



wwPDB EM Validation Summary Report ⓘ

Nov 18, 2024 – 01:44 PM JST

PDB ID : 8Z9D
EMDB ID : EMD-39860
Title : cryo-EM structure of PSII-LHCII megacomplex from spinach
Authors : Shan, J.Y.; Liu, Z.F.
Deposited on : 2024-04-23
Resolution : 3.22 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 : **FAILED**
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : **FAILED**
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

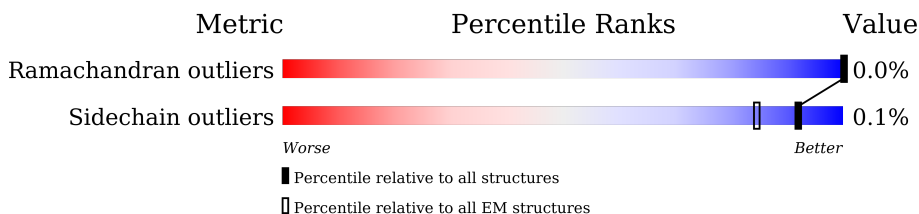
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.22 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	207382	16835
Sidechain outliers	206894	16415

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 $\leq 5\%$.

Mol	Chain	Length	Quality of chain
1	A	351	
1	AA	351	
1	Aa	351	
1	a	351	
2	O	332	
2	OO	332	
2	Oo	332	
2	o	332	
3	R	286	
3	RR	286	

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Mol	Chain	Length	Quality of chain	
3	Rr	286	80%	20%
3	r	286	80%	20%
4	S	295	75%	25%
4	SS	295	75%	25%
4	Ss	295	72%	28%
4	s	295	72%	28%
5	T	33	91%	9%
5	TT	33	91%	9%
5	Tt	33	91%	9%
5	t	33	91%	9%
6	U	99	27%	73%
6	UU	99	27%	73%
6	Uu	99	26%	74%
6	u	99	26%	74%
7	W	137	39%	61%
7	WW	137	39%	61%
7	Ww	137	39%	61%
7	w	137	39%	61%
8	X	117	39%	61%
8	XX	117	41%	59%
8	Xx	117	29%	71%
8	x	117	29%	71%
9	G	267	80%	19%
9	GG	267	81%	19%
9	Gg	267	81%	19%

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Mol	Chain	Length	Quality of chain	
9	N	267	81%	19%
9	NN	267	82%	18%
9	Nn	267	82%	18%
9	Y	267	82%	18%
9	YY	267	81%	18%
9	Yy	267	82%	18%
9	g	267	81%	19%
9	n	267	81%	18%
9	y	267	82%	18%
10	Z	62	98%	.
10	ZZ	62	95%	..
10	Zz	62	97%	..
10	z	62	97%	..
11	4	259	71%	28%
11	44	259	71%	28%
12	P	267	69%	30%
12	PP	267	70%	30%
12	Pp	267	70%	30%
12	p	267	70%	30%
13	Q	232	63%	37%
13	QQ	232	63%	37%
13	Qq	232	63%	37%
13	q	232	63%	37%
14	1	267	77%	22%
14	11	267	76%	23%




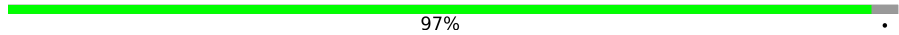
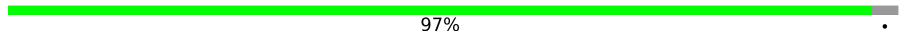
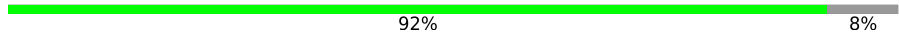
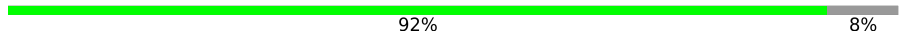
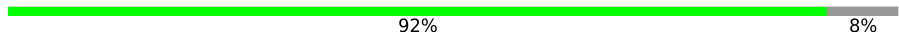









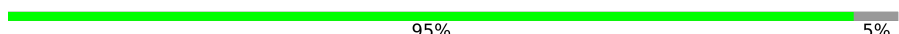
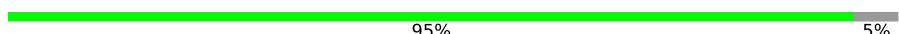
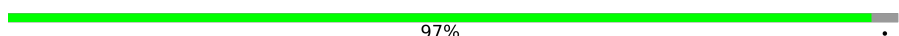
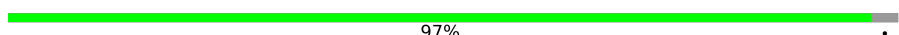
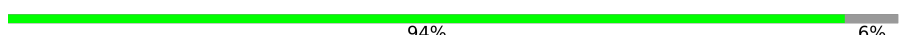
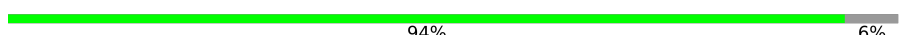
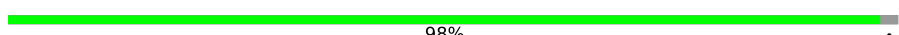
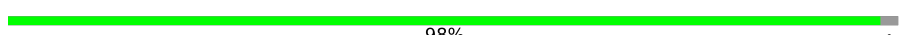
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Mol	Chain	Length	Quality of chain	
14	2	267	82%	18%
14	22	267	82%	18%
15	3	264	79%	21%
15	33	264	78%	22%
16	0	140	71%	29%
16	00	140	71%	29%
17	5	199	20%	80%
17	55	199	20%	80%
18	C	473	95%	5%
18	CC	473	95%	5%
18	Cc	473	95%	5%
18	c	473	95%	5%
19	D	352	96%	.
19	DD	352	96%	.
19	Dd	352	97%	.
19	d	352	97%	.
20	E	83	96%	.
20	EE	83	96%	.
20	Ee	83	90%	10%
20	e	83	90%	10%
21	F	39	87%	13%
21	FF	39	87%	13%
21	Ff	39	79%	21%
21	f	39	79%	21%
22	H	73	81%	19%

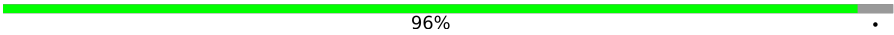
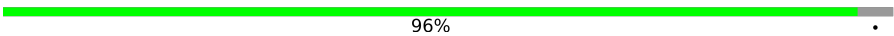
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Mol	Chain	Length	Quality of chain
22	HH	73	 81% 19%
22	Hh	73	 81% 19%
22	h	73	 81% 19%
23	I	36	 97% .
23	II	36	 97% .
23	Ii	36	 92% 8%
23	i	36	 92% 8%
24	J	40	 92% 8%
24	JJ	40	 92% 8%
24	Jj	40	 85% 15%
24	j	40	 85% 15%
25	K	59	 63% 37%
25	KK	59	 63% 37%
25	Kk	59	 63% 37%
25	k	59	 63% 37%
26	L	38	 92% 8%
26	LL	38	 92% 8%
26	Ll	38	 95% 5%
26	l	38	 95% 5%
27	M	34	 97% .
27	MM	34	 97% .
27	Mm	34	 94% 6%
27	m	34	 94% 6%
28	B	508	 98% .
28	BB	508	 98% .

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Mol	Chain	Length	Quality of chain
28	Bb	508	 96%
28	b	508	 96%

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
32	CLA	1	602	X	-	-	-
32	CLA	1	603	X	-	-	-
32	CLA	1	604	X	-	-	-
32	CLA	1	609	X	-	-	-
32	CLA	1	610	X	-	-	-
32	CLA	1	611	X	-	-	-
32	CLA	1	612	X	-	-	-
32	CLA	1	613	X	-	-	-
32	CLA	11	602	X	-	-	-
32	CLA	11	603	X	-	-	-
32	CLA	11	604	X	-	-	-
32	CLA	11	609	X	-	-	-
32	CLA	11	610	X	-	-	-
32	CLA	11	611	X	-	-	-
32	CLA	11	612	X	-	-	-
32	CLA	11	613	X	-	-	-
32	CLA	2	602	X	-	-	-
32	CLA	2	603	X	-	-	-
32	CLA	2	604	X	-	-	-
32	CLA	2	609	X	-	-	-
32	CLA	2	610	X	-	-	-
32	CLA	2	611	X	-	-	-
32	CLA	2	612	X	-	-	-
32	CLA	2	613	X	-	-	-
32	CLA	22	602	X	-	-	-
32	CLA	22	603	X	-	-	-
32	CLA	22	604	X	-	-	-
32	CLA	22	609	X	-	-	-
32	CLA	22	610	X	-	-	-
32	CLA	22	611	X	-	-	-
32	CLA	22	612	X	-	-	-
32	CLA	22	613	X	-	-	-
32	CLA	3	602	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	CLA	3	603	X	-	-	-
32	CLA	3	604	X	-	-	-
32	CLA	3	609	X	-	-	-
32	CLA	3	610	X	-	-	-
32	CLA	3	611	X	-	-	-
32	CLA	3	612	X	-	-	-
32	CLA	3	613	X	-	-	-
32	CLA	33	602	X	-	-	-
32	CLA	33	603	X	-	-	-
32	CLA	33	604	X	-	-	-
32	CLA	33	609	X	-	-	-
32	CLA	33	610	X	-	-	-
32	CLA	33	611	X	-	-	-
32	CLA	33	612	X	-	-	-
32	CLA	33	613	X	-	-	-
32	CLA	4	303	X	-	-	-
32	CLA	4	304	X	-	-	-
32	CLA	4	305	X	-	-	-
32	CLA	4	310	X	-	-	-
32	CLA	4	311	X	-	-	-
32	CLA	4	312	X	-	-	-
32	CLA	44	602	X	-	-	-
32	CLA	44	603	X	-	-	-
32	CLA	44	604	X	-	-	-
32	CLA	44	609	X	-	-	-
32	CLA	44	610	X	-	-	-
32	CLA	44	611	X	-	-	-
32	CLA	44	615	X	-	-	-
32	CLA	A	405	X	-	-	-
32	CLA	A	406	X	-	-	-
32	CLA	A	408	X	-	-	-
32	CLA	AA	405	X	-	-	-
32	CLA	AA	406	X	-	-	-
32	CLA	AA	408	X	-	-	-
32	CLA	Aa	405	X	-	-	-
32	CLA	Aa	406	X	-	-	-
32	CLA	Aa	407	X	-	-	-
32	CLA	Aa	410	X	-	-	-
32	CLA	B	604	X	-	-	-
32	CLA	B	606	X	-	-	-
32	CLA	B	607	X	-	-	-
32	CLA	B	608	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	CLA	B	609	X	-	-	-
32	CLA	B	610	X	-	-	-
32	CLA	B	611	X	-	-	-
32	CLA	B	618	X	-	-	-
32	CLA	B	619	X	-	-	-
32	CLA	B	620	X	-	-	-
32	CLA	B	621	X	-	-	-
32	CLA	B	622	X	-	-	-
32	CLA	B	623	X	-	-	-
32	CLA	B	624	X	-	-	-
32	CLA	BB	601	X	-	-	-
32	CLA	BB	602	X	-	-	-
32	CLA	BB	603	X	-	-	-
32	CLA	BB	604	X	-	-	-
32	CLA	BB	605	X	-	-	-
32	CLA	BB	606	X	-	-	-
32	CLA	BB	607	X	-	-	-
32	CLA	BB	608	X	-	-	-
32	CLA	BB	610	X	-	-	-
32	CLA	BB	611	X	-	-	-
32	CLA	BB	612	X	-	-	-
32	CLA	BB	613	X	-	-	-
32	CLA	BB	614	X	-	-	-
32	CLA	BB	615	X	-	-	-
32	CLA	Bb	601	X	-	-	-
32	CLA	Bb	602	X	-	-	-
32	CLA	Bb	603	X	-	-	-
32	CLA	Bb	604	X	-	-	-
32	CLA	Bb	605	X	-	-	-
32	CLA	Bb	606	X	-	-	-
32	CLA	Bb	607	X	-	-	-
32	CLA	Bb	608	X	-	-	-
32	CLA	Bb	609	X	-	-	-
32	CLA	Bb	610	X	-	-	-
32	CLA	Bb	611	X	-	-	-
32	CLA	Bb	612	X	-	-	-
32	CLA	Bb	613	X	-	-	-
32	CLA	Bb	614	X	-	-	-
32	CLA	Bb	615	X	-	-	-
32	CLA	Bb	616	X	-	-	-
32	CLA	C	503	X	-	-	-
32	CLA	C	505	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	CLA	C	506	X	-	-	-
32	CLA	C	507	X	-	-	-
32	CLA	C	508	X	-	-	-
32	CLA	C	509	X	-	-	-
32	CLA	C	510	X	-	-	-
32	CLA	C	511	X	-	-	-
32	CLA	C	512	X	-	-	-
32	CLA	C	513	X	-	-	-
32	CLA	C	514	X	-	-	-
32	CLA	C	515	X	-	-	-
32	CLA	CC	502	X	-	-	-
32	CLA	CC	504	X	-	-	-
32	CLA	CC	505	X	-	-	-
32	CLA	CC	506	X	-	-	-
32	CLA	CC	507	X	-	-	-
32	CLA	CC	508	X	-	-	-
32	CLA	CC	509	X	-	-	-
32	CLA	CC	510	X	-	-	-
32	CLA	CC	511	X	-	-	-
32	CLA	CC	512	X	-	-	-
32	CLA	CC	513	X	-	-	-
32	CLA	CC	514	X	-	-	-
32	CLA	Cc	503	X	-	-	-
32	CLA	Cc	505	X	-	-	-
32	CLA	Cc	506	X	-	-	-
32	CLA	Cc	507	X	-	-	-
32	CLA	Cc	508	X	-	-	-
32	CLA	Cc	509	X	-	-	-
32	CLA	Cc	510	X	-	-	-
32	CLA	Cc	511	X	-	-	-
32	CLA	Cc	512	X	-	-	-
32	CLA	Cc	513	X	-	-	-
32	CLA	Cc	514	X	-	-	-
32	CLA	Cc	515	X	-	-	-
32	CLA	D	401	X	-	-	-
32	CLA	D	404	X	-	-	-
32	CLA	D	405	X	-	-	-
32	CLA	DD	401	X	-	-	-
32	CLA	DD	403	X	-	-	-
32	CLA	DD	404	X	-	-	-
32	CLA	Dd	402	X	-	-	-
32	CLA	G	602	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	CLA	G	603	X	-	-	-
32	CLA	G	604	X	-	-	-
32	CLA	G	610	X	-	-	-
32	CLA	G	611	X	-	-	-
32	CLA	G	612	X	-	-	-
32	CLA	G	613	X	-	-	-
32	CLA	G	614	X	-	-	-
32	CLA	GG	602	X	-	-	-
32	CLA	GG	603	X	-	-	-
32	CLA	GG	604	X	-	-	-
32	CLA	GG	610	X	-	-	-
32	CLA	GG	611	X	-	-	-
32	CLA	GG	612	X	-	-	-
32	CLA	GG	613	X	-	-	-
32	CLA	GG	614	X	-	-	-
32	CLA	Gg	304	X	-	-	-
32	CLA	Gg	305	X	-	-	-
32	CLA	Gg	311	X	-	-	-
32	CLA	Gg	312	X	-	-	-
32	CLA	Gg	313	X	-	-	-
32	CLA	Gg	314	X	-	-	-
32	CLA	Gg	315	X	-	-	-
32	CLA	N	602	X	-	-	-
32	CLA	N	603	X	-	-	-
32	CLA	N	604	X	-	-	-
32	CLA	N	610	X	-	-	-
32	CLA	N	611	X	-	-	-
32	CLA	N	612	X	-	-	-
32	CLA	N	613	X	-	-	-
32	CLA	N	614	X	-	-	-
32	CLA	NN	602	X	-	-	-
32	CLA	NN	603	X	-	-	-
32	CLA	NN	604	X	-	-	-
32	CLA	NN	610	X	-	-	-
32	CLA	NN	611	X	-	-	-
32	CLA	NN	612	X	-	-	-
32	CLA	NN	613	X	-	-	-
32	CLA	NN	614	X	-	-	-
32	CLA	Nn	301	X	-	-	-
32	CLA	Nn	302	X	-	-	-
32	CLA	Nn	303	X	-	-	-
32	CLA	Nn	304	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	CLA	Nn	312	X	-	-	-
32	CLA	Nn	313	X	-	-	-
32	CLA	Nn	314	X	-	-	-
32	CLA	R	601	X	-	-	-
32	CLA	R	602	X	-	-	-
32	CLA	R	603	X	-	-	-
32	CLA	R	604	X	-	-	-
32	CLA	R	608	X	-	-	-
32	CLA	R	609	X	-	-	-
32	CLA	R	610	X	-	-	-
32	CLA	R	611	X	-	-	-
32	CLA	R	612	X	-	-	-
32	CLA	R	613	X	-	-	-
32	CLA	RR	302	X	-	-	-
32	CLA	RR	303	X	-	-	-
32	CLA	RR	304	X	-	-	-
32	CLA	RR	308	X	-	-	-
32	CLA	RR	309	X	-	-	-
32	CLA	RR	310	X	-	-	-
32	CLA	RR	311	X	-	-	-
32	CLA	RR	312	X	-	-	-
32	CLA	RR	313	X	-	-	-
32	CLA	Rr	601	X	-	-	-
32	CLA	Rr	602	X	-	-	-
32	CLA	Rr	603	X	-	-	-
32	CLA	Rr	604	X	-	-	-
32	CLA	Rr	608	X	-	-	-
32	CLA	Rr	609	X	-	-	-
32	CLA	Rr	610	X	-	-	-
32	CLA	Rr	611	X	-	-	-
32	CLA	Rr	612	X	-	-	-
32	CLA	Rr	613	X	-	-	-
32	CLA	S	602	X	-	-	-
32	CLA	S	603	X	-	-	-
32	CLA	S	604	X	-	-	-
32	CLA	S	608	X	-	-	-
32	CLA	S	609	X	-	-	-
32	CLA	S	610	X	-	-	-
32	CLA	S	611	X	-	-	-
32	CLA	S	612	X	-	-	-
32	CLA	S	613	X	-	-	-
32	CLA	SS	303	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	CLA	SS	304	X	-	-	-
32	CLA	SS	305	X	-	-	-
32	CLA	SS	309	X	-	-	-
32	CLA	SS	310	X	-	-	-
32	CLA	SS	311	X	-	-	-
32	CLA	SS	312	X	-	-	-
32	CLA	SS	313	X	-	-	-
32	CLA	SS	314	X	-	-	-
32	CLA	Ss	602	X	-	-	-
32	CLA	Ss	603	X	-	-	-
32	CLA	Ss	604	X	-	-	-
32	CLA	Ss	608	X	-	-	-
32	CLA	Ss	609	X	-	-	-
32	CLA	Ss	610	X	-	-	-
32	CLA	Ss	611	X	-	-	-
32	CLA	Ss	612	X	-	-	-
32	CLA	Ss	613	X	-	-	-
32	CLA	X	201	X	-	-	-
32	CLA	XX	201	X	-	-	-
32	CLA	Y	602	X	-	-	-
32	CLA	Y	603	X	-	-	-
32	CLA	Y	610	X	-	-	-
32	CLA	Y	611	X	-	-	-
32	CLA	Y	612	X	-	-	-
32	CLA	Y	613	X	-	-	-
32	CLA	Y	614	X	-	-	-
32	CLA	YY	602	X	-	-	-
32	CLA	YY	603	X	-	-	-
32	CLA	YY	610	X	-	-	-
32	CLA	YY	611	X	-	-	-
32	CLA	YY	612	X	-	-	-
32	CLA	YY	613	X	-	-	-
32	CLA	YY	614	X	-	-	-
32	CLA	Yy	602	X	-	-	-
32	CLA	Yy	603	X	-	-	-
32	CLA	Yy	604	X	-	-	-
32	CLA	Yy	610	X	-	-	-
32	CLA	Yy	611	X	-	-	-
32	CLA	Yy	612	X	-	-	-
32	CLA	Yy	613	X	-	-	-
32	CLA	Yy	614	X	-	-	-
32	CLA	a	405	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	CLA	a	406	X	-	-	-
32	CLA	a	407	X	-	-	-
32	CLA	a	410	X	-	-	-
32	CLA	b	601	X	-	-	-
32	CLA	b	602	X	-	-	-
32	CLA	b	603	X	-	-	-
32	CLA	b	604	X	-	-	-
32	CLA	b	605	X	-	-	-
32	CLA	b	606	X	-	-	-
32	CLA	b	607	X	-	-	-
32	CLA	b	608	X	-	-	-
32	CLA	b	609	X	-	-	-
32	CLA	b	610	X	-	-	-
32	CLA	b	611	X	-	-	-
32	CLA	b	612	X	-	-	-
32	CLA	b	613	X	-	-	-
32	CLA	b	614	X	-	-	-
32	CLA	b	615	X	-	-	-
32	CLA	b	616	X	-	-	-
32	CLA	c	501	X	-	-	-
32	CLA	c	502	X	-	-	-
32	CLA	c	503	X	-	-	-
32	CLA	c	504	X	-	-	-
32	CLA	c	505	X	-	-	-
32	CLA	c	506	X	-	-	-
32	CLA	c	507	X	-	-	-
32	CLA	c	508	X	-	-	-
32	CLA	c	509	X	-	-	-
32	CLA	c	510	X	-	-	-
32	CLA	c	511	X	-	-	-
32	CLA	c	512	X	-	-	-
32	CLA	c	513	X	-	-	-
32	CLA	d	402	X	-	-	-
32	CLA	g	603	X	-	-	-
32	CLA	g	604	X	-	-	-
32	CLA	g	610	X	-	-	-
32	CLA	g	611	X	-	-	-
32	CLA	g	612	X	-	-	-
32	CLA	g	613	X	-	-	-
32	CLA	g	614	X	-	-	-
32	CLA	n	602	X	-	-	-
32	CLA	n	603	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	CLA	n	604	X	-	-	-
32	CLA	n	610	X	-	-	-
32	CLA	n	611	X	-	-	-
32	CLA	n	612	X	-	-	-
32	CLA	n	613	X	-	-	-
32	CLA	n	614	X	-	-	-
32	CLA	r	601	X	-	-	-
32	CLA	r	602	X	-	-	-
32	CLA	r	603	X	-	-	-
32	CLA	r	604	X	-	-	-
32	CLA	r	608	X	-	-	-
32	CLA	r	609	X	-	-	-
32	CLA	r	610	X	-	-	-
32	CLA	r	611	X	-	-	-
32	CLA	r	612	X	-	-	-
32	CLA	r	613	X	-	-	-
32	CLA	s	602	X	-	-	-
32	CLA	s	603	X	-	-	-
32	CLA	s	604	X	-	-	-
32	CLA	s	608	X	-	-	-
32	CLA	s	609	X	-	-	-
32	CLA	s	610	X	-	-	-
32	CLA	s	611	X	-	-	-
32	CLA	s	612	X	-	-	-
32	CLA	s	613	X	-	-	-
32	CLA	y	304	X	-	-	-
32	CLA	y	305	X	-	-	-
32	CLA	y	306	X	-	-	-
32	CLA	y	312	X	-	-	-
32	CLA	y	313	X	-	-	-
32	CLA	y	314	X	-	-	-
32	CLA	y	315	X	-	-	-
32	CLA	y	316	X	-	-	-
35	PL9	A	410	-	X	-	-
35	PL9	AA	410	-	X	-	-
35	PL9	D	407	-	X	-	-
35	PL9	DD	406	-	X	-	-
35	PL9	Dd	404	-	X	-	-
35	PL9	d	404	-	X	-	-
39	CHL	1	601	X	-	-	-
39	CHL	1	605	X	-	-	-
39	CHL	1	606	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
39	CHL	1	607	X	-	-	-
39	CHL	1	608	X	-	-	-
39	CHL	11	601	X	-	-	-
39	CHL	11	605	X	-	-	-
39	CHL	11	606	X	-	-	-
39	CHL	11	607	X	-	-	-
39	CHL	11	608	X	-	-	-
39	CHL	2	601	X	-	-	-
39	CHL	2	605	X	-	-	-
39	CHL	2	606	X	-	-	-
39	CHL	2	607	X	-	-	-
39	CHL	2	608	X	-	-	-
39	CHL	22	601	X	-	-	-
39	CHL	22	605	X	-	-	-
39	CHL	22	606	X	-	-	-
39	CHL	22	607	X	-	-	-
39	CHL	22	608	X	-	-	-
39	CHL	3	601	X	-	-	-
39	CHL	3	605	X	-	-	-
39	CHL	3	606	X	-	-	-
39	CHL	3	607	X	-	-	-
39	CHL	3	608	X	-	-	-
39	CHL	33	601	X	-	-	-
39	CHL	33	605	X	-	-	-
39	CHL	33	606	X	-	-	-
39	CHL	33	607	X	-	-	-
39	CHL	33	608	X	-	-	-
39	CHL	4	302	X	-	-	-
39	CHL	4	306	X	-	-	-
39	CHL	4	307	X	-	-	-
39	CHL	4	308	X	-	-	-
39	CHL	4	309	X	-	-	-
39	CHL	44	601	X	-	-	-
39	CHL	44	605	X	-	-	-
39	CHL	44	606	X	-	-	-
39	CHL	44	607	X	-	-	-
39	CHL	44	608	X	-	-	-
39	CHL	G	601	X	-	-	-
39	CHL	G	605	X	-	-	-
39	CHL	G	606	X	-	-	-
39	CHL	G	607	X	-	-	-
39	CHL	G	608	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
39	CHL	G	609	X	-	-	-
39	CHL	GG	601	X	-	-	-
39	CHL	GG	605	X	-	-	-
39	CHL	GG	606	X	-	-	-
39	CHL	GG	607	X	-	-	-
39	CHL	GG	608	X	-	-	-
39	CHL	GG	609	X	-	-	-
39	CHL	Gg	302	X	-	-	-
39	CHL	Gg	306	X	-	-	-
39	CHL	Gg	307	X	-	-	-
39	CHL	Gg	308	X	-	-	-
39	CHL	Gg	309	X	-	-	-
39	CHL	Gg	310	X	-	-	-
39	CHL	N	601	X	-	-	-
39	CHL	N	605	X	-	-	-
39	CHL	N	606	X	-	-	-
39	CHL	N	607	X	-	-	-
39	CHL	N	608	X	-	-	-
39	CHL	N	609	X	-	-	-
39	CHL	NN	601	X	-	-	-
39	CHL	NN	605	X	-	-	-
39	CHL	NN	606	X	-	-	-
39	CHL	NN	607	X	-	-	-
39	CHL	NN	608	X	-	-	-
39	CHL	NN	609	X	-	-	-
39	CHL	Nn	311	X	-	-	-
39	CHL	Nn	315	X	-	-	-
39	CHL	Nn	316	X	-	-	-
39	CHL	Nn	317	X	-	-	-
39	CHL	Nn	318	X	-	-	-
39	CHL	Nn	319	X	-	-	-
39	CHL	R	605	X	-	-	-
39	CHL	R	606	X	-	-	-
39	CHL	R	607	X	-	-	-
39	CHL	RR	305	X	-	-	-
39	CHL	RR	306	X	-	-	-
39	CHL	RR	307	X	-	-	-
39	CHL	Rr	605	X	-	-	-
39	CHL	Rr	606	X	-	-	-
39	CHL	Rr	607	X	-	-	-
39	CHL	S	601	X	-	-	-
39	CHL	S	605	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
39	CHL	S	606	X	-	-	-
39	CHL	S	607	X	-	-	-
39	CHL	SS	302	X	-	-	-
39	CHL	SS	306	X	-	-	-
39	CHL	SS	307	X	-	-	-
39	CHL	SS	308	X	-	-	-
39	CHL	Ss	601	X	-	-	-
39	CHL	Ss	605	X	-	-	-
39	CHL	Ss	606	X	-	-	-
39	CHL	Ss	607	X	-	-	-
39	CHL	Y	601	X	-	-	-
39	CHL	Y	605	X	-	-	-
39	CHL	Y	606	X	-	-	-
39	CHL	Y	607	X	-	-	-
39	CHL	Y	608	X	-	-	-
39	CHL	Y	609	X	-	-	-
39	CHL	YY	601	X	-	-	-
39	CHL	YY	605	X	-	-	-
39	CHL	YY	606	X	-	-	-
39	CHL	YY	607	X	-	-	-
39	CHL	YY	608	X	-	-	-
39	CHL	YY	609	X	-	-	-
39	CHL	Yy	601	X	-	-	-
39	CHL	Yy	605	X	-	-	-
39	CHL	Yy	606	X	-	-	-
39	CHL	Yy	607	X	-	-	-
39	CHL	Yy	608	X	-	-	-
39	CHL	Yy	609	X	-	-	-
39	CHL	g	601	X	-	-	-
39	CHL	g	605	X	-	-	-
39	CHL	g	606	X	-	-	-
39	CHL	g	607	X	-	-	-
39	CHL	g	608	X	-	-	-
39	CHL	g	609	X	-	-	-
39	CHL	n	601	X	-	-	-
39	CHL	n	605	X	-	-	-
39	CHL	n	606	X	-	-	-
39	CHL	n	607	X	-	-	-
39	CHL	n	608	X	-	-	-
39	CHL	n	609	X	-	-	-
39	CHL	r	605	X	-	-	-
39	CHL	r	606	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
39	CHL	r	607	X	-	-	-
39	CHL	s	601	X	-	-	-
39	CHL	s	605	X	-	-	-
39	CHL	s	606	X	-	-	-
39	CHL	s	607	X	-	-	-
39	CHL	y	303	X	-	-	-
39	CHL	y	307	X	-	-	-
39	CHL	y	308	X	-	-	-
39	CHL	y	309	X	-	-	-
39	CHL	y	310	X	-	-	-
39	CHL	y	311	X	-	-	-

2 Entry composition [i](#)

There are 46 unique types of molecules in this entry. The entry contains 339330 atoms, of which 168031 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Photosystem II protein D1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
1	A	335	Total	C	H	N	O	S	0	0
			5145	1710	2526	431	465	13		
1	a	334	Total	C	H	N	O	S	0	0
			5134	1707	2521	430	463	13		
1	AA	335	Total	C	H	N	O	S	0	0
			5146	1710	2527	431	465	13		
1	Aa	334	Total	C	H	N	O	S	0	0
			5134	1707	2521	430	463	13		

- Molecule 2 is a protein called Oxygen-evolving enhancer protein 1, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
2	Oo	234	Total	C	H	N	O	S	0	0
			3524	1125	1748	289	359	3		
2	O	236	Total	C	H	N	O	S	0	0
			3559	1136	1765	292	363	3		
2	o	234	Total	C	H	N	O	S	0	0
			3524	1125	1748	289	359	3		
2	OO	236	Total	C	H	N	O	S	0	0
			3561	1136	1767	292	363	3		

- Molecule 3 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
3	Rr	228	Total	C	H	N	O	S	0	0
			3541	1155	1763	289	330	4		
3	R	227	Total	C	H	N	O	S	0	0
			3526	1150	1753	290	329	4		
3	r	228	Total	C	H	N	O	S	0	0
			3541	1155	1763	289	330	4		
3	RR	227	Total	C	H	N	O	S	0	0
			3526	1150	1753	290	329	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace	
4	Ss	213	Total	C	H	N	O	S	0	0
			3266	1078	1617	268	298	5		
4	S	222	Total	C	H	N	O	S	0	0
			3395	1117	1683	280	310	5		
4	s	213	Total	C	H	N	O	S	0	0
			3266	1078	1617	268	298	5		
4	SS	222	Total	C	H	N	O	S	0	0
			3395	1117	1683	280	310	5		

- Molecule 5 is a protein called Photosystem II reaction center protein T.

Mol	Chain	Residues	Atoms					AltConf	Trace	
5	Tt	30	Total	C	H	N	O	S	0	0
			505	171	260	34	39	1		
5	T	30	Total	C	H	N	O	S	0	0
			505	171	260	34	39	1		
5	t	30	Total	C	H	N	O	S	0	0
			505	171	260	34	39	1		
5	TT	30	Total	C	H	N	O	S	0	0
			505	171	260	34	39	1		

- Molecule 6 is a protein called Photosystem II 5 kDa protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
6	Uu	26	Total	C	H	N	O	S	0	0
			420	129	218	37	33	3		
6	U	27	Total	C	H	N	O	S	0	0
			435	134	226	38	34	3		
6	u	26	Total	C	H	N	O	S	0	0
			420	129	218	37	33	3		
6	UU	27	Total	C	H	N	O	S	0	0
			435	134	226	38	34	3		

- Molecule 7 is a protein called Photosystem II reaction center W protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
7	Ww	54	Total	C	H	N	O	S	0	0
			820	276	401	61	81	1		
7	W	54	Total	C	H	N	O	S	0	0
			820	276	401	61	81	1		
7	w	54	Total	C	H	N	O	S	0	0
			820	276	401	61	81	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
7	WW	54	820	276	401	61	81	1	0	0

- Molecule 8 is a protein called Photosystem II reaction center X protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
8	Xx	34	487	158	250	37	42		0	0
8	X	46	667	213	341	53	60		0	0
8	x	34	487	158	250	37	42		0	0
8	XX	48	701	223	359	55	62	2	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Xx	45	GLY	SER	conflict	UNP A0A9R0JQ89
X	45	GLY	SER	conflict	UNP A0A9R0JQ89
x	45	GLY	SER	conflict	UNP A0A9R0JQ89
XX	45	GLY	SER	conflict	UNP A0A9R0JQ89

- Molecule 9 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
9	Yy	218	3252	1079	1592	270	304	7	0	0
9	G	215	3207	1065	1571	264	300	7	0	0
9	N	217	3245	1077	1589	269	303	7	0	0
9	Y	218	3252	1079	1592	270	304	7	0	0
9	g	215	3207	1065	1571	264	300	7	0	0
9	n	218	3252	1079	1592	270	304	7	0	0
9	y	218	3252	1079	1592	270	304	7	0	0
9	GG	215	3207	1065	1571	264	300	7	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace	
9	NN	218	Total	C	H	N	O	S	0	0
			3252	1079	1592	270	304	7		
9	YY	218	Total	C	H	N	O	S	0	0
			3252	1079	1592	270	304	7		
9	Gg	215	Total	C	H	N	O	S	0	0
			3207	1065	1571	264	300	7		
9	Nn	218	Total	C	H	N	O	S	0	0
			3252	1079	1592	270	304	7		

- Molecule 10 is a protein called Photosystem II reaction center protein Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	Zz	61	Total	C	H	N	O	0	0
			933	306	479	68	80		
10	Z	61	Total	C	H	N	O	0	0
			933	306	479	68	80		
10	z	61	Total	C	H	N	O	0	0
			933	306	479	68	80		
10	ZZ	61	Total	C	H	N	O	0	0
			933	306	479	68	80		

- Molecule 11 is a protein called Chlorophyll a-b binding protein CP24, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
11	44	186	Total	C	H	N	O	S	0	0
			2847	952	1395	234	262	4		
11	4	186	Total	C	H	N	O	S	0	0
			2847	952	1395	234	262	4		

- Molecule 12 is a protein called Oxygen-evolving enhancer protein 2, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace	
12	Pp	187	Total	C	H	N	O	S	0	0
			2827	912	1394	234	285	2		
12	p	187	Total	C	H	N	O	S	0	0
			2827	912	1394	234	285	2		
12	P	187	Total	C	H	N	O	S	0	0
			2827	912	1394	234	285	2		
12	PP	187	Total	C	H	N	O	S	0	0
			2827	912	1394	234	285	2		

- Molecule 13 is a protein called Oxygen-evolving enhancer protein 3, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	Qq	147	Total	C	H	N	O		
			2334	731	1181	201	221	0	0
13	q	147	Total	C	H	N	O		
			2334	731	1181	201	221	0	0
13	Q	147	Total	C	H	N	O		
			2334	731	1181	201	221	0	0
13	QQ	147	Total	C	H	N	O		
			2334	731	1181	201	221	0	0

- Molecule 14 is a protein called Chlorophyll a-b binding protein, chloroplastic.

Mol	Chain	Residues	Atoms						AltConf	Trace
14	11	206	Total	C	H	N	O	S		
			3075	1021	1505	254	288	7	0	0
14	22	218	Total	C	H	N	O	S		
			3253	1079	1592	270	305	7	0	0
14	1	207	Total	C	H	N	O	S		
			3086	1024	1510	255	290	7	0	0
14	2	218	Total	C	H	N	O	S		
			3253	1079	1592	270	305	7	0	0

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

Mol	Chain	Residues	Atoms						AltConf	Trace
15	33	207	Total	C	H	N	O	S		
			3189	1061	1575	258	290	5	0	0
15	3	209	Total	C	H	N	O	S		
			3195	1063	1573	260	294	5	0	0

- Molecule 16 is a protein called Photosystem II 10 kDa polypeptide, chloroplastic.

Mol	Chain	Residues	Atoms						AltConf	Trace
16	0	99	Total	C	H	N	O	S		
			1448	462	726	120	139	1	0	0
16	00	99	Total	C	H	N	O	S		
			1448	462	726	120	139	1	0	0

- Molecule 17 is a protein called Photosystem II reaction center proteins PsbY, chloroplastic.

Mol	Chain	Residues	Atoms						AltConf	Trace
17	5	40	Total	C	H	N	O	S		
			633	199	325	55	53	1	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
17	55	40	633	199	325	55	53	1	0	0

- Molecule 18 is a protein called Photosystem II CP43 reaction center protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
18	C	449	6892	2284	3417	581	599	11	0	0
18	c	449	6891	2284	3416	581	599	11	0	0
18	CC	449	6892	2284	3417	581	599	11	0	0
18	Cc	449	6891	2284	3416	581	599	11	0	0

- Molecule 19 is a protein called Photosystem II D2 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
19	D	339	5274	1780	2580	441	461	12	0	0
19	d	340	5295	1786	2592	443	462	12	0	0
19	DD	339	5275	1780	2581	441	461	12	0	0
19	Dd	340	5295	1786	2592	443	462	12	0	0

- Molecule 20 is a protein called Cytochrome b559 subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
20	E	80	1255	414	615	105	121	0	0
20	e	75	1201	398	591	100	112	0	0
20	EE	80	1255	414	615	105	121	0	0
20	Ee	75	1201	398	591	100	112	0	0

- Molecule 21 is a protein called Cytochrome b559 subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace	
21	F	34	Total	C	H	N	O	S	0	0
			558	187	282	45	43	1		
21	f	31	Total	C	H	N	O	S	0	0
			509	169	259	42	38	1		
21	FF	34	Total	C	H	N	O	S	0	0
			558	187	282	45	43	1		
21	Ff	31	Total	C	H	N	O	S	0	0
			509	169	259	42	38	1		

- Molecule 22 is a protein called Photosystem II reaction center protein H.

Mol	Chain	Residues	Atoms					AltConf	Trace	
22	H	59	Total	C	H	N	O	S	0	0
			893	288	459	65	78	3		
22	h	59	Total	C	H	N	O	S	0	0
			893	288	459	65	78	3		
22	HH	59	Total	C	H	N	O	S	0	0
			893	288	459	65	78	3		
22	Hh	59	Total	C	H	N	O	S	0	0
			893	288	459	65	78	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace	
23	I	35	Total	C	H	N	O	S	0	0
			581	195	295	44	46	1		
23	i	33	Total	C	H	N	O	S	0	0
			542	184	276	39	42	1		
23	II	35	Total	C	H	N	O	S	0	0
			581	195	295	44	46	1		
23	Ii	33	Total	C	H	N	O	S	0	0
			542	184	276	39	42	1		

- Molecule 24 is a protein called Photosystem II reaction center protein J.

Mol	Chain	Residues	Atoms				AltConf	Trace	
24	J	37	Total	C	H	N	O	0	0
			552	182	283	41	46		
24	j	34	Total	C	H	N	O	0	0
			505	168	258	38	41		
24	JJ	37	Total	C	H	N	O	0	0
			552	182	283	41	46		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
24	Jj	34	505	168	258	38	41	0	0

- Molecule 25 is a protein called Photosystem II reaction center protein K.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
25	K	37	617	217	310	43	46	1	0	0
25	k	37	617	217	310	43	46	1	0	0
25	KK	37	617	217	310	43	46	1	0	0
25	Kk	37	616	217	310	43	45	1	0	0

- Molecule 26 is a protein called Photosystem II reaction center protein L.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
26	L	35	579	196	284	46	53	0	0
26	l	36	596	201	292	48	55	0	0
26	LL	35	579	196	284	46	53	0	0
26	Ll	36	596	201	292	48	55	0	0

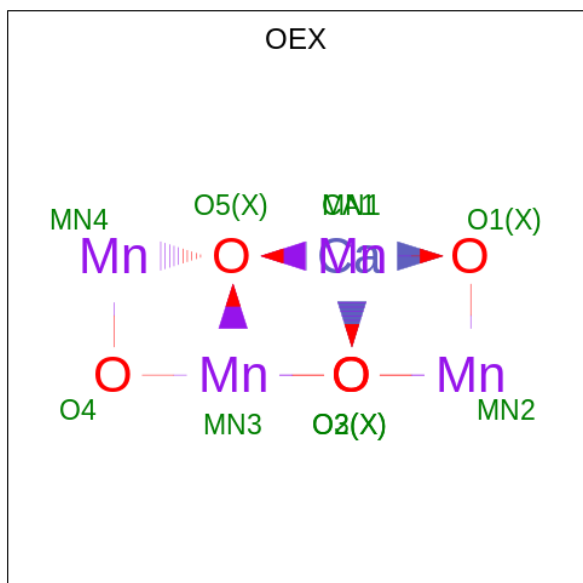
- Molecule 27 is a protein called Photosystem II reaction center protein M.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
27	M	33	543	177	285	37	43	1	0	0
27	m	32	523	172	273	36	42	0	0	
27	MM	33	543	177	285	37	43	1	0	0
27	Mm	32	523	172	273	36	42	0	0	

- Molecule 28 is a protein called Photosystem II CP47 reaction center protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
28	b	487	Total 7510	C 2501	H 3690	N 640	O 667	S 12	0	0
28	BB	499	Total 7692	C 2562	H 3778	N 655	O 685	S 12	0	0
28	B	499	Total 7692	C 2562	H 3778	N 655	O 685	S 12	0	0
28	Bb	487	Total 7510	C 2501	H 3690	N 640	O 667	S 12	0	0

- 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	Total 10	Ca 1	Mn 4	O 5	0
29	a	1	Total 10	Ca 1	Mn 4	O 5	0
29	AA	1	Total 10	Ca 1	Mn 4	O 5	0
29	Cc	1	Total 10	Ca 1	Mn 4	O 5	0

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

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

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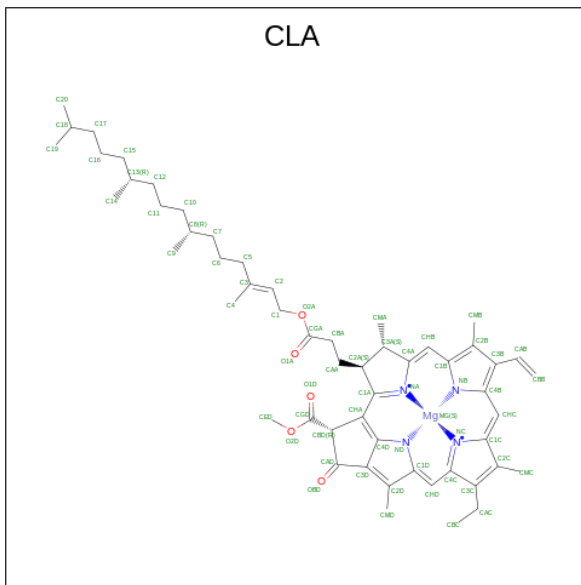
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Mol	Chain	Residues	Atoms	AltConf
30	AA	1	Total Fe 1 1	0
30	Aa	1	Total Fe 1 1	0

- Molecule 31 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	AltConf
31	A	2	Total Cl 2 2	0
31	a	2	Total Cl 2 2	0
31	AA	2	Total Cl 2 2	0
31	Aa	2	Total Cl 2 2	0

- Molecule 32 is CHLOROPHYLL A (three-letter code: CLA) (formula: C₅₅H₇₂MgN₄O₅).



Mol	Chain	Residues	Atoms	AltConf
32	A	1	Total C H Mg N O 137 55 72 1 4 5	0
32	A	1	Total C H Mg N O 88 39 39 1 4 5	0
32	A	1	Total C H Mg N O 119 50 59 1 4 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Rr	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Ss	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Yy	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Yy	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	Yy	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Yy	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Yy	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	Yy	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Yy	1	Total 114	C 49	H 55	Mg 1	N 4	O 5	0
32	Yy	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	44	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	44	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	44	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	44	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	44	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	44	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	44	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	44	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	11	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	11	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	11	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	11	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	11	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	11	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	11	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	11	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	22	1	68	32	28	1	4	3	0
32	22	1	68	32	28	1	4	3	0
32	22	1	68	32	28	1	4	3	0
32	22	1	68	32	28	1	4	3	0
32	22	1	73	34	31	1	4	3	0
32	22	1	68	32	28	1	4	3	0
32	22	1	68	32	28	1	4	3	0
32	22	1	68	32	28	1	4	3	0
32	33	1	68	32	28	1	4	3	0
32	33	1	68	32	28	1	4	3	0
32	33	1	68	32	28	1	4	3	0
32	33	1	68	32	28	1	4	3	0
32	33	1	68	32	28	1	4	3	0
32	33	1	68	32	28	1	4	3	0
32	33	1	68	32	28	1	4	3	0
32	33	1	68	32	28	1	4	3	0
32	1	1	68	32	28	1	4	3	0
32	1	1	68	32	28	1	4	3	0
32	1	1	68	32	28	1	4	3	0
32	1	1	68	32	28	1	4	3	0
32	1	1	68	32	28	1	4	3	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	1	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	1	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	1	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	2	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	3	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	3	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	3	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	3	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	3	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	3	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	3	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	3	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	C	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	D	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	D	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	D	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	G	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	G	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	G	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	G	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	G	1	Total 95	C 42	H 43	Mg 1	N 4	O 5	0
32	G	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	G	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	G	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	N	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	N	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	N	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	N	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	N	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	N	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	N	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	N	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	R	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	R	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	R	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	R	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	R	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	R	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	R	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	R	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	R	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	R	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	R	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	S	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	S	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	S	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	S	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	S	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	S	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	S	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	S	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	S	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	X	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	Y	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Y	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Y	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Y	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Y	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	Y	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Y	1	Total 114	C 49	H 55	Mg 1	N 4	O 5	0
32	Y	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	a	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	a	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	a	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	a	1	Total 119	C 50	H 59	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	b	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 104	C 45	H 49	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 119	C 50	H 59	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	c	1	Total 76	C 35	H 33	Mg 1	N 4	O 3	0
32	d	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	d	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	g	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	g	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	g	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	g	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	g	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	g	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	g	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	g	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	n	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	n	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	n	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	n	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	n	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	n	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	n	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	n	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	r	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	r	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	r	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	r	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	r	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	r	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	r	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	r	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	r	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	r	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	s	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	y	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	y	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	y	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	y	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	y	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	y	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	y	1	Total 114	C 49	H 55	Mg 1	N 4	O 5	0
32	y	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	4	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	4	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	4	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	4	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	4	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	4	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	4	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	AA	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	AA	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	AA	1	Total 119	C 50	H 59	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	BB	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	CC	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	DD	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	DD	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	DD	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 119	C 50	H 59	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	B	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	GG	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	GG	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	GG	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	GG	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	GG	1	Total 95	C 42	H 43	Mg 1	N 4	O 5	0
32	GG	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	GG	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	GG	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	NN	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	NN	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	NN	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	NN	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	NN	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	NN	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	NN	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	NN	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	RR	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	RR	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	RR	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	RR	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	RR	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	RR	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	RR	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	RR	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	RR	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	RR	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	SS	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	SS	1	Total 78	C 35	H 33	Mg 1	N 4	O 5	0
32	SS	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	SS	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	SS	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	SS	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	SS	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	SS	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	SS	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	XX	1	Total 70	C 33	H 29	Mg 1	N 4	O 3	0
32	YY	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	YY	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	YY	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
32	YY	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	YY	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	YY	1	Total 113	C 48	H 55	Mg 1	N 4	O 5	0
32	YY	1	Total 114	C 49	H 55	Mg 1	N 4	O 5	0
32	YY	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Aa	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Aa	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Aa	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Aa	1	Total 119	C 50	H 59	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0

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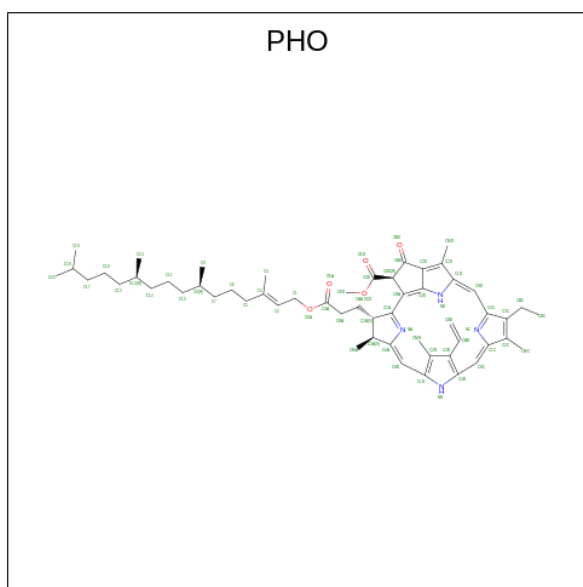
Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Bb	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 104	C 45	H 49	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 119	C 50	H 59	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Cc	1	Total 76	C 35	H 33	Mg 1	N 4	O 3	0
32	Dd	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Dd	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Gg	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Gg	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0

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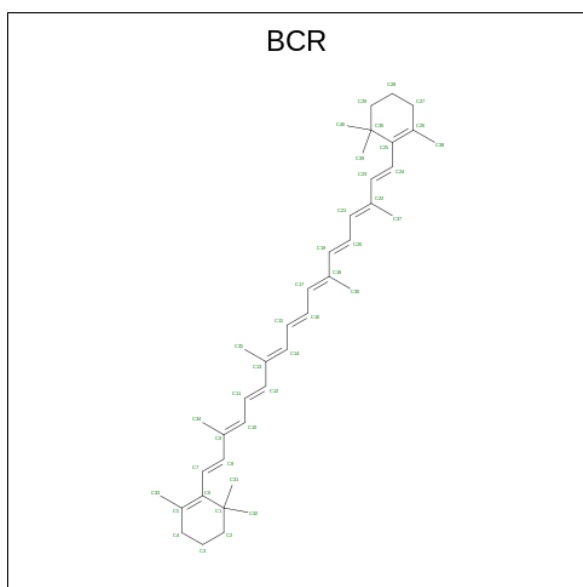
Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
32	Gg	1	Total 73	C 34	H 31	Mg 1	N 4	O 3	0
32	Gg	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Gg	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Gg	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Gg	1	Total 68	C 32	H 28	Mg 1	N 4	O 3	0
32	Gg	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Nn	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Nn	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Nn	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Nn	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Nn	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Nn	1	Total 137	C 55	H 72	Mg 1	N 4	O 5	0
32	Nn	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0
32	Nn	1	Total 88	C 39	H 39	Mg 1	N 4	O 5	0

- Molecule 33 is PHEOPHYTIN A (three-letter code: PHO) (formula: C₅₅H₇₄N₄O₅).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	N	O	
33	A	1	Total 138	C 55	H 74	N 4	O 5	0
33	D	1	Total 138	C 55	H 74	N 4	O 5	0
33	a	1	Total 138	C 55	H 74	N 4	O 5	0
33	a	1	Total 138	C 55	H 74	N 4	O 5	0
33	AA	1	Total 138	C 55	H 74	N 4	O 5	0
33	DD	1	Total 138	C 55	H 74	N 4	O 5	0
33	Aa	1	Total 138	C 55	H 74	N 4	O 5	0
33	Aa	1	Total 138	C 55	H 74	N 4	O 5	0

- Molecule 34 is BETA-CAROTENE (three-letter code: BCR) (formula: C₄₀H₅₆).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	H	
34	A	1	96	40	56	0
34	C	1	96	40	56	0
34	C	1	96	40	56	0
34	C	1	96	40	56	0
34	D	1	96	40	56	0
34	H	1	96	40	56	0
34	K	1	96	40	56	0
34	T	1	96	40	56	0
34	a	1	96	40	56	0
34	b	1	96	40	56	0
34	b	1	96	40	56	0
34	b	1	96	40	56	0
34	c	1	96	40	56	0
34	c	1	96	40	56	0

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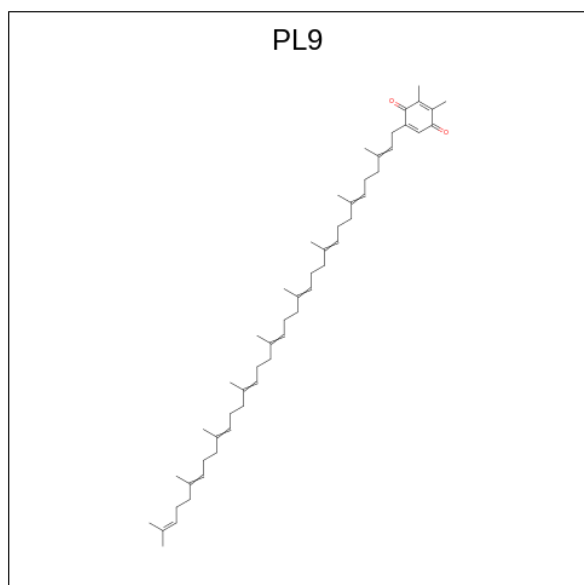
Mol	Chain	Residues	Atoms			AltConf
			Total	C	H	
34	c	1	96	40	56	0
34	d	1	96	40	56	0
34	h	1	96	40	56	0
34	k	1	96	40	56	0
34	AA	1	96	40	56	0
34	BB	1	96	40	56	0
34	BB	1	96	40	56	0
34	BB	1	96	40	56	0
34	BB	1	96	40	56	0
34	BB	1	96	40	56	0
34	CC	1	96	40	56	0
34	CC	1	96	40	56	0
34	CC	1	96	40	56	0
34	DD	1	96	40	56	0
34	B	1	96	40	56	0
34	B	1	96	40	56	0
34	B	1	96	40	56	0
34	B	1	96	40	56	0
34	KK	1	96	40	56	0
34	TT	1	96	40	56	0
34	XX	1	96	40	56	0
34	Aa	1	96	40	56	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	H	
34	Bb	1	96	40	56	0
34	Bb	1	96	40	56	0
34	Bb	1	96	40	56	0
34	Cc	1	96	40	56	0
34	Cc	1	96	40	56	0
34	Cc	1	96	40	56	0
34	Dd	1	96	40	56	0
34	Hh	1	96	40	56	0
34	Kk	1	96	40	56	0

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



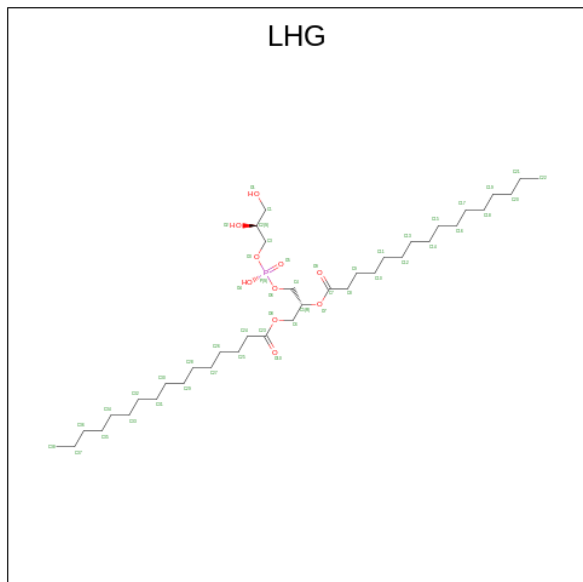
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
35	A	1	55	53	2	0

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Mol	Chain	Residues	Atoms			AltConf
35	D	1	Total	C	O	0
			55	53	2	
35	d	1	Total	C	O	0
			55	53	2	
35	AA	1	Total	C	O	0
			55	53	2	
35	DD	1	Total	C	O	0
			55	53	2	
35	Dd	1	Total	C	O	0
			55	53	2	

- Molecule 36 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: C₃₈H₇₅O₁₀P).



Mol	Chain	Residues	Atoms					AltConf
36	A	1	Total	C	H	O	P	0
			72	23	38	10	1	
36	A	1	Total	C	H	O	P	0
			81	26	44	10	1	
36	A	1	Total	C	H	O	P	0
			108	34	63	10	1	
36	Rr	1	Total	C	H	O	P	0
			123	38	74	10	1	
36	Ss	1	Total	C	H	O	P	0
			117	37	69	10	1	
36	Yy	1	Total	C	H	O	P	0
			123	38	74	10	1	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
36	44	1	Total 33	C 10	H 12	O 10	P 1	0
36	44	1	Total 31	C 8	H 12	O 10	P 1	0
36	11	1	Total 72	C 23	H 38	O 10	P 1	0
36	22	1	Total 72	C 23	H 38	O 10	P 1	0
36	33	1	Total 72	C 23	H 38	O 10	P 1	0
36	1	1	Total 60	C 19	H 30	O 10	P 1	0
36	3	1	Total 72	C 23	H 38	O 10	P 1	0
36	0	1	Total 114	C 36	H 67	O 10	P 1	0
36	C	1	Total 63	C 20	H 32	O 10	P 1	0
36	D	1	Total 102	C 32	H 59	O 10	P 1	0
36	D	1	Total 123	C 38	H 74	O 10	P 1	0
36	D	1	Total 72	C 23	H 38	O 10	P 1	0
36	G	1	Total 72	C 23	H 38	O 10	P 1	0
36	J	1	Total 51	C 16	H 24	O 10	P 1	0
36	K	1	Total 72	C 23	H 38	O 10	P 1	0
36	N	1	Total 84	C 27	H 46	O 10	P 1	0
36	Y	1	Total 123	C 38	H 74	O 10	P 1	0
36	a	1	Total 81	C 26	H 44	O 10	P 1	0
36	d	1	Total 102	C 32	H 59	O 10	P 1	0
36	d	1	Total 123	C 38	H 74	O 10	P 1	0
36	g	1	Total 72	C 23	H 38	O 10	P 1	0

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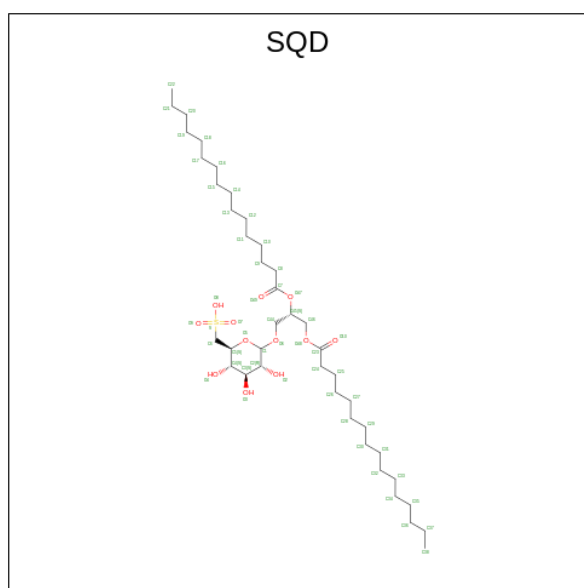
Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
36	l	1	Total 123	C 38	H 74	O 10	P 1	0
36	n	1	Total 123	C 38	H 74	O 10	P 1	0
36	r	1	Total 123	C 38	H 74	O 10	P 1	0
36	s	1	Total 117	C 37	H 69	O 10	P 1	0
36	y	1	Total 123	C 38	H 74	O 10	P 1	0
36	4	1	Total 31	C 8	H 12	O 10	P 1	0
36	4	1	Total 33	C 10	H 12	O 10	P 1	0
36	AA	1	Total 72	C 23	H 38	O 10	P 1	0
36	AA	1	Total 108	C 34	H 63	O 10	P 1	0
36	BB	1	Total 72	C 23	H 38	O 10	P 1	0
36	CC	1	Total 72	C 23	H 38	O 10	P 1	0
36	CC	1	Total 81	C 26	H 44	O 10	P 1	0
36	DD	1	Total 102	C 32	H 59	O 10	P 1	0
36	DD	1	Total 123	C 38	H 74	O 10	P 1	0
36	EE	1	Total 93	C 29	H 53	O 10	P 1	0
36	GG	1	Total 72	C 23	H 38	O 10	P 1	0
36	II	1	Total 72	C 23	H 38	O 10	P 1	0
36	JJ	1	Total 69	C 22	H 36	O 10	P 1	0
36	KK	1	Total 72	C 23	H 38	O 10	P 1	0
36	NN	1	Total 84	C 27	H 46	O 10	P 1	0
36	SS	1	Total 48	C 15	H 22	O 10	P 1	0

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Mol	Chain	Residues	Atoms				AltConf	
			Total	C	H	O		P
36	YY	1	Total 123	C 38	H 74	O 10	P 1	0
36	Dd	1	Total 102	C 32	H 59	O 10	P 1	0
36	Dd	1	Total 123	C 38	H 74	O 10	P 1	0
36	Dd	1	Total 81	C 26	H 44	O 10	P 1	0
36	Gg	1	Total 72	C 23	H 38	O 10	P 1	0
36	Ll	1	Total 123	C 38	H 74	O 10	P 1	0
36	Nn	1	Total 123	C 38	H 74	O 10	P 1	0

- Molecule 37 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: $C_{41}H_{78}O_{12}S$).



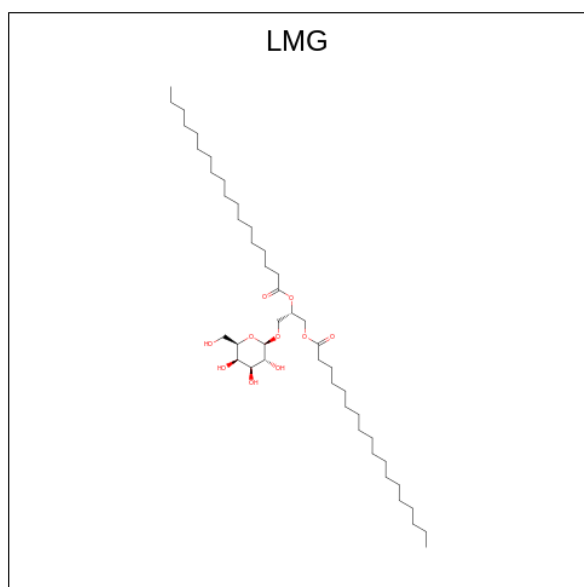
Mol	Chain	Residues	Atoms				AltConf	
			Total	C	H	O		S
37	A	1	Total 69	C 22	H 34	O 12	S 1	0
37	C	1	Total 132	C 41	H 78	O 12	S 1	0
37	L	1	Total 132	C 41	H 78	O 12	S 1	0
37	L	1	Total 72	C 23	H 36	O 12	S 1	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	S	
37	l	1	Total 132	C 41	H 78	O 12	S 1	0
37	AA	1	Total 69	C 22	H 34	O 12	S 1	0
37	BB	1	Total 72	C 23	H 36	O 12	S 1	0
37	CC	1	Total 132	C 41	H 78	O 12	S 1	0
37	B	1	Total 108	C 34	H 61	O 12	S 1	0
37	B	1	Total 72	C 23	H 36	O 12	S 1	0
37	LL	1	Total 72	C 23	H 36	O 12	S 1	0
37	LL	1	Total 132	C 41	H 78	O 12	S 1	0
37	Aa	1	Total 108	C 34	H 61	O 12	S 1	0
37	Ll	1	Total 132	C 41	H 78	O 12	S 1	0

- Molecule 38 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: $C_{45}H_{86}O_{10}$).



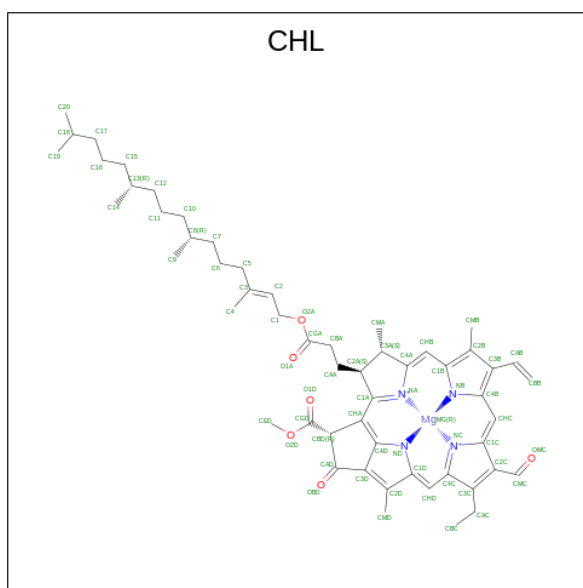
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
38	A	1	Total 78	C 26	H 42	O 10	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
38	C	1	123	41	72	10	0
38	F	1	108	36	62	10	0
38	W	1	114	38	66	10	0
38	a	1	97	33	54	10	0
38	b	1	78	26	42	10	0
38	b	1	78	26	42	10	0
38	c	1	72	24	38	10	0
38	j	1	108	36	62	10	0
38	m	1	123	41	72	10	0
38	AA	1	78	26	42	10	0
38	BB	1	105	35	60	10	0
38	CC	1	87	29	48	10	0
38	DD	1	108	36	62	10	0
38	B	1	105	35	60	10	0
38	WW	1	114	38	66	10	0
38	Aa	1	97	33	54	10	0
38	Bb	1	78	26	42	10	0
38	Bb	1	78	26	42	10	0
38	Cc	1	72	24	38	10	0
38	Dd	1	108	36	62	10	0
38	Mm	1	123	41	72	10	0

- Molecule 39 is CHLOROPHYLL B (three-letter code: CHL) (formula: $C_{55}H_{70}MgN_4O_6$).



Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
39	Rr	1	87	39	37	1	4	6	0
39	Rr	1	87	39	37	1	4	6	0
39	Rr	1	87	39	37	1	4	6	0
39	Ss	1	91	41	39	1	4	6	0
39	Ss	1	87	39	37	1	4	6	0
39	Ss	1	87	39	37	1	4	6	0
39	Ss	1	83	38	34	1	4	6	0
39	Yy	1	136	55	70	1	4	6	0
39	Yy	1	81	37	33	1	4	6	0
39	Yy	1	75	35	31	1	4	4	0
39	Yy	1	72	34	29	1	4	4	0
39	Yy	1	87	39	37	1	4	6	0
39	Yy	1	136	55	70	1	4	6	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
39	44	1	Total 73	C 34	H 28	Mg 1	N 4	O 6	0
39	44	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	44	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	44	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	44	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	11	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	11	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	11	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	11	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	11	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	22	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	22	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	22	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	22	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	22	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	33	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	33	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	33	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	33	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	33	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	1	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
39	1	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	1	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	1	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	1	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	2	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	2	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	2	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	2	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	2	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	2	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	3	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	3	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	3	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	3	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	3	1	Total 67	C 32	H 26	Mg 1	N 4	O 4	0
39	G	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	G	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	G	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	G	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	G	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	G	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	N	1	Total 75	C 35	H 31	Mg 1	N 4	O 4	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
39	N	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	N	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	N	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	N	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	N	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	R	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	R	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	R	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	S	1	Total 91	C 41	H 39	Mg 1	N 4	O 6	0
39	S	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	S	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	S	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	Y	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	Y	1	Total 81	C 37	H 33	Mg 1	N 4	O 6	0
39	Y	1	Total 75	C 35	H 31	Mg 1	N 4	O 4	0
39	Y	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	Y	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	Y	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	g	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	g	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	g	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
39	g	1	87	39	37	1	4	6	0
39	g	1	69	33	27	1	4	4	0
39	g	1	72	34	29	1	4	4	0
39	n	1	87	39	37	1	4	6	0
39	n	1	81	37	33	1	4	6	0
39	n	1	87	39	37	1	4	6	0
39	n	1	136	55	70	1	4	6	0
39	n	1	87	39	37	1	4	6	0
39	n	1	87	39	37	1	4	6	0
39	r	1	87	39	37	1	4	6	0
39	r	1	87	39	37	1	4	6	0
39	r	1	87	39	37	1	4	6	0
39	s	1	91	41	39	1	4	6	0
39	s	1	87	39	37	1	4	6	0
39	s	1	87	39	37	1	4	6	0
39	s	1	83	38	34	1	4	6	0
39	y	1	136	55	70	1	4	6	0
39	y	1	81	37	33	1	4	6	0
39	y	1	75	35	31	1	4	4	0
39	y	1	72	34	29	1	4	4	0
39	y	1	87	39	37	1	4	6	0

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Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
39	y	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	4	1	Total 73	C 34	H 28	Mg 1	N 4	O 6	0
39	4	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	4	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	4	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	4	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	GG	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	GG	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	GG	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	GG	1	Total 77	C 35	H 31	Mg 1	N 4	O 6	0
39	GG	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	GG	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	NN	1	Total 75	C 35	H 31	Mg 1	N 4	O 4	0
39	NN	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	NN	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	NN	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	NN	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	NN	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	RR	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	RR	1	Total 86	C 39	H 36	Mg 1	N 4	O 6	0
39	RR	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0

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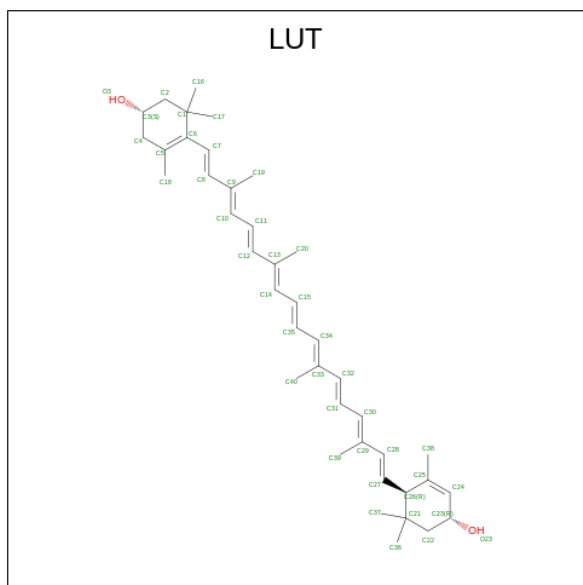
Mol	Chain	Residues	Atoms						AltConf
			Total	C	H	Mg	N	O	
39	SS	1	Total 91	C 41	H 39	Mg 1	N 4	O 6	0
39	SS	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	SS	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	SS	1	Total 83	C 38	H 34	Mg 1	N 4	O 6	0
39	YY	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	YY	1	Total 81	C 37	H 33	Mg 1	N 4	O 6	0
39	YY	1	Total 75	C 35	H 31	Mg 1	N 4	O 4	0
39	YY	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	YY	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	YY	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	Gg	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	Gg	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	Gg	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	Gg	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	Gg	1	Total 69	C 33	H 27	Mg 1	N 4	O 4	0
39	Gg	1	Total 72	C 34	H 29	Mg 1	N 4	O 4	0
39	Nn	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	Nn	1	Total 81	C 37	H 33	Mg 1	N 4	O 6	0
39	Nn	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0
39	Nn	1	Total 136	C 55	H 70	Mg 1	N 4	O 6	0
39	Nn	1	Total 87	C 39	H 37	Mg 1	N 4	O 6	0

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Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	Mg	N		O
39	Nn	1	87	39	37	1	4	6	0

- Molecule 40 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3,3'-DIOL (three-letter code: LUT) (formula: C₄₀H₅₆O₂).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
40	Rr	1	98	40	56	2	0
40	Ss	1	98	40	56	2	0
40	Ss	1	98	40	56	2	0
40	Yy	1	98	40	56	2	0
40	Yy	1	98	40	56	2	0
40	44	1	98	40	56	2	0
40	22	1	98	40	56	2	0
40	2	1	98	40	56	2	0
40	G	1	98	40	56	2	0
40	G	1	98	40	56	2	0

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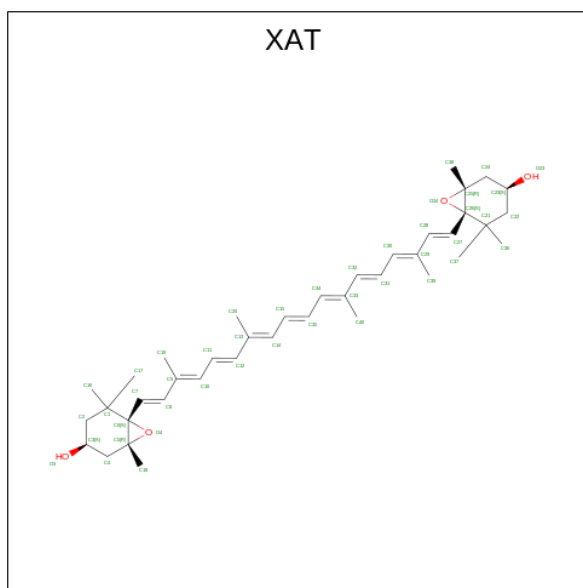
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
40	N	1	98	40	56	2	0
40	N	1	98	40	56	2	0
40	R	1	98	40	56	2	0
40	S	1	98	40	56	2	0
40	Y	1	98	40	56	2	0
40	Y	1	98	40	56	2	0
40	g	1	98	40	56	2	0
40	g	1	98	40	56	2	0
40	n	1	98	40	56	2	0
40	n	1	98	40	56	2	0
40	r	1	98	40	56	2	0
40	s	1	98	40	56	2	0
40	s	1	98	40	56	2	0
40	y	1	98	40	56	2	0
40	y	1	98	40	56	2	0
40	4	1	98	40	56	2	0
40	GG	1	98	40	56	2	0
40	GG	1	98	40	56	2	0
40	NN	1	98	40	56	2	0
40	NN	1	98	40	56	2	0
40	RR	1	98	40	56	2	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
40	SS	1	Total 98	C 40	H 56	O 2	0
40	YY	1	Total 98	C 40	H 56	O 2	0
40	YY	1	Total 98	C 40	H 56	O 2	0
40	Gg	1	Total 98	C 40	H 56	O 2	0
40	Gg	1	Total 98	C 40	H 56	O 2	0
40	Nn	1	Total 98	C 40	H 56	O 2	0
40	Nn	1	Total 98	C 40	H 56	O 2	0

- Molecule 41 is (3S,5R,6S,3'S,5'R,6'S)-5,6,5',6'-DIEPOXY-5,6,5',6'-TETRAHYDRO-BETA, BETA-CAROTENE-3,3'-DIOL (three-letter code: XAT) (formula: C₄₀H₅₆O₄).



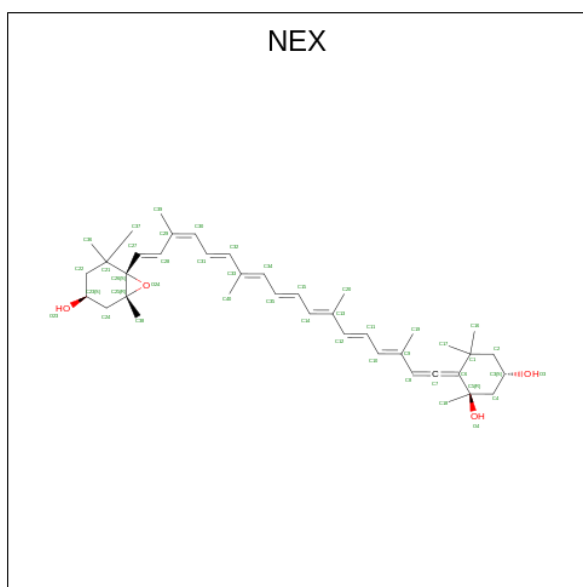
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
41	Rr	1	Total 100	C 40	H 56	O 4	0
41	Yy	1	Total 100	C 40	H 56	O 4	0
41	44	1	Total 100	C 40	H 56	O 4	0
41	G	1	Total 100	C 40	H 56	O 4	0

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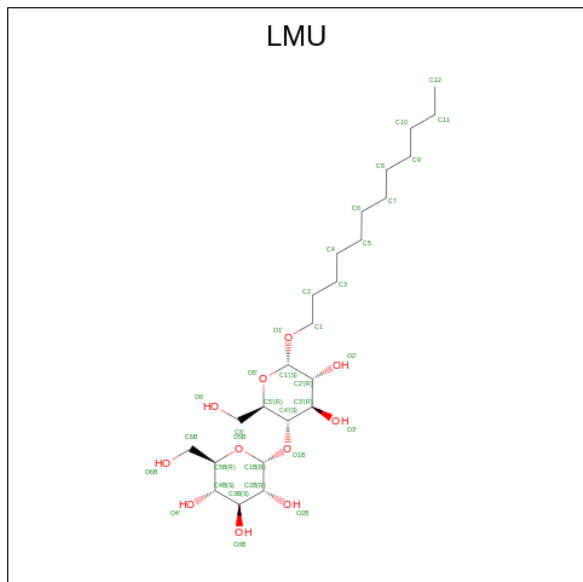
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
41	G	1	100	40	56	4	0
41	N	1	100	40	56	4	0
41	R	1	100	40	56	4	0
41	g	1	100	40	56	4	0
41	r	1	100	40	56	4	0
41	y	1	100	40	56	4	0
41	y	1	100	40	56	4	0
41	4	1	100	40	56	4	0
41	GG	1	100	40	56	4	0
41	GG	1	100	40	56	4	0
41	NN	1	100	40	56	4	0
41	RR	1	100	40	56	4	0
41	Gg	1	100	40	56	4	0
41	Nn	1	100	40	56	4	0

- Molecule 42 is (1R,3R)-6-[(3E,5E,7E,9E,11E,13E,15E,17E)-18-[(1S,4R,6R)-4-HYDROXY-2,2,6-TRIMETHYL-7-OXABICYCLO[4.1.0]HEPT-1-YL]-3,7,12,16-TETRAMETHYLOCTADECAN-1,3,5,7,9,11,13,15,17-NONAENYLIDENE]-1,5,5-TRIMETHYLCYCLOHEXANE-1,3-DIOL (three-letter code: NEX) (formula: C₄₀H₅₆O₄).



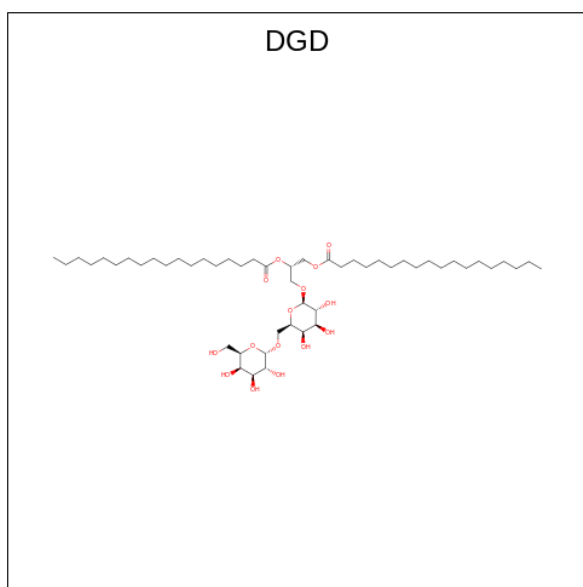
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
42	Rr	1	100	40	56	4	0
42	Yy	1	100	40	56	4	0
42	N	1	100	40	56	4	0
42	R	1	100	40	56	4	0
42	Y	1	100	40	56	4	0
42	Y	1	100	40	56	4	0
42	g	1	100	40	56	4	0
42	n	1	100	40	56	4	0
42	y	1	100	40	56	4	0
42	NN	1	100	40	56	4	0
42	RR	1	100	40	56	4	0
42	YY	1	100	40	56	4	0
42	Gg	1	100	40	56	4	0
42	Nn	1	100	40	56	4	0

- Molecule 43 is DODECYL-ALPHA-D-MALTOSE (three-letter code: LMU) (formula: $C_{24}H_{46}O_{11}$).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
43	C	1	54	16	27	11	0
43	R	1	54	16	27	11	0
43	KK	1	54	16	27	11	0
43	RR	1	53	16	26	11	0

- Molecule 44 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).



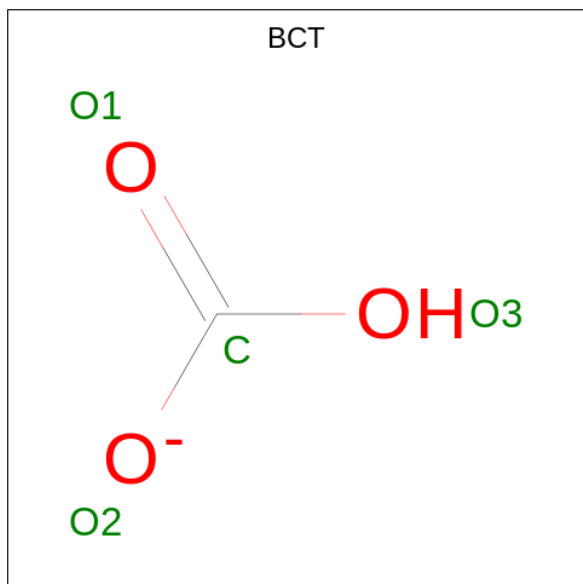
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
44	C	1	Total	C	H	O	0
			117	40	62	15	
44	C	1	Total	C	H	O	0
			132	47	70	15	
44	C	1	Total	C	H	O	0
			110	37	58	15	
44	D	1	Total	C	H	O	0
			132	47	70	15	
44	a	1	Total	C	H	O	0
			117	40	62	15	
44	c	1	Total	C	H	O	0
			117	40	62	15	
44	c	1	Total	C	H	O	0
			108	37	56	15	
44	h	1	Total	C	H	O	0
			132	47	70	15	
44	BB	1	Total	C	H	O	0
			132	47	70	15	
44	BB	1	Total	C	H	O	0
			117	40	62	15	
44	BB	1	Total	C	H	O	0
			121	42	64	15	
44	CC	1	Total	C	H	O	0
			117	40	62	15	
44	CC	1	Total	C	H	O	0
			132	47	70	15	
44	CC	1	Total	C	H	O	0
			117	40	62	15	

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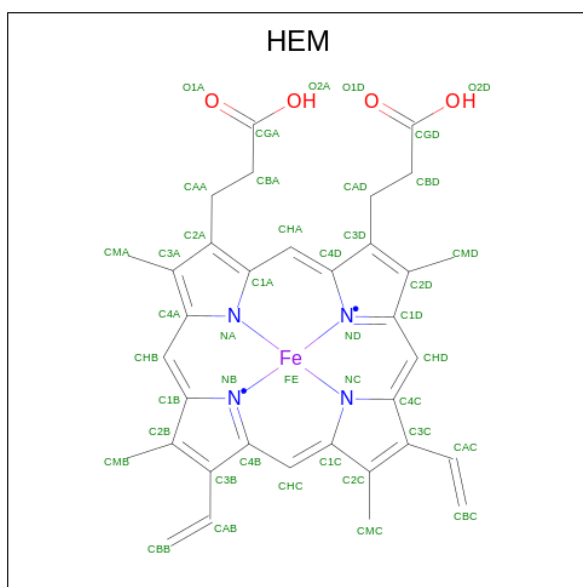
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
44	B	1	Total 117	C 40	H 62	O 15	0
44	B	1	Total 121	C 42	H 64	O 15	0
44	Aa	1	Total 117	C 40	H 62	O 15	0
44	Cc	1	Total 117	C 40	H 62	O 15	0
44	Cc	1	Total 108	C 37	H 56	O 15	0
44	Hh	1	Total 132	C 47	H 70	O 15	0

- Molecule 45 is BICARBONATE ION (three-letter code: BCT) (formula: CHO_3).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
45	D	1	Total 4	C 1	O 3		0
45	a	1	Total 5	C 1	H 1	O 3	0
45	AA	1	Total 4	C 1	O 3		0
45	Aa	1	Total 5	C 1	H 1	O 3	0

- Molecule 46 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: $\text{C}_{34}\text{H}_{32}\text{FeN}_4\text{O}_4$).



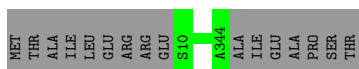
Mol	Chain	Residues	Atoms					AltConf	
			Total	C	Fe	H	N		O
46	E	1	73	34	1	30	4	4	0
46	e	1	73	34	1	30	4	4	0
46	EE	1	73	34	1	30	4	4	0
46	Ee	1	73	34	1	30	4	4	0

3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

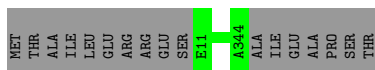
- Molecule 1: Photosystem II protein D1

Chain A:  95% 5%



- Molecule 1: Photosystem II protein D1

Chain a:  95% 5%



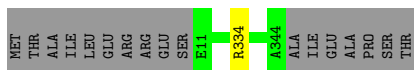
- Molecule 1: Photosystem II protein D1

Chain AA:  95% 5%



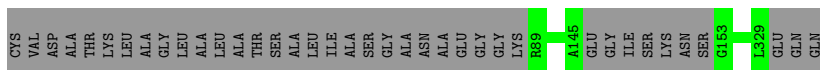
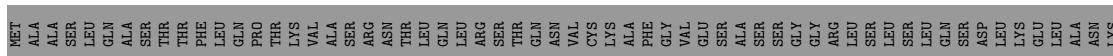
- Molecule 1: Photosystem II protein D1

Chain Aa:  95% 5%

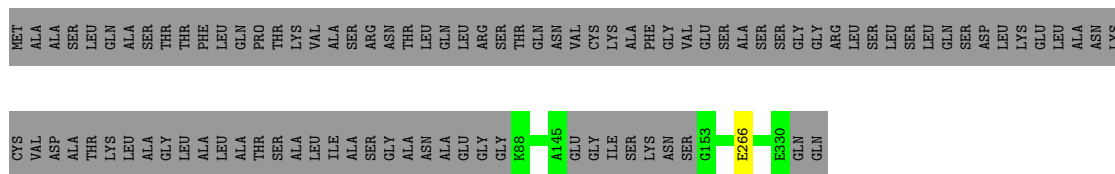


- Molecule 2: Oxygen-evolving enhancer protein 1, chloroplastic

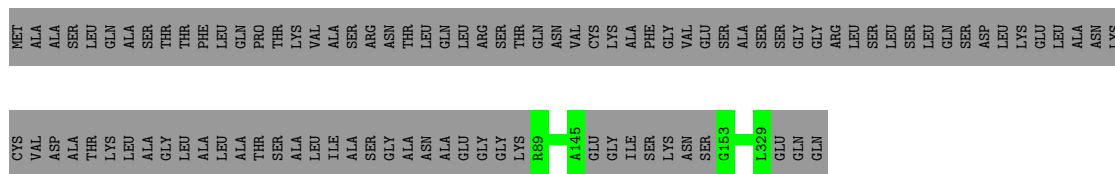
Chain Oo:  70% 30%



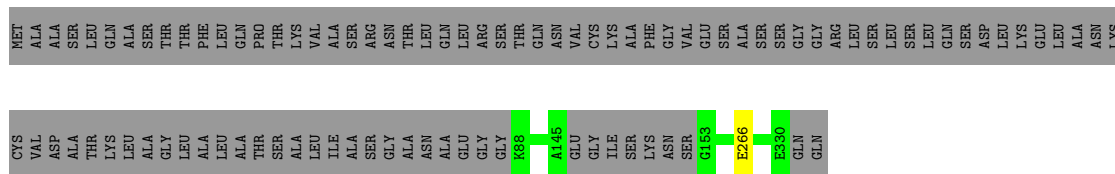
- Molecule 2: Oxygen-evolving enhancer protein 1, chloroplastic



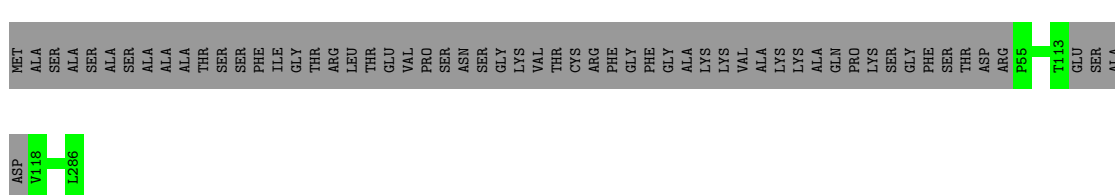
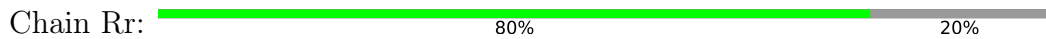
- Molecule 2: Oxygen-evolving enhancer protein 1, chloroplastic



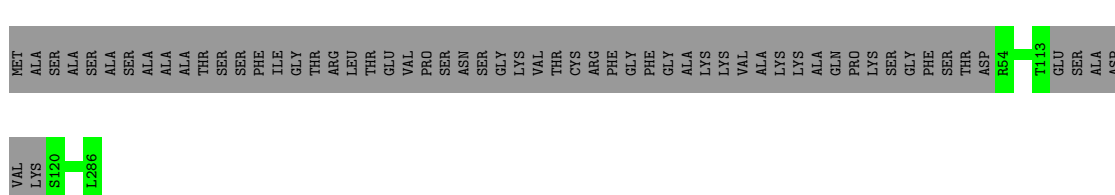
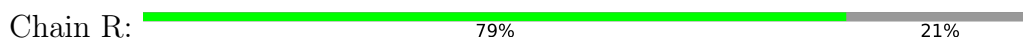
- Molecule 2: Oxygen-evolving enhancer protein 1, chloroplastic



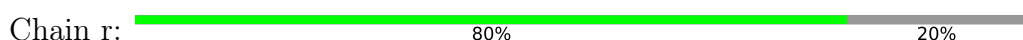
- Molecule 3: Chlorophyll a-b binding protein, chloroplastic

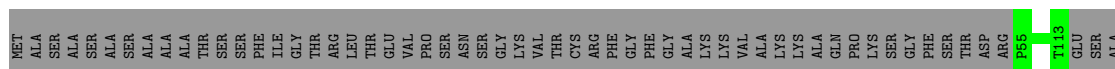


- Molecule 3: Chlorophyll a-b binding protein, chloroplastic

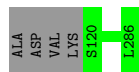
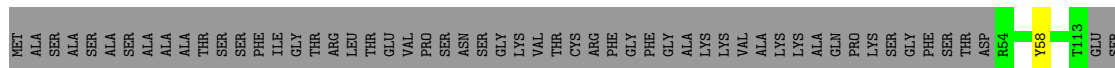
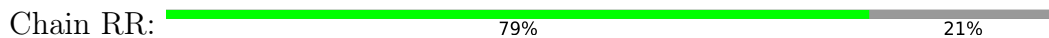


- Molecule 3: Chlorophyll a-b binding protein, chloroplastic





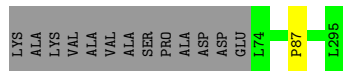
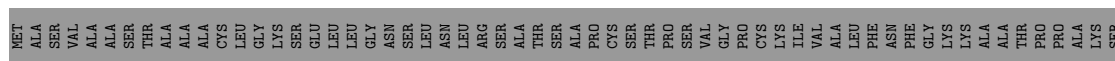
● Molecule 3: Chlorophyll a-b binding protein, chloroplastic



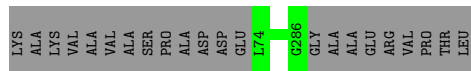
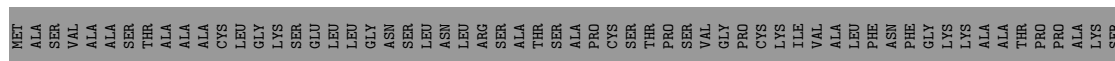
● Molecule 4: Chlorophyll a-b binding protein, chloroplastic



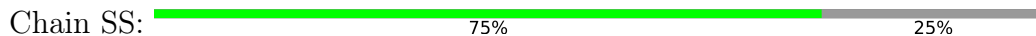
● Molecule 4: Chlorophyll a-b binding protein, chloroplastic



● Molecule 4: Chlorophyll a-b binding protein, chloroplastic



● Molecule 4: Chlorophyll a-b binding protein, chloroplastic



MET ALA ALA SER VAL THR THR ALA ALA ALA CYS LEU LEU GLY LYS SER SER GLU LEU LEU LEU GLY ASN ASN SER SER LEU LEU ASN LEU ARG SER SER THR THR ALA ALA CYS PRO PRO THR THR SER SER VAL VAL GLY CYS LYS ILE VAL ALA ALA PHE PHE ASP ASP LYS LYS ALA ALA THR THR PRO PRO ALA ALA SER

LYS ALA LYS VAL THR LYS VAL ALA SER PRO ALA ALA ASP ASP GLU L274 L100 L293

- Molecule 5: Photosystem II reaction center protein T

Chain Tt: 91% 9%

H1 S30 THR LYS LYS

- Molecule 5: Photosystem II reaction center protein T

Chain T: 91% 9%

H1 S30 THR LYS LYS

- Molecule 5: Photosystem II reaction center protein T

Chain t: 91% 9%

H1 S30 THR LYS LYS

- Molecule 5: Photosystem II reaction center protein T

Chain TT: 91% 9%

H1 S30 THR LYS LYS

- Molecule 6: Photosystem II 5 kDa protein, chloroplastic

Chain Uu: 26% 74%

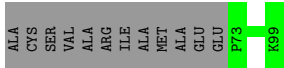
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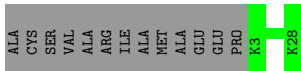
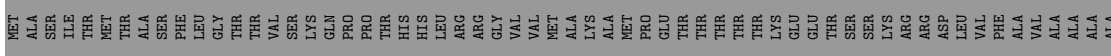
- Molecule 6: Photosystem II 5 kDa protein, chloroplastic

Chain U: 27% 73%

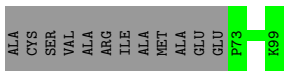
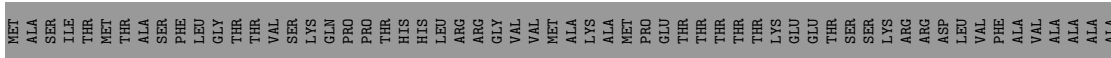
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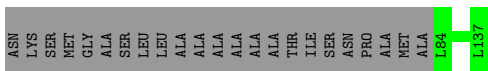
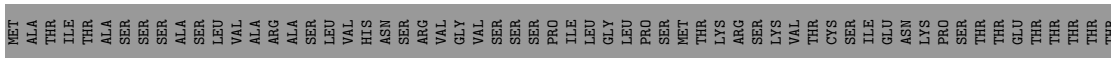
- Molecule 6: Photosystem II 5 kDa protein, chloroplastic



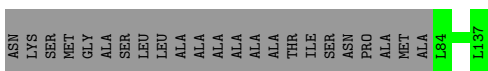
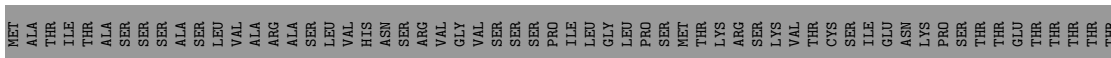
- Molecule 6: Photosystem II 5 kDa protein, chloroplastic



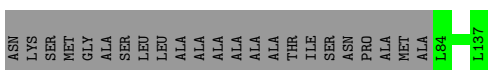
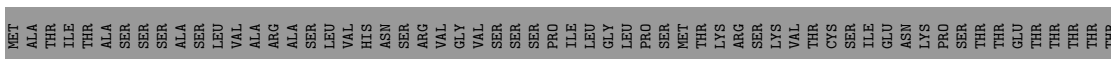
- Molecule 7: Photosystem II reaction center W protein, chloroplastic



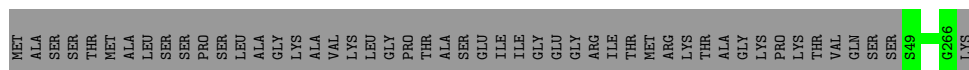
- Molecule 7: Photosystem II reaction center W protein, chloroplastic



- Molecule 7: Photosystem II reaction center W protein, chloroplastic

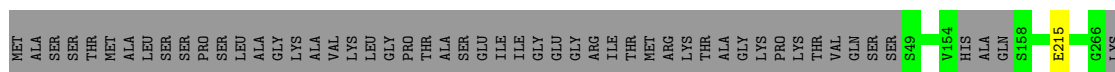


Chain Y_y: 82% 18%



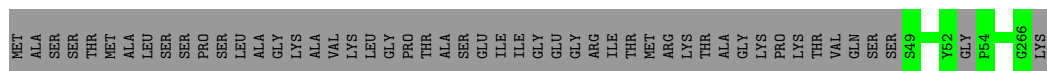
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain G_G: 80% 19%



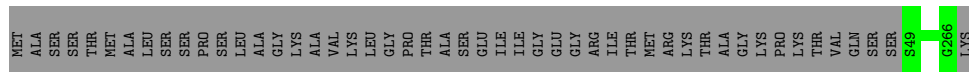
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain N_N: 81% 19%



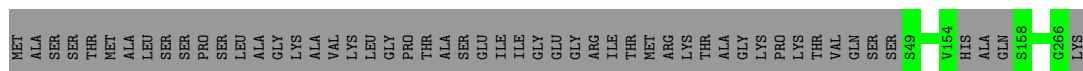
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain Y_Y: 82% 18%



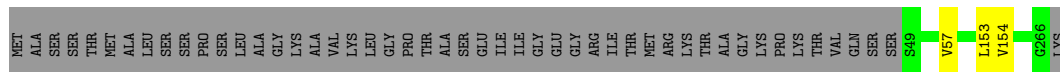
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain g_g: 81% 19%



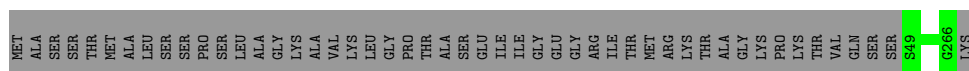
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain n_n: 81% 18%




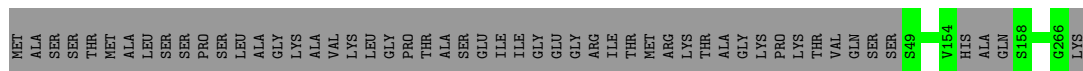
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain y_y: 82% 18%




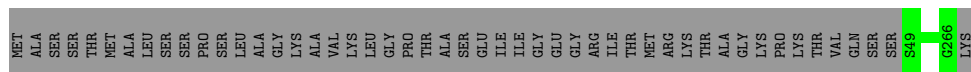
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain GG:  81% 19%




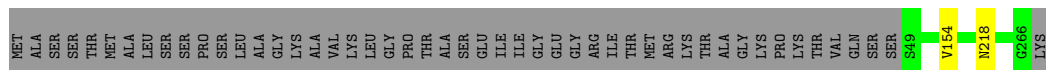
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain NN:  82% 18%




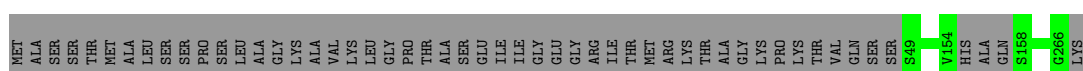
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain YY:  81% 18%




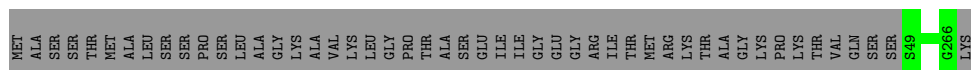
- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain Gg:  81% 19%



- Molecule 9: Chlorophyll a-b binding protein, chloroplastic

Chain Nn:  82% 18%



- Molecule 10: Photosystem II reaction center protein Z

Chain Zz:  97%



- Molecule 10: Photosystem II reaction center protein Z

Chain Z:  98%



- Molecule 10: Photosystem II reaction center protein Z

Chain z:  97%



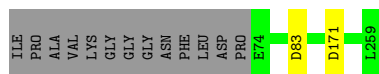
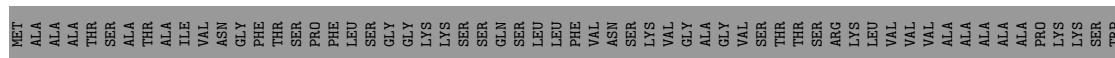
- Molecule 10: Photosystem II reaction center protein Z

Chain ZZ:  95%



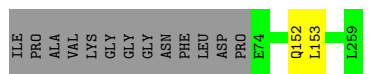
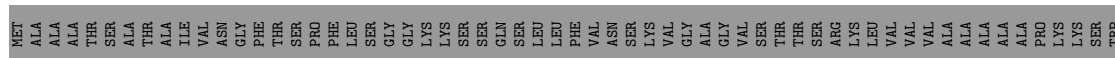
- Molecule 11: Chlorophyll a-b binding protein CP24, chloroplastic

Chain 44:  71%



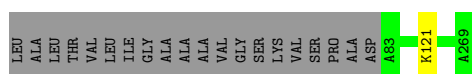
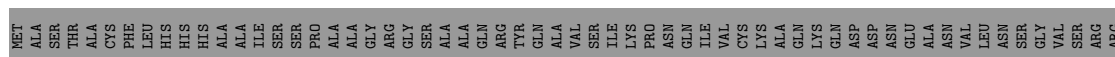
- Molecule 11: Chlorophyll a-b binding protein CP24, chloroplastic

Chain 4:  71%



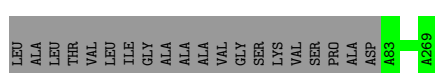
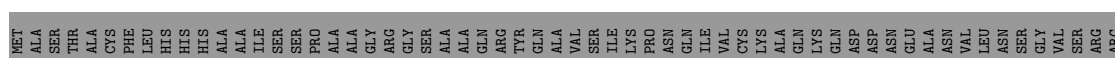
- Molecule 12: Oxygen-evolving enhancer protein 2, chloroplastic

Chain Pp:  70%



- Molecule 12: Oxygen-evolving enhancer protein 2, chloroplastic

Chain p:  70%



- Molecule 12: Oxygen-evolving enhancer protein 2, chloroplastic

Chain P:  69% 30%

MET ALA ALA SER THR THR ALA CYS PHE LEU HIS HIS HIS HIS ALA ALA ILE SER SER SER PRO ALA ALA GLY ARG GLY SER ALA ALA ALA GLN ARG TYR GLN ALA VAL SER ILE LYS PRO ASN ASN ILE VAL CYS LYS ALA GLN LYS ASP ASP ASN GLU ALA ASN VAL LEU ASN GLY VAL SER ARG ARG

LEU ALA LEU THR VAL LEU ILE GLY ALA ALA ALA VAL GLY SER LYS VAL SER PRO ALA ASP A83 D107 D236 A289

- Molecule 12: Oxygen-evolving enhancer protein 2, chloroplastic

Chain PP:  70% 30%

MET ALA ALA SER THR THR ALA CYS PHE LEU HIS HIS HIS HIS ALA ALA ILE SER SER SER PRO ALA ALA GLY ARG ARG GLY SER ALA ALA ALA GLN ARG TYR GLN ALA VAL SER ILE LYS PRO ASN ASN ILE VAL CYS LYS ALA GLN LYS ASP ASP ASN GLU ALA ASN VAL LEU ASN GLY VAL SER ARG ARG

LEU ALA LEU THR VAL LEU ILE GLY ALA ALA ALA VAL GLY SER LYS VAL SER PRO ALA ASP A83 A289

- Molecule 13: Oxygen-evolving enhancer protein 3, chloroplastic

Chain Qq:  63% 37%

MET ALA GLN MET MET ALA SER MET ALA ALA ALA LEU ARG GLY ALA SER GLN VAL VAL LEU GLY LEU LEU GLN ILE SER GLY SER ASN ARG LEU SER GLY PRO THR THR THR ARG VAL VAL VAL PRO LYS MET GLY LEU ASN ILE ARG ALA GLN VAL VAL SER ALA GLU ALA GLU THR SER

ARG ARG ALA MET LEU PHE VAL ALA ALA ALA LEU LEU ALA SER GLY PHE VAL VAL LYS ALA VAL VAL LEU ALA ALA GLN ILE SER GLY SER ASN ARG LEU SER GLY PRO THR THR THR ARG VAL VAL VAL PRO LYS MET GLY LEU ASN ILE ARG ALA GLN VAL VAL SER ALA GLU ALA GLU THR SER

- Molecule 13: Oxygen-evolving enhancer protein 3, chloroplastic

Chain q:  63% 37%

MET ALA GLN MET MET ALA SER MET ALA ALA ALA LEU ARG GLY ALA SER GLN VAL VAL LEU GLY LEU LEU GLN ILE SER GLY SER ASN ARG LEU SER GLY PRO THR THR THR ARG VAL VAL VAL PRO LYS MET GLY LEU ASN ILE ARG ALA GLN VAL VAL SER ALA GLU ALA GLU THR SER

ARG ARG ALA MET LEU PHE VAL ALA ALA ALA LEU LEU ALA SER GLY PHE VAL VAL LYS ALA VAL VAL LEU ALA ALA GLN ILE SER GLY SER ASN ARG LEU SER GLY PRO THR THR THR ARG VAL VAL VAL PRO LYS MET GLY LEU ASN ILE ARG ALA GLN VAL VAL SER ALA GLU ALA GLU THR SER

- Molecule 13: Oxygen-evolving enhancer protein 3, chloroplastic

Chain Q:  63% 37%

MET ALA GLN MET MET ALA SER MET ALA ALA ALA LEU ARG GLY ALA SER GLN VAL VAL LEU GLY LEU LEU GLN ILE SER GLY SER ASN ARG LEU SER GLY PRO THR THR THR ARG VAL VAL VAL PRO LYS MET GLY LEU ASN ILE ARG ALA GLN VAL VAL SER ALA GLU ALA GLU THR SER

ARG ARG ALA MET LEU PHE VAL ALA ALA ALA LEU LEU ALA SER GLY PHE VAL VAL LYS ALA VAL VAL LEU ALA ALA GLN ILE SER GLY SER ASN ARG LEU SER GLY PRO THR THR THR ARG VAL VAL VAL PRO LYS MET GLY LEU ASN ILE ARG ALA GLN VAL VAL SER ALA GLU ALA GLU THR SER

- Molecule 13: Oxygen-evolving enhancer protein 3, chloroplastic

GLU
ILE
ALA
ARG
GLY
SER
ASP
ASN
ARG
GLY
THR
LEU
LEU
LEU
VAL
LEU
VAL
PHE
LEU
ASN
ALA
ILE
GLY
THR
TRP
VAL
LEU
PHE
ASN
ILE
LEU
GLN
PRO
ALA
LEU
ASN
GLN
LEU
LYS
MET
SER
GLN

● Molecule 18: Photosystem II CP43 reaction center protein



MET
LYS
THR
LEU
TYR
SER
LEU
ARG
ARG
PHE
TYR
PRO
VAL
GLU
THR
LEU
PHE
ASN
GLY
THR
LEU
LEU
LEU
A24
V417
L472
ASN

● Molecule 18: Photosystem II CP43 reaction center protein



MET
LYS
THR
LEU
TYR
SER
LEU
ARG
ARG
PHE
TYR
PRO
VAL
GLU
THR
LEU
PHE
ASN
GLY
THR
LEU
LEU
LEU
A24
L472
ASN

● Molecule 18: Photosystem II CP43 reaction center protein



MET
LYS
THR
LEU
TYR
SER
LEU
ARG
ARG
PHE
TYR
PRO
VAL
GLU
THR
LEU
PHE
ASN
GLY
THR
LEU
LEU
LEU
A24
L472
ASN

● Molecule 18: Photosystem II CP43 reaction center protein



MET
LYS
THR
LEU
TYR
SER
LEU
ARG
ARG
PHE
TYR
PRO
VAL
GLU
THR
LEU
PHE
ASN
GLY
THR
LEU
LEU
LEU
A24
N68
L472
ASN

● Molecule 19: Photosystem II D2 protein



MET
THR
ILE
ALA
VAL
GLY
LYS
PHE
THR
LYS
ASP
GLU
LYS
D13
A351

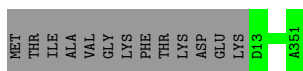
● Molecule 19: Photosystem II D2 protein



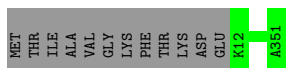
MET
THR
ILE
ALA
VAL
GLY
LYS
PHE
THR
LYS
ASP
GLU
K12
A351

● Molecule 19: Photosystem II D2 protein





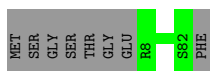
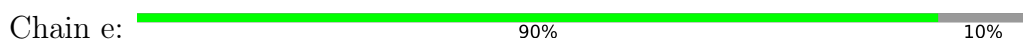
- Molecule 19: Photosystem II D2 protein



- Molecule 20: Cytochrome b559 subunit alpha



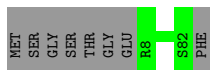
- Molecule 20: Cytochrome b559 subunit alpha



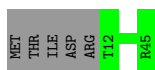
- Molecule 20: Cytochrome b559 subunit alpha



- Molecule 20: Cytochrome b559 subunit alpha

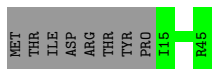


- Molecule 21: Cytochrome b559 subunit beta

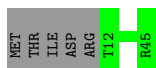
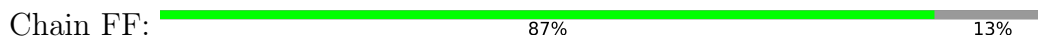


- Molecule 21: Cytochrome b559 subunit beta

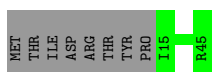
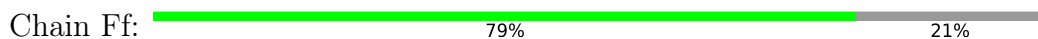




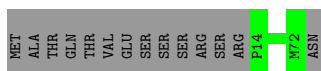
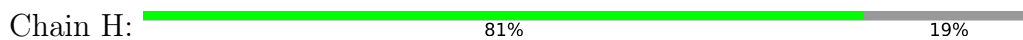
- Molecule 21: Cytochrome b559 subunit beta



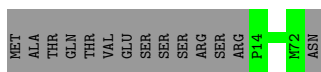
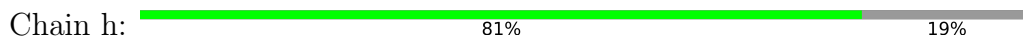
- Molecule 21: Cytochrome b559 subunit beta



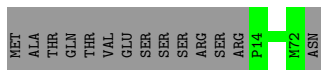
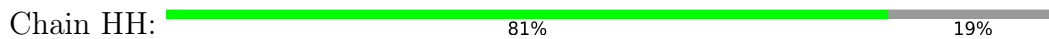
- Molecule 22: Photosystem II reaction center protein H



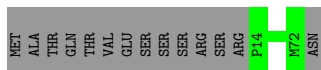
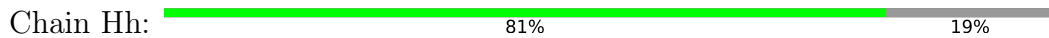
- Molecule 22: Photosystem II reaction center protein H



- Molecule 22: Photosystem II reaction center protein H



- Molecule 22: Photosystem II reaction center protein H



- Molecule 23: Photosystem II reaction center protein I





- Molecule 23: Photosystem II reaction center protein I

Chain i: 92% 8%



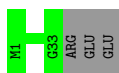
- Molecule 23: Photosystem II reaction center protein I

Chain II: 97%



- Molecule 23: Photosystem II reaction center protein I

Chain Ii: 92% 8%



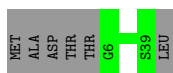
- Molecule 24: Photosystem II reaction center protein J

Chain J: 92% 8%



- Molecule 24: Photosystem II reaction center protein J

Chain j: 85% 15%



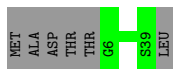
- Molecule 24: Photosystem II reaction center protein J

Chain JJ: 92% 8%



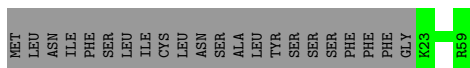
- Molecule 24: Photosystem II reaction center protein J

Chain Jj: 85% 15%



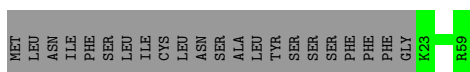
- Molecule 25: Photosystem II reaction center protein K

Chain K: 63% 37%



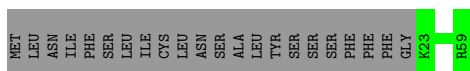
- Molecule 25: Photosystem II reaction center protein K

Chain k: 63% 37%



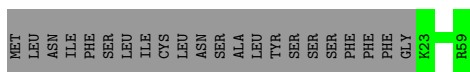
- Molecule 25: Photosystem II reaction center protein K

Chain KK: 63% 37%



- Molecule 25: Photosystem II reaction center protein K

Chain Kk: 63% 37%



- Molecule 26: Photosystem II reaction center protein L

Chain L: 92% 8%



- Molecule 26: Photosystem II reaction center protein L

Chain l: 95% 5%



- Molecule 26: Photosystem II reaction center protein L

Chain LL: 92% 8%



- Molecule 26: Photosystem II reaction center protein L

Chain Ll: 95% 5%



- Molecule 27: Photosystem II reaction center protein M

Chain M: 97% .



