



wwPDB EM Validation Summary Report ⓘ

Dec 18, 2022 – 10:30 AM JST

PDB ID : 6JLU
EMDB ID : EMD-9839
Title : Structure of PSII-FCP supercomplex from a centric diatom *Chaetoceros gracilis* at 3.02 angstrom resolution
Authors : Pi, X.; Zhao, S.; Wang, W.; Kuang, T.; Sui, S.; Shen, J.
Deposited on : 2019-03-06
Resolution : 3.02 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

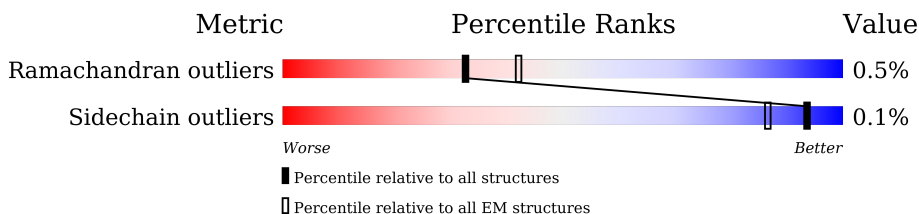
EMDB validation analysis : 0.0.1.dev43
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry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

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.02 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	359	92% 7%
1	a	359	92% 7%
2	B	509	98% ..
2	b	509	98% ..
3	C	450	99% .
3	c	450	99% .
4	D	341	99% .
4	d	341	99% .
5	E	79	100%

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Mol	Chain	Length	Quality of chain
5	e	79	11% 100%
6	F	32	22% 100%
6	f	32	16% 100%
7	G	179	56% 68% 32%
7	g	179	58% 68% 32%
8	H	65	6% 98%
8	h	65	6% 98%
9	I	34	100%
9	i	34	100%
10	J	34	24% 94% 6%
10	j	34	15% 94% 6%
11	K	37	5% 100%
11	k	37	1% 100%
12	L	38	97%
12	l	38	97%
13	M	41	7% 98%
13	m	41	12% 98%
14	N	30	7% 97%
14	n	30	7% 97%
15	O	249	6% 98%
15	o	249	6% 98%
16	P	226	12% 98%
16	p	226	12% 98%
17	Q	211	10% 68% 30%
17	q	211	11% 68% 30%

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Mol	Chain	Length	Quality of chain
18	R	73	29% 100%
18	r	73	29% 100%
19	T	31	10% 97%
19	t	31	6% 97%
20	U	93	5% 99%
20	u	93	5% 99%
21	V	137	• 100%
21	v	137	• 100%
22	W	51	27% 96%
22	w	51	25% 96%
23	X	35	40% 100%
23	x	35	37% 100%
24	Y	33	27% 91% 9%
24	y	33	21% 91% 9%
25	Z	61	• 100%
25	z	61	• 100%
26	0	178	19% 95% • •
26	10	178	17% 96% •
27	1	172	62% 95% 5%
27	11	172	66% 95% 5% •
27	12	172	97% 97% • •
27	13	172	98% 94% 6% •
27	14	172	46% 94% 5% ••
27	15	172	45% 90% 9% ••
27	16	172	99% 94% 6% •

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Mol	Chain	Length	Quality of chain
27	17	172	95% 92% 8%
27	18	172	22% 91% 9%
27	2	172	98% 92% 6%
27	3	172	94% 94% 6%
27	4	172	47% 95% 5%
27	5	172	49% 91% 9%
27	6	172	99% 93% 6%
27	7	172	95% 91% 8%
27	8	172	20% 90% 9%
28	19	166	100% 100%
28	9	166	100% 100%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	0	307	X	-	-	-
31	CLA	0	308	X	-	-	-
31	CLA	0	311	X	-	-	-
31	CLA	0	312	X	-	-	-
31	CLA	0	313	X	-	-	-
31	CLA	0	316	X	-	-	-
31	CLA	1	307	X	-	-	-
31	CLA	1	310	X	-	-	-
31	CLA	1	312	X	-	-	-
31	CLA	1	313	X	-	-	-
31	CLA	1	316	X	-	-	-
31	CLA	1	321	X	-	-	-
31	CLA	10	307	X	-	-	-
31	CLA	10	308	X	-	-	-
31	CLA	10	311	X	-	-	-
31	CLA	10	312	X	-	-	-
31	CLA	10	313	X	-	-	-
31	CLA	10	314	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	10	316	X	-	-	-
31	CLA	10	317	X	-	-	-
31	CLA	11	307	X	-	-	-
31	CLA	11	308	X	-	-	-
31	CLA	11	310	X	-	-	-
31	CLA	11	312	X	-	-	-
31	CLA	11	313	X	-	-	-
31	CLA	11	315	X	-	-	-
31	CLA	11	316	X	-	-	-
31	CLA	12	307	X	-	-	-
31	CLA	12	308	X	-	-	-
31	CLA	12	310	X	-	-	-
31	CLA	12	312	X	-	-	-
31	CLA	12	316	X	-	-	-
31	CLA	13	307	X	-	-	-
31	CLA	13	308	X	-	-	-
31	CLA	13	310	X	-	-	-
31	CLA	13	312	X	-	-	-
31	CLA	14	306	X	-	-	-
31	CLA	14	307	X	-	-	-
31	CLA	14	309	X	-	-	-
31	CLA	14	311	X	-	-	-
31	CLA	14	312	X	-	-	-
31	CLA	14	314	X	-	-	-
31	CLA	14	315	X	-	-	-
31	CLA	15	306	X	-	-	-
31	CLA	15	307	X	-	-	-
31	CLA	15	309	X	-	-	-
31	CLA	15	311	X	-	-	-
31	CLA	15	313	X	-	-	-
31	CLA	16	308	X	-	-	-
31	CLA	16	309	X	-	-	-
31	CLA	16	311	X	-	-	-
31	CLA	16	313	X	-	-	-
31	CLA	16	314	X	-	-	-
31	CLA	16	316	X	-	-	-
31	CLA	17	307	X	-	-	-
31	CLA	17	310	X	-	-	-
31	CLA	17	312	X	-	-	-
31	CLA	17	313	X	-	-	-
31	CLA	17	315	X	-	-	-
31	CLA	18	306	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	18	307	X	-	-	-
31	CLA	18	309	X	-	-	-
31	CLA	18	312	X	-	-	-
31	CLA	18	314	X	-	-	-
31	CLA	19	307	X	-	-	-
31	CLA	19	308	X	-	-	-
31	CLA	19	310	X	-	-	-
31	CLA	19	311	X	-	-	-
31	CLA	19	312	X	-	-	-
31	CLA	19	313	X	-	-	-
31	CLA	19	315	X	-	-	-
31	CLA	2	306	X	-	-	-
31	CLA	2	307	X	-	-	-
31	CLA	2	309	X	-	-	-
31	CLA	3	307	X	-	-	-
31	CLA	3	308	X	-	-	-
31	CLA	3	310	X	-	-	-
31	CLA	3	313	X	-	-	-
31	CLA	3	315	X	-	-	-
31	CLA	4	307	X	-	-	-
31	CLA	4	309	X	-	-	-
31	CLA	4	311	X	-	-	-
31	CLA	4	312	X	-	-	-
31	CLA	4	314	X	-	-	-
31	CLA	4	315	X	-	-	-
31	CLA	5	306	X	-	-	-
31	CLA	5	307	X	-	-	-
31	CLA	5	309	X	-	-	-
31	CLA	5	311	X	-	-	-
31	CLA	5	314	X	-	-	-
31	CLA	6	308	X	-	-	-
31	CLA	6	309	X	-	-	-
31	CLA	6	311	X	-	-	-
31	CLA	6	313	X	-	-	-
31	CLA	6	314	X	-	-	-
31	CLA	6	316	X	-	-	-
31	CLA	7	307	X	-	-	-
31	CLA	7	310	X	-	-	-
31	CLA	7	312	X	-	-	-
31	CLA	7	313	X	-	-	-
31	CLA	7	315	X	-	-	-
31	CLA	8	306	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	8	307	X	-	-	-
31	CLA	8	309	X	-	-	-
31	CLA	8	312	X	-	-	-
31	CLA	8	314	X	-	-	-
31	CLA	9	307	X	-	-	-
31	CLA	9	308	X	-	-	-
31	CLA	9	310	X	-	-	-
31	CLA	9	311	X	-	-	-
31	CLA	9	312	X	-	-	-
31	CLA	9	313	X	-	-	-
31	CLA	9	315	X	-	-	-
31	CLA	A	403	X	-	-	-
31	CLA	A	404	X	-	-	-
31	CLA	A	406	X	-	-	-
31	CLA	B	601	X	-	-	-
31	CLA	B	602	X	-	-	-
31	CLA	B	603	X	-	-	-
31	CLA	B	604	X	-	-	-
31	CLA	B	605	X	-	-	-
31	CLA	B	606	X	-	-	-
31	CLA	B	607	X	-	-	-
31	CLA	B	608	X	-	-	-
31	CLA	B	611	X	-	-	-
31	CLA	B	612	X	-	-	-
31	CLA	B	613	X	-	-	-
31	CLA	B	614	X	-	-	-
31	CLA	B	615	X	-	-	-
31	CLA	B	616	X	-	-	-
31	CLA	C	502	X	-	-	-
31	CLA	C	503	X	-	-	-
31	CLA	C	504	X	-	-	-
31	CLA	C	505	X	-	-	-
31	CLA	C	506	X	-	-	-
31	CLA	C	507	X	-	-	-
31	CLA	C	508	X	-	-	-
31	CLA	C	509	X	-	-	-
31	CLA	C	510	X	-	-	-
31	CLA	C	511	X	-	-	-
31	CLA	C	512	X	-	-	-
31	CLA	C	513	X	-	-	-
31	CLA	C	514	X	-	-	-
31	CLA	D	401	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	D	404	X	-	-	-
31	CLA	D	405	X	-	-	-
31	CLA	P	601	X	-	-	-
31	CLA	P	602	X	-	-	-
31	CLA	P	603	X	-	-	-
31	CLA	P	604	X	-	-	-
31	CLA	P	605	X	-	-	-
31	CLA	P	606	X	-	-	-
31	CLA	P	607	X	-	-	-
31	CLA	P	608	X	-	-	-
31	CLA	P	610	X	-	-	-
31	CLA	R	101	X	-	-	-
31	CLA	W	202	X	-	-	-
31	CLA	Z	101	X	-	-	-
31	CLA	a	403	X	-	-	-
31	CLA	a	404	X	-	-	-
31	CLA	a	406	X	-	-	-
31	CLA	b	602	X	-	-	-
31	CLA	b	603	X	-	-	-
31	CLA	b	604	X	-	-	-
31	CLA	b	605	X	-	-	-
31	CLA	b	606	X	-	-	-
31	CLA	b	607	X	-	-	-
31	CLA	b	608	X	-	-	-
31	CLA	b	609	X	-	-	-
31	CLA	b	612	X	-	-	-
31	CLA	b	613	X	-	-	-
31	CLA	b	614	X	-	-	-
31	CLA	b	615	X	-	-	-
31	CLA	b	616	X	-	-	-
31	CLA	b	617	X	-	-	-
31	CLA	c	502	X	-	-	-
31	CLA	c	503	X	-	-	-
31	CLA	c	504	X	-	-	-
31	CLA	c	505	X	-	-	-
31	CLA	c	506	X	-	-	-
31	CLA	c	507	X	-	-	-
31	CLA	c	508	X	-	-	-
31	CLA	c	509	X	-	-	-
31	CLA	c	510	X	-	-	-
31	CLA	c	511	X	-	-	-
31	CLA	c	512	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
31	CLA	c	513	X	-	-	-
31	CLA	c	514	X	-	-	-
31	CLA	d	401	X	-	-	-
31	CLA	d	404	X	-	-	-
31	CLA	d	405	X	-	-	-
31	CLA	p	601	X	-	-	-
31	CLA	p	602	X	-	-	-
31	CLA	p	603	X	-	-	-
31	CLA	p	604	X	-	-	-
31	CLA	p	605	X	-	-	-
31	CLA	p	606	X	-	-	-
31	CLA	p	607	X	-	-	-
31	CLA	p	608	X	-	-	-
31	CLA	p	610	X	-	-	-
31	CLA	r	101	X	-	-	-
31	CLA	w	203	X	-	-	-
31	CLA	z	101	X	-	-	-
31	CLA	z	103	X	-	-	-

2 Entry composition [i](#)

There are 46 unique types of molecules in this entry. The entry contains 102777 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called PsbA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	334	Total	C	N	O	S	0	0
			2617	1711	429	462	15		
1	a	334	Total	C	N	O	S	0	0
			2617	1711	429	462	15		

- Molecule 2 is a protein called PsbB.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	503	Total	C	N	O	S	0	0
			3960	2588	669	690	13		
2	b	503	Total	C	N	O	S	0	0
			3960	2588	669	690	13		

- Molecule 3 is a protein called PsbC.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	450	Total	C	N	O	S	0	0
			3496	2290	583	609	14		
3	c	450	Total	C	N	O	S	0	0
			3496	2290	583	609	14		

- Molecule 4 is a protein called PsbD.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	341	Total	C	N	O	S	0	0
			2696	1781	441	464	10		
4	d	341	Total	C	N	O	S	0	0
			2696	1781	441	464	10		

- Molecule 5 is a protein called PsbE.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	E	79	Total	C	N	O	0	0
			642	415	106	121		
5	e	79	Total	C	N	O	0	0
			642	415	106	121		

- Molecule 6 is a protein called PsbF.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	32	Total	C	N	O	S	0	0
			259	178	43	37	1		
6	f	32	Total	C	N	O	S	0	0
			259	178	43	37	1		

- Molecule 7 is a protein called Psb31.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	122	Total	C	N	O	S	0	0
			922	580	167	174	1		
7	g	122	Total	C	N	O	S	0	0
			922	580	167	174	1		

- Molecule 8 is a protein called Photosystem II reaction center protein H.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	65	Total	C	N	O	S	0	0
			506	335	82	87	2		
8	h	65	Total	C	N	O	S	0	0
			506	335	82	87	2		

- Molecule 9 is a protein called PsbI.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	34	Total	C	N	O	S	0	0
			278	188	43	46	1		
9	i	34	Total	C	N	O	S	0	0
			278	188	43	46	1		

- Molecule 10 is a protein called PsbJ.

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

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

- Molecule 11 is a protein called PsbK.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	K	37	300	210	44	45	1	0	0
11	k	37	300	210	44	45	1	0	0

- Molecule 12 is a protein called PsbL.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
12	L	37	301	203	47	51	0	0
12	l	37	301	203	47	51	0	0

- Molecule 13 is a protein called PsbM.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
13	M	41	308	203	50	55	0	0
13	m	41	308	203	50	55	0	0

- Molecule 14 is a protein called Psb34.

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

- Molecule 15 is a protein called Extrinsic protein in photosystem II.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	O	249	1881	1188	310	375	8	0	0
15	o	249	1881	1188	310	375	8	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
O	185	SER	ASN	conflict	UNP B6ZHE8
O	336	GLU	ASP	conflict	UNP B6ZHE8
o	185	SER	ASN	conflict	UNP B6ZHE8
o	336	GLU	ASP	conflict	UNP B6ZHE8

- Molecule 16 is a protein called FCP-D.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	P	226	1745	1129	290	321	5	0	0
16	p	226	1745	1129	290	321	5	0	0

- Molecule 17 is a protein called Extrinsic protein in photosystem II.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	Q	147	1143	725	188	229	1	0	0
17	q	147	1143	725	188	229	1	0	0

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Q	30	VAL	ILE	conflict	UNP B6ZHE9
Q	34	ALA	GLY	conflict	UNP B6ZHE9
Q	70	ILE	VAL	conflict	UNP B6ZHE9
Q	110	SER	ASN	conflict	UNP B6ZHE9
Q	133	GLY	ALA	conflict	UNP B6ZHE9
q	30	VAL	ILE	conflict	UNP B6ZHE9
q	34	ALA	GLY	conflict	UNP B6ZHE9
q	70	ILE	VAL	conflict	UNP B6ZHE9
q	110	SER	ASN	conflict	UNP B6ZHE9
q	133	GLY	ALA	conflict	UNP B6ZHE9

- Molecule 18 is a protein called PsbG.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
18	R	73	365	219	73	73	0	0

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Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
18	r	73	365	219	73	73	0	0

- Molecule 19 is a protein called PsbT.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	T	30	250	174	36	38	2	0	0
19	t	30	250	174	36	38	2	0	0

- Molecule 20 is a protein called Extrinsic protein in photosystem II.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	U	93	711	454	119	136	2	0	0
20	u	93	711	454	119	136	2	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
U	33	ILE	VAL	conflict	UNP B6ZHF0
U	60	SER	ALA	conflict	UNP B6ZHF0
u	33	ILE	VAL	conflict	UNP B6ZHF0
u	60	SER	ALA	conflict	UNP B6ZHF0

- Molecule 21 is a protein called Cytochrome c-550.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	V	137	1043	652	182	205	4	0	0
21	v	137	1043	652	182	205	4	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
V	70	ASN	SER	conflict	UNP B6ZHF4
v	70	ASN	SER	conflict	UNP B6ZHF4

- Molecule 22 is a protein called PsbW.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	W	51	Total	C	N	O	S	0	0
			394	247	73	71	3		
22	w	51	Total	C	N	O	S	0	0
			394	247	73	71	3		

- Molecule 23 is a protein called Photosystem II reaction center X protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	X	35	Total	C	N	O	S	0	0
			244	159	40	44	1		
23	x	35	Total	C	N	O	S	0	0
			244	159	40	44	1		

- Molecule 24 is a protein called PsbY.

Mol	Chain	Residues	Atoms				AltConf	Trace
24	Y	33	Total	C	N	O	0	0
			256	168	47	41		
24	y	33	Total	C	N	O	0	0
			256	168	47	41		

- Molecule 25 is a protein called PsbZ.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Z	61	Total	C	N	O	S	0	0
			452	301	68	82	1		
25	z	61	Total	C	N	O	S	0	0
			452	301	68	82	1		

- Molecule 26 is a protein called FCP-E.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	0	178	Total	C	N	O	S	0	0
			1291	827	219	241	4		
26	10	178	Total	C	N	O	S	0	0
			1291	827	219	241	4		

- Molecule 27 is a protein called FCP-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	1	172	Total	C	N	O	S	0	0
			1340	874	218	243	5		

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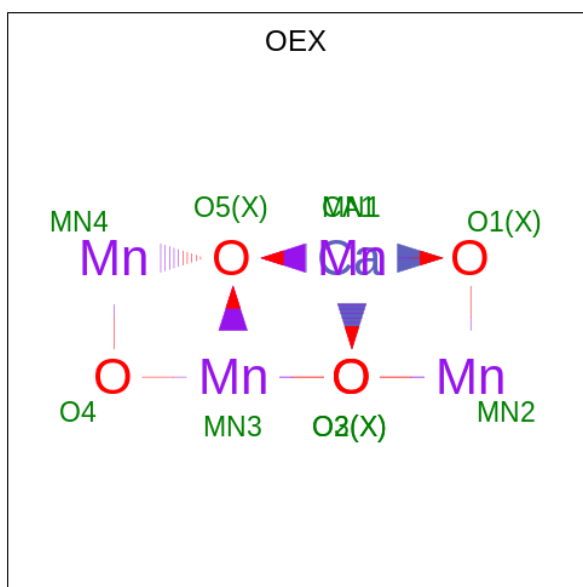
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Mol	Chain	Residues	Atoms					AltConf	Trace
27	2	172	Total	C	N	O	S	0	0
			1340	874	218	243	5		
27	3	172	Total	C	N	O	S	0	0
			1340	874	218	243	5		
27	4	172	Total	C	N	O	S	0	0
			1313	855	212	241	5		
27	5	172	Total	C	N	O	S	0	0
			1280	826	207	242	5		
27	6	172	Total	C	N	O	S	0	0
			1335	871	216	243	5		
27	7	172	Total	C	N	O	S	0	0
			1335	871	216	243	5		
27	8	172	Total	C	N	O	S	0	0
			1291	832	211	243	5		
27	11	172	Total	C	N	O	S	0	0
			1335	871	216	243	5		
27	12	172	Total	C	N	O	S	0	0
			1328	866	215	243	4		
27	13	172	Total	C	N	O	S	0	0
			1332	869	215	243	5		
27	14	172	Total	C	N	O	S	0	0
			1313	855	212	241	5		
27	15	172	Total	C	N	O	S	0	0
			1280	826	207	242	5		
27	16	172	Total	C	N	O	S	0	0
			1340	874	218	243	5		
27	17	172	Total	C	N	O	S	0	0
			1340	874	218	243	5		
27	18	172	Total	C	N	O	S	0	0
			1304	841	215	243	5		

- Molecule 28 is a protein called FCP-F.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	9	166	Total	C	N	O	S	0	0
			1286	829	212	241	4		
28	19	166	Total	C	N	O	S	0	0
			1286	829	212	241	4		

- Molecule 29 is CA-MN4-O5 CLUSTER (three-letter code: OEX) (formula: CaMn_4O_5).

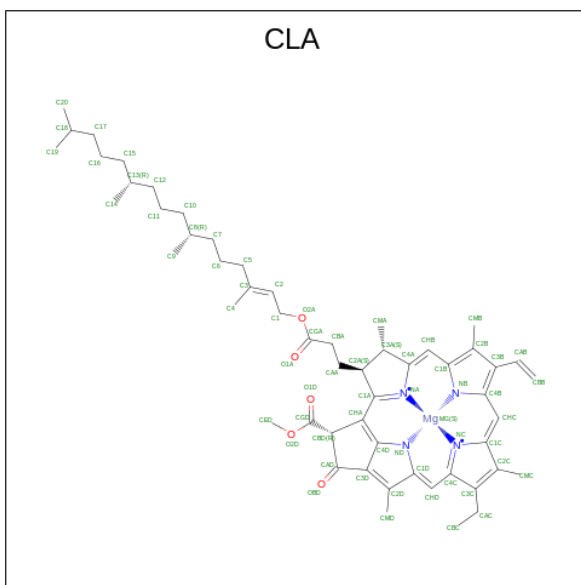


Mol	Chain	Residues	Atoms				AltConf
			Total	Ca	Mn	O	
29	A	1	10	1	4	5	0
29	a	1	10	1	4	5	0

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

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

- Molecule 31 is CHLOROPHYLL A (three-letter code: CLA) (formula: C₅₅H₇₂MgN₄O₅).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	A	1	Total	C	Mg	N	O	0
			174	144	3	12	15	
31	A	1	Total	C	Mg	N	O	0
			174	144	3	12	15	
31	A	1	Total	C	Mg	N	O	0
			174	144	3	12	15	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	
31	B	1	Total	C	Mg	N	O	0
			1040	880	16	64	80	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	B	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	B	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	B	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	B	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	B	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	C	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	D	1	Total 195	C 165	Mg 3	N 12	O 15	0
31	D	1	Total 195	C 165	Mg 3	N 12	O 15	0
31	D	1	Total 195	C 165	Mg 3	N 12	O 15	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	P	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	R	1	Total 47	C 37	Mg 1	N 4	O 5	0
31	W	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	Z	1	Total 51	C 41	Mg 1	N 4	O 5	0
31	a	1	Total 174	C 144	Mg 3	N 12	O 15	0
31	a	1	Total 174	C 144	Mg 3	N 12	O 15	0
31	a	1	Total 174	C 144	Mg 3	N 12	O 15	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	b	1	Total 1040	C 880	Mg 16	N 64	O 80	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	c	1	Total 829	C 699	Mg 13	N 52	O 65	0
31	d	1	Total 195	C 165	Mg 3	N 12	O 15	0
31	d	1	Total 195	C 165	Mg 3	N 12	O 15	0
31	d	1	Total 195	C 165	Mg 3	N 12	O 15	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	p	1	Total 447	C 365	Mg 9	N 36	O 37	0
31	r	1	Total 47	C 37	Mg 1	N 4	O 5	0
31	w	1	Total 65	C 55	Mg 1	N 4	O 5	0
31	z	1	Total 99	C 79	Mg 2	N 8	O 10	0
31	z	1	Total 99	C 79	Mg 2	N 8	O 10	0
31	0	1	Total 394	C 316	Mg 8	N 32	O 38	0
31	0	1	Total 394	C 316	Mg 8	N 32	O 38	0
31	0	1	Total 394	C 316	Mg 8	N 32	O 38	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	0	1	Total 394	C 316	Mg 8	N 32	O 38	0
31	0	1	Total 394	C 316	Mg 8	N 32	O 38	0
31	0	1	Total 394	C 316	Mg 8	N 32	O 38	0
31	0	1	Total 394	C 316	Mg 8	N 32	O 38	0
31	0	1	Total 394	C 316	Mg 8	N 32	O 38	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	1	1	Total 413	C 339	Mg 8	N 32	O 34	0
31	2	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	2	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	2	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	2	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	2	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	2	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	2	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	2	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	3	1	Total 345	C 282	Mg 7	N 28	O 28	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	3	1	345	282	7	28	28	0
31	3	1	345	282	7	28	28	0
31	3	1	345	282	7	28	28	0
31	3	1	345	282	7	28	28	0
31	3	1	345	282	7	28	28	0
31	3	1	345	282	7	28	28	0
31	3	1	345	282	7	28	28	0
31	4	1	313	257	6	24	26	0
31	4	1	313	257	6	24	26	0
31	4	1	313	257	6	24	26	0
31	4	1	313	257	6	24	26	0
31	4	1	313	257	6	24	26	0
31	4	1	313	257	6	24	26	0
31	4	1	313	257	6	24	26	0
31	4	1	313	257	6	24	26	0
31	5	1	295	239	6	24	26	0
31	5	1	295	239	6	24	26	0
31	5	1	295	239	6	24	26	0
31	5	1	295	239	6	24	26	0
31	5	1	295	239	6	24	26	0
31	5	1	295	239	6	24	26	0
31	5	1	295	239	6	24	26	0
31	6	1	280	228	6	24	22	0
31	6	1	280	228	6	24	22	0
31	6	1	280	228	6	24	22	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	6	1	280	228	6	24	22	0
31	6	1	280	228	6	24	22	0
31	6	1	280	228	6	24	22	0
31	7	1	265	211	6	24	24	0
31	7	1	265	211	6	24	24	0
31	7	1	265	211	6	24	24	0
31	7	1	265	211	6	24	24	0
31	7	1	265	211	6	24	24	0
31	7	1	265	211	6	24	24	0
31	8	1	307	249	6	24	28	0
31	8	1	307	249	6	24	28	0
31	8	1	307	249	6	24	28	0
31	8	1	307	249	6	24	28	0
31	8	1	307	249	6	24	28	0
31	8	1	307	249	6	24	28	0
31	8	1	307	249	6	24	28	0
31	9	1	408	340	7	28	33	0
31	9	1	408	340	7	28	33	0
31	9	1	408	340	7	28	33	0
31	9	1	408	340	7	28	33	0
31	9	1	408	340	7	28	33	0
31	9	1	408	340	7	28	33	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	9	1	Total 408	C 340	Mg 7	N 28	O 33	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	10	1	Total 442	C 354	Mg 9	N 36	O 43	0
31	11	1	Total 351	C 287	Mg 7	N 28	O 29	0
31	11	1	Total 351	C 287	Mg 7	N 28	O 29	0
31	11	1	Total 351	C 287	Mg 7	N 28	O 29	0
31	11	1	Total 351	C 287	Mg 7	N 28	O 29	0
31	11	1	Total 351	C 287	Mg 7	N 28	O 29	0
31	11	1	Total 351	C 287	Mg 7	N 28	O 29	0
31	11	1	Total 351	C 287	Mg 7	N 28	O 29	0
31	11	1	Total 351	C 287	Mg 7	N 28	O 29	0
31	12	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	12	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	12	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	12	1	Total 330	C 266	Mg 7	N 28	O 29	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	12	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	12	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	12	1	Total 330	C 266	Mg 7	N 28	O 29	0
31	13	1	Total 345	C 282	Mg 7	N 28	O 28	0
31	13	1	Total 345	C 282	Mg 7	N 28	O 28	0
31	13	1	Total 345	C 282	Mg 7	N 28	O 28	0
31	13	1	Total 345	C 282	Mg 7	N 28	O 28	0
31	13	1	Total 345	C 282	Mg 7	N 28	O 28	0
31	13	1	Total 345	C 282	Mg 7	N 28	O 28	0
31	13	1	Total 345	C 282	Mg 7	N 28	O 28	0
31	14	1	Total 374	C 308	Mg 7	N 28	O 31	0
31	14	1	Total 374	C 308	Mg 7	N 28	O 31	0
31	14	1	Total 374	C 308	Mg 7	N 28	O 31	0
31	14	1	Total 374	C 308	Mg 7	N 28	O 31	0
31	14	1	Total 374	C 308	Mg 7	N 28	O 31	0
31	14	1	Total 374	C 308	Mg 7	N 28	O 31	0
31	14	1	Total 374	C 308	Mg 7	N 28	O 31	0
31	15	1	Total 295	C 239	Mg 6	N 24	O 26	0
31	15	1	Total 295	C 239	Mg 6	N 24	O 26	0
31	15	1	Total 295	C 239	Mg 6	N 24	O 26	0
31	15	1	Total 295	C 239	Mg 6	N 24	O 26	0

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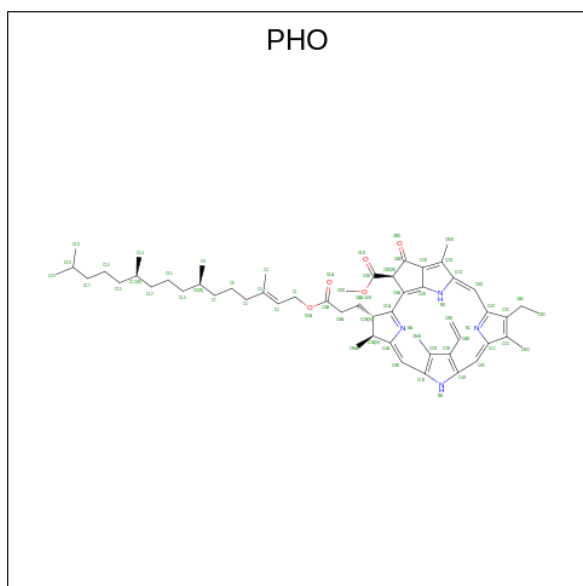
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
31	15	1	Total 295	C 239	Mg 6	N 24	O 26	0
31	15	1	Total 295	C 239	Mg 6	N 24	O 26	0
31	16	1	Total 280	C 228	Mg 6	N 24	O 22	0
31	16	1	Total 280	C 228	Mg 6	N 24	O 22	0
31	16	1	Total 280	C 228	Mg 6	N 24	O 22	0
31	16	1	Total 280	C 228	Mg 6	N 24	O 22	0
31	16	1	Total 280	C 228	Mg 6	N 24	O 22	0
31	16	1	Total 280	C 228	Mg 6	N 24	O 22	0
31	16	1	Total 280	C 228	Mg 6	N 24	O 22	0
31	17	1	Total 265	C 211	Mg 6	N 24	O 24	0
31	17	1	Total 265	C 211	Mg 6	N 24	O 24	0
31	17	1	Total 265	C 211	Mg 6	N 24	O 24	0
31	17	1	Total 265	C 211	Mg 6	N 24	O 24	0
31	17	1	Total 265	C 211	Mg 6	N 24	O 24	0
31	17	1	Total 265	C 211	Mg 6	N 24	O 24	0
31	17	1	Total 265	C 211	Mg 6	N 24	O 24	0
31	17	1	Total 265	C 211	Mg 6	N 24	O 24	0
31	18	1	Total 307	C 249	Mg 6	N 24	O 28	0
31	18	1	Total 307	C 249	Mg 6	N 24	O 28	0
31	18	1	Total 307	C 249	Mg 6	N 24	O 28	0
31	18	1	Total 307	C 249	Mg 6	N 24	O 28	0
31	18	1	Total 307	C 249	Mg 6	N 24	O 28	0
31	18	1	Total 307	C 249	Mg 6	N 24	O 28	0
31	18	1	Total 307	C 249	Mg 6	N 24	O 28	0
31	19	1	Total 408	C 340	Mg 7	N 28	O 33	0

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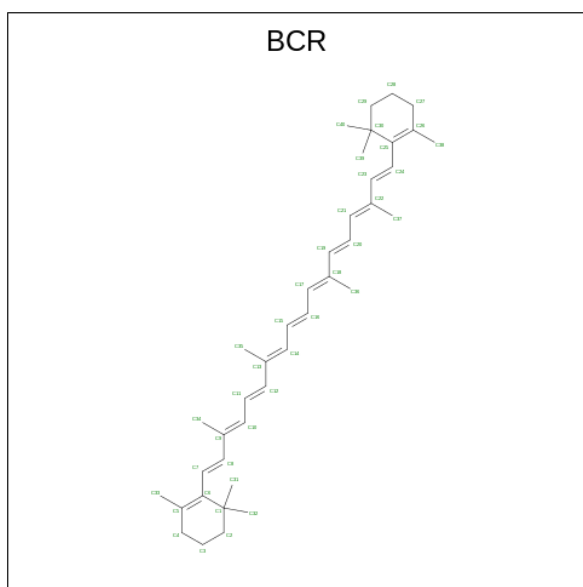
Mol	Chain	Residues	Atoms					AltConf
31	19	1	Total	C	Mg	N	O	0
			408	340	7	28	33	
31	19	1	Total	C	Mg	N	O	0
			408	340	7	28	33	
31	19	1	Total	C	Mg	N	O	0
			408	340	7	28	33	
31	19	1	Total	C	Mg	N	O	0
			408	340	7	28	33	
31	19	1	Total	C	Mg	N	O	0
			408	340	7	28	33	

- Molecule 32 is PHEOPHYTIN A (three-letter code: PHO) (formula: $C_{55}H_{74}N_4O_5$).



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

- Molecule 33 is BETA-CAROTENE (three-letter code: BCR) (formula: $C_{40}H_{56}$).



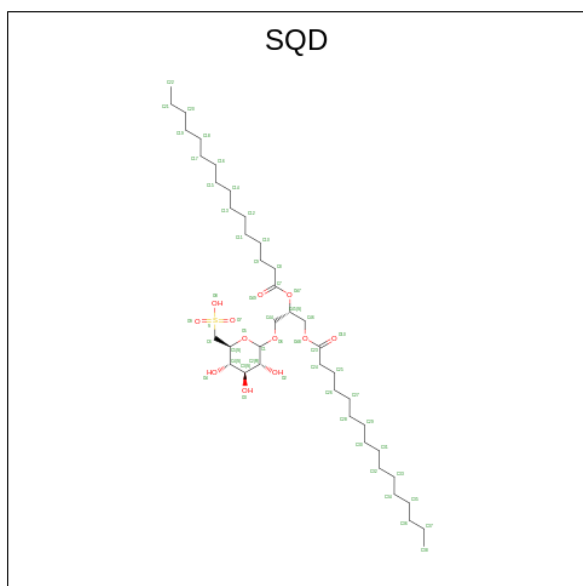
Mol	Chain	Residues	Atoms	AltConf
33	A	1	Total C 40 40	0
33	B	1	Total C 120 120	0
33	B	1	Total C 120 120	0
33	B	1	Total C 120 120	0
33	C	1	Total C 120 120	0
33	C	1	Total C 120 120	0
33	C	1	Total C 120 120	0
33	F	1	Total C 40 40	0
33	H	1	Total C 40 40	0
33	Y	1	Total C 40 40	0
33	a	1	Total C 40 40	0
33	b	1	Total C 120 120	0
33	b	1	Total C 120 120	0
33	b	1	Total C 120 120	0

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Mol	Chain	Residues	Atoms		AltConf
33	c	1	Total	C	0
			120	120	
33	c	1	Total	C	0
			120	120	
33	c	1	Total	C	0
			120	120	
33	f	1	Total	C	0
			40	40	
33	h	1	Total	C	0
			40	40	
33	y	1	Total	C	0
			40	40	

- Molecule 34 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: $C_{41}H_{78}O_{12}S$).



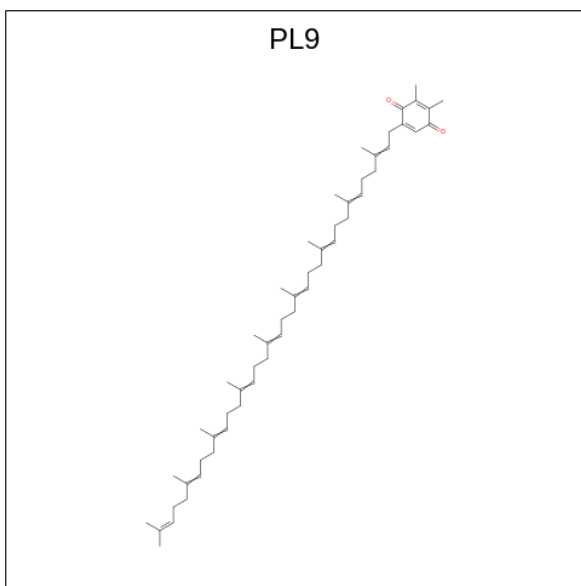
Mol	Chain	Residues	Atoms				AltConf
34	A	1	Total	C	O	S	0
			94	68	24	2	
34	A	1	Total	C	O	S	0
			94	68	24	2	
34	B	1	Total	C	O	S	0
			54	41	12	1	
34	L	1	Total	C	O	S	0
			54	41	12	1	
34	a	1	Total	C	O	S	0
			54	41	12	1	

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	S	
34	b	1	Total 54	C 41	O 12	S 1	0
34	i	1	Total 40	C 27	O 12	S 1	0
34	l	1	Total 54	C 41	O 12	S 1	0
34	o	1	Total 41	C 28	O 12	S 1	0
34	10	1	Total 41	C 28	O 12	S 1	0

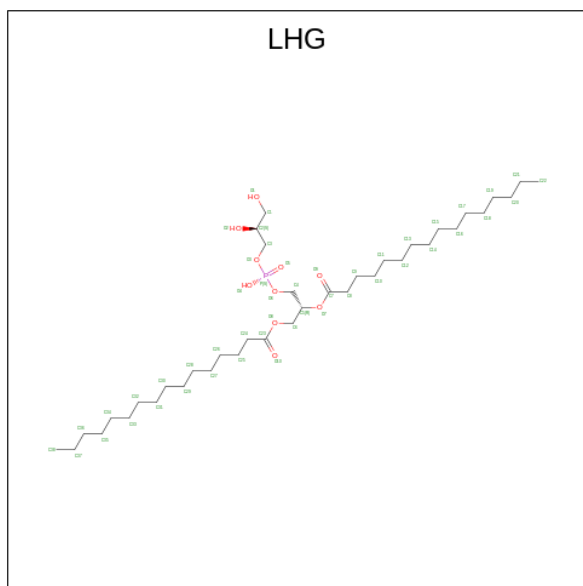
- Molecule 35 is 2,3-DIMETHYL-5-(3,7,11,15,19,23,27,31,35-NONAMETHYL-2,6,10,14,18,22,26,30,34-HEXATRIACONTANONAENYL-2,5-CYCLOHEXADIENE-1,4-DIONE-2,3-DIMETHYL-5-SOLANESYL-1,4-BENZOQUINONE (three-letter code: PL9) (formula: $C_{53}H_{80}O_2$).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
35	A	1	Total 33	C 31	O 2	0
35	D	1	Total 55	C 53	O 2	0
35	a	1	Total 33	C 31	O 2	0
35	d	1	Total 55	C 53	O 2	0

- Molecule 36 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code:

LHG) (formula: C₃₈H₇₅O₁₀P).



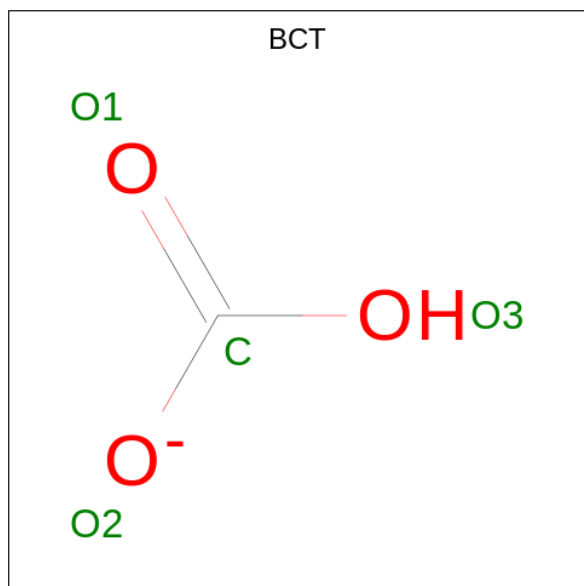
Mol	Chain	Residues	Atoms			AltConf	
			Total	C	O		P
36	A	1	37	26	10	1	0
36	B	1	43	32	10	1	0
36	C	1	40	29	10	1	0
36	D	1	49	38	10	1	0
36	L	1	49	38	10	1	0
36	P	1	27	16	10	1	0
36	Z	1	25	14	10	1	0
36	a	1	37	26	10	1	0
36	b	1	43	32	10	1	0
36	d	1	49	38	10	1	0
36	l	1	49	38	10	1	0
36	p	1	27	16	10	1	0
36	w	1	40	29	10	1	0

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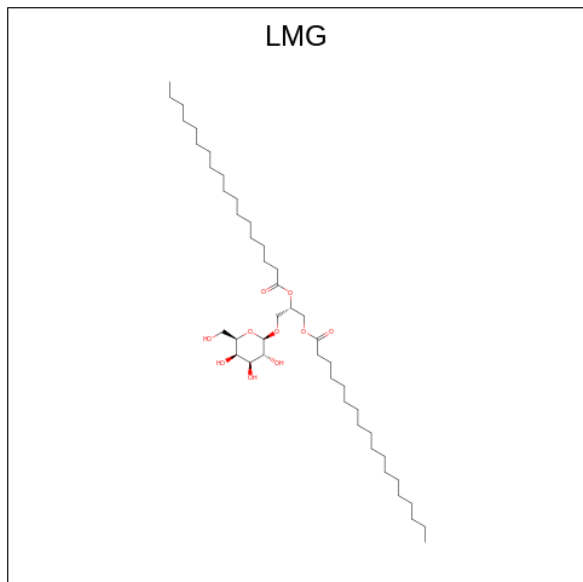
Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
36	z	1	Total 25	C 14	O 10	P 1	0
36	4	1	Total 35	C 24	O 10	P 1	0
36	5	1	Total 25	C 14	O 10	P 1	0
36	8	1	Total 70	C 48	O 20	P 2	0
36	8	1	Total 70	C 48	O 20	P 2	0
36	14	1	Total 35	C 24	O 10	P 1	0
36	15	1	Total 25	C 14	O 10	P 1	0
36	18	1	Total 70	C 48	O 20	P 2	0
36	18	1	Total 70	C 48	O 20	P 2	0

- Molecule 37 is BICARBONATE ION (three-letter code: BCT) (formula: CHO_3).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
37	A	1	Total 4	C 1	O 3	0
37	a	1	Total 4	C 1	O 3	0

- Molecule 38 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C₄₅H₈₆O₁₀).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
38	B	1	51	41	10	0
38	C	1	51	41	10	0
38	D	1	77	57	20	0
38	D	1	77	57	20	0
38	F	1	46	36	10	0
38	J	1	50	40	10	0
38	K	1	46	36	10	0
38	M	1	40	30	10	0
38	N	1	28	18	10	0
38	P	1	31	21	10	0
38	W	1	48	38	10	0
38	Z	1	31	21	10	0

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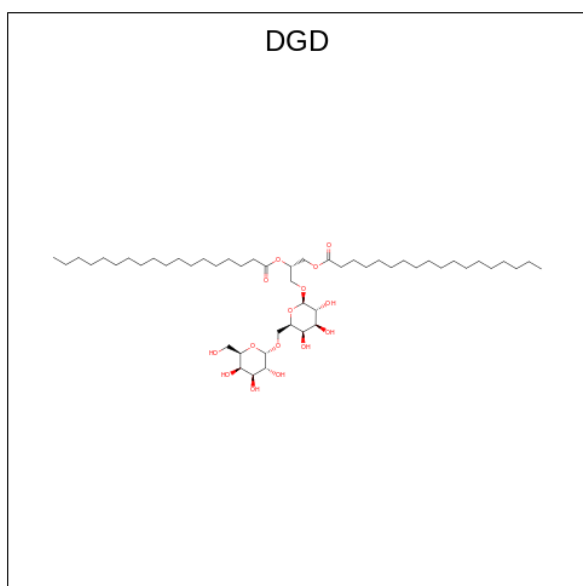
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
38	b	1	51	41	10	0
38	c	1	82	62	20	0
38	c	1	82	62	20	0
38	d	1	77	57	20	0
38	d	1	77	57	20	0
38	f	1	46	36	10	0
38	j	1	50	40	10	0
38	k	1	46	36	10	0
38	m	1	40	30	10	0
38	n	1	28	18	10	0
38	p	1	31	21	10	0
38	w	1	48	38	10	0
38	0	1	31	21	10	0
38	1	1	81	61	20	0
38	1	1	81	61	20	0
38	4	1	49	39	10	0
38	5	1	73	53	20	0
38	5	1	73	53	20	0
38	10	1	31	21	10	0
38	11	1	81	61	20	0
38	11	1	81	61	20	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
38	14	1	49	39	10	0
38	15	1	73	53	20	0
38	15	1	73	53	20	0

- Molecule 39 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
39	B	1	54	39	15	0
39	C	1	179	134	45	0
39	C	1	179	134	45	0
39	C	1	179	134	45	0
39	H	1	62	47	15	0
39	W	1	56	41	15	0
39	b	1	55	40	15	0
39	c	1	179	134	45	0

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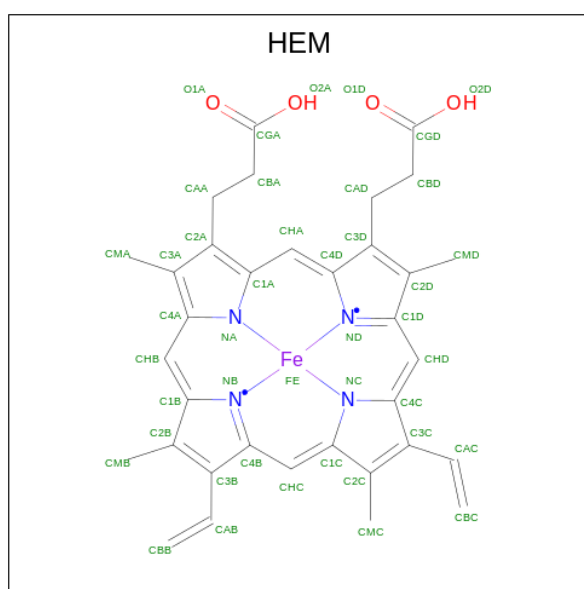
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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
39	c	1	179	134	45	0
39	c	1	179	134	45	0
39	h	1	62	47	15	0
39	w	1	56	41	15	0
39	1	1	54	39	15	0
39	11	1	60	45	15	0

- Molecule 40 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

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

- Molecule 41 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: C₃₄H₃₂FeN₄O₄).



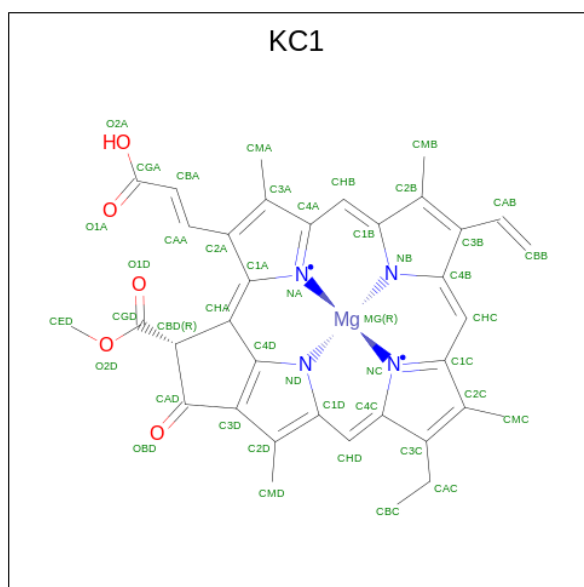
Mol	Chain	Residues	Atoms				AltConf	
			Total	C	Fe	N		O
41	E	1	43	34	1	4	4	0

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

- Molecule 42 is Chlorophyll c1 (three-letter code: KC1) (formula: $C_{35}H_{30}MgN_4O_5$).



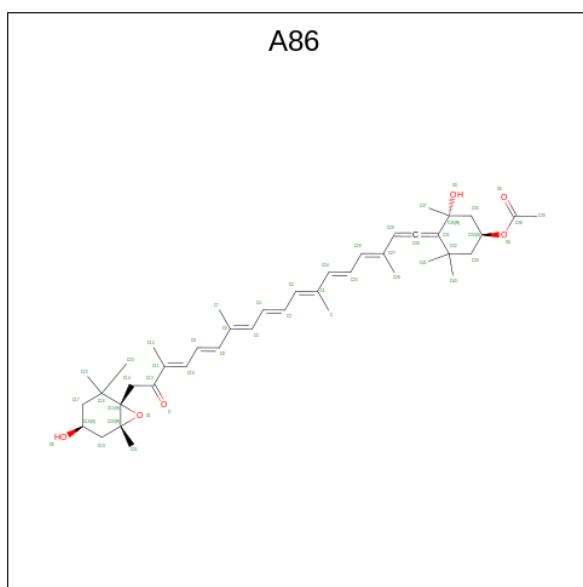
Mol	Chain	Residues	Atoms				AltConf	
42	P	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
42	p	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
42	0	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
42	1	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
42	2	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
42	3	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
42	4	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
42	5	1	Total	C	Mg	N	O	0
			45	35	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
42	6	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	7	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	8	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	9	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	10	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	11	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	12	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	13	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	14	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	16	1	Total 90	C 70	Mg 2	N 8	O 10	0
42	16	1	Total 90	C 70	Mg 2	N 8	O 10	0
42	17	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	18	1	Total 45	C 35	Mg 1	N 4	O 5	0
42	19	1	Total 45	C 35	Mg 1	N 4	O 5	0

- Molecule 43 is (3S,3'S,5R,5'R,6S,6'R,8'R)-3,5'-dihydroxy-8-oxo-6',7'-didehydro-5,5',6,6',7,8-hexahydro-5,6-epoxy-beta,beta-caroten-3'-yl acetate (three-letter code: A86) (formula: C₄₂H₅₈O₆).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
43	P	1	96	84	12	0
43	P	1	96	84	12	0
43	p	1	96	84	12	0
43	p	1	96	84	12	0
43	0	1	288	252	36	0
43	0	1	288	252	36	0
43	0	1	288	252	36	0
43	0	1	288	252	36	0
43	0	1	288	252	36	0
43	0	1	288	252	36	0
43	0	1	288	252	36	0
43	1	1	336	294	42	0
43	1	1	336	294	42	0
43	1	1	336	294	42	0
43	1	1	336	294	42	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
43	1	1	336	294	42	0
43	1	1	336	294	42	0
43	1	1	336	294	42	0
43	2	1	240	210	30	0
43	2	1	240	210	30	0
43	2	1	240	210	30	0
43	2	1	240	210	30	0
43	2	1	240	210	30	0
43	3	1	288	252	36	0
43	3	1	288	252	36	0
43	3	1	288	252	36	0
43	3	1	288	252	36	0
43	3	1	288	252	36	0
43	3	1	288	252	36	0
43	3	1	288	252	36	0
43	4	1	288	252	36	0
43	4	1	288	252	36	0
43	4	1	288	252	36	0
43	4	1	288	252	36	0
43	4	1	288	252	36	0
43	4	1	288	252	36	0
43	4	1	288	252	36	0
43	5	1	288	252	36	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
43	5	1	288	252	36	0
43	5	1	288	252	36	0
43	5	1	288	252	36	0
43	5	1	288	252	36	0
43	5	1	288	252	36	0
43	6	1	336	294	42	0
43	6	1	336	294	42	0
43	6	1	336	294	42	0
43	6	1	336	294	42	0
43	6	1	336	294	42	0
43	6	1	336	294	42	0
43	6	1	336	294	42	0
43	6	1	336	294	42	0
43	6	1	336	294	42	0
43	7	1	288	252	36	0
43	7	1	288	252	36	0
43	7	1	288	252	36	0
43	7	1	288	252	36	0
43	7	1	288	252	36	0
43	7	1	288	252	36	0
43	7	1	288	252	36	0
43	8	1	240	210	30	0
43	8	1	240	210	30	0
43	8	1	240	210	30	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
43	8	1	240	210	30	0
43	8	1	240	210	30	0
43	9	1	288	252	36	0
43	9	1	288	252	36	0
43	9	1	288	252	36	0
43	9	1	288	252	36	0
43	9	1	288	252	36	0
43	9	1	288	252	36	0
43	10	1	336	294	42	0
43	10	1	336	294	42	0
43	10	1	336	294	42	0
43	10	1	336	294	42	0
43	10	1	336	294	42	0
43	10	1	336	294	42	0
43	10	1	336	294	42	0
43	10	1	336	294	42	0
43	10	1	336	294	42	0
43	11	1	336	294	42	0
43	11	1	336	294	42	0
43	11	1	336	294	42	0
43	11	1	336	294	42	0
43	11	1	336	294	42	0
43	11	1	336	294	42	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
43	11	1	336	294	42	0
43	12	1	288	252	36	0
43	12	1	288	252	36	0
43	12	1	288	252	36	0
43	12	1	288	252	36	0
43	12	1	288	252	36	0
43	12	1	288	252	36	0
43	12	1	288	252	36	0
43	13	1	288	252	36	0
43	13	1	288	252	36	0
43	13	1	288	252	36	0
43	13	1	288	252	36	0
43	13	1	288	252	36	0
43	13	1	288	252	36	0
43	13	1	288	252	36	0
43	14	1	240	210	30	0
43	14	1	240	210	30	0
43	14	1	240	210	30	0
43	14	1	240	210	30	0
43	14	1	240	210	30	0
43	14	1	240	210	30	0
43	15	1	240	210	30	0
43	15	1	240	210	30	0
43	15	1	240	210	30	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
43	15	1	240	210	30	0
43	15	1	240	210	30	0
43	16	1	288	252	36	0
43	16	1	288	252	36	0
43	16	1	288	252	36	0
43	16	1	288	252	36	0
43	16	1	288	252	36	0
43	16	1	288	252	36	0
43	16	1	288	252	36	0
43	17	1	336	294	42	0
43	17	1	336	294	42	0
43	17	1	336	294	42	0
43	17	1	336	294	42	0
43	17	1	336	294	42	0
43	17	1	336	294	42	0
43	17	1	336	294	42	0
43	17	1	336	294	42	0
43	17	1	336	294	42	0
43	18	1	240	210	30	0
43	18	1	240	210	30	0
43	18	1	240	210	30	0
43	18	1	240	210	30	0
43	18	1	240	210	30	0
43	19	1	288	252	36	0

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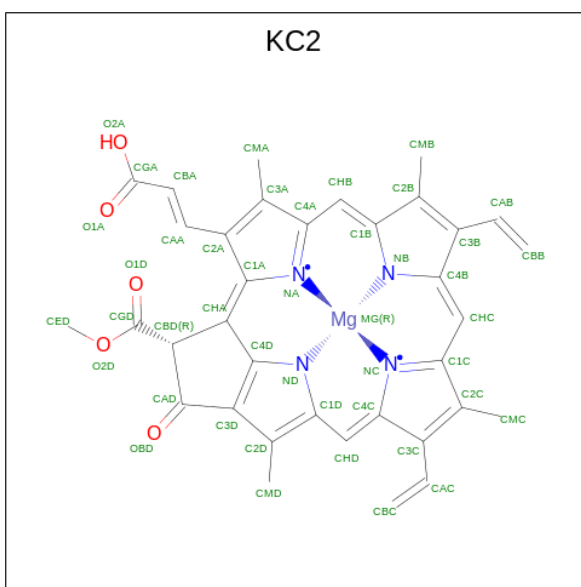
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
43	19	1	288	252	36	0
43	19	1	288	252	36	0
43	19	1	288	252	36	0
43	19	1	288	252	36	0
43	19	1	288	252	36	0

- Molecule 44 is (3S,3'R,5R,6S,7cis)-7',8'-didehydro-5,6-dihydro-5,6-epoxy-beta,beta-carotene-3,3'-diol (three-letter code: DD6) (formula: C₄₀H₅₄O₃).



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

- Molecule 45 is Chlorophyll c2 (three-letter code: KC2) (formula: C₃₅H₂₈MgN₄O₅).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
45	0	1	Total	C	Mg	N	O	0
			45	35	1	4	5	
45	1	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	1	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	2	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	2	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	3	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	3	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	4	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	4	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	5	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	5	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	6	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	6	1	Total	C	Mg	N	O	0
			90	70	2	8	10	
45	7	1	Total	C	Mg	N	O	0
			90	70	2	8	10	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
45	7	1	90	70	2	8	10	0
45	8	1	90	70	2	8	10	0
45	8	1	90	70	2	8	10	0
45	9	1	45	35	1	4	5	0
45	10	1	45	35	1	4	5	0
45	11	1	90	70	2	8	10	0
45	11	1	90	70	2	8	10	0
45	12	1	90	70	2	8	10	0
45	12	1	90	70	2	8	10	0
45	13	1	90	70	2	8	10	0
45	13	1	90	70	2	8	10	0
45	14	1	90	70	2	8	10	0
45	14	1	90	70	2	8	10	0
45	15	1	90	70	2	8	10	0
45	15	1	90	70	2	8	10	0
45	16	1	90	70	2	8	10	0
45	16	1	90	70	2	8	10	0
45	17	1	90	70	2	8	10	0
45	17	1	90	70	2	8	10	0
45	18	1	90	70	2	8	10	0
45	18	1	90	70	2	8	10	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
45	19	1	45	35	1	4	5	0

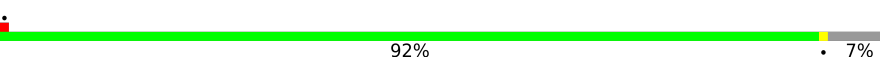
- Molecule 46 is water.

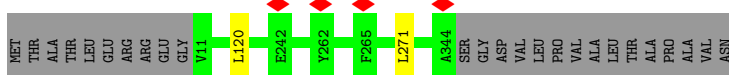
Mol	Chain	Residues	Atoms		AltConf
46	Z	1	Total	O	0
			1	1	

3 Residue-property plots

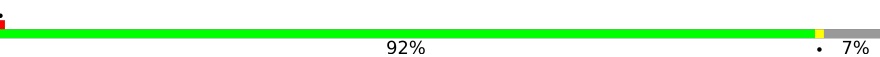
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

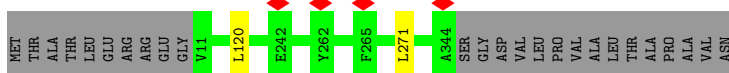
- Molecule 1: PsbA

Chain A: 



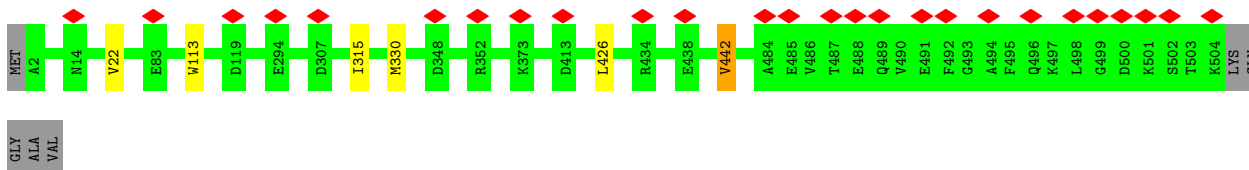
- Molecule 1: PsbA

Chain a: 



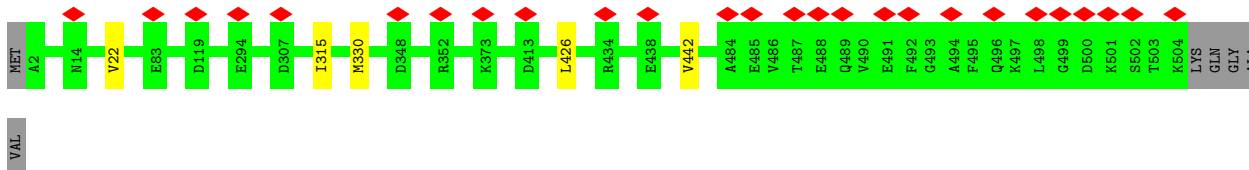
- Molecule 2: PsbB

Chain B: 



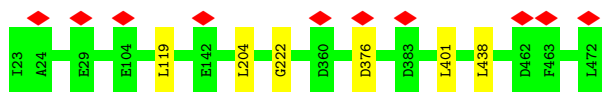
- Molecule 2: PsbB

Chain b: 

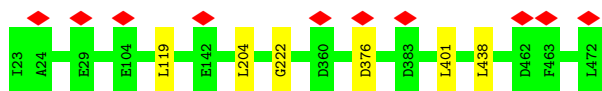


- Molecule 3: PsbC

Chain C: 



• Molecule 3: PsbC



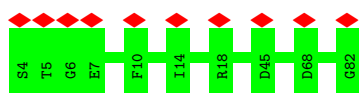
• Molecule 4: PsbD



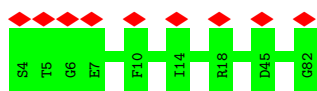
• Molecule 4: PsbD



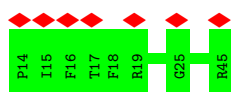
• Molecule 5: PsbE



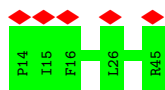
• Molecule 5: PsbE



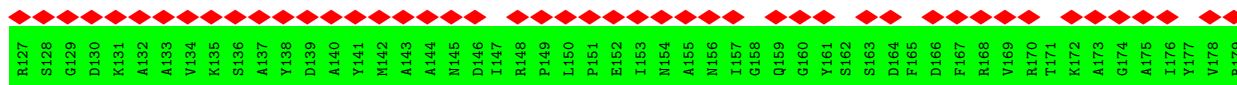
• Molecule 6: PsbF



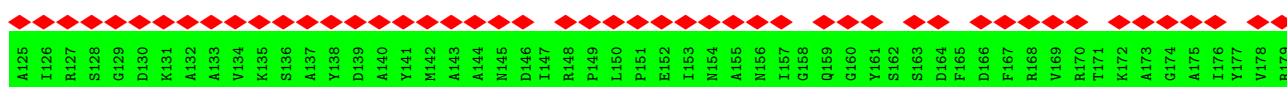
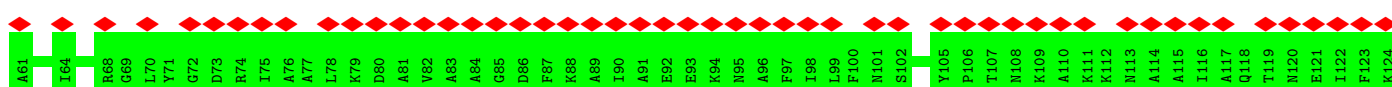
• Molecule 6: PsbF



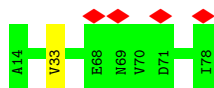
• Molecule 7: Psb31



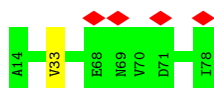
• Molecule 7: Psb31



• Molecule 8: Photosystem II reaction center protein H



• Molecule 8: Photosystem II reaction center protein H



- Molecule 9: PsaI

Chain I:  100%

There are no outlier residues recorded for this chain.

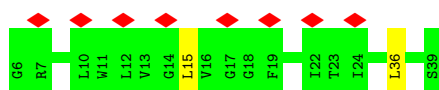
- Molecule 9: PsaI

Chain i:  100%


There are no outlier residues recorded for this chain.

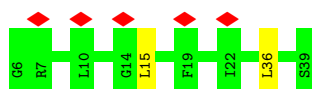
- Molecule 10: PsaJ

Chain J:  24% 94% 6%



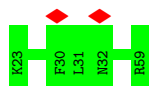
- Molecule 10: PsaJ

Chain j:  15% 94% 6%



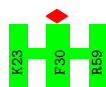
- Molecule 11: PsaK

Chain K:  5% 100%



- Molecule 11: PsaK

Chain k:  1% 100%



- Molecule 12: PsaL

Chain L:  97% .

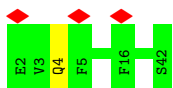


- Molecule 12: PsaL

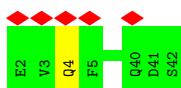
Chain l:  97% .



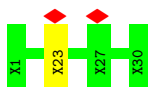
- Molecule 13: PsmM



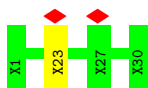
- Molecule 13: PsmM



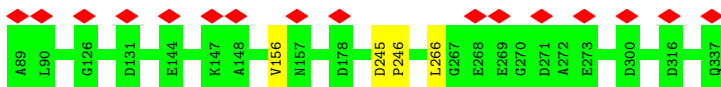
- Molecule 14: Psb34



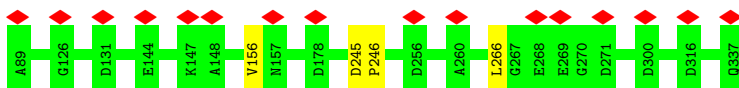
- Molecule 14: Psb34



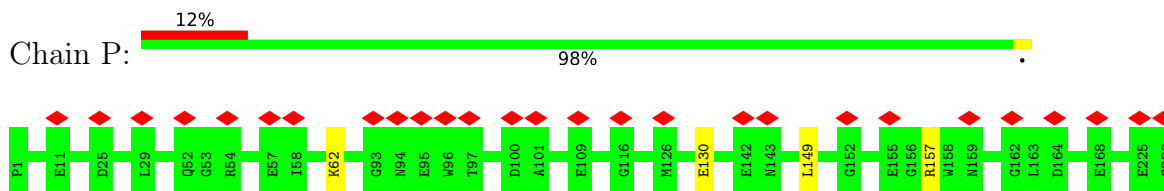
- Molecule 15: Extrinsic protein in photosystem II



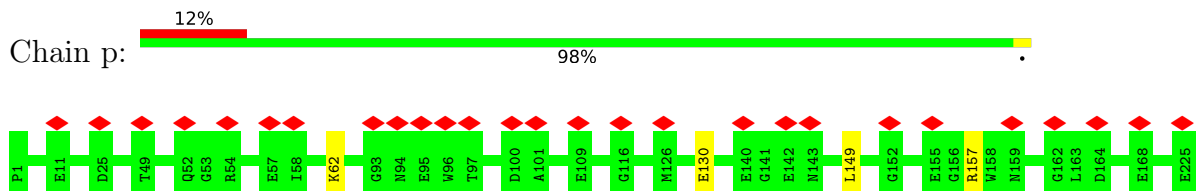
- Molecule 15: Extrinsic protein in photosystem II



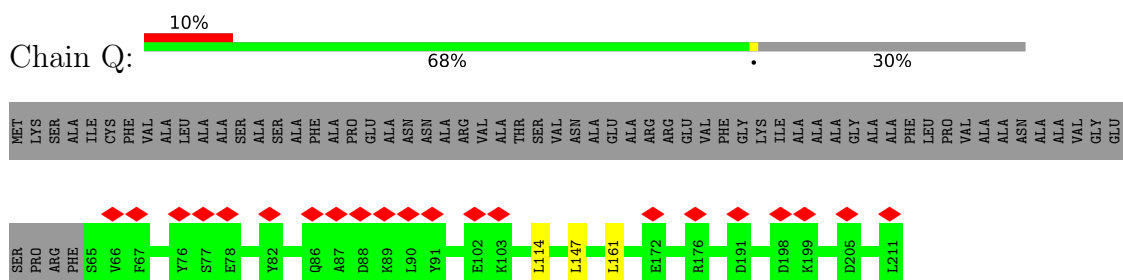
- Molecule 16: FCP-D



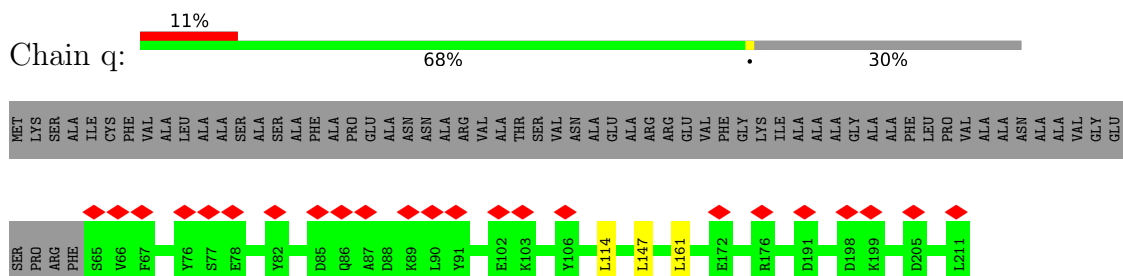
• Molecule 16: FCP-D



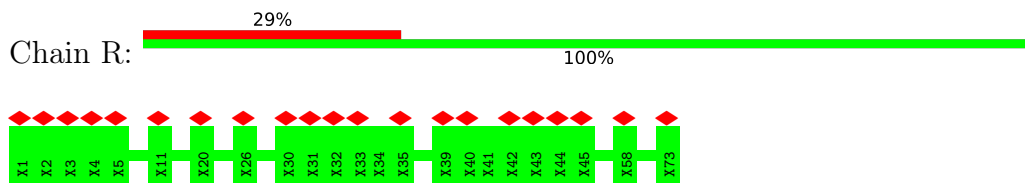
• Molecule 17: Extrinsic protein in photosystem II



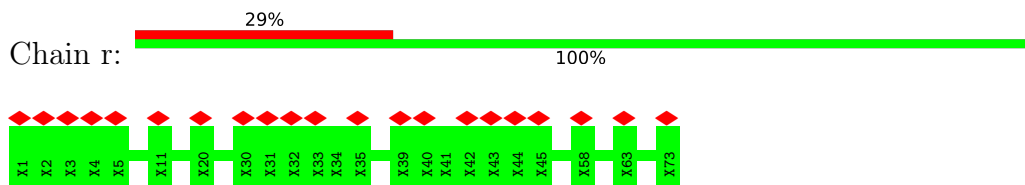
• Molecule 17: Extrinsic protein in photosystem II



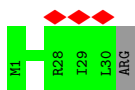
• Molecule 18: PsbG



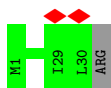
• Molecule 18: PsbG



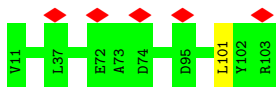
• Molecule 19: PsbT



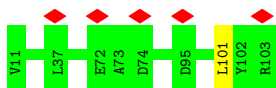
- Molecule 19: PsbT



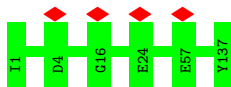
- Molecule 20: Extrinsic protein in photosystem II



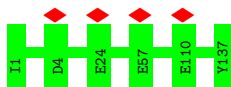
- Molecule 20: Extrinsic protein in photosystem II



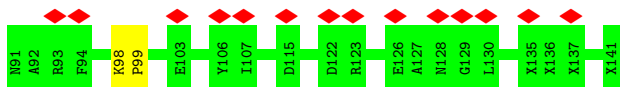
- Molecule 21: Cytochrome c-550



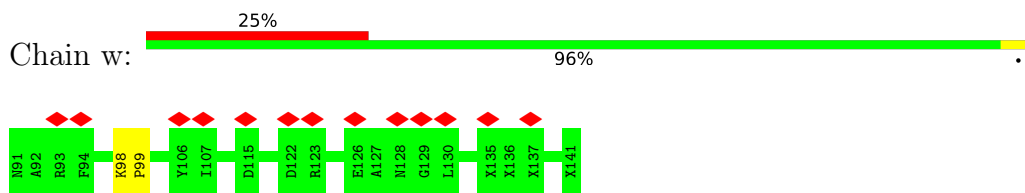
- Molecule 21: Cytochrome c-550



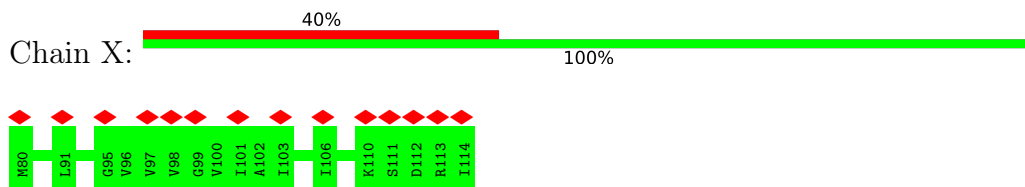
- Molecule 22: PsbW



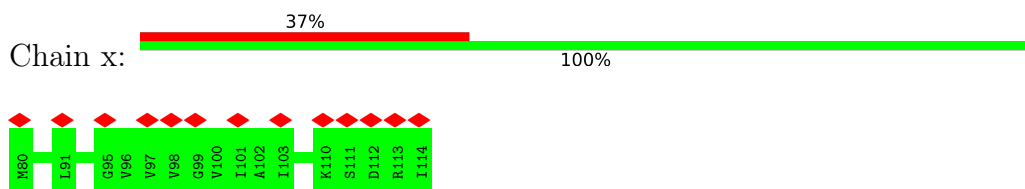
- Molecule 22: PsbW



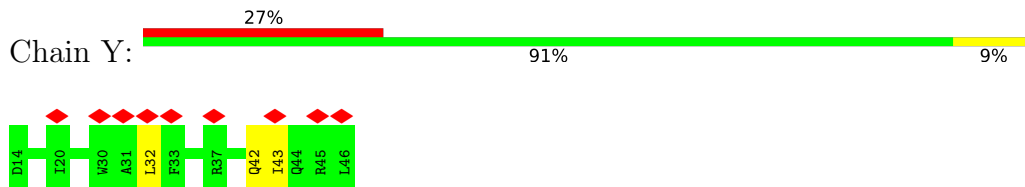
- Molecule 23: Photosystem II reaction center X protein



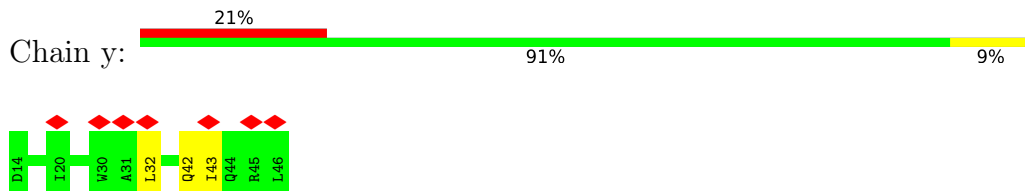
- Molecule 23: Photosystem II reaction center X protein



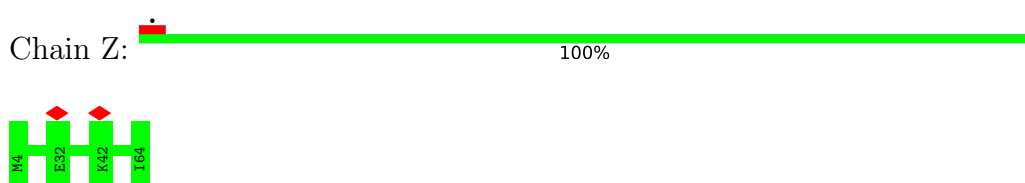
- Molecule 24: PsbY



- Molecule 24: PsbY

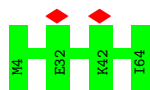


- Molecule 25: PsbZ

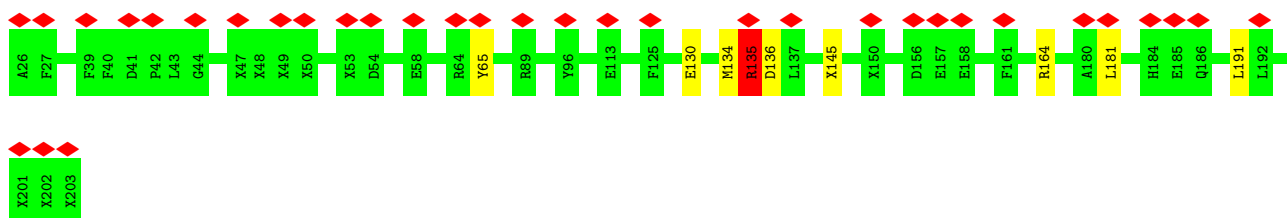
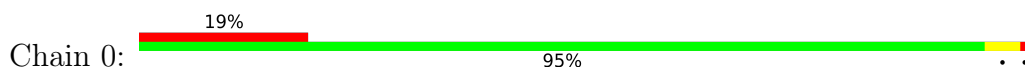


- Molecule 25: PsbZ

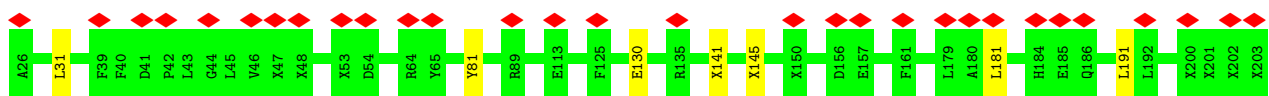




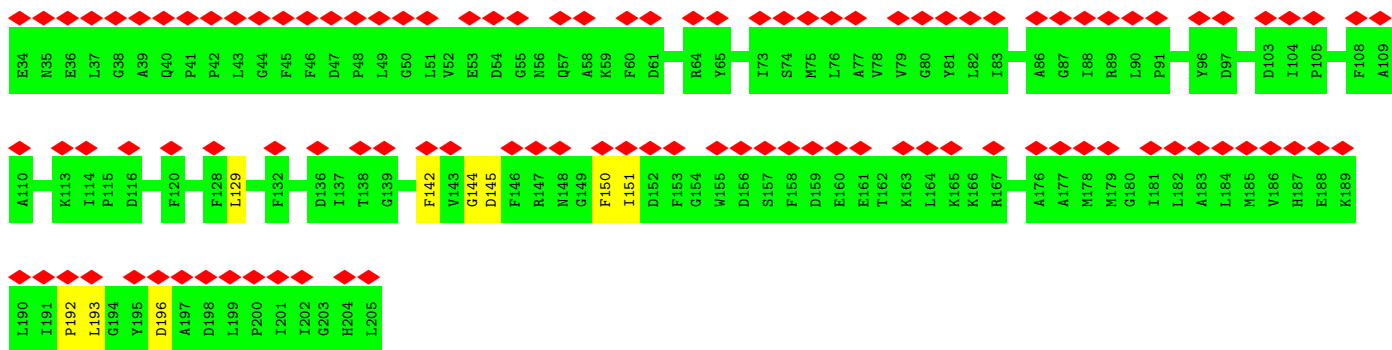
• Molecule 26: FCP-E



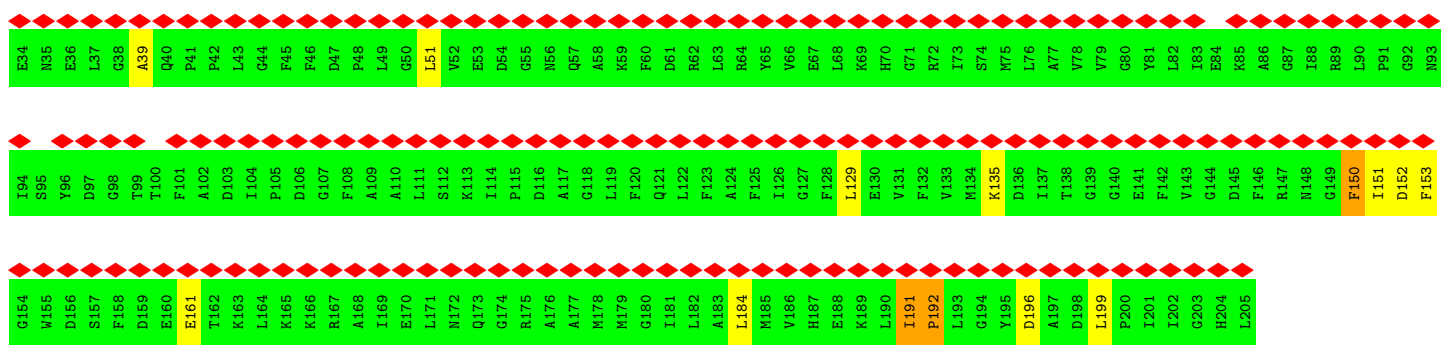
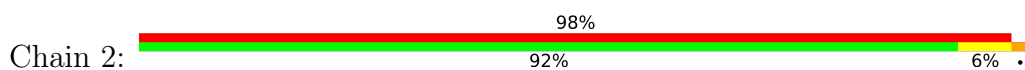
• Molecule 26: FCP-E



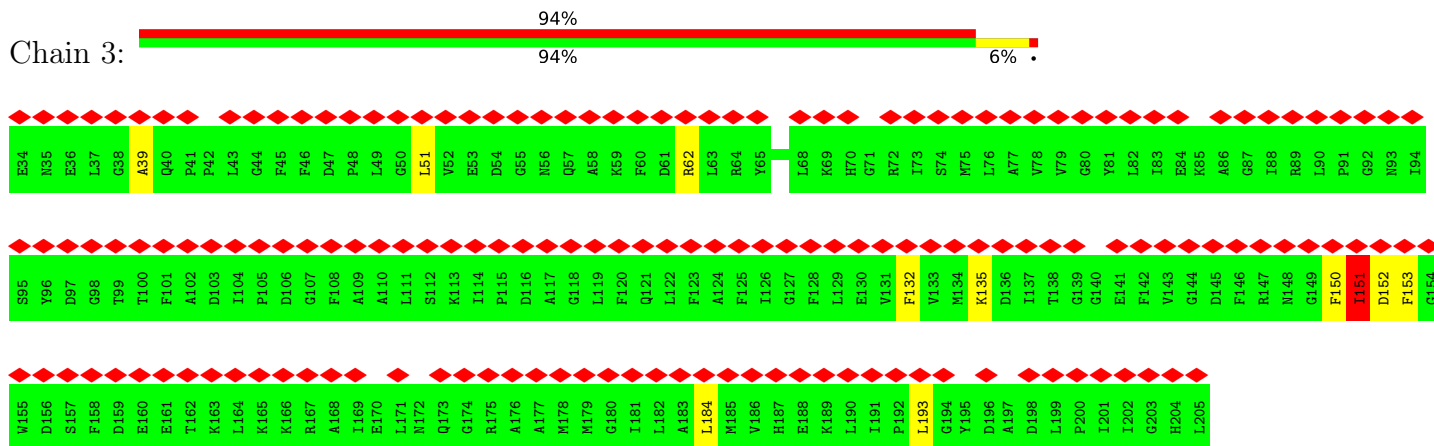
• Molecule 27: FCP-A



• Molecule 27: FCP-A



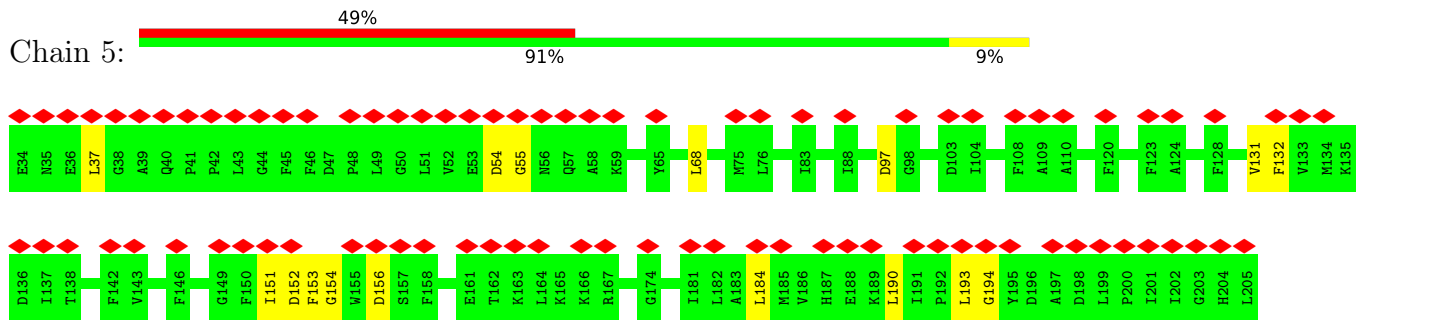
• Molecule 27: FCP-A



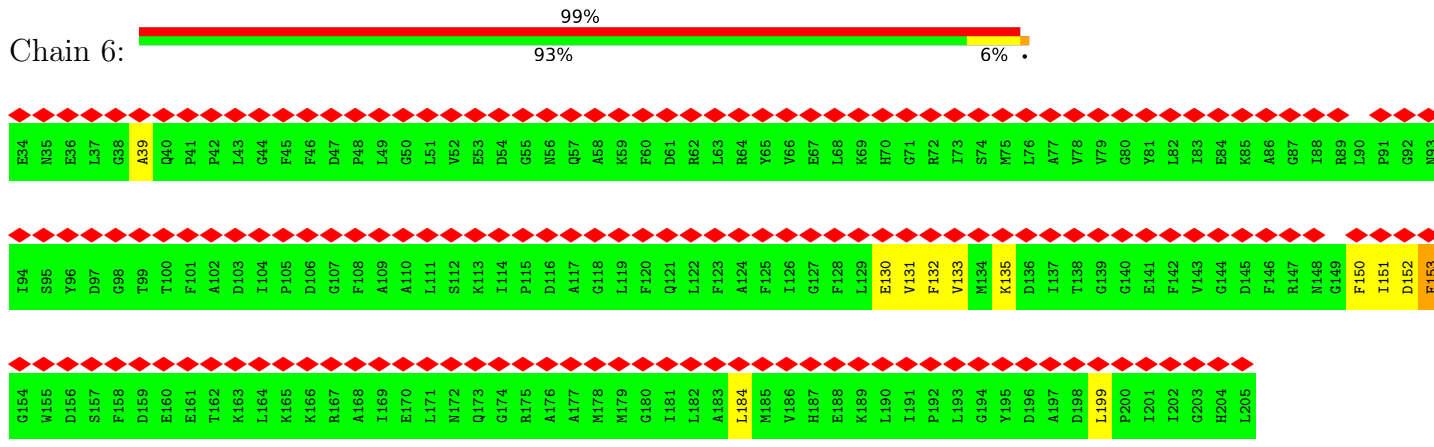
• Molecule 27: FCP-A



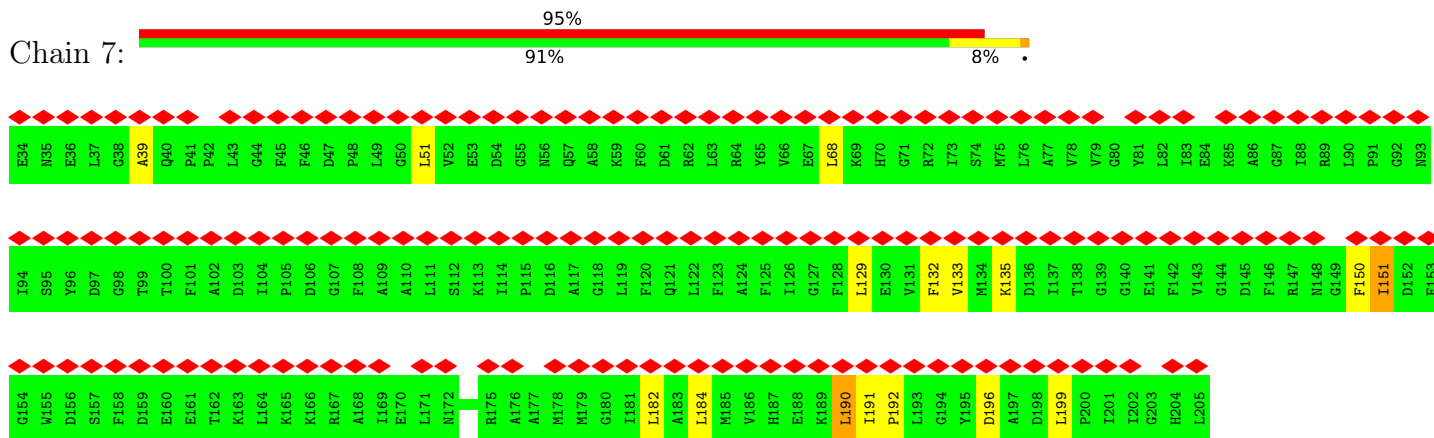
• Molecule 27: FCP-A



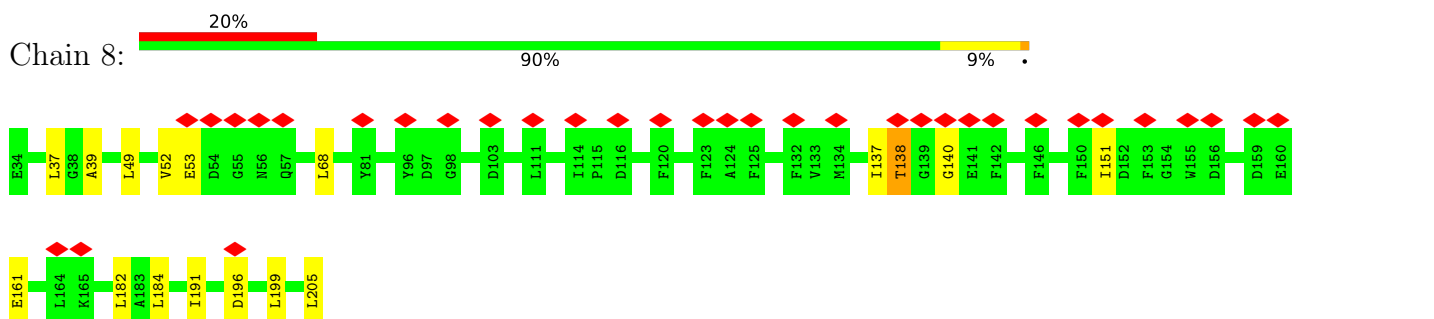
• Molecule 27: FCP-A



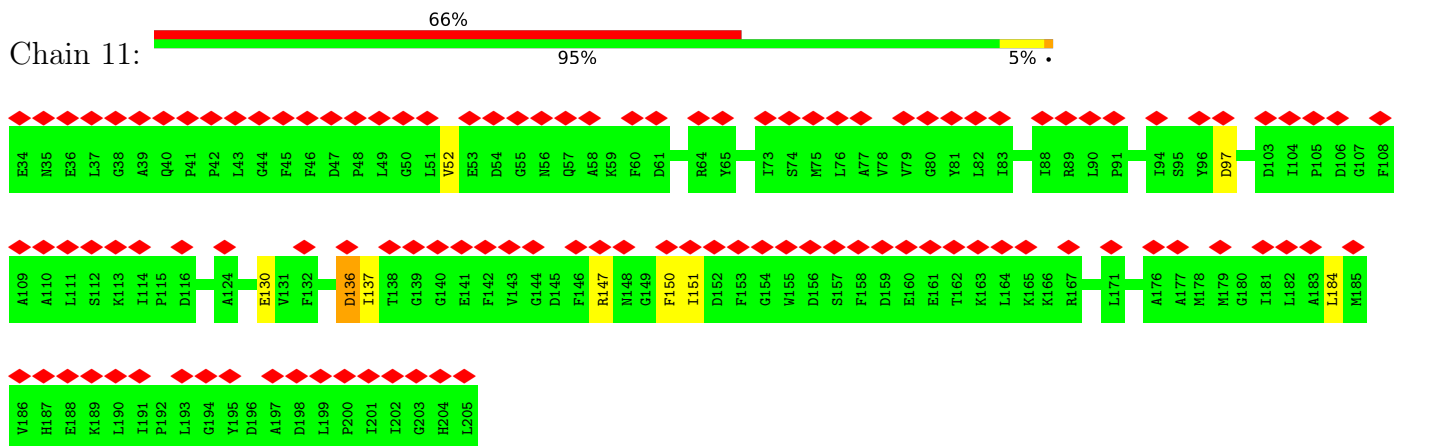
• Molecule 27: FCP-A



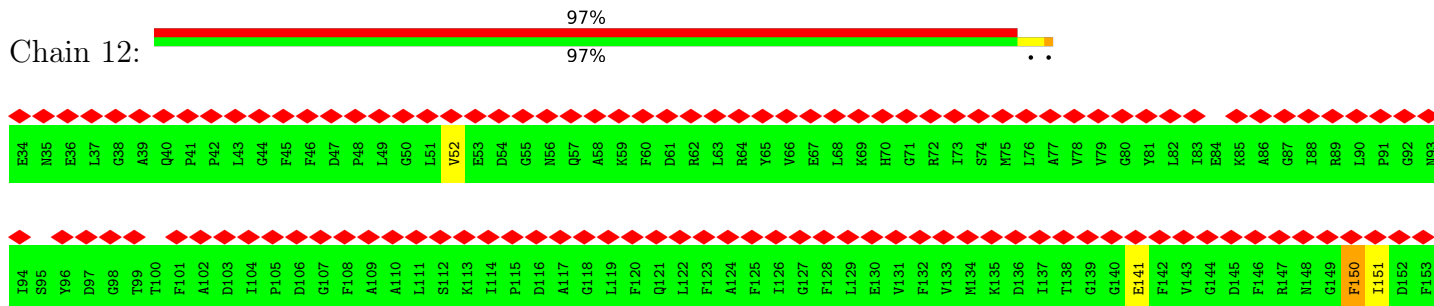
• Molecule 27: FCP-A

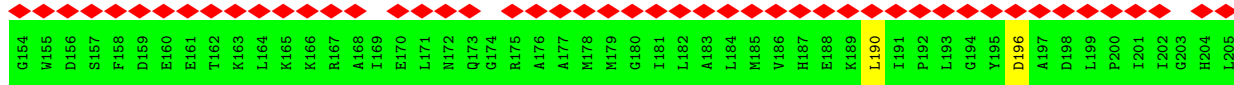


• Molecule 27: FCP-A

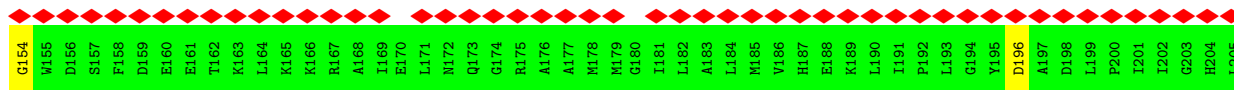
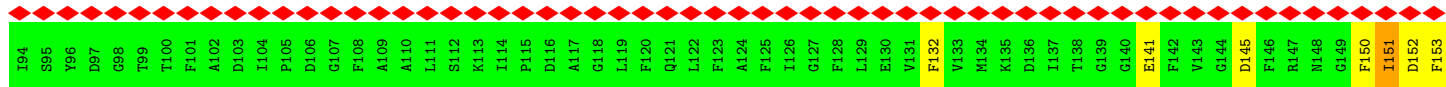
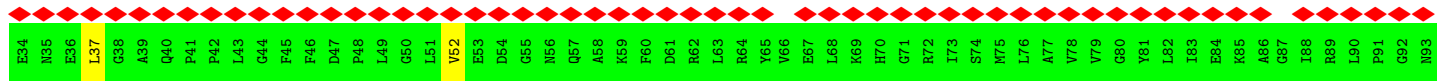
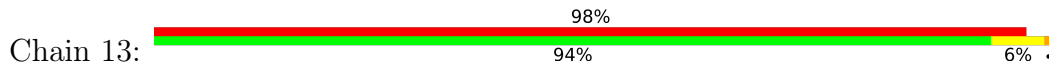


• Molecule 27: FCP-A

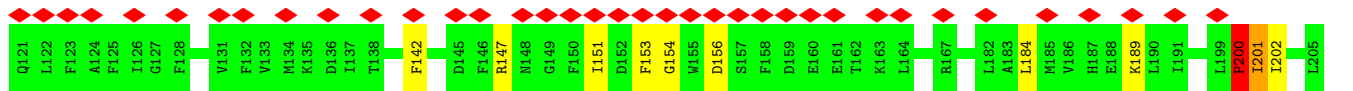
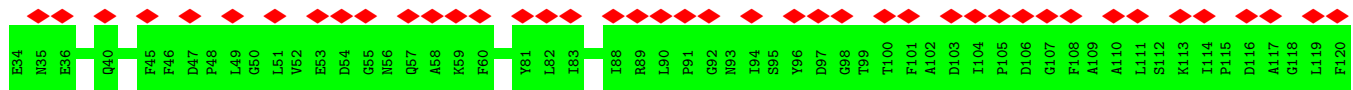
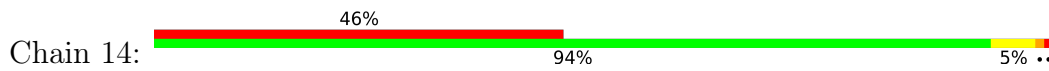




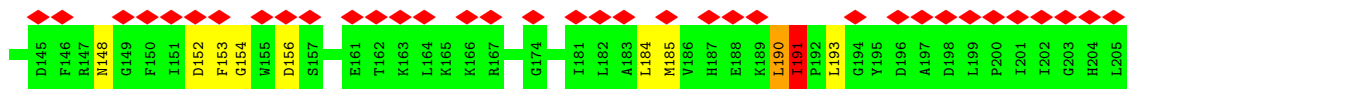
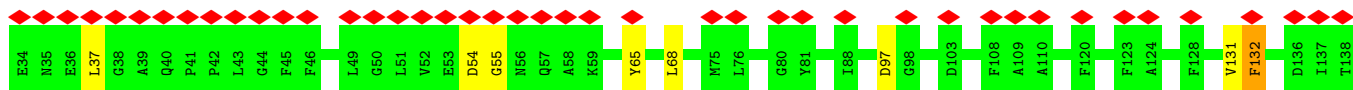
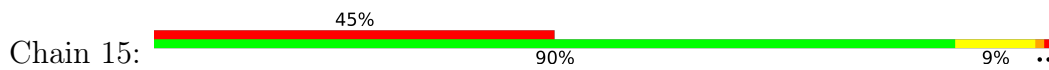
• Molecule 27: FCP-A



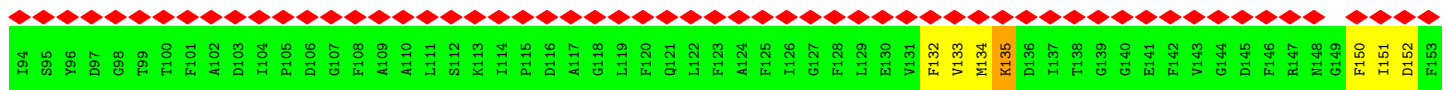
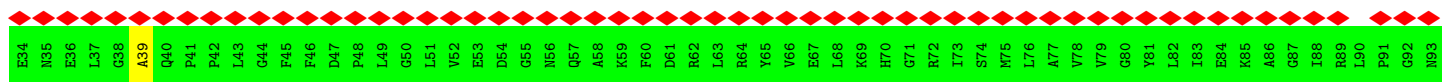
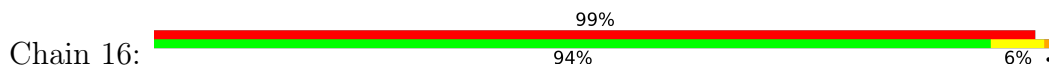
• Molecule 27: FCP-A

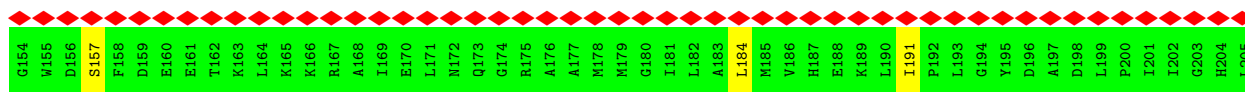


• Molecule 27: FCP-A

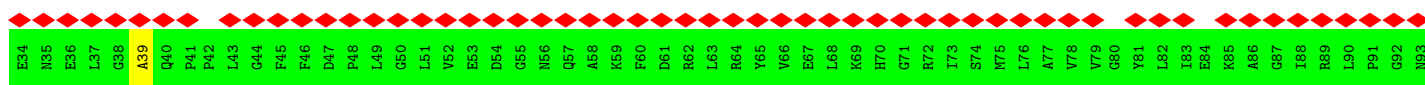
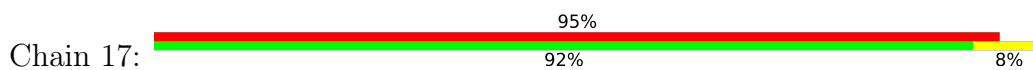


• Molecule 27: FCP-A

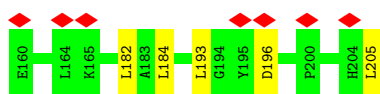
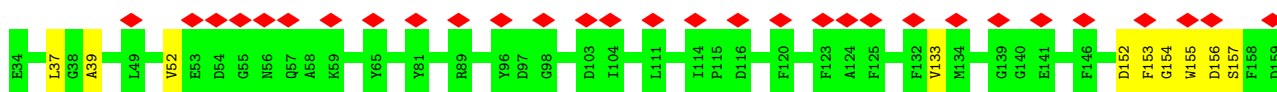




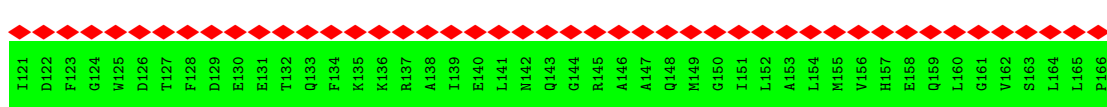
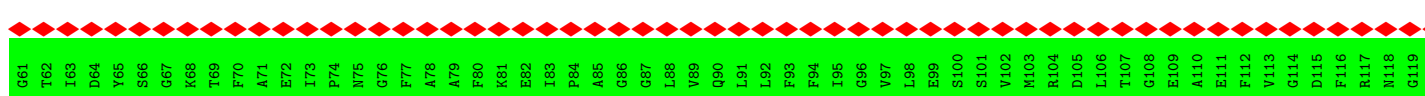
• Molecule 27: FCP-A



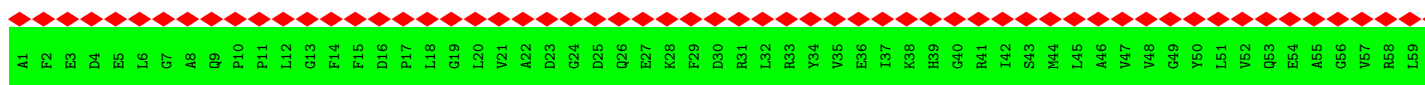
• Molecule 27: FCP-A



• Molecule 28: FCP-F



• Molecule 28: FCP-F



G61 T62 I63 D64 Y65 S66 G67 K68 T69 F70 A71 E72 I73 P74 N75 G76 F77 A78 A79 F80 K81 E82 I83 P84 A85 G86 G87 L88 V89 Q90 L91 L92 F93 F94 I95 G96 V97 L98 E99 S100 S101 V102 M103 R104 D105 L106 T107 G108 E109 A110 E111 F112 V113 G114 D115 F116 N117 G119 A120

I121 D122 F123 G124 W125 D126 T127 F128 D129 E130 E131 T132 Q133 F134 K135 K136 R137 A138 I139 E140 L141 N142 Q143 G144 R145 A146 A147 Q148 M149 G150 I151 L152 A153 L154 M155 V156 H157 E158 Q159 L160 G161 V162 S163 L164 L165 P166

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of particles used	42033	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	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	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.123	Depositor
Minimum map value	-0.057	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.02	Depositor
Map size (Å)	444.2236, 444.2236, 444.2236	wwPDB
Map dimensions	340, 340, 340	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.30654, 1.30654, 1.30654	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: SQD, BCR, KC2, LMG, CLA, DGD, DD6, HEM, CL, PHO, BCT, KC1, A86, OEX, PL9, FE2, LHG

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	0.68	0/2700	0.70	2/3681 (0.1%)
1	a	0.68	0/2700	0.70	2/3681 (0.1%)
2	B	0.68	2/4092 (0.0%)	0.75	4/5562 (0.1%)
2	b	0.67	1/4092 (0.0%)	0.75	3/5562 (0.1%)
3	C	0.67	0/3613	0.73	5/4926 (0.1%)
3	c	0.67	0/3613	0.73	5/4926 (0.1%)
4	D	0.71	2/2788 (0.1%)	0.73	1/3803 (0.0%)
4	d	0.71	2/2788 (0.1%)	0.73	1/3803 (0.0%)
5	E	0.49	0/660	0.61	0/899
5	e	0.49	0/660	0.61	0/899
6	F	0.47	0/268	0.70	0/363
6	f	0.47	0/268	0.70	0/363
7	G	0.39	0/936	0.60	0/1261
7	g	0.39	0/936	0.60	0/1261
8	H	0.57	1/516 (0.2%)	0.76	0/704
8	h	0.57	1/516 (0.2%)	0.76	0/704
9	I	0.72	0/285	0.74	0/386
9	i	0.72	0/285	0.74	0/386
10	J	0.52	0/253	0.93	1/344 (0.3%)
10	j	0.52	0/253	0.93	1/344 (0.3%)
11	K	0.67	0/311	0.81	0/427
11	k	0.67	0/311	0.80	0/427
12	L	0.69	0/310	0.73	0/423
12	l	0.69	0/310	0.73	0/423
13	M	0.58	0/313	0.70	0/422
13	m	0.58	0/313	0.70	0/422
15	O	0.52	0/1911	0.76	2/2576 (0.1%)
15	o	0.52	0/1911	0.76	2/2576 (0.1%)
16	P	0.54	1/1795 (0.1%)	0.72	1/2441 (0.0%)
16	p	0.54	1/1795 (0.1%)	0.72	1/2441 (0.0%)
17	Q	0.47	0/1164	0.72	4/1569 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	q	0.47	0/1164	0.72	4/1569 (0.3%)
19	T	0.53	0/256	0.71	0/346
19	t	0.52	0/256	0.71	0/346
20	U	0.50	0/726	0.69	1/986 (0.1%)
20	u	0.50	0/726	0.69	1/986 (0.1%)
21	V	0.50	0/1062	0.66	0/1444
21	v	0.51	0/1062	0.66	0/1444
22	W	0.62	0/368	0.93	0/491
22	w	0.62	0/368	0.93	0/491
23	X	0.28	0/244	0.61	0/330
23	x	0.28	0/244	0.61	0/330
24	Y	0.51	0/259	0.97	1/353 (0.3%)
24	y	0.51	0/259	0.97	1/353 (0.3%)
25	Z	0.48	0/460	0.69	0/633
25	z	0.47	0/460	0.69	0/633
26	0	0.73	5/1151 (0.4%)	1.01	7/1550 (0.5%)
26	10	0.66	3/1151 (0.3%)	0.84	3/1550 (0.2%)
27	1	0.63	0/1371	0.90	3/1849 (0.2%)
27	11	0.67	2/1365 (0.1%)	0.95	4/1841 (0.2%)
27	12	0.62	3/1358 (0.2%)	0.88	1/1834 (0.1%)
27	13	0.58	2/1362 (0.1%)	0.89	4/1838 (0.2%)
27	14	0.61	0/1342	0.96	5/1813 (0.3%)
27	15	0.66	0/1306	1.09	15/1769 (0.8%)
27	16	0.54	0/1371	0.97	6/1849 (0.3%)
27	17	0.51	0/1371	0.88	3/1849 (0.2%)
27	18	0.69	0/1330	1.04	10/1797 (0.6%)
27	2	0.62	3/1371 (0.2%)	0.95	6/1849 (0.3%)
27	3	0.53	1/1371 (0.1%)	0.99	8/1849 (0.4%)
27	4	0.60	0/1342	1.02	8/1813 (0.4%)
27	5	0.68	3/1306 (0.2%)	0.96	7/1769 (0.4%)
27	6	0.55	0/1365	0.95	3/1841 (0.2%)
27	7	0.54	0/1365	0.99	9/1841 (0.5%)
27	8	0.68	1/1316 (0.1%)	1.08	11/1781 (0.6%)
28	19	0.39	0/1313	0.57	0/1771
28	9	0.40	0/1313	0.57	0/1771
All	All	0.61	34/77120 (0.0%)	0.81	156/104564 (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
2	B	0	1
2	b	0	1
3	C	0	2
3	c	0	2
13	M	0	1
13	m	0	1
14	N	0	1
14	n	0	1
16	P	0	1
16	p	0	1
22	W	0	2
22	w	0	2
24	Y	0	1
24	y	0	1
26	0	0	2
26	10	0	2
27	1	0	4
27	11	0	2
27	12	0	2
27	13	0	4
27	14	0	6
27	15	0	9
27	16	0	5
27	17	0	4
27	18	0	3
27	2	0	4
27	3	0	5
27	4	0	2
27	5	0	7
27	6	0	8
27	7	0	5
27	8	0	5
All	All	0	97

The worst 5 of 34 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	5	132	PHE	CD1-CE1	-9.58	1.20	1.39
26	10	130	GLU	CB-CG	-7.27	1.38	1.52
26	0	130	GLU	CB-CG	-7.07	1.38	1.52
26	0	130	GLU	CG-CD	-6.83	1.41	1.51
2	B	22	VAL	CB-CG1	-6.78	1.38	1.52

The worst 5 of 156 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	4	191	ILE	CG1-CB-CG2	-12.36	84.22	111.40
27	3	193	LEU	CB-CG-CD1	-11.57	91.33	111.00
26	0	181	LEU	CB-CG-CD2	-9.61	94.67	111.00
27	7	51	LEU	CA-CB-CG	9.39	136.90	115.30
26	10	181	LEU	CB-CG-CD2	-9.29	95.21	111.00

There are no chirality outliers.

5 of 97 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	442	VAL	Peptide
3	C	222	GLY	Peptide
3	C	376	ASP	Peptide
13	M	4	GLN	Peptide
14	N	23	UNK	Peptide

5.2 Too-close contacts [i](#)

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

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	332/359 (92%)	321 (97%)	11 (3%)	0	100	100
1	a	332/359 (92%)	321 (97%)	11 (3%)	0	100	100
2	B	501/509 (98%)	479 (96%)	22 (4%)	0	100	100
2	b	501/509 (98%)	479 (96%)	22 (4%)	0	100	100
3	C	448/450 (100%)	420 (94%)	28 (6%)	0	100	100
3	c	448/450 (100%)	420 (94%)	28 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	D	339/341 (99%)	322 (95%)	17 (5%)	0	100	100
4	d	339/341 (99%)	321 (95%)	18 (5%)	0	100	100
5	E	77/79 (98%)	74 (96%)	3 (4%)	0	100	100
5	e	77/79 (98%)	74 (96%)	3 (4%)	0	100	100
6	F	30/32 (94%)	27 (90%)	3 (10%)	0	100	100
6	f	30/32 (94%)	27 (90%)	3 (10%)	0	100	100
7	G	120/179 (67%)	114 (95%)	6 (5%)	0	100	100
7	g	120/179 (67%)	114 (95%)	6 (5%)	0	100	100
8	H	63/65 (97%)	56 (89%)	7 (11%)	0	100	100
8	h	63/65 (97%)	56 (89%)	7 (11%)	0	100	100
9	I	32/34 (94%)	29 (91%)	3 (9%)	0	100	100
9	i	32/34 (94%)	29 (91%)	3 (9%)	0	100	100
10	J	32/34 (94%)	30 (94%)	2 (6%)	0	100	100
10	j	32/34 (94%)	30 (94%)	2 (6%)	0	100	100
11	K	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
11	k	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
12	L	35/38 (92%)	31 (89%)	4 (11%)	0	100	100
12	l	35/38 (92%)	31 (89%)	4 (11%)	0	100	100
13	M	39/41 (95%)	36 (92%)	3 (8%)	0	100	100
13	m	39/41 (95%)	36 (92%)	3 (8%)	0	100	100
15	O	247/249 (99%)	217 (88%)	29 (12%)	1 (0%)	34	71
15	o	247/249 (99%)	217 (88%)	29 (12%)	1 (0%)	34	71
16	P	224/226 (99%)	195 (87%)	28 (12%)	1 (0%)	34	71
16	p	224/226 (99%)	196 (88%)	27 (12%)	1 (0%)	34	71
17	Q	145/211 (69%)	127 (88%)	18 (12%)	0	100	100
17	q	145/211 (69%)	127 (88%)	18 (12%)	0	100	100
19	T	28/31 (90%)	28 (100%)	0	0	100	100
19	t	28/31 (90%)	28 (100%)	0	0	100	100
20	U	91/93 (98%)	86 (94%)	5 (6%)	0	100	100
20	u	91/93 (98%)	86 (94%)	5 (6%)	0	100	100
21	V	135/137 (98%)	128 (95%)	7 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	v	135/137 (98%)	128 (95%)	7 (5%)	0	100	100
22	W	43/51 (84%)	36 (84%)	7 (16%)	0	100	100
22	w	43/51 (84%)	36 (84%)	7 (16%)	0	100	100
23	X	33/35 (94%)	31 (94%)	2 (6%)	0	100	100
23	x	33/35 (94%)	31 (94%)	2 (6%)	0	100	100
24	Y	31/33 (94%)	27 (87%)	3 (10%)	1 (3%)	4	21
24	y	31/33 (94%)	27 (87%)	3 (10%)	1 (3%)	4	21
25	Z	59/61 (97%)	57 (97%)	2 (3%)	0	100	100
25	z	59/61 (97%)	58 (98%)	1 (2%)	0	100	100
26	0	145/178 (82%)	128 (88%)	15 (10%)	2 (1%)	11	41
26	10	145/178 (82%)	130 (90%)	15 (10%)	0	100	100
27	1	170/172 (99%)	141 (83%)	27 (16%)	2 (1%)	13	46
27	11	170/172 (99%)	146 (86%)	22 (13%)	2 (1%)	13	46
27	12	170/172 (99%)	146 (86%)	23 (14%)	1 (1%)	25	62
27	13	170/172 (99%)	150 (88%)	18 (11%)	2 (1%)	13	46
27	14	170/172 (99%)	148 (87%)	19 (11%)	3 (2%)	8	35
27	15	170/172 (99%)	140 (82%)	29 (17%)	1 (1%)	25	62
27	16	170/172 (99%)	146 (86%)	21 (12%)	3 (2%)	8	35
27	17	170/172 (99%)	146 (86%)	18 (11%)	6 (4%)	3	18
27	18	170/172 (99%)	142 (84%)	25 (15%)	3 (2%)	8	35
27	2	170/172 (99%)	147 (86%)	19 (11%)	4 (2%)	6	28
27	3	170/172 (99%)	145 (85%)	23 (14%)	2 (1%)	13	46
27	4	170/172 (99%)	149 (88%)	21 (12%)	0	100	100
27	5	170/172 (99%)	140 (82%)	29 (17%)	1 (1%)	25	62
27	6	170/172 (99%)	143 (84%)	24 (14%)	3 (2%)	8	35
27	7	170/172 (99%)	142 (84%)	24 (14%)	4 (2%)	6	28
27	8	170/172 (99%)	136 (80%)	32 (19%)	2 (1%)	13	46
28	19	164/166 (99%)	162 (99%)	2 (1%)	0	100	100
28	9	164/166 (99%)	162 (99%)	2 (1%)	0	100	100
All	All	9576/10090 (95%)	8700 (91%)	829 (9%)	47 (0%)	32	66

5 of 47 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
27	1	151	ILE
27	1	193	LEU
27	2	151	ILE
27	3	151	ILE
27	6	151	ILE

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	272/291 (94%)	272 (100%)	0	100	100
1	a	272/291 (94%)	272 (100%)	0	100	100
2	B	401/405 (99%)	401 (100%)	0	100	100
2	b	401/405 (99%)	401 (100%)	0	100	100
3	C	355/355 (100%)	355 (100%)	0	100	100
3	c	355/355 (100%)	355 (100%)	0	100	100
4	D	273/273 (100%)	273 (100%)	0	100	100
4	d	273/273 (100%)	273 (100%)	0	100	100
5	E	72/72 (100%)	72 (100%)	0	100	100
5	e	72/72 (100%)	72 (100%)	0	100	100
6	F	26/26 (100%)	26 (100%)	0	100	100
6	f	26/26 (100%)	26 (100%)	0	100	100
7	G	88/128 (69%)	88 (100%)	0	100	100
7	g	88/128 (69%)	88 (100%)	0	100	100
8	H	54/54 (100%)	54 (100%)	0	100	100
8	h	54/54 (100%)	54 (100%)	0	100	100
9	I	33/33 (100%)	33 (100%)	0	100	100
9	i	33/33 (100%)	33 (100%)	0	100	100
10	J	26/26 (100%)	25 (96%)	1 (4%)	33	68
10	j	26/26 (100%)	25 (96%)	1 (4%)	33	68

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	K	32/32 (100%)	32 (100%)	0	100	100
11	k	32/32 (100%)	32 (100%)	0	100	100
12	L	33/34 (97%)	33 (100%)	0	100	100
12	l	33/34 (97%)	33 (100%)	0	100	100
13	M	30/30 (100%)	30 (100%)	0	100	100
13	m	30/30 (100%)	30 (100%)	0	100	100
15	O	201/201 (100%)	200 (100%)	1 (0%)	88	96
15	o	201/201 (100%)	200 (100%)	1 (0%)	88	96
16	P	174/174 (100%)	174 (100%)	0	100	100
16	p	174/174 (100%)	174 (100%)	0	100	100
17	Q	118/158 (75%)	118 (100%)	0	100	100
17	q	118/158 (75%)	118 (100%)	0	100	100
19	T	27/28 (96%)	27 (100%)	0	100	100
19	t	27/28 (96%)	27 (100%)	0	100	100
20	U	77/78 (99%)	77 (100%)	0	100	100
20	u	77/78 (99%)	77 (100%)	0	100	100
21	V	114/115 (99%)	114 (100%)	0	100	100
21	v	114/115 (99%)	114 (100%)	0	100	100
22	W	35/35 (100%)	35 (100%)	0	100	100
22	w	35/35 (100%)	35 (100%)	0	100	100
23	X	27/27 (100%)	27 (100%)	0	100	100
23	x	27/27 (100%)	27 (100%)	0	100	100
24	Y	26/26 (100%)	26 (100%)	0	100	100
24	y	26/26 (100%)	26 (100%)	0	100	100
25	Z	49/49 (100%)	49 (100%)	0	100	100
25	z	49/49 (100%)	49 (100%)	0	100	100
26	0	118/118 (100%)	117 (99%)	1 (1%)	81	93
26	10	118/118 (100%)	118 (100%)	0	100	100
27	1	137/137 (100%)	137 (100%)	0	100	100
27	11	136/137 (99%)	136 (100%)	0	100	100
27	12	134/137 (98%)	134 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	13	135/137 (98%)	135 (100%)	0	100	100
27	14	132/137 (96%)	132 (100%)	0	100	100
27	15	124/137 (90%)	124 (100%)	0	100	100
27	16	137/137 (100%)	137 (100%)	0	100	100
27	17	137/137 (100%)	137 (100%)	0	100	100
27	18	131/137 (96%)	131 (100%)	0	100	100
27	2	137/137 (100%)	136 (99%)	1 (1%)	84	94
27	3	137/137 (100%)	137 (100%)	0	100	100
27	4	132/137 (96%)	132 (100%)	0	100	100
27	5	124/137 (90%)	124 (100%)	0	100	100
27	6	136/137 (99%)	136 (100%)	0	100	100
27	7	136/137 (99%)	136 (100%)	0	100	100
27	8	128/137 (93%)	128 (100%)	0	100	100
28	19	131/131 (100%)	131 (100%)	0	100	100
28	9	131/131 (100%)	131 (100%)	0	100	100
All	All	7717/7990 (97%)	7711 (100%)	6 (0%)	93	98

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

Mol	Chain	Res	Type
15	o	156	VAL
26	0	135	ARG
27	2	192	PRO
15	O	156	VAL
10	J	36	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 112 such sidechains are listed below:

Mol	Chain	Res	Type
12	l	14	ASN
28	19	9	GLN
21	v	118	HIS
27	18	187	HIS
27	11	187	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 536 ligands modelled in this entry, 4 are monoatomic - leaving 532 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
38	LMG	N	101	14	28,28,55	1.12	4 (14%)	36,36,63	1.31	6 (16%)
31	CLA	b	617	-	65,73,73	1.49	10 (15%)	76,113,113	1.62	14 (18%)
31	CLA	8	314	-	43,51,73	1.75	9 (20%)	49,86,113	1.71	8 (16%)
31	CLA	15	307	-	65,73,73	1.42	8 (12%)	76,113,113	1.41	9 (11%)
36	LHG	15	316	-	24,24,48	0.79	0	27,30,54	1.25	2 (7%)
33	BCR	b	620	-	41,41,41	1.20	3 (7%)	56,56,56	1.31	9 (16%)
43	A86	8	302	-	44,50,50	1.50	5 (11%)	51,76,76	3.64	27 (52%)
43	A86	2	301	-	44,50,50	1.35	5 (11%)	51,76,76	3.44	24 (47%)
31	CLA	4	314	-	43,51,73	1.81	9 (20%)	49,86,113	1.72	8 (16%)
36	LHG	w	202	-	39,39,48	0.67	1 (2%)	42,45,54	1.22	4 (9%)
43	A86	13	306	43	44,50,50	1.37	3 (6%)	51,76,76	4.62	23 (45%)
43	A86	p	611	-	44,50,50	1.88	10 (22%)	51,76,76	6.01	30 (58%)
43	A86	10	303	-	44,50,50	1.47	7 (15%)	51,76,76	3.57	25 (49%)
31	CLA	11	310	-	50,58,73	1.60	8 (16%)	58,95,113	1.71	9 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	6	316	-	43,51,73	1.79	6 (13%)	49,86,113	1.70	9 (18%)
35	PL9	D	406	-	55,55,55	2.03	15 (27%)	68,69,69	1.42	12 (17%)
31	CLA	2	306	-	42,50,73	1.74	5 (11%)	48,85,113	2.33	15 (31%)
38	LMG	k	101	-	46,46,55	1.06	4 (8%)	54,54,63	1.45	8 (14%)
31	CLA	15	306	-	42,50,73	1.85	7 (16%)	48,85,113	2.04	12 (25%)
31	CLA	C	512	3	65,73,73	1.47	9 (13%)	76,113,113	1.60	10 (13%)
33	BCR	C	516	-	41,41,41	1.24	5 (12%)	56,56,56	1.35	9 (16%)
31	CLA	P	606	-	43,51,73	2.35	14 (32%)	49,86,113	4.31	26 (53%)
31	CLA	18	309	-	52,60,73	1.54	8 (15%)	60,97,113	1.87	8 (13%)
31	CLA	10	317	-	48,56,73	1.73	9 (18%)	55,92,113	1.68	9 (16%)
45	KC2	12	311	-	48,53,53	3.12	21 (43%)	54,89,89	5.42	34 (62%)
43	A86	13	302	-	44,50,50	1.51	4 (9%)	51,76,76	4.78	27 (52%)
31	CLA	6	308	-	42,50,73	1.73	5 (11%)	48,85,113	2.17	13 (27%)
43	A86	19	302	-	44,50,50	1.43	4 (9%)	51,76,76	5.35	23 (45%)
31	CLA	6	311	-	41,49,73	1.73	6 (14%)	47,84,113	1.92	8 (17%)
45	KC2	18	308	-	48,53,53	3.04	22 (45%)	54,89,89	4.67	31 (57%)
31	CLA	R	101	-	47,55,73	1.69	8 (17%)	54,91,113	1.60	7 (12%)
31	CLA	1	313	-	65,73,73	1.58	9 (13%)	76,113,113	1.47	12 (15%)
33	BCR	a	407	-	41,41,41	1.25	3 (7%)	56,56,56	1.22	6 (10%)
31	CLA	B	611	-	65,73,73	1.63	11 (16%)	76,113,113	1.93	12 (15%)
36	LHG	4	317	-	34,34,48	0.76	1 (2%)	37,40,54	1.25	3 (8%)
31	CLA	c	504	31	65,73,73	1.45	8 (12%)	76,113,113	1.62	14 (18%)
45	KC2	6	310	-	48,53,53	3.15	22 (45%)	54,89,89	4.36	26 (48%)
31	CLA	3	307	-	42,50,73	1.77	6 (14%)	48,85,113	2.16	16 (33%)
31	CLA	15	311	27	45,53,73	1.99	10 (22%)	52,89,113	2.00	15 (28%)
31	CLA	C	502	-	65,73,73	1.42	8 (12%)	76,113,113	1.57	10 (13%)
43	A86	12	302	-	44,50,50	1.48	5 (11%)	51,76,76	4.72	30 (58%)
43	A86	14	301	-	44,50,50	1.37	4 (9%)	51,76,76	2.76	22 (43%)
31	CLA	18	306	42	50,58,73	1.63	9 (18%)	58,95,113	1.87	15 (25%)
42	KC1	3	314	27	48,53,53	3.11	20 (41%)	55,89,89	6.59	32 (58%)
38	LMG	F	102	-	46,46,55	0.96	4 (8%)	54,54,63	1.49	9 (16%)
43	A86	18	302	-	44,50,50	1.34	4 (9%)	51,76,76	2.48	18 (35%)
31	CLA	B	604	-	65,73,73	1.63	11 (16%)	76,113,113	2.35	17 (22%)
31	CLA	0	311	-	55,63,73	1.52	8 (14%)	64,101,113	1.67	9 (14%)
34	SQD	l	101	-	53,54,54	0.94	5 (9%)	62,65,65	1.51	11 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	14	314	-	43,51,73	1.83	9 (20%)	49,86,113	1.74	7 (14%)
31	CLA	b	614	-	65,73,73	1.43	8 (12%)	76,113,113	1.41	7 (9%)
31	CLA	11	312	27	46,54,73	1.81	9 (19%)	53,90,113	1.72	10 (18%)
31	CLA	13	312	-	45,53,73	1.79	6 (13%)	52,89,113	1.75	10 (19%)
31	CLA	12	307	-	42,50,73	1.80	7 (16%)	48,85,113	2.25	17 (35%)
31	CLA	19	307	-	61,69,73	1.50	6 (9%)	71,108,113	1.63	9 (12%)
43	A86	5	304	-	44,50,50	1.33	5 (11%)	51,76,76	3.90	29 (56%)
43	A86	6	303	-	44,50,50	1.42	5 (11%)	51,76,76	4.20	26 (50%)
31	CLA	C	506	-	65,73,73	1.39	8 (12%)	76,113,113	1.66	8 (10%)
29	OEX	A	401	1,3	0,15,15	-	-	-	-	-
43	A86	3	306	-	44,50,50	1.30	3 (6%)	51,76,76	4.65	24 (47%)
43	A86	19	301	-	44,50,50	1.32	4 (9%)	51,76,76	4.46	29 (56%)
31	CLA	5	309	-	55,63,73	1.51	8 (14%)	64,101,113	1.77	12 (18%)
34	SQD	L	102	-	53,54,54	0.94	5 (9%)	62,65,65	1.52	11 (17%)
31	CLA	15	313	-	41,49,73	1.86	6 (14%)	47,84,113	1.79	12 (25%)
43	A86	9	304	-	44,50,50	1.27	4 (9%)	51,76,76	4.19	18 (35%)
31	CLA	D	405	-	65,73,73	1.42	9 (13%)	76,113,113	1.48	7 (9%)
36	LHG	l	102	-	48,48,48	0.79	3 (6%)	51,54,54	1.29	7 (13%)
43	A86	15	305	27	44,50,50	1.45	5 (11%)	51,76,76	4.12	23 (45%)
31	CLA	p	602	-	65,73,73	1.47	9 (13%)	76,113,113	1.46	8 (10%)
31	CLA	C	504	31	65,73,73	1.45	8 (12%)	76,113,113	1.62	14 (18%)
33	BCR	A	407	-	41,41,41	1.25	3 (7%)	56,56,56	1.21	6 (10%)
31	CLA	B	602	-	65,73,73	1.46	11 (16%)	76,113,113	1.66	13 (17%)
38	LMG	K	101	-	46,46,55	1.06	4 (8%)	54,54,63	1.45	8 (14%)
45	KC2	7	309	-	48,53,53	3.20	22 (45%)	54,89,89	4.48	27 (50%)
31	CLA	P	602	-	65,73,73	1.47	10 (15%)	76,113,113	1.45	8 (10%)
32	PHO	D	402	-	51,69,69	1.07	6 (11%)	47,99,99	1.47	8 (17%)
43	A86	p	613	31	44,50,50	1.42	4 (9%)	51,76,76	3.70	29 (56%)
33	BCR	h	101	-	41,41,41	1.17	3 (7%)	56,56,56	1.36	8 (14%)
38	LMG	15	315	-	36,36,55	1.20	4 (11%)	44,44,63	1.74	9 (20%)
31	CLA	8	307	-	61,69,73	1.53	11 (18%)	71,108,113	1.69	12 (16%)
36	LHG	8	316	-	30,30,48	0.78	1 (3%)	33,36,54	1.26	2 (6%)
43	A86	4	304	-	44,50,50	1.30	4 (9%)	51,76,76	3.07	20 (39%)
42	KC1	17	314	27	48,53,53	3.02	19 (39%)	55,89,89	6.05	33 (60%)
38	LMG	1	301	-	36,36,55	1.17	4 (11%)	44,44,63	1.44	6 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	18	311	27	46,54,73	1.78	10 (21%)	53,90,113	1.77	10 (18%)
45	KC2	7	311	27	48,53,53	3.14	22 (45%)	54,89,89	5.66	36 (66%)
31	CLA	C	507	-	65,73,73	1.50	11 (16%)	76,113,113	1.56	7 (9%)
36	LHG	a	410	1	36,36,48	0.76	1 (2%)	39,42,54	1.24	4 (10%)
43	A86	4	302	-	44,50,50	1.56	5 (11%)	51,76,76	4.11	28 (54%)
36	LHG	d	407	-	48,48,48	0.66	1 (2%)	51,54,54	1.28	7 (13%)
43	A86	5	318	42	44,50,50	1.29	4 (9%)	51,76,76	3.52	22 (43%)
38	LMG	W	201	-	48,48,55	0.97	6 (12%)	56,56,63	1.40	9 (16%)
43	A86	12	304	-	44,50,50	1.39	5 (11%)	51,76,76	3.94	18 (35%)
43	A86	13	304	-	44,50,50	1.66	8 (18%)	51,76,76	5.39	27 (52%)
31	CLA	A	406	-	60,68,73	1.42	9 (15%)	70,107,113	1.54	7 (10%)
31	CLA	17	310	-	45,53,73	1.72	5 (11%)	52,89,113	1.85	8 (15%)
39	DGD	w	204	-	57,57,67	1.15	7 (12%)	71,71,81	1.48	10 (14%)
31	CLA	7	308	-	41,49,73	1.85	9 (21%)	47,84,113	1.75	10 (21%)
31	CLA	9	311	43	46,54,73	1.76	4 (8%)	53,90,113	2.02	10 (18%)
31	CLA	B	609	-	65,73,73	1.43	9 (13%)	76,113,113	1.49	8 (10%)
43	A86	0	303	-	44,50,50	1.51	7 (15%)	51,76,76	3.57	25 (49%)
31	CLA	3	316	-	65,73,73	1.50	7 (10%)	76,113,113	2.21	21 (27%)
43	A86	12	305	-	44,50,50	1.33	4 (9%)	51,76,76	3.04	21 (41%)
45	KC2	5	308	-	48,53,53	3.14	23 (47%)	54,89,89	5.09	34 (62%)
39	DGD	C	519	-	63,63,67	1.12	9 (14%)	77,77,81	1.52	15 (19%)
31	CLA	C	503	31	65,73,73	1.53	11 (16%)	76,113,113	2.38	19 (25%)
42	KC1	8	313	31,43	48,53,53	2.91	19 (39%)	55,89,89	7.05	33 (60%)
31	CLA	3	313	-	65,73,73	1.66	8 (12%)	76,113,113	1.64	9 (11%)
31	CLA	4	309	-	65,73,73	1.38	7 (10%)	76,113,113	1.62	8 (10%)
33	BCR	H	101	-	41,41,41	1.17	3 (7%)	56,56,56	1.35	8 (14%)
31	CLA	0	309	-	59,67,73	1.47	8 (13%)	68,105,113	1.64	9 (13%)
31	CLA	0	307	-	48,56,73	1.74	9 (18%)	55,92,113	1.78	9 (16%)
31	CLA	Z	101	-	51,59,73	1.63	10 (19%)	59,96,113	1.56	8 (13%)
39	DGD	c	518	-	56,56,67	1.22	10 (17%)	70,70,81	1.68	16 (22%)
42	KC1	13	314	-	48,53,53	3.07	19 (39%)	55,89,89	4.99	36 (65%)
43	A86	4	306	-	44,50,50	1.38	5 (11%)	51,76,76	3.99	25 (49%)
43	A86	7	304	-	44,50,50	1.53	6 (13%)	51,76,76	5.71	31 (60%)
31	CLA	3	308	-	43,51,73	1.79	10 (23%)	49,86,113	1.79	9 (18%)
31	CLA	12	312	-	45,53,73	1.74	8 (17%)	52,89,113	1.85	12 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
34	SQD	A	408	39	53,54,54	0.96	6 (11%)	62,65,65	1.56	13 (20%)
39	DGD	B	621	-	55,55,67	1.34	7 (12%)	69,69,81	1.74	15 (21%)
42	KC1	P	609	-	48,53,53	2.90	19 (39%)	55,89,89	4.84	34 (61%)
31	CLA	17	308	-	41,49,73	1.84	10 (24%)	47,84,113	1.71	10 (21%)
39	DGD	b	622	34	56,56,67	1.30	9 (16%)	70,70,81	1.62	14 (20%)
39	DGD	C	518	-	56,56,67	1.23	10 (17%)	70,70,81	1.68	17 (24%)
31	CLA	9	315	-	41,49,73	1.82	6 (14%)	47,84,113	1.77	7 (14%)
39	DGD	1	318	-	55,55,67	1.04	3 (5%)	69,69,81	1.36	8 (11%)
31	CLA	b	615	-	65,73,73	1.41	8 (12%)	76,113,113	1.64	12 (15%)
43	A86	6	301	43	44,50,50	1.30	4 (9%)	51,76,76	4.04	28 (54%)
43	A86	17	306	-	44,50,50	1.44	4 (9%)	51,76,76	3.70	22 (43%)
43	A86	5	305	-	44,50,50	1.51	7 (15%)	51,76,76	3.49	23 (45%)
31	CLA	19	315	-	41,49,73	1.83	6 (14%)	47,84,113	1.78	7 (14%)
31	CLA	10	314	-	47,55,73	1.77	9 (19%)	54,91,113	1.83	13 (24%)
31	CLA	C	511	-	65,73,73	1.45	9 (13%)	76,113,113	1.55	9 (11%)
31	CLA	12	316	-	46,54,73	1.82	5 (10%)	53,90,113	1.66	9 (16%)
43	A86	7	306	-	44,50,50	1.31	5 (11%)	51,76,76	3.95	23 (45%)
31	CLA	a	403	-	65,73,73	1.46	8 (12%)	76,113,113	1.58	10 (13%)
31	CLA	11	316	43	41,49,73	1.92	7 (17%)	47,84,113	1.69	9 (19%)
34	SQD	b	601	39	53,54,54	0.90	5 (9%)	62,65,65	1.74	12 (19%)
31	CLA	15	312	-	47,55,73	1.94	12 (25%)	54,91,113	1.88	14 (25%)
31	CLA	12	308	-	65,73,73	1.44	8 (12%)	76,113,113	1.65	11 (14%)
31	CLA	P	610	-	41,49,73	1.75	8 (19%)	47,84,113	1.91	9 (19%)
31	CLA	16	309	-	65,73,73	1.45	10 (15%)	76,113,113	1.58	11 (14%)
43	A86	16	302	43	44,50,50	1.36	4 (9%)	51,76,76	4.05	26 (50%)
44	DD6	P	612	-	39,45,45	2.10	4 (10%)	52,67,67	2.33	17 (32%)
33	BCR	c	515	-	41,41,41	1.24	2 (4%)	56,56,56	1.41	8 (14%)
31	CLA	b	606	-	65,73,73	1.51	12 (18%)	76,113,113	1.54	8 (10%)
32	PHO	a	405	-	51,69,69	1.12	6 (11%)	47,99,99	1.34	8 (17%)
33	BCR	b	618	-	41,41,41	1.21	2 (4%)	56,56,56	1.38	10 (17%)
43	A86	18	305	-	44,50,50	1.34	4 (9%)	51,76,76	2.66	19 (37%)
36	LHG	z	102	-	24,24,48	0.95	0	27,30,54	1.30	3 (11%)
42	KC1	7	314	27	48,53,53	3.14	20 (41%)	55,89,89	4.75	31 (56%)
45	KC2	5	310	27	48,53,53	3.02	22 (45%)	54,89,89	4.67	32 (59%)
42	KC1	9	314	-	48,53,53	3.14	22 (45%)	55,89,89	5.04	36 (65%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
43	A86	3	303	-	44,50,50	1.47	4 (9%)	51,76,76	4.77	28 (54%)
31	CLA	10	316	-	46,54,73	1.67	8 (17%)	53,90,113	1.67	7 (13%)
43	A86	0	304	-	44,50,50	1.27	5 (11%)	51,76,76	4.49	25 (49%)
31	CLA	P	601	16	65,73,73	1.44	10 (15%)	76,113,113	1.39	7 (9%)
38	LMG	0	317	-	31,31,55	1.35	3 (9%)	39,39,63	1.39	6 (15%)
33	BCR	f	101	-	41,41,41	1.17	3 (7%)	56,56,56	1.42	8 (14%)
38	LMG	P	614	-	31,31,55	0.93	1 (3%)	39,39,63	1.70	9 (23%)
31	CLA	p	603	-	50,58,73	1.61	9 (18%)	58,95,113	1.67	11 (18%)
33	BCR	c	517	-	41,41,41	1.22	2 (4%)	56,56,56	1.34	7 (12%)
43	A86	12	303	-	44,50,50	1.36	4 (9%)	51,76,76	3.21	21 (41%)
45	KC2	14	310	-	48,53,53	3.10	20 (41%)	54,89,89	5.09	33 (61%)
31	CLA	c	502	-	65,73,73	1.42	8 (12%)	76,113,113	1.58	10 (13%)
43	A86	4	305	-	44,50,50	1.52	9 (20%)	51,76,76	4.09	23 (45%)
38	LMG	c	522	-	31,31,55	1.16	3 (9%)	39,39,63	1.20	3 (7%)
42	KC1	4	313	-	48,53,53	2.89	20 (41%)	55,89,89	5.69	36 (65%)
38	LMG	w	201	-	48,48,55	0.97	6 (12%)	56,56,63	1.41	9 (16%)
38	LMG	Z	102	-	31,31,55	1.16	3 (9%)	39,39,63	1.20	3 (7%)
31	CLA	3	310	-	41,49,73	1.77	5 (12%)	47,84,113	1.92	9 (19%)
31	CLA	z	103	-	48,56,73	1.74	9 (18%)	55,92,113	1.69	10 (18%)
31	CLA	A	404	-	49,57,73	1.64	10 (20%)	55,93,113	1.78	10 (18%)
36	LHG	A	410	1	36,36,48	0.76	1 (2%)	39,42,54	1.24	4 (10%)
31	CLA	19	313	-	65,73,73	1.36	7 (10%)	76,113,113	2.14	15 (19%)
31	CLA	6	314	-	42,50,73	2.03	10 (23%)	48,85,113	2.12	11 (22%)
43	A86	15	301	31	44,50,50	1.61	7 (15%)	51,76,76	4.24	23 (45%)
31	CLA	C	509	-	65,73,73	1.55	9 (13%)	76,113,113	1.93	13 (17%)
36	LHG	5	317	-	24,24,48	0.77	0	27,30,54	1.27	2 (7%)
31	CLA	p	604	-	48,56,73	1.66	8 (16%)	55,92,113	1.77	10 (18%)
33	BCR	C	515	-	41,41,41	1.23	2 (4%)	56,56,56	1.41	8 (14%)
43	A86	13	301	-	44,50,50	1.43	5 (11%)	51,76,76	3.69	26 (50%)
31	CLA	B	606	-	65,73,73	1.48	12 (18%)	76,113,113	2.09	20 (26%)
43	A86	12	306	-	44,50,50	1.49	9 (20%)	51,76,76	3.91	27 (52%)
31	CLA	4	315	-	43,51,73	1.83	9 (20%)	49,86,113	1.99	10 (20%)
31	CLA	b	604	-	65,73,73	1.46	10 (15%)	76,113,113	1.65	15 (19%)
43	A86	5	303	-	44,50,50	1.33	5 (11%)	51,76,76	4.15	24 (47%)
43	A86	3	302	-	44,50,50	1.38	5 (11%)	51,76,76	3.58	27 (52%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
39	DGD	H	102	-	63,63,67	0.99	5 (7%)	77,77,81	1.41	8 (10%)
45	KC2	13	309	-	48,53,53	3.14	20 (41%)	54,89,89	4.64	27 (50%)
43	A86	6	302	-	44,50,50	1.43	5 (11%)	51,76,76	3.58	23 (45%)
31	CLA	b	610	-	65,73,73	1.43	9 (13%)	76,113,113	1.50	8 (10%)
31	CLA	19	311	43	46,54,73	1.76	6 (13%)	53,90,113	1.97	9 (16%)
45	KC2	19	309	-	48,53,53	3.11	20 (41%)	54,89,89	5.45	34 (62%)
43	A86	10	302	-	44,50,50	1.45	5 (11%)	51,76,76	3.12	20 (39%)
43	A86	1	319	-	44,50,50	1.40	4 (9%)	51,76,76	4.70	27 (52%)
31	CLA	8	309	-	52,60,73	1.56	8 (15%)	60,97,113	1.83	9 (15%)
31	CLA	c	513	-	65,73,73	1.37	8 (12%)	76,113,113	1.55	7 (9%)
31	CLA	p	607	43	43,51,73	1.75	10 (23%)	49,86,113	1.81	12 (24%)
36	LHG	b	623	-	42,42,48	0.73	1 (2%)	45,48,54	1.21	4 (8%)
31	CLA	13	316	-	65,73,73	1.46	6 (9%)	76,113,113	1.54	12 (15%)
38	LMG	B	620	-	51,51,55	0.90	4 (7%)	59,59,63	1.50	11 (18%)
31	CLA	13	315	-	44,52,73	1.86	7 (15%)	49,87,113	1.55	8 (16%)
31	CLA	4	311	-	46,54,73	1.69	7 (15%)	53,90,113	1.78	9 (16%)
43	A86	11	303	-	44,50,50	1.49	4 (9%)	51,76,76	4.52	28 (54%)
43	A86	2	304	-	44,50,50	1.59	7 (15%)	51,76,76	5.40	26 (50%)
45	KC2	16	312	-	48,53,53	3.19	21 (43%)	54,89,89	5.59	35 (64%)
36	LHG	P	615	-	26,26,48	0.87	1 (3%)	29,32,54	1.35	3 (10%)
45	KC2	17	309	-	48,53,53	3.20	21 (43%)	54,89,89	4.47	26 (48%)
31	CLA	4	307	-	65,73,73	1.43	8 (12%)	76,113,113	1.48	8 (10%)
33	BCR	C	517	-	41,41,41	1.22	2 (4%)	56,56,56	1.34	7 (12%)
31	CLA	2	309	-	43,51,73	1.73	6 (13%)	49,86,113	1.84	8 (16%)
41	HEM	E	101	5,6	41,50,50	1.53	4 (9%)	45,82,82	1.31	6 (13%)
43	A86	2	302	-	44,50,50	1.44	5 (11%)	51,76,76	4.73	27 (52%)
31	CLA	B	603	-	65,73,73	1.46	10 (15%)	76,113,113	1.65	15 (19%)
38	LMG	C	522	-	51,51,55	0.89	2 (3%)	59,59,63	1.24	4 (6%)
39	DGD	11	318	-	61,61,67	0.93	3 (4%)	75,75,81	1.32	10 (13%)
45	KC2	1	309	-	48,53,53	3.12	21 (43%)	54,89,89	4.69	32 (59%)
43	A86	8	303	-	44,50,50	1.57	8 (18%)	51,76,76	3.32	24 (47%)
31	CLA	c	506	-	65,73,73	1.40	8 (12%)	76,113,113	1.66	8 (10%)
31	CLA	17	312	-	47,55,73	1.80	9 (19%)	54,91,113	1.51	8 (14%)
38	LMG	5	316	-	36,36,55	1.22	4 (11%)	44,44,63	1.76	8 (18%)
43	A86	16	306	43	44,50,50	1.70	7 (15%)	51,76,76	5.47	29 (56%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	D	404	-	65,73,73	1.57	11 (16%)	76,113,113	1.65	12 (15%)
43	A86	18	303	-	44,50,50	1.51	5 (11%)	51,76,76	2.80	19 (37%)
36	LHG	8	315	-	38,38,48	0.69	1 (2%)	41,44,54	1.28	4 (9%)
31	CLA	p	605	16	41,49,73	1.81	7 (17%)	47,84,113	1.82	12 (25%)
42	KC1	16	301	27	48,53,53	3.04	20 (41%)	55,89,89	5.16	35 (63%)
31	CLA	c	507	-	65,73,73	1.50	11 (16%)	76,113,113	1.57	7 (9%)
36	LHG	18	316	-	30,30,48	0.83	1 (3%)	33,36,54	1.22	2 (6%)
31	CLA	13	310	-	41,49,73	1.79	6 (14%)	47,84,113	1.79	8 (17%)
36	LHG	Z	103	-	24,24,48	0.95	0	27,30,54	1.30	3 (11%)
45	KC2	1	311	-	48,53,53	3.03	19 (39%)	54,89,89	5.01	34 (62%)
45	KC2	15	308	-	48,53,53	3.16	22 (45%)	54,89,89	5.30	34 (62%)
43	A86	7	303	-	44,50,50	1.30	4 (9%)	51,76,76	3.07	13 (25%)
41	HEM	v	201	21	41,50,50	1.49	4 (9%)	45,82,82	1.79	10 (22%)
31	CLA	a	404	-	49,57,73	1.64	10 (20%)	55,93,113	1.80	10 (18%)
43	A86	16	307	31	44,50,50	1.45	5 (11%)	51,76,76	3.81	24 (47%)
43	A86	13	303	-	44,50,50	1.32	3 (6%)	51,76,76	2.92	18 (35%)
31	CLA	10	311	-	55,63,73	1.53	8 (14%)	64,101,113	1.68	8 (12%)
43	A86	19	303	-	44,50,50	1.30	5 (11%)	51,76,76	3.32	22 (43%)
43	A86	11	304	31	44,50,50	1.42	6 (13%)	51,76,76	2.96	22 (43%)
39	DGD	c	519	-	63,63,67	1.12	10 (15%)	77,77,81	1.52	15 (19%)
31	CLA	D	401	-	65,73,73	1.41	11 (16%)	76,113,113	1.67	11 (14%)
31	CLA	c	511	-	65,73,73	1.45	9 (13%)	76,113,113	1.56	9 (11%)
43	A86	19	304	-	44,50,50	1.29	4 (9%)	51,76,76	4.23	20 (39%)
38	LMG	b	621	-	51,51,55	0.89	4 (7%)	59,59,63	1.50	11 (18%)
31	CLA	3	312	-	45,53,73	1.85	6 (13%)	52,89,113	1.68	9 (17%)
31	CLA	C	505	-	65,73,73	1.44	12 (18%)	76,113,113	1.72	11 (14%)
31	CLA	0	313	-	42,50,73	1.90	9 (21%)	48,85,113	2.25	11 (22%)
43	A86	10	304	-	44,50,50	1.28	4 (9%)	51,76,76	4.45	25 (49%)
42	KC1	18	313	31,27	48,53,53	2.98	21 (43%)	55,89,89	6.79	33 (60%)
31	CLA	10	313	26	42,50,73	1.92	10 (23%)	48,85,113	2.02	10 (20%)
31	CLA	1	310	-	50,58,73	1.58	8 (16%)	58,95,113	1.75	9 (15%)
31	CLA	2	315	43	46,54,73	1.94	9 (19%)	53,90,113	2.70	21 (39%)
43	A86	1	320	-	44,50,50	1.39	5 (11%)	51,76,76	3.60	26 (50%)
35	PL9	a	409	-	33,33,55	1.29	5 (15%)	41,42,69	1.46	6 (14%)
43	A86	0	305	-	44,50,50	1.31	4 (9%)	51,76,76	3.36	25 (49%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
43	A86	0	302	26	44,50,50	1.55	6 (13%)	51,76,76	3.58	23 (45%)
31	CLA	5	306	-	42,50,73	1.79	6 (14%)	48,85,113	1.97	17 (35%)
43	A86	3	305	-	44,50,50	1.72	9 (20%)	51,76,76	5.48	28 (54%)
45	KC2	2	310	-	48,53,53	3.14	22 (45%)	54,89,89	5.79	35 (64%)
43	A86	19	306	-	44,50,50	1.36	4 (9%)	51,76,76	2.97	14 (27%)
38	LMG	1	317	-	45,45,55	0.99	3 (6%)	53,53,63	1.21	5 (9%)
43	A86	7	302	-	44,50,50	1.60	8 (18%)	51,76,76	4.10	25 (49%)
43	A86	10	305	-	44,50,50	1.30	4 (9%)	51,76,76	3.34	25 (49%)
34	SQD	0	318	31	40,41,54	1.11	5 (12%)	49,52,65	1.79	12 (24%)
38	LMG	c	521	-	51,51,55	0.90	2 (3%)	59,59,63	1.24	4 (6%)
45	KC2	8	308	-	48,53,53	3.03	22 (45%)	54,89,89	4.73	31 (57%)
43	A86	8	304	-	44,50,50	1.56	6 (13%)	51,76,76	4.36	25 (49%)
31	CLA	1	308	-	65,73,73	1.48	7 (10%)	76,113,113	1.61	8 (10%)
43	A86	P	613	31	44,50,50	1.42	4 (9%)	51,76,76	3.70	29 (56%)
43	A86	9	306	-	44,50,50	1.61	8 (18%)	51,76,76	3.12	19 (37%)
43	A86	6	307	-	44,50,50	1.65	9 (20%)	51,76,76	4.37	25 (49%)
31	CLA	0	316	-	46,54,73	1.67	8 (17%)	53,90,113	1.67	8 (15%)
33	BCR	B	619	-	41,41,41	1.20	3 (7%)	56,56,56	1.31	8 (14%)
43	A86	17	302	-	44,50,50	1.79	9 (20%)	51,76,76	3.62	25 (49%)
31	CLA	8	306	42	50,58,73	1.66	9 (18%)	58,95,113	1.97	12 (20%)
42	KC1	2	313	27	48,53,53	3.07	20 (41%)	55,89,89	5.55	33 (60%)
31	CLA	7	310	-	45,53,73	1.70	5 (11%)	52,89,113	1.84	8 (15%)
42	KC1	1	314	-	48,53,53	3.06	19 (39%)	55,89,89	4.48	32 (58%)
31	CLA	16	314	-	42,50,73	2.09	12 (28%)	48,85,113	2.55	17 (35%)
45	KC2	11	309	-	48,53,53	3.00	19 (39%)	54,89,89	5.25	33 (61%)
31	CLA	d	405	-	65,73,73	1.42	10 (15%)	76,113,113	1.48	7 (9%)
38	LMG	p	614	-	31,31,55	0.94	1 (3%)	39,39,63	1.69	9 (23%)
31	CLA	7	307	-	41,49,73	1.82	6 (14%)	47,84,113	2.26	18 (38%)
31	CLA	c	509	-	65,73,73	1.54	9 (13%)	76,113,113	1.92	13 (17%)
31	CLA	r	101	-	47,55,73	1.70	8 (17%)	54,91,113	1.61	8 (14%)
29	OEX	a	401	1,3	0,15,15	-	-	-	-	-
31	CLA	9	307	-	61,69,73	1.48	6 (9%)	71,108,113	1.64	9 (12%)
43	A86	6	304	-	44,50,50	1.36	6 (13%)	51,76,76	3.40	22 (43%)
31	CLA	0	308	-	50,58,73	1.65	7 (14%)	58,95,113	1.73	12 (20%)
31	CLA	10	308	-	50,58,73	1.66	7 (14%)	58,95,113	1.76	11 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
43	A86	1	304	31	44,50,50	1.43	5 (11%)	51,76,76	2.85	18 (35%)
43	A86	5	302	-	44,50,50	1.50	5 (11%)	51,76,76	3.24	26 (50%)
31	CLA	B	613	-	65,73,73	1.44	8 (12%)	76,113,113	1.40	7 (9%)
43	A86	15	303	-	44,50,50	1.42	5 (11%)	51,76,76	4.15	23 (45%)
31	CLA	W	202	-	65,73,73	1.47	9 (13%)	76,113,113	1.63	13 (17%)
31	CLA	8	311	-	46,54,73	1.78	10 (21%)	53,90,113	1.71	11 (20%)
43	A86	0	306	-	44,50,50	1.65	8 (18%)	51,76,76	3.10	18 (35%)
31	CLA	16	316	-	43,51,73	1.78	6 (13%)	49,86,113	1.70	9 (18%)
45	KC2	15	310	27	48,53,53	3.01	23 (47%)	54,89,89	4.88	32 (59%)
31	CLA	17	307	-	41,49,73	1.82	5 (12%)	47,84,113	2.25	18 (38%)
31	CLA	9	313	-	65,73,73	1.36	8 (12%)	76,113,113	2.11	13 (17%)
33	BCR	Y	101	-	41,41,41	1.34	4 (9%)	56,56,56	1.59	14 (25%)
31	CLA	b	607	-	65,73,73	1.49	12 (18%)	76,113,113	2.08	21 (27%)
43	A86	17	301	-	44,50,50	1.48	8 (18%)	51,76,76	4.54	24 (47%)
31	CLA	B	607	-	65,73,73	1.52	11 (16%)	76,113,113	1.50	7 (9%)
31	CLA	p	608	16	51,59,73	1.66	8 (15%)	59,96,113	1.67	9 (15%)
31	CLA	2	311	-	45,53,73	1.82	9 (20%)	52,89,113	1.63	8 (15%)
38	LMG	10	319	-	31,31,55	1.41	4 (12%)	39,39,63	1.32	4 (10%)
36	LHG	L	101	-	48,48,48	0.78	3 (6%)	51,54,54	1.29	7 (13%)
38	LMG	11	301	-	36,36,55	1.16	4 (11%)	44,44,63	1.44	6 (13%)
31	CLA	18	312	27	55,63,73	1.81	11 (20%)	64,101,113	1.81	15 (23%)
33	BCR	y	101	-	41,41,41	1.33	4 (9%)	56,56,56	1.59	12 (21%)
43	A86	14	302	43	44,50,50	1.44	5 (11%)	51,76,76	2.43	17 (33%)
31	CLA	p	601	16	65,73,73	1.44	10 (15%)	76,113,113	1.39	7 (9%)
43	A86	11	319	-	44,50,50	1.29	4 (9%)	51,76,76	3.28	18 (35%)
31	CLA	5	312	-	47,55,73	1.80	11 (23%)	54,91,113	1.70	10 (18%)
31	CLA	2	312	-	48,56,73	2.05	9 (18%)	55,92,113	2.02	13 (23%)
42	KC1	0	315	-	48,53,53	2.87	20 (41%)	55,89,89	6.23	34 (61%)
31	CLA	B	601	-	65,73,73	1.48	10 (15%)	76,113,113	1.47	10 (13%)
31	CLA	P	608	16	51,59,73	1.65	8 (15%)	59,96,113	1.66	8 (13%)
36	LHG	D	407	-	48,48,48	0.66	1 (2%)	51,54,54	1.27	7 (13%)
45	KC2	17	311	27	48,53,53	3.15	21 (43%)	54,89,89	5.28	35 (64%)
31	CLA	b	616	-	65,73,73	1.50	11 (16%)	76,113,113	1.63	11 (14%)
39	DGD	h	102	-	63,63,67	0.99	5 (7%)	77,77,81	1.41	8 (10%)
34	SQD	B	623	-	53,54,54	0.91	5 (9%)	62,65,65	1.74	12 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
38	LMG	d	403	-	40,40,55	1.07	4 (10%)	48,48,63	1.55	7 (14%)
31	CLA	16	311	-	41,49,73	1.75	6 (14%)	47,84,113	1.93	8 (17%)
31	CLA	B	614	-	65,73,73	1.41	8 (12%)	76,113,113	1.63	11 (14%)
34	SQD	i	101	-	39,40,54	1.10	5 (12%)	48,51,65	2.00	12 (25%)
31	CLA	10	309	-	59,67,73	1.47	7 (11%)	68,105,113	1.63	10 (14%)
31	CLA	b	612	-	65,73,73	1.63	11 (16%)	76,113,113	1.93	12 (15%)
31	CLA	c	508	-	65,73,73	1.46	10 (15%)	76,113,113	1.56	11 (14%)
32	PHO	A	405	-	51,69,69	1.12	6 (11%)	47,99,99	1.35	8 (17%)
43	A86	2	303	-	44,50,50	1.35	5 (11%)	51,76,76	3.33	25 (49%)
45	KC2	16	310	-	48,53,53	3.16	22 (45%)	54,89,89	4.38	27 (50%)
32	PHO	d	402	-	51,69,69	1.06	6 (11%)	47,99,99	1.47	7 (14%)
31	CLA	7	315	-	41,49,73	1.81	6 (14%)	47,84,113	1.74	8 (17%)
31	CLA	p	606	-	43,51,73	2.35	14 (32%)	49,86,113	4.31	26 (53%)
36	LHG	B	622	-	42,42,48	0.74	1 (2%)	45,48,54	1.21	4 (8%)
43	A86	10	306	-	44,50,50	1.44	4 (9%)	51,76,76	3.10	19 (37%)
41	HEM	V	201	21	41,50,50	1.48	4 (9%)	45,82,82	1.79	10 (22%)
31	CLA	13	307	-	42,50,73	1.83	5 (11%)	48,85,113	2.02	13 (27%)
31	CLA	18	314	27	43,51,73	1.73	8 (18%)	49,86,113	1.81	9 (18%)
43	A86	7	305	-	44,50,50	1.44	5 (11%)	51,76,76	3.74	23 (45%)
43	A86	14	304	-	44,50,50	1.31	5 (11%)	51,76,76	3.18	23 (45%)
31	CLA	b	609	-	65,73,73	1.42	9 (13%)	76,113,113	1.51	7 (9%)
43	A86	9	305	-	44,50,50	1.58	6 (13%)	51,76,76	5.12	24 (47%)
38	LMG	11	317	-	45,45,55	0.96	2 (4%)	53,53,63	1.25	5 (9%)
43	A86	9	302	-	44,50,50	1.31	4 (9%)	51,76,76	3.02	19 (37%)
43	A86	11	320	-	44,50,50	1.37	3 (6%)	51,76,76	3.74	22 (43%)
43	A86	13	305	-	44,50,50	1.34	4 (9%)	51,76,76	3.10	19 (37%)
45	KC2	18	310	27	48,53,53	3.06	21 (43%)	54,89,89	6.03	35 (64%)
31	CLA	9	308	-	65,73,73	1.42	7 (10%)	76,113,113	1.55	10 (13%)
31	CLA	14	309	-	65,73,73	1.37	7 (10%)	76,113,113	1.61	8 (10%)
31	CLA	A	403	-	65,73,73	1.45	9 (13%)	76,113,113	1.58	10 (13%)
37	BCT	A	412	30	2,3,3	1.38	0	2,3,3	3.94	1 (50%)
43	A86	16	303	-	44,50,50	1.56	6 (13%)	51,76,76	3.53	24 (47%)
31	CLA	7	312	-	47,55,73	1.82	7 (14%)	54,91,113	1.52	8 (14%)
31	CLA	d	401	-	65,73,73	1.41	11 (16%)	76,113,113	1.67	10 (13%)
31	CLA	9	312	43	65,73,73	1.46	7 (10%)	76,113,113	1.54	10 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	17	315	-	41,49,73	1.78	6 (14%)	47,84,113	1.73	8 (17%)
45	KC2	4	310	-	48,53,53	3.11	20 (41%)	54,89,89	5.09	33 (61%)
43	A86	8	305	-	44,50,50	1.43	6 (13%)	51,76,76	3.66	22 (43%)
39	DGD	c	520	34	63,63,67	1.18	10 (15%)	77,77,81	1.58	14 (18%)
31	CLA	B	616	-	65,73,73	1.49	10 (15%)	76,113,113	1.61	13 (17%)
31	CLA	18	307	-	61,69,73	1.55	10 (16%)	71,108,113	1.73	14 (19%)
31	CLA	b	613	-	65,73,73	1.38	8 (12%)	76,113,113	1.73	11 (14%)
31	CLA	14	315	-	43,51,73	1.82	8 (18%)	49,86,113	2.15	11 (22%)
42	KC1	11	314	-	48,53,53	2.95	22 (45%)	55,89,89	5.27	33 (60%)
31	CLA	C	513	-	65,73,73	1.37	8 (12%)	76,113,113	1.56	8 (10%)
43	A86	18	301	-	44,50,50	1.47	5 (11%)	51,76,76	4.91	26 (50%)
43	A86	1	303	-	44,50,50	1.54	7 (15%)	51,76,76	4.68	27 (52%)
43	A86	3	301	-	44,50,50	1.62	9 (20%)	51,76,76	4.06	26 (50%)
43	A86	15	304	-	44,50,50	1.38	5 (11%)	51,76,76	4.51	29 (56%)
31	CLA	14	306	-	61,69,73	1.59	9 (14%)	71,108,113	2.35	19 (26%)
31	CLA	c	514	-	49,57,73	1.59	7 (14%)	55,93,113	1.73	8 (14%)
45	KC2	11	311	-	48,53,53	3.05	20 (41%)	54,89,89	5.04	33 (61%)
31	CLA	w	203	-	65,73,73	1.47	9 (13%)	76,113,113	1.63	13 (17%)
31	CLA	C	508	-	65,73,73	1.45	10 (15%)	76,113,113	1.55	10 (13%)
31	CLA	12	315	-	41,49,73	1.82	6 (14%)	47,84,113	1.71	7 (14%)
38	LMG	D	408	4	37,37,55	0.90	1 (2%)	45,45,63	1.36	6 (13%)
45	KC2	8	310	-	48,53,53	3.06	21 (43%)	54,89,89	6.00	34 (62%)
31	CLA	3	315	-	44,52,73	1.78	6 (13%)	49,87,113	1.66	8 (16%)
31	CLA	10	312	34,26	46,54,73	1.75	6 (13%)	53,90,113	2.00	11 (20%)
42	KC1	19	314	-	48,53,53	3.13	22 (45%)	55,89,89	5.05	36 (65%)
33	BCR	B	617	-	41,41,41	1.21	2 (4%)	56,56,56	1.38	10 (17%)
43	A86	19	305	-	44,50,50	1.54	6 (13%)	51,76,76	5.10	23 (45%)
42	KC1	10	315	-	48,53,53	2.80	17 (35%)	55,89,89	6.30	37 (67%)
43	A86	18	304	-	44,50,50	1.44	6 (13%)	51,76,76	4.00	22 (43%)
43	A86	3	304	-	44,50,50	1.58	7 (15%)	51,76,76	2.99	21 (41%)
43	A86	17	304	-	44,50,50	1.33	4 (9%)	51,76,76	3.13	13 (25%)
31	CLA	14	307	-	65,73,73	1.42	8 (12%)	76,113,113	1.44	8 (10%)
31	CLA	P	603	-	50,58,73	1.61	9 (18%)	58,95,113	1.67	11 (18%)
39	DGD	C	520	34	63,63,67	1.18	10 (15%)	77,77,81	1.58	13 (16%)
45	KC2	2	308	-	48,53,53	3.22	21 (43%)	54,89,89	4.44	26 (48%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
43	A86	9	303	-	44,50,50	1.29	4 (9%)	51,76,76	3.20	21 (41%)
31	CLA	12	310	-	43,51,73	1.74	6 (13%)	49,86,113	1.76	7 (14%)
31	CLA	19	310	-	65,73,73	1.46	5 (7%)	76,113,113	1.54	7 (9%)
34	SQD	10	320	31	40,41,54	1.12	6 (15%)	49,52,65	1.73	10 (20%)
38	LMG	m	101	-	40,40,55	0.95	1 (2%)	48,48,63	1.34	3 (6%)
43	A86	4	303	-	44,50,50	1.40	7 (15%)	51,76,76	2.98	18 (35%)
31	CLA	17	313	27	50,58,73	1.97	9 (18%)	58,95,113	1.92	15 (25%)
43	A86	1	302	-	44,50,50	1.29	3 (6%)	51,76,76	4.93	31 (60%)
31	CLA	10	307	-	48,56,73	1.76	9 (18%)	55,92,113	1.92	13 (23%)
31	CLA	C	514	-	49,57,73	1.59	7 (14%)	55,93,113	1.74	8 (14%)
45	KC2	13	311	-	48,53,53	3.23	21 (43%)	54,89,89	4.39	28 (51%)
31	CLA	b	603	-	65,73,73	1.45	11 (16%)	76,113,113	1.65	13 (17%)
34	SQD	A	411	-	39,40,54	1.10	5 (12%)	48,51,65	2.01	12 (25%)
31	CLA	5	307	-	65,73,73	1.40	8 (12%)	76,113,113	1.42	9 (11%)
31	CLA	b	608	-	65,73,73	1.52	11 (16%)	76,113,113	1.49	8 (10%)
42	KC1	5	313	-	48,53,53	3.04	20 (41%)	55,89,89	5.55	33 (60%)
31	CLA	B	608	-	65,73,73	1.41	9 (13%)	76,113,113	1.52	7 (9%)
31	CLA	B	615	-	65,73,73	1.48	10 (15%)	76,113,113	1.61	11 (14%)
43	A86	5	301	31	44,50,50	1.50	5 (11%)	51,76,76	4.25	27 (52%)
31	CLA	5	311	-	45,53,73	1.76	10 (22%)	52,89,113	1.88	12 (23%)
42	KC1	p	609	-	48,53,53	2.91	20 (41%)	55,89,89	4.84	34 (61%)
31	CLA	0	312	34,26	46,54,73	1.76	6 (13%)	53,90,113	2.02	12 (22%)
31	CLA	7	313	-	50,58,73	1.93	10 (20%)	58,95,113	1.94	14 (24%)
31	CLA	c	503	31	65,73,73	1.53	11 (16%)	76,113,113	2.38	19 (25%)
33	BCR	b	619	-	41,41,41	1.10	2 (4%)	56,56,56	1.46	11 (19%)
31	CLA	14	311	-	46,54,73	1.72	8 (17%)	53,90,113	1.85	11 (20%)
43	A86	16	304	43	44,50,50	1.44	5 (11%)	51,76,76	5.37	24 (47%)
31	CLA	c	512	3	65,73,73	1.47	9 (13%)	76,113,113	1.60	10 (13%)
31	CLA	4	312	27	51,59,73	1.79	10 (19%)	59,96,113	2.13	16 (27%)
42	KC1	16	315	27	48,53,53	3.17	20 (41%)	55,89,89	6.94	34 (61%)
38	LMG	15	314	-	37,37,55	0.98	3 (8%)	45,45,63	1.13	2 (4%)
31	CLA	z	101	-	51,59,73	1.62	9 (17%)	59,96,113	1.57	8 (13%)
38	LMG	5	315	-	37,37,55	1.00	4 (10%)	45,45,63	1.17	3 (6%)
31	CLA	19	308	-	65,73,73	1.43	7 (10%)	76,113,113	1.57	11 (14%)
43	A86	7	301	-	44,50,50	1.42	5 (11%)	51,76,76	3.49	24 (47%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
43	A86	11	306	-	44,50,50	1.77	8 (18%)	51,76,76	5.16	25 (49%)
31	CLA	1	307	-	43,51,73	1.71	7 (16%)	49,86,113	2.17	15 (30%)
31	CLA	P	607	43	43,51,73	1.74	10 (23%)	49,86,113	1.82	12 (24%)
39	DGD	W	203	-	57,57,67	1.15	8 (14%)	71,71,81	1.48	10 (14%)
31	CLA	11	307	27	43,51,73	1.74	7 (16%)	49,86,113	2.52	18 (36%)
42	KC1	14	313	27	48,53,53	2.88	21 (43%)	55,89,89	5.93	38 (69%)
31	CLA	12	313	-	48,56,73	1.95	10 (20%)	55,92,113	1.56	13 (23%)
33	BCR	B	618	-	41,41,41	1.11	2 (4%)	56,56,56	1.47	9 (16%)
45	KC2	14	308	-	48,53,53	3.10	21 (43%)	54,89,89	5.42	29 (53%)
31	CLA	16	313	-	47,55,73	1.78	8 (17%)	54,91,113	1.51	8 (14%)
31	CLA	B	605	-	65,73,73	1.51	12 (18%)	76,113,113	1.54	7 (9%)
31	CLA	B	612	-	65,73,73	1.39	8 (12%)	76,113,113	1.74	11 (14%)
44	DD6	p	612	-	39,45,45	2.20	6 (15%)	52,67,67	3.59	26 (50%)
31	CLA	C	510	-	65,73,73	1.42	8 (12%)	76,113,113	1.73	11 (14%)
43	A86	1	306	-	44,50,50	1.42	7 (15%)	51,76,76	4.32	25 (49%)
33	BCR	c	516	-	41,41,41	1.24	5 (12%)	56,56,56	1.35	8 (14%)
33	BCR	F	101	-	41,41,41	1.17	3 (7%)	56,56,56	1.42	8 (14%)
31	CLA	a	406	-	60,68,73	1.42	9 (15%)	70,107,113	1.54	7 (10%)
43	A86	10	318	-	44,50,50	1.47	8 (18%)	51,76,76	3.64	24 (47%)
31	CLA	b	602	-	65,73,73	1.47	10 (15%)	76,113,113	1.48	9 (11%)
43	A86	12	301	-	44,50,50	1.36	4 (9%)	51,76,76	4.70	26 (50%)
42	KC1	12	314	-	48,53,53	2.99	19 (39%)	55,89,89	4.98	34 (61%)
31	CLA	13	313	-	65,73,73	1.66	11 (16%)	76,113,113	1.57	15 (19%)
43	A86	14	303	-	44,50,50	1.29	4 (9%)	51,76,76	3.02	20 (39%)
35	PL9	A	409	-	33,33,55	1.29	5 (15%)	41,42,69	1.47	6 (14%)
43	A86	2	305	31	44,50,50	1.46	4 (9%)	51,76,76	3.76	24 (47%)
31	CLA	0	314	-	47,55,73	1.75	9 (19%)	54,91,113	1.71	14 (25%)
43	A86	15	302	-	44,50,50	1.47	5 (11%)	51,76,76	4.46	29 (56%)
43	A86	17	316	-	44,50,50	1.62	7 (15%)	51,76,76	4.91	33 (64%)
38	LMG	f	102	-	46,46,55	0.96	4 (8%)	54,54,63	1.49	9 (16%)
37	BCT	a	411	30	2,3,3	1.38	0	2,3,3	3.94	1 (50%)
38	LMG	D	403	4	40,40,55	1.10	4 (10%)	48,48,63	1.52	7 (14%)
31	CLA	15	309	-	55,63,73	1.52	7 (12%)	64,101,113	1.77	10 (15%)
31	CLA	9	310	-	65,73,73	1.45	5 (7%)	76,113,113	1.54	7 (9%)
43	A86	14	305	-	44,50,50	1.48	8 (18%)	51,76,76	4.18	29 (56%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	CLA	11	313	-	65,73,73	1.60	10 (15%)	76,113,113	1.55	14 (18%)
31	CLA	2	307	-	65,73,73	1.45	10 (15%)	76,113,113	1.64	11 (14%)
38	LMG	M	101	-	40,40,55	0.88	1 (2%)	48,48,63	1.31	5 (10%)
41	HEM	e	101	5,6	41,50,50	1.54	5 (12%)	45,82,82	1.31	7 (15%)
43	A86	9	301	-	44,50,50	1.30	3 (6%)	51,76,76	4.38	25 (49%)
38	LMG	n	701	14	28,28,55	1.11	4 (14%)	36,36,63	1.32	6 (16%)
36	LHG	14	317	-	34,34,48	0.71	1 (2%)	37,40,54	1.27	4 (10%)
38	LMG	4	316	-	49,49,55	0.82	1 (2%)	57,57,63	1.45	13 (22%)
43	A86	4	301	-	44,50,50	1.31	4 (9%)	51,76,76	3.65	22 (43%)
43	A86	11	305	-	44,50,50	1.44	5 (11%)	51,76,76	3.87	34 (66%)
31	CLA	5	314	-	41,49,73	1.85	7 (17%)	47,84,113	1.67	8 (17%)
31	CLA	2	314	-	41,49,73	1.82	6 (14%)	47,84,113	1.78	10 (21%)
38	LMG	J	101	-	50,50,55	0.95	3 (6%)	58,58,63	1.32	4 (6%)
31	CLA	d	404	-	65,73,73	1.57	11 (16%)	76,113,113	1.65	12 (15%)
34	SQD	a	408	39	53,54,54	0.96	6 (11%)	62,65,65	1.56	12 (19%)
31	CLA	14	312	-	51,59,73	1.85	10 (19%)	59,96,113	1.86	14 (23%)
45	KC2	6	312	27	48,53,53	3.18	21 (43%)	54,89,89	5.61	36 (66%)
31	CLA	P	604	-	48,56,73	1.66	8 (16%)	55,92,113	1.76	10 (18%)
43	A86	16	305	-	44,50,50	1.35	6 (13%)	51,76,76	3.49	24 (47%)
43	A86	P	611	-	44,50,50	1.87	10 (22%)	51,76,76	6.02	30 (58%)
36	LHG	18	315	-	38,38,48	0.68	0	41,44,54	1.27	4 (9%)
38	LMG	j	101	-	50,50,55	0.95	3 (6%)	58,58,63	1.32	4 (6%)
38	LMG	14	316	-	49,49,55	0.79	0	57,57,63	1.41	11 (19%)
31	CLA	p	610	-	41,49,73	1.75	8 (19%)	47,84,113	1.91	9 (19%)
31	CLA	b	611	-	65,73,73	1.47	9 (13%)	76,113,113	1.49	10 (13%)
36	LHG	C	521	-	39,39,48	0.67	1 (2%)	42,45,54	1.22	4 (9%)
31	CLA	1	321	-	61,69,73	1.47	8 (13%)	71,108,113	2.32	20 (28%)
38	LMG	d	408	4	37,37,55	0.90	2 (5%)	45,45,63	1.36	6 (13%)
31	CLA	B	610	-	65,73,73	1.46	9 (13%)	76,113,113	1.49	11 (14%)
43	A86	8	301	-	44,50,50	1.74	7 (15%)	51,76,76	4.70	35 (68%)
31	CLA	11	315	-	41,49,73	1.85	7 (17%)	47,84,113	2.06	13 (27%)
43	A86	17	305	-	44,50,50	1.73	9 (20%)	51,76,76	5.58	24 (47%)
31	CLA	16	308	-	42,50,73	1.81	5 (11%)	48,85,113	2.18	14 (29%)
43	A86	0	301	-	44,50,50	1.37	5 (11%)	51,76,76	4.30	27 (52%)
45	KC2	12	309	-	48,53,53	3.14	19 (39%)	54,89,89	5.10	35 (64%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
43	A86	10	301	-	44,50,50	1.39	5 (11%)	51,76,76	4.35	28 (54%)
43	A86	6	306	31	44,50,50	1.45	4 (9%)	51,76,76	3.79	22 (43%)
43	A86	1	305	-	44,50,50	1.55	6 (13%)	51,76,76	3.97	34 (66%)
31	CLA	19	312	43	65,73,73	1.45	7 (10%)	76,113,113	1.52	11 (14%)
43	A86	11	302	-	44,50,50	1.48	6 (13%)	51,76,76	5.53	30 (58%)
45	KC2	3	309	-	48,53,53	3.19	22 (45%)	54,89,89	4.78	31 (57%)
31	CLA	13	308	-	43,51,73	1.76	8 (18%)	49,86,113	1.85	9 (18%)
36	LHG	p	615	-	26,26,48	0.87	1 (3%)	29,32,54	1.35	3 (10%)
43	A86	17	303	-	44,50,50	1.41	6 (13%)	51,76,76	3.72	22 (43%)
31	CLA	1	312	-	46,54,73	1.77	10 (21%)	53,90,113	1.67	11 (20%)
45	KC2	9	309	-	48,53,53	3.11	20 (41%)	54,89,89	5.41	34 (62%)
45	KC2	4	308	-	48,53,53	3.10	20 (41%)	54,89,89	5.40	29 (53%)
31	CLA	c	510	-	65,73,73	1.42	8 (12%)	76,113,113	1.72	11 (14%)
45	KC2	0	310	26	48,53,53	2.89	21 (43%)	54,89,89	4.92	32 (59%)
42	KC1	6	315	27	48,53,53	3.18	22 (45%)	55,89,89	7.31	35 (63%)
31	CLA	11	308	-	65,73,73	1.47	8 (12%)	76,113,113	1.71	13 (17%)
45	KC2	10	310	26	48,53,53	2.86	20 (41%)	54,89,89	5.12	33 (61%)
31	CLA	b	605	-	65,73,73	1.63	12 (18%)	76,113,113	2.35	17 (22%)
31	CLA	1	316	43	42,50,73	1.86	8 (19%)	48,85,113	1.68	7 (14%)
31	CLA	P	605	16	41,49,73	1.81	7 (17%)	47,84,113	1.82	13 (27%)
45	KC2	3	311	-	48,53,53	3.17	21 (43%)	54,89,89	5.63	34 (62%)
35	PL9	d	406	-	55,55,55	2.04	15 (27%)	68,69,69	1.42	12 (17%)
31	CLA	8	312	-	55,63,73	1.78	11 (20%)	64,101,113	1.86	18 (28%)
31	CLA	6	313	-	47,55,73	1.76	8 (17%)	54,91,113	1.54	8 (14%)
31	CLA	1	315	27	41,49,73	1.87	6 (14%)	47,84,113	1.70	6 (12%)
31	CLA	6	309	-	65,73,73	1.46	10 (15%)	76,113,113	1.55	10 (13%)
43	A86	6	305	43	44,50,50	1.73	10 (22%)	51,76,76	5.46	30 (58%)
31	CLA	c	505	-	65,73,73	1.44	12 (18%)	76,113,113	1.72	12 (15%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	LMG	N	101	14	-	6/23/43/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	b	617	-	1/1/15/20	15/37/115/115	-
31	CLA	8	314	-	1/1/10/20	2/11/89/115	-
31	CLA	15	307	-	1/1/15/20	17/37/115/115	-
36	LHG	15	316	-	-	15/29/29/53	-
33	BCR	b	620	-	-	12/29/63/63	0/2/2/2
43	A86	8	302	-	-	8/34/90/90	0/3/3/3
43	A86	2	301	-	-	10/34/90/90	0/3/3/3
31	CLA	4	314	-	1/1/10/20	5/11/89/115	-
36	LHG	w	202	-	-	20/44/44/53	-
43	A86	13	306	43	-	9/34/90/90	0/3/3/3
43	A86	p	611	-	-	7/34/90/90	1/3/3/3
43	A86	10	303	-	-	7/34/90/90	0/3/3/3
31	CLA	11	310	-	1/1/12/20	5/19/97/115	-
31	CLA	6	316	-	1/1/10/20	4/11/89/115	-
35	PL9	D	406	-	-	9/53/73/73	0/1/1/1
31	CLA	2	306	-	1/1/10/20	4/10/88/115	-
38	LMG	k	101	-	-	23/41/61/70	0/1/1/1
31	CLA	15	306	-	1/1/10/20	4/10/88/115	-
31	CLA	C	512	3	1/1/15/20	6/37/115/115	-
33	BCR	C	516	-	-	9/29/63/63	0/2/2/2
31	CLA	P	606	-	1/1/10/20	6/11/89/115	-
31	CLA	18	309	-	1/1/12/20	7/22/100/115	-
31	CLA	10	317	-	1/1/11/20	5/17/95/115	-
45	KC2	12	311	-	-	8/15/71/71	-
43	A86	13	302	-	-	8/34/90/90	0/3/3/3
31	CLA	6	308	-	1/1/10/20	5/10/88/115	-
43	A86	19	302	-	-	8/34/90/90	0/3/3/3
31	CLA	6	311	-	1/1/10/20	3/8/86/115	-
45	KC2	18	308	-	-	10/15/71/71	-
31	CLA	R	101	-	1/1/11/20	4/16/94/115	-
31	CLA	1	313	-	1/1/15/20	14/37/115/115	-
33	BCR	a	407	-	-	8/29/63/63	0/2/2/2
31	CLA	B	611	-	1/1/15/20	12/37/115/115	-
36	LHG	4	317	-	-	18/38/38/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	c	504	31	1/1/15/20	23/37/115/115	-
45	KC2	6	310	-	-	10/15/71/71	-
31	CLA	3	307	-	1/1/10/20	5/10/88/115	-
31	CLA	15	311	27	1/1/11/20	5/13/91/115	-
31	CLA	C	502	-	1/1/15/20	13/37/115/115	-
43	A86	12	302	-	-	7/34/90/90	0/3/3/3
43	A86	14	301	-	-	14/34/90/90	0/3/3/3
31	CLA	18	306	42	1/1/12/20	8/19/97/115	-
42	KC1	3	314	27	-	1/15/71/71	-
38	LMG	F	102	-	-	14/41/61/70	0/1/1/1
43	A86	18	302	-	-	8/34/90/90	0/3/3/3
31	CLA	B	604	-	1/1/15/20	14/37/115/115	-
31	CLA	0	311	-	1/1/13/20	6/25/103/115	-
34	SQD	l	101	-	-	25/49/69/69	0/1/1/1
31	CLA	14	314	-	1/1/10/20	5/11/89/115	-
31	CLA	b	614	-	1/1/15/20	10/37/115/115	-
31	CLA	11	312	27	1/1/11/20	7/15/93/115	-
31	CLA	13	312	-	1/1/11/20	6/13/91/115	-
31	CLA	12	307	-	1/1/10/20	1/10/88/115	-
31	CLA	19	307	-	1/1/14/20	10/33/111/115	-
43	A86	5	304	-	-	11/34/90/90	0/3/3/3
43	A86	6	303	-	-	9/34/90/90	0/3/3/3
31	CLA	C	506	-	1/1/15/20	12/37/115/115	-
43	A86	3	306	-	-	8/34/90/90	0/3/3/3
43	A86	19	301	-	-	8/34/90/90	0/3/3/3
31	CLA	5	309	-	1/1/13/20	11/25/103/115	-
34	SQD	L	102	-	-	22/49/69/69	0/1/1/1
31	CLA	15	313	-	1/1/10/20	0/8/86/115	-
43	A86	9	304	-	-	7/34/90/90	0/3/3/3
31	CLA	D	405	-	1/1/15/20	11/37/115/115	-
36	LHG	l	102	-	-	22/53/53/53	-
43	A86	15	305	27	-	6/34/90/90	0/3/3/3
31	CLA	p	602	-	1/1/15/20	14/37/115/115	-
31	CLA	C	504	31	1/1/15/20	23/37/115/115	-
33	BCR	A	407	-	-	8/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	B	602	-	1/1/15/20	17/37/115/115	-
38	LMG	K	101	-	-	23/41/61/70	0/1/1/1
45	KC2	7	309	-	-	10/15/71/71	-
31	CLA	P	602	-	1/1/15/20	13/37/115/115	-
32	PHO	D	402	-	-	6/37/103/103	0/5/6/6
43	A86	p	613	31	-	8/34/90/90	1/3/3/3
33	BCR	h	101	-	-	10/29/63/63	0/2/2/2
38	LMG	15	315	-	-	18/31/51/70	0/1/1/1
31	CLA	8	307	-	1/1/14/20	8/33/111/115	-
36	LHG	8	316	-	-	20/34/34/53	-
43	A86	4	304	-	-	9/34/90/90	0/3/3/3
42	KC1	17	314	27	-	2/15/71/71	-
38	LMG	1	301	-	-	14/31/51/70	0/1/1/1
31	CLA	18	311	27	-	6/15/93/115	-
45	KC2	7	311	27	-	6/15/71/71	-
31	CLA	C	507	-	1/1/15/20	16/37/115/115	-
36	LHG	a	410	1	-	17/41/41/53	-
43	A86	4	302	-	-	7/34/90/90	0/3/3/3
36	LHG	d	407	-	-	28/53/53/53	-
43	A86	5	318	42	-	10/34/90/90	0/3/3/3
38	LMG	W	201	-	-	25/43/63/70	0/1/1/1
43	A86	12	304	-	-	7/34/90/90	0/3/3/3
43	A86	13	304	-	-	8/34/90/90	0/3/3/3
31	CLA	A	406	-	1/1/14/20	5/31/109/115	-
31	CLA	17	310	-	1/1/11/20	6/13/91/115	-
39	DGD	w	204	-	-	28/45/85/95	0/2/2/2
31	CLA	7	308	-	-	1/8/86/115	-
31	CLA	9	311	43	1/1/11/20	6/15/93/115	-
31	CLA	B	609	-	-	12/37/115/115	-
43	A86	0	303	-	-	7/34/90/90	0/3/3/3
31	CLA	3	316	-	-	15/37/115/115	-
43	A86	12	305	-	-	8/34/90/90	0/3/3/3
45	KC2	5	308	-	-	7/15/71/71	-
39	DGD	C	519	-	-	27/51/91/95	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	C	503	31	1/1/15/20	11/37/115/115	-
42	KC1	8	313	31,43	-	3/15/71/71	-
31	CLA	3	313	-	1/1/15/20	17/37/115/115	-
31	CLA	4	309	-	1/1/15/20	20/37/115/115	-
33	BCR	H	101	-	-	10/29/63/63	0/2/2/2
31	CLA	0	309	-	-	15/30/108/115	-
31	CLA	0	307	-	1/1/11/20	4/17/95/115	-
31	CLA	Z	101	-	1/1/12/20	6/21/99/115	-
39	DGD	c	518	-	-	22/44/84/95	0/2/2/2
42	KC1	13	314	-	-	4/15/71/71	-
43	A86	4	306	-	-	7/34/90/90	1/3/3/3
43	A86	7	304	-	-	9/34/90/90	0/3/3/3
31	CLA	3	308	-	1/1/10/20	2/11/89/115	-
31	CLA	12	312	-	1/1/11/20	6/13/91/115	-
34	SQD	A	408	39	-	23/49/69/69	0/1/1/1
39	DGD	B	621	-	-	31/43/83/95	0/2/2/2
42	KC1	P	609	-	-	8/15/71/71	-
31	CLA	17	308	-	-	1/8/86/115	-
39	DGD	b	622	34	-	28/44/84/95	0/2/2/2
39	DGD	C	518	-	-	22/44/84/95	0/2/2/2
31	CLA	9	315	-	1/1/10/20	2/8/86/115	-
39	DGD	1	318	-	-	27/43/83/95	0/2/2/2
31	CLA	b	615	-	1/1/15/20	21/37/115/115	-
43	A86	6	301	43	-	9/34/90/90	0/3/3/3
43	A86	17	306	-	-	8/34/90/90	0/3/3/3
43	A86	5	305	-	-	6/34/90/90	0/3/3/3
31	CLA	19	315	-	1/1/10/20	2/8/86/115	-
31	CLA	10	314	-	1/1/11/20	4/16/94/115	-
31	CLA	C	511	-	1/1/15/20	20/37/115/115	-
31	CLA	12	316	-	1/1/11/20	5/15/93/115	-
43	A86	7	306	-	-	7/34/90/90	0/3/3/3
31	CLA	a	403	-	1/1/15/20	10/37/115/115	-
31	CLA	11	316	43	1/1/10/20	0/8/86/115	-
34	SQD	b	601	39	-	25/49/69/69	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	15	312	-	-	6/16/94/115	-
31	CLA	12	308	-	1/1/15/20	15/37/115/115	-
31	CLA	P	610	-	1/1/10/20	2/8/86/115	-
31	CLA	16	309	-	1/1/15/20	13/37/115/115	-
43	A86	16	302	43	-	10/34/90/90	0/3/3/3
44	DD6	P	612	-	-	7/26/80/80	0/3/3/3
33	BCR	c	515	-	-	14/29/63/63	0/2/2/2
31	CLA	b	606	-	1/1/15/20	10/37/115/115	-
32	PHO	a	405	-	-	14/37/103/103	0/5/6/6
33	BCR	b	618	-	-	13/29/63/63	0/2/2/2
43	A86	18	305	-	-	12/34/90/90	0/3/3/3
36	LHG	z	102	-	-	16/29/29/53	-
42	KC1	7	314	27	-	2/15/71/71	-
45	KC2	5	310	27	-	7/15/71/71	-
42	KC1	9	314	-	-	5/15/71/71	-
43	A86	3	303	-	-	9/34/90/90	0/3/3/3
31	CLA	10	316	-	1/1/11/20	4/15/93/115	-
43	A86	0	304	-	-	6/34/90/90	0/3/3/3
31	CLA	P	601	16	1/1/15/20	22/37/115/115	-
38	LMG	0	317	-	-	7/26/46/70	0/1/1/1
33	BCR	f	101	-	-	19/29/63/63	0/2/2/2
38	LMG	P	614	-	-	11/26/46/70	0/1/1/1
31	CLA	p	603	-	1/1/12/20	8/19/97/115	-
33	BCR	c	517	-	-	10/29/63/63	0/2/2/2
43	A86	12	303	-	-	5/34/90/90	0/3/3/3
45	KC2	14	310	-	-	6/15/71/71	-
31	CLA	c	502	-	1/1/15/20	13/37/115/115	-
43	A86	4	305	-	-	8/34/90/90	0/3/3/3
38	LMG	c	522	-	-	10/26/46/70	0/1/1/1
42	KC1	4	313	-	-	9/15/71/71	-
38	LMG	w	201	-	-	25/43/63/70	0/1/1/1
38	LMG	Z	102	-	-	10/26/46/70	0/1/1/1
31	CLA	3	310	-	1/1/10/20	3/8/86/115	-
31	CLA	z	103	-	1/1/11/20	5/17/95/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	A	404	-	1/1/11/20	5/18/96/115	-
36	LHG	A	410	1	-	17/41/41/53	-
31	CLA	19	313	-	1/1/15/20	11/37/115/115	-
31	CLA	6	314	-	1/1/10/20	3/10/88/115	-
43	A86	15	301	31	-	6/34/90/90	0/3/3/3
31	CLA	C	509	-	1/1/15/20	11/37/115/115	-
36	LHG	5	317	-	-	15/29/29/53	-
31	CLA	p	604	-	1/1/11/20	5/17/95/115	-
33	BCR	C	515	-	-	14/29/63/63	0/2/2/2
43	A86	13	301	-	-	6/34/90/90	0/3/3/3
31	CLA	B	606	-	1/1/15/20	10/37/115/115	-
43	A86	12	306	-	-	9/34/90/90	0/3/3/3
31	CLA	4	315	-	1/1/10/20	7/11/89/115	-
31	CLA	b	604	-	1/1/15/20	14/37/115/115	-
43	A86	5	303	-	-	8/34/90/90	0/3/3/3
43	A86	3	302	-	-	6/34/90/90	0/3/3/3
39	DGD	H	102	-	-	29/51/91/95	0/2/2/2
45	KC2	13	309	-	-	10/15/71/71	-
43	A86	6	302	-	-	8/34/90/90	0/3/3/3
31	CLA	b	610	-	-	12/37/115/115	-
31	CLA	19	311	43	1/1/11/20	4/15/93/115	-
45	KC2	19	309	-	-	4/15/71/71	-
43	A86	10	302	-	-	7/34/90/90	0/3/3/3
43	A86	1	319	-	-	8/34/90/90	0/3/3/3
31	CLA	8	309	-	1/1/12/20	7/22/100/115	-
31	CLA	c	513	-	1/1/15/20	18/37/115/115	-
31	CLA	p	607	43	1/1/10/20	3/11/89/115	-
36	LHG	b	623	-	-	15/47/47/53	-
31	CLA	13	316	-	-	14/37/115/115	-
38	LMG	B	620	-	-	26/46/66/70	0/1/1/1
31	CLA	13	315	-	-	2/11/90/115	-
31	CLA	4	311	-	1/1/11/20	8/15/93/115	-
43	A86	11	303	-	-	9/34/90/90	0/3/3/3
43	A86	2	304	-	-	6/34/90/90	1/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
45	KC2	16	312	-	-	6/15/71/71	-
36	LHG	P	615	-	-	14/31/31/53	-
45	KC2	17	309	-	-	10/15/71/71	-
31	CLA	4	307	-	1/1/15/20	16/37/115/115	-
33	BCR	C	517	-	-	10/29/63/63	0/2/2/2
31	CLA	2	309	-	1/1/10/20	6/11/89/115	-
41	HEM	E	101	5,6	-	5/12/54/54	-
43	A86	2	302	-	-	10/34/90/90	0/3/3/3
31	CLA	B	603	-	1/1/15/20	15/37/115/115	-
38	LMG	C	522	-	-	25/46/66/70	0/1/1/1
39	DGD	11	318	-	-	33/49/89/95	0/2/2/2
45	KC2	1	309	-	-	9/15/71/71	-
43	A86	8	303	-	-	9/34/90/90	0/3/3/3
31	CLA	c	506	-	1/1/15/20	12/37/115/115	-
31	CLA	17	312	-	1/1/11/20	5/16/94/115	-
38	LMG	5	316	-	-	17/31/51/70	0/1/1/1
43	A86	16	306	43	-	8/34/90/90	0/3/3/3
31	CLA	D	404	-	1/1/15/20	12/37/115/115	-
43	A86	18	303	-	-	12/34/90/90	0/3/3/3
36	LHG	8	315	-	-	23/43/43/53	-
31	CLA	p	605	16	1/1/10/20	3/8/86/115	-
42	KC1	16	301	27	-	0/15/71/71	-
31	CLA	c	507	-	1/1/15/20	16/37/115/115	-
36	LHG	18	316	-	-	23/34/34/53	-
31	CLA	13	310	-	1/1/10/20	2/8/86/115	-
36	LHG	Z	103	-	-	16/29/29/53	-
45	KC2	1	311	-	-	4/15/71/71	-
45	KC2	15	308	-	-	7/15/71/71	-
43	A86	7	303	-	-	8/34/90/90	0/3/3/3
41	HEM	v	201	21	-	8/12/54/54	-
31	CLA	a	404	-	1/1/11/20	5/18/96/115	-
43	A86	16	307	31	-	8/34/90/90	0/3/3/3
43	A86	13	303	-	-	6/34/90/90	0/3/3/3
31	CLA	10	311	-	1/1/13/20	6/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
43	A86	19	303	-	-	7/34/90/90	0/3/3/3
43	A86	11	304	31	-	8/34/90/90	0/3/3/3
39	DGD	c	519	-	-	27/51/91/95	0/2/2/2
31	CLA	D	401	-	1/1/15/20	9/37/115/115	-
31	CLA	c	511	-	1/1/15/20	20/37/115/115	-
43	A86	19	304	-	-	7/34/90/90	0/3/3/3
38	LMG	b	621	-	-	26/46/66/70	0/1/1/1
31	CLA	3	312	-	-	4/13/91/115	-
31	CLA	C	505	-	1/1/15/20	8/37/115/115	-
31	CLA	0	313	-	1/1/10/20	4/10/88/115	-
43	A86	10	304	-	-	6/34/90/90	0/3/3/3
42	KC1	18	313	31,27	-	3/15/71/71	-
31	CLA	10	313	26	1/1/10/20	4/10/88/115	-
31	CLA	1	310	-	1/1/12/20	4/19/97/115	-
31	CLA	2	315	43	-	7/15/93/115	-
43	A86	1	320	-	-	8/34/90/90	0/3/3/3
35	PL9	a	409	-	-	15/27/47/73	0/1/1/1
43	A86	0	305	-	-	9/34/90/90	0/3/3/3
43	A86	0	302	26	-	8/34/90/90	0/3/3/3
31	CLA	5	306	-	1/1/10/20	3/10/88/115	-
43	A86	3	305	-	-	10/34/90/90	0/3/3/3
45	KC2	2	310	-	-	8/15/71/71	-
43	A86	19	306	-	-	8/34/90/90	0/3/3/3
38	LMG	1	317	-	-	26/40/60/70	0/1/1/1
43	A86	7	302	-	-	10/34/90/90	0/3/3/3
43	A86	10	305	-	-	9/34/90/90	0/3/3/3
34	SQD	0	318	31	-	22/36/56/69	0/1/1/1
38	LMG	c	521	-	-	25/46/66/70	0/1/1/1
45	KC2	8	308	-	-	10/15/71/71	-
43	A86	8	304	-	-	8/34/90/90	0/3/3/3
31	CLA	1	308	-	-	15/37/115/115	-
43	A86	P	613	31	-	8/34/90/90	1/3/3/3
43	A86	9	306	-	-	8/34/90/90	0/3/3/3
43	A86	6	307	-	-	13/34/90/90	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	0	316	-	1/1/11/20	5/15/93/115	-
33	BCR	B	619	-	-	12/29/63/63	0/2/2/2
43	A86	17	302	-	-	6/34/90/90	0/3/3/3
31	CLA	8	306	42	1/1/12/20	5/19/97/115	-
42	KC1	2	313	27	-	4/15/71/71	-
31	CLA	7	310	-	1/1/11/20	6/13/91/115	-
42	KC1	1	314	-	-	7/15/71/71	-
31	CLA	16	314	-	1/1/10/20	3/10/88/115	-
45	KC2	11	309	-	-	10/15/71/71	-
31	CLA	d	405	-	1/1/15/20	11/37/115/115	-
38	LMG	p	614	-	-	11/26/46/70	0/1/1/1
31	CLA	7	307	-	1/1/10/20	4/8/86/115	-
31	CLA	c	509	-	1/1/15/20	11/37/115/115	-
31	CLA	r	101	-	1/1/11/20	4/16/94/115	-
31	CLA	9	307	-	1/1/14/20	10/33/111/115	-
43	A86	6	304	-	-	7/34/90/90	0/3/3/3
31	CLA	0	308	-	1/1/12/20	8/19/97/115	-
31	CLA	10	308	-	1/1/12/20	9/19/97/115	-
43	A86	1	304	31	-	6/34/90/90	0/3/3/3
43	A86	5	302	-	-	8/34/90/90	0/3/3/3
31	CLA	B	613	-	1/1/15/20	10/37/115/115	-
43	A86	15	303	-	-	8/34/90/90	0/3/3/3
31	CLA	W	202	-	1/1/15/20	17/37/115/115	-
31	CLA	8	311	-	-	7/15/93/115	-
43	A86	0	306	-	-	7/34/90/90	0/3/3/3
31	CLA	16	316	-	1/1/10/20	4/11/89/115	-
45	KC2	15	310	27	-	7/15/71/71	-
31	CLA	17	307	-	1/1/10/20	4/8/86/115	-
31	CLA	9	313	-	1/1/15/20	11/37/115/115	-
33	BCR	Y	101	-	-	13/29/63/63	0/2/2/2
31	CLA	b	607	-	1/1/15/20	10/37/115/115	-
43	A86	17	301	-	-	10/34/90/90	0/3/3/3
31	CLA	B	607	-	1/1/15/20	16/37/115/115	-
31	CLA	p	608	16	1/1/12/20	5/21/99/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	2	311	-	-	5/13/91/115	-
38	LMG	10	319	-	-	8/26/46/70	0/1/1/1
36	LHG	L	101	-	-	22/53/53/53	-
38	LMG	11	301	-	-	14/31/51/70	0/1/1/1
31	CLA	18	312	27	1/1/13/20	8/25/103/115	-
33	BCR	y	101	-	-	13/29/63/63	0/2/2/2
43	A86	14	302	43	-	7/34/90/90	0/3/3/3
31	CLA	p	601	16	1/1/15/20	22/37/115/115	-
43	A86	11	319	-	-	6/34/90/90	0/3/3/3
31	CLA	5	312	-	-	4/16/94/115	-
31	CLA	2	312	-	-	10/17/95/115	-
42	KC1	0	315	-	-	4/15/71/71	-
31	CLA	B	601	-	1/1/15/20	20/37/115/115	-
31	CLA	P	608	16	1/1/12/20	5/21/99/115	-
36	LHG	D	407	-	-	28/53/53/53	-
45	KC2	17	311	27	-	6/15/71/71	-
31	CLA	b	616	-	1/1/15/20	7/37/115/115	-
39	DGD	h	102	-	-	29/51/91/95	0/2/2/2
34	SQD	B	623	-	-	25/49/69/69	0/1/1/1
38	LMG	d	403	-	-	17/35/55/70	0/1/1/1
31	CLA	16	311	-	1/1/10/20	3/8/86/115	-
31	CLA	B	614	-	1/1/15/20	20/37/115/115	-
34	SQD	i	101	-	-	21/35/55/69	0/1/1/1
31	CLA	10	309	-	-	16/30/108/115	-
31	CLA	b	612	-	1/1/15/20	12/37/115/115	-
31	CLA	c	508	-	1/1/15/20	14/37/115/115	-
32	PHO	A	405	-	-	14/37/103/103	0/5/6/6
43	A86	2	303	-	-	7/34/90/90	0/3/3/3
45	KC2	16	310	-	-	10/15/71/71	-
32	PHO	d	402	-	-	6/37/103/103	0/5/6/6
31	CLA	7	315	-	1/1/10/20	4/8/86/115	-
31	CLA	p	606	-	1/1/10/20	6/11/89/115	-
36	LHG	B	622	-	-	15/47/47/53	-
43	A86	10	306	-	-	8/34/90/90	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
41	HEM	V	201	21	-	8/12/54/54	-
31	CLA	13	307	-	1/1/10/20	1/10/88/115	-
31	CLA	18	314	27	1/1/10/20	7/11/89/115	-
43	A86	7	305	-	-	8/34/90/90	0/3/3/3
43	A86	14	304	-	-	7/34/90/90	0/3/3/3
31	CLA	b	609	-	1/1/15/20	16/37/115/115	-
43	A86	9	305	-	-	9/34/90/90	0/3/3/3
38	LMG	11	317	-	-	24/40/60/70	0/1/1/1
43	A86	9	302	-	-	6/34/90/90	0/3/3/3
43	A86	11	320	-	-	8/34/90/90	0/3/3/3
43	A86	13	305	-	-	9/34/90/90	0/3/3/3
45	KC2	18	310	27	-	7/15/71/71	-
31	CLA	9	308	-	1/1/15/20	18/37/115/115	-
31	CLA	14	309	-	1/1/15/20	20/37/115/115	-
31	CLA	A	403	-	1/1/15/20	10/37/115/115	-
43	A86	16	303	-	-	8/34/90/90	0/3/3/3
31	CLA	7	312	-	1/1/11/20	8/16/94/115	-
31	CLA	d	401	-	1/1/15/20	9/37/115/115	-
31	CLA	9	312	43	1/1/15/20	6/37/115/115	-
31	CLA	17	315	-	1/1/10/20	4/8/86/115	-
45	KC2	4	310	-	-	6/15/71/71	-
43	A86	8	305	-	-	8/34/90/90	0/3/3/3
39	DGD	c	520	34	-	32/51/91/95	0/2/2/2
31	CLA	B	616	-	1/1/15/20	14/37/115/115	-
31	CLA	18	307	-	1/1/14/20	9/33/111/115	-
31	CLA	b	613	-	1/1/15/20	16/37/115/115	-
31	CLA	14	315	-	1/1/10/20	7/11/89/115	-
42	KC1	11	314	-	-	8/15/71/71	-
31	CLA	C	513	-	1/1/15/20	18/37/115/115	-
43	A86	18	301	-	-	5/34/90/90	0/3/3/3
43	A86	1	303	-	-	8/34/90/90	0/3/3/3
43	A86	3	301	-	-	10/34/90/90	0/3/3/3
43	A86	15	304	-	-	10/34/90/90	1/3/3/3
31	CLA	14	306	-	1/1/14/20	15/33/111/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	c	514	-	1/1/11/20	5/18/96/115	-
45	KC2	11	311	-	-	4/15/71/71	-
31	CLA	w	203	-	1/1/15/20	17/37/115/115	-
31	CLA	C	508	-	1/1/15/20	14/37/115/115	-
31	CLA	12	315	-	-	1/8/86/115	-
38	LMG	D	408	4	-	16/32/52/70	0/1/1/1
45	KC2	8	310	-	-	6/15/71/71	-
31	CLA	3	315	-	1/1/10/20	5/11/90/115	-
31	CLA	10	312	34,26	1/1/11/20	6/15/93/115	-
42	KC1	19	314	-	-	5/15/71/71	-
33	BCR	B	617	-	-	13/29/63/63	0/2/2/2
43	A86	19	305	-	-	9/34/90/90	0/3/3/3
42	KC1	10	315	-	-	4/15/71/71	-
43	A86	18	304	-	-	6/34/90/90	0/3/3/3
43	A86	3	304	-	-	6/34/90/90	0/3/3/3
43	A86	17	304	-	-	8/34/90/90	0/3/3/3
31	CLA	14	307	-	1/1/15/20	16/37/115/115	-
31	CLA	P	603	-	1/1/12/20	8/19/97/115	-
39	DGD	C	520	34	-	32/51/91/95	0/2/2/2
45	KC2	2	308	-	-	10/15/71/71	-
43	A86	9	303	-	-	8/34/90/90	0/3/3/3
31	CLA	12	310	-	1/1/10/20	6/11/89/115	-
31	CLA	19	310	-	1/1/15/20	15/37/115/115	-
34	SQD	10	320	31	-	24/36/56/69	0/1/1/1
38	LMG	m	101	-	-	19/35/55/70	0/1/1/1
43	A86	4	303	-	-	12/34/90/90	0/3/3/3
31	CLA	17	313	27	1/1/12/20	6/19/97/115	-
43	A86	1	302	-	-	8/34/90/90	0/3/3/3
31	CLA	10	307	-	1/1/11/20	7/17/95/115	-
31	CLA	C	514	-	1/1/11/20	5/18/96/115	-
45	KC2	13	311	-	-	7/15/71/71	-
31	CLA	b	603	-	1/1/15/20	17/37/115/115	-
34	SQD	A	411	-	-	22/35/55/69	0/1/1/1
31	CLA	5	307	-	1/1/15/20	13/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	b	608	-	1/1/15/20	17/37/115/115	-
42	KC1	5	313	-	-	3/15/71/71	-
31	CLA	B	608	-	1/1/15/20	16/37/115/115	-
31	CLA	B	615	-	1/1/15/20	7/37/115/115	-
43	A86	5	301	31	-	6/34/90/90	0/3/3/3
31	CLA	5	311	-	1/1/11/20	5/13/91/115	-
42	KC1	p	609	-	-	8/15/71/71	-
31	CLA	0	312	34,26	1/1/11/20	7/15/93/115	-
31	CLA	7	313	-	1/1/12/20	7/19/97/115	-
31	CLA	c	503	31	1/1/15/20	11/37/115/115	-
33	BCR	b	619	-	-	9/29/63/63	0/2/2/2
31	CLA	14	311	-	1/1/11/20	10/15/93/115	-
43	A86	16	304	43	-	8/34/90/90	0/3/3/3
31	CLA	c	512	3	1/1/15/20	6/37/115/115	-
31	CLA	4	312	27	1/1/12/20	9/21/99/115	-
42	KC1	16	315	27	-	1/15/71/71	-
38	LMG	15	314	-	-	17/32/52/70	0/1/1/1
31	CLA	z	101	-	1/1/12/20	6/21/99/115	-
38	LMG	5	315	-	-	16/32/52/70	0/1/1/1
31	CLA	19	308	-	1/1/15/20	15/37/115/115	-
43	A86	7	301	-	-	6/34/90/90	0/3/3/3
43	A86	11	306	-	-	8/34/90/90	0/3/3/3
31	CLA	1	307	-	1/1/10/20	2/11/89/115	-
31	CLA	P	607	43	1/1/10/20	3/11/89/115	-
39	DGD	W	203	-	-	28/45/85/95	0/2/2/2
31	CLA	11	307	27	1/1/10/20	3/11/89/115	-
42	KC1	14	313	27	-	9/15/71/71	-
31	CLA	12	313	-	-	10/17/95/115	-
33	BCR	B	618	-	-	9/29/63/63	0/2/2/2
45	KC2	14	308	-	-	7/15/71/71	-
31	CLA	16	313	-	1/1/11/20	6/16/94/115	-
31	CLA	B	605	-	1/1/15/20	10/37/115/115	-
31	CLA	B	612	-	1/1/15/20	16/37/115/115	-
44	DD6	p	612	-	-	10/26/80/80	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	C	510	-	1/1/15/20	7/37/115/115	-
43	A86	1	306	-	-	8/34/90/90	0/3/3/3
33	BCR	c	516	-	-	9/29/63/63	0/2/2/2
33	BCR	F	101	-	-	19/29/63/63	0/2/2/2
31	CLA	a	406	-	1/1/14/20	5/31/109/115	-
43	A86	10	318	-	-	8/34/90/90	0/3/3/3
31	CLA	b	602	-	1/1/15/20	20/37/115/115	-
43	A86	12	301	-	-	8/34/90/90	0/3/3/3
42	KC1	12	314	-	-	3/15/71/71	-
31	CLA	13	313	-	-	16/37/115/115	-
43	A86	14	303	-	-	9/34/90/90	0/3/3/3
35	PL9	A	409	-	-	16/27/47/73	0/1/1/1
43	A86	2	305	31	-	7/34/90/90	0/3/3/3
31	CLA	0	314	-	-	5/16/94/115	-
43	A86	15	302	-	-	9/34/90/90	1/3/3/3
43	A86	17	316	-	-	9/34/90/90	0/3/3/3
38	LMG	f	102	-	-	14/41/61/70	0/1/1/1
38	LMG	D	403	4	-	22/35/55/70	0/1/1/1
31	CLA	15	309	-	1/1/13/20	11/25/103/115	-
31	CLA	9	310	-	1/1/15/20	15/37/115/115	-
43	A86	14	305	-	-	6/34/90/90	1/3/3/3
31	CLA	11	313	-	1/1/15/20	12/37/115/115	-
31	CLA	2	307	-	1/1/15/20	15/37/115/115	-
38	LMG	M	101	-	-	18/35/55/70	0/1/1/1
41	HEM	e	101	5,6	-	5/12/54/54	-
43	A86	9	301	-	-	8/34/90/90	0/3/3/3
38	LMG	n	701	14	-	6/23/43/70	0/1/1/1
36	LHG	14	317	-	-	22/38/38/53	-
38	LMG	4	316	-	-	24/44/64/70	0/1/1/1
43	A86	4	301	-	-	8/34/90/90	0/3/3/3
43	A86	11	305	-	-	9/34/90/90	0/3/3/3
31	CLA	5	314	-	1/1/10/20	1/8/86/115	-
31	CLA	2	314	-	-	4/8/86/115	-
38	LMG	J	101	-	-	29/45/65/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	d	404	-	1/1/15/20	12/37/115/115	-
34	SQD	a	408	39	-	23/49/69/69	0/1/1/1
31	CLA	14	312	-	1/1/12/20	8/21/99/115	-
45	KC2	6	312	27	-	6/15/71/71	-
31	CLA	P	604	-	1/1/11/20	5/17/95/115	-
43	A86	16	305	-	-	7/34/90/90	0/3/3/3
43	A86	P	611	-	-	7/34/90/90	1/3/3/3
36	LHG	18	315	-	-	21/43/43/53	-
38	LMG	j	101	-	-	29/45/65/70	0/1/1/1
38	LMG	14	316	-	-	24/44/64/70	0/1/1/1
31	CLA	p	610	-	1/1/10/20	2/8/86/115	-
31	CLA	b	611	-	-	9/37/115/115	-
36	LHG	C	521	-	-	20/44/44/53	-
31	CLA	1	321	-	1/1/14/20	13/33/111/115	-
38	LMG	d	408	4	-	16/32/52/70	0/1/1/1
31	CLA	B	610	-	-	9/37/115/115	-
43	A86	8	301	-	-	11/34/90/90	0/3/3/3
31	CLA	11	315	-	1/1/10/20	5/8/86/115	-
43	A86	17	305	-	-	8/34/90/90	0/3/3/3
31	CLA	16	308	-	1/1/10/20	5/10/88/115	-
43	A86	0	301	-	-	7/34/90/90	0/3/3/3
45	KC2	12	309	-	-	6/15/71/71	-
43	A86	10	301	-	-	7/34/90/90	0/3/3/3
43	A86	6	306	31	-	8/34/90/90	0/3/3/3
43	A86	1	305	-	-	10/34/90/90	0/3/3/3
31	CLA	19	312	43	1/1/15/20	8/37/115/115	-
43	A86	11	302	-	-	6/34/90/90	0/3/3/3
45	KC2	3	309	-	-	10/15/71/71	-
31	CLA	13	308	-	1/1/10/20	3/11/89/115	-
36	LHG	p	615	-	-	14/31/31/53	-
43	A86	17	303	-	-	10/34/90/90	0/3/3/3
31	CLA	1	312	-	1/1/11/20	6/15/93/115	-
45	KC2	9	309	-	-	5/15/71/71	-
45	KC2	4	308	-	-	5/15/71/71	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
31	CLA	c	510	-	1/1/15/20	7/37/115/115	-
45	KC2	0	310	26	-	9/15/71/71	-
42	KC1	6	315	27	-	1/15/71/71	-
31	CLA	11	308	-	1/1/15/20	22/37/115/115	-
45	KC2	10	310	26	-	7/15/71/71	-
31	CLA	b	605	-	1/1/15/20	14/37/115/115	-
31	CLA	1	316	43	1/1/10/20	3/10/88/115	-
31	CLA	P	605	16	1/1/10/20	3/8/86/115	-
45	KC2	3	311	-	-	6/15/71/71	-
35	PL9	d	406	-	-	9/53/73/73	0/1/1/1
31	CLA	8	312	-	1/1/13/20	10/25/103/115	-
31	CLA	6	313	-	1/1/11/20	6/16/94/115	-
31	CLA	1	315	27	-	3/8/86/115	-
31	CLA	6	309	-	1/1/15/20	13/37/115/115	-
43	A86	6	305	43	-	8/34/90/90	0/3/3/3
31	CLA	c	505	-	1/1/15/20	8/37/115/115	-

