30 (93%)	28 (100%)	0	0	100	100
12	2u	87/121 (72%)	87 (100%)	0	0	100	100
13	1	137/227 (60%)	130 (95%)	7 (5%)	0	100	100
14	2	170/205 (83%)	151 (89%)	19 (11%)	0	100	100
15	3	162/200 (81%)	151 (93%)	9 (6%)	2 (1%)	13	19
16	4	177/215 (82%)	167 (94%)	10 (6%)	0	100	100
17	5	167/266 (63%)	157 (94%)	10 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	6	172/208 (83%)	167 (97%)	5 (3%)	0	100	100
19	7	186/296 (63%)	179 (96%)	7 (4%)	0	100	100
20	8	211/270 (78%)	203 (96%)	8 (4%)	0	100	100
21	9	161/214 (75%)	149 (92%)	12 (8%)	0	100	100
22	10	167/207 (81%)	157 (94%)	8 (5%)	2 (1%)	13	19
23	11	189/229 (82%)	173 (92%)	16 (8%)	0	100	100
24	12	171/204 (84%)	160 (94%)	11 (6%)	0	100	100
25	13	144/244 (59%)	133 (92%)	11 (8%)	0	100	100
26	14	206/249 (83%)	177 (86%)	29 (14%)	0	100	100
27	15	209/281 (74%)	171 (82%)	37 (18%)	1 (0%)	29	41
28	16	172/218 (79%)	157 (91%)	15 (9%)	0	100	100
All	All	5013/6068 (83%)	4694 (94%)	307 (6%)	12 (0%)	50	62

5 of 12 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	122	VAL
4	D	92	VAL
2	B	492	TRP
3	C	62	PHE
3	C	63	LEU

### 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	602/611 (98%)	601 (100%)	1 (0%)	93	97
2	B	592/593 (100%)	589 (100%)	3 (0%)	88	95
3	C	69/70 (99%)	66 (96%)	3 (4%)	29	46
4	D	111/119 (93%)	111 (100%)	0	100	100
5	E	51/58 (88%)	51 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	F	132/153 (86%)	132 (100%)	0	100	100
7	I	29/29 (100%)	29 (100%)	0	100	100
8	J	37/37 (100%)	37 (100%)	0	100	100
9	L	107/121 (88%)	107 (100%)	0	100	100
10	M	24/24 (100%)	24 (100%)	0	100	100
12	2u	69/94 (73%)	69 (100%)	0	100	100
13	1	114/183 (62%)	113 (99%)	1 (1%)	78	90
14	2	134/154 (87%)	134 (100%)	0	100	100
15	3	128/154 (83%)	127 (99%)	1 (1%)	81	91
16	4	142/165 (86%)	142 (100%)	0	100	100
17	5	137/228 (60%)	136 (99%)	1 (1%)	84	92
18	6	140/160 (88%)	140 (100%)	0	100	100
19	7	143/236 (61%)	143 (100%)	0	100	100
20	8	171/215 (80%)	171 (100%)	0	100	100
21	9	126/175 (72%)	125 (99%)	1 (1%)	81	91
22	10	133/161 (83%)	133 (100%)	0	100	100
23	11	154/181 (85%)	153 (99%)	1 (1%)	86	94
24	12	136/159 (86%)	134 (98%)	2 (2%)	65	80
25	13	112/184 (61%)	111 (99%)	1 (1%)	78	90
26	14	166/196 (85%)	145 (87%)	21 (13%)	4	5
27	15	171/231 (74%)	151 (88%)	20 (12%)	5	7
28	16	139/174 (80%)	127 (91%)	12 (9%)	10	16
All	All	4069/4865 (84%)	4001 (98%)	68 (2%)	62	78

5 of 68 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
28	16	47	ASP
28	16	70	GLU
28	16	172	THR
26	14	156	LYS
26	14	133	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 37 such sidechains are listed below:



Mol	Chain	Res	Type
22	10	175	GLN
28	16	177	GLN
22	10	201	HIS
26	14	183	ASN
2	B	632	ASN

### 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](#)

427 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	3	310	15	45,53,73	2.40	17 (37%)	52,89,113	3.21	24 (46%)
30	CLA	B	820	2	45,53,73	2.42	16 (35%)	52,89,113	3.39	22 (42%)
38	KC1	5	310	17	48,53,53	3.42	24 (50%)	55,89,89	3.91	30 (54%)
31	PQN	B	840	-	34,34,34	1.50	2 (5%)	42,45,45	1.09	4 (9%)
38	KC1	5	306	17	48,53,53	3.41	24 (50%)	55,89,89	4.11	30 (54%)
37	A86	2	319	-	44,50,50	3.89	22 (50%)	51,76,76	7.61	18 (35%)
39	DD6	6	318	-	39,45,45	6.65	23 (58%)	52,67,67	6.55	29 (55%)
30	CLA	A	825	1	59,67,73	2.09	17 (28%)	68,105,113	2.76	26 (38%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	A	831	1	65,73,73	1.98	16 (24%)	76,113,113	2.83	28 (36%)
30	CLA	15	312	27	45,53,73	2.47	16 (35%)	52,89,113	3.33	28 (53%)
38	KC1	6	312	18	48,53,53	3.39	25 (52%)	55,89,89	3.69	30 (54%)
38	KC1	8	307	20	48,53,53	3.36	23 (47%)	55,89,89	3.88	30 (54%)
39	DD6	3	312	-	39,45,45	6.71	23 (58%)	52,67,67	6.79	26 (50%)
38	KC1	1	306	13	48,53,53	3.45	25 (52%)	55,89,89	3.83	30 (54%)
30	CLA	16	306	28	52,60,73	2.26	18 (34%)	60,97,113	2.95	28 (46%)
35	LMT	12	319	-	36,36,36	0.40	0	47,47,47	0.86	0
30	CLA	1	304	13	65,73,73	1.99	16 (24%)	76,113,113	2.59	27 (35%)
32	SF4	C	101	3	0,12,12	-	-	-	-	-
30	CLA	2	305	40	65,73,73	2.00	17 (26%)	76,113,113	2.77	28 (36%)
30	CLA	12	308	40	65,73,73	2.02	18 (27%)	76,113,113	2.63	27 (35%)
30	CLA	13	302	25	65,73,73	2.03	17 (26%)	76,113,113	2.62	27 (35%)
30	CLA	6	317	-	65,73,73	2.04	17 (26%)	76,113,113	2.69	26 (34%)
30	CLA	16	309	28	45,53,73	2.48	17 (37%)	52,89,113	3.26	24 (46%)
30	CLA	F	203	6	45,53,73	2.41	17 (37%)	52,89,113	3.19	26 (50%)
39	DD6	1	310	-	39,45,45	6.70	23 (58%)	52,67,67	6.71	24 (46%)
30	CLA	L	202	9	65,73,73	1.94	16 (24%)	76,113,113	2.84	27 (35%)
37	A86	6	320	-	44,50,50	3.90	23 (52%)	51,76,76	7.09	20 (39%)
39	DD6	6	321	-	39,45,45	6.60	23 (58%)	52,67,67	6.79	28 (53%)
30	CLA	B	808	2	65,73,73	1.94	16 (24%)	76,113,113	2.75	28 (36%)
30	CLA	A	844	-	65,73,73	2.06	16 (24%)	76,113,113	2.61	29 (38%)
37	A86	15	323	-	44,50,50	4.19	23 (52%)	51,76,76	8.39	17 (33%)
30	CLA	A	823	1	49,57,73	2.28	17 (34%)	55,93,113	3.16	26 (47%)
30	CLA	1	307	13	65,73,73	2.05	18 (27%)	76,113,113	2.73	27 (35%)
38	KC1	1	308	13	48,53,53	3.44	26 (54%)	55,89,89	3.81	28 (50%)
30	CLA	3	306	15	65,73,73	2.01	15 (23%)	76,113,113	2.65	29 (38%)
30	CLA	15	305	27,37	45,53,73	2.48	16 (35%)	52,89,113	3.16	26 (50%)
30	CLA	B	810	2	65,73,73	1.95	17 (26%)	76,113,113	2.69	27 (35%)
30	CLA	5	309	34	65,73,73	2.01	17 (26%)	76,113,113	2.63	27 (35%)
30	CLA	F	202	40	65,73,73	2.01	18 (27%)	76,113,113	2.70	27 (35%)
30	CLA	10	307	22	65,73,73	1.96	17 (26%)	76,113,113	2.61	27 (35%)
37	A86	4	314	-	44,50,50	4.10	22 (50%)	51,76,76	8.17	22 (43%)
30	CLA	A	803	-	65,73,73	1.97	16 (24%)	76,113,113	2.68	30 (39%)
30	CLA	6	306	40	65,73,73	2.01	16 (24%)	76,113,113	2.70	27 (35%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	8	305	20	65,73,73	1.99	18 (27%)	76,113,113	4.76	31 (40%)
30	CLA	A	818	1	54,62,73	2.11	16 (29%)	62,99,113	3.04	27 (43%)
30	CLA	15	308	27,30	45,53,73	2.43	18 (40%)	52,89,113	3.11	26 (50%)
39	DD6	15	319	30	39,45,45	6.79	22 (56%)	52,67,67	6.92	30 (57%)
30	CLA	2	308	14	65,73,73	2.02	15 (23%)	76,113,113	2.71	27 (35%)
34	LHG	A	853	30	26,26,48	0.91	1 (3%)	29,32,54	1.29	3 (10%)
37	A86	14	319	30	44,50,50	4.09	22 (50%)	51,76,76	8.30	17 (33%)
37	A86	7	316	-	44,50,50	3.75	22 (50%)	51,76,76	7.71	27 (52%)
37	A86	10	315	-	44,50,50	4.10	22 (50%)	51,76,76	8.25	16 (31%)
30	CLA	6	307	39,18	65,73,73	2.01	16 (24%)	76,113,113	2.57	30 (39%)
31	PQN	A	845	-	34,34,34	1.52	2 (5%)	42,45,45	1.10	3 (7%)
30	CLA	B	824	40	65,73,73	2.01	17 (26%)	76,113,113	4.67	29 (38%)
33	BCR	B	844	-	41,41,41	1.13	2 (4%)	56,56,56	1.38	8 (14%)
33	BCR	M	101	-	41,41,41	1.11	3 (7%)	56,56,56	1.27	6 (10%)
30	CLA	6	305	18	65,73,73	2.05	18 (27%)	76,113,113	2.69	27 (35%)
30	CLA	A	826	40	65,73,73	1.99	18 (27%)	76,113,113	2.72	26 (34%)
33	BCR	A	849	-	41,41,41	1.14	2 (4%)	56,56,56	1.38	9 (16%)
37	A86	15	317	30	44,50,50	4.15	23 (52%)	51,76,76	8.44	15 (29%)
35	LMT	12	320	-	36,36,36	0.39	0	47,47,47	0.71	0
39	DD6	11	313	-	39,45,45	6.77	23 (58%)	52,67,67	6.83	29 (55%)
30	CLA	B	819	40	65,73,73	1.97	16 (24%)	76,113,113	2.43	28 (36%)
37	A86	11	316	-	44,50,50	4.05	23 (52%)	51,76,76	8.21	16 (31%)
38	KC1	7	308	40	48,53,53	3.43	24 (50%)	55,89,89	3.70	28 (50%)
38	KC1	14	306	26	48,53,53	3.44	27 (56%)	55,89,89	3.84	30 (54%)
38	KC1	2	306	14	48,53,53	3.44	26 (54%)	55,89,89	3.90	31 (56%)
38	KC1	12	311	24	48,53,53	3.46	25 (52%)	55,89,89	3.91	34 (61%)
35	LMT	11	318	-	36,36,36	0.43	0	47,47,47	0.88	2 (4%)
30	CLA	A	807	1	65,73,73	1.96	16 (24%)	76,113,113	2.75	29 (38%)
30	CLA	A	815	1	65,73,73	2.03	16 (24%)	76,113,113	2.72	28 (36%)
38	KC1	10	306	22	48,53,53	3.39	25 (52%)	55,89,89	3.95	31 (56%)
30	CLA	9	303	21	65,73,73	1.99	16 (24%)	76,113,113	2.69	27 (35%)
30	CLA	14	305	26	50,58,73	2.32	16 (32%)	58,95,113	3.02	27 (46%)
30	CLA	7	311	19	65,73,73	2.00	17 (26%)	76,113,113	2.60	26 (34%)
30	CLA	A	843	40	65,73,73	1.94	16 (24%)	76,113,113	2.63	27 (35%)
30	CLA	1	301	13	65,73,73	2.00	17 (26%)	76,113,113	2.64	24 (31%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	5	302	17	65,73,73	1.98	16 (24%)	76,113,113	2.66	27 (35%)
30	CLA	7	309	19	65,73,73	1.94	17 (26%)	76,113,113	2.65	24 (31%)
30	CLA	16	301	28	65,73,73	2.00	16 (24%)	76,113,113	2.76	28 (36%)
37	A86	13	315	-	44,50,50	4.18	23 (52%)	51,76,76	8.50	18 (35%)
39	DD6	3	313	-	39,45,45	6.73	23 (58%)	52,67,67	6.66	24 (46%)
38	KC1	11	305	23	48,53,53	3.42	25 (52%)	55,89,89	3.86	30 (54%)
36	LMG	6	301	30	33,33,55	0.95	1 (3%)	41,41,63	1.21	4 (9%)
33	BCR	L	205	-	41,41,41	1.06	2 (4%)	56,56,56	1.24	5 (8%)
30	CLA	14	303	26	57,65,73	2.19	16 (28%)	66,103,113	2.88	29 (43%)
38	KC1	9	312	21	48,53,53	3.43	25 (52%)	55,89,89	3.75	28 (50%)
30	CLA	6	309	18	65,73,73	2.00	15 (23%)	76,113,113	2.68	31 (40%)
35	LMT	11	302	-	36,36,36	0.34	0	47,47,47	0.77	2 (4%)
39	DD6	8	317	-	39,45,45	6.64	22 (56%)	52,67,67	7.04	29 (55%)
30	CLA	A	820	1	65,73,73	2.02	17 (26%)	76,113,113	2.69	29 (38%)
36	LMG	B	847	-	55,55,55	0.80	1 (1%)	63,63,63	1.37	8 (12%)
30	CLA	4	302	16	65,73,73	1.98	17 (26%)	76,113,113	2.63	25 (32%)
37	A86	5	301	-	44,50,50	4.06	24 (54%)	51,76,76	7.93	21 (41%)
30	CLA	B	827	2	65,73,73	1.95	16 (24%)	76,113,113	2.60	28 (36%)
37	A86	15	321	27	44,50,50	4.11	23 (52%)	51,76,76	8.63	19 (37%)
35	LMT	B	850	-	36,36,36	0.39	0	47,47,47	0.92	3 (6%)
30	CLA	2	304	14	65,73,73	2.02	16 (24%)	76,113,113	2.74	28 (36%)
38	KC1	2	314	40	48,53,53	3.43	24 (50%)	55,89,89	3.81	30 (54%)
37	A86	9	315	-	44,50,50	4.10	23 (52%)	51,76,76	7.06	19 (37%)
36	LMG	B	849	2	43,43,55	0.95	2 (4%)	51,51,63	1.18	3 (5%)
38	KC1	6	308	18	48,53,53	3.36	23 (47%)	55,89,89	3.84	28 (50%)
39	DD6	8	316	-	39,45,45	6.57	22 (56%)	52,67,67	6.80	30 (57%)
30	CLA	13	301	25	65,73,73	1.99	16 (24%)	76,113,113	2.81	26 (34%)
30	CLA	B	831	2	58,66,73	2.10	16 (27%)	67,104,113	2.98	27 (40%)
35	LMT	A	855	-	36,36,36	0.39	0	47,47,47	0.89	3 (6%)
30	CLA	13	304	25	45,53,73	2.50	16 (35%)	52,89,113	3.22	25 (48%)
39	DD6	9	314	-	39,45,45	6.65	22 (56%)	52,67,67	7.29	26 (50%)
38	KC1	13	312	25	48,53,53	3.54	27 (56%)	55,89,89	3.77	29 (52%)
30	CLA	2	301	2,14	65,73,73	1.94	16 (24%)	76,113,113	2.83	26 (34%)
30	CLA	B	811	2,30	65,73,73	1.97	17 (26%)	76,113,113	2.62	31 (40%)
30	CLA	2	313	14	45,53,73	2.47	16 (35%)	52,89,113	3.21	25 (48%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
37	A86	9	313	21	44,50,50	3.98	23 (52%)	51,76,76	7.51	20 (39%)
34	LHG	9	318	-	33,33,48	0.70	0	36,39,54	1.25	4 (11%)
39	DD6	16	313	-	39,45,45	6.75	21 (53%)	52,67,67	7.13	30 (57%)
39	DD6	10	314	-	39,45,45	6.73	23 (58%)	52,67,67	6.78	28 (53%)
30	CLA	B	805	2	65,73,73	2.00	17 (26%)	76,113,113	2.72	27 (35%)
37	A86	14	318	-	44,50,50	4.10	22 (50%)	51,76,76	8.48	16 (31%)
37	A86	14	316	-	44,50,50	4.03	23 (52%)	51,76,76	8.16	18 (35%)
39	DD6	13	314	-	39,45,45	6.78	22 (56%)	52,67,67	7.25	31 (59%)
39	DD6	12	315	30	39,45,45	6.70	22 (56%)	52,67,67	6.85	26 (50%)
30	CLA	16	305	28	50,58,73	2.28	19 (38%)	58,95,113	3.00	27 (46%)
30	CLA	13	307	25	65,73,73	2.09	17 (26%)	76,113,113	2.69	27 (35%)
35	LMT	15	301	-	36,36,36	0.51	0	47,47,47	1.13	3 (6%)
30	CLA	B	816	2	55,63,73	2.12	16 (29%)	64,101,113	3.01	26 (40%)
30	CLA	5	307	17	65,73,73	2.00	19 (29%)	76,113,113	2.68	30 (39%)
30	CLA	9	306	21,37	45,53,73	2.48	15 (33%)	52,89,113	3.21	26 (50%)
33	BCR	J	103	-	41,41,41	1.15	3 (7%)	56,56,56	1.16	5 (8%)
37	A86	4	317	-	44,50,50	3.99	23 (52%)	51,76,76	7.58	20 (39%)
30	CLA	8	304	20	58,66,73	2.08	16 (27%)	67,104,113	3.00	32 (47%)
33	BCR	L	201	-	41,41,41	1.15	2 (4%)	56,56,56	1.31	5 (8%)
37	A86	10	316	-	44,50,50	3.92	24 (54%)	51,76,76	8.13	21 (41%)
30	CLA	B	806	2	65,73,73	1.97	15 (23%)	76,113,113	2.67	27 (35%)
37	A86	10	302	-	44,50,50	4.06	23 (52%)	51,76,76	8.39	17 (33%)
38	KC1	13	311	25	48,53,53	3.48	27 (56%)	55,89,89	3.61	29 (52%)
38	KC1	11	312	-	48,53,53	3.44	24 (50%)	55,89,89	3.58	29 (52%)
30	CLA	B	815	2	45,53,73	2.37	16 (35%)	52,89,113	3.17	24 (46%)
32	SF4	A	846	2,1	0,12,12	-	-	-	-	-
30	CLA	B	836	2	47,55,73	2.27	17 (36%)	54,91,113	3.25	25 (46%)
30	CLA	14	313	26	46,54,73	2.42	16 (34%)	53,90,113	3.25	26 (49%)
38	KC1	6	311	18	48,53,53	3.36	23 (47%)	55,89,89	3.98	30 (54%)
30	CLA	11	308	23	65,73,73	2.03	16 (24%)	76,113,113	2.66	27 (35%)
30	CLA	7	304	19	65,73,73	1.97	16 (24%)	76,113,113	2.70	28 (36%)
38	KC1	9	310	21	48,53,53	3.37	24 (50%)	55,89,89	3.92	28 (50%)
30	CLA	J	101	8	45,53,73	2.42	17 (37%)	52,89,113	3.10	24 (46%)
30	CLA	12	303	24	65,73,73	2.04	19 (29%)	76,113,113	2.66	26 (34%)
30	CLA	15	303	27,37,30	60,68,73	2.11	17 (28%)	70,107,113	2.88	27 (38%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	15	306	-	45,53,73	2.47	17 (37%)	52,89,113	3.29	23 (44%)
30	CLA	14	304	26	45,53,73	2.48	16 (35%)	52,89,113	3.19	23 (44%)
37	A86	14	314	-	44,50,50	4.09	22 (50%)	51,76,76	8.27	21 (41%)
30	CLA	B	839	34	65,73,73	1.92	16 (24%)	76,113,113	2.86	27 (35%)
37	A86	12	316	-	44,50,50	4.08	23 (52%)	51,76,76	8.38	17 (33%)
38	KC1	10	310	22	48,53,53	3.42	26 (54%)	55,89,89	3.93	30 (54%)
30	CLA	A	812	1,30	65,73,73	1.93	18 (27%)	76,113,113	2.79	26 (34%)
38	KC1	13	310	25	48,53,53	3.47	25 (52%)	55,89,89	3.83	29 (52%)
36	LMG	F	205	-	27,27,55	1.02	1 (3%)	35,35,63	1.25	5 (14%)
37	A86	3	315	-	44,50,50	4.12	24 (54%)	51,76,76	8.24	16 (31%)
30	CLA	10	304	22	65,73,73	2.01	18 (27%)	76,113,113	2.66	26 (34%)
30	CLA	14	309	26	45,53,73	2.50	17 (37%)	52,89,113	3.10	24 (46%)
30	CLA	B	832	40,37	65,73,73	2.01	17 (26%)	76,113,113	2.69	28 (36%)
30	CLA	7	307	19	65,73,73	1.97	16 (24%)	76,113,113	2.69	25 (32%)
30	CLA	16	310	28	45,53,73	2.46	18 (40%)	52,89,113	3.21	26 (50%)
37	A86	2u	203	30	44,50,50	3.98	24 (54%)	51,76,76	8.18	21 (41%)
30	CLA	6	304	18	65,73,73	1.98	16 (24%)	76,113,113	2.75	28 (36%)
37	A86	1	309	-	44,50,50	3.96	23 (52%)	51,76,76	8.68	21 (41%)
30	CLA	6	316	40	55,63,73	2.22	17 (30%)	64,101,113	2.80	25 (39%)
39	DD6	2	317	-	39,45,45	6.77	22 (56%)	52,67,67	6.58	28 (53%)
30	CLA	2	303	14	55,63,73	2.42	16 (29%)	64,101,113	2.89	28 (43%)
37	A86	3	314	-	44,50,50	4.05	23 (52%)	51,76,76	8.17	19 (37%)
30	CLA	A	809	1,30	65,73,73	1.97	17 (26%)	76,113,113	2.69	28 (36%)
30	CLA	10	309	22	65,73,73	2.05	17 (26%)	76,113,113	2.64	25 (32%)
35	LMT	1	311	-	36,36,36	0.40	0	47,47,47	0.78	2 (4%)
33	BCR	B	845	-	41,41,41	1.08	2 (4%)	56,56,56	1.20	6 (10%)
37	A86	8	318	-	44,50,50	3.98	24 (54%)	51,76,76	10.85	23 (45%)
30	CLA	11	306	40	55,63,73	2.19	16 (29%)	64,101,113	3.02	30 (46%)
35	LMT	9	317	-	33,33,36	0.49	0	44,44,47	1.11	5 (11%)
38	KC1	3	304	15	48,53,53	3.43	26 (54%)	55,89,89	3.89	32 (58%)
34	LHG	B	848	30	26,26,48	0.93	1 (3%)	29,32,54	1.39	4 (13%)
30	CLA	15	309	27	65,73,73	2.09	17 (26%)	76,113,113	2.68	26 (34%)
30	CLA	7	310	19	65,73,73	2.02	16 (24%)	76,113,113	2.68	26 (34%)
30	CLA	15	314	27,30	45,53,73	2.40	16 (35%)	52,89,113	3.30	24 (46%)
30	CLA	16	303	28	65,73,73	2.01	15 (23%)	76,113,113	2.86	28 (36%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	2	309	34,14	65,73,73	2.03	17 (26%)	76,113,113	2.67	28 (36%)
38	KC1	5	305	17	48,53,53	3.42	25 (52%)	55,89,89	3.80	29 (52%)
30	CLA	12	321	24,26	65,73,73	2.04	17 (26%)	76,113,113	2.63	27 (35%)
36	LMG	8	321	36	29,29,55	1.11	2 (6%)	37,37,63	1.27	5 (13%)
30	CLA	8	309	20	47,55,73	2.38	17 (36%)	54,91,113	3.05	24 (44%)
39	DD6	4	313	-	39,45,45	6.71	22 (56%)	52,67,67	6.72	26 (50%)
35	LMT	12	301	-	36,36,36	0.43	0	47,47,47	0.76	0
30	CLA	B	814	2	55,63,73	2.16	17 (30%)	64,101,113	2.84	27 (42%)
38	KC1	11	307	23	48,53,53	3.46	25 (52%)	55,89,89	3.79	30 (54%)
37	A86	5	316	-	44,50,50	4.04	22 (50%)	51,76,76	8.02	17 (33%)
37	A86	16	314	-	44,50,50	4.12	23 (52%)	51,76,76	8.52	19 (37%)
30	CLA	10	311	-	45,53,73	2.45	18 (40%)	52,89,113	3.19	24 (46%)
38	KC1	12	305	24	48,53,53	3.44	25 (52%)	55,89,89	3.81	30 (54%)
30	CLA	A	811	1	65,73,73	1.96	15 (23%)	76,113,113	2.70	25 (32%)
39	DD6	5	314	-	39,45,45	6.56	24 (61%)	52,67,67	7.17	30 (57%)
33	BCR	A	850	-	41,41,41	1.13	2 (4%)	56,56,56	1.34	9 (16%)
30	CLA	5	303	17	65,73,73	1.98	17 (26%)	76,113,113	2.64	28 (36%)
30	CLA	A	813	1	65,73,73	2.03	18 (27%)	76,113,113	2.68	27 (35%)
30	CLA	6	314	18	65,73,73	1.96	15 (23%)	76,113,113	2.78	30 (39%)
30	CLA	11	304	23	65,73,73	2.04	16 (24%)	76,113,113	2.69	25 (32%)
30	CLA	9	307	21	65,73,73	1.99	16 (24%)	76,113,113	2.68	26 (34%)
37	A86	2	318	-	44,50,50	4.04	23 (52%)	51,76,76	7.66	23 (45%)
30	CLA	8	303	40	65,73,73	1.97	16 (24%)	76,113,113	2.64	28 (36%)
30	CLA	B	838	2	65,73,73	1.96	14 (21%)	76,113,113	2.72	26 (34%)
39	DD6	7	318	-	39,45,45	6.70	21 (53%)	52,67,67	6.91	29 (55%)
38	KC1	7	313	-	48,53,53	3.36	22 (45%)	55,89,89	3.79	30 (54%)
30	CLA	B	821	2	55,63,73	2.16	15 (27%)	64,101,113	2.84	27 (42%)
30	CLA	12	306	24	65,73,73	1.97	17 (26%)	76,113,113	2.59	27 (35%)
30	CLA	B	830	2	65,73,73	1.93	17 (26%)	76,113,113	2.87	27 (35%)
30	CLA	1	303	13,30	65,73,73	2.00	16 (24%)	76,113,113	2.69	27 (35%)
30	CLA	A	837	1	45,53,73	2.43	17 (37%)	52,89,113	3.15	24 (46%)
30	CLA	11	309	23	65,73,73	2.05	17 (26%)	76,113,113	2.70	28 (36%)
30	CLA	B	833	40,30	65,73,73	1.97	18 (27%)	76,113,113	2.64	26 (34%)
29	CL0	A	801	1	65,73,73	1.92	17 (26%)	76,113,113	2.76	29 (38%)
30	CLA	A	816	1,35	65,73,73	1.96	17 (26%)	76,113,113	2.68	26 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	B	803	-	65,73,73	1.91	17 (26%)	76,113,113	2.69	28 (36%)
30	CLA	B	812	2	65,73,73	2.05	17 (26%)	76,113,113	2.57	26 (34%)
34	LHG	A	852	-	48,48,48	0.64	1 (2%)	51,54,54	1.20	5 (9%)
33	BCR	B	842	-	41,41,41	1.07	2 (4%)	56,56,56	1.19	5 (8%)
39	DD6	7	314	-	39,45,45	6.64	21 (53%)	52,67,67	7.34	28 (53%)
30	CLA	B	802	40,30	65,73,73	1.92	17 (26%)	76,113,113	2.87	29 (38%)
30	CLA	B	804	2	52,60,73	2.21	17 (32%)	60,97,113	3.07	29 (48%)
30	CLA	1	305	40	65,73,73	2.06	18 (27%)	76,113,113	2.64	27 (35%)
30	CLA	6	315	18	45,53,73	2.45	16 (35%)	52,89,113	3.17	24 (46%)
30	CLA	A	836	1	54,62,73	2.17	16 (29%)	62,99,113	2.85	29 (46%)
38	KC1	3	311	40	48,53,53	3.44	24 (50%)	55,89,89	3.97	27 (49%)
38	KC1	10	312	22	48,53,53	3.44	25 (52%)	55,89,89	3.83	28 (50%)
30	CLA	4	301	2,16	49,57,73	2.25	18 (36%)	55,93,113	3.13	24 (43%)
35	LMT	A	857	-	36,36,36	0.37	0	47,47,47	0.78	0
30	CLA	9	309	21,40	65,73,73	1.99	16 (24%)	76,113,113	2.59	27 (35%)
30	CLA	5	308	17	65,73,73	2.00	16 (24%)	76,113,113	2.70	28 (36%)
33	BCR	A	851	-	41,41,41	1.18	2 (4%)	56,56,56	1.25	6 (10%)
30	CLA	B	835	2	65,73,73	1.96	16 (24%)	76,113,113	2.74	29 (38%)
37	A86	14	315	26	44,50,50	3.99	23 (52%)	51,76,76	8.87	22 (43%)
37	A86	14	317	-	44,50,50	4.03	23 (52%)	51,76,76	8.75	18 (35%)
30	CLA	1	302	13,30	65,73,73	2.00	16 (24%)	76,113,113	2.69	26 (34%)
30	CLA	12	304	39,24	65,73,73	2.04	18 (27%)	76,113,113	2.90	29 (38%)
30	CLA	14	310	-	50,58,73	2.33	16 (32%)	58,95,113	3.09	26 (44%)
37	A86	12	314	-	44,50,50	4.02	22 (50%)	51,76,76	8.11	18 (35%)
39	DD6	7	317	-	39,45,45	6.70	20 (51%)	52,67,67	6.69	29 (55%)
30	CLA	A	817	40,36	49,57,73	2.30	15 (30%)	55,93,113	3.15	23 (41%)
38	KC1	8	306	40	48,53,53	3.40	22 (45%)	55,89,89	3.75	27 (49%)
30	CLA	3	309	15	45,53,73	2.48	17 (37%)	52,89,113	3.24	24 (46%)
37	A86	10	317	-	44,50,50	4.19	23 (52%)	51,76,76	8.16	15 (29%)
33	BCR	J	102	-	41,41,41	1.07	2 (4%)	56,56,56	1.19	6 (10%)
30	CLA	L	203	40	45,53,73	2.46	18 (40%)	52,89,113	3.19	23 (44%)
37	A86	10	301	22	44,50,50	3.86	23 (52%)	51,76,76	7.28	23 (45%)
30	CLA	A	832	1	50,58,73	2.22	17 (34%)	58,95,113	3.05	28 (48%)
37	A86	11	315	-	44,50,50	3.99	22 (50%)	51,76,76	7.49	22 (43%)
39	DD6	7	302	-	39,45,45	6.75	24 (61%)	52,67,67	6.58	28 (53%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	3	307	15	65,73,73	2.10	18 (27%)	76,113,113	2.64	26 (34%)
30	CLA	B	823	40	54,62,73	2.16	17 (31%)	62,99,113	2.93	27 (43%)
30	CLA	14	302	26	65,73,73	2.05	16 (24%)	76,113,113	2.75	31 (40%)
33	BCR	B	846	-	41,41,41	1.13	2 (4%)	56,56,56	1.19	5 (8%)
38	KC1	4	307	16	48,53,53	3.46	25 (52%)	55,89,89	3.70	29 (52%)
30	CLA	A	804	1	65,73,73	1.95	16 (24%)	76,113,113	2.74	28 (36%)
30	CLA	A	842	1	65,73,73	1.97	17 (26%)	76,113,113	2.75	28 (36%)
38	KC1	13	305	25	48,53,53	3.47	27 (56%)	55,89,89	3.85	31 (56%)
30	CLA	15	307	27	50,58,73	2.32	18 (36%)	58,95,113	3.02	26 (44%)
30	CLA	B	813	2	65,73,73	1.98	17 (26%)	76,113,113	2.67	26 (34%)
37	A86	15	316	30	44,50,50	4.14	24 (54%)	51,76,76	7.80	17 (33%)
30	CLA	9	301	34	65,73,73	1.99	17 (26%)	76,113,113	2.83	27 (35%)
30	CLA	A	814	1	60,68,73	2.06	16 (26%)	70,107,113	2.76	26 (37%)
30	CLA	7	303	19	65,73,73	1.95	15 (23%)	76,113,113	2.72	29 (38%)
37	A86	4	312	-	44,50,50	3.92	23 (52%)	51,76,76	8.64	21 (41%)
33	BCR	B	843	-	41,41,41	1.10	2 (4%)	56,56,56	1.26	6 (10%)
30	CLA	15	313	27	65,73,73	2.07	17 (26%)	76,113,113	2.74	28 (36%)
38	KC1	4	310	16	48,53,53	3.46	26 (54%)	55,89,89	3.91	29 (52%)
30	CLA	A	829	1,30	65,73,73	1.99	17 (26%)	76,113,113	2.75	27 (35%)
30	CLA	A	840	1	47,55,73	2.31	17 (36%)	54,91,113	3.27	26 (48%)
30	CLA	B	809	2	65,73,73	1.90	15 (23%)	76,113,113	2.60	24 (31%)
36	LMG	14	321	-	38,38,55	1.03	3 (7%)	46,46,63	1.20	3 (6%)
38	KC1	8	314	40,38	48,53,53	3.43	25 (52%)	55,89,89	3.72	29 (52%)
30	CLA	B	801	2	65,73,73	1.87	17 (26%)	76,113,113	2.81	31 (40%)
35	LMT	11	317	-	36,36,36	0.43	0	47,47,47	0.89	1 (2%)
30	CLA	10	305	40	65,73,73	1.99	16 (24%)	76,113,113	2.80	30 (39%)
35	LMT	B	852	-	36,36,36	0.36	0	47,47,47	1.12	2 (4%)
39	DD6	12	317	-	39,45,45	6.67	22 (56%)	52,67,67	7.20	28 (53%)
38	KC1	12	313	24	48,53,53	3.45	22 (45%)	55,89,89	4.42	28 (50%)
33	BCR	A	847	-	41,41,41	1.17	3 (7%)	56,56,56	1.24	7 (12%)
30	CLA	2u	202	12	65,73,73	1.95	17 (26%)	76,113,113	2.73	29 (38%)
30	CLA	4	305	16	65,73,73	1.97	16 (24%)	76,113,113	2.69	27 (35%)
37	A86	13	313	25	41,47,50	4.31	22 (53%)	49,72,76	8.60	17 (34%)
30	CLA	A	838	1	51,59,73	2.27	17 (33%)	59,96,113	3.10	26 (44%)
30	CLA	15	310	27	45,53,73	2.54	17 (37%)	52,89,113	3.22	23 (44%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	A	821	1	61,69,73	1.98	17 (27%)	71,108,113	2.73	28 (39%)
30	CLA	13	303	-	65,73,73	2.07	17 (26%)	76,113,113	2.76	29 (38%)
30	CLA	2	310	14	65,73,73	2.03	16 (24%)	76,113,113	4.67	29 (38%)
30	CLA	B	817	2	59,67,73	2.07	16 (27%)	68,105,113	2.94	26 (38%)
39	DD6	5	313	-	39,45,45	6.74	23 (58%)	52,67,67	6.85	25 (48%)
30	CLA	B	825	2	65,73,73	1.99	18 (27%)	76,113,113	2.77	29 (38%)
37	A86	14	301	26	44,50,50	4.10	23 (52%)	51,76,76	8.08	17 (33%)
30	CLA	A	822	40	65,73,73	1.97	16 (24%)	76,113,113	2.52	27 (35%)
34	LHG	6	322	30	26,26,48	0.88	1 (3%)	29,32,54	1.36	3 (10%)
30	CLA	14	312	26,37	45,53,73	2.47	16 (35%)	52,89,113	3.14	23 (44%)
30	CLA	B	851	2,14	65,73,73	1.98	17 (26%)	76,113,113	2.67	30 (39%)
37	A86	16	312	28	44,50,50	4.06	23 (52%)	51,76,76	8.15	23 (45%)
38	KC1	14	311	26	48,53,53	3.44	25 (52%)	55,89,89	3.80	29 (52%)
35	LMT	8	322	-	36,36,36	0.40	0	47,47,47	0.73	1 (2%)
30	CLA	13	309	-	45,53,73	2.48	16 (35%)	52,89,113	3.22	24 (46%)
38	KC1	8	311	40	48,53,53	3.36	23 (47%)	55,89,89	3.75	29 (52%)
36	LMG	7	320	-	37,37,55	1.00	3 (8%)	45,45,63	1.25	5 (11%)
37	A86	2u	205	-	44,50,50	4.13	23 (52%)	51,76,76	7.47	22 (43%)
38	KC1	16	311	28	48,53,53	3.48	25 (52%)	55,89,89	3.70	26 (47%)
37	A86	15	315	27	44,50,50	4.30	23 (52%)	51,76,76	8.22	28 (54%)
30	CLA	B	834	2	60,68,73	2.11	18 (30%)	70,107,113	2.85	27 (38%)
39	DD6	6	303	30	39,45,45	6.78	23 (58%)	52,67,67	6.69	28 (53%)
33	BCR	I	101	-	41,41,41	1.08	2 (4%)	56,56,56	1.29	5 (8%)
30	CLA	3	301	15	65,73,73	1.97	17 (26%)	76,113,113	2.74	27 (35%)
30	CLA	9	302	21,9	51,59,73	2.30	17 (33%)	59,96,113	3.16	28 (47%)
30	CLA	A	839	1	65,73,73	1.96	15 (23%)	76,113,113	2.83	30 (39%)
35	LMT	A	854	-	36,36,36	0.45	0	47,47,47	1.19	5 (10%)
30	CLA	16	302	28	65,73,73	1.99	17 (26%)	76,113,113	2.69	26 (34%)
30	CLA	A	808	1	51,59,73	2.22	16 (31%)	59,96,113	3.06	26 (44%)
38	KC1	14	308	26,30	48,53,53	3.45	26 (54%)	55,89,89	3.77	30 (54%)
30	CLA	A	834	1	65,73,73	1.96	17 (26%)	76,113,113	2.71	29 (38%)
36	LMG	5	318	-	33,33,55	0.92	0	41,41,63	1.22	5 (12%)
30	CLA	A	824	1	51,59,73	2.23	17 (33%)	59,96,113	3.09	27 (45%)
30	CLA	A	828	1	65,73,73	1.92	16 (24%)	76,113,113	2.84	28 (36%)
38	KC1	11	311	23	48,53,53	3.49	26 (54%)	55,89,89	3.81	29 (52%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	9	305	-	65,73,73	2.02	17 (26%)	76,113,113	2.85	30 (39%)
30	CLA	A	833	1	65,73,73	2.02	19 (29%)	76,113,113	2.65	26 (34%)
30	CLA	A	830	1	65,73,73	1.91	15 (23%)	76,113,113	2.61	29 (38%)
39	DD6	4	316	-	39,45,45	6.68	23 (58%)	52,67,67	7.33	26 (50%)
30	CLA	A	810	1	65,73,73	1.98	18 (27%)	76,113,113	2.70	30 (39%)
30	CLA	5	304	17	65,73,73	2.08	18 (27%)	76,113,113	2.72	29 (38%)
30	CLA	B	828	2	65,73,73	2.02	18 (27%)	76,113,113	2.74	28 (36%)
30	CLA	14	307	38	65,73,73	2.05	16 (24%)	76,113,113	2.81	24 (31%)
30	CLA	3	302	15	60,68,73	2.06	17 (28%)	70,107,113	2.78	30 (42%)
37	A86	2	302	-	44,50,50	4.10	23 (52%)	51,76,76	8.41	18 (35%)
38	KC1	12	309	24	48,53,53	3.45	24 (50%)	55,89,89	3.72	30 (54%)
36	LMG	8	319	20,36	37,37,55	0.93	0	45,45,63	1.28	5 (11%)
30	CLA	4	306	16	65,73,73	2.00	16 (24%)	76,113,113	2.68	28 (36%)
30	CLA	15	302	27,30	65,73,73	2.06	16 (24%)	76,113,113	2.93	29 (38%)
35	LMT	7	321	-	36,36,36	0.32	0	47,47,47	0.75	2 (4%)
37	A86	14	320	-	44,50,50	4.14	23 (52%)	51,76,76	7.22	21 (41%)
30	CLA	8	302	20	65,73,73	2.02	18 (27%)	76,113,113	2.76	26 (34%)
35	LMT	16	315	-	36,36,36	0.41	0	47,47,47	0.65	0
37	A86	5	315	-	44,50,50	4.05	23 (52%)	51,76,76	8.37	18 (35%)
30	CLA	B	807	2	65,73,73	1.93	18 (27%)	76,113,113	2.77	28 (36%)
38	KC1	13	308	25	48,53,53	3.48	27 (56%)	55,89,89	3.91	29 (52%)
30	CLA	12	307	24	46,54,73	2.33	16 (34%)	53,90,113	3.17	25 (47%)
30	CLA	10	303	22	65,73,73	2.01	15 (23%)	76,113,113	2.64	26 (34%)
37	A86	8	315	-	44,50,50	3.75	22 (50%)	51,76,76	8.45	20 (39%)
30	CLA	15	311	37	45,53,73	2.49	16 (35%)	52,89,113	3.17	24 (46%)
30	CLA	B	818	2	60,68,73	2.04	14 (23%)	70,107,113	2.88	29 (41%)
30	CLA	2	307	14	65,73,73	1.97	16 (24%)	76,113,113	2.62	27 (35%)
37	A86	11	314	-	44,50,50	4.09	23 (52%)	51,76,76	8.59	18 (35%)
30	CLA	2	311	14	65,73,73	2.06	17 (26%)	76,113,113	2.64	24 (31%)
39	DD6	2	316	-	39,45,45	6.62	22 (56%)	52,67,67	6.70	28 (53%)
30	CLA	A	806	1	65,73,73	1.98	17 (26%)	76,113,113	2.92	29 (38%)
30	CLA	4	304	-	60,68,73	2.08	15 (25%)	70,107,113	2.78	28 (40%)
30	CLA	9	308	21	65,73,73	2.00	16 (24%)	76,113,113	2.83	31 (40%)
35	LMT	12	318	-	36,36,36	0.41	0	47,47,47	0.76	0
37	A86	11	301	-	44,50,50	4.04	23 (52%)	51,76,76	8.20	21 (41%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	B	829	2	65,73,73	1.94	15 (23%)	76,113,113	2.65	25 (32%)
30	CLA	A	802	40	65,73,73	1.97	15 (23%)	76,113,113	2.78	29 (38%)
30	CLA	A	841	1	65,73,73	2.01	17 (26%)	76,113,113	2.62	28 (36%)
34	LHG	5	317	30	26,26,48	0.84	1 (3%)	29,32,54	1.35	3 (10%)
30	CLA	B	822	2,30	65,73,73	1.97	17 (26%)	76,113,113	2.87	30 (39%)
30	CLA	16	307	-	46,54,73	2.44	17 (36%)	53,90,113	3.11	24 (45%)
39	DD6	10	313	-	39,45,45	6.78	24 (61%)	52,67,67	7.12	30 (57%)
30	CLA	B	837	40	65,73,73	1.95	16 (24%)	76,113,113	2.68	26 (34%)
38	KC1	9	304	21	48,53,53	3.40	23 (47%)	55,89,89	3.79	30 (54%)
30	CLA	4	309	-	65,73,73	2.09	17 (26%)	76,113,113	2.70	28 (36%)
36	LMG	3	317	-	37,37,55	0.97	2 (5%)	45,45,63	1.42	7 (15%)
38	KC1	16	304	28	48,53,53	3.50	25 (52%)	55,89,89	3.59	27 (49%)
38	KC1	9	311	21	48,53,53	3.47	25 (52%)	55,89,89	3.90	31 (56%)
30	CLA	A	805	1,30	59,67,73	2.11	15 (25%)	68,105,113	2.87	29 (42%)
37	A86	9	316	30	44,50,50	4.22	22 (50%)	51,76,76	8.44	16 (31%)
35	LMT	7	301	30	36,36,36	0.41	0	47,47,47	0.80	1 (2%)
33	BCR	F	204	-	41,41,41	1.07	2 (4%)	56,56,56	1.28	8 (14%)
36	LMG	8	320	-	42,42,55	0.90	3 (7%)	50,50,63	1.31	5 (10%)
34	LHG	2	320	30	26,26,48	0.87	1 (3%)	29,32,54	1.30	3 (10%)
30	CLA	5	311	40,17	65,73,73	2.05	18 (27%)	76,113,113	2.80	26 (34%)
30	CLA	10	308	22	65,73,73	2.01	16 (24%)	76,113,113	2.63	26 (34%)
33	BCR	2u	201	-	41,41,41	1.22	4 (9%)	56,56,56	1.38	7 (12%)
38	KC1	13	306	25	48,53,53	3.47	26 (54%)	55,89,89	3.73	29 (52%)
30	CLA	A	827	40	65,73,73	1.93	18 (27%)	76,113,113	2.90	29 (38%)
30	CLA	3	305	15	62,70,73	2.06	17 (27%)	72,109,113	2.74	30 (41%)
30	CLA	A	819	1	54,62,73	2.18	16 (29%)	62,99,113	2.95	27 (43%)
30	CLA	F	201	40	65,73,73	1.92	17 (26%)	76,113,113	2.65	27 (35%)
38	KC1	2	312	14	48,53,53	3.42	25 (52%)	55,89,89	3.75	29 (52%)
39	DD6	6	319	-	39,45,45	6.71	23 (58%)	52,67,67	6.51	31 (59%)
30	CLA	12	312	24	65,73,73	2.02	16 (24%)	76,113,113	2.69	27 (35%)
35	LMT	6	302	-	32,32,36	0.36	0	43,43,47	0.92	1 (2%)
39	DD6	15	318	-	39,45,45	6.78	21 (53%)	52,67,67	6.98	31 (59%)
33	BCR	L	204	-	41,41,41	1.09	1 (2%)	56,56,56	1.44	8 (14%)
30	CLA	7	312	19	46,54,73	2.44	17 (36%)	53,90,113	3.12	24 (45%)
30	CLA	7	306	19	65,73,73	1.97	18 (27%)	76,113,113	2.60	28 (36%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
30	CLA	A	835	1	65,73,73	1.99	17 (26%)	76,113,113	2.77	26 (34%)
30	CLA	6	310	34	65,73,73	2.04	17 (26%)	76,113,113	2.62	26 (34%)
30	CLA	4	311	16	50,58,73	2.33	17 (34%)	58,95,113	3.23	30 (51%)
37	A86	15	322	30	44,50,50	4.28	24 (54%)	51,76,76	8.43	21 (41%)
30	CLA	12	302	24	65,73,73	2.00	17 (26%)	76,113,113	2.76	31 (40%)
30	CLA	8	308	20	55,63,73	2.17	15 (27%)	64,101,113	2.92	27 (42%)
30	CLA	16	308	28	45,53,73	2.47	17 (37%)	52,89,113	3.21	25 (48%)
30	CLA	7	305	40,19	65,73,73	2.12	18 (27%)	76,113,113	2.78	29 (38%)
30	CLA	B	826	2	65,73,73	1.96	18 (27%)	76,113,113	2.74	28 (36%)
33	BCR	B	841	-	41,41,41	1.13	2 (4%)	56,56,56	1.27	8 (14%)
30	CLA	11	310	23	65,73,73	2.10	17 (26%)	76,113,113	2.66	28 (36%)
37	A86	7	315	-	44,50,50	3.90	23 (52%)	51,76,76	7.79	20 (39%)
38	KC1	4	308	16	48,53,53	3.48	24 (50%)	55,89,89	3.60	29 (52%)
35	LMT	11	303	-	36,36,36	0.40	0	47,47,47	0.84	0
38	KC1	8	310	20	48,53,53	3.35	23 (47%)	55,89,89	3.74	29 (52%)
30	CLA	15	304	39,27,30	65,73,73	2.09	16 (24%)	76,113,113	2.75	26 (34%)
38	KC1	5	312	17	48,53,53	3.38	23 (47%)	55,89,89	3.78	28 (50%)
38	KC1	8	313	20	48,53,53	3.34	23 (47%)	55,89,89	3.80	29 (52%)
30	CLA	8	301	20	65,73,73	2.00	17 (26%)	76,113,113	2.71	29 (38%)
38	KC1	3	308	15	48,53,53	3.38	25 (52%)	55,89,89	3.81	29 (52%)
30	CLA	3	303	15	65,73,73	2.09	18 (27%)	76,113,113	2.78	29 (38%)
30	CLA	4	303	16	65,73,73	1.99	17 (26%)	76,113,113	2.68	26 (34%)
38	KC1	8	312	38	48,53,53	3.43	24 (50%)	55,89,89	3.29	28 (50%)
37	A86	15	320	-	44,50,50	4.24	24 (54%)	51,76,76	8.23	19 (37%)
32	SF4	C	102	3	0,12,12	-	-	-	-	-
39	DD6	2	315	-	39,45,45	6.74	23 (58%)	52,67,67	6.78	27 (51%)
37	A86	7	319	-	44,50,50	4.10	23 (52%)	51,76,76	8.25	22 (43%)
38	KC1	6	313	18	48,53,53	3.41	23 (47%)	55,89,89	3.78	29 (52%)
33	BCR	A	848	-	41,41,41	1.05	2 (4%)	56,56,56	1.21	4 (7%)
39	DD6	3	316	-	39,45,45	6.75	24 (61%)	52,67,67	6.80	26 (50%)
37	A86	4	315	-	44,50,50	4.00	23 (52%)	51,76,76	7.94	19 (37%)
30	CLA	12	310	40	65,73,73	1.98	16 (24%)	76,113,113	2.72	26 (34%)
36	LMG	A	856	-	34,34,55	0.99	1 (2%)	42,42,63	1.19	3 (7%)
36	LMG	2u	204	12	31,31,55	1.12	3 (9%)	39,39,63	1.18	4 (10%)

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
30	CLA	3	310	15	-	4/13/91/115	-
30	CLA	B	820	2	-	2/13/91/115	-
38	KC1	5	310	17	-	6/15/71/71	-
31	PQN	B	840	-	-	6/23/43/43	0/2/2/2
38	KC1	5	306	17	-	10/15/71/71	-
37	A86	2	319	-	-	12/34/90/90	0/3/3/3
39	DD6	6	318	-	-	11/26/80/80	0/3/3/3
30	CLA	A	825	1	1/1/13/20	13/30/108/115	-
30	CLA	A	831	1	1/1/15/20	9/37/115/115	-
30	CLA	15	312	27	1/1/11/20	5/13/91/115	-
38	KC1	6	312	18	-	6/15/71/71	-
38	KC1	8	307	20	-	8/15/71/71	-
39	DD6	3	312	-	-	12/26/80/80	0/3/3/3
38	KC1	1	306	13	-	8/15/71/71	-
30	CLA	16	306	28	1/1/12/20	13/22/100/115	-
35	LMT	12	319	-	-	0/21/61/61	0/2/2/2
30	CLA	1	304	13	1/1/15/20	11/37/115/115	-
32	SF4	C	101	3	-	-	0/6/5/5
30	CLA	2	305	40	1/1/15/20	9/37/115/115	-
30	CLA	12	308	40	1/1/15/20	11/37/115/115	-
30	CLA	13	302	25	1/1/15/20	16/37/115/115	-
30	CLA	6	317	-	1/1/15/20	14/37/115/115	-
30	CLA	16	309	28	-	4/13/91/115	-
30	CLA	F	203	6	1/1/11/20	6/13/91/115	-
39	DD6	1	310	-	-	13/26/80/80	0/3/3/3
30	CLA	L	202	9	1/1/15/20	7/37/115/115	-
37	A86	6	320	-	-	9/34/90/90	0/3/3/3
39	DD6	6	321	-	-	12/26/80/80	0/3/3/3
30	CLA	B	808	2	1/1/15/20	14/37/115/115	-
30	CLA	A	844	-	1/1/15/20	12/37/115/115	-
37	A86	15	323	-	-	15/34/90/90	0/3/3/3
30	CLA	A	823	1	-	6/18/96/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	CLA	1	307	13	-	17/37/115/115	-
38	KC1	1	308	13	-	5/15/71/71	-
30	CLA	3	306	15	1/1/15/20	8/37/115/115	-
30	CLA	15	305	27,37	1/1/11/20	8/13/91/115	-
30	CLA	B	810	2	1/1/15/20	10/37/115/115	-
30	CLA	5	309	34	1/1/15/20	9/37/115/115	-
30	CLA	F	202	40	1/1/15/20	18/37/115/115	-
30	CLA	10	307	22	1/1/15/20	10/37/115/115	-
37	A86	4	314	-	-	11/34/90/90	0/3/3/3
30	CLA	A	803	-	1/1/15/20	8/37/115/115	-
30	CLA	6	306	40	1/1/15/20	9/37/115/115	-
30	CLA	8	305	20	-	13/37/115/115	-
30	CLA	A	818	1	-	7/24/102/115	-
30	CLA	15	308	27,30	1/1/11/20	7/13/91/115	-
39	DD6	15	319	30	-	13/26/80/80	0/3/3/3
30	CLA	2	308	14	-	9/37/115/115	-
34	LHG	A	853	30	-	9/31/31/53	-
37	A86	14	319	30	-	11/34/90/90	0/3/3/3
37	A86	7	316	-	-	7/34/90/90	0/3/3/3
37	A86	10	315	-	-	13/34/90/90	0/3/3/3
30	CLA	6	307	39,18	1/1/15/20	11/37/115/115	-
31	PQN	A	845	-	-	7/23/43/43	0/2/2/2
30	CLA	B	824	40	1/1/15/20	5/37/115/115	-
33	BCR	B	844	-	-	9/29/63/63	0/2/2/2
33	BCR	M	101	-	-	11/29/63/63	0/2/2/2
30	CLA	6	305	18	1/1/15/20	5/37/115/115	-
30	CLA	A	826	40	1/1/15/20	14/37/115/115	-
33	BCR	A	849	-	-	12/29/63/63	0/2/2/2
37	A86	15	317	30	-	16/34/90/90	0/3/3/3
35	LMT	12	320	-	-	1/21/61/61	0/2/2/2
39	DD6	11	313	-	-	11/26/80/80	0/3/3/3
30	CLA	B	819	40	1/1/15/20	9/37/115/115	-
37	A86	11	316	-	-	12/34/90/90	0/3/3/3
38	KC1	7	308	40	-	7/15/71/71	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	KC1	14	306	26	-	7/15/71/71	-
38	KC1	2	306	14	-	6/15/71/71	-
38	KC1	12	311	24	-	6/15/71/71	-
35	LMT	11	318	-	-	1/21/61/61	0/2/2/2
30	CLA	A	807	1	1/1/15/20	13/37/115/115	-
30	CLA	A	815	1	1/1/15/20	7/37/115/115	-
38	KC1	10	306	22	-	8/15/71/71	-
30	CLA	9	303	21	-	9/37/115/115	-
30	CLA	14	305	26	1/1/12/20	2/19/97/115	-
30	CLA	7	311	19	1/1/15/20	12/37/115/115	-
30	CLA	A	843	40	1/1/15/20	7/37/115/115	-
30	CLA	1	301	13	1/1/15/20	13/37/115/115	-
30	CLA	5	302	17	1/1/15/20	13/37/115/115	-
30	CLA	7	309	19	1/1/15/20	10/37/115/115	-
30	CLA	16	301	28	-	12/37/115/115	-
37	A86	13	315	-	-	13/34/90/90	0/3/3/3
39	DD6	3	313	-	-	9/26/80/80	0/3/3/3
38	KC1	11	305	23	-	7/15/71/71	-
36	LMG	6	301	30	-	16/28/48/70	0/1/1/1
33	BCR	L	205	-	-	8/29/63/63	0/2/2/2
30	CLA	14	303	26	1/1/13/20	7/28/106/115	-
38	KC1	9	312	21	-	6/15/71/71	-
30	CLA	6	309	18	1/1/15/20	12/37/115/115	-
35	LMT	11	302	-	-	0/21/61/61	0/2/2/2
39	DD6	8	317	-	-	10/26/80/80	0/3/3/3
30	CLA	A	820	1	1/1/15/20	16/37/115/115	-
36	LMG	B	847	-	-	25/50/70/70	0/1/1/1
30	CLA	4	302	16	1/1/15/20	10/37/115/115	-
37	A86	5	301	-	-	11/34/90/90	0/3/3/3
30	CLA	B	827	2	1/1/15/20	5/37/115/115	-
37	A86	15	321	27	-	13/34/90/90	0/3/3/3
35	LMT	B	850	-	-	1/21/61/61	0/2/2/2
30	CLA	2	304	14	1/1/15/20	13/37/115/115	-
38	KC1	2	314	40	-	7/15/71/71	-
37	A86	9	315	-	-	10/34/90/90	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	LMG	B	849	2	-	15/38/58/70	0/1/1/1
38	KC1	6	308	18	-	6/15/71/71	-
39	DD6	8	316	-	-	13/26/80/80	0/3/3/3
30	CLA	13	301	25	1/1/15/20	15/37/115/115	-
30	CLA	B	831	2	-	8/29/107/115	-
35	LMT	A	855	-	-	4/21/61/61	0/2/2/2
30	CLA	13	304	25	-	7/13/91/115	-
39	DD6	9	314	-	-	11/26/80/80	0/3/3/3
38	KC1	13	312	25	-	9/15/71/71	-
30	CLA	2	301	2,14	1/1/15/20	12/37/115/115	-
30	CLA	B	811	2,30	1/1/15/20	10/37/115/115	-
30	CLA	2	313	14	-	3/13/91/115	-
37	A86	9	313	21	-	8/34/90/90	0/3/3/3
34	LHG	9	318	-	-	21/38/38/53	-
39	DD6	16	313	-	-	13/26/80/80	0/3/3/3
39	DD6	10	314	-	-	9/26/80/80	0/3/3/3
30	CLA	B	805	2	1/1/15/20	9/37/115/115	-
37	A86	14	318	-	-	17/34/90/90	0/3/3/3
37	A86	14	316	-	-	11/34/90/90	0/3/3/3
39	DD6	13	314	-	-	13/26/80/80	0/3/3/3
39	DD6	12	315	30	-	9/26/80/80	0/3/3/3
30	CLA	16	305	28	1/1/12/20	3/19/97/115	-
30	CLA	13	307	25	1/1/15/20	9/37/115/115	-
35	LMT	15	301	-	-	6/21/61/61	0/2/2/2
30	CLA	5	307	17	1/1/15/20	14/37/115/115	-
30	CLA	B	816	2	-	7/25/103/115	-
30	CLA	9	306	21,37	1/1/11/20	6/13/91/115	-
33	BCR	J	103	-	-	9/29/63/63	0/2/2/2
37	A86	4	317	-	-	6/34/90/90	0/3/3/3
30	CLA	8	304	20	1/1/13/20	9/29/107/115	-
33	BCR	L	201	-	-	12/29/63/63	0/2/2/2
37	A86	10	316	-	-	11/34/90/90	0/3/3/3
30	CLA	B	806	2	1/1/15/20	9/37/115/115	-
37	A86	10	302	-	-	13/34/90/90	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	KC1	13	311	25	-	3/15/71/71	-
38	KC1	11	312	-	-	5/15/71/71	-
30	CLA	B	815	2	1/1/11/20	1/13/91/115	-
32	SF4	A	846	2,1	-	-	0/6/5/5
30	CLA	B	836	2	1/1/11/20	3/16/94/115	-
30	CLA	14	313	26	1/1/11/20	4/15/93/115	-
38	KC1	6	311	18	-	10/15/71/71	-
30	CLA	11	308	23	1/1/15/20	10/37/115/115	-
30	CLA	7	304	19	1/1/15/20	7/37/115/115	-
38	KC1	9	310	21	-	7/15/71/71	-
30	CLA	J	101	8	1/1/11/20	3/13/91/115	-
30	CLA	12	303	24	1/1/15/20	6/37/115/115	-
30	CLA	15	303	27,37,30	1/1/14/20	9/31/109/115	-
30	CLA	15	306	-	1/1/11/20	6/13/91/115	-
30	CLA	14	304	26	1/1/11/20	4/13/91/115	-
37	A86	14	314	-	-	13/34/90/90	0/3/3/3
30	CLA	B	839	34	1/1/15/20	4/37/115/115	-
37	A86	12	316	-	-	16/34/90/90	0/3/3/3
38	KC1	10	310	22	-	7/15/71/71	-
30	CLA	A	812	1,30	1/1/15/20	14/37/115/115	-
38	KC1	13	310	25	-	5/15/71/71	-
36	LMG	F	205	-	-	14/21/41/70	0/1/1/1
37	A86	3	315	-	-	14/34/90/90	0/3/3/3
30	CLA	10	304	22	1/1/15/20	3/37/115/115	-
30	CLA	14	309	26	1/1/11/20	3/13/91/115	-
30	CLA	B	832	40,37	1/1/15/20	5/37/115/115	-
30	CLA	7	307	19	-	19/37/115/115	-
30	CLA	16	310	28	1/1/11/20	7/13/91/115	-
37	A86	2u	203	30	-	15/34/90/90	0/3/3/3
30	CLA	6	304	18	1/1/15/20	10/37/115/115	-
37	A86	1	309	-	-	8/34/90/90	0/3/3/3
30	CLA	6	316	40	1/1/13/20	7/25/103/115	-
39	DD6	2	317	-	-	14/26/80/80	0/3/3/3
30	CLA	2	303	14	-	13/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
37	A86	3	314	-	-	9/34/90/90	0/3/3/3
30	CLA	A	809	1,30	1/1/15/20	15/37/115/115	-
30	CLA	10	309	22	1/1/15/20	10/37/115/115	-
35	LMT	1	311	-	-	4/21/61/61	0/2/2/2
33	BCR	B	845	-	-	13/29/63/63	0/2/2/2
37	A86	8	318	-	-	15/34/90/90	0/3/3/3
30	CLA	11	306	40	1/1/13/20	8/25/103/115	-
35	LMT	9	317	-	-	5/18/58/61	0/2/2/2
38	KC1	3	304	15	-	6/15/71/71	-
34	LHG	B	848	30	-	18/31/31/53	-
30	CLA	15	309	27	-	10/37/115/115	-
30	CLA	7	310	19	-	11/37/115/115	-
30	CLA	15	314	27,30	-	4/13/91/115	-
30	CLA	16	303	28	1/1/15/20	19/37/115/115	-
30	CLA	2	309	34,14	1/1/15/20	11/37/115/115	-
38	KC1	5	305	17	-	5/15/71/71	-
30	CLA	12	321	24,26	1/1/15/20	4/37/115/115	-
36	LMG	8	321	36	-	5/24/44/70	0/1/1/1
30	CLA	8	309	20	-	3/16/94/115	-
39	DD6	4	313	-	-	14/26/80/80	0/3/3/3
35	LMT	12	301	-	-	4/21/61/61	0/2/2/2
30	CLA	B	814	2	1/1/13/20	5/25/103/115	-
38	KC1	11	307	23	-	10/15/71/71	-
37	A86	5	316	-	-	6/34/90/90	0/3/3/3
37	A86	16	314	-	-	11/34/90/90	0/3/3/3
30	CLA	10	311	-	-	7/13/91/115	-
38	KC1	12	305	24	-	7/15/71/71	-
30	CLA	A	811	1	1/1/15/20	12/37/115/115	-
39	DD6	5	314	-	-	10/26/80/80	0/3/3/3
33	BCR	A	850	-	-	11/29/63/63	0/2/2/2
30	CLA	5	303	17	1/1/15/20	6/37/115/115	-
30	CLA	A	813	1	1/1/15/20	13/37/115/115	-
30	CLA	6	314	18	-	16/37/115/115	-
30	CLA	11	304	23	1/1/15/20	9/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	CLA	9	307	21	1/1/15/20	9/37/115/115	-
37	A86	2	318	-	-	8/34/90/90	0/3/3/3
30	CLA	8	303	40	-	10/37/115/115	-
30	CLA	B	838	2	1/1/15/20	17/37/115/115	-
39	DD6	7	318	-	-	13/26/80/80	0/3/3/3
38	KC1	7	313	-	-	4/15/71/71	-
30	CLA	B	821	2	1/1/13/20	14/25/103/115	-
30	CLA	12	306	24	1/1/15/20	6/37/115/115	-
30	CLA	B	830	2	1/1/15/20	12/37/115/115	-
30	CLA	1	303	13,30	1/1/15/20	13/37/115/115	-
30	CLA	A	837	1	1/1/11/20	7/13/91/115	-
30	CLA	11	309	23	-	16/37/115/115	-
30	CLA	B	833	40,30	1/1/15/20	11/37/115/115	-
29	CL0	A	801	1	3/3/20/25	4/37/135/135	-
30	CLA	A	816	1,35	1/1/15/20	17/37/115/115	-
30	CLA	B	803	-	1/1/15/20	6/37/115/115	-
30	CLA	B	812	2	1/1/15/20	8/37/115/115	-
34	LHG	A	852	-	-	25/53/53/53	-
33	BCR	B	842	-	-	10/29/63/63	0/2/2/2
39	DD6	7	314	-	-	11/26/80/80	0/3/3/3
30	CLA	B	802	40,30	1/1/15/20	10/37/115/115	-
30	CLA	B	804	2	1/1/12/20	6/22/100/115	-
30	CLA	1	305	40	1/1/15/20	9/37/115/115	-
30	CLA	6	315	18	1/1/11/20	3/13/91/115	-
30	CLA	A	836	1	1/1/12/20	7/24/102/115	-
38	KC1	3	311	40	-	6/15/71/71	-
38	KC1	10	312	22	-	5/15/71/71	-
30	CLA	4	301	2,16	1/1/11/20	7/18/96/115	-
35	LMT	A	857	-	-	3/21/61/61	0/2/2/2
30	CLA	9	309	21,40	1/1/15/20	9/37/115/115	-
30	CLA	5	308	17	-	14/37/115/115	-
33	BCR	A	851	-	-	7/29/63/63	0/2/2/2
30	CLA	B	835	2	1/1/15/20	6/37/115/115	-
37	A86	14	315	26	-	11/34/90/90	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
37	A86	14	317	-	-	15/34/90/90	0/3/3/3
30	CLA	1	302	13,30	1/1/15/20	10/37/115/115	-
30	CLA	12	304	39,24	1/1/15/20	14/37/115/115	-
30	CLA	14	310	-	1/1/12/20	5/19/97/115	-
37	A86	12	314	-	-	13/34/90/90	0/3/3/3
39	DD6	7	317	-	-	10/26/80/80	0/3/3/3
30	CLA	A	817	40,36	-	4/18/96/115	-
38	KC1	8	306	40	-	8/15/71/71	-
30	CLA	3	309	15	-	4/13/91/115	-
37	A86	10	317	-	-	12/34/90/90	0/3/3/3
33	BCR	J	102	-	-	12/29/63/63	0/2/2/2
30	CLA	L	203	40	1/1/11/20	2/13/91/115	-
37	A86	10	301	22	-	6/34/90/90	0/3/3/3
30	CLA	A	832	1	-	5/19/97/115	-
37	A86	11	315	-	-	13/34/90/90	0/3/3/3
39	DD6	7	302	-	-	12/26/80/80	0/3/3/3
30	CLA	3	307	15	1/1/15/20	14/37/115/115	-
30	CLA	B	823	40	1/1/12/20	3/24/102/115	-
30	CLA	14	302	26	1/1/15/20	14/37/115/115	-
33	BCR	B	846	-	-	7/29/63/63	0/2/2/2
38	KC1	4	307	16	-	6/15/71/71	-
30	CLA	A	804	1	1/1/15/20	11/37/115/115	-
30	CLA	A	842	1	1/1/15/20	10/37/115/115	-
38	KC1	13	305	25	-	8/15/71/71	-
30	CLA	15	307	27	1/1/12/20	7/19/97/115	-
30	CLA	B	813	2	1/1/15/20	21/37/115/115	-
37	A86	15	316	30	-	14/34/90/90	0/3/3/3
30	CLA	9	301	34	1/1/15/20	10/37/115/115	-
30	CLA	A	814	1	1/1/14/20	10/31/109/115	-
30	CLA	7	303	19	1/1/15/20	11/37/115/115	-
37	A86	4	312	-	-	11/34/90/90	0/3/3/3
33	BCR	B	843	-	-	9/29/63/63	0/2/2/2
30	CLA	15	313	27	-	11/37/115/115	-
38	KC1	4	310	16	-	4/15/71/71	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	CLA	A	829	1,30	1/1/15/20	14/37/115/115	-
30	CLA	A	840	1	1/1/11/20	5/16/94/115	-
30	CLA	B	809	2	1/1/15/20	10/37/115/115	-
36	LMG	14	321	-	-	13/33/53/70	0/1/1/1
38	KC1	8	314	40,38	-	7/15/71/71	-
30	CLA	B	801	2	1/1/15/20	8/37/115/115	-
35	LMT	11	317	-	-	2/21/61/61	0/2/2/2
30	CLA	10	305	40	1/1/15/20	10/37/115/115	-
35	LMT	B	852	-	-	8/21/61/61	0/2/2/2
39	DD6	12	317	-	-	13/26/80/80	0/3/3/3
38	KC1	12	313	24	-	7/15/71/71	-
33	BCR	A	847	-	-	12/29/63/63	0/2/2/2
30	CLA	2u	202	12	1/1/15/20	14/37/115/115	-
30	CLA	4	305	16	1/1/15/20	9/37/115/115	-
37	A86	13	313	25	-	11/30/86/90	0/3/3/3
30	CLA	A	838	1	1/1/12/20	4/21/99/115	-
30	CLA	15	310	27	1/1/11/20	6/13/91/115	-
30	CLA	A	821	1	1/1/14/20	11/33/111/115	-
30	CLA	13	303	-	-	8/37/115/115	-
30	CLA	2	310	14	1/1/15/20	6/37/115/115	-
30	CLA	B	817	2	1/1/13/20	5/30/108/115	-
39	DD6	5	313	-	-	9/26/80/80	0/3/3/3
30	CLA	B	825	2	1/1/15/20	7/37/115/115	-
37	A86	14	301	26	-	8/34/90/90	0/3/3/3
30	CLA	A	822	40	1/1/15/20	8/37/115/115	-
34	LHG	6	322	30	-	12/31/31/53	-
30	CLA	14	312	26,37	-	7/13/91/115	-
30	CLA	B	851	2,14	-	14/37/115/115	-
37	A86	16	312	28	-	13/34/90/90	0/3/3/3
38	KC1	14	311	26	-	5/15/71/71	-
35	LMT	8	322	-	-	3/21/61/61	0/2/2/2
30	CLA	13	309	-	1/1/11/20	8/13/91/115	-
38	KC1	8	311	40	-	5/15/71/71	-
36	LMG	7	320	-	-	14/32/52/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
37	A86	2u	205	-	-	11/34/90/90	0/3/3/3
38	KC1	16	311	28	-	6/15/71/71	-
37	A86	15	315	27	-	9/34/90/90	0/3/3/3
30	CLA	B	834	2	1/1/14/20	8/31/109/115	-
39	DD6	6	303	30	-	10/26/80/80	0/3/3/3
33	BCR	I	101	-	-	5/29/63/63	0/2/2/2
30	CLA	3	301	15	1/1/15/20	7/37/115/115	-
30	CLA	9	302	21,9	1/1/12/20	7/21/99/115	-
30	CLA	A	839	1	1/1/15/20	14/37/115/115	-
35	LMT	A	854	-	-	15/21/61/61	0/2/2/2
30	CLA	16	302	28	1/1/15/20	9/37/115/115	-
30	CLA	A	808	1	1/1/12/20	3/21/99/115	-
38	KC1	14	308	26,30	-	9/15/71/71	-
30	CLA	A	834	1	1/1/15/20	10/37/115/115	-
36	LMG	5	318	-	-	10/28/48/70	0/1/1/1
30	CLA	A	824	1	1/1/12/20	3/21/99/115	-
30	CLA	A	828	1	1/1/15/20	13/37/115/115	-
38	KC1	11	311	23	-	10/15/71/71	-
30	CLA	9	305	-	1/1/15/20	13/37/115/115	-
30	CLA	A	833	1	1/1/15/20	13/37/115/115	-
30	CLA	A	830	1	1/1/15/20	9/37/115/115	-
39	DD6	4	316	-	-	14/26/80/80	0/3/3/3
30	CLA	A	810	1	1/1/15/20	10/37/115/115	-
30	CLA	5	304	17	1/1/15/20	12/37/115/115	-
30	CLA	B	828	2	1/1/15/20	14/37/115/115	-
30	CLA	14	307	38	-	10/37/115/115	-
30	CLA	3	302	15	1/1/14/20	7/31/109/115	-
37	A86	2	302	-	-	11/34/90/90	0/3/3/3
38	KC1	12	309	24	-	8/15/71/71	-
36	LMG	8	319	20,36	-	17/32/52/70	0/1/1/1
30	CLA	4	306	16	1/1/15/20	10/37/115/115	-
30	CLA	15	302	27,30	-	15/37/115/115	-
35	LMT	7	321	-	-	4/21/61/61	0/2/2/2
37	A86	14	320	-	-	9/34/90/90	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	CLA	8	302	20	1/1/15/20	8/37/115/115	-
35	LMT	16	315	-	-	5/21/61/61	0/2/2/2
37	A86	5	315	-	-	6/34/90/90	0/3/3/3
30	CLA	B	807	2	1/1/15/20	9/37/115/115	-
38	KC1	13	308	25	-	10/15/71/71	-
30	CLA	12	307	24	1/1/11/20	4/15/93/115	-
30	CLA	10	303	22	1/1/15/20	13/37/115/115	-
37	A86	8	315	-	-	7/34/90/90	0/3/3/3
30	CLA	15	311	37	1/1/11/20	7/13/91/115	-
30	CLA	B	818	2	1/1/14/20	6/31/109/115	-
30	CLA	2	307	14	1/1/15/20	7/37/115/115	-
37	A86	11	314	-	-	14/34/90/90	0/3/3/3
30	CLA	2	311	14	-	11/37/115/115	-
39	DD6	2	316	-	-	12/26/80/80	0/3/3/3
30	CLA	A	806	1	1/1/15/20	15/37/115/115	-
30	CLA	4	304	-	1/1/14/20	9/31/109/115	-
30	CLA	9	308	21	1/1/15/20	16/37/115/115	-
35	LMT	12	318	-	-	3/21/61/61	0/2/2/2
37	A86	11	301	-	-	14/34/90/90	0/3/3/3
30	CLA	B	829	2	1/1/15/20	11/37/115/115	-
30	CLA	A	802	40	1/1/15/20	6/37/115/115	-
30	CLA	A	841	1	1/1/15/20	10/37/115/115	-
34	LHG	5	317	30	-	4/31/31/53	-
30	CLA	B	822	2,30	-	12/37/115/115	-
30	CLA	16	307	-	1/1/11/20	7/15/93/115	-
39	DD6	10	313	-	-	11/26/80/80	0/3/3/3
30	CLA	B	837	40	1/1/15/20	5/37/115/115	-
38	KC1	9	304	21	-	6/15/71/71	-
30	CLA	4	309	-	1/1/15/20	9/37/115/115	-
36	LMG	3	317	-	-	18/32/52/70	0/1/1/1
38	KC1	16	304	28	-	8/15/71/71	-
38	KC1	9	311	21	-	8/15/71/71	-
30	CLA	A	805	1,30	1/1/13/20	9/30/108/115	-
37	A86	9	316	30	-	11/34/90/90	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
35	LMT	7	301	30	-	3/21/61/61	0/2/2/2
33	BCR	F	204	-	-	10/29/63/63	0/2/2/2
36	LMG	8	320	-	-	20/37/57/70	0/1/1/1
34	LHG	2	320	30	-	12/31/31/53	-
30	CLA	5	311	40,17	1/1/15/20	15/37/115/115	-
30	CLA	10	308	22	1/1/15/20	11/37/115/115	-
33	BCR	2u	201	-	-	11/29/63/63	0/2/2/2
38	KC1	13	306	25	-	9/15/71/71	-
30	CLA	A	827	40	1/1/15/20	5/37/115/115	-
30	CLA	3	305	15	1/1/14/20	12/34/112/115	-
30	CLA	A	819	1	-	6/24/102/115	-
30	CLA	F	201	40	1/1/15/20	10/37/115/115	-
38	KC1	2	312	14	-	2/15/71/71	-
39	DD6	6	319	-	-	11/26/80/80	0/3/3/3
30	CLA	12	312	24	1/1/15/20	12/37/115/115	-
35	LMT	6	302	-	-	3/17/57/61	0/2/2/2
39	DD6	15	318	-	-	13/26/80/80	0/3/3/3
33	BCR	L	204	-	-	11/29/63/63	0/2/2/2
30	CLA	7	312	19	1/1/11/20	6/15/93/115	-
30	CLA	7	306	19	1/1/15/20	8/37/115/115	-
30	CLA	A	835	1	1/1/15/20	9/37/115/115	-
30	CLA	6	310	34	1/1/15/20	8/37/115/115	-
30	CLA	4	311	16	1/1/12/20	1/19/97/115	-
37	A86	15	322	30	-	15/34/90/90	0/3/3/3
30	CLA	12	302	24	-	13/37/115/115	-
30	CLA	8	308	20	1/1/13/20	10/25/103/115	-
30	CLA	16	308	28	1/1/11/20	6/13/91/115	-
30	CLA	7	305	40,19	1/1/15/20	8/37/115/115	-
30	CLA	B	826	2	1/1/15/20	14/37/115/115	-
33	BCR	B	841	-	-	10/29/63/63	0/2/2/2
30	CLA	11	310	23	1/1/15/20	15/37/115/115	-
37	A86	7	315	-	-	15/34/90/90	0/3/3/3
38	KC1	4	308	16	-	2/15/71/71	-
35	LMT	11	303	-	-	11/21/61/61	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	KC1	8	310	20	-	6/15/71/71	-
30	CLA	15	304	39,27,30	1/1/15/20	20/37/115/115	-
38	KC1	5	312	17	-	4/15/71/71	-
38	KC1	8	313	20	-	5/15/71/71	-
30	CLA	8	301	20	1/1/15/20	20/37/115/115	-
38	KC1	3	308	15	-	8/15/71/71	-
30	CLA	3	303	15	1/1/15/20	14/37/115/115	-
30	CLA	4	303	16	1/1/15/20	4/37/115/115	-
38	KC1	8	312	38	-	9/15/71/71	-
37	A86	15	320	-	-	15/34/90/90	0/3/3/3
32	SF4	C	102	3	-	-	0/6/5/5
39	DD6	2	315	-	-	13/26/80/80	0/3/3/3
37	A86	7	319	-	-	10/34/90/90	0/3/3/3
38	KC1	6	313	18	-	5/15/71/71	-
33	BCR	A	848	-	-	10/29/63/63	0/2/2/2
39	DD6	3	316	-	-	12/26/80/80	0/3/3/3
37	A86	4	315	-	-	5/34/90/90	0/3/3/3
30	CLA	12	310	40	-	8/37/115/115	-
36	LMG	A	856	-	-	15/29/49/70	0/1/1/1
36	LMG	2u	204	12	-	14/26/46/70	0/1/1/1

The worst 5 of 7031 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	2	315	DD6	C10-C11	26.29	1.70	1.35
39	11	313	DD6	C10-C11	25.97	1.70	1.35
39	6	303	DD6	C10-C11	25.93	1.70	1.35
39	15	318	DD6	C10-C11	25.83	1.70	1.35
39	10	313	DD6	C10-C11	25.83	1.70	1.35

The worst 5 of 9756 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	14	315	A86	O1-C20-C19	58.15	157.06	113.38
37	14	317	A86	O1-C20-C19	57.25	156.39	113.38
37	15	321	A86	O1-C20-C19	57.05	156.24	113.38
37	8	318	A86	O1-C20-C19	56.85	156.09	113.38
37	4	312	A86	O1-C20-C19	56.56	155.87	113.38

5 of 185 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
29	A	801	CL0	NC
29	A	801	CL0	NA
29	A	801	CL0	ND
30	A	802	CLA	ND
30	A	803	CLA	ND

5 of 3979 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
30	A	804	CLA	C3A-C2A-CAA-CBA
30	A	806	CLA	C1A-C2A-CAA-CBA
30	A	806	CLA	C3A-C2A-CAA-CBA
30	A	807	CLA	C1A-C2A-CAA-CBA
30	A	807	CLA	CBD-CGD-O2D-CED

There are no ring outliers.

235 monomers are involved in 440 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	3	310	CLA	2	0
30	B	820	CLA	2	0
38	5	310	KC1	1	0
31	B	840	PQN	1	0
39	6	318	DD6	1	0
30	A	831	CLA	5	0
30	16	306	CLA	1	0
35	12	319	LMT	1	0
30	1	304	CLA	2	0
30	2	305	CLA	2	0
30	12	308	CLA	4	0
30	13	302	CLA	3	0
30	16	309	CLA	1	0
30	L	202	CLA	5	0
39	6	321	DD6	1	0
30	B	808	CLA	2	0
30	A	844	CLA	1	0
30	A	823	CLA	1	0
30	1	307	CLA	2	0
30	3	306	CLA	2	0
30	F	202	CLA	3	0
30	10	307	CLA	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	A	803	CLA	2	0
30	6	306	CLA	2	0
30	8	305	CLA	2	0
30	A	818	CLA	1	0
30	15	308	CLA	1	0
30	2	308	CLA	1	0
34	A	853	LHG	1	0
30	6	307	CLA	1	0
31	A	845	PQN	5	0
30	B	824	CLA	3	0
33	B	844	BCR	2	0
33	M	101	BCR	3	0
30	A	826	CLA	4	0
33	A	849	BCR	4	0
35	12	320	LMT	1	0
30	B	819	CLA	2	0
37	11	316	A86	1	0
35	11	318	LMT	2	0
30	A	807	CLA	2	0
30	14	305	CLA	1	0
30	7	311	CLA	2	0
30	A	843	CLA	2	0
30	1	301	CLA	2	0
30	5	302	CLA	3	0
30	7	309	CLA	6	0
30	16	301	CLA	6	0
36	6	301	LMG	1	0
33	L	205	BCR	4	0
30	14	303	CLA	3	0
30	6	309	CLA	3	0
30	A	820	CLA	6	0
36	B	847	LMG	2	0
30	4	302	CLA	1	0
30	B	827	CLA	5	0
30	2	304	CLA	1	0
36	B	849	LMG	1	0
30	13	301	CLA	5	0
30	B	831	CLA	2	0
35	A	855	LMT	2	0
30	2	301	CLA	1	0
30	B	811	CLA	4	0
30	B	805	CLA	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
39	13	314	DD6	1	0
30	13	307	CLA	4	0
30	B	816	CLA	2	0
30	5	307	CLA	2	0
30	9	306	CLA	2	0
33	J	103	BCR	4	0
33	L	201	BCR	2	0
30	B	806	CLA	7	0
30	B	815	CLA	2	0
30	B	836	CLA	4	0
30	11	308	CLA	2	0
30	7	304	CLA	1	0
30	J	101	CLA	1	0
30	12	303	CLA	2	0
30	15	303	CLA	3	0
30	B	839	CLA	3	0
30	A	812	CLA	4	0
30	10	304	CLA	1	0
30	7	307	CLA	2	0
30	16	310	CLA	1	0
30	6	316	CLA	5	0
30	2	303	CLA	4	0
30	A	809	CLA	1	0
30	10	309	CLA	2	0
33	B	845	BCR	2	0
30	11	306	CLA	2	0
38	3	304	KC1	1	0
30	15	309	CLA	2	0
30	16	303	CLA	1	0
30	2	309	CLA	2	0
30	12	321	CLA	2	0
36	8	321	LMG	1	0
35	12	301	LMT	2	0
30	A	811	CLA	3	0
33	A	850	BCR	2	0
30	5	303	CLA	4	0
30	A	813	CLA	3	0
30	6	314	CLA	2	0
30	11	304	CLA	3	0
30	9	307	CLA	4	0
30	8	303	CLA	2	0
30	B	838	CLA	7	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	B	821	CLA	2	0
30	B	830	CLA	2	0
30	1	303	CLA	3	0
30	A	837	CLA	1	0
30	B	833	CLA	1	0
29	A	801	CL0	3	0
30	A	816	CLA	4	0
30	B	803	CLA	1	0
30	B	812	CLA	2	0
34	A	852	LHG	1	0
33	B	842	BCR	1	0
30	B	802	CLA	2	0
30	B	804	CLA	2	0
30	A	836	CLA	3	0
30	4	301	CLA	3	0
35	A	857	LMT	1	0
30	5	308	CLA	2	0
33	A	851	BCR	2	0
30	B	835	CLA	4	0
37	14	317	A86	1	0
30	1	302	CLA	3	0
30	A	817	CLA	3	0
33	J	102	BCR	3	0
30	L	203	CLA	2	0
30	A	832	CLA	1	0
37	11	315	A86	1	0
30	B	823	CLA	1	0
30	14	302	CLA	2	0
33	B	846	BCR	4	0
30	A	804	CLA	4	0
30	A	842	CLA	4	0
30	15	307	CLA	1	0
30	B	813	CLA	7	0
30	9	301	CLA	1	0
30	A	814	CLA	3	0
30	7	303	CLA	1	0
33	B	843	BCR	2	0
30	15	313	CLA	4	0
38	4	310	KC1	1	0
30	A	829	CLA	10	0
30	A	840	CLA	1	0
30	B	809	CLA	7	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
36	14	321	LMG	2	0
30	B	801	CLA	4	0
35	11	317	LMT	2	0
30	10	305	CLA	1	0
33	A	847	BCR	3	0
30	4	305	CLA	1	0
30	A	838	CLA	1	0
30	A	821	CLA	2	0
30	2	310	CLA	1	0
30	B	817	CLA	5	0
30	B	825	CLA	1	0
30	A	822	CLA	3	0
30	14	312	CLA	1	0
30	B	851	CLA	1	0
30	B	834	CLA	2	0
33	I	101	BCR	2	0
30	3	301	CLA	1	0
30	9	302	CLA	1	0
30	A	839	CLA	6	0
30	16	302	CLA	1	0
30	A	834	CLA	2	0
30	A	824	CLA	1	0
30	A	828	CLA	2	0
30	9	305	CLA	2	0
30	A	833	CLA	6	0
30	A	830	CLA	4	0
30	A	810	CLA	5	0
30	5	304	CLA	2	0
30	B	828	CLA	5	0
30	14	307	CLA	1	0
30	3	302	CLA	1	0
38	12	309	KC1	1	0
36	8	319	LMG	1	0
30	4	306	CLA	6	0
30	15	302	CLA	4	0
35	7	321	LMT	1	0
37	14	320	A86	1	0
30	8	302	CLA	2	0
37	5	315	A86	1	0
30	B	807	CLA	2	0
30	10	303	CLA	3	0
37	8	315	A86	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	B	818	CLA	1	0
30	2	307	CLA	3	0
30	2	311	CLA	1	0
30	A	806	CLA	5	0
30	9	308	CLA	2	0
30	A	802	CLA	3	0
30	A	841	CLA	2	0
34	5	317	LHG	1	0
30	B	822	CLA	2	0
30	16	307	CLA	2	0
39	10	313	DD6	1	0
30	B	837	CLA	2	0
30	4	309	CLA	1	0
36	3	317	LMG	2	0
38	16	304	KC1	1	0
30	A	805	CLA	3	0
37	9	316	A86	1	0
35	7	301	LMT	1	0
33	F	204	BCR	3	0
30	10	308	CLA	1	0
30	3	305	CLA	1	0
30	A	819	CLA	3	0
30	F	201	CLA	6	0
39	6	319	DD6	1	0
30	12	312	CLA	1	0
35	6	302	LMT	2	0
33	L	204	BCR	4	0
30	7	306	CLA	3	0
30	A	835	CLA	2	0
30	4	311	CLA	2	0
30	12	302	CLA	1	0
30	8	308	CLA	1	0
30	B	826	CLA	5	0
33	B	841	BCR	1	0
30	11	310	CLA	4	0
37	7	315	A86	1	0
35	11	303	LMT	1	0
30	15	304	CLA	2	0
38	5	312	KC1	1	0
30	8	301	CLA	1	0
30	3	303	CLA	2	0
33	A	848	BCR	2	0

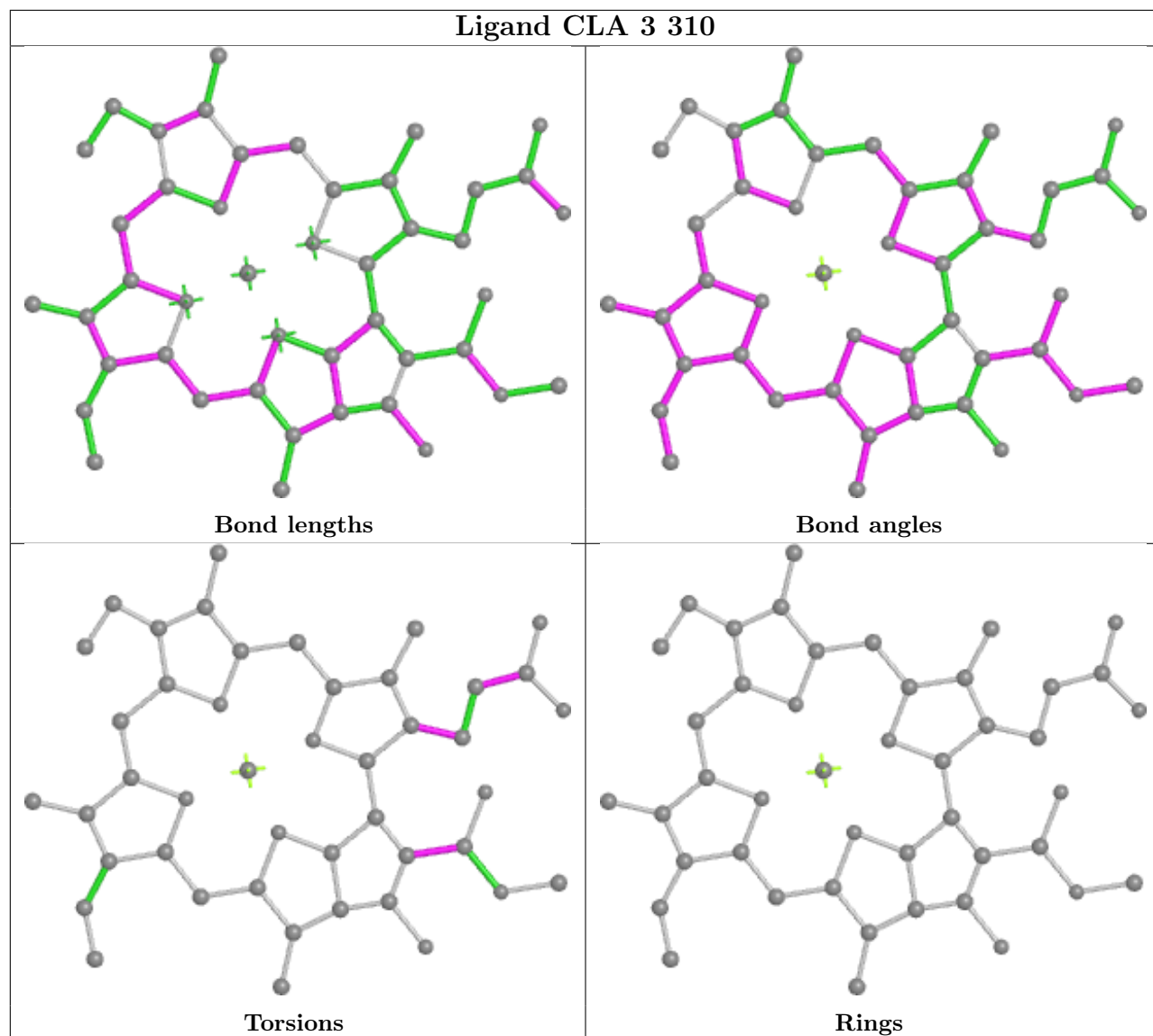
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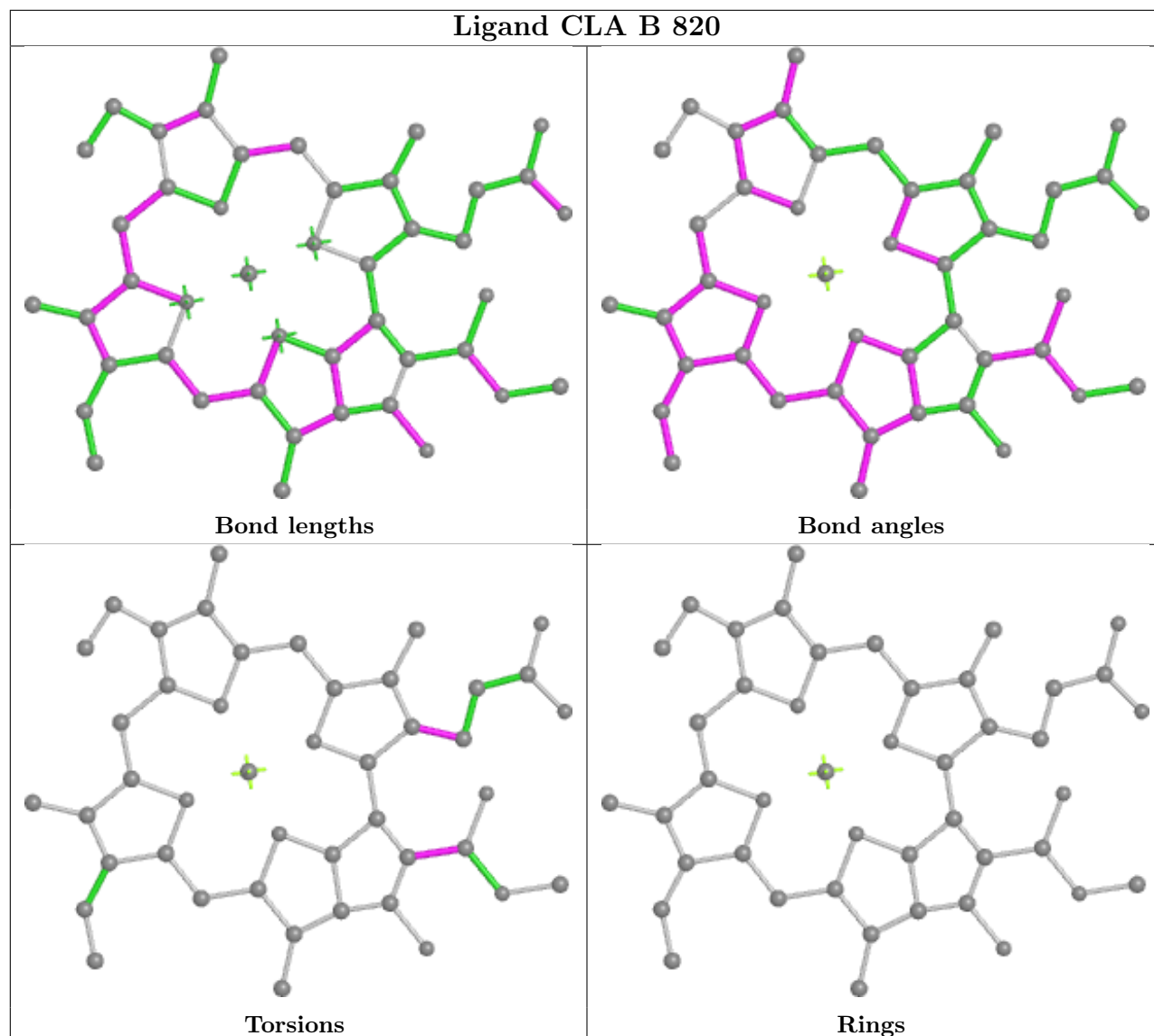


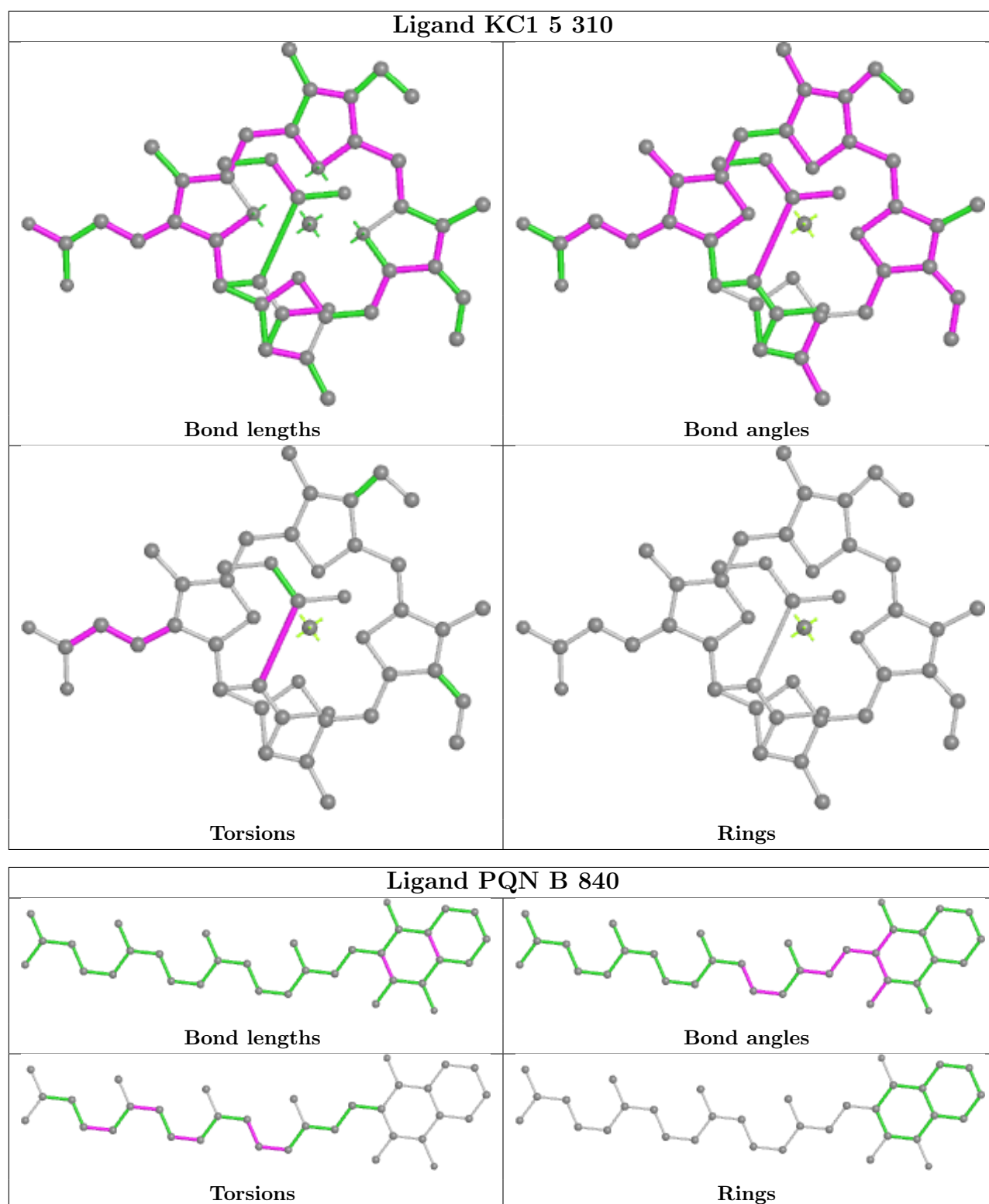
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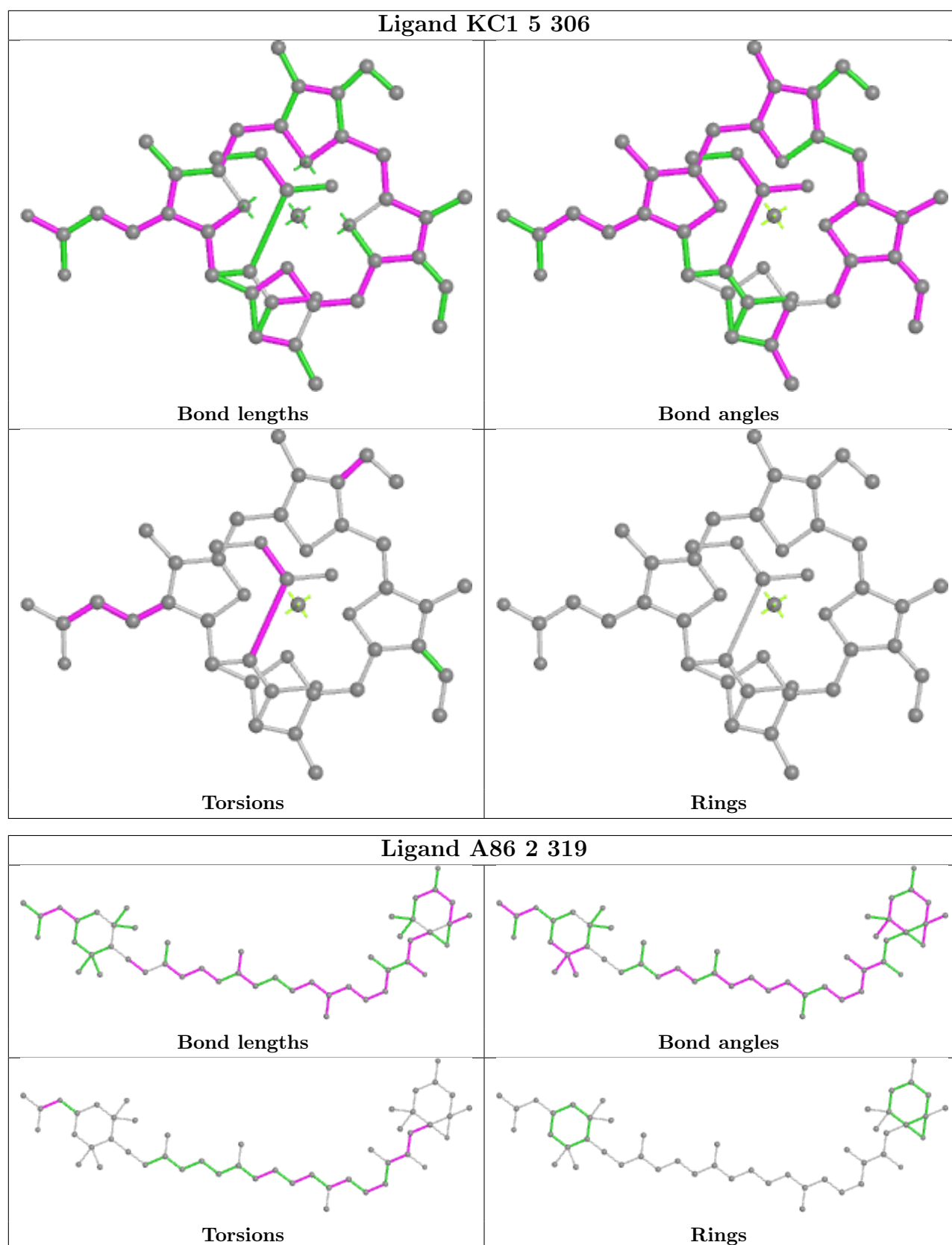
Mol	Chain	Res	Type	Clashes	Symm-Clashes
37	4	315	A86	1	0
30	12	310	CLA	2	0
36	A	856	LMG	2	0

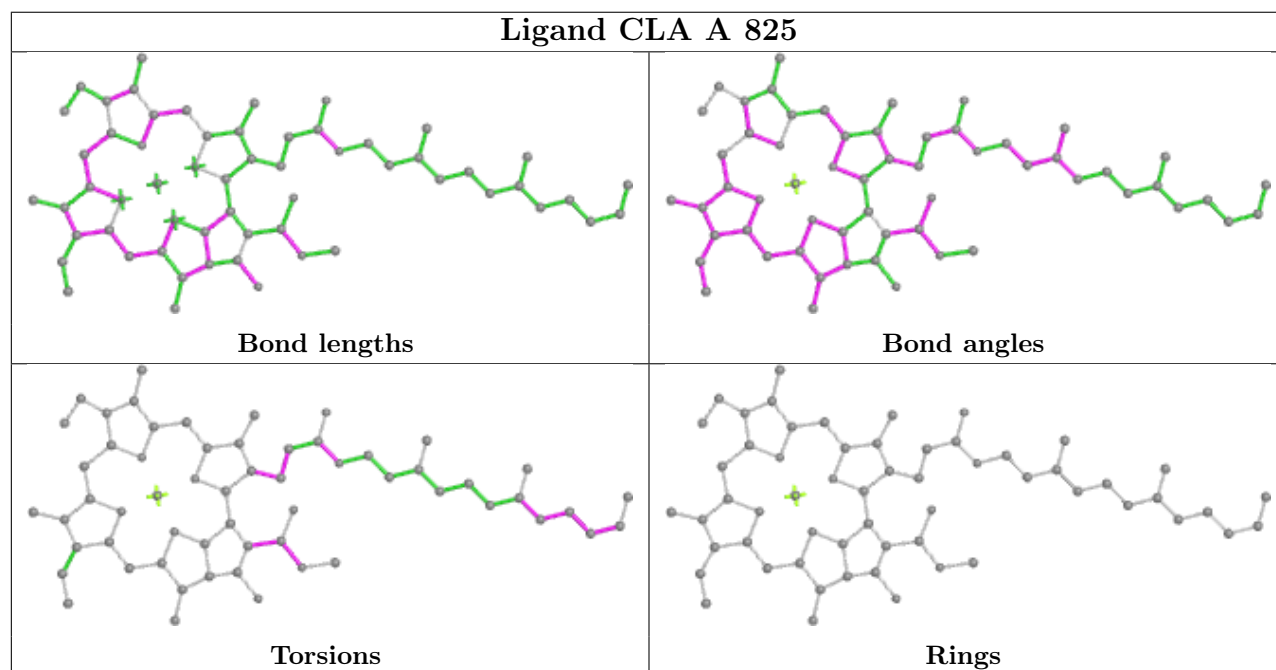
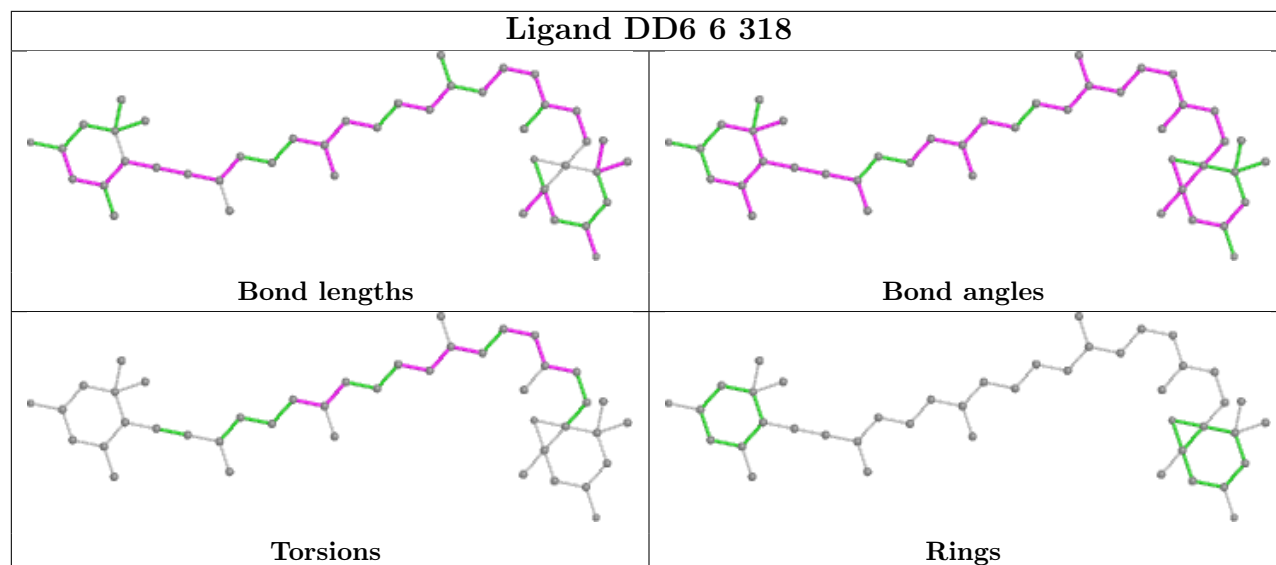
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

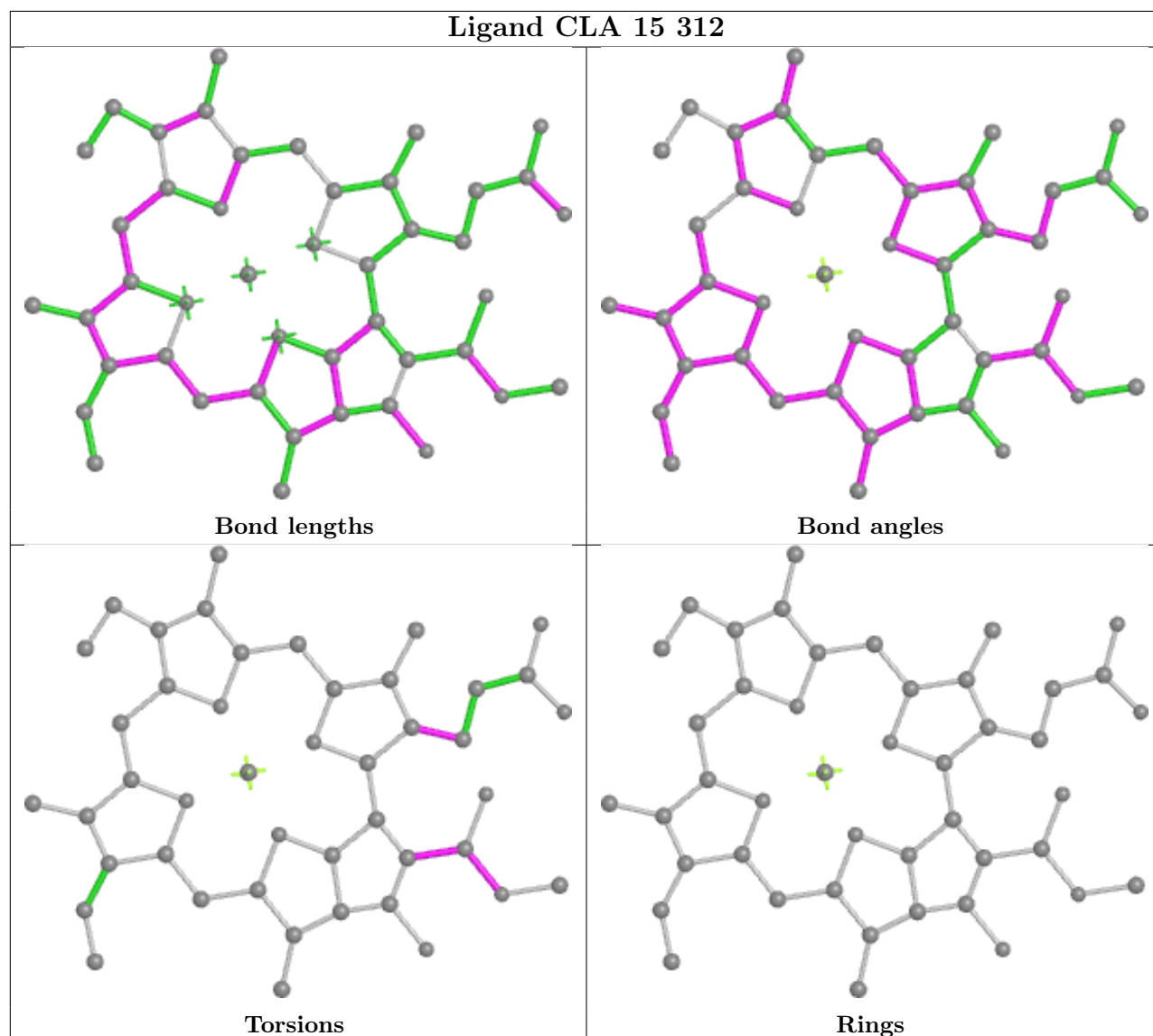
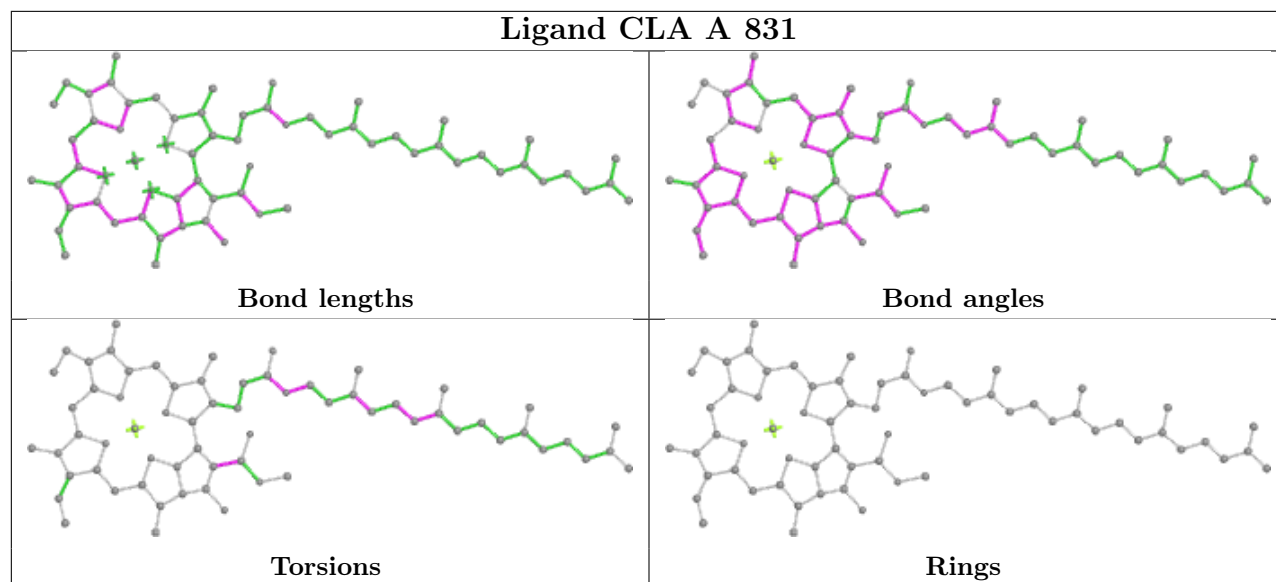


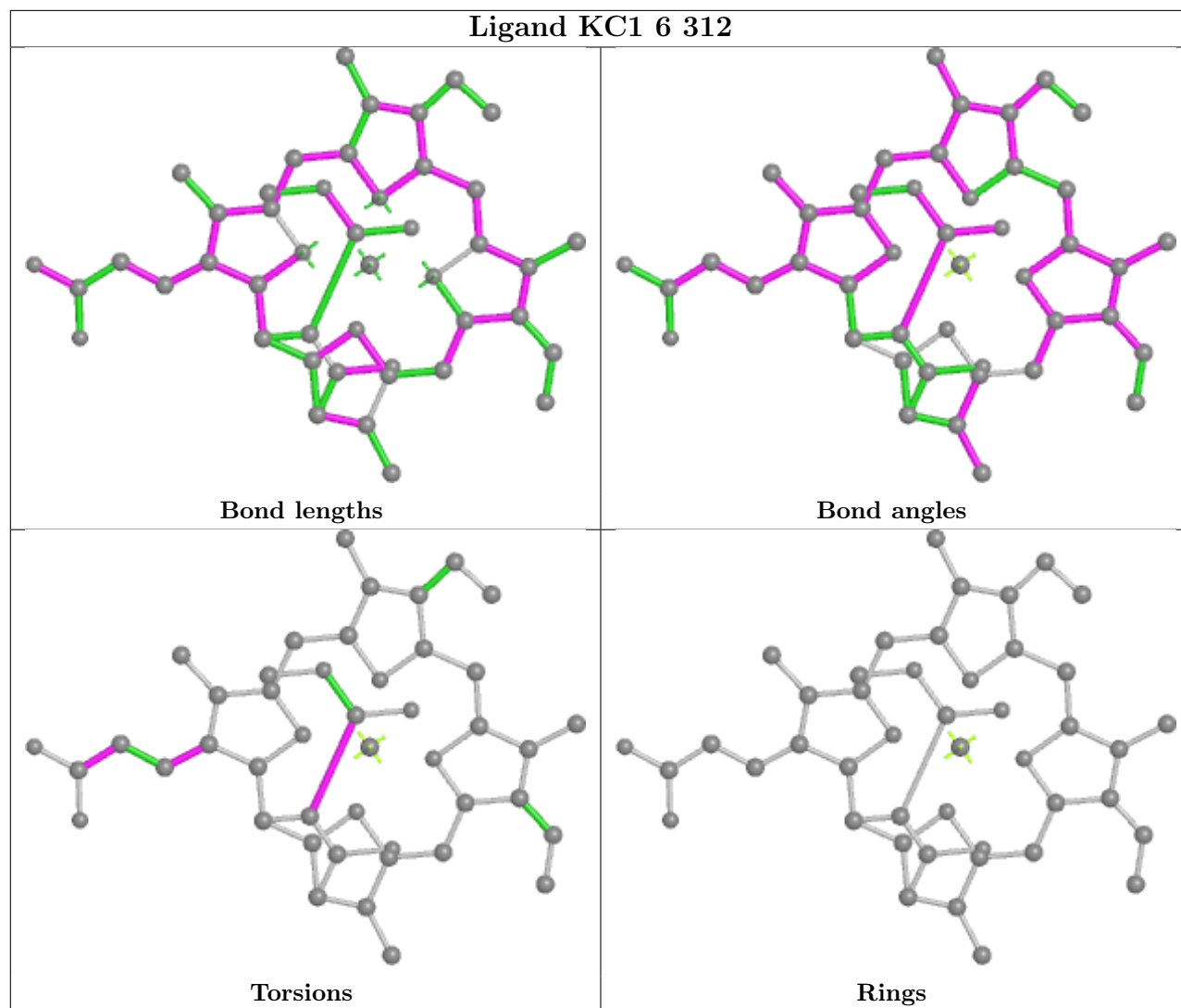




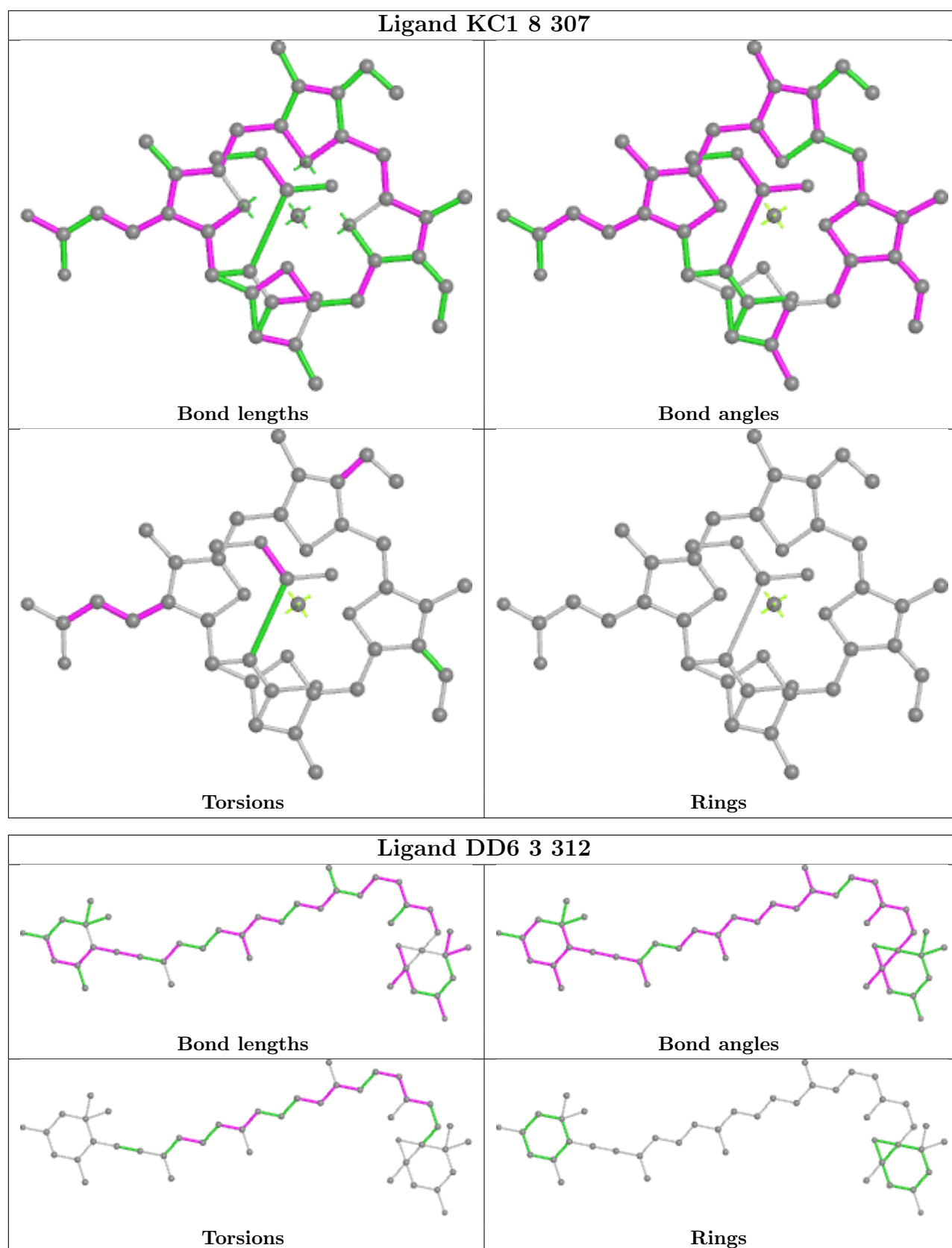


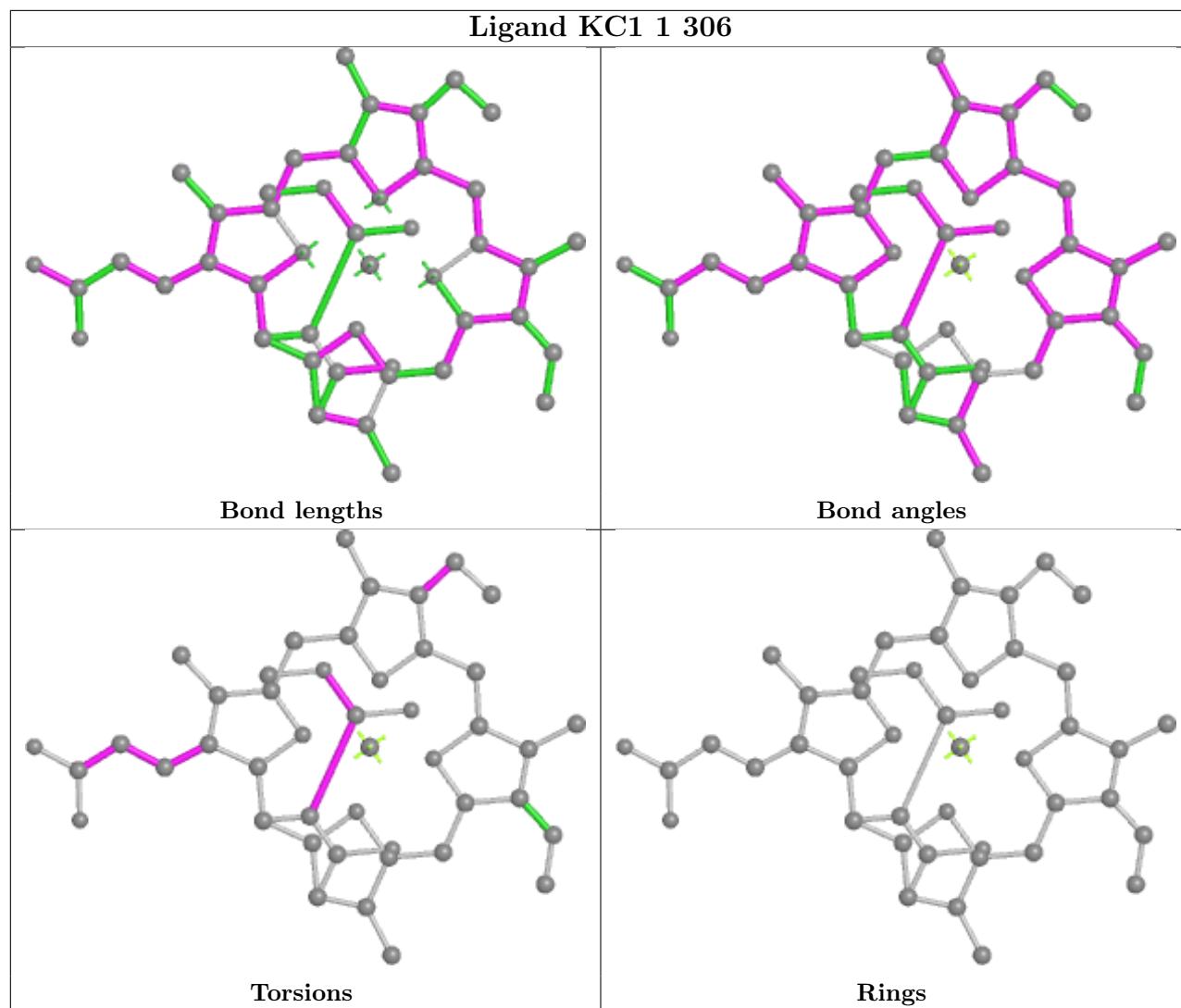


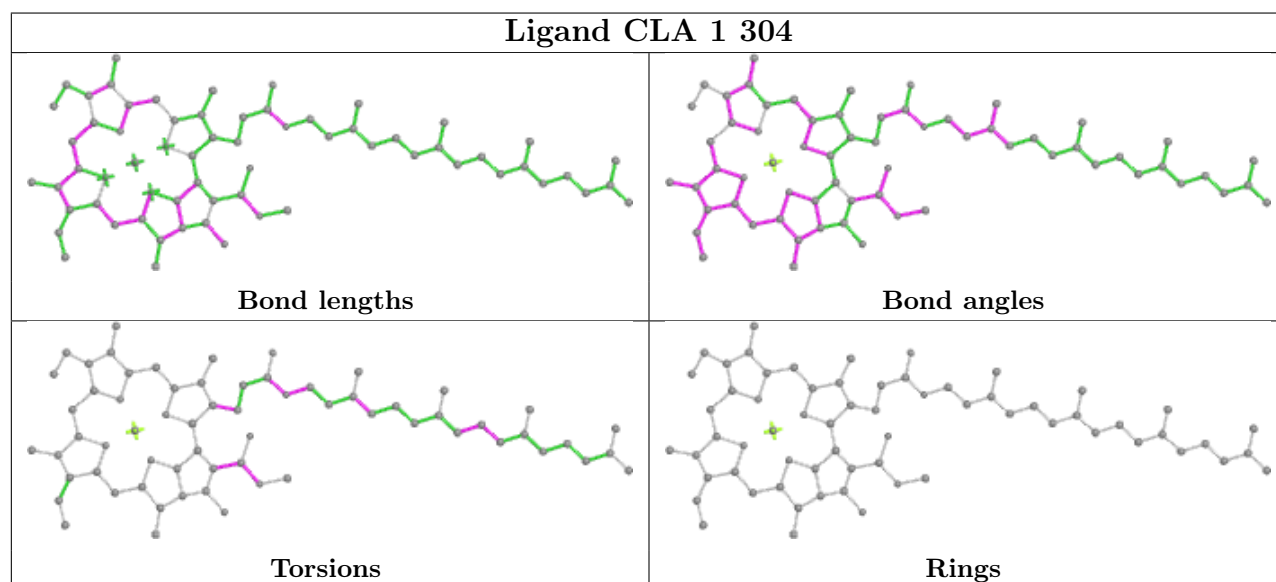
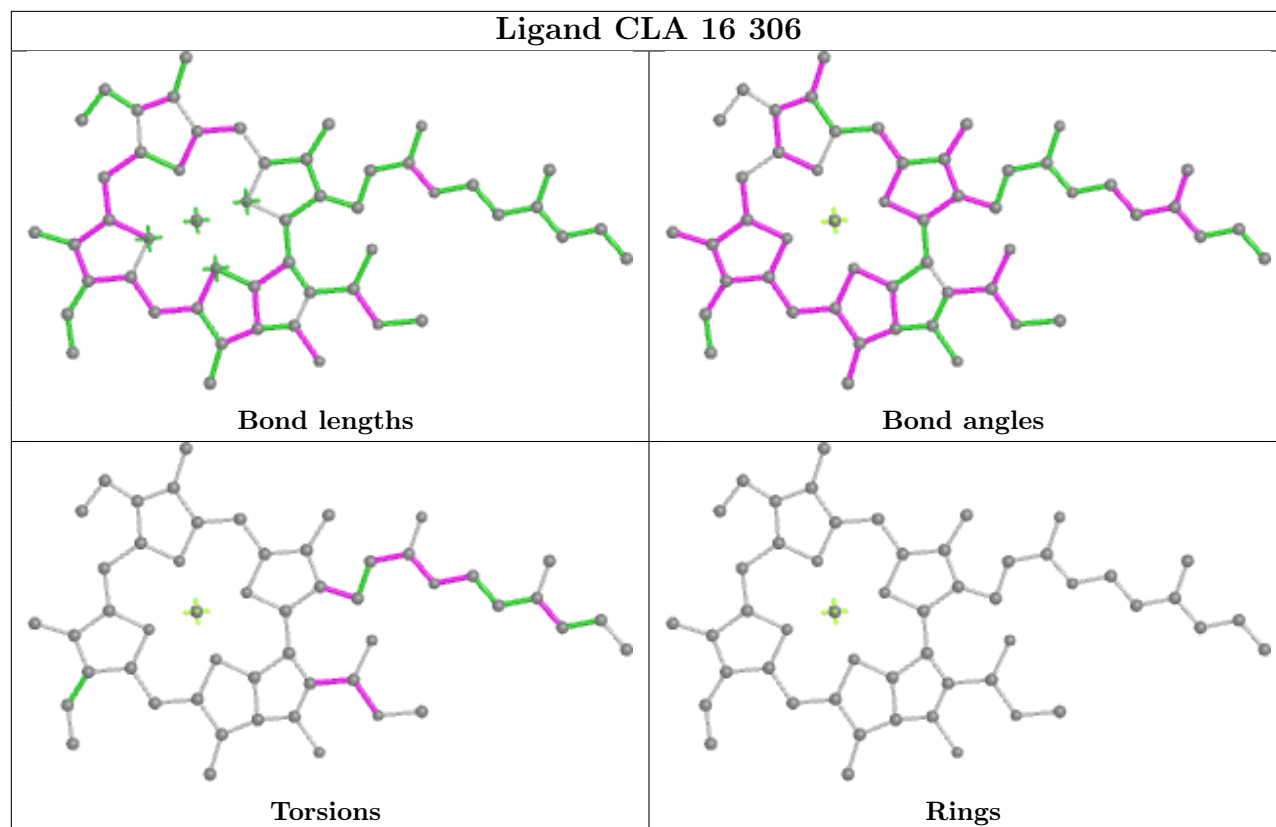