- Molecule 27: Photosystem II reaction center protein M

Chain m: 94% 6%



- Molecule 27: Photosystem II reaction center protein M

Chain MM: 97% .



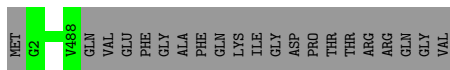
- Molecule 27: Photosystem II reaction center protein M

Chain Mm: 94% 6%



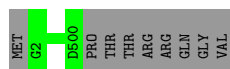
- Molecule 28: Photosystem II CP47 reaction center protein

Chain b: 96% .



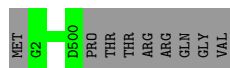
- Molecule 28: Photosystem II CP47 reaction center protein

Chain BB: 98% .



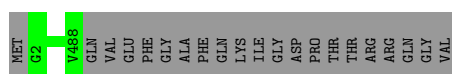
- Molecule 28: Photosystem II CP47 reaction center protein

Chain B: 98%



- Molecule 28: Photosystem II CP47 reaction center protein

Chain Bb: 96%



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	93684	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	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: LMG, LUT, BCR, PL9, HEM, PHO, LMU, FE2, NEX, SQD, BCT, CLA, CL, OEX, DGD, CHL, LHG, XAT

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	0.31	0/2700	0.55	0/3682
1	AA	0.30	0/2700	0.53	0/3682
1	Aa	0.29	0/2694	0.54	0/3674
1	a	0.30	0/2694	0.54	0/3674
2	O	0.28	0/1829	0.55	0/2471
2	OO	0.28	0/1829	0.54	0/2471
2	Oo	0.28	0/1811	0.54	0/2448
2	o	0.28	0/1811	0.55	0/2448
3	R	0.27	0/1819	0.55	0/2475
3	RR	0.28	0/1819	0.56	0/2475
3	Rr	0.28	0/1824	0.55	0/2481
3	r	0.27	0/1824	0.54	0/2481
4	S	0.29	0/1760	0.57	0/2393
4	SS	0.29	0/1760	0.57	1/2393 (0.0%)
4	Ss	0.28	0/1696	0.53	0/2305
4	s	0.28	0/1696	0.53	0/2305
5	T	0.35	0/252	0.51	0/341
5	TT	0.34	0/252	0.48	0/341
5	Tt	0.32	0/252	0.47	0/341
5	t	0.33	0/252	0.49	0/341
6	U	0.34	0/214	0.67	0/286
6	UU	0.31	0/214	0.57	0/286
6	Uu	0.34	0/206	0.70	0/275
6	u	0.32	0/206	0.73	0/275
7	W	0.31	0/429	0.59	0/582
7	WW	0.32	0/429	0.55	0/582
7	Ww	0.31	0/429	0.52	0/582
7	w	0.31	0/429	0.58	0/582
8	X	0.28	0/331	0.49	0/453
8	XX	0.27	0/347	0.54	0/473
8	Xx	0.25	0/241	0.44	0/330

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
8	x	0.29	0/241	0.48	0/330
9	G	0.33	0/1686	0.62	1/2295 (0.0%)
9	GG	0.29	0/1686	0.55	0/2295
9	Gg	0.29	0/1686	0.54	0/2295
9	N	0.30	0/1707	0.55	0/2323
9	NN	0.29	0/1712	0.53	0/2332
9	Nn	0.30	0/1712	0.55	0/2332
9	Y	0.30	0/1712	0.53	0/2332
9	YY	0.28	0/1712	0.51	0/2332
9	Yy	0.29	0/1712	0.52	0/2332
9	g	0.31	0/1686	0.55	0/2295
9	n	0.32	0/1712	0.58	0/2332
9	y	0.31	0/1712	0.54	0/2332
10	Z	0.27	0/464	0.46	0/636
10	ZZ	0.25	0/464	0.47	0/636
10	Zz	0.25	0/464	0.49	0/636
10	z	0.29	0/464	0.60	1/636 (0.2%)
11	4	0.30	0/1501	0.61	3/2043 (0.1%)
11	44	0.28	0/1501	0.54	0/2043
12	P	0.31	0/1465	0.61	2/1978 (0.1%)
12	PP	0.28	0/1465	0.54	0/1978
12	Pp	0.28	0/1465	0.53	0/1978
12	p	0.28	0/1465	0.53	0/1978
13	Q	0.31	0/1177	0.62	1/1597 (0.1%)
13	QQ	0.28	0/1177	0.55	0/1597
13	Qq	0.29	0/1177	0.62	1/1597 (0.1%)
13	q	0.29	0/1177	0.61	0/1597
14	1	0.30	0/1622	0.53	0/2206
14	11	0.29	0/1616	0.56	0/2198
14	2	0.28	0/1713	0.52	0/2333
14	22	0.28	0/1713	0.51	0/2333
15	3	0.29	0/1668	0.58	0/2265
15	33	0.27	0/1661	0.52	0/2257
16	0	0.30	0/736	0.57	0/997
16	00	0.29	0/736	0.54	0/997
17	5	0.29	0/313	0.60	0/426
17	55	0.26	0/313	0.62	0/426
18	C	0.30	0/3589	0.55	0/4891
18	CC	0.29	0/3589	0.52	0/4891
18	Cc	0.28	0/3589	0.54	0/4891
18	c	0.29	0/3589	0.55	0/4891
19	D	0.32	0/2787	0.55	0/3800
19	DD	0.30	0/2787	0.54	0/3800

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
19	Dd	0.28	0/2796	0.52	0/3811
19	d	0.30	0/2796	0.53	0/3811
20	E	0.32	0/658	0.59	0/894
20	EE	0.29	0/658	0.55	0/894
20	Ee	0.27	0/628	0.57	0/854
20	e	0.30	0/628	0.60	0/854
21	F	0.28	0/285	0.57	0/387
21	FF	0.27	0/285	0.56	0/387
21	Ff	0.26	0/257	0.64	0/347
21	f	0.27	0/257	0.65	0/347
22	H	0.28	0/444	0.52	0/605
22	HH	0.27	0/444	0.50	0/605
22	Hh	0.27	0/444	0.50	0/605
22	h	0.28	0/444	0.55	0/605
23	I	0.35	0/294	0.57	0/397
23	II	0.33	0/294	0.53	0/397
23	Ii	0.31	0/274	0.50	0/371
23	i	0.36	0/274	0.56	0/371
24	J	0.28	0/275	0.61	0/374
24	JJ	0.30	0/275	0.57	0/374
24	Jj	0.26	0/253	0.57	0/343
24	j	0.28	0/253	0.55	0/343
25	K	0.33	0/320	0.56	0/436
25	KK	0.31	0/320	0.49	0/436
25	Kk	0.29	0/319	0.55	0/436
25	k	0.30	0/320	0.56	0/436
26	L	0.35	0/303	0.54	0/412
26	LL	0.32	0/303	0.49	0/412
26	Ll	0.31	0/312	0.49	0/424
26	l	0.32	0/312	0.50	0/424
27	M	0.31	0/262	0.45	0/358
27	MM	0.29	0/262	0.45	0/358
27	Mm	0.32	0/254	0.46	0/348
27	m	0.35	0/254	0.50	0/348
28	B	0.30	0/4047	0.56	0/5507
28	BB	0.30	0/4047	0.55	0/5507
28	Bb	0.29	0/3951	0.55	0/5379
28	b	0.30	0/3951	0.57	0/5379
All	All	0.29	0/137625	0.55	10/187193 (0.0%)

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	O	0	1
2	OO	0	1
9	YY	0	2
9	n	0	2
14	11	0	2
All	All	0	8

There are no bond length outliers.

The worst 5 of 10 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	Q	160	ASP	CB-CG-OD2	6.96	124.56	118.30
13	Qq	93	PRO	CA-N-CD	-6.81	101.97	111.50
4	SS	100	LEU	CA-CB-CG	6.47	130.19	115.30
9	G	215	GLU	OE1-CD-OE2	-6.16	115.91	123.30
12	P	236	ASP	CB-CG-OD2	5.95	123.66	118.30

There are no chirality outliers.

5 of 8 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
14	11	154	VAL	Peptide
14	11	232	GLN	Peptide
2	O	266	GLU	Peptide
9	n	153	LEU	Peptide
9	n	154	VAL	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	333/351 (95%)	313 (94%)	20 (6%)	0	100	100
1	AA	333/351 (95%)	305 (92%)	28 (8%)	0	100	100
1	Aa	332/351 (95%)	317 (96%)	14 (4%)	1 (0%)	37	68
1	a	332/351 (95%)	318 (96%)	14 (4%)	0	100	100
2	O	232/332 (70%)	219 (94%)	13 (6%)	0	100	100
2	OO	232/332 (70%)	216 (93%)	16 (7%)	0	100	100
2	Oo	230/332 (69%)	206 (90%)	24 (10%)	0	100	100
2	o	230/332 (69%)	210 (91%)	20 (9%)	0	100	100
3	R	223/286 (78%)	215 (96%)	8 (4%)	0	100	100
3	RR	223/286 (78%)	212 (95%)	10 (4%)	1 (0%)	30	63
3	Rr	224/286 (78%)	216 (96%)	8 (4%)	0	100	100
3	r	224/286 (78%)	216 (96%)	8 (4%)	0	100	100
4	S	220/295 (75%)	205 (93%)	14 (6%)	1 (0%)	25	59
4	SS	220/295 (75%)	201 (91%)	19 (9%)	0	100	100
4	Ss	211/295 (72%)	196 (93%)	15 (7%)	0	100	100
4	s	211/295 (72%)	199 (94%)	12 (6%)	0	100	100
5	T	28/33 (85%)	28 (100%)	0	0	100	100
5	TT	28/33 (85%)	28 (100%)	0	0	100	100
5	Tt	28/33 (85%)	28 (100%)	0	0	100	100
5	t	28/33 (85%)	28 (100%)	0	0	100	100
6	U	25/99 (25%)	25 (100%)	0	0	100	100
6	UU	25/99 (25%)	24 (96%)	1 (4%)	0	100	100
6	Uu	24/99 (24%)	22 (92%)	2 (8%)	0	100	100
6	u	24/99 (24%)	24 (100%)	0	0	100	100
7	W	52/137 (38%)	51 (98%)	1 (2%)	0	100	100
7	WW	52/137 (38%)	52 (100%)	0	0	100	100
7	Ww	52/137 (38%)	50 (96%)	2 (4%)	0	100	100
7	w	52/137 (38%)	48 (92%)	4 (8%)	0	100	100
8	X	44/117 (38%)	43 (98%)	1 (2%)	0	100	100
8	XX	46/117 (39%)	46 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	Xx	32/117 (27%)	32 (100%)	0	0	100	100
8	x	32/117 (27%)	32 (100%)	0	0	100	100
9	G	211/267 (79%)	198 (94%)	13 (6%)	0	100	100
9	GG	211/267 (79%)	200 (95%)	11 (5%)	0	100	100
9	Gg	211/267 (79%)	197 (93%)	14 (7%)	0	100	100
9	N	213/267 (80%)	196 (92%)	17 (8%)	0	100	100
9	NN	216/267 (81%)	203 (94%)	13 (6%)	0	100	100
9	Nn	216/267 (81%)	195 (90%)	21 (10%)	0	100	100
9	Y	216/267 (81%)	207 (96%)	9 (4%)	0	100	100
9	YY	216/267 (81%)	205 (95%)	11 (5%)	0	100	100
9	Yy	216/267 (81%)	204 (94%)	12 (6%)	0	100	100
9	g	211/267 (79%)	197 (93%)	14 (7%)	0	100	100
9	n	216/267 (81%)	195 (90%)	20 (9%)	1 (0%)	25	59
9	y	216/267 (81%)	206 (95%)	10 (5%)	0	100	100
10	Z	59/62 (95%)	59 (100%)	0	0	100	100
10	ZZ	59/62 (95%)	59 (100%)	0	0	100	100
10	Zz	59/62 (95%)	59 (100%)	0	0	100	100
10	z	59/62 (95%)	59 (100%)	0	0	100	100
11	4	184/259 (71%)	172 (94%)	12 (6%)	0	100	100
11	44	184/259 (71%)	174 (95%)	8 (4%)	2 (1%)	12	43
12	P	185/267 (69%)	169 (91%)	16 (9%)	0	100	100
12	PP	185/267 (69%)	171 (92%)	14 (8%)	0	100	100
12	Pp	185/267 (69%)	176 (95%)	9 (5%)	0	100	100
12	p	185/267 (69%)	178 (96%)	7 (4%)	0	100	100
13	Q	145/232 (62%)	135 (93%)	10 (7%)	0	100	100
13	QQ	145/232 (62%)	134 (92%)	11 (8%)	0	100	100
13	Qq	145/232 (62%)	138 (95%)	7 (5%)	0	100	100
13	q	145/232 (62%)	141 (97%)	4 (3%)	0	100	100
14	1	201/267 (75%)	191 (95%)	9 (4%)	1 (0%)	25	59
14	11	200/267 (75%)	189 (94%)	11 (6%)	0	100	100
14	2	216/267 (81%)	203 (94%)	13 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	22	216/267 (81%)	206 (95%)	10 (5%)	0	100	100
15	3	203/264 (77%)	195 (96%)	8 (4%)	0	100	100
15	33	201/264 (76%)	190 (94%)	11 (6%)	0	100	100
16	0	97/140 (69%)	90 (93%)	7 (7%)	0	100	100
16	00	97/140 (69%)	90 (93%)	7 (7%)	0	100	100
17	5	38/199 (19%)	38 (100%)	0	0	100	100
17	55	38/199 (19%)	36 (95%)	2 (5%)	0	100	100
18	C	447/473 (94%)	429 (96%)	17 (4%)	1 (0%)	44	74
18	CC	447/473 (94%)	433 (97%)	14 (3%)	0	100	100
18	Cc	447/473 (94%)	423 (95%)	24 (5%)	0	100	100
18	c	447/473 (94%)	421 (94%)	26 (6%)	0	100	100
19	D	337/352 (96%)	322 (96%)	15 (4%)	0	100	100
19	DD	337/352 (96%)	323 (96%)	14 (4%)	0	100	100
19	Dd	338/352 (96%)	328 (97%)	10 (3%)	0	100	100
19	d	338/352 (96%)	328 (97%)	10 (3%)	0	100	100
20	E	78/83 (94%)	75 (96%)	3 (4%)	0	100	100
20	EE	78/83 (94%)	77 (99%)	1 (1%)	0	100	100
20	Ee	73/83 (88%)	72 (99%)	1 (1%)	0	100	100
20	e	73/83 (88%)	72 (99%)	1 (1%)	0	100	100
21	F	32/39 (82%)	31 (97%)	1 (3%)	0	100	100
21	FF	32/39 (82%)	30 (94%)	2 (6%)	0	100	100
21	Ff	29/39 (74%)	29 (100%)	0	0	100	100
21	f	29/39 (74%)	29 (100%)	0	0	100	100
22	H	57/73 (78%)	54 (95%)	3 (5%)	0	100	100
22	HH	57/73 (78%)	56 (98%)	1 (2%)	0	100	100
22	Hh	57/73 (78%)	56 (98%)	1 (2%)	0	100	100
22	h	57/73 (78%)	56 (98%)	1 (2%)	0	100	100
23	I	33/36 (92%)	32 (97%)	1 (3%)	0	100	100
23	II	33/36 (92%)	31 (94%)	2 (6%)	0	100	100
23	Ii	31/36 (86%)	31 (100%)	0	0	100	100
23	i	31/36 (86%)	29 (94%)	2 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
24	J	35/40 (88%)	35 (100%)	0	0	100	100
24	JJ	35/40 (88%)	35 (100%)	0	0	100	100
24	Jj	32/40 (80%)	31 (97%)	1 (3%)	0	100	100
24	j	32/40 (80%)	31 (97%)	1 (3%)	0	100	100
25	K	35/59 (59%)	34 (97%)	1 (3%)	0	100	100
25	KK	35/59 (59%)	34 (97%)	1 (3%)	0	100	100
25	Kk	35/59 (59%)	31 (89%)	4 (11%)	0	100	100
25	k	35/59 (59%)	34 (97%)	1 (3%)	0	100	100
26	L	33/38 (87%)	33 (100%)	0	0	100	100
26	LL	33/38 (87%)	33 (100%)	0	0	100	100
26	Ll	34/38 (90%)	34 (100%)	0	0	100	100
26	l	34/38 (90%)	34 (100%)	0	0	100	100
27	M	31/34 (91%)	31 (100%)	0	0	100	100
27	MM	31/34 (91%)	30 (97%)	1 (3%)	0	100	100
27	Mm	30/34 (88%)	30 (100%)	0	0	100	100
27	m	30/34 (88%)	30 (100%)	0	0	100	100
28	B	497/508 (98%)	472 (95%)	25 (5%)	0	100	100
28	BB	497/508 (98%)	477 (96%)	20 (4%)	0	100	100
28	Bb	485/508 (96%)	471 (97%)	14 (3%)	0	100	100
28	b	485/508 (96%)	471 (97%)	14 (3%)	0	100	100
All	All	16994/21780 (78%)	16158 (95%)	828 (5%)	8 (0%)	100	100

5 of 8 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
11	44	171	ASP
14	1	147	TYR
9	n	57	VAL
3	RR	58	TYR
1	Aa	334	ARG

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	271/284 (95%)	271 (100%)	0	100	100
1	AA	271/284 (95%)	271 (100%)	0	100	100
1	Aa	270/284 (95%)	270 (100%)	0	100	100
1	a	270/284 (95%)	270 (100%)	0	100	100
2	O	196/269 (73%)	196 (100%)	0	100	100
2	OO	196/269 (73%)	196 (100%)	0	100	100
2	Oo	194/269 (72%)	194 (100%)	0	100	100
2	o	194/269 (72%)	194 (100%)	0	100	100
3	R	185/229 (81%)	185 (100%)	0	100	100
3	RR	185/229 (81%)	185 (100%)	0	100	100
3	Rr	186/229 (81%)	186 (100%)	0	100	100
3	r	186/229 (81%)	186 (100%)	0	100	100
4	S	173/226 (76%)	173 (100%)	0	100	100
4	SS	173/226 (76%)	173 (100%)	0	100	100
4	Ss	167/226 (74%)	166 (99%)	1 (1%)	84	91
4	s	167/226 (74%)	167 (100%)	0	100	100
5	T	27/30 (90%)	27 (100%)	0	100	100
5	TT	27/30 (90%)	27 (100%)	0	100	100
5	Tt	27/30 (90%)	27 (100%)	0	100	100
5	t	27/30 (90%)	27 (100%)	0	100	100
6	U	23/80 (29%)	23 (100%)	0	100	100
6	UU	23/80 (29%)	23 (100%)	0	100	100
6	Uu	22/80 (28%)	22 (100%)	0	100	100
6	u	22/80 (28%)	22 (100%)	0	100	100
7	W	44/110 (40%)	44 (100%)	0	100	100
7	WW	44/110 (40%)	44 (100%)	0	100	100
7	Ww	44/110 (40%)	44 (100%)	0	100	100
7	w	44/110 (40%)	44 (100%)	0	100	100
8	X	34/90 (38%)	34 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	XX	36/90 (40%)	36 (100%)	0	100	100
8	Xx	25/90 (28%)	25 (100%)	0	100	100
8	x	25/90 (28%)	25 (100%)	0	100	100
9	G	165/205 (80%)	165 (100%)	0	100	100
9	GG	165/205 (80%)	165 (100%)	0	100	100
9	Gg	165/205 (80%)	165 (100%)	0	100	100
9	N	167/205 (82%)	167 (100%)	0	100	100
9	NN	167/205 (82%)	167 (100%)	0	100	100
9	Nn	167/205 (82%)	167 (100%)	0	100	100
9	Y	167/205 (82%)	167 (100%)	0	100	100
9	YY	167/205 (82%)	167 (100%)	0	100	100
9	Yy	167/205 (82%)	167 (100%)	0	100	100
9	g	165/205 (80%)	165 (100%)	0	100	100
9	n	167/205 (82%)	167 (100%)	0	100	100
9	y	167/205 (82%)	167 (100%)	0	100	100
10	Z	52/53 (98%)	52 (100%)	0	100	100
10	ZZ	52/53 (98%)	50 (96%)	2 (4%)	28	59
10	Zz	52/53 (98%)	51 (98%)	1 (2%)	52	74
10	z	52/53 (98%)	52 (100%)	0	100	100
11	4	145/198 (73%)	145 (100%)	0	100	100
11	44	145/198 (73%)	145 (100%)	0	100	100
12	P	153/212 (72%)	153 (100%)	0	100	100
12	PP	153/212 (72%)	153 (100%)	0	100	100
12	Pp	153/212 (72%)	152 (99%)	1 (1%)	81	90
12	p	153/212 (72%)	153 (100%)	0	100	100
13	Q	128/187 (68%)	128 (100%)	0	100	100
13	QQ	128/187 (68%)	128 (100%)	0	100	100
13	Qq	128/187 (68%)	128 (100%)	0	100	100
13	q	128/187 (68%)	128 (100%)	0	100	100
14	1	160/206 (78%)	160 (100%)	0	100	100
14	11	159/206 (77%)	158 (99%)	1 (1%)	84	91

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	2	168/206 (82%)	168 (100%)	0	100	100
14	22	168/206 (82%)	168 (100%)	0	100	100
15	3	164/209 (78%)	164 (100%)	0	100	100
15	33	164/209 (78%)	164 (100%)	0	100	100
16	0	72/107 (67%)	72 (100%)	0	100	100
16	00	72/107 (67%)	72 (100%)	0	100	100
17	5	33/158 (21%)	33 (100%)	0	100	100
17	55	33/158 (21%)	33 (100%)	0	100	100
18	C	351/374 (94%)	351 (100%)	0	100	100
18	CC	351/374 (94%)	351 (100%)	0	100	100
18	Cc	351/374 (94%)	350 (100%)	1 (0%)	91	95
18	c	351/374 (94%)	351 (100%)	0	100	100
19	D	271/282 (96%)	271 (100%)	0	100	100
19	DD	271/282 (96%)	271 (100%)	0	100	100
19	Dd	272/282 (96%)	272 (100%)	0	100	100
19	d	272/282 (96%)	272 (100%)	0	100	100
20	E	70/73 (96%)	70 (100%)	0	100	100
20	EE	70/73 (96%)	70 (100%)	0	100	100
20	Ee	67/73 (92%)	67 (100%)	0	100	100
20	e	67/73 (92%)	67 (100%)	0	100	100
21	F	29/34 (85%)	29 (100%)	0	100	100
21	FF	29/34 (85%)	29 (100%)	0	100	100
21	Ff	26/34 (76%)	26 (100%)	0	100	100
21	f	26/34 (76%)	26 (100%)	0	100	100
22	H	48/61 (79%)	48 (100%)	0	100	100
22	HH	48/61 (79%)	48 (100%)	0	100	100
22	Hh	48/61 (79%)	48 (100%)	0	100	100
22	h	48/61 (79%)	48 (100%)	0	100	100
23	I	32/33 (97%)	32 (100%)	0	100	100
23	II	32/33 (97%)	32 (100%)	0	100	100
23	Ii	30/33 (91%)	30 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	i	30/33 (91%)	30 (100%)	0	100	100
24	J	28/30 (93%)	28 (100%)	0	100	100
24	JJ	28/30 (93%)	28 (100%)	0	100	100
24	Jj	25/30 (83%)	25 (100%)	0	100	100
24	j	25/30 (83%)	25 (100%)	0	100	100
25	K	32/52 (62%)	32 (100%)	0	100	100
25	KK	32/52 (62%)	32 (100%)	0	100	100
25	Kk	32/52 (62%)	32 (100%)	0	100	100
25	k	32/52 (62%)	32 (100%)	0	100	100
26	L	33/36 (92%)	33 (100%)	0	100	100
26	LL	33/36 (92%)	33 (100%)	0	100	100
26	Ll	34/36 (94%)	34 (100%)	0	100	100
26	l	34/36 (94%)	34 (100%)	0	100	100
27	M	29/30 (97%)	29 (100%)	0	100	100
27	MM	29/30 (97%)	29 (100%)	0	100	100
27	Mm	28/30 (93%)	28 (100%)	0	100	100
27	m	28/30 (93%)	28 (100%)	0	100	100
28	B	398/406 (98%)	398 (100%)	0	100	100
28	BB	398/406 (98%)	398 (100%)	0	100	100
28	Bb	389/406 (96%)	389 (100%)	0	100	100
28	b	389/406 (96%)	389 (100%)	0	100	100
All	All	13835/17352 (80%)	13828 (100%)	7 (0%)	92	97

5 of 7 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
14	11	232	GLN
10	ZZ	37	LYS
18	Cc	68	ASN
10	ZZ	58	ASN
12	Pp	121	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
14	2	247	HIS
1	a	190	HIS
11	4	152	GLN
28	B	343	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 781 ligands modelled in this entry, 12 are monoatomic - leaving 769 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
36	LHG	J	101	-	26,26,48	1.33	2 (7%)	29,32,54	1.36	3 (10%)
39	CHL	SS	307	-	42,50,74	1.85	5 (11%)	44,85,114	1.34	4 (9%)
36	LHG	CC	523	-	36,36,48	1.05	2 (5%)	39,42,54	1.03	3 (7%)
36	LHG	Gg	319	32	33,33,48	1.12	2 (6%)	36,39,54	1.17	3 (8%)
38	LMG	A	415	-	36,36,55	1.10	2 (5%)	44,44,63	1.11	3 (6%)
42	NEX	R	617	-	38,46,46	1.09	2 (5%)	50,70,70	2.01	13 (26%)
41	XAT	Rr	615	-	39,47,47	1.03	1 (2%)	54,74,74	2.46	21 (38%)
39	CHL	2	606	-	40,49,74	1.95	4 (10%)	42,83,114	1.61	7 (16%)
32	CLA	Y	611	36	42,50,73	1.84	7 (16%)	48,85,113	1.37	5 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	4	303	11	45,53,73	1.81	7 (15%)	52,89,113	1.38	8 (15%)
38	LMG	Dd	408	-	46,46,55	0.97	2 (4%)	54,54,63	1.02	3 (5%)
39	CHL	Ss	607	-	49,57,74	1.75	5 (10%)	52,93,114	1.24	6 (11%)
39	CHL	y	308	-	44,52,74	1.81	5 (11%)	46,87,114	1.32	5 (10%)
32	CLA	11	610	36	39,48,73	1.95	5 (12%)	45,82,113	1.46	8 (17%)
44	DGD	Aa	401	-	56,56,67	0.96	2 (3%)	70,70,81	0.90	3 (4%)
44	DGD	c	518	-	53,53,67	0.95	2 (3%)	67,67,81	0.89	2 (2%)
32	CLA	Gg	304	-	65,73,73	1.51	8 (12%)	76,113,113	1.15	8 (10%)
32	CLA	RR	314	3	49,57,73	1.81	7 (14%)	55,93,113	1.37	9 (16%)
32	CLA	Bb	615	-	65,73,73	1.50	8 (12%)	76,113,113	1.21	7 (9%)
40	LUT	N	616	-	42,43,43	0.97	1 (2%)	51,60,60	1.64	10 (19%)
32	CLA	r	608	3	49,57,73	1.74	6 (12%)	55,93,113	1.36	6 (10%)
34	BCR	B	612	-	41,41,41	0.95	0	56,56,56	1.75	13 (23%)
45	BCT	a	413	30	2,3,3	1.28	0	2,3,3	3.84	2 (100%)
32	CLA	Cc	515	-	43,51,73	1.80	7 (16%)	49,86,113	1.43	7 (14%)
46	HEM	e	101	20,21	41,50,50	1.47	3 (7%)	45,82,82	1.41	7 (15%)
42	NEX	YY	617	-	38,46,46	1.08	2 (5%)	50,70,70	2.07	13 (26%)
38	LMG	C	521	-	51,51,55	0.91	2 (3%)	59,59,63	1.01	3 (5%)
32	CLA	Bb	606	-	65,73,73	1.49	8 (12%)	76,113,113	1.21	9 (11%)
39	CHL	Yy	607	-	43,51,74	1.80	5 (11%)	45,86,114	1.46	6 (13%)
37	SQD	CC	501	-	53,54,54	1.16	5 (9%)	62,65,65	1.23	5 (8%)
39	CHL	NN	606	-	42,50,74	1.84	5 (11%)	44,85,114	1.35	4 (9%)
32	CLA	4	305	-	45,53,73	1.78	6 (13%)	52,89,113	1.44	8 (15%)
42	NEX	y	319	-	38,46,46	1.07	1 (2%)	50,70,70	2.01	11 (22%)
40	LUT	Ss	615	-	42,43,43	0.99	1 (2%)	51,60,60	1.69	13 (25%)
34	BCR	b	617	-	41,41,41	1.00	2 (4%)	56,56,56	2.10	16 (28%)
32	CLA	r	611	-	49,57,73	1.79	7 (14%)	55,93,113	1.31	7 (12%)
32	CLA	SS	305	-	49,57,73	1.74	7 (14%)	55,93,113	1.42	8 (14%)
39	CHL	Y	608	-	50,58,74	1.68	6 (12%)	52,94,114	1.30	6 (11%)
39	CHL	y	311	9	66,74,74	1.50	6 (9%)	73,114,114	1.14	7 (9%)
32	CLA	Nn	314	-	49,57,73	1.72	7 (14%)	55,93,113	1.30	8 (14%)
41	XAT	Gg	301	-	39,47,47	1.22	4 (10%)	54,74,74	2.84	11 (20%)
42	NEX	Y	617	-	38,46,46	1.08	2 (5%)	50,70,70	2.12	13 (26%)
32	CLA	Rr	609	3	65,73,73	1.49	6 (9%)	76,113,113	1.25	7 (9%)
32	CLA	SS	310	4	41,49,73	1.92	6 (14%)	47,84,113	1.37	6 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	C	513	18	65,73,73	1.50	8 (12%)	76,113,113	1.25	6 (7%)
39	CHL	GG	606	-	43,51,74	1.82	6 (13%)	45,86,114	1.29	6 (13%)
34	BCR	BB	617	-	41,41,41	0.97	2 (4%)	56,56,56	1.75	12 (21%)
34	BCR	Bb	617	-	41,41,41	1.05	2 (4%)	56,56,56	2.11	16 (28%)
32	CLA	1	612	14	39,48,73	1.94	5 (12%)	45,82,113	1.56	7 (15%)
32	CLA	s	613	-	49,57,73	1.73	6 (12%)	55,93,113	1.32	7 (12%)
36	LHG	A	413	-	36,36,48	1.07	2 (5%)	39,42,54	1.01	3 (7%)
32	CLA	n	611	36	49,57,73	1.72	6 (12%)	55,93,113	1.39	7 (12%)
32	CLA	y	314	9	65,73,73	1.49	8 (12%)	76,113,113	1.21	8 (10%)
36	LHG	AA	411	-	33,33,48	1.12	2 (6%)	36,39,54	1.22	4 (11%)
32	CLA	Ss	604	-	49,57,73	1.75	6 (12%)	55,93,113	1.36	8 (14%)
32	CLA	Dd	402	-	65,73,73	1.50	7 (10%)	76,113,113	1.19	7 (9%)
39	CHL	2	608	14	40,49,74	1.95	6 (15%)	42,83,114	1.37	6 (14%)
34	BCR	CC	515	-	41,41,41	0.97	1 (2%)	56,56,56	2.02	17 (30%)
32	CLA	c	507	-	65,73,73	1.47	7 (10%)	76,113,113	1.32	8 (10%)
32	CLA	Bb	604	-	65,73,73	1.49	7 (10%)	76,113,113	1.32	9 (11%)
39	CHL	11	605	14	40,49,74	1.97	5 (12%)	42,83,114	1.43	6 (14%)
40	LUT	GG	615	-	42,43,43	0.93	0	51,60,60	1.45	7 (13%)
32	CLA	BB	601	-	65,73,73	1.49	7 (10%)	76,113,113	1.17	9 (11%)
32	CLA	d	402	-	65,73,73	1.51	7 (10%)	76,113,113	1.15	8 (10%)
32	CLA	Gg	313	9	49,57,73	1.72	8 (16%)	55,93,113	1.37	8 (14%)
36	LHG	l	101	-	48,48,48	0.93	2 (4%)	51,54,54	0.96	3 (5%)
39	CHL	33	607	-	40,49,74	1.93	5 (12%)	42,83,114	1.64	7 (16%)
32	CLA	Cc	513	18	65,73,73	1.52	7 (10%)	76,113,113	1.21	8 (10%)
32	CLA	1	603	-	39,48,73	1.92	7 (17%)	45,82,113	1.36	5 (11%)
32	CLA	Bb	614	-	65,73,73	1.45	6 (9%)	76,113,113	1.23	7 (9%)
32	CLA	BB	605	-	65,73,73	1.49	8 (12%)	76,113,113	1.26	9 (11%)
32	CLA	RR	308	3	49,57,73	1.71	7 (14%)	55,93,113	1.46	7 (12%)
32	CLA	g	603	-	65,73,73	1.52	8 (12%)	76,113,113	1.13	8 (10%)
34	BCR	D	406	-	41,41,41	0.83	0	56,56,56	1.92	16 (28%)
32	CLA	b	608	-	65,73,73	1.51	8 (12%)	76,113,113	1.23	8 (10%)
37	SQD	L	102	-	35,36,54	1.45	4 (11%)	44,47,65	1.23	5 (11%)
36	LHG	D	410	-	33,33,48	1.12	2 (6%)	36,39,54	1.11	3 (8%)
32	CLA	Aa	406	1	65,73,73	1.56	9 (13%)	76,113,113	1.24	10 (13%)
41	XAT	N	617	-	39,47,47	1.13	3 (7%)	54,74,74	2.50	14 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	n	610	9	65,73,73	1.52	8 (12%)	76,113,113	1.13	10 (13%)
32	CLA	1	610	36	39,48,73	1.95	5 (12%)	45,82,113	1.45	7 (15%)
32	CLA	Ss	608	4	49,57,73	1.71	6 (12%)	55,93,113	1.42	9 (16%)
39	CHL	Ss	601	4	52,60,74	1.69	5 (9%)	56,97,114	1.23	6 (10%)
32	CLA	Aa	407	-	49,57,73	1.72	8 (16%)	55,93,113	1.45	9 (16%)
38	LMG	DD	409	-	46,46,55	0.98	2 (4%)	54,54,63	0.89	1 (1%)
32	CLA	Yy	614	-	49,57,73	1.71	7 (14%)	55,93,113	1.39	8 (14%)
32	CLA	b	616	-	65,73,73	1.48	7 (10%)	76,113,113	1.19	7 (9%)
39	CHL	GG	607	-	46,54,74	1.77	5 (10%)	49,90,114	1.31	4 (8%)
39	CHL	33	608	15	40,49,74	1.92	5 (12%)	42,83,114	1.69	8 (19%)
32	CLA	3	604	-	39,48,73	1.98	5 (12%)	45,82,113	1.46	7 (15%)
32	CLA	2	609	14	39,48,73	1.95	6 (15%)	45,82,113	1.48	7 (15%)
32	CLA	SS	313	4	49,57,73	1.73	7 (14%)	55,93,113	1.25	6 (10%)
39	CHL	g	609	9	43,51,74	1.81	5 (11%)	45,86,114	1.57	7 (15%)
44	DGD	BB	625	-	57,57,67	0.91	2 (3%)	70,70,81	0.94	3 (4%)
39	CHL	r	606	-	50,58,74	1.72	4 (8%)	52,94,114	1.50	7 (13%)
41	XAT	RR	316	-	39,47,47	1.01	2 (5%)	54,74,74	2.30	16 (29%)
44	DGD	Cc	519	-	56,56,67	0.91	2 (3%)	70,70,81	1.11	7 (10%)
32	CLA	Gg	314	9	39,48,73	1.92	7 (17%)	45,82,113	1.43	6 (13%)
32	CLA	YY	611	36	42,50,73	1.83	7 (16%)	48,85,113	1.37	7 (14%)
32	CLA	Cc	512	-	65,73,73	1.50	7 (10%)	76,113,113	1.25	8 (10%)
32	CLA	D	401	-	65,73,73	1.49	8 (12%)	76,113,113	1.26	9 (11%)
36	LHG	g	618	32	33,33,48	1.13	2 (6%)	36,39,54	1.16	3 (8%)
39	CHL	1	608	14	40,49,74	1.85	5 (12%)	42,83,114	1.75	8 (19%)
32	CLA	C	504	-	65,73,73	1.46	7 (10%)	76,113,113	1.32	8 (10%)
32	CLA	NN	610	9	65,73,73	1.52	8 (12%)	76,113,113	1.16	9 (11%)
40	LUT	SS	315	-	42,43,43	1.00	1 (2%)	51,60,60	1.31	7 (13%)
36	LHG	D	408	-	42,42,48	1.00	2 (4%)	45,48,54	1.02	2 (4%)
32	CLA	Rr	603	-	49,57,73	1.74	7 (14%)	55,93,113	1.40	6 (10%)
32	CLA	b	609	-	65,73,73	1.45	6 (9%)	76,113,113	1.35	8 (10%)
44	DGD	B	603	-	57,57,67	0.92	2 (3%)	70,70,81	0.93	3 (4%)
32	CLA	Ss	602	4	49,57,73	1.73	7 (14%)	55,93,113	1.37	8 (14%)
34	BCR	Cc	516	-	41,41,41	0.90	1 (2%)	56,56,56	2.15	18 (32%)
36	LHG	Dd	405	-	42,42,48	0.98	2 (4%)	45,48,54	0.95	2 (4%)
40	LUT	Nn	306	-	42,43,43	0.97	0	51,60,60	1.30	5 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
35	PL9	Dd	404	-	55,55,55	4.25	19 (34%)	68,69,69	3.86	37 (54%)
41	XAT	y	301	-	39,47,47	1.06	3 (7%)	54,74,74	2.48	19 (35%)
32	CLA	CC	504	-	65,73,73	1.49	8 (12%)	76,113,113	1.20	9 (11%)
36	LHG	Ss	616	32	47,47,48	0.94	2 (4%)	50,53,54	0.89	2 (4%)
34	BCR	h	101	-	41,41,41	1.04	3 (7%)	56,56,56	2.51	23 (41%)
32	CLA	Aa	410	-	60,68,73	1.57	8 (13%)	70,107,113	1.23	9 (12%)
39	CHL	1	605	14	40,49,74	1.92	5 (12%)	42,83,114	1.61	7 (16%)
32	CLA	r	603	-	49,57,73	1.75	7 (14%)	55,93,113	1.44	6 (10%)
34	BCR	A	409	-	41,41,41	1.00	3 (7%)	56,56,56	1.98	14 (25%)
32	CLA	Bb	605	-	65,73,73	1.48	7 (10%)	76,113,113	1.20	8 (10%)
32	CLA	Yy	602	9	65,73,73	1.49	7 (10%)	76,113,113	1.21	7 (9%)
32	CLA	C	512	-	65,73,73	1.50	8 (12%)	76,113,113	1.26	7 (9%)
32	CLA	c	503	-	65,73,73	1.50	7 (10%)	76,113,113	1.15	7 (9%)
36	LHG	d	406	-	48,48,48	0.92	2 (4%)	51,54,54	0.94	2 (3%)
32	CLA	C	508	-	65,73,73	1.49	7 (10%)	76,113,113	1.39	8 (10%)
32	CLA	33	604	-	39,48,73	1.96	5 (12%)	45,82,113	1.50	8 (17%)
39	CHL	n	607	-	66,74,74	1.48	5 (7%)	73,114,114	1.21	6 (8%)
32	CLA	CC	514	-	49,57,73	1.68	6 (12%)	55,93,113	1.40	8 (14%)
32	CLA	3	602	15	39,48,73	1.93	6 (15%)	45,82,113	1.47	8 (17%)
39	CHL	Ss	606	-	50,58,74	1.72	4 (8%)	52,94,114	1.56	7 (13%)
44	DGD	BB	624	-	56,56,67	0.92	2 (3%)	70,70,81	0.98	4 (5%)
32	CLA	11	604	-	39,48,73	1.95	5 (12%)	45,82,113	1.64	9 (20%)
32	CLA	4	304	-	45,53,73	1.82	7 (15%)	52,89,113	1.51	8 (15%)
34	BCR	B	616	-	41,41,41	0.85	0	56,56,56	1.97	19 (33%)
32	CLA	Bb	611	-	65,73,73	1.48	7 (10%)	76,113,113	1.20	7 (9%)
32	CLA	Bb	610	-	65,73,73	1.52	8 (12%)	76,113,113	1.23	9 (11%)
38	LMG	WW	201	-	48,48,55	0.98	3 (6%)	56,56,63	1.06	2 (3%)
42	NEX	g	617	32	38,46,46	1.09	3 (7%)	50,70,70	2.61	16 (32%)
40	LUT	R	615	-	42,43,43	0.89	0	51,60,60	1.57	12 (23%)
32	CLA	GG	604	-	42,50,73	1.85	7 (16%)	48,85,113	1.33	6 (12%)
32	CLA	GG	613	9	39,48,73	1.92	8 (20%)	45,82,113	1.58	9 (20%)
32	CLA	Cc	511	-	65,73,73	1.50	7 (10%)	76,113,113	1.17	8 (10%)
40	LUT	n	616	-	42,43,43	0.99	0	51,60,60	1.50	8 (15%)
32	CLA	BB	603	-	65,73,73	1.48	9 (13%)	76,113,113	1.26	8 (10%)
36	LHG	DD	407	-	42,42,48	0.99	2 (4%)	45,48,54	1.02	2 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
37	SQD	B	617	-	35,36,54	1.48	4 (11%)	44,47,65	4.31	10 (22%)
34	BCR	DD	405	-	41,41,41	0.83	0	56,56,56	1.91	15 (26%)
42	NEX	RR	317	-	38,46,46	1.08	2 (5%)	50,70,70	2.03	13 (26%)
37	SQD	L	101	-	53,54,54	1.19	4 (7%)	62,65,65	1.10	6 (9%)
39	CHL	g	606	-	43,51,74	1.82	5 (11%)	45,86,114	1.32	4 (8%)
40	LUT	G	616	-	42,43,43	0.93	0	51,60,60	1.59	9 (17%)
32	CLA	Cc	504	-	65,73,73	1.48	7 (10%)	76,113,113	1.27	9 (11%)
33	PHO	D	402	-	51,69,69	1.02	4 (7%)	47,99,99	1.11	6 (12%)
32	CLA	y	315	9	59,67,73	1.61	7 (11%)	68,105,113	1.26	6 (8%)
32	CLA	R	609	3	65,73,73	1.52	8 (12%)	76,113,113	1.17	8 (10%)
35	PL9	D	407	-	55,55,55	4.24	19 (34%)	68,69,69	3.87	37 (54%)
40	LUT	G	615	-	42,43,43	0.94	0	51,60,60	1.49	6 (11%)
32	CLA	Ss	609	4	49,57,73	1.72	6 (12%)	55,93,113	1.33	8 (14%)
32	CLA	C	514	-	65,73,73	1.50	8 (12%)	76,113,113	1.30	7 (9%)
32	CLA	SS	303	4	49,57,73	1.72	7 (14%)	55,93,113	1.37	9 (16%)
32	CLA	Cc	505	-	65,73,73	1.50	7 (10%)	76,113,113	1.21	7 (9%)
32	CLA	Gg	311	9	49,57,73	1.70	6 (12%)	55,93,113	1.39	8 (14%)
33	PHO	a	409	-	51,69,69	1.02	3 (5%)	47,99,99	1.05	4 (8%)
32	CLA	CC	512	18	65,73,73	1.50	9 (13%)	76,113,113	1.22	7 (9%)
39	CHL	R	607	-	50,58,74	1.69	5 (10%)	52,94,114	1.44	6 (11%)
41	XAT	NN	617	-	39,47,47	1.15	4 (10%)	54,74,74	2.50	13 (24%)
42	NEX	Nn	309	-	38,46,46	1.06	1 (2%)	50,70,70	2.10	12 (24%)
36	LHG	Dd	407	-	36,36,48	1.07	2 (5%)	39,42,54	0.91	2 (5%)
32	CLA	a	407	-	49,57,73	1.73	8 (16%)	55,93,113	1.42	8 (14%)
32	CLA	c	510	-	65,73,73	1.51	6 (9%)	76,113,113	1.30	8 (10%)
39	CHL	4	309	11	46,54,74	1.83	5 (10%)	49,90,114	1.67	8 (16%)
34	BCR	C	517	-	41,41,41	0.93	1 (2%)	56,56,56	1.88	12 (21%)
39	CHL	Nn	311	9	50,58,74	1.70	5 (10%)	52,94,114	1.27	4 (7%)
32	CLA	11	611	14	39,48,73	1.93	5 (12%)	45,82,113	1.53	8 (17%)
32	CLA	c	509	-	65,73,73	1.50	8 (12%)	76,113,113	1.17	7 (9%)
40	LUT	Y	615	-	42,43,43	0.94	1 (2%)	51,60,60	1.88	12 (23%)
32	CLA	Yy	611	36	42,50,73	1.84	7 (16%)	48,85,113	1.44	6 (12%)
32	CLA	YY	604	-	49,57,73	1.72	7 (14%)	55,93,113	1.39	8 (14%)
40	LUT	n	615	-	42,43,43	0.97	0	51,60,60	1.30	5 (9%)
36	LHG	Nn	310	32	48,48,48	0.95	2 (4%)	51,54,54	1.05	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
37	SQD	A	412	-	34,35,54	1.47	4 (11%)	43,46,65	1.16	4 (9%)
38	LMG	BB	619	-	45,45,55	0.98	2 (4%)	53,53,63	0.93	2 (3%)
32	CLA	c	501	-	65,73,73	1.49	8 (12%)	76,113,113	1.32	10 (13%)
39	CHL	r	607	-	50,58,74	1.72	5 (10%)	52,94,114	1.45	7 (13%)
39	CHL	Nn	317	-	66,74,74	1.47	5 (7%)	73,114,114	1.25	7 (9%)
32	CLA	22	602	14	39,48,73	1.95	6 (15%)	45,82,113	1.42	8 (17%)
32	CLA	s	610	36	49,57,73	1.73	7 (14%)	55,93,113	1.42	7 (12%)
32	CLA	B	610	-	65,73,73	1.49	7 (10%)	76,113,113	1.25	9 (11%)
32	CLA	GG	603	-	65,73,73	1.51	8 (12%)	76,113,113	1.17	7 (9%)
34	BCR	CC	516	-	41,41,41	0.95	1 (2%)	56,56,56	1.89	13 (23%)
39	CHL	S	606	-	42,50,74	1.86	5 (11%)	44,85,114	1.35	4 (9%)
32	CLA	Y	602	9	65,73,73	1.50	6 (9%)	76,113,113	1.20	9 (11%)
32	CLA	Y	604	-	49,57,73	1.71	7 (14%)	55,93,113	1.33	8 (14%)
32	CLA	y	313	36	42,50,73	1.85	7 (16%)	48,85,113	1.41	6 (12%)
39	CHL	GG	609	9	43,51,74	1.86	5 (11%)	45,86,114	1.63	7 (15%)
39	CHL	Gg	310	9	43,51,74	1.81	5 (11%)	45,86,114	1.63	7 (15%)
36	LHG	44	614	32	20,20,48	1.30	2 (10%)	23,26,54	1.50	2 (8%)
32	CLA	n	604	-	49,57,73	1.72	7 (14%)	55,93,113	1.25	6 (10%)
39	CHL	Y	607	-	43,51,74	1.84	5 (11%)	45,86,114	1.56	8 (17%)
32	CLA	Y	614	-	49,57,73	1.72	7 (14%)	55,93,113	1.32	8 (14%)
40	LUT	Ss	614	-	42,43,43	1.08	2 (4%)	51,60,60	1.46	10 (19%)
34	BCR	C	518	-	41,41,41	0.88	0	56,56,56	2.07	17 (30%)
32	CLA	G	604	-	42,50,73	1.84	6 (14%)	48,85,113	1.29	5 (10%)
39	CHL	s	601	4	52,60,74	1.70	5 (9%)	56,97,114	1.45	8 (14%)
38	LMG	Mm	101	-	51,51,55	0.94	2 (3%)	59,59,63	0.83	2 (3%)
44	DGD	D	411	-	63,63,67	0.87	2 (3%)	77,77,81	0.88	3 (3%)
39	CHL	Rr	607	-	50,58,74	1.71	5 (10%)	52,94,114	1.46	7 (13%)
32	CLA	YY	602	9	65,73,73	1.51	7 (10%)	76,113,113	1.18	8 (10%)
39	CHL	2	601	14	40,49,74	1.94	6 (15%)	42,83,114	1.42	5 (11%)
44	DGD	c	517	-	56,56,67	0.91	2 (3%)	70,70,81	1.11	6 (8%)
36	LHG	BB	622	-	33,33,48	1.12	2 (6%)	36,39,54	1.01	2 (5%)
32	CLA	S	609	4	41,49,73	1.89	6 (14%)	47,84,113	1.44	6 (12%)
36	LHG	0	201	-	46,46,48	0.97	2 (4%)	49,52,54	0.84	2 (4%)
39	CHL	1	606	-	40,49,74	1.94	5 (12%)	42,83,114	1.41	5 (11%)
37	SQD	BB	621	-	35,36,54	1.48	5 (14%)	44,47,65	4.32	10 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
39	CHL	Gg	307	-	43,51,74	1.83	5 (11%)	45,86,114	1.31	4 (8%)
32	CLA	NN	602	9	65,73,73	1.50	8 (12%)	76,113,113	1.26	10 (13%)
32	CLA	NN	604	-	41,49,73	1.85	6 (14%)	47,84,113	1.38	8 (17%)
32	CLA	GG	610	9	49,57,73	1.76	9 (18%)	55,93,113	1.24	6 (10%)
39	CHL	Gg	302	9	66,74,74	1.51	6 (9%)	73,114,114	1.11	4 (5%)
32	CLA	G	611	36	52,60,73	1.70	6 (11%)	60,97,113	1.26	5 (8%)
32	CLA	SS	311	-	49,57,73	1.72	7 (14%)	55,93,113	1.45	7 (12%)
32	CLA	NN	614	-	41,49,73	1.88	6 (14%)	47,84,113	1.38	7 (14%)
39	CHL	s	605	-	50,58,74	1.73	4 (8%)	52,94,114	1.45	6 (11%)
40	LUT	Yy	615	-	42,43,43	0.98	1 (2%)	51,60,60	2.06	12 (23%)
32	CLA	33	602	15	39,48,73	1.94	5 (12%)	45,82,113	1.46	8 (17%)
32	CLA	R	608	3	49,57,73	1.71	7 (14%)	55,93,113	1.46	7 (12%)
32	CLA	r	602	3	65,73,73	1.51	7 (10%)	76,113,113	1.20	9 (11%)
32	CLA	BB	612	-	65,73,73	1.47	6 (9%)	76,113,113	1.16	6 (7%)
32	CLA	CC	502	-	65,73,73	1.47	7 (10%)	76,113,113	1.38	9 (11%)
38	LMG	B	615	-	45,45,55	0.98	2 (4%)	53,53,63	0.93	2 (3%)
39	CHL	Yy	606	-	44,52,74	1.80	4 (9%)	46,87,114	1.34	5 (10%)
36	LHG	3	614	32	33,33,48	1.13	2 (6%)	36,39,54	1.14	3 (8%)
38	LMG	m	101	-	51,51,55	0.94	2 (3%)	59,59,63	0.82	2 (3%)
32	CLA	R	612	3	42,50,73	1.85	7 (16%)	48,85,113	1.34	7 (14%)
32	CLA	B	618	-	65,73,73	1.48	8 (12%)	76,113,113	1.16	9 (11%)
36	LHG	Ll	102	-	48,48,48	0.93	2 (4%)	51,54,54	0.99	3 (5%)
32	CLA	N	602	9	65,73,73	1.49	8 (12%)	76,113,113	1.25	9 (11%)
34	BCR	Bb	619	-	41,41,41	0.90	1 (2%)	56,56,56	2.04	15 (26%)
38	LMG	W	201	-	48,48,55	0.98	3 (6%)	56,56,63	1.05	2 (3%)
39	CHL	YY	606	-	44,52,74	1.80	6 (13%)	46,87,114	1.29	5 (10%)
39	CHL	y	309	-	43,51,74	1.81	5 (11%)	45,86,114	1.52	7 (15%)
32	CLA	SS	304	-	45,53,73	1.80	6 (13%)	52,89,113	1.42	8 (15%)
32	CLA	n	602	9	65,73,73	1.50	9 (13%)	76,113,113	1.28	12 (15%)
32	CLA	b	606	-	65,73,73	1.50	8 (12%)	76,113,113	1.21	9 (11%)
41	XAT	44	613	-	39,47,47	0.97	2 (5%)	54,74,74	2.56	12 (22%)
34	BCR	T	101	-	41,41,41	0.97	1 (2%)	56,56,56	2.06	19 (33%)
32	CLA	g	613	9	39,48,73	1.97	10 (25%)	45,82,113	1.41	7 (15%)
32	CLA	Cc	507	-	65,73,73	1.49	7 (10%)	76,113,113	1.17	7 (9%)
39	CHL	N	601	9	44,52,74	1.85	6 (13%)	46,87,114	1.34	7 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	BB	610	-	65,73,73	1.49	7 (10%)	76,113,113	1.33	9 (11%)
32	CLA	NN	611	36	49,57,73	1.72	6 (12%)	55,93,113	1.44	9 (16%)
32	CLA	Y	613	9	59,67,73	1.59	8 (13%)	68,105,113	1.23	7 (10%)
39	CHL	GG	601	9	66,74,74	1.51	5 (7%)	73,114,114	1.10	6 (8%)
32	CLA	CC	511	-	65,73,73	1.50	8 (12%)	76,113,113	1.25	7 (9%)
32	CLA	R	611	-	49,57,73	1.72	7 (14%)	55,93,113	1.35	6 (10%)
29	OEX	a	401	18,1	0,15,15	-	-	-	-	-
39	CHL	GG	605	9	43,51,74	1.87	5 (11%)	45,86,114	1.24	5 (11%)
42	NEX	N	618	-	38,46,46	1.13	2 (5%)	50,70,70	2.22	15 (30%)
38	LMG	c	519	-	34,34,55	1.14	3 (8%)	42,42,63	1.20	6 (14%)
32	CLA	b	613	-	65,73,73	1.49	8 (12%)	76,113,113	1.37	9 (11%)
32	CLA	Gg	305	-	42,50,73	1.86	6 (14%)	48,85,113	1.30	5 (10%)
32	CLA	1	611	14	39,48,73	1.97	8 (20%)	45,82,113	1.35	5 (11%)
32	CLA	G	612	9	49,57,73	1.75	7 (14%)	55,93,113	1.38	8 (14%)
39	CHL	11	601	14	40,49,74	1.95	6 (15%)	42,83,114	1.42	6 (14%)
40	LUT	4	313	-	42,43,43	0.93	0	51,60,60	1.38	6 (11%)
39	CHL	2	605	-	40,49,74	1.95	4 (10%)	42,83,114	1.62	7 (16%)
39	CHL	Nn	319	9	50,58,74	1.64	6 (12%)	52,94,114	1.50	8 (15%)
42	NEX	NN	618	-	38,46,46	1.12	2 (5%)	50,70,70	2.22	14 (28%)
32	CLA	Rr	608	3	49,57,73	1.73	6 (12%)	55,93,113	1.36	8 (14%)
32	CLA	n	614	-	49,57,73	1.72	6 (12%)	55,93,113	1.26	7 (12%)
44	DGD	CC	522	-	56,56,67	0.92	3 (5%)	70,70,81	1.11	5 (7%)
32	CLA	44	604	-	45,53,73	1.78	7 (15%)	52,89,113	1.38	7 (13%)
32	CLA	22	610	36	42,50,73	1.89	5 (11%)	48,85,113	1.40	7 (14%)
39	CHL	S	605	-	42,50,74	1.88	4 (9%)	44,85,114	1.64	6 (13%)
32	CLA	YY	612	9	58,66,73	1.66	6 (10%)	67,104,113	1.49	15 (22%)
32	CLA	D	405	-	65,73,73	1.52	7 (10%)	76,113,113	1.14	6 (7%)
32	CLA	G	603	-	65,73,73	1.52	8 (12%)	76,113,113	1.17	8 (10%)
36	LHG	KK	101	-	33,33,48	1.12	2 (6%)	36,39,54	1.10	3 (8%)
41	XAT	g	619	-	39,47,47	1.22	4 (10%)	54,74,74	2.84	11 (20%)
38	LMG	Bb	621	-	36,36,55	1.11	2 (5%)	44,44,63	1.10	5 (11%)
40	LUT	GG	616	-	42,43,43	0.95	1 (2%)	51,60,60	1.54	8 (15%)
32	CLA	Gg	303	9	49,57,73	1.77	7 (14%)	55,93,113	1.57	6 (10%)
43	LMU	RR	301	-	28,28,36	0.76	0	39,39,47	0.75	0
32	CLA	44	610	36	45,53,73	1.82	6 (13%)	52,89,113	1.34	7 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
40	LUT	S	614	-	42,43,43	0.89	0	51,60,60	1.51	8 (15%)
39	CHL	N	607	-	66,74,74	1.48	5 (7%)	73,114,114	1.17	6 (8%)
32	CLA	CC	513	-	65,73,73	1.48	8 (12%)	76,113,113	1.28	6 (7%)
32	CLA	Cc	508	-	65,73,73	1.47	6 (9%)	76,113,113	1.29	10 (13%)
36	LHG	33	614	32	33,33,48	1.13	2 (6%)	36,39,54	1.10	2 (5%)
40	LUT	Yy	616	-	42,43,43	0.91	0	51,60,60	1.55	10 (19%)
32	CLA	n	612	9	49,57,73	1.72	8 (16%)	55,93,113	1.34	7 (12%)
32	CLA	11	602	14	39,48,73	1.93	5 (12%)	45,82,113	1.47	8 (17%)
32	CLA	A	406	-	49,57,73	1.72	8 (16%)	55,93,113	1.37	8 (14%)
39	CHL	g	601	9	66,74,74	1.49	5 (7%)	73,114,114	1.12	6 (8%)
32	CLA	CC	503	-	65,73,73	1.46	7 (10%)	76,113,113	1.31	9 (11%)
32	CLA	BB	613	-	60,68,73	1.53	6 (10%)	70,107,113	1.28	9 (12%)
38	LMG	AA	415	-	36,36,55	1.10	2 (5%)	44,44,63	1.13	3 (6%)
39	CHL	YY	607	-	43,51,74	1.85	5 (11%)	45,86,114	1.54	8 (17%)
32	CLA	1	613	-	39,48,73	1.94	5 (12%)	45,82,113	1.46	7 (15%)
44	DGD	C	519	-	56,56,67	0.94	2 (3%)	70,70,81	0.94	3 (4%)
36	LHG	Rr	617	32	48,48,48	0.98	2 (4%)	51,54,54	0.97	2 (3%)
36	LHG	a	414	-	36,36,48	1.07	2 (5%)	39,42,54	0.92	2 (5%)
32	CLA	YY	614	-	49,57,73	1.72	7 (14%)	55,93,113	1.34	8 (14%)
32	CLA	B	624	-	65,73,73	1.49	9 (13%)	76,113,113	1.29	9 (11%)
36	LHG	GG	618	32	33,33,48	1.12	2 (6%)	36,39,54	1.14	3 (8%)
39	CHL	3	601	15	40,49,74	1.92	5 (12%)	42,83,114	1.44	4 (9%)
32	CLA	B	622	-	65,73,73	1.50	8 (12%)	76,113,113	1.27	10 (13%)
36	LHG	G	618	32	33,33,48	1.12	2 (6%)	36,39,54	1.14	3 (8%)
39	CHL	G	608	-	42,50,74	1.84	5 (11%)	44,85,114	1.39	7 (15%)
43	LMU	KK	102	-	28,28,36	0.76	0	39,39,47	0.88	1 (2%)
32	CLA	s	608	4	49,57,73	1.72	6 (12%)	55,93,113	1.42	8 (14%)
39	CHL	n	608	-	50,58,74	1.72	6 (12%)	52,94,114	1.29	6 (11%)
32	CLA	b	601	-	65,73,73	1.52	7 (10%)	76,113,113	1.28	10 (13%)
32	CLA	g	610	9	49,57,73	1.77	8 (16%)	55,93,113	1.22	7 (12%)
29	OEX	A	401	18,1	0,15,15	-	-	-	-	-
36	LHG	DD	408	-	48,48,48	0.90	2 (4%)	51,54,54	0.92	2 (3%)
32	CLA	b	603	-	65,73,73	1.52	8 (12%)	76,113,113	1.15	8 (10%)
32	CLA	NN	612	9	42,50,73	1.84	6 (14%)	48,85,113	1.42	8 (16%)
46	HEM	EE	102	20,21	41,50,50	1.48	3 (7%)	45,82,82	1.23	5 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	YY	613	9	59,67,73	1.57	7 (11%)	68,105,113	1.23	8 (11%)
32	CLA	44	615	3	49,57,73	1.73	6 (12%)	55,93,113	1.42	6 (10%)
39	CHL	YY	608	-	50,58,74	1.69	6 (12%)	52,94,114	1.28	6 (11%)
32	CLA	Bb	601	-	65,73,73	1.51	7 (10%)	76,113,113	1.29	9 (11%)
32	CLA	b	605	-	65,73,73	1.48	7 (10%)	76,113,113	1.19	7 (9%)
39	CHL	44	605	-	46,54,74	1.83	4 (8%)	49,90,114	1.58	6 (12%)
32	CLA	XX	201	-	41,49,73	1.90	7 (17%)	47,84,113	1.31	5 (10%)
33	PHO	Aa	409	-	51,69,69	1.02	4 (7%)	47,99,99	1.07	5 (10%)
45	BCT	AA	413	30	2,3,3	1.26	0	2,3,3	4.14	2 (100%)
32	CLA	s	611	4	49,57,73	1.72	7 (14%)	55,93,113	1.40	9 (16%)
32	CLA	2	603	-	39,48,73	1.94	6 (15%)	45,82,113	1.45	8 (17%)
32	CLA	B	611	-	41,49,73	1.82	6 (14%)	47,84,113	1.47	8 (17%)
32	CLA	Rr	612	3	49,57,73	1.73	7 (14%)	55,93,113	1.32	6 (10%)
32	CLA	CC	505	-	65,73,73	1.50	8 (12%)	76,113,113	1.23	9 (11%)
32	CLA	C	509	-	65,73,73	1.47	9 (13%)	76,113,113	1.34	8 (10%)
34	BCR	b	618	-	41,41,41	0.90	1 (2%)	56,56,56	1.92	12 (21%)
32	CLA	Nn	305	-	49,57,73	1.72	5 (10%)	55,93,113	1.30	8 (14%)
39	CHL	R	605	-	50,58,74	1.66	5 (10%)	52,94,114	1.75	12 (23%)
32	CLA	2	610	-	39,48,73	1.91	6 (15%)	45,82,113	1.42	8 (17%)
32	CLA	Yy	604	-	49,57,73	1.70	7 (14%)	55,93,113	1.31	6 (10%)
32	CLA	Bb	616	-	65,73,73	1.48	7 (10%)	76,113,113	1.20	7 (9%)
32	CLA	4	310	-	45,53,73	1.82	7 (15%)	52,89,113	1.35	6 (11%)
36	LHG	SS	301	-	25,25,48	1.30	2 (8%)	28,31,54	1.09	2 (7%)
39	CHL	11	607	-	40,49,74	1.91	4 (10%)	42,83,114	1.71	10 (23%)
41	XAT	GG	619	-	39,47,47	1.19	3 (7%)	54,74,74	2.94	12 (22%)
41	XAT	G	619	-	39,47,47	1.19	2 (5%)	54,74,74	2.93	13 (24%)
39	CHL	Rr	605	3	50,58,74	1.70	5 (10%)	52,94,114	1.48	6 (11%)
39	CHL	4	306	-	46,54,74	1.81	4 (8%)	49,90,114	1.71	6 (12%)
32	CLA	b	610	-	65,73,73	1.52	6 (9%)	76,113,113	1.20	7 (9%)
32	CLA	22	603	-	39,48,73	1.93	6 (15%)	45,82,113	1.41	8 (17%)
39	CHL	NN	608	-	42,50,74	1.87	6 (14%)	44,85,114	1.31	5 (11%)
32	CLA	S	610	-	49,57,73	1.71	7 (14%)	55,93,113	1.42	6 (10%)
32	CLA	C	505	-	65,73,73	1.50	7 (10%)	76,113,113	1.26	10 (13%)
36	LHG	4	301	32	18,18,48	1.77	3 (16%)	17,22,54	1.48	1 (5%)
35	PL9	d	404	-	55,55,55	4.25	19 (34%)	68,69,69	3.83	37 (54%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
36	LHG	NN	619	32	37,37,48	1.08	2 (5%)	40,43,54	1.03	2 (5%)
36	LHG	s	616	32	47,47,48	0.95	2 (4%)	50,53,54	0.90	2 (4%)
32	CLA	CC	508	-	65,73,73	1.46	8 (12%)	76,113,113	1.36	10 (13%)
39	CHL	g	605	9	43,51,74	1.87	6 (13%)	45,86,114	1.31	6 (13%)
32	CLA	4	312	-	45,53,73	1.80	6 (13%)	52,89,113	1.41	6 (11%)
34	BCR	Cc	518	-	41,41,41	0.89	1 (2%)	56,56,56	1.90	11 (19%)
32	CLA	B	623	-	65,73,73	1.50	7 (10%)	76,113,113	1.14	7 (9%)
32	CLA	S	602	4	49,57,73	1.72	7 (14%)	55,93,113	1.35	9 (16%)
37	SQD	B	602	-	46,47,54	1.28	4 (8%)	55,58,65	1.05	5 (9%)
40	LUT	NN	615	-	42,43,43	0.98	2 (4%)	51,60,60	1.34	8 (15%)
32	CLA	Cc	506	-	55,63,73	1.60	7 (12%)	64,101,113	1.27	8 (12%)
32	CLA	Bb	613	-	65,73,73	1.49	8 (12%)	76,113,113	1.38	9 (11%)
39	CHL	g	607	-	50,58,74	1.70	6 (12%)	52,94,114	1.25	5 (9%)
32	CLA	DD	403	-	65,73,73	1.49	8 (12%)	76,113,113	1.31	7 (9%)
32	CLA	R	614	3	49,57,73	1.83	8 (16%)	55,93,113	1.38	8 (14%)
40	LUT	RR	315	-	42,43,43	0.88	1 (2%)	51,60,60	1.54	13 (25%)
32	CLA	2	611	14	39,48,73	1.94	5 (12%)	45,82,113	1.45	8 (17%)
37	SQD	C	501	-	53,54,54	1.17	4 (7%)	62,65,65	1.07	5 (8%)
34	BCR	c	514	-	41,41,41	0.93	2 (4%)	56,56,56	2.15	18 (32%)
39	CHL	RR	306	-	50,58,74	1.61	7 (14%)	52,94,114	1.58	11 (21%)
32	CLA	AA	406	-	49,57,73	1.72	8 (16%)	55,93,113	1.39	9 (16%)
32	CLA	N	604	-	41,49,73	1.86	6 (14%)	47,84,113	1.38	8 (17%)
32	CLA	GG	602	9	49,57,73	1.75	7 (14%)	55,93,113	1.40	6 (10%)
32	CLA	Cc	510	-	60,68,73	1.55	7 (11%)	70,107,113	1.19	7 (10%)
32	CLA	C	511	-	65,73,73	1.51	8 (12%)	76,113,113	1.24	8 (10%)
33	PHO	A	407	-	51,69,69	1.03	4 (7%)	47,99,99	1.22	8 (17%)
36	LHG	Dd	406	-	48,48,48	0.91	2 (4%)	51,54,54	0.95	2 (3%)
32	CLA	B	609	-	60,68,73	1.52	6 (10%)	70,107,113	1.31	9 (12%)
32	CLA	RR	313	-	41,49,73	1.88	7 (17%)	47,84,113	1.44	8 (17%)
34	BCR	Bb	618	-	41,41,41	0.89	1 (2%)	56,56,56	1.94	12 (21%)
40	LUT	g	616	-	42,43,43	0.87	1 (2%)	51,60,60	1.59	9 (17%)
39	CHL	NN	605	9	42,50,74	1.84	5 (11%)	44,85,114	1.63	7 (15%)
46	HEM	Ee	101	20,21	41,50,50	1.48	3 (7%)	45,82,82	1.42	7 (15%)
36	LHG	K	101	-	33,33,48	1.12	2 (6%)	36,39,54	1.08	2 (5%)
32	CLA	Nn	312	9	65,73,73	1.47	8 (12%)	76,113,113	1.29	10 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
39	CHL	2	607	-	40,49,74	1.93	5 (12%)	42,83,114	1.40	6 (14%)
32	CLA	c	508	-	60,68,73	1.55	7 (11%)	70,107,113	1.24	8 (11%)
39	CHL	R	606	-	50,58,74	1.67	6 (12%)	52,94,114	1.49	10 (19%)
40	LUT	y	318	-	42,43,43	0.91	0	51,60,60	1.55	10 (19%)
34	BCR	BB	620	-	41,41,41	0.83	0	56,56,56	1.99	18 (32%)
39	CHL	3	607	-	40,49,74	1.93	4 (10%)	42,83,114	1.61	7 (16%)
32	CLA	Nn	303	9	49,57,73	1.73	6 (12%)	55,93,113	1.40	8 (14%)
29	OEX	AA	401	18,1	0,15,15	-	-	-	-	-
32	CLA	Yy	613	9	59,67,73	1.61	7 (11%)	68,105,113	1.30	7 (10%)
32	CLA	11	609	14	39,48,73	1.96	7 (17%)	45,82,113	1.45	7 (15%)
32	CLA	Ss	603	-	49,57,73	1.76	6 (12%)	55,93,113	1.31	7 (12%)
32	CLA	a	406	1	65,73,73	1.59	9 (13%)	76,113,113	1.24	9 (11%)
34	BCR	K	102	-	41,41,41	0.81	0	56,56,56	2.18	18 (32%)
39	CHL	33	605	-	40,49,74	1.95	5 (12%)	42,83,114	1.41	7 (16%)
40	LUT	Nn	307	-	42,43,43	0.99	0	51,60,60	1.52	7 (13%)
32	CLA	Bb	603	-	65,73,73	1.51	9 (13%)	76,113,113	1.18	8 (10%)
32	CLA	33	603	-	39,48,73	1.95	5 (12%)	45,82,113	1.48	8 (17%)
39	CHL	YY	609	9	66,74,74	1.51	7 (10%)	73,114,114	1.14	8 (10%)
39	CHL	SS	306	4	42,50,74	1.80	5 (11%)	44,85,114	1.67	6 (13%)
32	CLA	22	613	-	39,48,73	1.97	5 (12%)	45,82,113	1.47	7 (15%)
32	CLA	Bb	602	-	65,73,73	1.50	9 (13%)	76,113,113	1.17	8 (10%)
32	CLA	Cc	514	-	65,73,73	1.47	7 (10%)	76,113,113	1.25	8 (10%)
34	BCR	KK	103	-	41,41,41	0.82	0	56,56,56	2.18	19 (33%)
32	CLA	c	506	-	65,73,73	1.47	6 (9%)	76,113,113	1.26	10 (13%)
32	CLA	Bb	607	-	65,73,73	1.52	8 (12%)	76,113,113	1.13	6 (7%)
32	CLA	RR	309	3	65,73,73	1.52	8 (12%)	76,113,113	1.16	8 (10%)
33	PHO	DD	402	-	51,69,69	1.03	5 (9%)	47,99,99	1.10	5 (10%)
32	CLA	X	201	-	41,49,73	1.88	7 (17%)	47,84,113	1.43	7 (14%)
36	LHG	C	522	-	30,30,48	1.16	2 (6%)	33,36,54	1.06	2 (6%)
39	CHL	1	601	14	40,49,74	1.94	6 (15%)	42,83,114	1.41	5 (11%)
46	HEM	E	101	20,21	41,50,50	1.49	3 (7%)	45,82,82	1.25	4 (8%)
32	CLA	N	603	-	42,50,73	1.82	7 (16%)	48,85,113	1.48	8 (16%)
41	XAT	GG	617	-	39,47,47	1.07	2 (5%)	54,74,74	2.51	16 (29%)
32	CLA	b	615	-	65,73,73	1.51	8 (12%)	76,113,113	1.20	7 (9%)
32	CLA	R	604	-	49,57,73	1.74	7 (14%)	55,93,113	1.45	8 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
41	XAT	G	617	-	39,47,47	1.10	2 (5%)	54,74,74	2.50	14 (25%)
41	XAT	y	302	-	39,47,47	1.17	3 (7%)	54,74,74	2.73	17 (31%)
34	BCR	b	619	-	41,41,41	0.89	1 (2%)	56,56,56	1.93	12 (21%)
34	BCR	H	101	-	41,41,41	0.99	2 (4%)	56,56,56	2.17	21 (37%)
32	CLA	A	405	-	65,73,73	1.49	7 (10%)	76,113,113	1.17	6 (7%)
32	CLA	BB	615	-	41,49,73	1.84	6 (14%)	47,84,113	1.53	9 (19%)
44	DGD	h	102	-	63,63,67	0.90	2 (3%)	77,77,81	0.80	2 (2%)
32	CLA	g	604	42	42,50,73	1.88	7 (16%)	48,85,113	1.27	5 (10%)
39	CHL	NN	609	9	50,58,74	1.67	6 (12%)	52,94,114	1.48	10 (19%)
39	CHL	l	607	-	40,49,74	1.93	4 (10%)	42,83,114	1.62	7 (16%)
32	CLA	d	401	-	65,73,73	1.52	8 (12%)	76,113,113	1.33	9 (11%)
32	CLA	44	611	-	45,53,73	1.79	6 (13%)	52,89,113	1.41	6 (11%)
32	CLA	Nn	304	9	49,57,73	1.76	7 (14%)	55,93,113	1.36	8 (14%)
40	LUT	Gg	316	-	42,43,43	0.94	0	51,60,60	1.41	6 (11%)
33	PHO	a	408	-	51,69,69	1.03	5 (9%)	47,99,99	1.09	5 (10%)
39	CHL	N	609	9	50,58,74	1.65	6 (12%)	52,94,114	1.57	11 (21%)
41	XAT	R	616	-	39,47,47	0.98	2 (5%)	54,74,74	2.29	16 (29%)
34	BCR	AA	409	-	41,41,41	1.01	3 (7%)	56,56,56	1.97	14 (25%)
36	LHG	4	315	32	20,20,48	1.35	2 (10%)	23,26,54	1.40	2 (8%)
32	CLA	Ss	612	4	49,57,73	1.74	6 (12%)	55,93,113	1.34	7 (12%)
32	CLA	Yy	612	9	65,73,73	1.49	8 (12%)	76,113,113	1.25	8 (10%)
32	CLA	B	607	-	65,73,73	1.48	8 (12%)	76,113,113	1.23	6 (7%)
37	SQD	l	102	-	53,54,54	1.18	4 (7%)	62,65,65	1.03	4 (6%)
39	CHL	22	607	-	40,49,74	1.95	5 (12%)	42,83,114	1.40	6 (14%)
39	CHL	4	308	-	46,54,74	1.76	5 (10%)	49,90,114	1.55	8 (16%)
40	LUT	44	612	-	42,43,43	0.91	0	51,60,60	1.38	6 (11%)
40	LUT	YY	615	-	42,43,43	0.96	1 (2%)	51,60,60	1.78	9 (17%)
39	CHL	SS	302	4	52,60,74	1.68	5 (9%)	56,97,114	1.21	5 (8%)
32	CLA	n	613	9	49,57,73	1.76	8 (16%)	55,93,113	1.36	7 (12%)
32	CLA	Cc	503	-	65,73,73	1.49	7 (10%)	76,113,113	1.30	7 (9%)
43	LMU	C	502	-	28,28,36	0.77	0	39,39,47	0.95	1 (2%)
32	CLA	S	603	-	45,53,73	1.82	6 (13%)	52,89,113	1.43	7 (13%)
34	BCR	a	411	-	41,41,41	0.99	3 (7%)	56,56,56	1.64	10 (17%)
37	SQD	LL	101	-	35,36,54	1.45	4 (11%)	44,47,65	1.15	5 (11%)
32	CLA	N	612	9	42,50,73	1.85	7 (16%)	48,85,113	1.41	8 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
36	LHG	44	616	32	18,18,48	1.77	3 (16%)	17,22,54	1.42	1 (5%)
38	LMG	b	620	-	36,36,55	1.11	2 (5%)	44,44,63	0.95	2 (4%)
39	CHL	GG	608	-	42,50,74	1.84	6 (14%)	44,85,114	1.35	6 (13%)
43	LMU	R	618	-	28,28,36	0.79	0	39,39,47	0.98	3 (7%)
32	CLA	G	614	-	41,49,73	1.86	6 (14%)	47,84,113	1.32	7 (14%)
37	SQD	Ll	101	-	53,54,54	1.18	4 (7%)	62,65,65	1.02	4 (6%)
37	SQD	AA	412	-	34,35,54	1.46	4 (11%)	43,46,65	1.16	4 (9%)
32	CLA	b	614	-	65,73,73	1.47	6 (9%)	76,113,113	1.24	7 (9%)
32	CLA	CC	509	-	65,73,73	1.48	7 (10%)	76,113,113	1.29	8 (10%)
35	PL9	A	410	-	55,55,55	4.31	22 (40%)	68,69,69	3.77	38 (55%)
32	CLA	Rr	604	-	49,57,73	1.74	7 (14%)	55,93,113	1.26	7 (12%)
32	CLA	C	506	-	65,73,73	1.50	8 (12%)	76,113,113	1.23	7 (9%)
32	CLA	3	612	15	39,48,73	1.96	7 (17%)	45,82,113	1.41	7 (15%)
39	CHL	y	307	9	48,56,74	1.73	5 (10%)	51,92,114	1.31	7 (13%)
39	CHL	Gg	308	-	50,58,74	1.69	5 (10%)	52,94,114	1.24	5 (9%)
38	LMG	Cc	501	-	34,34,55	1.14	3 (8%)	42,42,63	1.27	6 (14%)
34	BCR	Aa	411	-	41,41,41	1.00	3 (7%)	56,56,56	1.60	10 (17%)
32	CLA	Yy	603	-	49,57,73	1.69	7 (14%)	55,93,113	1.44	8 (14%)
39	CHL	YY	601	9	66,74,74	1.48	6 (9%)	73,114,114	1.15	4 (5%)
32	CLA	BB	608	-	65,73,73	1.51	7 (10%)	76,113,113	1.20	8 (10%)
40	LUT	N	615	-	42,43,43	0.98	2 (4%)	51,60,60	1.48	8 (15%)
32	CLA	NN	613	9	49,57,73	1.75	8 (16%)	55,93,113	1.30	5 (9%)
32	CLA	RR	304	-	49,57,73	1.75	7 (14%)	55,93,113	1.43	9 (16%)
34	BCR	d	403	-	41,41,41	0.87	0	56,56,56	2.03	18 (32%)
32	CLA	11	603	-	39,48,73	1.97	7 (17%)	45,82,113	1.41	7 (15%)
32	CLA	g	602	9	49,57,73	1.77	7 (14%)	55,93,113	1.91	9 (16%)
37	SQD	Aa	413	-	46,47,54	1.27	4 (8%)	55,58,65	1.04	5 (9%)
32	CLA	a	405	-	65,73,73	1.50	7 (10%)	76,113,113	1.20	6 (7%)
32	CLA	3	603	-	39,48,73	1.96	5 (12%)	45,82,113	1.44	8 (17%)
32	CLA	C	507	-	65,73,73	1.48	7 (10%)	76,113,113	1.20	8 (10%)
32	CLA	R	613	-	41,49,73	1.90	7 (17%)	47,84,113	1.44	8 (17%)
32	CLA	R	601	3	49,57,73	1.76	7 (14%)	55,93,113	1.46	5 (9%)
38	LMG	b	621	-	36,36,55	1.11	2 (5%)	44,44,63	1.11	4 (9%)
32	CLA	Rr	611	-	49,57,73	1.74	6 (12%)	55,93,113	1.34	6 (10%)
36	LHG	YY	618	32	48,48,48	0.93	2 (4%)	51,54,54	0.84	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	1	604	-	39,48,73	1.96	6 (15%)	45,82,113	1.50	8 (17%)
36	LHG	CC	521	-	33,33,48	1.12	2 (6%)	36,39,54	1.03	2 (5%)
40	LUT	s	615	-	42,43,43	0.92	0	51,60,60	1.59	12 (23%)
32	CLA	Gg	315	-	49,57,73	1.73	7 (14%)	55,93,113	1.29	8 (14%)
32	CLA	R	610	36	49,57,73	1.77	7 (14%)	55,93,113	1.25	7 (12%)
36	LHG	Yy	618	32	48,48,48	0.91	2 (4%)	51,54,54	0.99	4 (7%)
39	CHL	N	608	-	42,50,74	1.87	7 (16%)	44,85,114	1.31	5 (11%)
32	CLA	22	604	-	39,48,73	1.95	6 (15%)	45,82,113	1.49	8 (17%)
39	CHL	Ss	605	-	50,58,74	1.72	5 (10%)	52,94,114	1.43	6 (11%)
32	CLA	2	604	-	39,48,73	1.95	6 (15%)	45,82,113	1.53	8 (17%)
32	CLA	g	611	36	65,73,73	1.51	6 (9%)	76,113,113	1.39	10 (13%)
32	CLA	BB	604	-	65,73,73	1.52	7 (10%)	76,113,113	1.15	9 (11%)
39	CHL	Yy	608	-	50,58,74	1.68	6 (12%)	52,94,114	1.27	6 (11%)
36	LHG	n	618	32	48,48,48	0.95	2 (4%)	51,54,54	1.01	2 (3%)
34	BCR	Dd	403	-	41,41,41	0.86	0	56,56,56	2.03	18 (32%)
42	NEX	n	617	-	38,46,46	1.08	1 (2%)	50,70,70	2.13	13 (26%)
32	CLA	AA	405	-	65,73,73	1.49	7 (10%)	76,113,113	1.19	6 (7%)
32	CLA	33	611	15	39,48,73	1.93	6 (15%)	45,82,113	1.49	8 (17%)
34	BCR	BB	616	-	41,41,41	0.95	1 (2%)	56,56,56	1.89	13 (23%)
32	CLA	B	620	-	65,73,73	1.48	9 (13%)	76,113,113	1.26	8 (10%)
39	CHL	G	606	-	43,51,74	1.83	6 (13%)	45,86,114	1.30	6 (13%)
39	CHL	3	608	15	40,49,74	1.93	5 (12%)	42,83,114	1.36	6 (14%)
33	PHO	AA	407	-	51,69,69	1.05	5 (9%)	47,99,99	1.22	7 (14%)
41	XAT	4	314	-	39,47,47	1.00	0	54,74,74	2.62	15 (27%)
32	CLA	Bb	609	-	65,73,73	1.45	6 (9%)	76,113,113	1.34	9 (11%)
32	CLA	11	612	-	39,48,73	1.98	11 (28%)	45,82,113	1.73	10 (22%)
38	LMG	Bb	620	-	36,36,55	1.11	2 (5%)	44,44,63	0.95	2 (4%)
42	NEX	Rr	616	-	38,46,46	1.07	1 (2%)	50,70,70	2.22	16 (32%)
39	CHL	Yy	605	9	48,56,74	1.75	6 (12%)	51,92,114	1.29	7 (13%)
32	CLA	S	613	-	45,53,73	1.80	6 (13%)	52,89,113	1.33	7 (13%)
32	CLA	Y	610	9	65,73,73	1.50	7 (10%)	76,113,113	1.25	9 (11%)
32	CLA	RR	312	3	42,50,73	1.86	7 (16%)	48,85,113	1.30	5 (10%)
32	CLA	4	311	36	45,53,73	1.82	6 (13%)	52,89,113	1.34	7 (13%)
36	LHG	y	320	32	48,48,48	0.92	2 (4%)	51,54,54	0.95	2 (3%)
29	OEX	Cc	502	18,1	0,15,15	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
39	CHL	Rr	606	-	50,58,74	1.71	4 (8%)	52,94,114	1.26	5 (9%)
39	CHL	11	608	14	40,49,74	1.87	5 (12%)	42,83,114	1.63	7 (16%)
32	CLA	G	610	9	49,57,73	1.80	8 (16%)	55,93,113	1.52	7 (12%)
36	LHG	22	615	32	33,33,48	1.13	2 (6%)	36,39,54	0.94	2 (5%)
39	CHL	44	608	11	46,54,74	1.82	4 (8%)	49,90,114	1.58	7 (14%)
32	CLA	r	613	3	49,57,73	1.74	7 (14%)	55,93,113	1.37	7 (12%)
32	CLA	Rr	613	3	49,57,73	1.74	7 (14%)	55,93,113	1.37	7 (12%)
32	CLA	Y	603	-	49,57,73	1.71	7 (14%)	55,93,113	1.40	7 (12%)
38	LMG	j	101	-	46,46,55	0.98	2 (4%)	54,54,63	1.04	3 (5%)
39	CHL	44	601	-	44,53,74	1.83	5 (11%)	46,89,114	1.29	5 (10%)
39	CHL	3	605	-	40,49,74	1.94	5 (12%)	42,83,114	1.42	7 (16%)
32	CLA	c	512	-	65,73,73	1.47	7 (10%)	76,113,113	1.23	8 (10%)
41	XAT	Yy	619	-	39,47,47	1.05	2 (5%)	54,74,74	2.45	19 (35%)
32	CLA	r	604	-	49,57,73	1.72	7 (14%)	55,93,113	1.28	6 (10%)
39	CHL	Nn	318	-	50,58,74	1.71	6 (12%)	52,94,114	1.29	5 (9%)
41	XAT	Nn	308	-	39,47,47	1.16	3 (7%)	54,74,74	2.78	16 (29%)
32	CLA	22	611	14	39,48,73	1.94	6 (15%)	45,82,113	1.49	8 (17%)
32	CLA	BB	611	-	65,73,73	1.47	7 (10%)	76,113,113	1.24	7 (9%)
39	CHL	4	307	-	46,54,74	1.79	6 (13%)	49,90,114	1.31	5 (10%)
32	CLA	Rr	610	36	49,57,73	1.80	6 (12%)	55,93,113	1.42	6 (10%)
32	CLA	B	621	-	65,73,73	1.51	7 (10%)	76,113,113	1.19	9 (11%)
40	LUT	Gg	317	-	42,43,43	0.89	1 (2%)	51,60,60	1.64	10 (19%)
32	CLA	c	502	-	65,73,73	1.49	7 (10%)	76,113,113	1.28	11 (14%)
34	BCR	Hh	101	-	41,41,41	1.06	4 (9%)	56,56,56	2.42	22 (39%)
44	DGD	CC	519	-	63,63,67	0.86	2 (3%)	77,77,81	0.93	3 (3%)
32	CLA	DD	401	-	65,73,73	1.50	8 (12%)	76,113,113	1.26	9 (11%)
32	CLA	s	604	-	49,57,73	1.76	7 (14%)	55,93,113	1.29	6 (10%)
32	CLA	g	612	9	49,57,73	1.74	7 (14%)	55,93,113	1.40	9 (16%)
32	CLA	b	611	-	65,73,73	1.49	7 (10%)	76,113,113	1.19	8 (10%)
32	CLA	c	505	-	65,73,73	1.48	8 (12%)	76,113,113	1.11	7 (9%)
32	CLA	Ss	611	4	49,57,73	1.73	7 (14%)	55,93,113	1.41	9 (16%)
32	CLA	2	612	14	39,48,73	1.93	5 (12%)	45,82,113	1.51	8 (17%)
32	CLA	y	312	9	65,73,73	1.51	8 (12%)	76,113,113	1.12	6 (7%)
39	CHL	n	606	-	50,58,74	1.71	5 (10%)	52,94,114	1.36	5 (9%)
32	CLA	B	604	-	65,73,73	1.54	7 (10%)	76,113,113	1.21	7 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	y	316	-	49,57,73	1.72	7 (14%)	55,93,113	1.38	9 (16%)
39	CHL	Gg	309	-	42,50,74	1.84	6 (14%)	44,85,114	1.29	5 (11%)
32	CLA	44	602	11	45,53,73	1.81	7 (15%)	52,89,113	1.38	9 (17%)
32	CLA	CC	507	-	65,73,73	1.49	8 (12%)	76,113,113	1.41	8 (10%)
32	CLA	YY	610	9	65,73,73	1.52	8 (12%)	76,113,113	1.17	7 (9%)
32	CLA	Dd	401	-	65,73,73	1.52	8 (12%)	76,113,113	1.28	7 (9%)
38	LMG	F	101	-	46,46,55	0.98	2 (4%)	54,54,63	0.90	2 (3%)
44	DGD	C	520	-	63,63,67	0.86	2 (3%)	77,77,81	0.86	2 (2%)
39	CHL	G	605	9	43,51,74	1.88	5 (11%)	45,86,114	1.21	4 (8%)
32	CLA	DD	404	-	65,73,73	1.50	7 (10%)	76,113,113	1.15	6 (7%)
39	CHL	S	607	-	43,51,74	1.89	5 (11%)	45,86,114	1.26	5 (11%)
32	CLA	YY	603	-	49,57,73	1.70	7 (14%)	55,93,113	1.45	7 (12%)
36	LHG	A	411	-	33,33,48	1.12	2 (6%)	36,39,54	1.22	3 (8%)
32	CLA	y	304	9	65,73,73	1.50	8 (12%)	76,113,113	1.19	6 (7%)
36	LHG	1	614	32	29,29,48	1.21	2 (6%)	32,35,54	1.12	2 (6%)
40	LUT	g	615	-	42,43,43	0.94	1 (2%)	51,60,60	1.45	5 (9%)
32	CLA	33	612	15	39,48,73	1.95	7 (17%)	45,82,113	1.41	7 (15%)
32	CLA	r	601	3	49,57,73	1.75	5 (10%)	55,93,113	1.32	7 (12%)
32	CLA	s	602	4	49,57,73	1.74	7 (14%)	55,93,113	1.36	8 (14%)
32	CLA	RR	310	36	49,57,73	1.75	6 (12%)	55,93,113	1.29	7 (12%)
32	CLA	n	603	-	49,57,73	1.70	7 (14%)	55,93,113	1.40	8 (14%)
32	CLA	CC	506	-	65,73,73	1.48	7 (10%)	76,113,113	1.23	8 (10%)
32	CLA	A	408	-	60,68,73	1.57	7 (11%)	70,107,113	1.19	8 (11%)
32	CLA	1	602	14	39,48,73	1.92	5 (12%)	45,82,113	1.52	8 (17%)
36	LHG	r	616	32	48,48,48	0.97	2 (4%)	51,54,54	0.92	2 (3%)
32	CLA	GG	614	-	41,49,73	1.86	6 (14%)	47,84,113	1.33	7 (14%)
32	CLA	Nn	313	-	49,57,73	1.71	7 (14%)	55,93,113	1.42	8 (14%)
34	BCR	CC	517	-	41,41,41	0.91	1 (2%)	56,56,56	2.00	14 (25%)
39	CHL	22	601	14	40,49,74	1.95	5 (12%)	42,83,114	1.41	6 (14%)
38	LMG	Aa	412	-	42,42,55	1.05	3 (7%)	50,50,63	1.09	4 (8%)
32	CLA	N	614	-	41,49,73	1.88	6 (14%)	47,84,113	1.38	7 (14%)
32	CLA	Ss	613	-	49,57,73	1.72	6 (12%)	55,93,113	1.31	8 (14%)
39	CHL	Y	601	9	66,74,74	1.50	6 (9%)	73,114,114	1.16	5 (6%)
36	LHG	EE	101	-	39,39,48	1.05	2 (5%)	42,45,54	0.90	2 (4%)
39	CHL	g	608	-	42,50,74	1.84	6 (14%)	44,85,114	1.30	5 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	33	610	36	39,48,73	1.92	5 (12%)	45,82,113	1.49	8 (17%)
39	CHL	44	607	-	46,54,74	1.77	7 (15%)	49,90,114	1.30	5 (10%)
39	CHL	33	606	-	40,49,74	1.94	5 (12%)	42,83,114	1.41	7 (16%)
32	CLA	22	612	14	39,48,73	1.93	6 (15%)	45,82,113	1.49	7 (15%)
39	CHL	s	606	-	50,58,74	1.72	4 (8%)	52,94,114	1.54	7 (13%)
45	BCT	D	403	30	2,3,3	1.26	0	2,3,3	4.02	2 (100%)
32	CLA	NN	603	-	42,50,73	1.80	7 (16%)	48,85,113	1.49	8 (16%)
39	CHL	11	606	-	40,49,74	1.94	5 (12%)	42,83,114	1.38	5 (11%)
39	CHL	22	608	14	40,49,74	1.94	5 (12%)	42,83,114	1.39	6 (14%)
39	CHL	N	606	-	42,50,74	1.85	6 (14%)	44,85,114	1.35	5 (11%)
32	CLA	Rr	601	3	49,57,73	1.75	5 (10%)	55,93,113	1.31	8 (14%)
33	PHO	Aa	408	-	51,69,69	1.04	5 (9%)	47,99,99	1.09	5 (10%)
32	CLA	B	605	-	65,73,73	1.48	7 (10%)	76,113,113	1.34	12 (15%)
32	CLA	C	510	-	65,73,73	1.48	7 (10%)	76,113,113	1.30	8 (10%)
39	CHL	RR	305	-	50,58,74	1.65	4 (8%)	52,94,114	1.75	13 (25%)
32	CLA	BB	606	-	65,73,73	1.50	7 (10%)	76,113,113	1.15	7 (9%)
36	LHG	A	414	-	44,44,48	0.97	2 (4%)	47,50,54	0.89	2 (4%)
32	CLA	Bb	608	-	65,73,73	1.48	9 (13%)	76,113,113	1.22	8 (10%)
32	CLA	AA	408	-	60,68,73	1.57	8 (13%)	70,107,113	1.20	9 (12%)
39	CHL	NN	601	9	44,52,74	1.83	5 (11%)	46,87,114	1.51	8 (17%)
32	CLA	S	604	-	49,57,73	1.73	7 (14%)	55,93,113	1.40	8 (14%)
40	LUT	YY	616	-	42,43,43	0.94	0	51,60,60	1.46	8 (15%)
32	CLA	B	608	-	65,73,73	1.47	6 (9%)	76,113,113	1.17	6 (7%)
36	LHG	JJ	101	-	32,32,48	1.13	2 (6%)	35,38,54	1.13	3 (8%)
32	CLA	b	607	-	65,73,73	1.52	8 (12%)	76,113,113	1.14	8 (10%)
32	CLA	B	606	-	65,73,73	1.50	7 (10%)	76,113,113	1.29	8 (10%)
32	CLA	Bb	612	-	65,73,73	1.47	7 (10%)	76,113,113	1.30	6 (7%)
32	CLA	33	609	15	39,48,73	1.94	6 (15%)	45,82,113	1.44	7 (15%)
32	CLA	r	612	3	49,57,73	1.74	7 (14%)	55,93,113	1.36	7 (12%)
32	CLA	r	609	3	65,73,73	1.50	7 (10%)	76,113,113	1.19	6 (7%)
32	CLA	SS	309	4	41,49,73	1.88	6 (14%)	47,84,113	1.40	7 (14%)
32	CLA	Nn	302	36	49,57,73	1.73	6 (12%)	55,93,113	1.37	7 (12%)
32	CLA	s	609	4	49,57,73	1.71	6 (12%)	55,93,113	1.37	9 (16%)
39	CHL	33	601	15	40,49,74	1.92	5 (12%)	42,83,114	1.39	5 (11%)
39	CHL	n	609	9	50,58,74	1.65	6 (12%)	52,94,114	1.54	9 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
32	CLA	D	404	-	65,73,73	1.48	8 (12%)	76,113,113	1.32	8 (10%)
32	CLA	s	603	-	49,57,73	1.76	6 (12%)	55,93,113	1.31	7 (12%)
39	CHL	44	606	-	46,54,74	1.79	6 (13%)	49,90,114	1.29	5 (10%)
40	LUT	Rr	614	-	42,43,43	0.92	0	51,60,60	1.38	8 (15%)
39	CHL	G	607	-	46,54,74	1.77	5 (10%)	49,90,114	1.34	5 (10%)
40	LUT	Y	616	-	42,43,43	0.99	0	51,60,60	1.57	11 (21%)
32	CLA	Cc	509	-	65,73,73	1.48	7 (10%)	76,113,113	1.30	7 (9%)
32	CLA	S	608	4	41,49,73	1.90	7 (17%)	47,84,113	1.36	7 (14%)
39	CHL	G	609	9	43,51,74	1.85	5 (11%)	45,86,114	1.53	6 (13%)
39	CHL	y	303	9	66,74,74	1.51	6 (9%)	73,114,114	1.11	5 (6%)
32	CLA	Aa	405	-	65,73,73	1.49	8 (12%)	76,113,113	1.26	7 (9%)
34	BCR	C	516	-	41,41,41	0.95	1 (2%)	56,56,56	2.07	17 (30%)
39	CHL	Y	609	9	66,74,74	1.51	6 (9%)	73,114,114	1.20	8 (10%)
32	CLA	BB	602	-	65,73,73	1.50	8 (12%)	76,113,113	1.21	9 (11%)
34	BCR	c	516	-	41,41,41	0.89	1 (2%)	56,56,56	2.02	15 (26%)
36	LHG	N	619	32	37,37,48	1.07	2 (5%)	40,43,54	1.06	3 (7%)
40	LUT	22	614	-	42,43,43	1.12	4 (9%)	51,60,60	1.77	11 (21%)
32	CLA	BB	607	-	65,73,73	1.47	9 (13%)	76,113,113	1.33	9 (11%)
34	BCR	TT	101	-	41,41,41	0.98	1 (2%)	56,56,56	2.04	18 (32%)
35	PL9	AA	410	-	55,55,55	4.33	23 (41%)	68,69,69	3.71	38 (55%)
32	CLA	N	613	9	49,57,73	1.75	7 (14%)	55,93,113	1.43	7 (12%)
39	CHL	22	605	-	40,49,74	1.93	4 (10%)	42,83,114	1.63	8 (19%)
32	CLA	s	612	4	49,57,73	1.73	6 (12%)	55,93,113	1.34	7 (12%)
32	CLA	R	602	3	65,73,73	1.52	8 (12%)	76,113,113	1.25	9 (11%)
32	CLA	r	610	36	49,57,73	1.75	6 (12%)	55,93,113	1.38	7 (12%)
39	CHL	Y	605	9	48,56,74	1.74	6 (12%)	51,92,114	1.29	6 (11%)
32	CLA	Nn	301	9	65,73,73	1.52	8 (12%)	76,113,113	1.18	10 (13%)
44	DGD	B	601	-	56,56,67	0.92	2 (3%)	70,70,81	0.97	4 (5%)
40	LUT	y	317	-	42,43,43	0.96	1 (2%)	51,60,60	2.02	11 (21%)
35	PL9	DD	406	-	55,55,55	4.25	19 (34%)	68,69,69	3.82	37 (54%)
32	CLA	44	609	11	45,53,73	1.79	6 (13%)	52,89,113	1.36	6 (11%)
32	CLA	N	611	36	49,57,73	1.74	5 (10%)	55,93,113	1.42	9 (16%)
34	BCR	B	614	-	41,41,41	0.96	2 (4%)	56,56,56	1.85	13 (23%)
32	CLA	GG	611	36	52,60,73	1.68	6 (11%)	60,97,113	1.28	6 (10%)
37	SQD	LL	102	-	53,54,54	1.19	4 (7%)	62,65,65	1.10	6 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
40	LUT	NN	616	-	42,43,43	0.94	1 (2%)	51,60,60	1.67	10 (19%)
32	CLA	11	613	-	39,48,73	1.96	5 (12%)	45,82,113	1.44	7 (15%)
39	CHL	NN	607	-	66,74,74	1.48	5 (7%)	73,114,114	1.17	5 (6%)
36	LHG	D	409	-	48,48,48	0.90	2 (4%)	51,54,54	0.91	2 (3%)
32	CLA	3	611	15	39,48,73	1.94	6 (15%)	45,82,113	1.42	8 (17%)
38	LMG	a	412	-	42,42,55	1.03	2 (4%)	50,50,63	1.10	4 (8%)
39	CHL	SS	308	4	49,57,74	1.77	5 (10%)	52,93,114	1.25	5 (9%)
32	CLA	S	612	4	49,57,73	1.74	7 (14%)	55,93,113	1.25	6 (10%)
39	CHL	Gg	306	9	43,51,74	1.86	6 (13%)	45,86,114	1.33	6 (13%)
36	LHG	11	614	32	33,33,48	1.14	2 (6%)	36,39,54	1.11	3 (8%)
34	BCR	B	613	-	41,41,41	0.98	3 (7%)	56,56,56	1.78	12 (21%)
40	LUT	s	614	-	42,43,43	1.05	2 (4%)	51,60,60	1.49	8 (15%)
32	CLA	RR	311	-	49,57,73	1.73	7 (14%)	55,93,113	1.34	6 (10%)
32	CLA	G	602	9	49,57,73	1.77	7 (14%)	55,93,113	1.32	5 (9%)
32	CLA	C	503	-	65,73,73	1.50	7 (10%)	76,113,113	1.20	8 (10%)
32	CLA	g	614	-	49,57,73	1.73	7 (14%)	55,93,113	1.29	8 (14%)
44	DGD	BB	623	-	63,63,67	0.89	3 (4%)	77,77,81	0.93	2 (2%)
32	CLA	y	306	-	49,57,73	1.69	7 (14%)	55,93,113	1.32	7 (12%)
42	NEX	Yy	617	-	38,46,46	1.07	1 (2%)	50,70,70	2.02	13 (26%)
32	CLA	1	609	14	39,48,73	1.97	8 (20%)	45,82,113	1.52	6 (13%)
34	BCR	c	515	-	41,41,41	1.01	3 (7%)	56,56,56	1.69	12 (21%)
34	BCR	k	101	-	41,41,41	0.88	0	56,56,56	1.92	15 (26%)
32	CLA	c	504	-	55,63,73	1.61	7 (12%)	64,101,113	1.22	6 (9%)
32	CLA	RR	303	-	49,57,73	1.70	7 (14%)	55,93,113	1.43	6 (10%)
40	LUT	r	614	-	42,43,43	0.94	1 (2%)	51,60,60	1.38	7 (13%)
39	CHL	r	605	3	50,58,74	1.71	5 (10%)	52,94,114	1.35	6 (11%)
32	CLA	2	602	14	39,48,73	1.97	6 (15%)	45,82,113	1.44	7 (15%)
32	CLA	CC	510	-	65,73,73	1.51	8 (12%)	76,113,113	1.24	8 (10%)
41	XAT	r	615	-	39,47,47	1.02	1 (2%)	54,74,74	2.49	14 (25%)
45	BCT	Aa	414	30	2,3,3	1.27	0	2,3,3	3.93	2 (100%)
32	CLA	Rr	602	3	65,73,73	1.54	7 (10%)	76,113,113	1.22	8 (10%)
36	LHG	d	405	-	42,42,48	0.99	2 (4%)	45,48,54	0.97	2 (4%)
32	CLA	Ss	610	36	49,57,73	1.72	7 (14%)	55,93,113	1.42	7 (12%)
32	CLA	S	611	4	49,57,73	1.72	6 (12%)	55,93,113	1.45	7 (12%)
39	CHL	n	601	9	50,58,74	1.71	5 (10%)	52,94,114	1.30	4 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
36	LHG	AA	414	-	44,44,48	0.97	2 (4%)	47,50,54	0.89	2 (4%)
32	CLA	2	613	-	39,48,73	1.91	7 (17%)	45,82,113	1.38	7 (15%)
32	CLA	GG	612	9	49,57,73	1.75	6 (12%)	55,93,113	1.45	8 (14%)
39	CHL	G	601	9	66,74,74	1.50	4 (6%)	73,114,114	1.07	5 (6%)
32	CLA	G	613	9	39,48,73	1.93	7 (17%)	45,82,113	1.47	9 (20%)
40	LUT	2	614	-	42,43,43	1.08	4 (9%)	51,60,60	1.84	12 (23%)
34	BCR	BB	618	-	41,41,41	0.92	1 (2%)	56,56,56	1.87	13 (23%)
32	CLA	SS	314	-	49,57,73	1.73	7 (14%)	55,93,113	1.29	8 (14%)
39	CHL	Nn	315	9	48,56,74	1.74	5 (10%)	51,92,114	1.60	8 (15%)
32	CLA	3	613	-	39,48,73	1.94	6 (15%)	45,82,113	1.45	8 (17%)
32	CLA	C	515	-	49,57,73	1.70	7 (14%)	55,93,113	1.42	8 (14%)
32	CLA	N	610	9	65,73,73	1.53	8 (12%)	76,113,113	1.12	8 (10%)
32	CLA	c	511	18	65,73,73	1.54	7 (10%)	76,113,113	1.15	5 (6%)
32	CLA	Yy	610	9	65,73,73	1.52	9 (13%)	76,113,113	1.14	6 (7%)
44	DGD	CC	518	-	56,56,67	0.92	2 (3%)	70,70,81	0.95	4 (5%)
32	CLA	SS	312	4	49,57,73	1.72	6 (12%)	55,93,113	1.41	7 (12%)
42	NEX	Y	619	-	38,46,46	1.08	1 (2%)	50,70,70	2.23	15 (30%)
44	DGD	Cc	520	-	53,53,67	0.95	2 (3%)	67,67,81	0.88	1 (1%)
32	CLA	3	610	36	39,48,73	1.90	5 (12%)	45,82,113	1.58	9 (20%)
39	CHL	22	606	-	40,49,74	1.95	4 (10%)	42,83,114	1.68	7 (16%)
36	LHG	Y	618	32	48,48,48	0.93	2 (4%)	51,54,54	0.85	2 (3%)
34	BCR	XX	202	-	41,41,41	0.92	1 (2%)	56,56,56	2.14	16 (28%)
39	CHL	YY	605	9	48,56,74	1.76	5 (10%)	51,92,114	1.22	5 (9%)
39	CHL	3	606	-	40,49,74	1.92	5 (12%)	42,83,114	1.43	7 (16%)
32	CLA	b	612	-	65,73,73	1.47	7 (10%)	76,113,113	1.29	7 (9%)
39	CHL	y	310	-	50,58,74	1.69	6 (12%)	52,94,114	1.25	6 (11%)
32	CLA	33	613	-	39,48,73	1.94	6 (15%)	45,82,113	1.48	9 (20%)
32	CLA	y	305	-	49,57,73	1.71	8 (16%)	55,93,113	1.36	6 (10%)
44	DGD	Hh	102	-	63,63,67	0.89	2 (3%)	77,77,81	0.92	2 (2%)
34	BCR	Cc	517	-	41,41,41	1.03	2 (4%)	56,56,56	1.79	14 (25%)
32	CLA	44	603	-	45,53,73	1.80	7 (15%)	52,89,113	1.44	6 (11%)
44	DGD	C	523	-	53,53,67	0.93	2 (3%)	67,67,81	0.93	2 (2%)
36	LHG	II	101	-	33,33,48	1.13	2 (6%)	36,39,54	1.01	2 (5%)
32	CLA	B	619	-	65,73,73	1.50	8 (12%)	76,113,113	1.20	9 (11%)
32	CLA	BB	614	-	65,73,73	1.49	7 (10%)	76,113,113	1.28	10 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
39	CHL	Yy	601	9	66,74,74	1.50	6 (9%)	73,114,114	1.11	5 (6%)
38	LMG	CC	520	-	39,39,55	1.06	2 (5%)	47,47,63	0.95	2 (4%)
39	CHL	s	607	-	49,57,74	1.76	5 (10%)	52,93,114	1.23	6 (11%)
32	CLA	Gg	312	36	65,73,73	1.50	6 (9%)	76,113,113	1.35	10 (13%)
39	CHL	Yy	609	9	66,74,74	1.48	6 (9%)	73,114,114	1.52	8 (10%)
39	CHL	4	302	-	44,53,74	1.84	6 (13%)	46,89,114	1.28	5 (10%)
32	CLA	22	609	14	39,48,73	1.95	7 (17%)	45,82,113	1.55	7 (15%)
32	CLA	c	513	-	43,51,73	1.79	6 (13%)	49,86,113	1.43	7 (14%)
32	CLA	Y	612	9	65,73,73	1.54	7 (10%)	76,113,113	1.21	10 (13%)
32	CLA	BB	609	-	65,73,73	1.48	8 (12%)	76,113,113	1.34	12 (15%)
34	BCR	Kk	101	-	41,41,41	0.85	0	56,56,56	1.98	13 (23%)
39	CHL	RR	307	-	50,58,74	1.70	5 (10%)	52,94,114	1.44	6 (11%)
44	DGD	a	415	-	56,56,67	0.97	2 (3%)	70,70,81	0.91	3 (4%)
32	CLA	b	602	-	65,73,73	1.50	7 (10%)	76,113,113	1.19	9 (11%)
32	CLA	b	604	-	65,73,73	1.48	7 (10%)	76,113,113	1.30	9 (11%)
39	CHL	N	605	9	42,50,74	1.86	5 (11%)	44,85,114	1.56	6 (13%)
39	CHL	S	601	4	52,60,74	1.69	5 (9%)	56,97,114	1.20	5 (8%)
32	CLA	a	410	-	60,68,73	1.57	7 (11%)	70,107,113	1.23	8 (11%)
32	CLA	3	609	15	39,48,73	1.96	5 (12%)	45,82,113	1.47	8 (17%)
32	CLA	R	603	-	49,57,73	1.72	7 (14%)	55,93,113	1.41	7 (12%)
39	CHL	n	605	9	48,56,74	1.76	6 (12%)	51,92,114	1.37	7 (13%)
32	CLA	RR	302	3	65,73,73	1.51	8 (12%)	76,113,113	1.29	10 (13%)
39	CHL	Y	606	-	44,52,74	1.83	6 (13%)	46,87,114	1.23	5 (10%)
39	CHL	Nn	316	-	50,58,74	1.71	5 (10%)	52,94,114	1.33	5 (9%)
42	NEX	Gg	318	-	38,46,46	1.10	3 (7%)	50,70,70	2.44	14 (28%)