The worst 5 of 4266 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	12	313	CLA	C4B-NB	8.87	1.43	1.35
31	17	313	CLA	C4B-NB	8.86	1.43	1.35
42	6	315	KC1	C4D-ND	8.81	1.43	1.35
44	p	612	DD6	C29-C27	-8.80	1.25	1.42
44	P	612	DD6	C29-C27	-8.78	1.25	1.42

The worst 5 of 8349 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	16	304	A86	O1-C20-C19	-32.86	88.70	113.38
43	P	611	A86	O1-C20-C19	-27.13	93.00	113.38
43	p	611	A86	O1-C20-C19	-27.03	93.07	113.38
42	8	313	KC1	CMD-C2D-C1D	-25.69	88.98	128.46
42	6	315	KC1	OBD-CAD-CBD	23.59	159.59	125.89

5 of 204 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
31	A	403	CLA	ND
31	A	404	CLA	ND
31	A	406	CLA	ND
31	B	601	CLA	ND
31	B	602	CLA	ND

5 of 5474 torsion outliers are listed below:

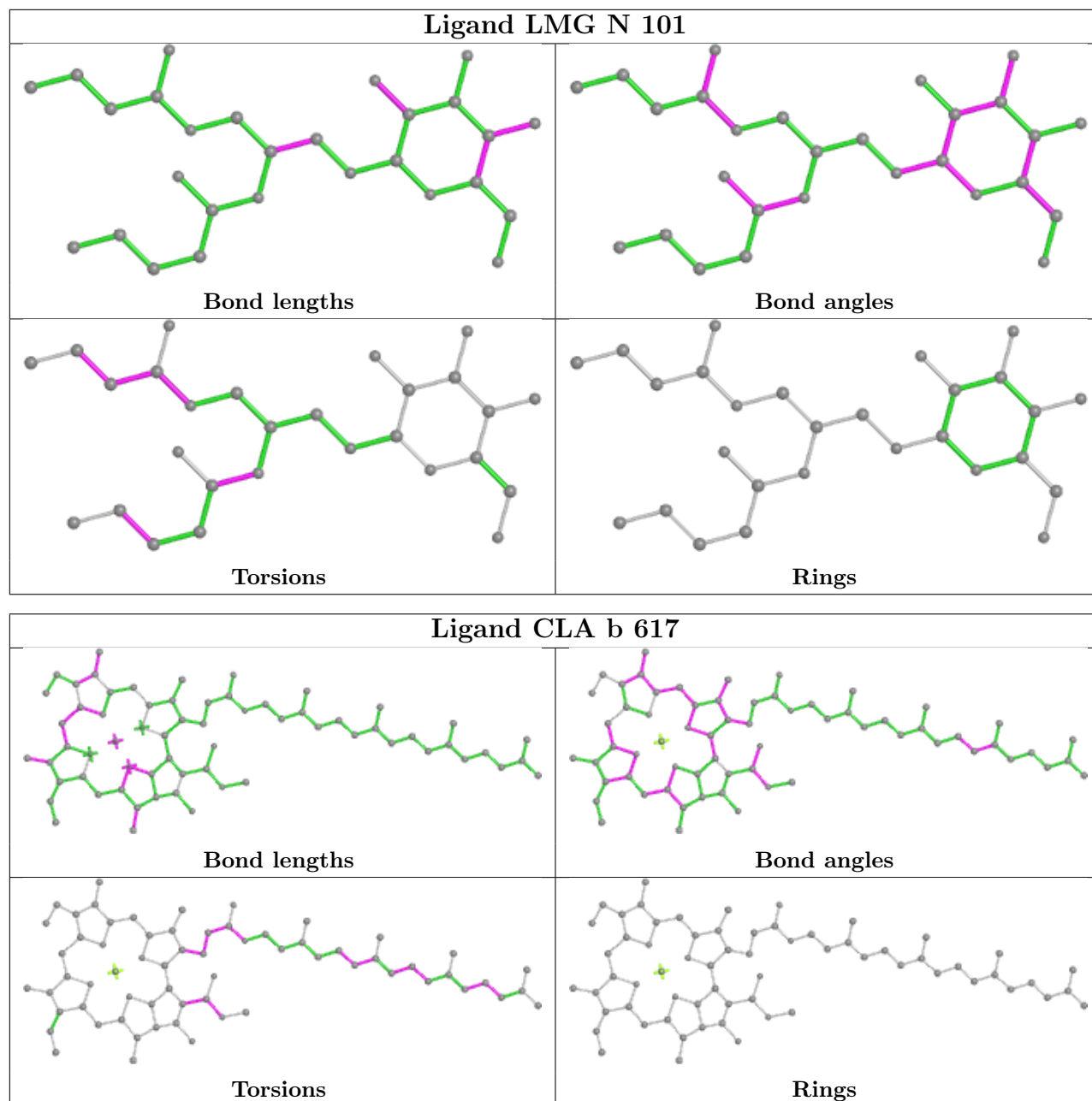
Mol	Chain	Res	Type	Atoms
31	A	403	CLA	CBD-CGD-O2D-CED
31	B	601	CLA	C1A-C2A-CAA-CBA
31	B	601	CLA	C3A-C2A-CAA-CBA
31	B	601	CLA	CHA-CBD-CGD-O1D
31	B	601	CLA	CHA-CBD-CGD-O2D

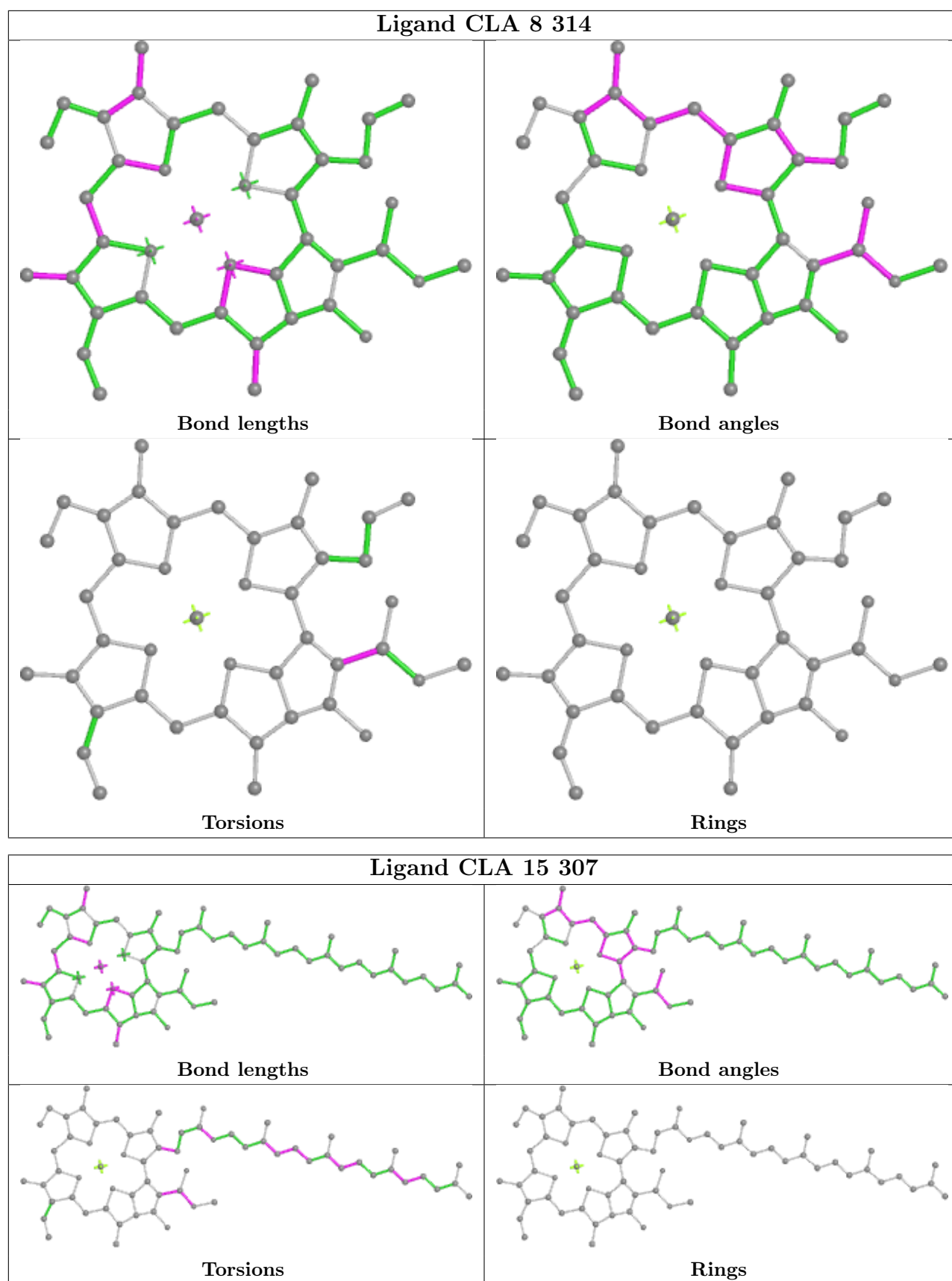
5 of 9 ring outliers are listed below:

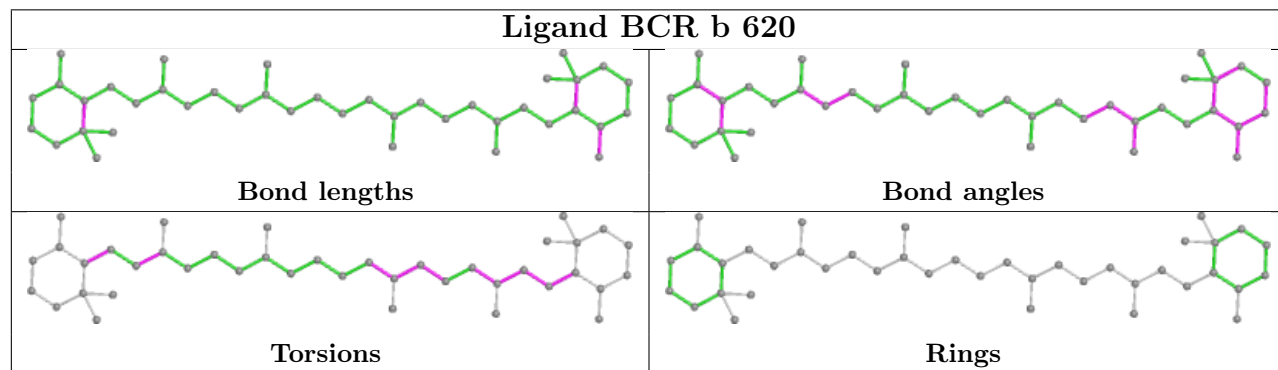
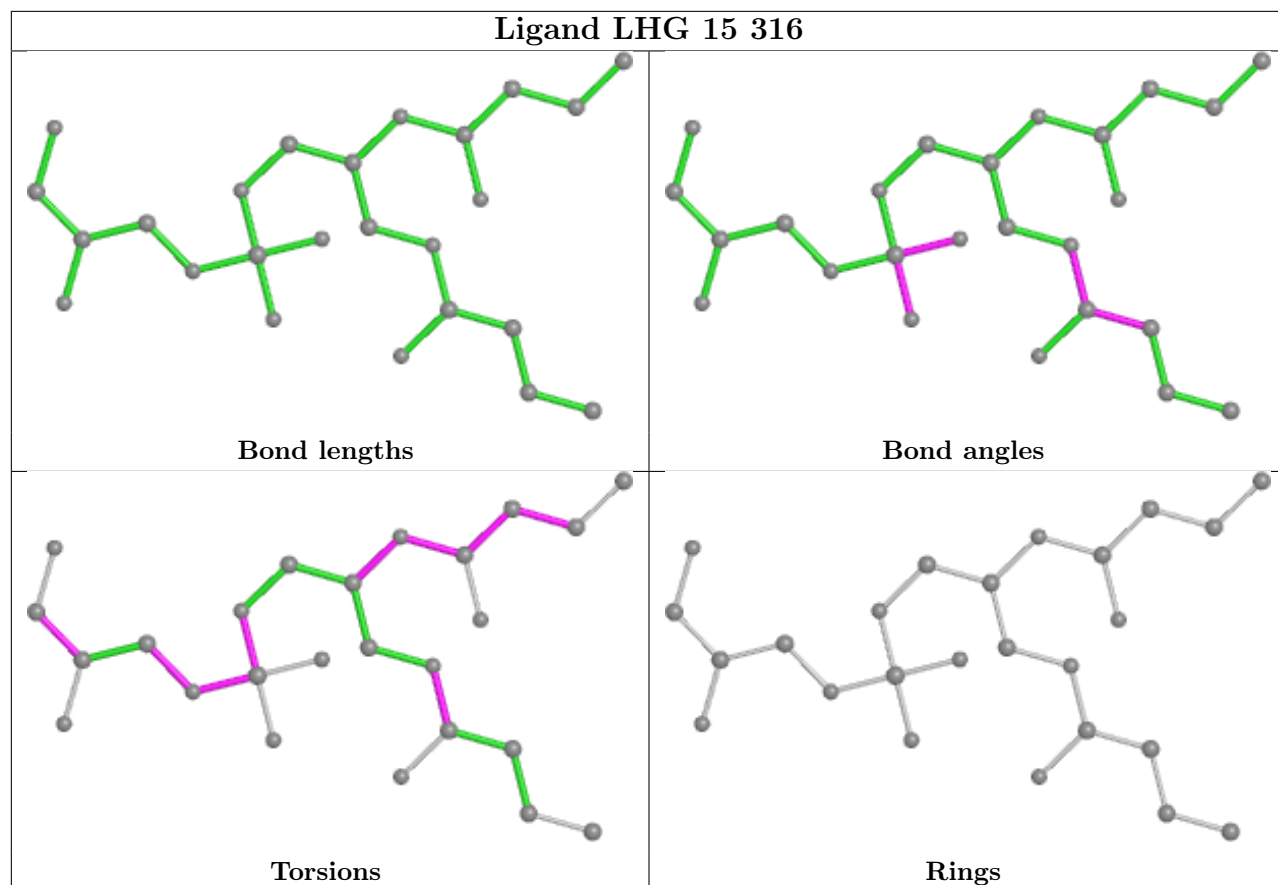
Mol	Chain	Res	Type	Atoms
43	14	305	A86	C31-C32-C33-C34-C35-C36
43	p	613	A86	C31-C32-C33-C34-C35-C36
43	P	613	A86	C31-C32-C33-C34-C35-C36
43	2	304	A86	C31-C32-C33-C34-C35-C36
43	4	306	A86	C31-C32-C33-C34-C35-C36

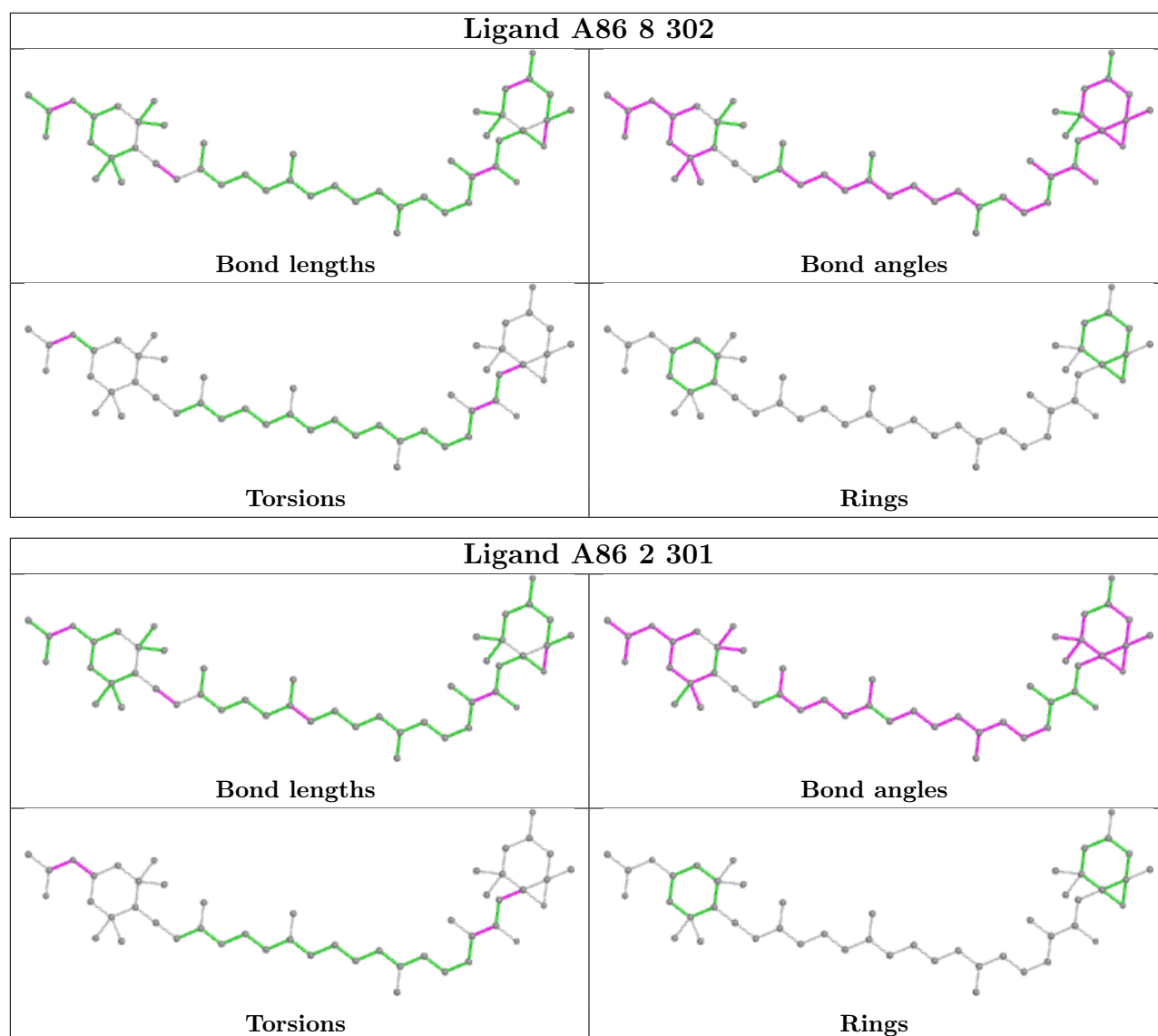
No monomer is involved in short contacts.

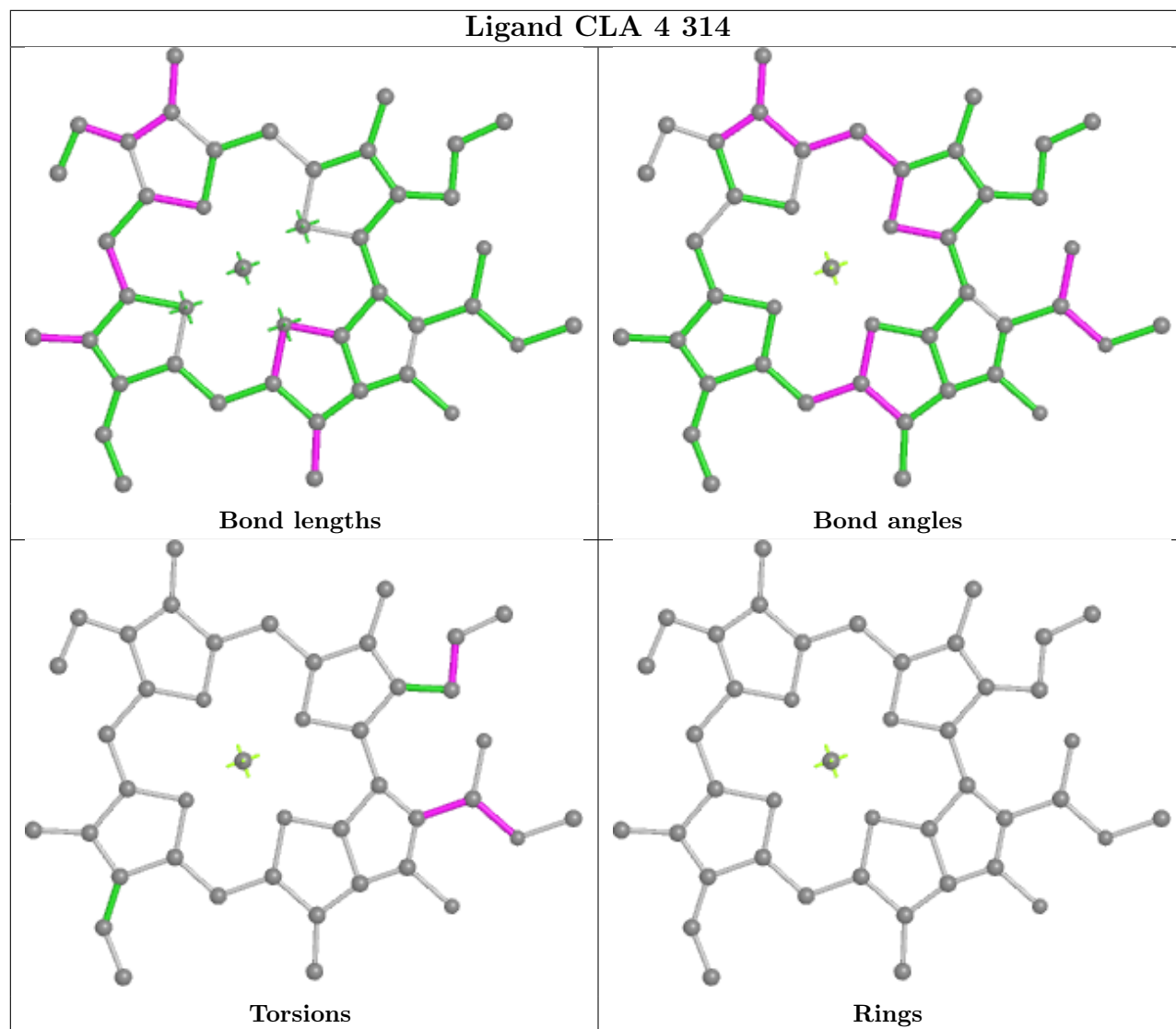
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

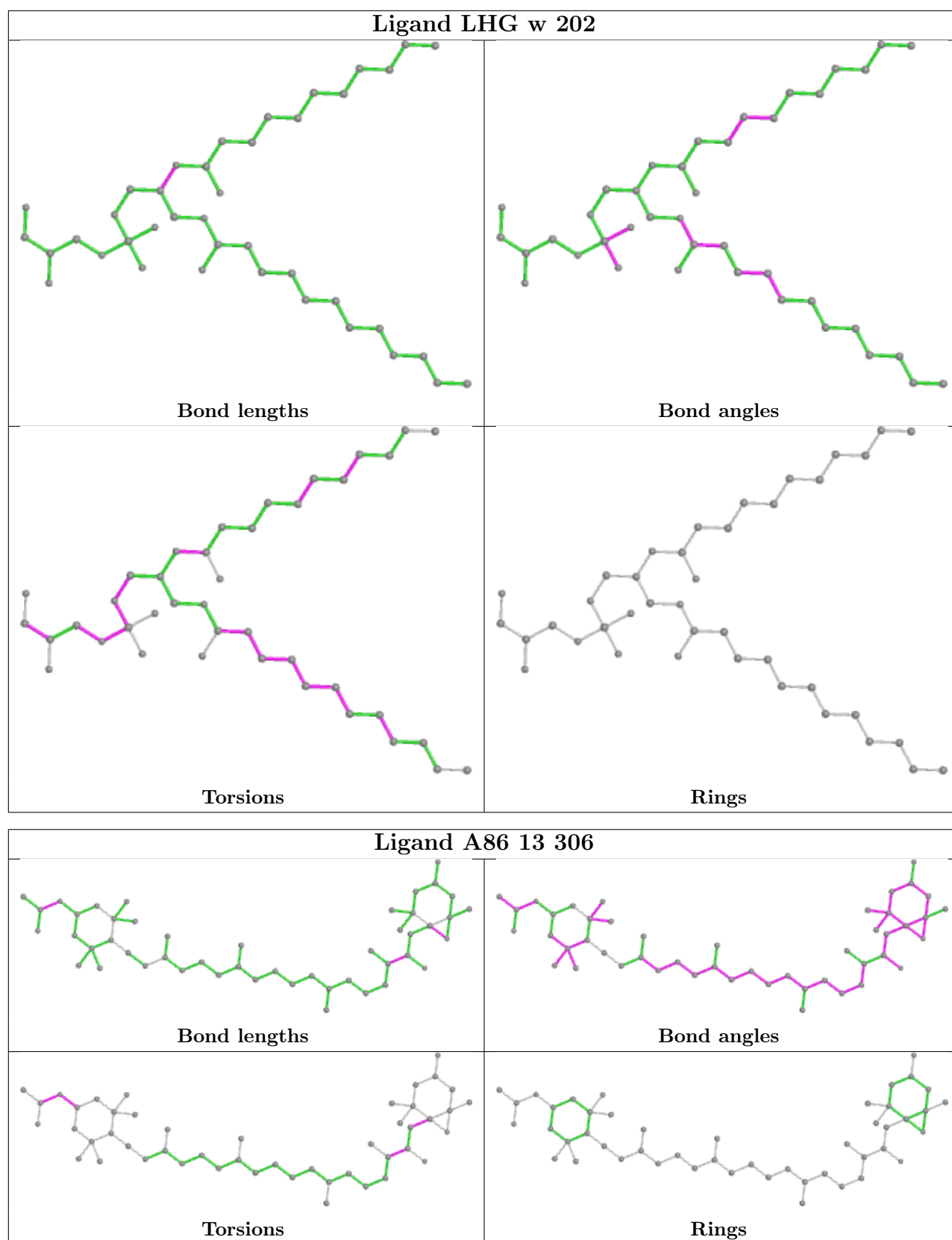


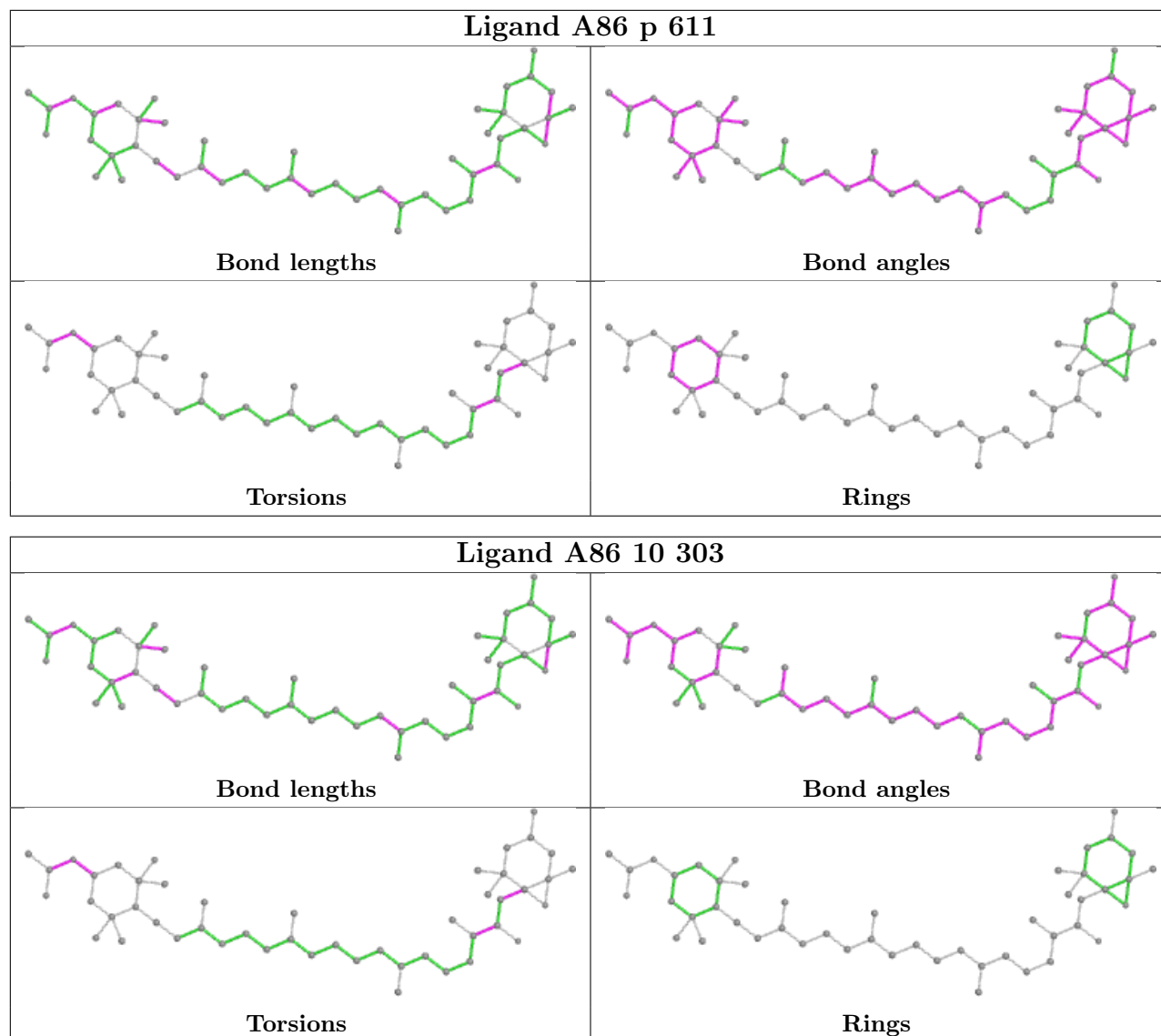


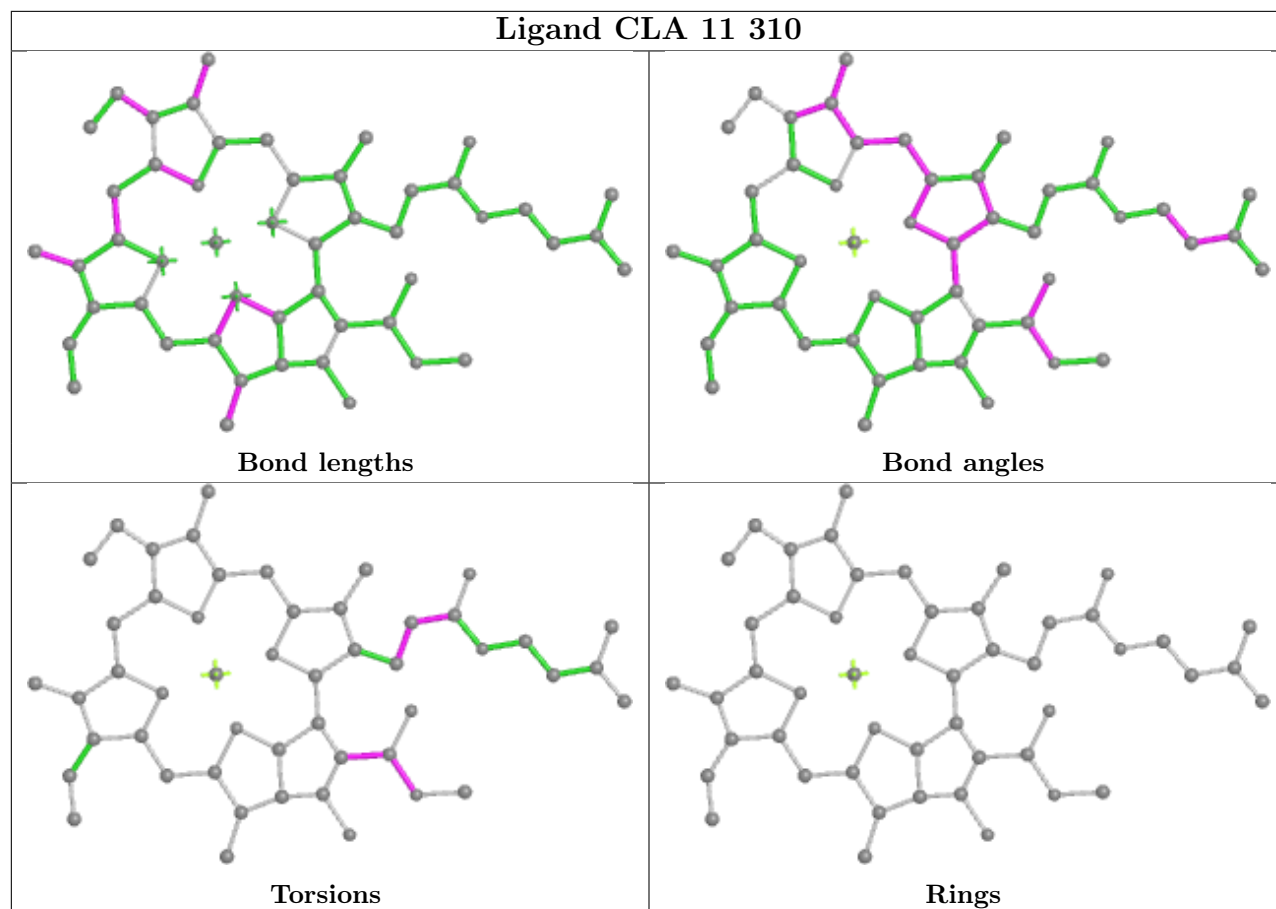


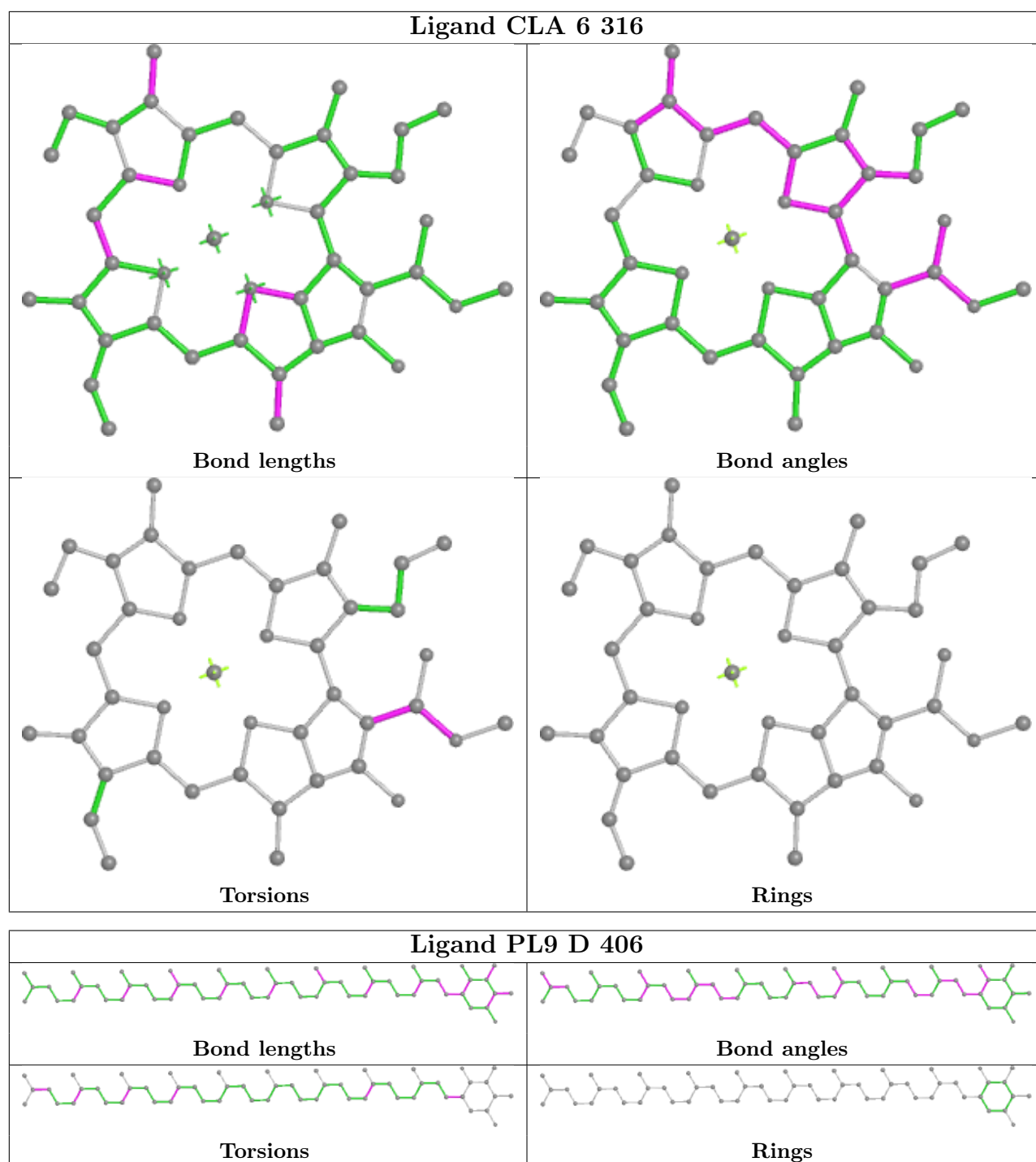


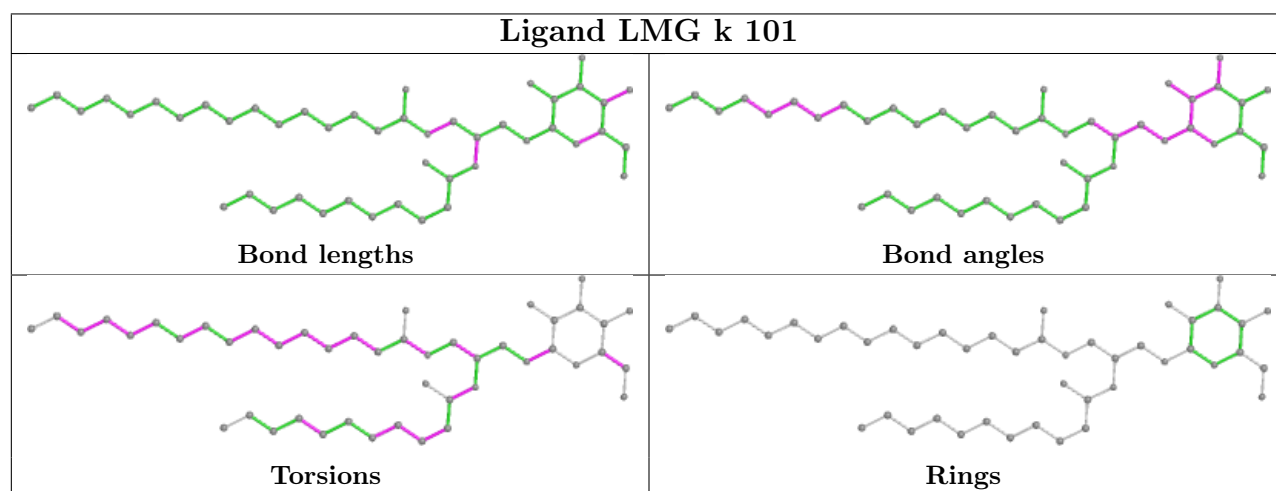
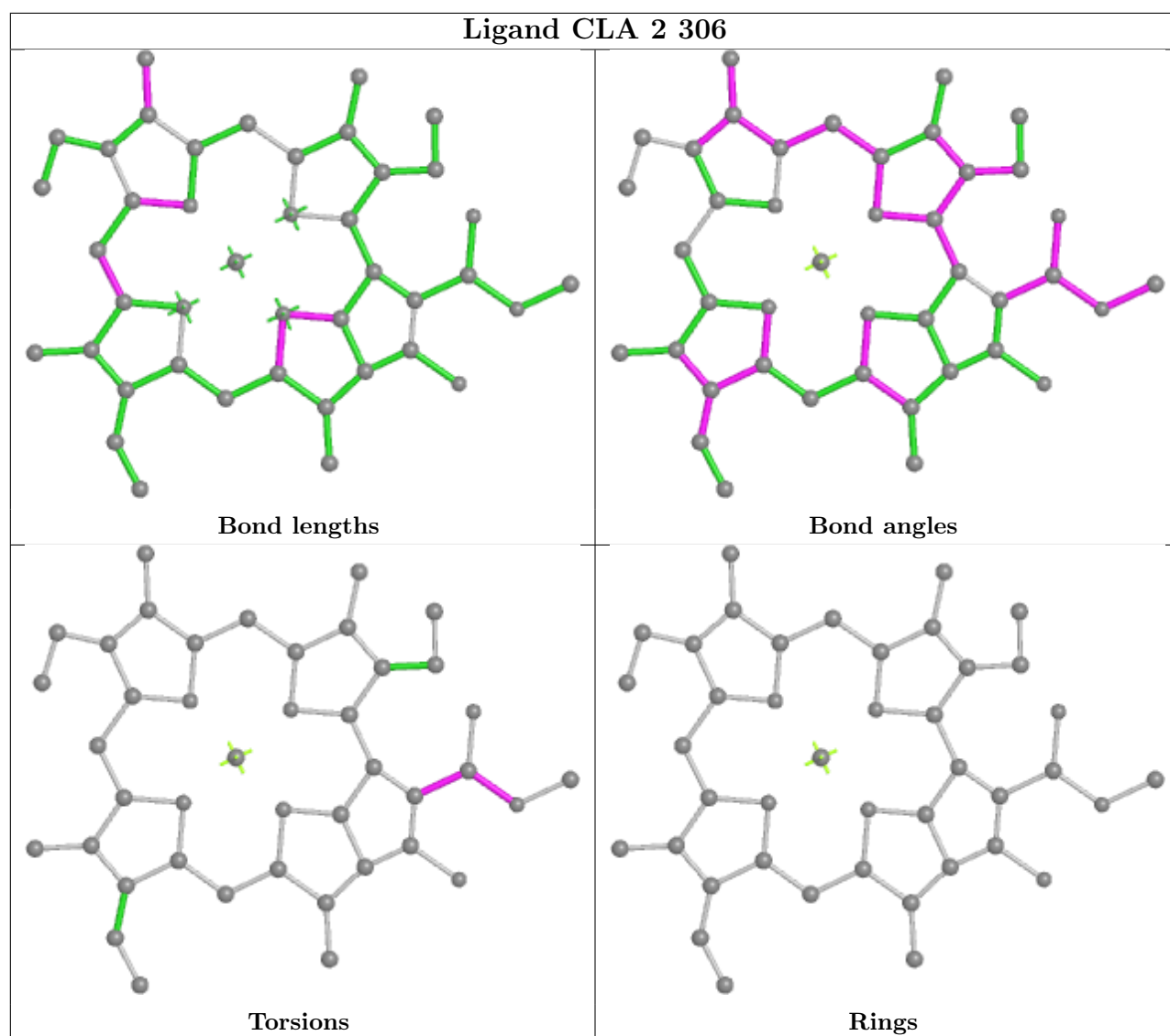


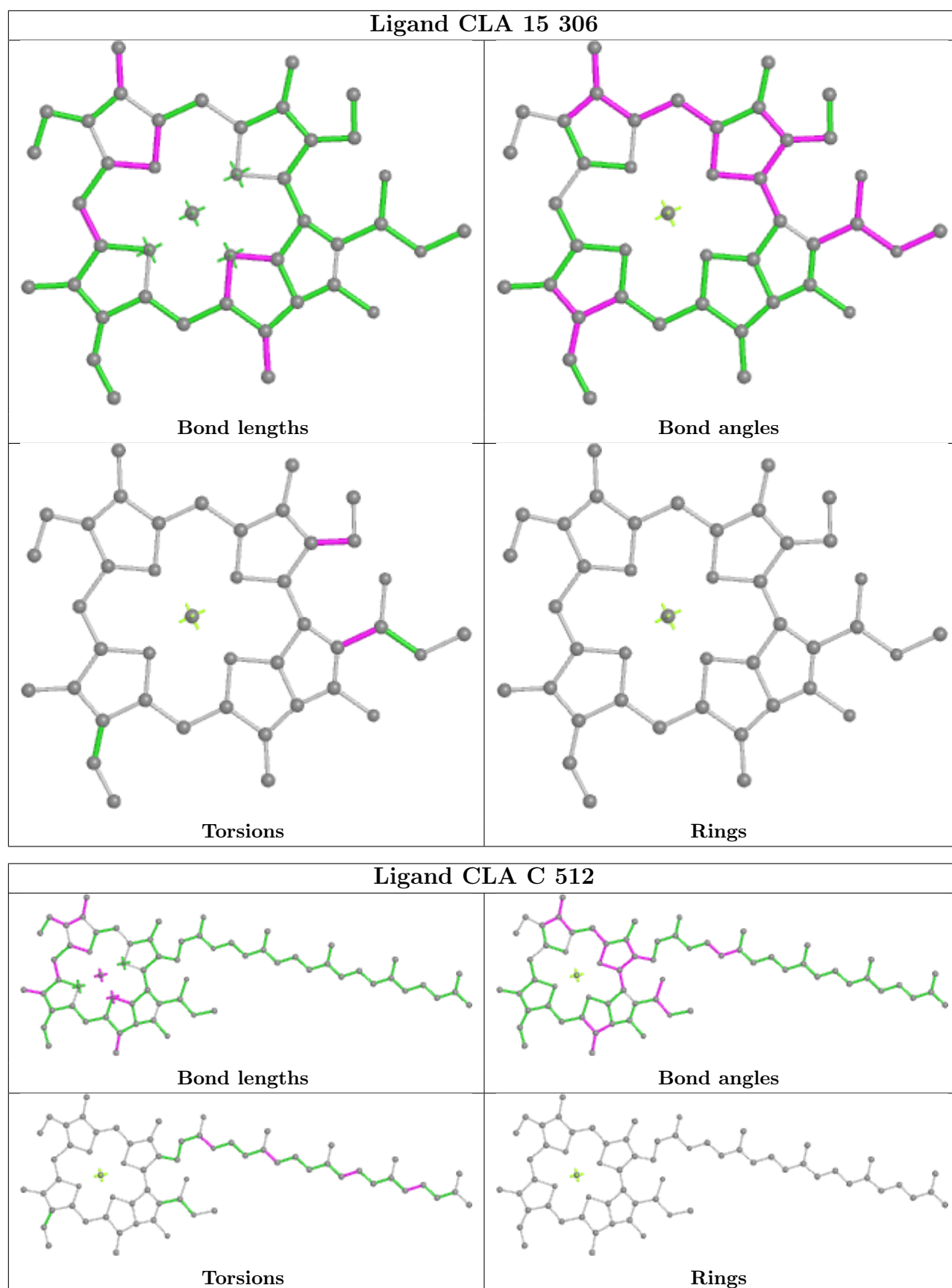


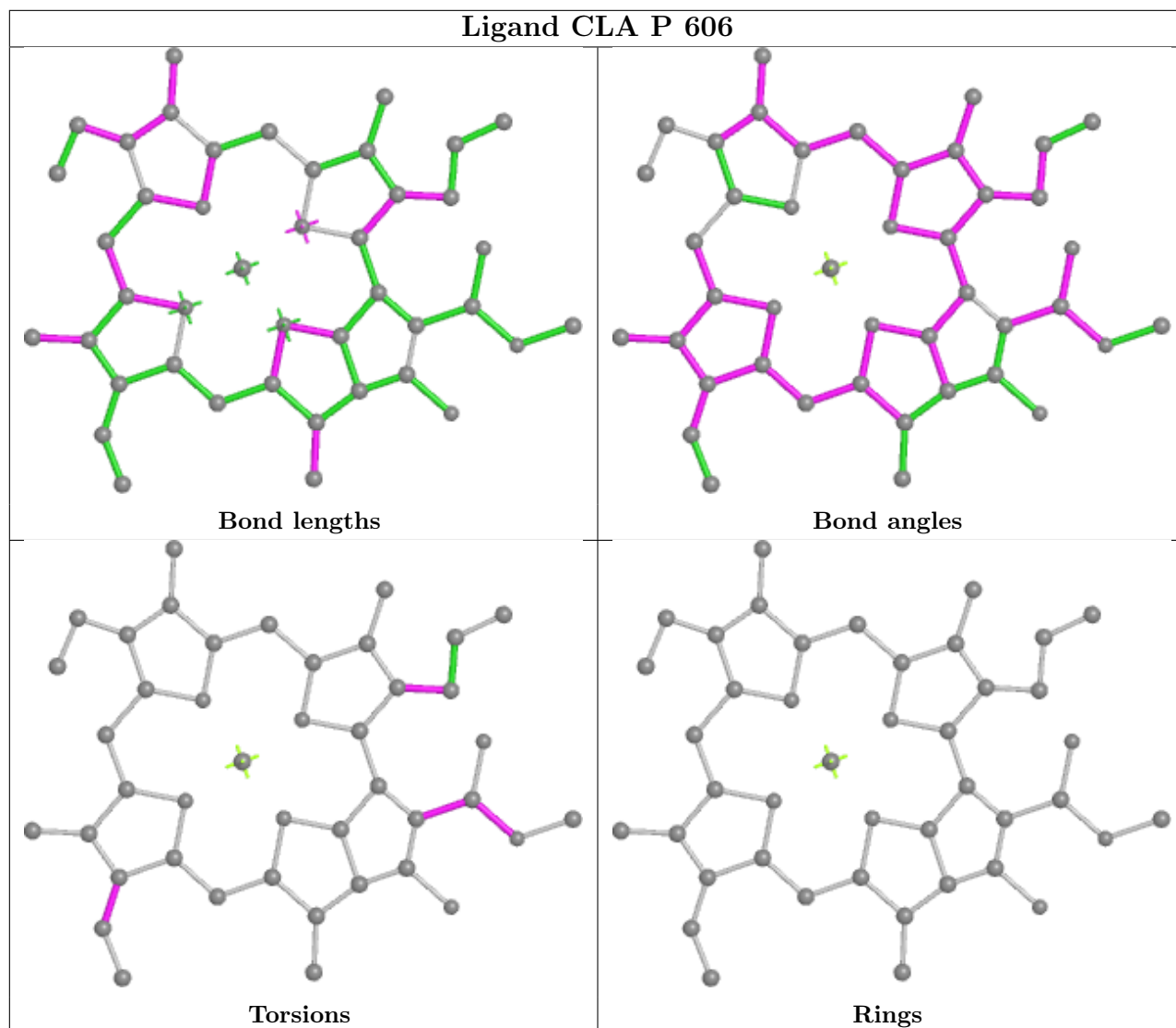
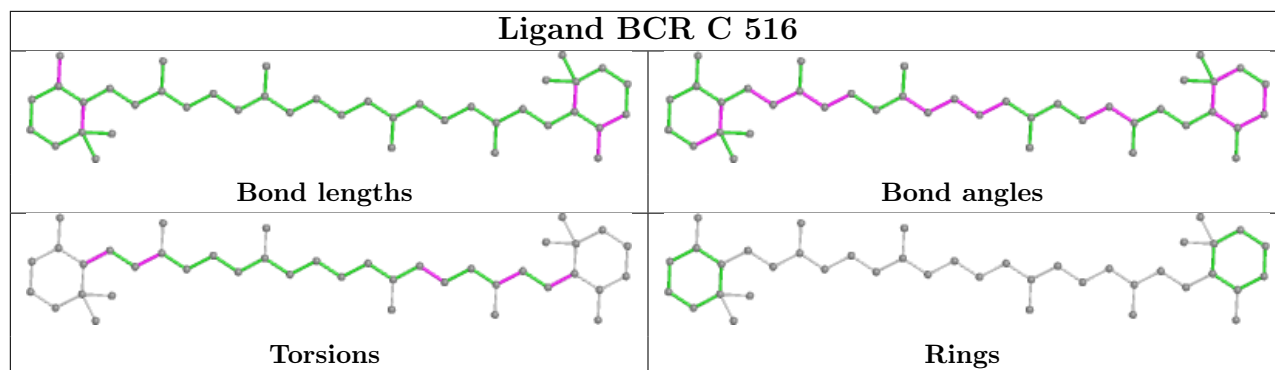


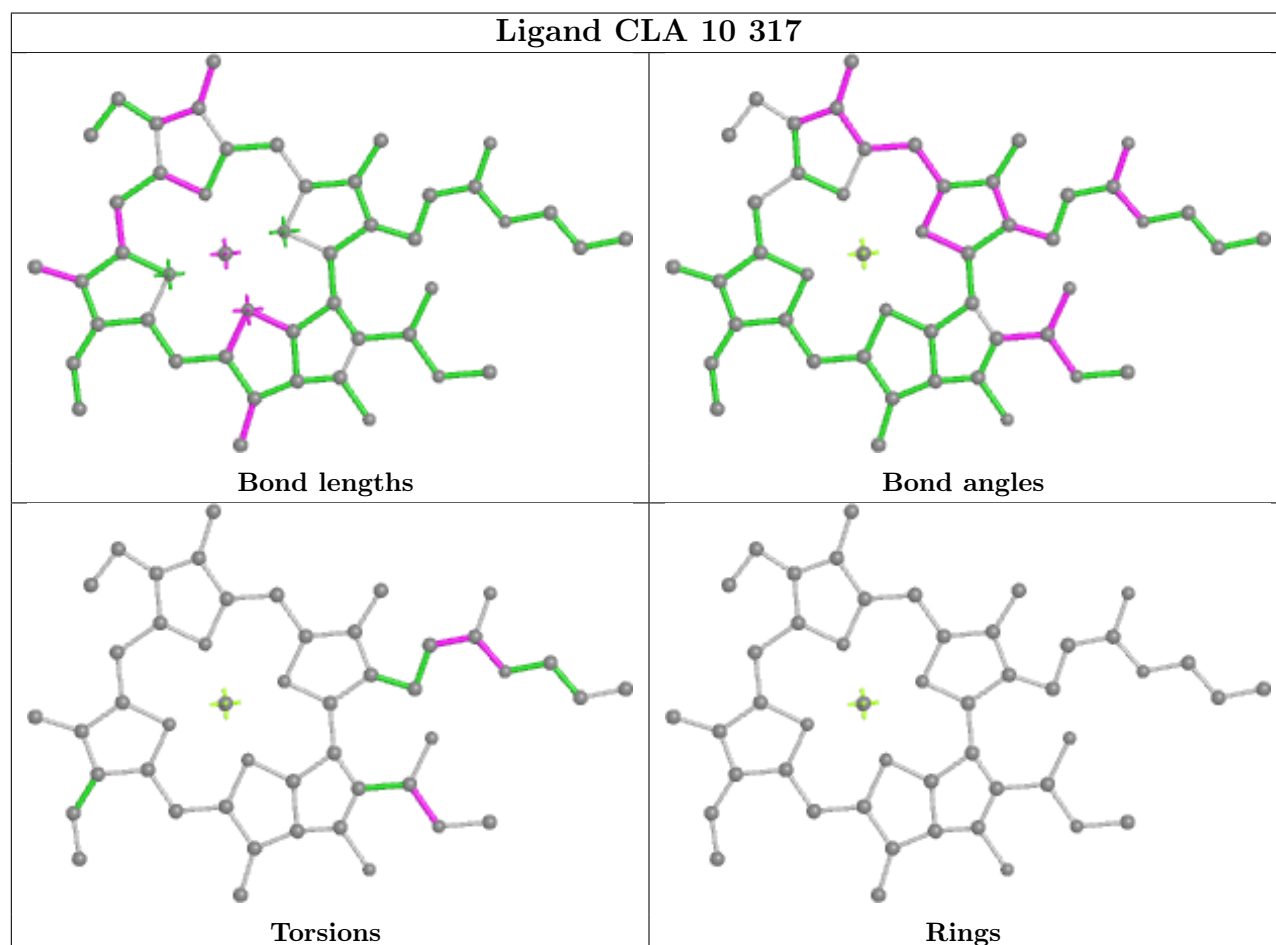
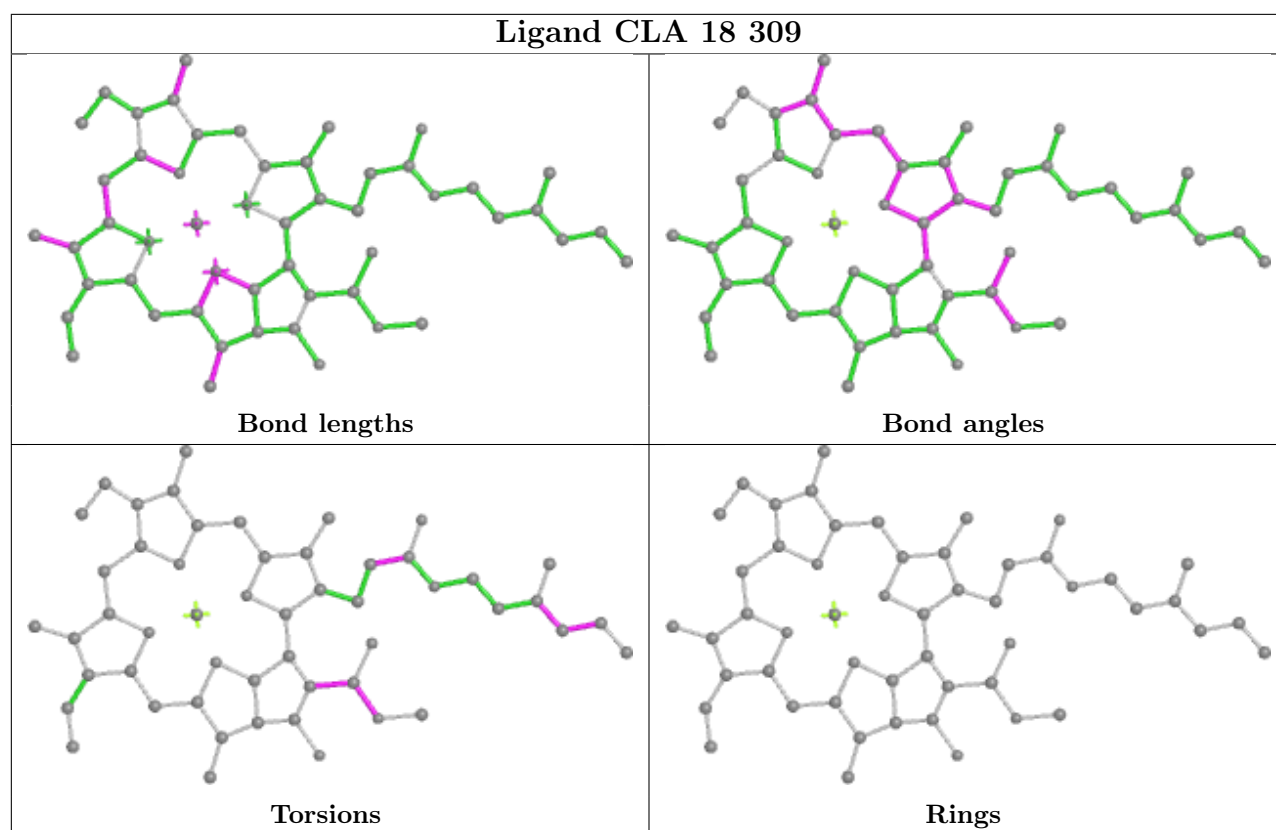


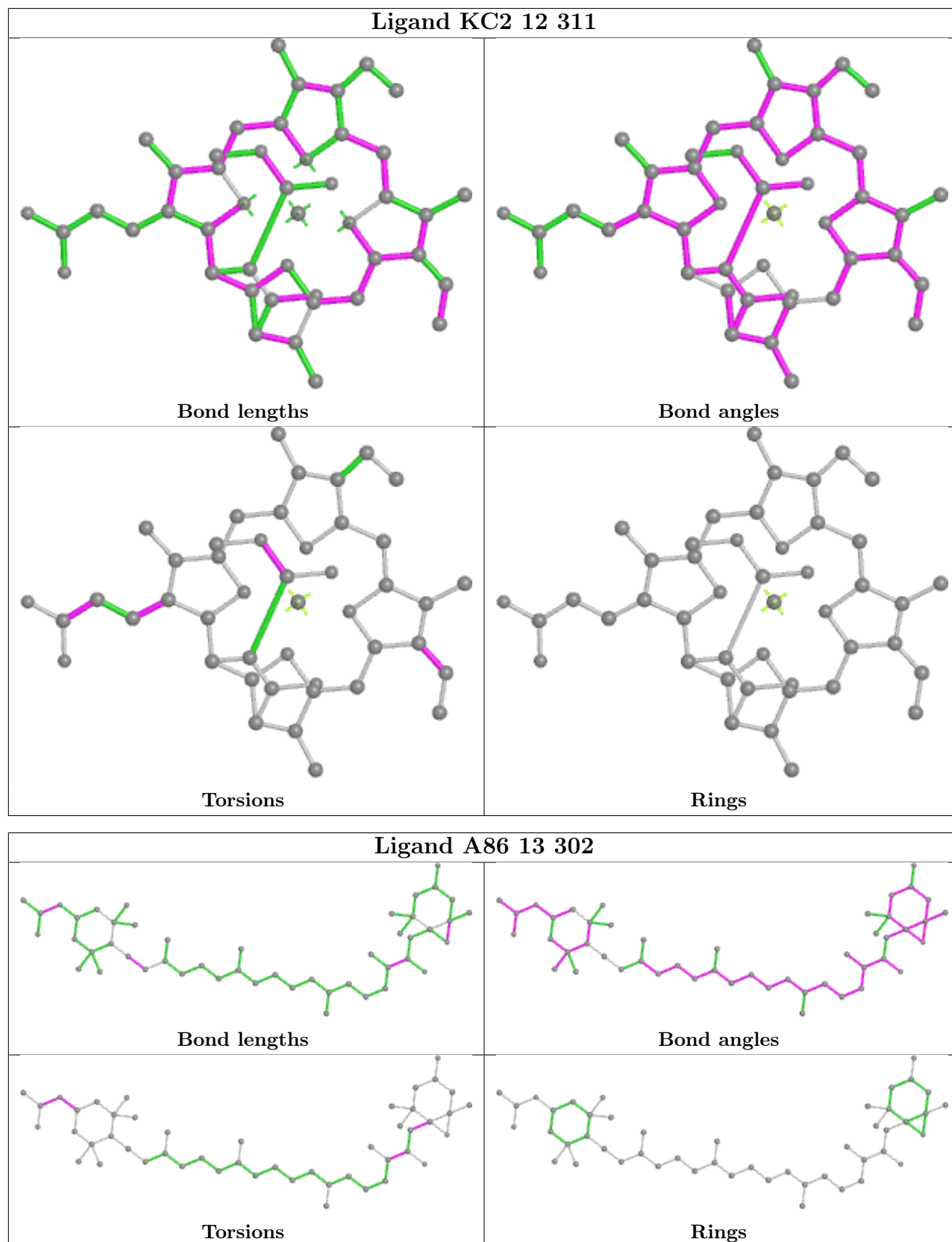


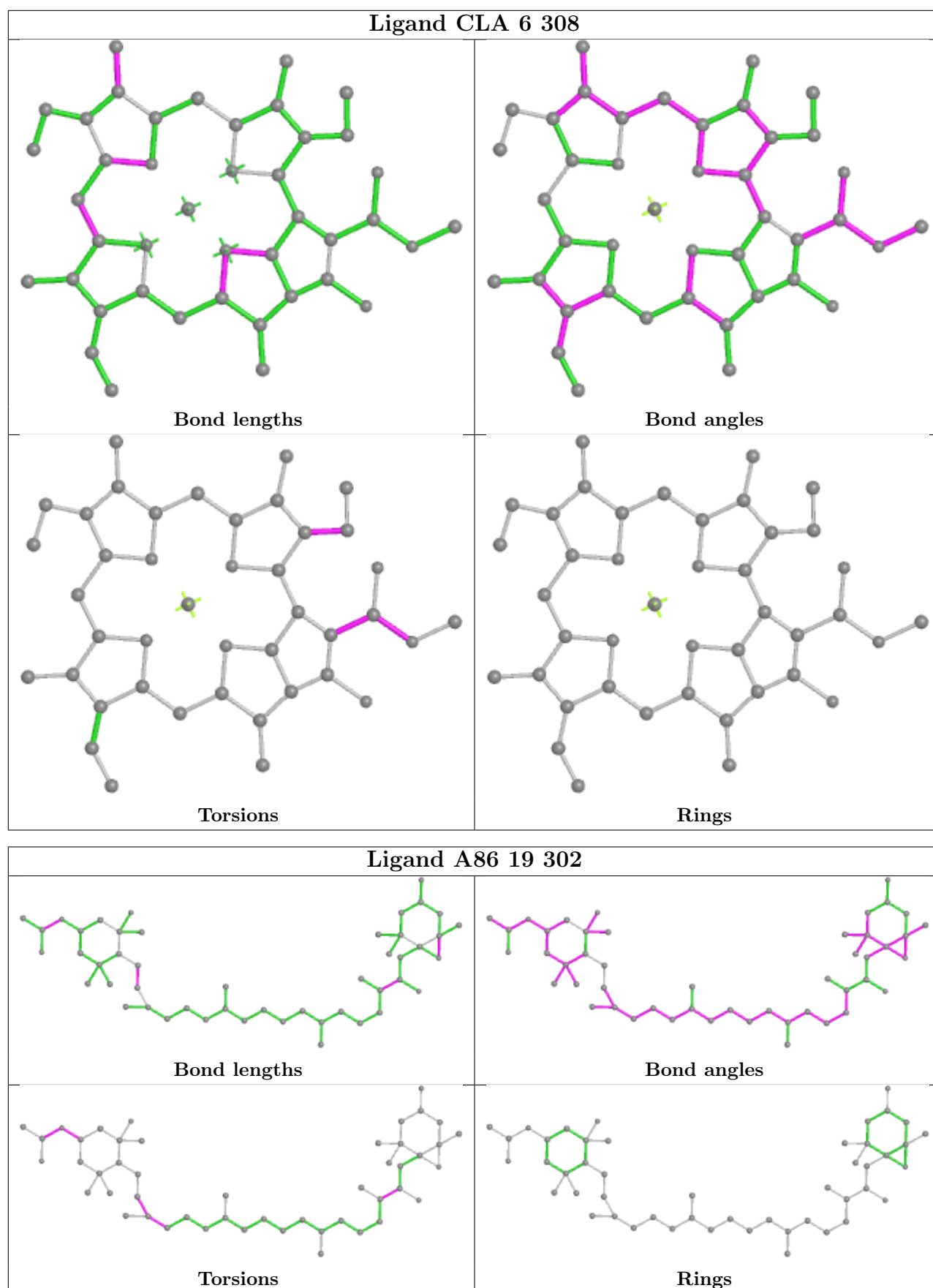


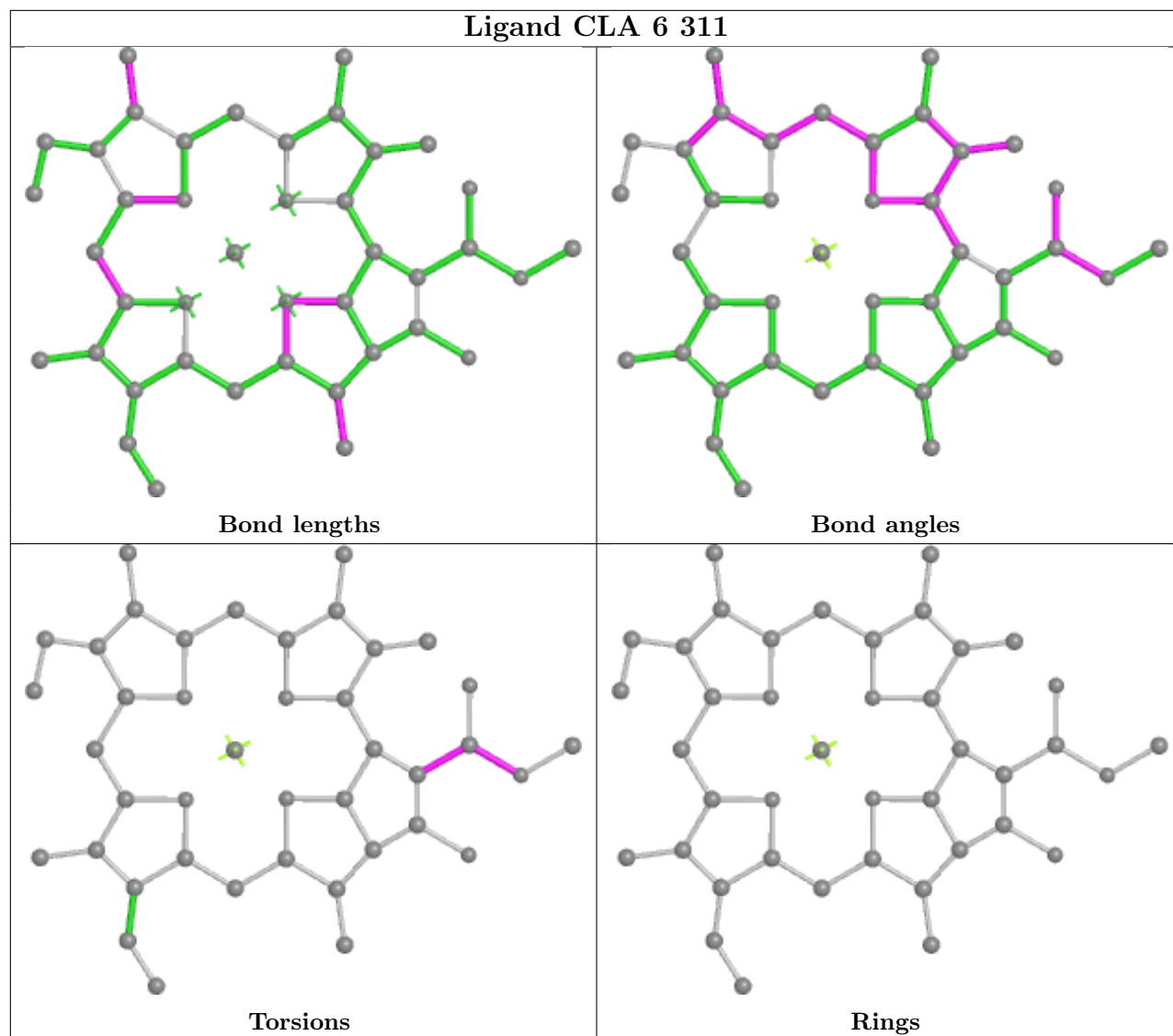


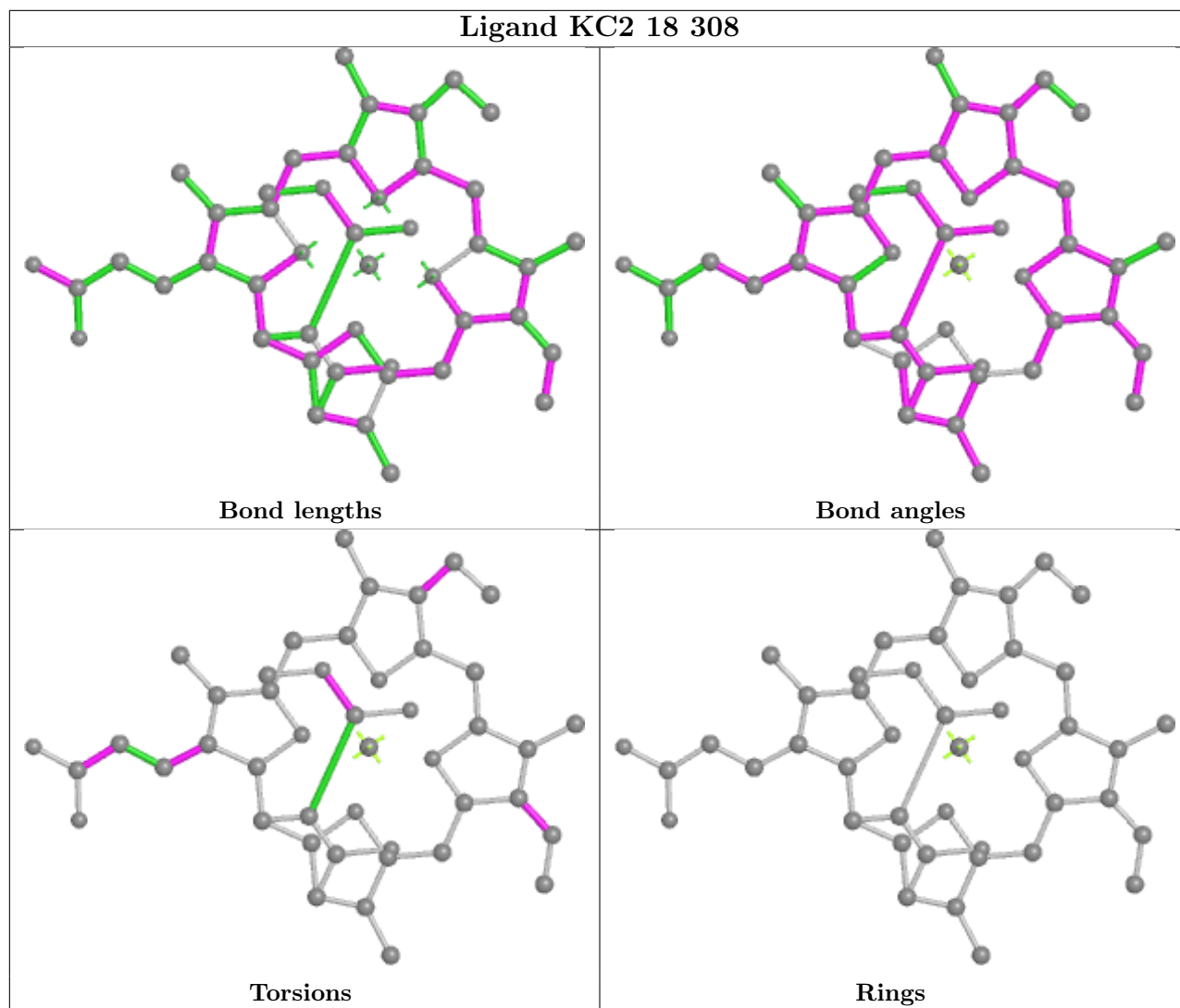


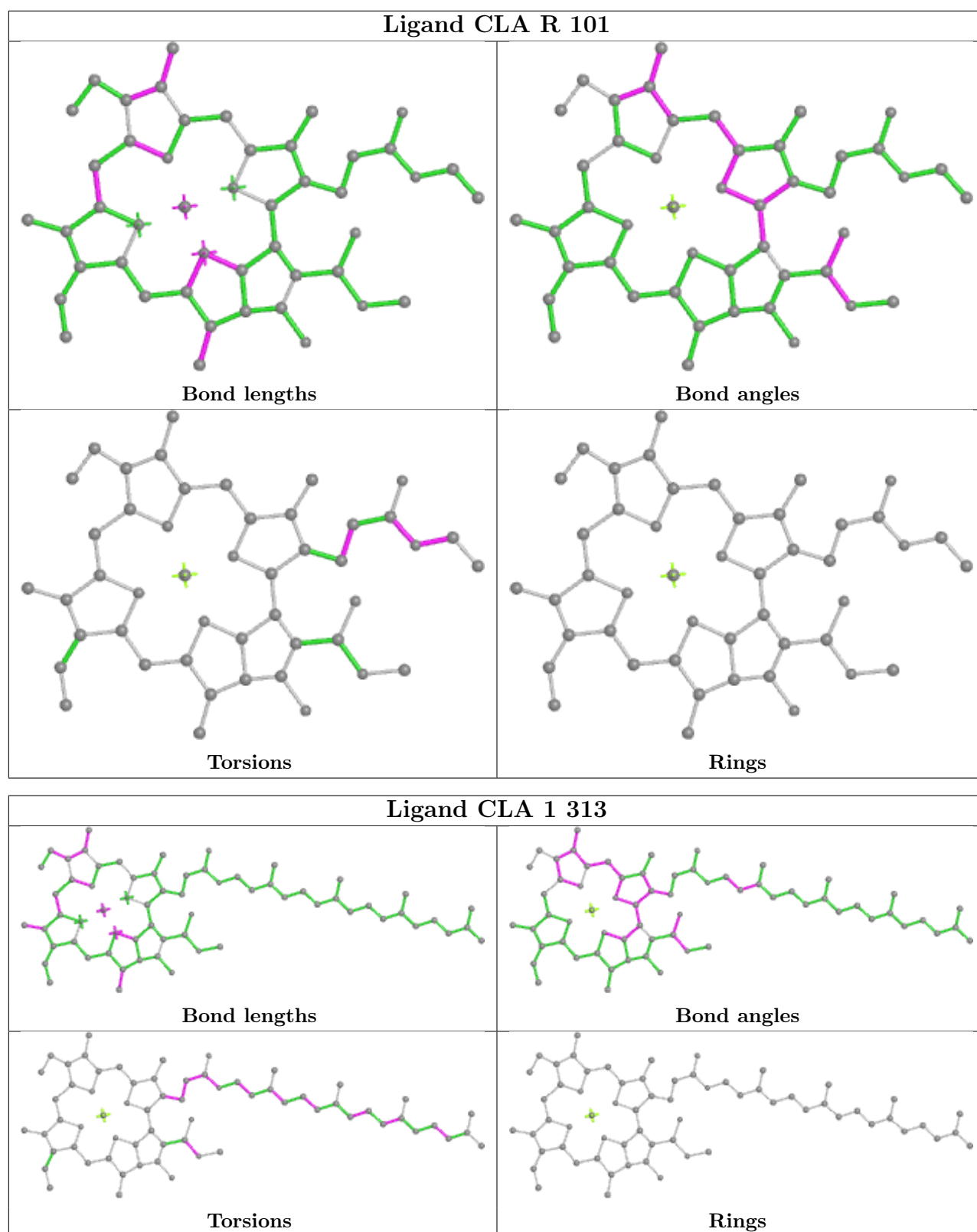


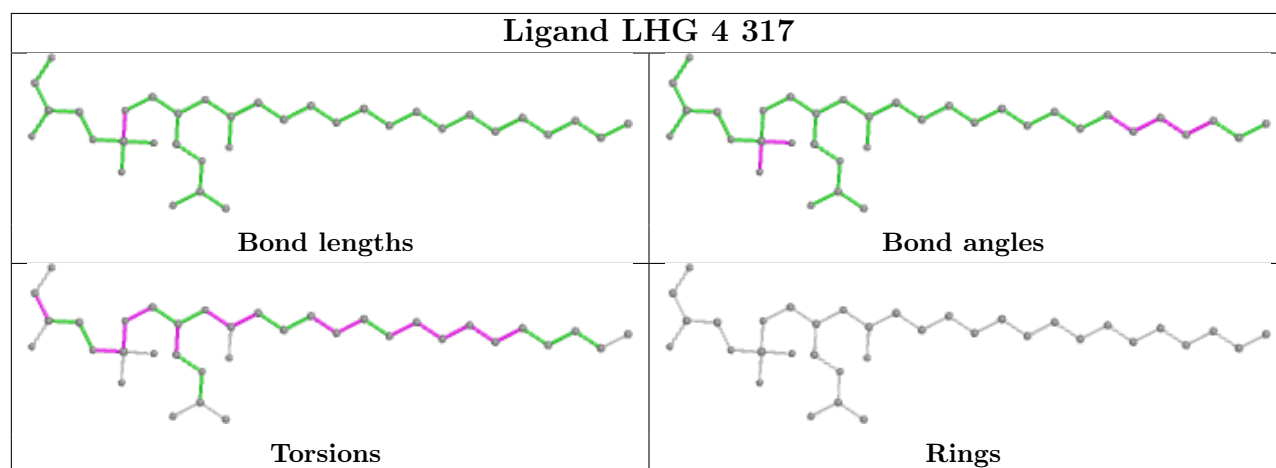
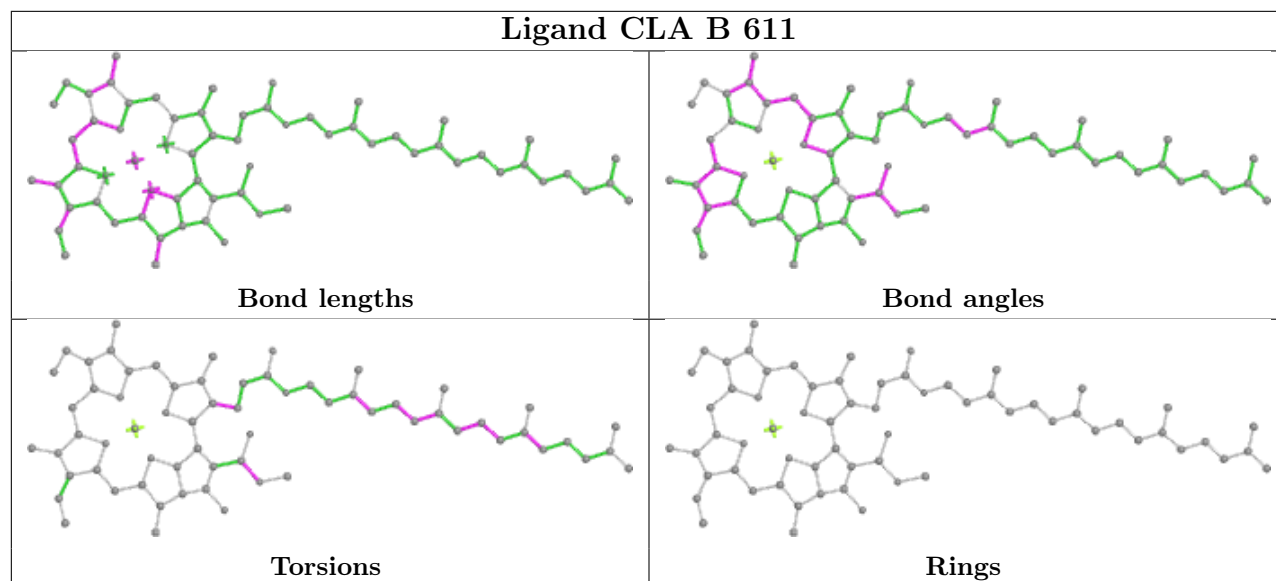
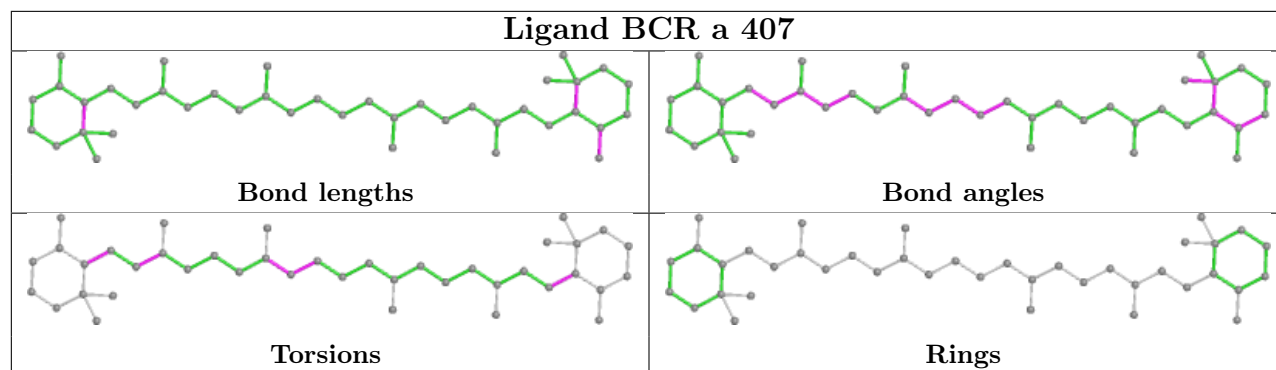


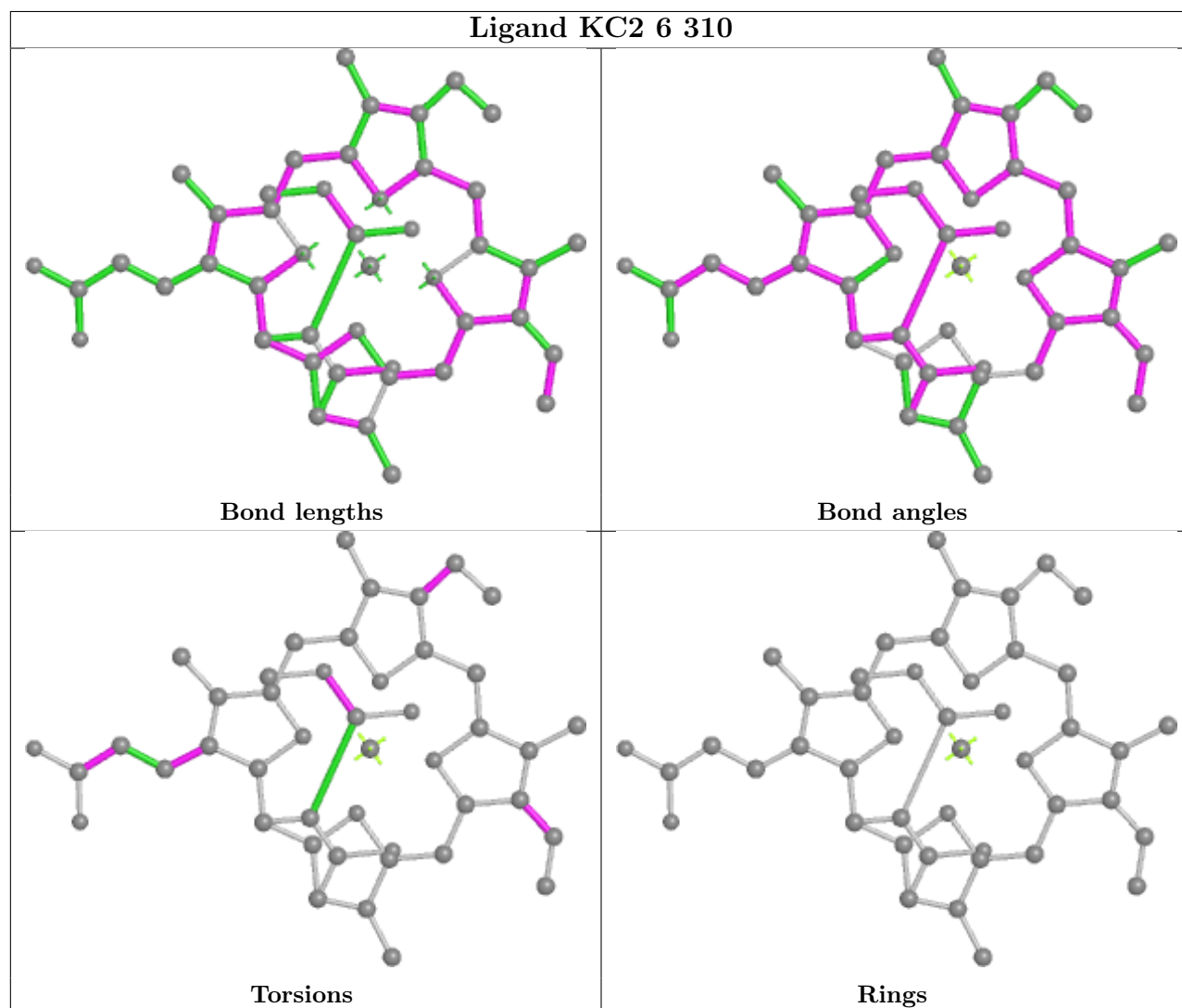
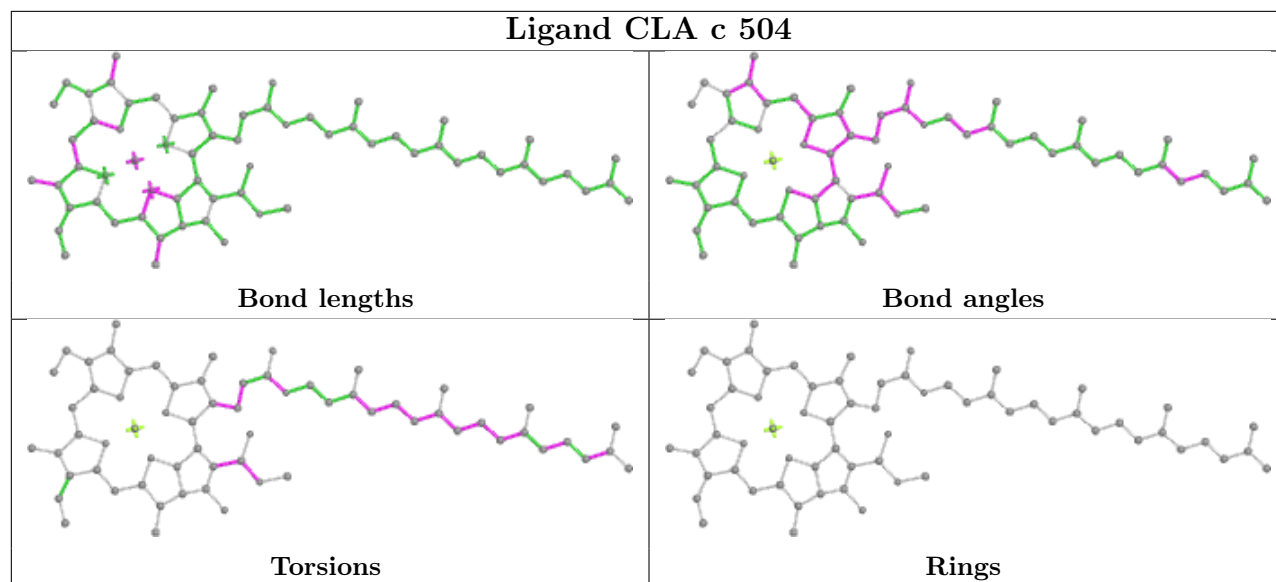


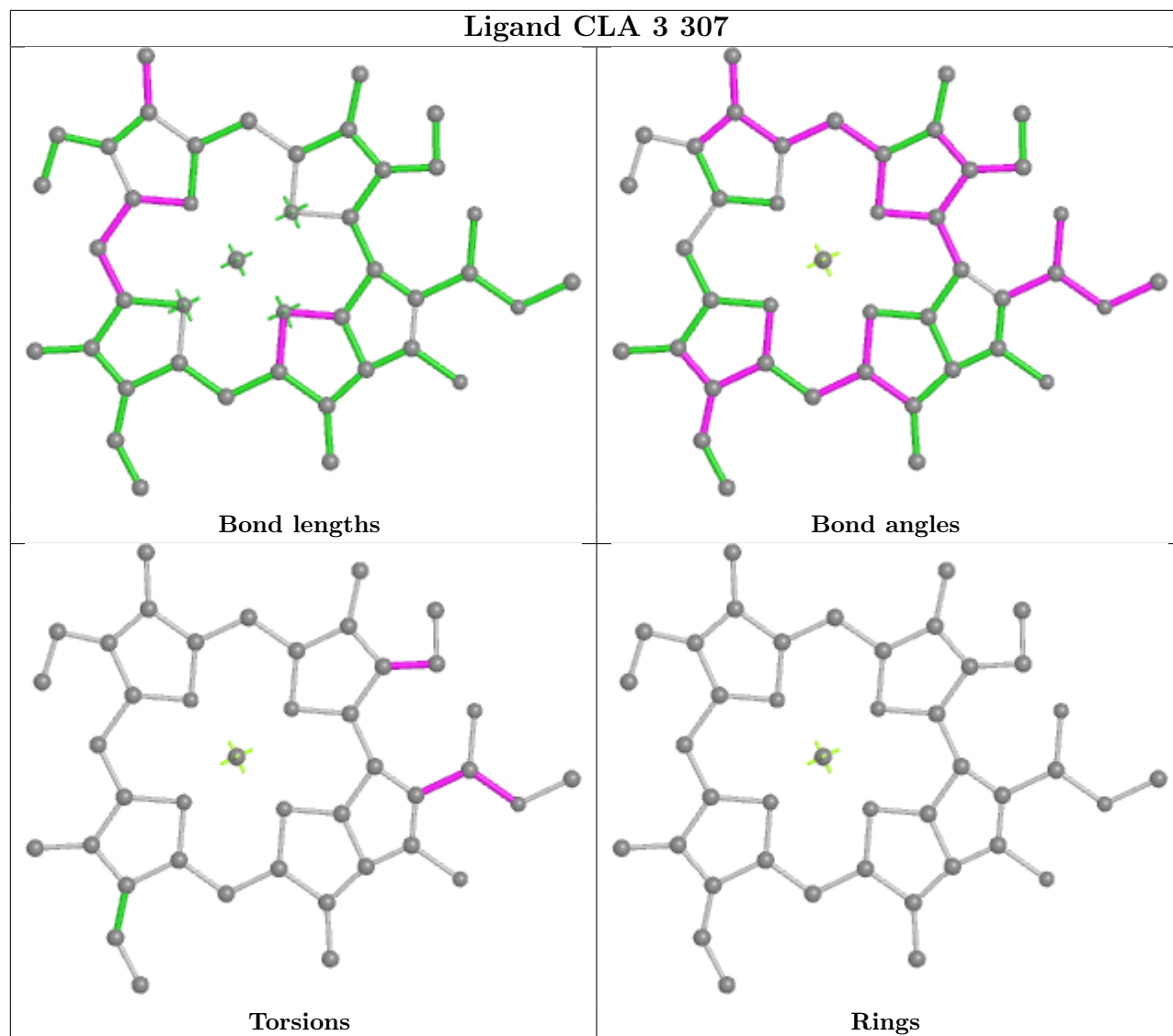


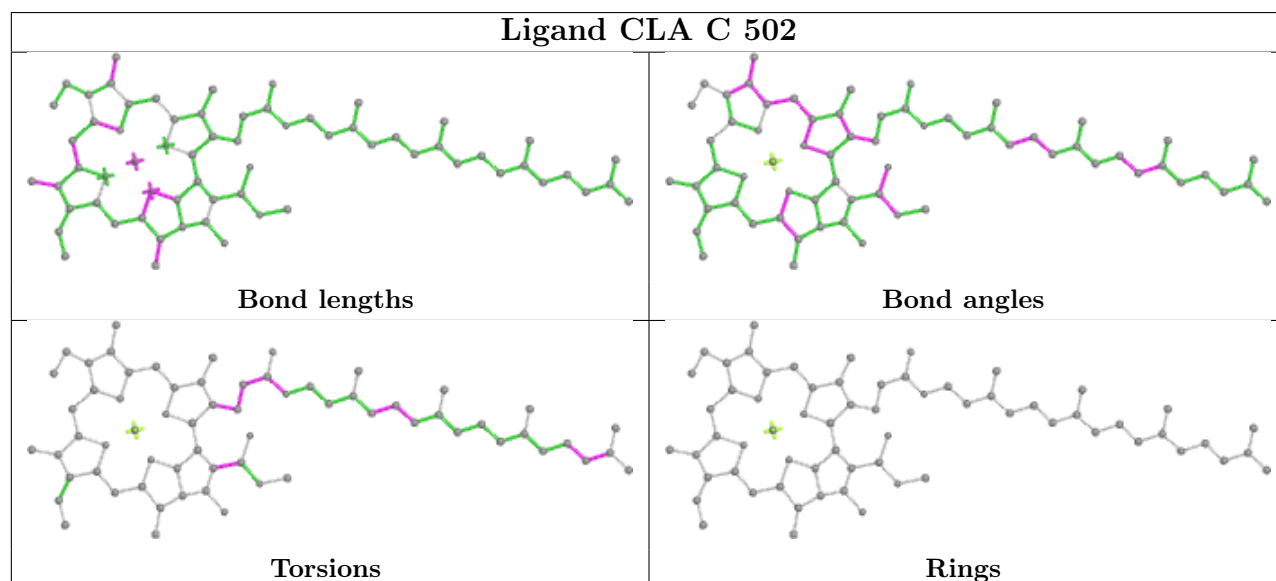
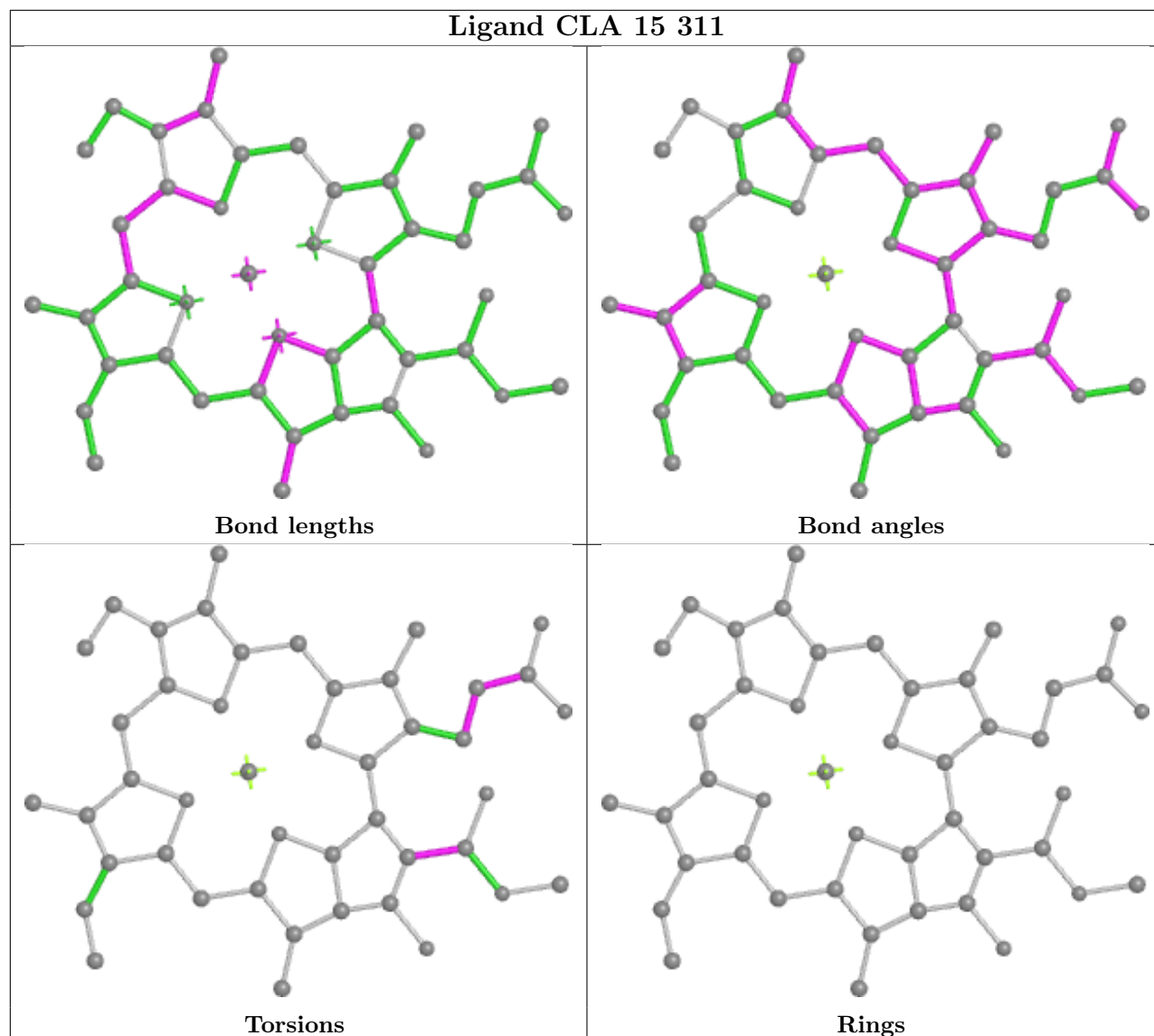


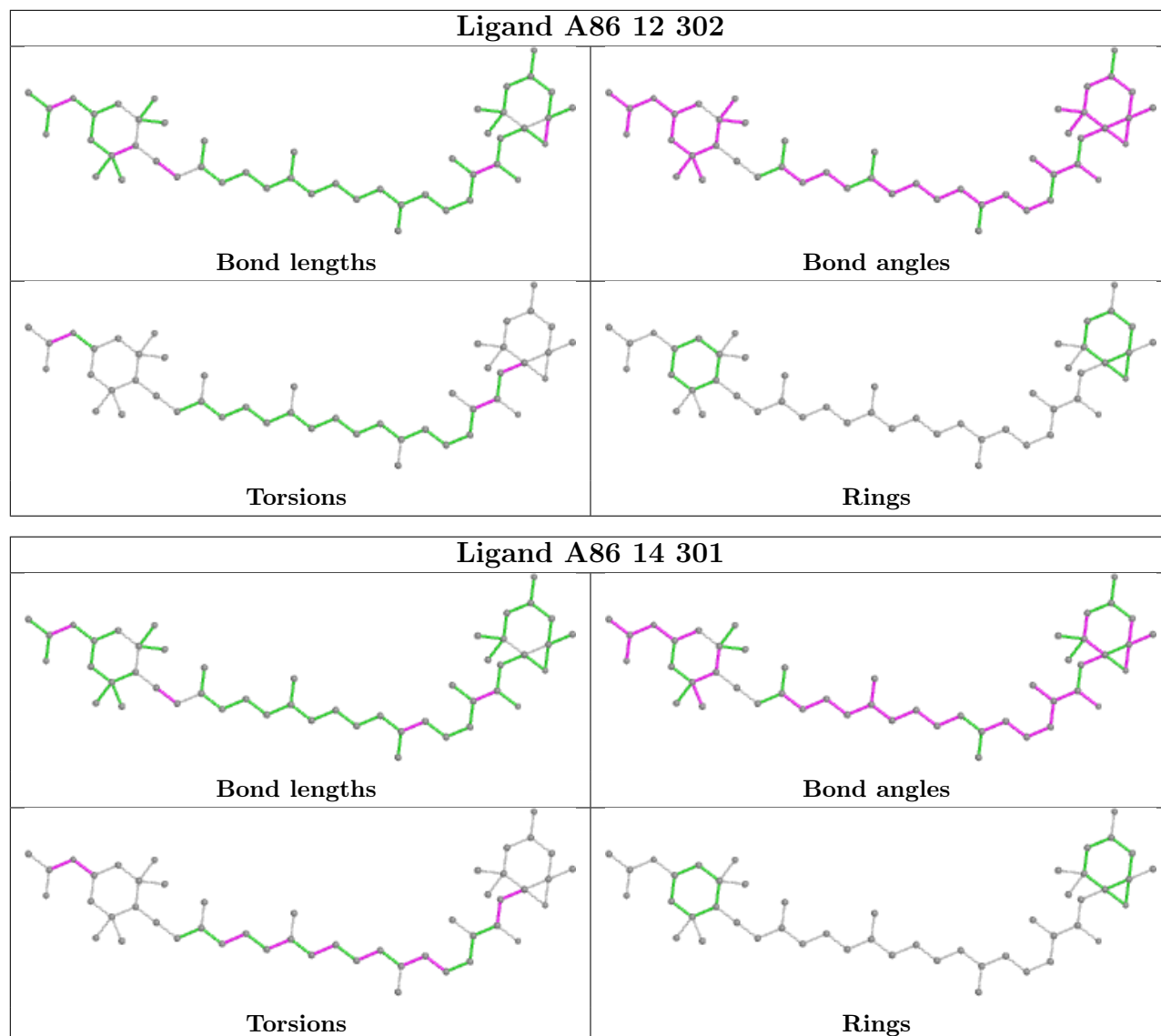


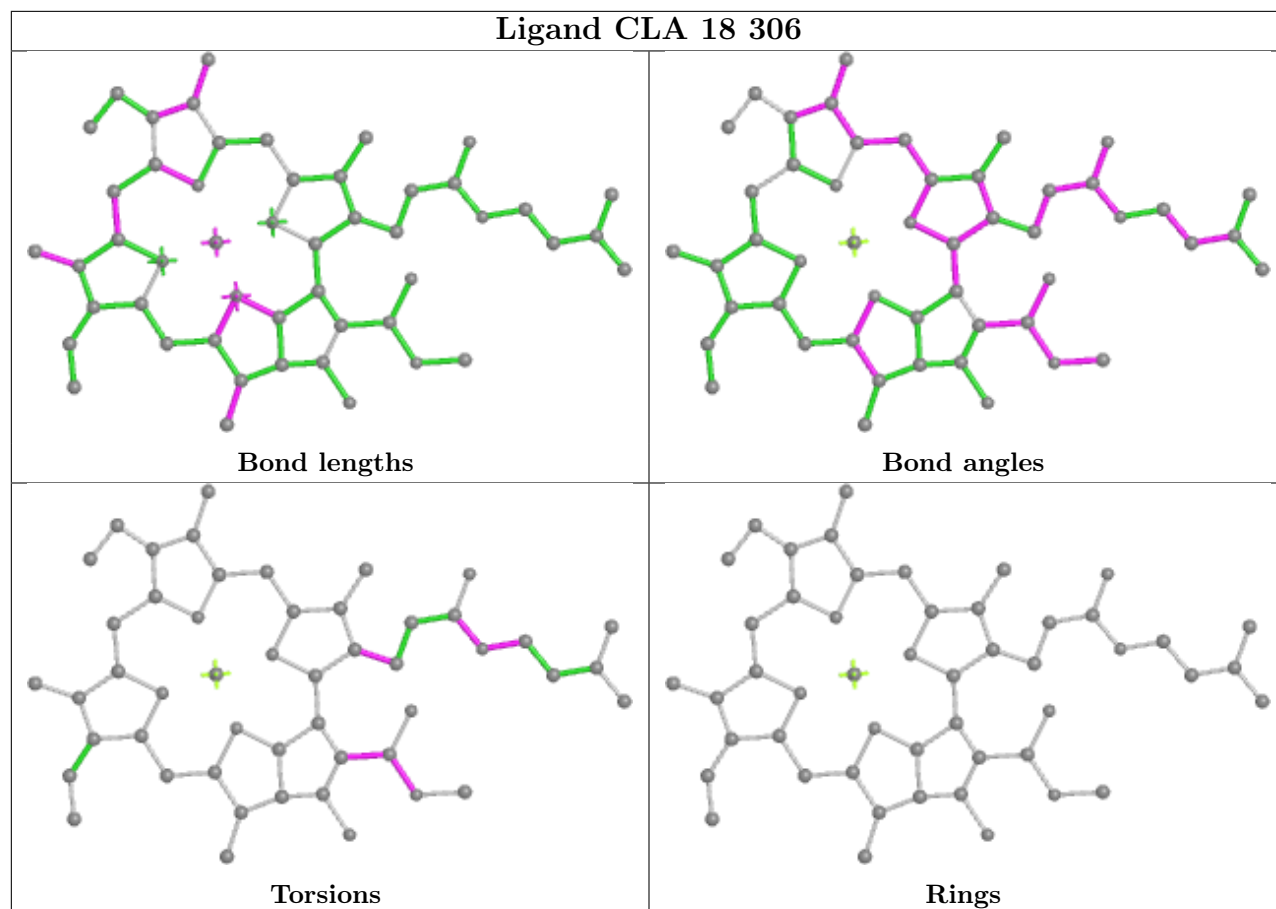


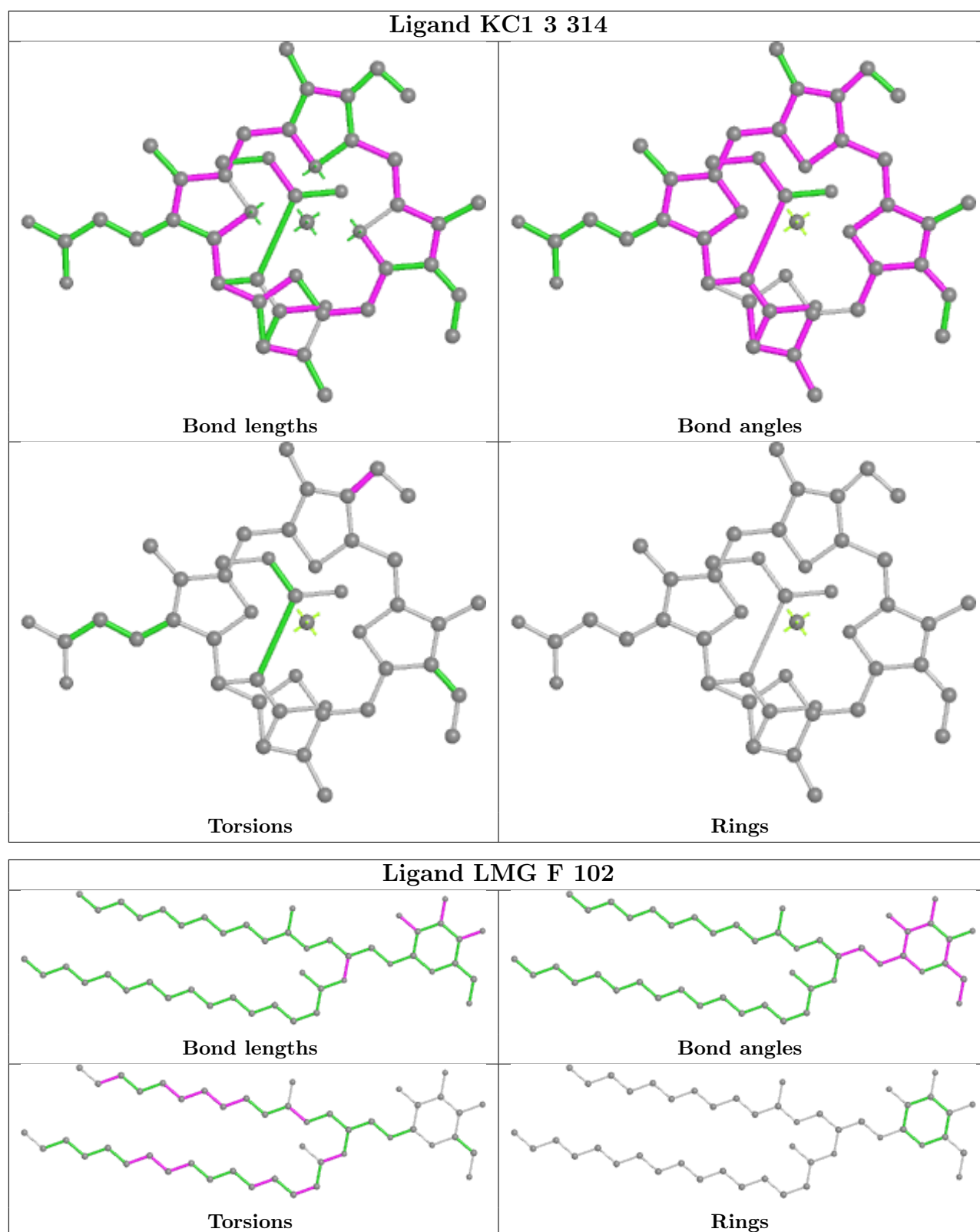


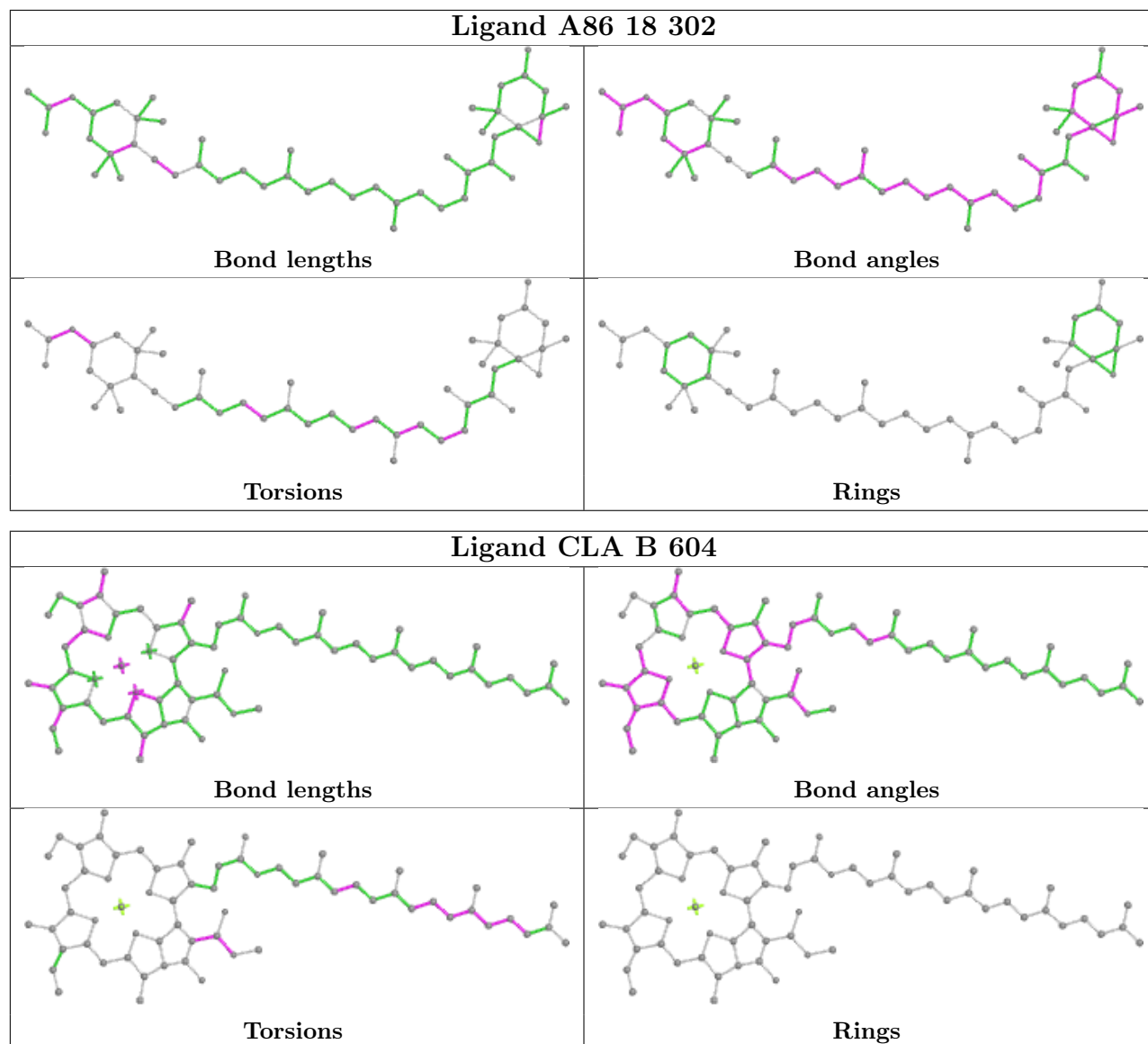


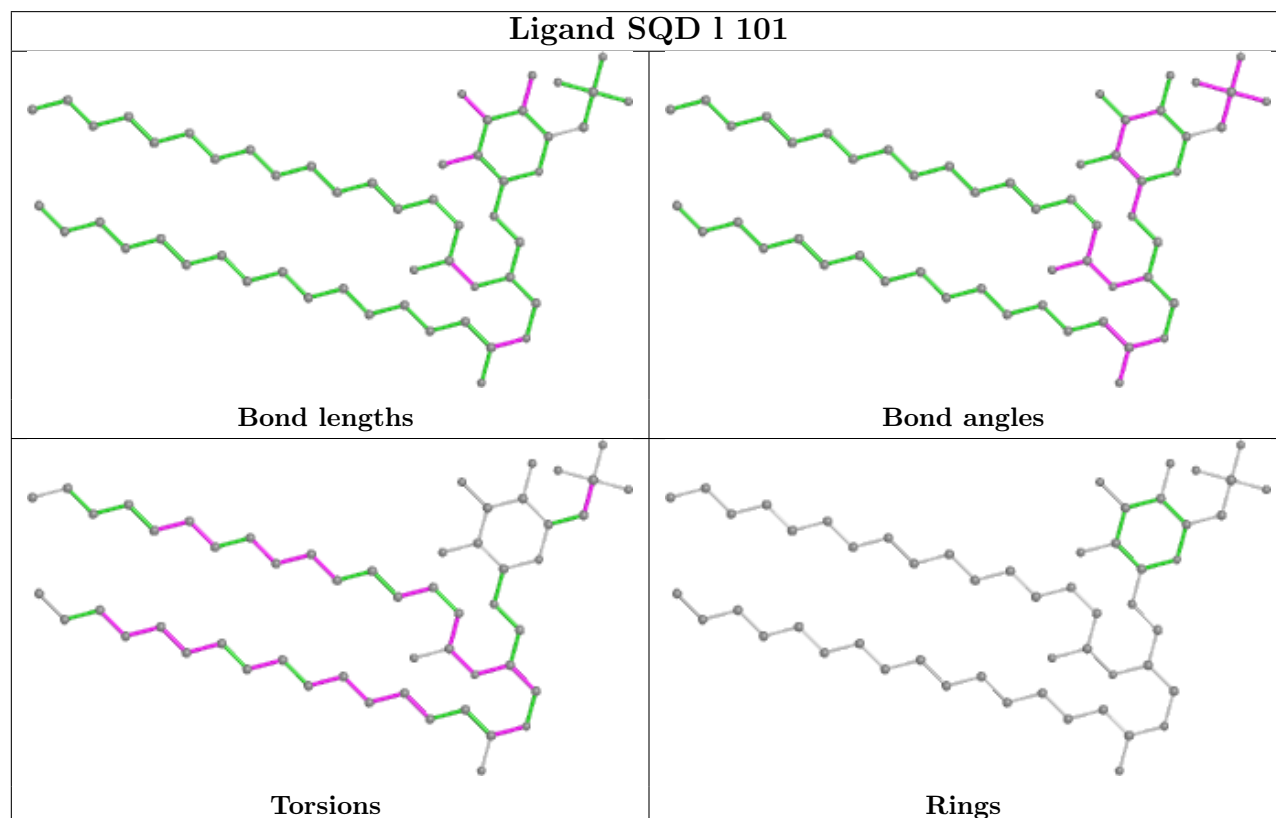
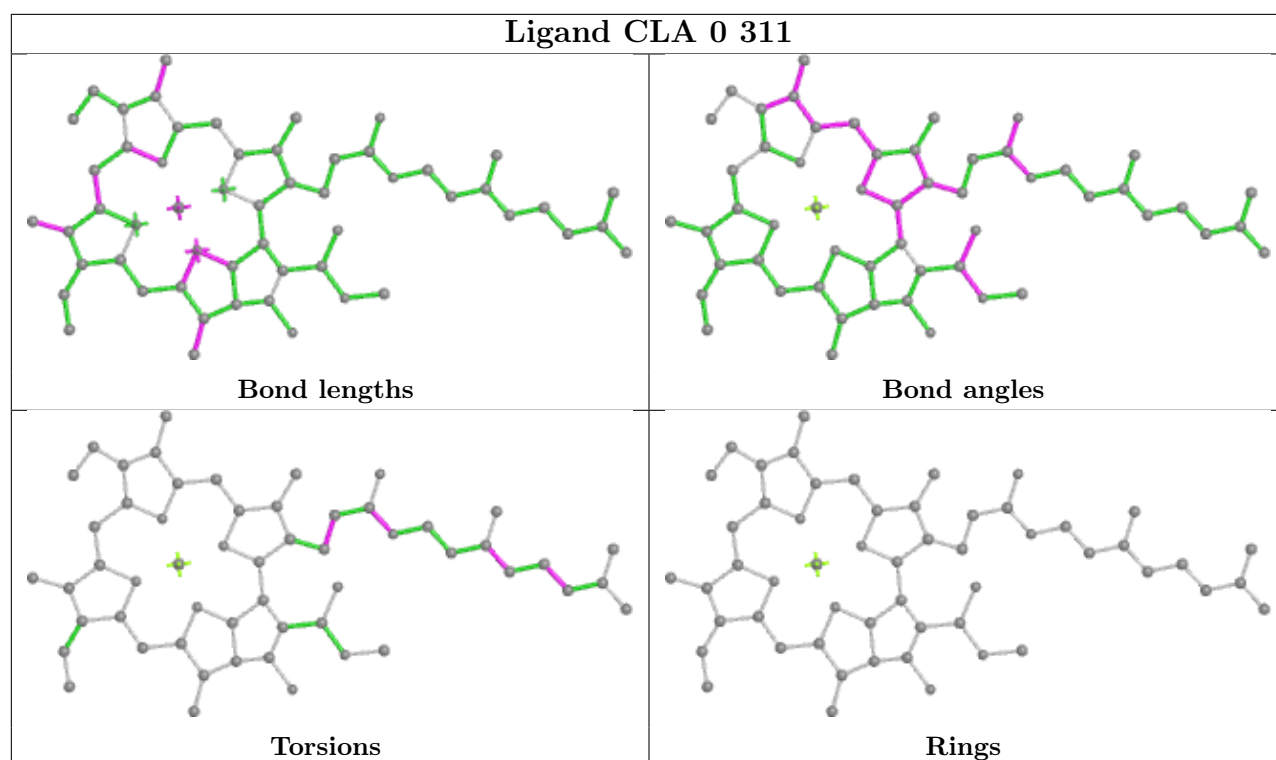


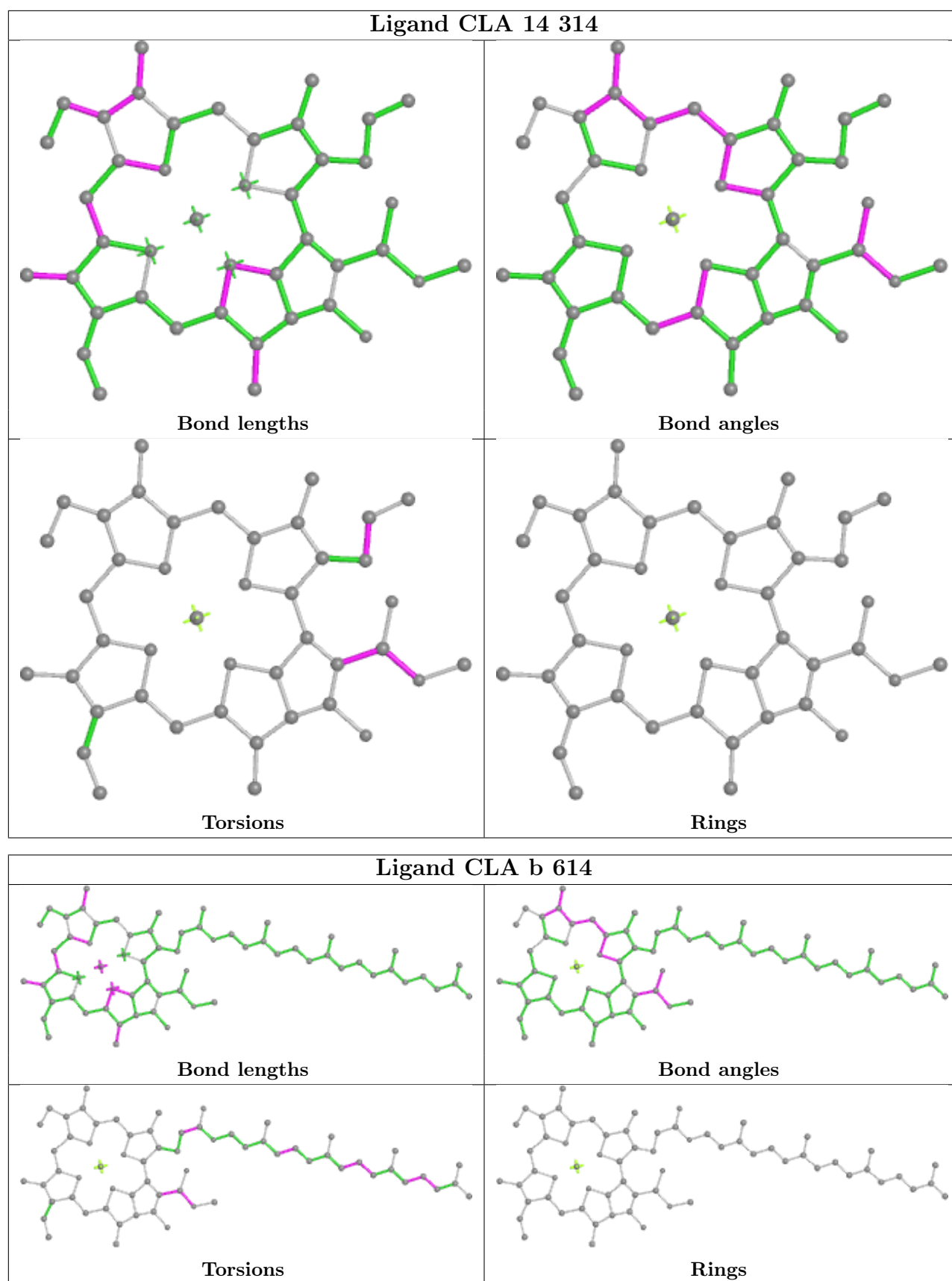


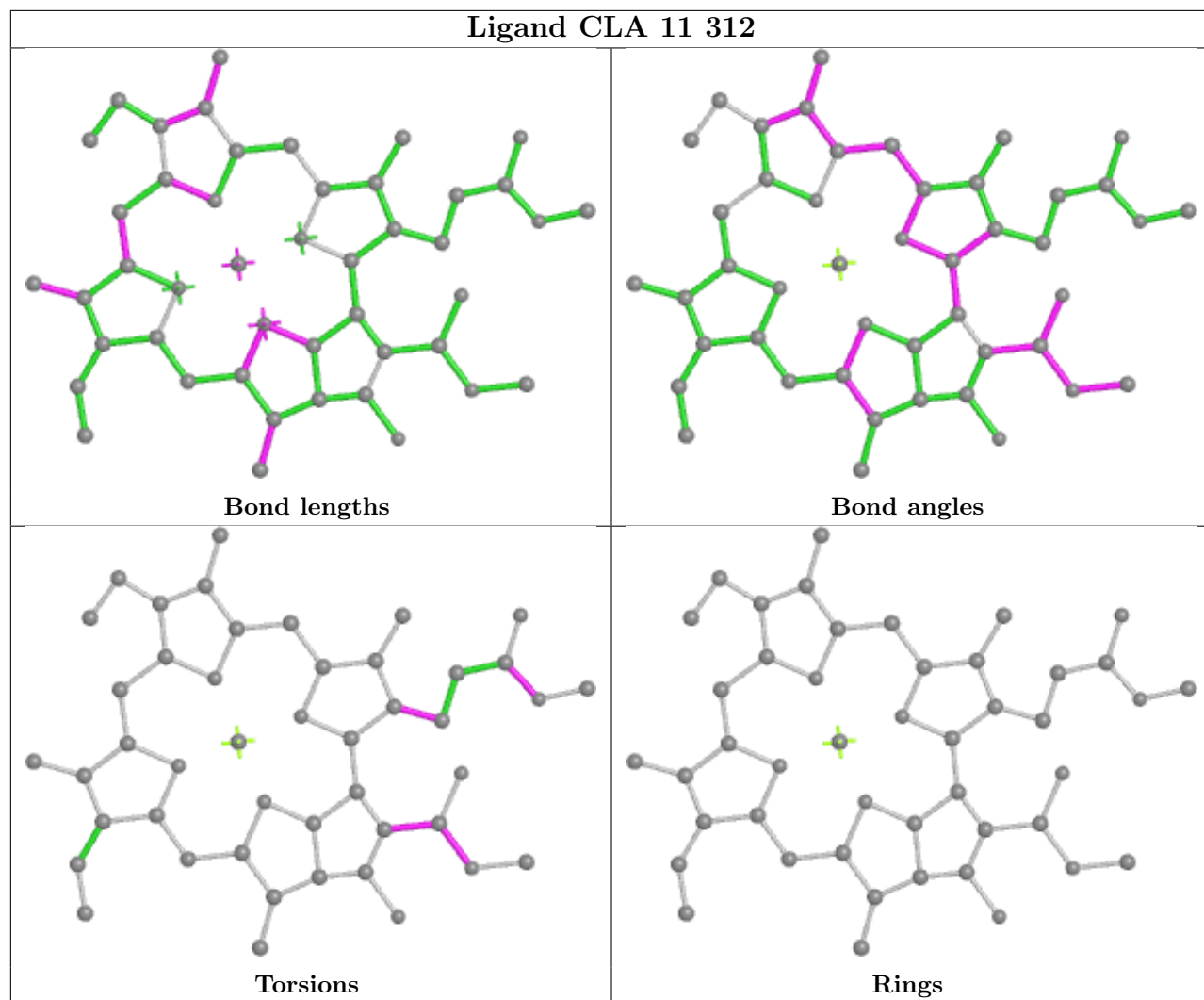


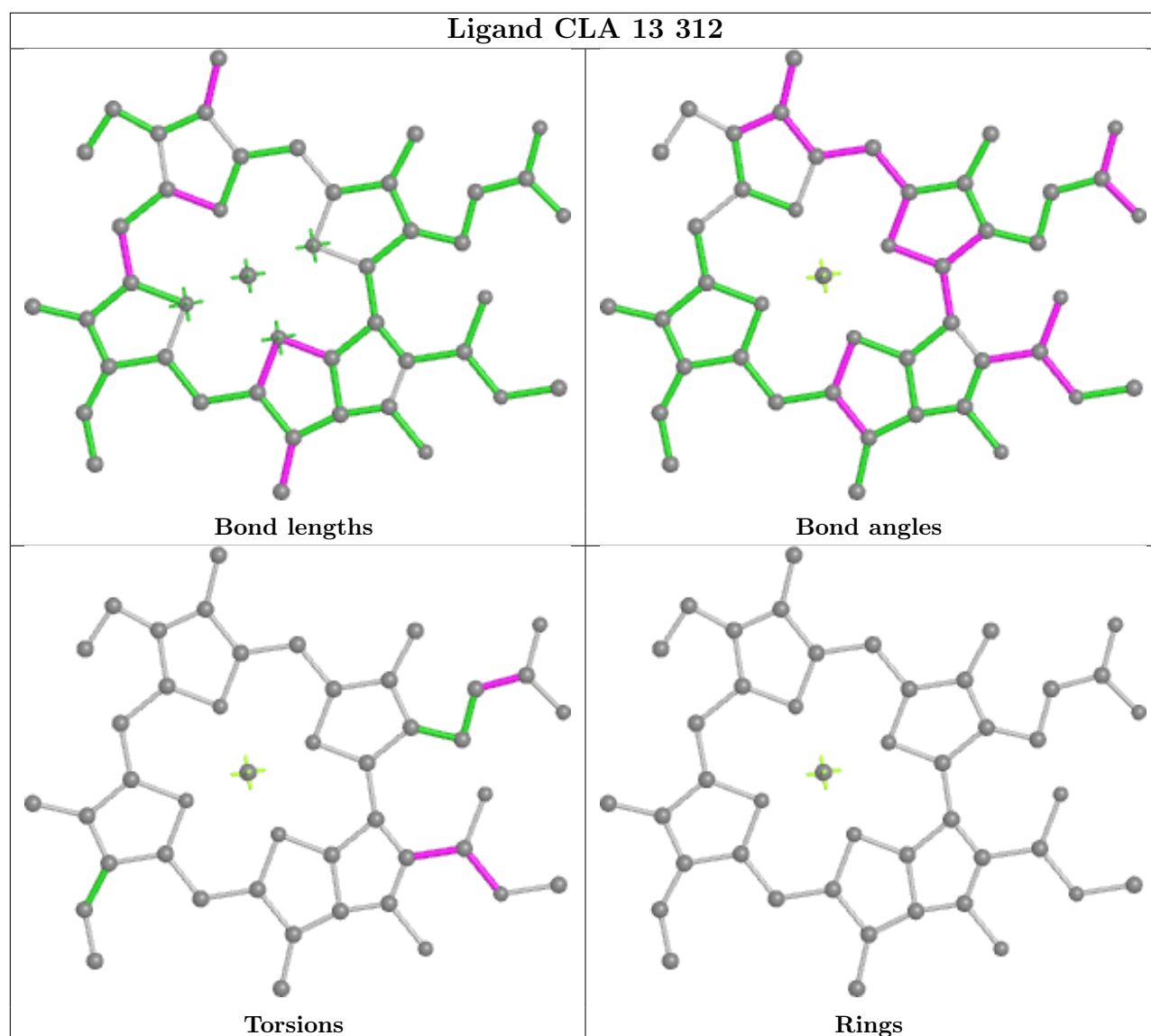


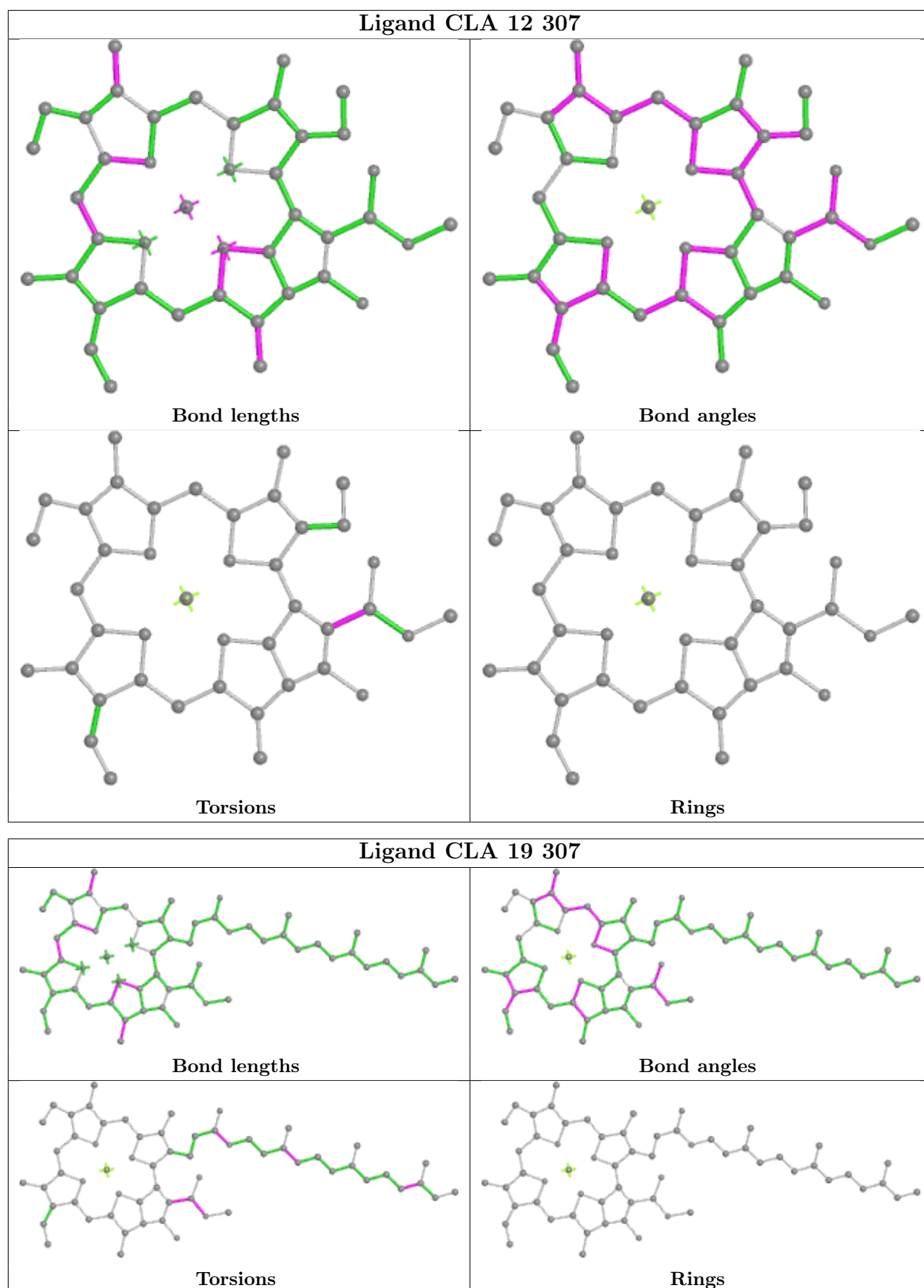


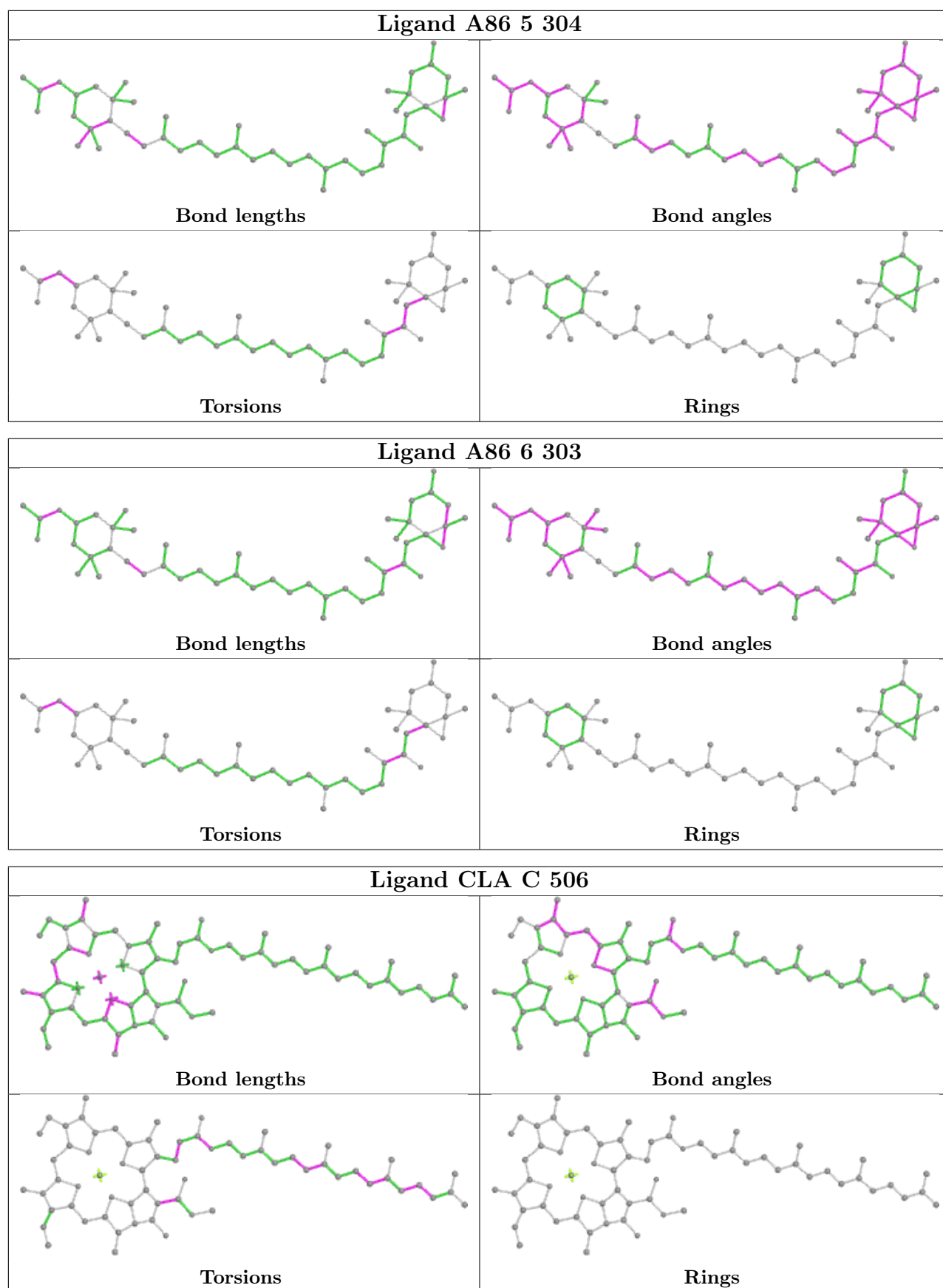


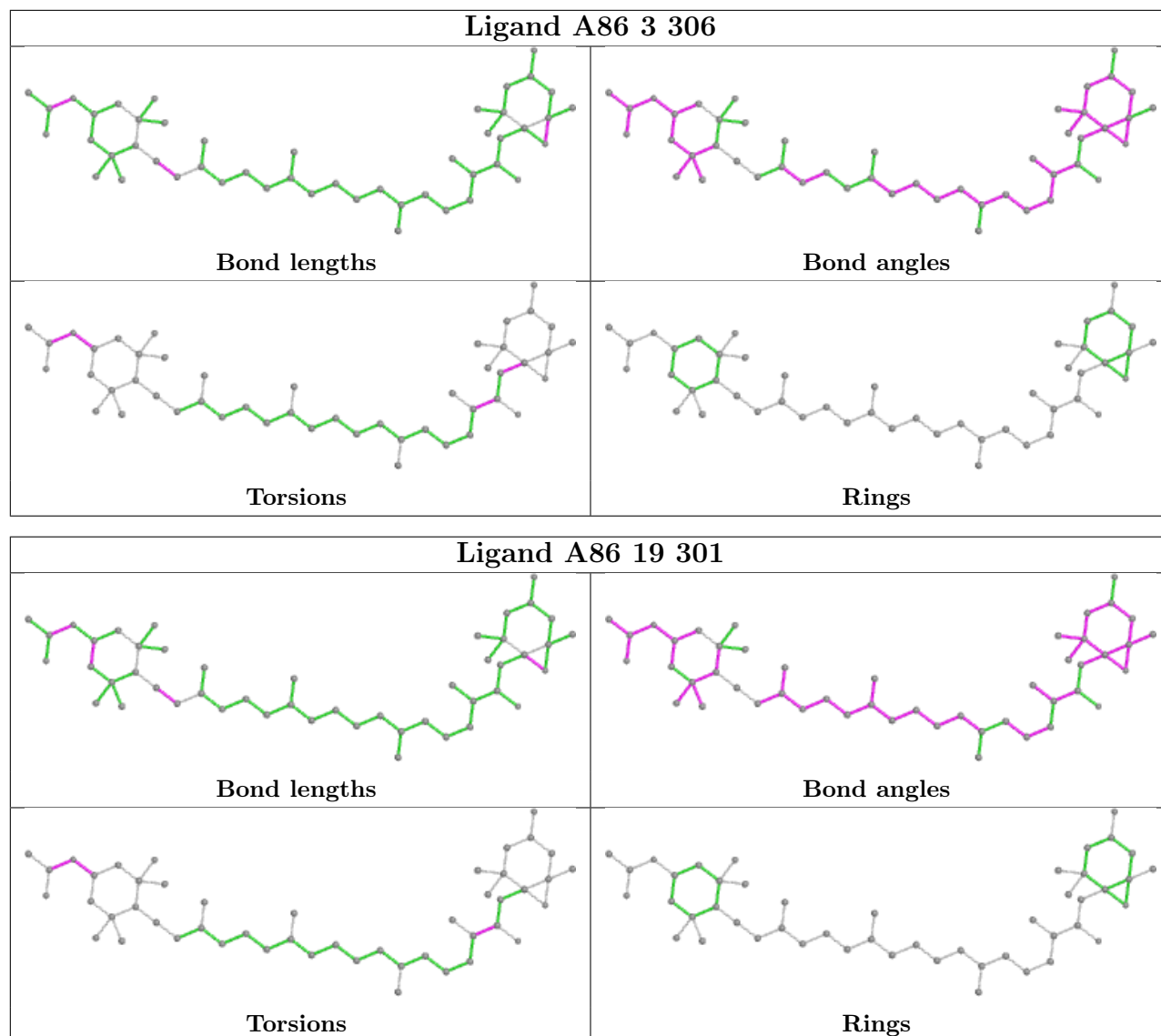


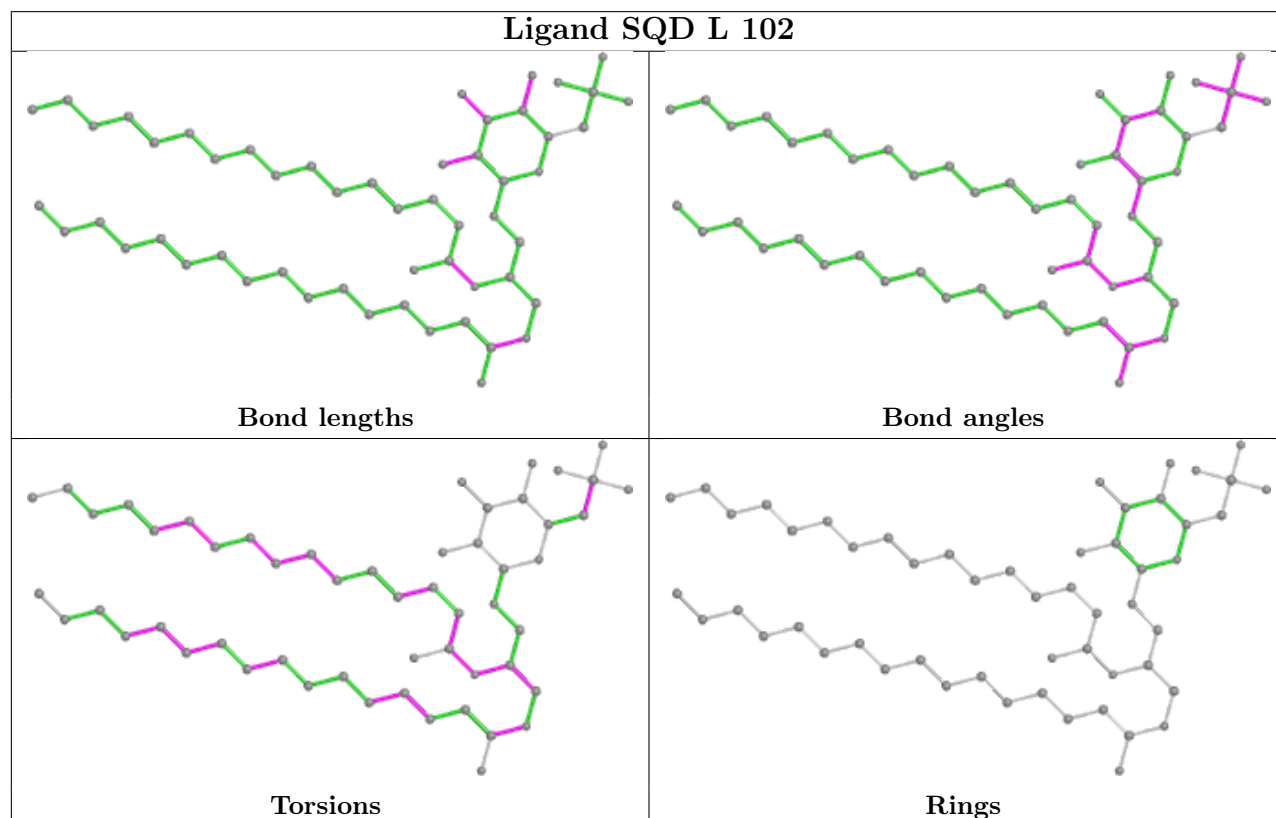
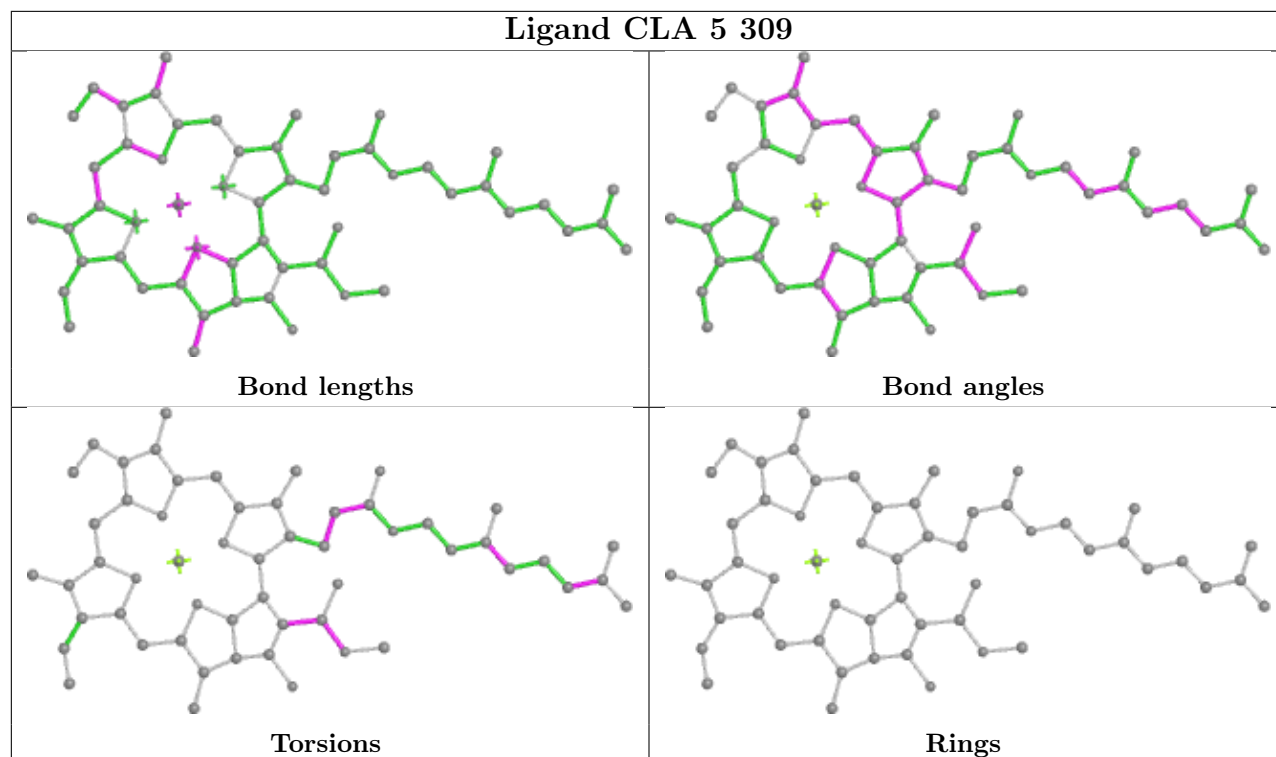


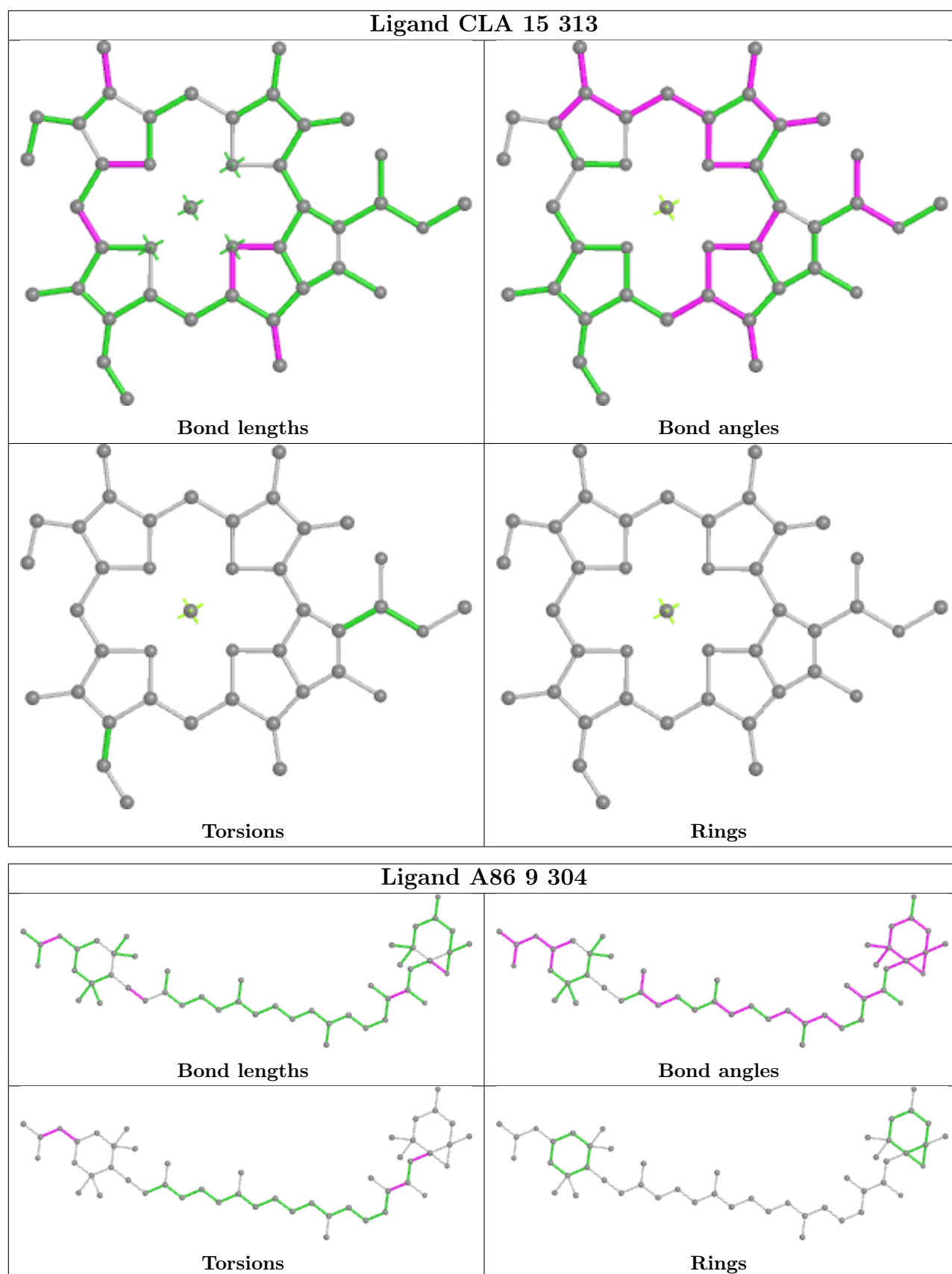


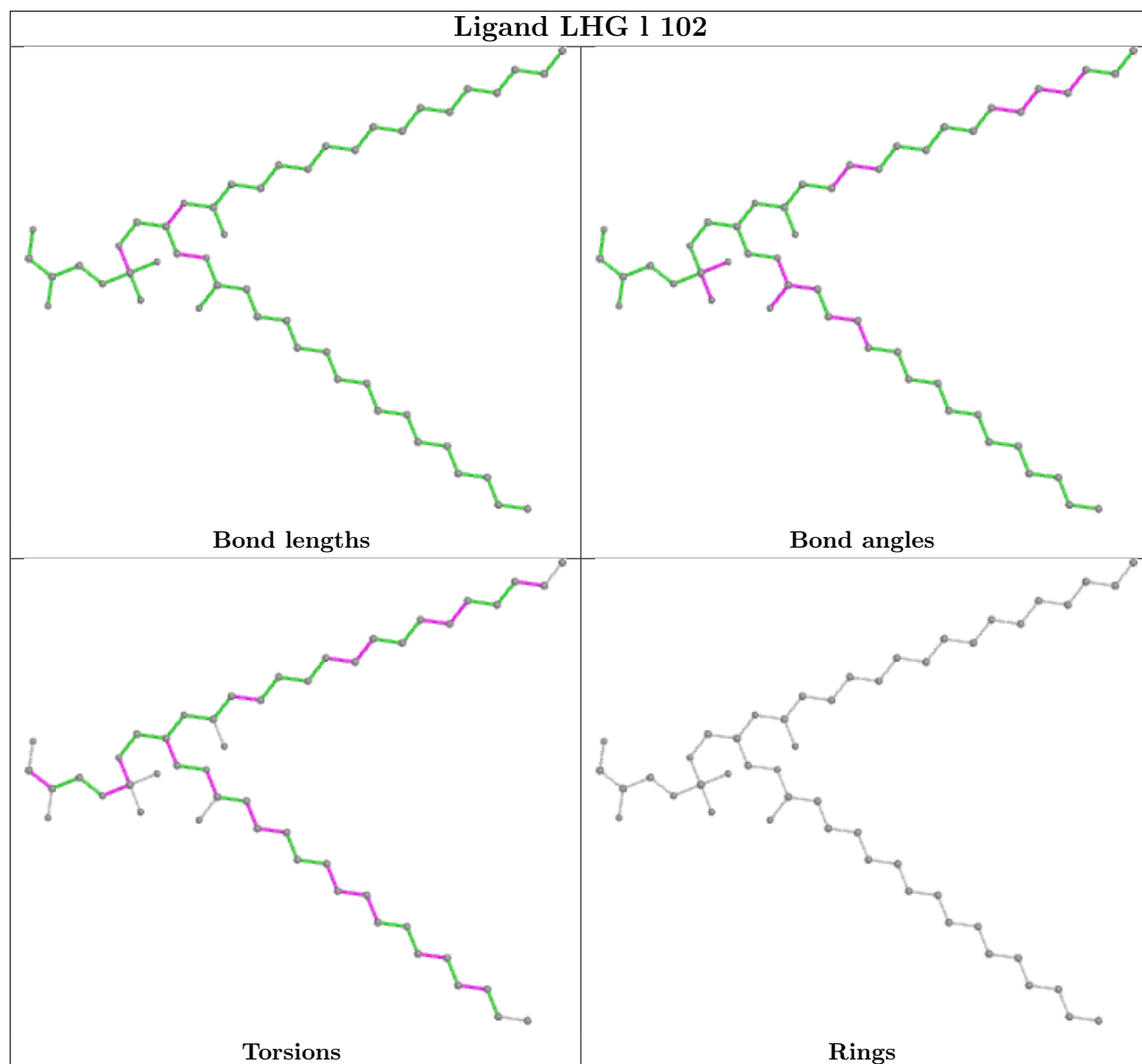
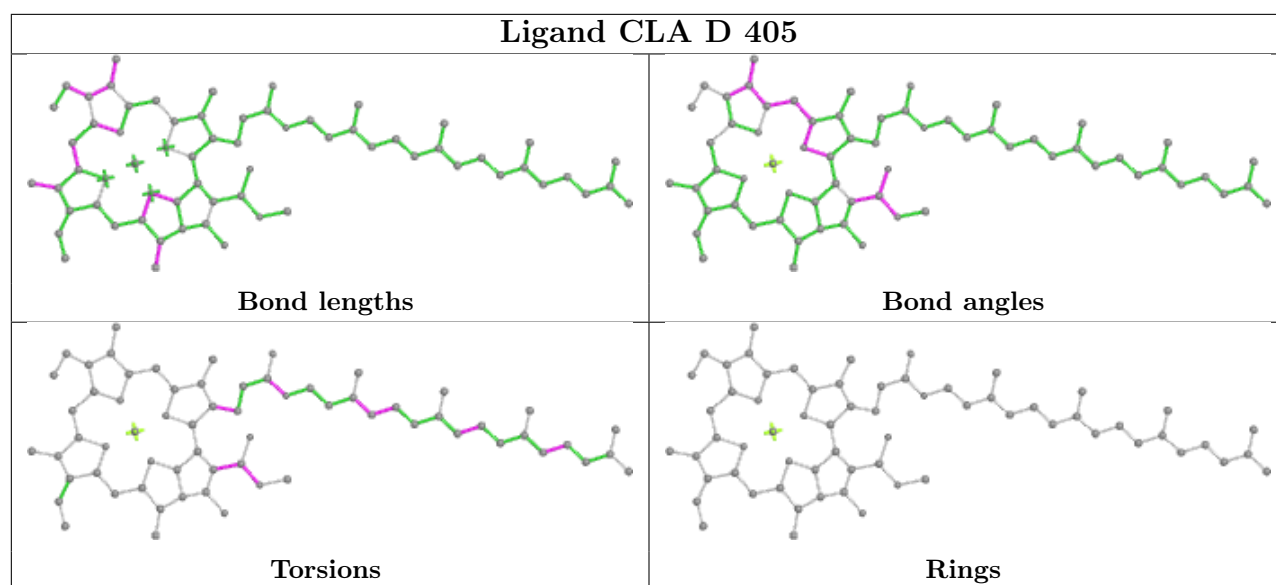