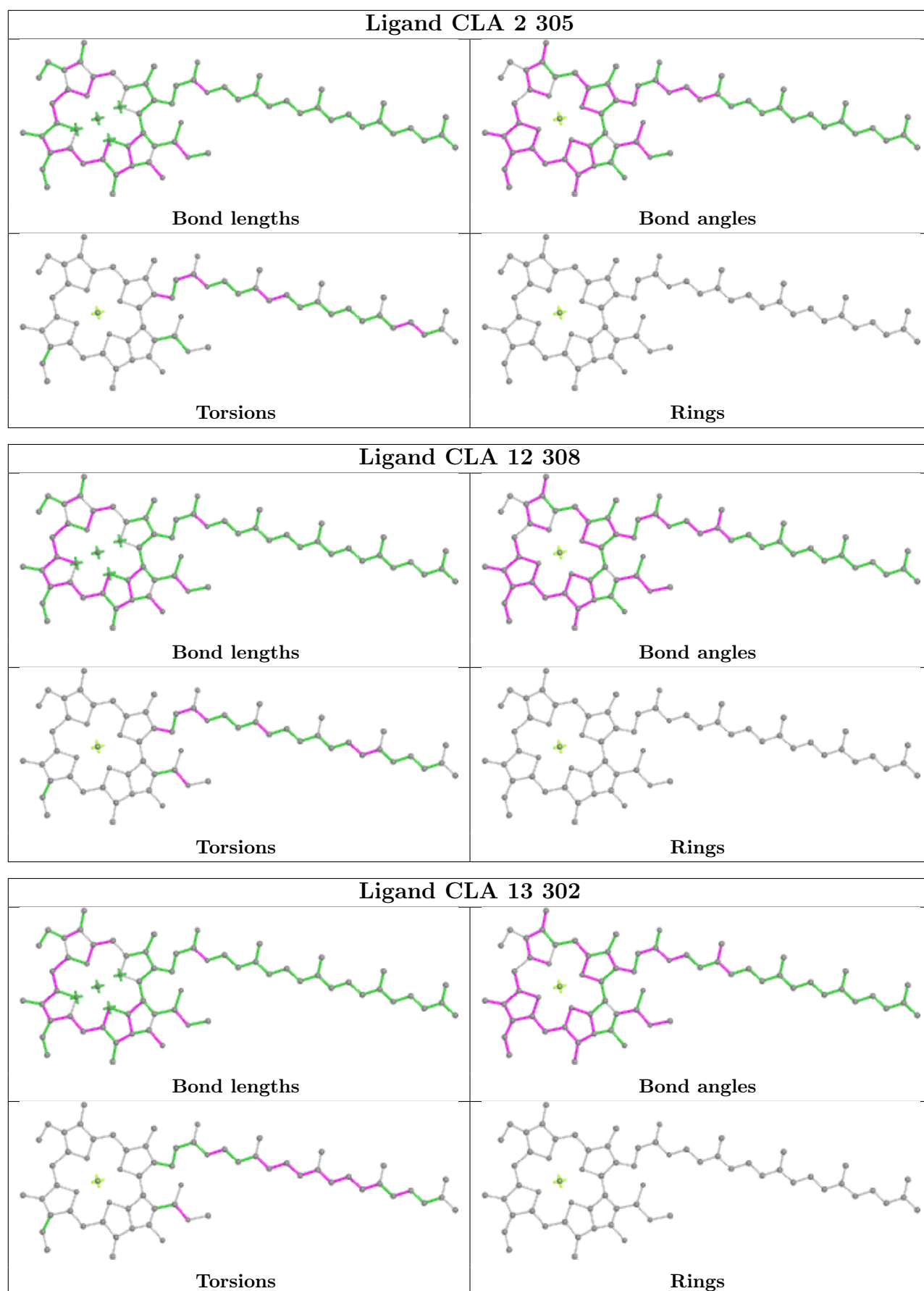


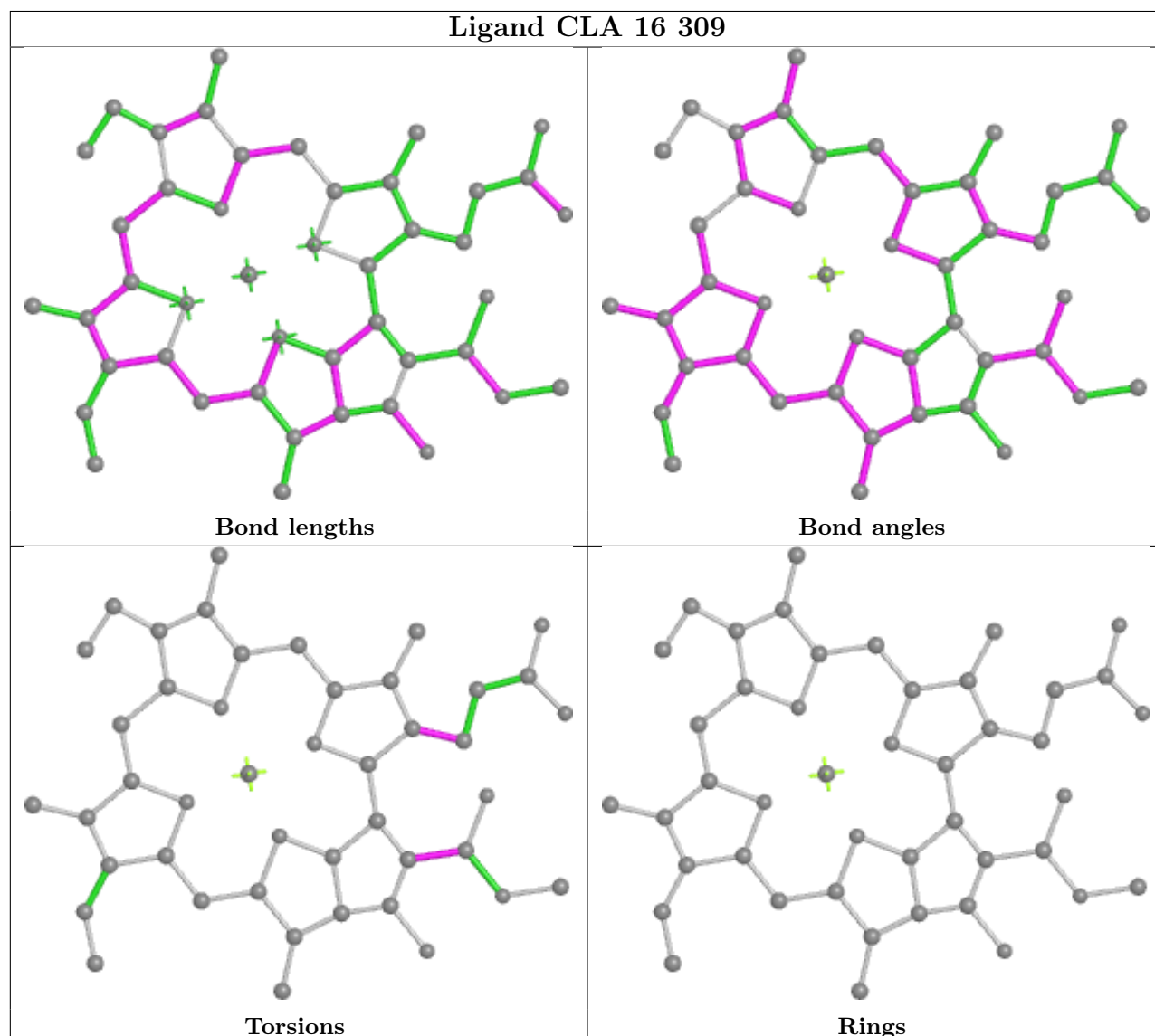
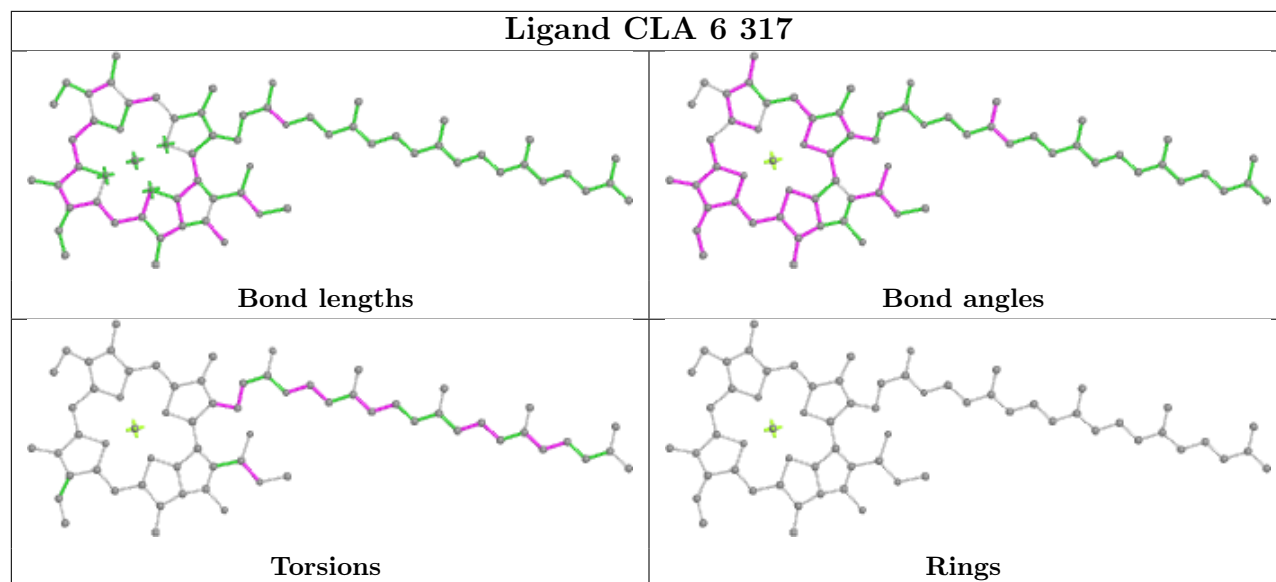


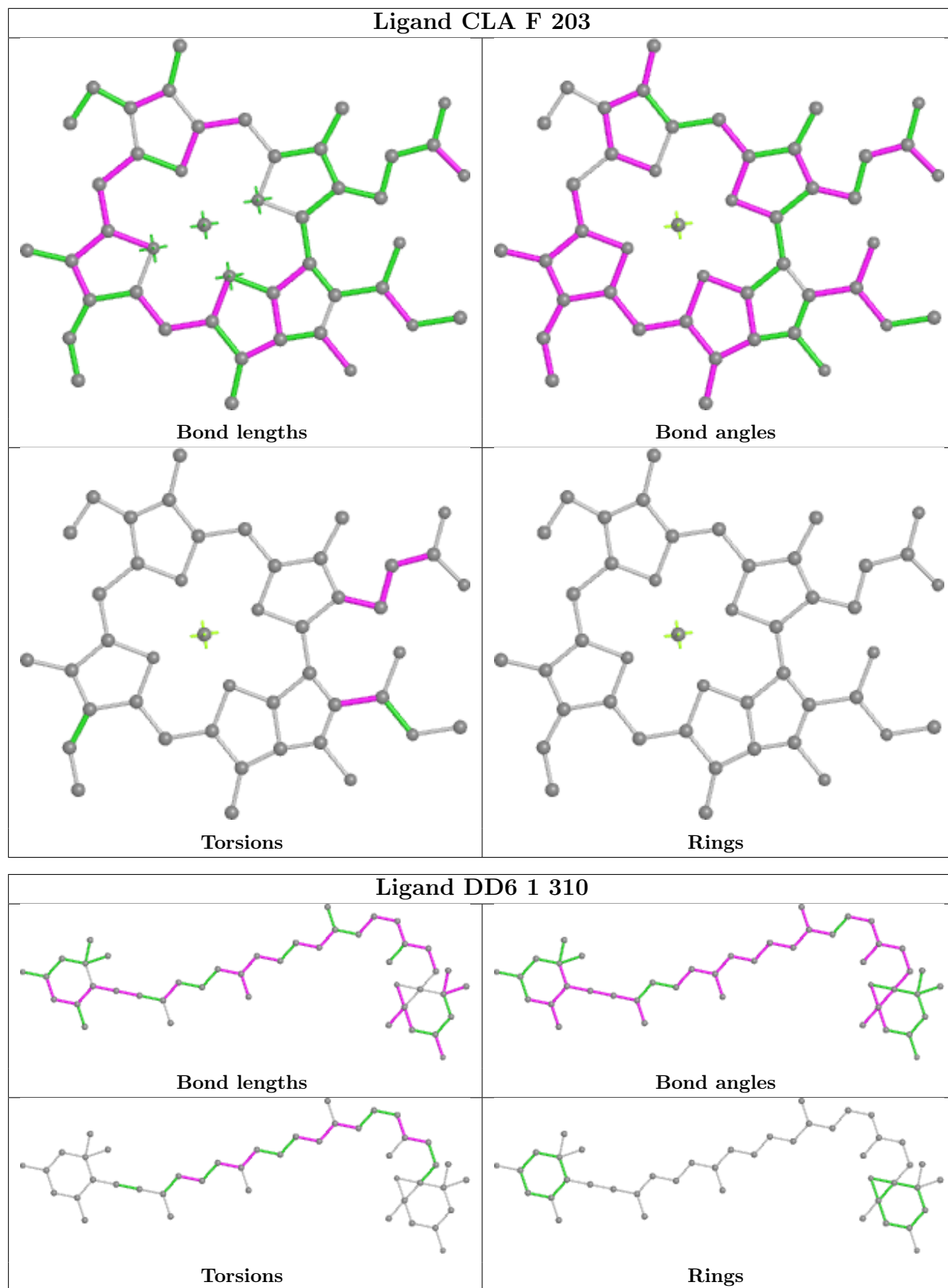


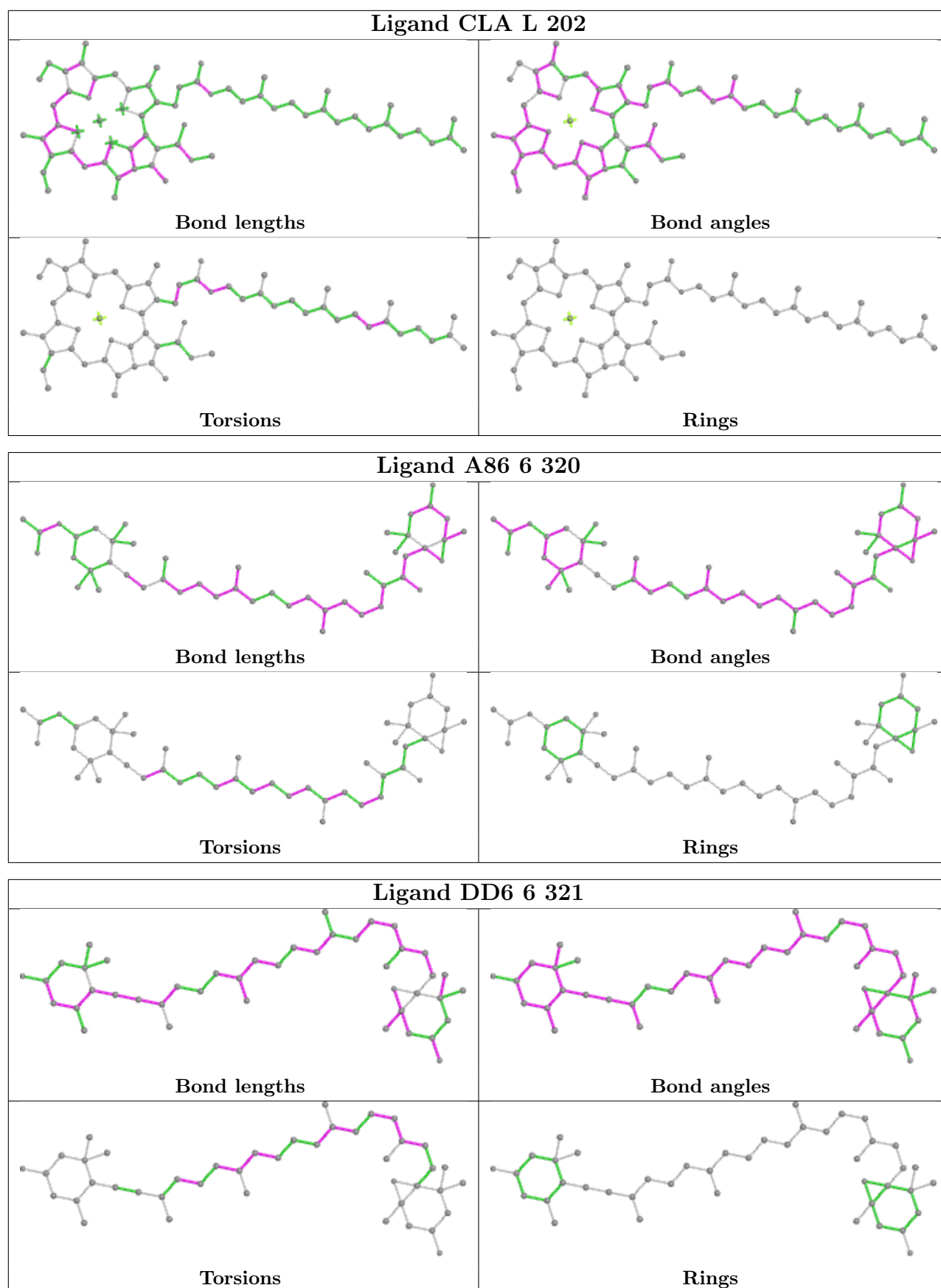


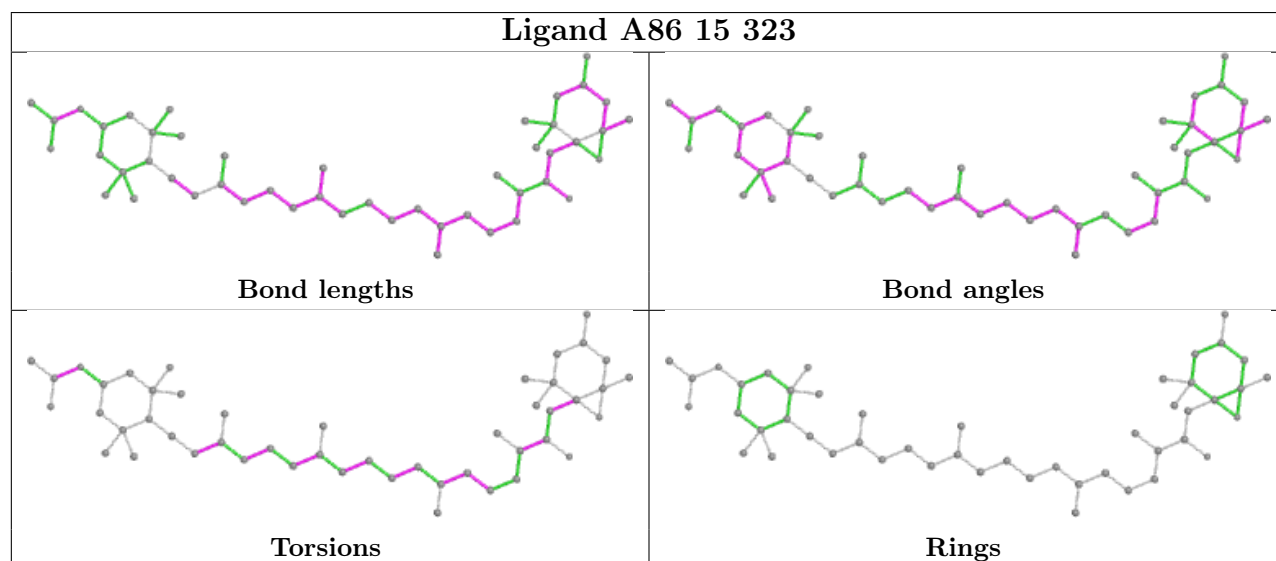
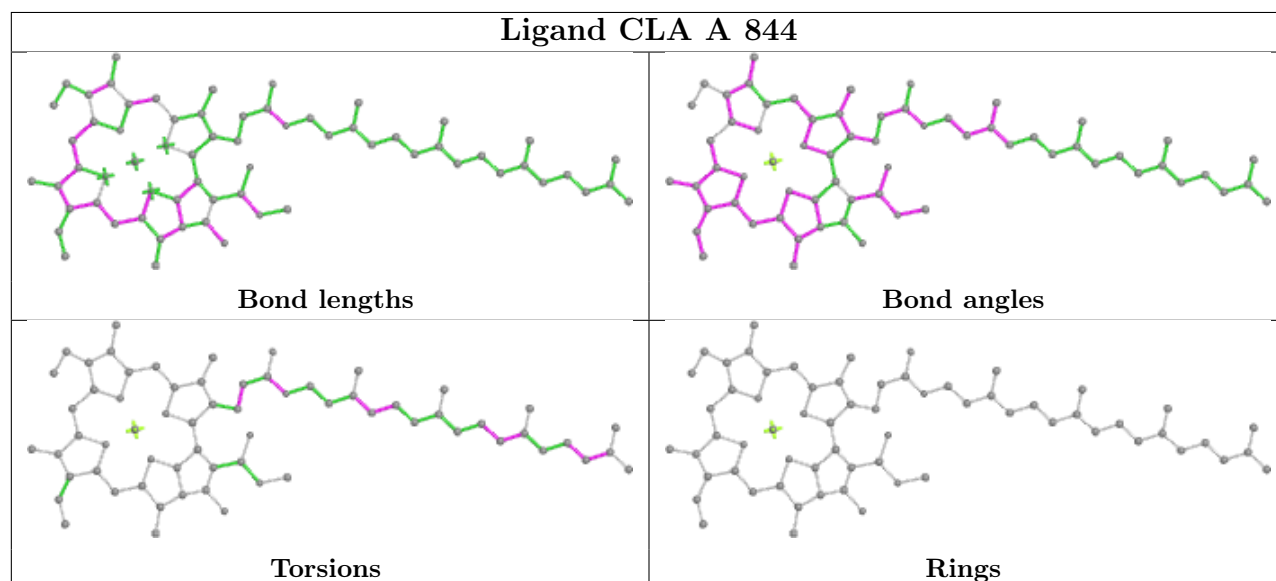
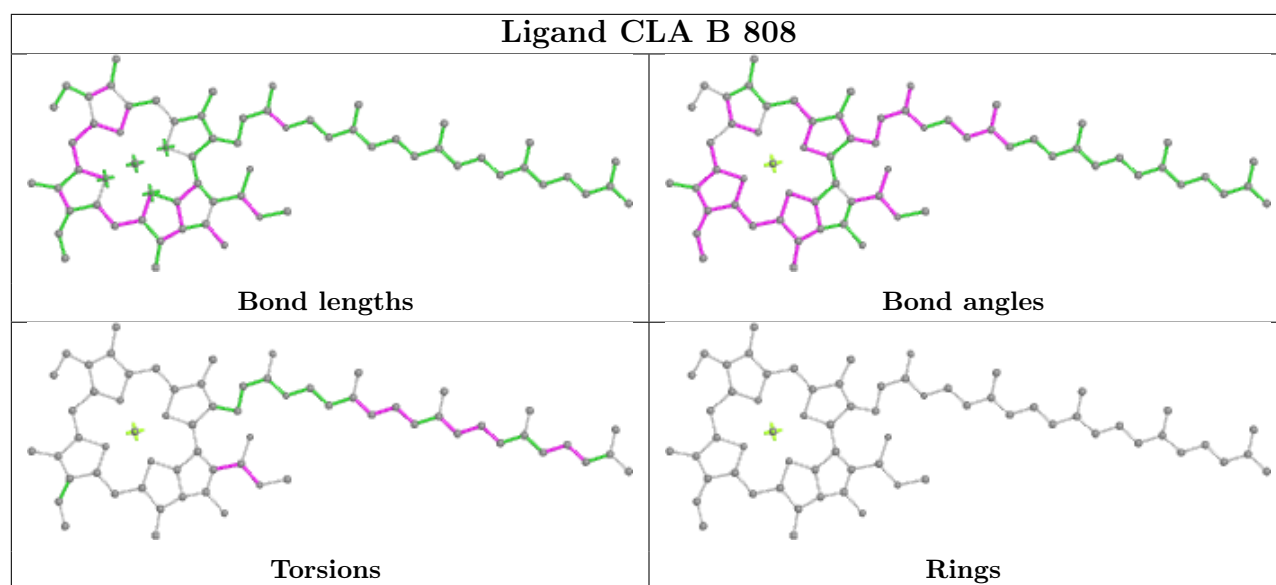




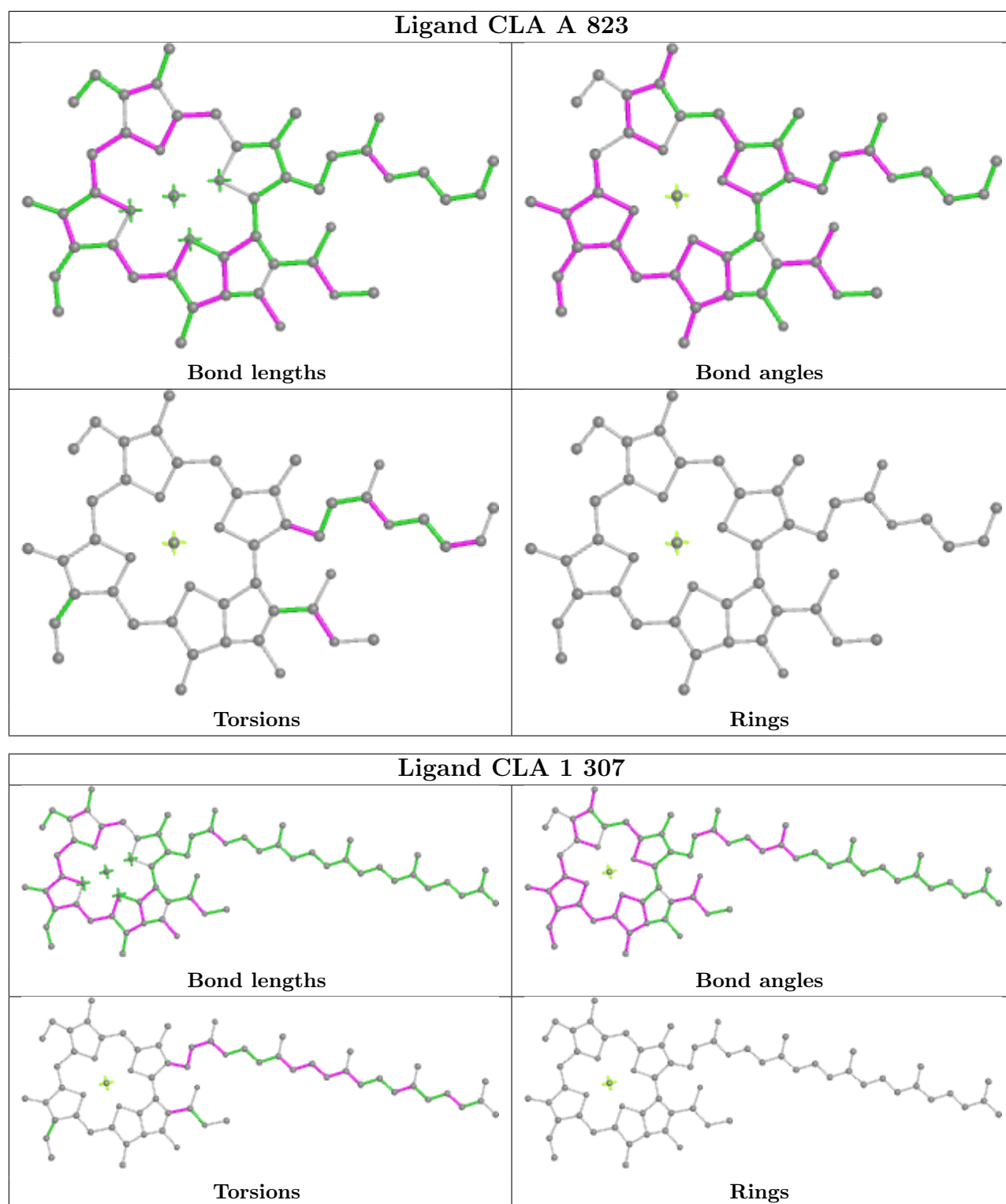


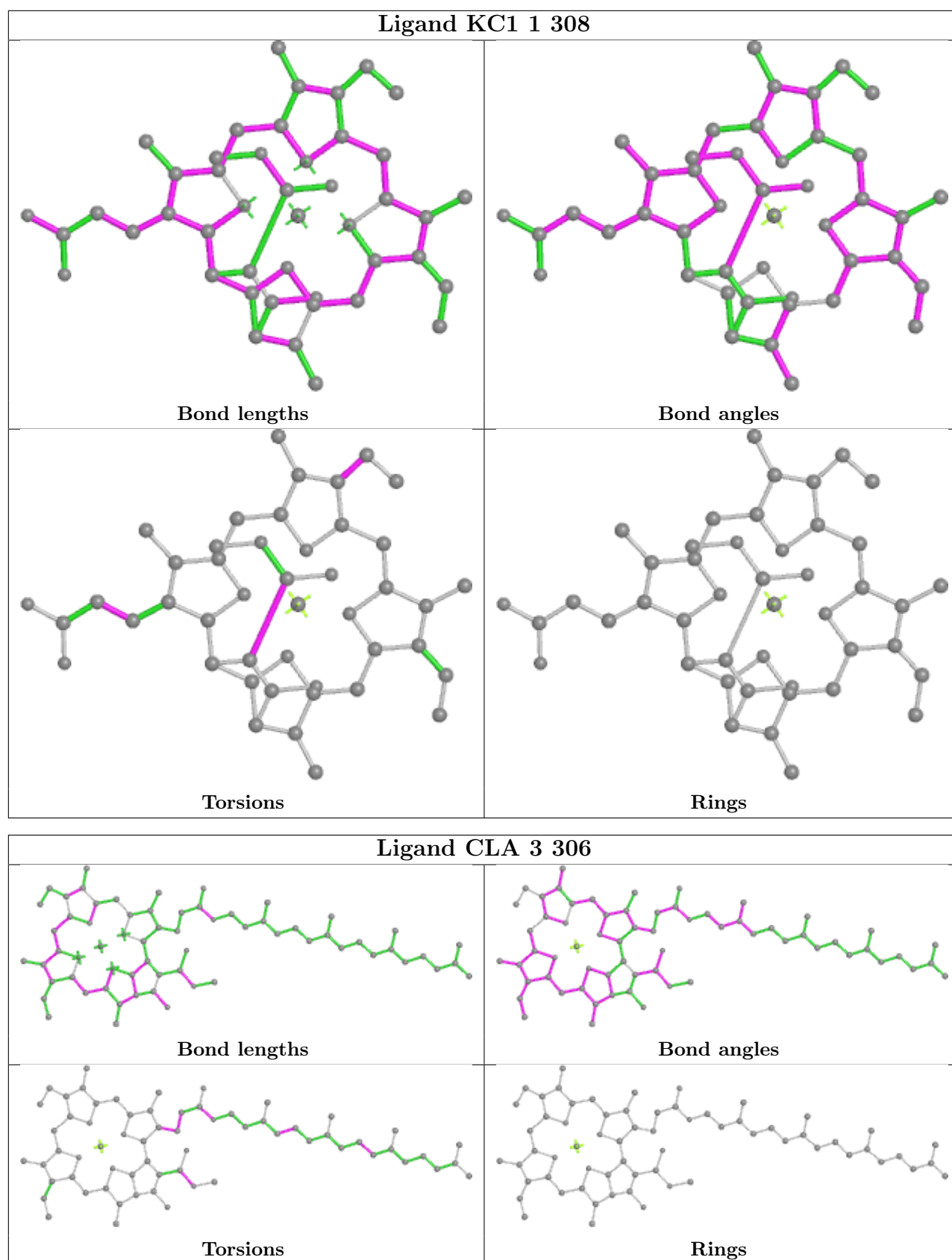


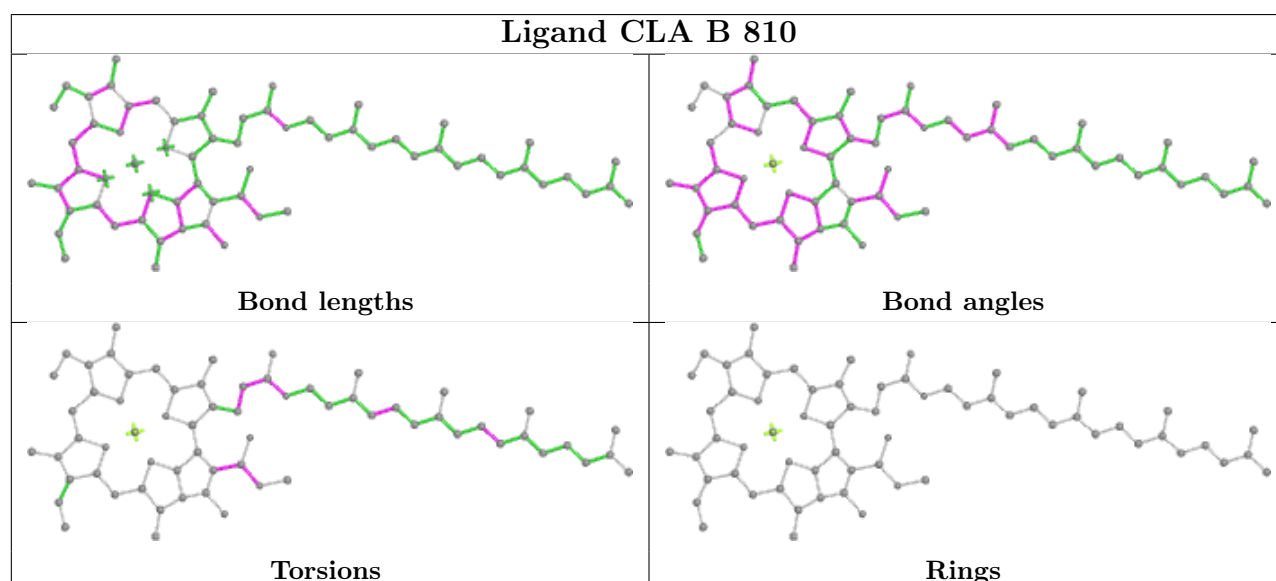
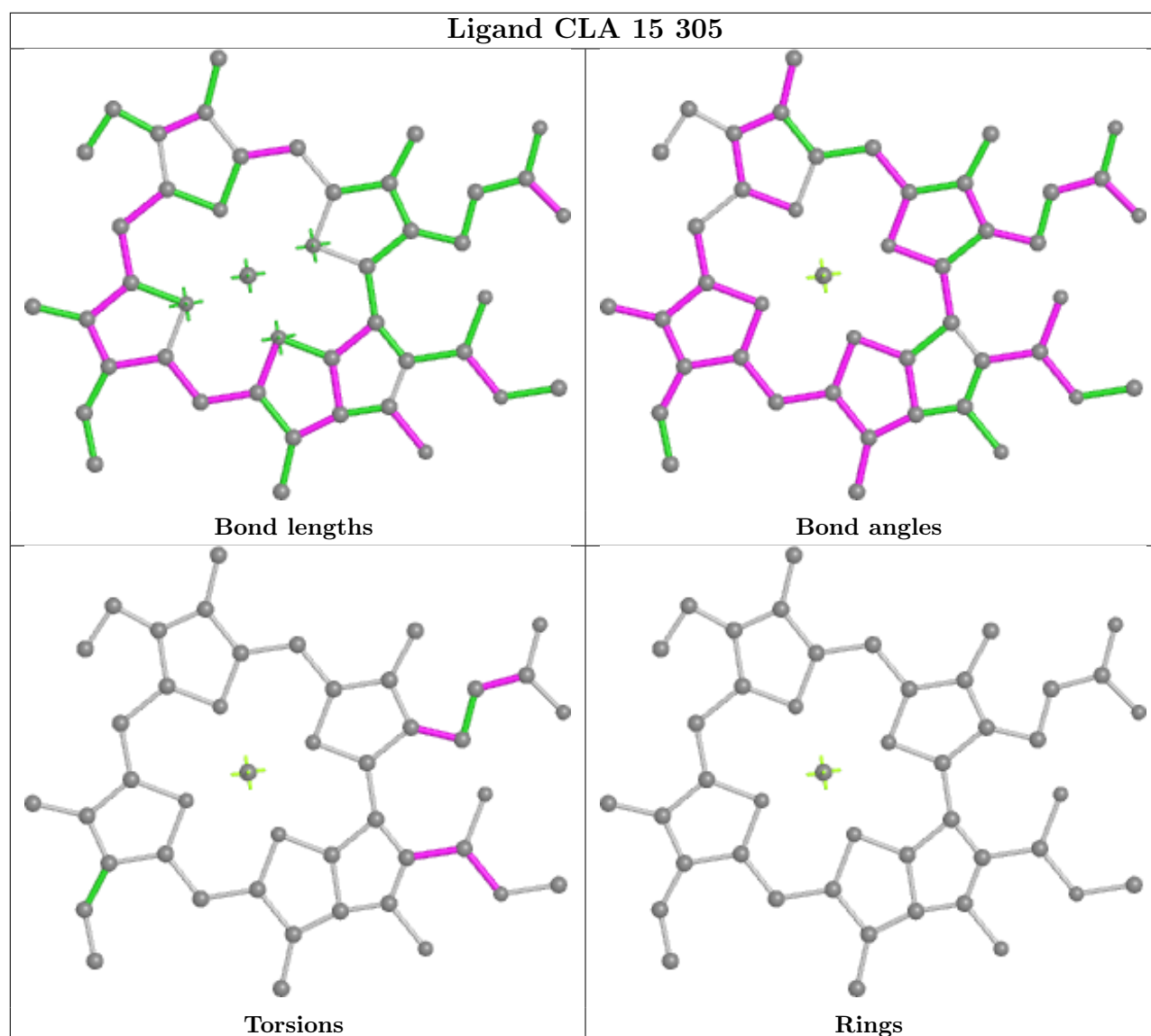


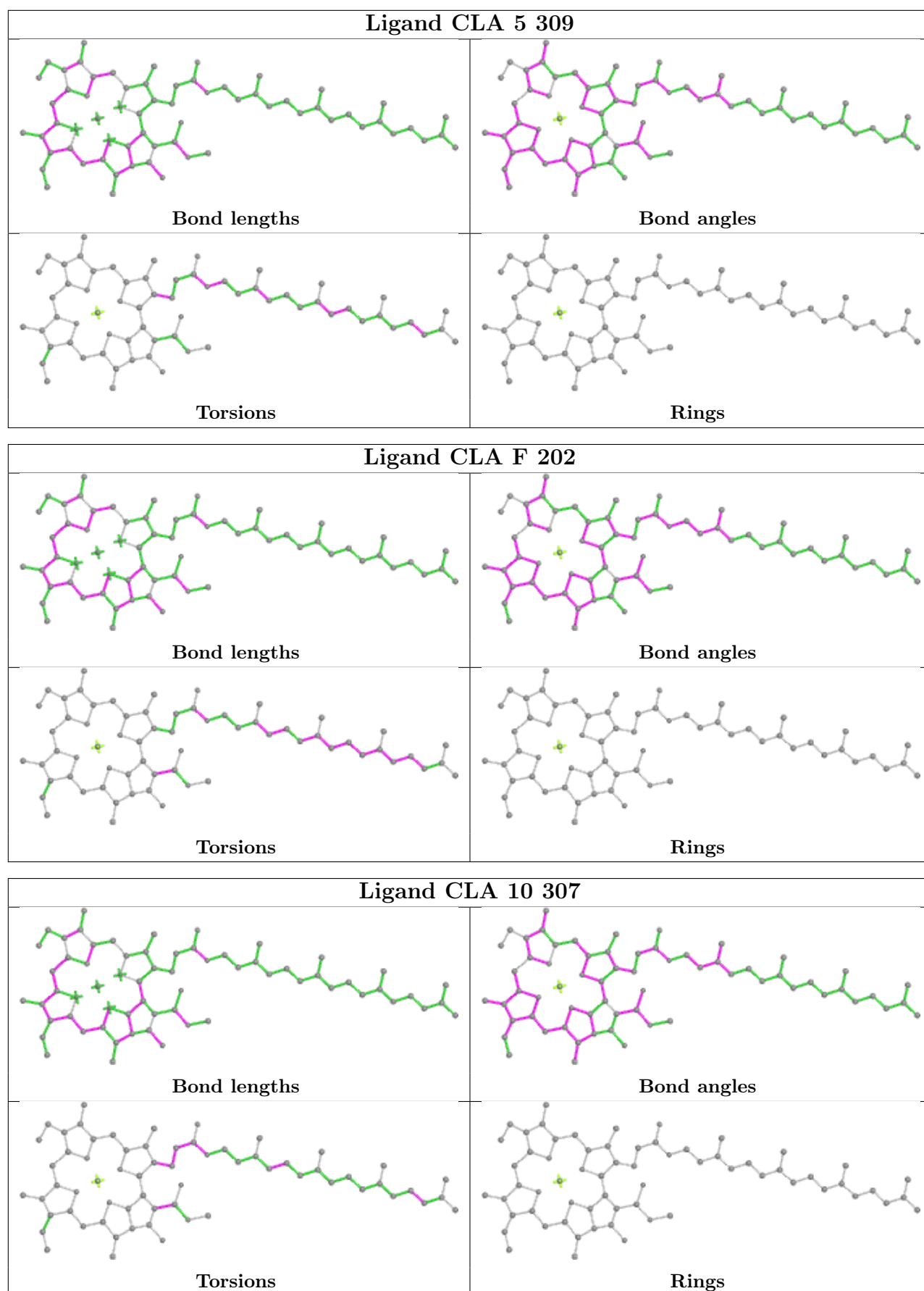


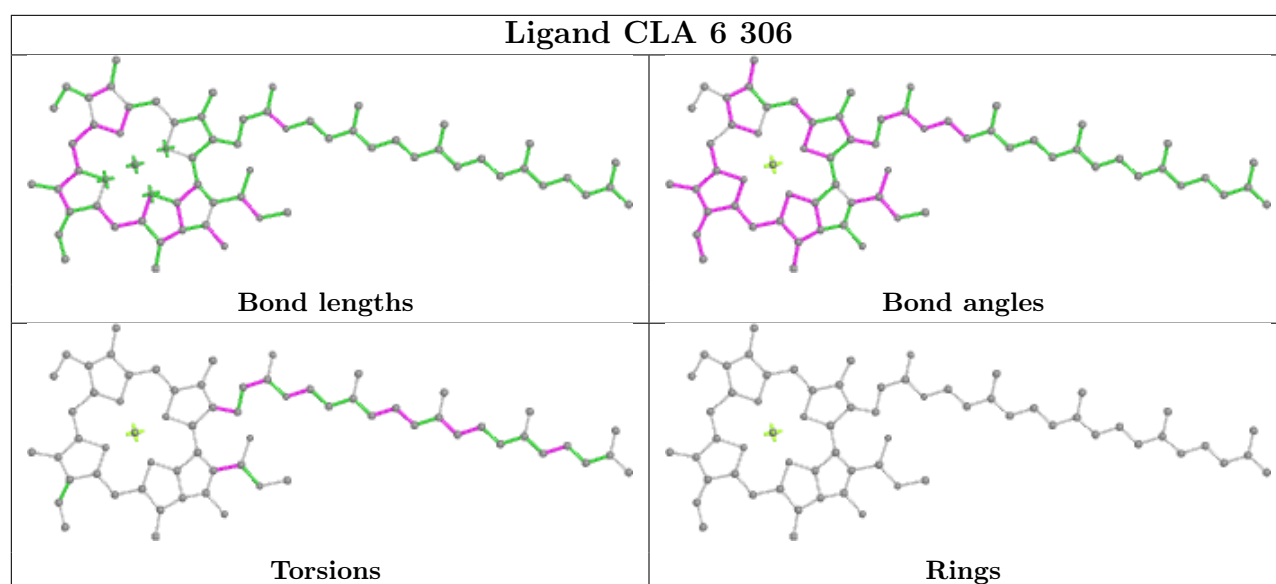
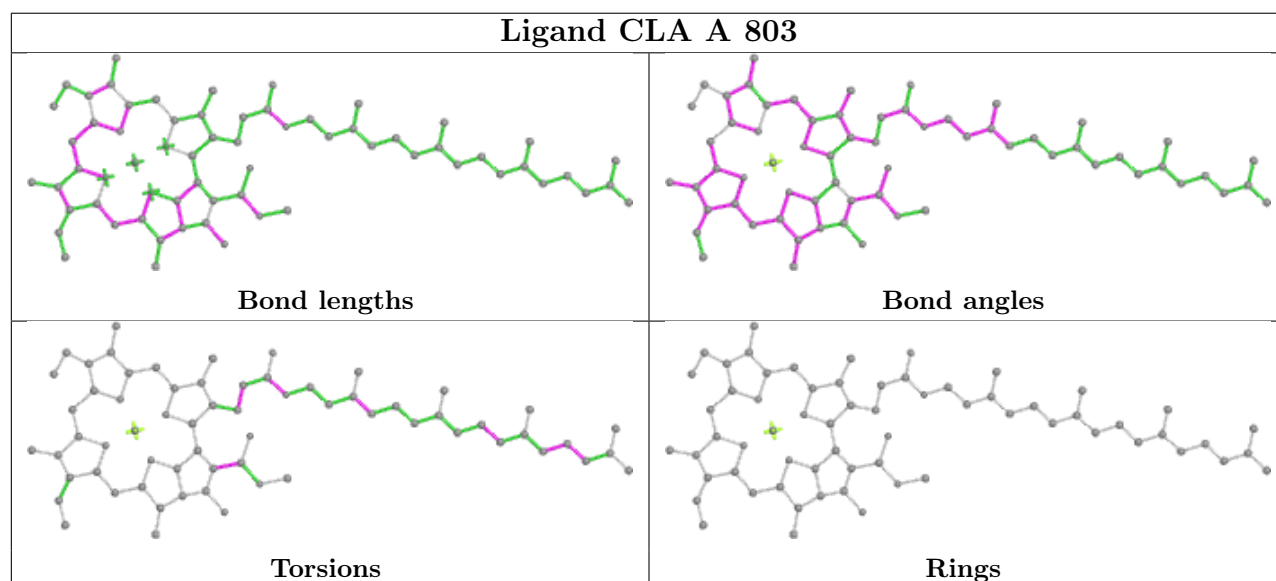
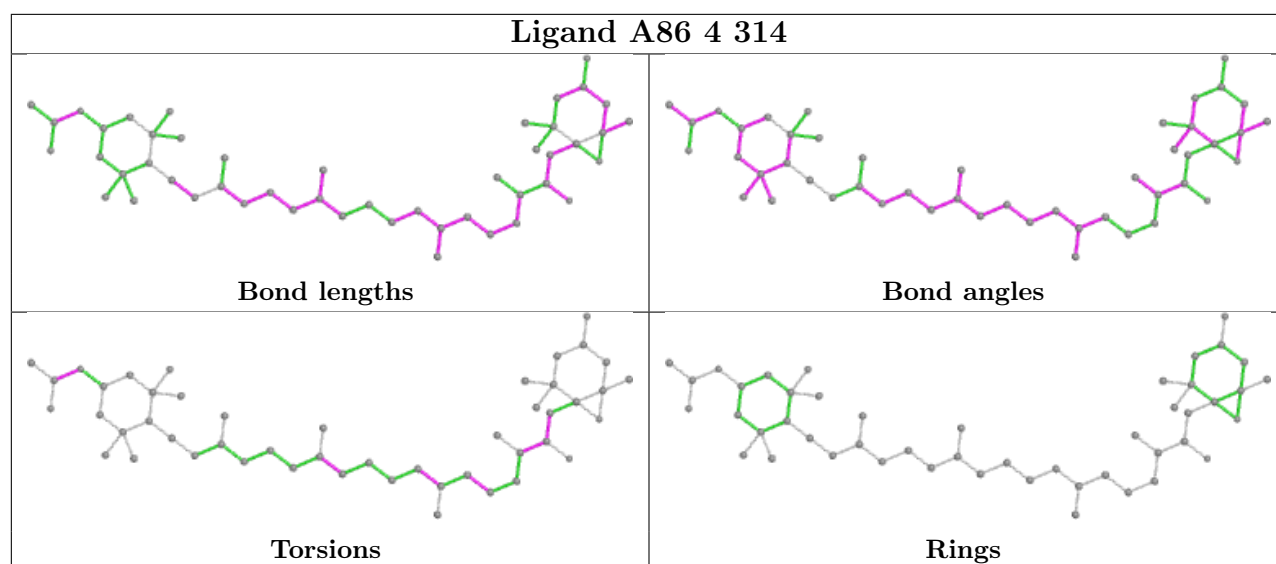


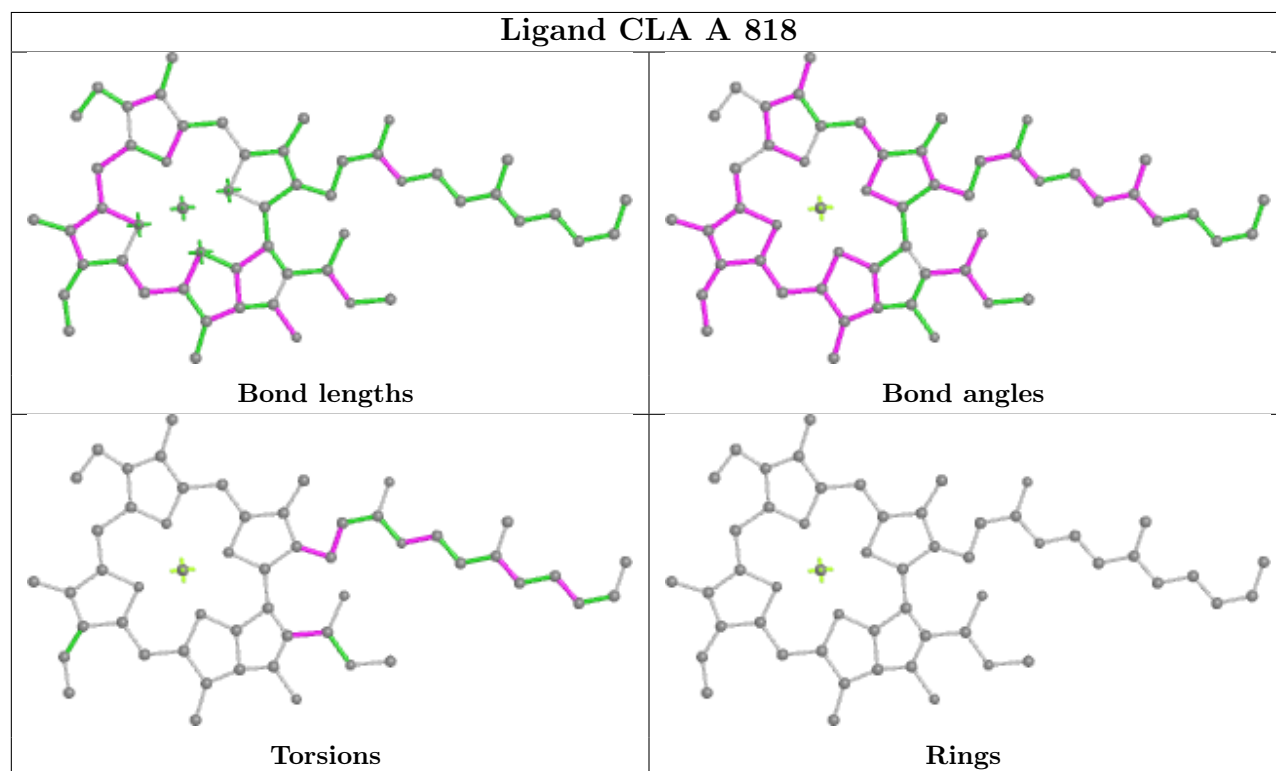
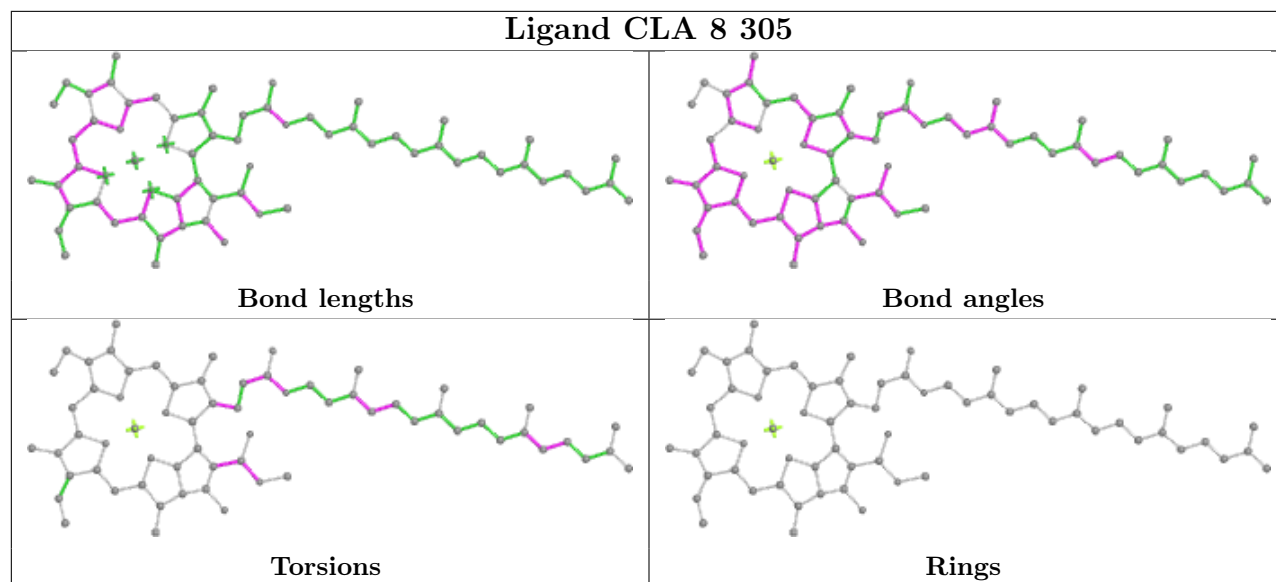


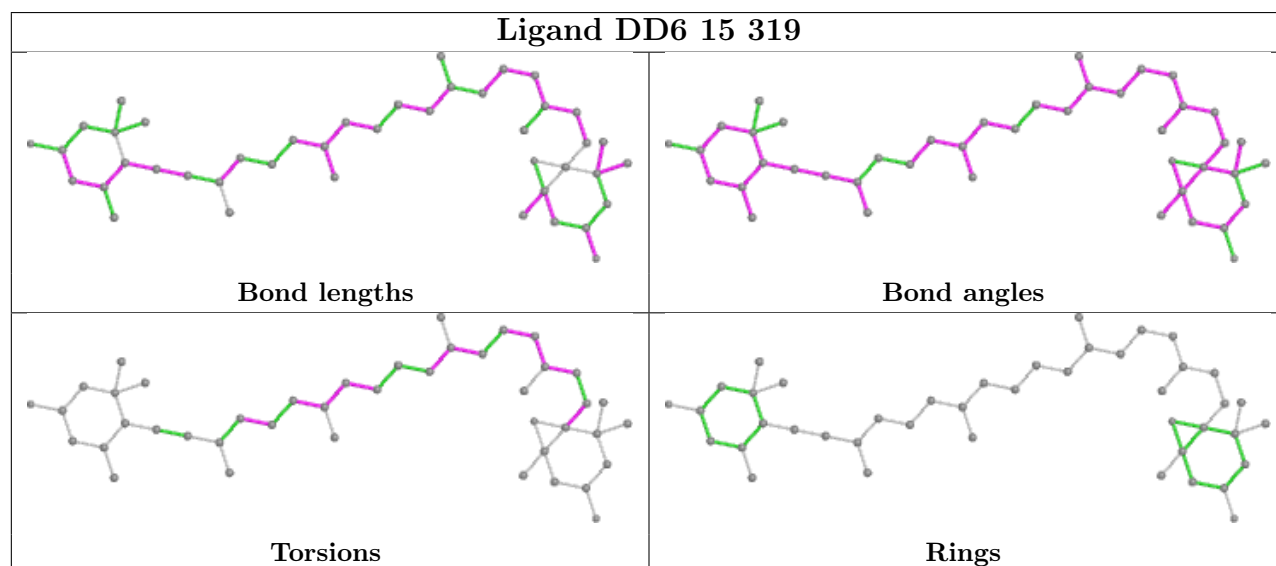
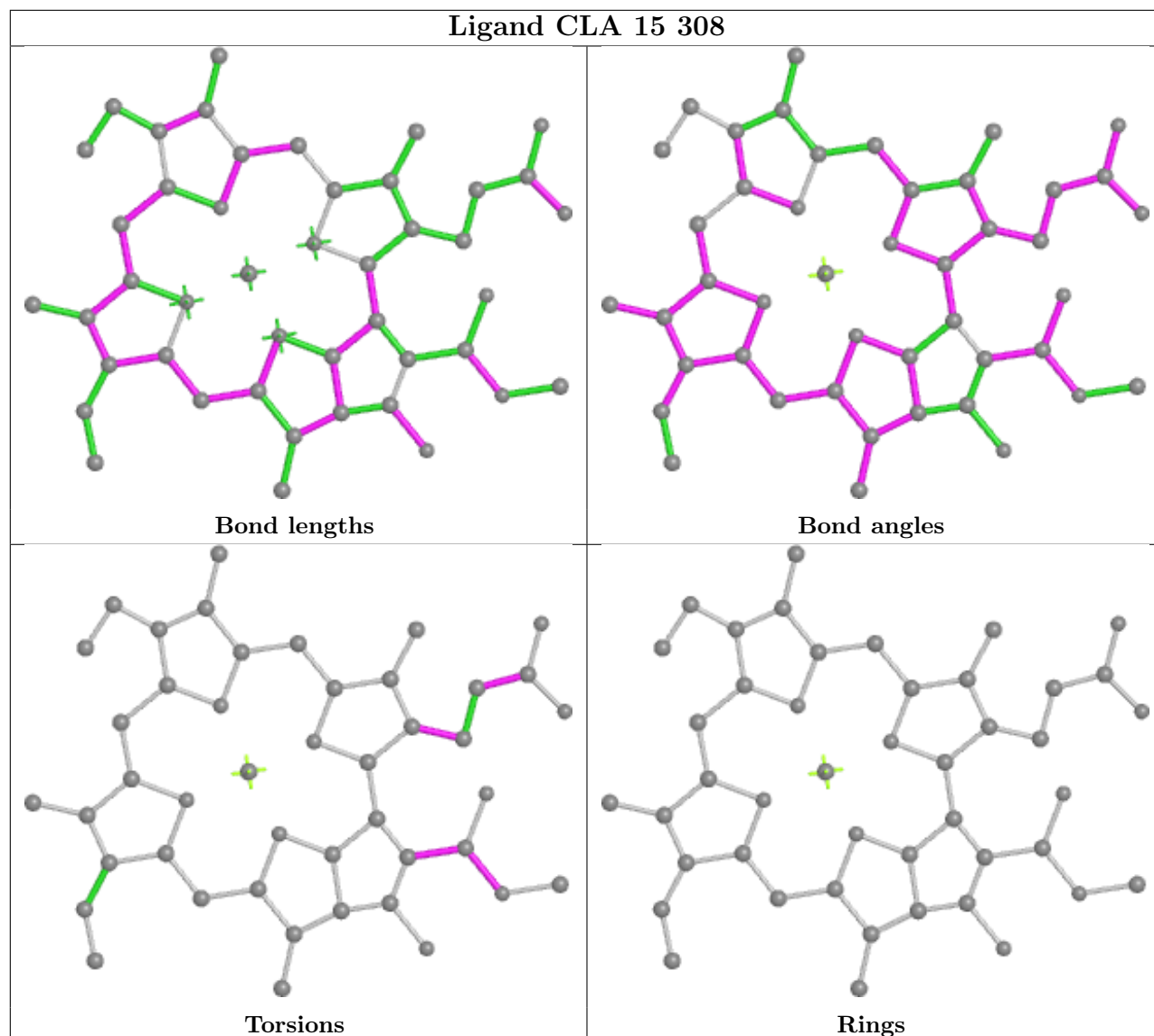


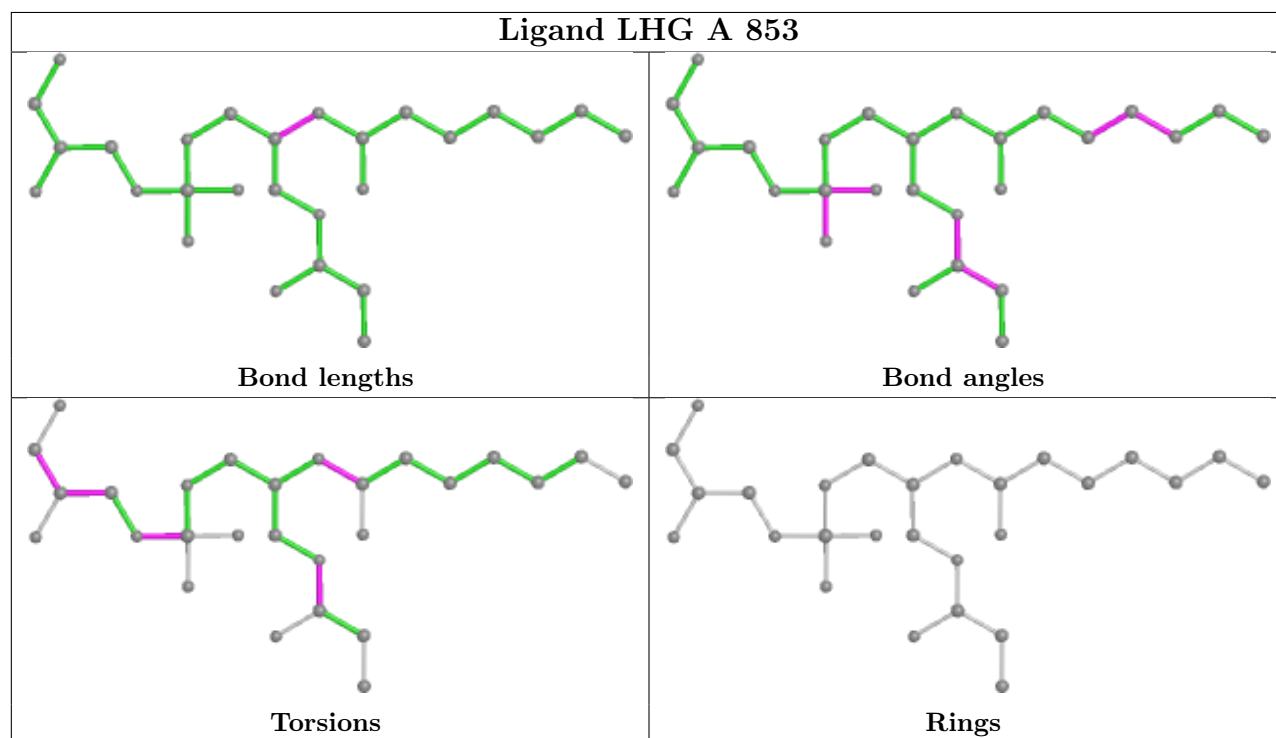
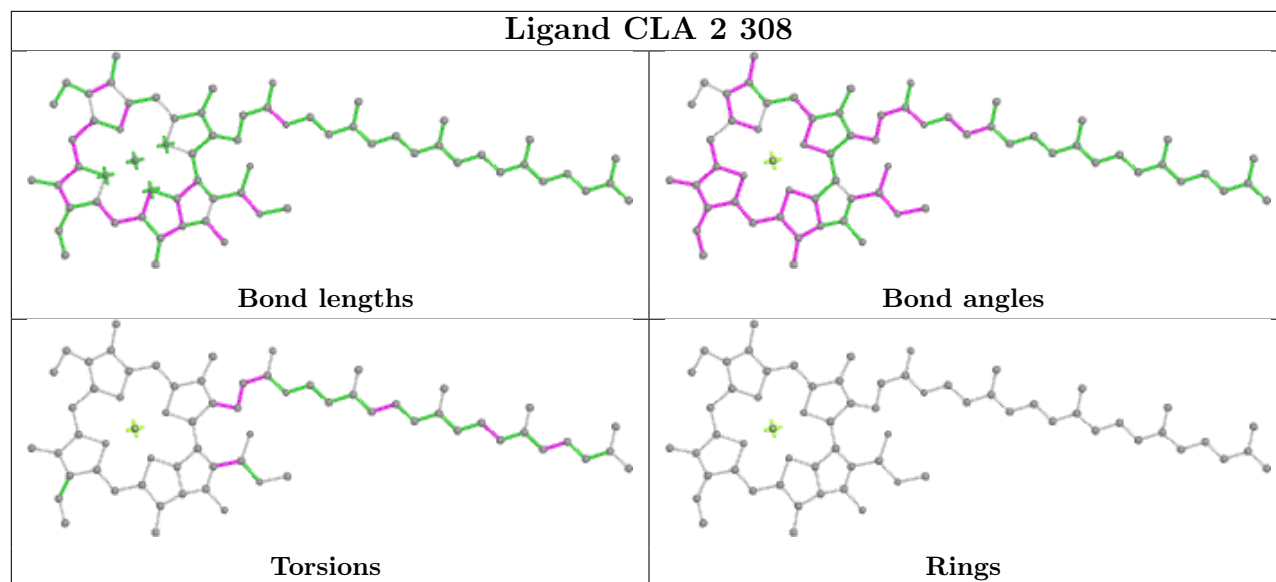




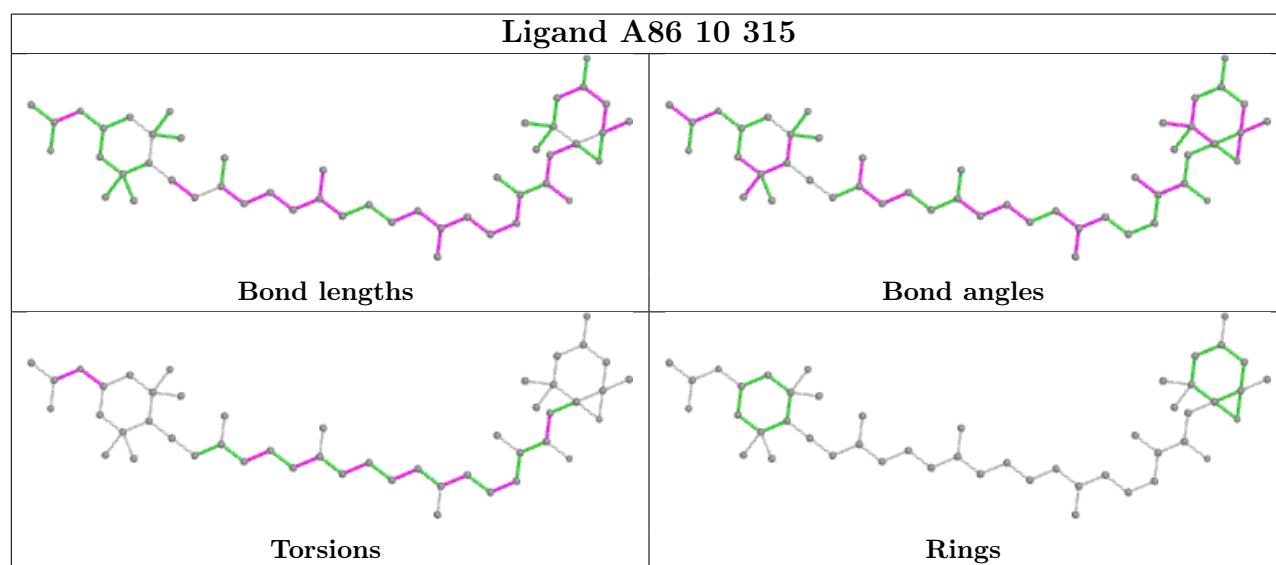
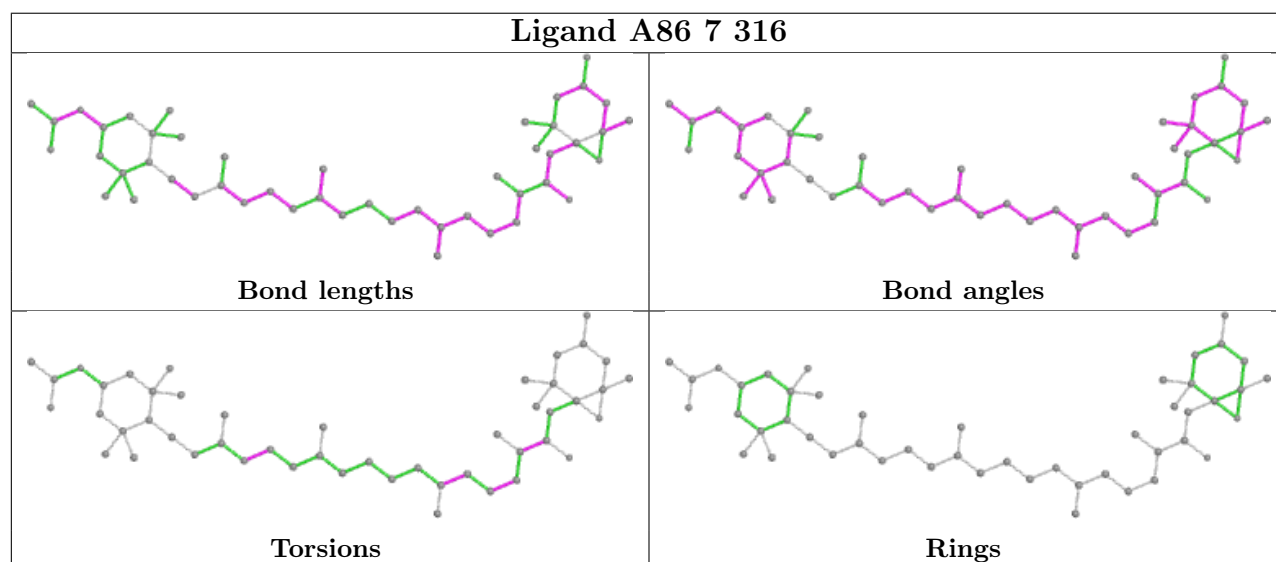
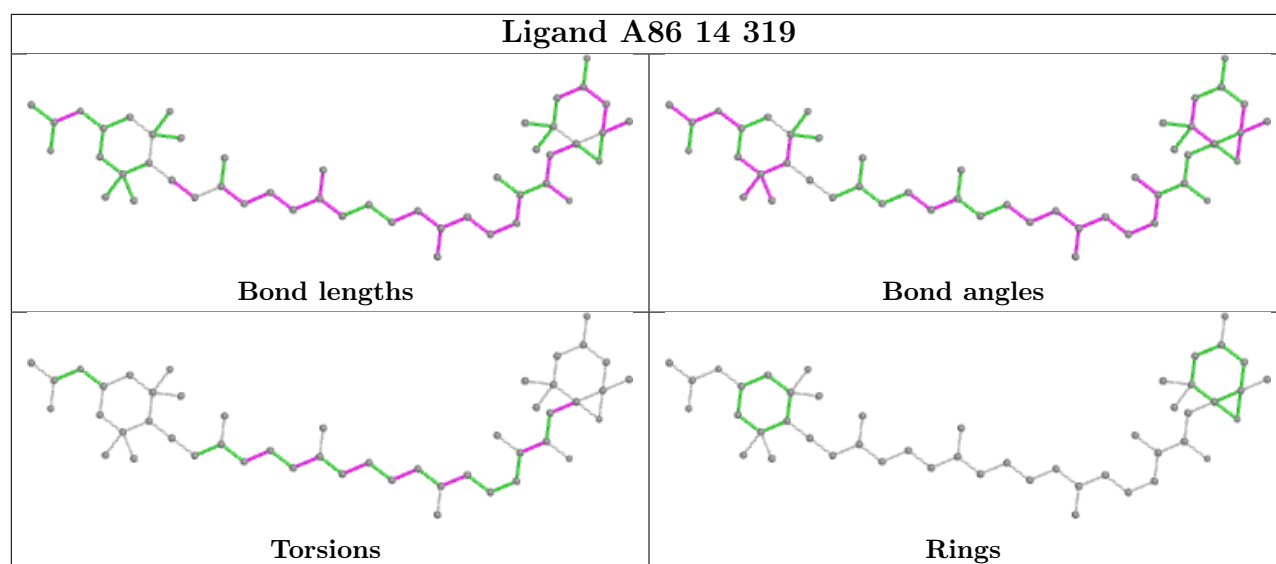


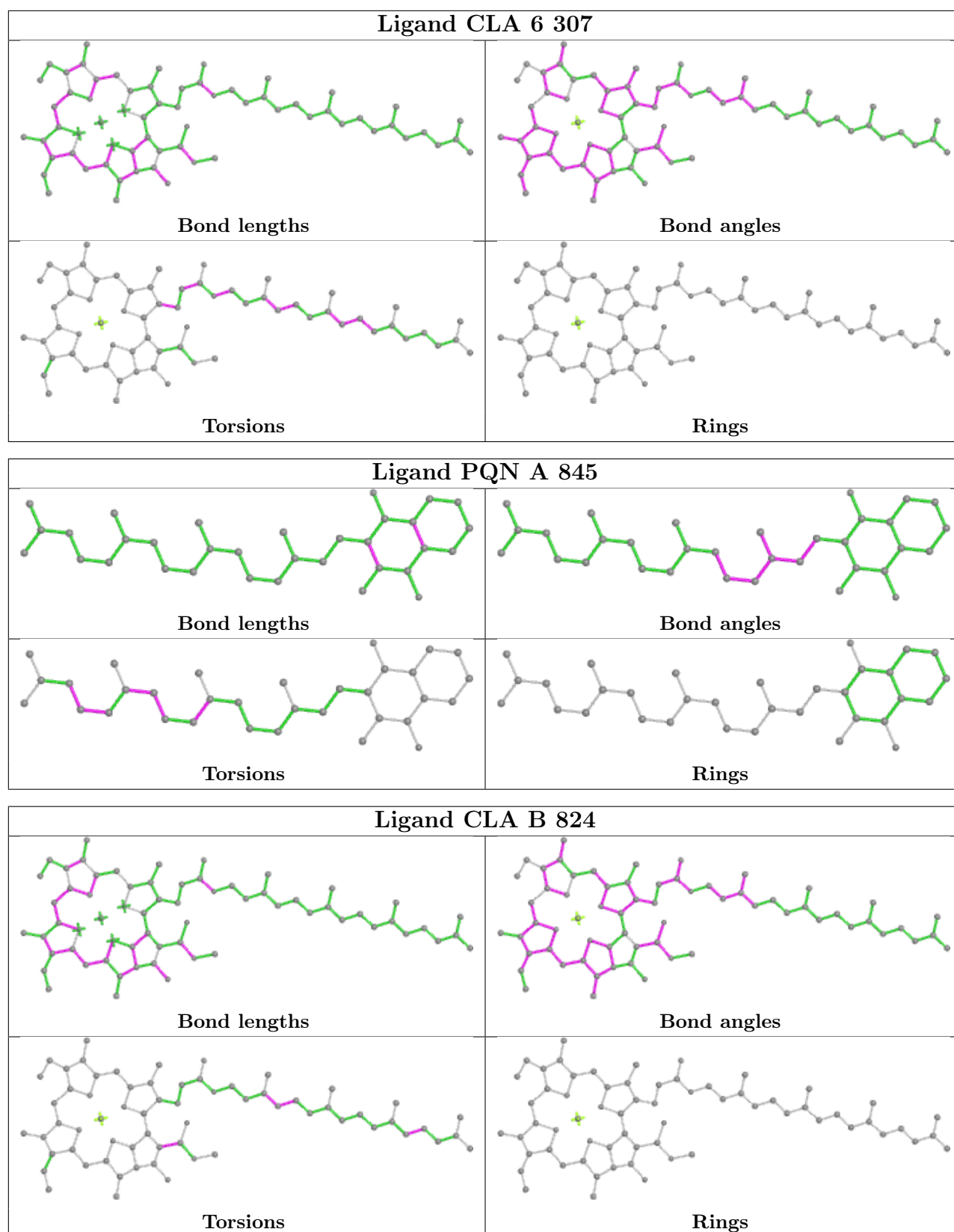


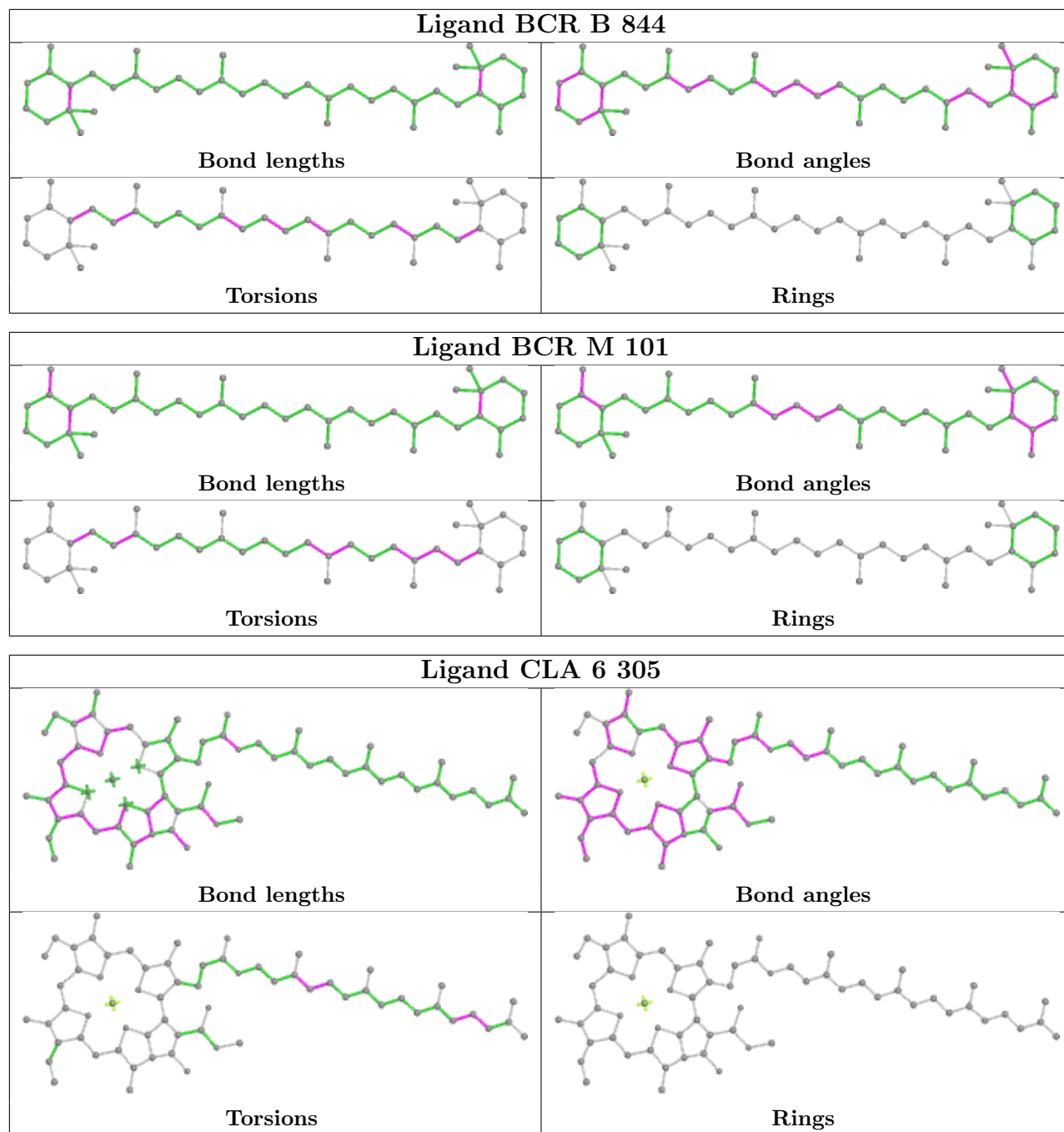


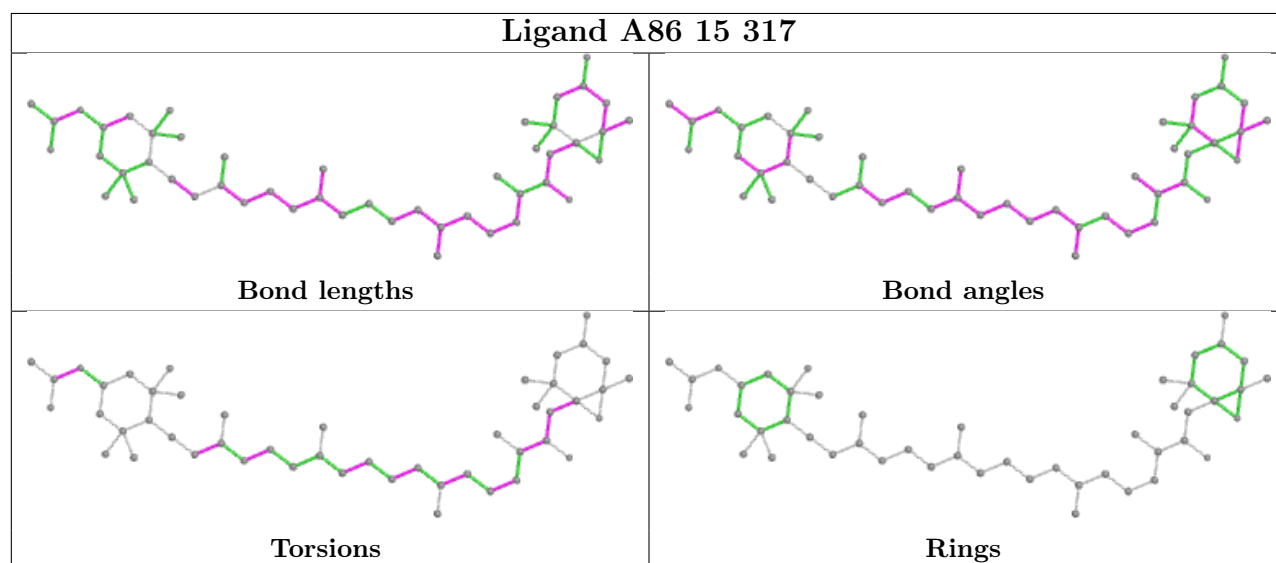
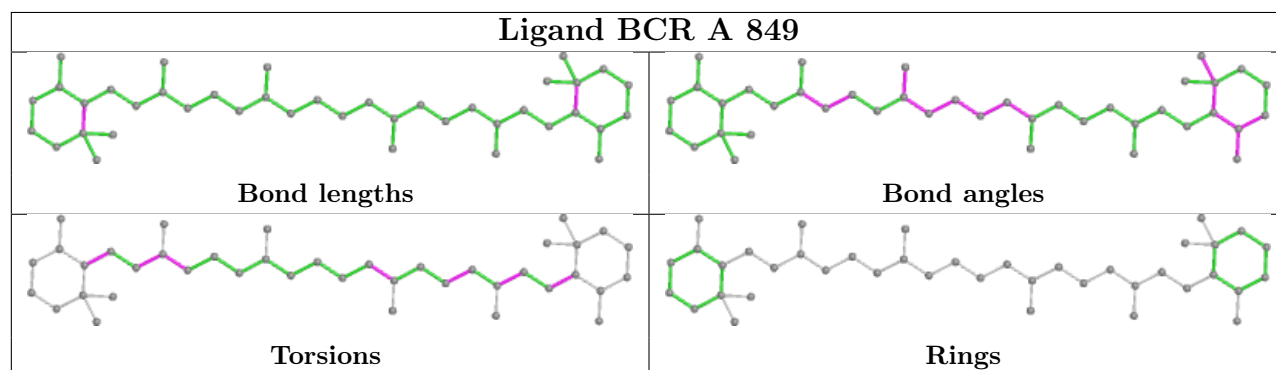
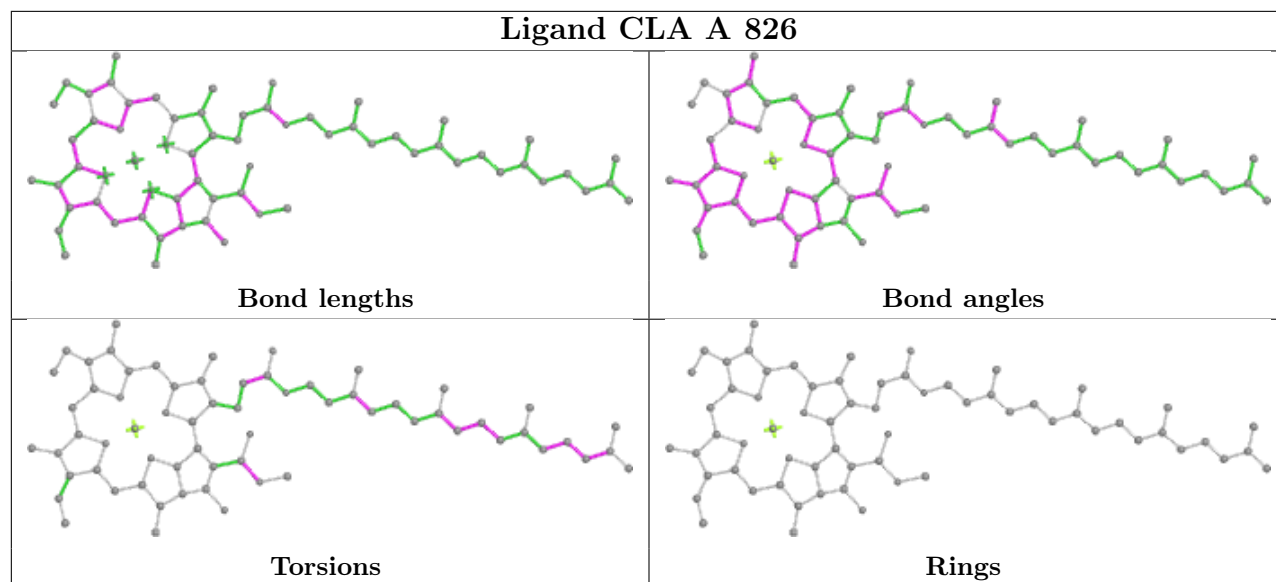


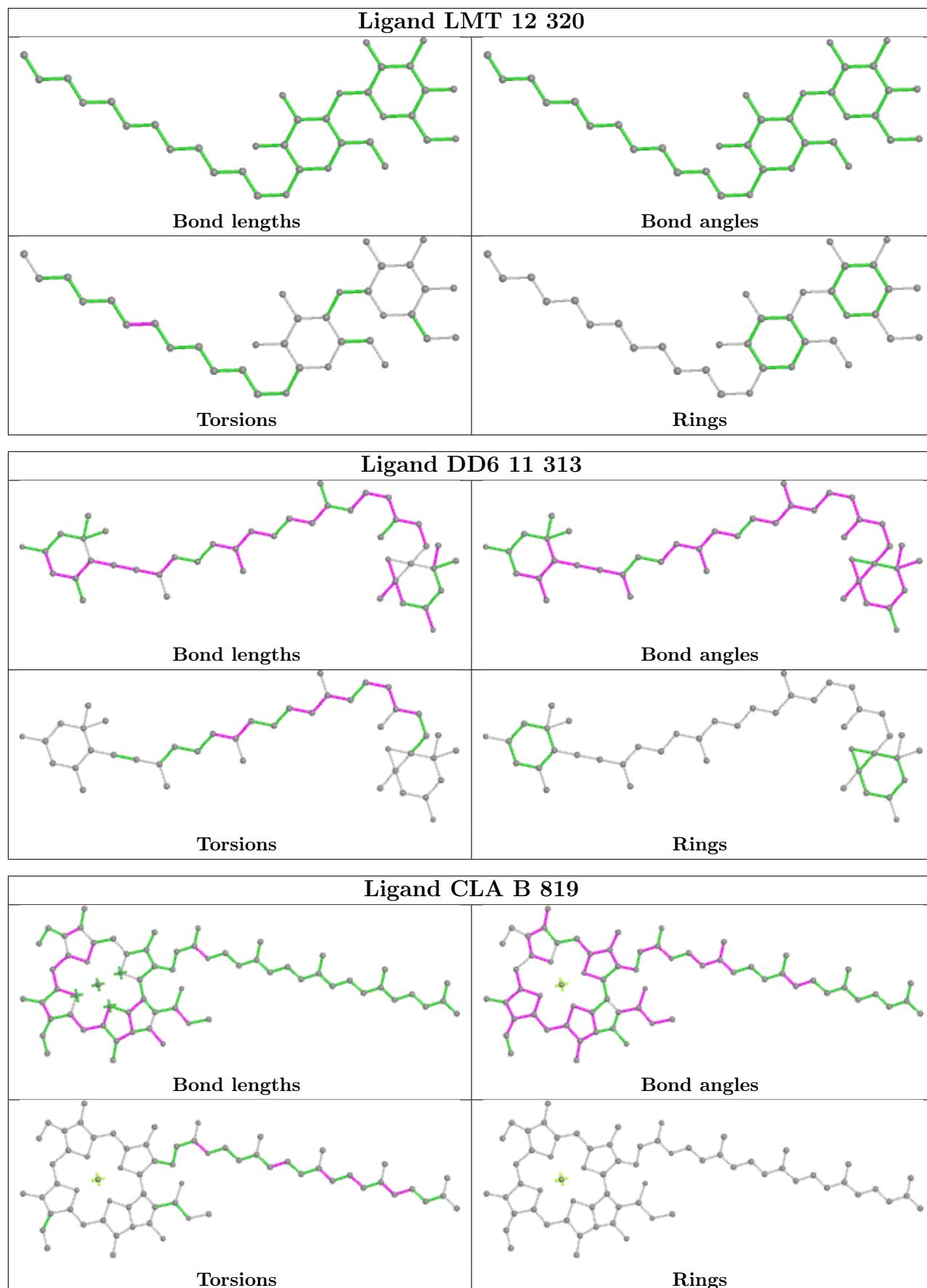


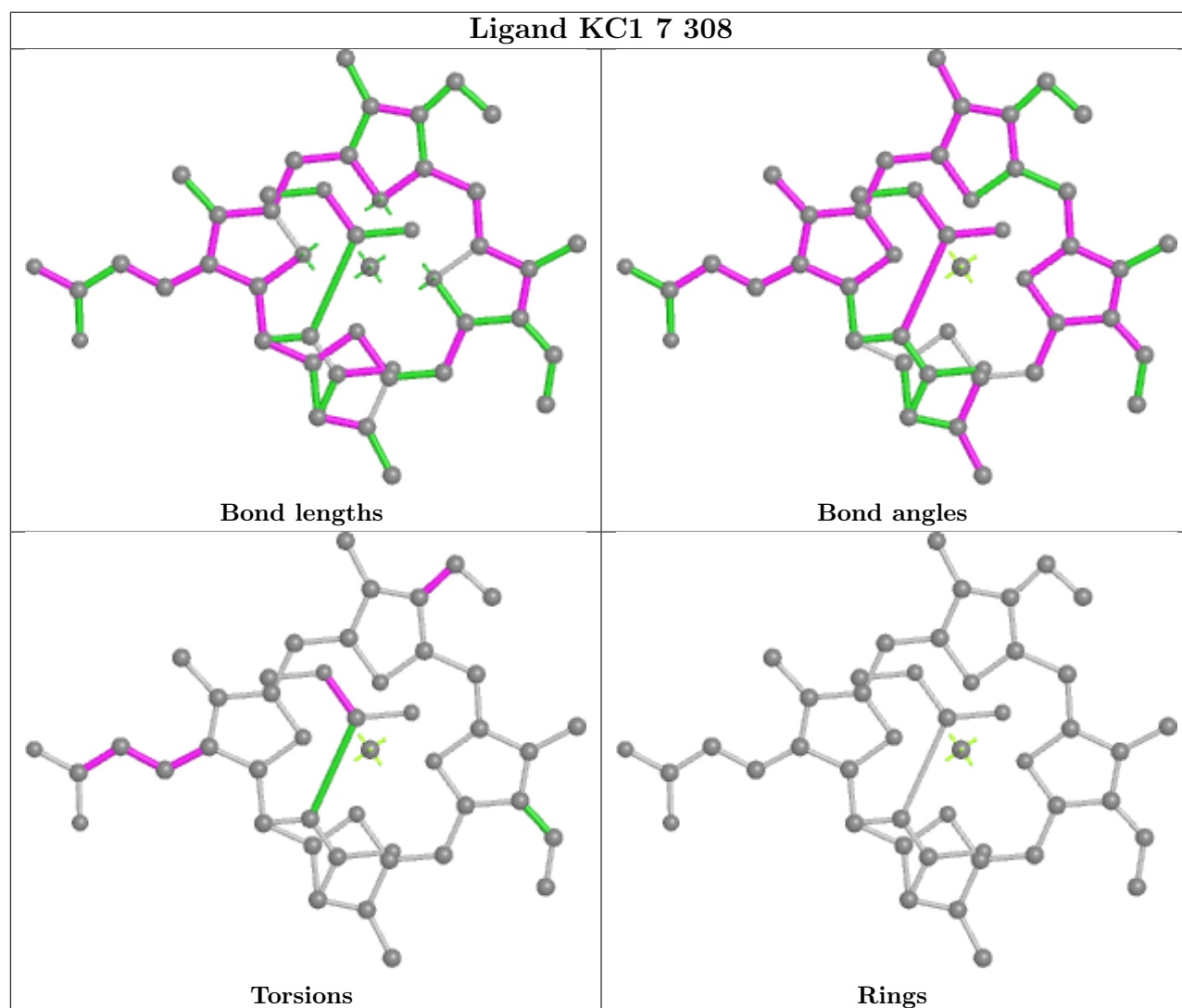
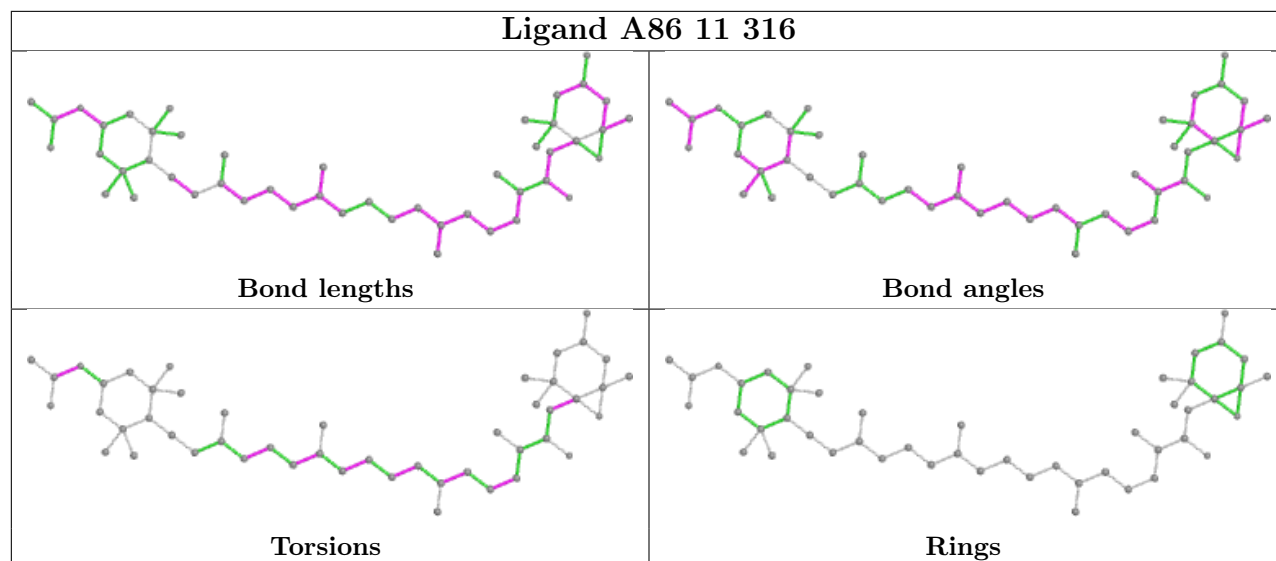


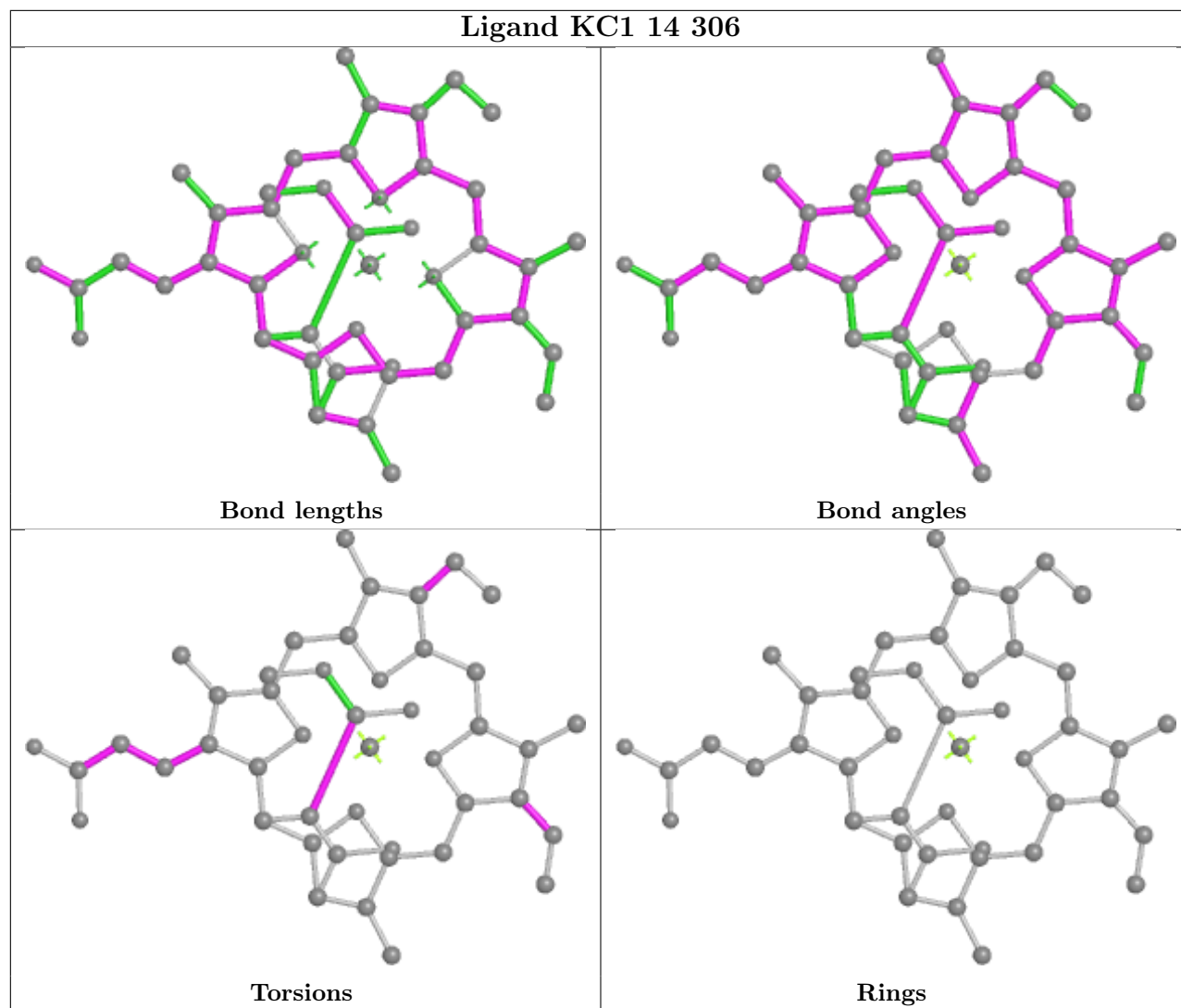


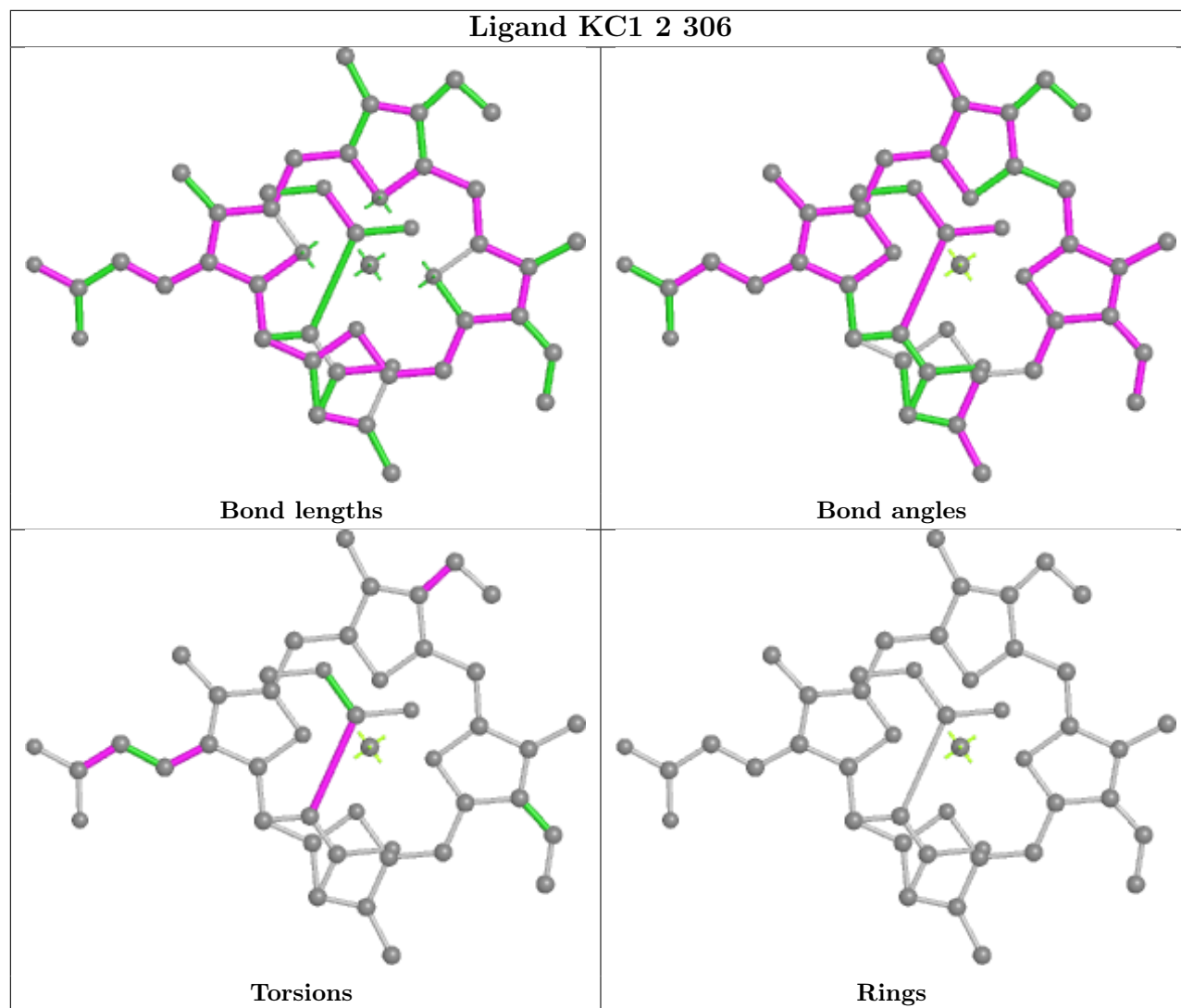




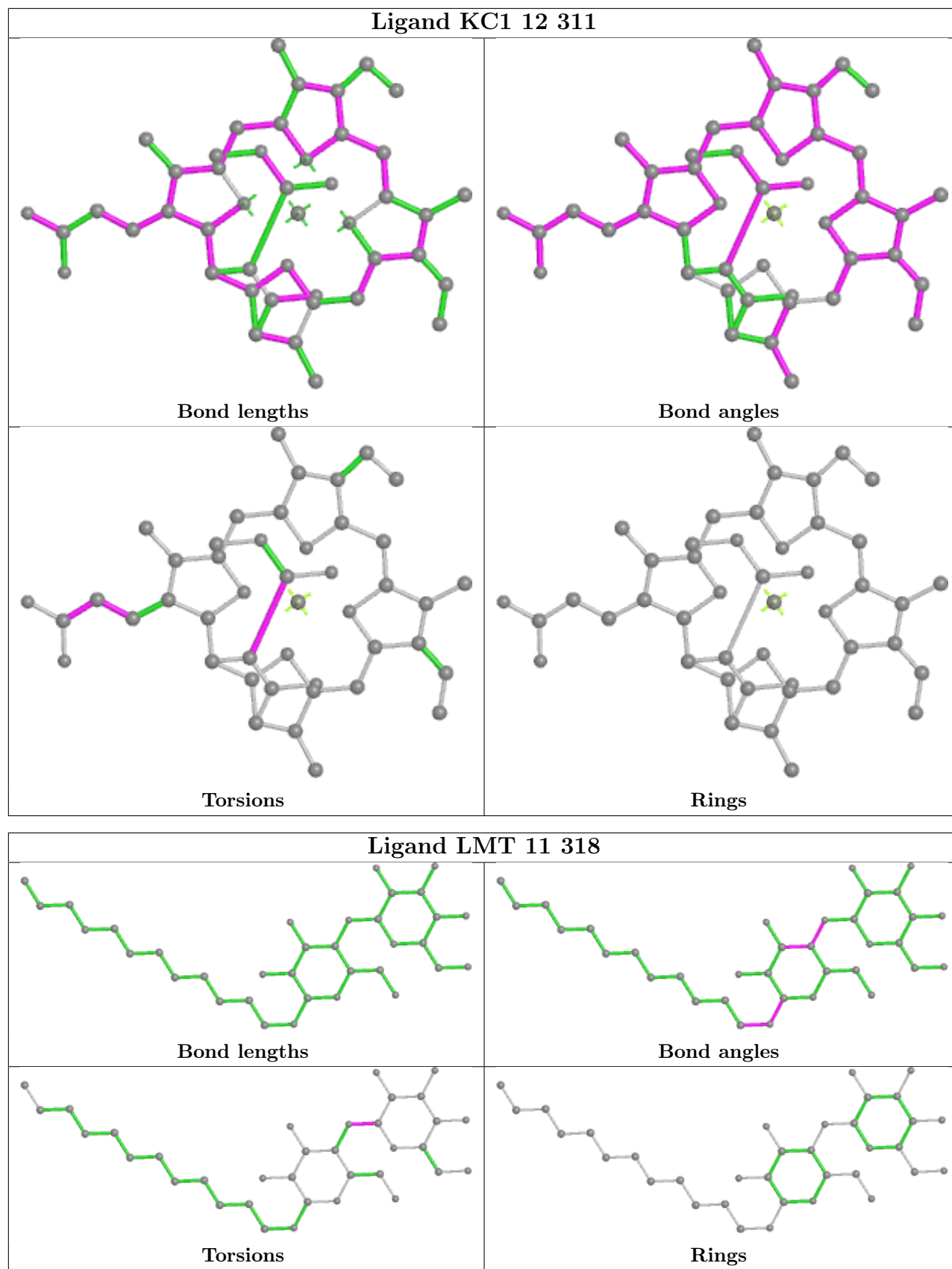


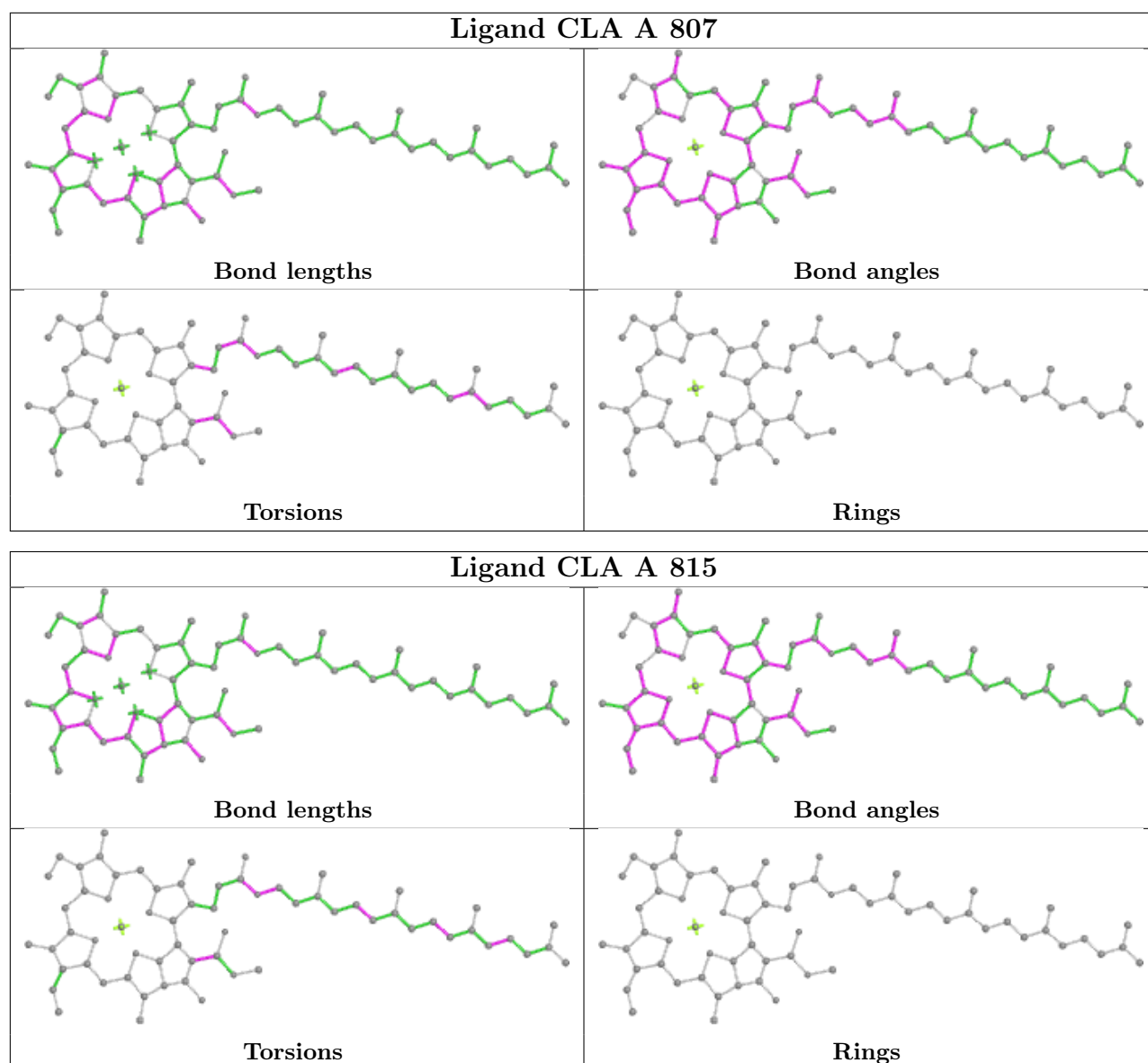


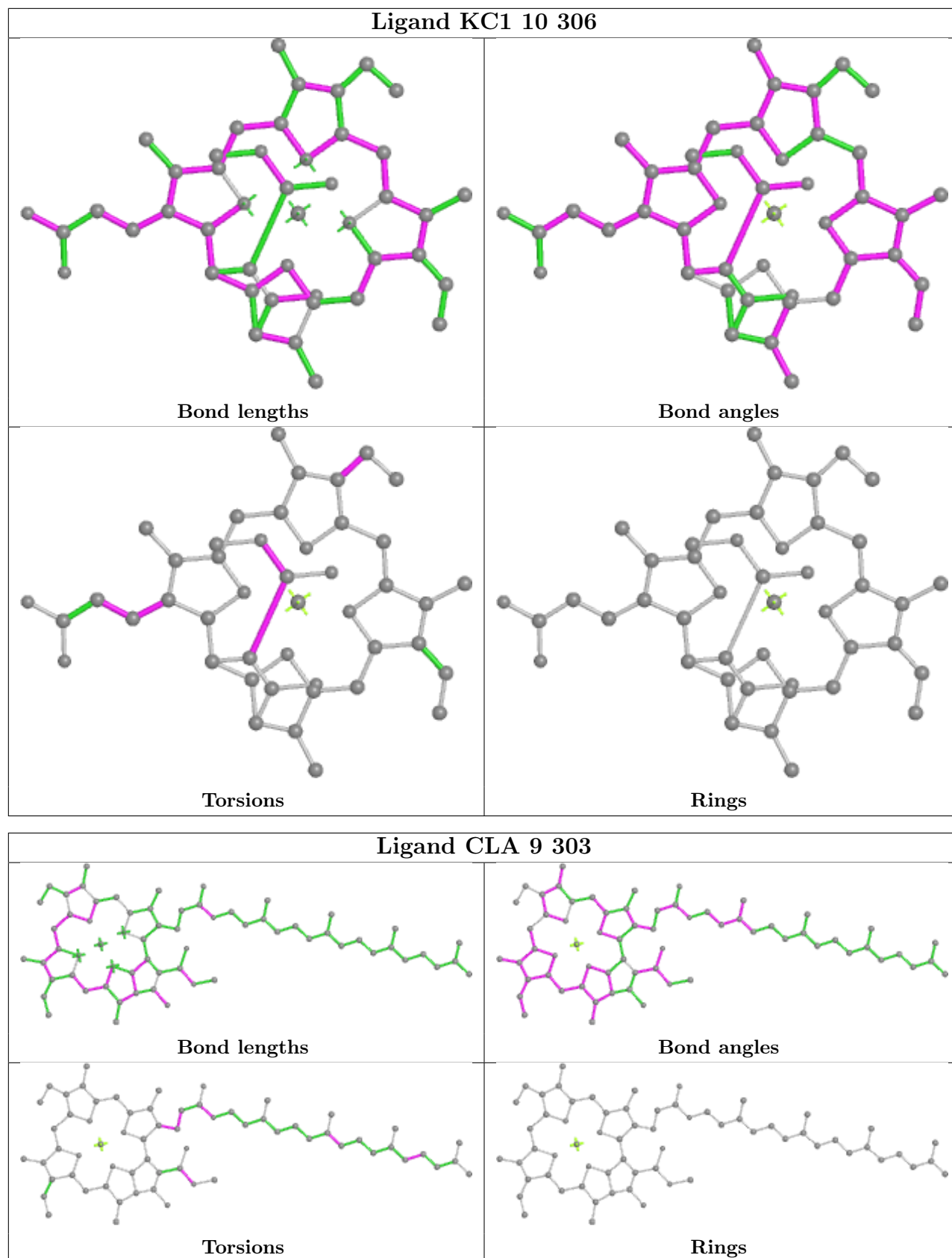


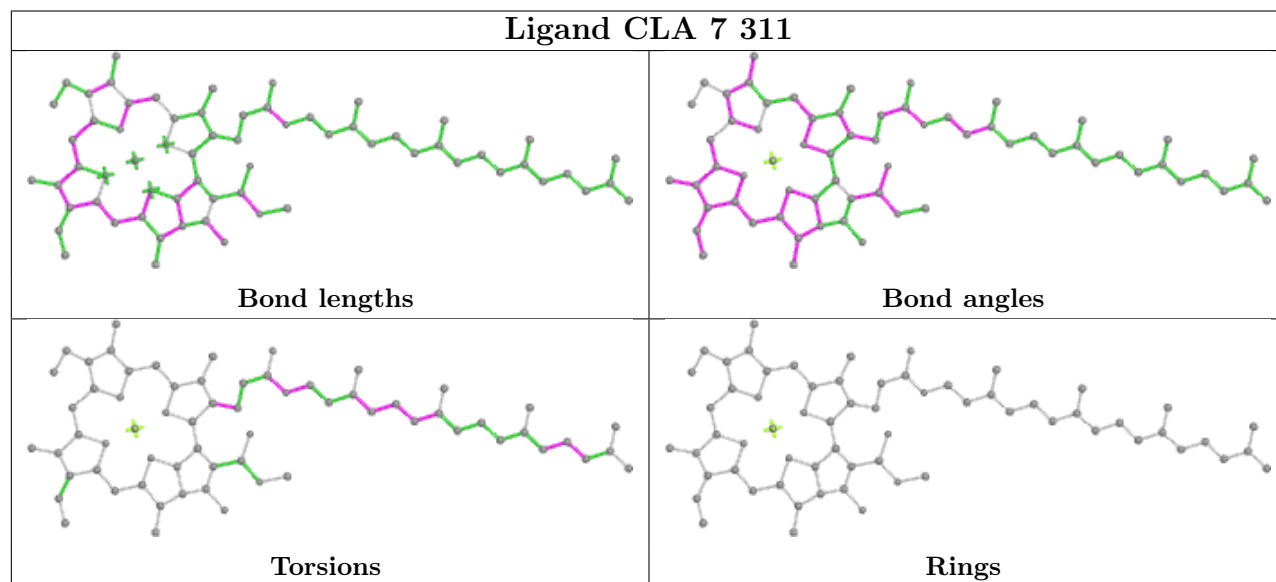
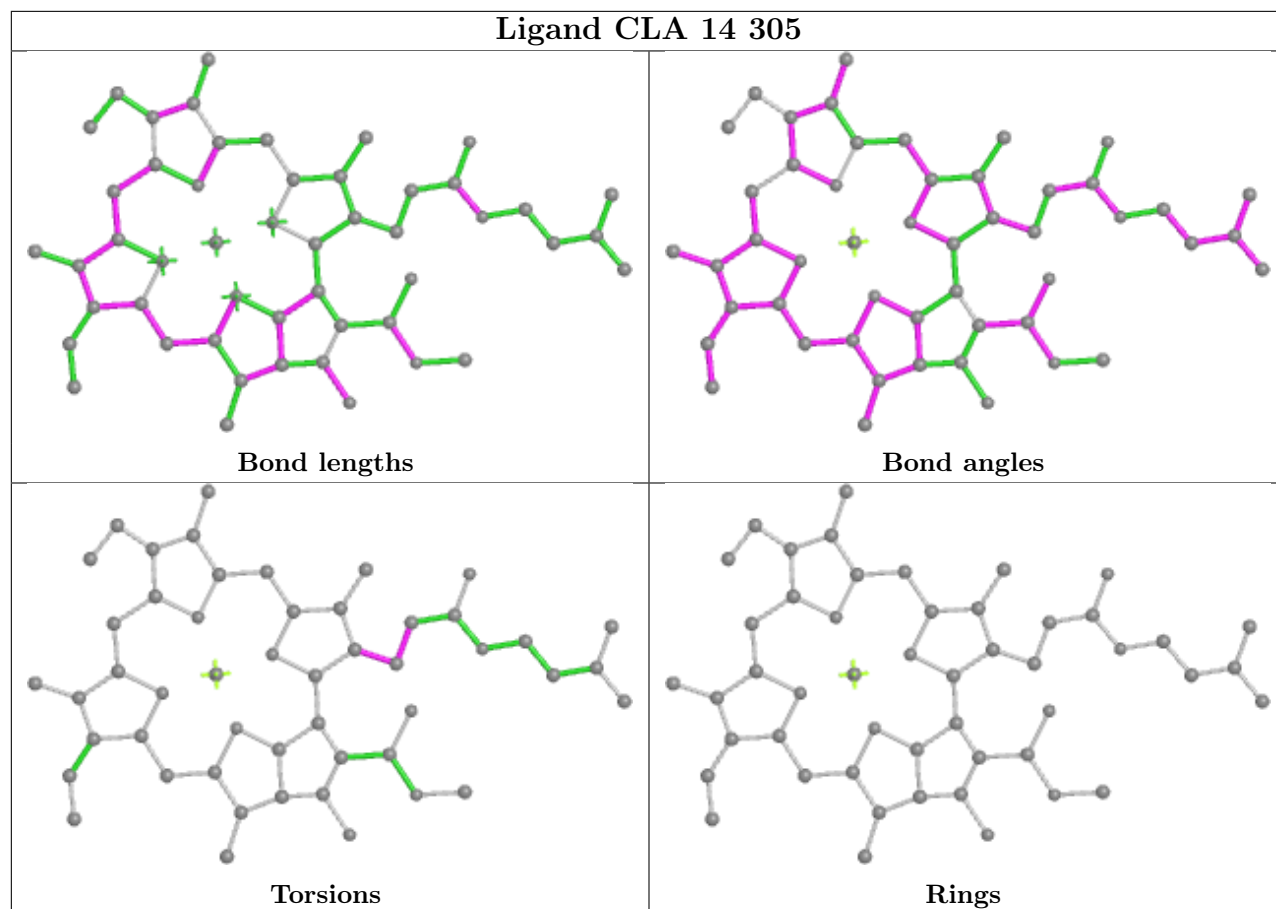


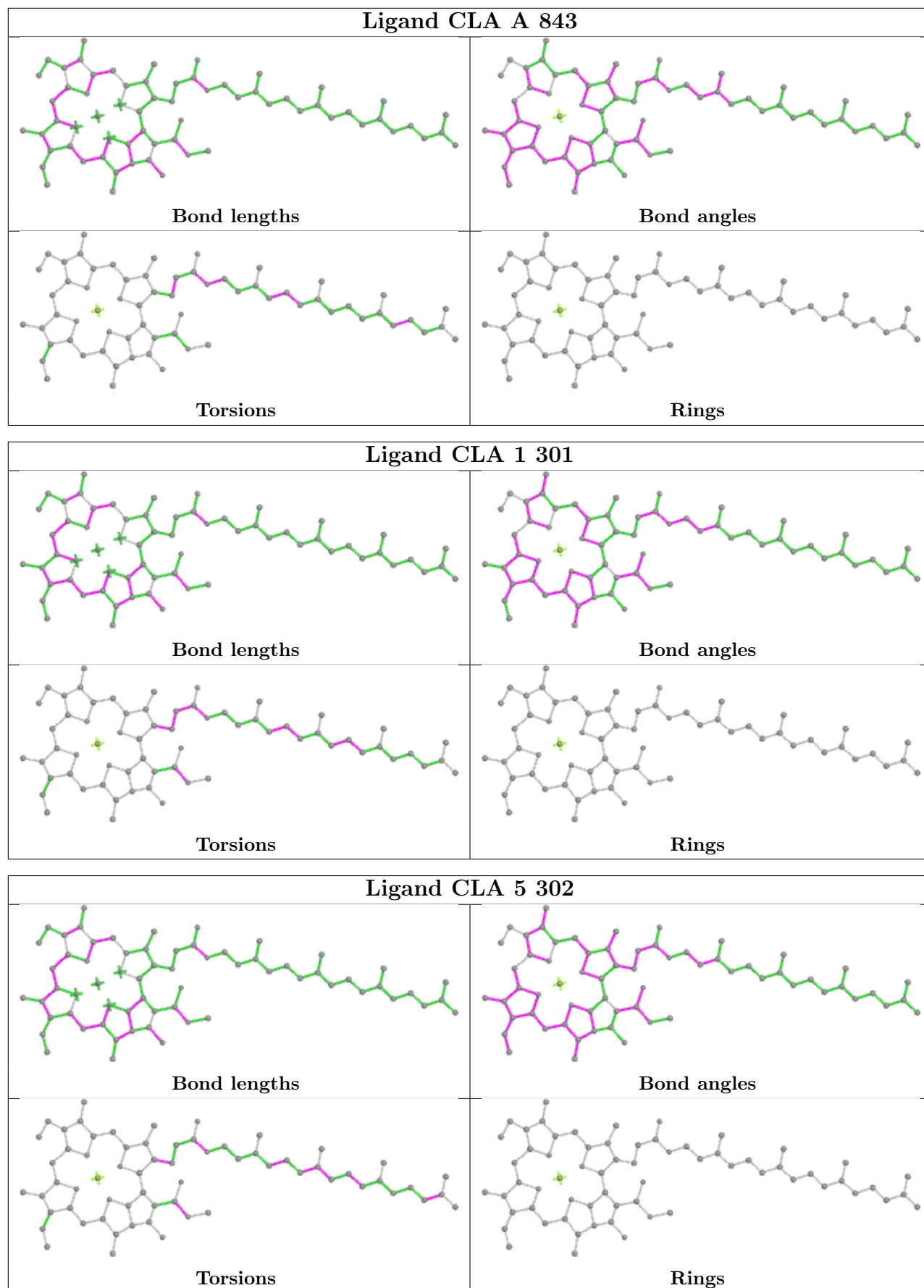


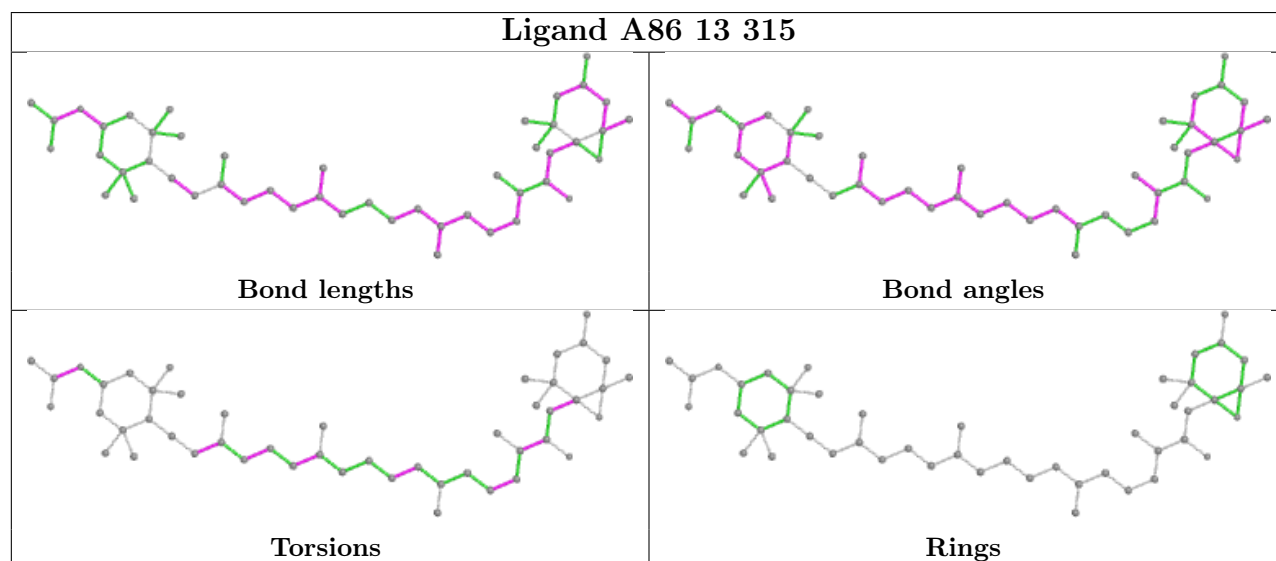
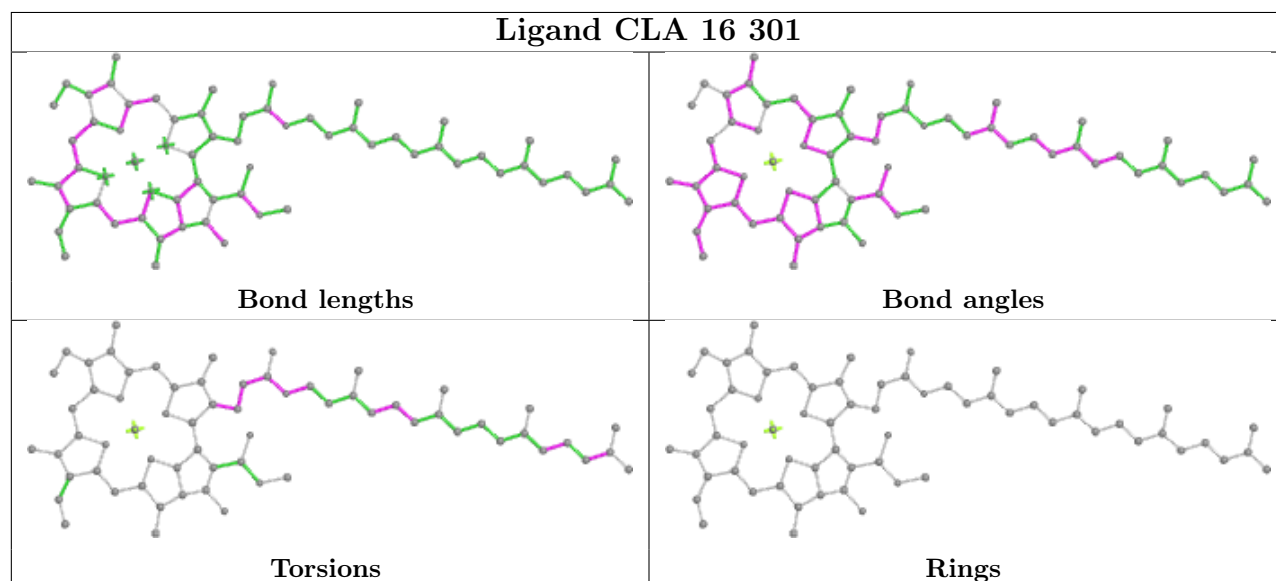
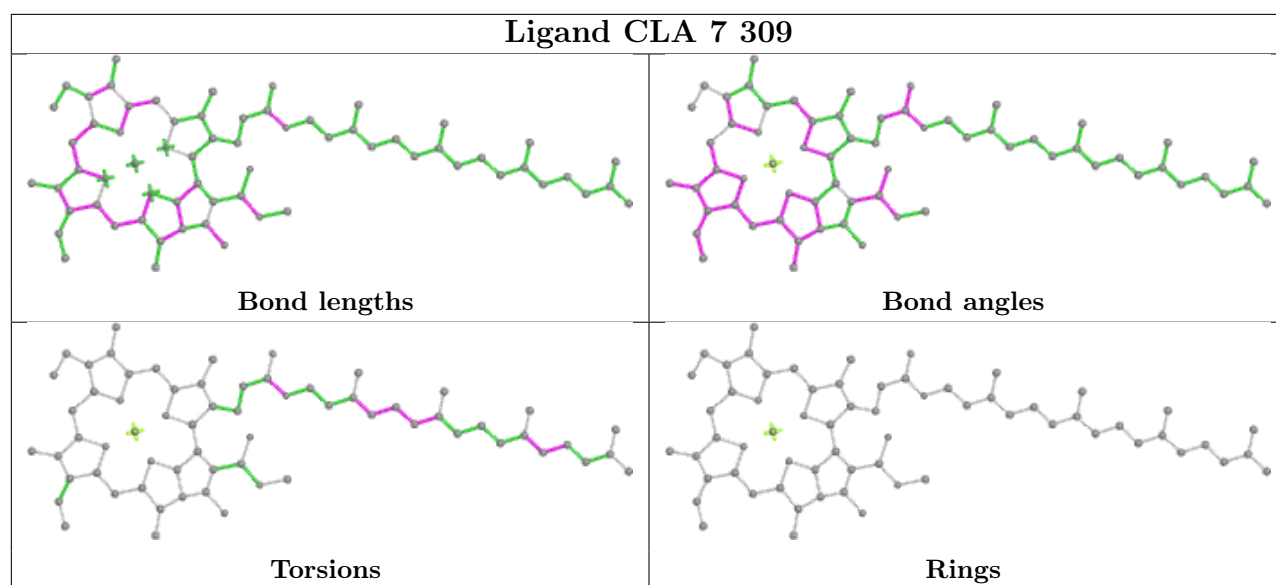