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
36	LHG	J	101	-	-	10/30/30/53	-
39	CHL	SS	307	-	3/3/20/26	1/10/108/137	-
36	LHG	CC	523	-	-	10/41/41/53	-
36	LHG	Gg	319	32	-	7/38/38/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
38	LMG	A	415	-	-	4/31/51/70	0/1/1/1
42	NEX	R	617	-	-	2/27/83/83	0/3/3/3
41	XAT	Rr	615	-	-	2/31/93/93	0/4/4/4
39	CHL	2	606	-	3/3/19/26	2/10/104/137	-
32	CLA	Y	611	36	1/1/14/20	3/10/88/115	-
32	CLA	4	303	11	1/1/15/20	8/13/91/115	-
39	CHL	Ss	607	-	3/3/22/26	6/19/117/137	-
39	CHL	y	308	-	3/3/20/26	2/13/111/137	-
38	LMG	Dd	408	-	-	6/41/61/70	0/1/1/1
32	CLA	11	610	36	1/1/13/20	3/8/82/115	-
44	DGD	Aa	401	-	-	9/44/84/95	0/2/2/2
44	DGD	c	518	-	-	6/41/81/95	0/2/2/2
32	CLA	Gg	304	-	1/1/20/20	13/37/115/115	-
32	CLA	Bb	615	-	1/1/20/20	14/37/115/115	-
32	CLA	RR	314	3	-	11/18/96/115	-
40	LUT	N	616	-	-	3/29/67/67	0/2/2/2
32	CLA	r	608	3	1/1/16/20	11/18/96/115	-
34	BCR	B	612	-	-	4/29/63/63	0/2/2/2
32	CLA	Cc	515	-	1/1/14/20	9/11/89/115	-
46	HEM	e	101	20,21	-	3/12/54/54	-
42	NEX	YY	617	-	-	2/27/83/83	0/3/3/3
38	LMG	C	521	-	-	10/46/66/70	0/1/1/1
32	CLA	Bb	606	-	1/1/20/20	7/37/115/115	-
39	CHL	Yy	607	-	3/3/20/26	3/12/110/137	-
37	SQD	CC	501	-	-	11/49/69/69	0/1/1/1
39	CHL	NN	606	-	3/3/20/26	3/10/108/137	-
32	CLA	4	305	-	1/1/15/20	6/13/91/115	-
42	NEX	y	319	-	-	3/27/83/83	0/3/3/3
40	LUT	Ss	615	-	-	0/29/67/67	0/2/2/2
34	BCR	b	617	-	-	4/29/63/63	0/2/2/2
32	CLA	r	611	-	1/1/16/20	11/18/96/115	-
32	CLA	SS	305	-	1/1/16/20	8/18/96/115	-
39	CHL	Y	608	-	3/3/22/26	6/20/118/137	-
39	CHL	y	311	9	3/3/26/26	12/39/137/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	Nn	314	-	1/1/16/20	4/18/96/115	-
41	XAT	Gg	301	-	-	1/31/93/93	0/4/4/4
42	NEX	Y	617	-	-	2/27/83/83	0/3/3/3
32	CLA	Rr	609	3	1/1/20/20	13/37/115/115	-
32	CLA	SS	310	4	1/1/14/20	3/8/86/115	-
32	CLA	C	513	18	1/1/20/20	18/37/115/115	-
39	CHL	GG	606	-	3/3/20/26	5/12/110/137	-
34	BCR	BB	617	-	-	4/29/63/63	0/2/2/2
34	BCR	Bb	617	-	-	5/29/63/63	0/2/2/2
32	CLA	1	612	14	1/1/13/20	1/8/82/115	-
32	CLA	s	613	-	1/1/16/20	4/18/96/115	-
36	LHG	A	413	-	-	11/41/41/53	-
32	CLA	n	611	36	1/1/16/20	5/18/96/115	-
32	CLA	y	314	9	1/1/20/20	11/37/115/115	-
36	LHG	AA	411	-	-	13/38/38/53	-
32	CLA	Ss	604	-	1/1/16/20	10/18/96/115	-
32	CLA	Dd	402	-	1/1/20/20	14/37/115/115	-
39	CHL	2	608	14	3/3/19/26	3/10/104/137	-
34	BCR	CC	515	-	-	6/29/63/63	0/2/2/2
32	CLA	c	507	-	1/1/20/20	10/37/115/115	-
32	CLA	Bb	604	-	1/1/20/20	9/37/115/115	-
39	CHL	11	605	14	3/3/19/26	4/10/104/137	-
40	LUT	GG	615	-	-	2/29/67/67	0/2/2/2
32	CLA	BB	601	-	1/1/20/20	10/37/115/115	-
32	CLA	d	402	-	1/1/20/20	10/37/115/115	-
32	CLA	Gg	313	9	1/1/16/20	12/18/96/115	-
36	LHG	l	101	-	-	13/53/53/53	-
39	CHL	33	607	-	3/3/19/26	3/10/104/137	-
32	CLA	Cc	513	18	1/1/20/20	9/37/115/115	-
32	CLA	1	603	-	1/1/13/20	5/8/82/115	-
32	CLA	Bb	614	-	1/1/20/20	8/37/115/115	-
32	CLA	BB	605	-	1/1/20/20	16/37/115/115	-
32	CLA	RR	308	3	1/1/16/20	8/18/96/115	-
32	CLA	g	603	-	1/1/20/20	16/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	BCR	D	406	-	-	2/29/63/63	0/2/2/2
32	CLA	b	608	-	1/1/20/20	8/37/115/115	-
37	SQD	L	102	-	-	10/31/51/69	0/1/1/1
36	LHG	D	410	-	-	10/38/38/53	-
32	CLA	Aa	406	1	1/1/20/20	11/37/115/115	-
41	XAT	N	617	-	-	0/31/93/93	0/4/4/4
32	CLA	n	610	9	1/1/20/20	12/37/115/115	-
32	CLA	1	610	36	1/1/13/20	6/8/82/115	-
32	CLA	Ss	608	4	1/1/16/20	9/18/96/115	-
39	CHL	Ss	601	4	3/3/23/26	7/23/121/137	-
32	CLA	Aa	407	-	1/1/16/20	8/18/96/115	-
38	LMG	DD	409	-	-	4/41/61/70	0/1/1/1
32	CLA	Yy	614	-	1/1/16/20	8/18/96/115	-
32	CLA	b	616	-	1/1/20/20	12/37/115/115	-
39	CHL	GG	607	-	3/3/21/26	6/15/113/137	-
39	CHL	33	608	15	3/3/19/26	3/10/104/137	-
32	CLA	3	604	-	1/1/13/20	3/8/82/115	-
32	CLA	2	609	14	1/1/13/20	2/8/82/115	-
32	CLA	SS	313	4	1/1/16/20	8/18/96/115	-
39	CHL	g	609	9	3/3/20/26	6/12/110/137	-
44	DGD	BB	625	-	-	3/43/83/95	0/2/2/2
39	CHL	r	606	-	3/3/22/26	4/20/118/137	-
41	XAT	RR	316	-	-	0/31/93/93	0/4/4/4
44	DGD	Cc	519	-	-	8/44/84/95	0/2/2/2
32	CLA	Gg	314	9	1/1/13/20	2/8/82/115	-
32	CLA	YY	611	36	1/1/14/20	2/10/88/115	-
32	CLA	Cc	512	-	1/1/20/20	15/37/115/115	-
32	CLA	D	401	-	1/1/20/20	8/37/115/115	-
39	CHL	1	608	14	3/3/19/26	3/10/104/137	-
36	LHG	g	618	32	-	9/38/38/53	-
32	CLA	C	504	-	-	14/37/115/115	-
32	CLA	NN	610	9	1/1/20/20	12/37/115/115	-
40	LUT	SS	315	-	-	3/29/67/67	0/2/2/2
36	LHG	D	408	-	-	13/47/47/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	Rr	603	-	1/1/16/20	6/18/96/115	-
32	CLA	b	609	-	1/1/20/20	17/37/115/115	-
44	DGD	B	603	-	-	6/43/83/95	0/2/2/2
32	CLA	Ss	602	4	1/1/16/20	11/18/96/115	-
34	BCR	Cc	516	-	-	4/29/63/63	0/2/2/2
36	LHG	Dd	405	-	-	9/47/47/53	-
40	LUT	Nn	306	-	-	1/29/67/67	0/2/2/2
35	PL9	Dd	404	-	-	28/53/73/73	0/1/1/1
41	XAT	y	301	-	-	3/31/93/93	0/4/4/4
32	CLA	CC	504	-	1/1/20/20	14/37/115/115	-
36	LHG	Ss	616	32	-	9/52/52/53	-
34	BCR	h	101	-	-	7/29/63/63	0/2/2/2
32	CLA	Aa	410	-	1/1/19/20	10/31/109/115	-
39	CHL	1	605	14	3/3/19/26	4/10/104/137	-
32	CLA	r	603	-	1/1/16/20	7/18/96/115	-
34	BCR	A	409	-	-	5/29/63/63	0/2/2/2
32	CLA	Bb	605	-	1/1/20/20	13/37/115/115	-
32	CLA	Yy	602	9	1/1/20/20	15/37/115/115	-
32	CLA	C	512	-	1/1/20/20	10/37/115/115	-
32	CLA	c	503	-	1/1/20/20	9/37/115/115	-
36	LHG	d	406	-	-	10/53/53/53	-
32	CLA	C	508	-	1/1/20/20	13/37/115/115	-
32	CLA	33	604	-	1/1/13/20	3/8/82/115	-
39	CHL	n	607	-	3/3/26/26	17/39/137/137	-
32	CLA	CC	514	-	1/1/16/20	8/18/96/115	-
32	CLA	3	602	15	1/1/13/20	2/8/82/115	-
39	CHL	Ss	606	-	3/3/22/26	11/20/118/137	-
44	DGD	BB	624	-	-	9/44/84/95	0/2/2/2
32	CLA	11	604	-	1/1/13/20	4/8/82/115	-
32	CLA	4	304	-	1/1/15/20	5/13/91/115	-
34	BCR	B	616	-	-	4/29/63/63	0/2/2/2
32	CLA	Bb	611	-	1/1/20/20	7/37/115/115	-
32	CLA	Bb	610	-	1/1/20/20	14/37/115/115	-
38	LMG	WW	201	-	-	8/43/63/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
42	NEX	g	617	32	-	3/27/83/83	0/3/3/3
40	LUT	R	615	-	-	0/29/67/67	0/2/2/2
32	CLA	GG	604	-	1/1/14/20	5/10/88/115	-
32	CLA	GG	613	9	1/1/13/20	4/8/82/115	-
32	CLA	Cc	511	-	1/1/20/20	16/37/115/115	-
40	LUT	n	616	-	-	3/29/67/67	0/2/2/2
32	CLA	BB	603	-	1/1/20/20	13/37/115/115	-
36	LHG	DD	407	-	-	14/47/47/53	-
37	SQD	B	617	-	-	5/31/51/69	0/1/1/1
34	BCR	DD	405	-	-	2/29/63/63	0/2/2/2
42	NEX	RR	317	-	-	3/27/83/83	0/3/3/3
37	SQD	L	101	-	-	16/49/69/69	0/1/1/1
39	CHL	g	606	-	3/3/20/26	6/12/110/137	-
40	LUT	G	616	-	-	2/29/67/67	0/2/2/2
32	CLA	Cc	504	-	-	14/37/115/115	-
33	PHO	D	402	-	-	9/37/103/103	0/5/6/6
32	CLA	y	315	9	1/1/18/20	11/30/108/115	-
32	CLA	R	609	3	1/1/20/20	10/37/115/115	-
35	PL9	D	407	-	-	28/53/73/73	0/1/1/1
40	LUT	G	615	-	-	2/29/67/67	0/2/2/2
32	CLA	Ss	609	4	1/1/16/20	10/18/96/115	-
32	CLA	C	514	-	1/1/20/20	8/37/115/115	-
32	CLA	SS	303	4	1/1/16/20	10/18/96/115	-
32	CLA	Cc	505	-	1/1/20/20	13/37/115/115	-
32	CLA	Gg	311	9	1/1/16/20	9/18/96/115	-
39	CHL	R	607	-	3/3/22/26	8/20/118/137	-
32	CLA	CC	512	18	1/1/20/20	16/37/115/115	-
33	PHO	a	409	-	-	16/37/103/103	0/5/6/6
41	XAT	NN	617	-	-	0/31/93/93	0/4/4/4
42	NEX	Nn	309	-	-	2/27/83/83	0/3/3/3
36	LHG	Dd	407	-	-	5/41/41/53	-
32	CLA	a	407	-	1/1/16/20	6/18/96/115	-
32	CLA	c	510	-	1/1/20/20	17/37/115/115	-
39	CHL	4	309	11	3/3/21/26	7/15/113/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
39	CHL	Nn	311	9	3/3/22/26	6/20/118/137	-
34	BCR	C	517	-	-	5/29/63/63	0/2/2/2
32	CLA	11	611	14	1/1/13/20	2/8/82/115	-
32	CLA	c	509	-	1/1/20/20	12/37/115/115	-
40	LUT	Y	615	-	-	4/29/67/67	0/2/2/2
32	CLA	Yy	611	36	1/1/14/20	3/10/88/115	-
32	CLA	YY	604	-	-	11/18/96/115	-
40	LUT	n	615	-	-	2/29/67/67	0/2/2/2
36	LHG	Nn	310	32	-	16/53/53/53	-
37	SQD	A	412	-	-	6/30/50/69	0/1/1/1
38	LMG	BB	619	-	-	10/40/60/70	0/1/1/1
32	CLA	c	501	-	1/1/20/20	18/37/115/115	-
39	CHL	r	607	-	3/3/22/26	8/20/118/137	-
39	CHL	Nn	317	-	3/3/26/26	14/39/137/137	-
32	CLA	22	602	14	1/1/13/20	2/8/82/115	-
32	CLA	s	610	36	1/1/16/20	8/18/96/115	-
32	CLA	B	610	-	1/1/20/20	9/37/115/115	-
32	CLA	GG	603	-	1/1/20/20	10/37/115/115	-
34	BCR	CC	516	-	-	5/29/63/63	0/2/2/2
39	CHL	S	606	-	3/3/20/26	1/10/108/137	-
32	CLA	Y	602	9	1/1/20/20	18/37/115/115	-
32	CLA	y	313	36	1/1/14/20	3/10/88/115	-
39	CHL	GG	609	9	3/3/20/26	4/12/110/137	-
32	CLA	Y	604	-	-	11/18/96/115	-
39	CHL	Gg	310	9	3/3/20/26	6/12/110/137	-
36	LHG	44	614	32	-	7/23/23/53	-
32	CLA	n	604	-	1/1/16/20	6/18/96/115	-
39	CHL	Y	607	-	3/3/20/26	2/12/110/137	-
32	CLA	Y	614	-	1/1/16/20	11/18/96/115	-
40	LUT	Ss	614	-	-	2/29/67/67	0/2/2/2
34	BCR	C	518	-	-	2/29/63/63	0/2/2/2
32	CLA	G	604	-	1/1/14/20	6/10/88/115	-
39	CHL	s	601	4	3/3/23/26	10/23/121/137	-
38	LMG	Mm	101	-	-	10/46/66/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
44	DGD	D	411	-	-	7/51/91/95	0/2/2/2
39	CHL	Rr	607	-	3/3/22/26	8/20/118/137	-
32	CLA	YY	602	9	1/1/20/20	15/37/115/115	-
39	CHL	2	601	14	3/3/19/26	2/10/104/137	-
44	DGD	c	517	-	-	5/44/84/95	0/2/2/2
36	LHG	BB	622	-	-	9/38/38/53	-
32	CLA	S	609	4	1/1/14/20	2/8/86/115	-
36	LHG	0	201	-	-	11/51/51/53	-
39	CHL	1	606	-	3/3/19/26	4/10/104/137	-
37	SQD	BB	621	-	-	5/31/51/69	0/1/1/1
39	CHL	Gg	307	-	3/3/20/26	6/12/110/137	-
32	CLA	NN	602	9	1/1/20/20	14/37/115/115	-
32	CLA	NN	604	-	1/1/14/20	5/8/86/115	-
32	CLA	GG	610	9	1/1/16/20	7/18/96/115	-
39	CHL	Gg	302	9	3/3/26/26	12/39/137/137	-
32	CLA	G	611	36	1/1/17/20	8/22/100/115	-
32	CLA	SS	311	-	1/1/16/20	6/18/96/115	-
32	CLA	NN	614	-	1/1/14/20	3/8/86/115	-
39	CHL	s	605	-	3/3/22/26	9/20/118/137	-
40	LUT	Yy	615	-	-	3/29/67/67	0/2/2/2
32	CLA	33	602	15	1/1/13/20	2/8/82/115	-
32	CLA	R	608	3	1/1/16/20	9/18/96/115	-
32	CLA	r	602	3	1/1/20/20	14/37/115/115	-
32	CLA	BB	612	-	1/1/20/20	14/37/115/115	-
32	CLA	CC	502	-	1/1/20/20	15/37/115/115	-
38	LMG	B	615	-	-	8/40/60/70	0/1/1/1
39	CHL	Yy	606	-	3/3/20/26	3/13/111/137	-
36	LHG	3	614	32	-	11/38/38/53	-
38	LMG	m	101	-	-	13/46/66/70	0/1/1/1
32	CLA	R	612	3	1/1/14/20	1/10/88/115	-
32	CLA	B	618	-	1/1/20/20	10/37/115/115	-
39	CHL	YY	606	-	3/3/20/26	5/13/111/137	-
32	CLA	N	602	9	1/1/20/20	14/37/115/115	-
34	BCR	Bb	619	-	-	2/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	LHG	Ll	102	-	-	15/53/53/53	-
38	LMG	W	201	-	-	6/43/63/70	0/1/1/1
39	CHL	y	309	-	3/3/20/26	4/12/110/137	-
32	CLA	SS	304	-	1/1/15/20	3/13/91/115	-
32	CLA	n	602	9	1/1/20/20	13/37/115/115	-
32	CLA	b	606	-	1/1/20/20	8/37/115/115	-
41	XAT	44	613	-	-	0/31/93/93	0/4/4/4
34	BCR	T	101	-	-	3/29/63/63	0/2/2/2
32	CLA	g	613	9	1/1/13/20	6/8/82/115	-
32	CLA	Cc	507	-	1/1/20/20	12/37/115/115	-
39	CHL	N	601	9	3/3/20/26	3/13/111/137	-
32	CLA	BB	610	-	1/1/20/20	15/37/115/115	-
32	CLA	NN	611	36	1/1/16/20	12/18/96/115	-
32	CLA	Y	613	9	1/1/18/20	13/30/108/115	-
39	CHL	GG	601	9	3/3/26/26	11/39/137/137	-
32	CLA	CC	511	-	1/1/20/20	8/37/115/115	-
32	CLA	R	611	-	1/1/16/20	6/18/96/115	-
39	CHL	GG	605	9	3/3/20/26	3/12/110/137	-
42	NEX	N	618	-	-	2/27/83/83	0/3/3/3
38	LMG	c	519	-	-	7/29/49/70	0/1/1/1
32	CLA	b	613	-	1/1/20/20	14/37/115/115	-
32	CLA	Gg	305	-	1/1/14/20	6/10/88/115	-
32	CLA	1	611	14	1/1/13/20	2/8/82/115	-
32	CLA	G	612	9	1/1/16/20	8/18/96/115	-
39	CHL	11	601	14	3/3/19/26	3/10/104/137	-
40	LUT	4	313	-	-	2/29/67/67	0/2/2/2
39	CHL	2	605	-	3/3/19/26	2/10/104/137	-
39	CHL	Nn	319	9	3/3/22/26	7/20/118/137	-
42	NEX	NN	618	-	-	2/27/83/83	0/3/3/3
32	CLA	Rr	608	3	1/1/16/20	12/18/96/115	-
32	CLA	n	614	-	1/1/16/20	8/18/96/115	-
44	DGD	CC	522	-	-	11/44/84/95	0/2/2/2
32	CLA	44	604	-	1/1/15/20	6/13/91/115	-
32	CLA	22	610	36	1/1/14/20	6/10/88/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
39	CHL	S	605	-	3/3/20/26	3/10/108/137	-
32	CLA	YY	612	9	1/1/18/20	12/29/107/115	-
32	CLA	D	405	-	1/1/20/20	6/37/115/115	-
32	CLA	G	603	-	1/1/20/20	11/37/115/115	-
36	LHG	KK	101	-	-	8/38/38/53	-
41	XAT	g	619	-	-	1/31/93/93	0/4/4/4
38	LMG	Bb	621	-	-	8/31/51/70	0/1/1/1
40	LUT	GG	616	-	-	2/29/67/67	0/2/2/2
32	CLA	Gg	303	9	-	10/18/96/115	-
43	LMU	RR	301	-	-	3/13/53/61	0/2/2/2
32	CLA	44	610	36	1/1/15/20	6/13/91/115	-
40	LUT	S	614	-	-	2/29/67/67	0/2/2/2
39	CHL	N	607	-	3/3/26/26	12/39/137/137	-
32	CLA	CC	513	-	1/1/20/20	8/37/115/115	-
32	CLA	Cc	508	-	1/1/20/20	18/37/115/115	-
36	LHG	33	614	32	-	11/38/38/53	-
40	LUT	Yy	616	-	-	3/29/67/67	0/2/2/2
32	CLA	n	612	9	1/1/16/20	7/18/96/115	-
32	CLA	11	602	14	1/1/13/20	2/8/82/115	-
32	CLA	A	406	-	1/1/16/20	9/18/96/115	-
39	CHL	g	601	9	3/3/26/26	12/39/137/137	-
32	CLA	CC	503	-	-	15/37/115/115	-
32	CLA	BB	613	-	1/1/19/20	8/31/109/115	-
38	LMG	AA	415	-	-	4/31/51/70	0/1/1/1
39	CHL	YY	607	-	3/3/20/26	2/12/110/137	-
32	CLA	1	613	-	1/1/13/20	2/8/82/115	-
44	DGD	C	519	-	-	9/44/84/95	0/2/2/2
36	LHG	Rr	617	32	-	11/53/53/53	-
36	LHG	a	414	-	-	5/41/41/53	-
32	CLA	YY	614	-	1/1/16/20	11/18/96/115	-
32	CLA	B	624	-	1/1/20/20	11/37/115/115	-
36	LHG	GG	618	32	-	7/38/38/53	-
39	CHL	3	601	15	3/3/19/26	5/10/104/137	-
32	CLA	B	622	-	1/1/20/20	19/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
36	LHG	G	618	32	-	7/38/38/53	-
39	CHL	G	608	-	3/3/20/26	6/10/108/137	-
43	LMU	KK	102	-	-	5/13/53/61	0/2/2/2
32	CLA	s	608	4	1/1/16/20	9/18/96/115	-
39	CHL	n	608	-	3/3/22/26	9/20/118/137	-
32	CLA	b	601	-	1/1/20/20	16/37/115/115	-
32	CLA	g	610	9	1/1/16/20	6/18/96/115	-
36	LHG	DD	408	-	-	10/53/53/53	-
32	CLA	b	603	-	1/1/20/20	16/37/115/115	-
32	CLA	NN	612	9	1/1/14/20	4/10/88/115	-
46	HEM	EE	102	20,21	-	0/12/54/54	-
32	CLA	YY	613	9	1/1/18/20	9/30/108/115	-
32	CLA	44	615	3	1/1/16/20	9/18/96/115	-
39	CHL	YY	608	-	3/3/22/26	6/20/118/137	-
32	CLA	Bb	601	-	1/1/20/20	14/37/115/115	-
32	CLA	b	605	-	1/1/20/20	11/37/115/115	-
39	CHL	44	605	-	3/3/21/26	5/15/113/137	-
32	CLA	XX	201	-	1/1/14/20	2/8/86/115	-
33	PHO	Aa	409	-	-	16/37/103/103	0/5/6/6
32	CLA	s	611	4	1/1/16/20	10/18/96/115	-
32	CLA	2	603	-	1/1/13/20	3/8/82/115	-
32	CLA	B	611	-	1/1/14/20	3/8/86/115	-
32	CLA	Rr	612	3	1/1/16/20	7/18/96/115	-
32	CLA	CC	505	-	1/1/20/20	7/37/115/115	-
32	CLA	C	509	-	1/1/20/20	10/37/115/115	-
34	BCR	b	618	-	-	4/29/63/63	0/2/2/2
32	CLA	Nn	305	-	-	7/18/96/115	-
39	CHL	R	605	-	3/3/22/26	7/20/118/137	-
32	CLA	2	610	-	1/1/13/20	3/8/82/115	-
32	CLA	Yy	604	-	1/1/16/20	10/18/96/115	-
32	CLA	Bb	616	-	1/1/20/20	12/37/115/115	-
32	CLA	4	310	-	1/1/15/20	6/13/91/115	-
39	CHL	11	607	-	3/3/19/26	2/10/104/137	-
36	LHG	SS	301	-	-	4/30/30/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
41	XAT	GG	619	-	-	1/31/93/93	0/4/4/4
41	XAT	G	619	-	-	1/31/93/93	0/4/4/4
39	CHL	Rr	605	3	3/3/22/26	8/20/118/137	-
39	CHL	4	306	-	3/3/21/26	5/15/113/137	-
32	CLA	b	610	-	1/1/20/20	9/37/115/115	-
32	CLA	22	603	-	1/1/13/20	2/8/82/115	-
39	CHL	NN	608	-	3/3/20/26	3/10/108/137	-
32	CLA	S	610	-	1/1/16/20	7/18/96/115	-
32	CLA	C	505	-	1/1/20/20	16/37/115/115	-
36	LHG	4	301	32	-	9/21/21/53	-
35	PL9	d	404	-	-	28/53/73/73	0/1/1/1
36	LHG	NN	619	32	-	10/42/42/53	-
36	LHG	s	616	32	-	9/52/52/53	-
32	CLA	CC	508	-	1/1/20/20	10/37/115/115	-
39	CHL	g	605	9	3/3/20/26	6/12/110/137	-
32	CLA	4	312	-	1/1/15/20	7/13/91/115	-
34	BCR	Cc	518	-	-	3/29/63/63	0/2/2/2
32	CLA	B	623	-	1/1/20/20	11/37/115/115	-
32	CLA	S	602	4	1/1/16/20	9/18/96/115	-
37	SQD	B	602	-	-	10/42/62/69	0/1/1/1
40	LUT	NN	615	-	-	2/29/67/67	0/2/2/2
32	CLA	Cc	506	-	1/1/18/20	7/25/103/115	-
32	CLA	Bb	613	-	1/1/20/20	14/37/115/115	-
39	CHL	g	607	-	3/3/22/26	5/20/118/137	-
32	CLA	DD	403	-	1/1/20/20	13/37/115/115	-
32	CLA	R	614	3	-	8/18/96/115	-
40	LUT	RR	315	-	-	2/29/67/67	0/2/2/2
32	CLA	2	611	14	1/1/13/20	3/8/82/115	-
37	SQD	C	501	-	-	16/49/69/69	0/1/1/1
34	BCR	c	514	-	-	4/29/63/63	0/2/2/2
39	CHL	RR	306	-	3/3/21/26	11/20/118/137	-
32	CLA	AA	406	-	1/1/16/20	7/18/96/115	-
32	CLA	N	604	-	1/1/14/20	5/8/86/115	-
32	CLA	GG	602	9	1/1/16/20	7/18/96/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	Cc	510	-	1/1/19/20	8/31/109/115	-
32	CLA	C	511	-	1/1/20/20	12/37/115/115	-
33	PHO	A	407	-	-	11/37/103/103	0/5/6/6
36	LHG	Dd	406	-	-	10/53/53/53	-
32	CLA	B	609	-	1/1/19/20	7/31/109/115	-
32	CLA	RR	313	-	1/1/14/20	4/8/86/115	-
34	BCR	Bb	618	-	-	4/29/63/63	0/2/2/2
40	LUT	g	616	-	-	2/29/67/67	0/2/2/2
39	CHL	NN	605	9	3/3/20/26	5/10/108/137	-
46	HEM	Ee	101	20,21	-	6/12/54/54	-
36	LHG	K	101	-	-	11/38/38/53	-
32	CLA	Nn	312	9	1/1/20/20	13/37/115/115	-
39	CHL	2	607	-	3/3/19/26	4/10/104/137	-
32	CLA	c	508	-	1/1/19/20	11/31/109/115	-
39	CHL	R	606	-	3/3/22/26	8/20/118/137	-
40	LUT	y	318	-	-	2/29/67/67	0/2/2/2
34	BCR	BB	620	-	-	5/29/63/63	0/2/2/2
39	CHL	3	607	-	3/3/19/26	2/10/104/137	-
32	CLA	Nn	303	9	1/1/16/20	6/18/96/115	-
32	CLA	Yy	613	9	1/1/18/20	9/30/108/115	-
32	CLA	11	609	14	1/1/13/20	2/8/82/115	-
32	CLA	Ss	603	-	1/1/16/20	9/18/96/115	-
32	CLA	a	406	1	1/1/20/20	11/37/115/115	-
39	CHL	33	605	-	3/3/19/26	3/10/104/137	-
34	BCR	K	102	-	-	5/29/63/63	0/2/2/2
40	LUT	Nn	307	-	-	2/29/67/67	0/2/2/2
32	CLA	Bb	603	-	1/1/20/20	17/37/115/115	-
32	CLA	33	603	-	1/1/13/20	4/8/82/115	-
39	CHL	YY	609	9	3/3/26/26	10/39/137/137	-
39	CHL	SS	306	4	3/3/20/26	3/10/108/137	-
32	CLA	22	613	-	1/1/13/20	4/8/82/115	-
32	CLA	Bb	602	-	1/1/20/20	11/37/115/115	-
32	CLA	Cc	514	-	1/1/20/20	8/37/115/115	-
34	BCR	KK	103	-	-	4/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	c	506	-	1/1/20/20	18/37/115/115	-
32	CLA	Bb	607	-	1/1/20/20	11/37/115/115	-
32	CLA	RR	309	3	1/1/20/20	10/37/115/115	-
33	PHO	DD	402	-	-	11/37/103/103	0/5/6/6
32	CLA	X	201	-	1/1/14/20	3/8/86/115	-
36	LHG	C	522	-	-	9/35/35/53	-
39	CHL	1	601	14	3/3/19/26	4/10/104/137	-
46	HEM	E	101	20,21	-	0/12/54/54	-
32	CLA	N	603	-	1/1/14/20	6/10/88/115	-
41	XAT	GG	617	-	-	2/31/93/93	0/4/4/4
32	CLA	b	615	-	1/1/20/20	14/37/115/115	-
32	CLA	R	604	-	1/1/16/20	5/18/96/115	-
41	XAT	G	617	-	-	2/31/93/93	0/4/4/4
41	XAT	y	302	-	-	1/31/93/93	0/4/4/4
34	BCR	b	619	-	-	4/29/63/63	0/2/2/2
34	BCR	H	101	-	-	3/29/63/63	0/2/2/2
32	CLA	A	405	-	1/1/20/20	16/37/115/115	-
32	CLA	BB	615	-	1/1/14/20	3/8/86/115	-
44	DGD	h	102	-	-	8/51/91/95	0/2/2/2
32	CLA	g	604	42	1/1/14/20	6/10/88/115	-
39	CHL	NN	609	9	3/3/22/26	6/20/118/137	-
39	CHL	1	607	-	3/3/19/26	2/10/104/137	-
32	CLA	d	401	-	-	11/37/115/115	-
32	CLA	44	611	-	1/1/15/20	5/13/91/115	-
32	CLA	Nn	304	9	1/1/16/20	9/18/96/115	-
40	LUT	Gg	316	-	-	2/29/67/67	0/2/2/2
39	CHL	N	609	9	3/3/22/26	6/20/118/137	-
33	PHO	a	408	-	-	8/37/103/103	0/5/6/6
41	XAT	R	616	-	-	0/31/93/93	0/4/4/4
34	BCR	AA	409	-	-	5/29/63/63	0/2/2/2
36	LHG	4	315	32	-	8/23/23/53	-
32	CLA	Ss	612	4	1/1/16/20	9/18/96/115	-
32	CLA	Yy	612	9	1/1/20/20	8/37/115/115	-
32	CLA	B	607	-	1/1/20/20	8/37/115/115	-
39	CHL	22	607	-	3/3/19/26	3/10/104/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
37	SQD	l	102	-	-	10/49/69/69	0/1/1/1
39	CHL	4	308	-	3/3/21/26	6/15/113/137	-
40	LUT	44	612	-	-	2/29/67/67	0/2/2/2
40	LUT	YY	615	-	-	4/29/67/67	0/2/2/2
39	CHL	SS	302	4	3/3/23/26	8/23/121/137	-
32	CLA	n	613	9	1/1/16/20	10/18/96/115	-
32	CLA	Cc	503	-	1/1/20/20	16/37/115/115	-
43	LMU	C	502	-	-	4/13/53/61	0/2/2/2
32	CLA	S	603	-	1/1/15/20	4/13/91/115	-
34	BCR	a	411	-	-	4/29/63/63	0/2/2/2
37	SQD	LL	101	-	-	9/31/51/69	0/1/1/1
32	CLA	N	612	9	1/1/14/20	3/10/88/115	-
36	LHG	44	616	32	-	8/21/21/53	-
39	CHL	GG	608	-	3/3/20/26	6/10/108/137	-
38	LMG	b	620	-	-	4/31/51/70	0/1/1/1
43	LMU	R	618	-	-	5/13/53/61	0/2/2/2
32	CLA	G	614	-	1/1/14/20	2/8/86/115	-
37	SQD	Ll	101	-	-	9/49/69/69	0/1/1/1
37	SQD	AA	412	-	-	7/30/50/69	0/1/1/1
32	CLA	b	614	-	1/1/20/20	7/37/115/115	-
32	CLA	CC	509	-	1/1/20/20	16/37/115/115	-
35	PL9	A	410	-	-	24/53/73/73	0/1/1/1
32	CLA	Rr	604	-	1/1/16/20	11/18/96/115	-
32	CLA	C	506	-	1/1/20/20	7/37/115/115	-
32	CLA	3	612	15	1/1/13/20	4/8/82/115	-
39	CHL	y	307	9	3/3/21/26	8/18/116/137	-
39	CHL	Gg	308	-	3/3/22/26	6/20/118/137	-
38	LMG	Cc	501	-	-	7/29/49/70	0/1/1/1
34	BCR	Aa	411	-	-	4/29/63/63	0/2/2/2
32	CLA	Yy	603	-	1/1/16/20	6/18/96/115	-
39	CHL	YY	601	9	3/3/26/26	14/39/137/137	-
32	CLA	BB	608	-	1/1/20/20	13/37/115/115	-
40	LUT	N	615	-	-	1/29/67/67	0/2/2/2
32	CLA	NN	613	9	1/1/16/20	9/18/96/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	RR	304	-	1/1/16/20	5/18/96/115	-
34	BCR	d	403	-	-	4/29/63/63	0/2/2/2
32	CLA	11	603	-	1/1/13/20	5/8/82/115	-
32	CLA	g	602	9	-	7/18/96/115	-
37	SQD	Aa	413	-	-	10/42/62/69	0/1/1/1
32	CLA	a	405	-	1/1/20/20	15/37/115/115	-
32	CLA	3	603	-	1/1/13/20	3/8/82/115	-
32	CLA	C	507	-	1/1/20/20	13/37/115/115	-
32	CLA	R	613	-	1/1/14/20	6/8/86/115	-
32	CLA	R	601	3	1/1/16/20	8/18/96/115	-
38	LMG	b	621	-	-	9/31/51/70	0/1/1/1
32	CLA	Rr	611	-	1/1/16/20	11/18/96/115	-
36	LHG	YY	618	32	-	19/53/53/53	-
32	CLA	1	604	-	1/1/13/20	3/8/82/115	-
36	LHG	CC	521	-	-	7/38/38/53	-
40	LUT	s	615	-	-	2/29/67/67	0/2/2/2
32	CLA	Gg	315	-	1/1/16/20	9/18/96/115	-
32	CLA	R	610	36	1/1/16/20	11/18/96/115	-
36	LHG	Yy	618	32	-	19/53/53/53	-
39	CHL	N	608	-	3/3/20/26	3/10/108/137	-
32	CLA	22	604	-	1/1/13/20	2/8/82/115	-
39	CHL	Ss	605	-	3/3/22/26	12/20/118/137	-
32	CLA	2	604	-	1/1/13/20	3/8/82/115	-
32	CLA	g	611	36	1/1/20/20	17/37/115/115	-
32	CLA	BB	604	-	1/1/20/20	13/37/115/115	-
39	CHL	Yy	608	-	3/3/22/26	6/20/118/137	-
36	LHG	n	618	32	-	12/53/53/53	-
34	BCR	Dd	403	-	-	4/29/63/63	0/2/2/2
42	NEX	n	617	-	-	3/27/83/83	0/3/3/3
32	CLA	AA	405	-	1/1/20/20	14/37/115/115	-
32	CLA	33	611	15	1/1/13/20	4/8/82/115	-
34	BCR	BB	616	-	-	4/29/63/63	0/2/2/2
32	CLA	B	620	-	1/1/20/20	10/37/115/115	-
39	CHL	G	606	-	3/3/20/26	5/12/110/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
39	CHL	3	608	15	3/3/19/26	3/10/104/137	-
33	PHO	AA	407	-	-	7/37/103/103	0/5/6/6
41	XAT	4	314	-	-	0/31/93/93	0/4/4/4
32	CLA	Bb	609	-	1/1/20/20	17/37/115/115	-
32	CLA	11	612	-	1/1/13/20	3/8/82/115	-
38	LMG	Bb	620	-	-	4/31/51/70	0/1/1/1
42	NEX	Rr	616	-	-	3/27/83/83	0/3/3/3
39	CHL	Yy	605	9	3/3/21/26	9/18/116/137	-
32	CLA	S	613	-	1/1/15/20	4/13/91/115	-
32	CLA	Y	610	9	1/1/20/20	17/37/115/115	-
32	CLA	RR	312	3	1/1/14/20	2/10/88/115	-
32	CLA	4	311	36	1/1/15/20	6/13/91/115	-
39	CHL	11	608	14	3/3/19/26	2/10/104/137	-
39	CHL	Rr	606	-	3/3/22/26	6/20/118/137	-
36	LHG	y	320	32	-	23/53/53/53	-
32	CLA	G	610	9	1/1/16/20	7/18/96/115	-
36	LHG	22	615	32	-	9/38/38/53	-
39	CHL	44	608	11	3/3/21/26	4/15/113/137	-
32	CLA	r	613	3	1/1/16/20	9/18/96/115	-
32	CLA	Rr	613	3	1/1/16/20	8/18/96/115	-
32	CLA	Y	603	-	1/1/16/20	8/18/96/115	-
38	LMG	j	101	-	-	3/41/61/70	0/1/1/1
39	CHL	44	601	-	3/3/21/26	2/13/111/137	-
39	CHL	3	605	-	3/3/19/26	5/10/104/137	-
32	CLA	c	512	-	1/1/20/20	8/37/115/115	-
41	XAT	Yy	619	-	-	3/31/93/93	0/4/4/4
32	CLA	r	604	-	1/1/16/20	14/18/96/115	-
39	CHL	Nn	318	-	3/3/22/26	7/20/118/137	-
41	XAT	Nn	308	-	-	1/31/93/93	0/4/4/4
32	CLA	22	611	14	1/1/13/20	2/8/82/115	-
32	CLA	BB	611	-	1/1/20/20	6/37/115/115	-
39	CHL	4	307	-	3/3/21/26	4/15/113/137	-
32	CLA	Rr	610	36	1/1/16/20	11/18/96/115	-
32	CLA	B	621	-	1/1/20/20	12/37/115/115	-
40	LUT	Gg	317	-	-	1/29/67/67	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	c	502	-	1/1/20/20	9/37/115/115	-
34	BCR	Hh	101	-	-	8/29/63/63	0/2/2/2
44	DGD	CC	519	-	-	5/51/91/95	0/2/2/2
32	CLA	DD	401	-	1/1/20/20	6/37/115/115	-
32	CLA	s	604	-	1/1/16/20	9/18/96/115	-
32	CLA	g	612	9	1/1/16/20	12/18/96/115	-
32	CLA	b	611	-	1/1/20/20	7/37/115/115	-
32	CLA	c	505	-	1/1/20/20	12/37/115/115	-
32	CLA	Ss	611	4	1/1/16/20	10/18/96/115	-
32	CLA	2	612	14	1/1/13/20	2/8/82/115	-
32	CLA	y	312	9	1/1/20/20	12/37/115/115	-
39	CHL	n	606	-	3/3/22/26	1/20/118/137	-
32	CLA	B	604	-	1/1/20/20	11/37/115/115	-
32	CLA	y	316	-	1/1/16/20	8/18/96/115	-
39	CHL	Gg	309	-	3/3/20/26	3/10/108/137	-
32	CLA	44	602	11	1/1/15/20	8/13/91/115	-
32	CLA	CC	507	-	1/1/20/20	13/37/115/115	-
32	CLA	YY	610	9	1/1/20/20	15/37/115/115	-
32	CLA	Dd	401	-	-	12/37/115/115	-
38	LMG	F	101	-	-	3/41/61/70	0/1/1/1
44	DGD	C	520	-	-	4/51/91/95	0/2/2/2
39	CHL	G	605	9	3/3/20/26	4/12/110/137	-
32	CLA	DD	404	-	1/1/20/20	8/37/115/115	-
39	CHL	S	607	-	3/3/20/26	2/12/110/137	-
32	CLA	YY	603	-	1/1/16/20	7/18/96/115	-
36	LHG	A	411	-	-	12/38/38/53	-
32	CLA	y	304	9	1/1/20/20	13/37/115/115	-
36	LHG	1	614	32	-	8/34/34/53	-
40	LUT	g	615	-	-	1/29/67/67	0/2/2/2
32	CLA	33	612	15	1/1/13/20	5/8/82/115	-
32	CLA	r	601	3	1/1/16/20	10/18/96/115	-
32	CLA	s	602	4	1/1/16/20	11/18/96/115	-
32	CLA	RR	310	36	1/1/16/20	11/18/96/115	-
32	CLA	n	603	-	1/1/16/20	10/18/96/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	CC	506	-	1/1/20/20	17/37/115/115	-
32	CLA	A	408	-	1/1/19/20	8/31/109/115	-
32	CLA	1	602	14	1/1/13/20	3/8/82/115	-
36	LHG	r	616	32	-	13/53/53/53	-
32	CLA	GG	614	-	1/1/14/20	3/8/86/115	-
32	CLA	Nn	313	-	1/1/16/20	10/18/96/115	-
34	BCR	CC	517	-	-	2/29/63/63	0/2/2/2
39	CHL	22	601	14	3/3/19/26	3/10/104/137	-
38	LMG	Aa	412	-	-	7/37/57/70	0/1/1/1
32	CLA	N	614	-	1/1/14/20	3/8/86/115	-
32	CLA	Ss	613	-	1/1/16/20	7/18/96/115	-
39	CHL	Y	601	9	3/3/26/26	14/39/137/137	-
39	CHL	g	608	-	3/3/20/26	2/10/108/137	-
36	LHG	EE	101	-	-	9/44/44/53	-
32	CLA	33	610	36	1/1/13/20	5/8/82/115	-
39	CHL	44	607	-	3/3/21/26	7/15/113/137	-
39	CHL	33	606	-	3/3/19/26	4/10/104/137	-
32	CLA	22	612	14	1/1/13/20	3/8/82/115	-
39	CHL	s	606	-	3/3/22/26	11/20/118/137	-
32	CLA	NN	603	-	1/1/14/20	6/10/88/115	-
39	CHL	11	606	-	3/3/19/26	4/10/104/137	-
39	CHL	22	608	14	3/3/19/26	2/10/104/137	-
39	CHL	N	606	-	3/3/20/26	1/10/108/137	-
32	CLA	Rr	601	3	1/1/16/20	11/18/96/115	-
33	PHO	Aa	408	-	-	7/37/103/103	0/5/6/6
32	CLA	B	605	-	-	15/37/115/115	-
32	CLA	C	510	-	1/1/20/20	13/37/115/115	-
39	CHL	RR	305	-	3/3/22/26	8/20/118/137	-
32	CLA	BB	606	-	1/1/20/20	12/37/115/115	-
36	LHG	A	414	-	-	10/49/49/53	-
32	CLA	Bb	608	-	1/1/20/20	9/37/115/115	-
32	CLA	AA	408	-	1/1/19/20	8/31/109/115	-
39	CHL	NN	601	9	3/3/20/26	3/13/111/137	-
32	CLA	S	604	-	1/1/16/20	7/18/96/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
40	LUT	YY	616	-	-	2/29/67/67	0/2/2/2
32	CLA	B	608	-	1/1/20/20	14/37/115/115	-
36	LHG	JJ	101	-	-	9/37/37/53	-
32	CLA	b	607	-	1/1/20/20	11/37/115/115	-
32	CLA	B	606	-	1/1/20/20	16/37/115/115	-
32	CLA	Bb	612	-	1/1/20/20	15/37/115/115	-
32	CLA	33	609	15	1/1/13/20	1/8/82/115	-
32	CLA	r	612	3	1/1/16/20	4/18/96/115	-
32	CLA	r	609	3	1/1/20/20	13/37/115/115	-
32	CLA	SS	309	4	1/1/14/20	5/8/86/115	-
32	CLA	Nn	302	36	1/1/16/20	3/18/96/115	-
32	CLA	s	609	4	1/1/16/20	8/18/96/115	-
39	CHL	33	601	15	3/3/19/26	5/10/104/137	-
39	CHL	n	609	9	3/3/22/26	6/20/118/137	-
32	CLA	D	404	-	1/1/20/20	16/37/115/115	-
32	CLA	s	603	-	1/1/16/20	9/18/96/115	-
39	CHL	44	606	-	3/3/21/26	4/15/113/137	-
40	LUT	Rr	614	-	-	2/29/67/67	0/2/2/2
39	CHL	G	607	-	3/3/21/26	6/15/113/137	-
40	LUT	Y	616	-	-	2/29/67/67	0/2/2/2
32	CLA	Cc	509	-	1/1/20/20	12/37/115/115	-
32	CLA	S	608	4	1/1/14/20	6/8/86/115	-
39	CHL	G	609	9	3/3/20/26	3/12/110/137	-
39	CHL	y	303	9	3/3/26/26	14/39/137/137	-
32	CLA	Aa	405	-	1/1/20/20	14/37/115/115	-
34	BCR	C	516	-	-	6/29/63/63	0/2/2/2
39	CHL	Y	609	9	3/3/26/26	10/39/137/137	-
32	CLA	BB	602	-	1/1/20/20	21/37/115/115	-
34	BCR	c	516	-	-	4/29/63/63	0/2/2/2
36	LHG	N	619	32	-	11/42/42/53	-
40	LUT	22	614	-	-	4/29/67/67	0/2/2/2
32	CLA	BB	607	-	1/1/20/20	12/37/115/115	-
34	BCR	TT	101	-	-	5/29/63/63	0/2/2/2
35	PL9	AA	410	-	-	27/53/73/73	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	N	613	9	1/1/16/20	8/18/96/115	-
39	CHL	22	605	-	3/3/19/26	2/10/104/137	-
32	CLA	s	612	4	1/1/16/20	9/18/96/115	-
32	CLA	R	602	3	1/1/20/20	18/37/115/115	-
32	CLA	r	610	36	1/1/16/20	10/18/96/115	-
39	CHL	Y	605	9	3/3/21/26	6/18/116/137	-
32	CLA	Nn	301	9	1/1/20/20	12/37/115/115	-
44	DGD	B	601	-	-	6/44/84/95	0/2/2/2
40	LUT	y	317	-	-	3/29/67/67	0/2/2/2
35	PL9	DD	406	-	-	27/53/73/73	0/1/1/1
32	CLA	44	609	11	1/1/15/20	5/13/91/115	-
32	CLA	N	611	36	1/1/16/20	9/18/96/115	-
34	BCR	B	614	-	-	4/29/63/63	0/2/2/2
32	CLA	GG	611	36	1/1/17/20	8/22/100/115	-
37	SQD	LL	102	-	-	16/49/69/69	0/1/1/1
40	LUT	NN	616	-	-	2/29/67/67	0/2/2/2
32	CLA	11	613	-	1/1/13/20	2/8/82/115	-
39	CHL	NN	607	-	3/3/26/26	12/39/137/137	-
36	LHG	D	409	-	-	7/53/53/53	-
32	CLA	3	611	15	1/1/13/20	4/8/82/115	-
38	LMG	a	412	-	-	10/37/57/70	0/1/1/1
39	CHL	SS	308	4	3/3/22/26	5/19/117/137	-
32	CLA	S	612	4	1/1/16/20	6/18/96/115	-
39	CHL	Gg	306	9	3/3/20/26	6/12/110/137	-
36	LHG	11	614	32	-	16/38/38/53	-
34	BCR	B	613	-	-	4/29/63/63	0/2/2/2
40	LUT	s	614	-	-	2/29/67/67	0/2/2/2
32	CLA	RR	311	-	1/1/16/20	6/18/96/115	-
32	CLA	G	602	9	1/1/16/20	8/18/96/115	-
32	CLA	C	503	-	1/1/20/20	13/37/115/115	-
32	CLA	g	614	-	1/1/16/20	9/18/96/115	-
44	DGD	BB	623	-	-	8/51/91/95	0/2/2/2
32	CLA	y	306	-	1/1/16/20	8/18/96/115	-
42	NEX	Yy	617	-	-	3/27/83/83	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	1	609	14	1/1/13/20	2/8/82/115	-
34	BCR	c	515	-	-	5/29/63/63	0/2/2/2
34	BCR	k	101	-	-	6/29/63/63	0/2/2/2
32	CLA	c	504	-	1/1/18/20	4/25/103/115	-
32	CLA	RR	303	-	1/1/16/20	3/18/96/115	-
40	LUT	r	614	-	-	2/29/67/67	0/2/2/2
39	CHL	r	605	3	3/3/22/26	8/20/118/137	-
32	CLA	2	602	14	1/1/13/20	4/8/82/115	-
32	CLA	CC	510	-	1/1/20/20	13/37/115/115	-
41	XAT	r	615	-	-	1/31/93/93	0/4/4/4
32	CLA	Rr	602	3	1/1/20/20	12/37/115/115	-
36	LHG	d	405	-	-	9/47/47/53	-
32	CLA	Ss	610	36	1/1/16/20	8/18/96/115	-
32	CLA	S	611	4	1/1/16/20	9/18/96/115	-
39	CHL	n	601	9	3/3/22/26	6/20/118/137	-
36	LHG	AA	414	-	-	10/49/49/53	-
32	CLA	2	613	-	1/1/13/20	2/8/82/115	-
32	CLA	GG	612	9	1/1/16/20	8/18/96/115	-
39	CHL	G	601	9	3/3/26/26	14/39/137/137	-
32	CLA	G	613	9	1/1/13/20	5/8/82/115	-
40	LUT	2	614	-	-	4/29/67/67	0/2/2/2
34	BCR	BB	618	-	-	4/29/63/63	0/2/2/2
32	CLA	SS	314	-	1/1/16/20	7/18/96/115	-
39	CHL	Nn	315	9	3/3/21/26	6/18/116/137	-
32	CLA	3	613	-	1/1/13/20	4/8/82/115	-
32	CLA	C	515	-	1/1/16/20	8/18/96/115	-
32	CLA	N	610	9	1/1/20/20	13/37/115/115	-
32	CLA	c	511	18	1/1/20/20	10/37/115/115	-
32	CLA	Yy	610	9	1/1/20/20	10/37/115/115	-
44	DGD	CC	518	-	-	11/44/84/95	0/2/2/2
32	CLA	SS	312	4	1/1/16/20	8/18/96/115	-
42	NEX	Y	619	-	-	3/27/83/83	0/3/3/3
44	DGD	Cc	520	-	-	7/41/81/95	0/2/2/2
32	CLA	3	610	36	1/1/13/20	6/8/82/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
39	CHL	22	606	-	3/3/19/26	2/10/104/137	-
36	LHG	Y	618	32	-	18/53/53/53	-
34	BCR	XX	202	-	-	6/29/63/63	0/2/2/2
39	CHL	YY	605	9	3/3/21/26	6/18/116/137	-
39	CHL	3	606	-	3/3/19/26	4/10/104/137	-
32	CLA	b	612	-	1/1/20/20	13/37/115/115	-
39	CHL	y	310	-	3/3/22/26	6/20/118/137	-
32	CLA	33	613	-	1/1/13/20	4/8/82/115	-
32	CLA	y	305	-	1/1/16/20	5/18/96/115	-
44	DGD	Hh	102	-	-	12/51/91/95	0/2/2/2
34	BCR	Cc	517	-	-	5/29/63/63	0/2/2/2
32	CLA	44	603	-	1/1/15/20	8/13/91/115	-
44	DGD	C	523	-	-	9/41/81/95	0/2/2/2
36	LHG	II	101	-	-	11/38/38/53	-
32	CLA	B	619	-	1/1/20/20	21/37/115/115	-
32	CLA	BB	614	-	1/1/20/20	8/37/115/115	-
39	CHL	Yy	601	9	3/3/26/26	14/39/137/137	-
39	CHL	s	607	-	3/3/22/26	7/19/117/137	-
38	LMG	CC	520	-	-	3/34/54/70	0/1/1/1
32	CLA	Gg	312	36	1/1/20/20	17/37/115/115	-
39	CHL	Yy	609	9	3/3/26/26	11/39/137/137	-
39	CHL	4	302	-	3/3/21/26	2/13/111/137	-
32	CLA	22	609	14	1/1/13/20	5/8/82/115	-
32	CLA	c	513	-	1/1/14/20	9/11/89/115	-
32	CLA	Y	612	9	1/1/20/20	11/37/115/115	-
39	CHL	RR	307	-	3/3/22/26	8/20/118/137	-
32	CLA	BB	609	-	-	13/37/115/115	-
34	BCR	Kk	101	-	-	4/29/63/63	0/2/2/2
44	DGD	a	415	-	-	9/44/84/95	0/2/2/2
32	CLA	b	602	-	1/1/20/20	14/37/115/115	-
32	CLA	b	604	-	1/1/20/20	11/37/115/115	-
39	CHL	N	605	9	3/3/20/26	4/10/108/137	-
39	CHL	S	601	4	3/3/23/26	8/23/121/137	-
32	CLA	a	410	-	1/1/19/20	9/31/109/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	CLA	3	609	15	1/1/13/20	3/8/82/115	-
32	CLA	R	603	-	1/1/16/20	3/18/96/115	-
39	CHL	n	605	9	3/3/21/26	8/18/116/137	-
32	CLA	RR	302	3	1/1/20/20	17/37/115/115	-
39	CHL	Y	606	-	3/3/20/26	4/13/111/137	-
39	CHL	Nn	316	-	3/3/22/26	1/20/118/137	-
42	NEX	Gg	318	-	-	3/27/83/83	0/3/3/3

The worst 5 of 3906 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	AA	410	PL9	C23-C24	10.46	1.58	1.33
35	A	410	PL9	C23-C24	10.36	1.57	1.33
35	d	404	PL9	C23-C24	10.20	1.57	1.33
35	Dd	404	PL9	C23-C24	10.20	1.57	1.33
35	DD	406	PL9	C23-C24	10.17	1.57	1.33

The worst 5 of 5850 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BB	621	SQD	O9-S-C6	-19.31	83.99	106.94
37	B	617	SQD	O9-S-C6	-19.24	84.07	106.94
41	G	619	XAT	O24-C25-C24	14.32	124.14	113.38
41	GG	619	XAT	O24-C25-C24	14.28	124.11	113.38
41	g	619	XAT	O24-C25-C24	13.93	123.85	113.38

5 of 780 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
32	A	405	CLA	ND
32	A	406	CLA	ND
32	A	408	CLA	ND
32	Rr	601	CLA	ND
32	Rr	602	CLA	ND

5 of 5753 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
32	A	406	CLA	CHA-CBD-CGD-O1D
32	A	406	CLA	CHA-CBD-CGD-O2D

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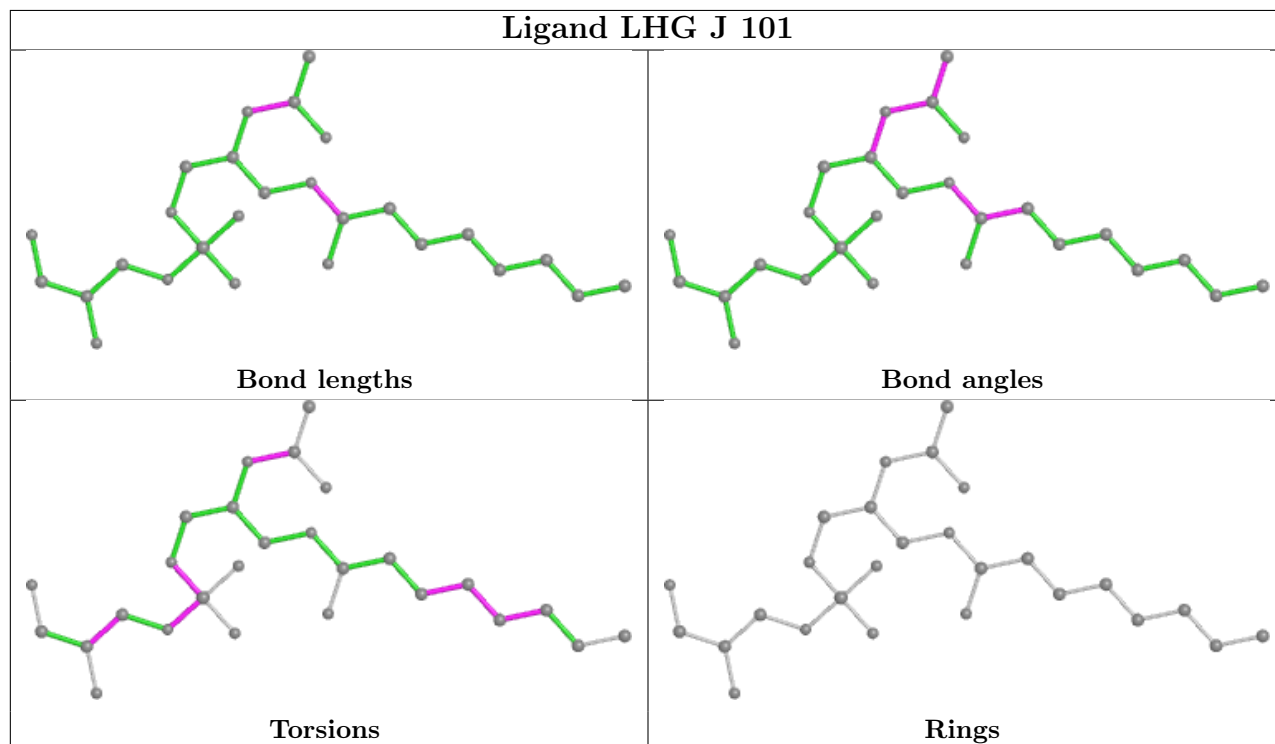
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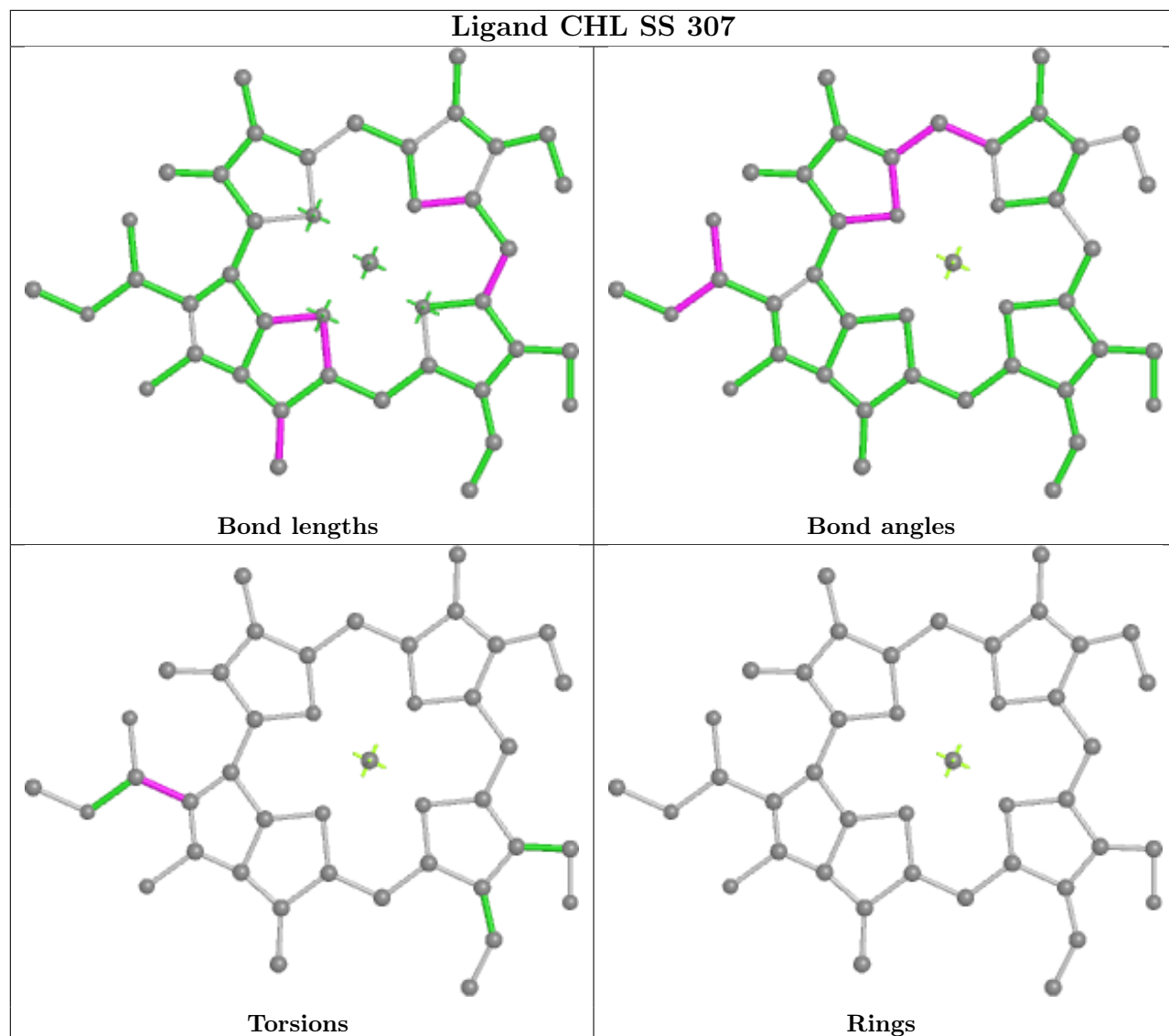
Mol	Chain	Res	Type	Atoms
32	A	408	CLA	CHA-CBD-CGD-O1D
32	A	408	CLA	CHA-CBD-CGD-O2D
32	A	408	CLA	CAD-CBD-CGD-O1D

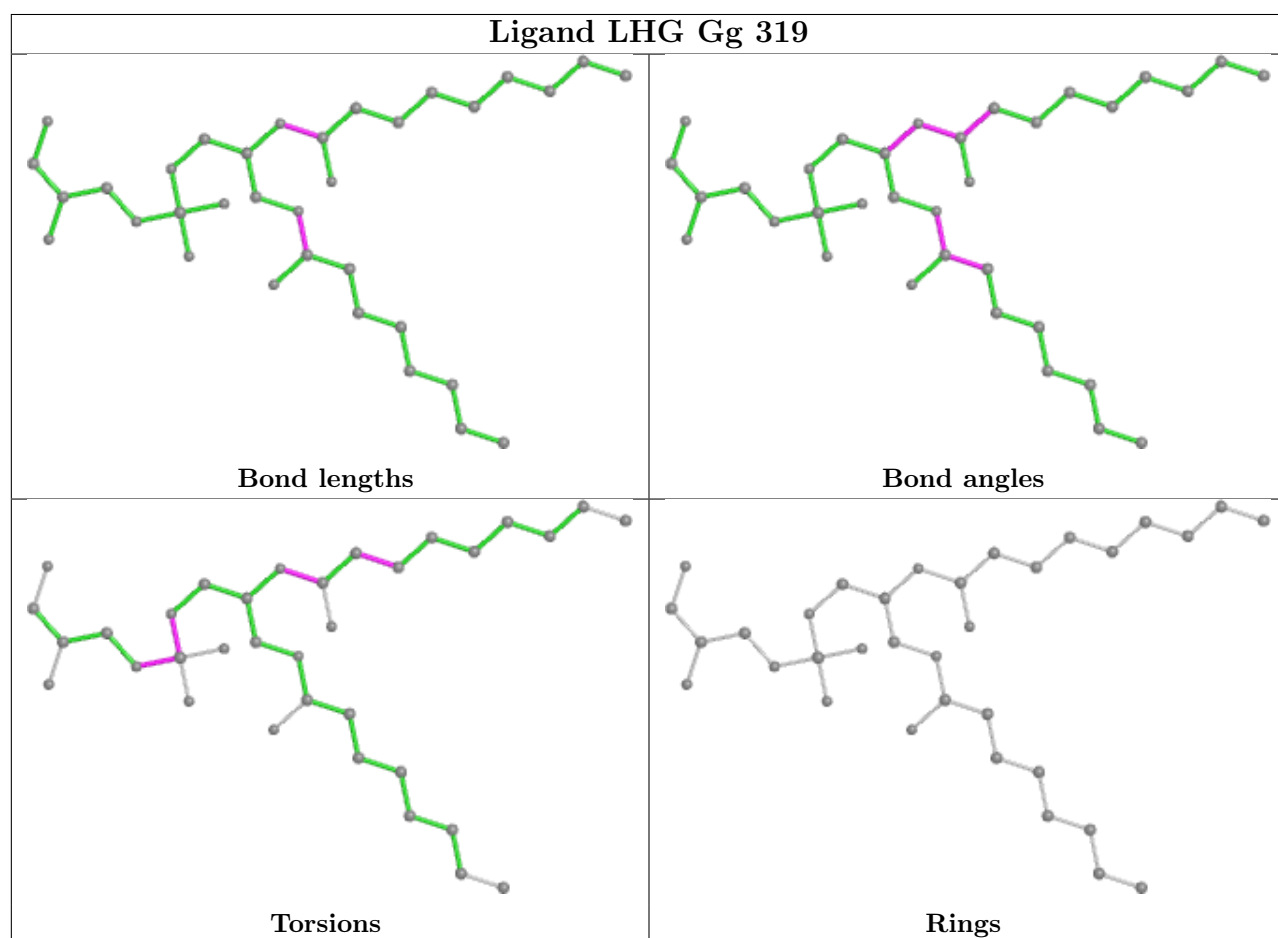
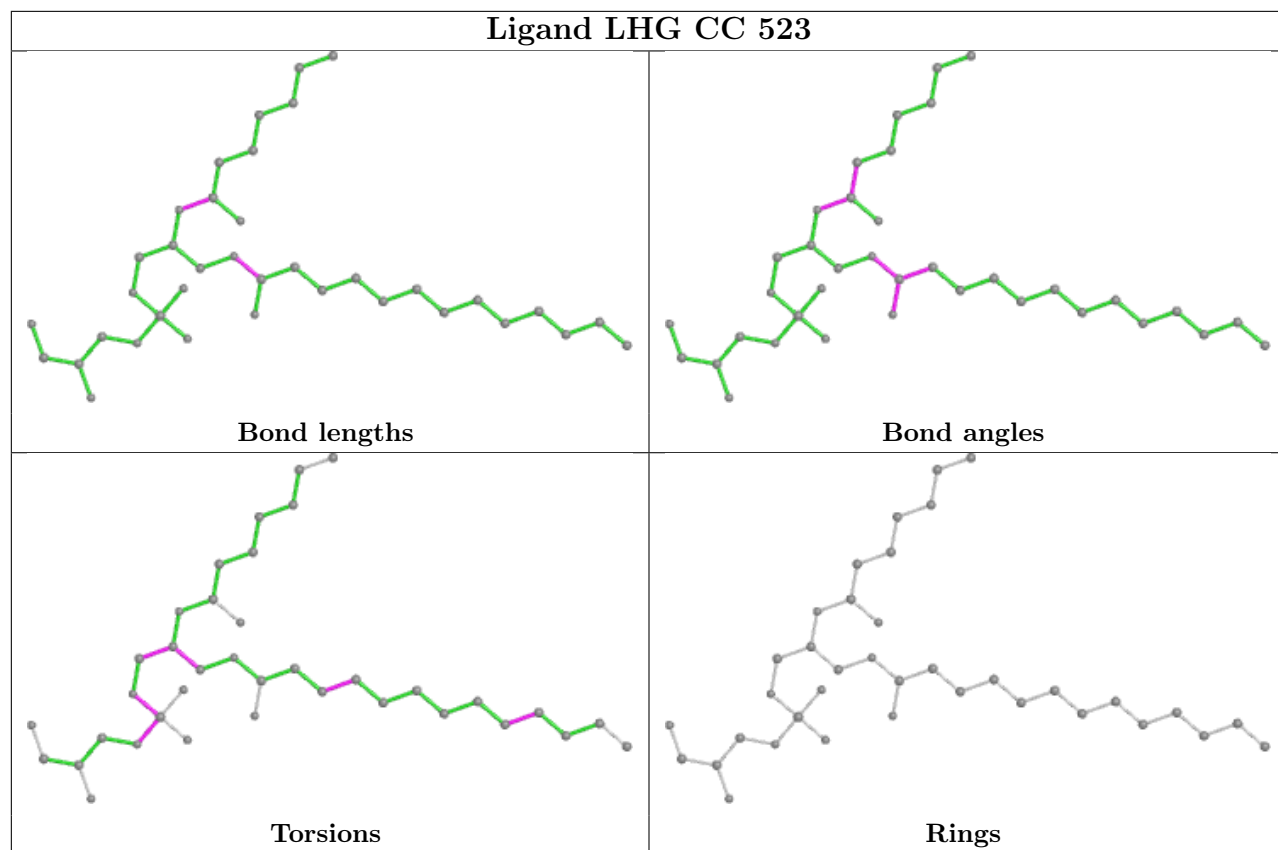
There are no ring outliers.

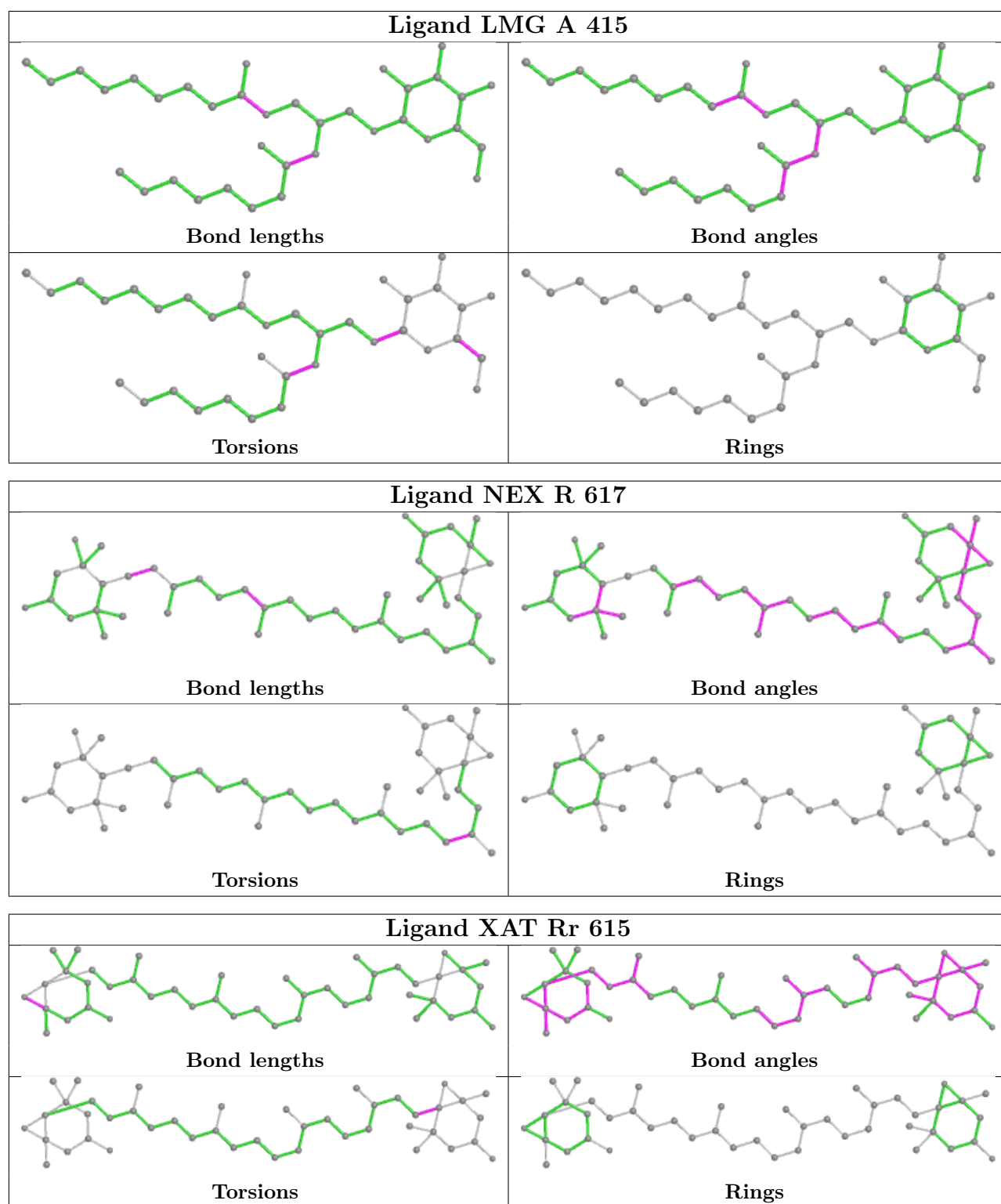
No monomer is involved in short contacts.

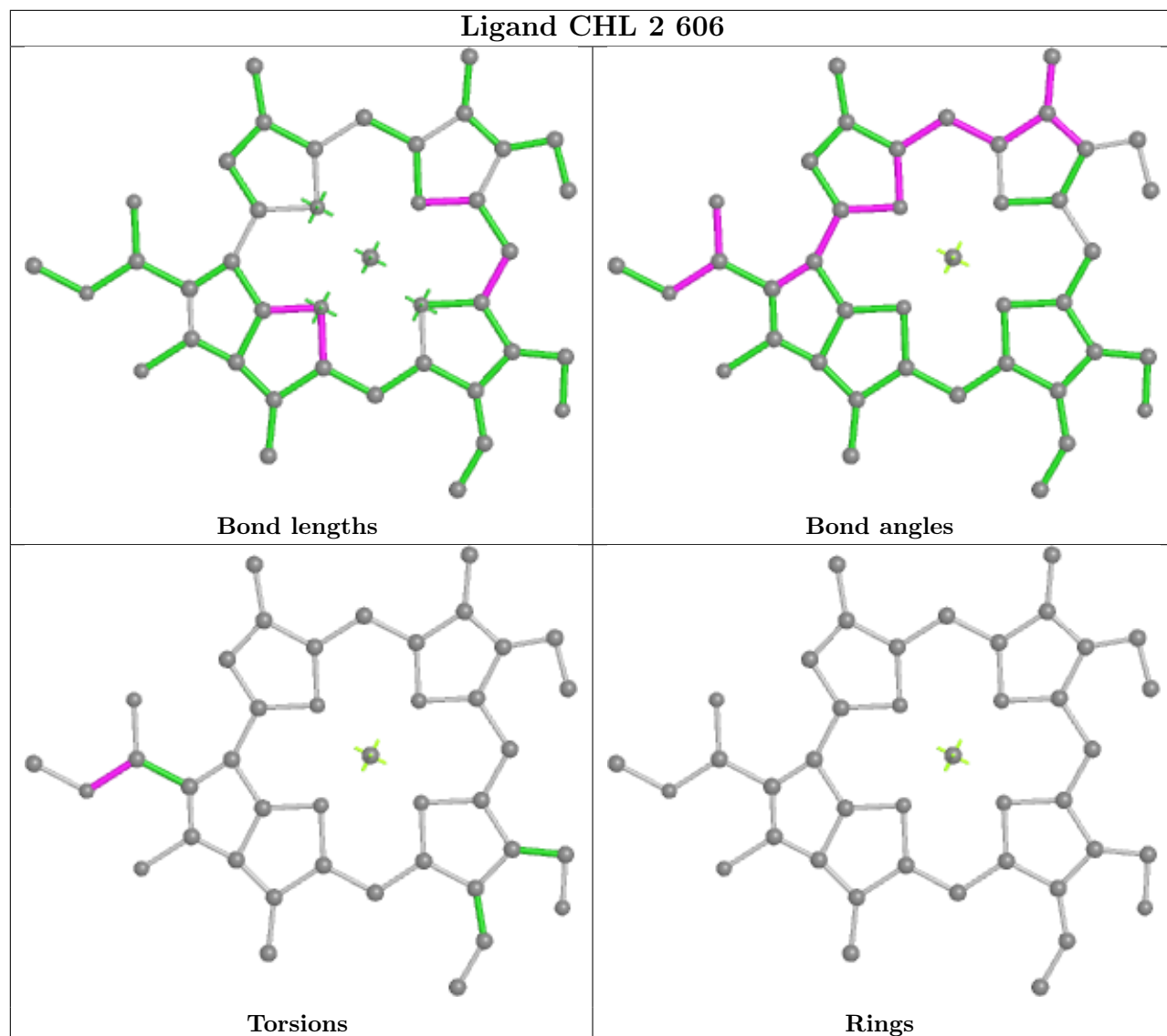
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

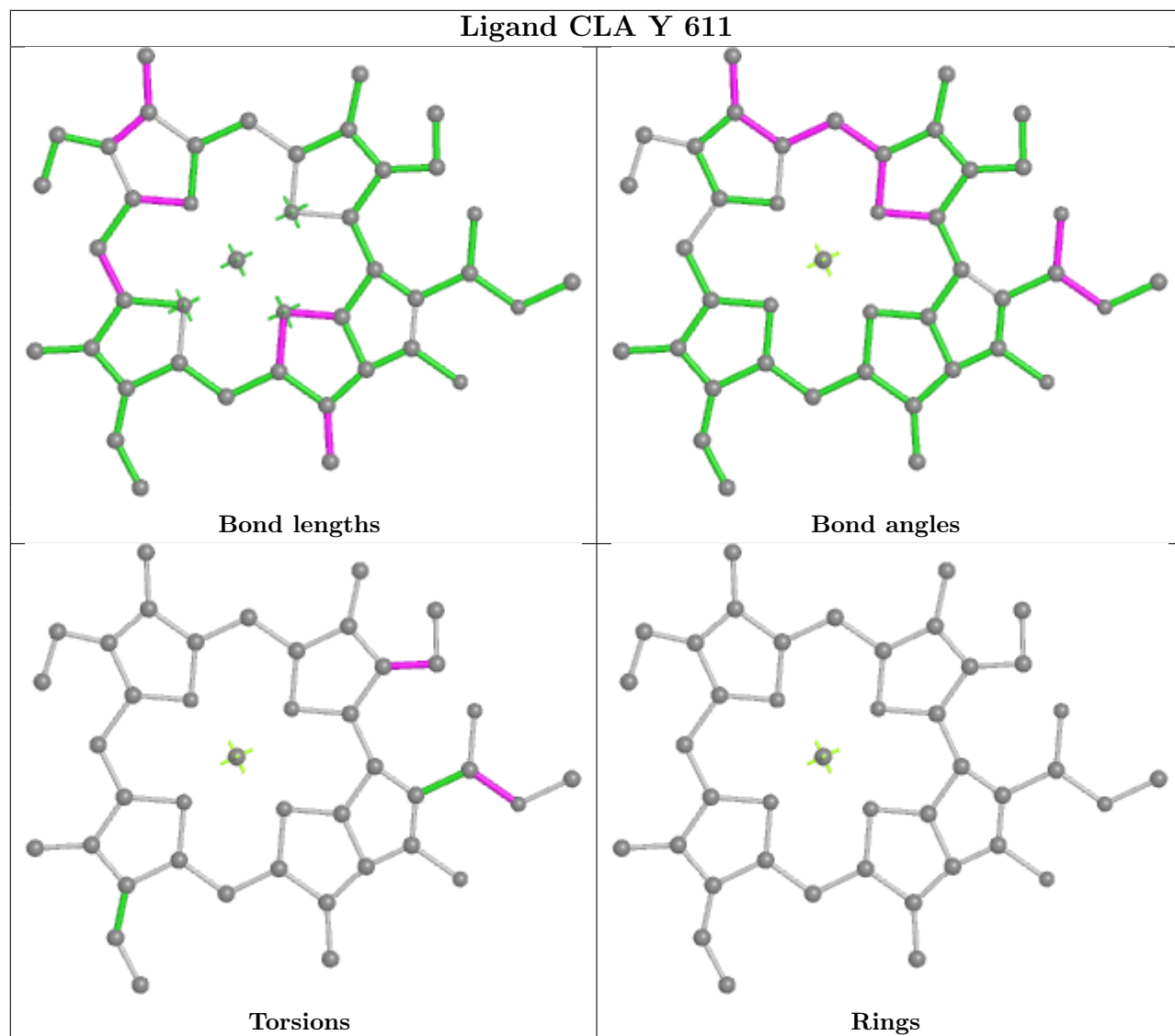


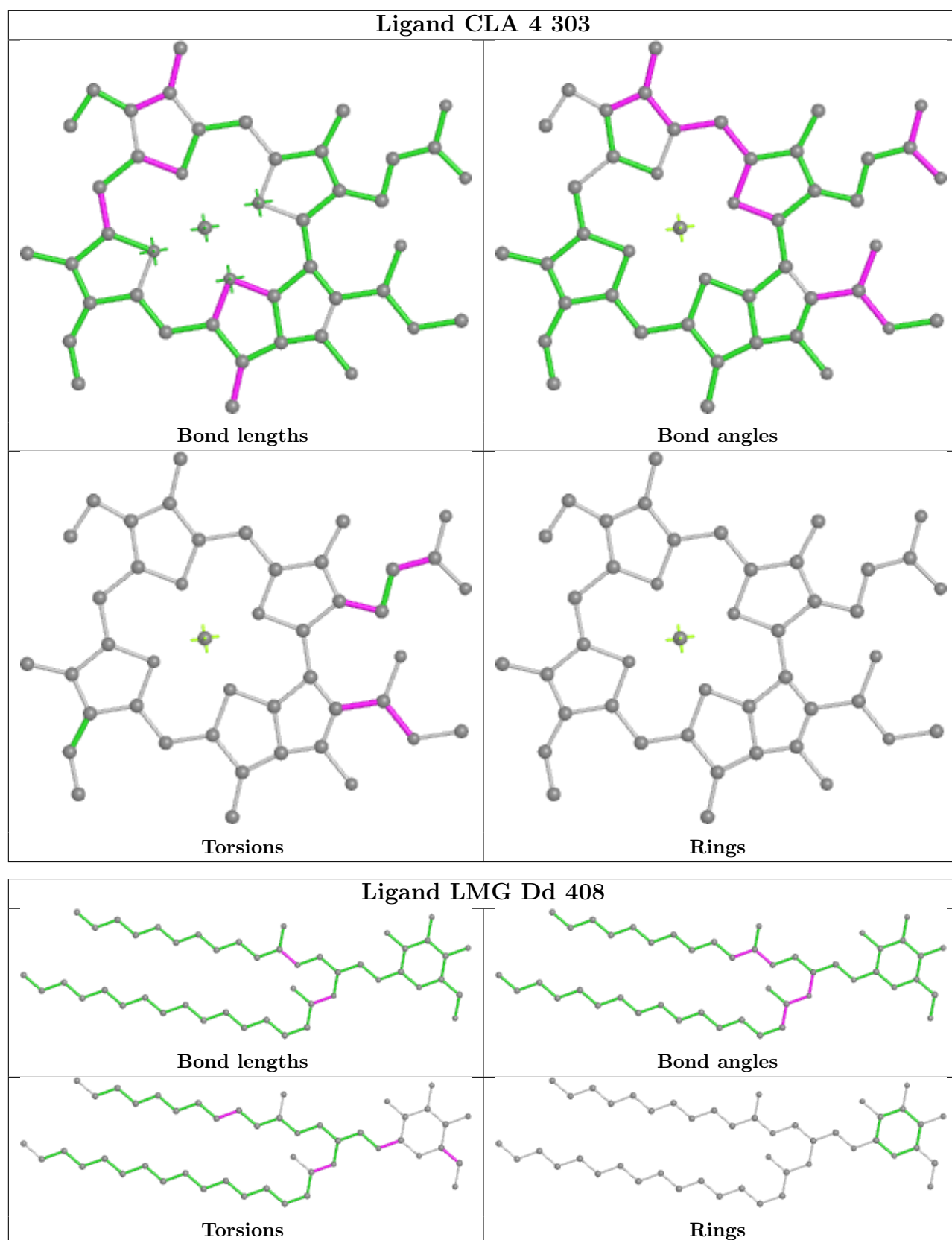


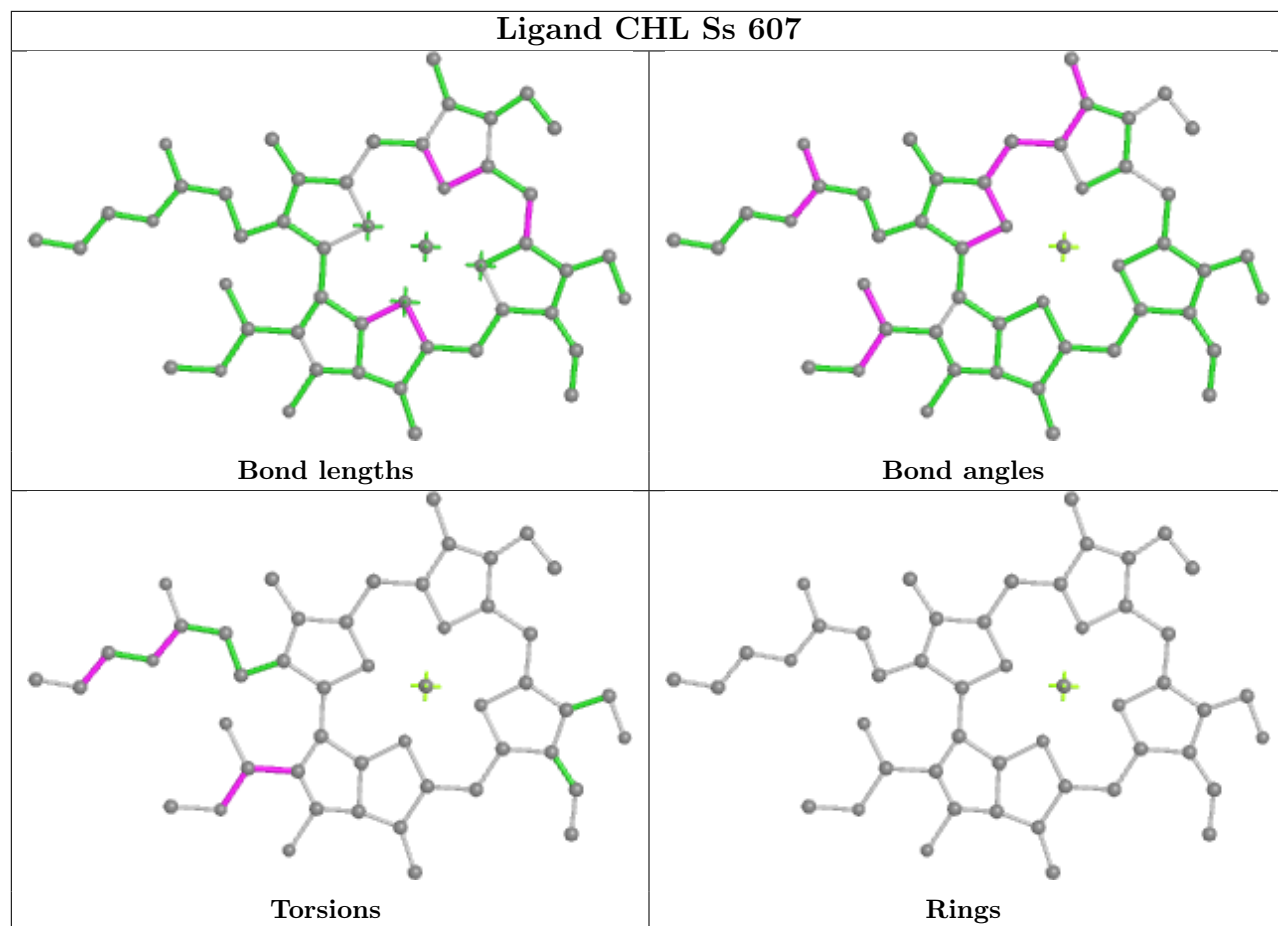


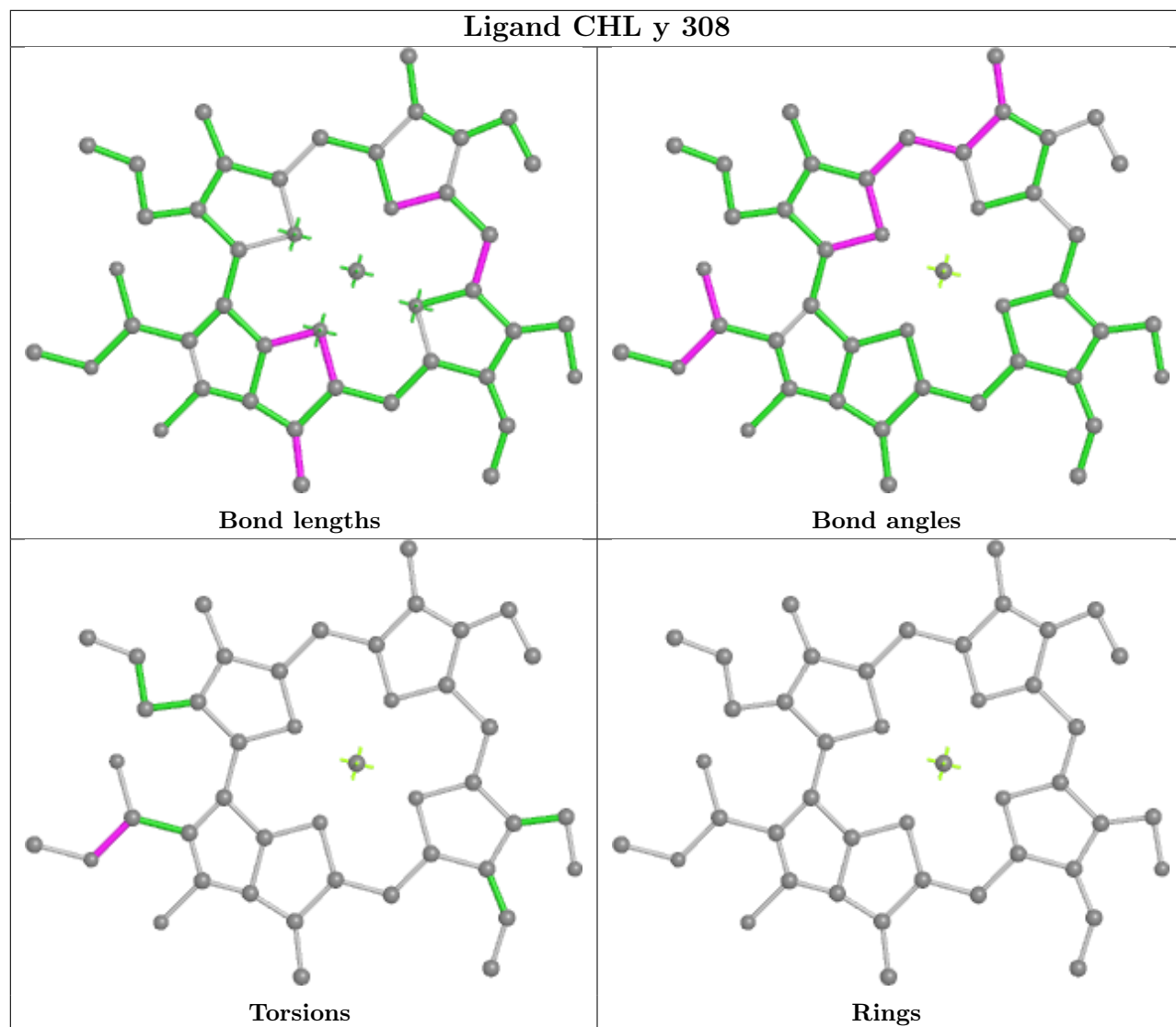


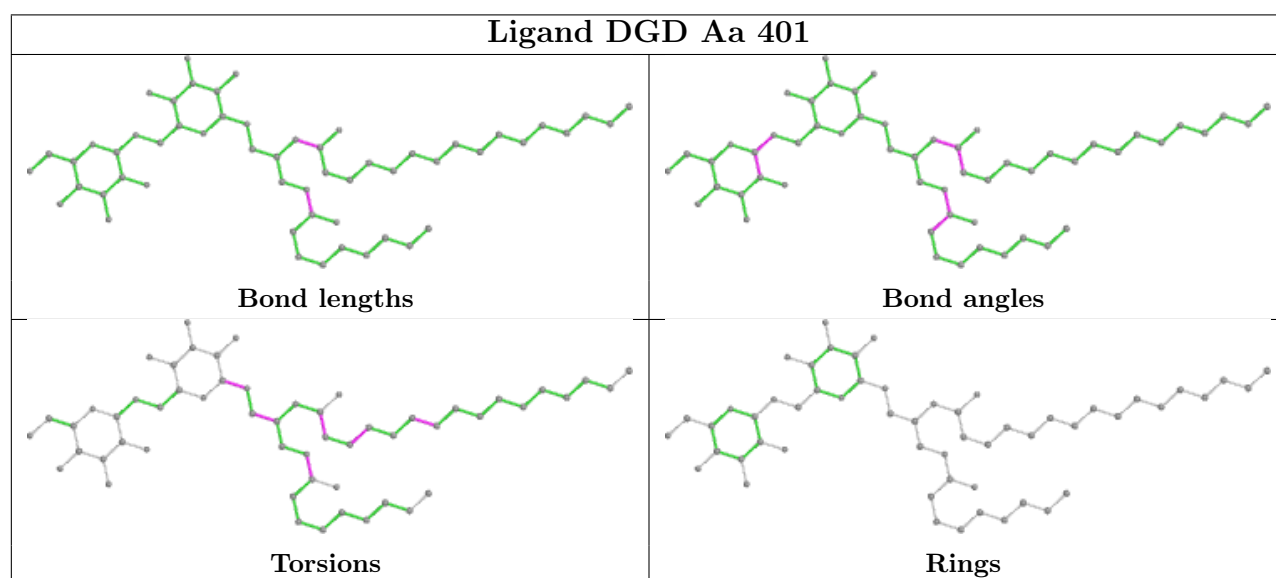
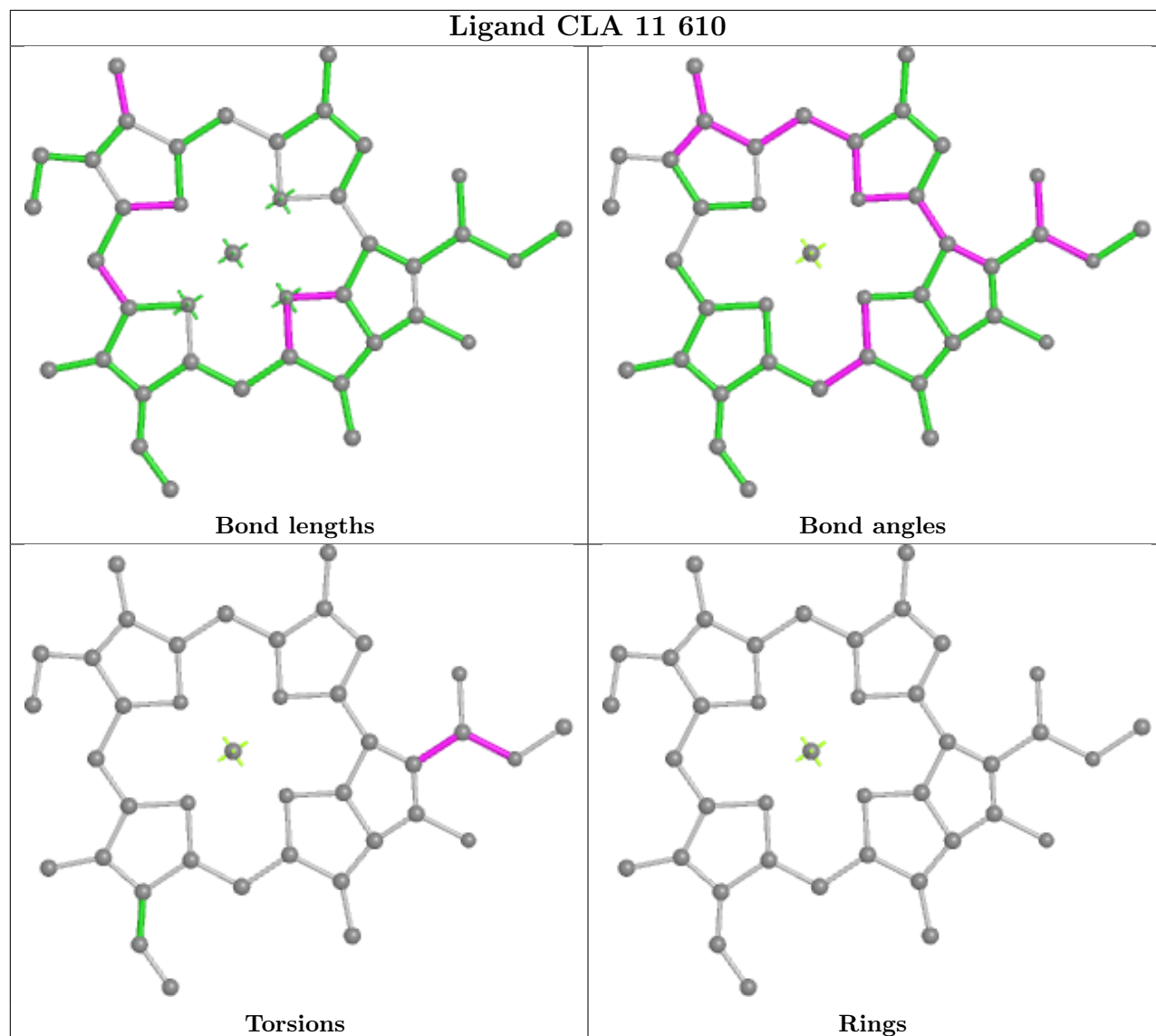