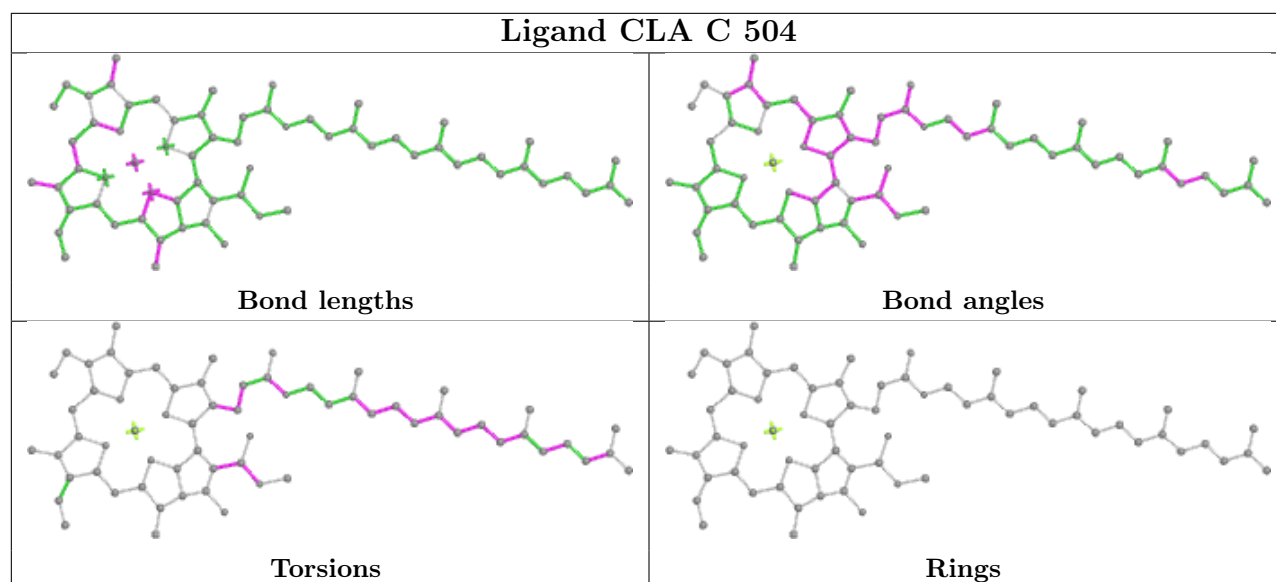
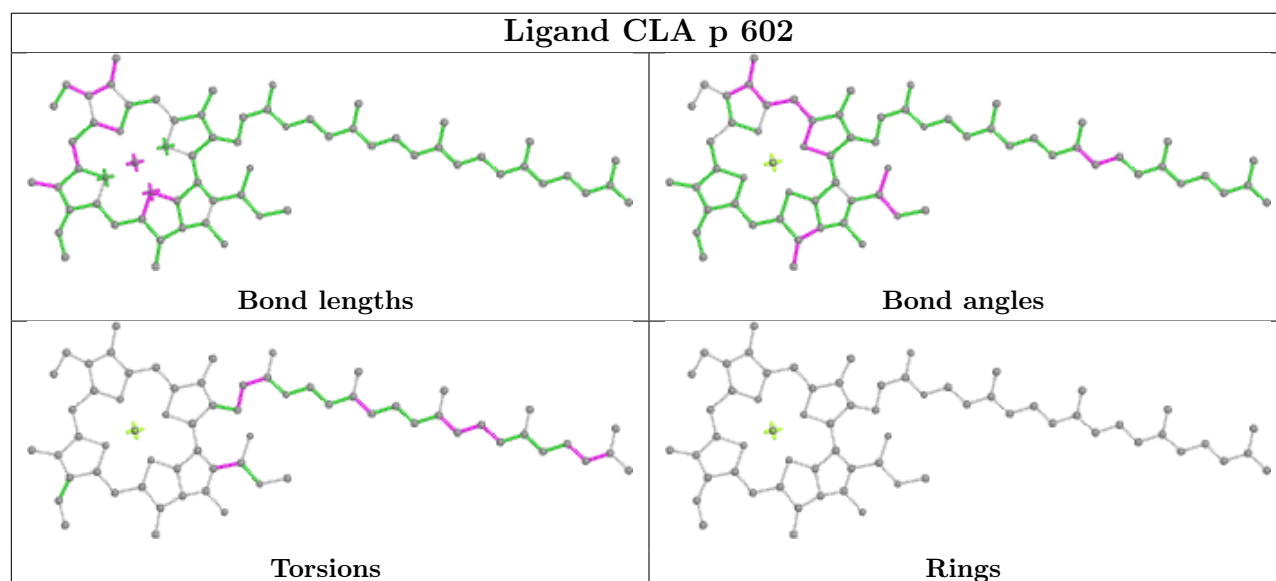
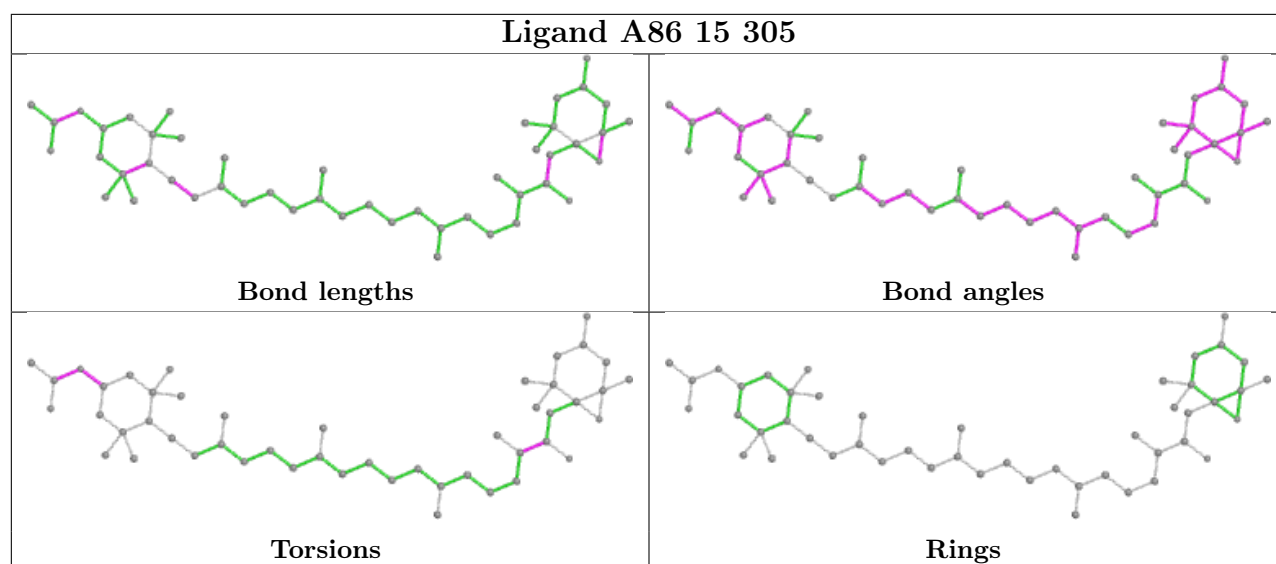


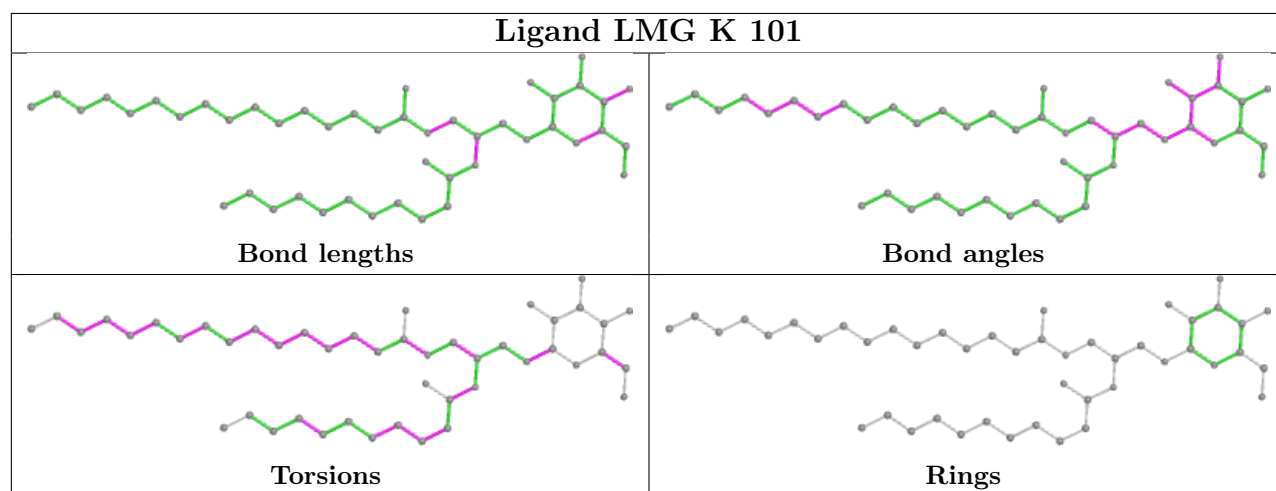
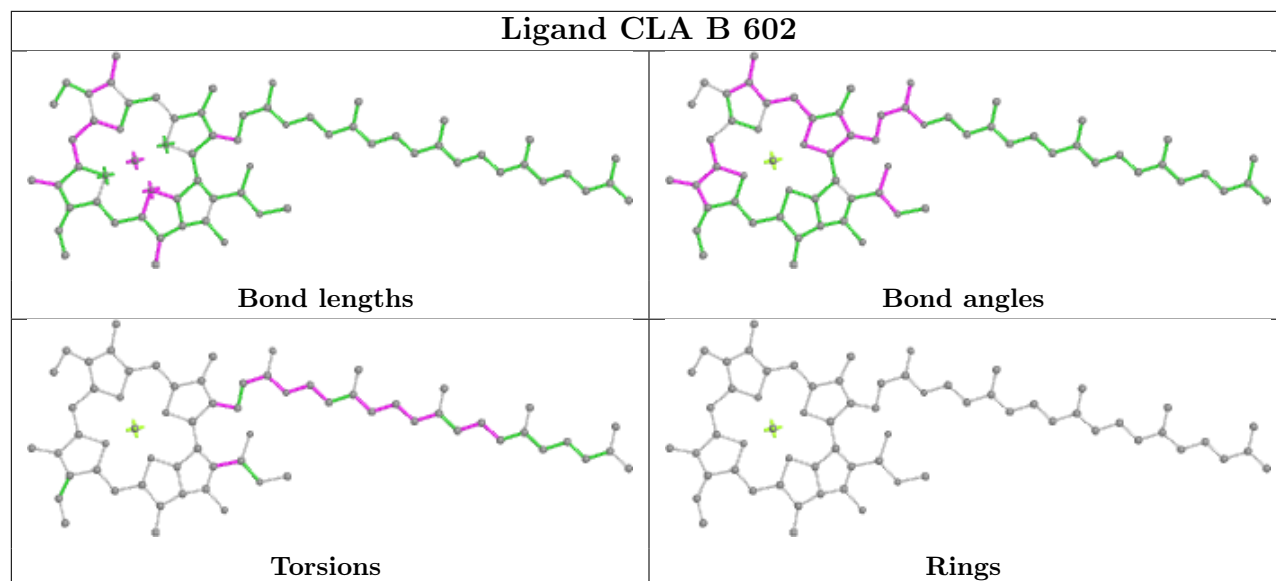
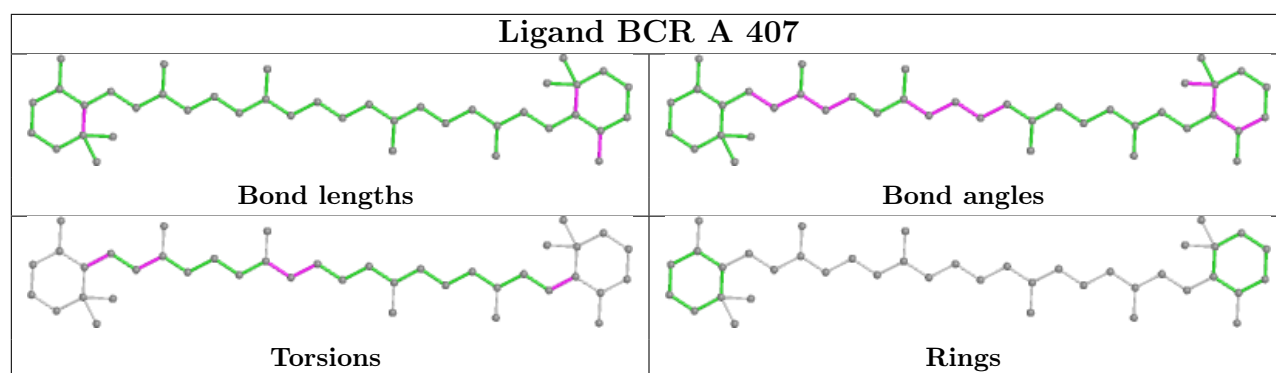


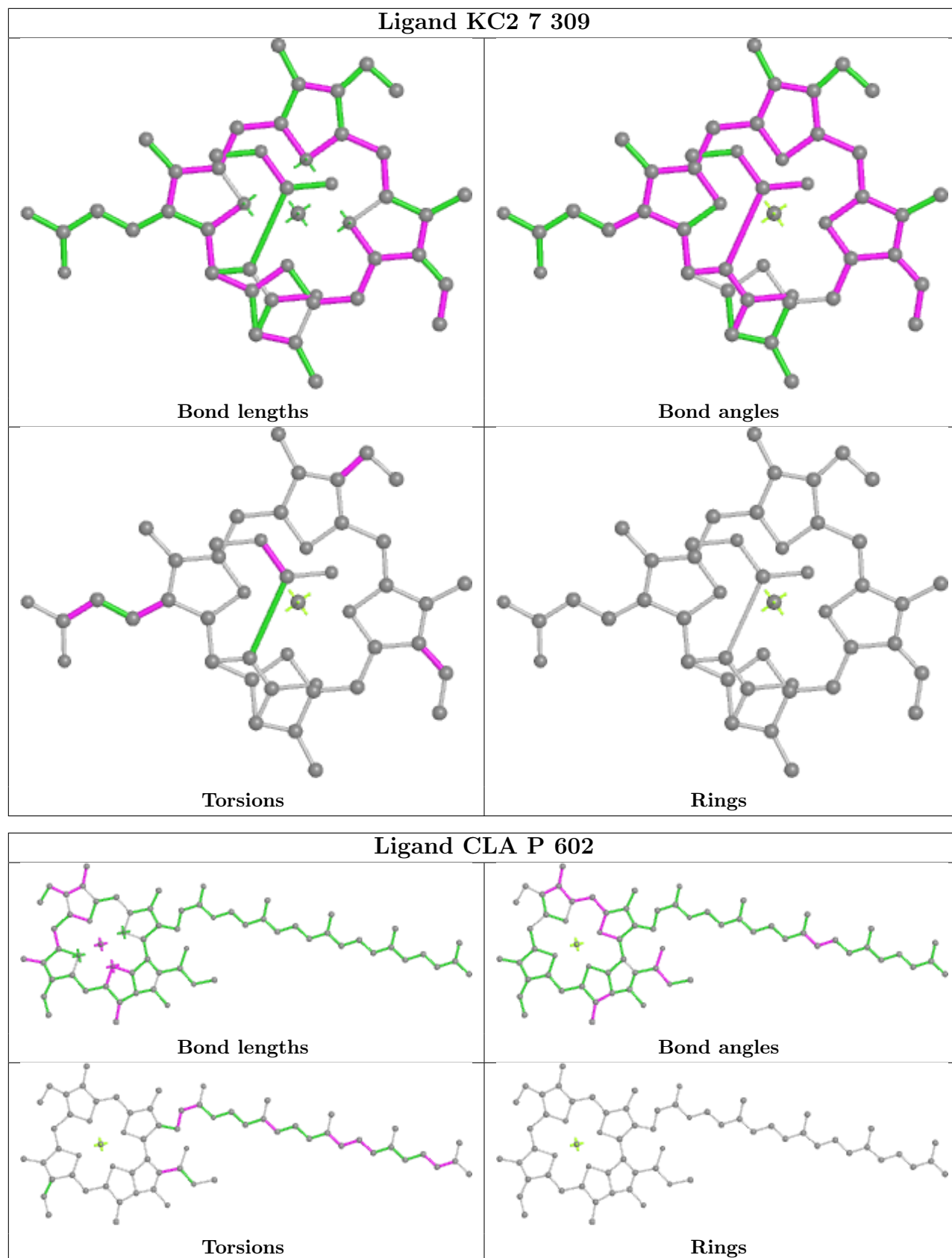


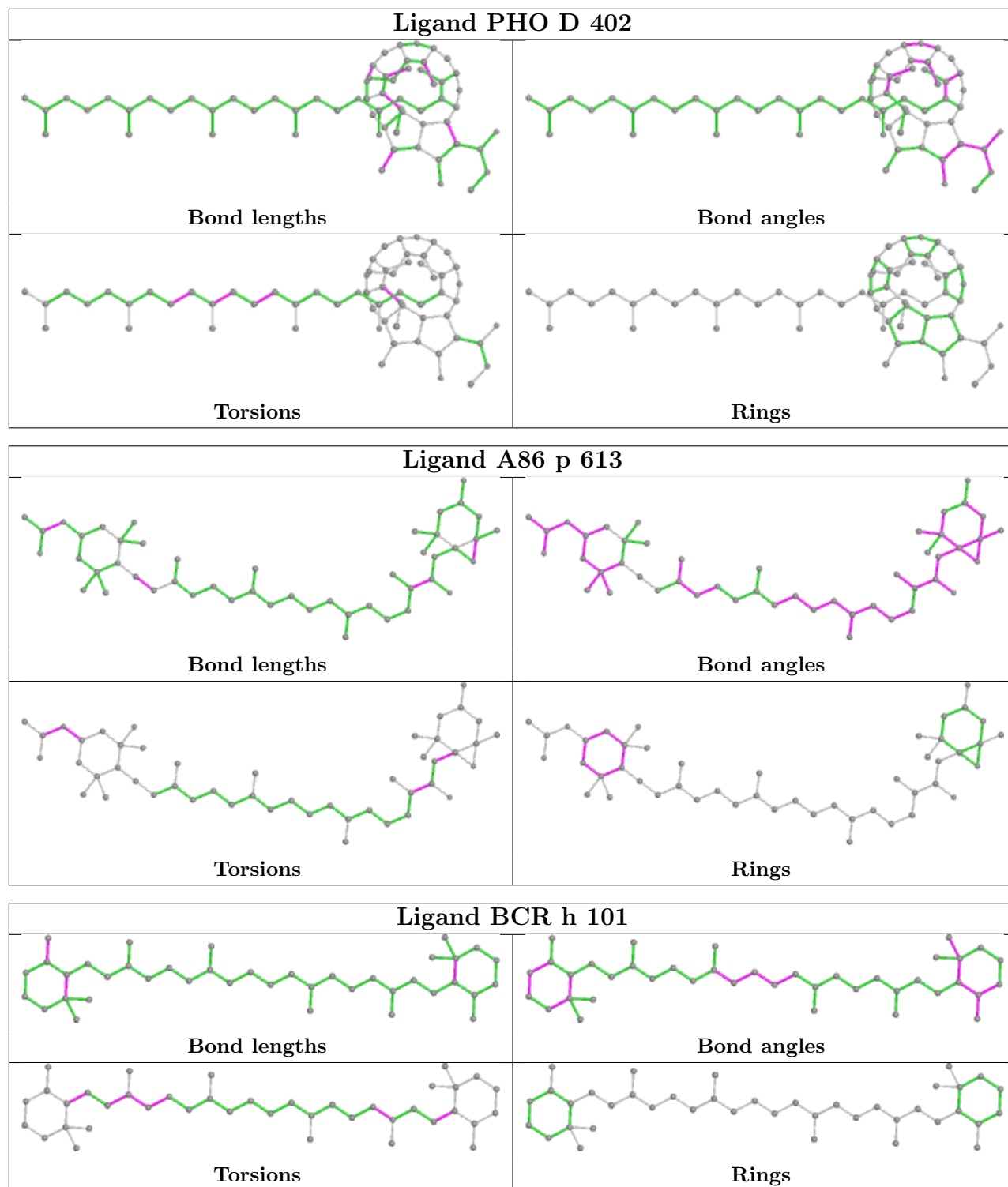


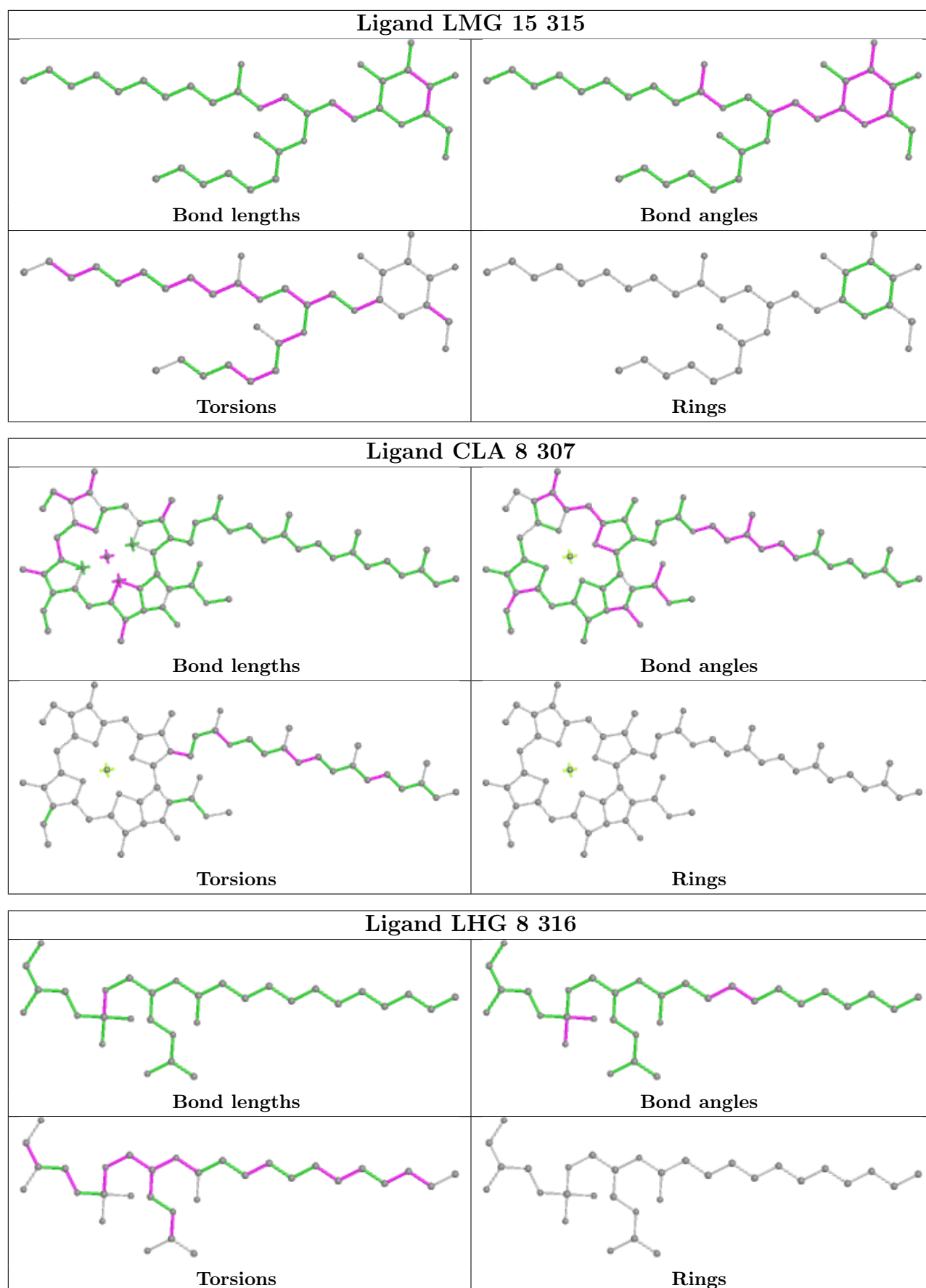


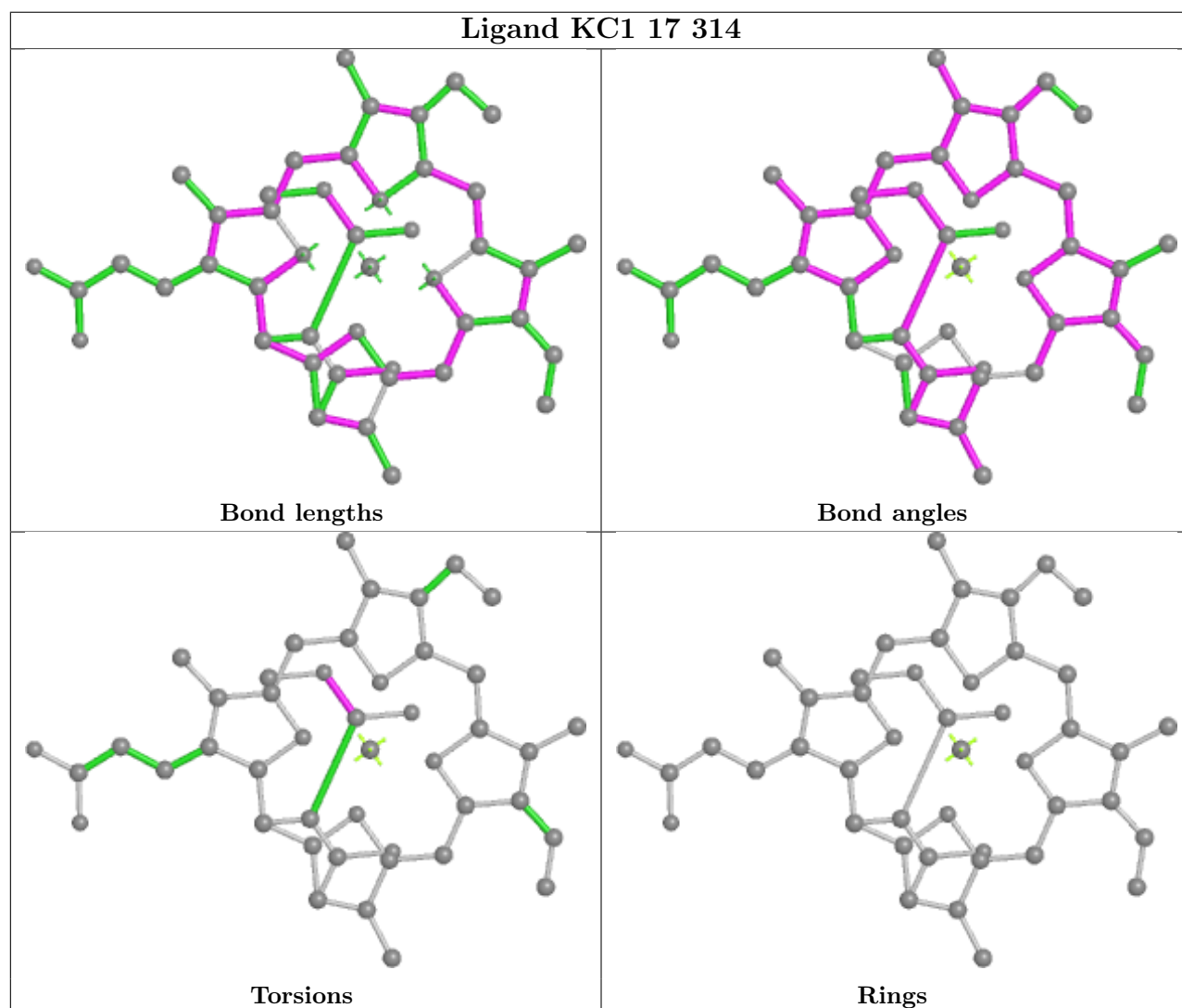
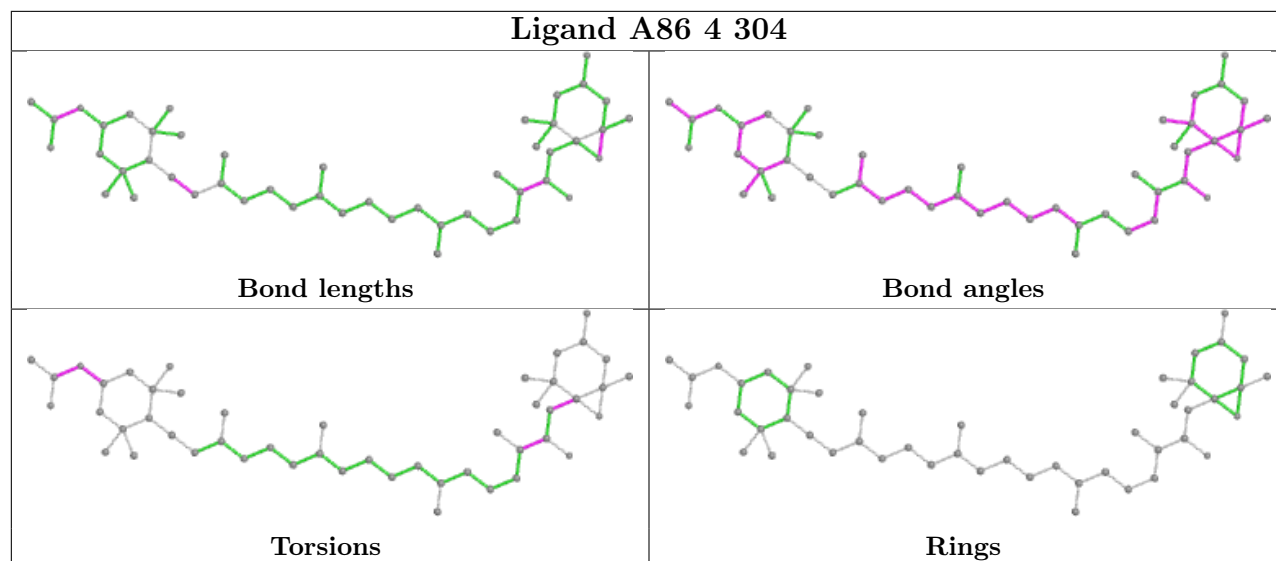


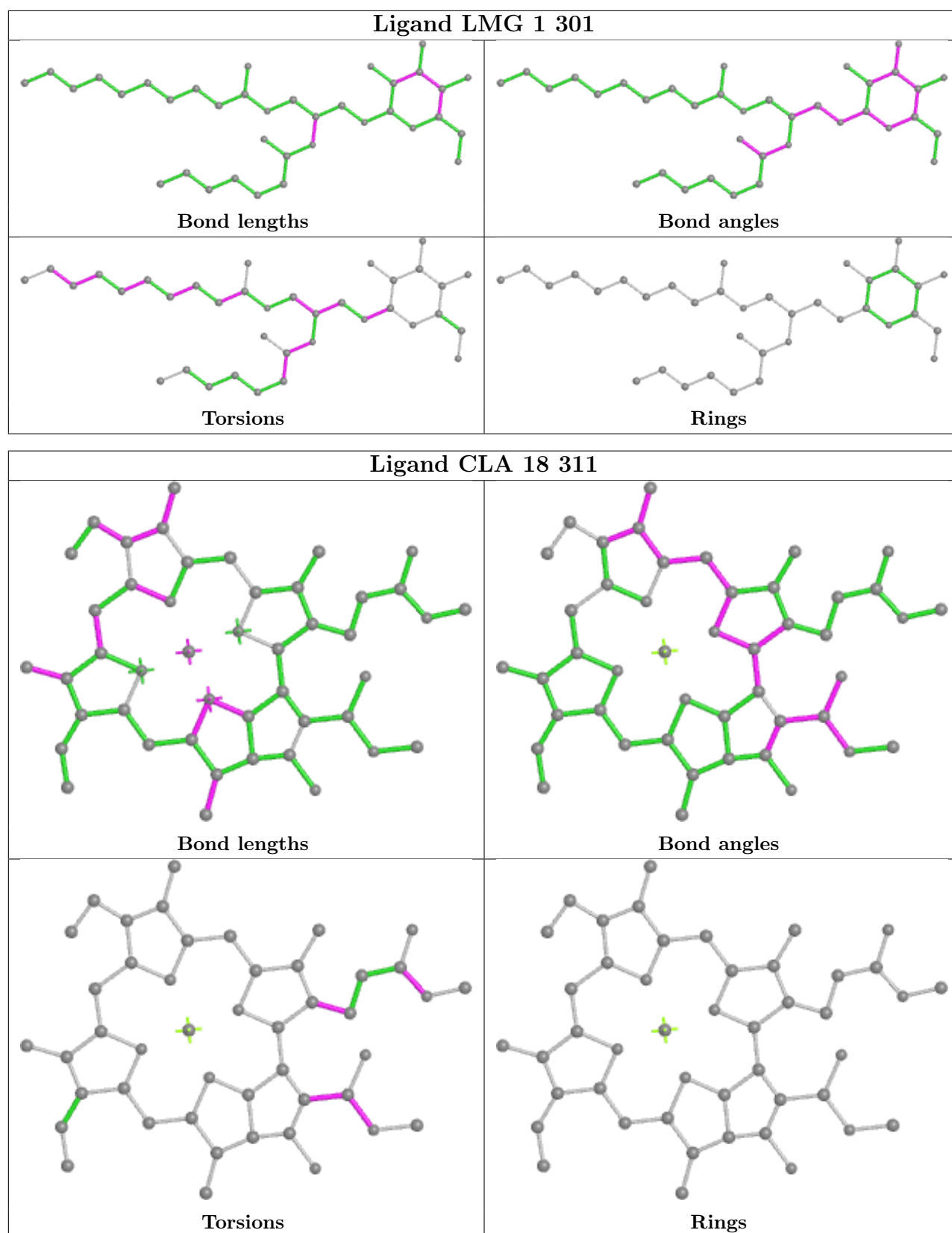


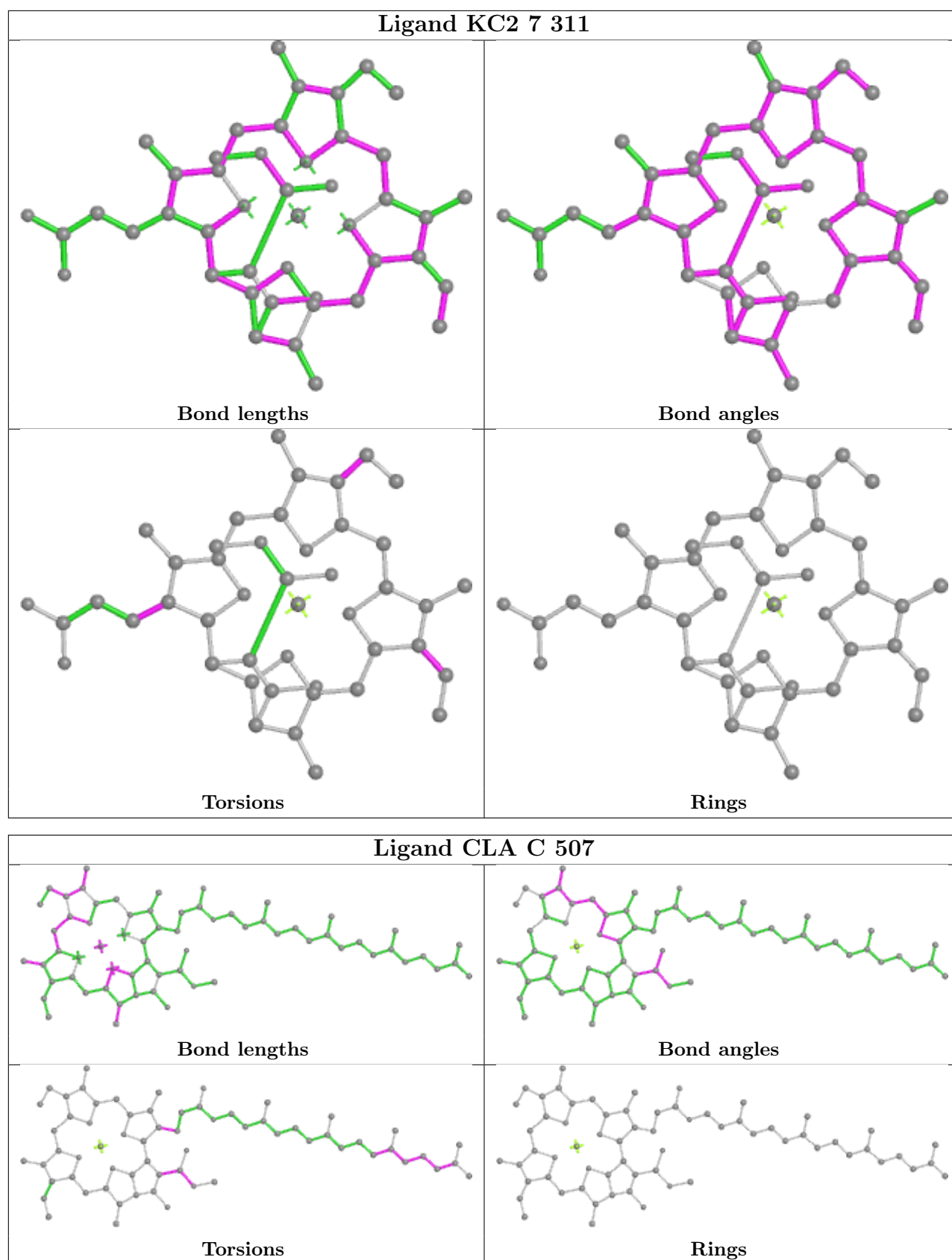


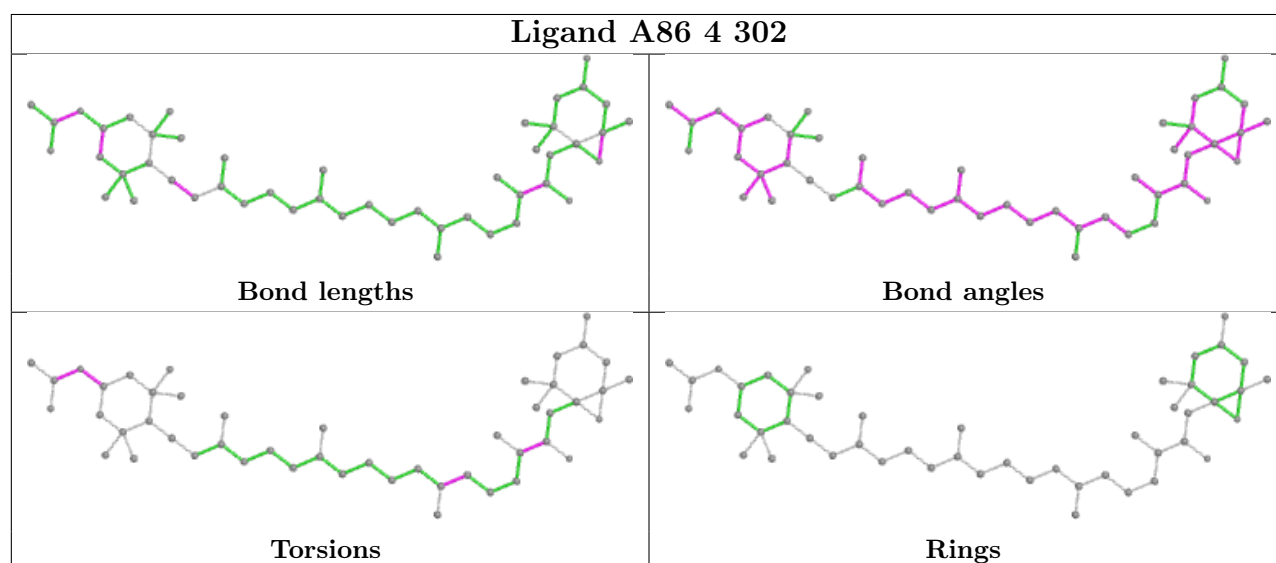
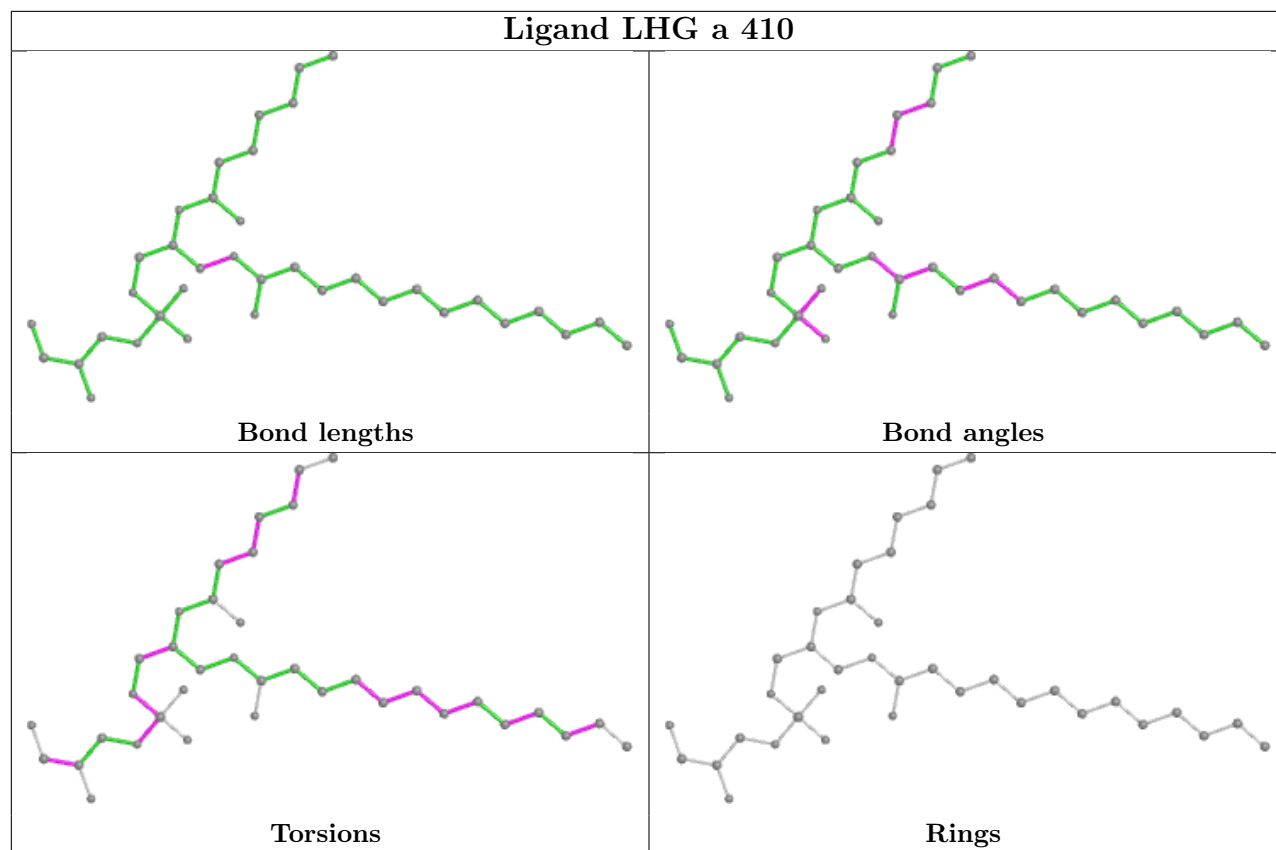


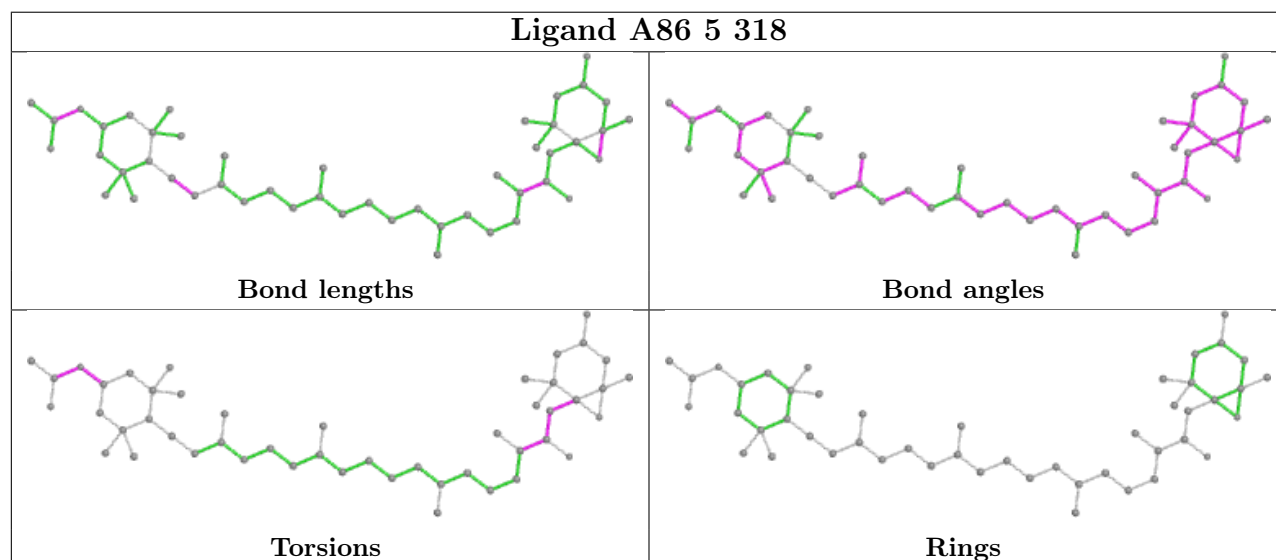
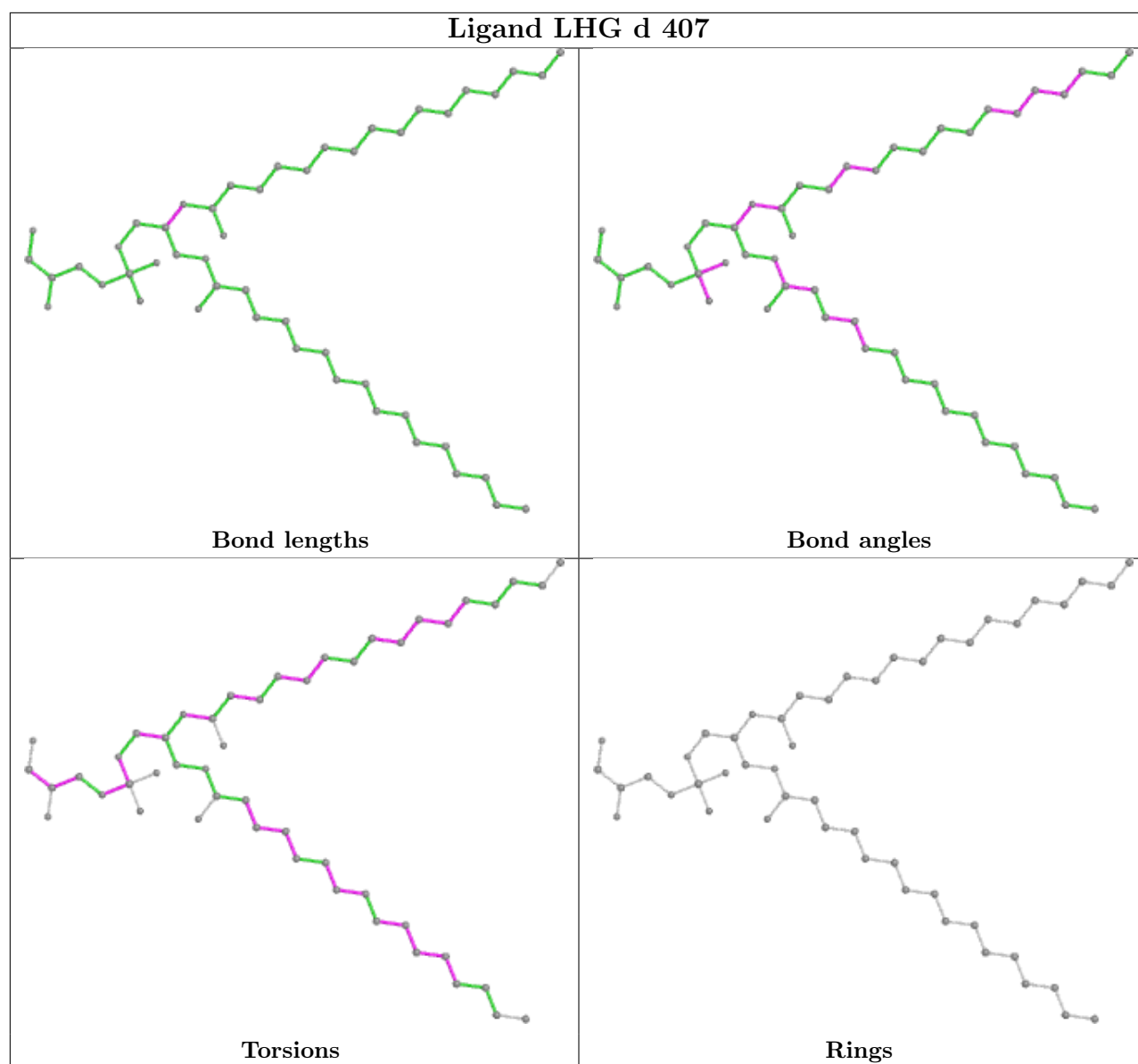


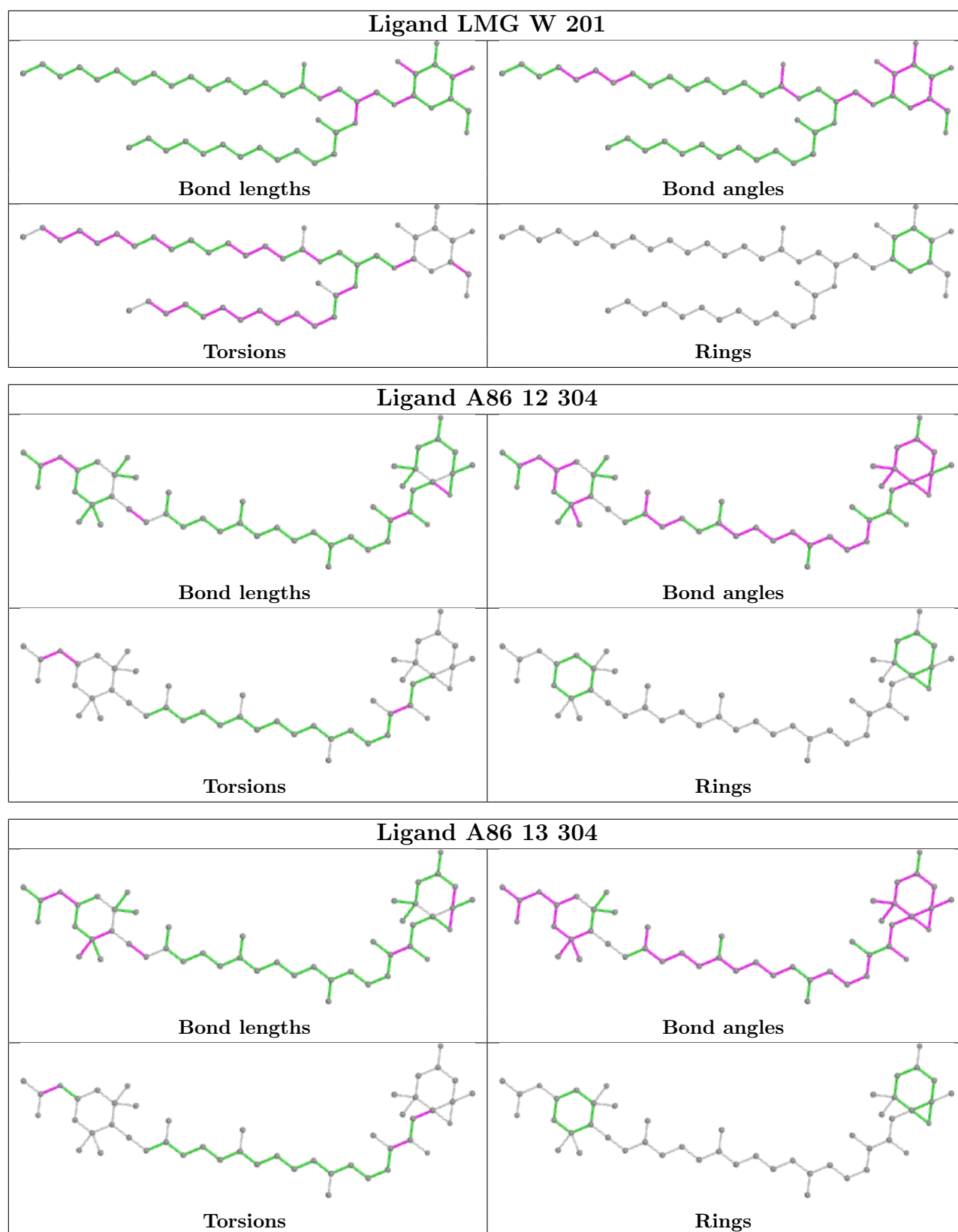


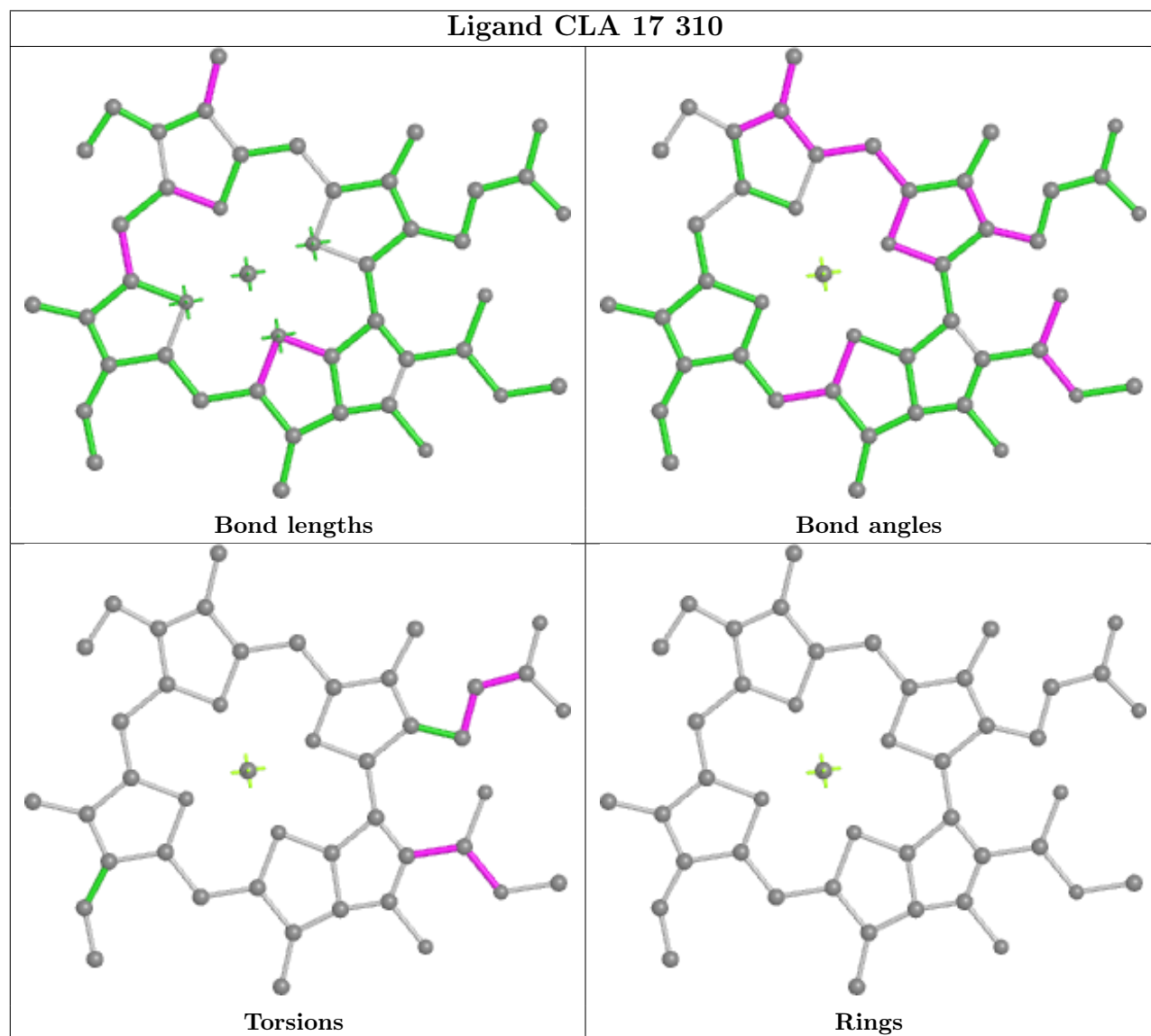
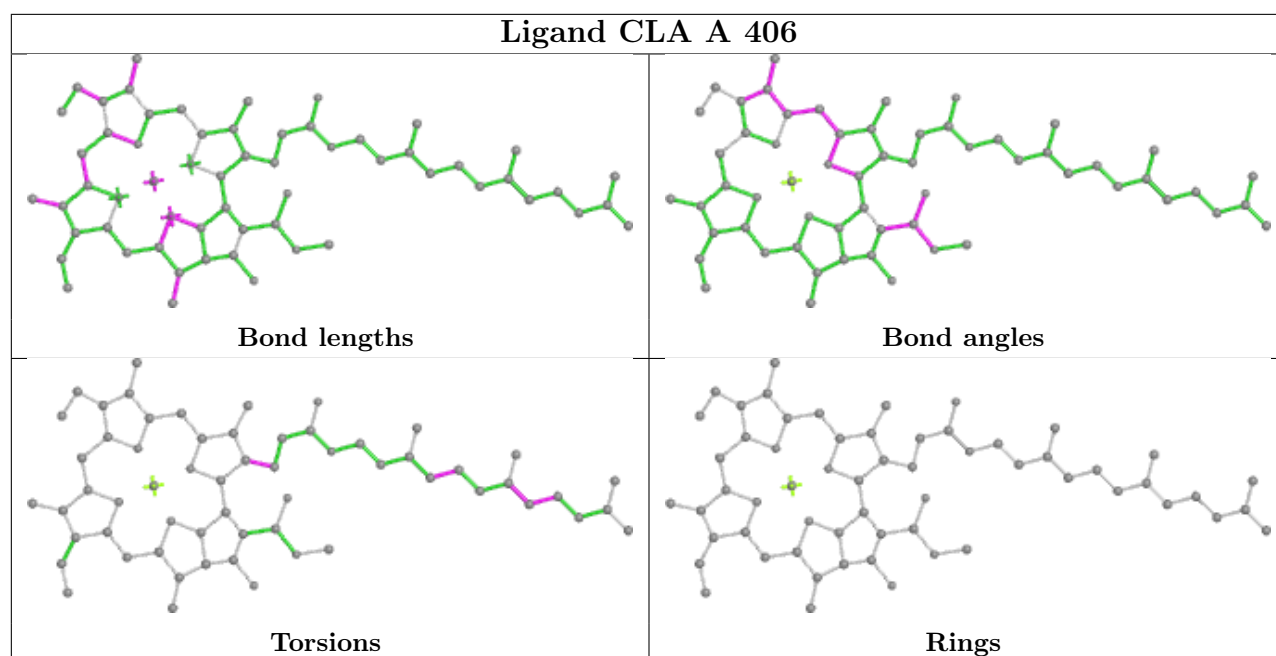


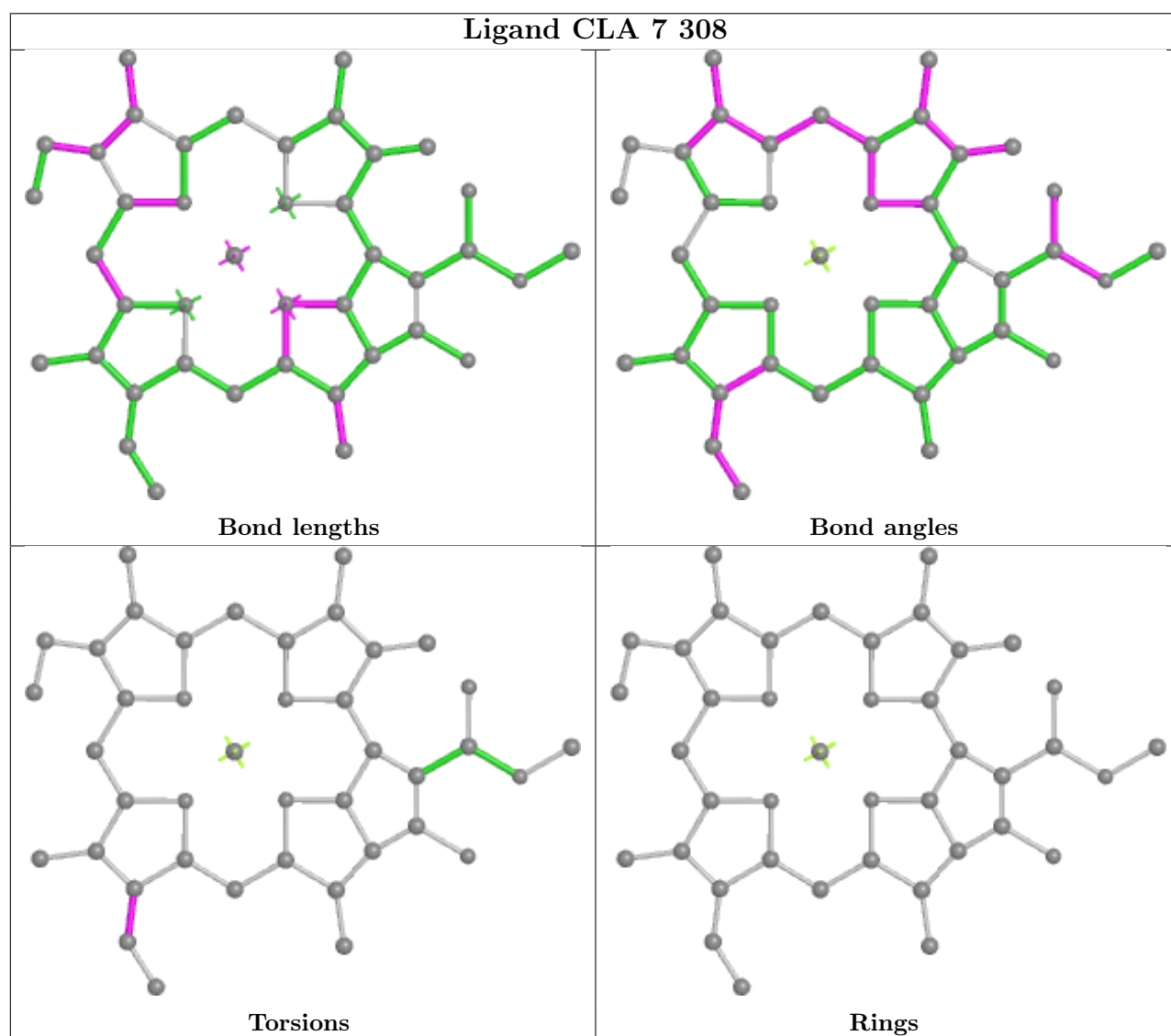
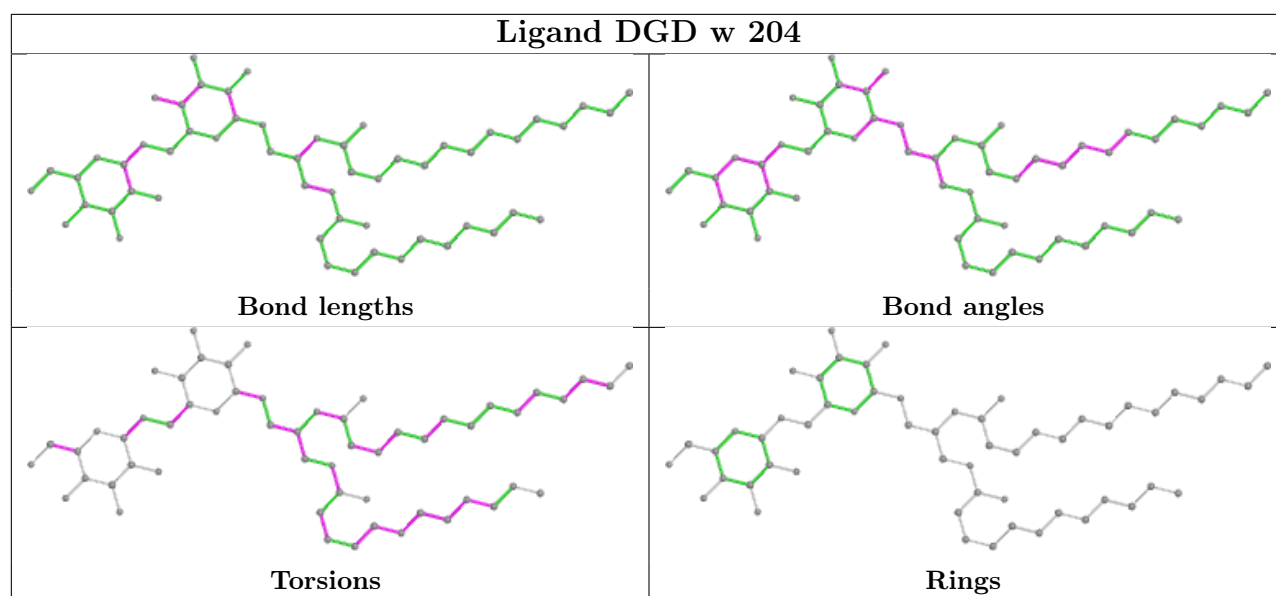


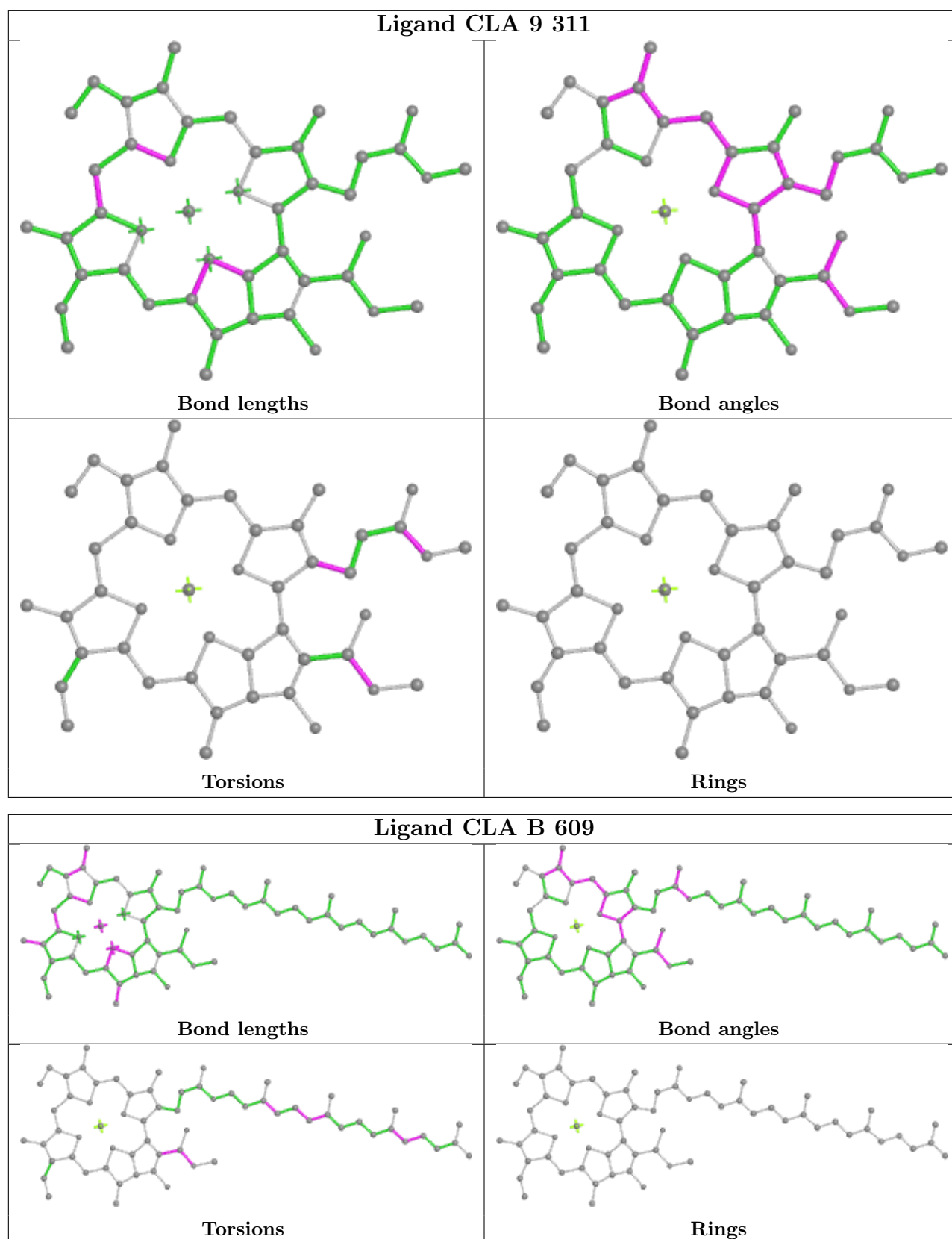


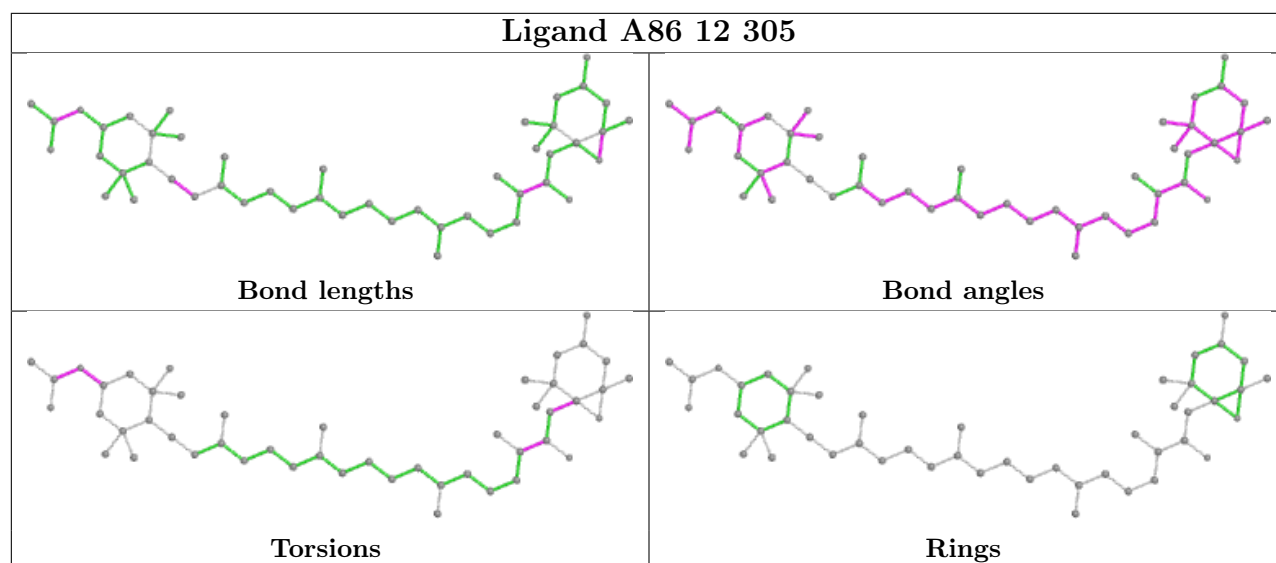
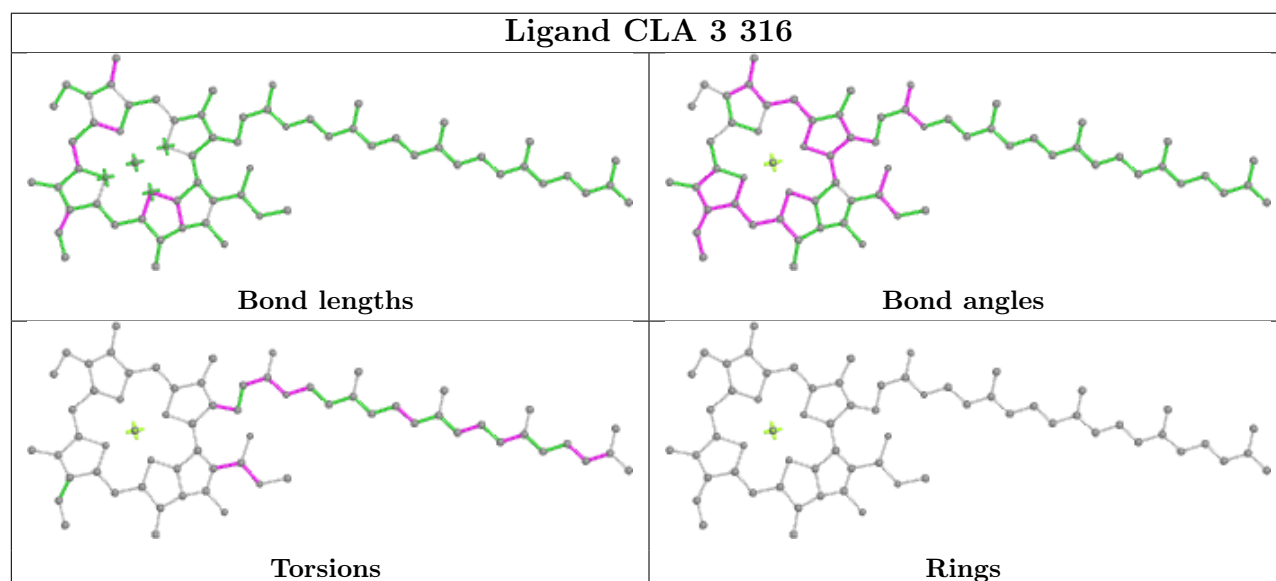
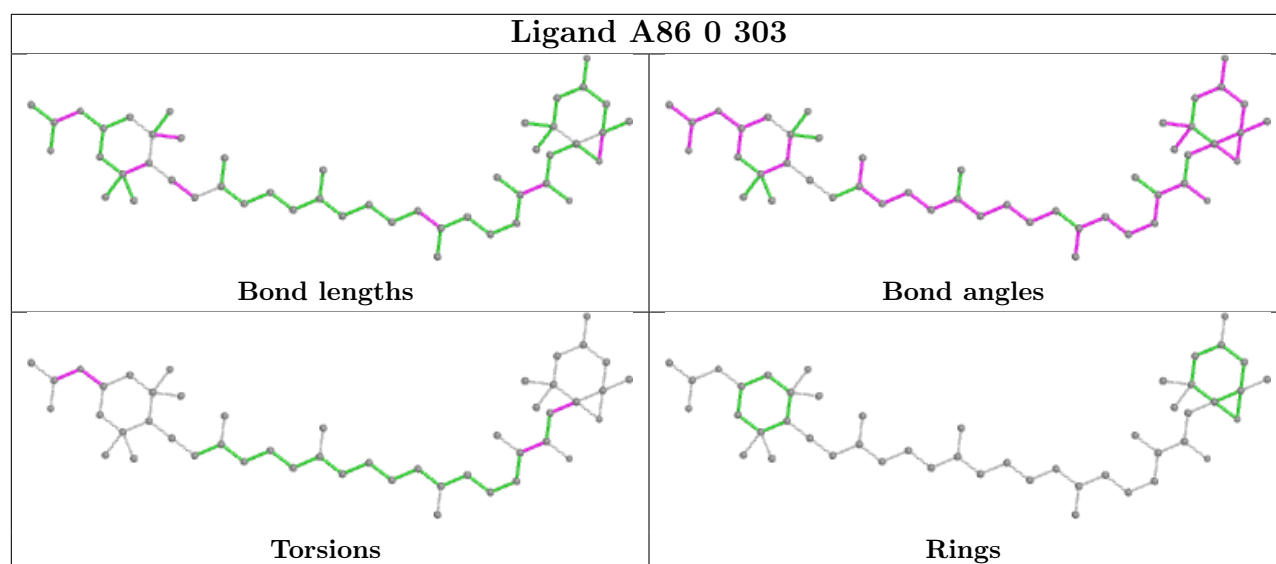


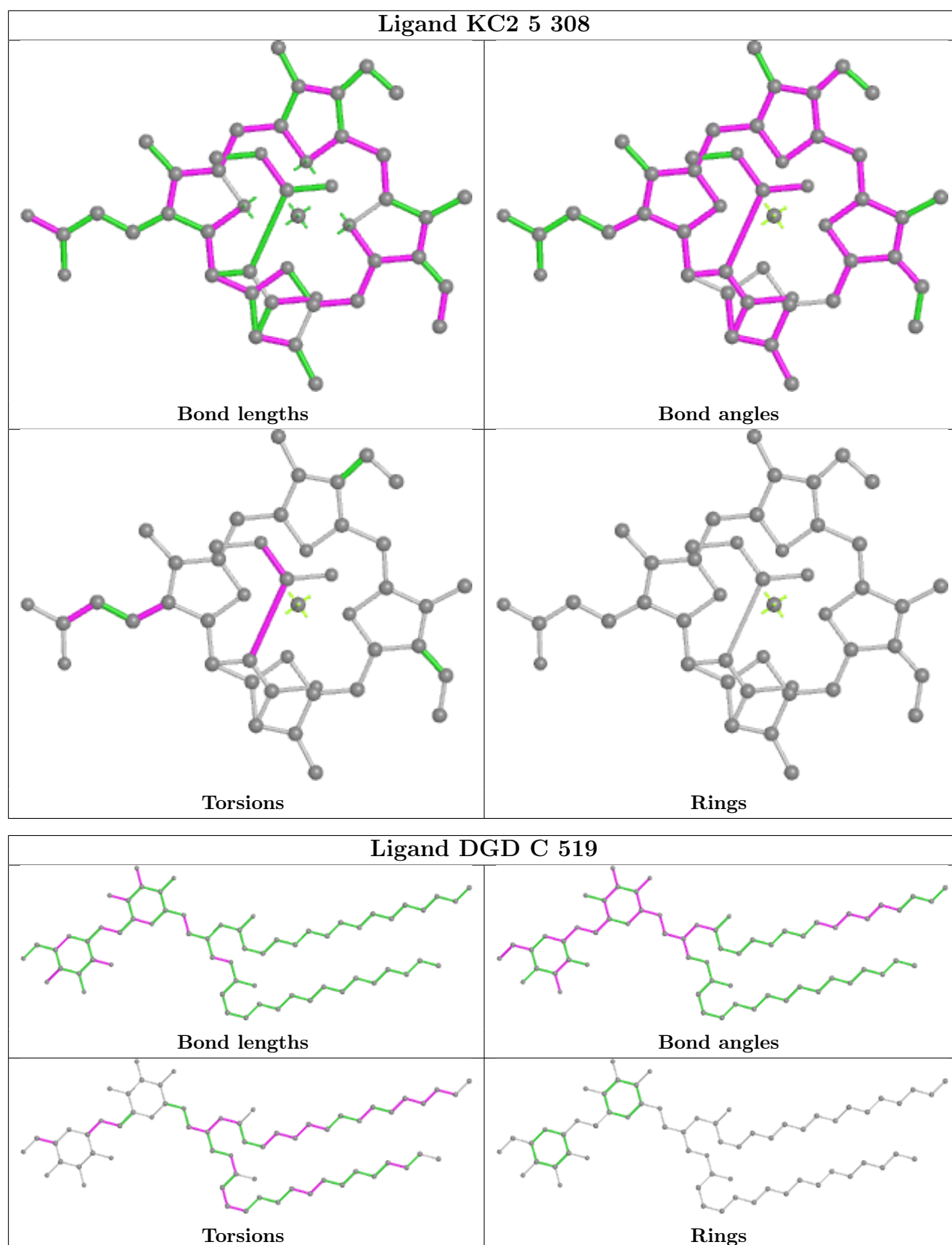


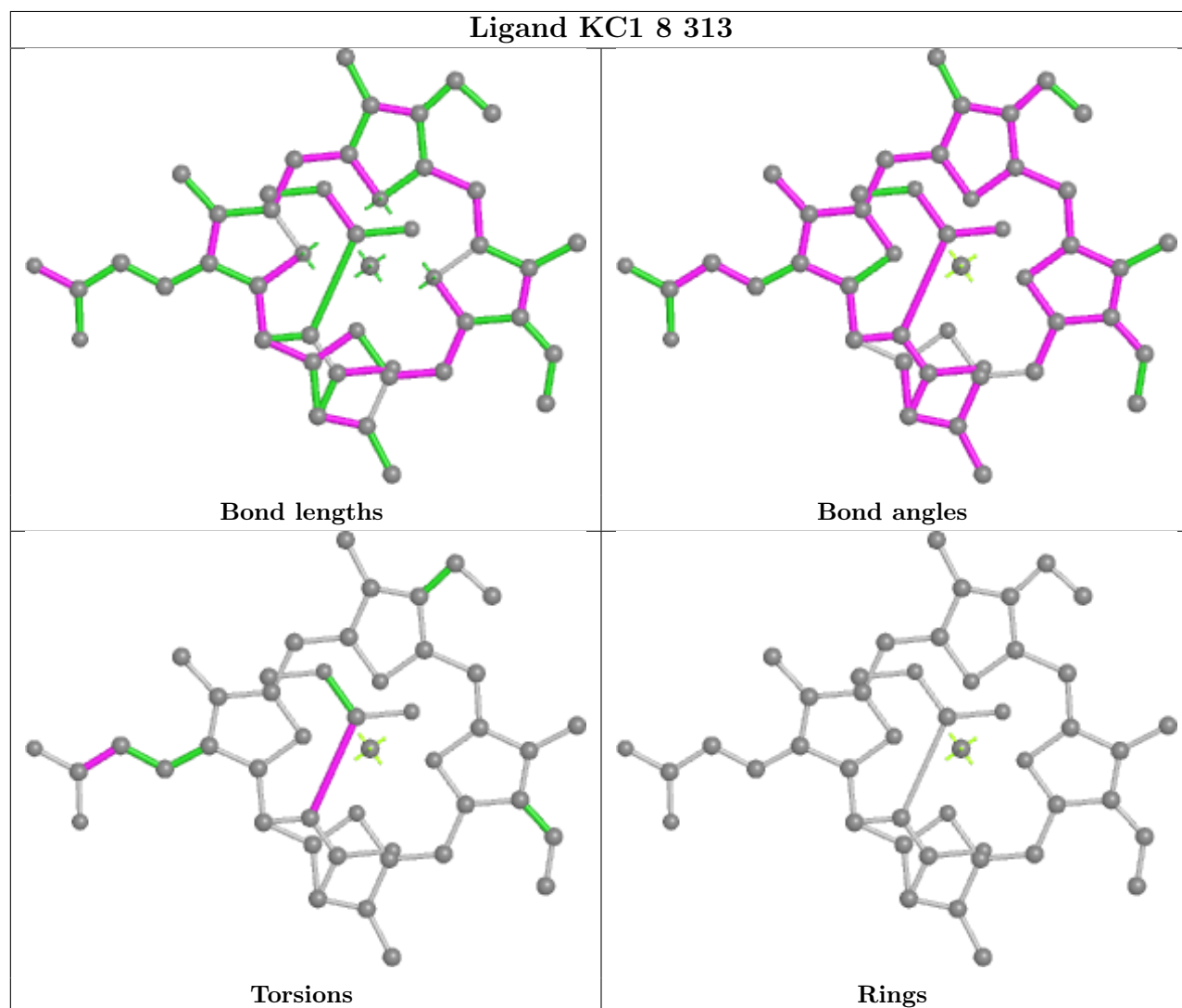
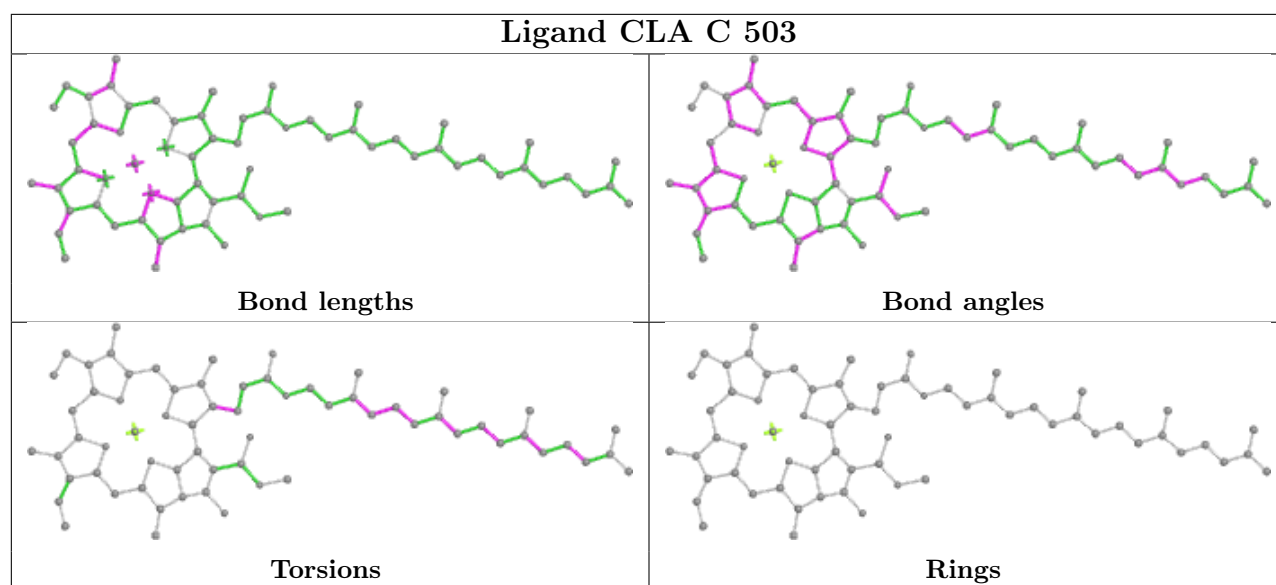


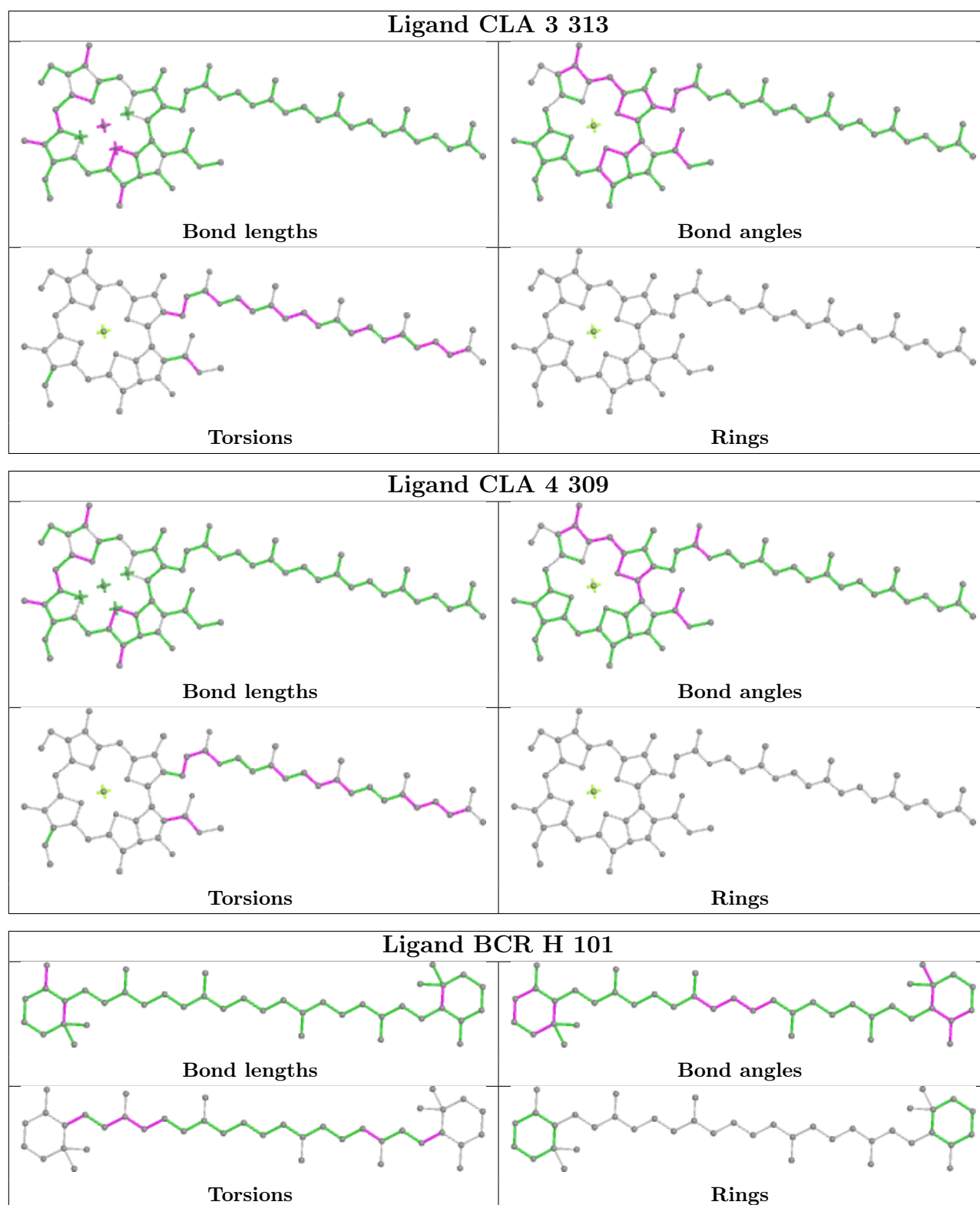


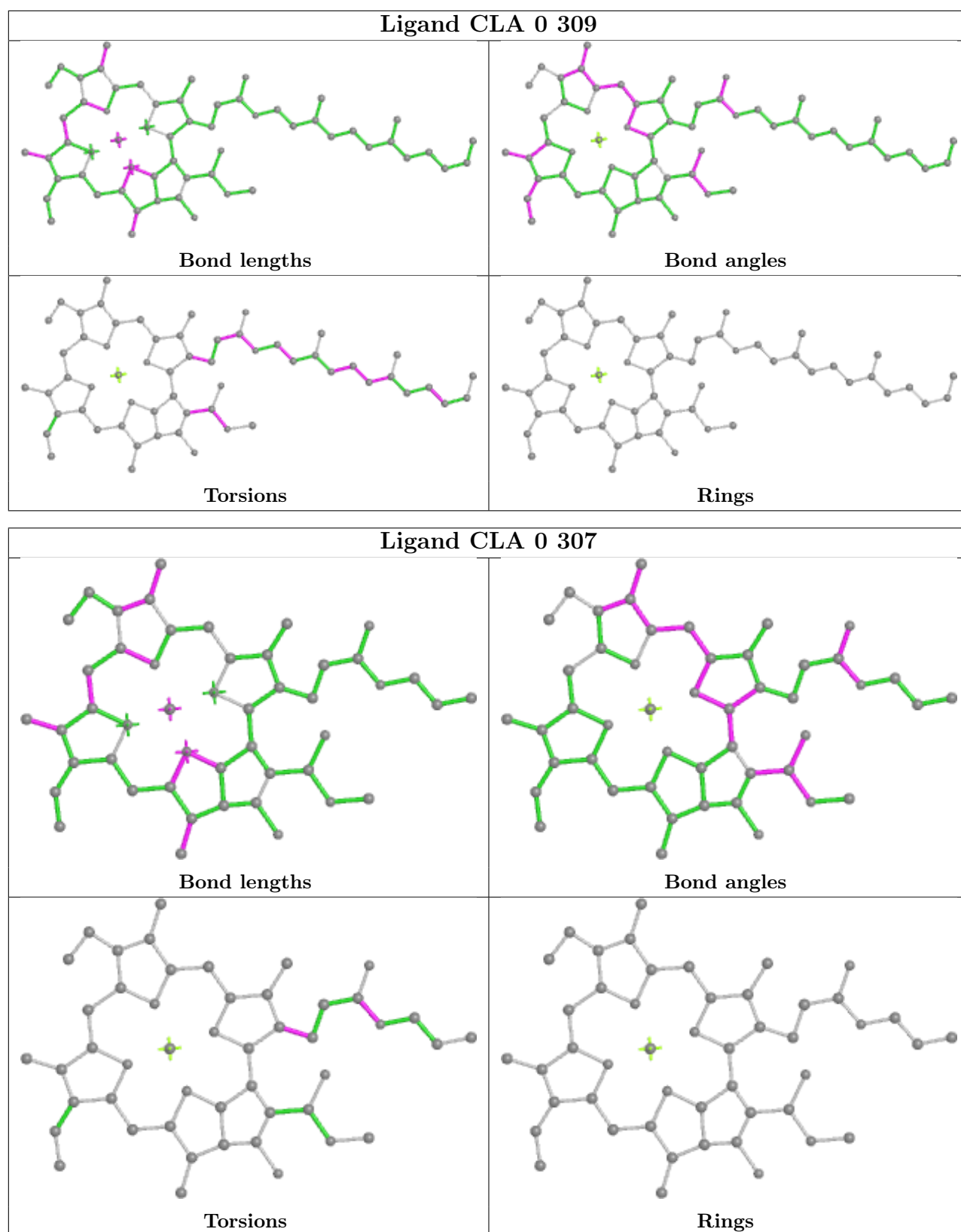


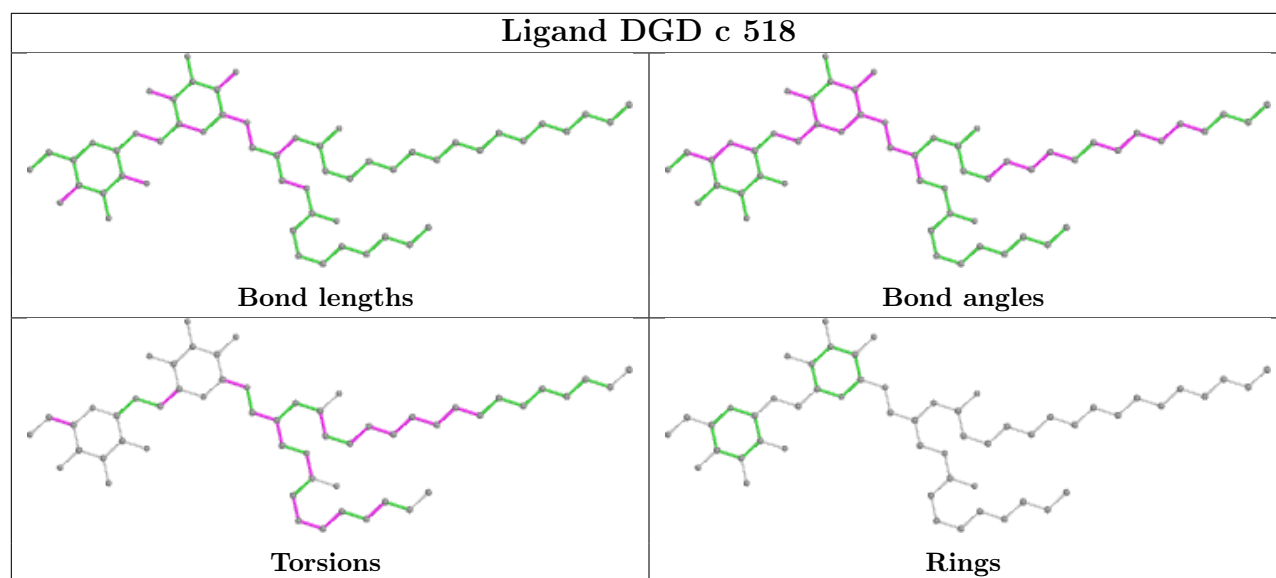
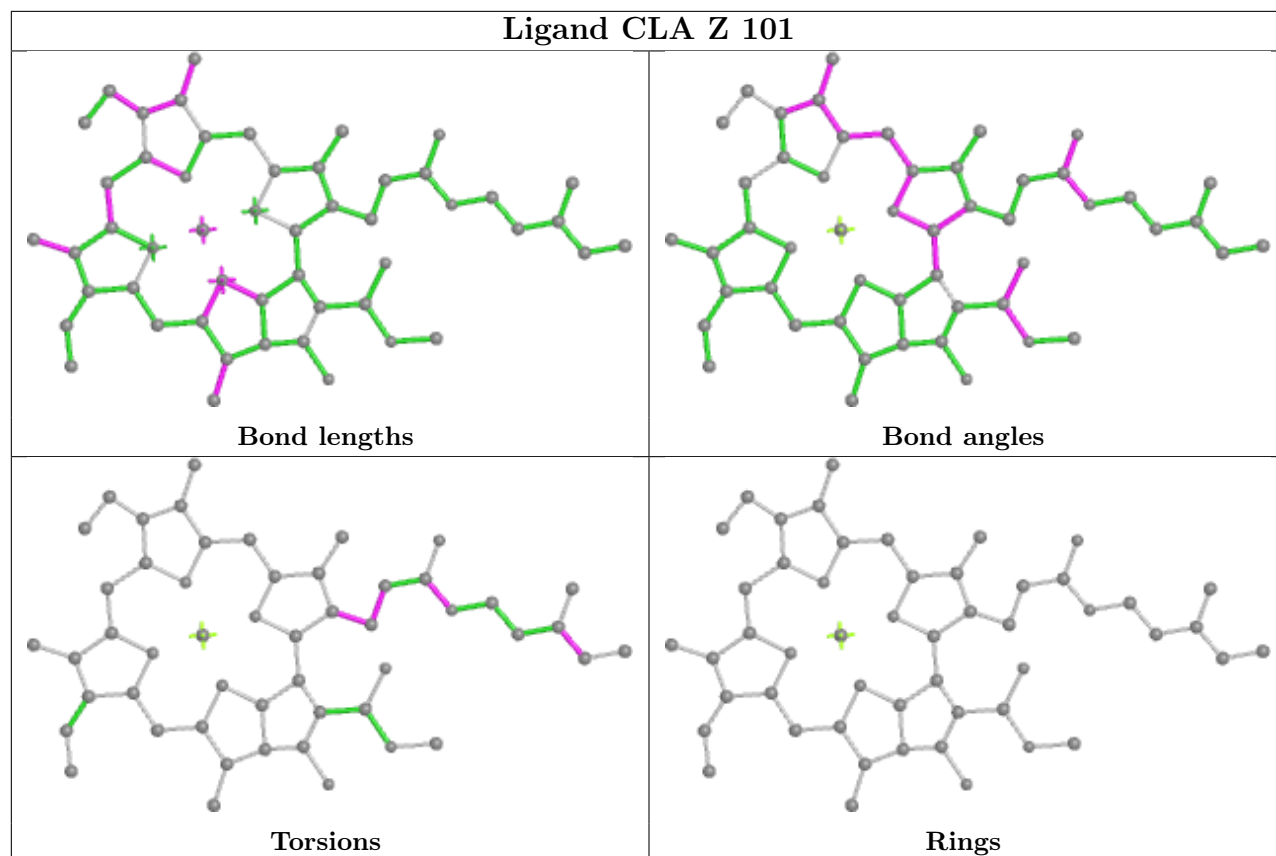


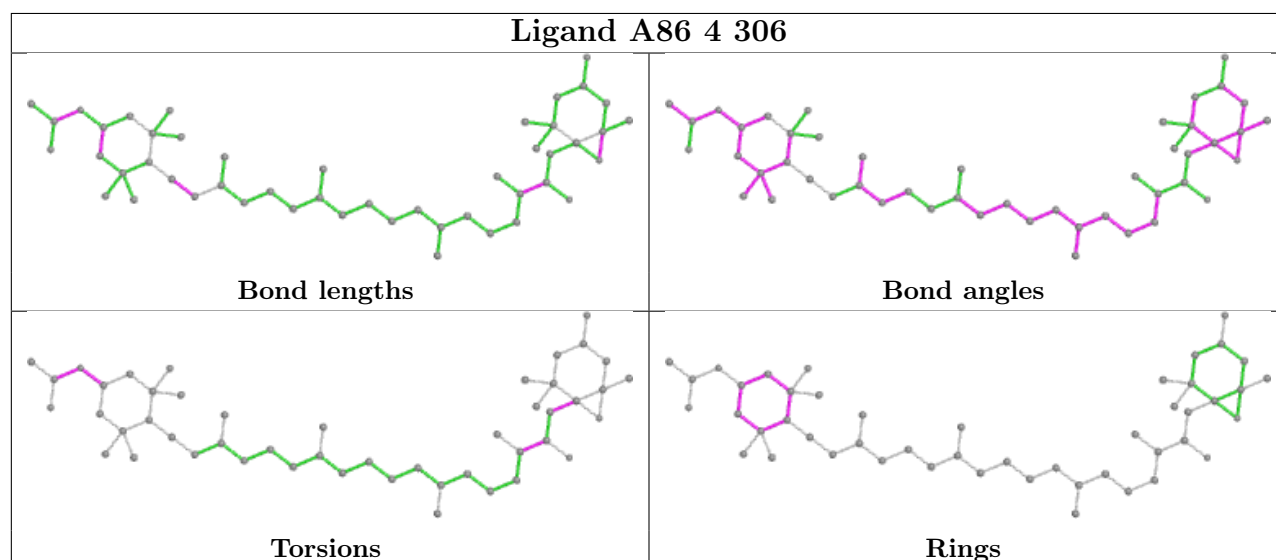
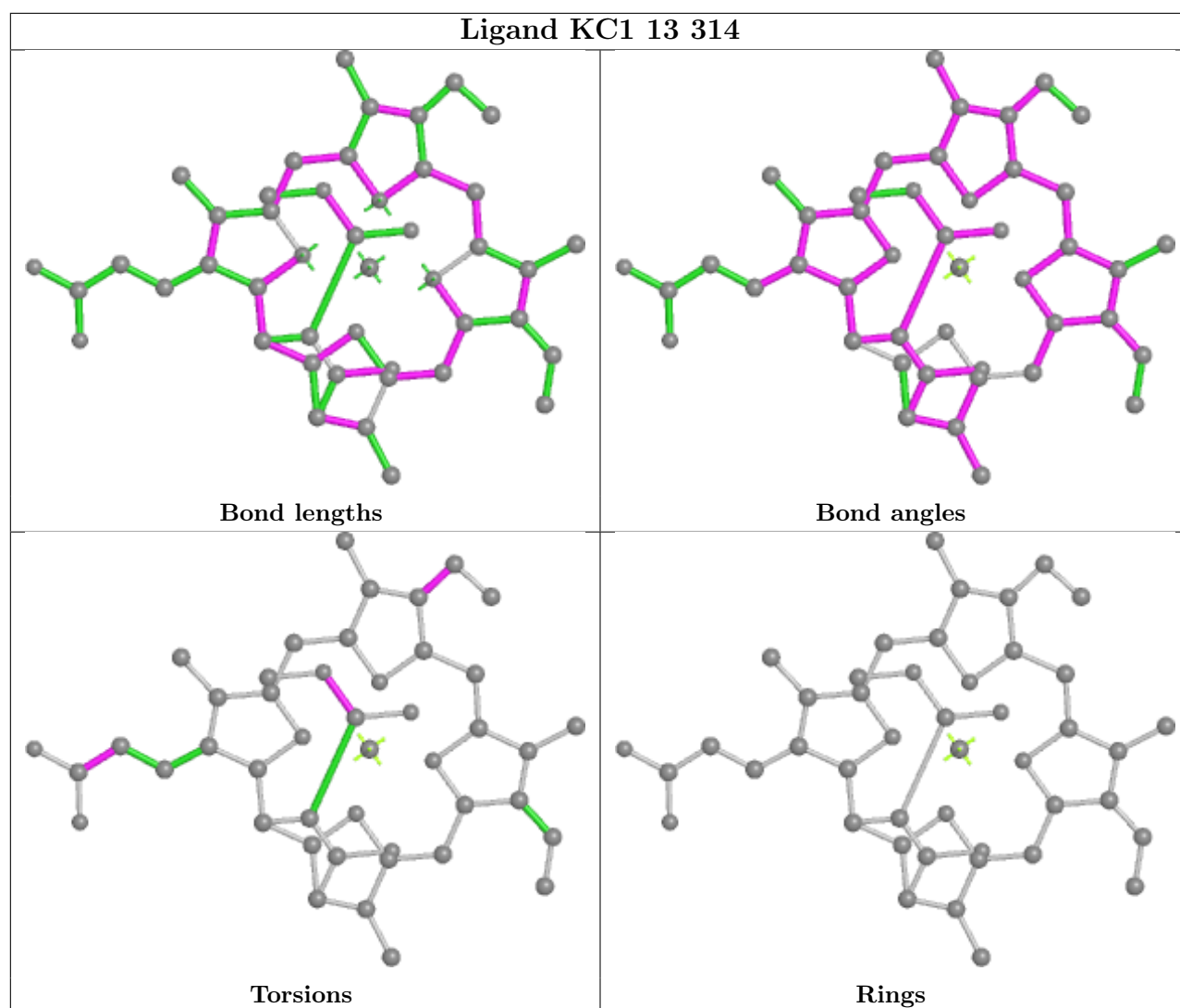


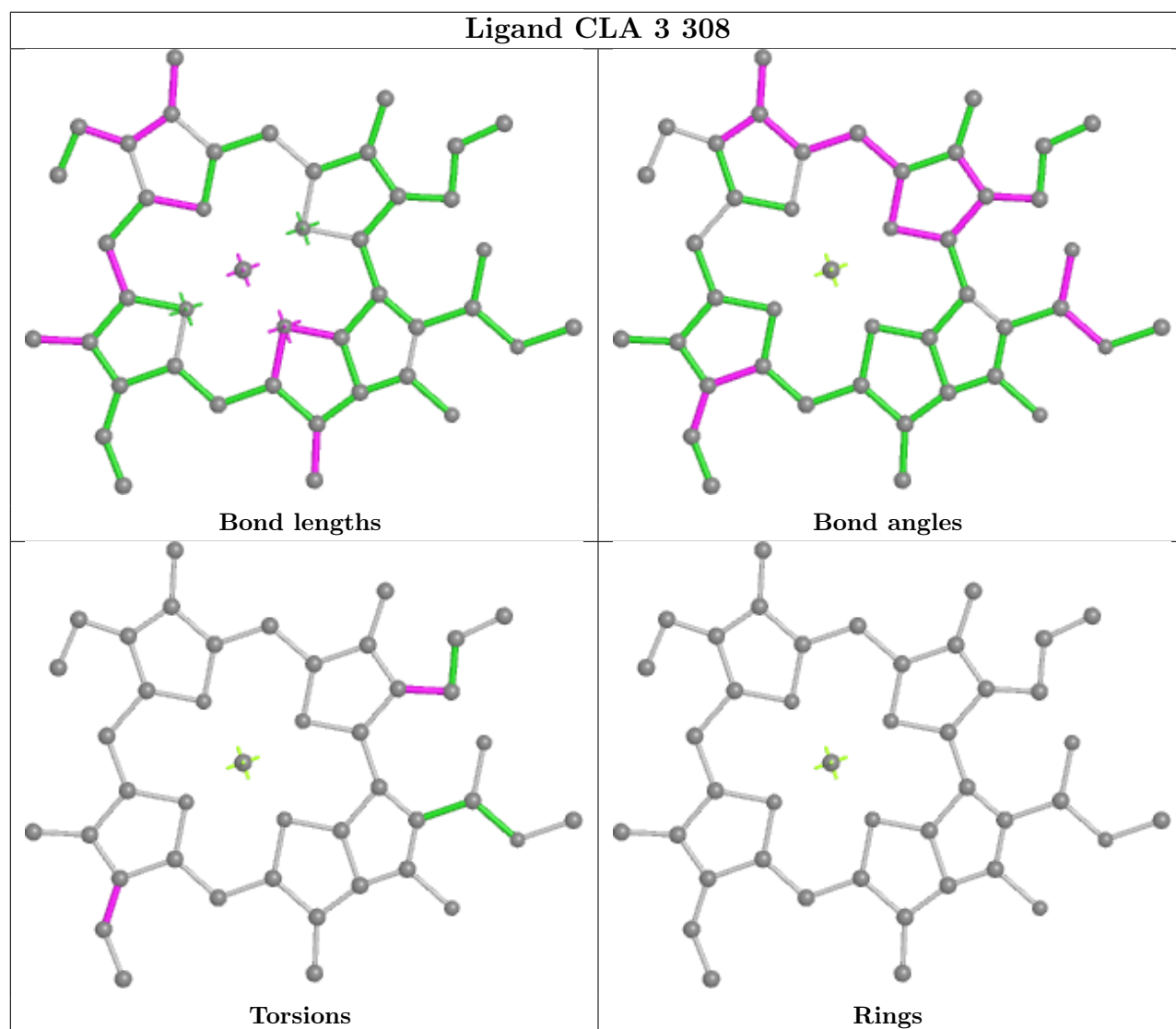
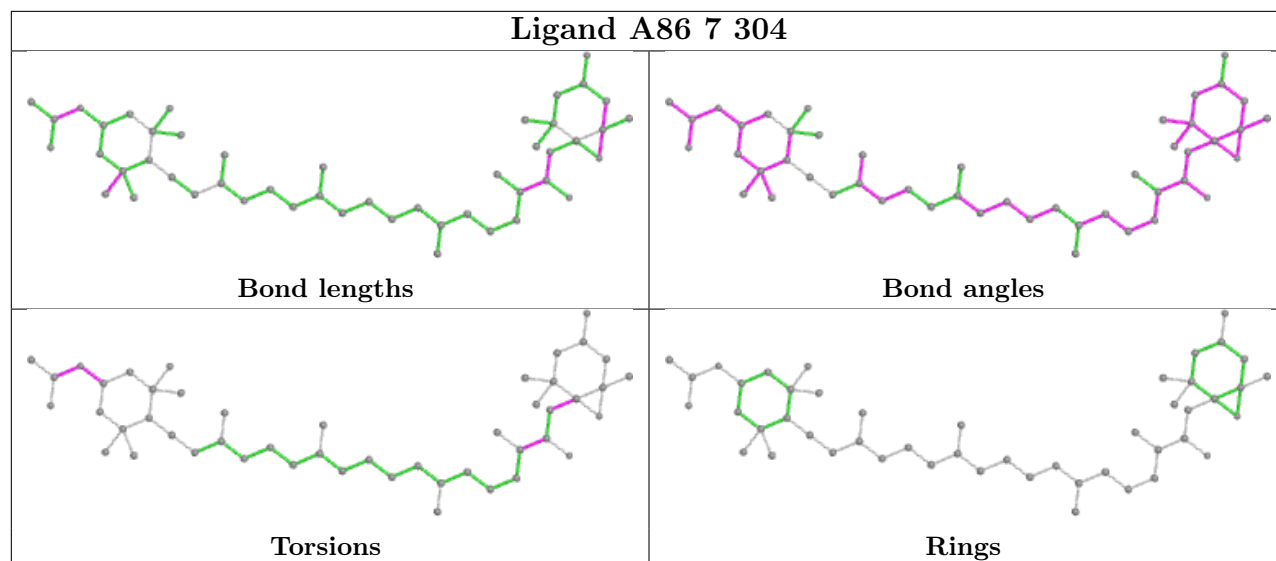


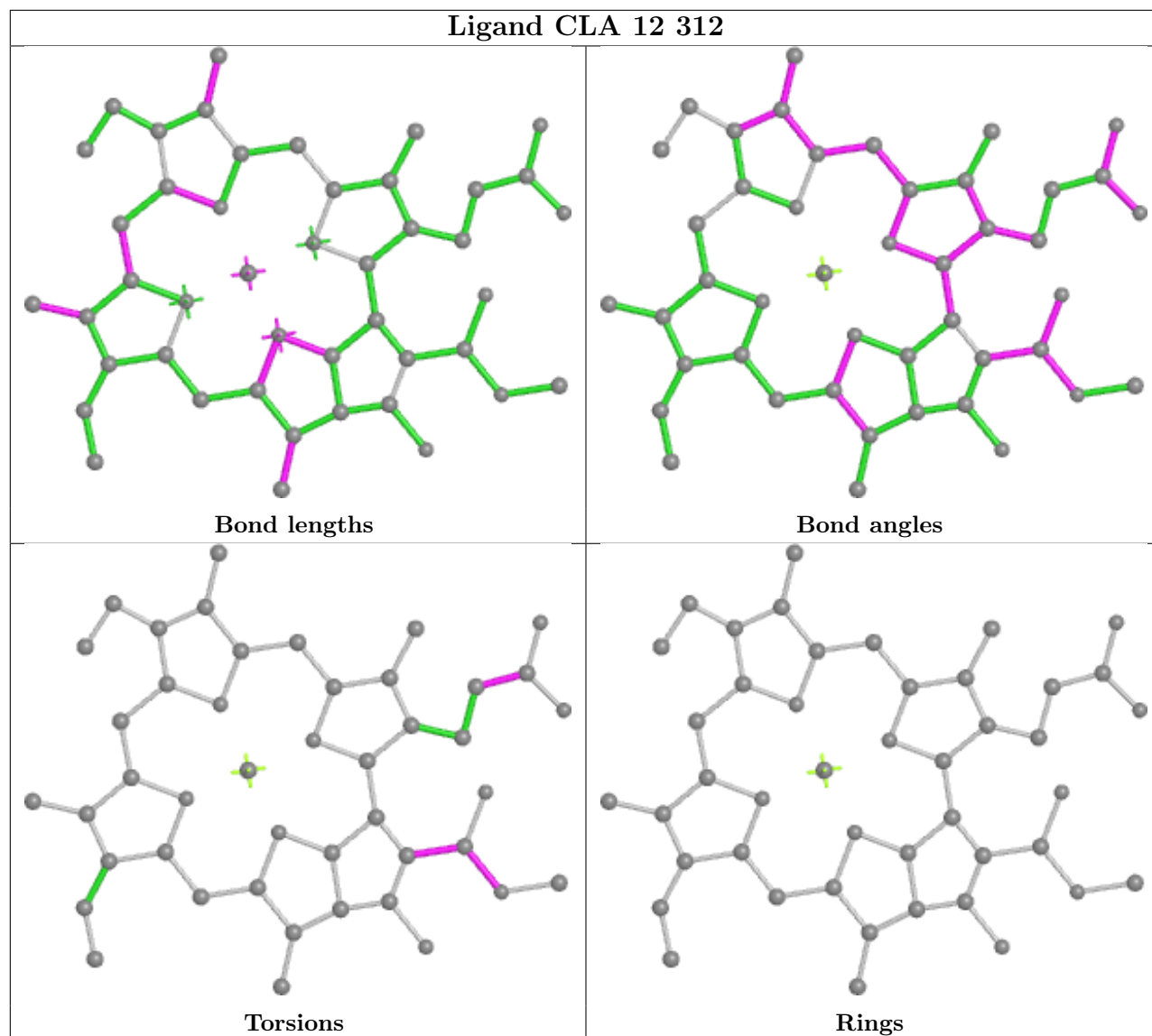


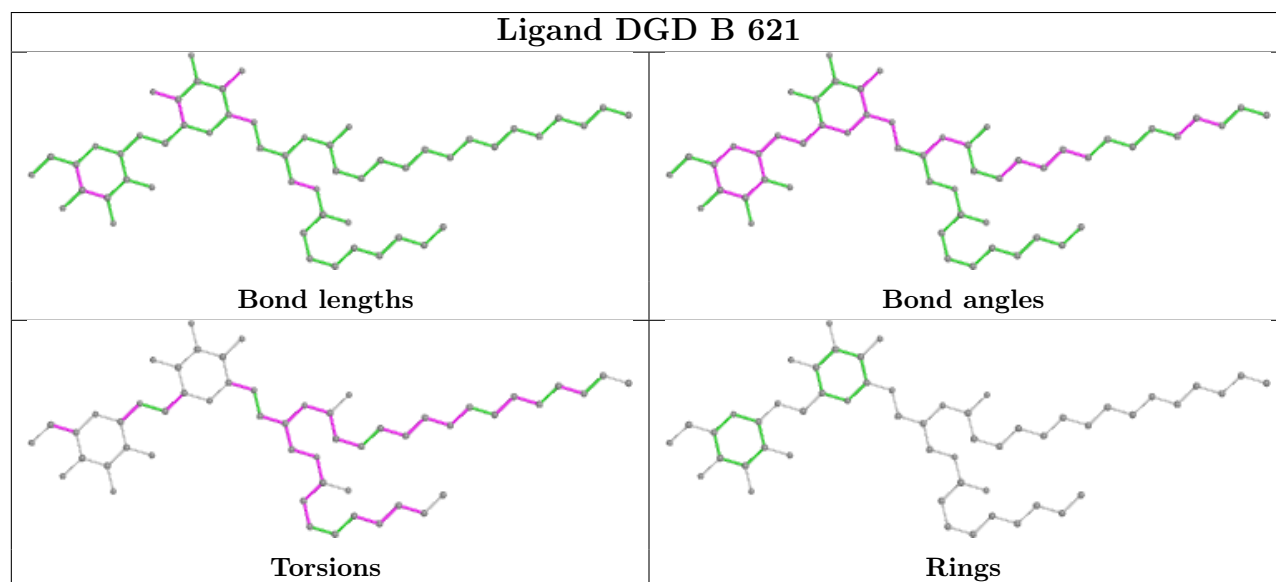
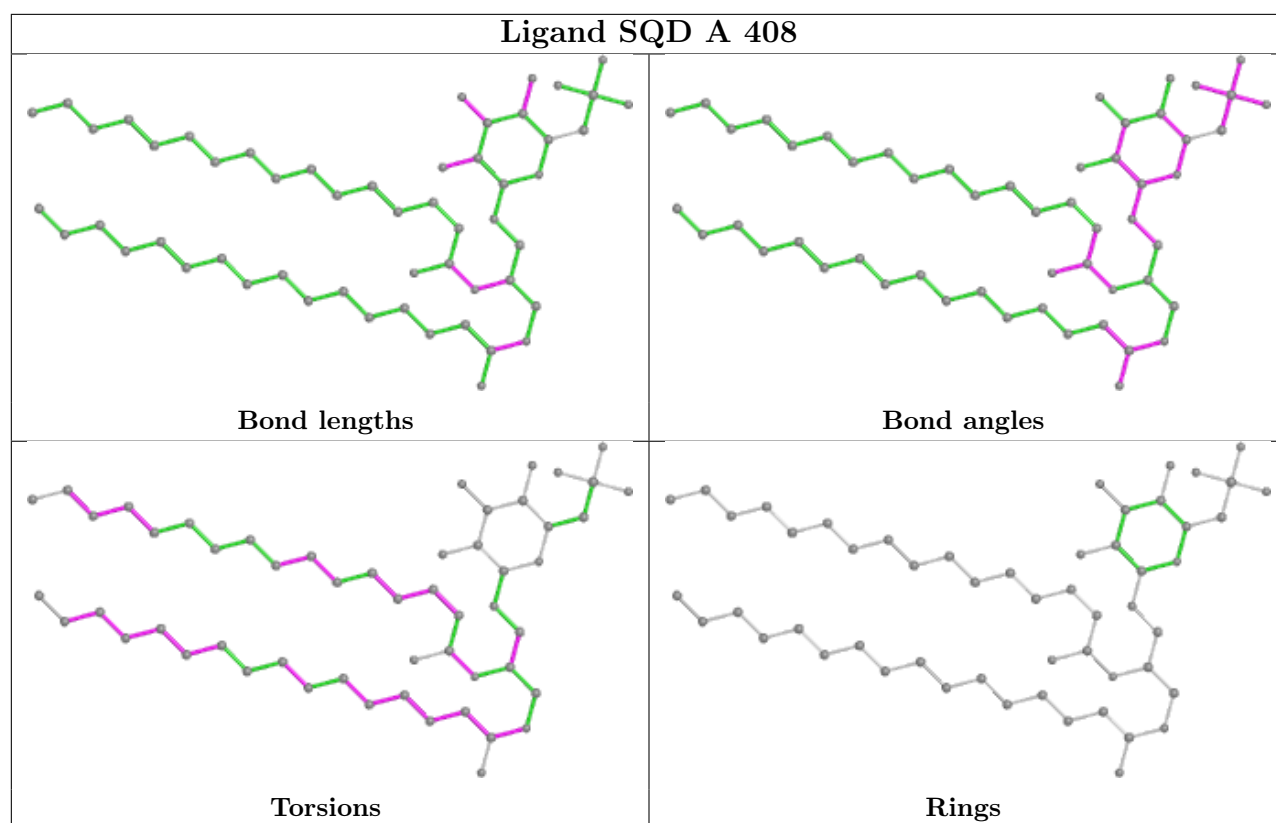


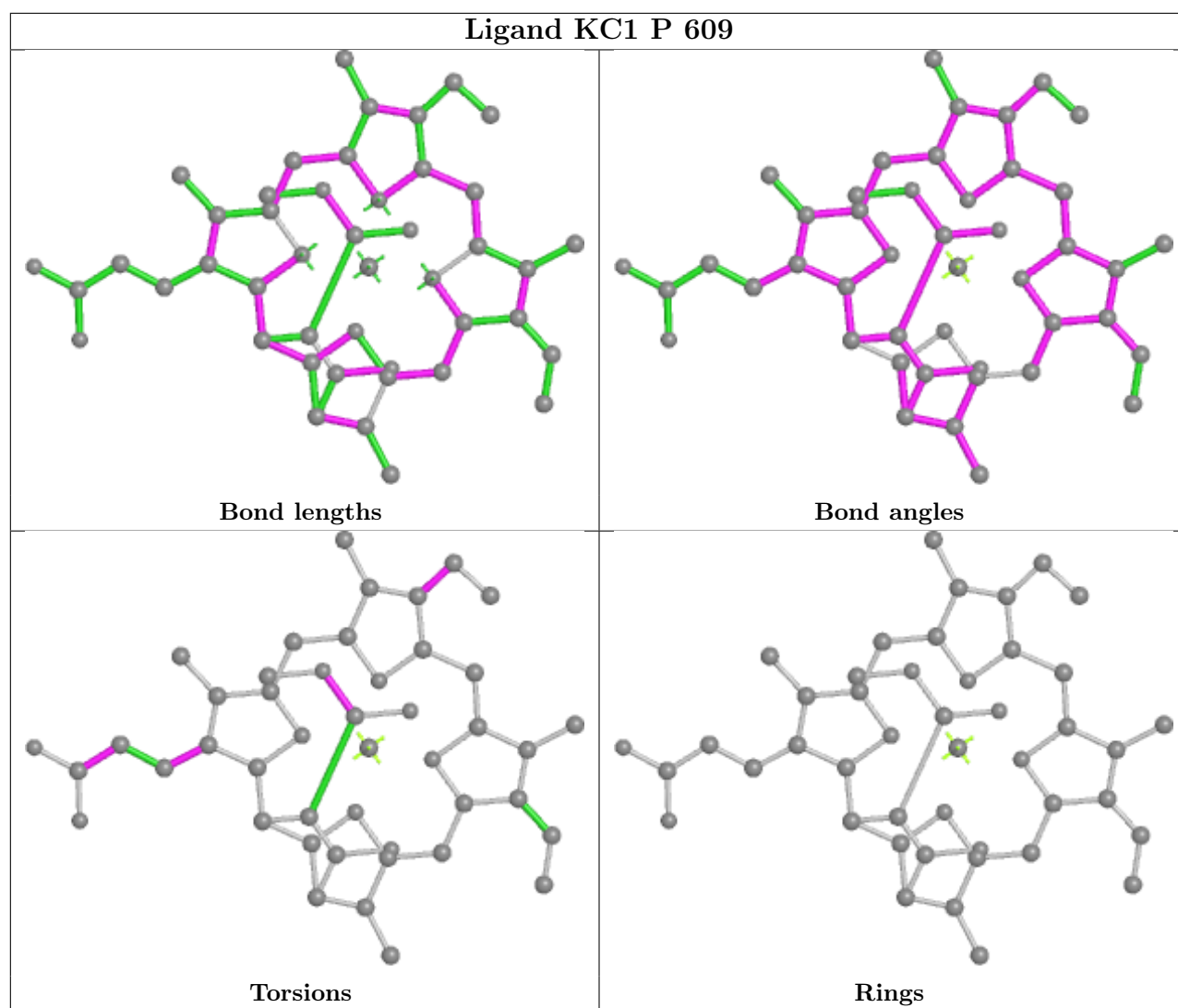


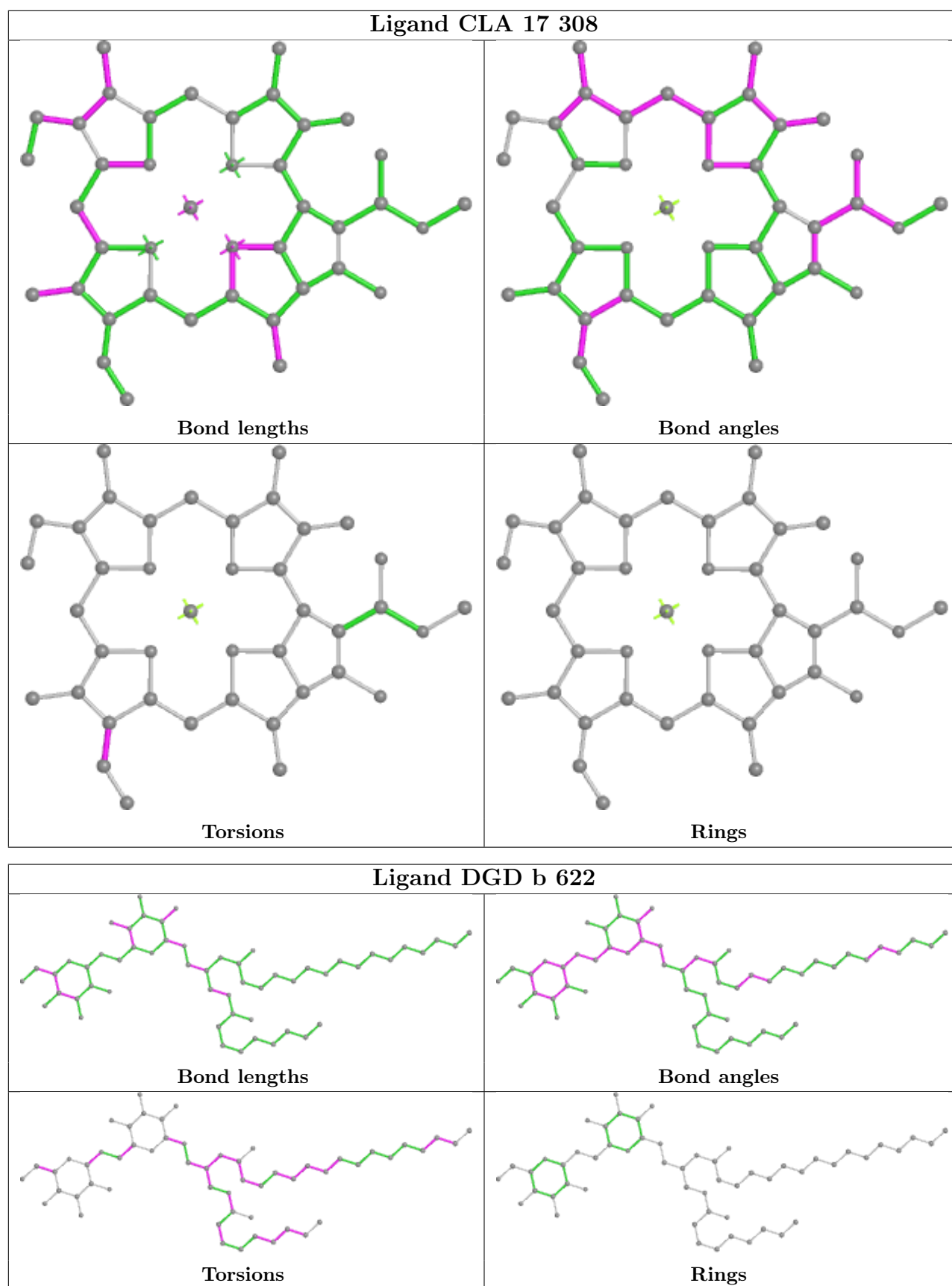


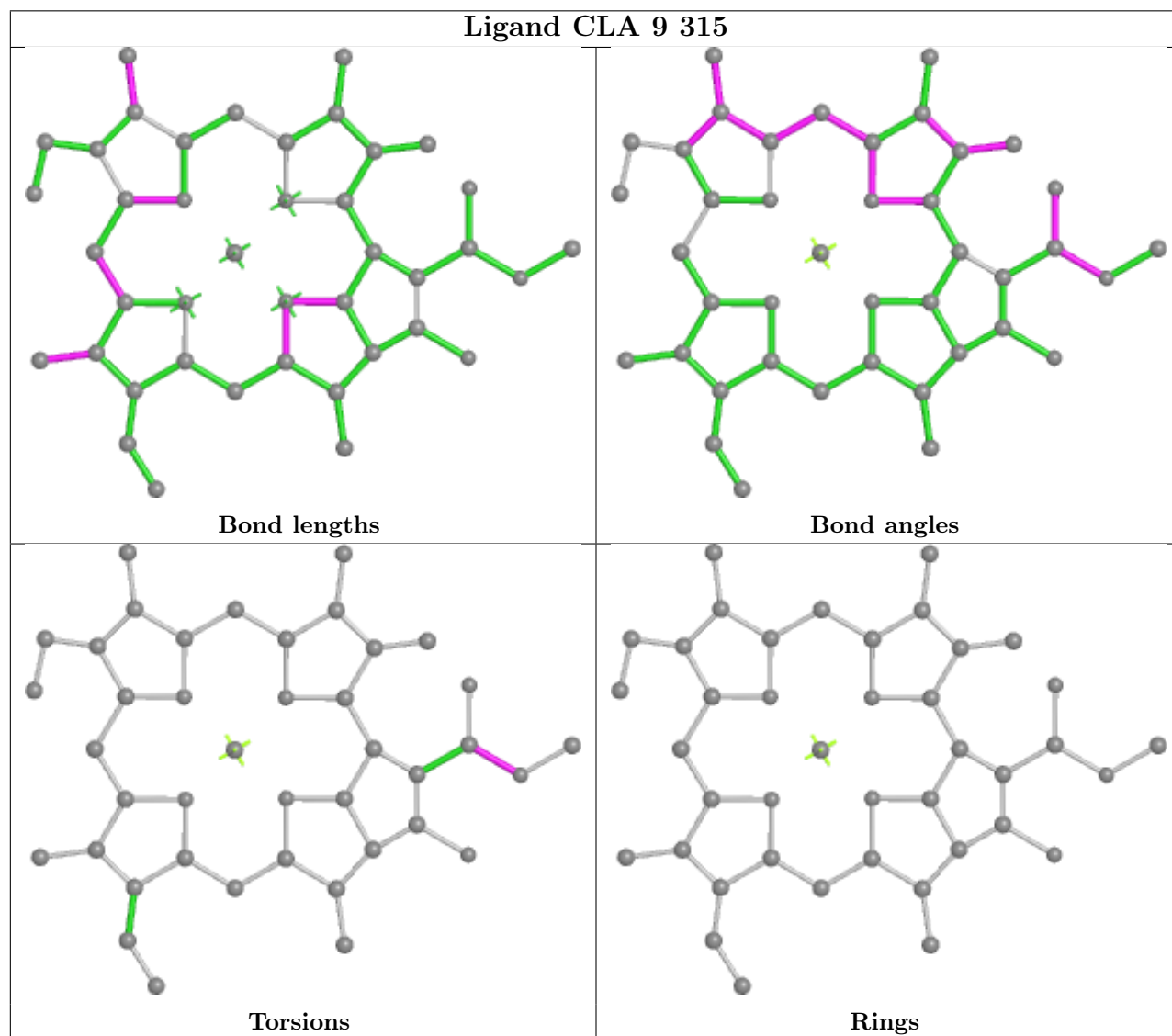
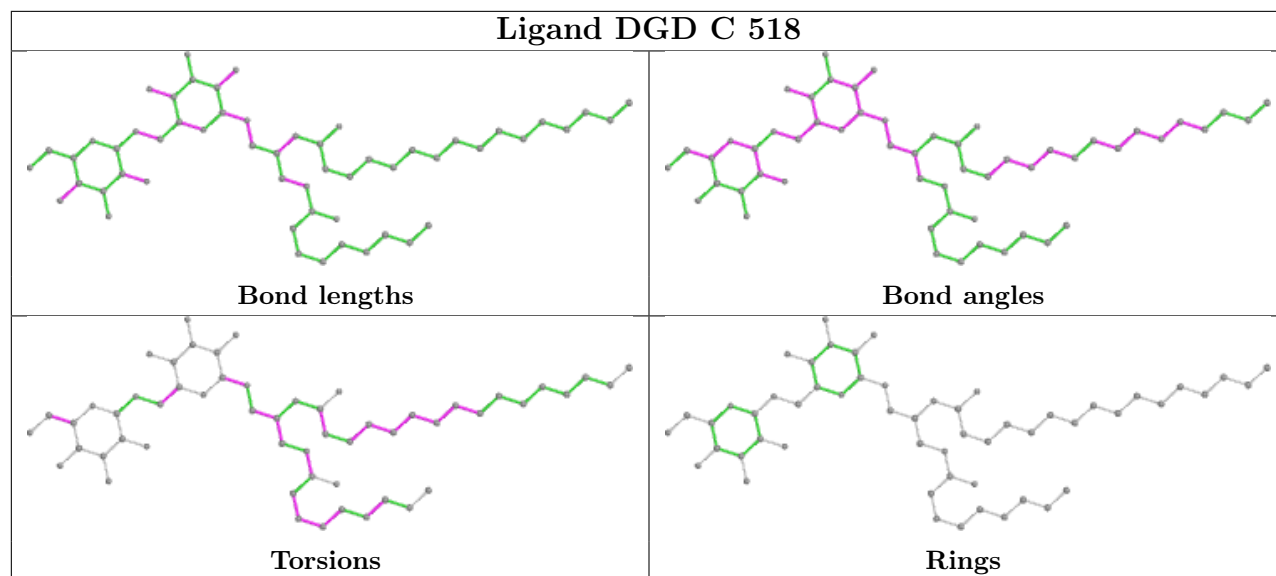


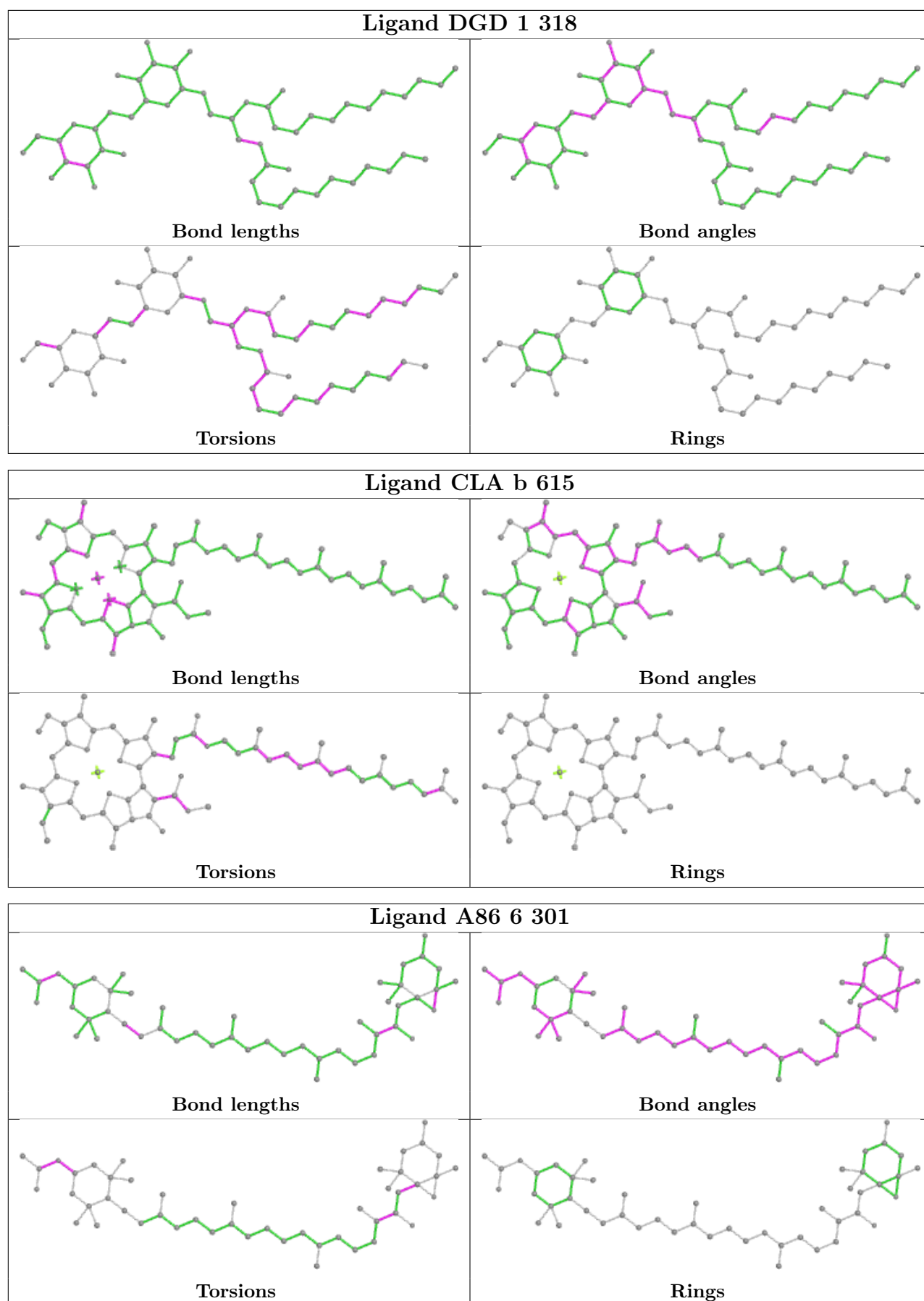


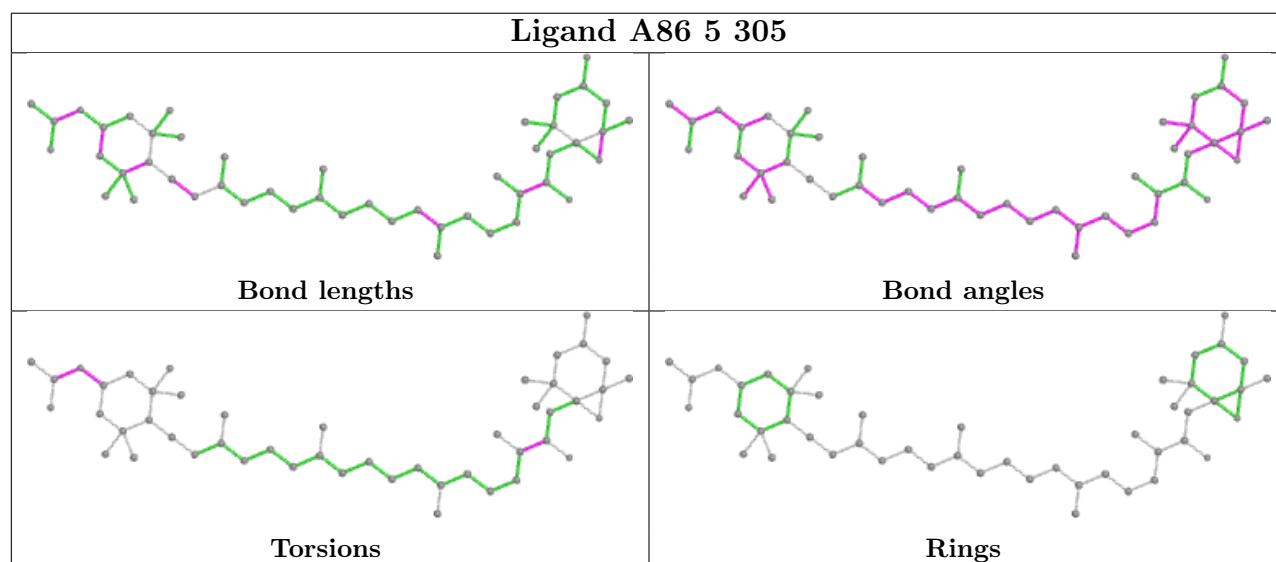
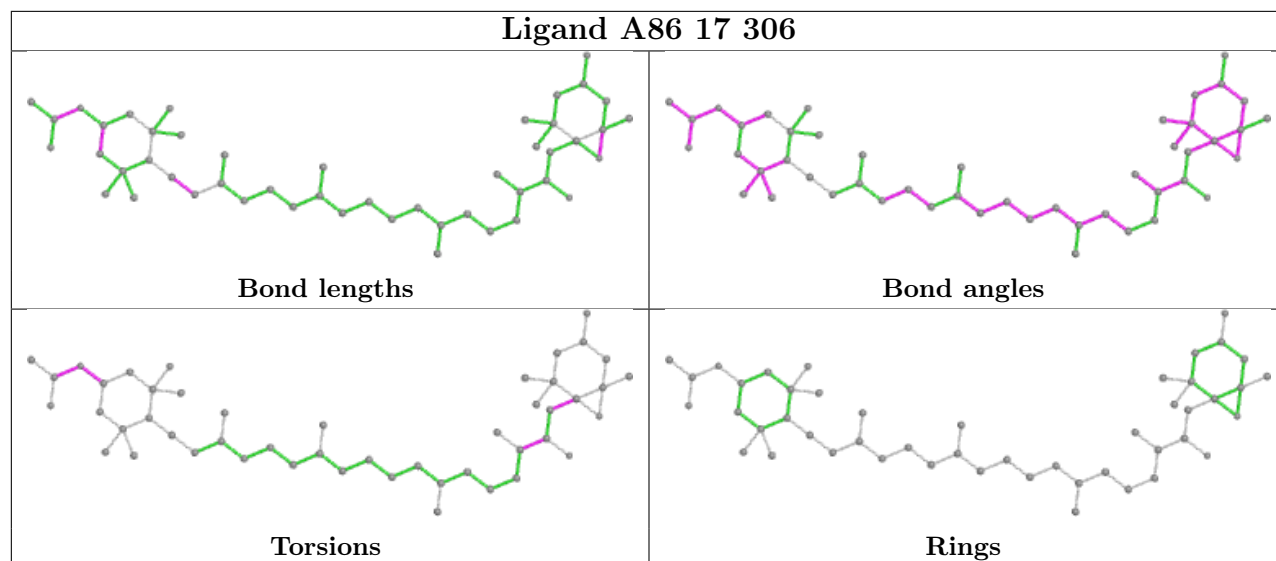


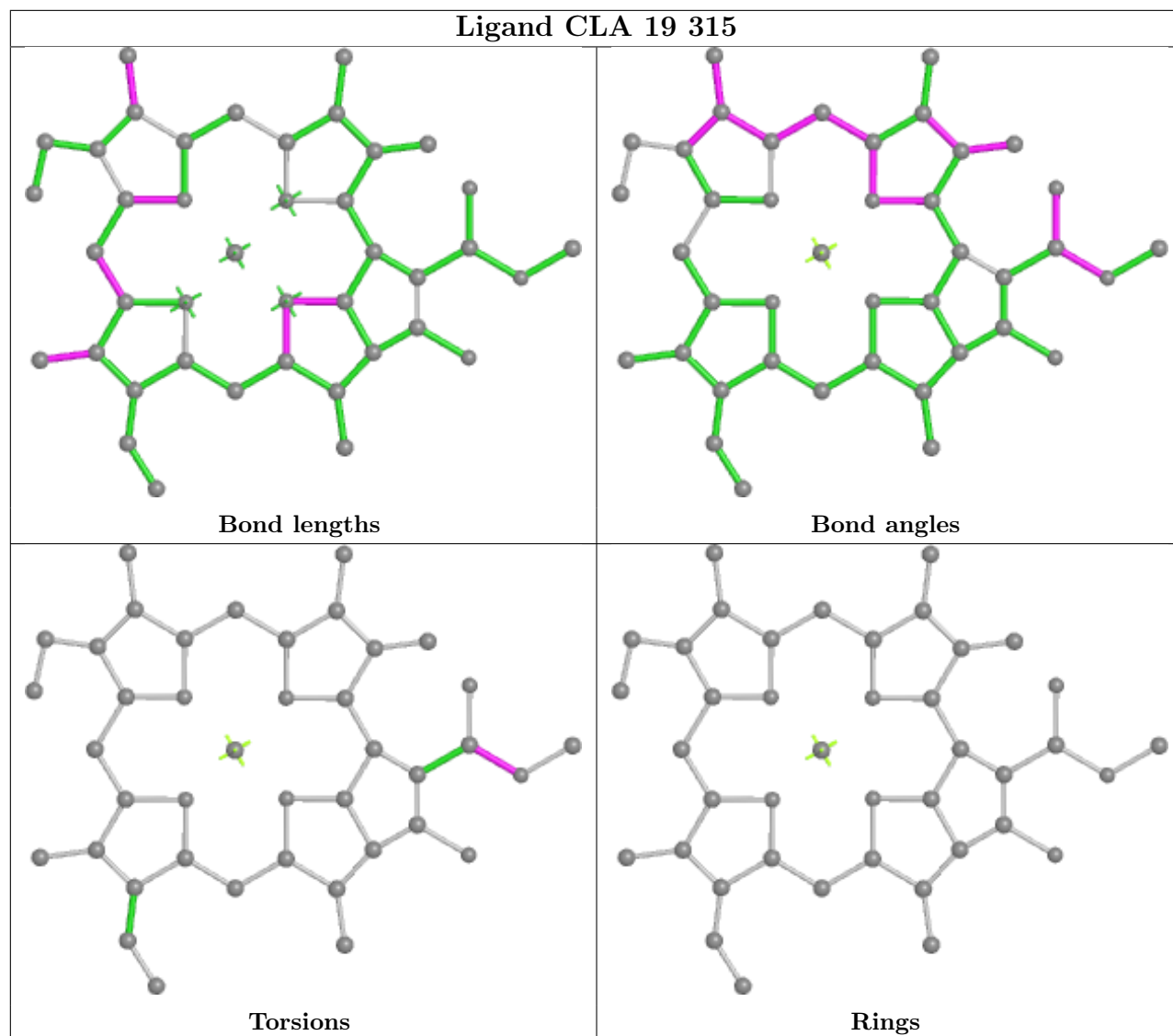


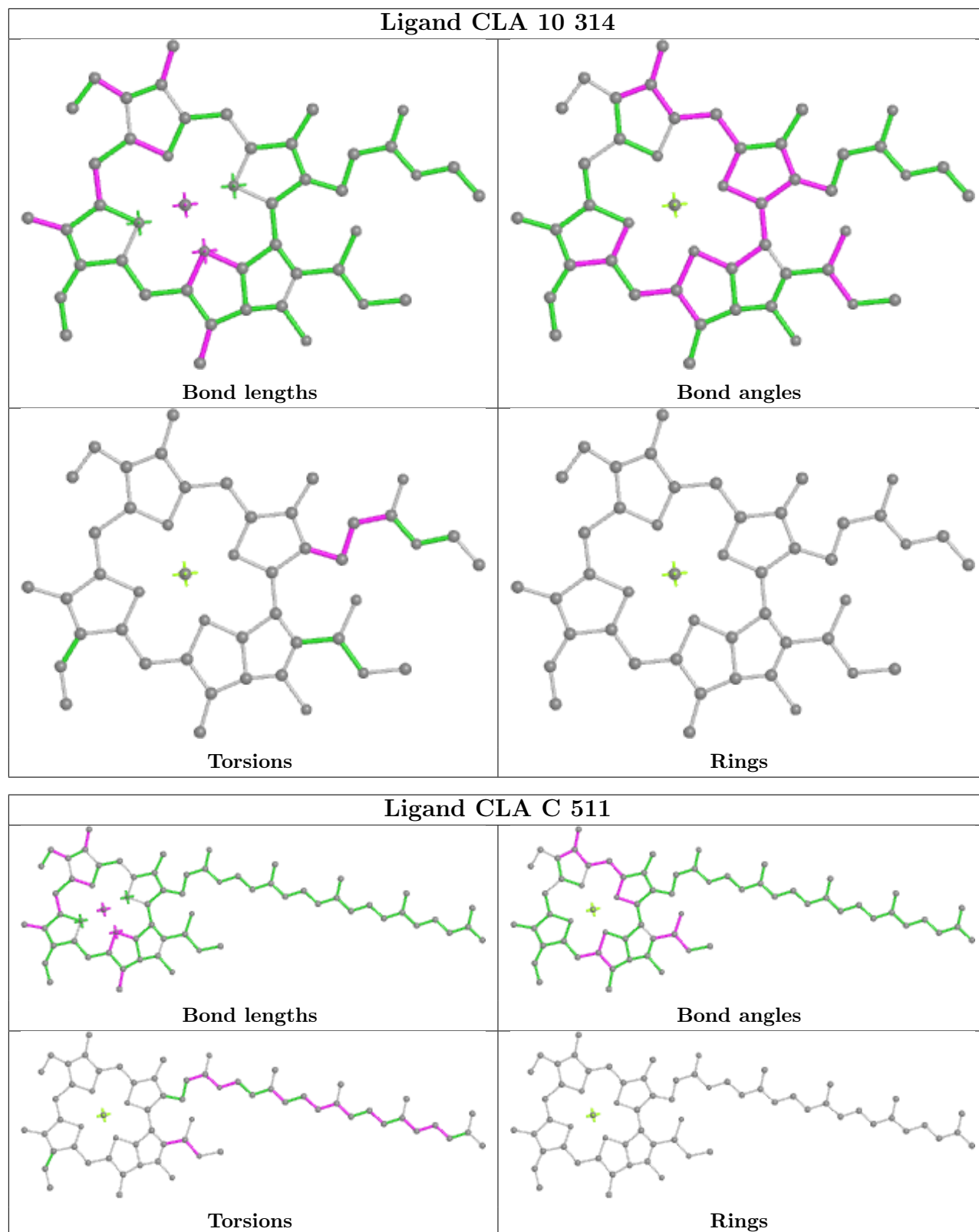


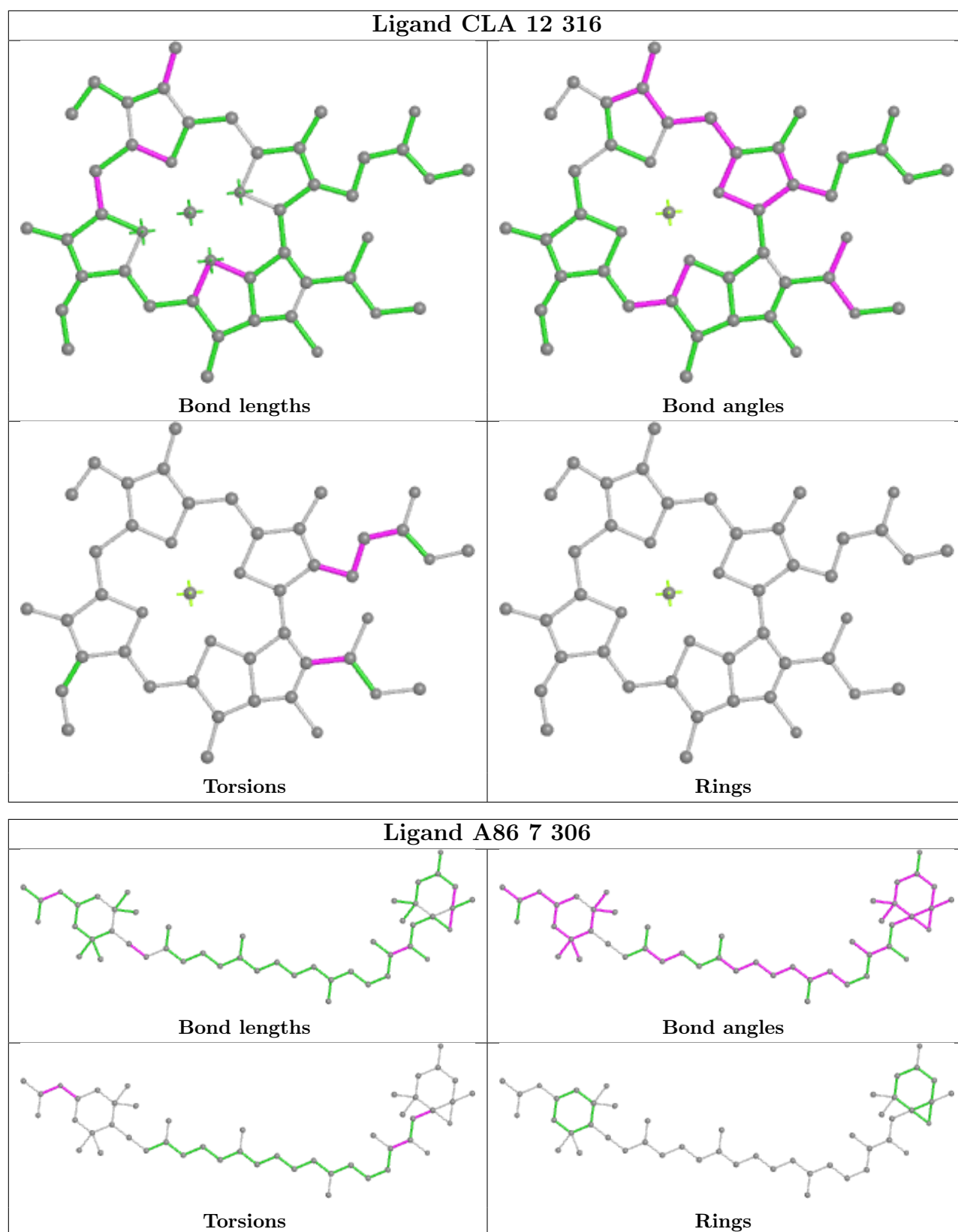


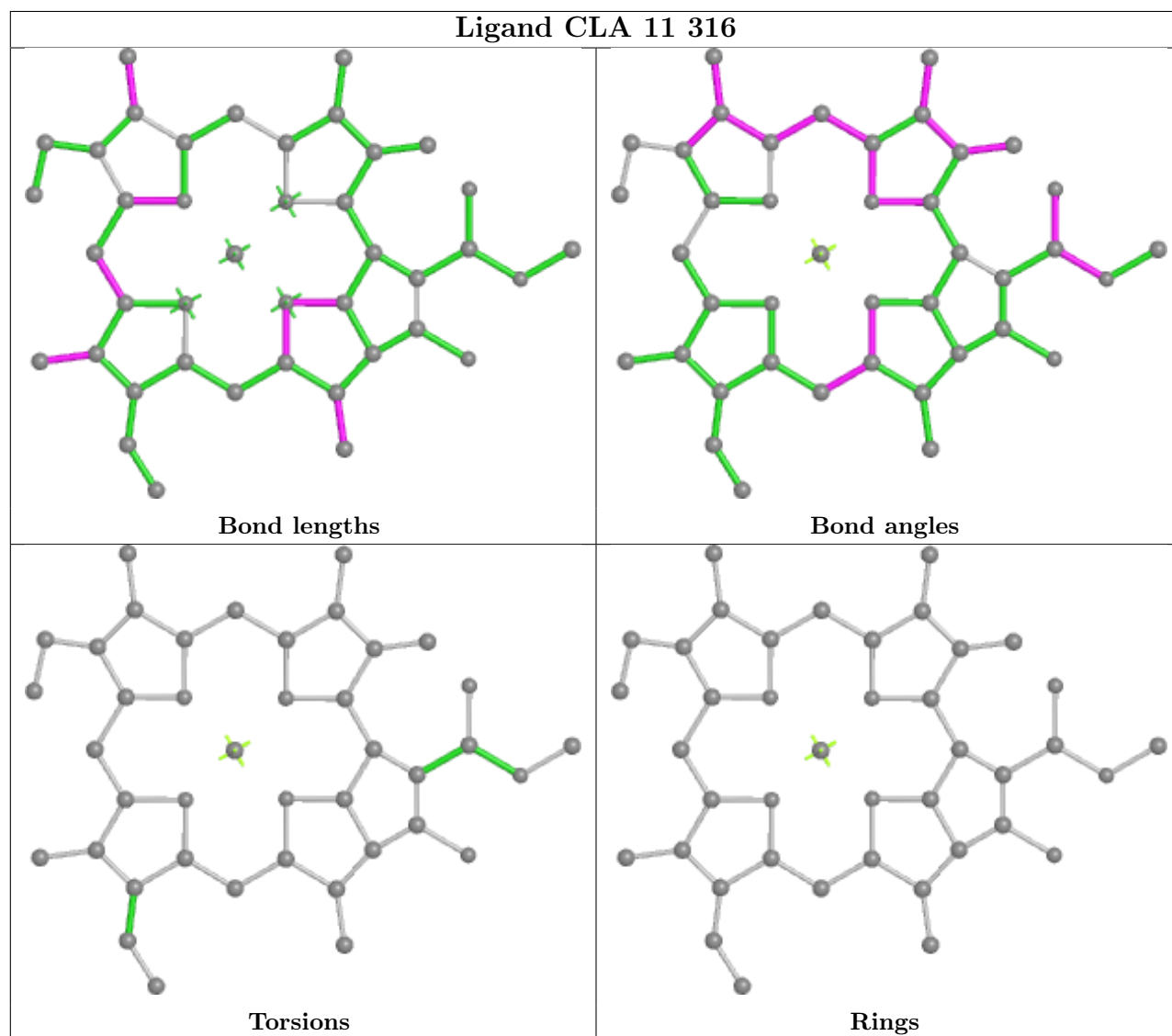
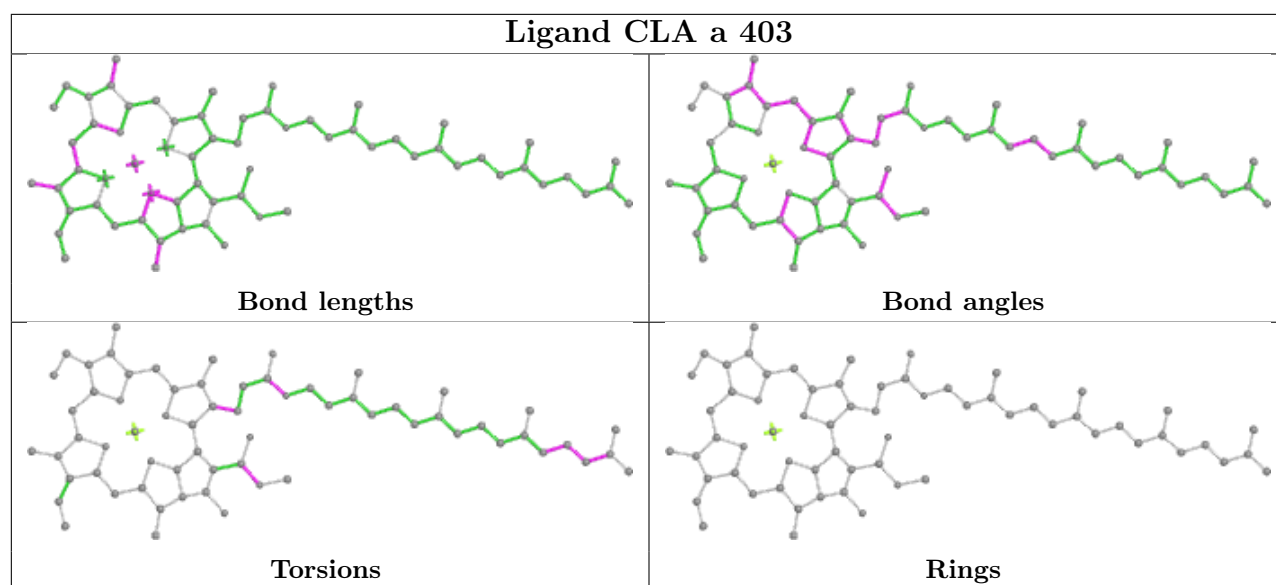


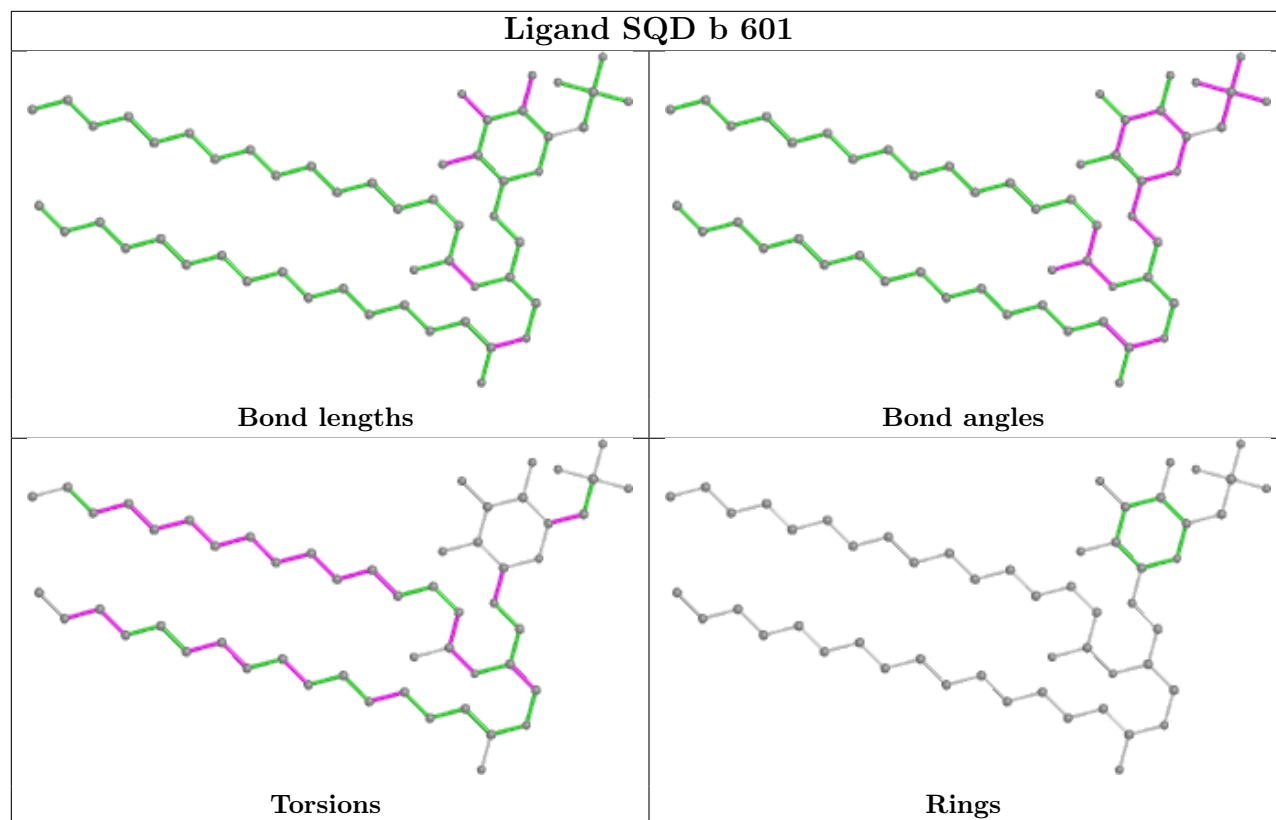


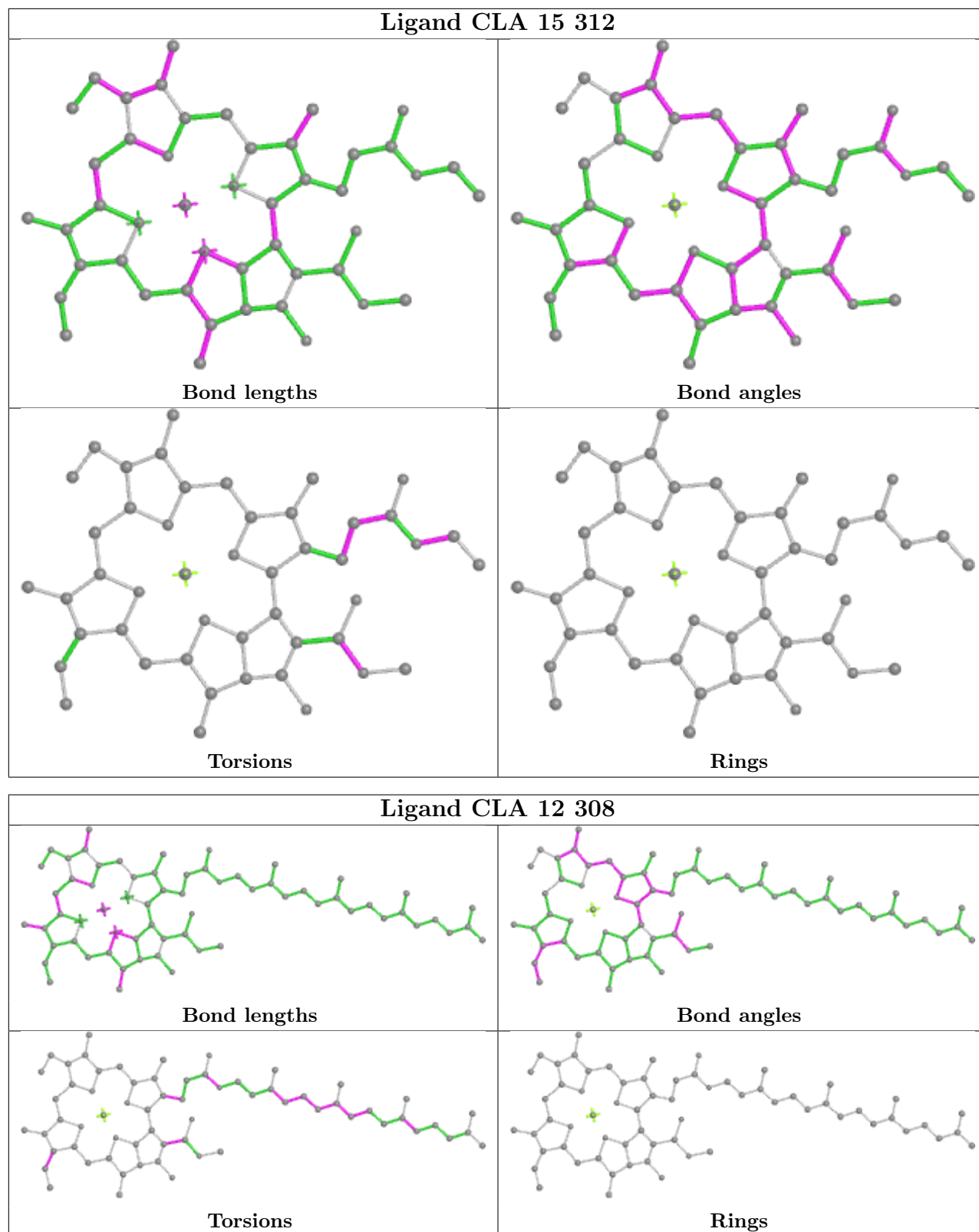


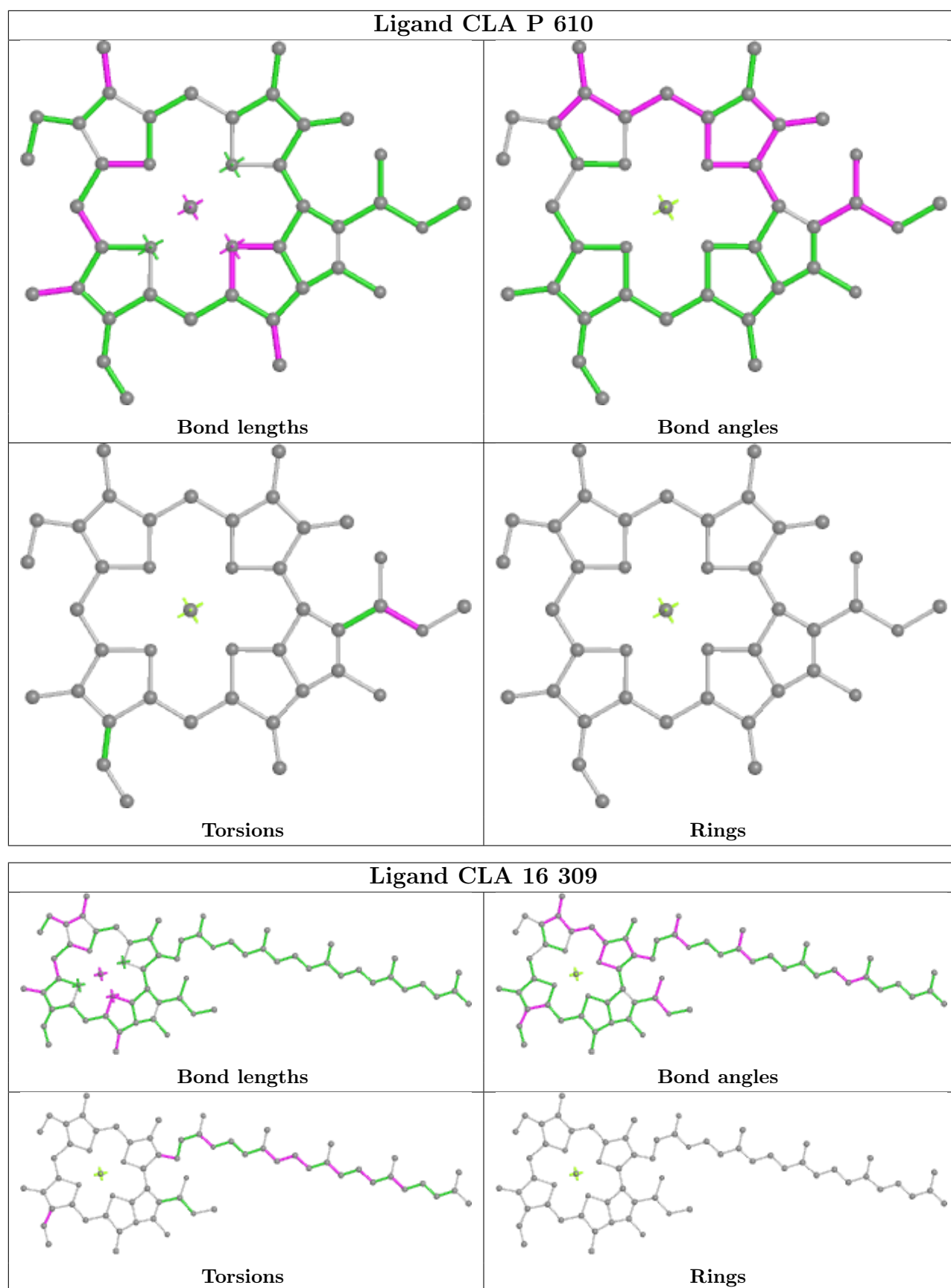


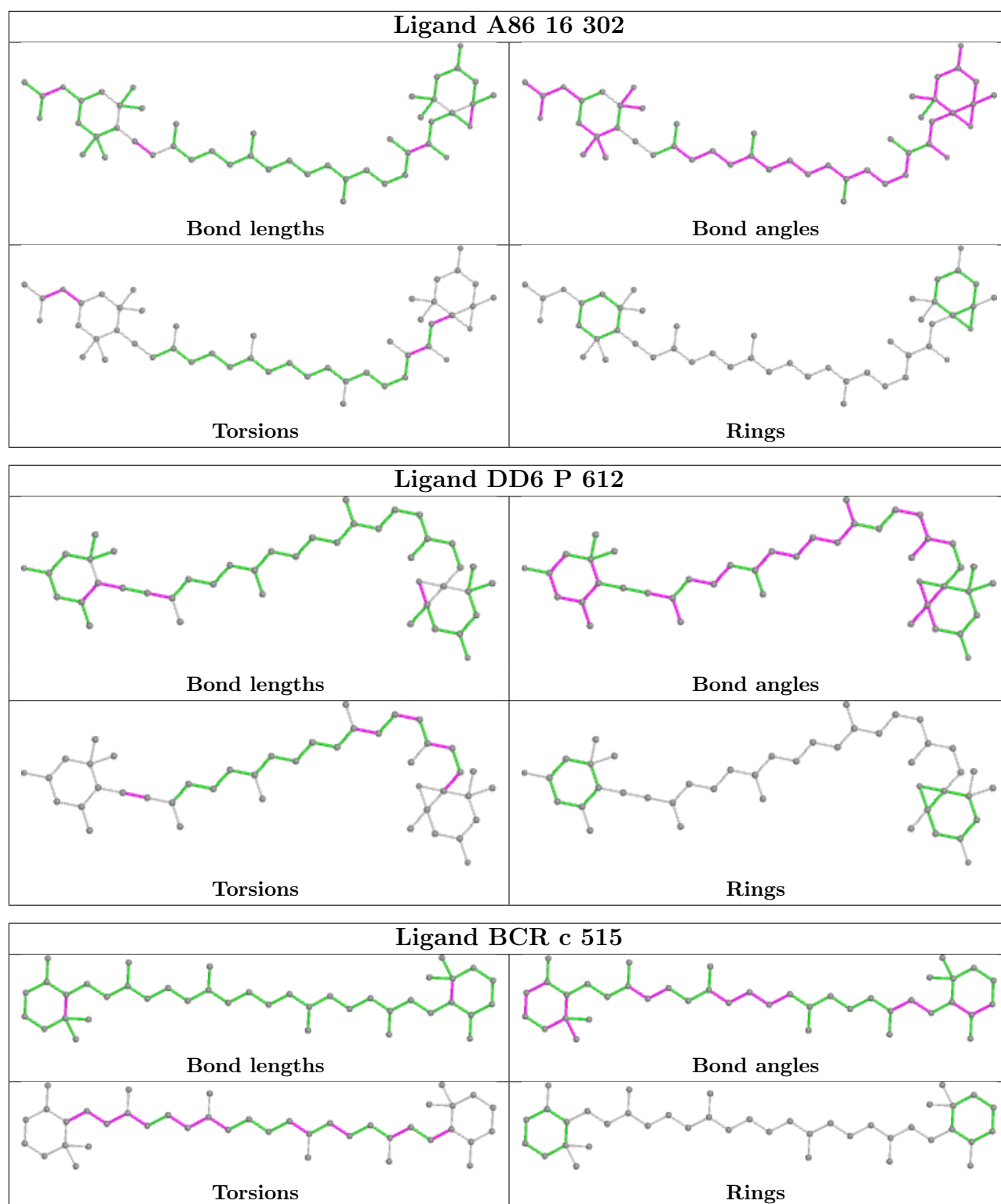


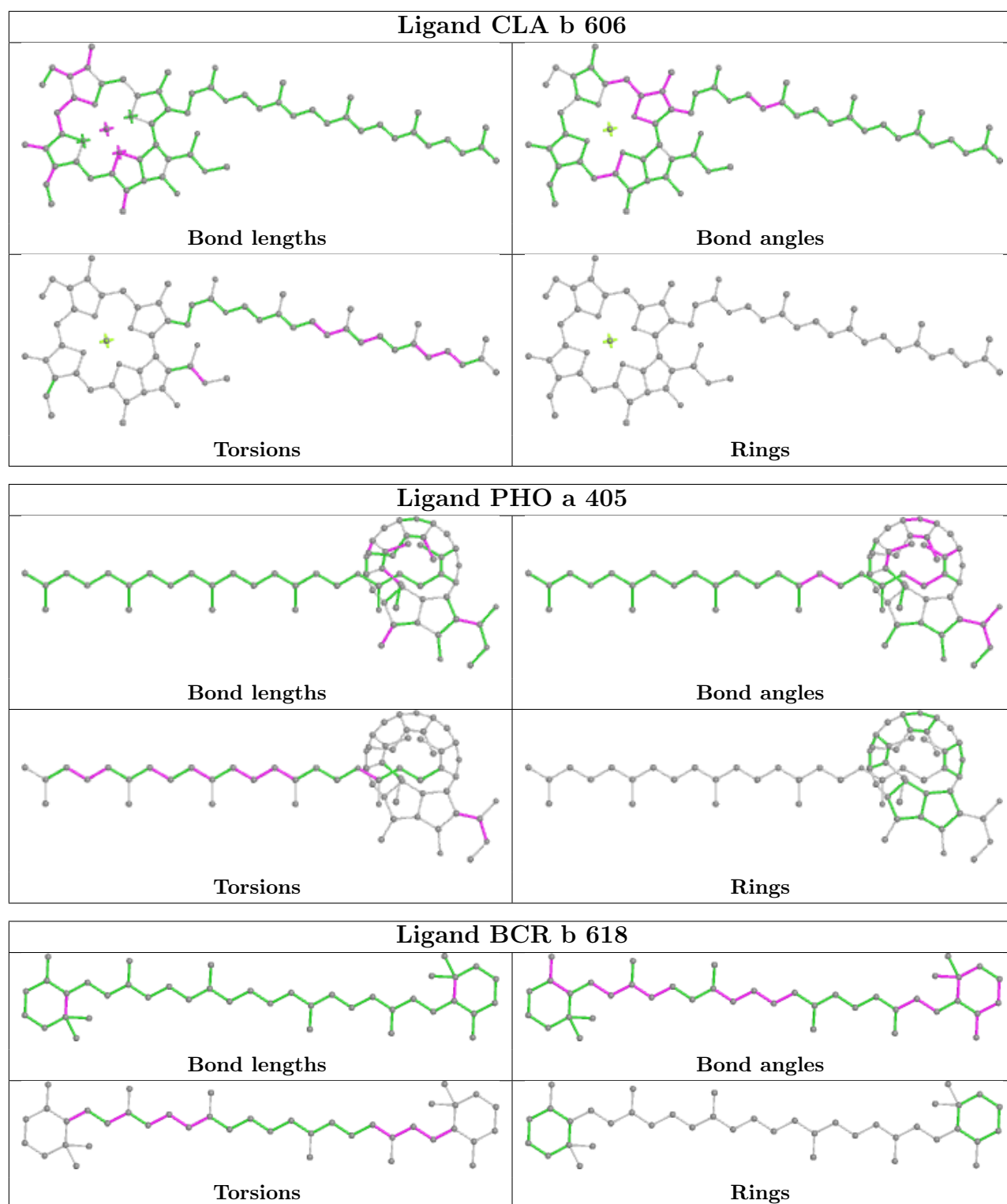


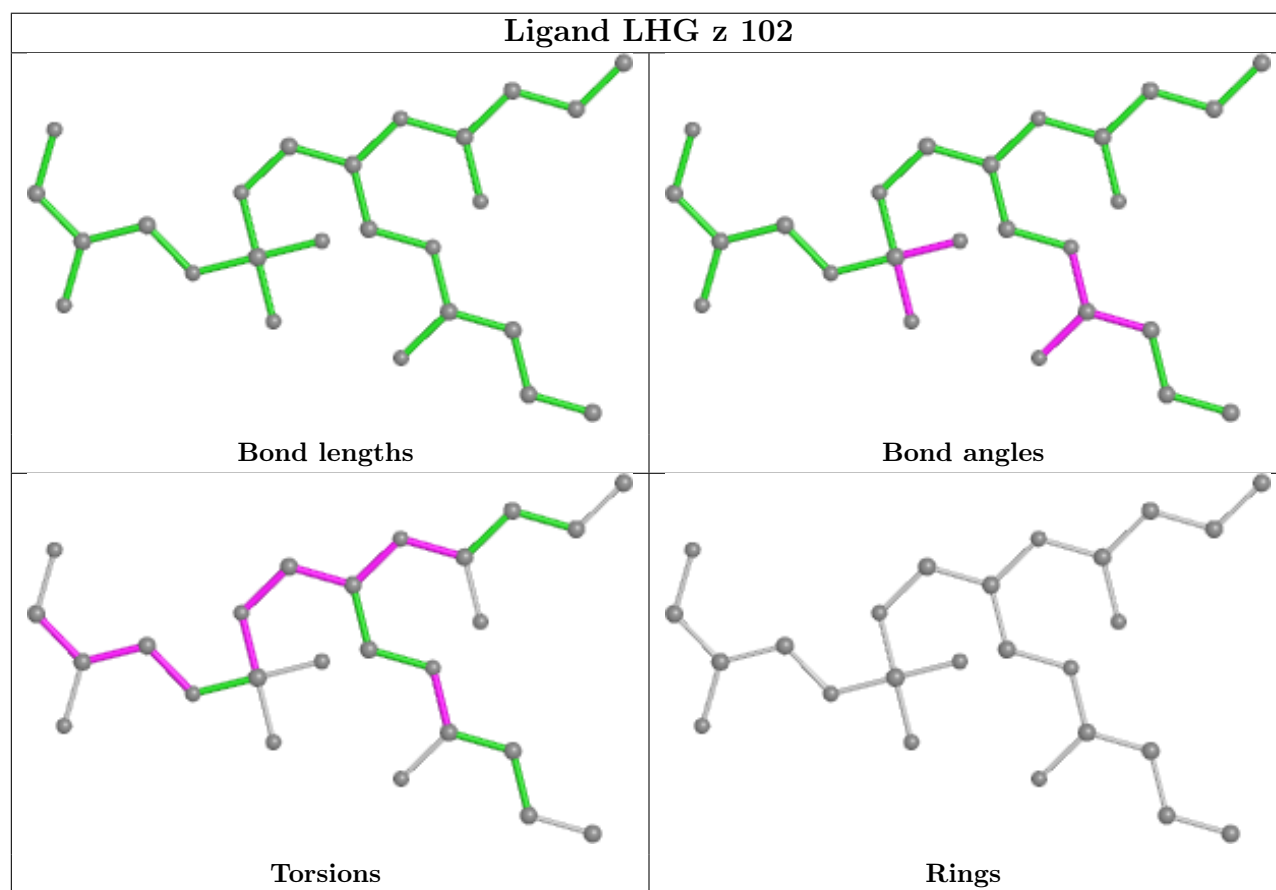
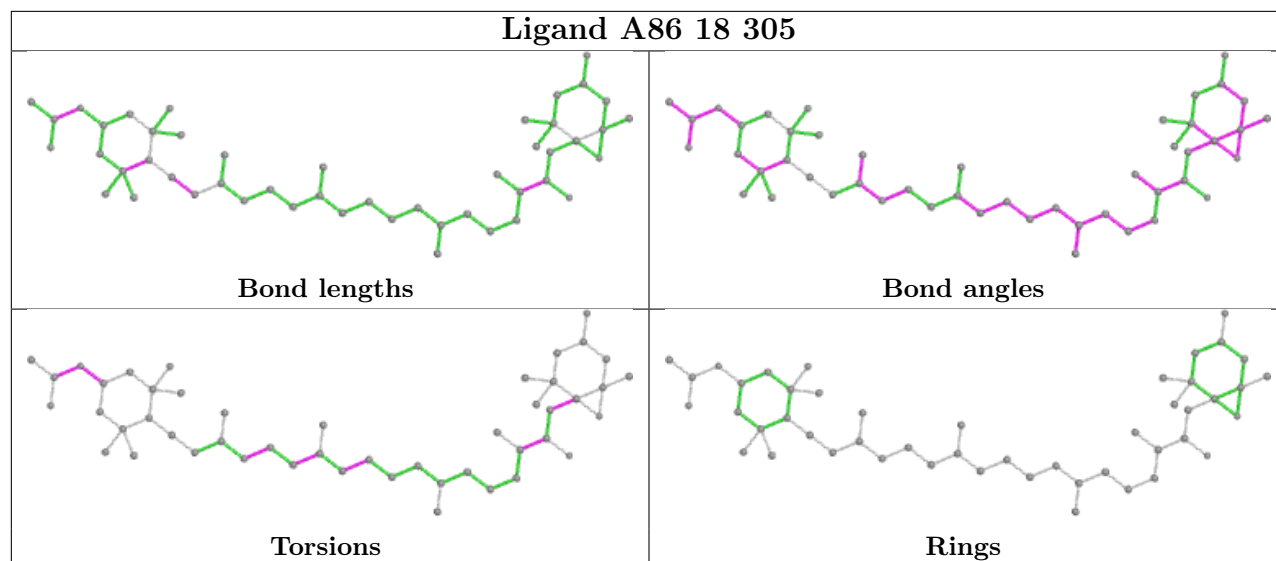