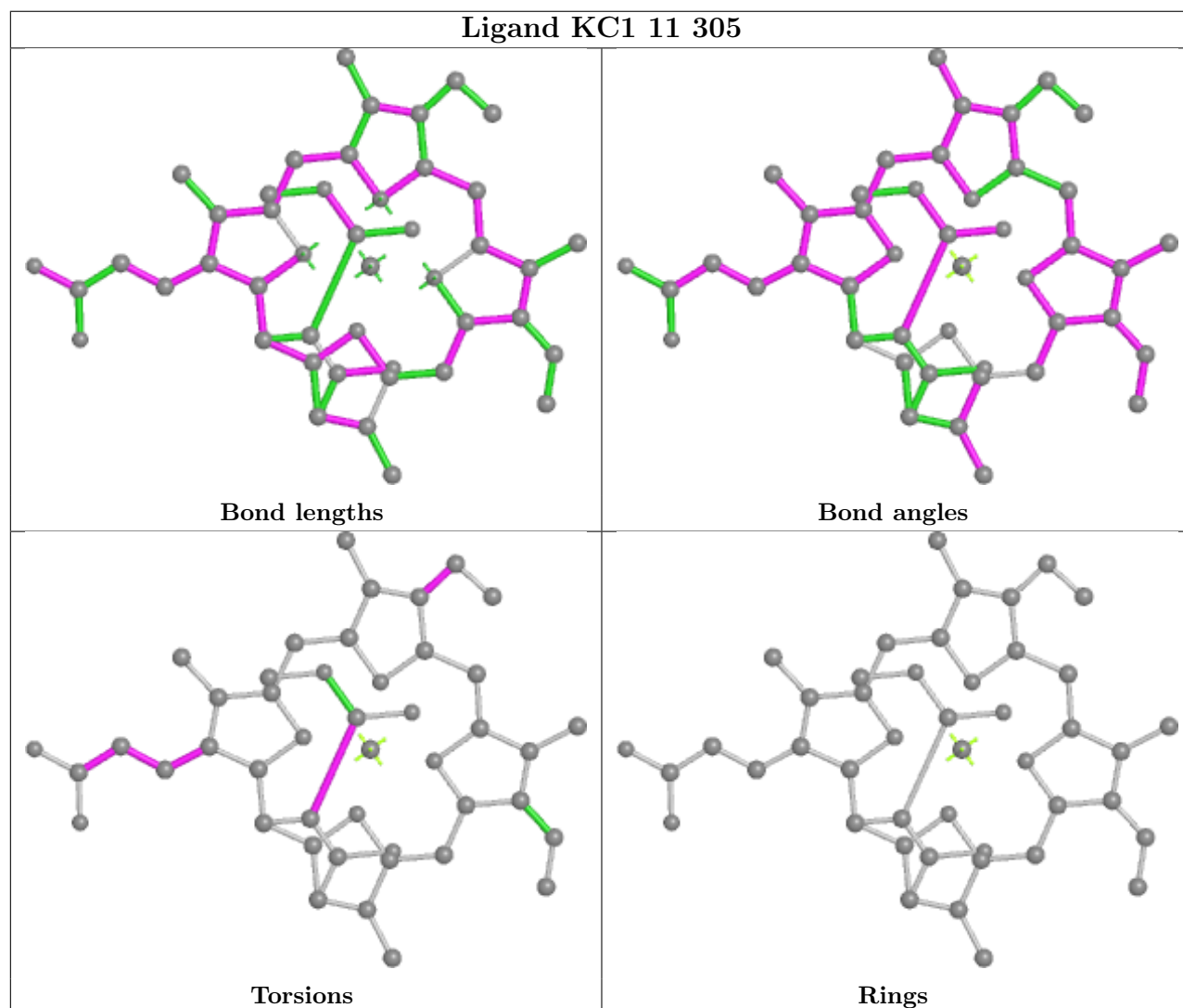
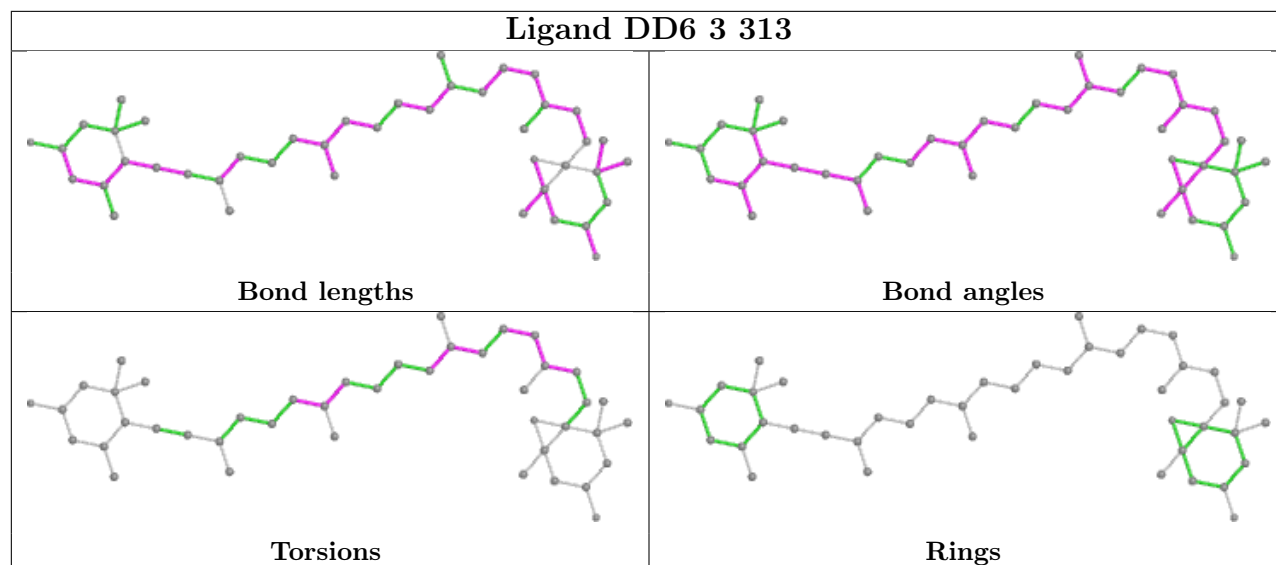


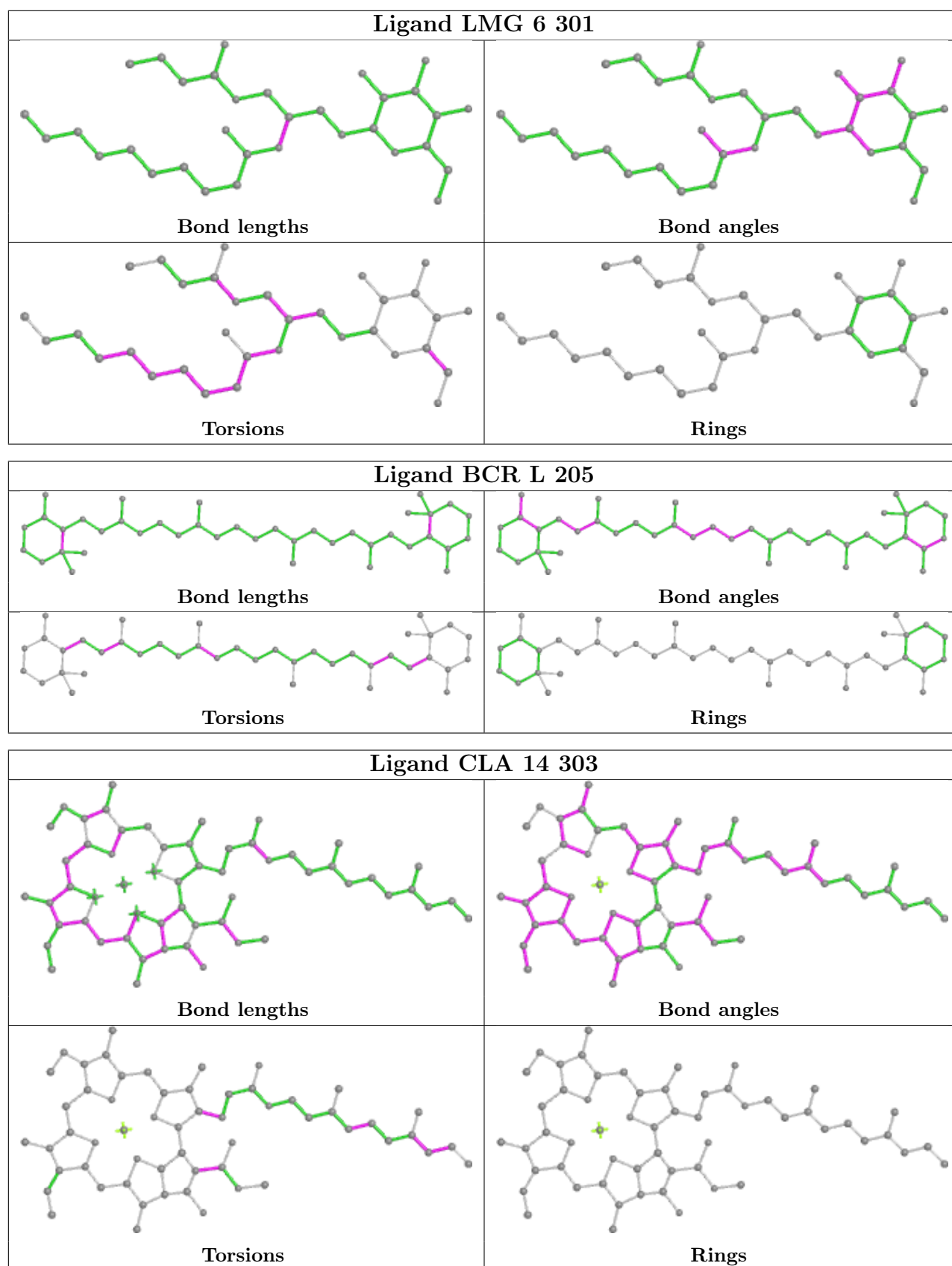




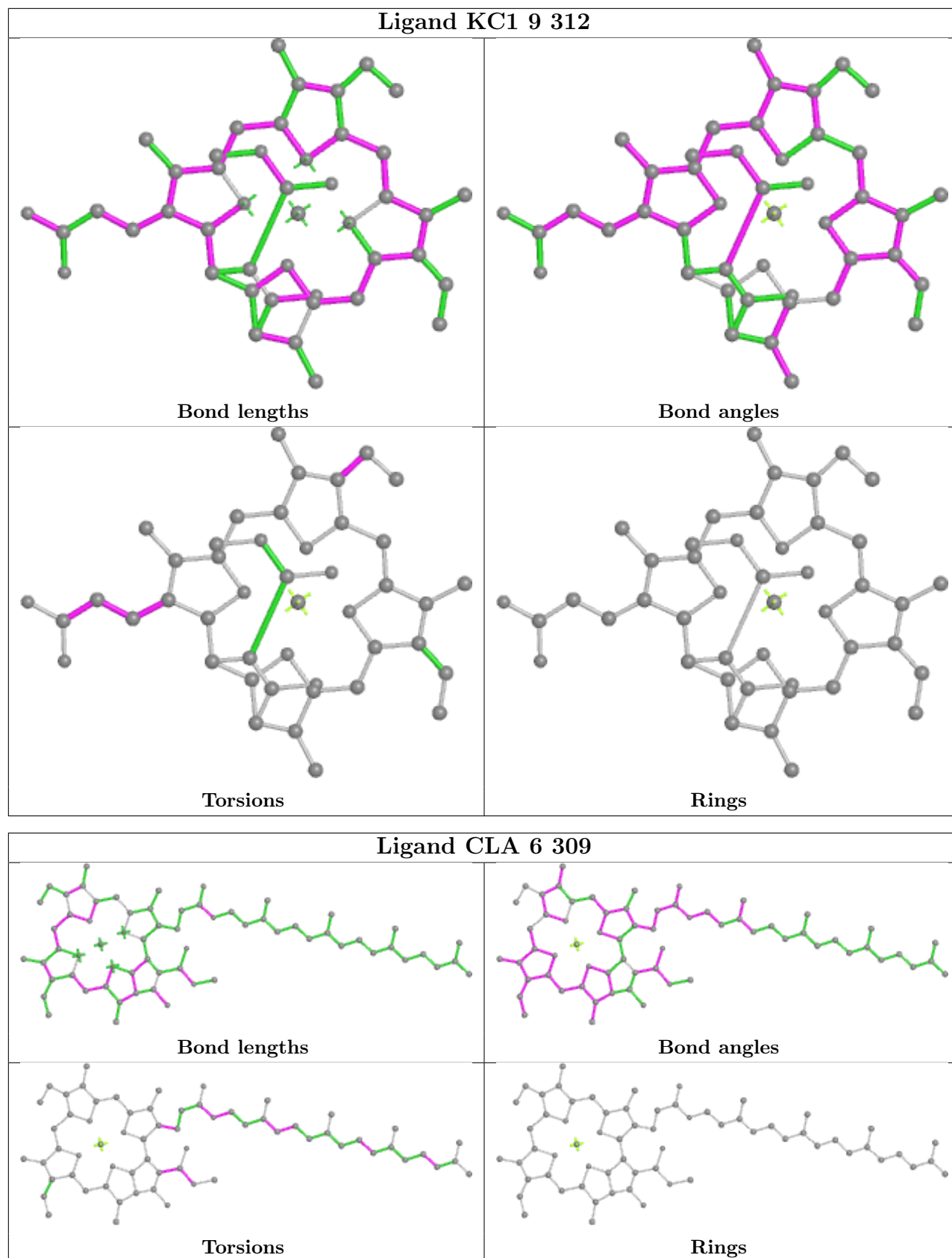


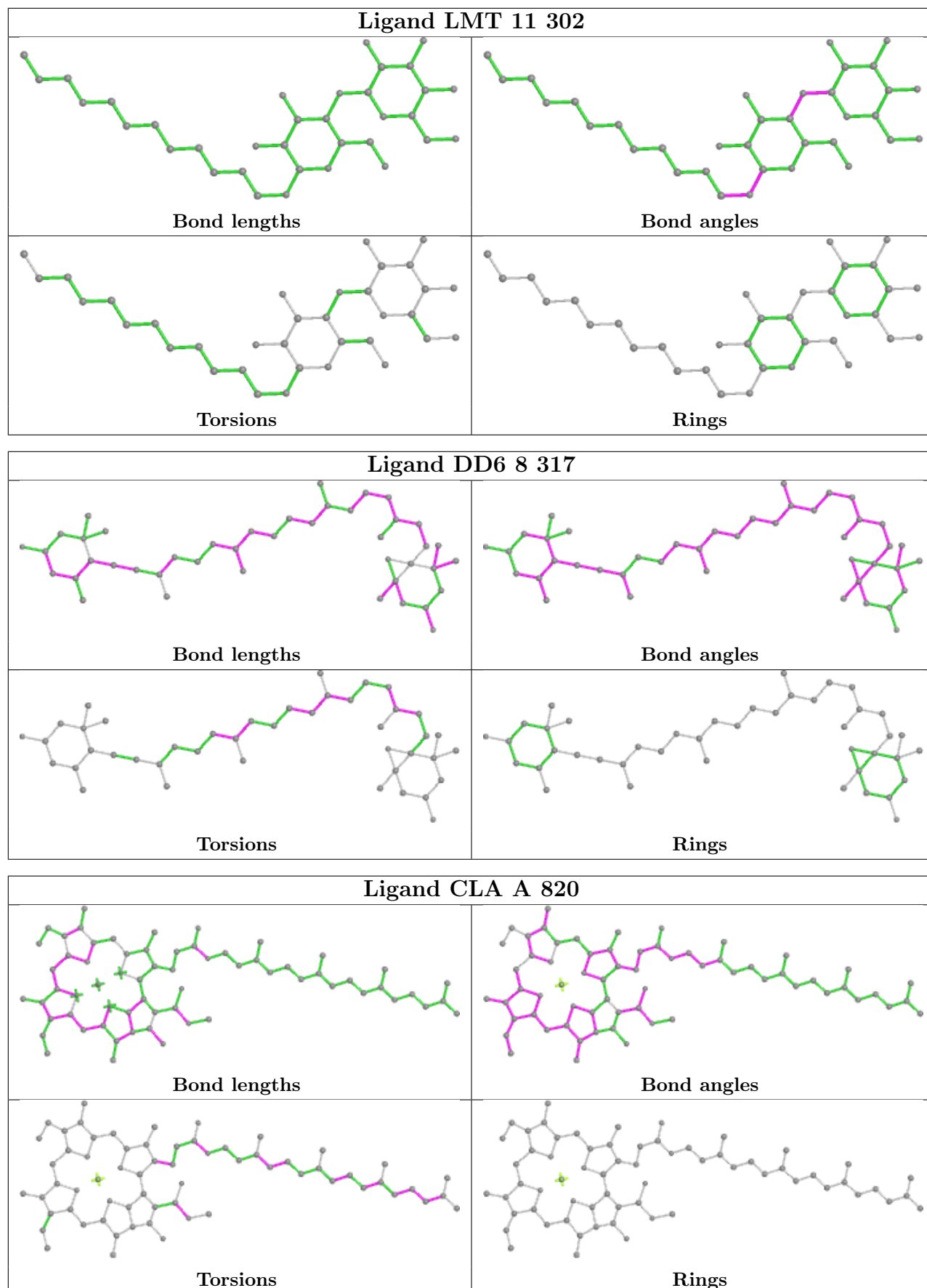


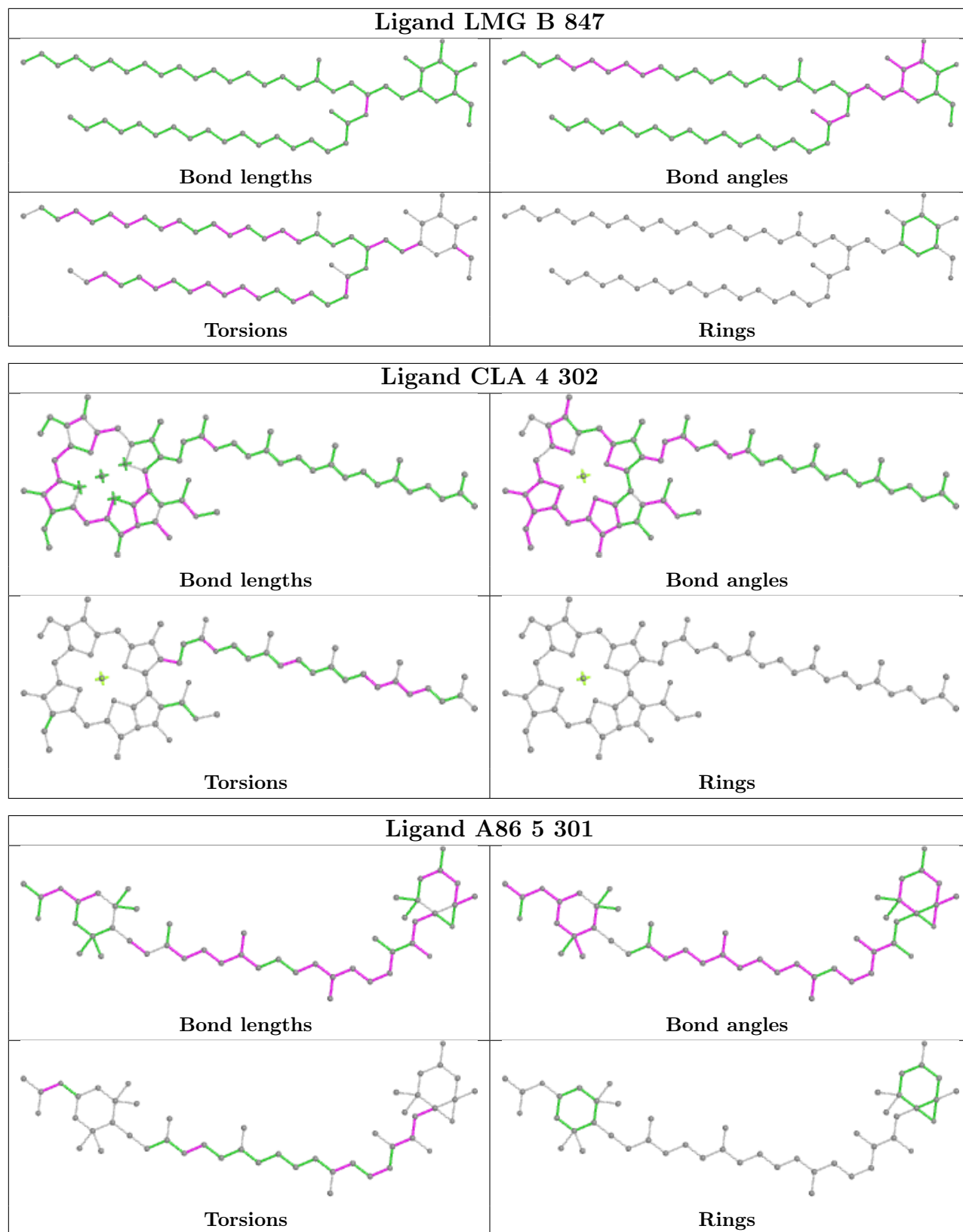


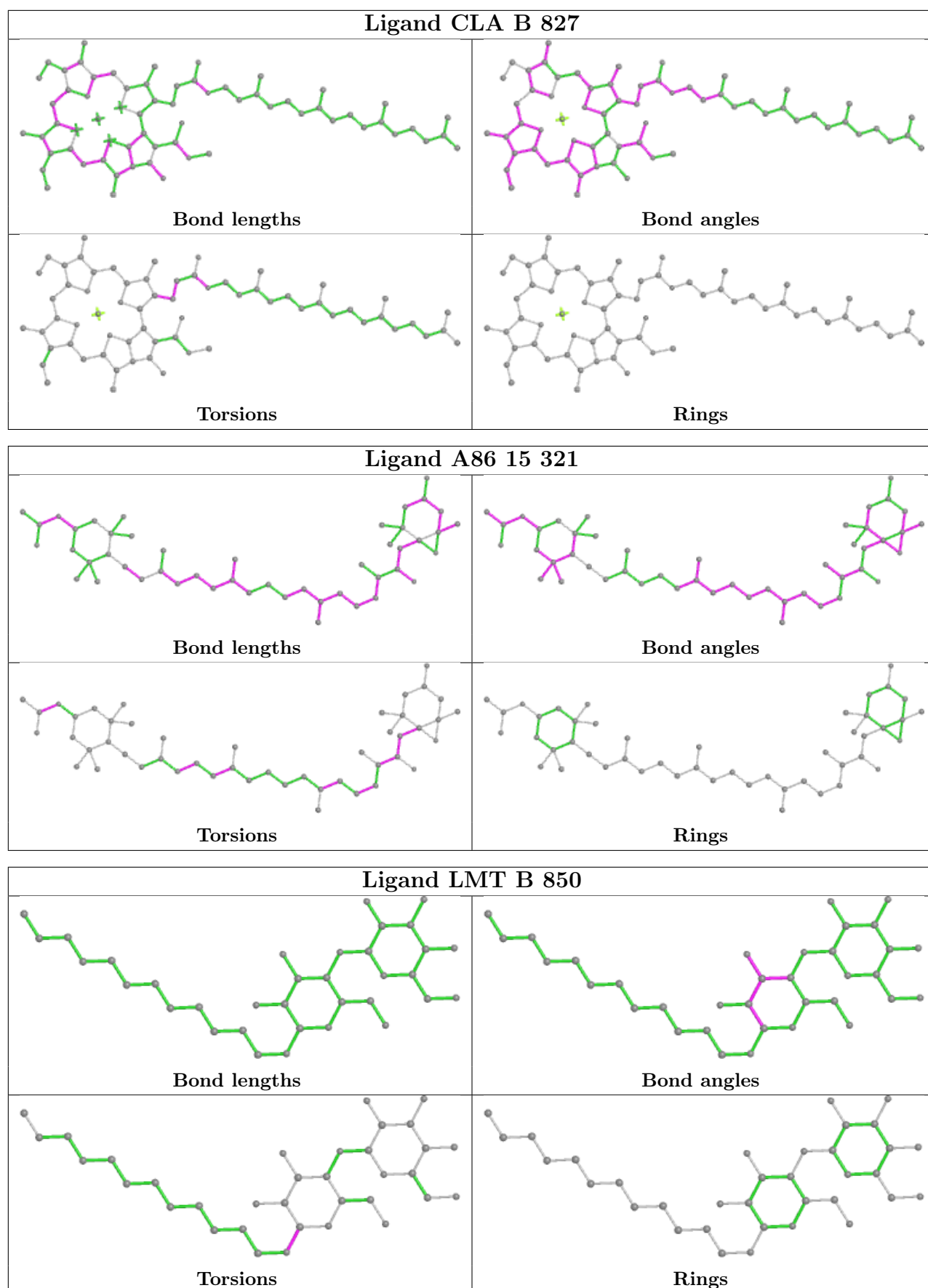


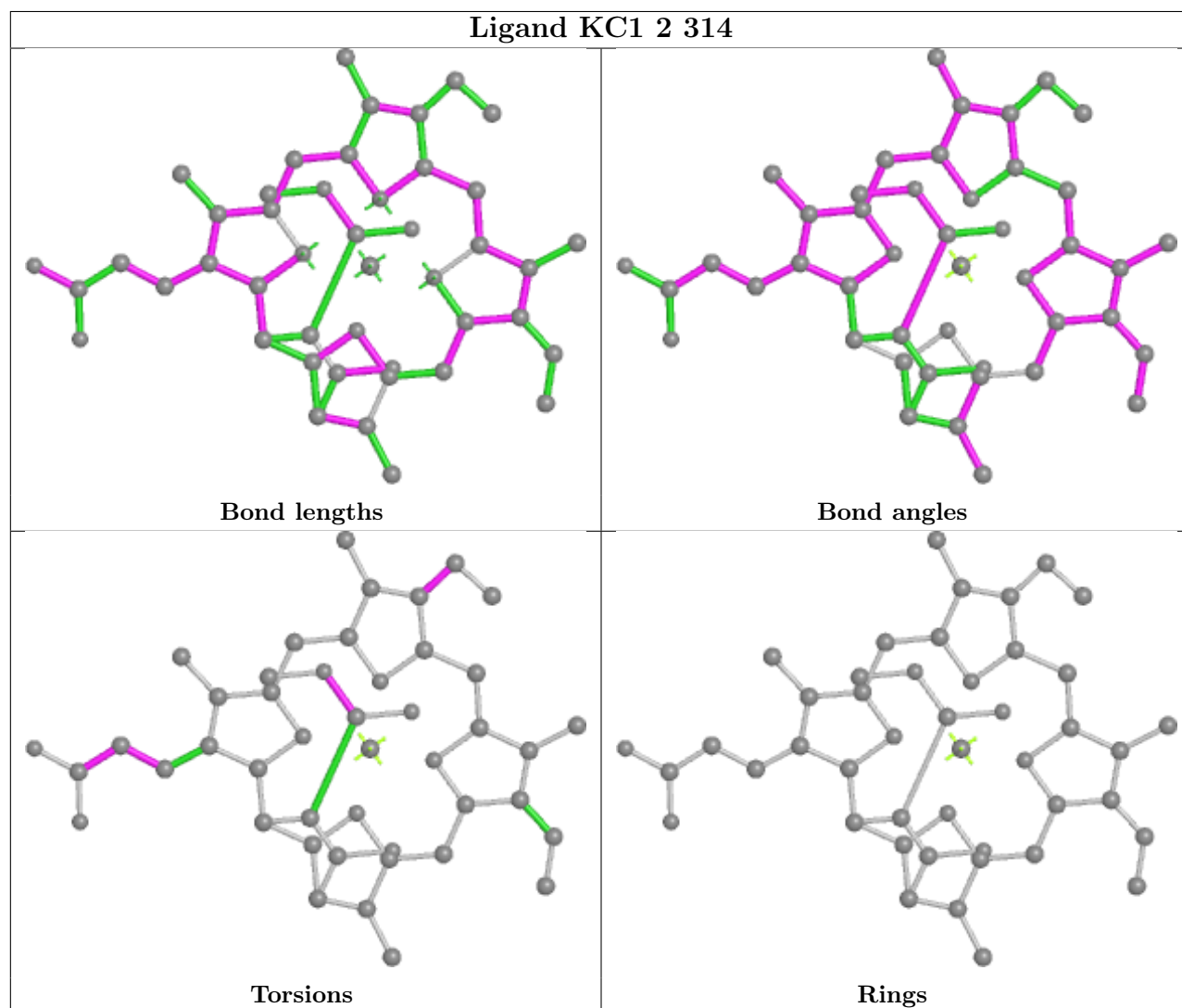
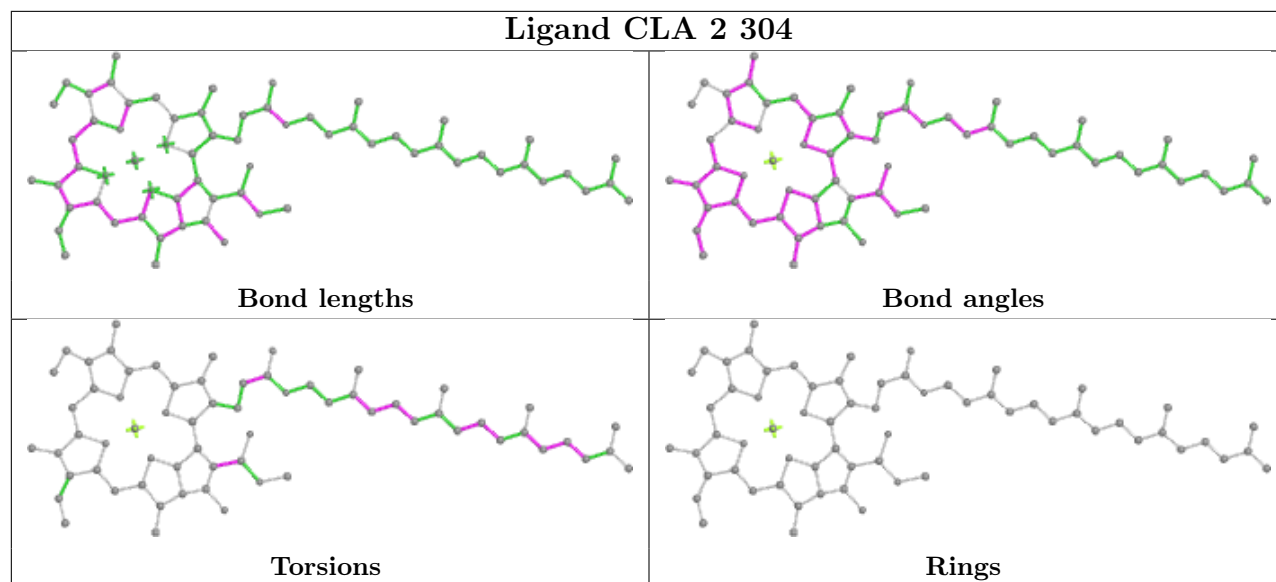


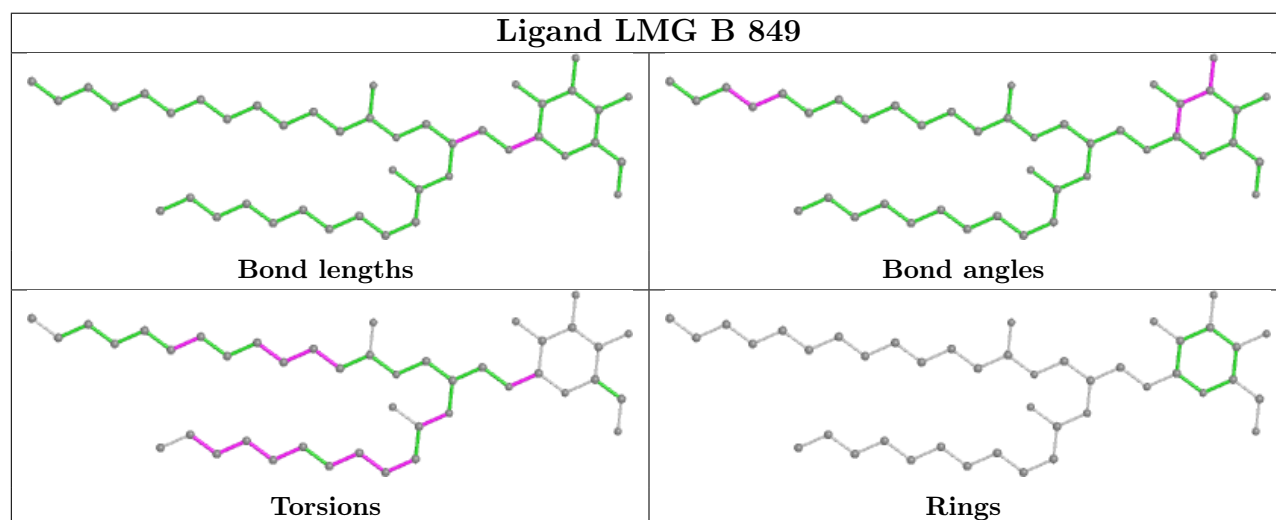
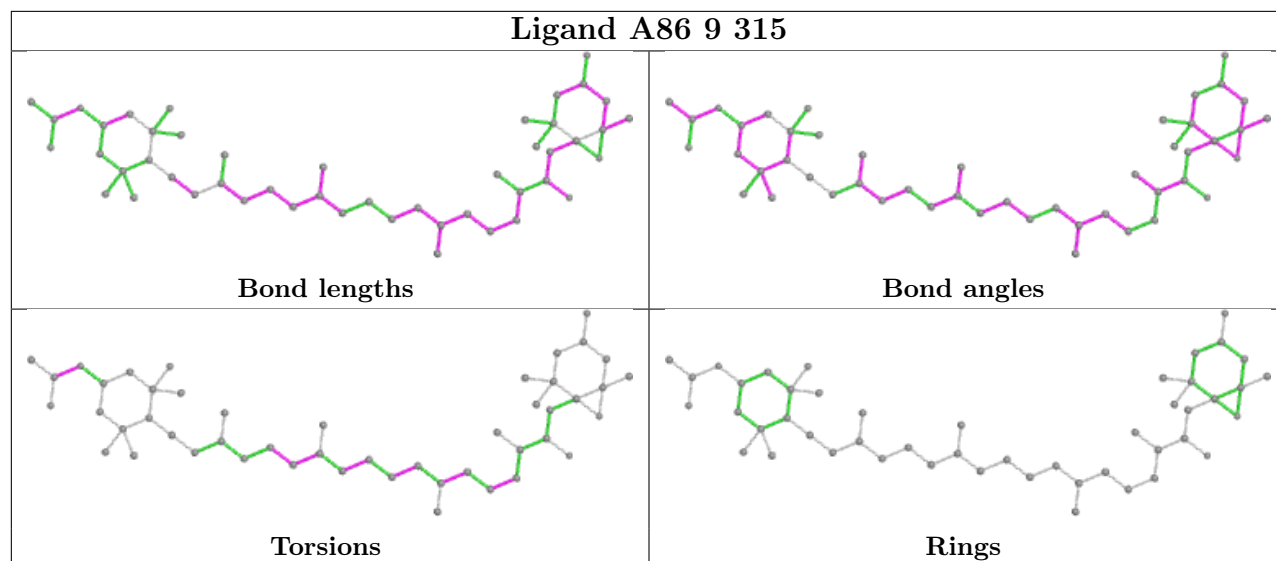


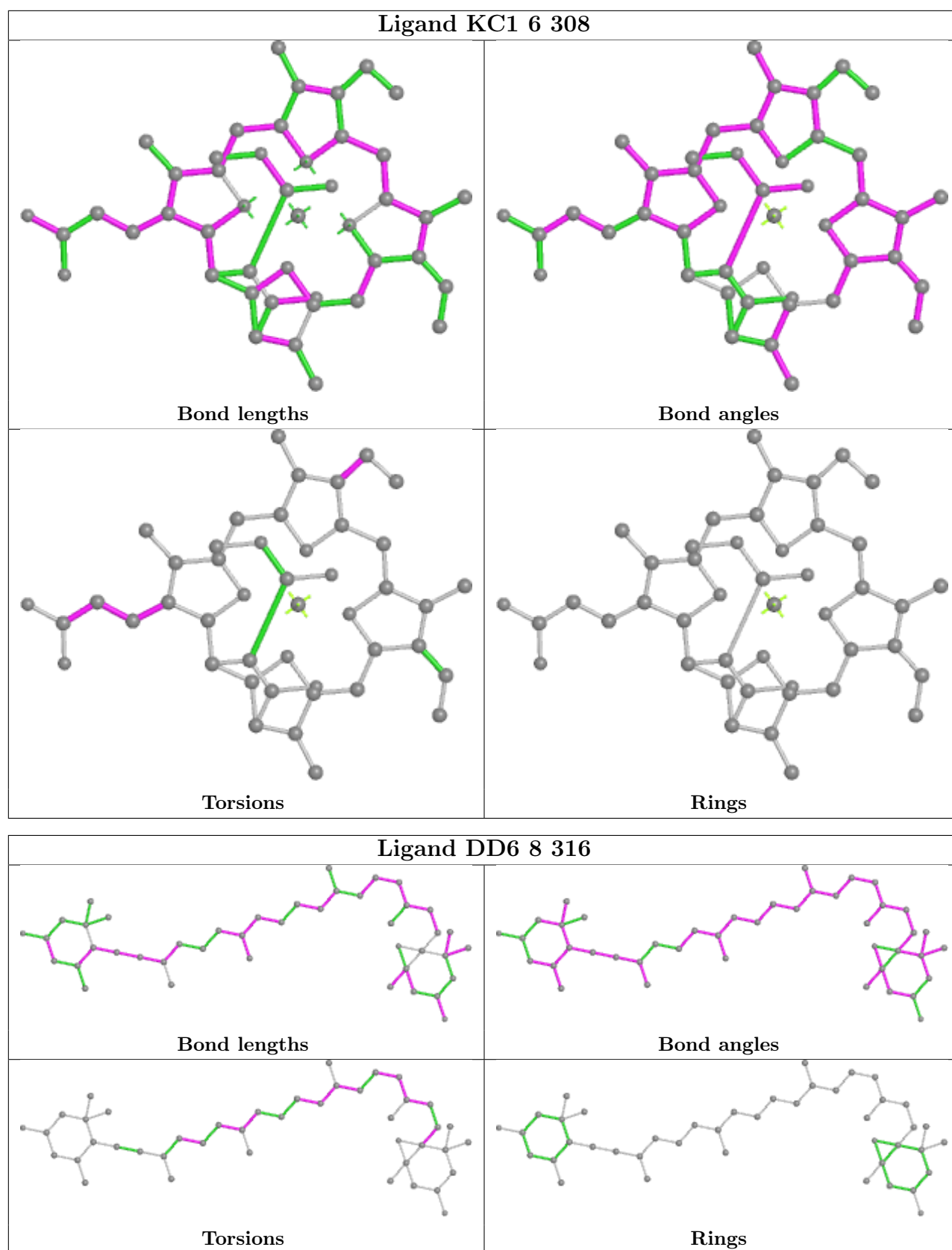


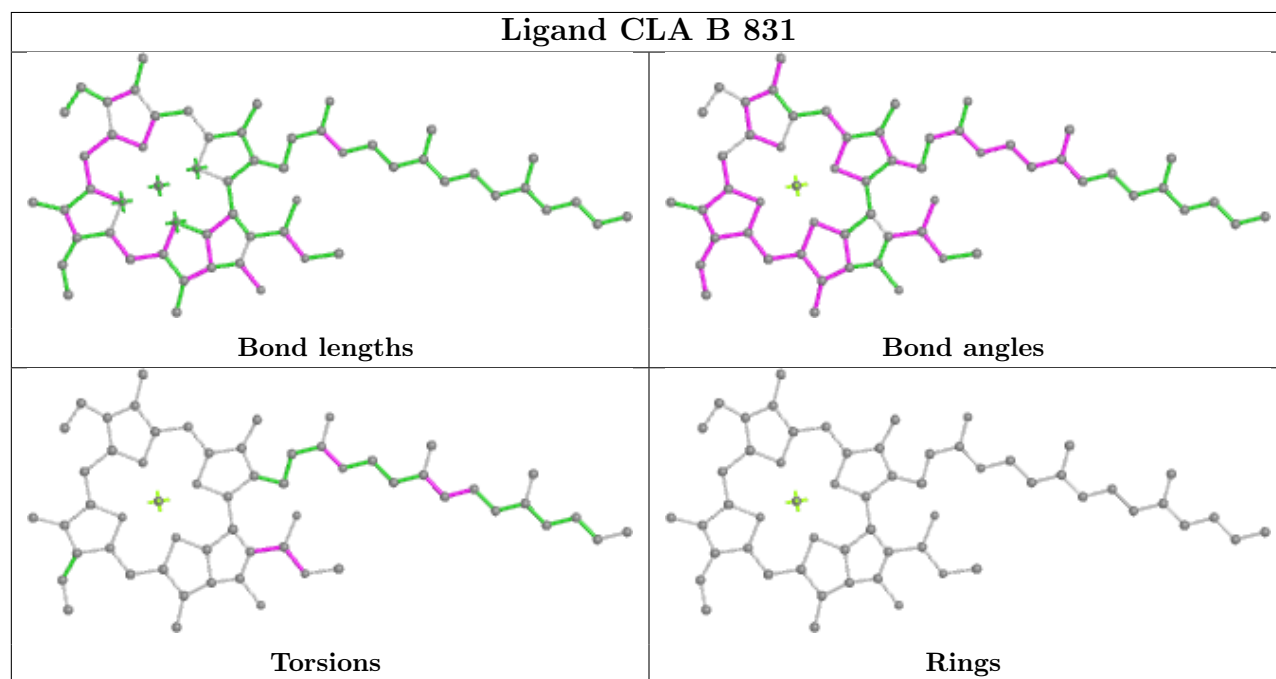
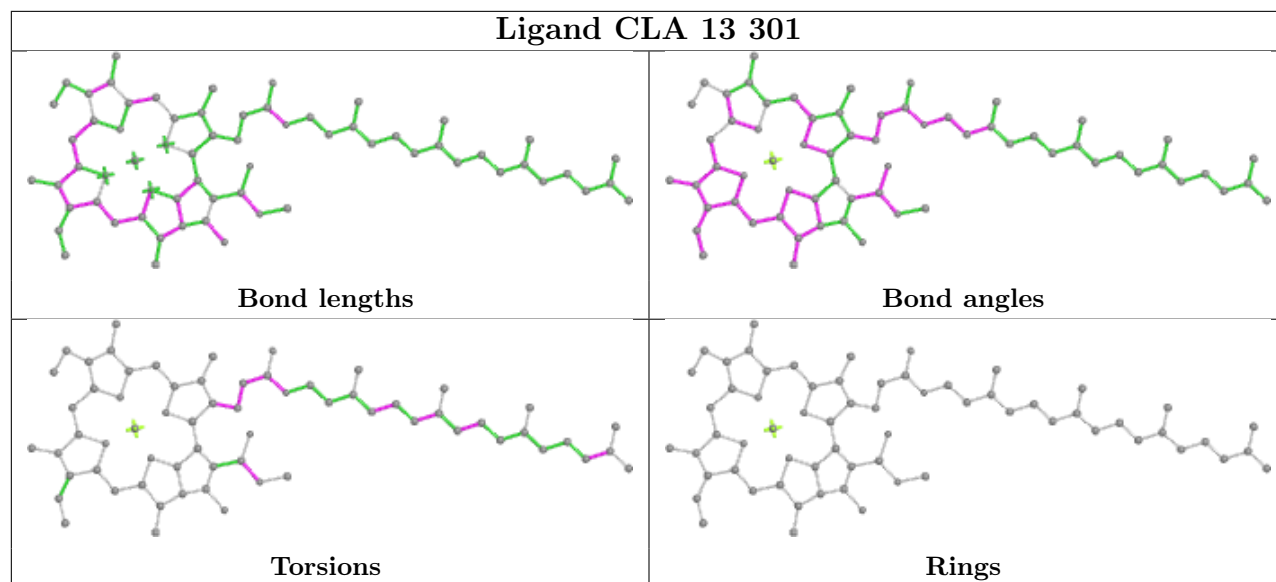




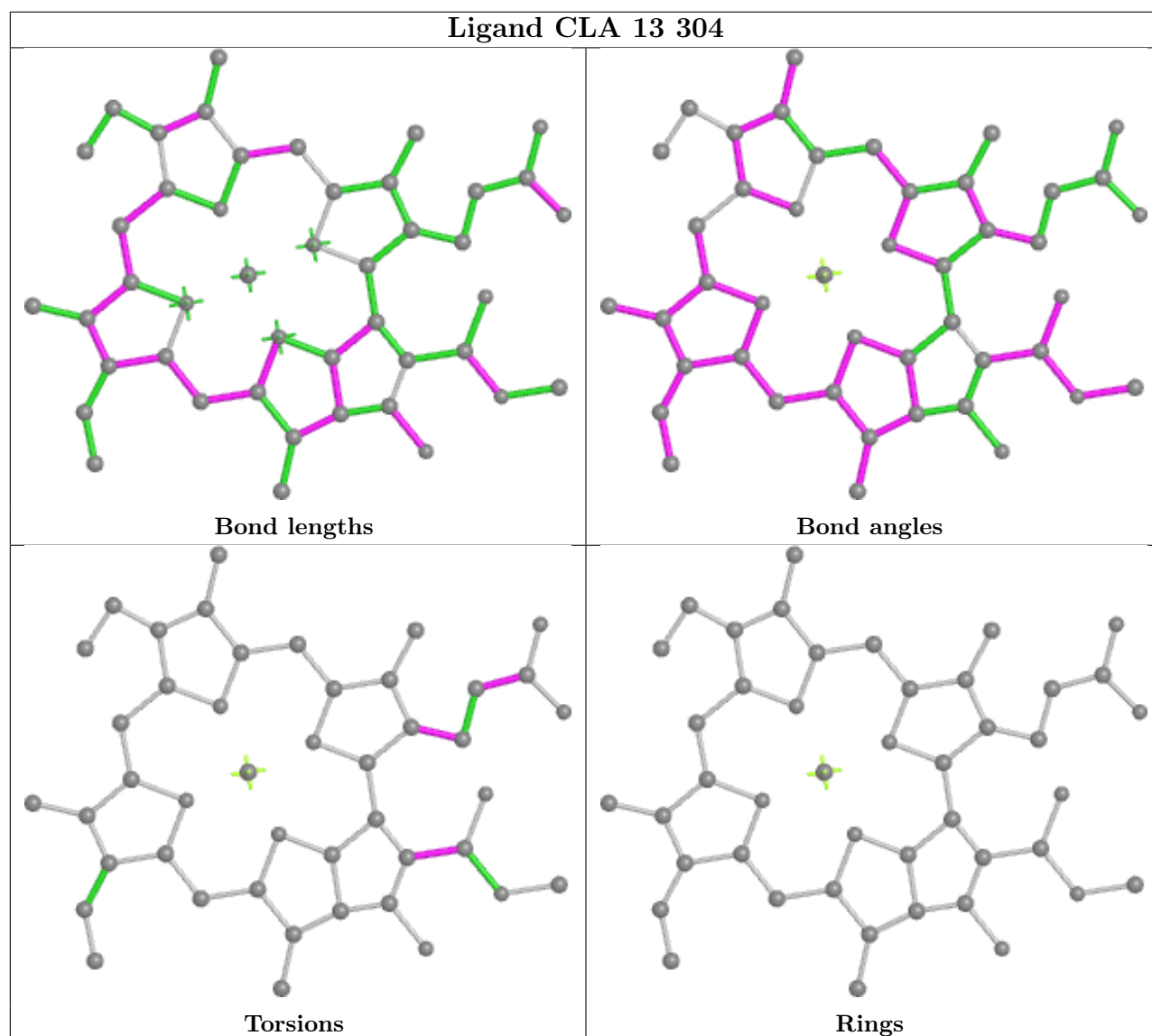
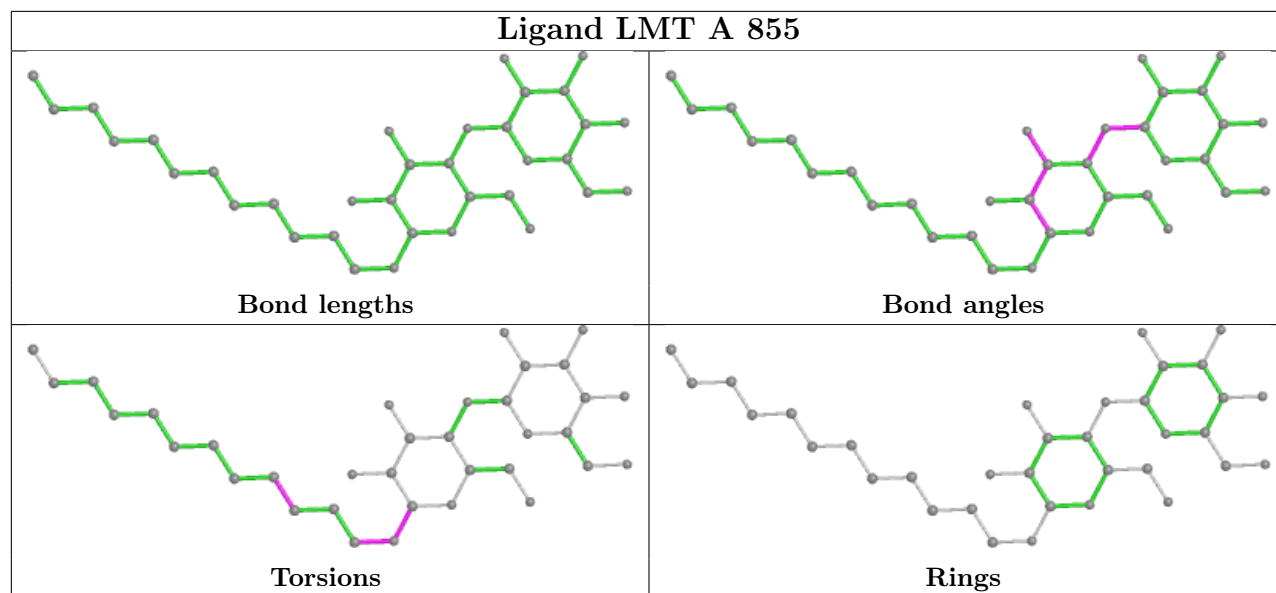


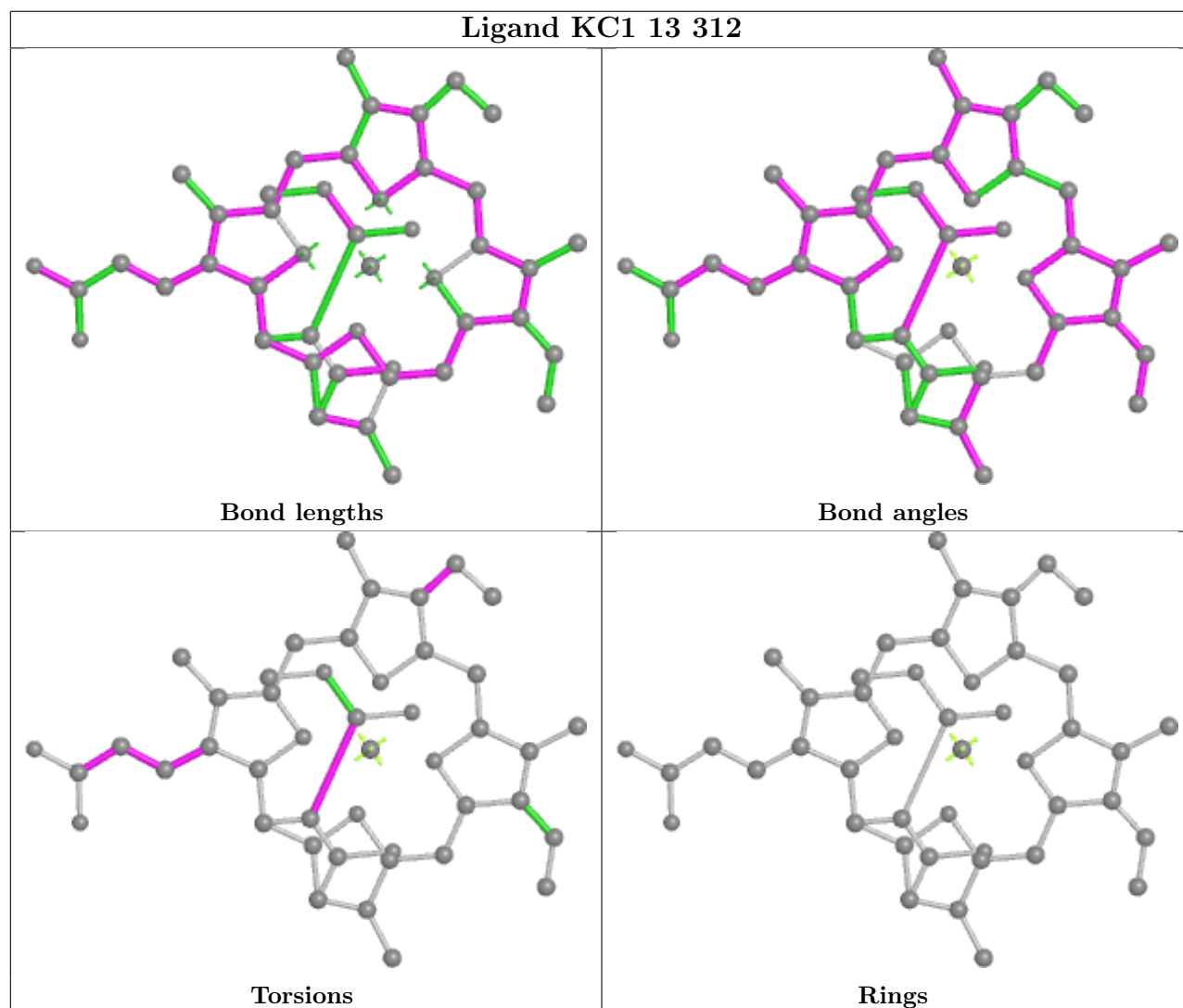
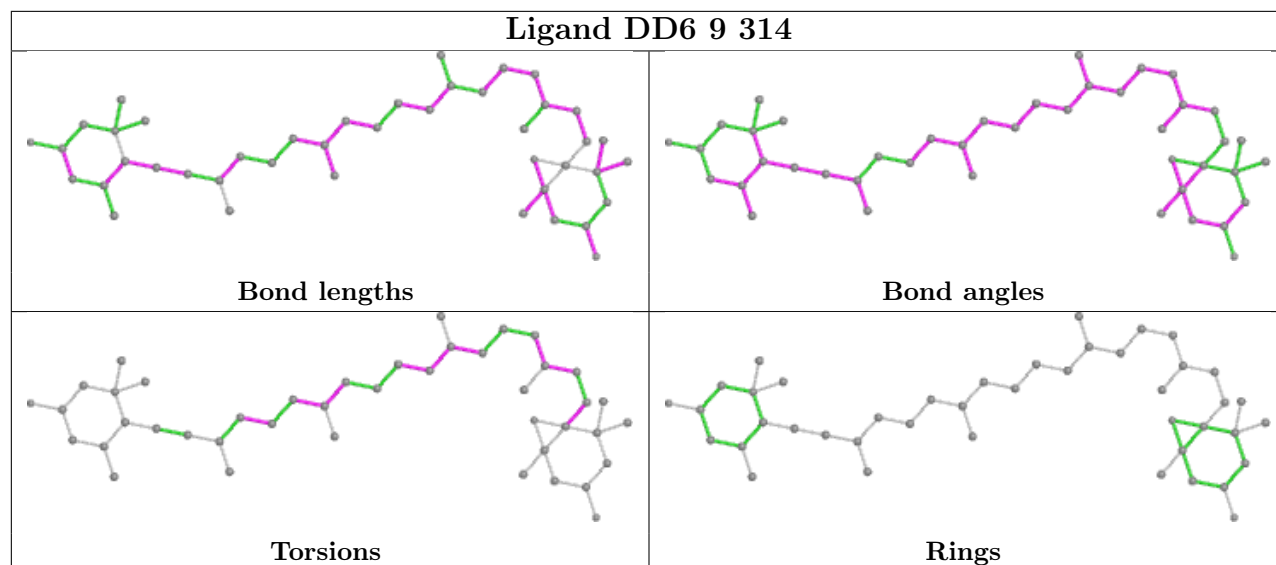


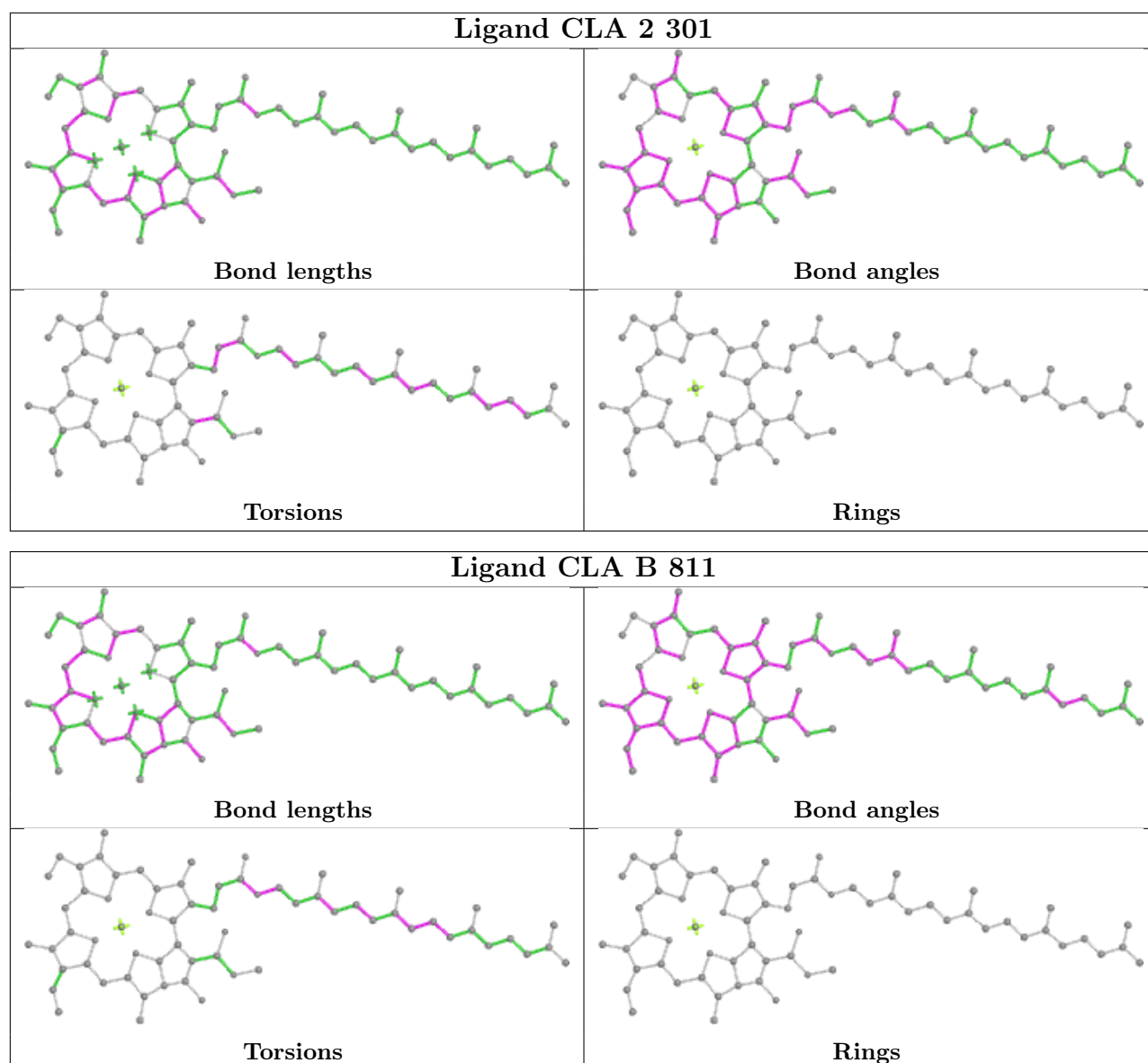


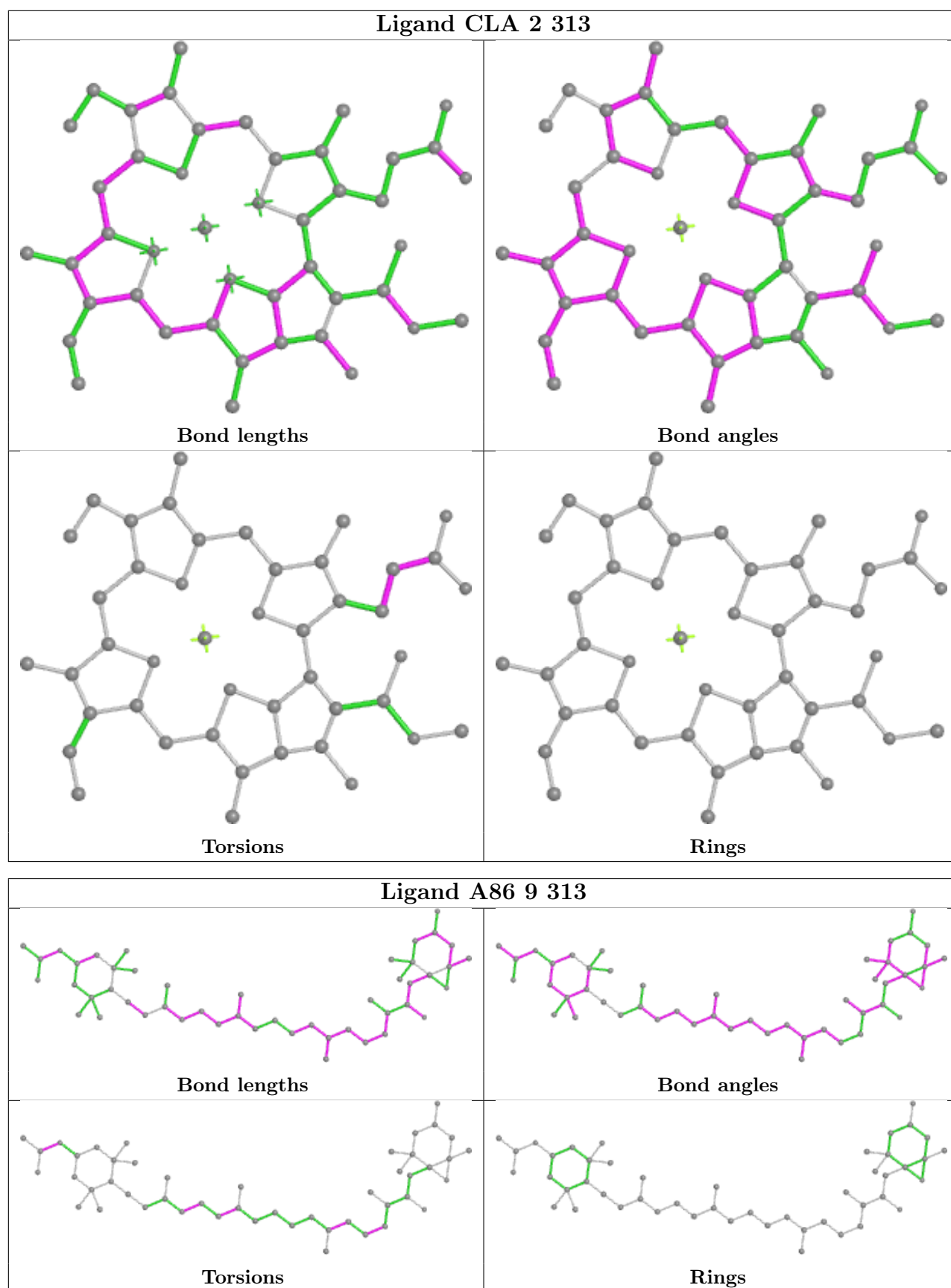


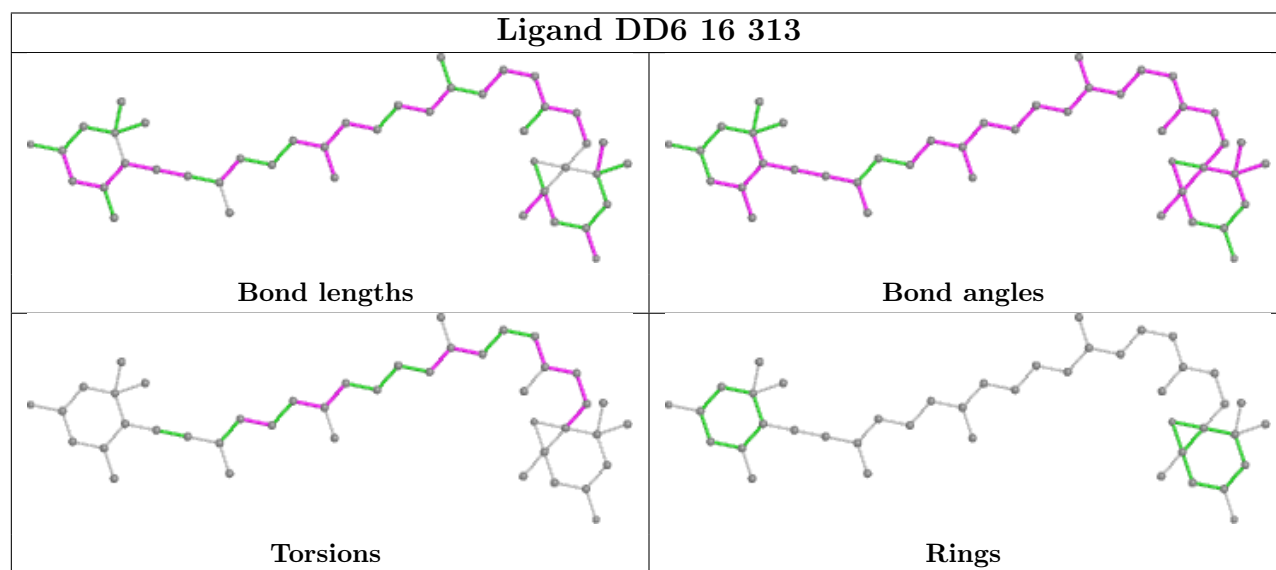
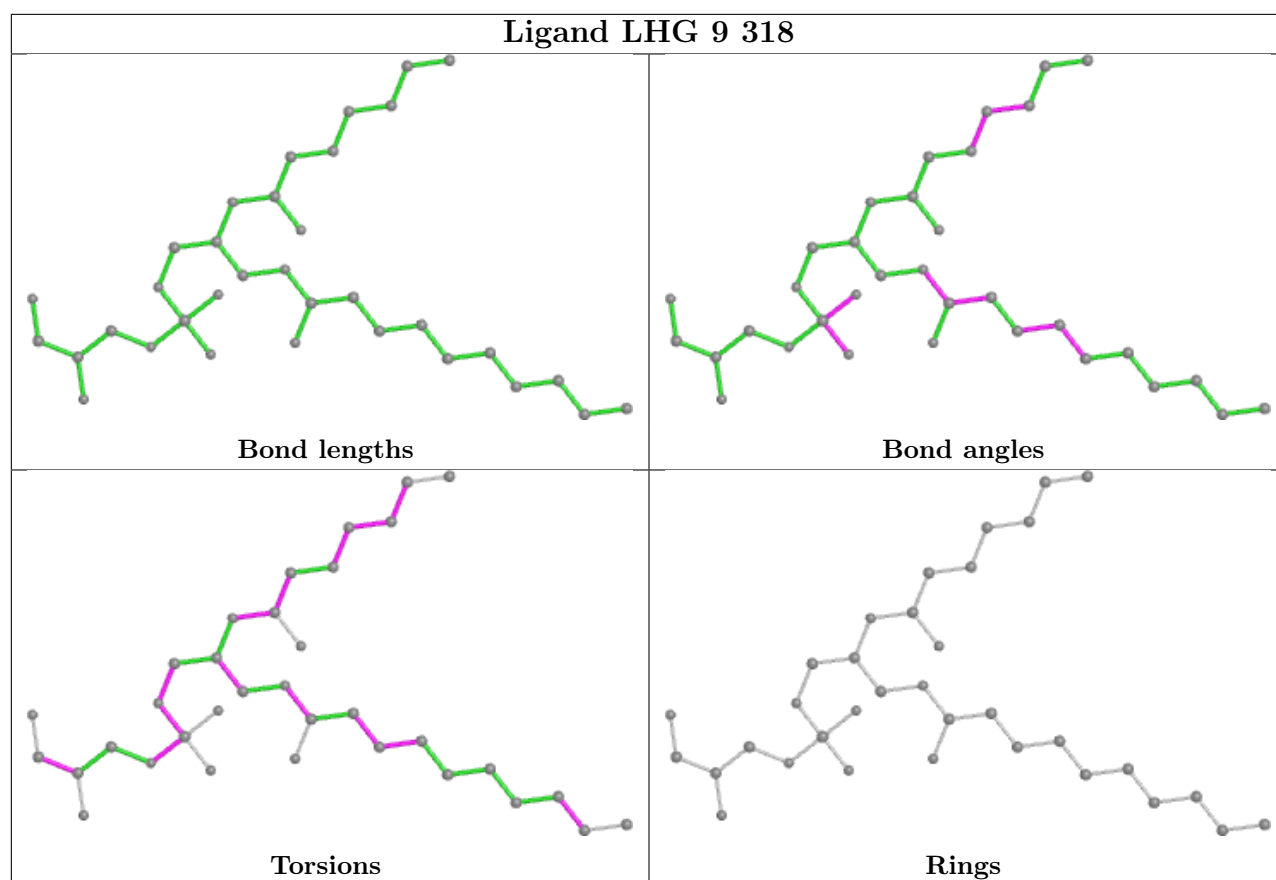


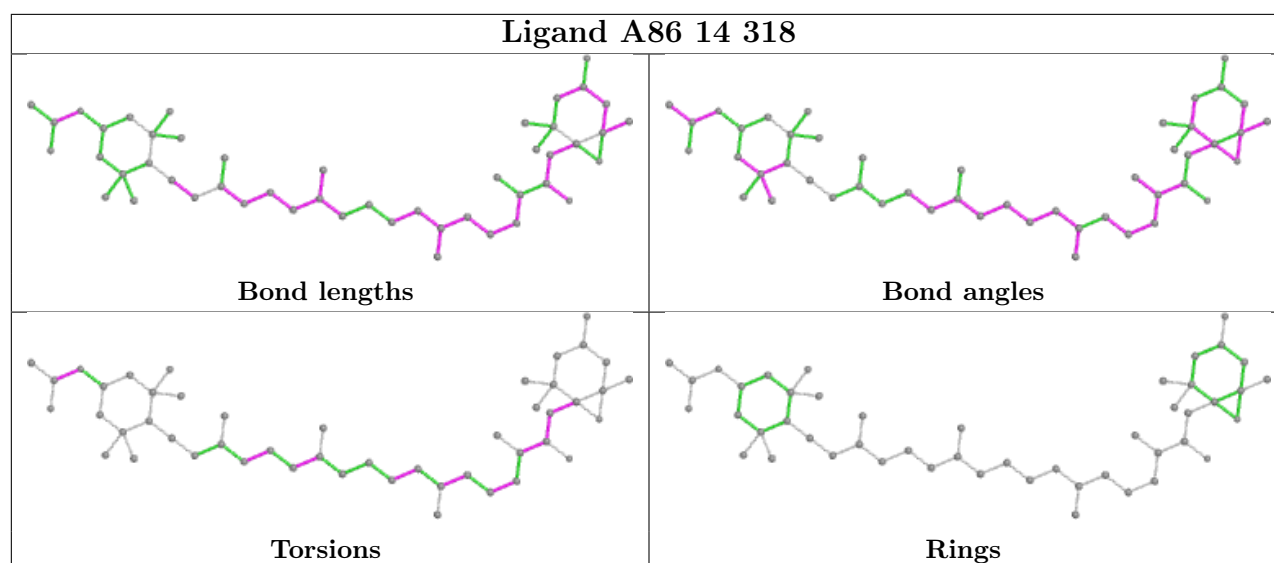
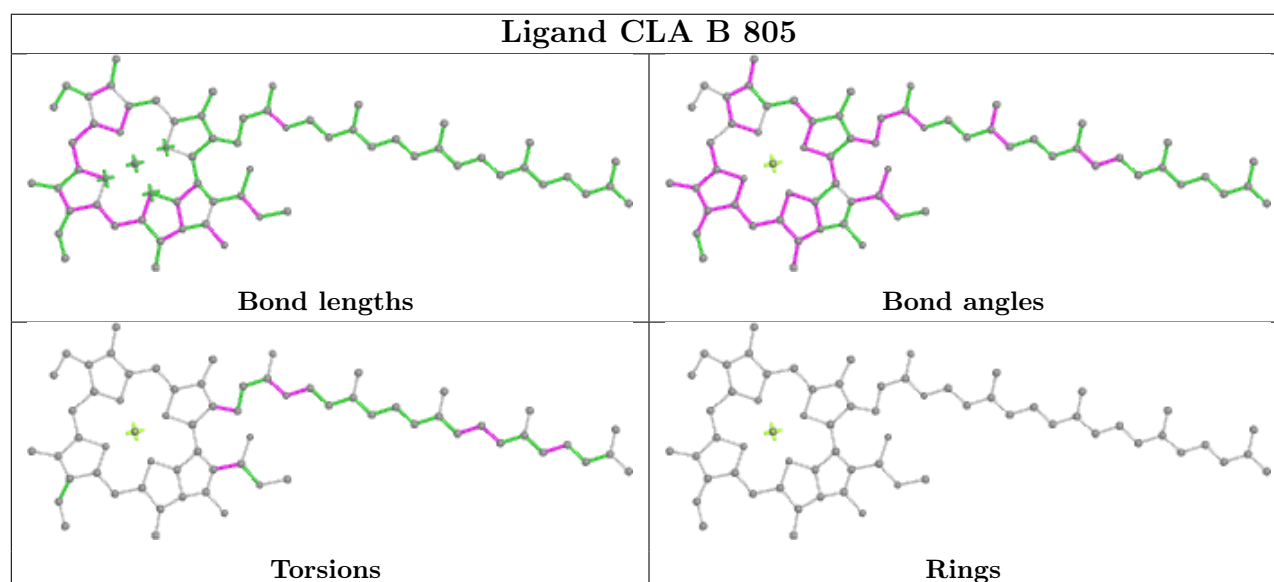
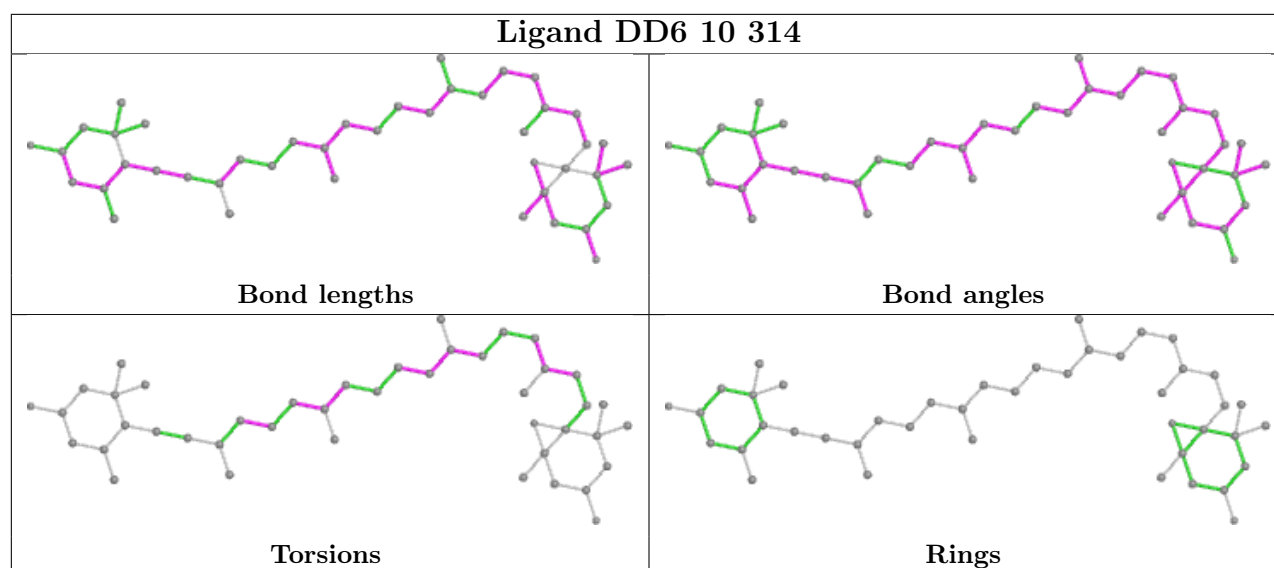


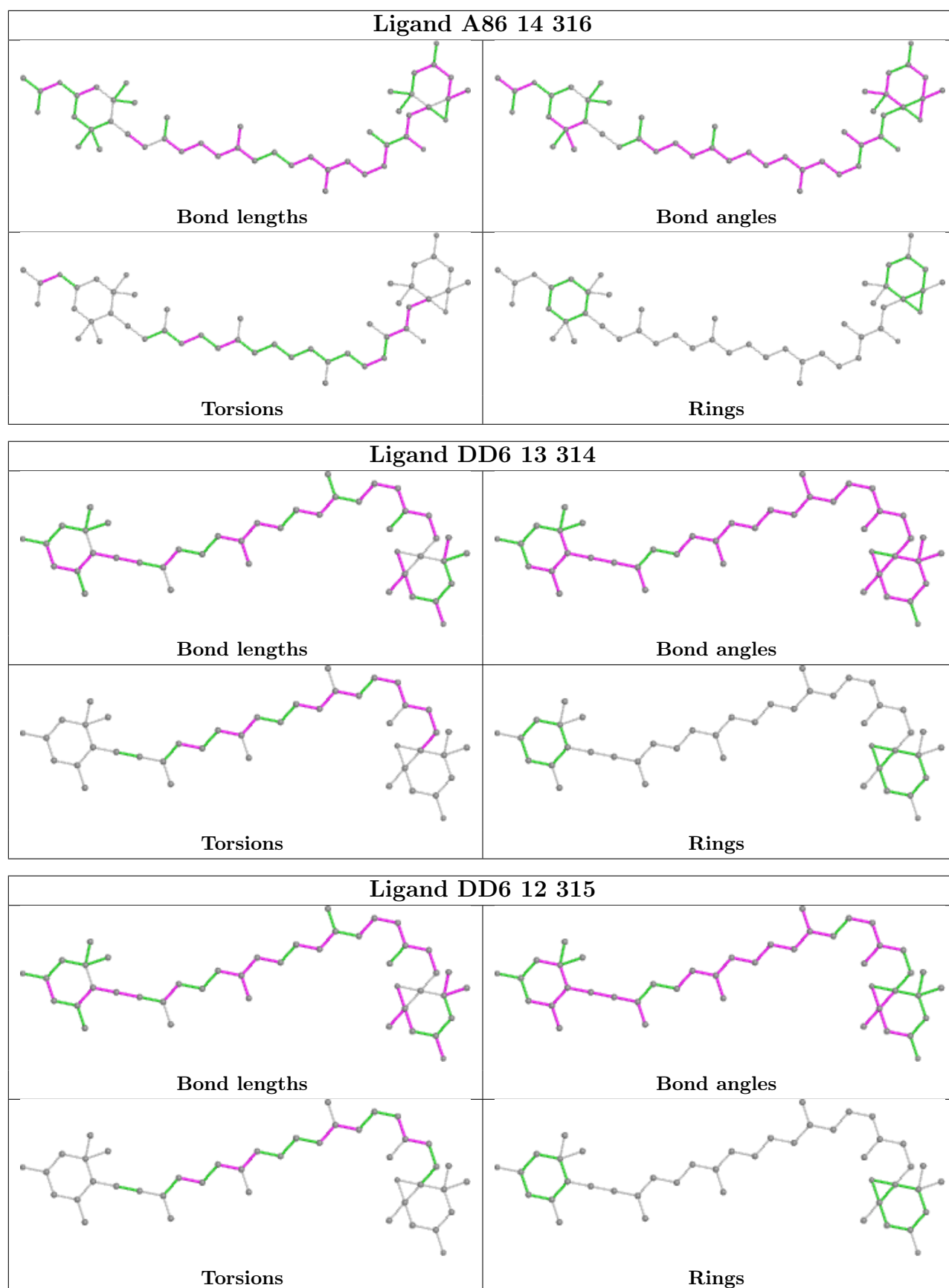


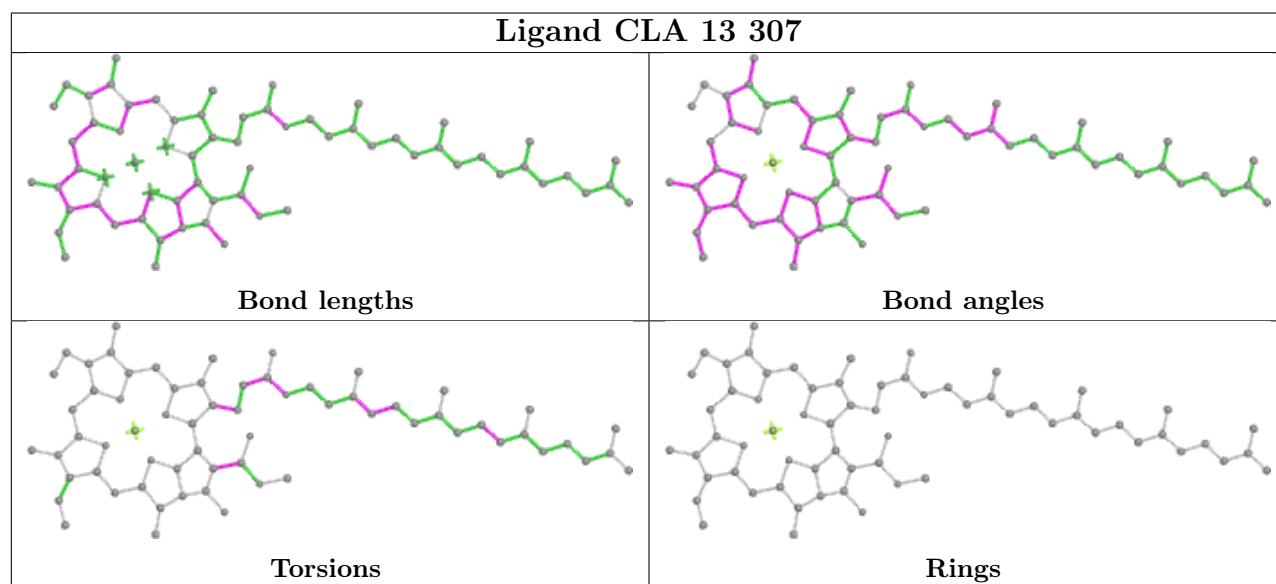
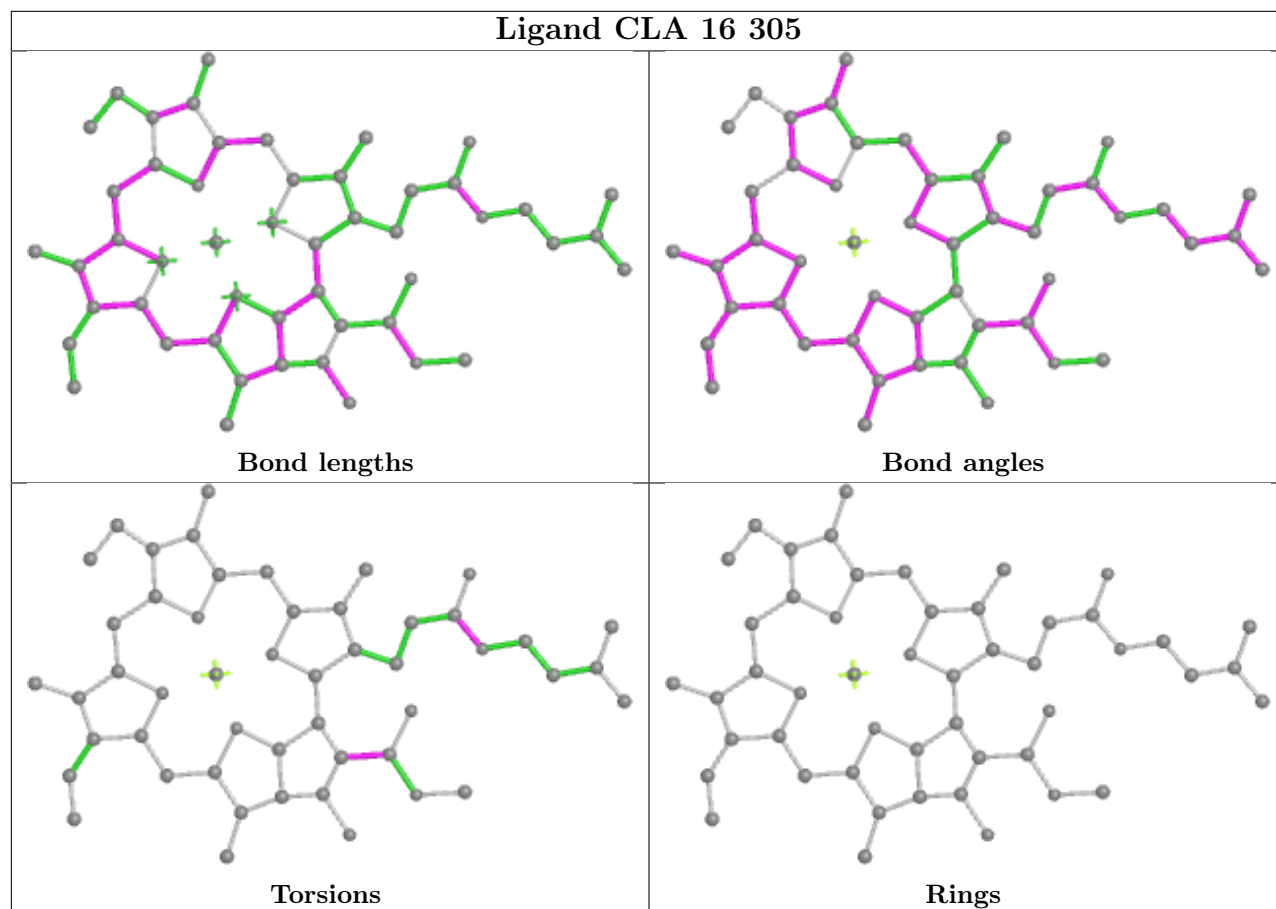




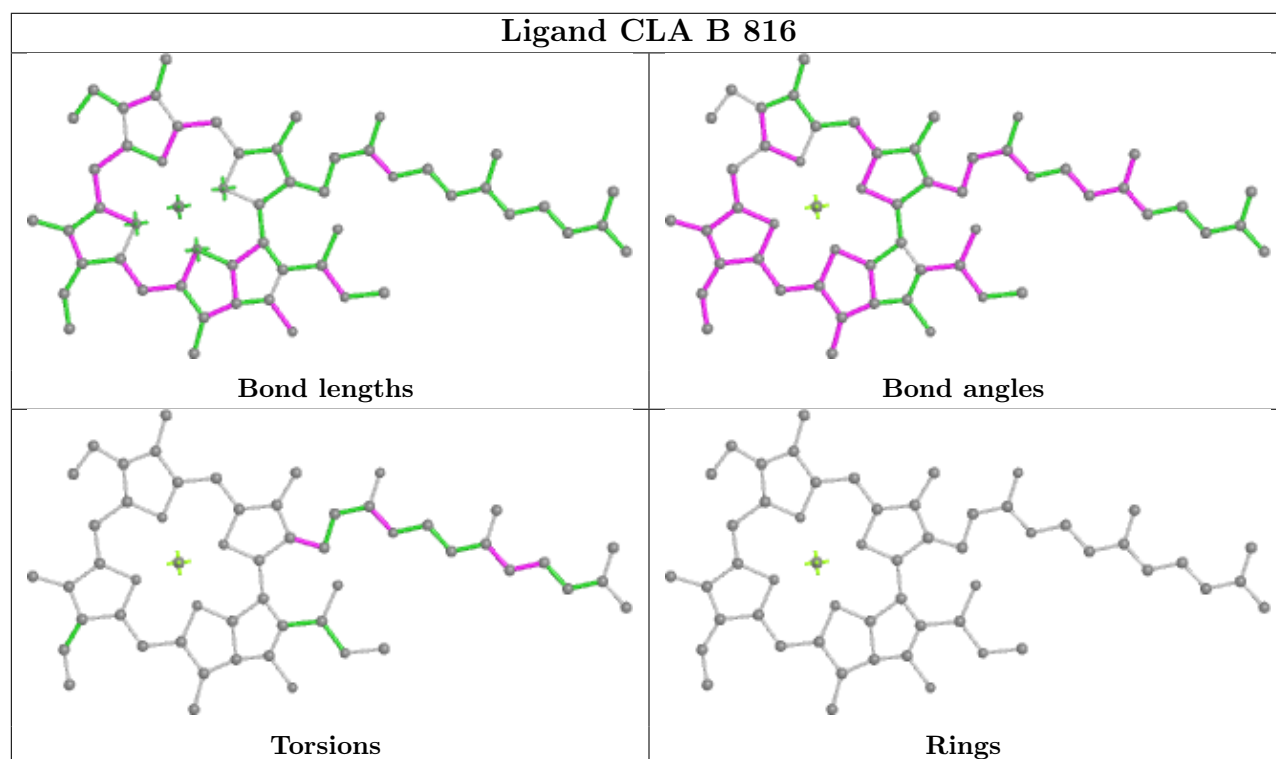
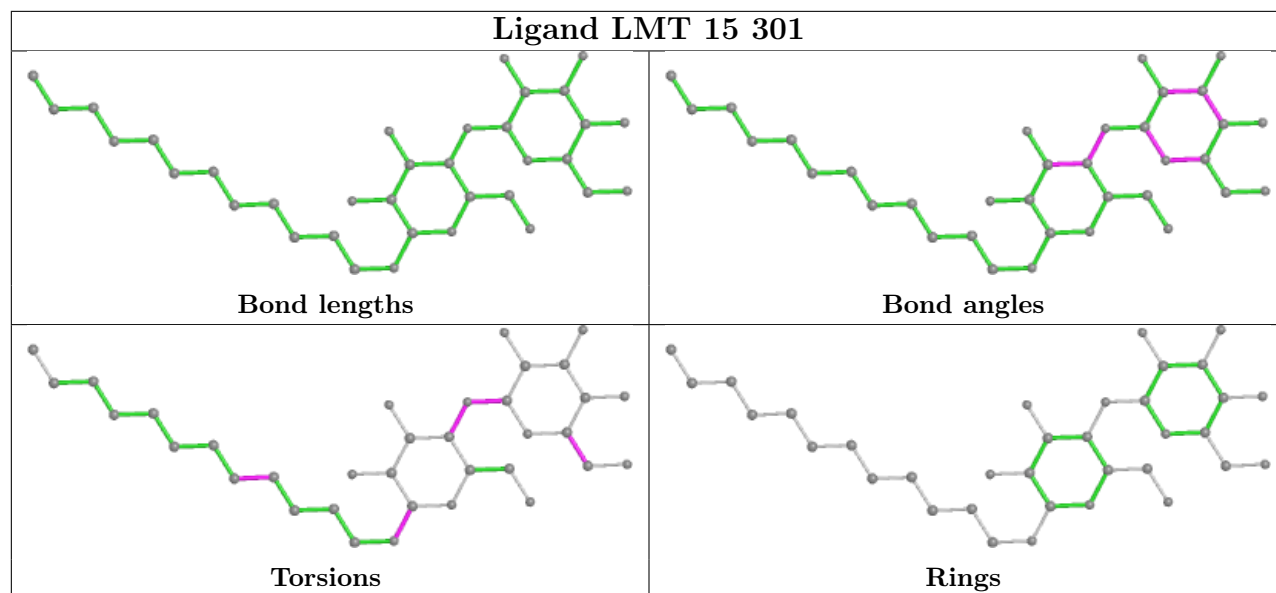


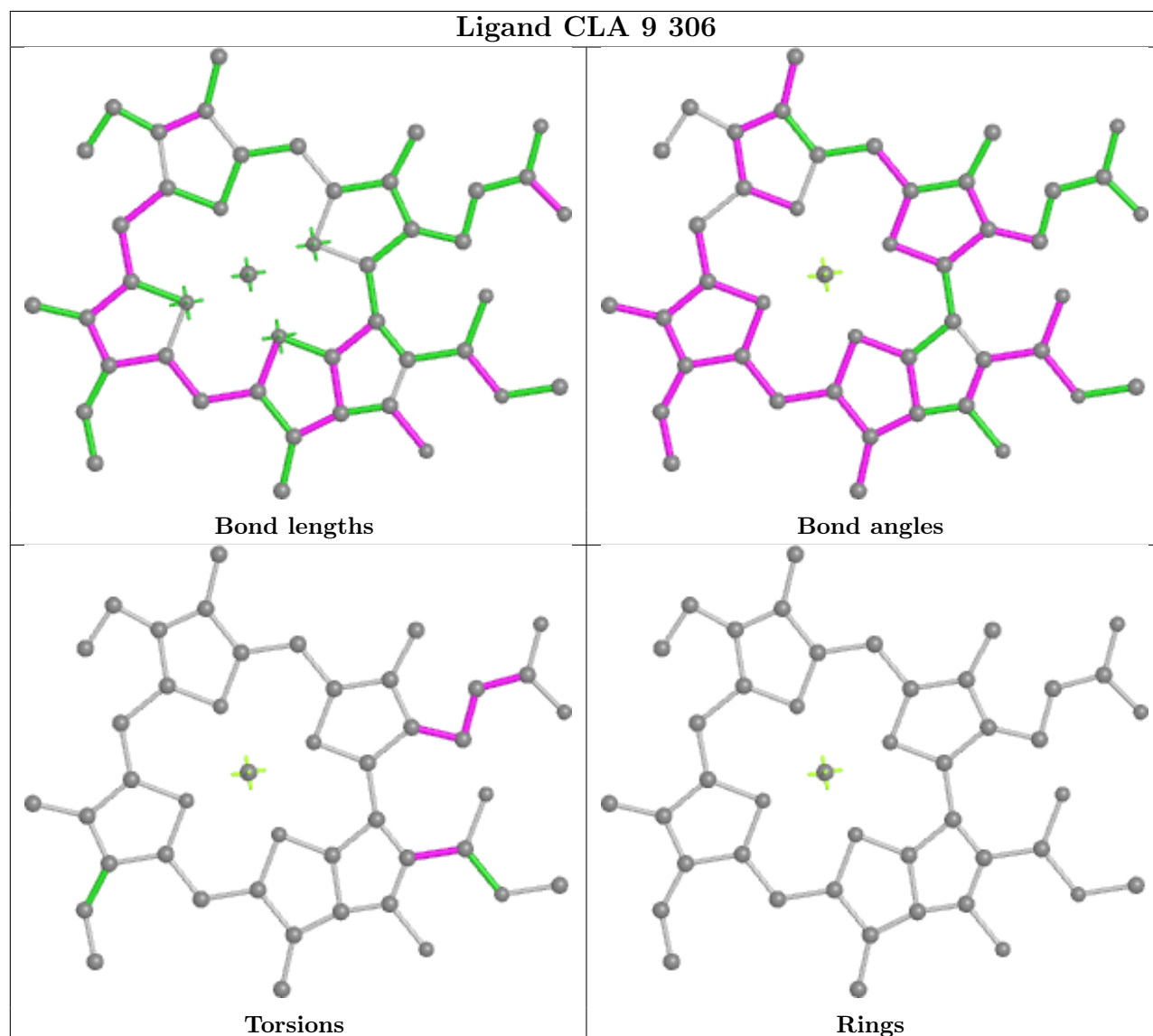
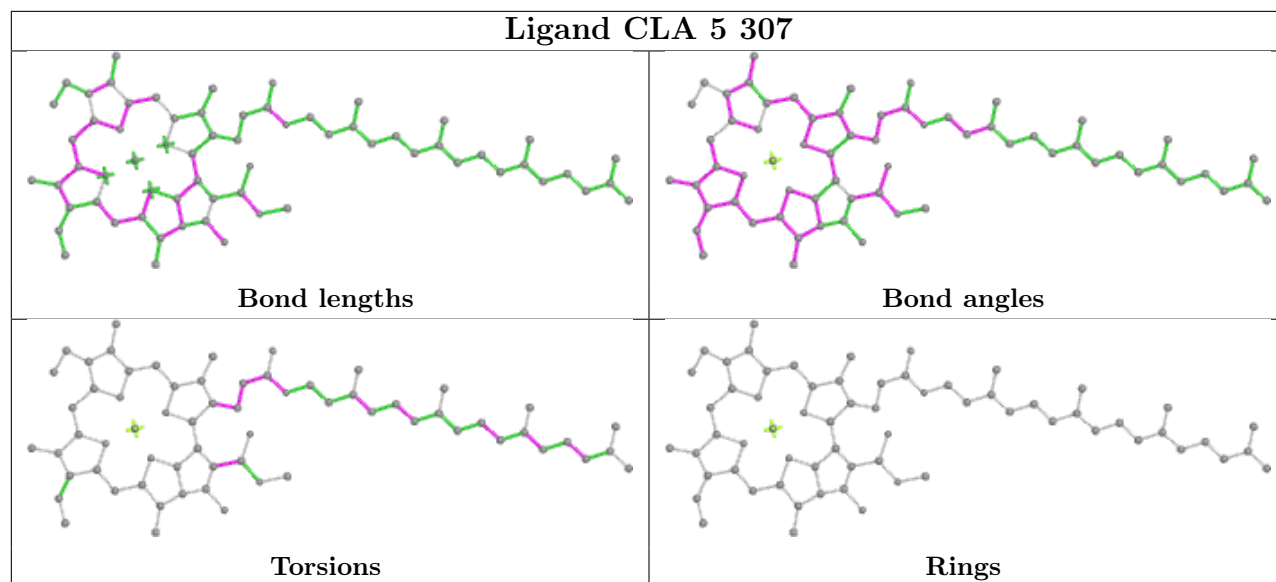


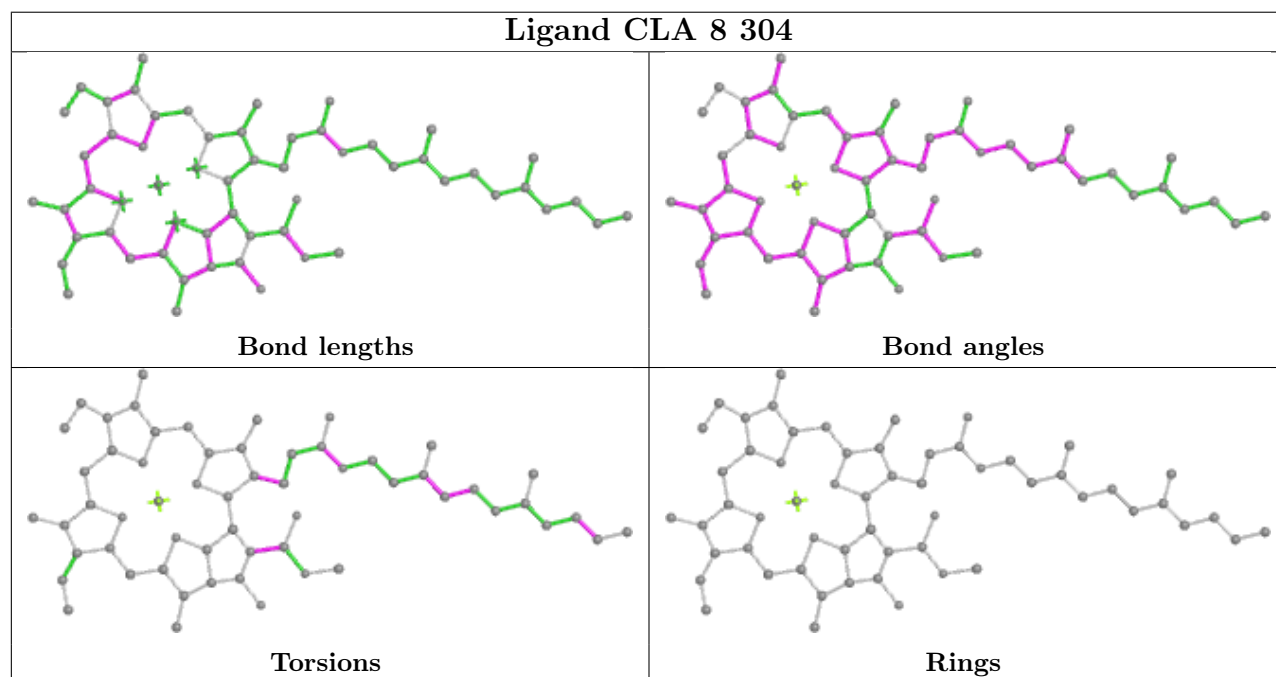
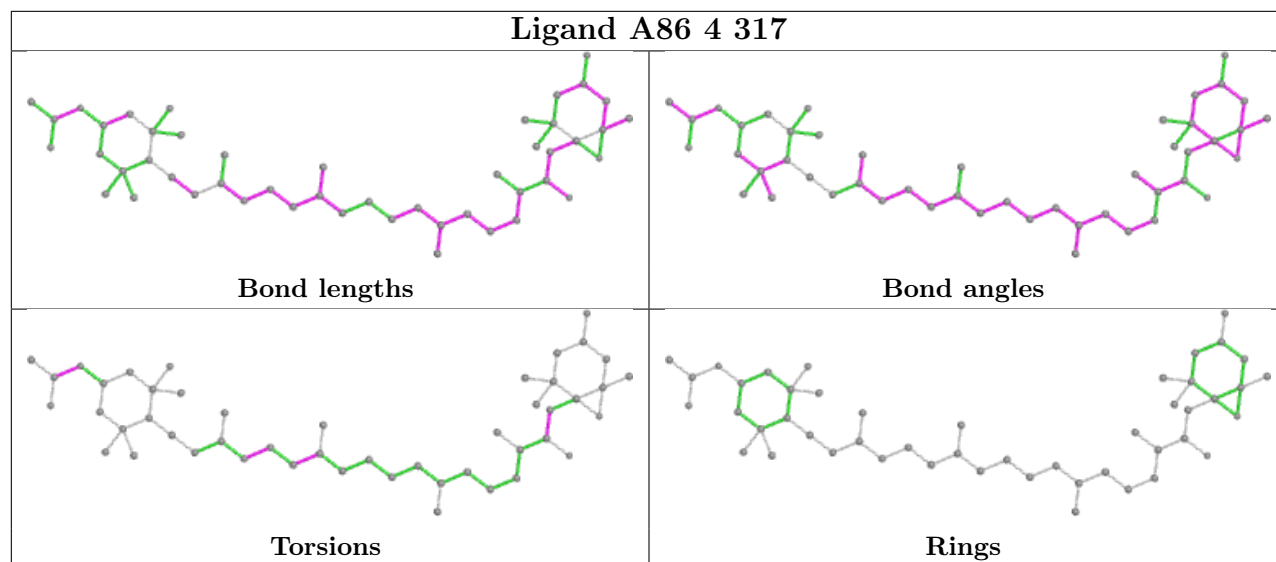
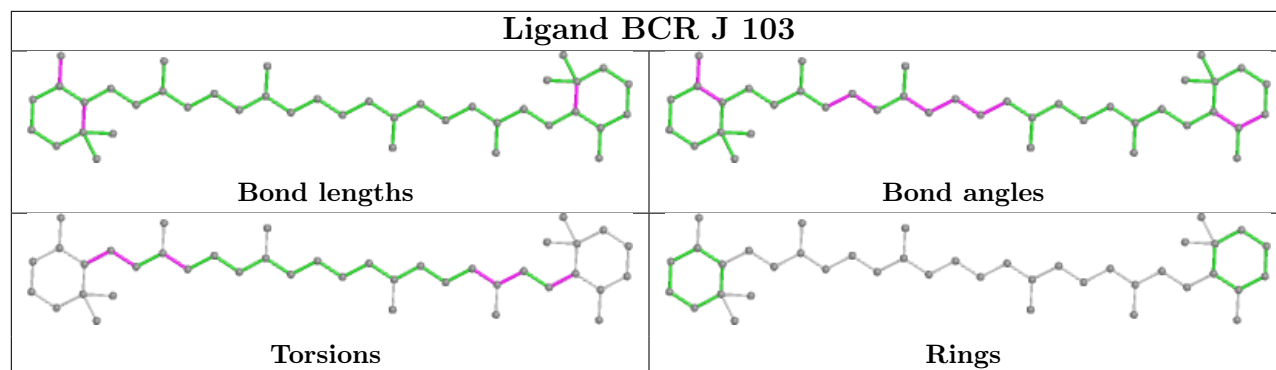


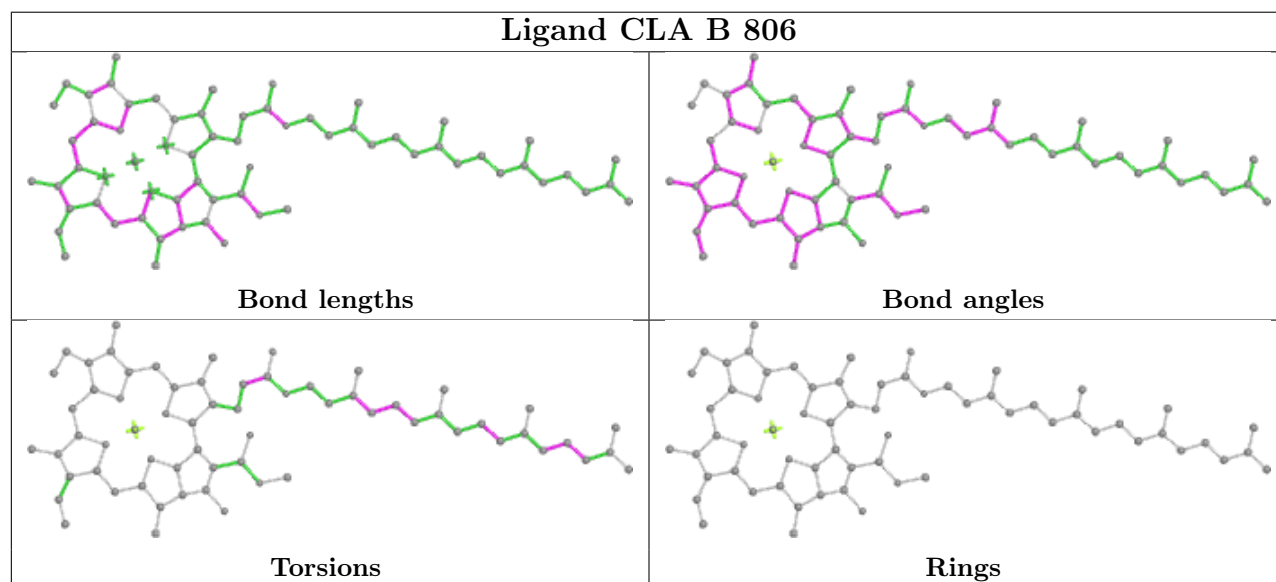
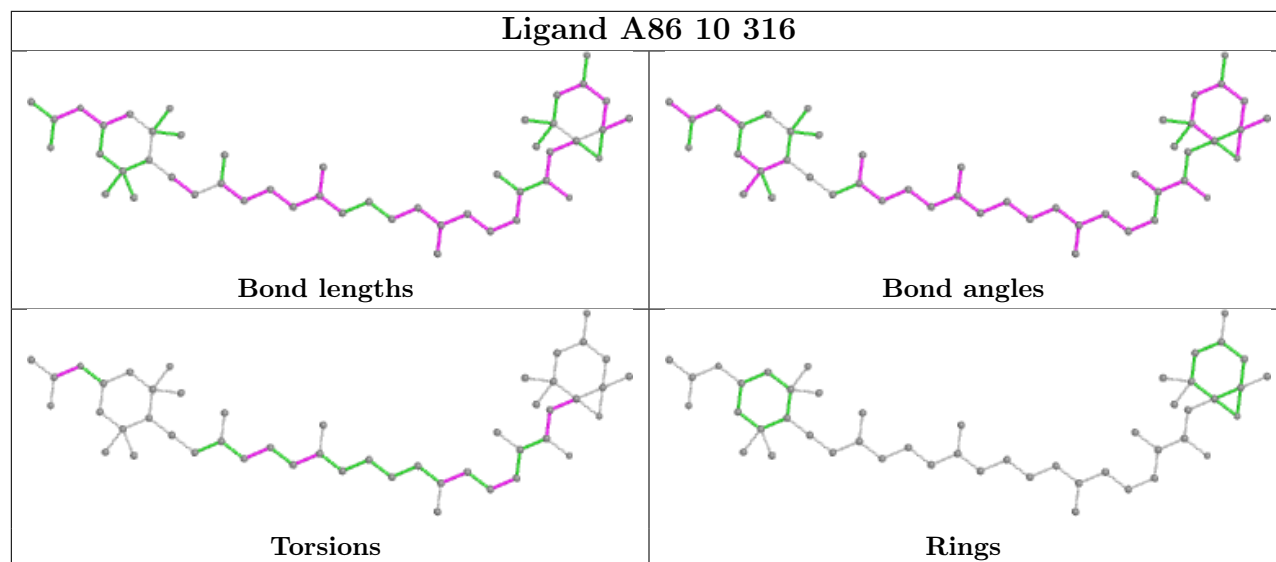
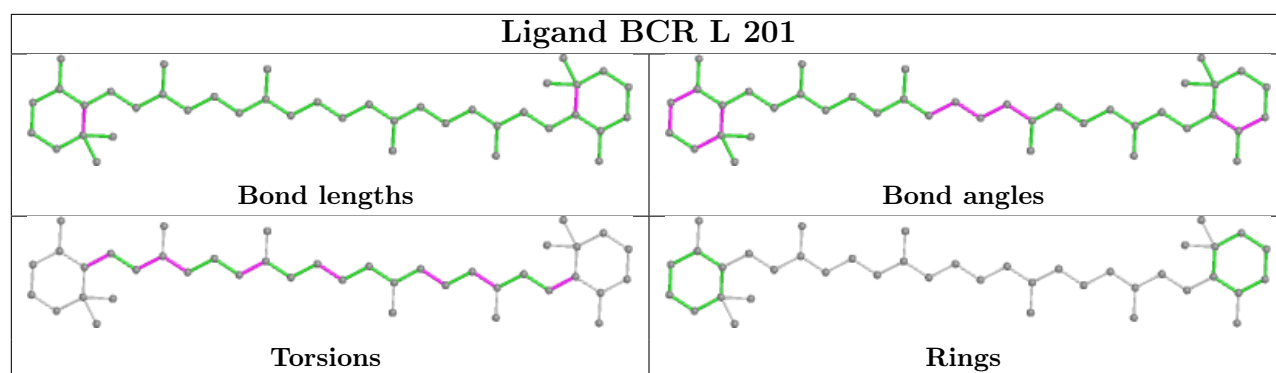


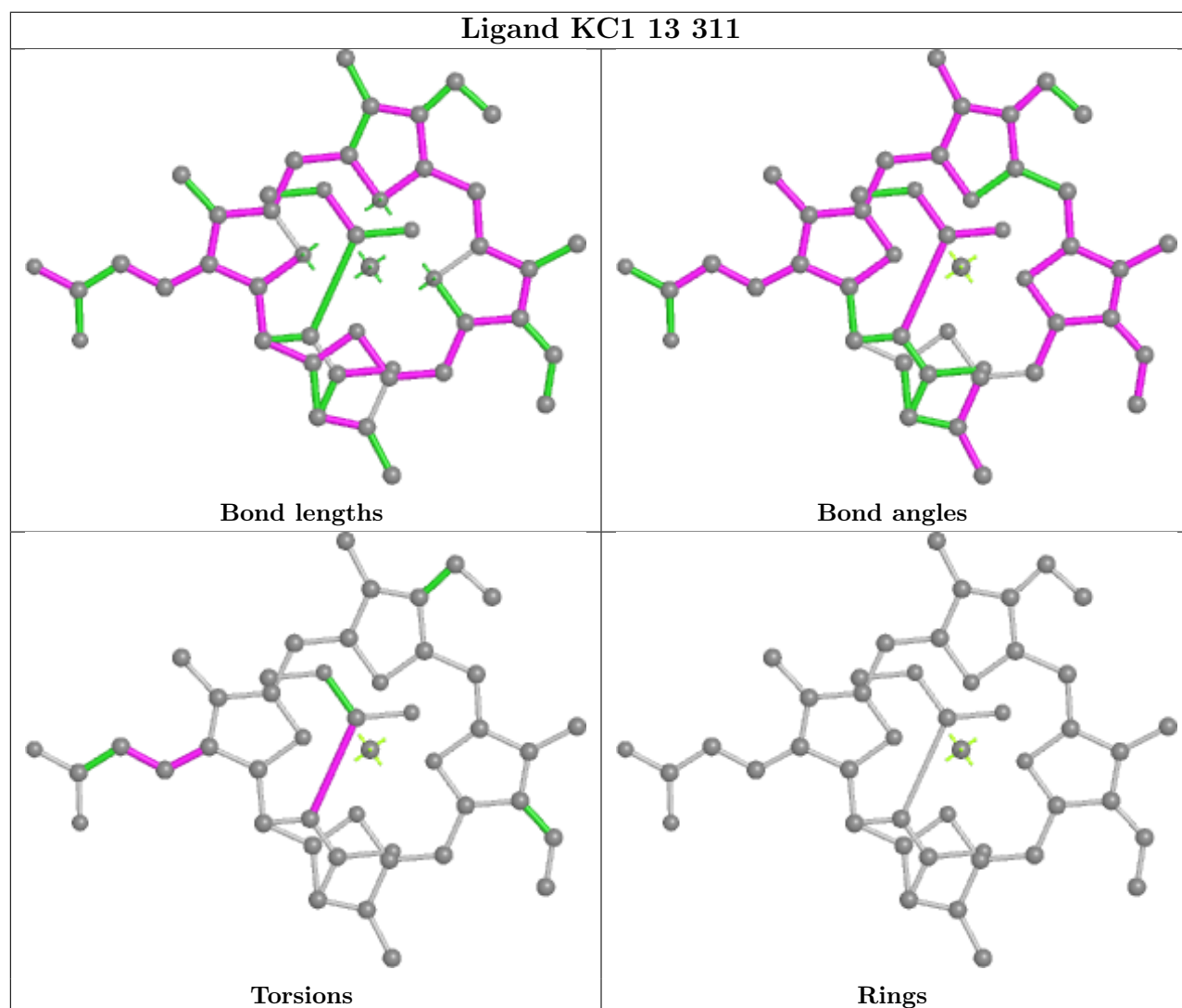
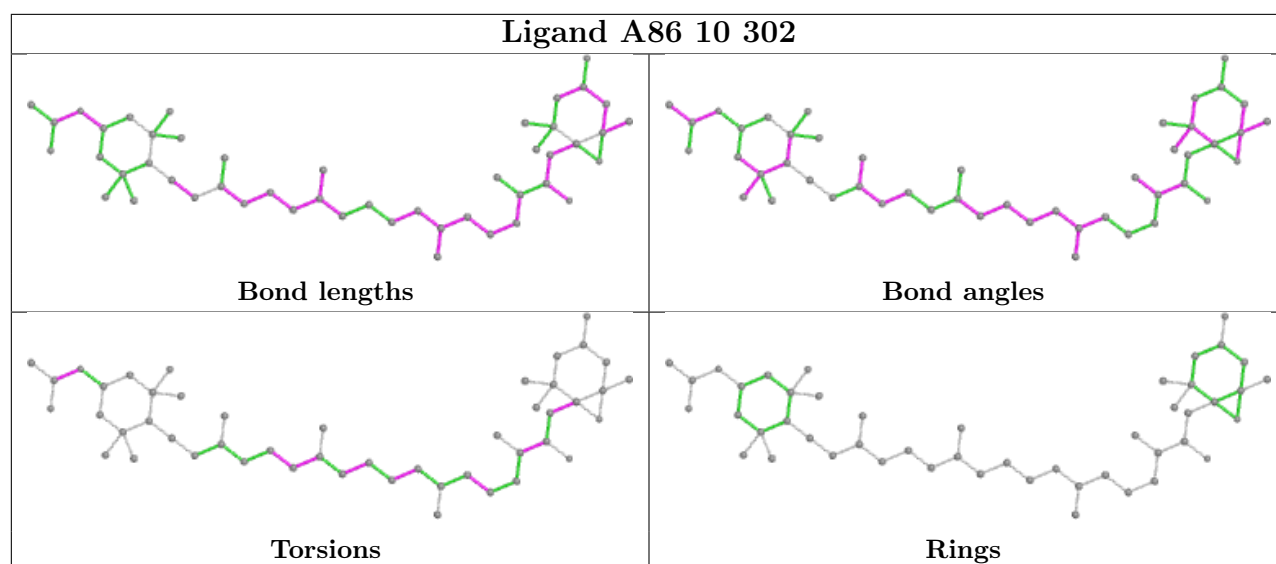


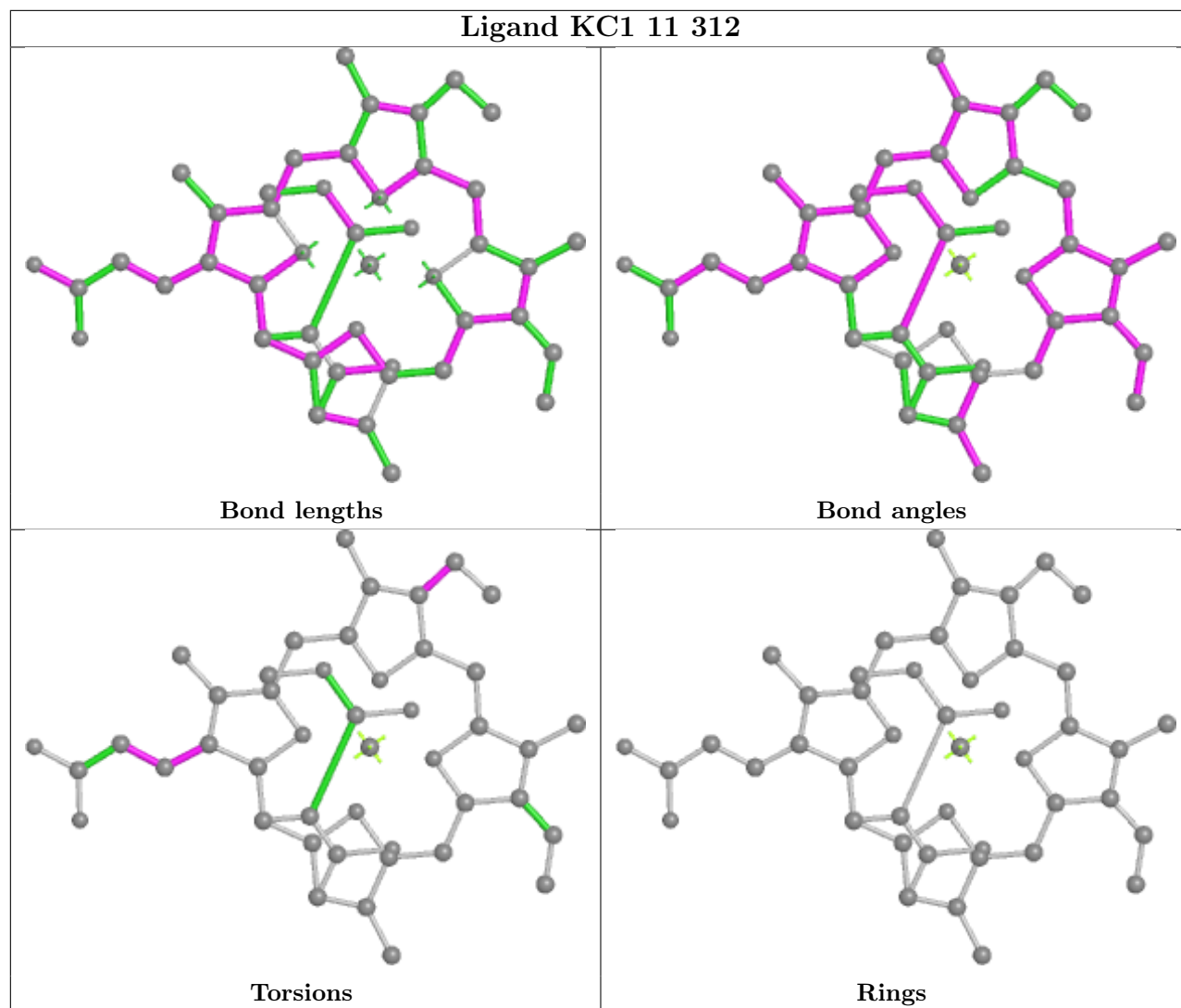


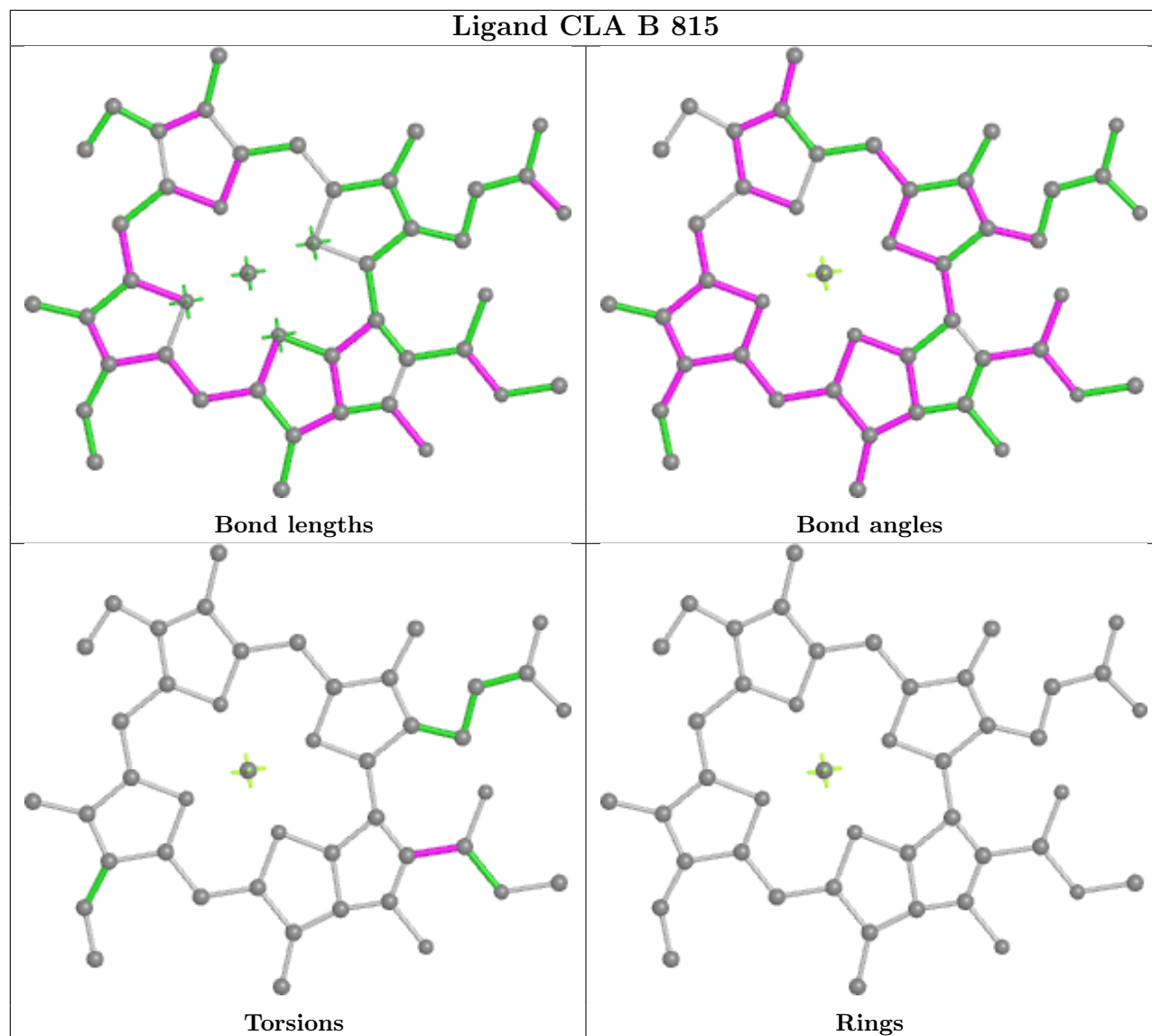


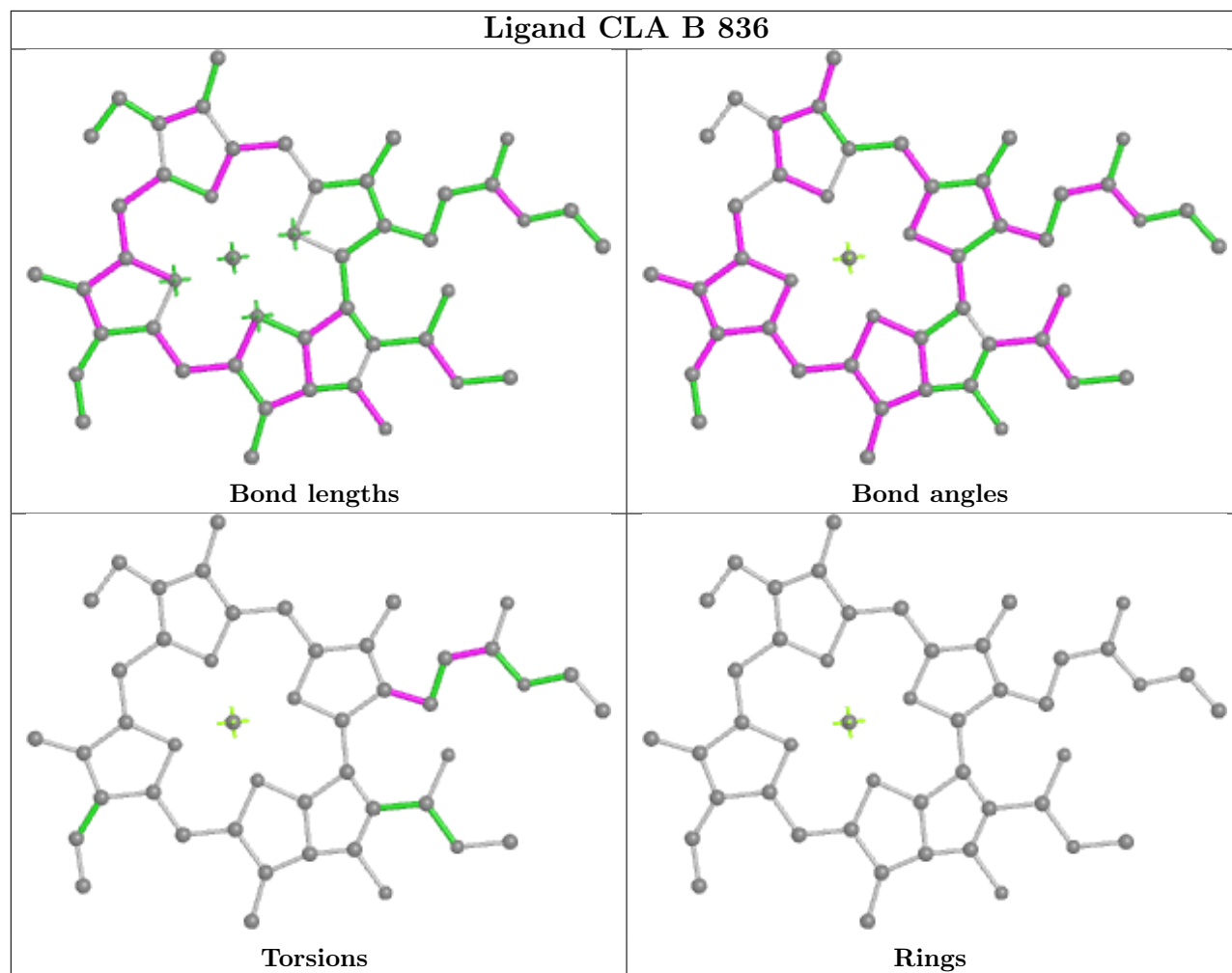




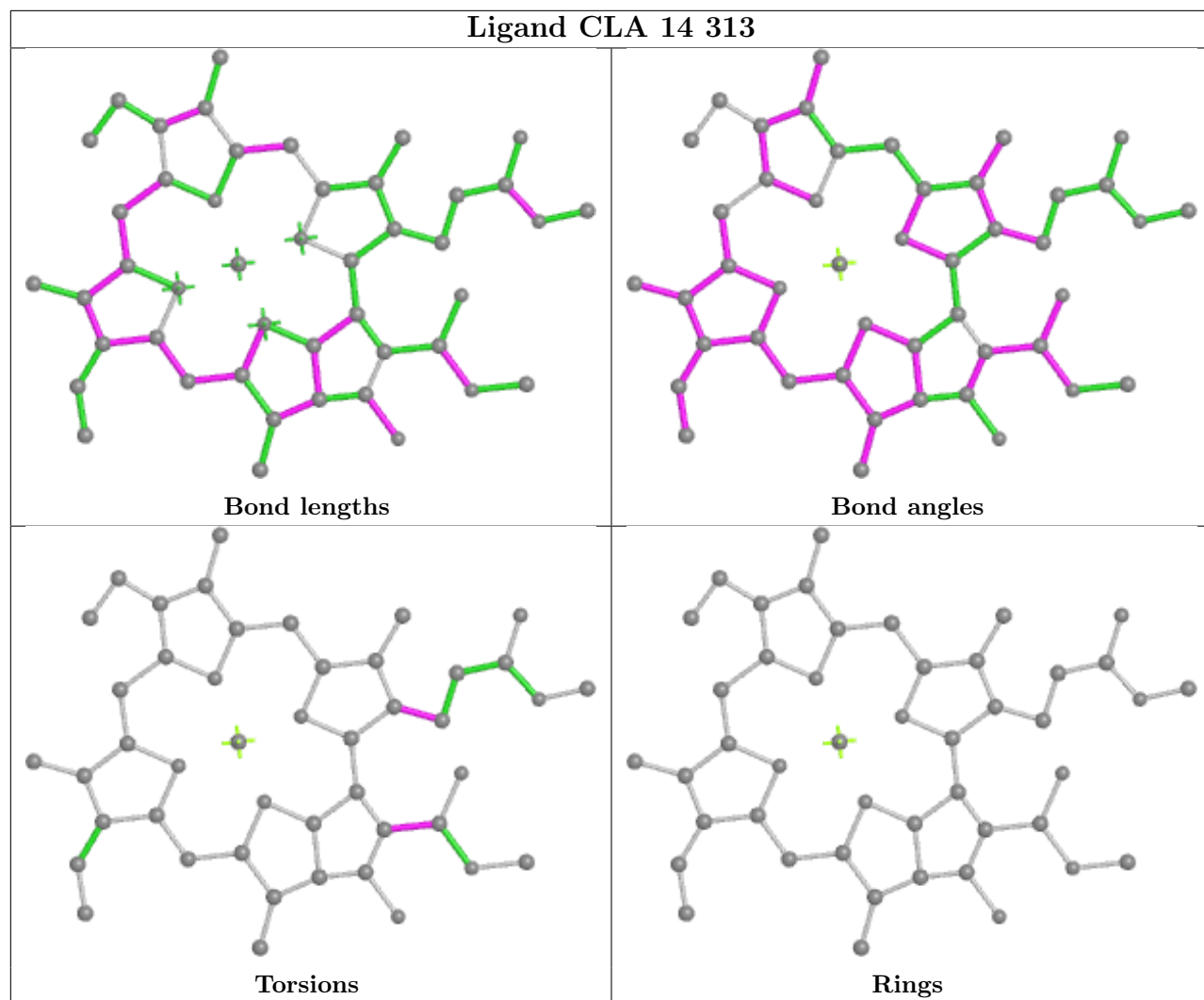


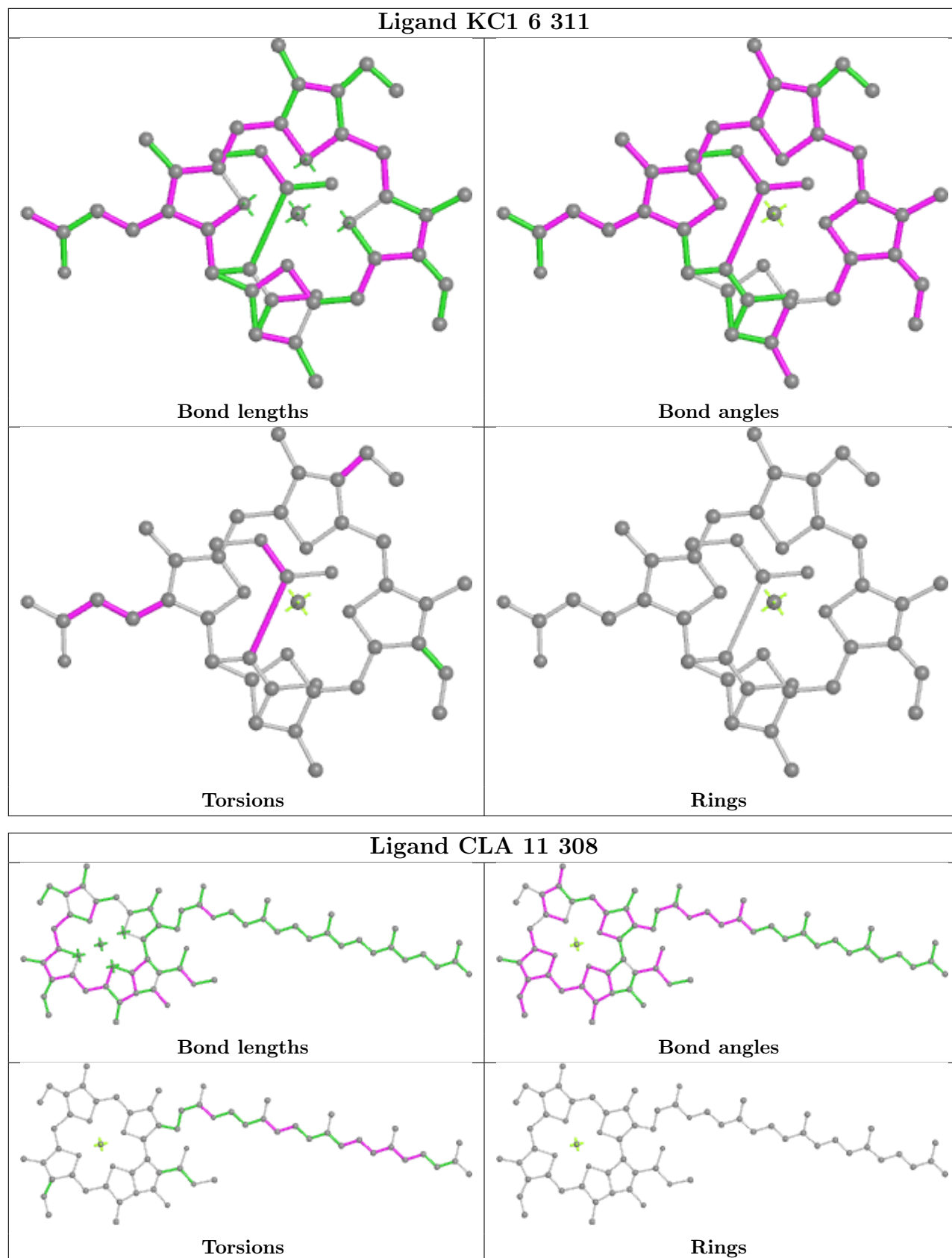


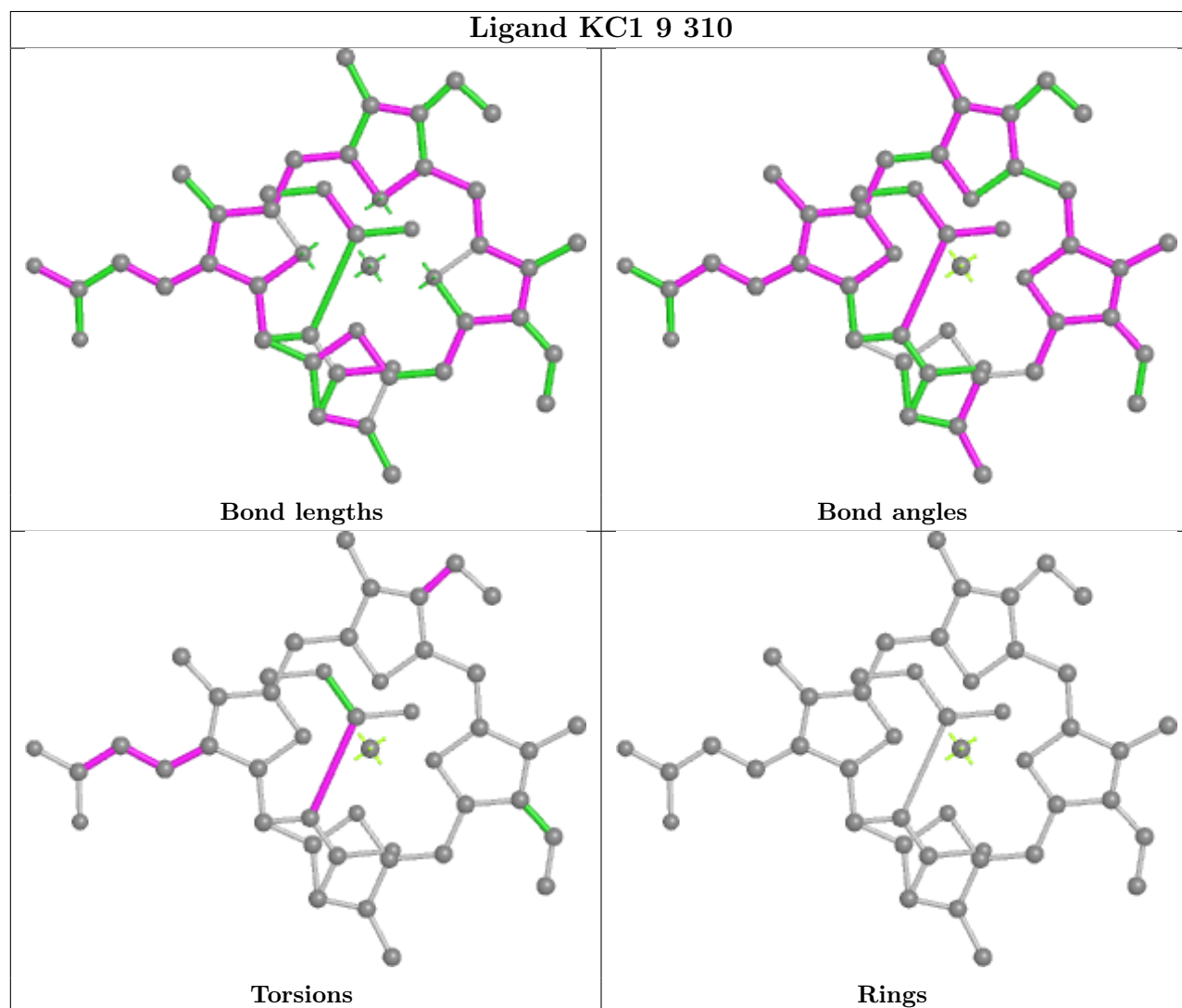
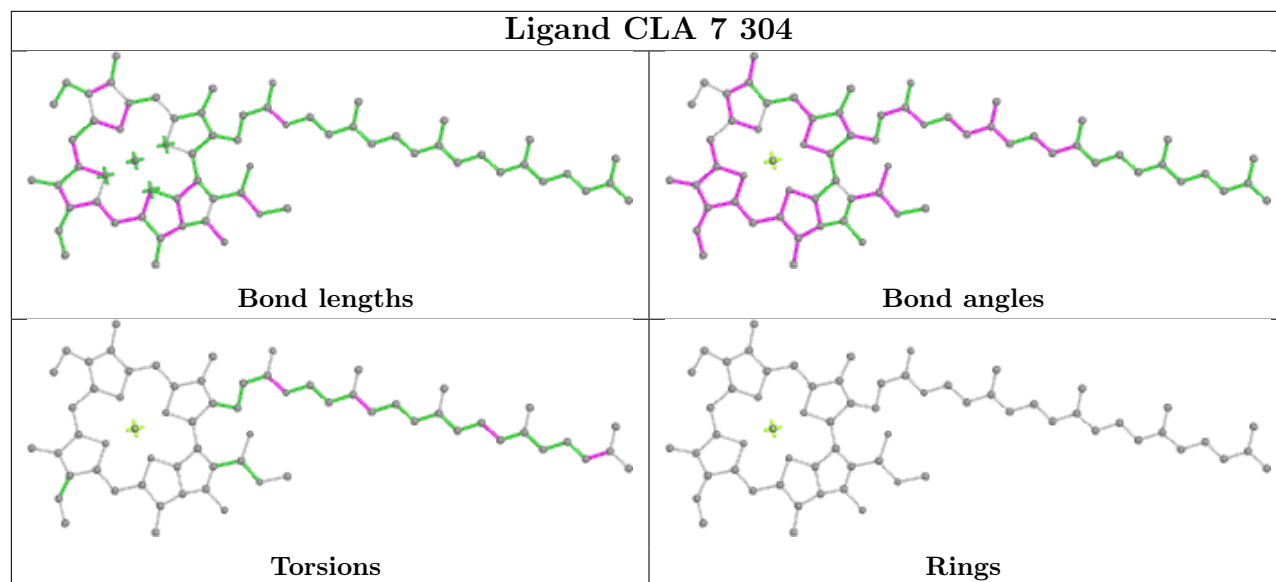