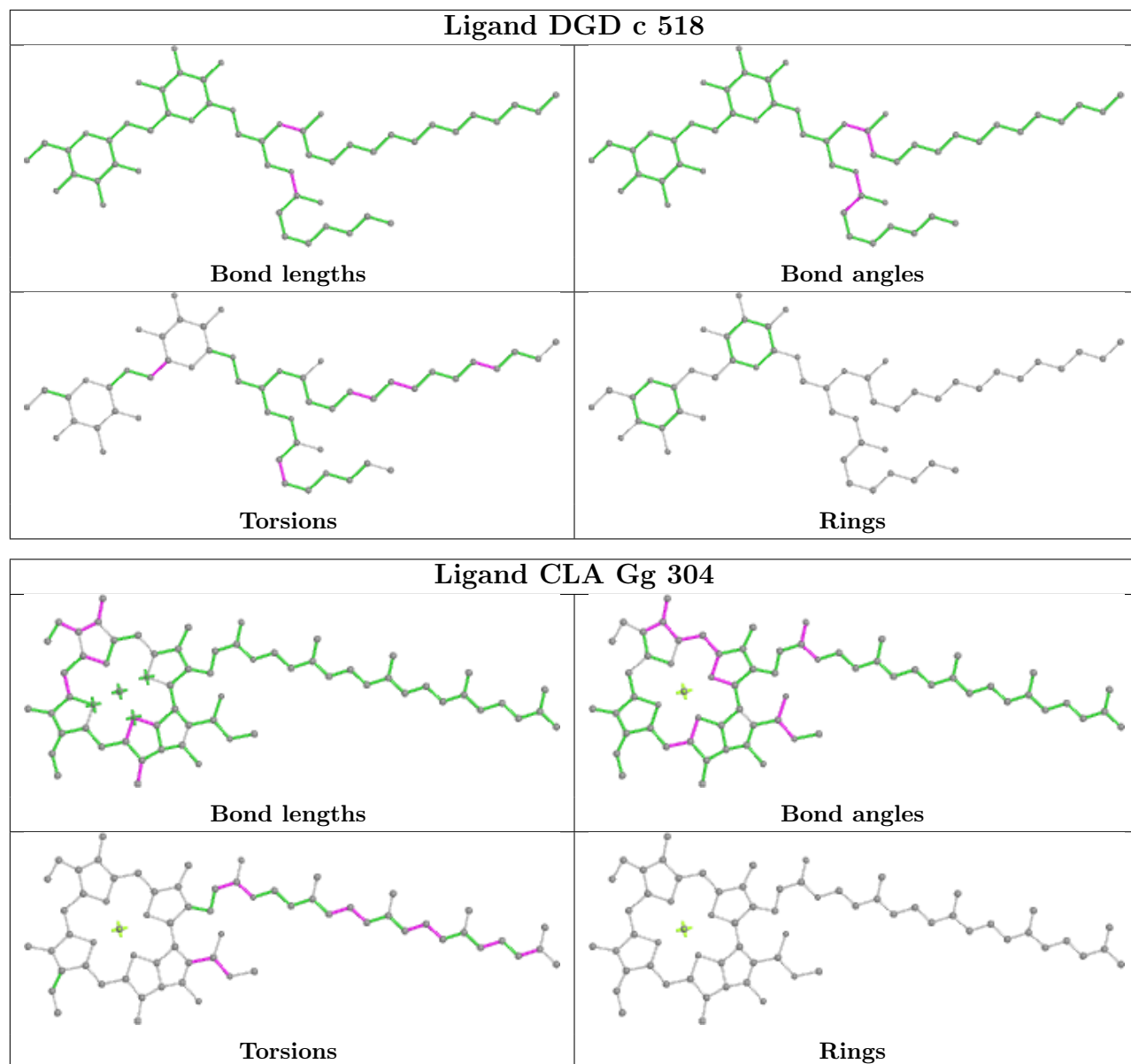


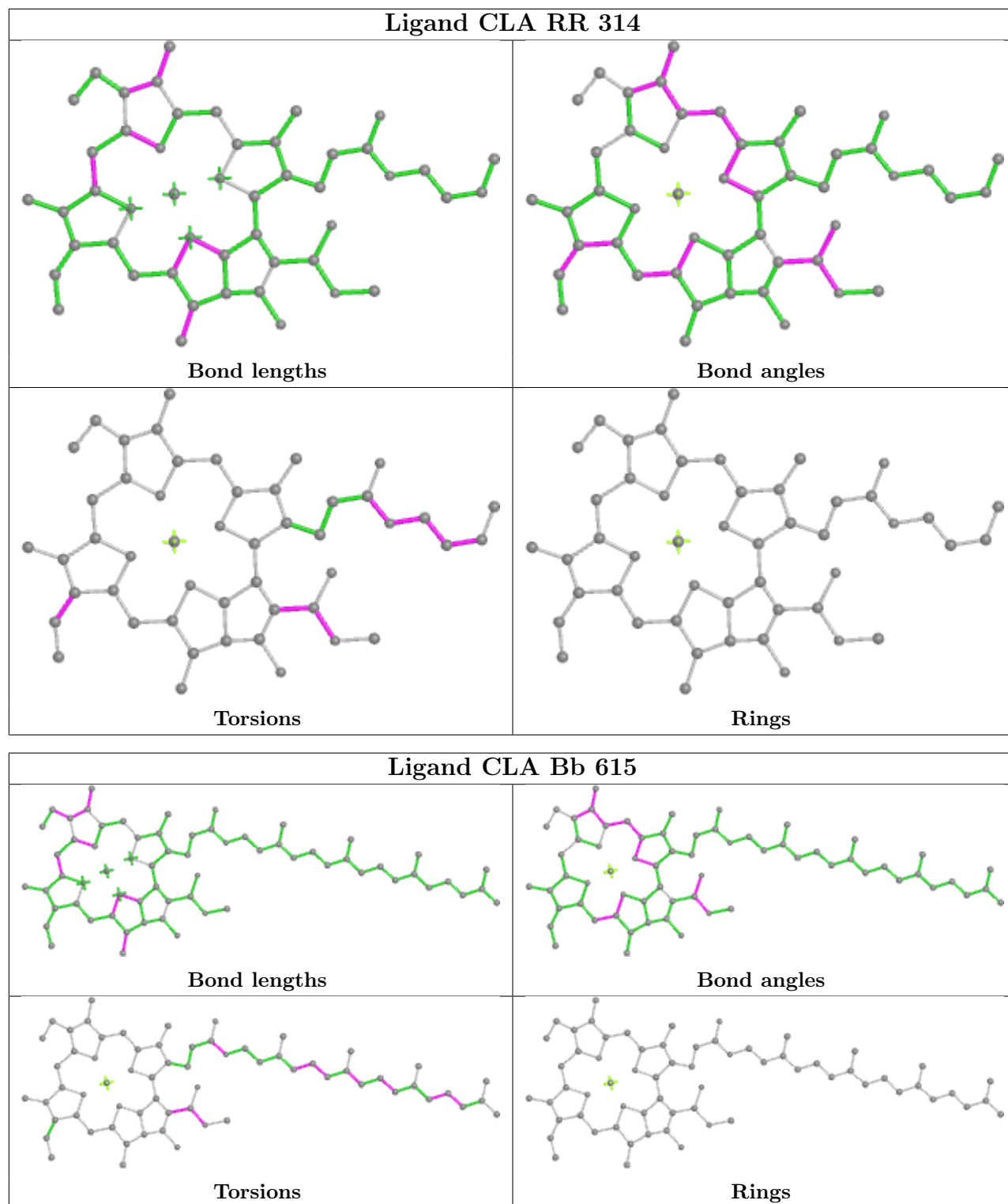


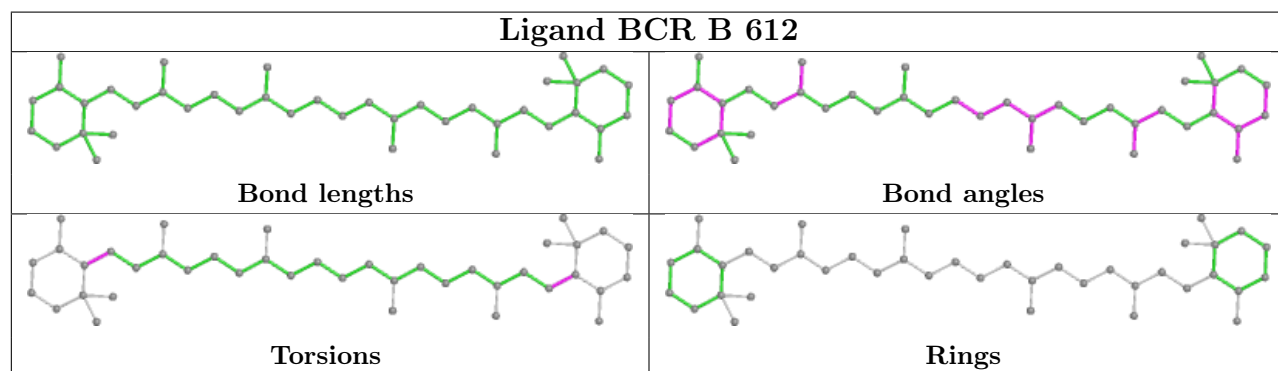
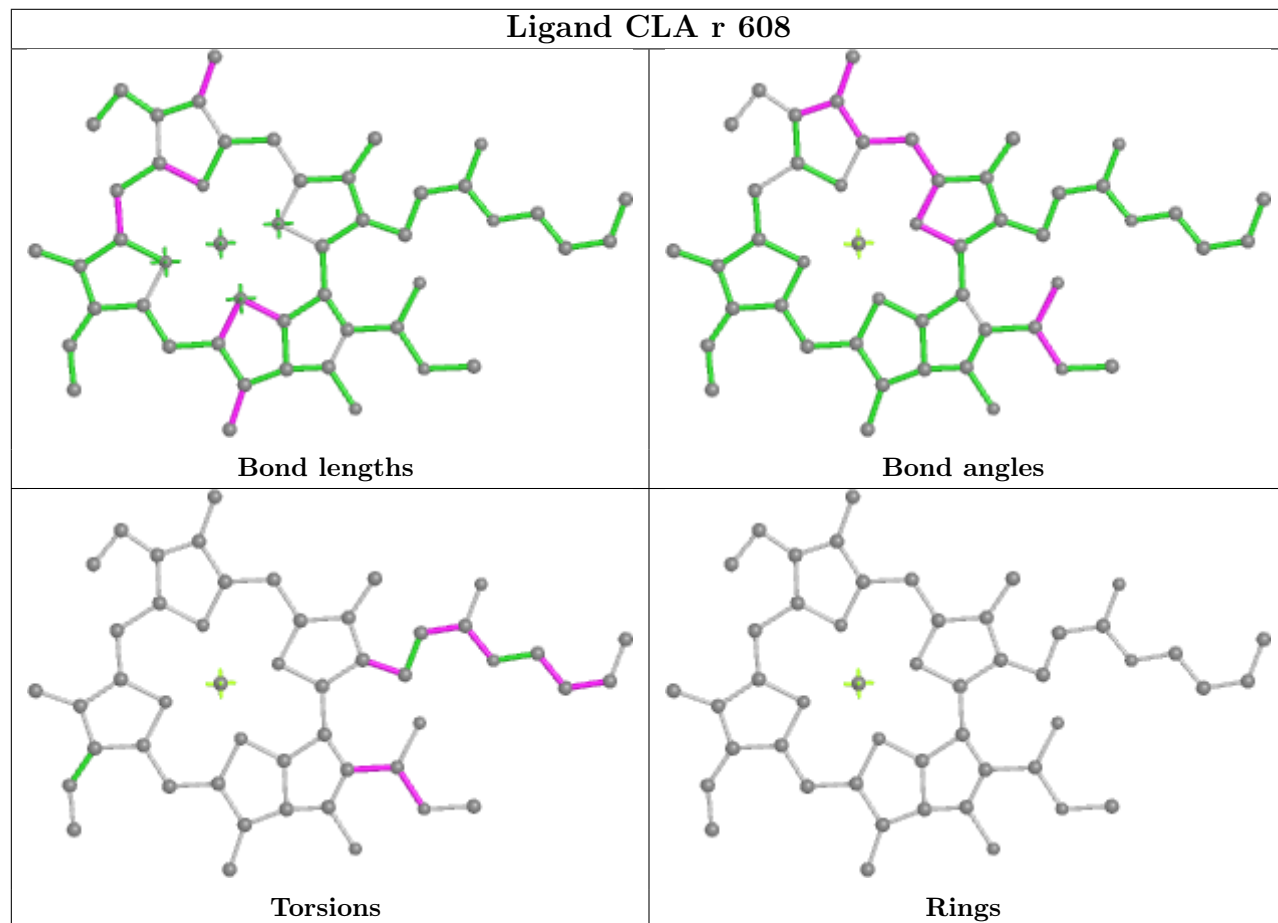
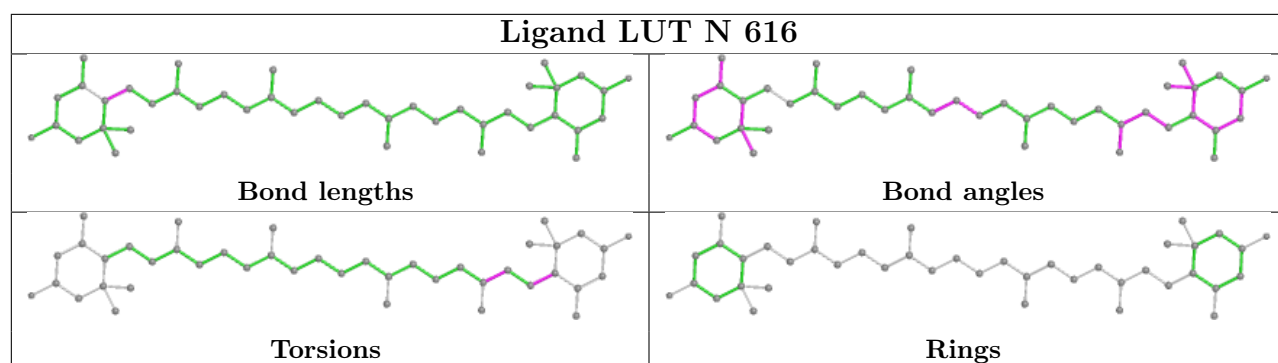


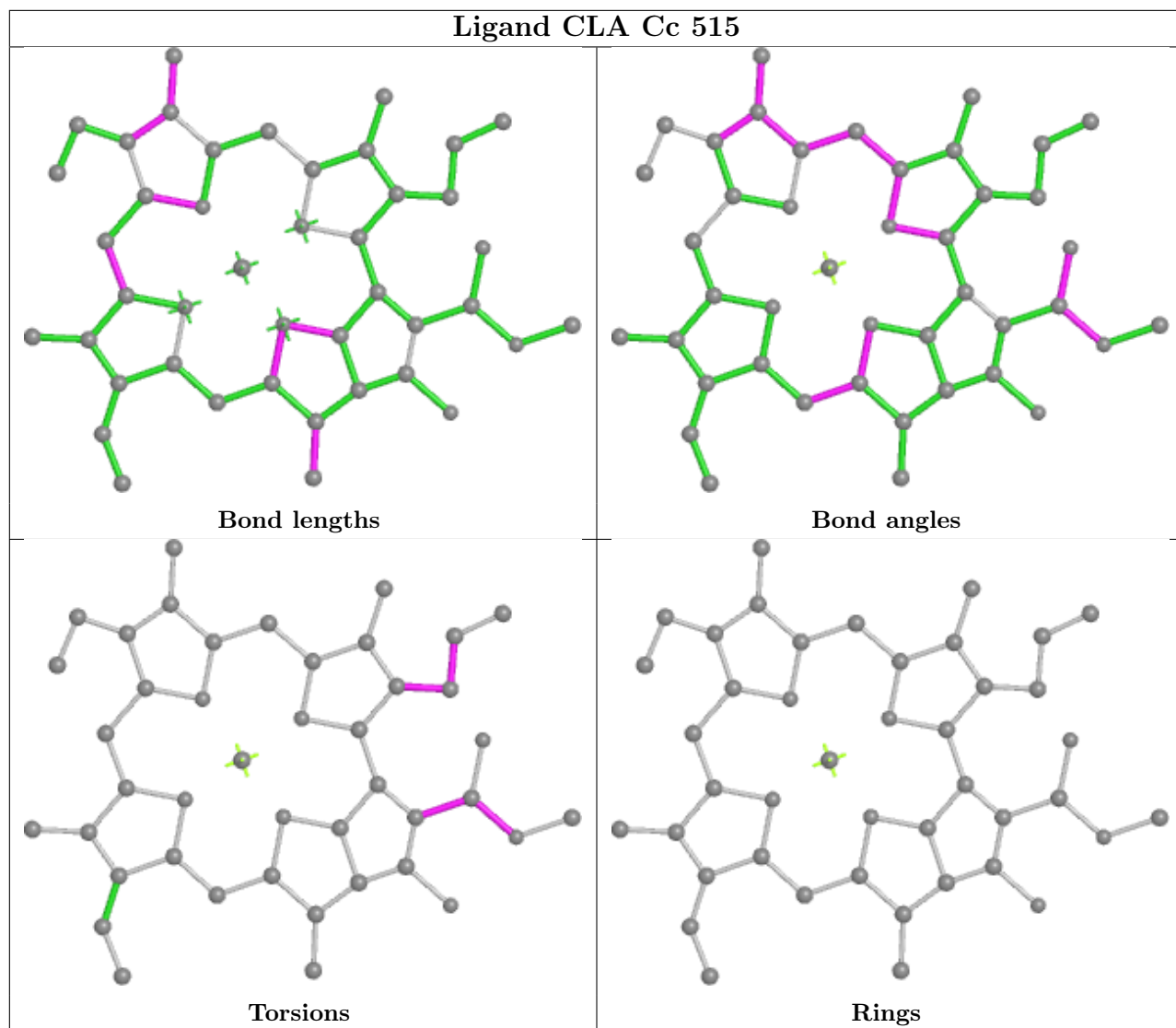


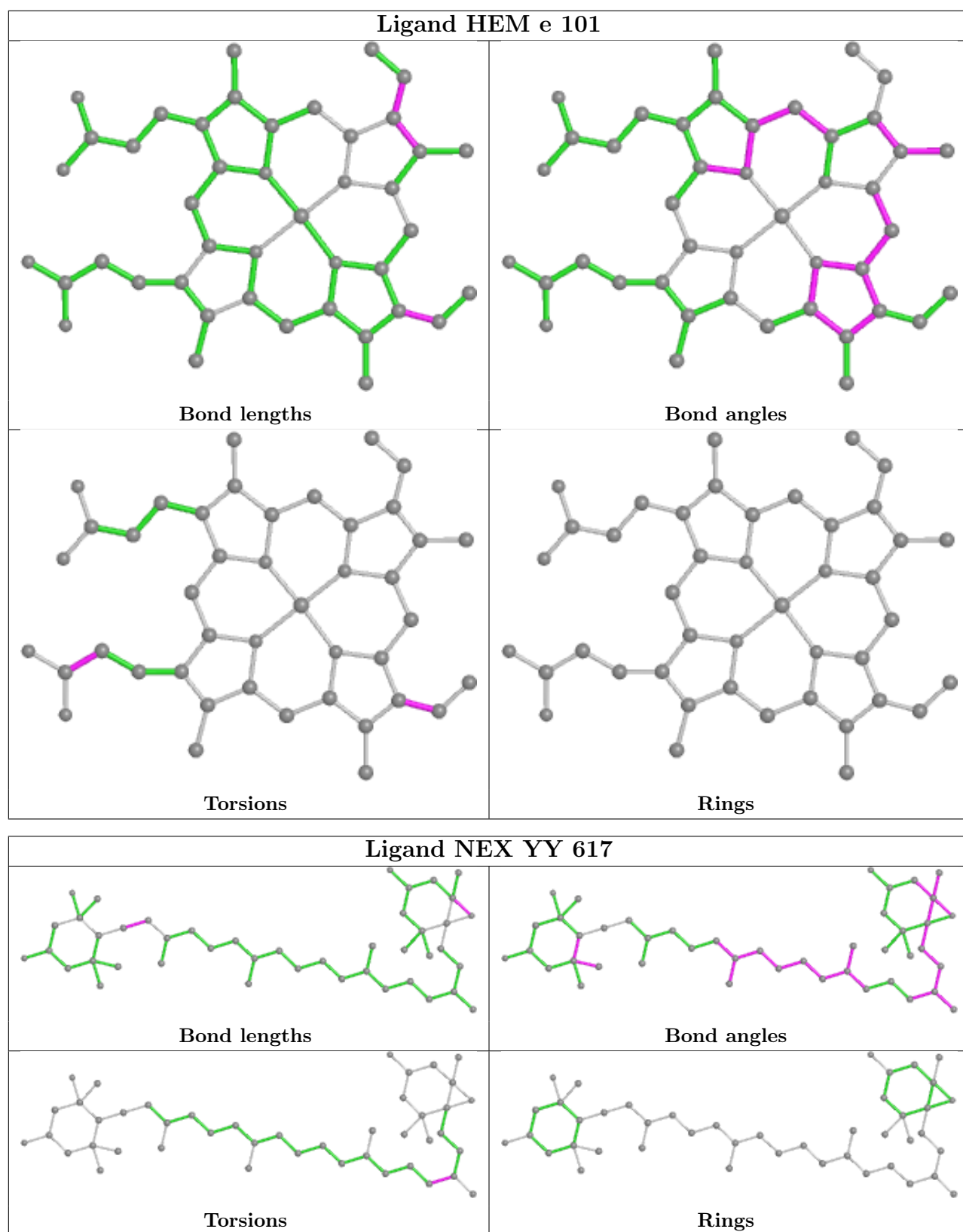


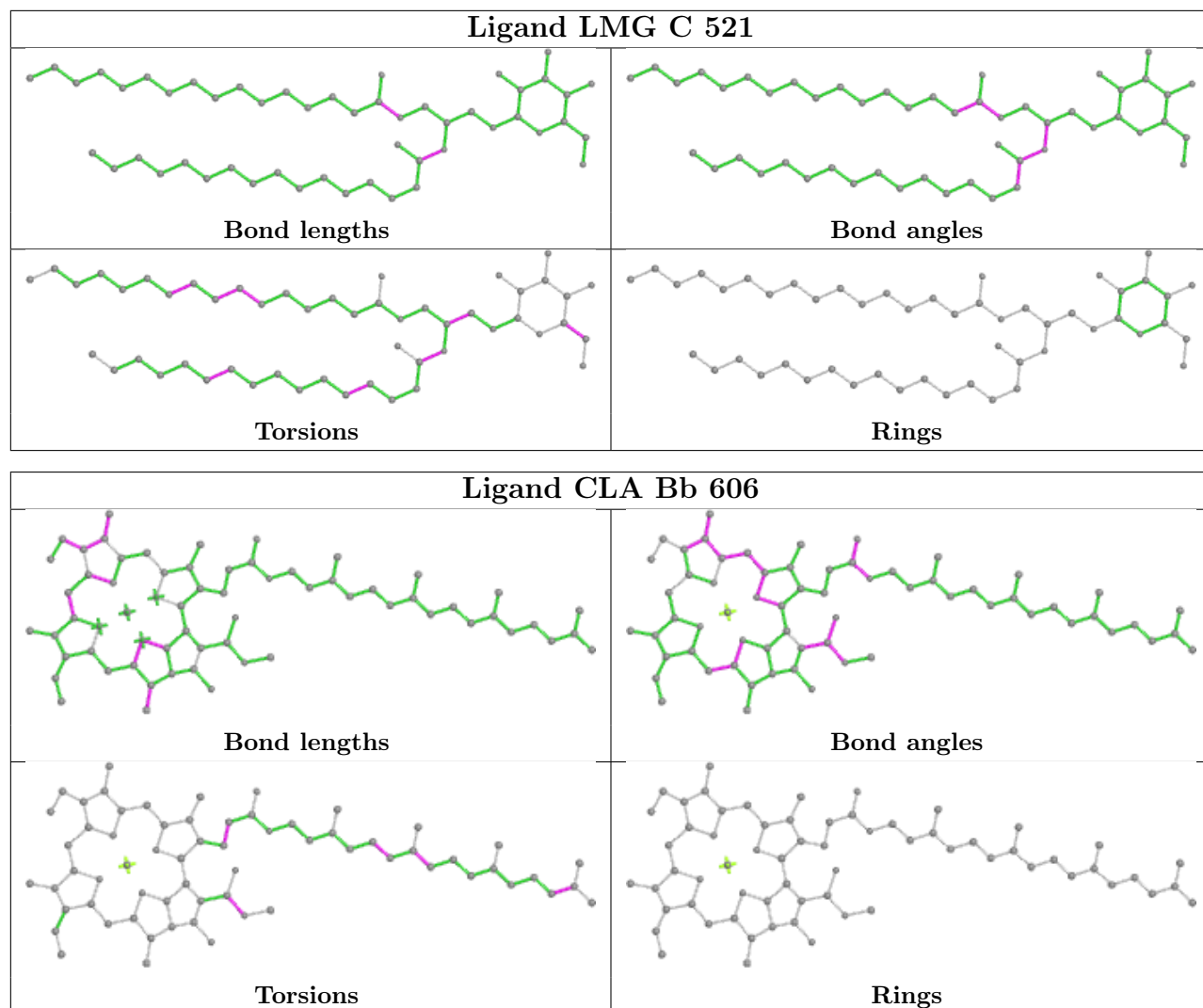


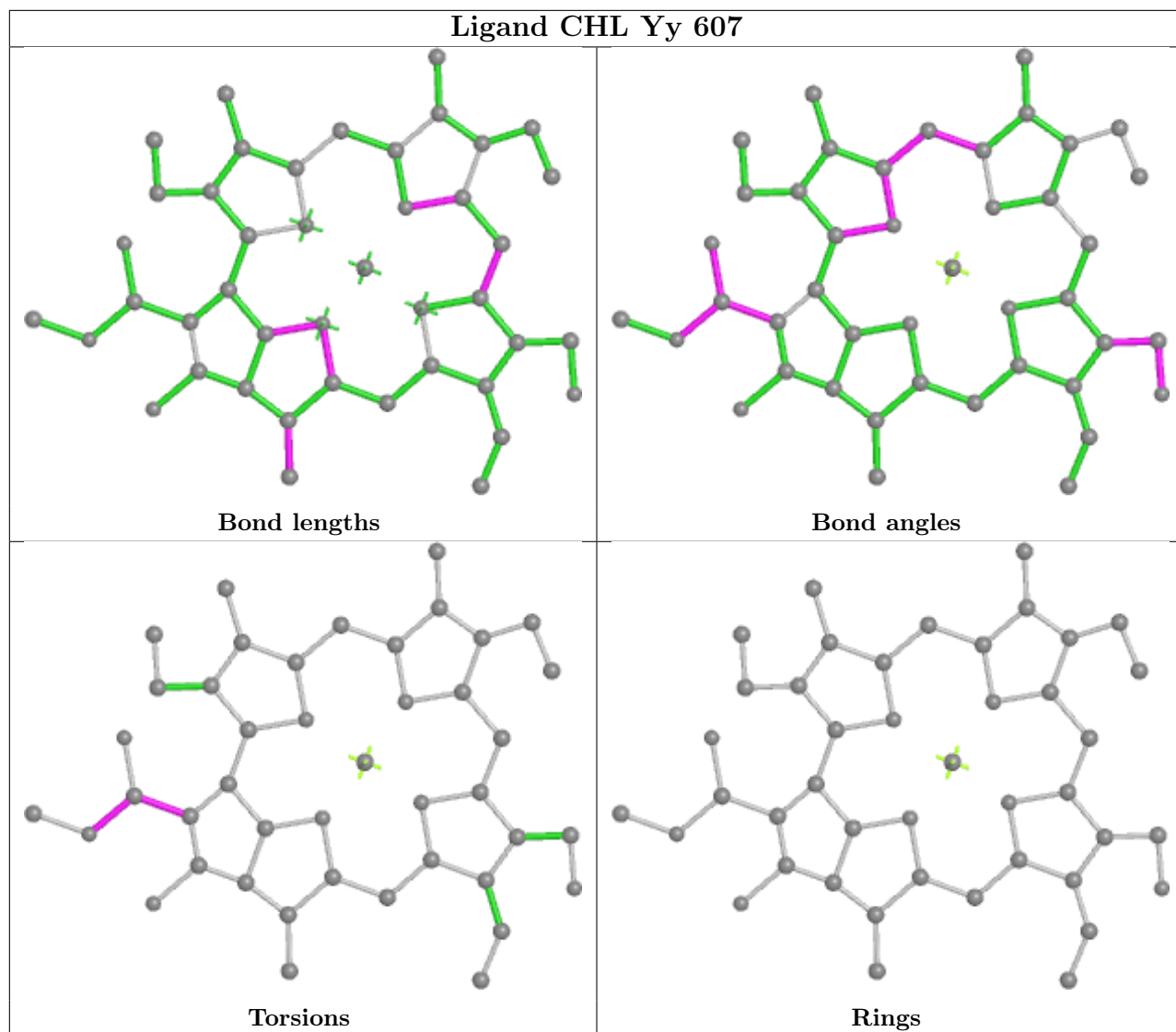


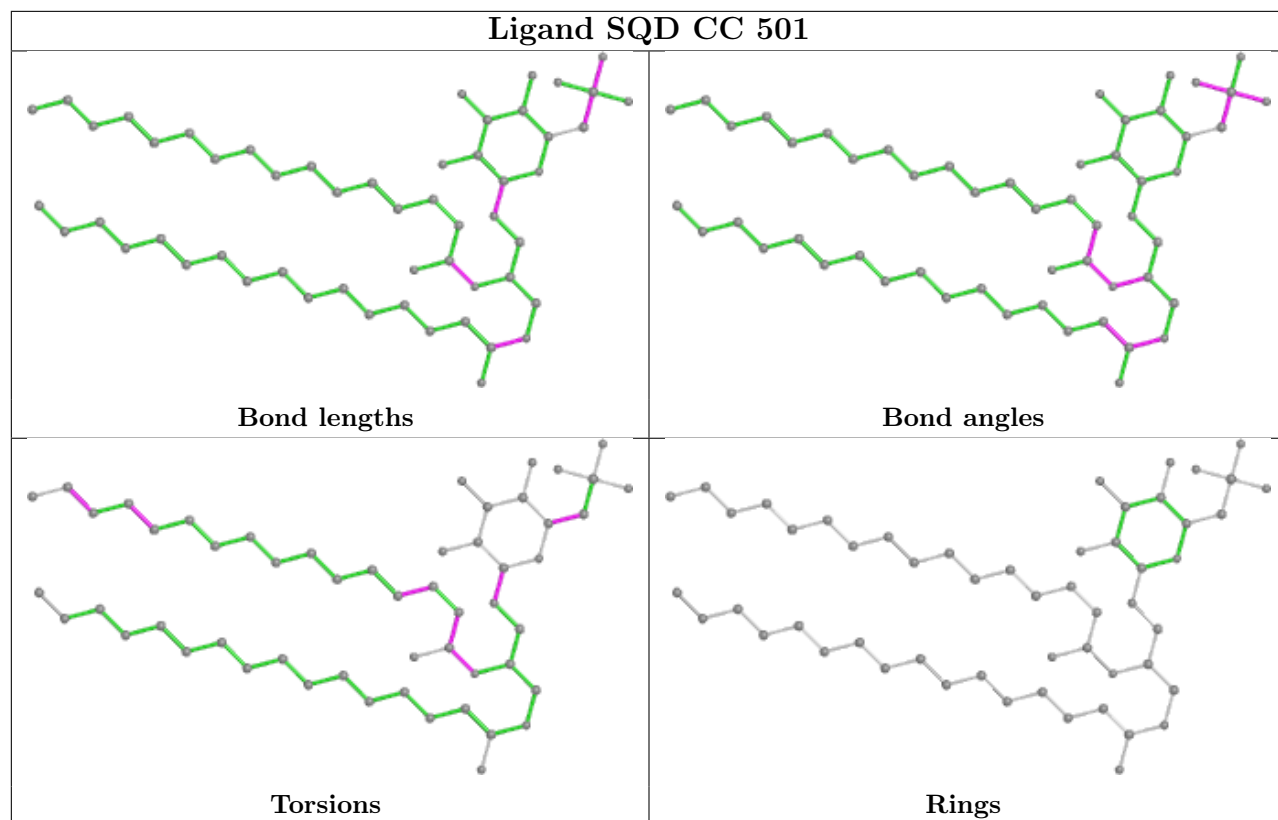


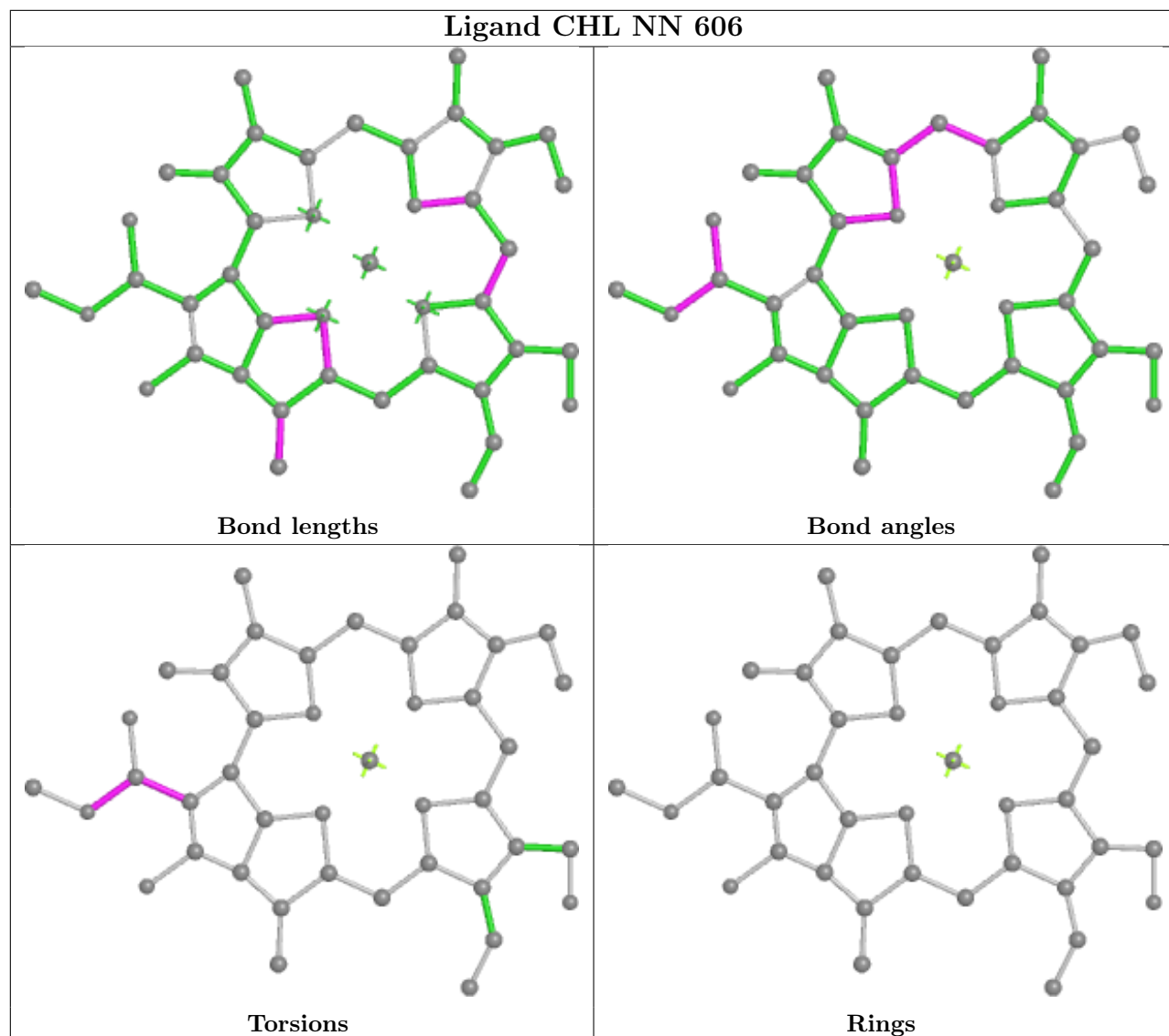


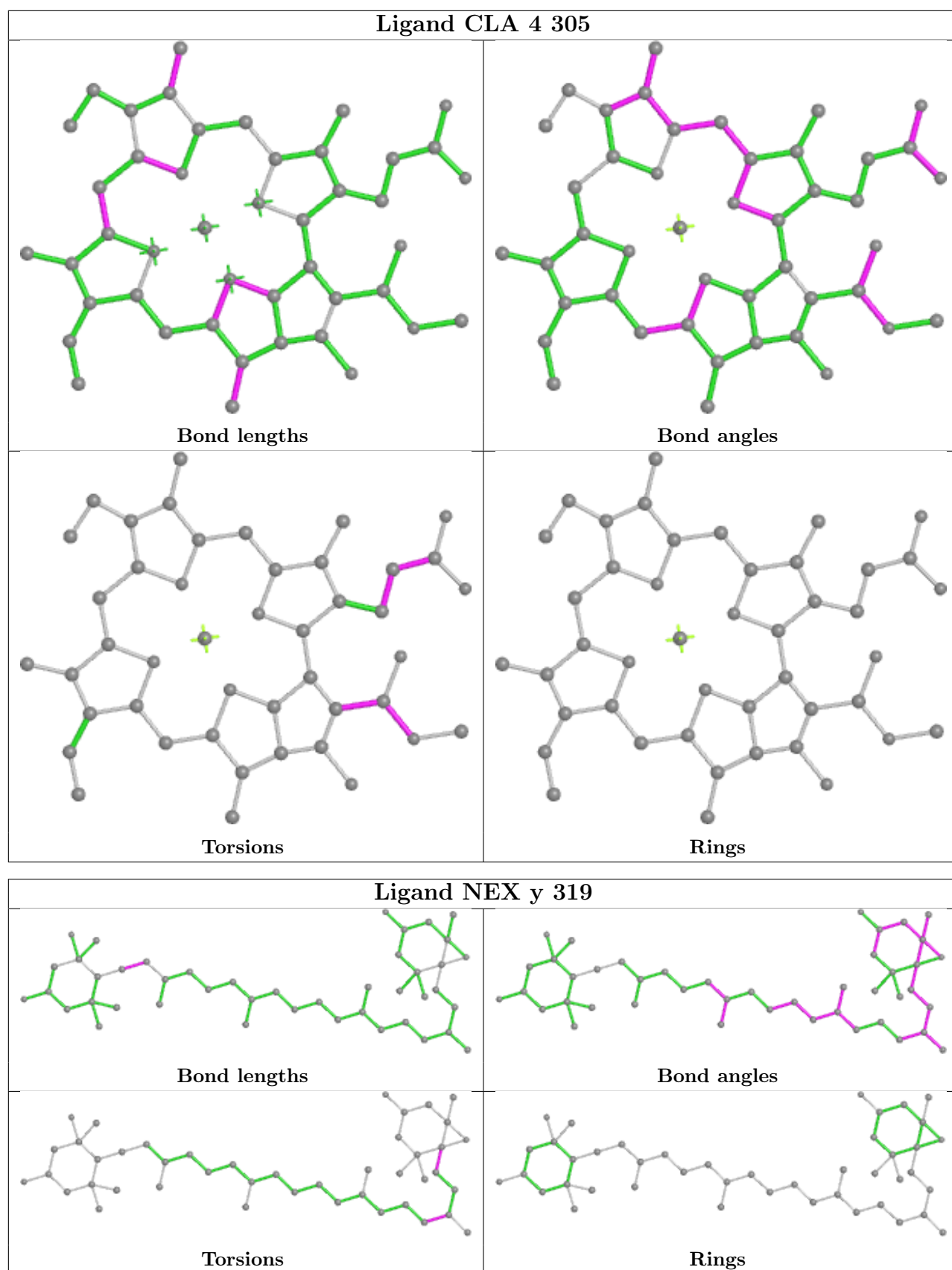


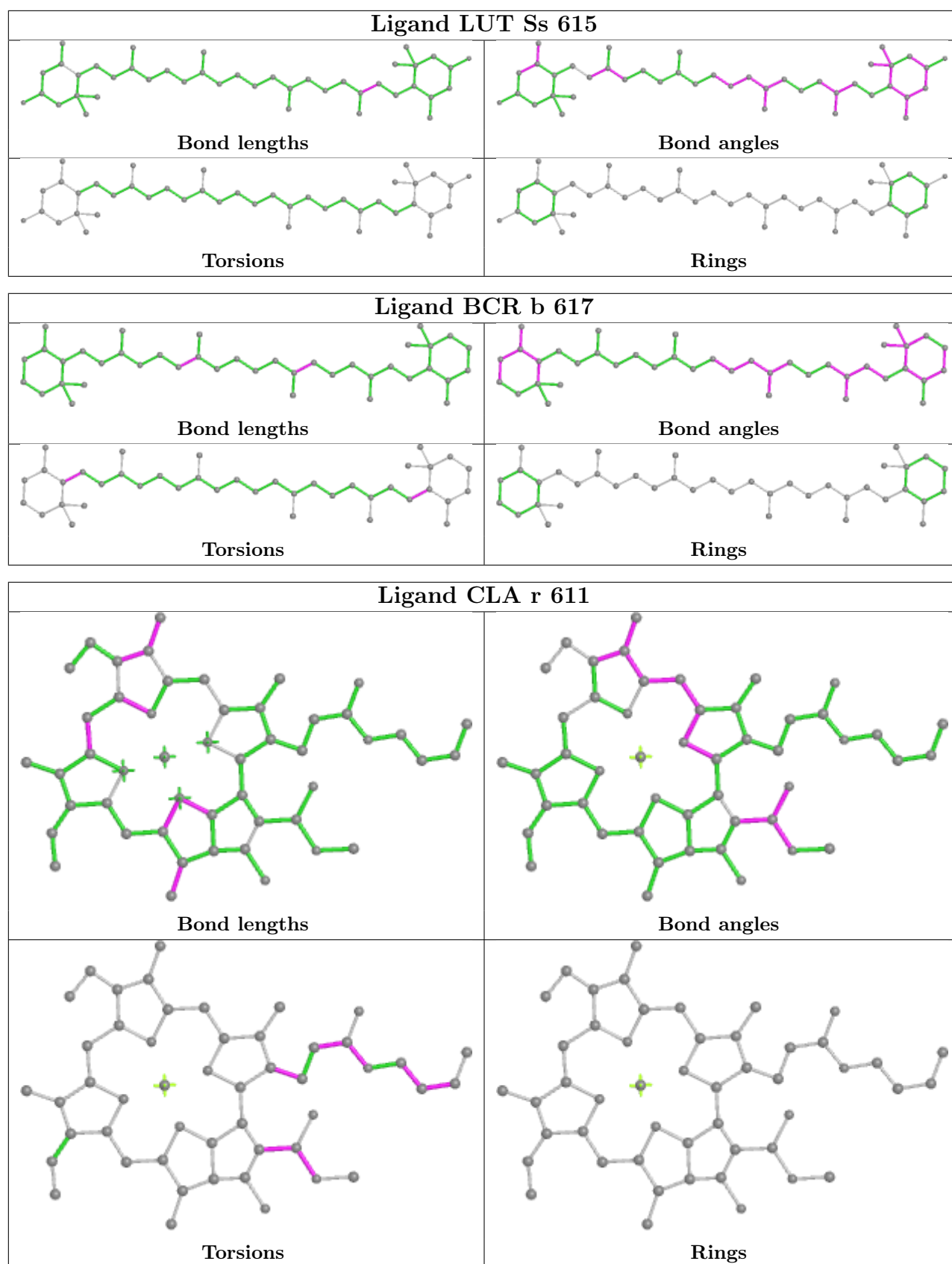


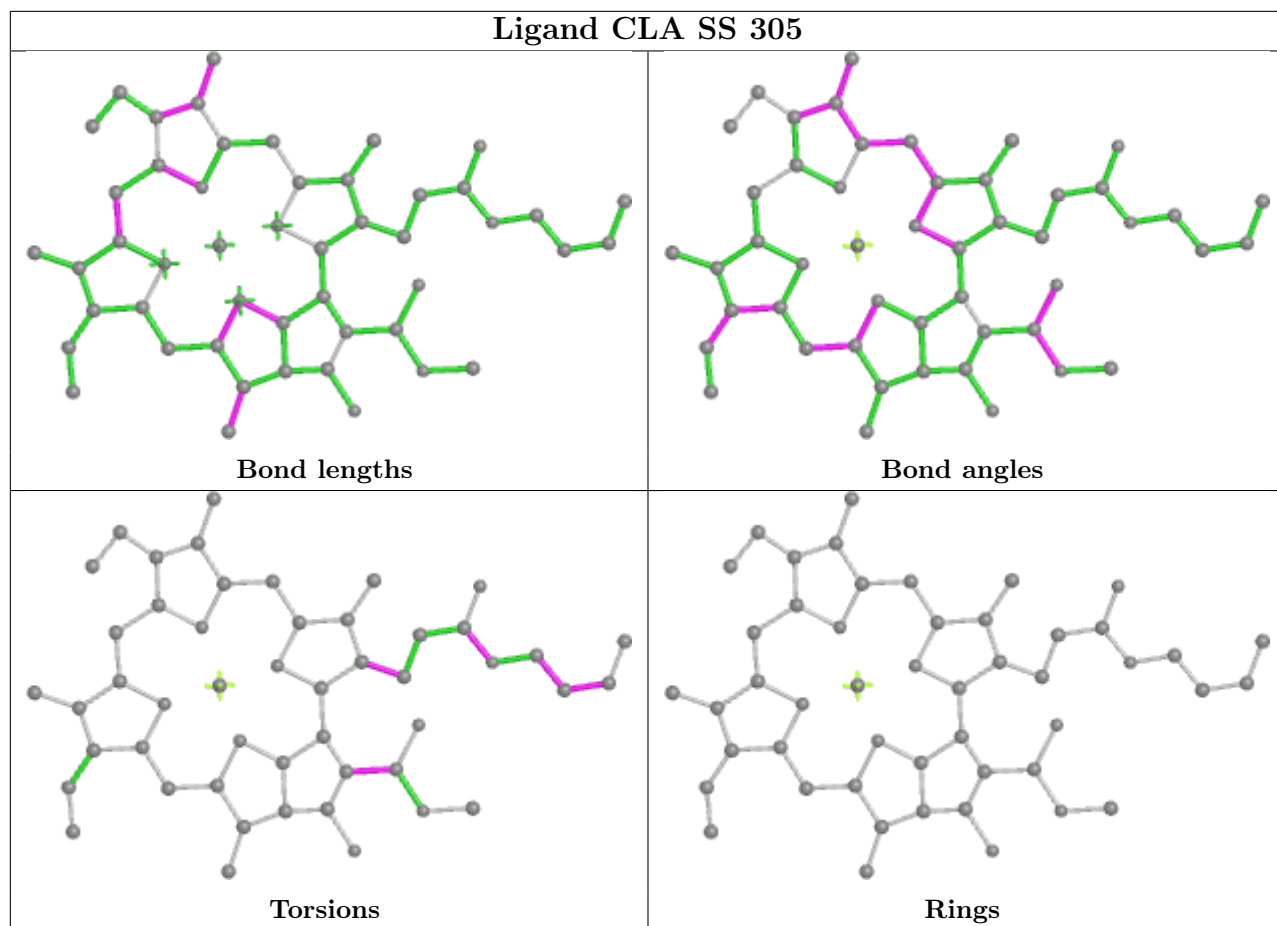


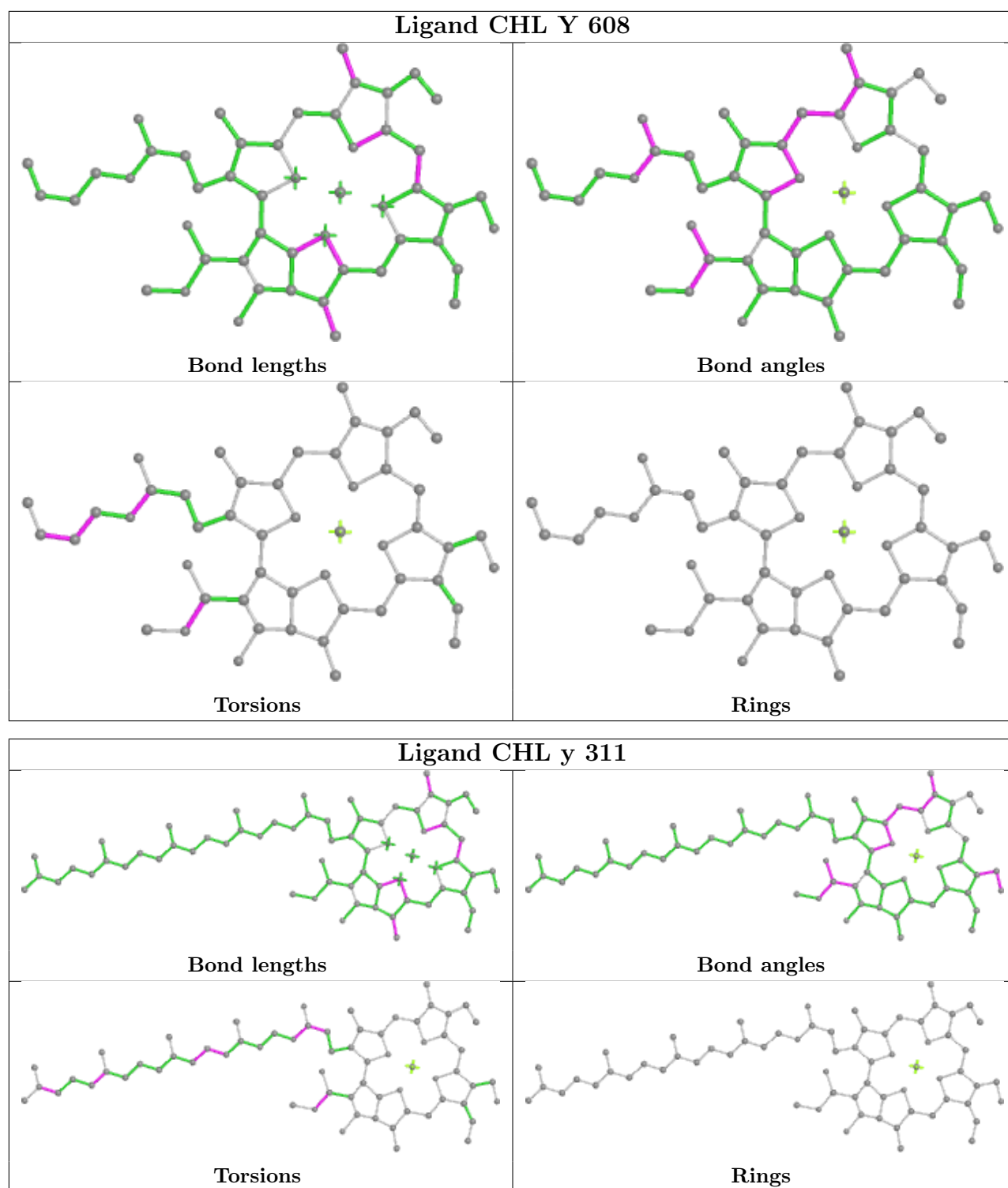


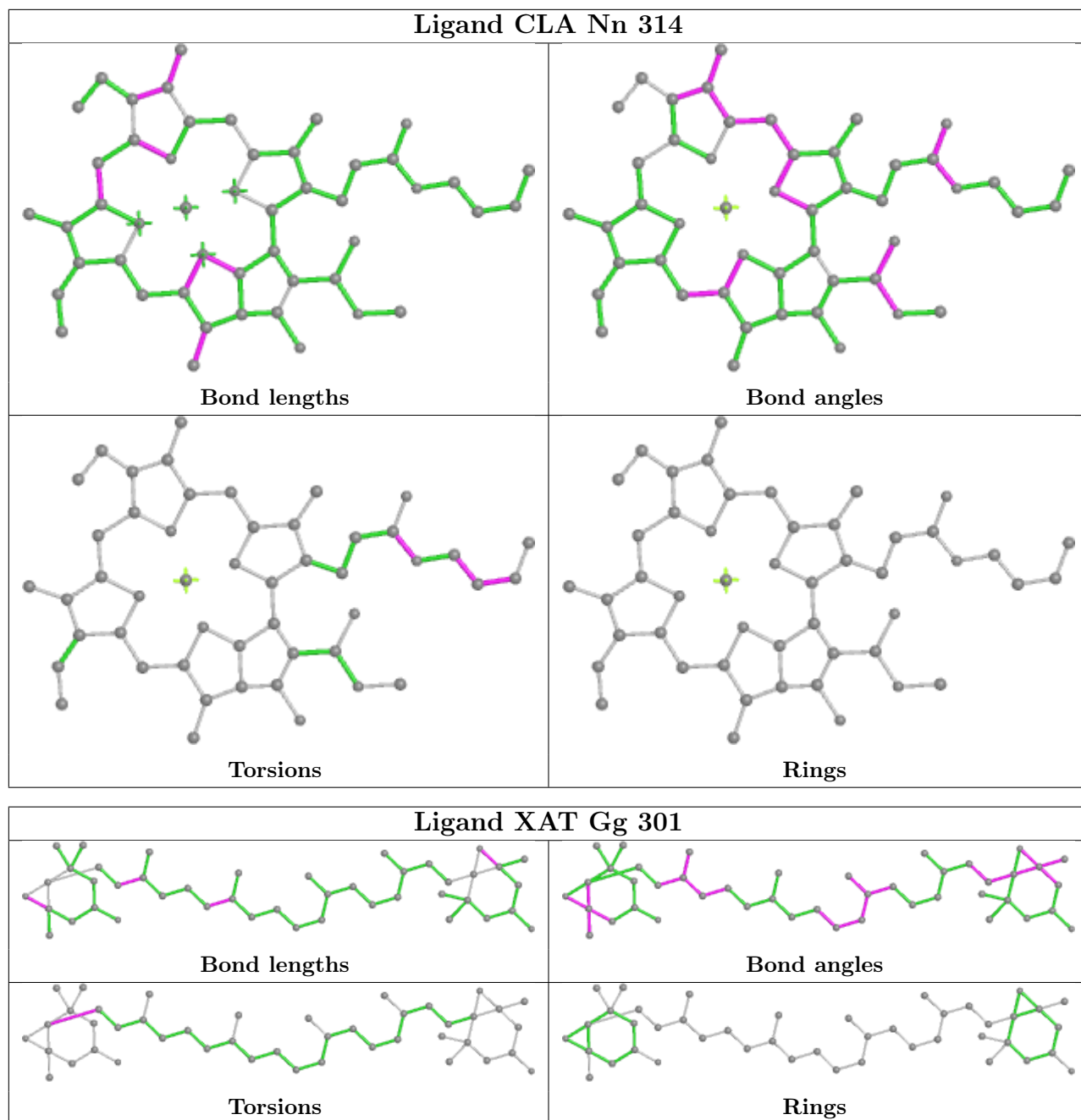


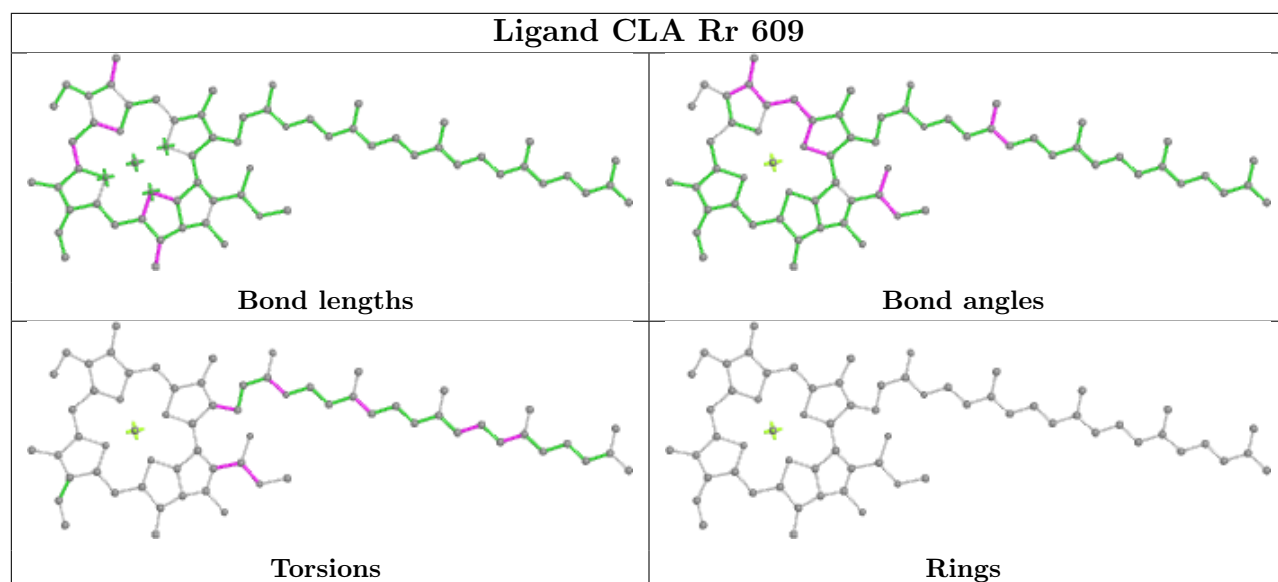
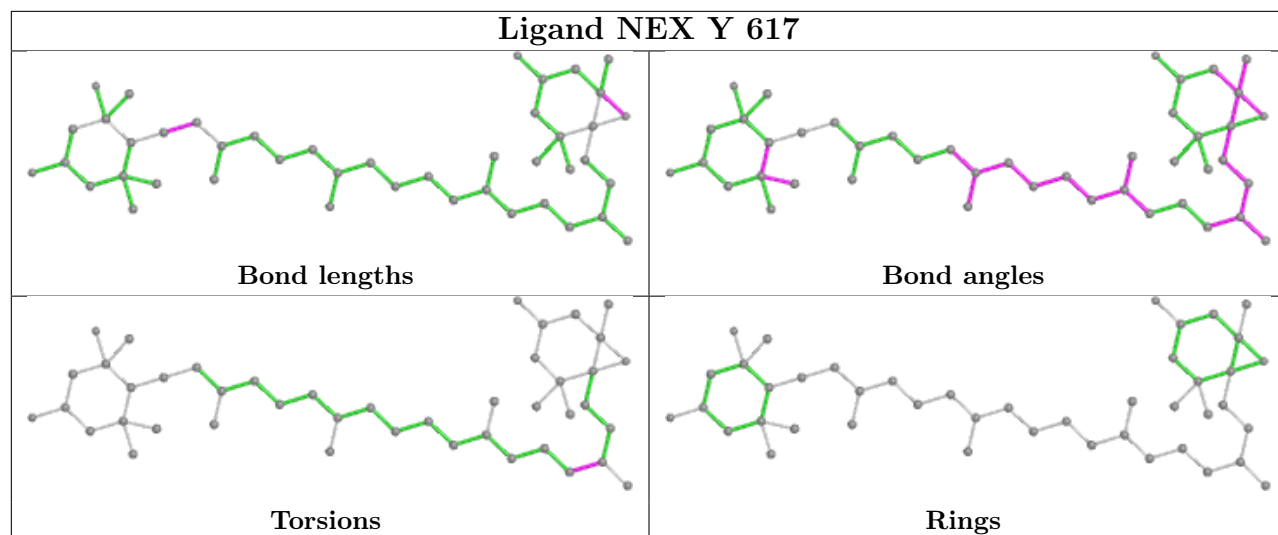


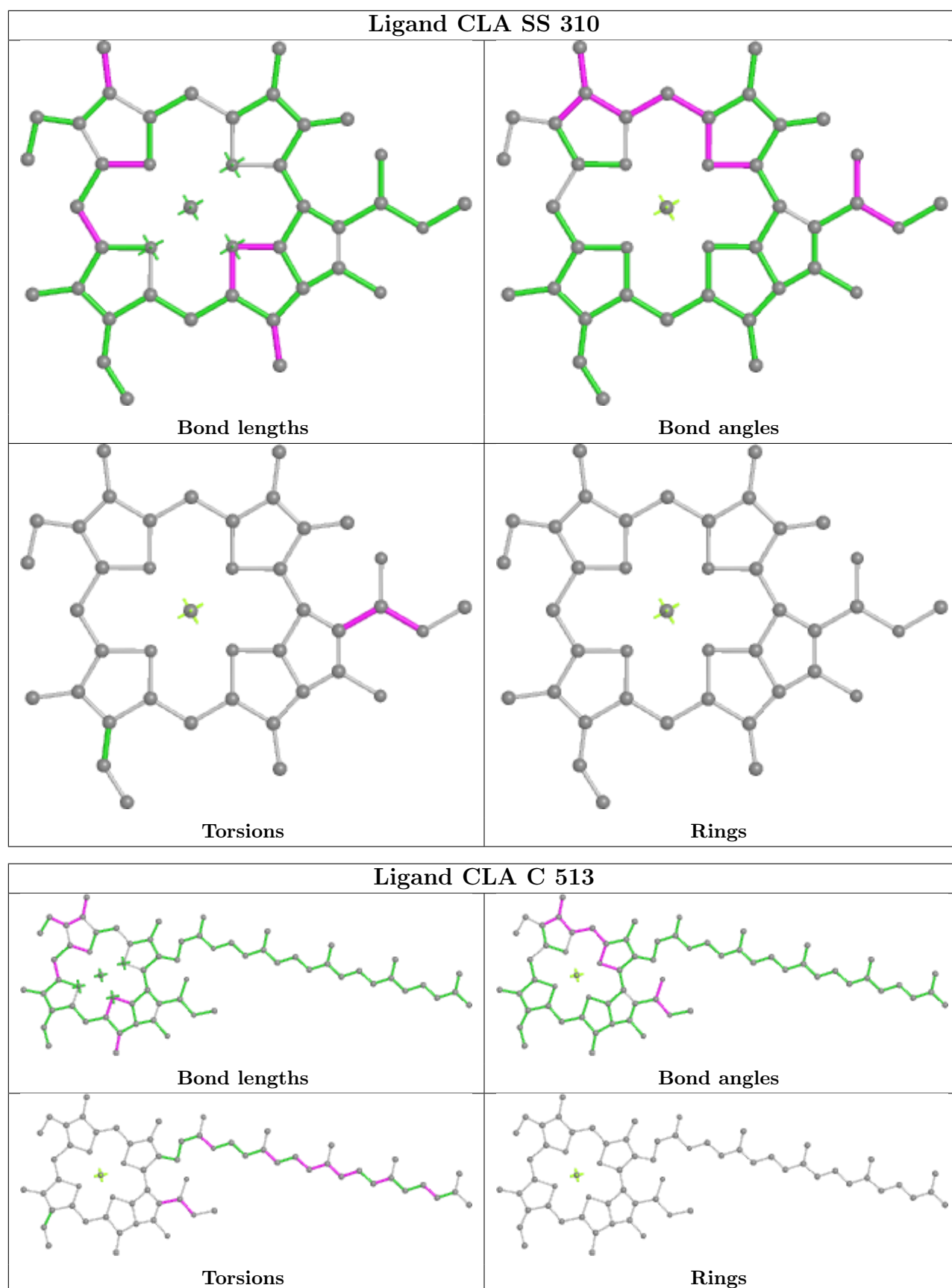


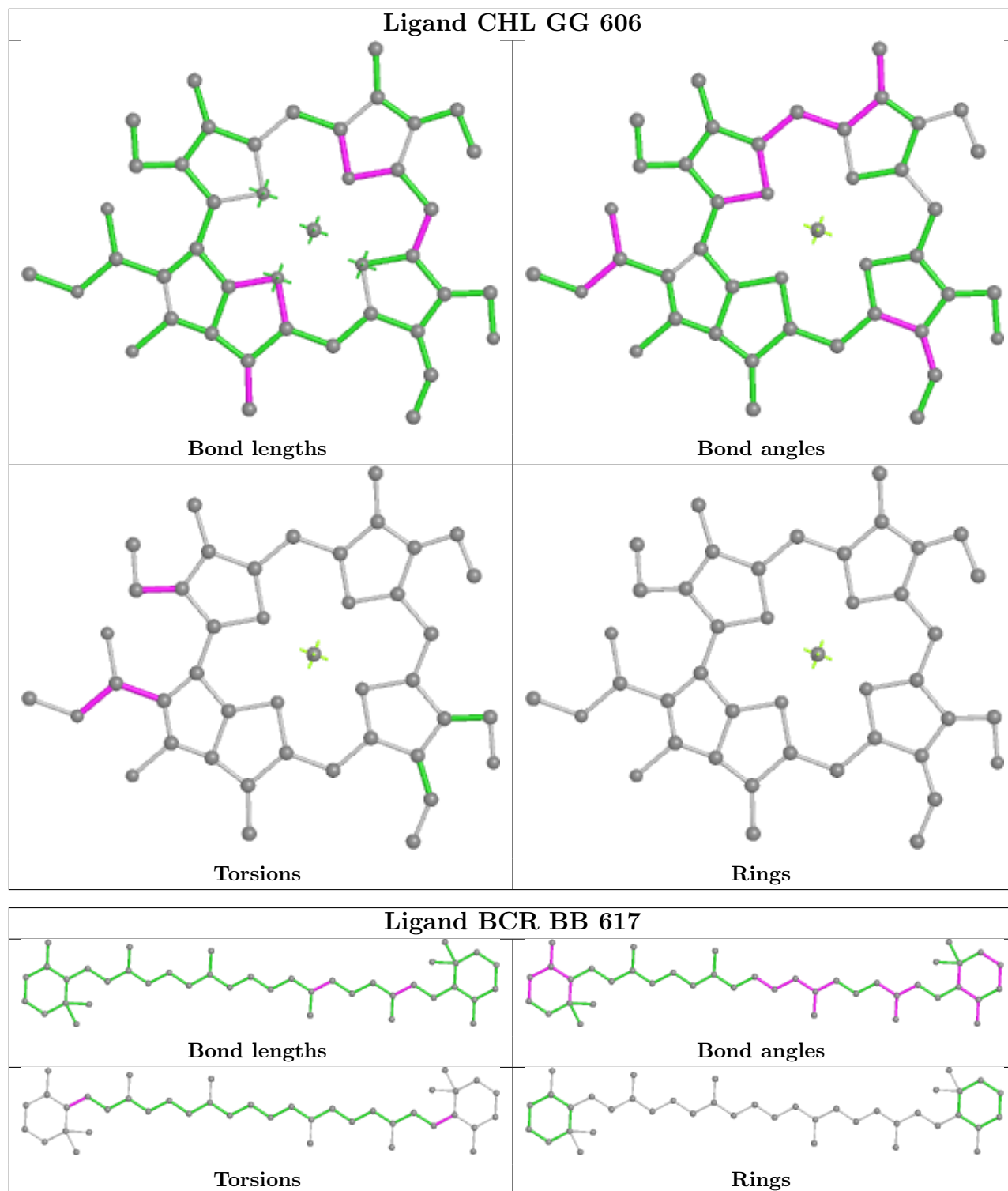


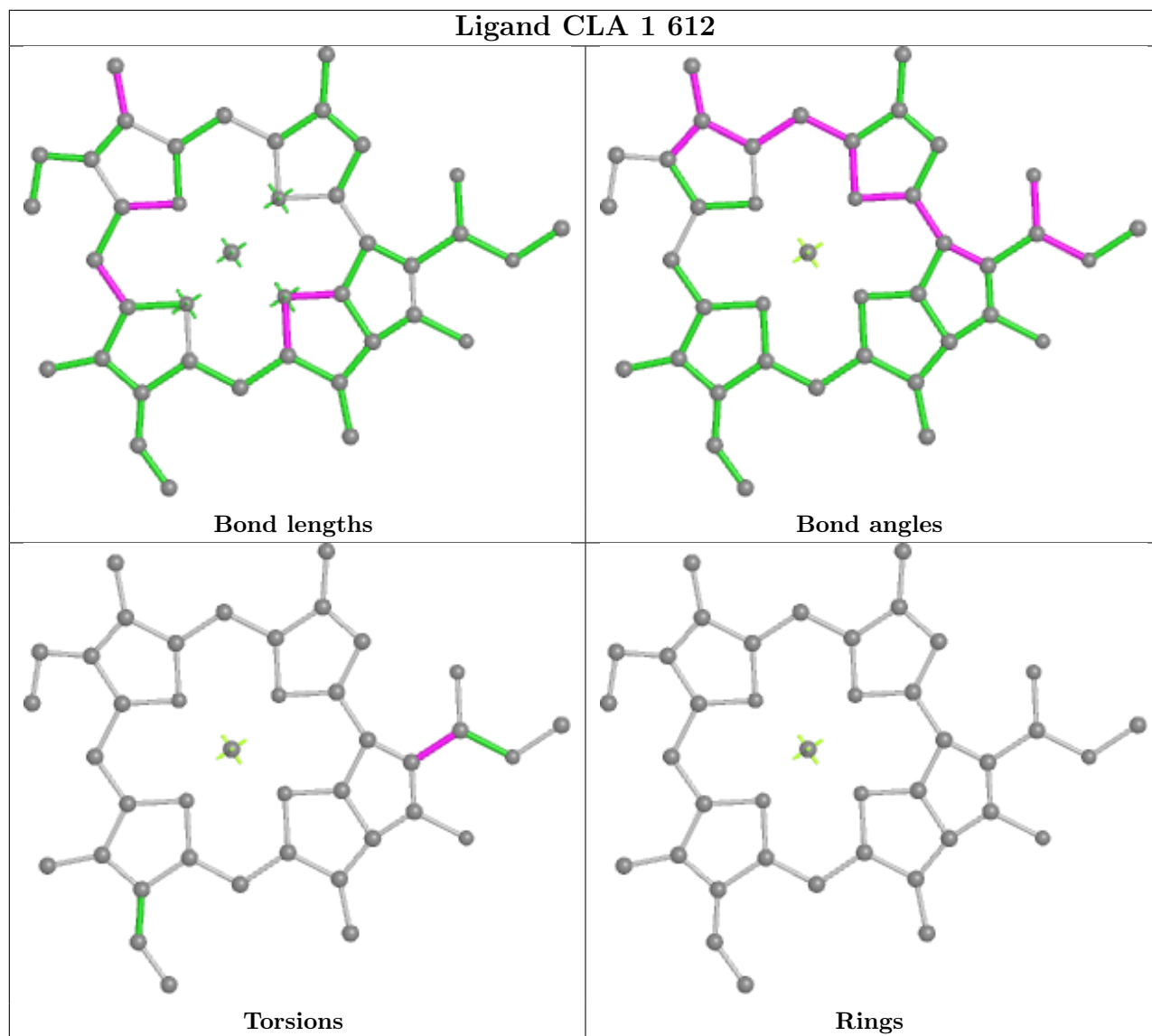
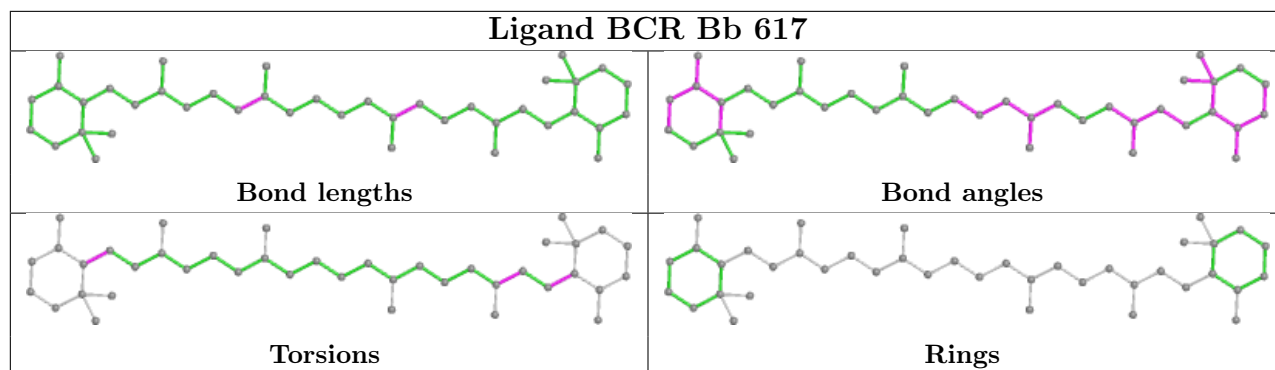


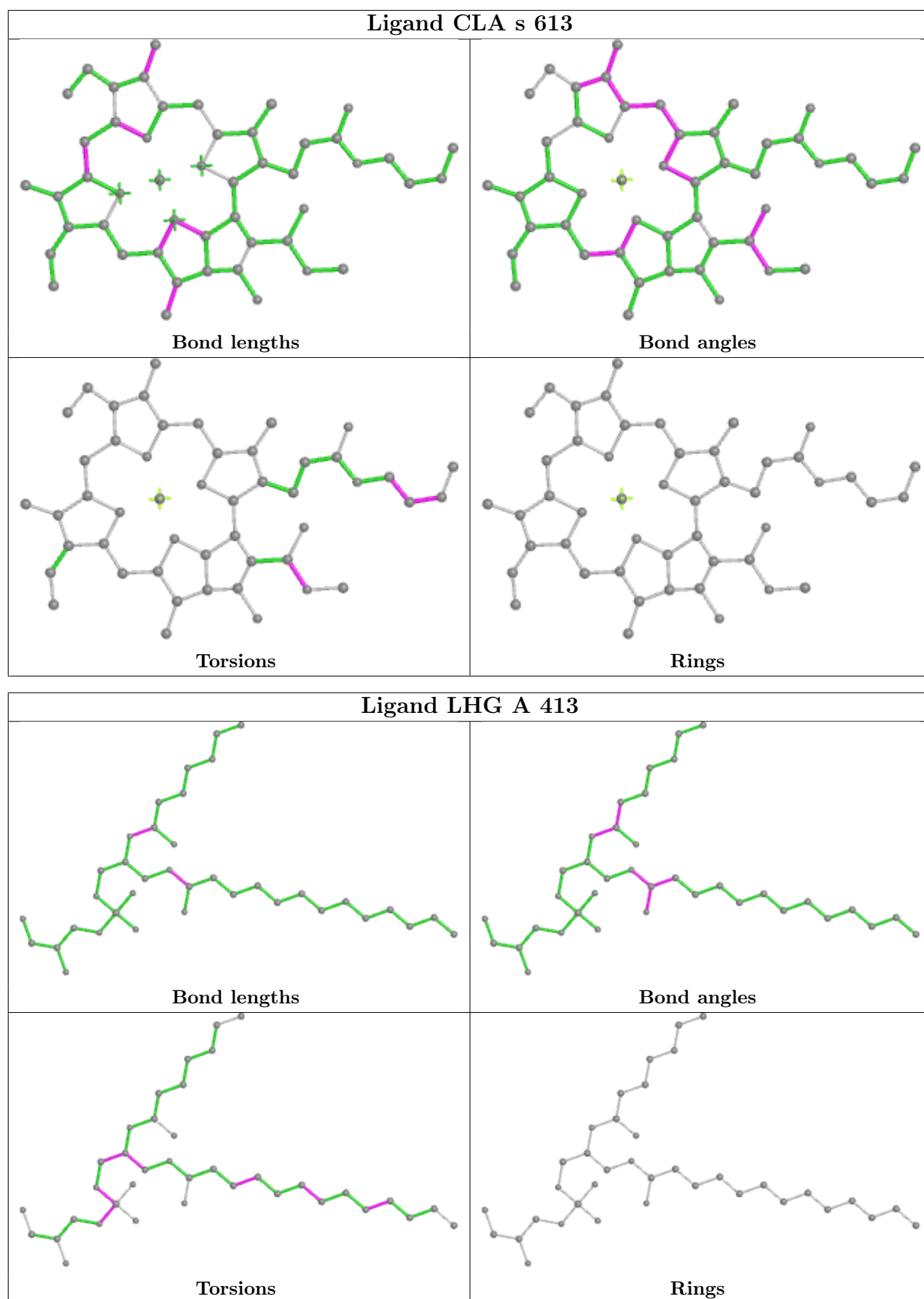


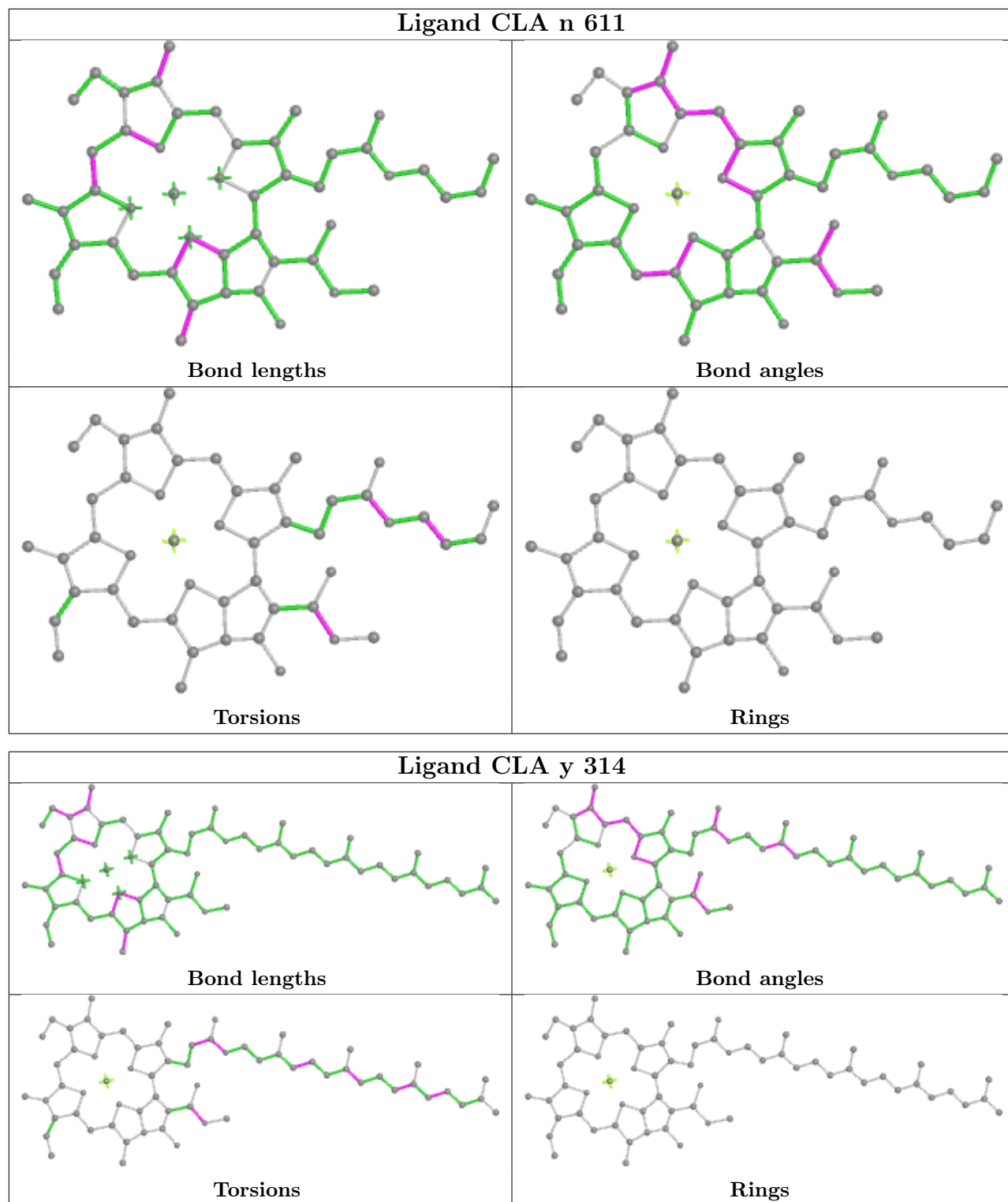


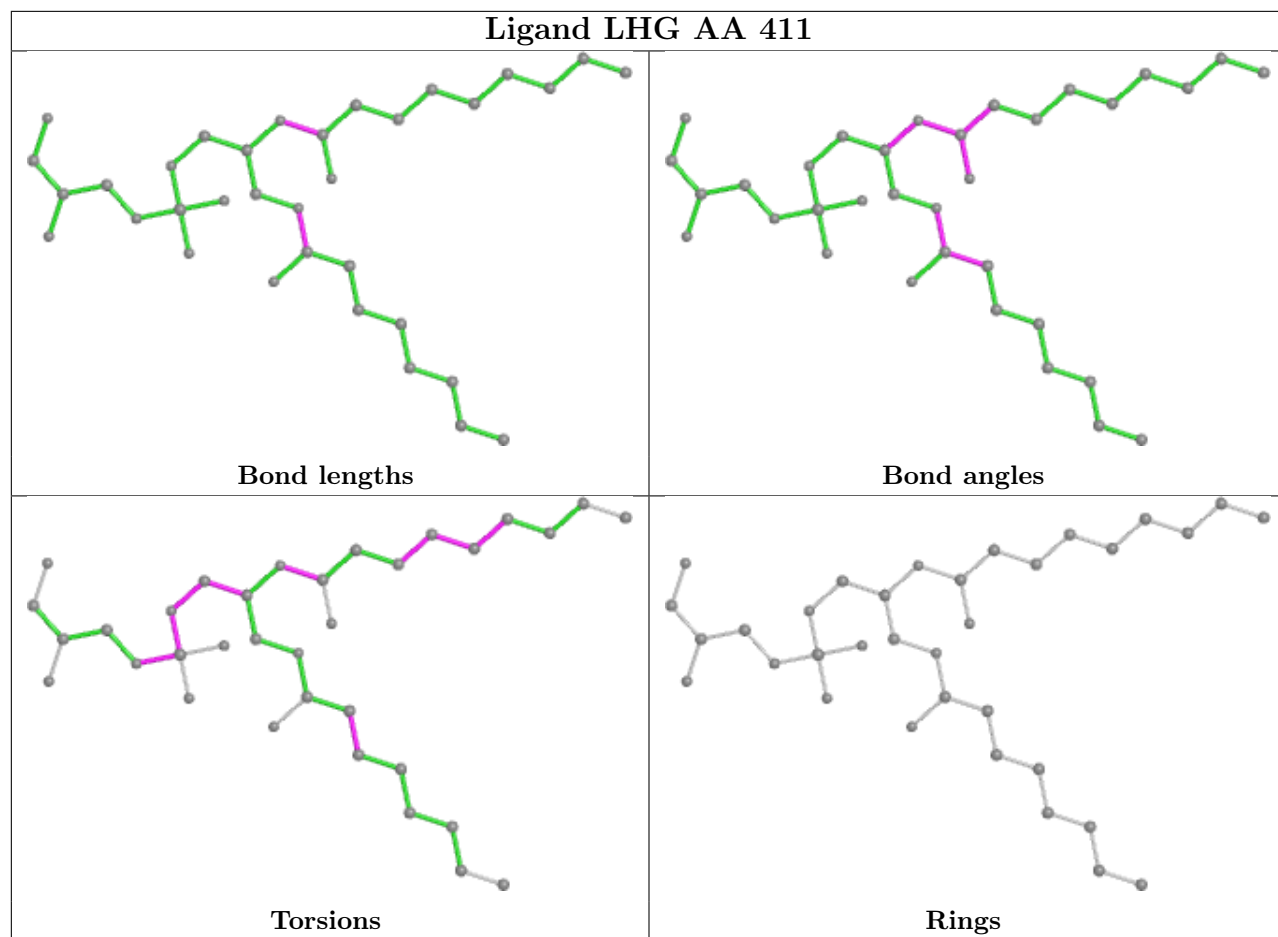


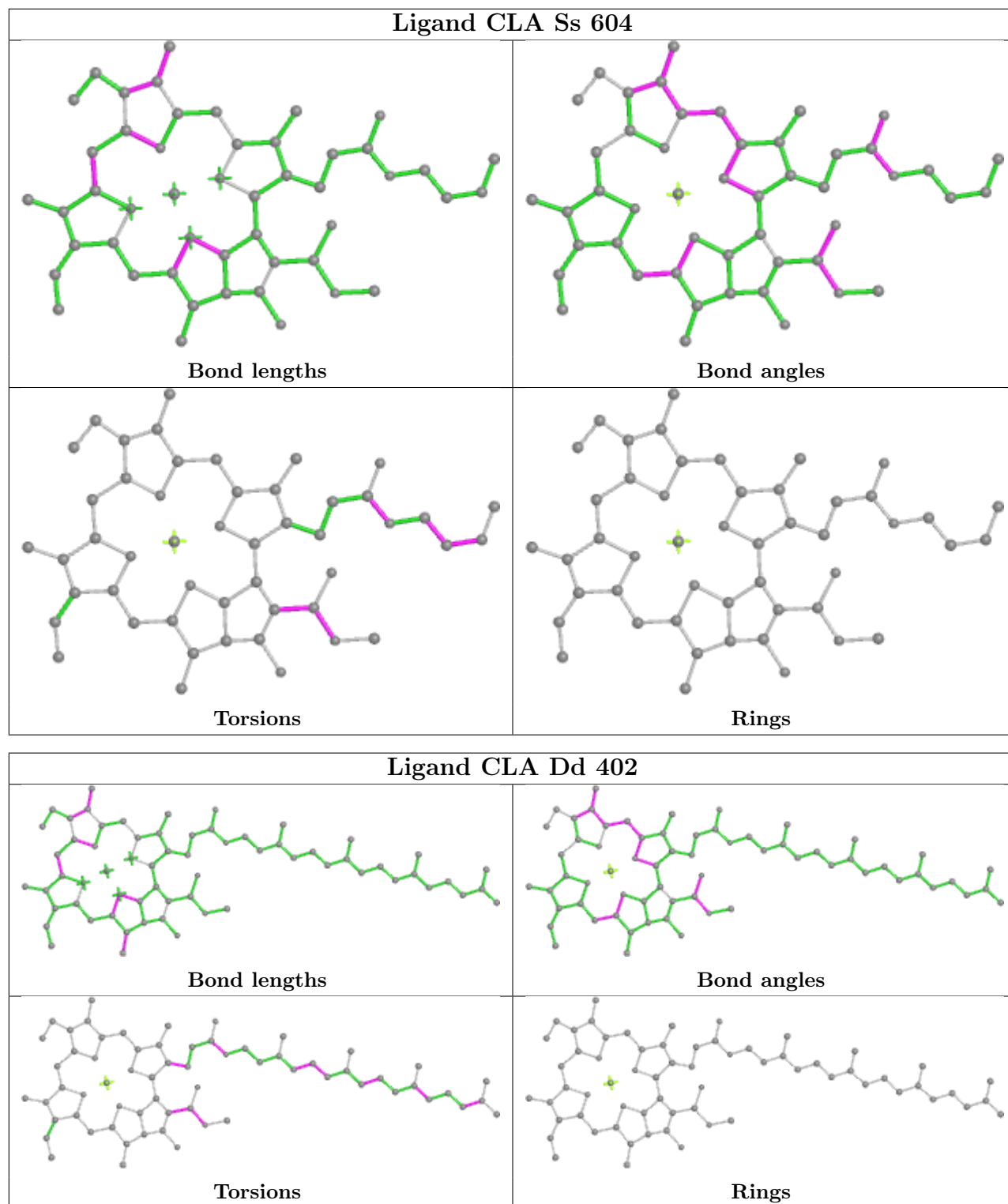


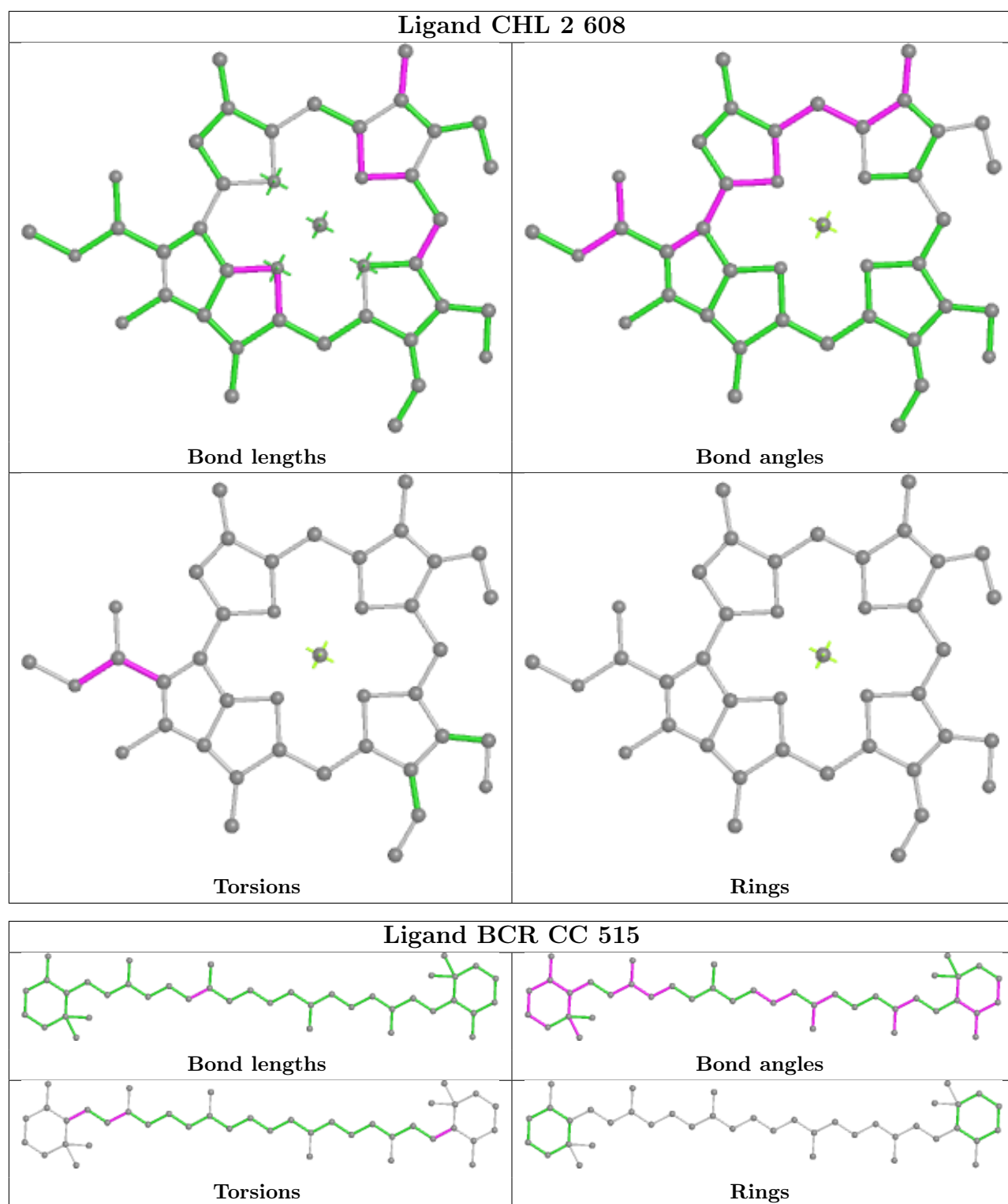


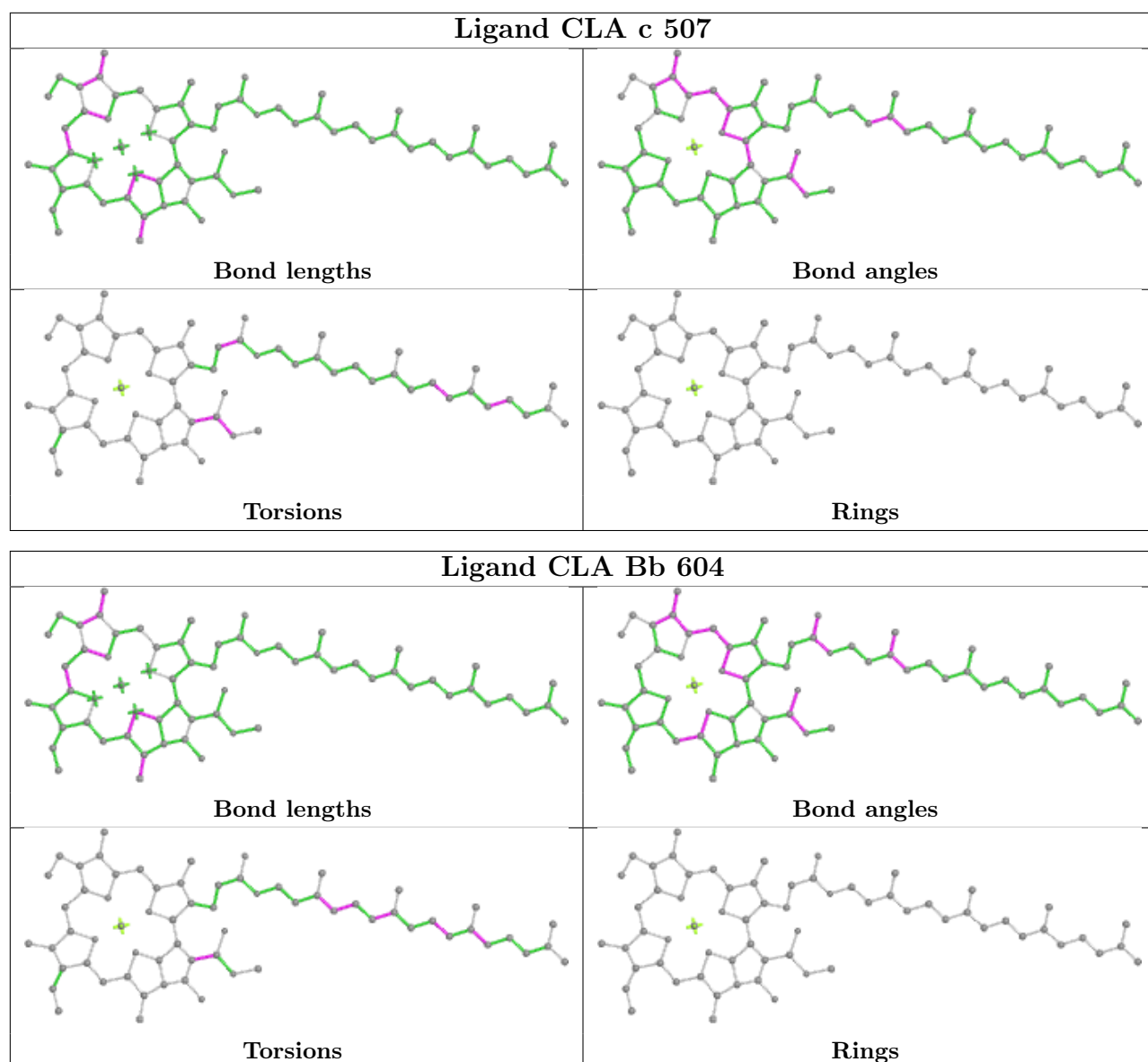


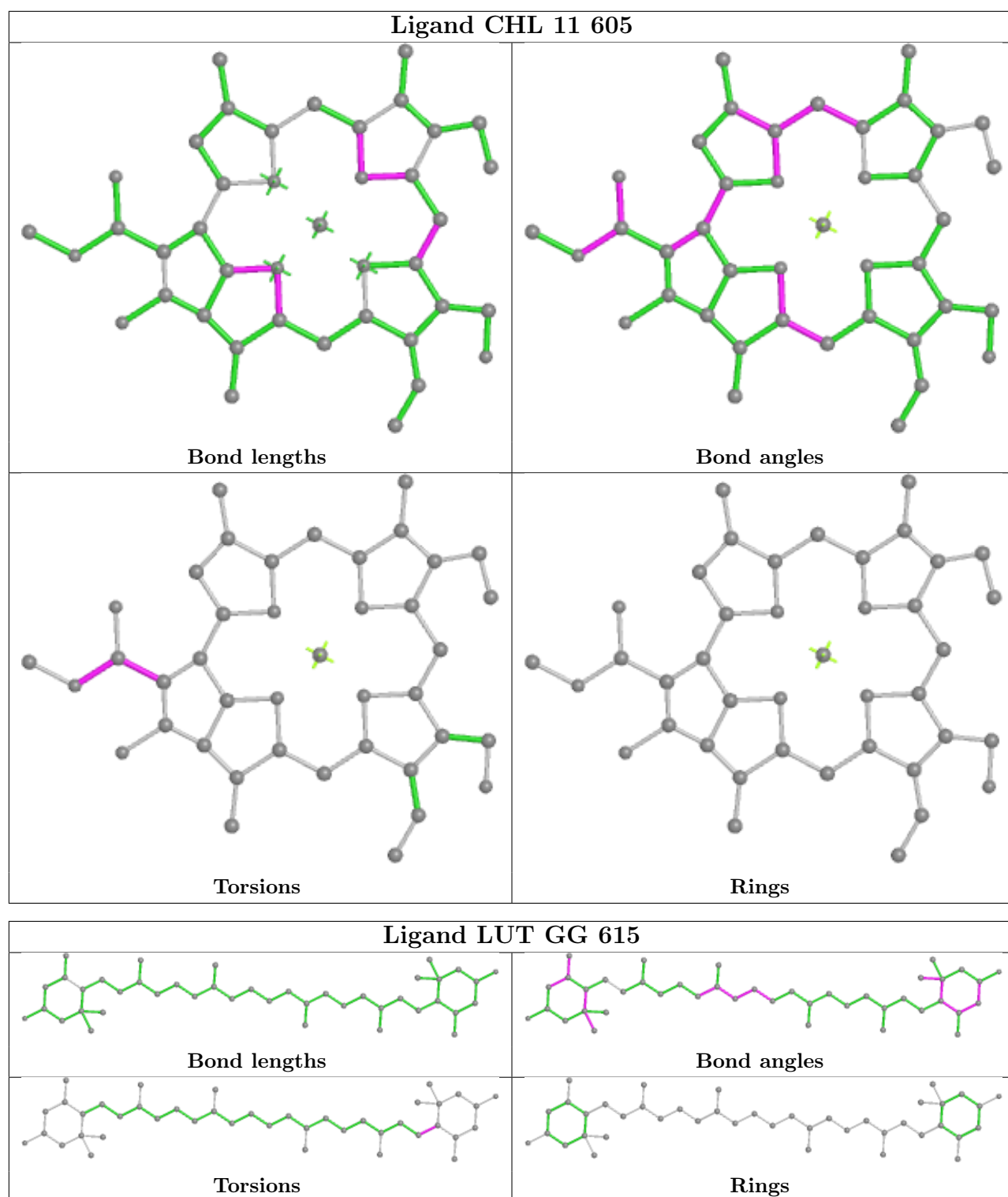


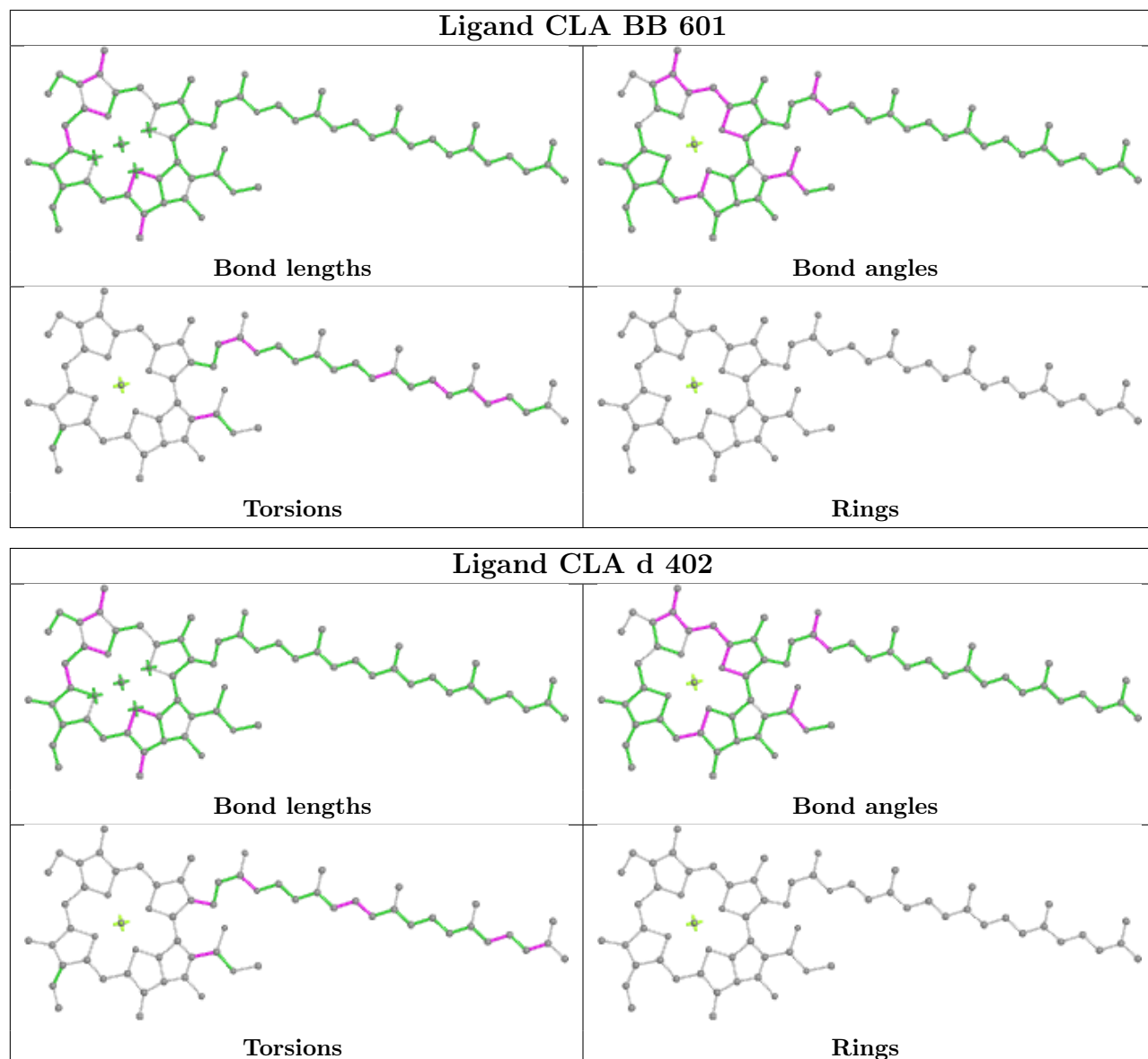


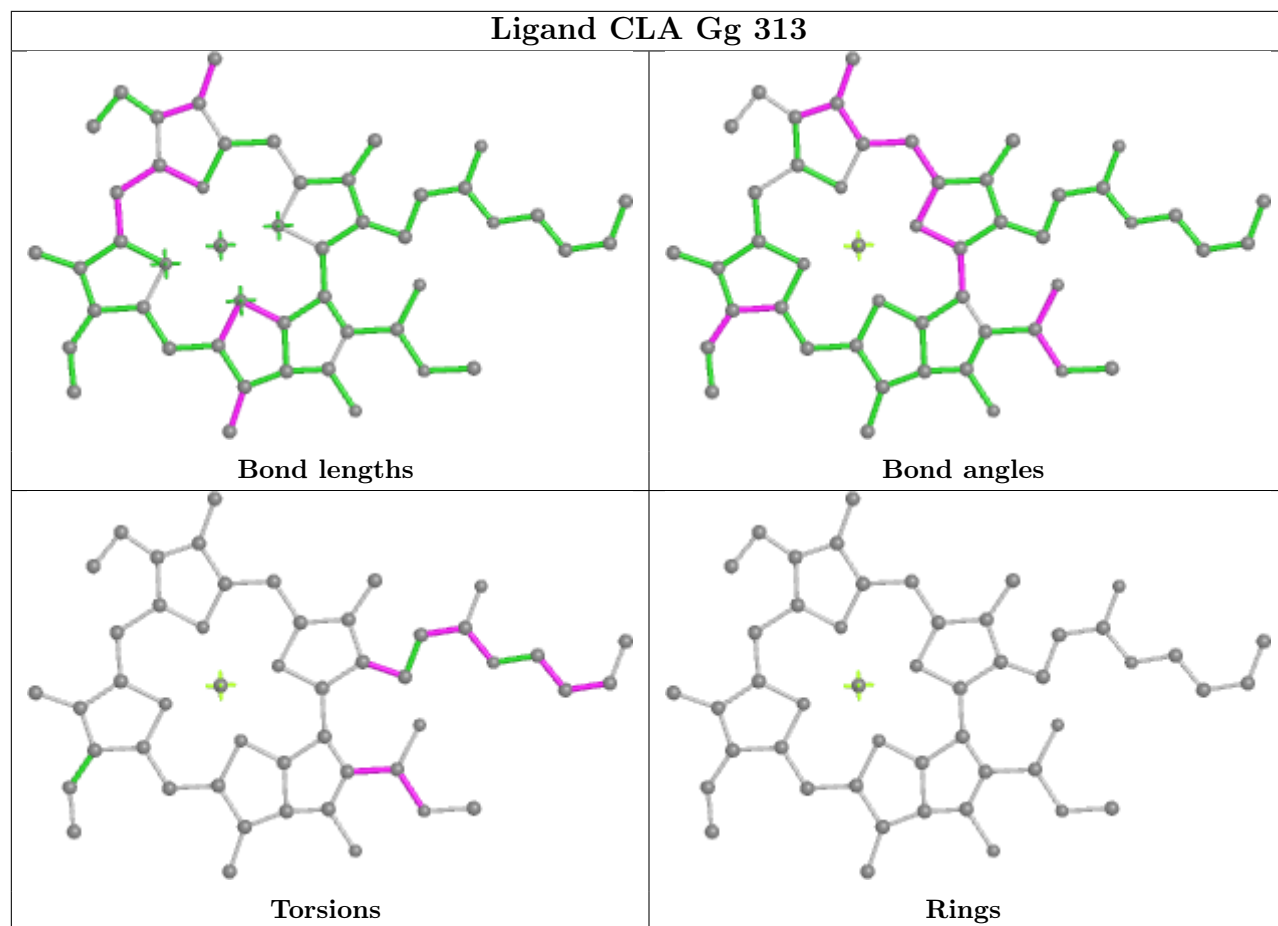


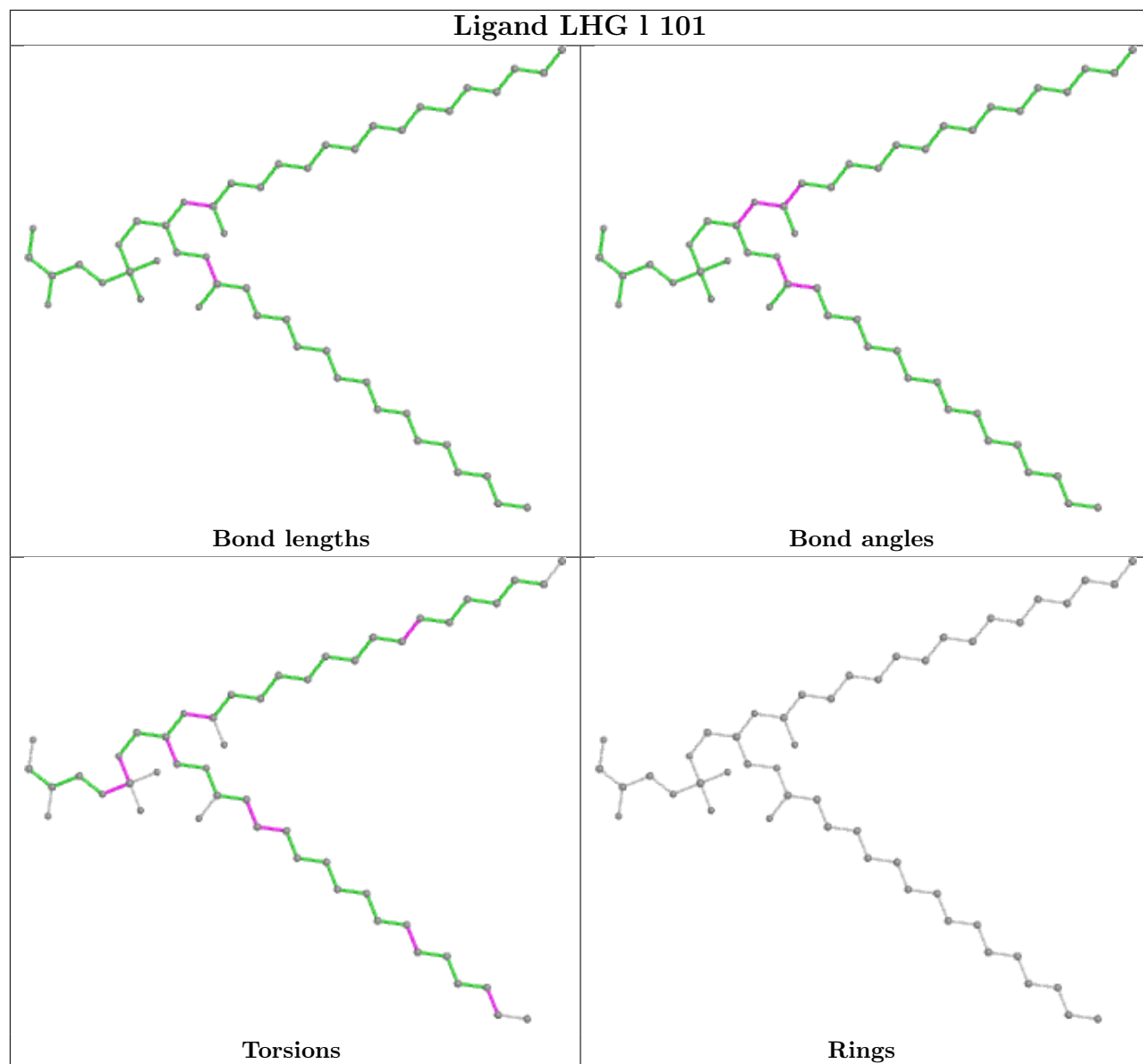


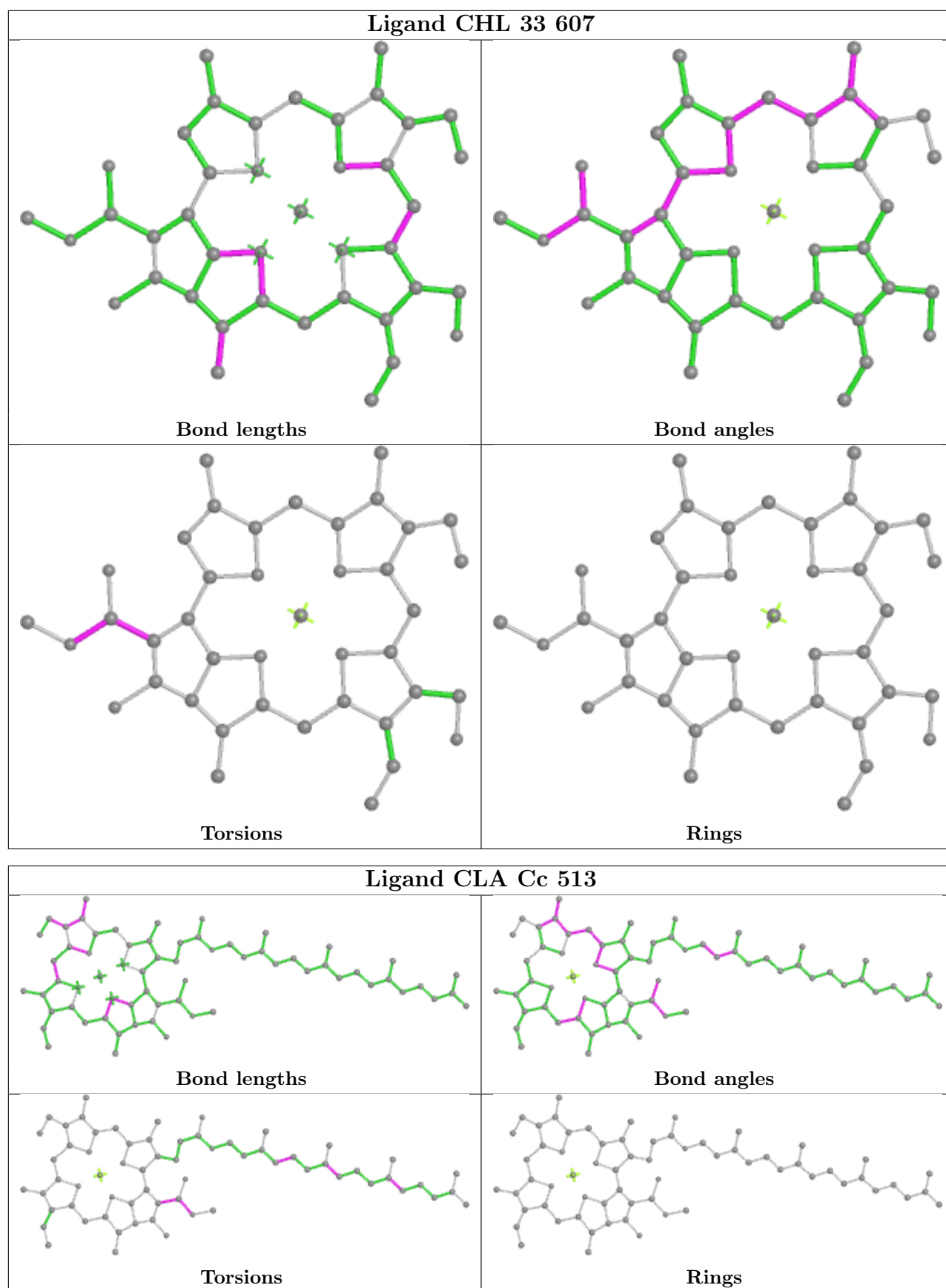


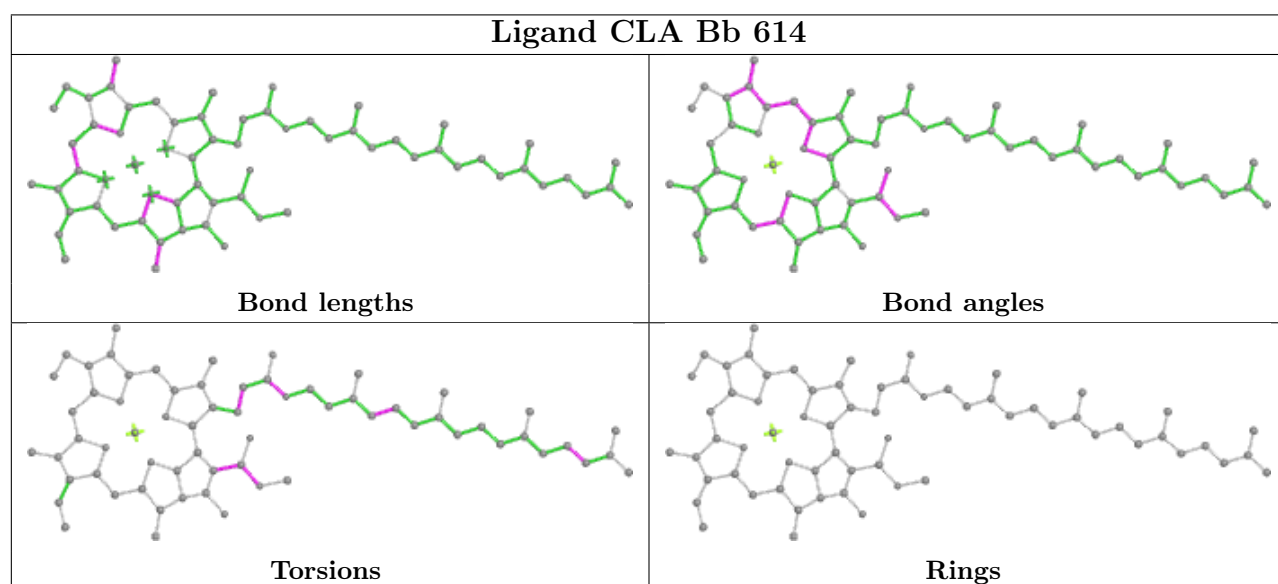
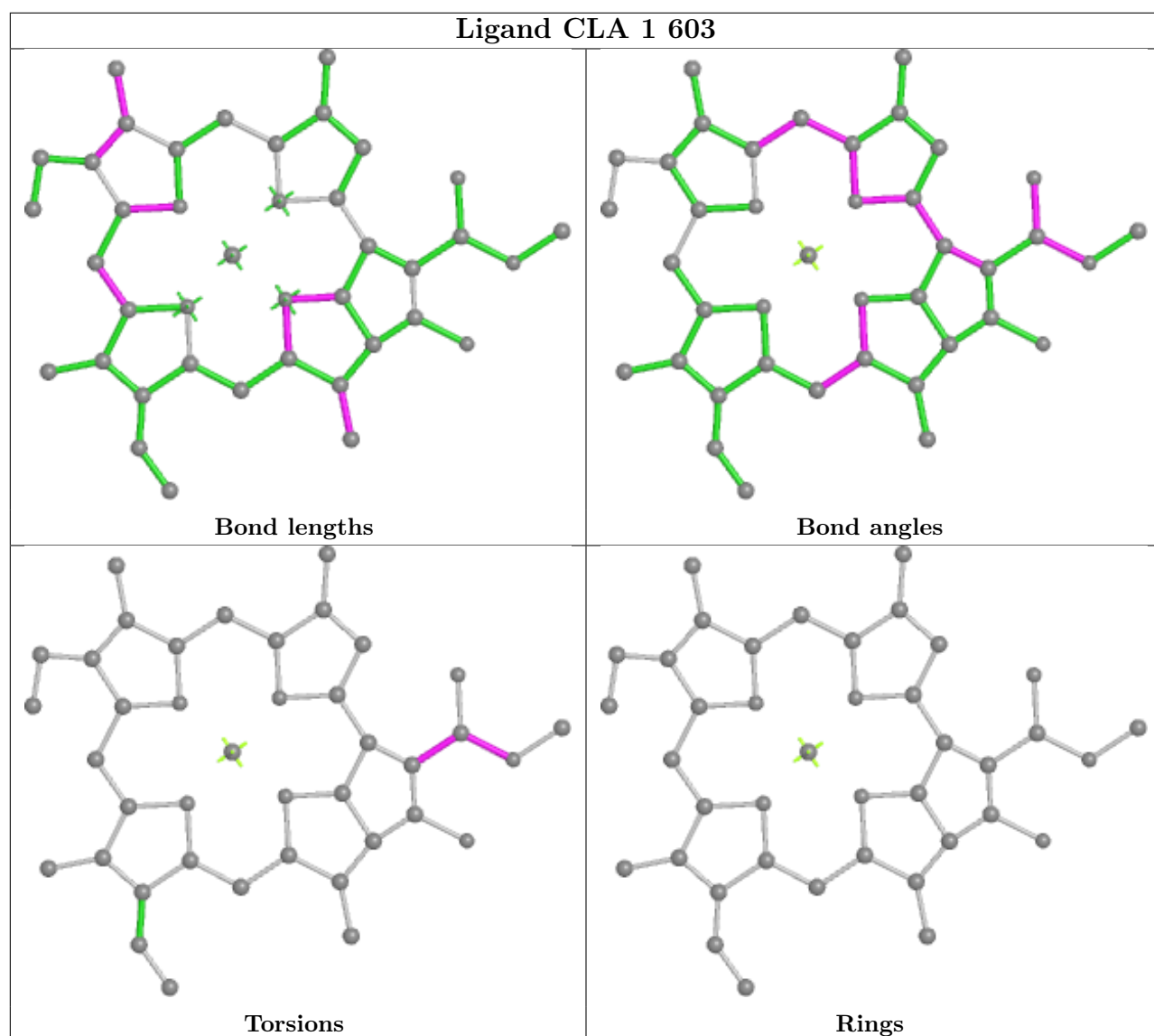