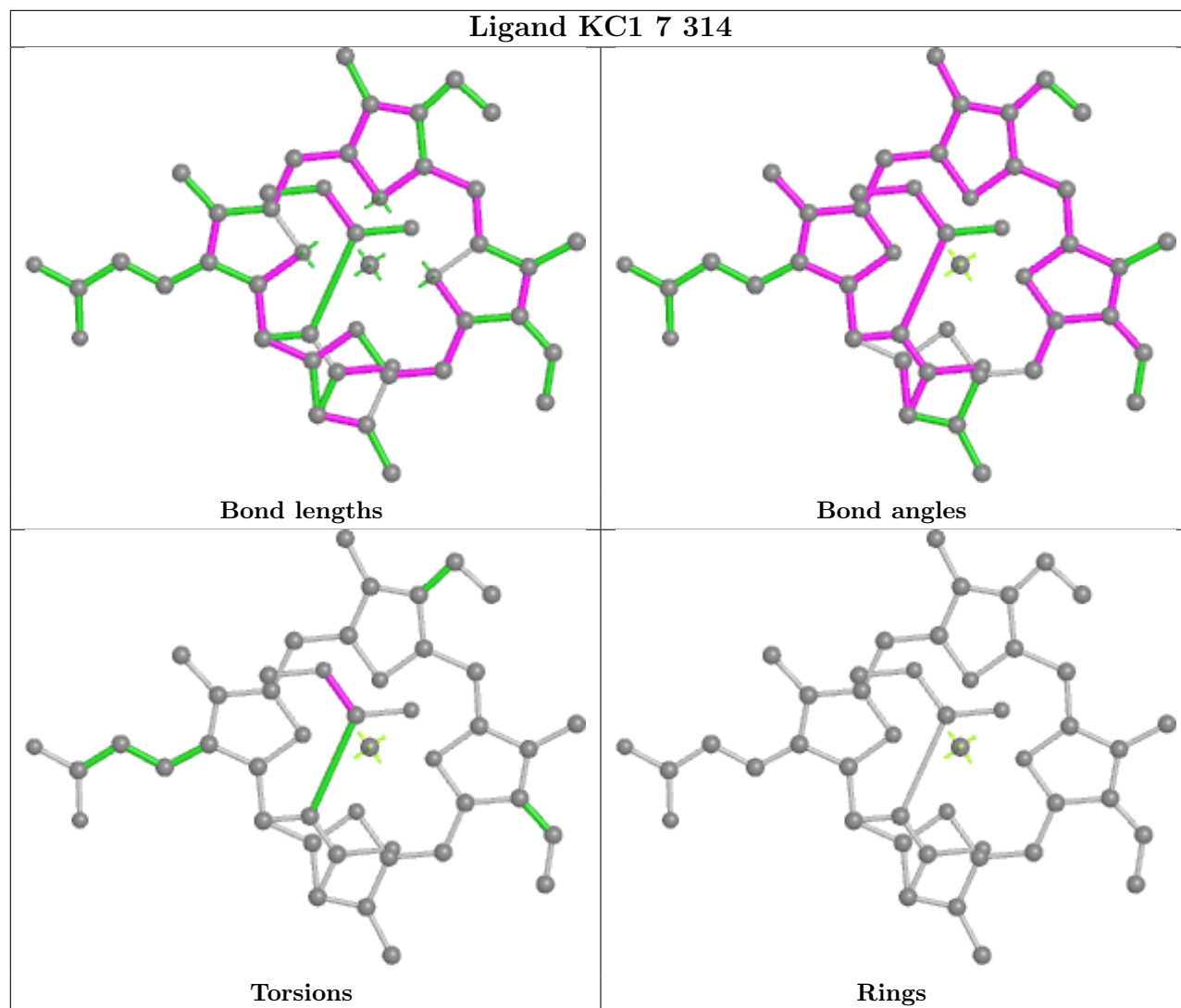


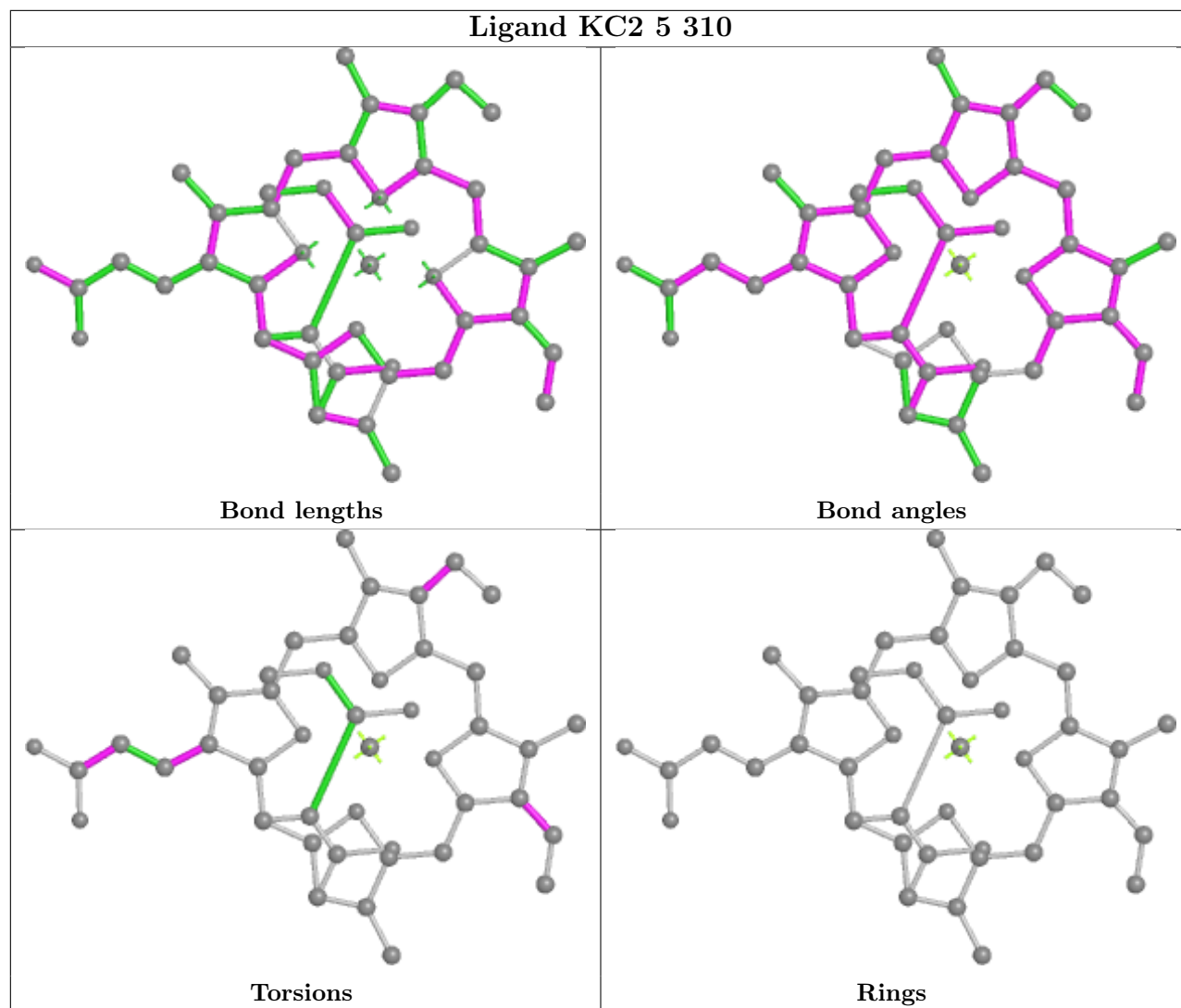


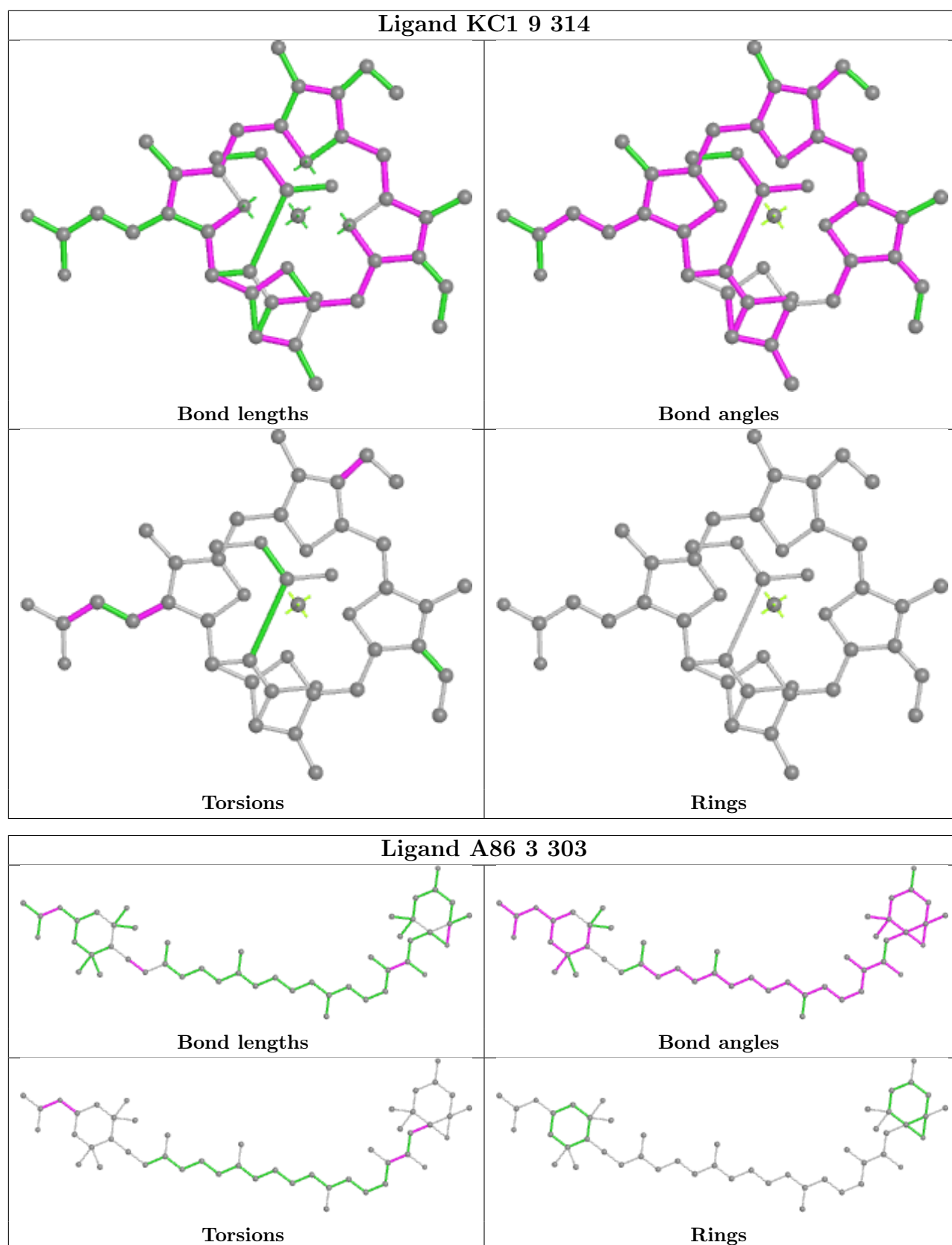


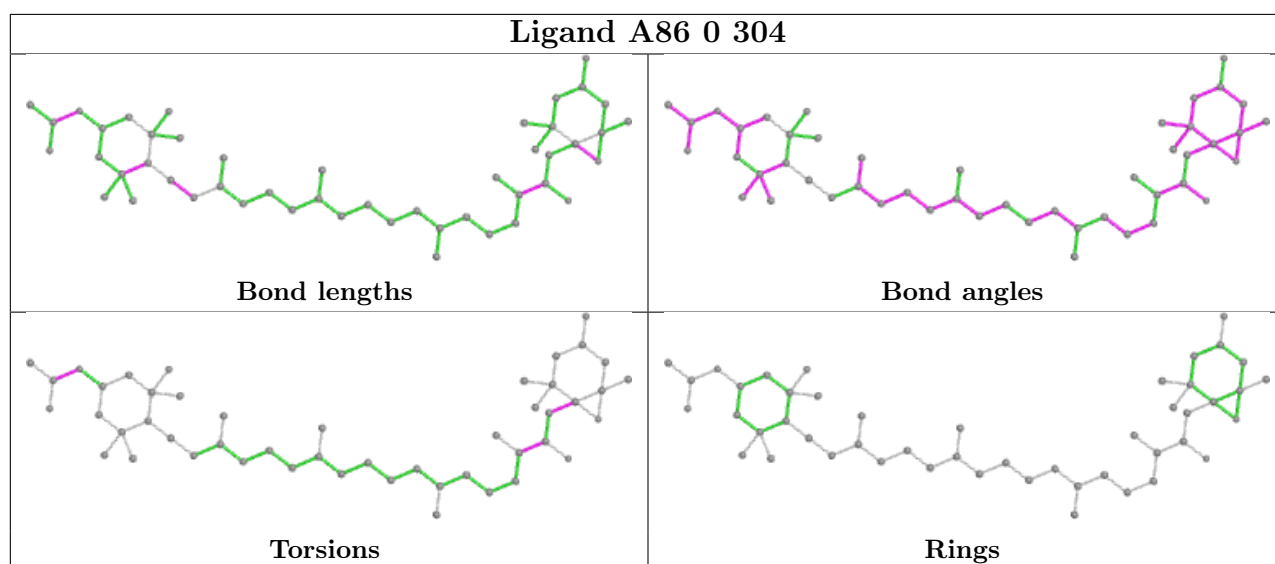
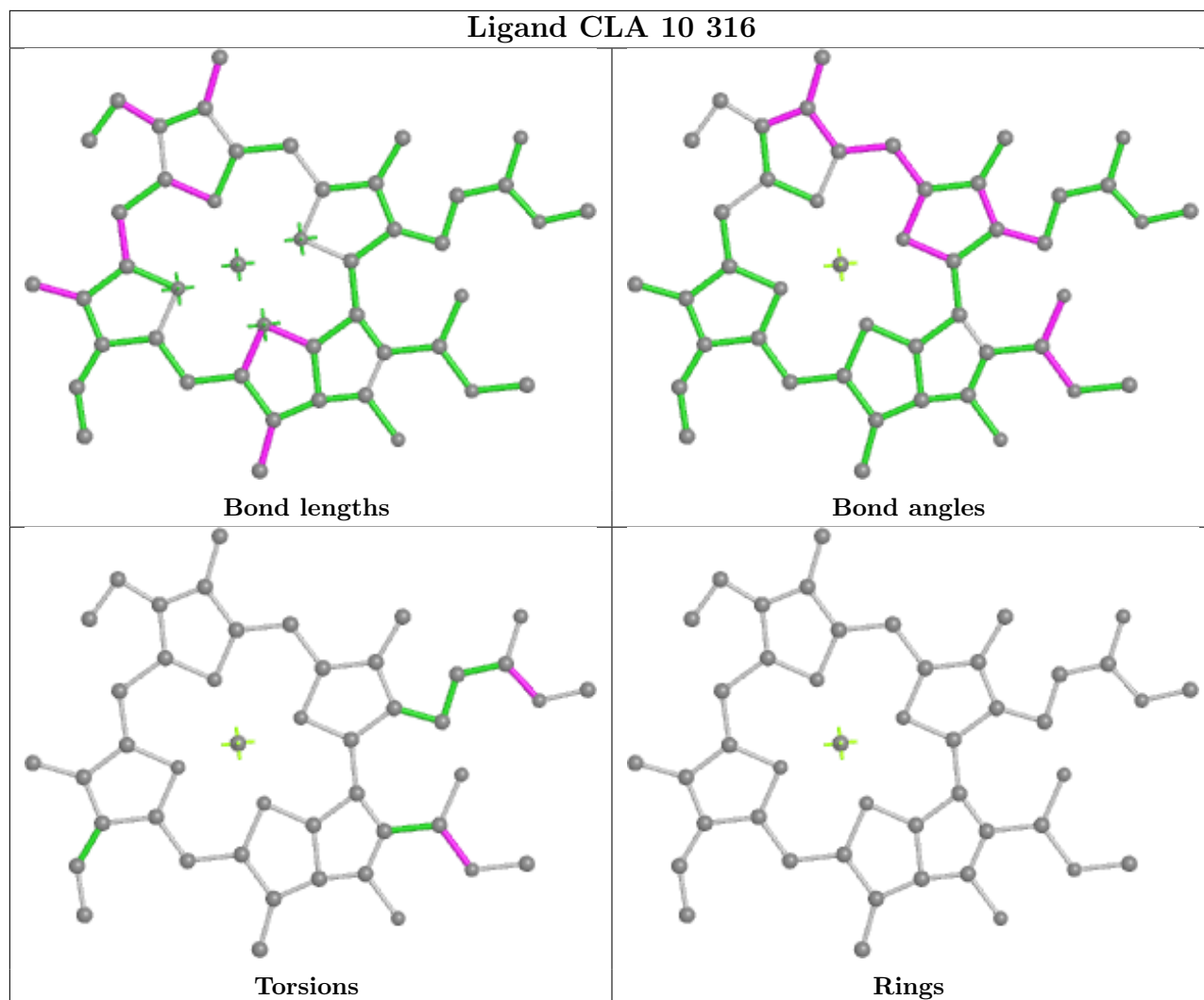


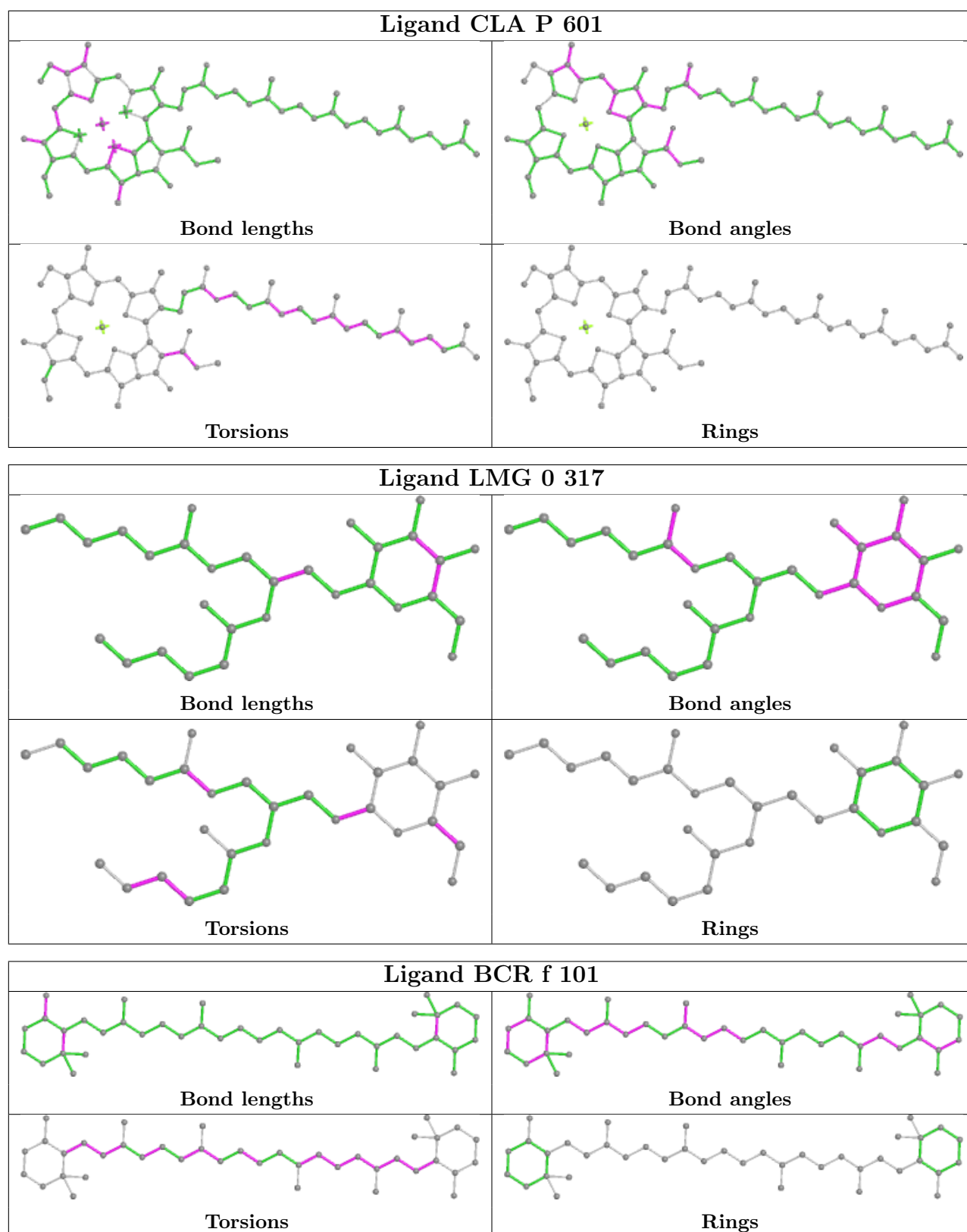


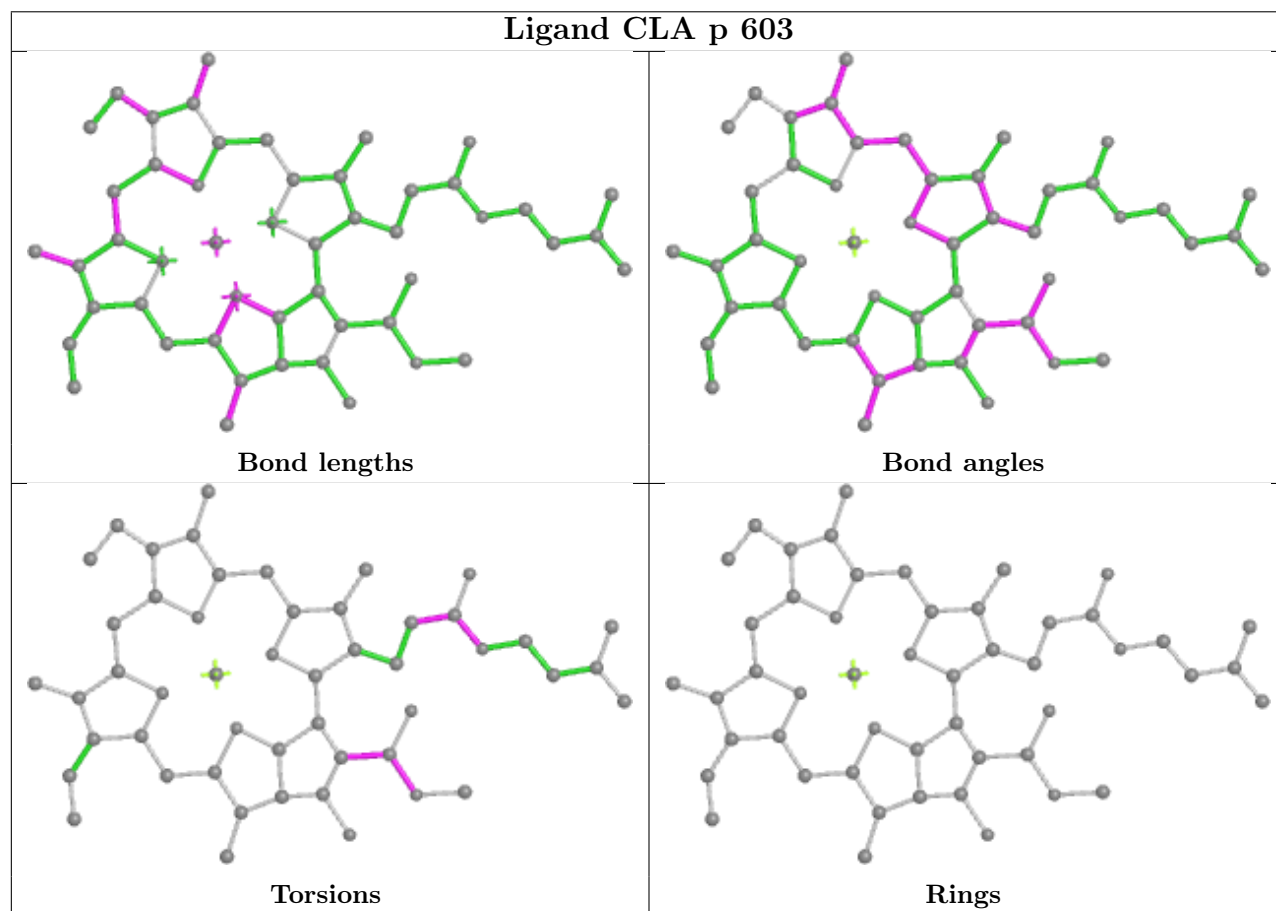
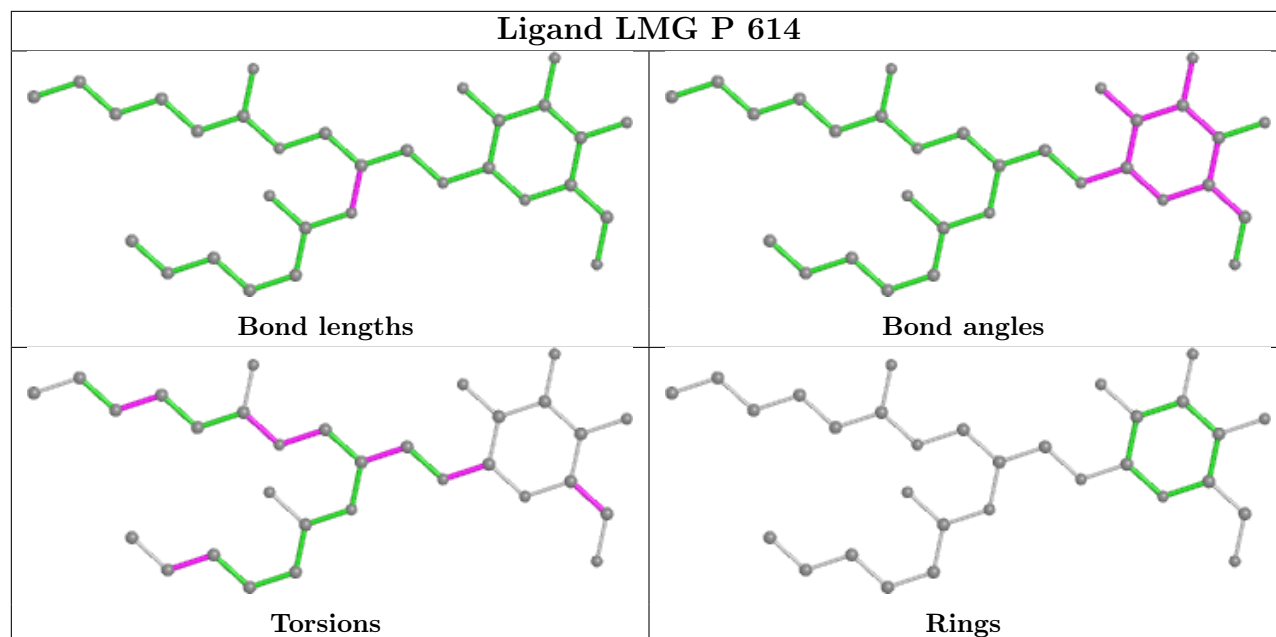


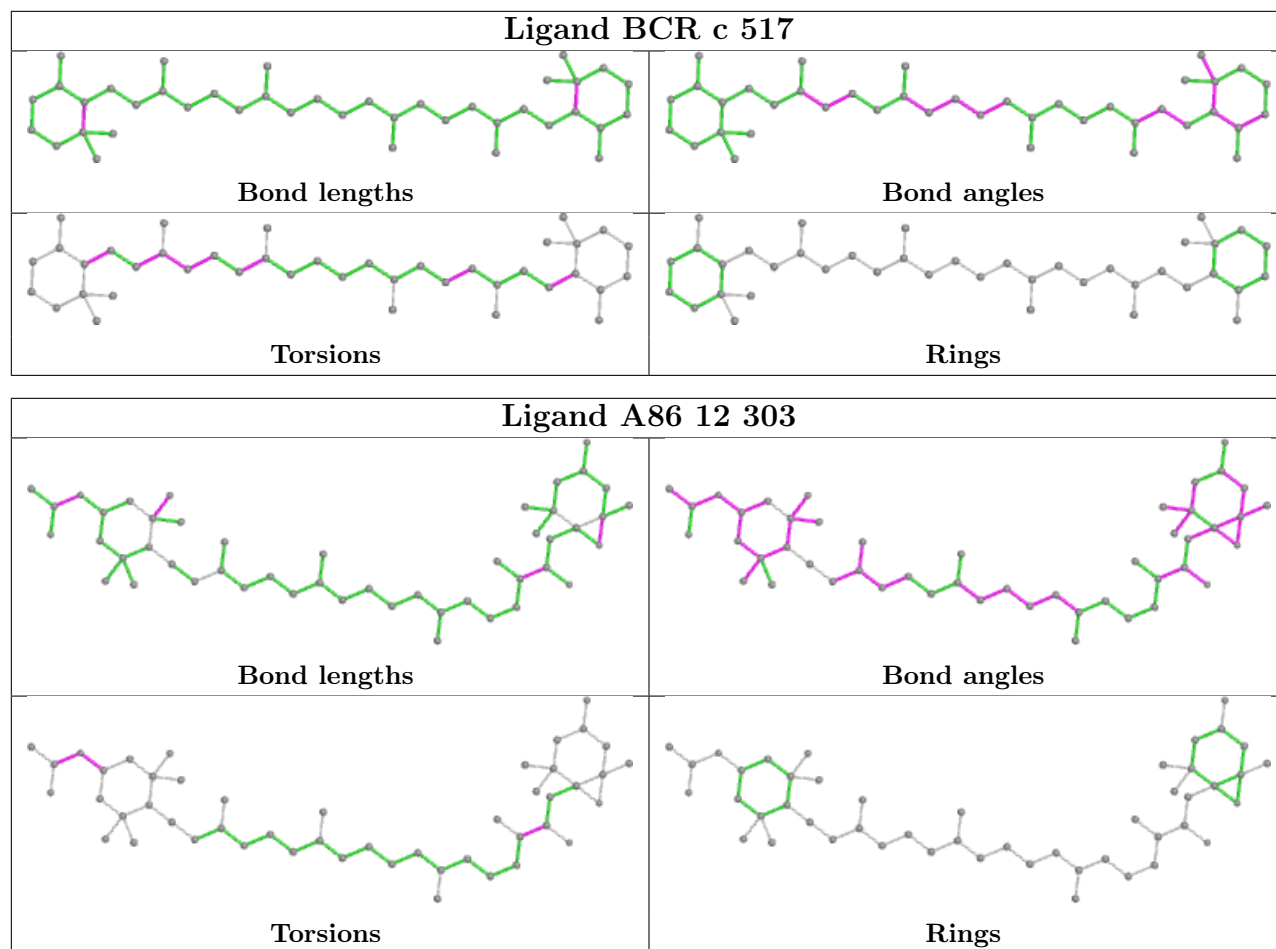


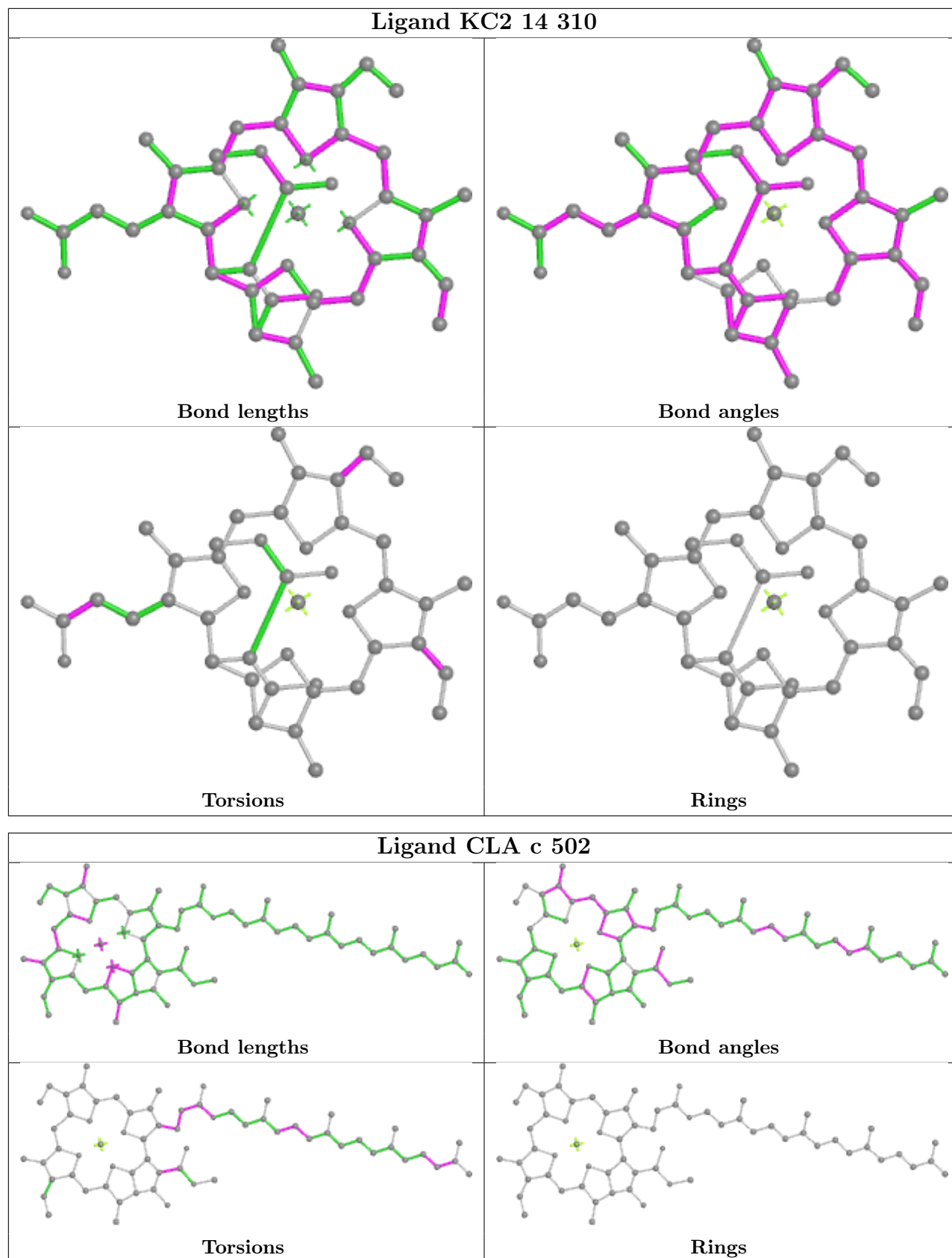


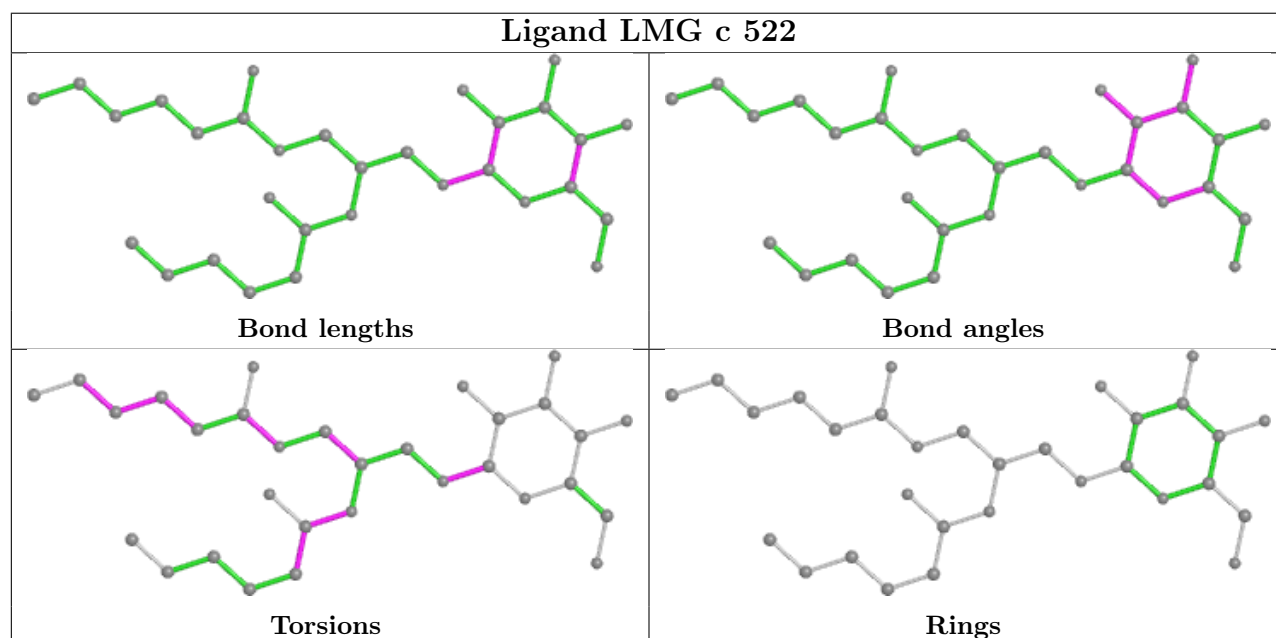
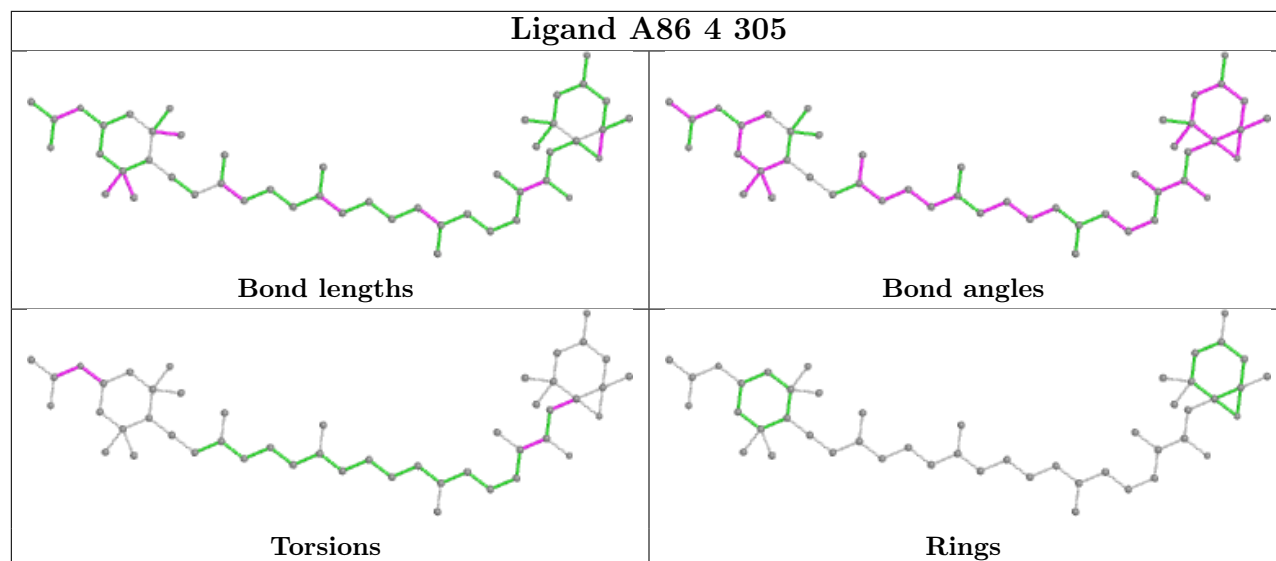


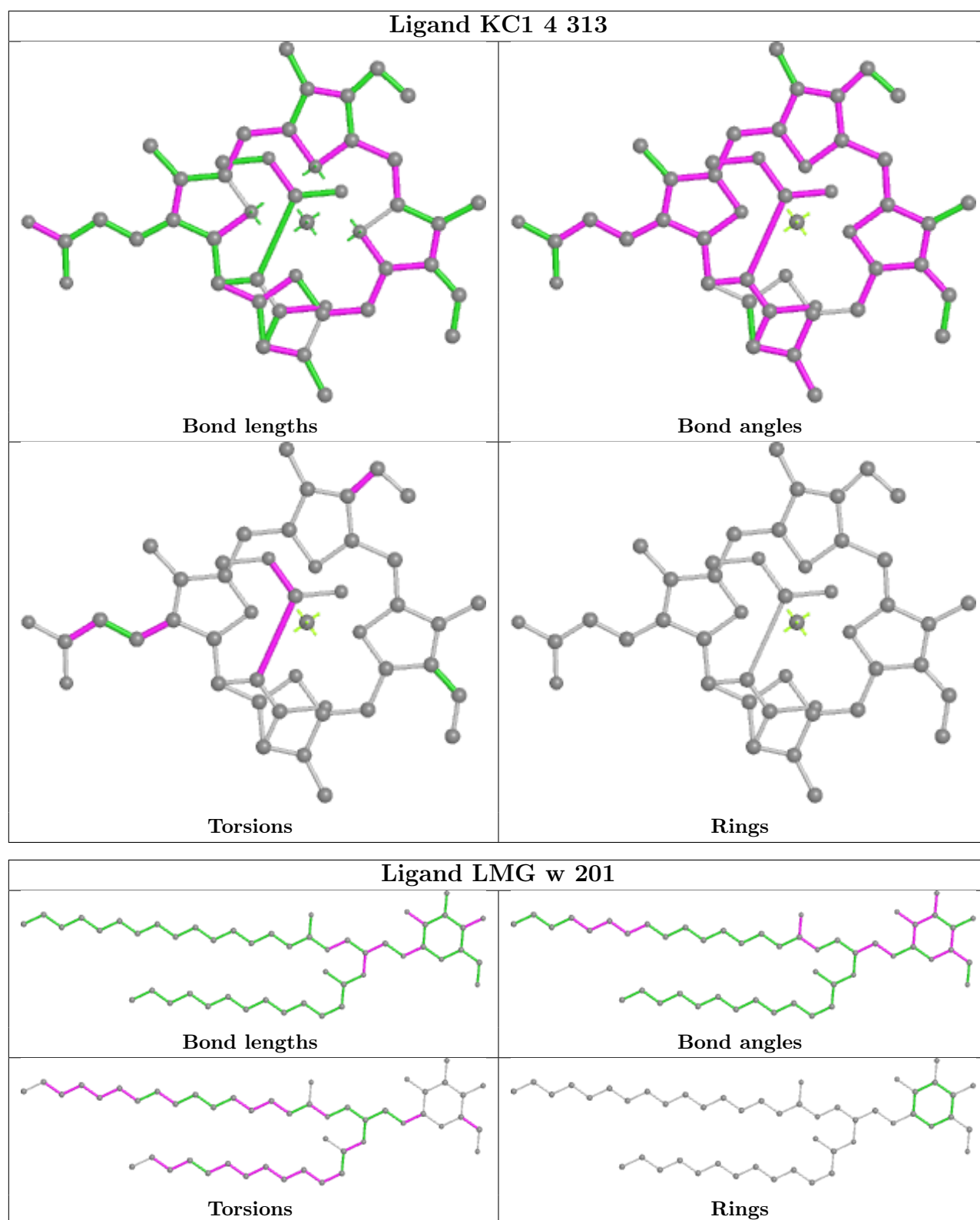


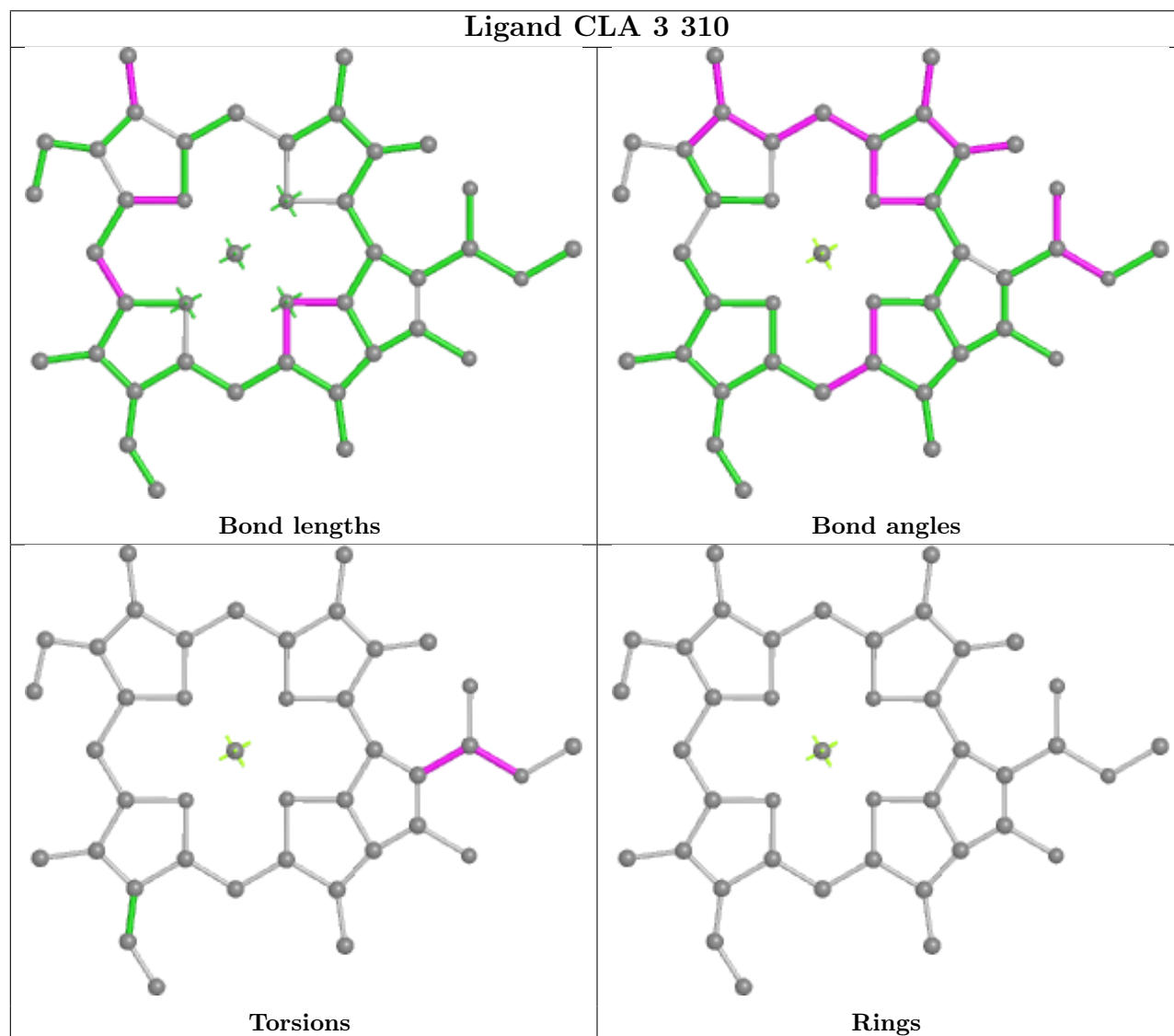
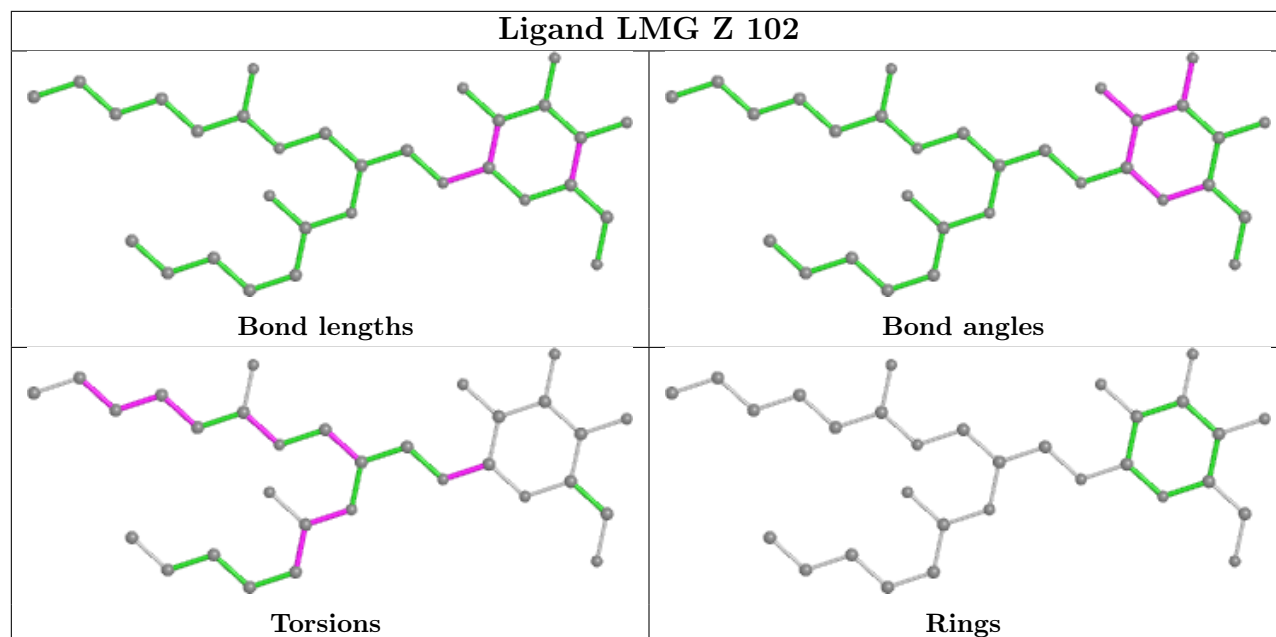


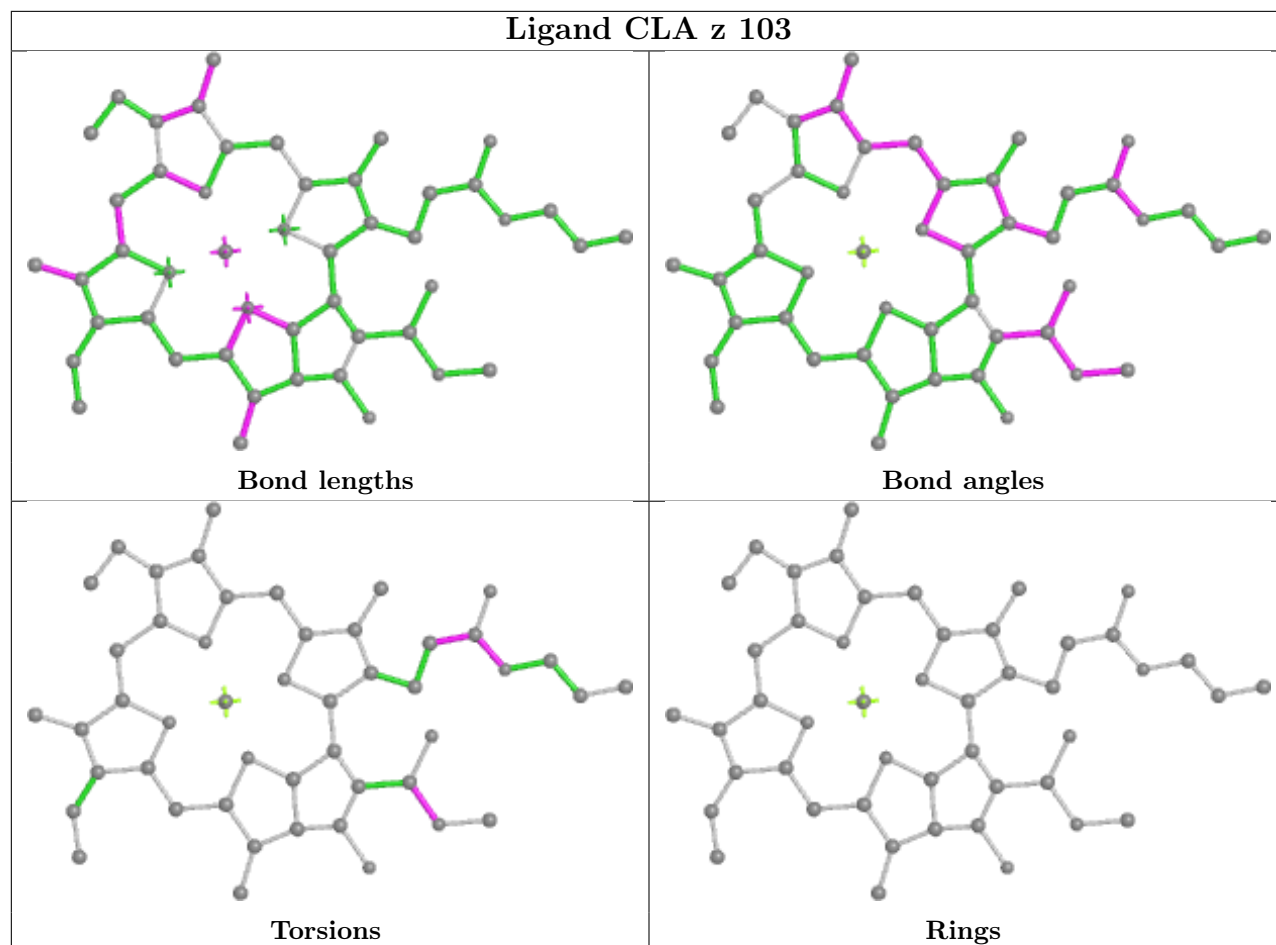


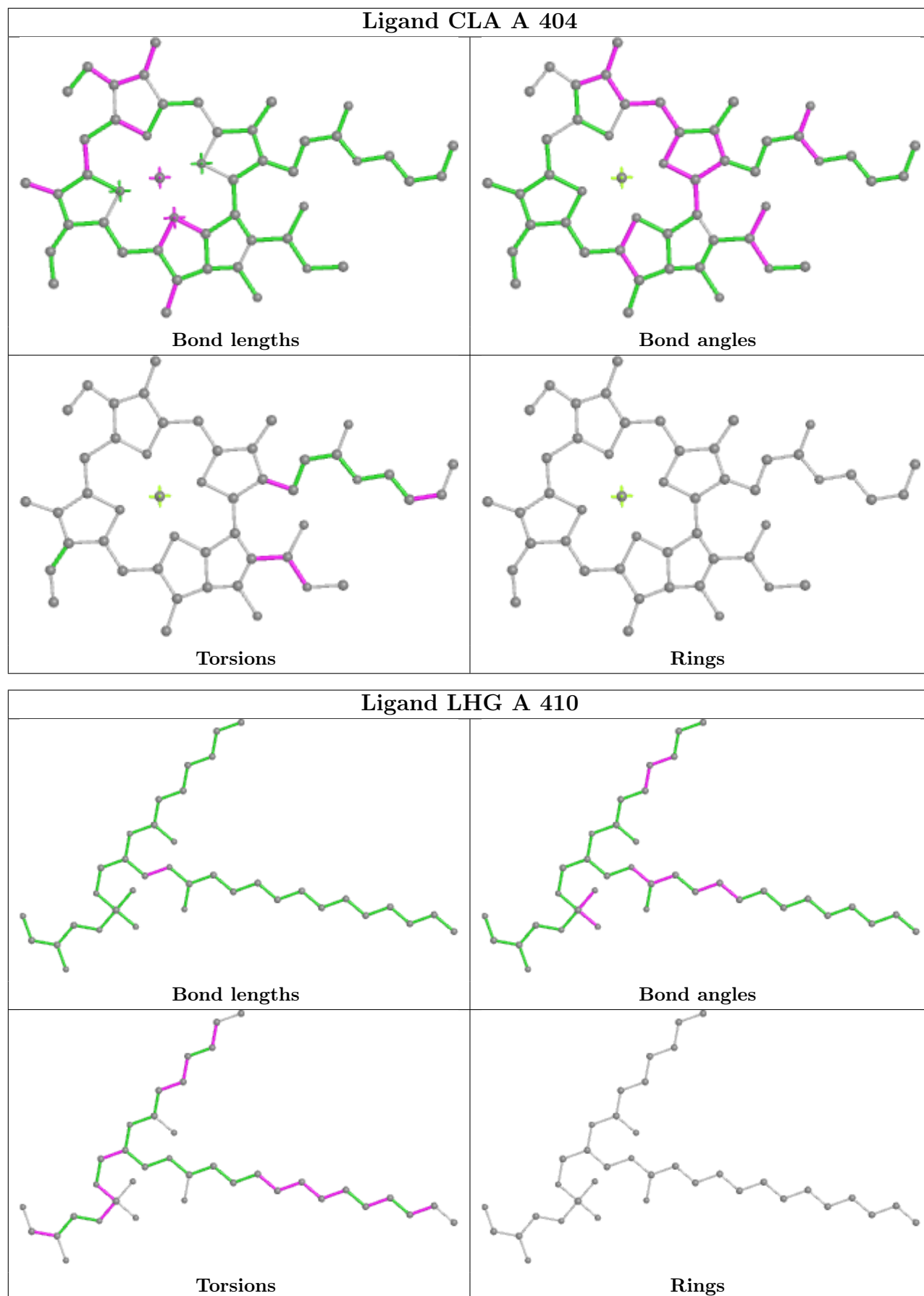


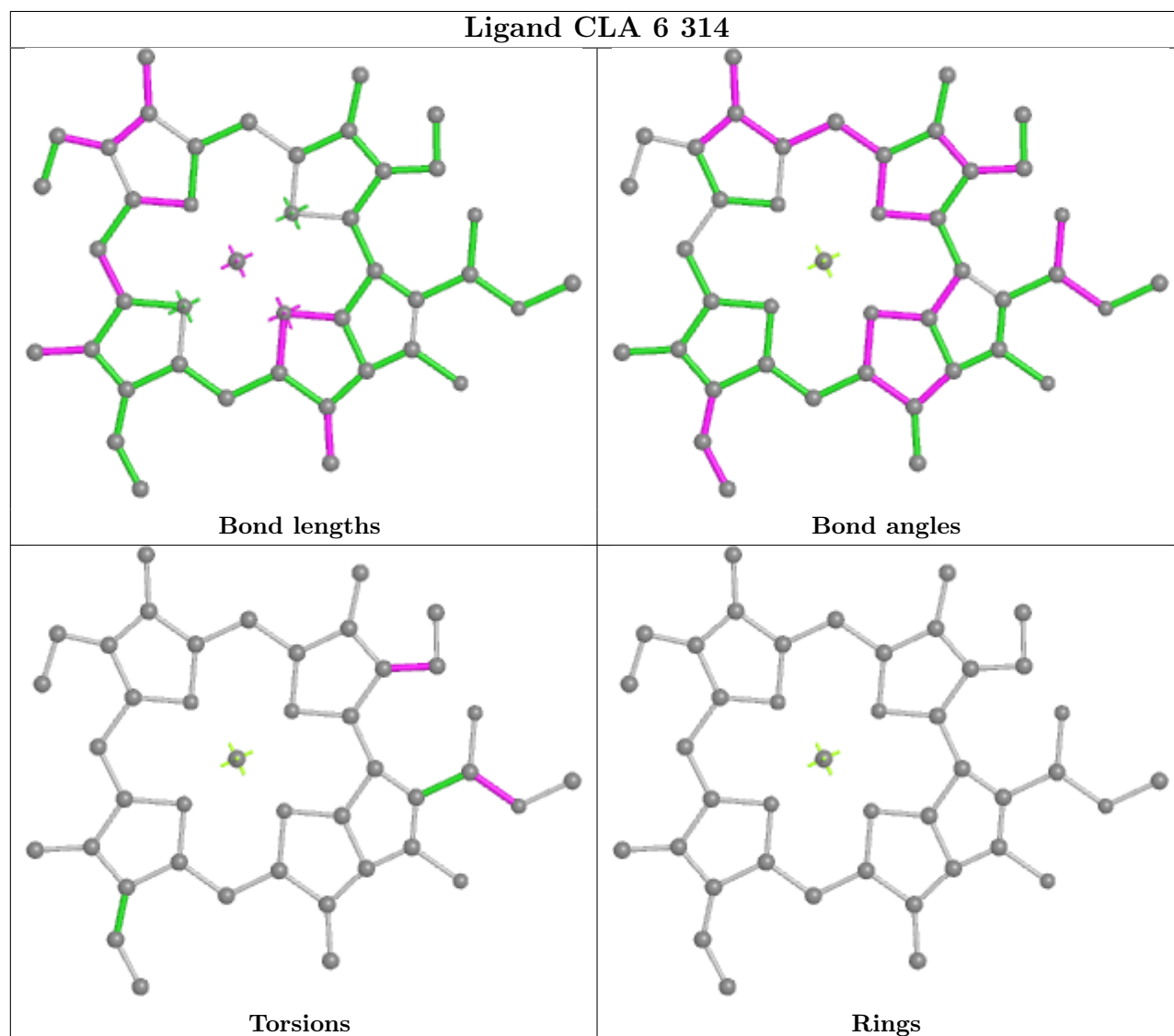
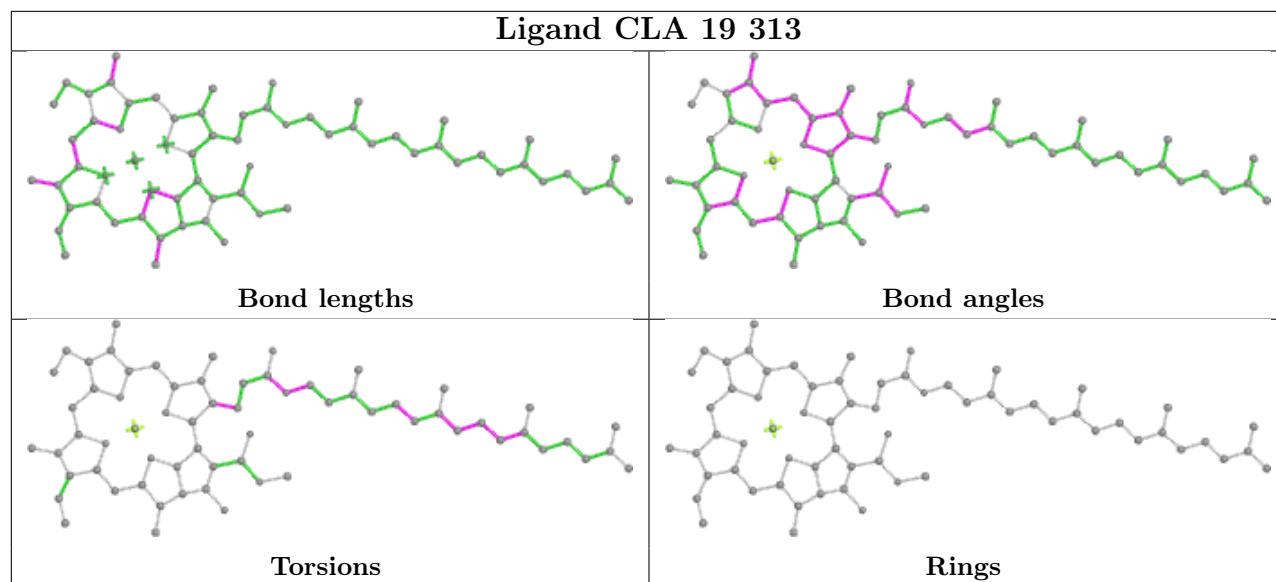


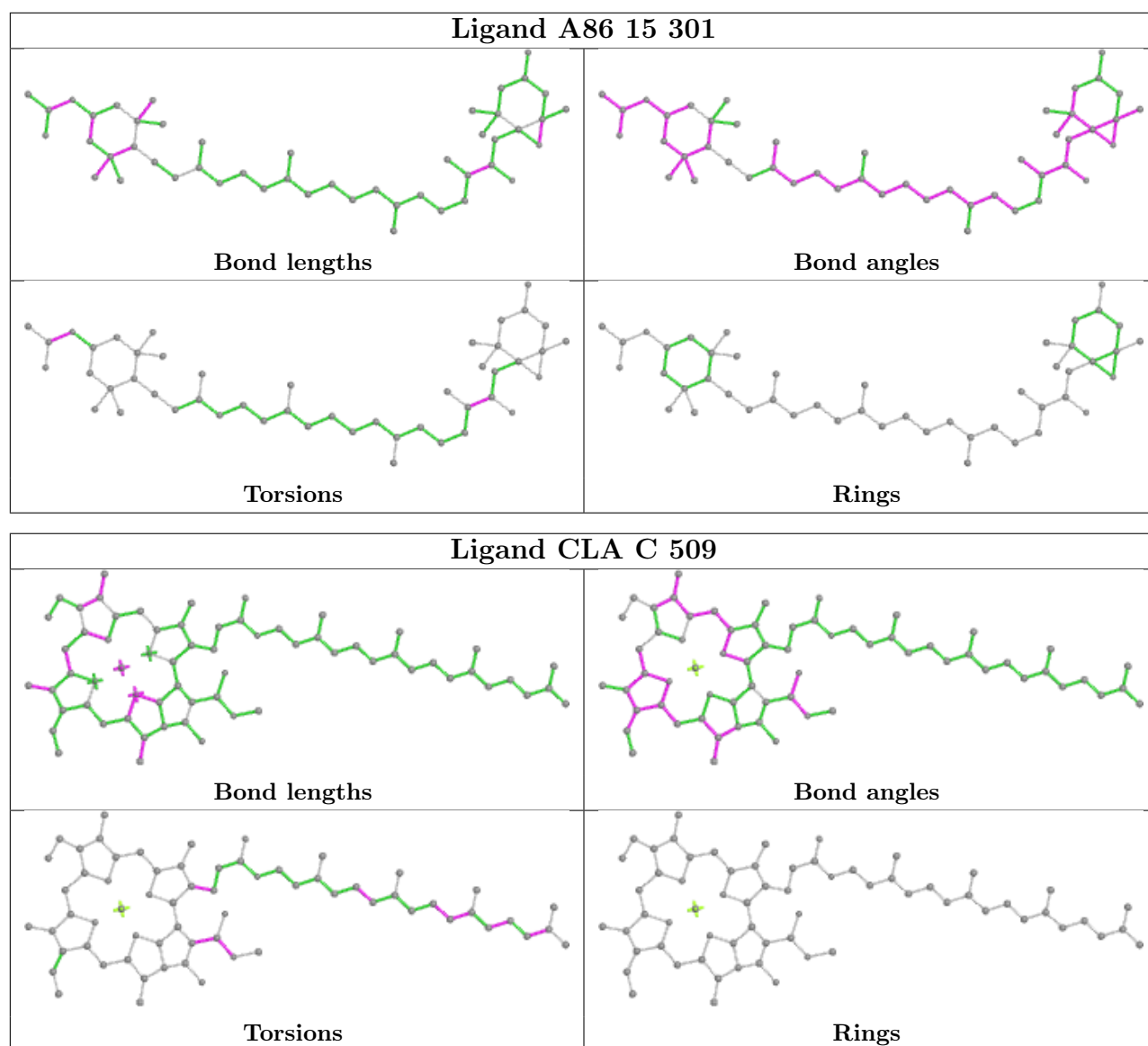


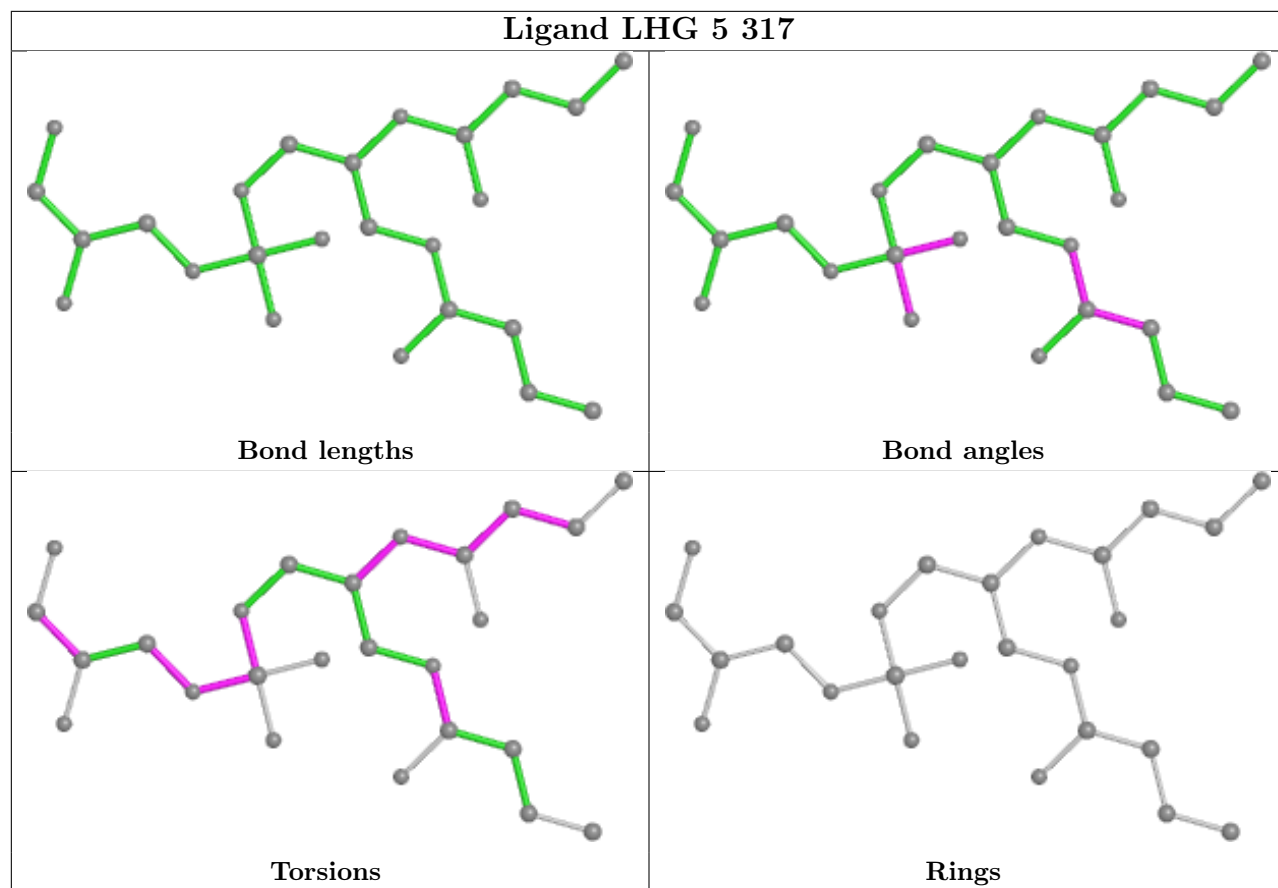


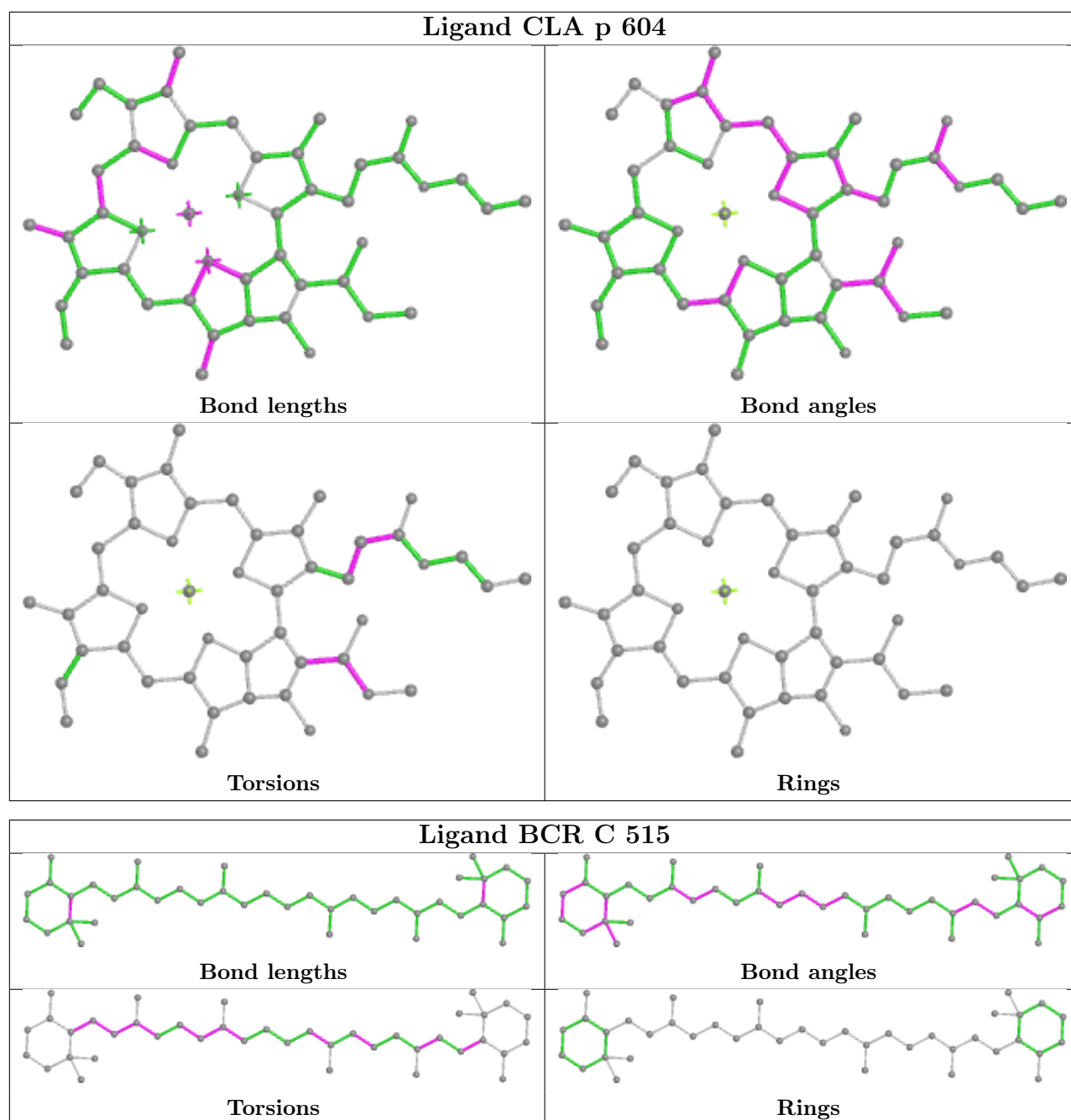


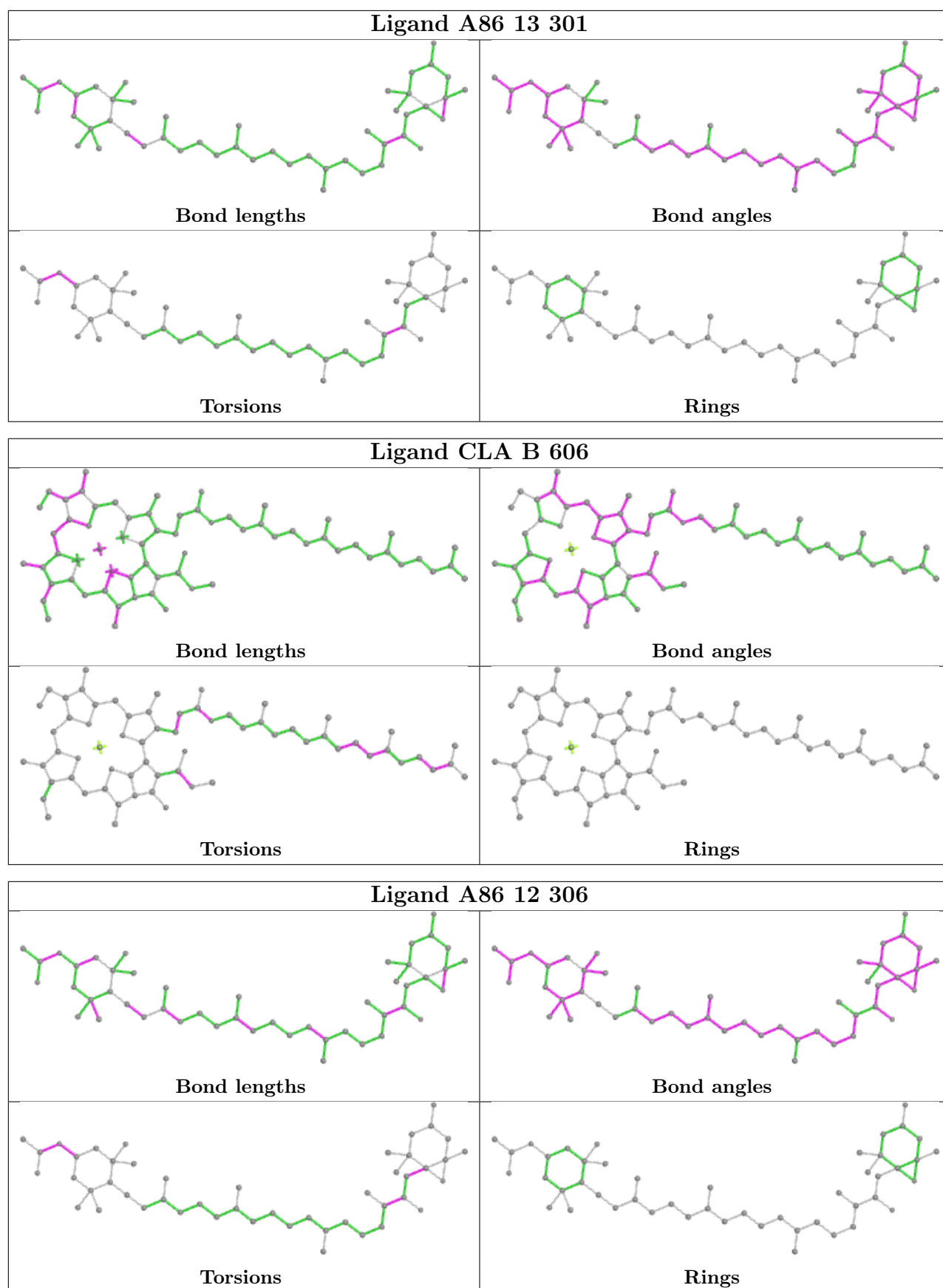


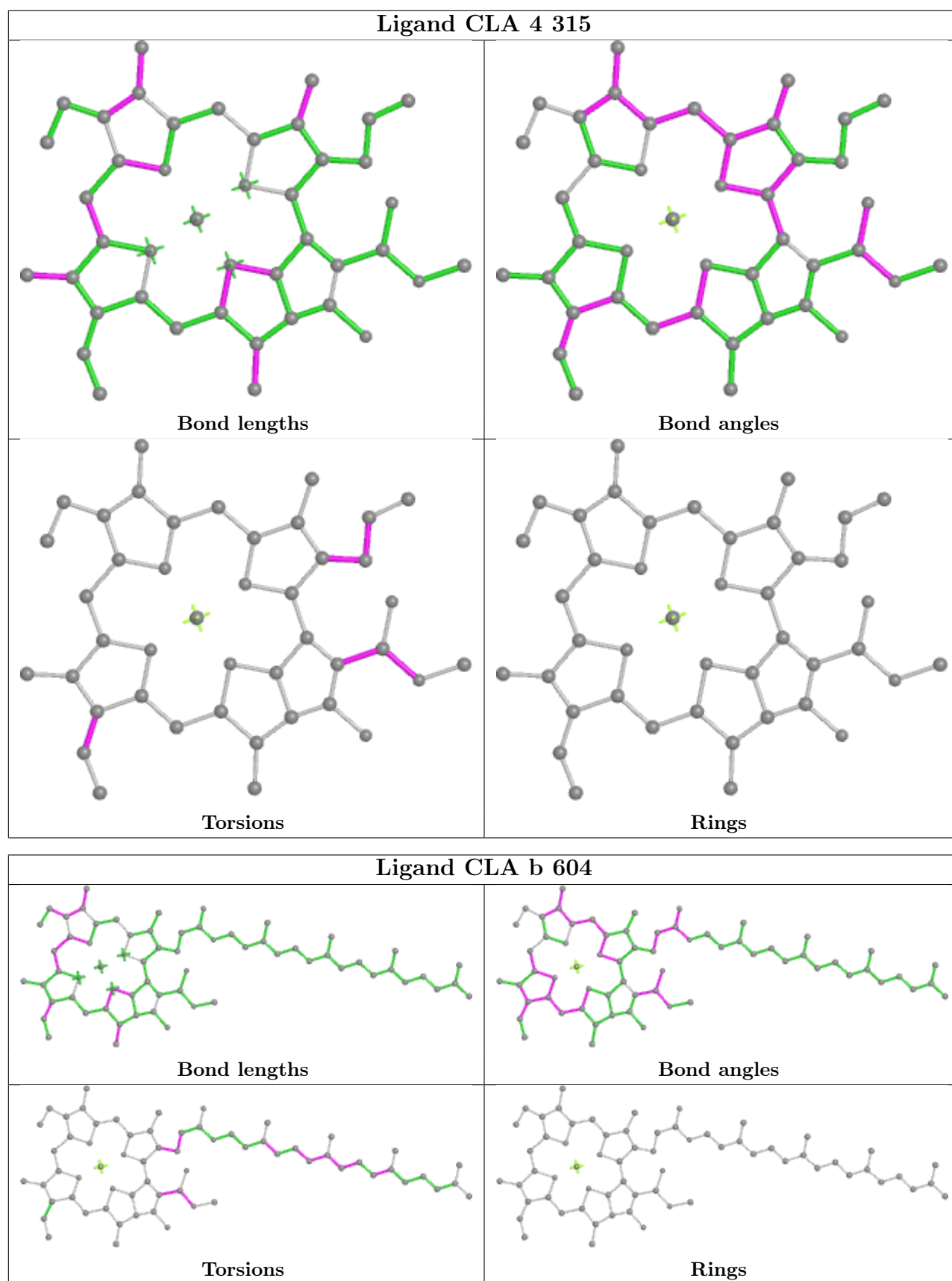


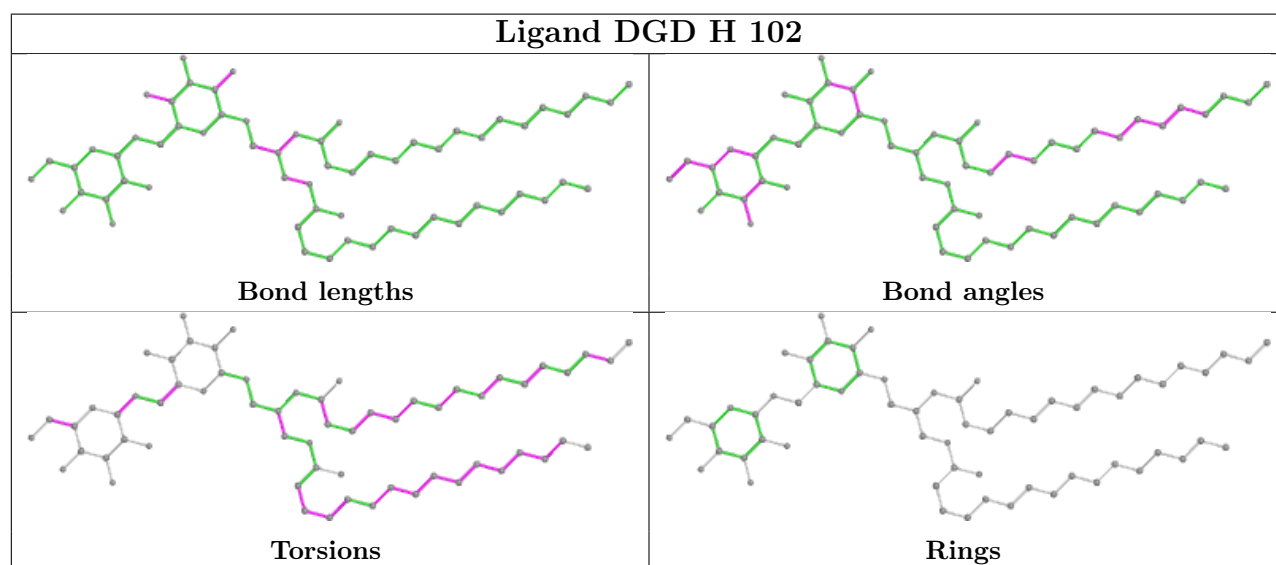
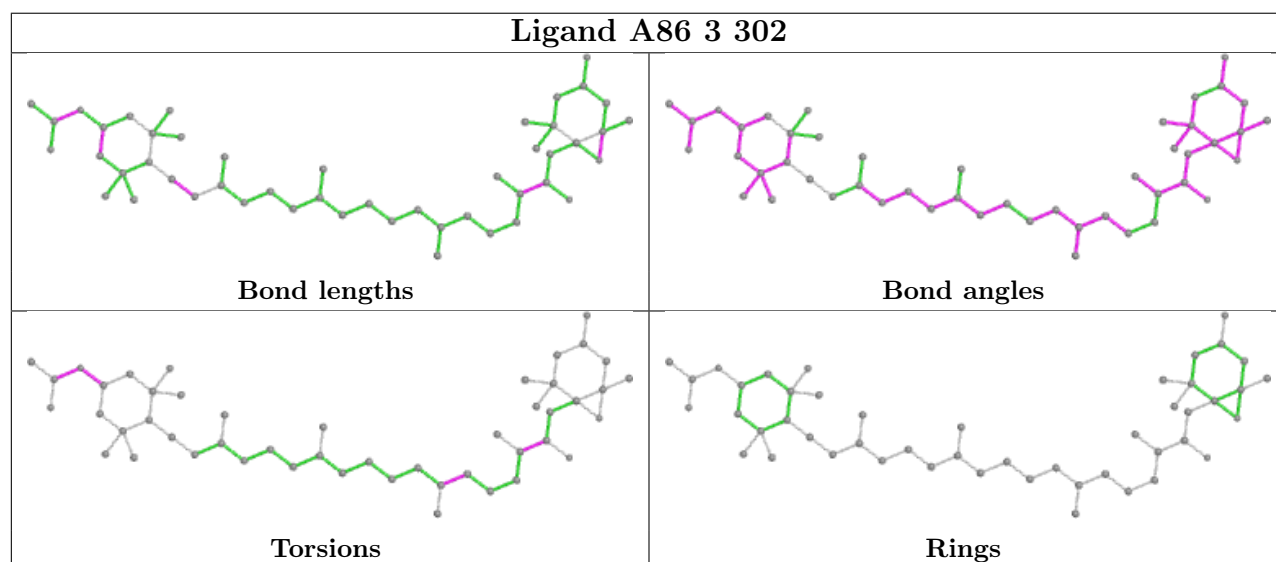
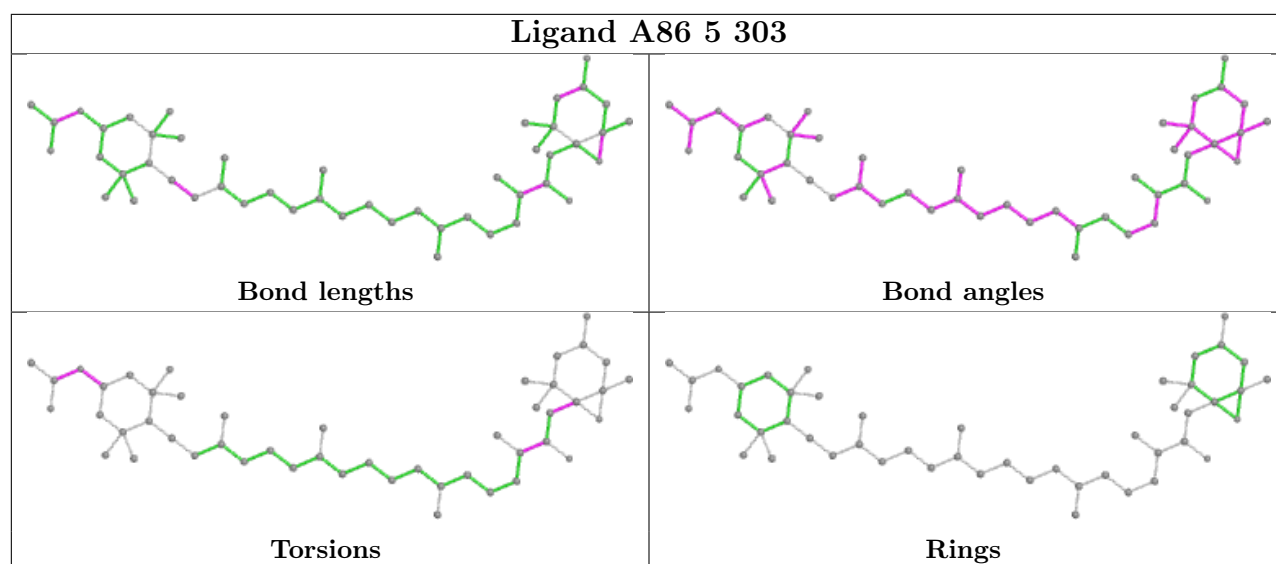


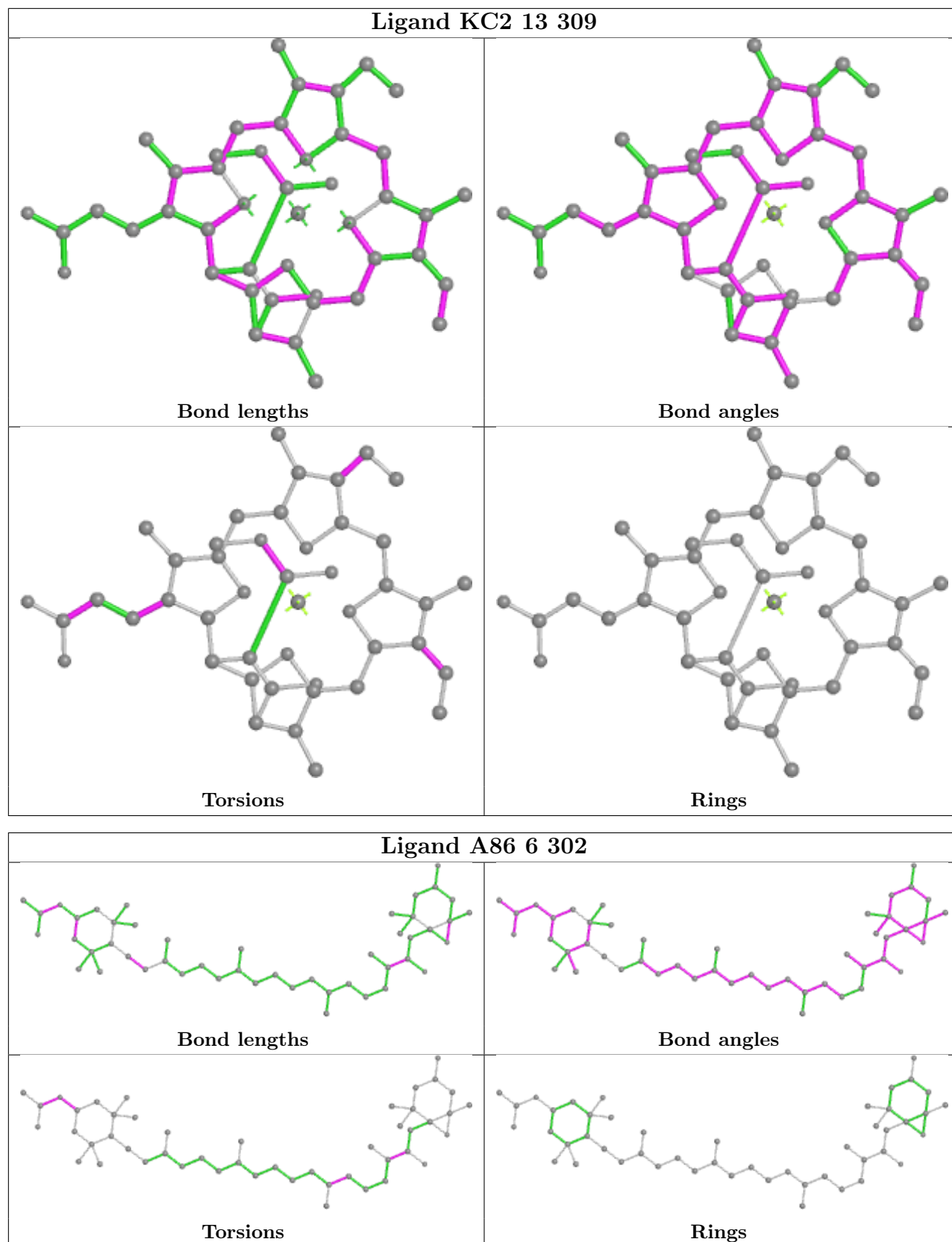


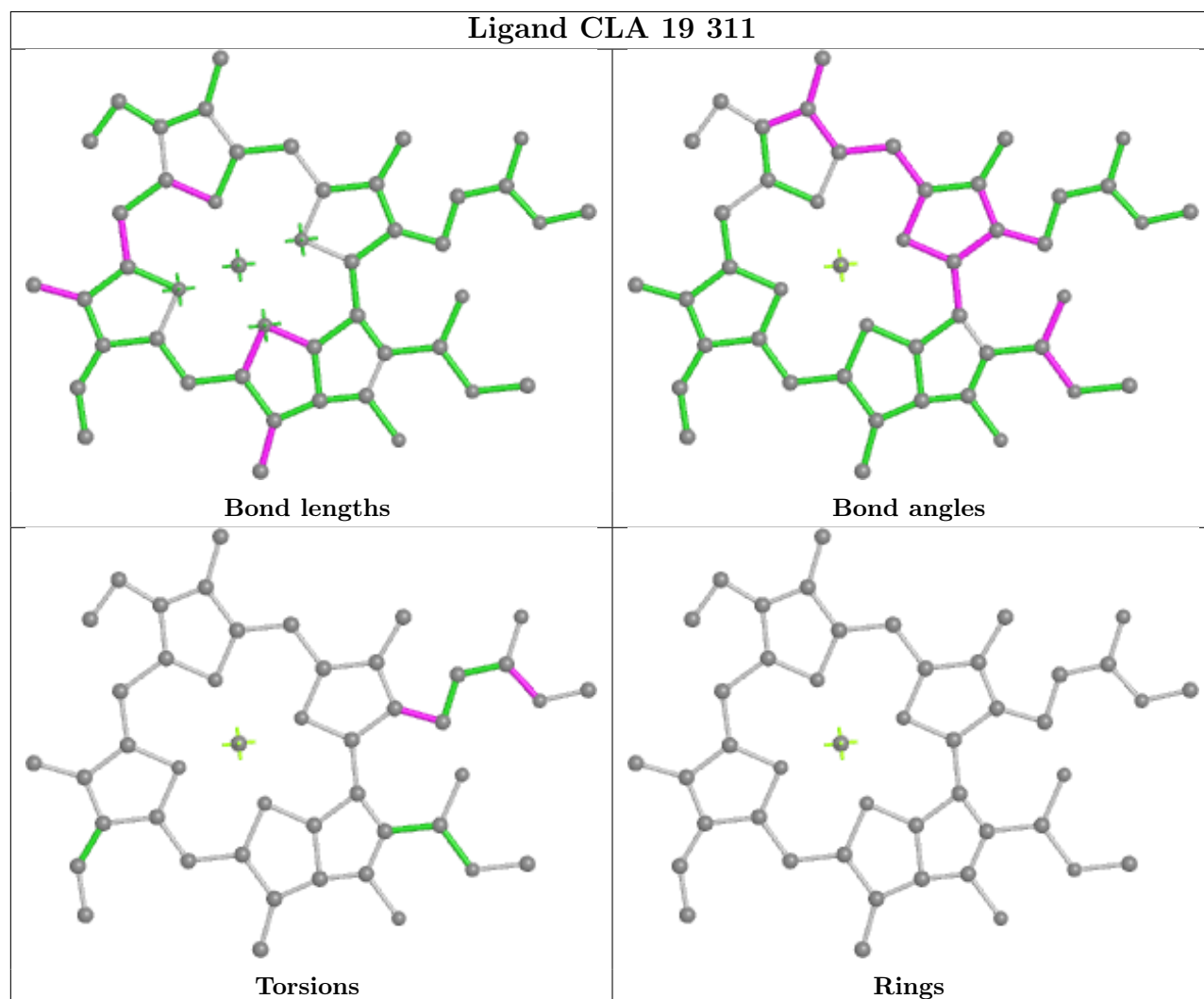
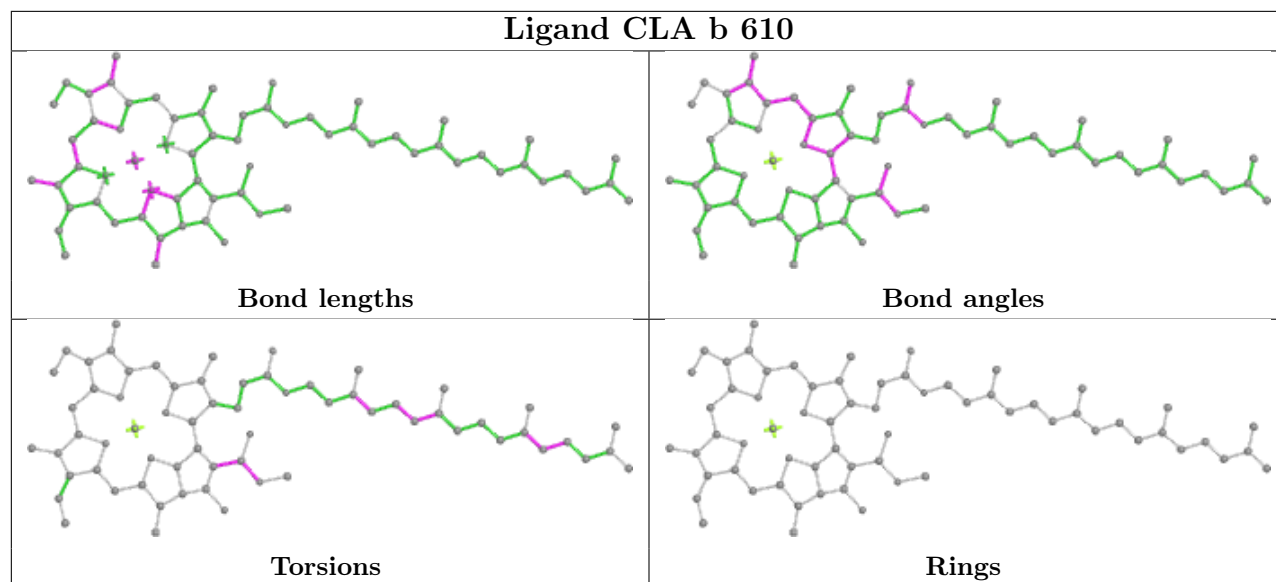


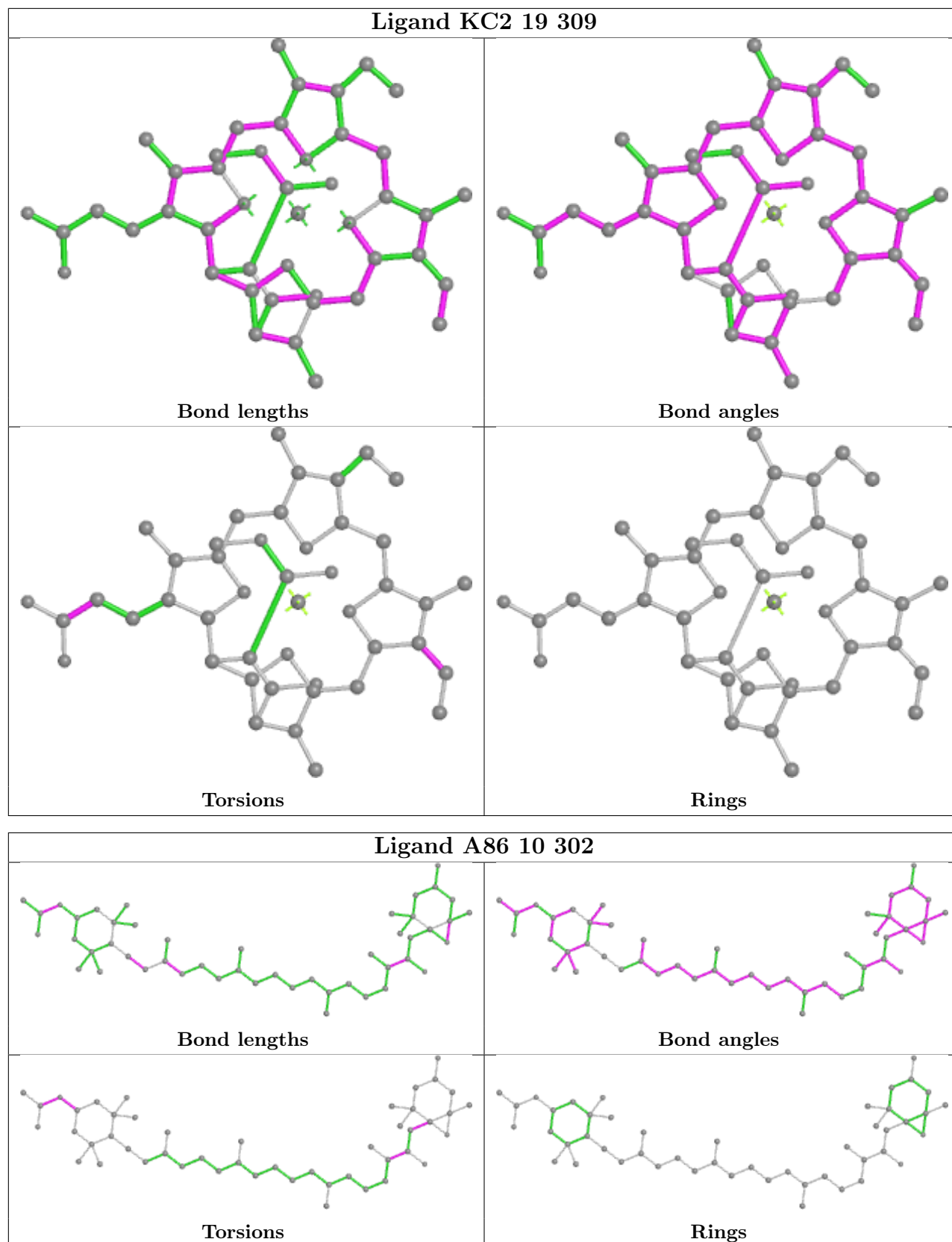


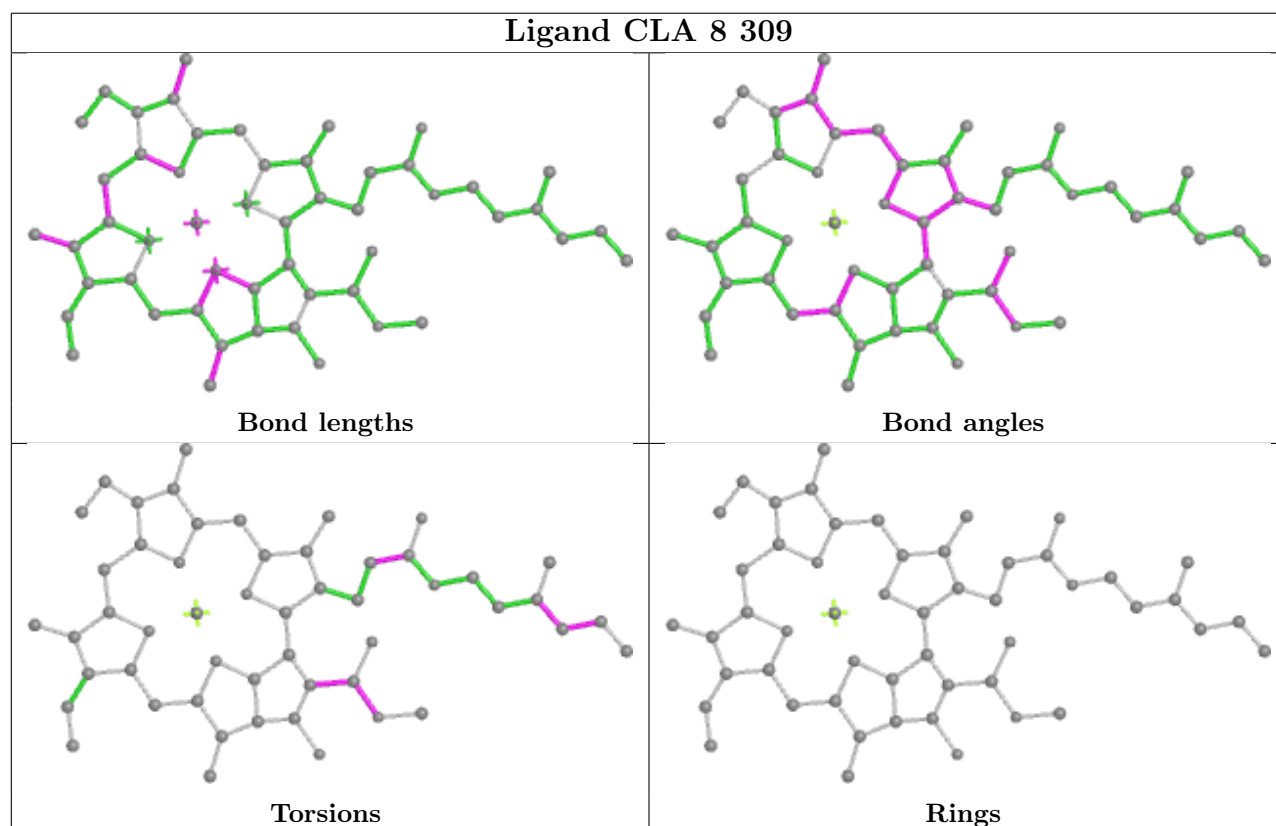
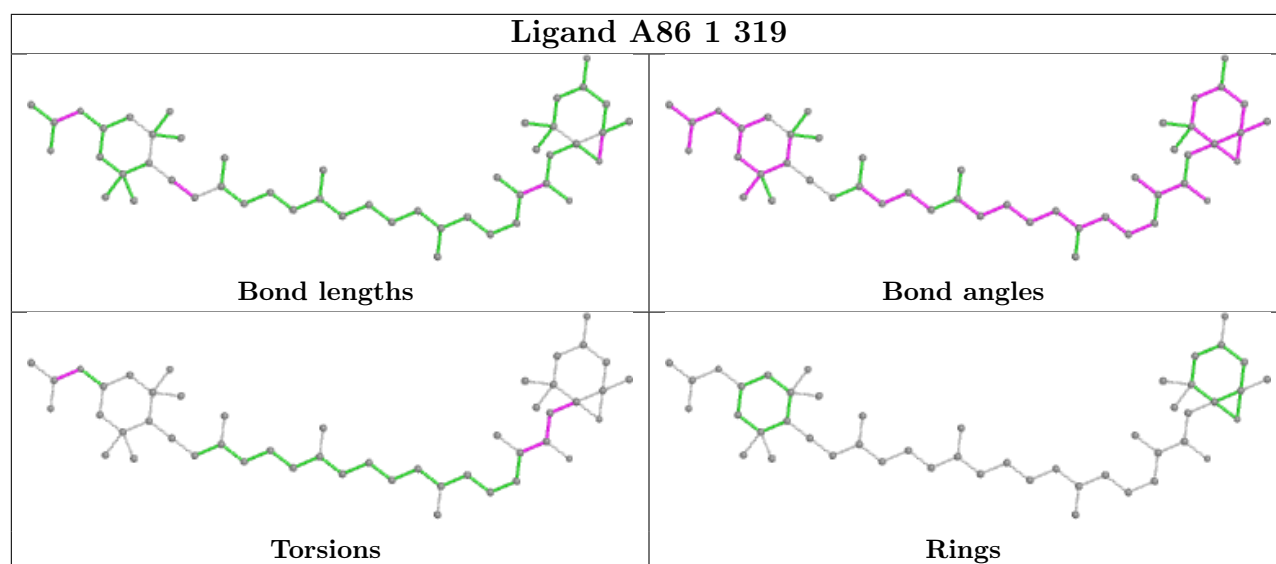


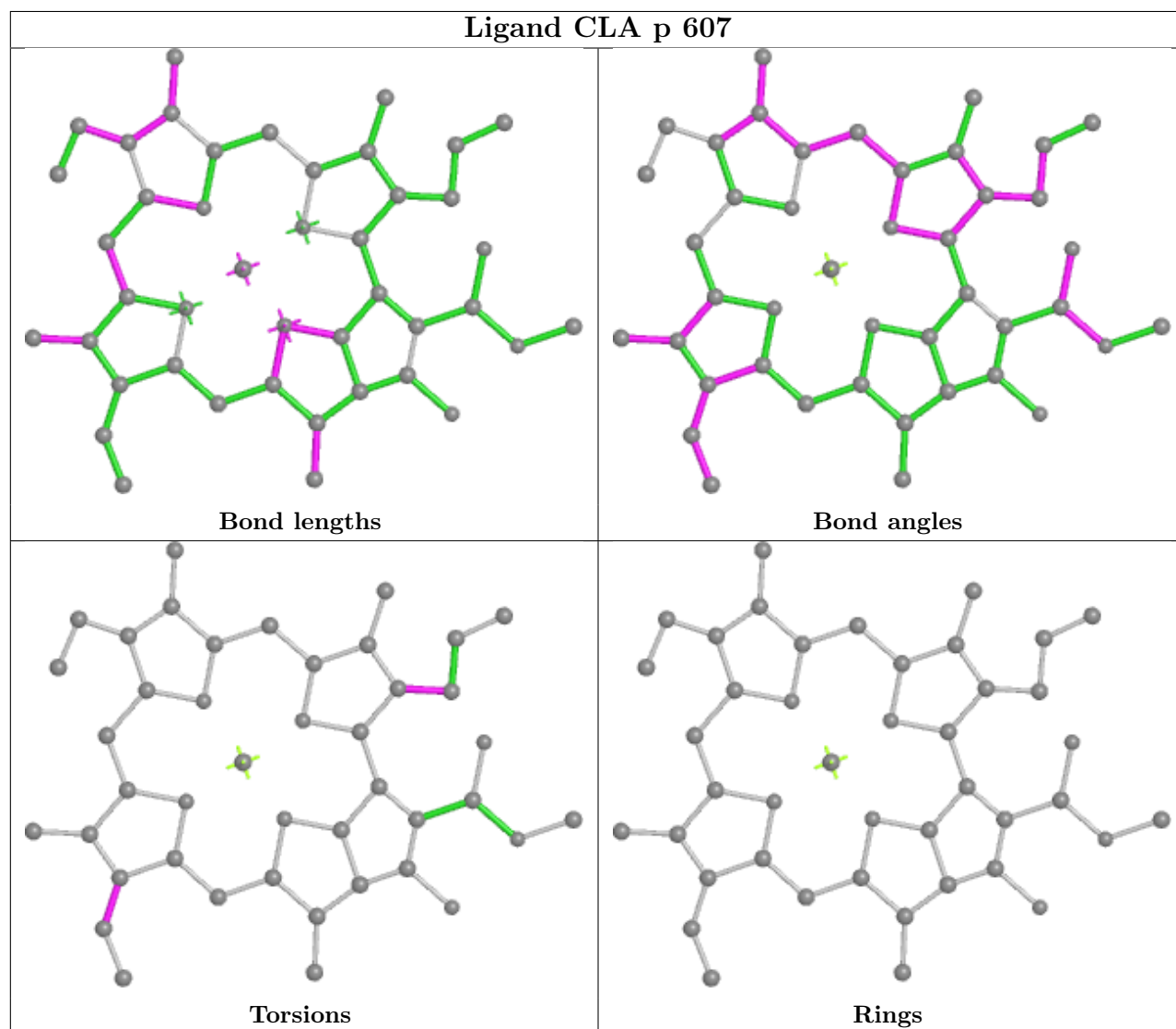
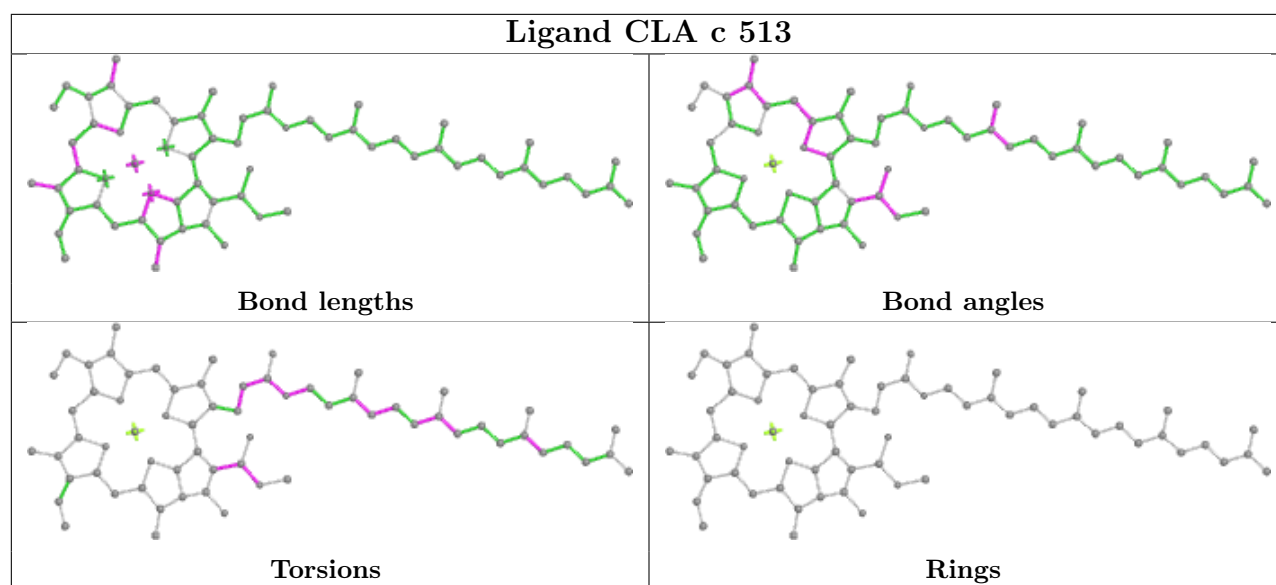


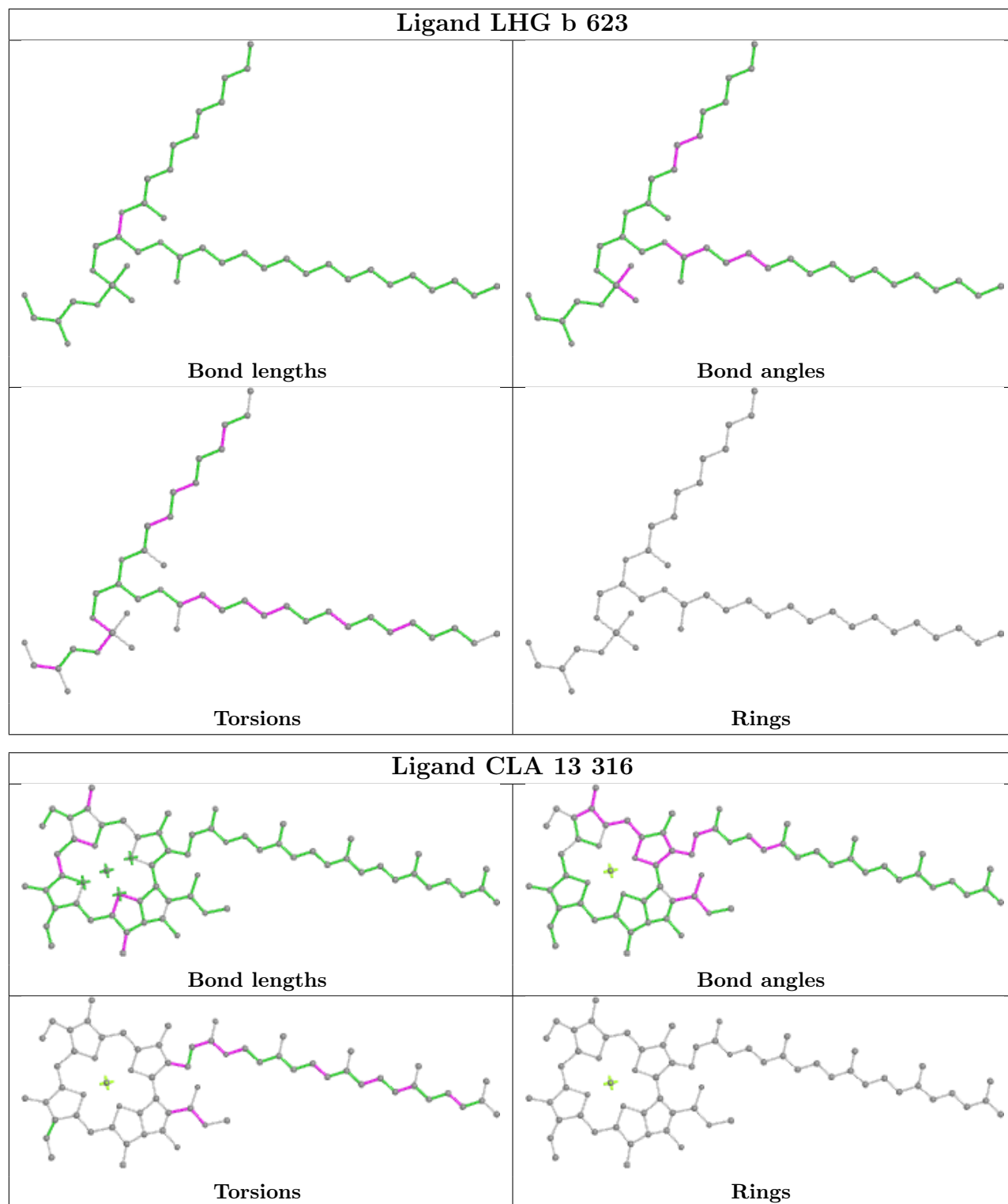


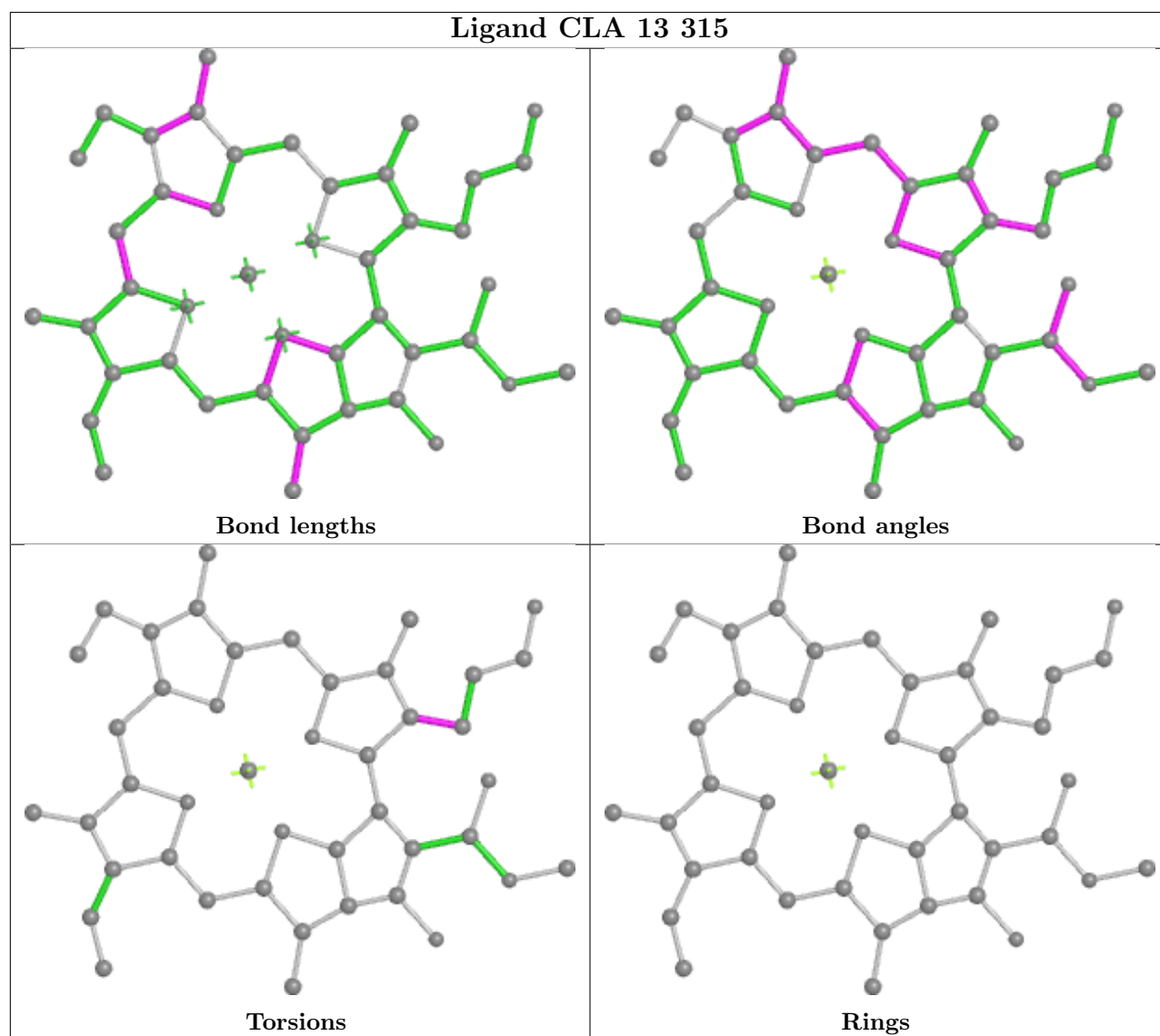
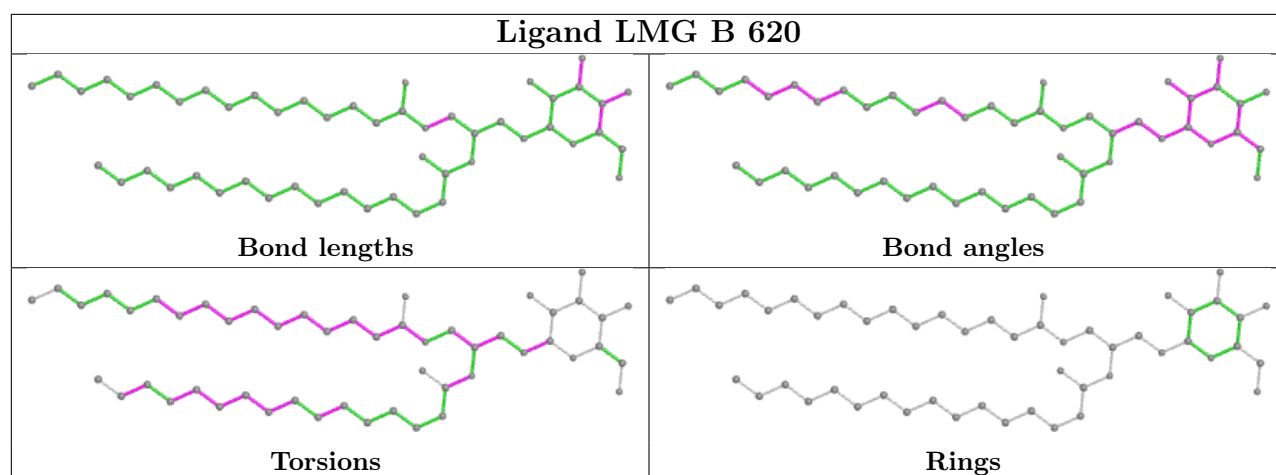


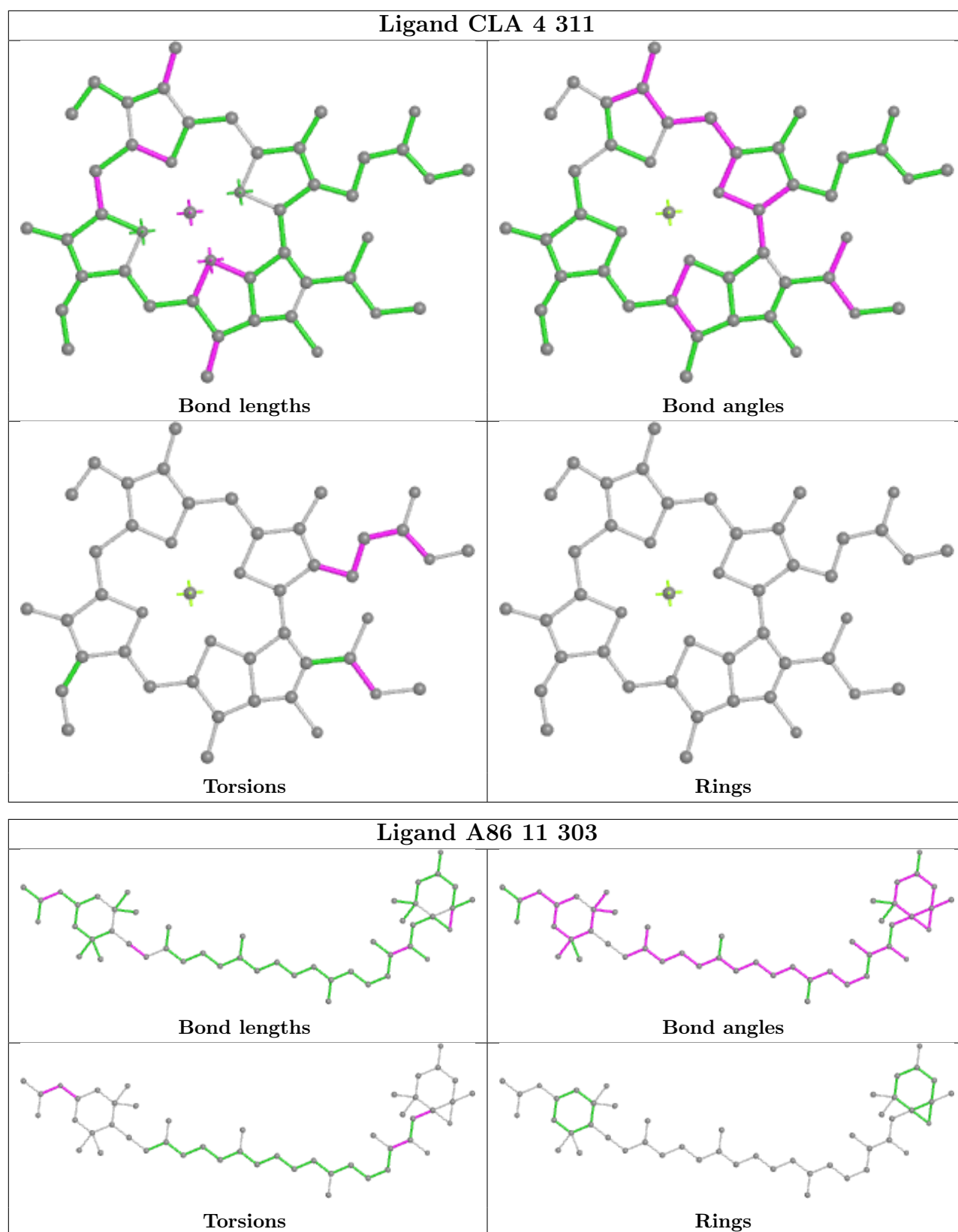


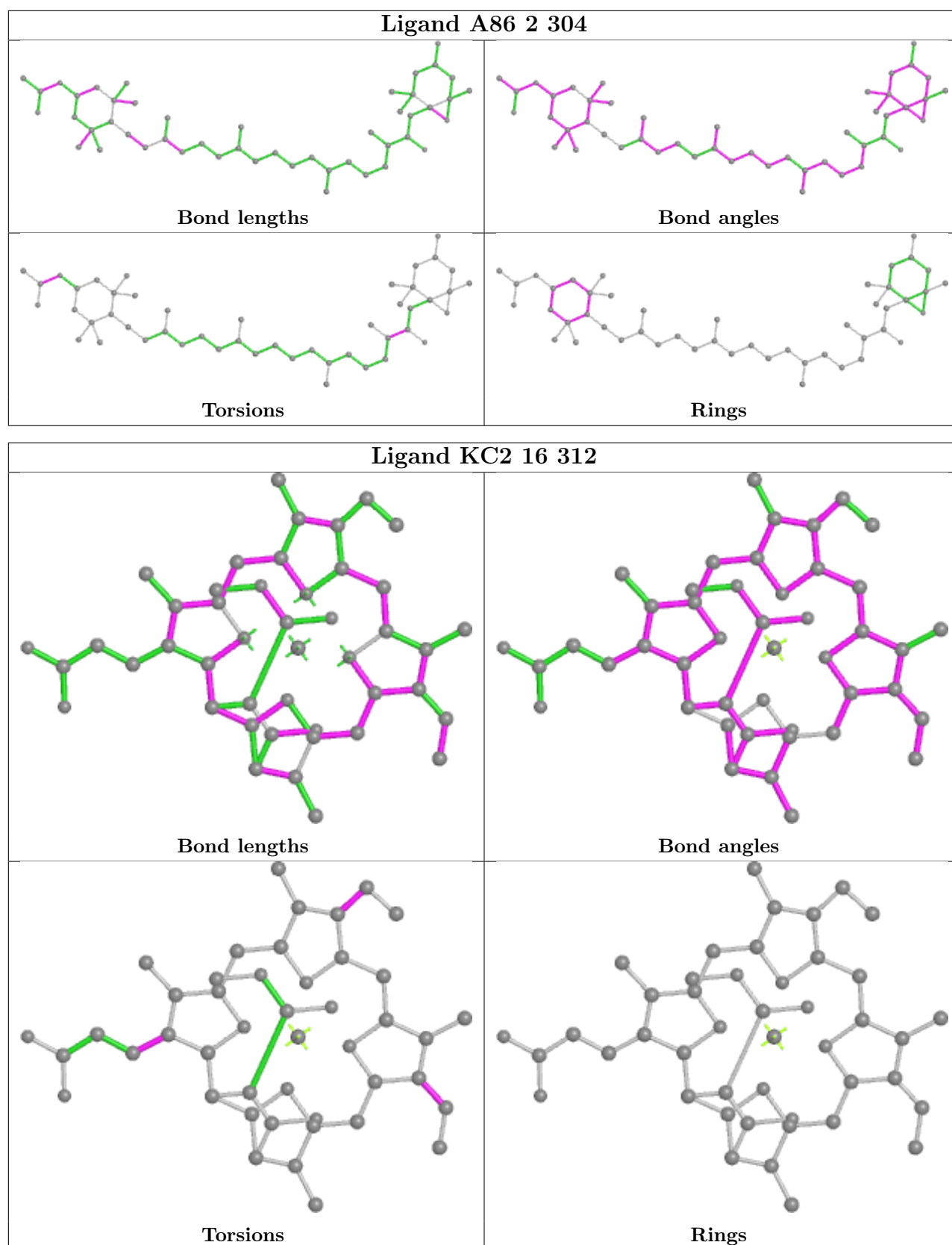


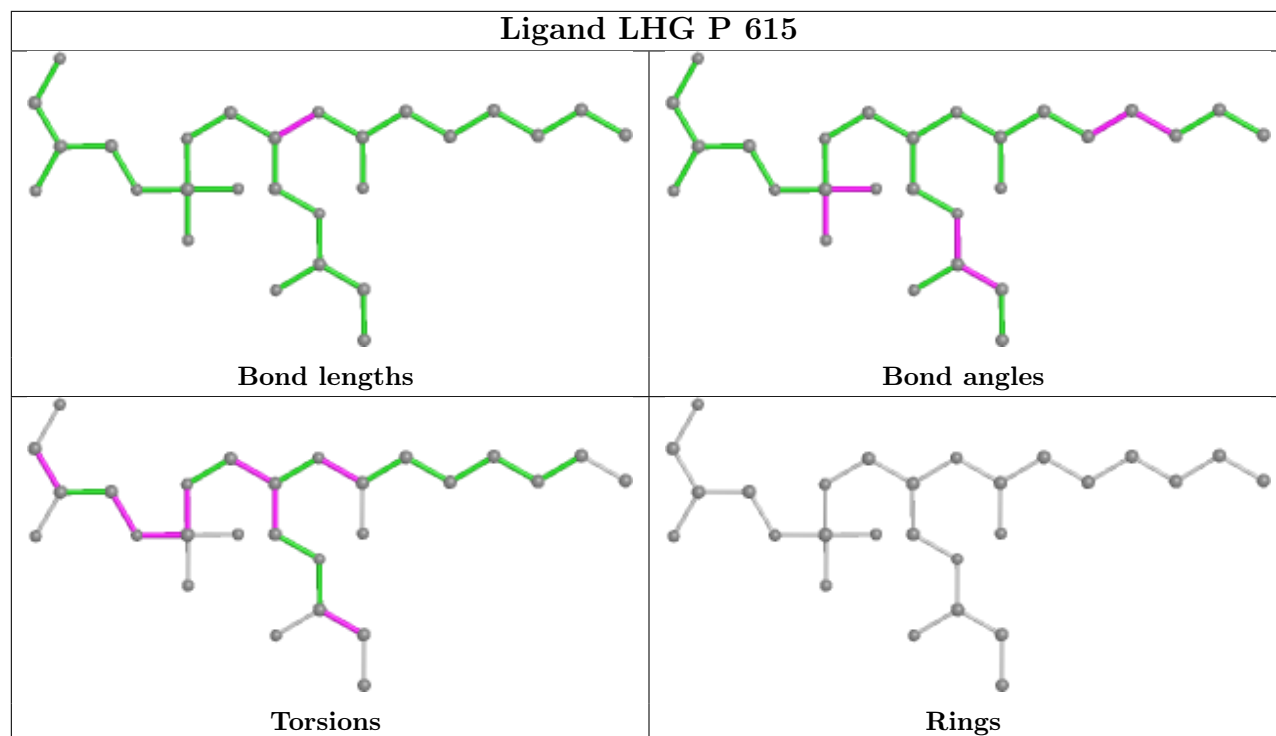


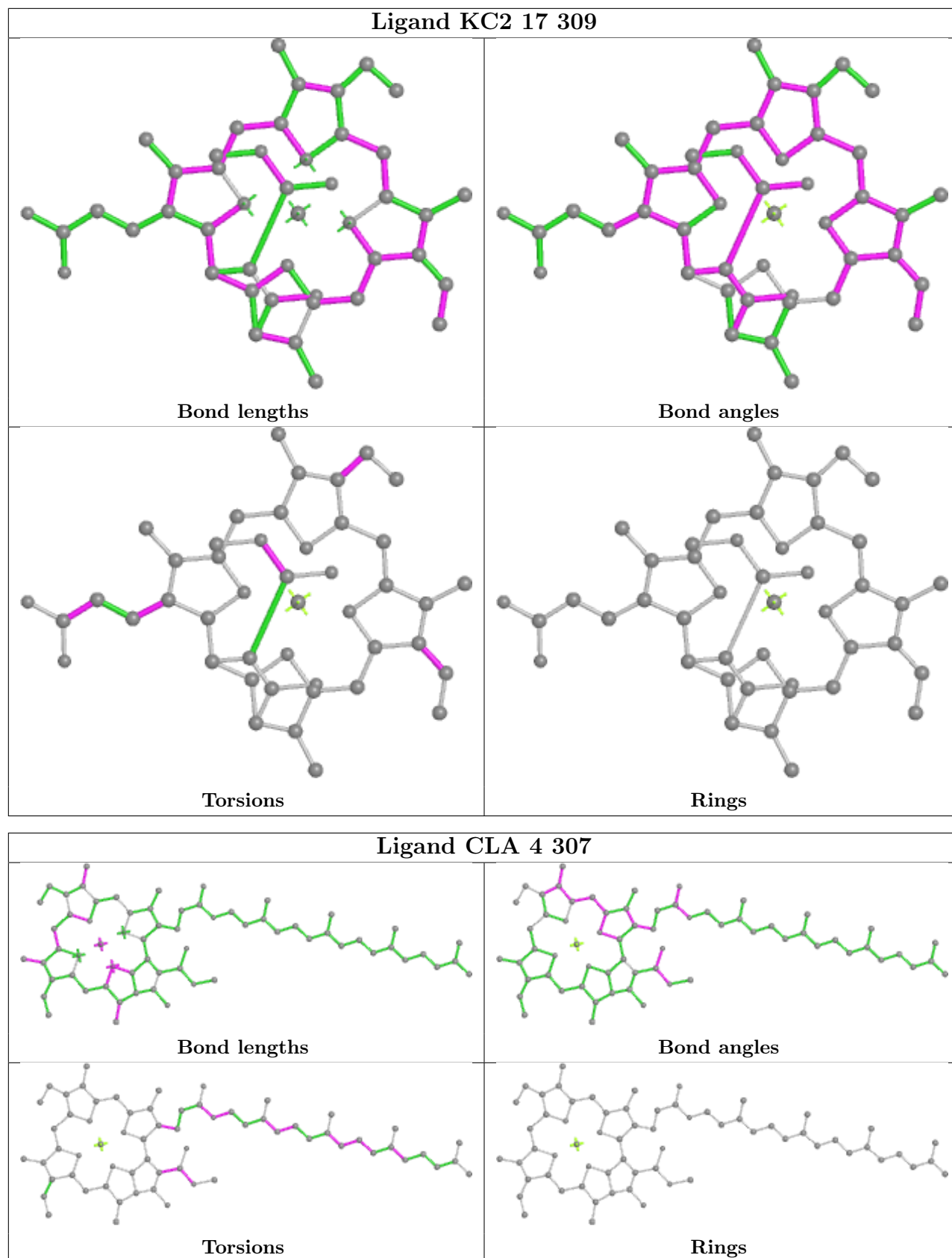


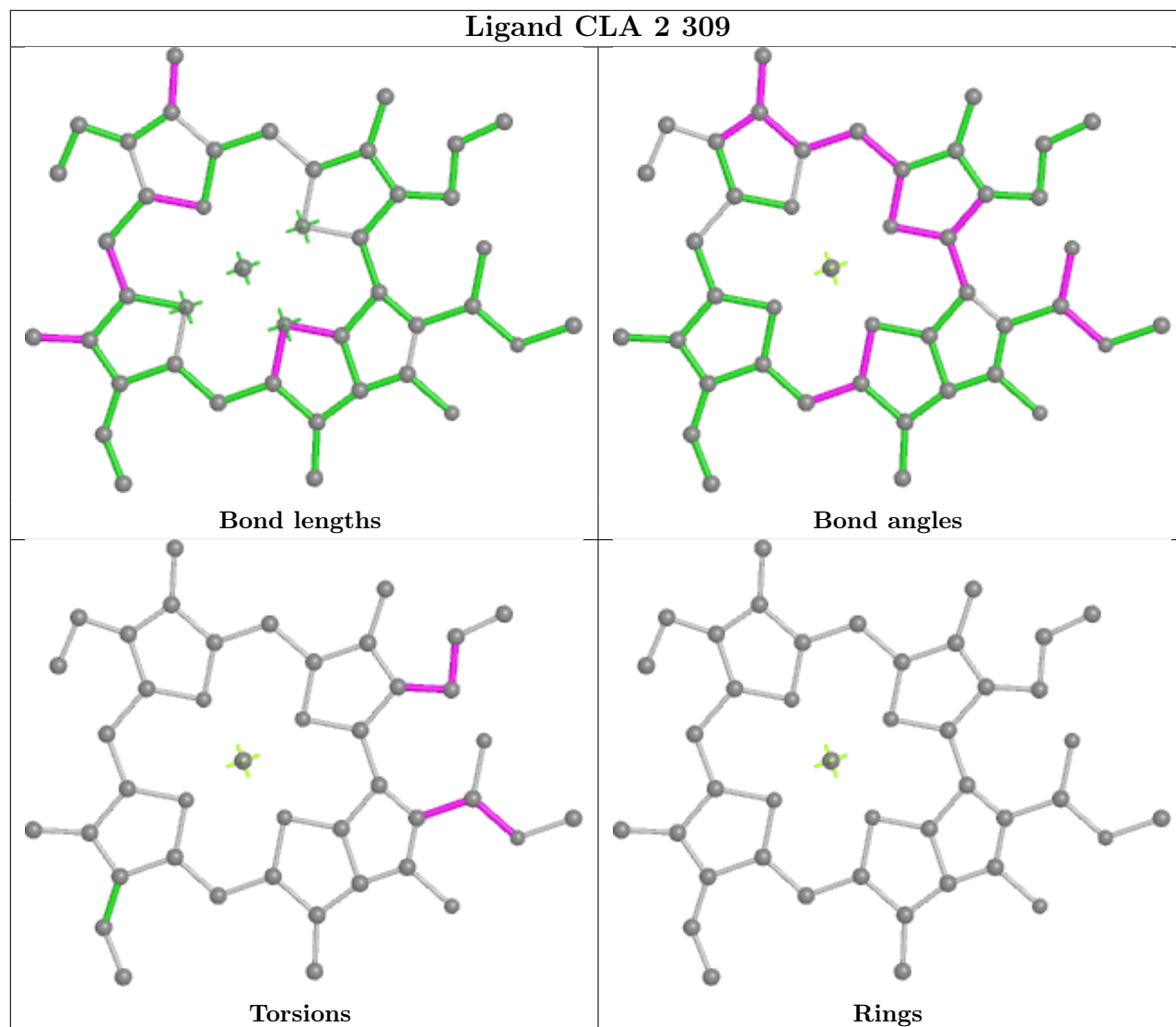
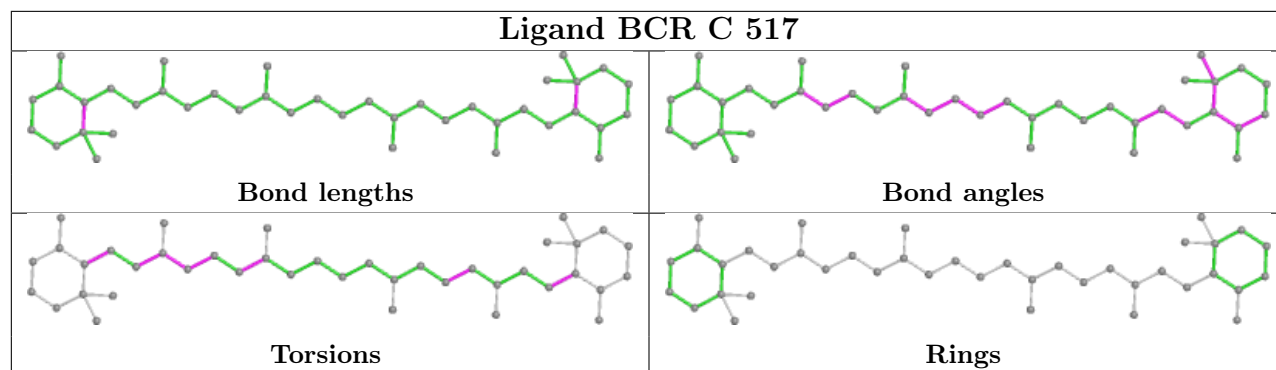


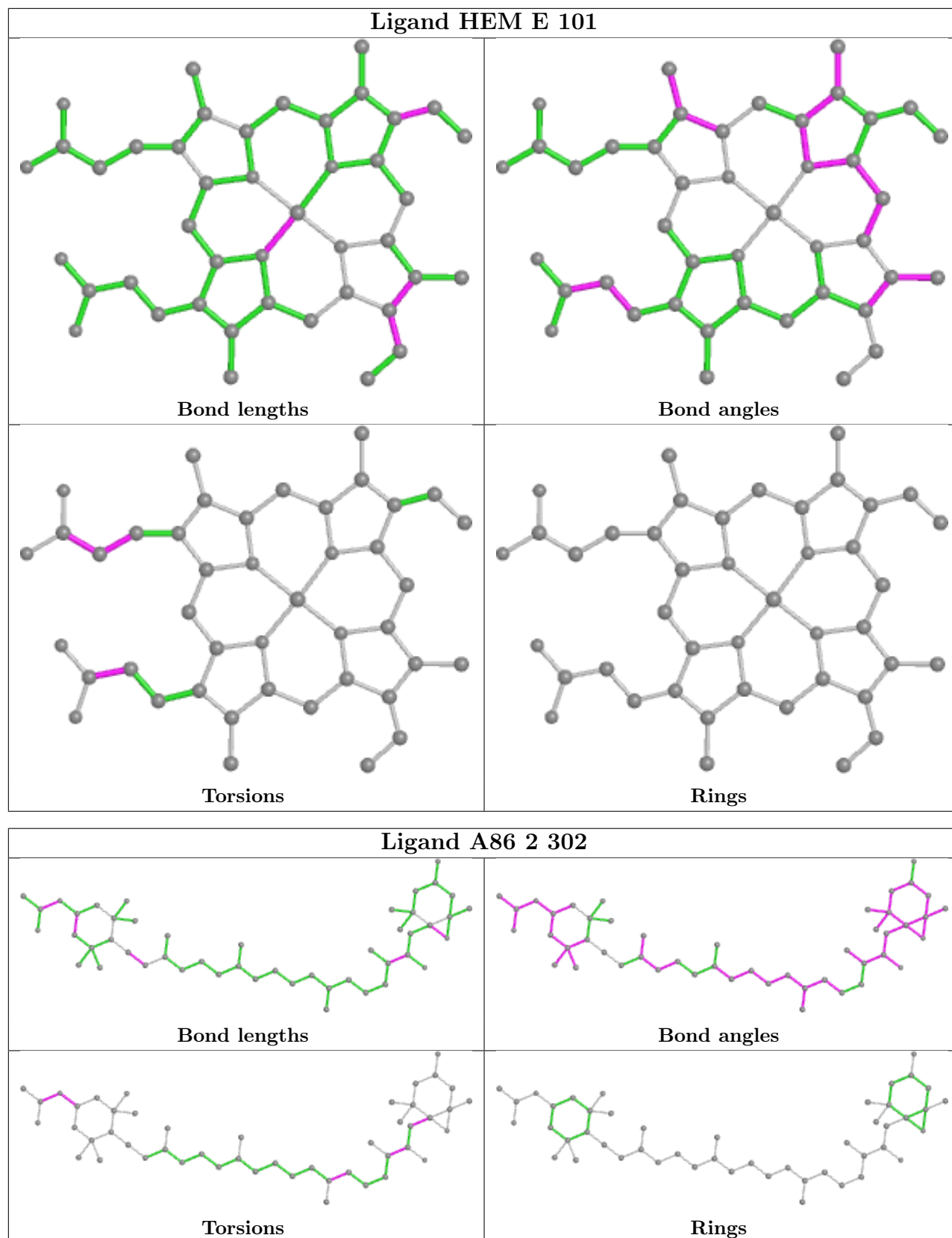


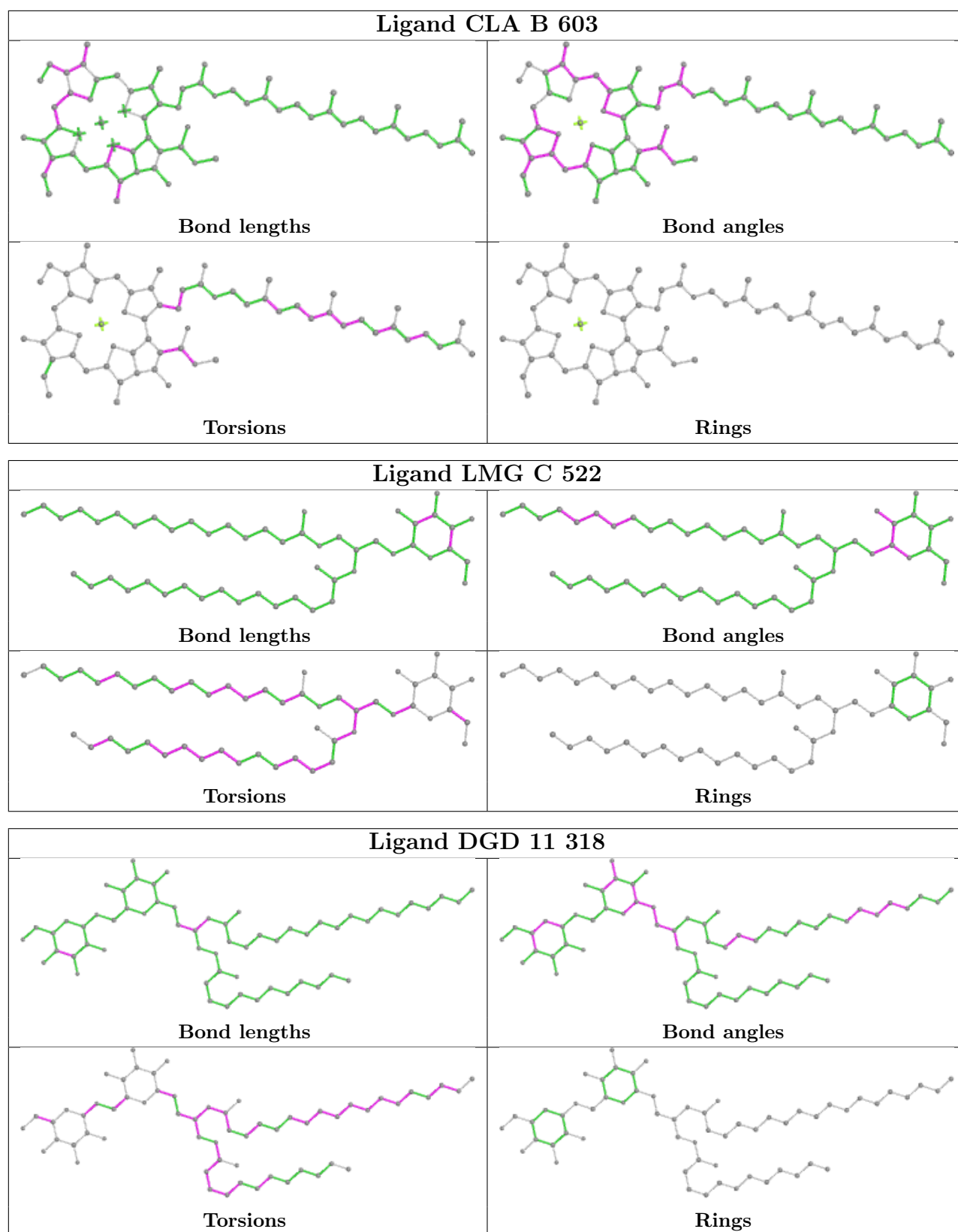


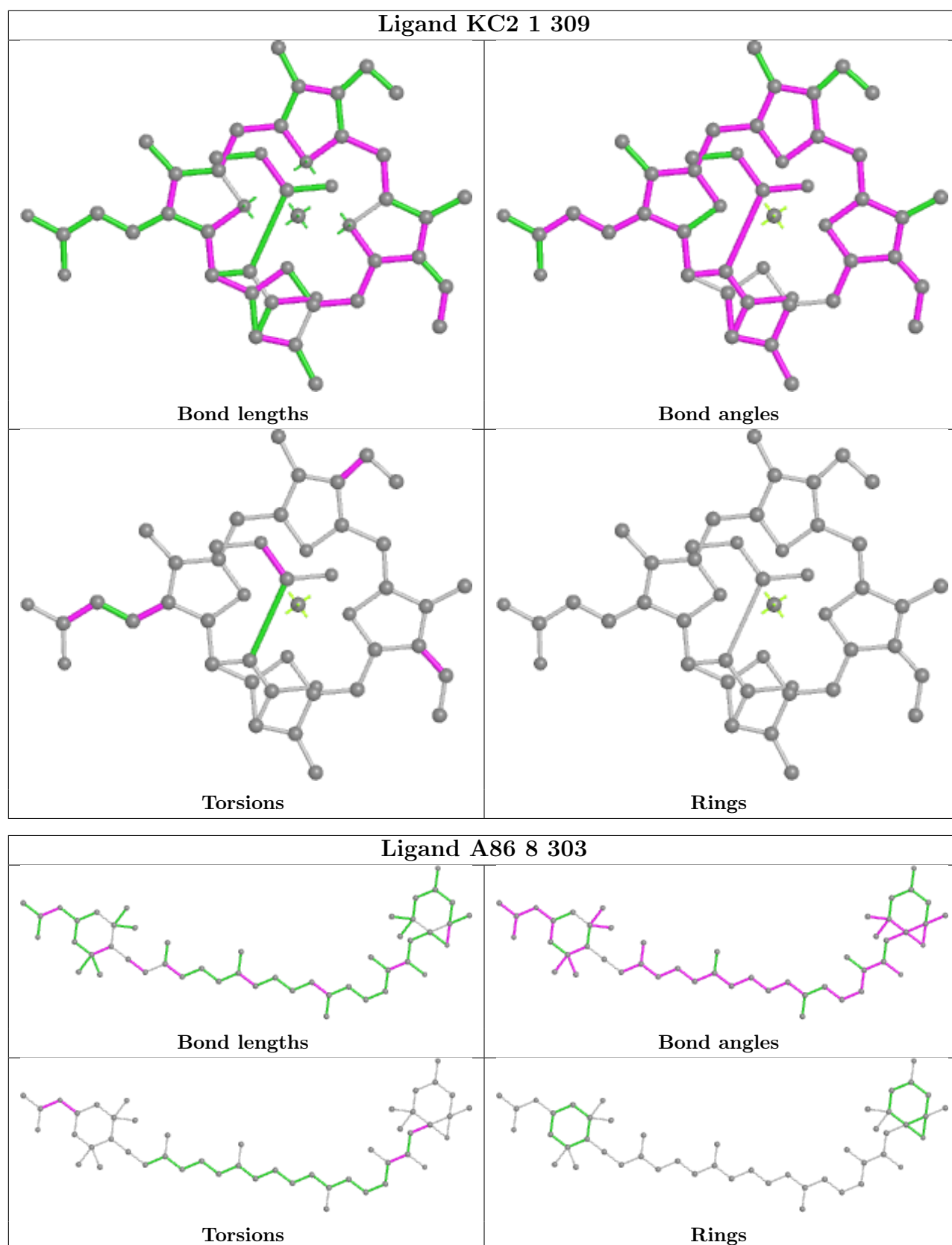


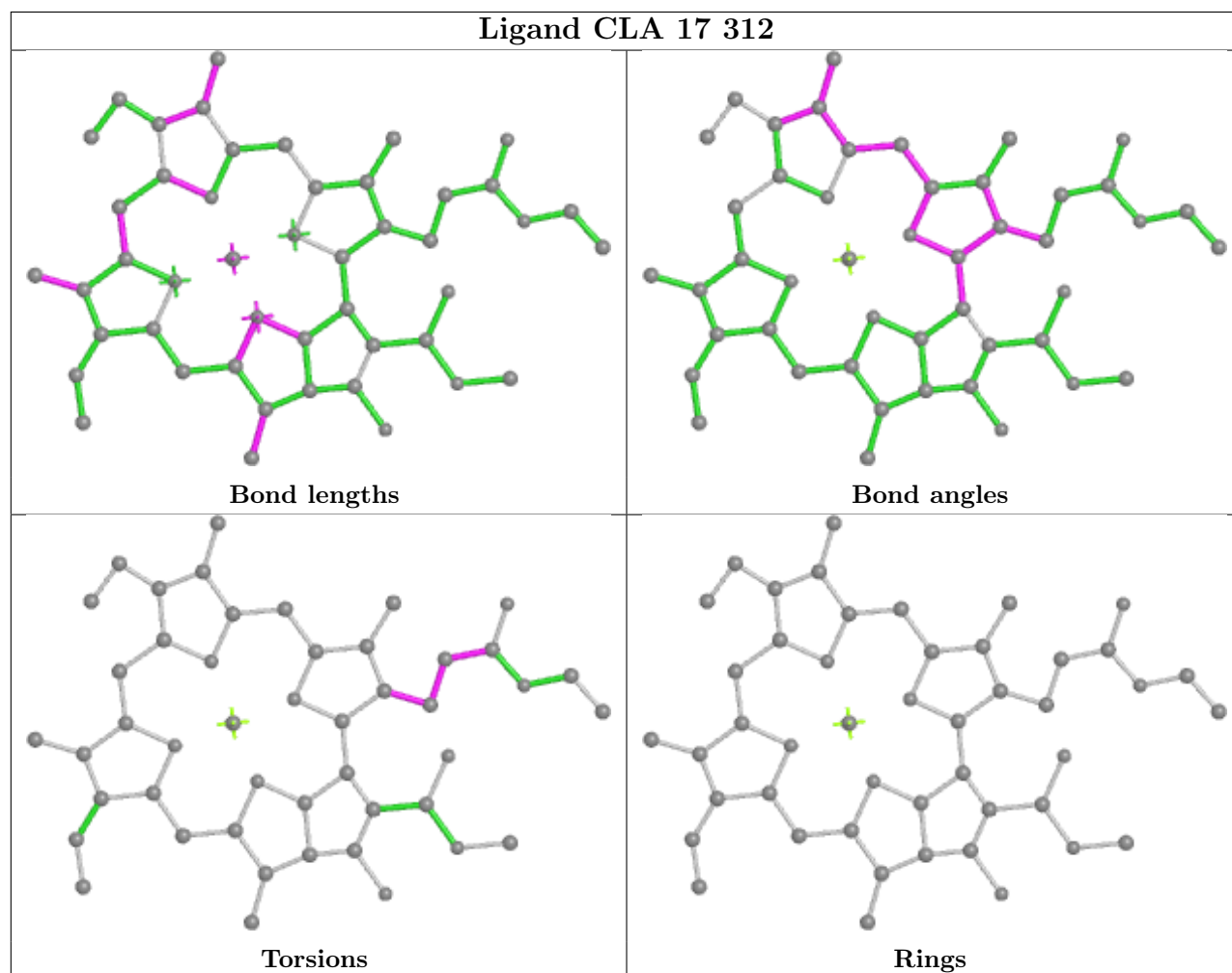
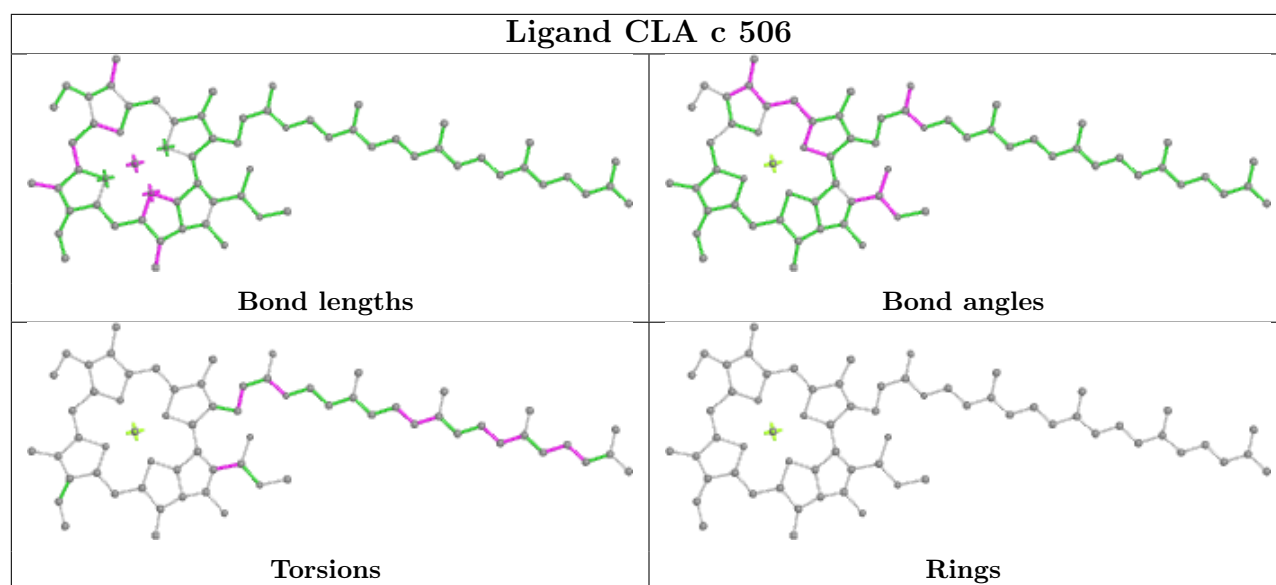


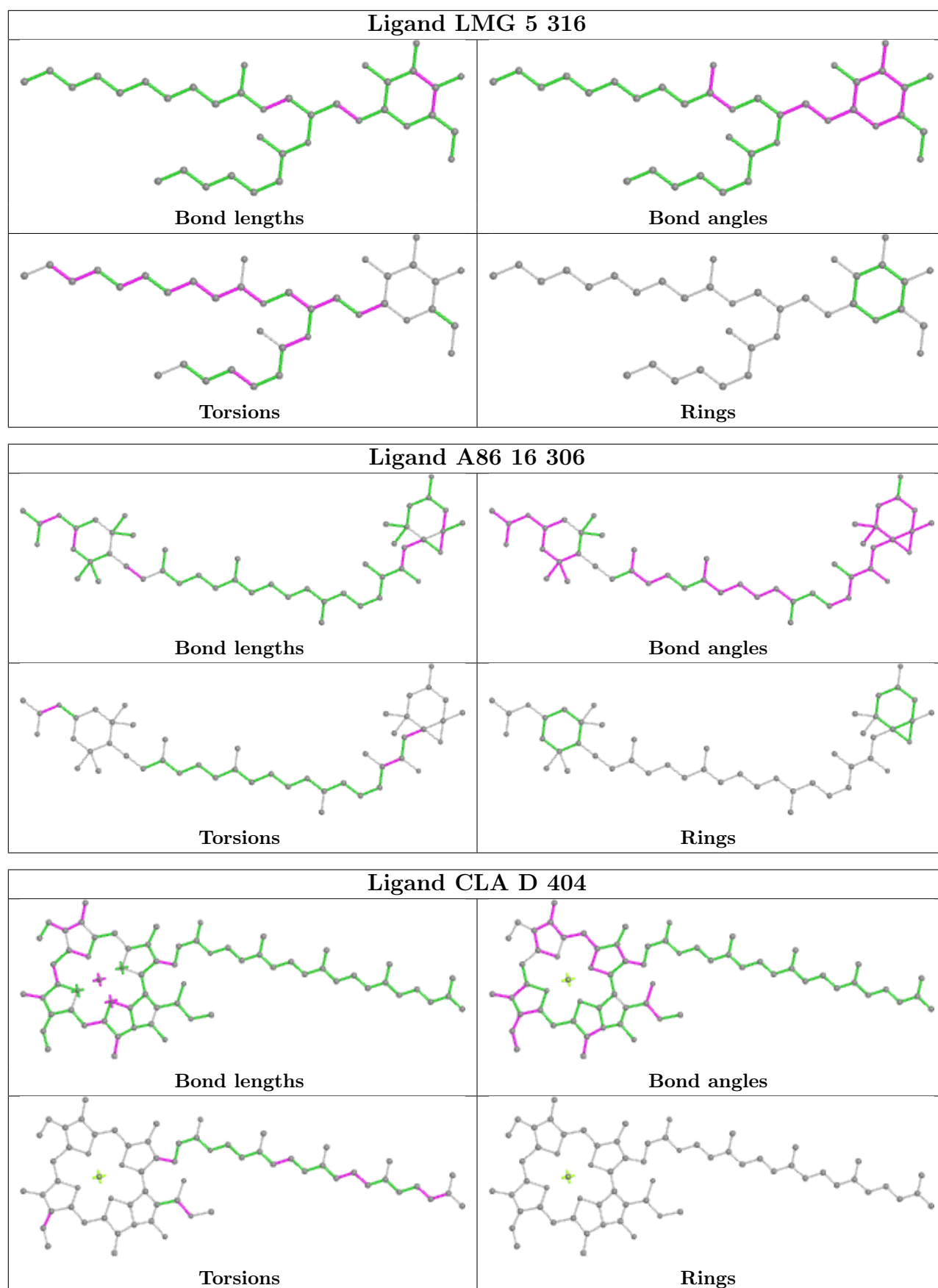


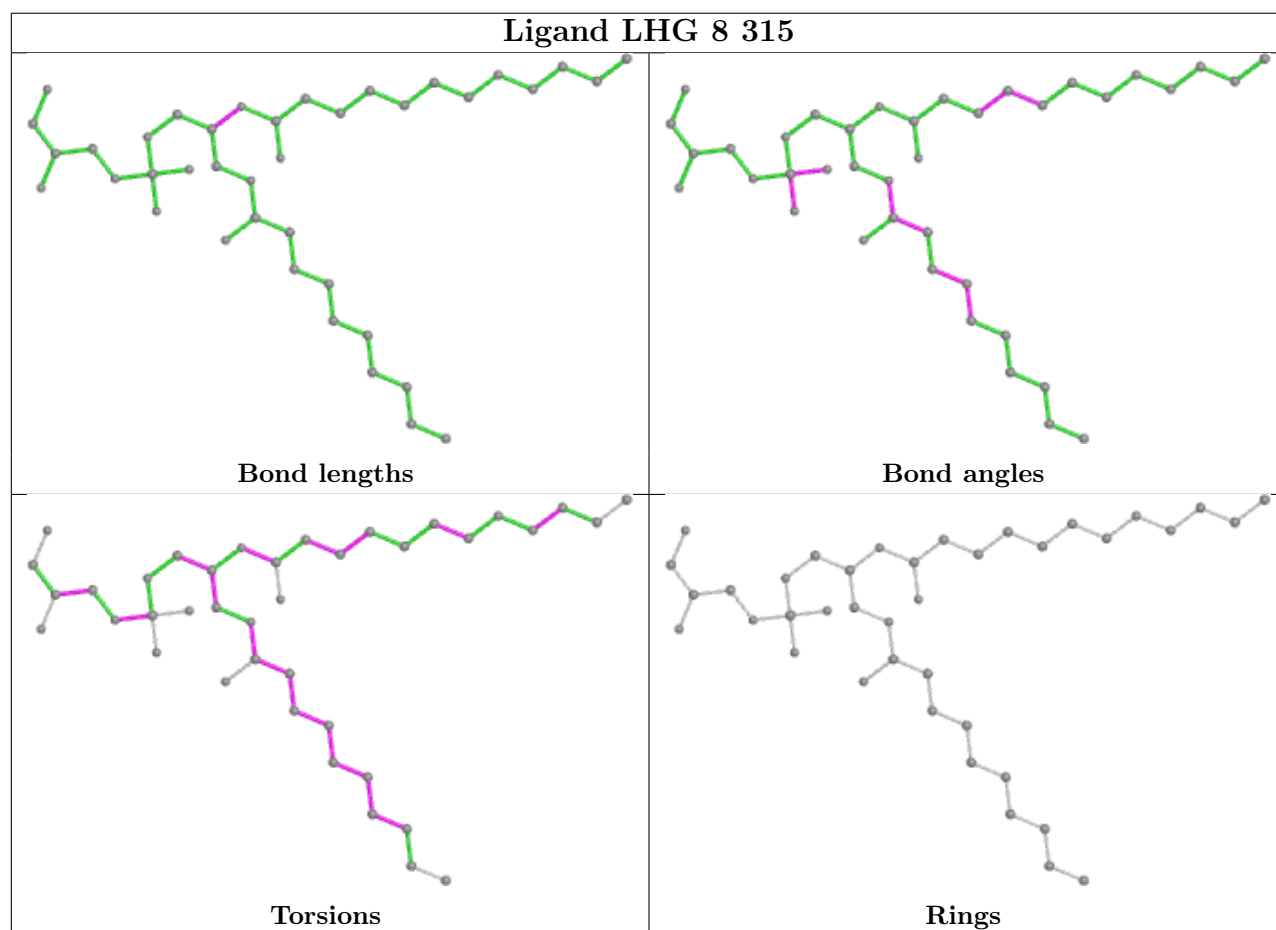
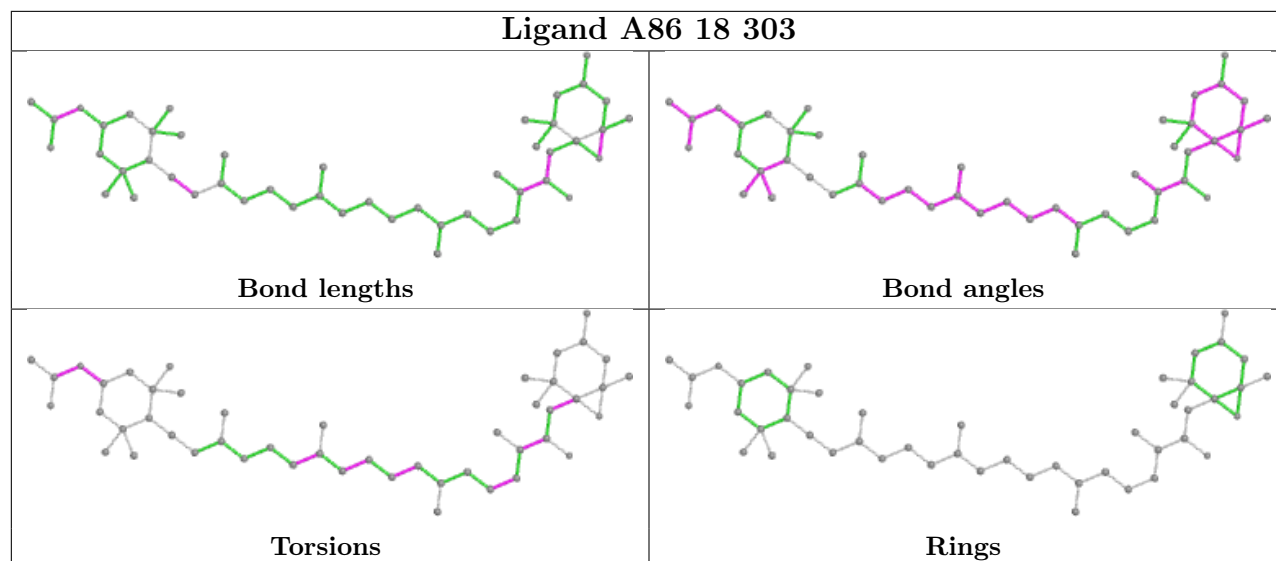


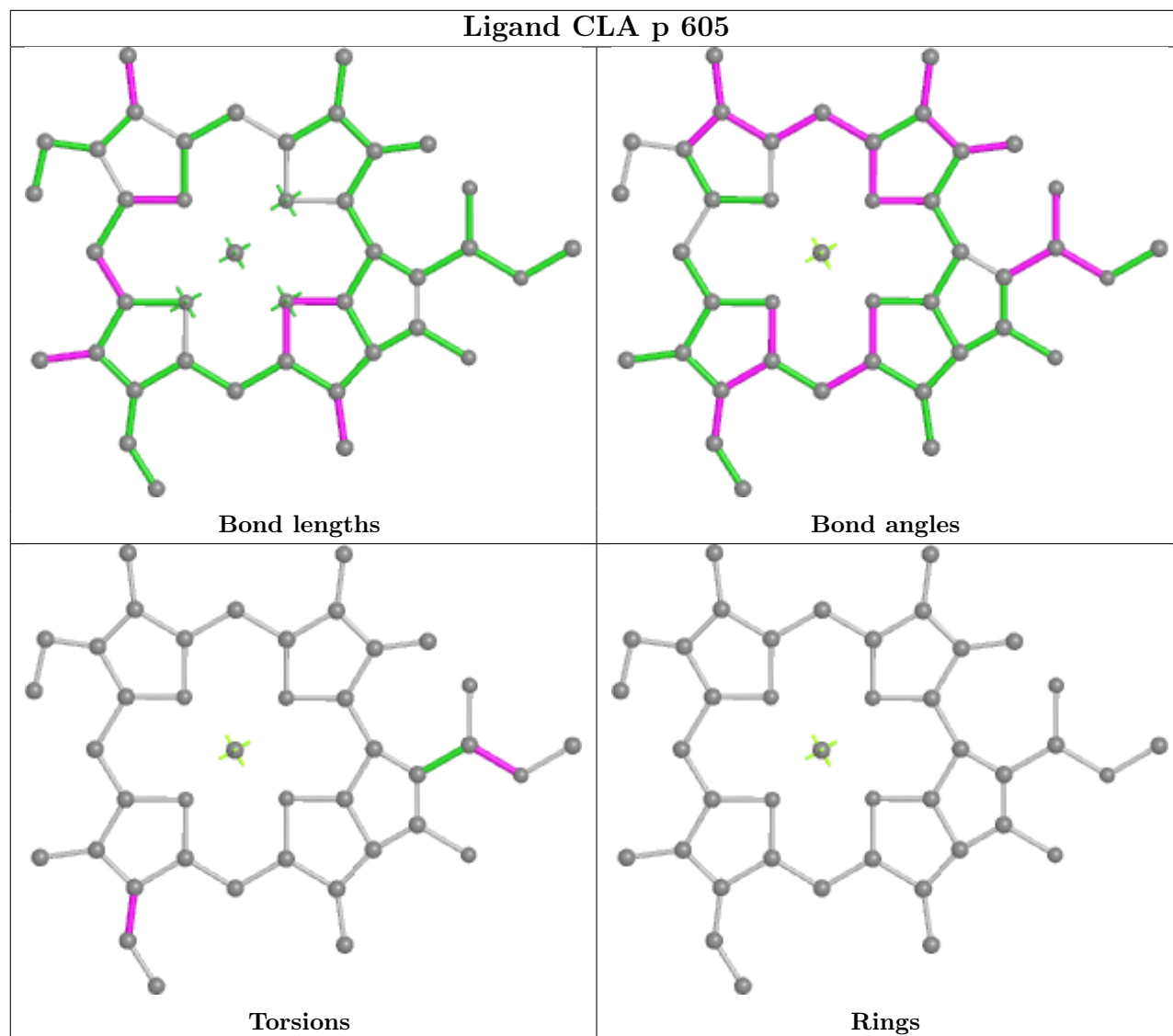


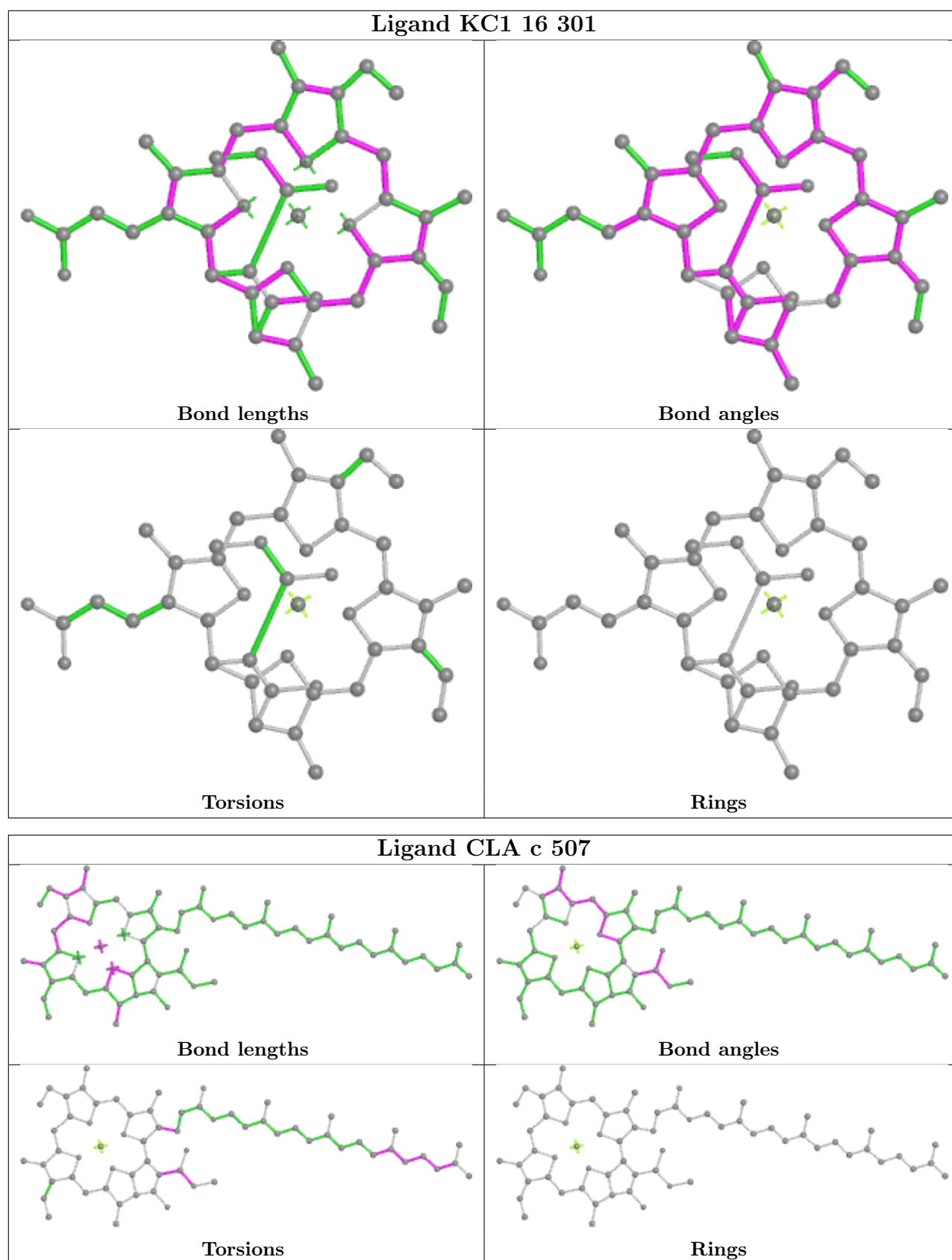


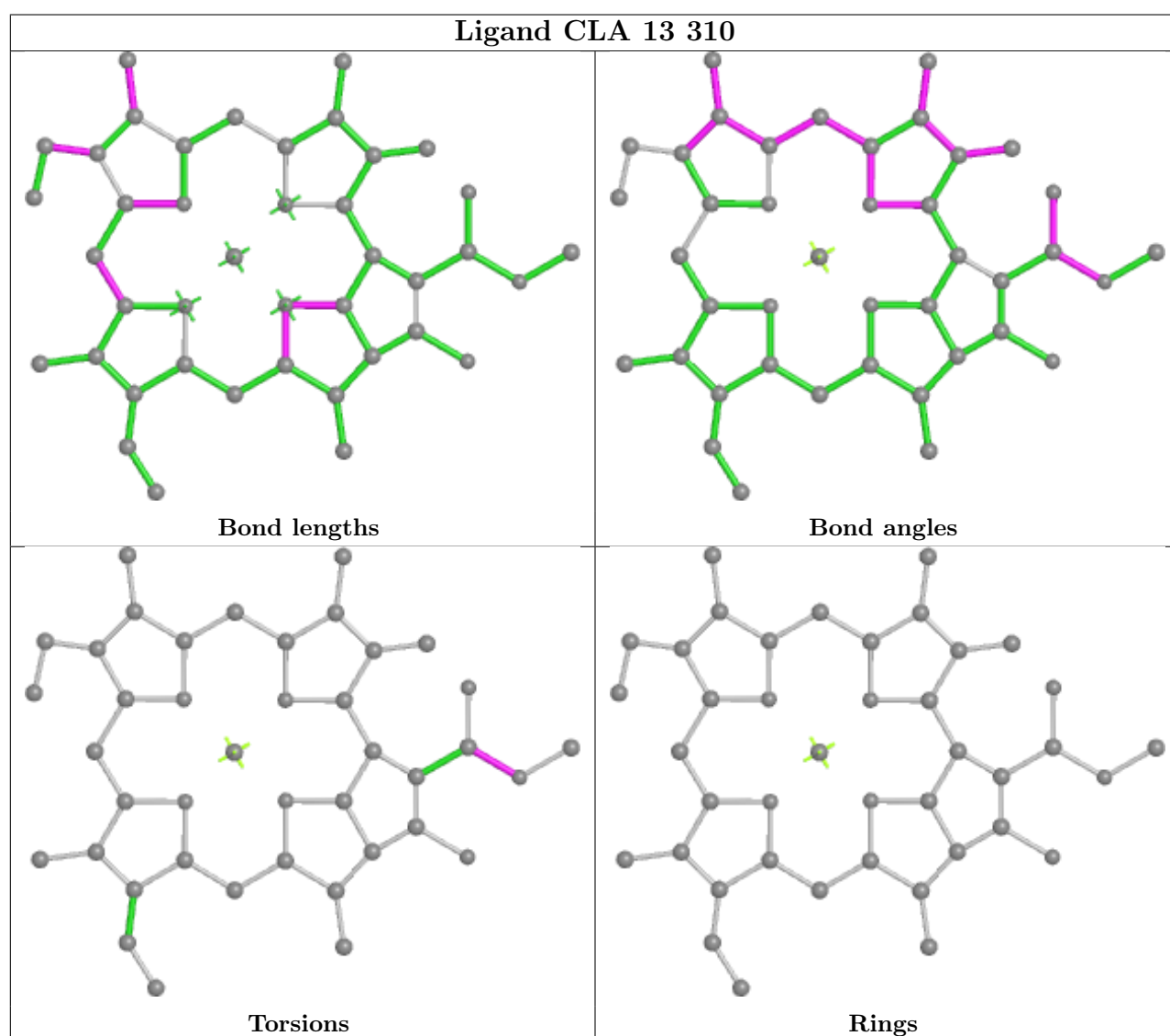
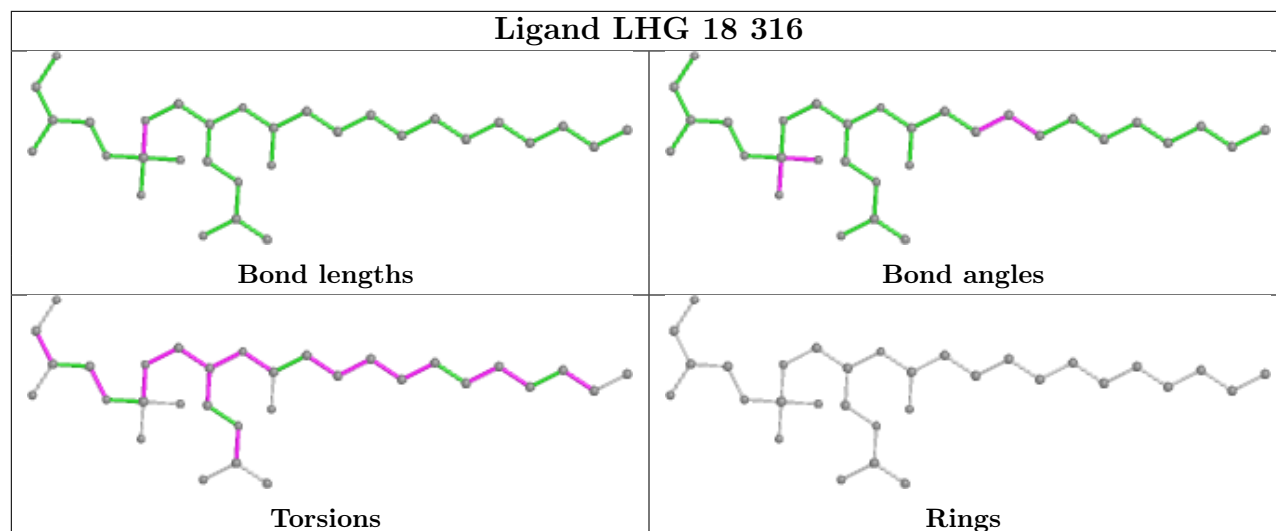