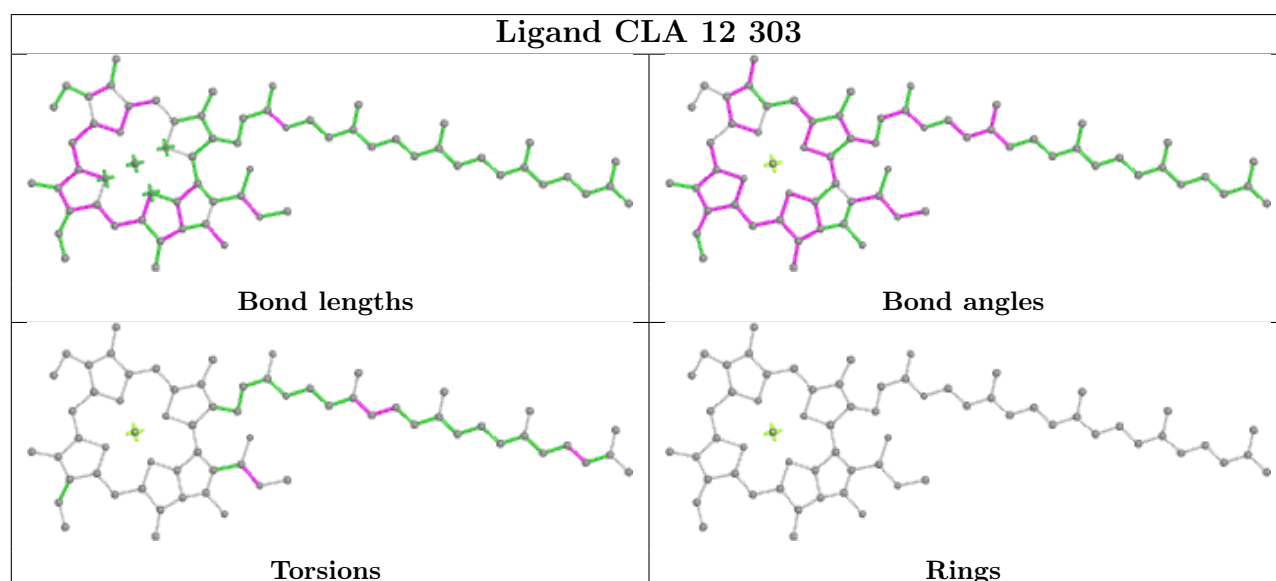
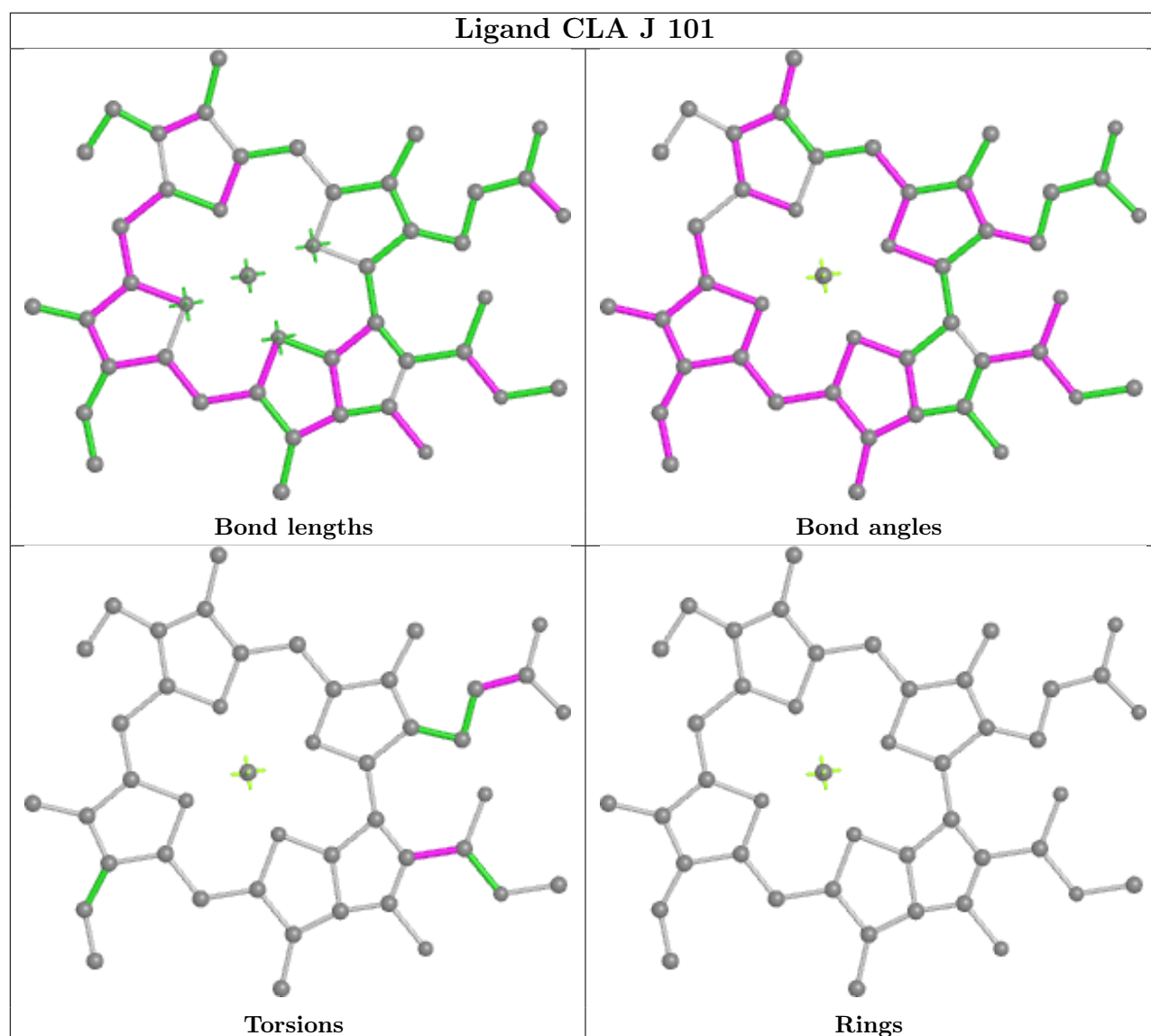


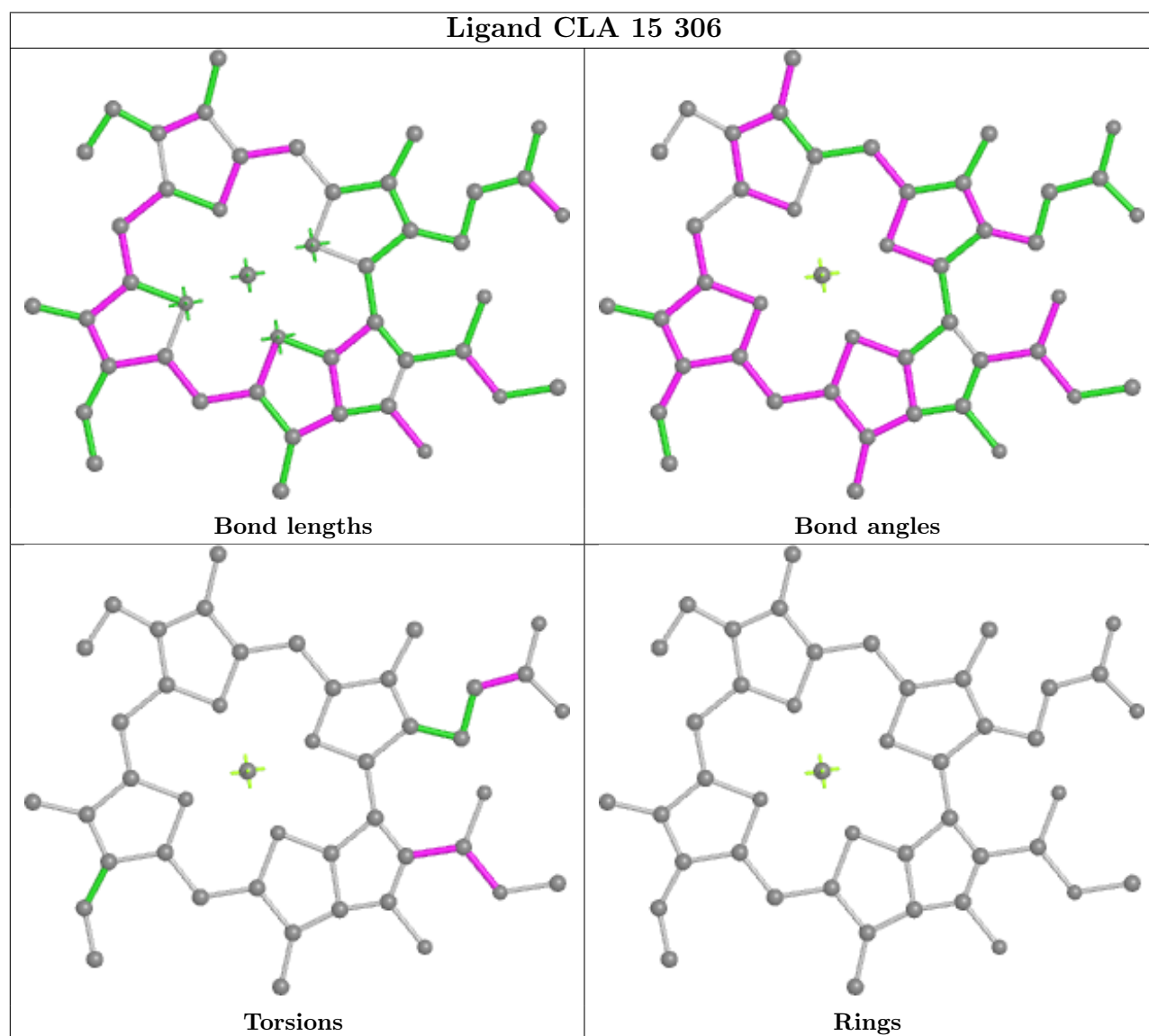
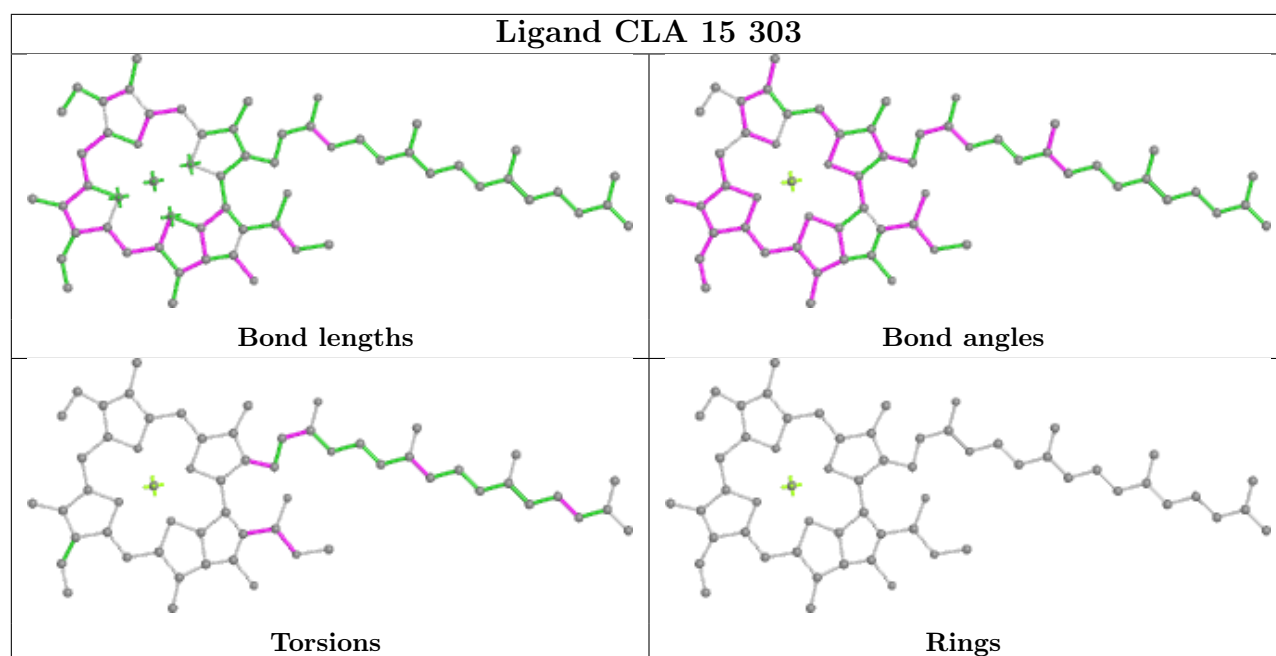


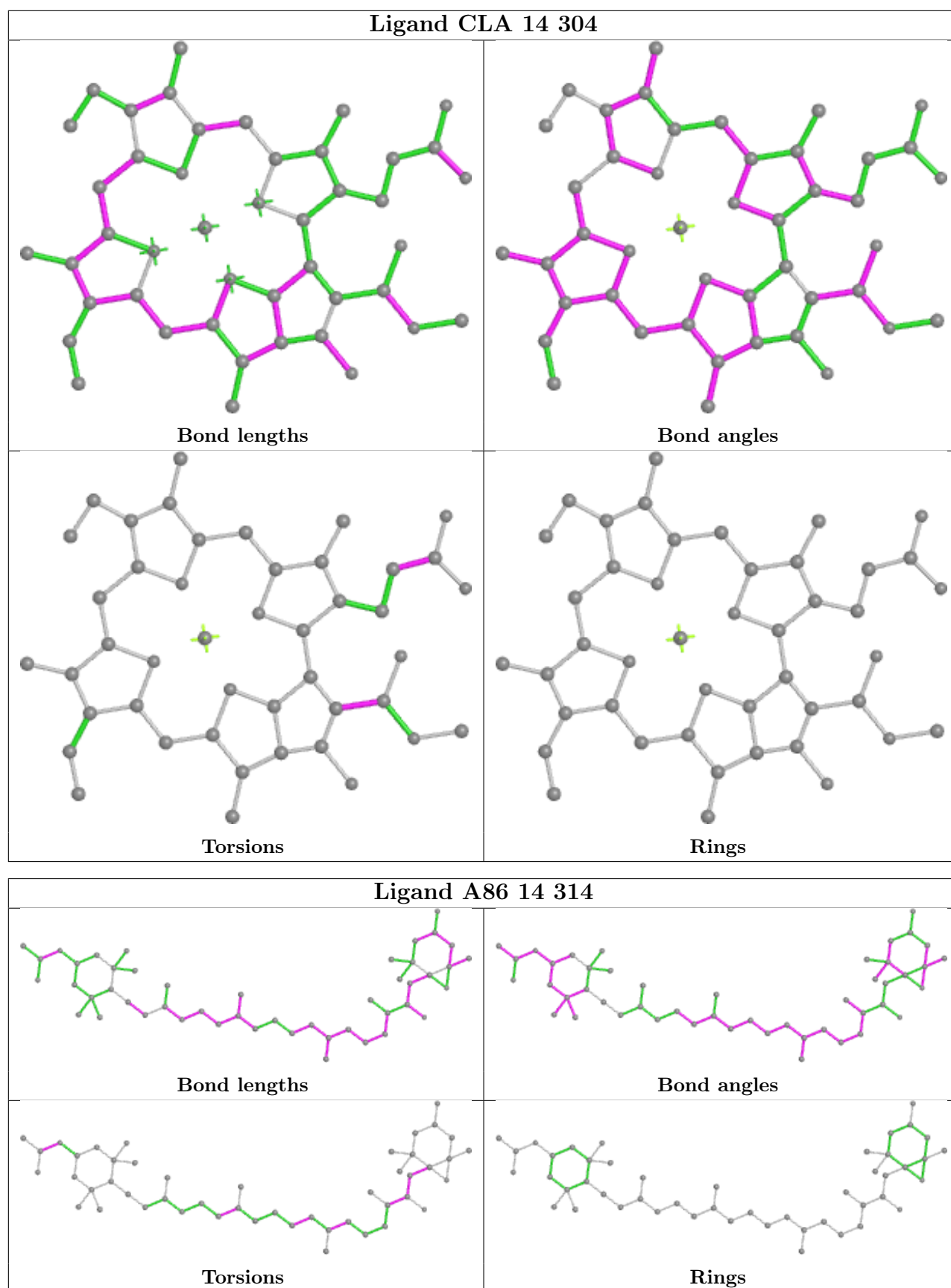


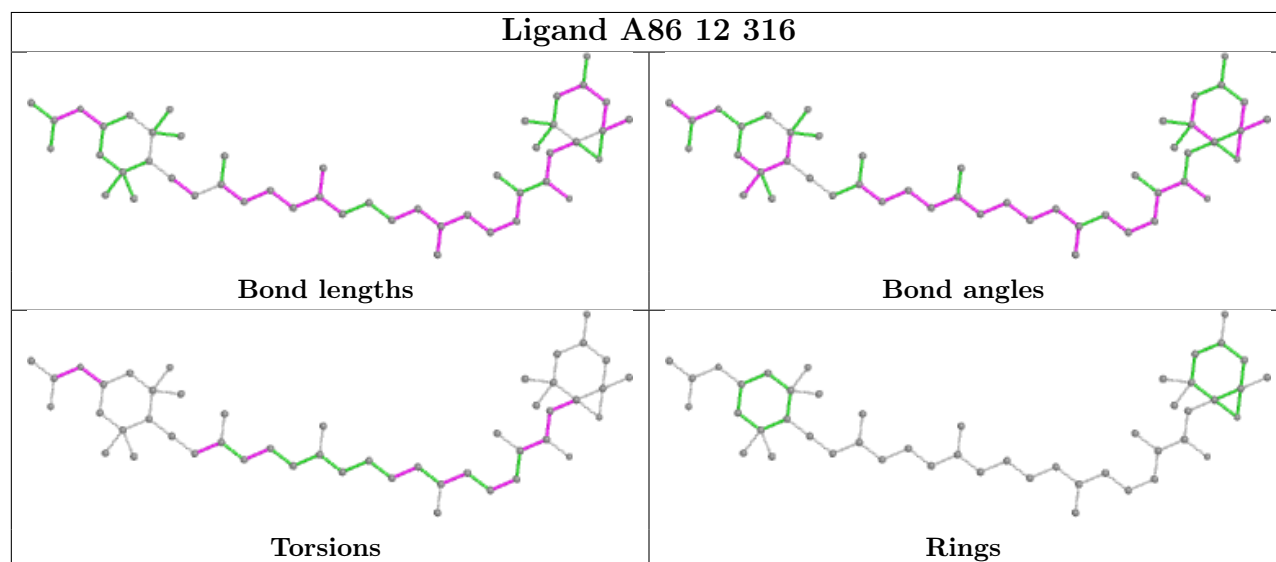
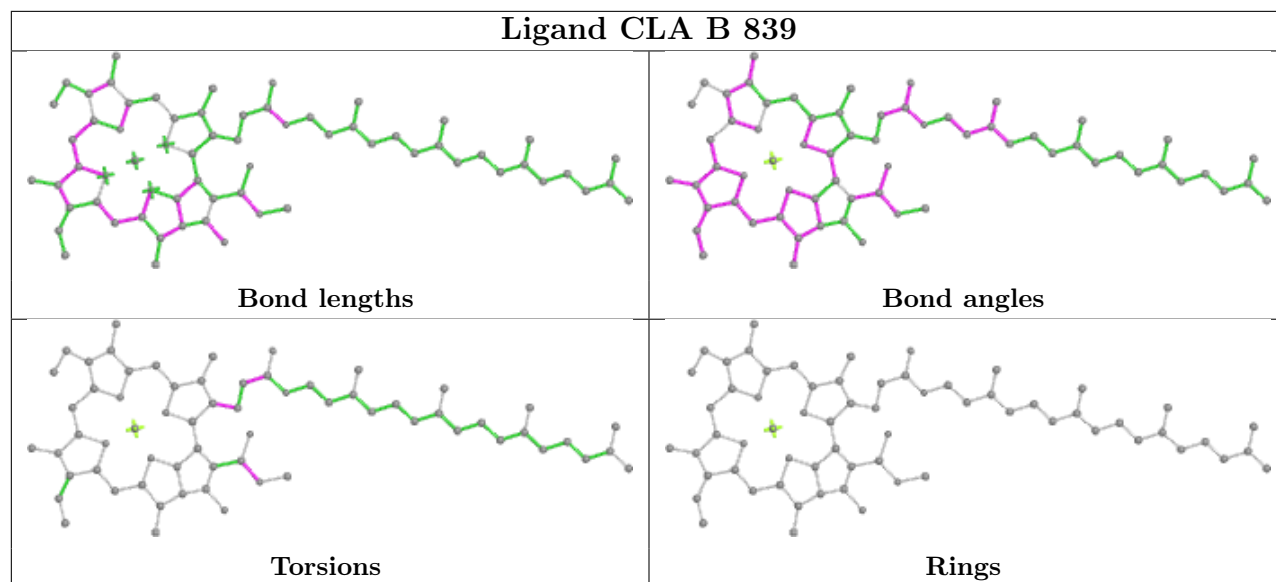


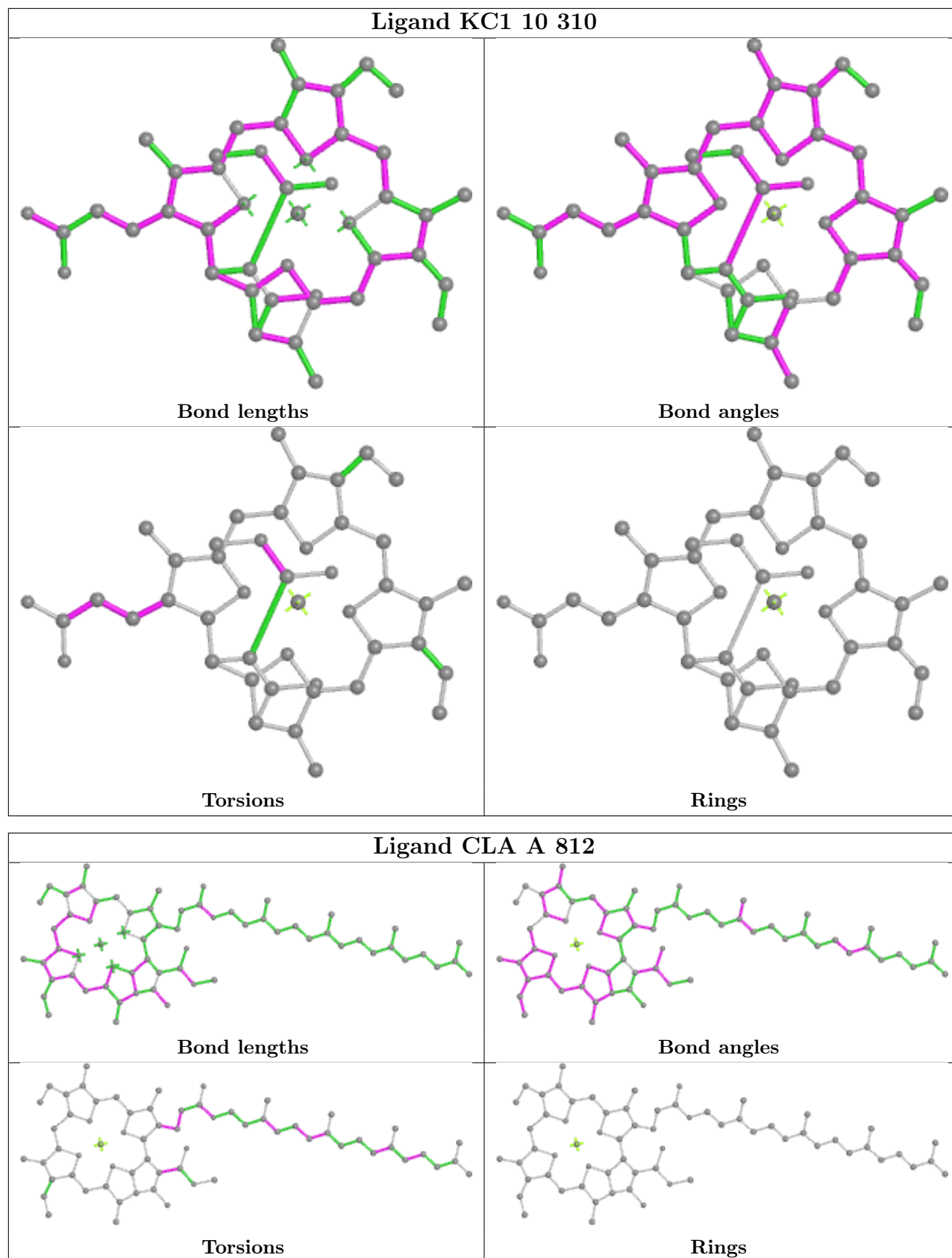




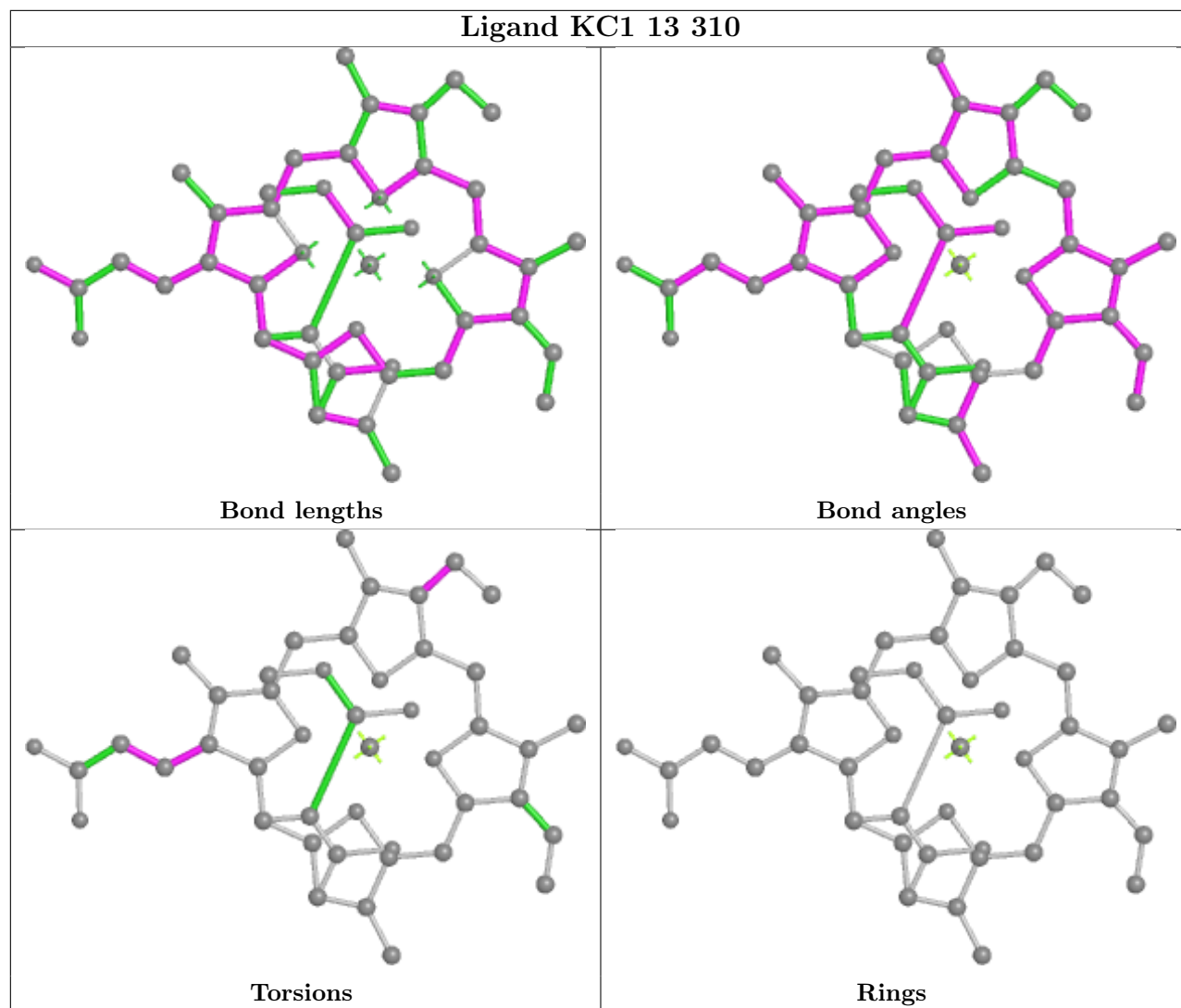


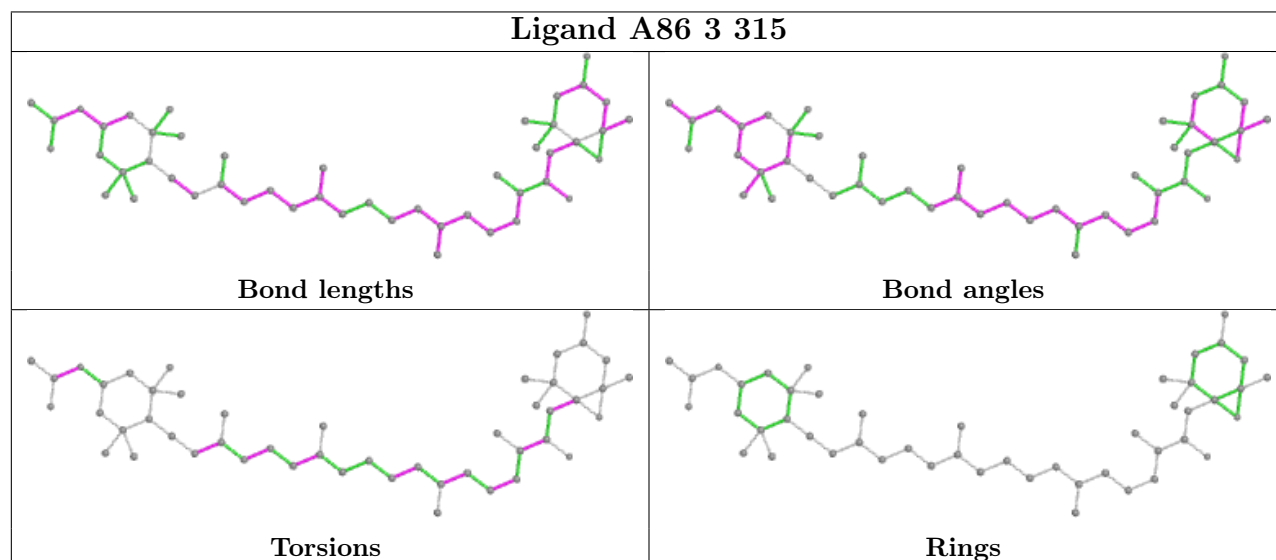
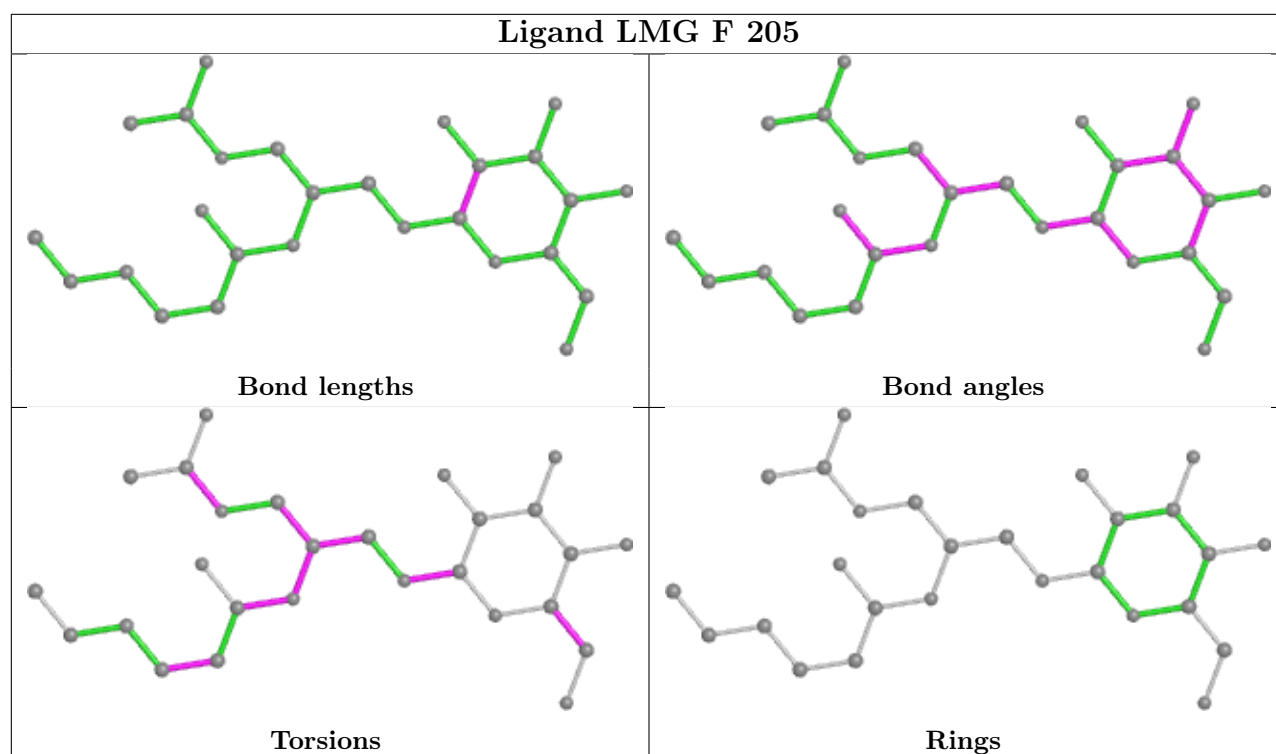


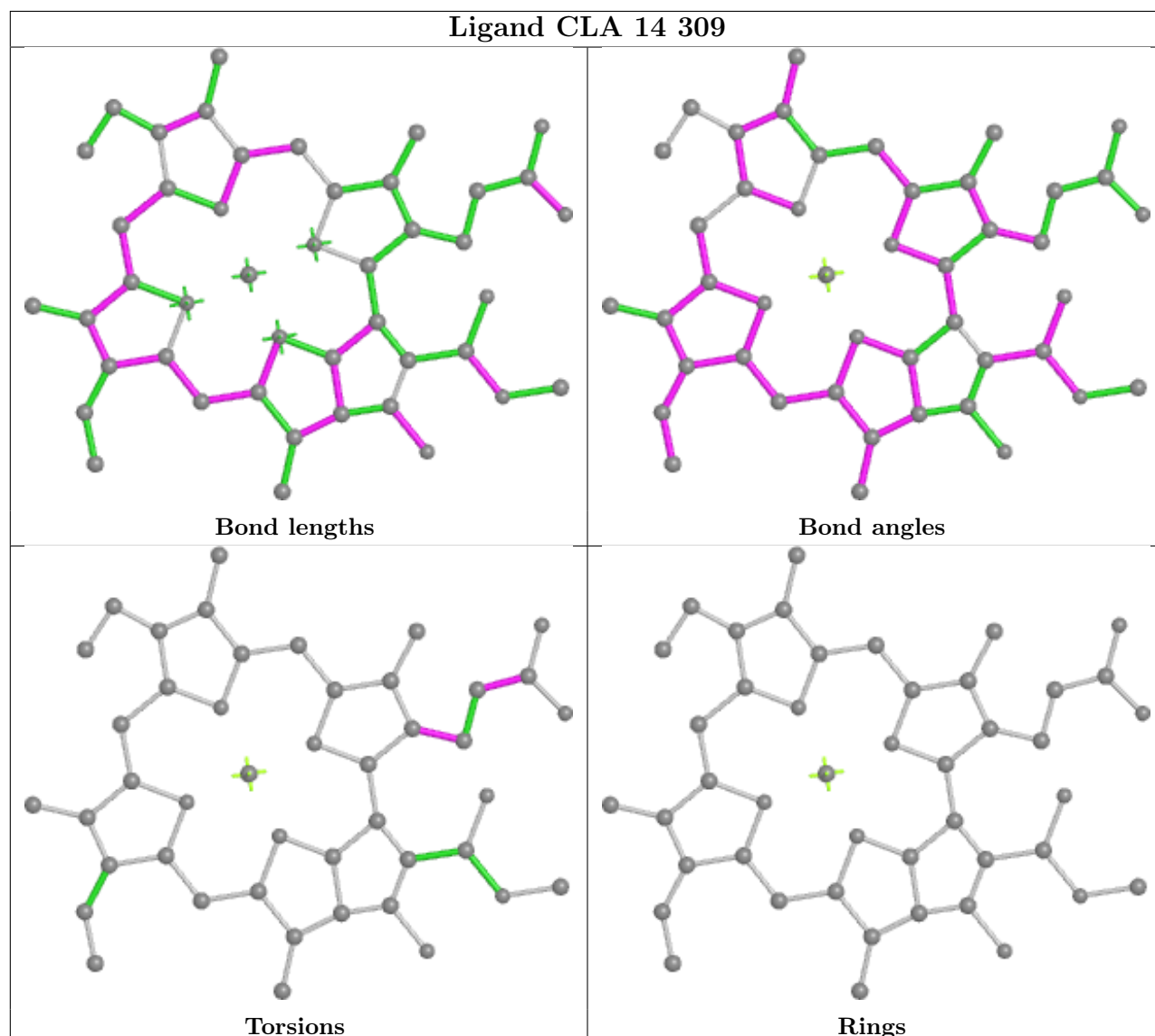
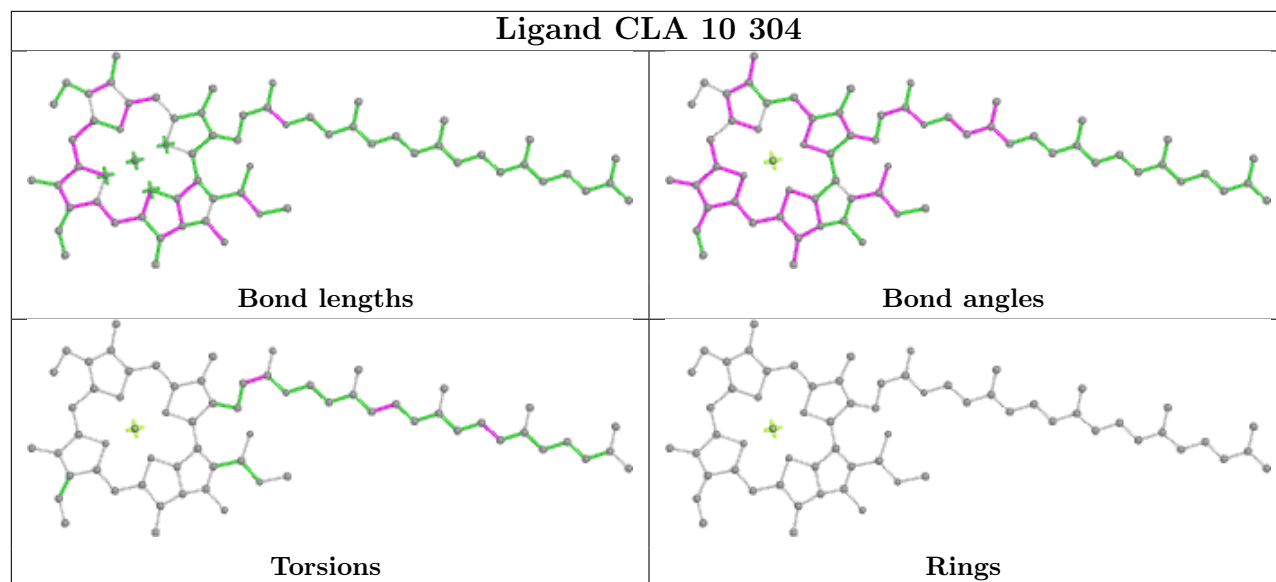


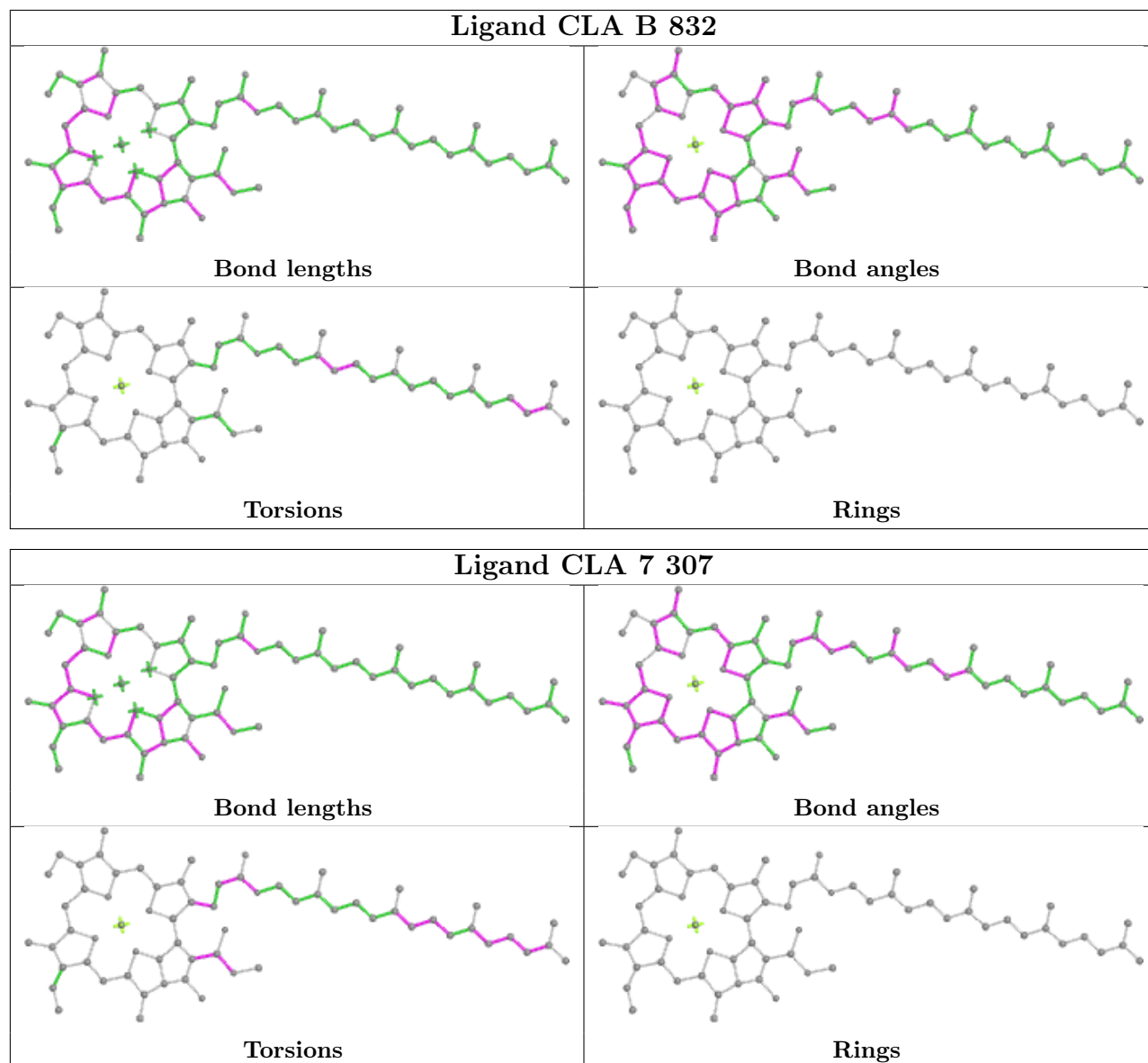


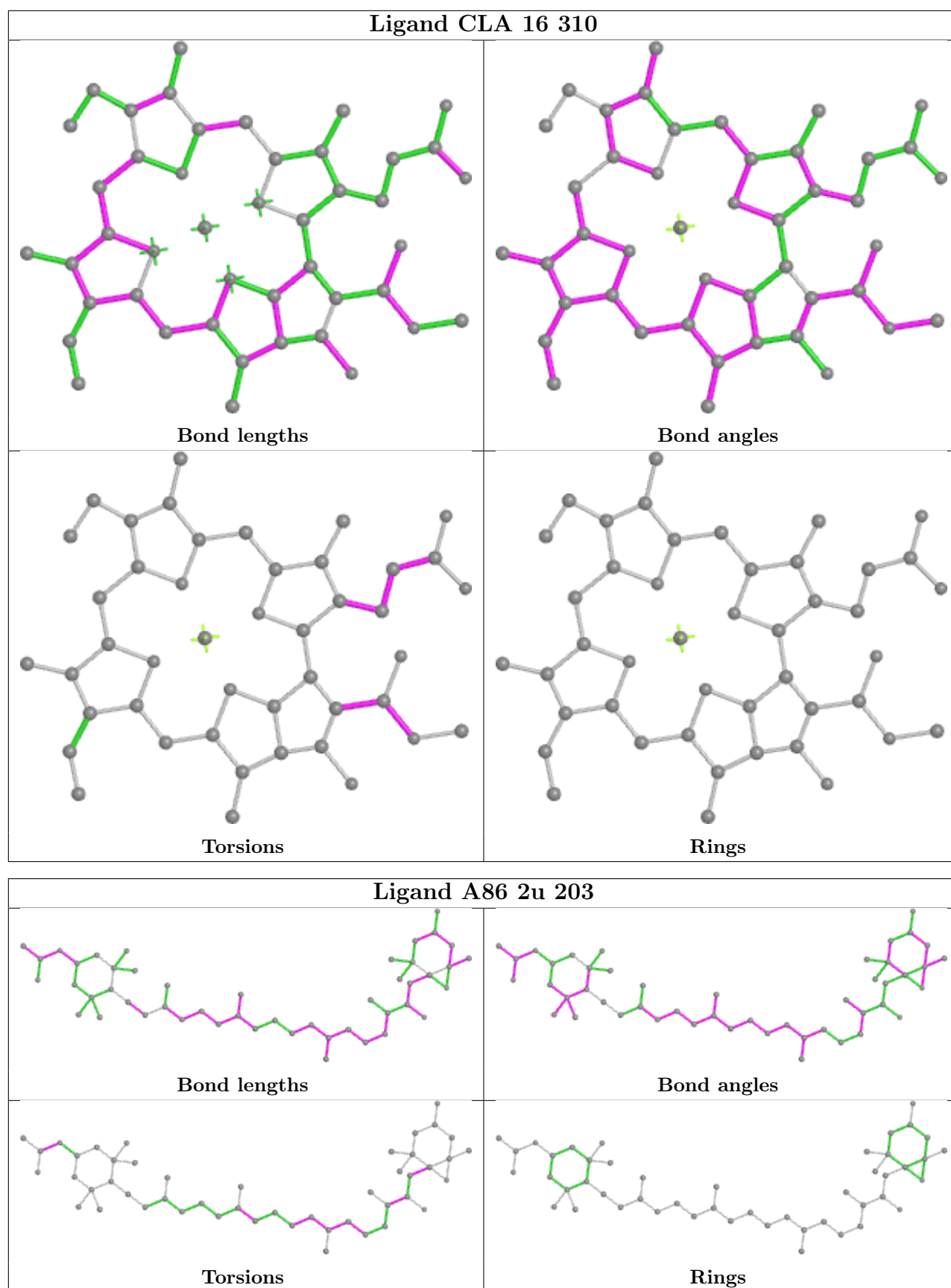


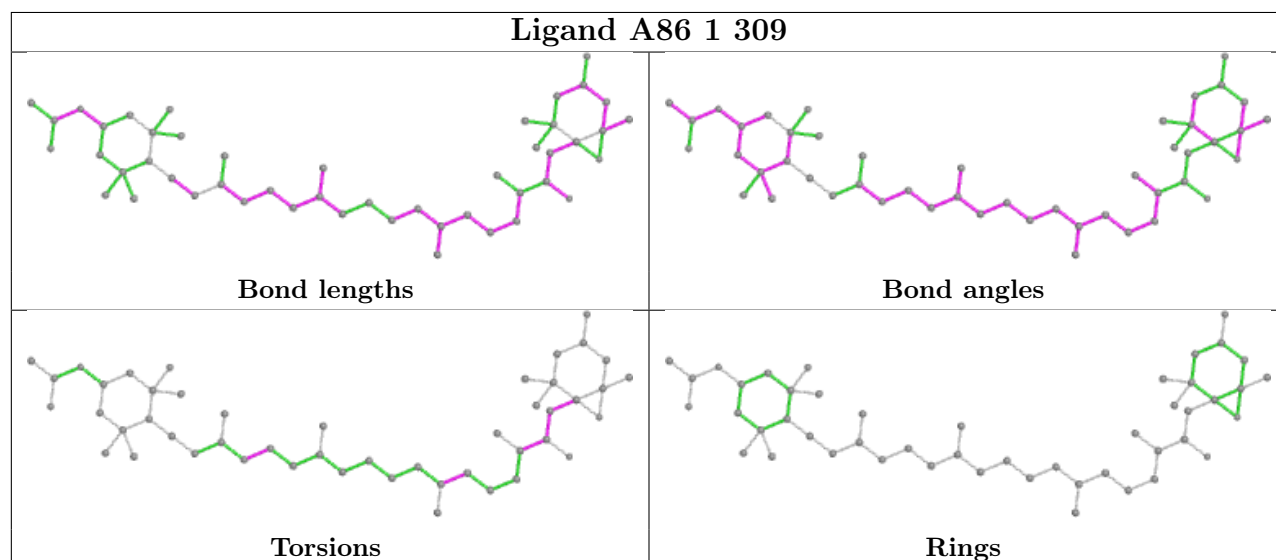
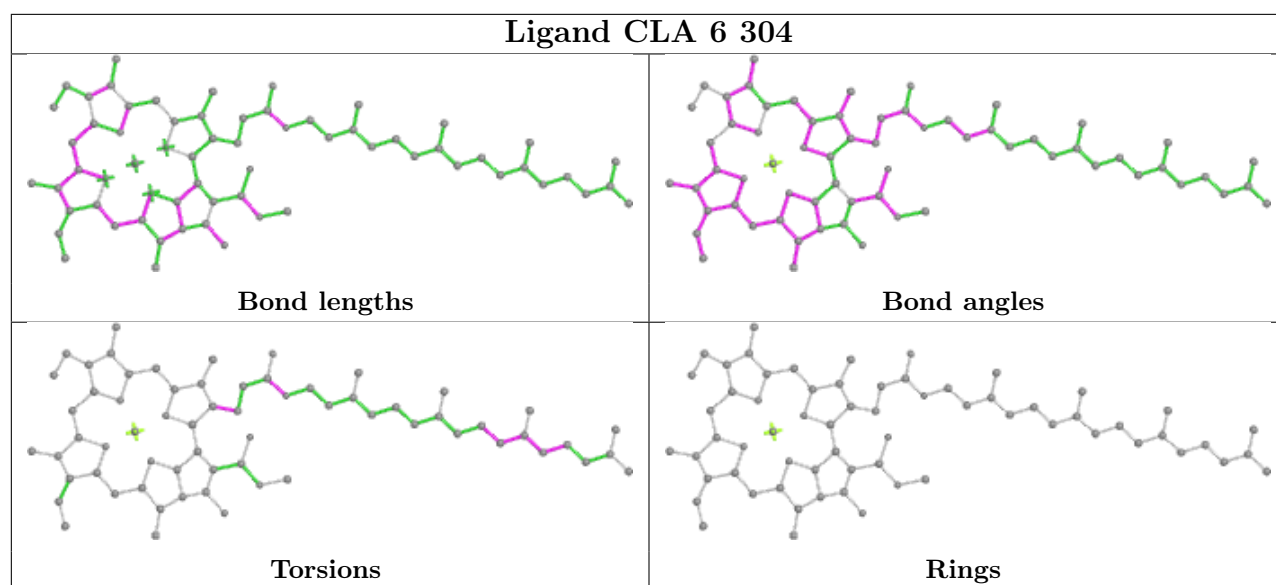


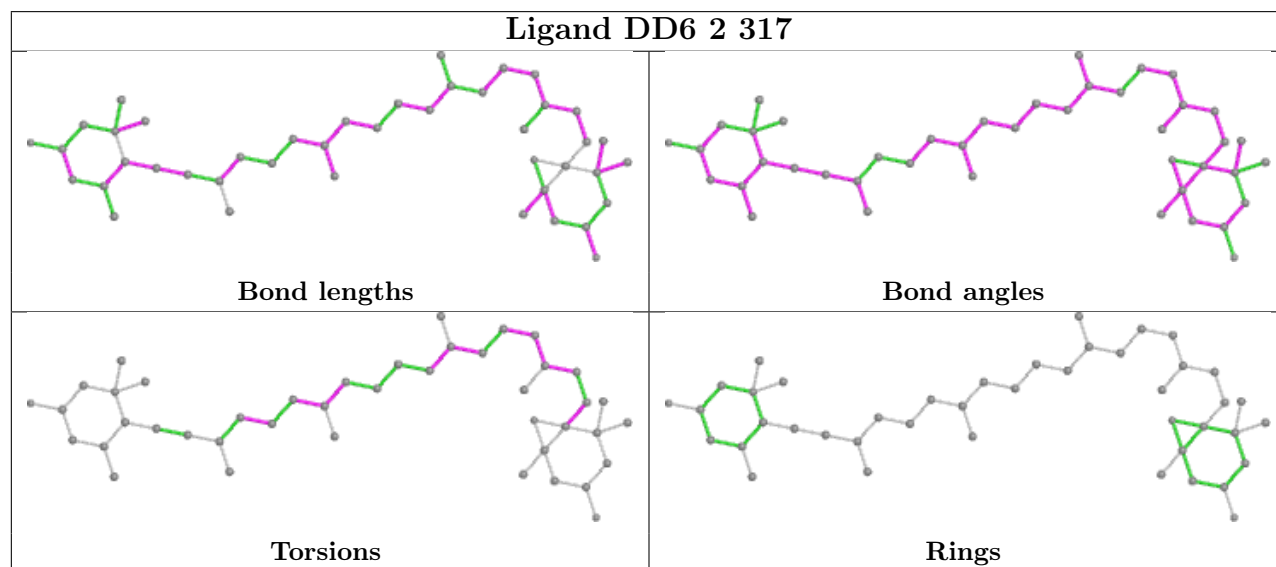
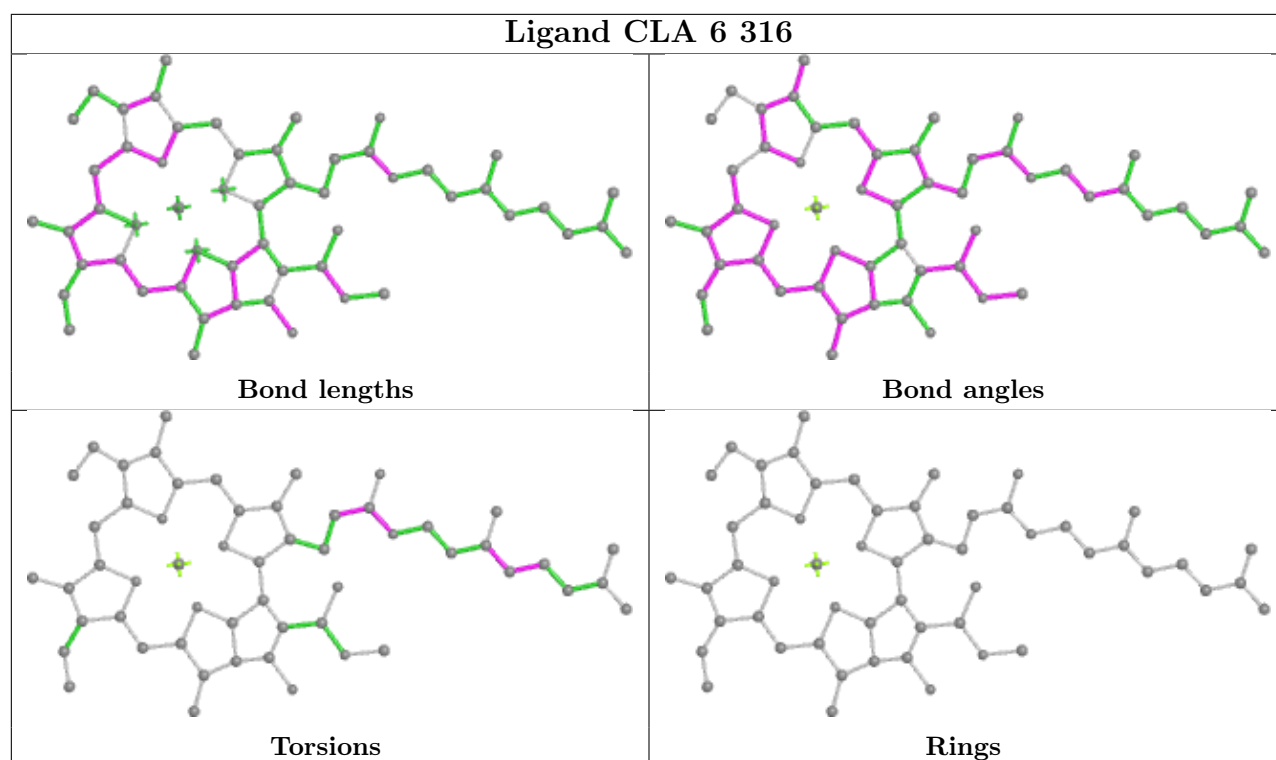


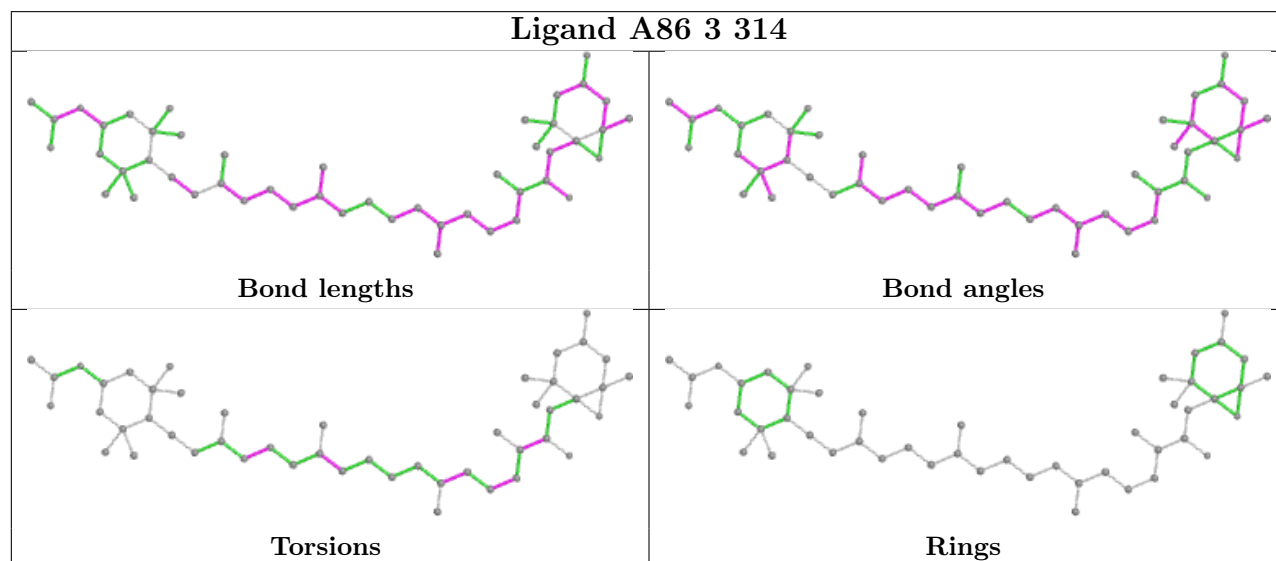
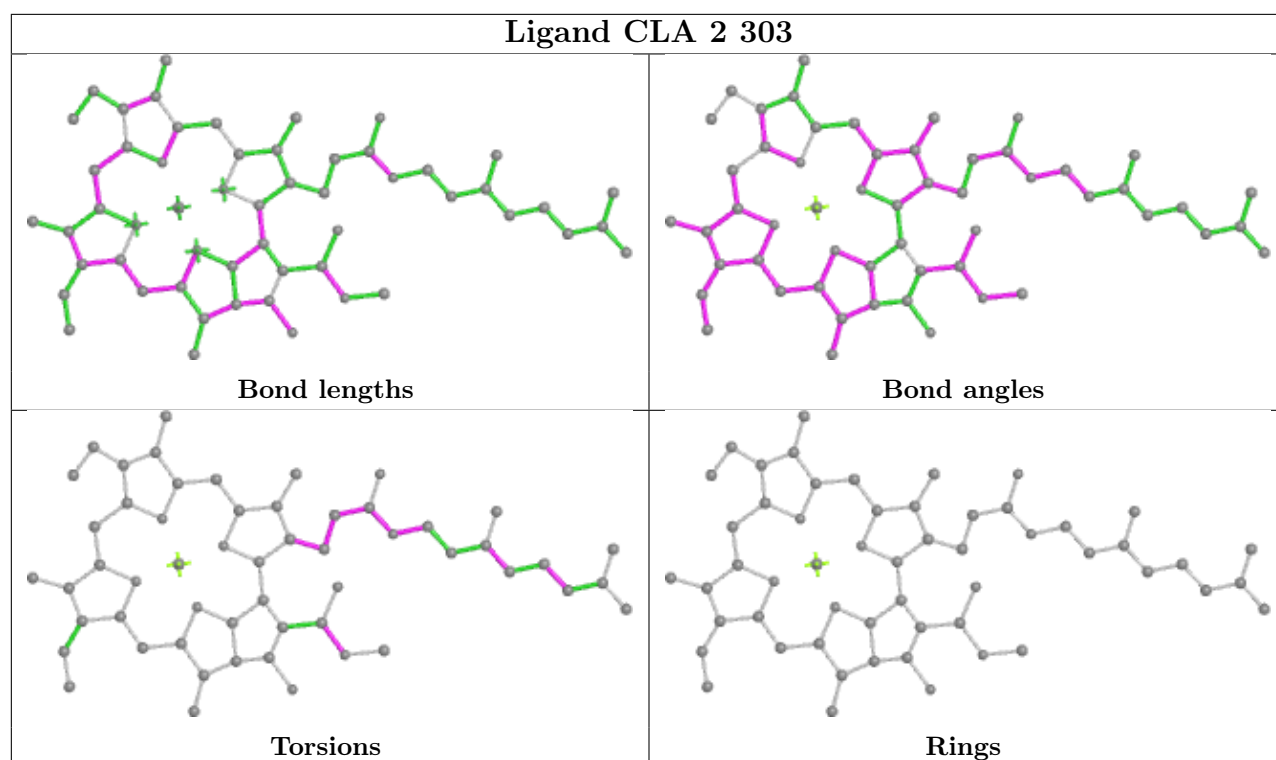




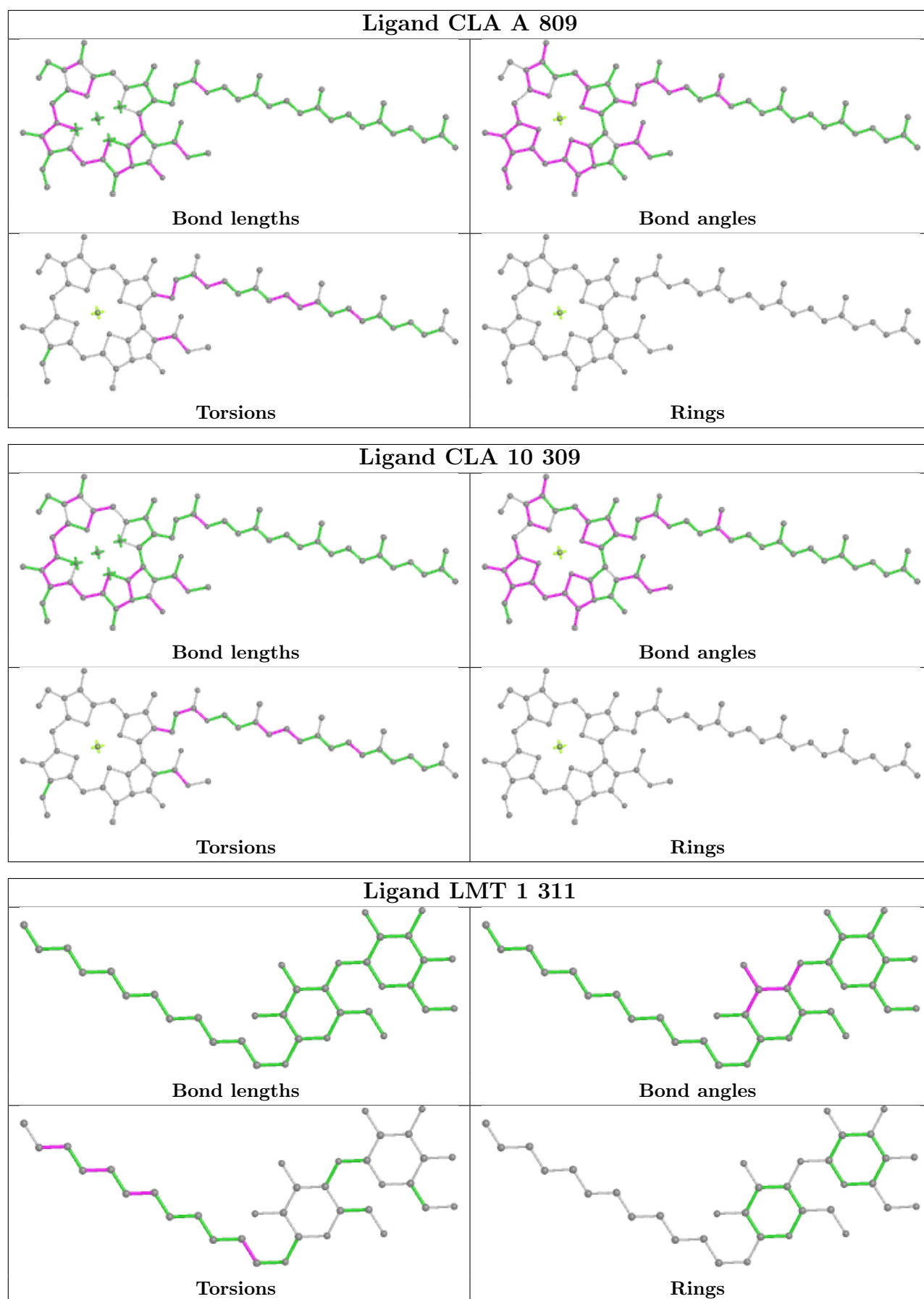


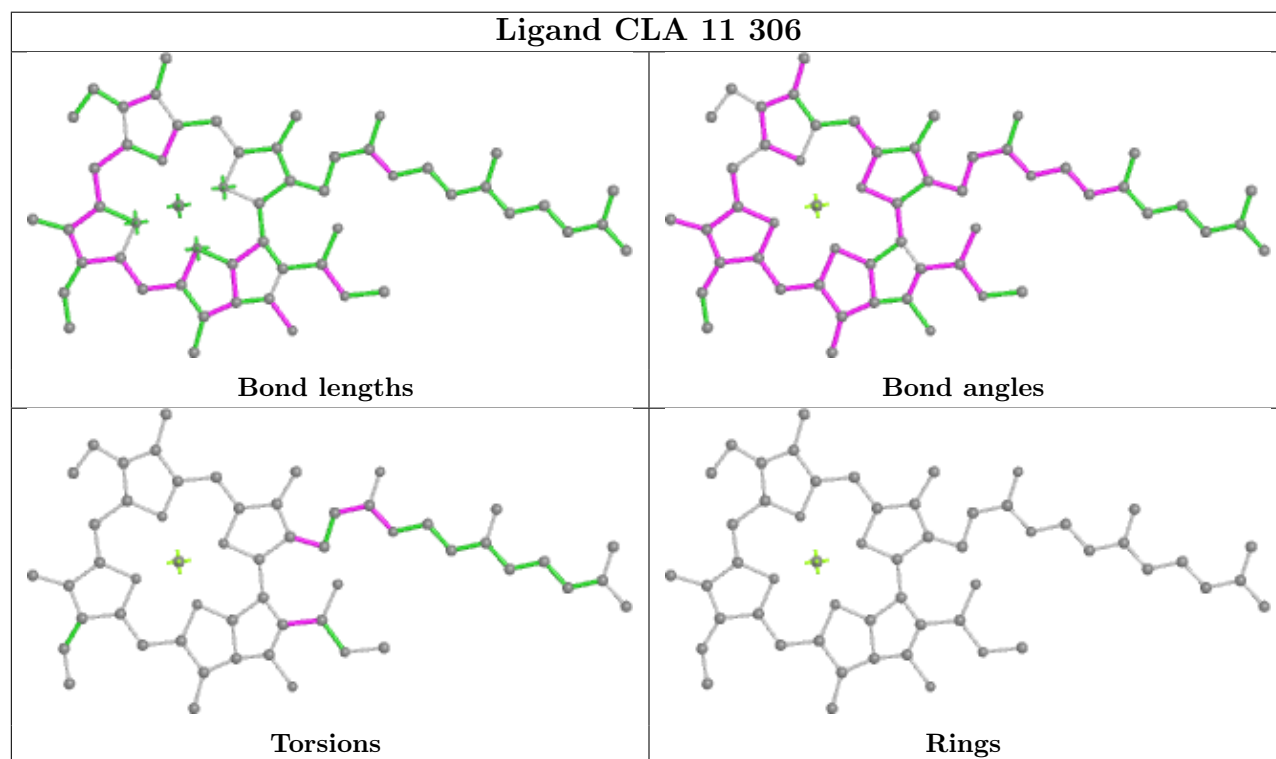
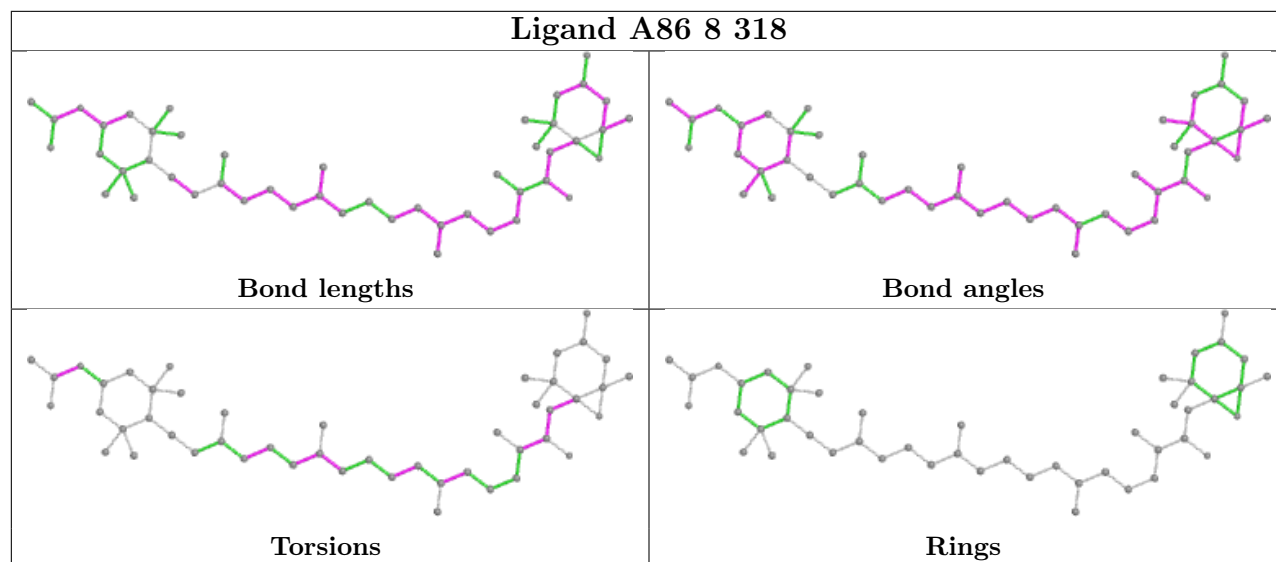
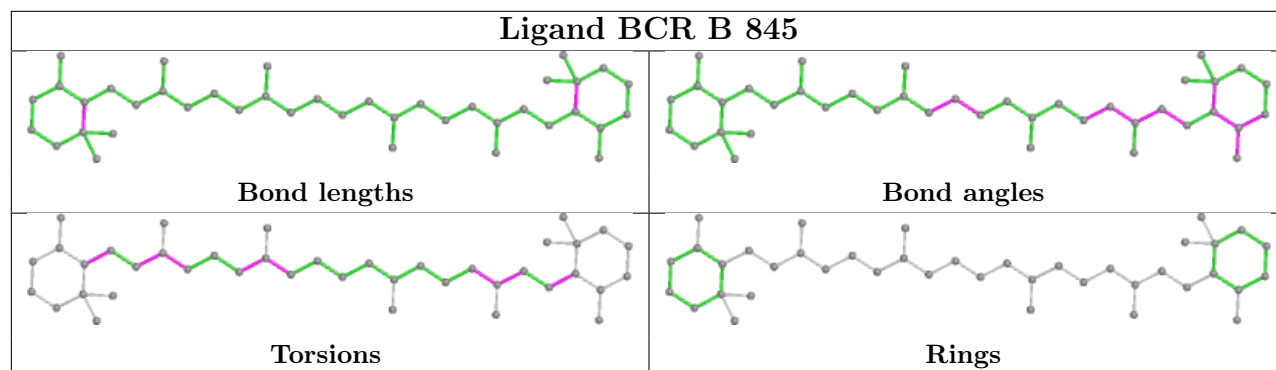


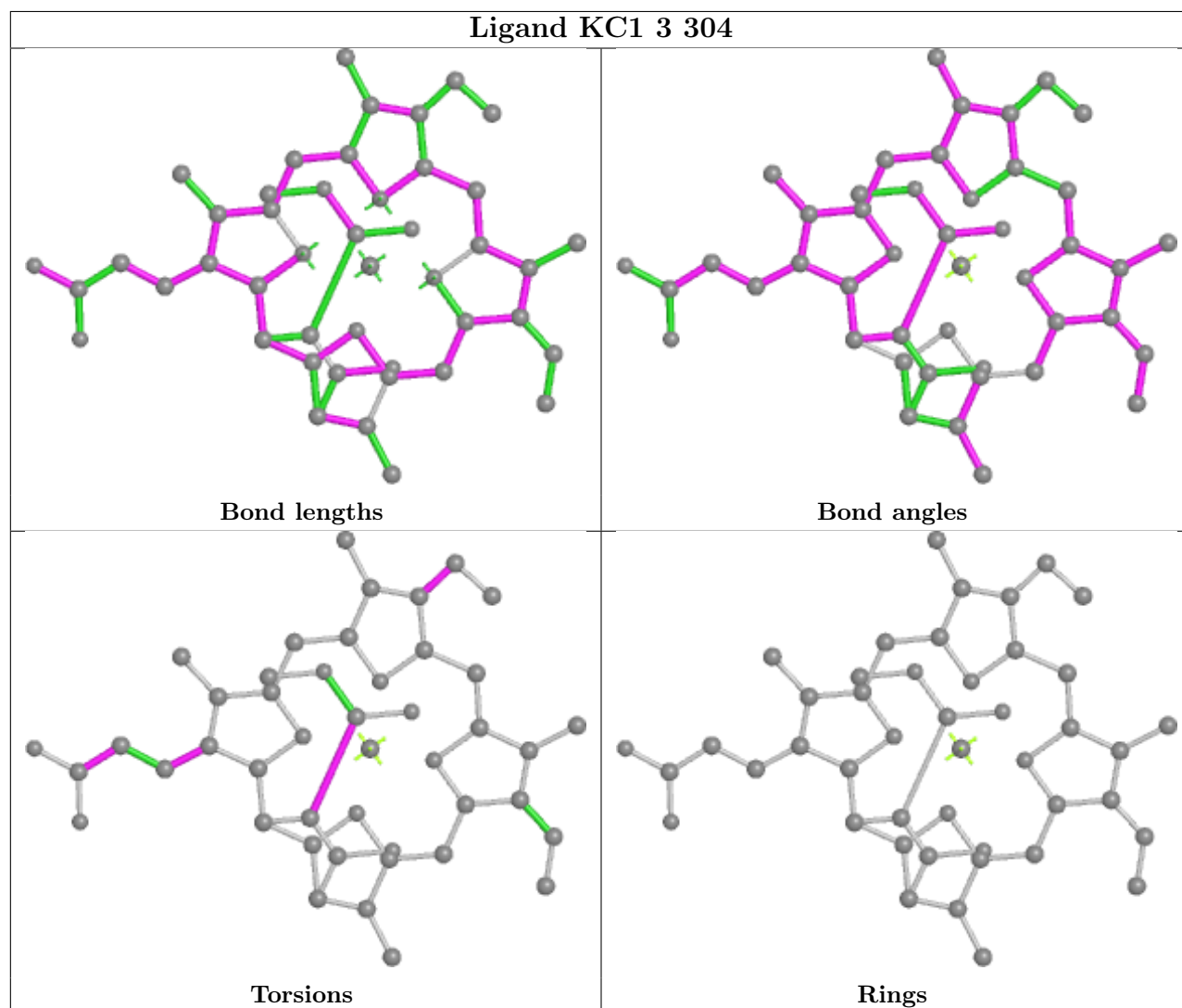
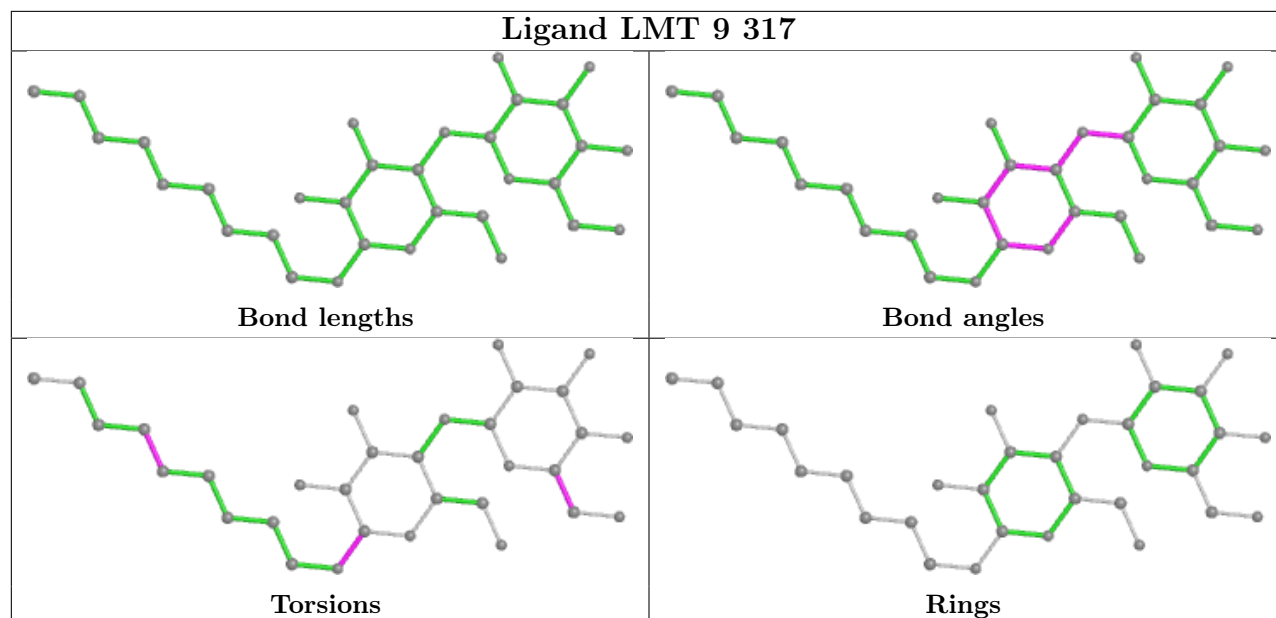


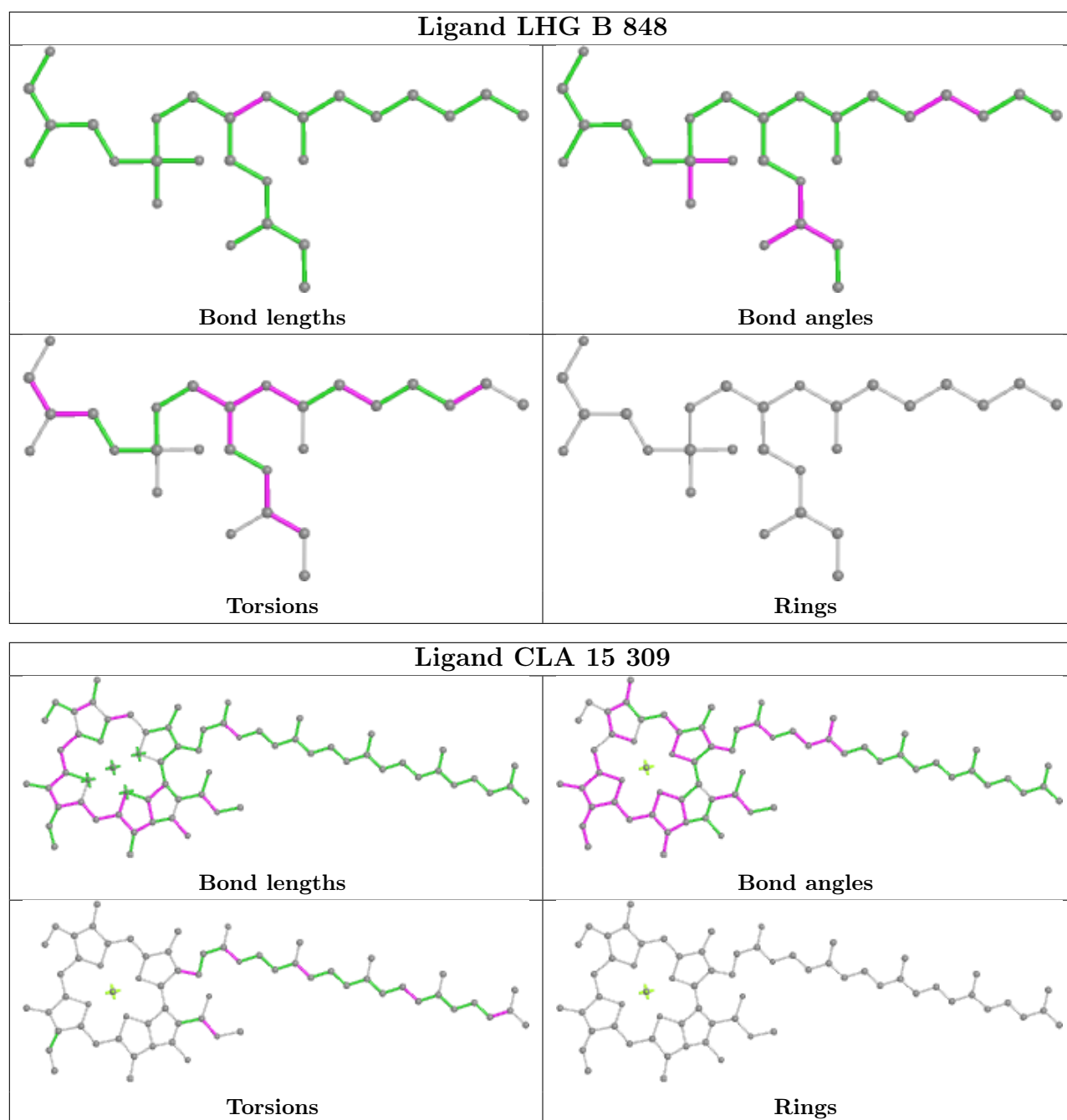


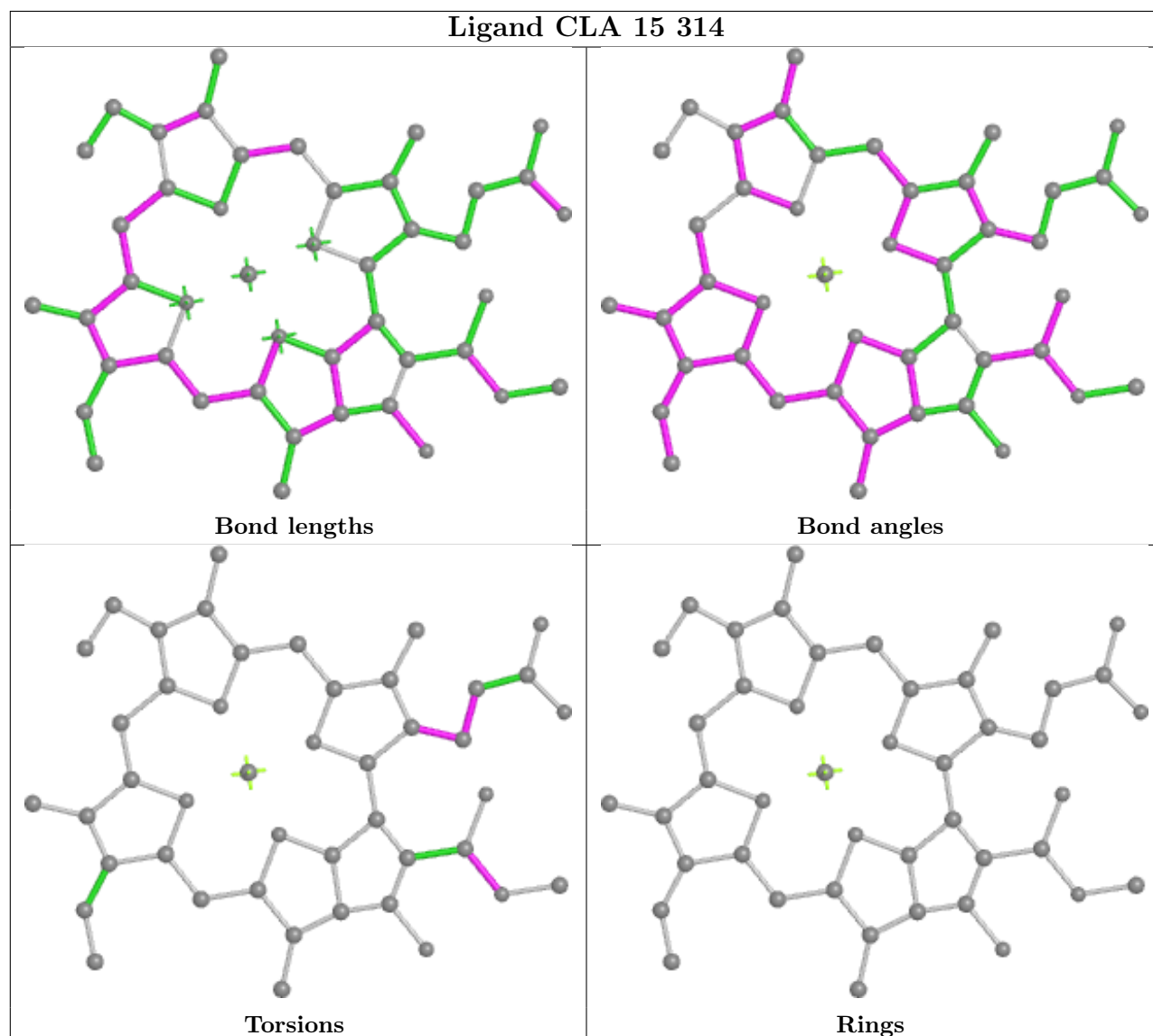
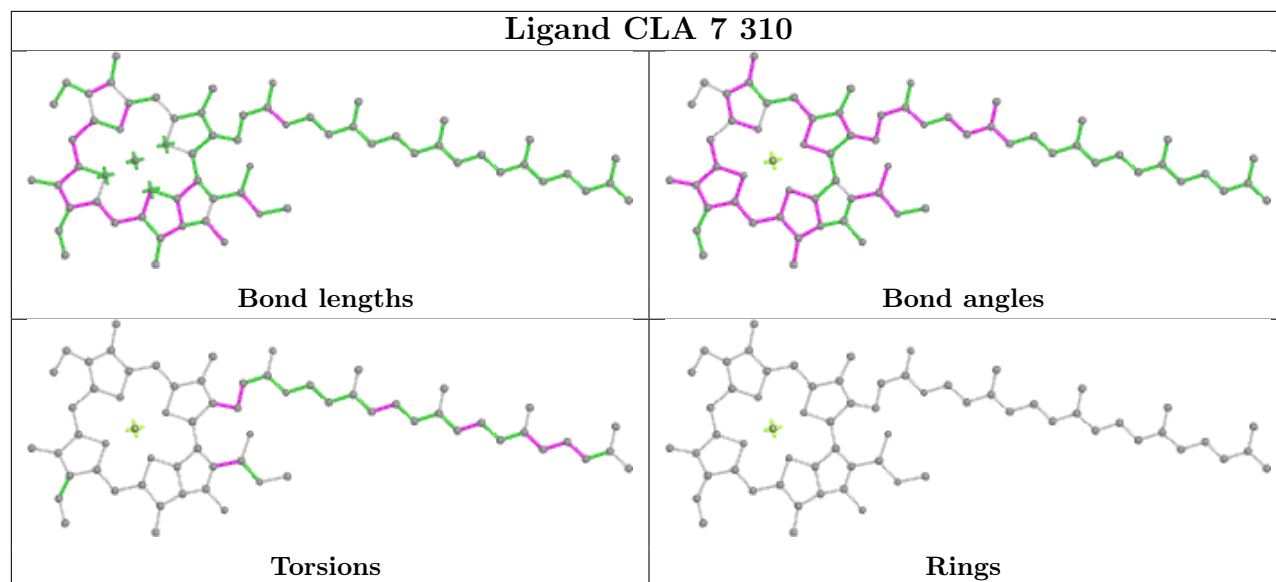


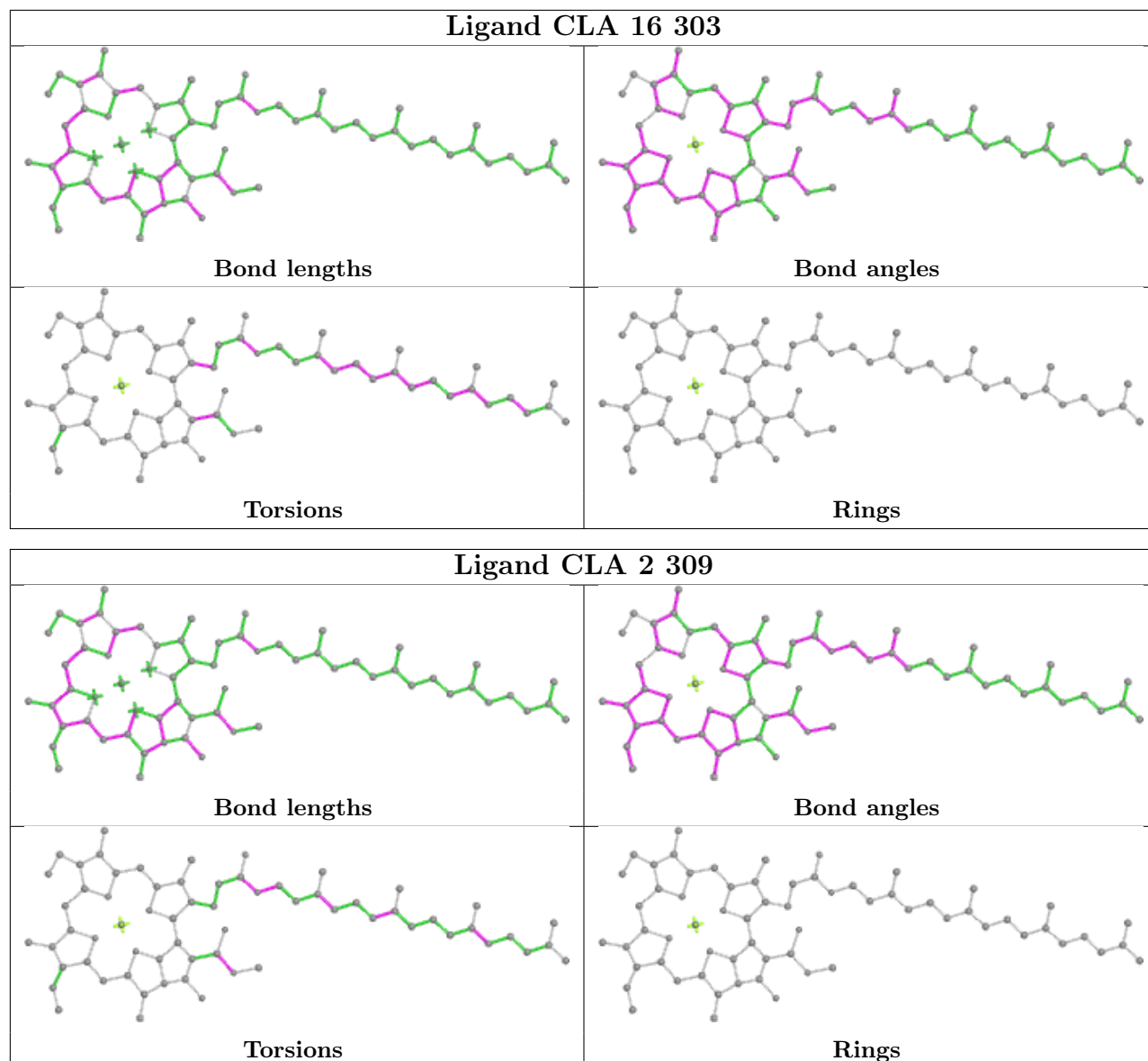


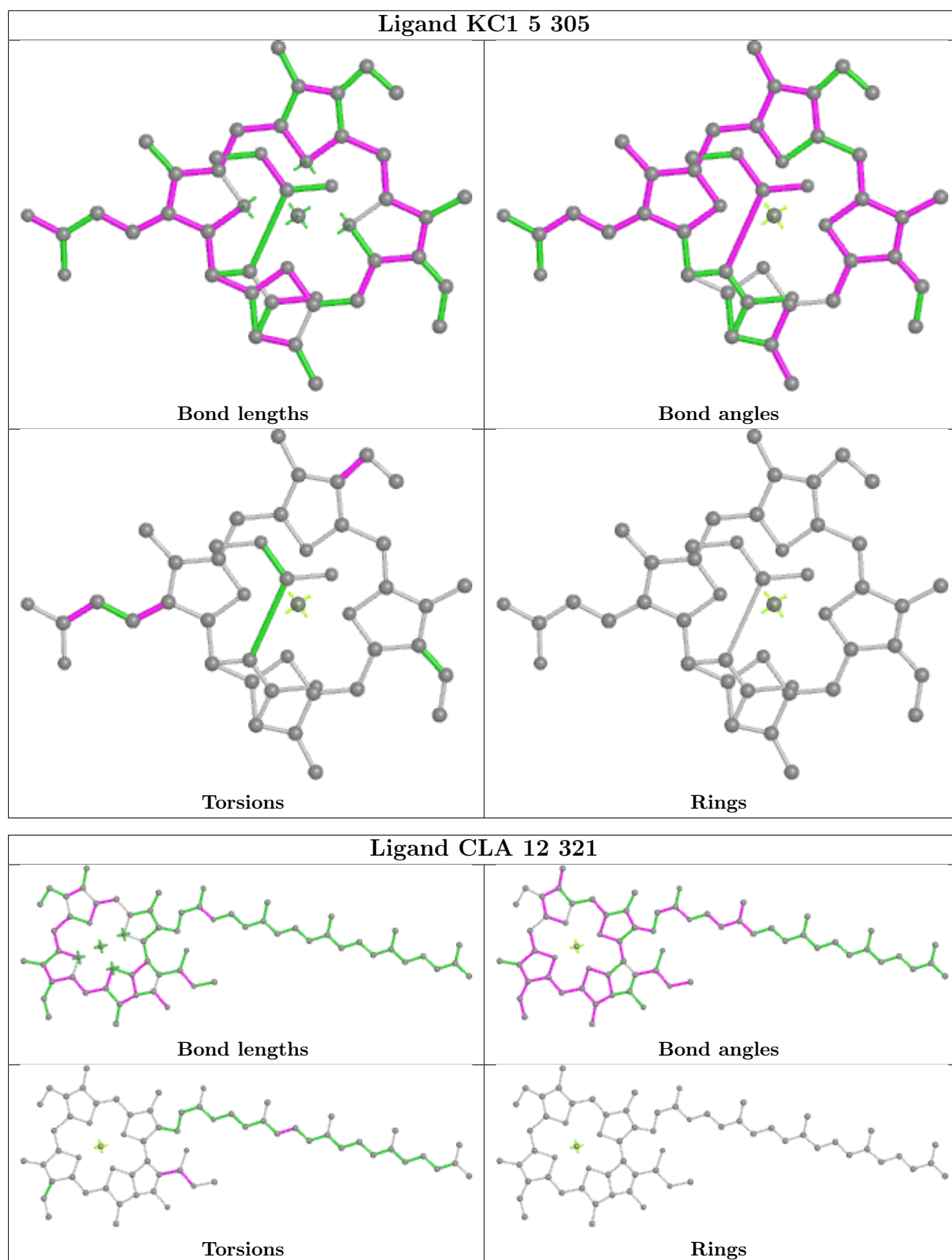


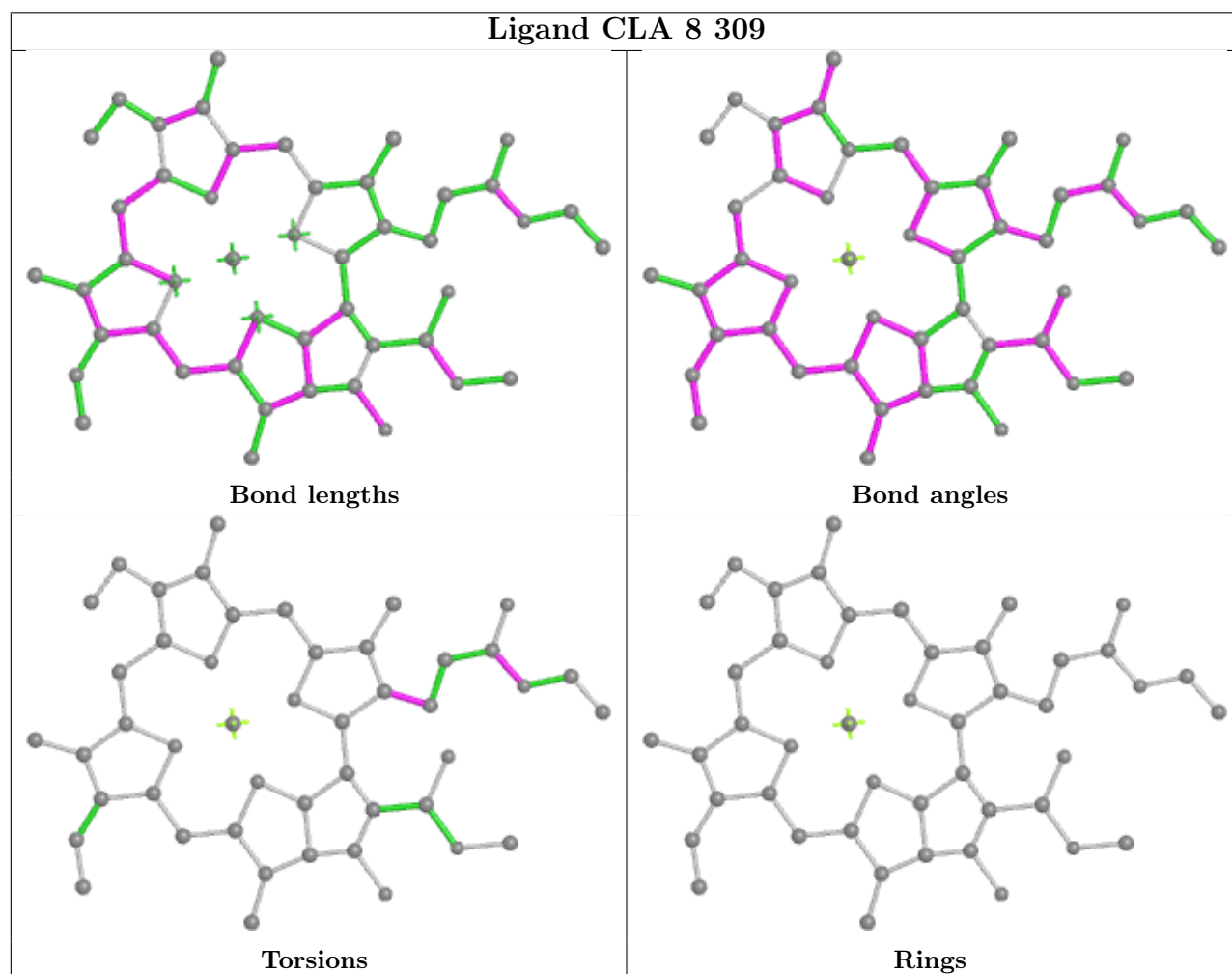
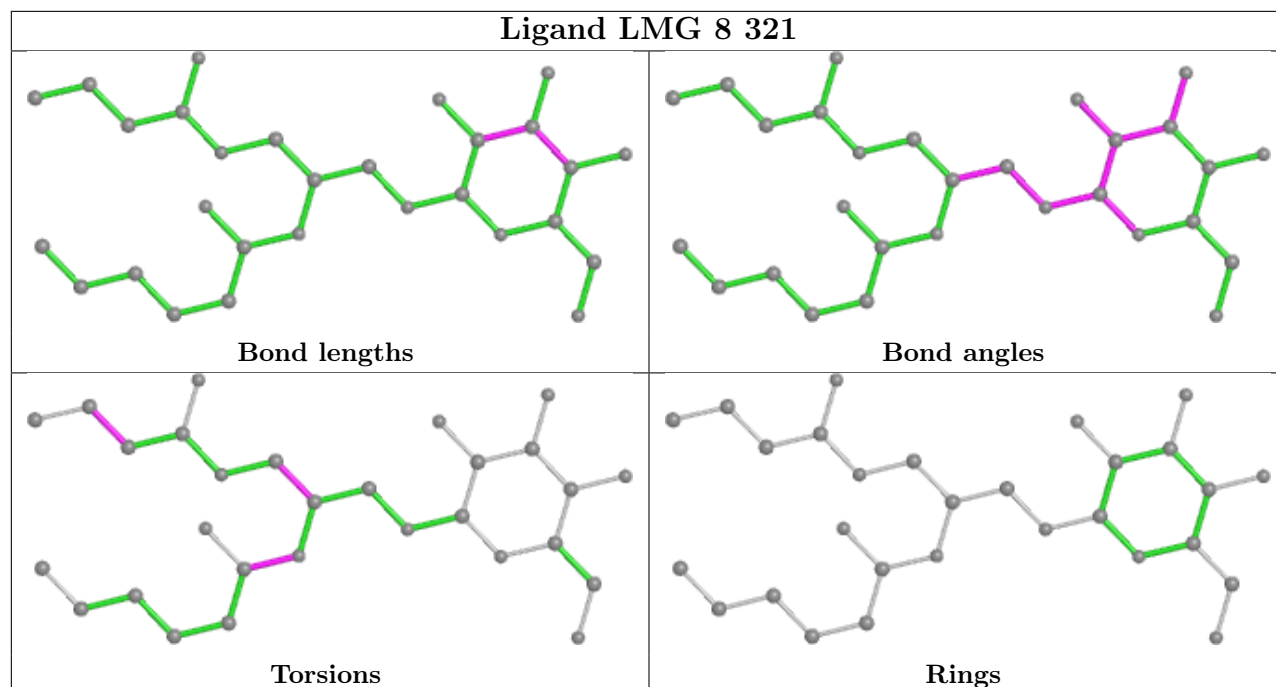




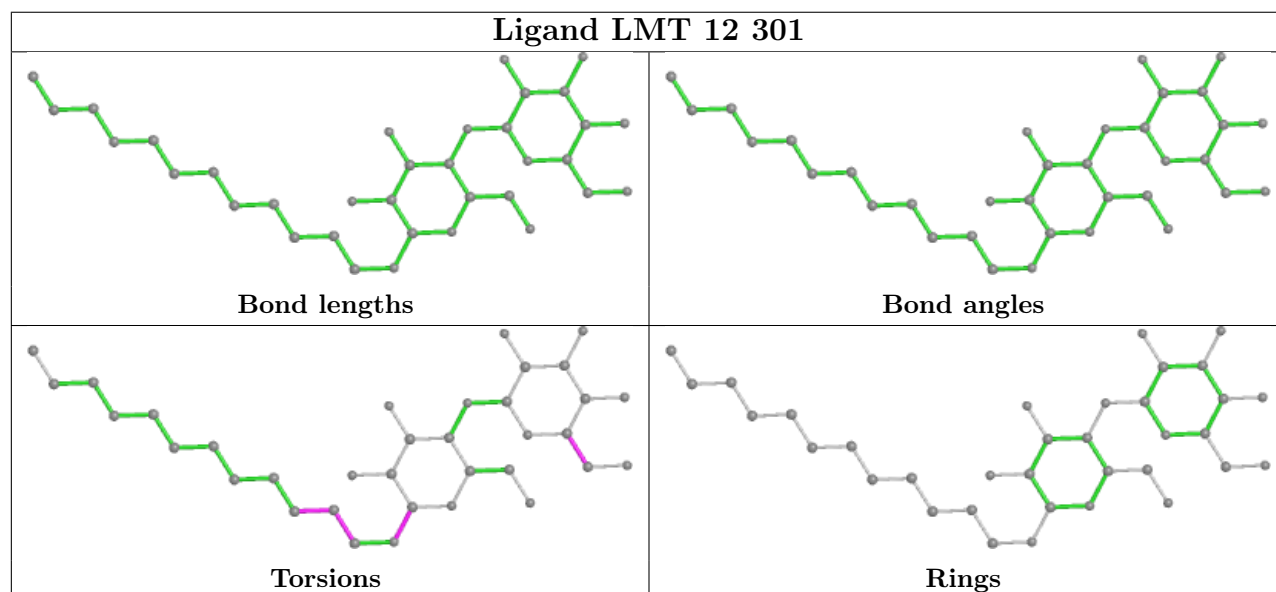
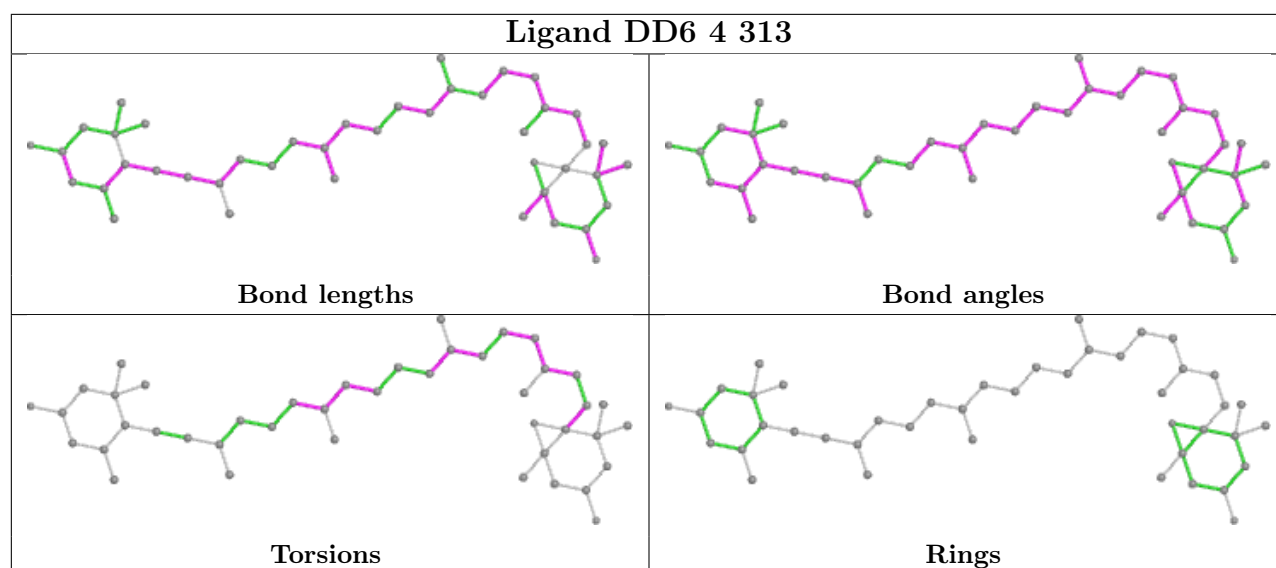


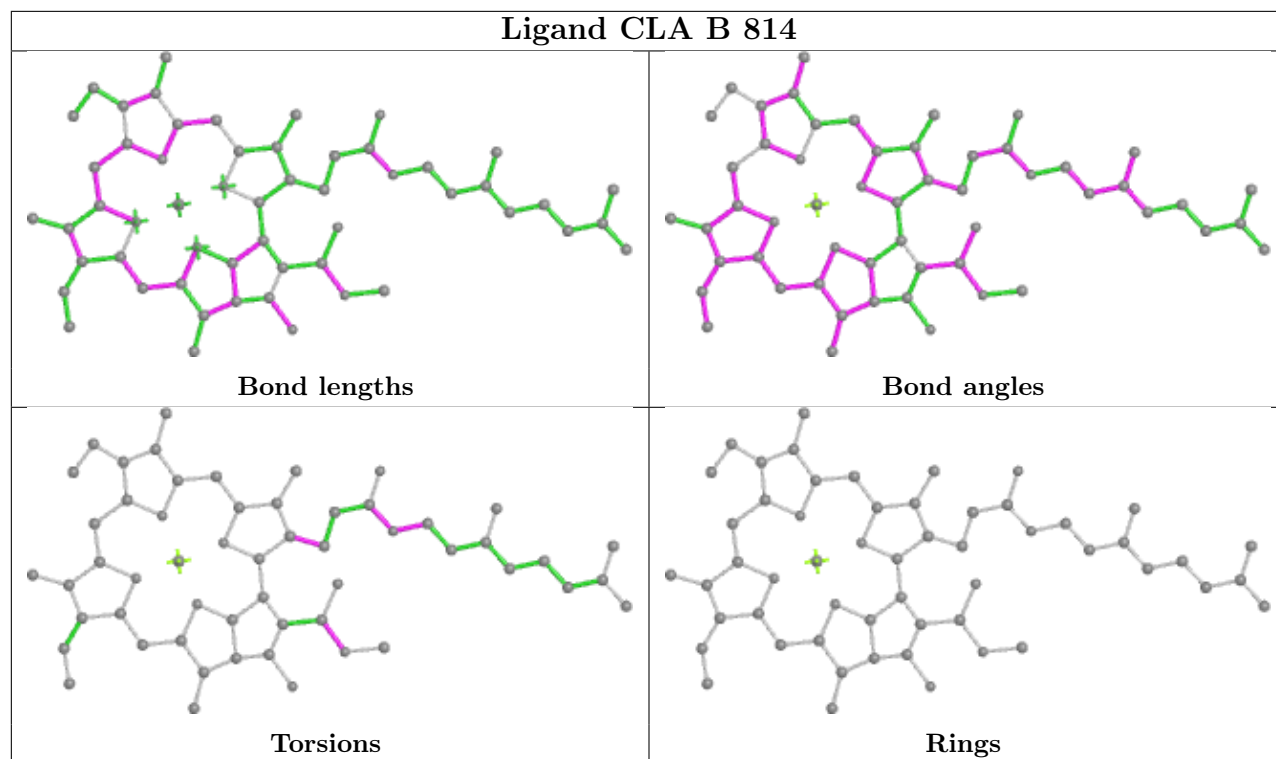


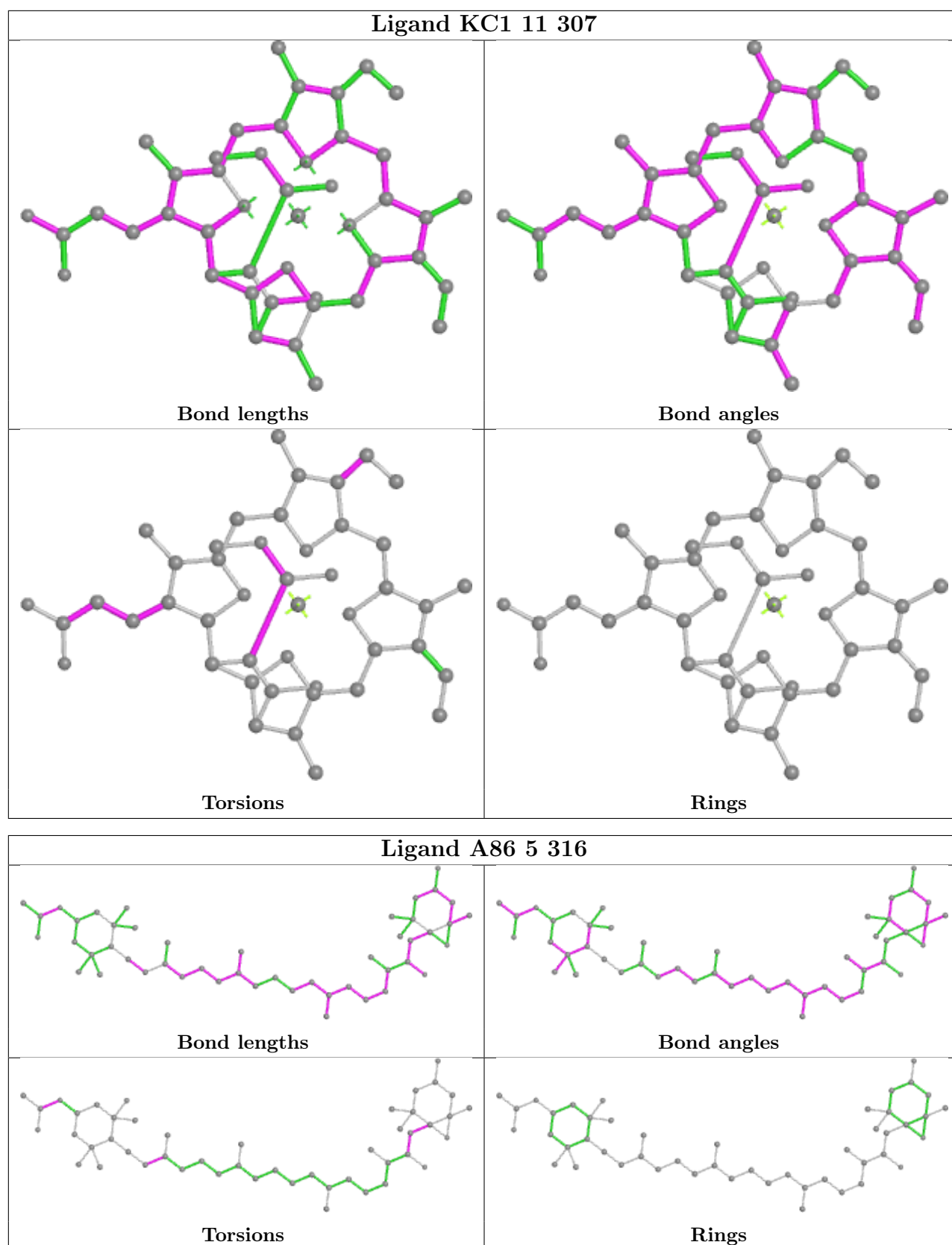


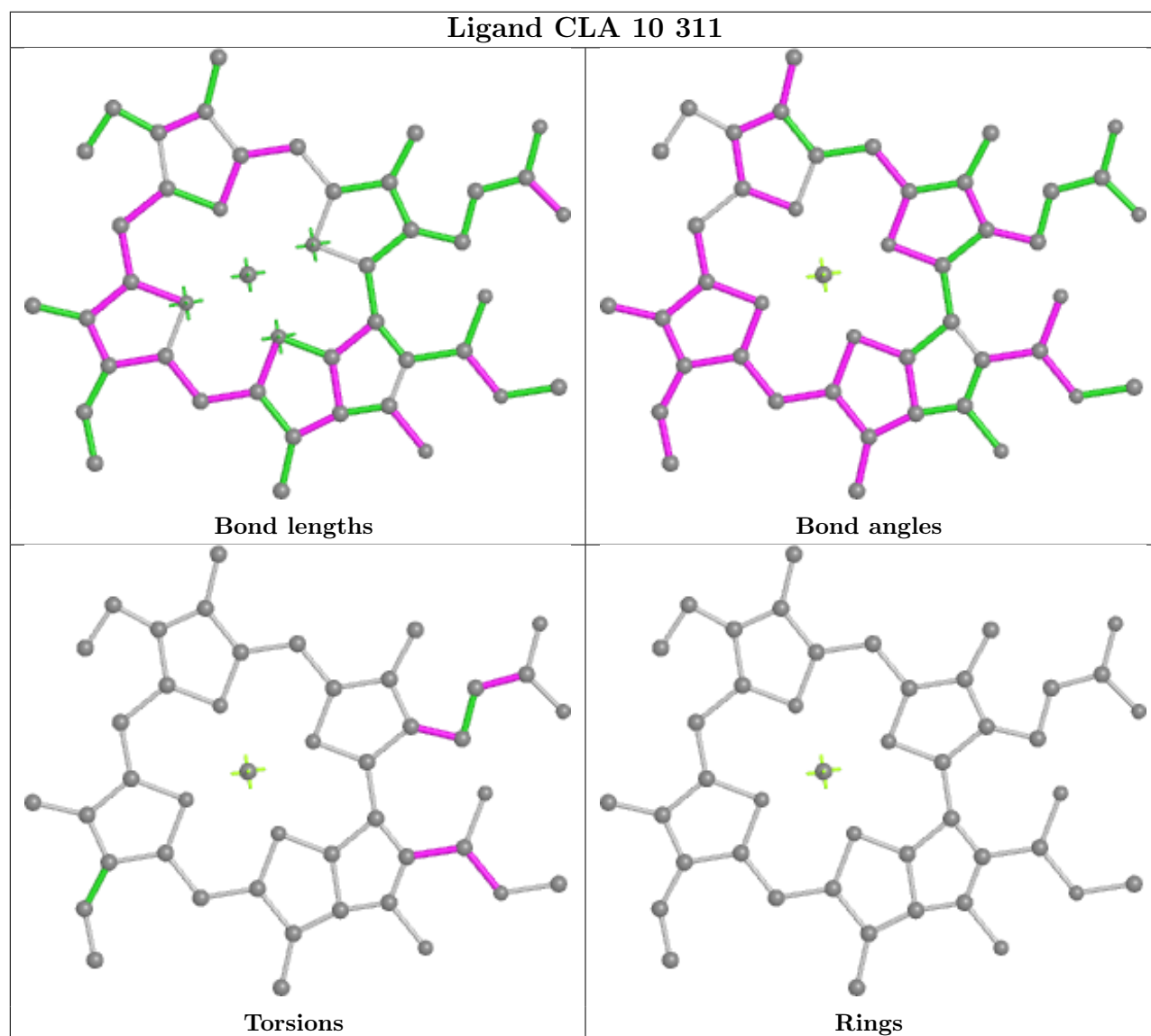
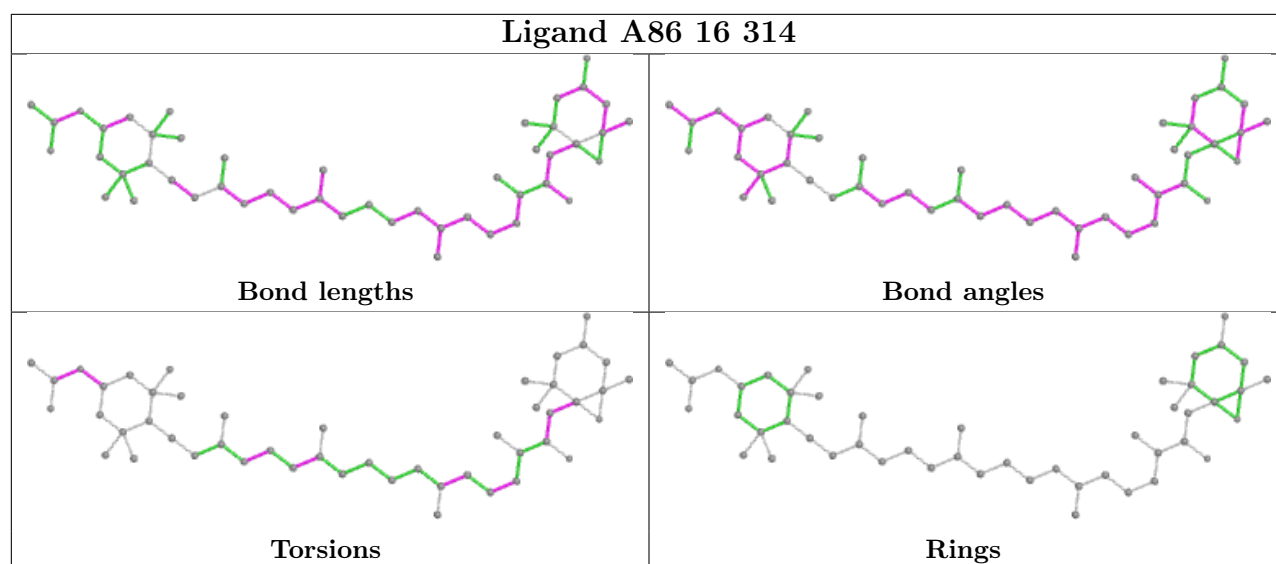