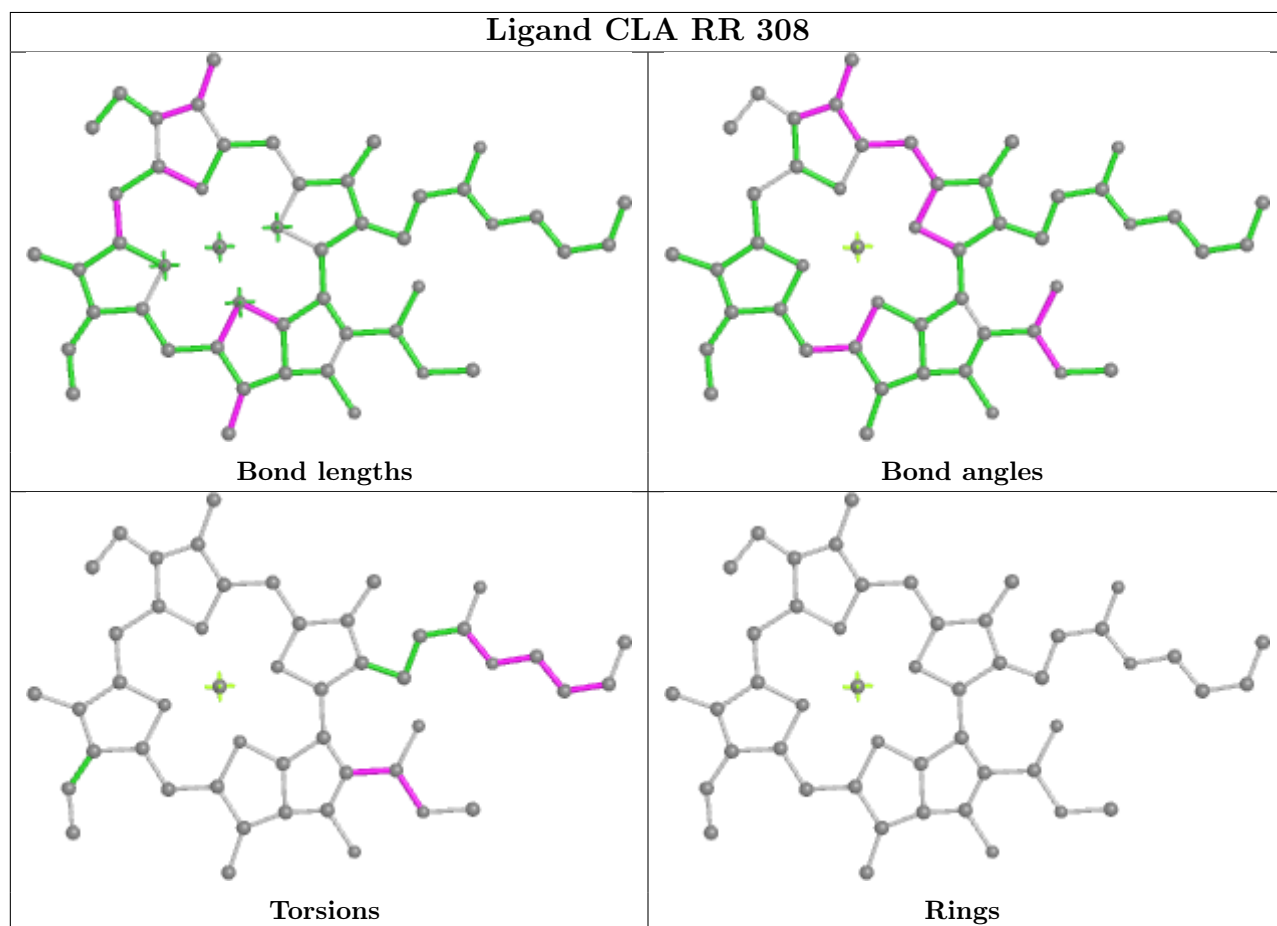
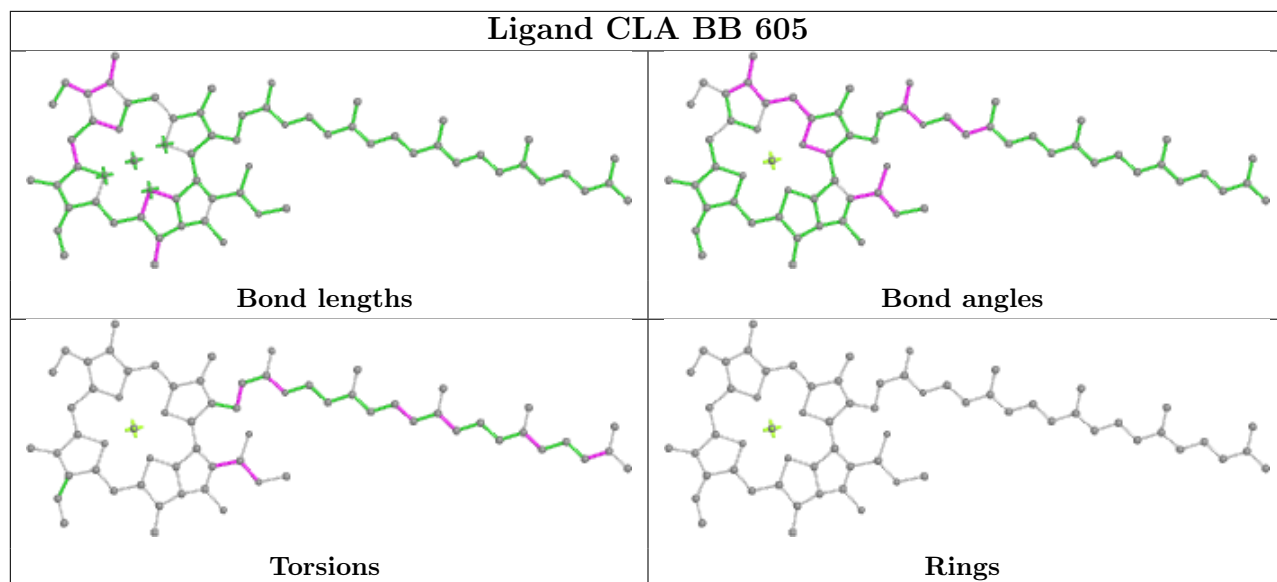


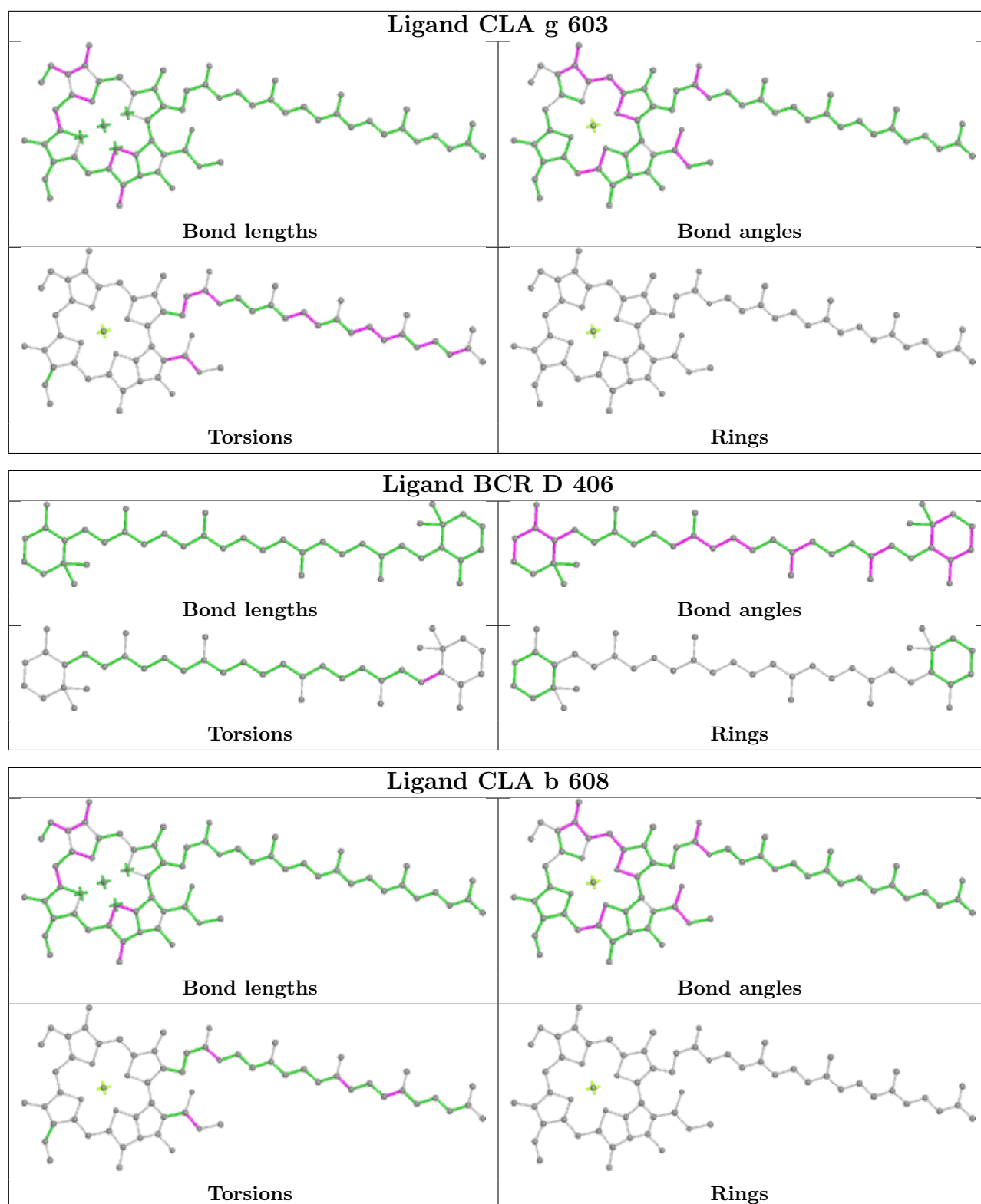


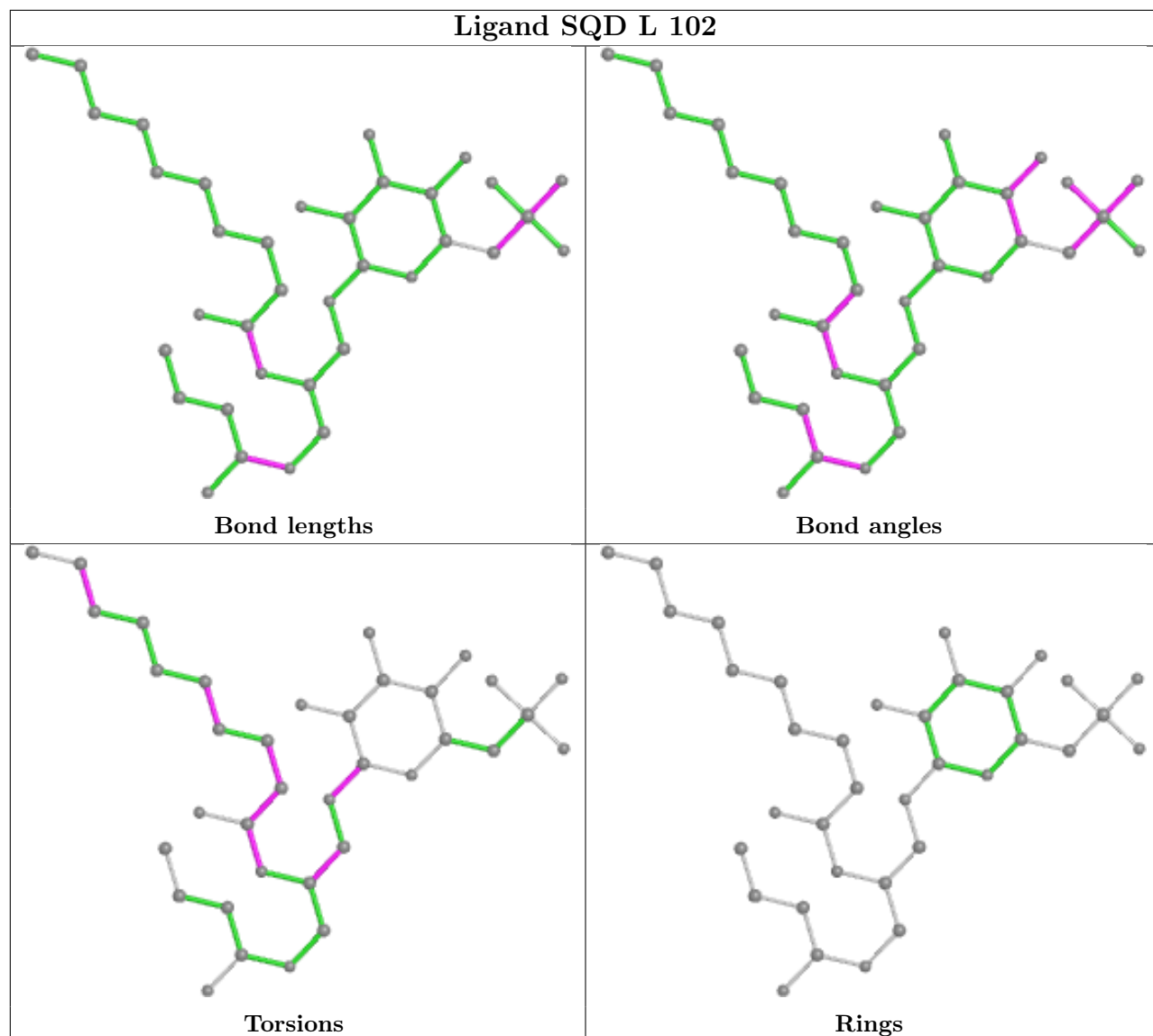


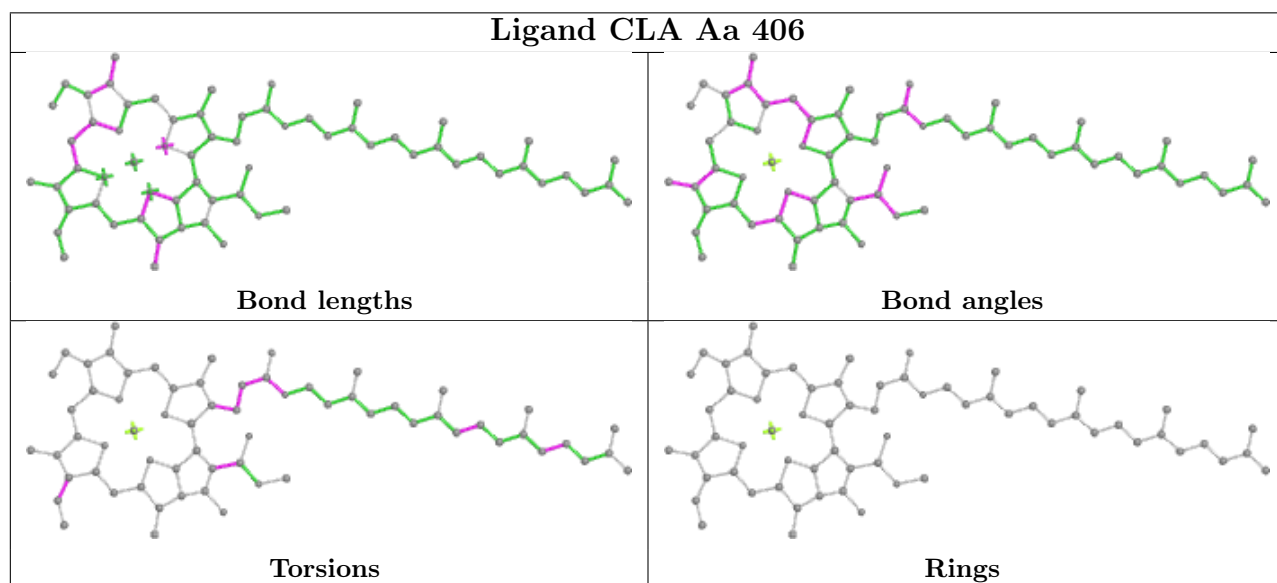
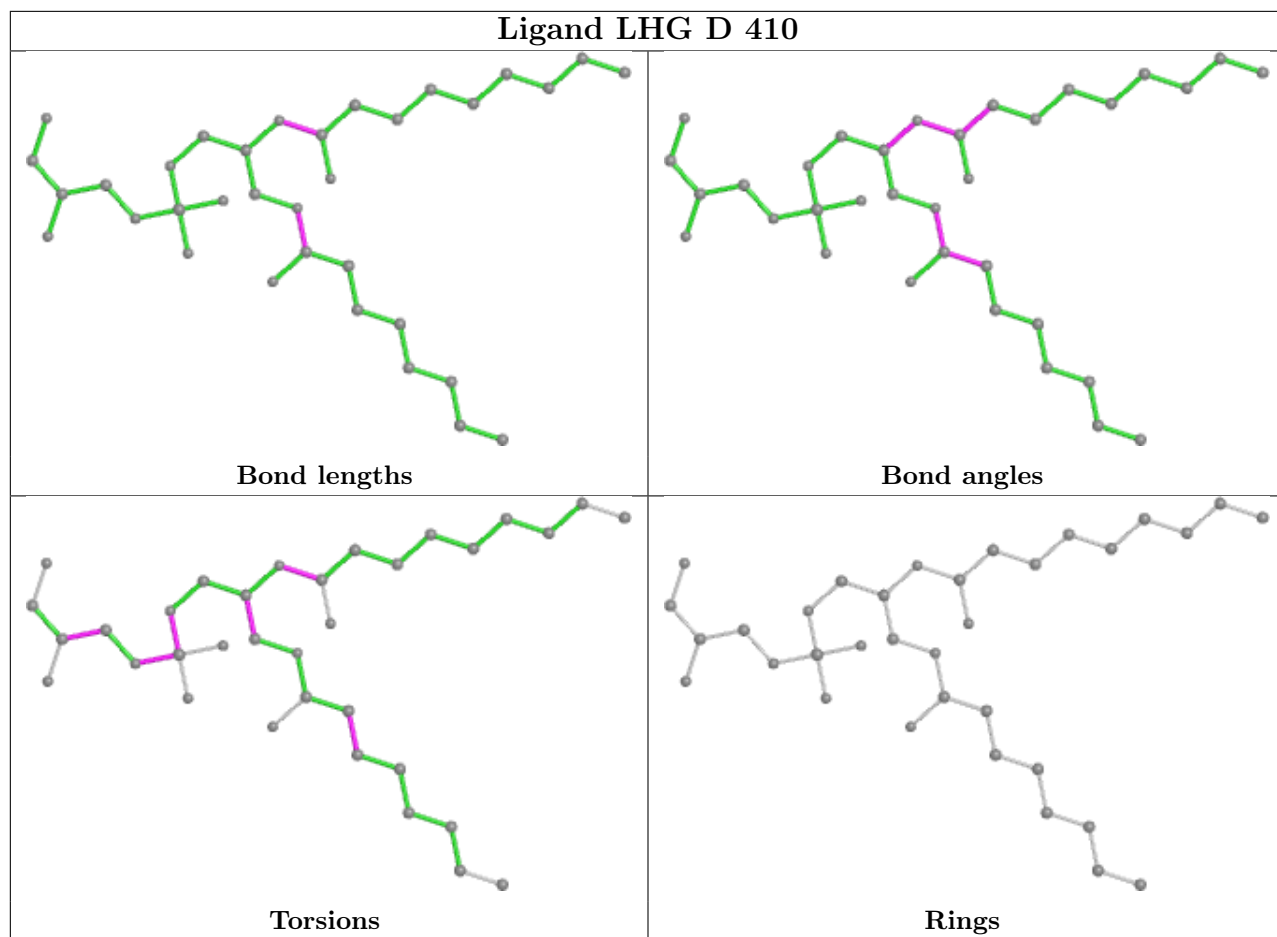


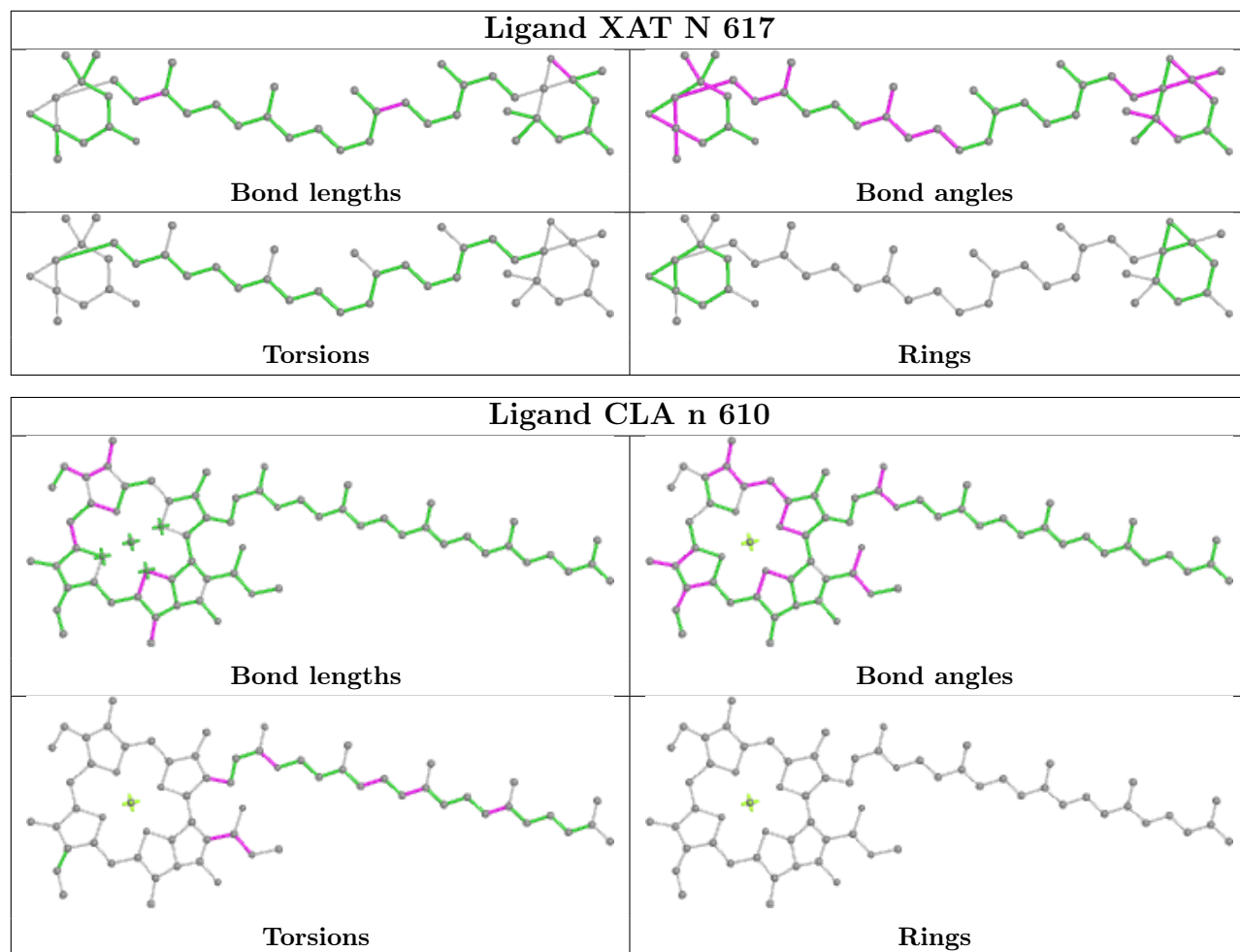


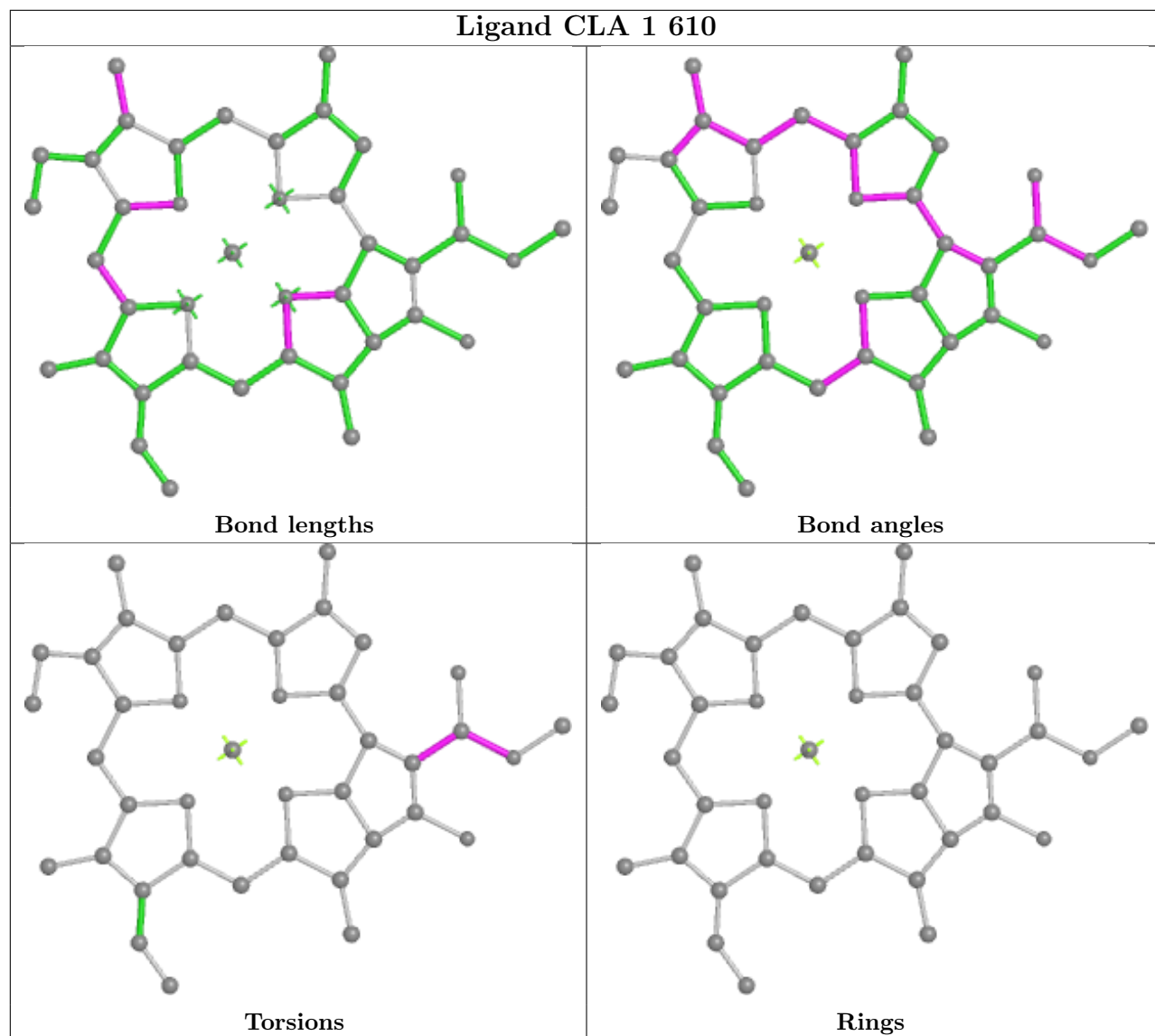


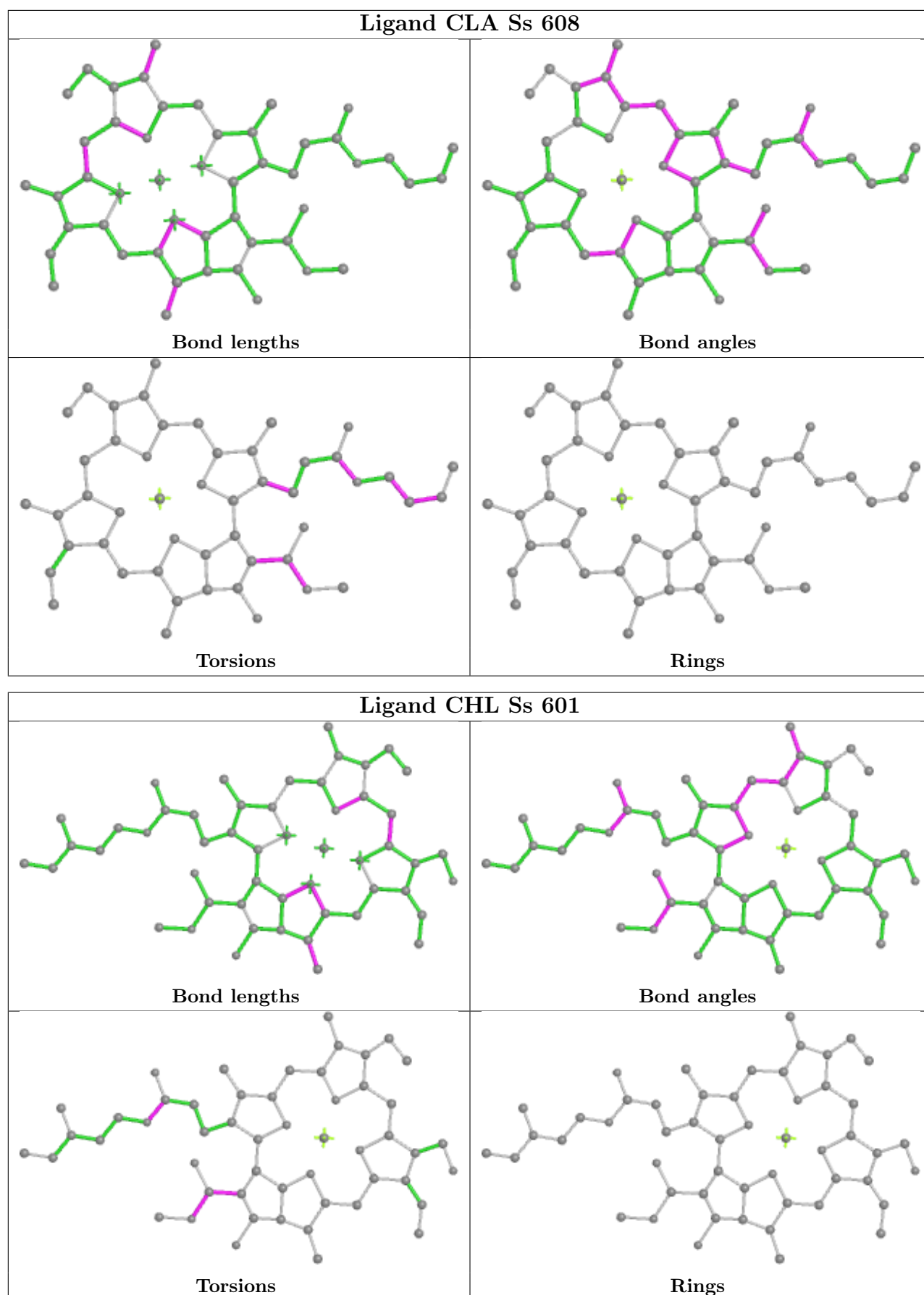


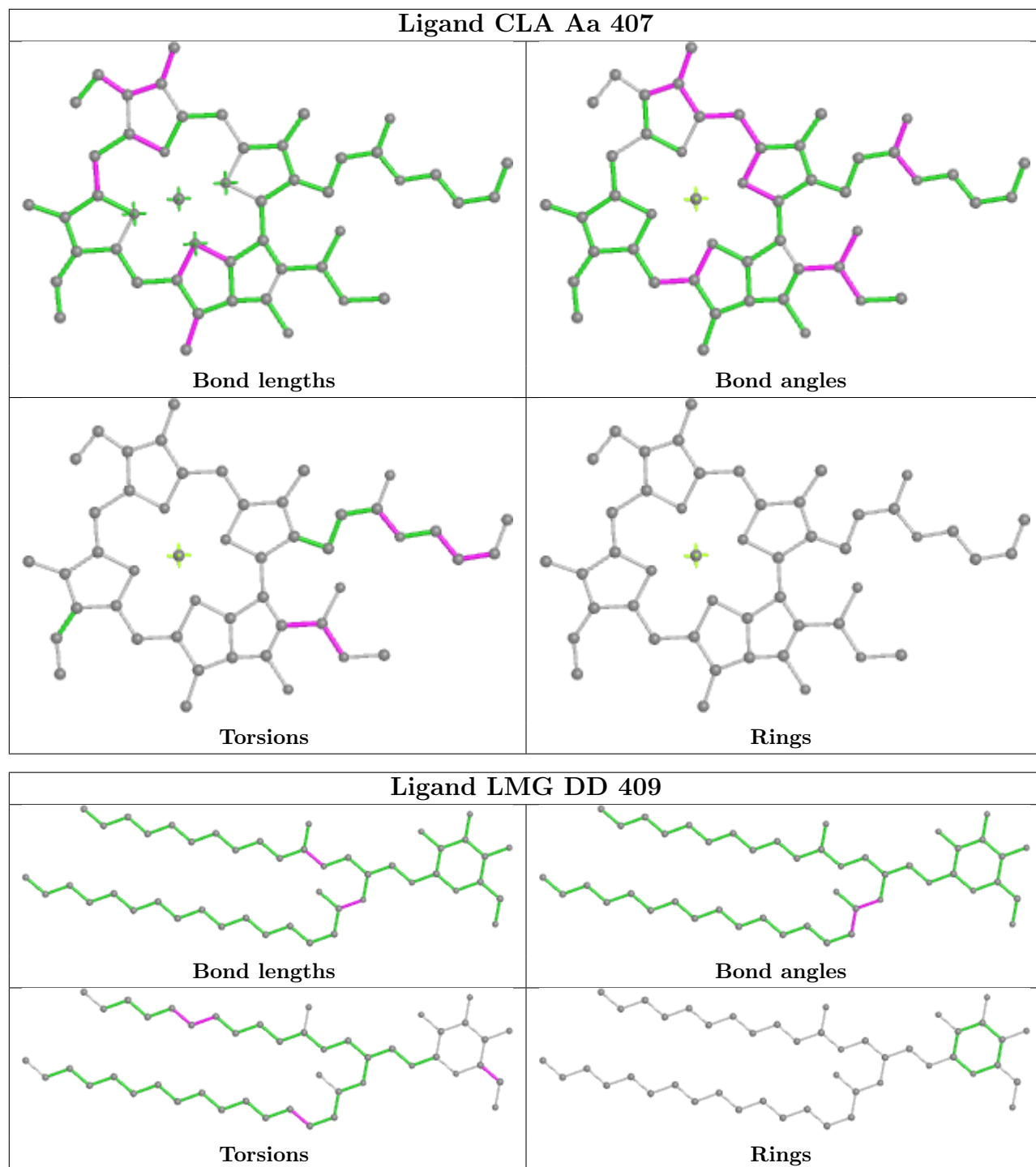


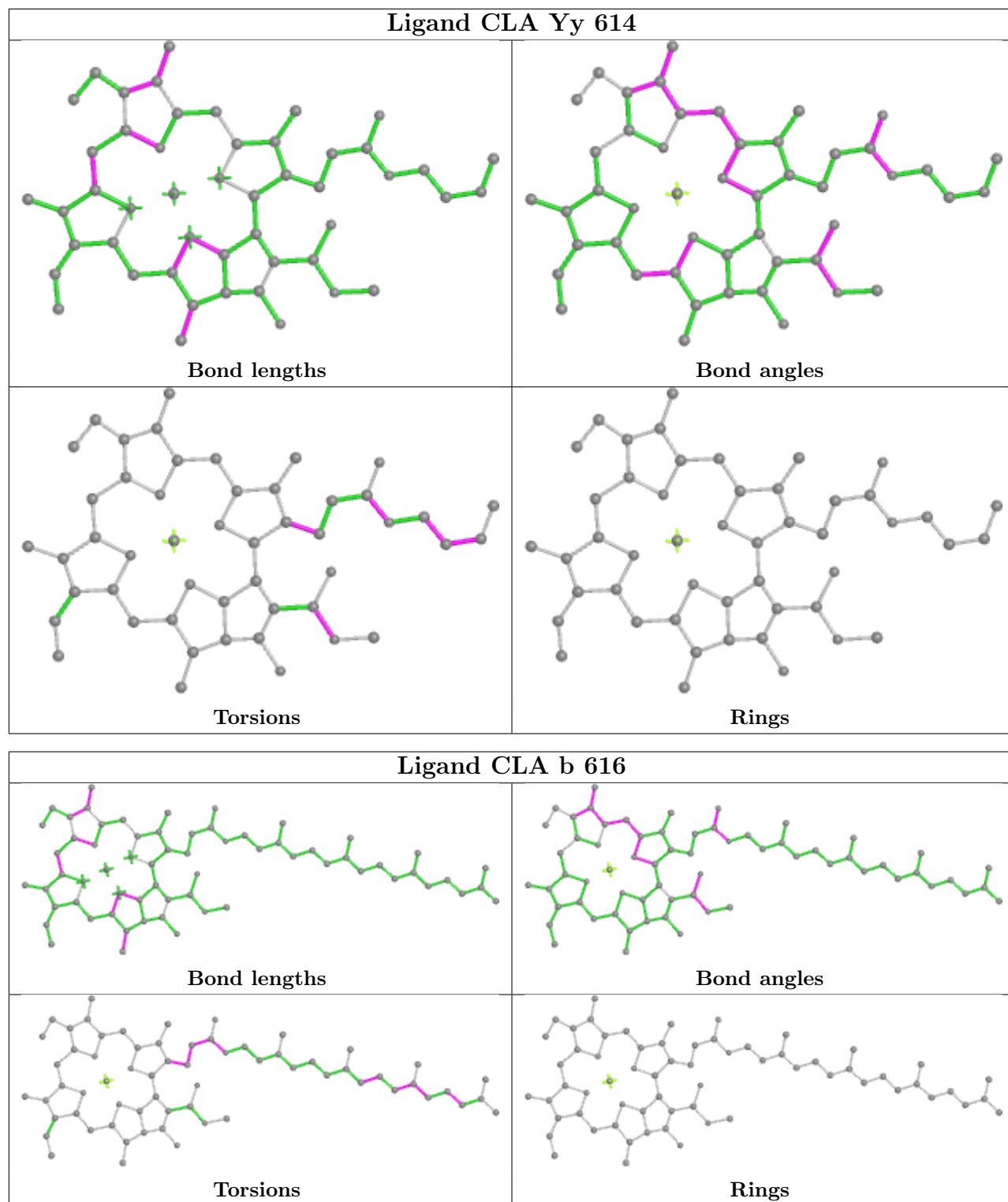


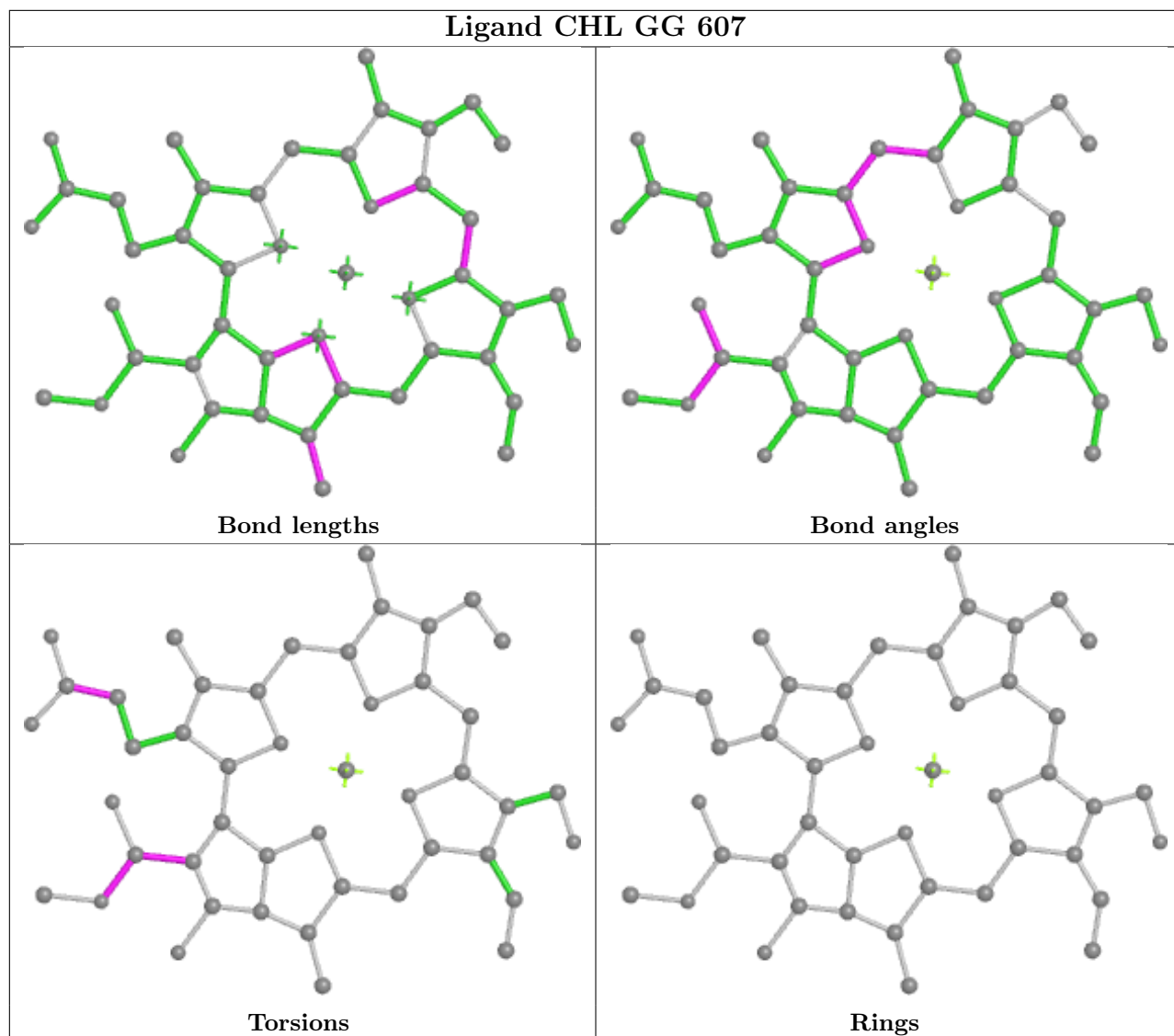


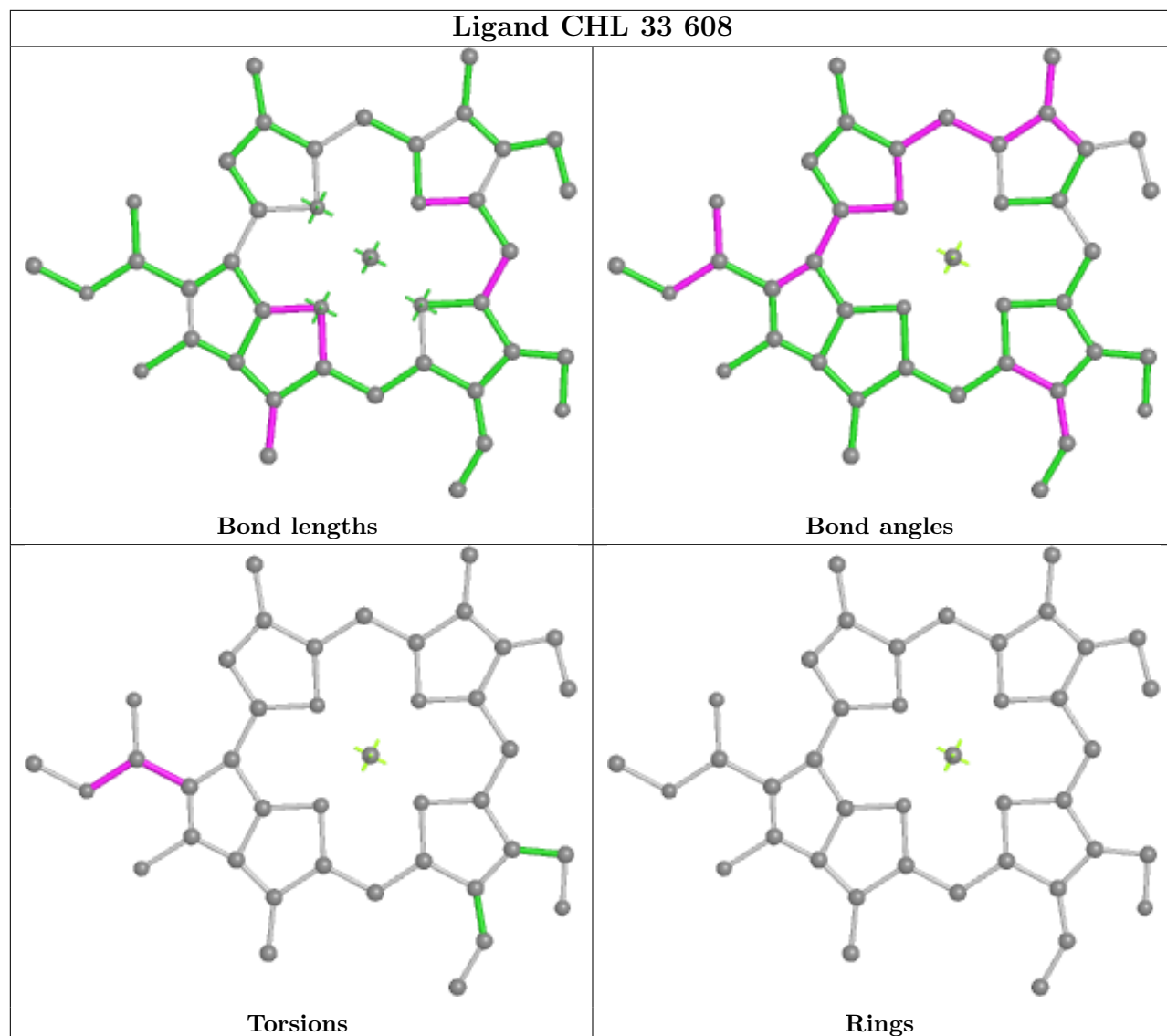


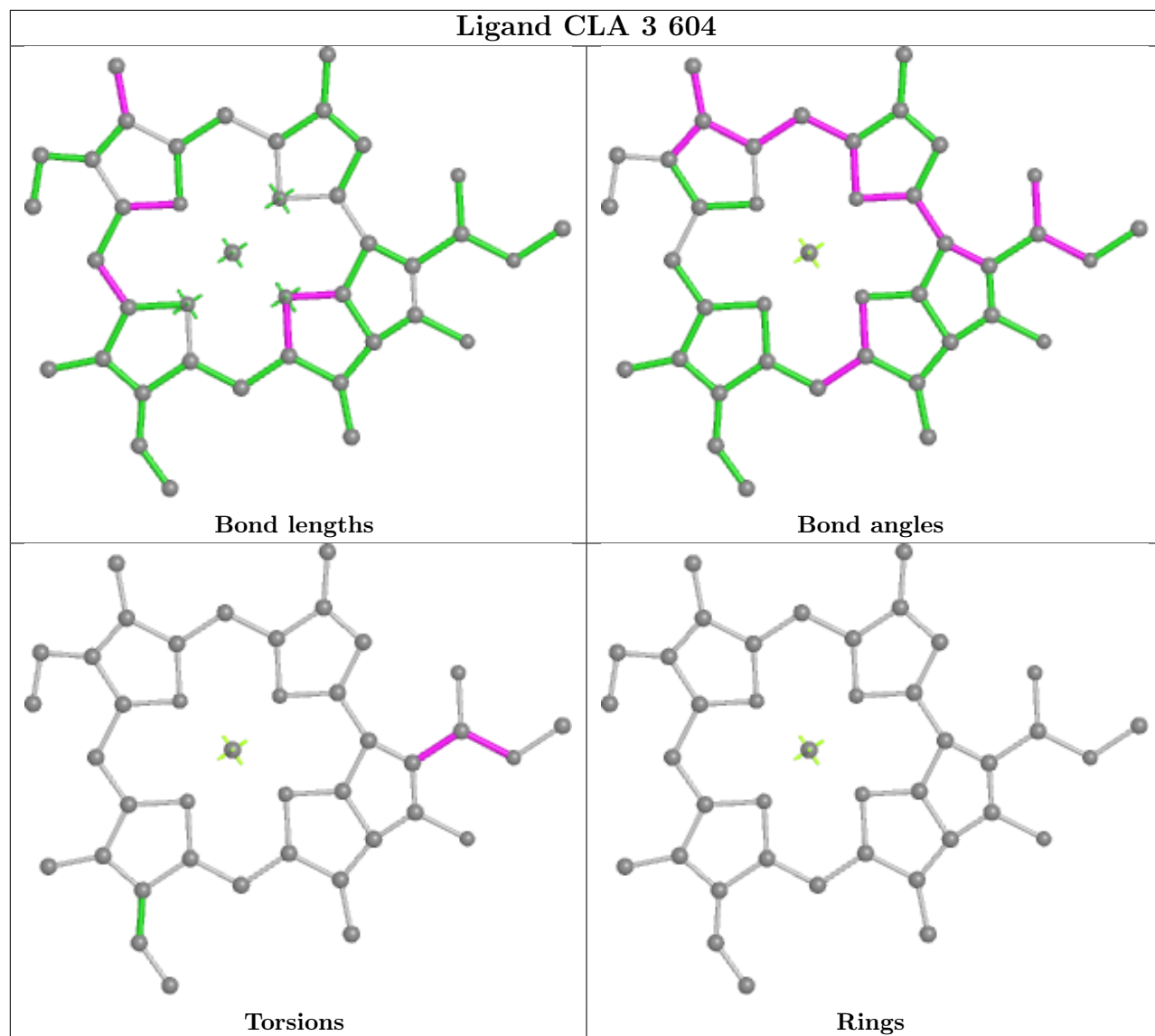


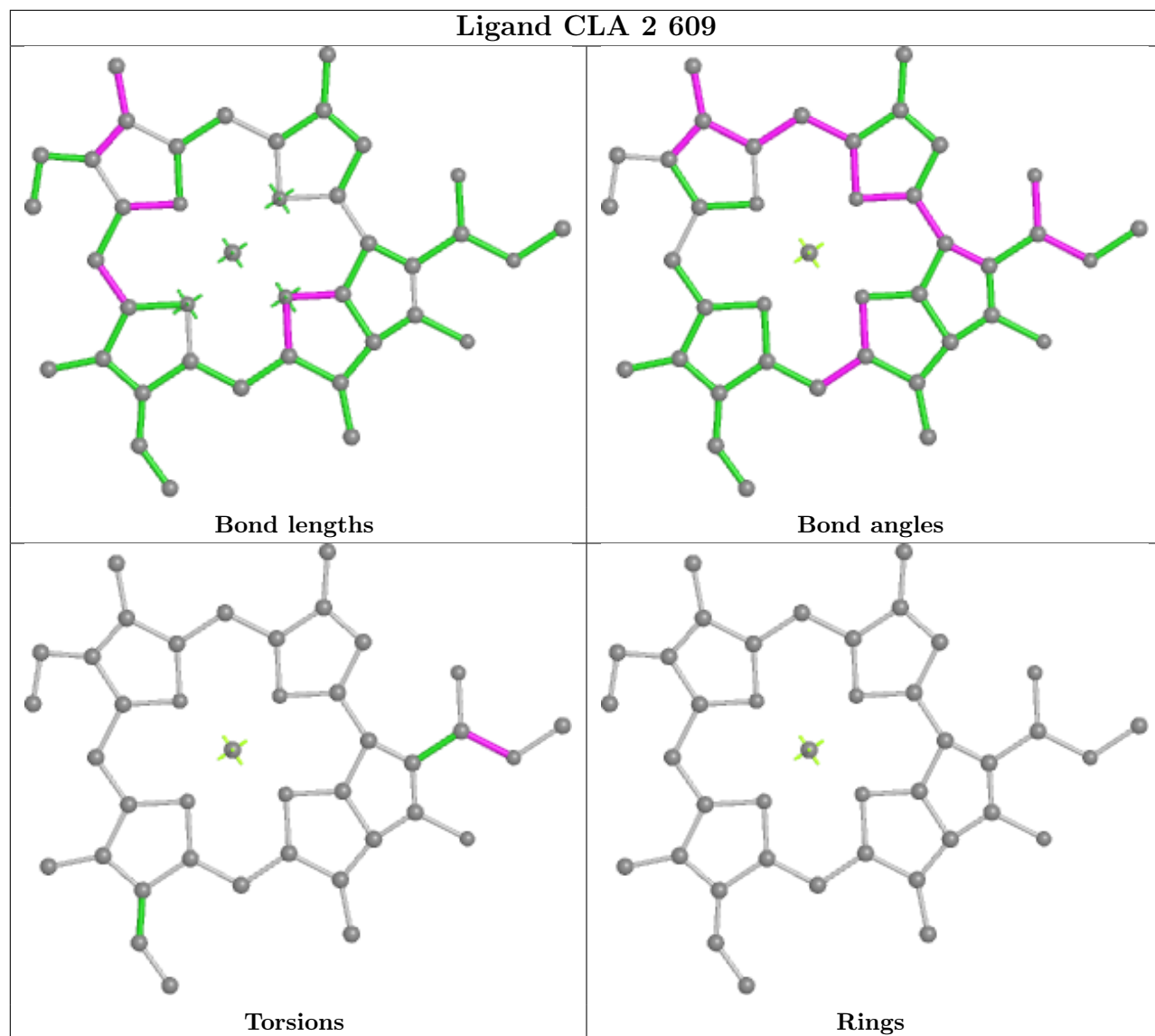


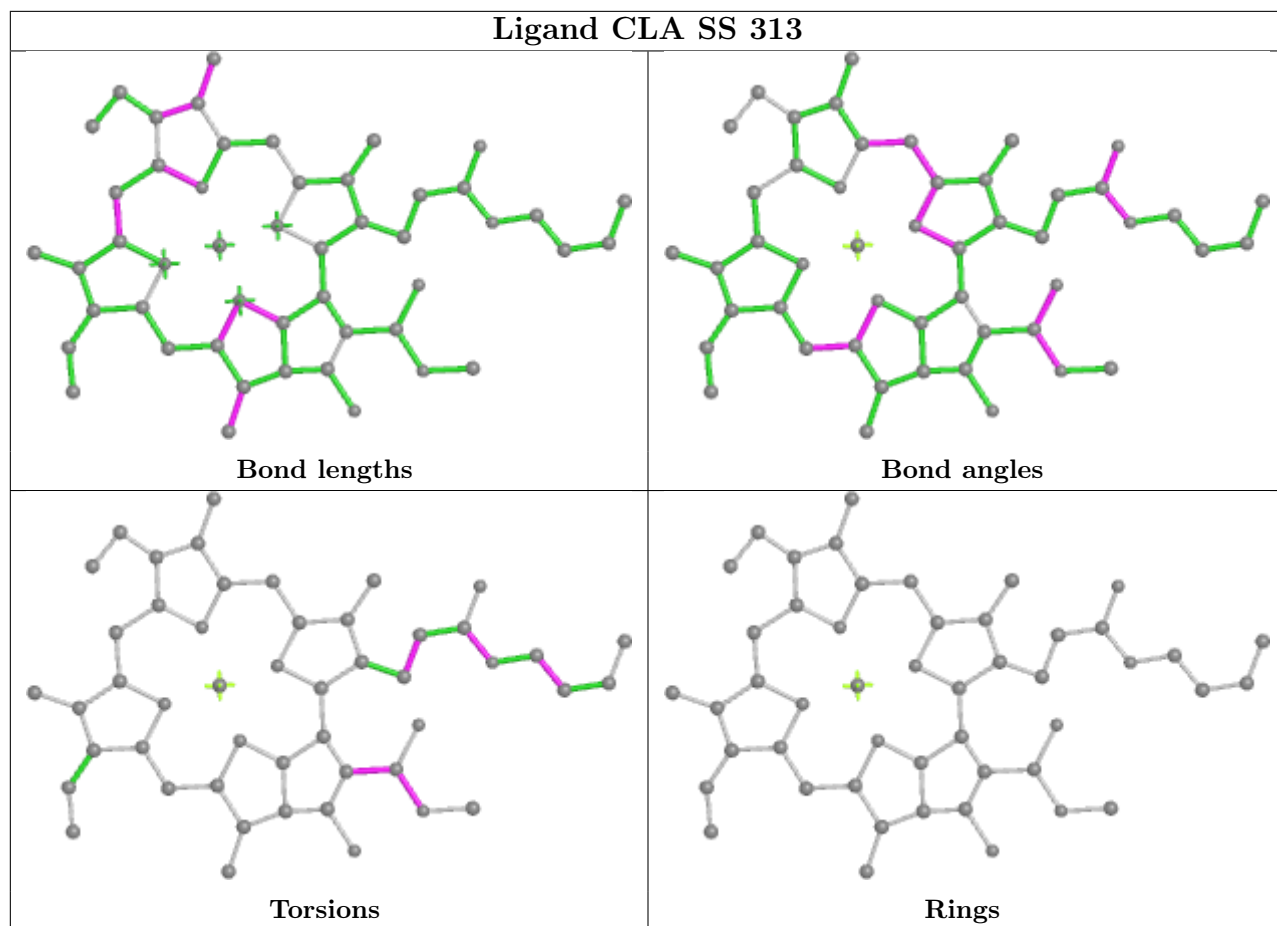


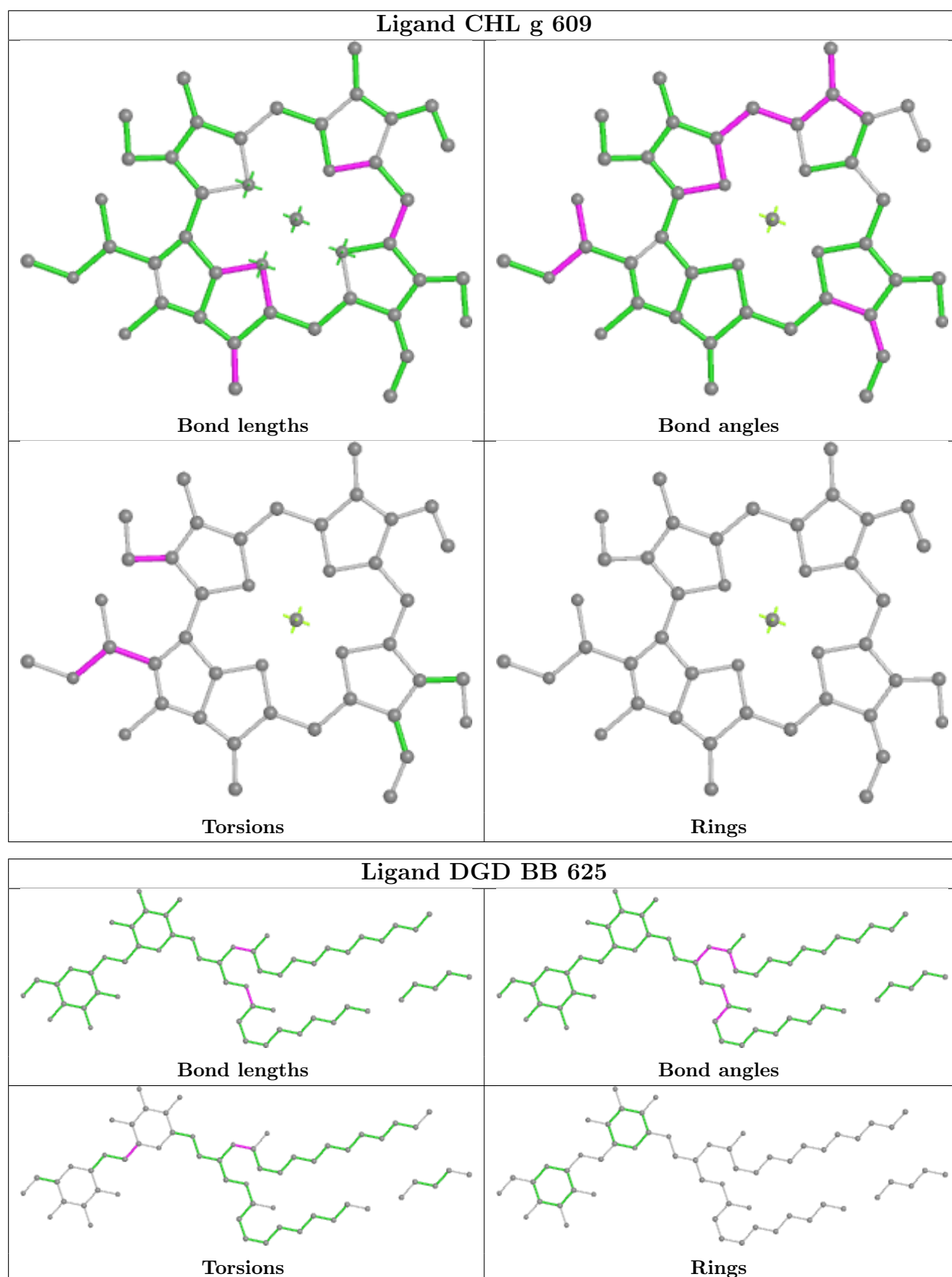


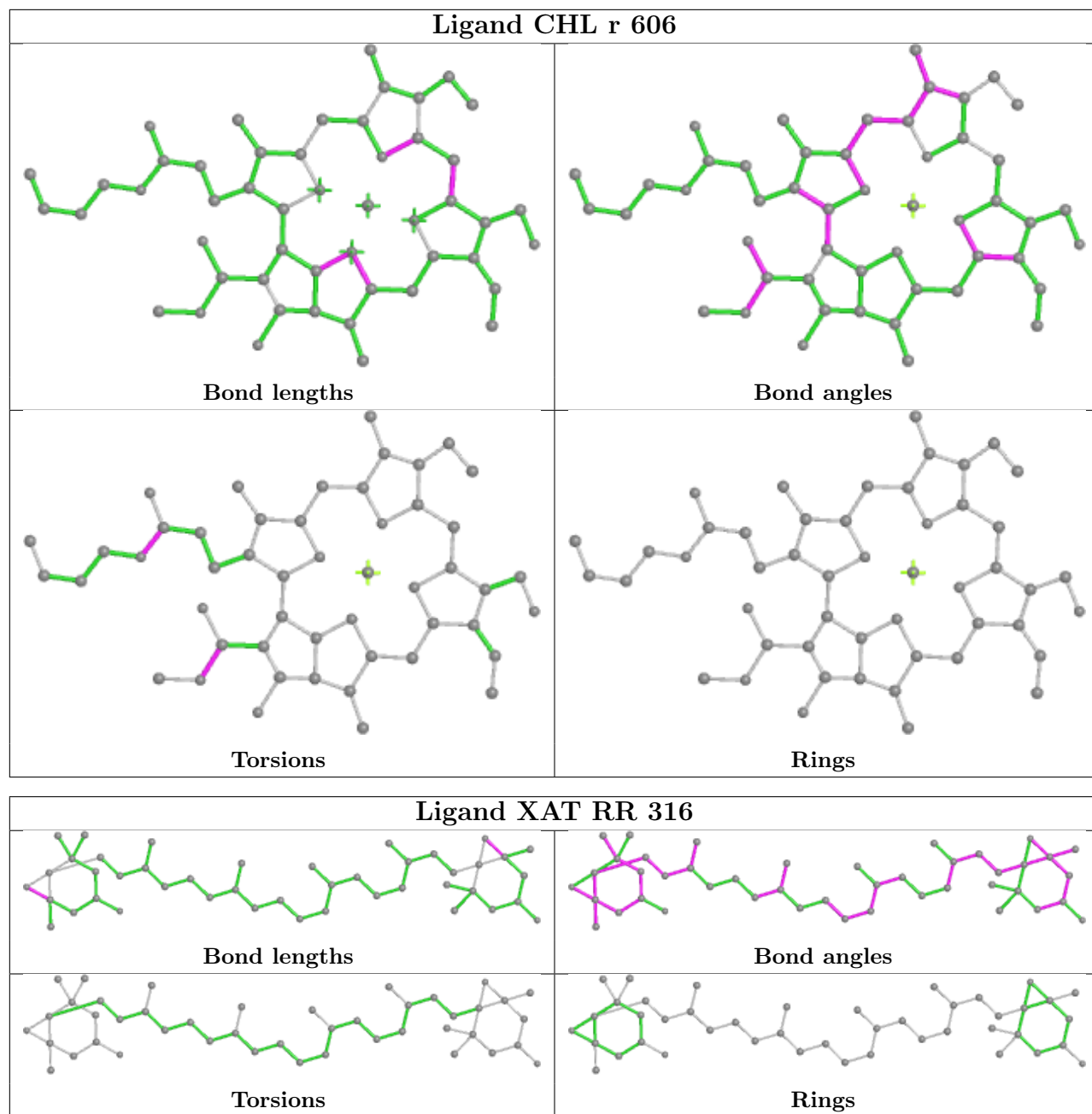


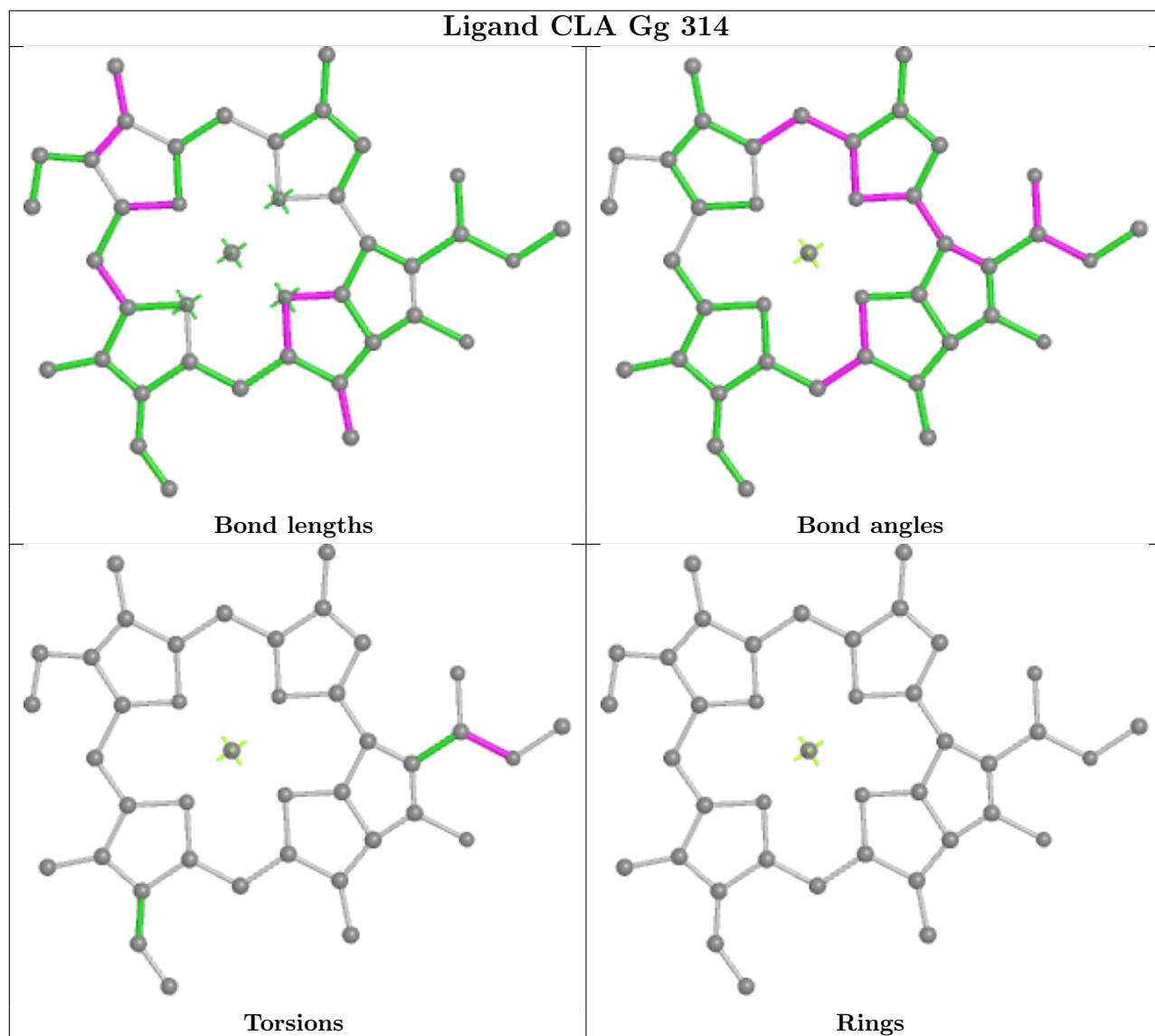
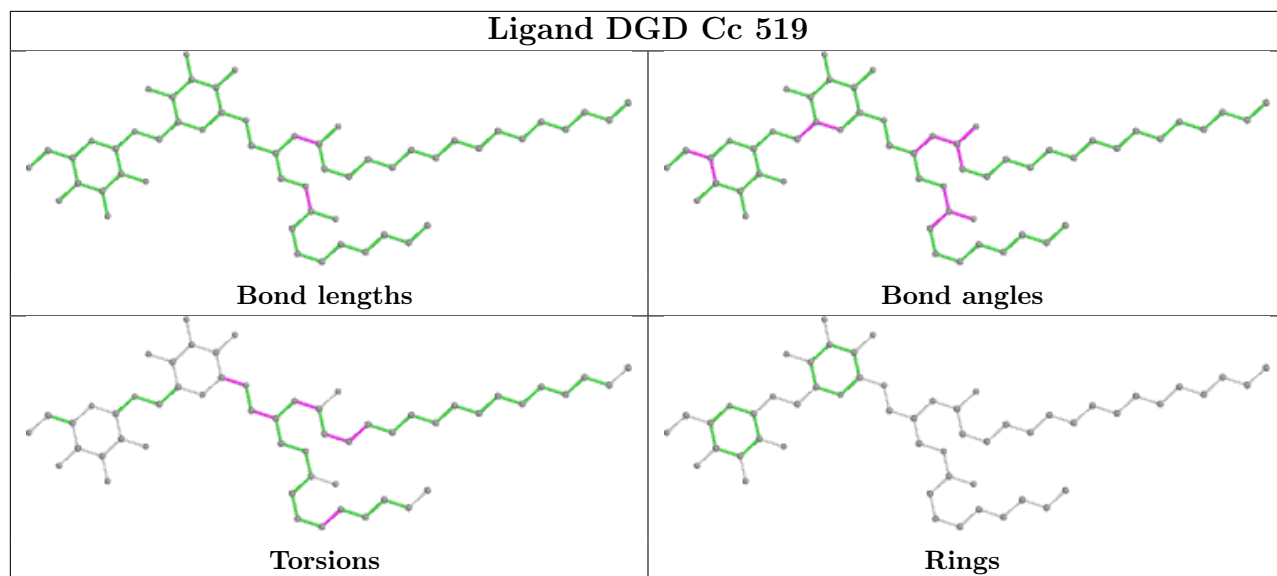


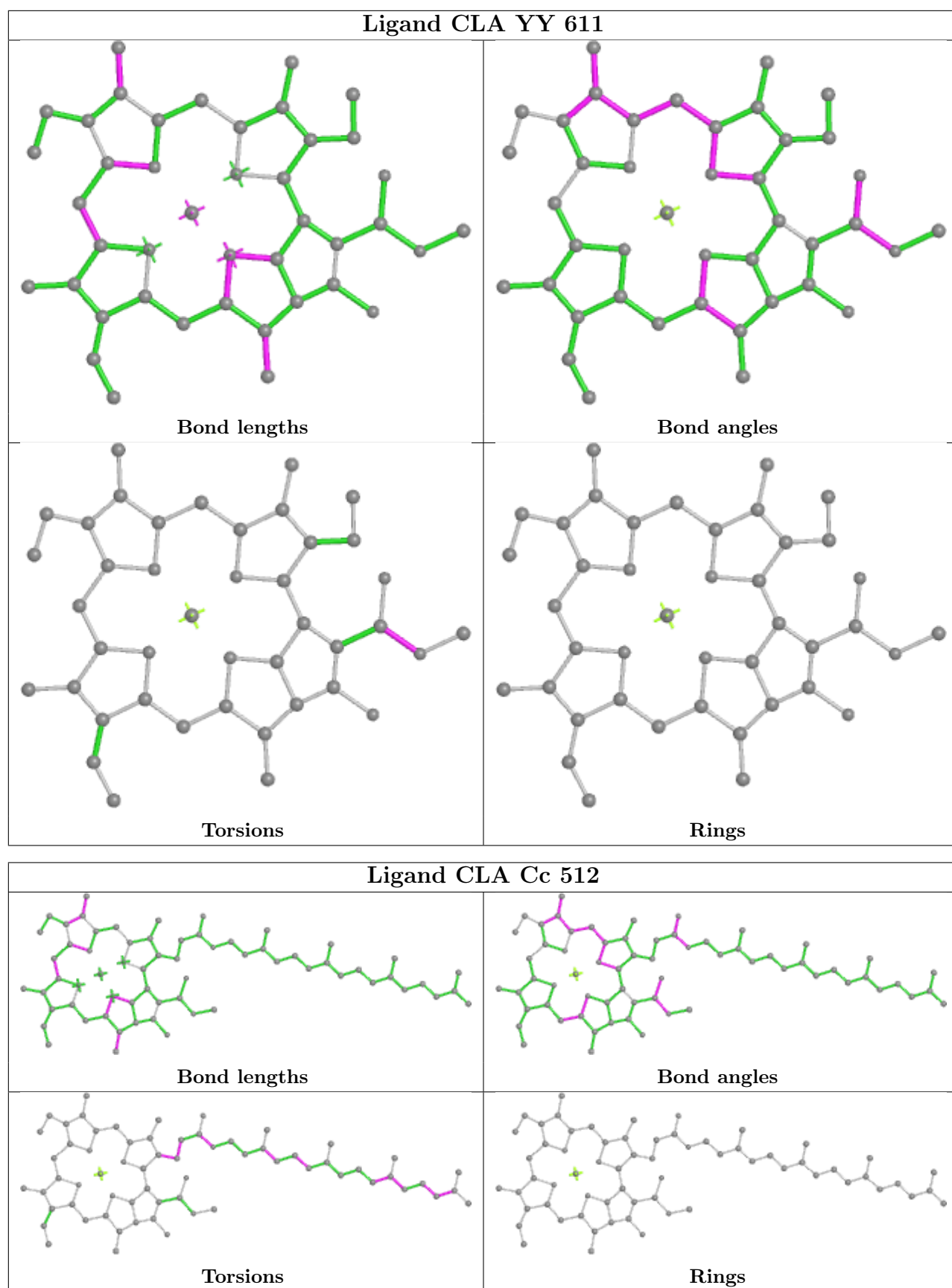


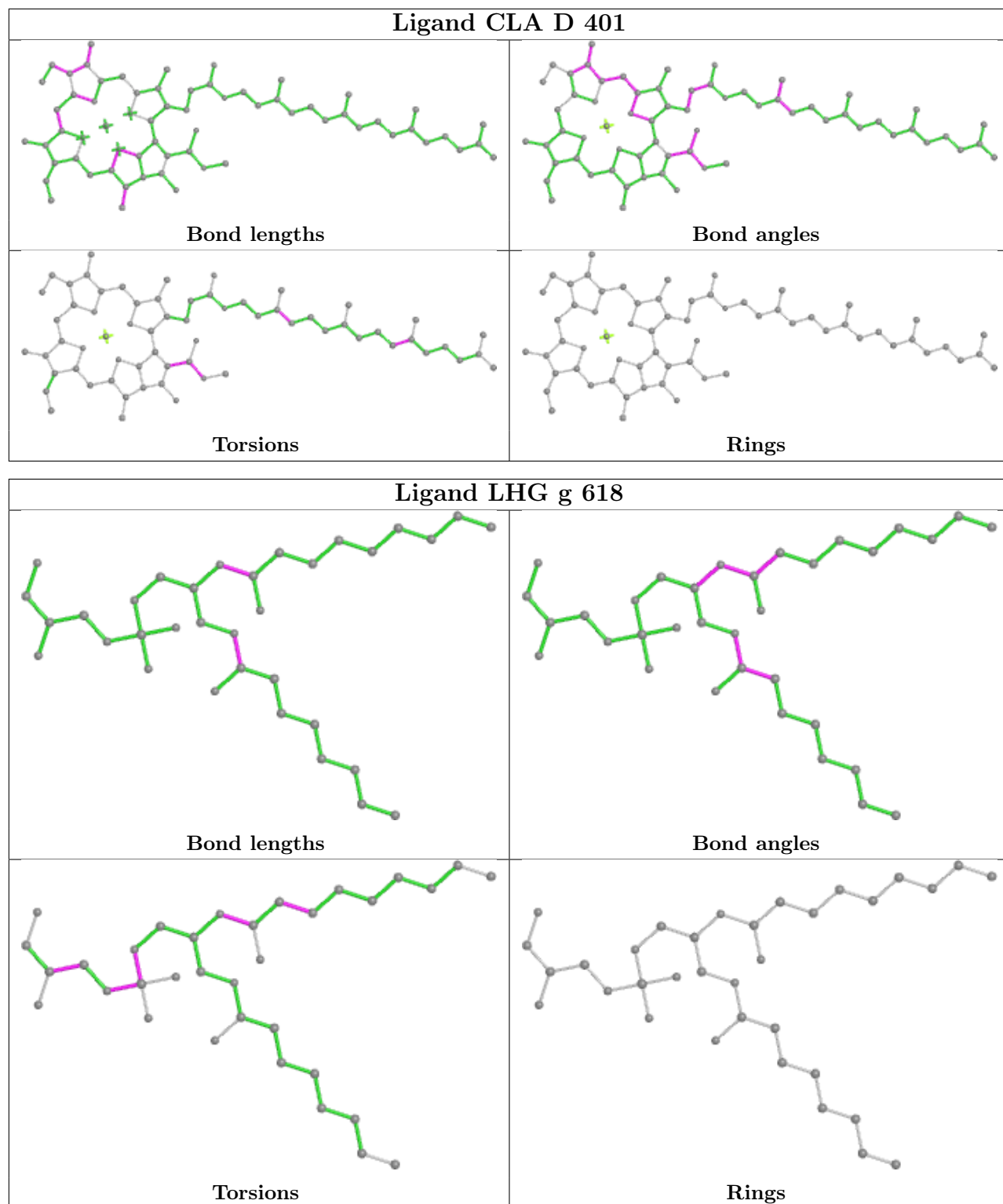


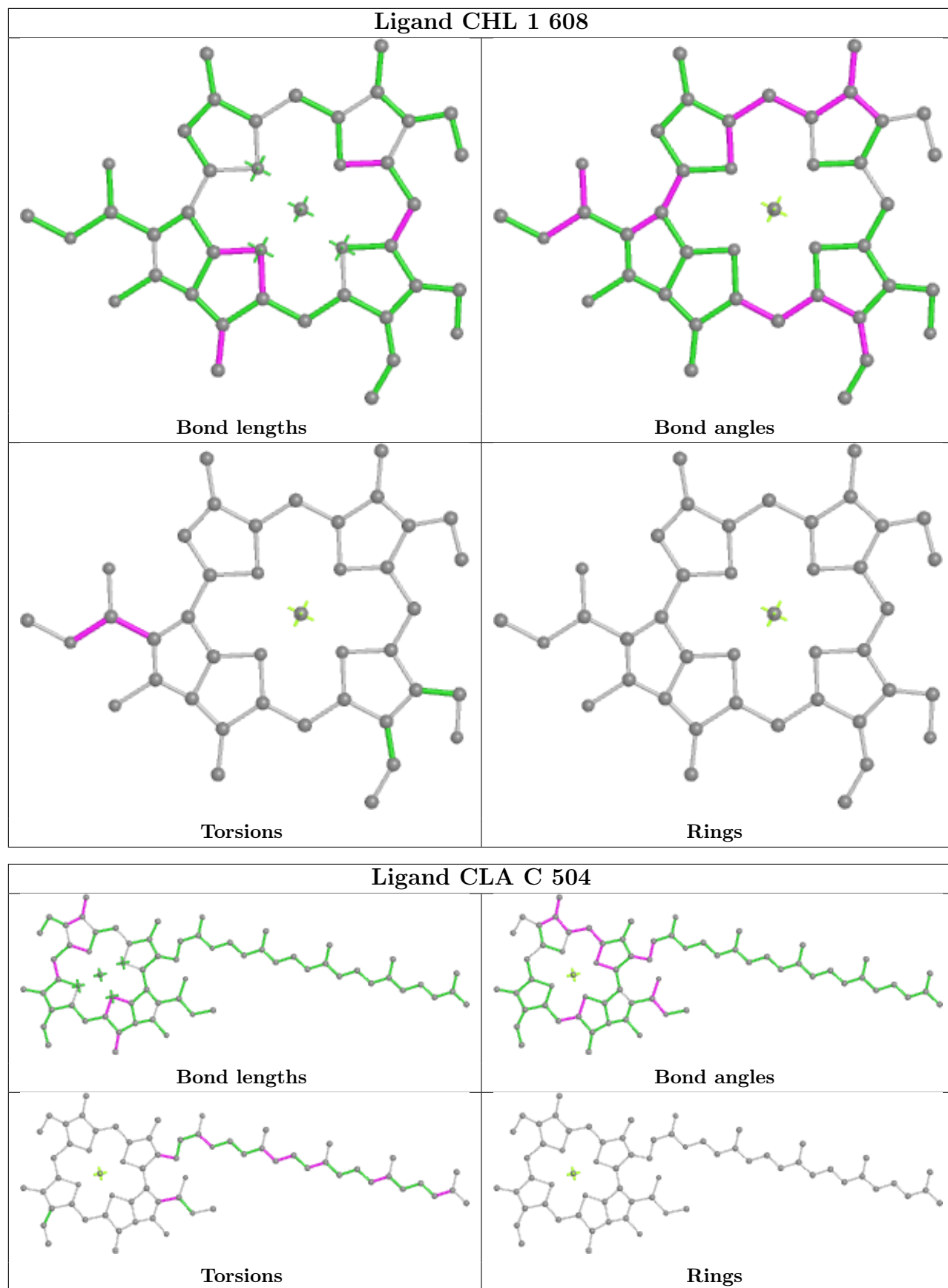


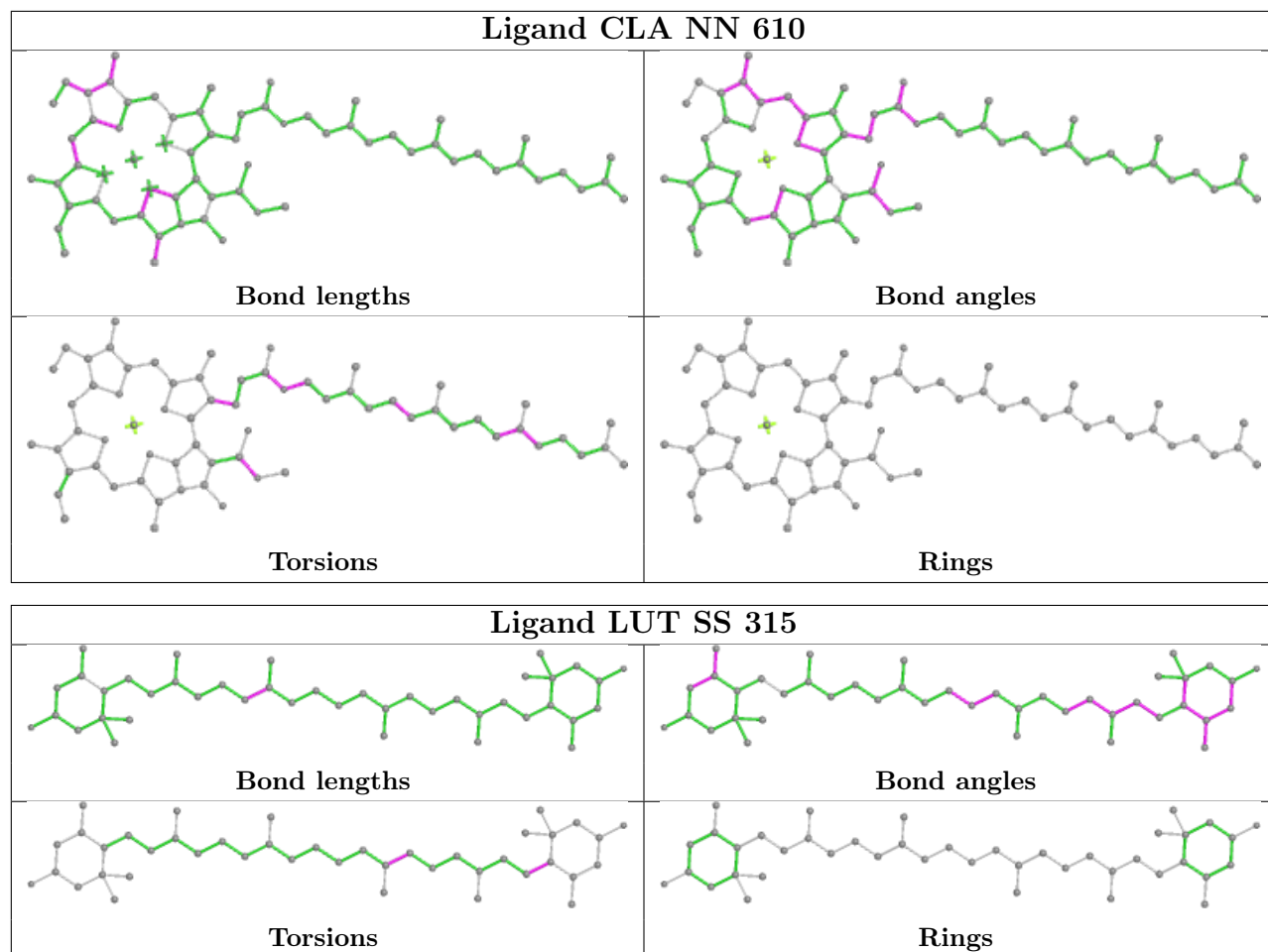


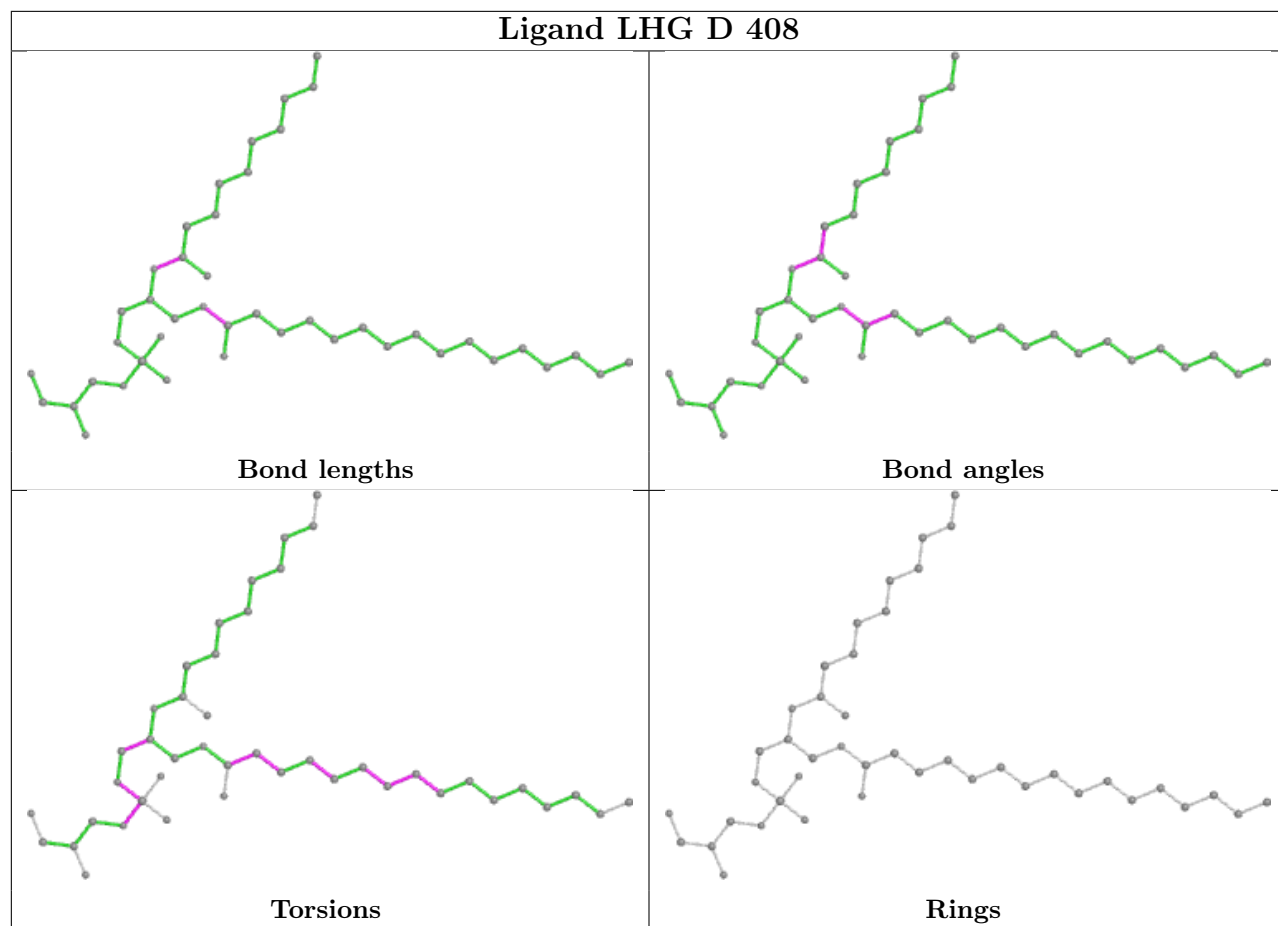


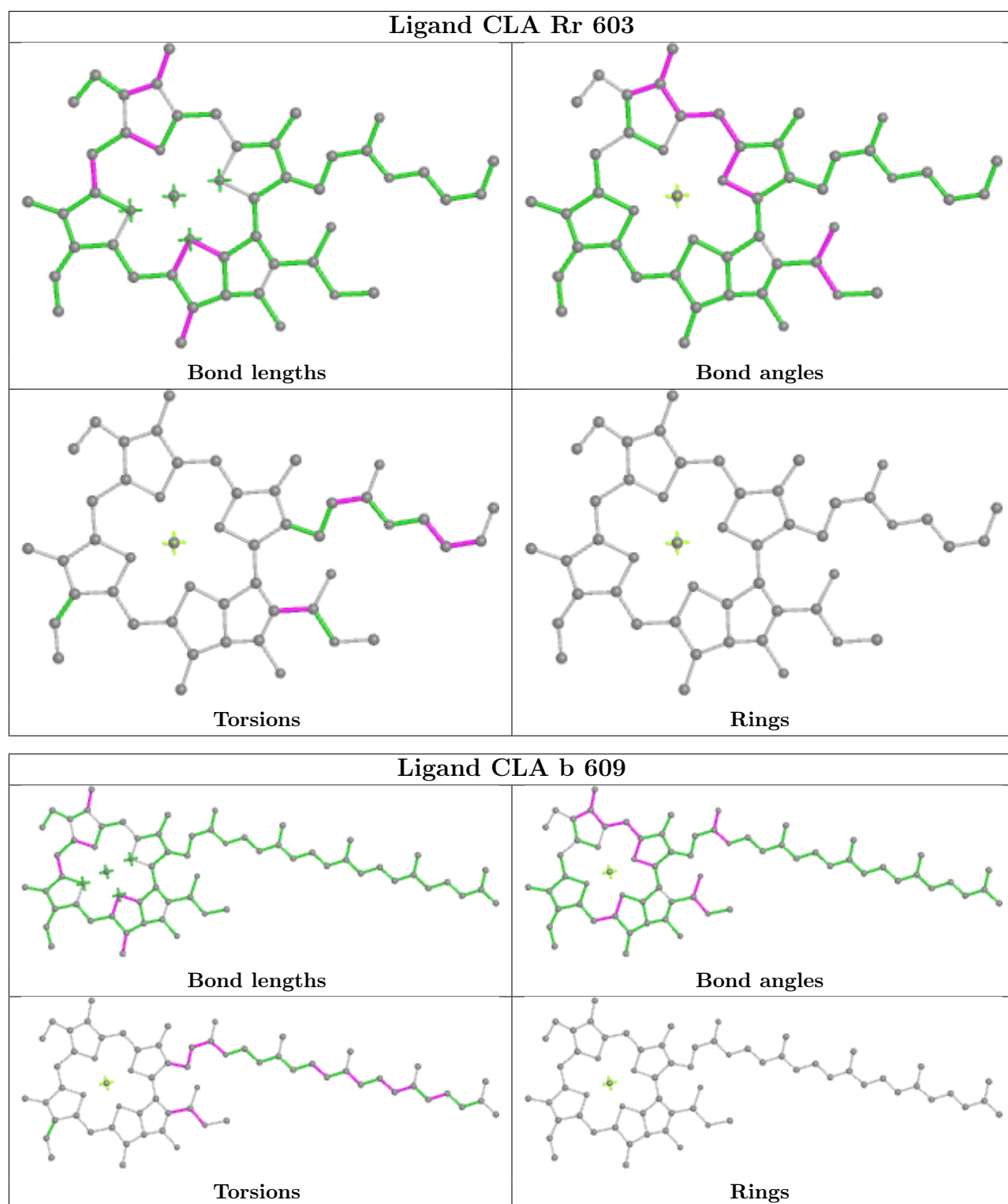


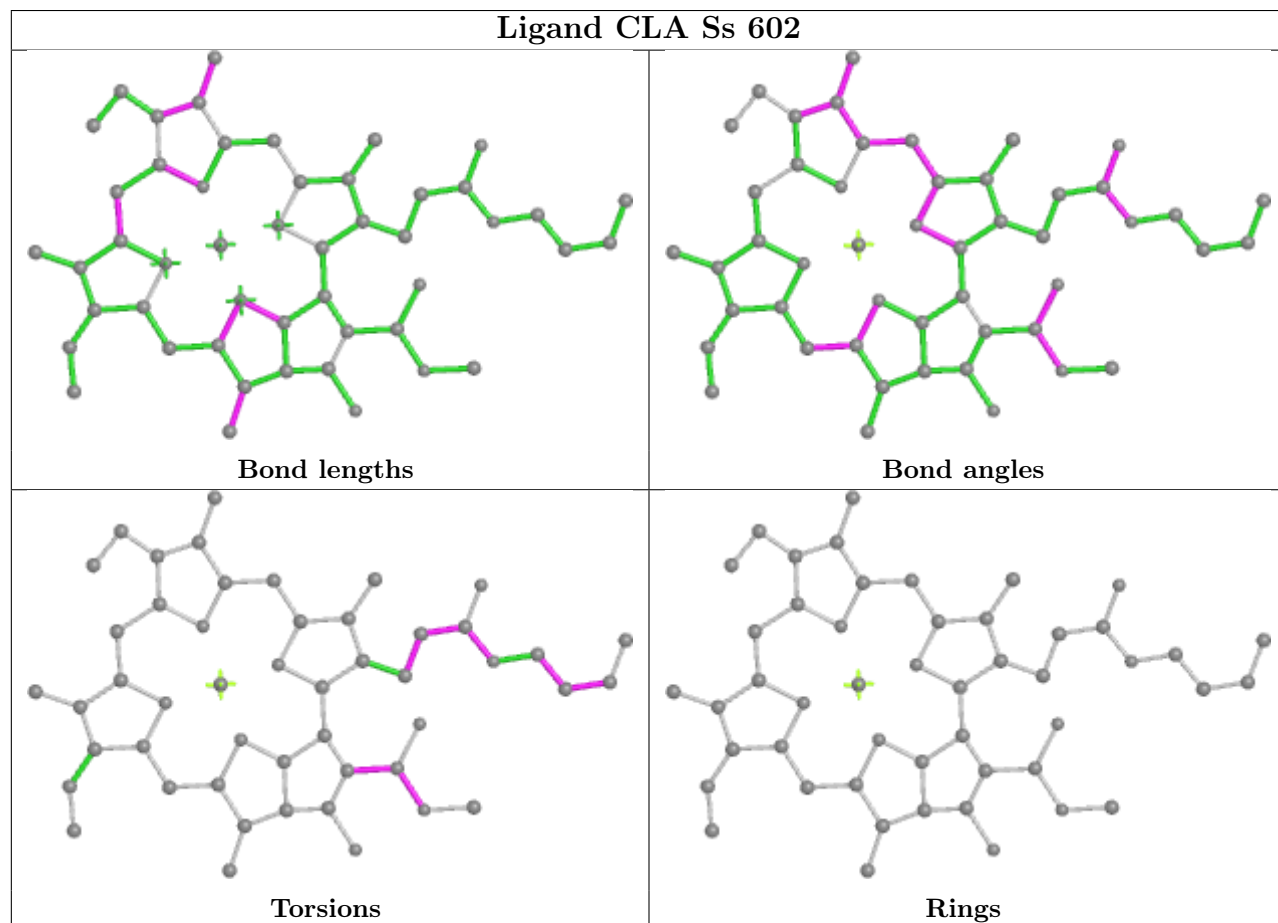
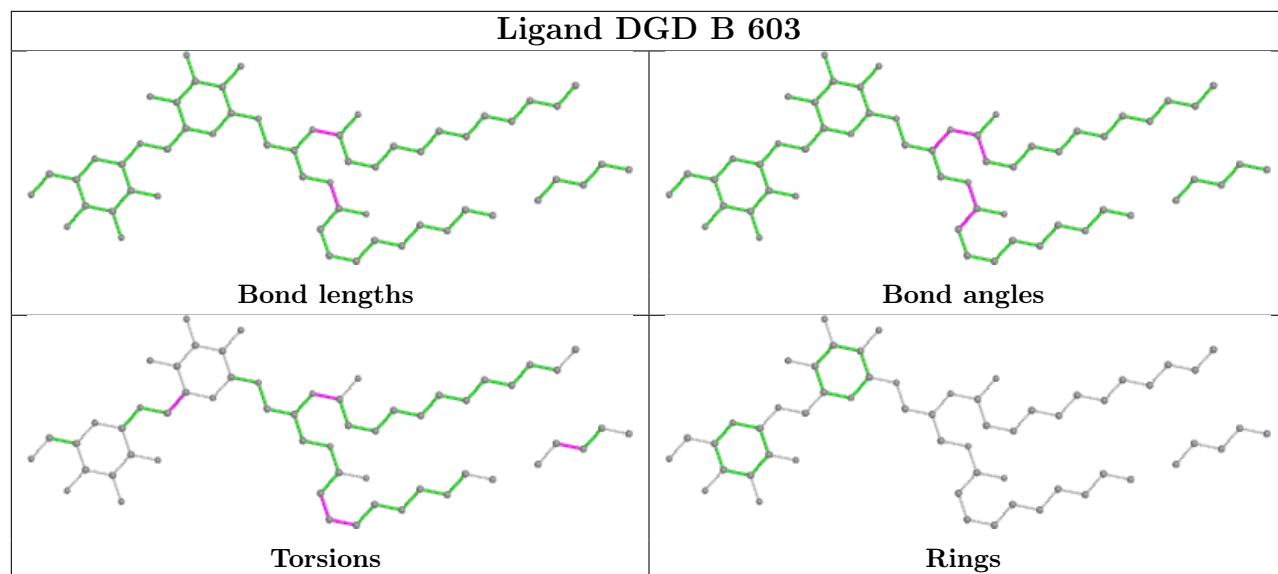