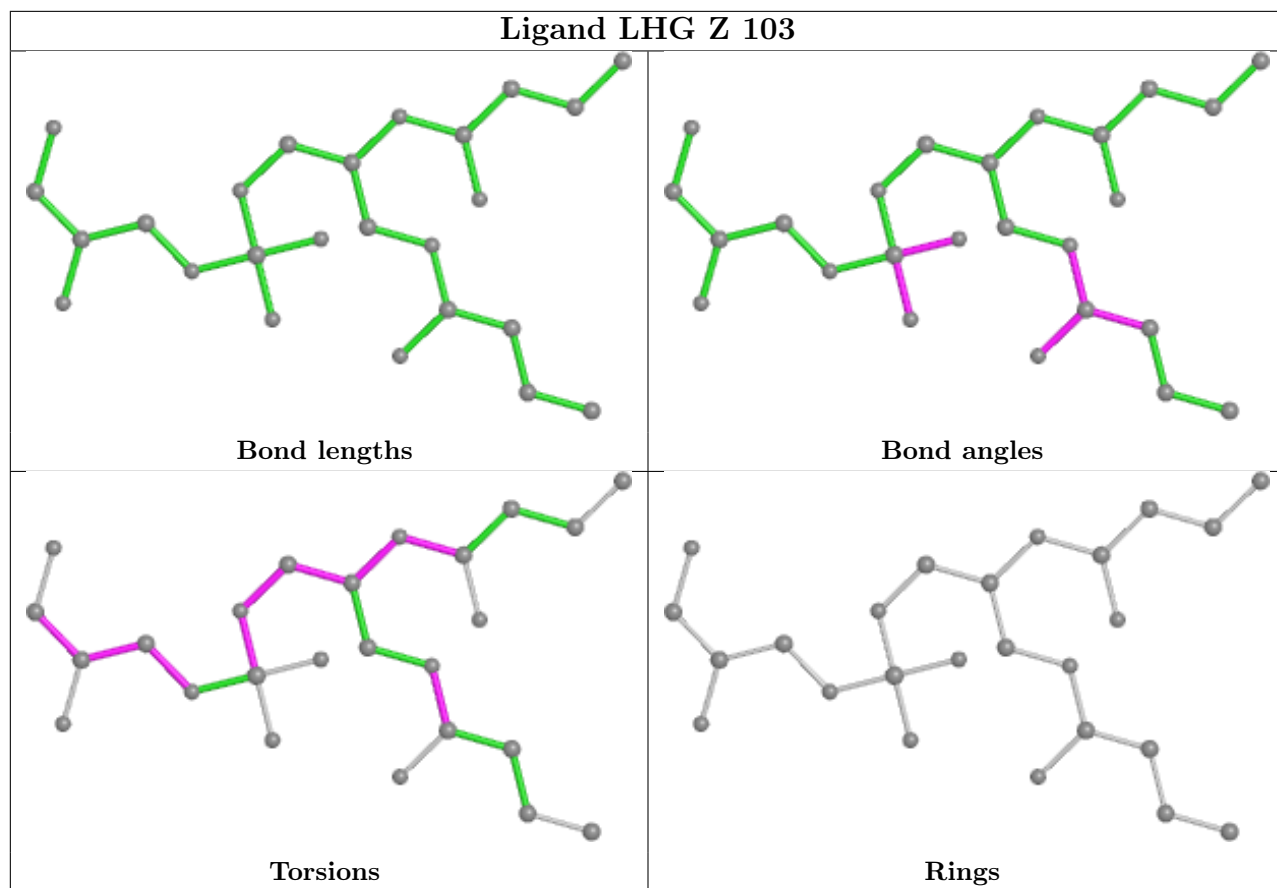


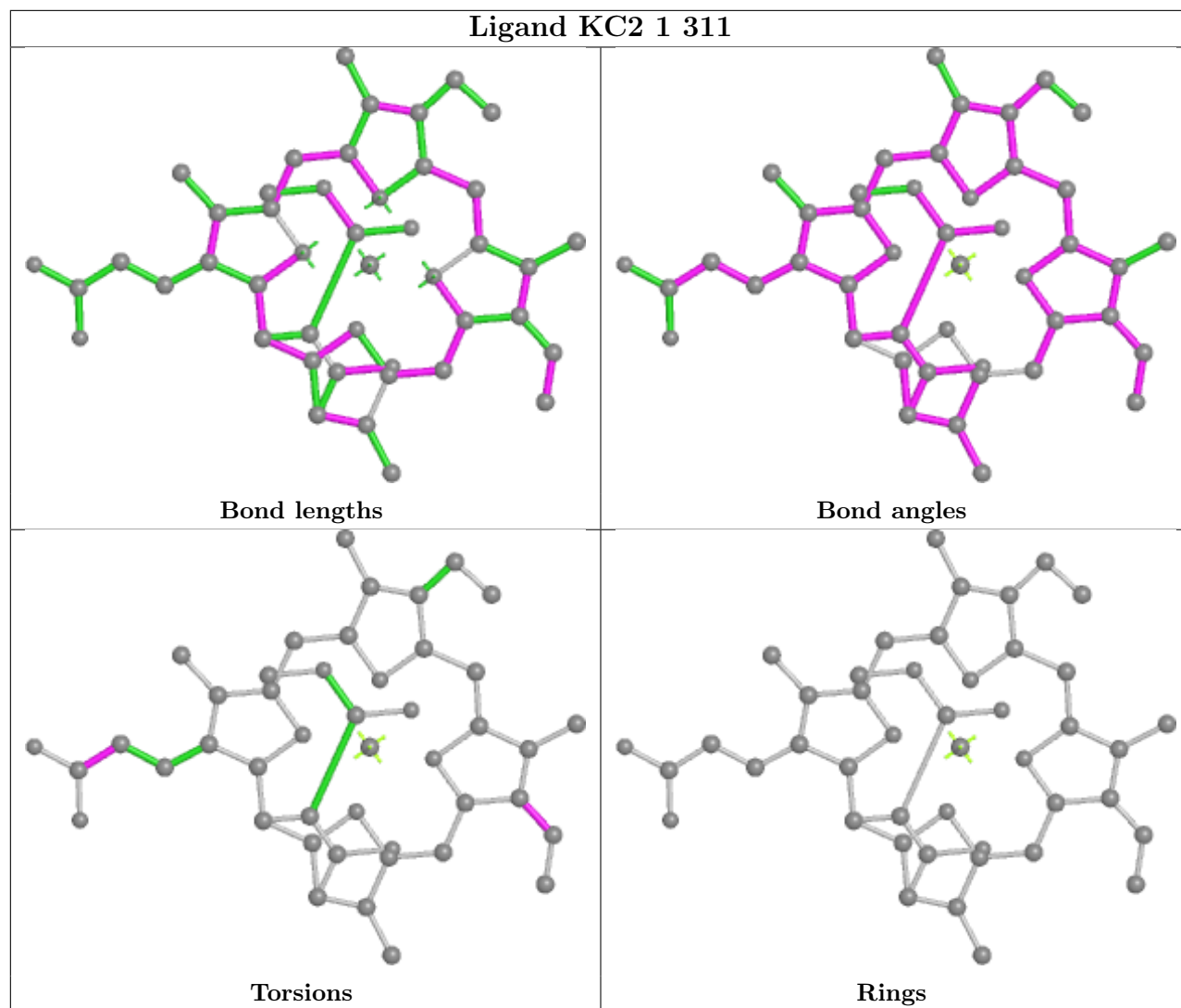


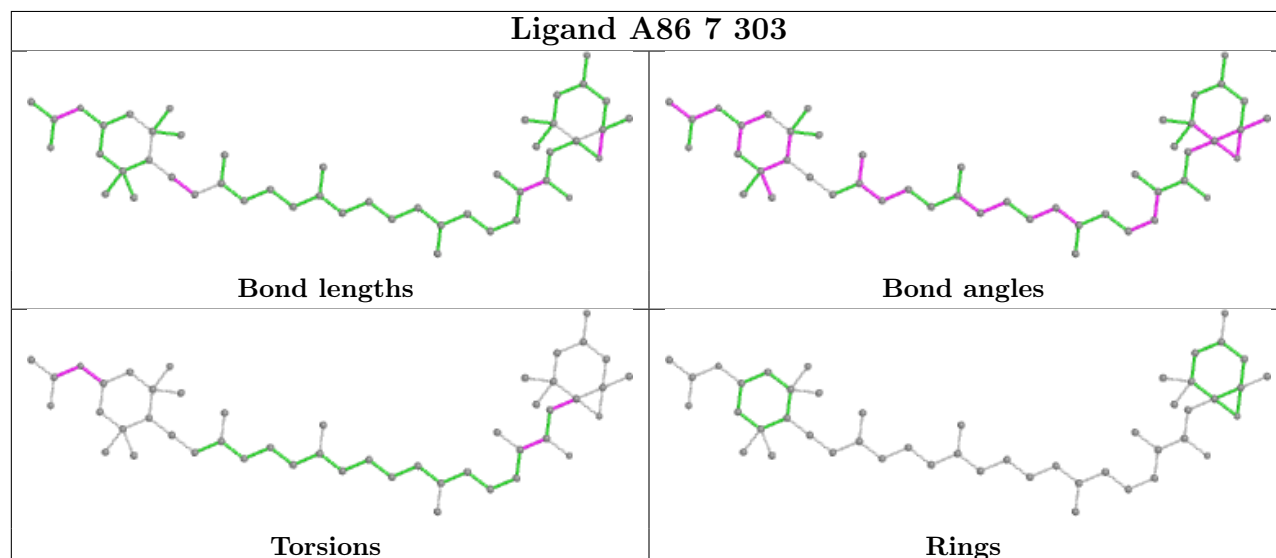
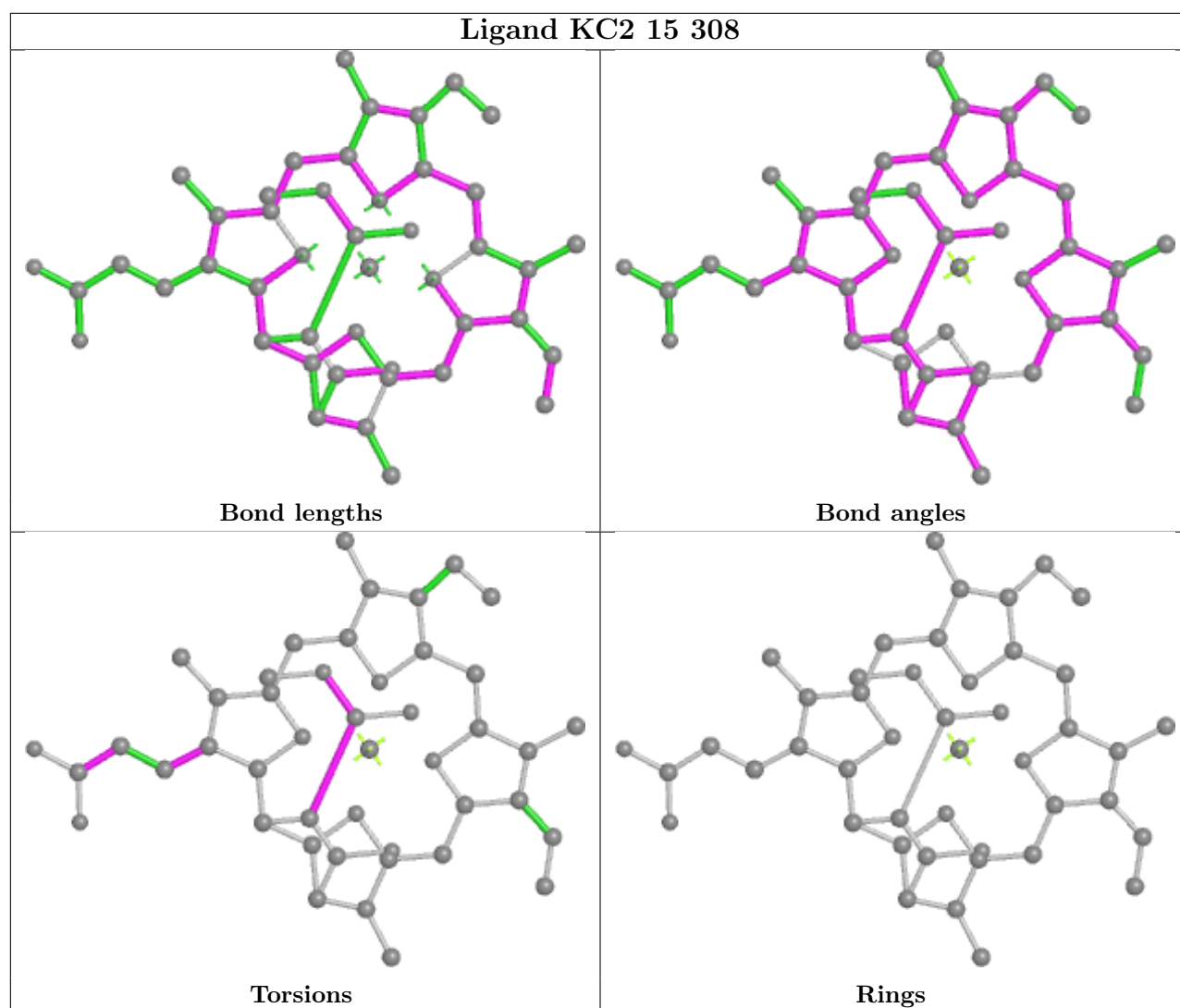


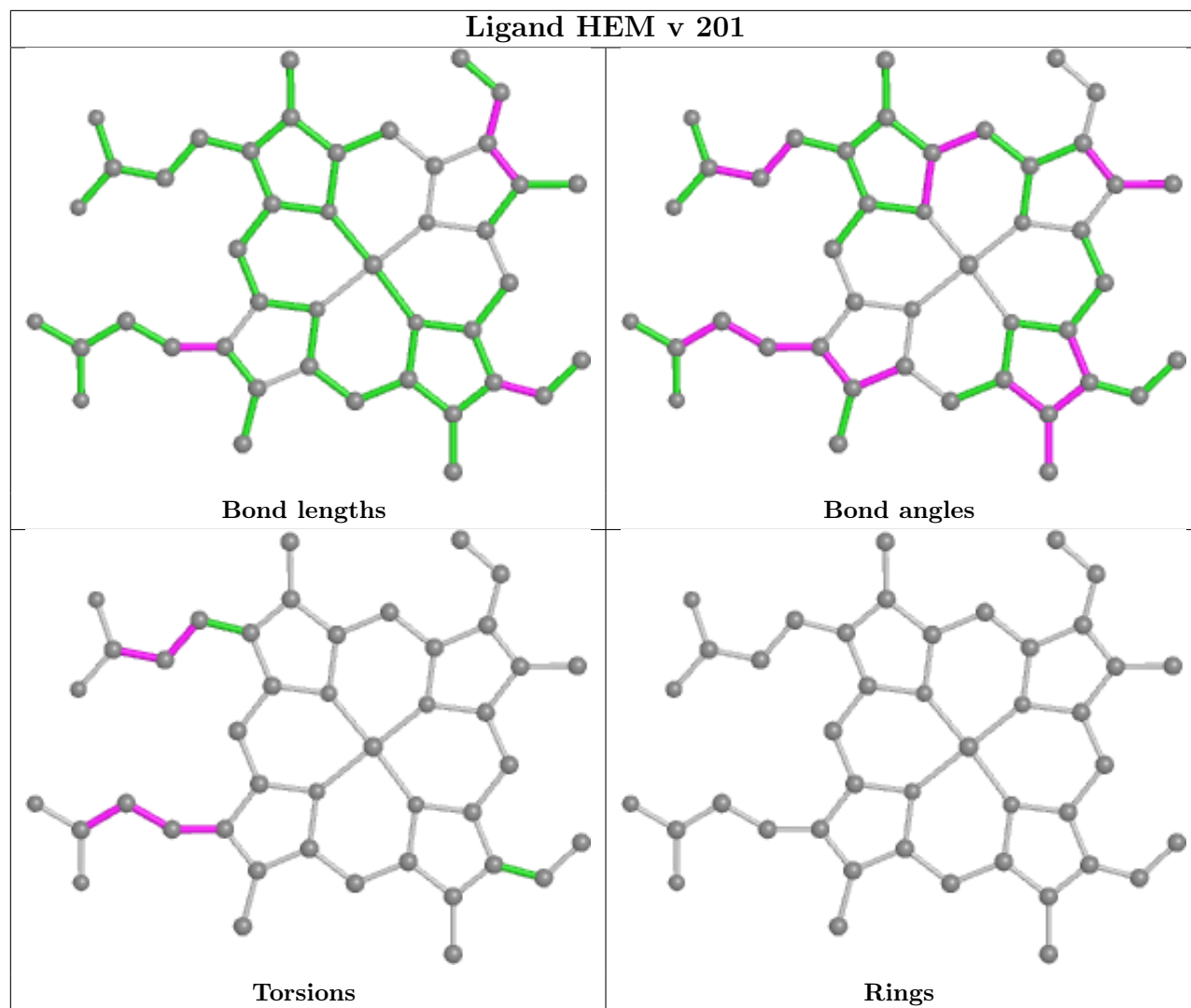


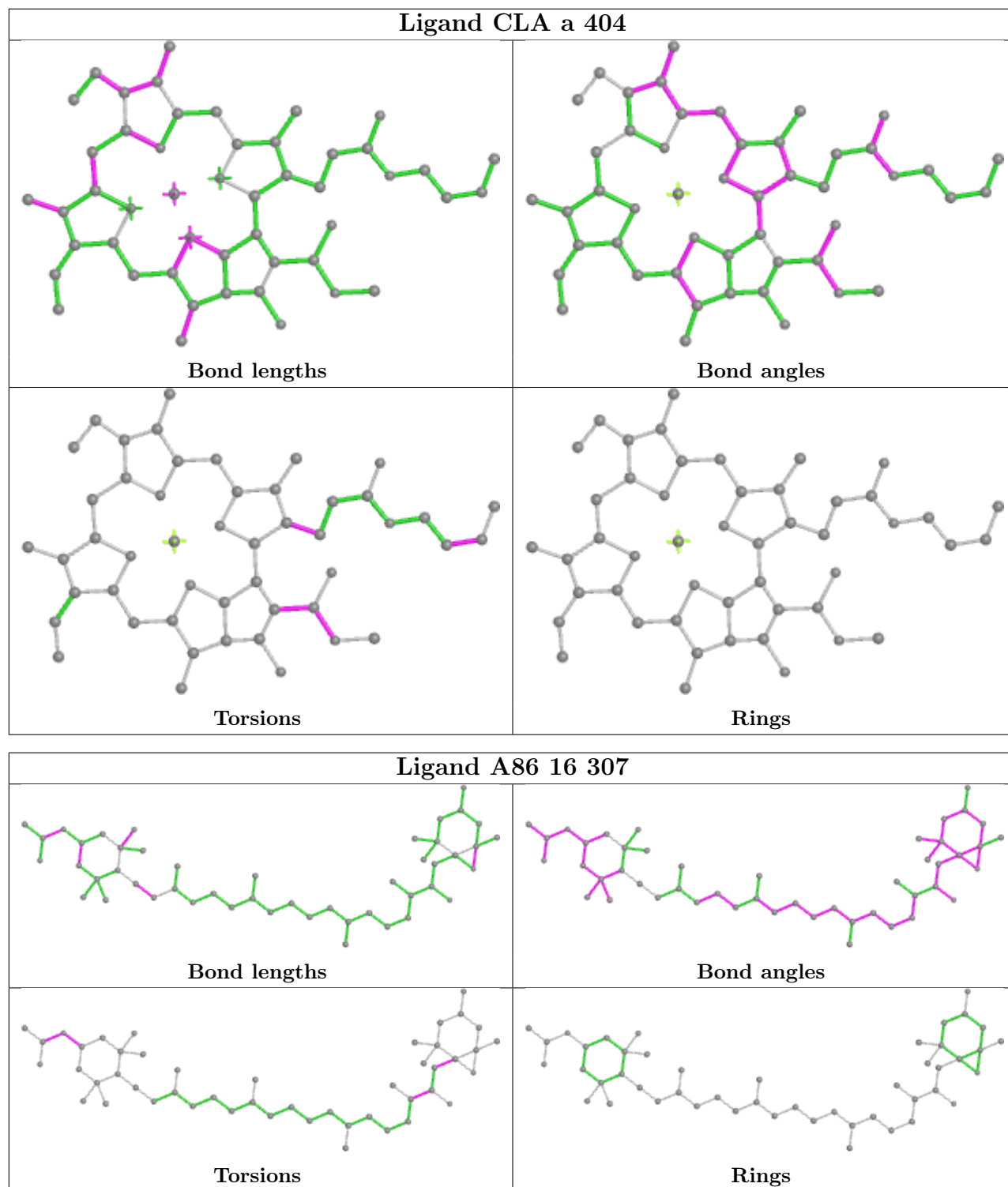


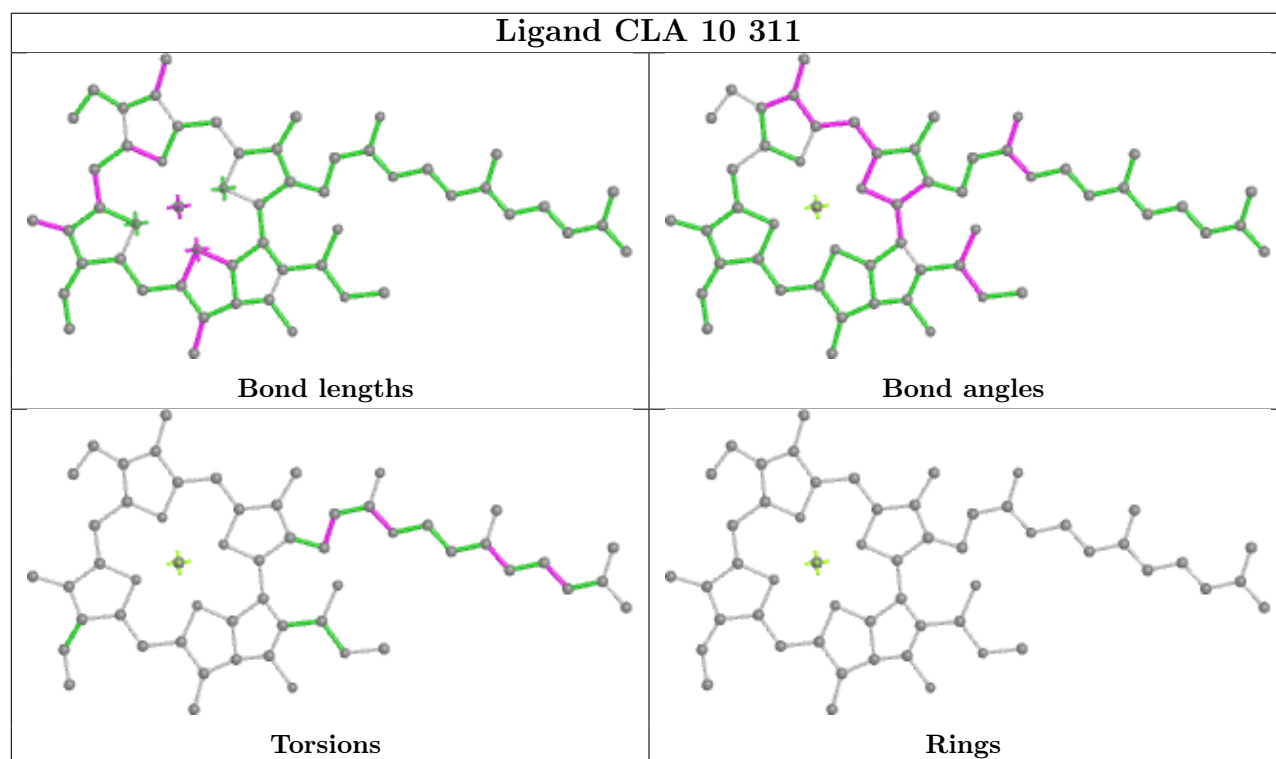
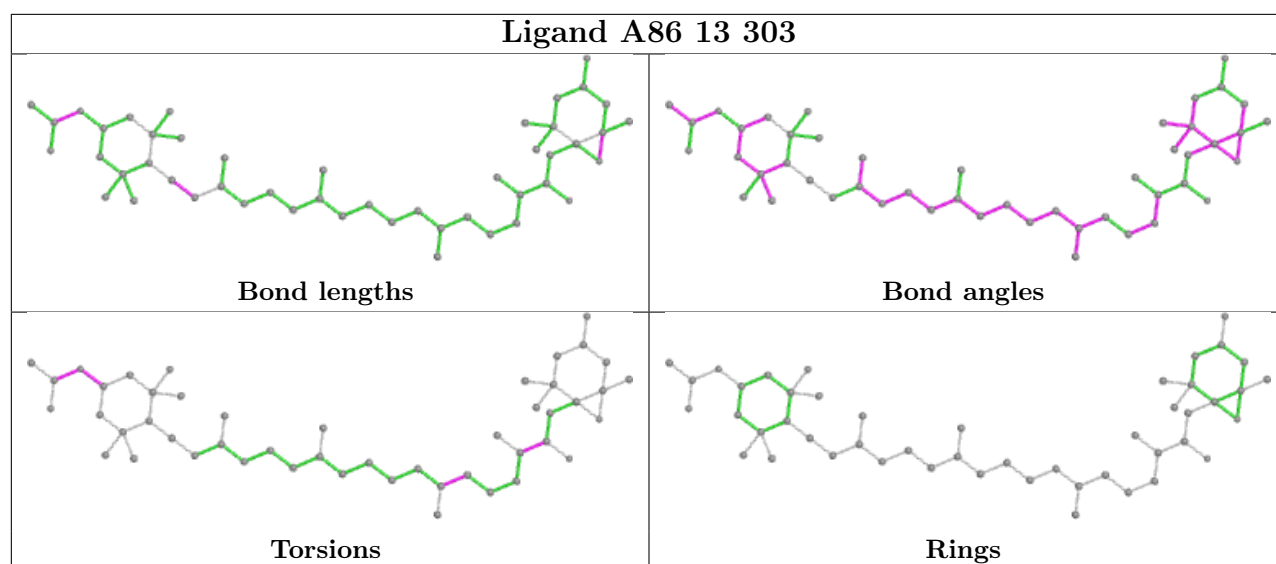


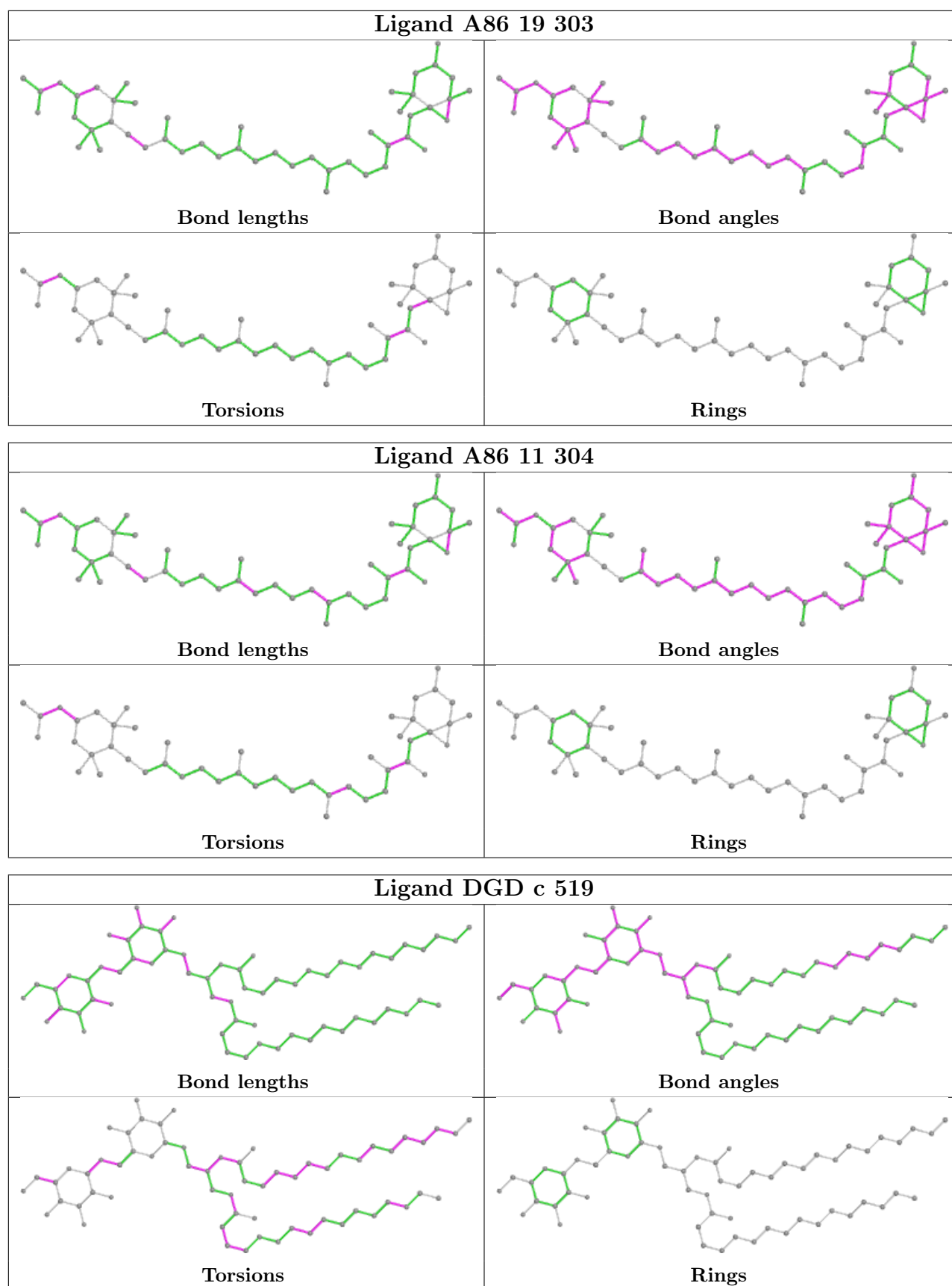


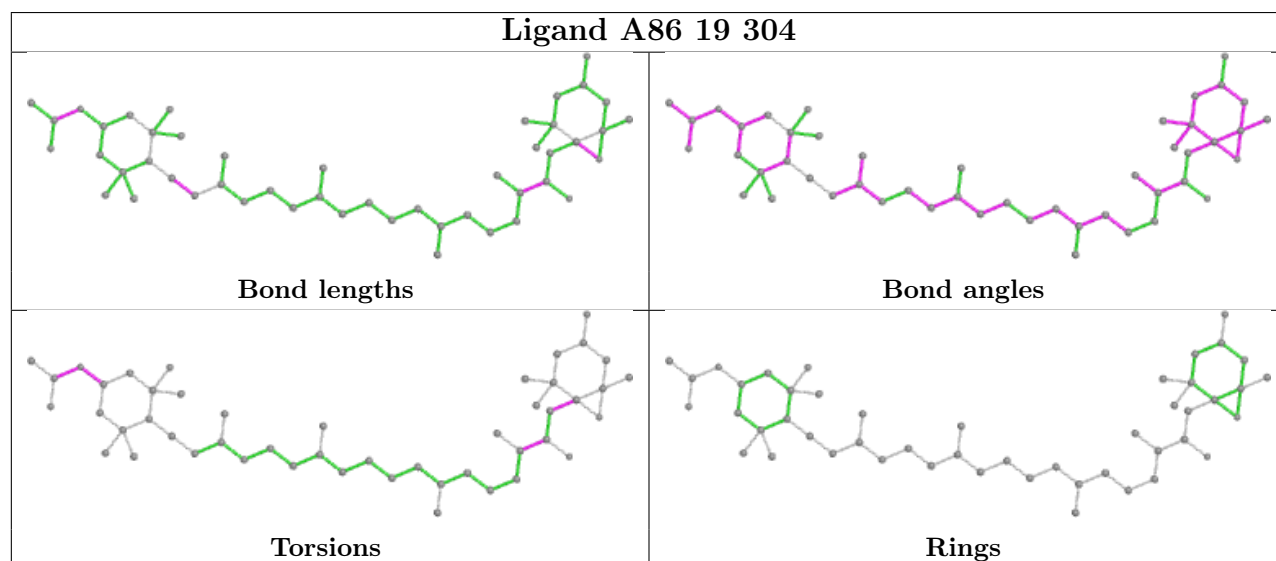
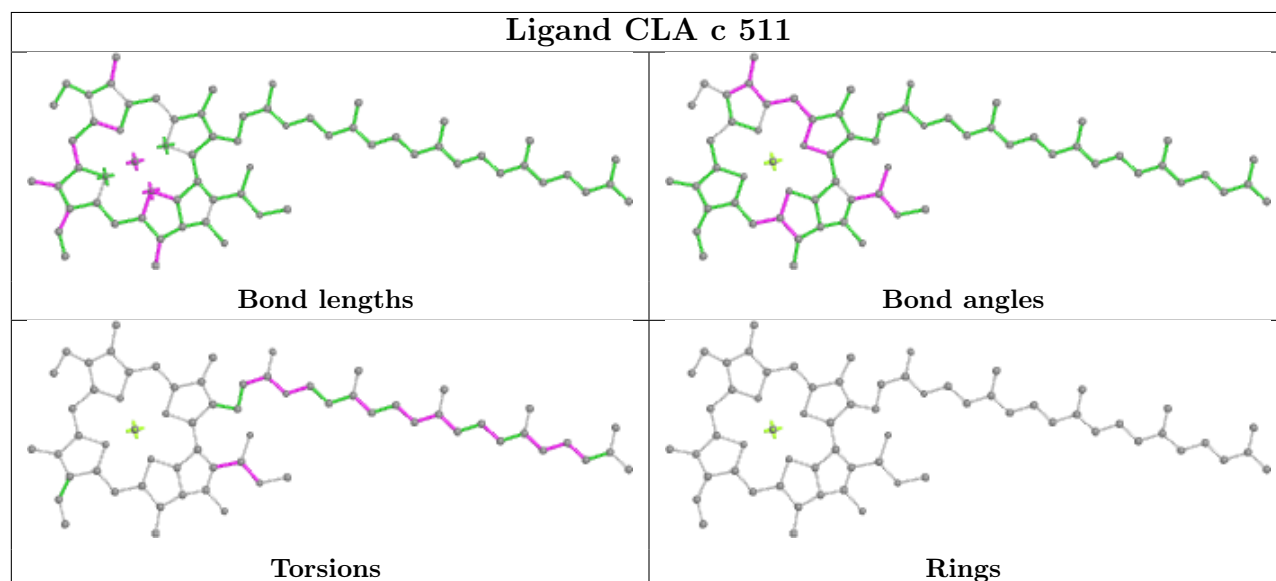
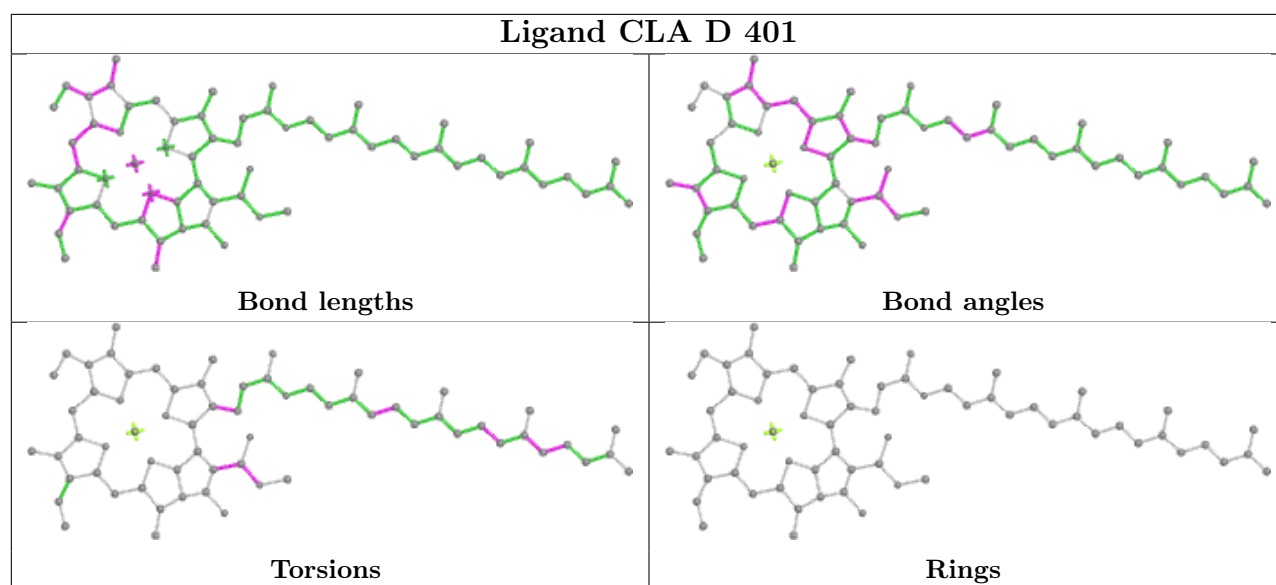


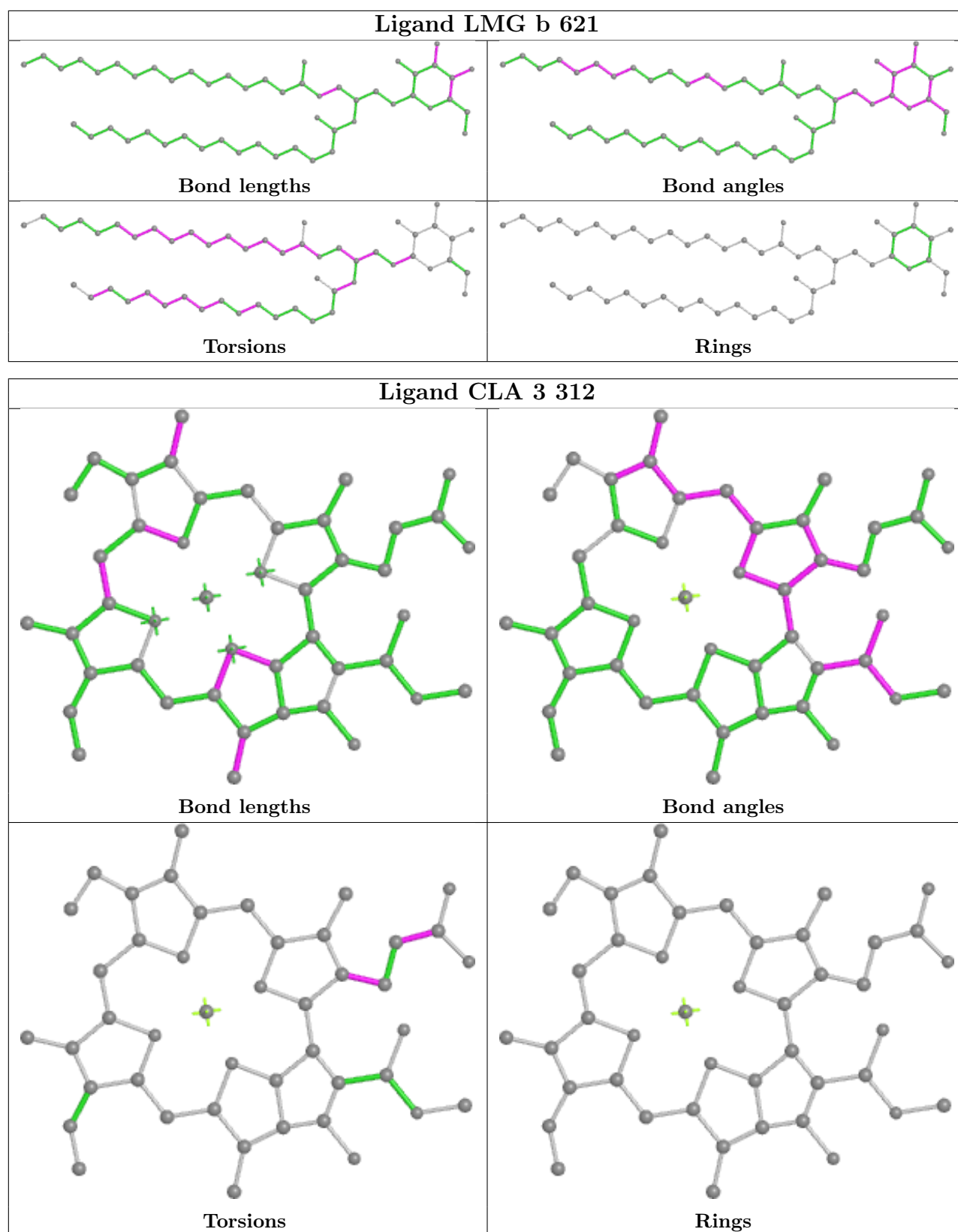


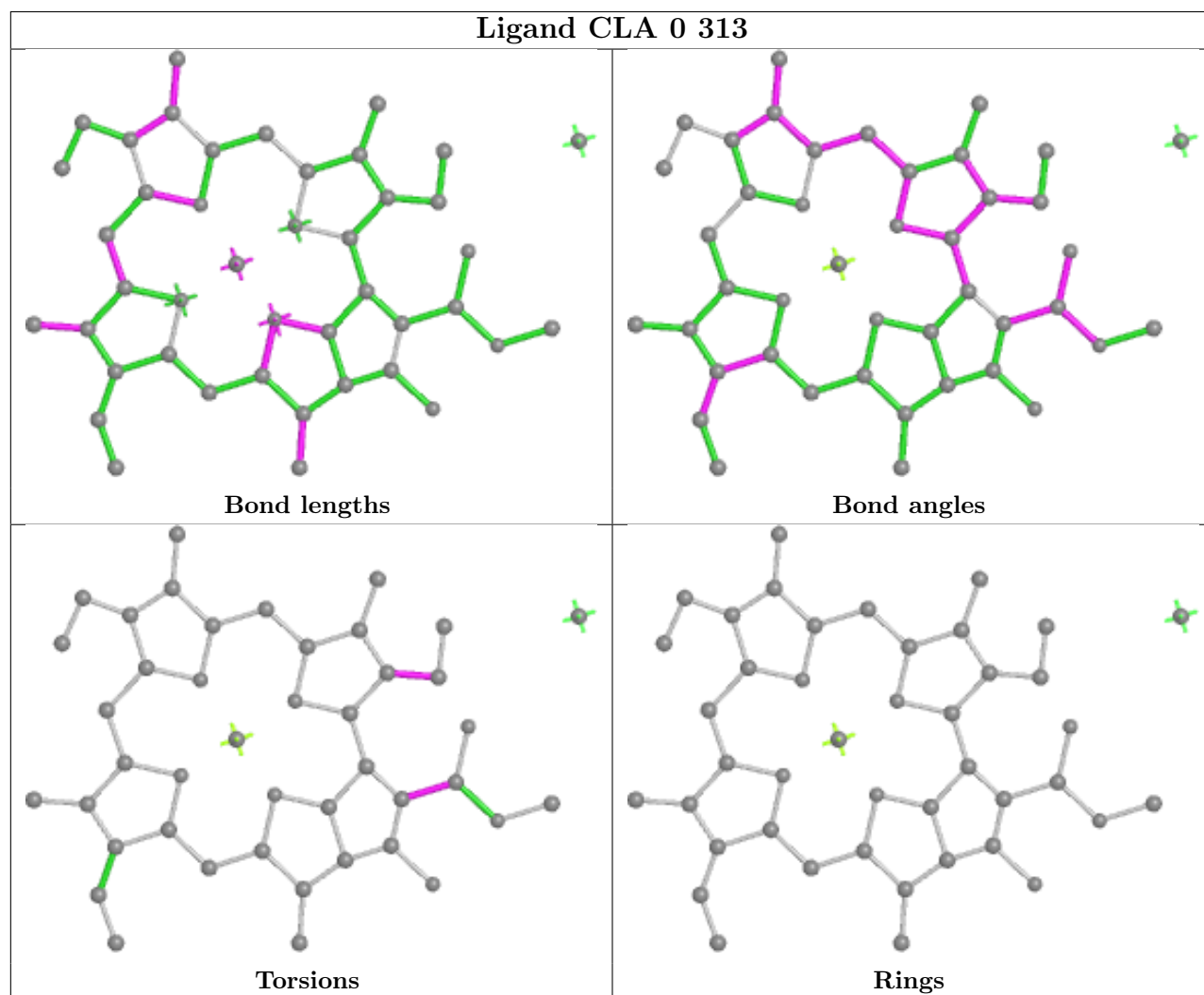
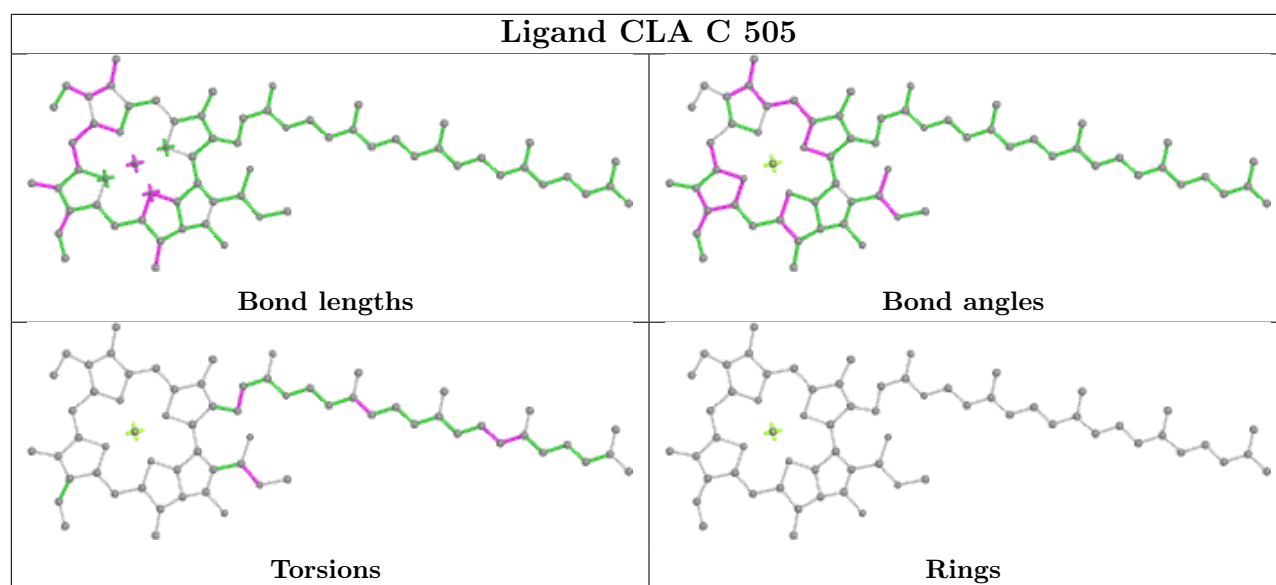


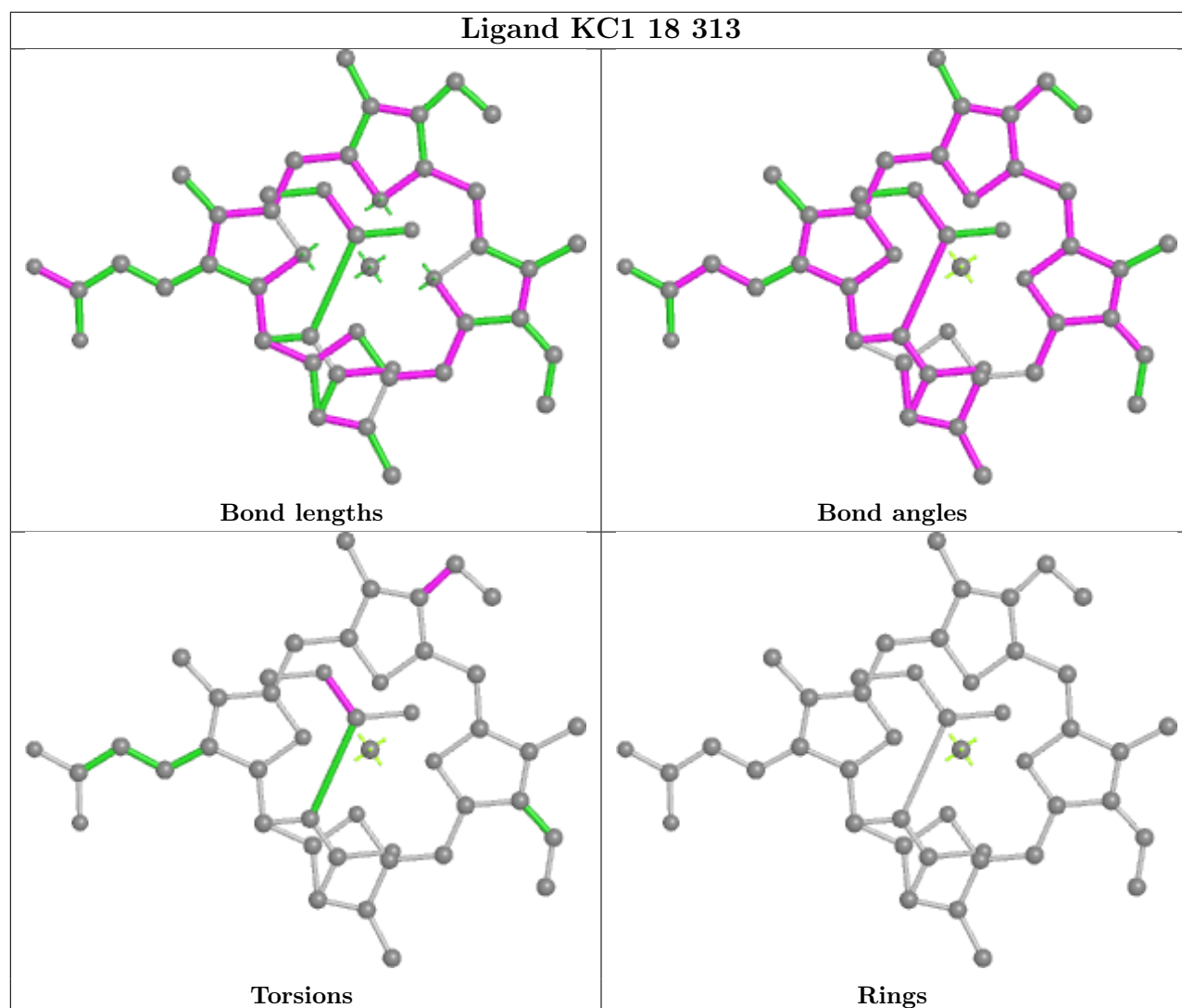
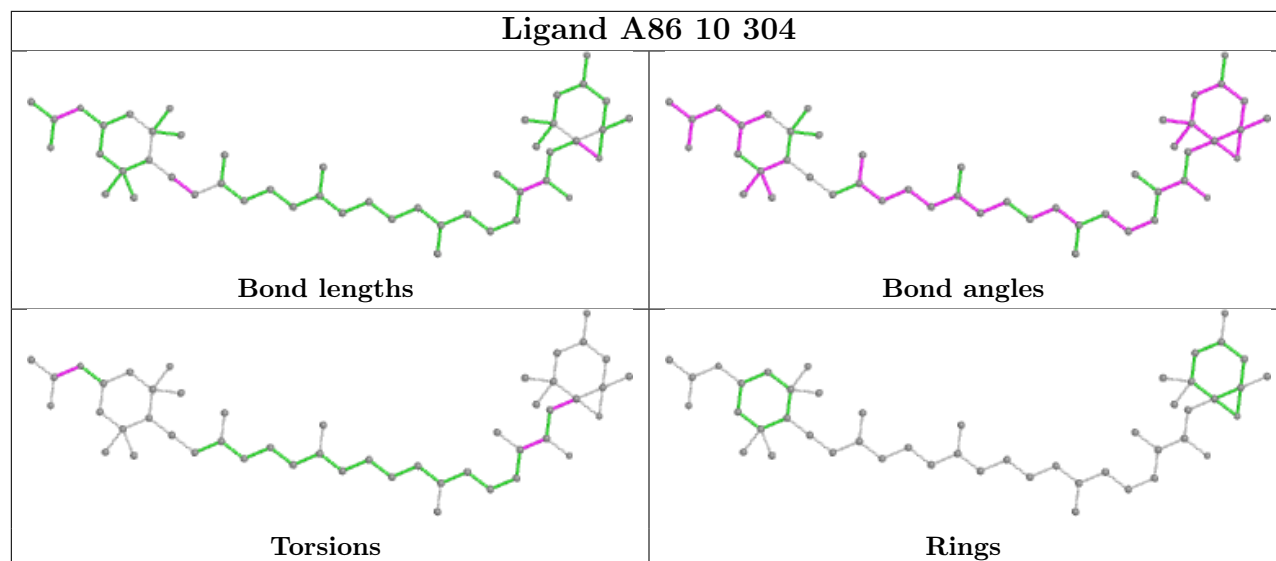


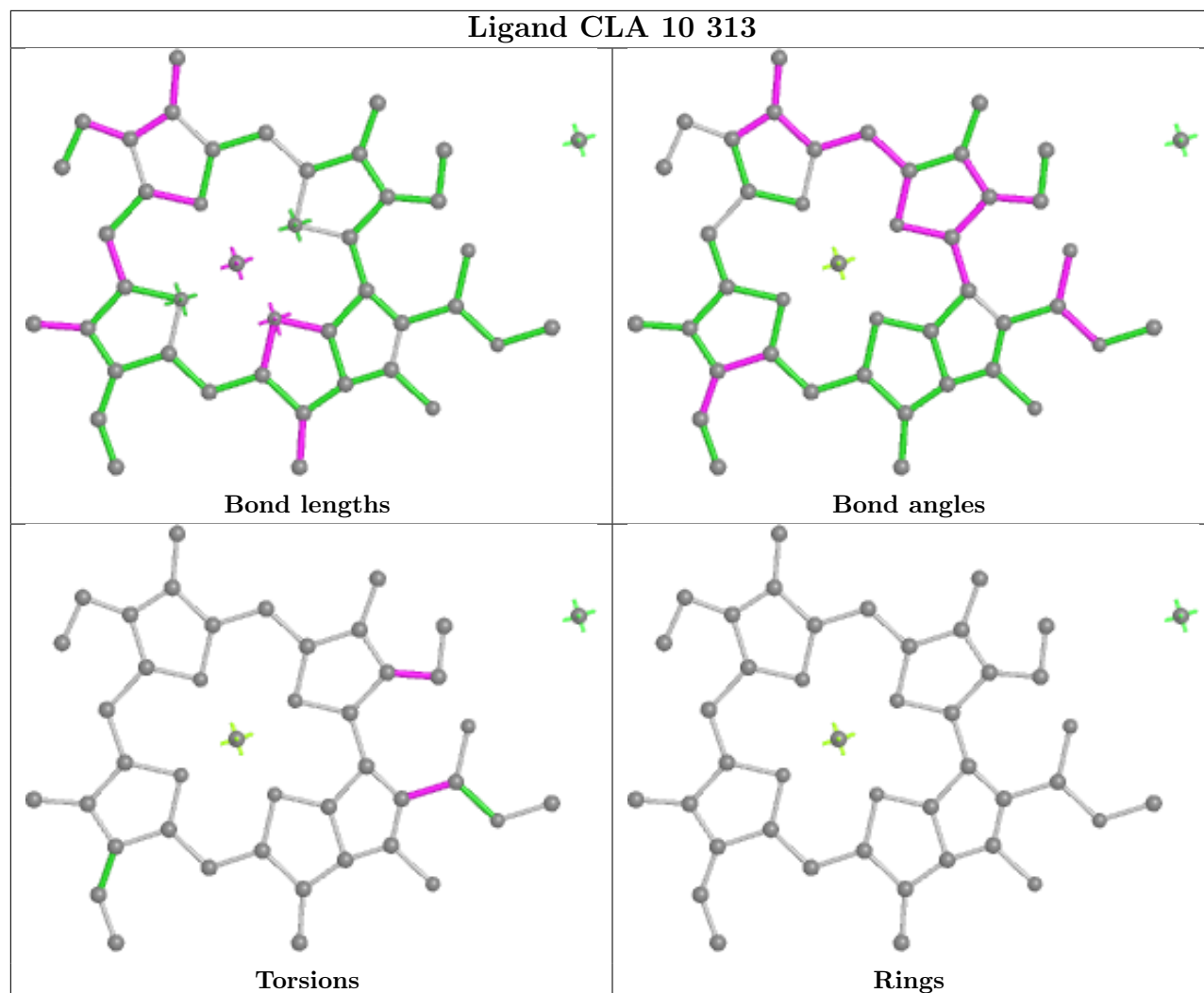


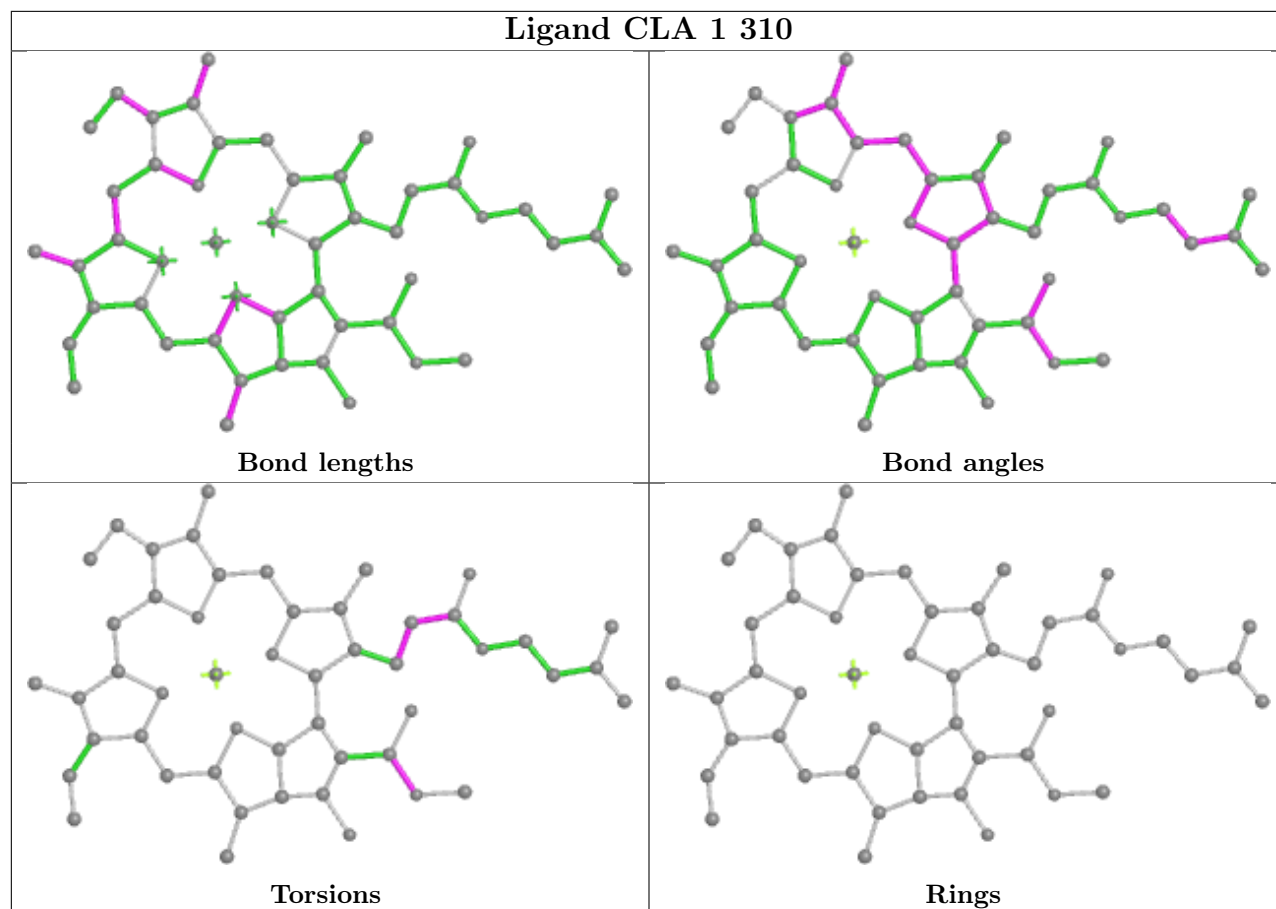


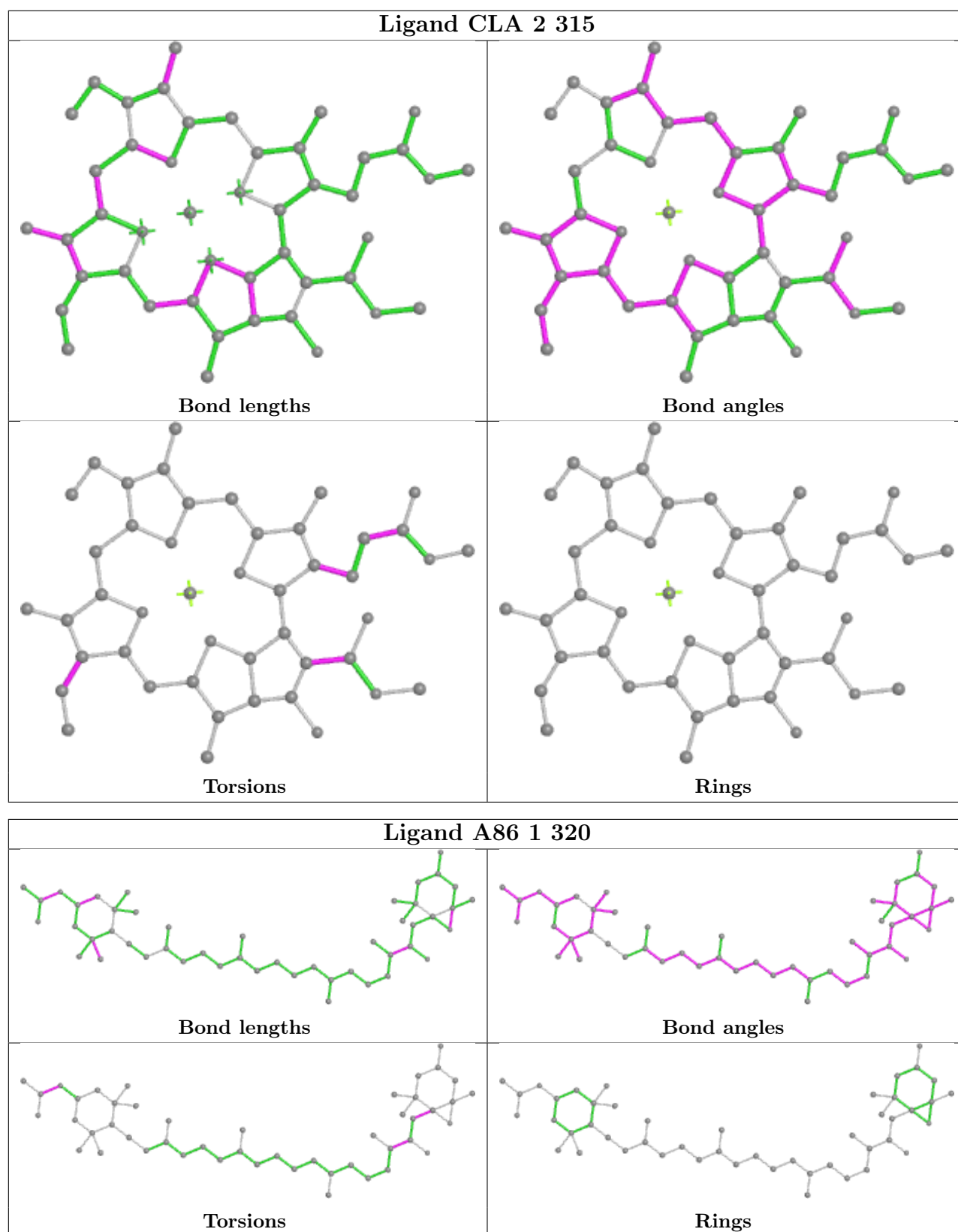


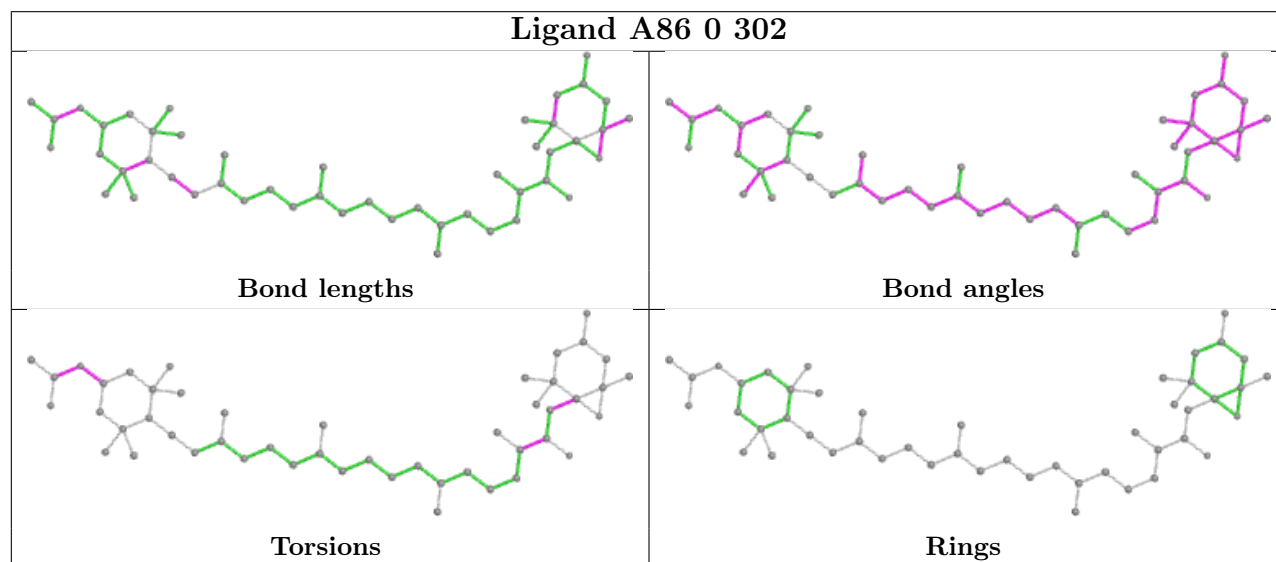
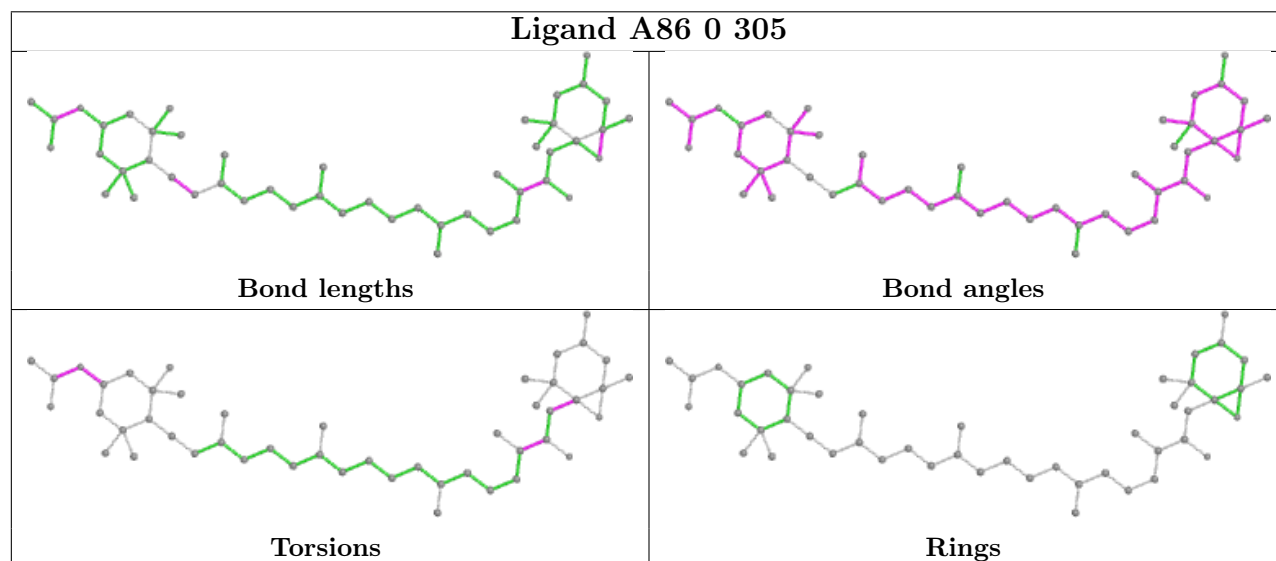
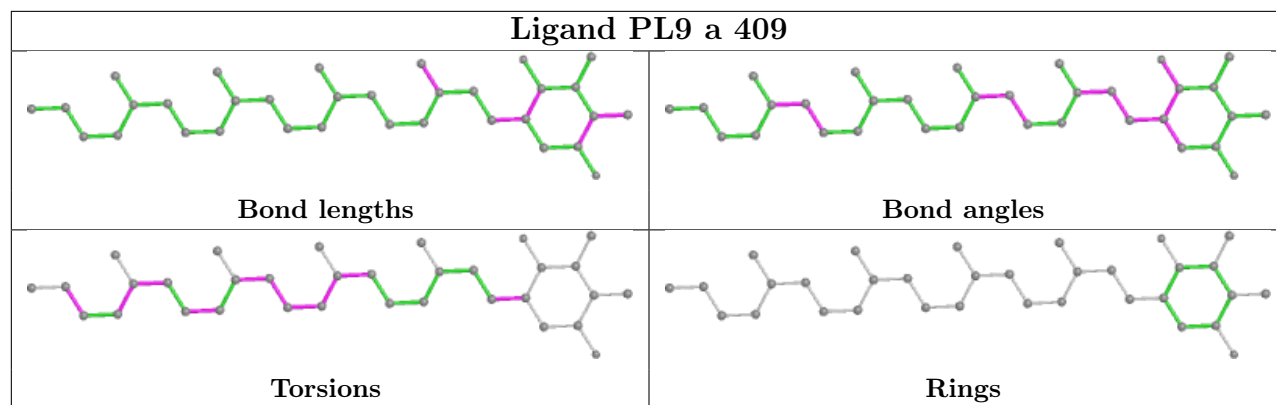


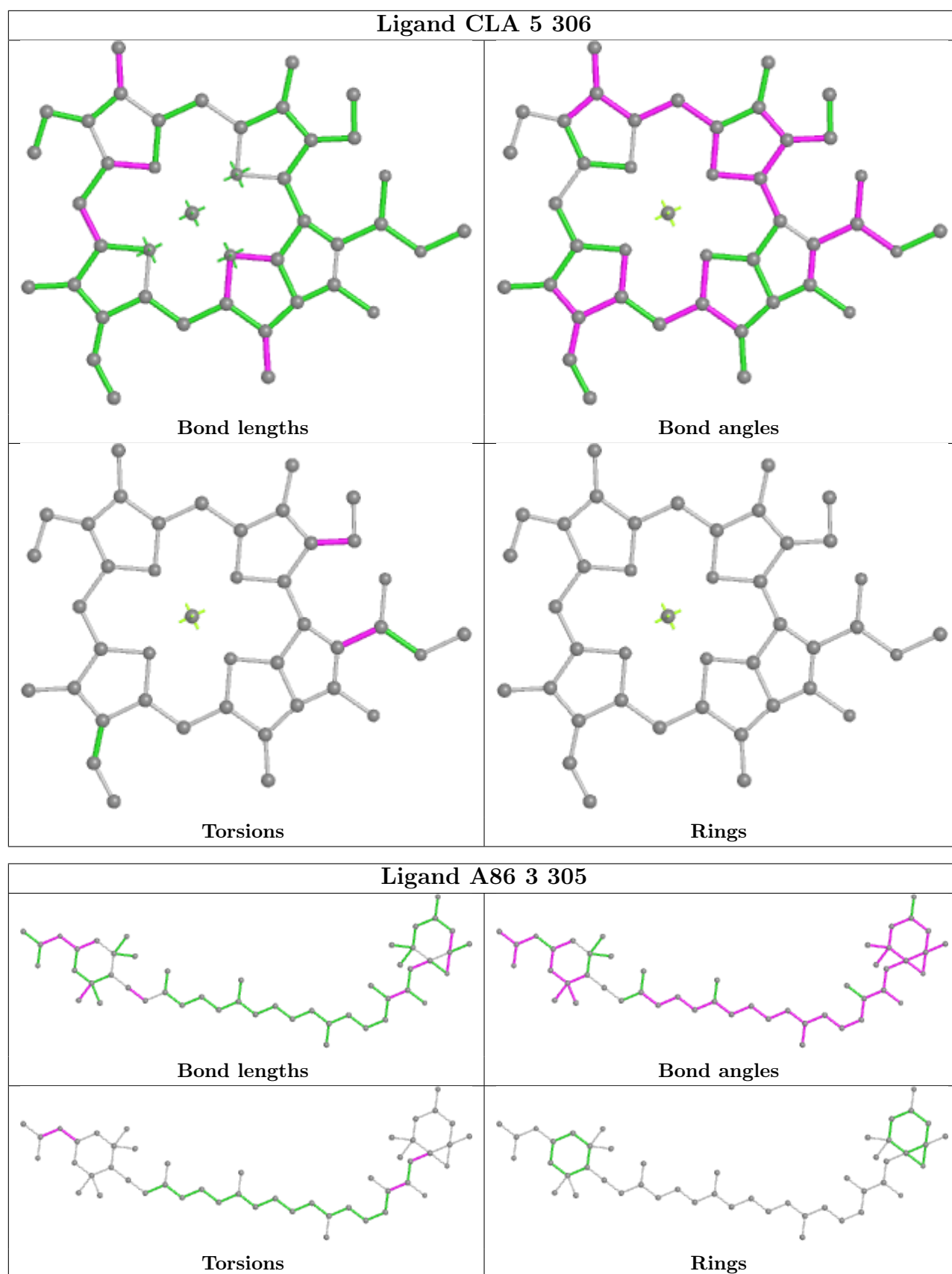


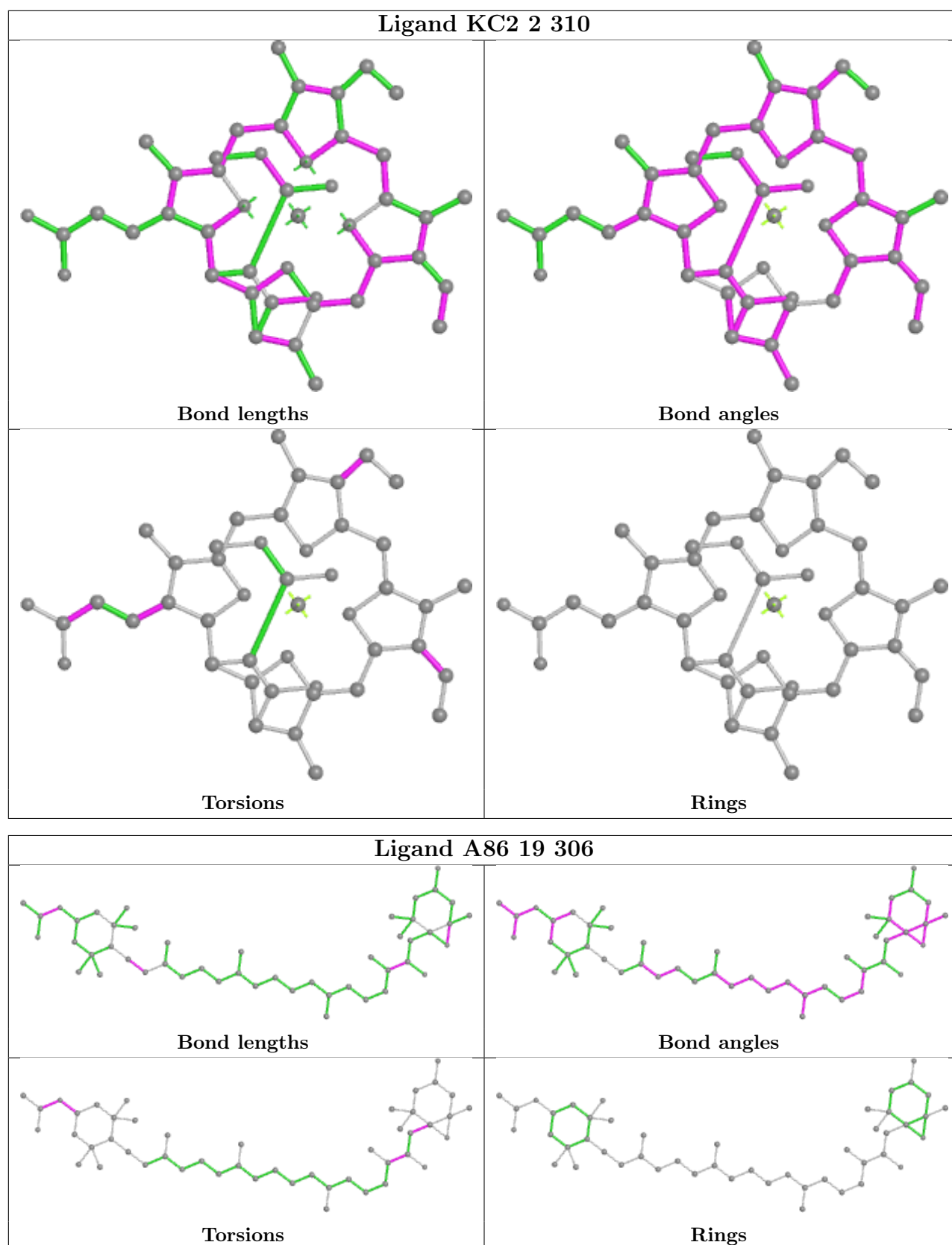


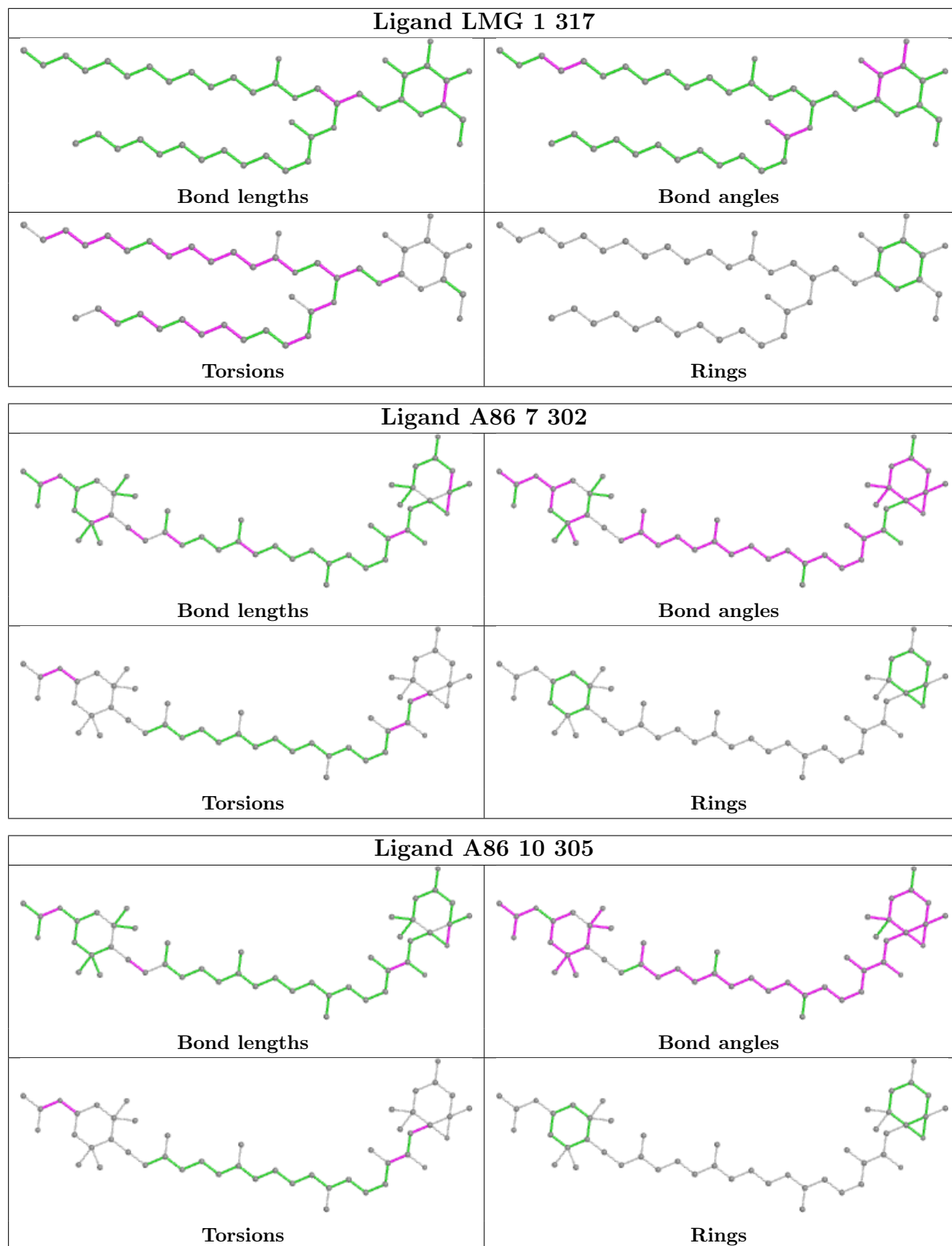


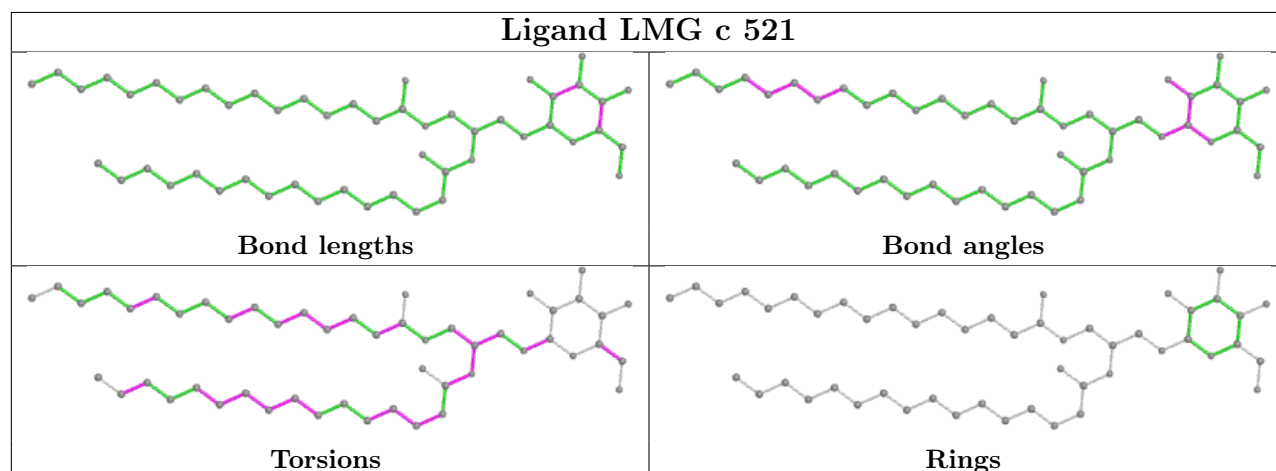
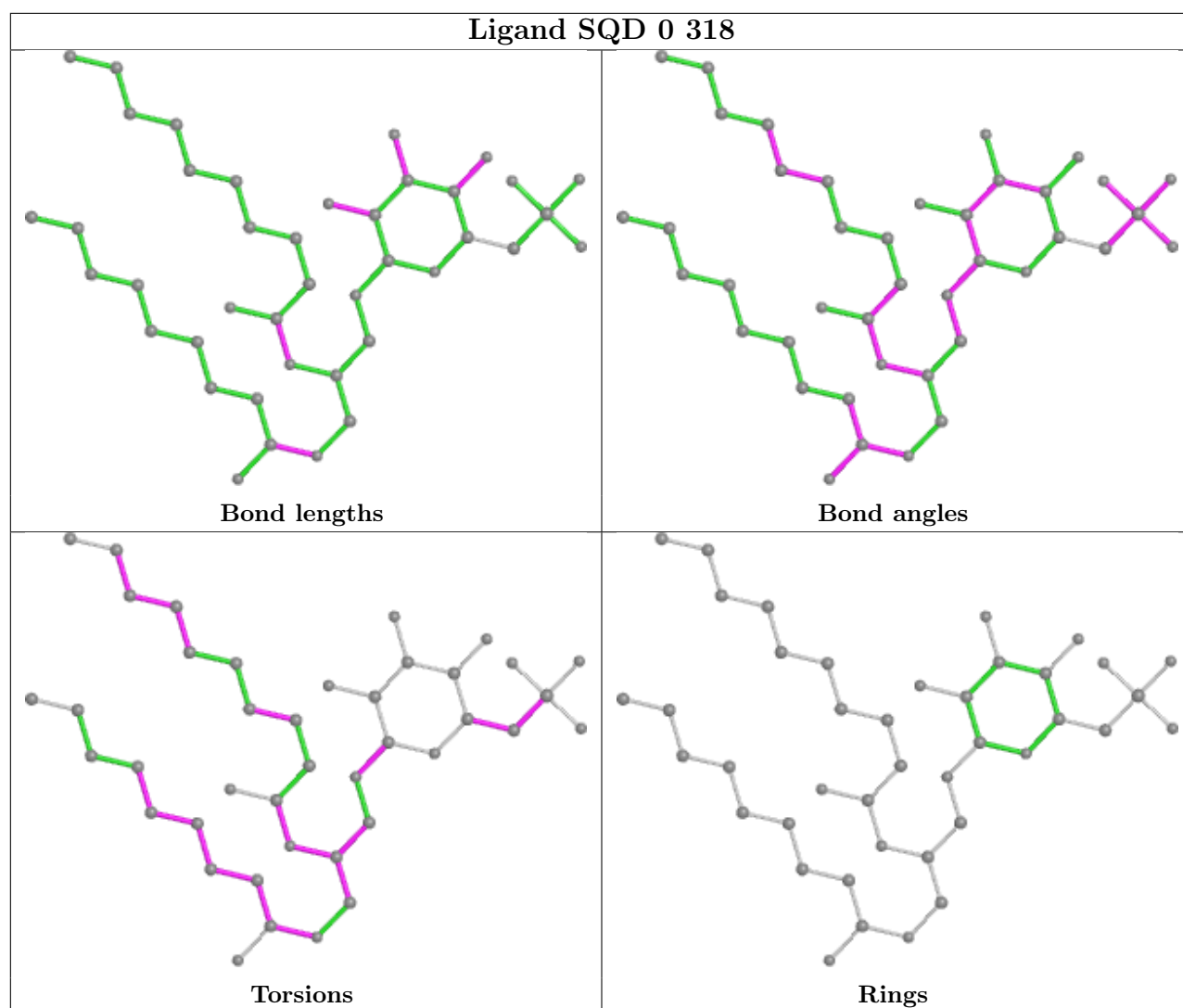


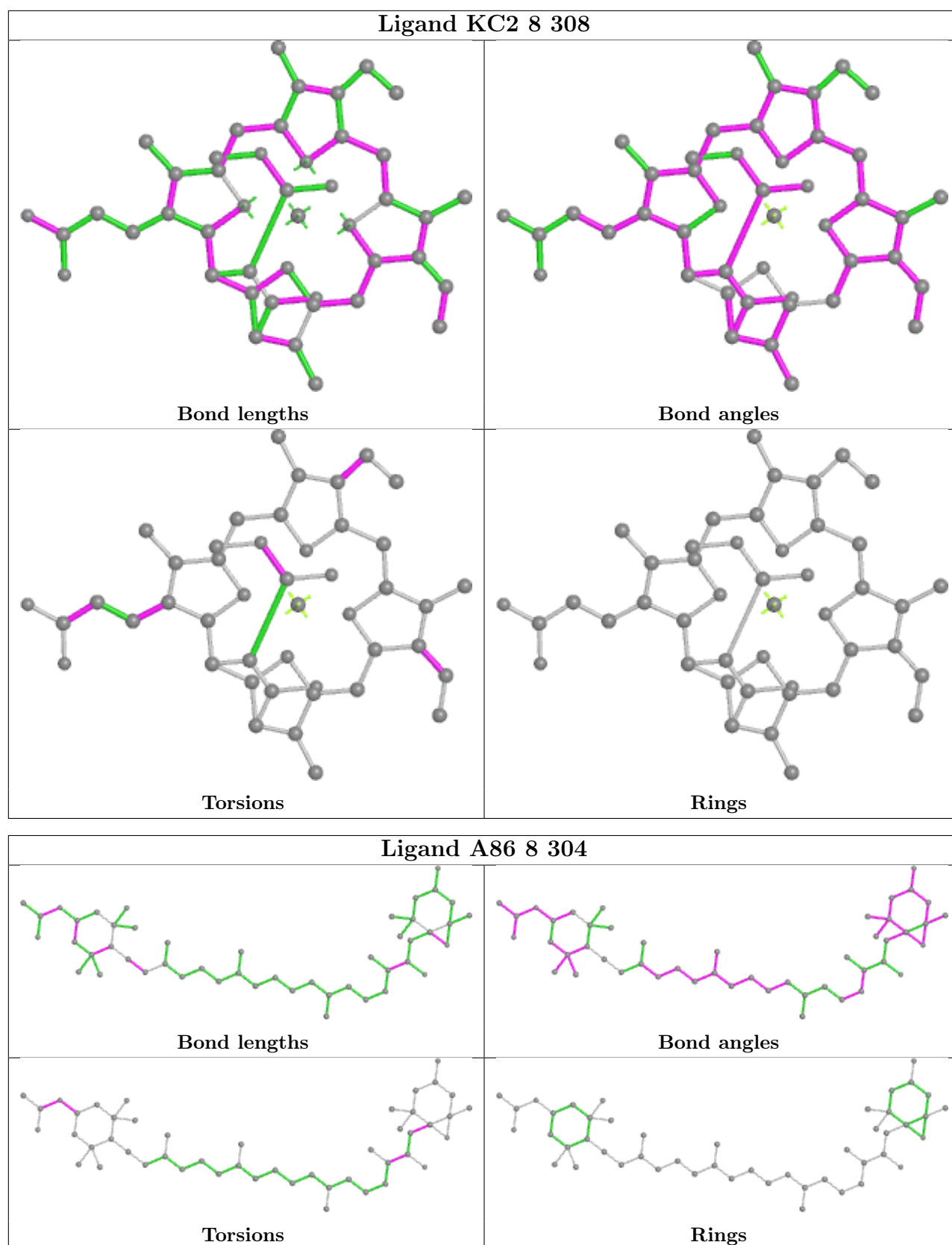


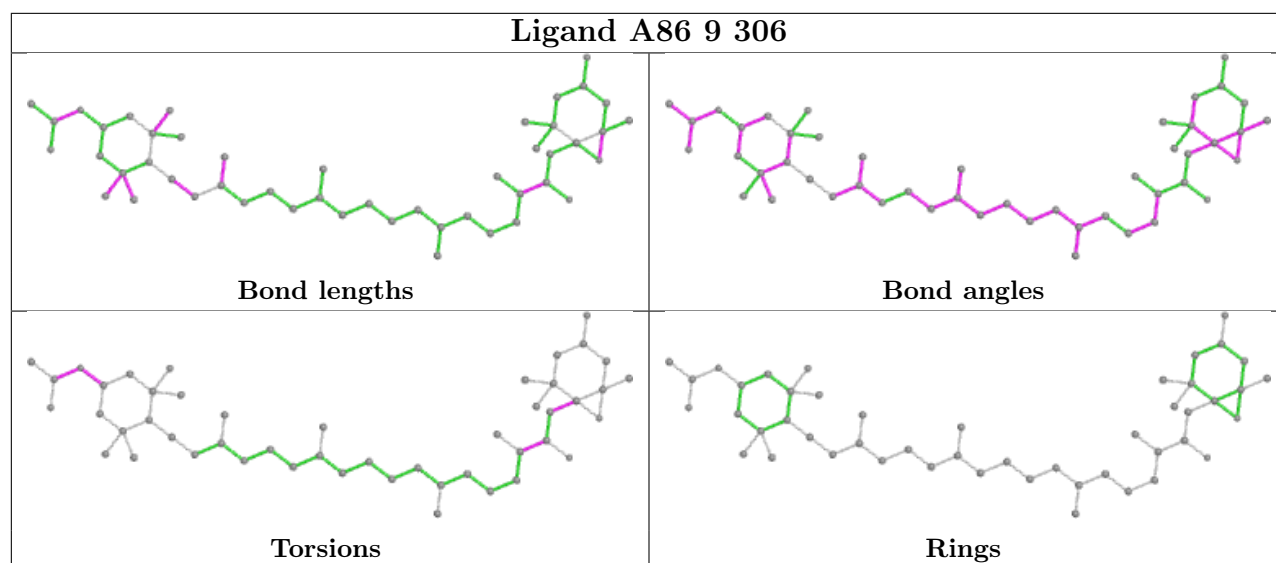
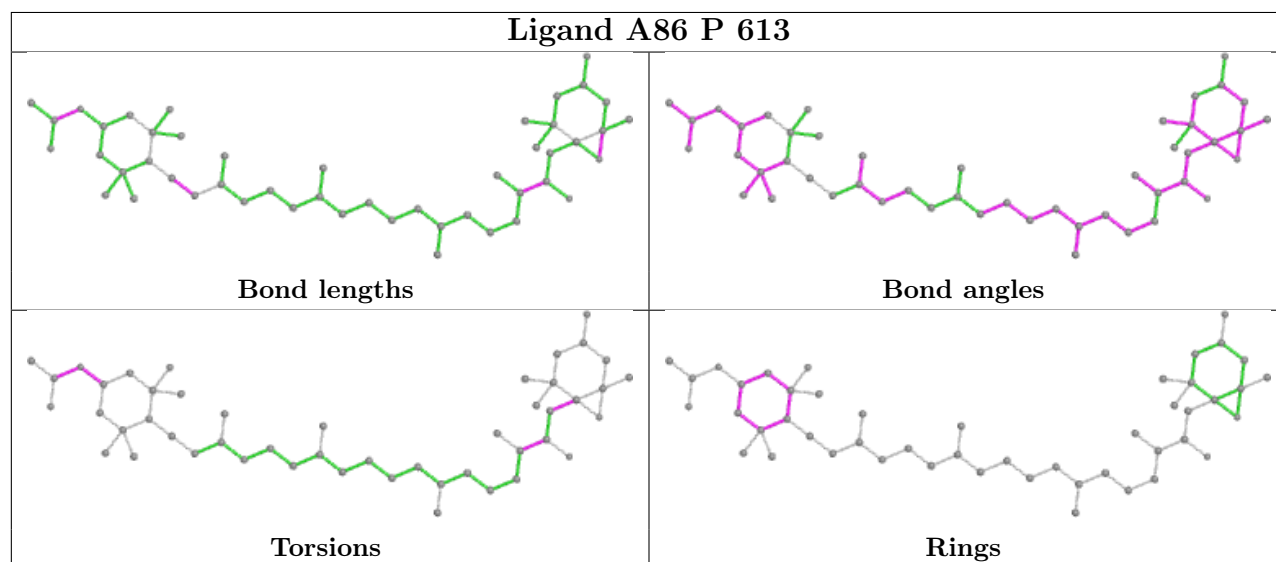
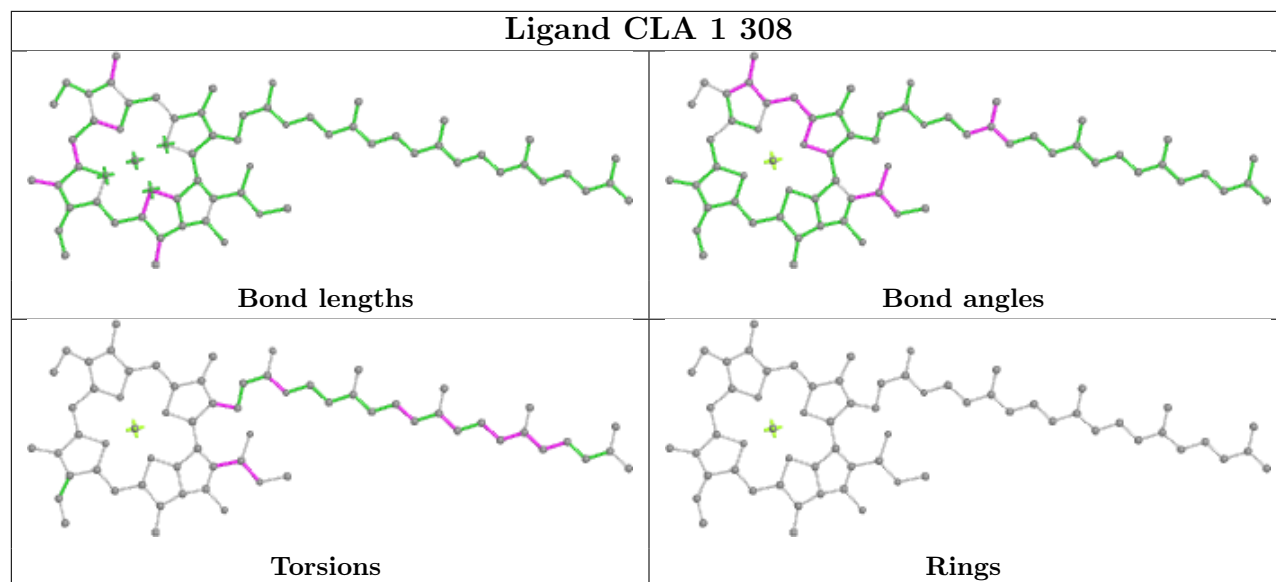


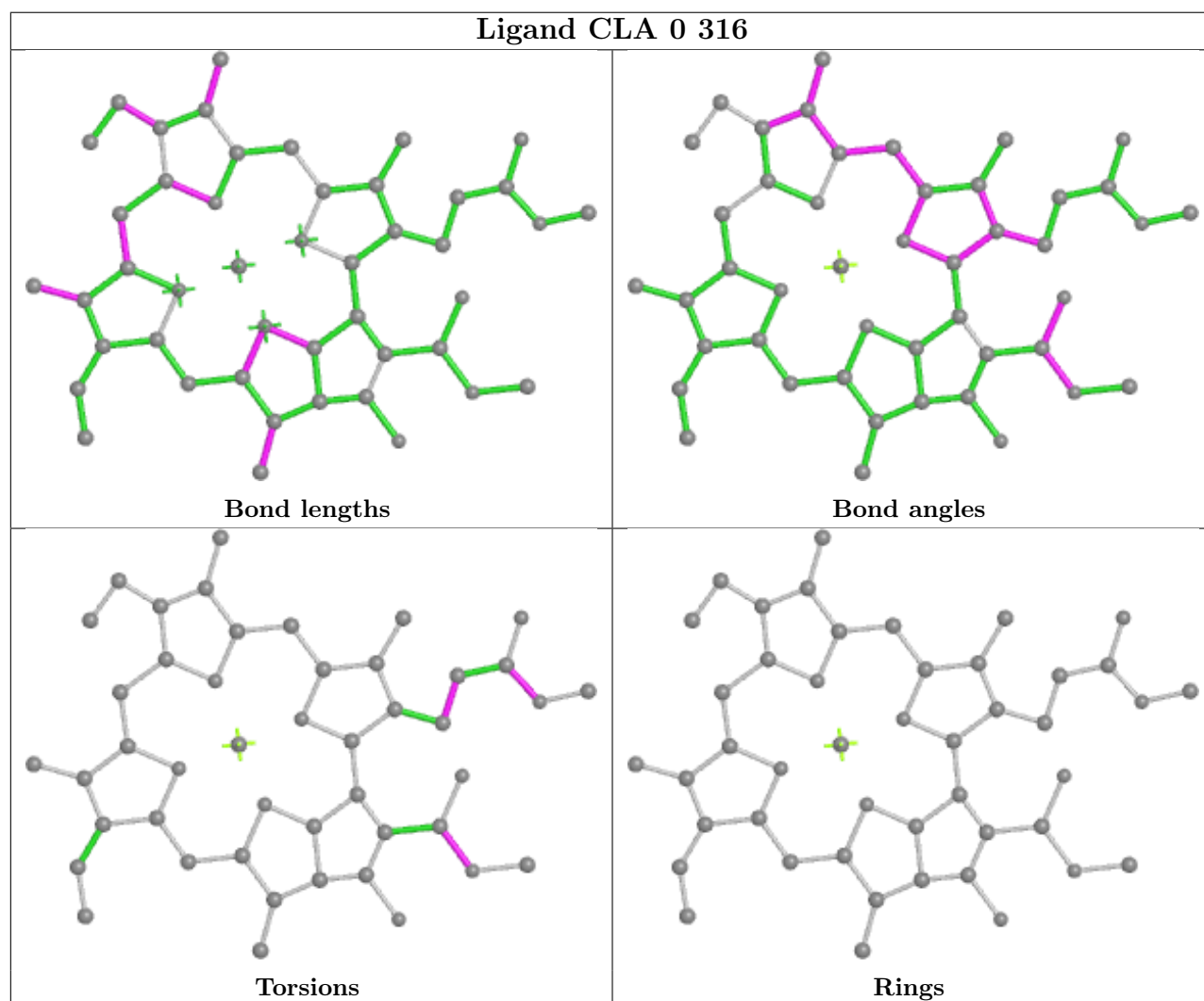
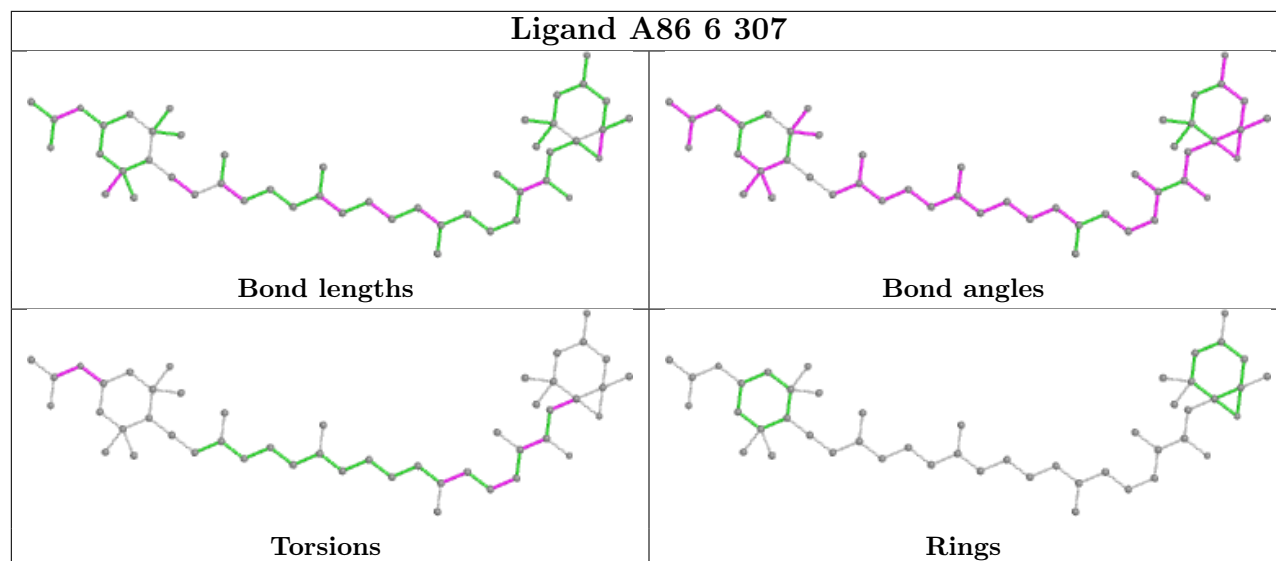


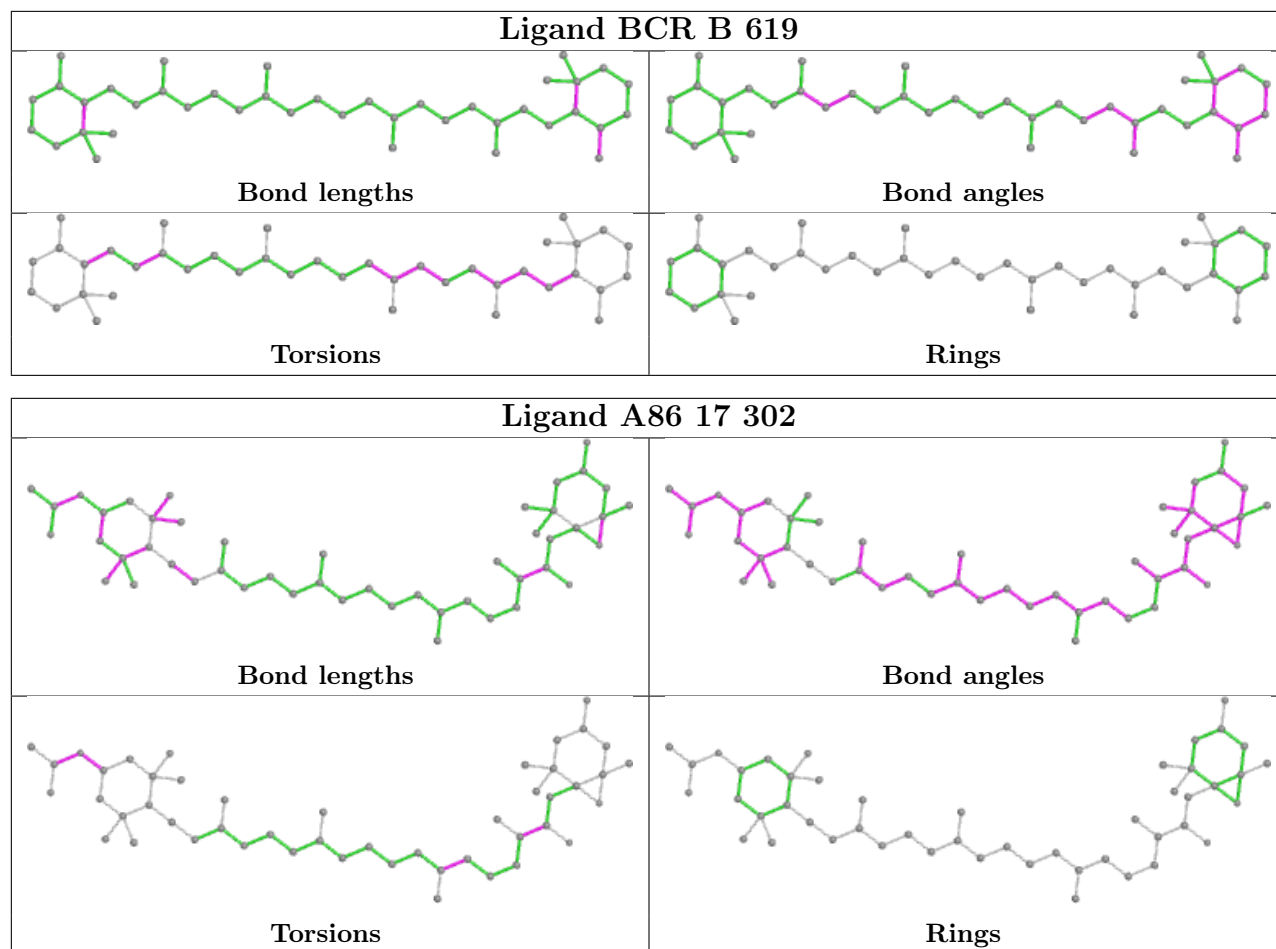


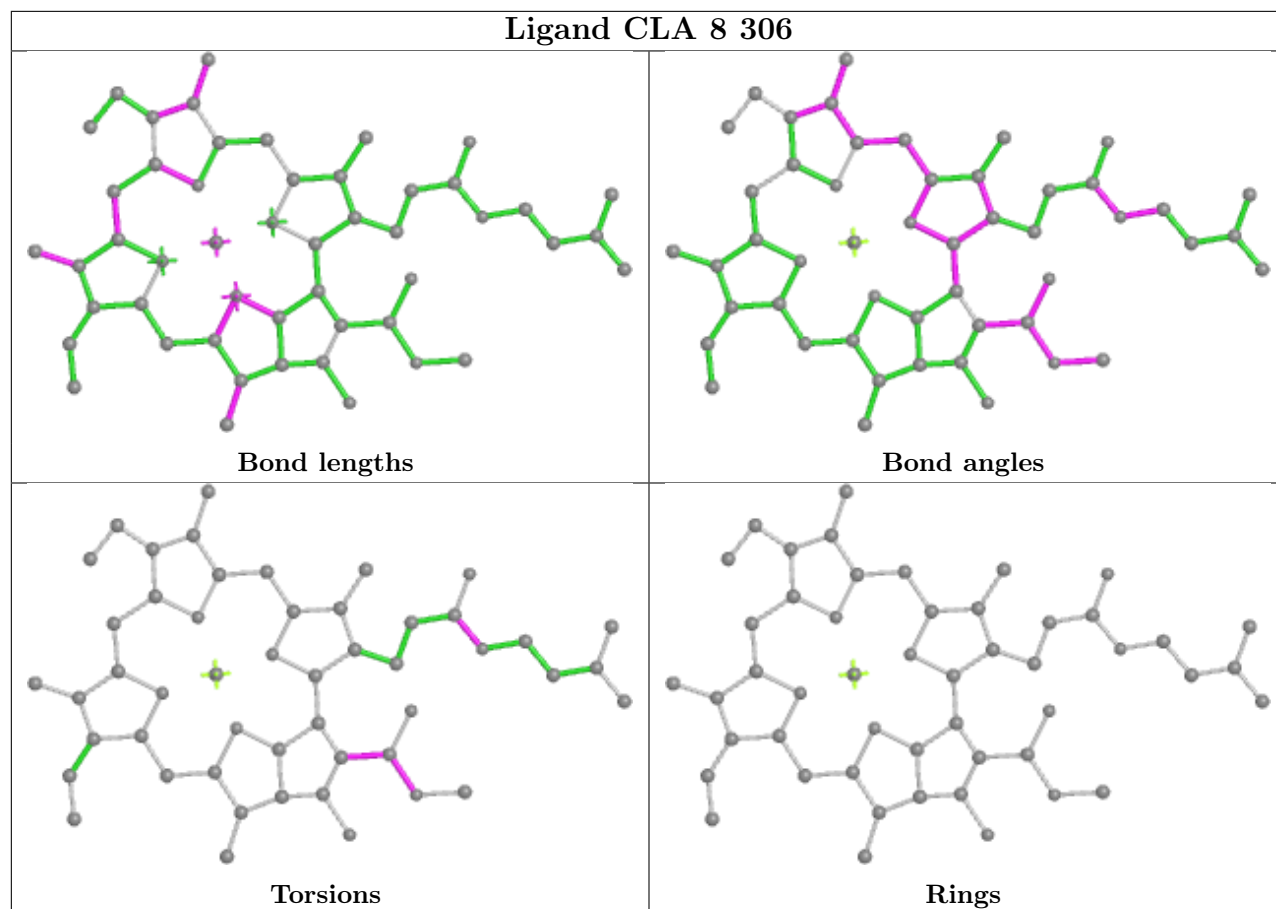


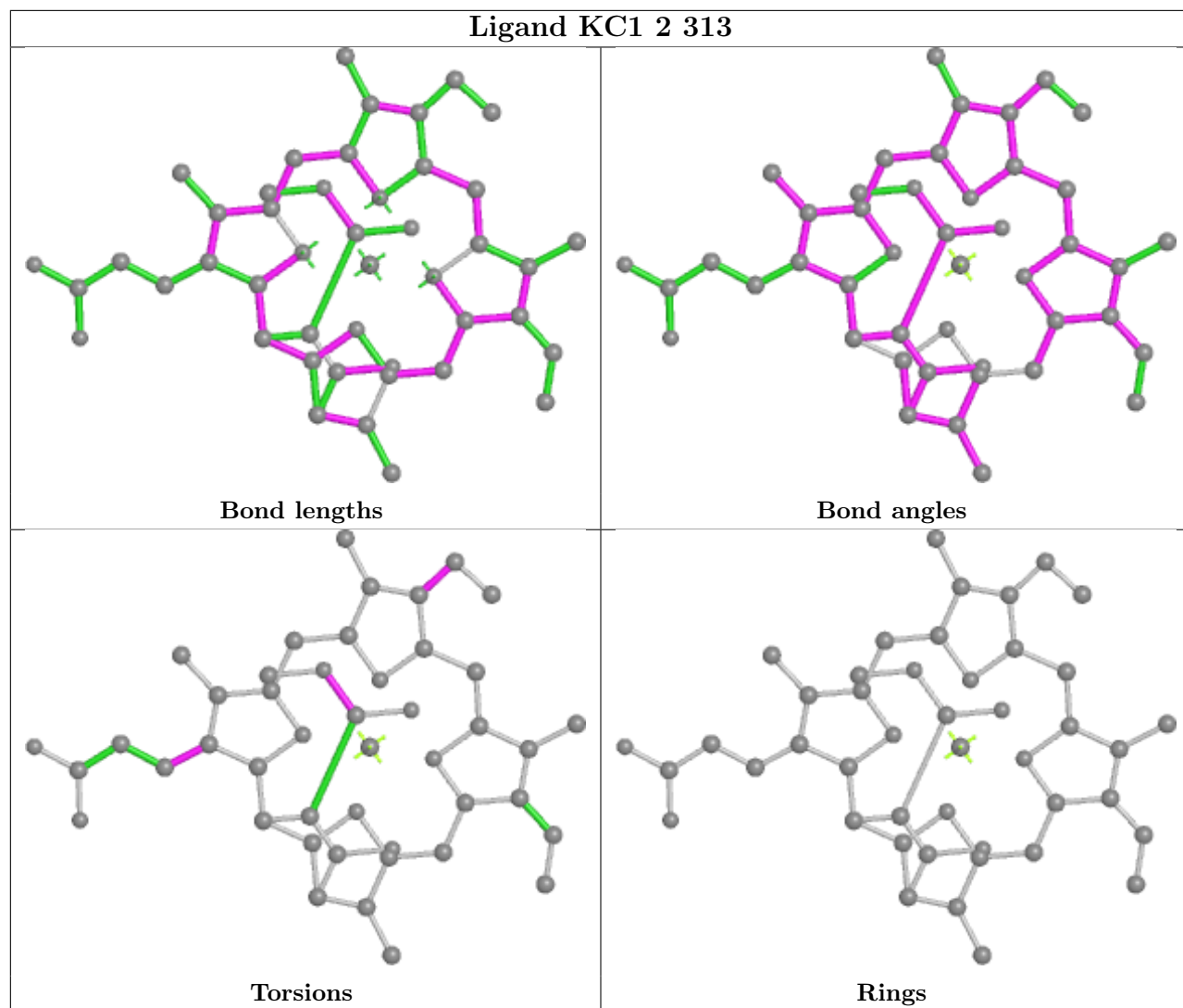


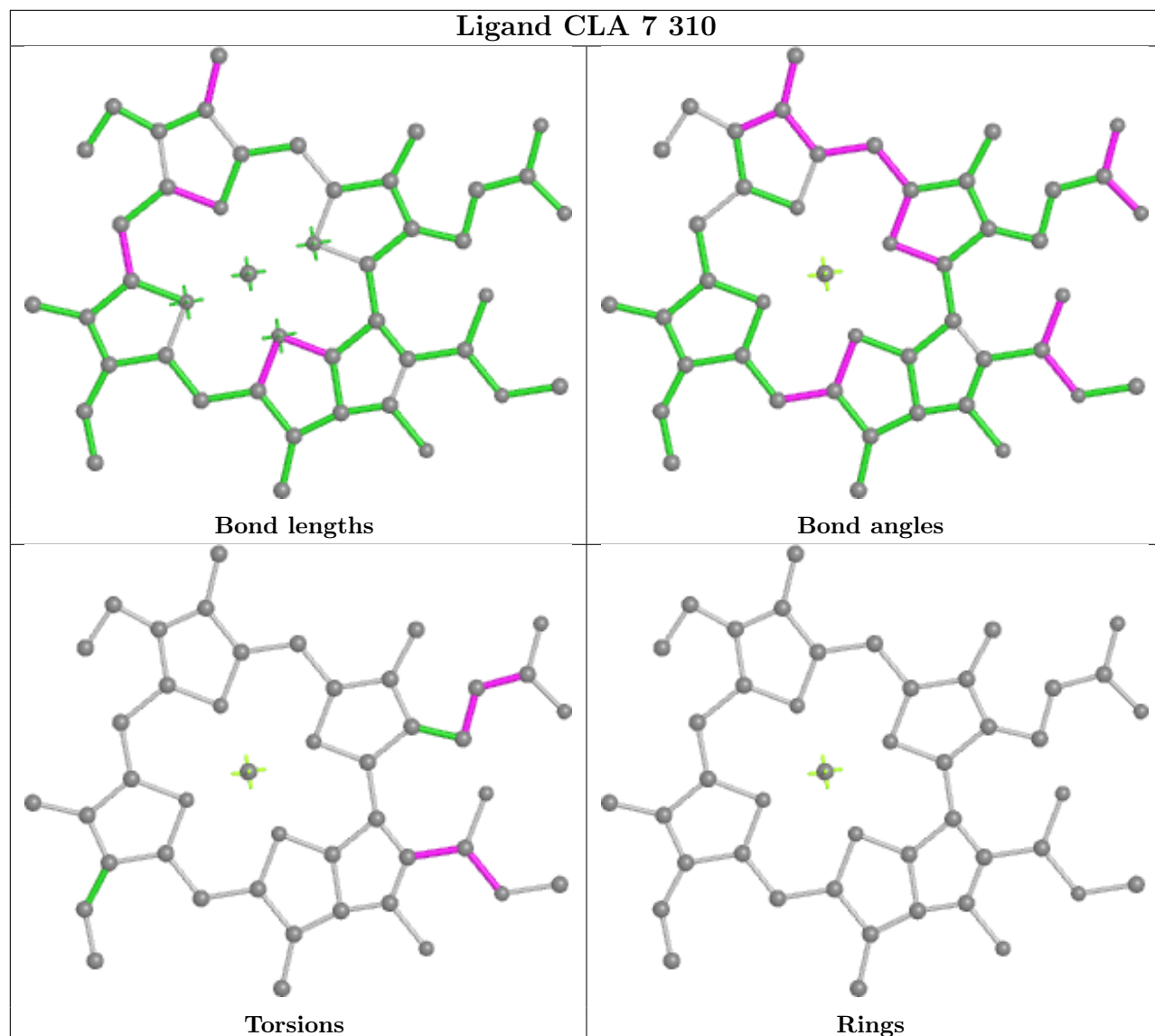


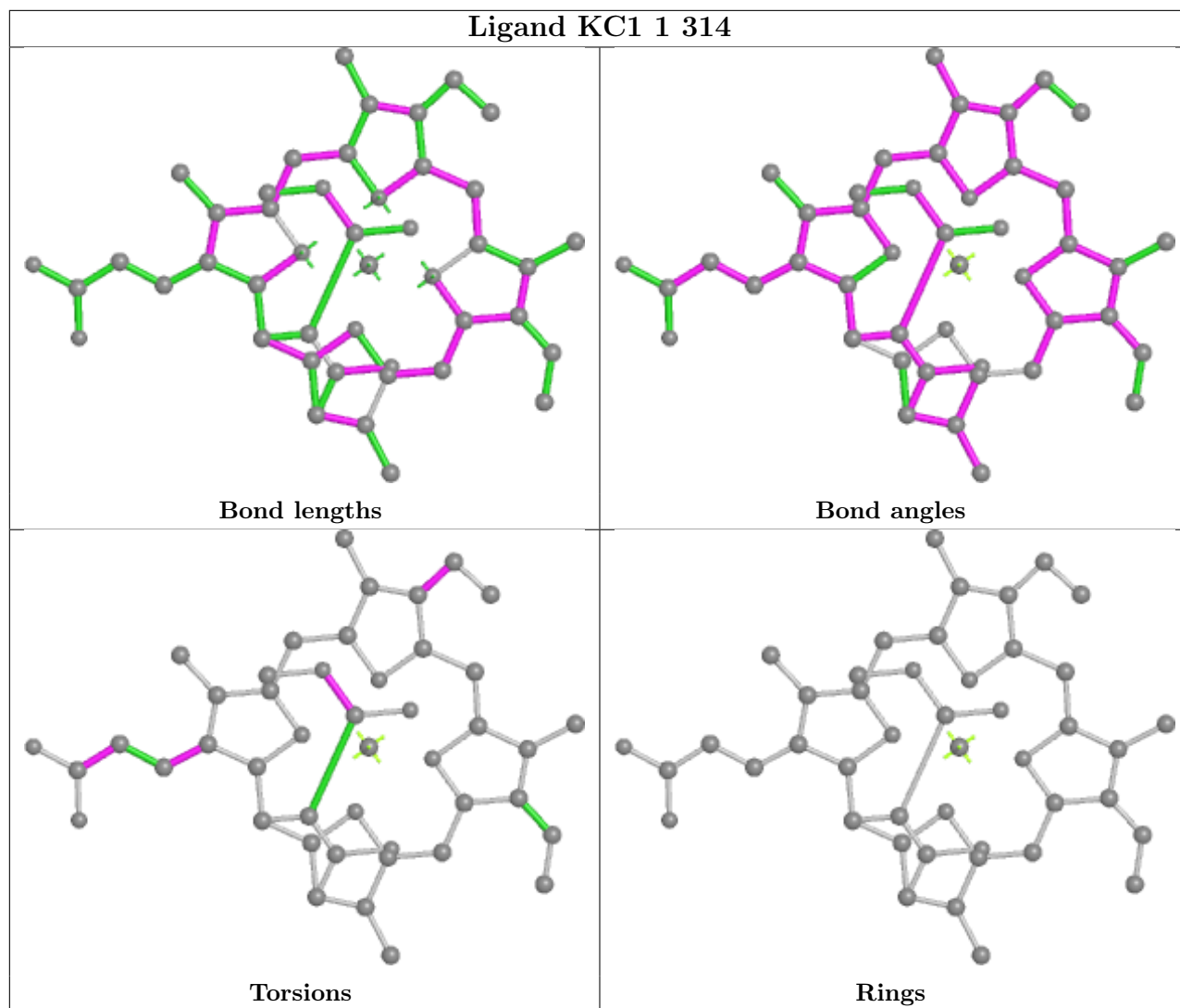


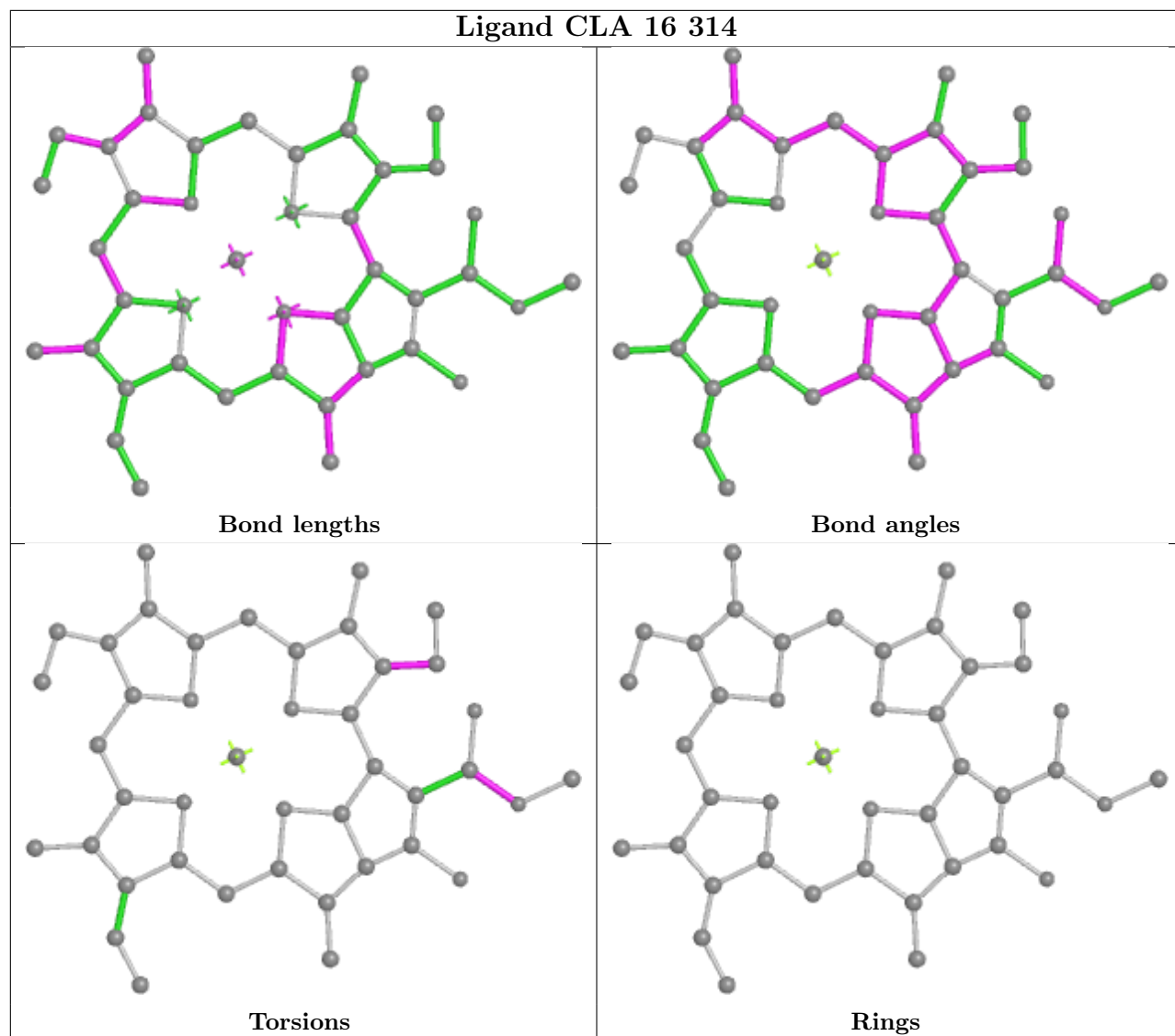


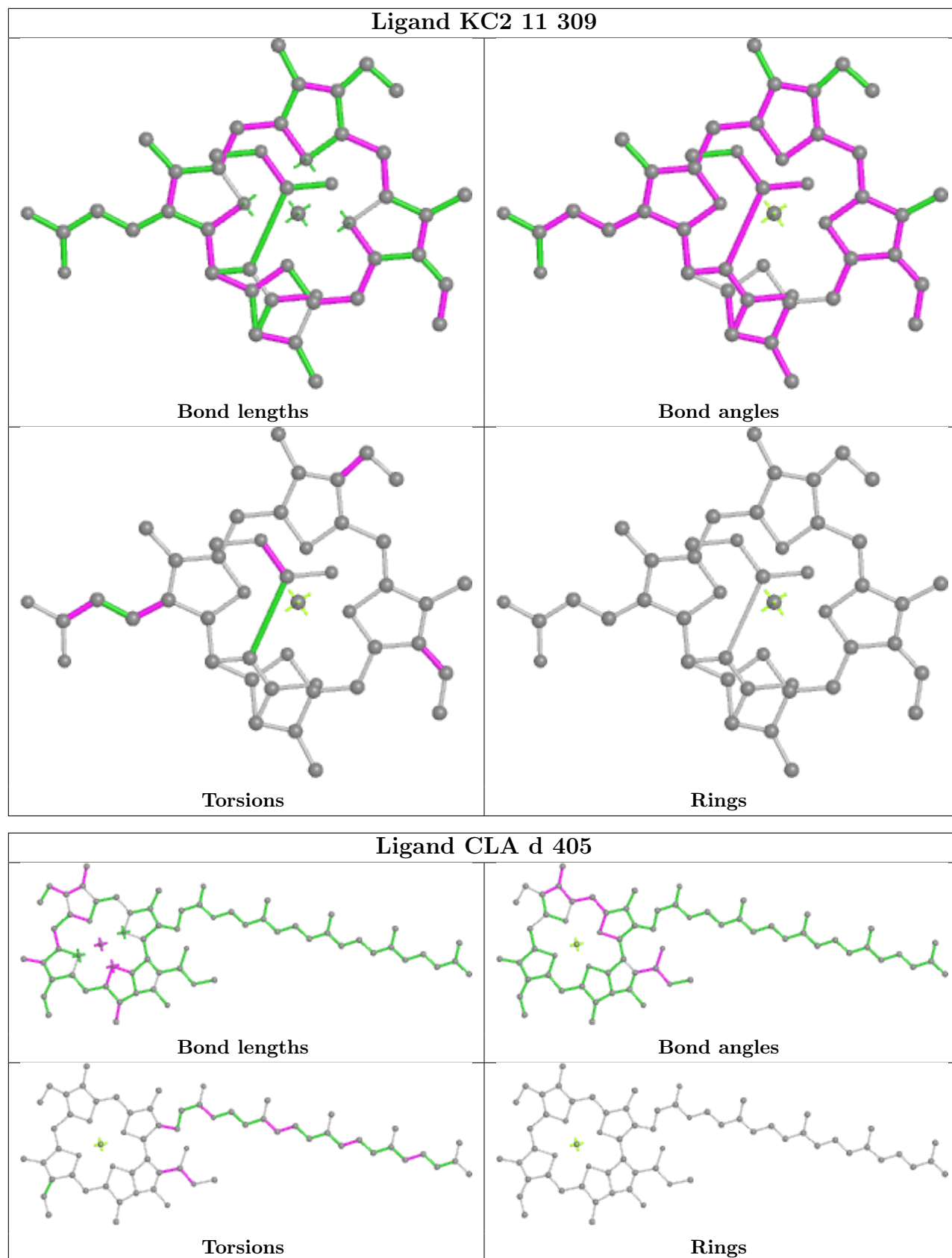


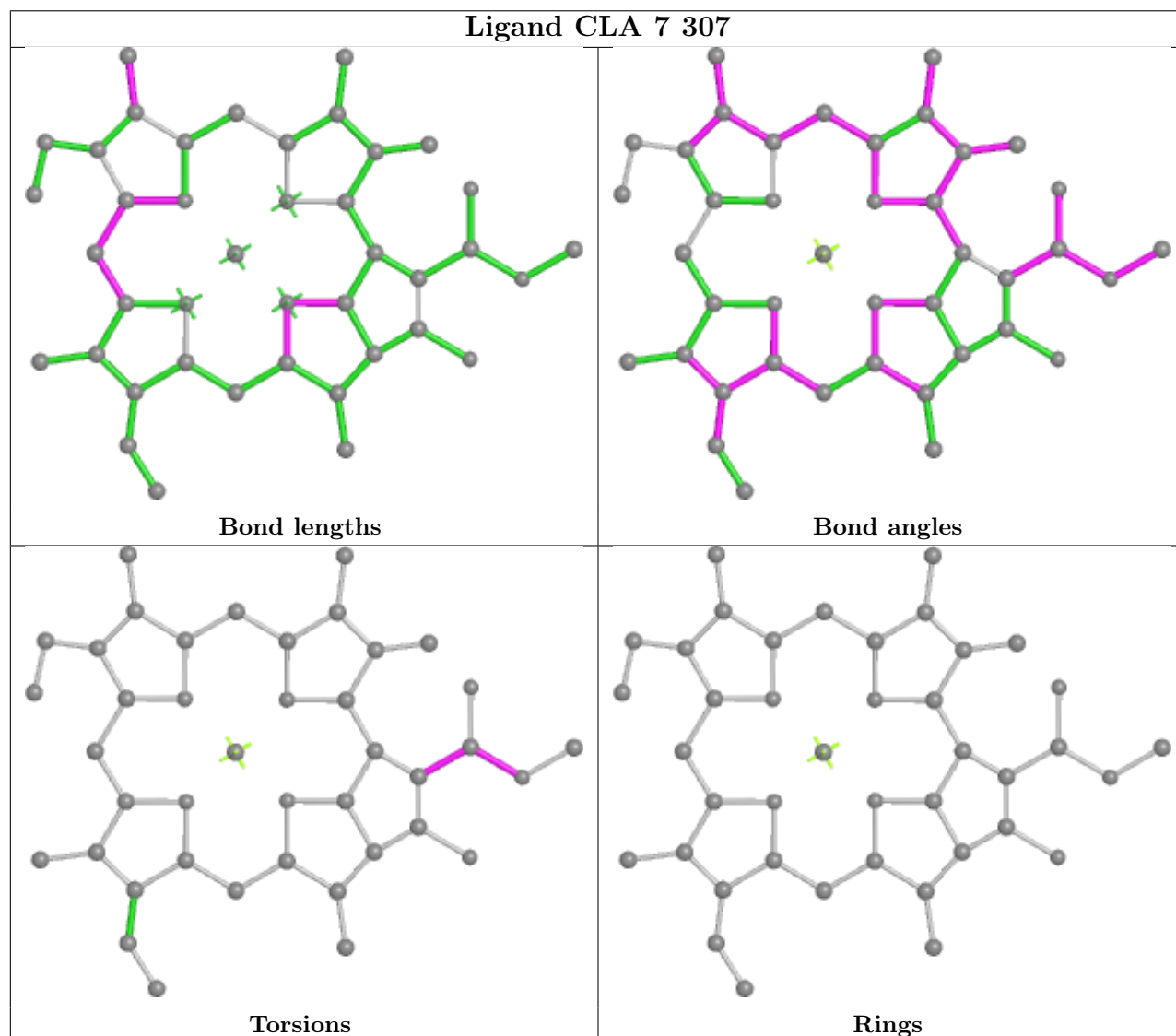
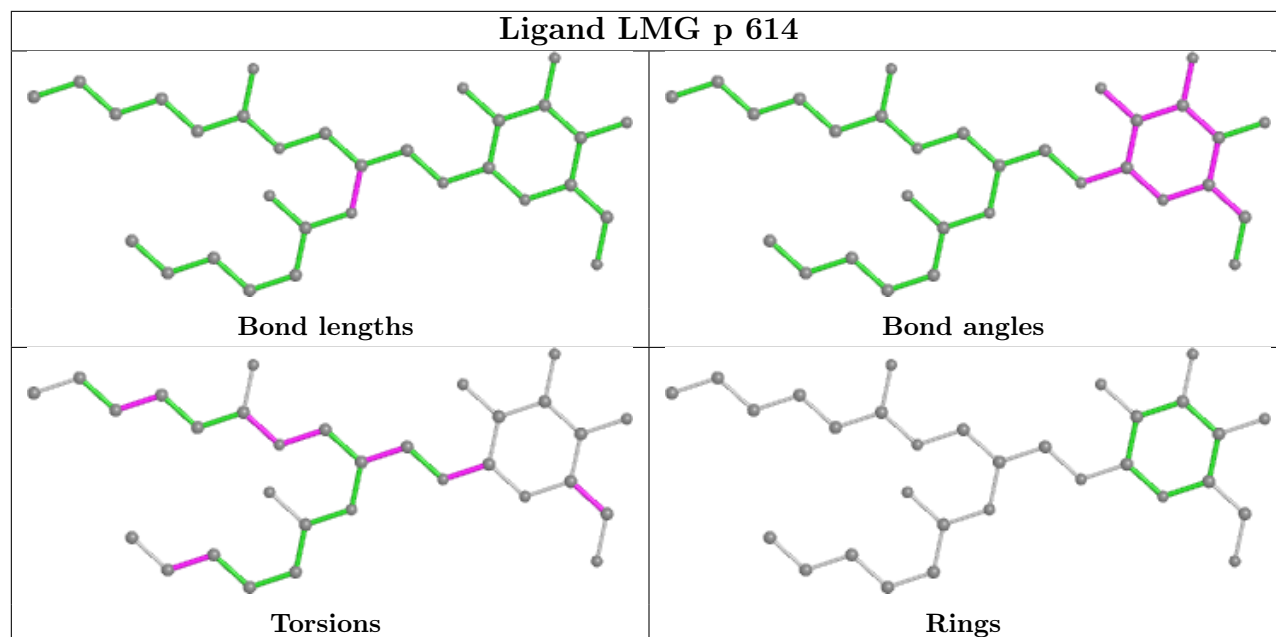


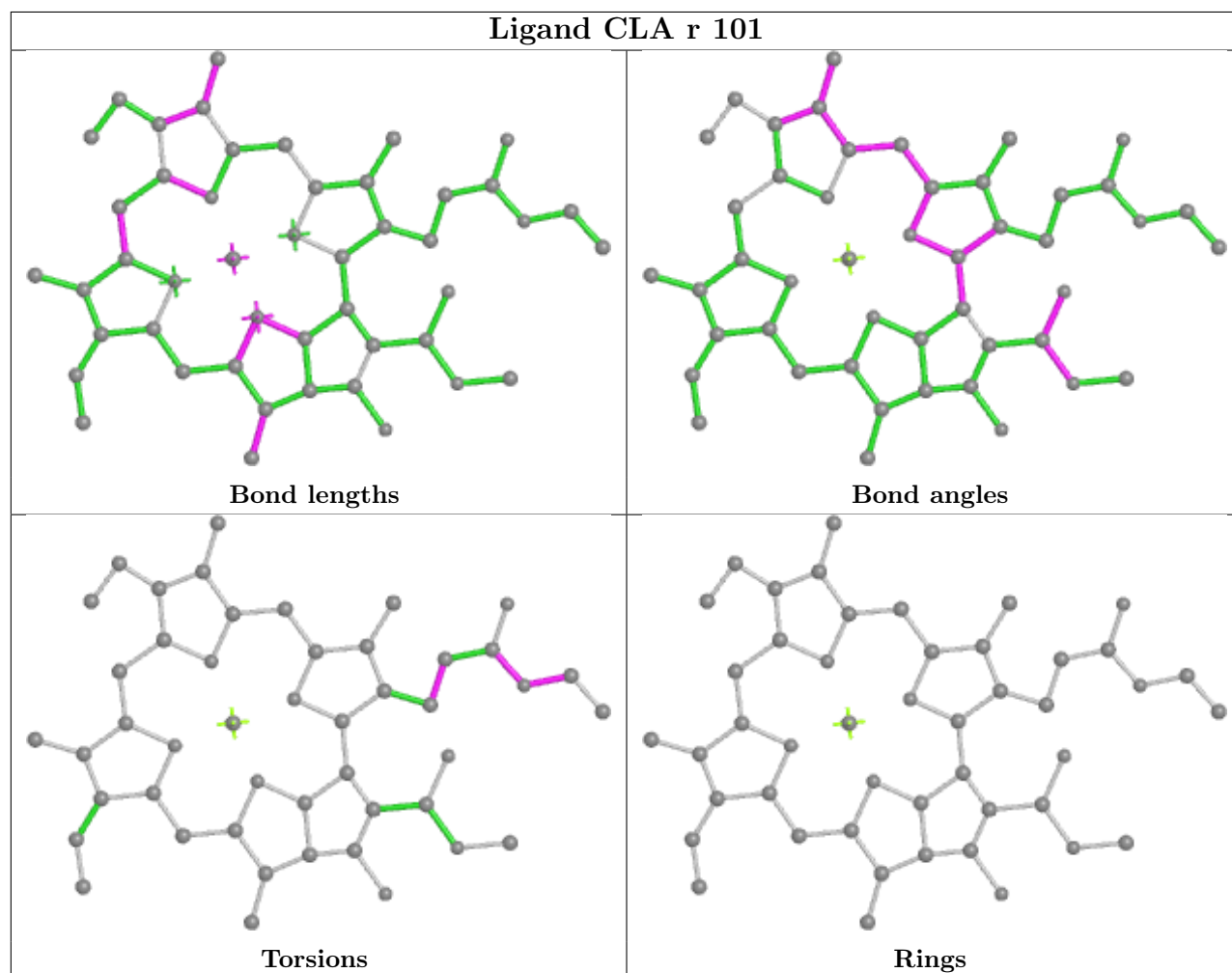
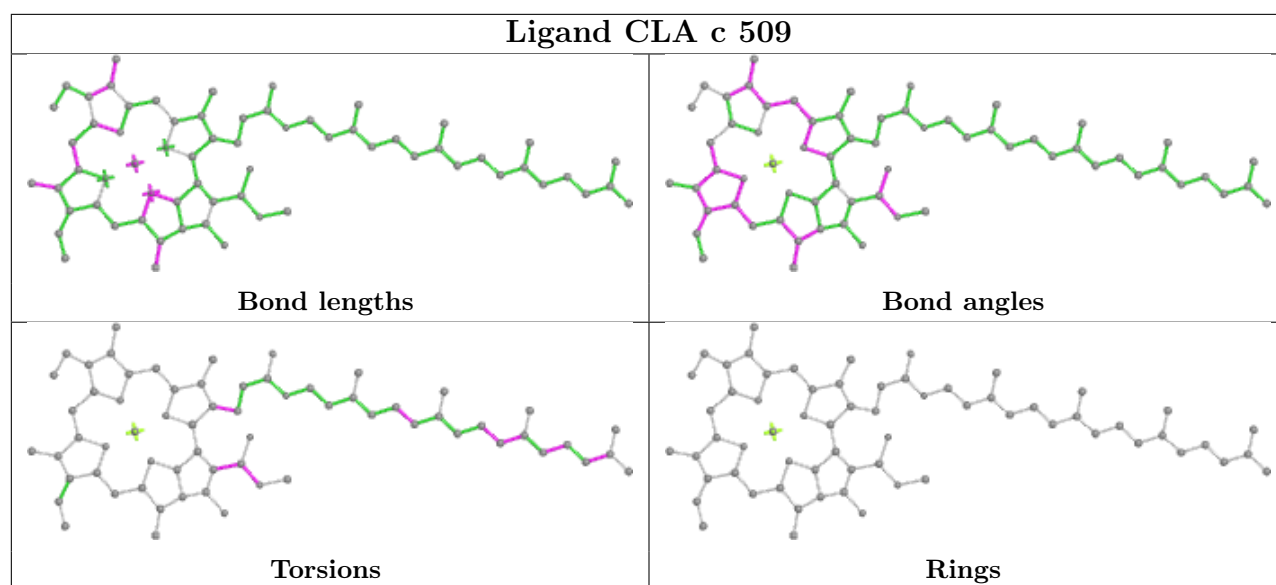


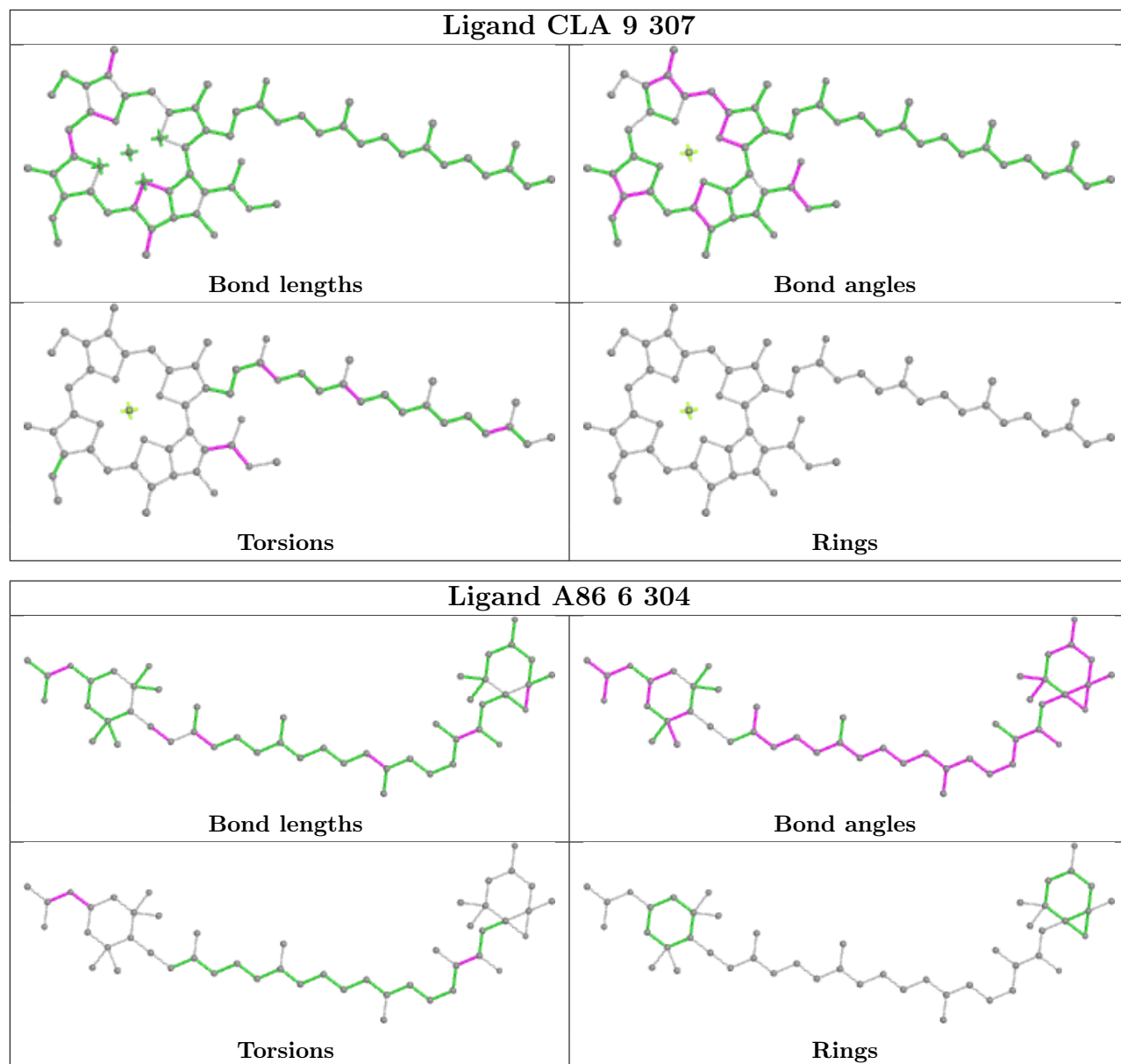


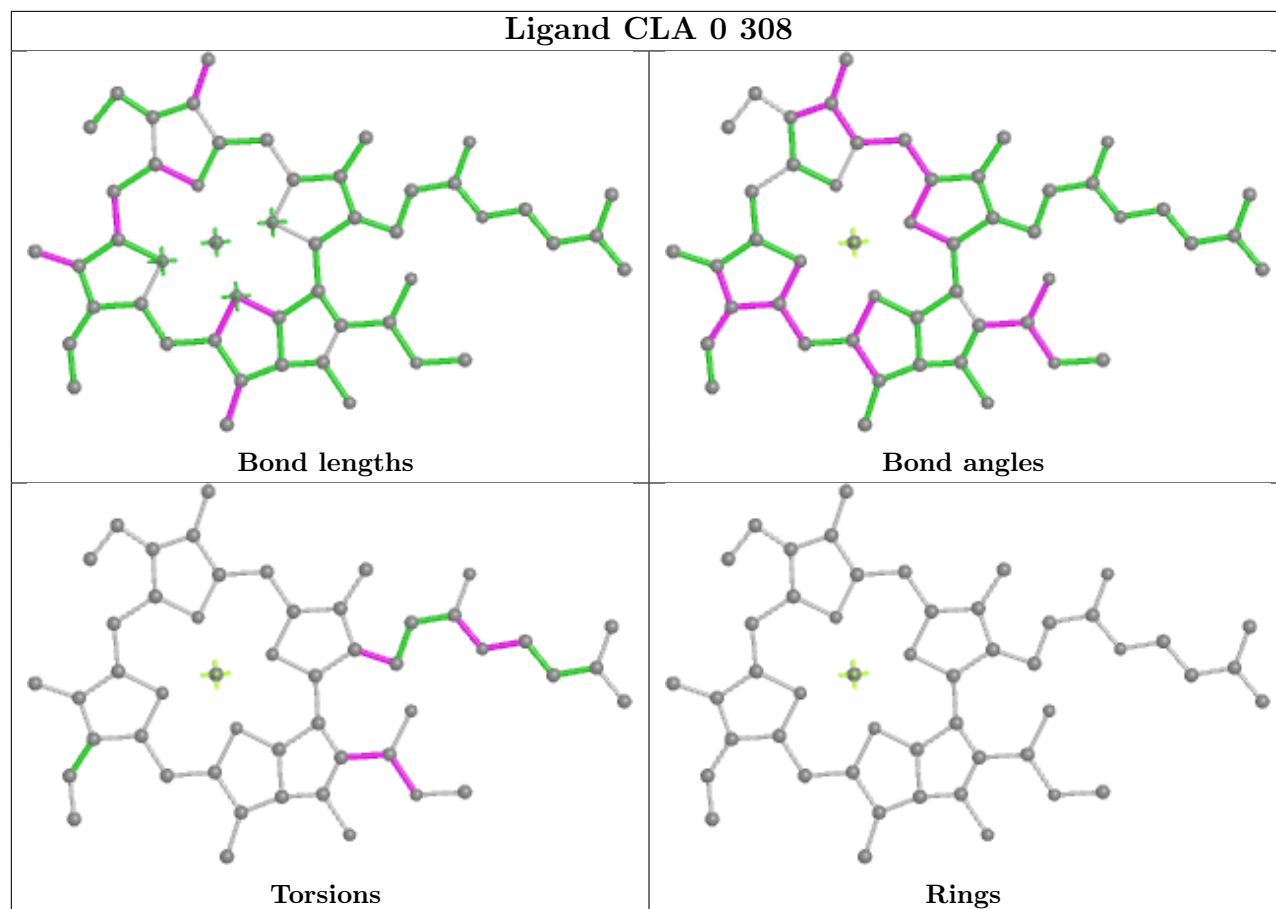


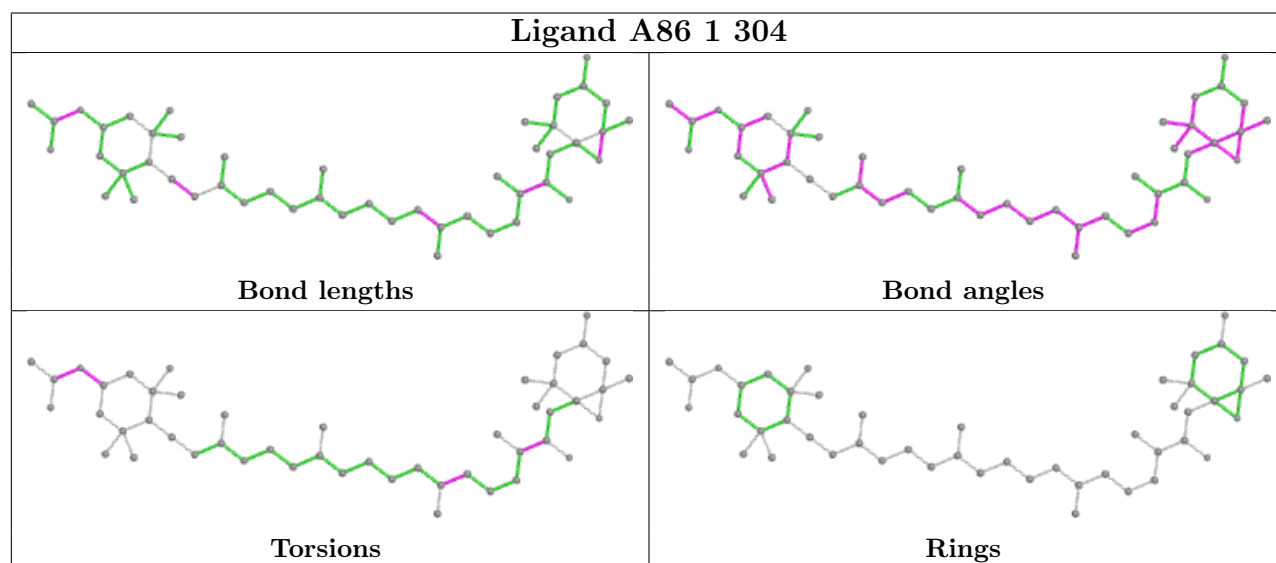
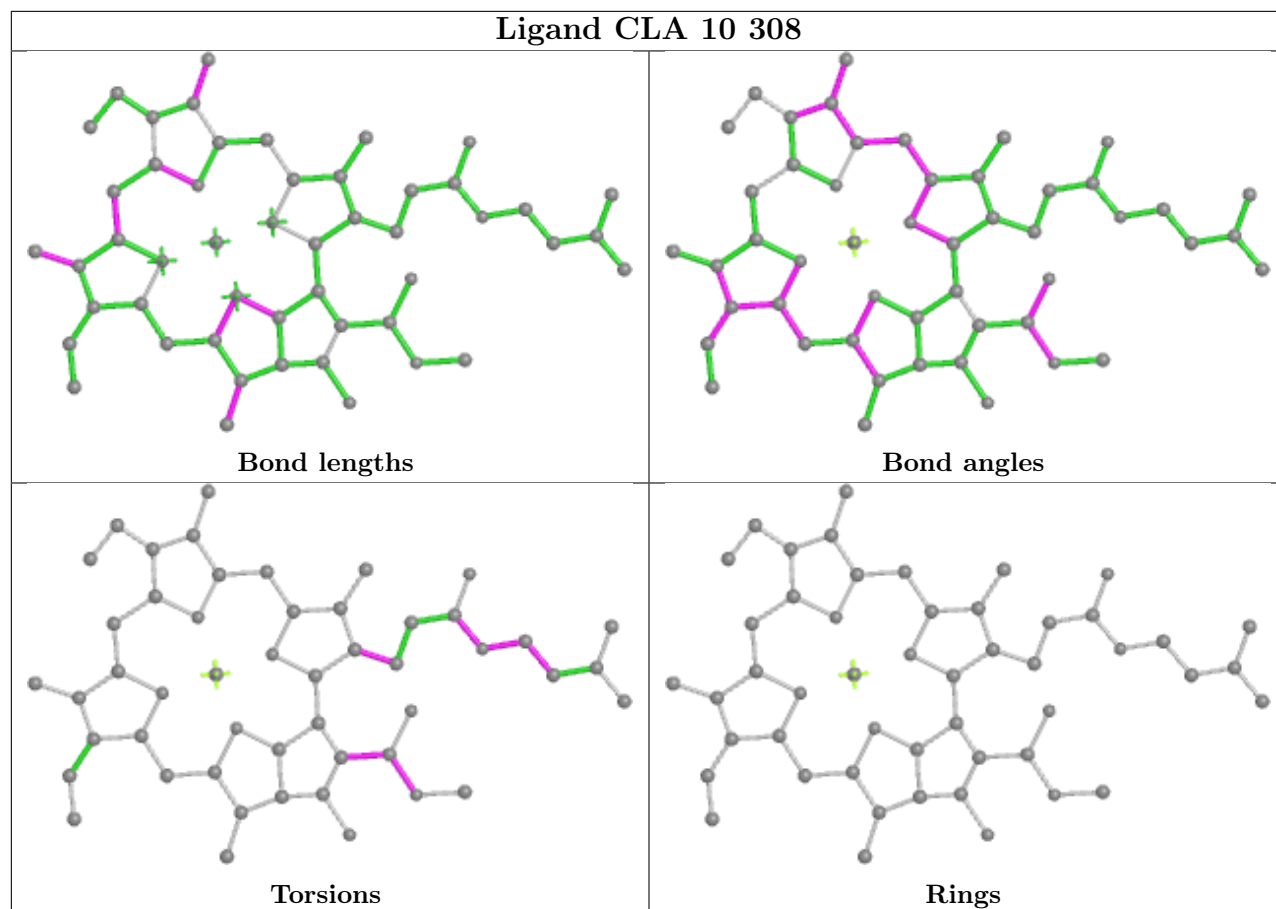


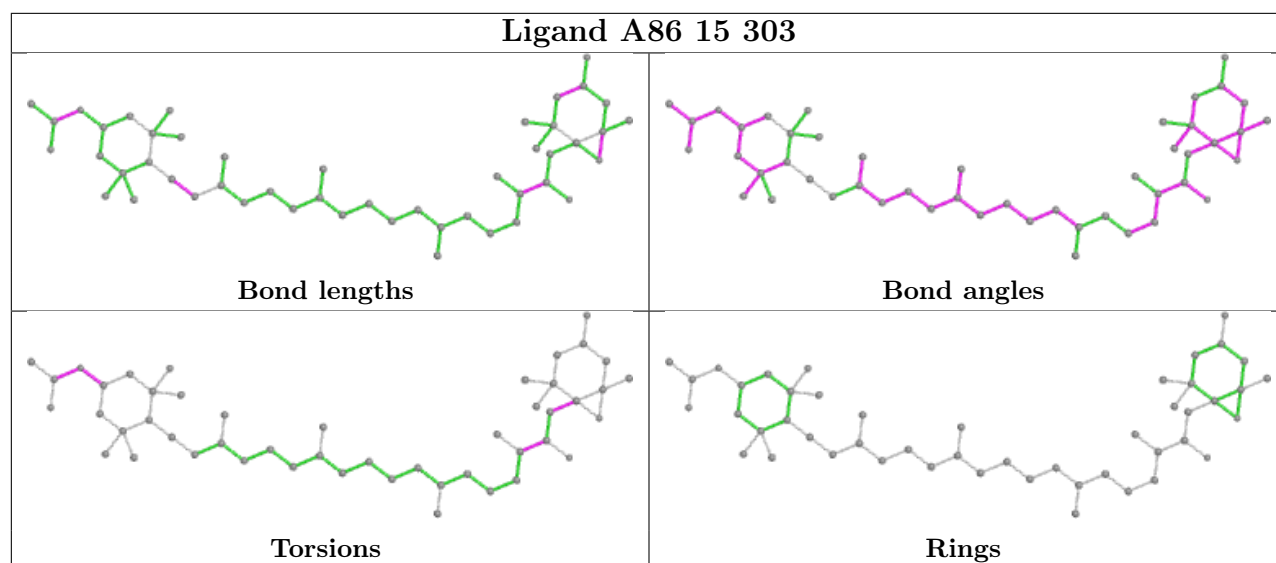
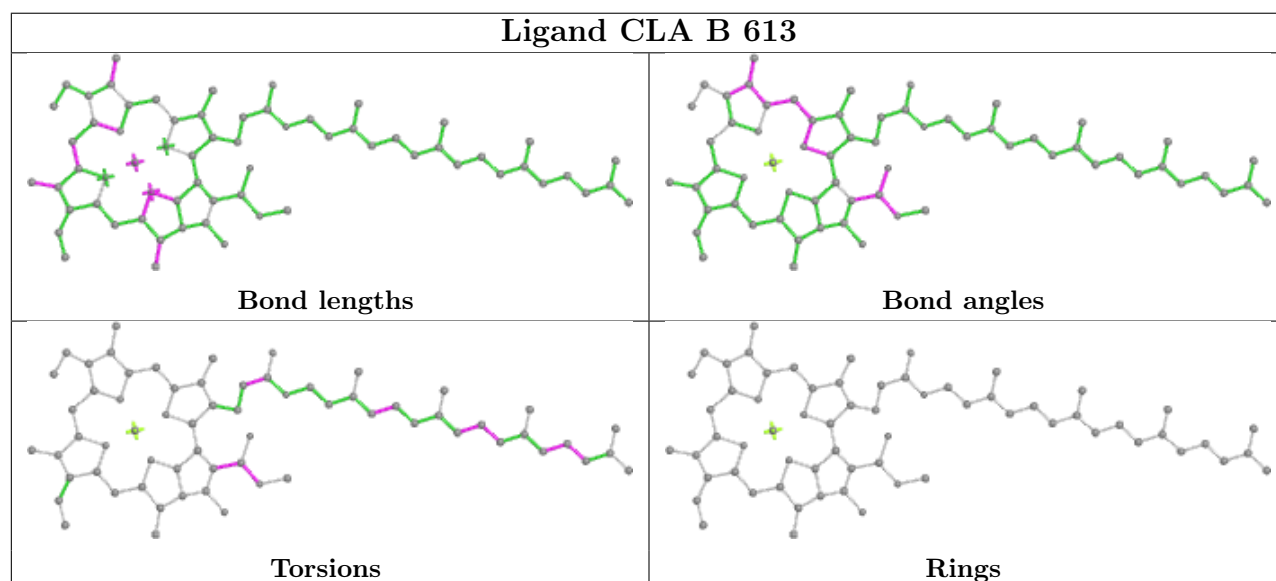
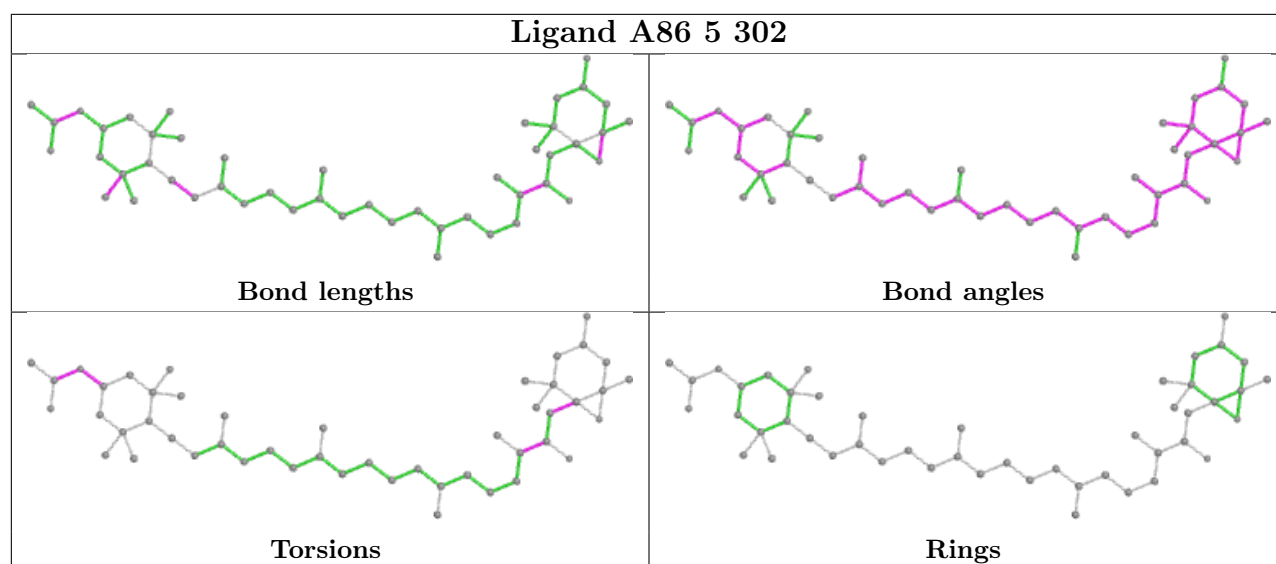


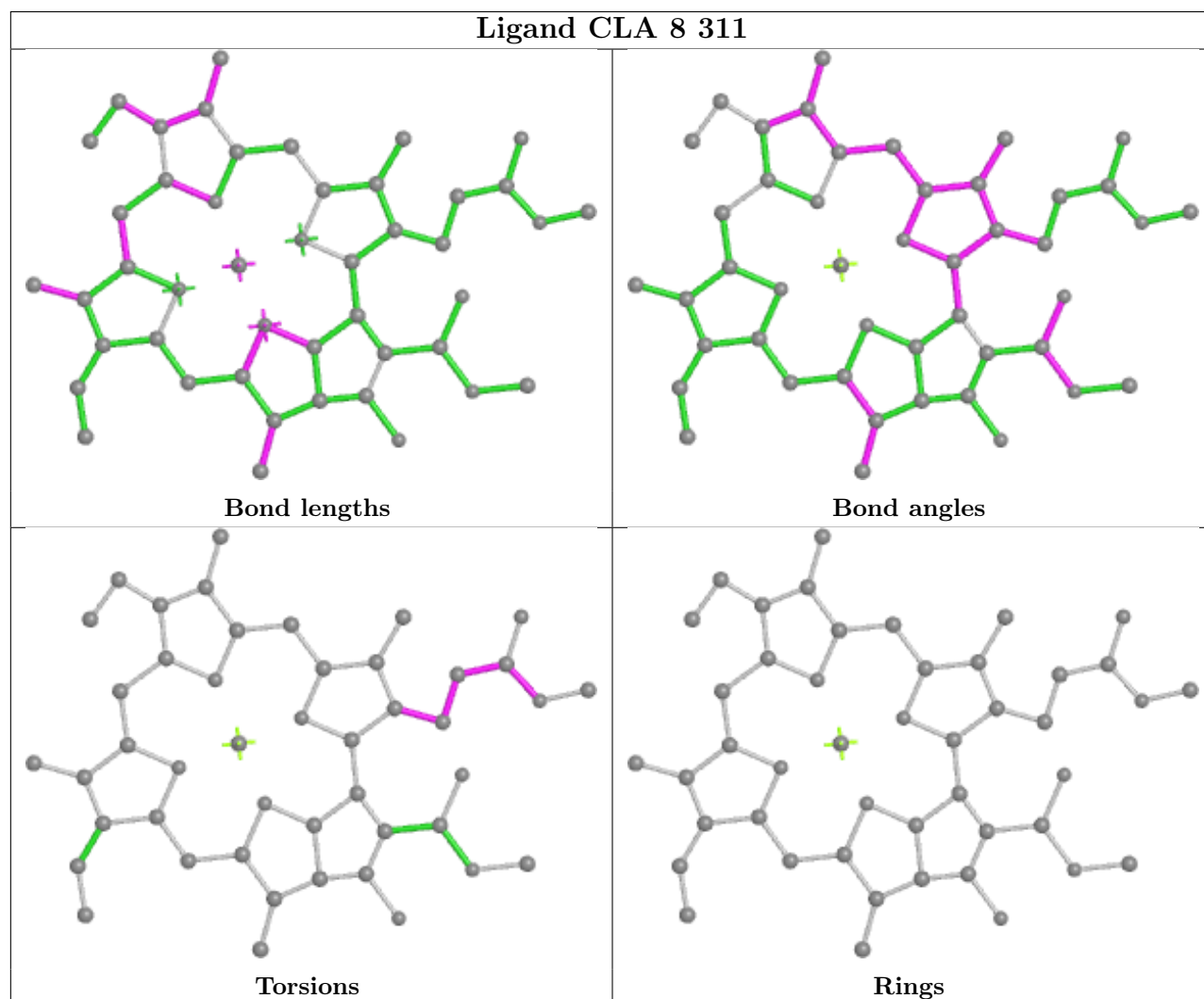
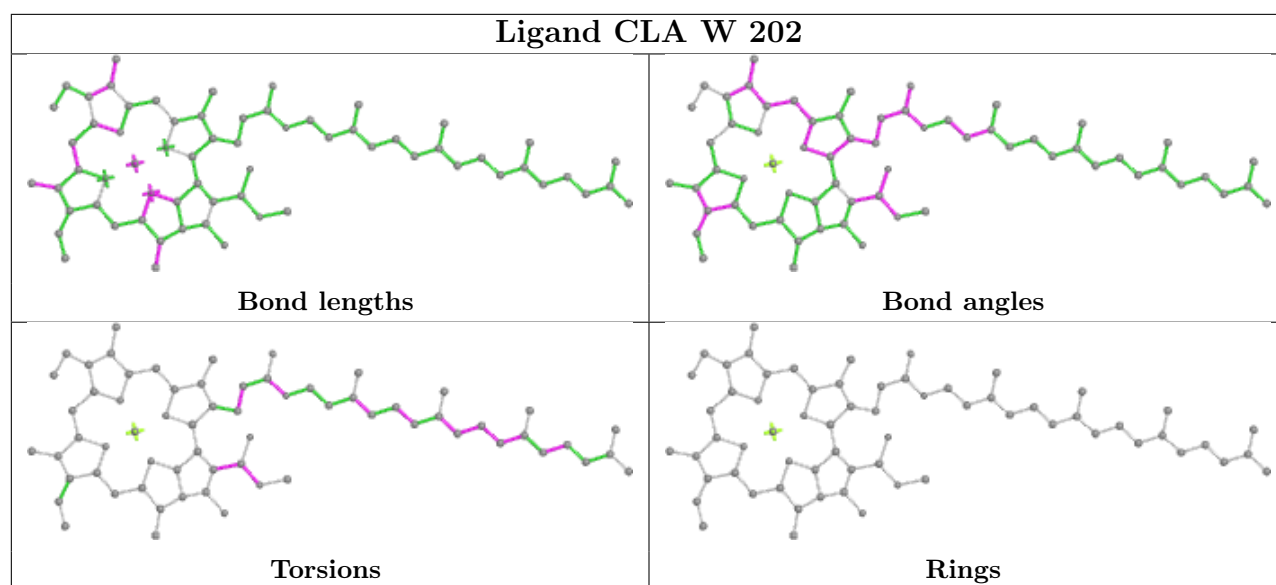


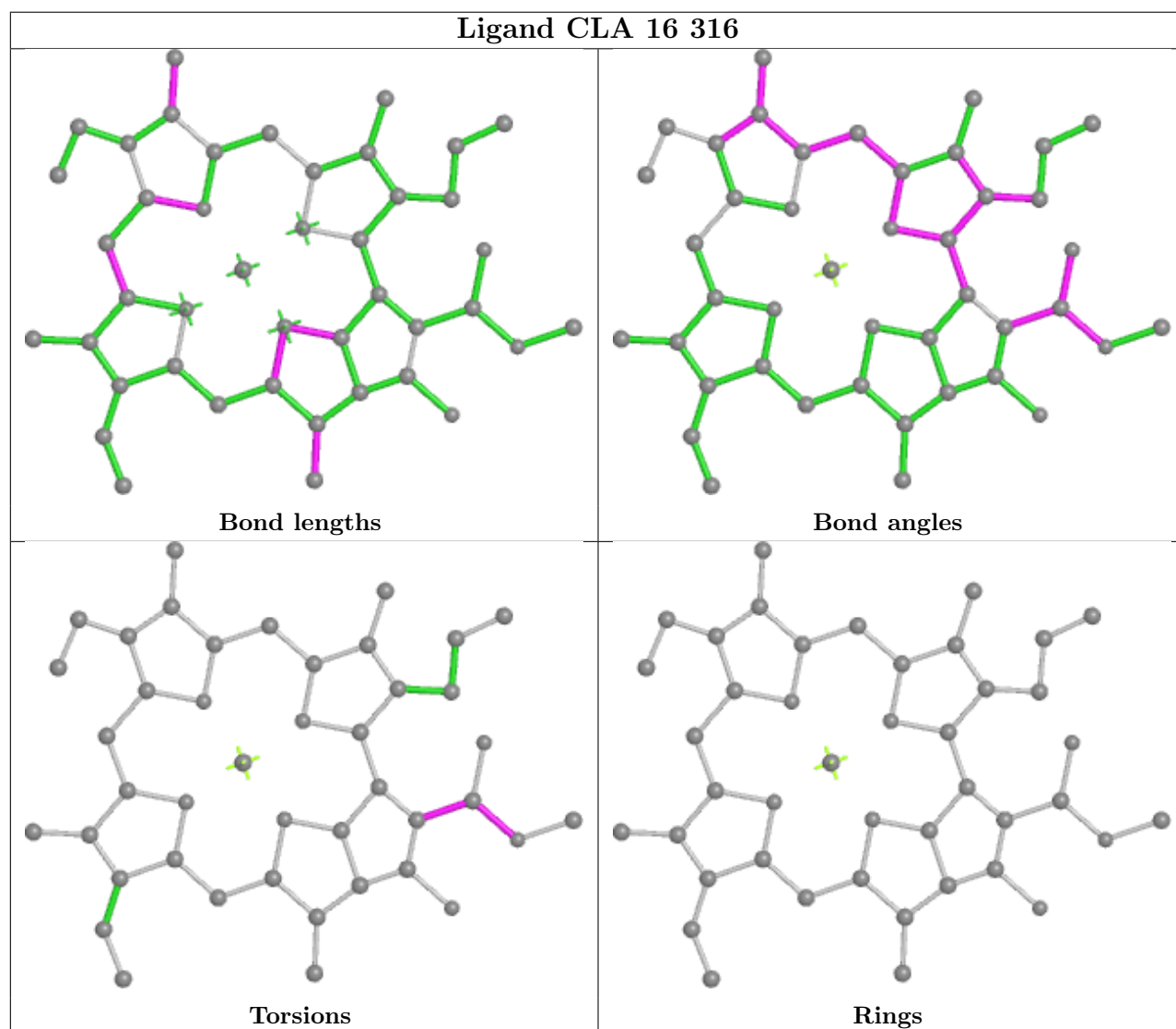
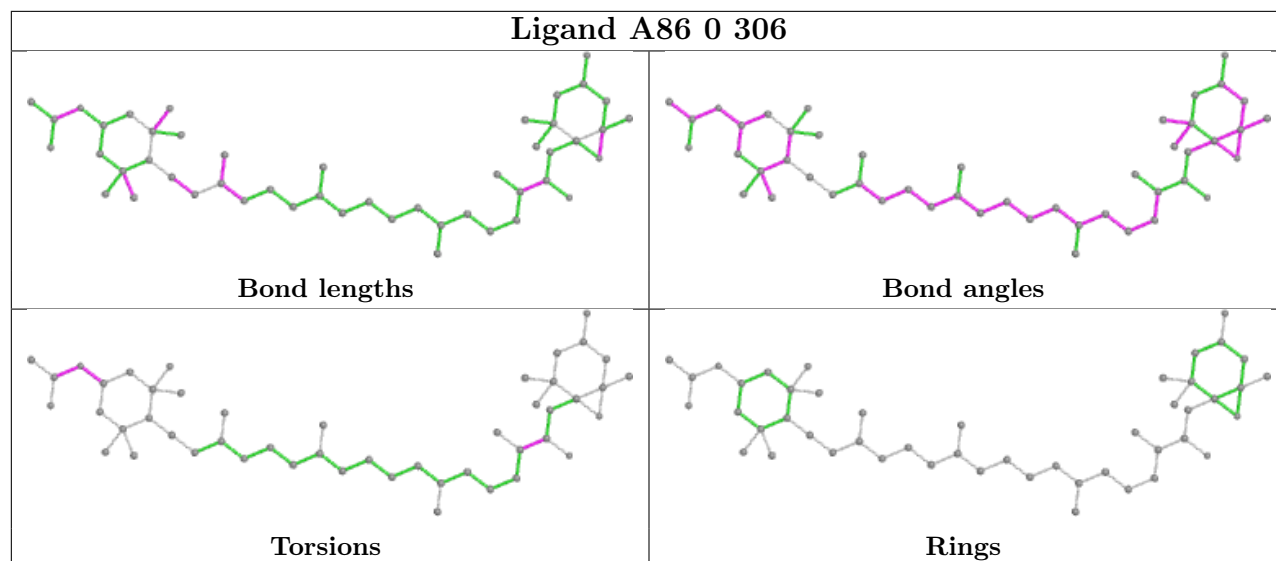


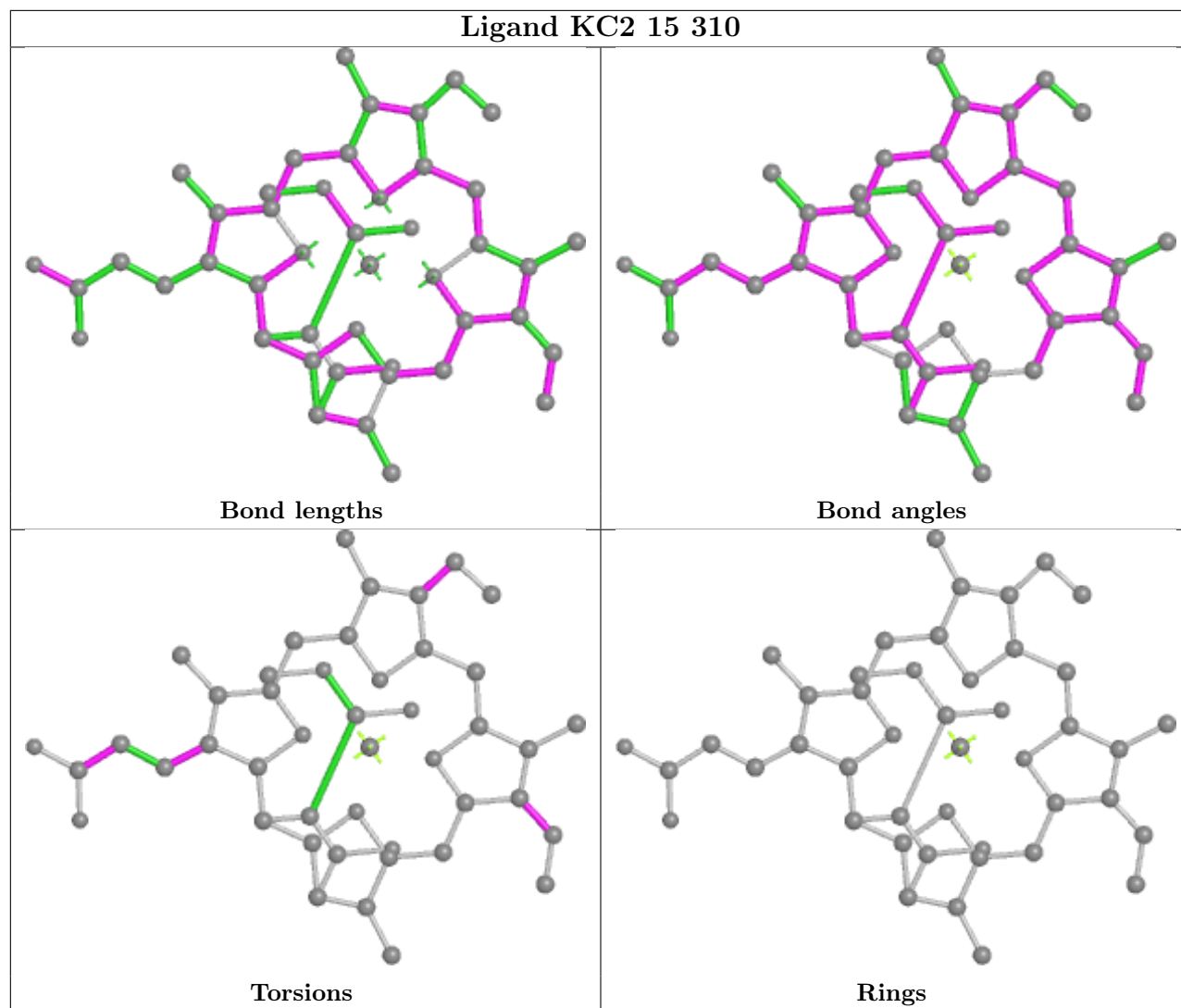


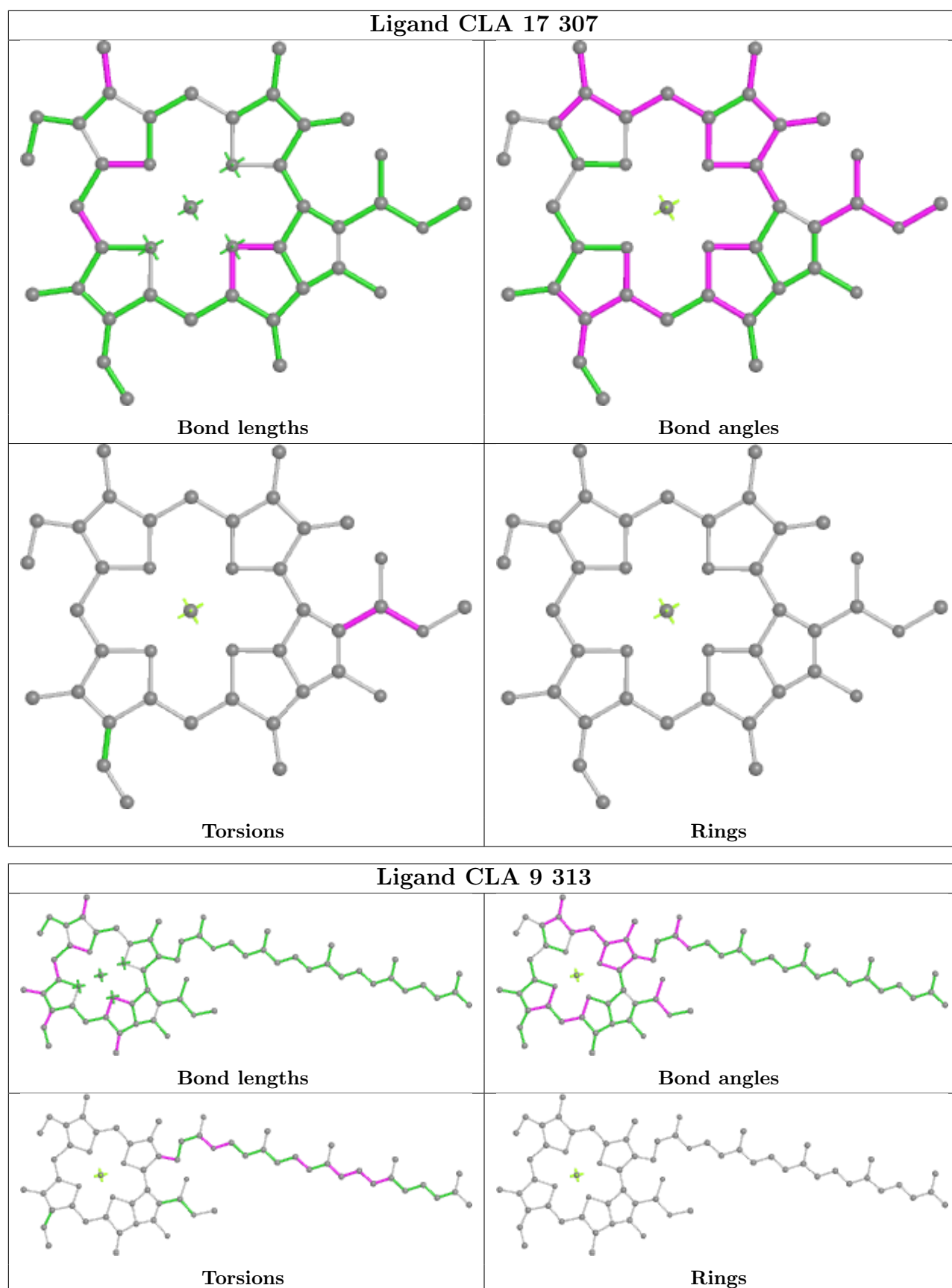


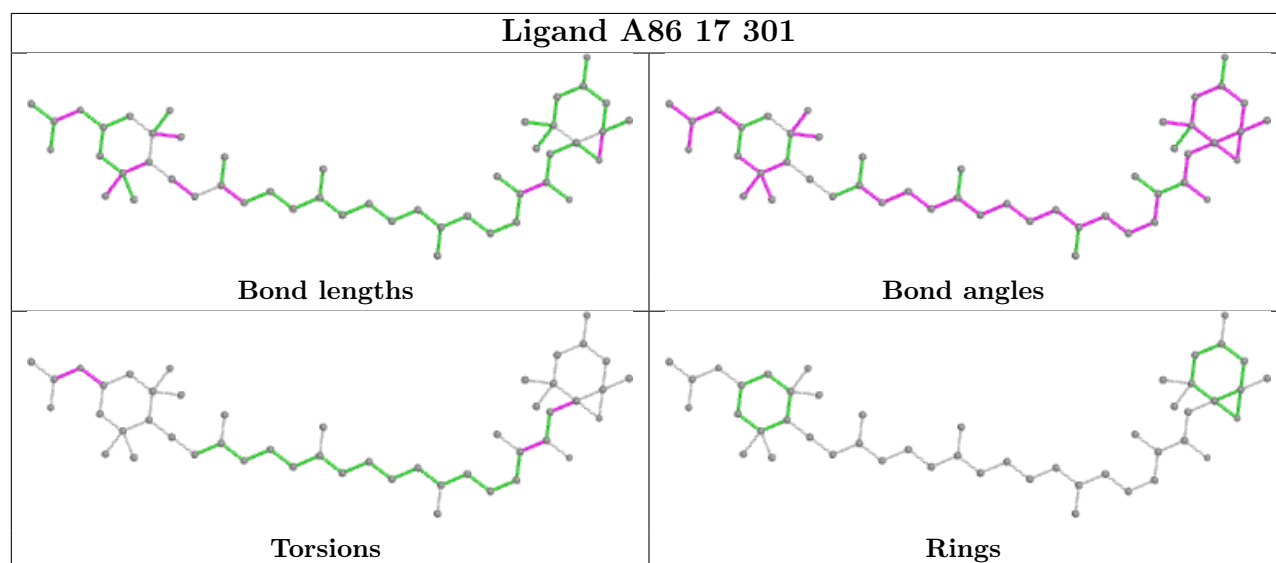
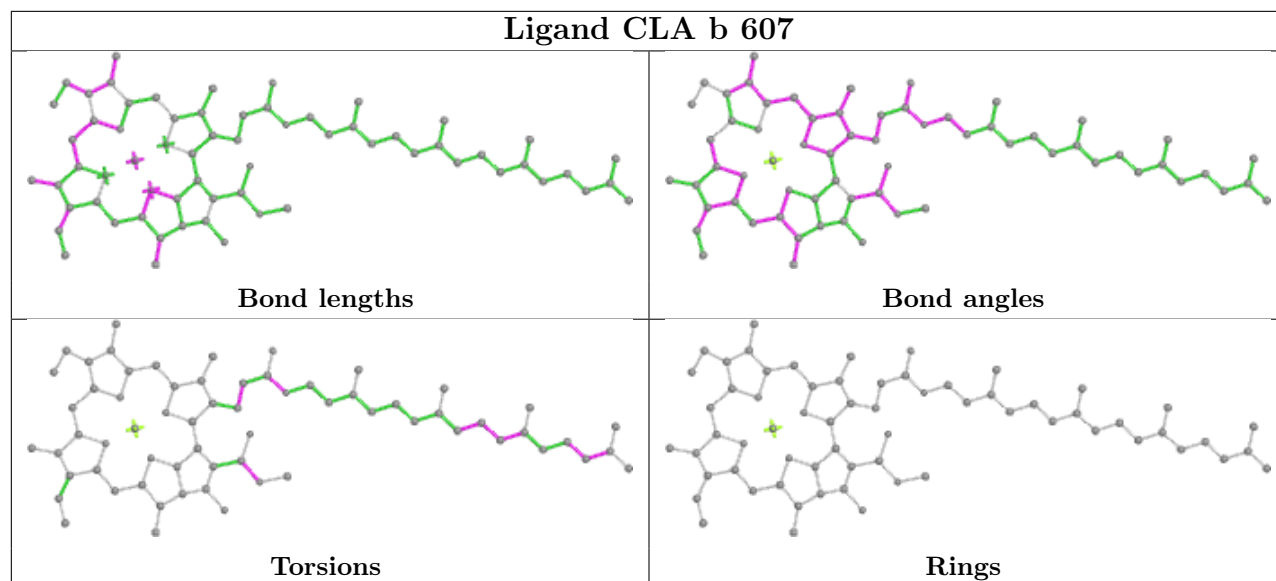
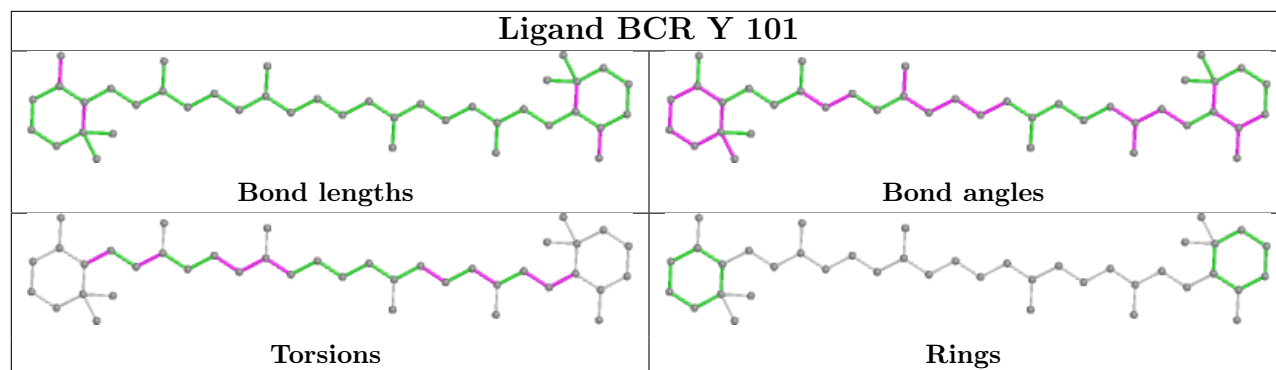