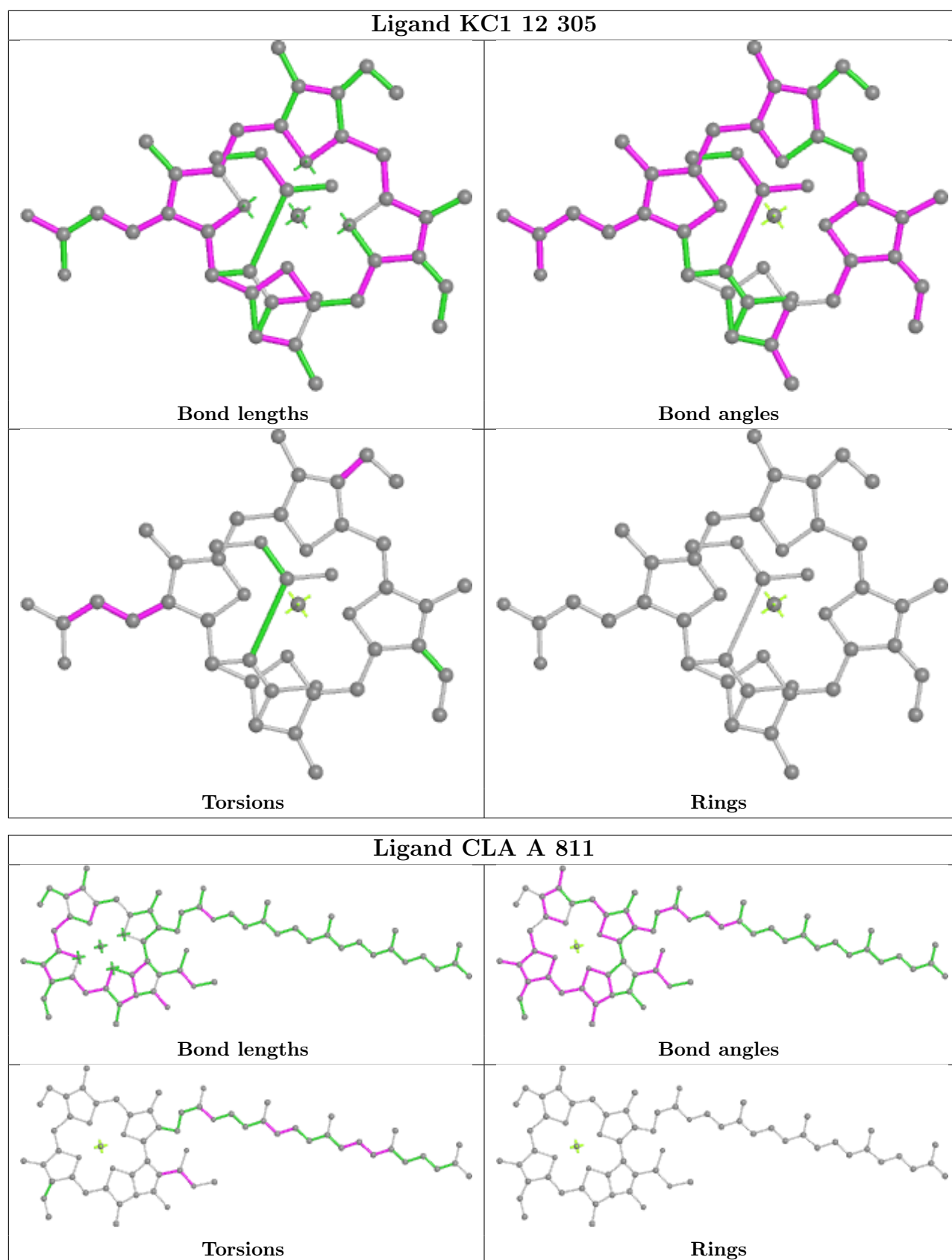


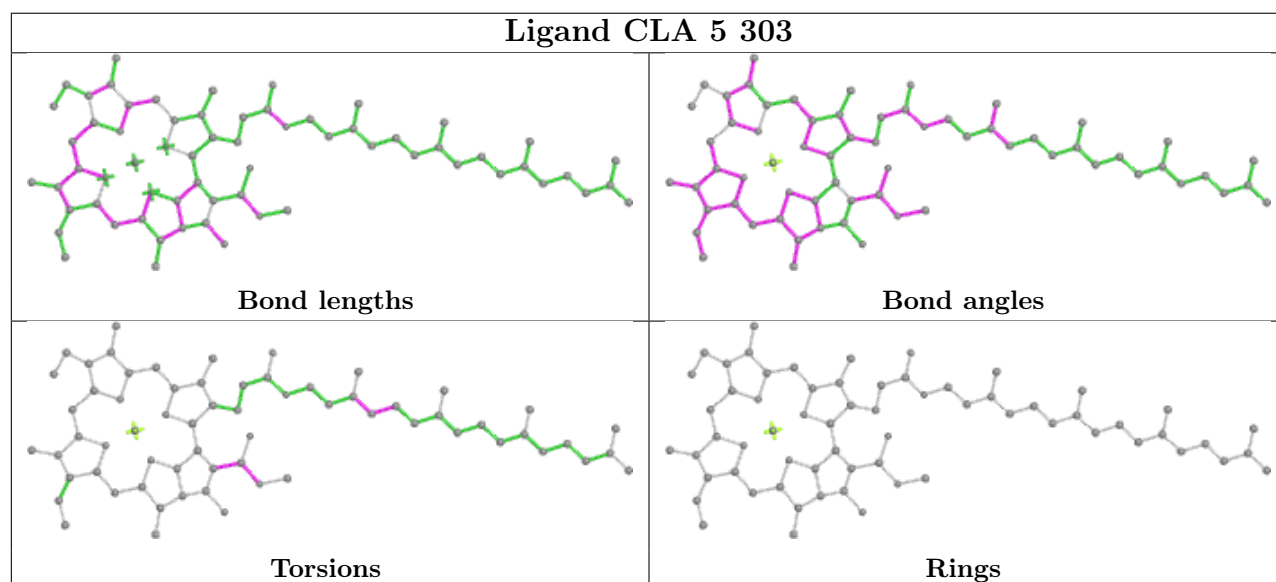
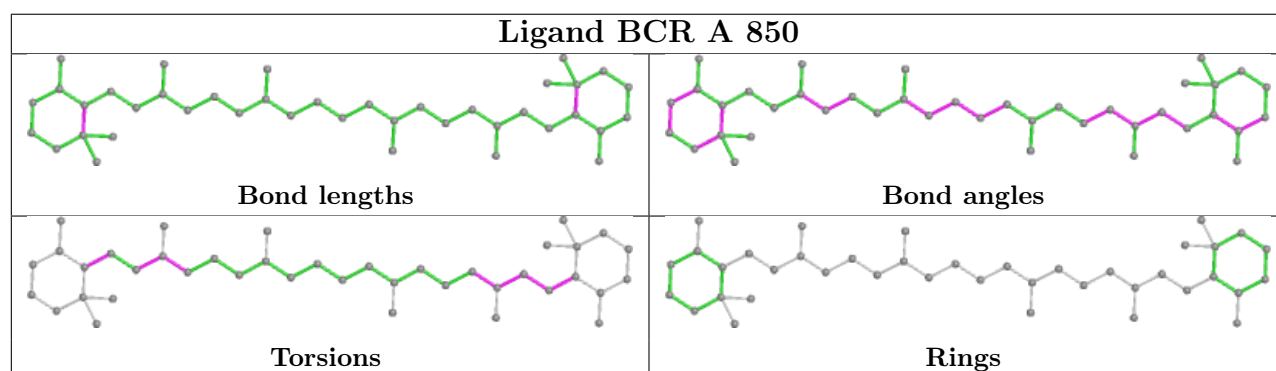
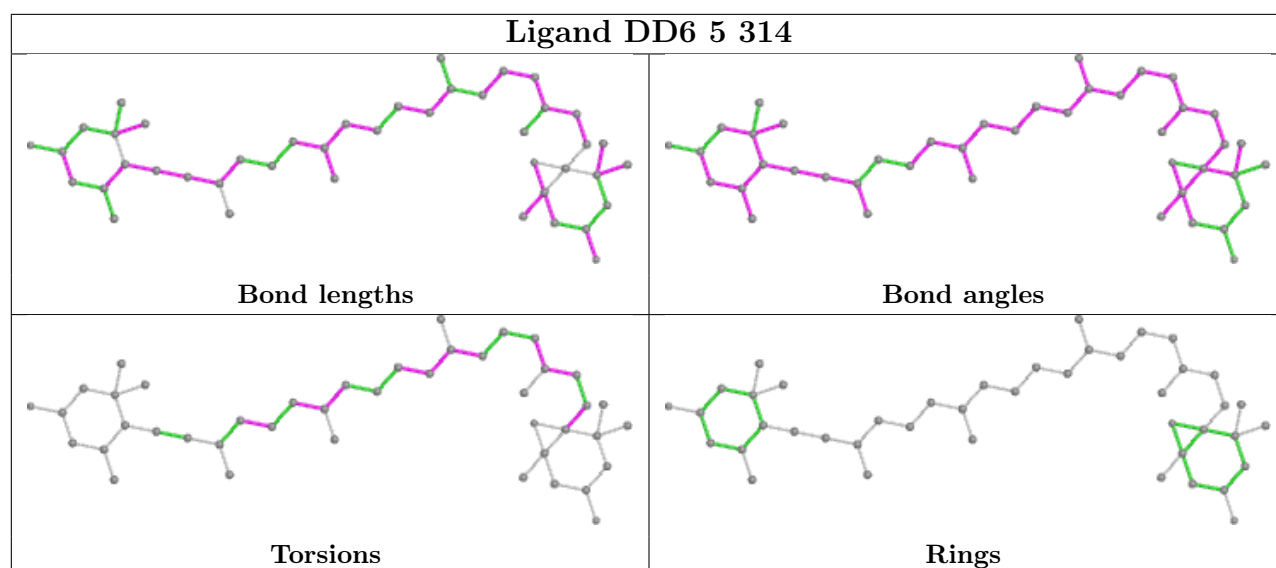


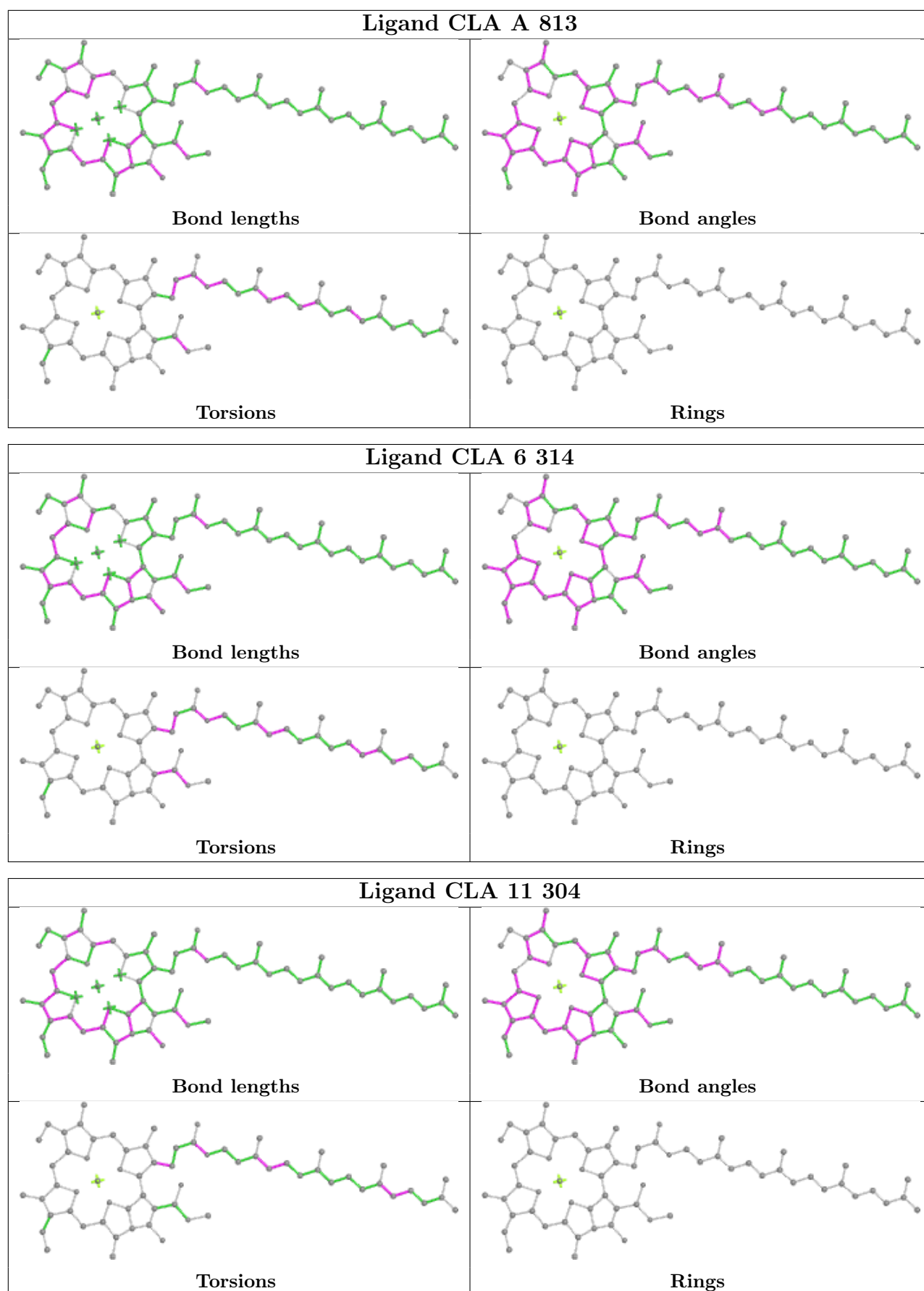


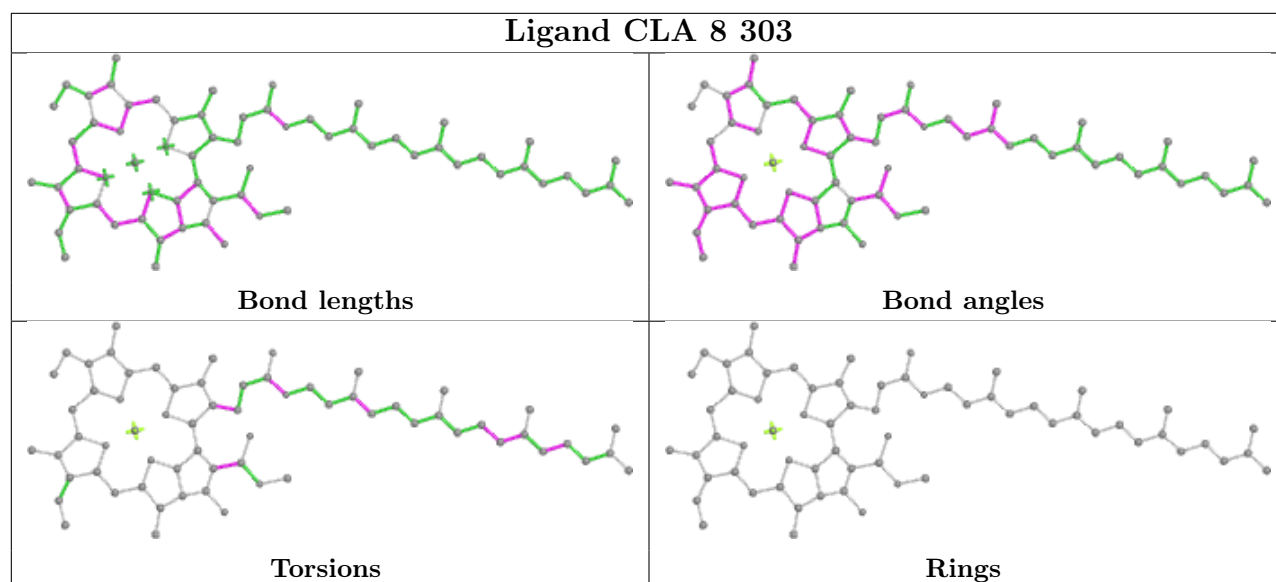
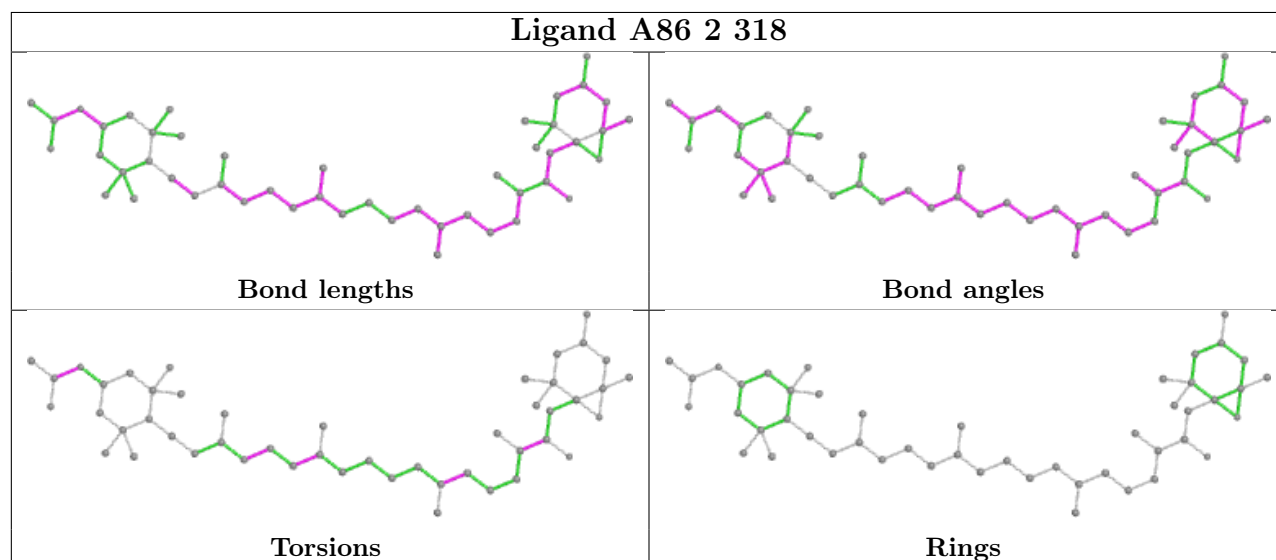
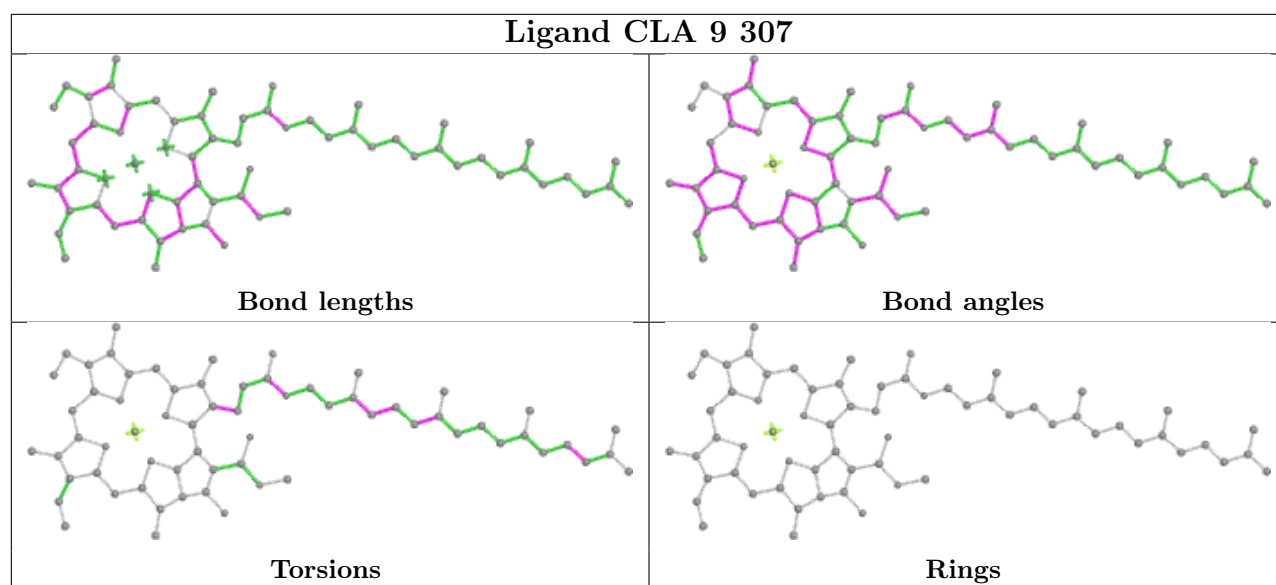




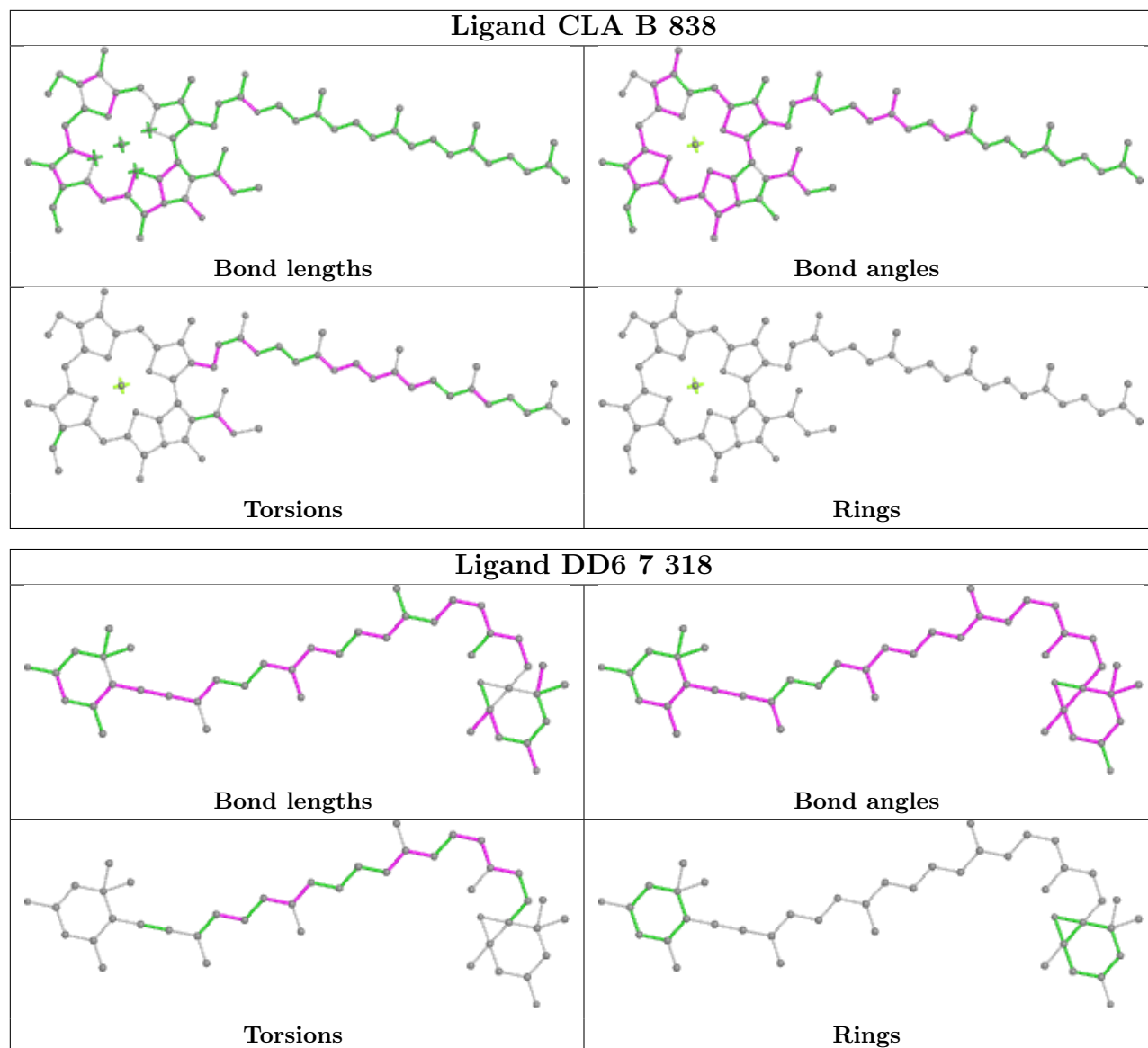


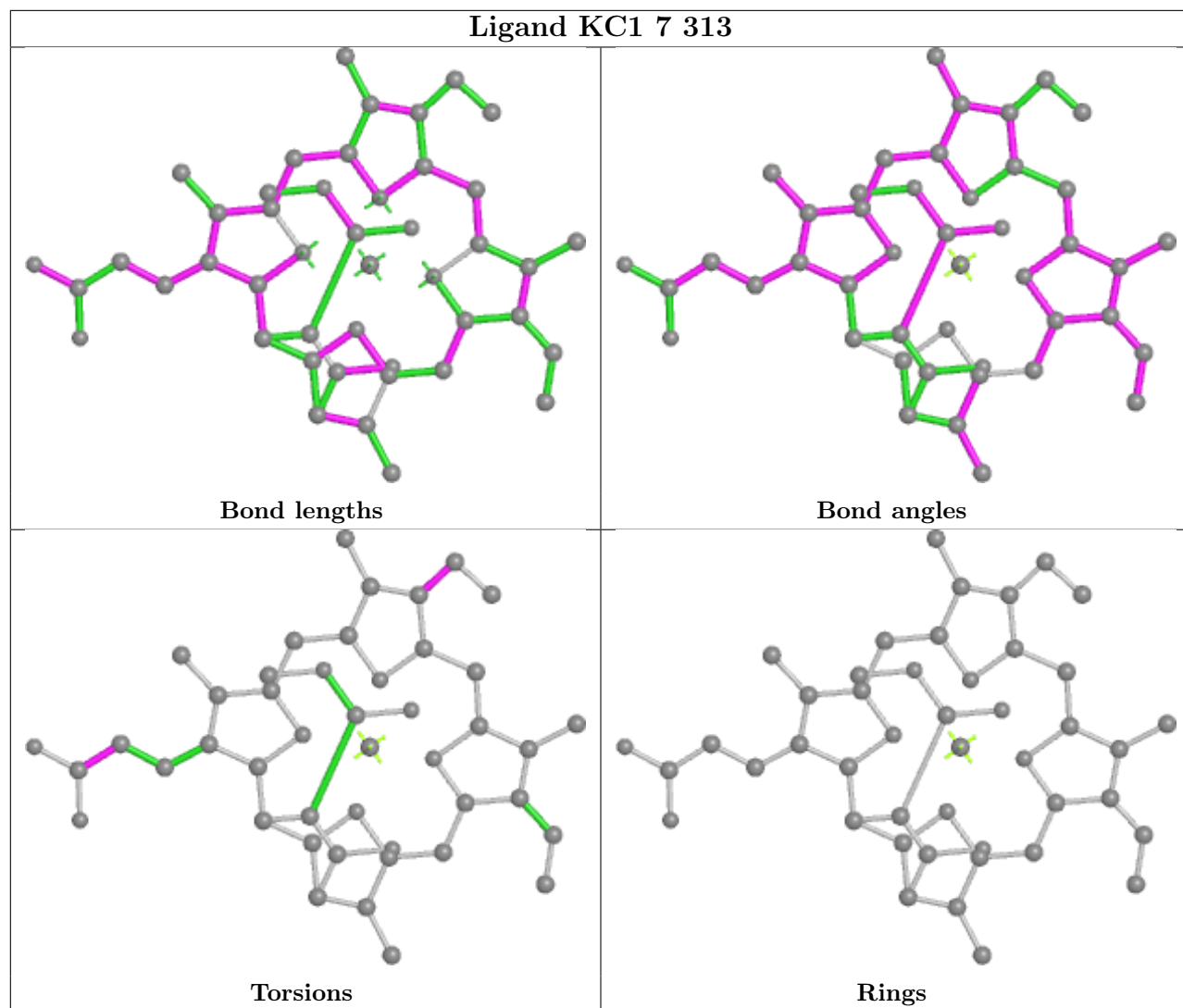


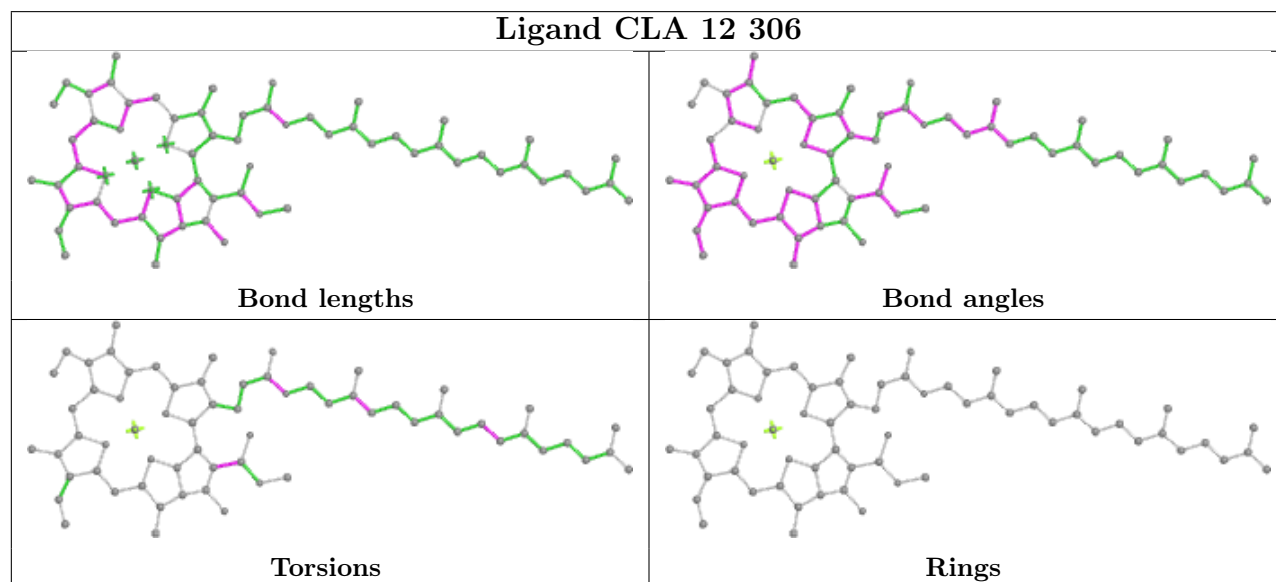
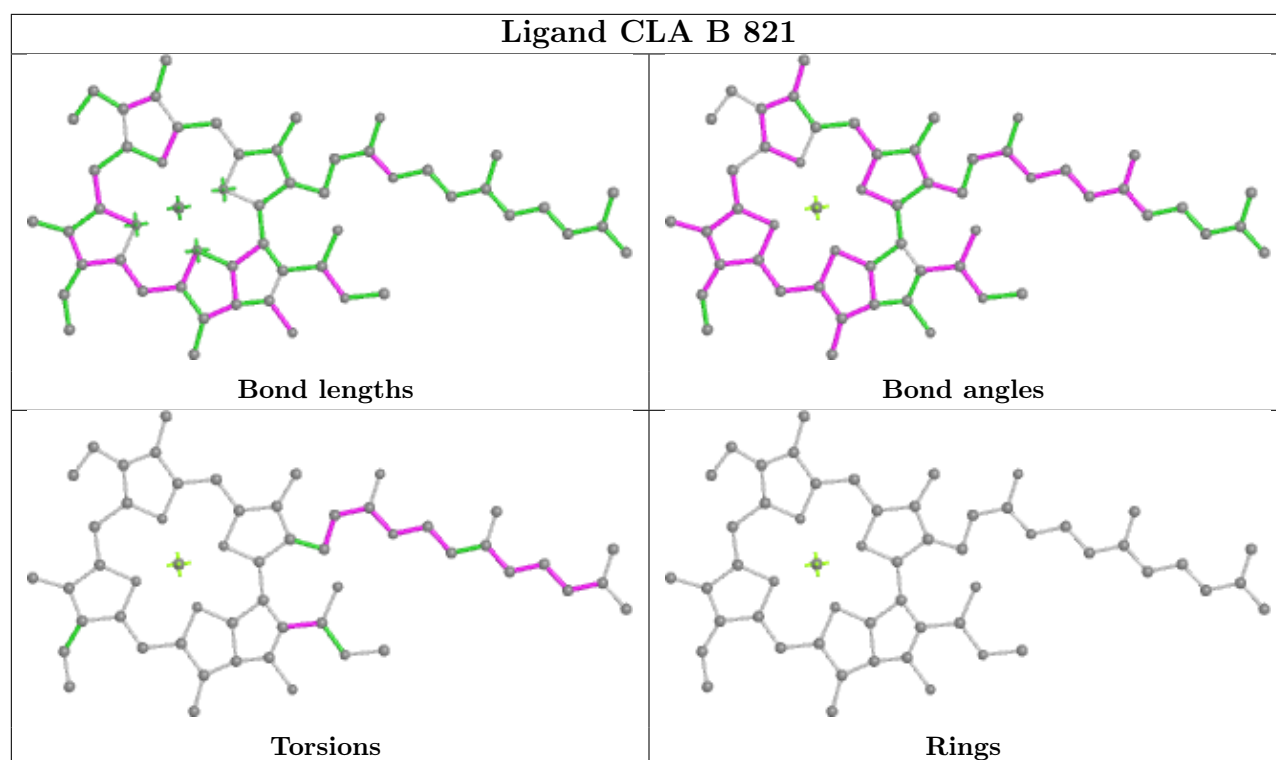


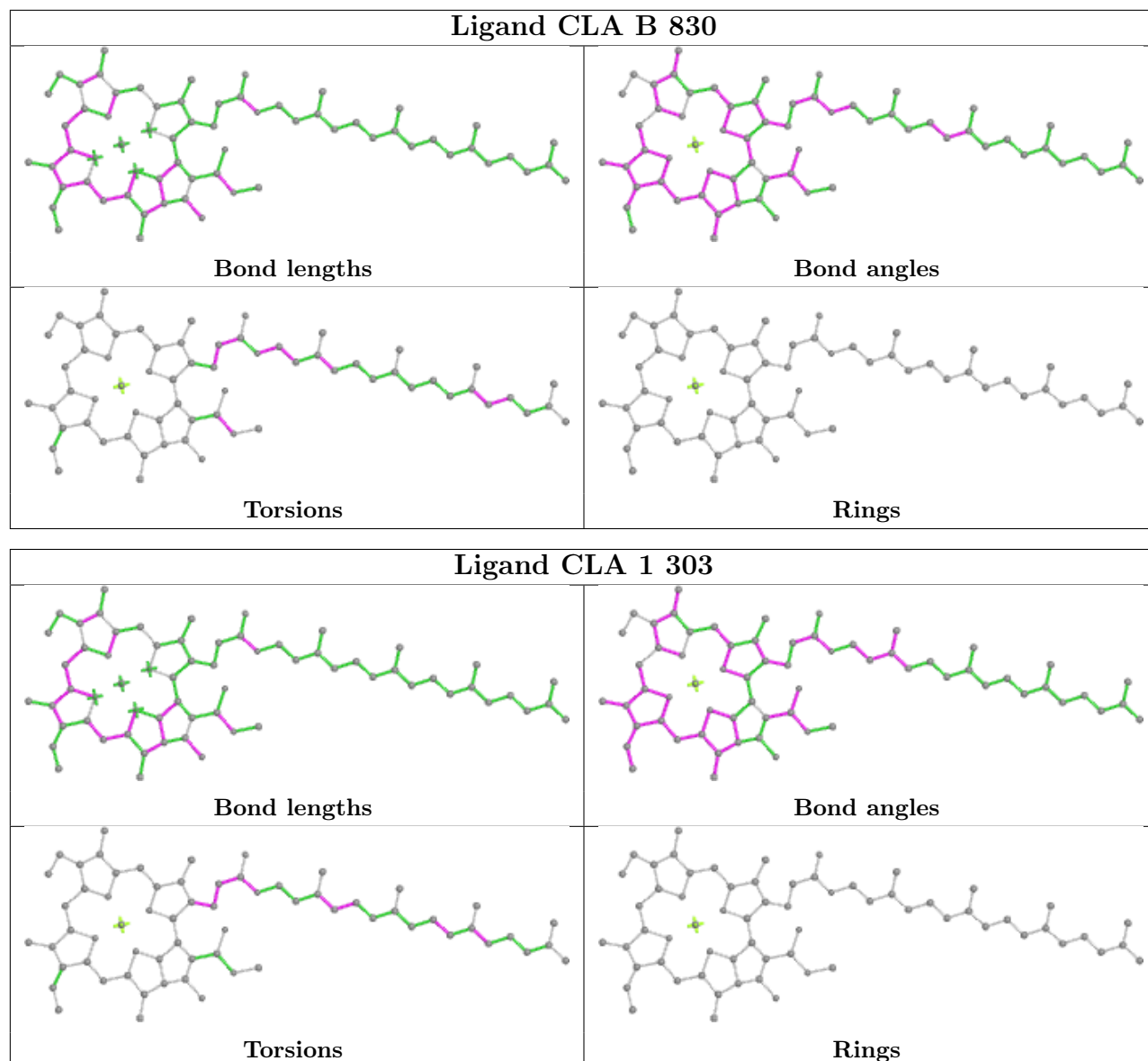


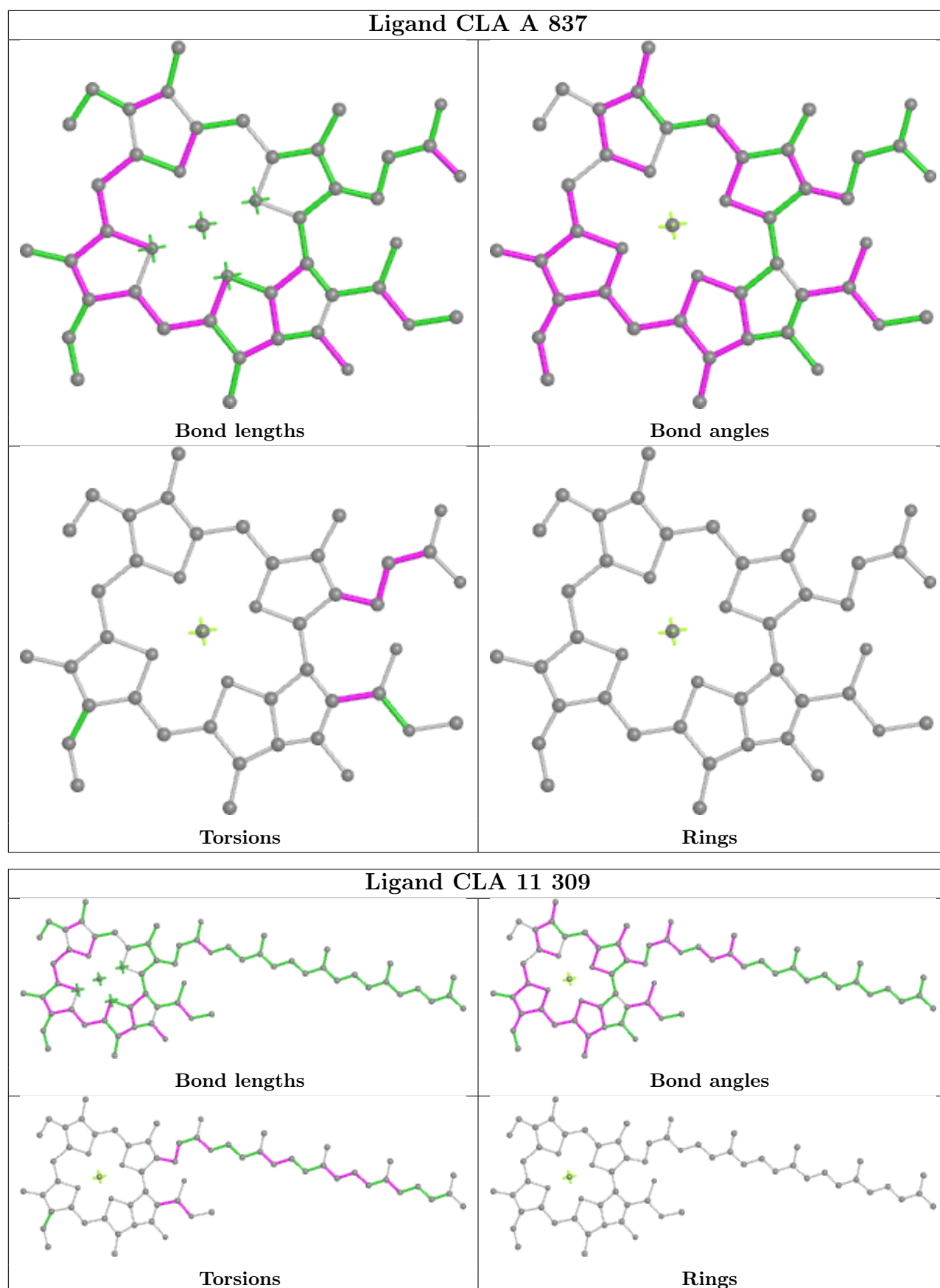


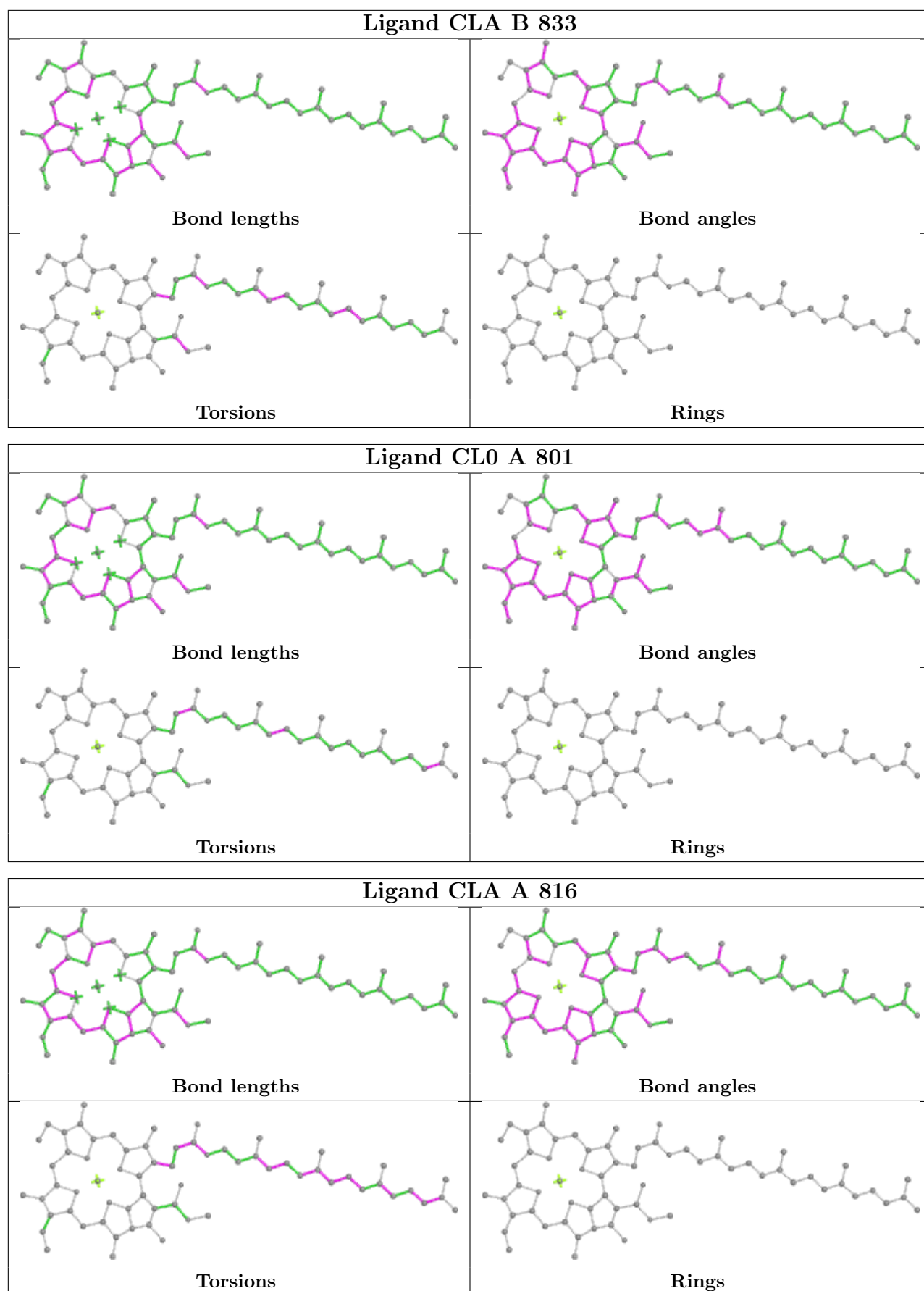


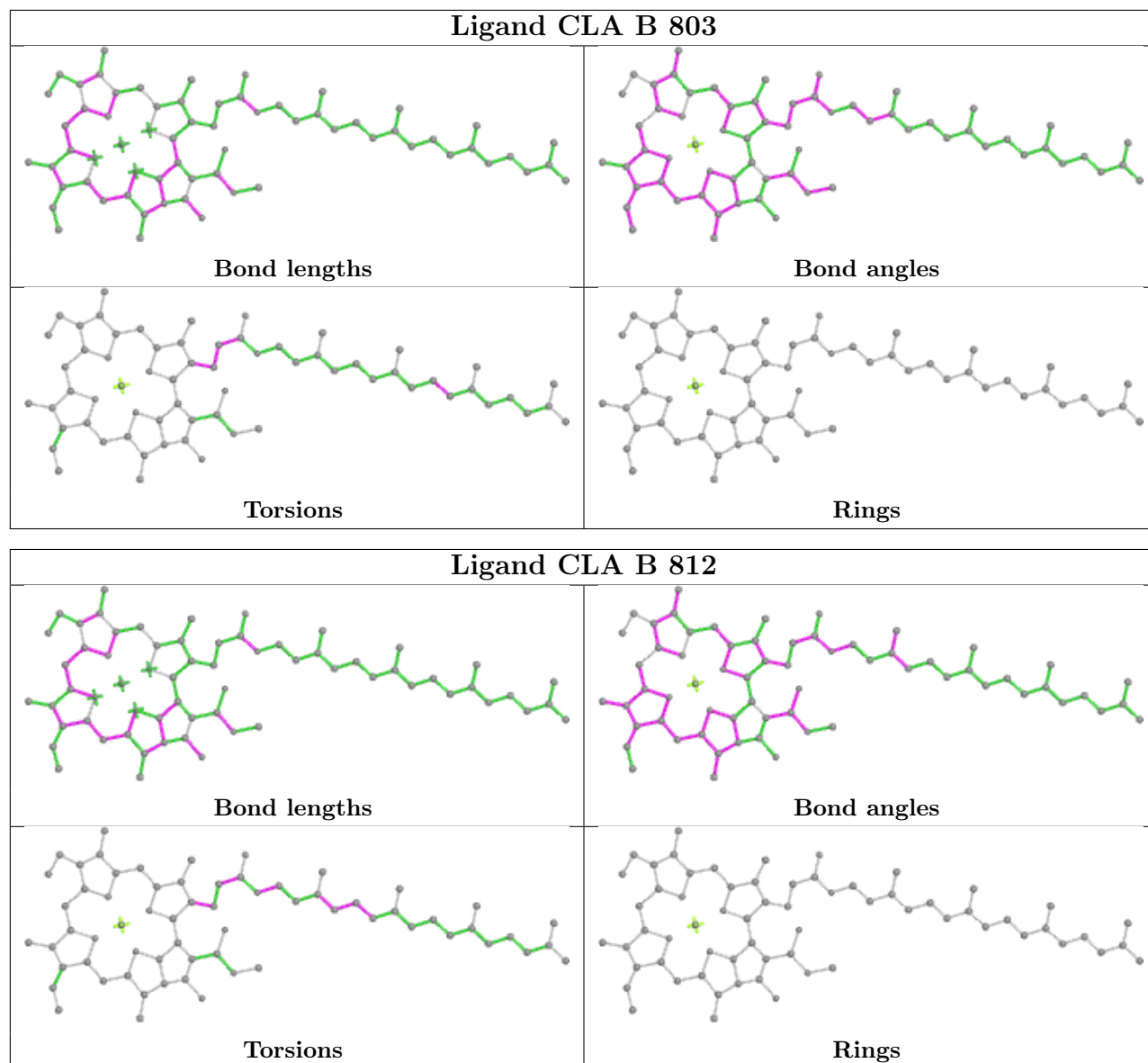


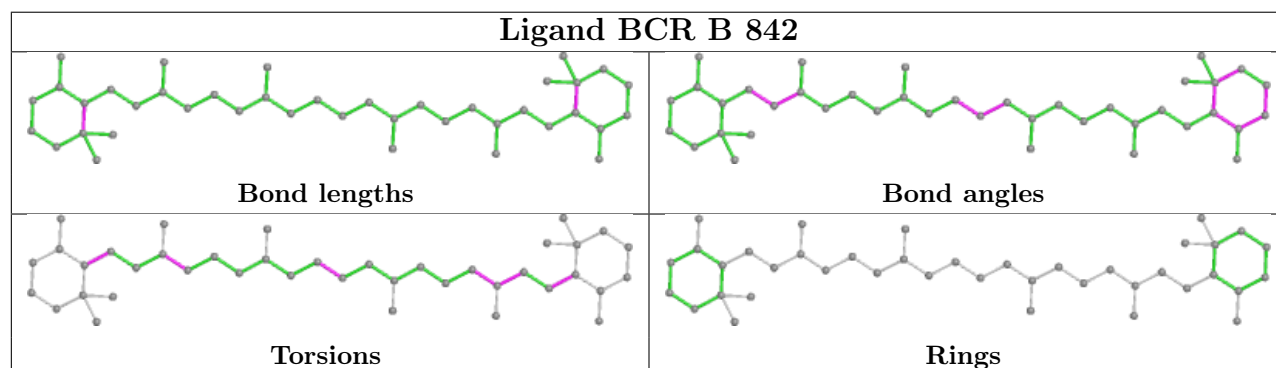
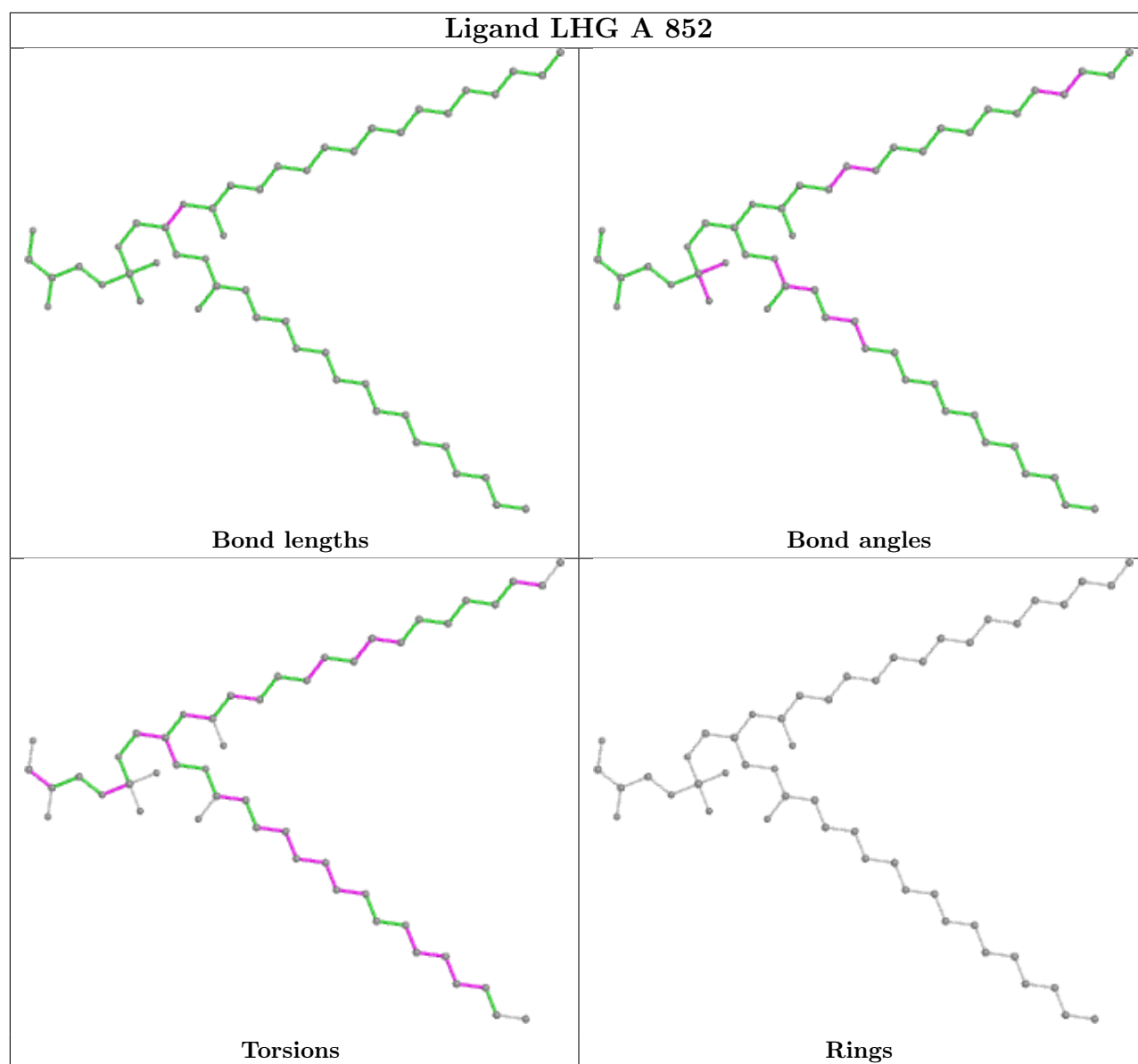




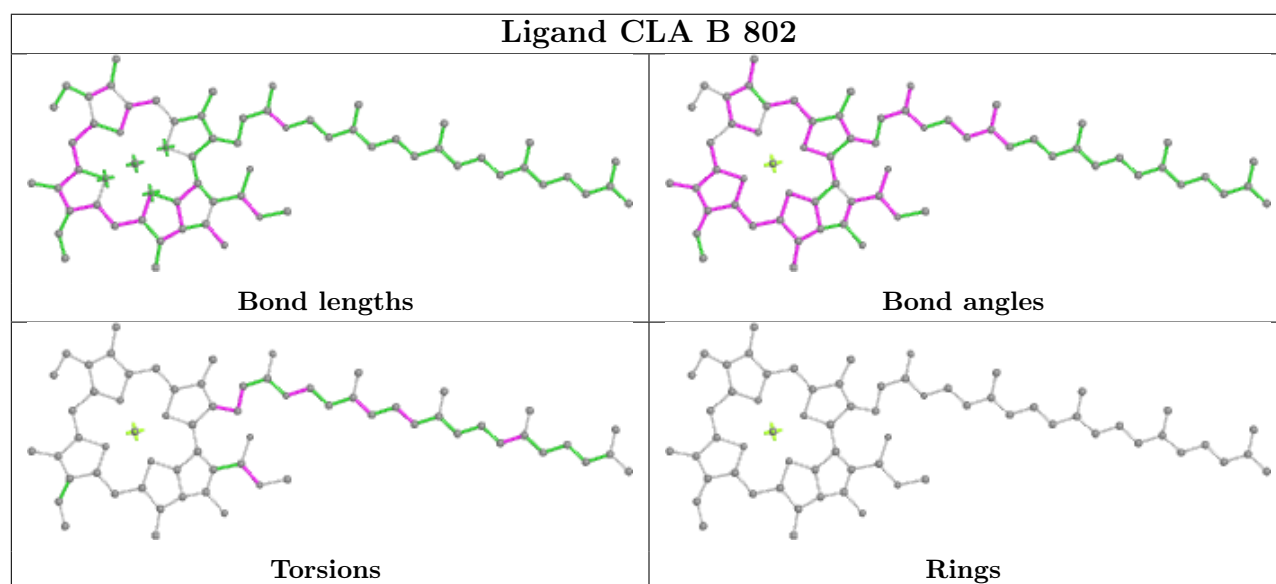
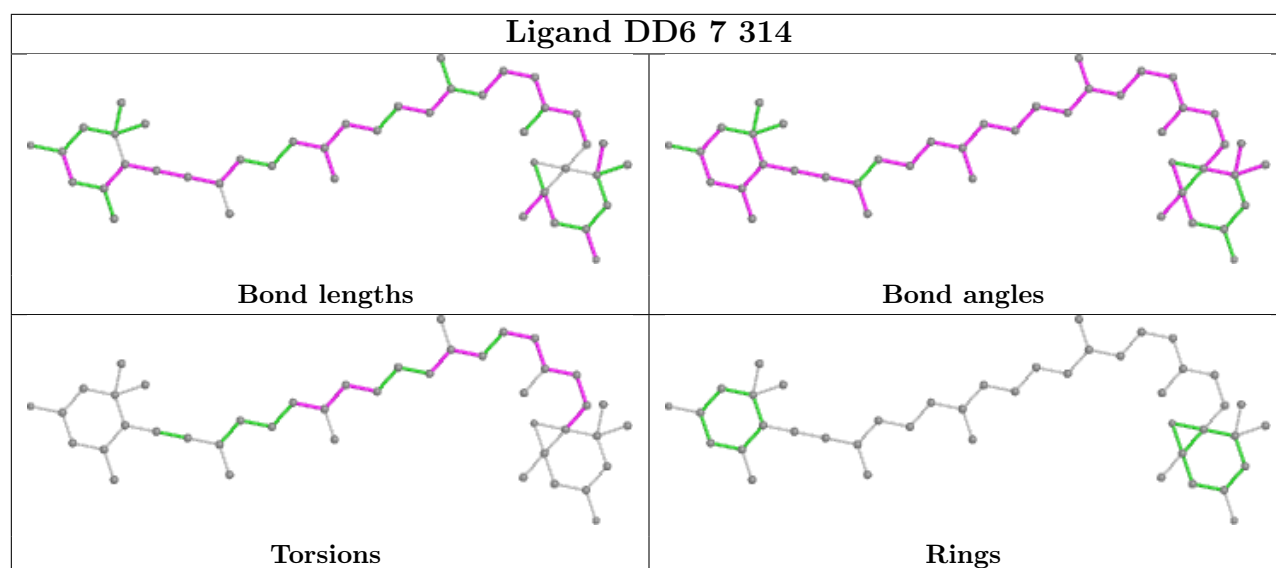


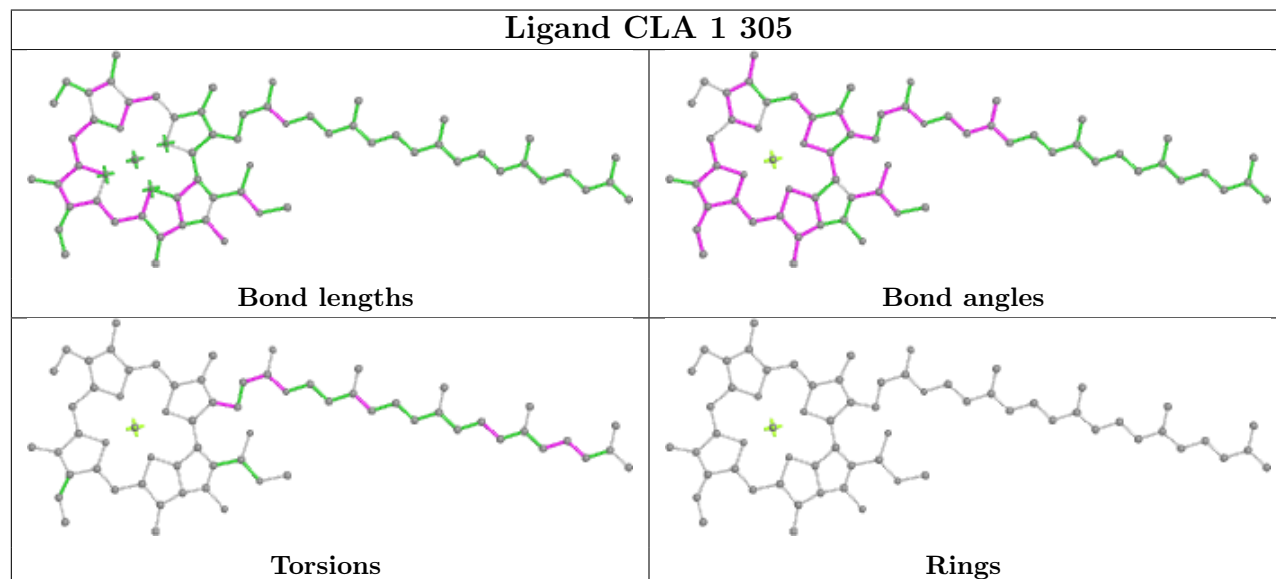
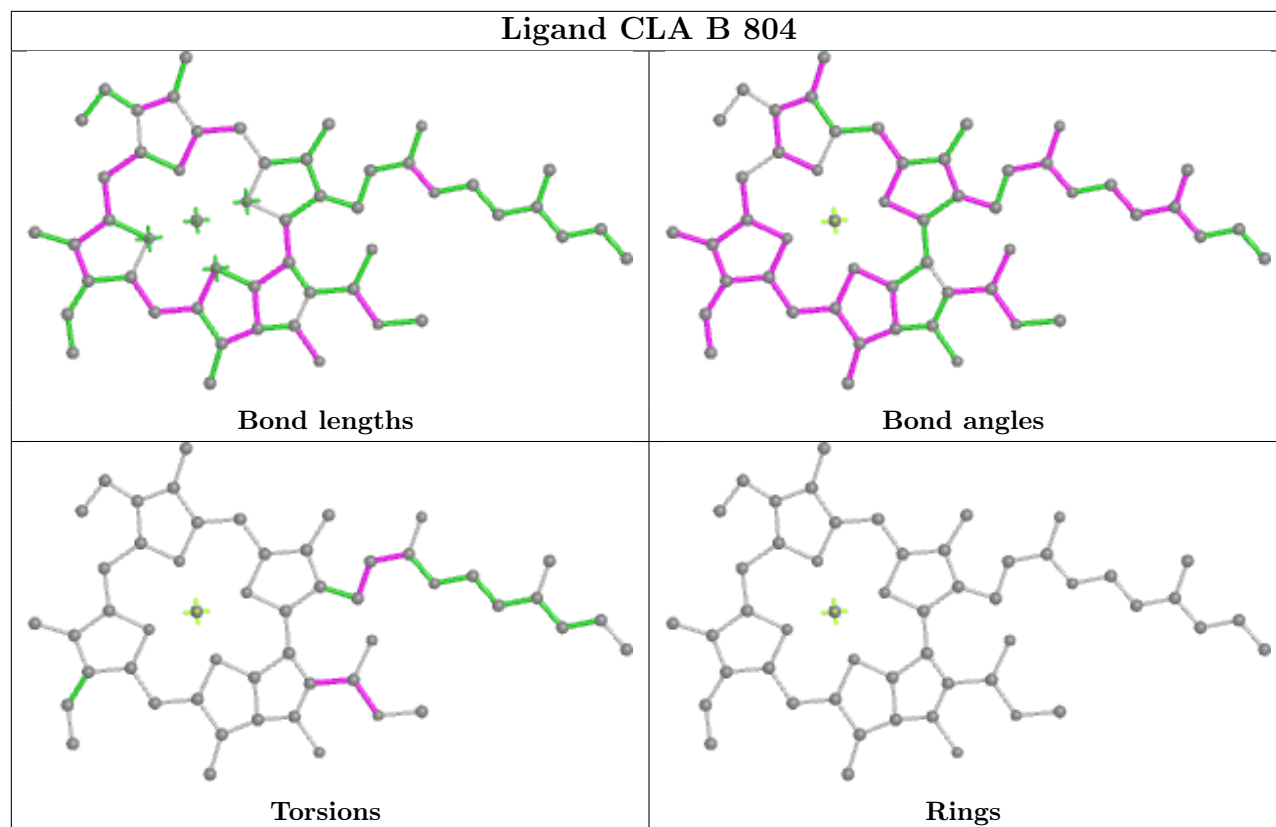


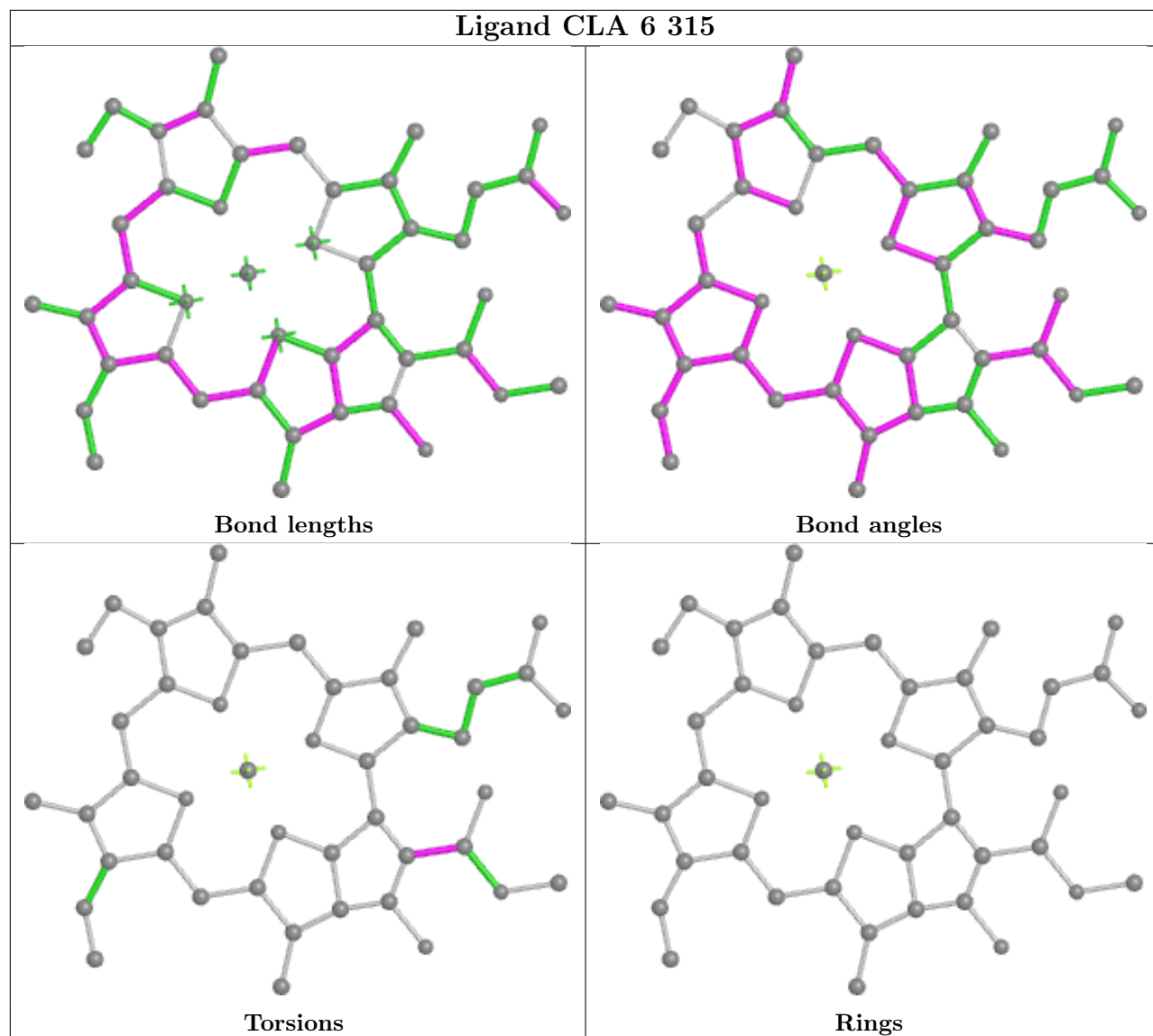


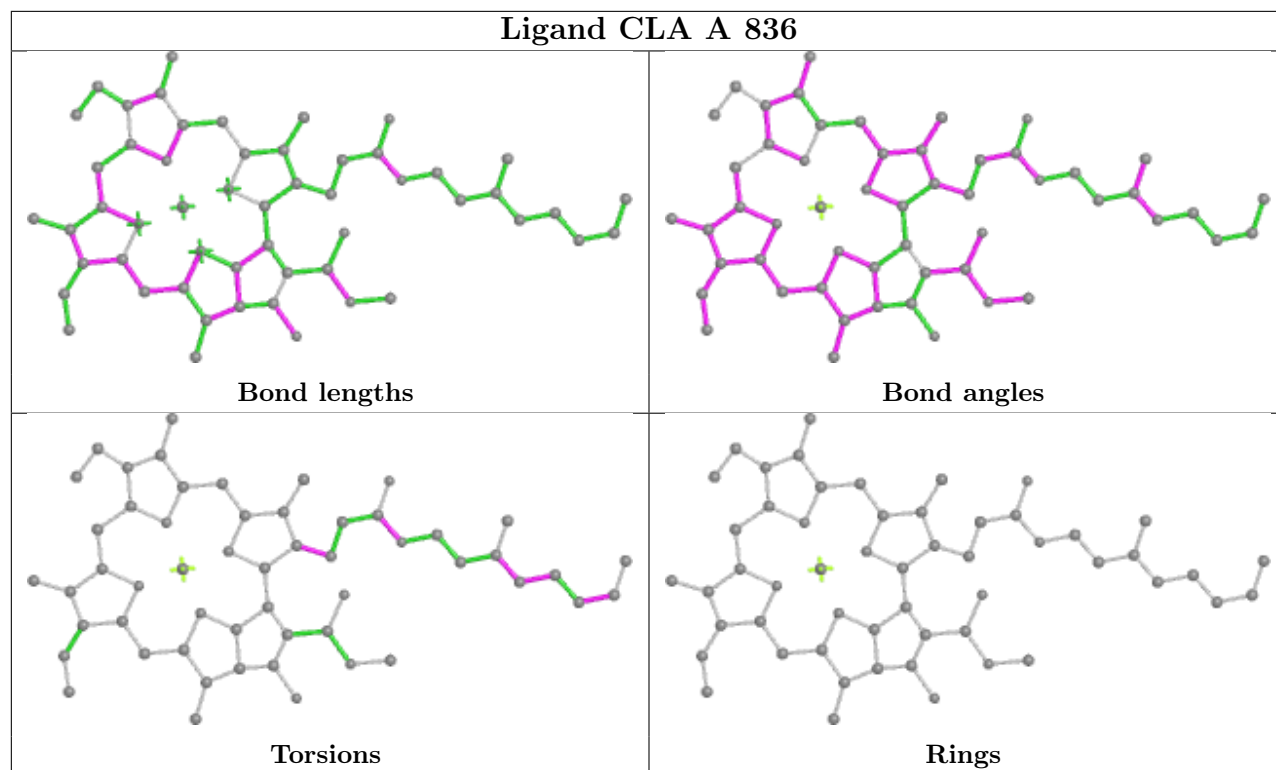


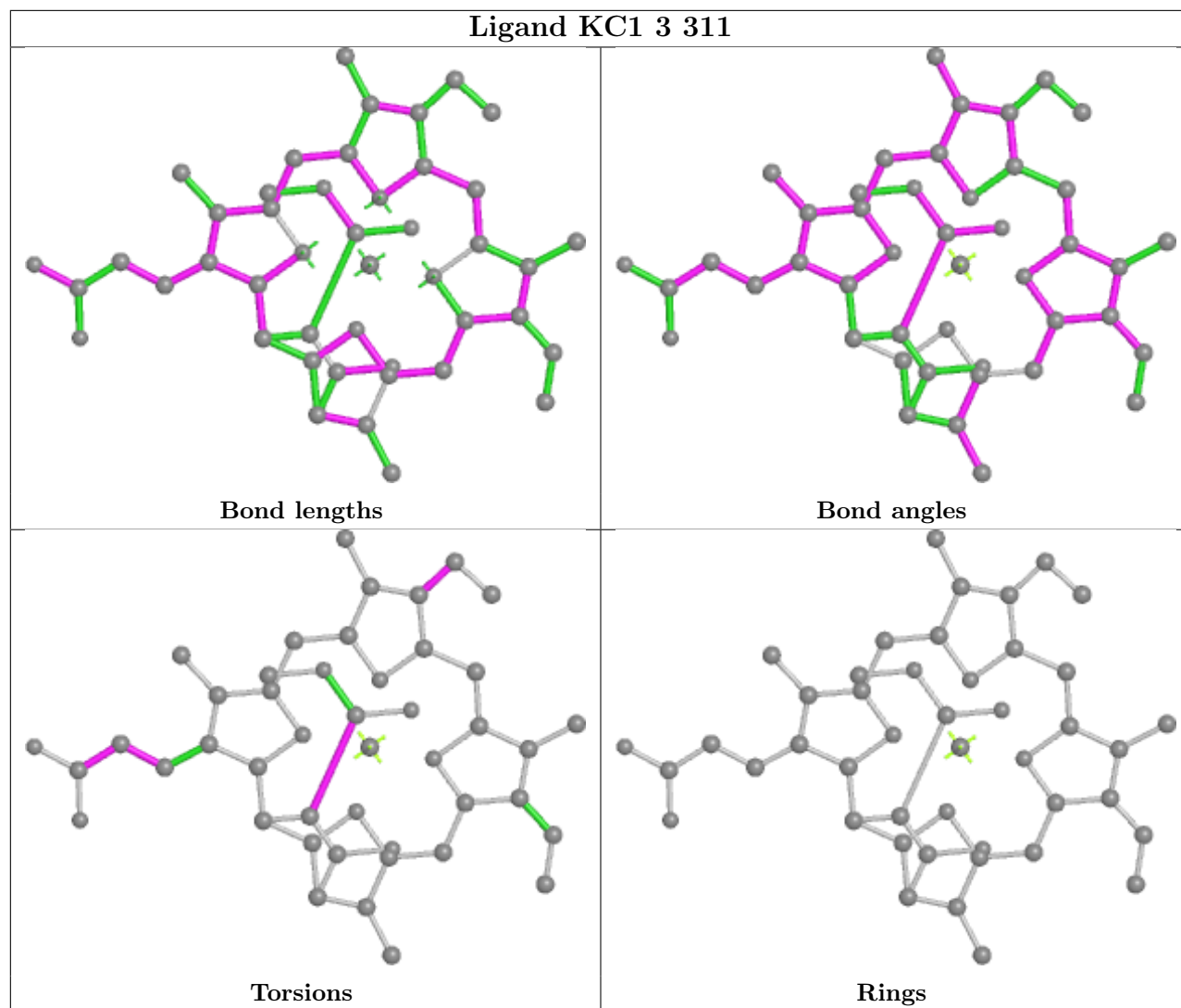


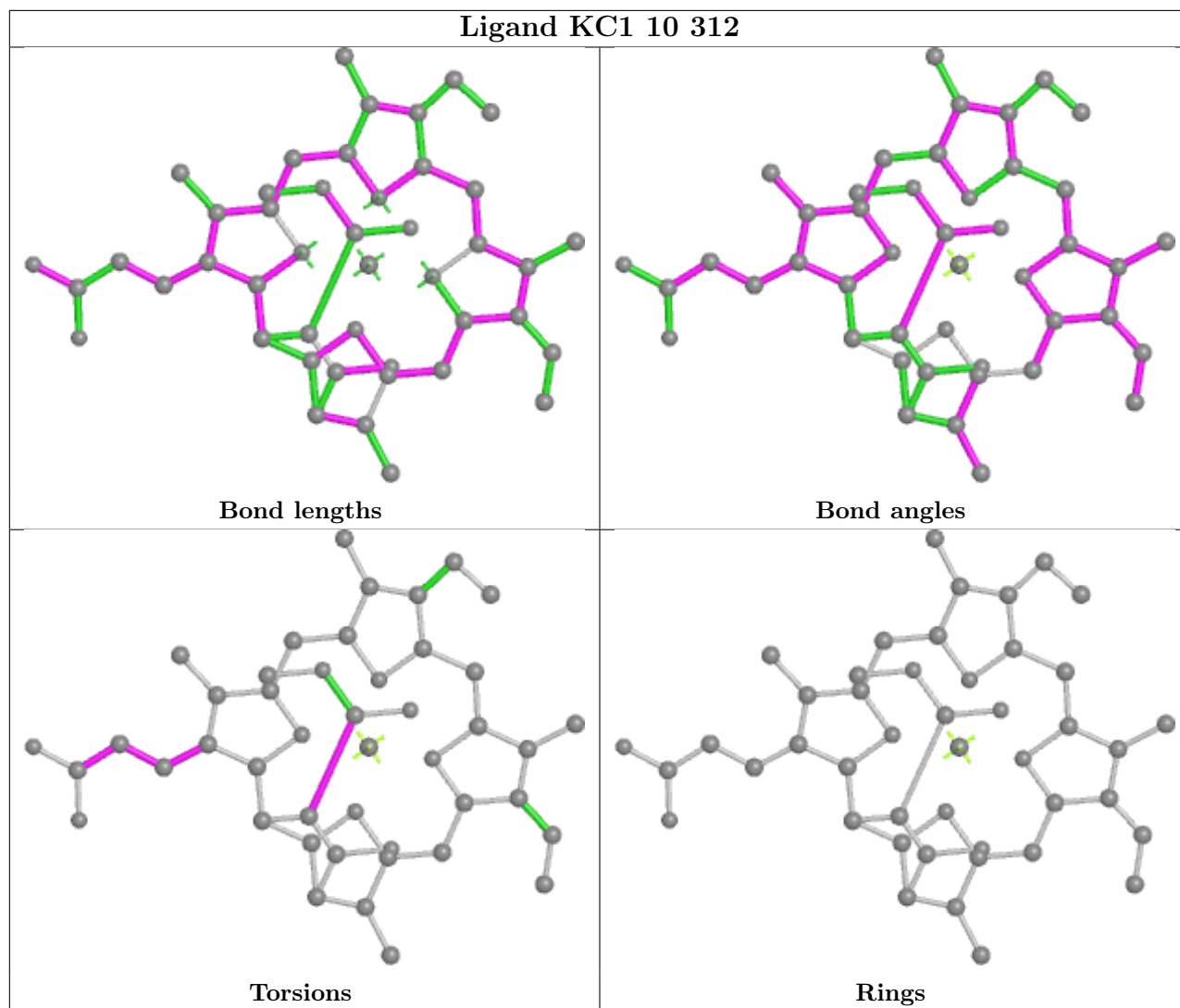


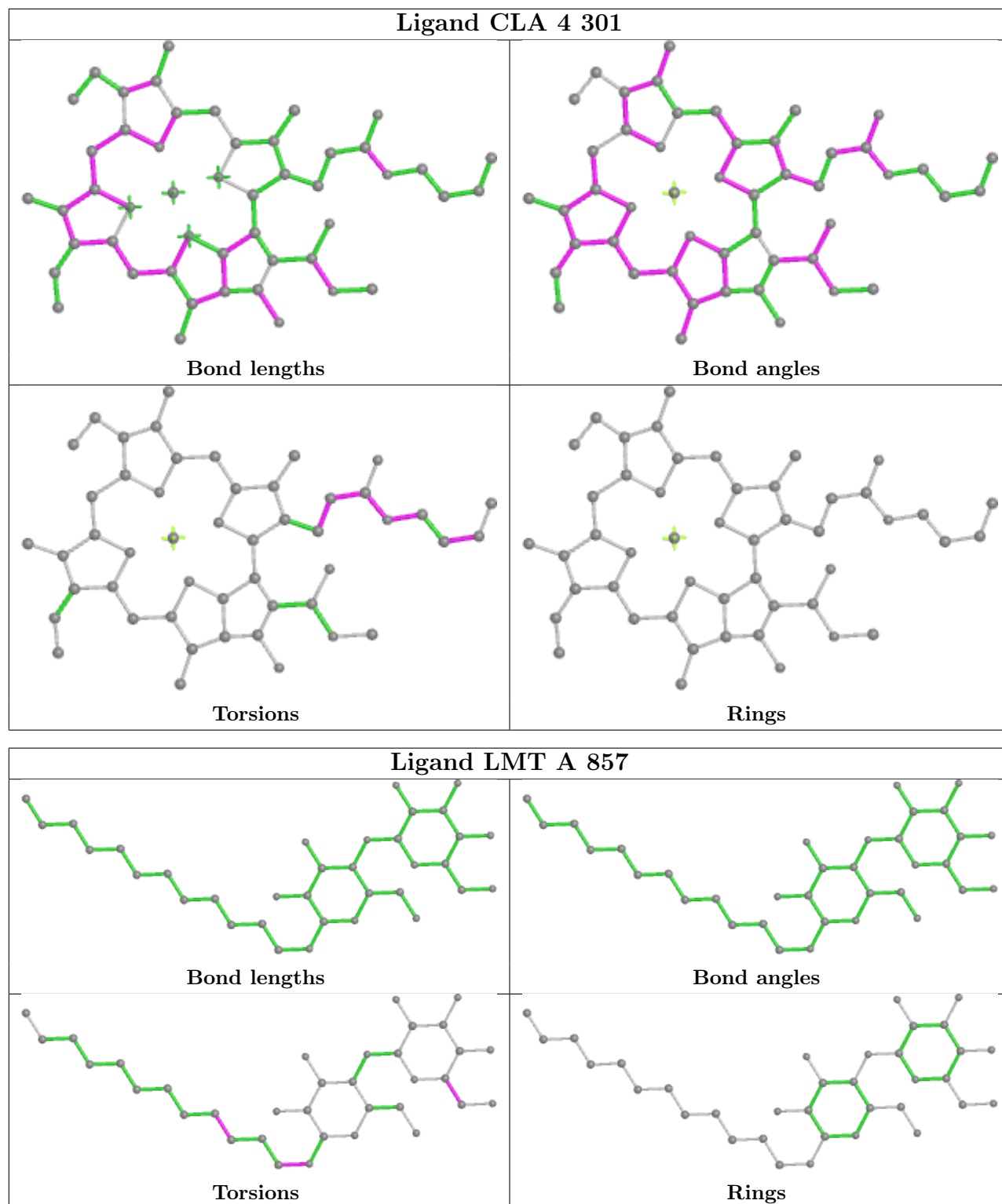


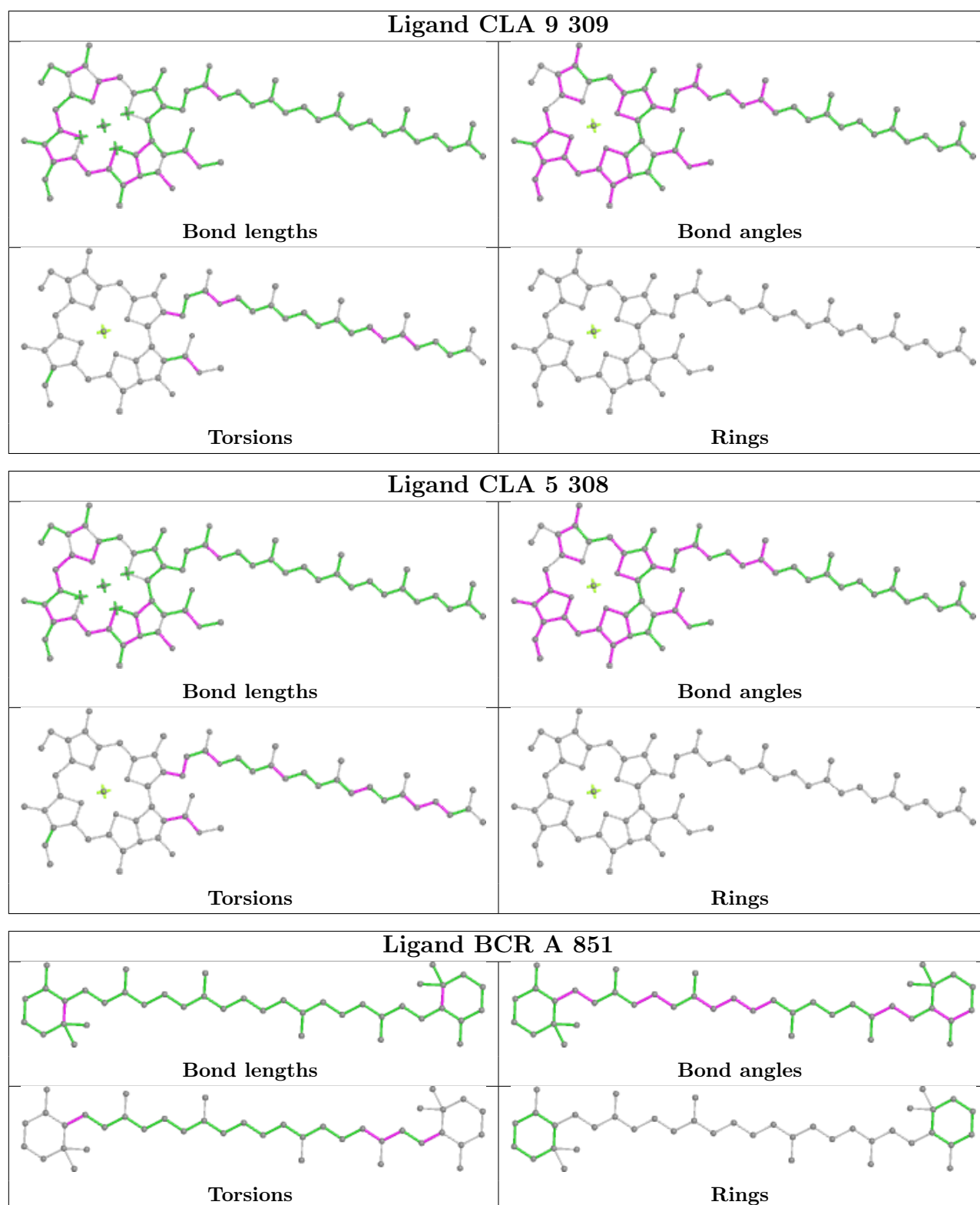




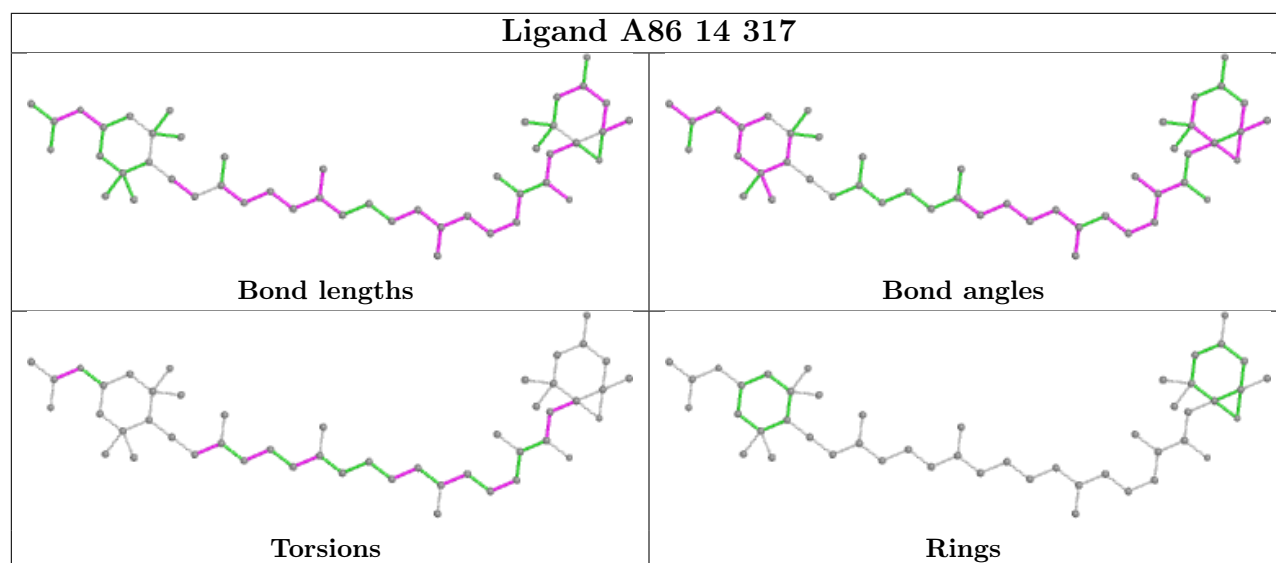
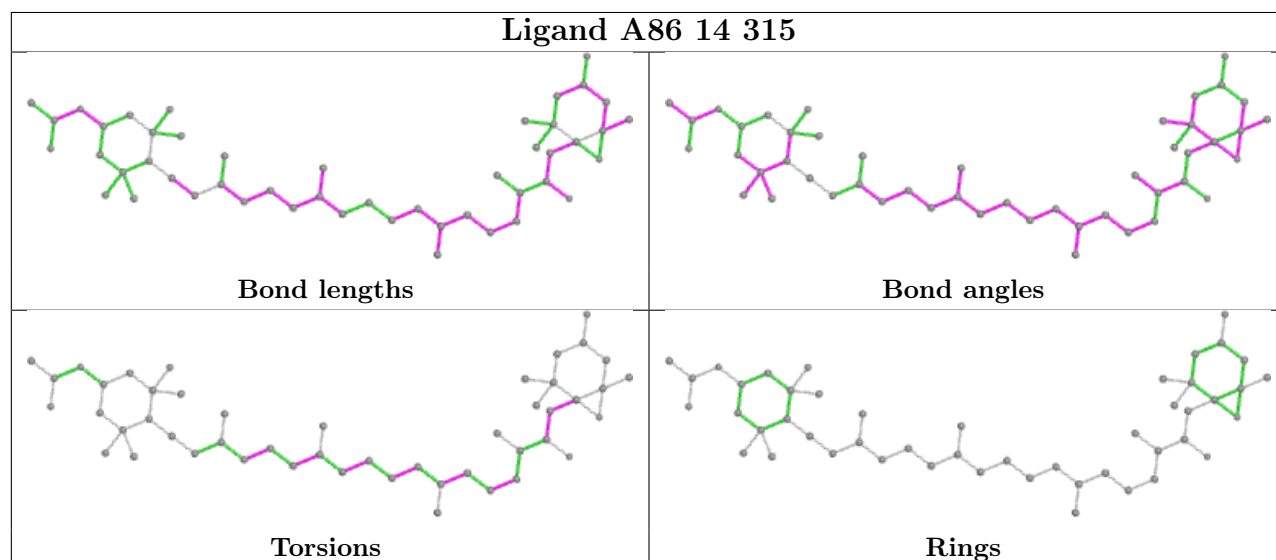
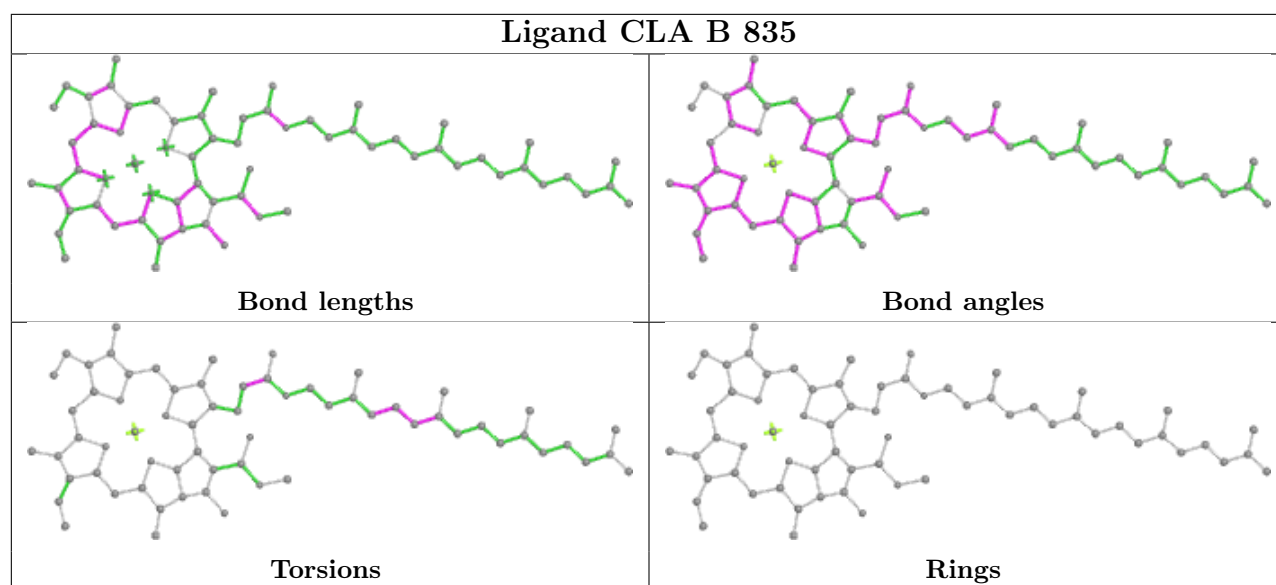


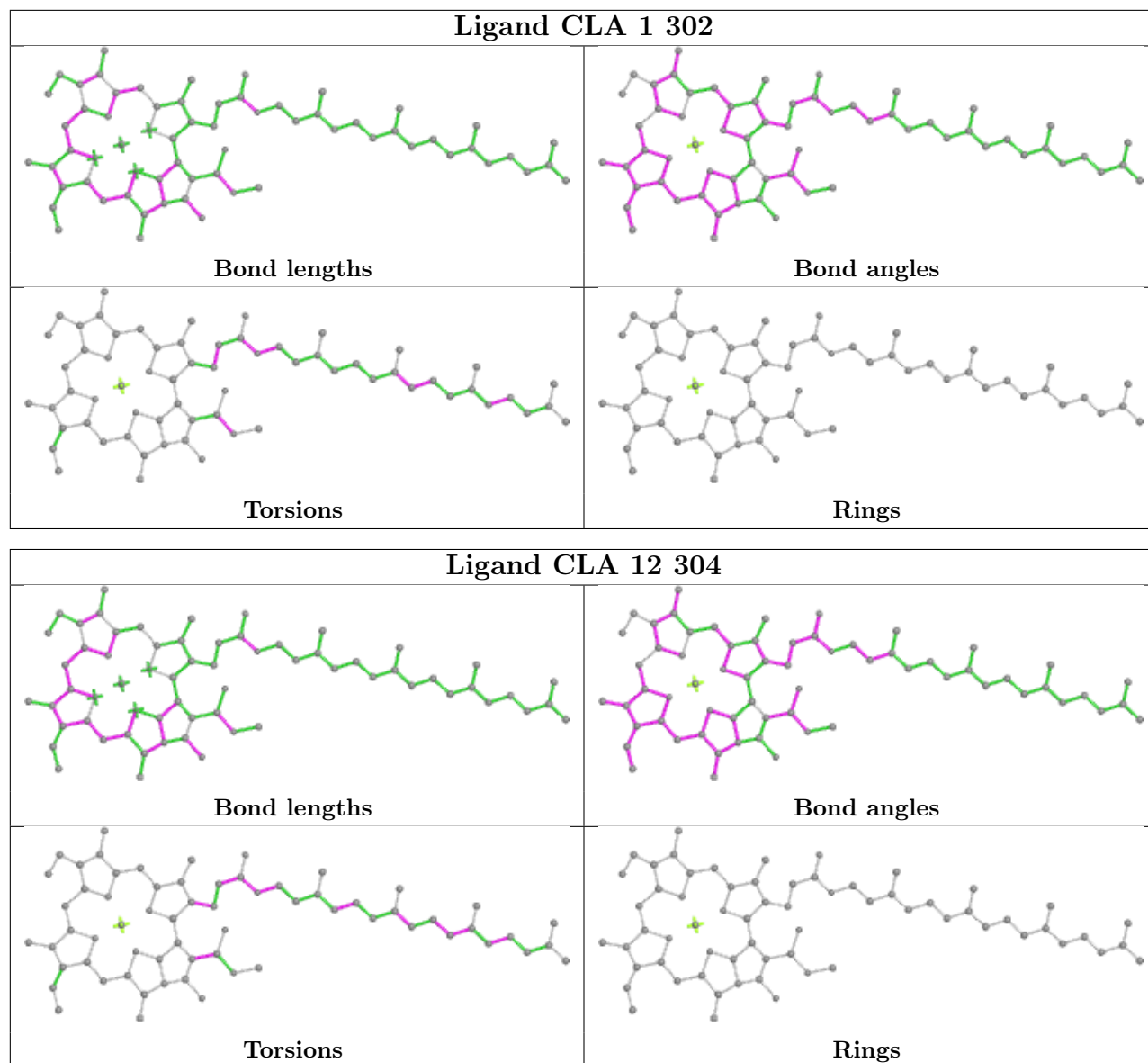


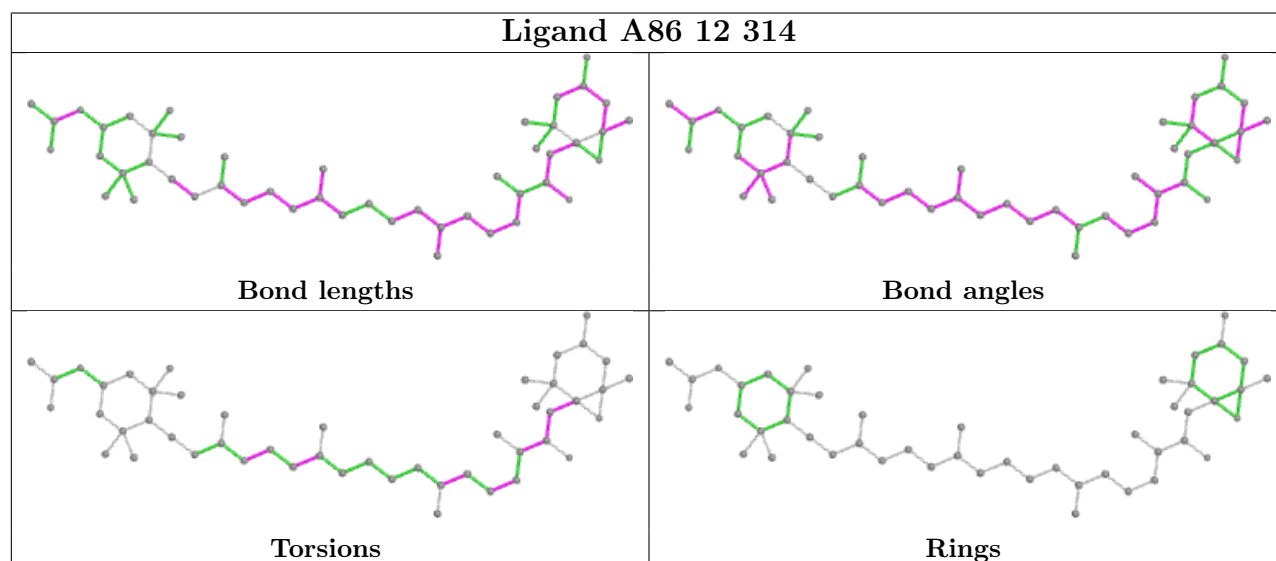
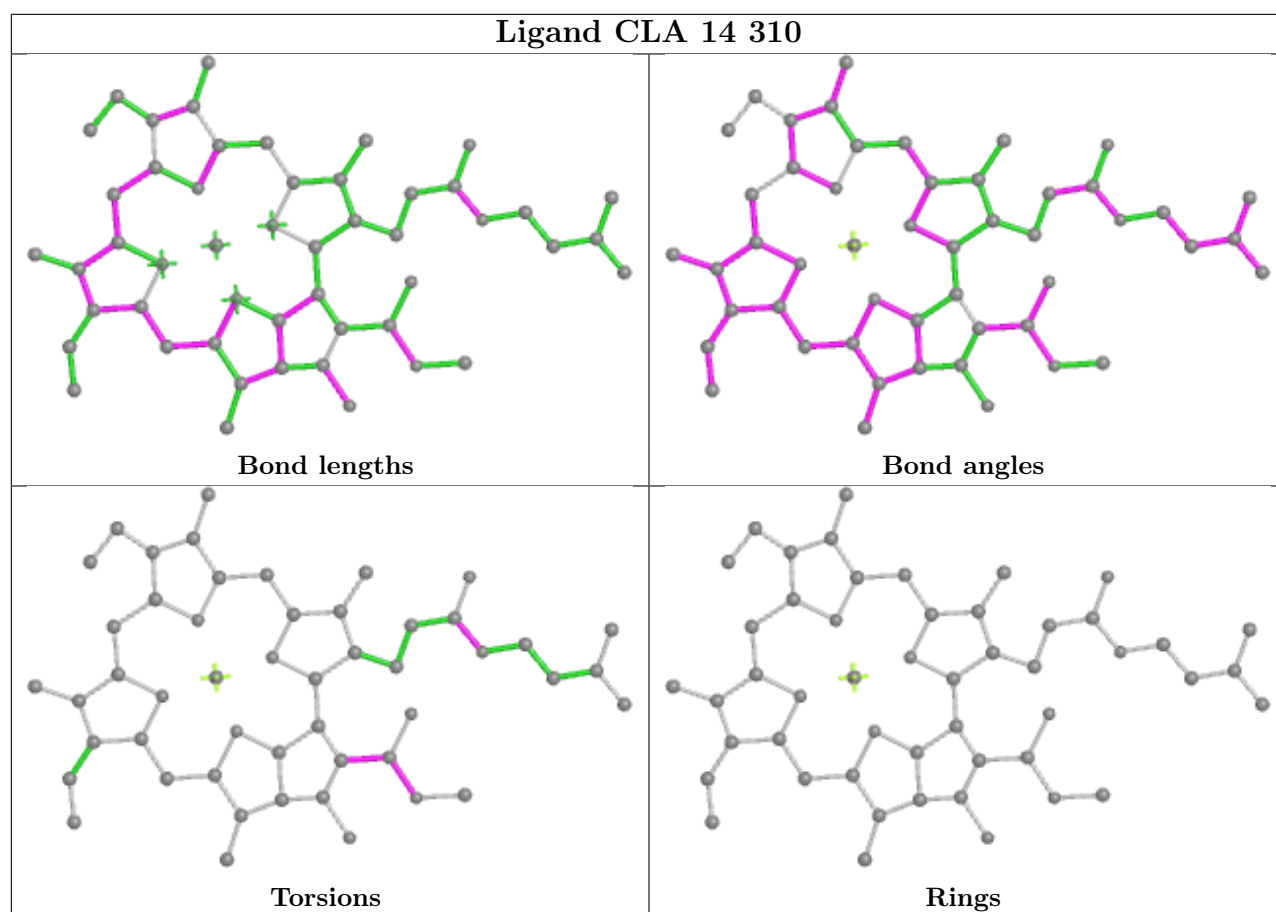


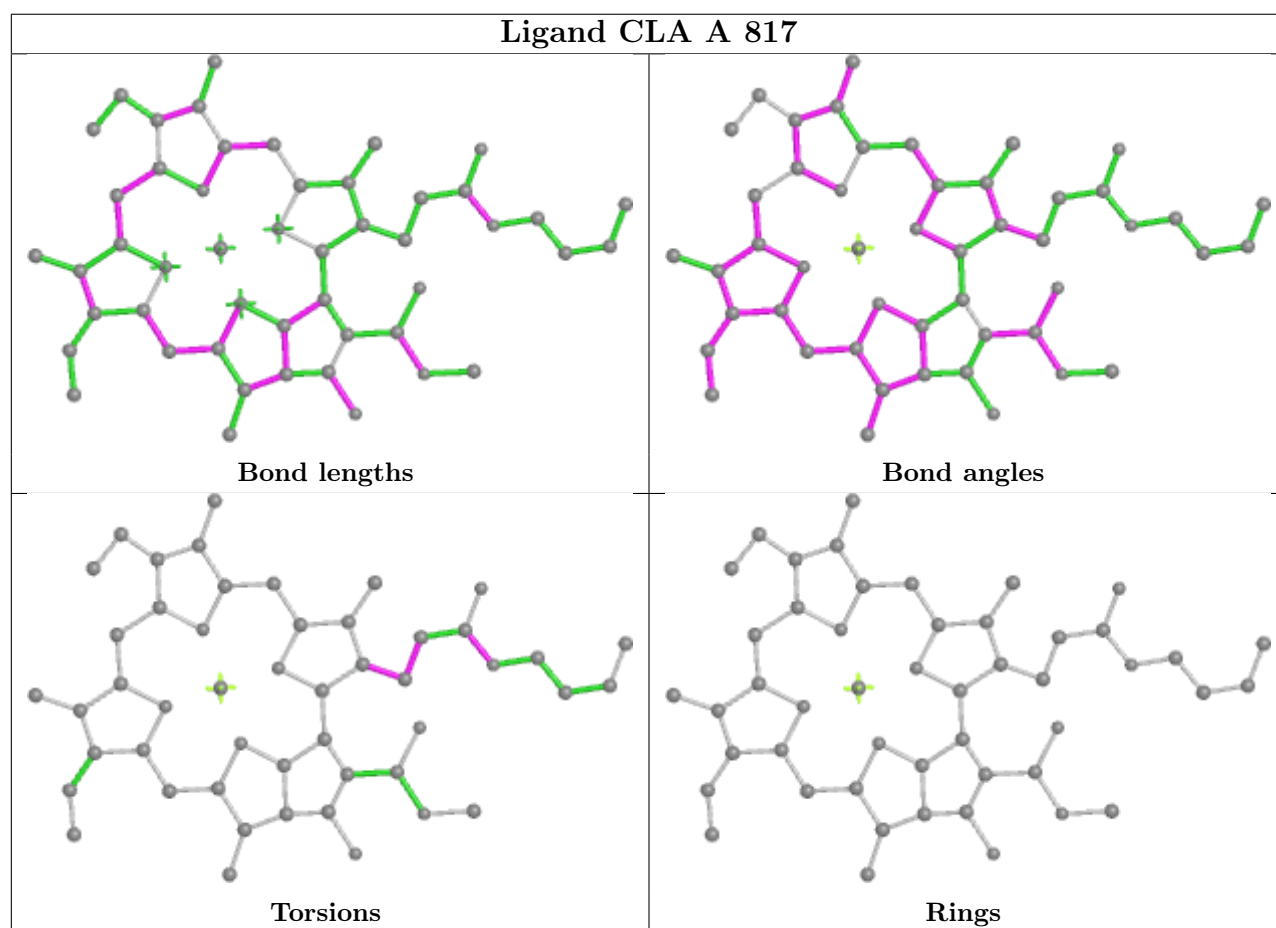
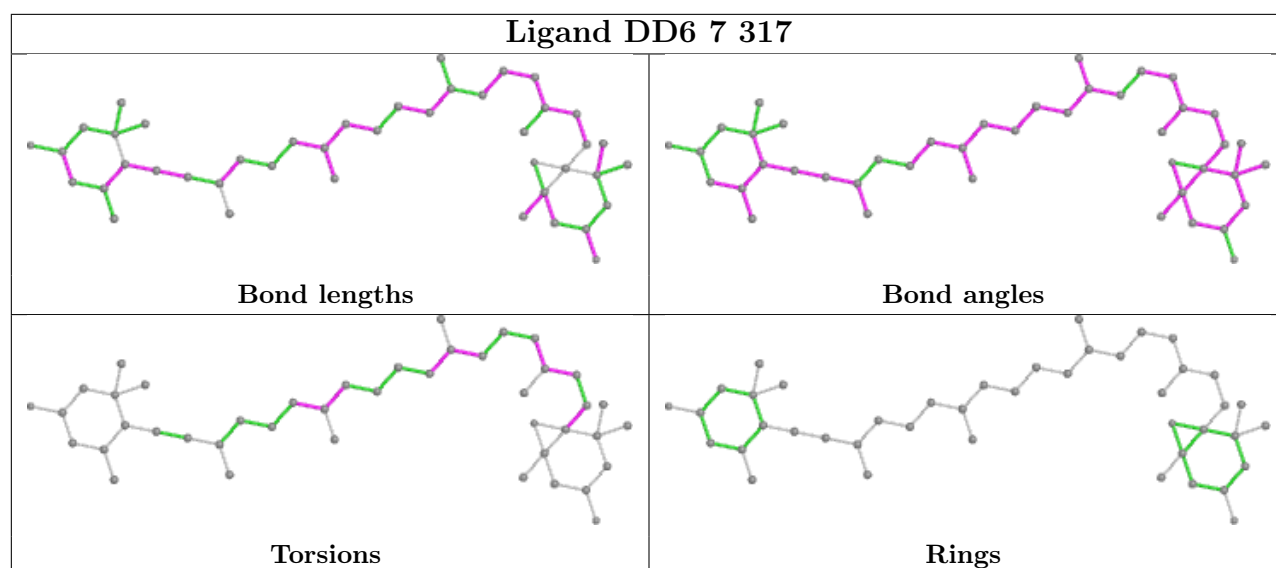


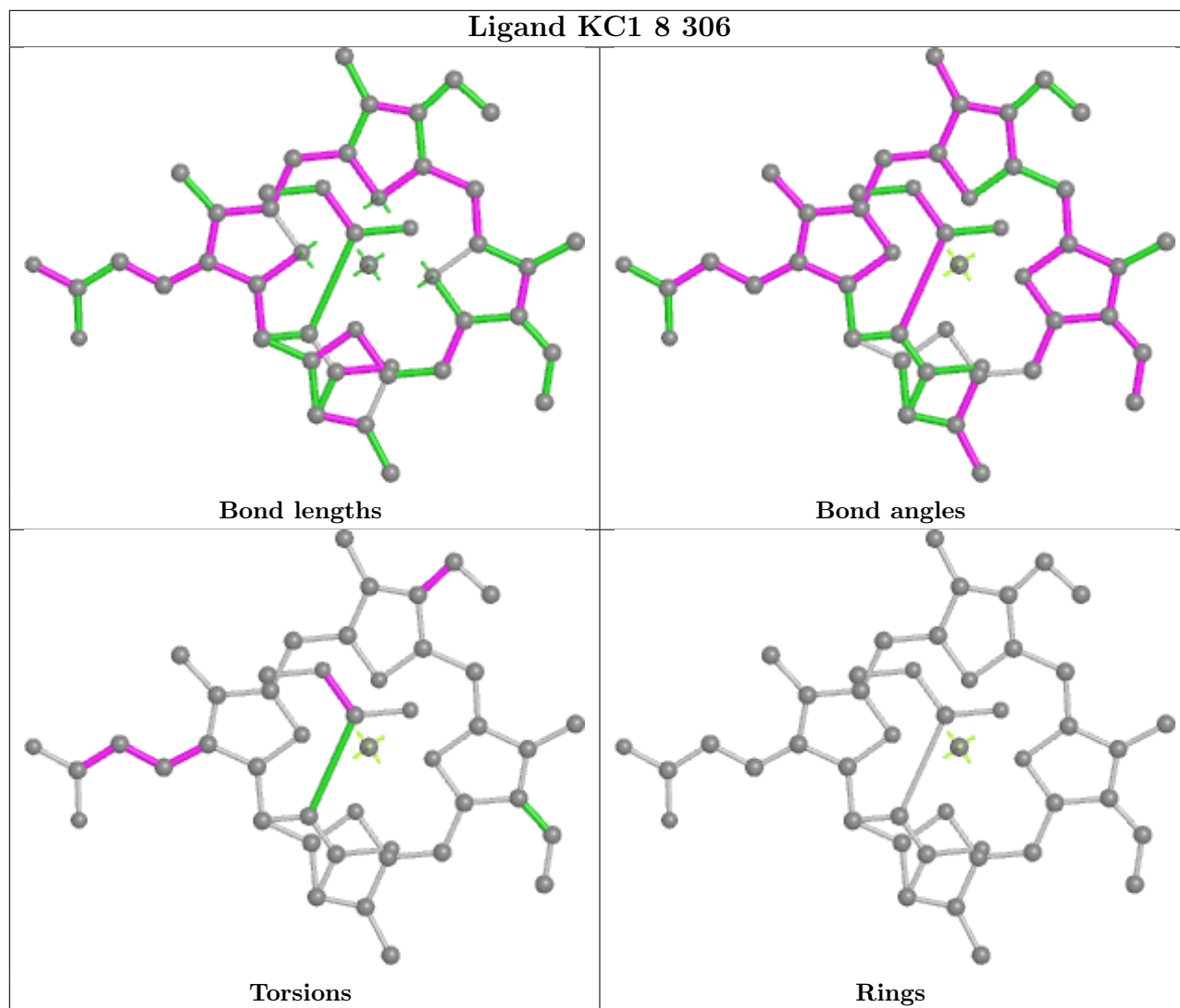


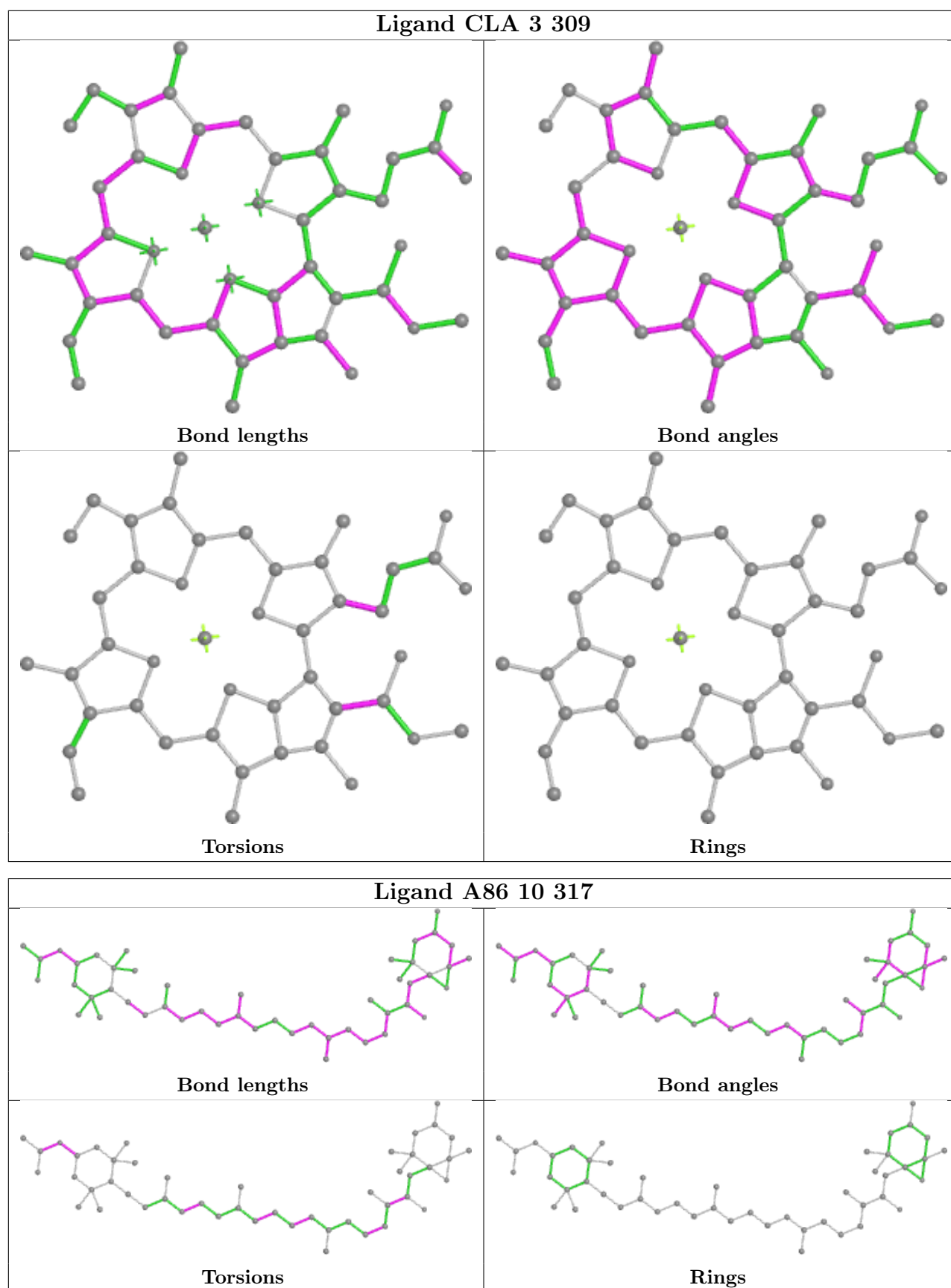


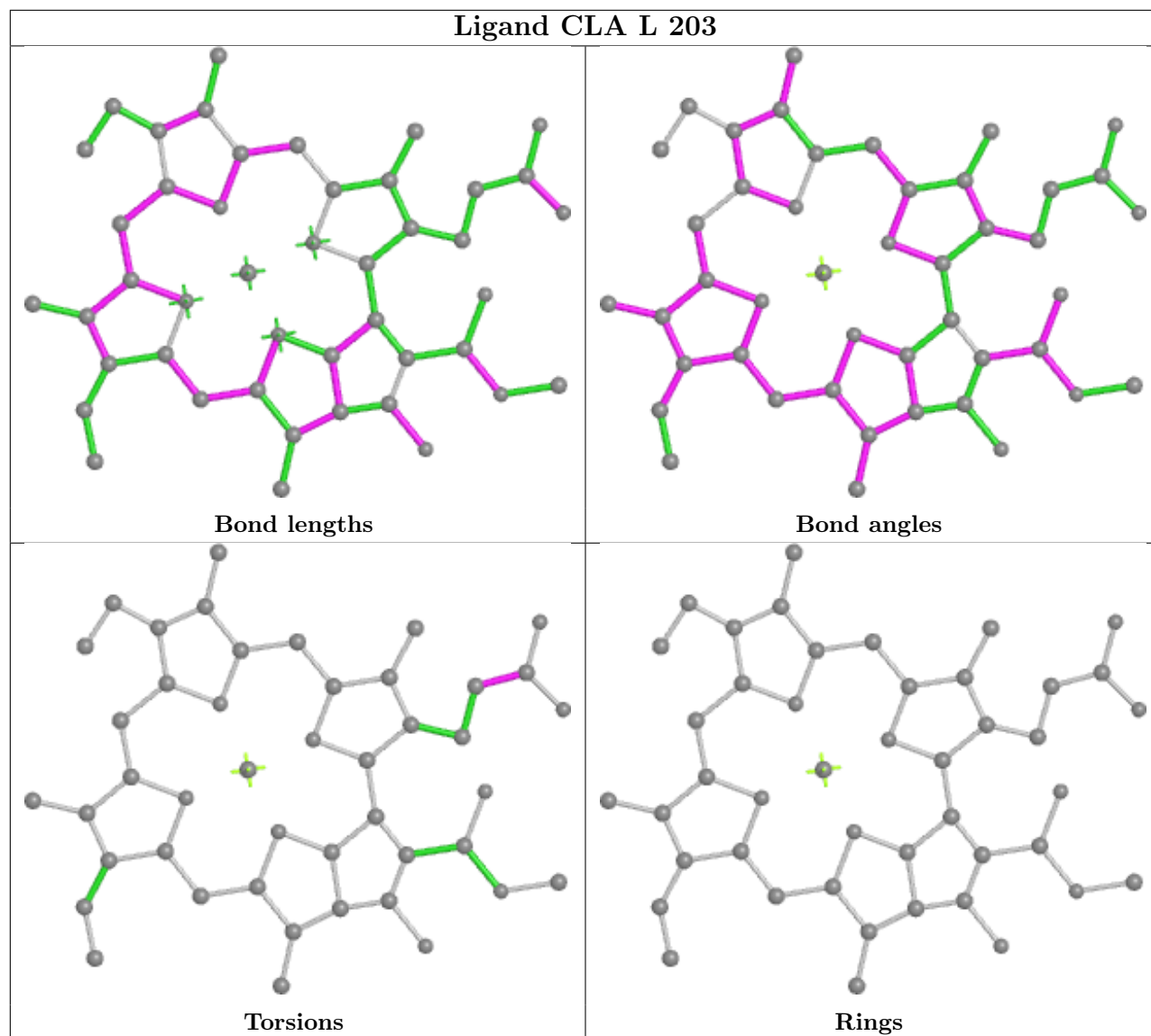
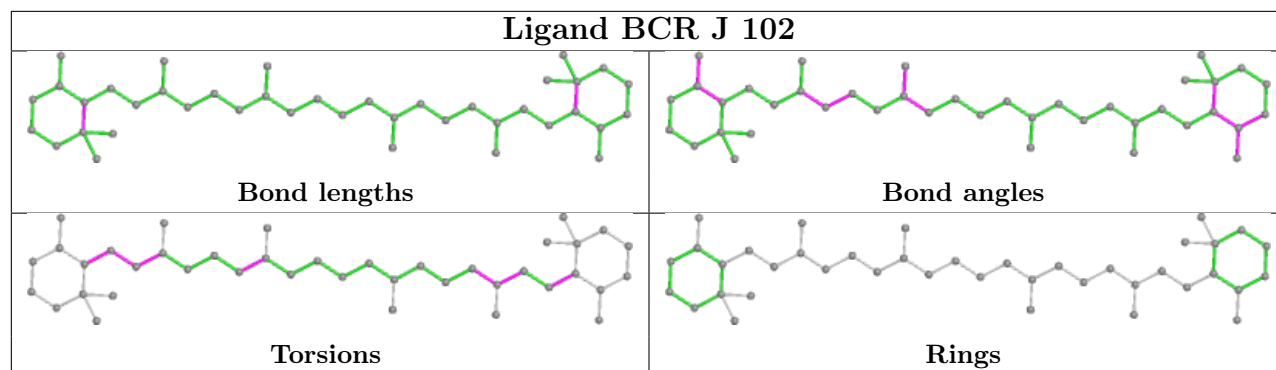


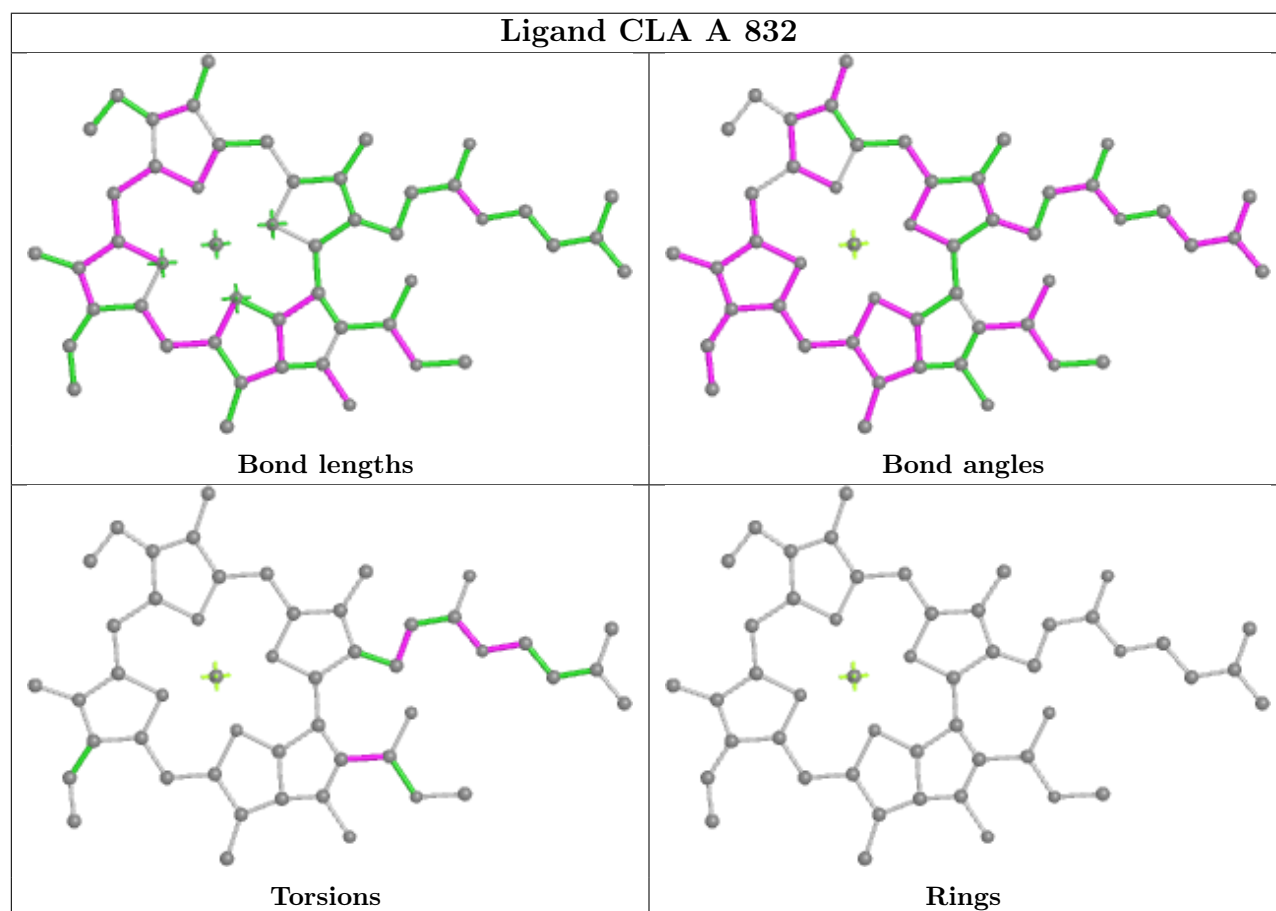
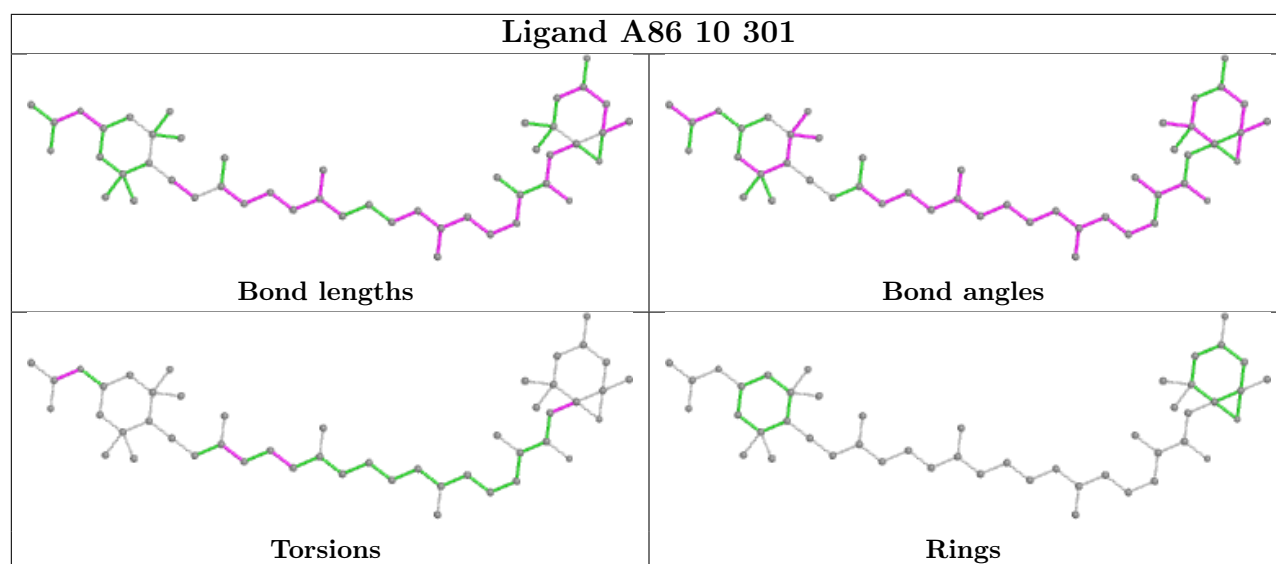




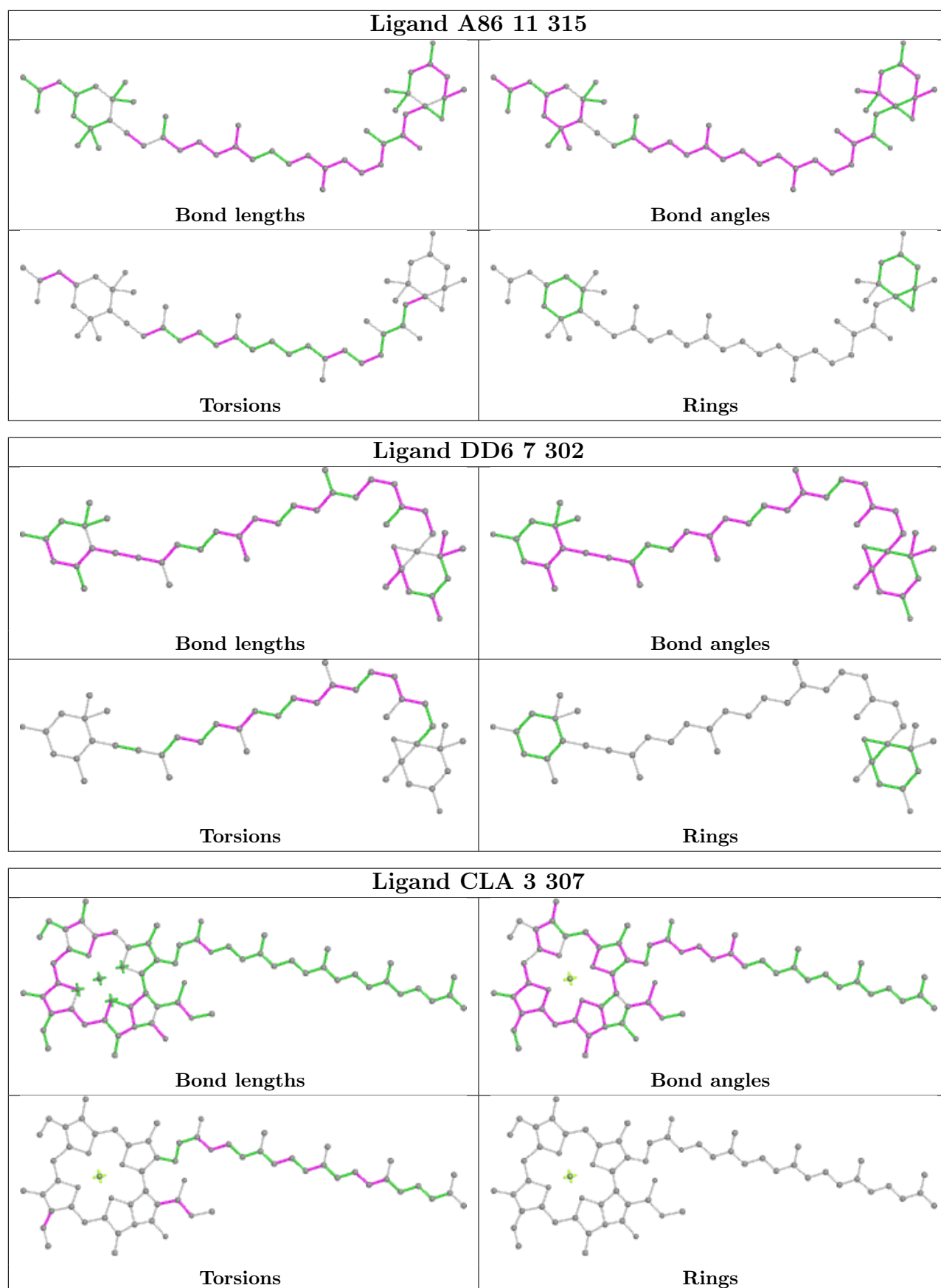


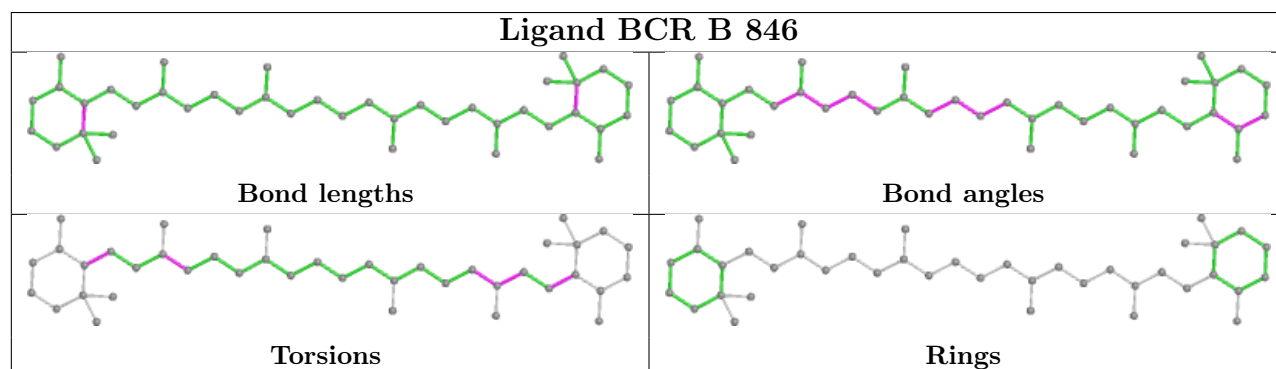
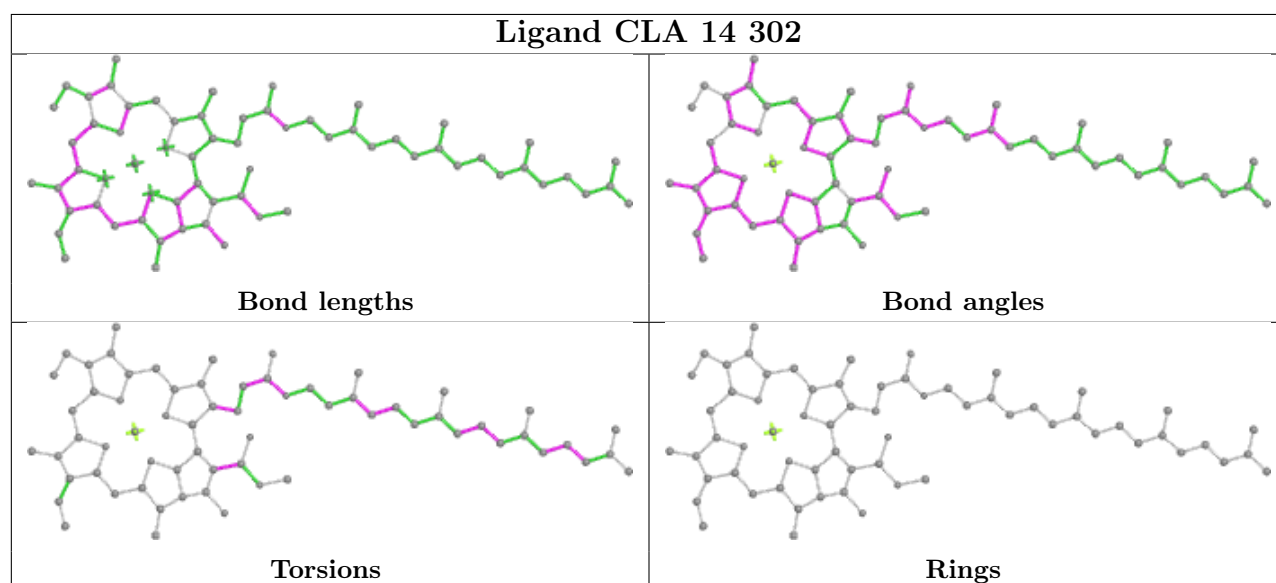
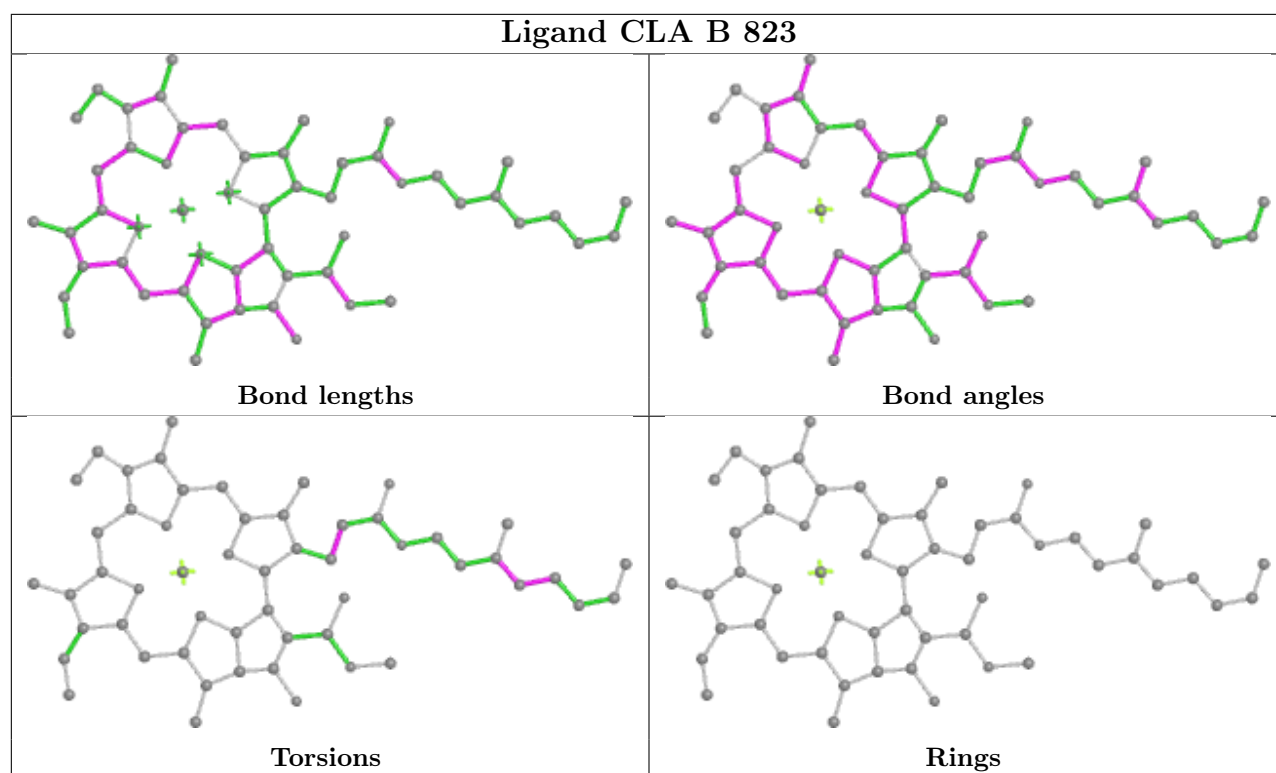