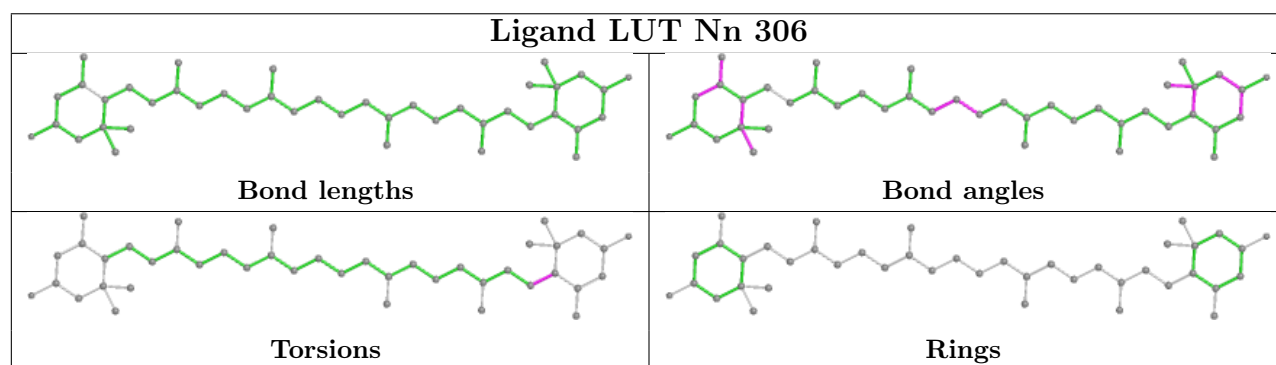
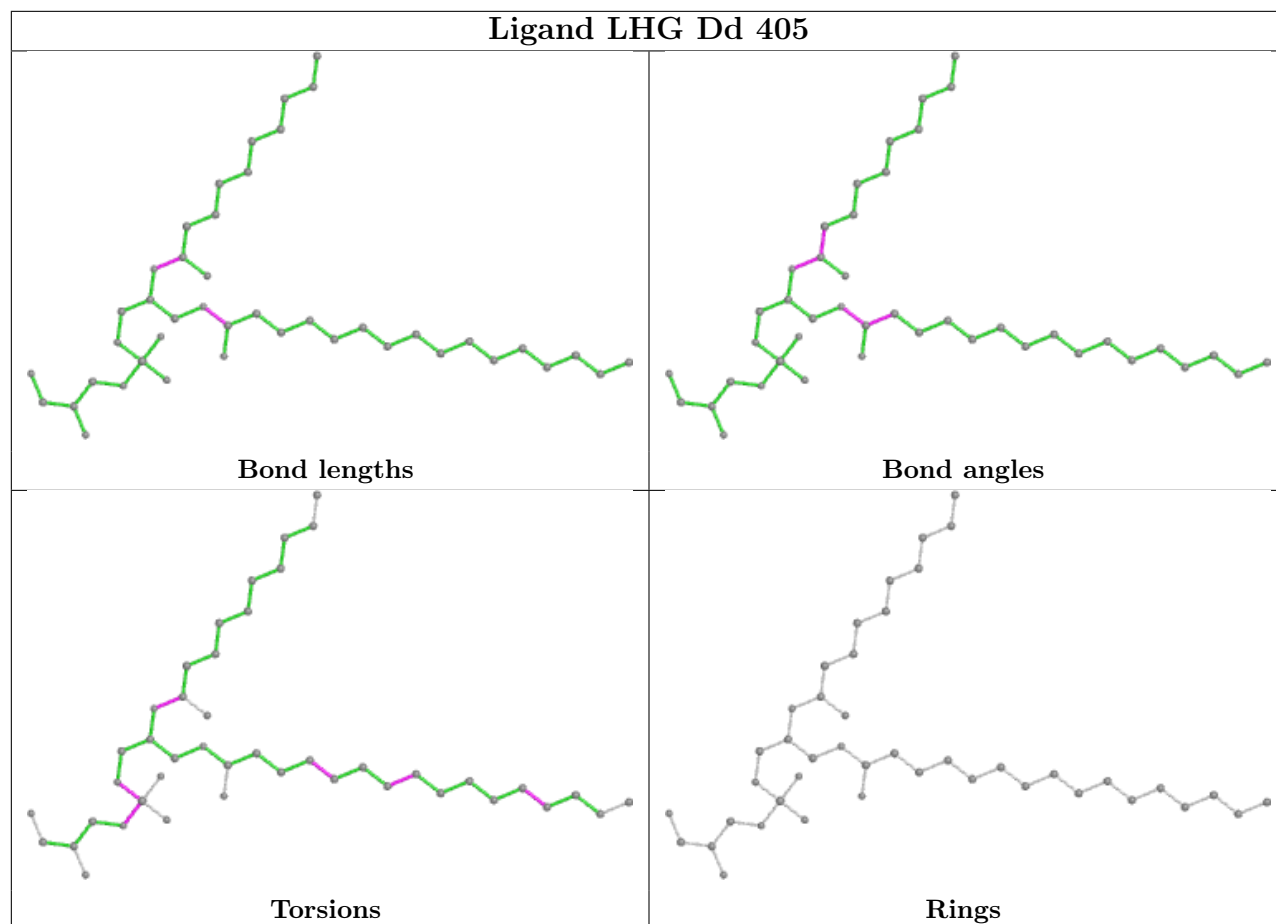
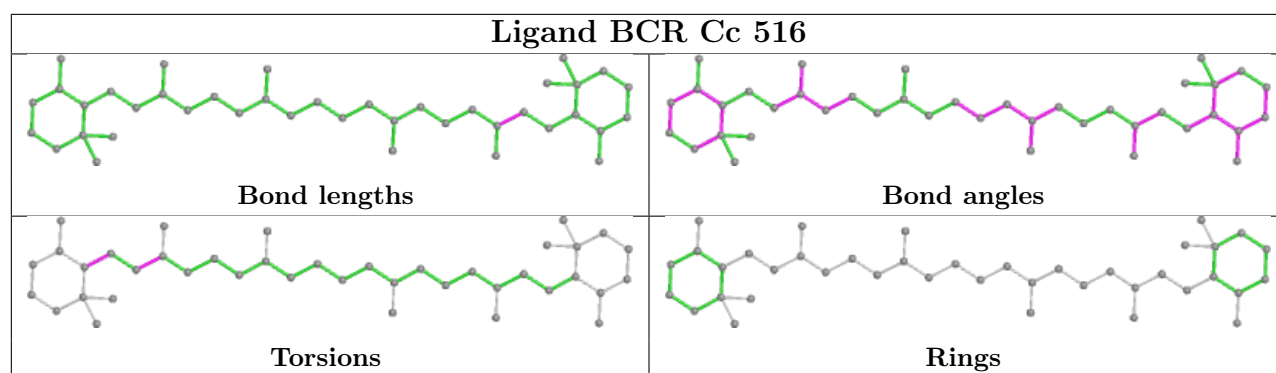


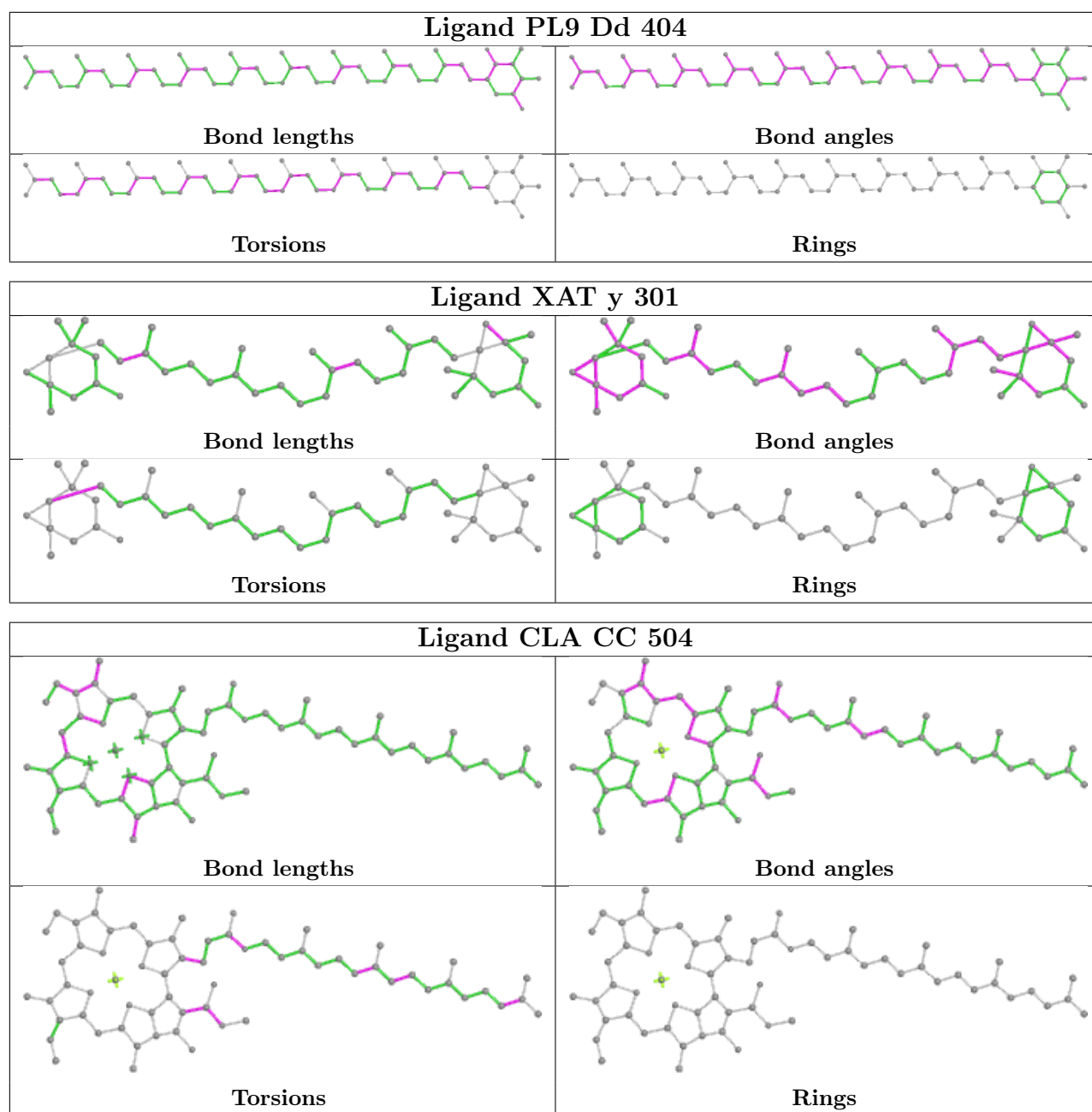


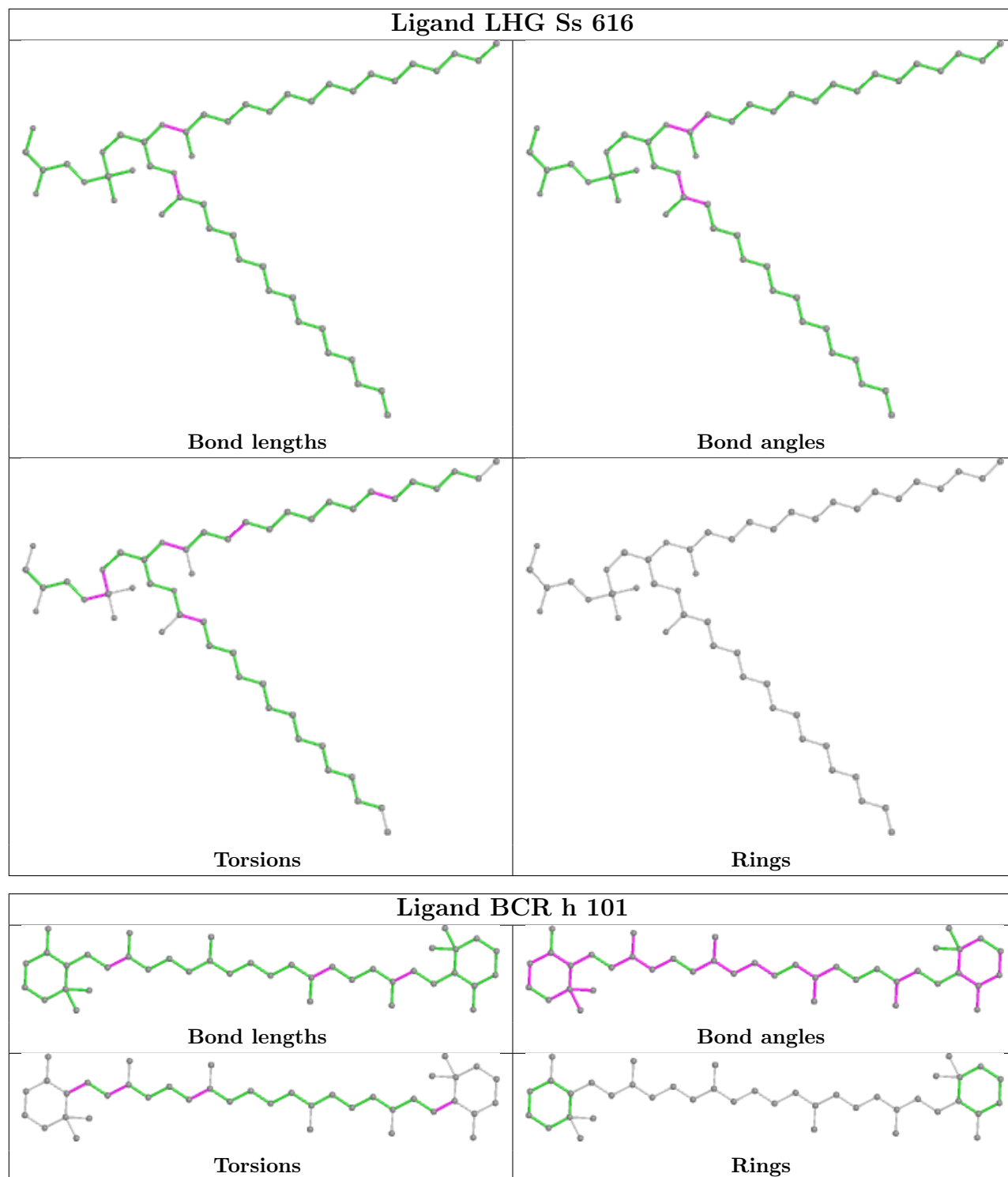


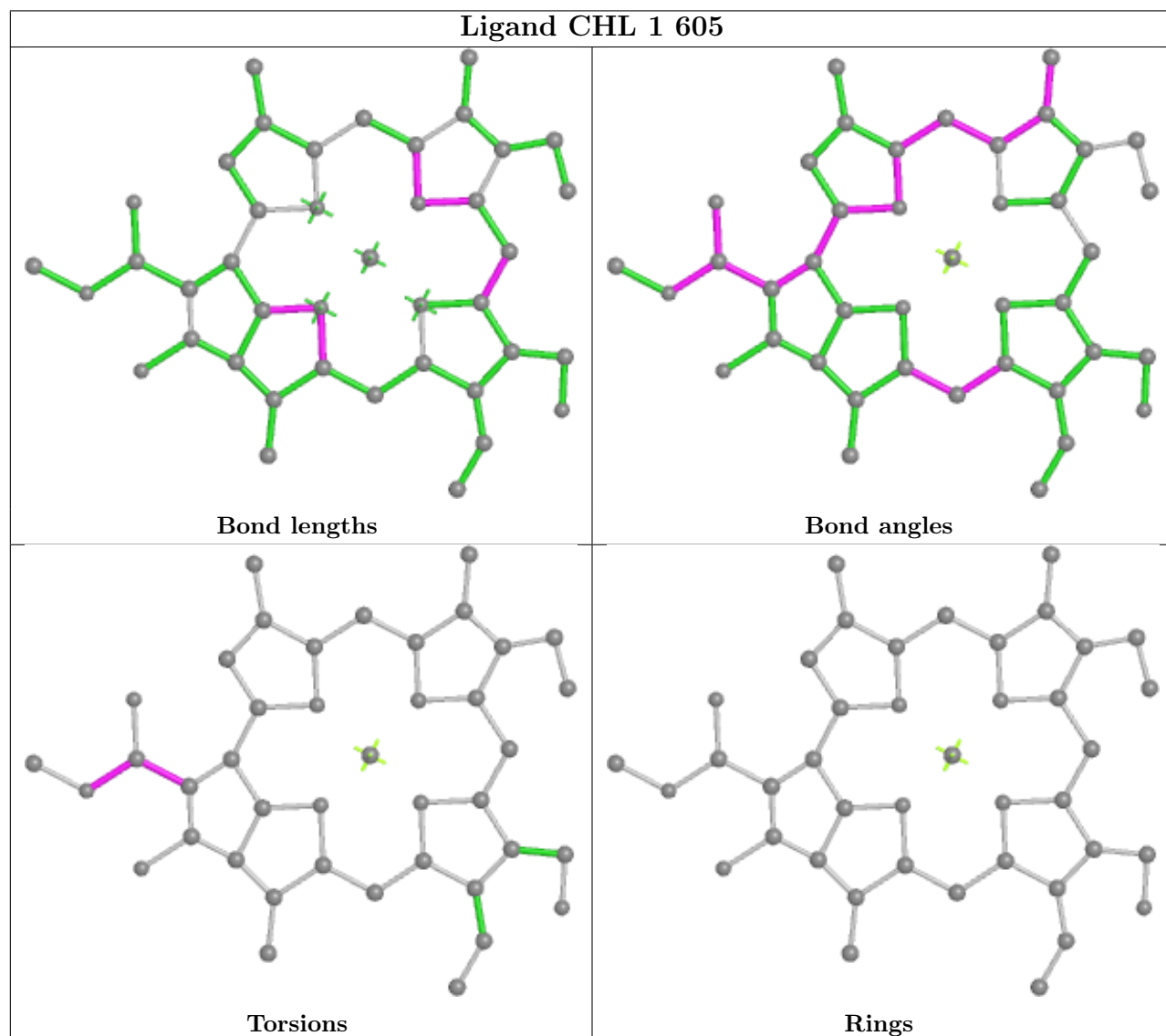
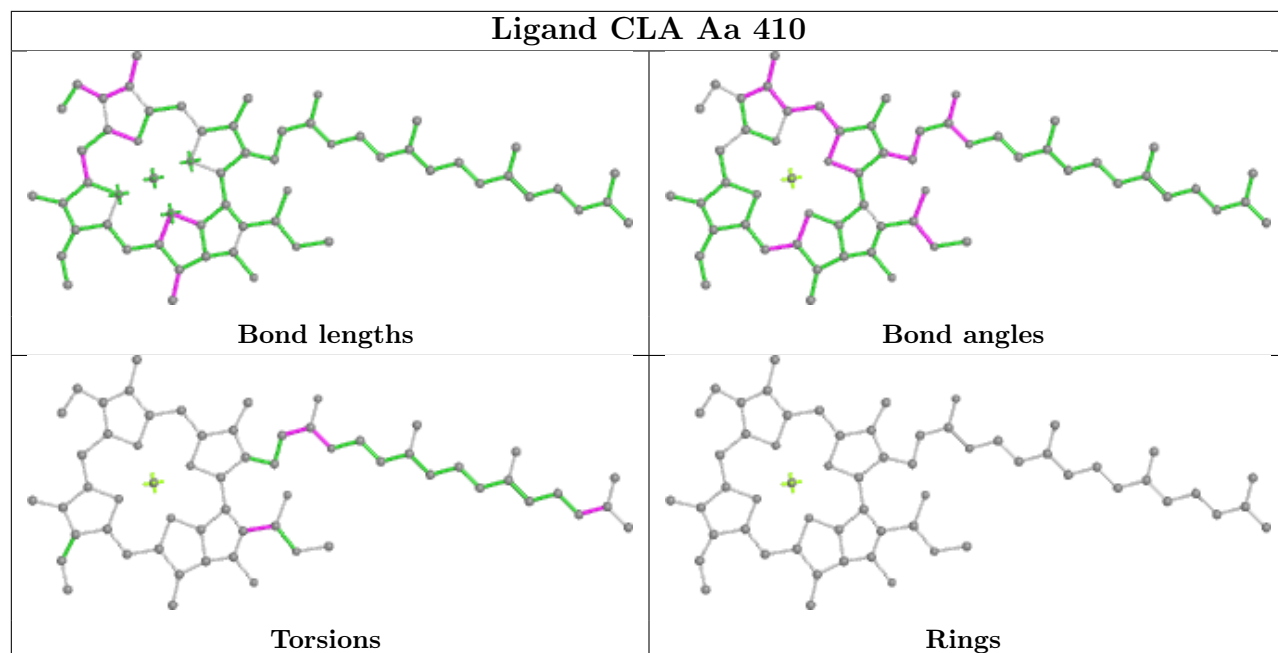


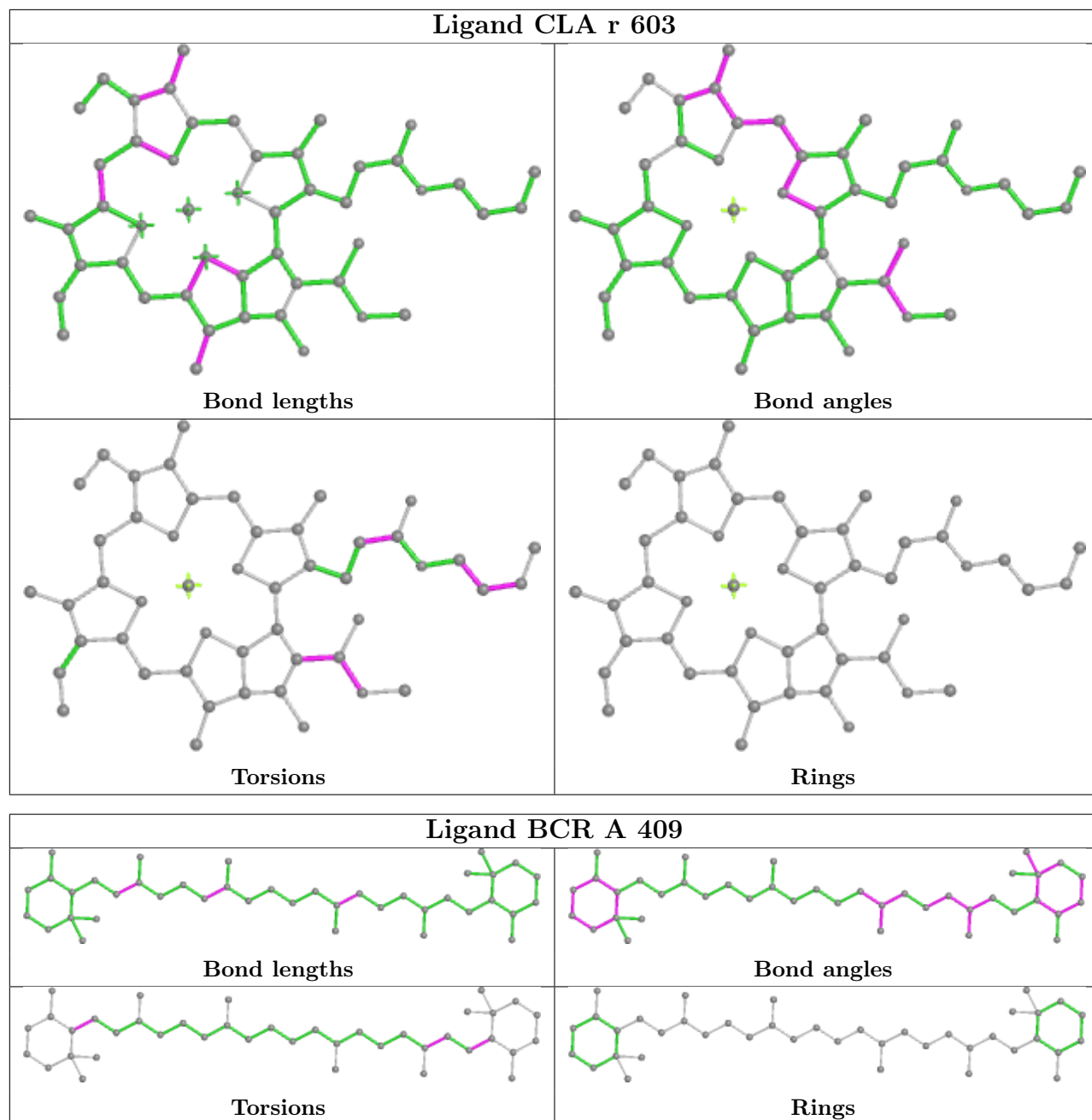


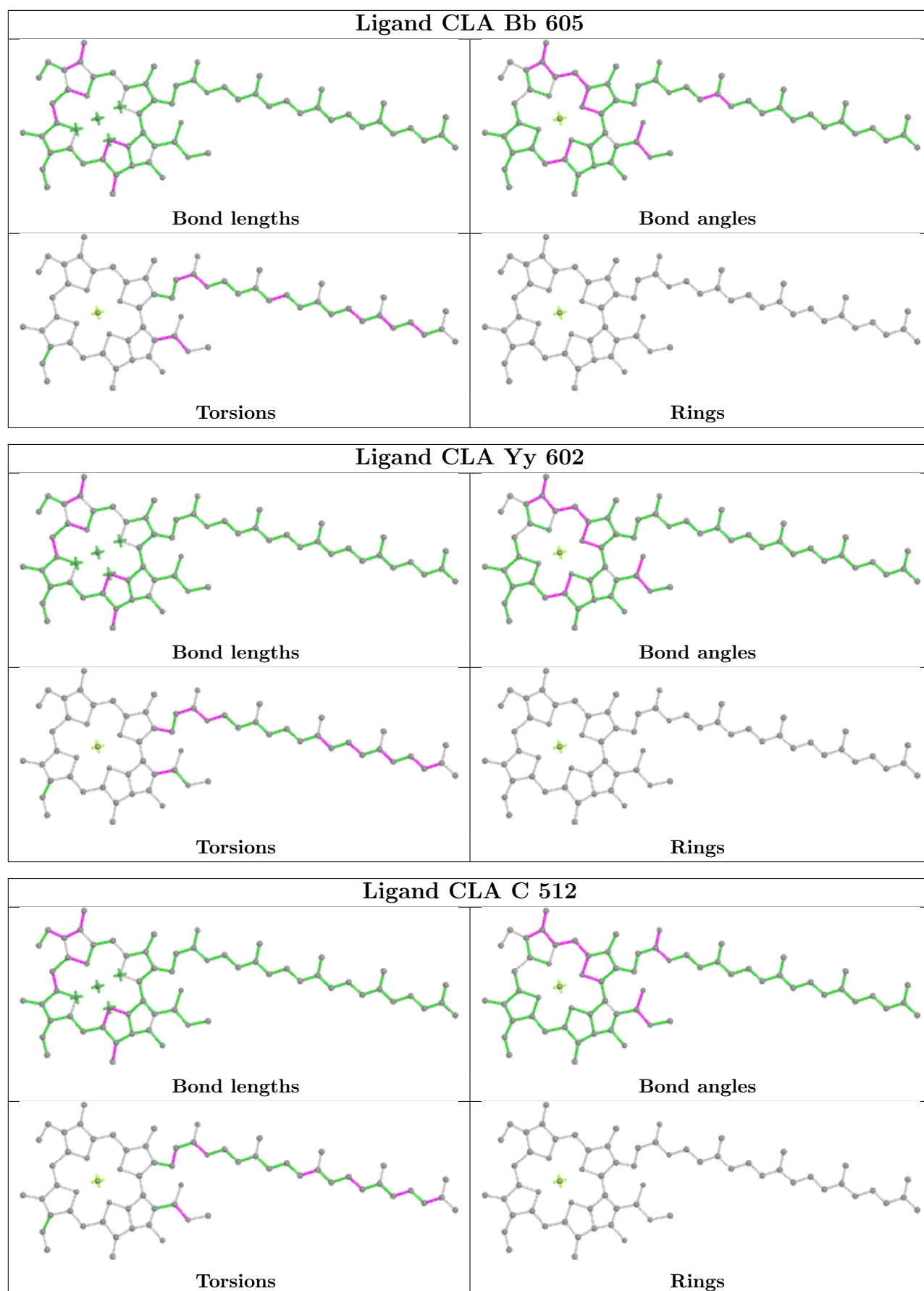


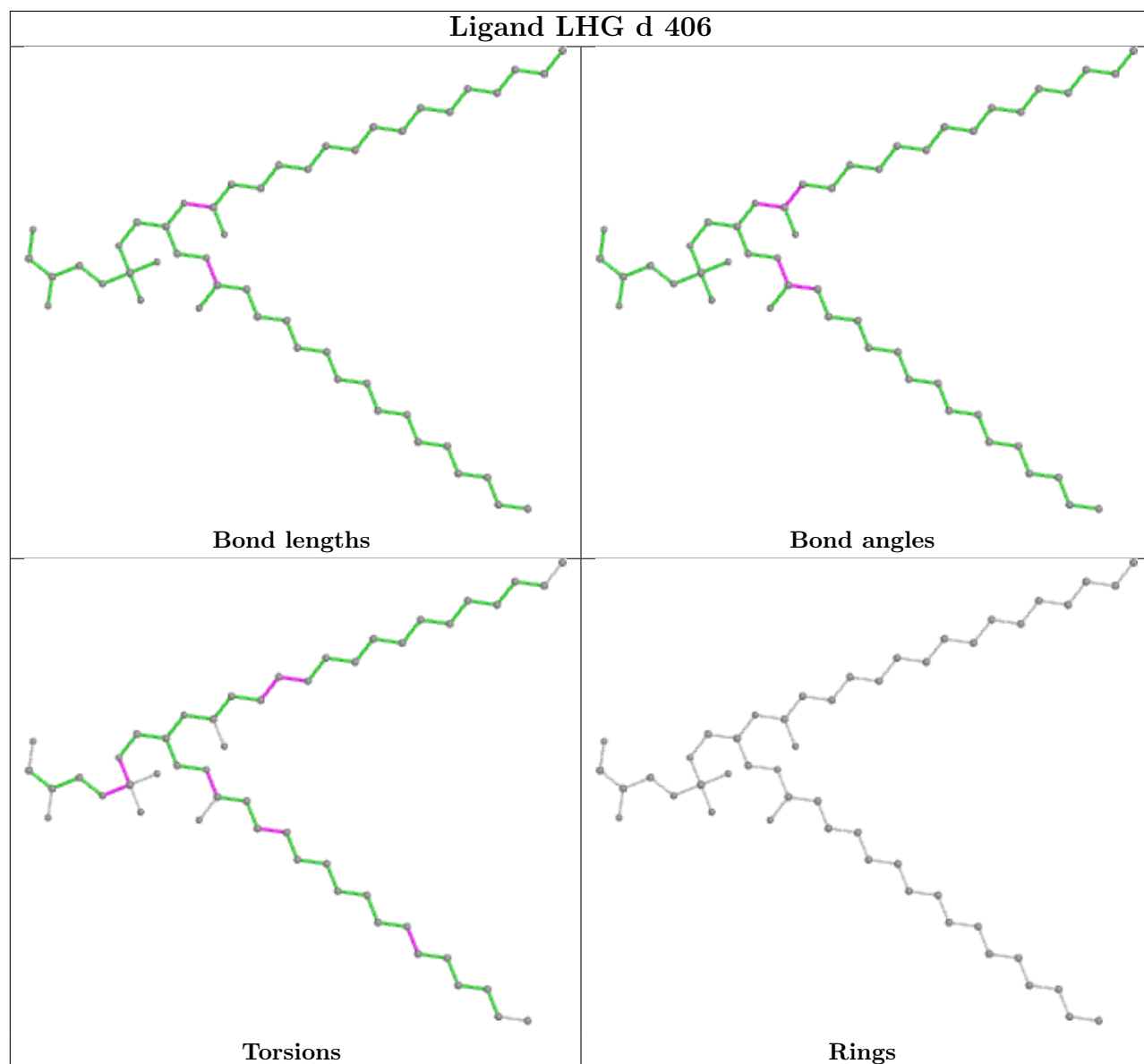
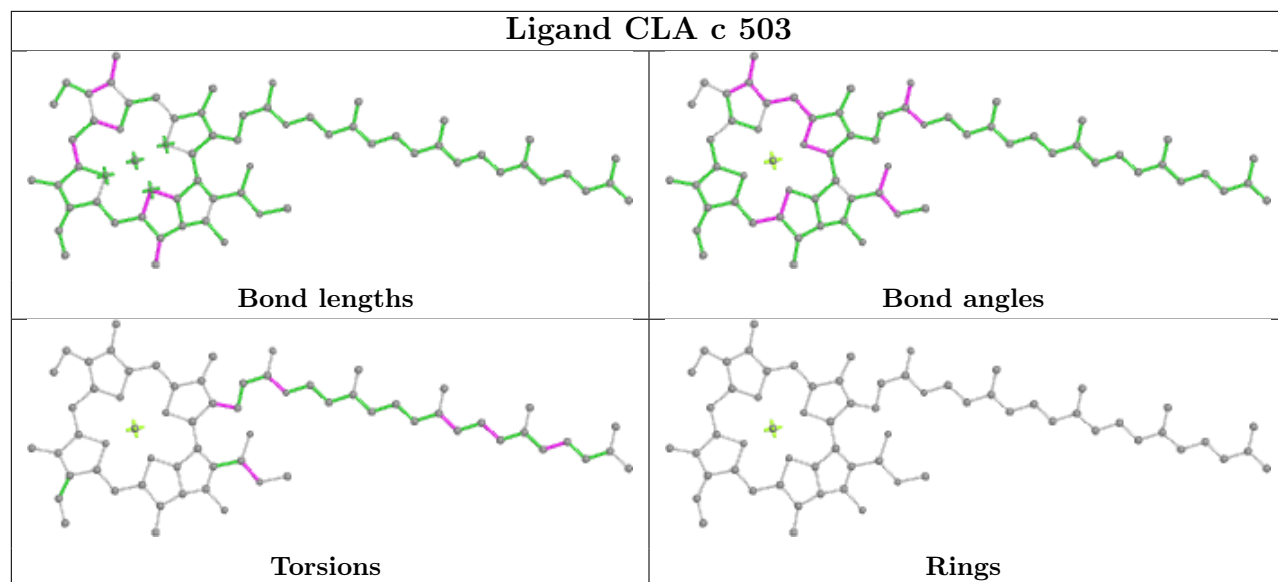


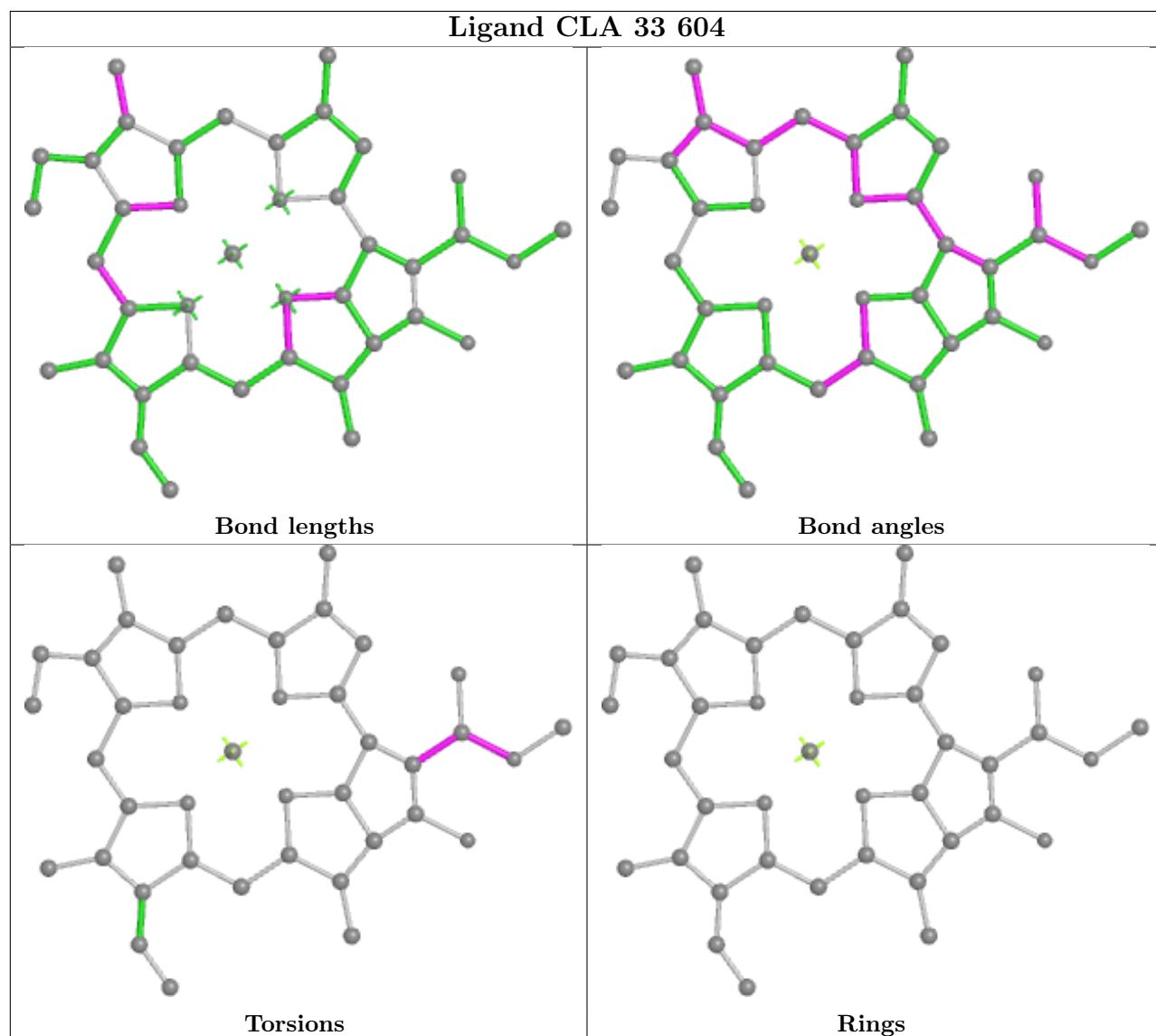
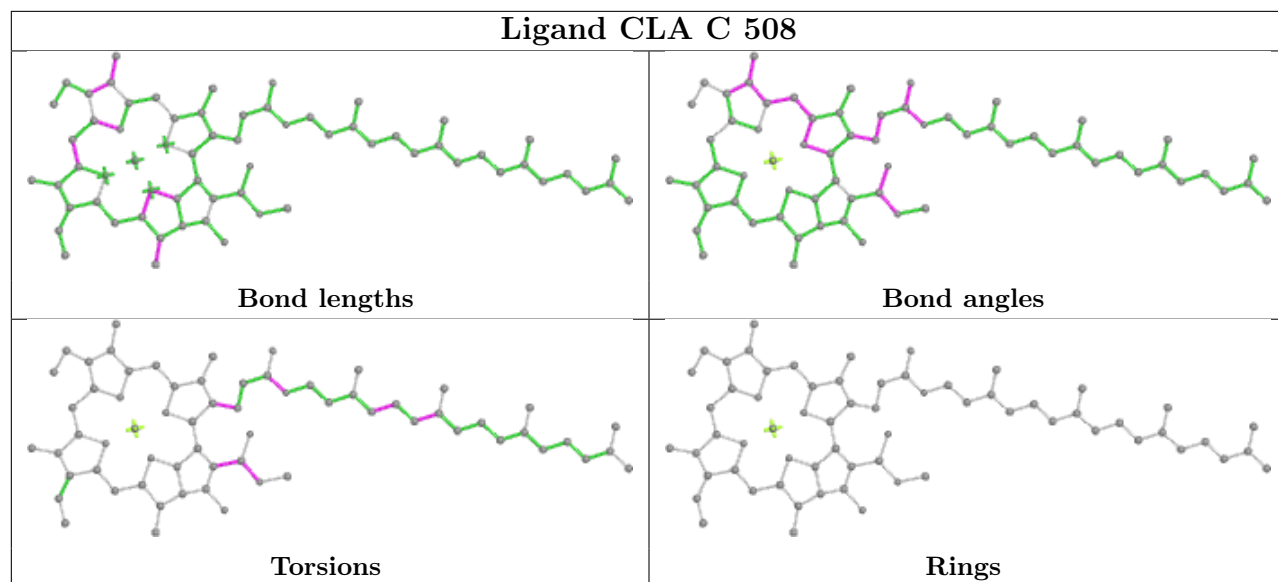


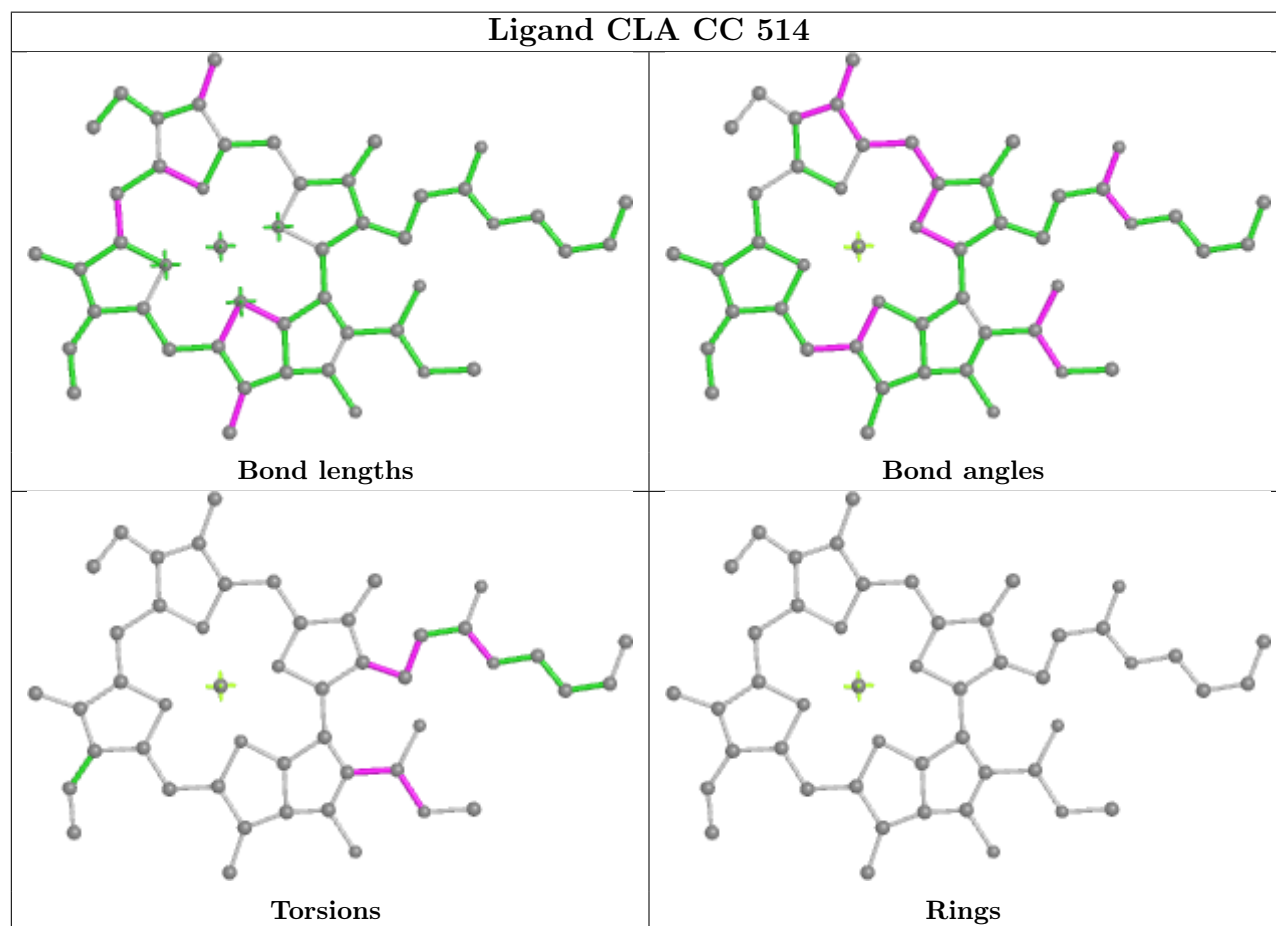
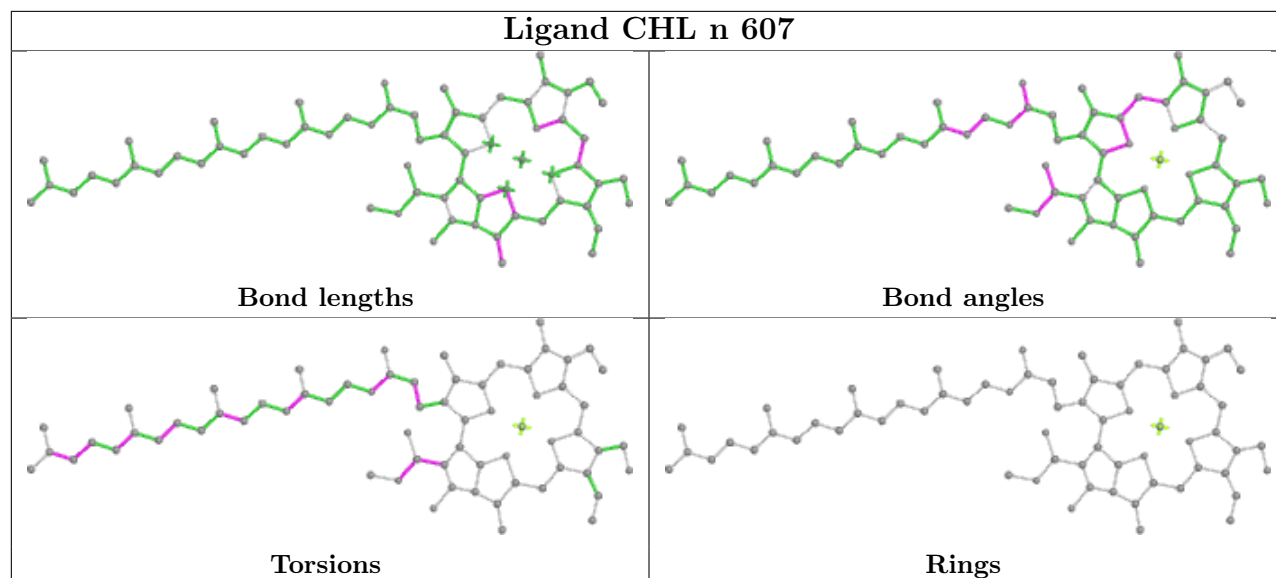


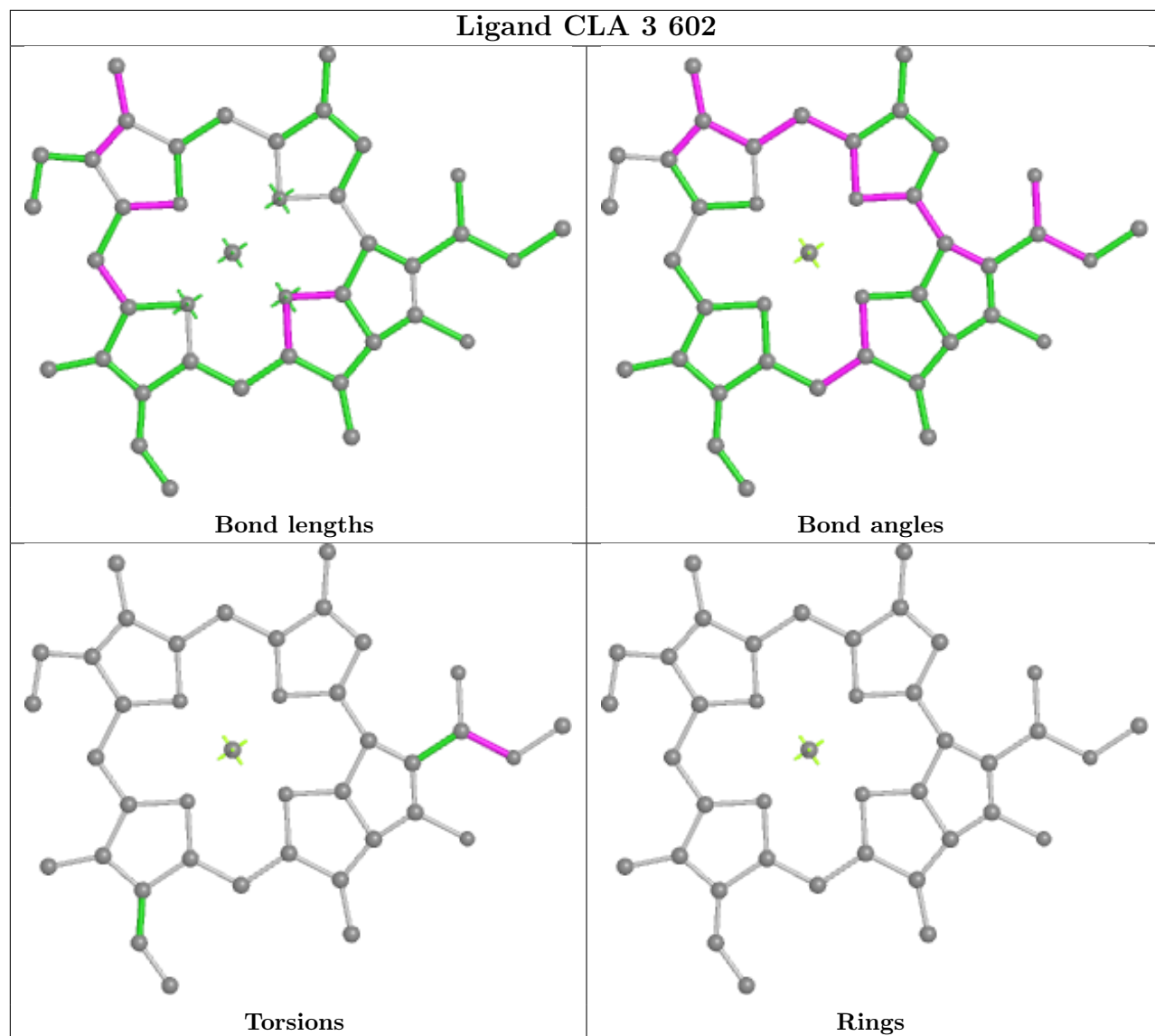


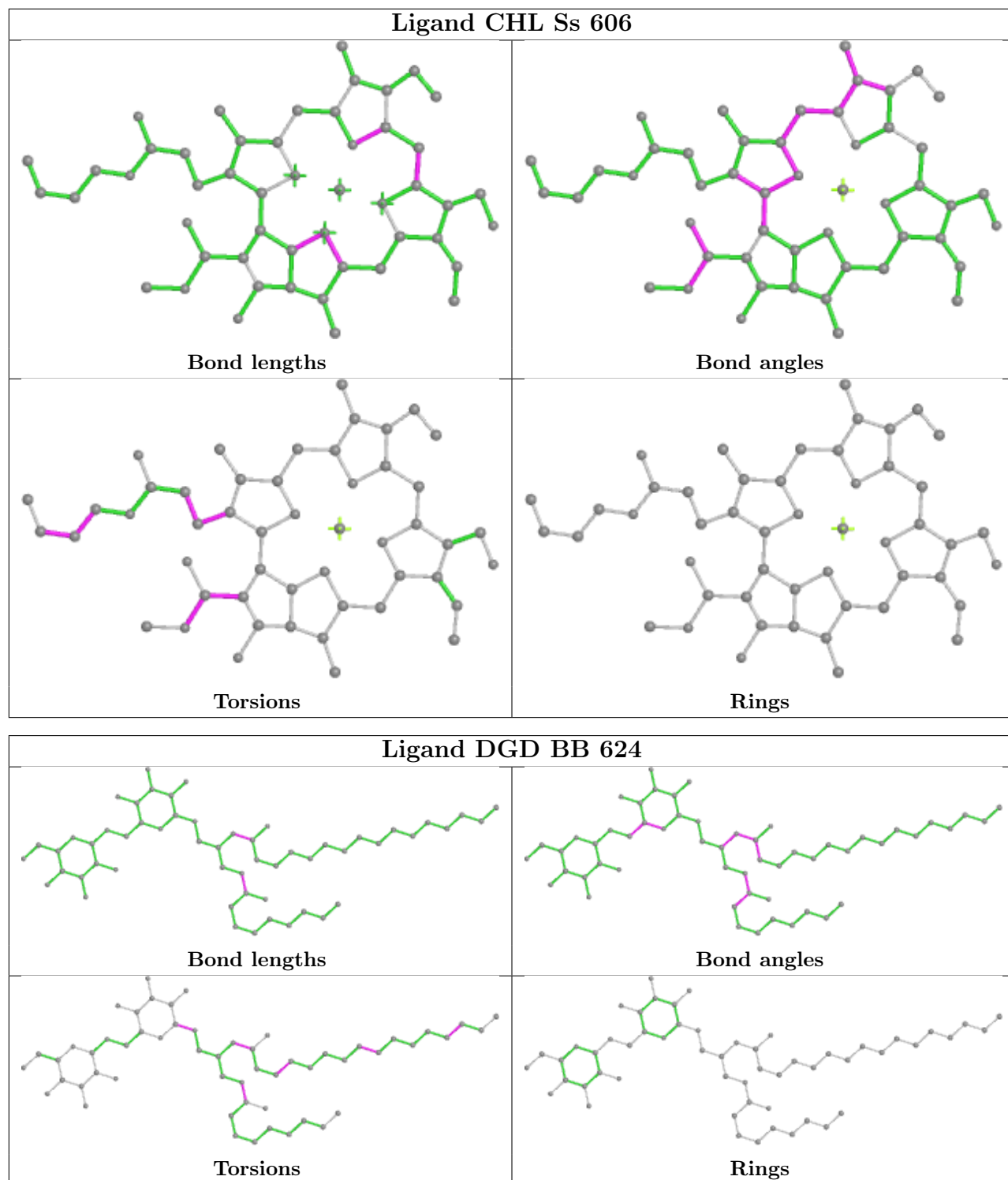


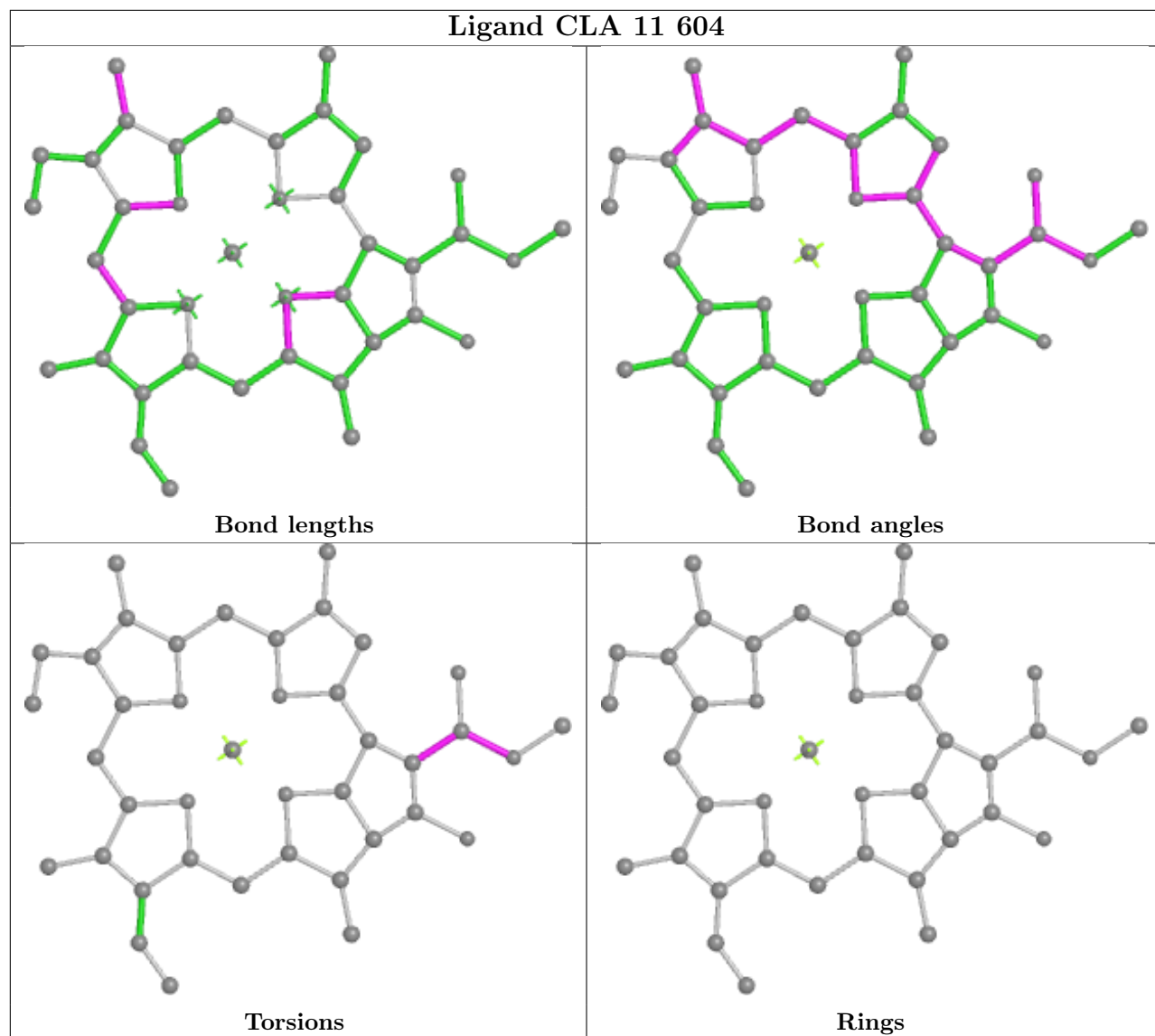


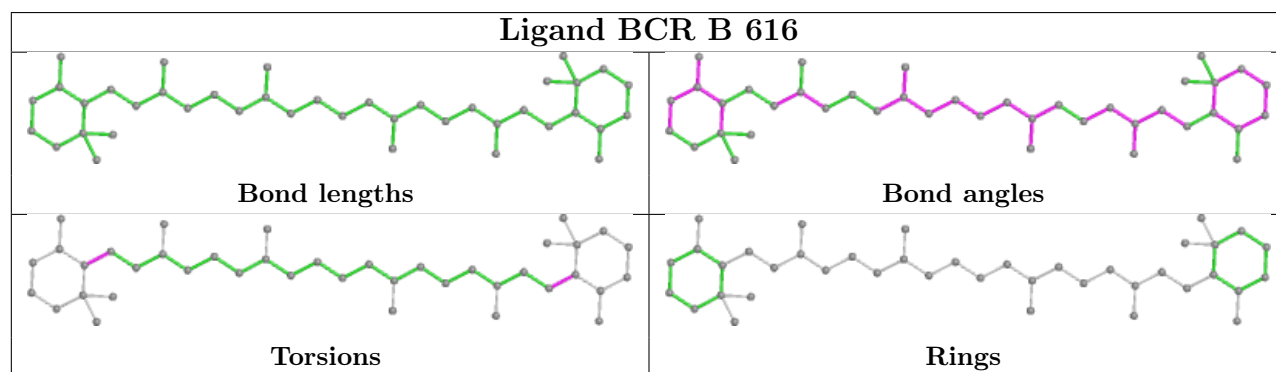
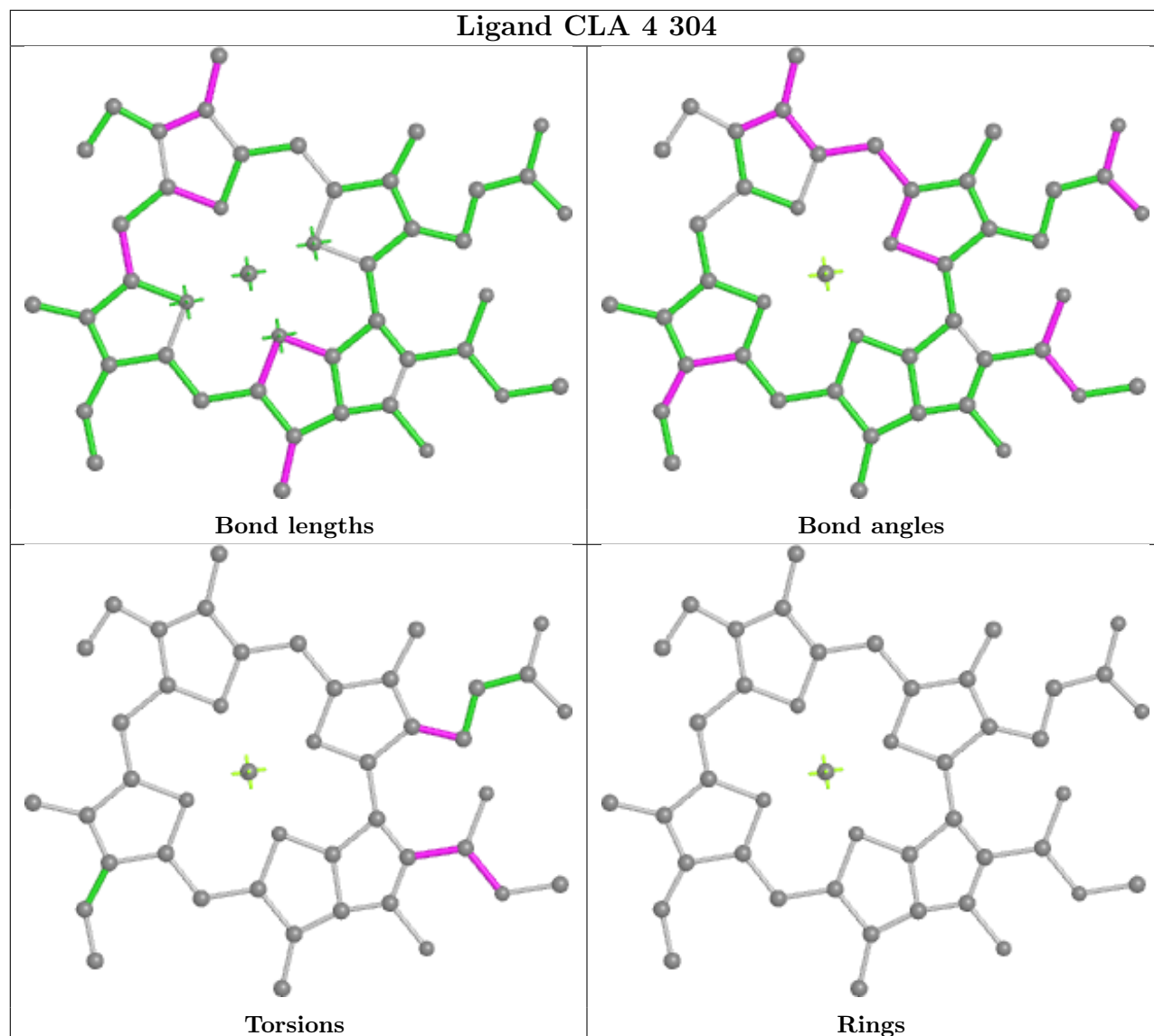


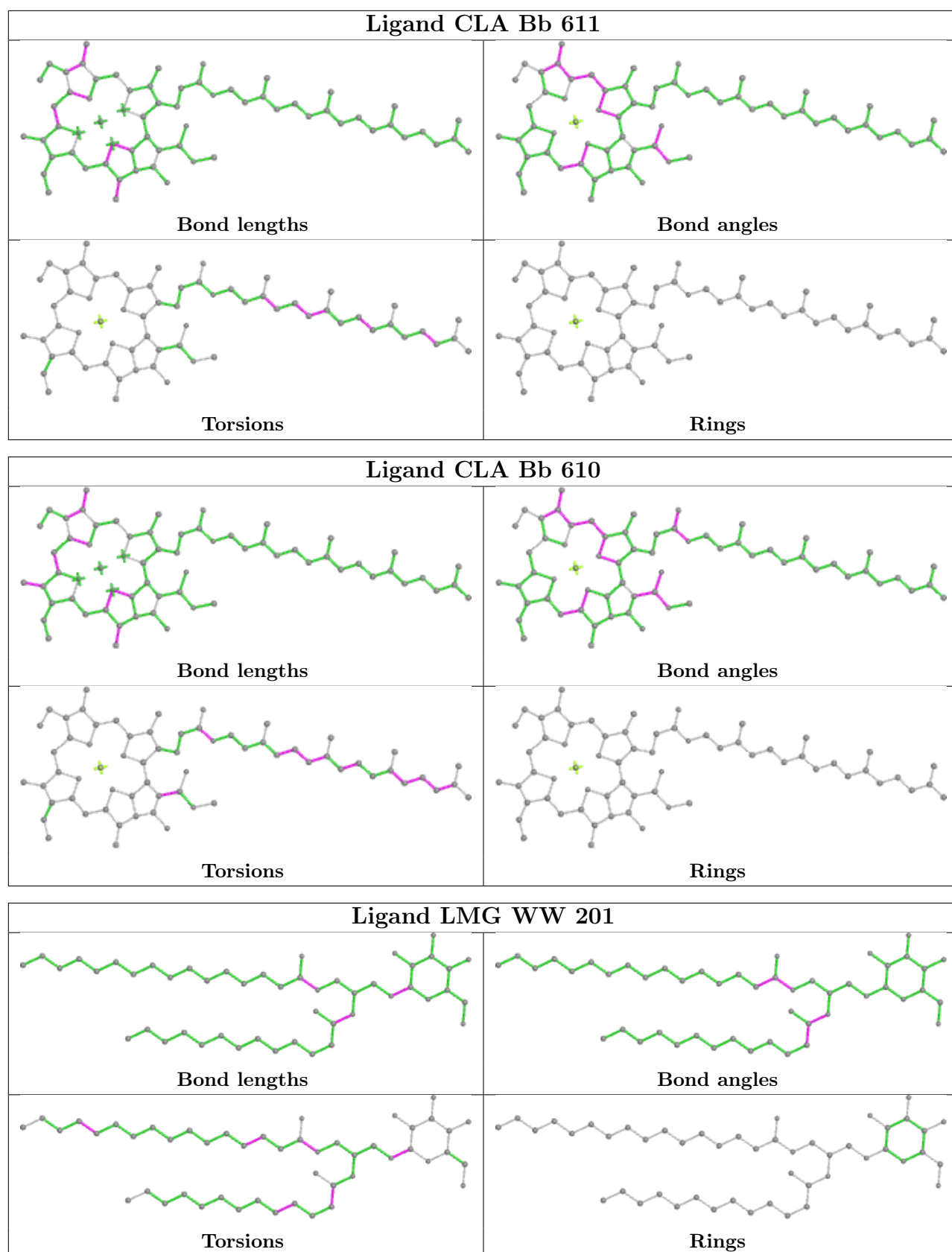


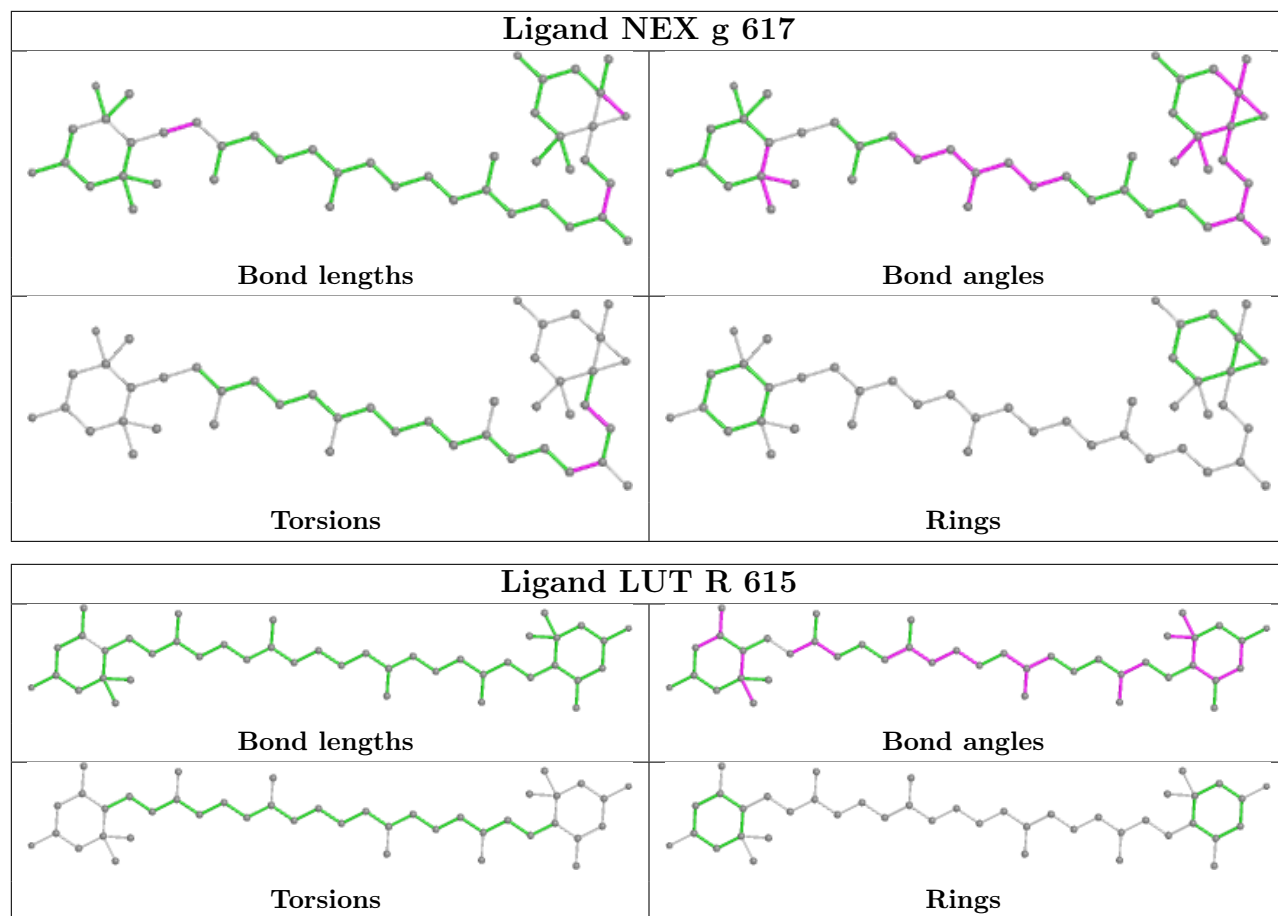


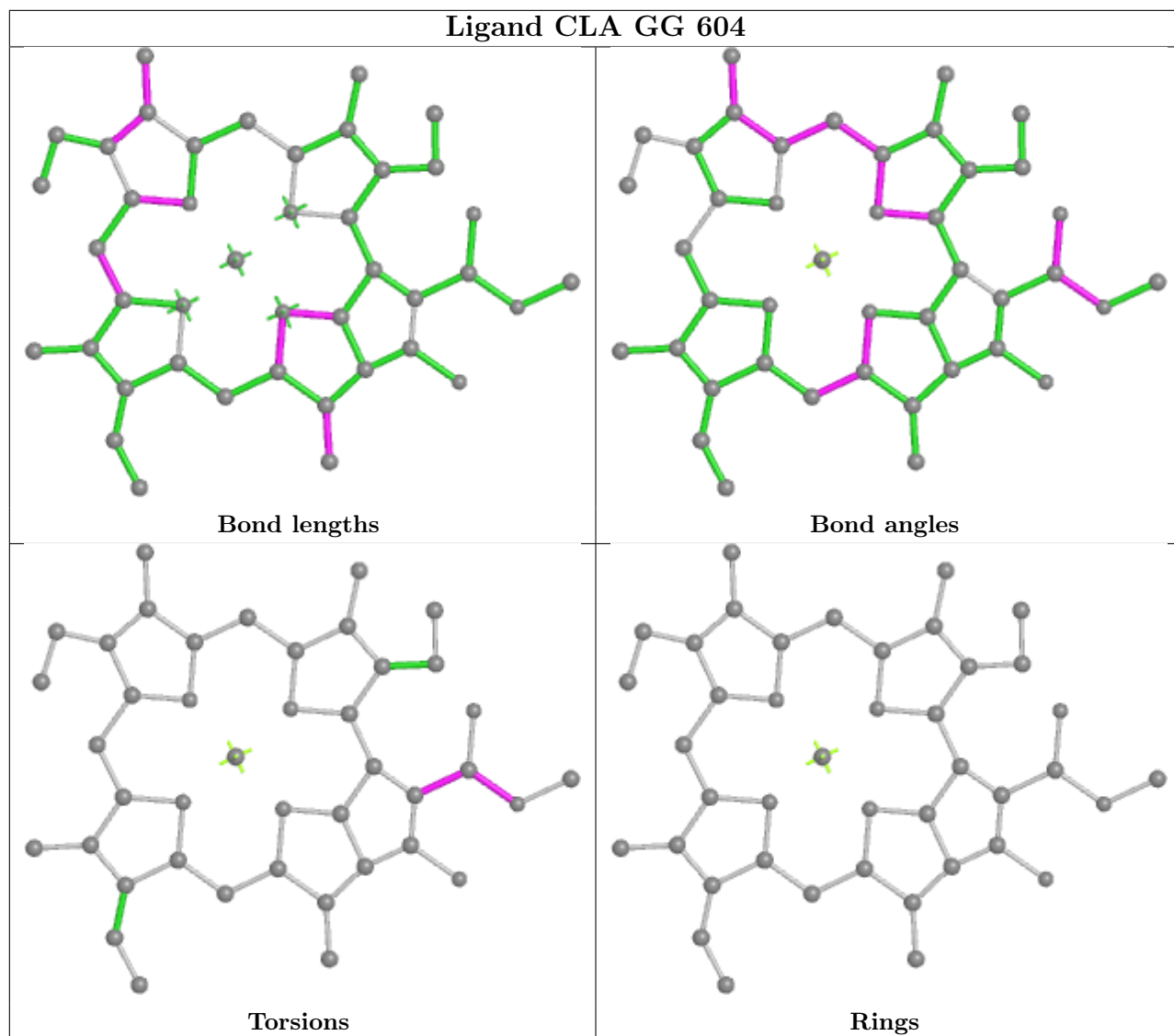


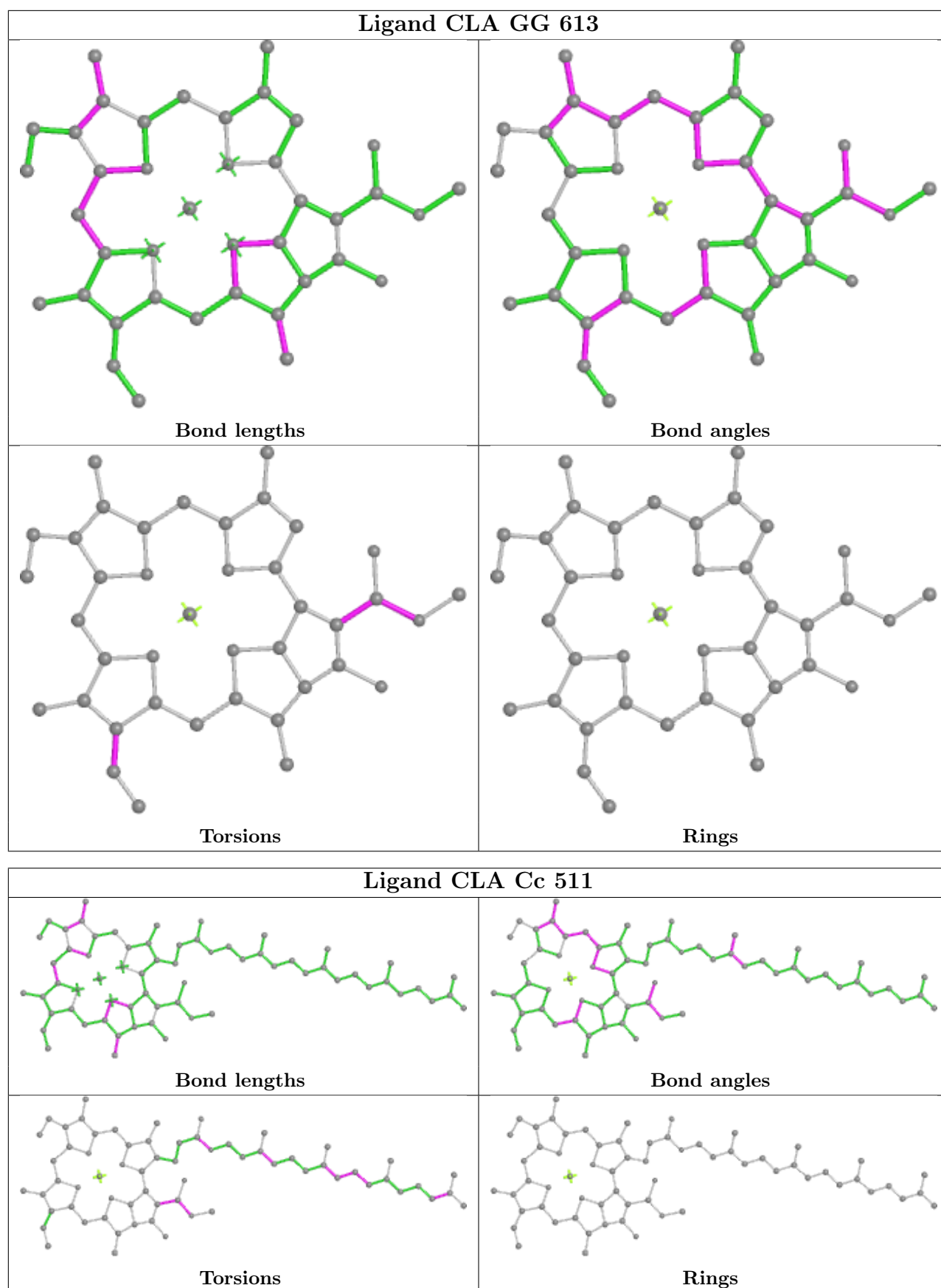


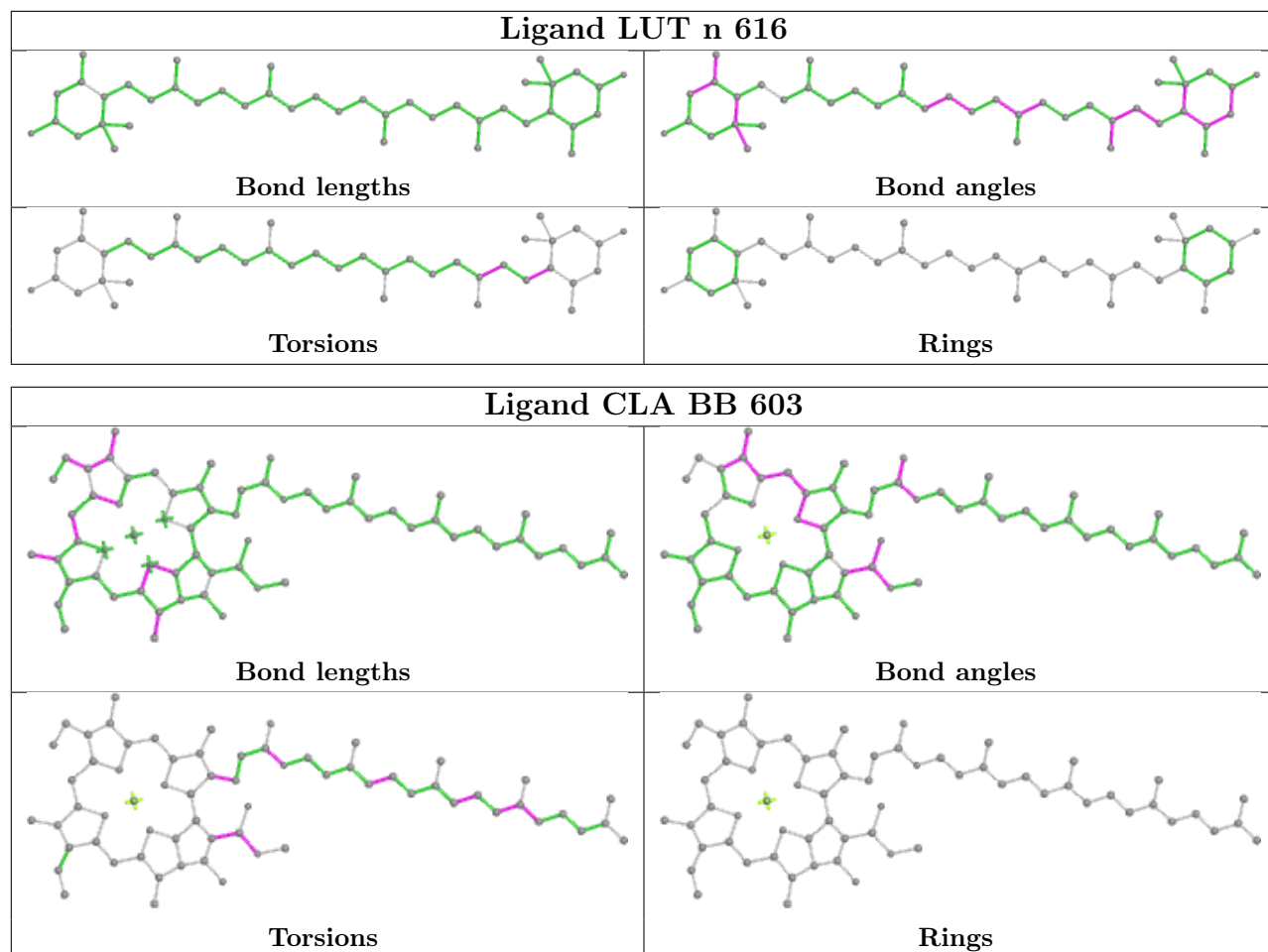


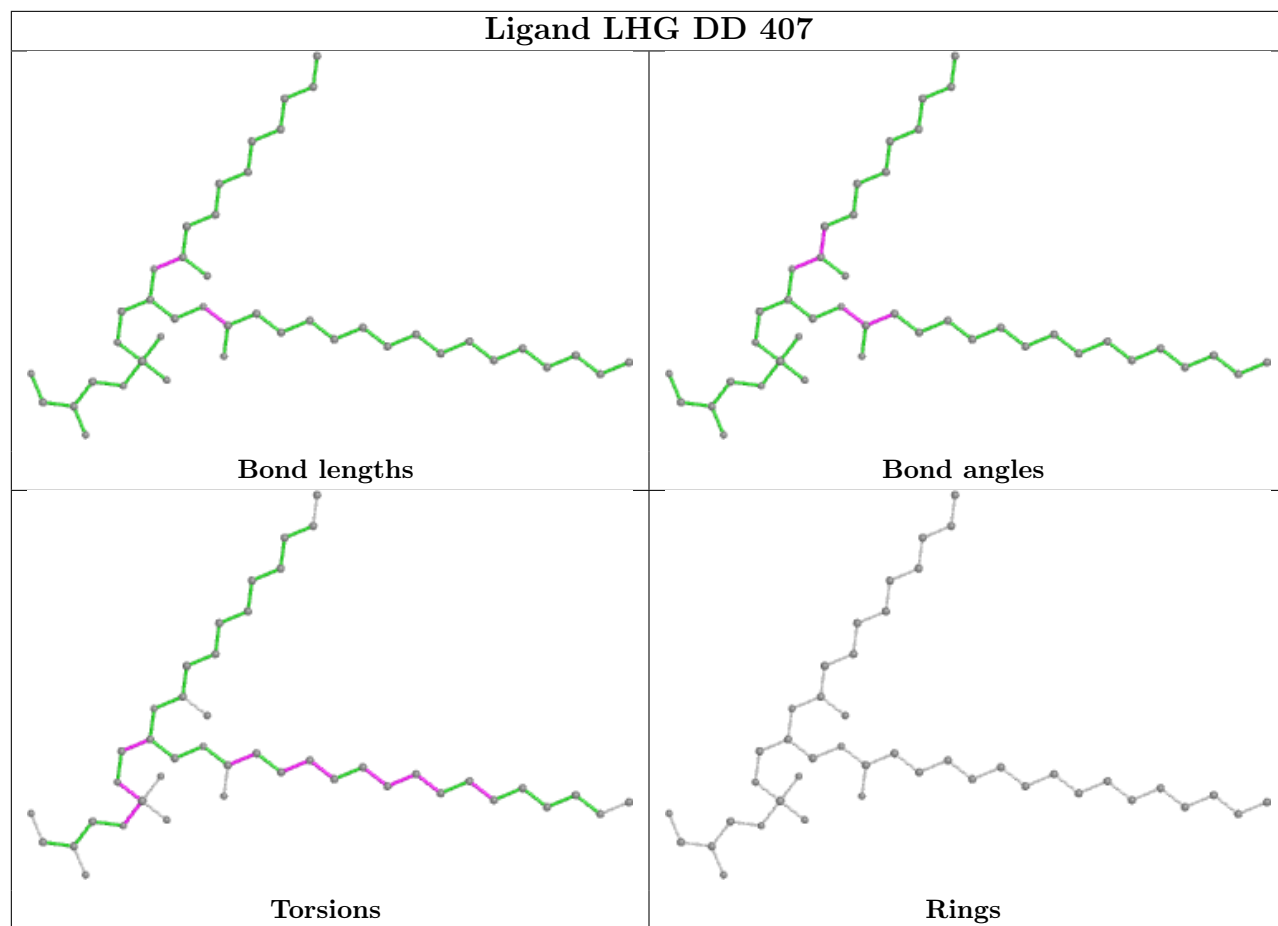


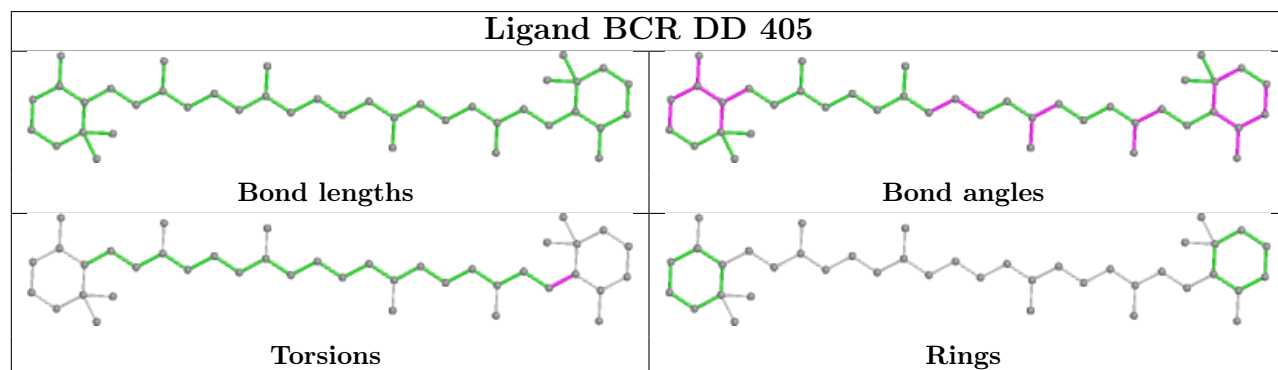
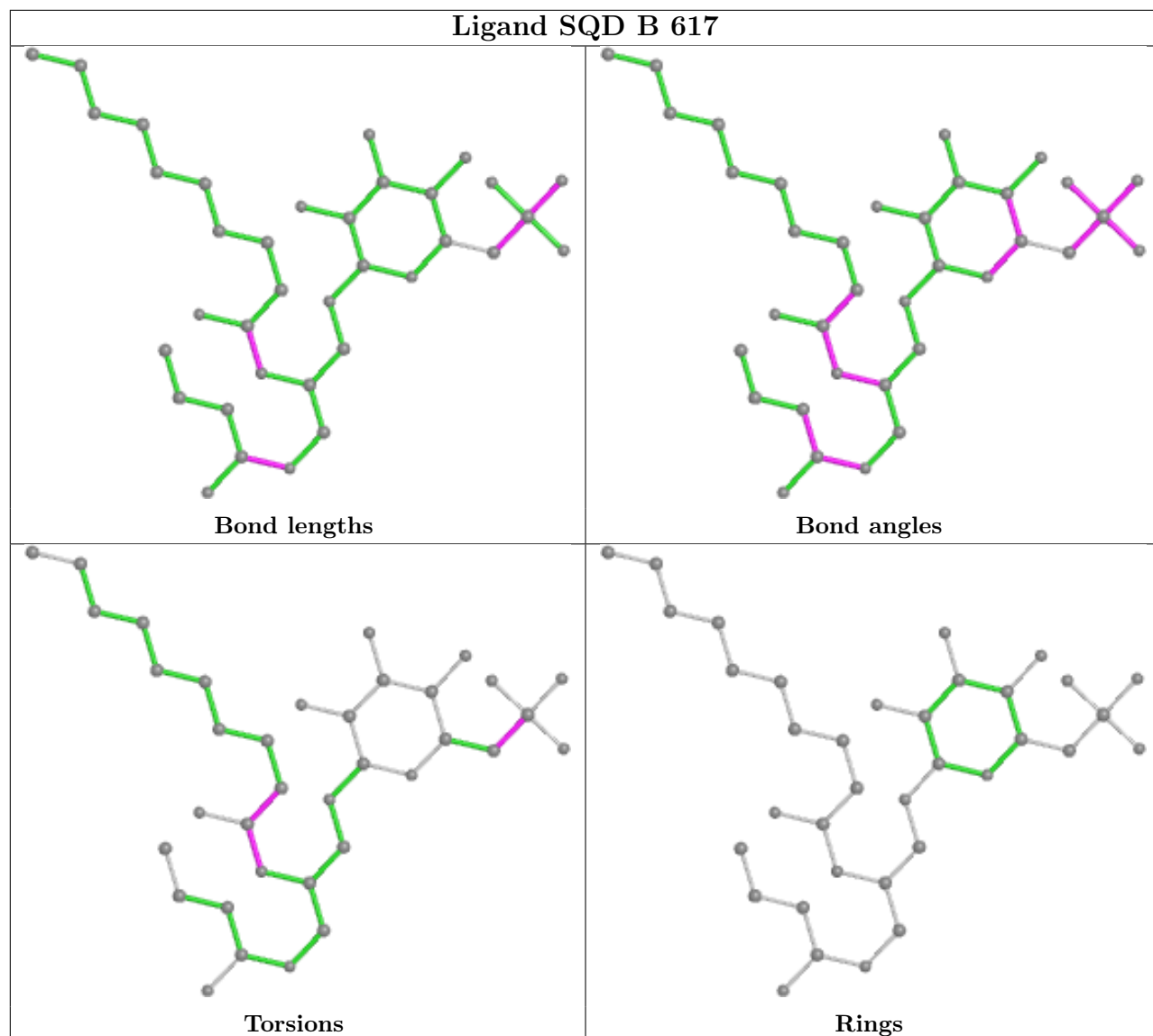


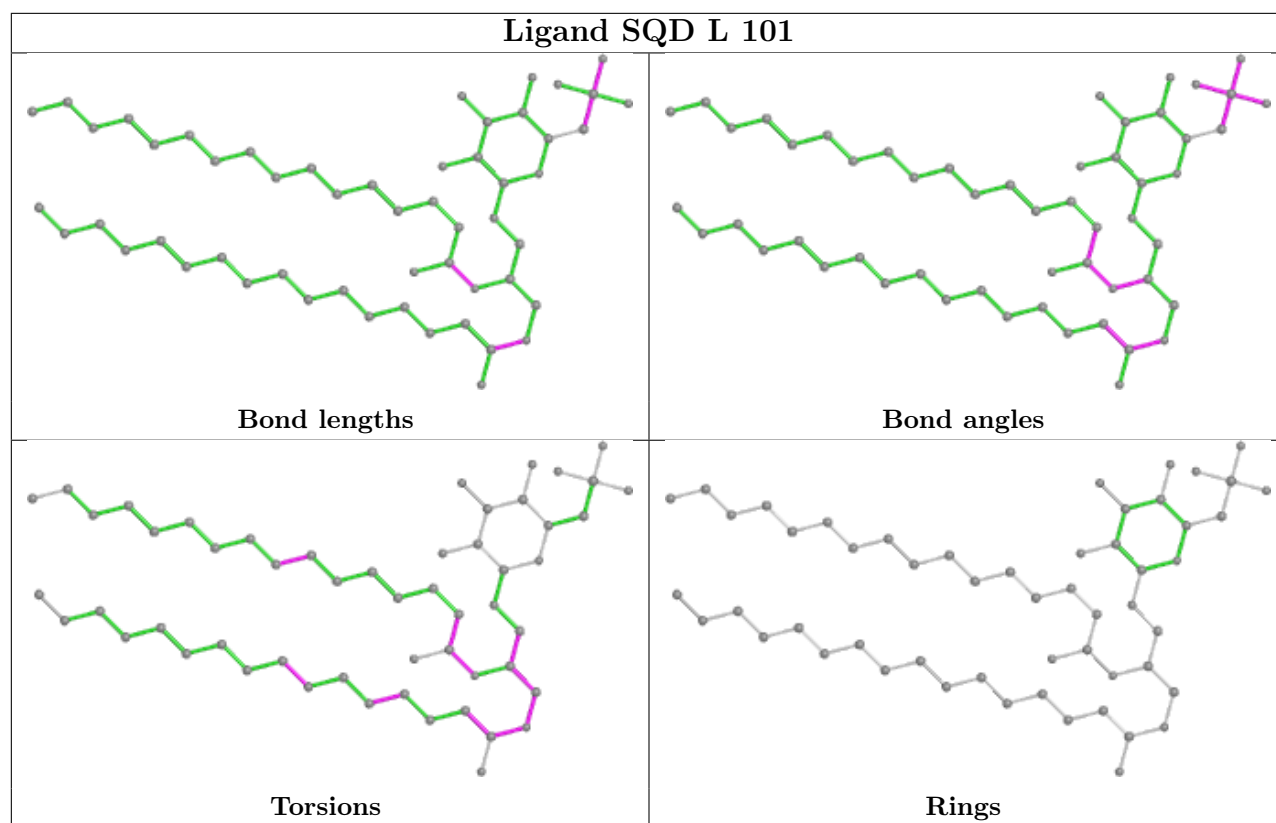
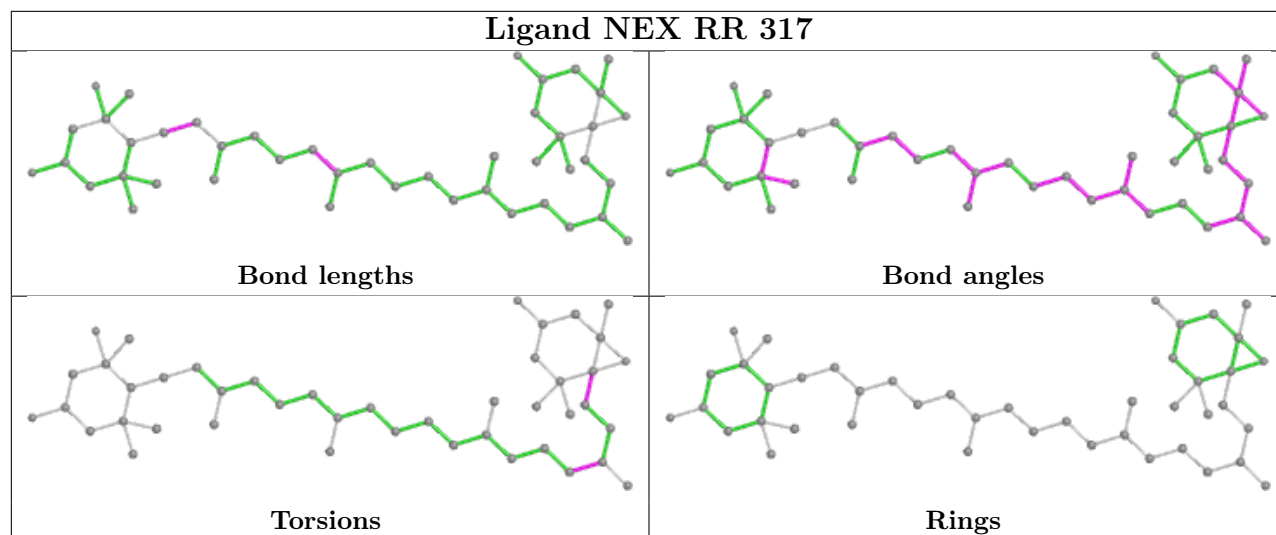


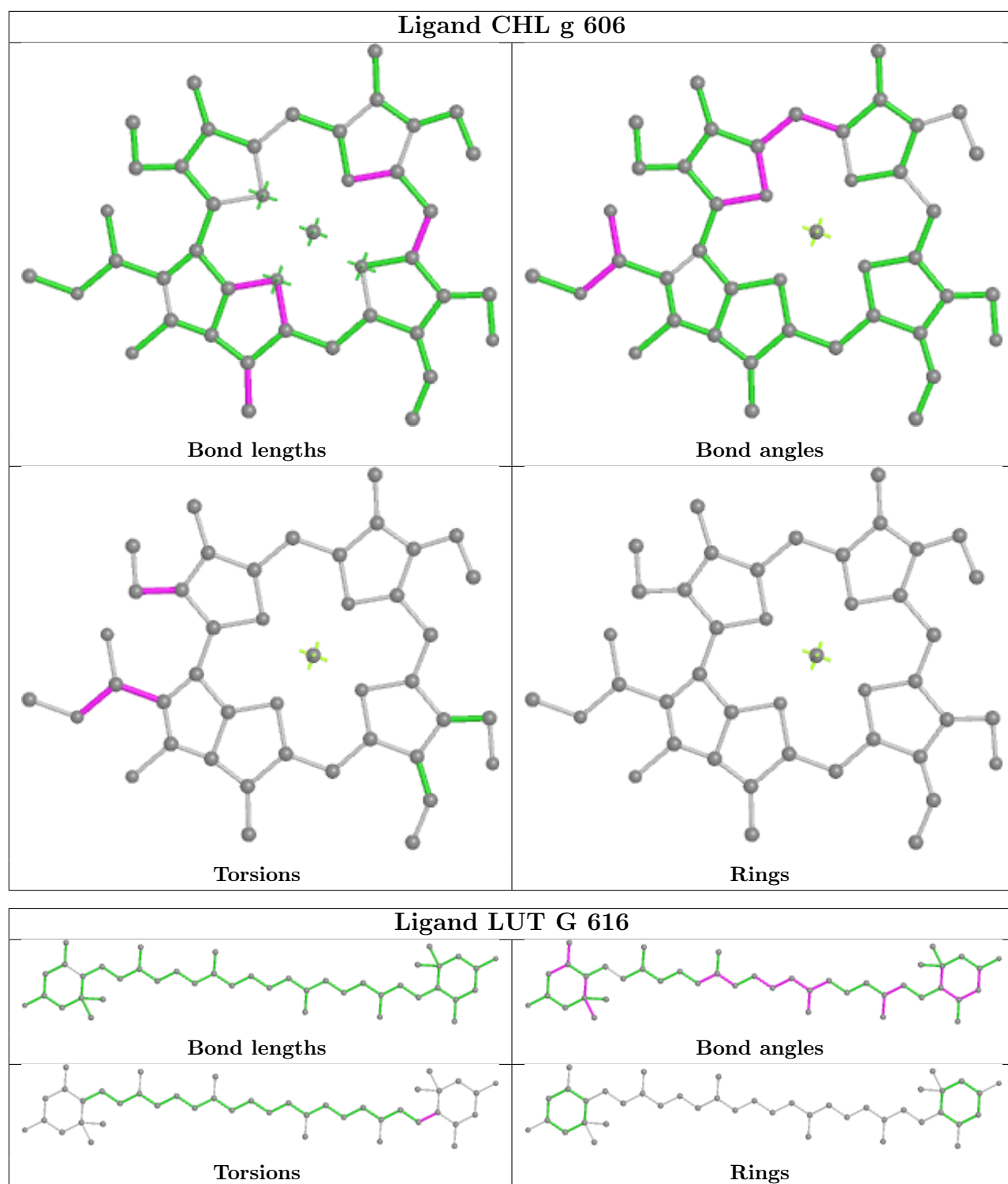


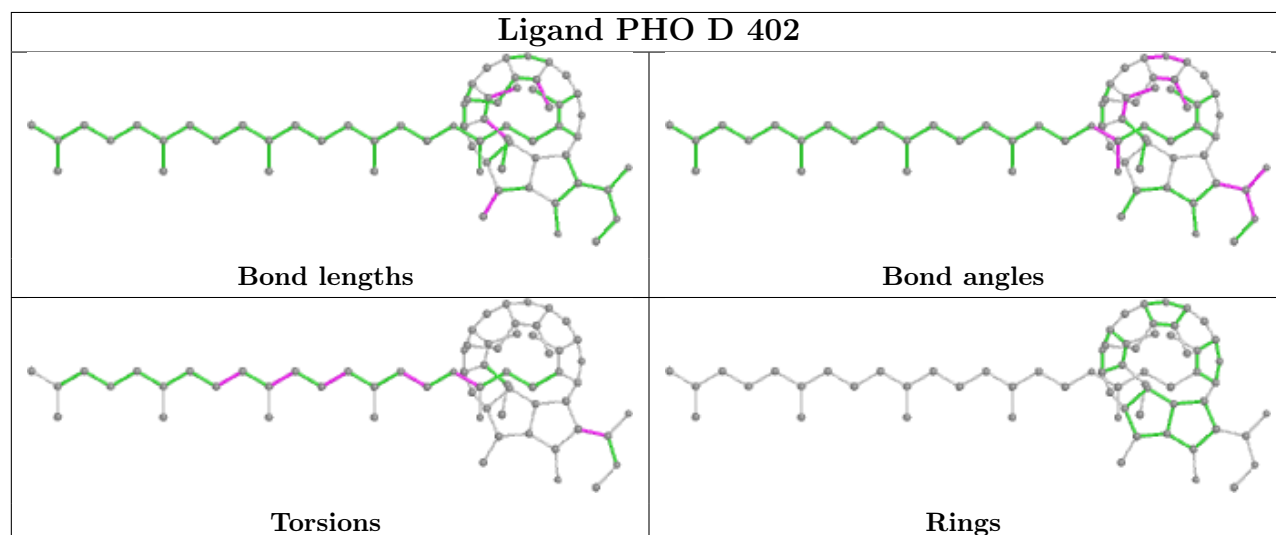
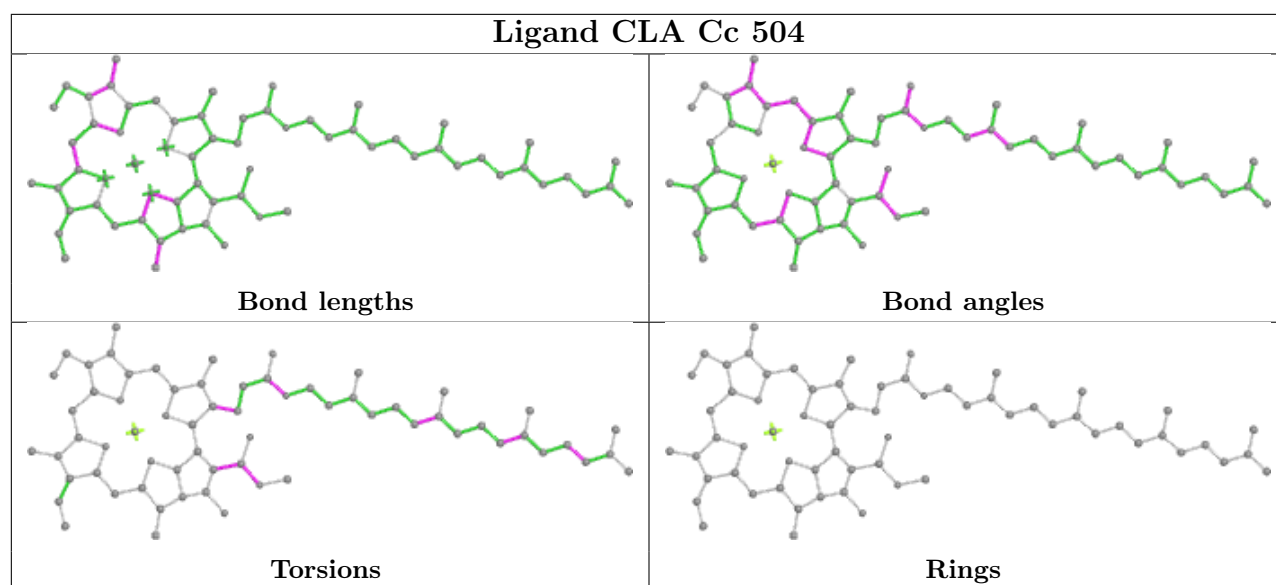


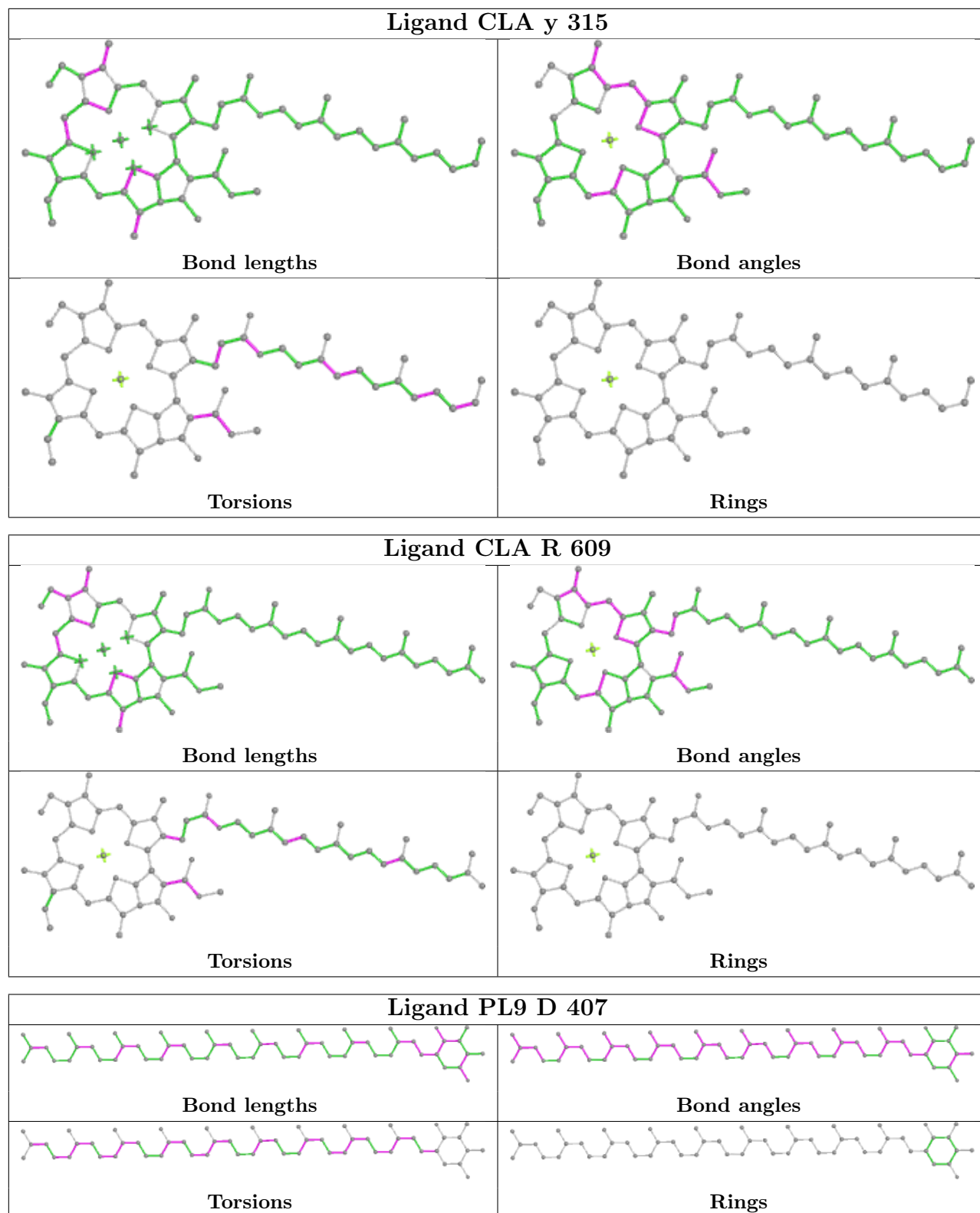


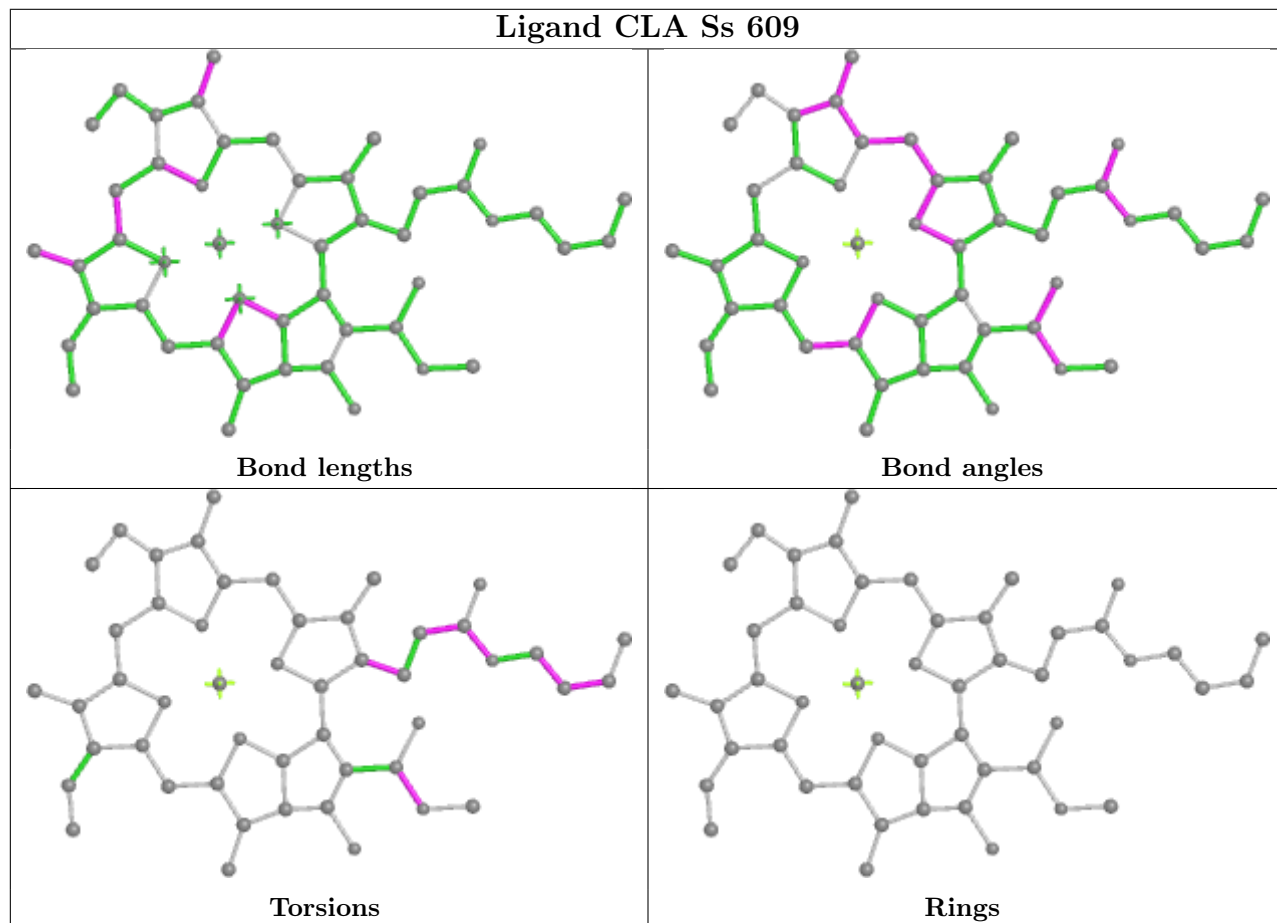
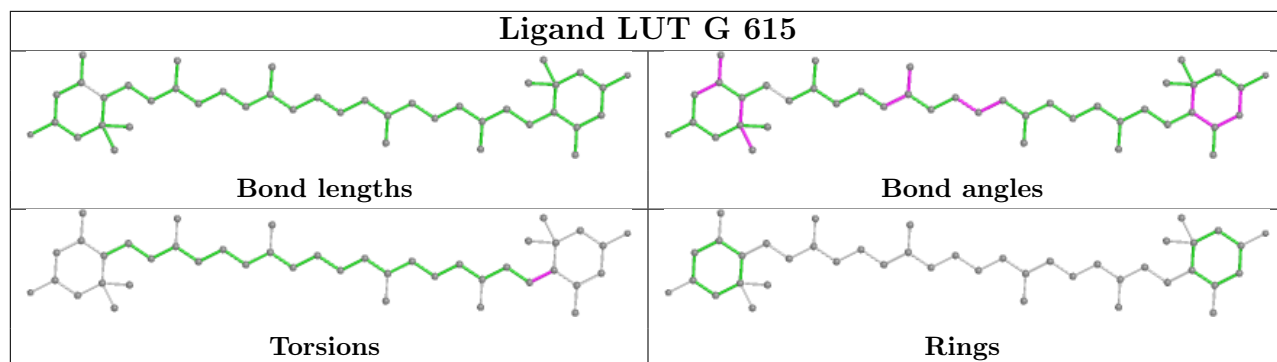