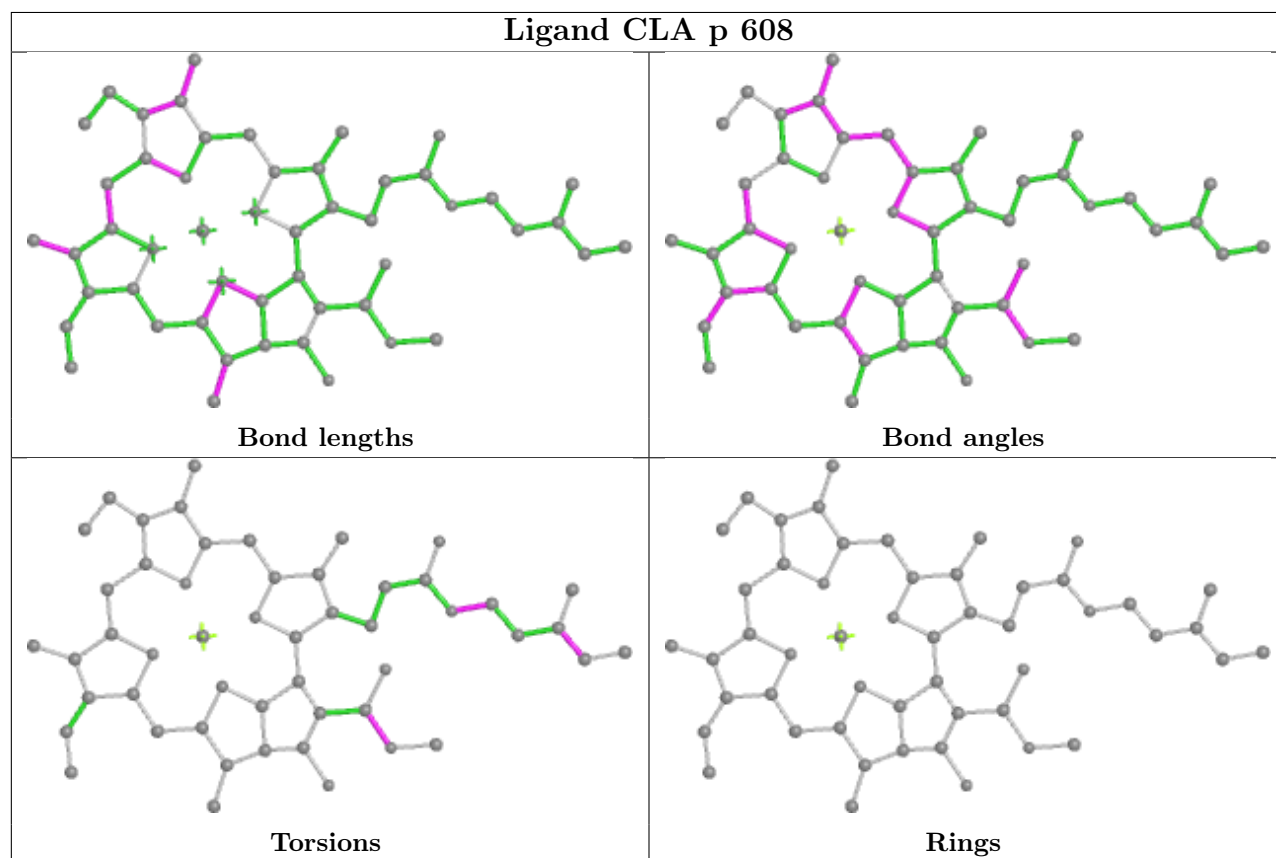
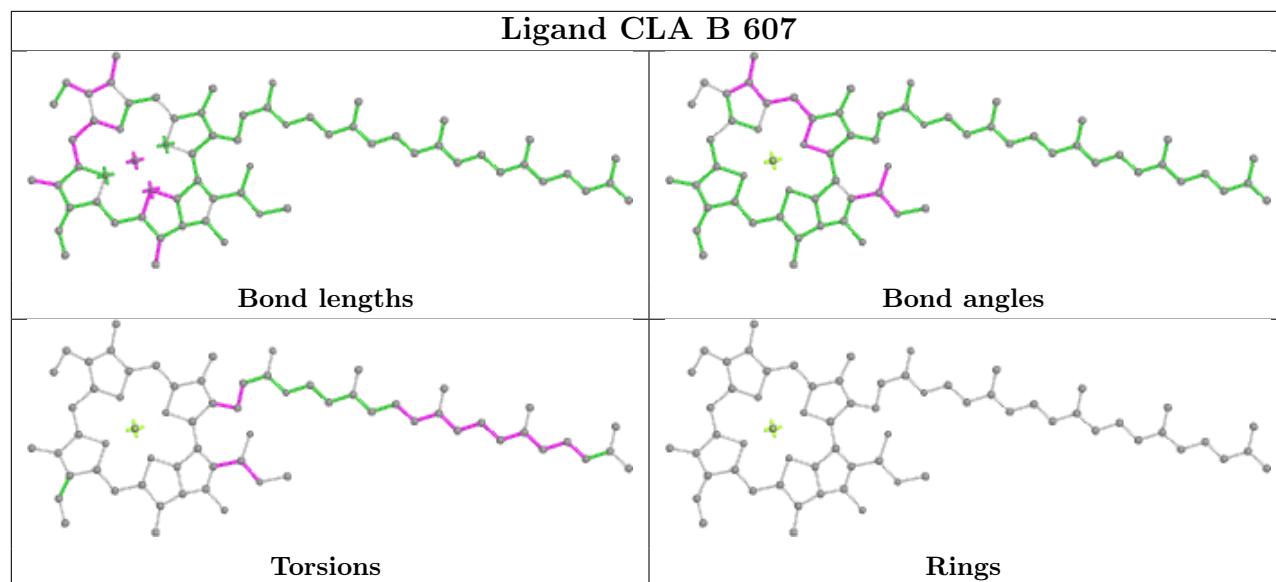


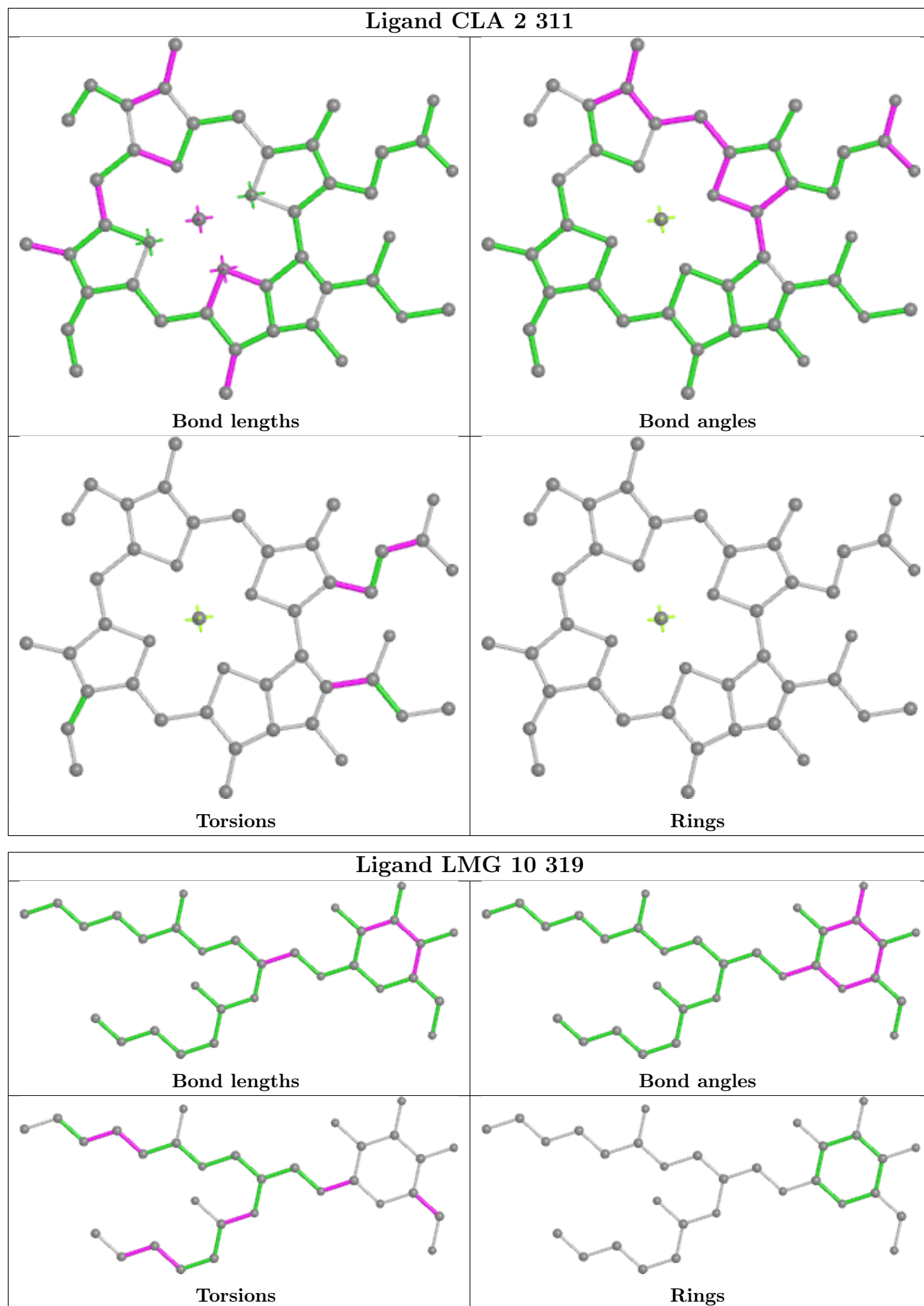


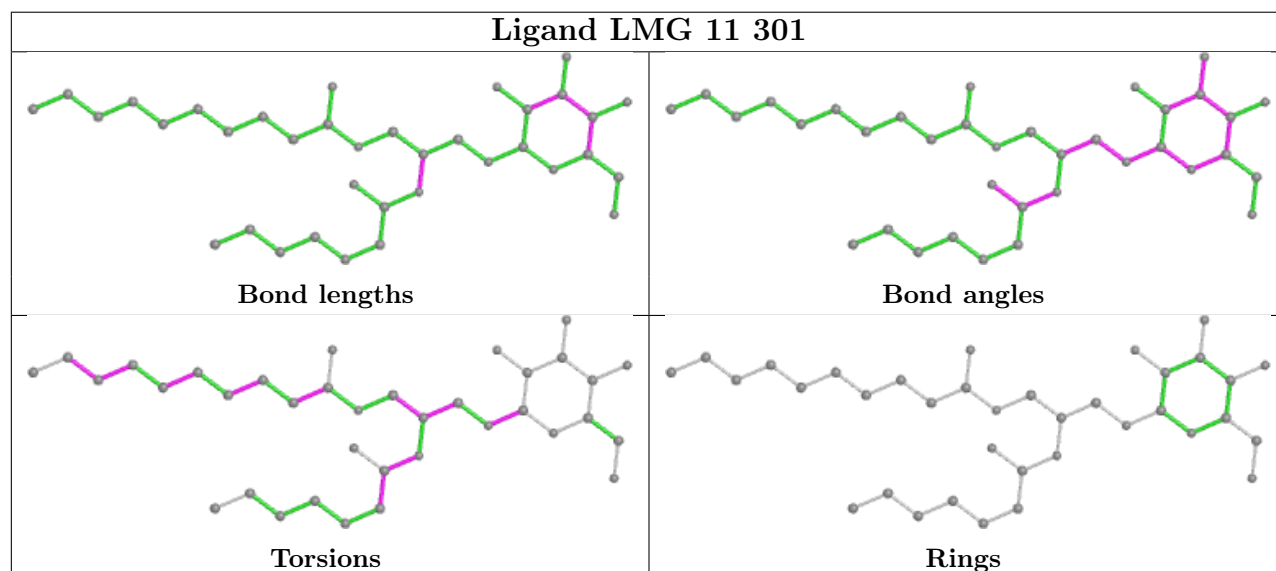
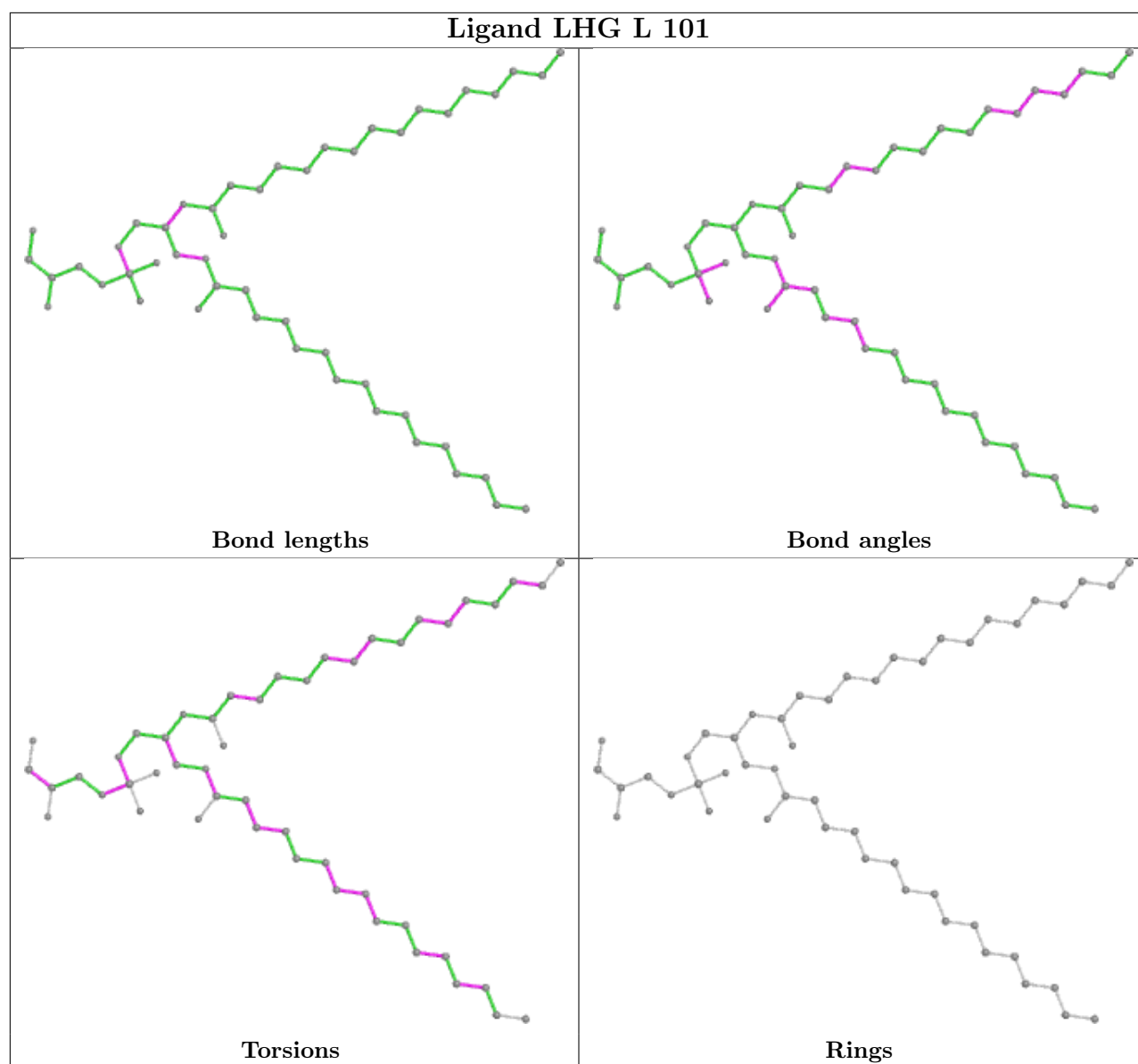


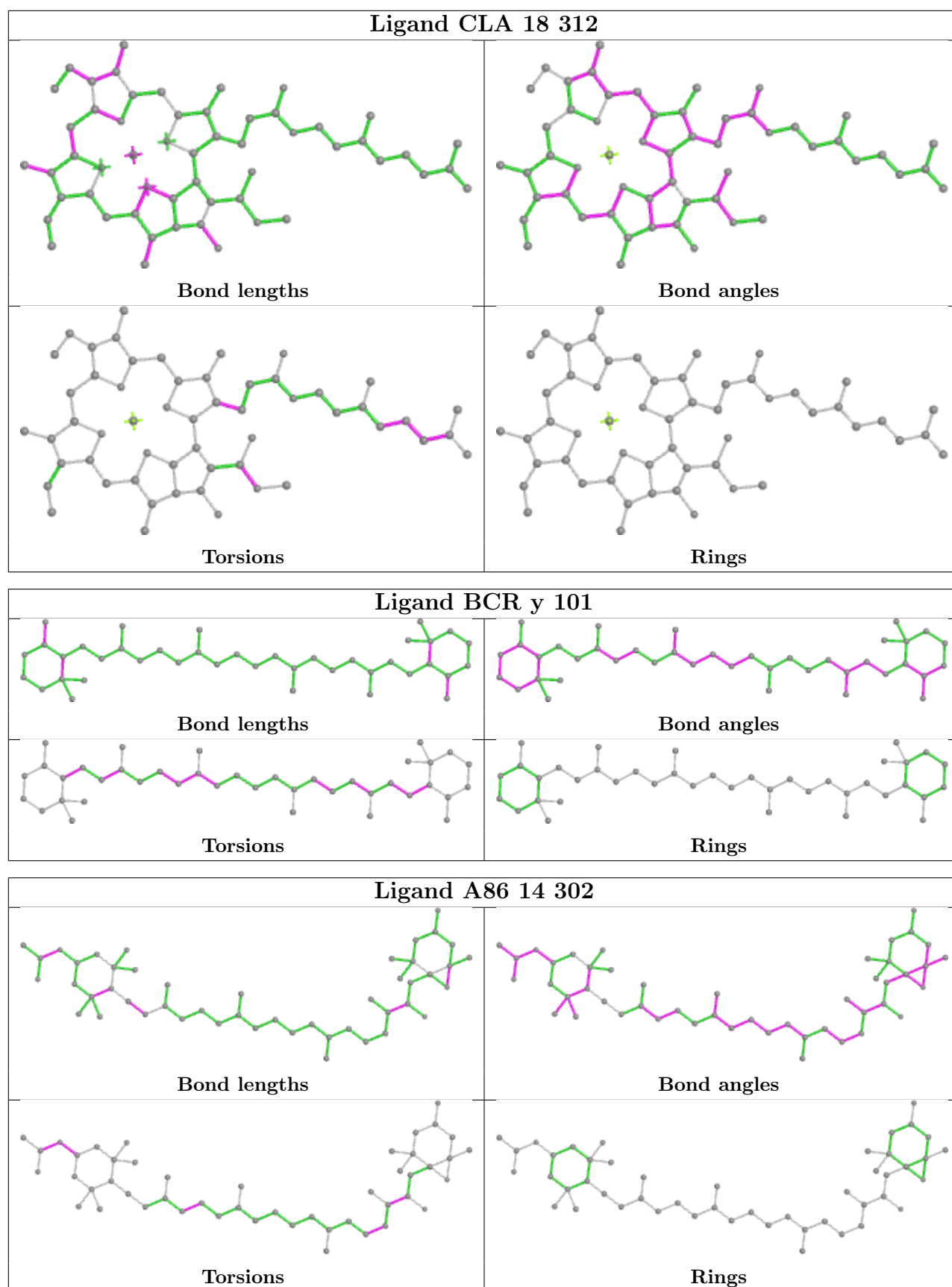


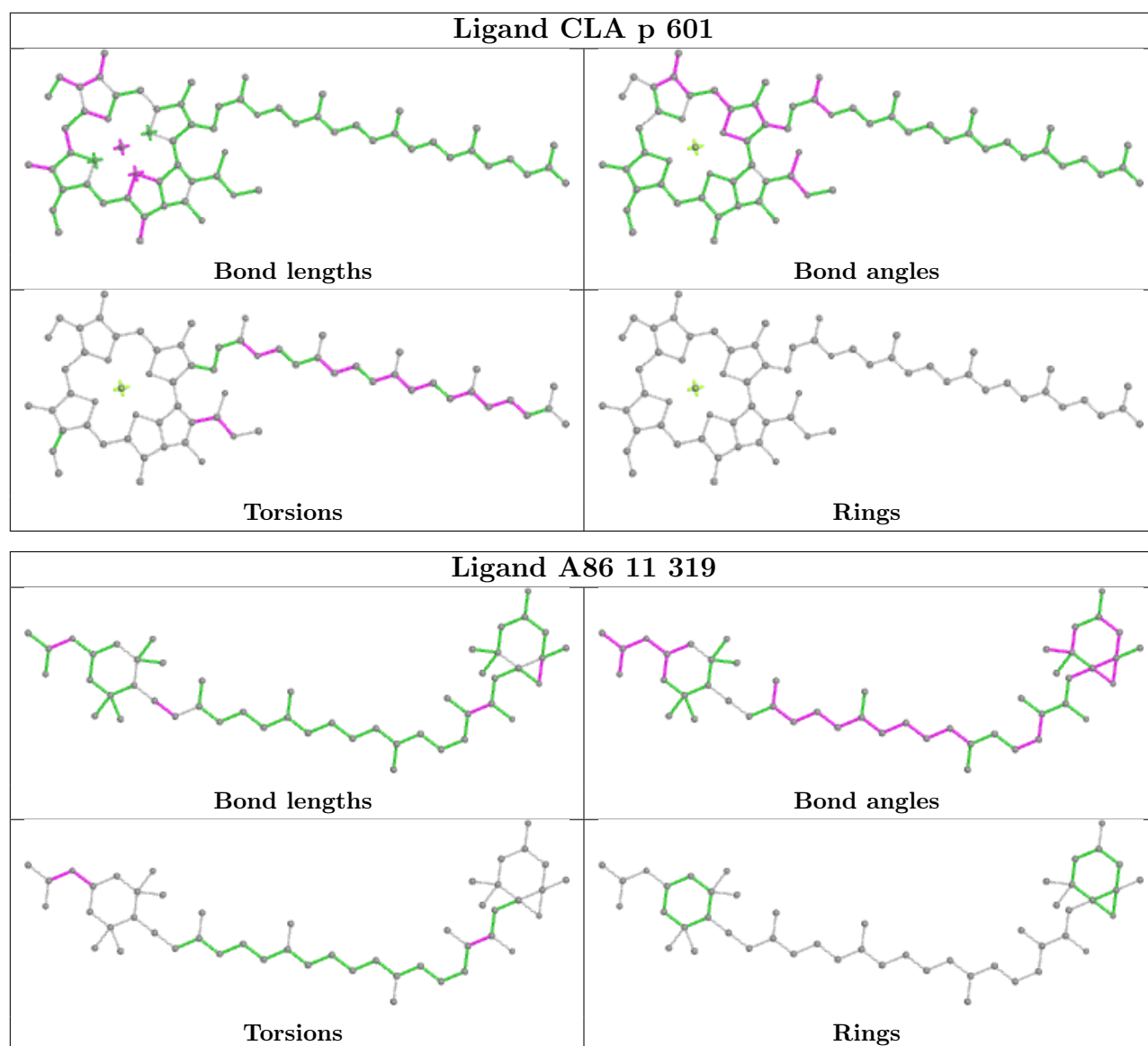


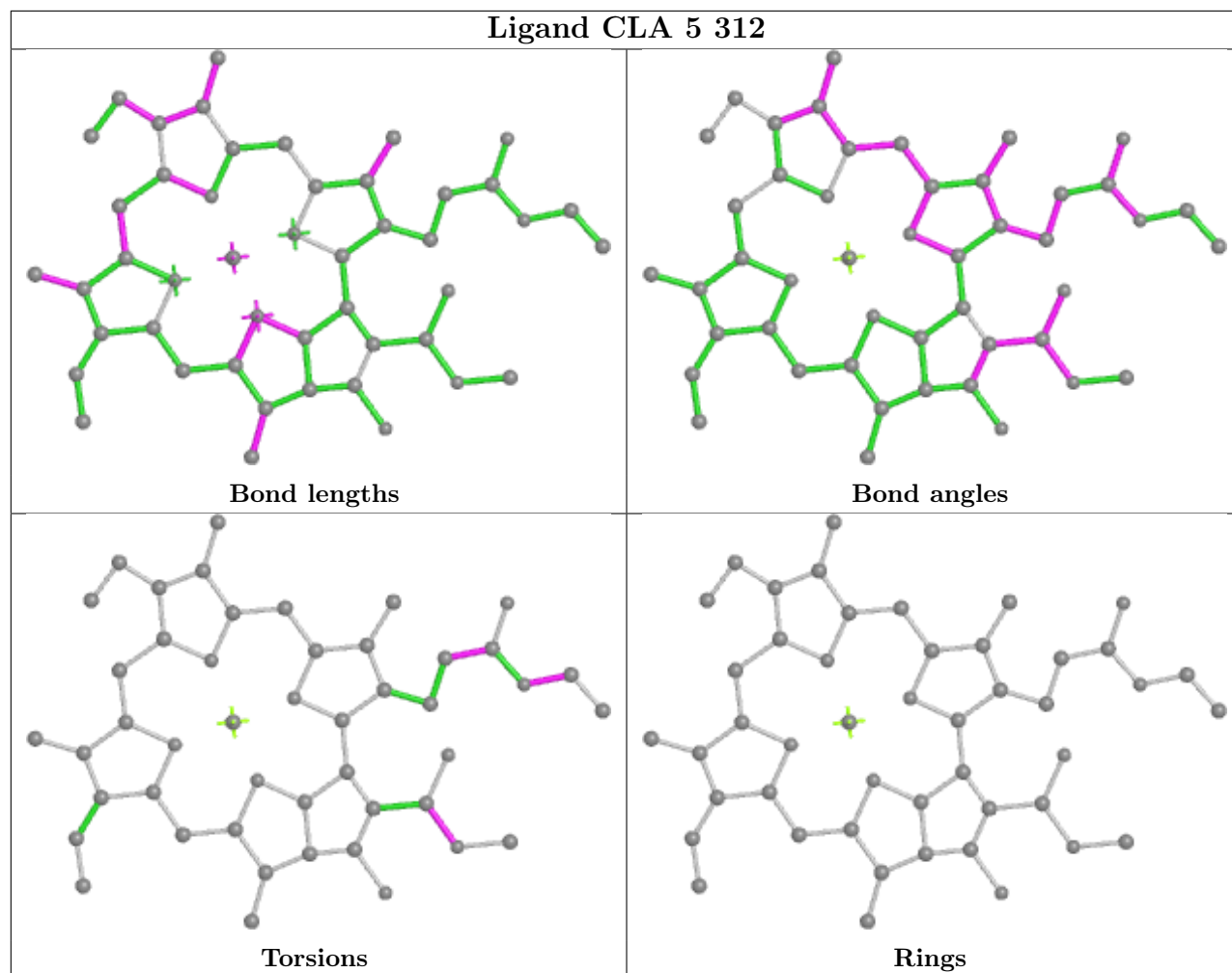


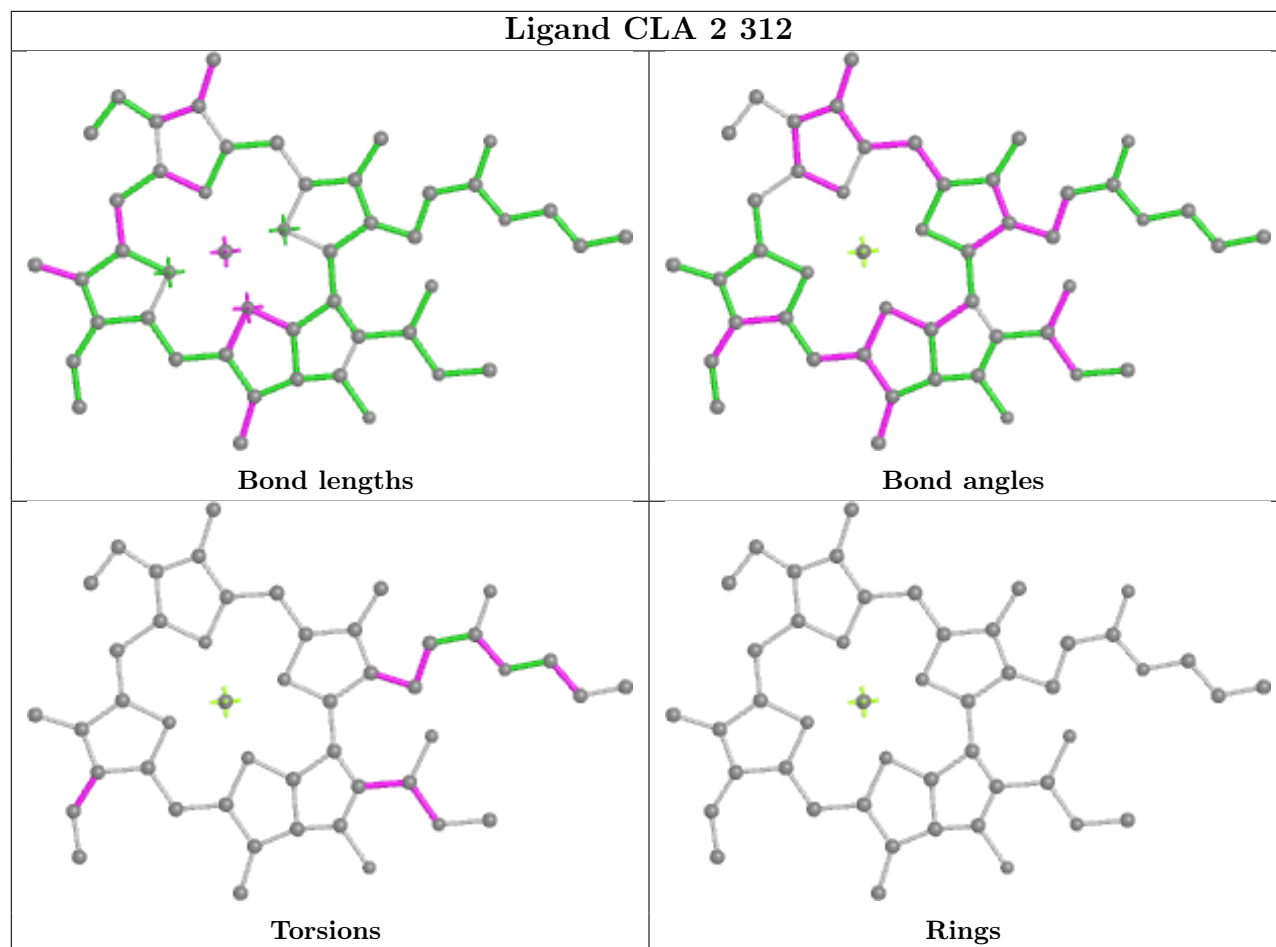


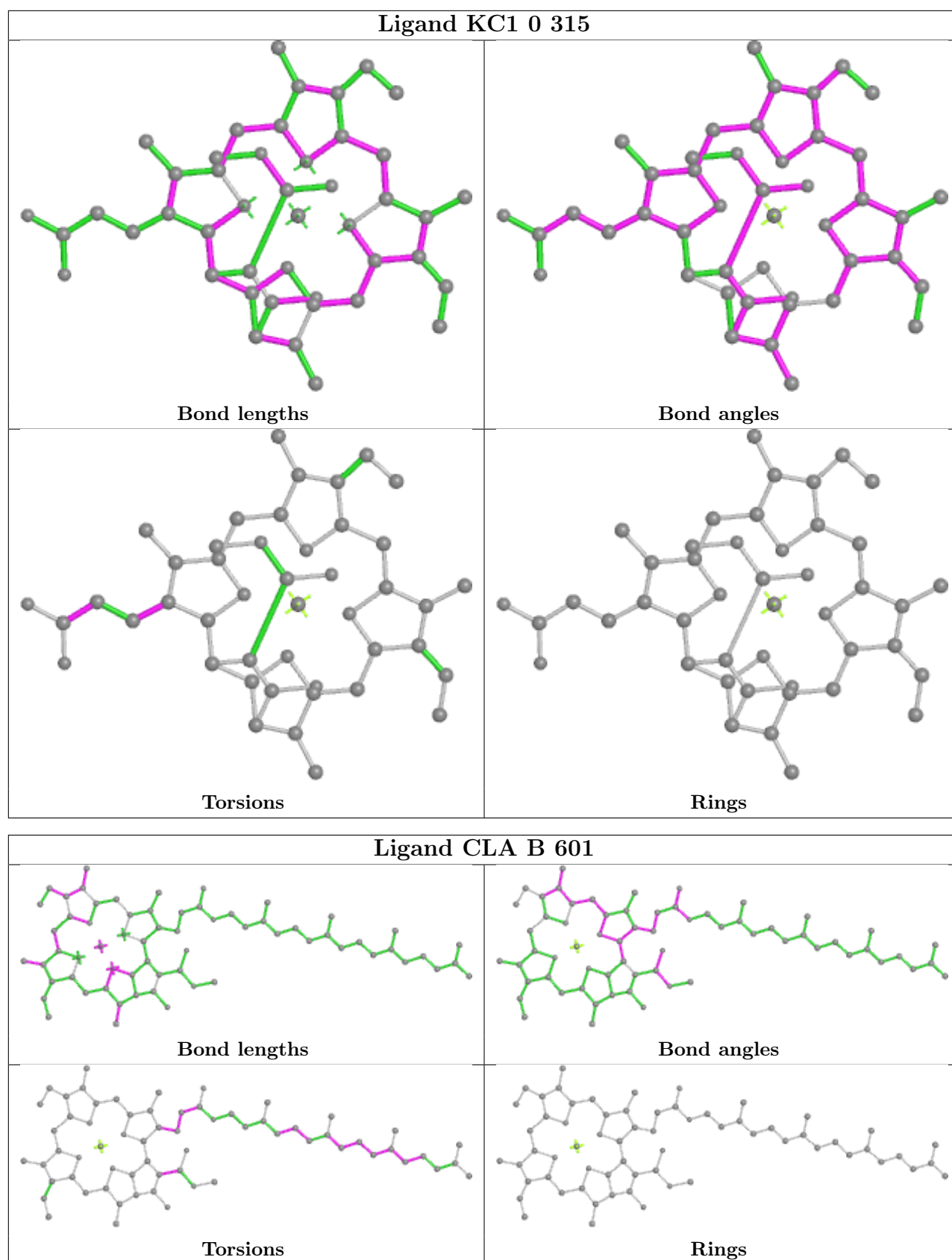


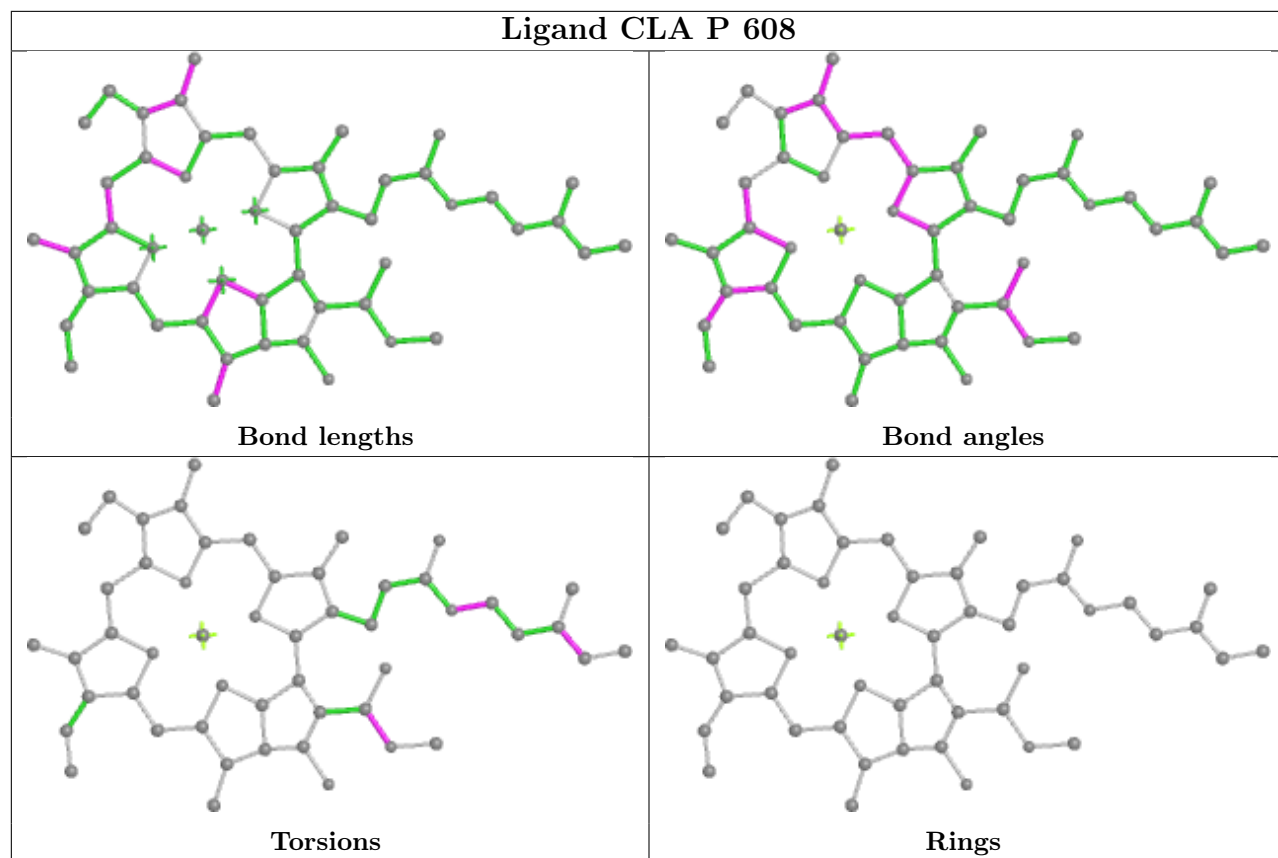


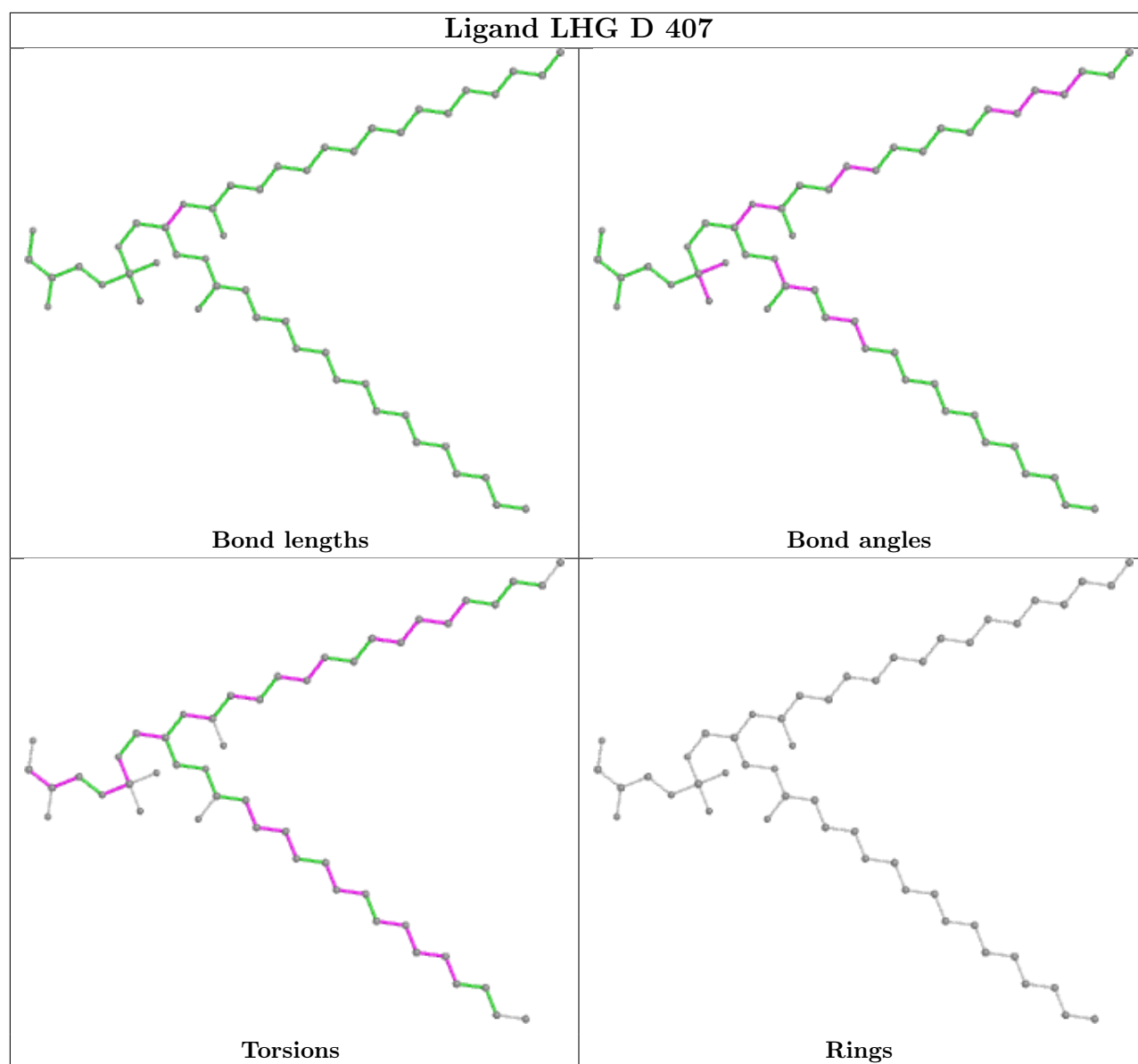


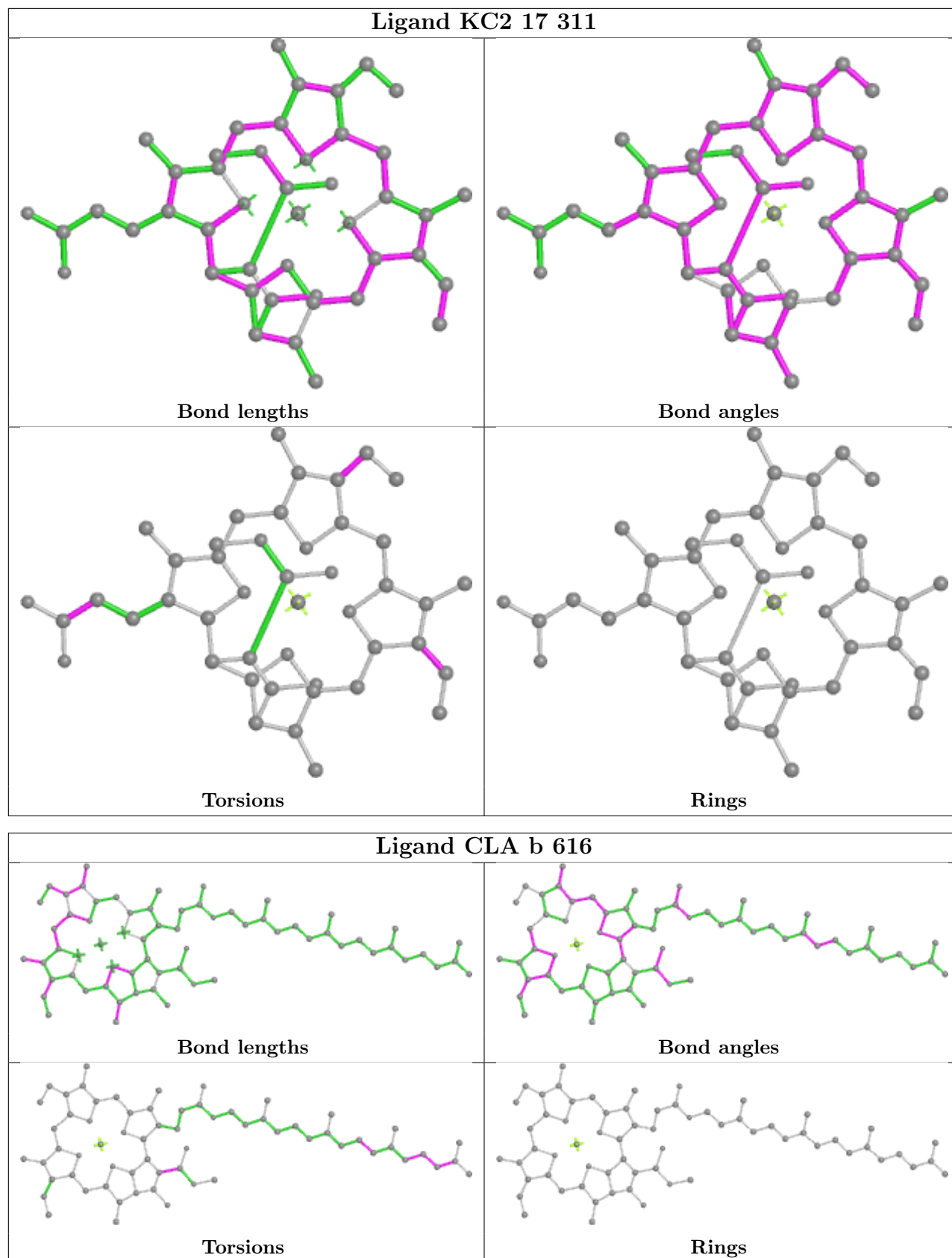


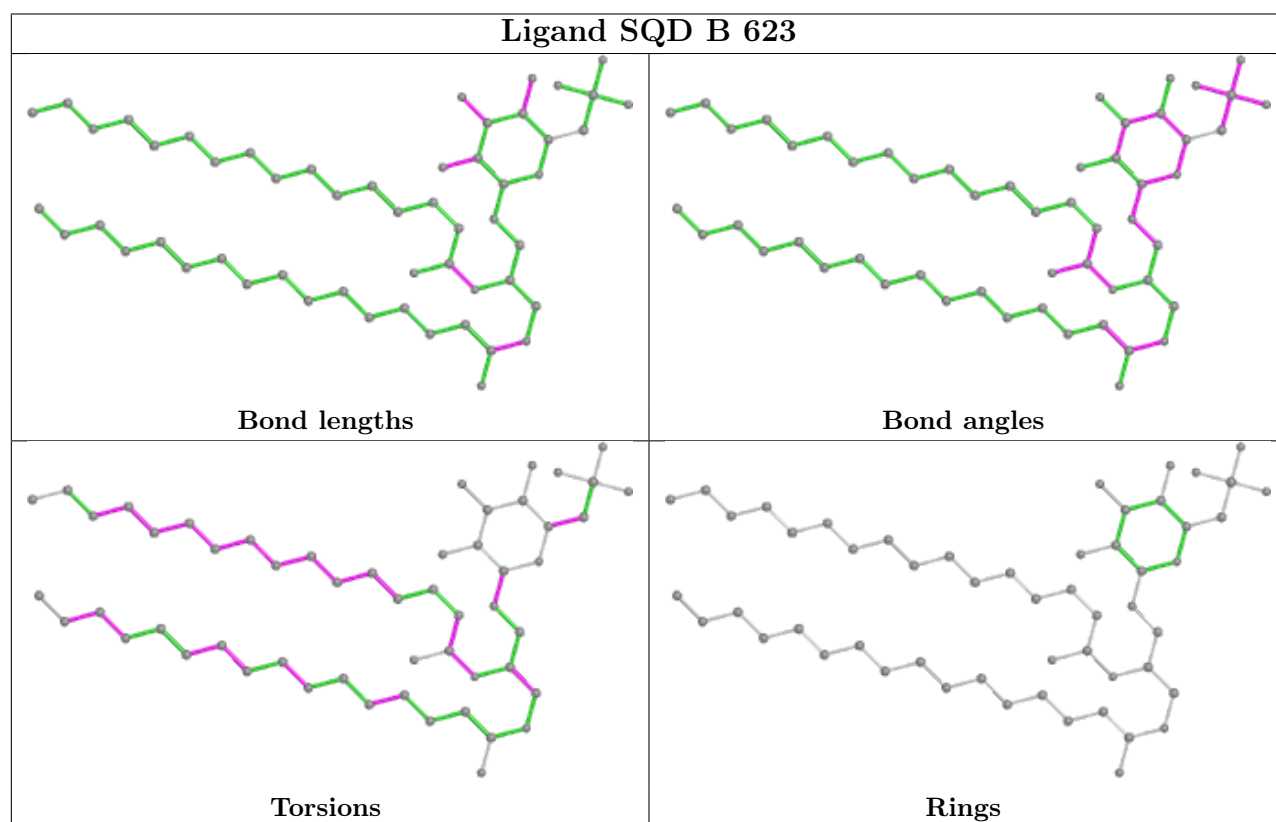
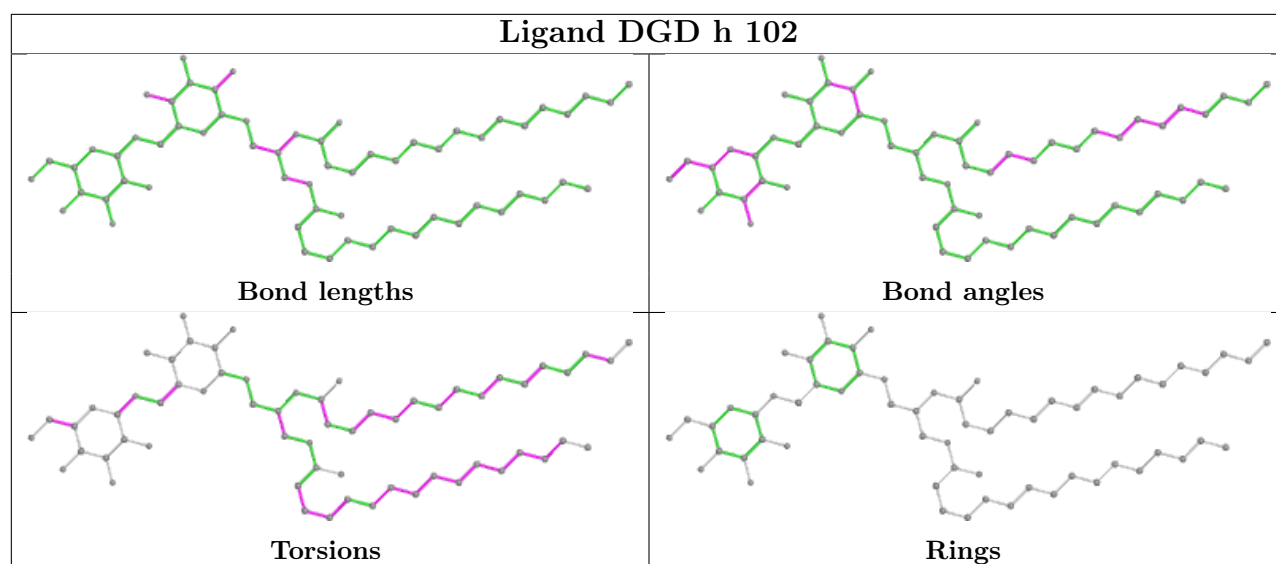


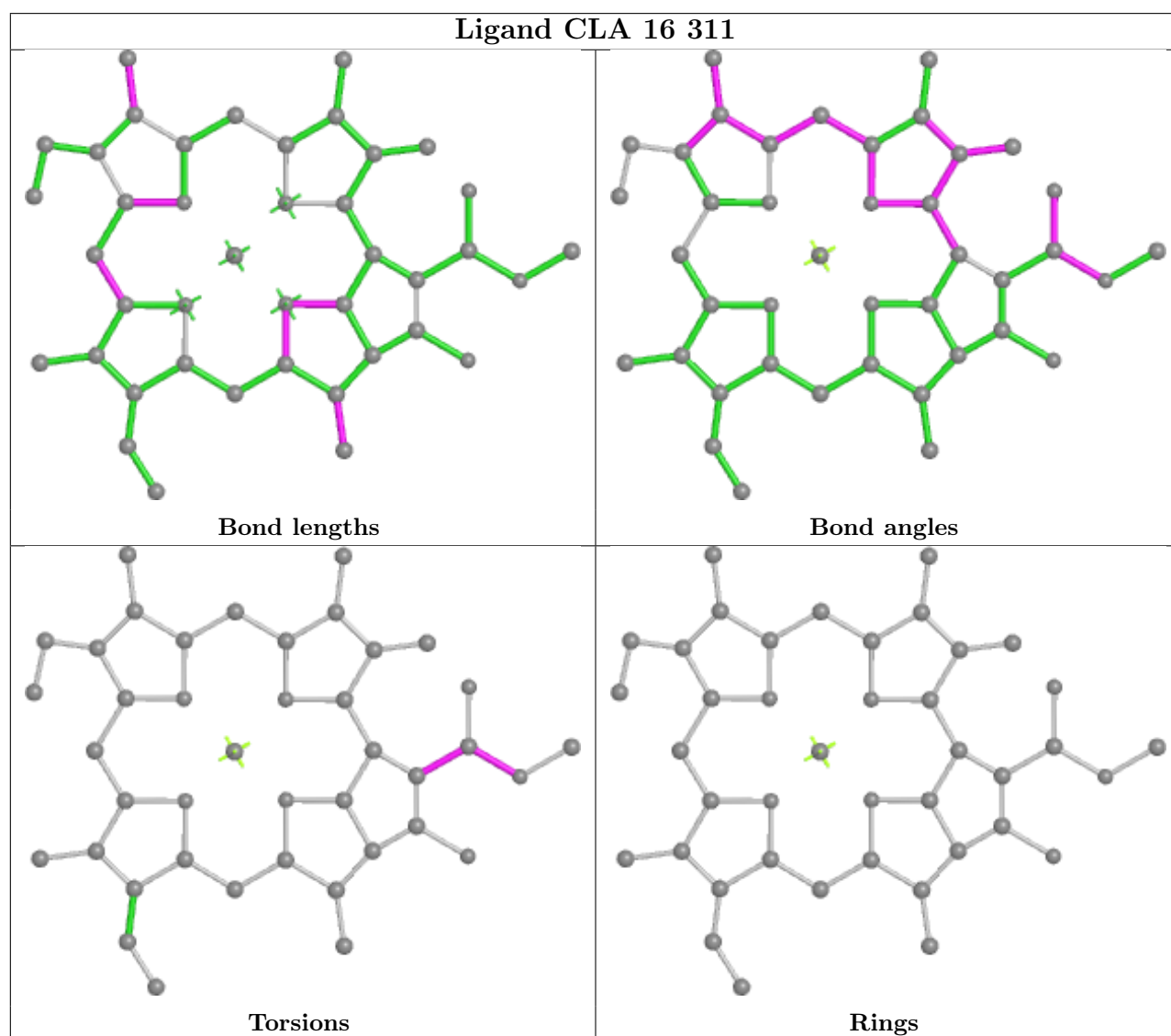
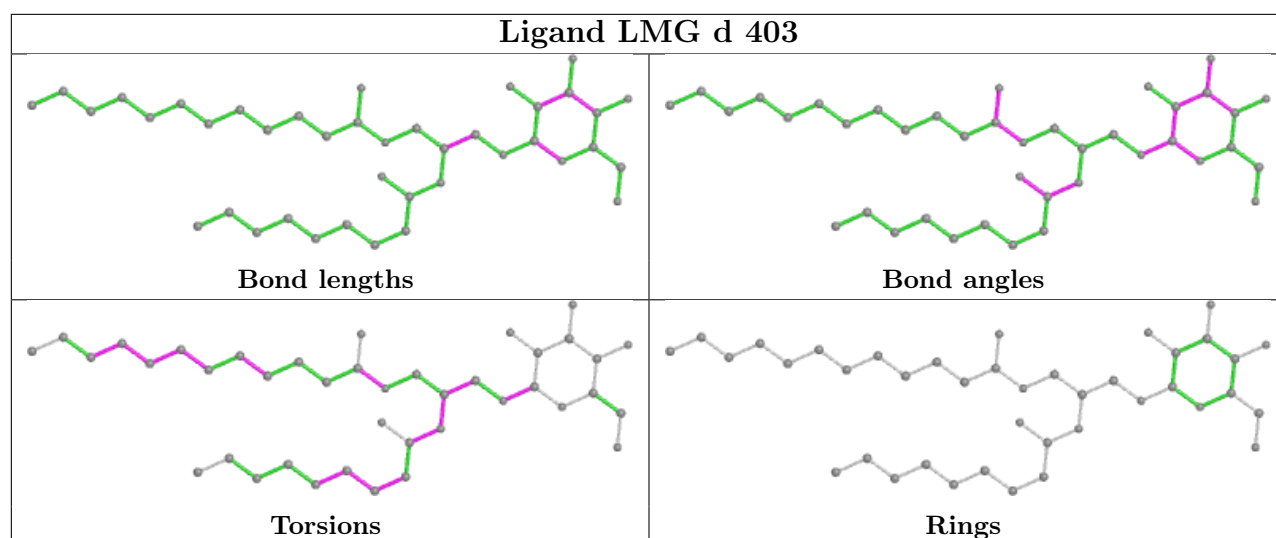


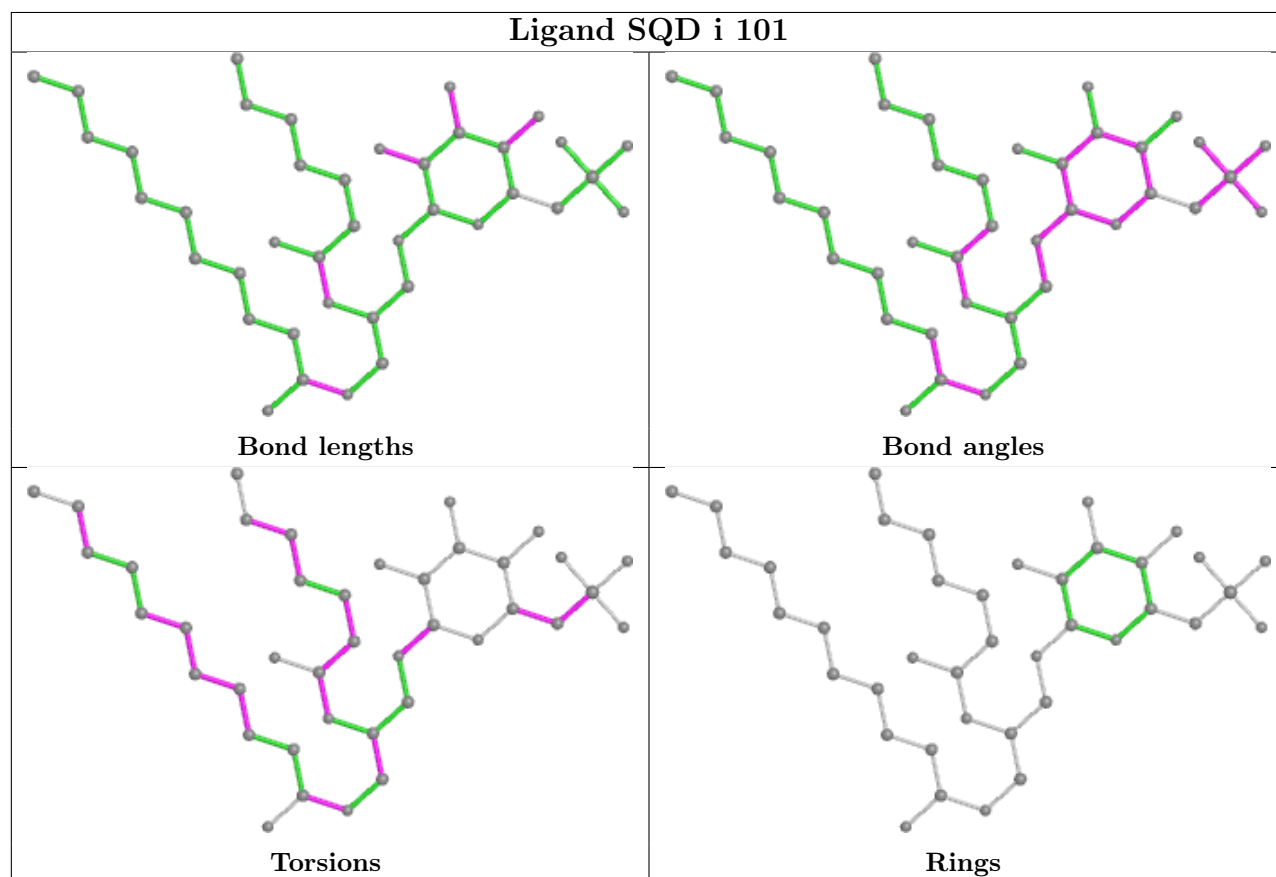
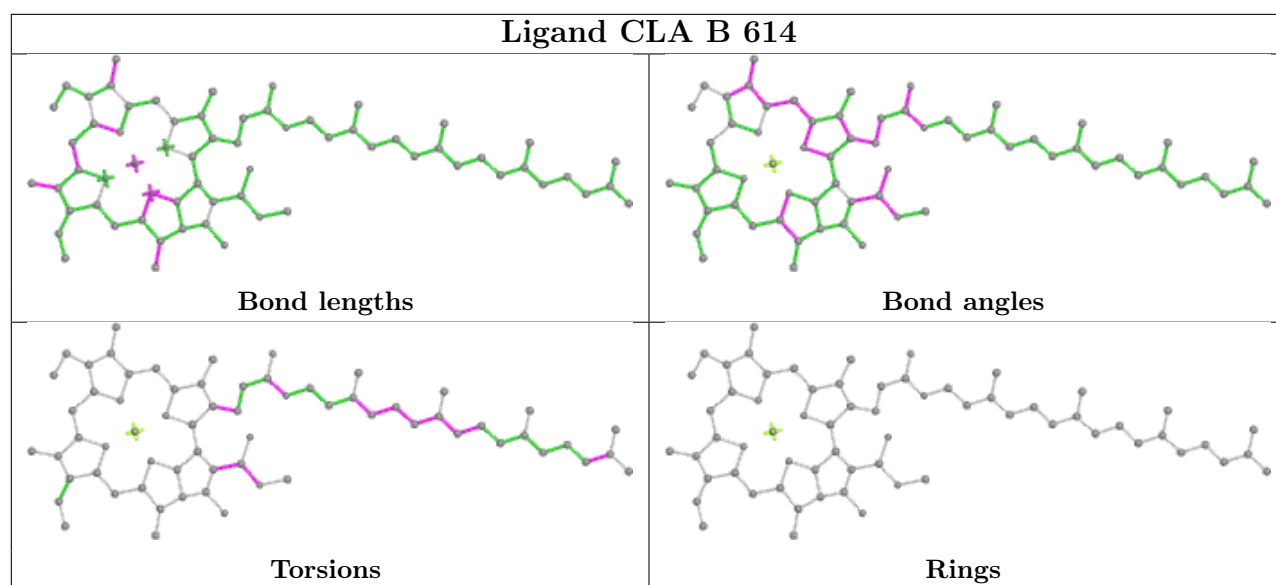


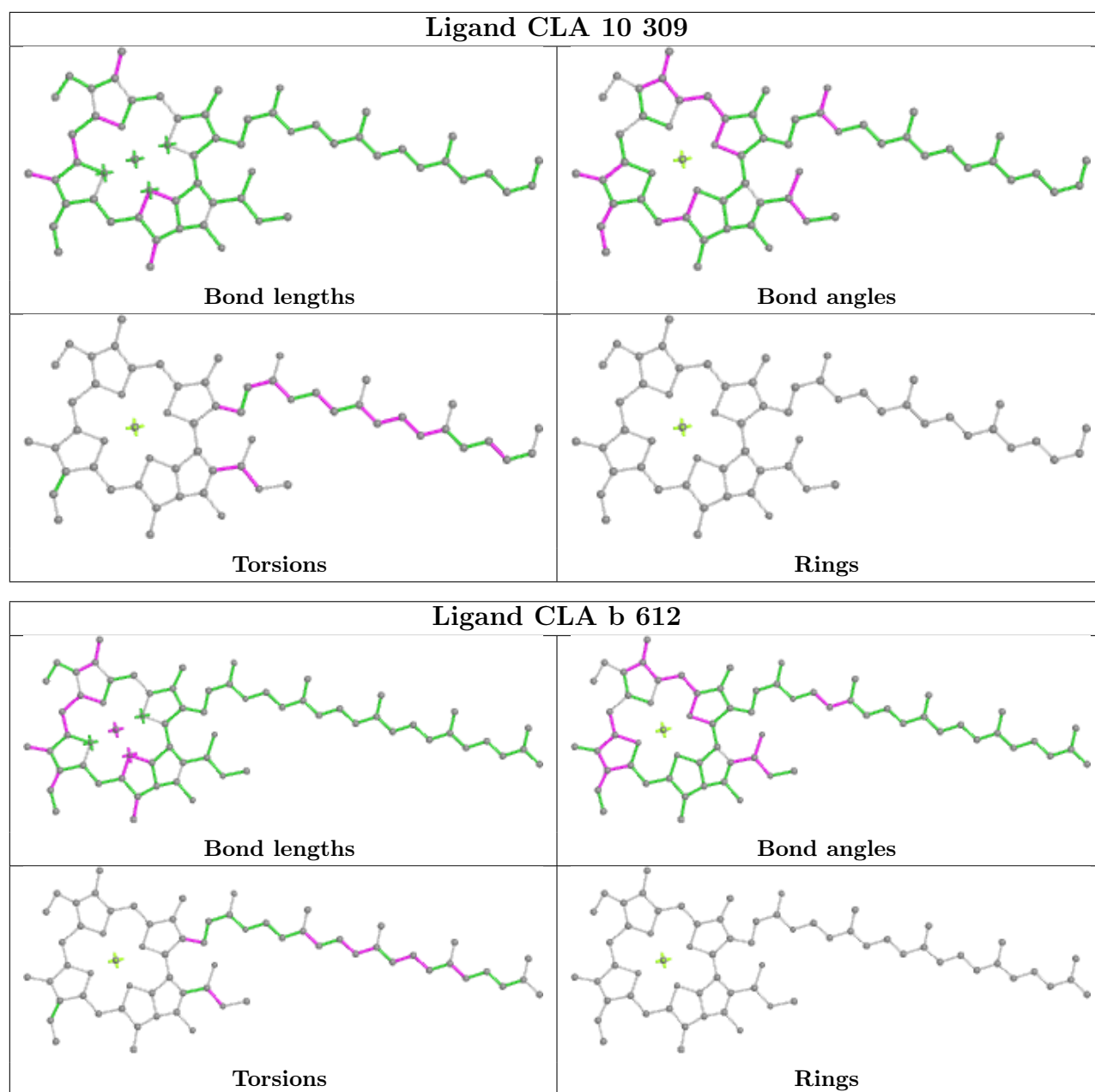


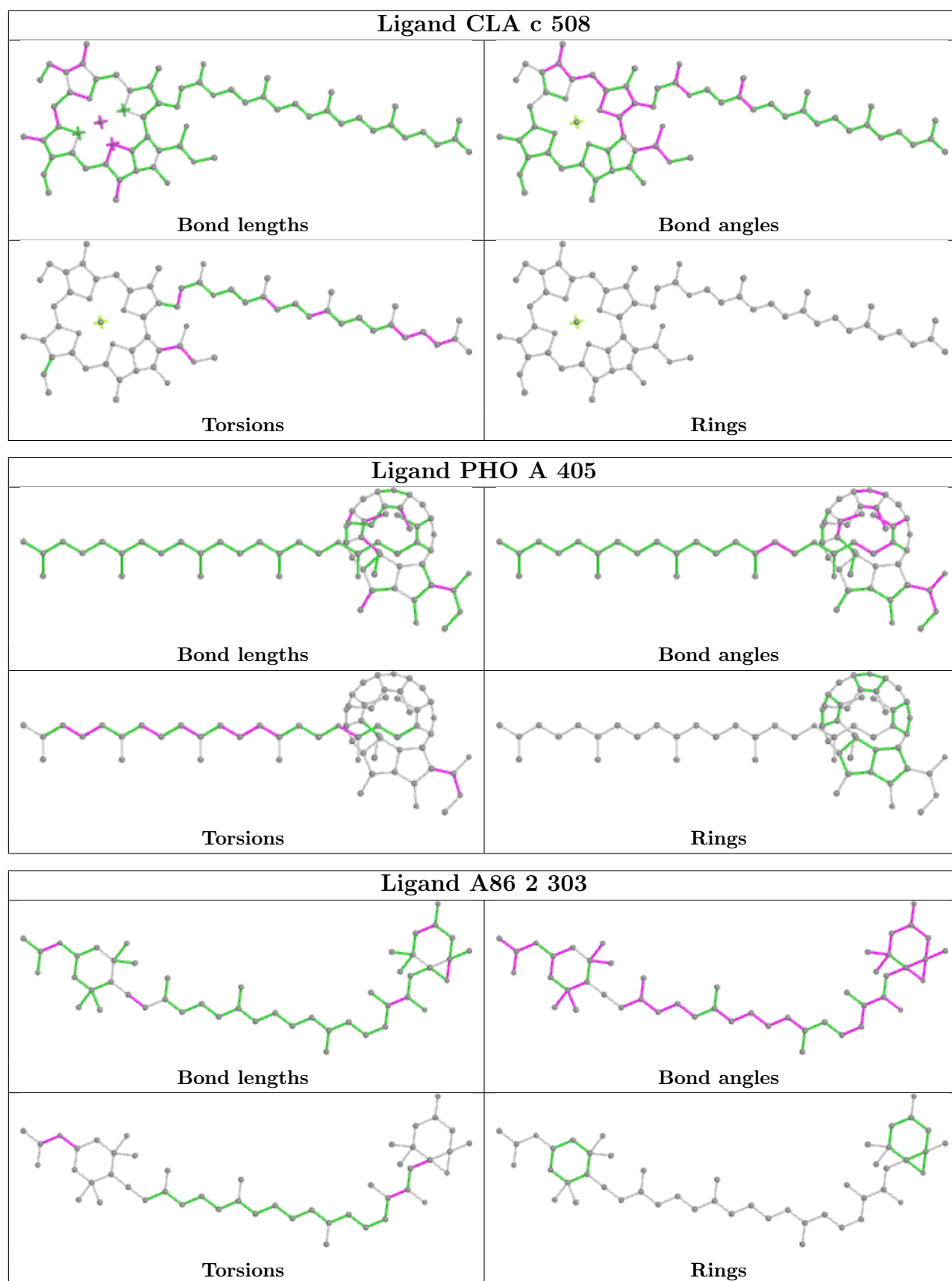


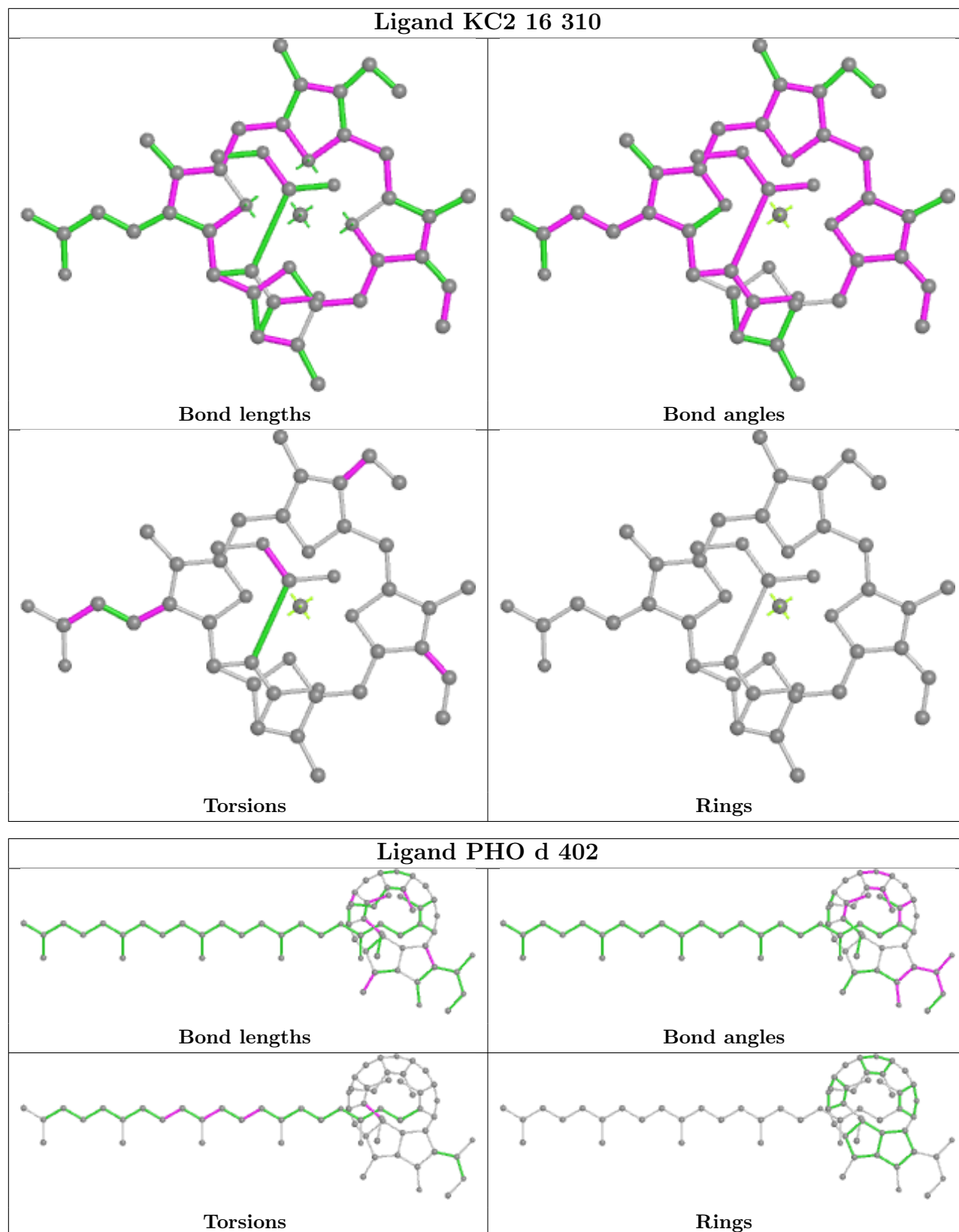


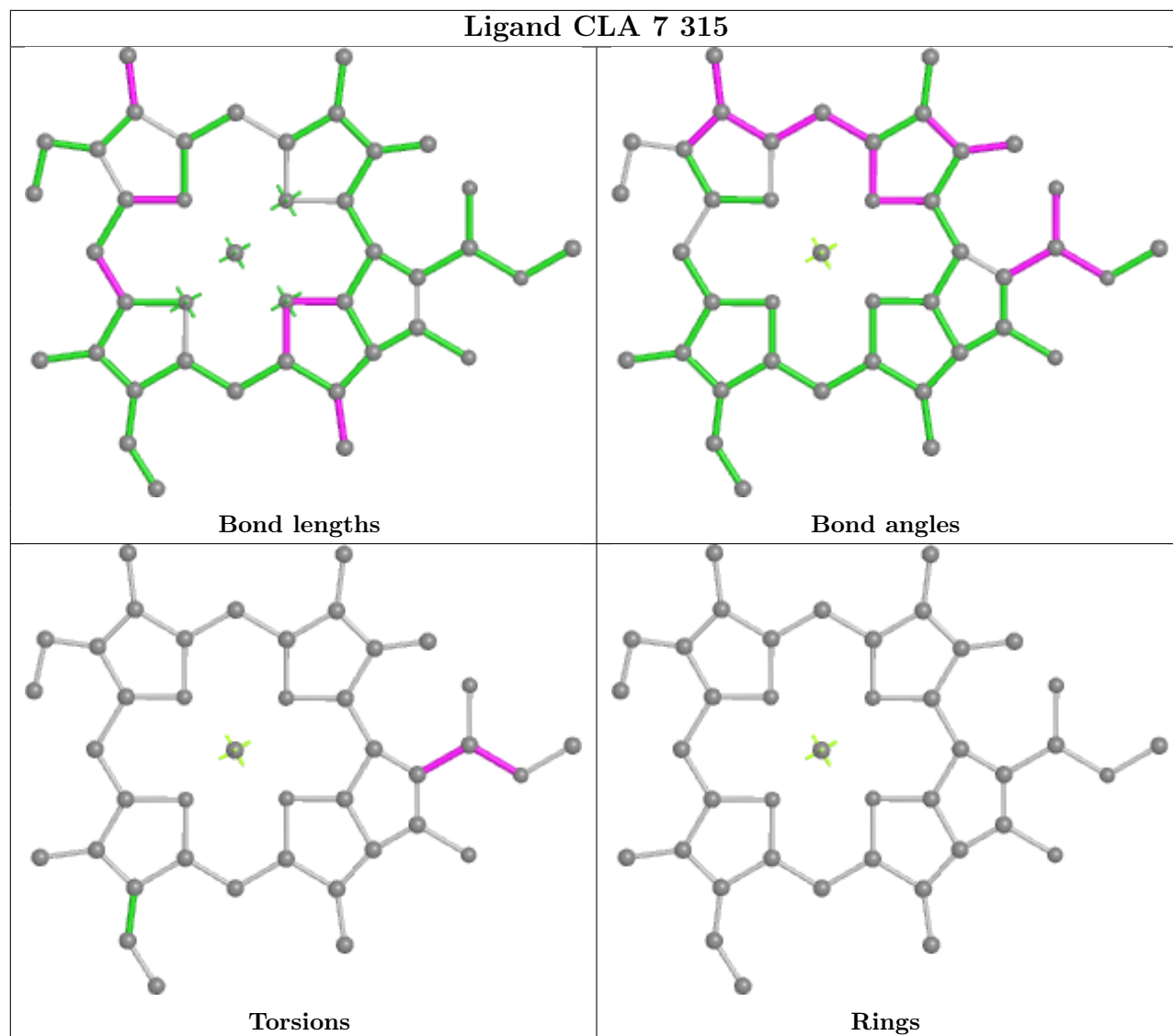


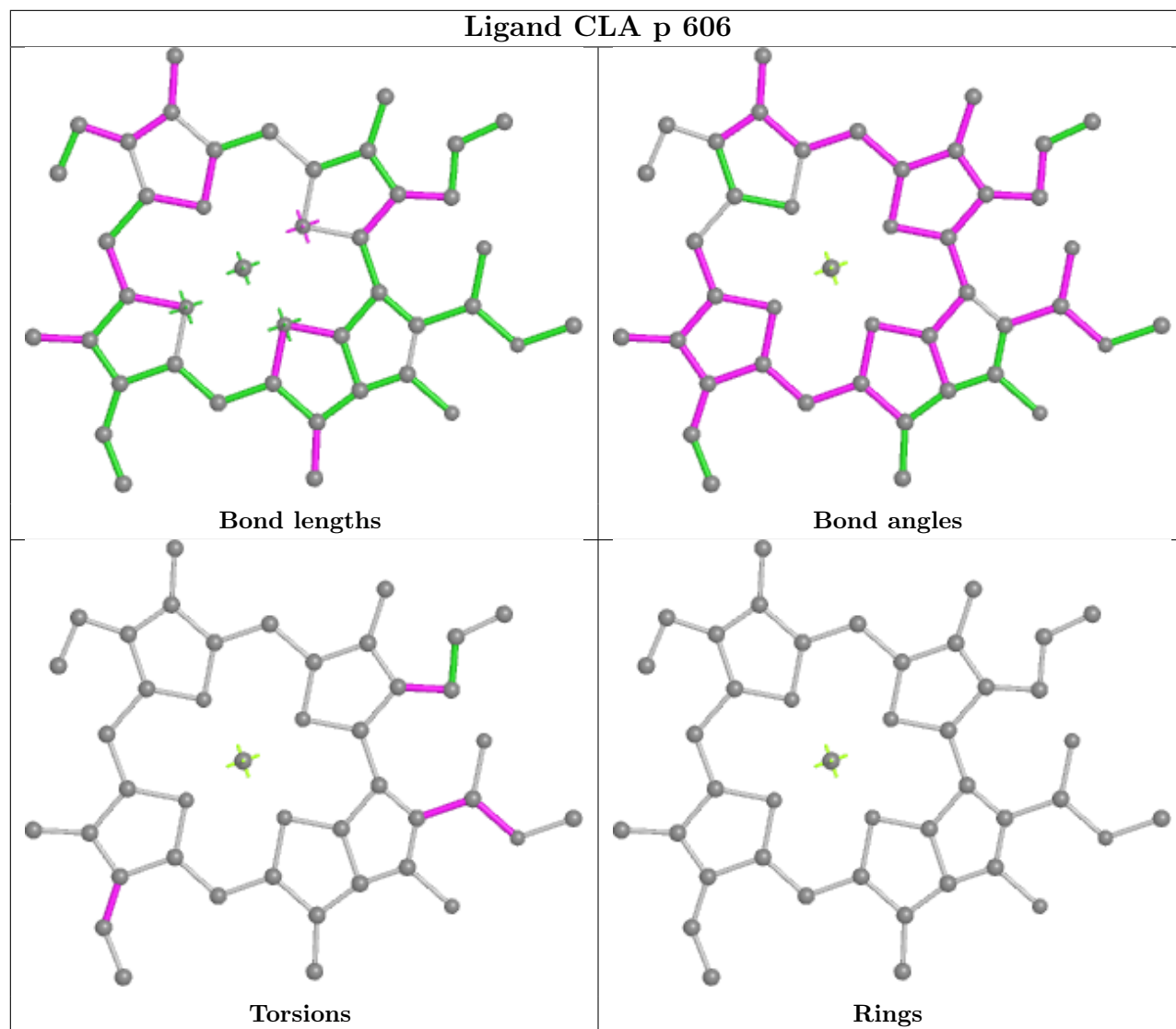


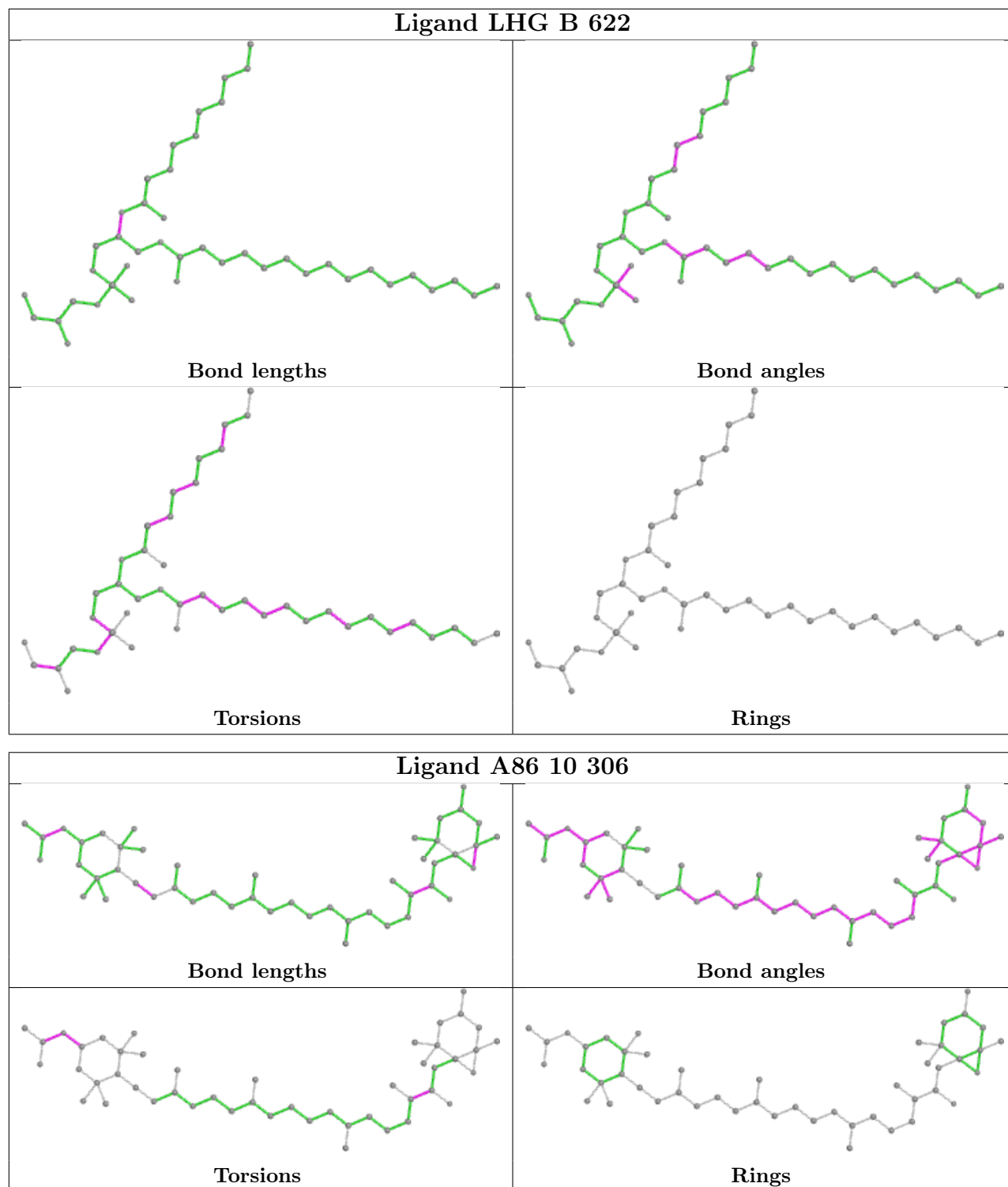


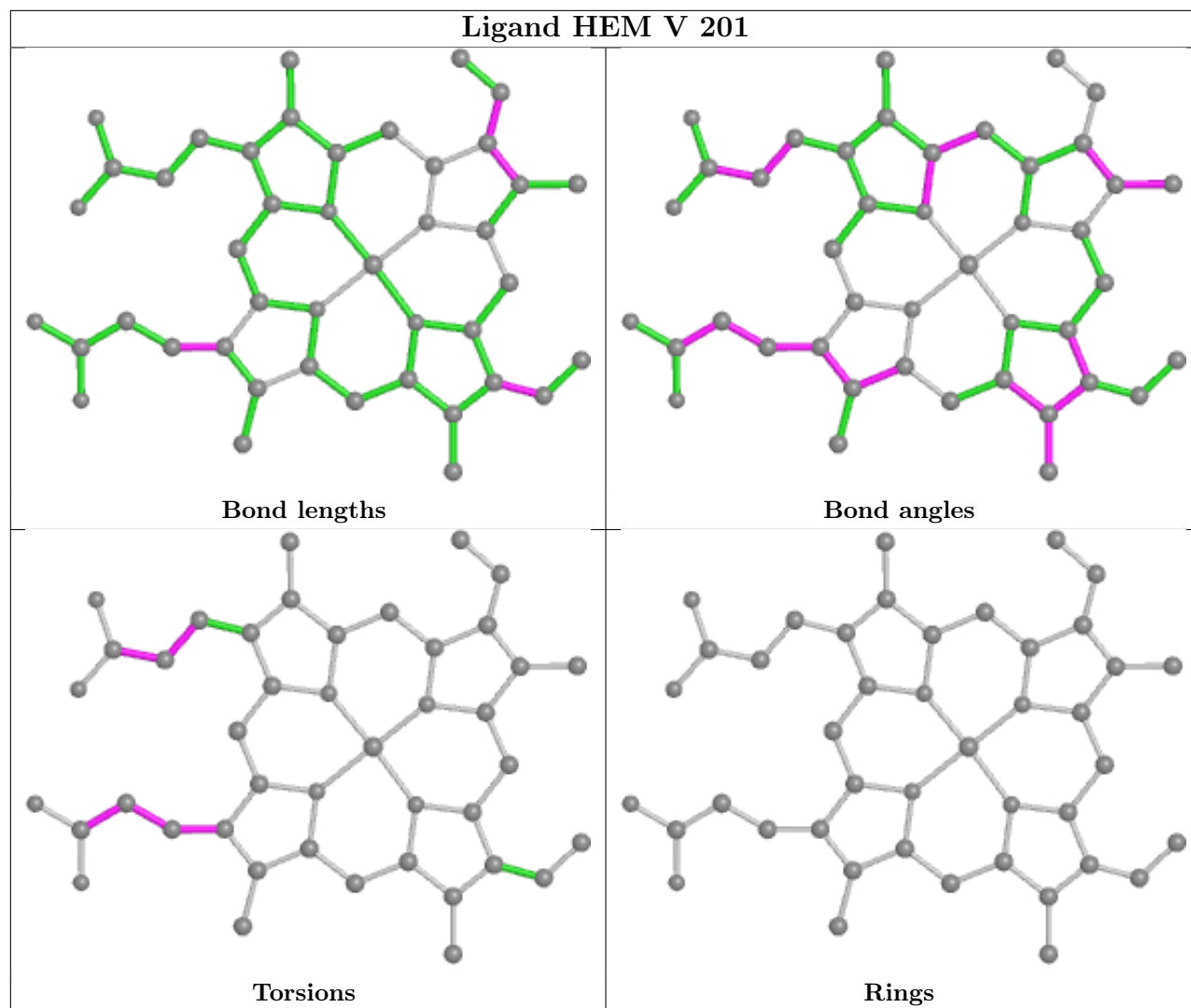


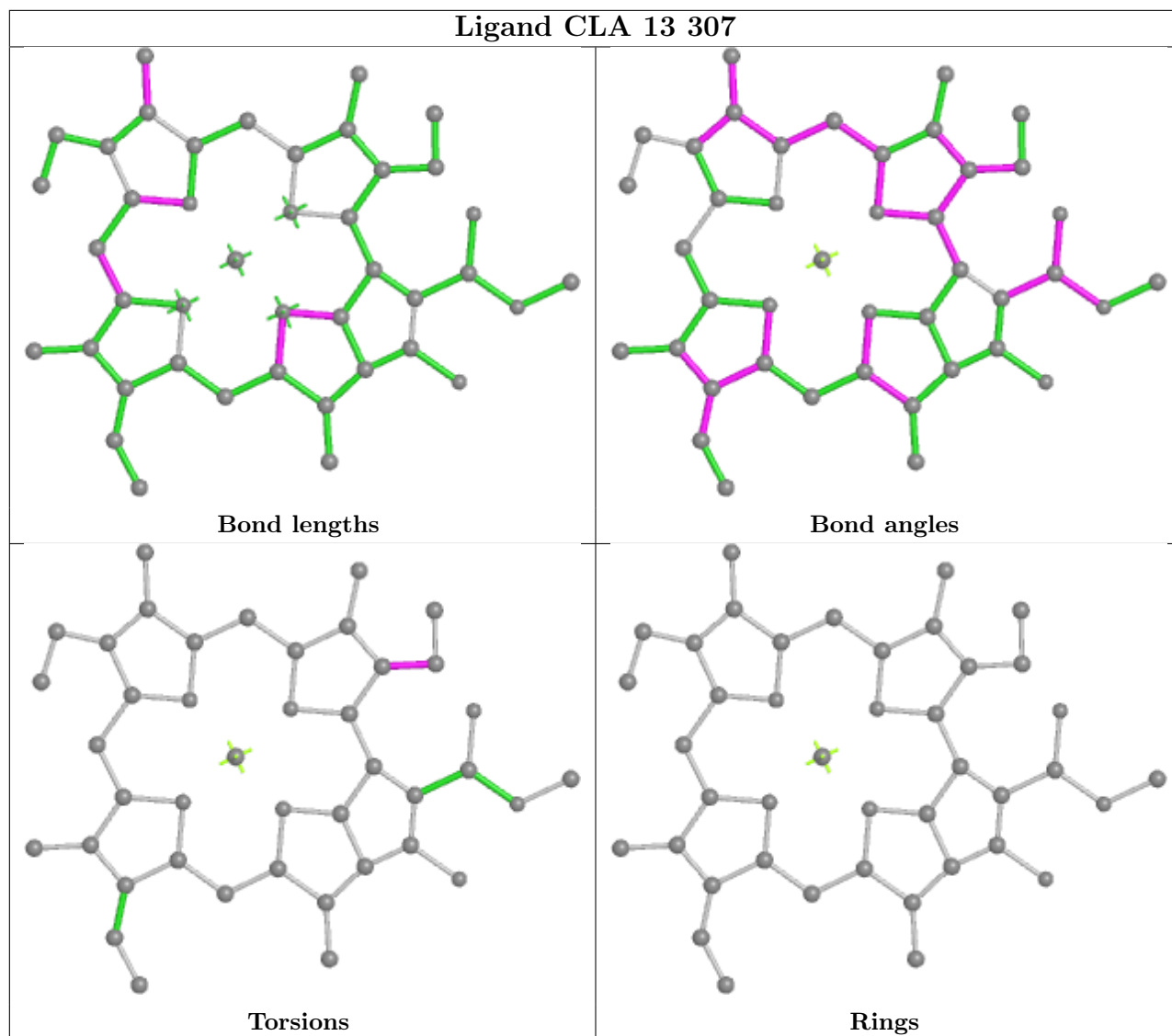


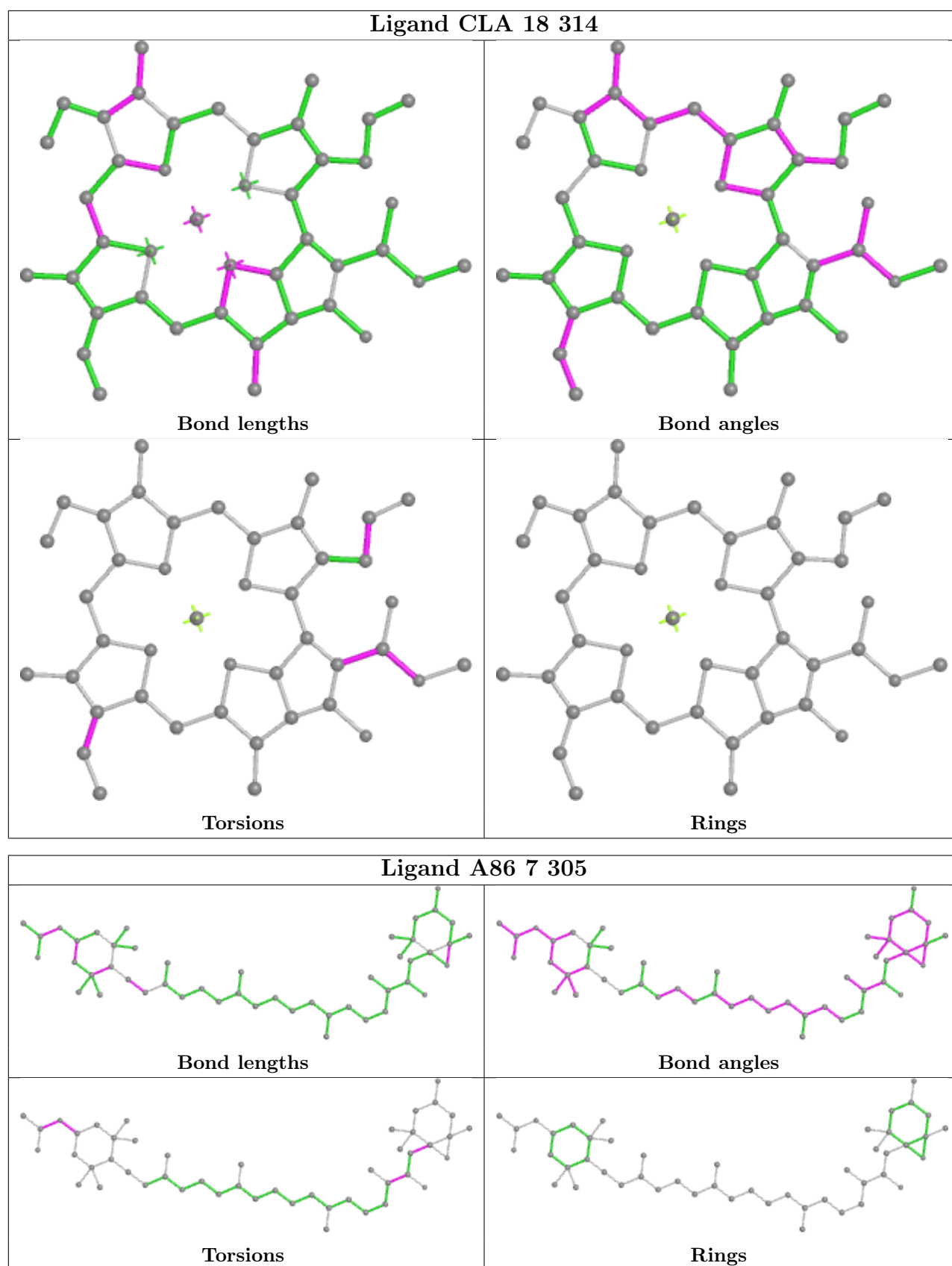


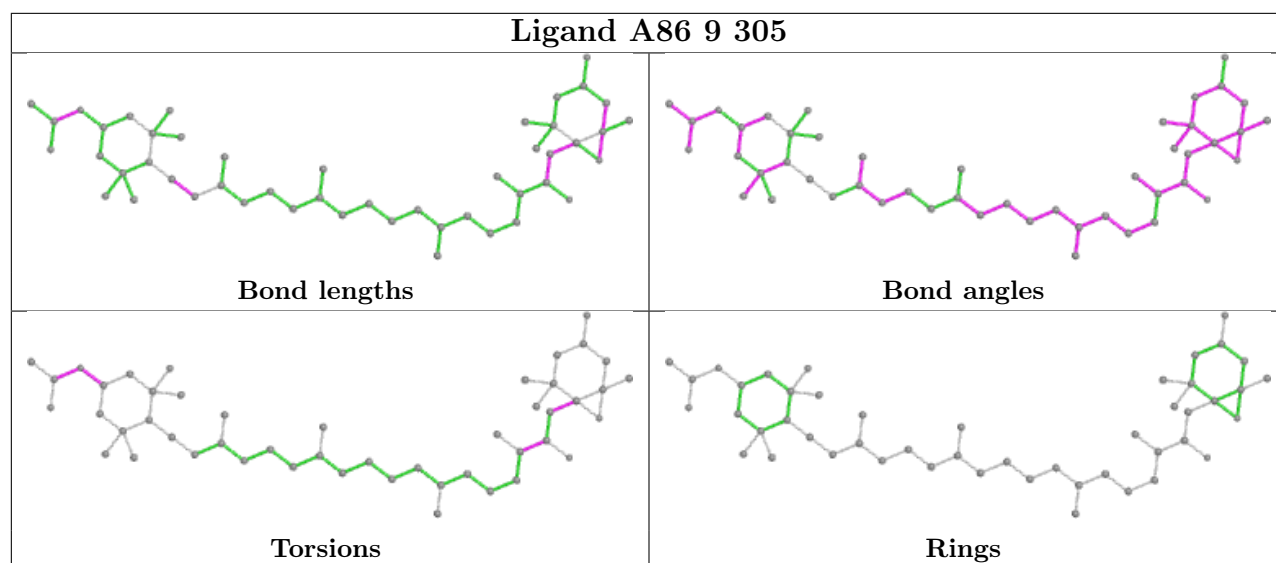
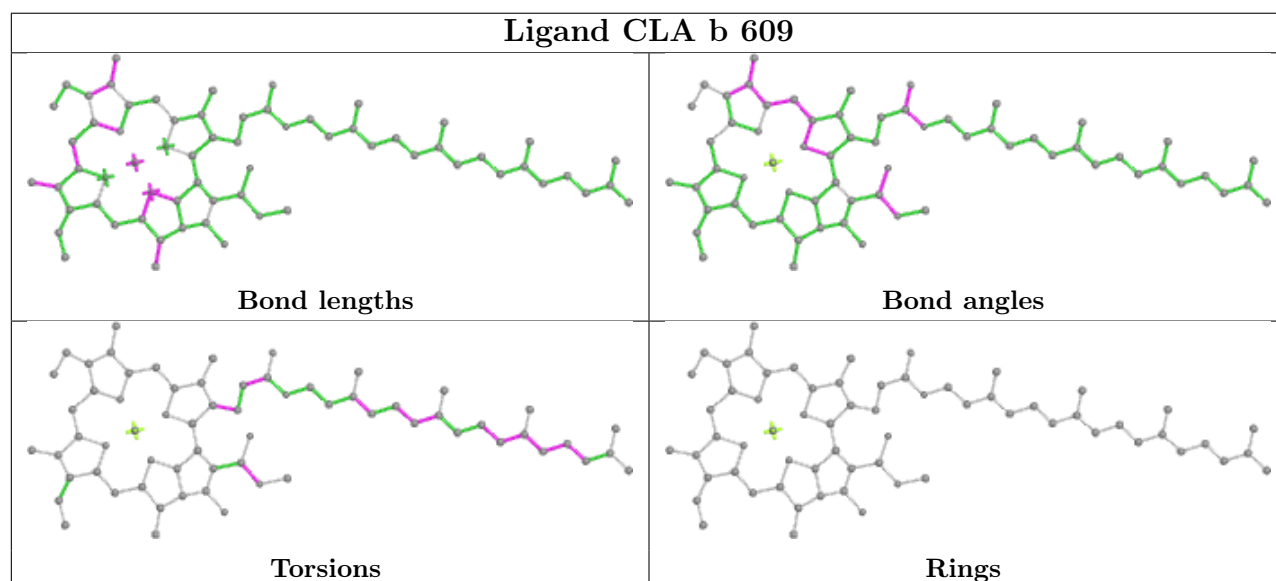
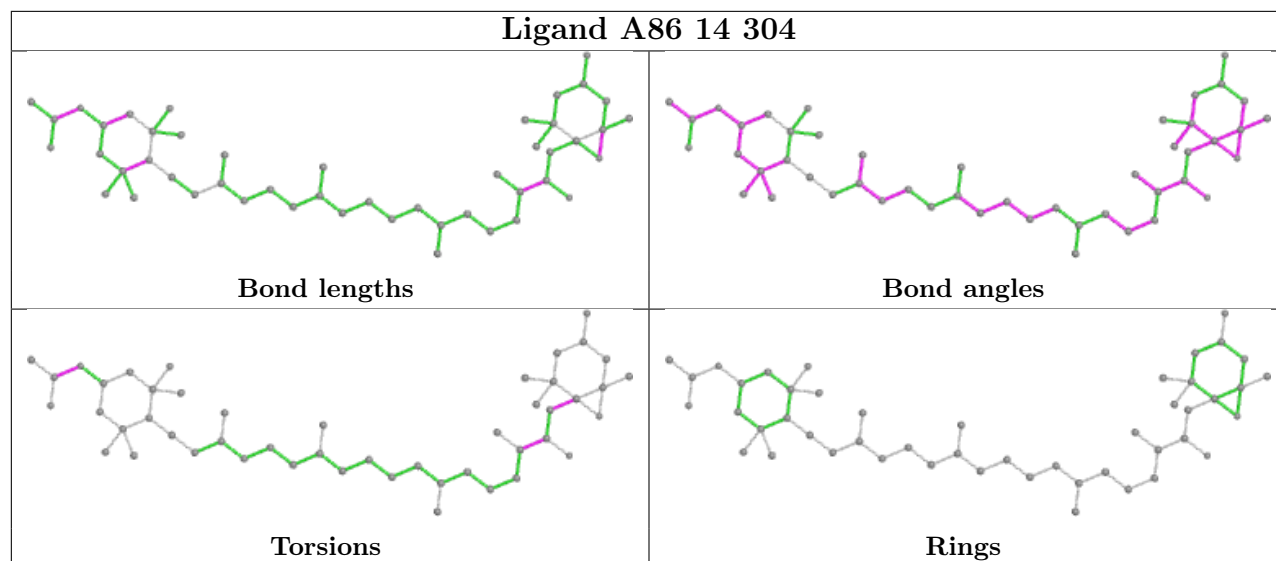


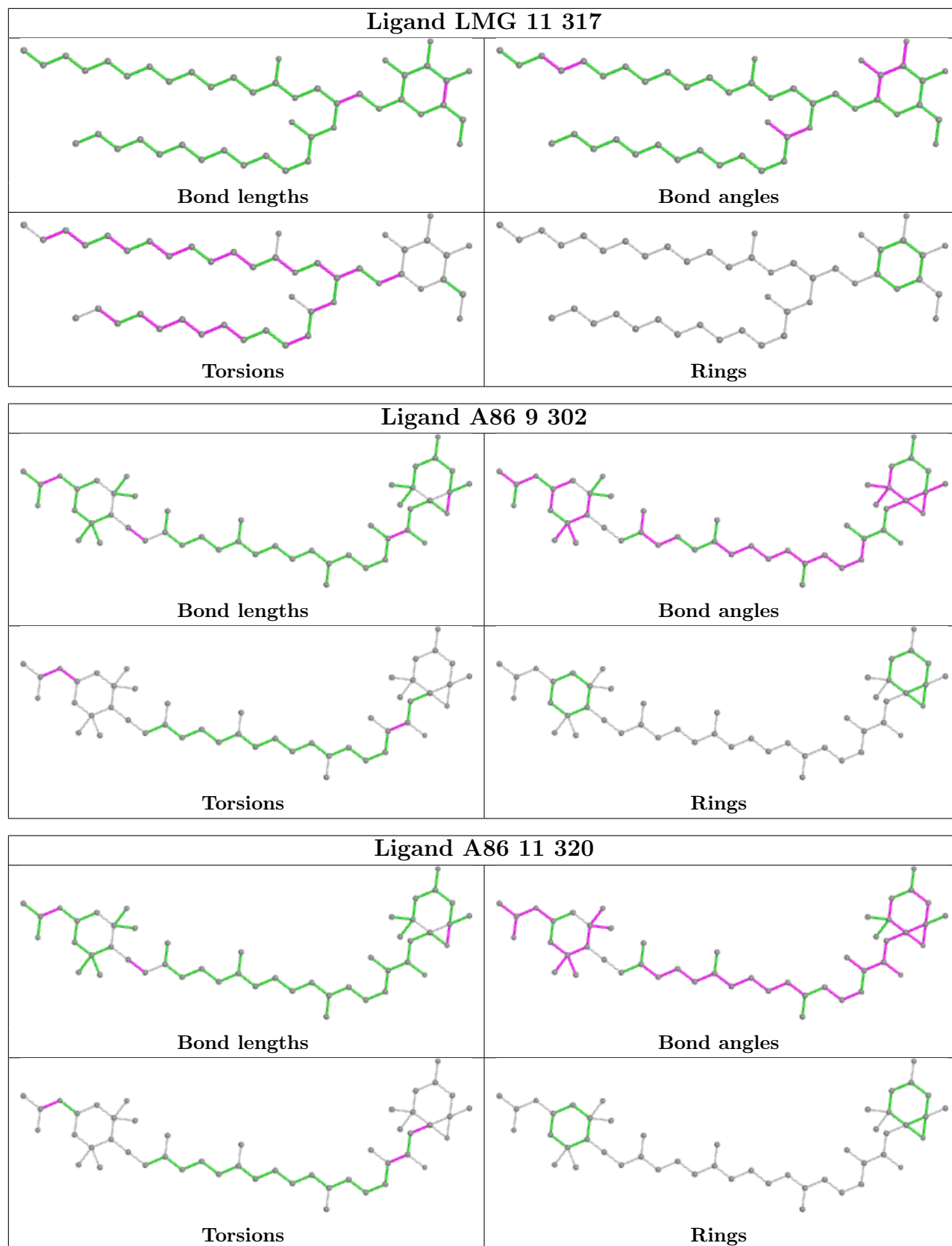


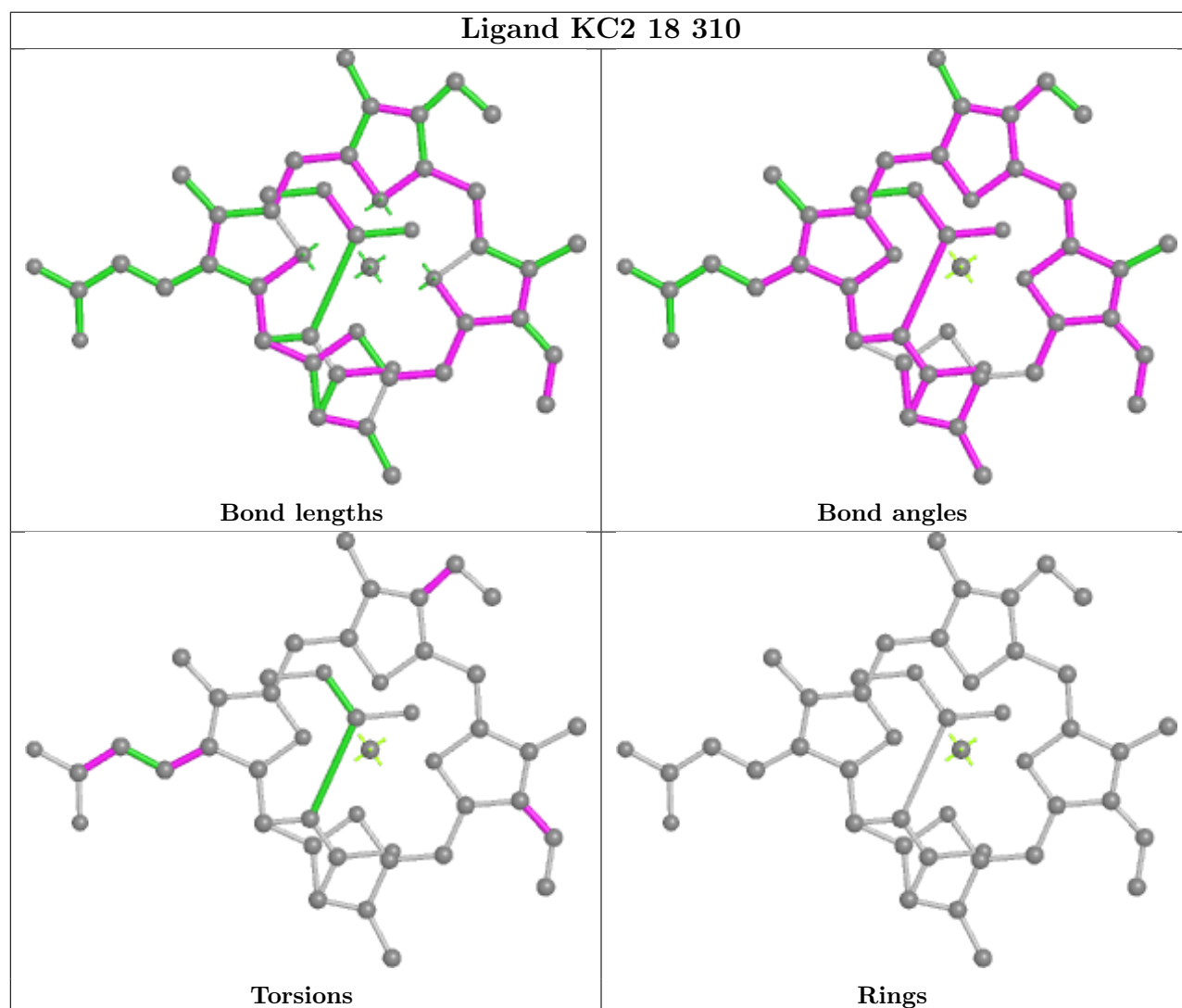
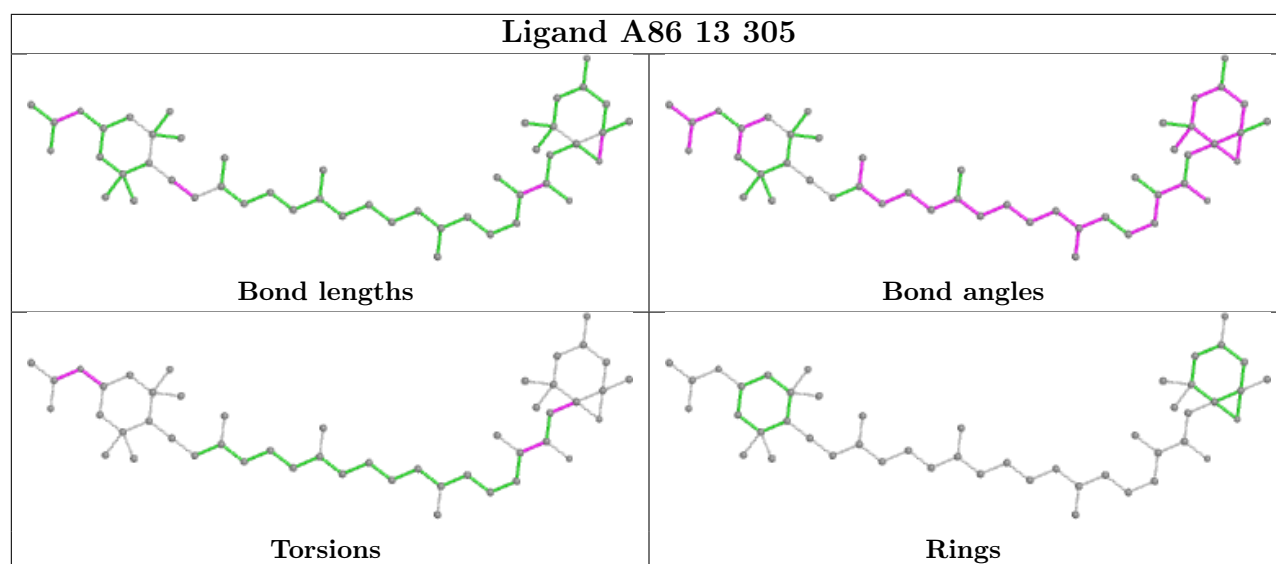


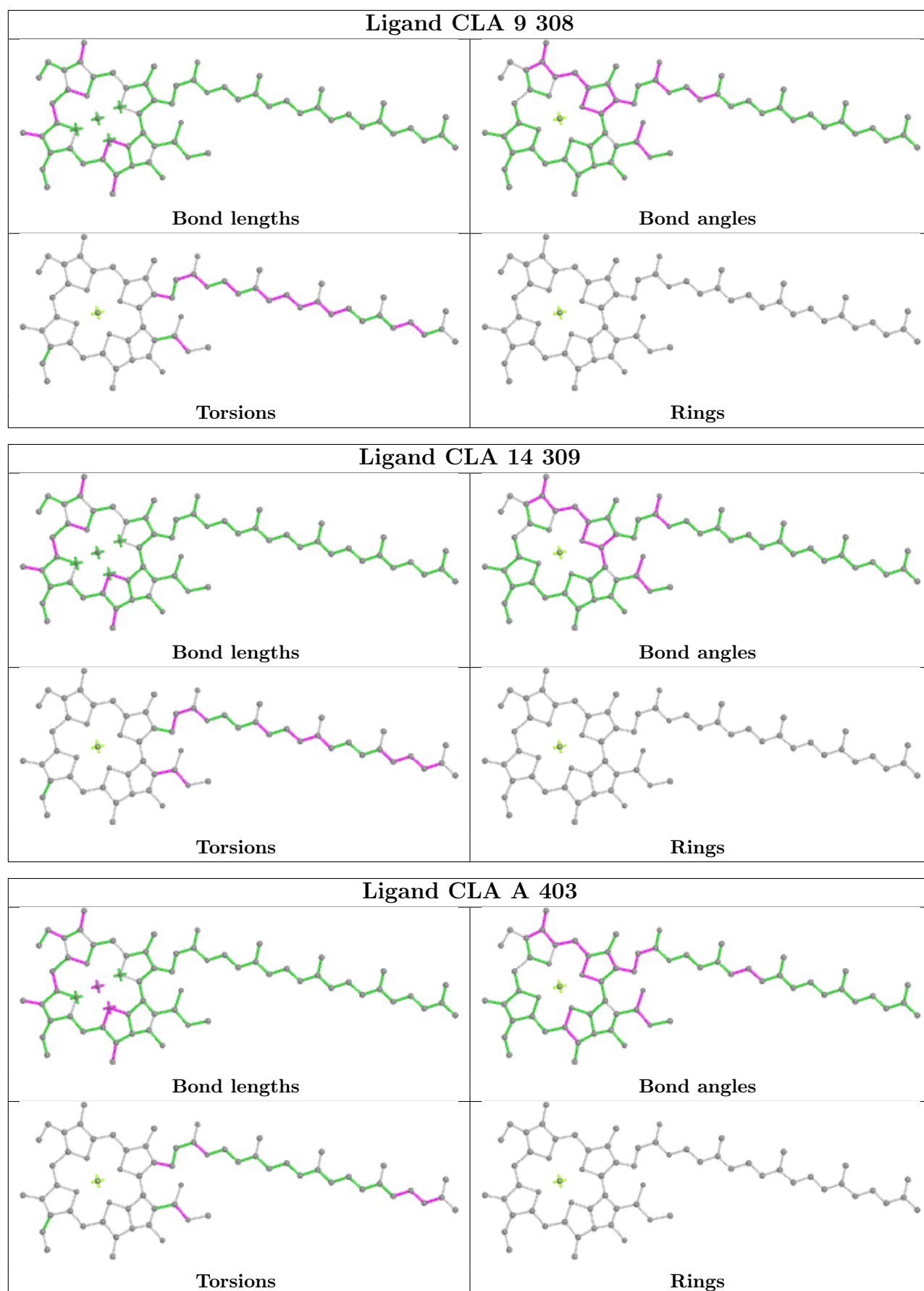


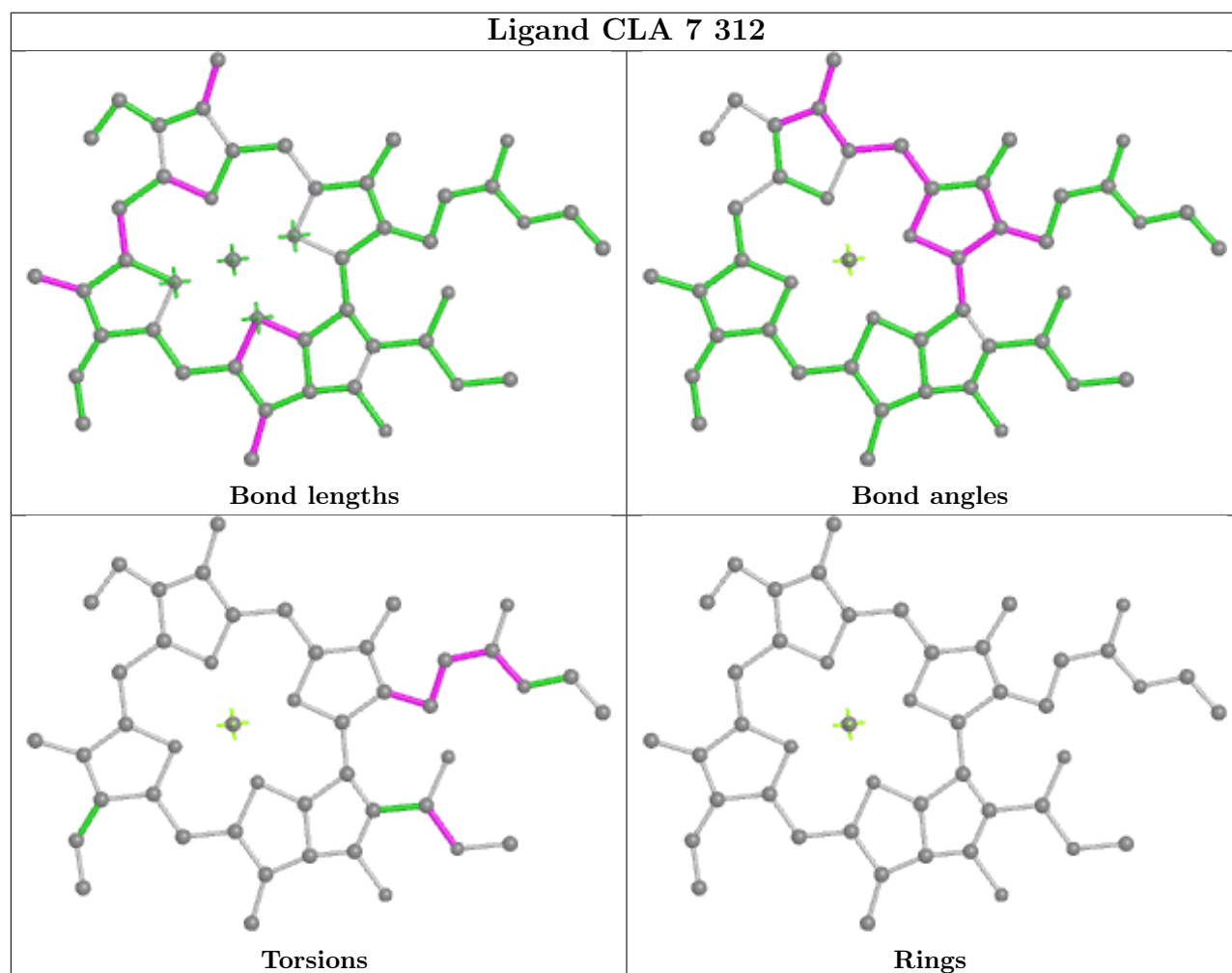
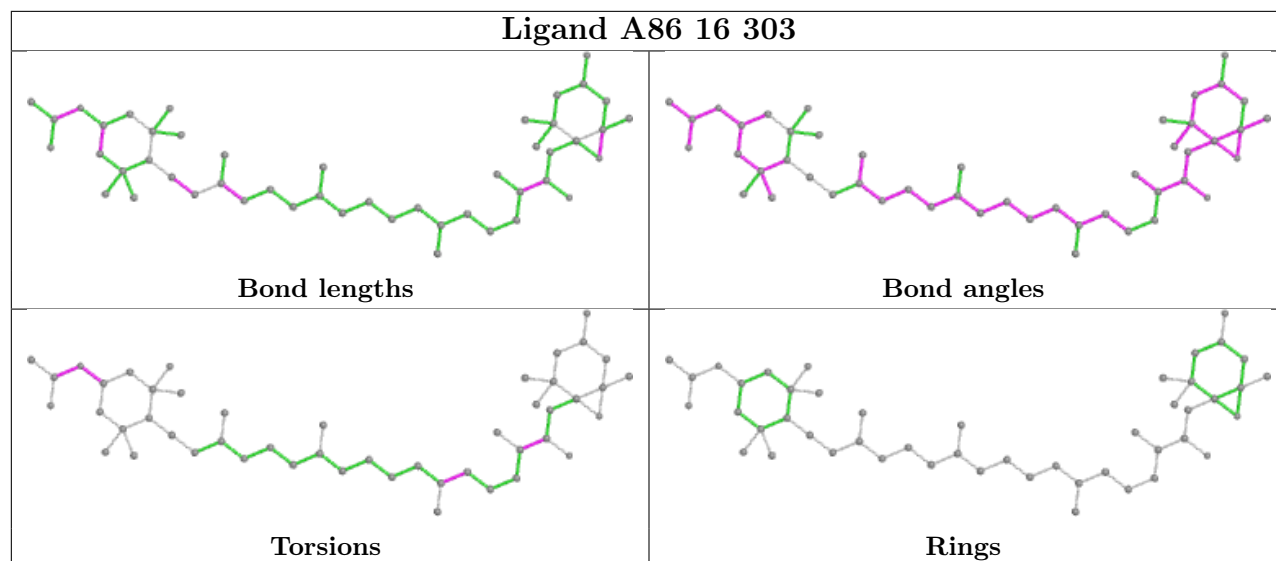


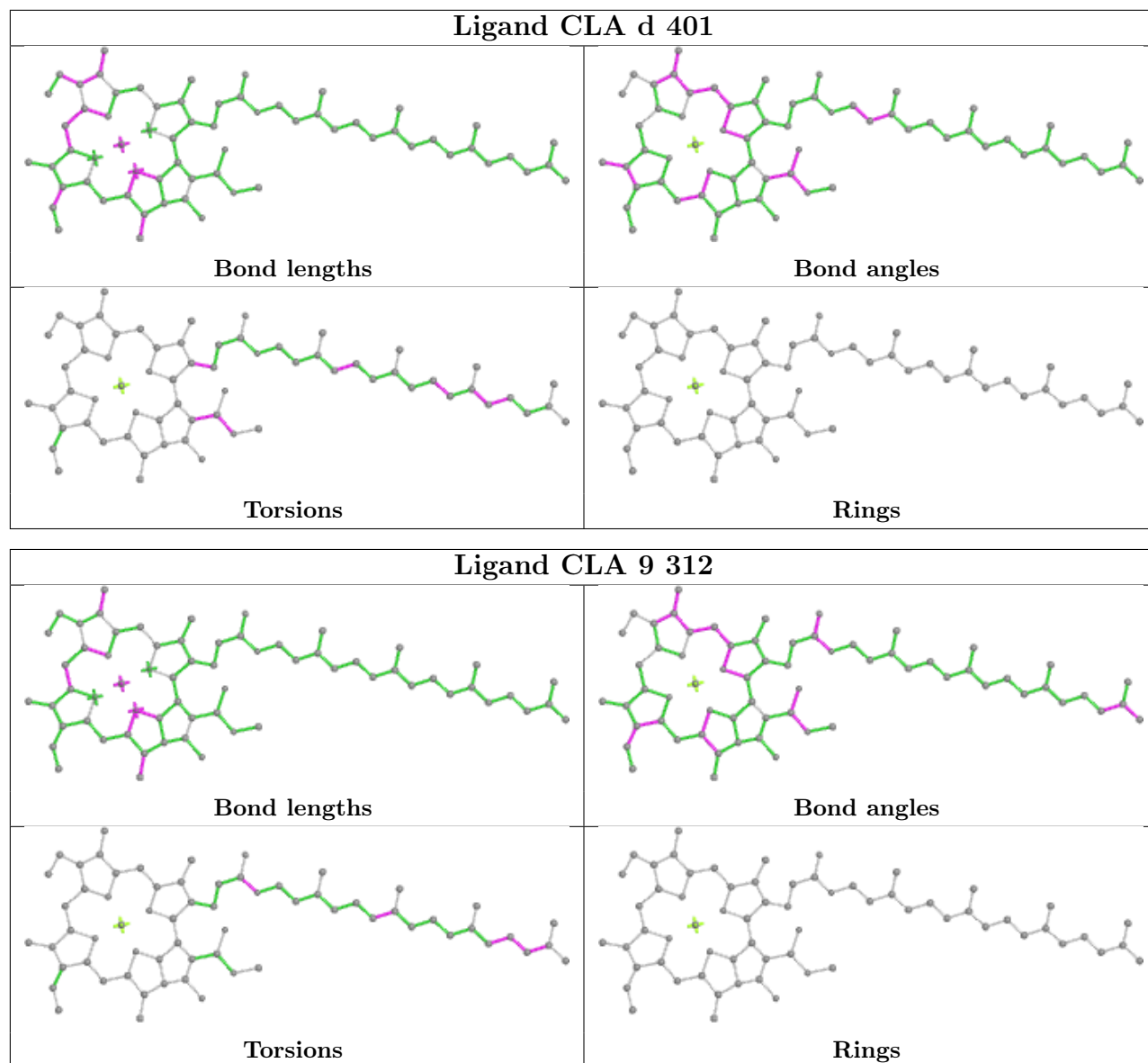


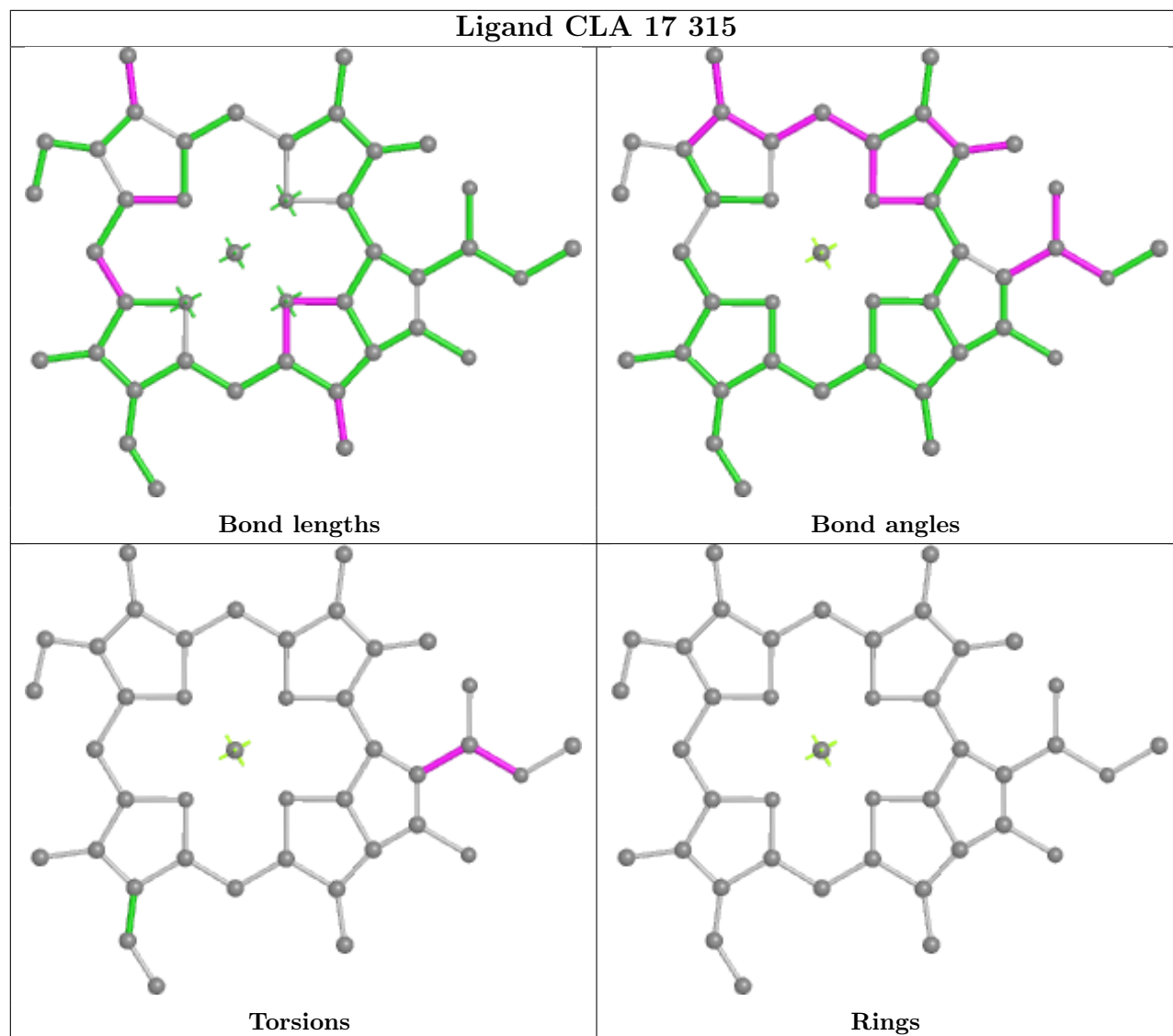


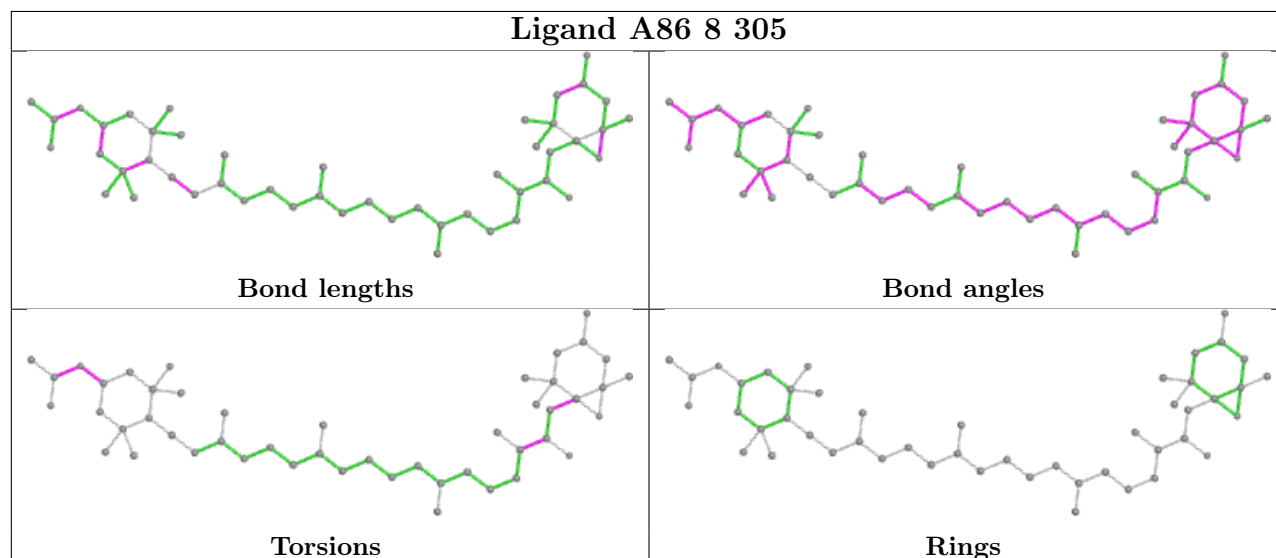
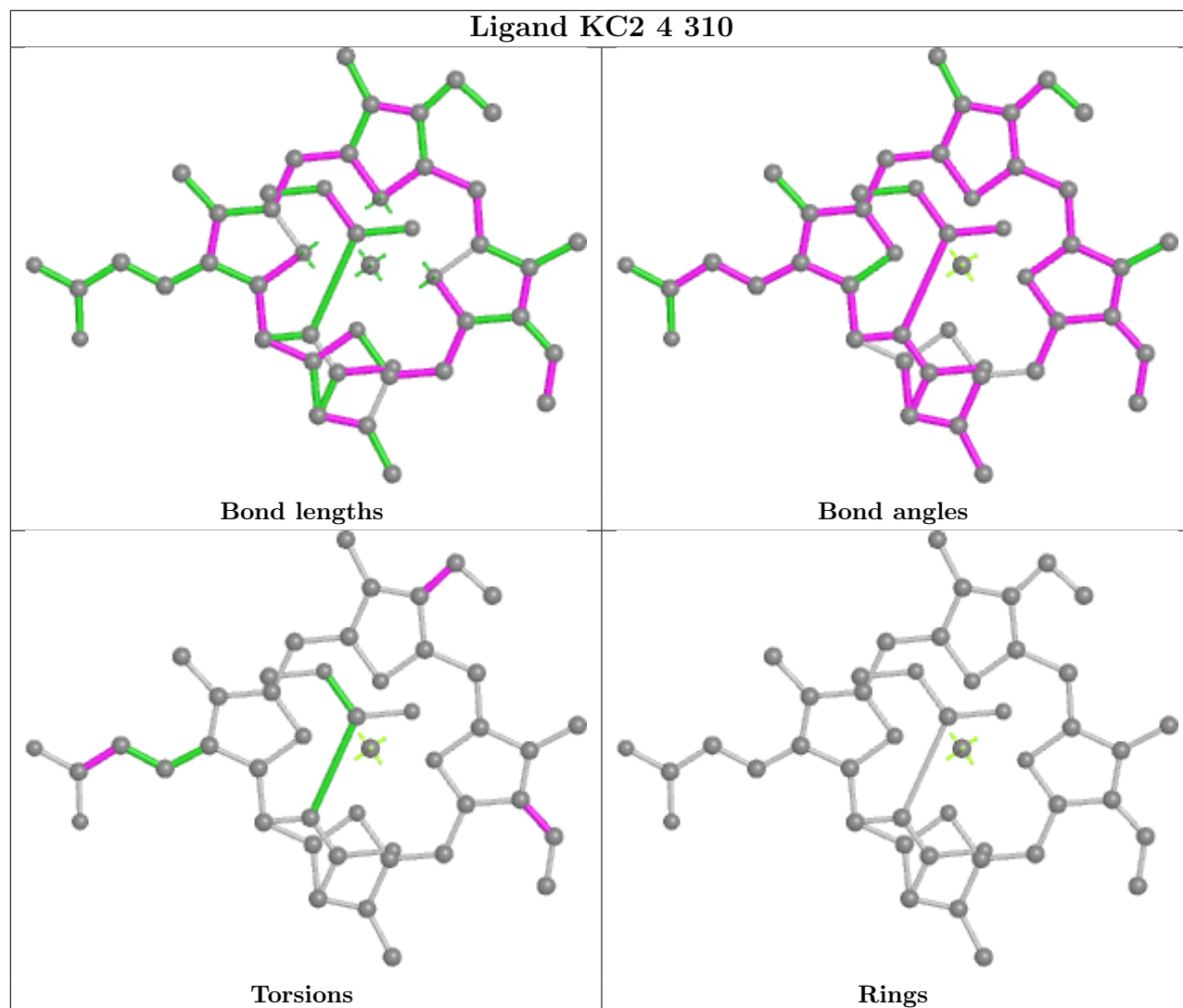


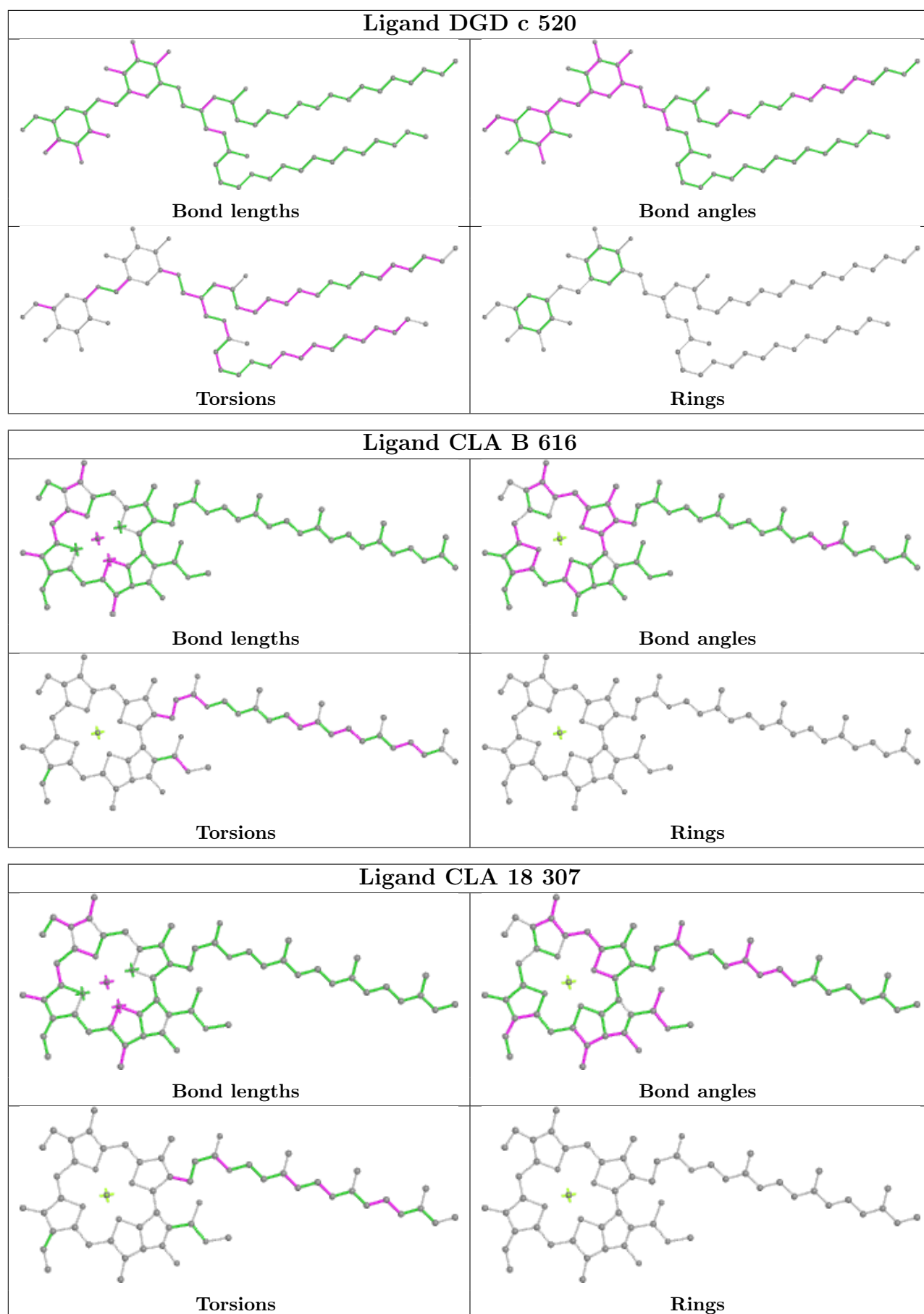


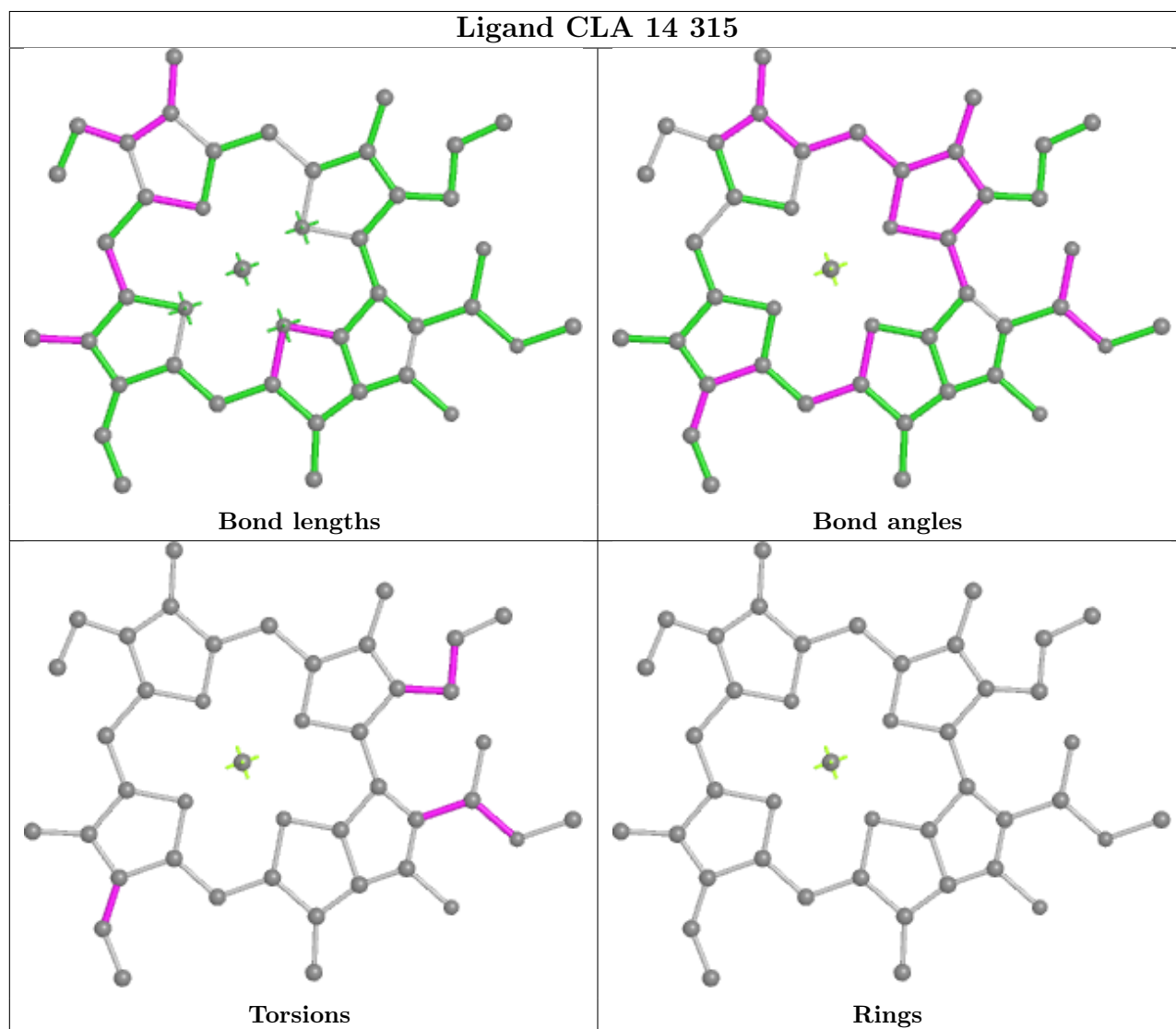
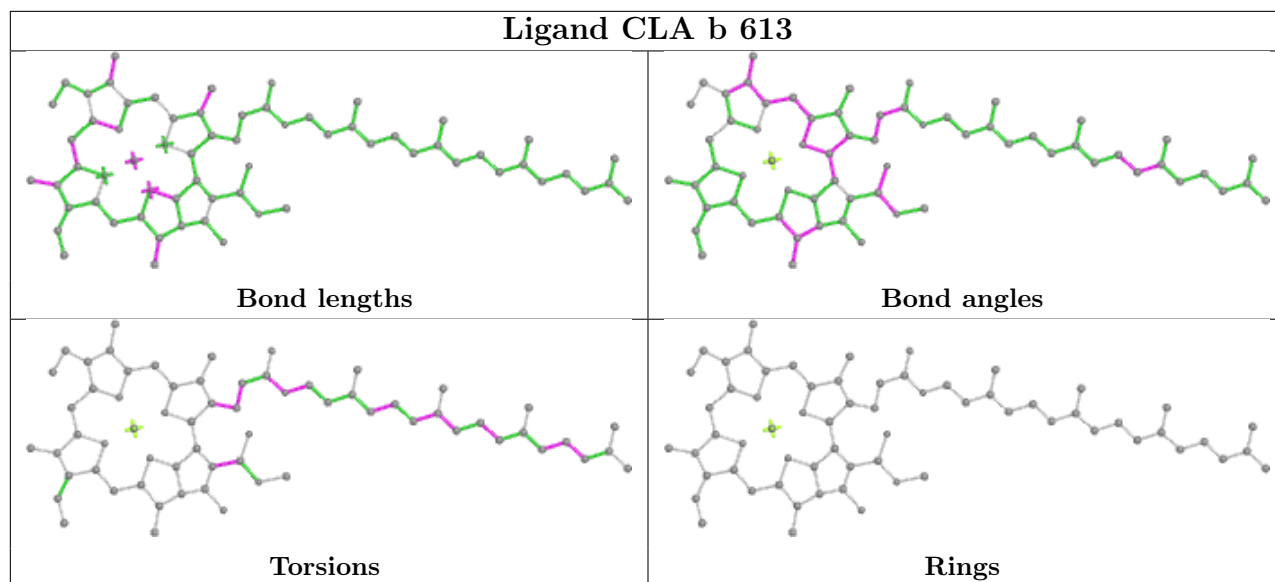


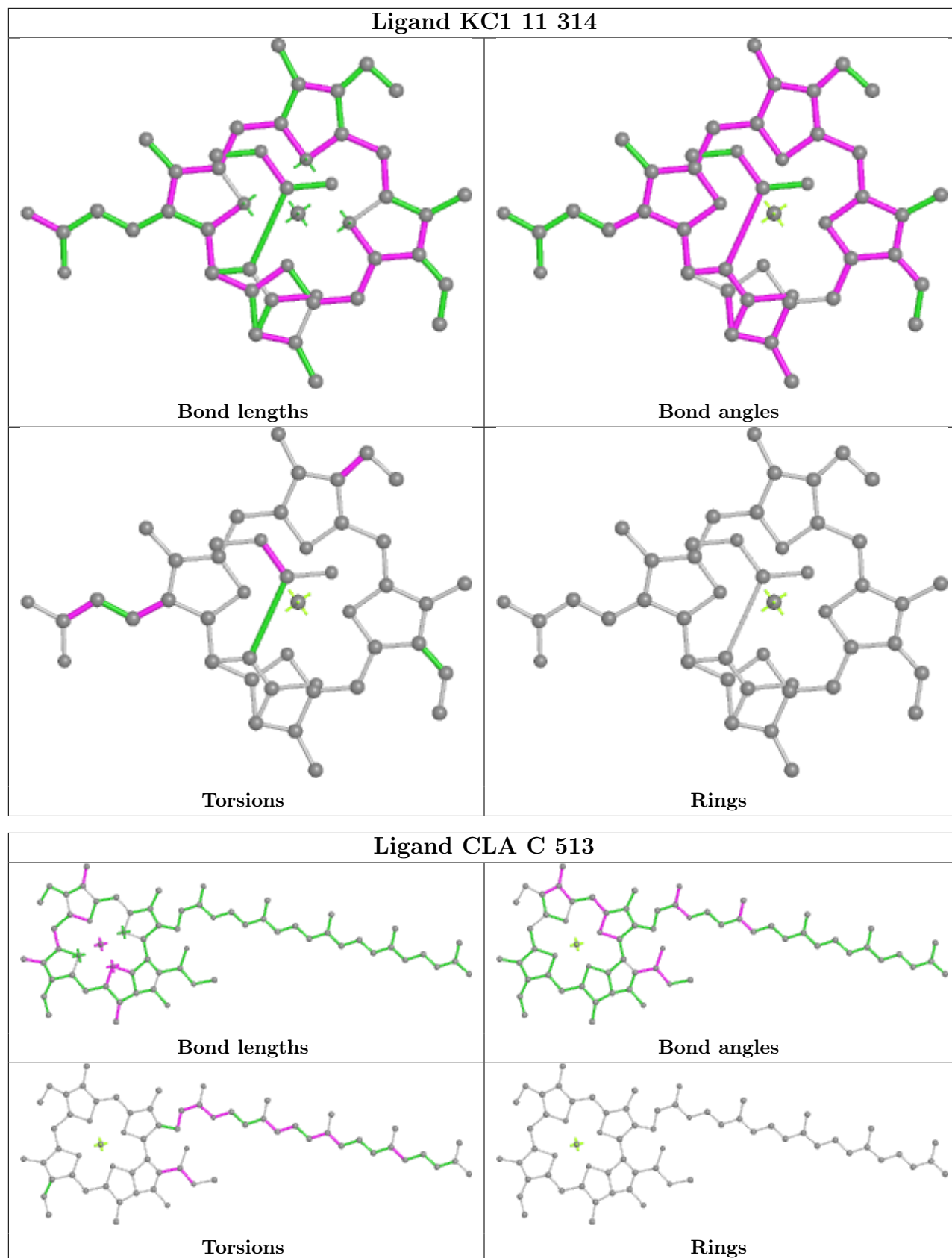


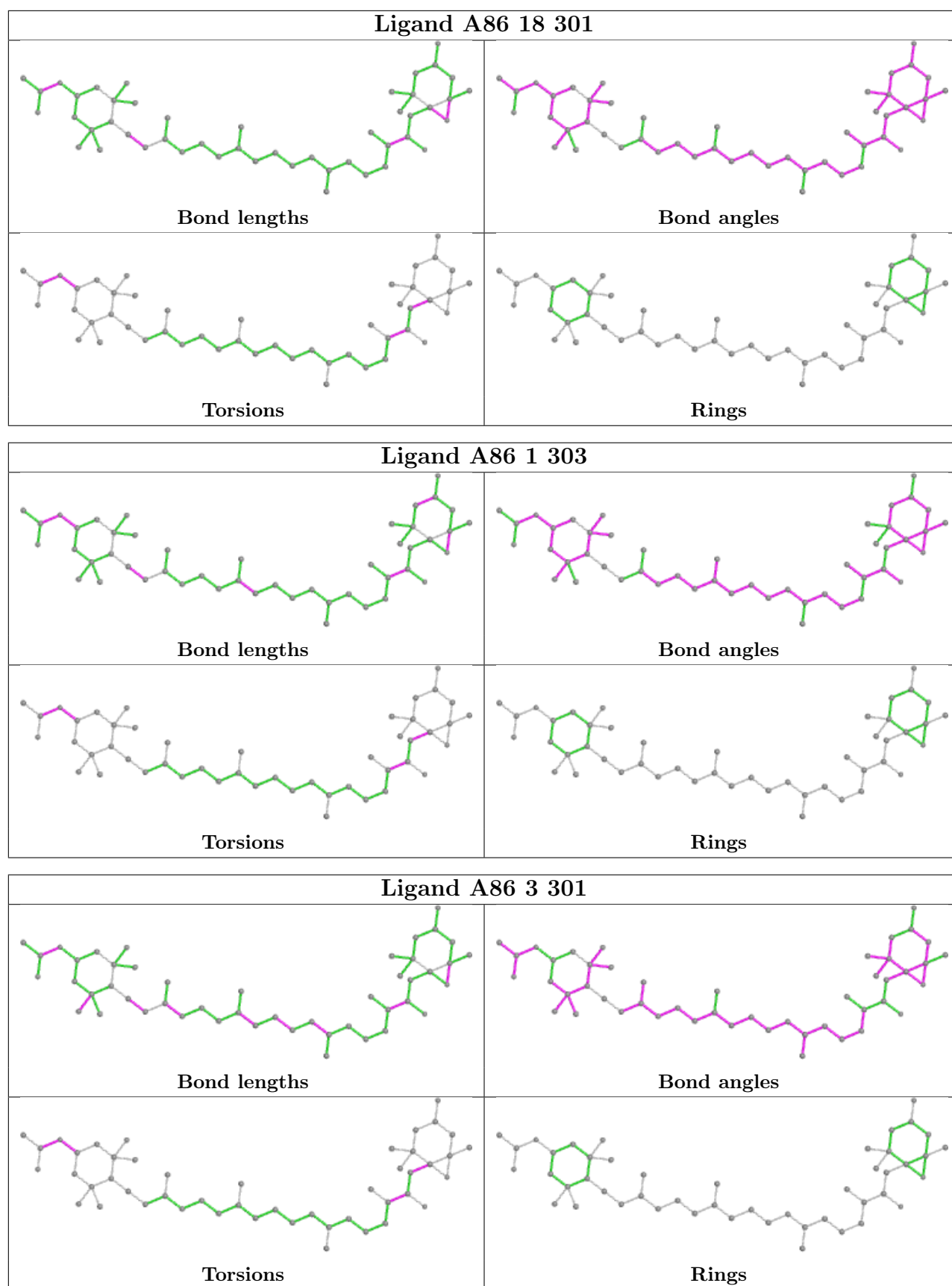


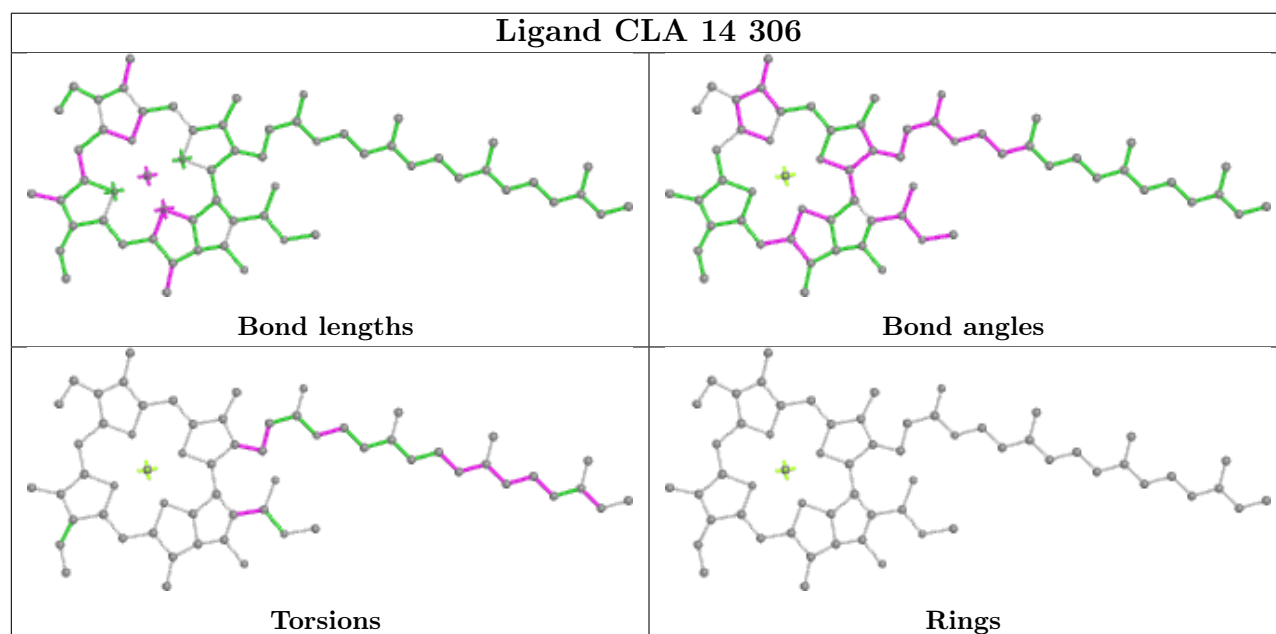
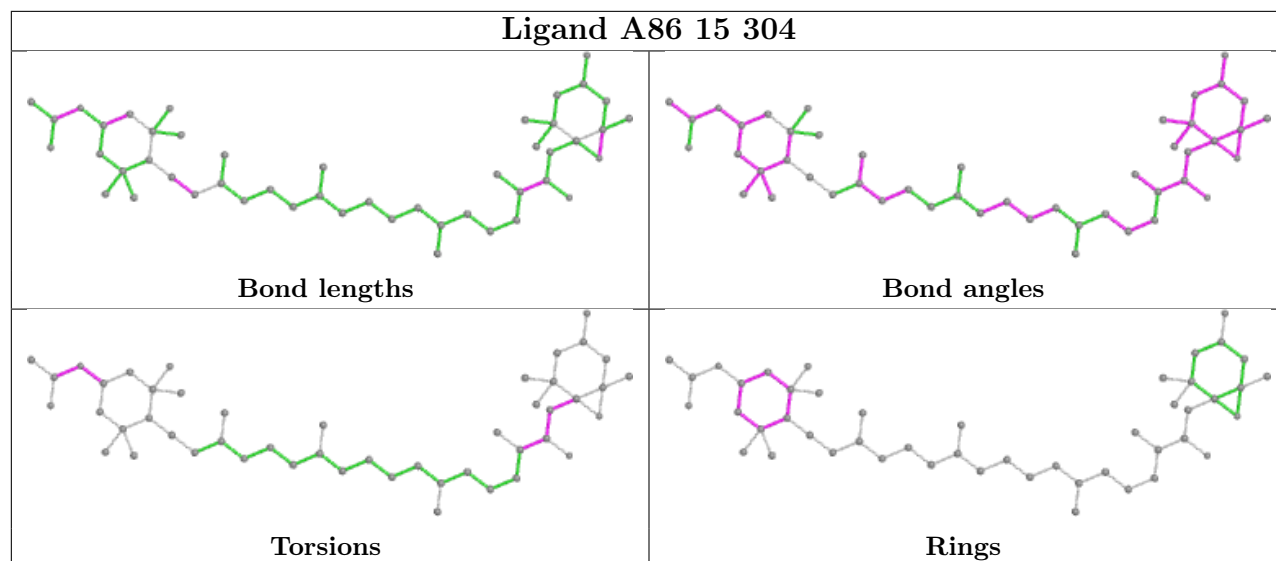


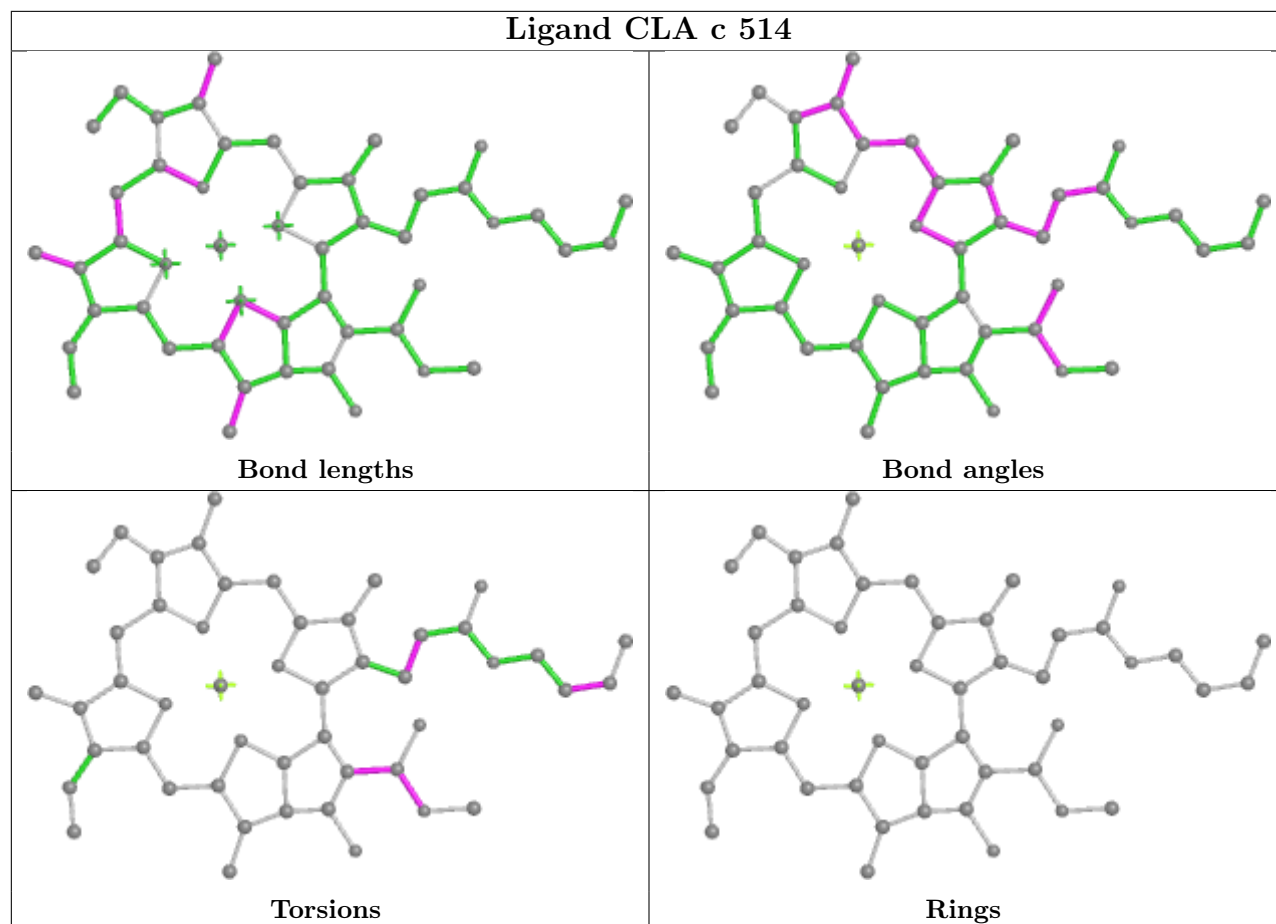


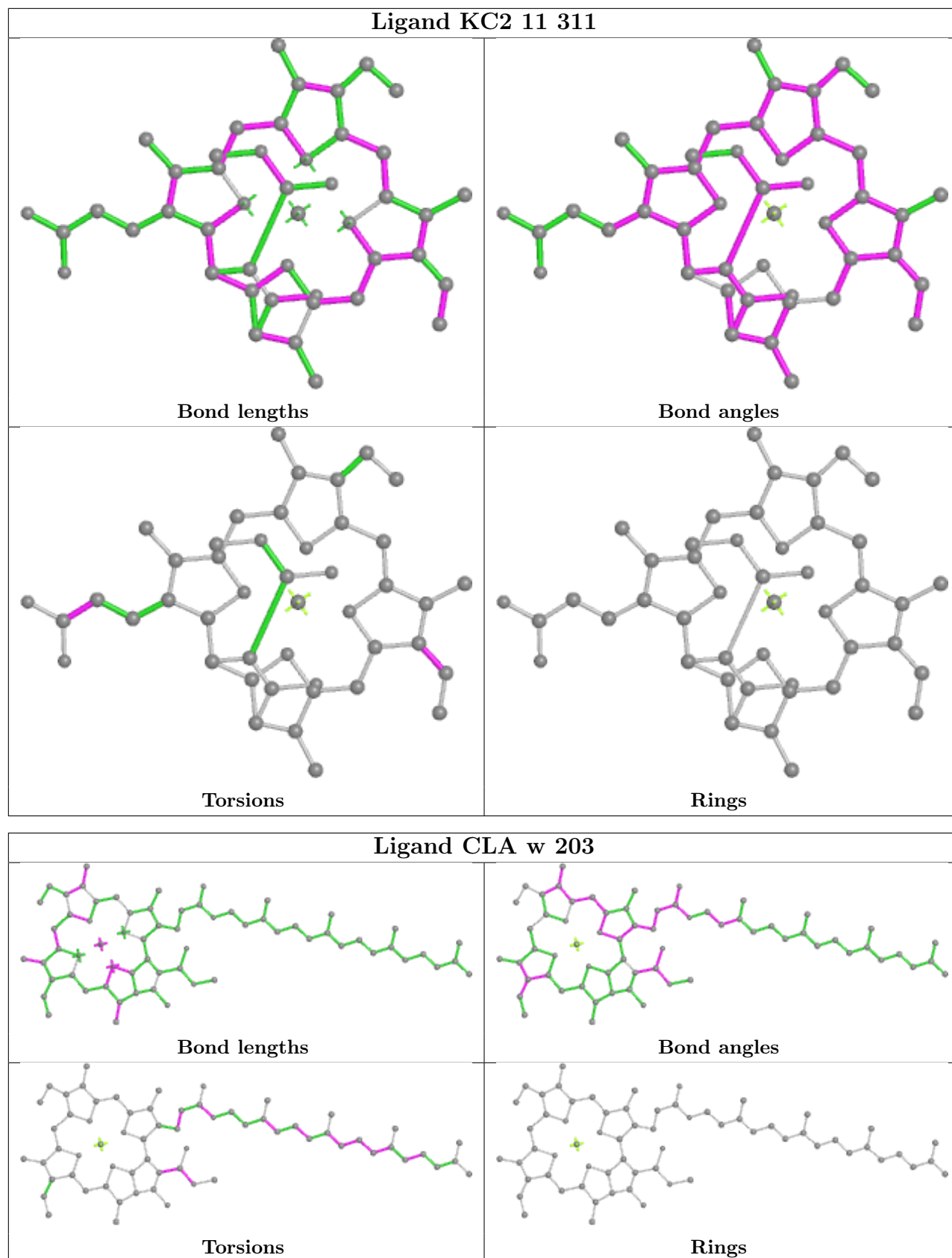


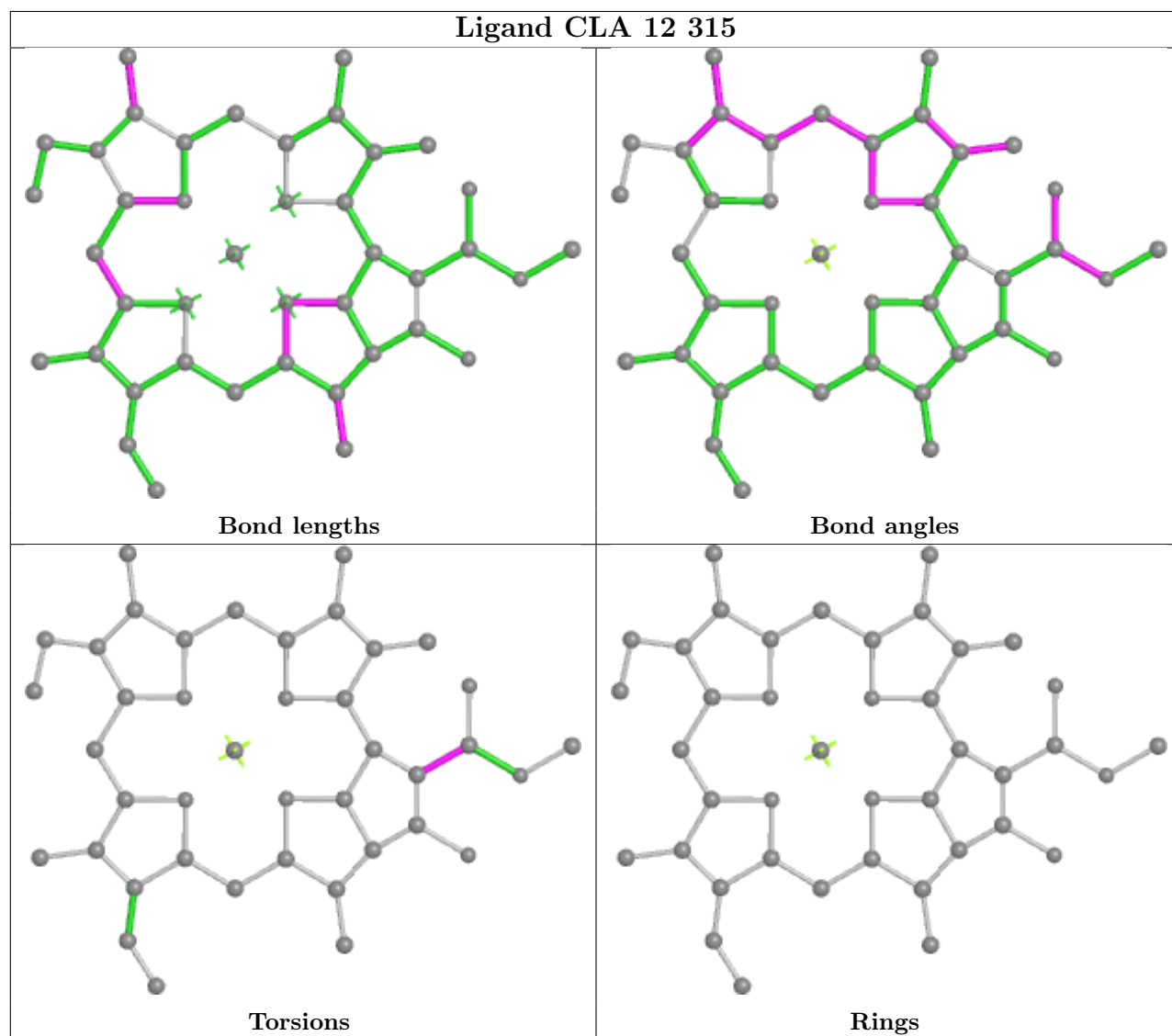
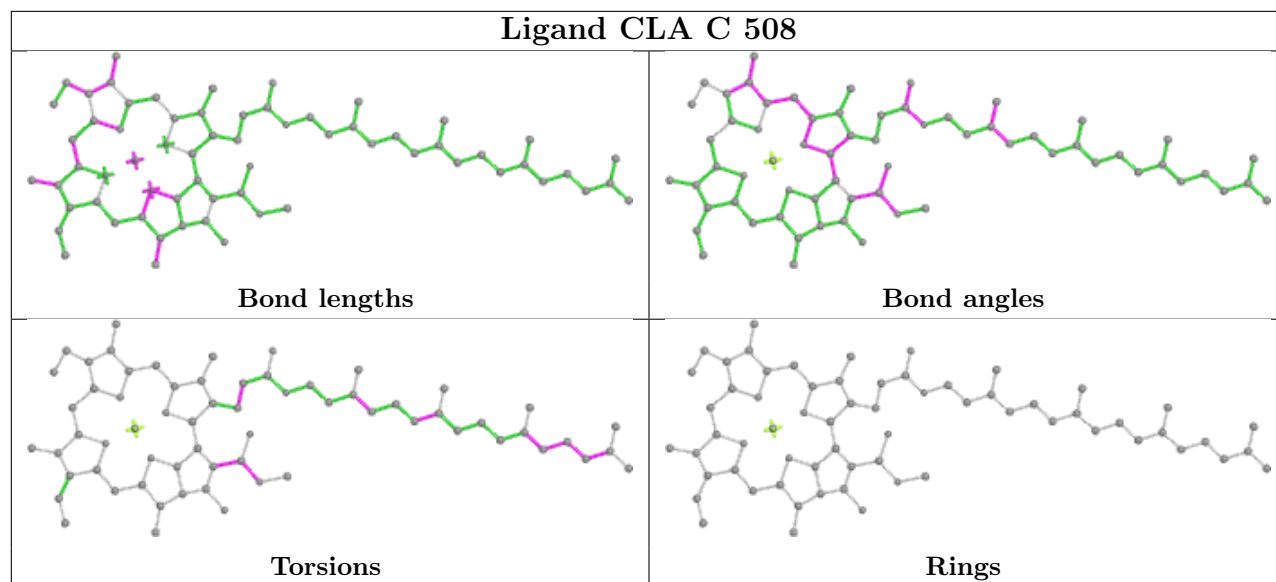


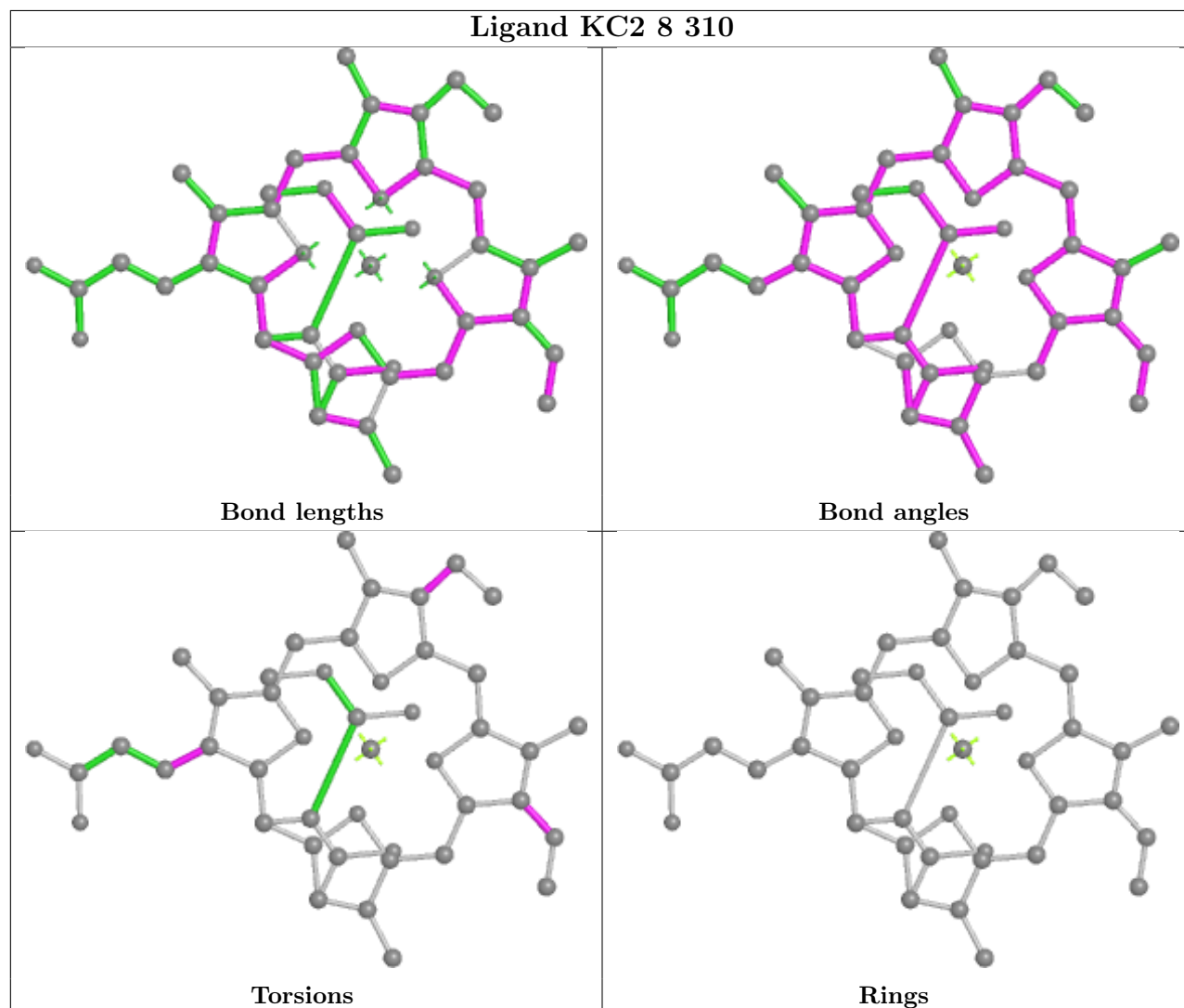
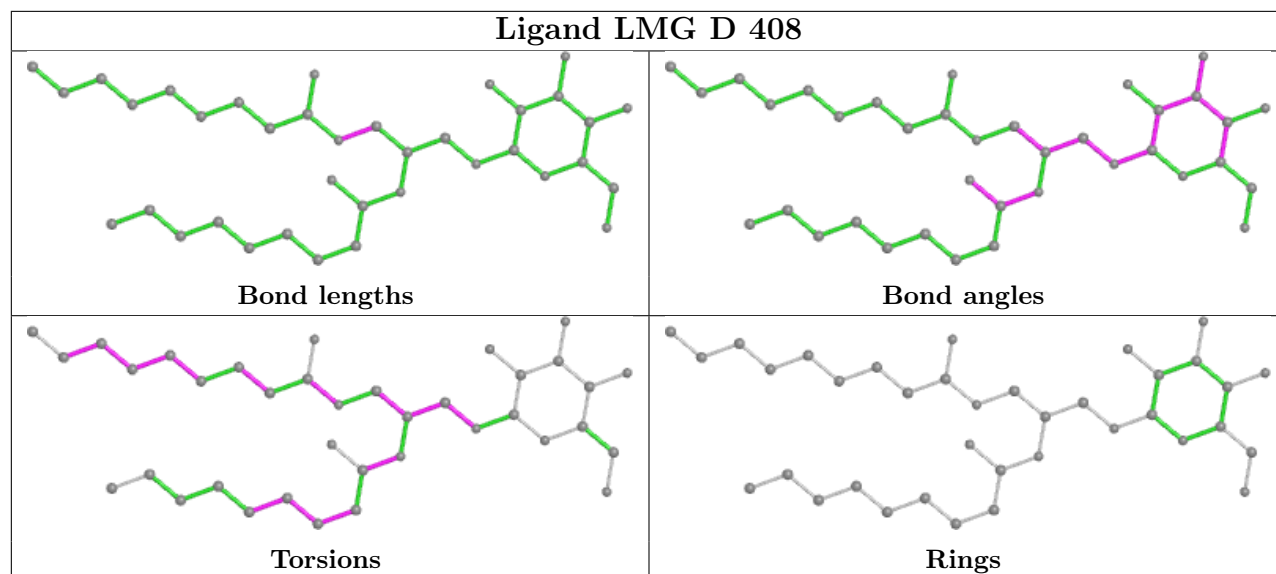