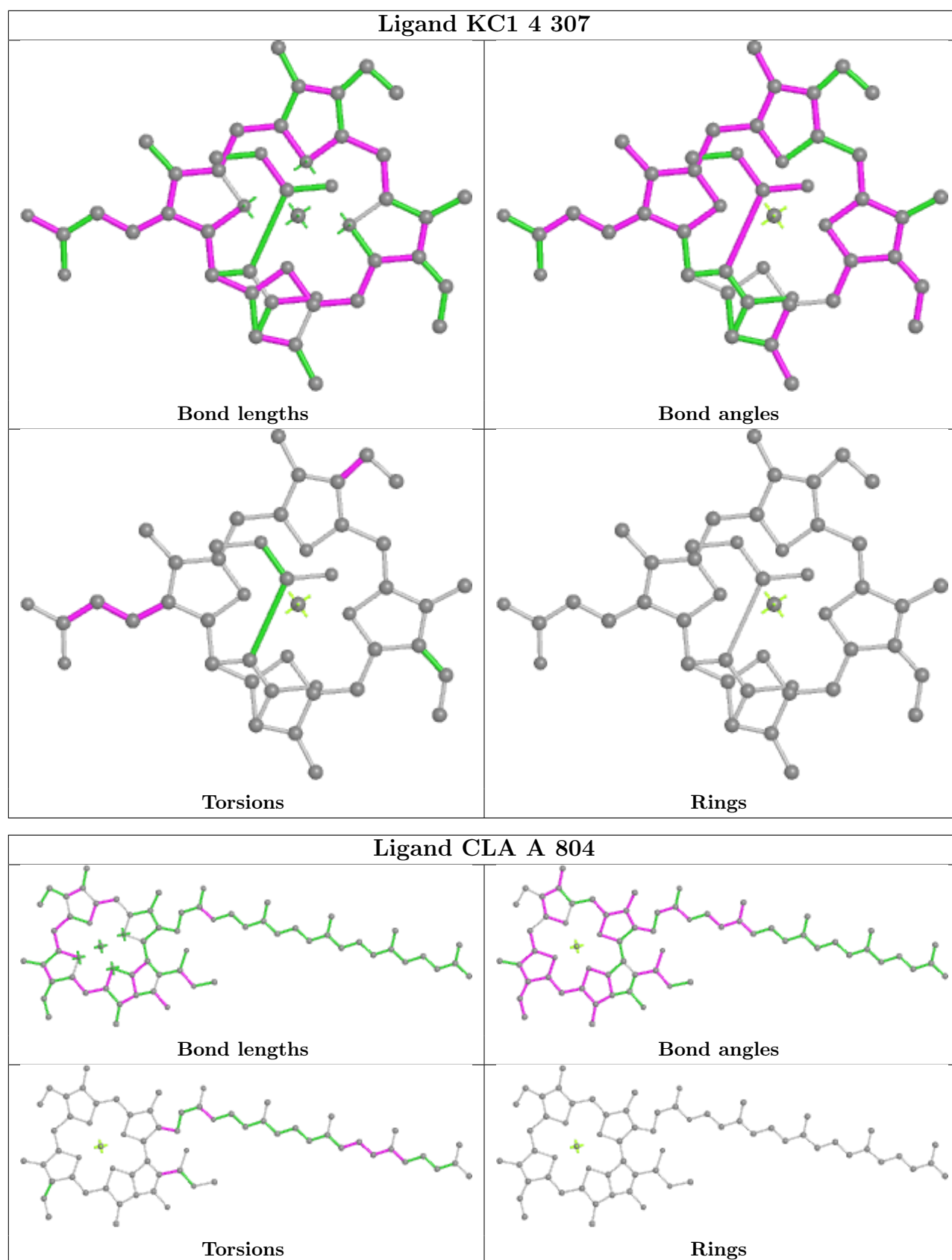


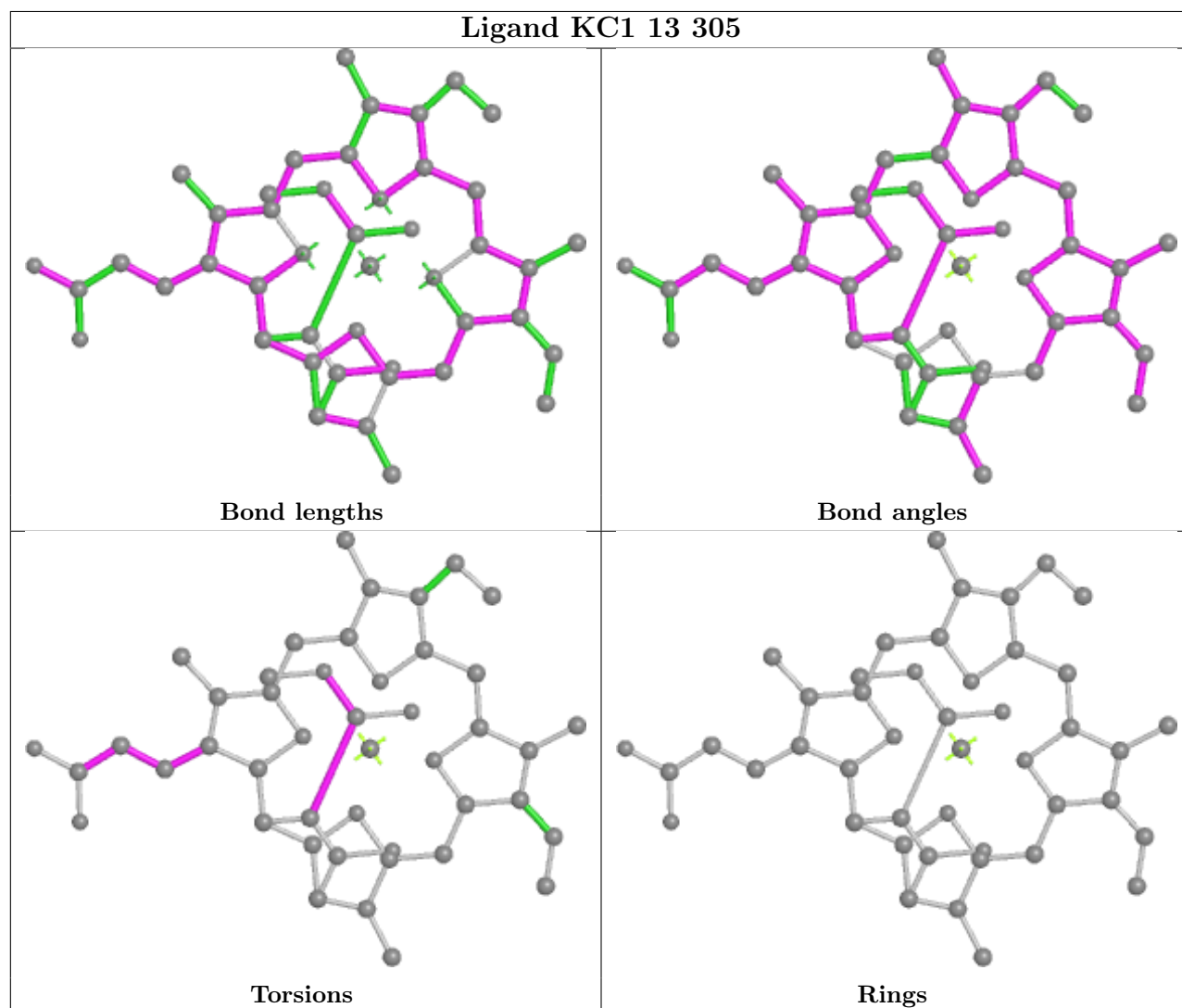
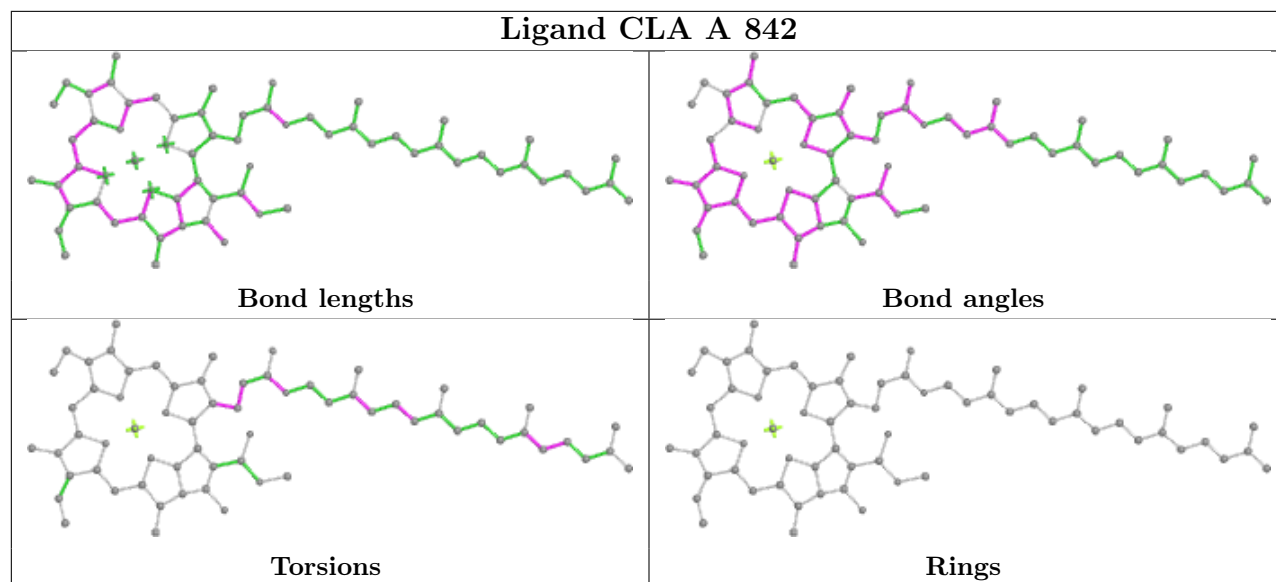


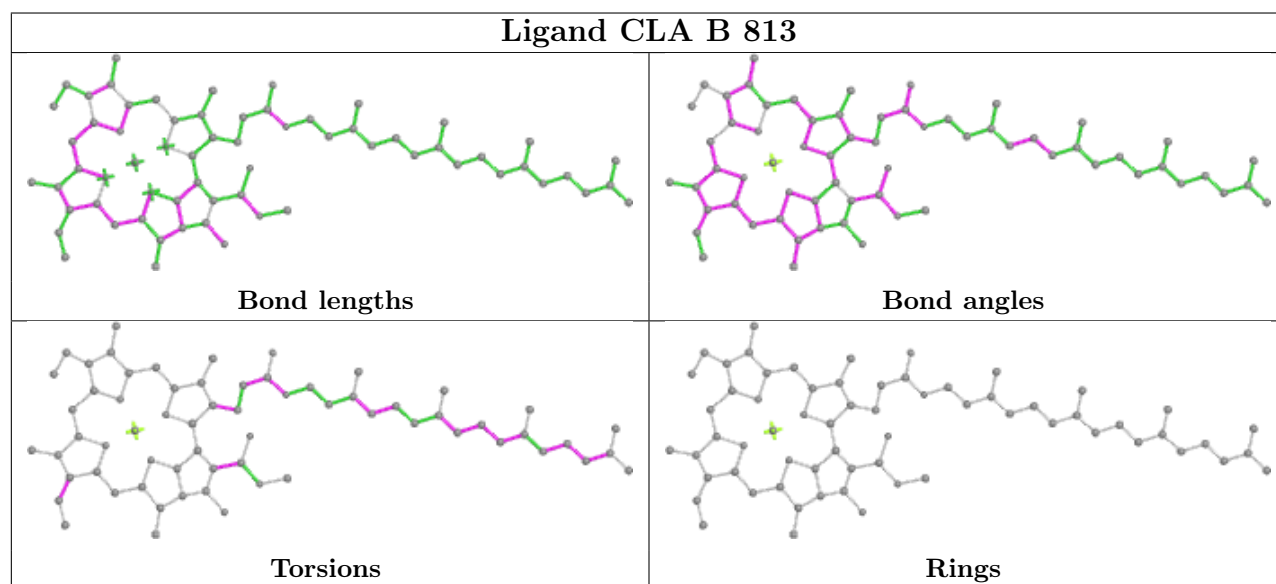
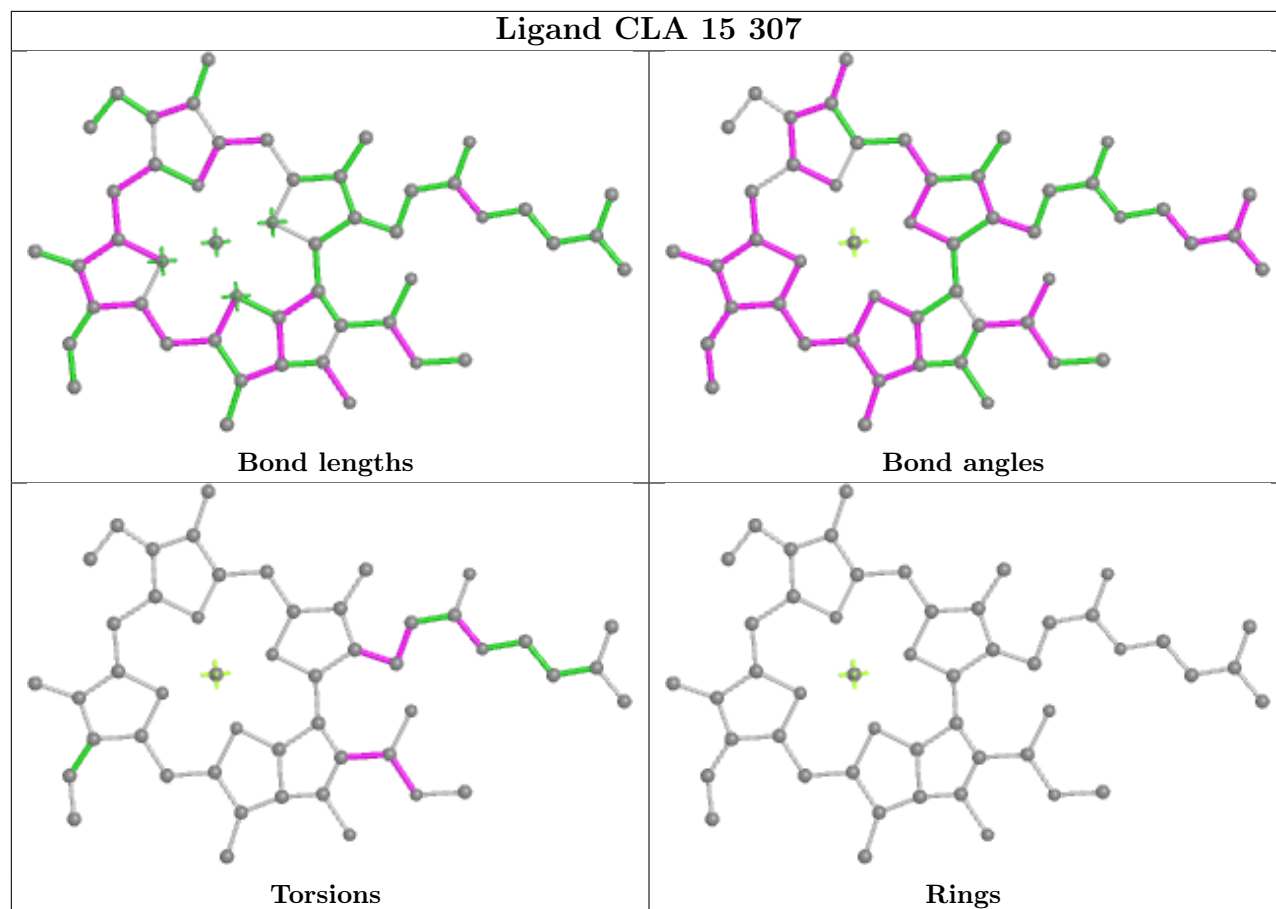


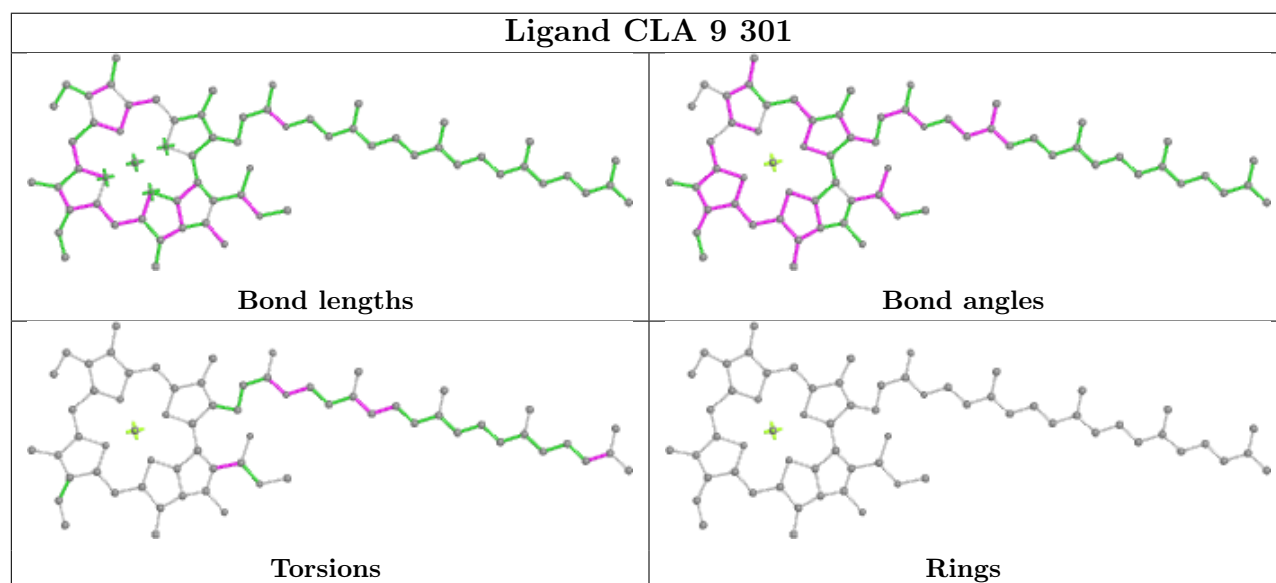
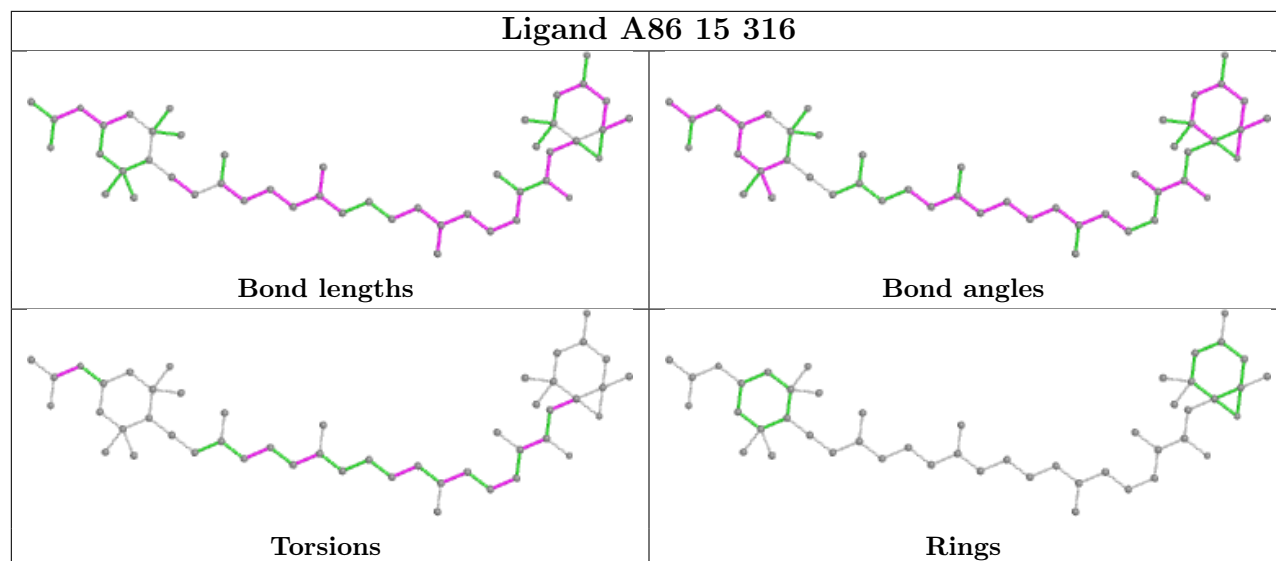


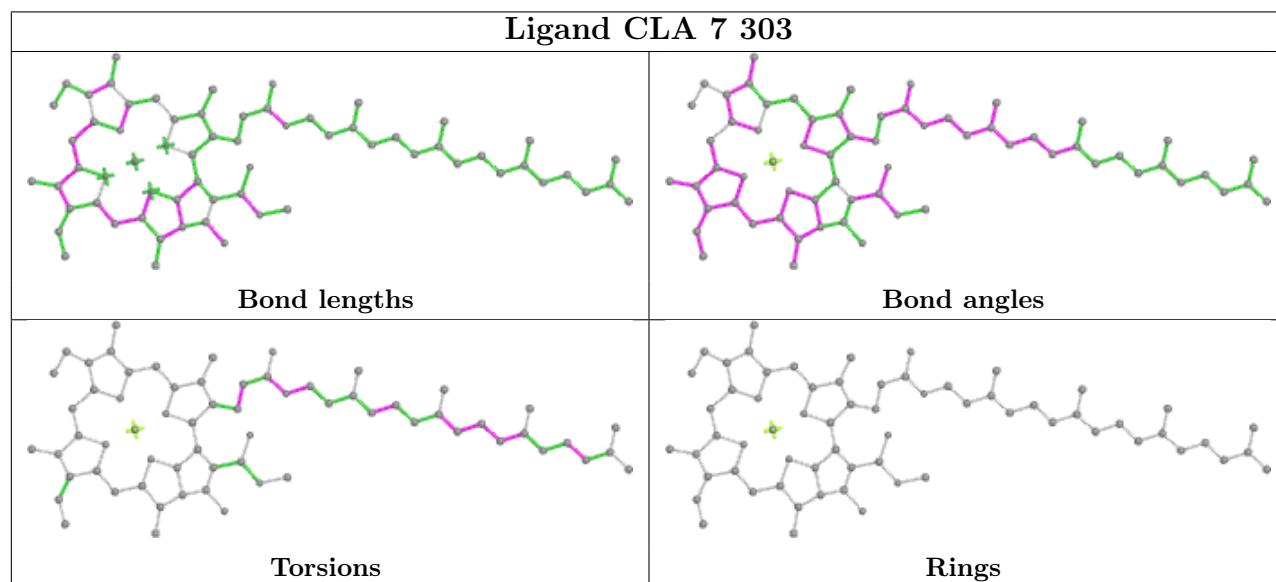
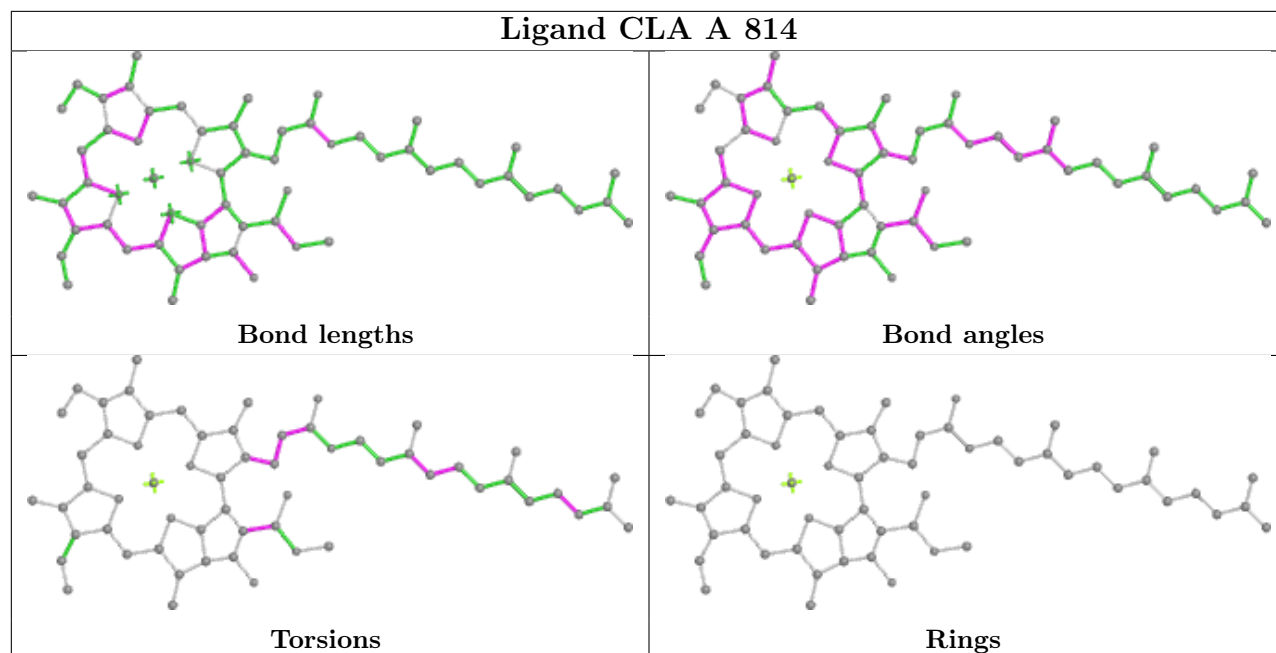


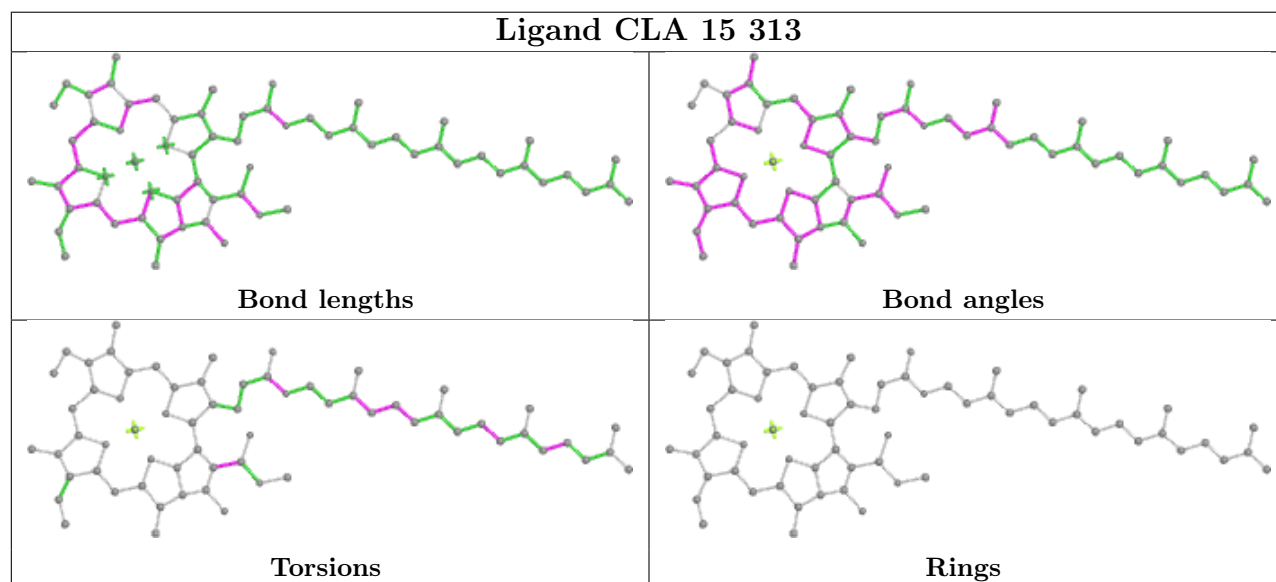
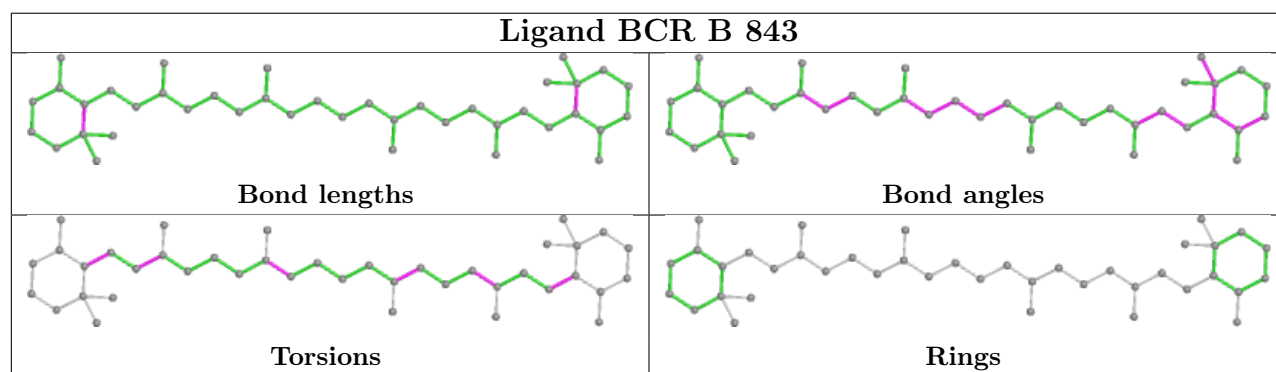
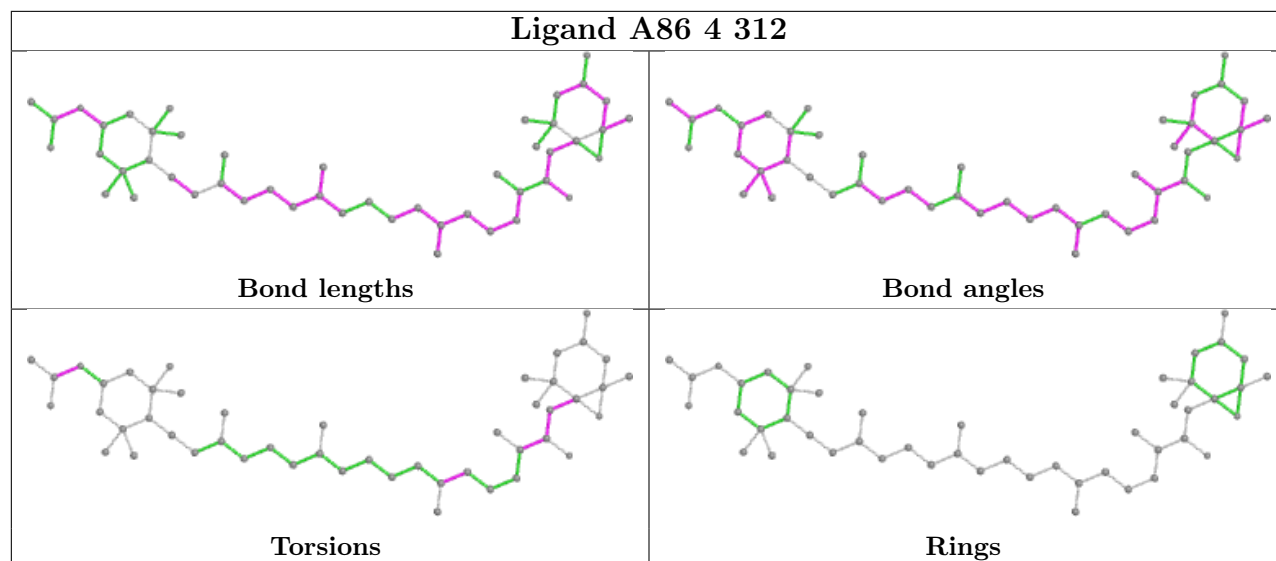




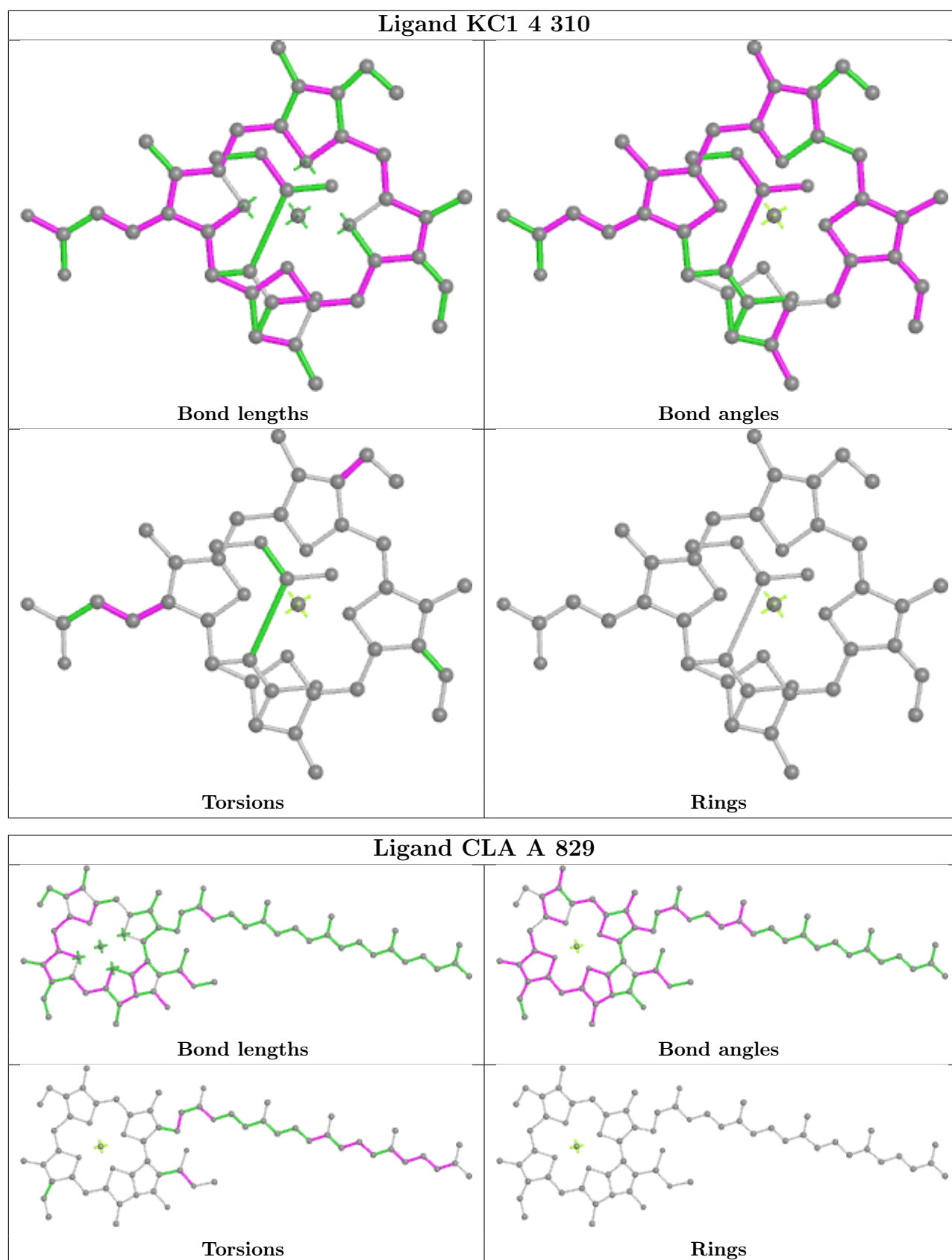


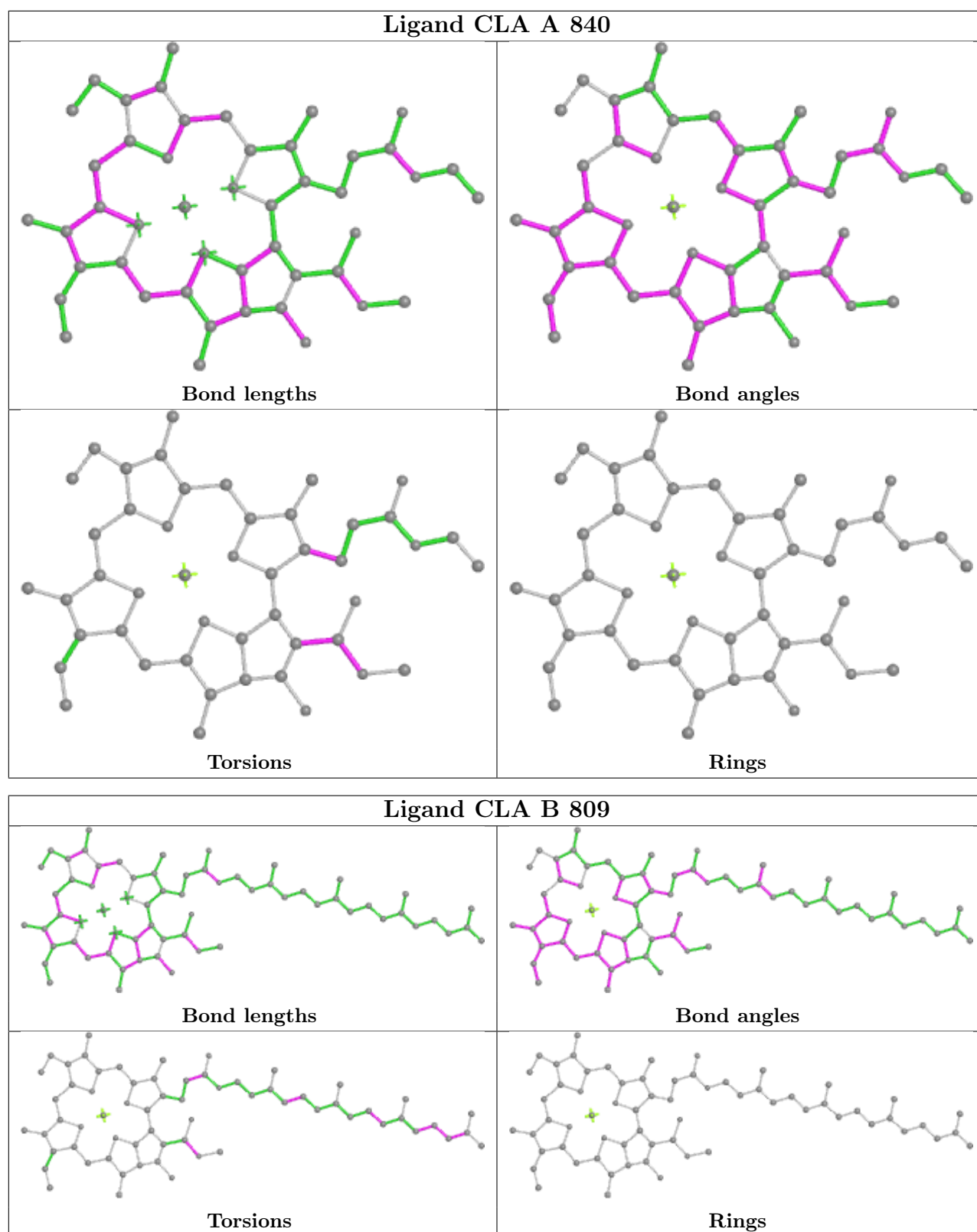


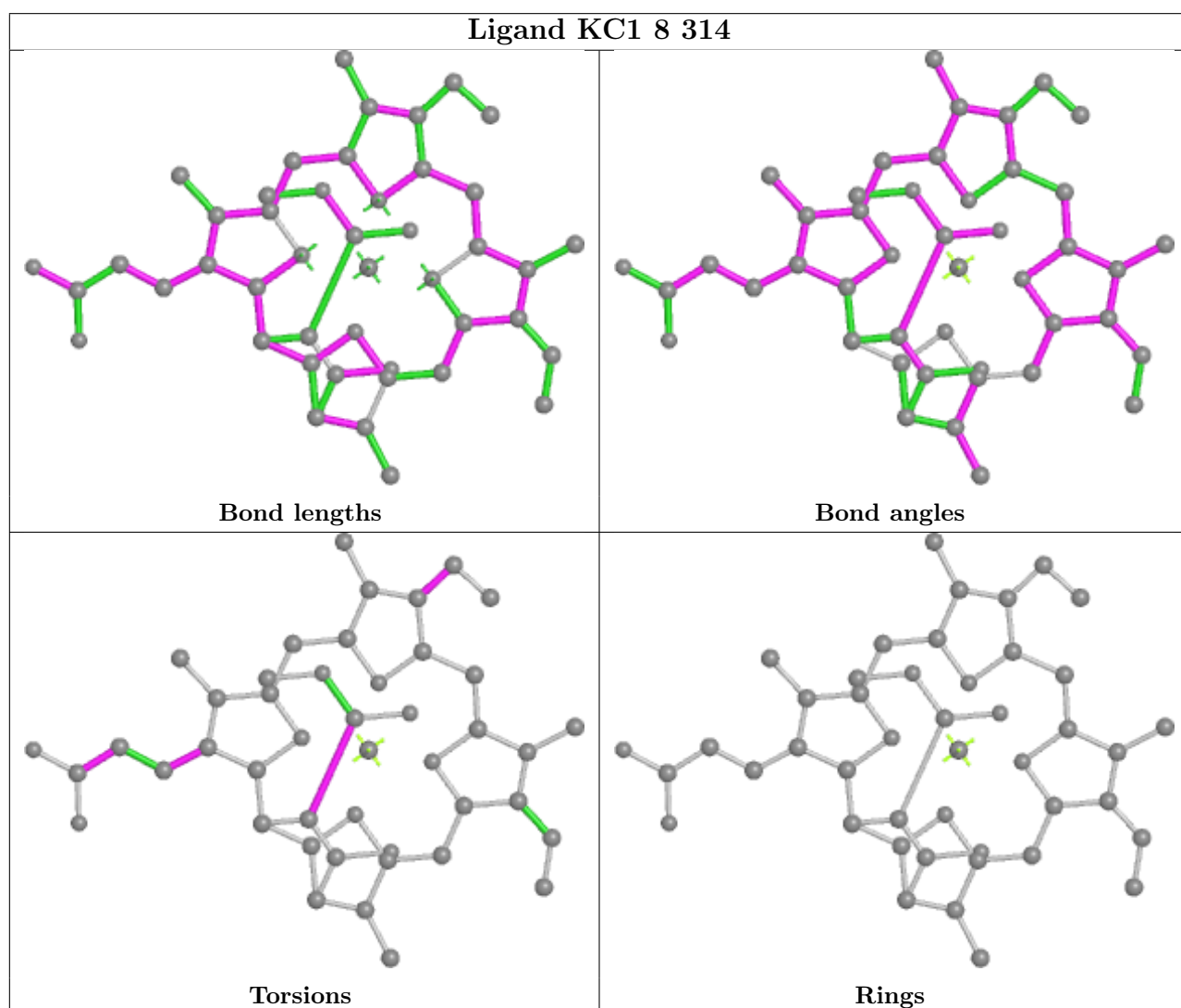
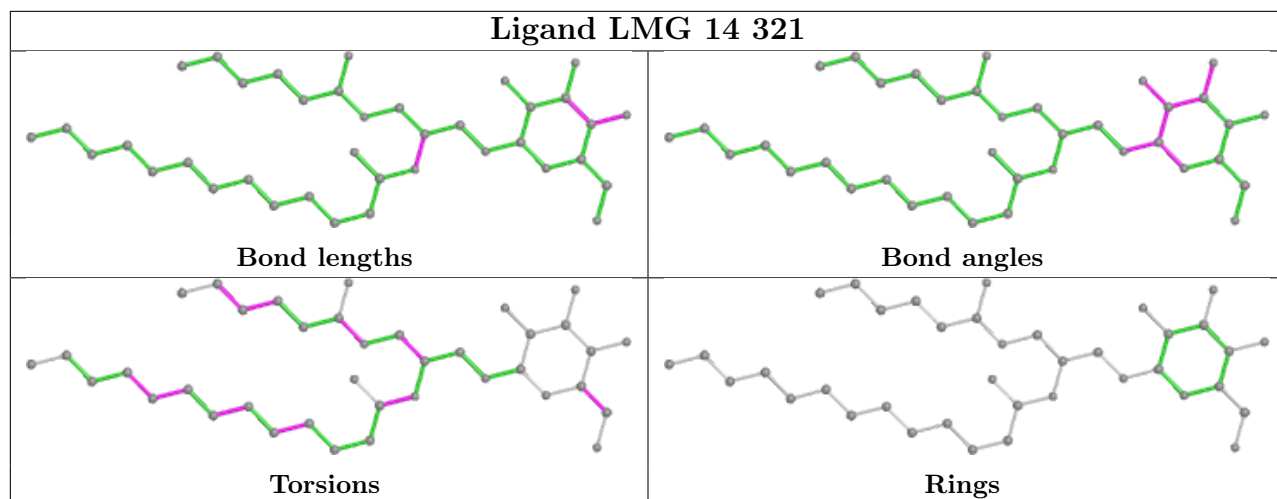


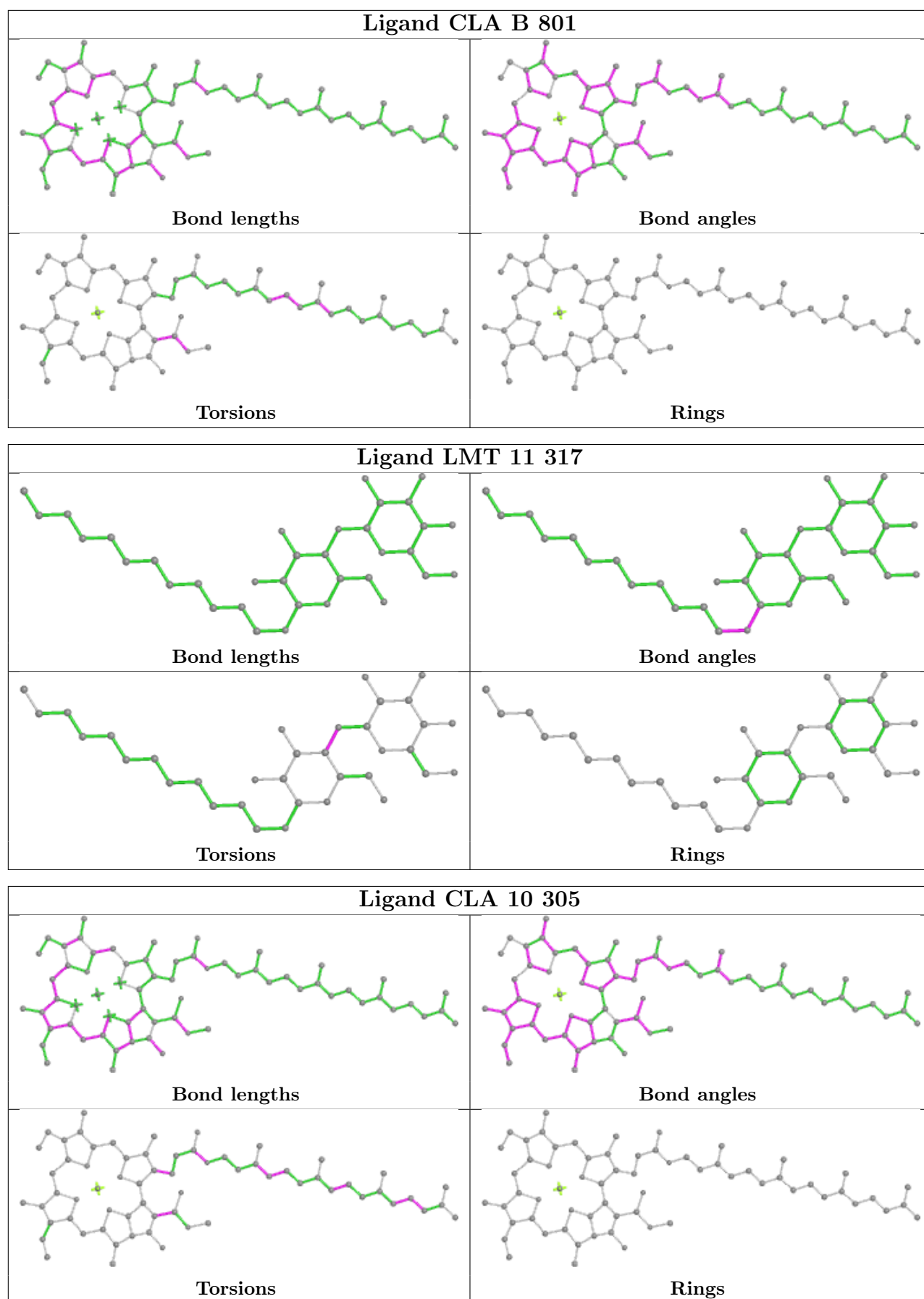


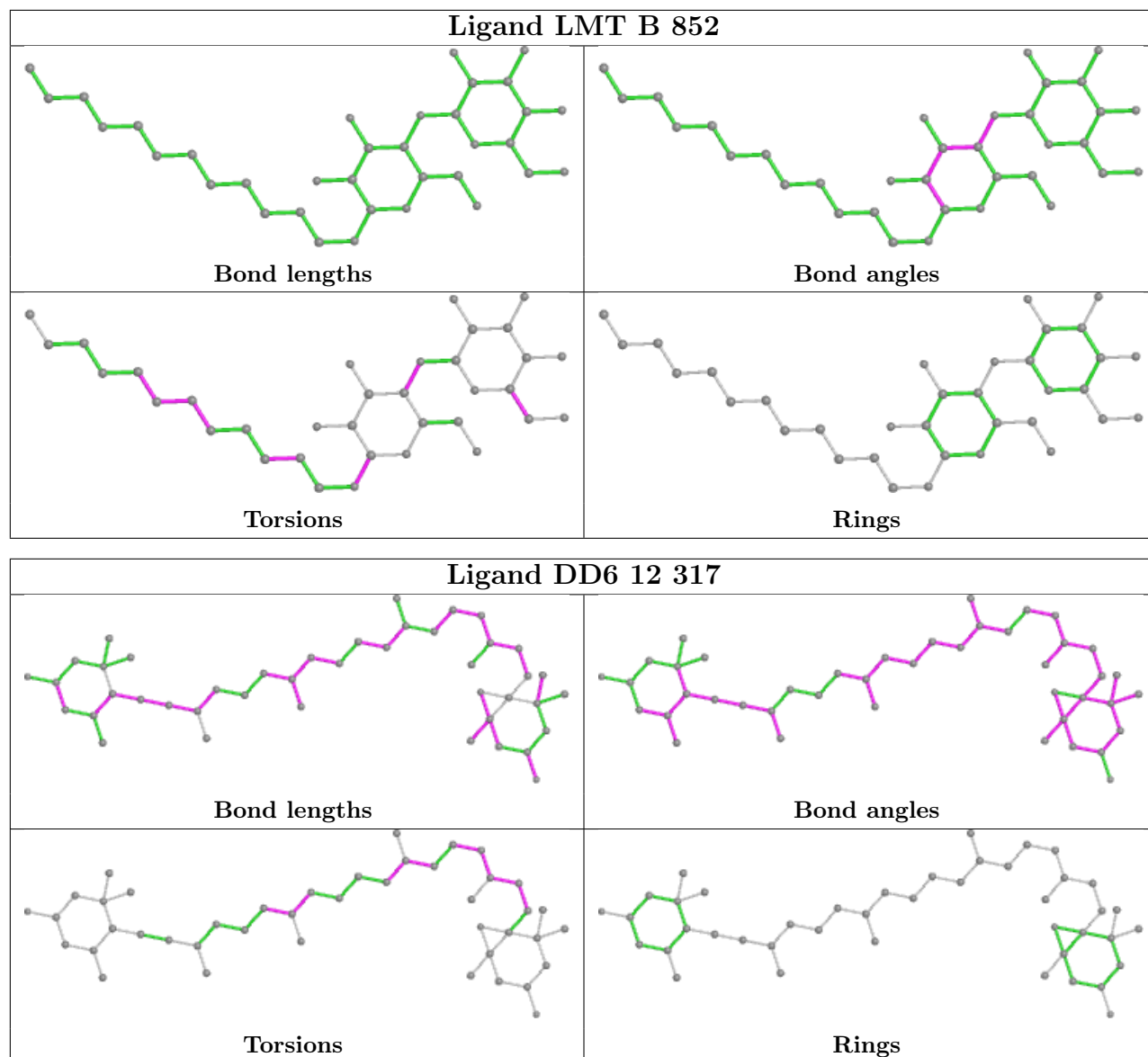


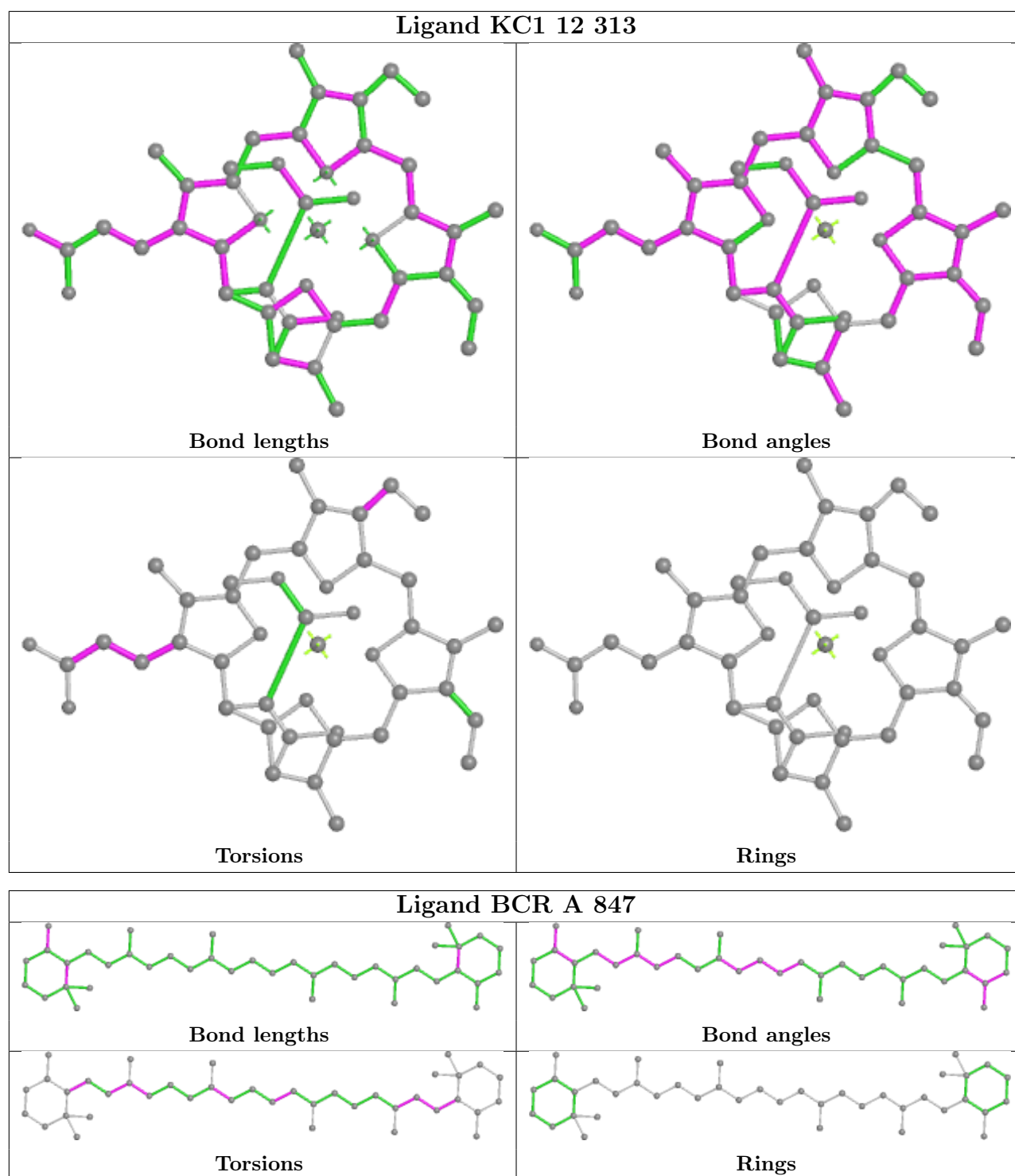


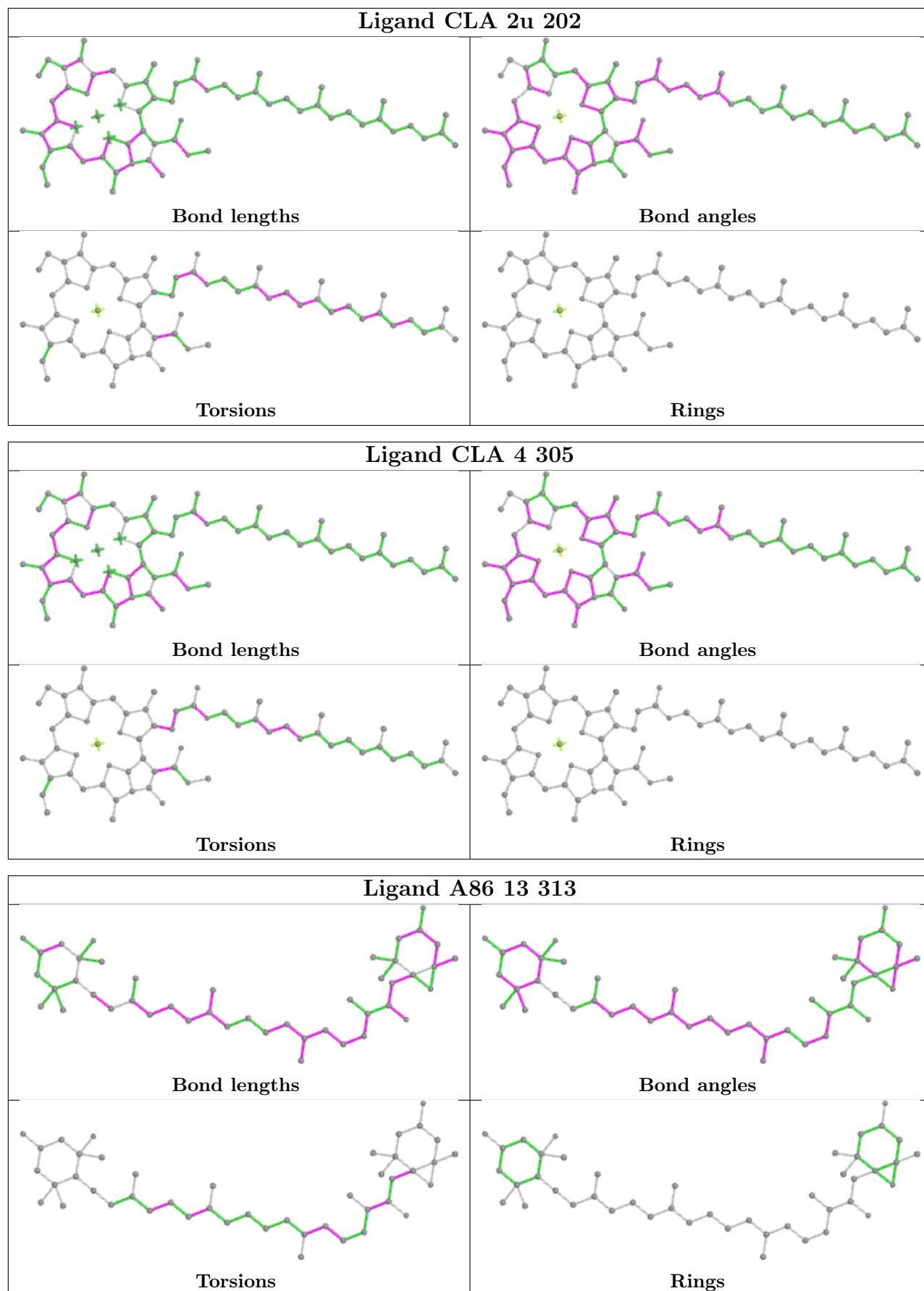


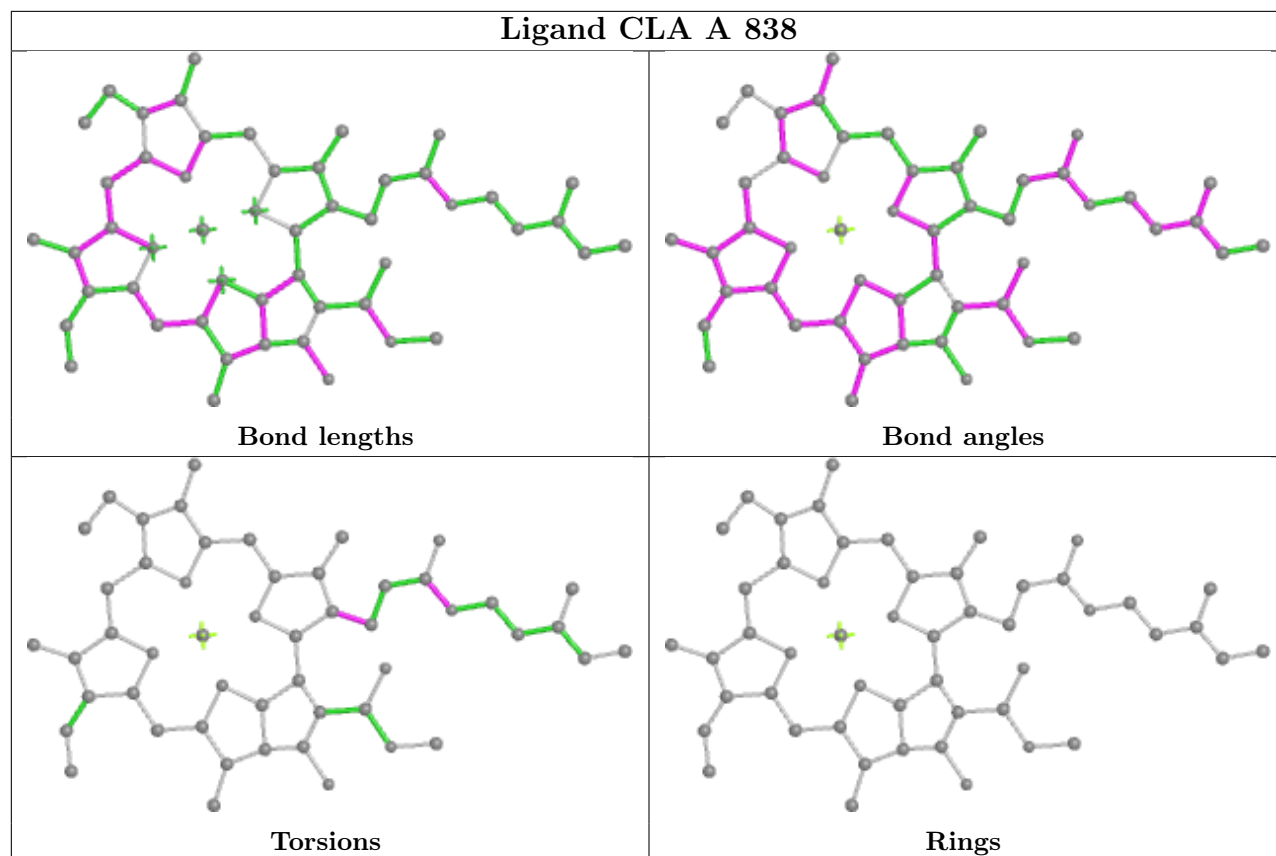




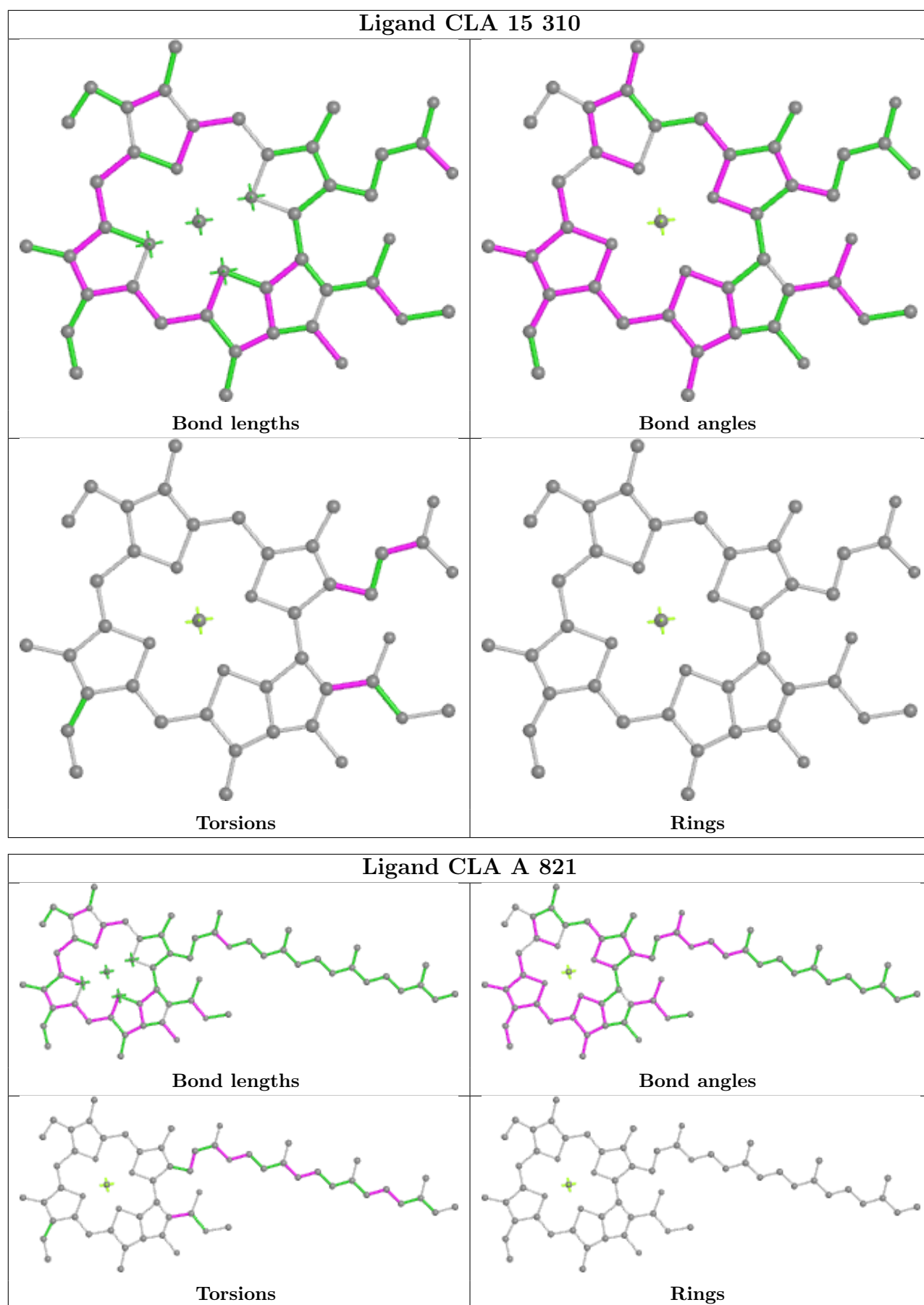


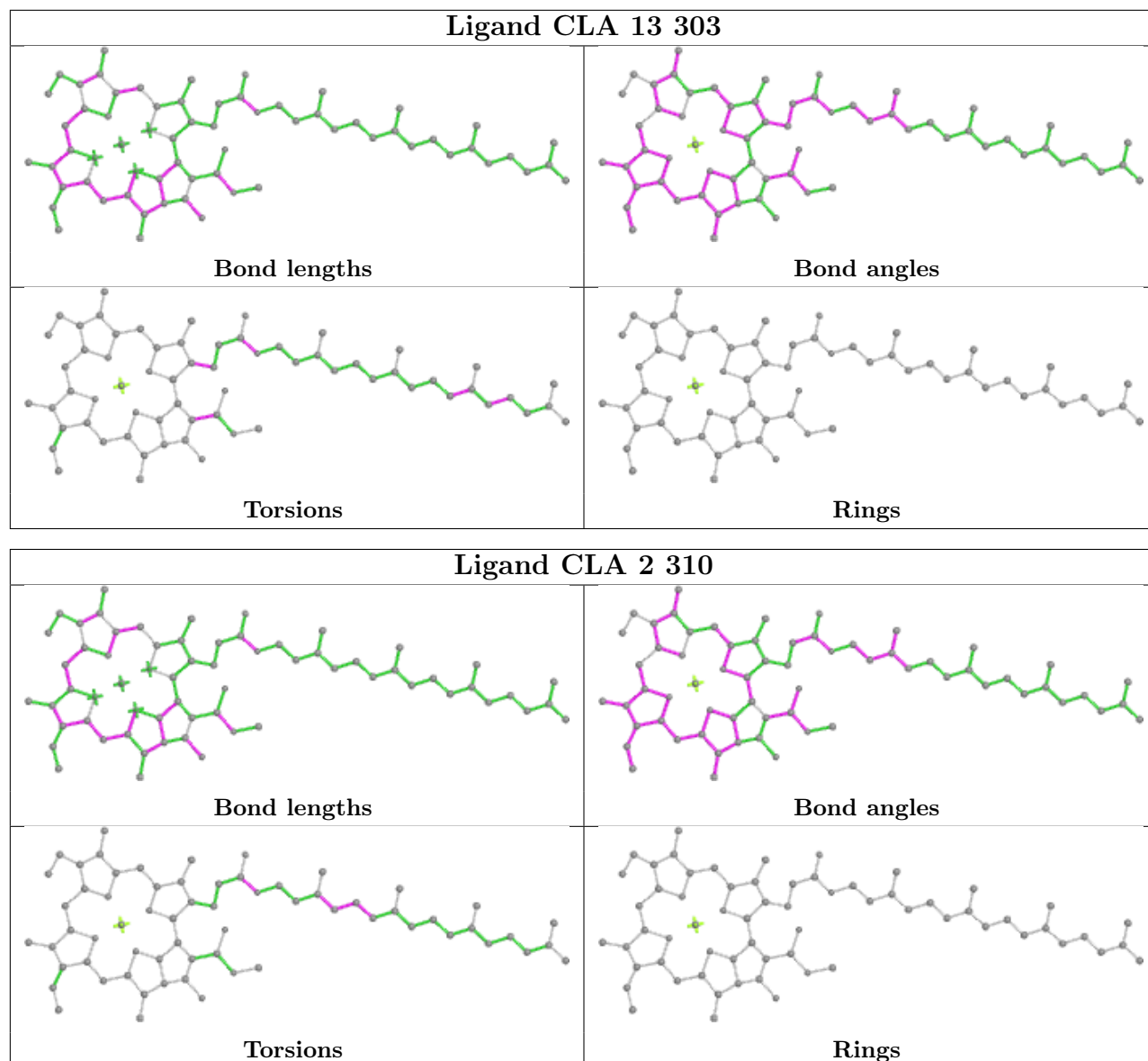


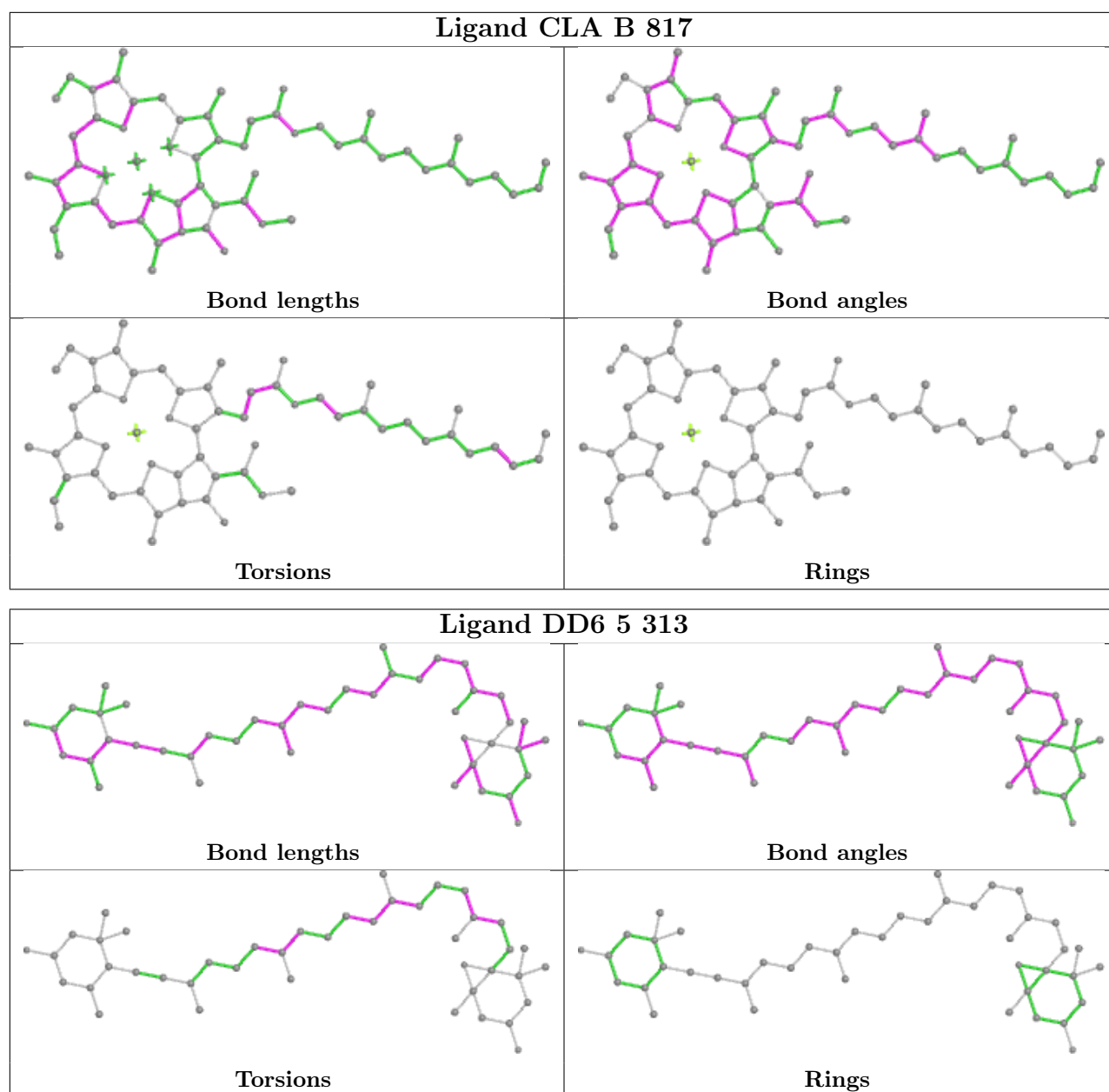


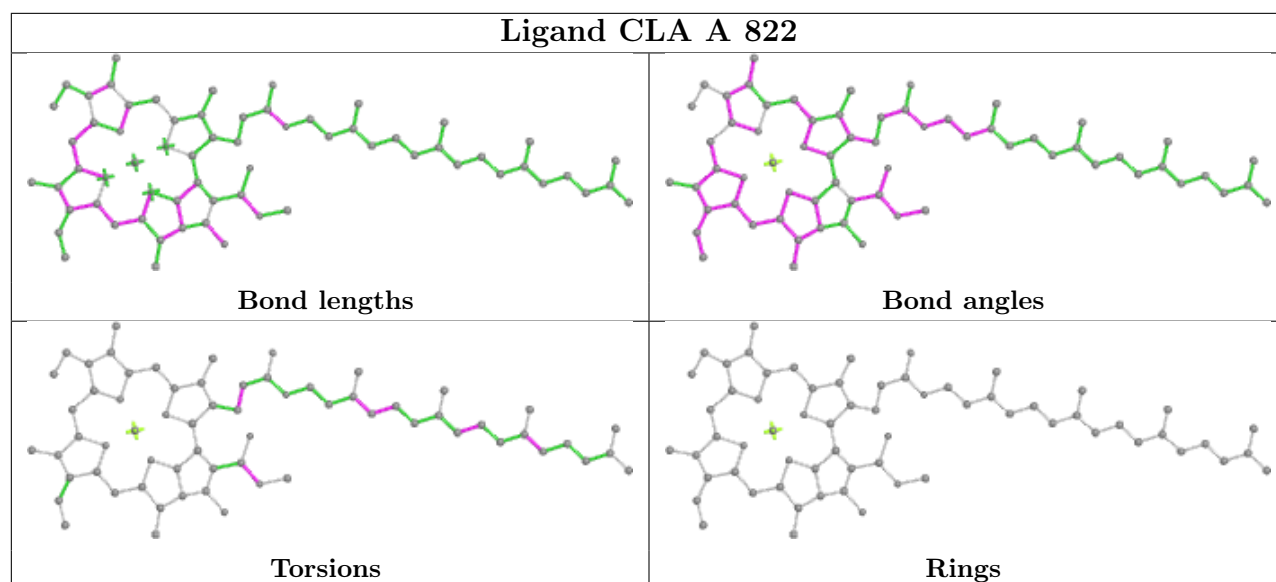
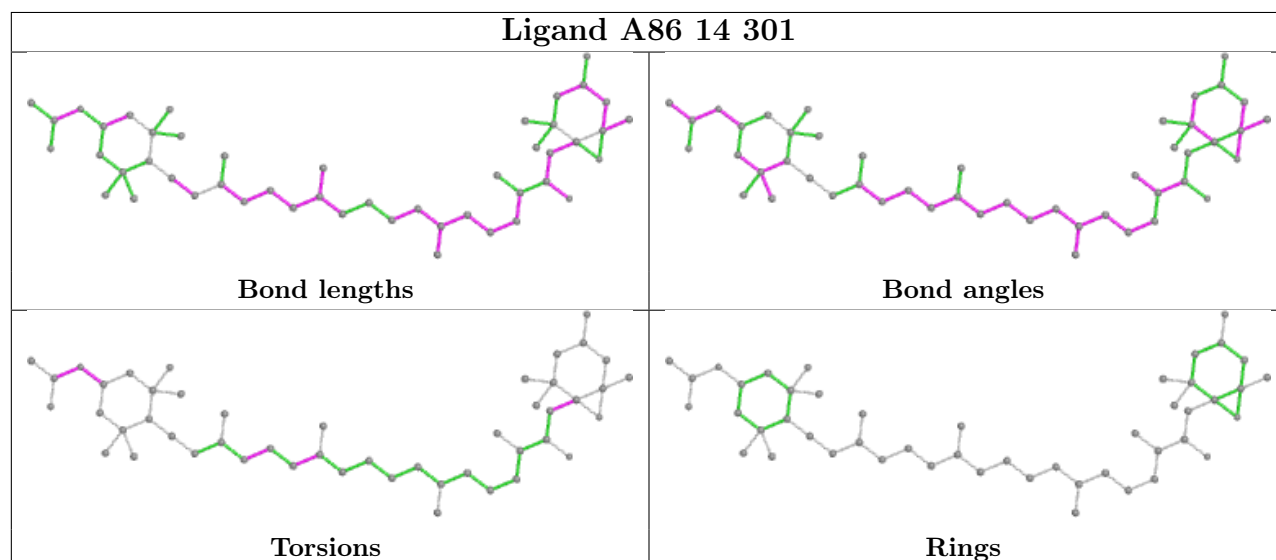
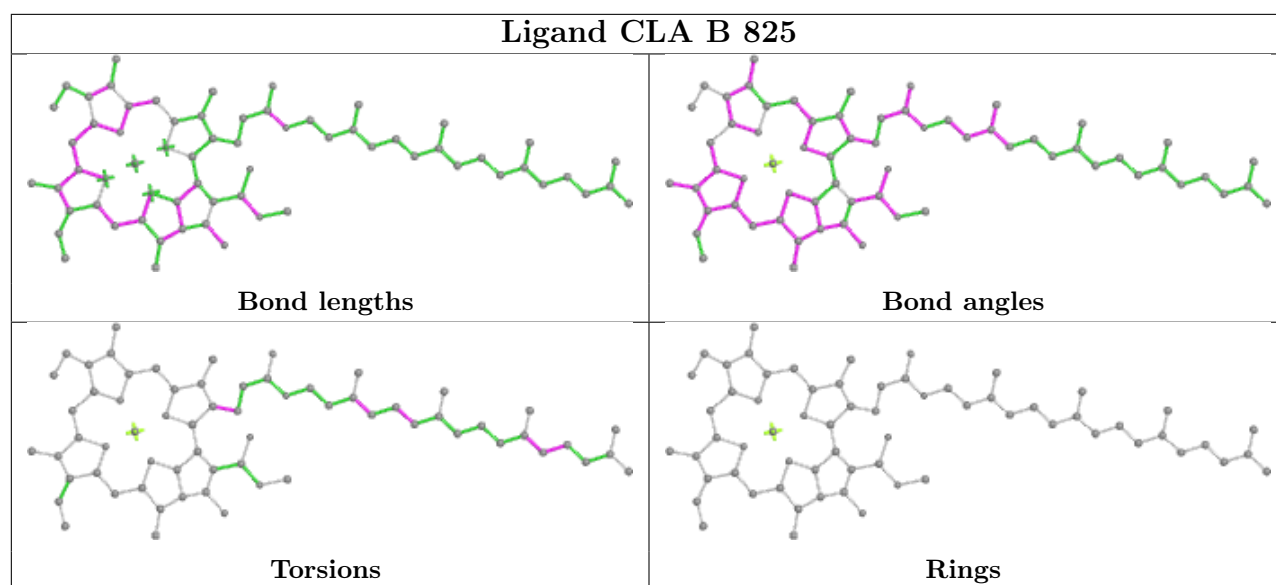


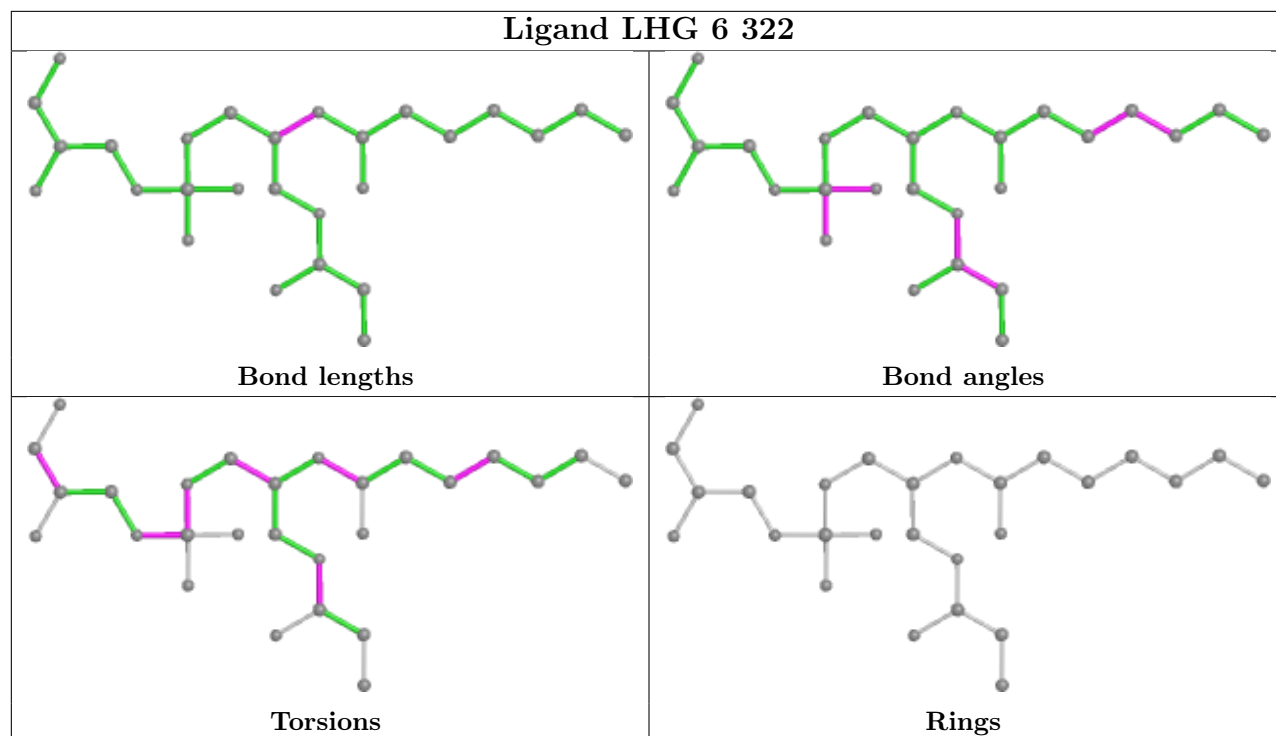


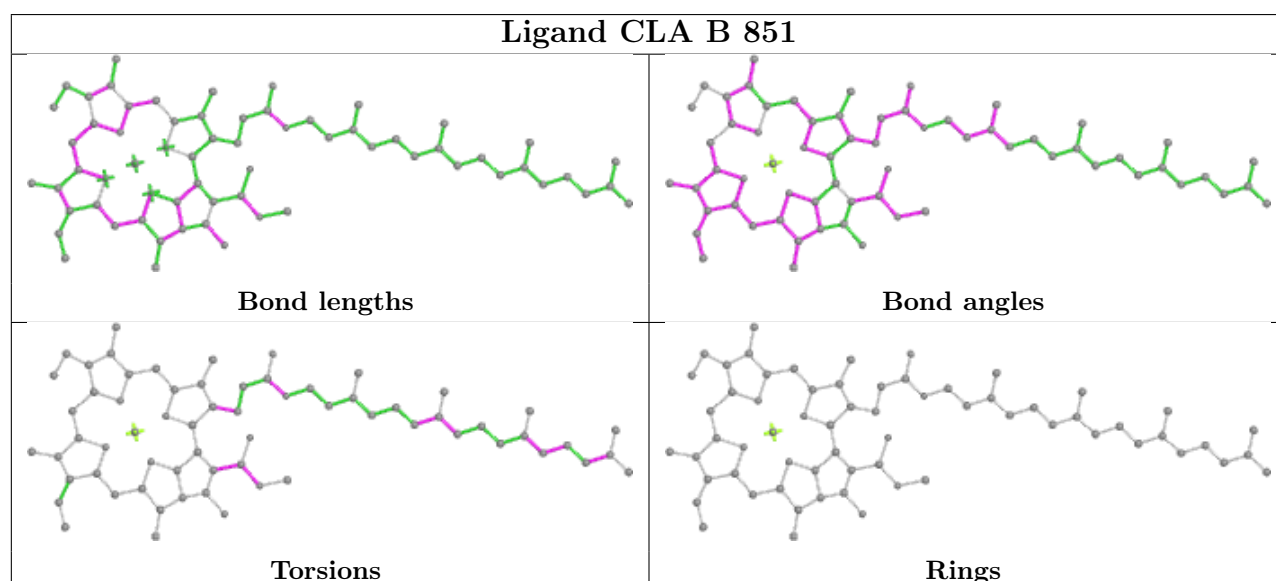
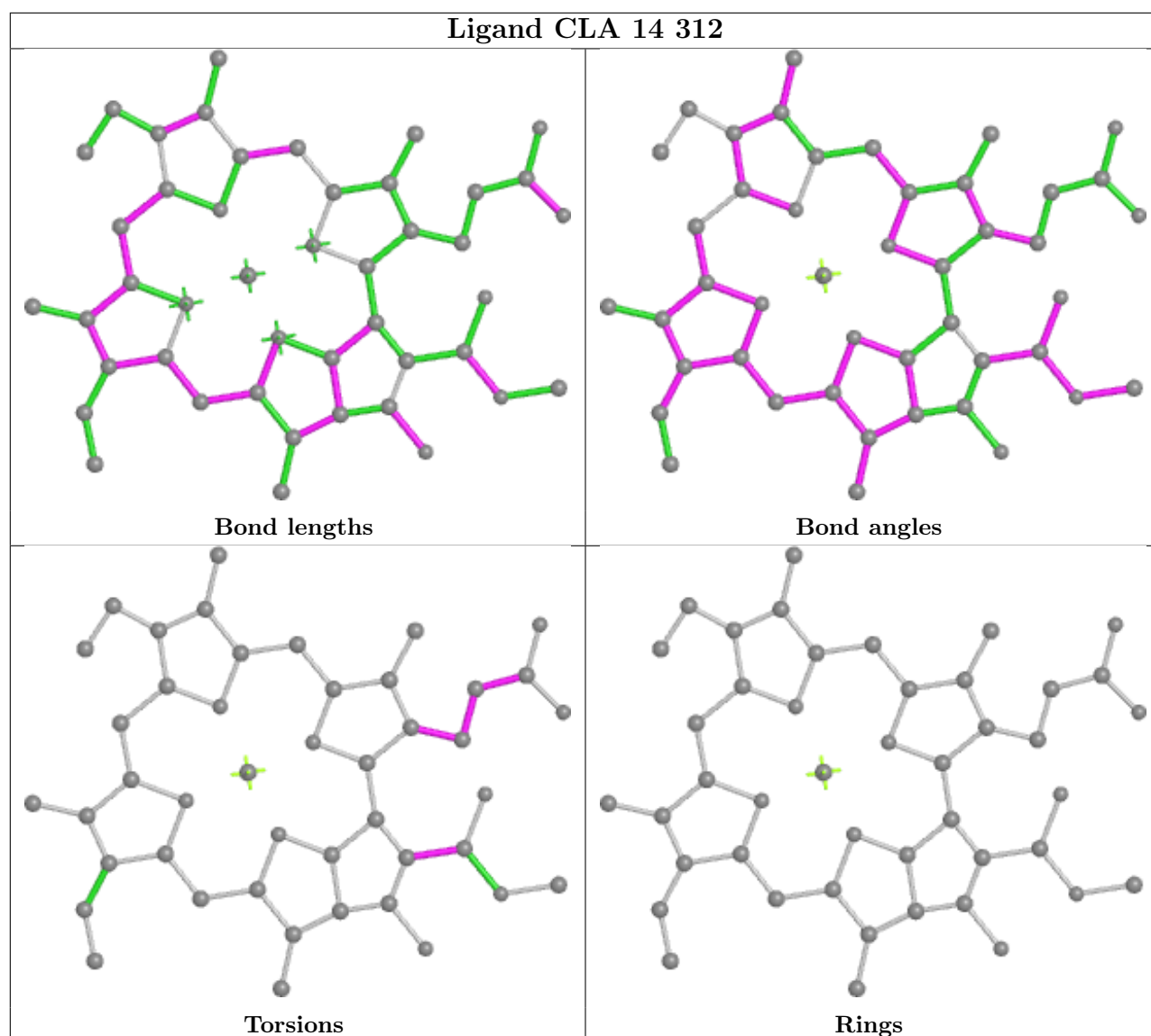


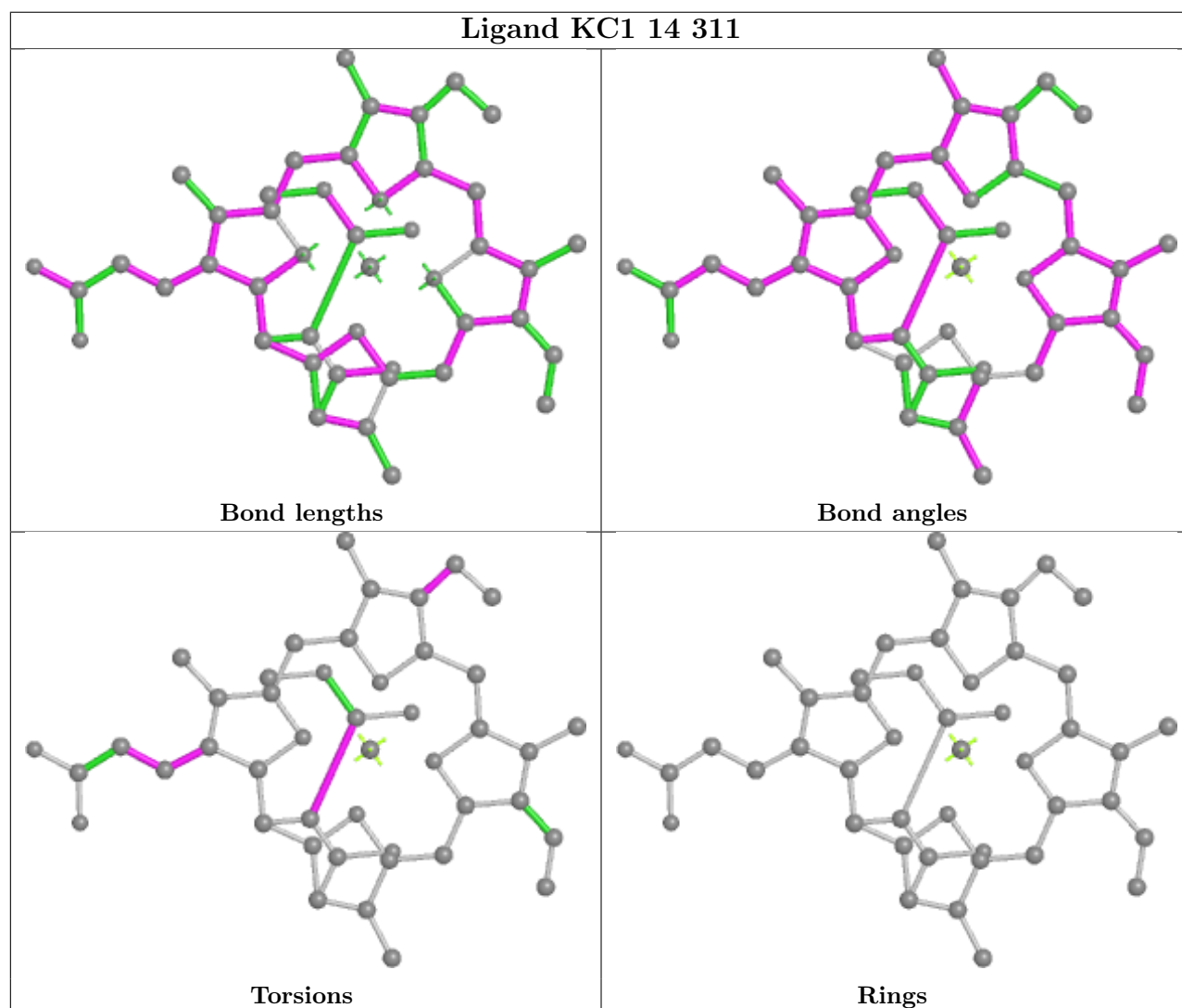
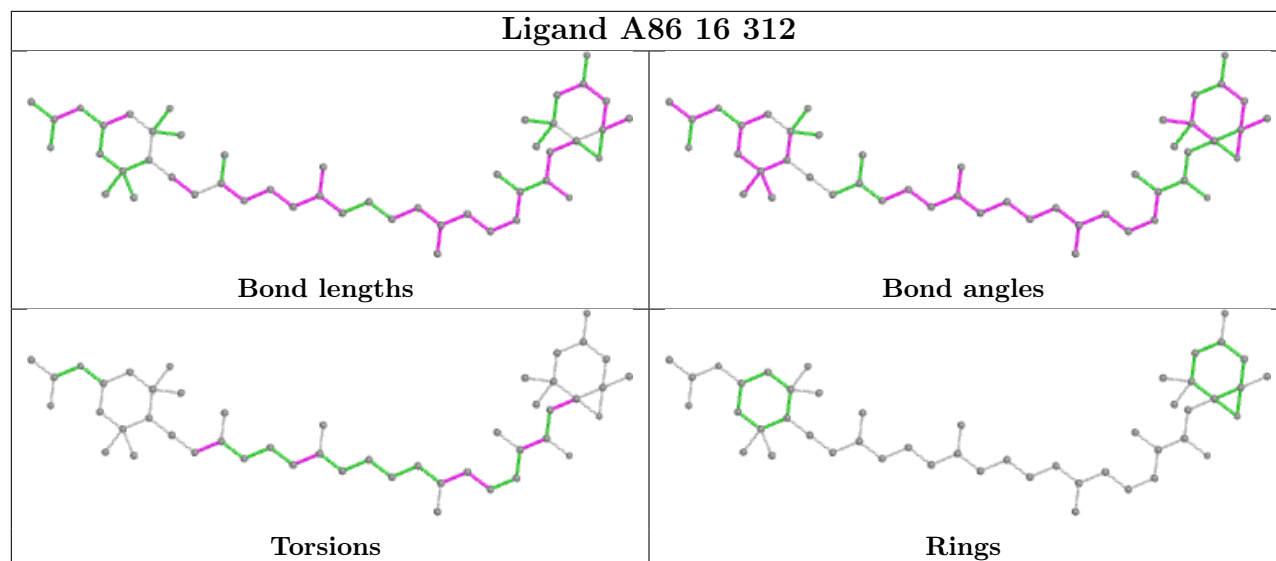


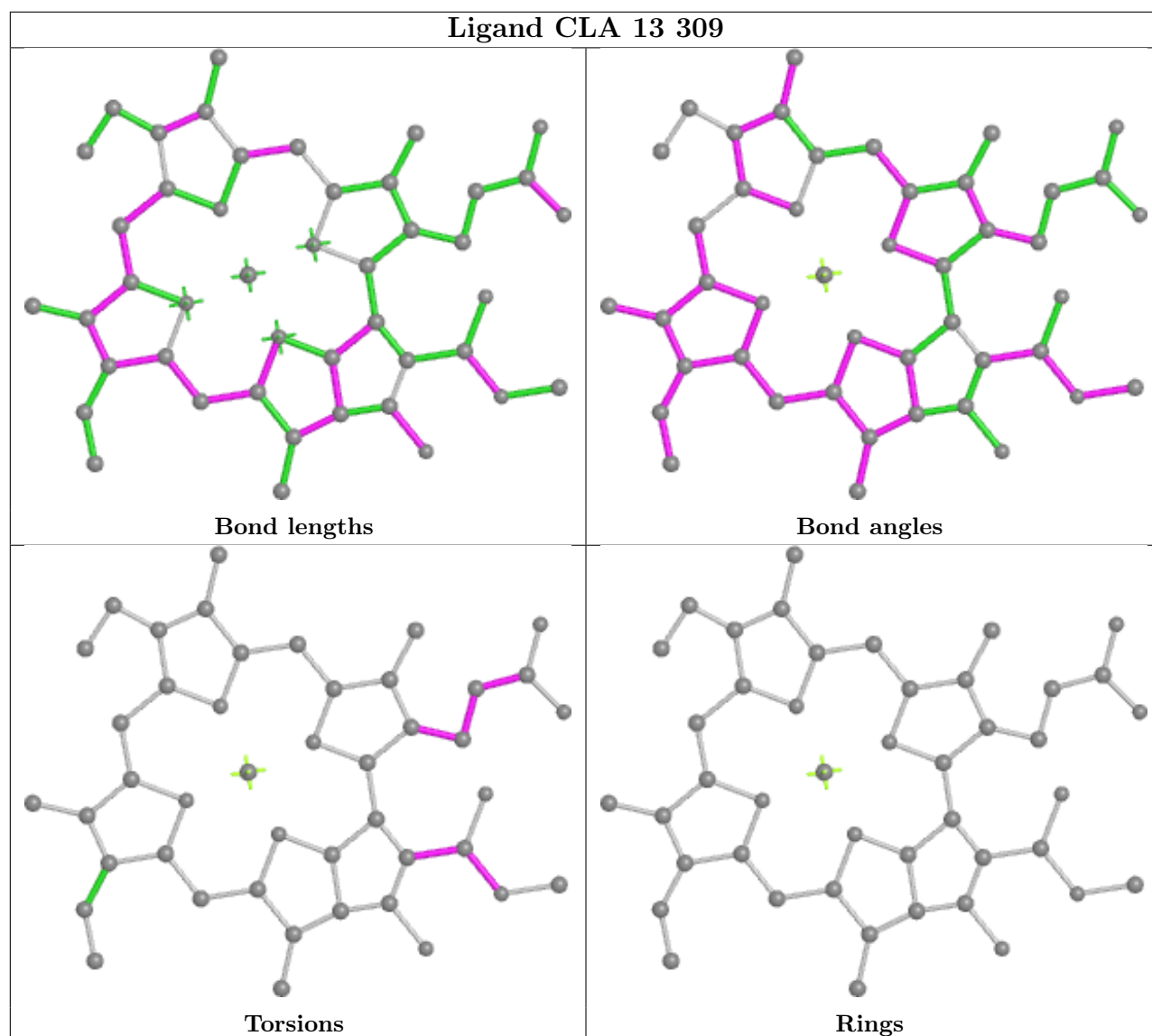
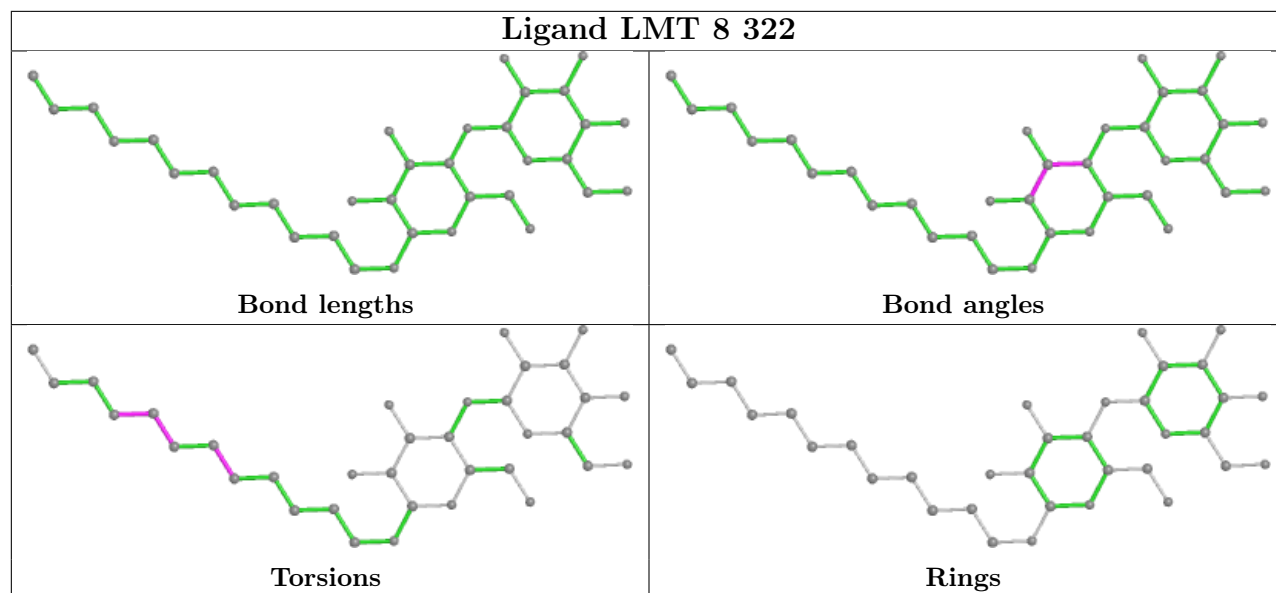




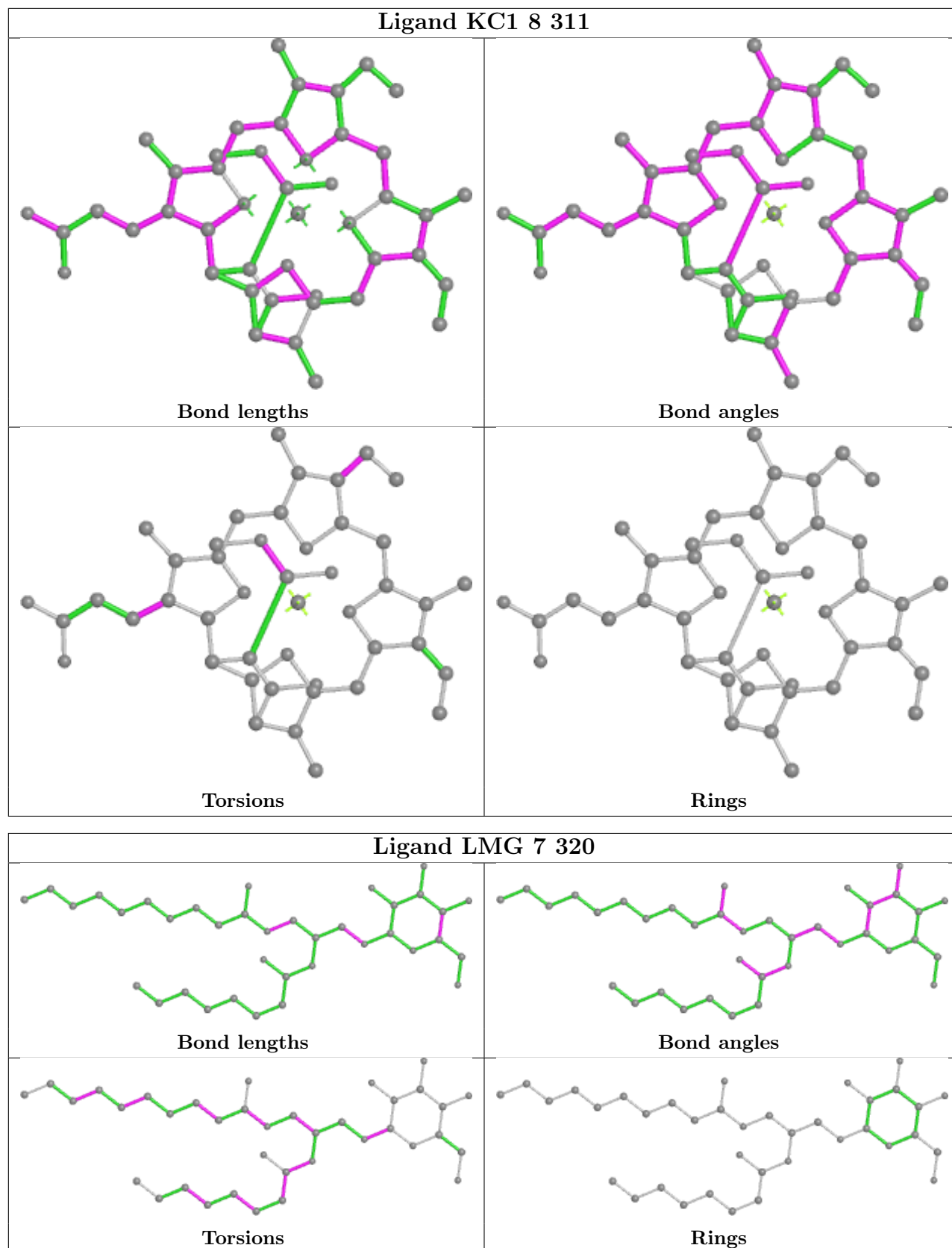


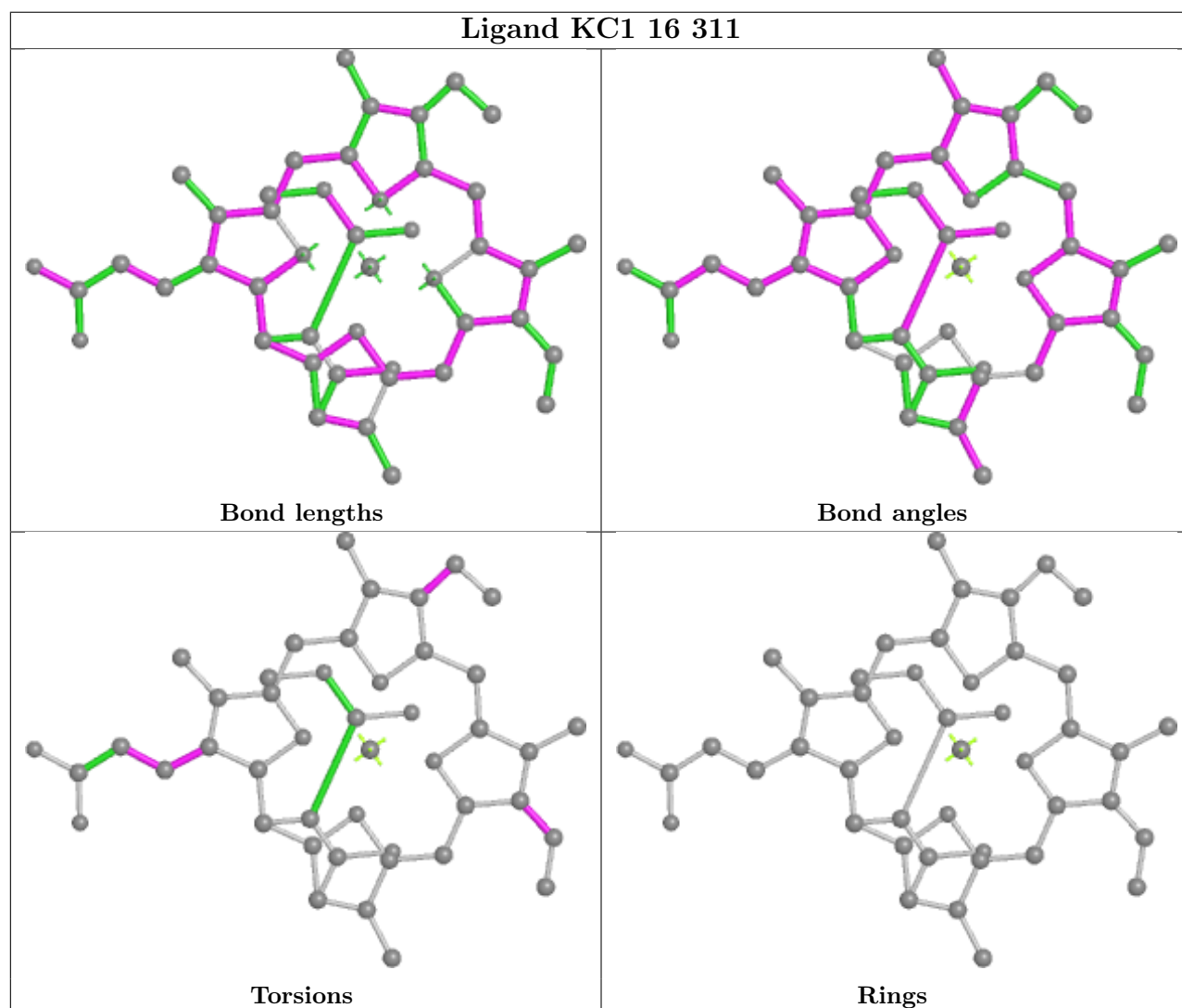
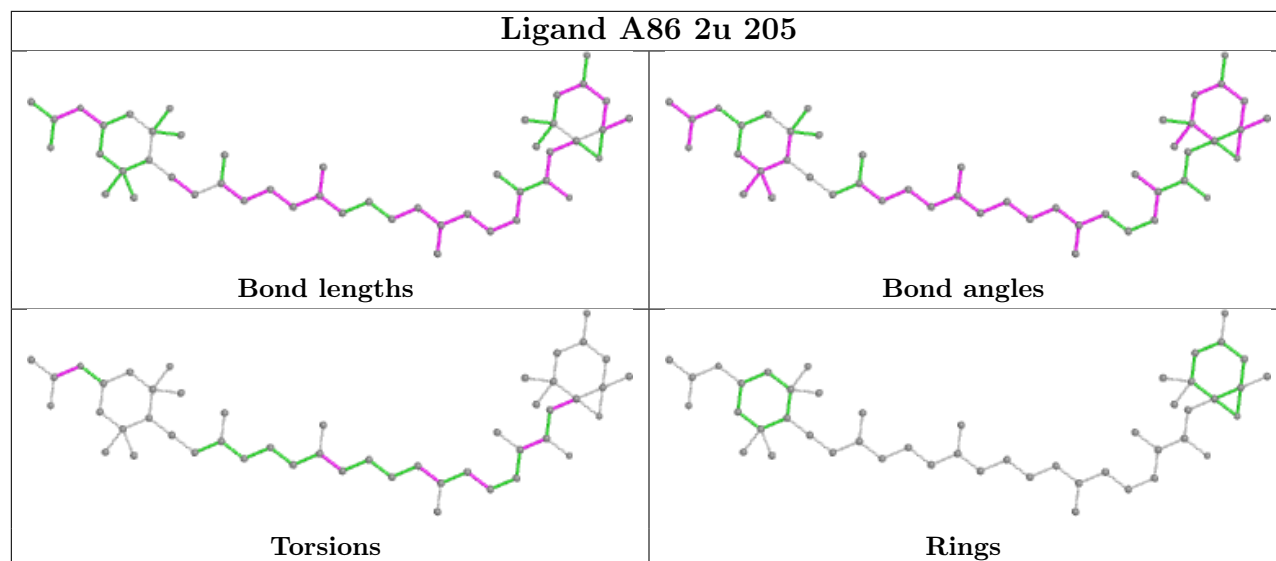


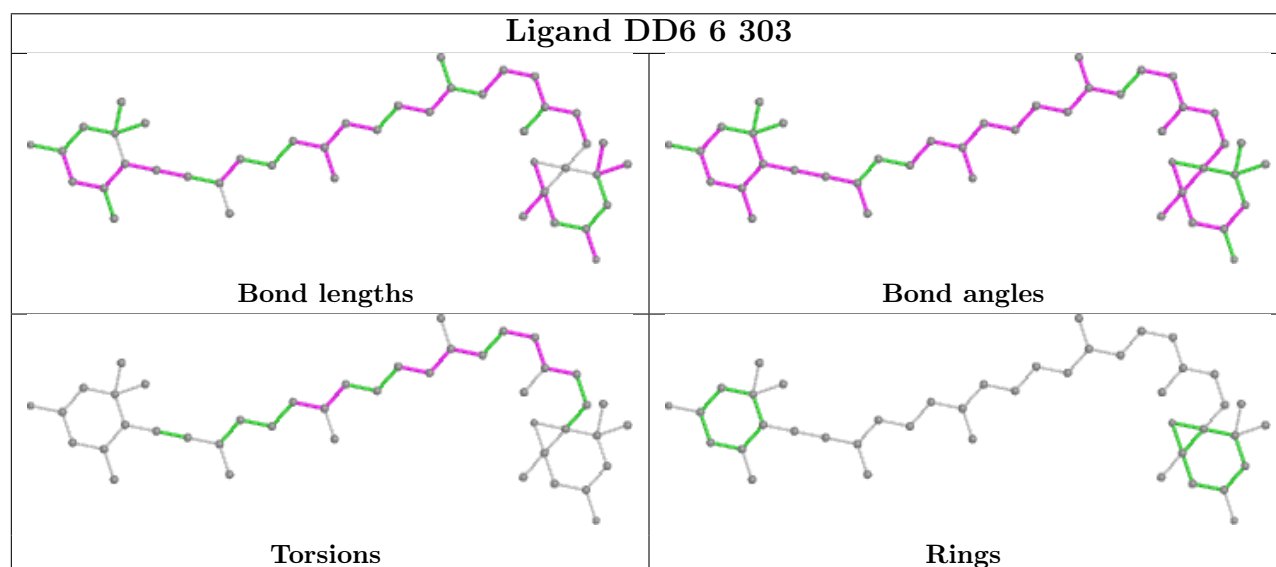
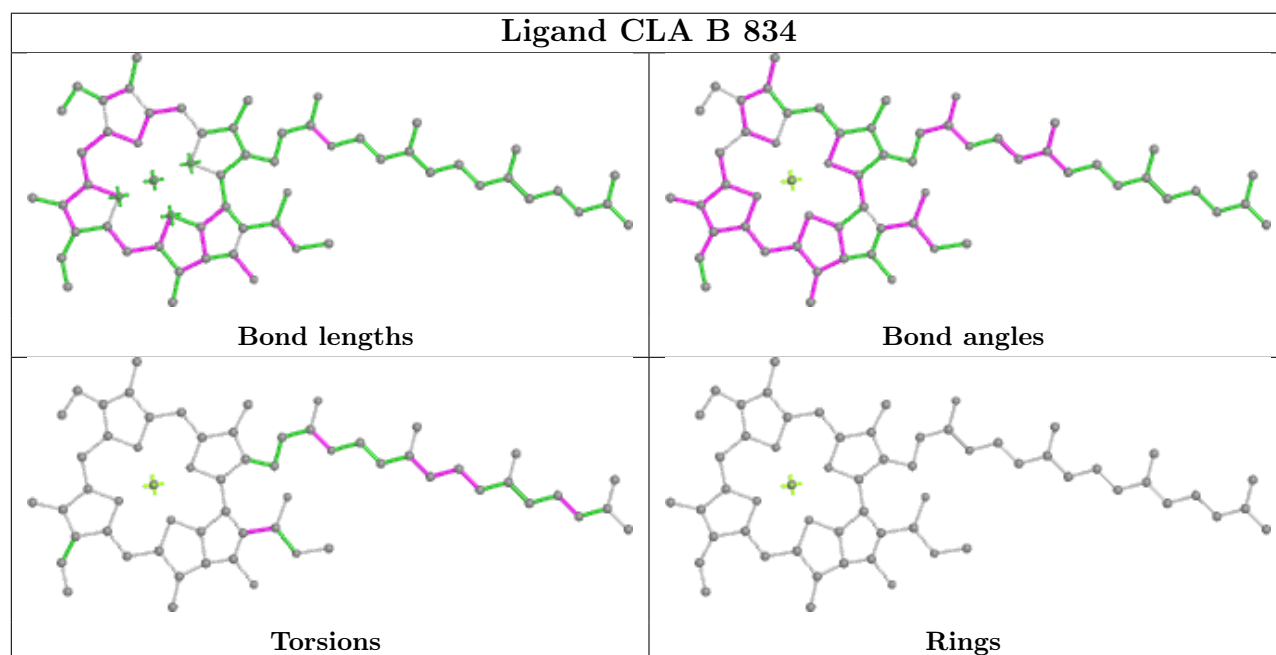
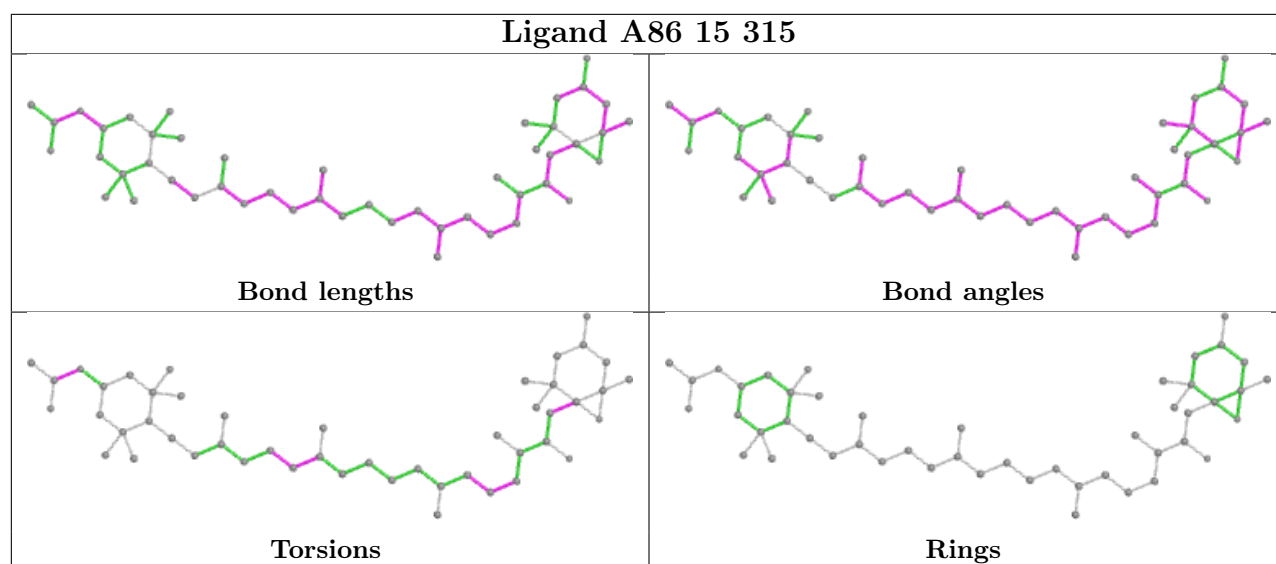


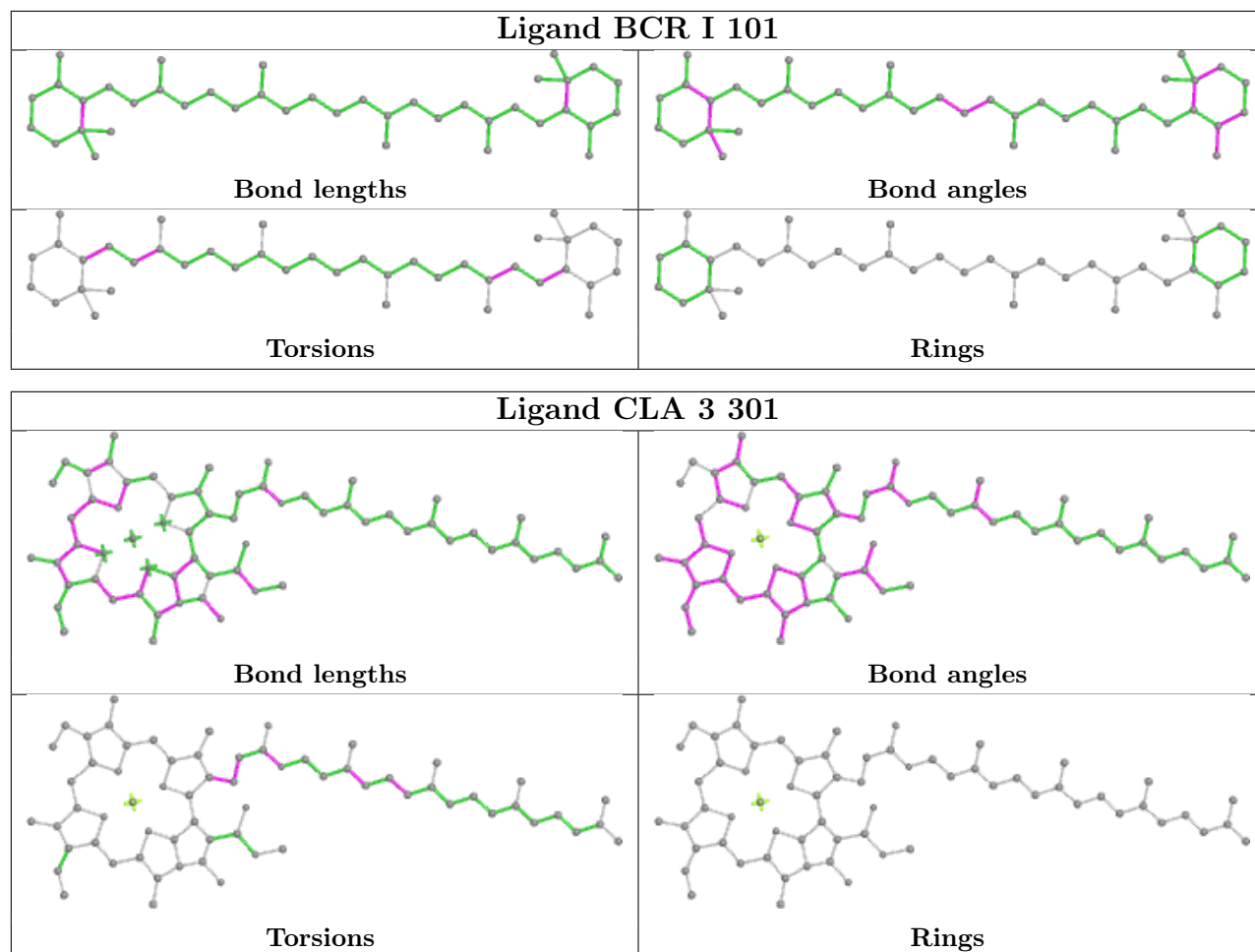


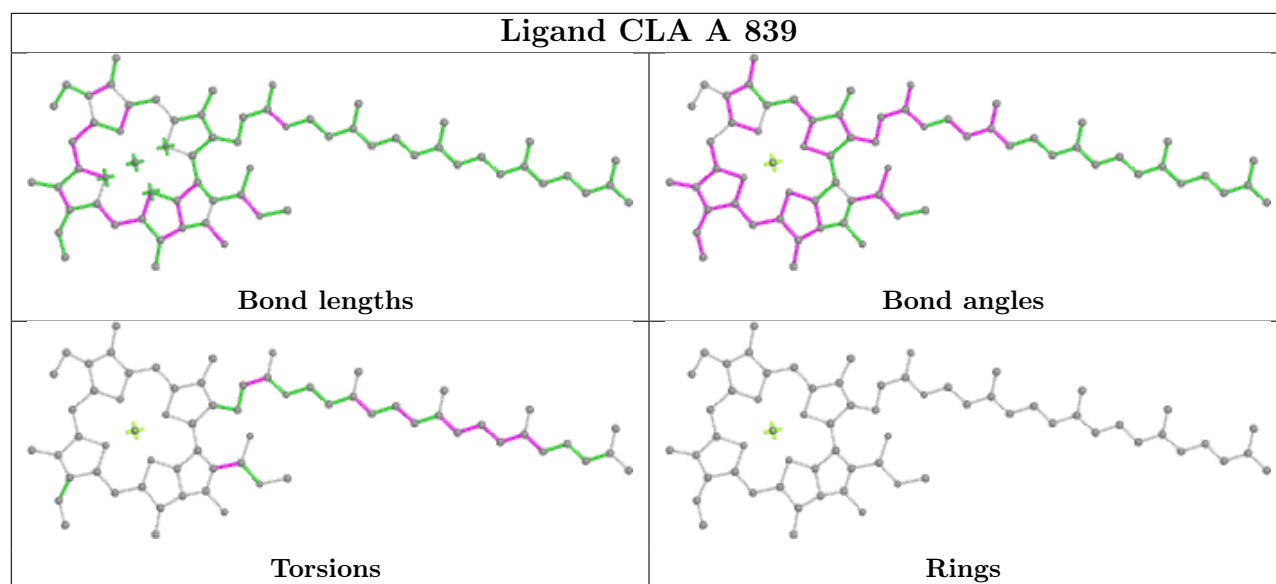
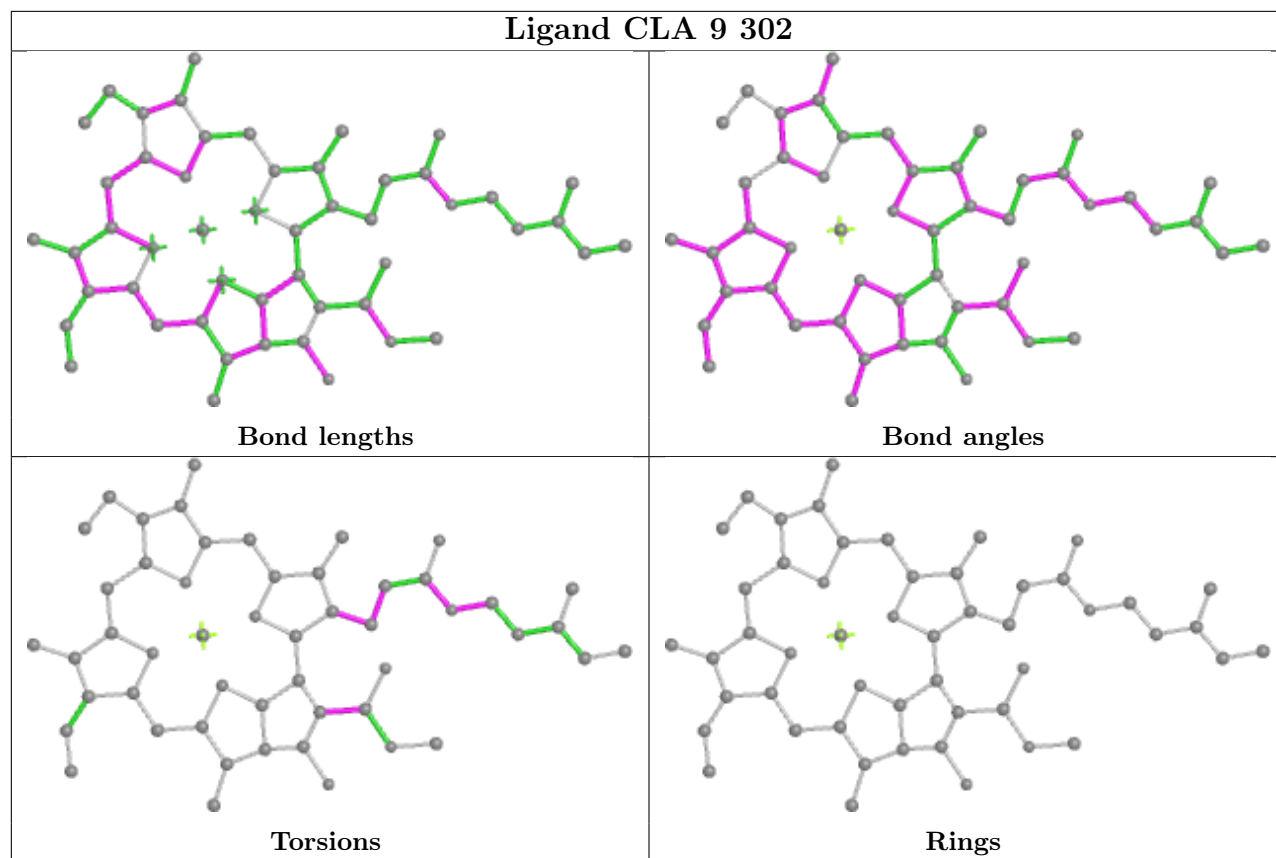