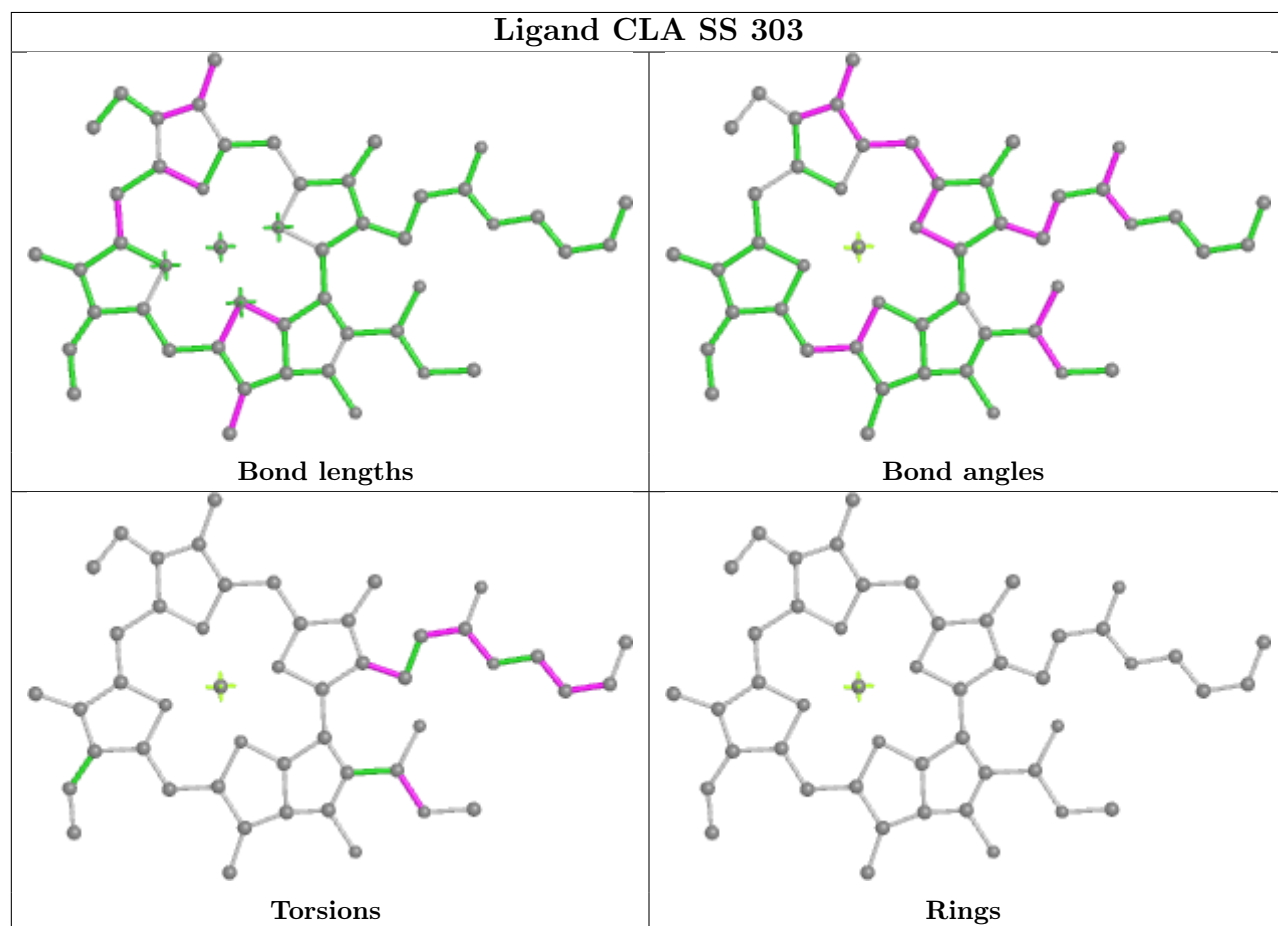
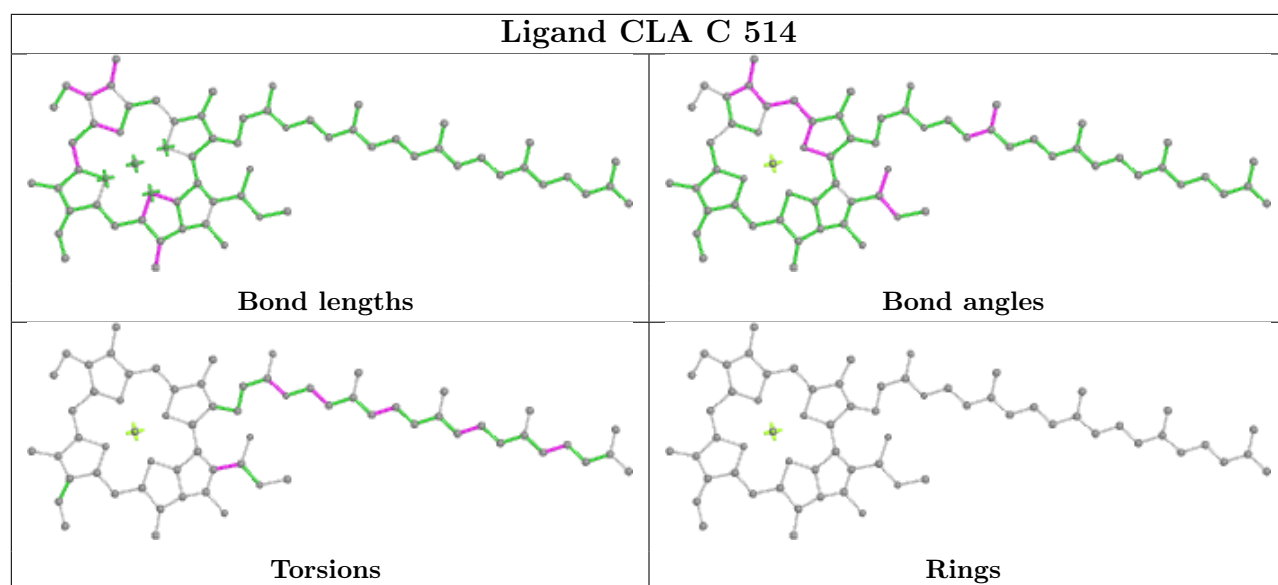


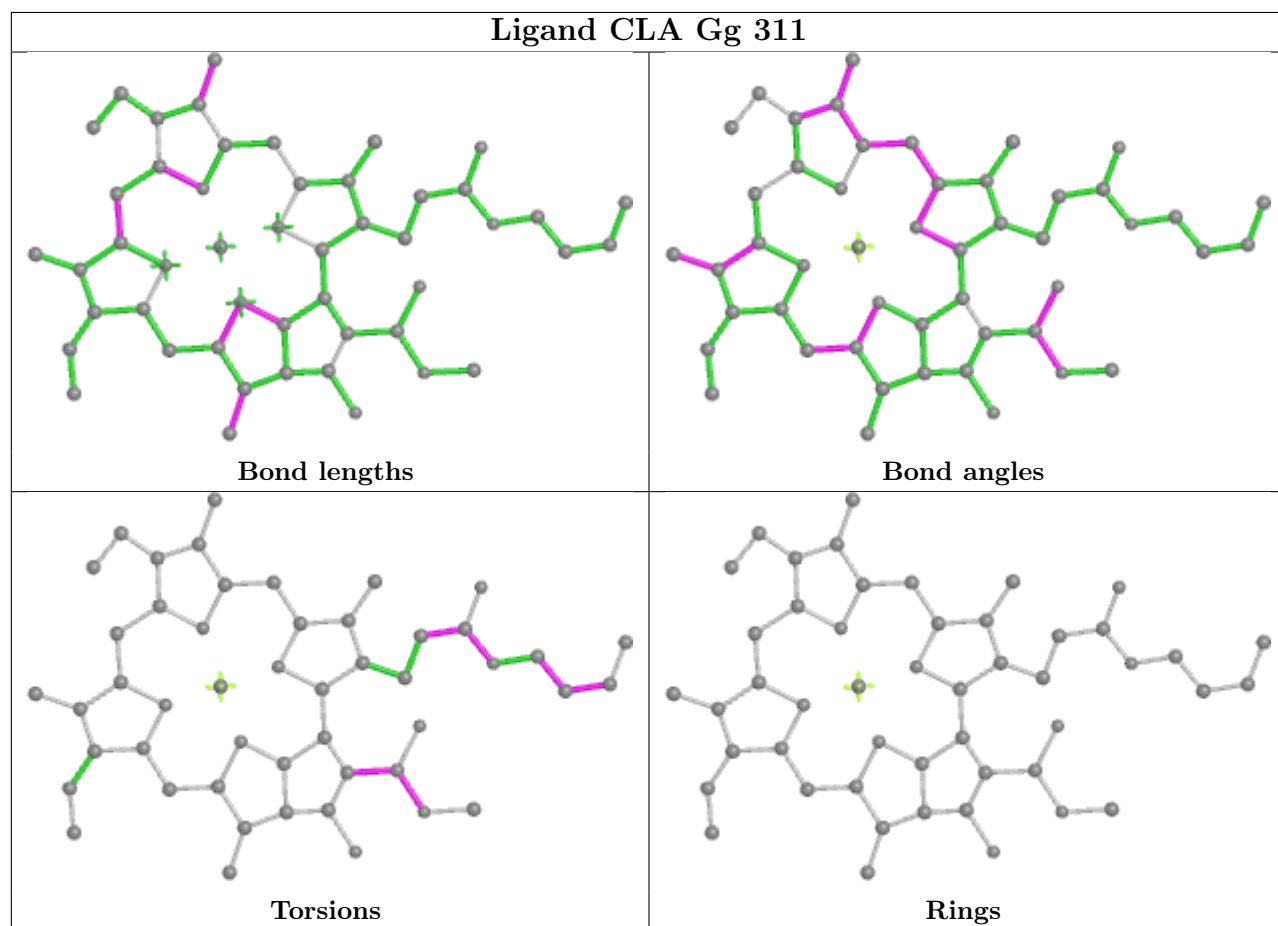
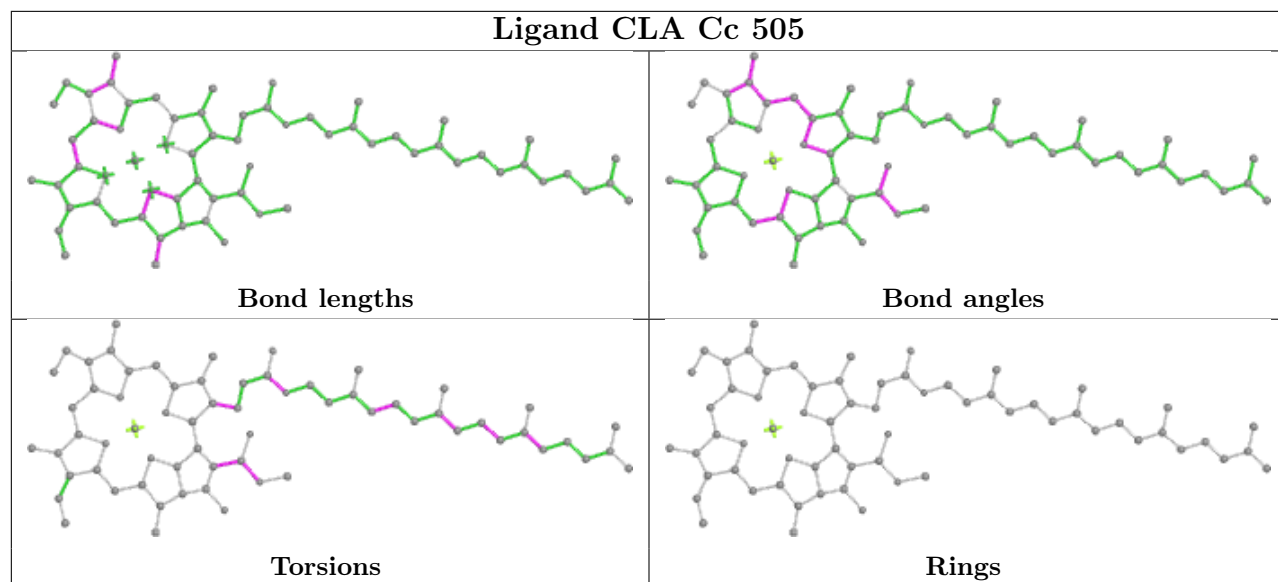


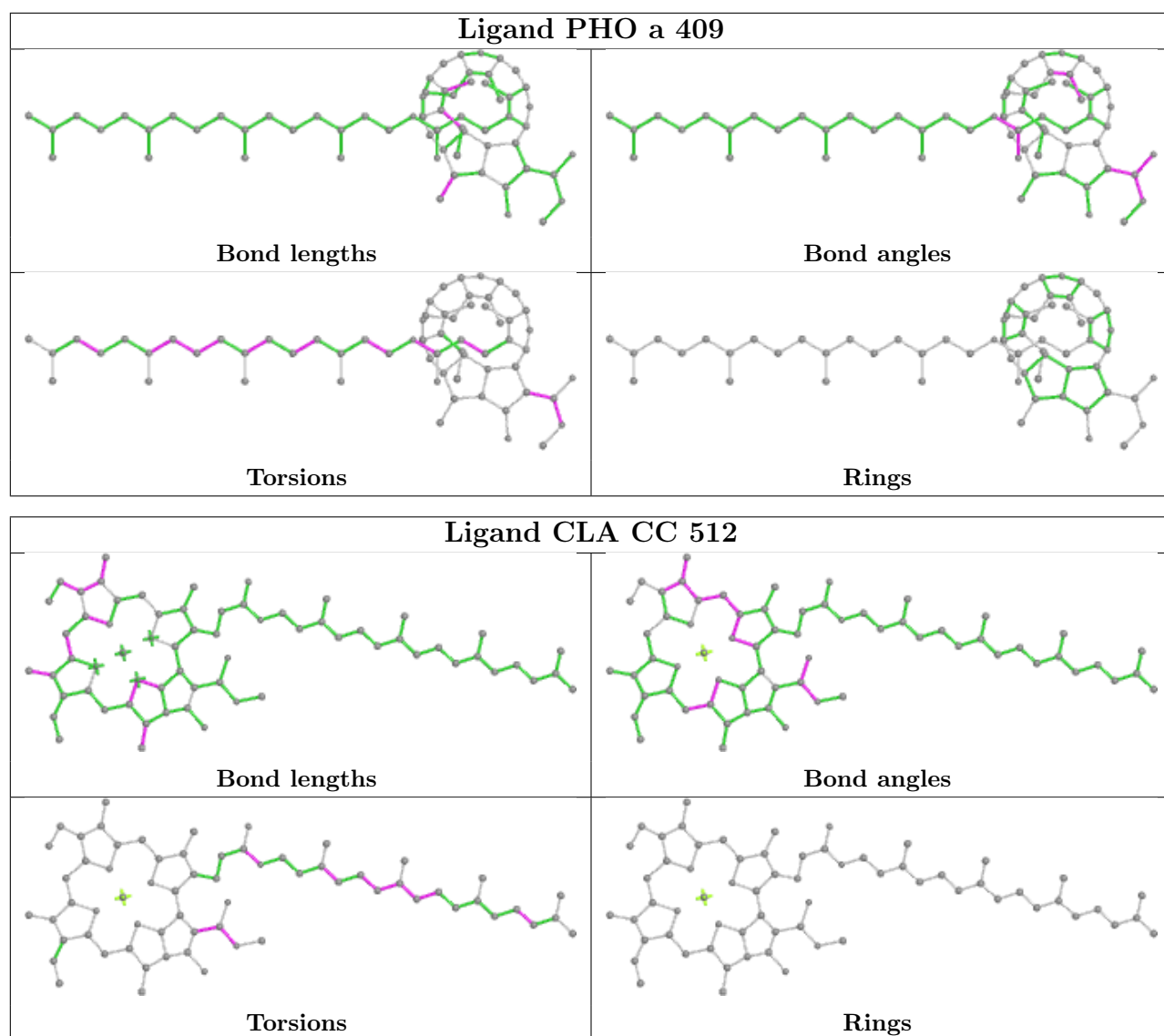


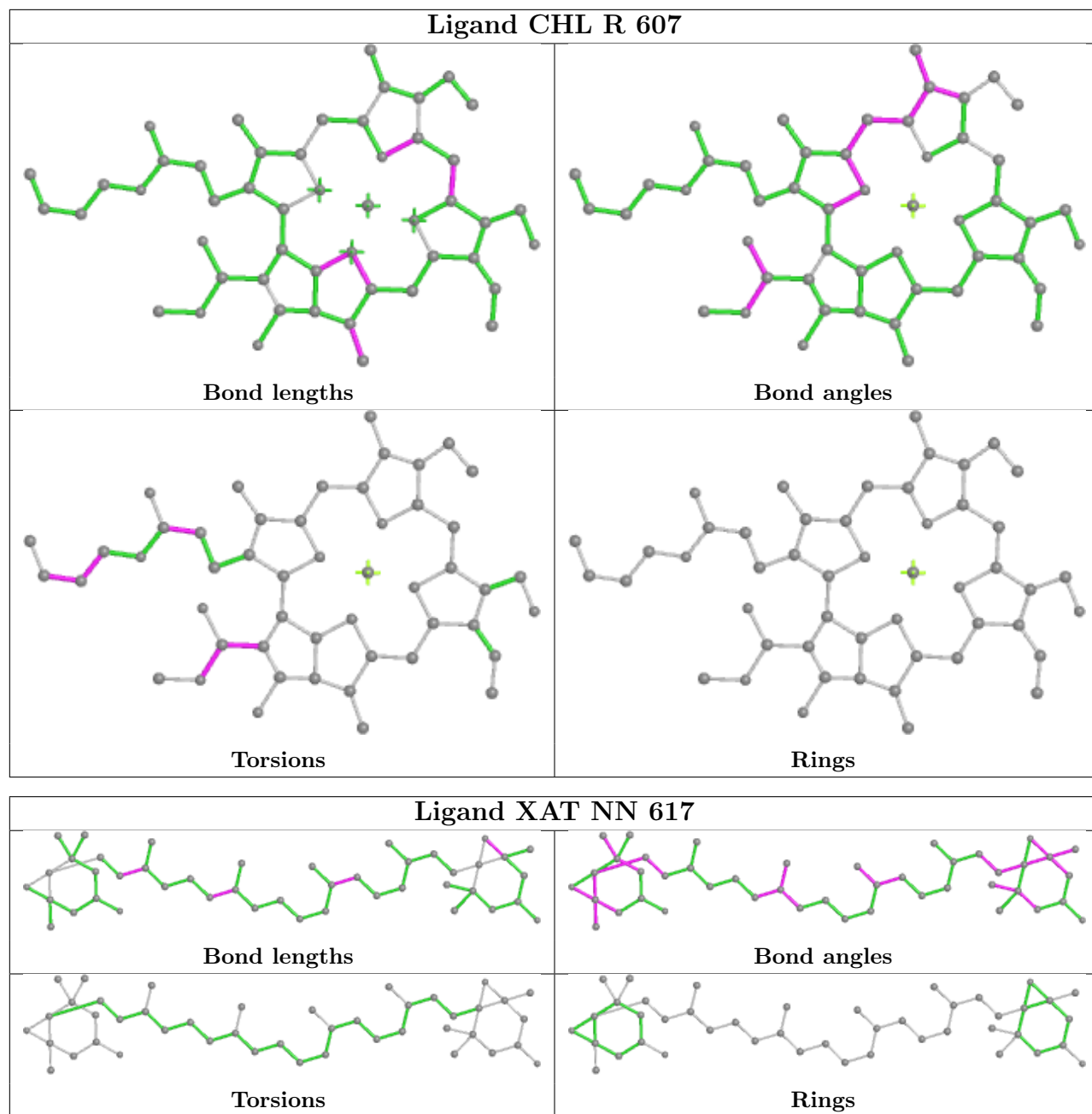


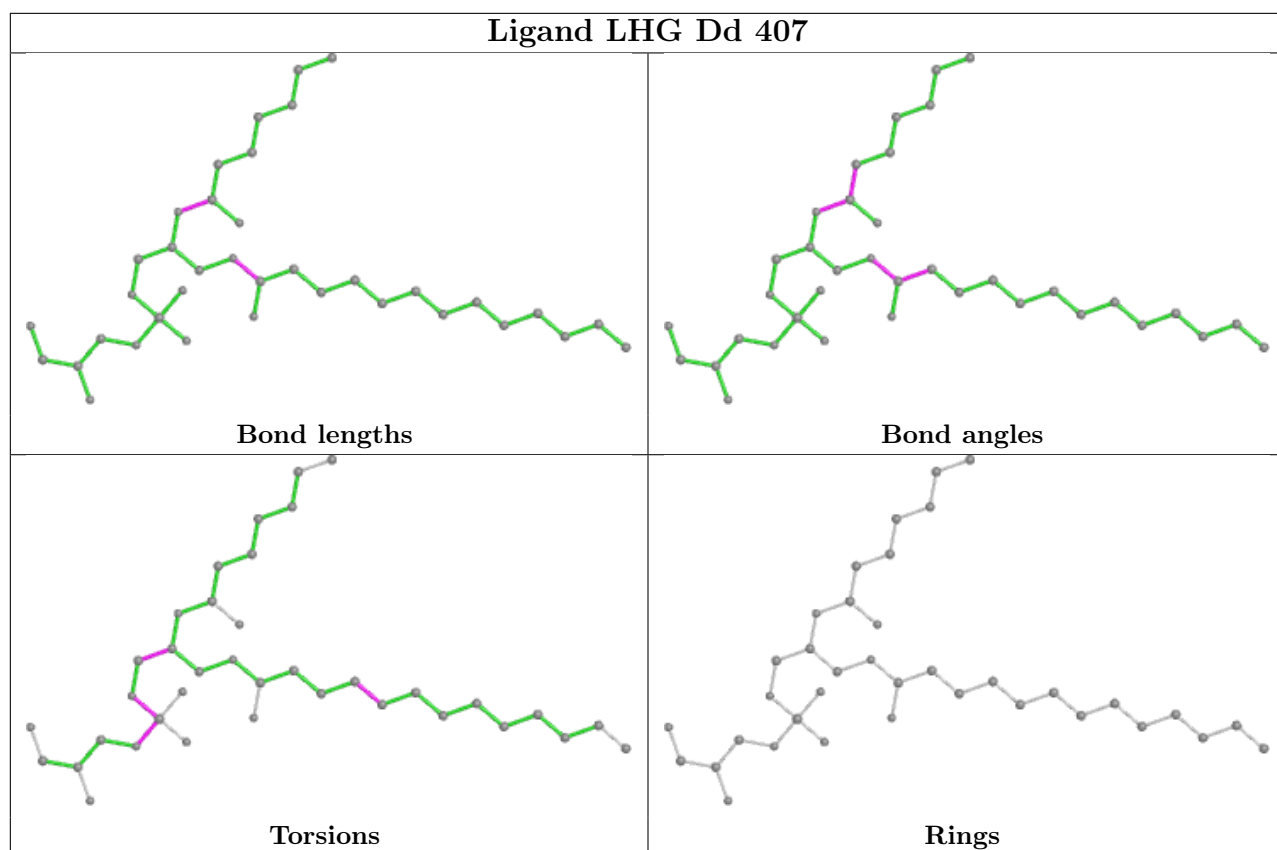
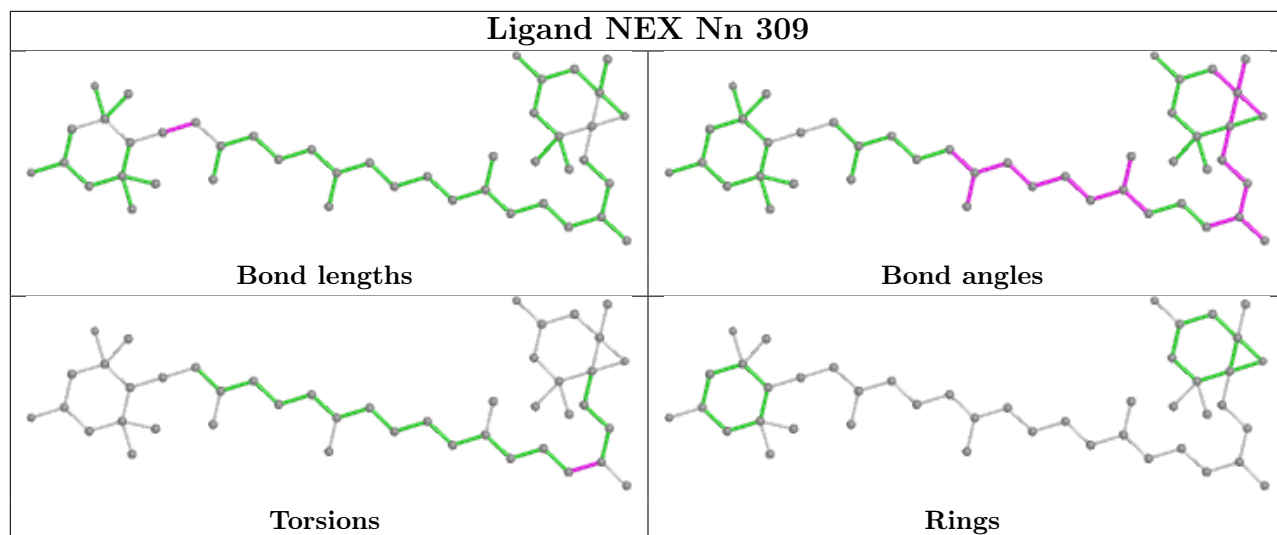


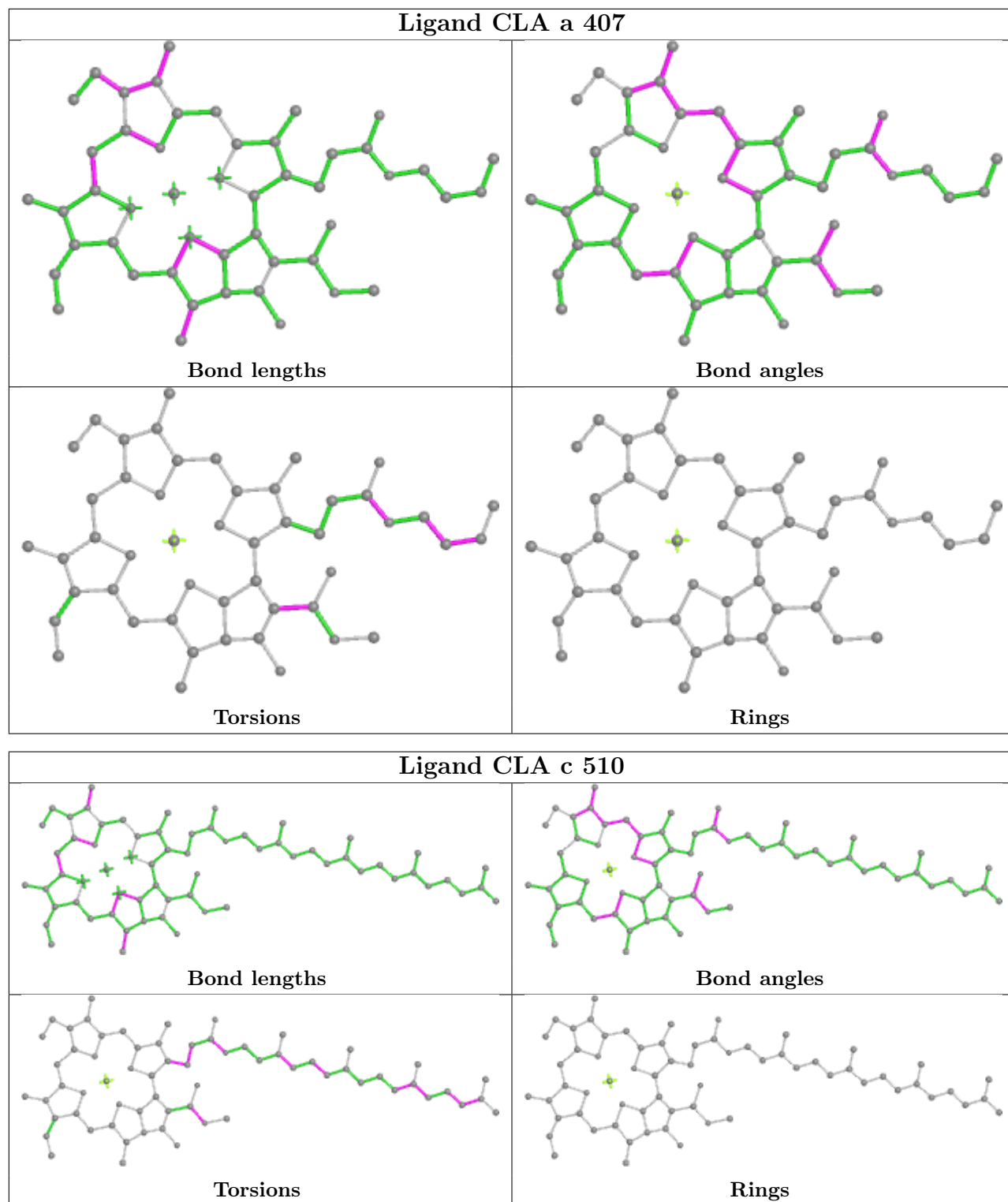


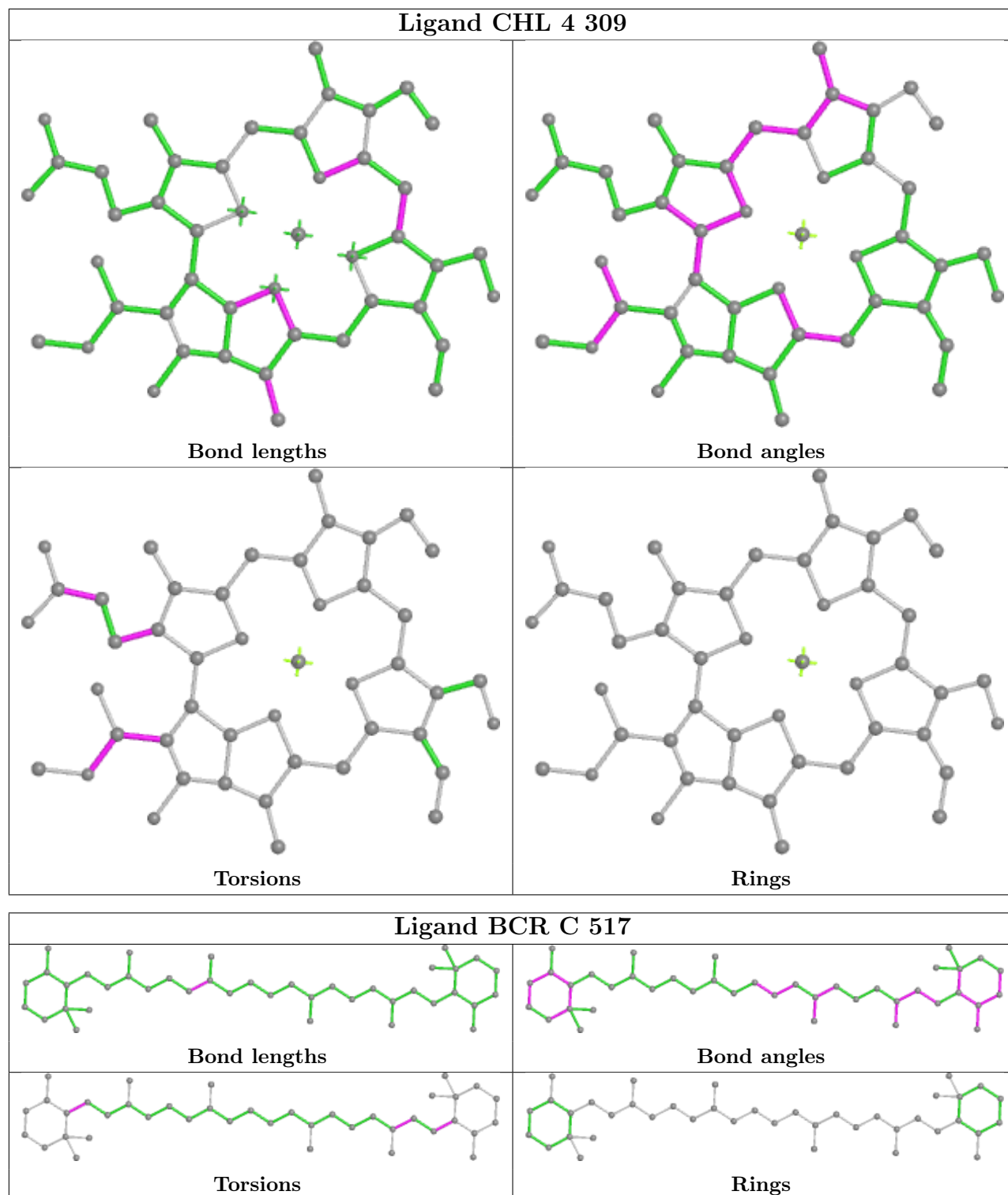


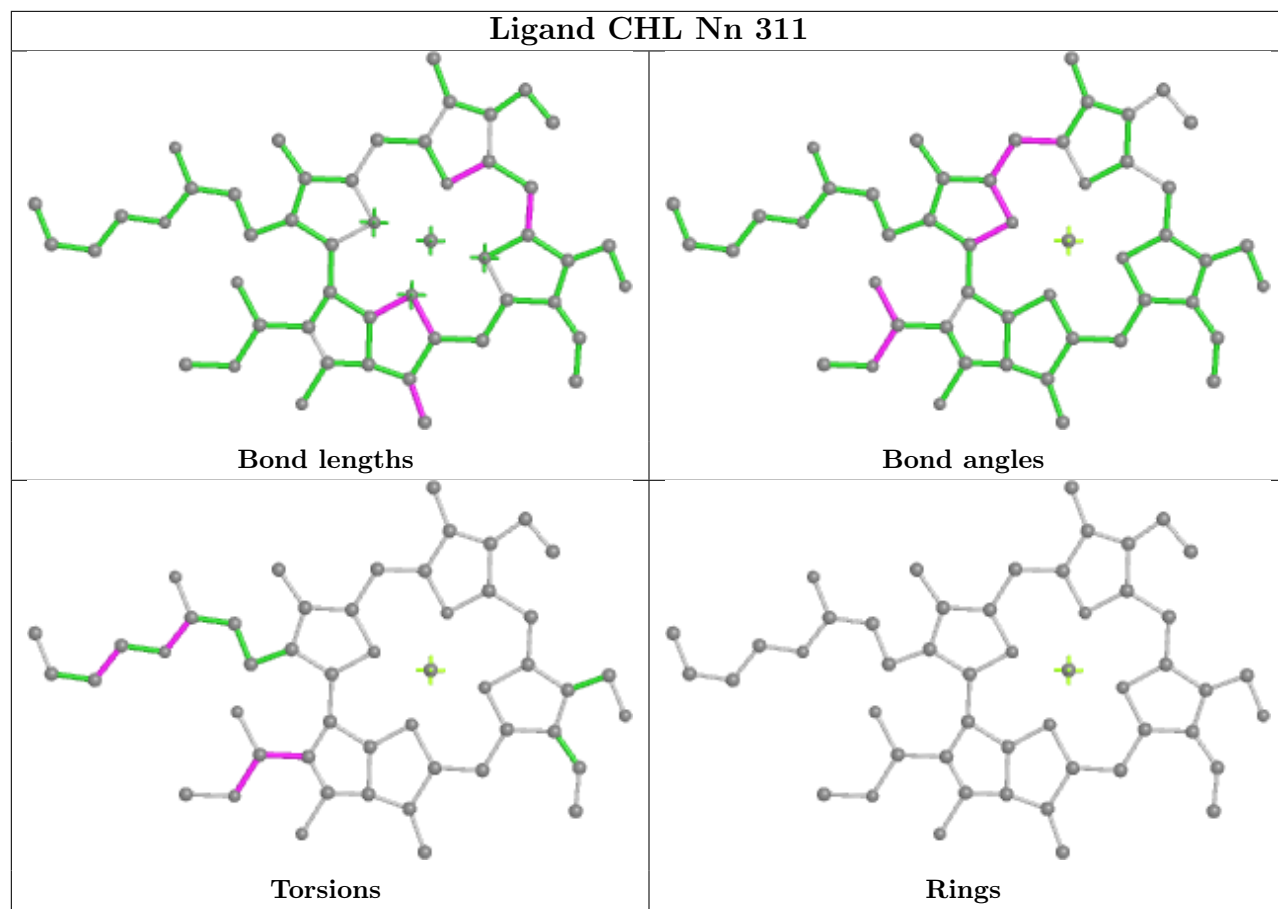


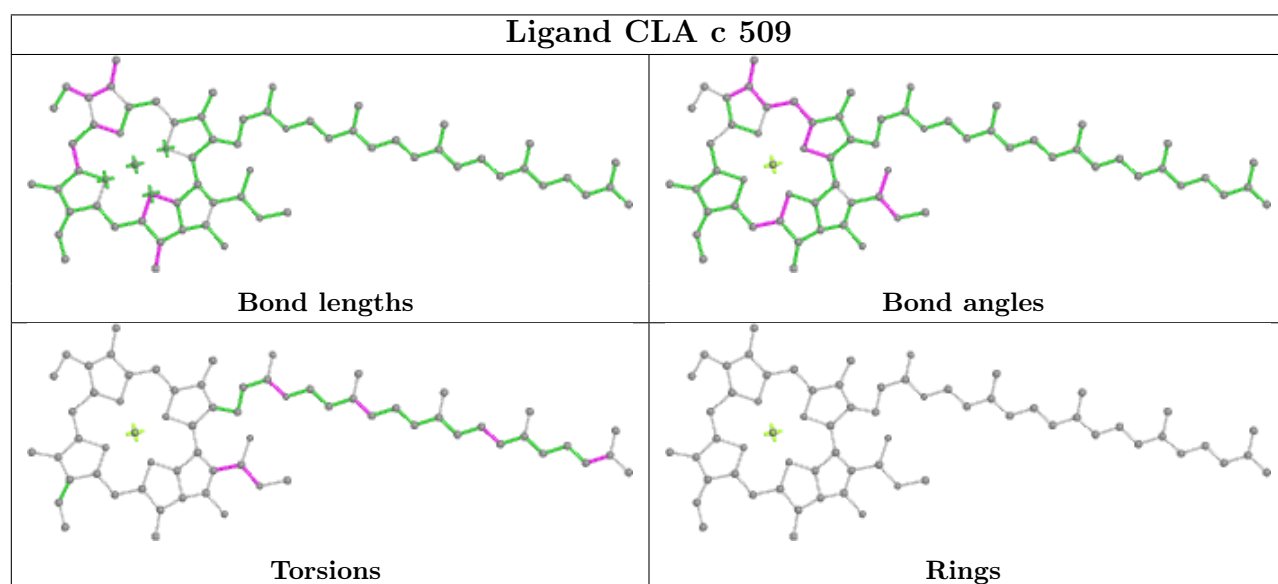
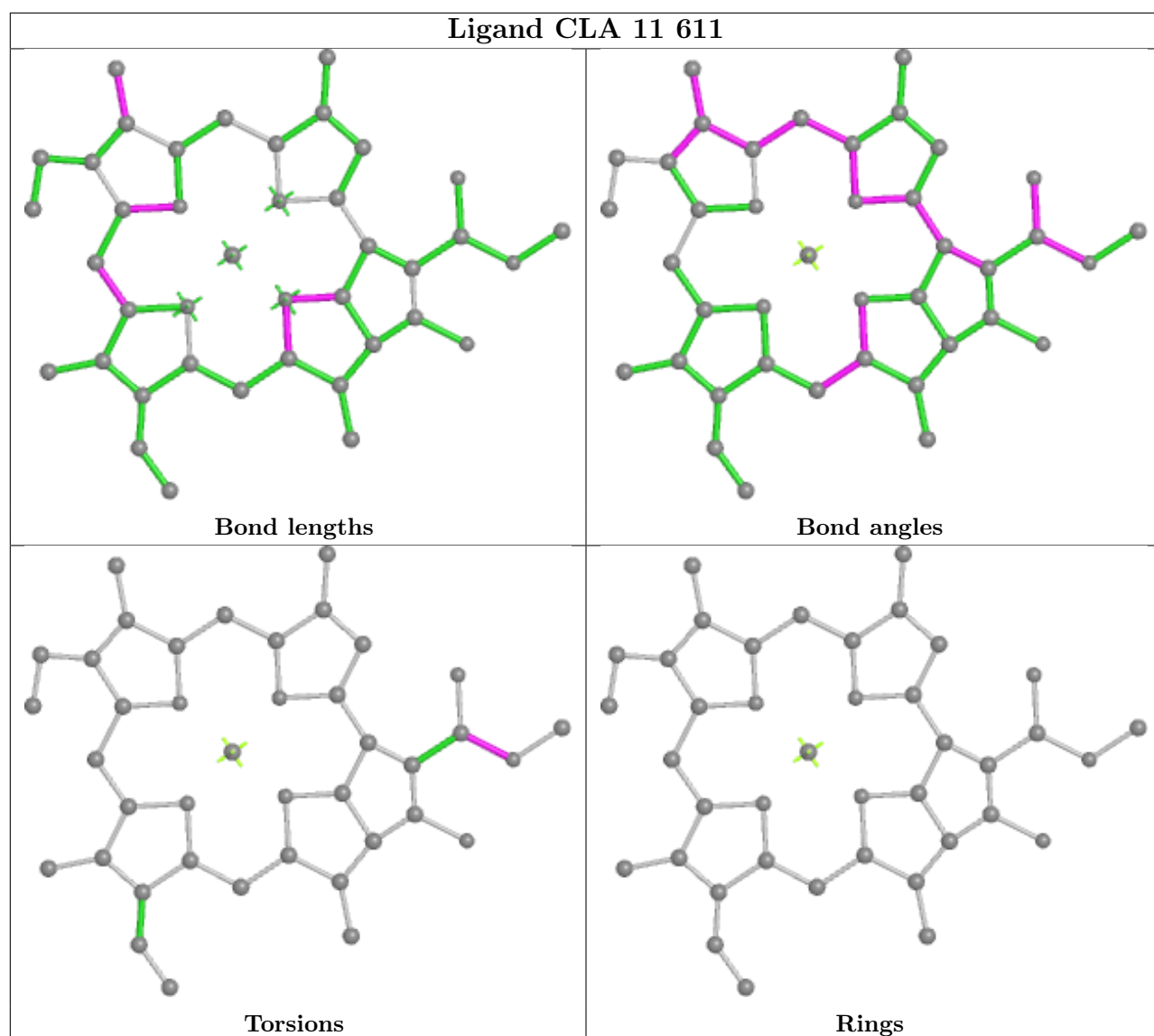


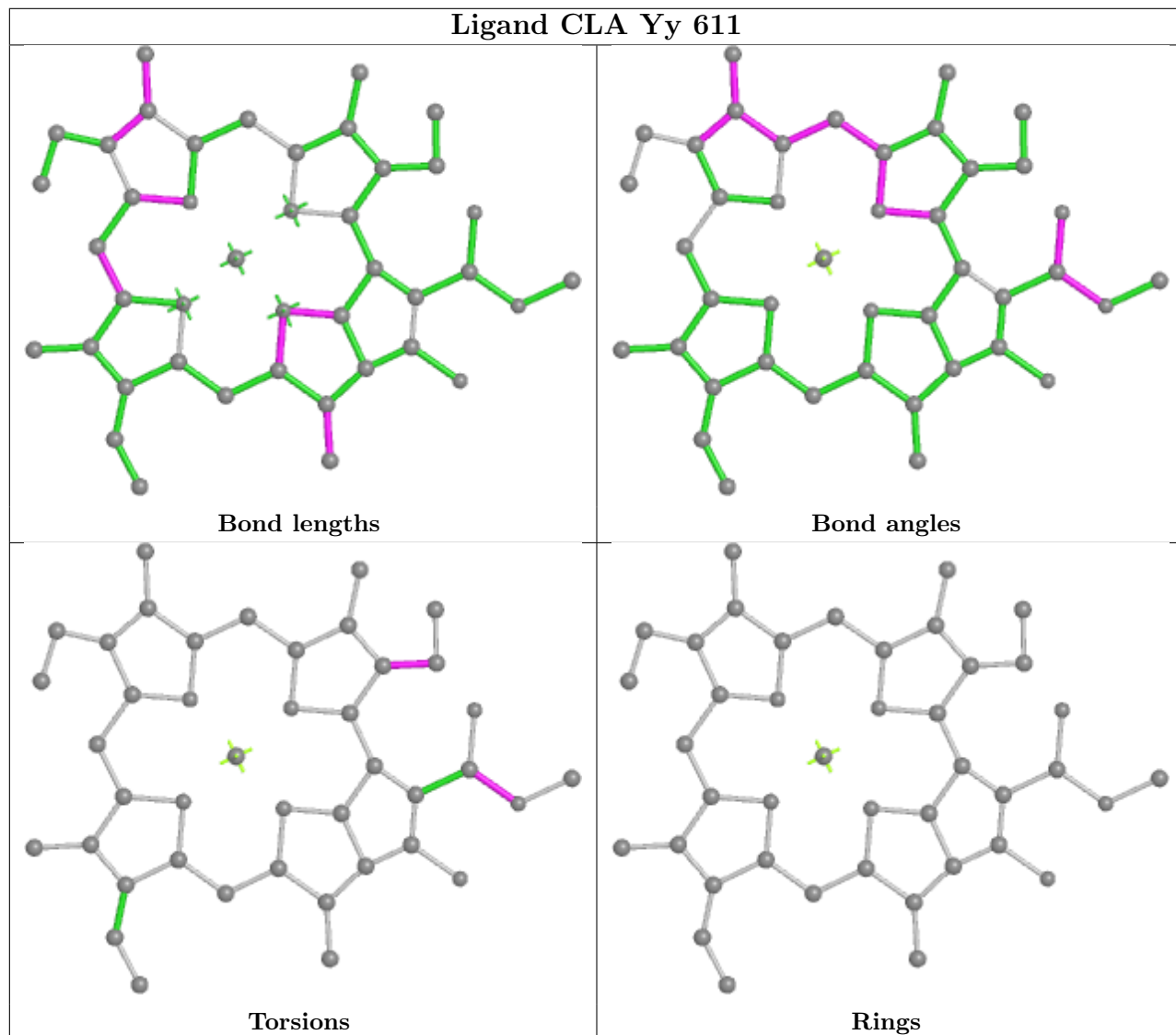
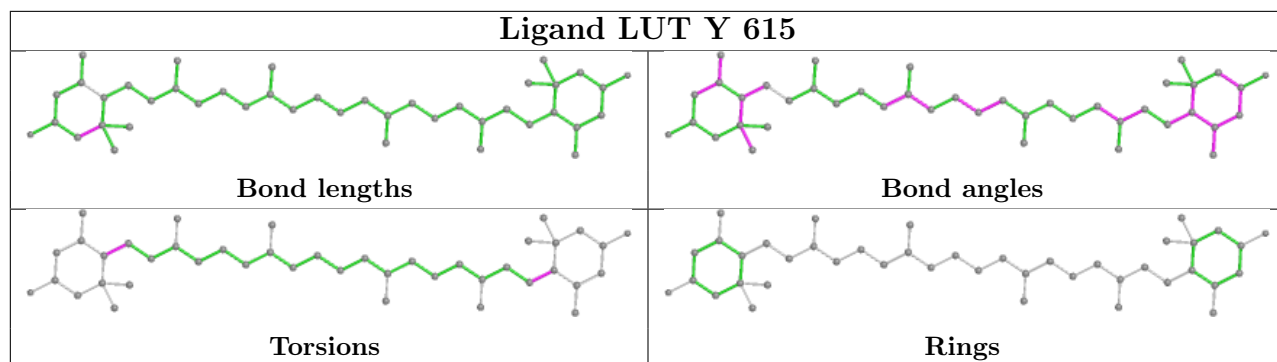


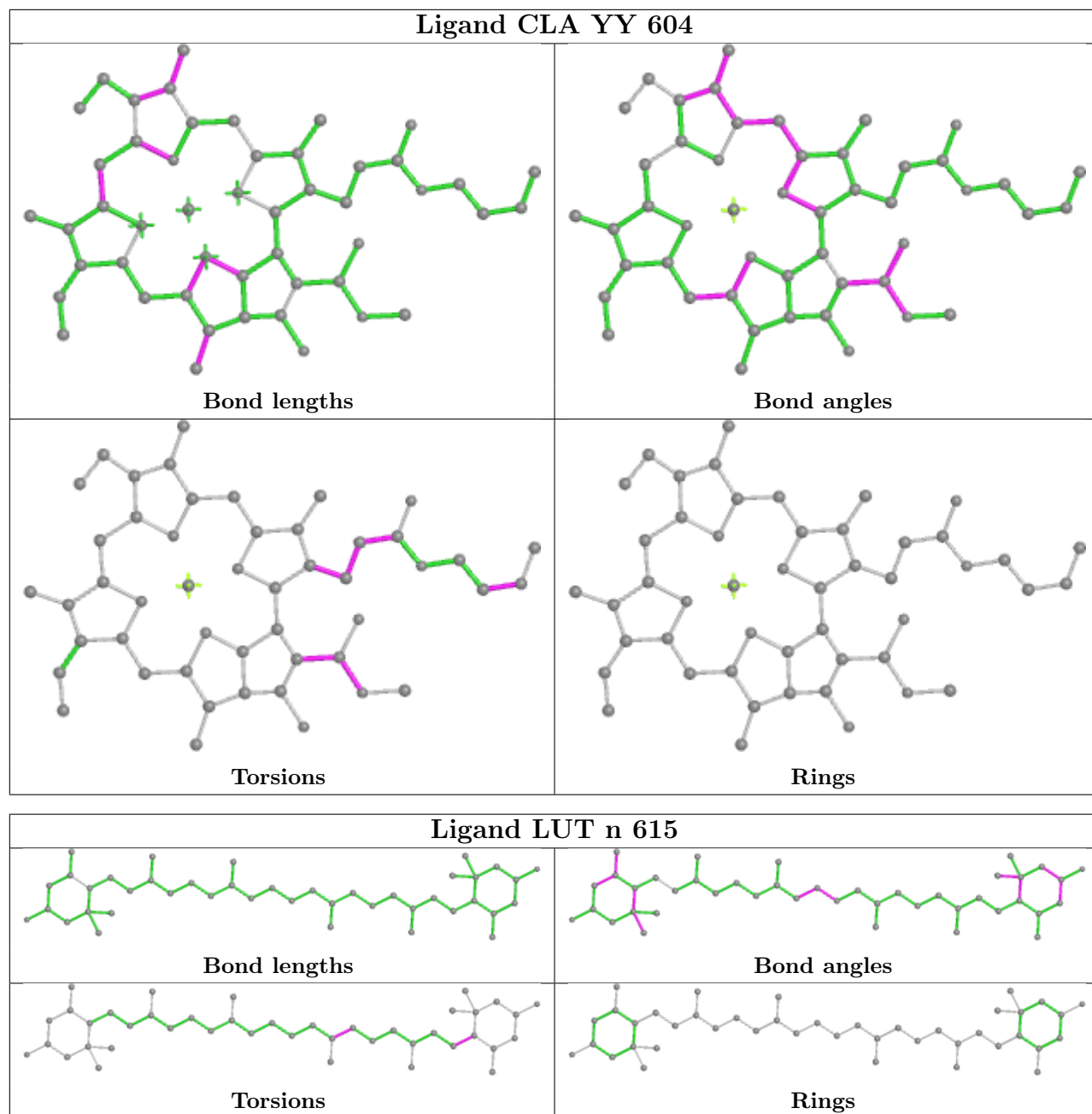


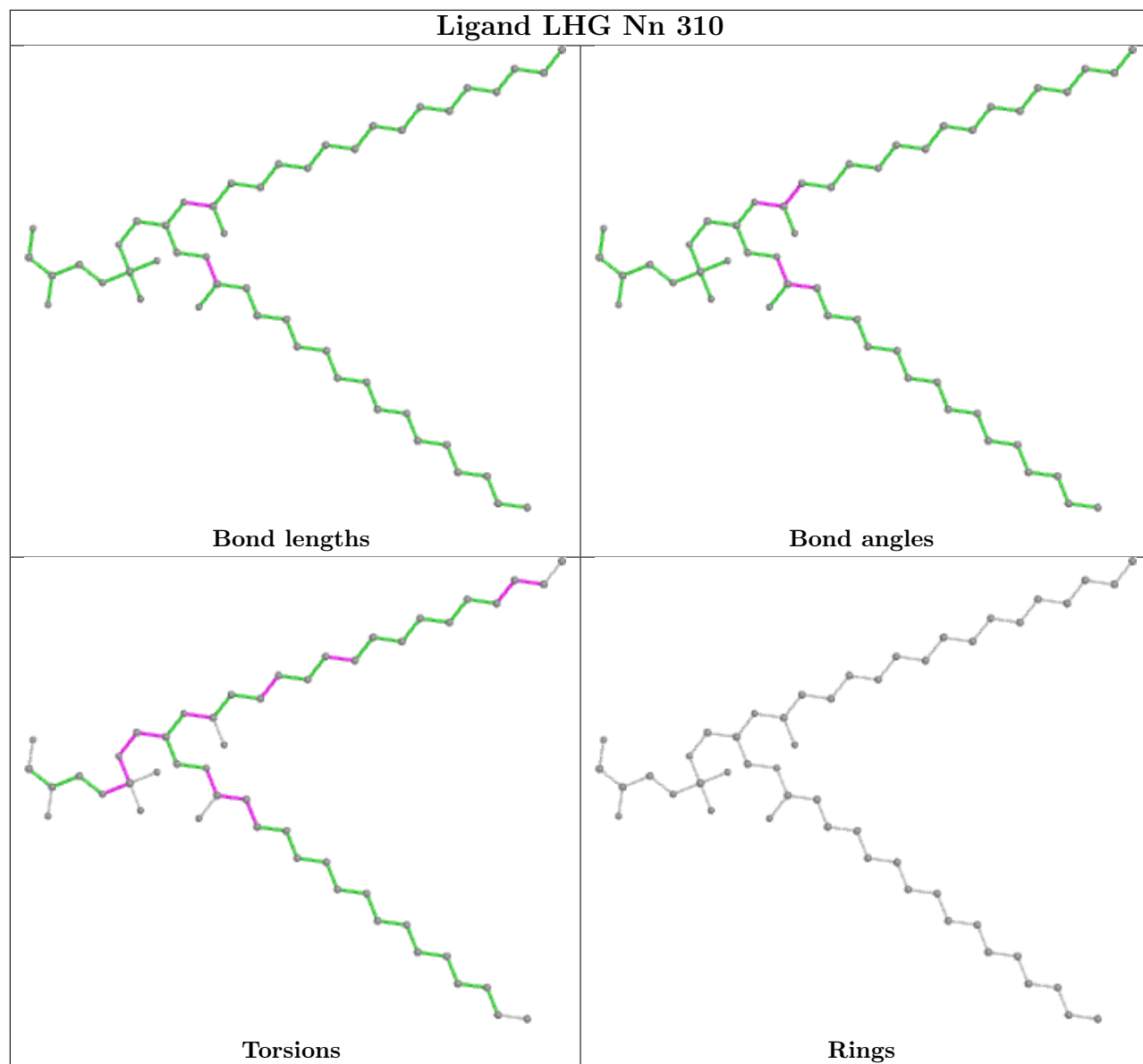


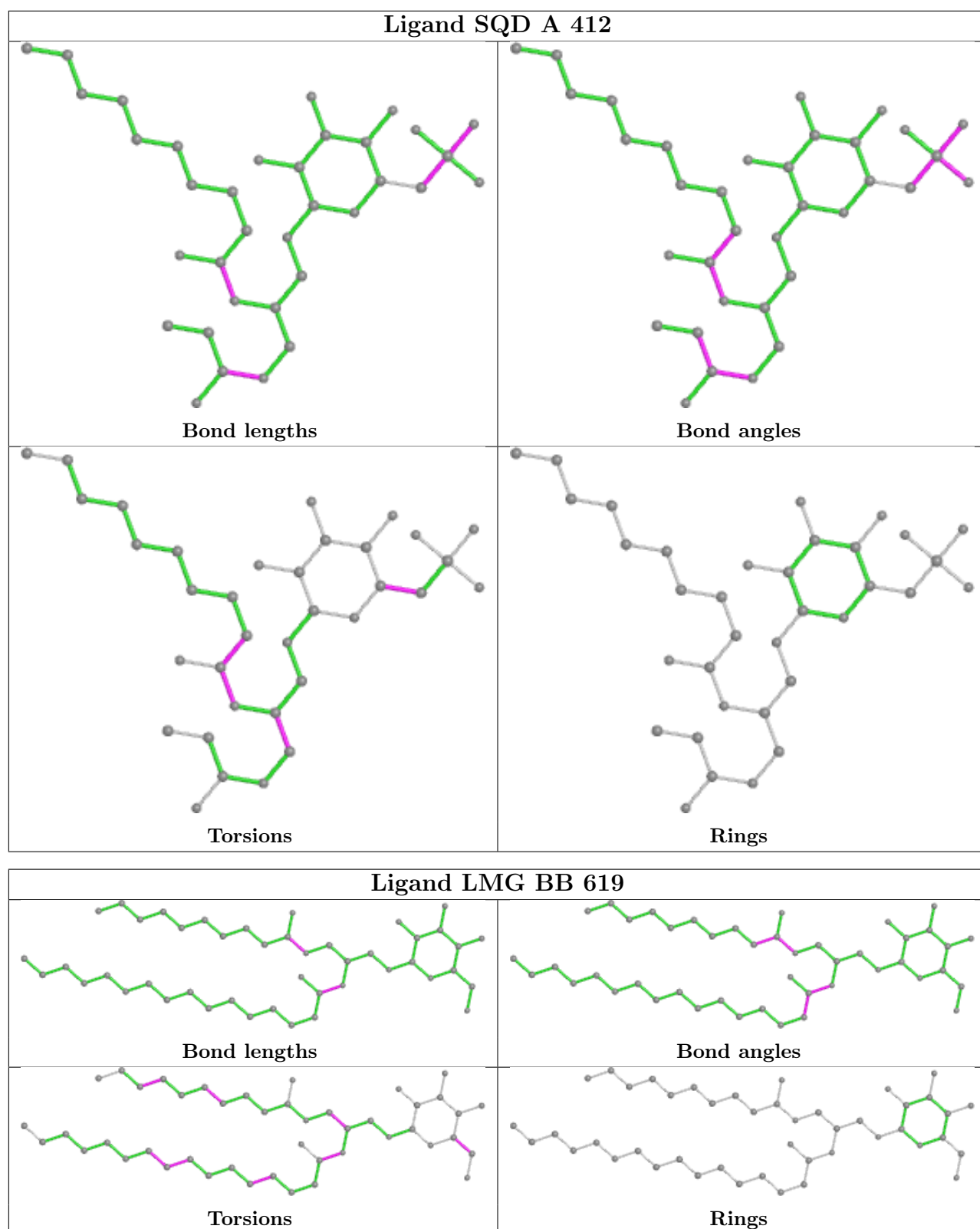


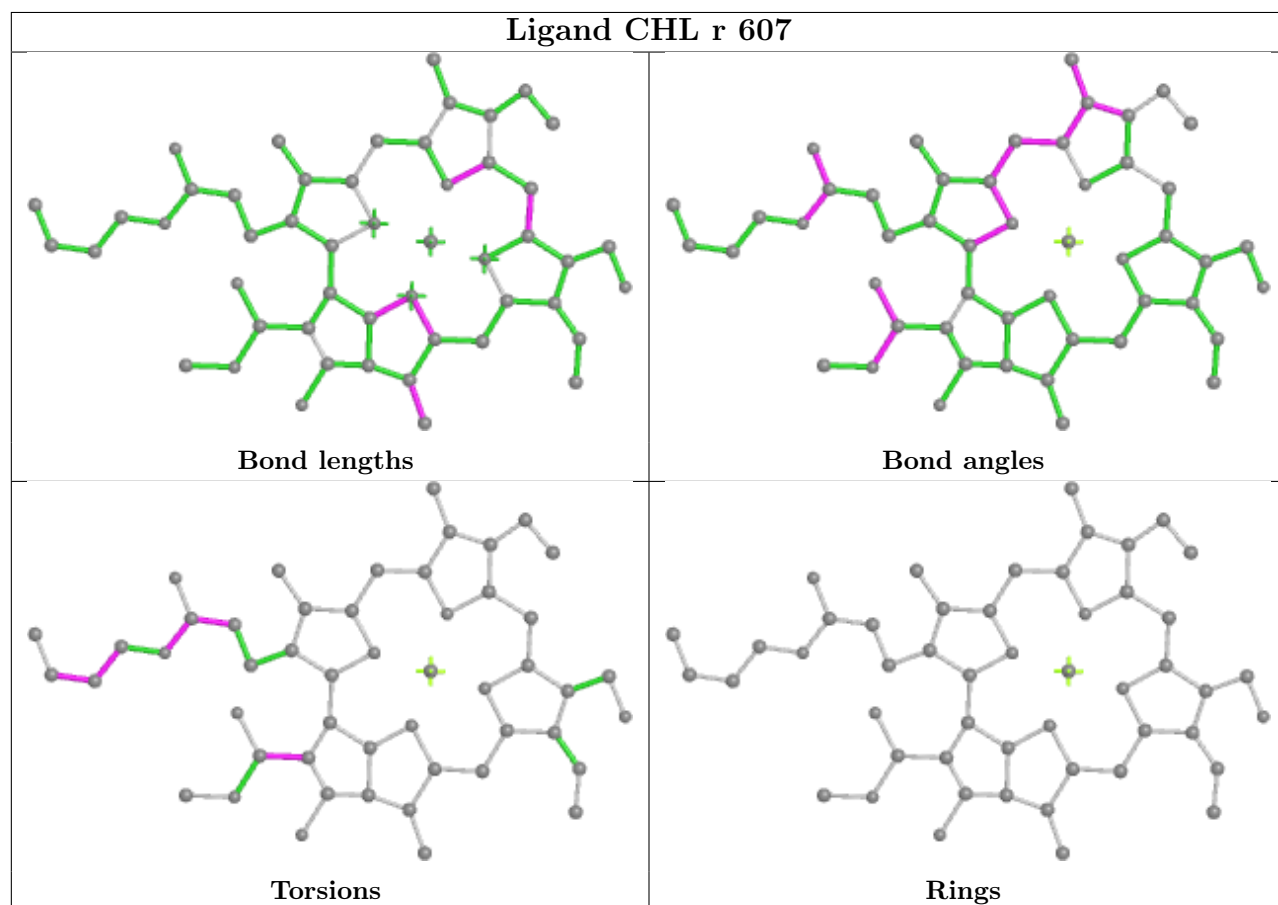
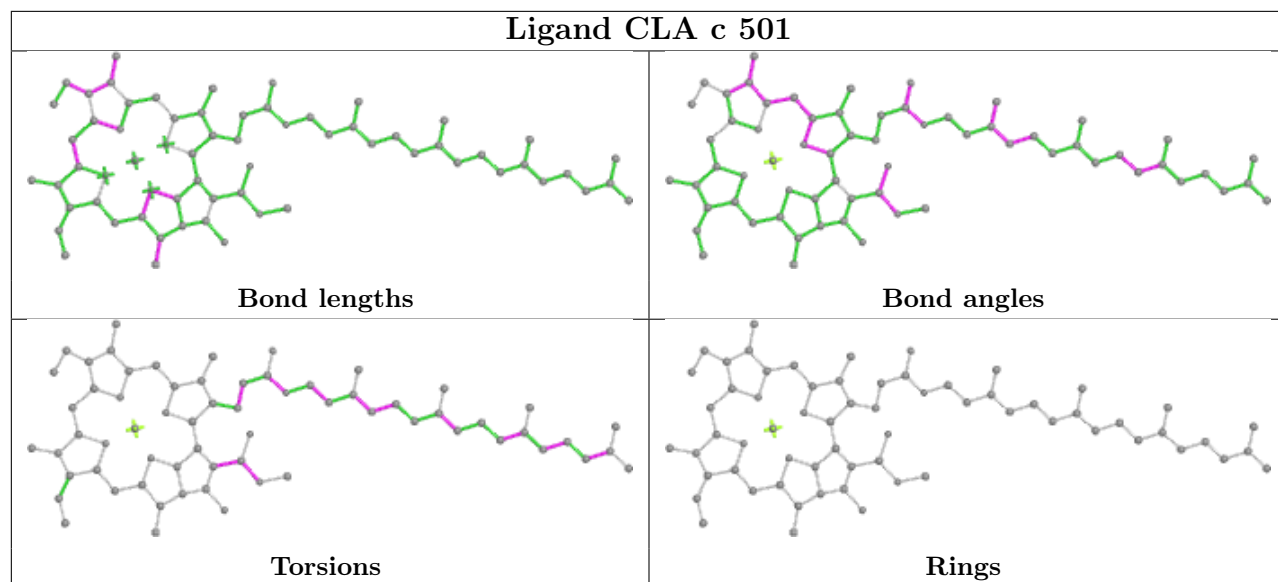


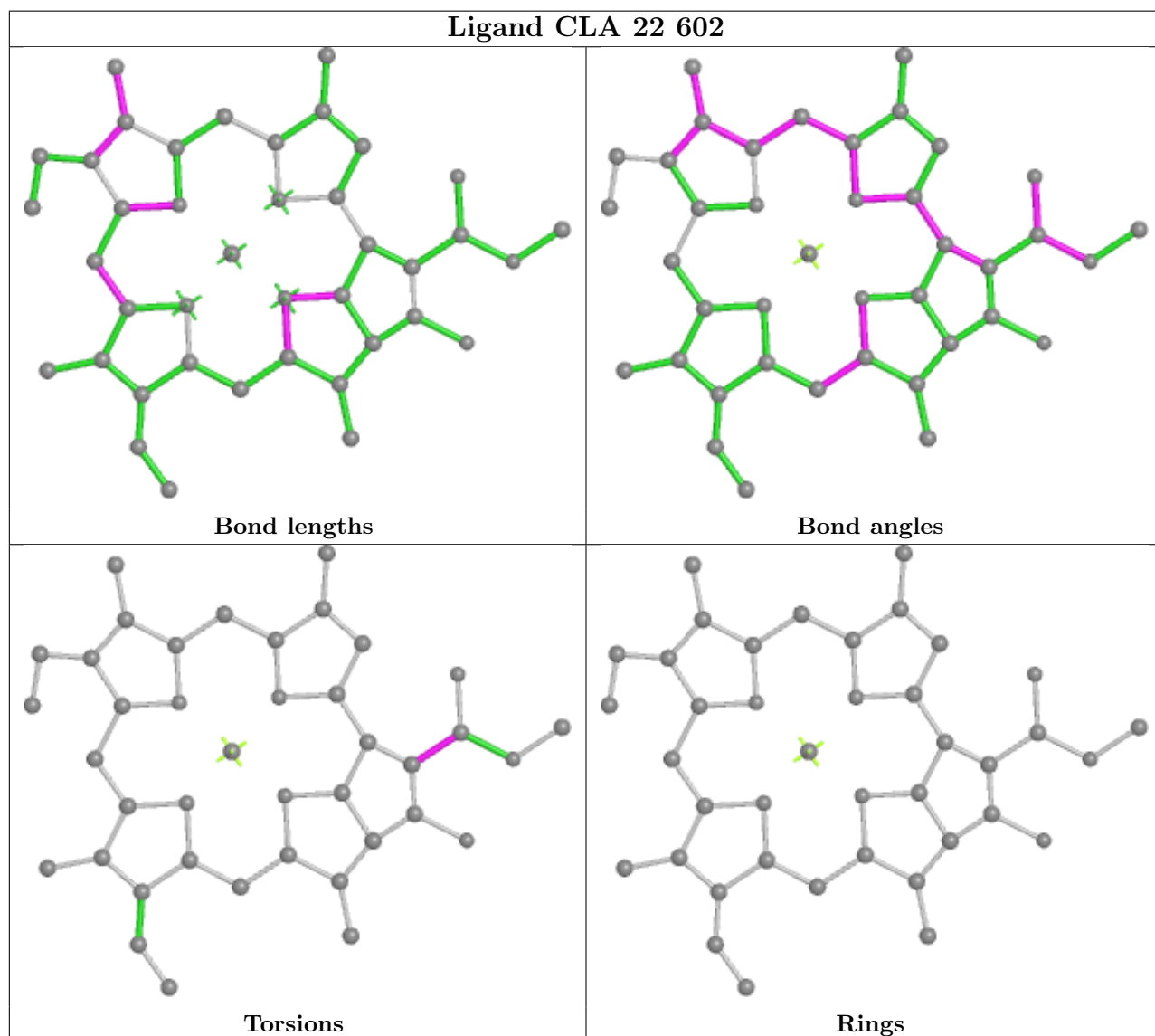
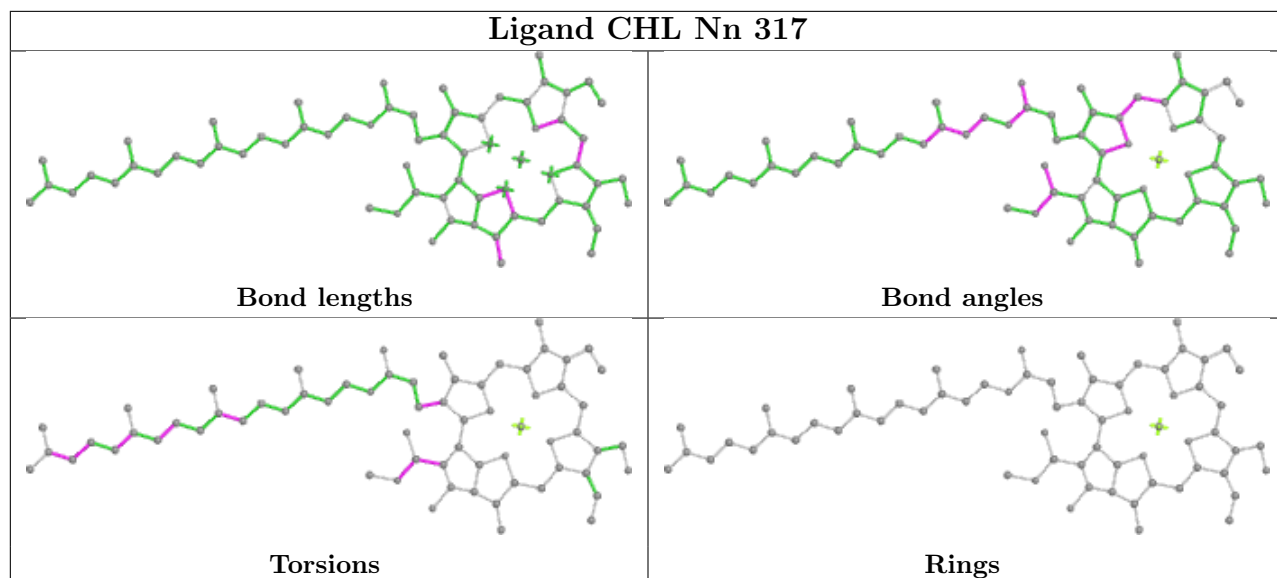


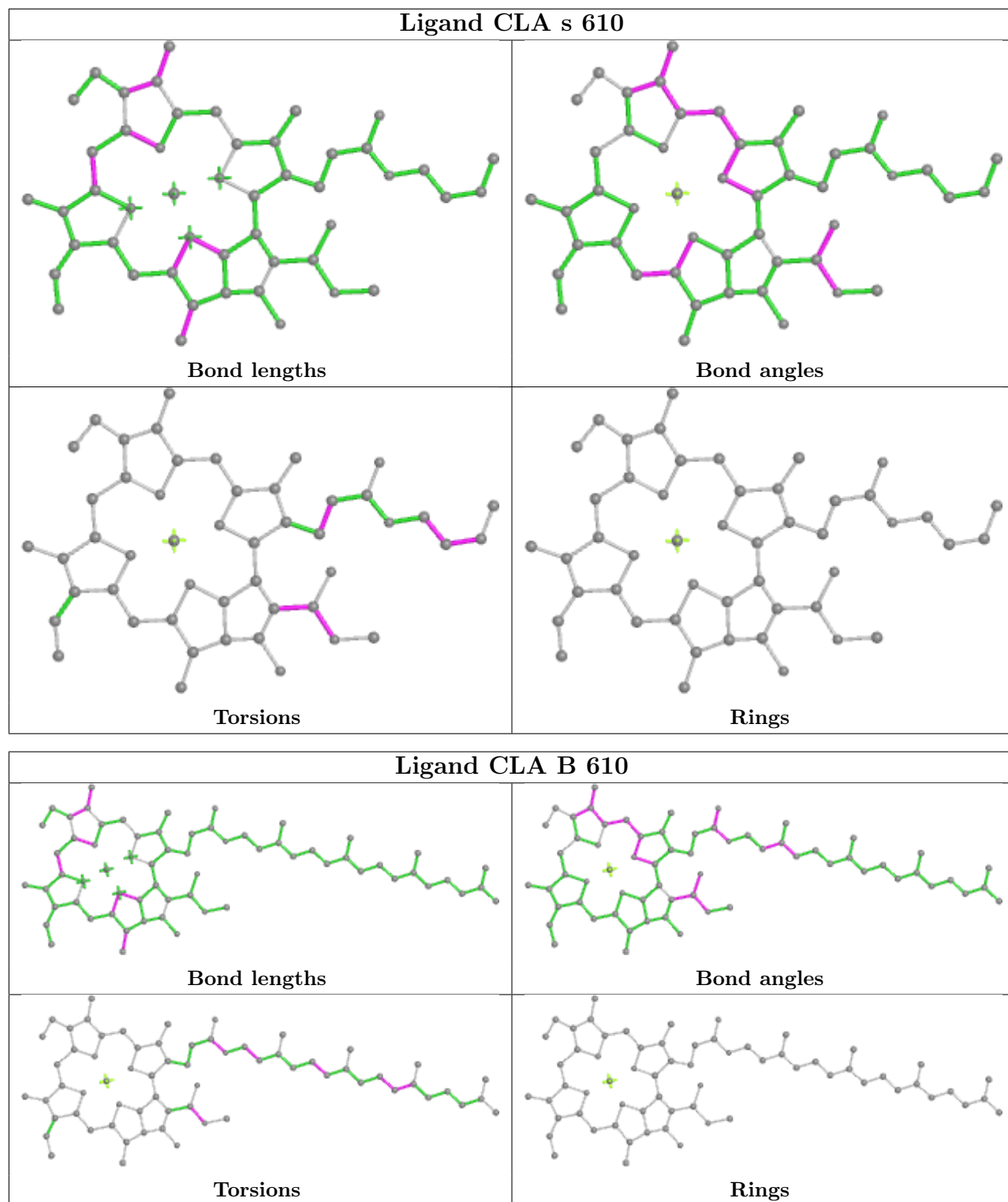


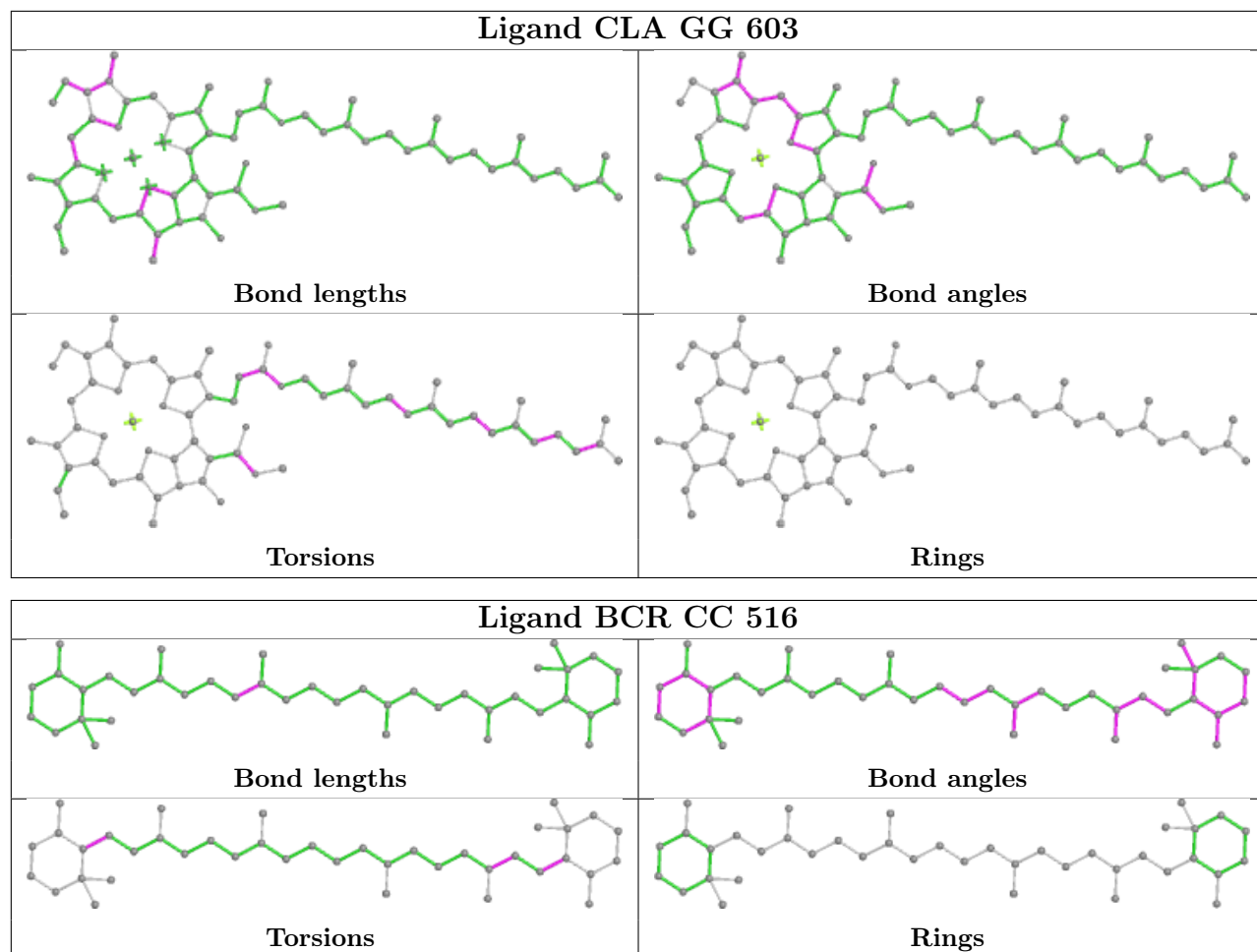


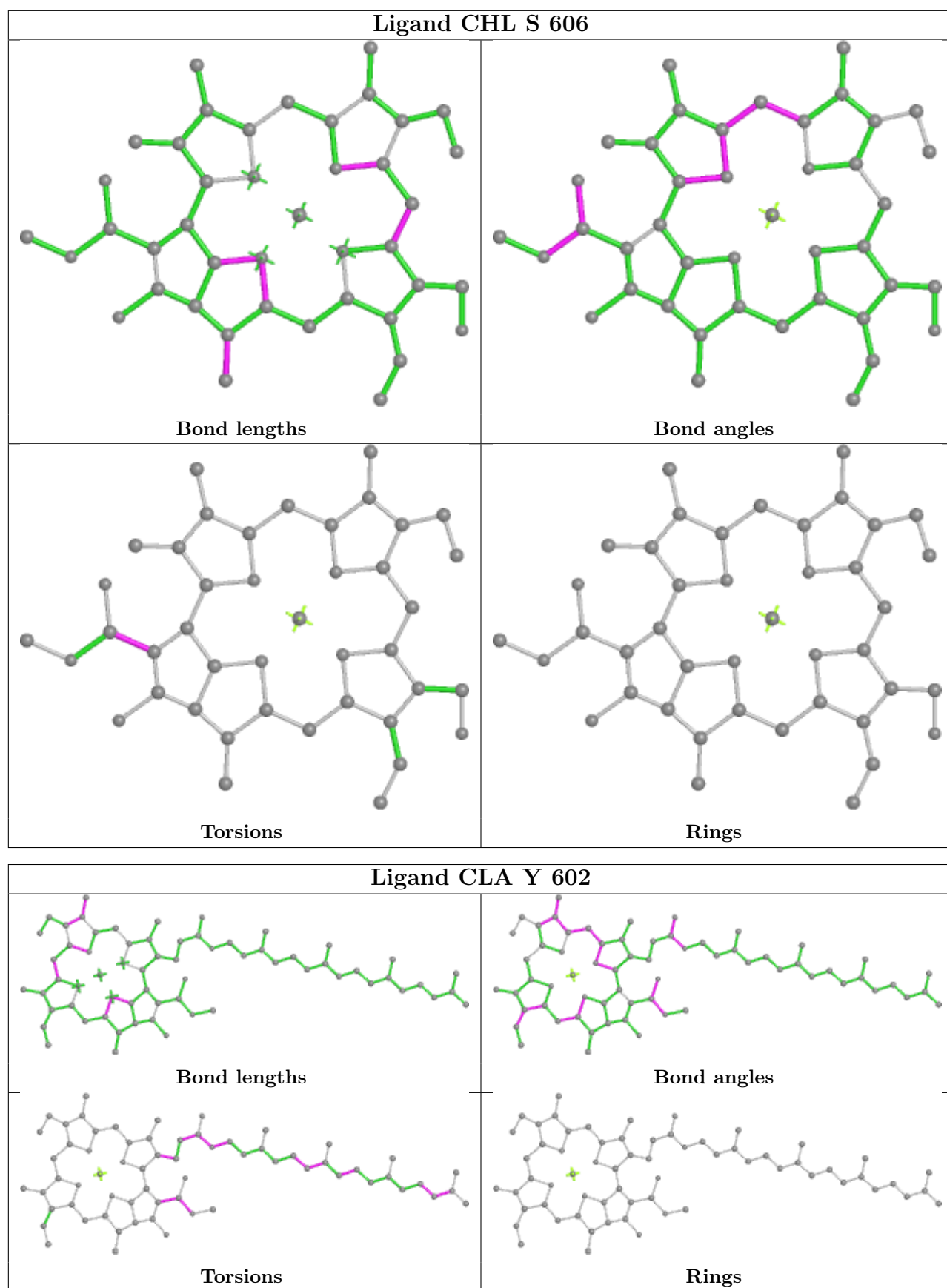


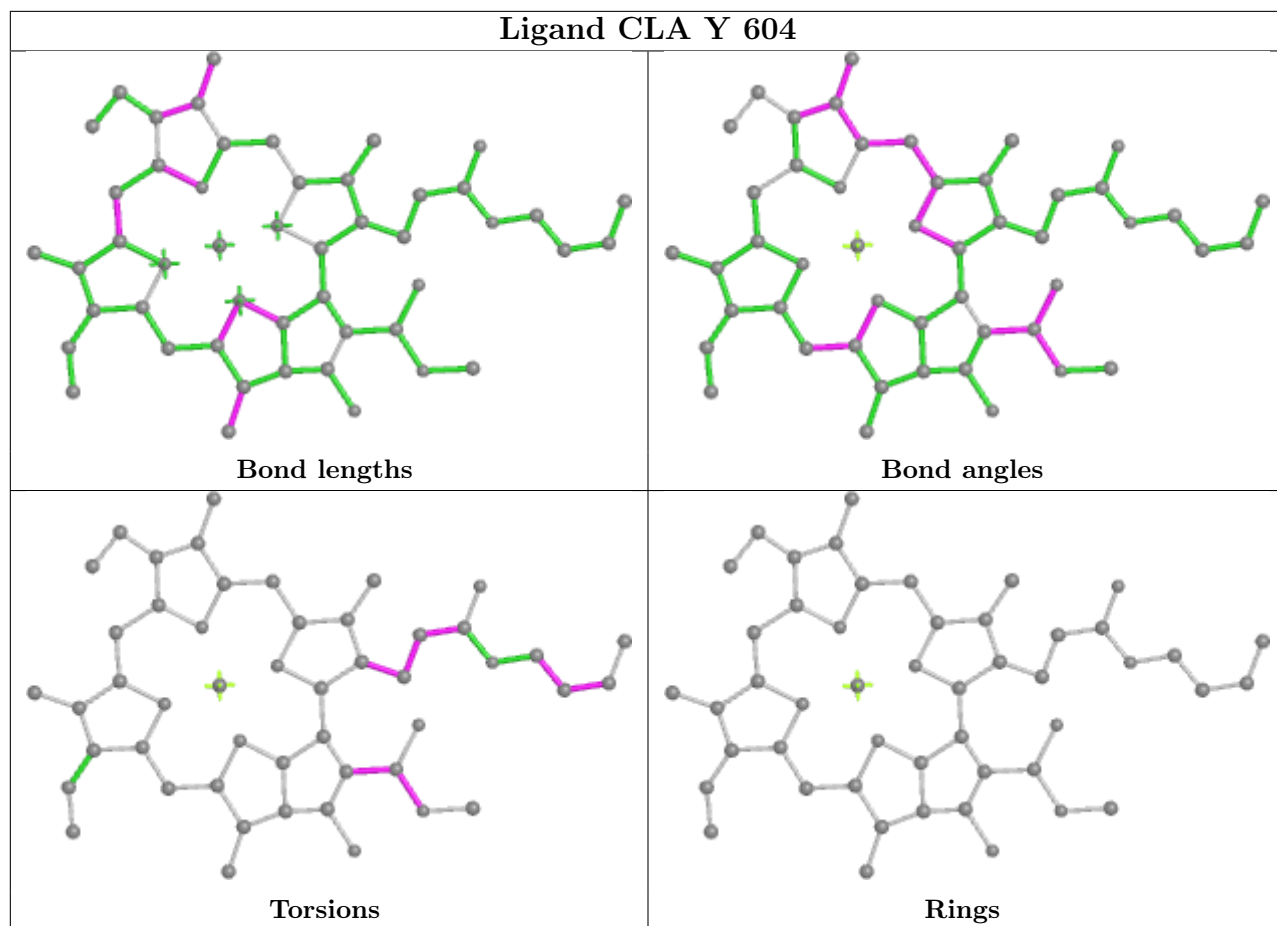




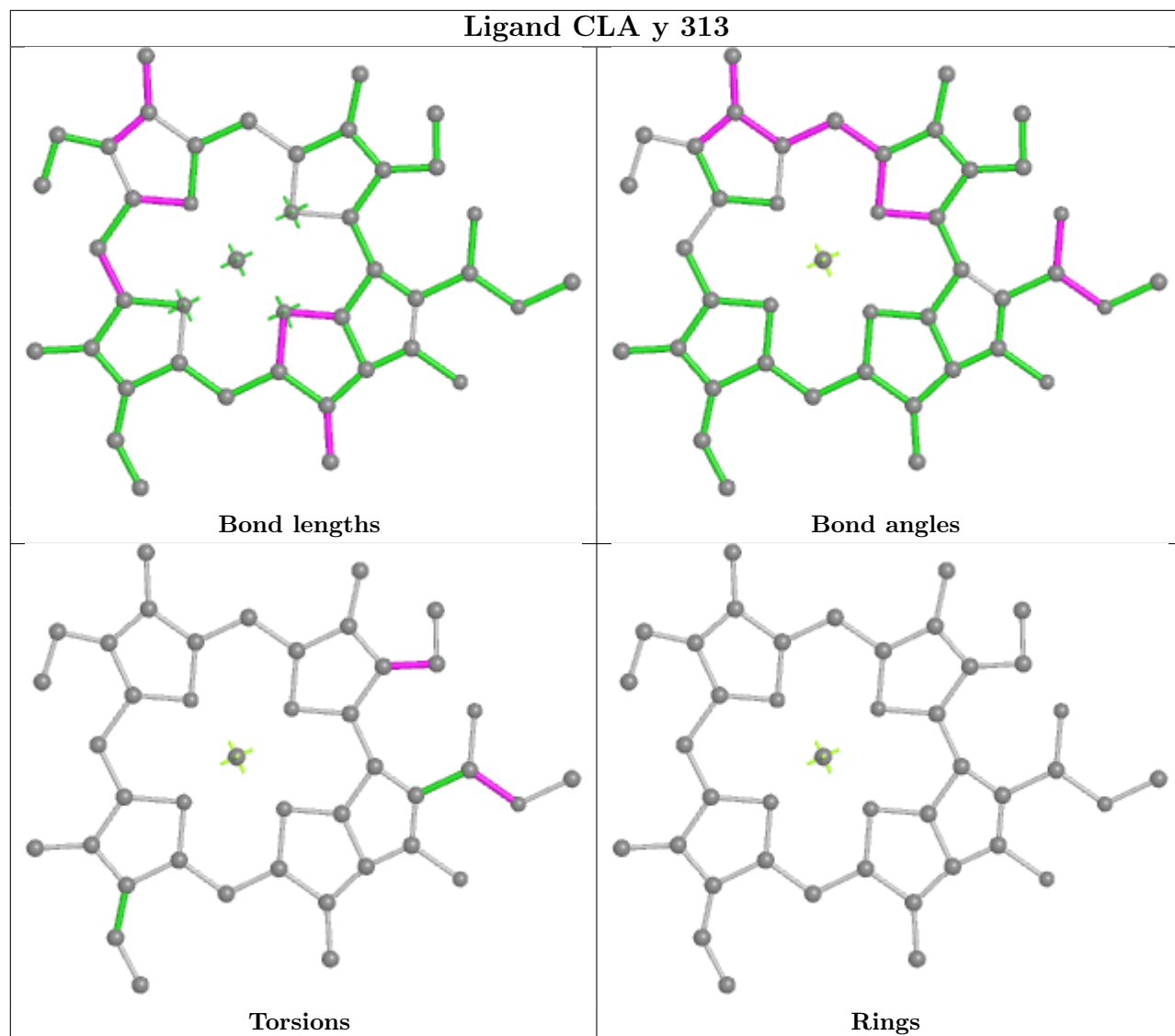


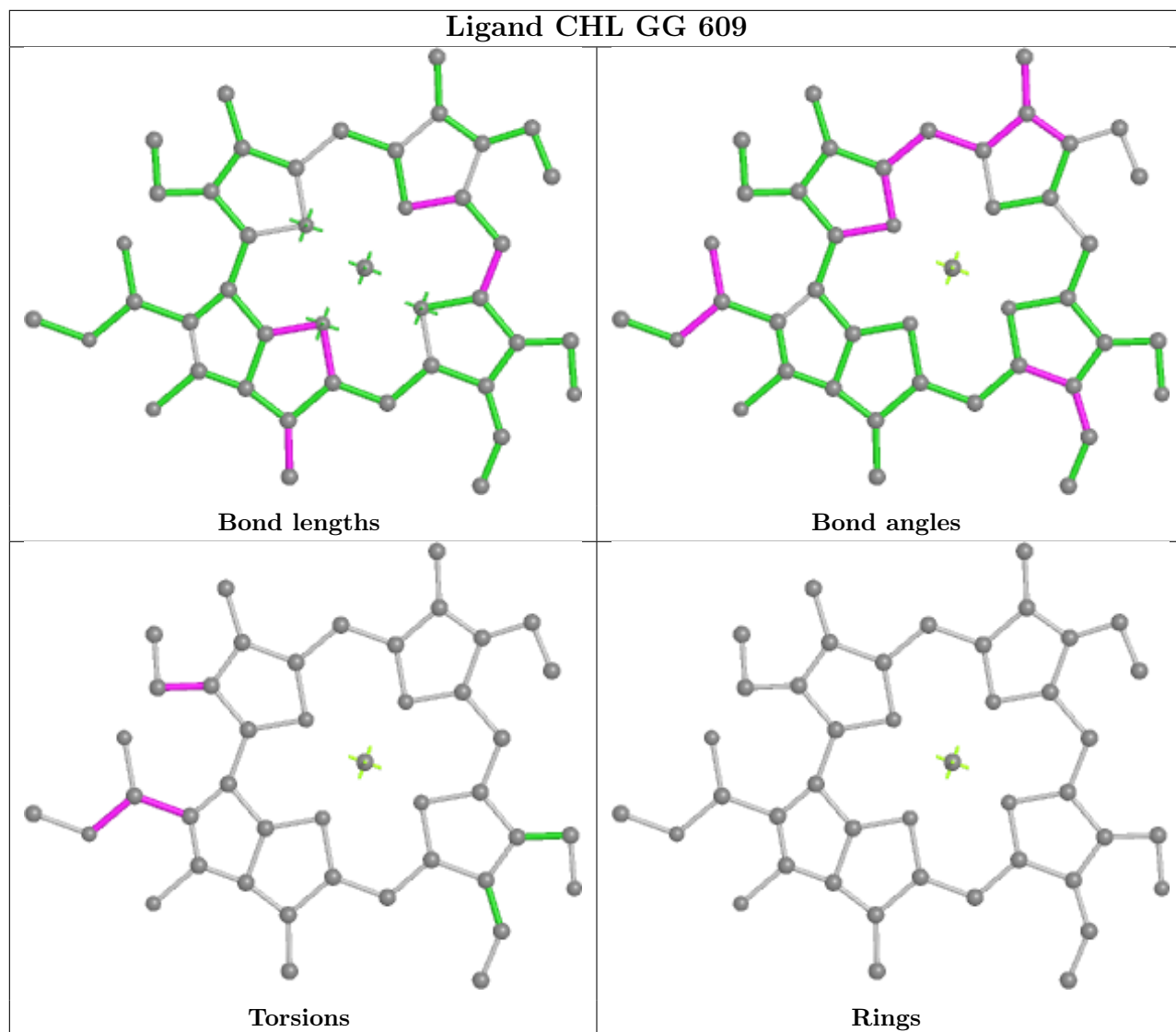


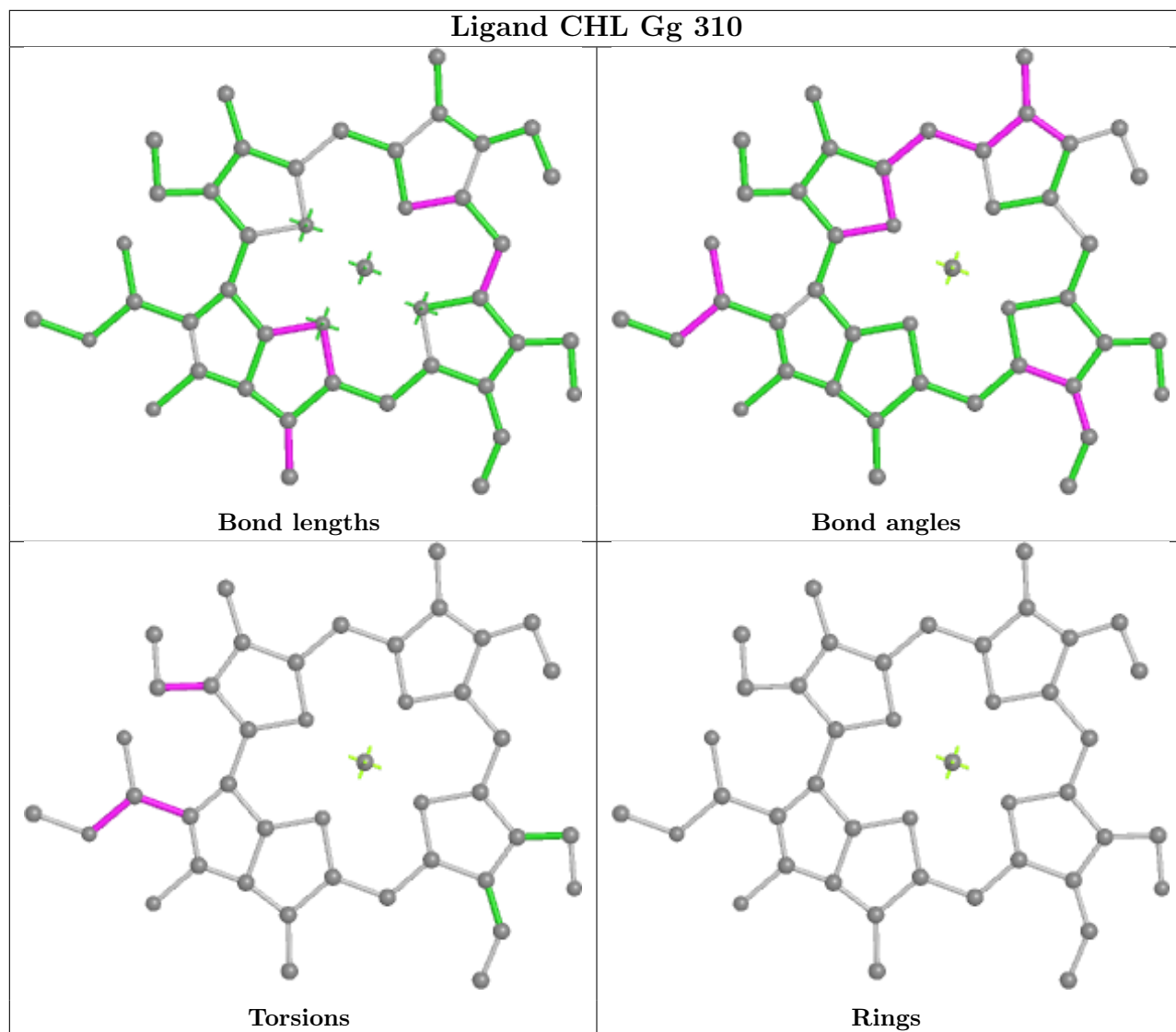


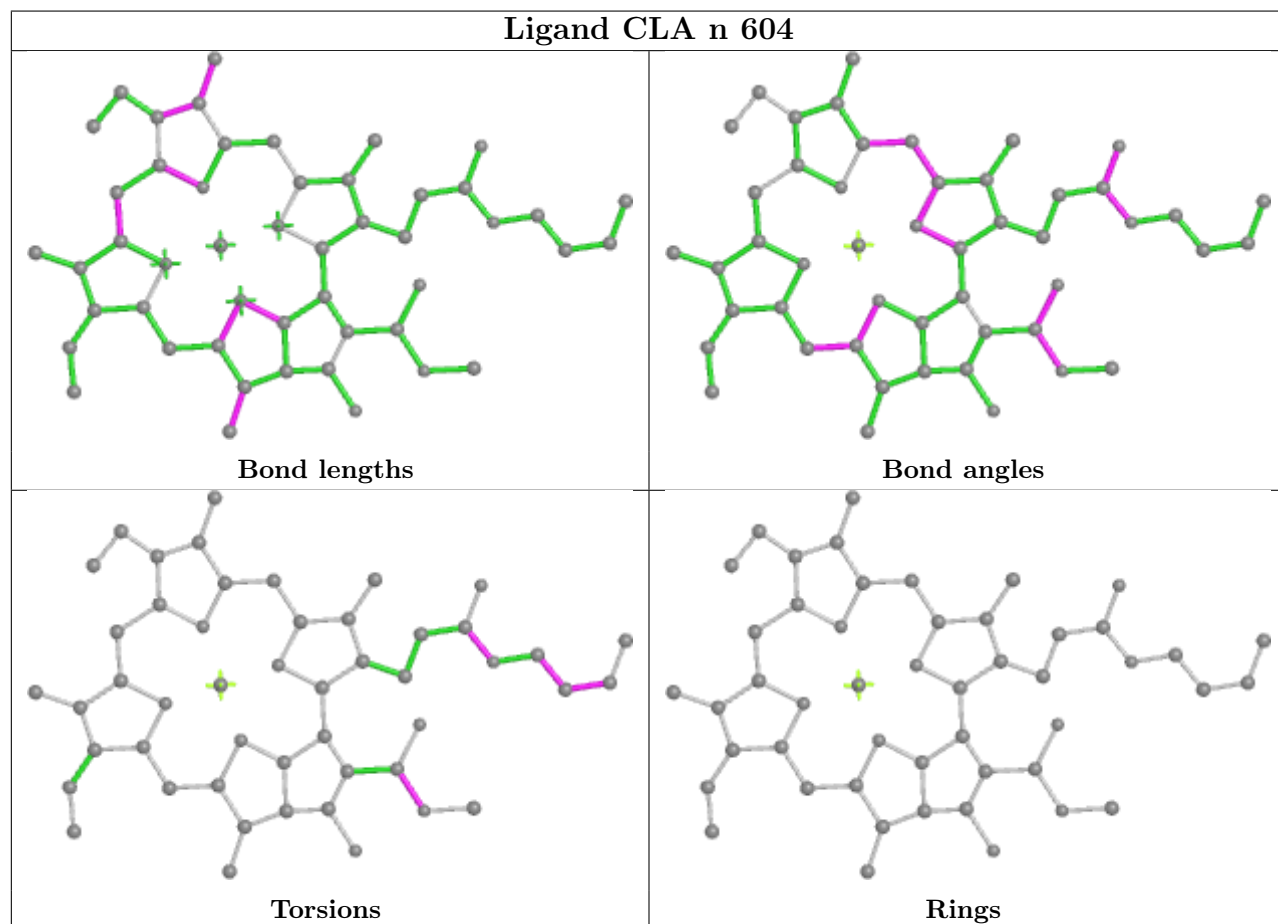
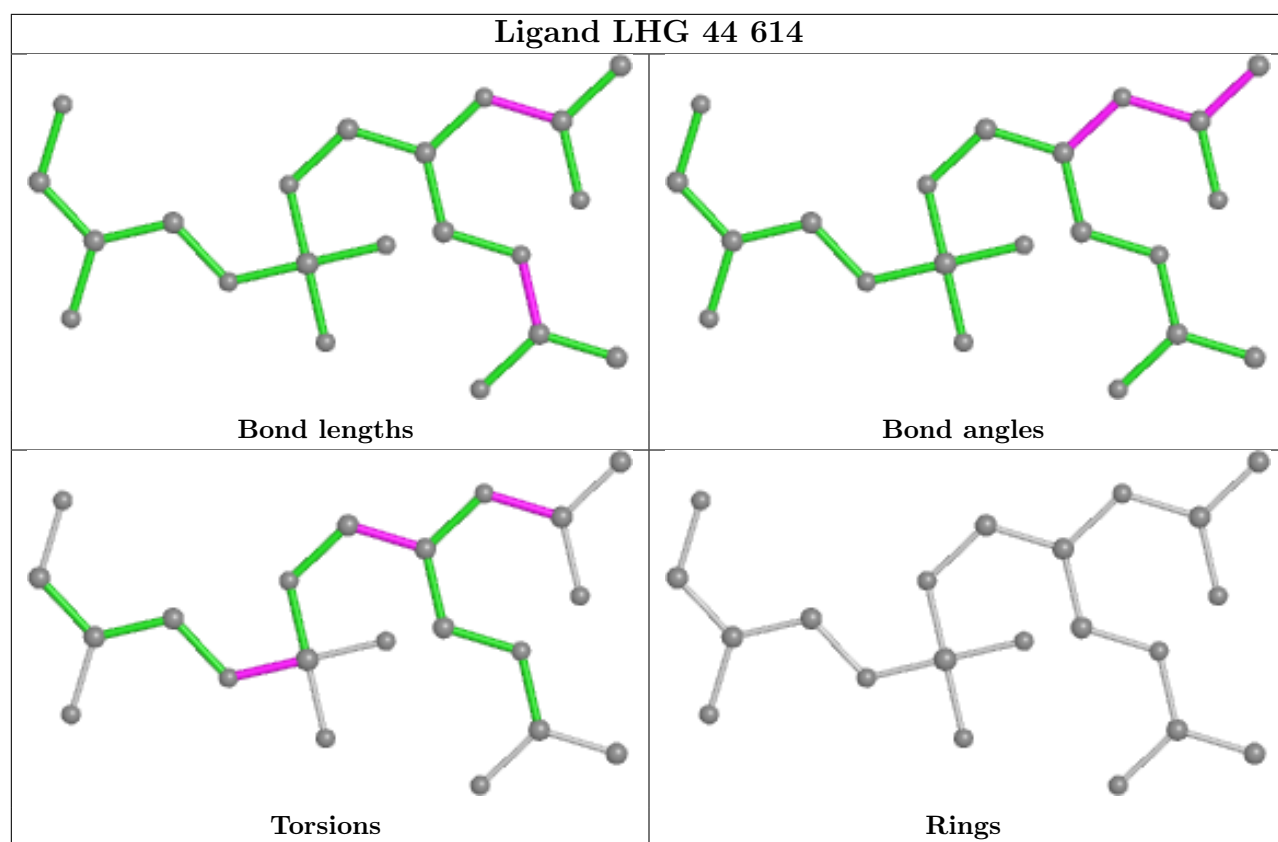