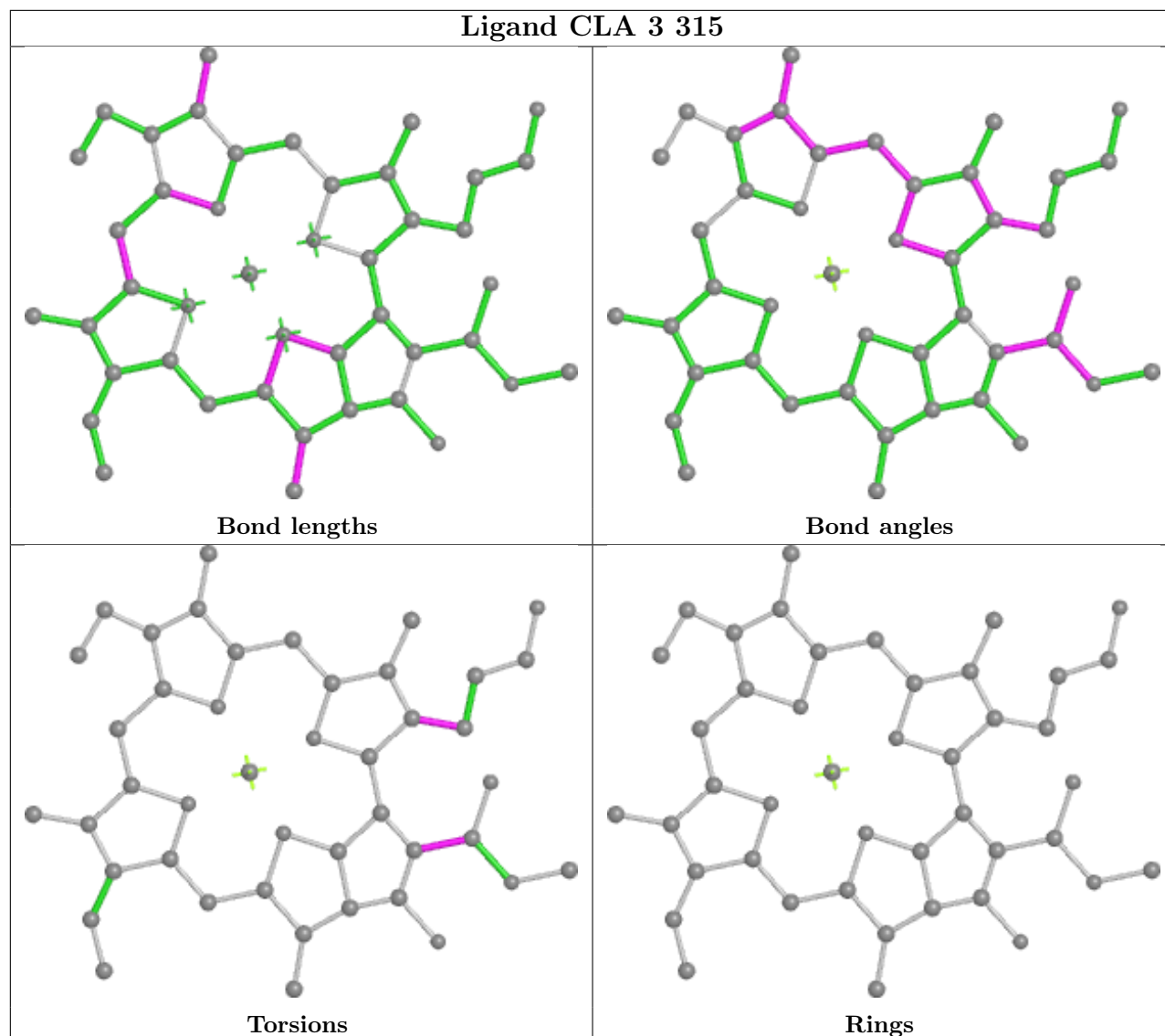


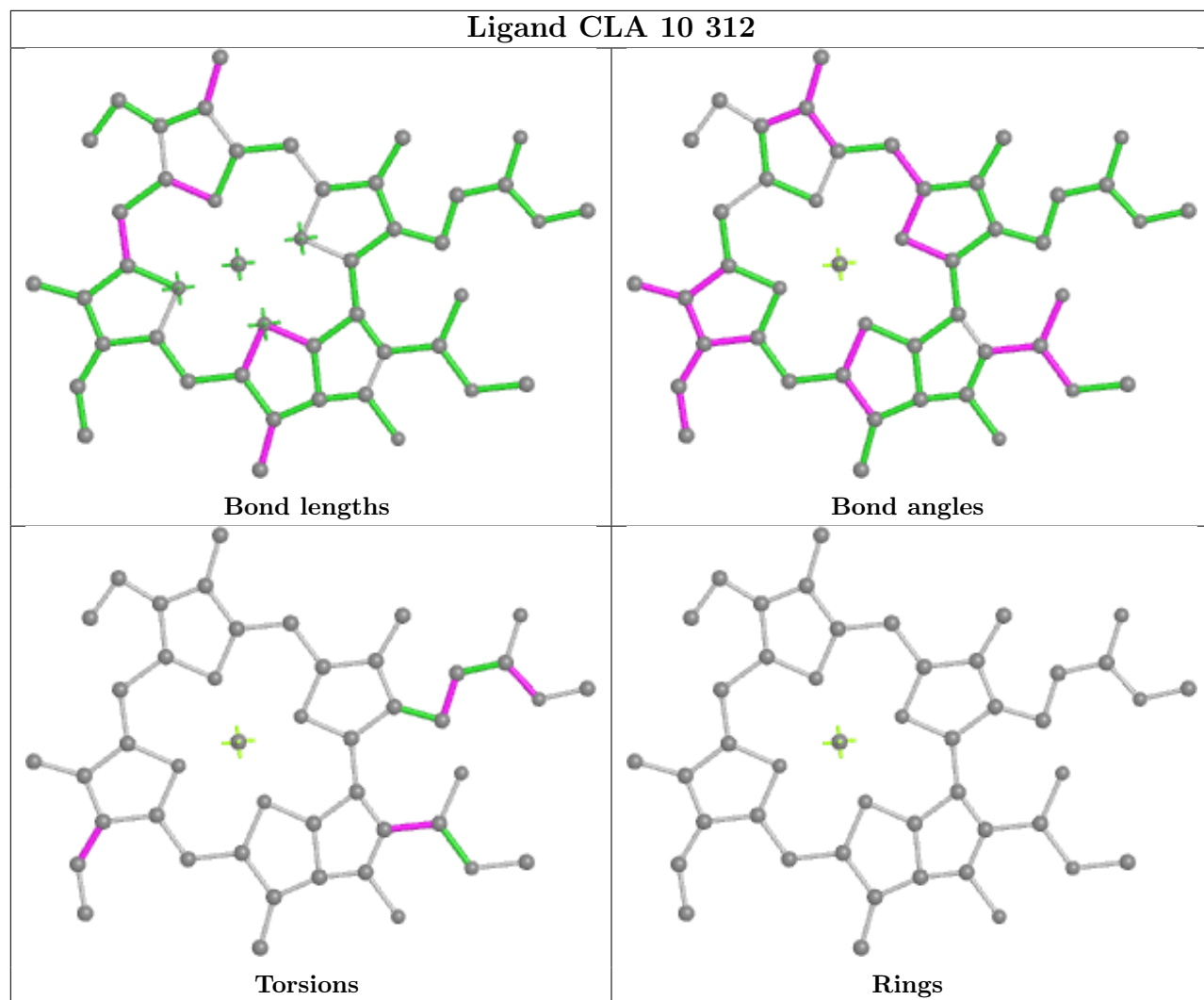


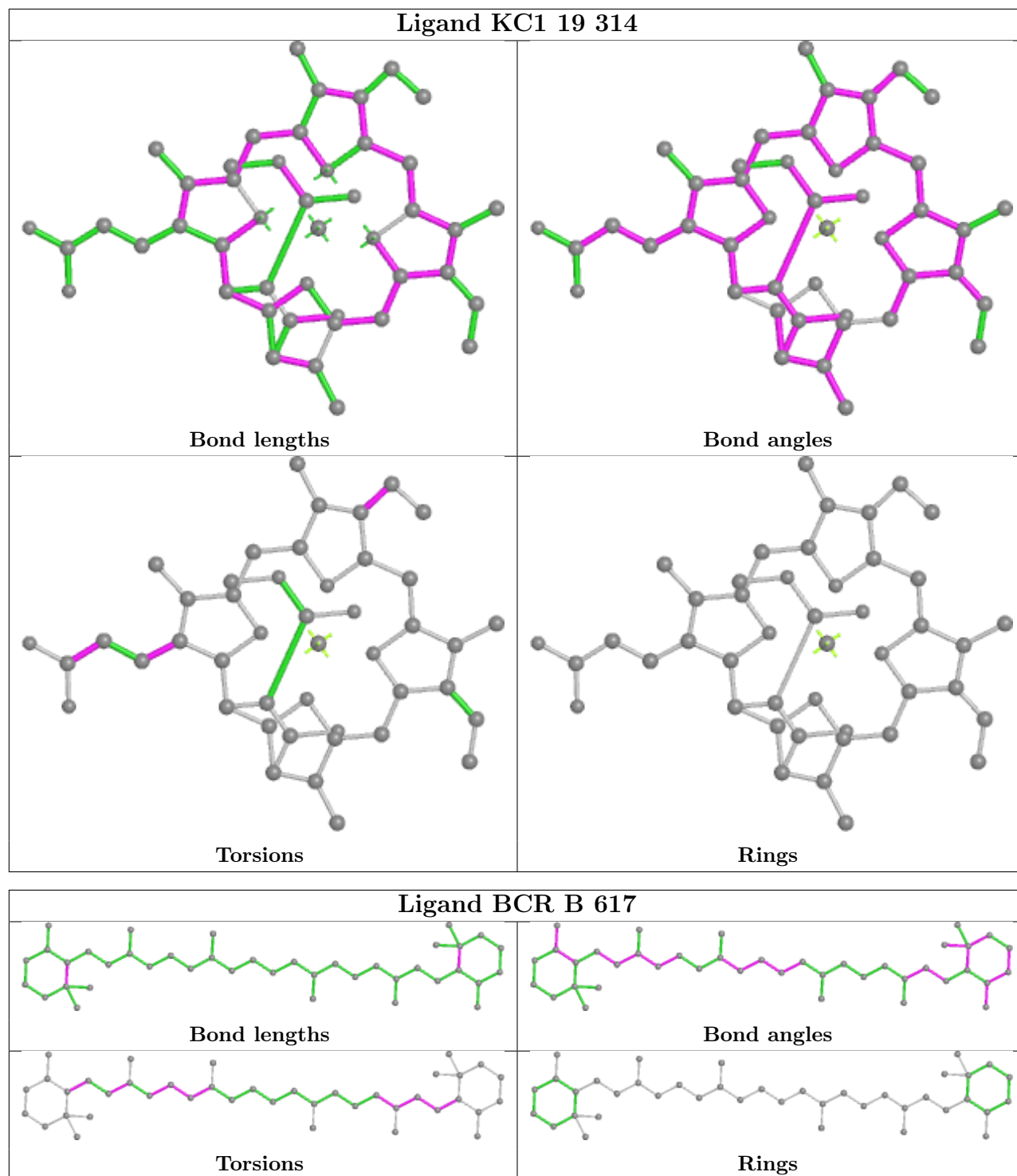


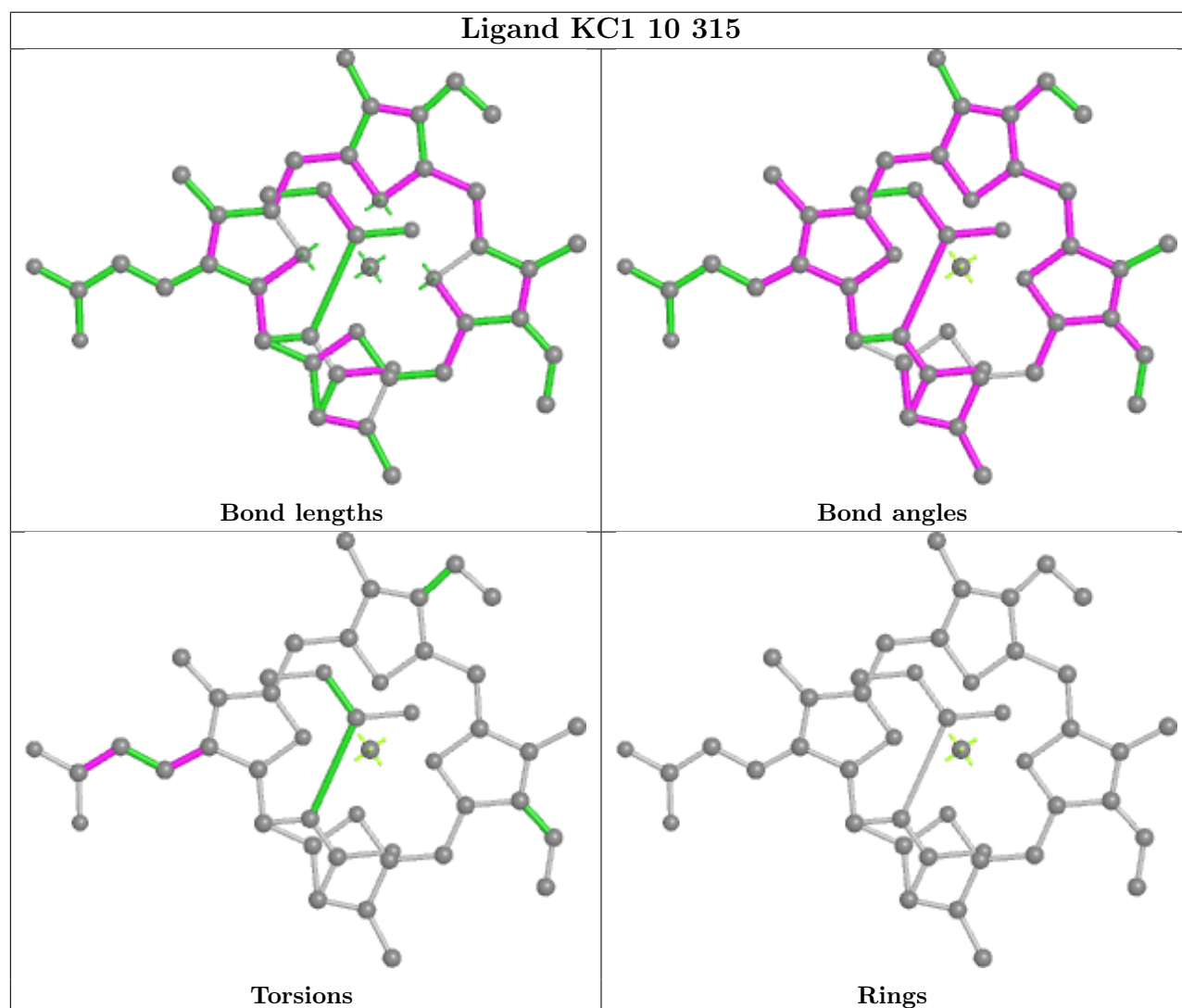
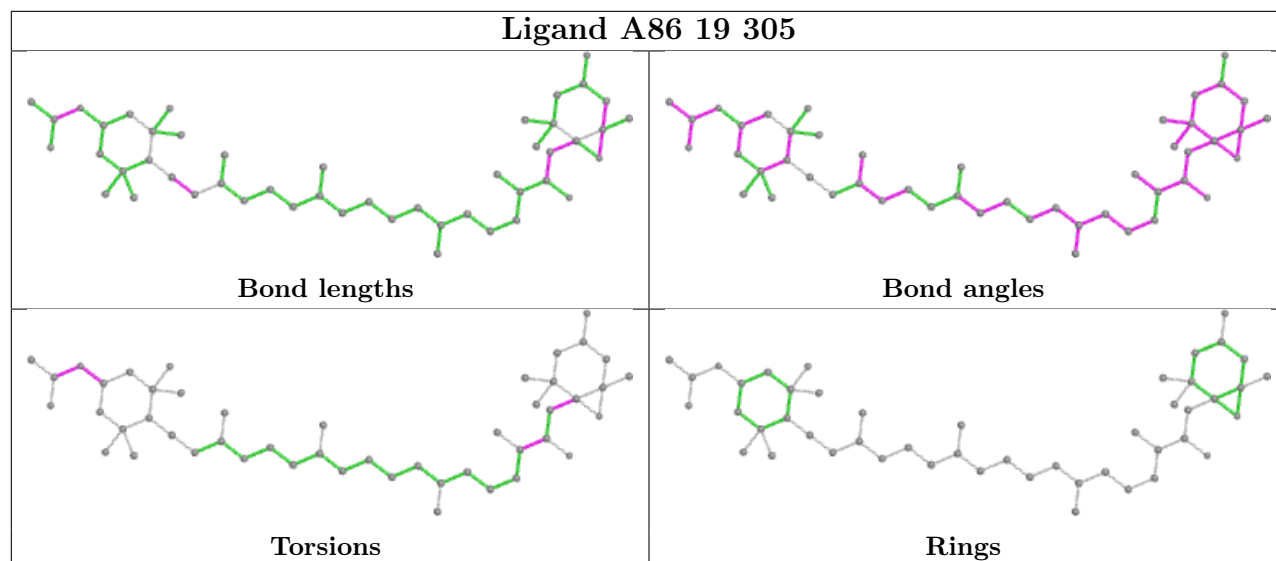


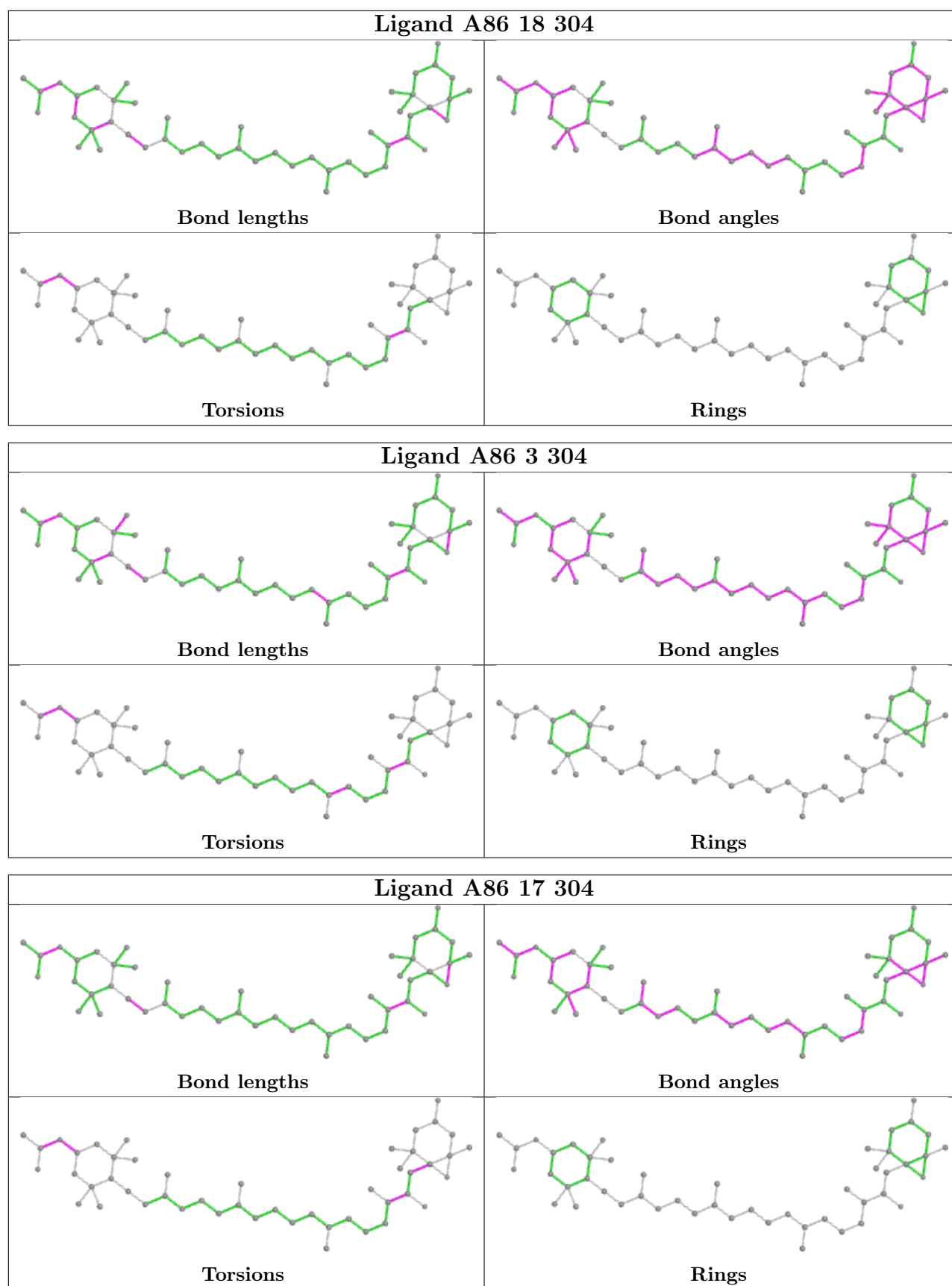


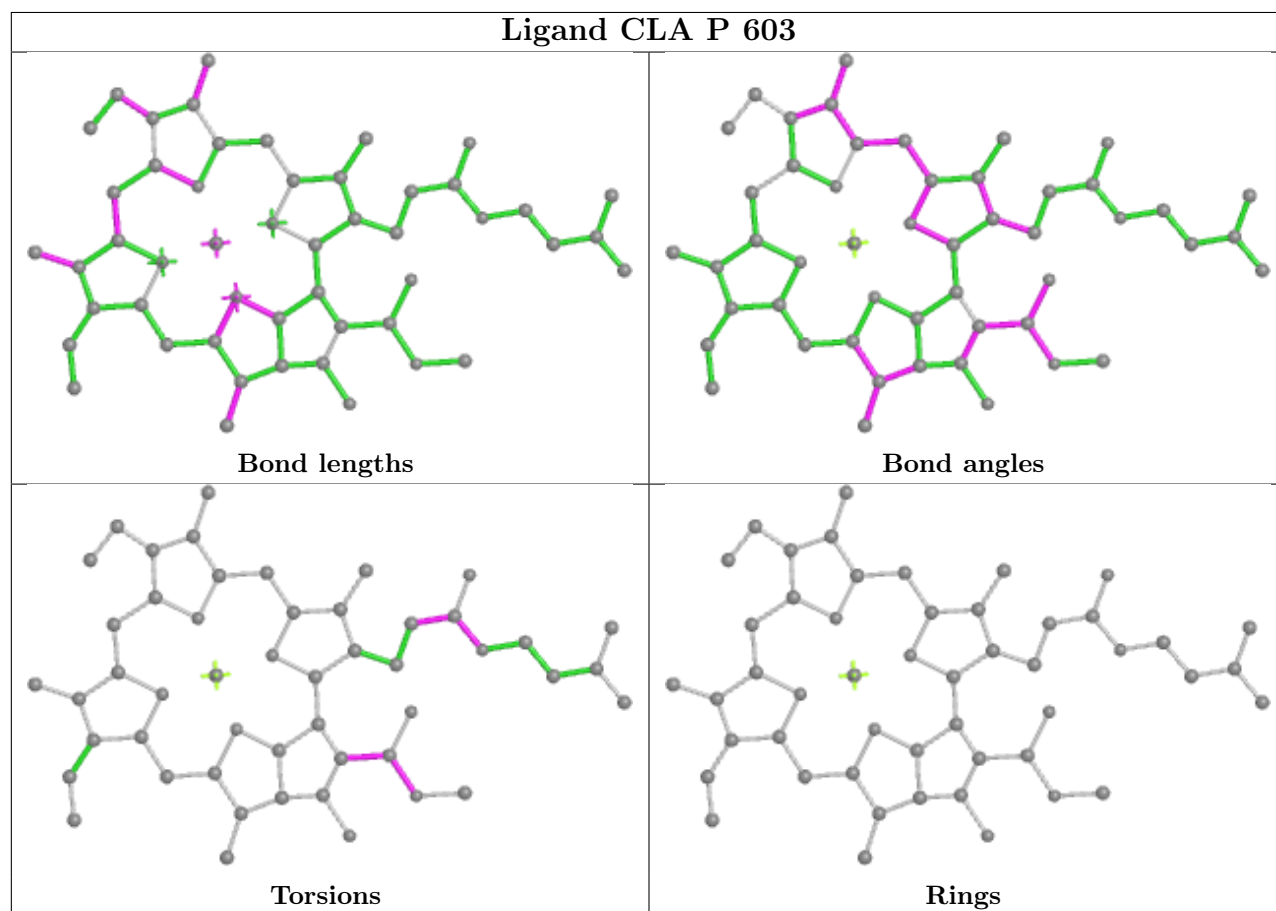
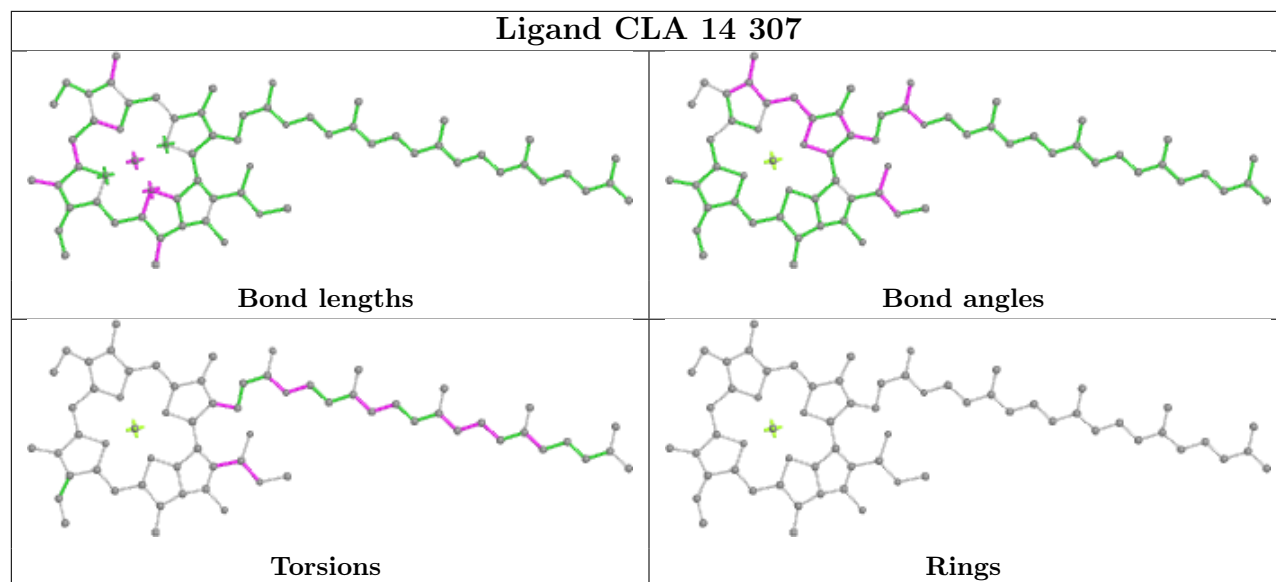


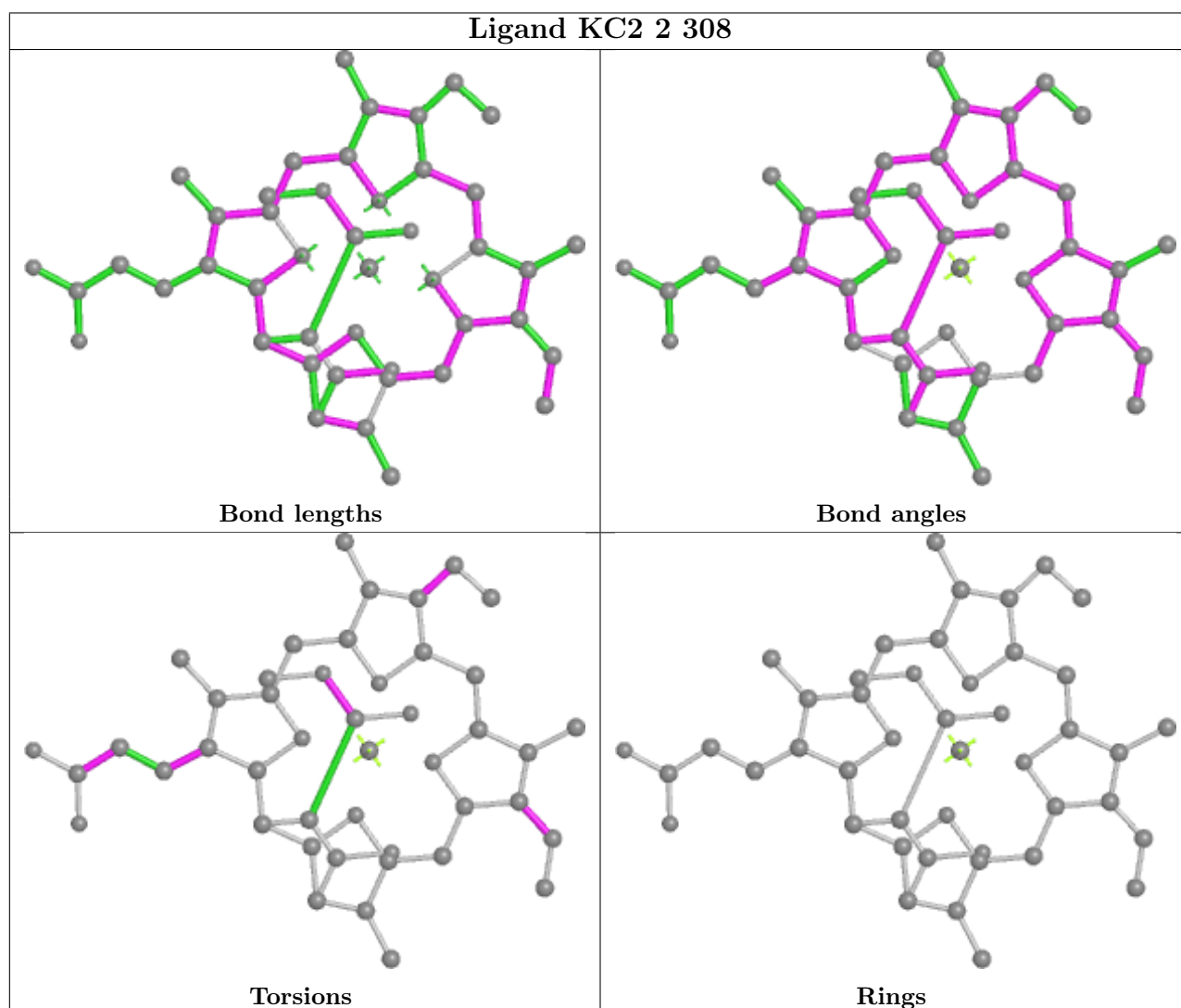
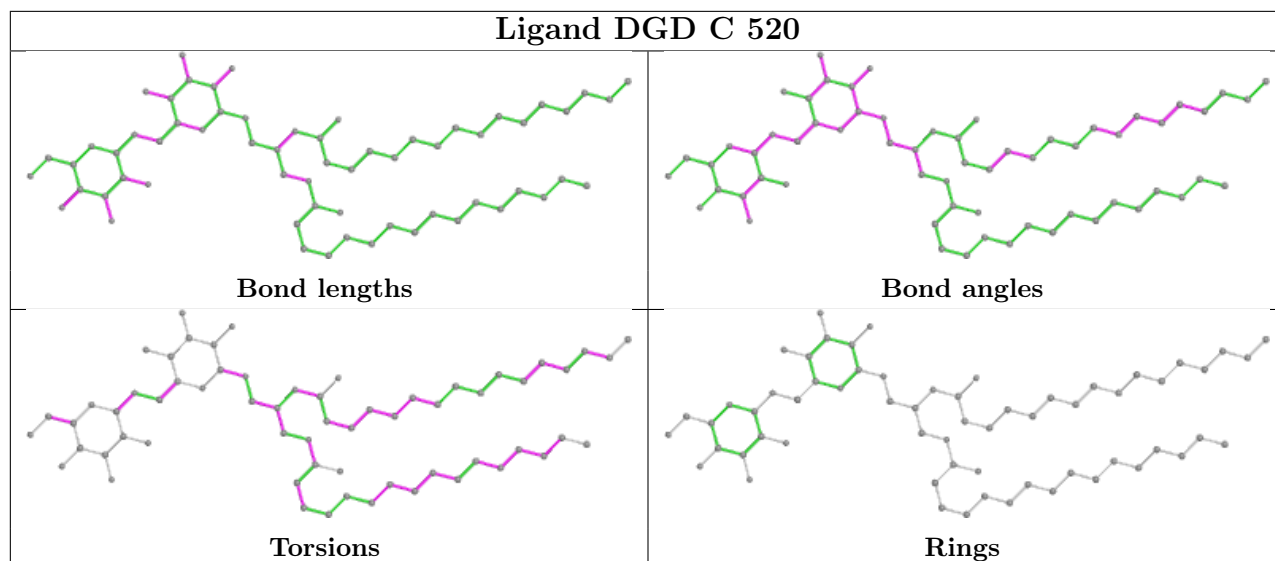


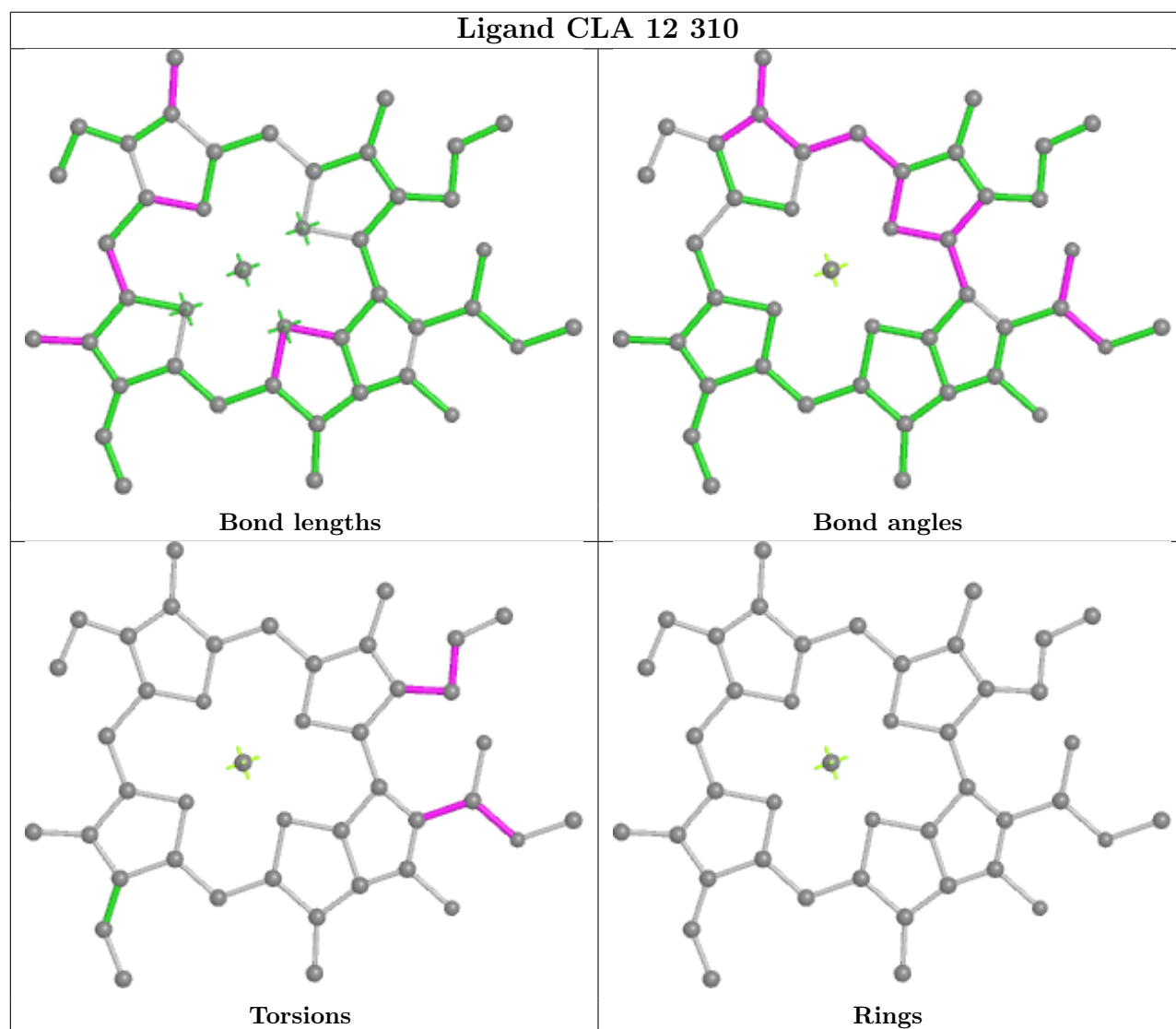
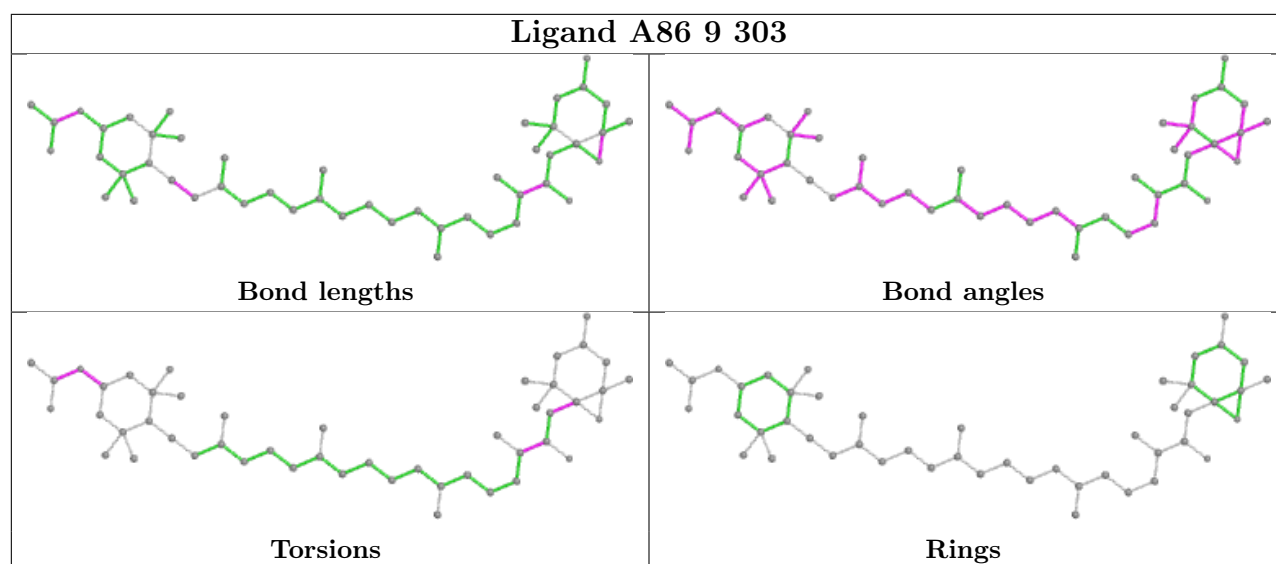


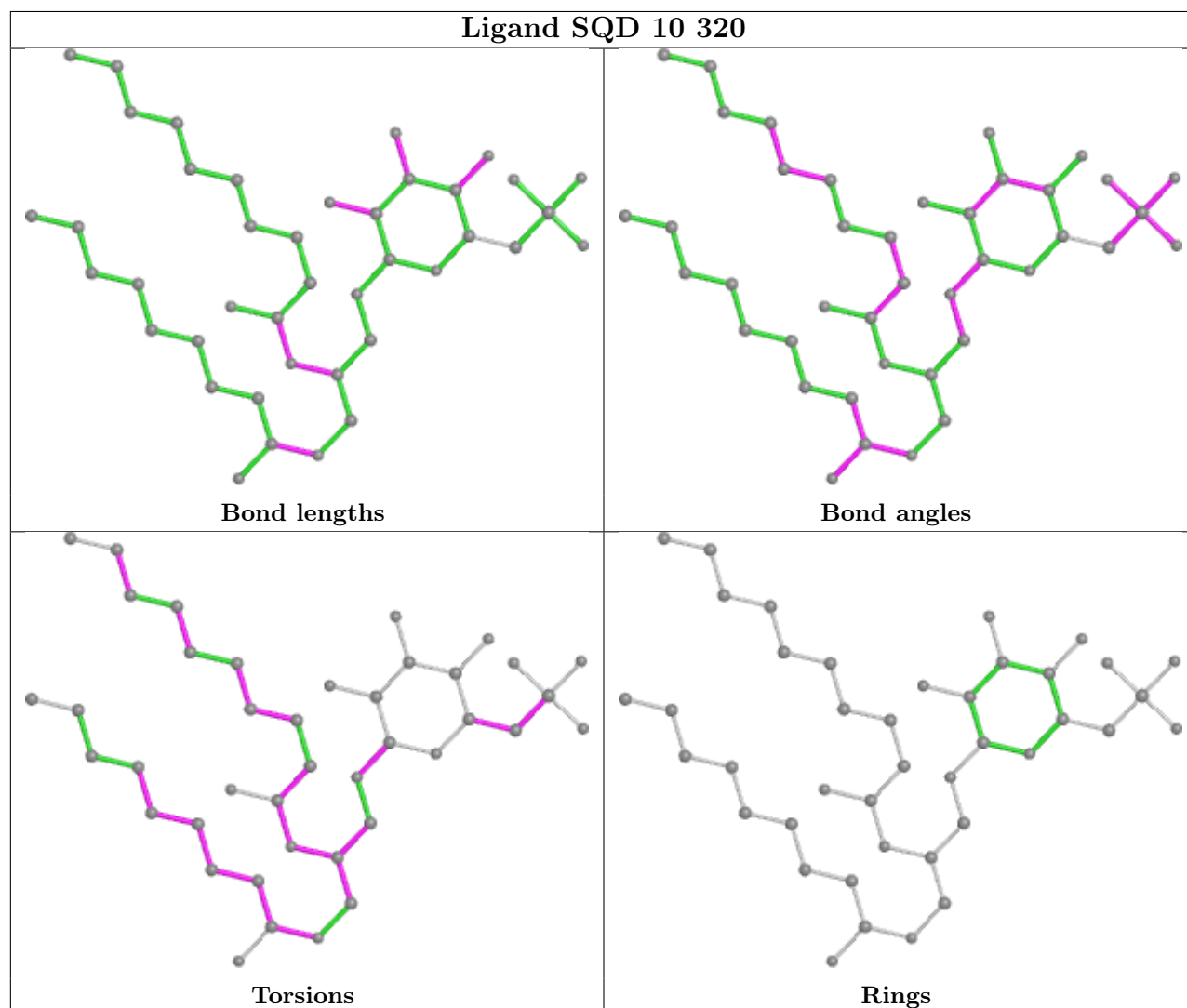
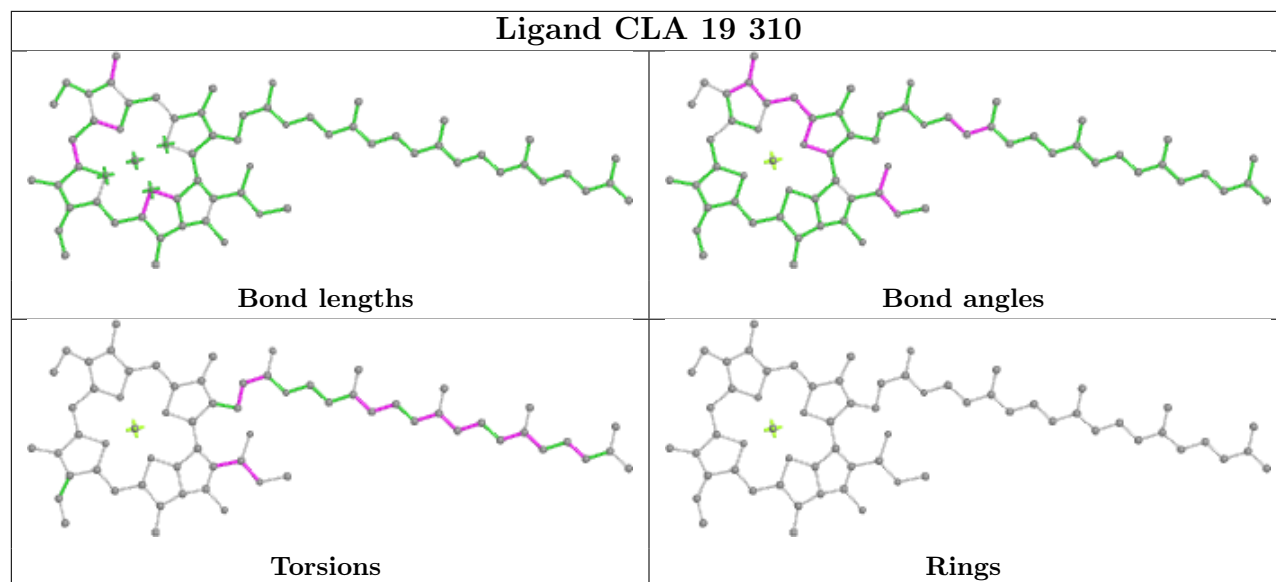


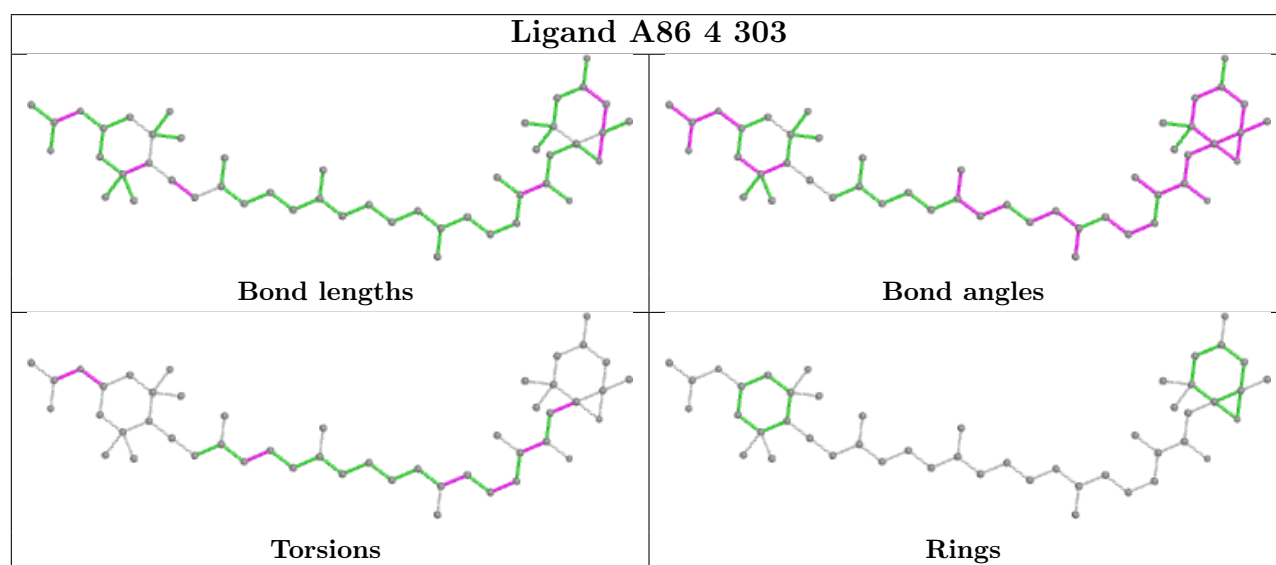
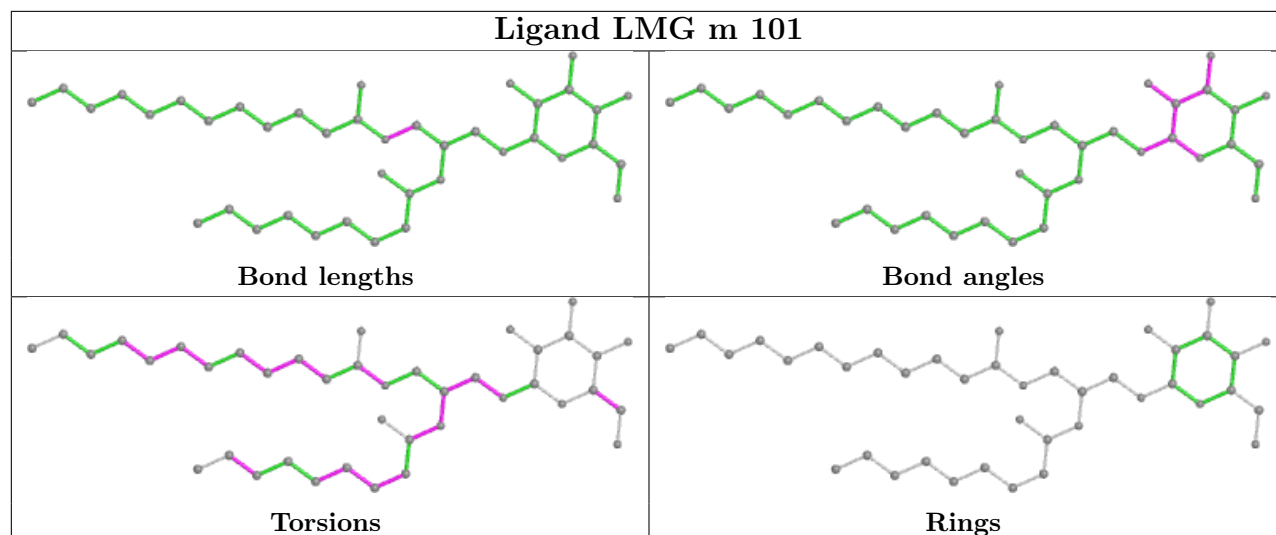


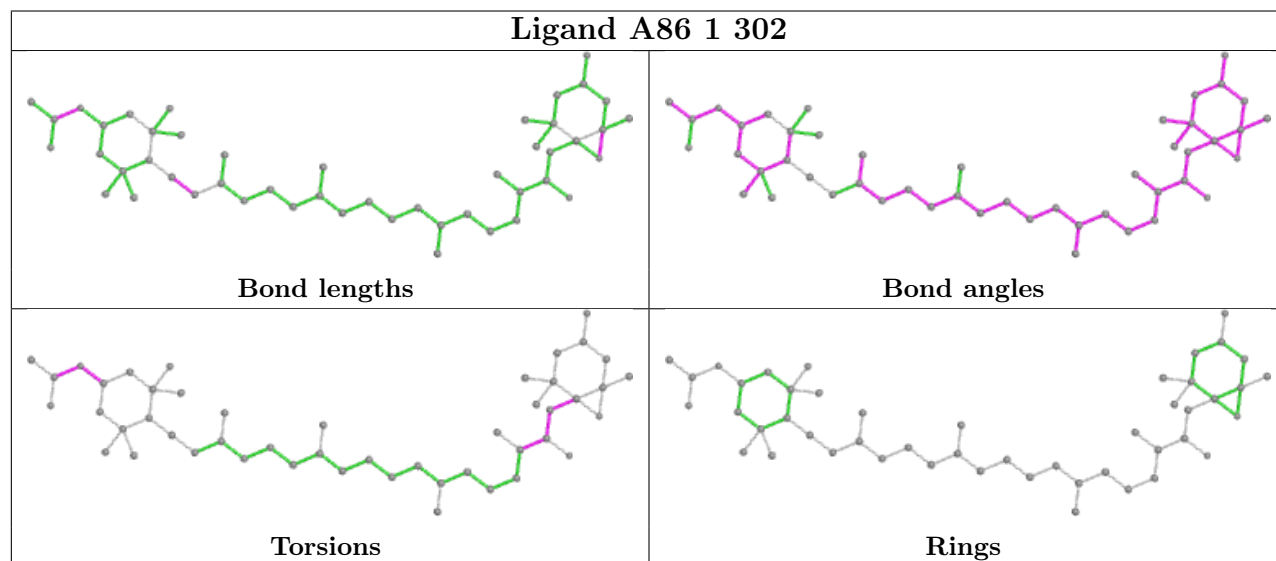
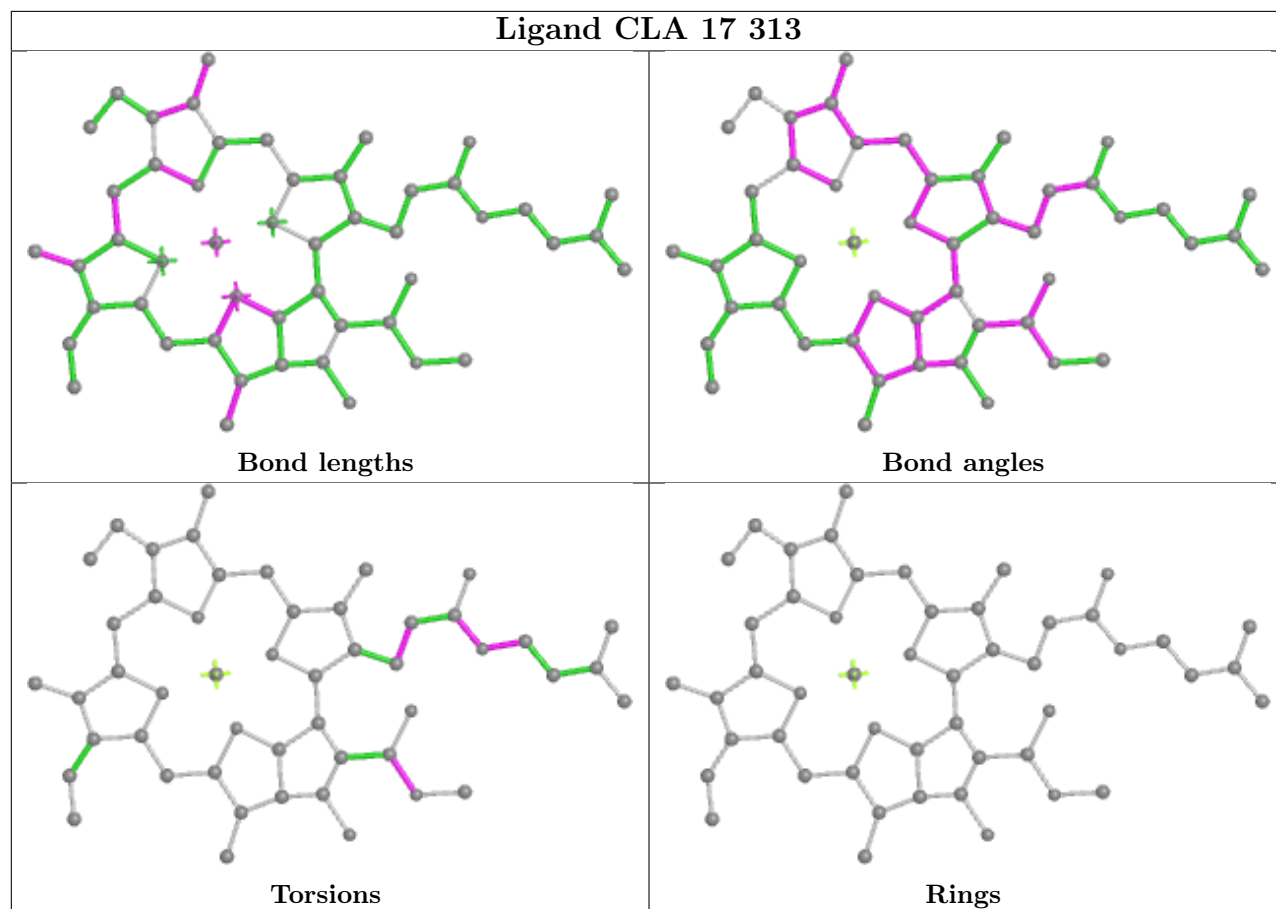


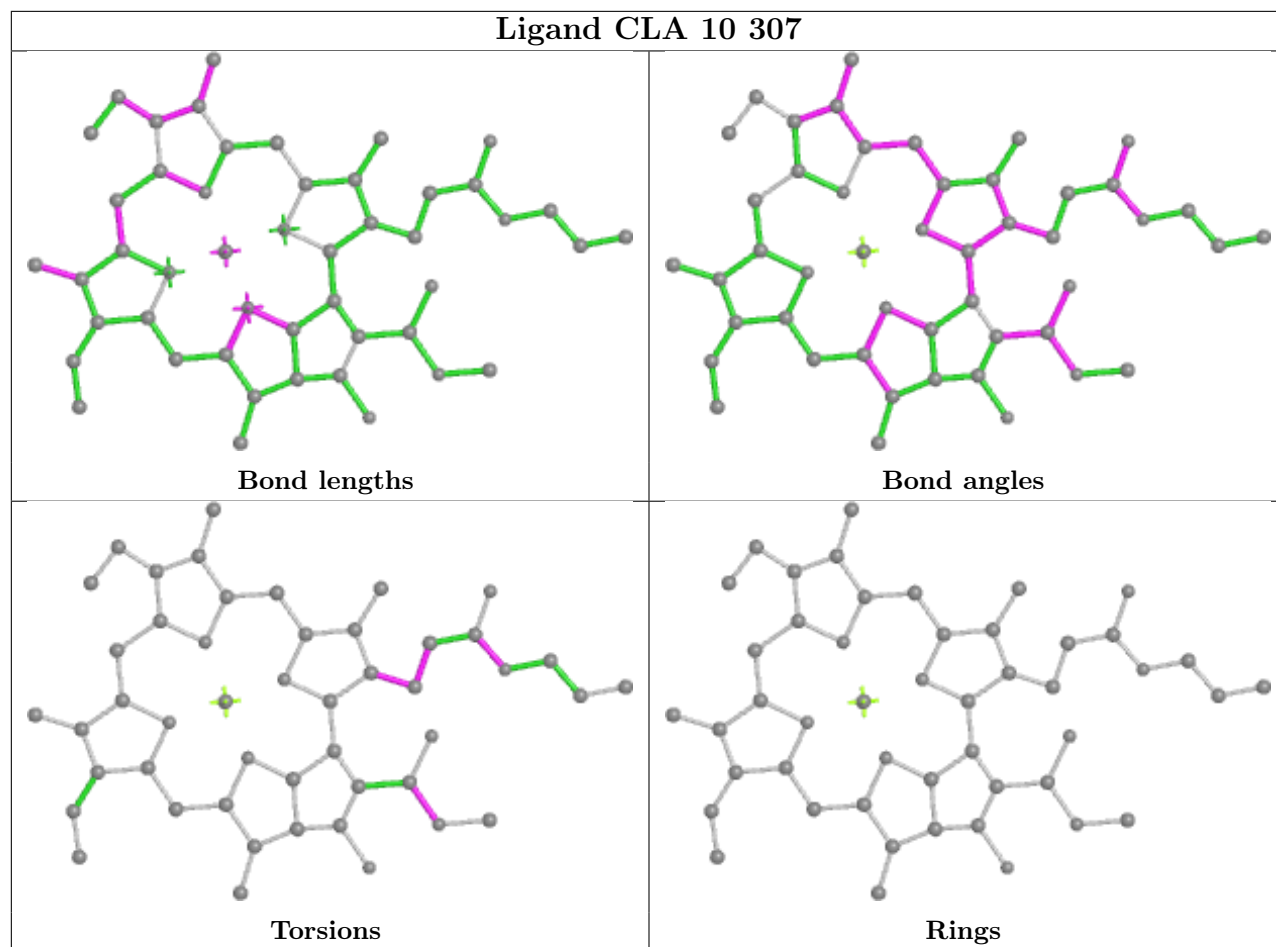


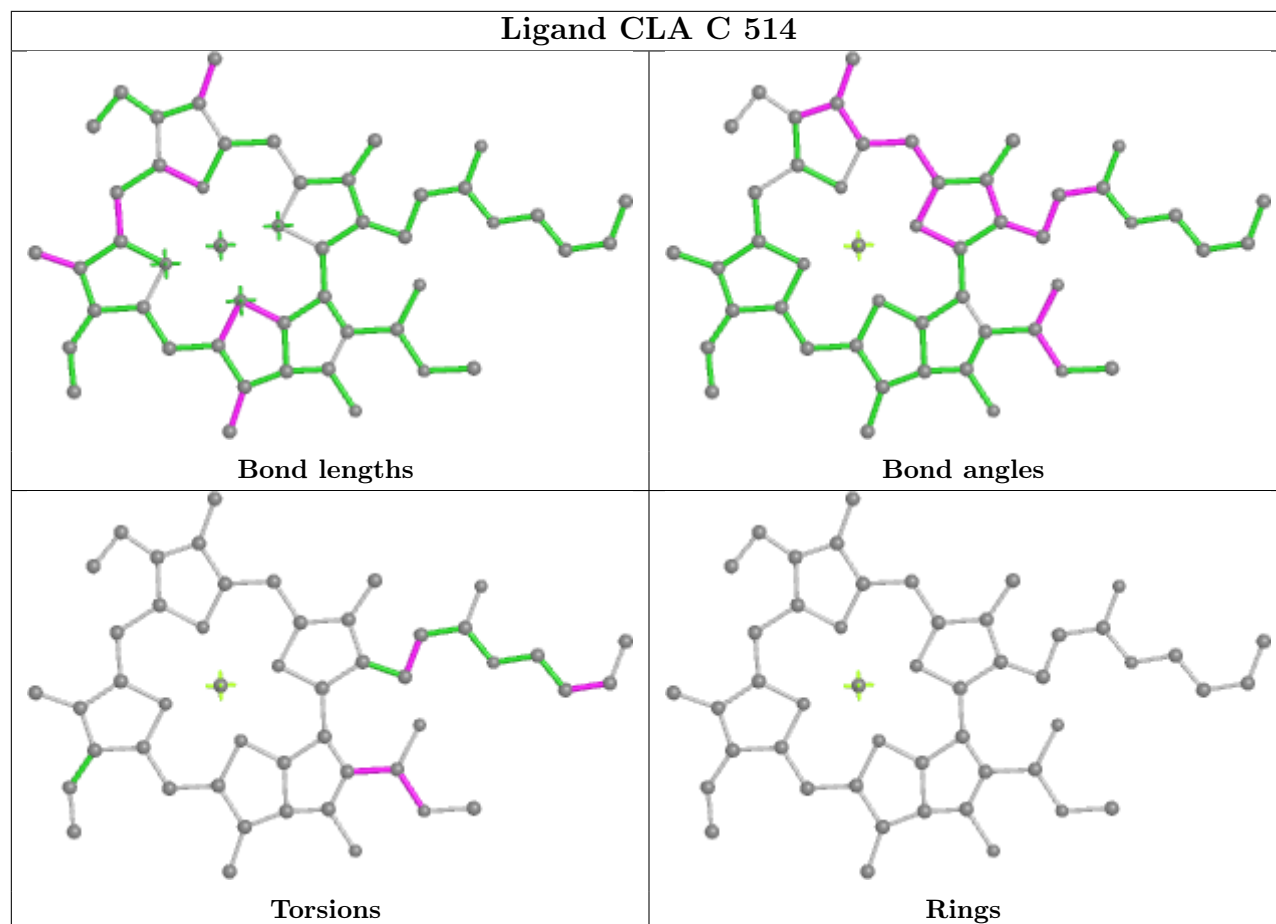


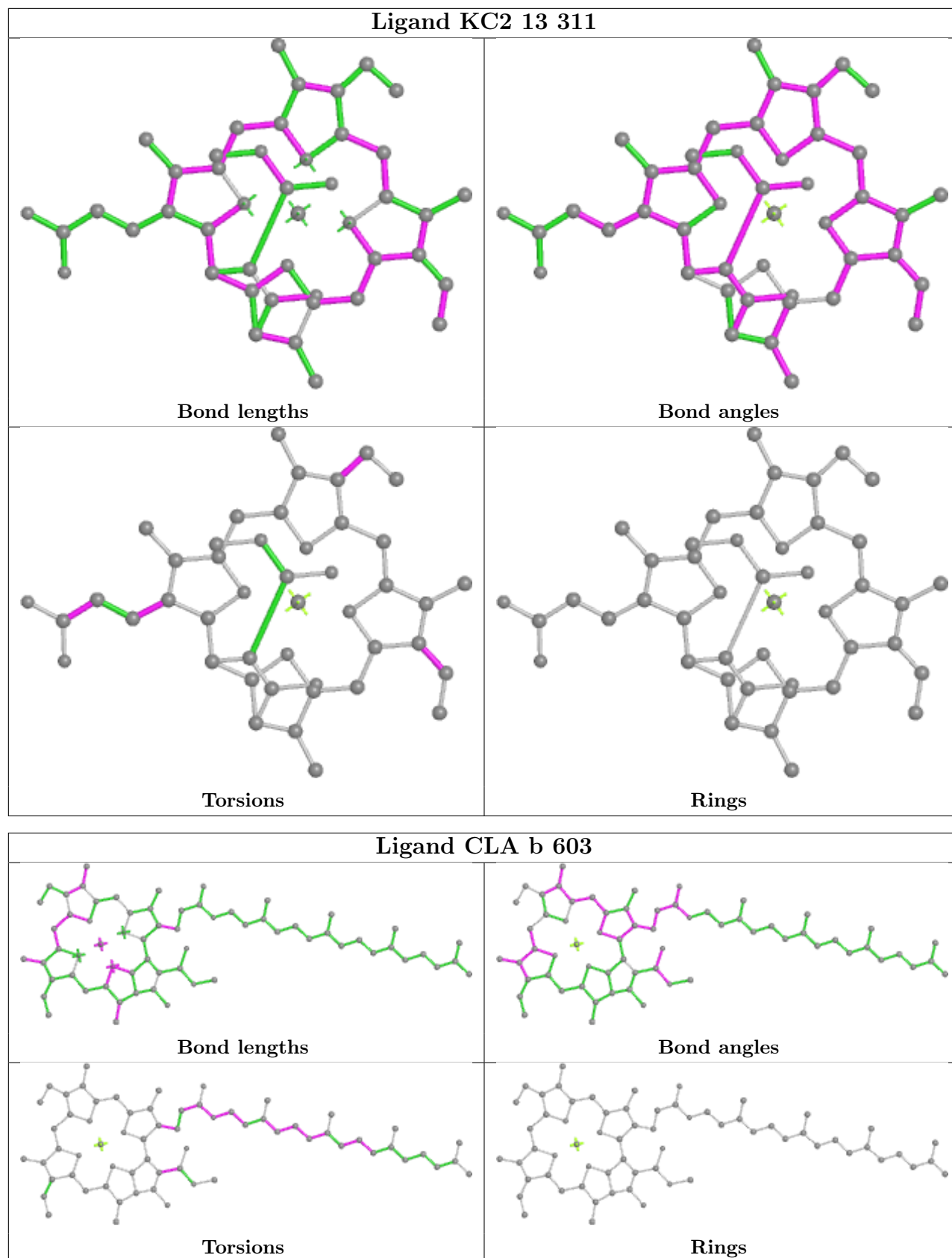


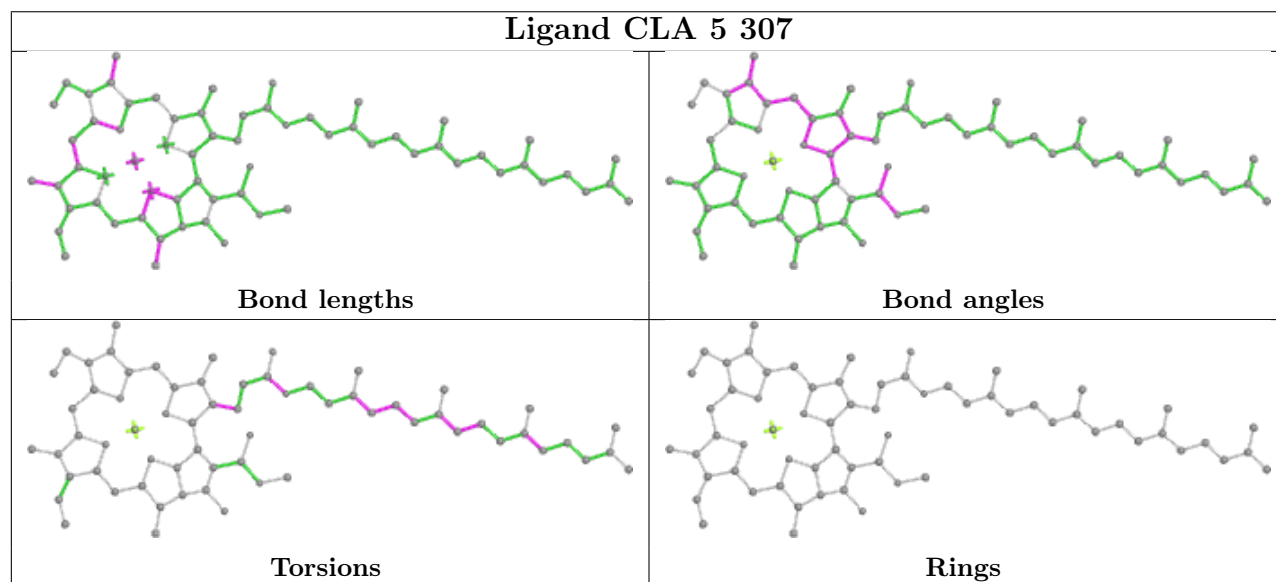
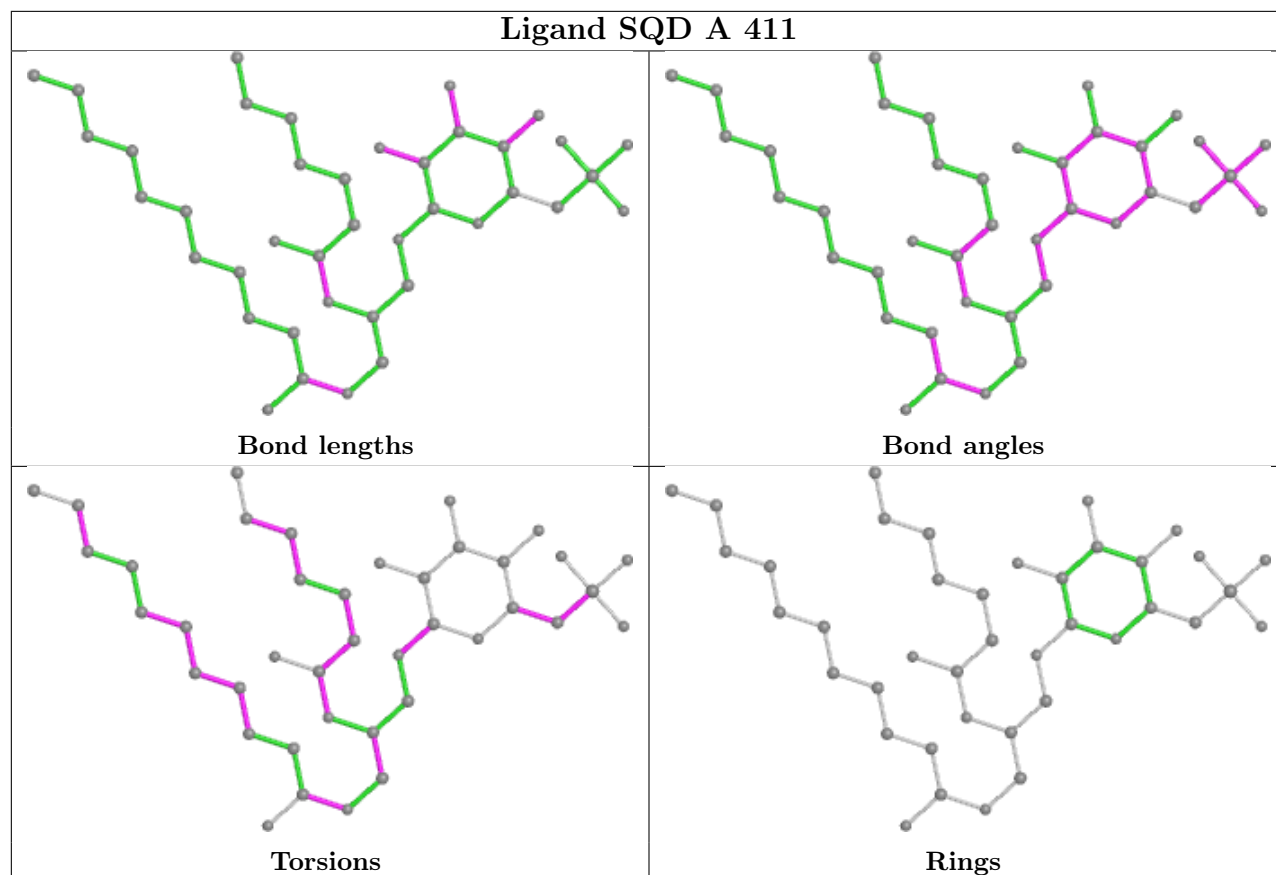


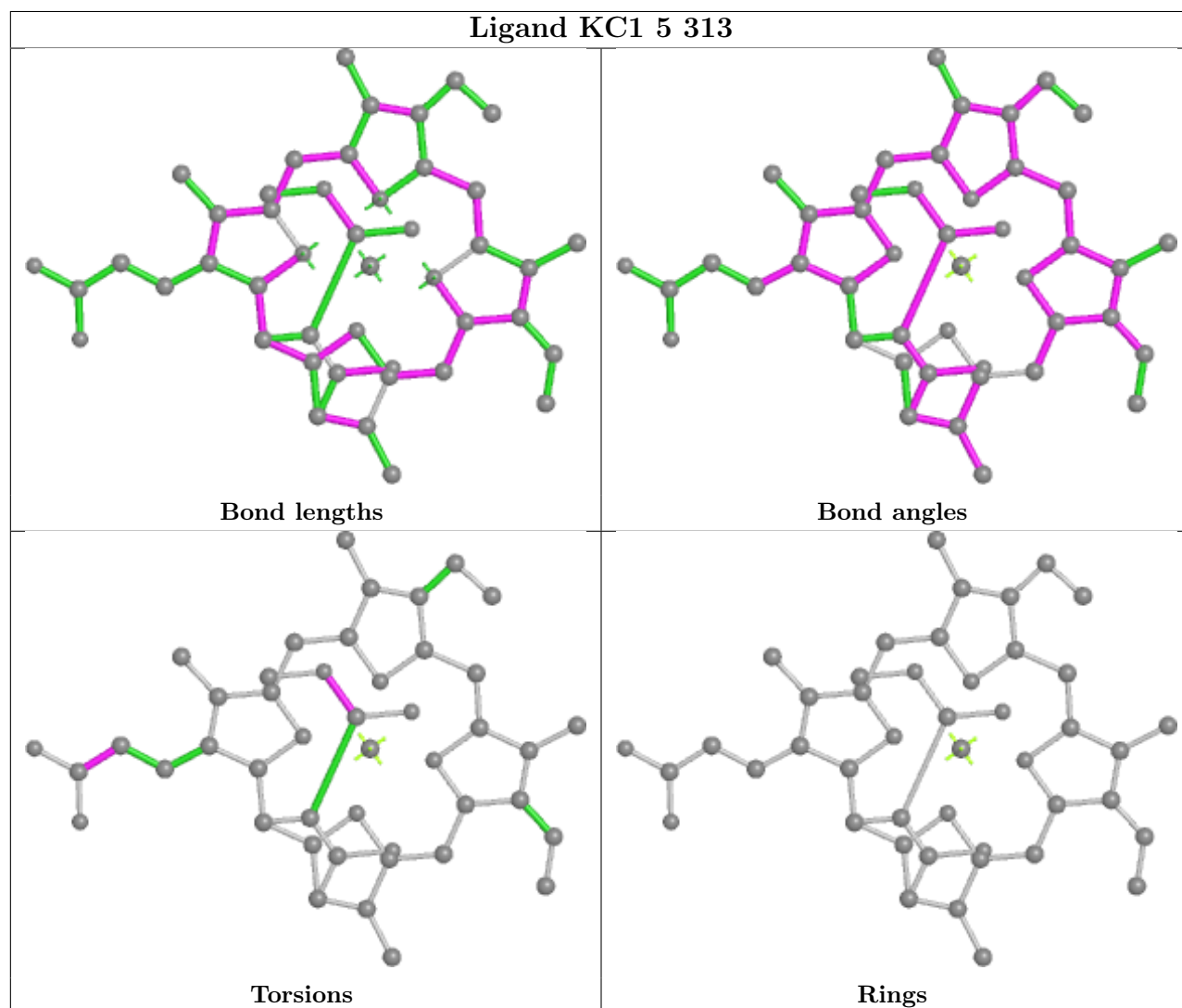
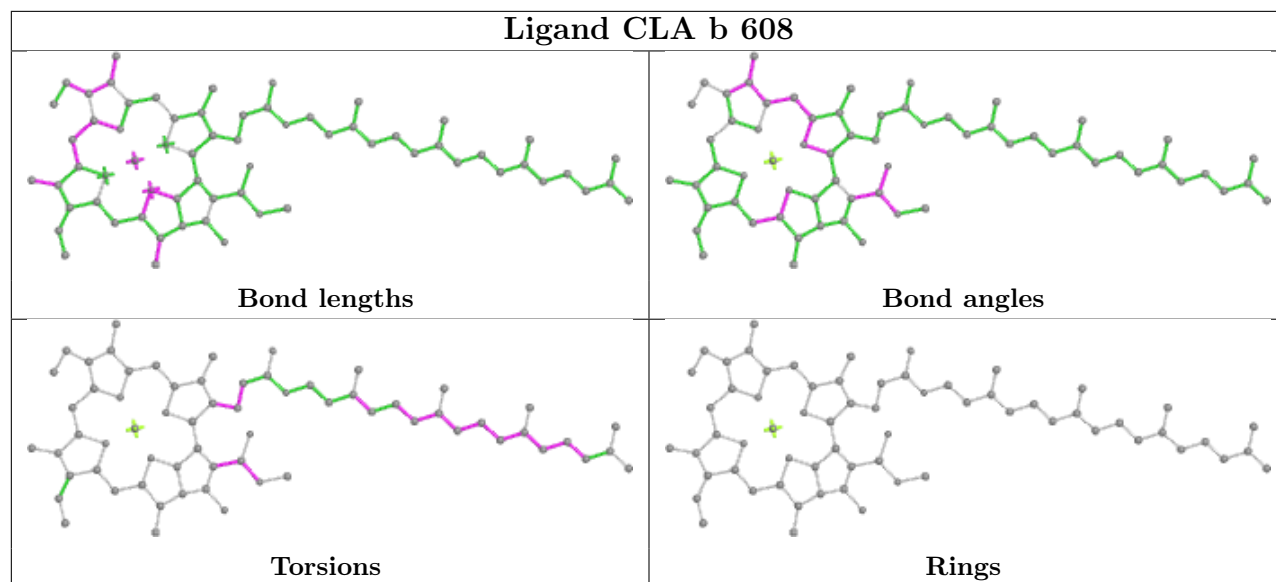


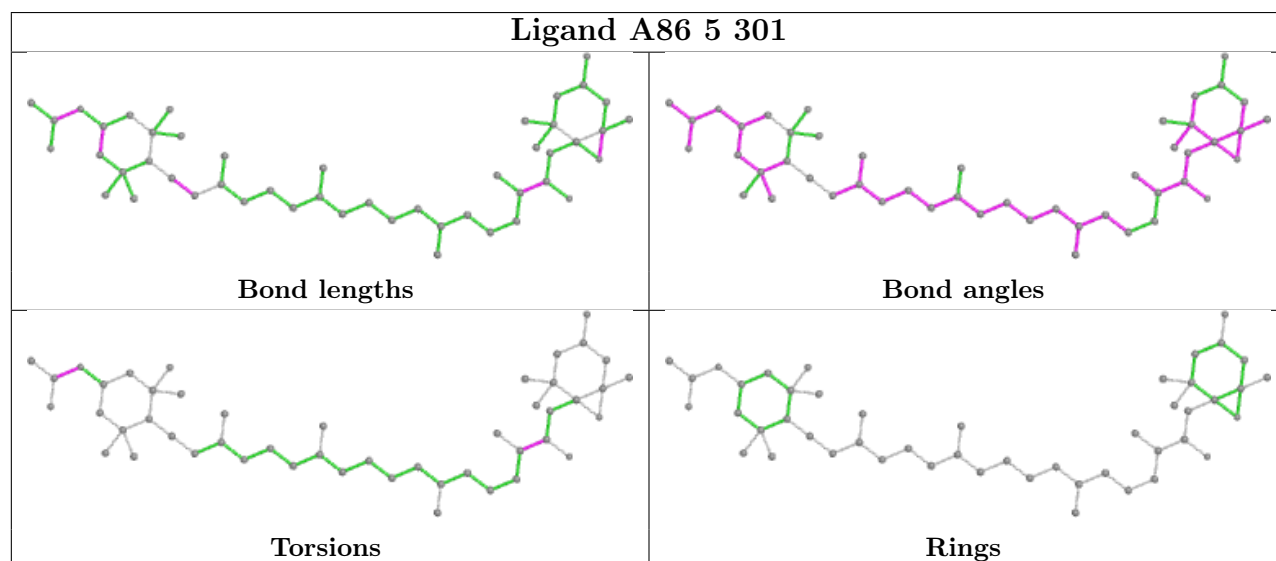
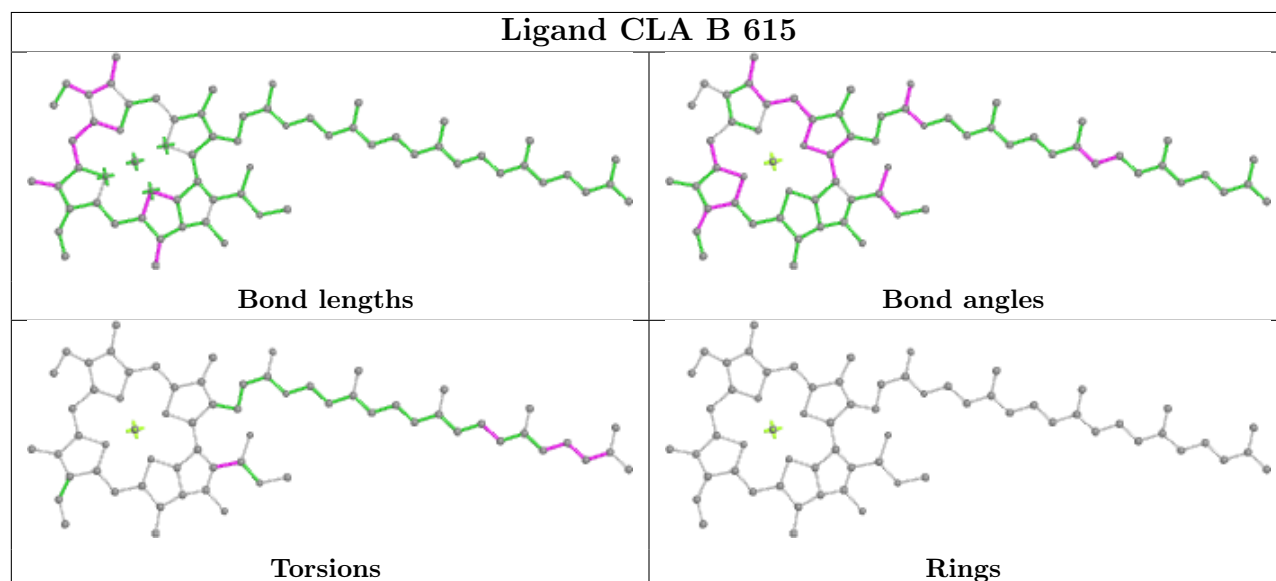
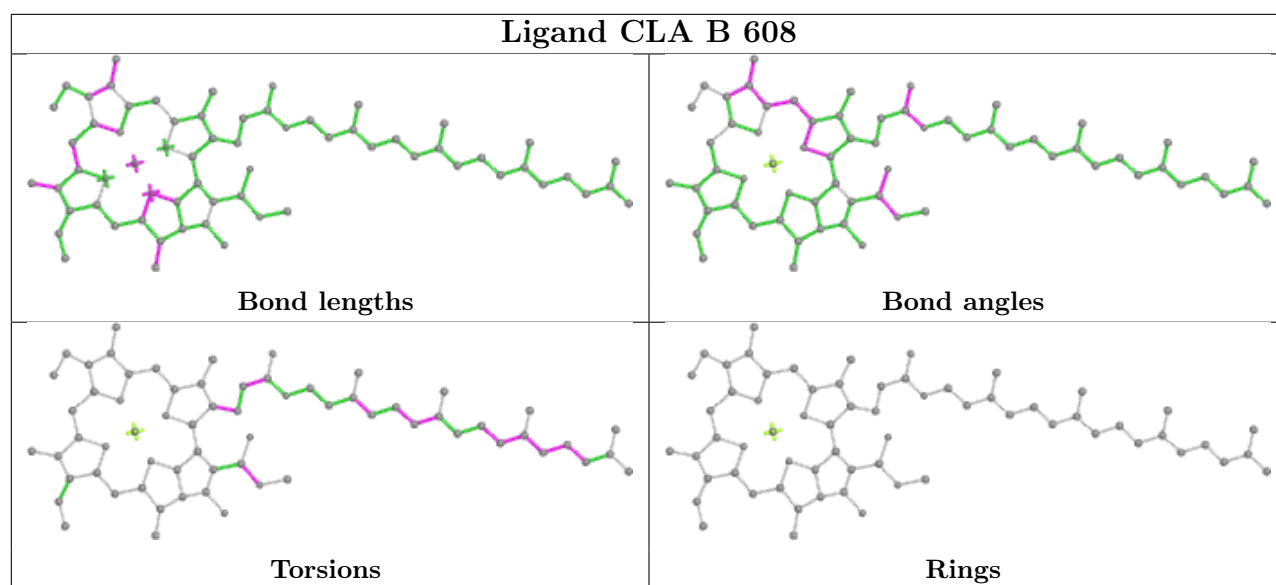


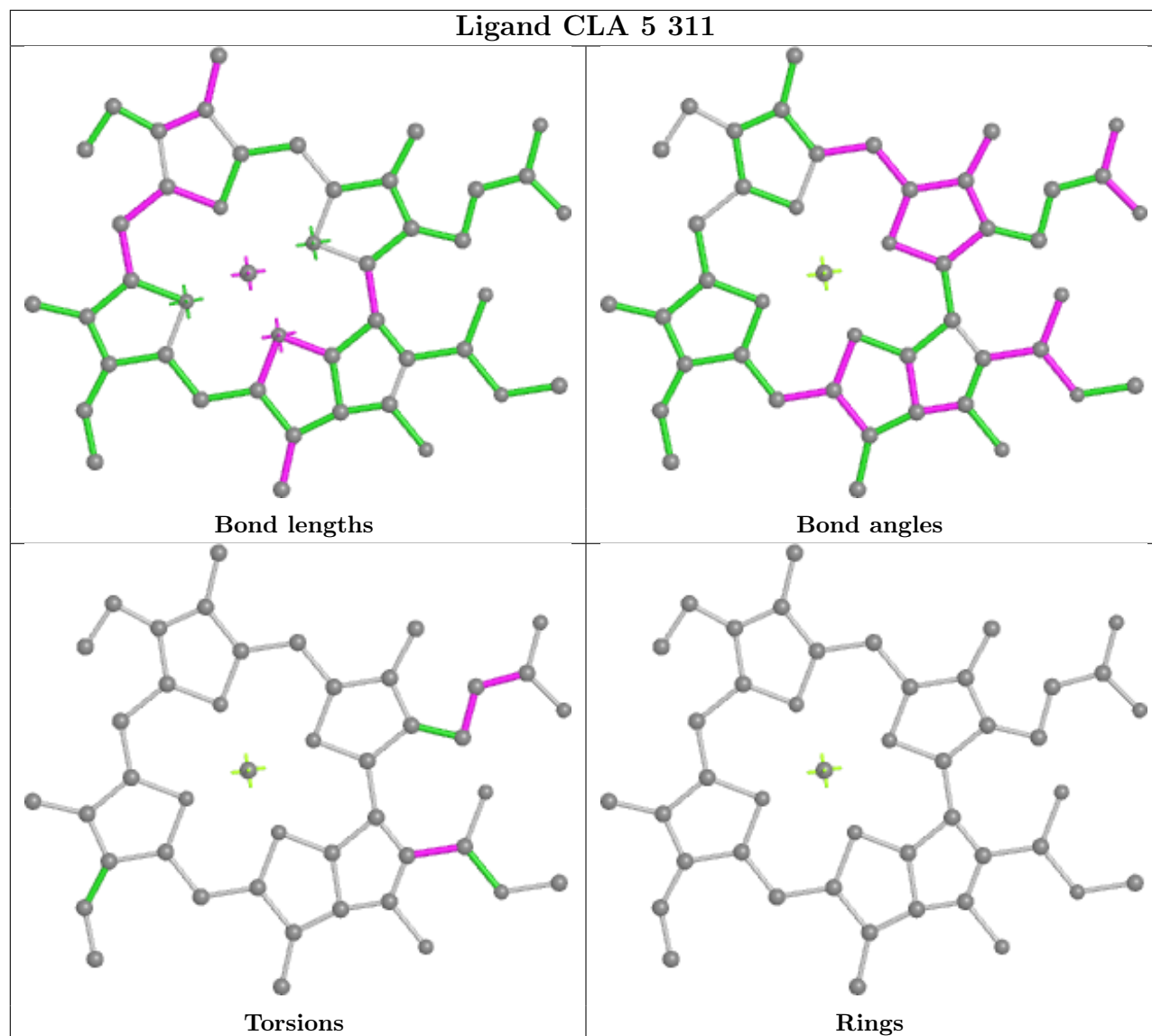


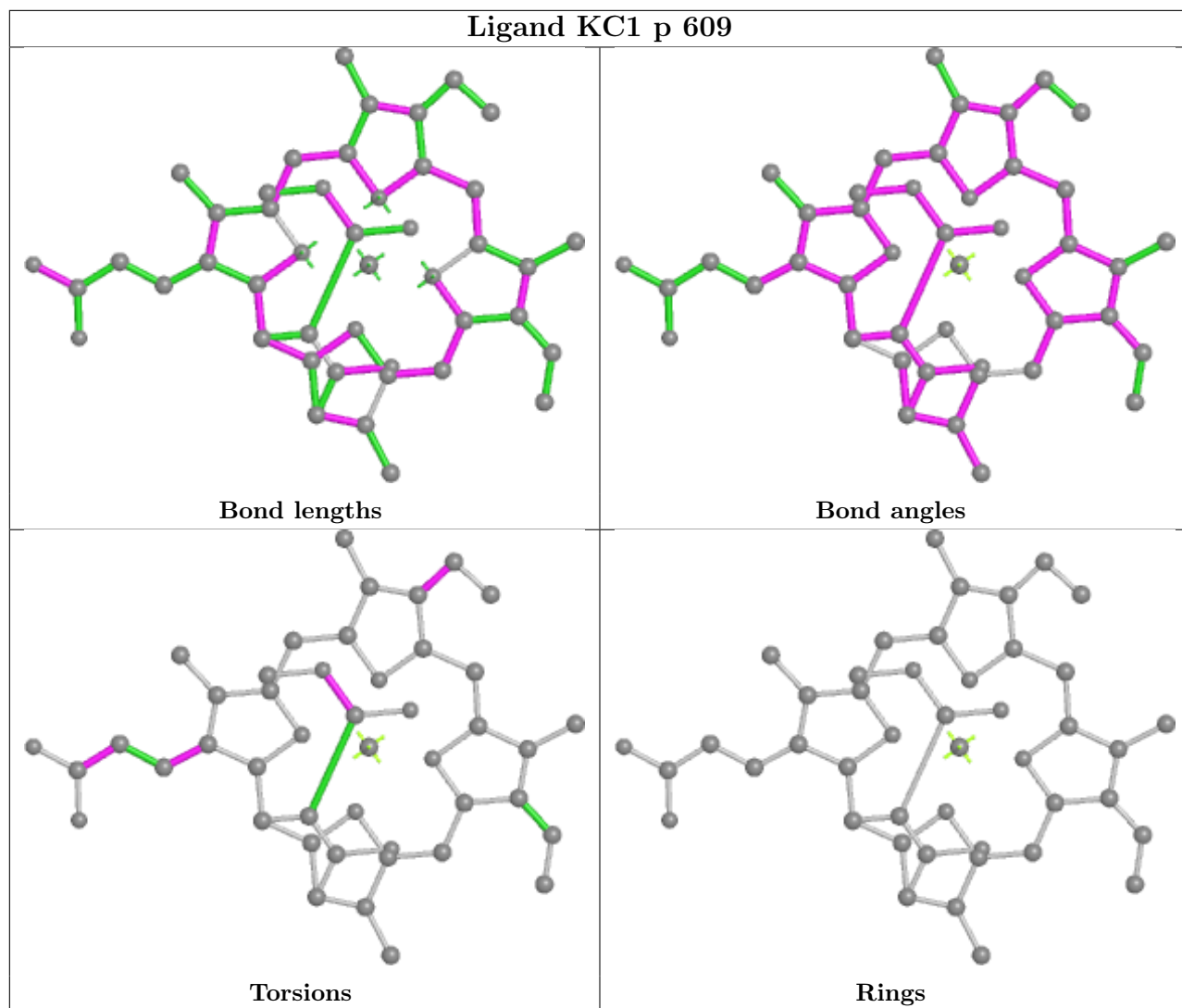


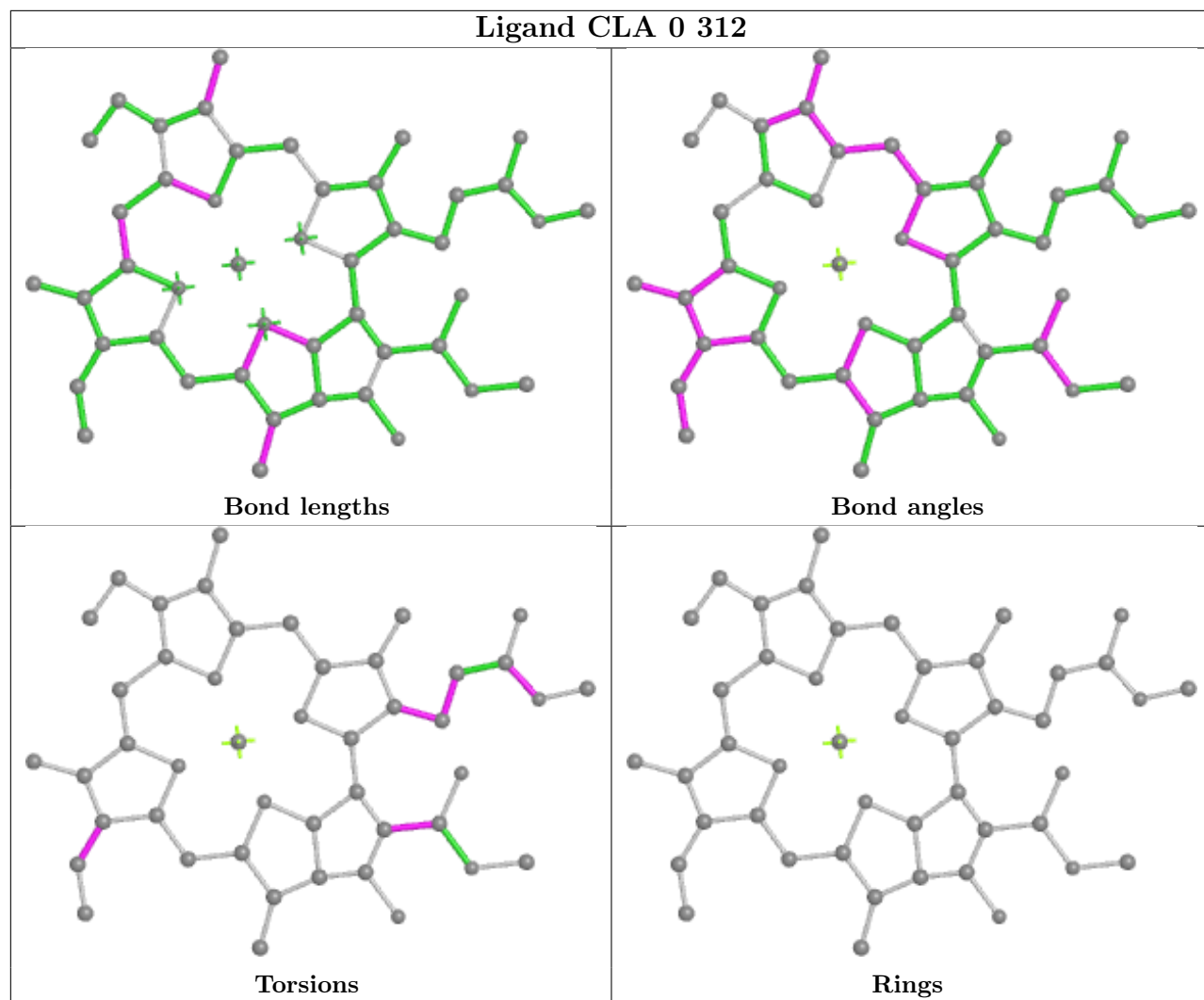


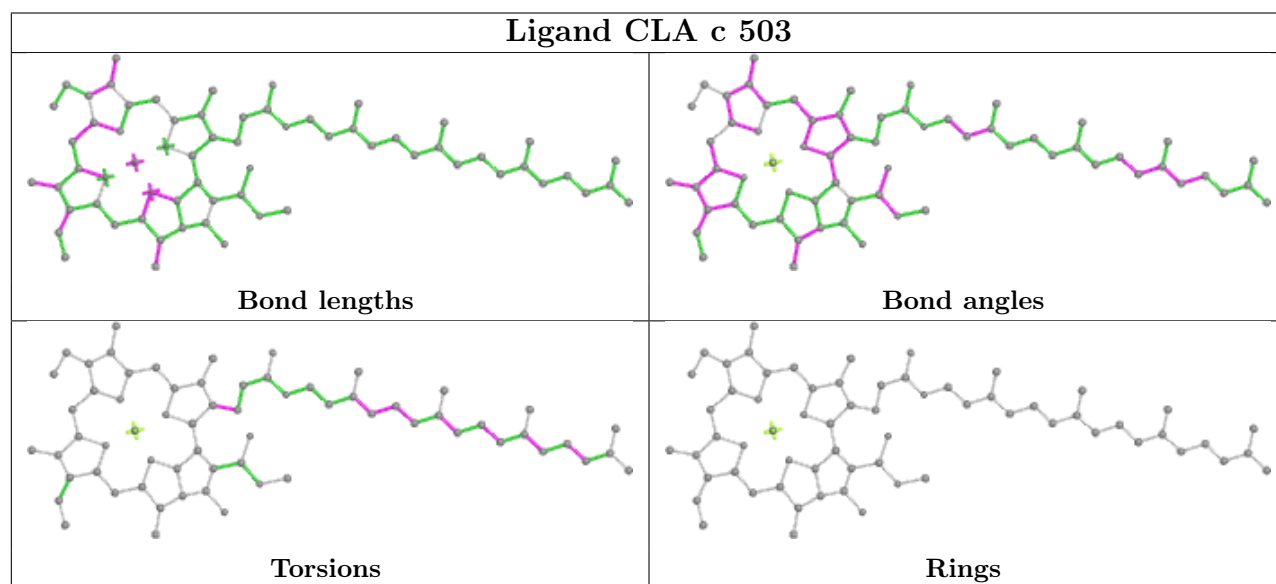
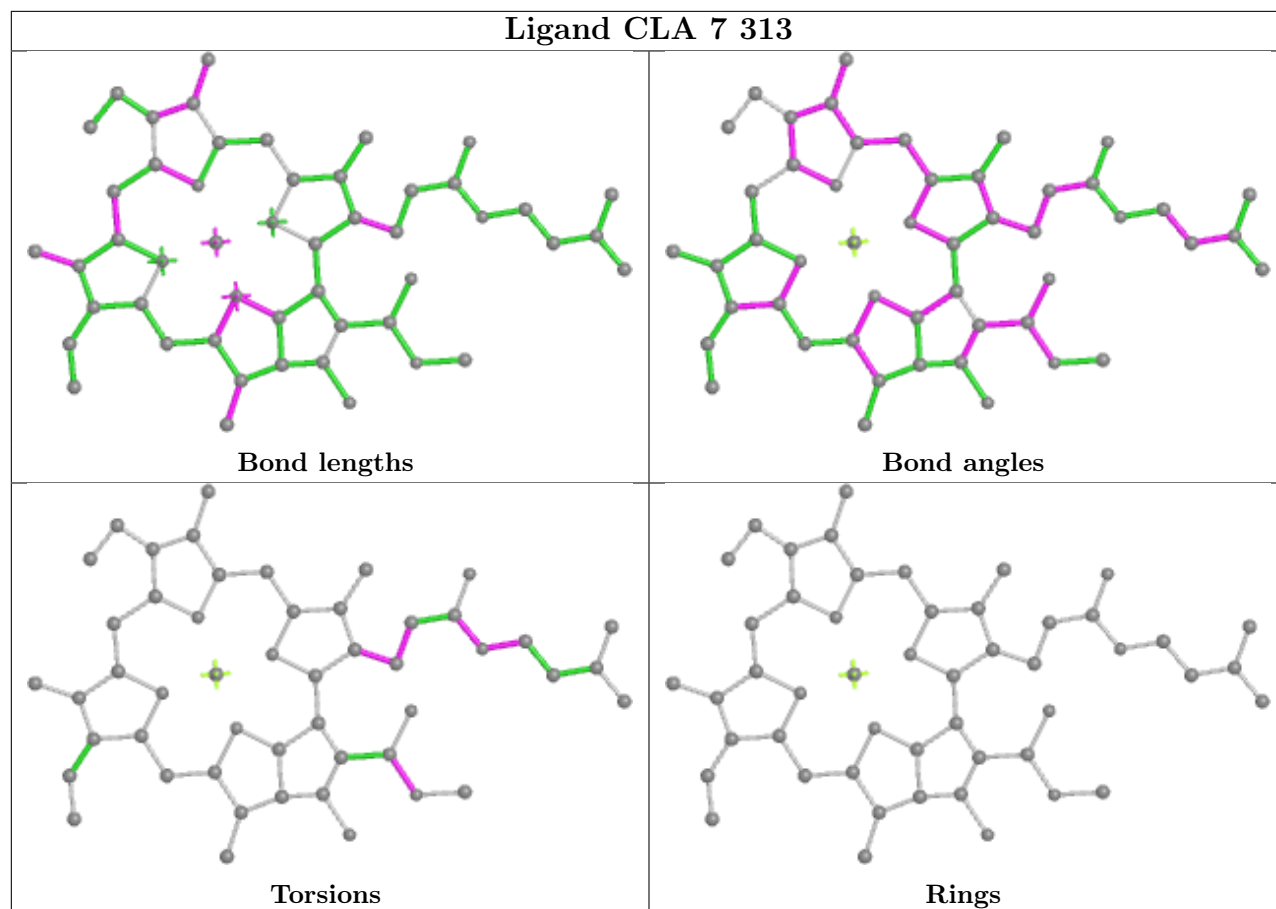


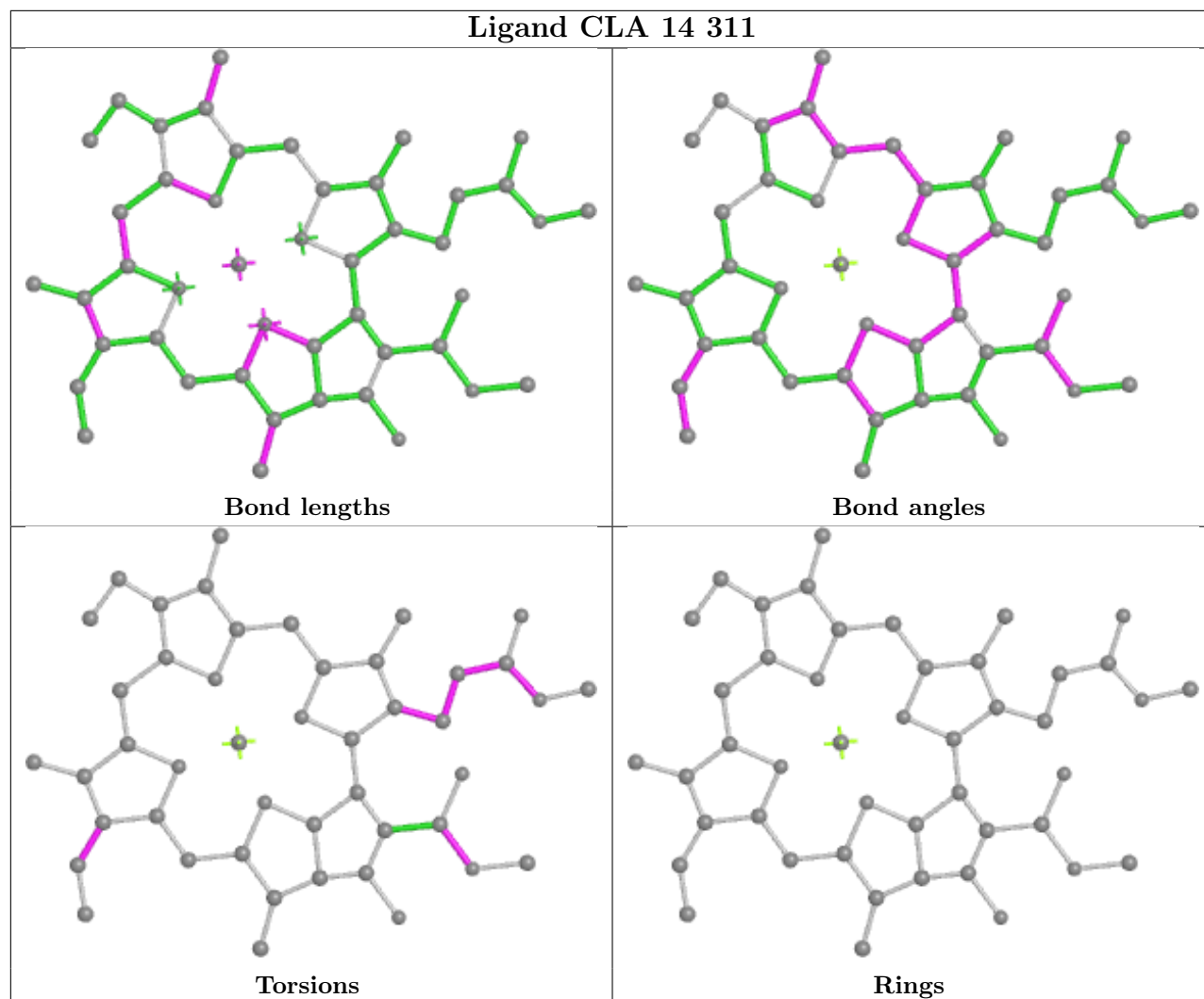
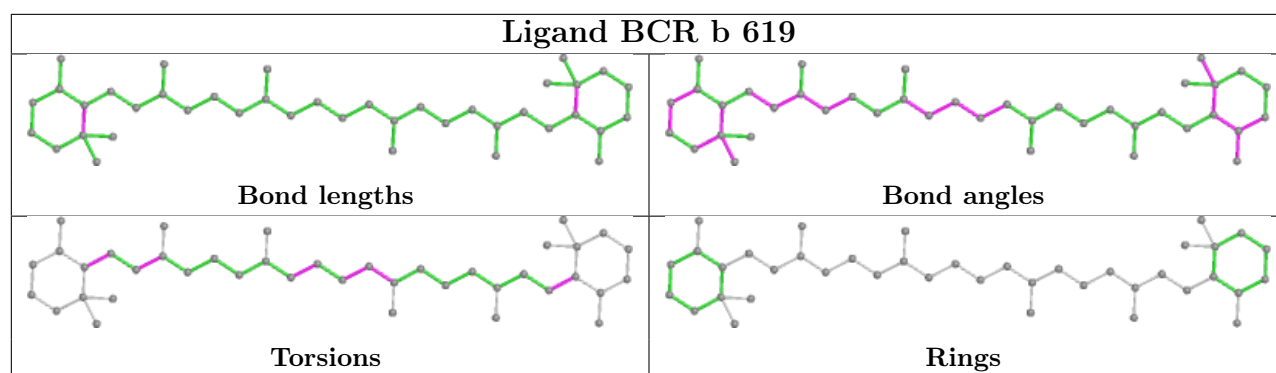


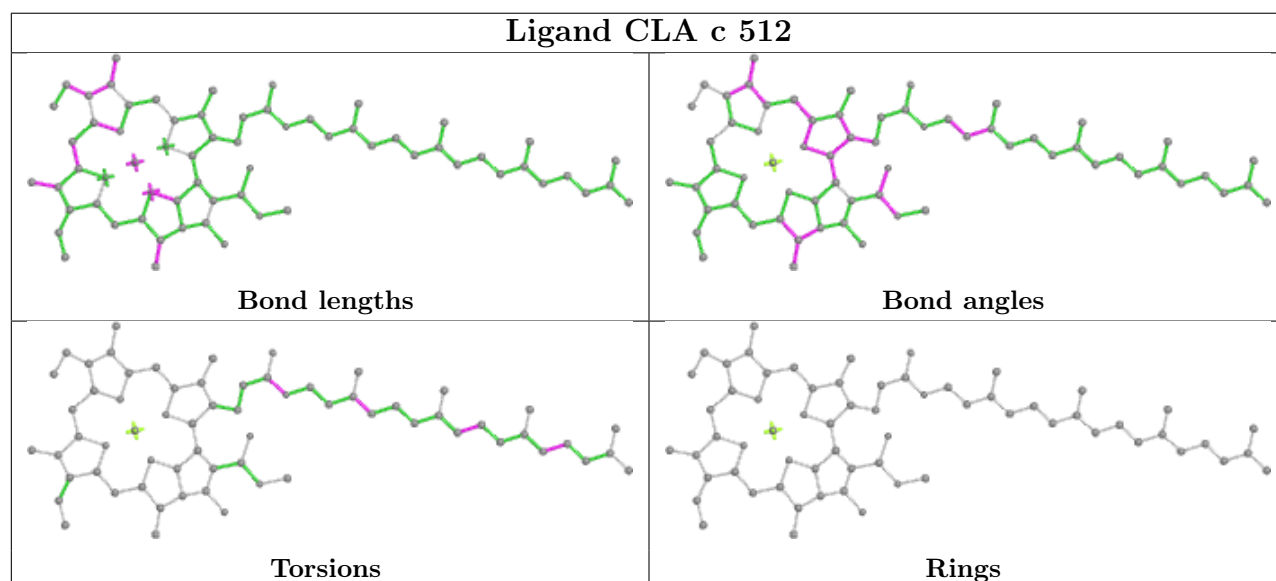
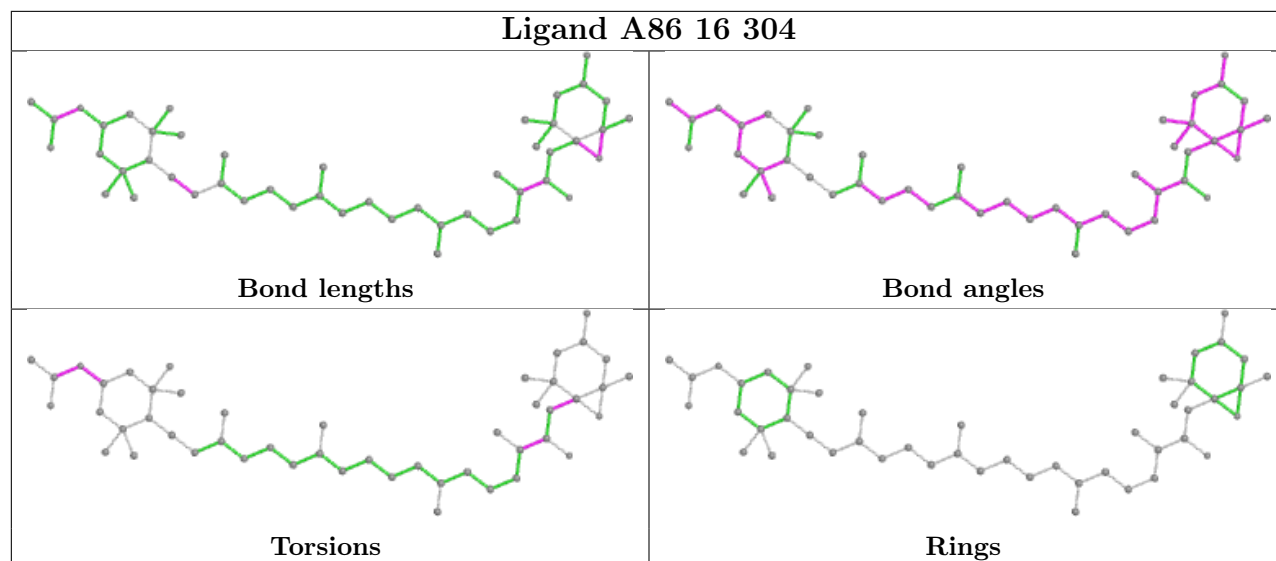


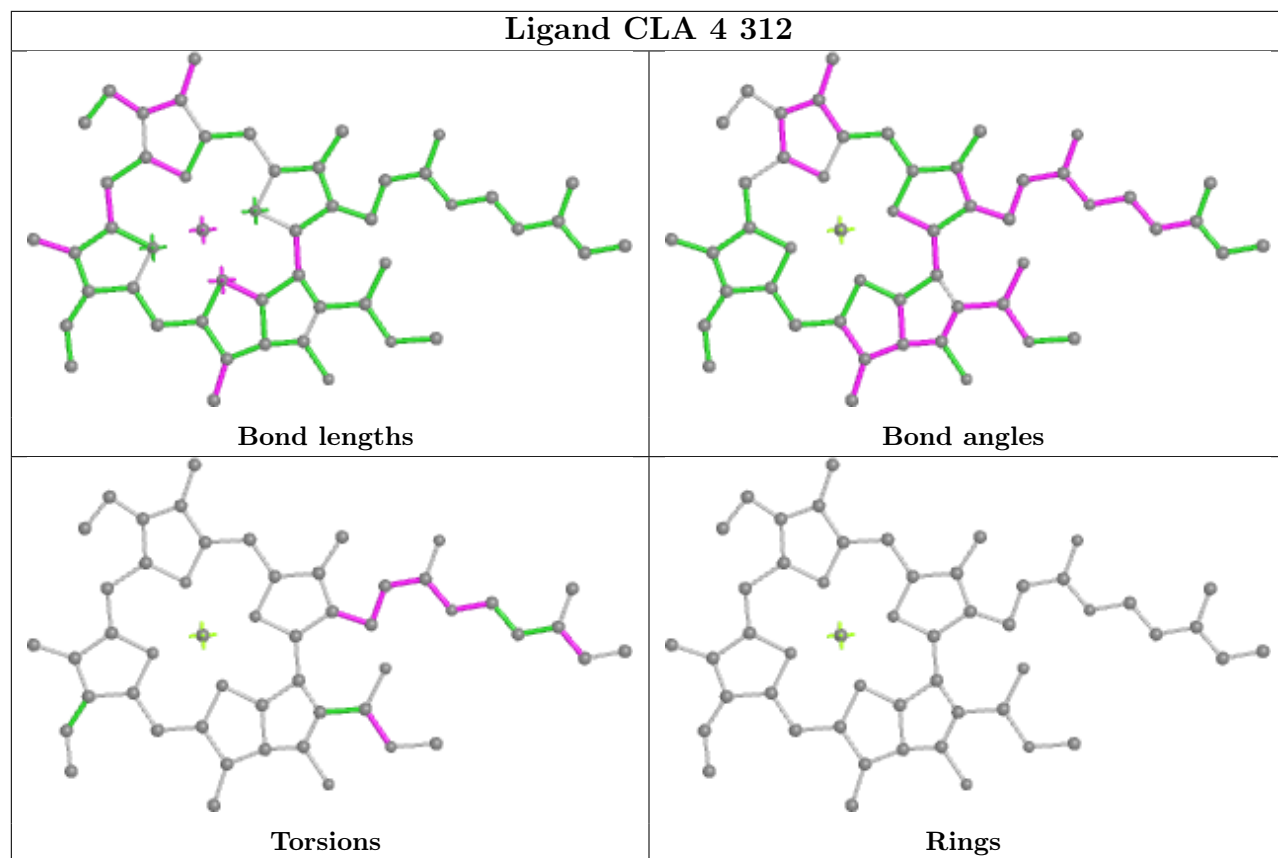


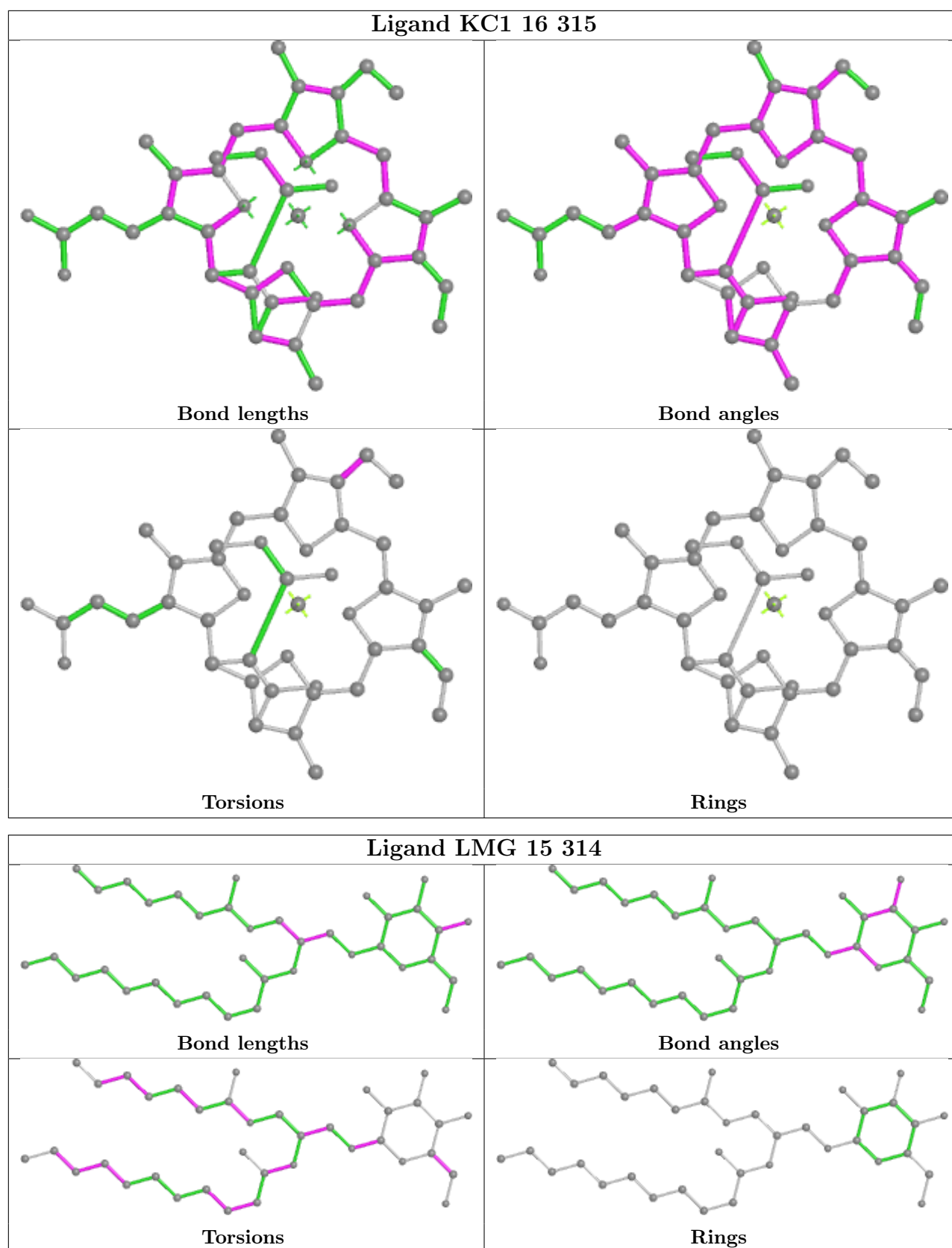


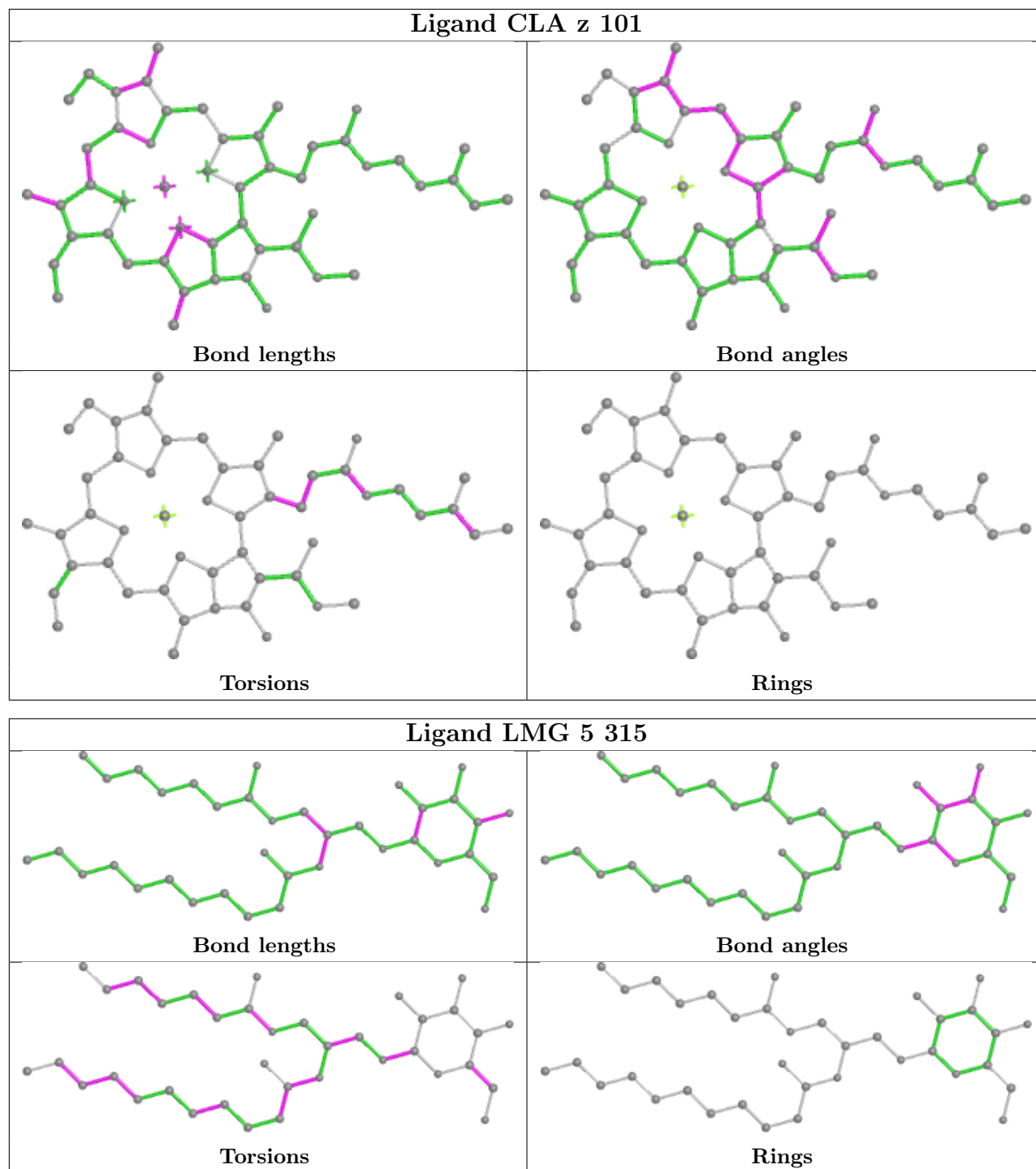


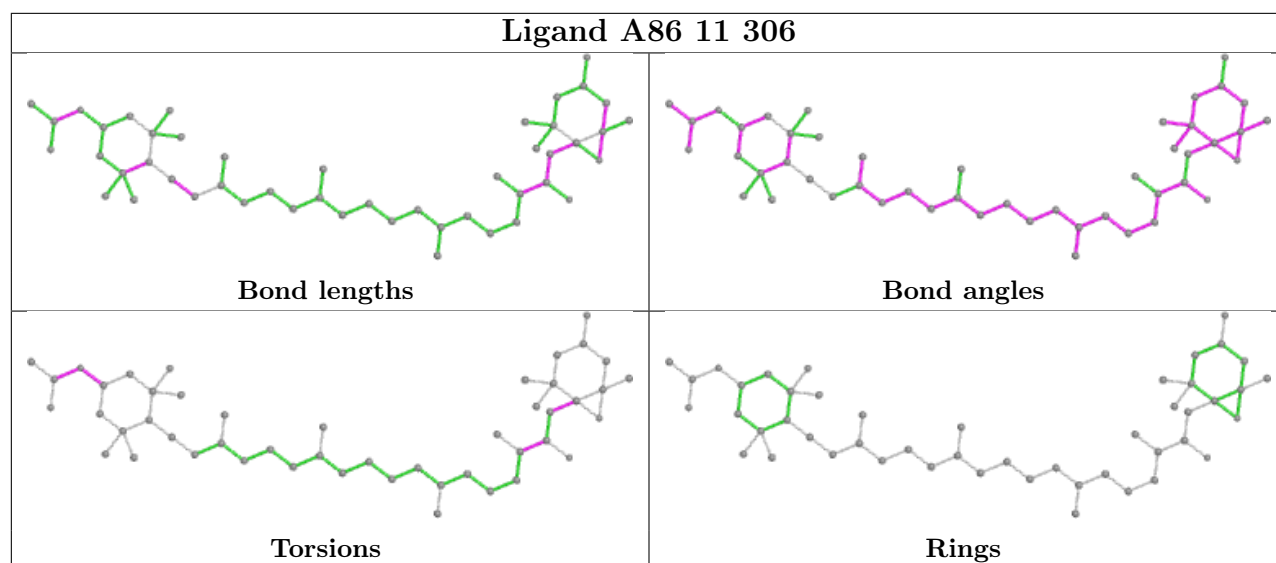
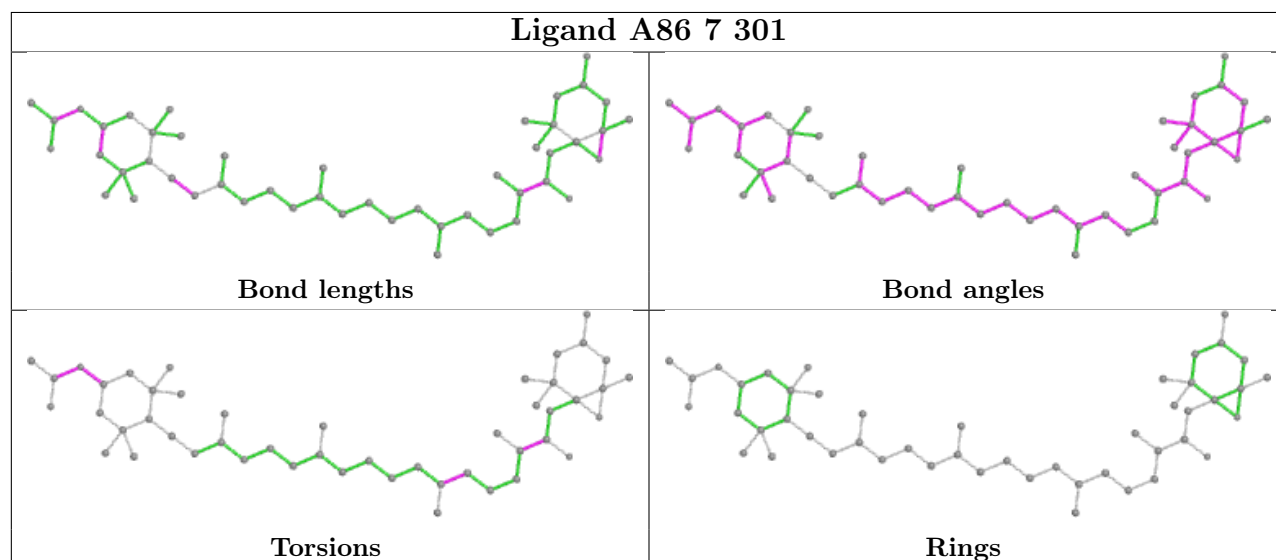
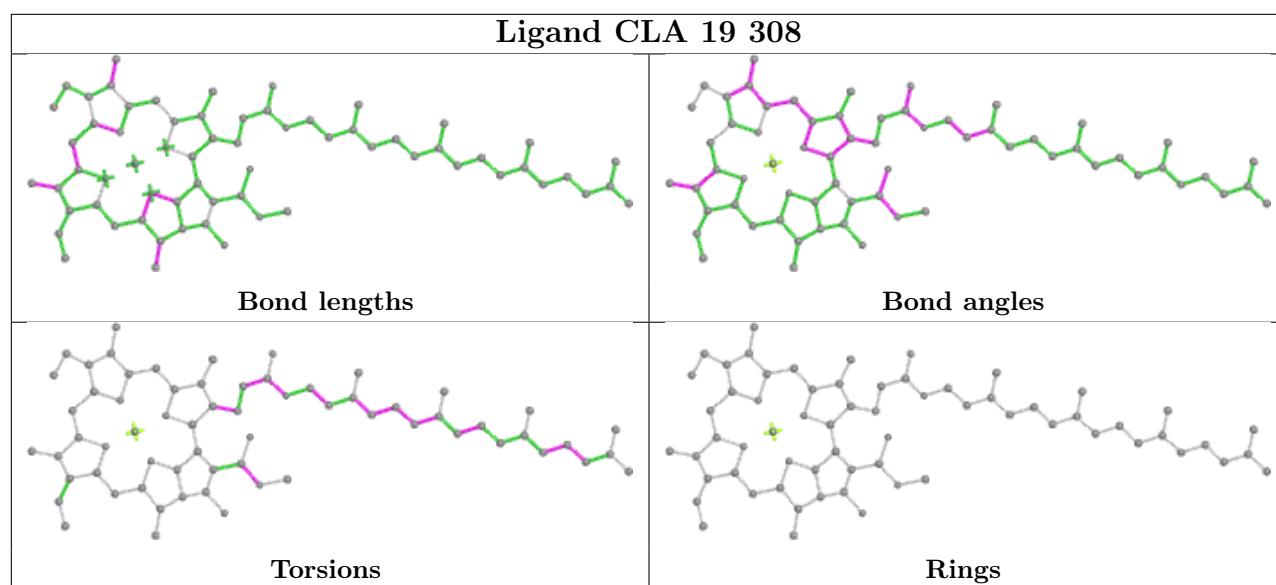


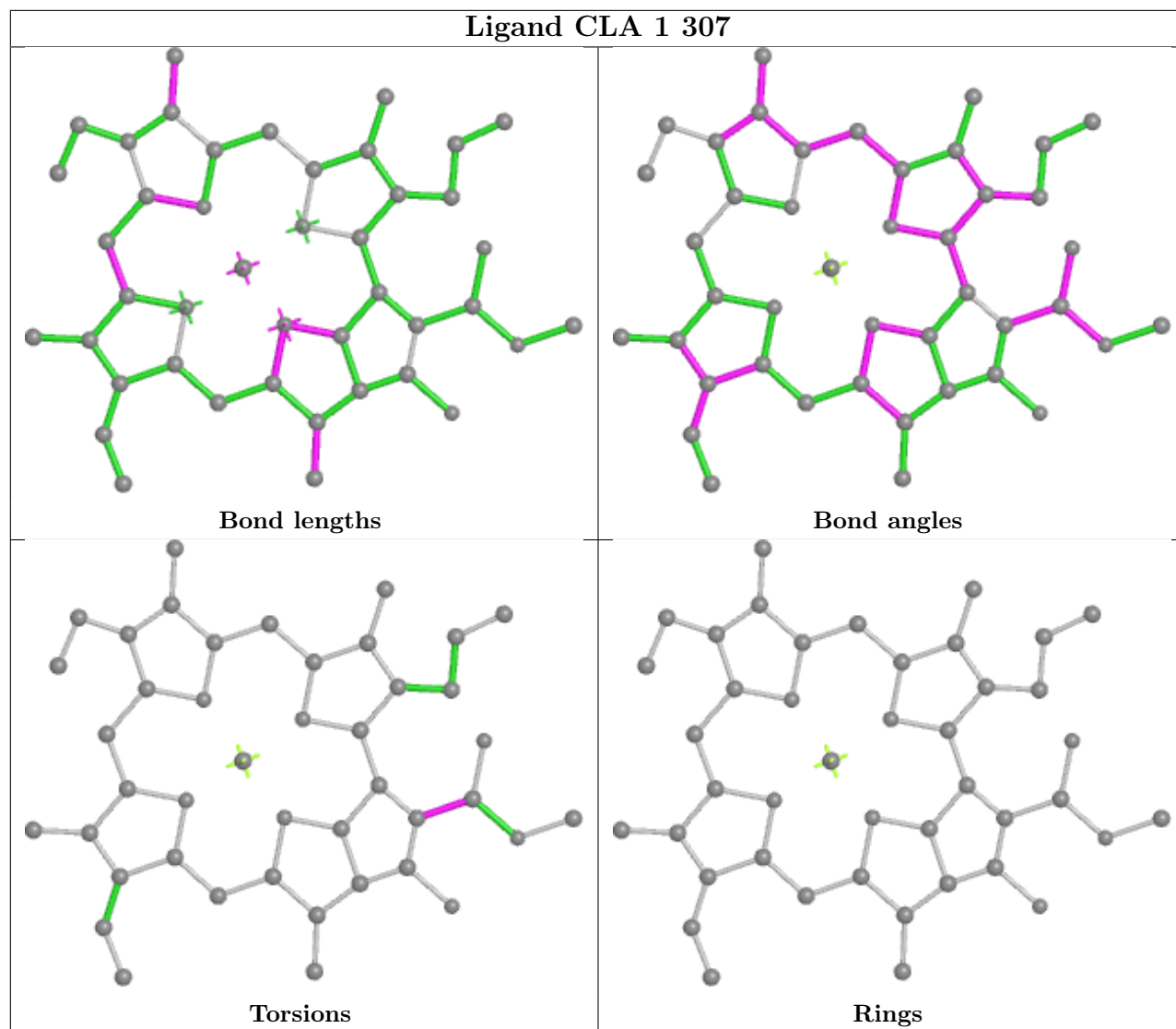


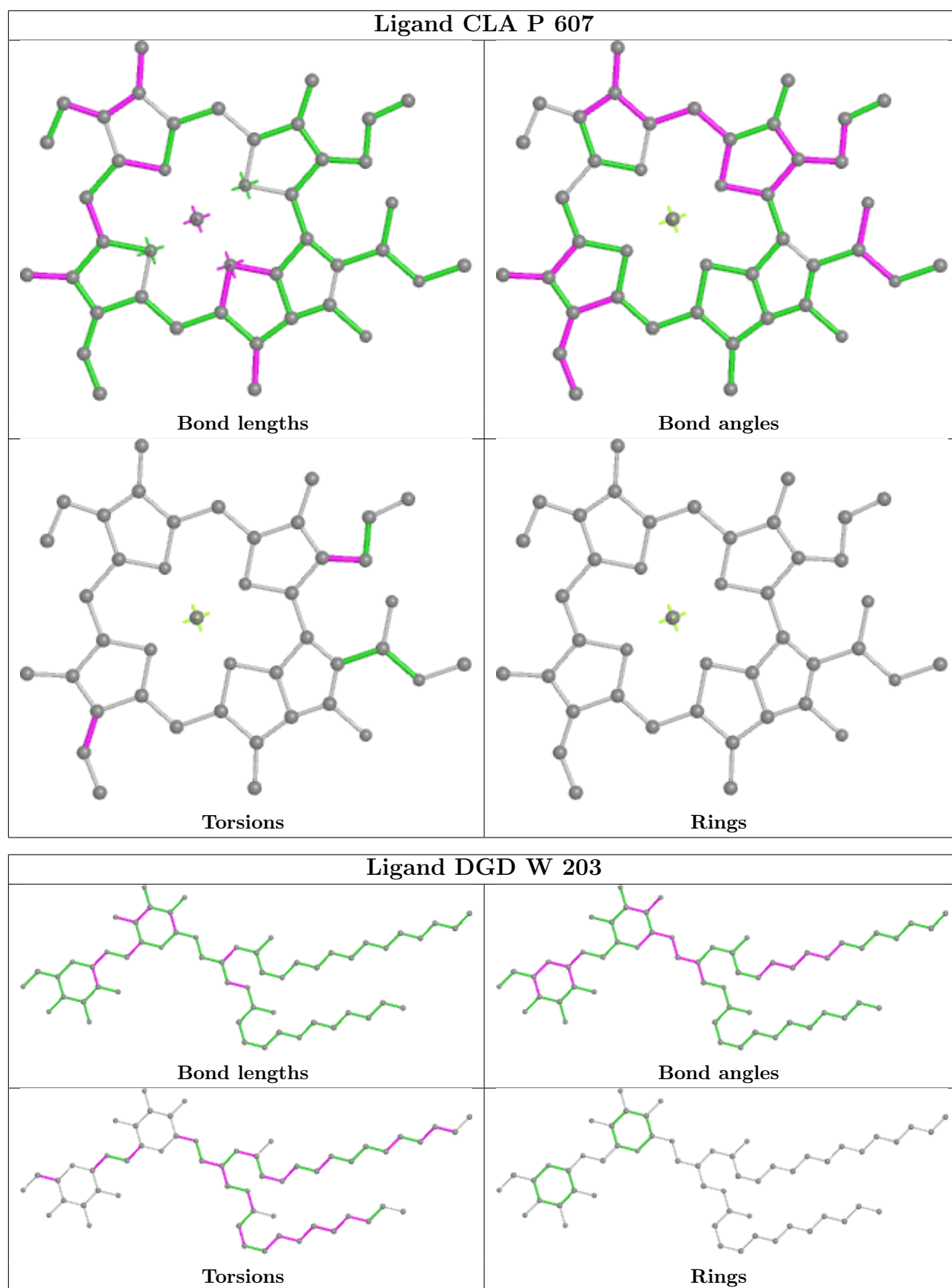


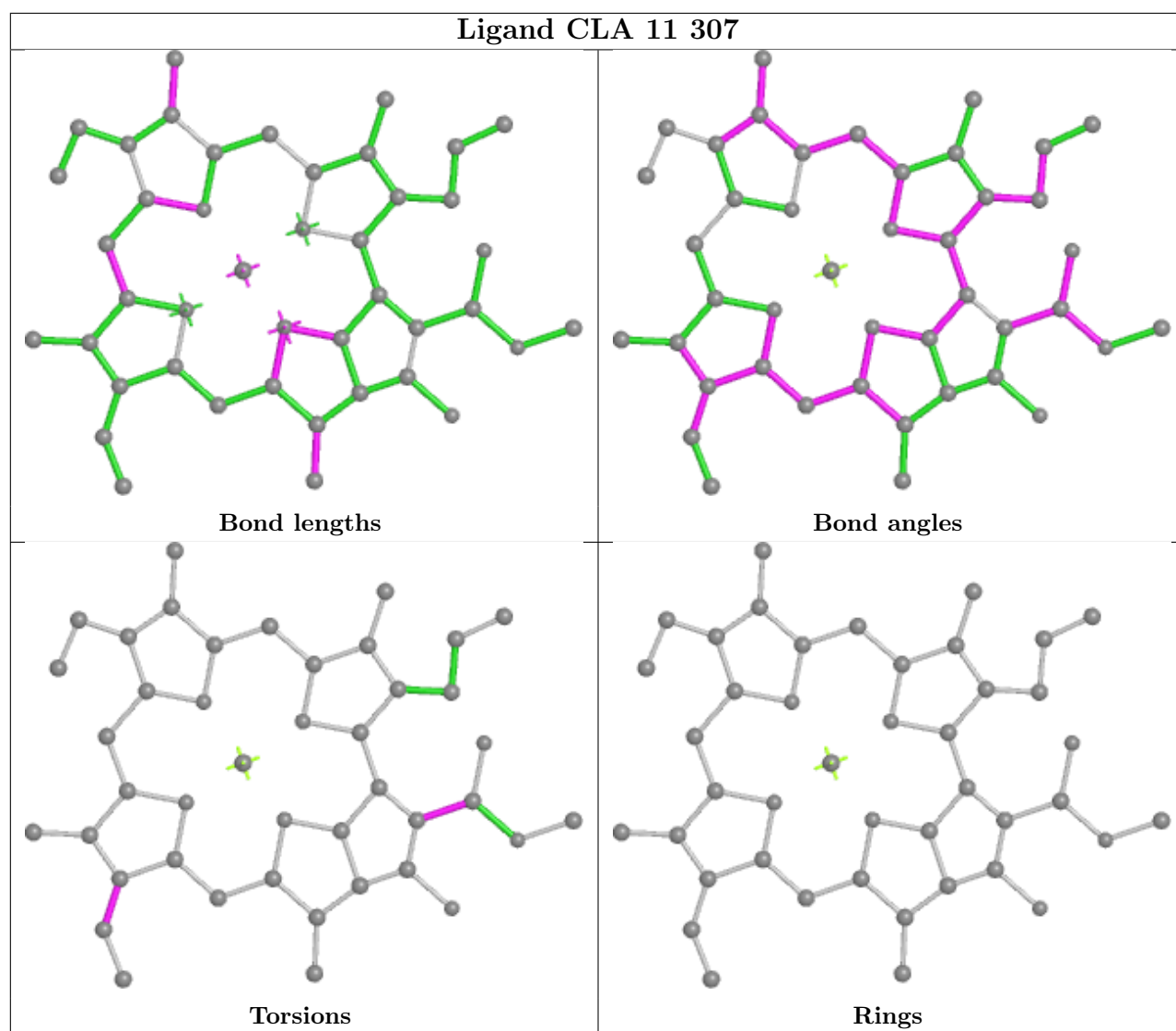


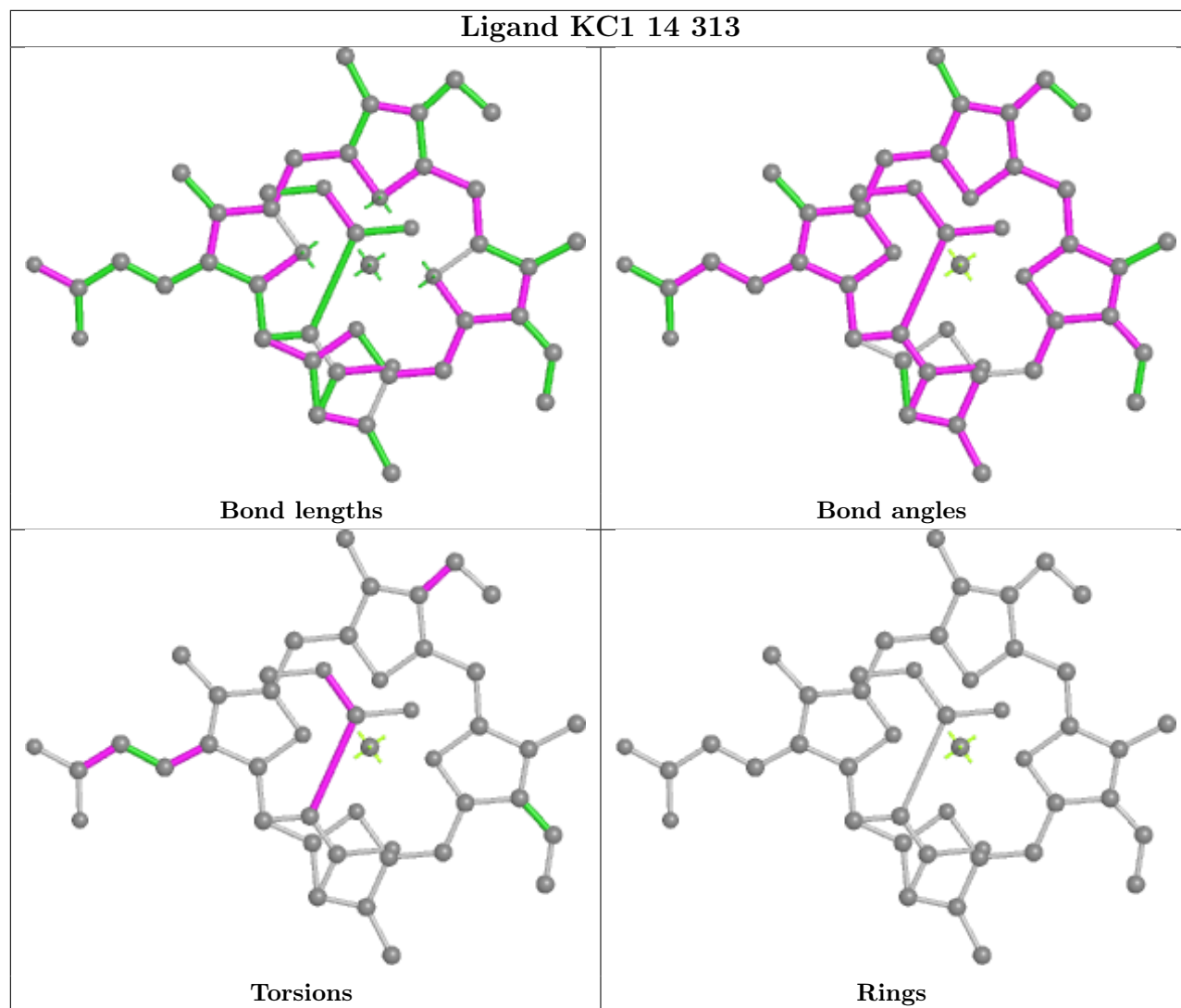


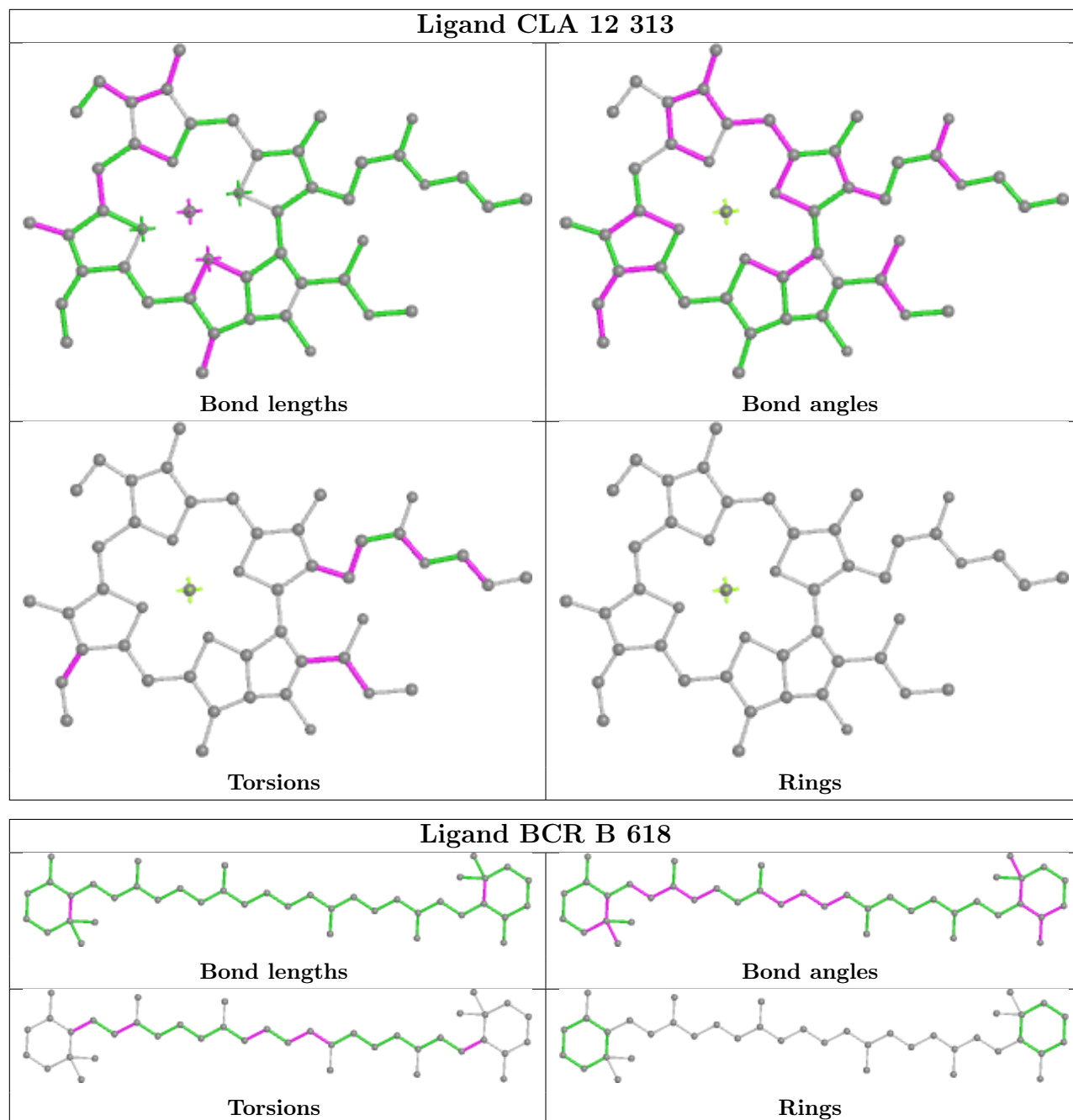


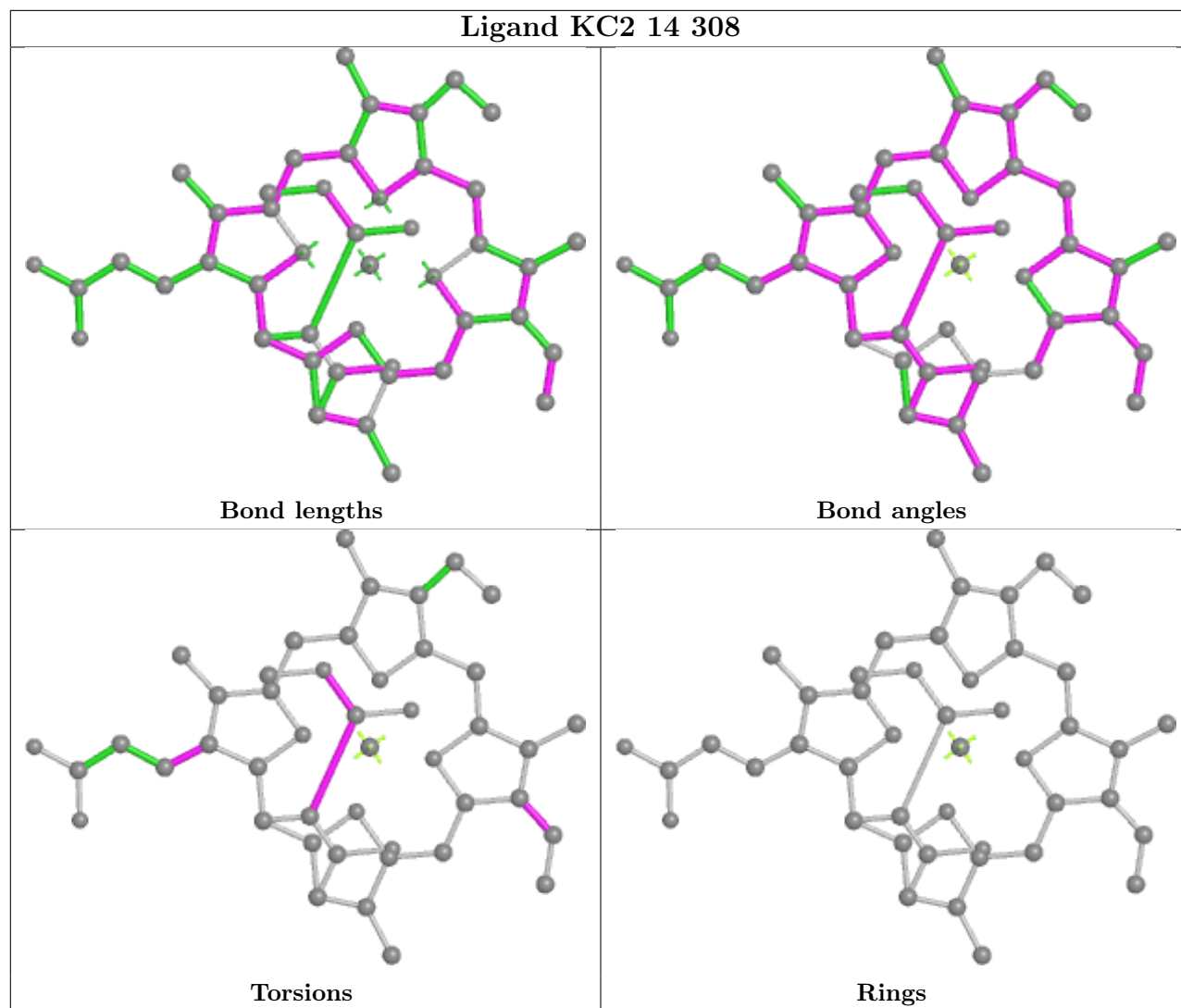


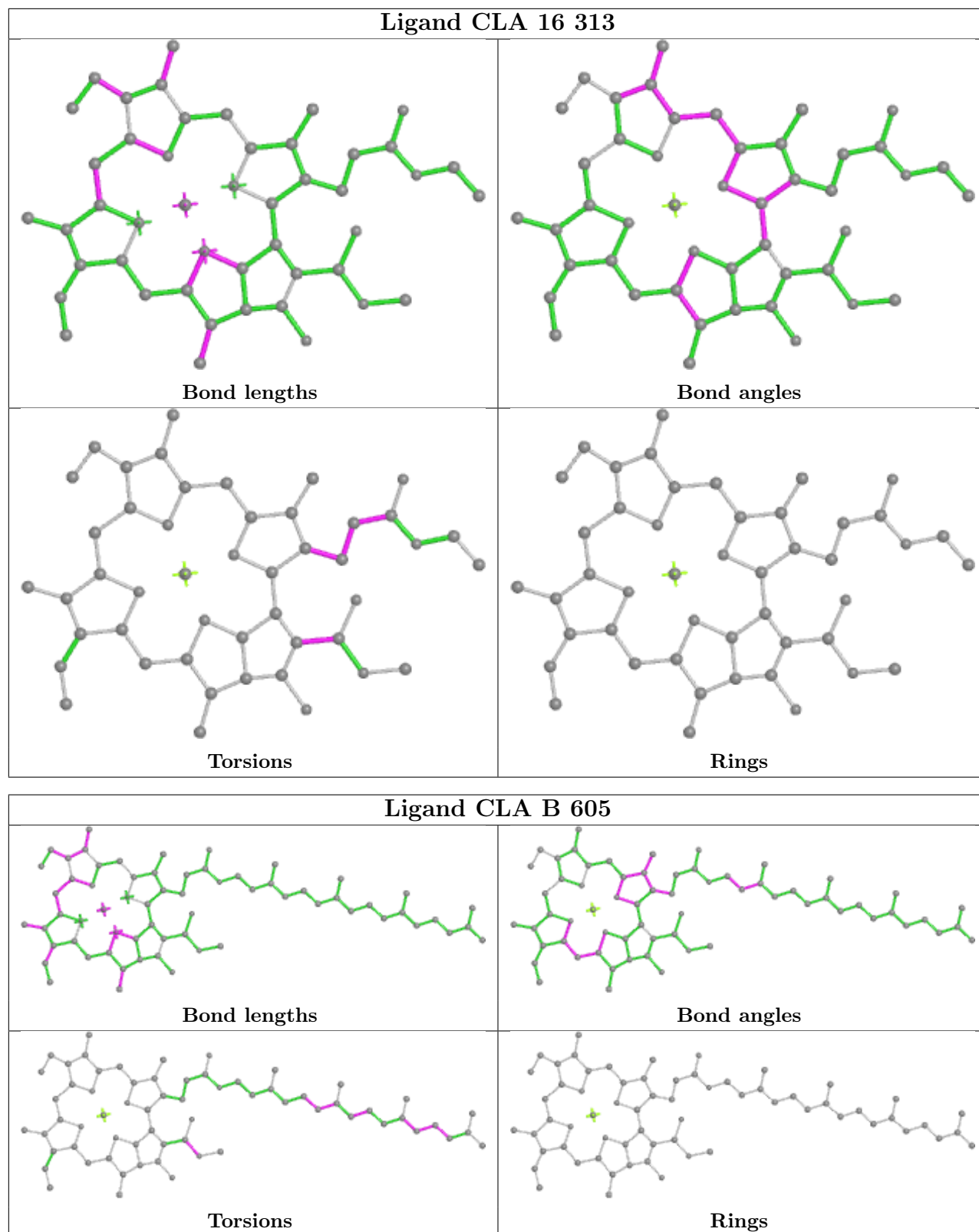


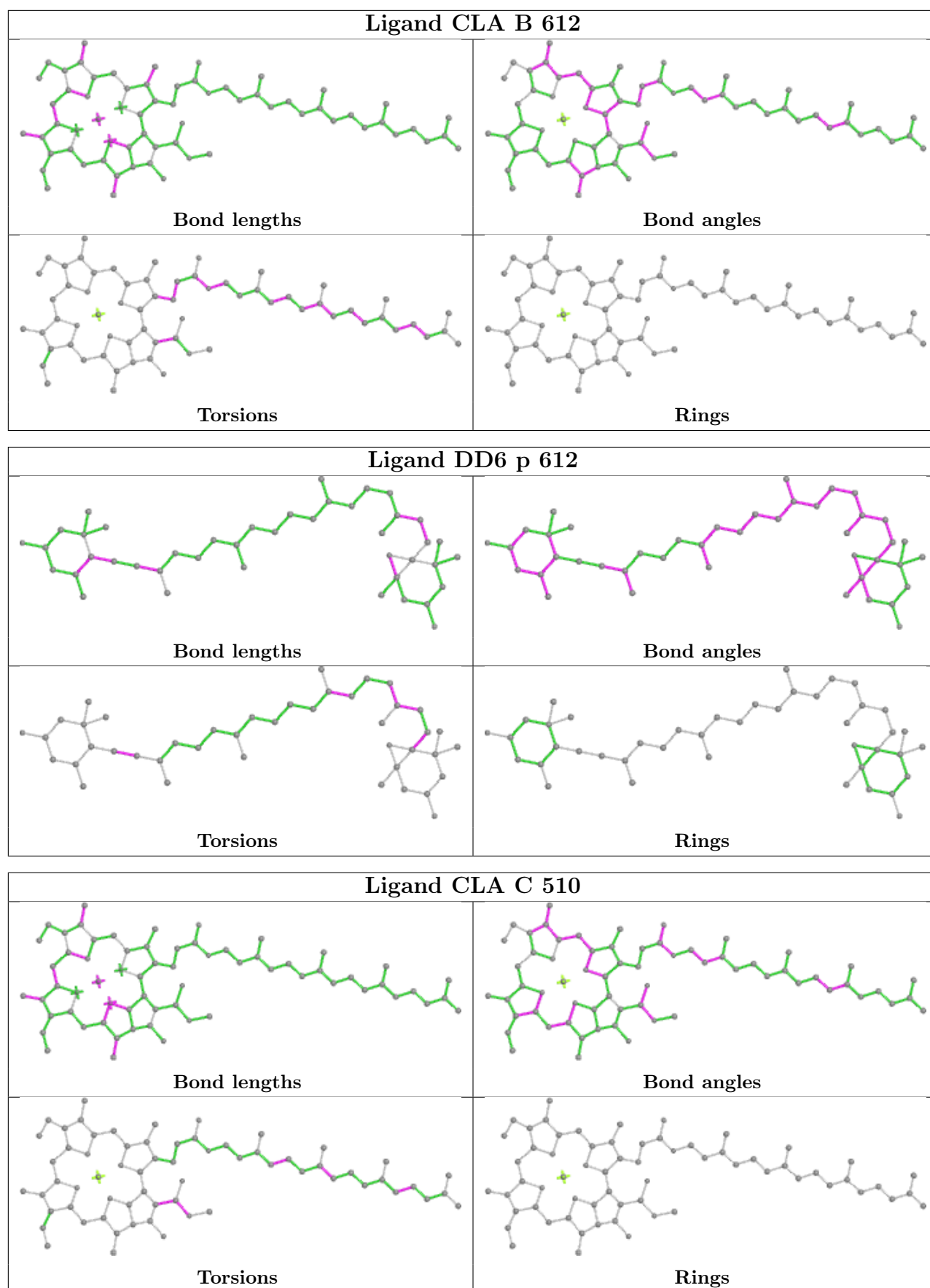


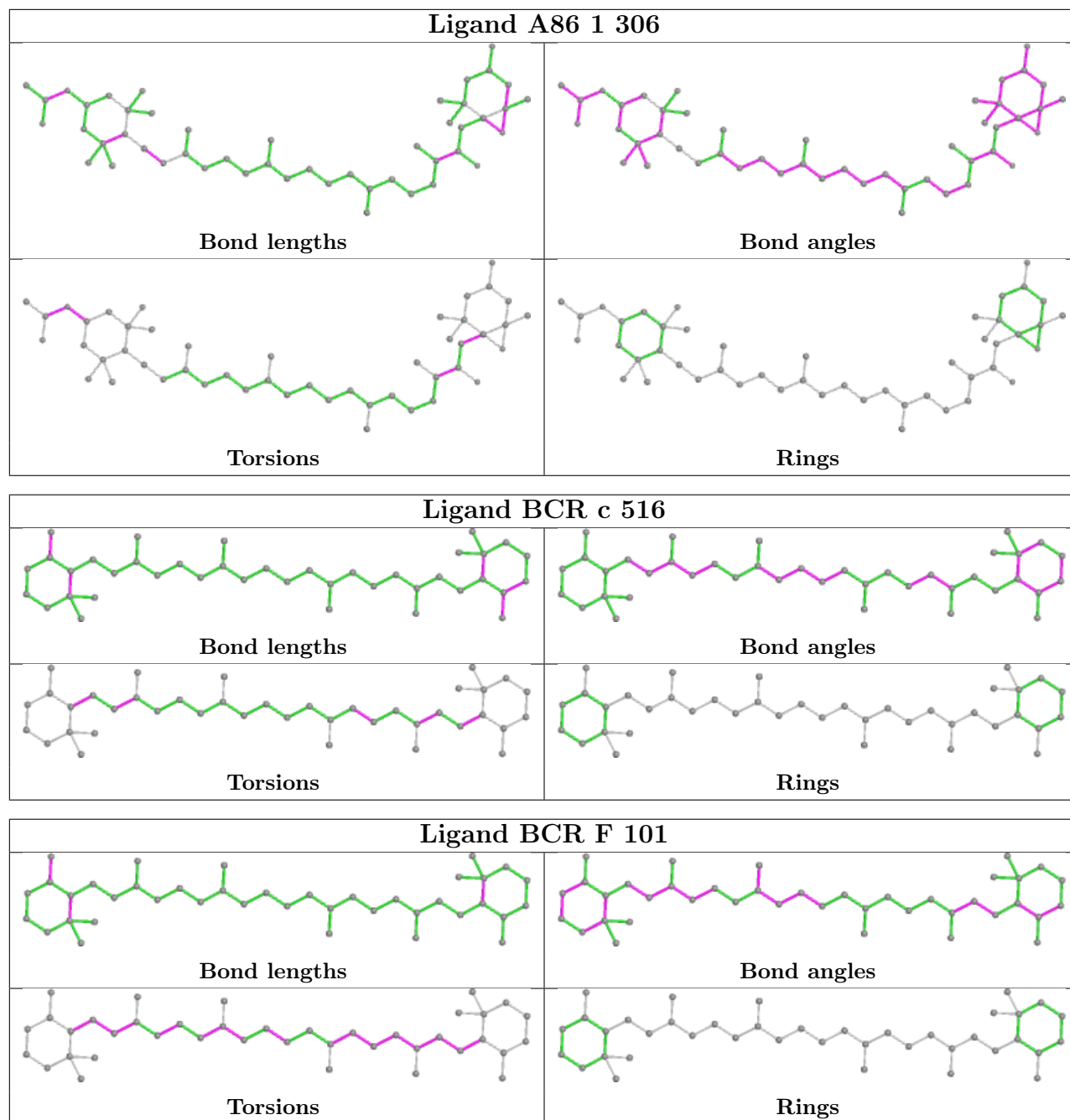


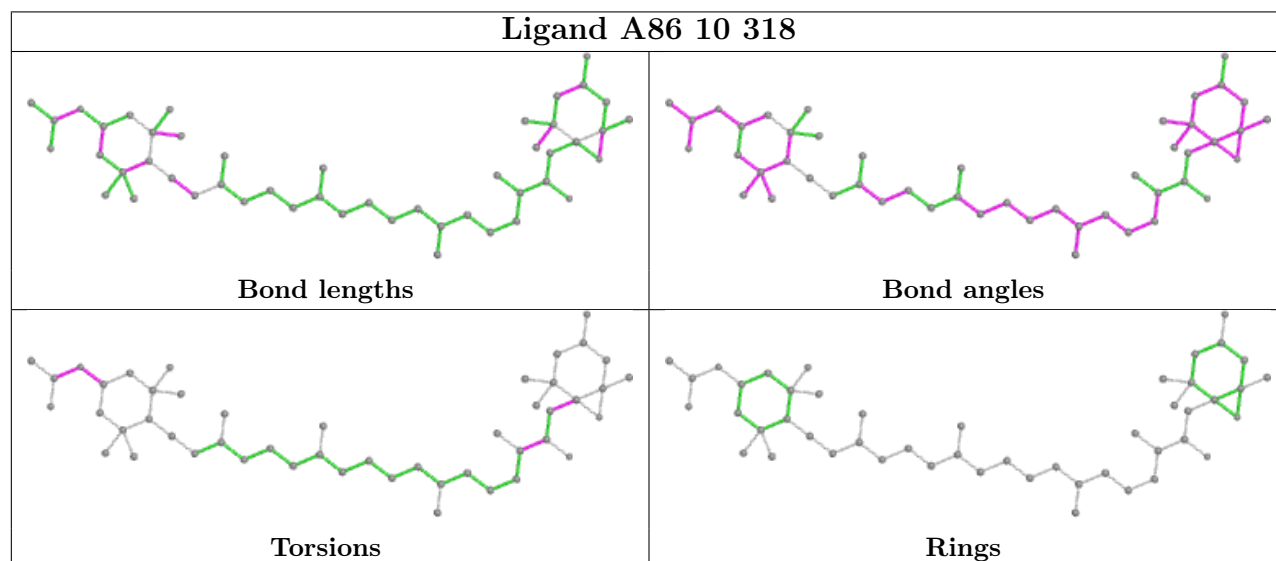
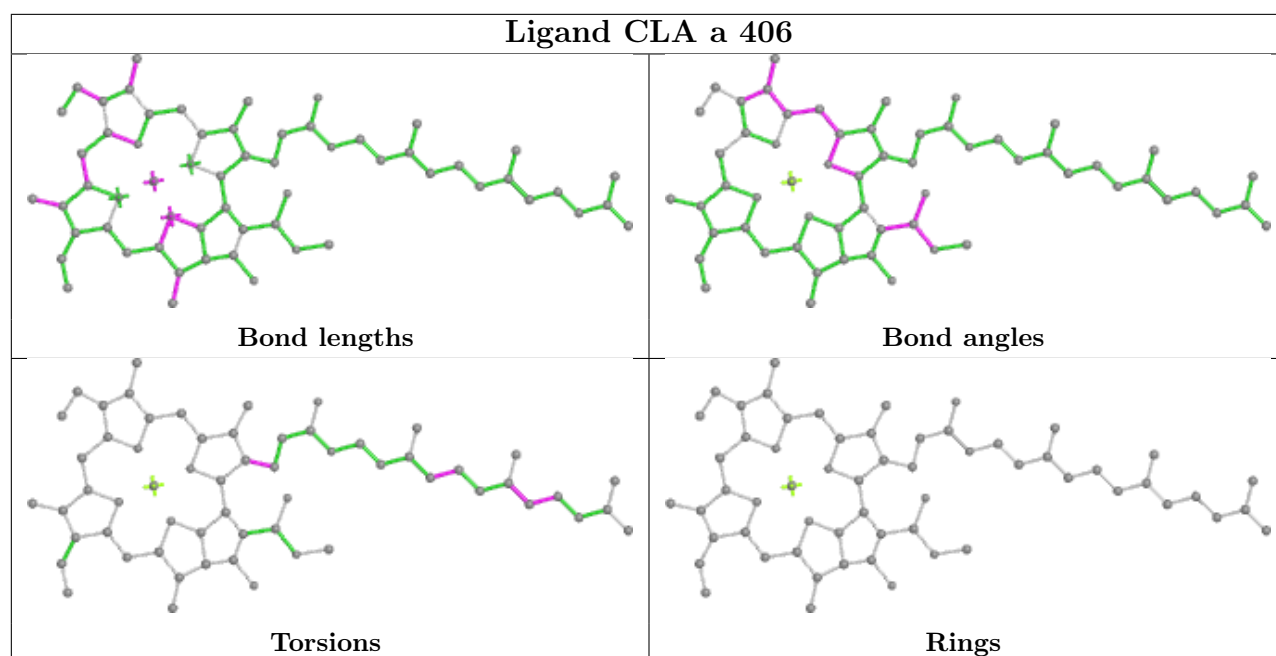


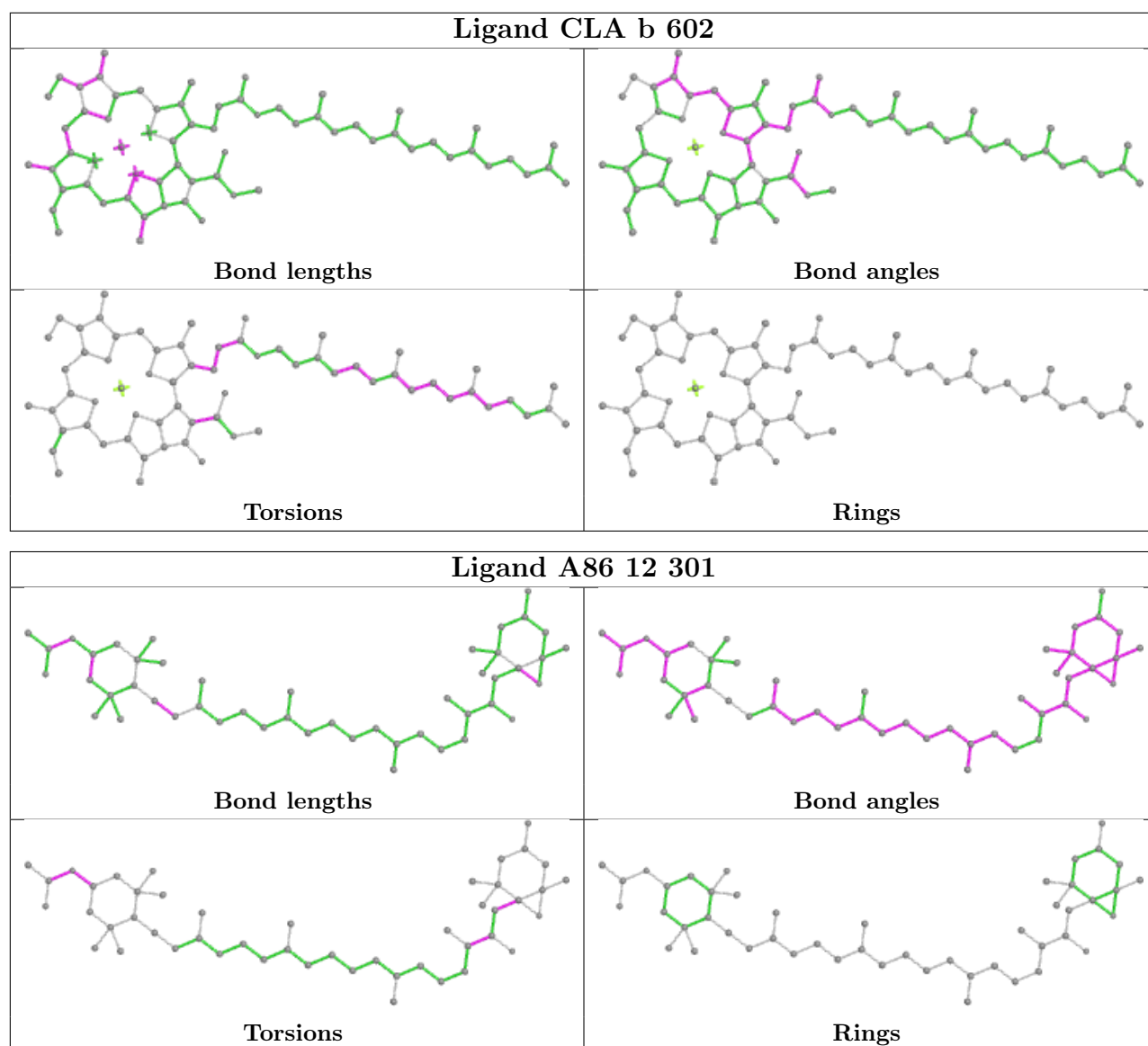


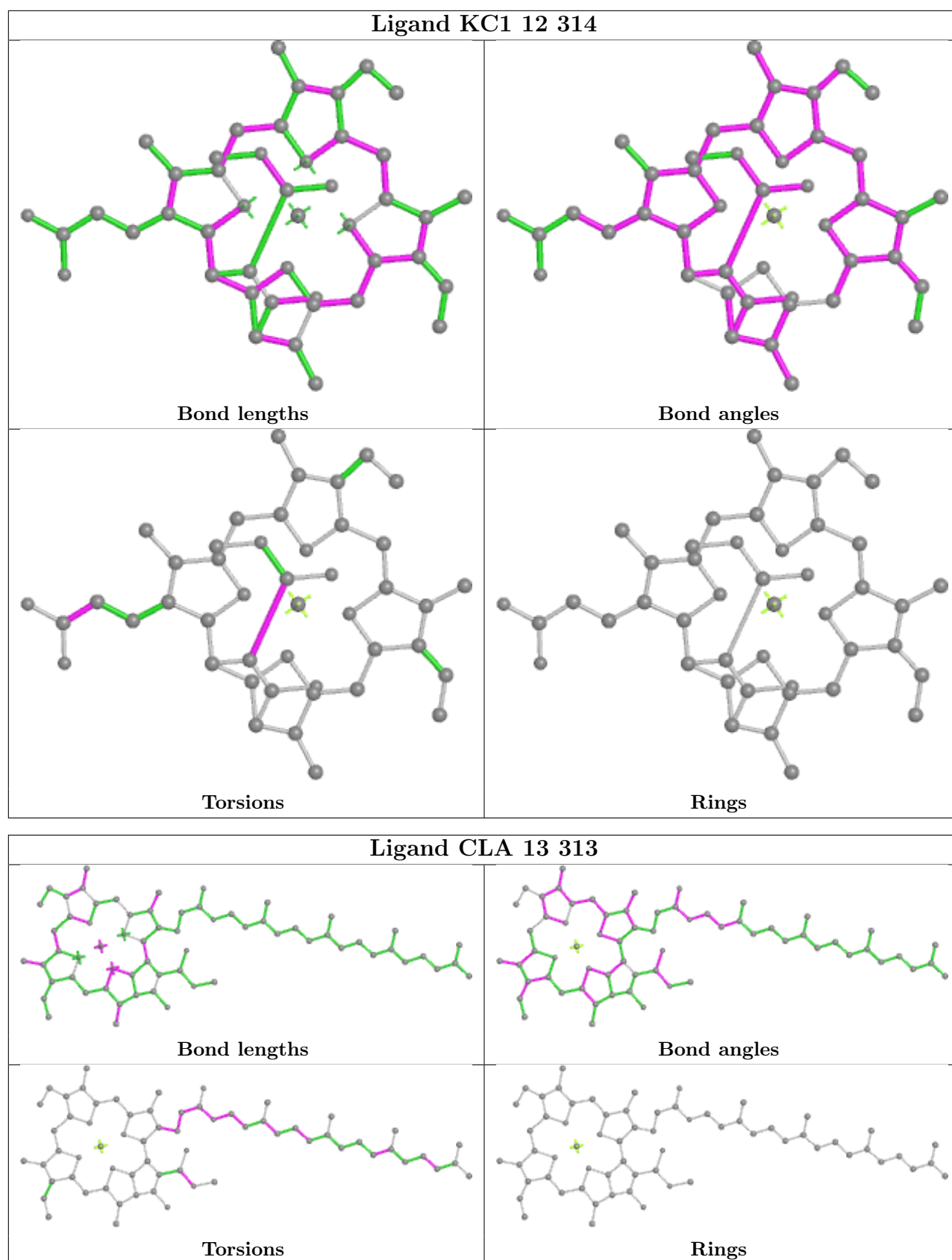


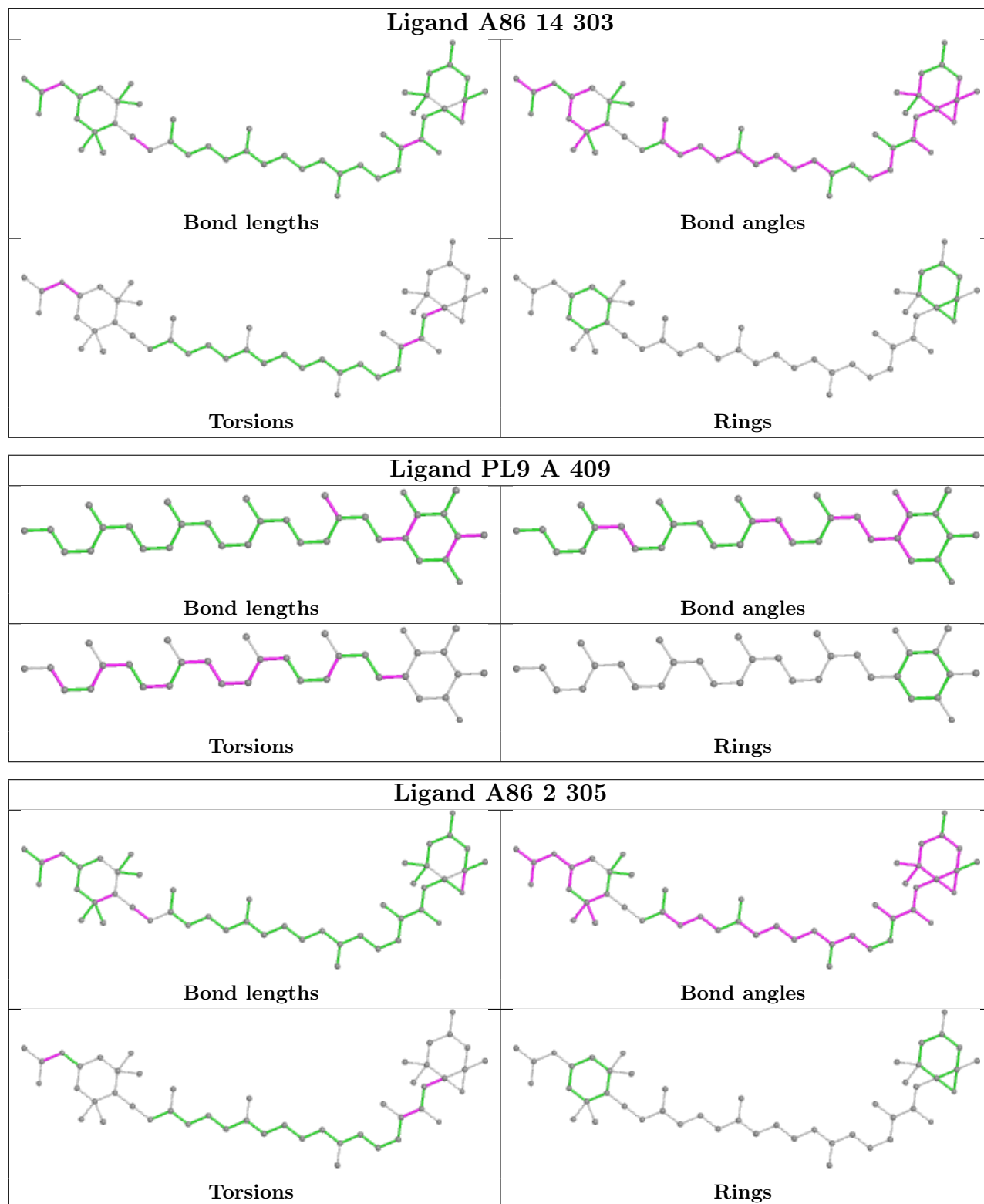


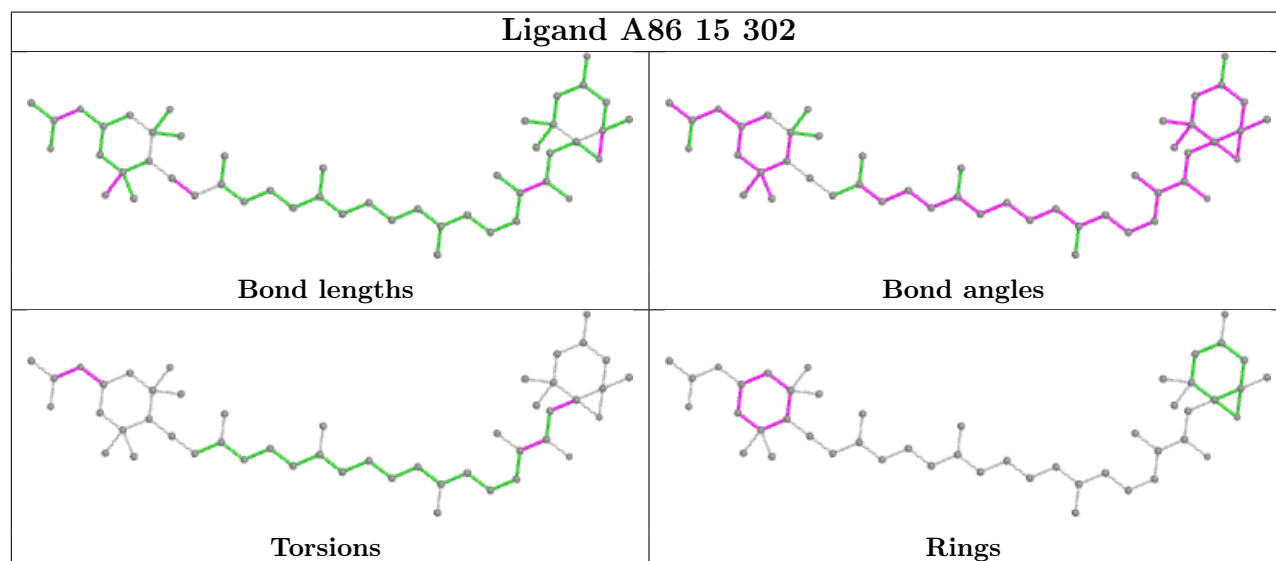
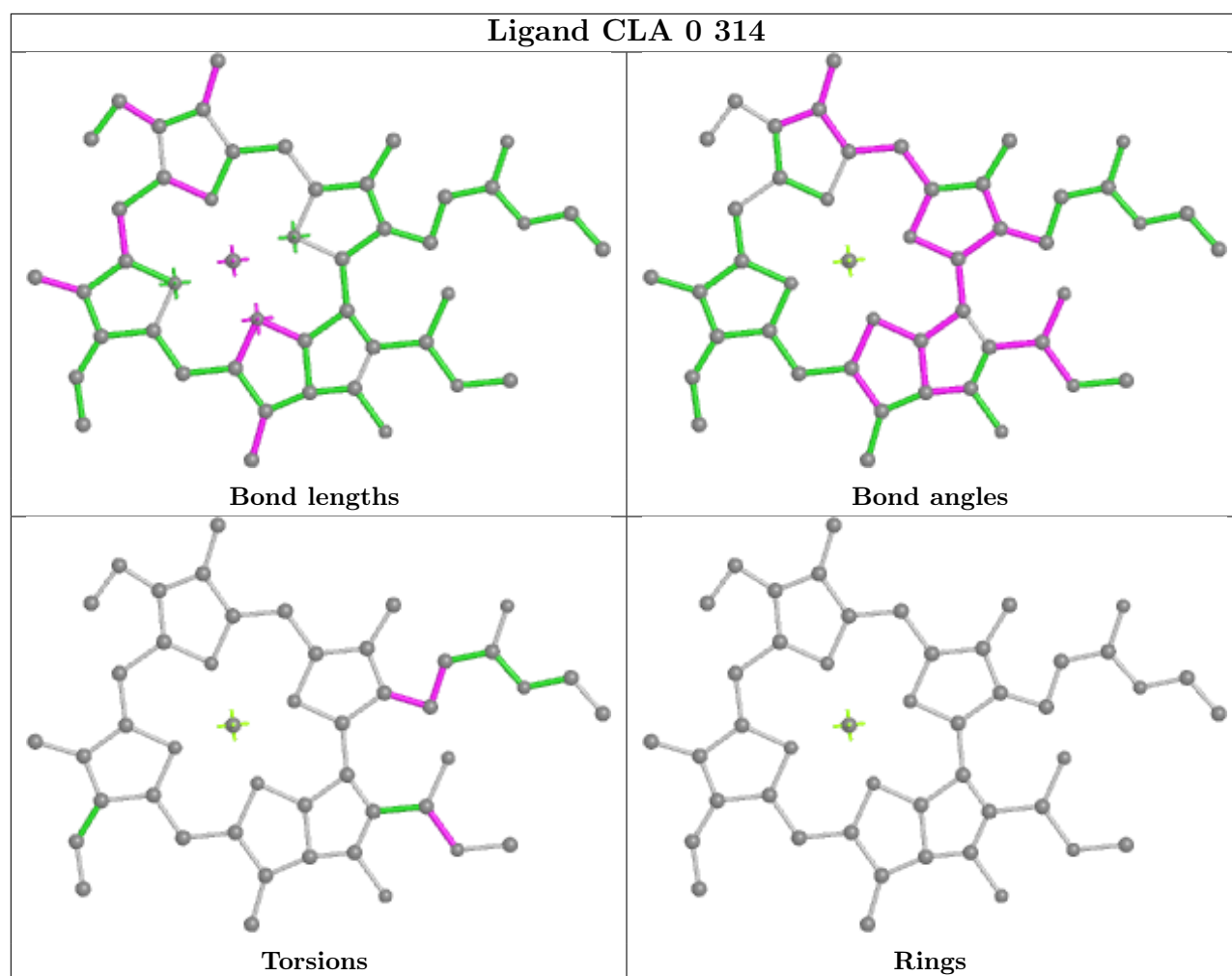