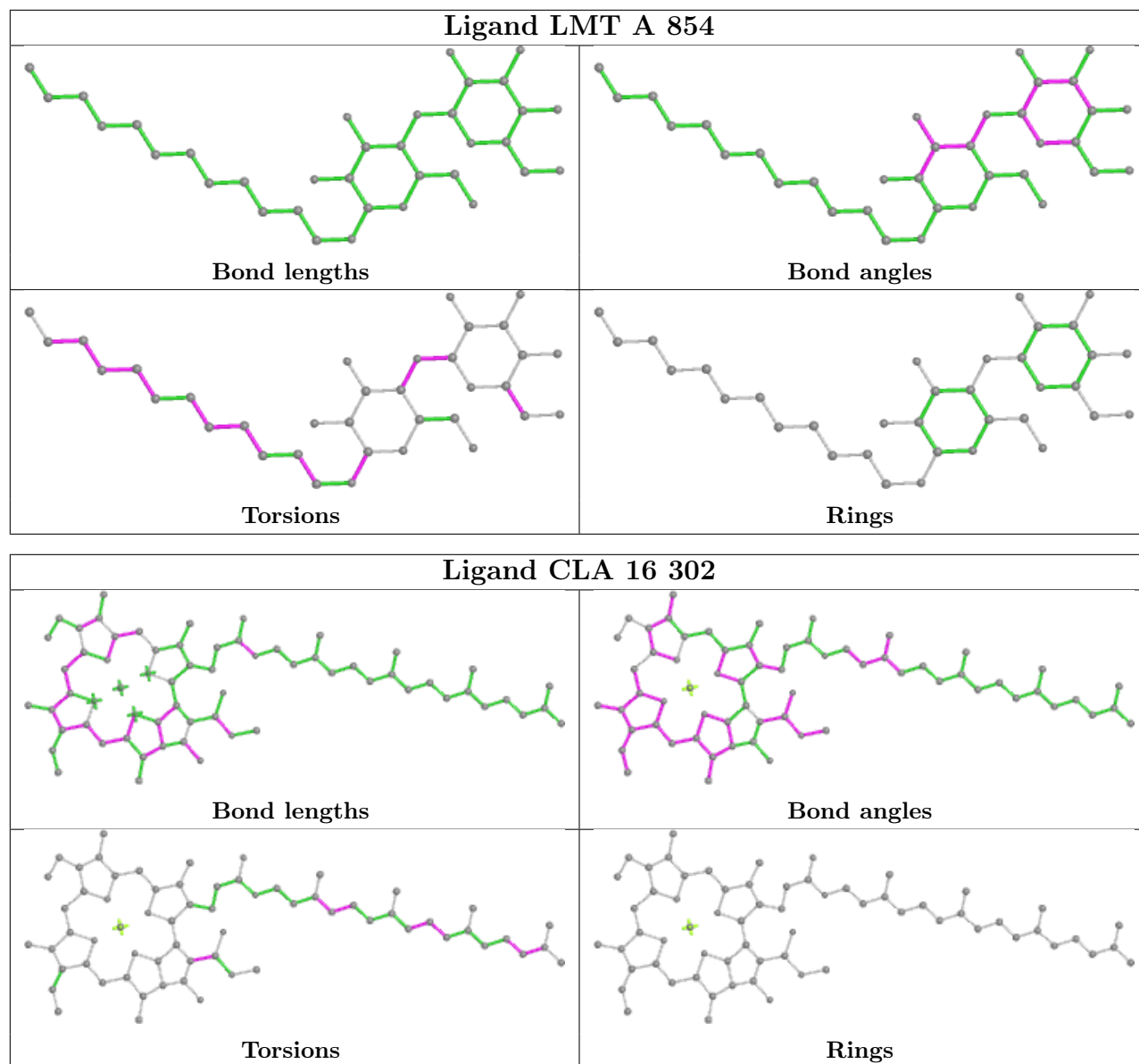


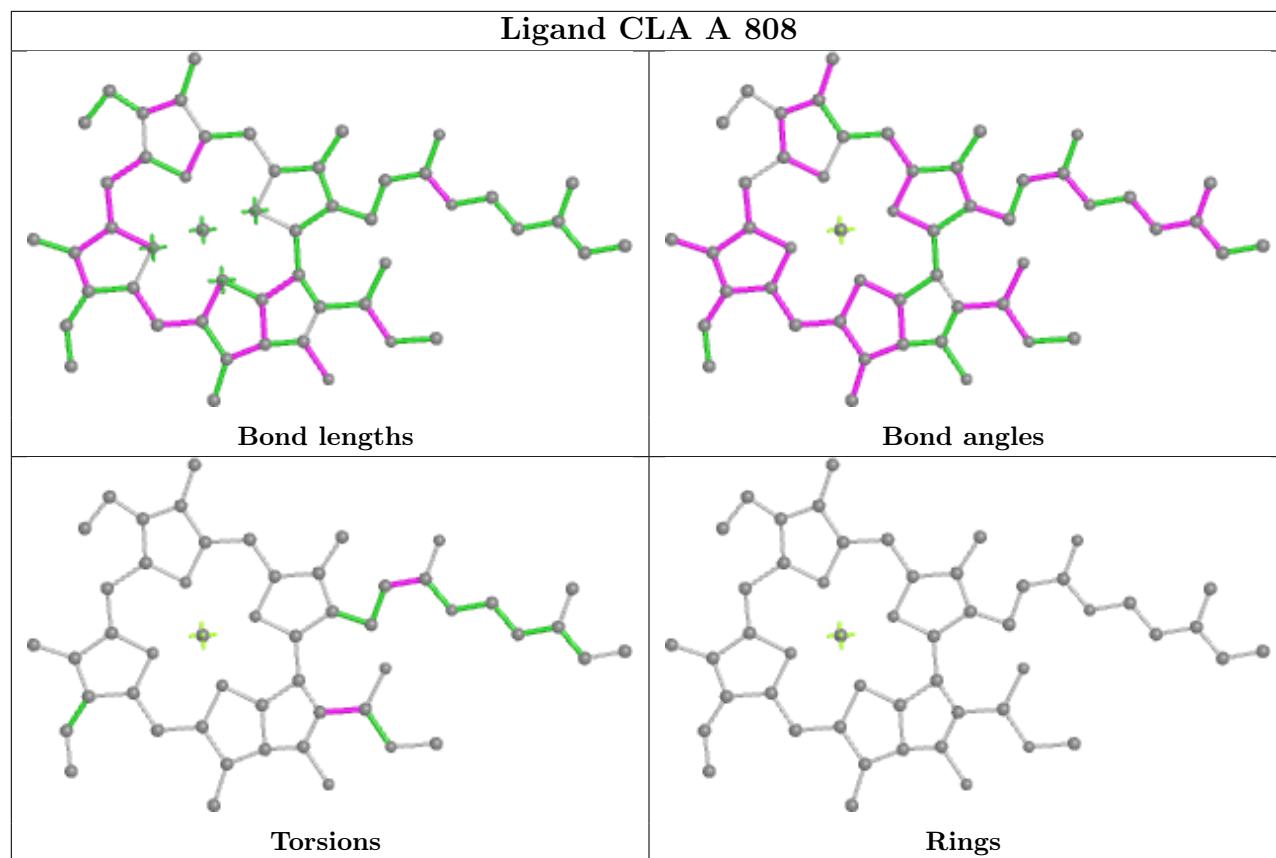


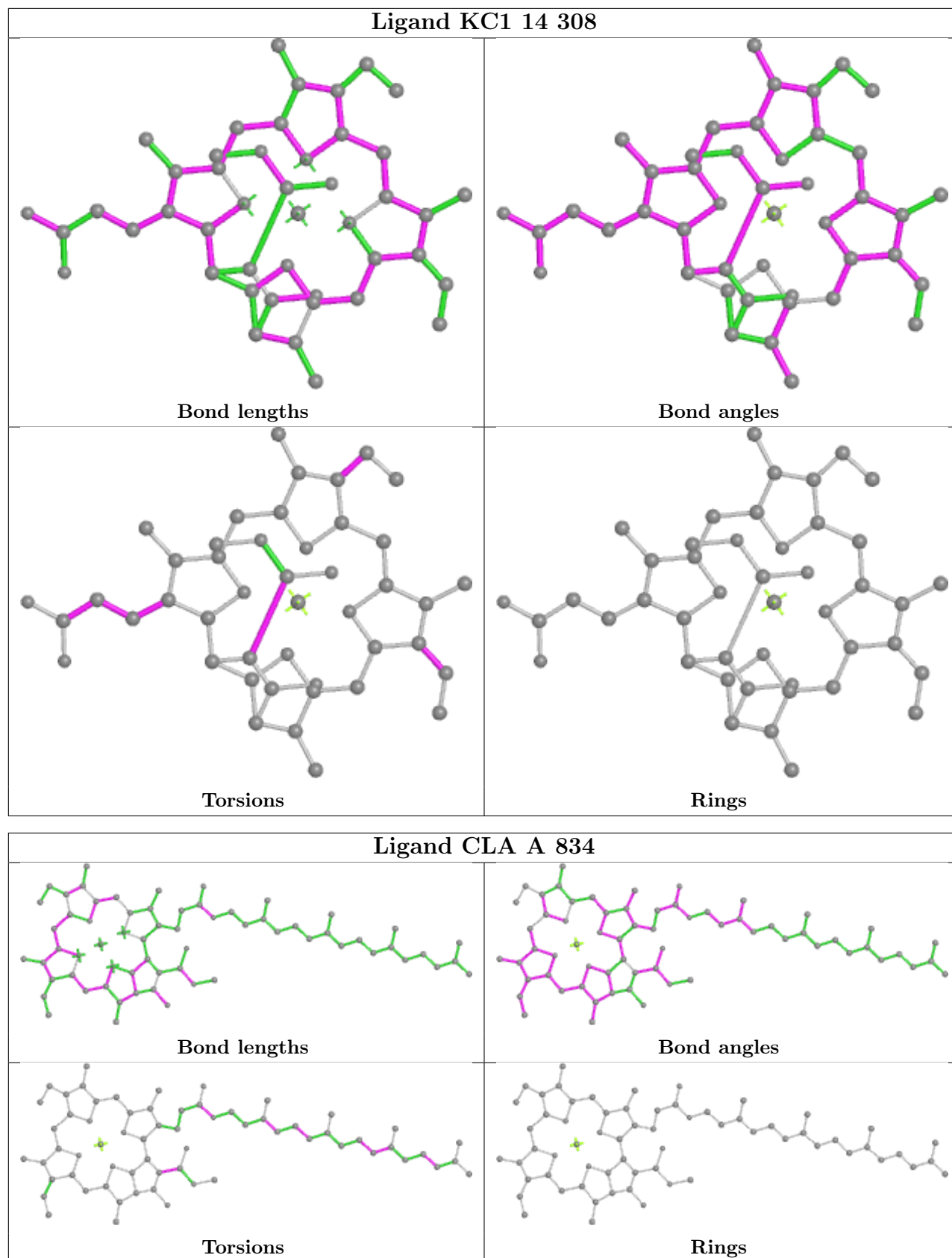




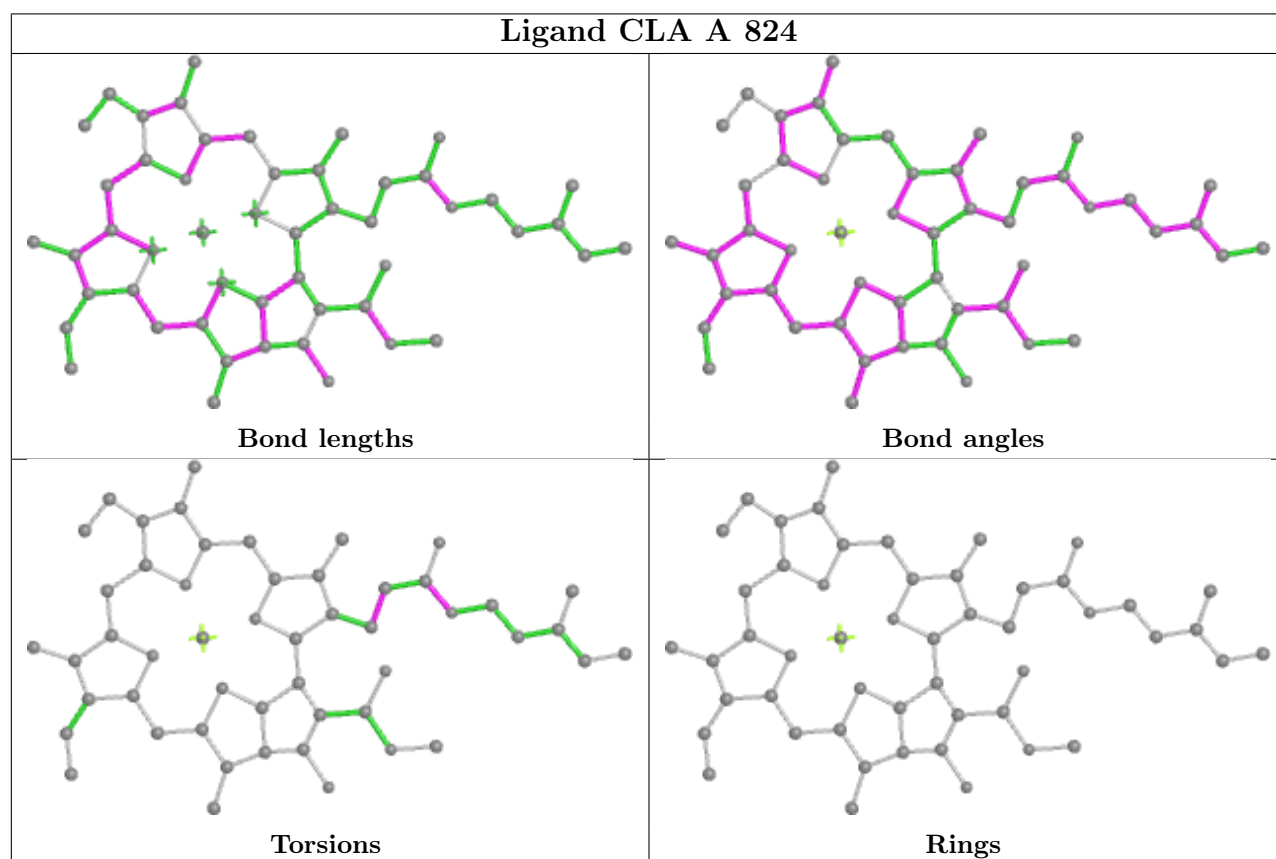
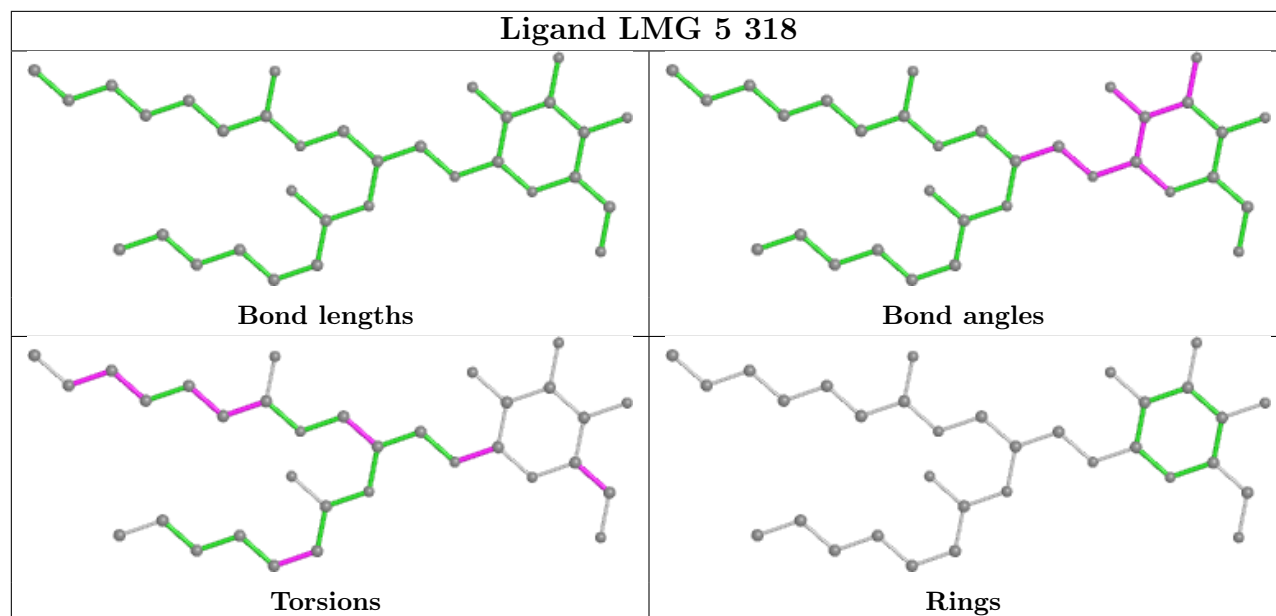


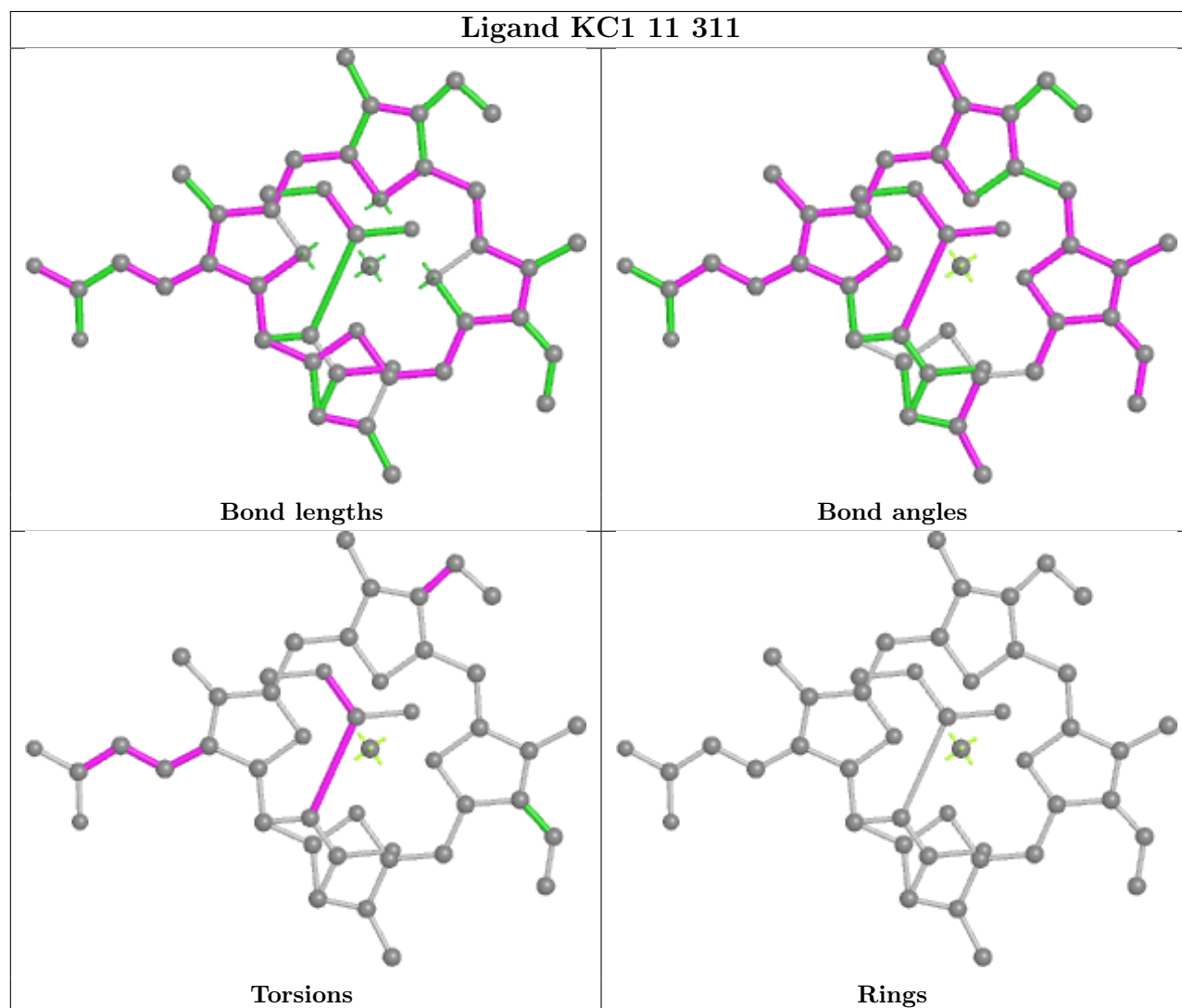
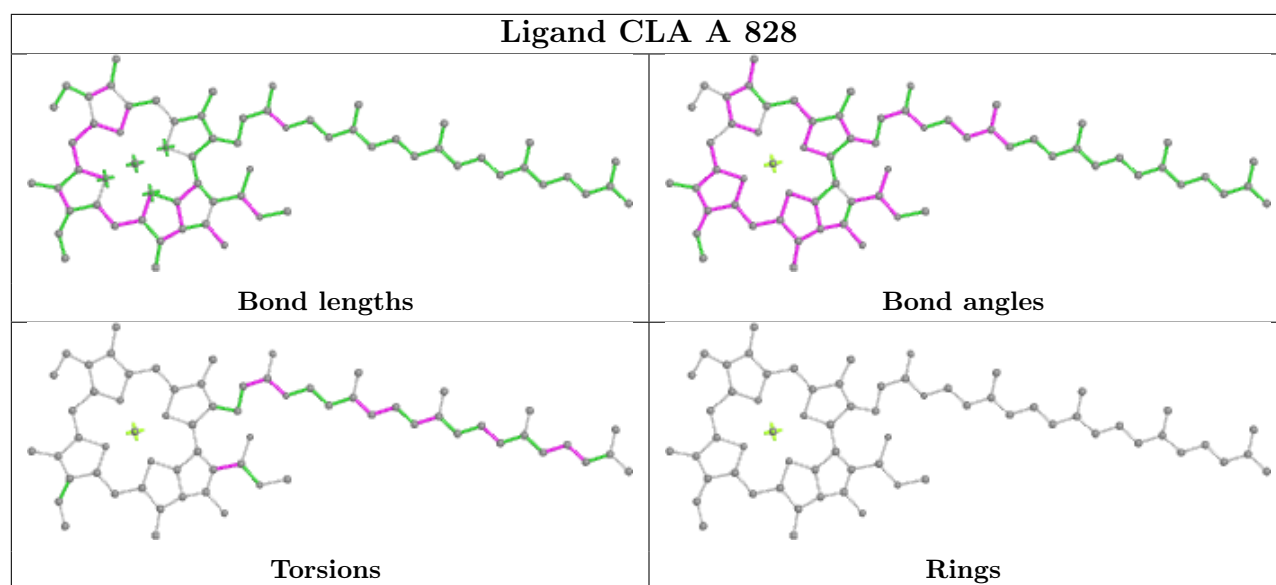


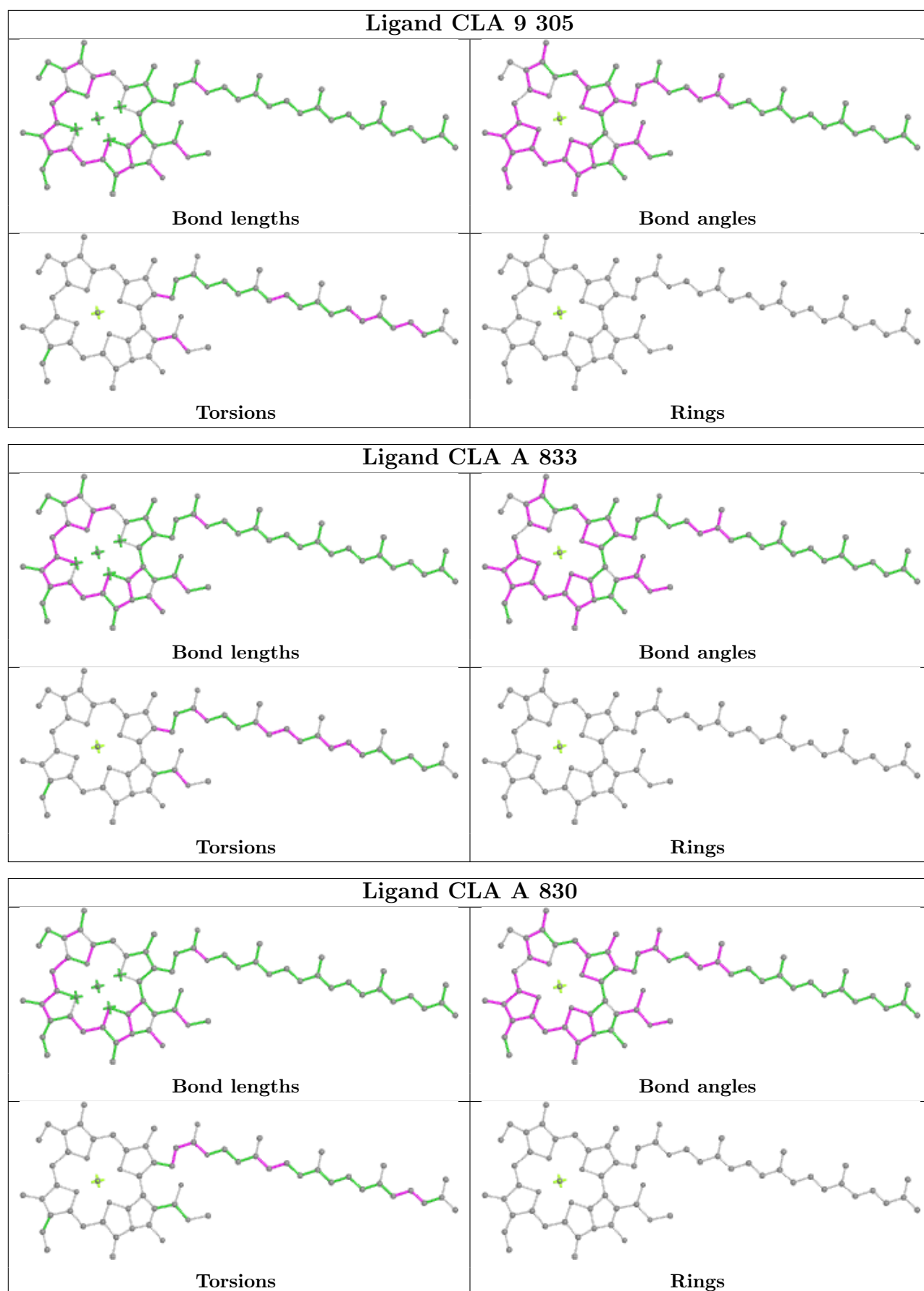


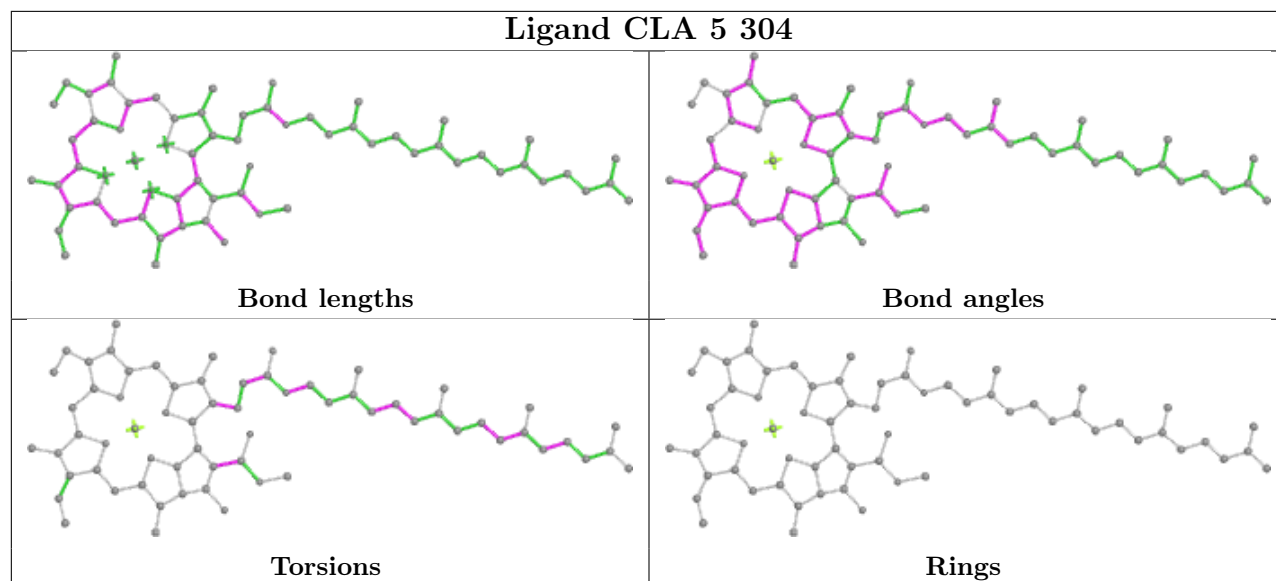
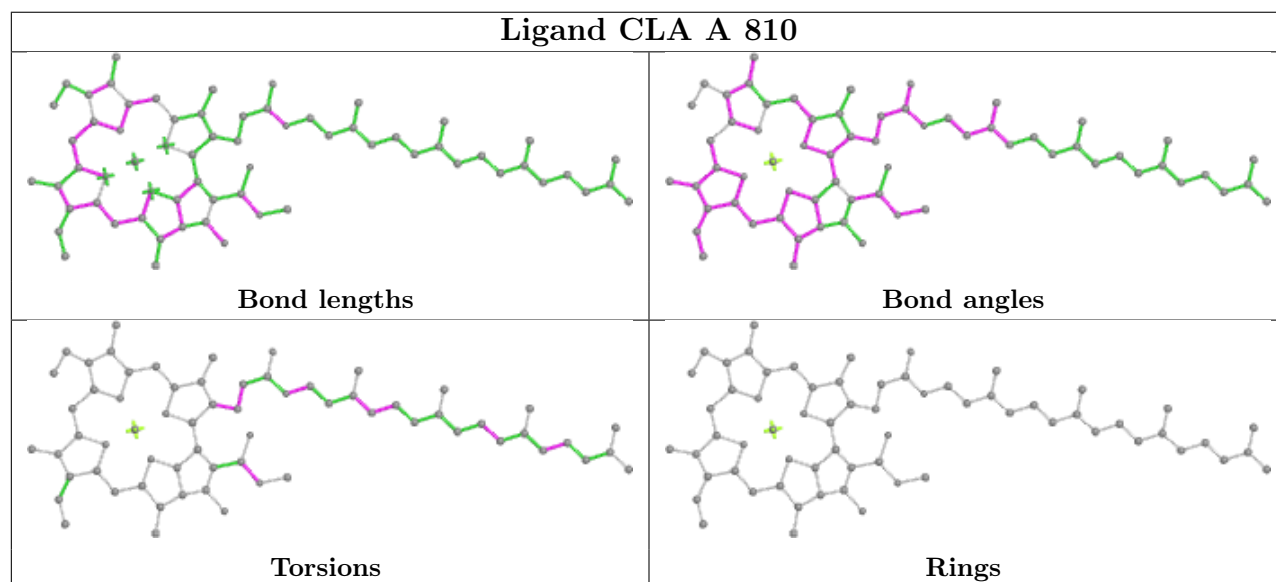
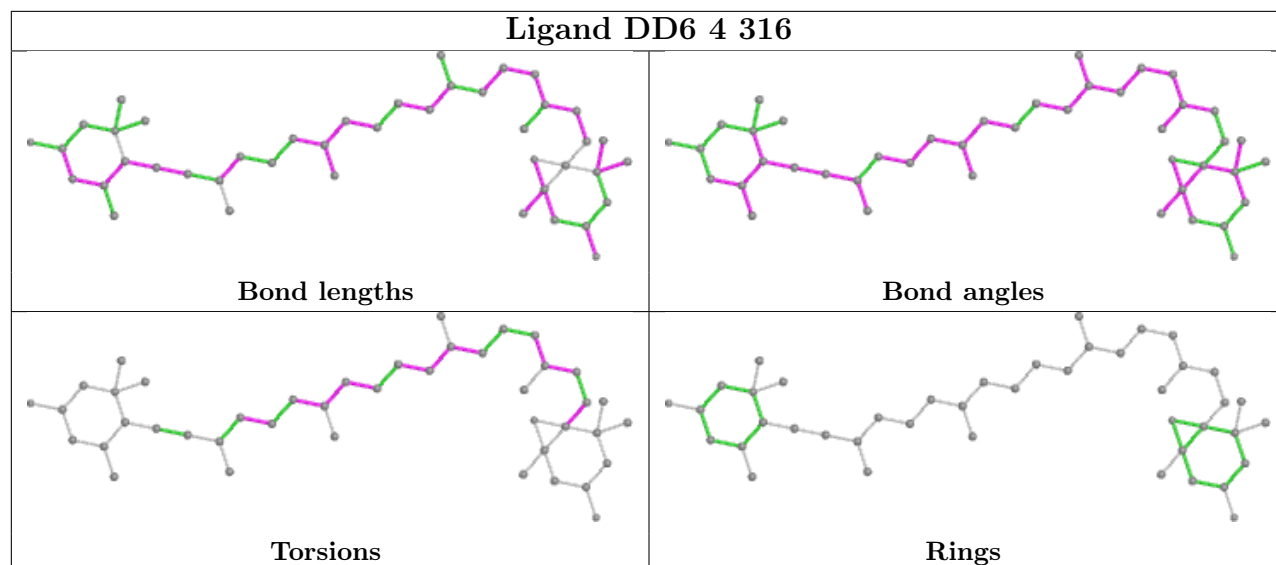


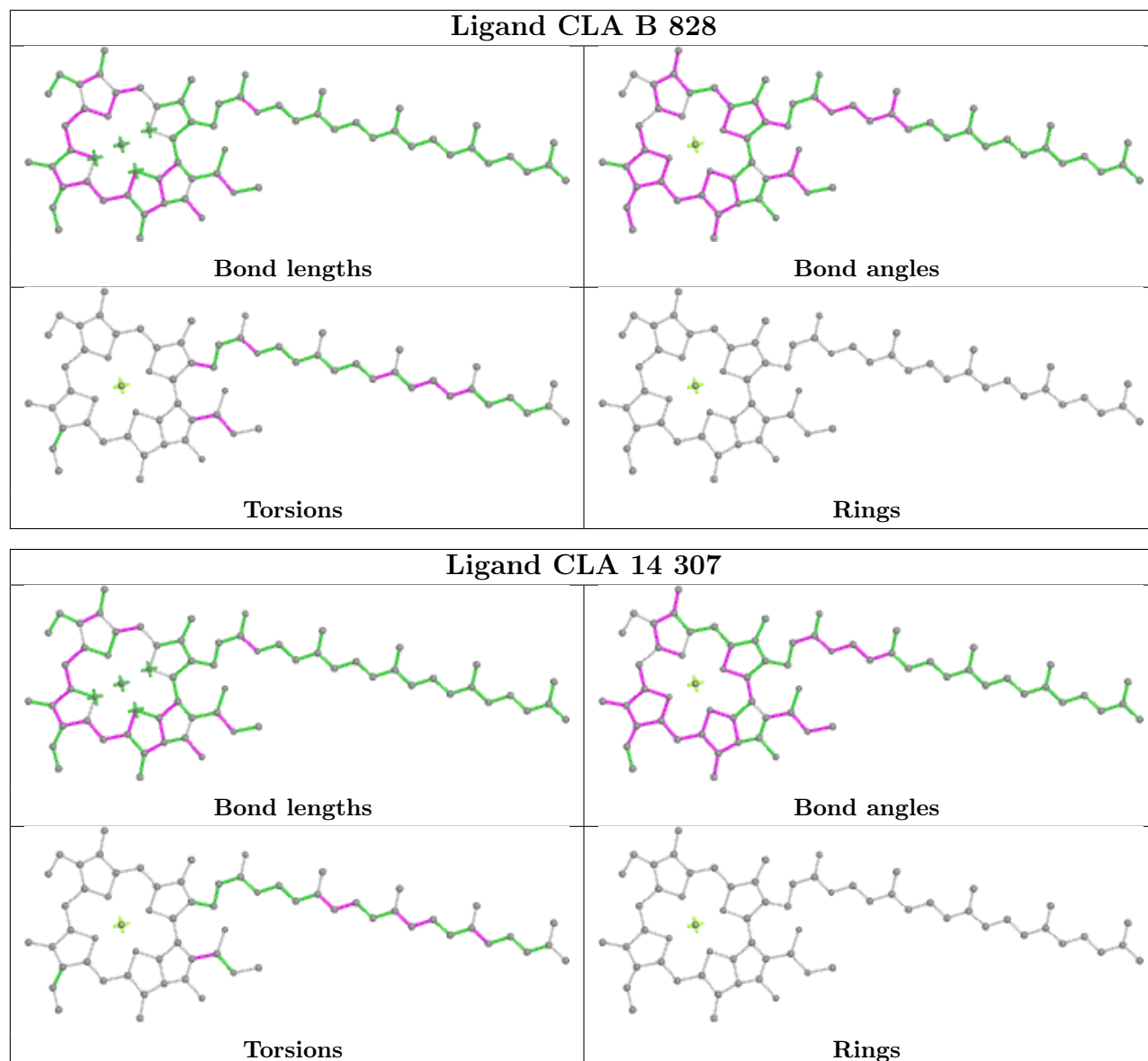


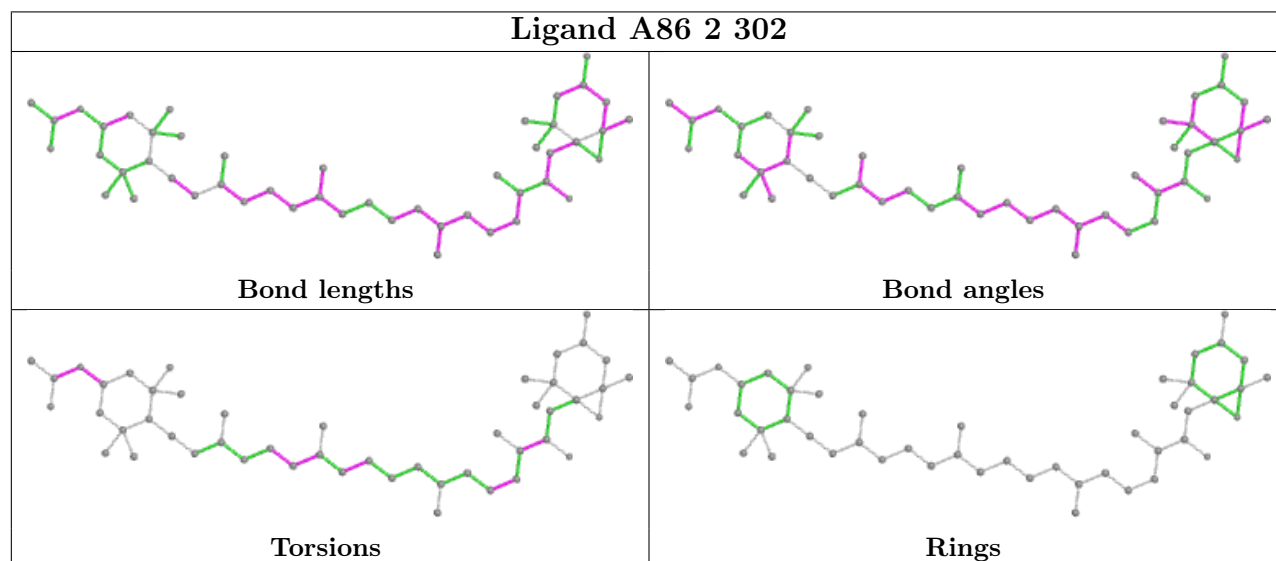
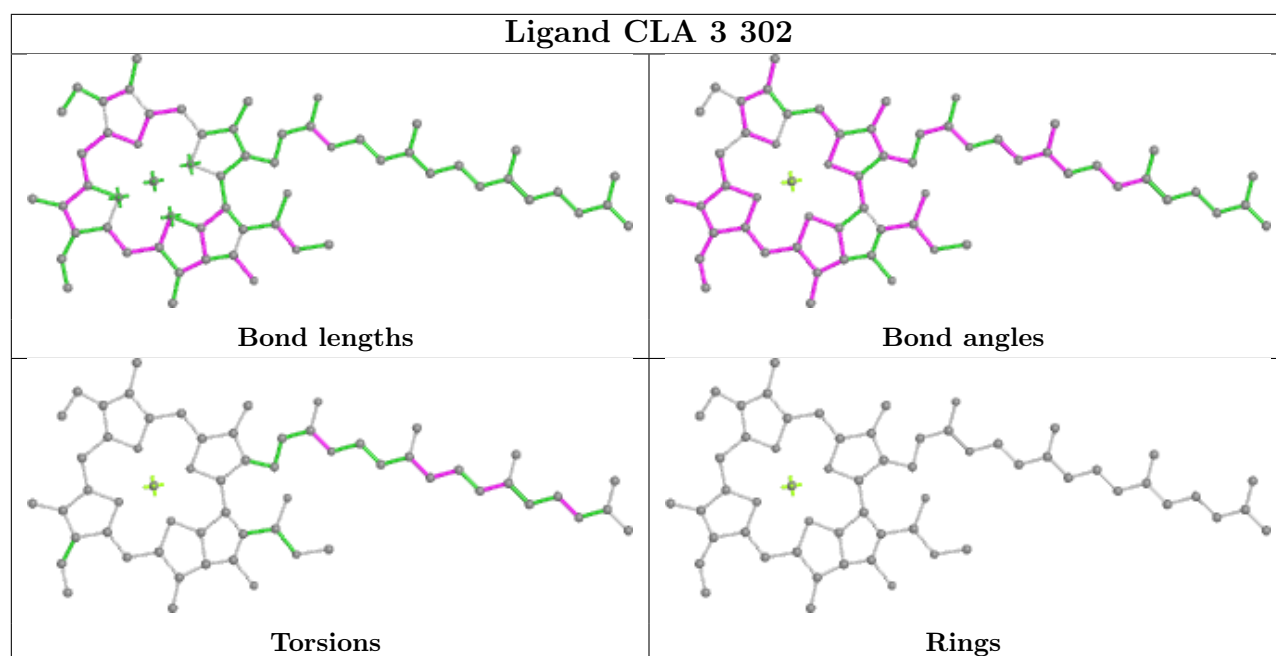


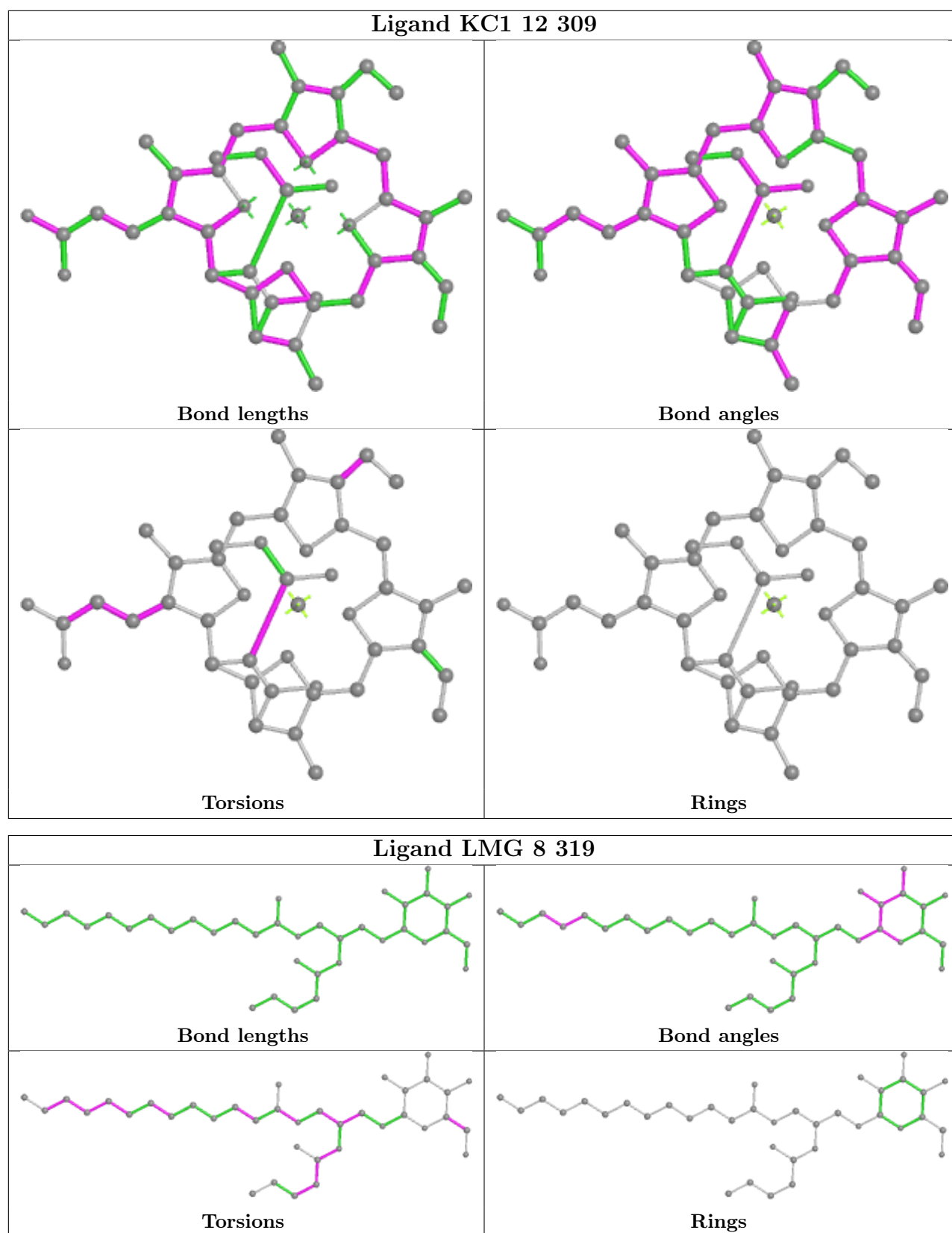


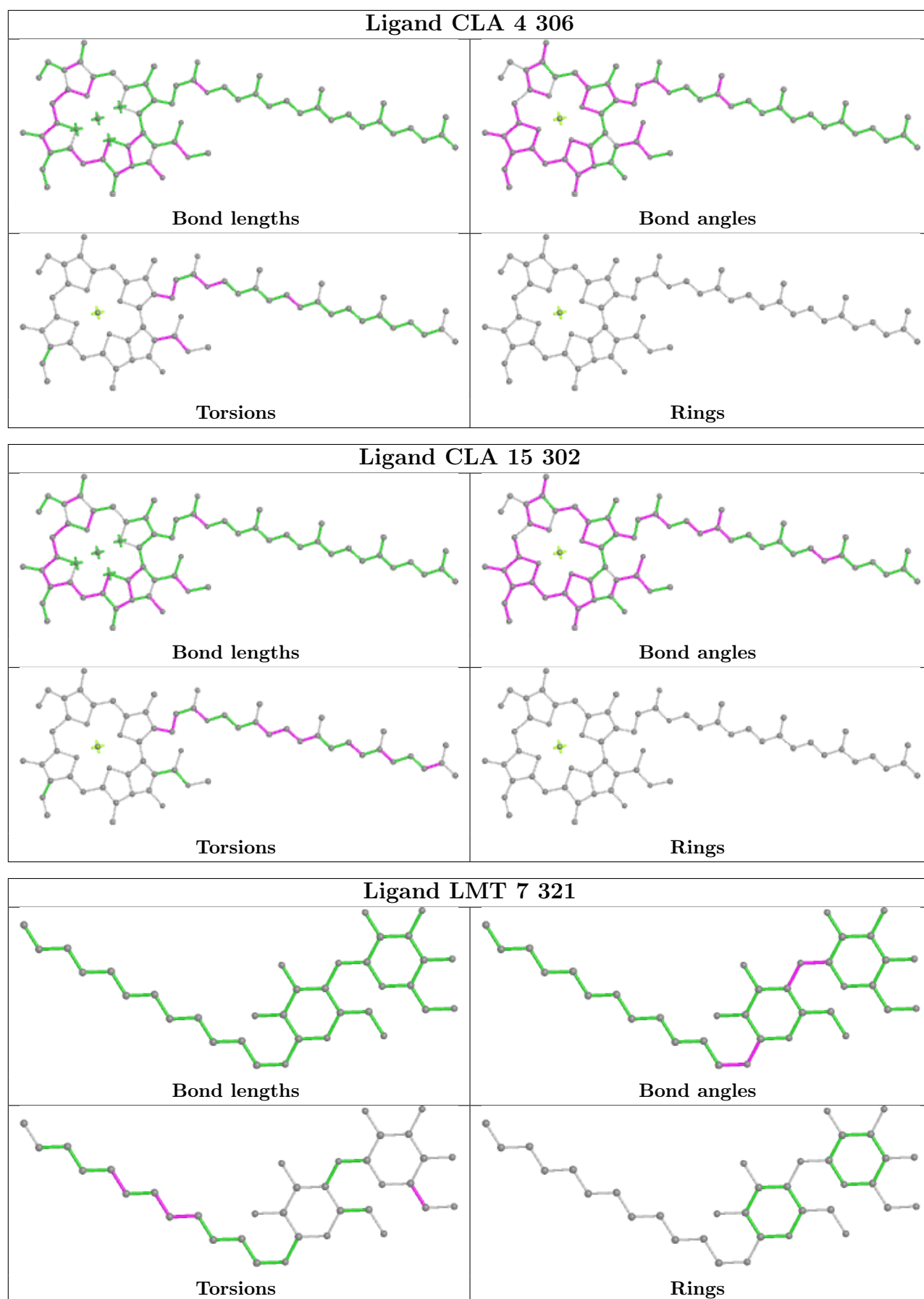




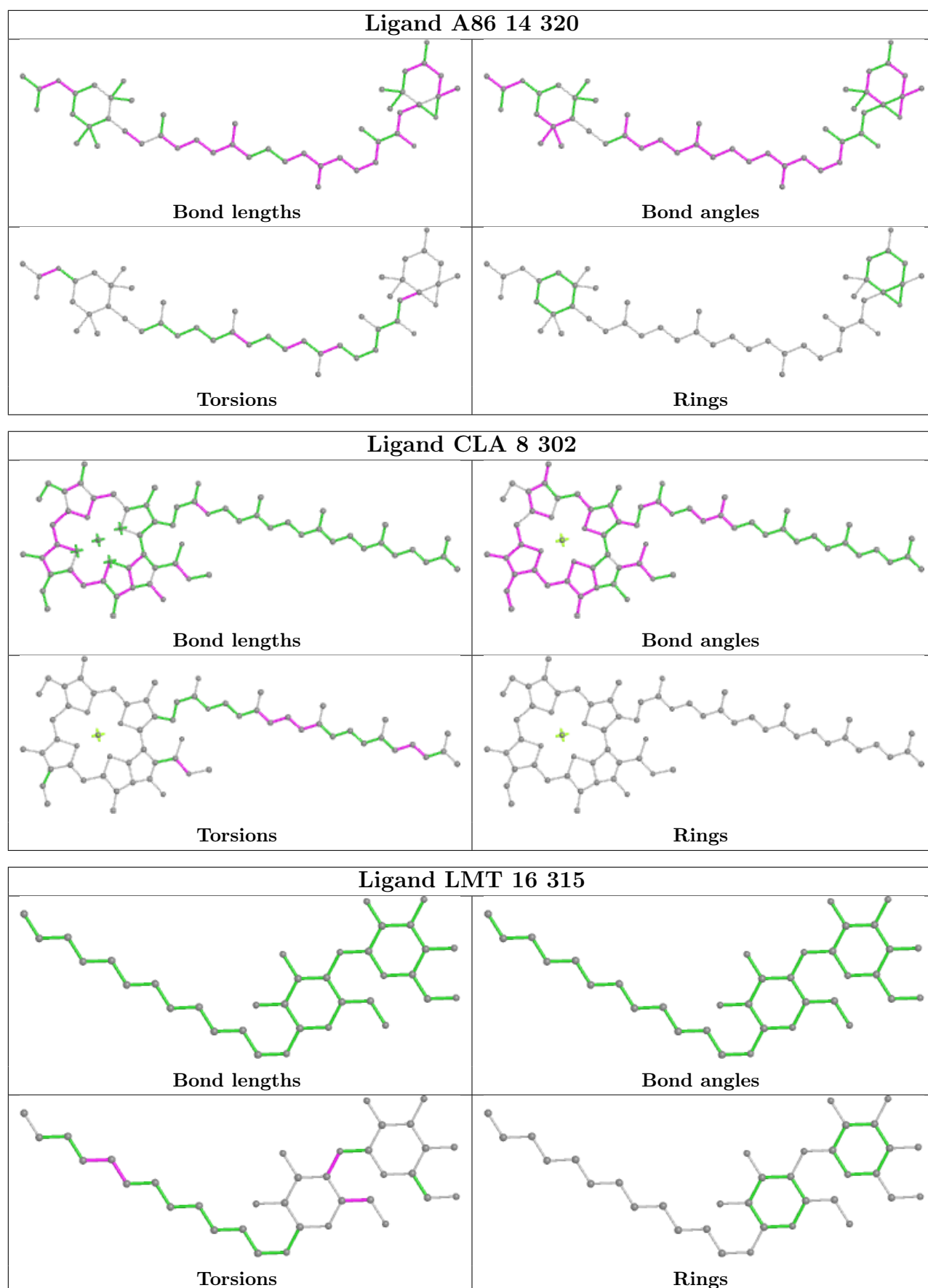


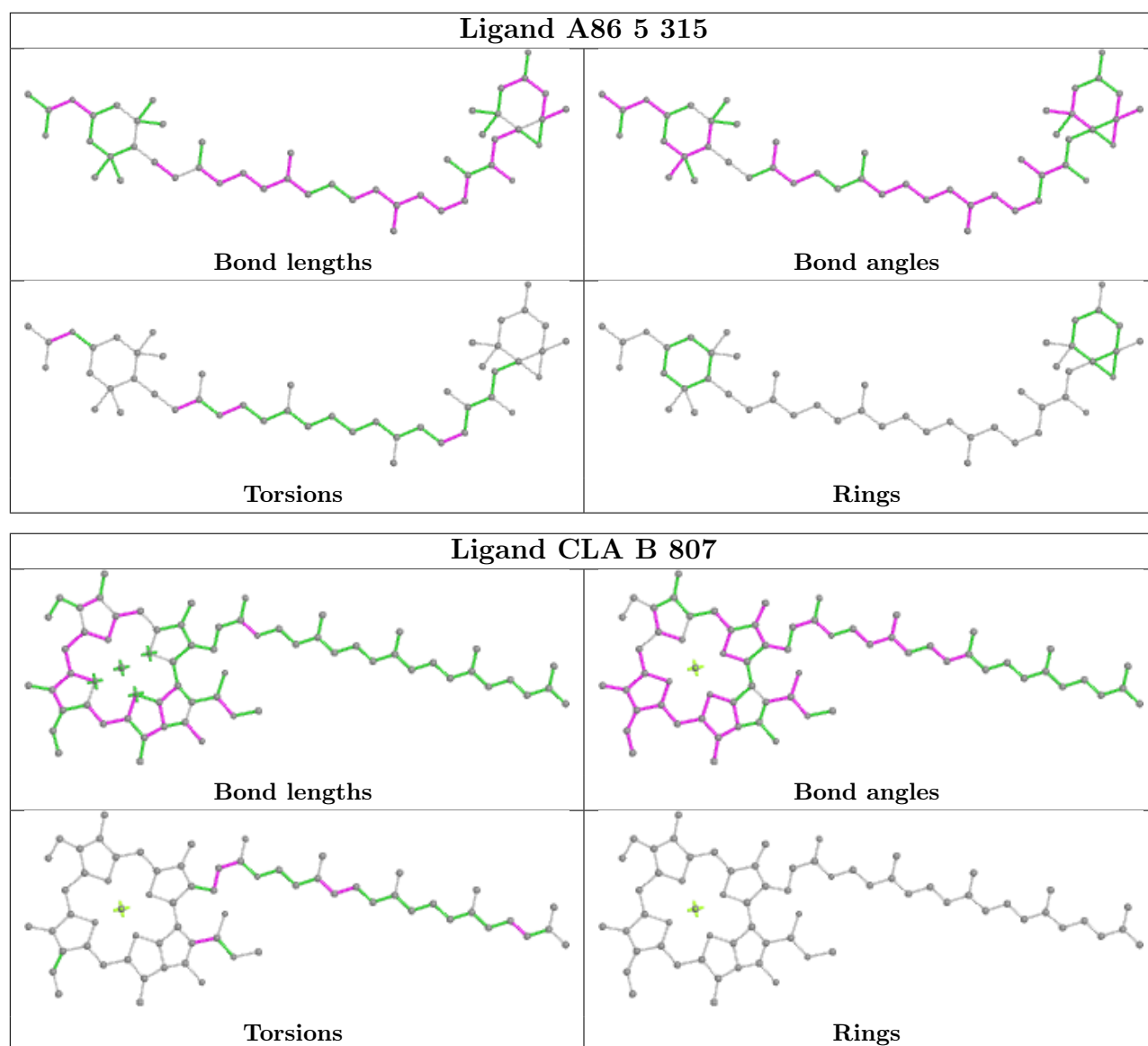


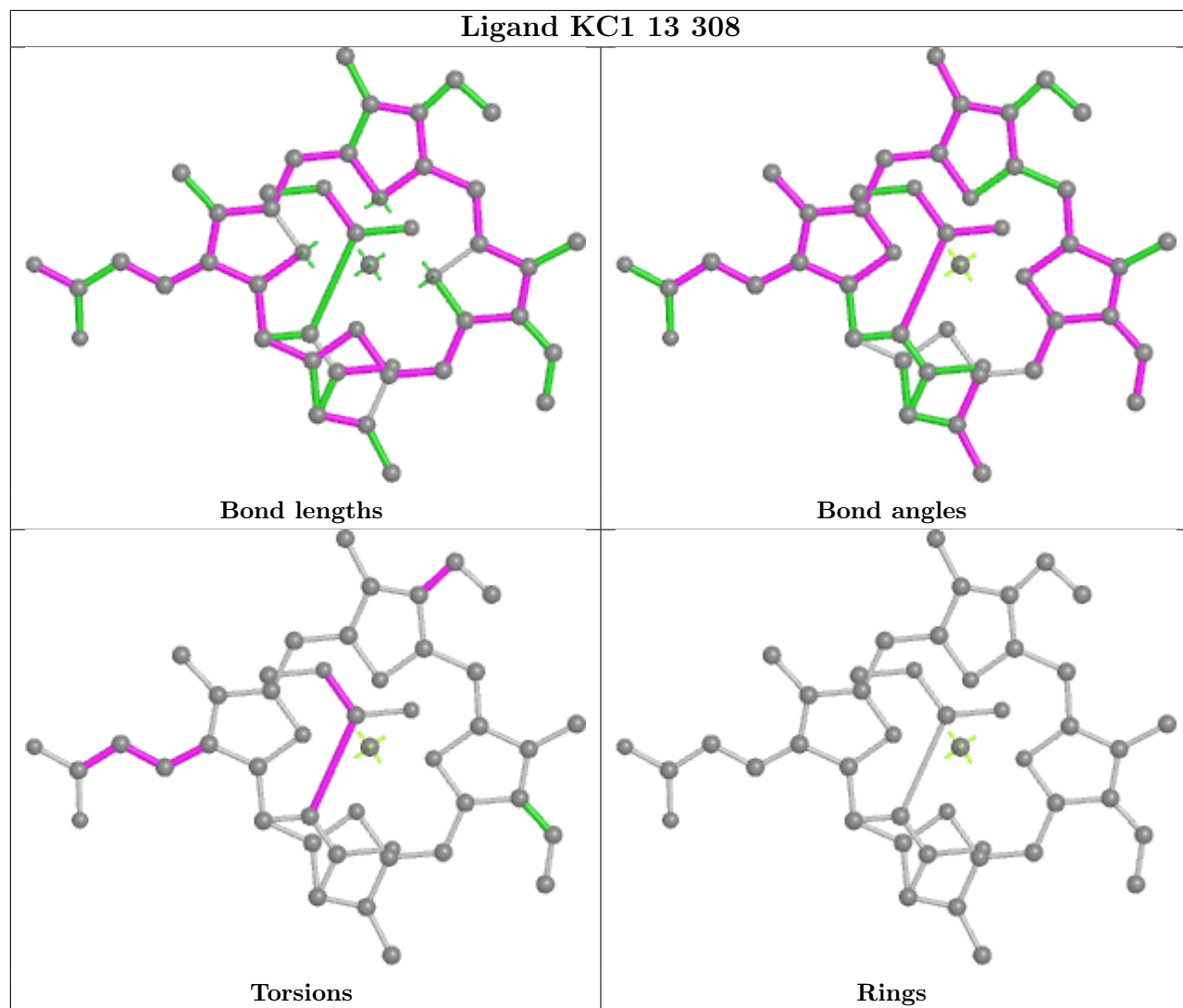


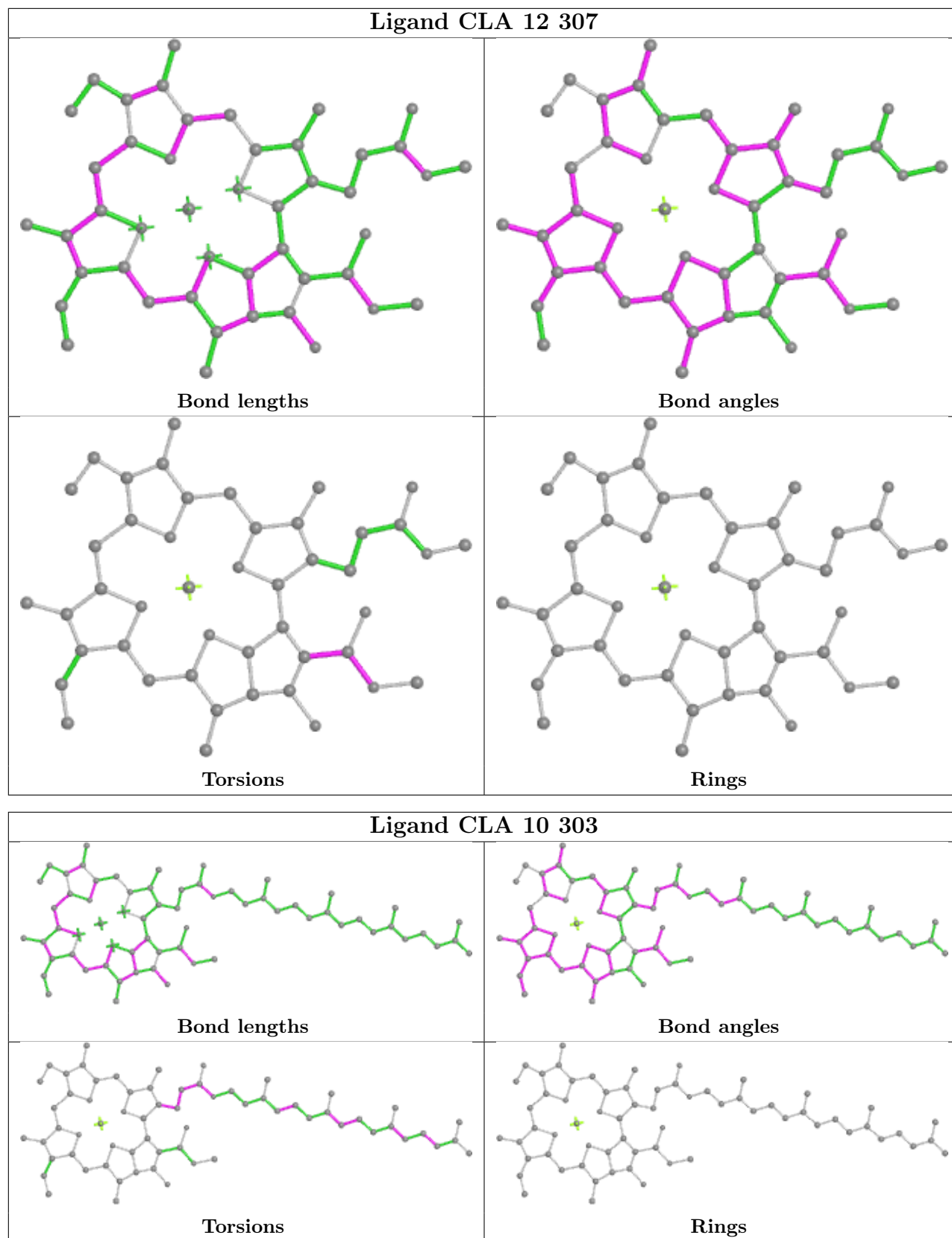


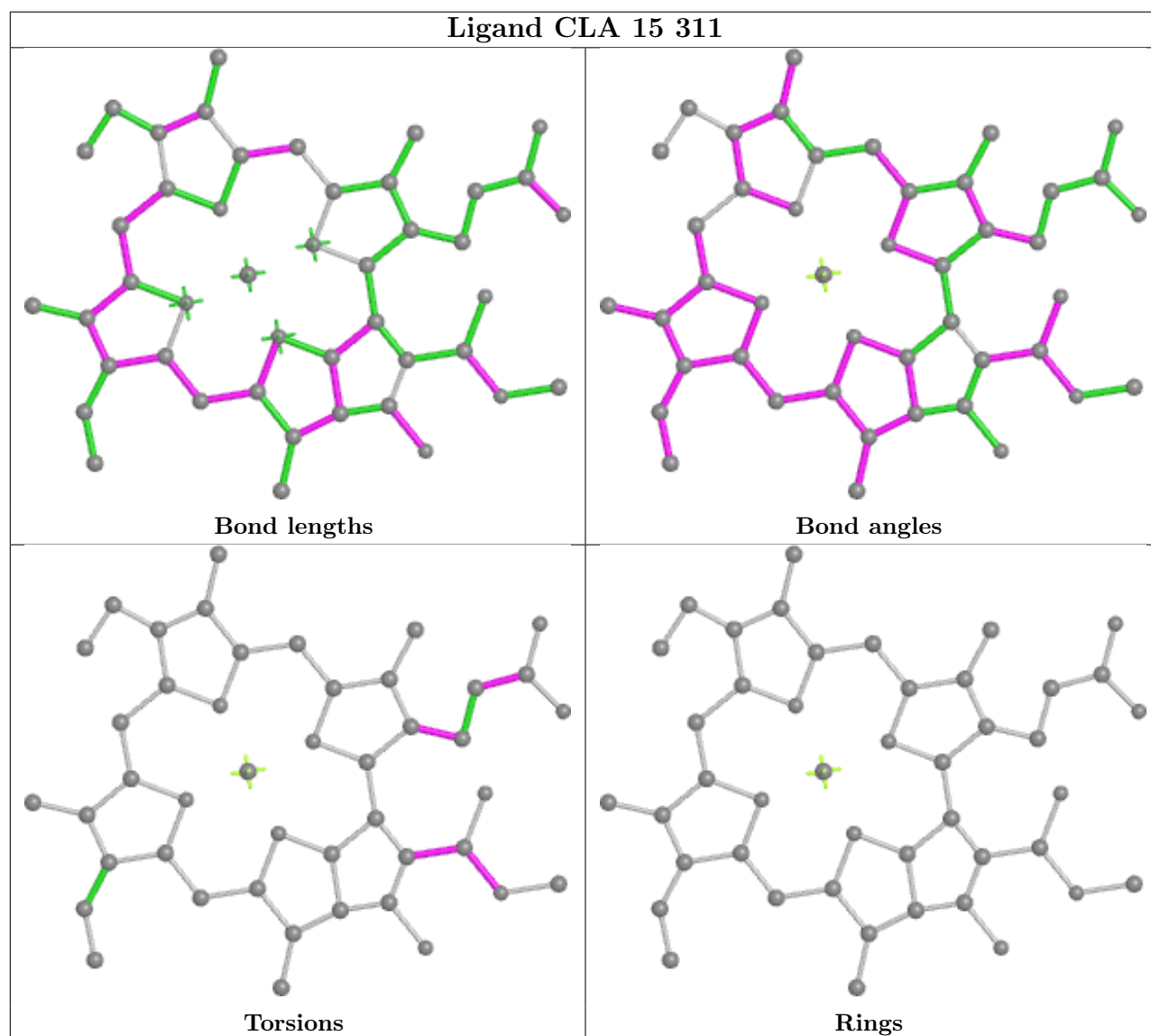
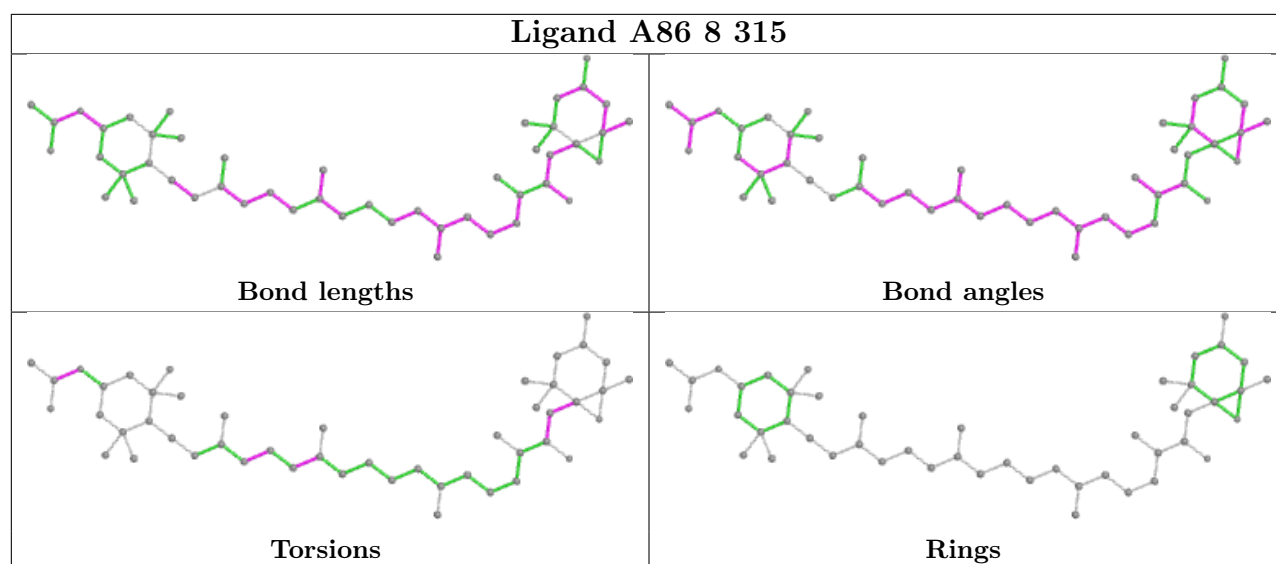


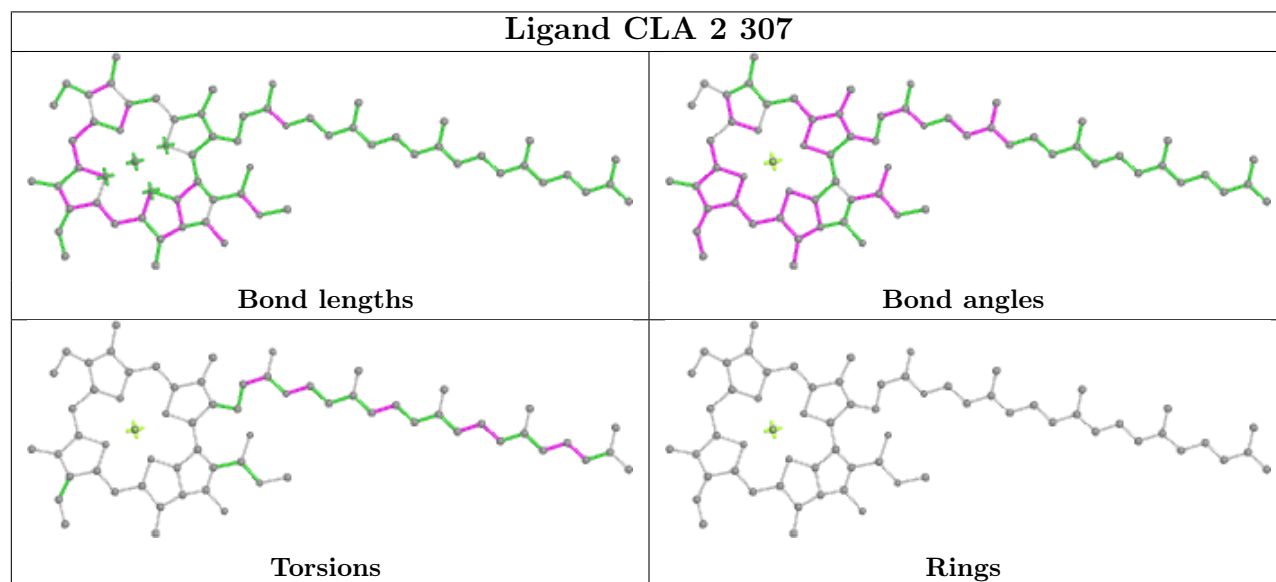
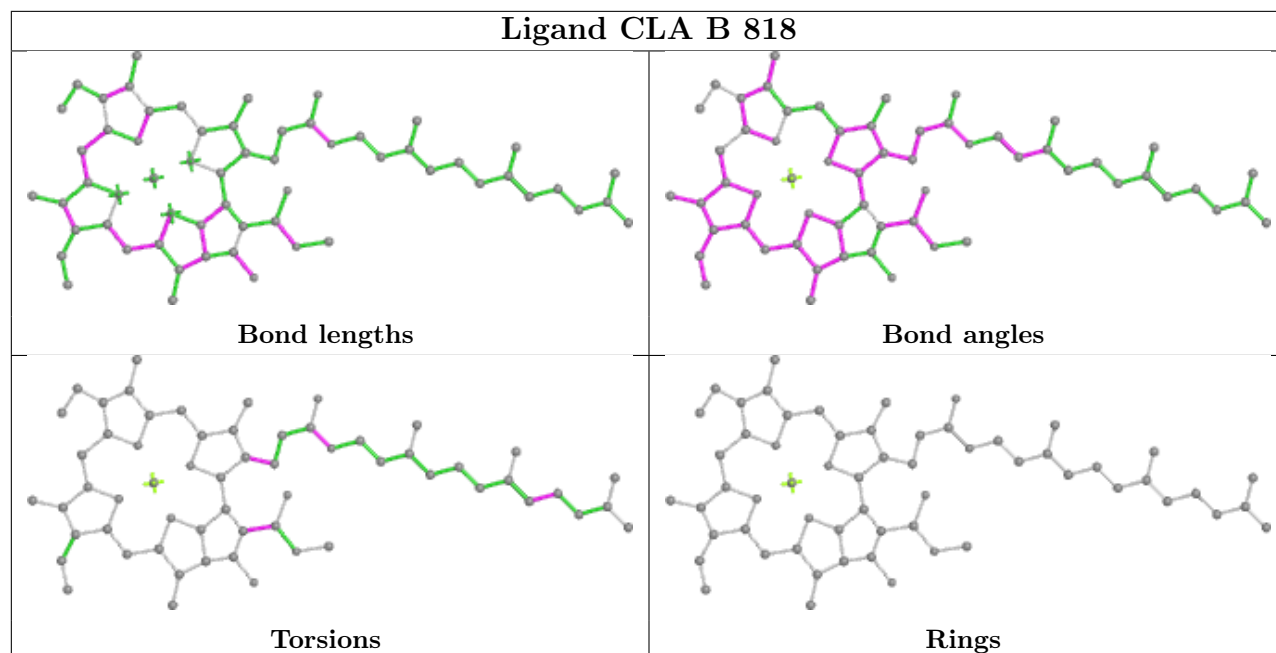


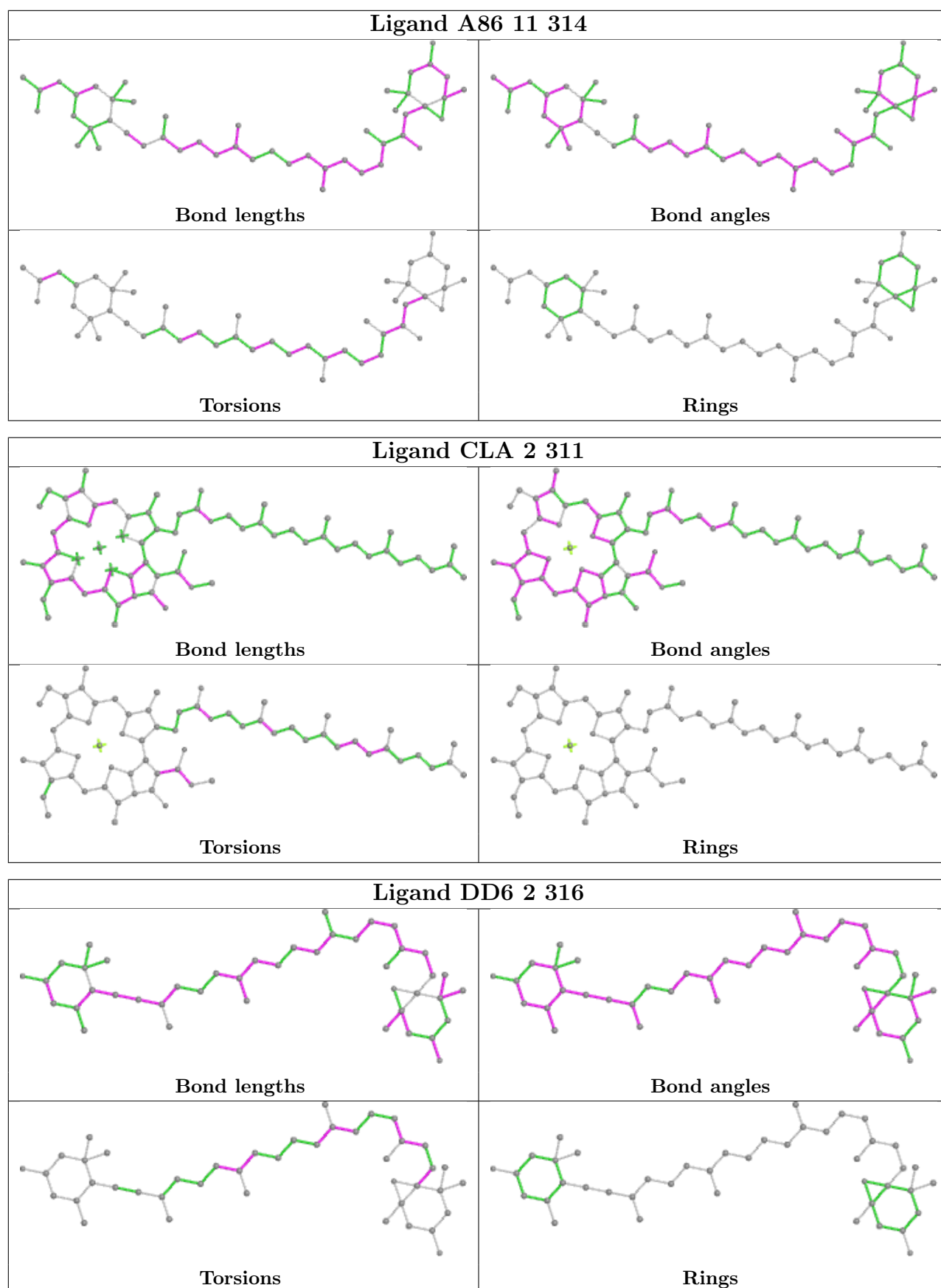


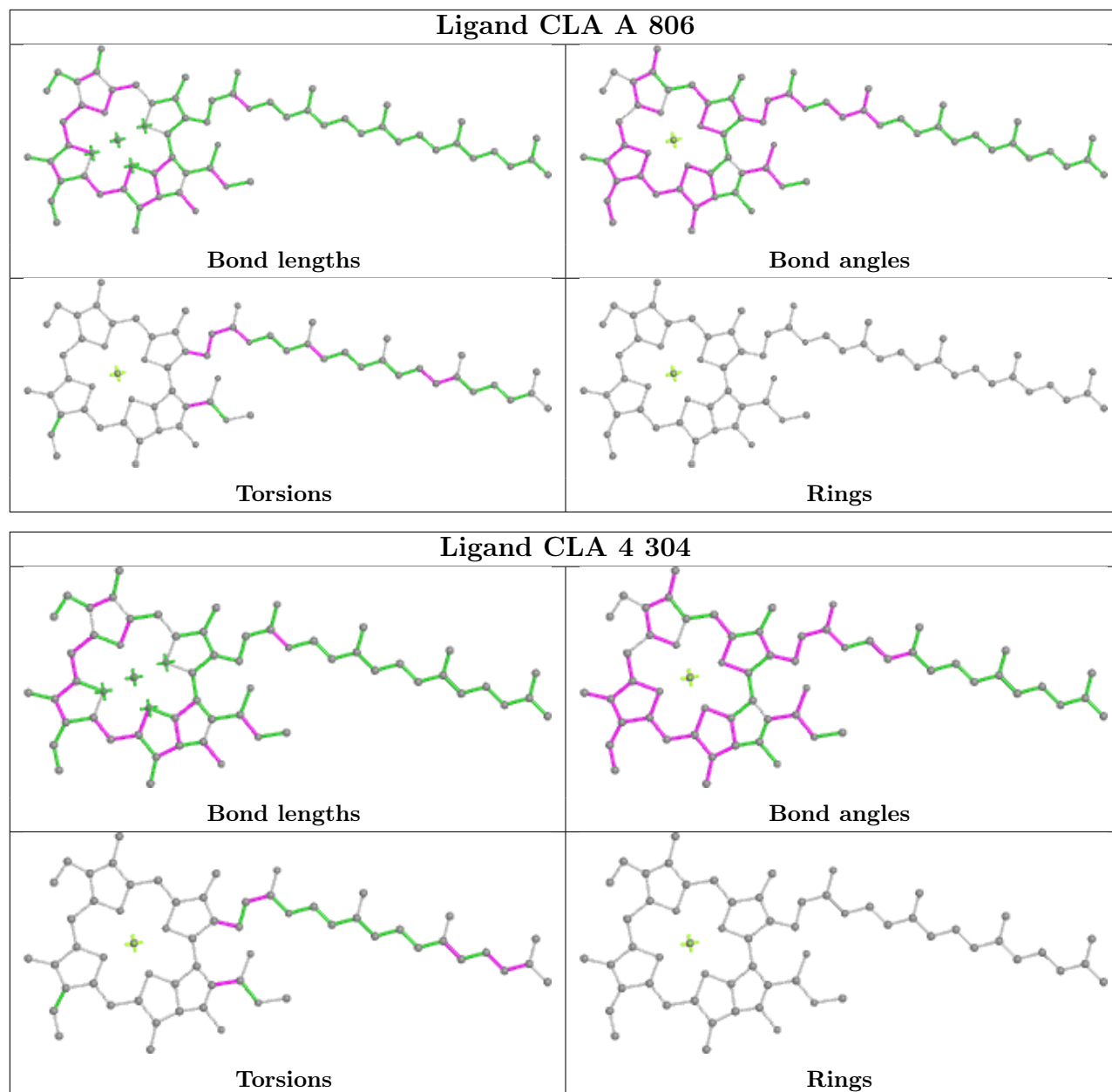




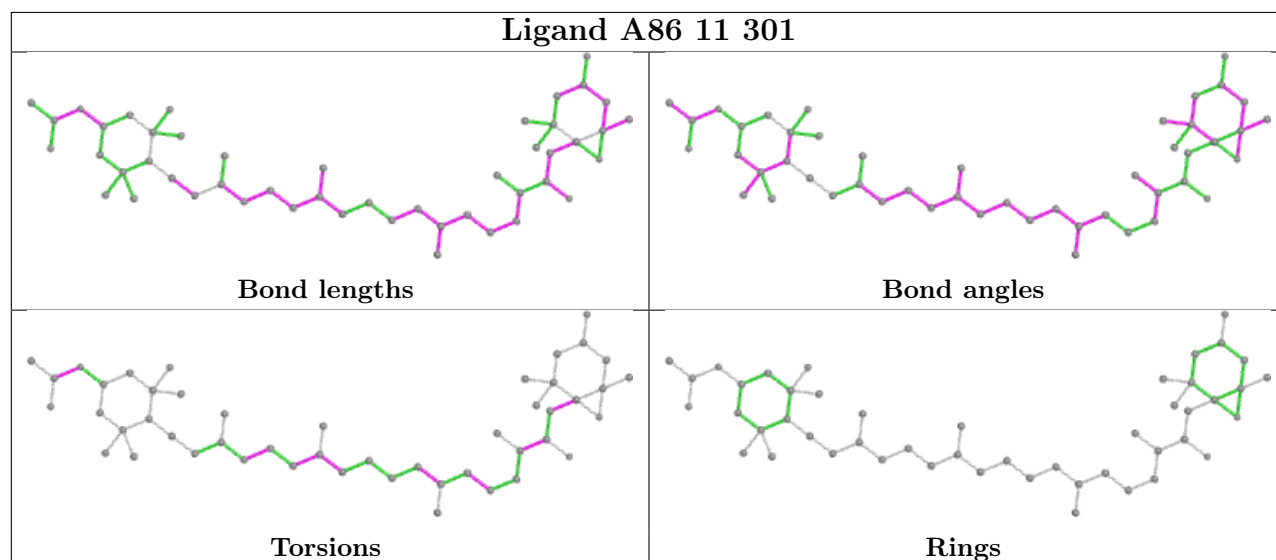
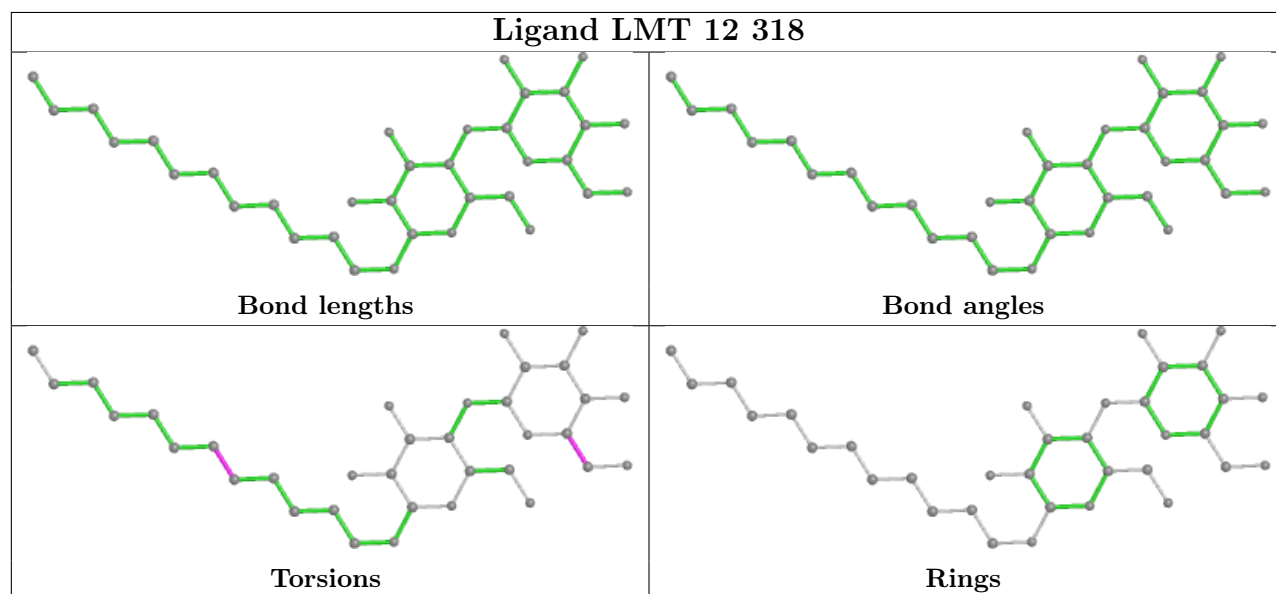
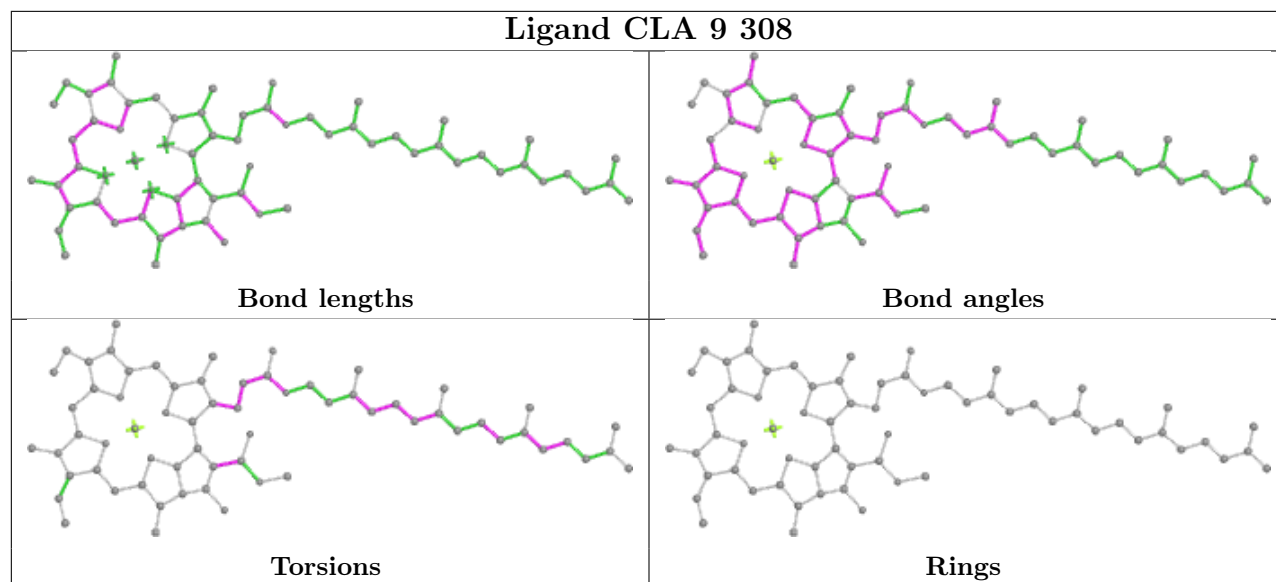


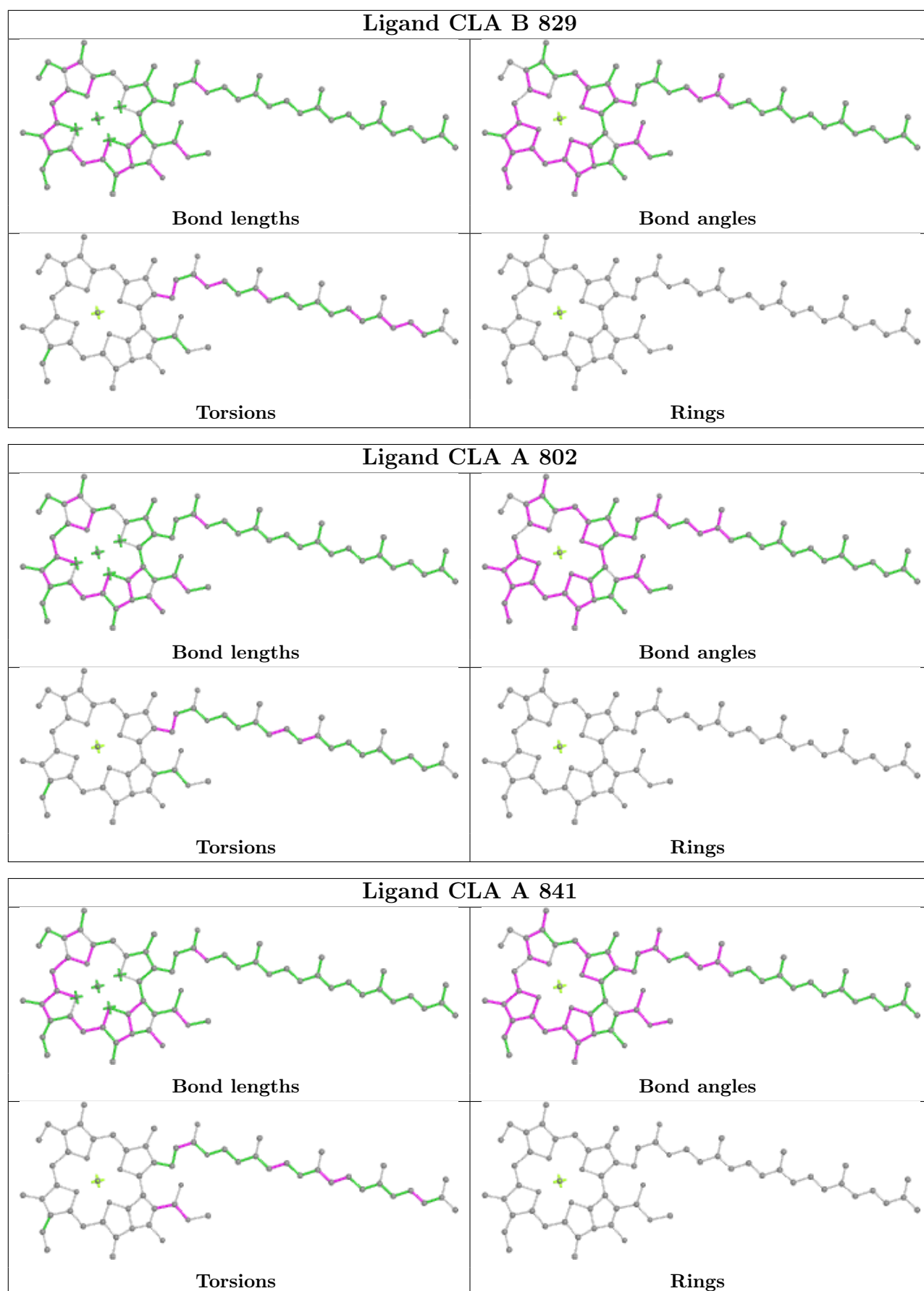


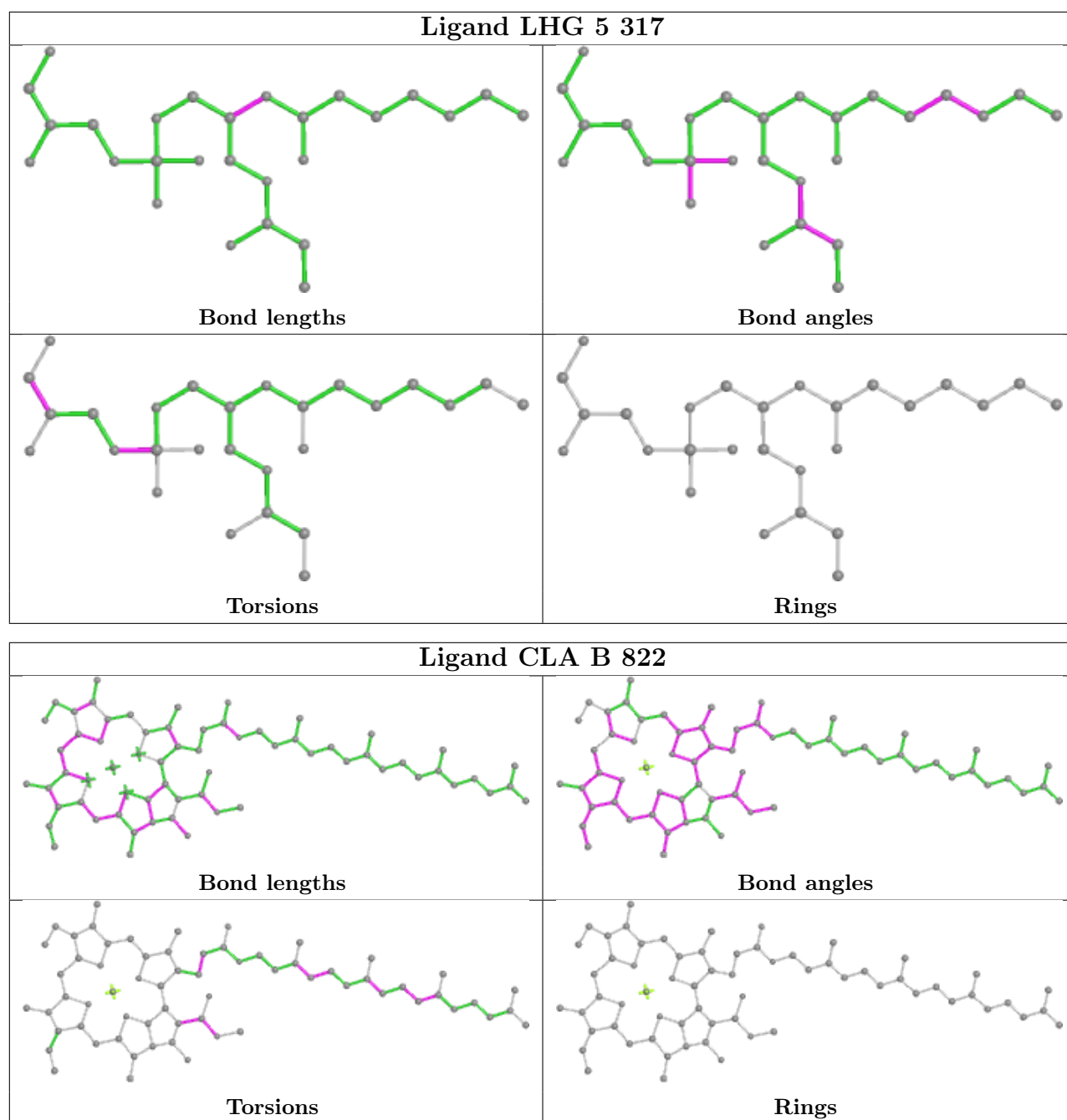


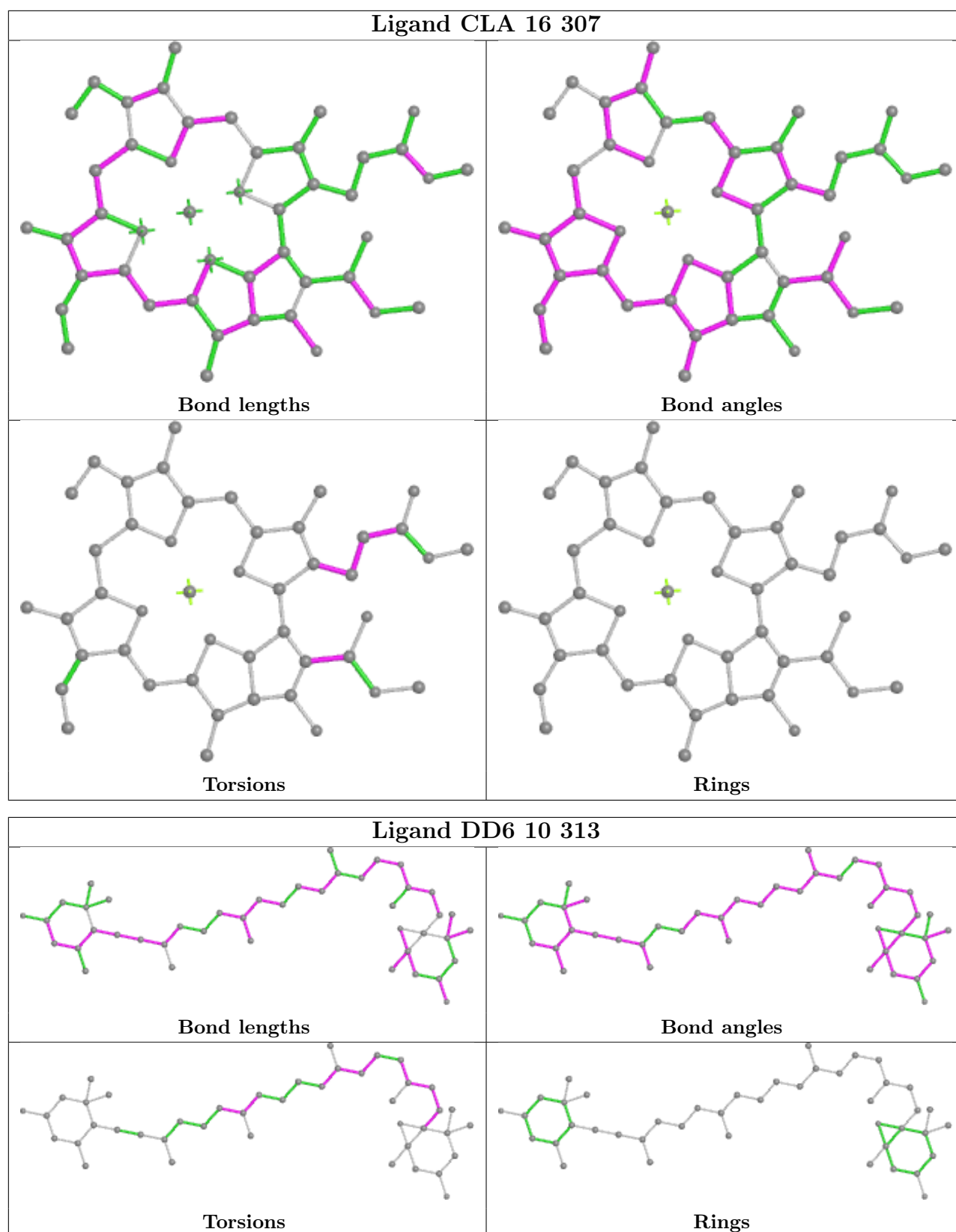


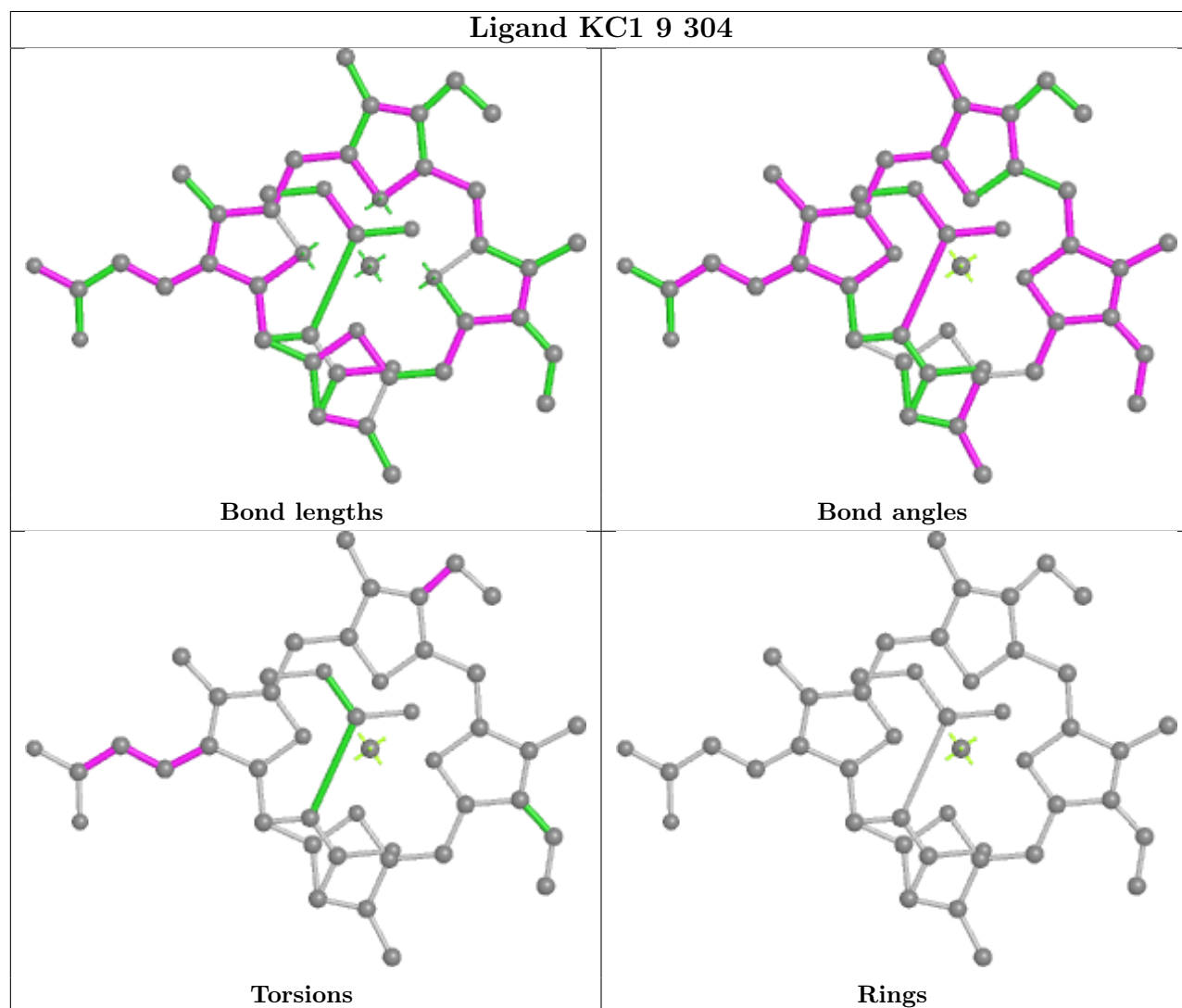
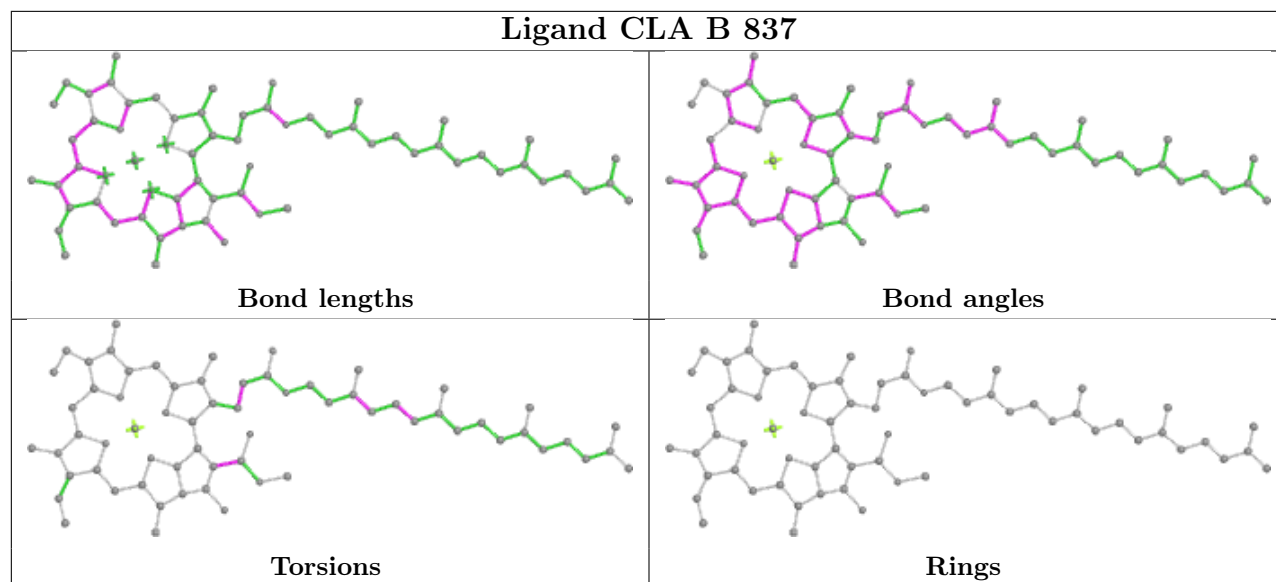


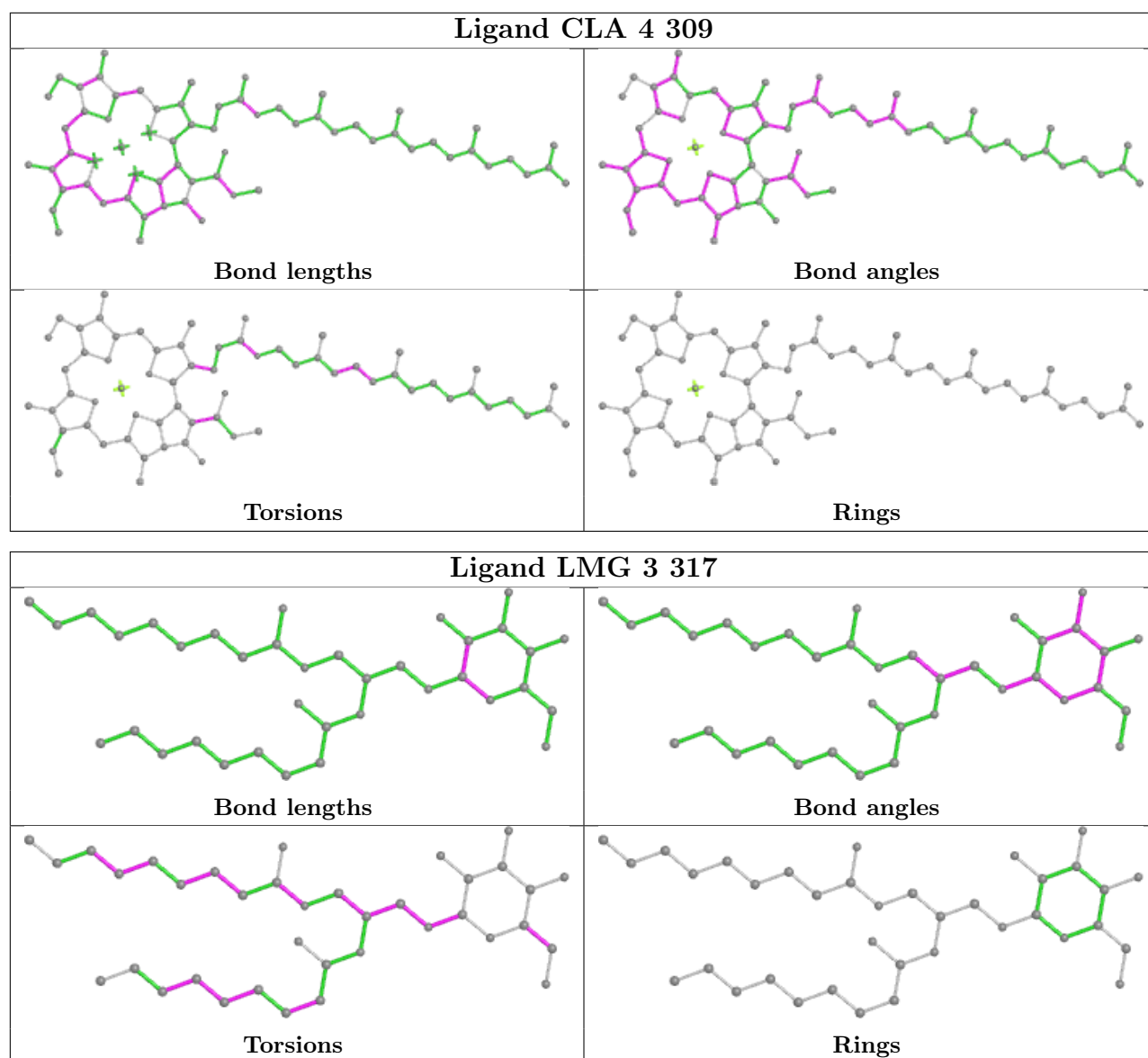


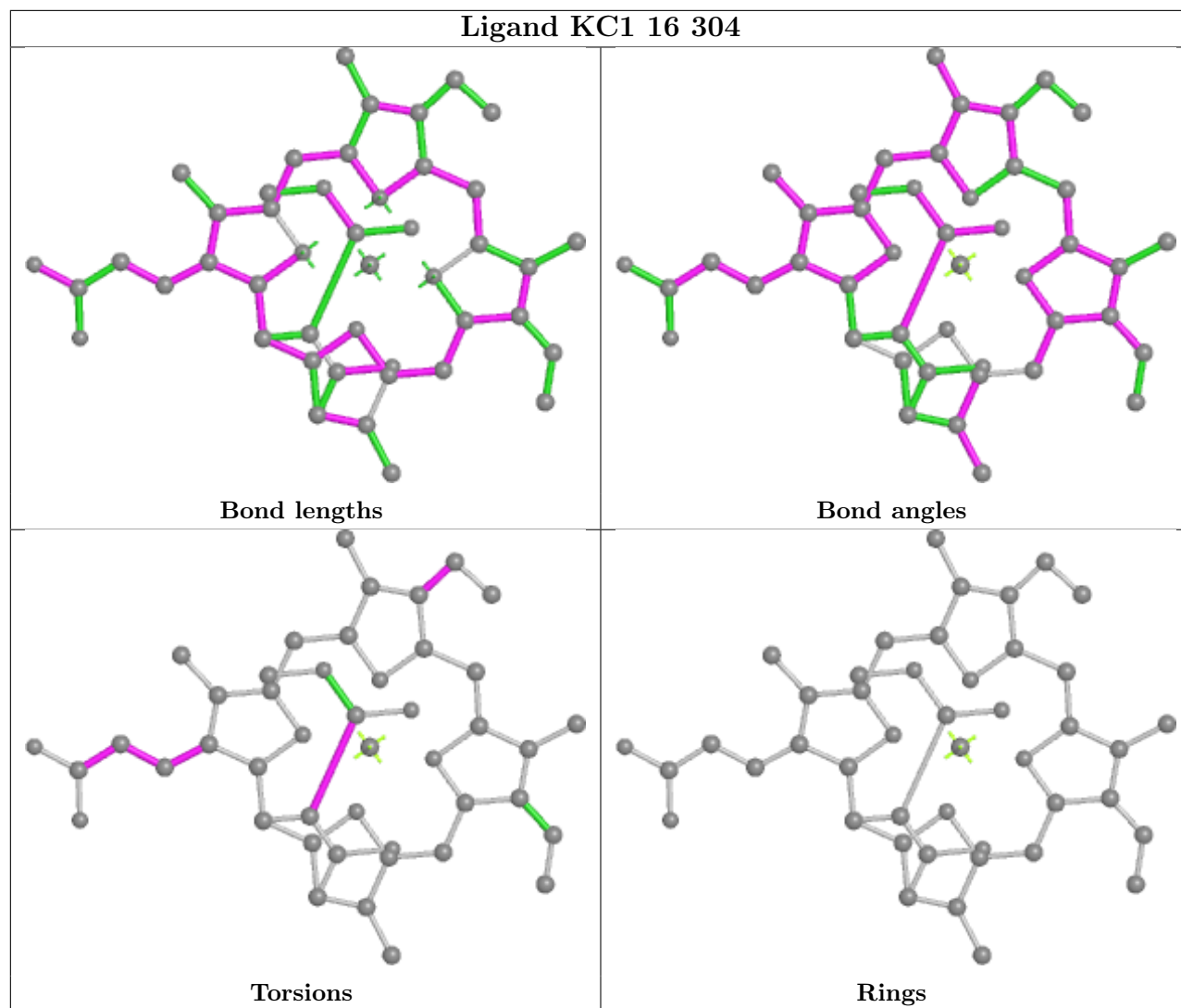


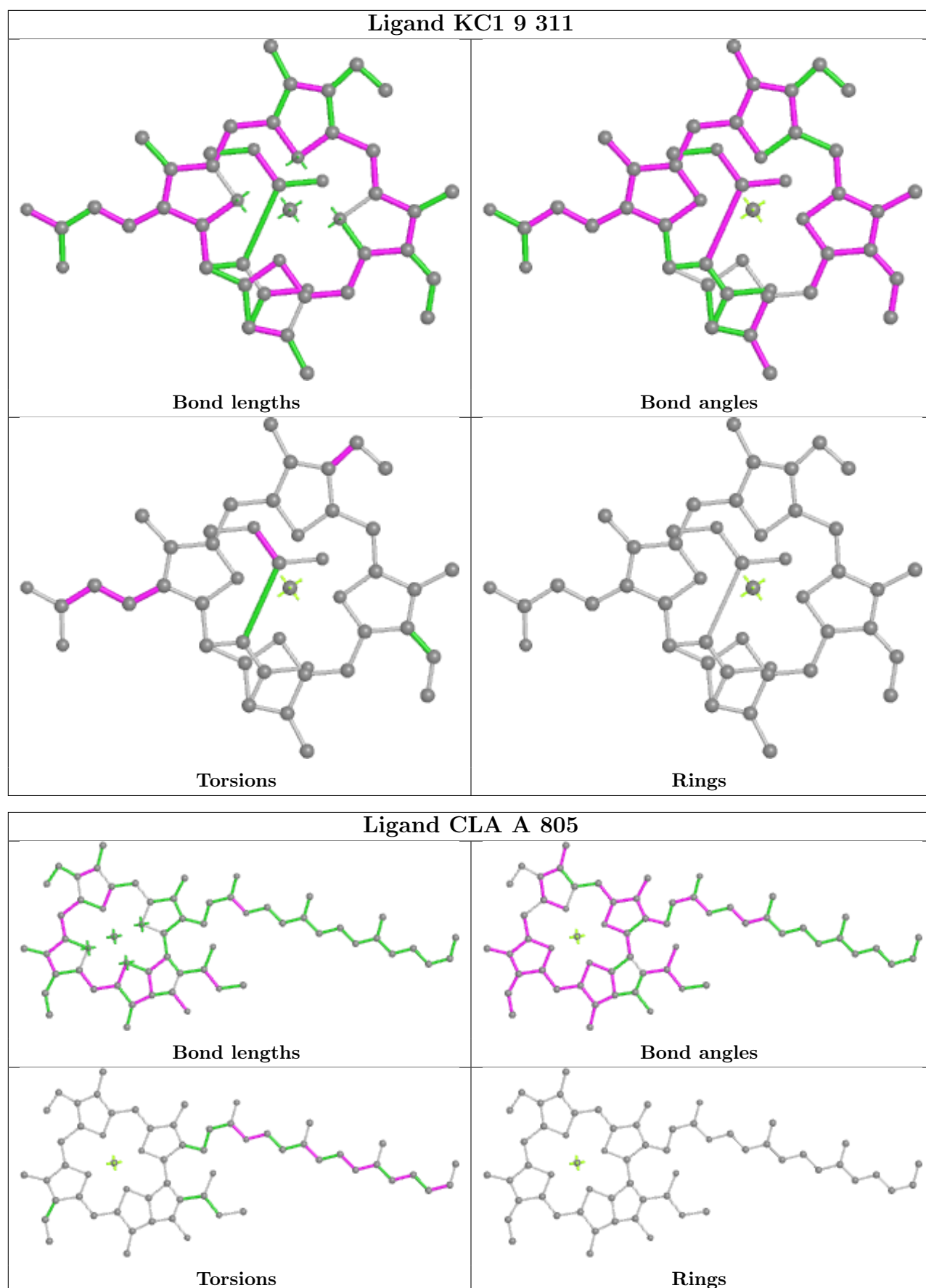




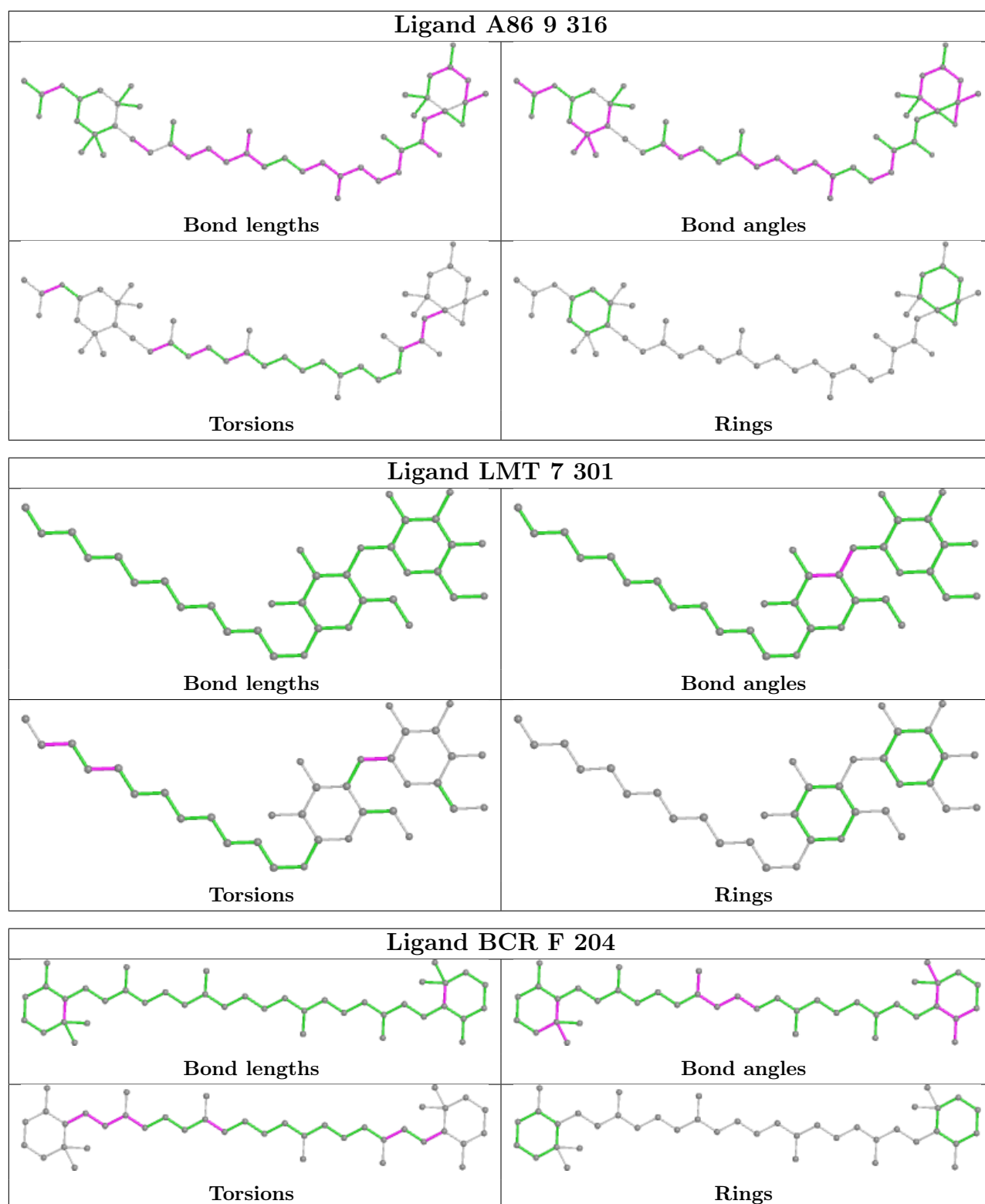


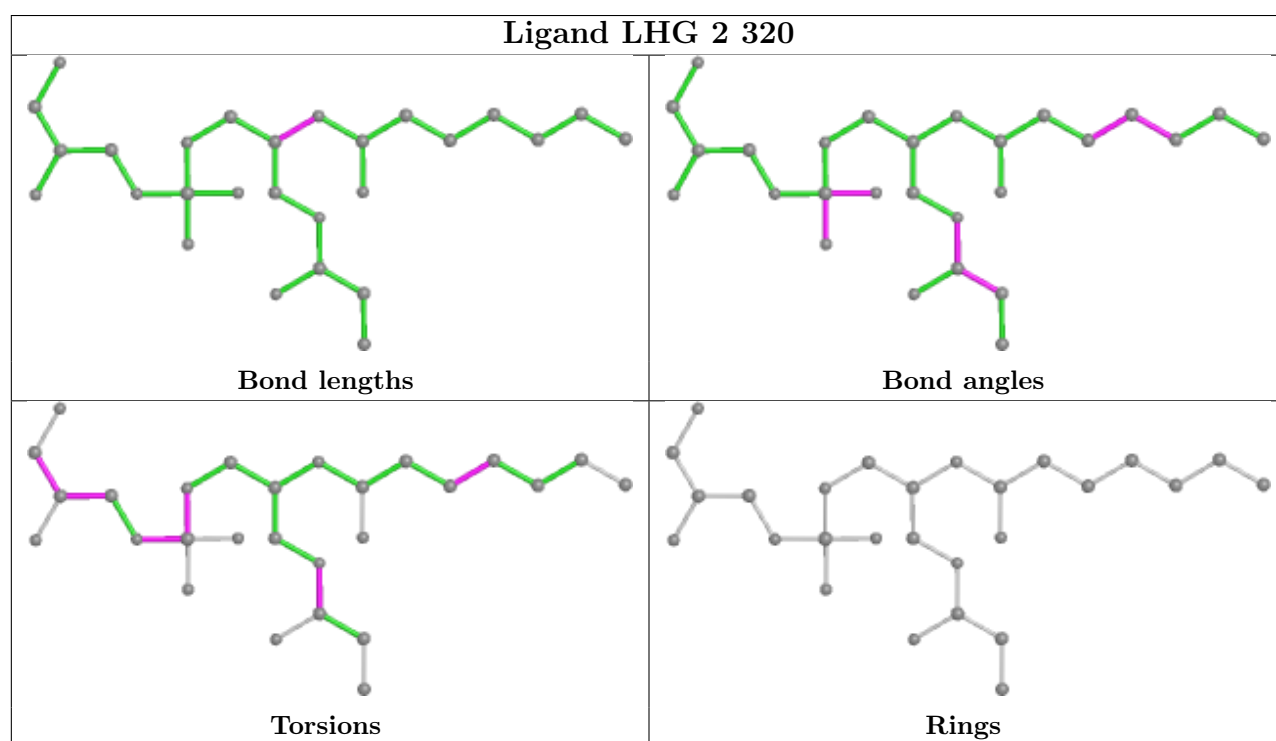
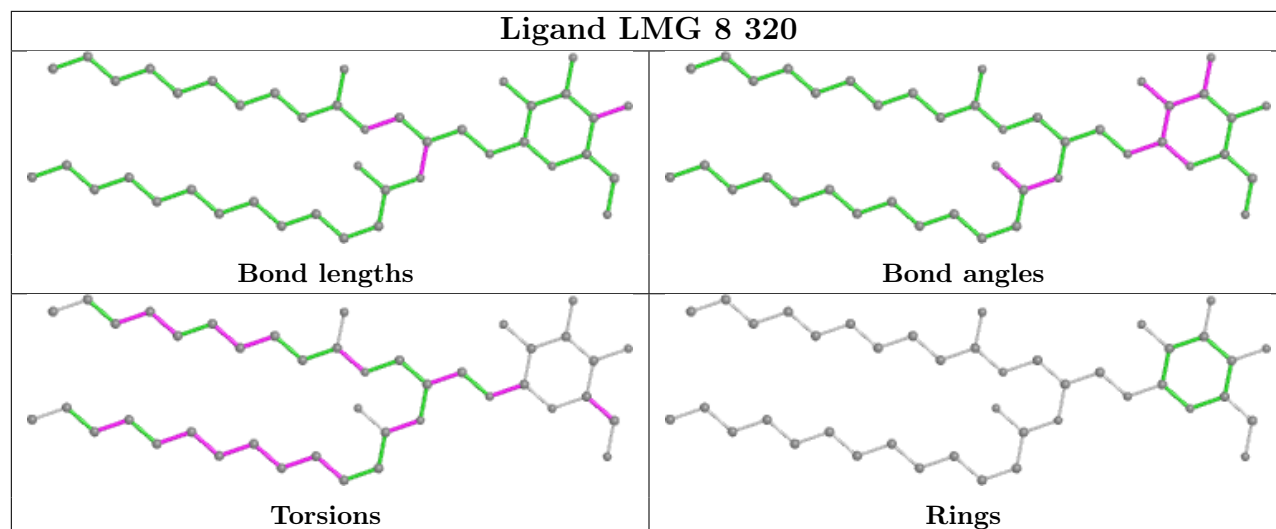