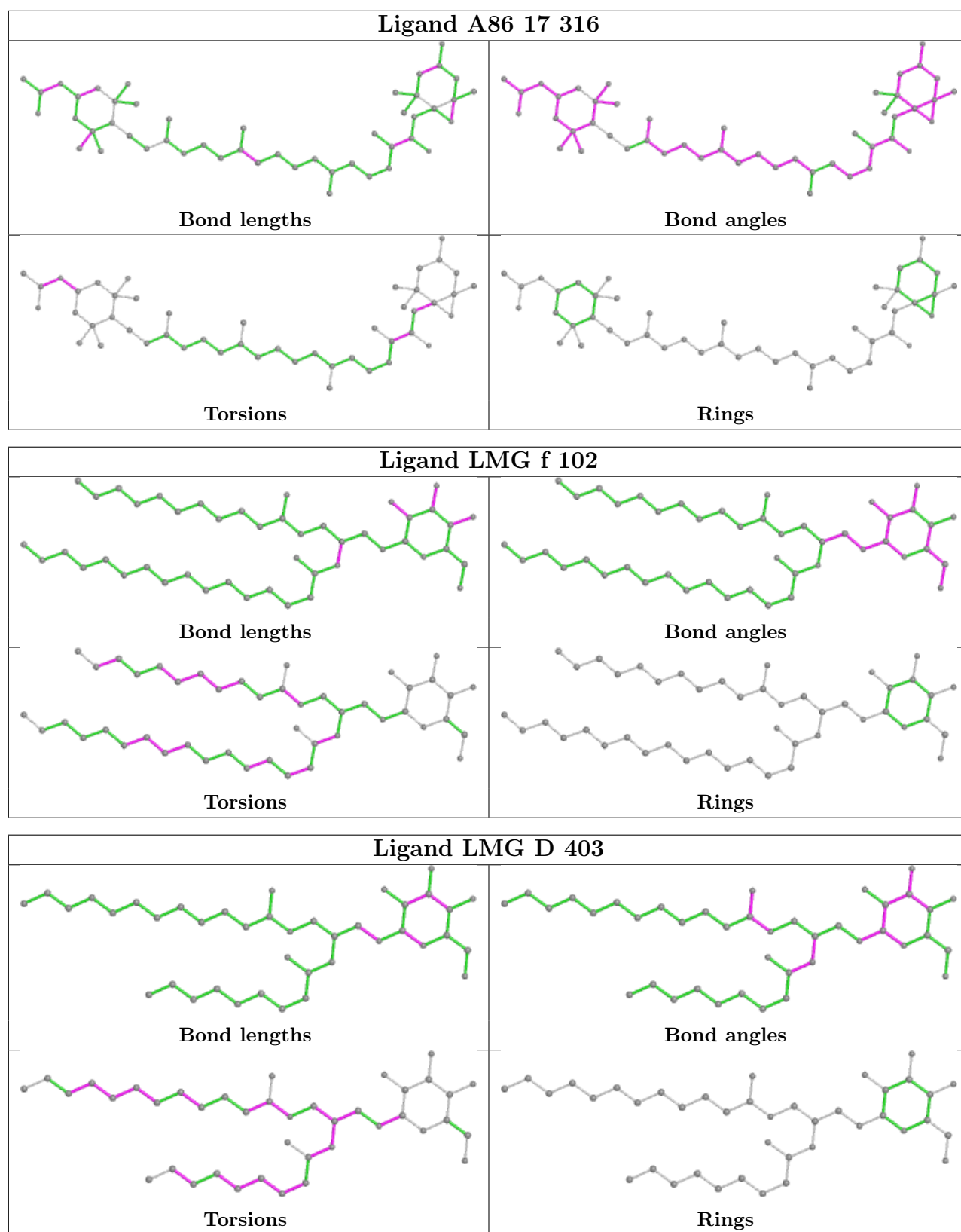


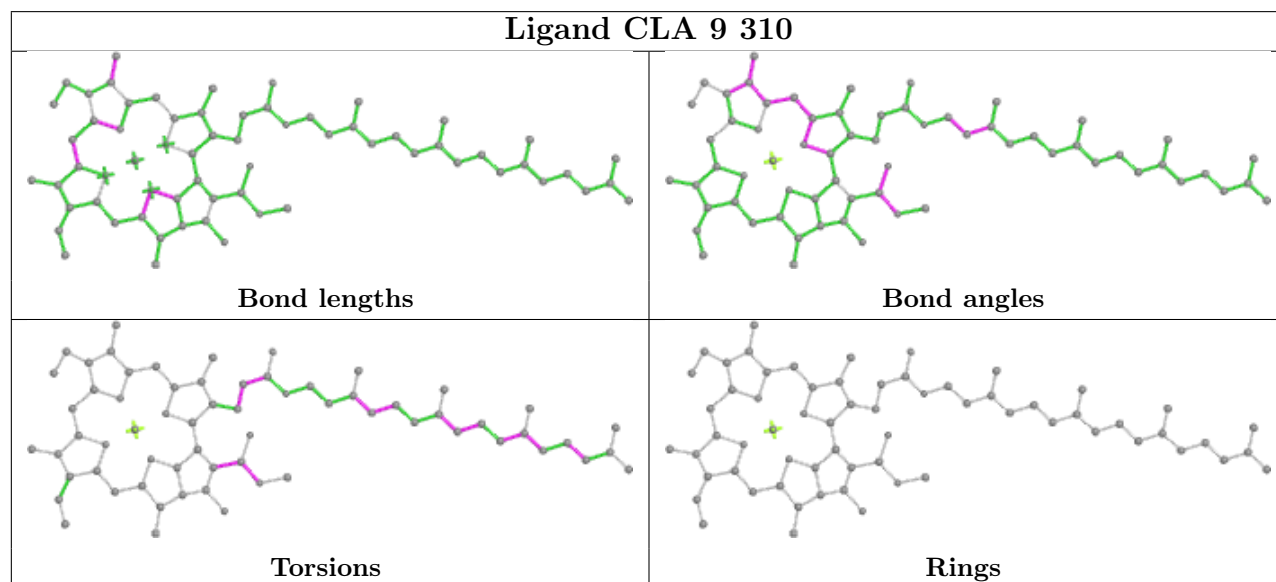
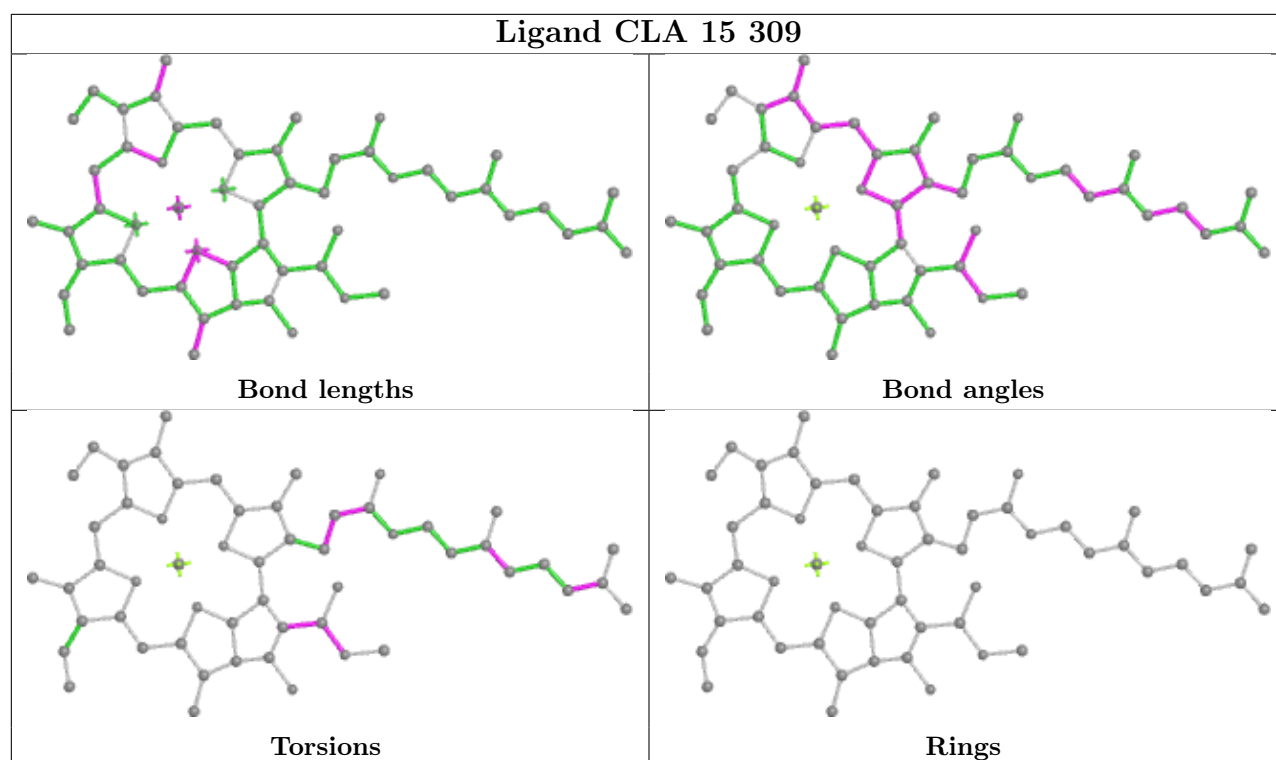


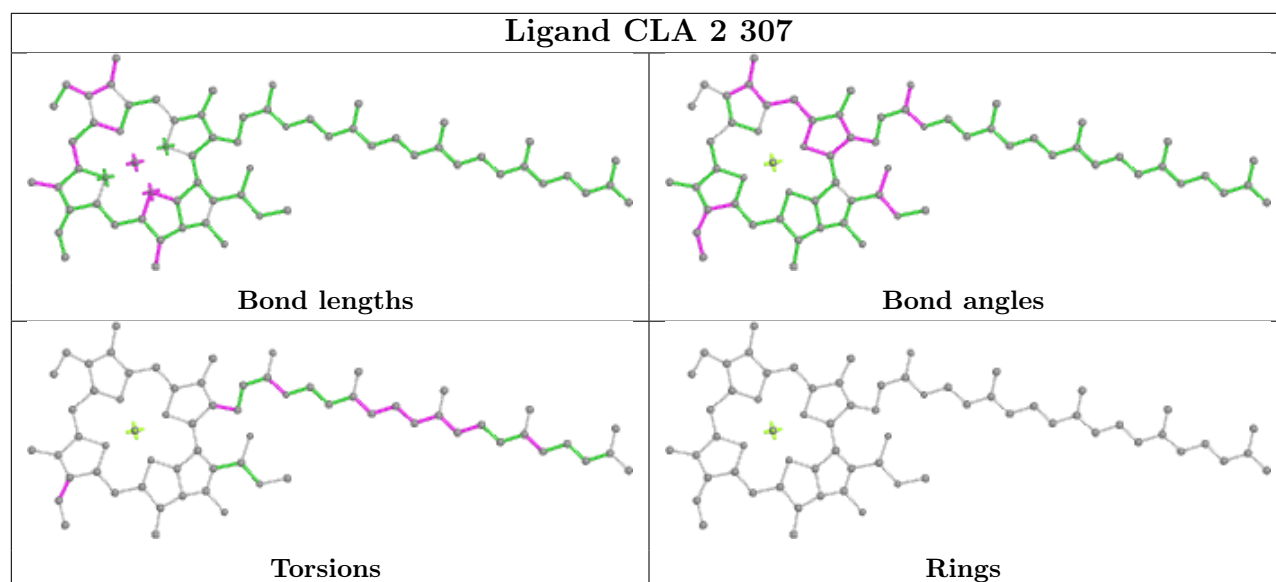
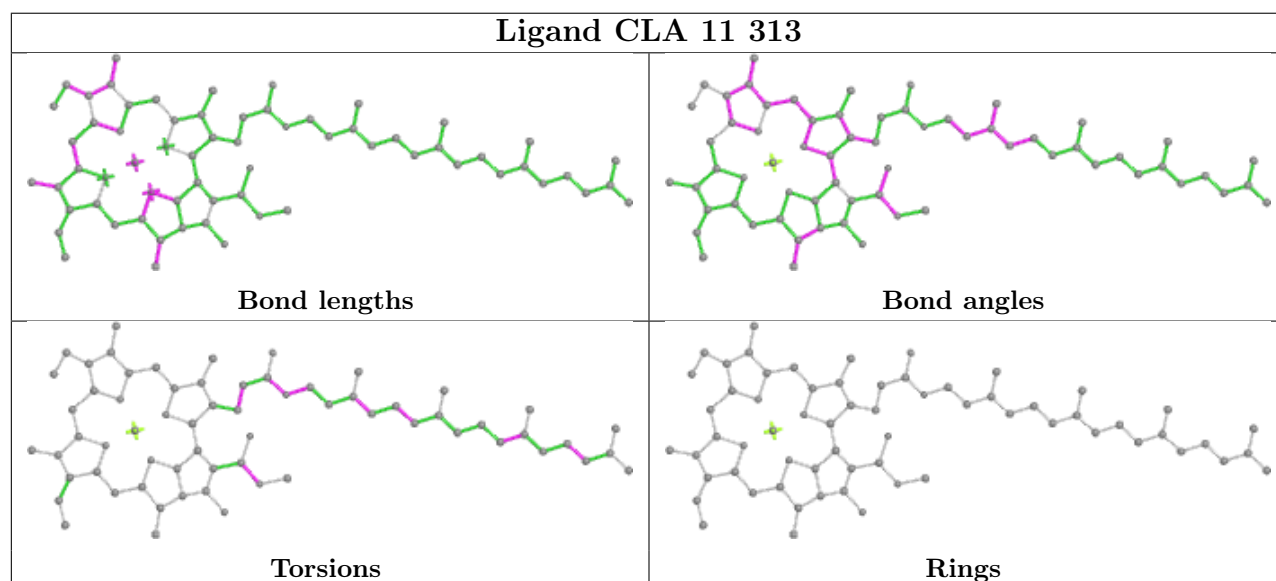
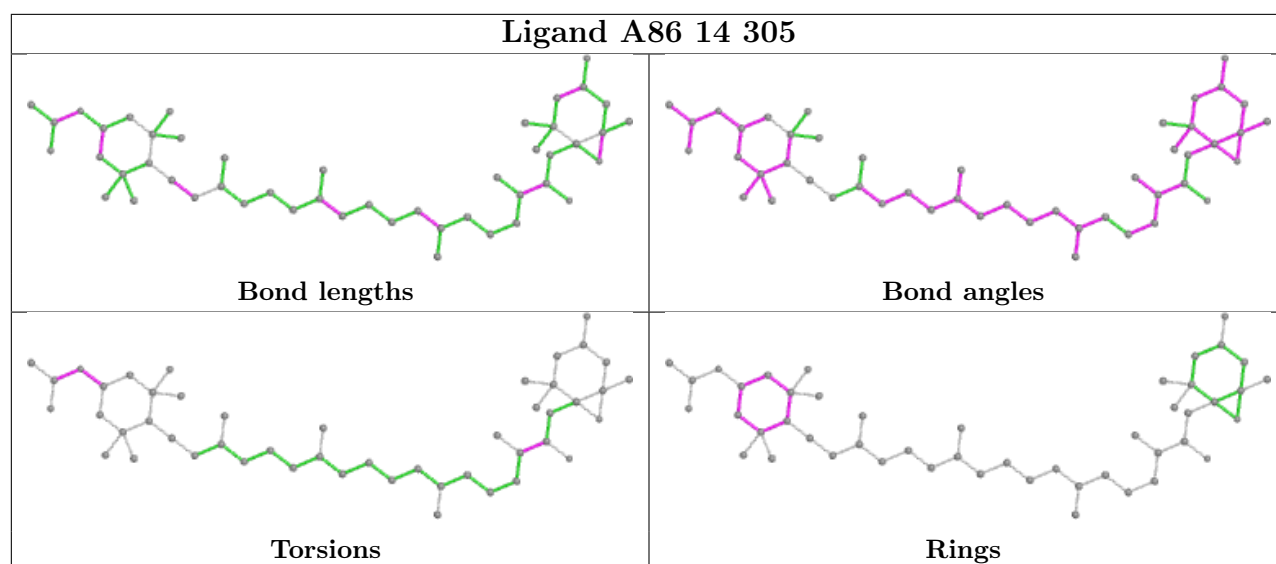


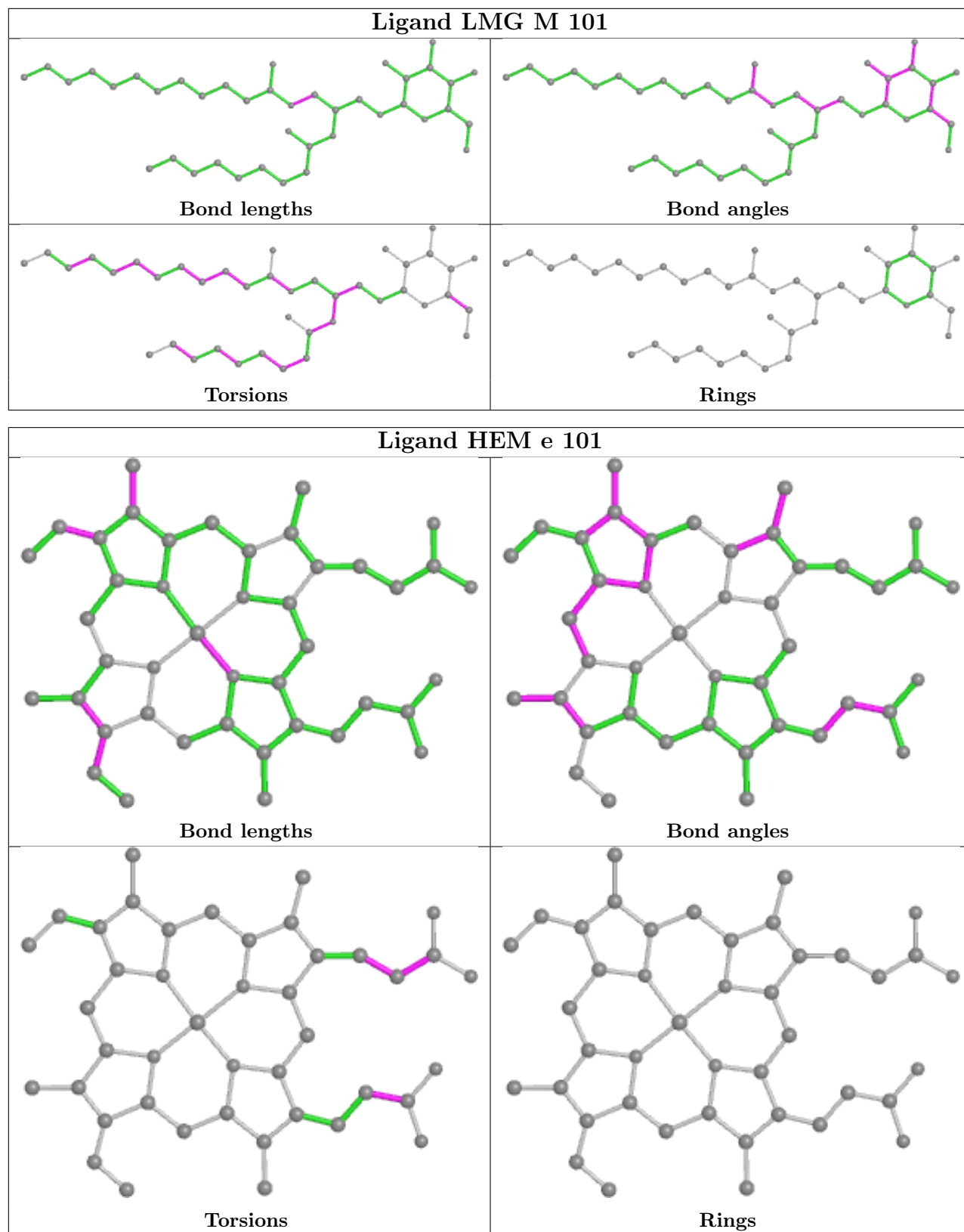


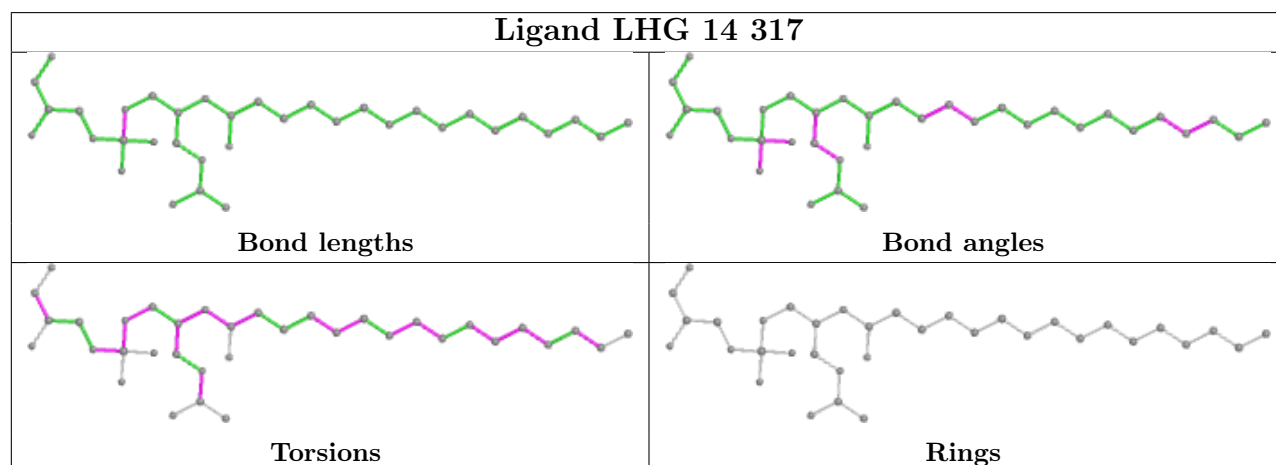
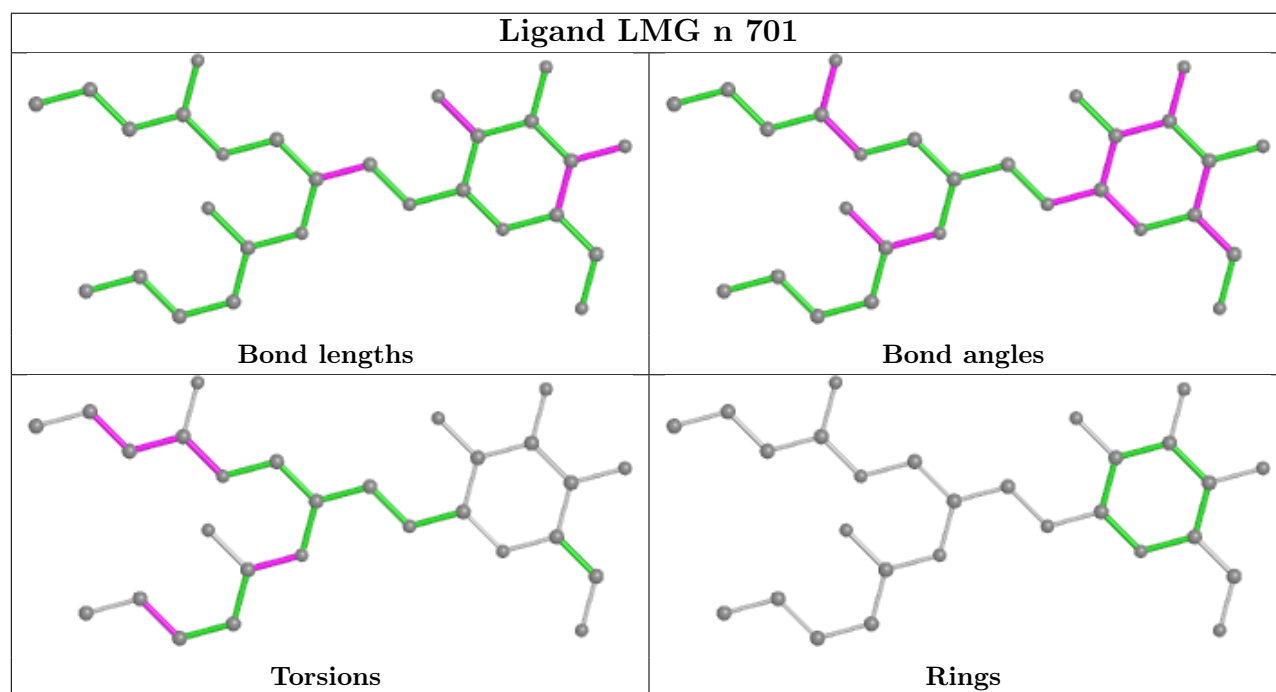
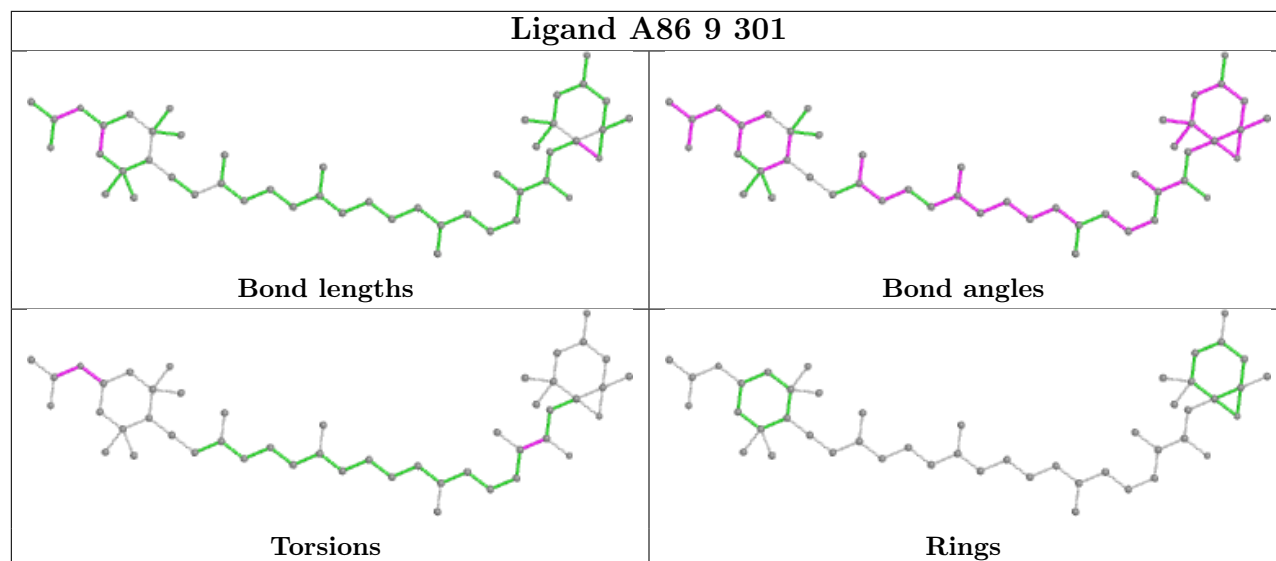


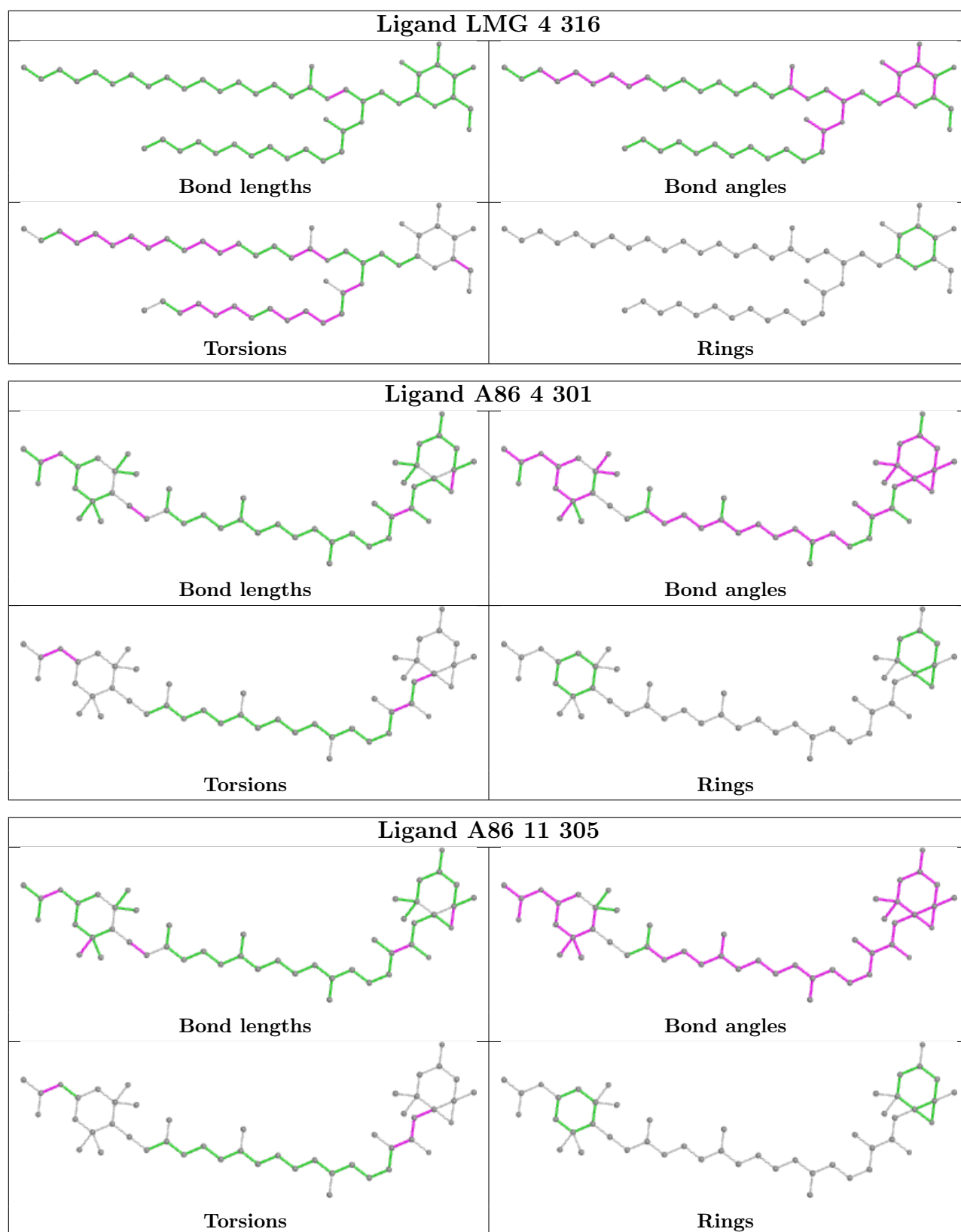


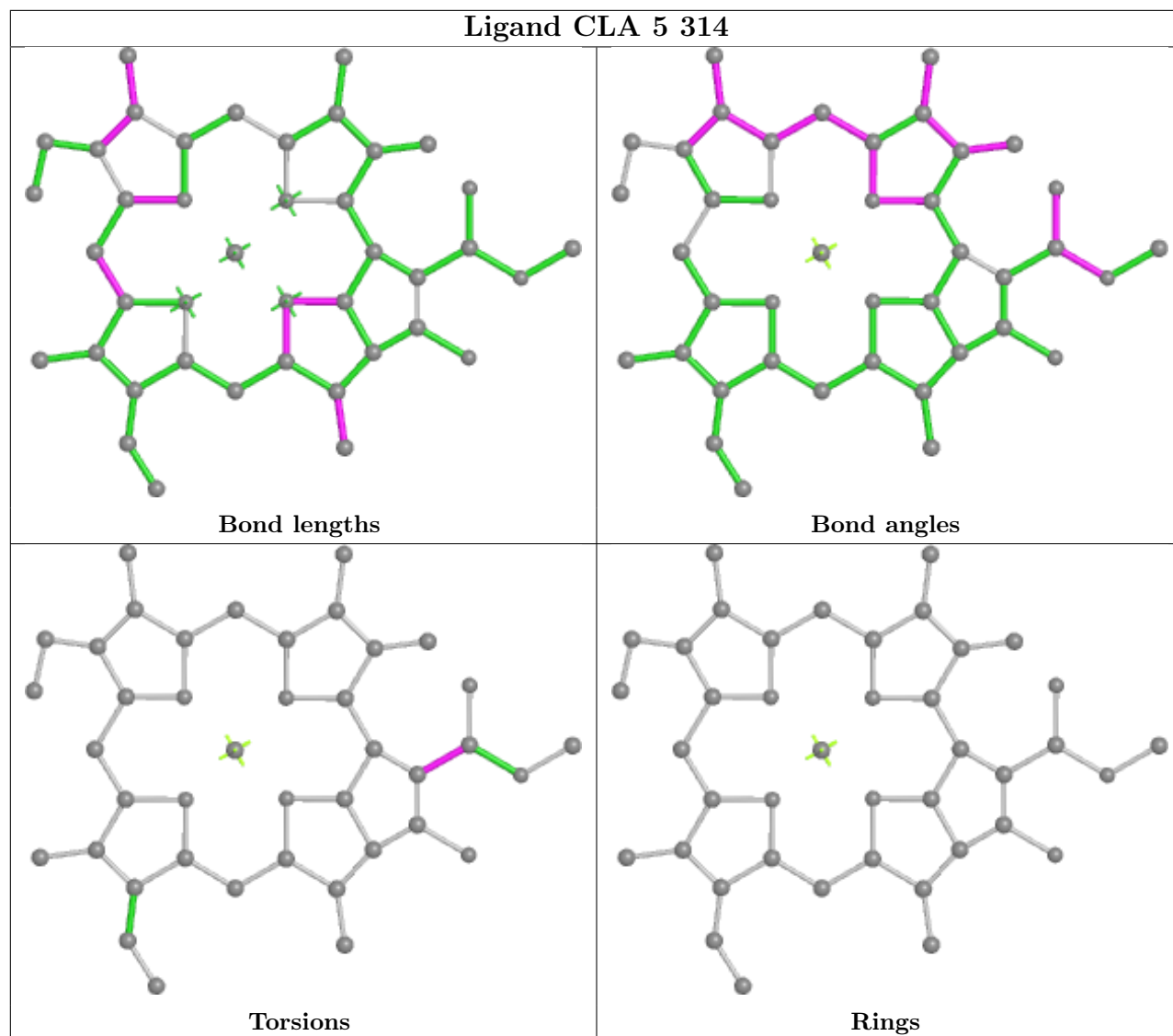


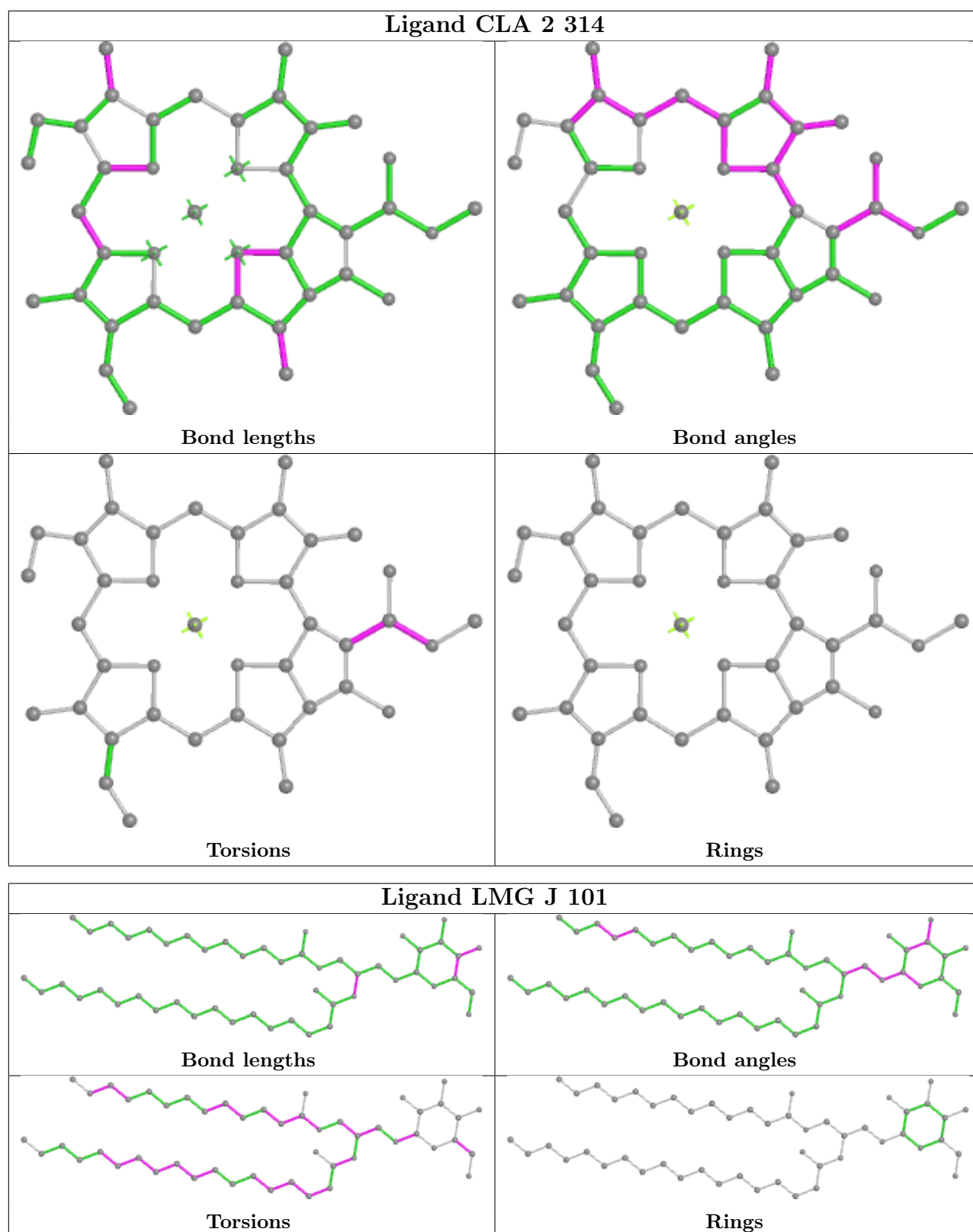


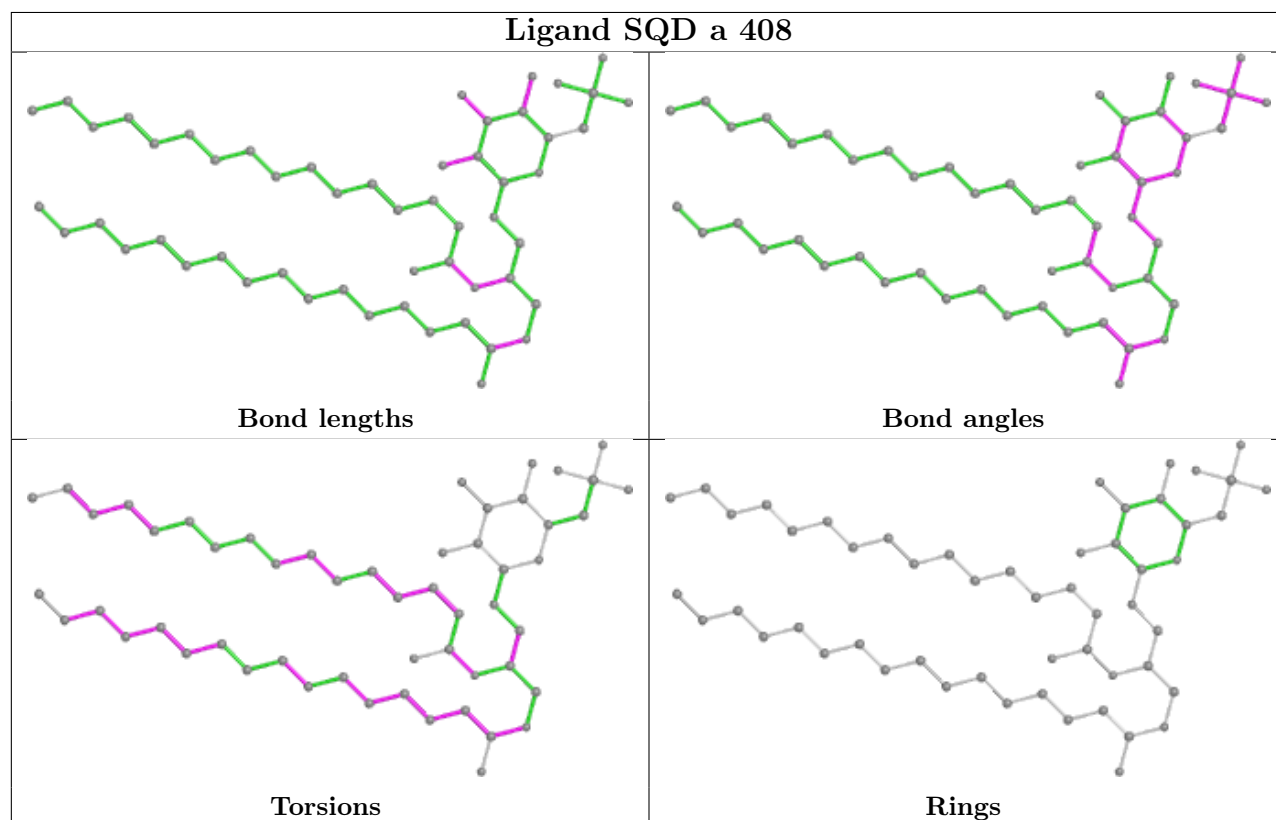
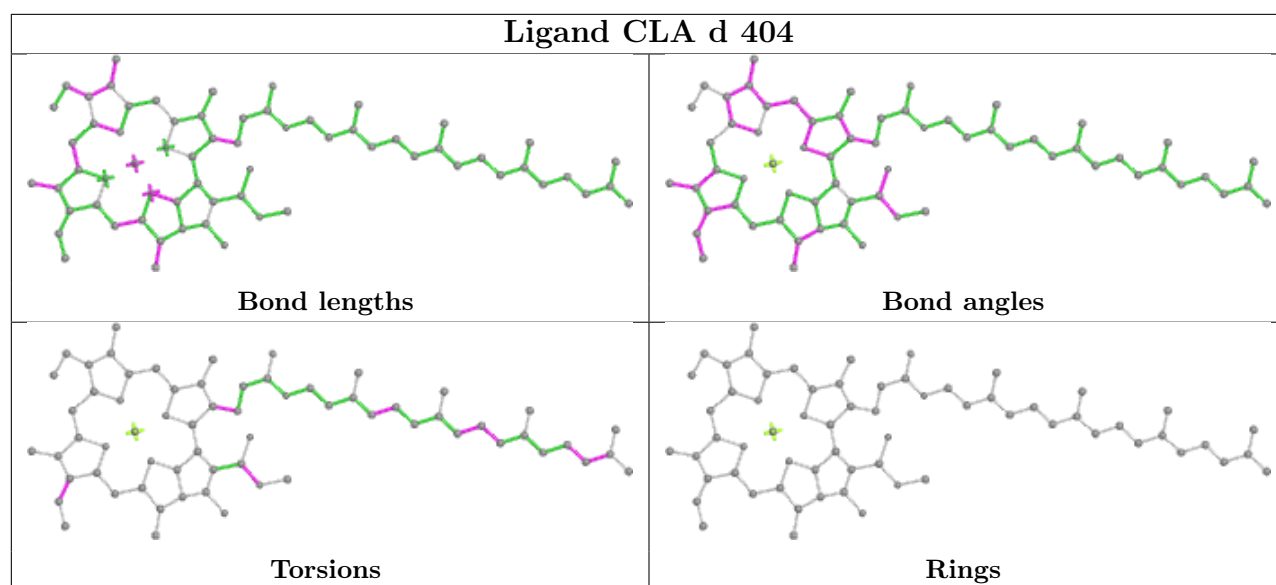


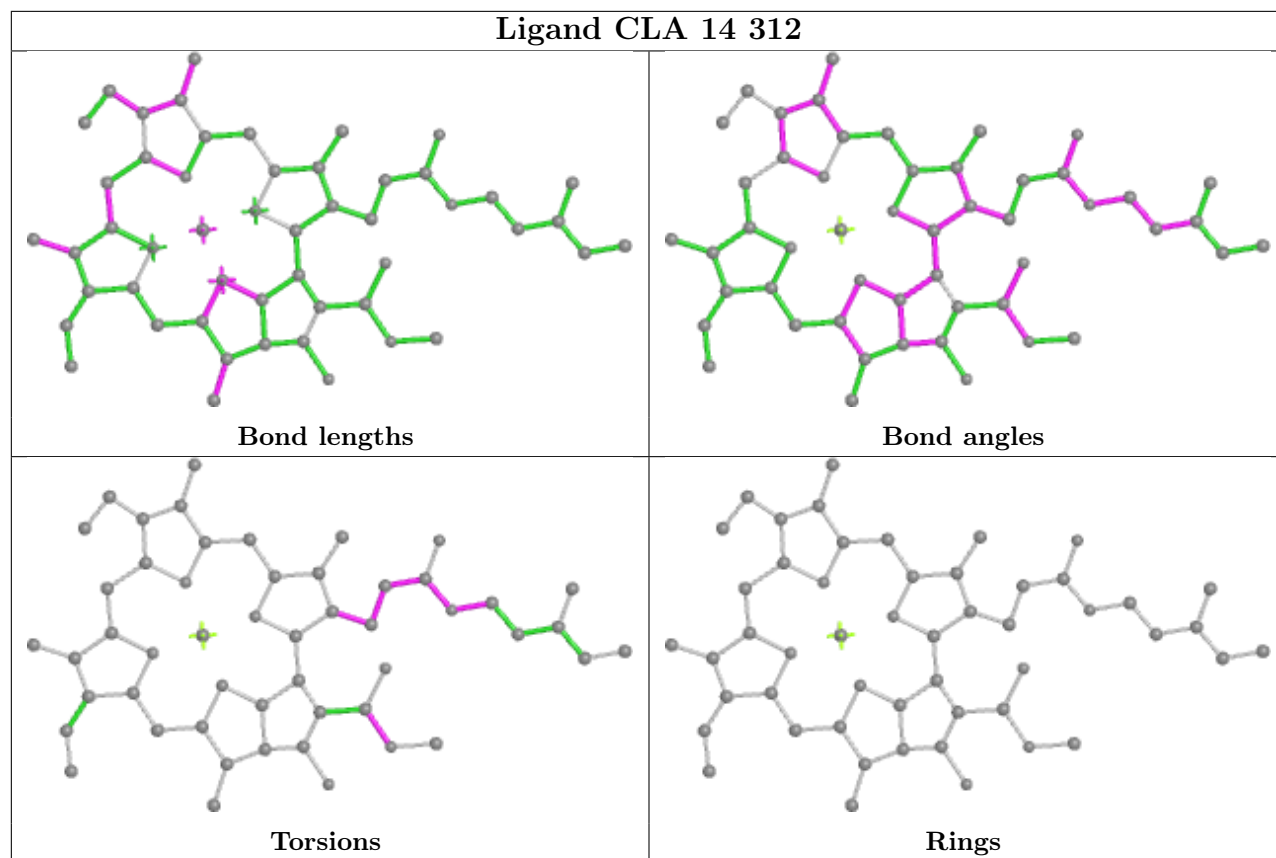


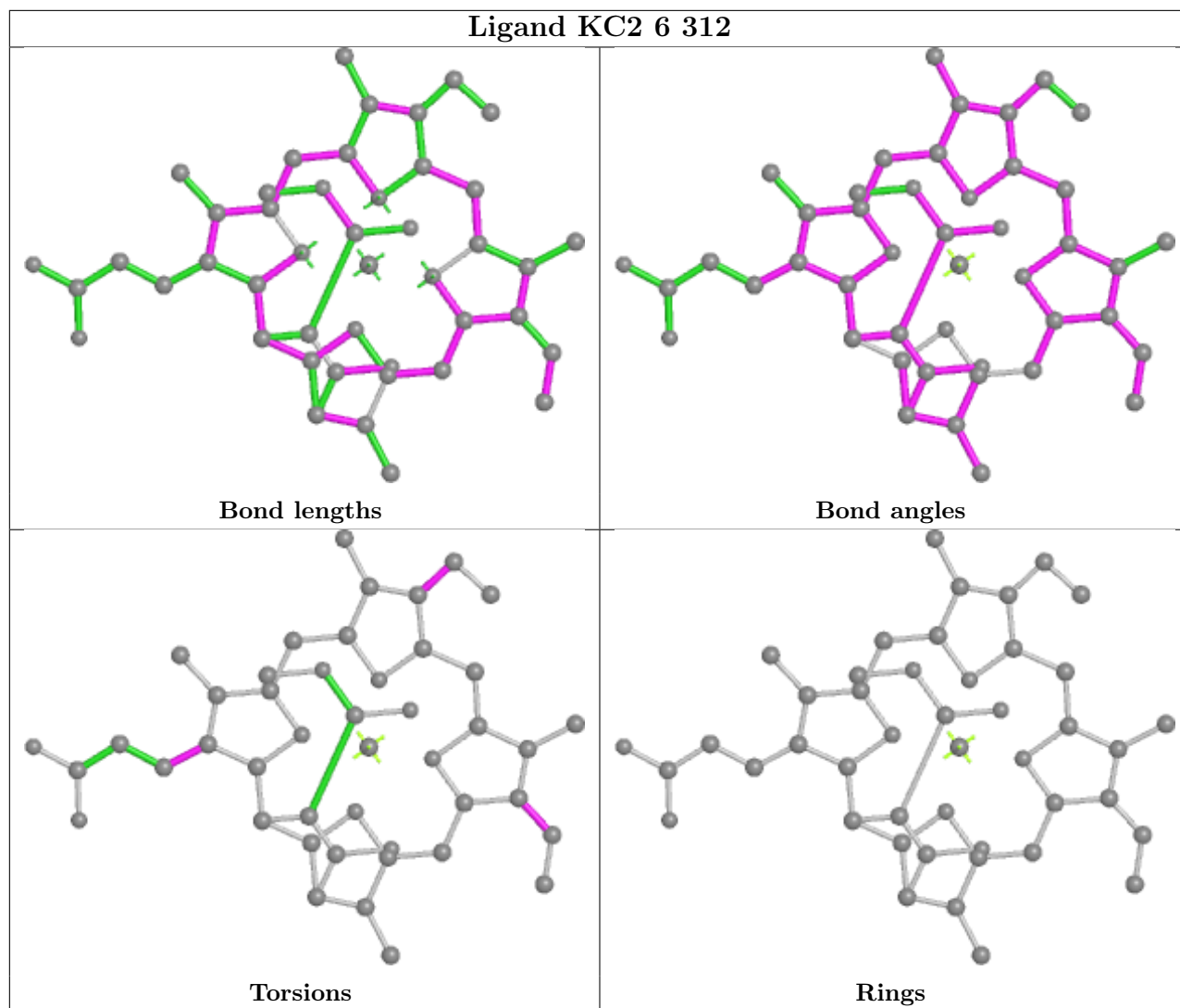


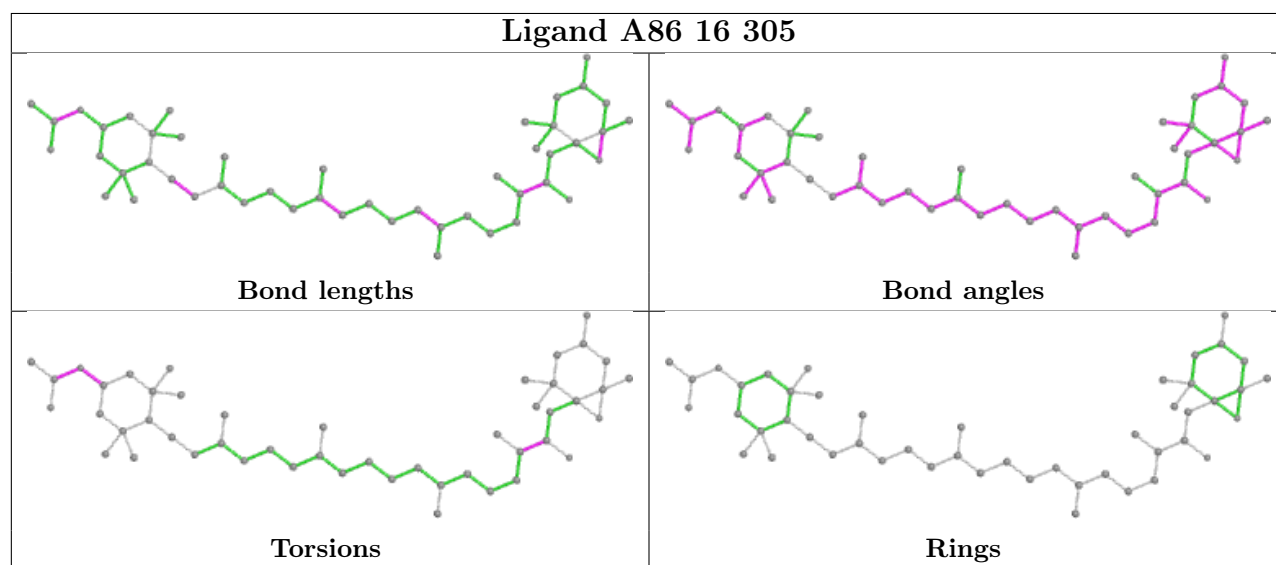
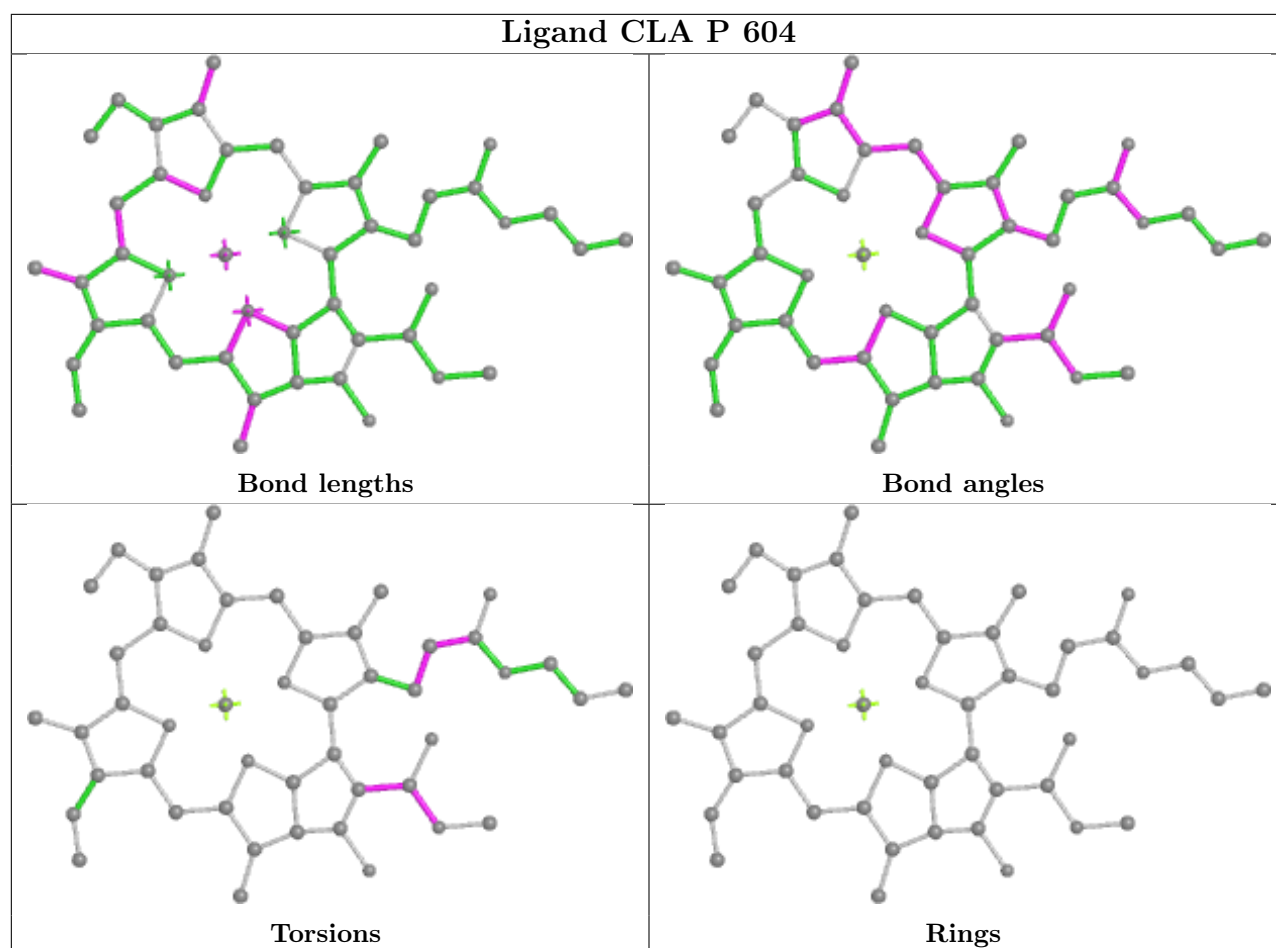


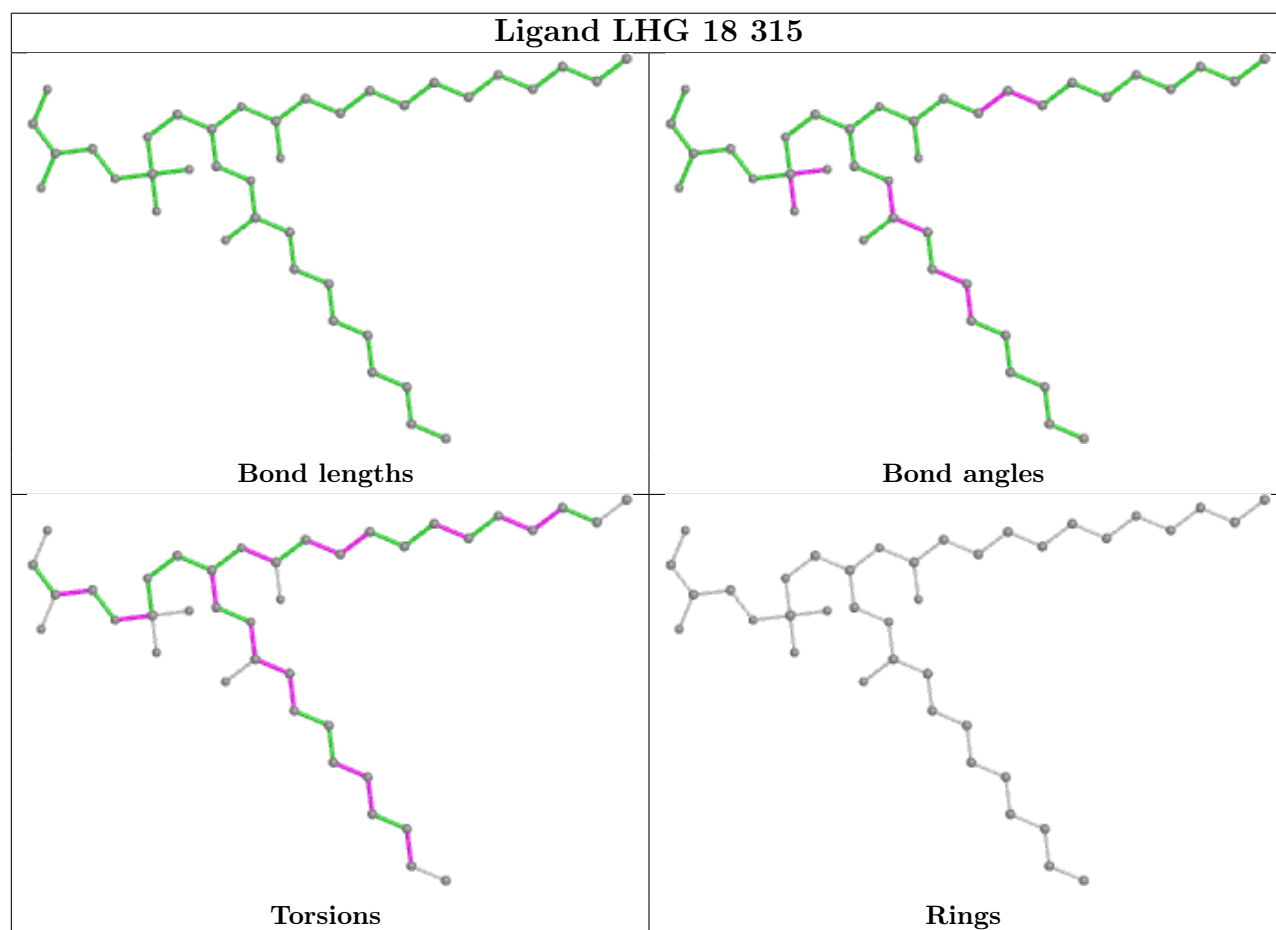
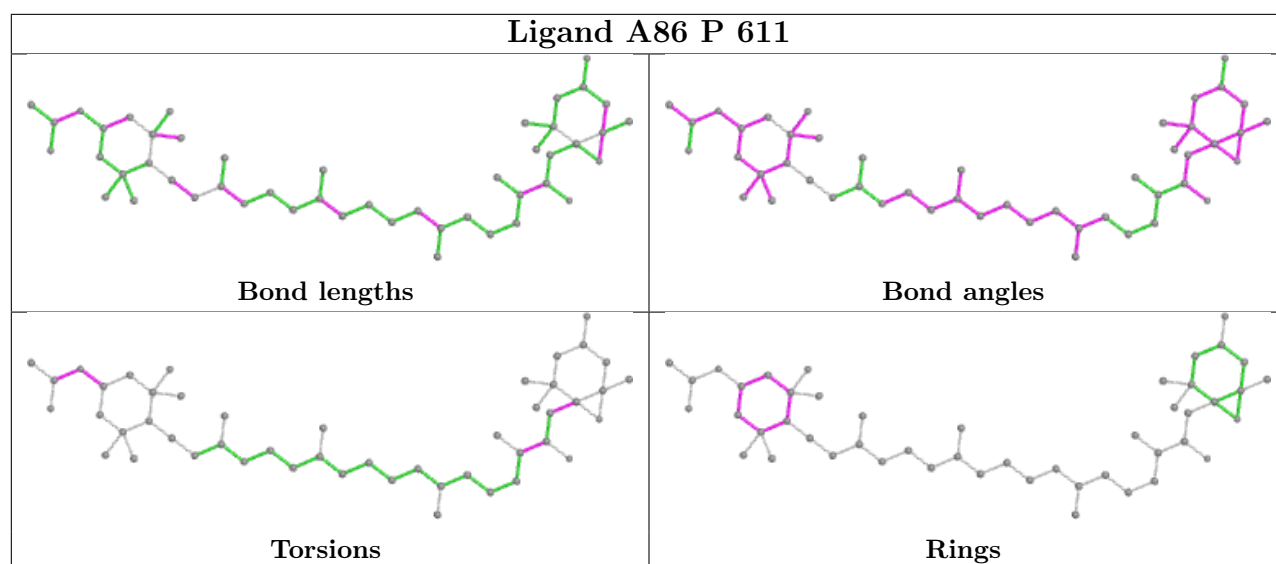


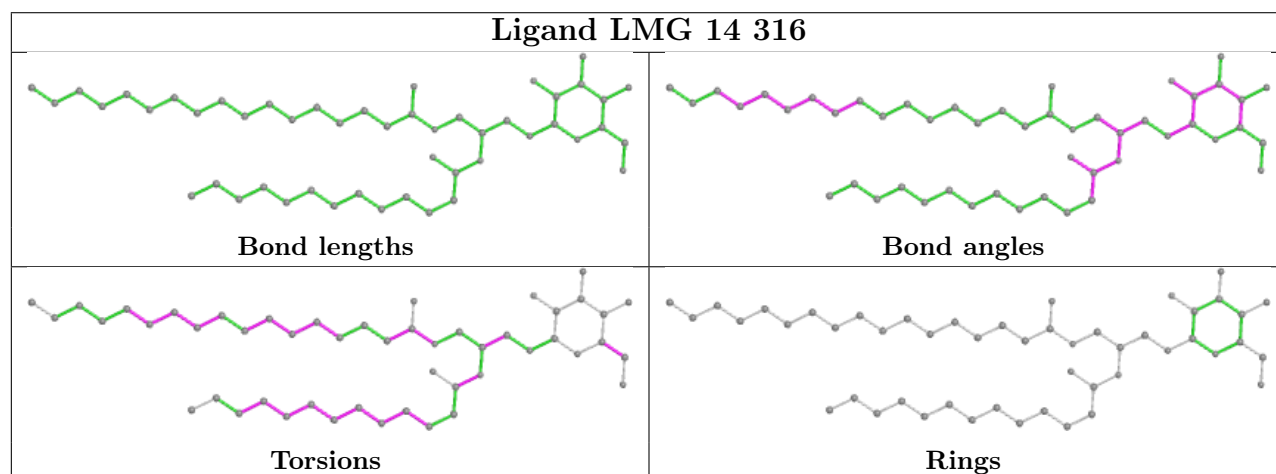
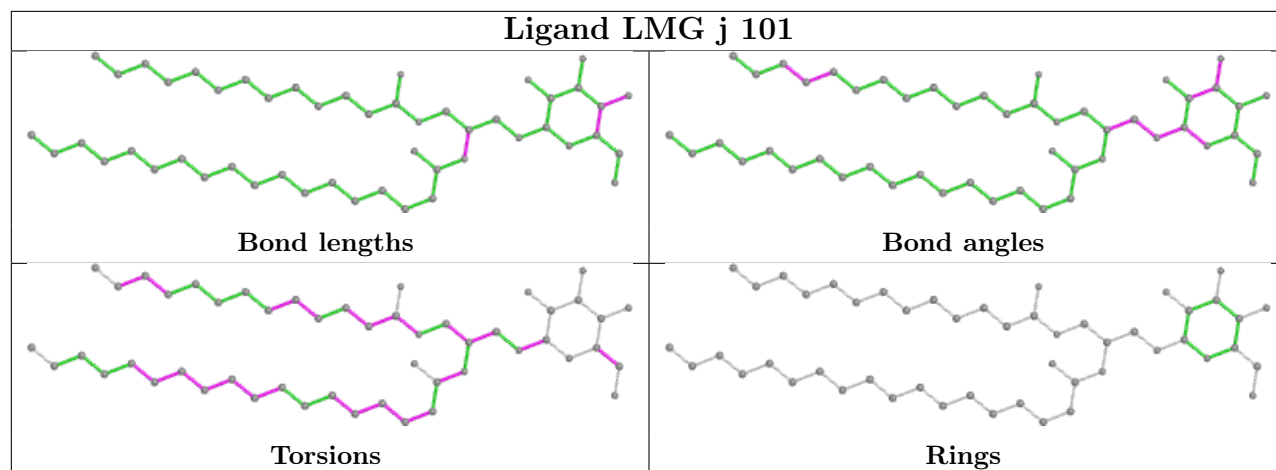


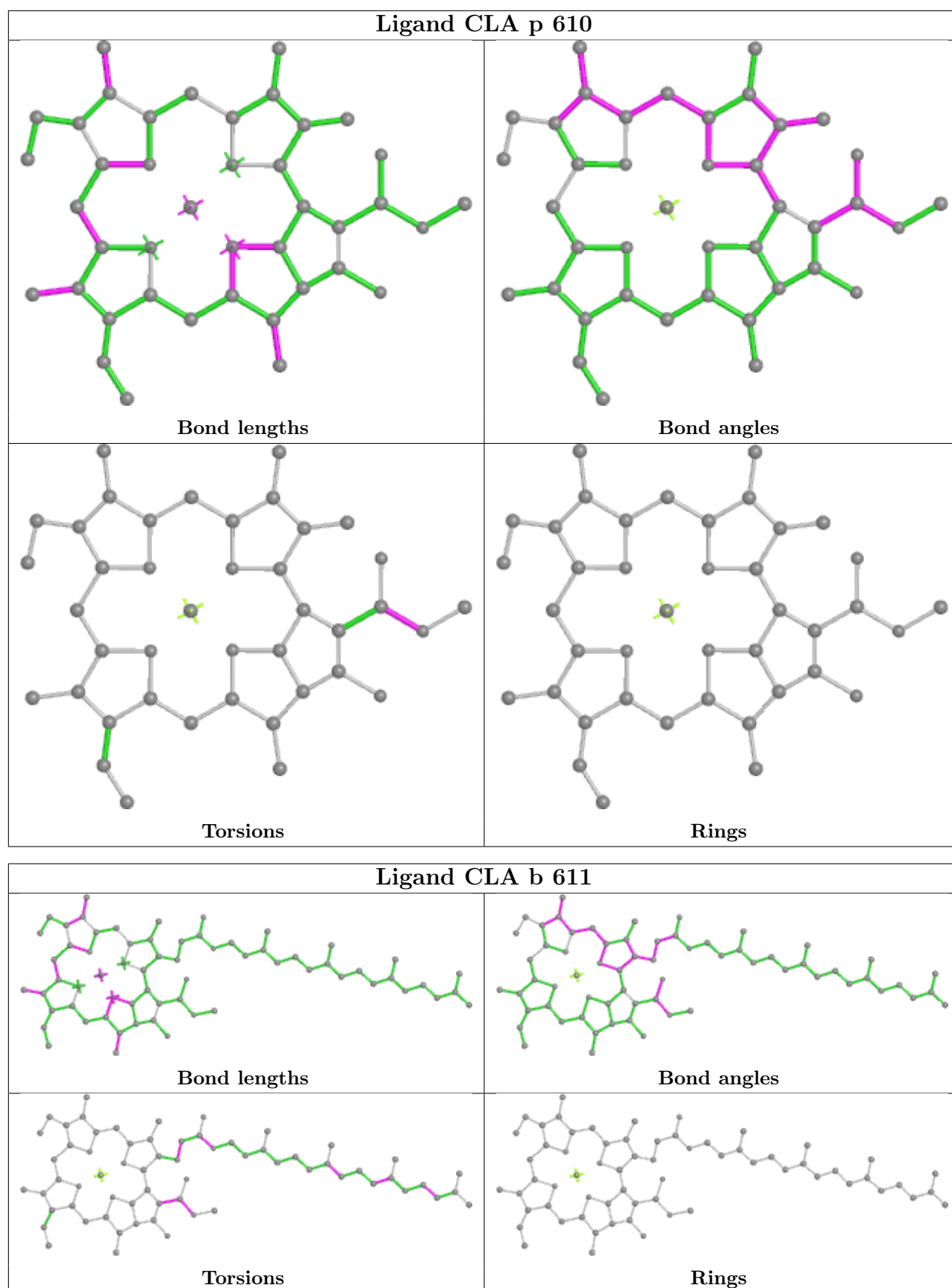


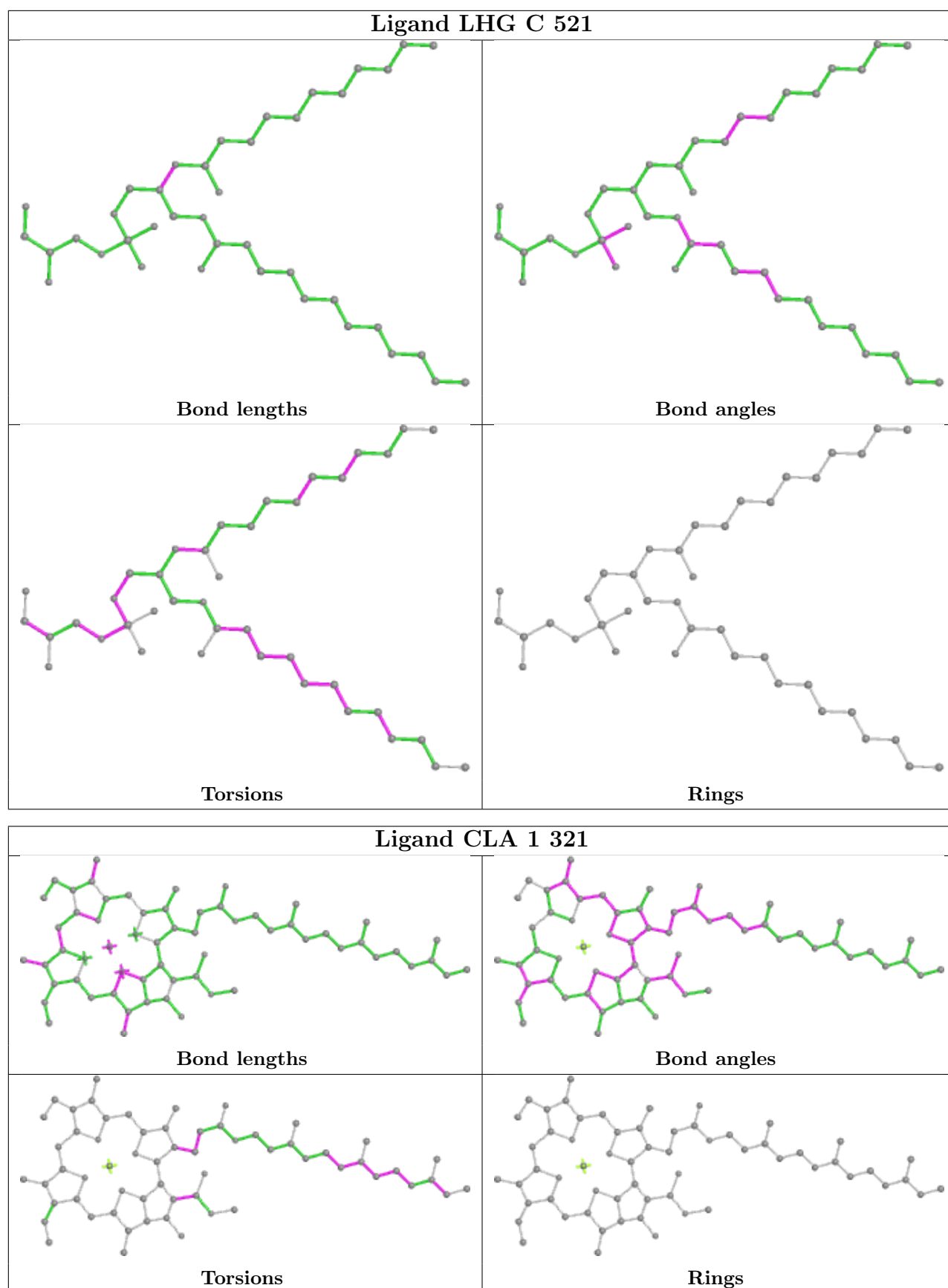


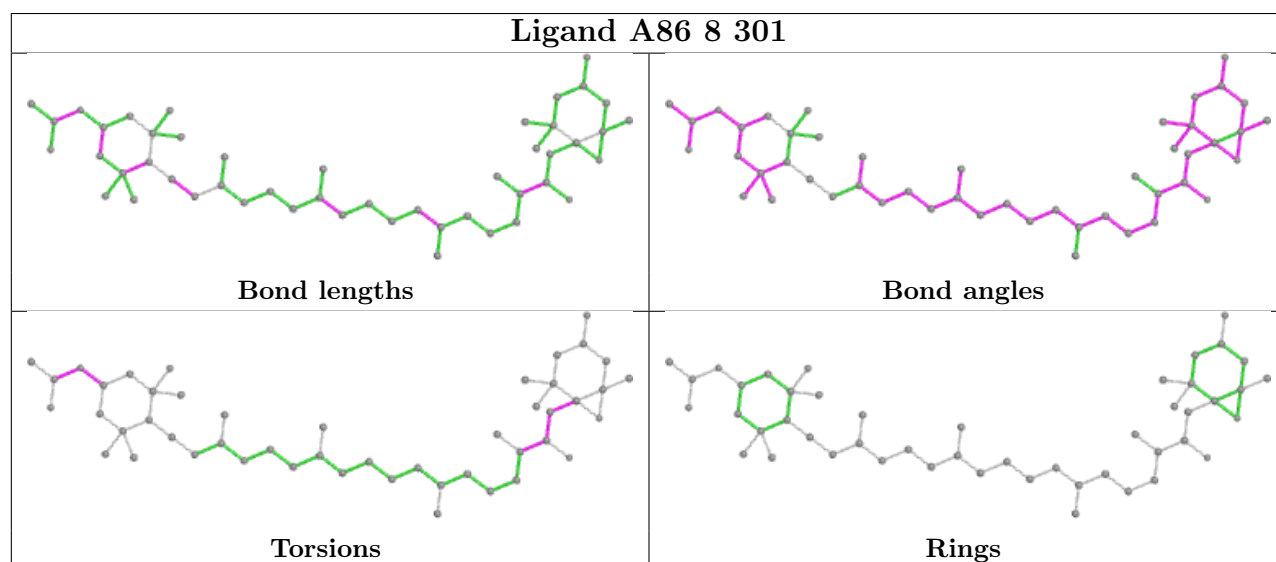
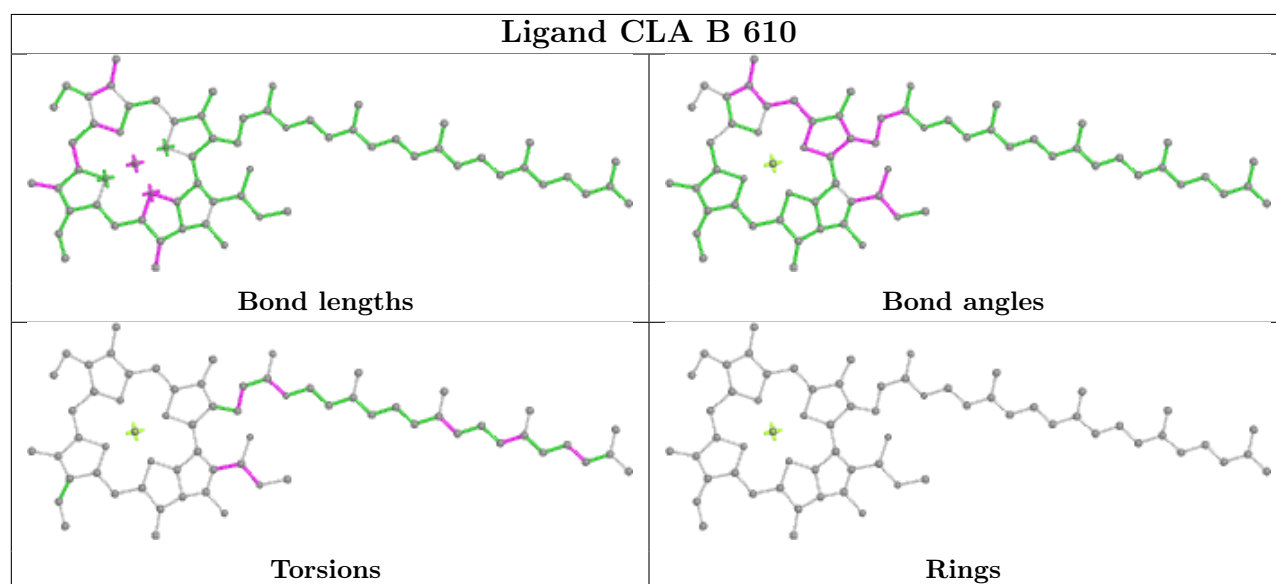
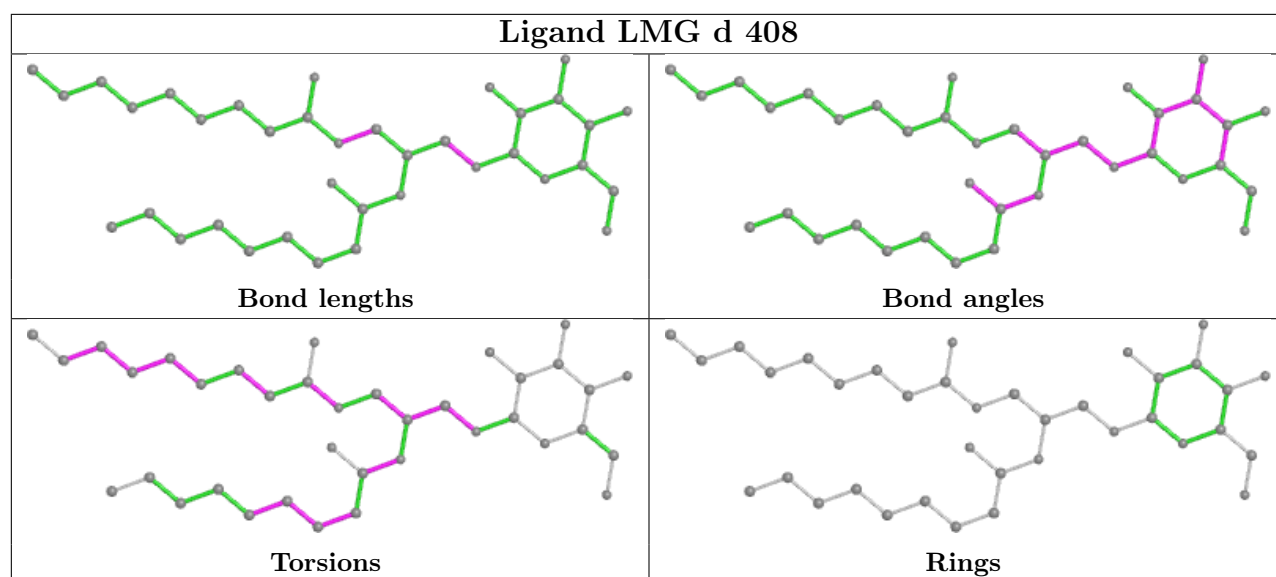


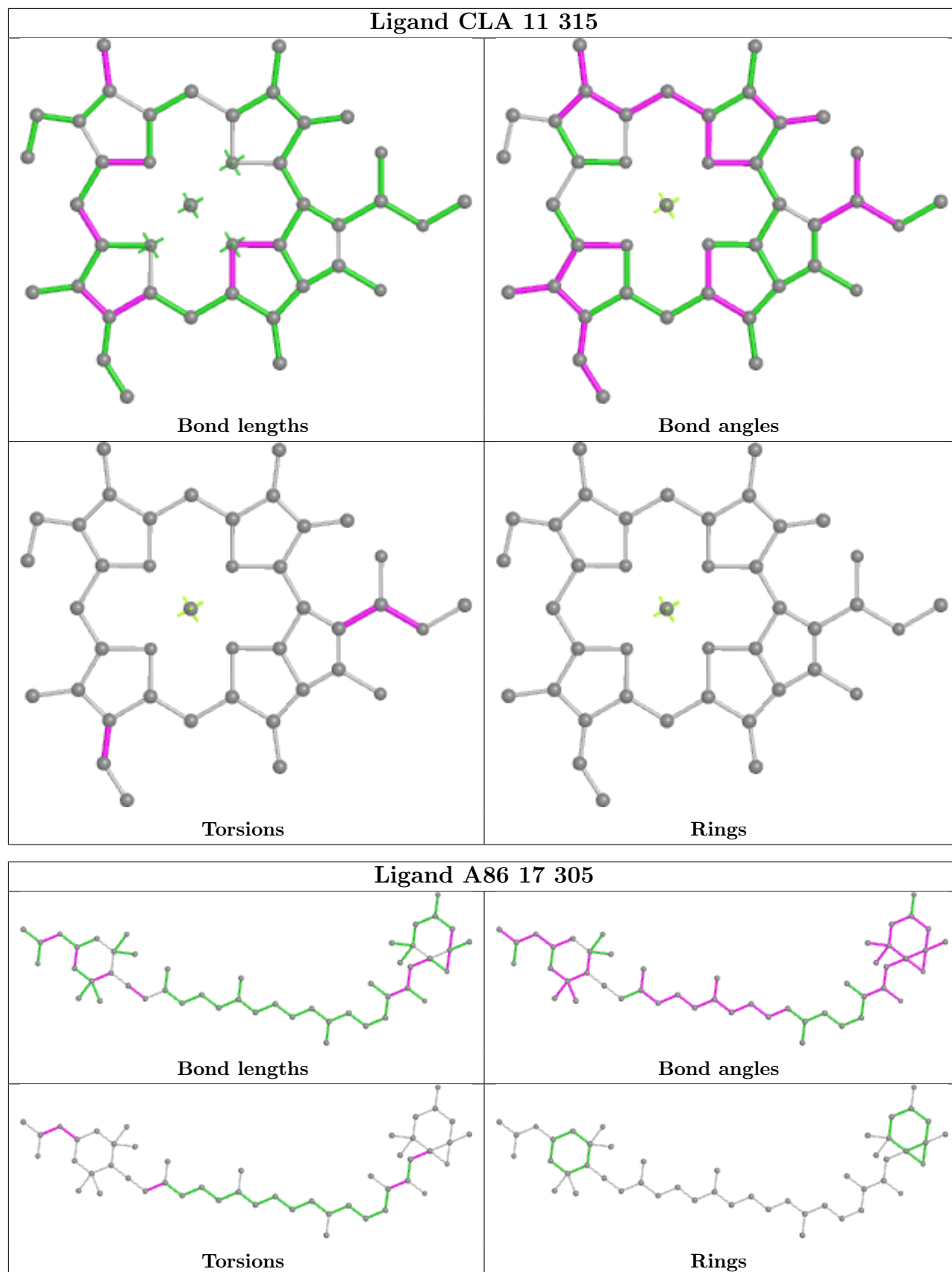


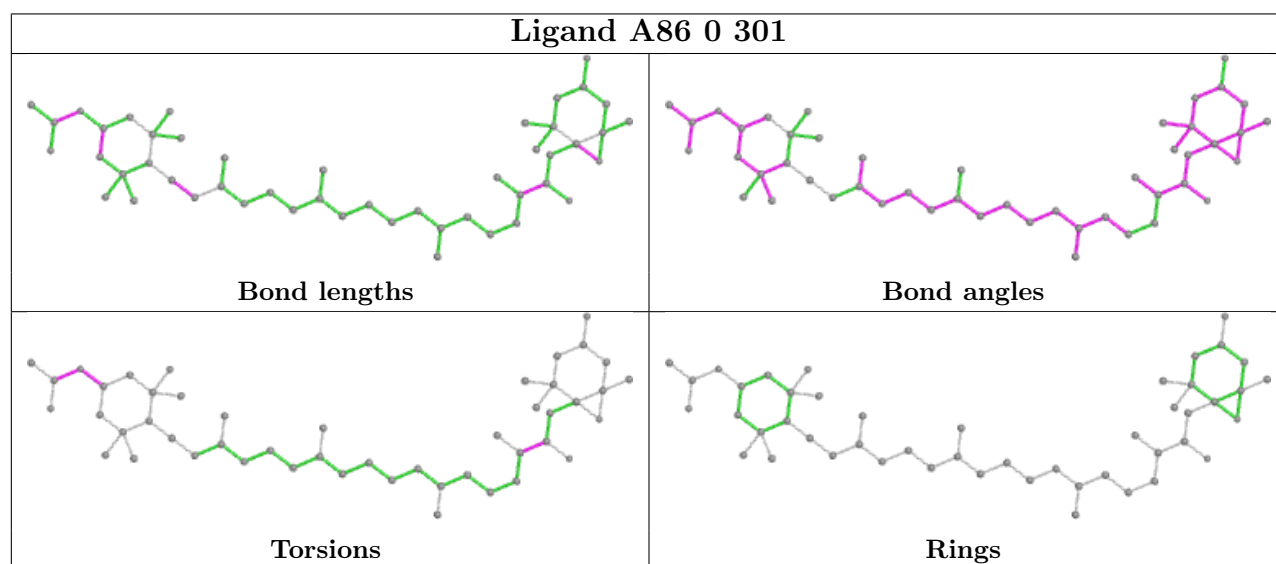
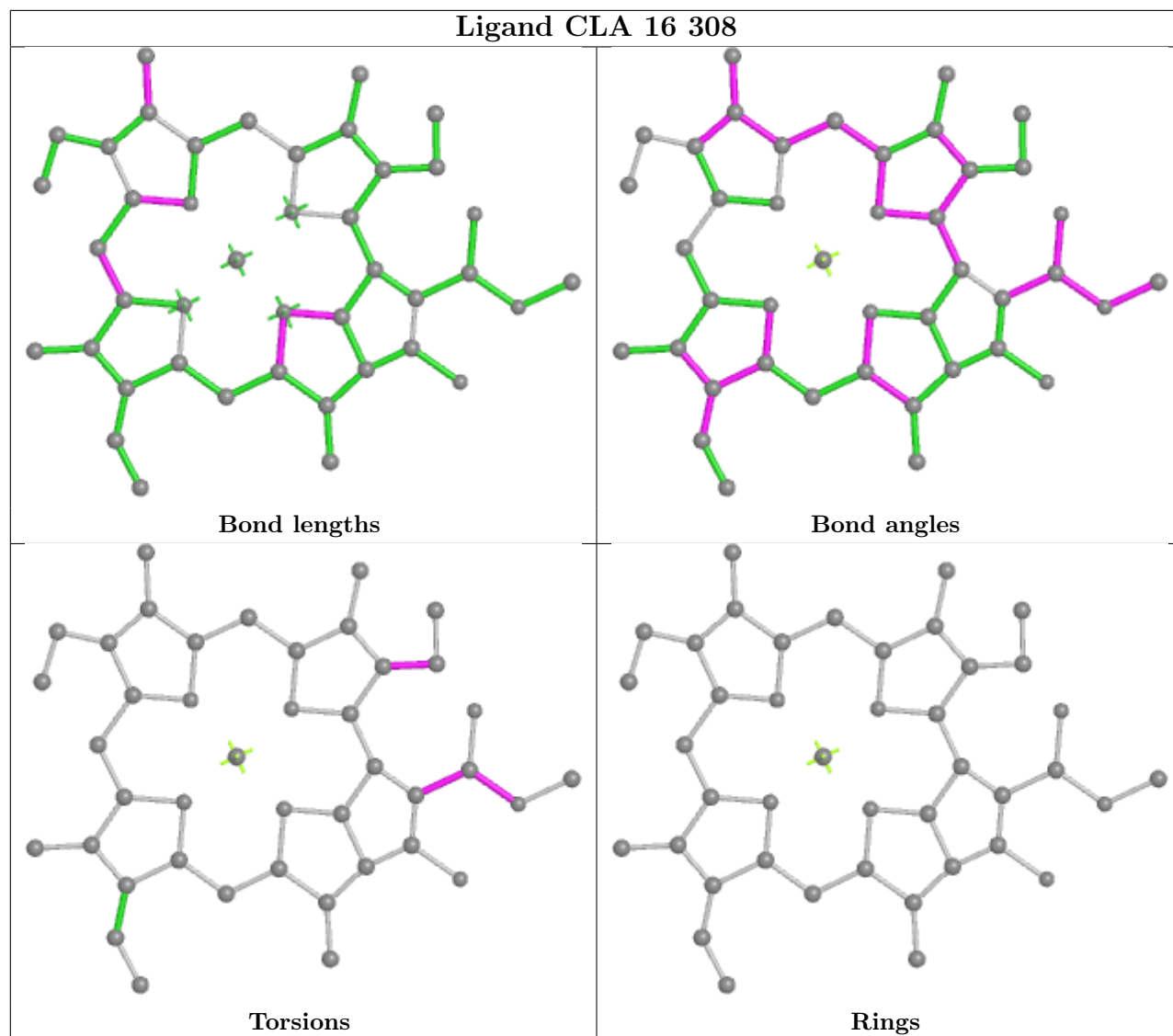


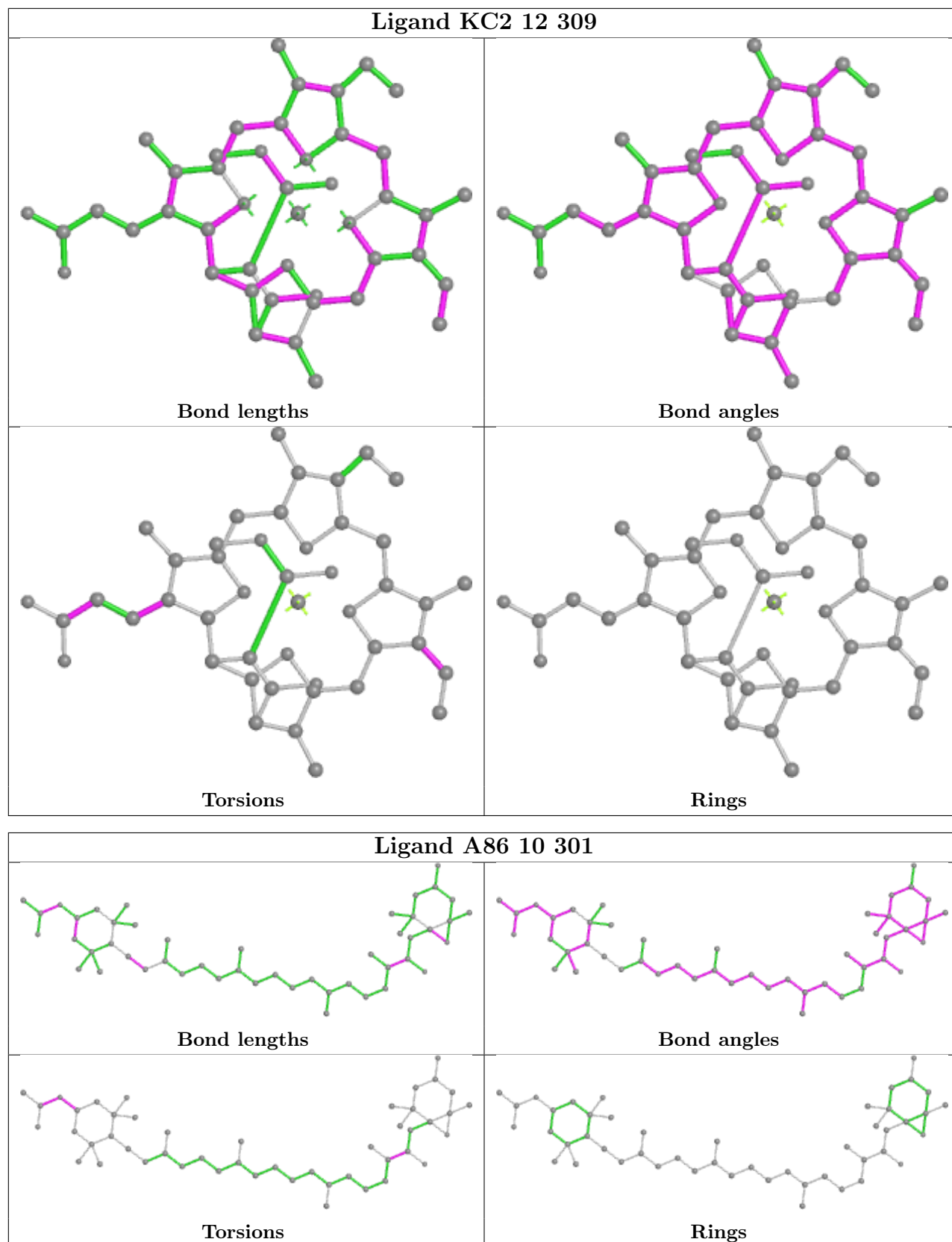


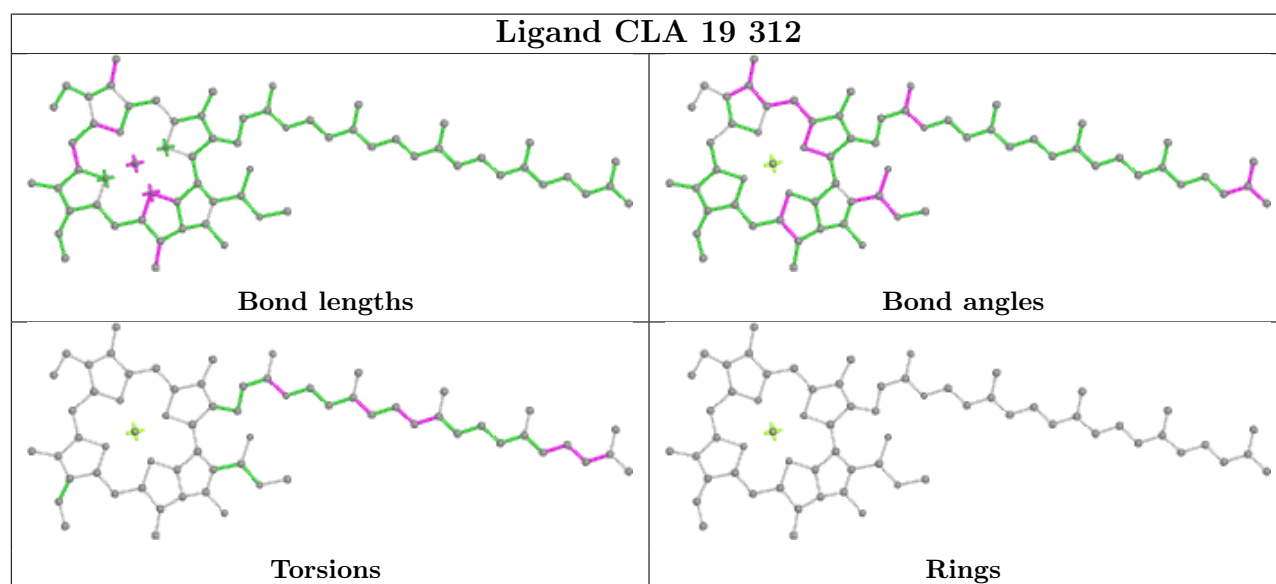
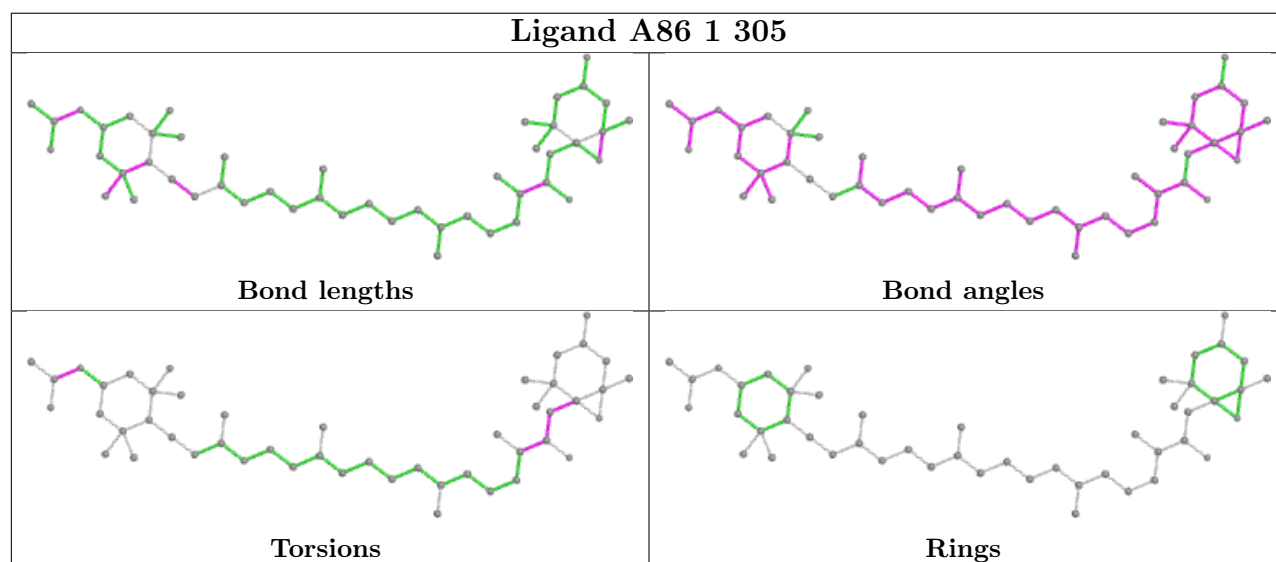
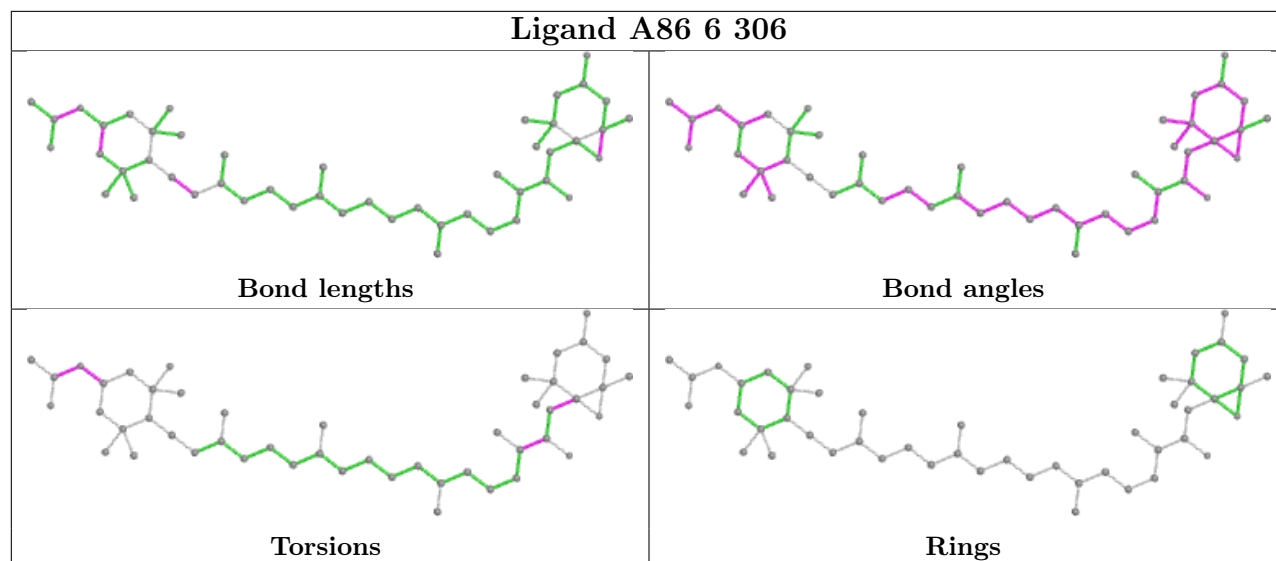


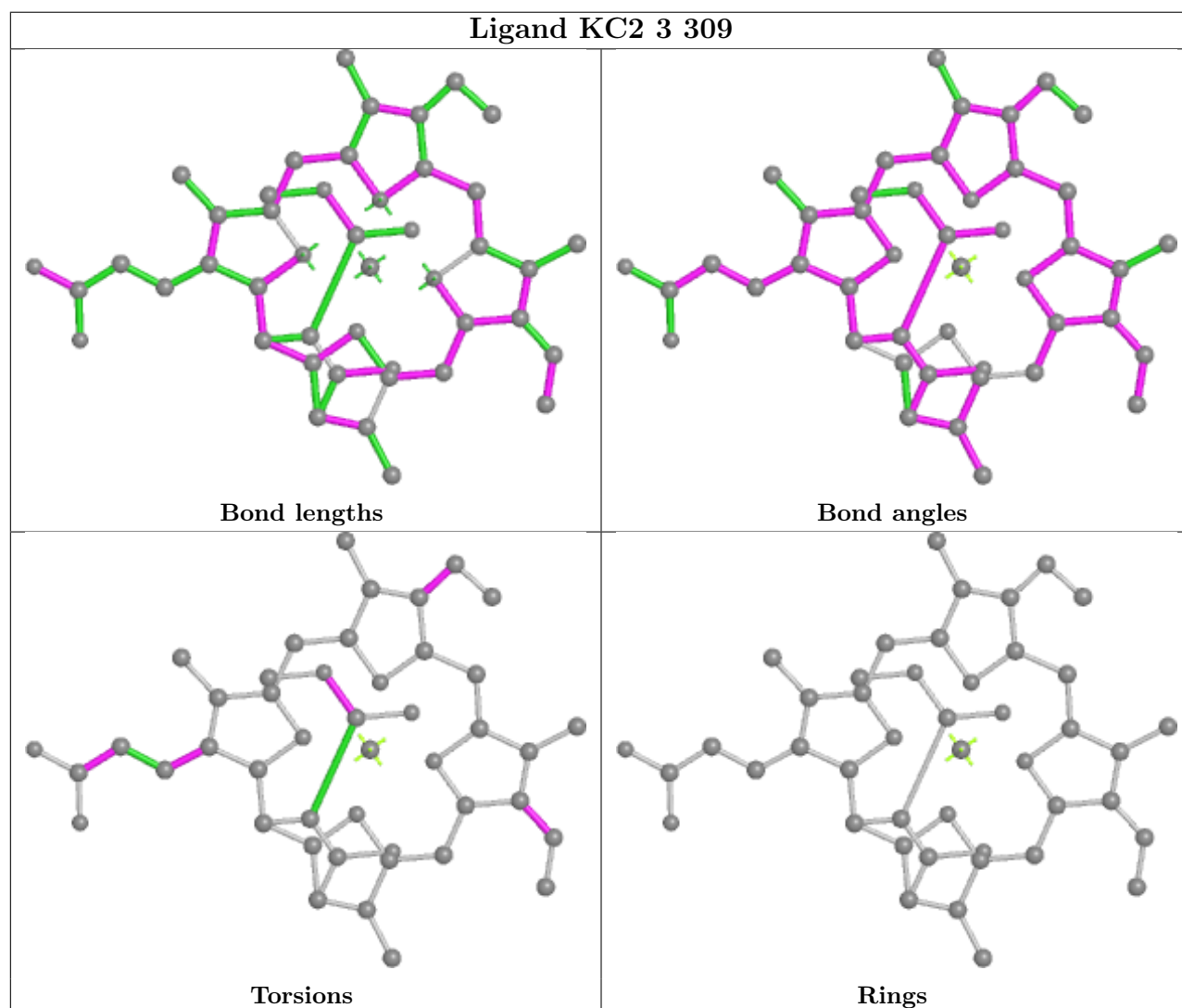
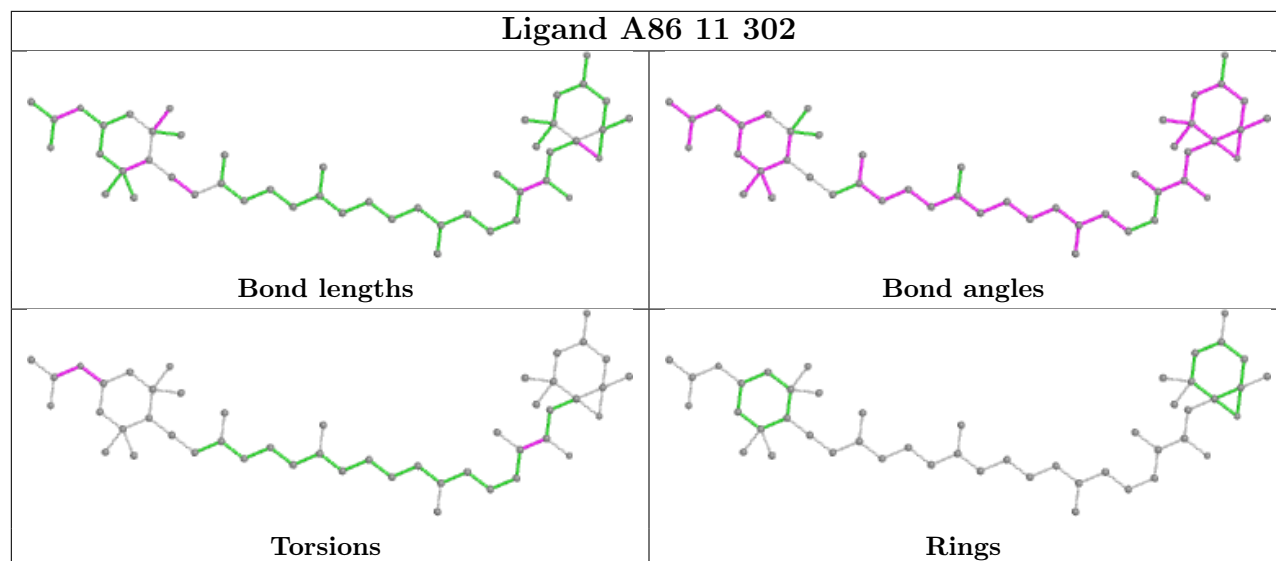


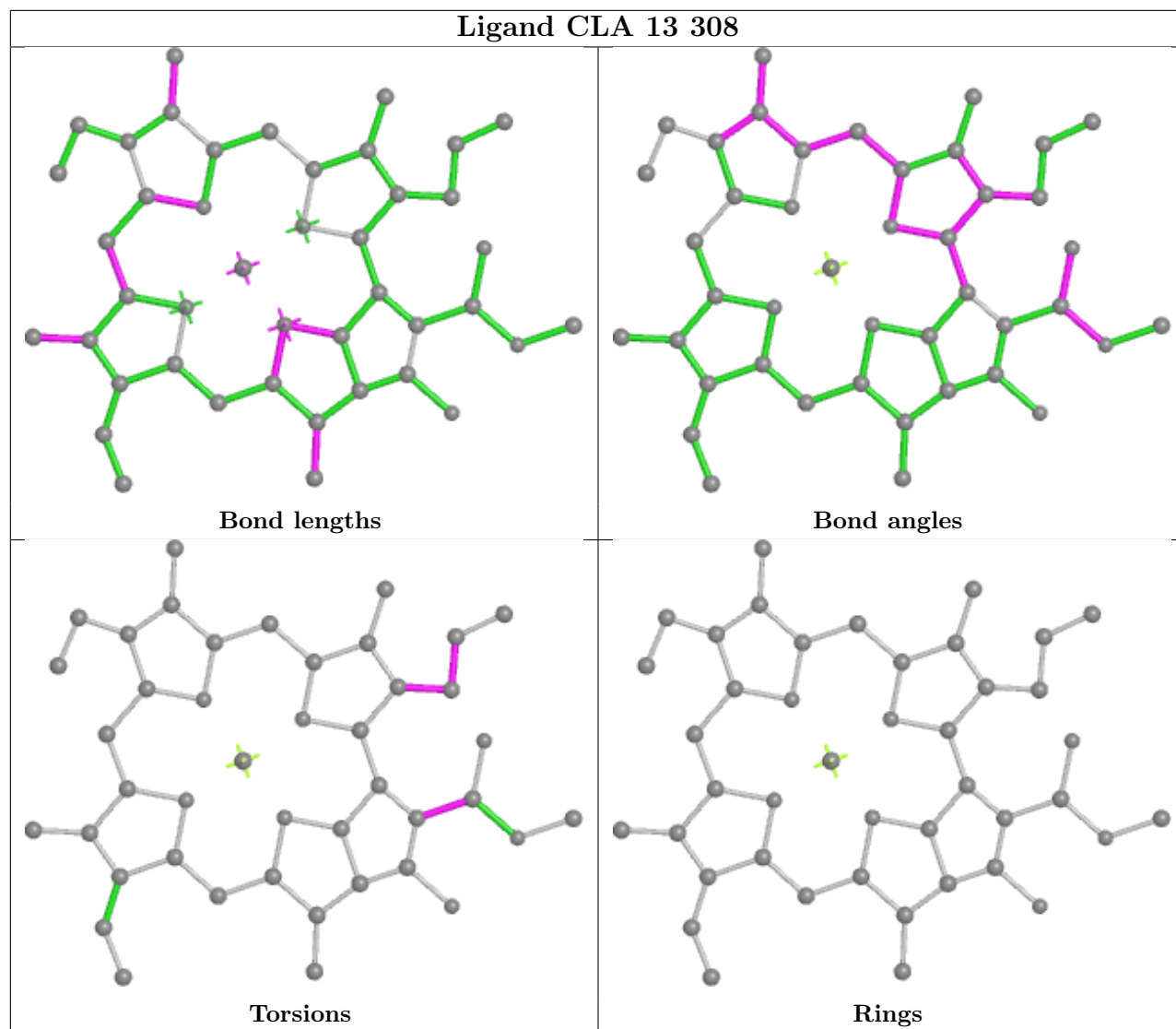


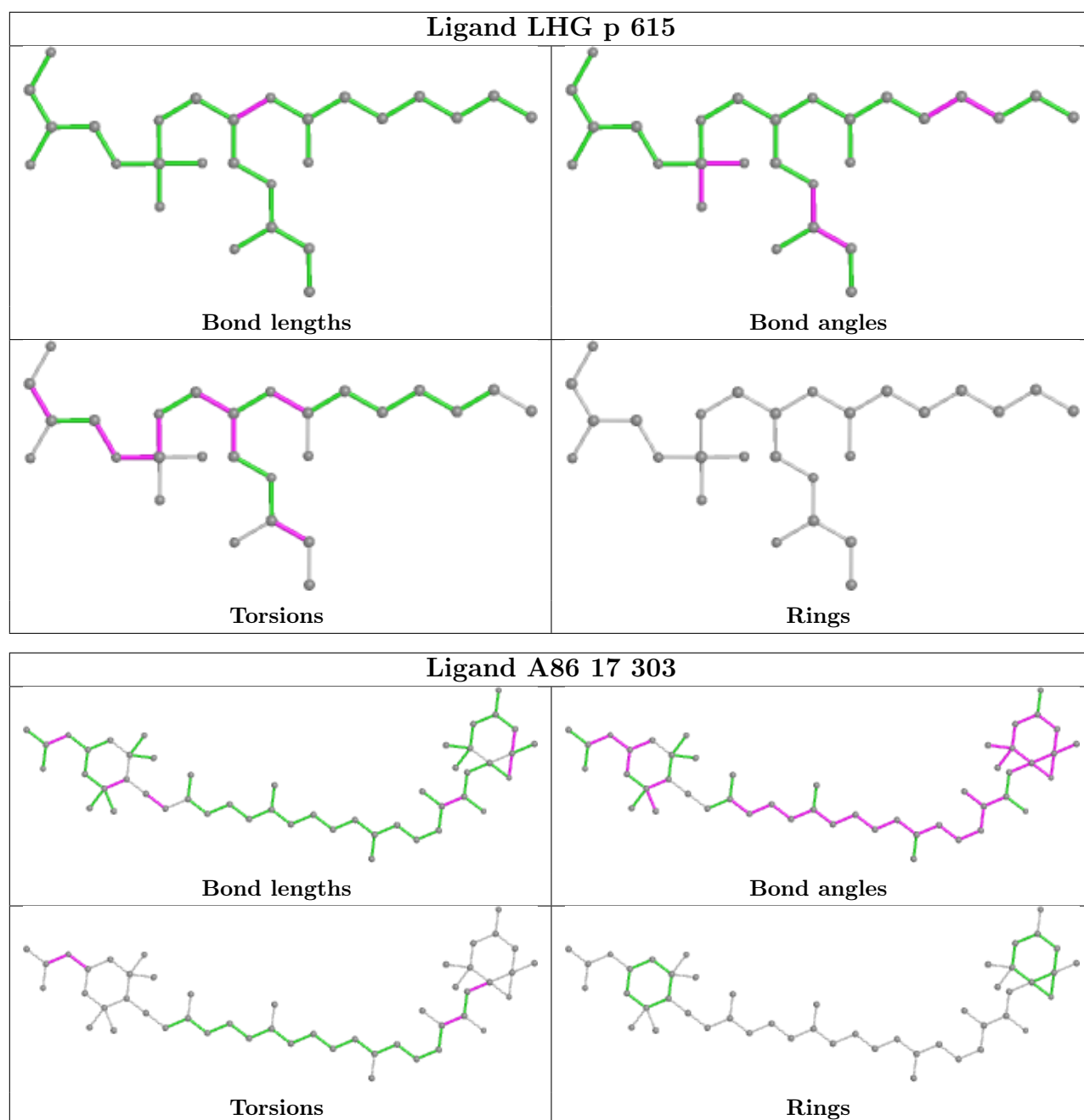


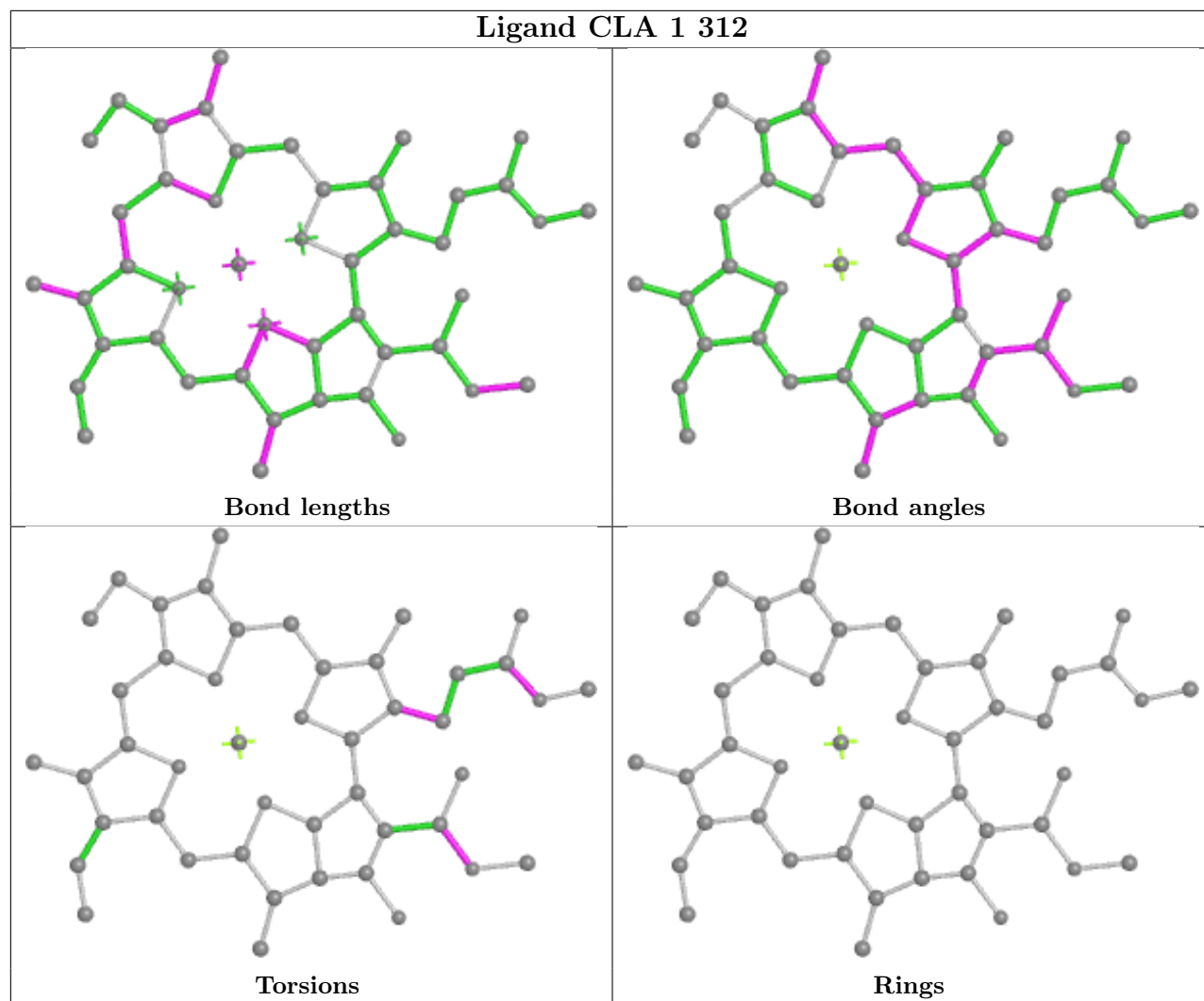


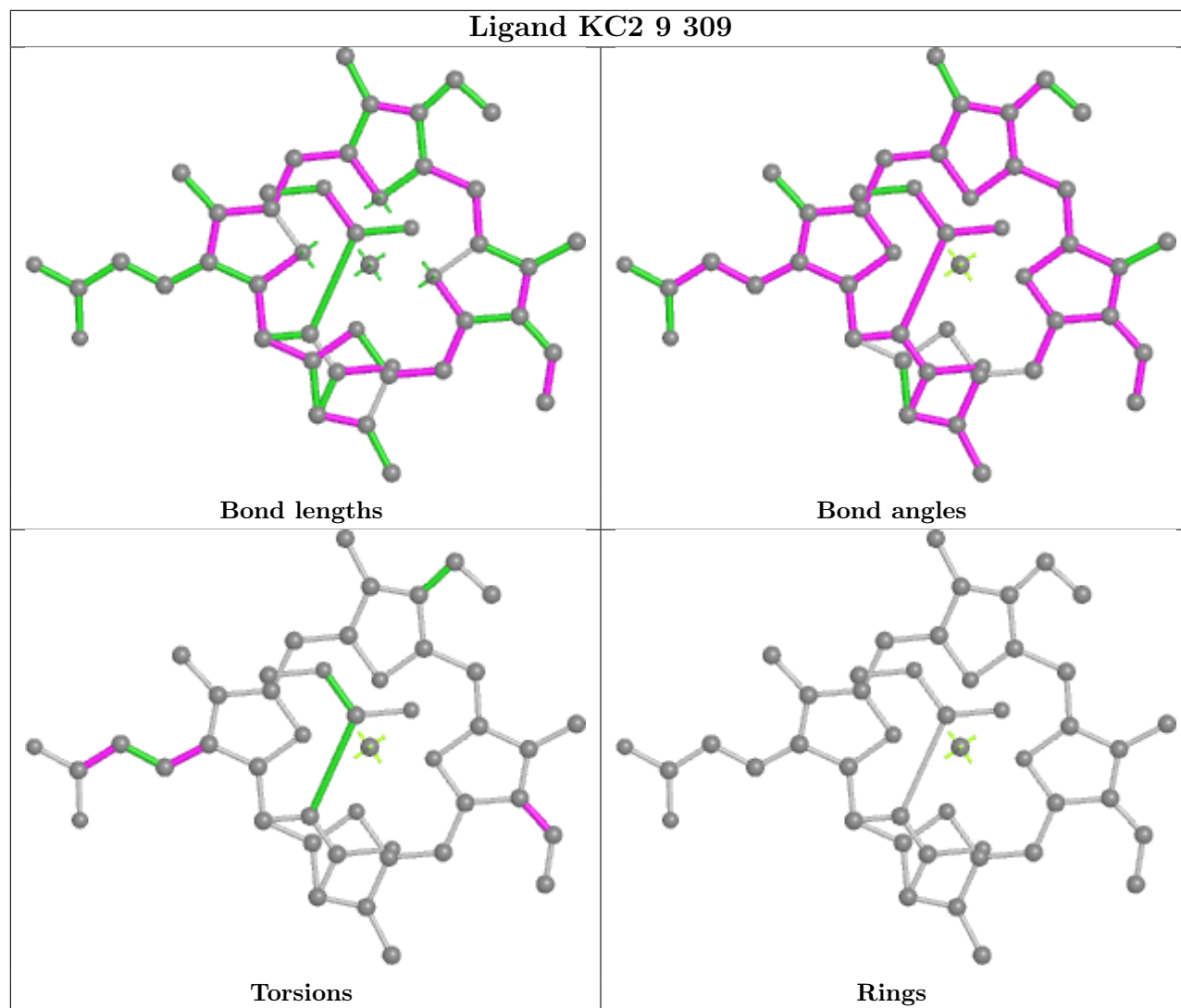


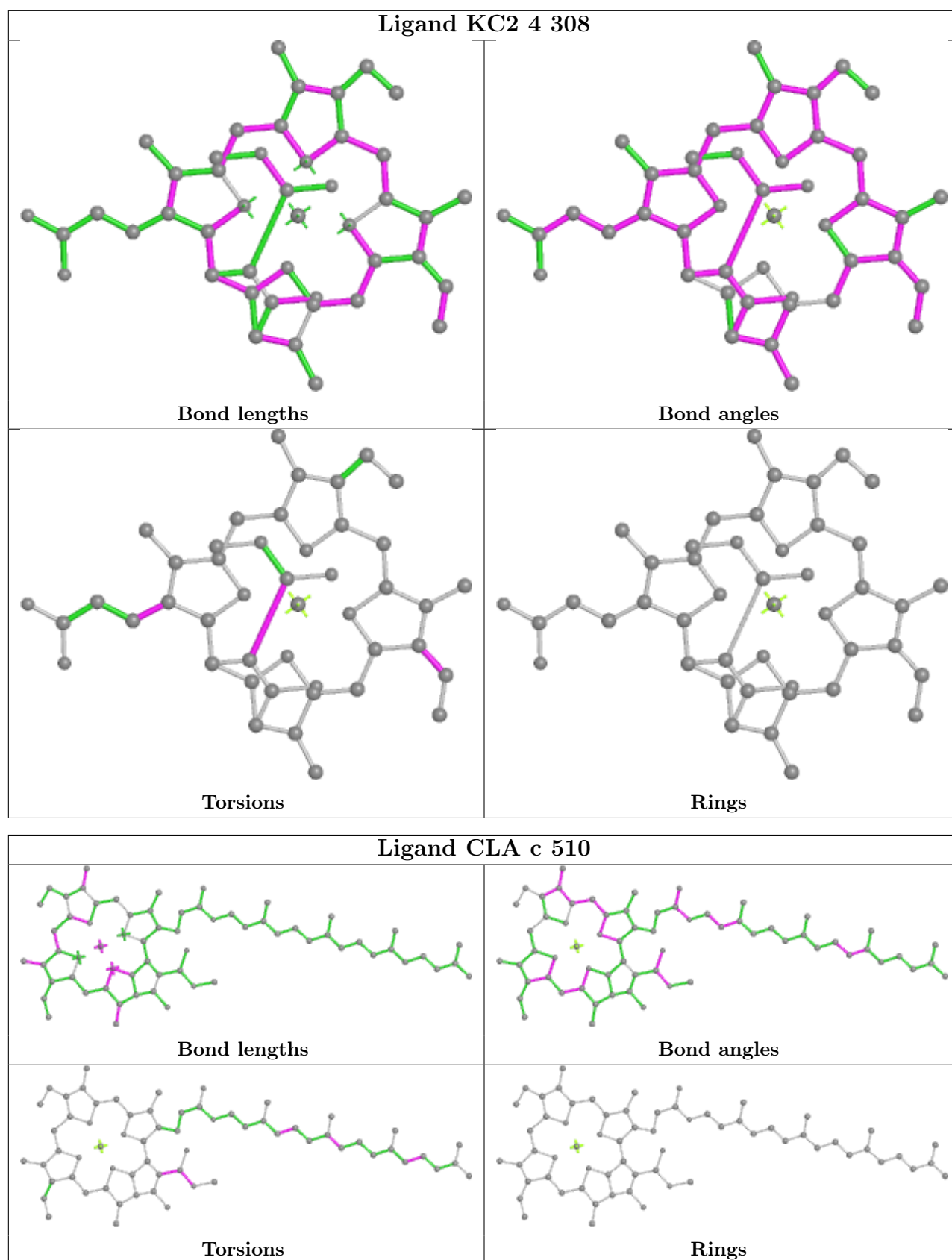


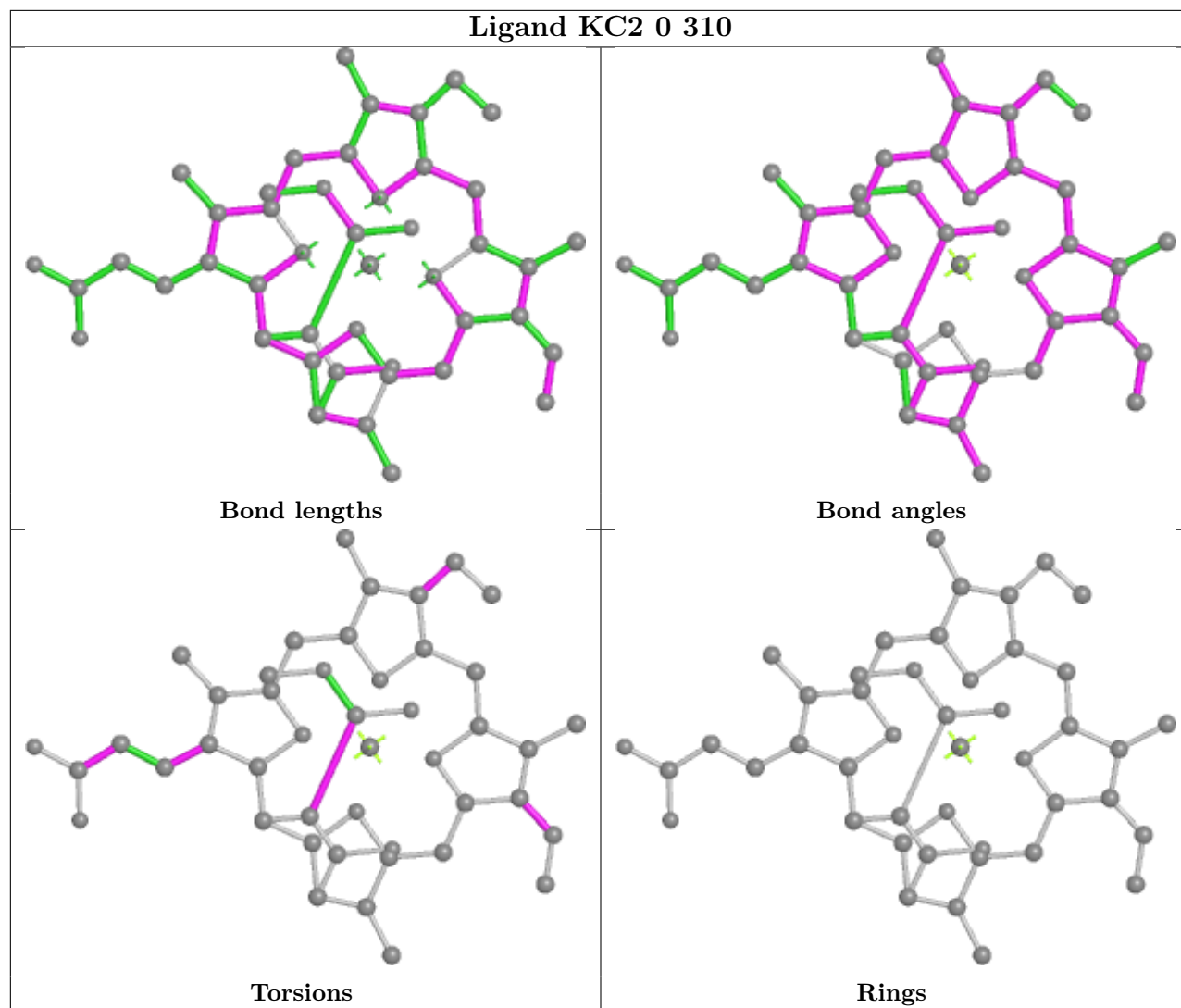


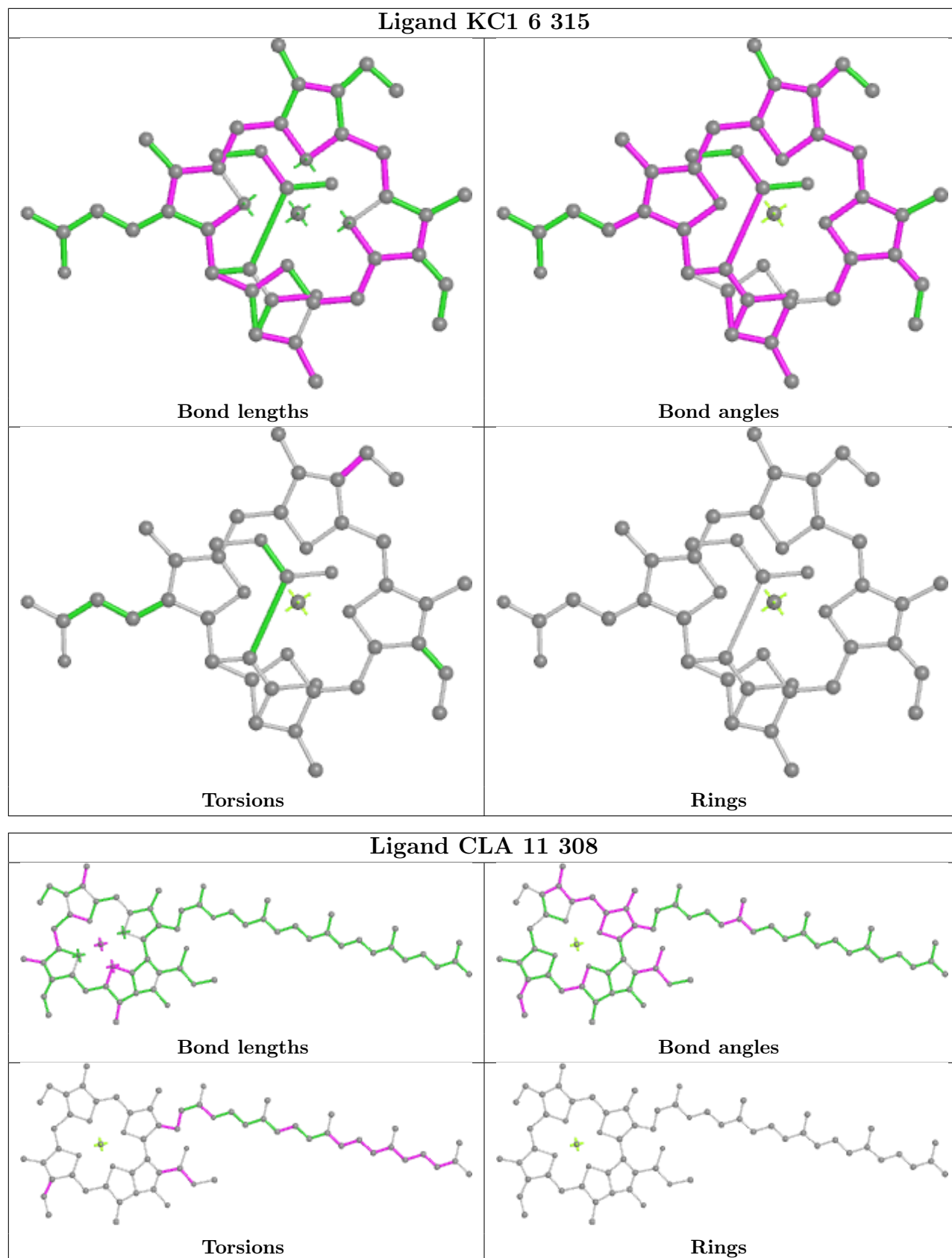


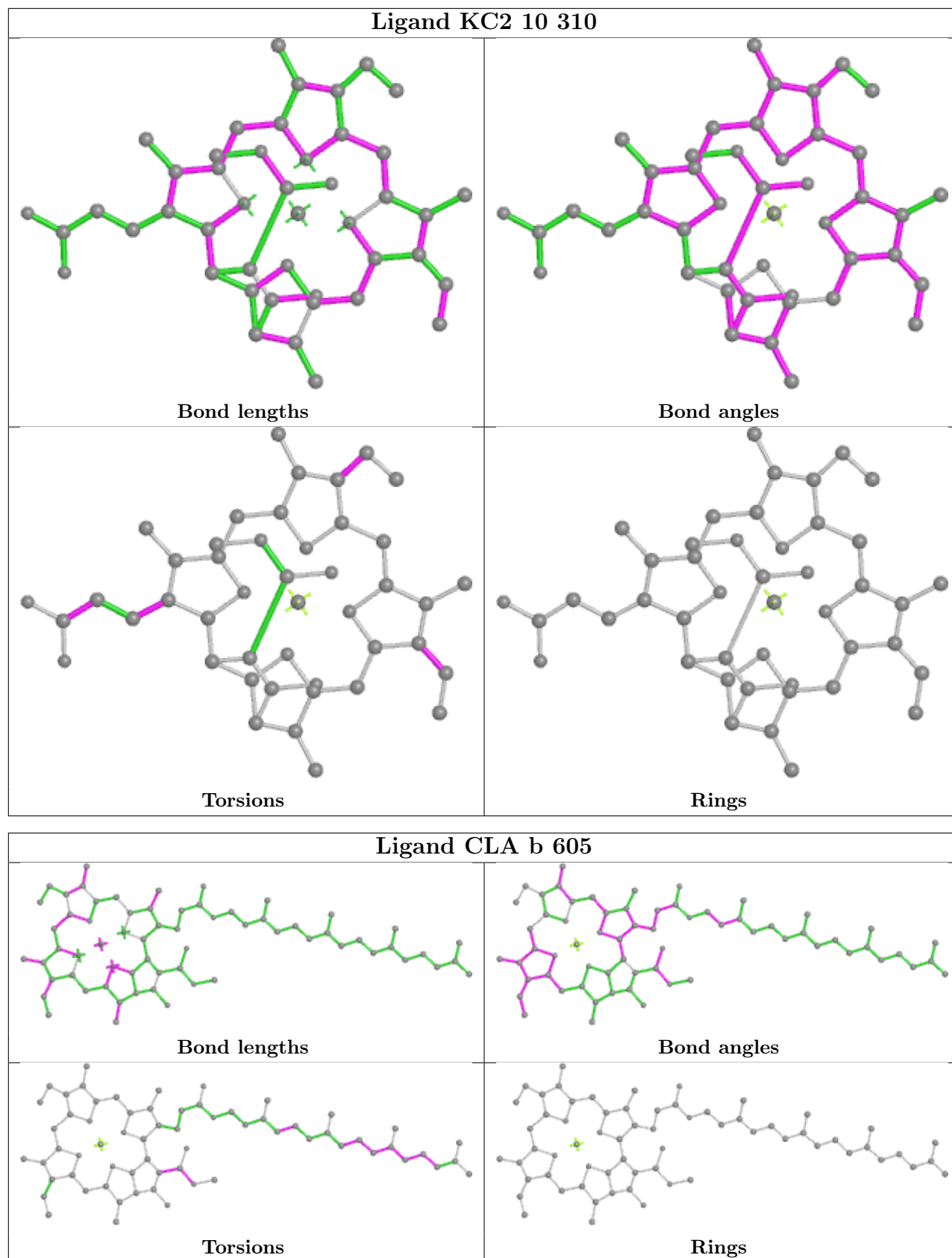




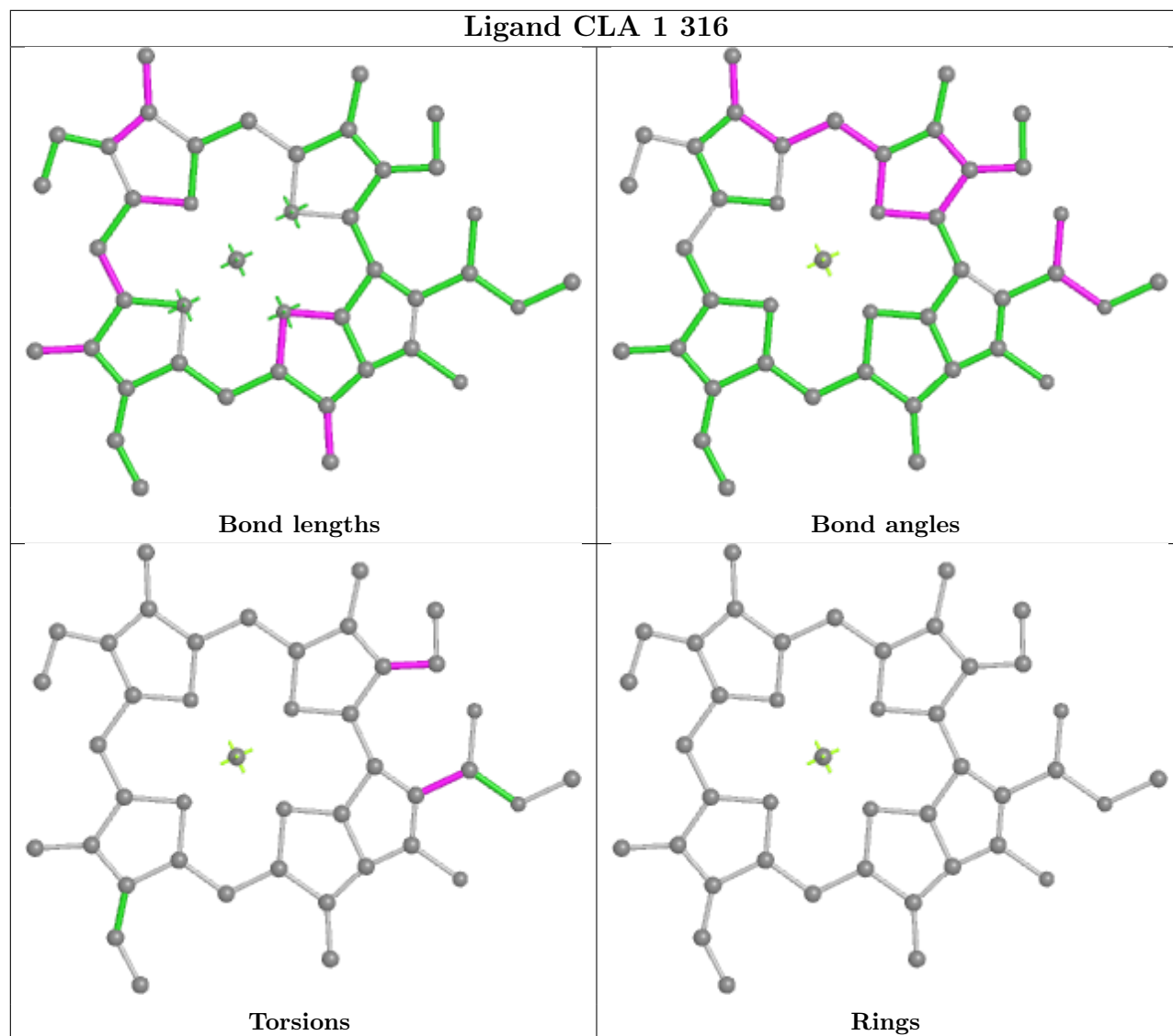


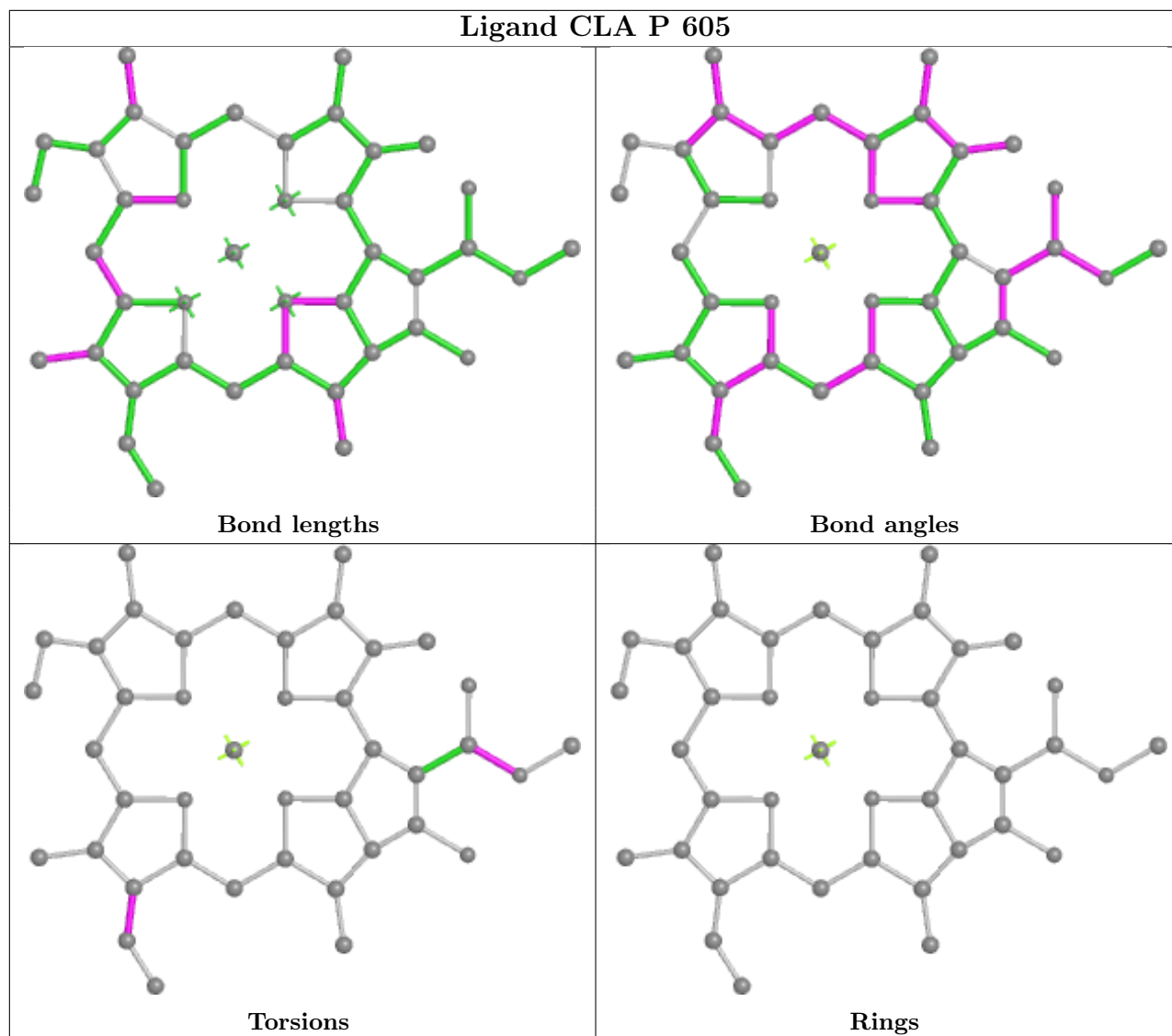


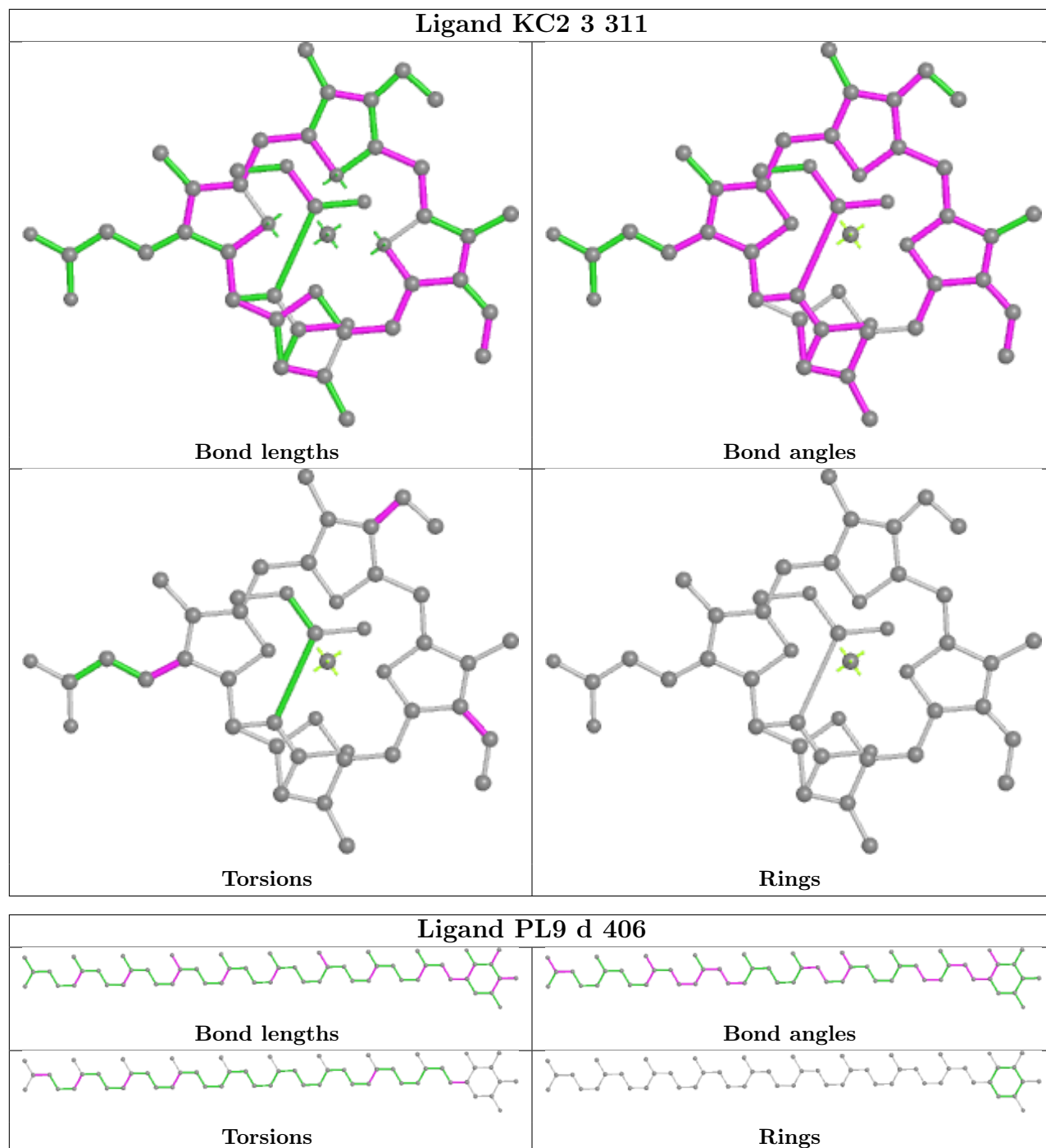




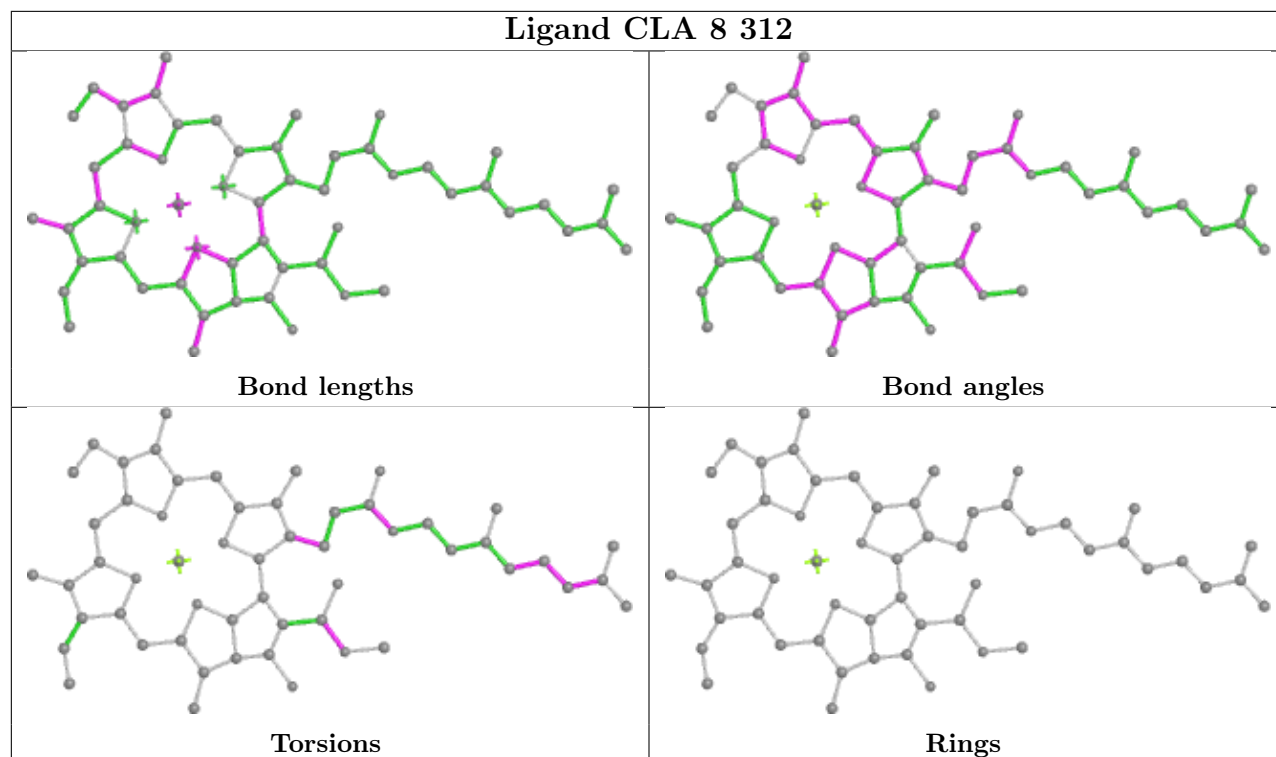
Ligand CLA 1 316



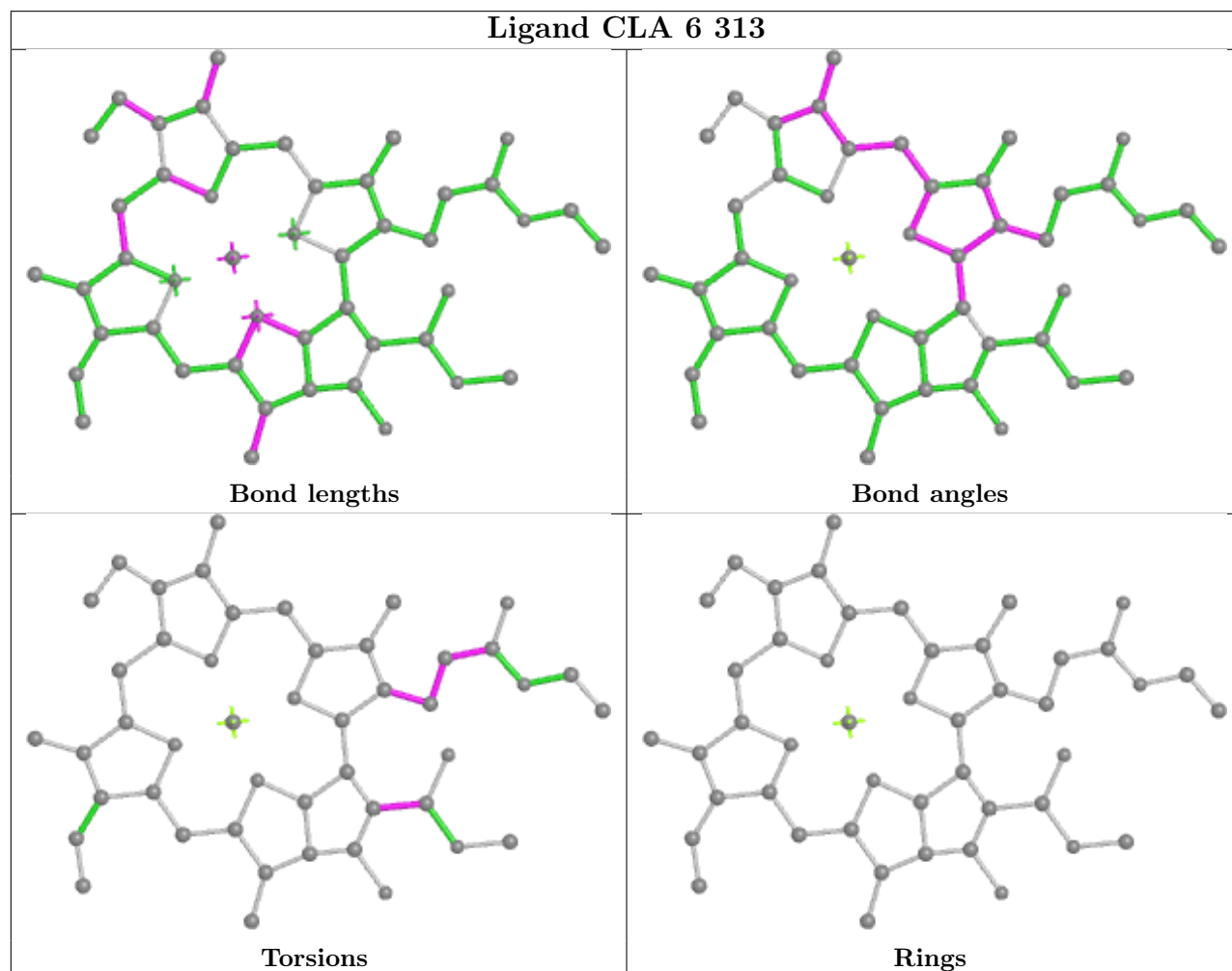


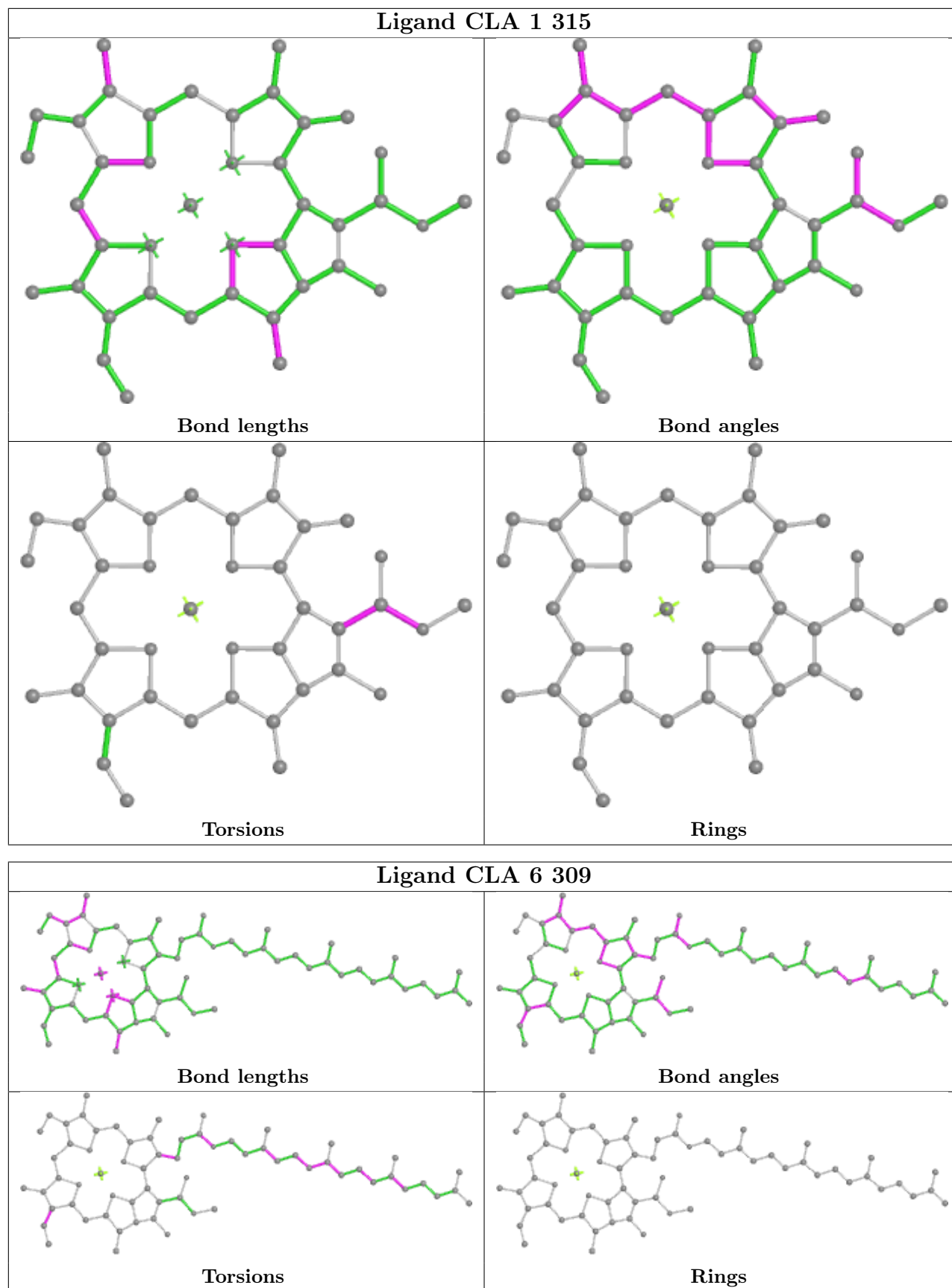


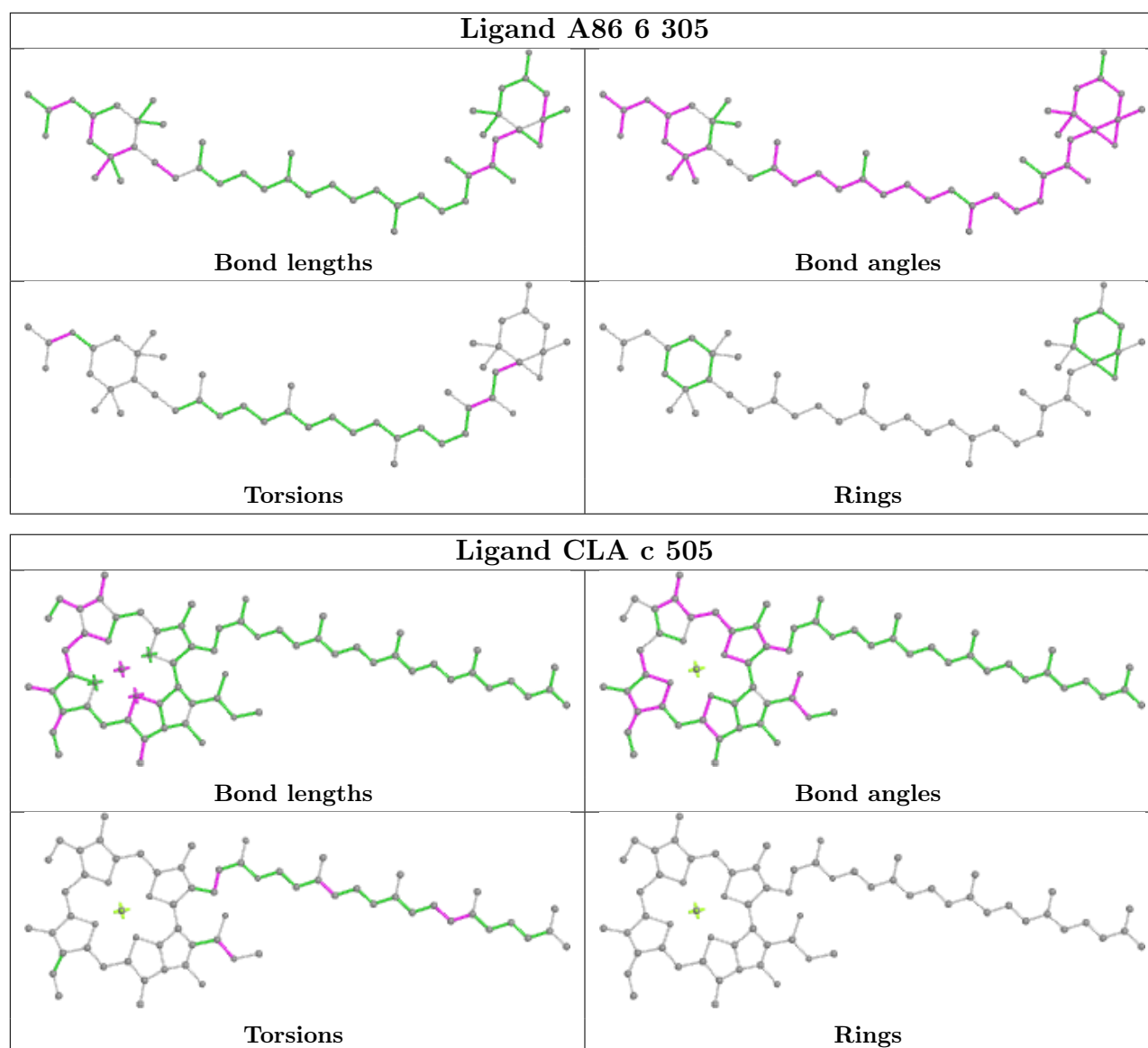
Ligand CLA 8 312



Ligand CLA 6 313







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.

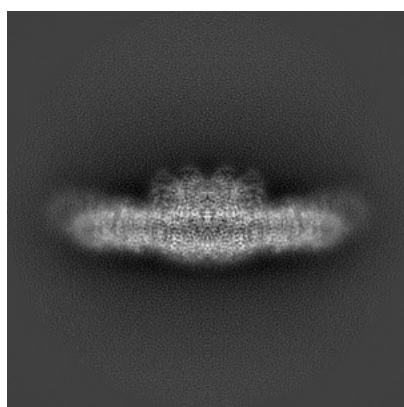
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-9839. These allow visual inspection of the internal detail of the map and identification of artifacts.

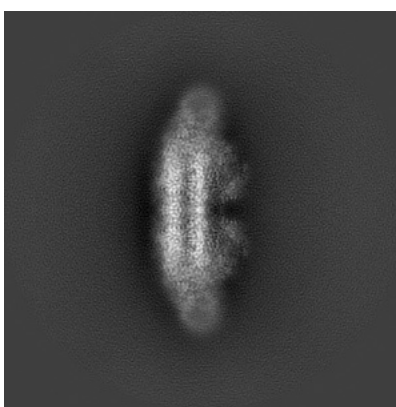
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

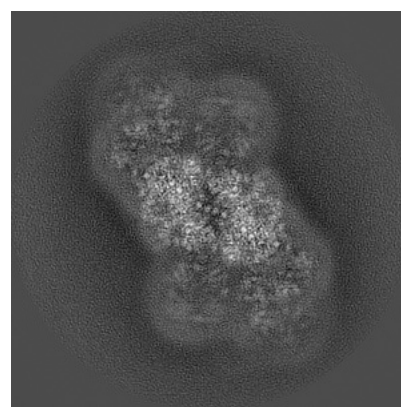
6.1.1 Primary map



X



Y

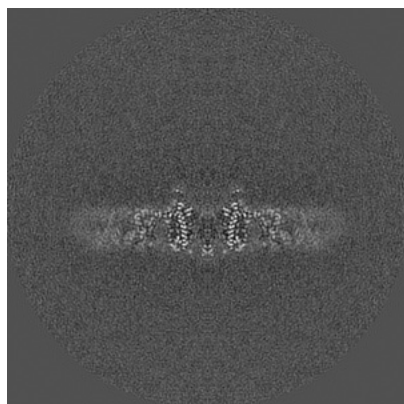


Z

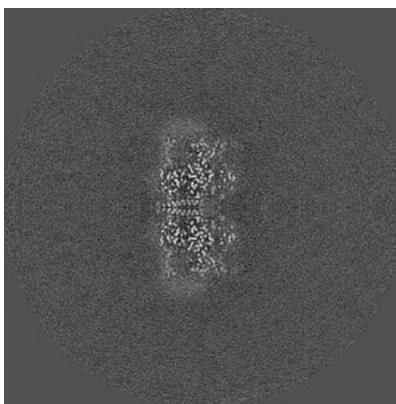
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

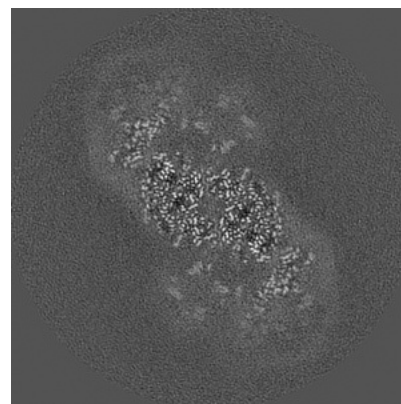
6.2.1 Primary map



X Index: 170



Y Index: 170

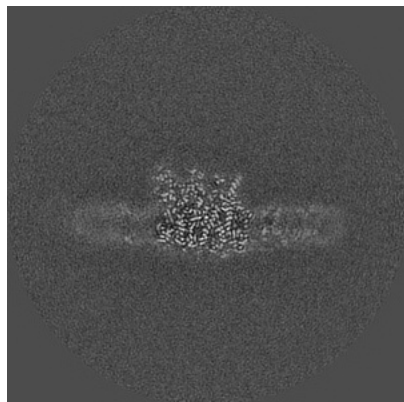


Z Index: 170

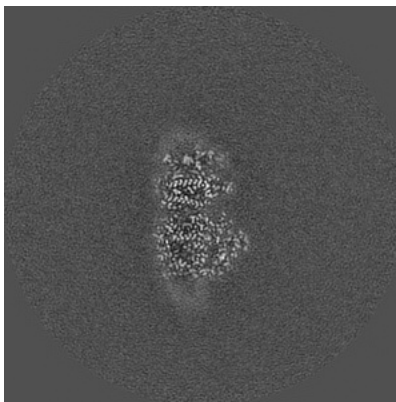
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

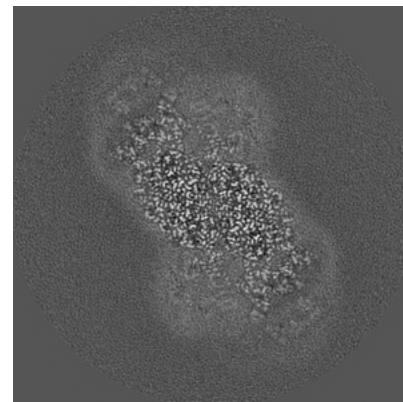
6.3.1 Primary map



X Index: 191



Y Index: 187



Z Index: 165

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

6.4 Orthogonal surface views [i](#)

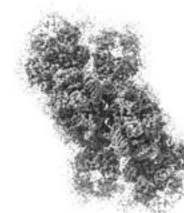
6.4.1 Primary map



X



Y



Z

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

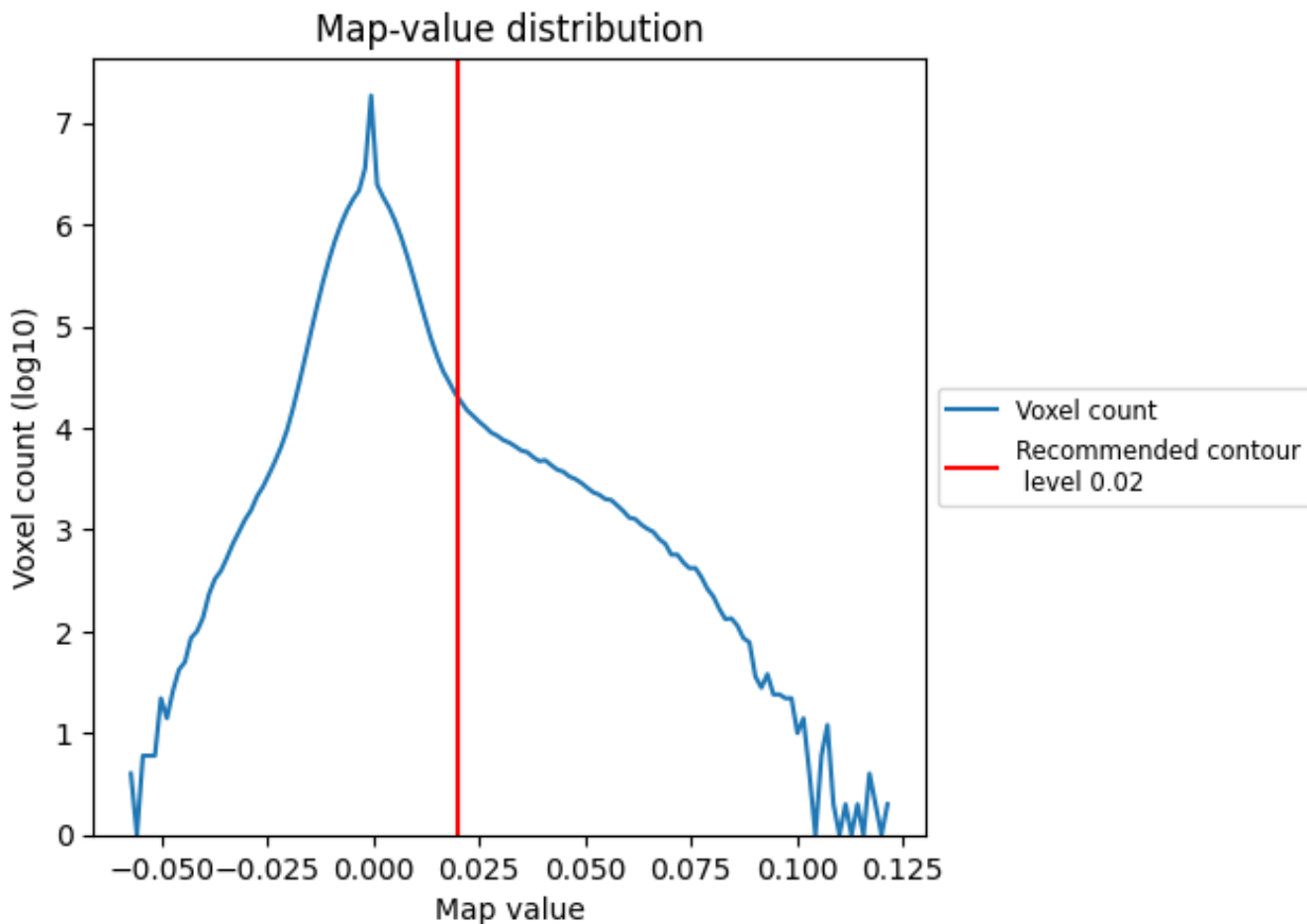
6.5 Mask visualisation

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

7 Map analysis [i](#)

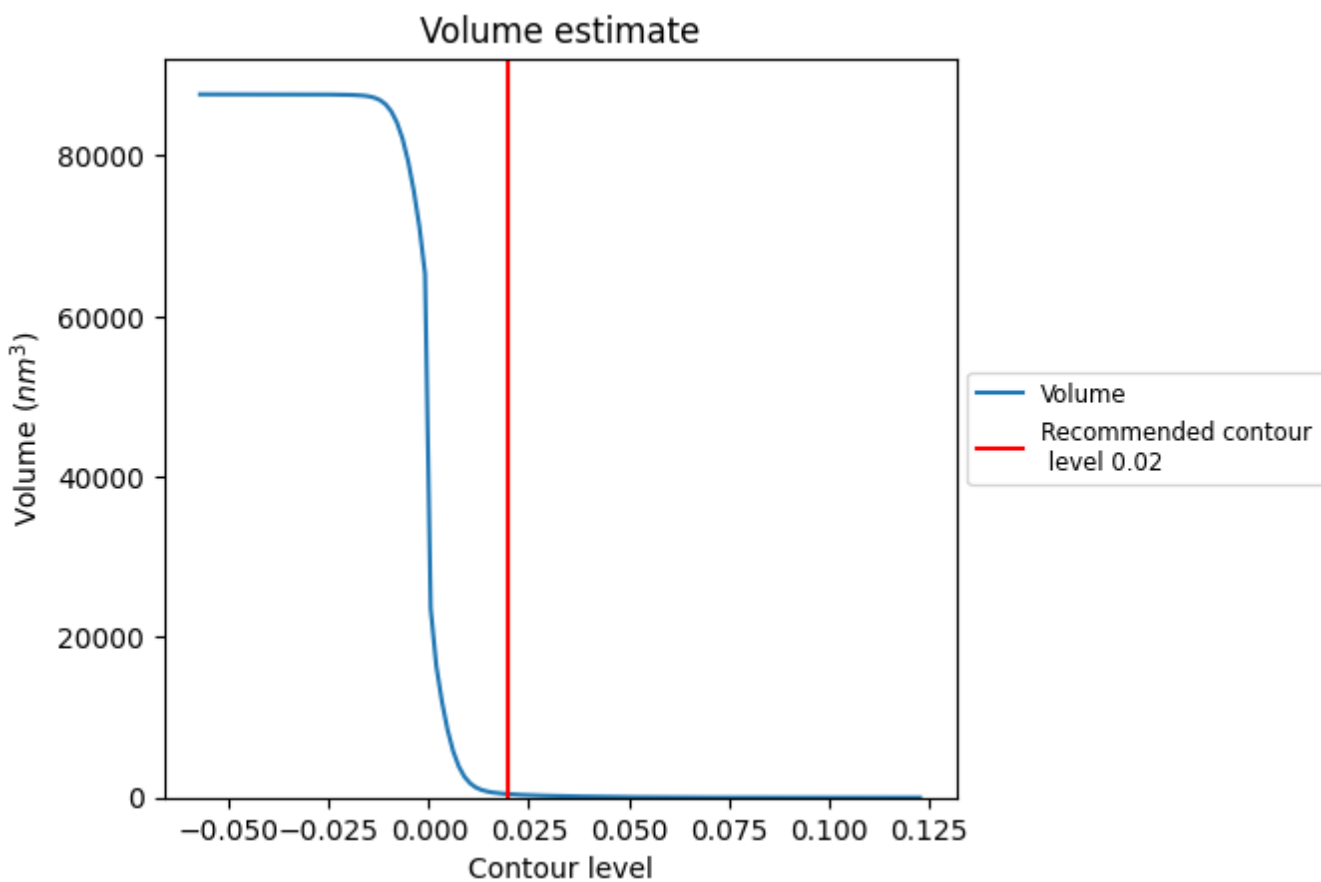
This section contains the results of statistical analysis of the map.

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.

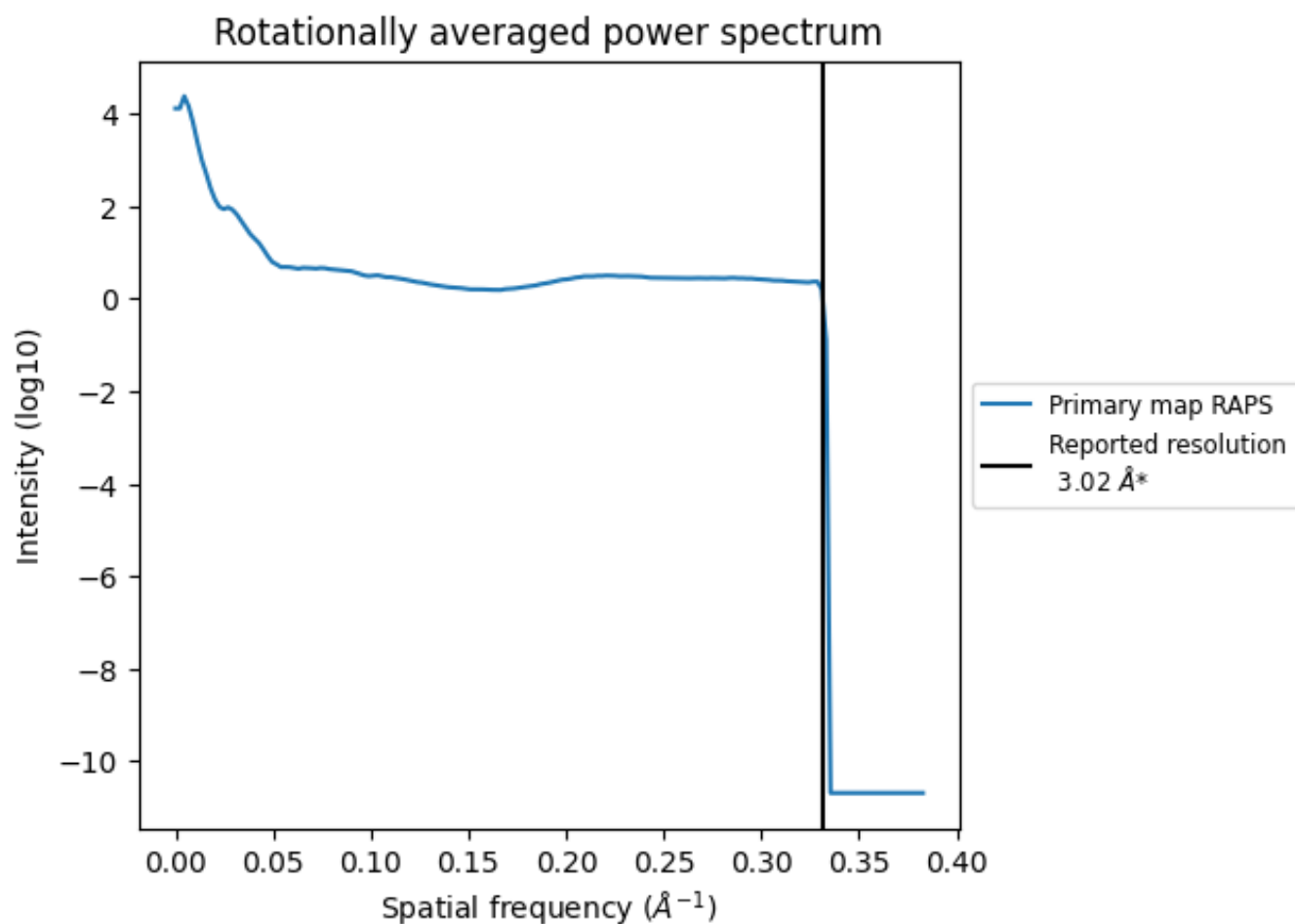
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 428 nm^3 ; this corresponds to an approximate mass of 387 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 0.331 Å⁻¹

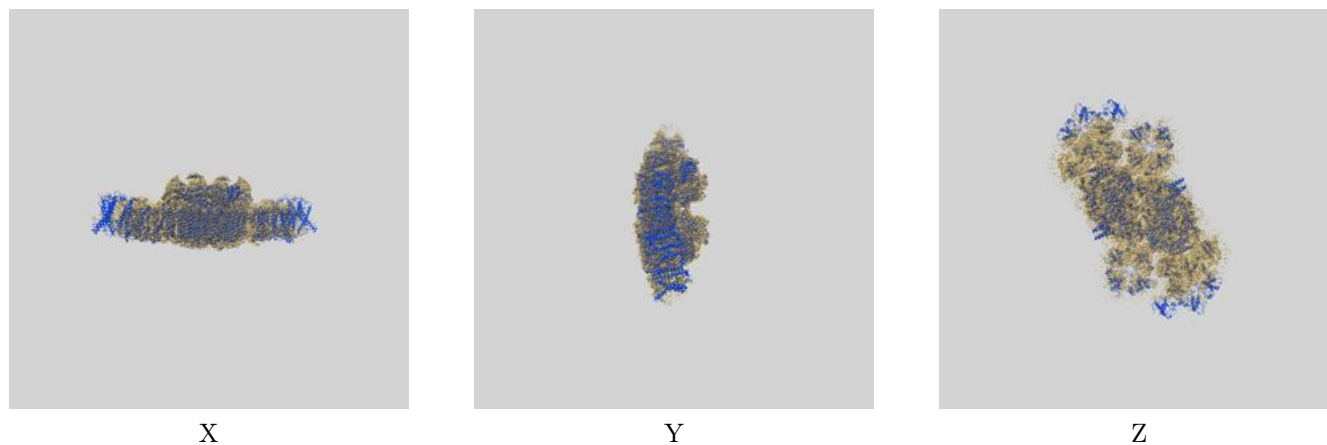
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-9839 and PDB model 6JLU. Per-residue inclusion information can be found in section [3](#) on page [52](#).

9.1 Map-model overlay [i](#)

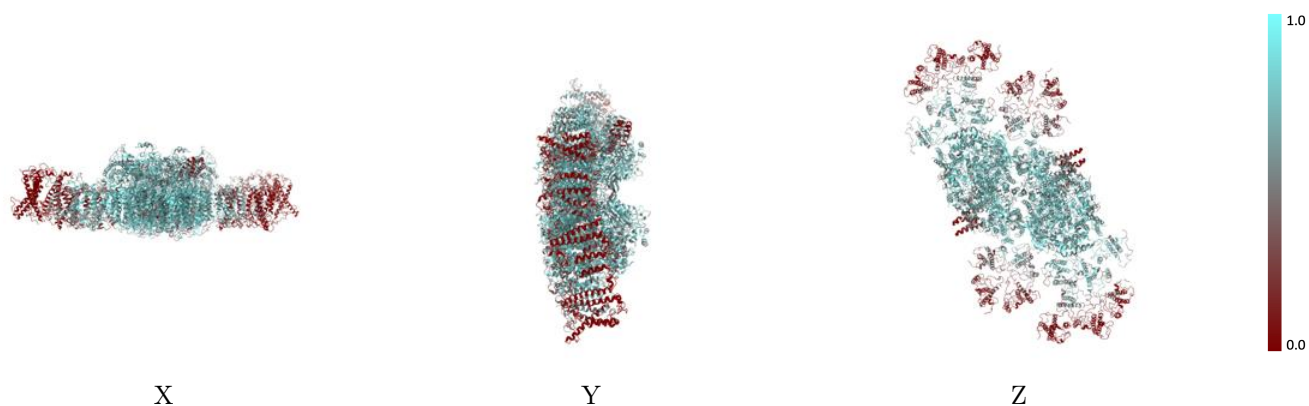


The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

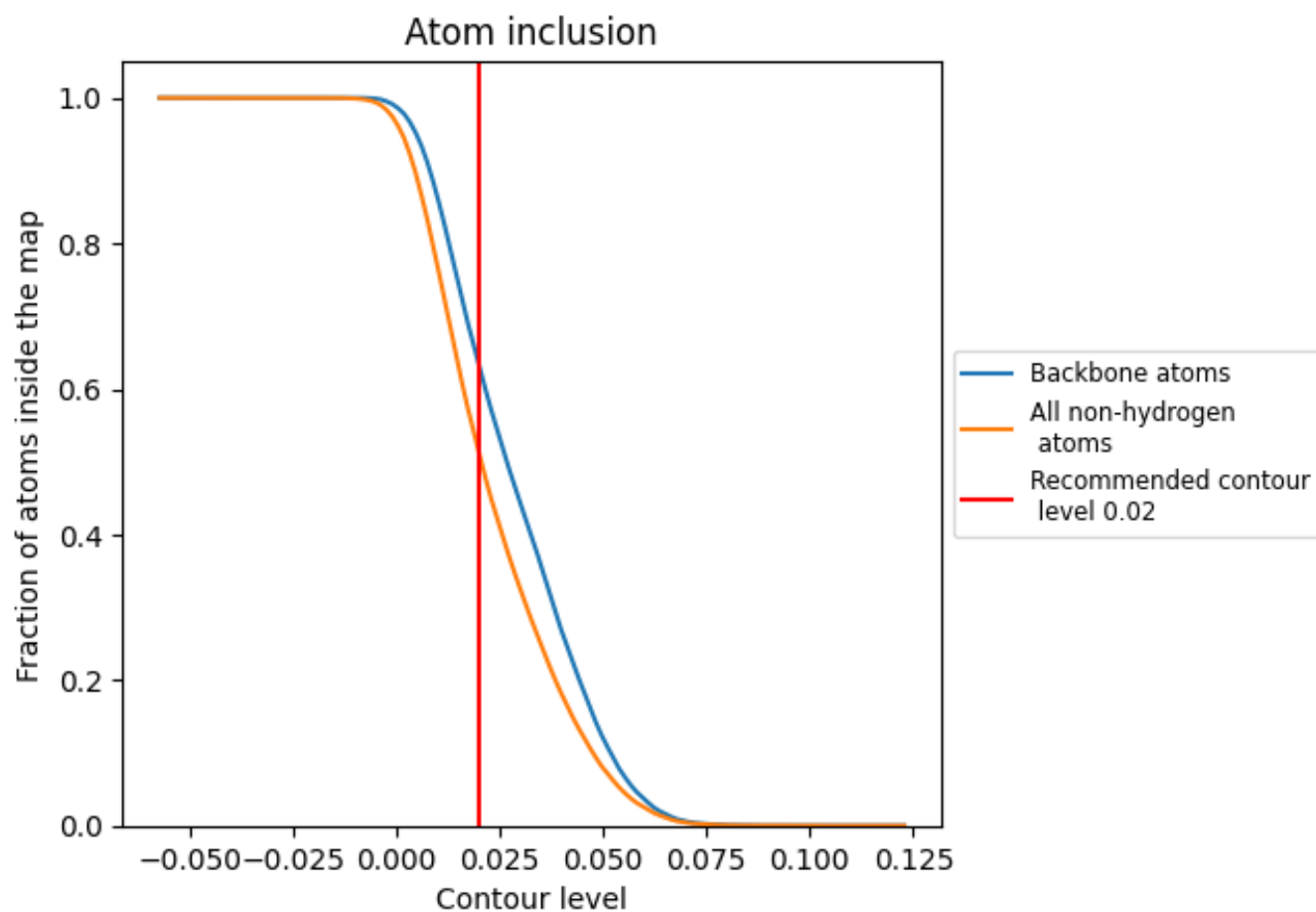
This section was not generated.

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.02).

9.4 Atom inclusion [i](#)



At the recommended contour level, 63% of all backbone atoms, 51% of all non-hydrogen atoms, are inside the map.

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





































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

Chain	Atom inclusion
All	0.5130
0	0.5861
1	0.3471
10	0.5903
11	0.3311
12	0.0900
13	0.0838
14	0.4275
15	0.4054
16	0.0473
17	0.0836
18	0.5776
19	0.0060
2	0.0906
3	0.0878
4	0.4241
5	0.3995
6	0.0355
7	0.0818
8	0.5894
9	0.0050
A	0.7632
B	0.7292
C	0.7558
D	0.7545
E	0.6502
F	0.5794
G	0.2400
H	0.7274
I	0.7473
J	0.5514
K	0.6550
L	0.6266
M	0.5942
N	0.7584



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Chain	Atom inclusion
O	 0.6794
P	 0.6384
Q	 0.6193
R	 0.6275
T	 0.6531
U	 0.6902
V	 0.7304
W	 0.5476
X	 0.4669
Y	 0.5190
Z	 0.6112
a	 0.7698
b	 0.7286
c	 0.7564
d	 0.7561
e	 0.6532
f	 0.5794
g	 0.2389
h	 0.7291
i	 0.6741
j	 0.5822
k	 0.6550
l	 0.6366
m	 0.5942
n	 0.7809
o	 0.6821
p	 0.6376
q	 0.6229
r	 0.6299
t	 0.6612
u	 0.6945
v	 0.7352
w	 0.5290
x	 0.4835
y	 0.5225
z	 0.6343