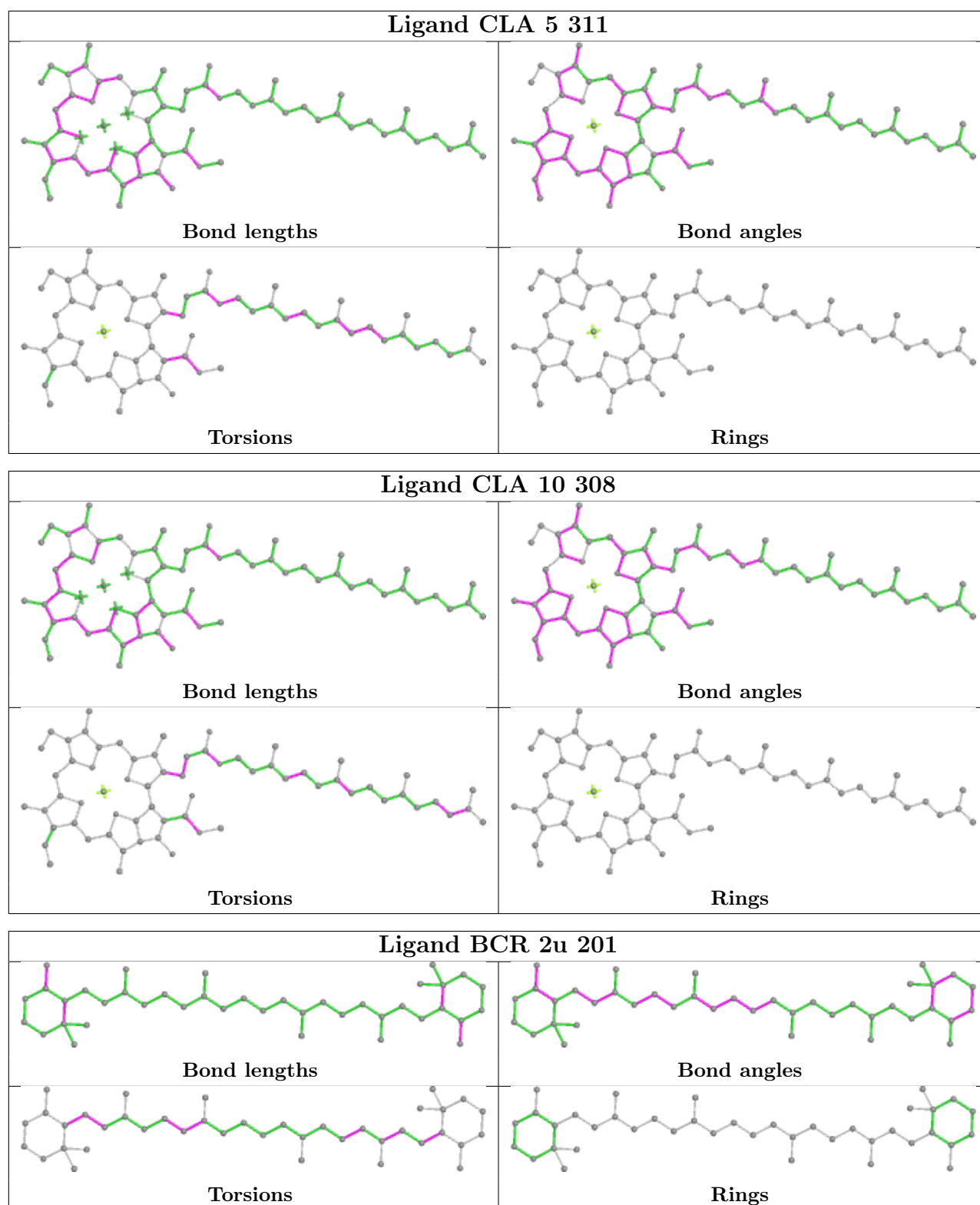


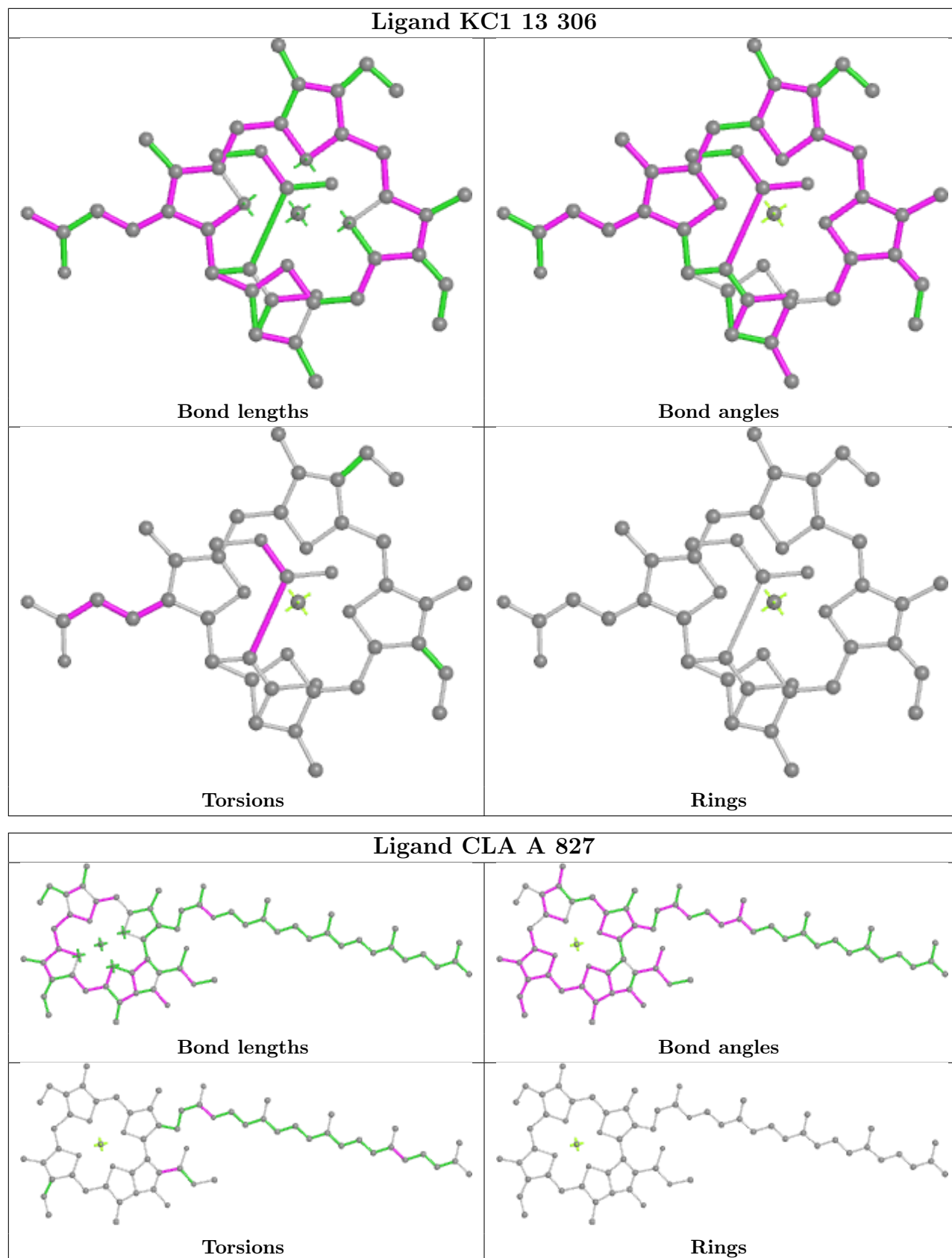


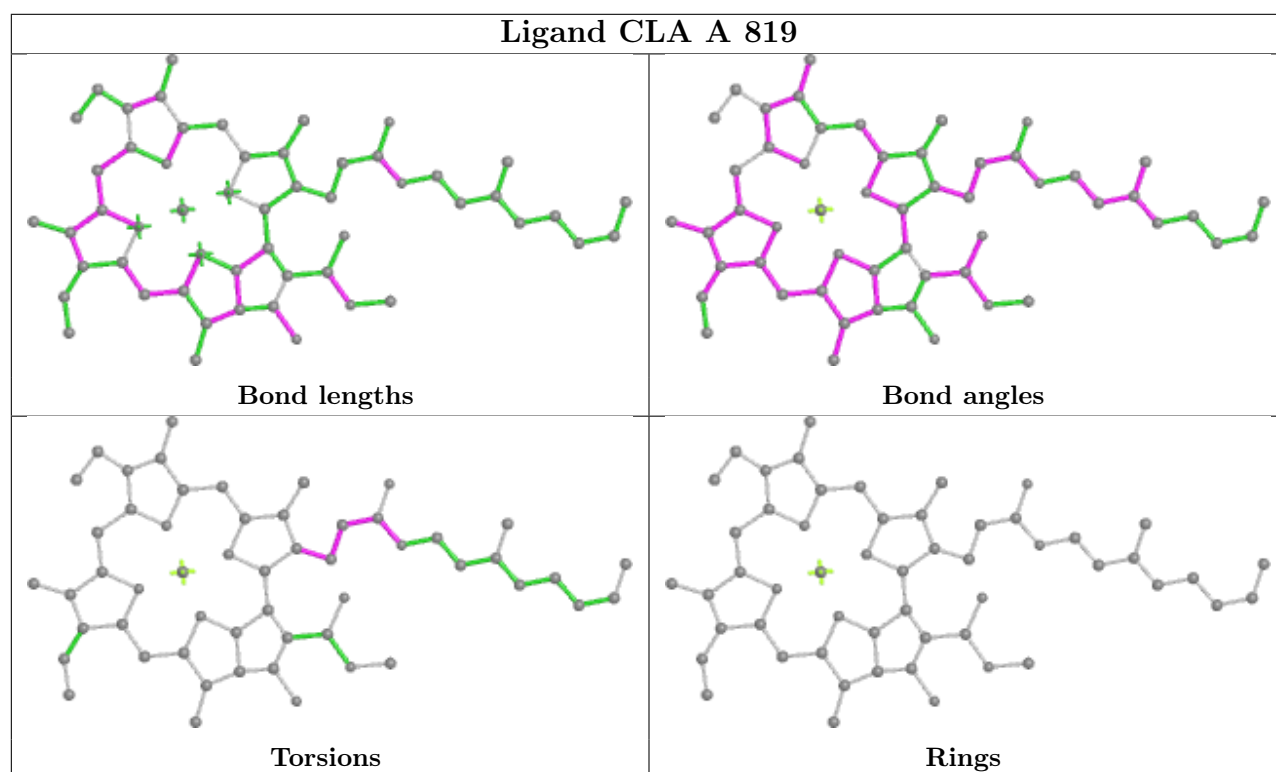
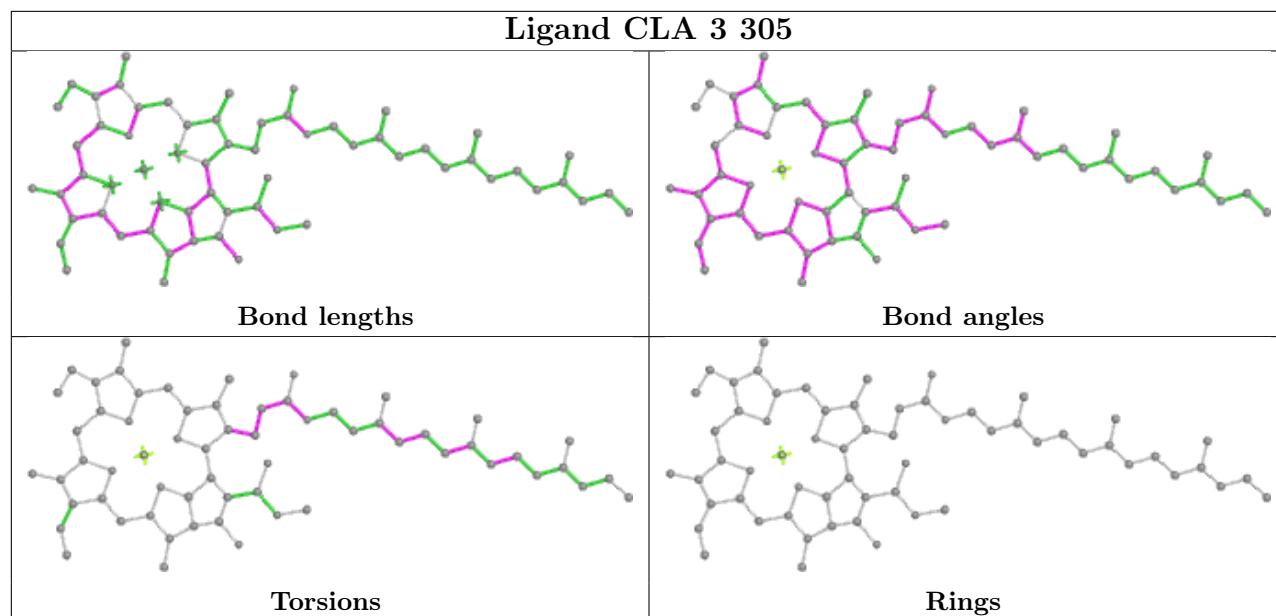


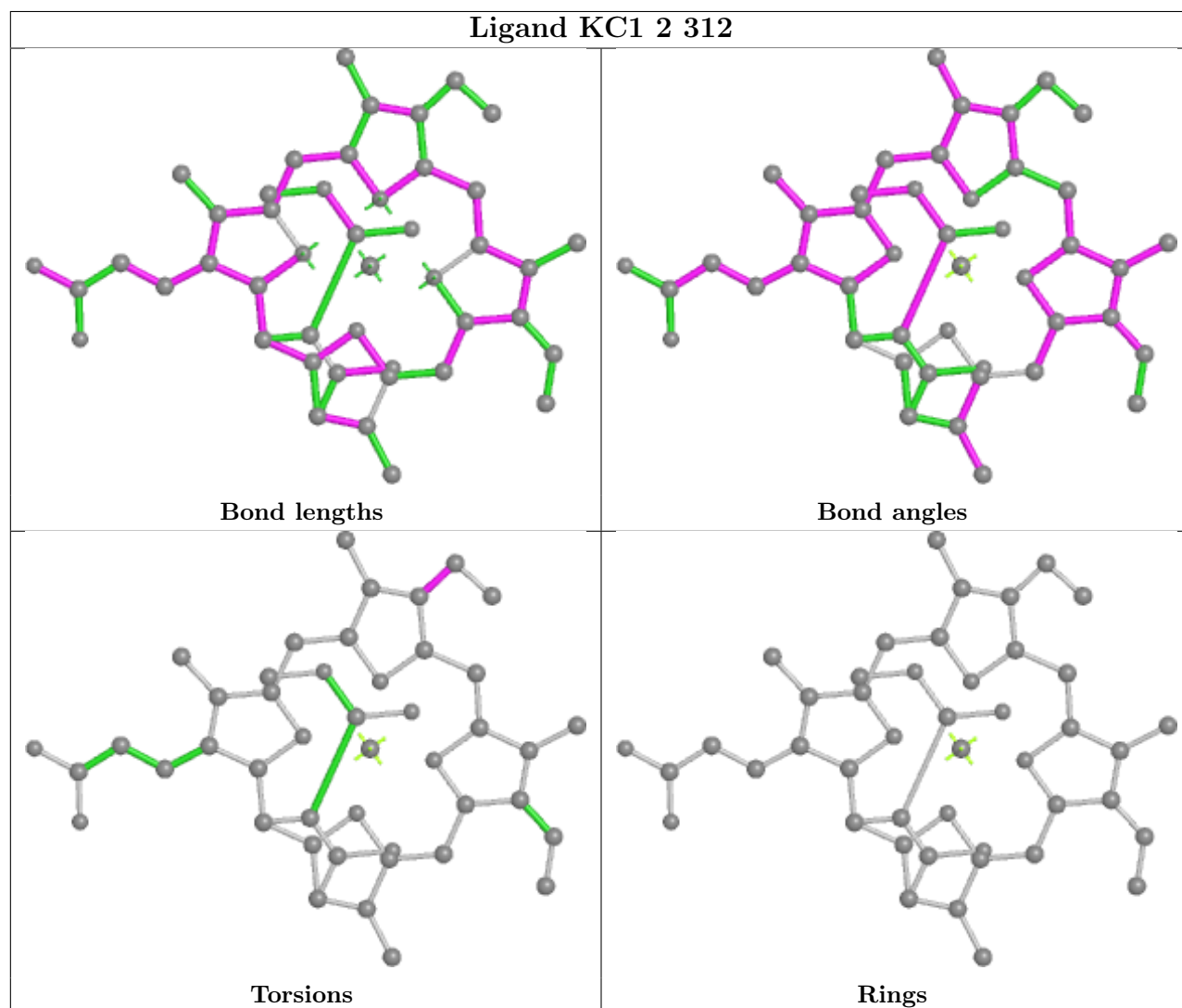
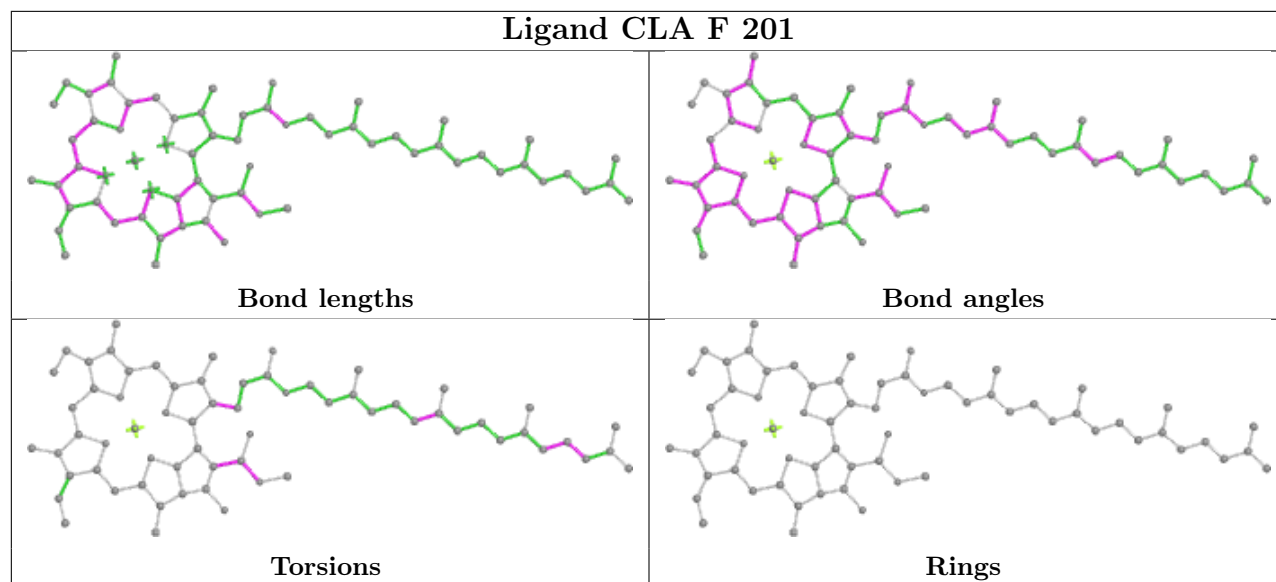


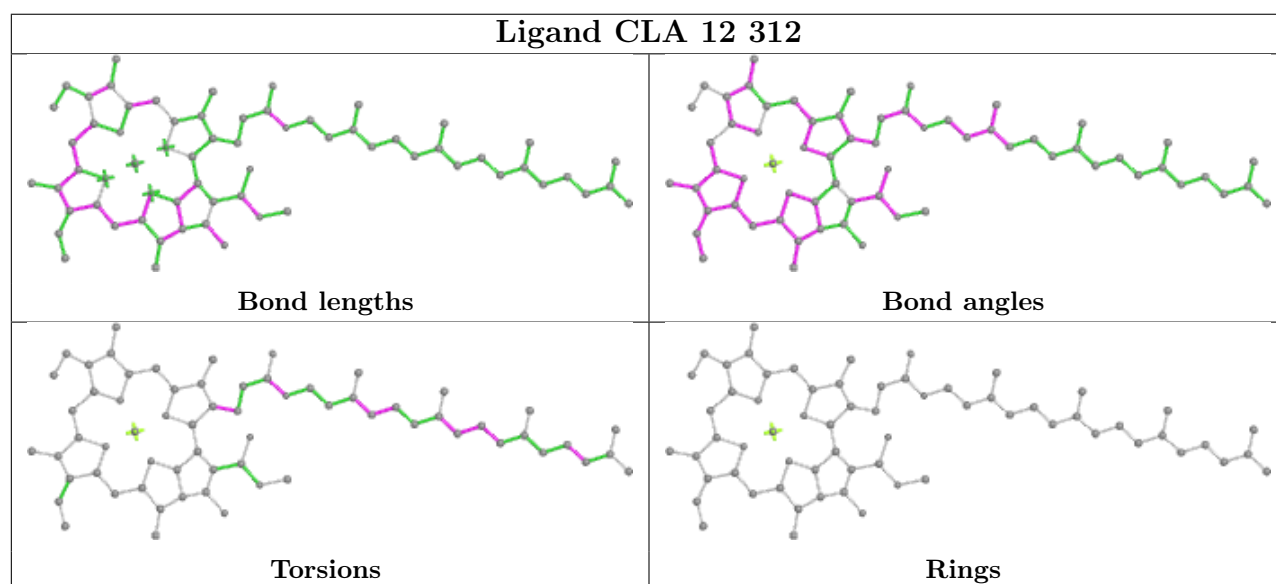
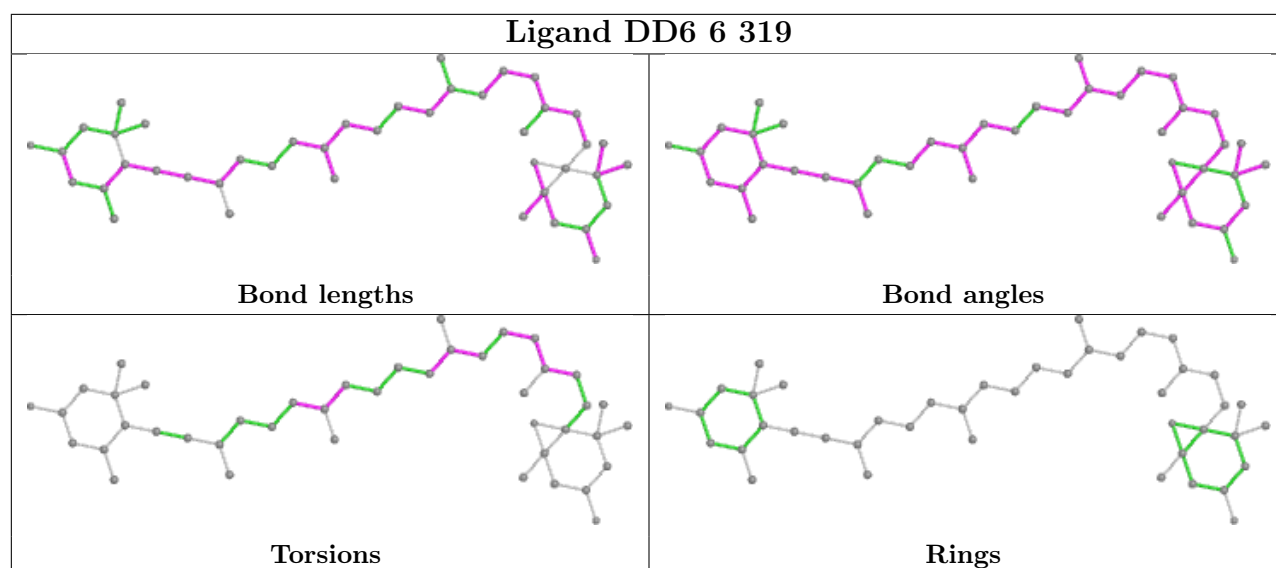


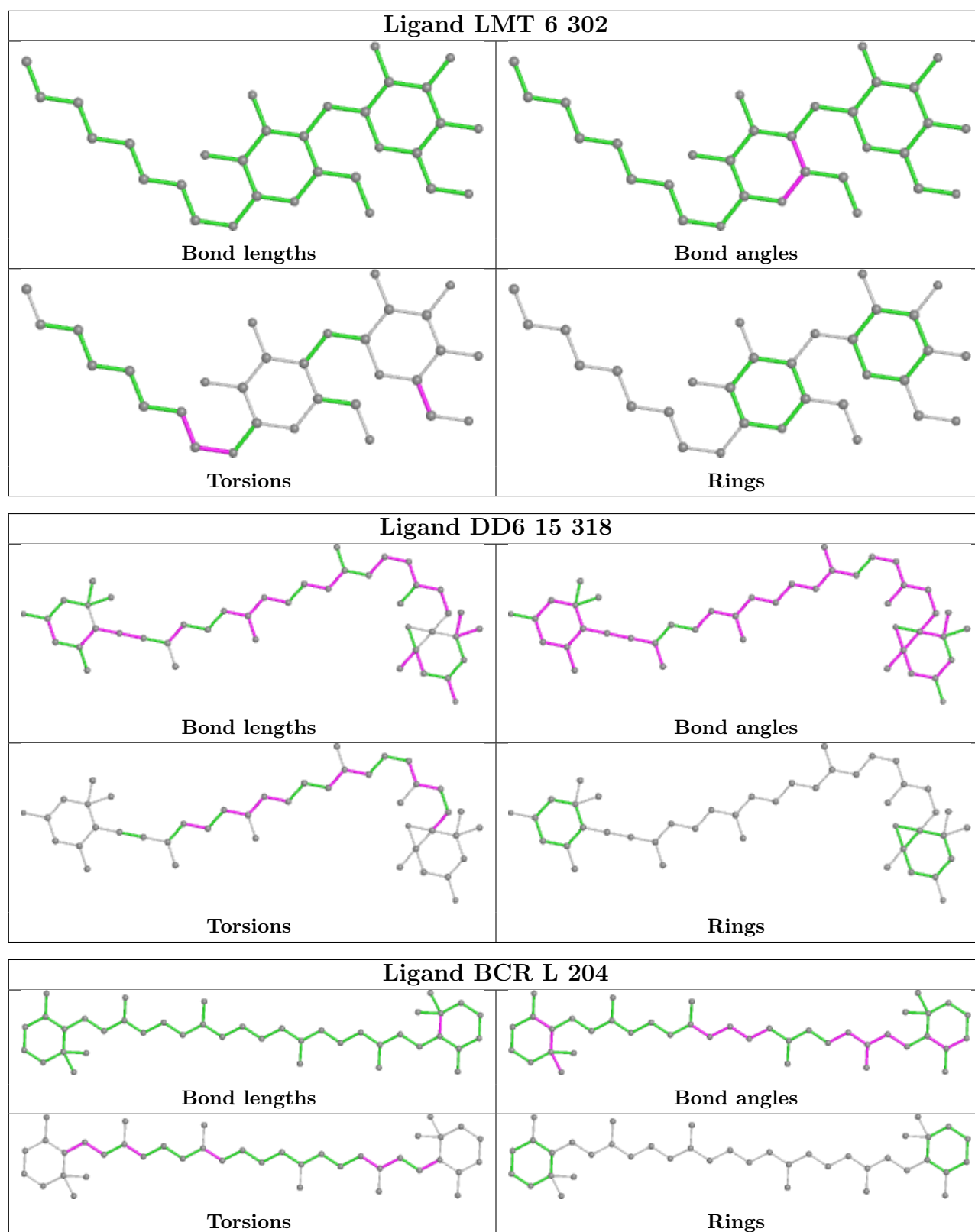






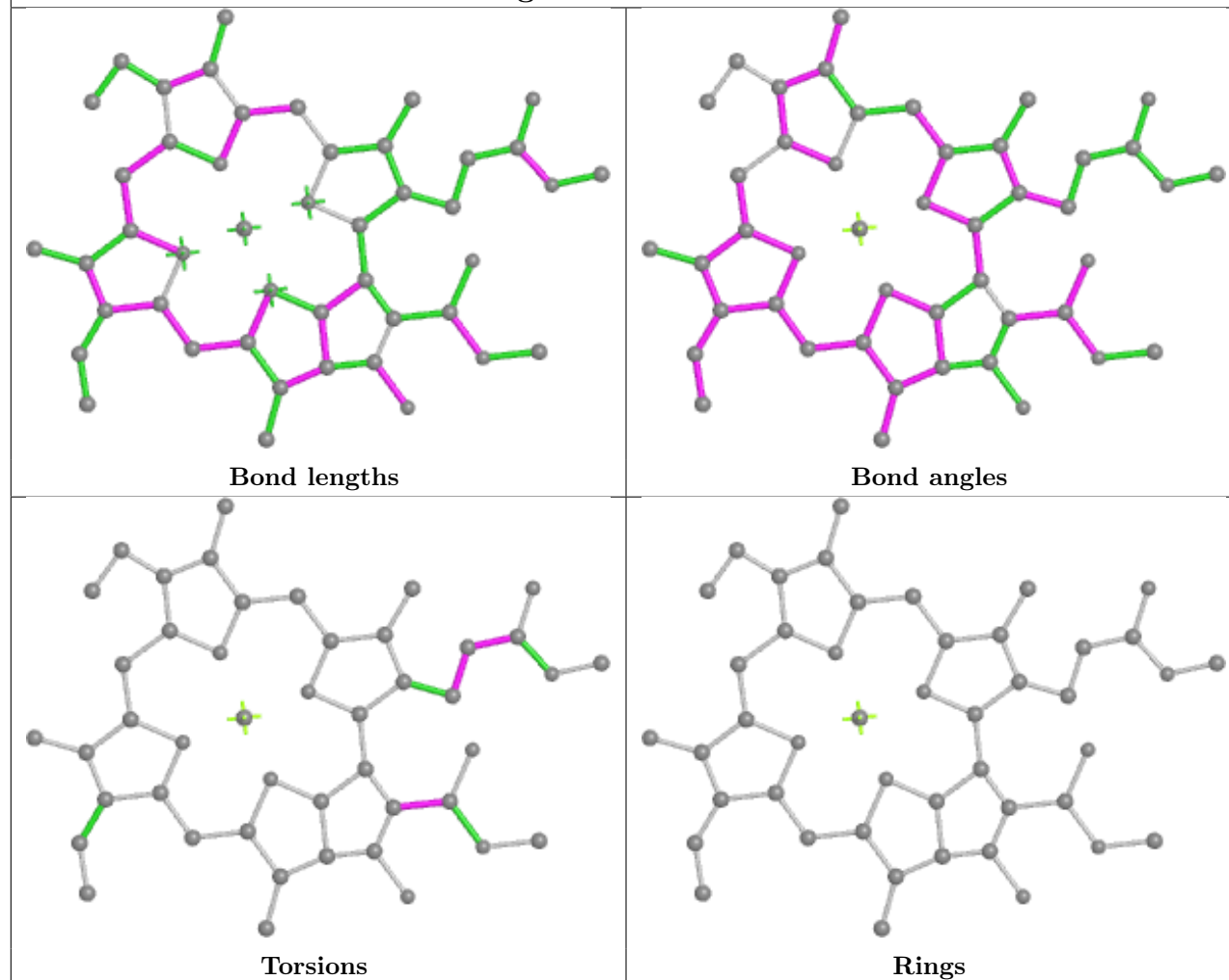




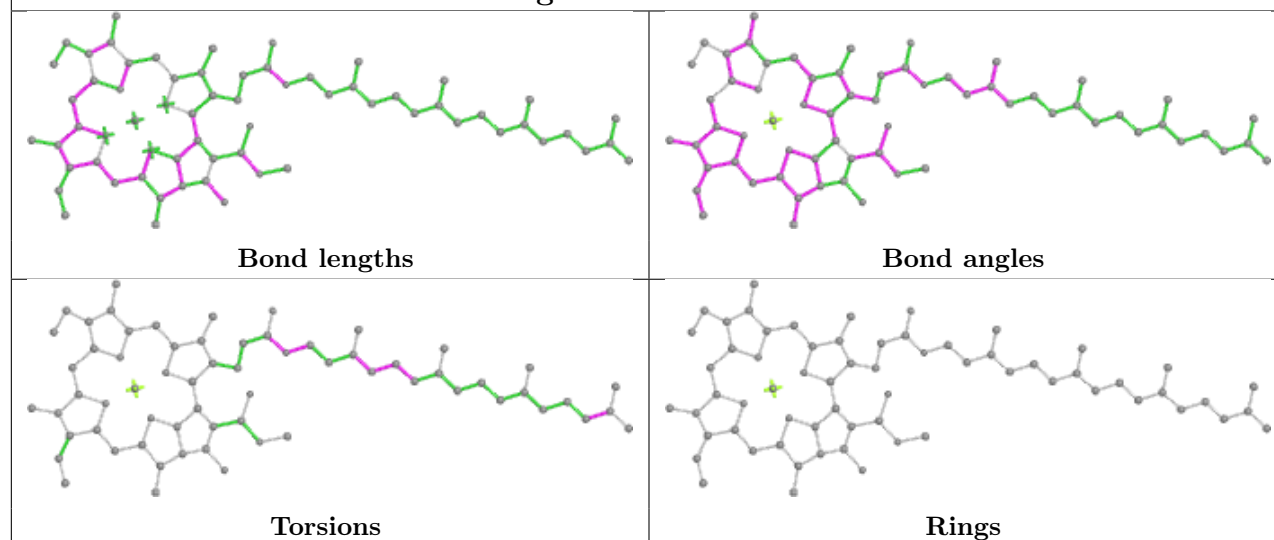


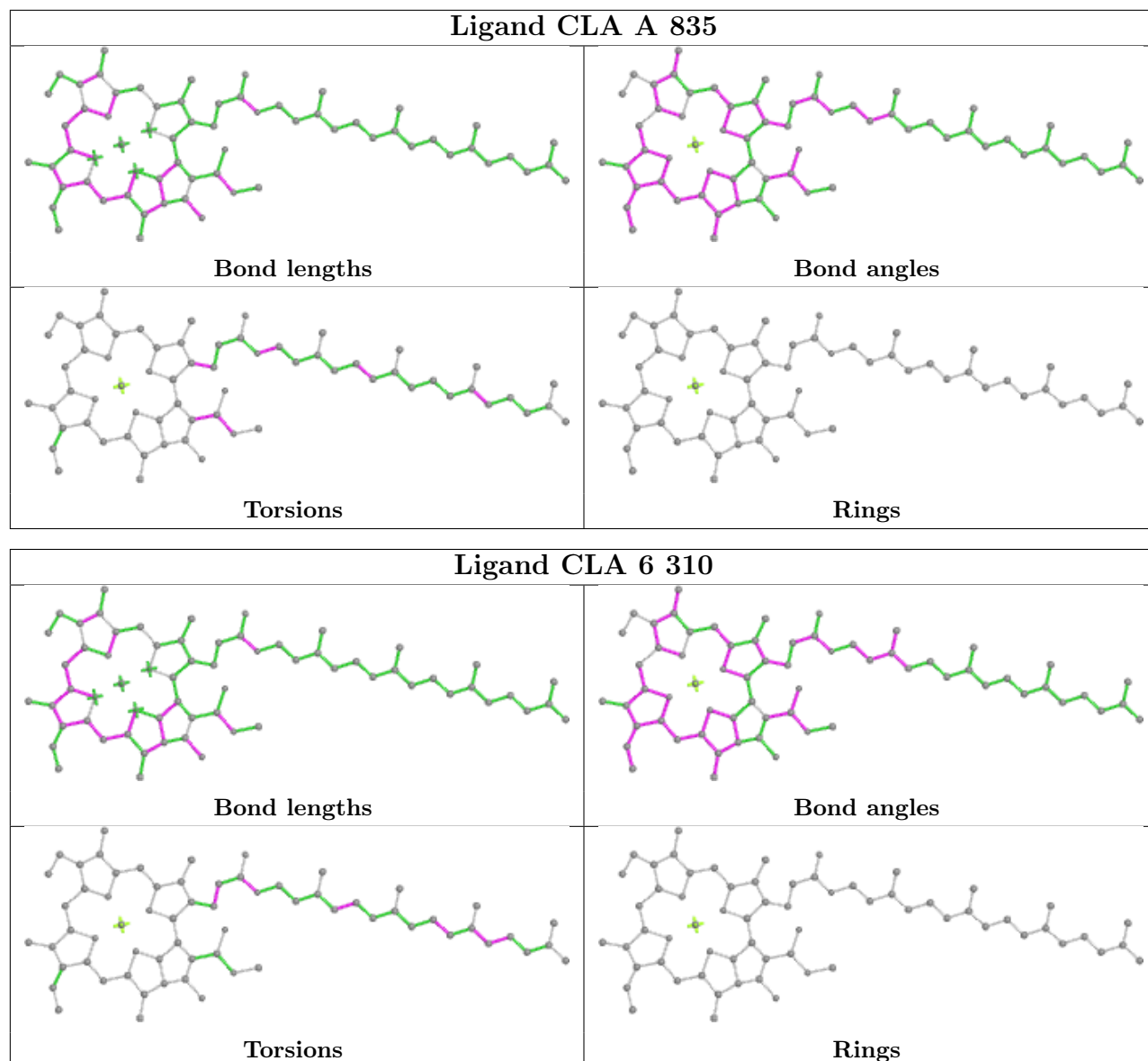


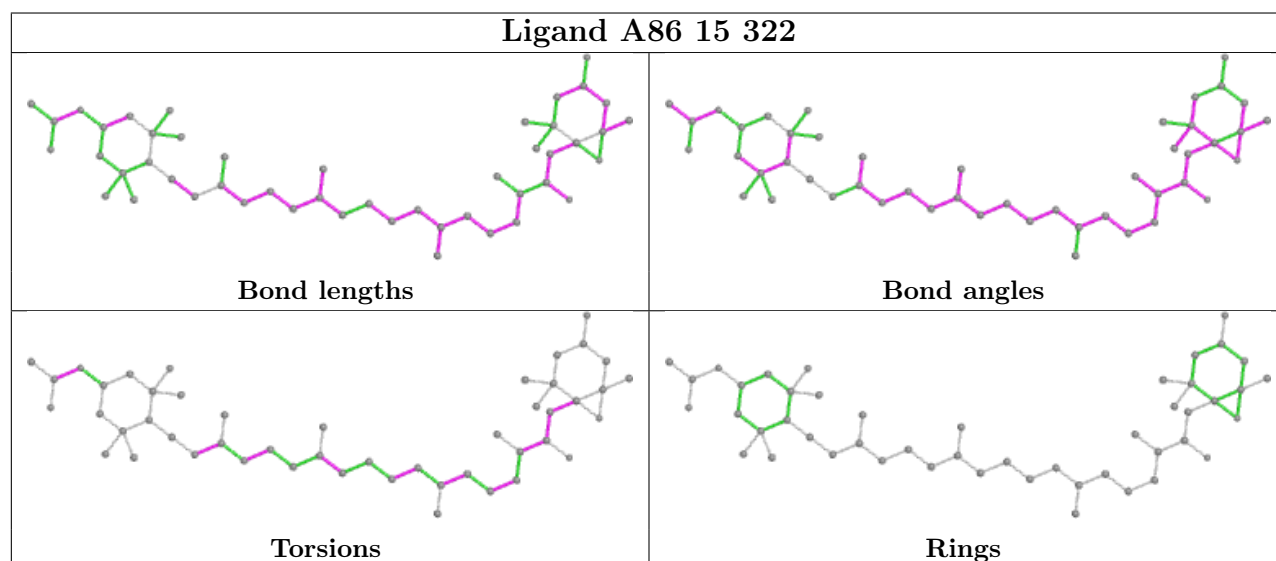
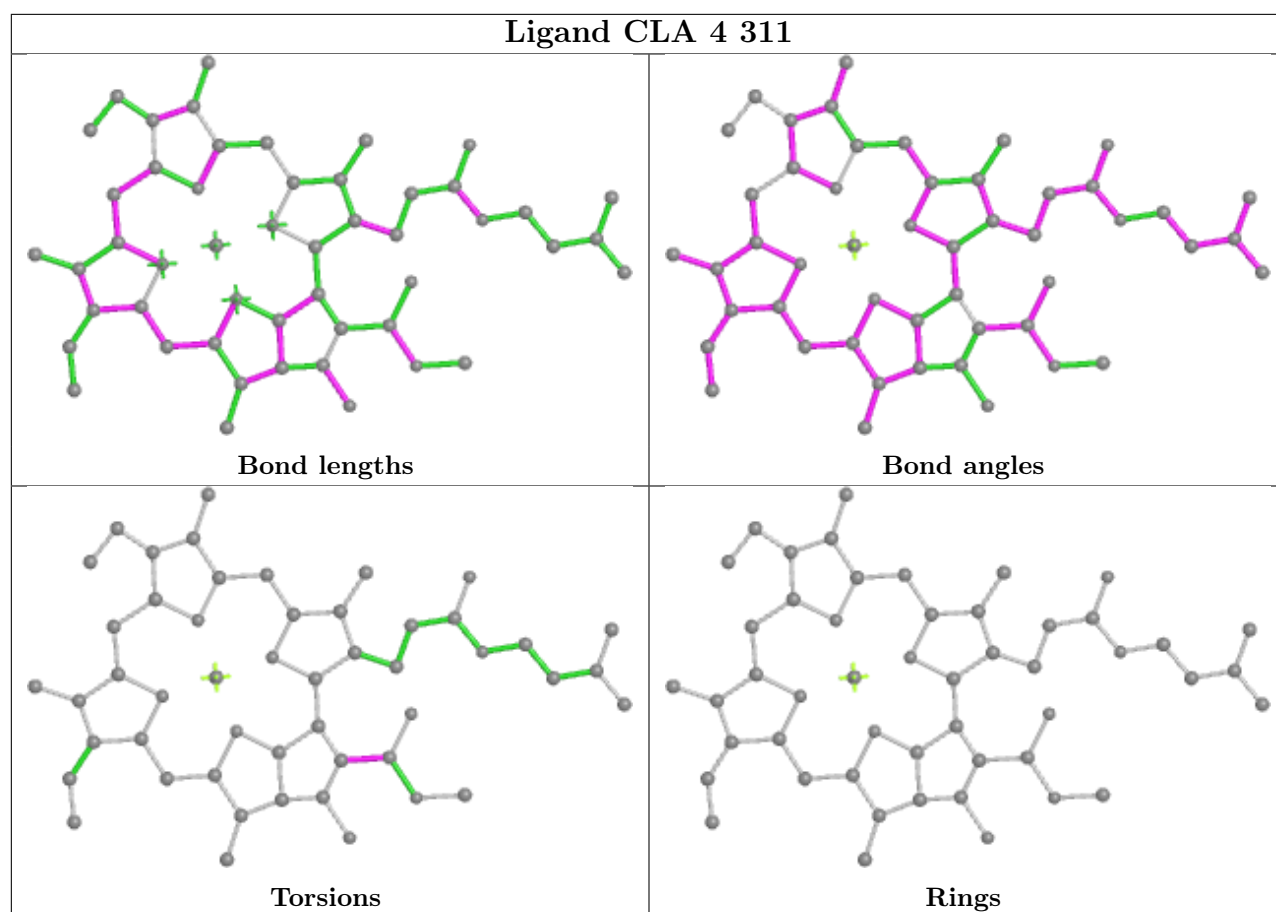
## Ligand CLA 7 312

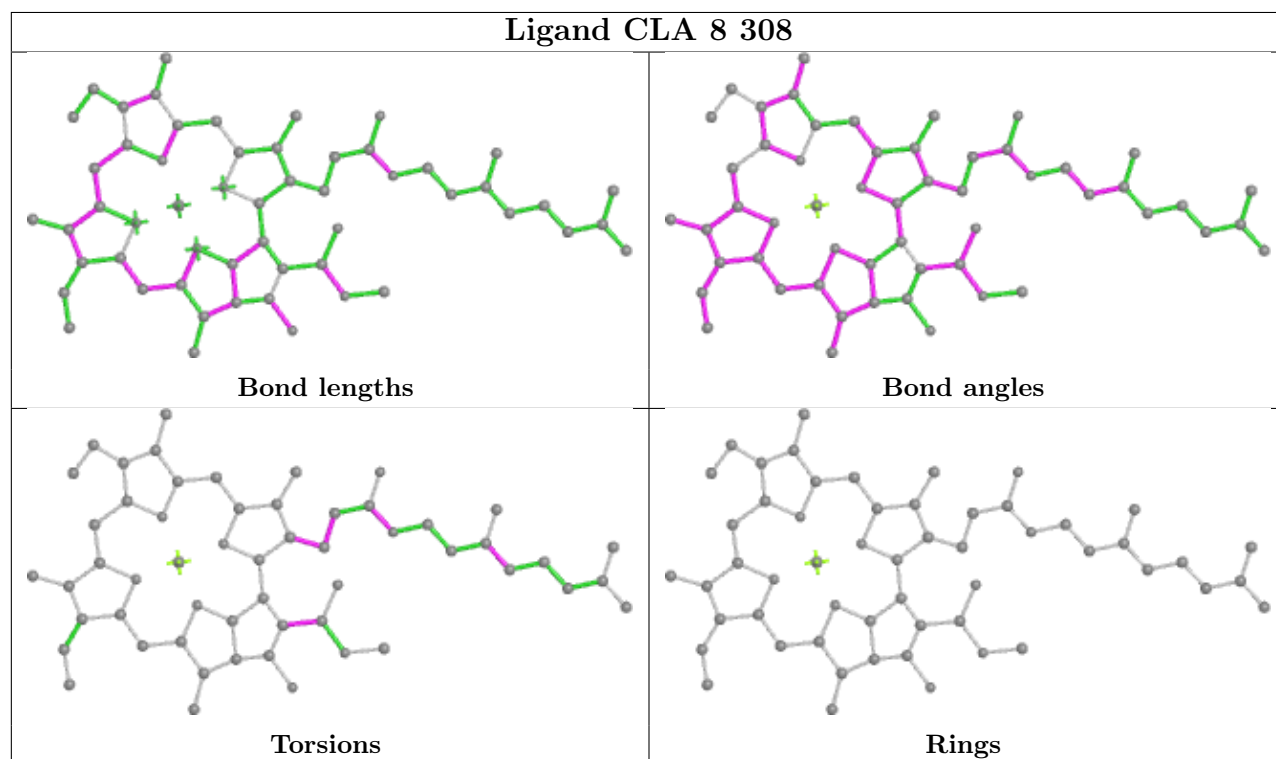
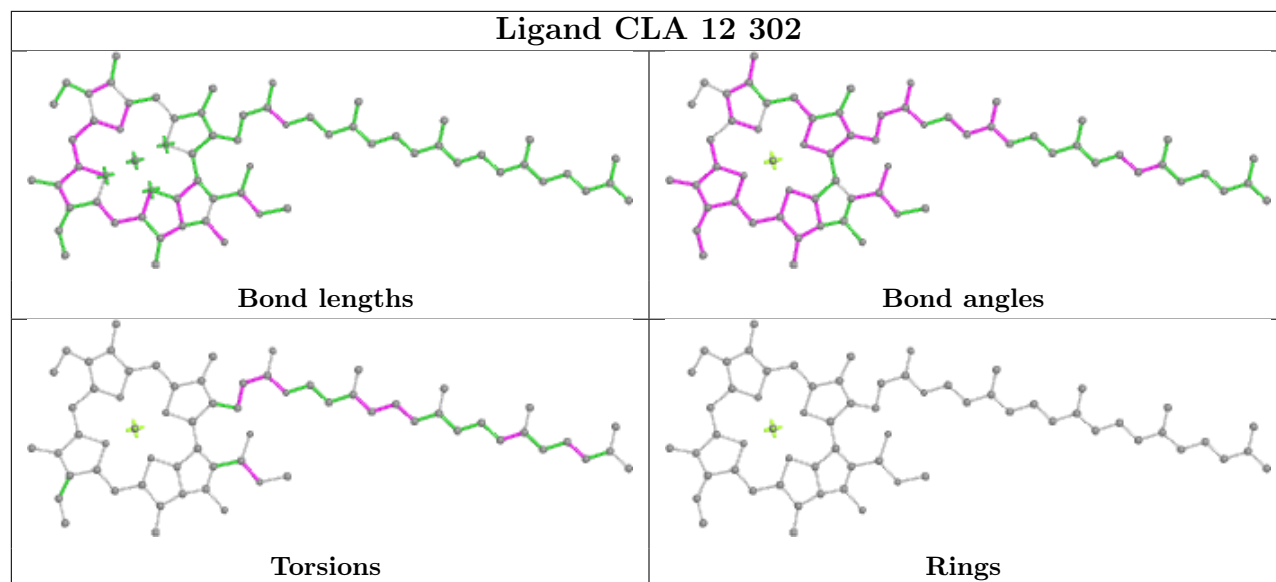


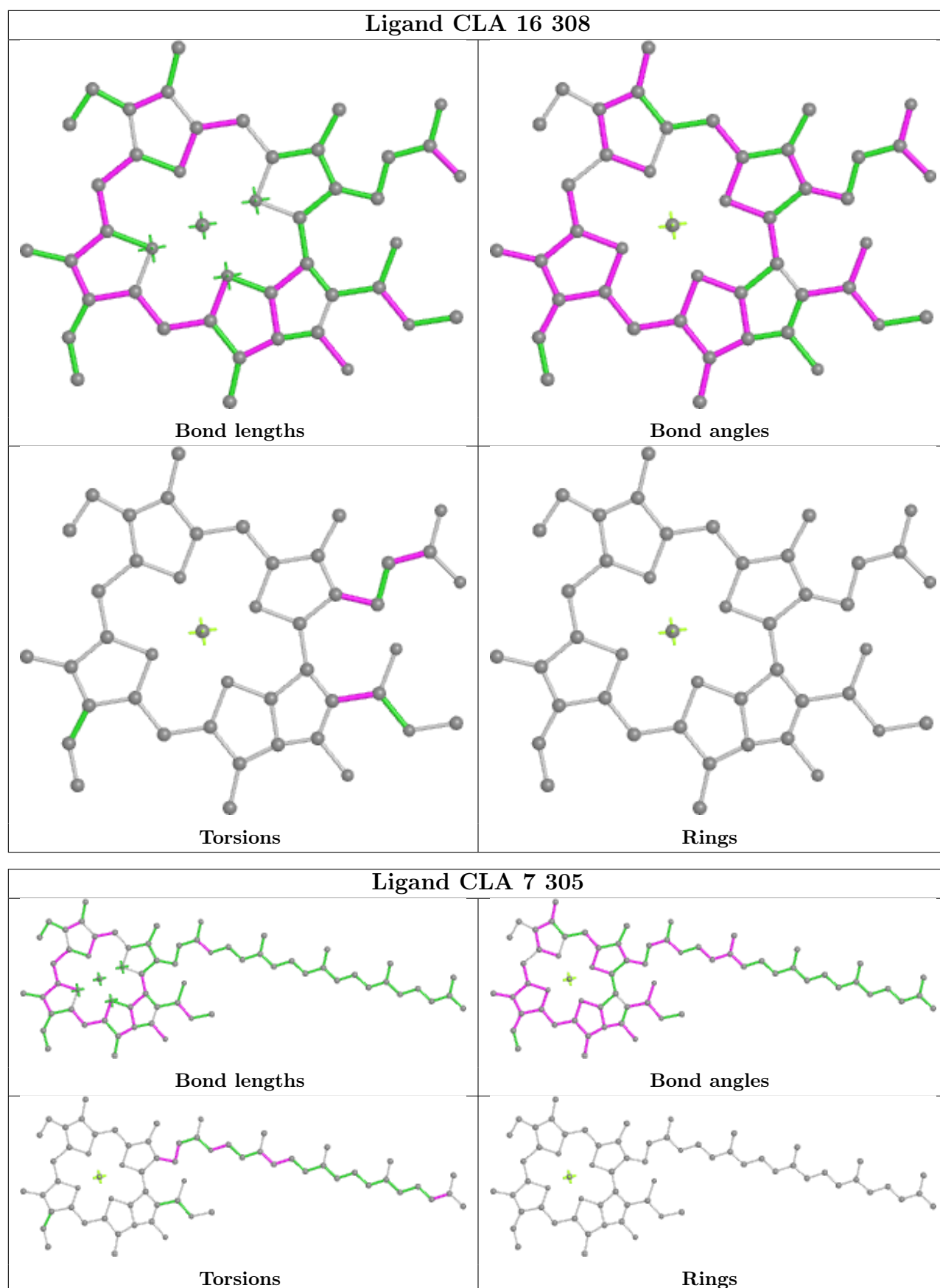
## Ligand CLA 7 306

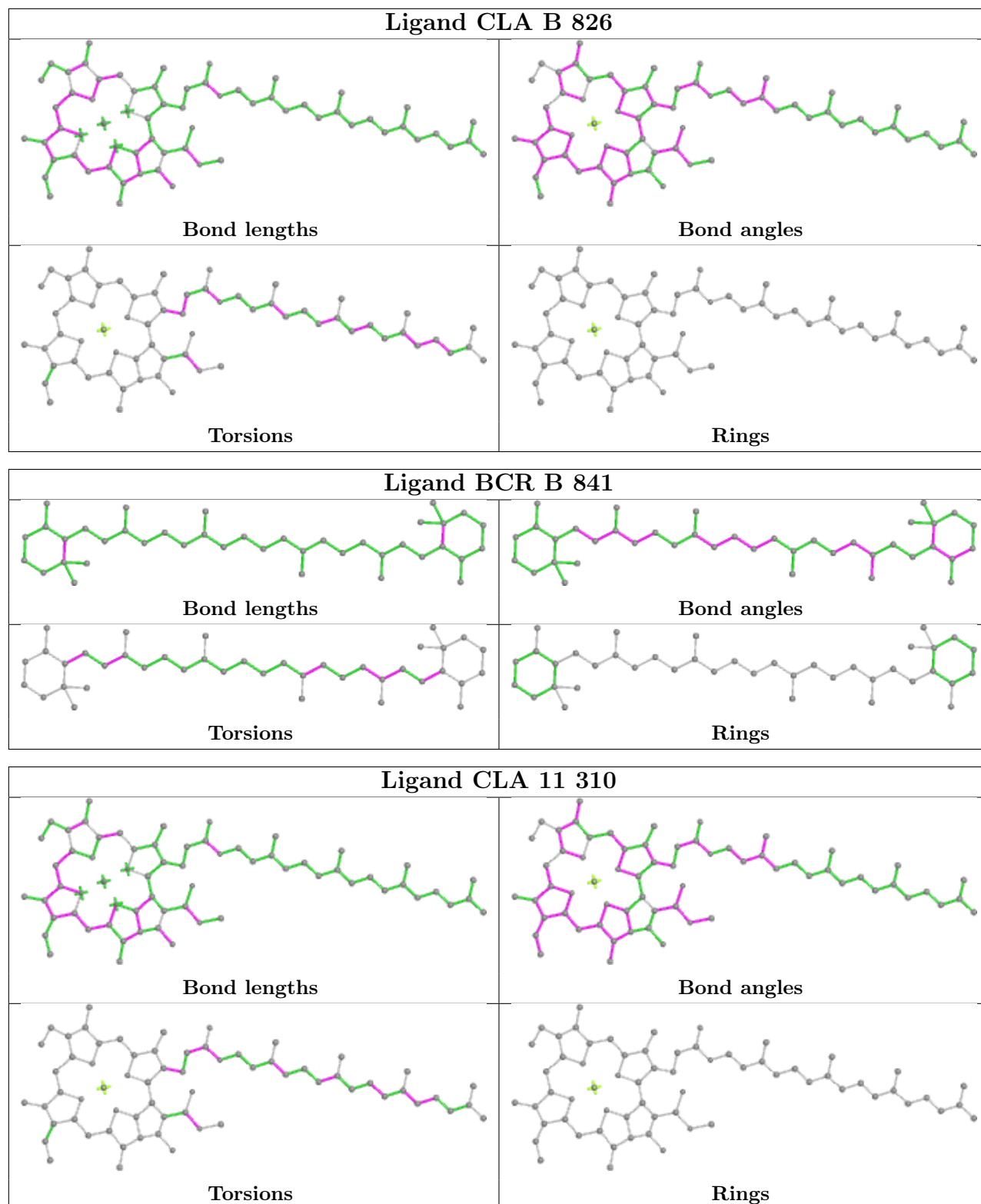


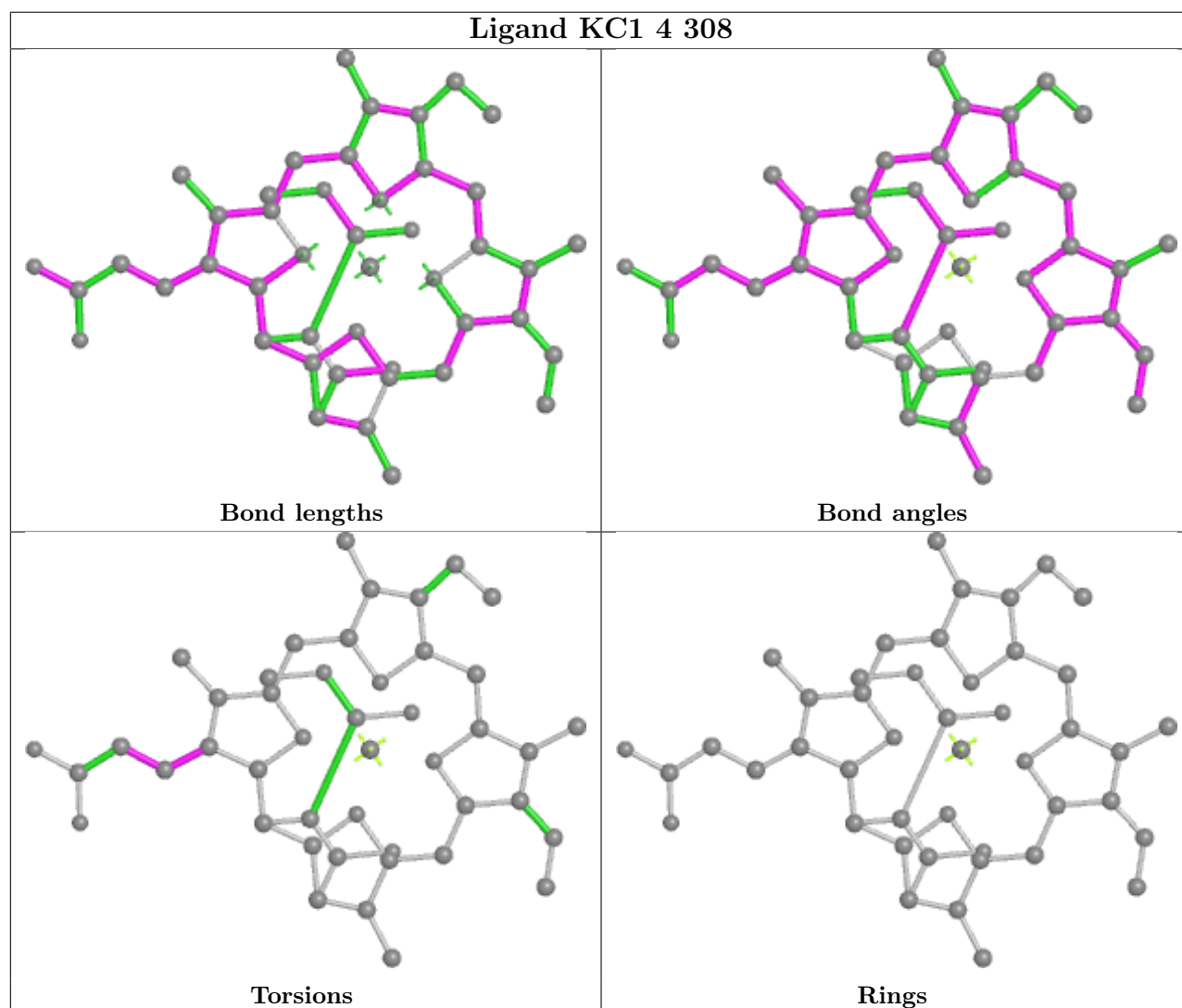
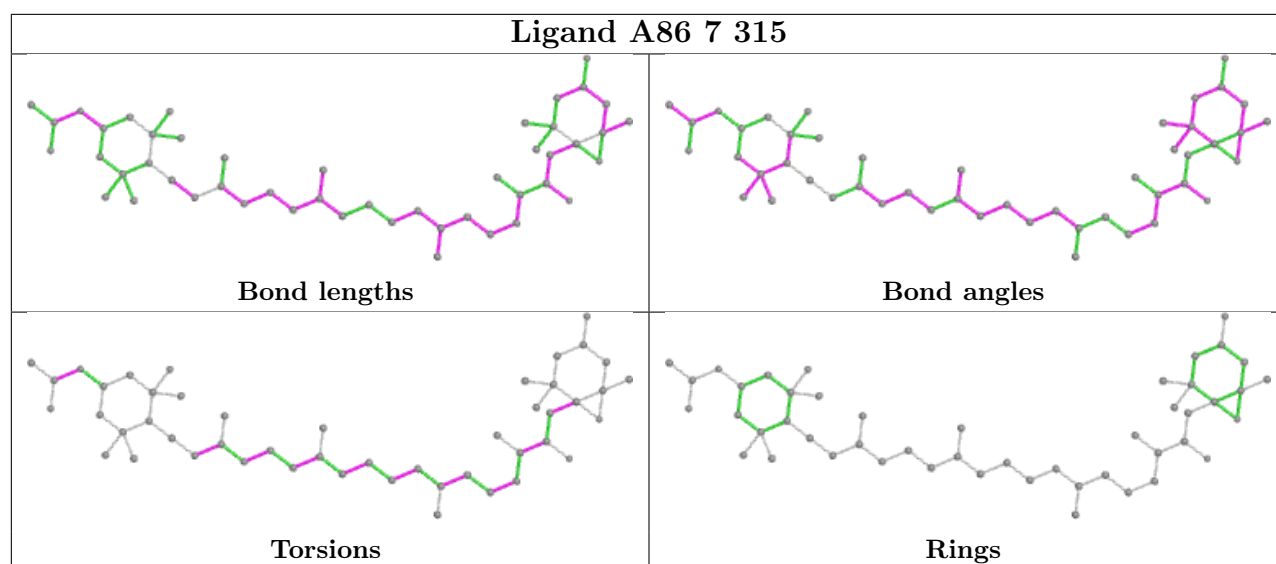


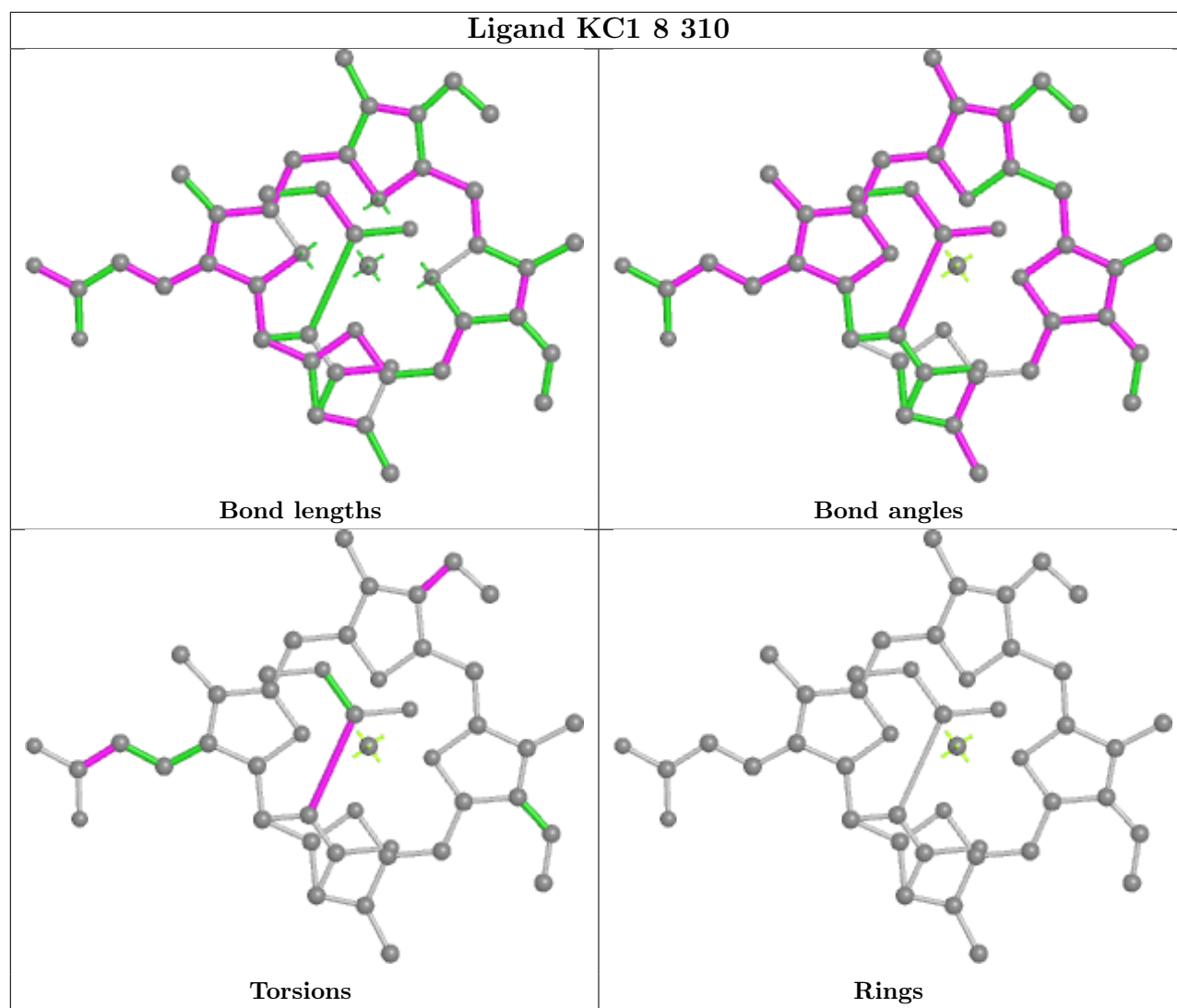
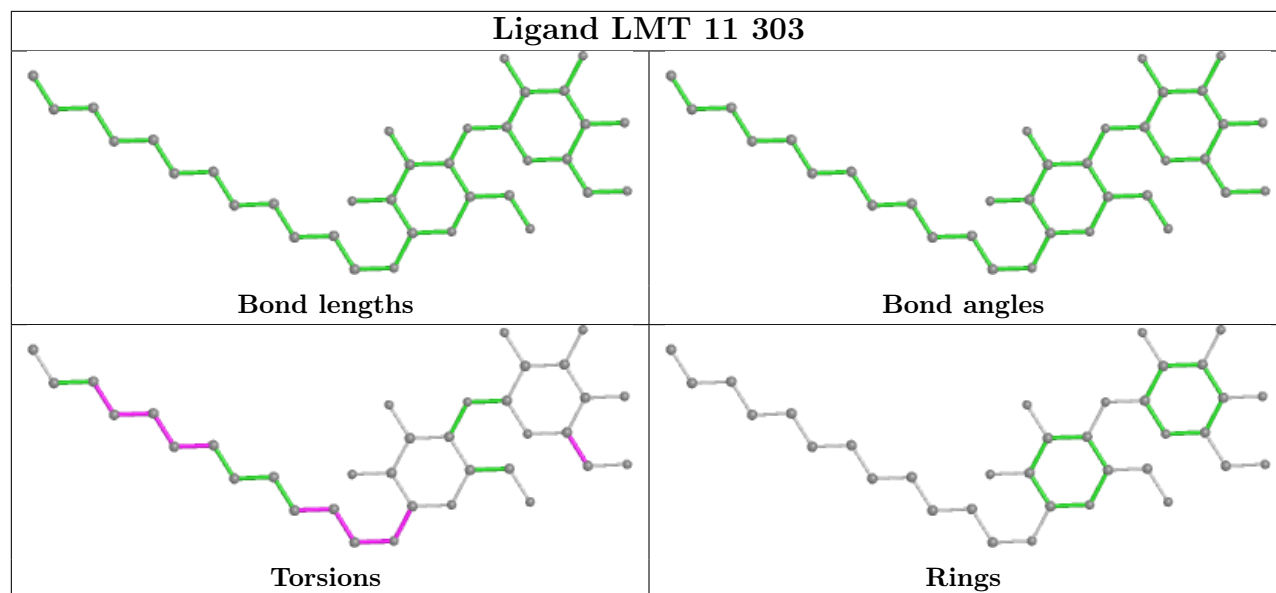




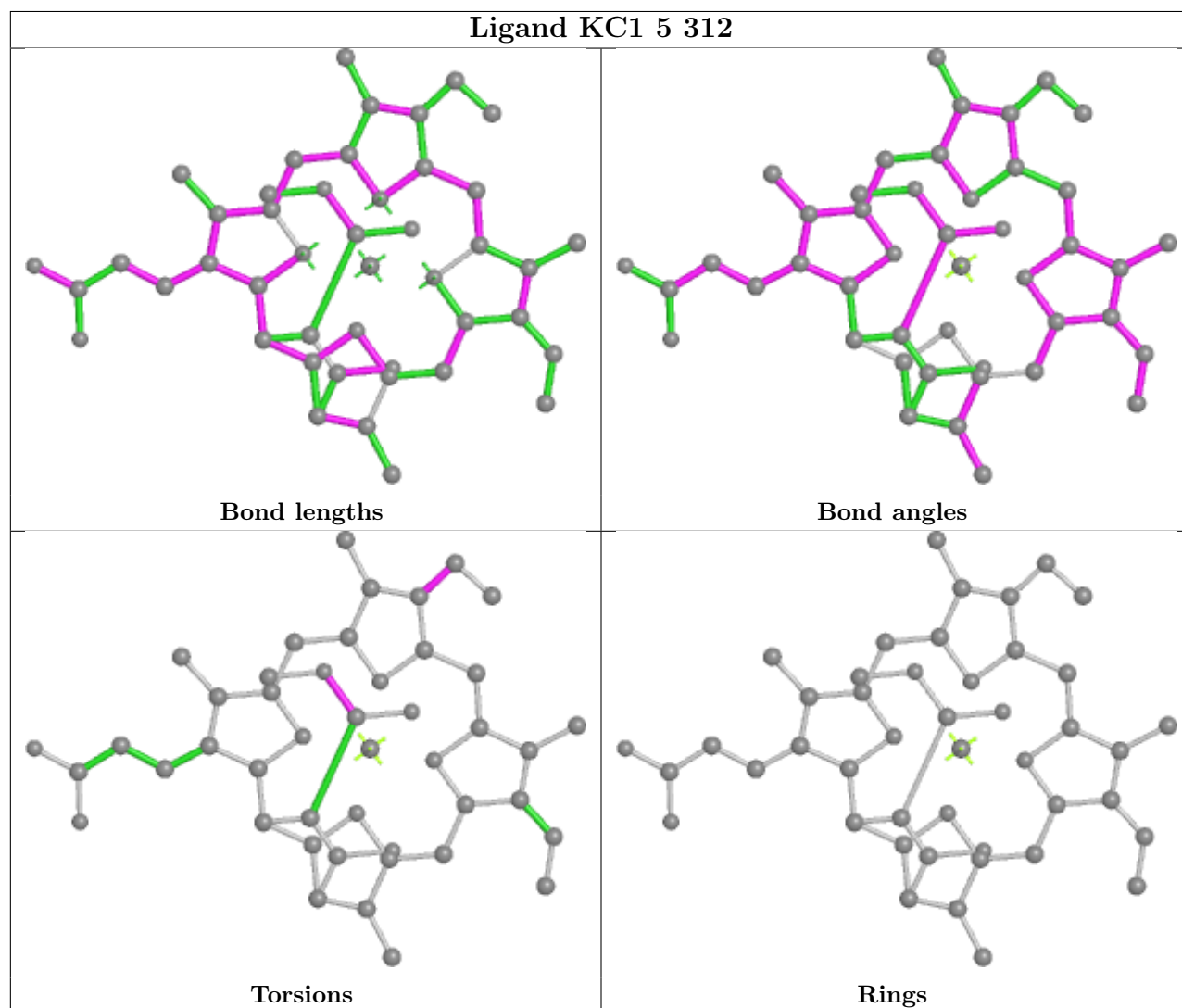
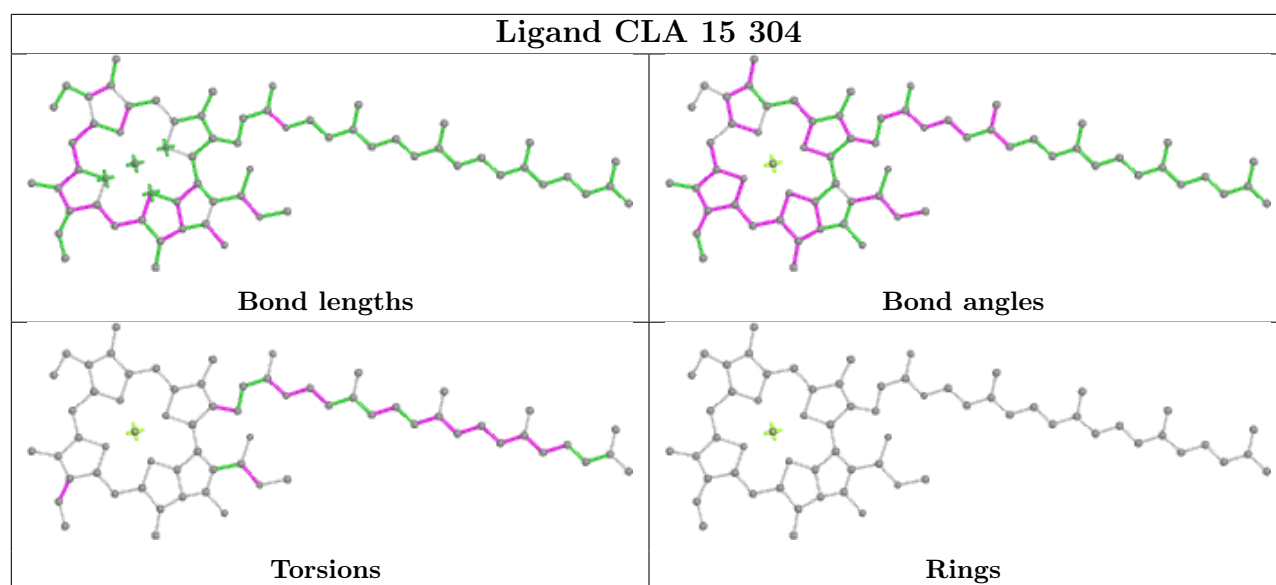


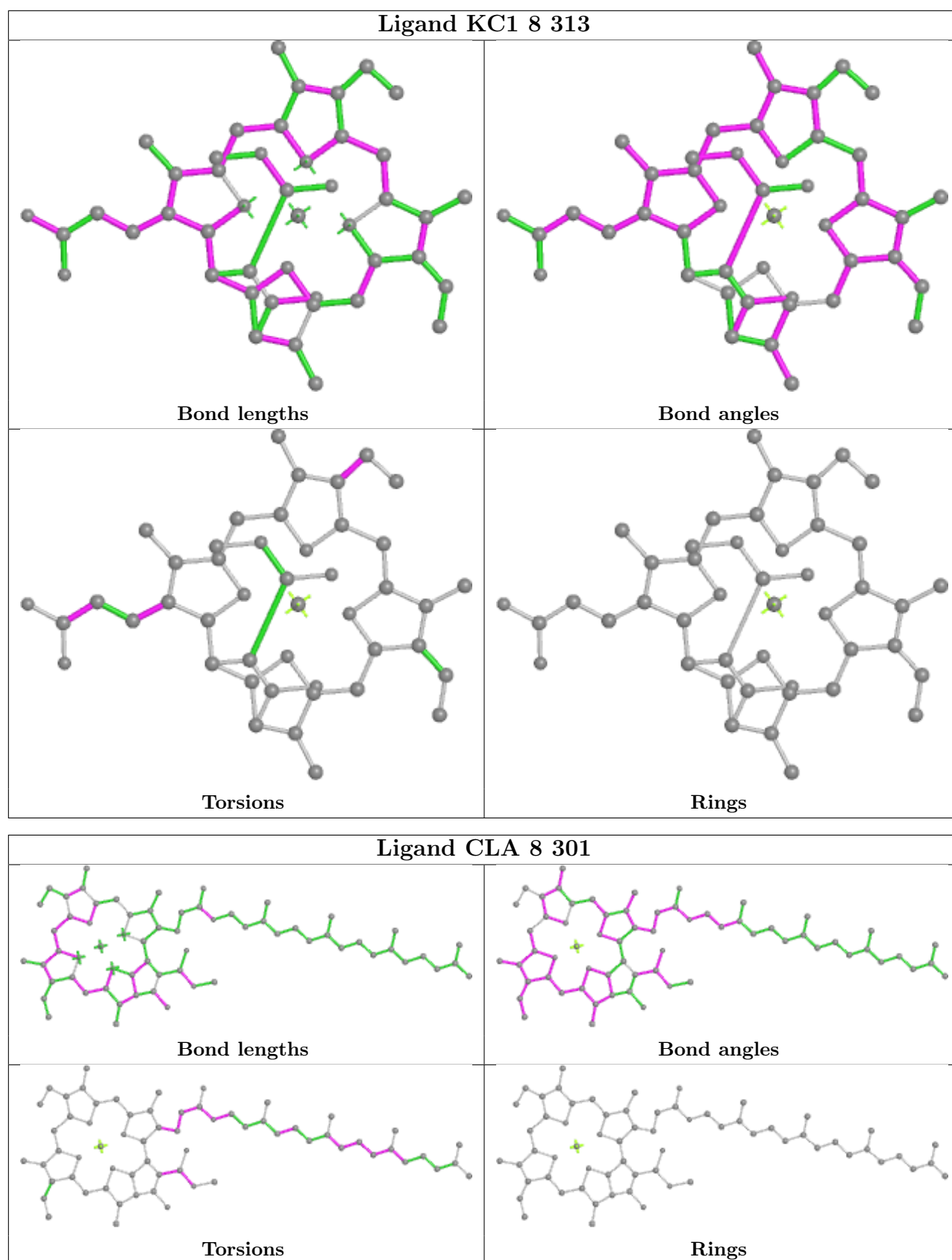


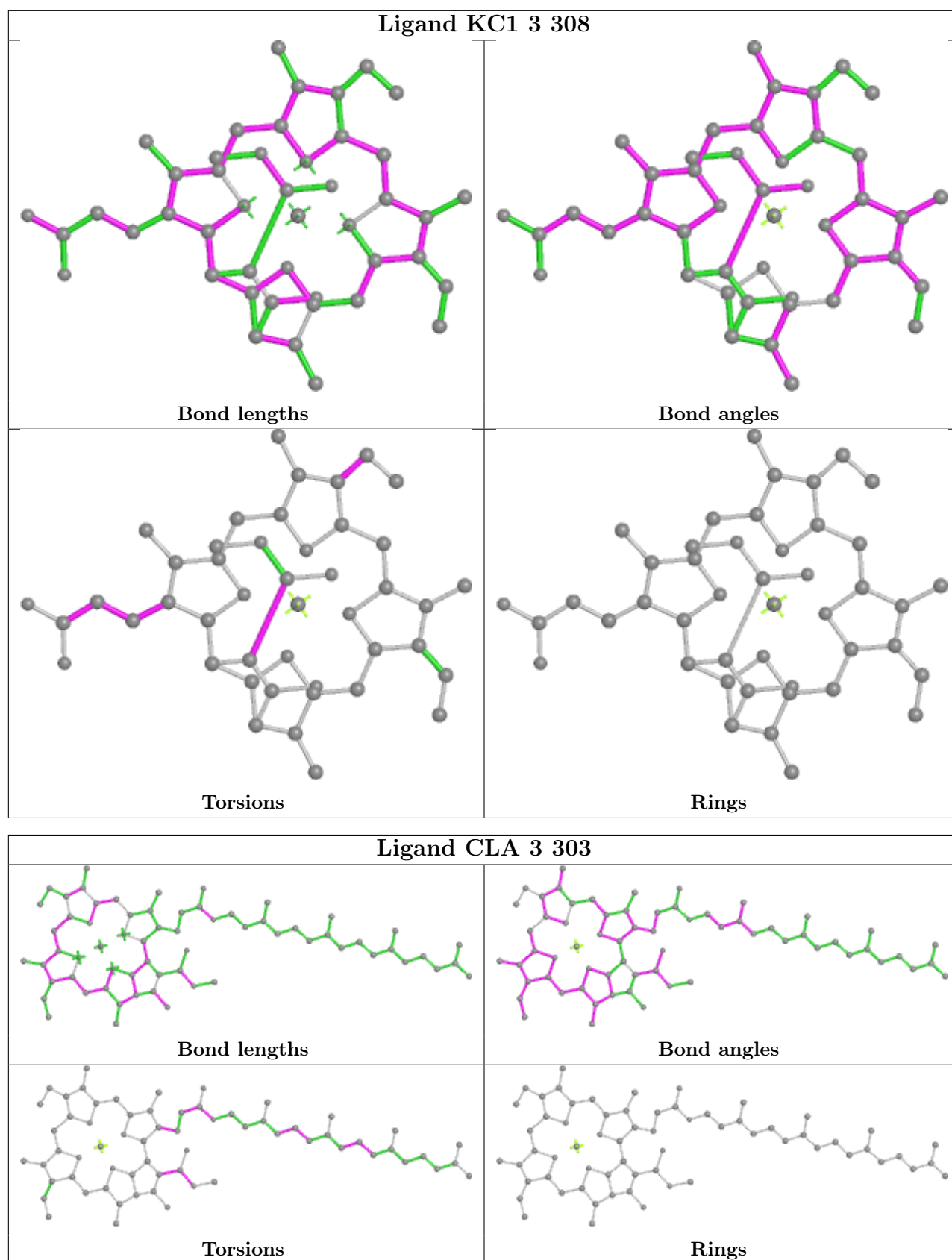


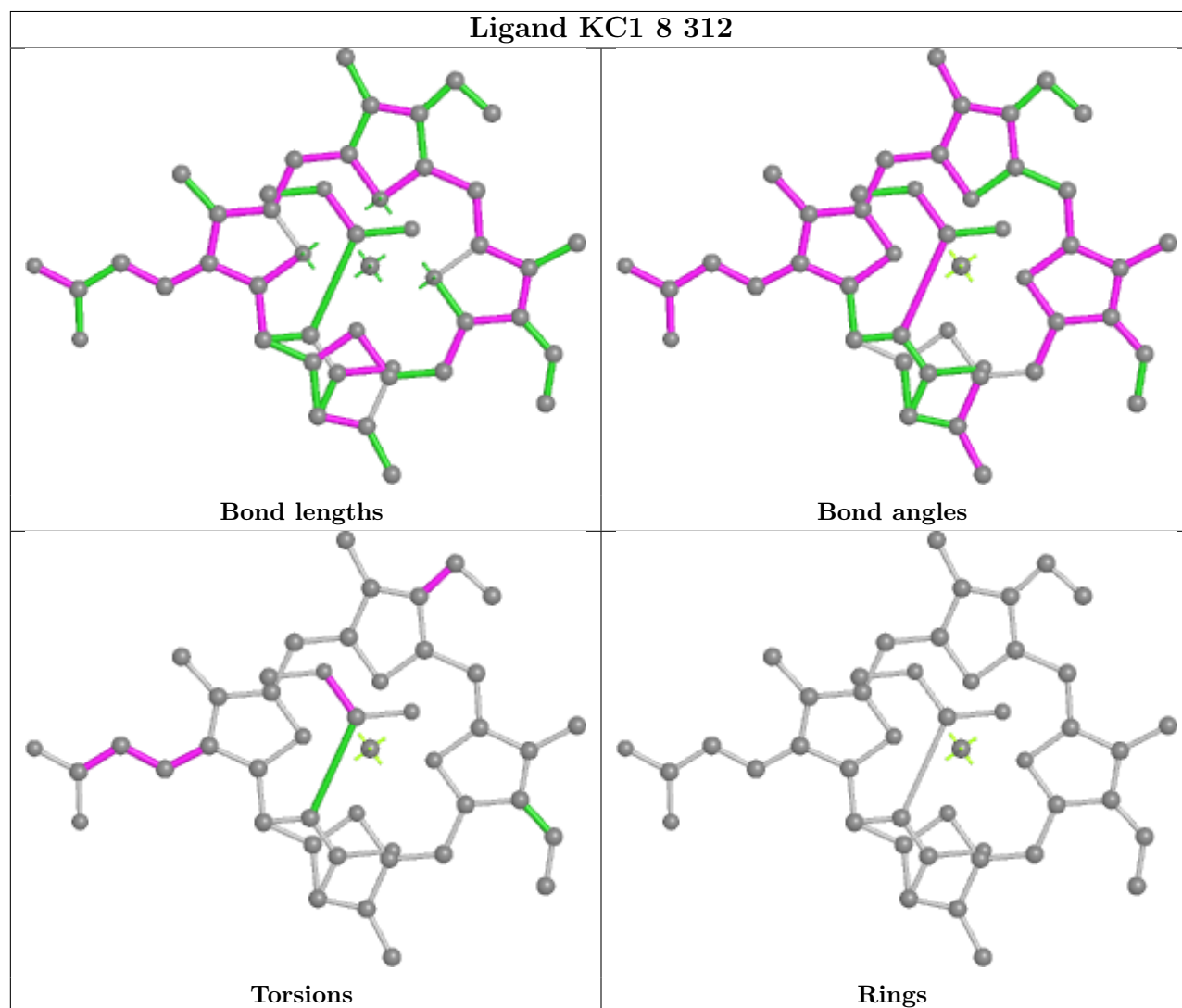
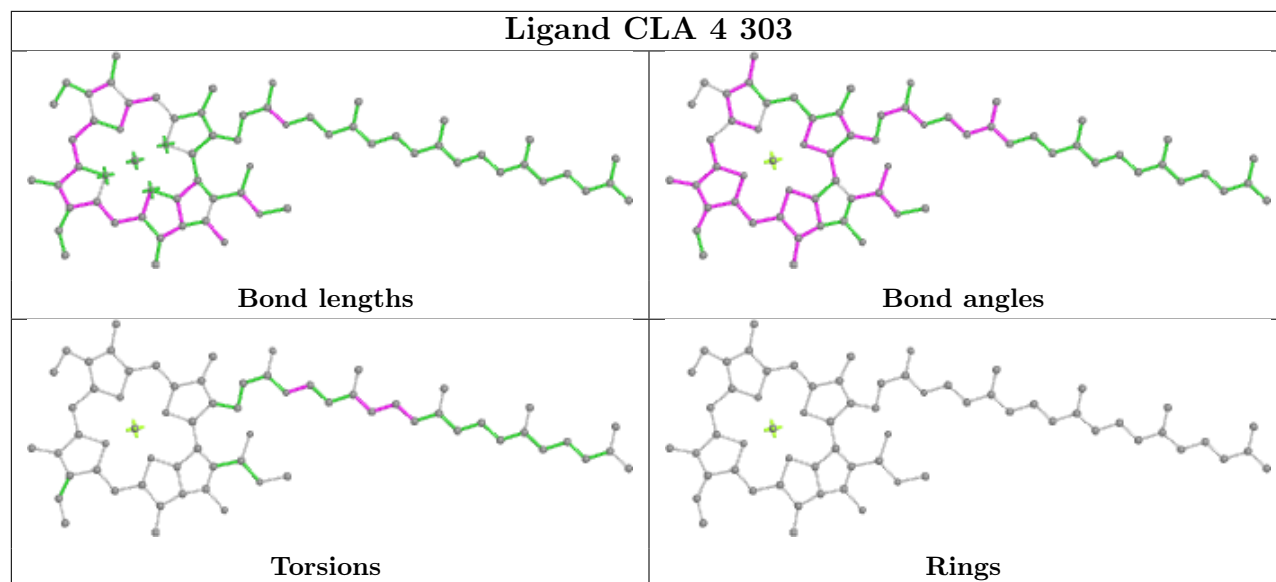


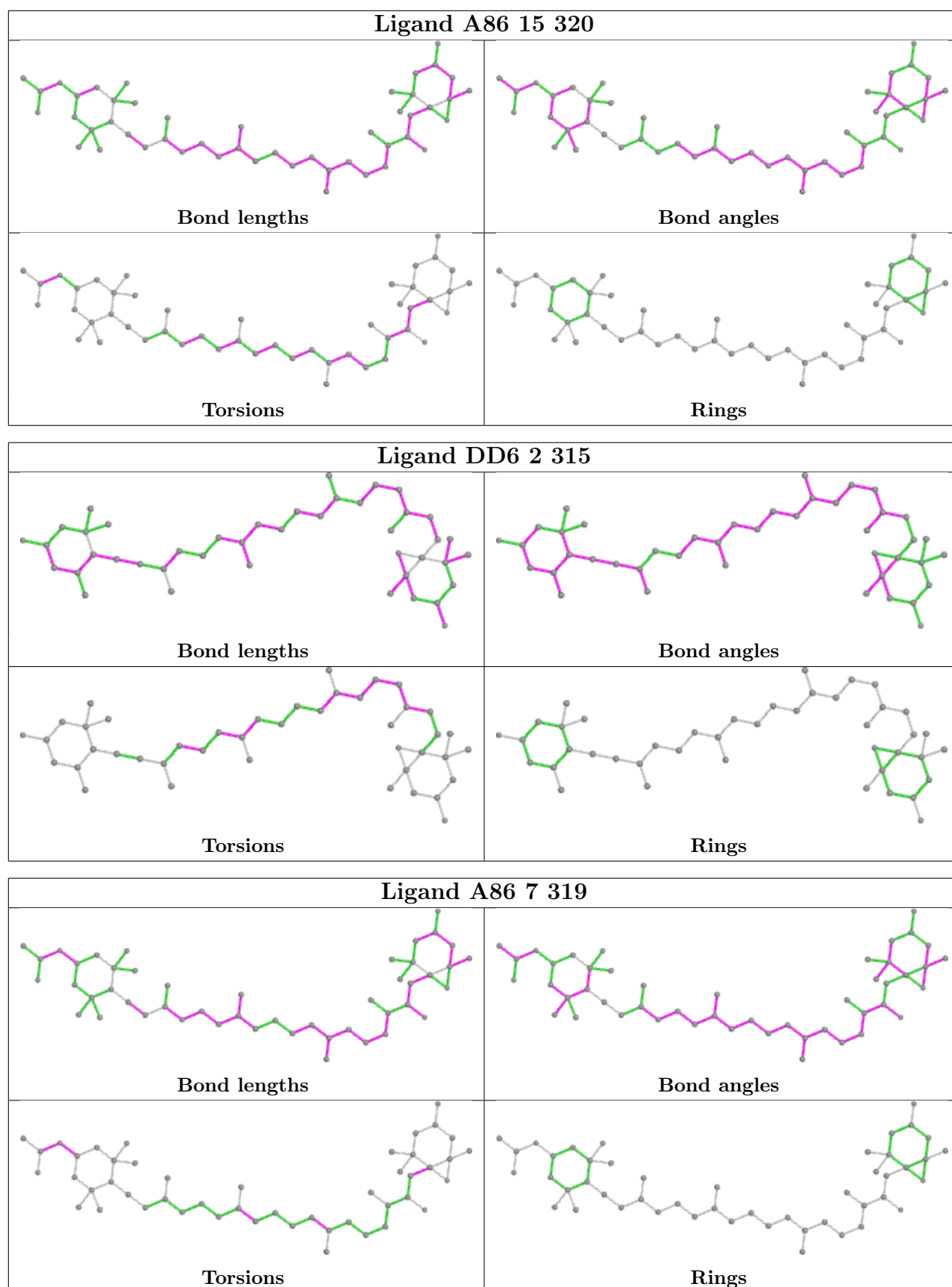


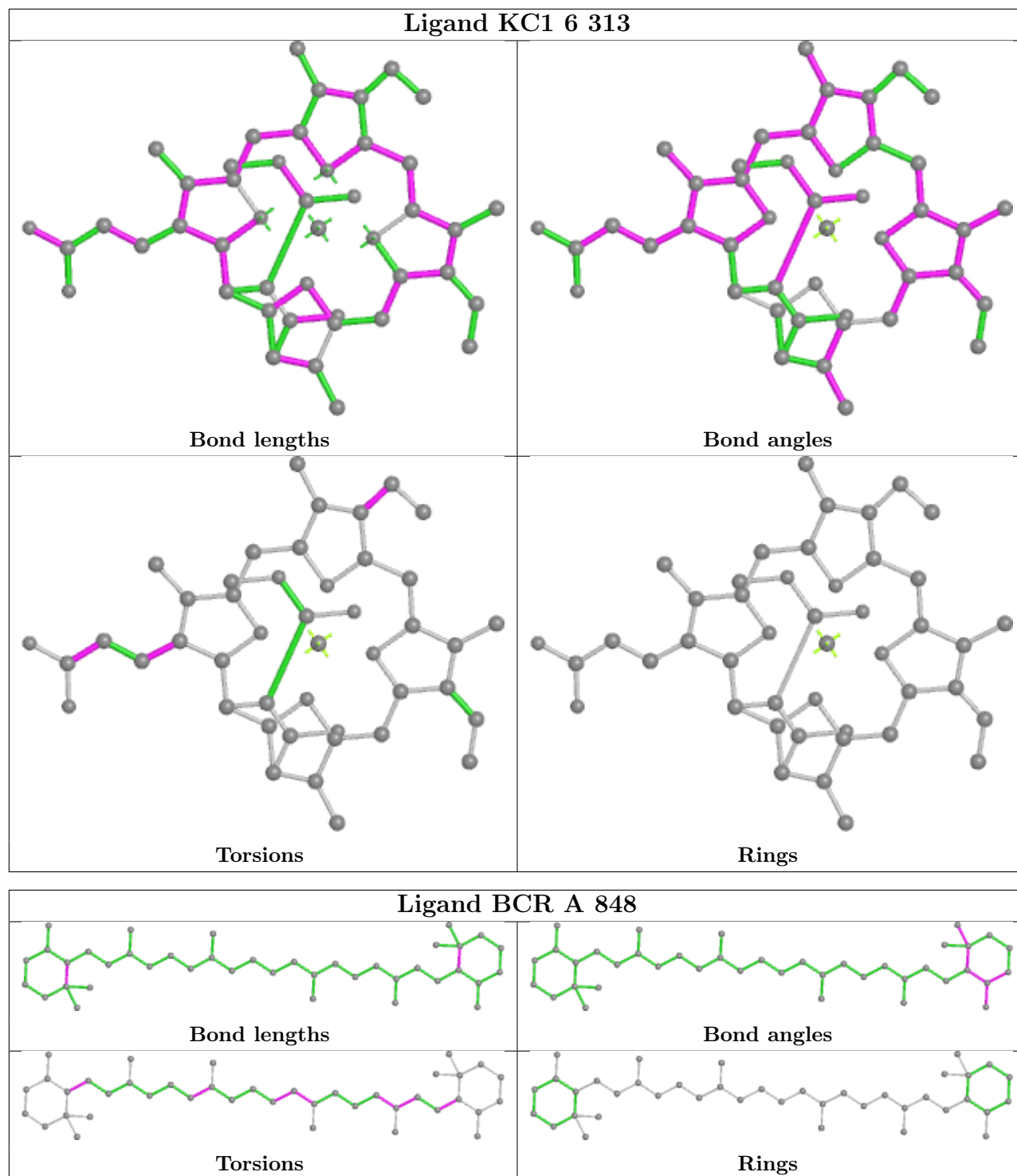


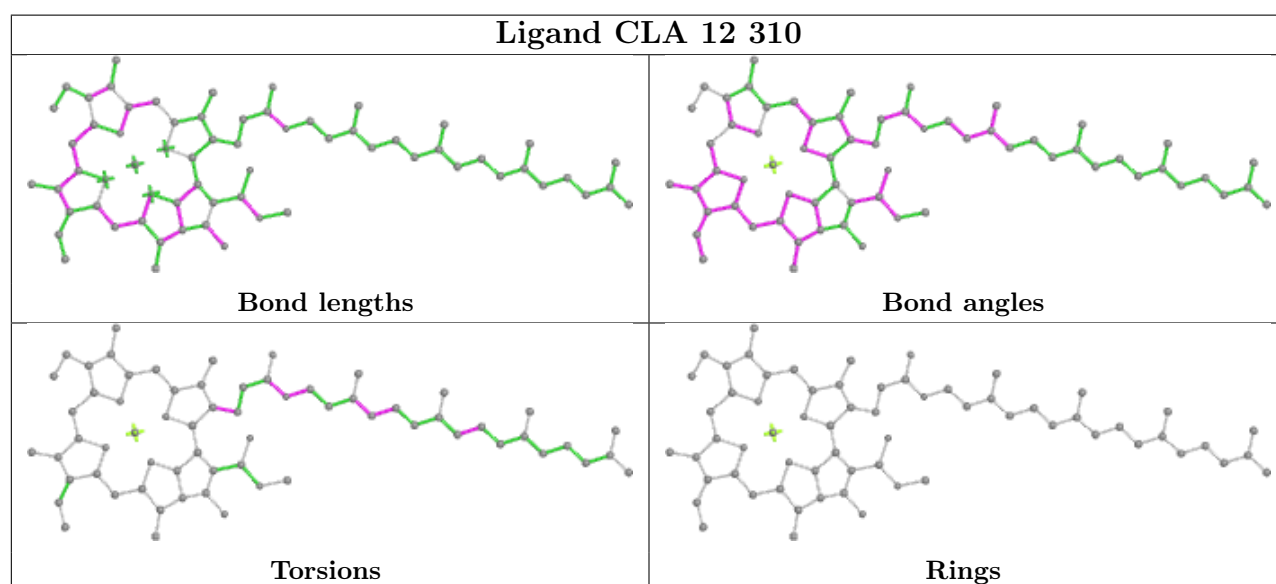
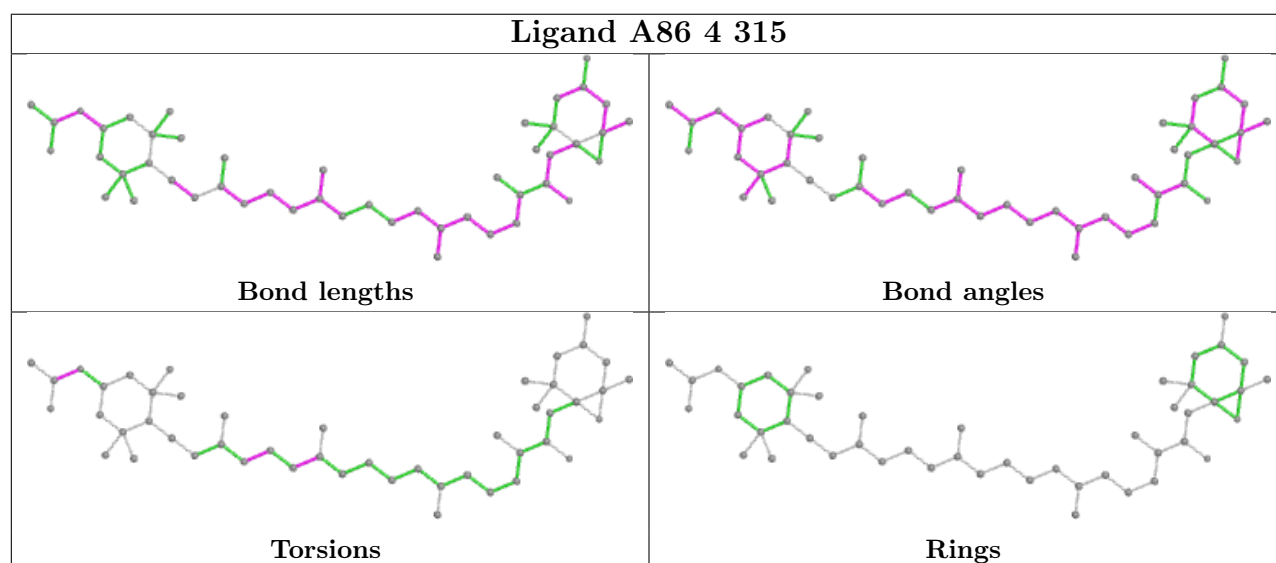
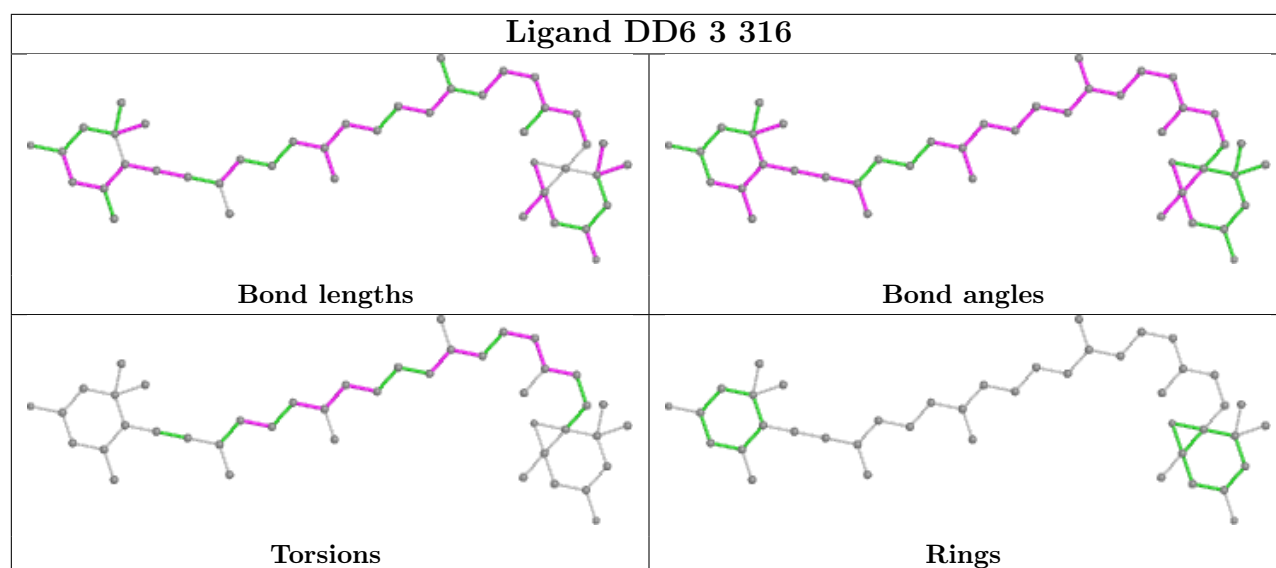


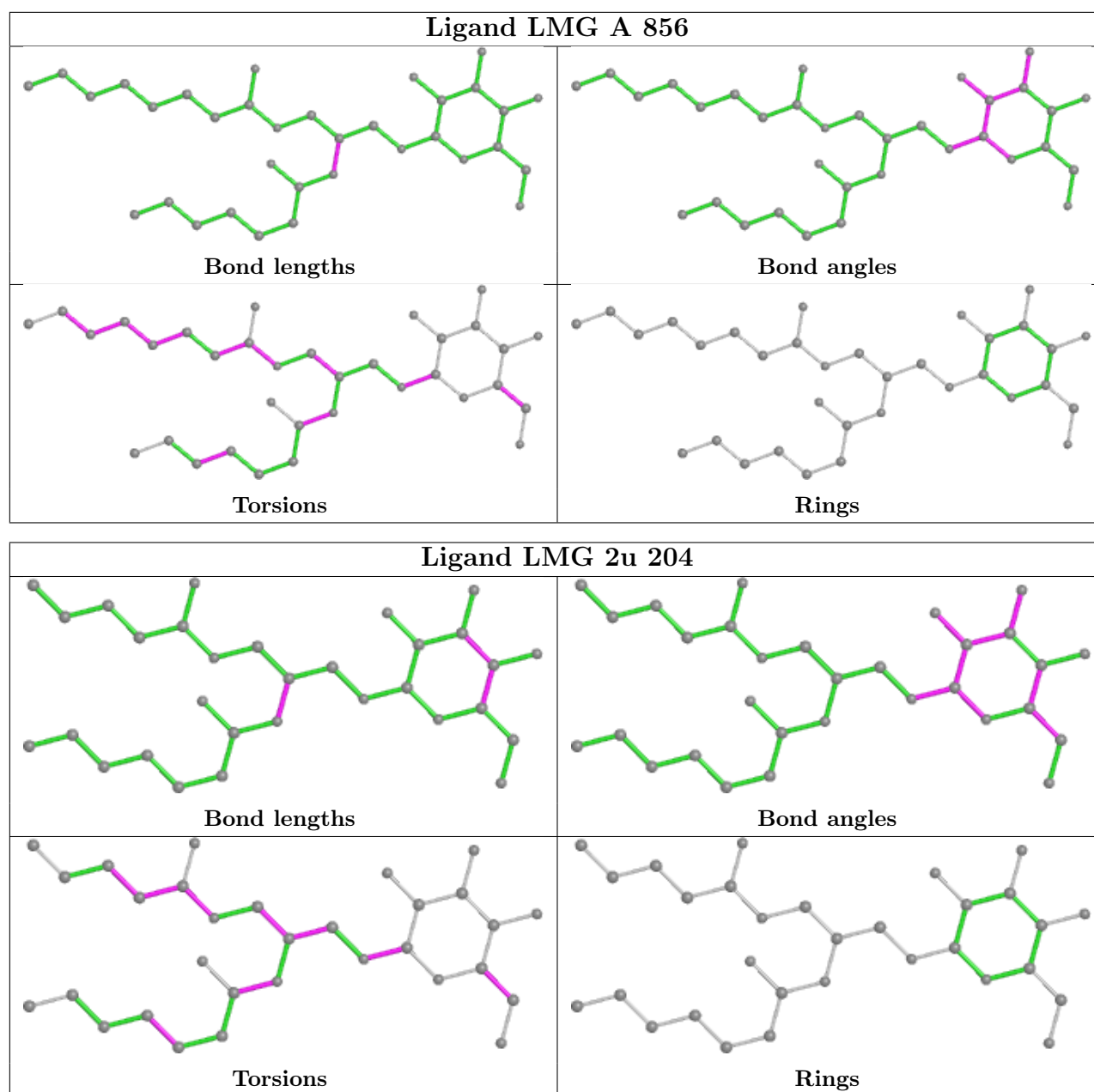












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.



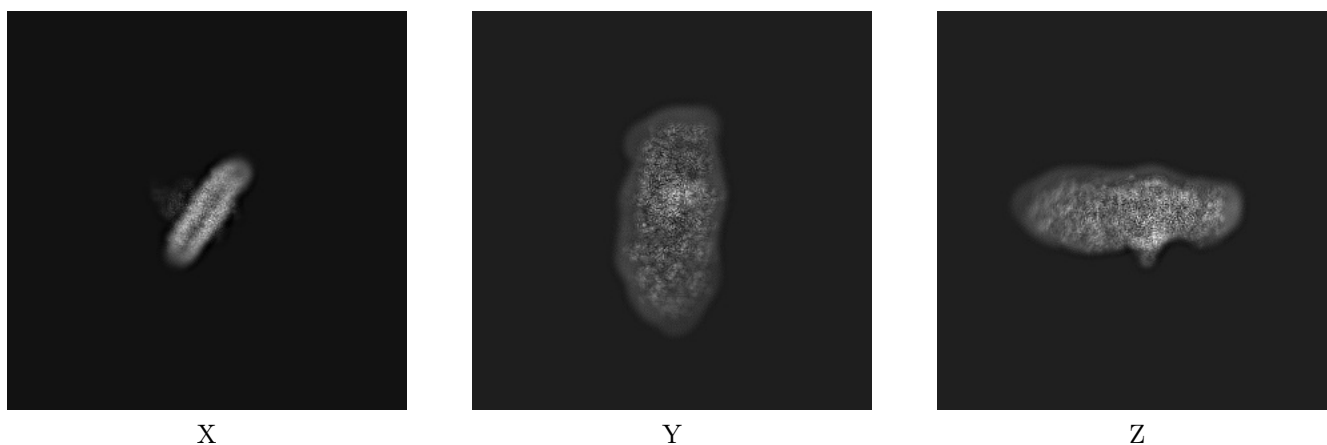
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-0835. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

### 6.1 Orthogonal projections [i](#)

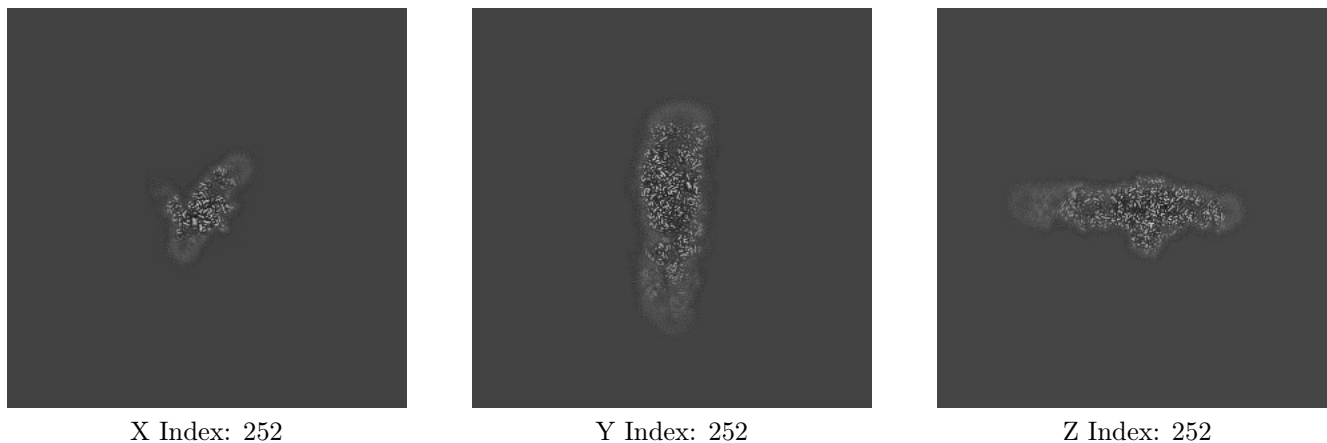
#### 6.1.1 Primary map



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

### 6.2 Central slices [i](#)

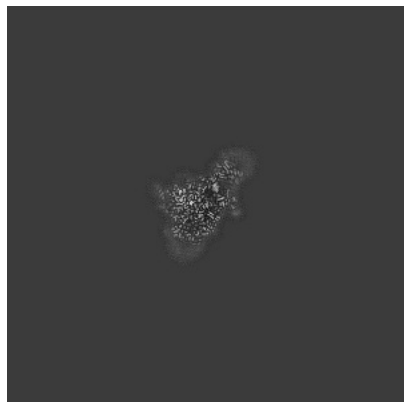
#### 6.2.1 Primary map



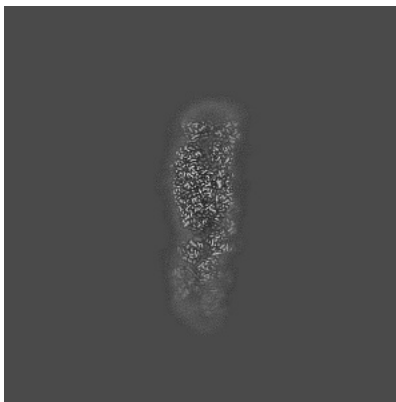
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

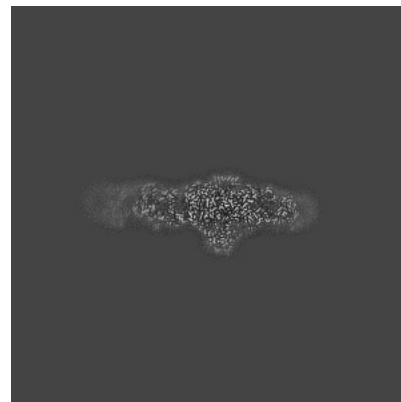
### 6.3.1 Primary map



X Index: 273



Y Index: 251

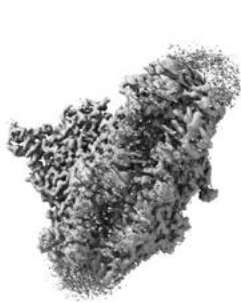


Z Index: 250

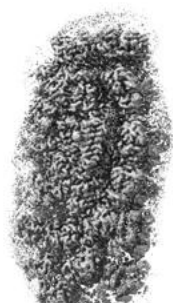
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views [i](#)

### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.045. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

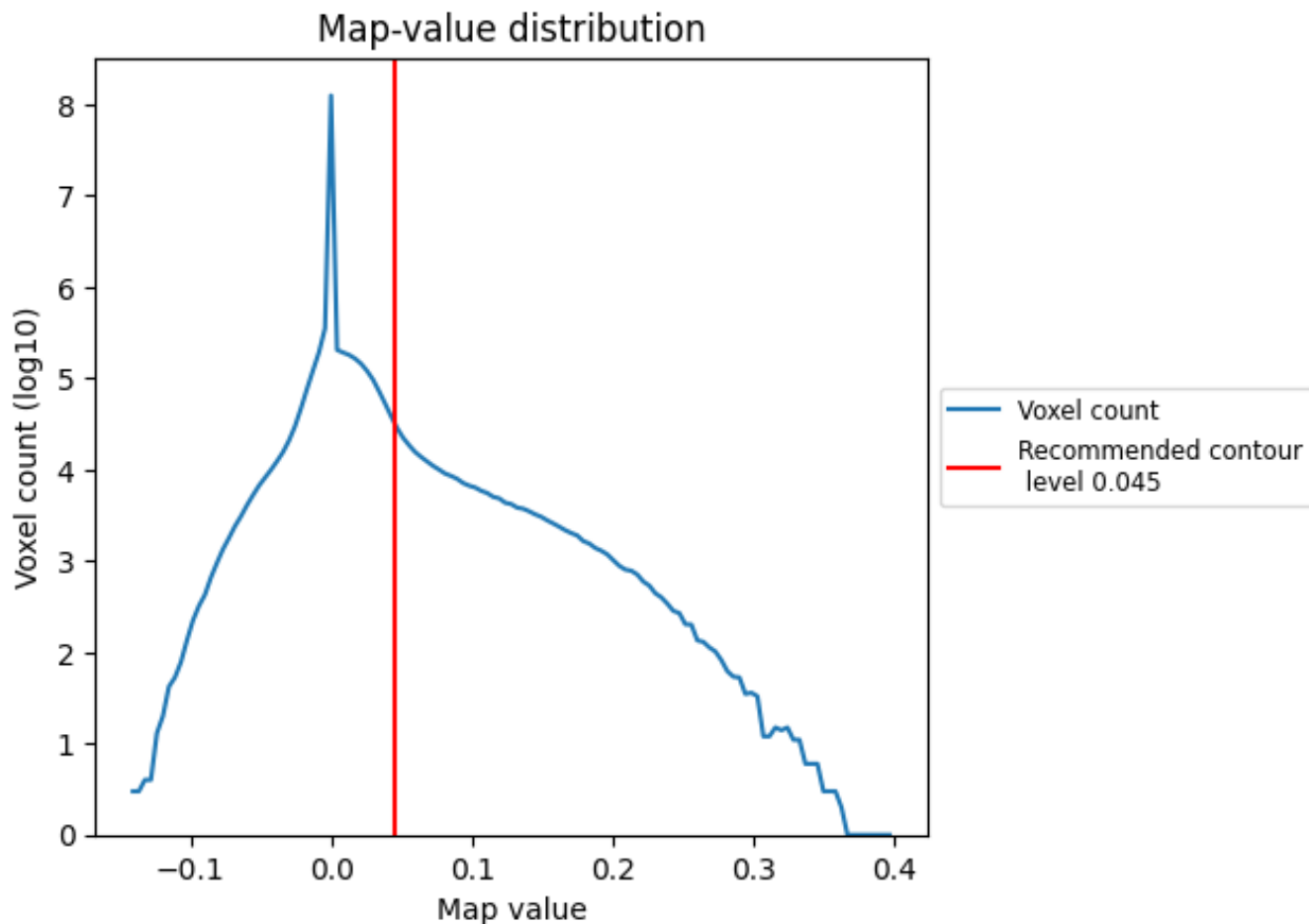
## 6.5 Mask visualisation

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

## 7 Map analysis [i](#)

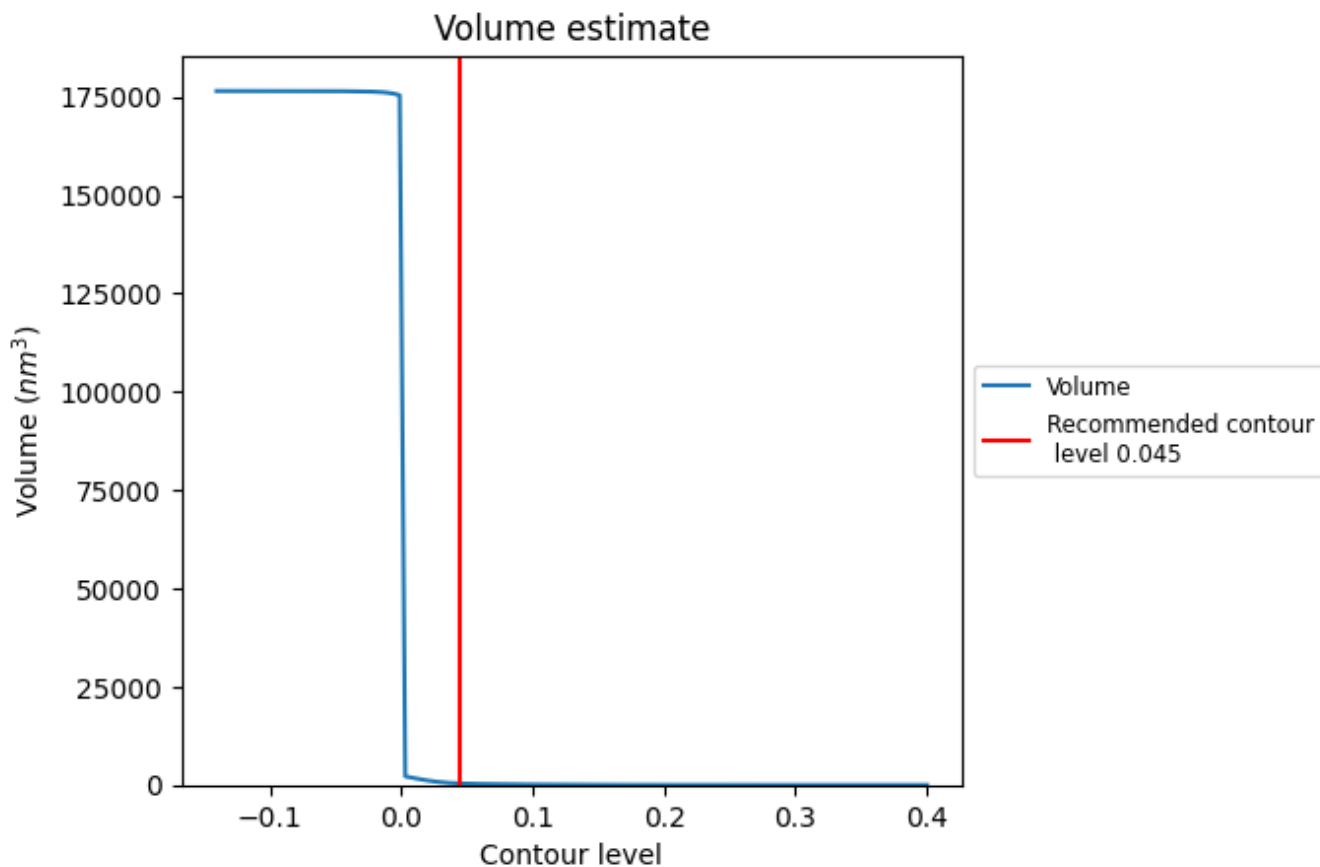
This section contains the results of statistical analysis of the map.

### 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.

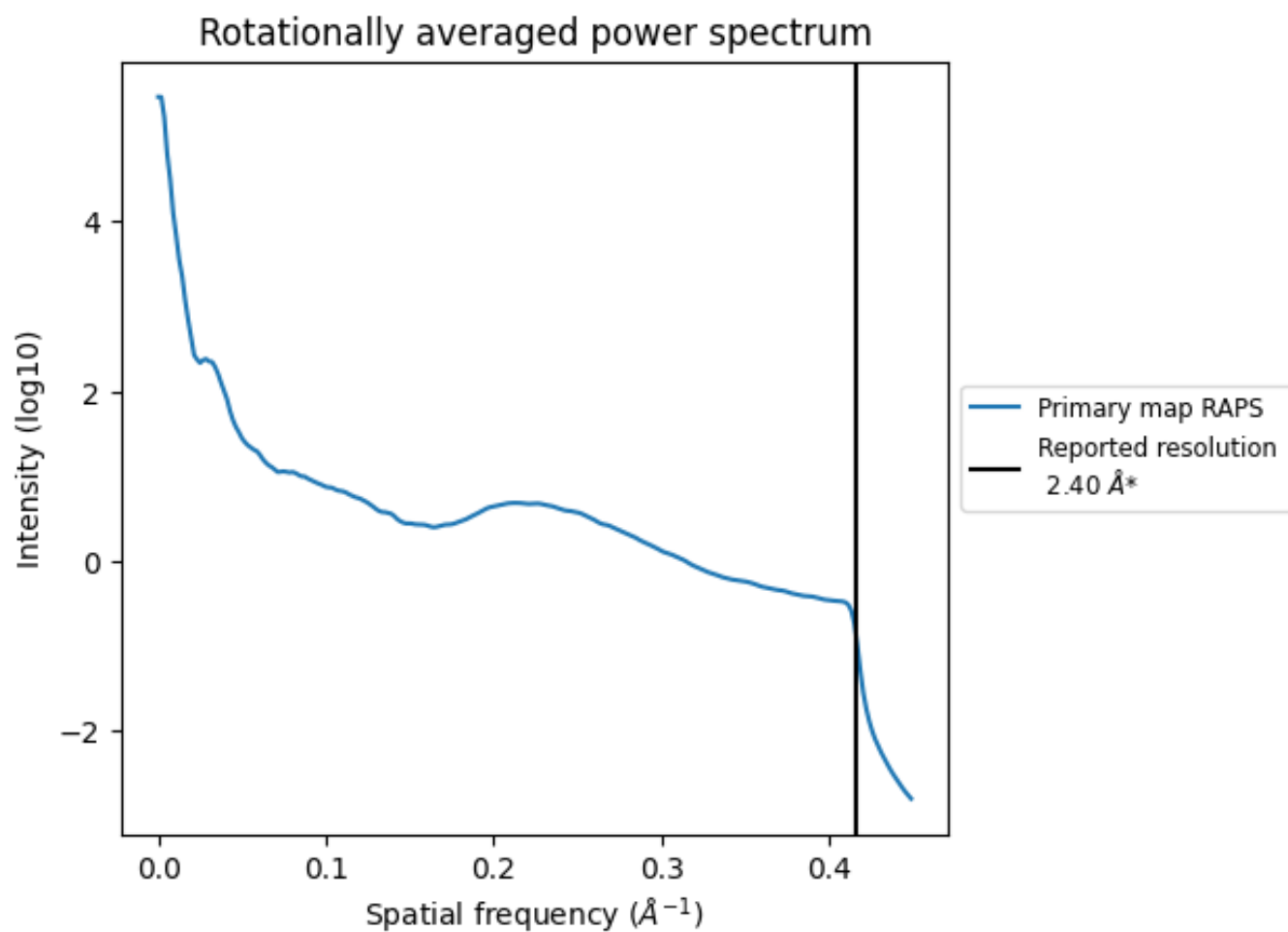
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is  $370 \text{ nm}^3$ ; this corresponds to an approximate mass of 334 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](#)

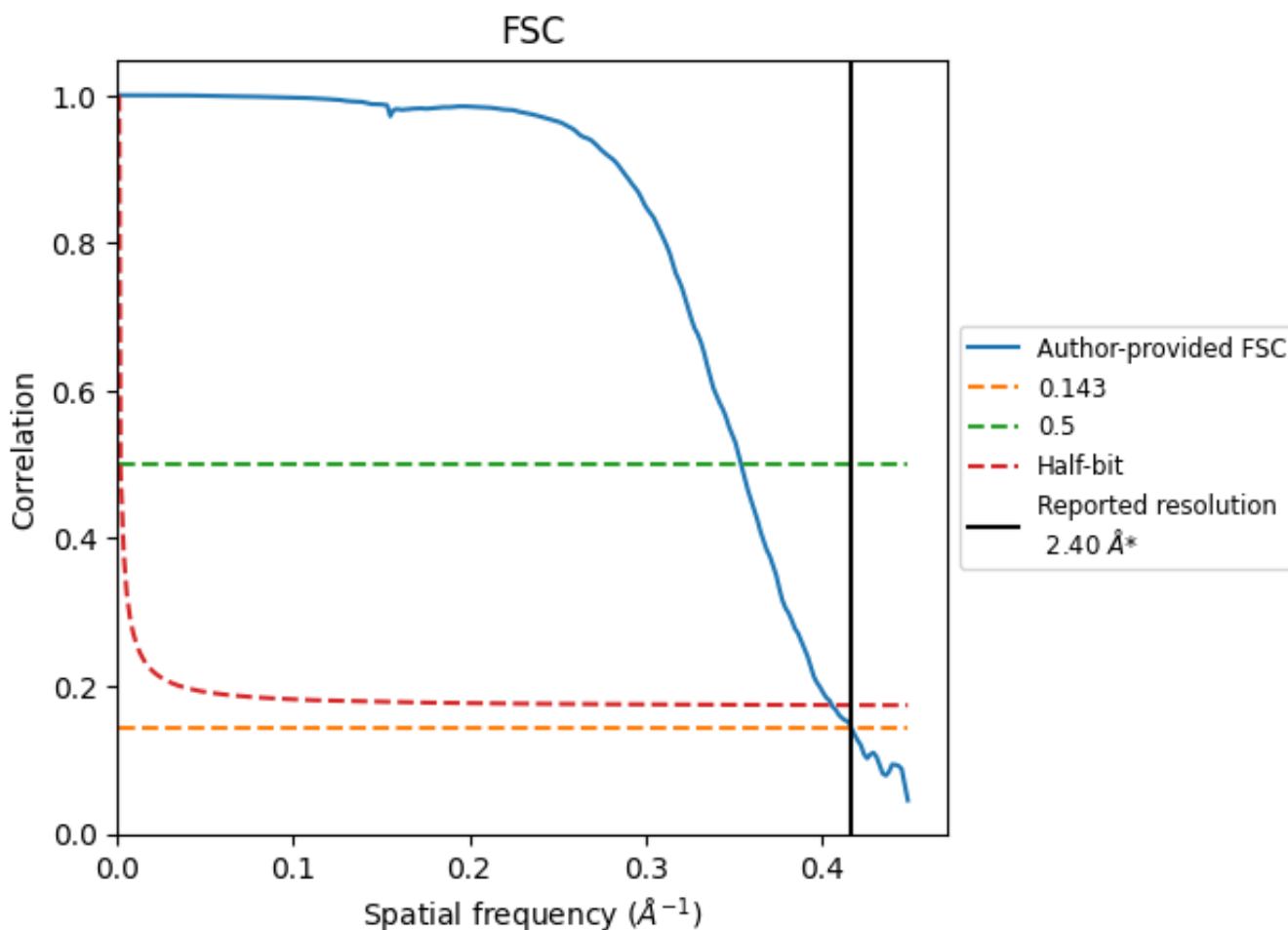


\*Reported resolution corresponds to spatial frequency of 0.417 Å<sup>-1</sup>

## 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 0.417 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.40	-	-
Author-provided FSC curve	2.40	2.82	2.46
Unmasked-calculated*	-	-	-

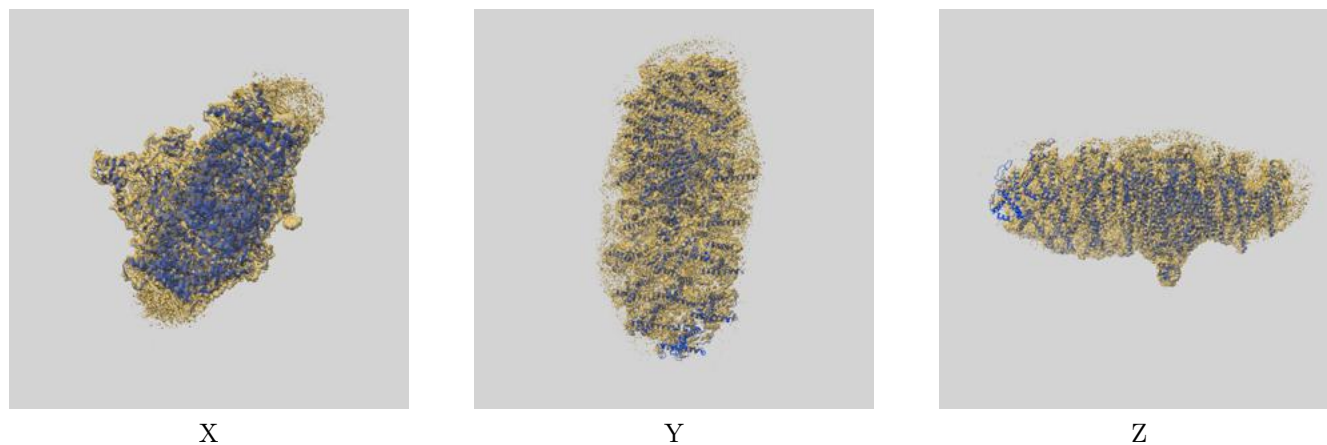
\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.



## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-0835 and PDB model 6L4U. Per-residue inclusion information can be found in section [3](#) on page [40](#).

### 9.1 Map-model overlay [i](#)

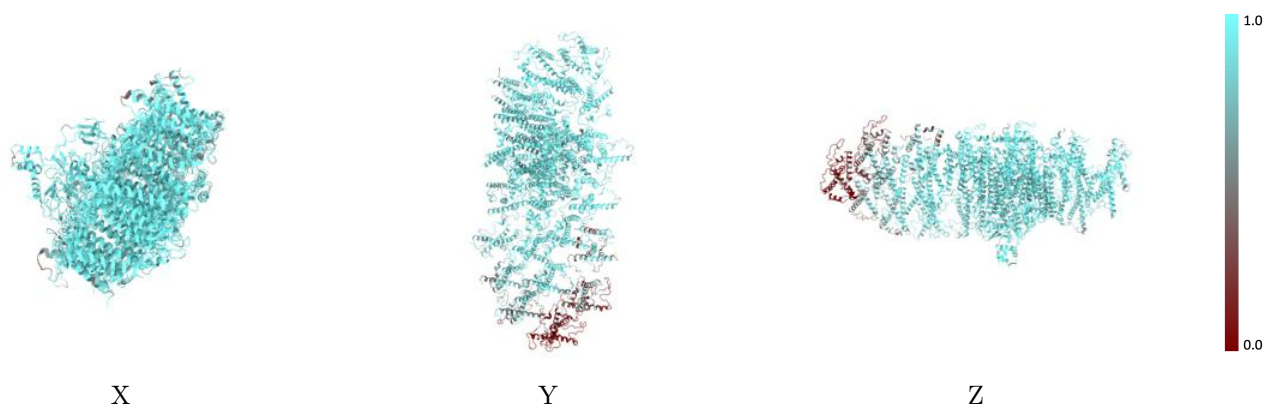


The images above show the 3D surface view of the map at the recommended contour level 0.045 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

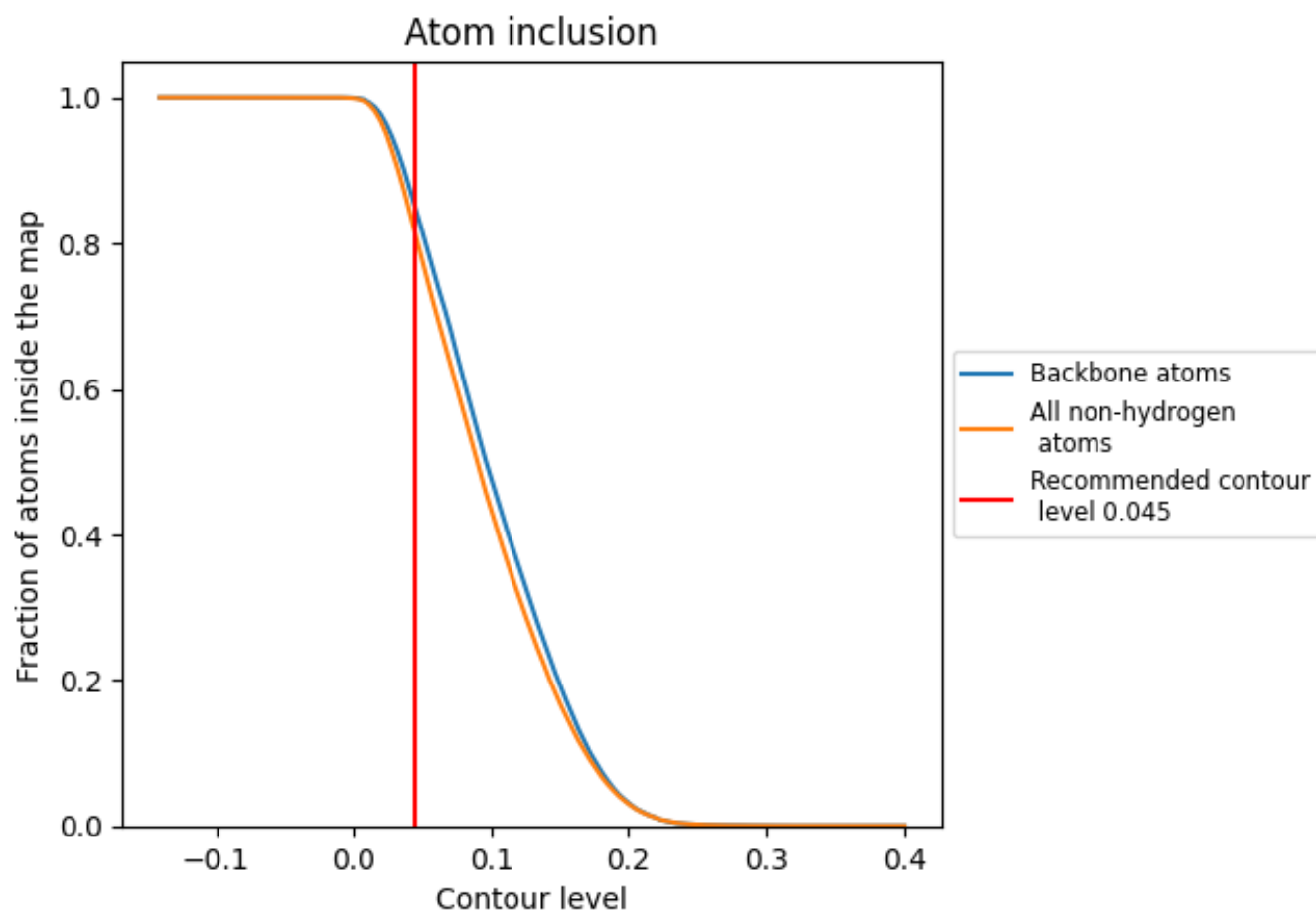
This section was not generated.

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



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 (0.045).






























## 9.4 Atom inclusion [i](#)



At the recommended contour level, 85% of all backbone atoms, 81% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.045) and Q-score for the entire model and for each chain.

Chain	Atom inclusion
All	 0.8127
1	 0.8158
10	 0.8013
11	 0.6958
12	 0.7643
13	 0.6124
14	 0.3759
15	 0.1111
16	 0.5787
1u	 0.9015
2	 0.8678
2u	 0.9371
3	 0.8195
4	 0.8599
5	 0.8462
6	 0.8748
7	 0.8826
8	 0.9032
9	 0.8260
A	 0.9415
B	 0.9494
C	 0.9800
D	 0.9537
E	 0.9332
F	 0.9253
I	 0.9071
J	 0.9413
L	 0.9539
M	 0.9198