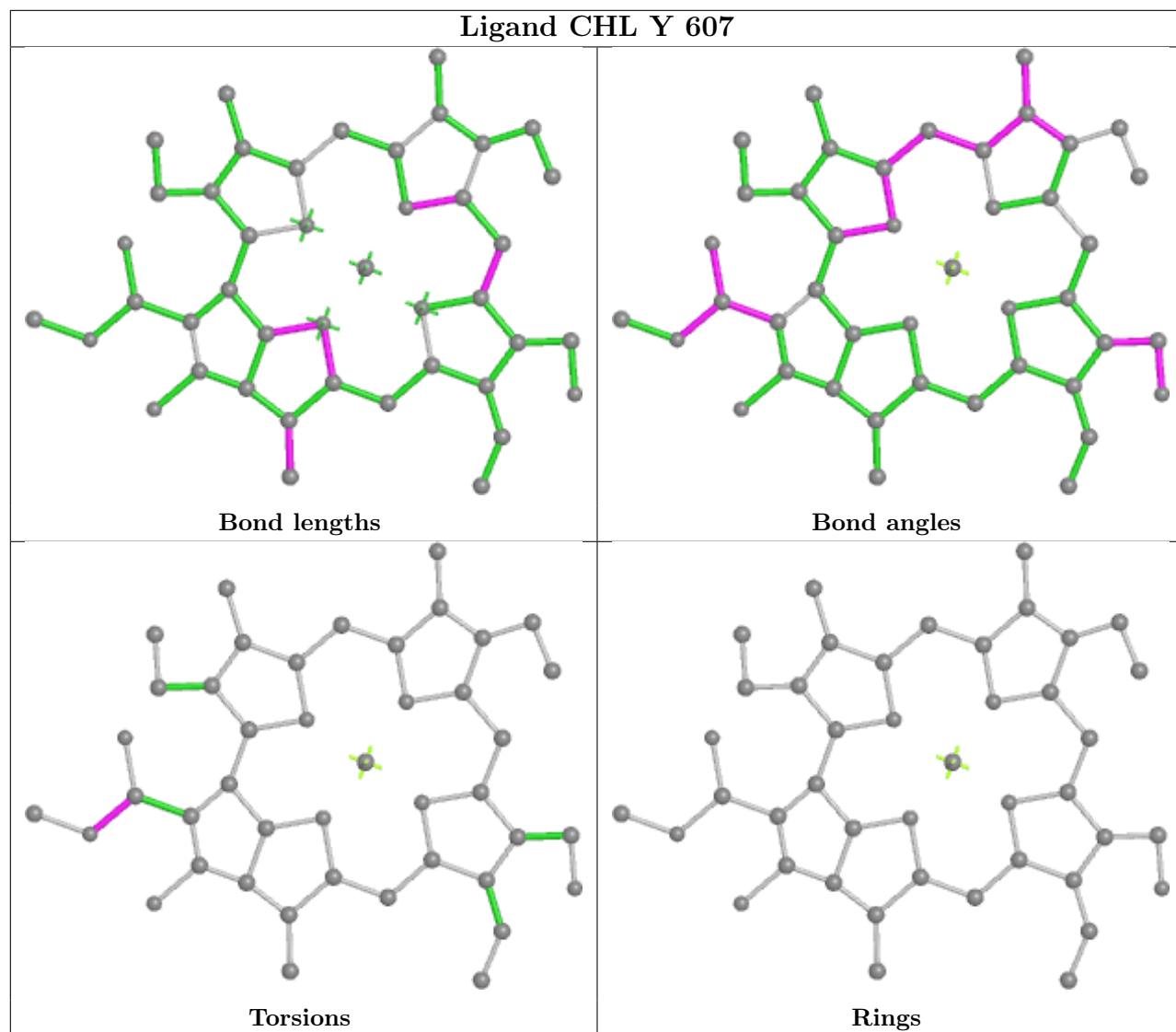
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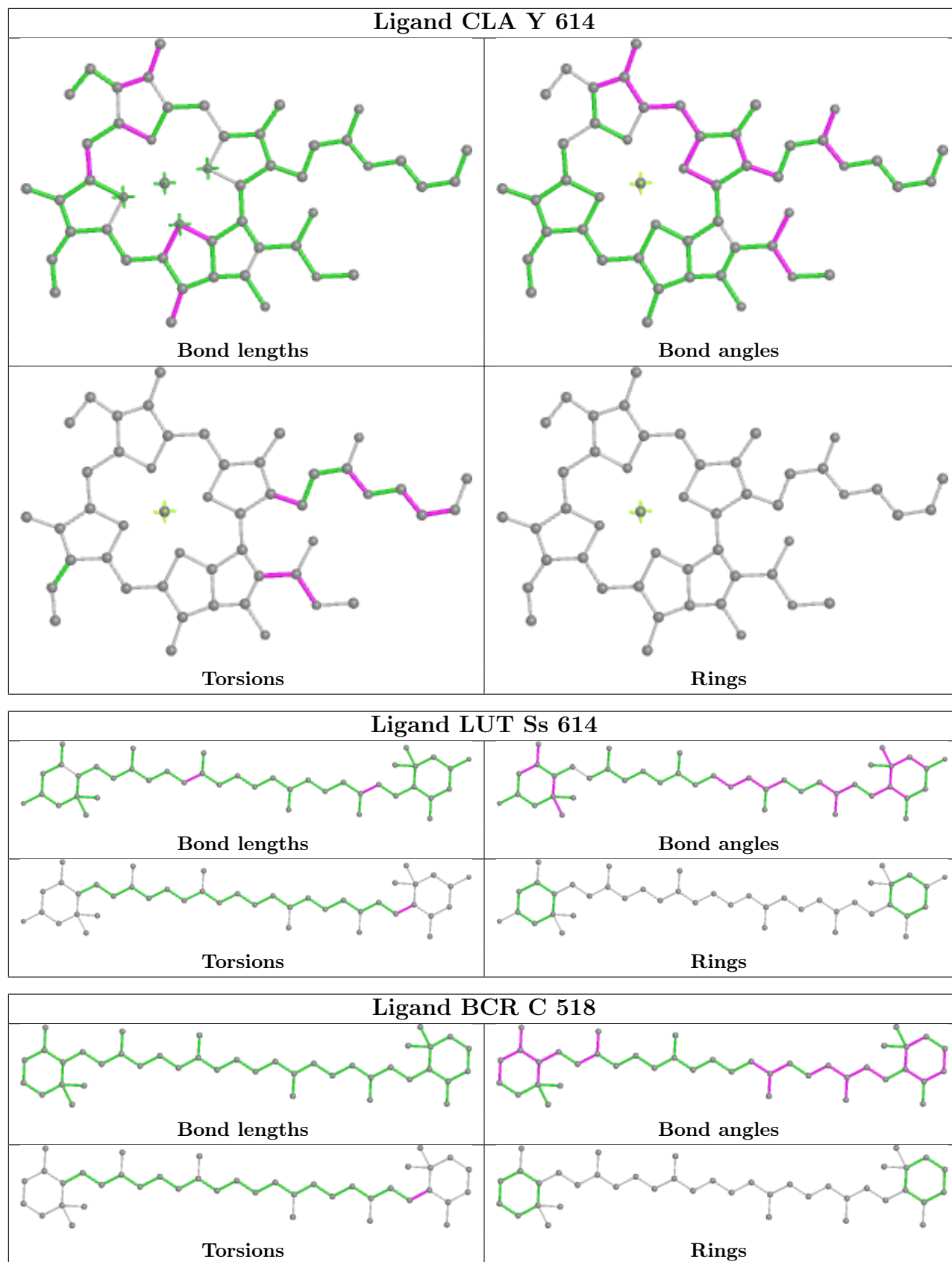


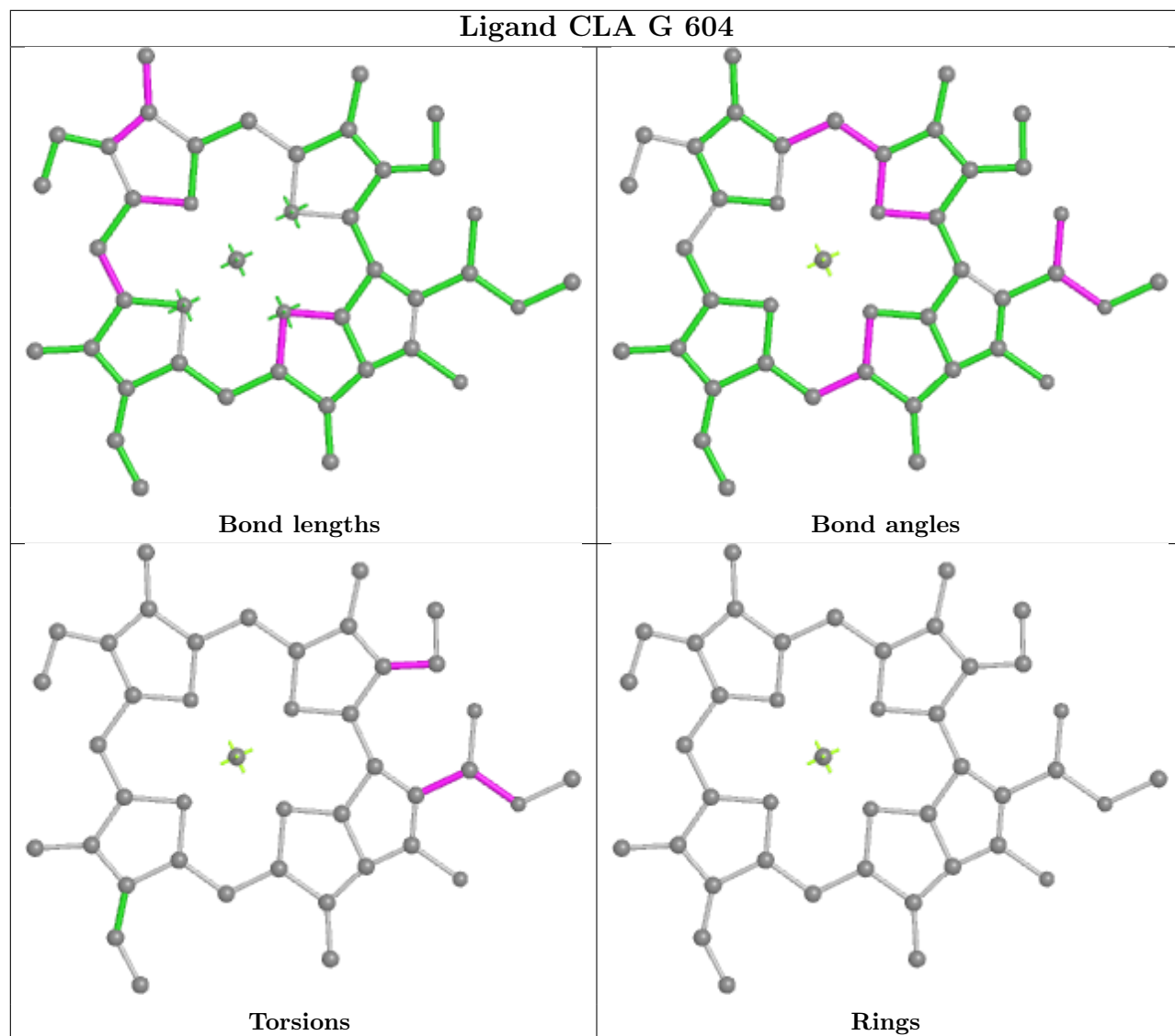


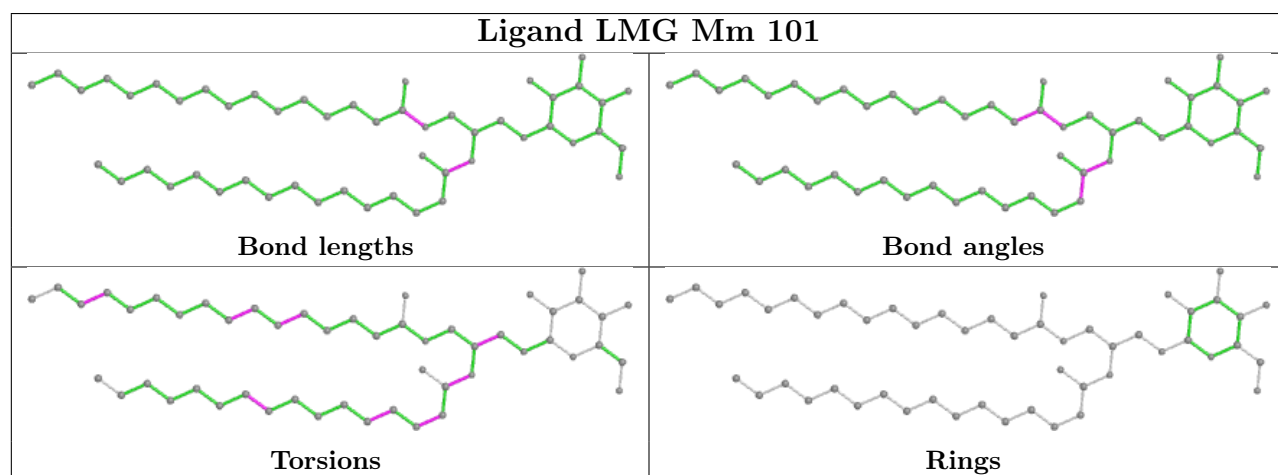
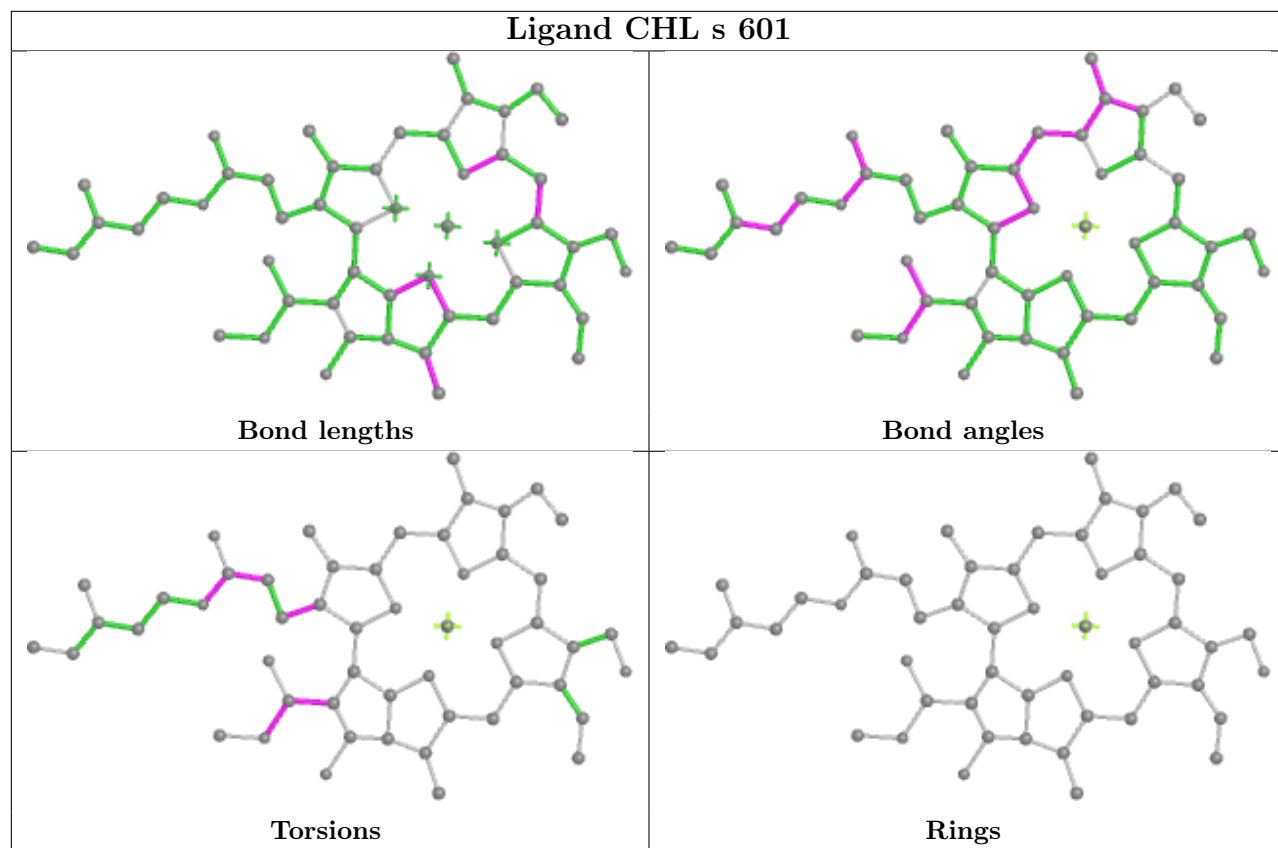


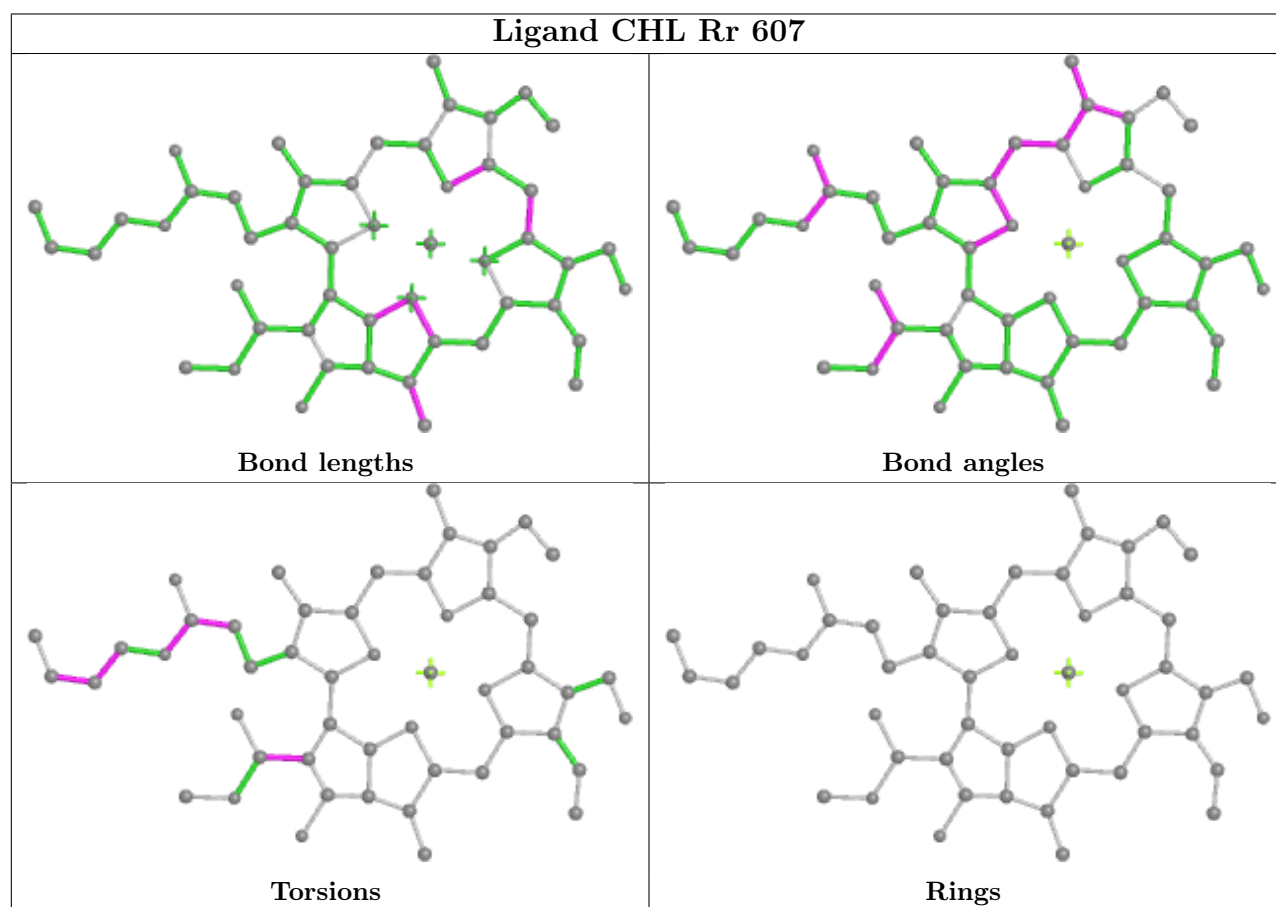
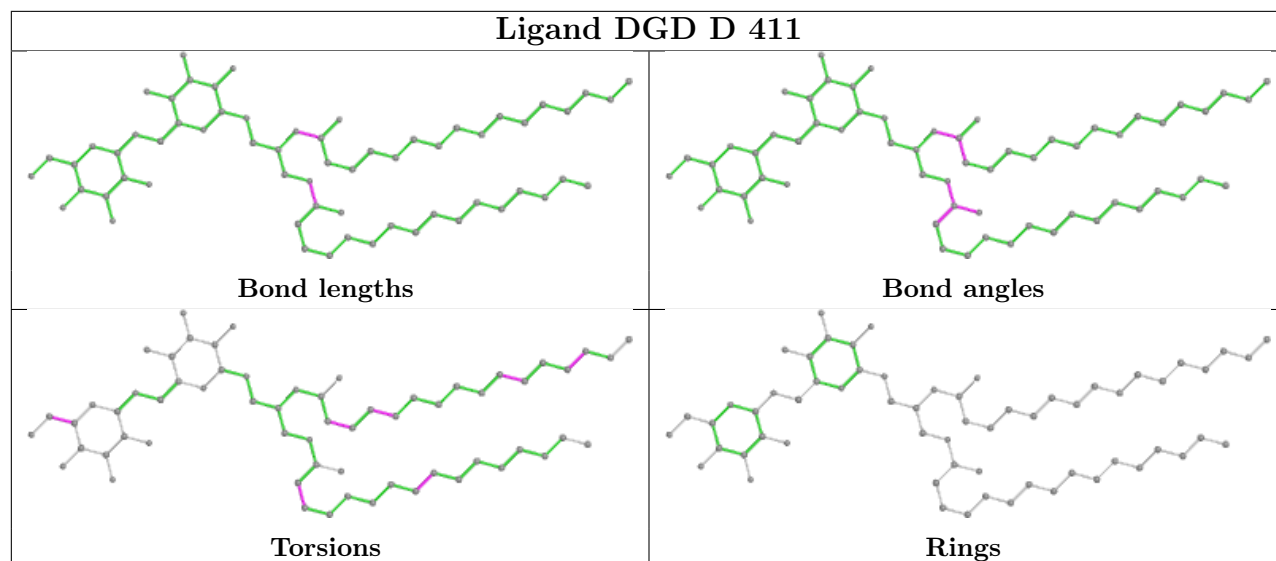


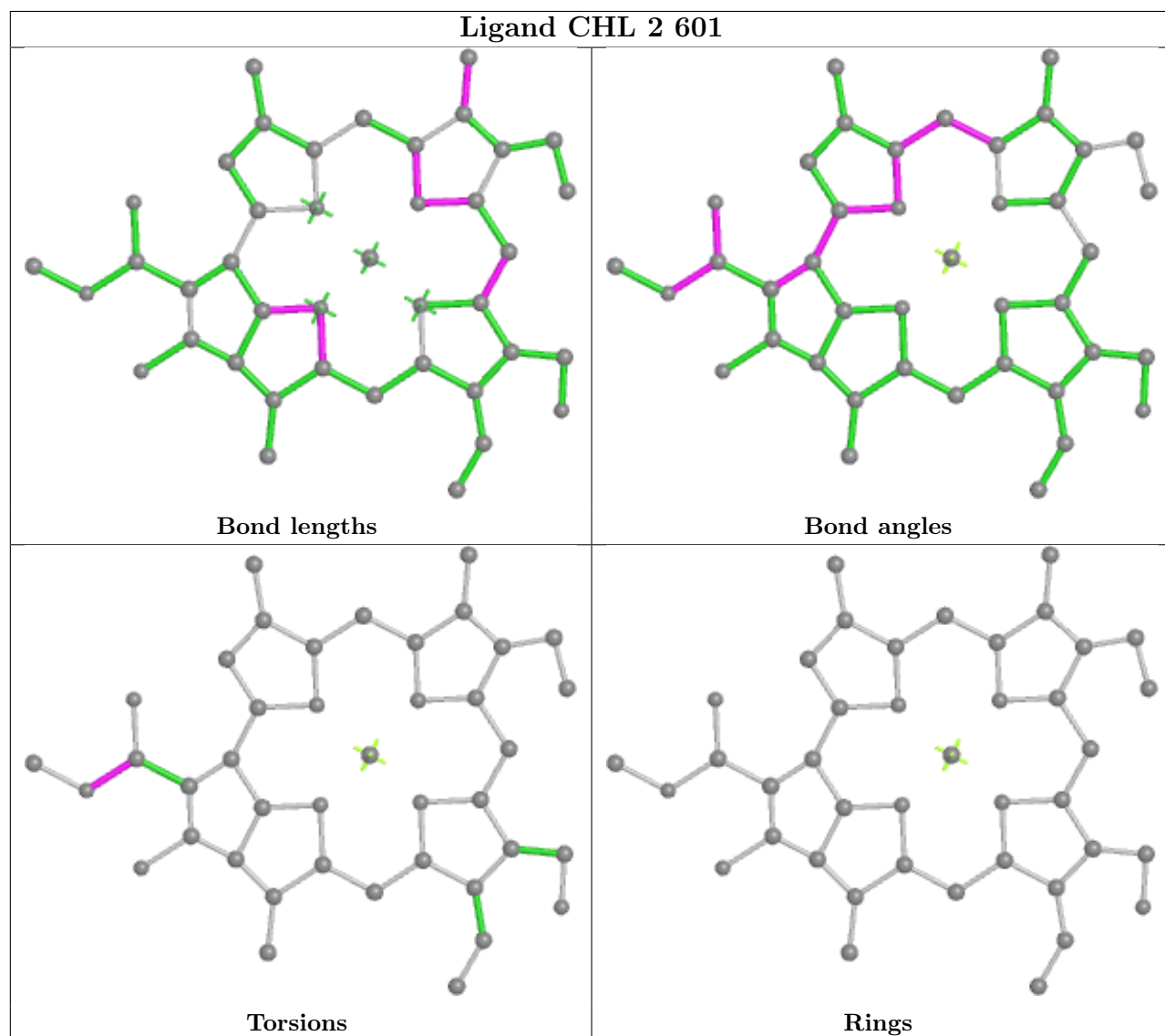
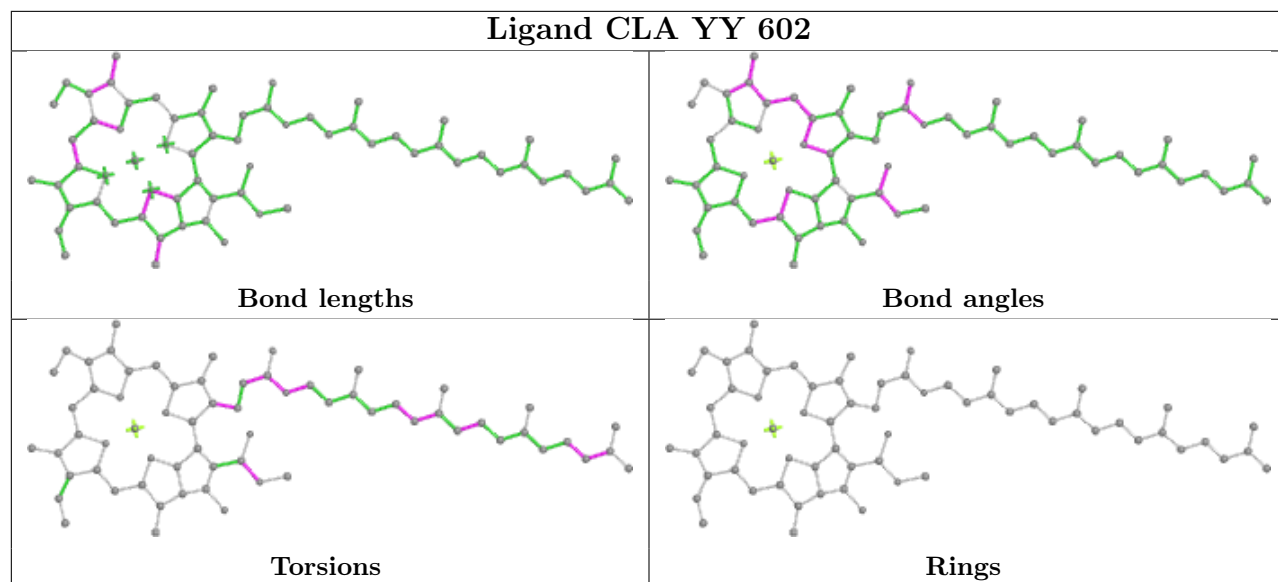


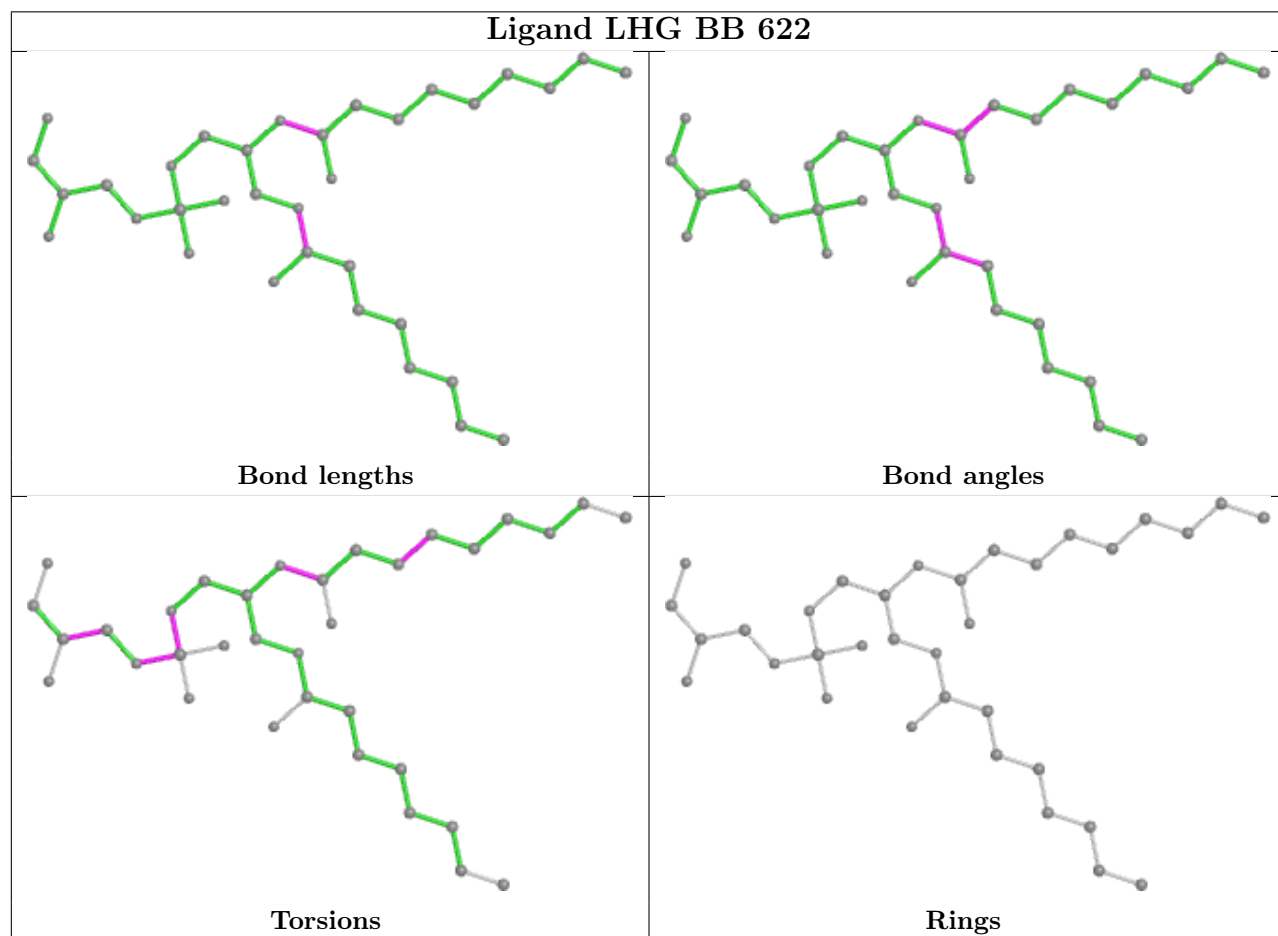
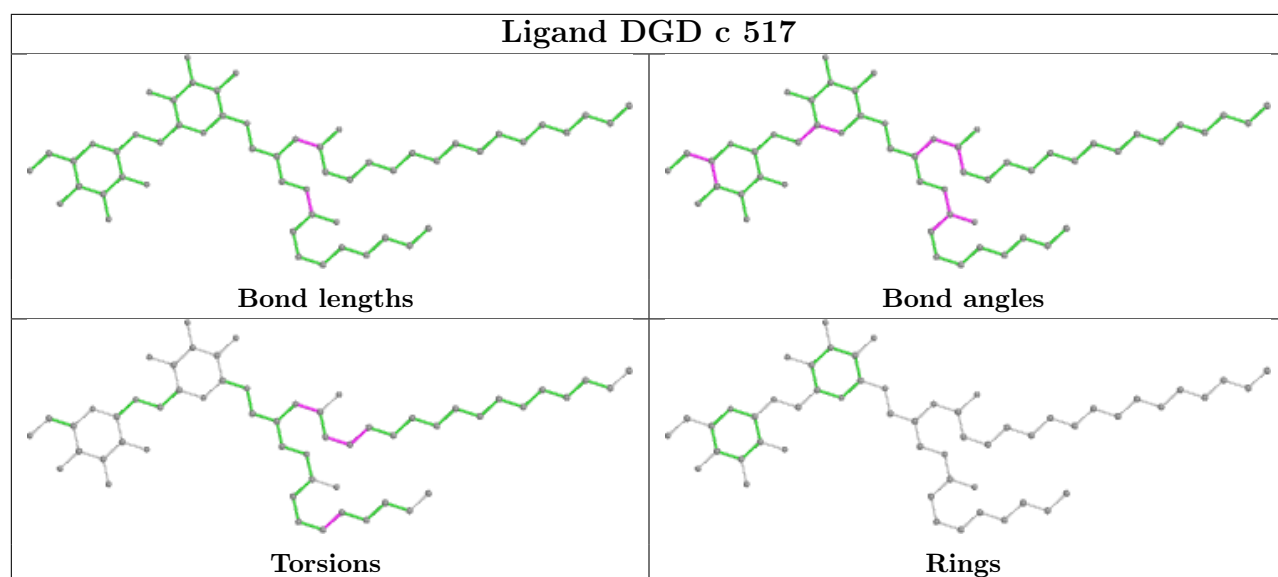


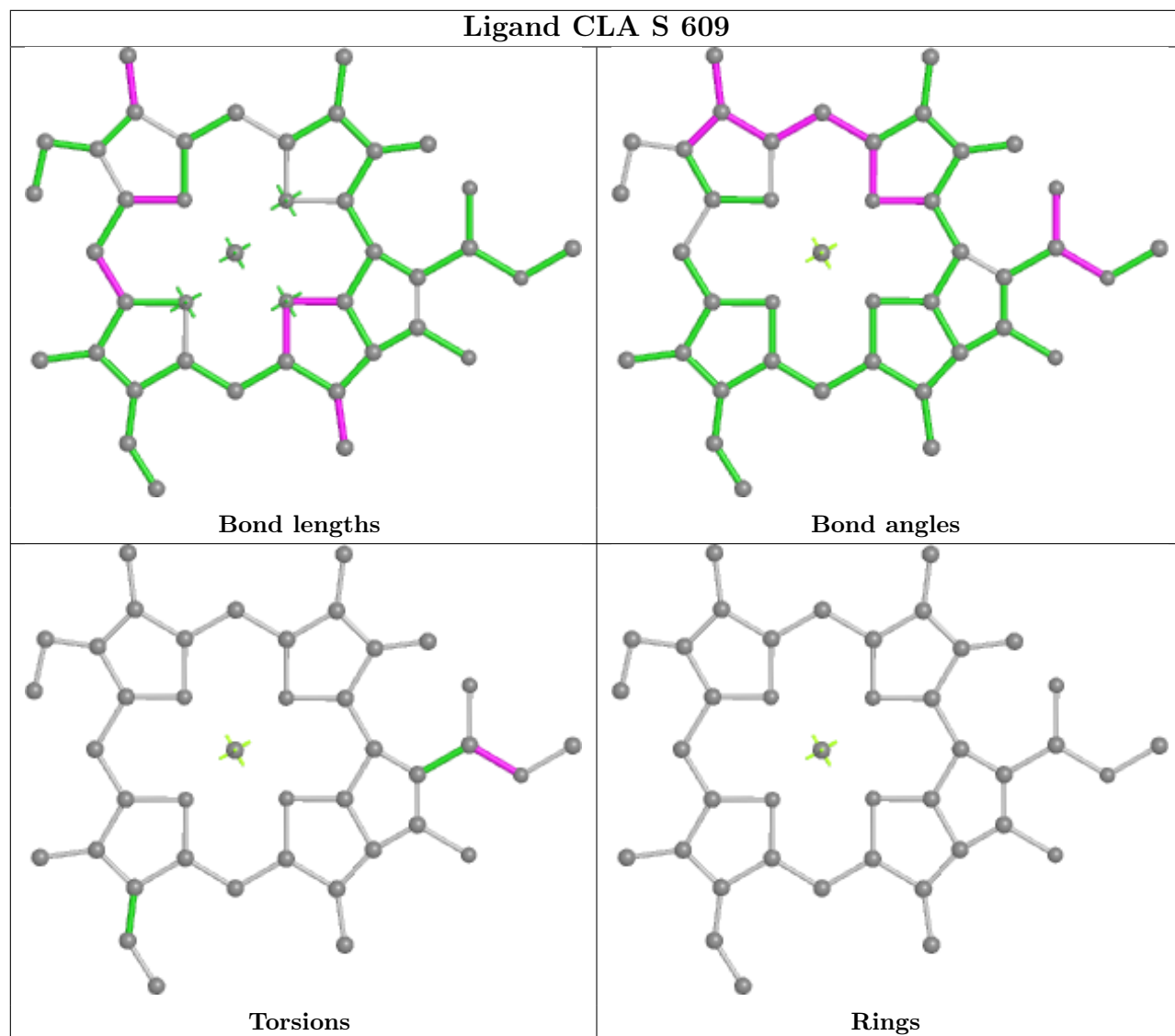


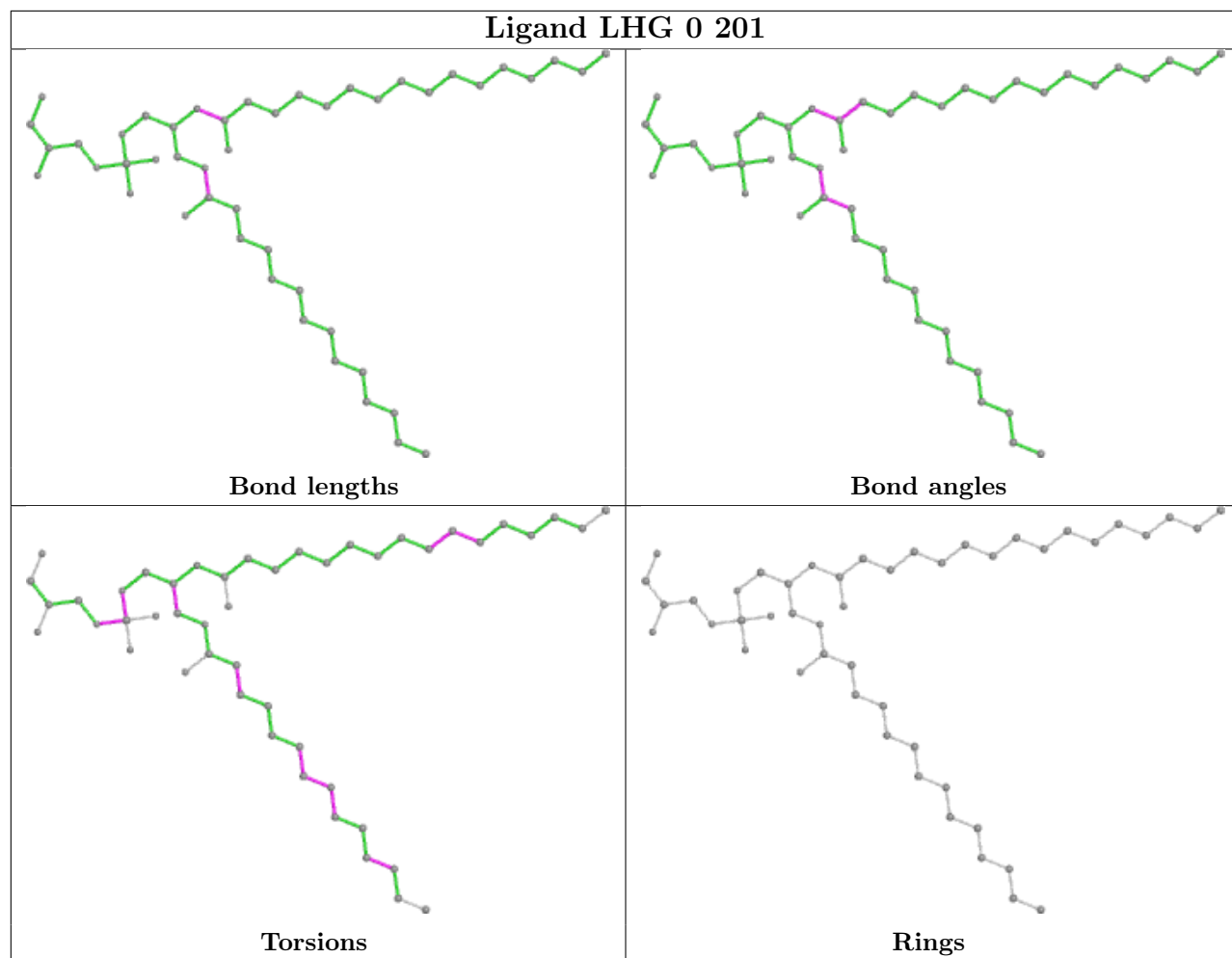


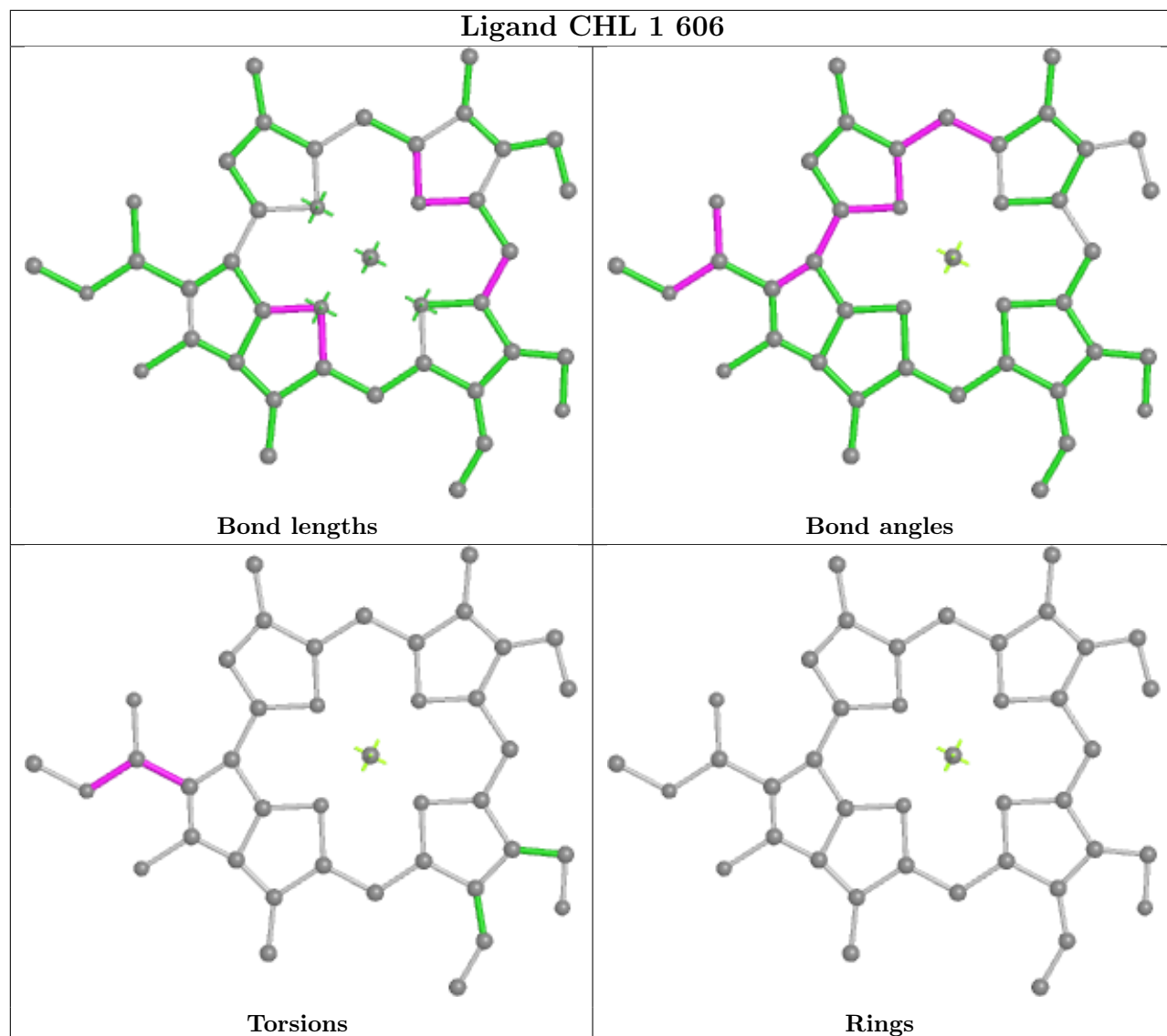


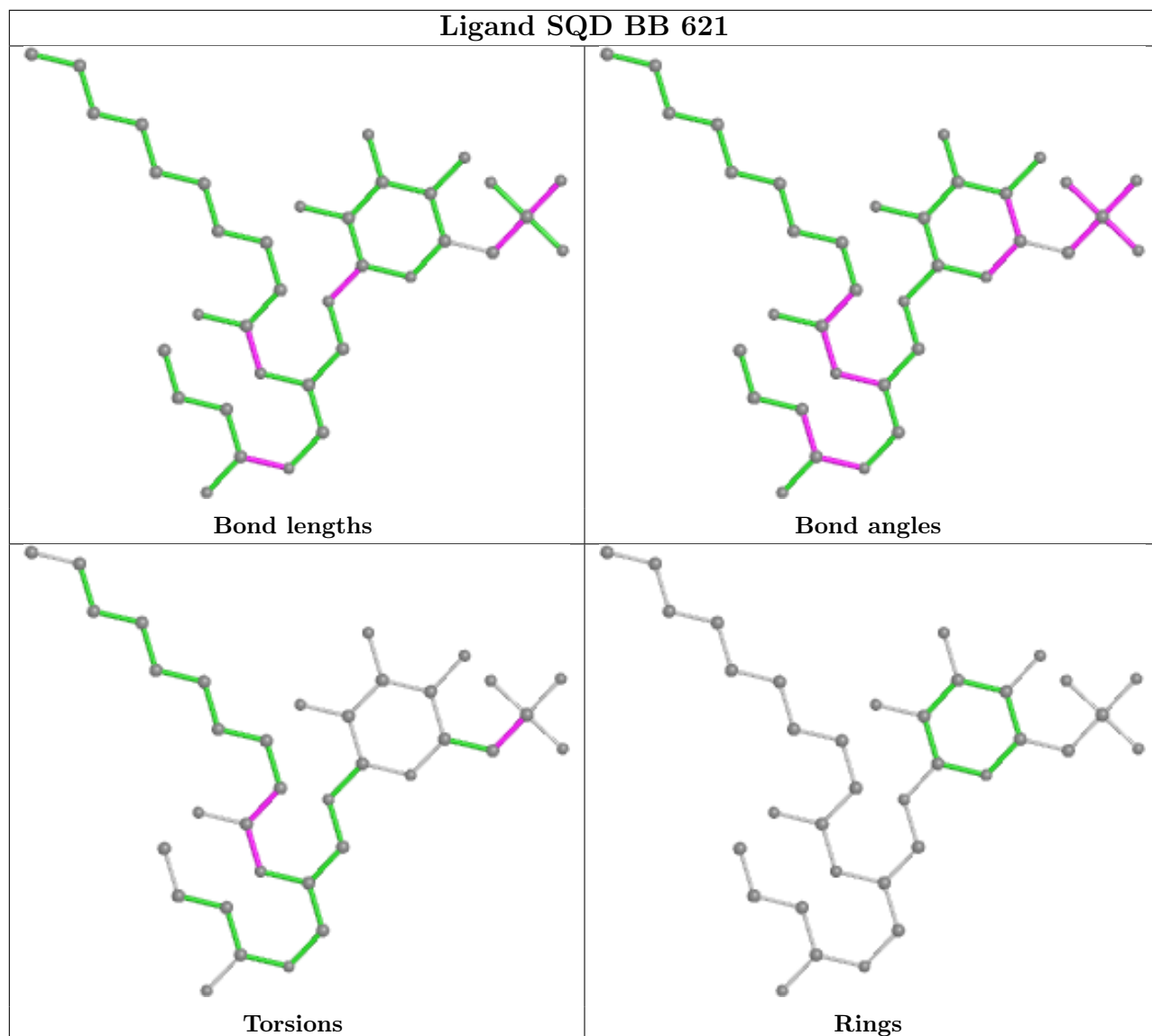


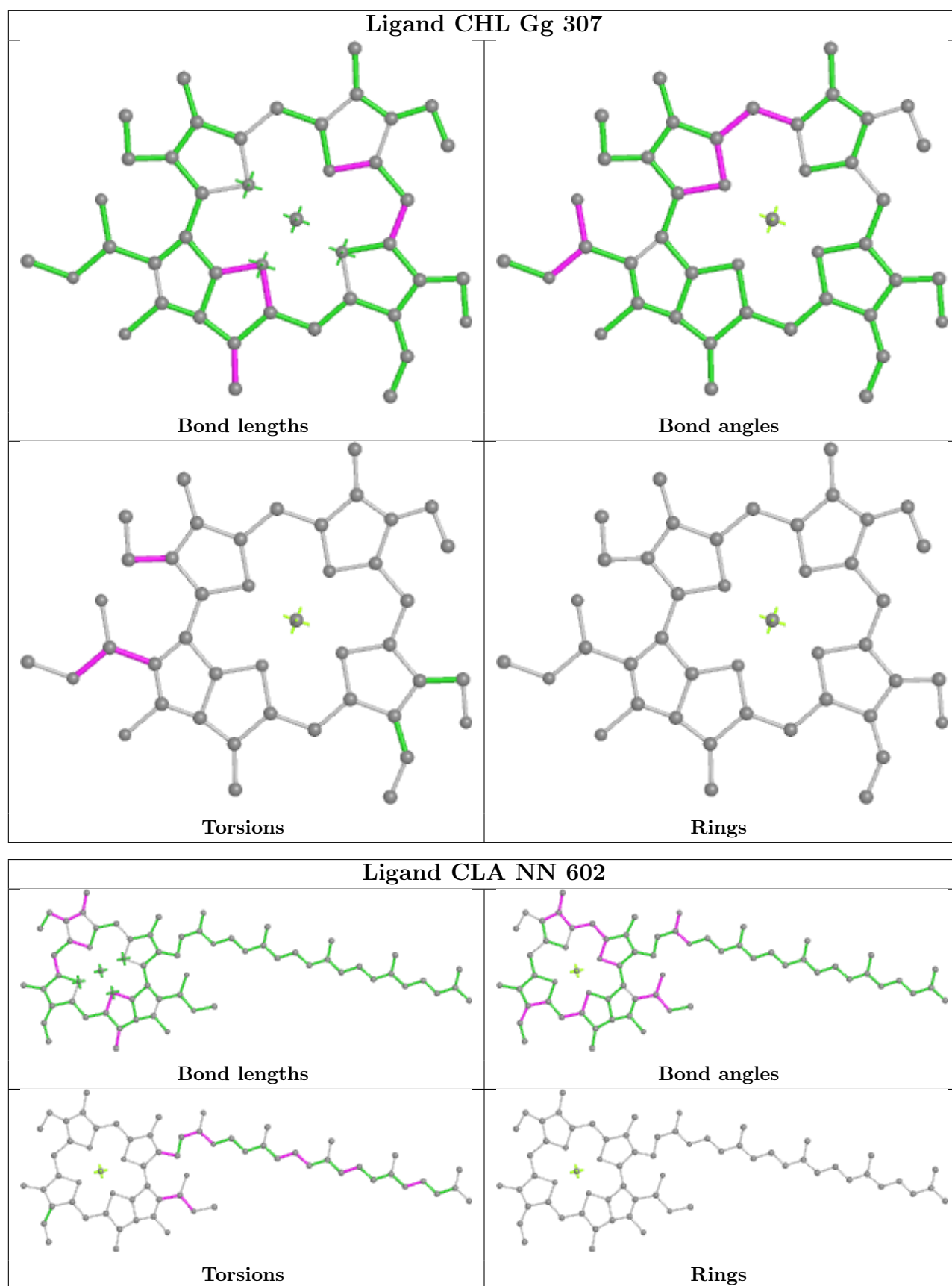


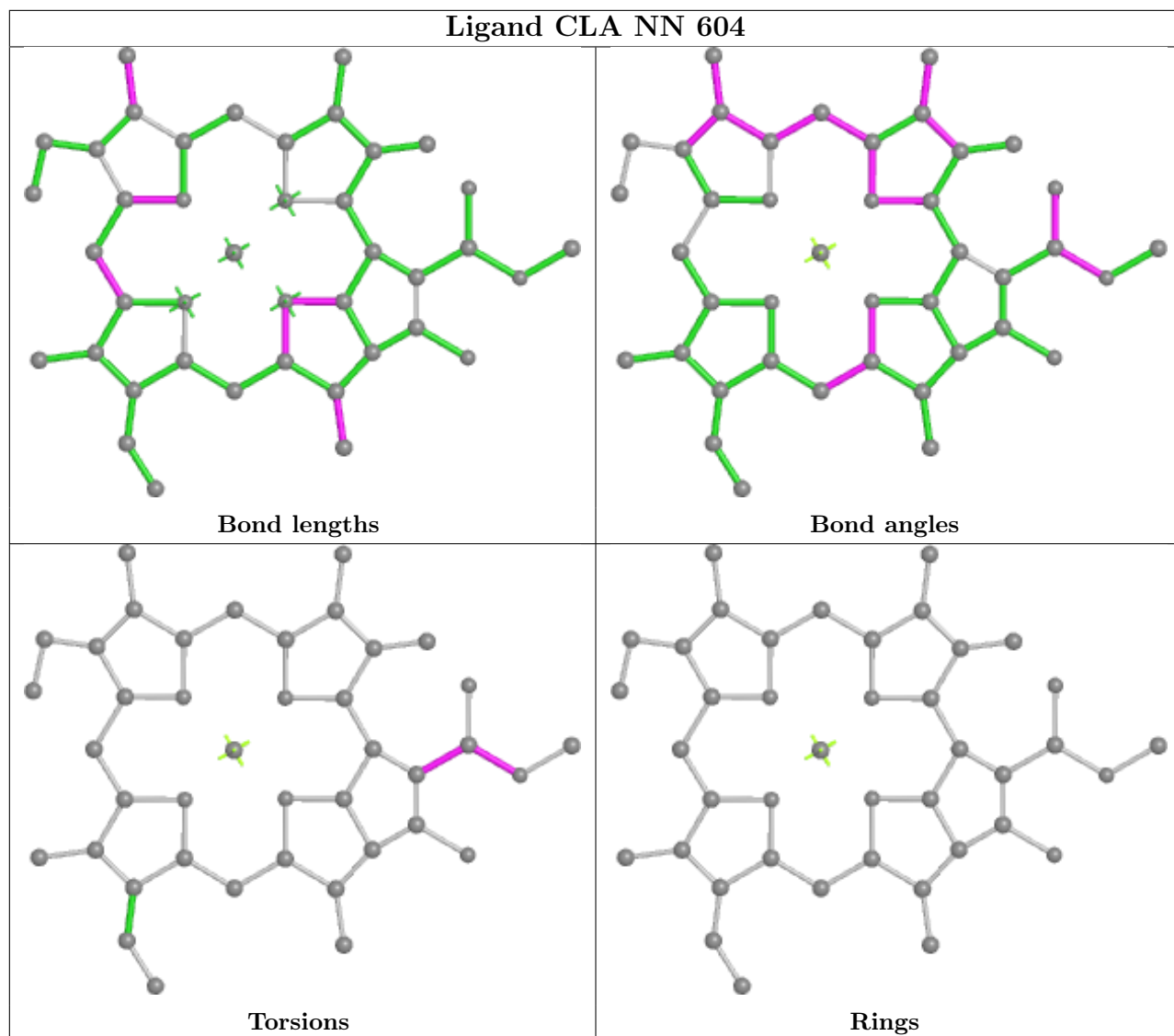


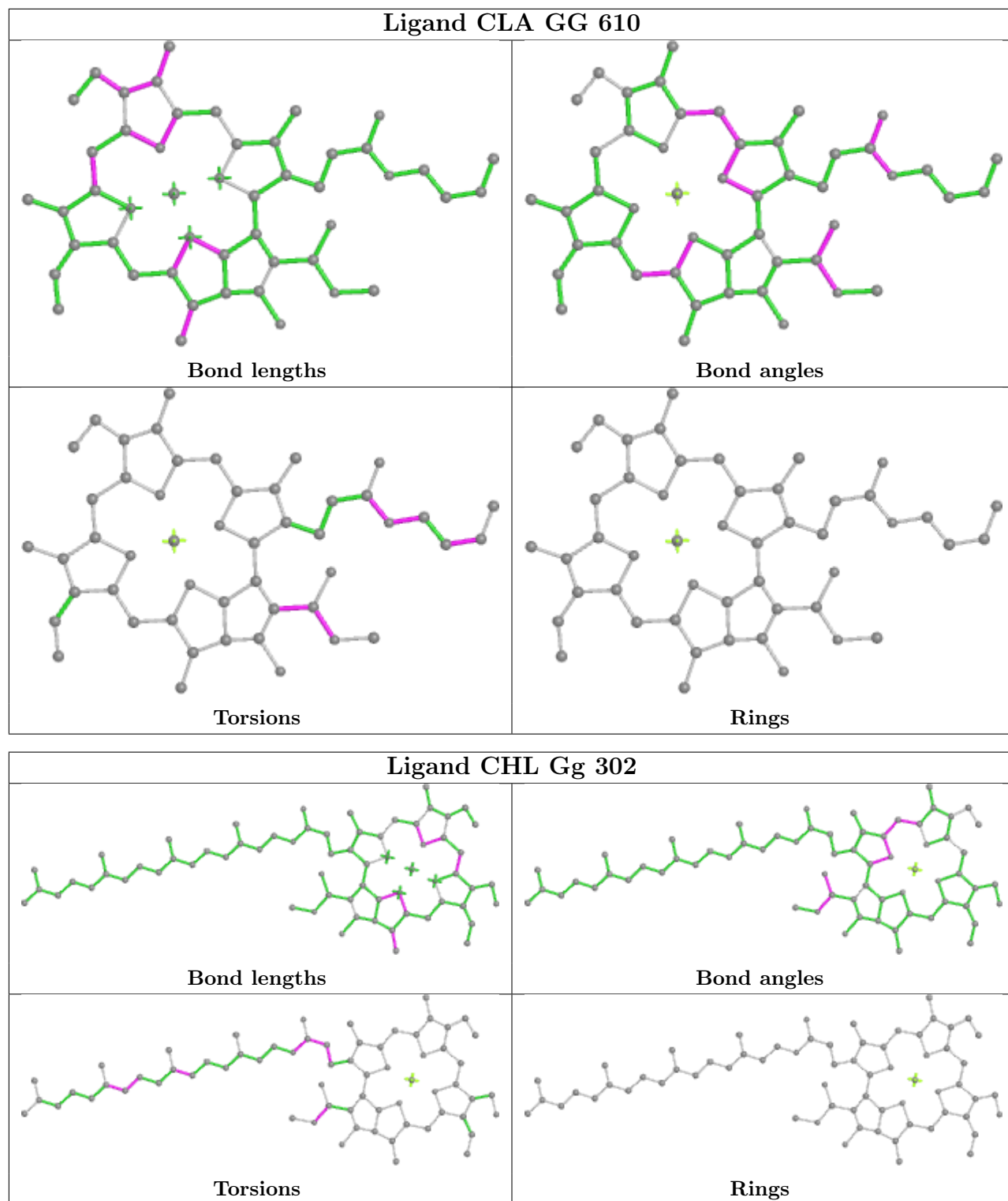


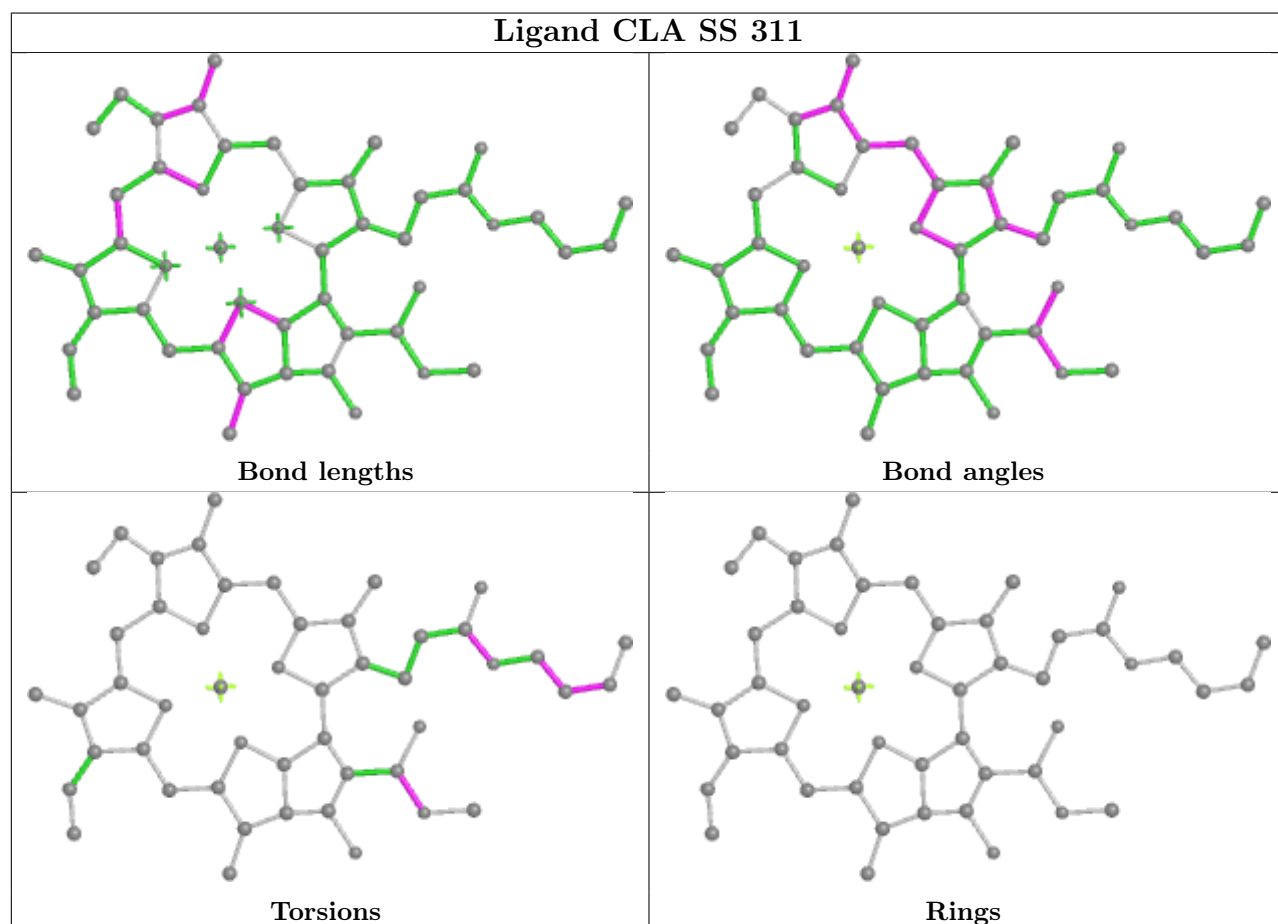
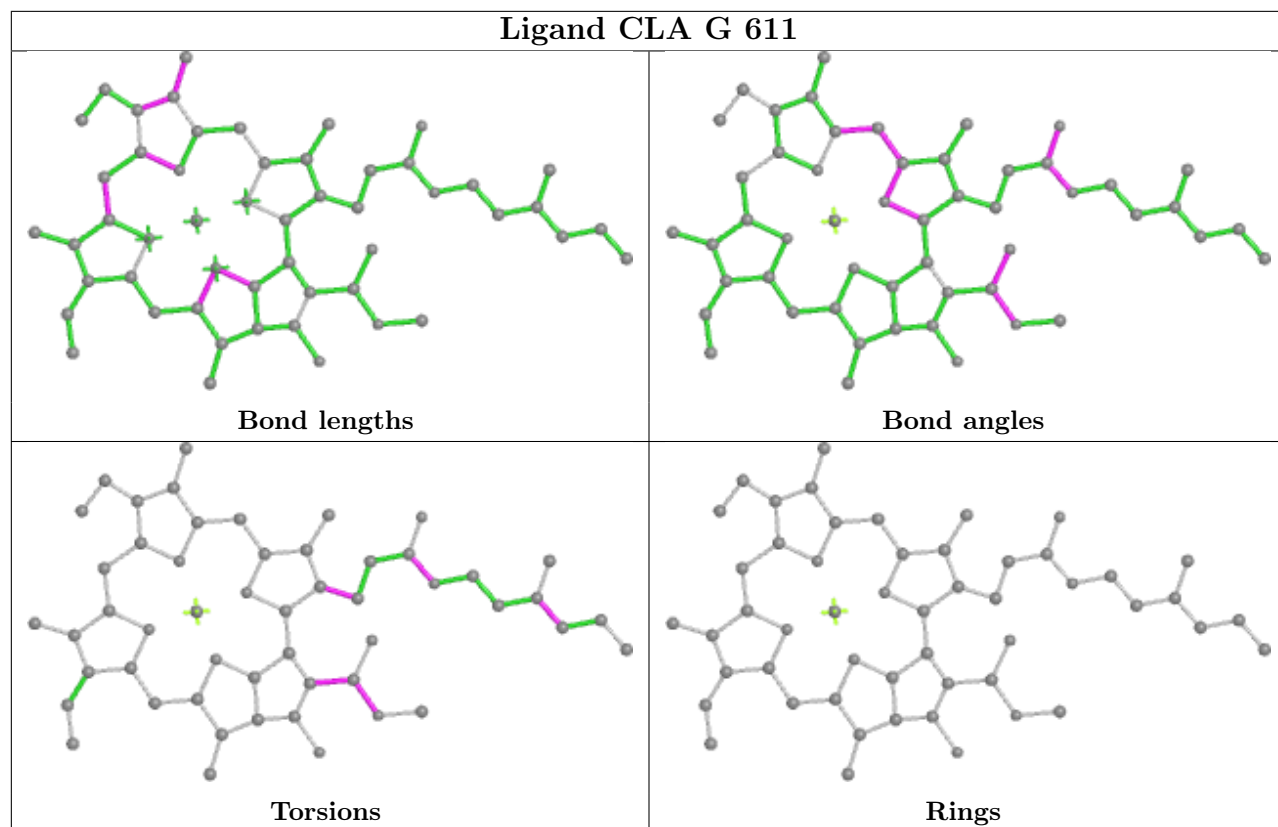


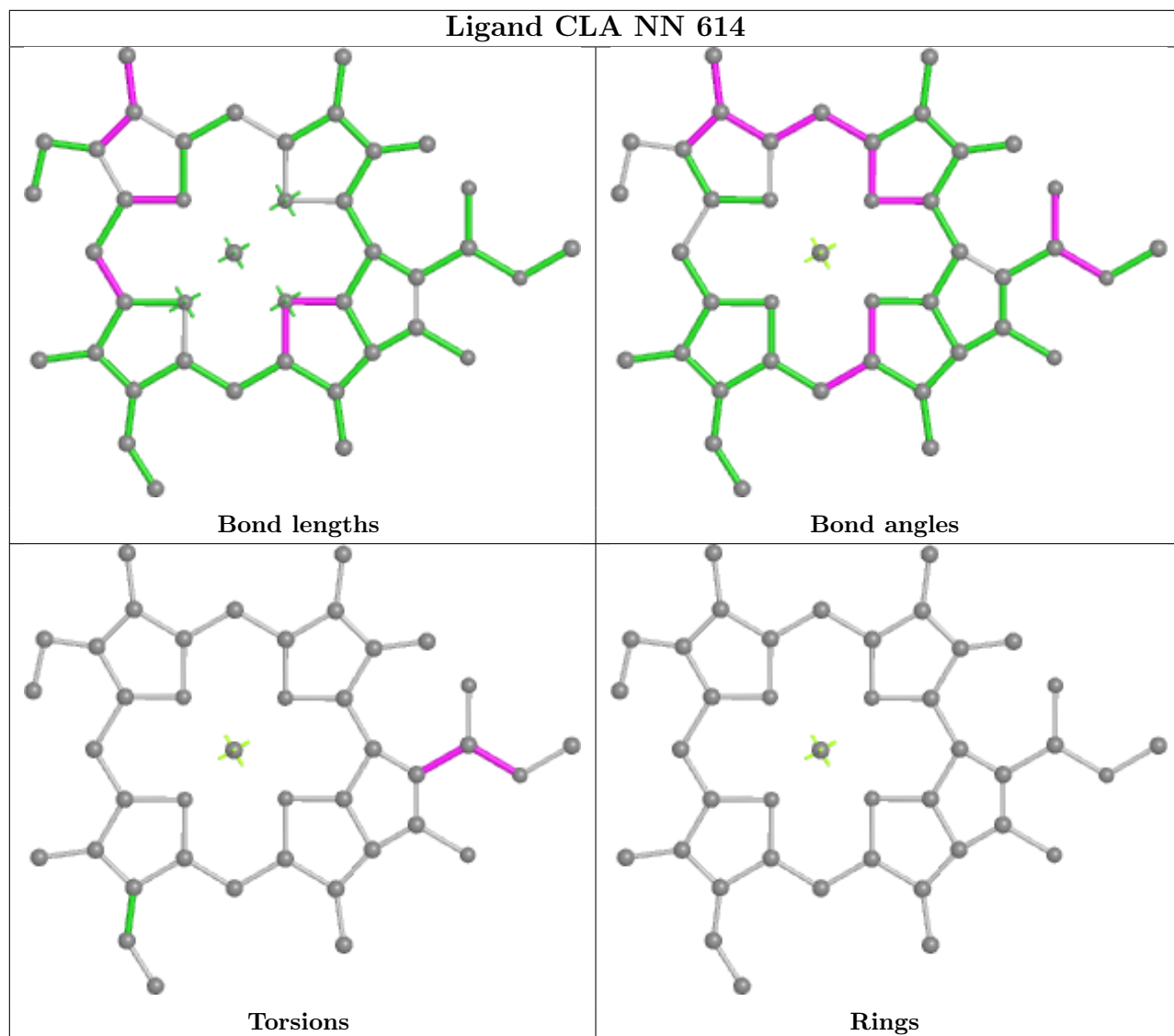


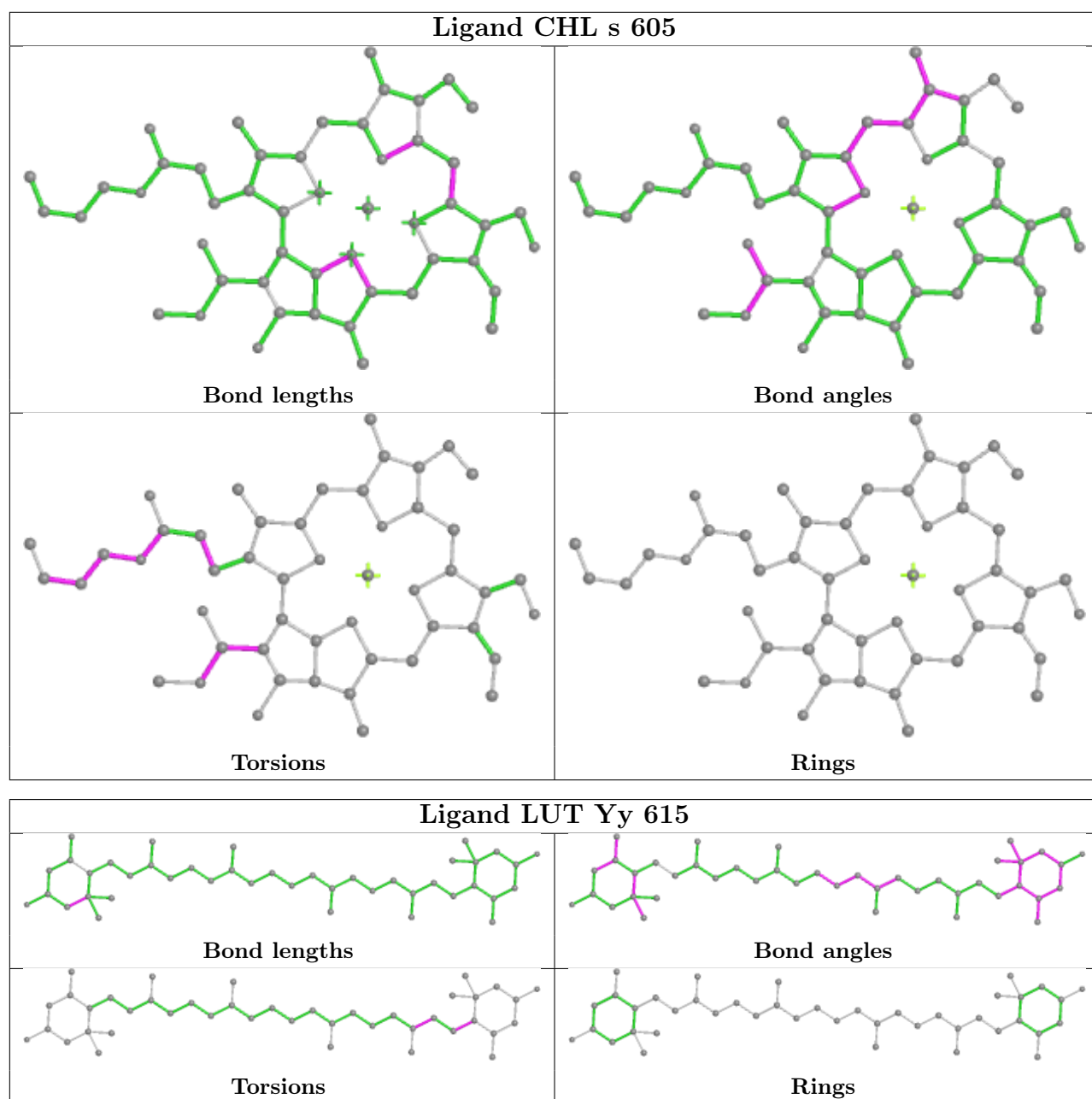


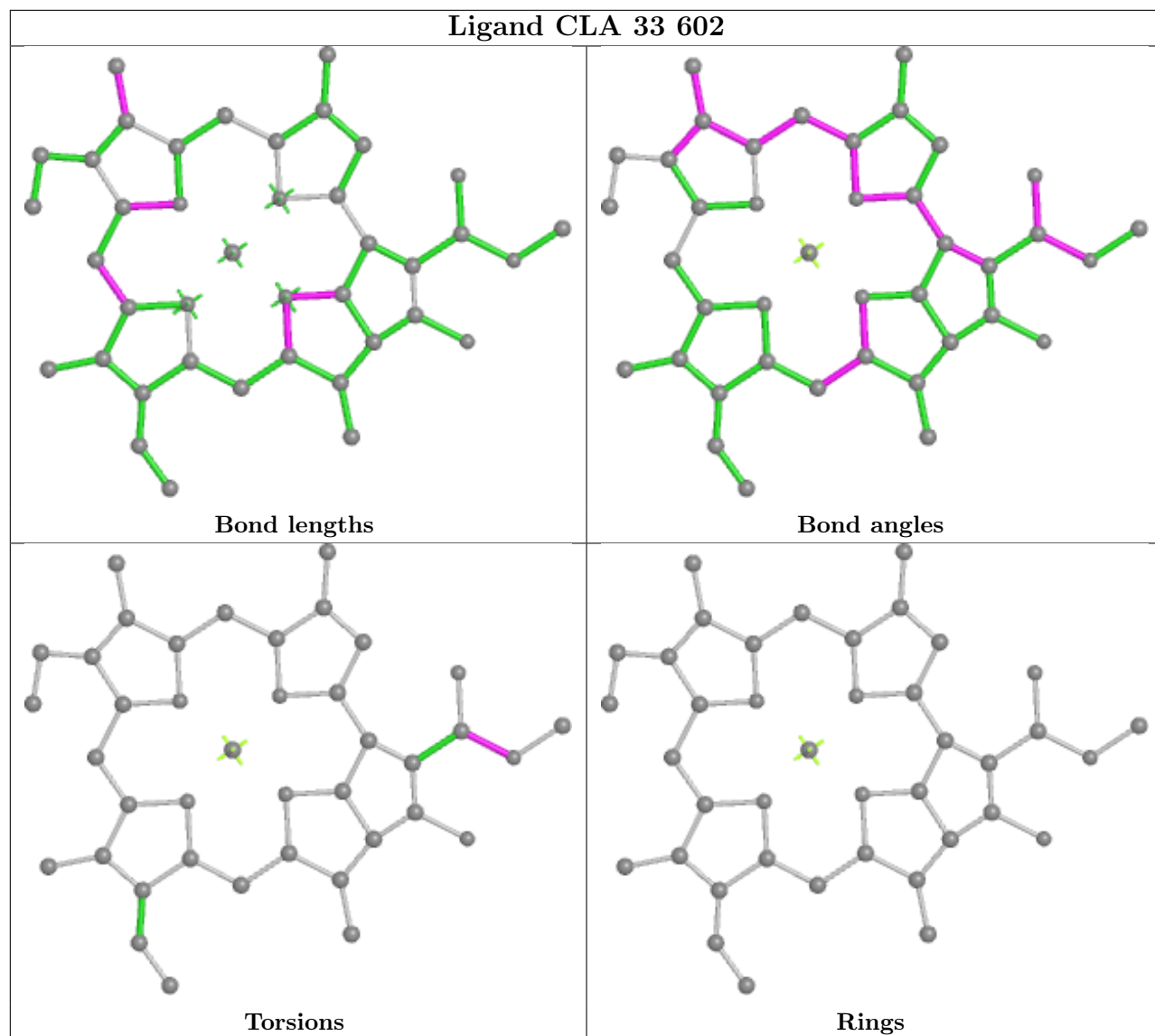


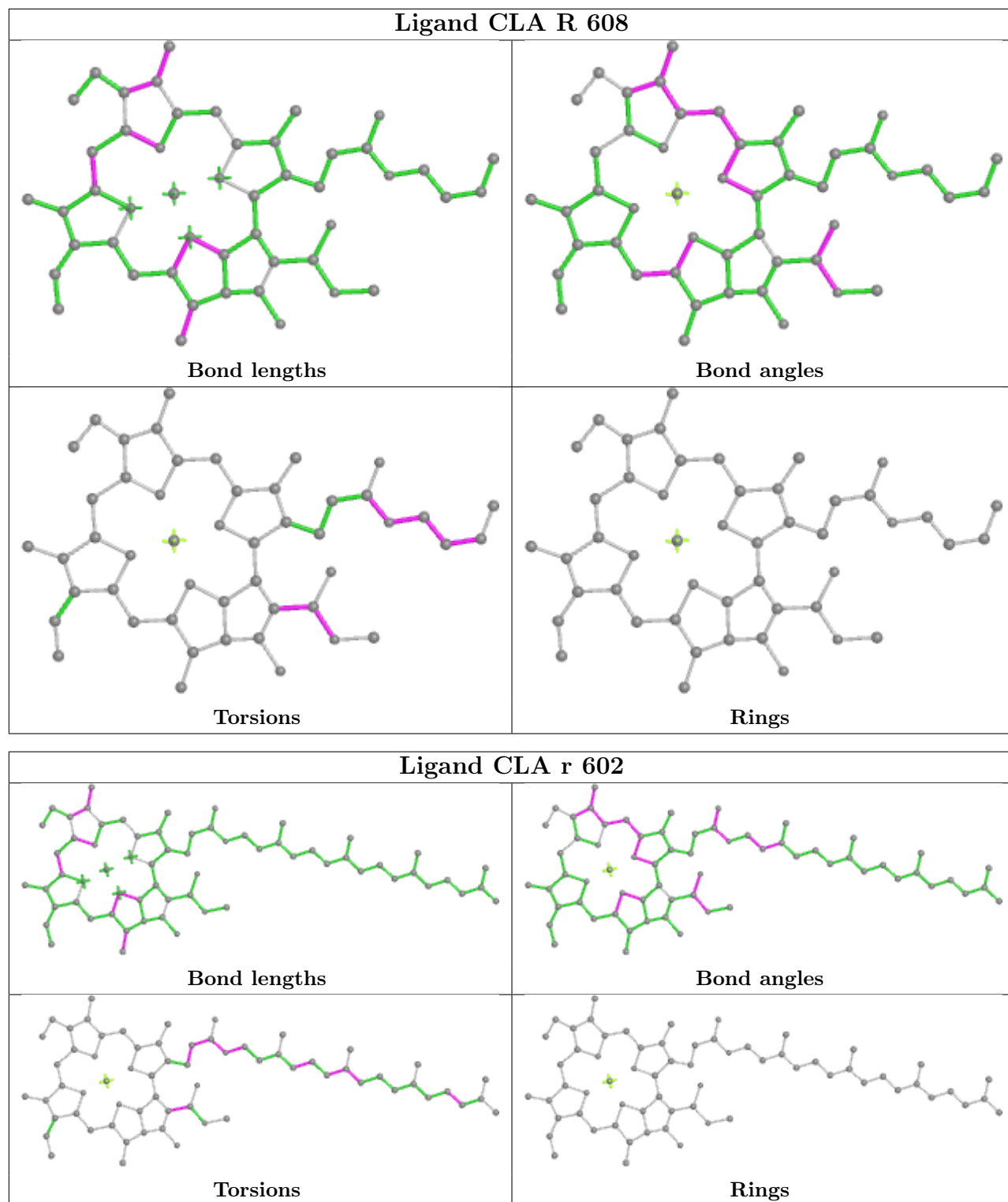


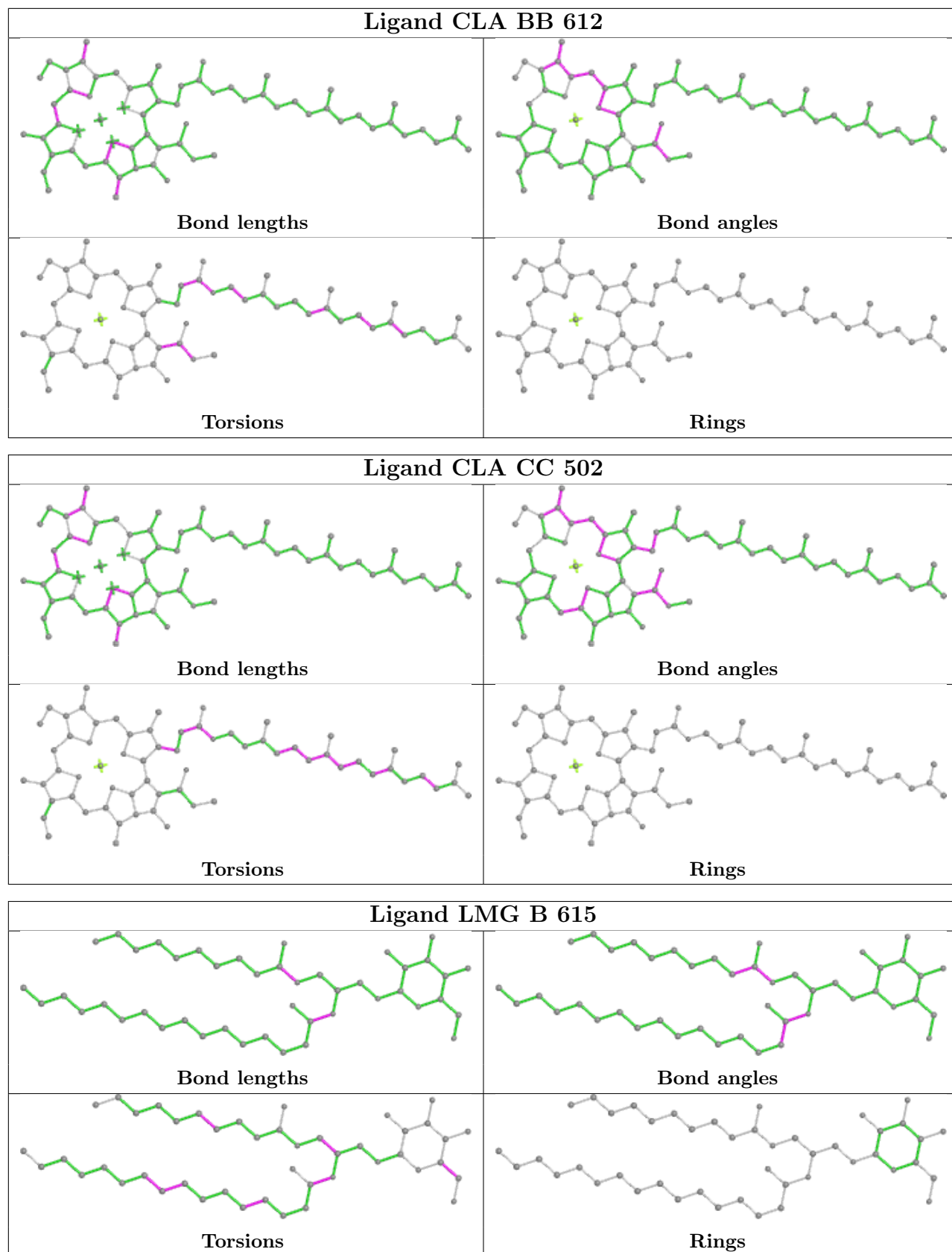


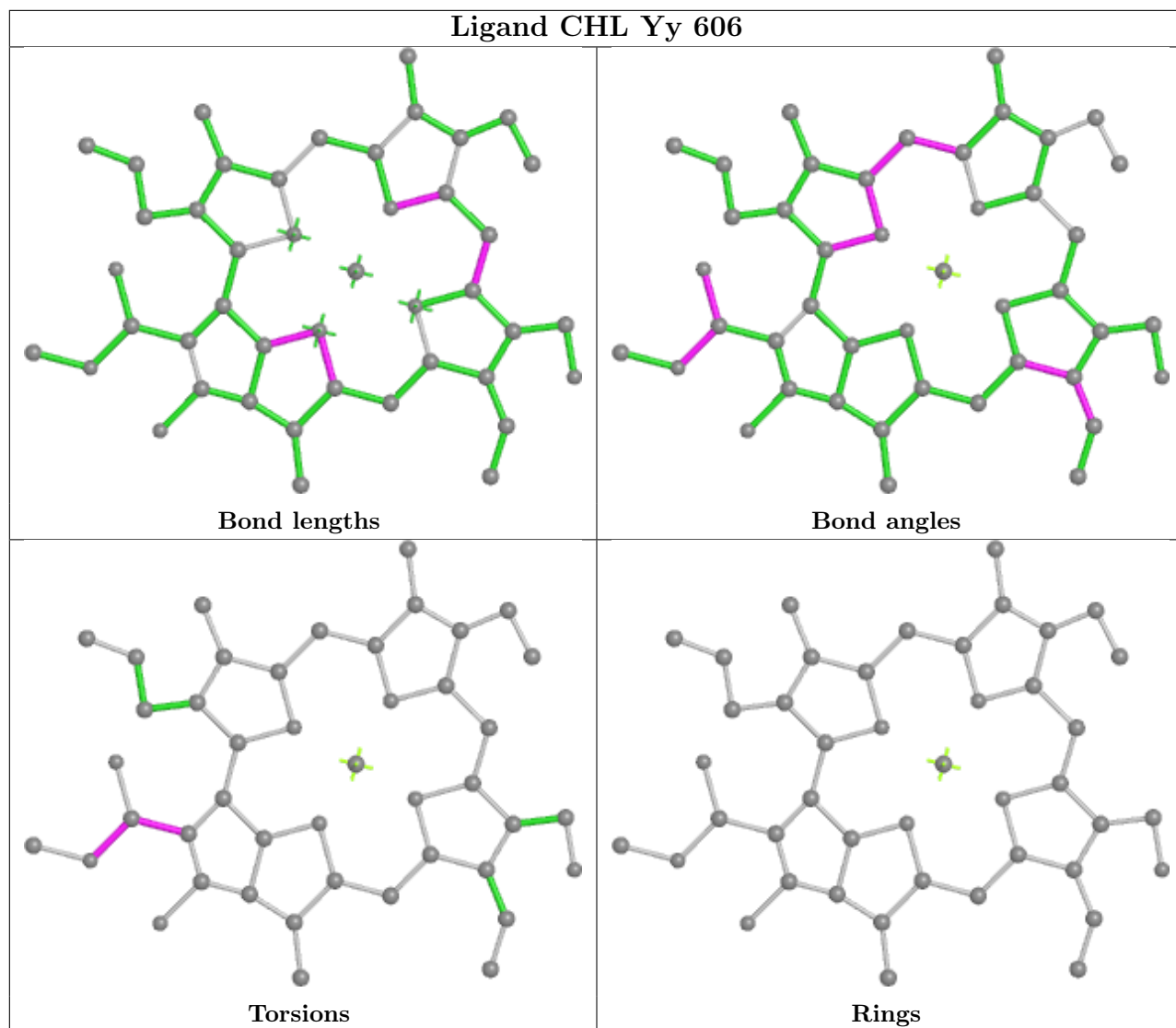


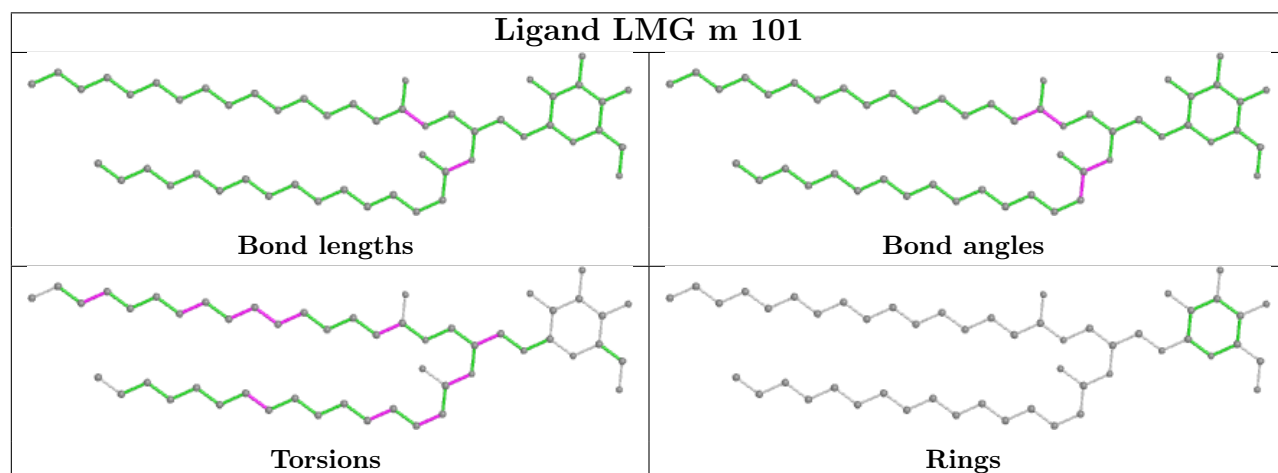
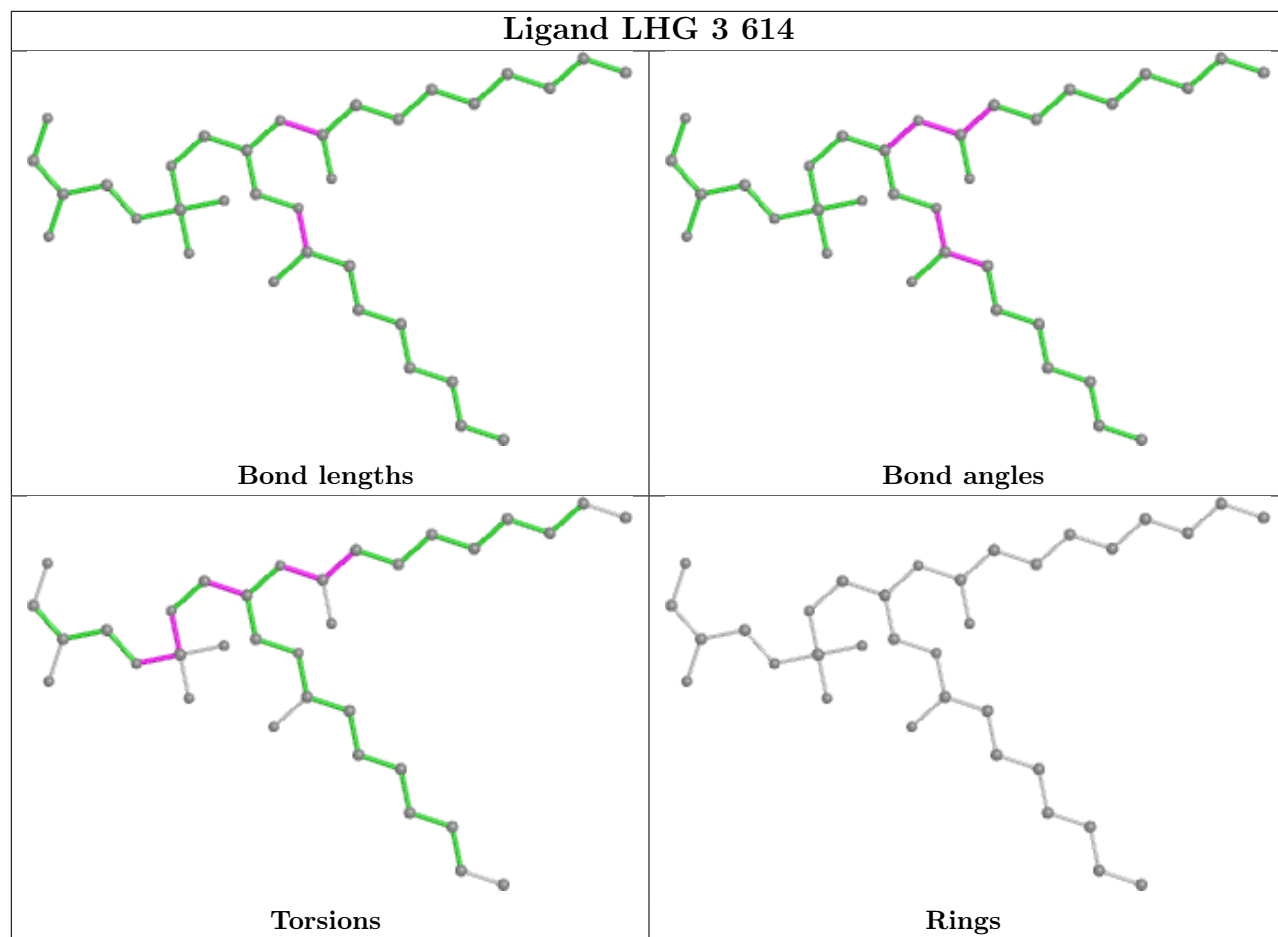


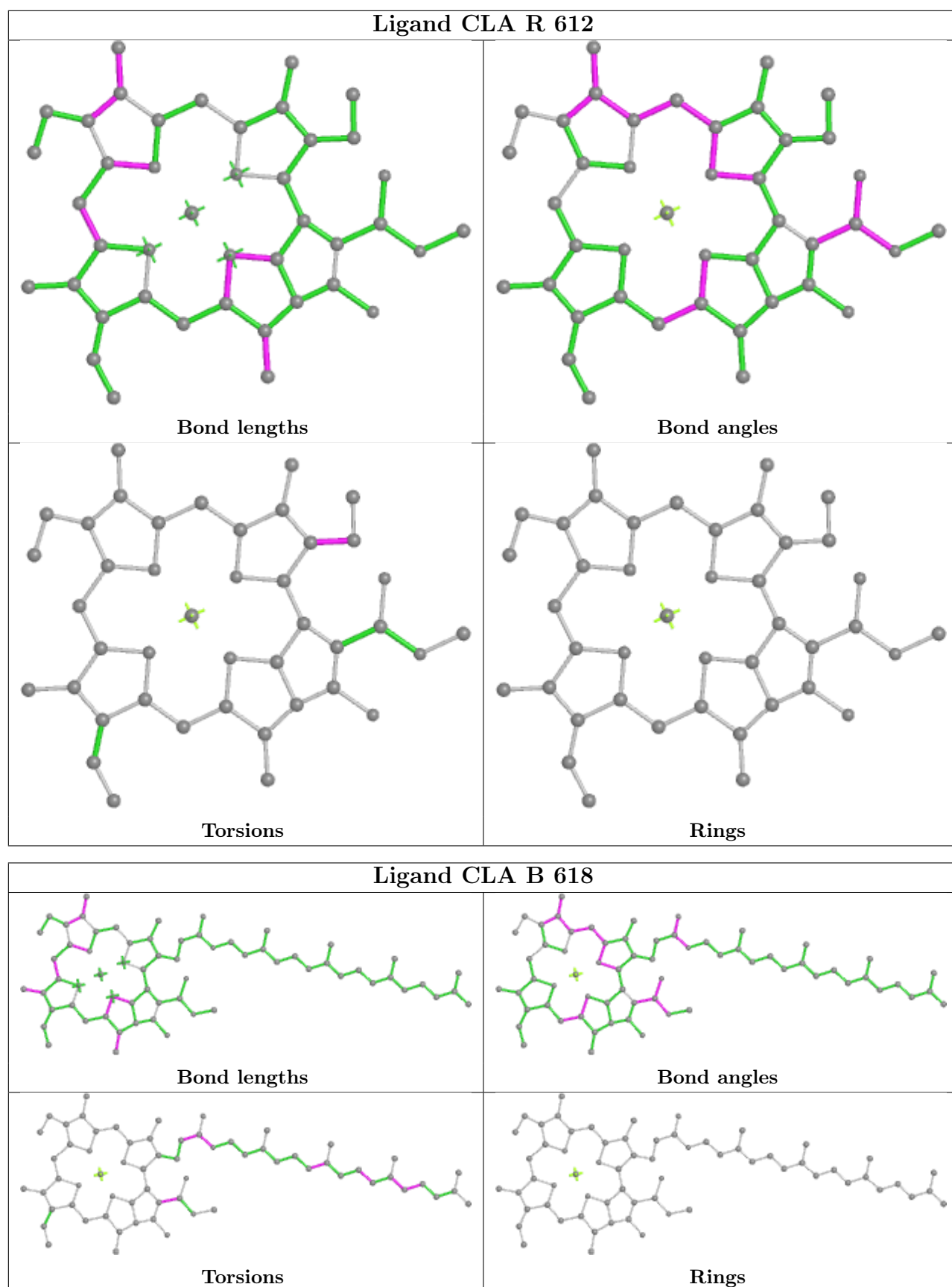


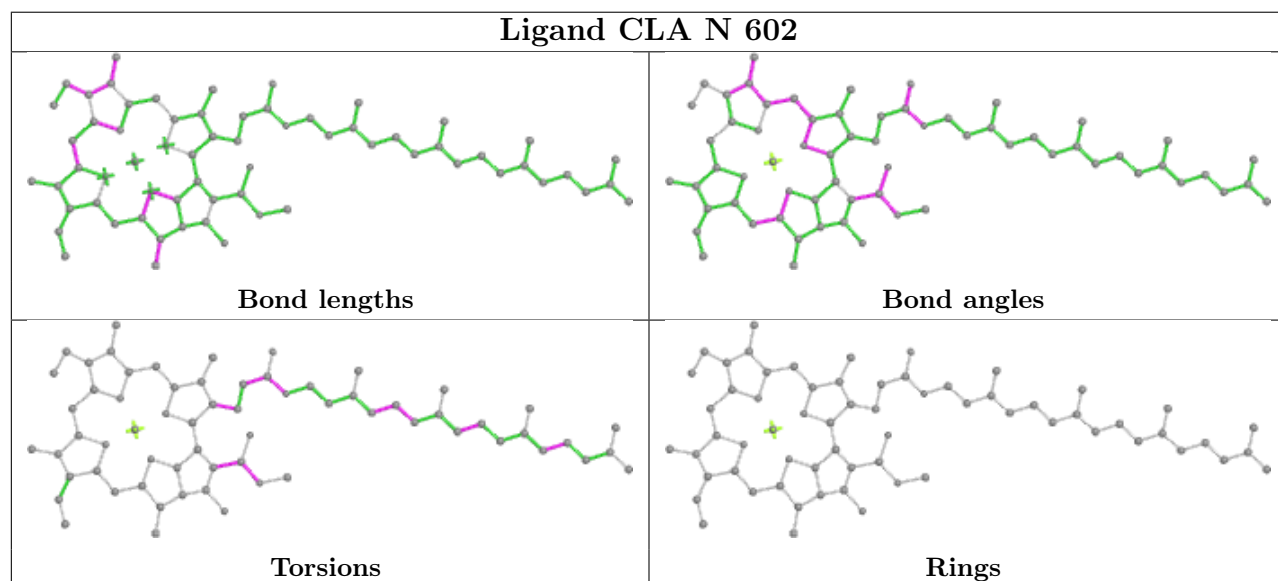
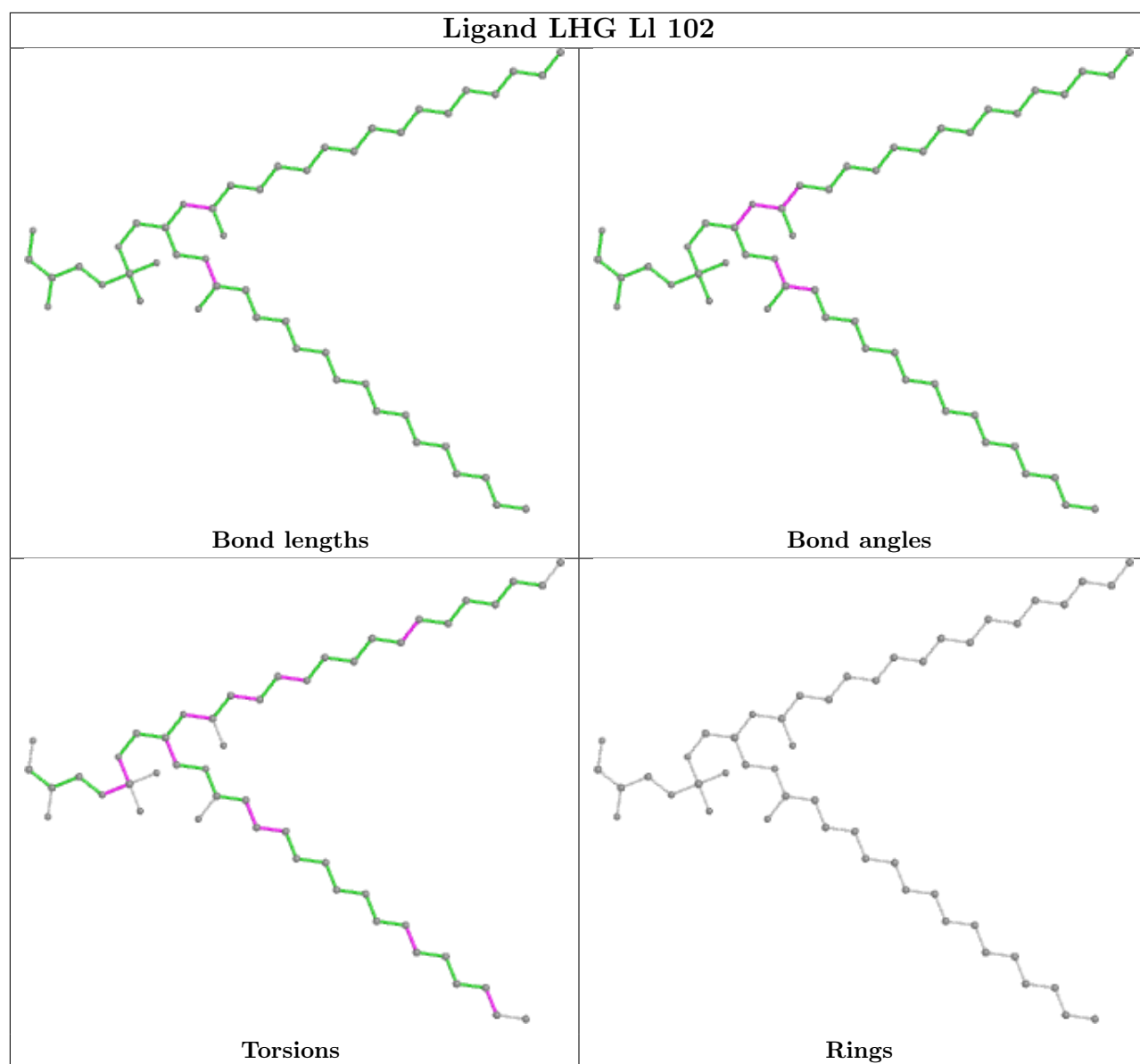


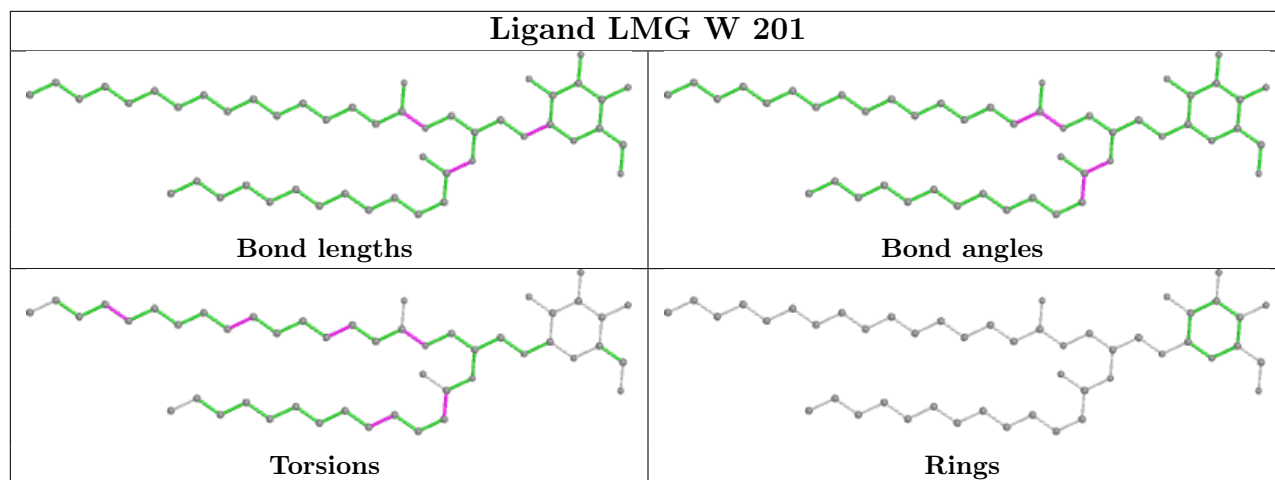
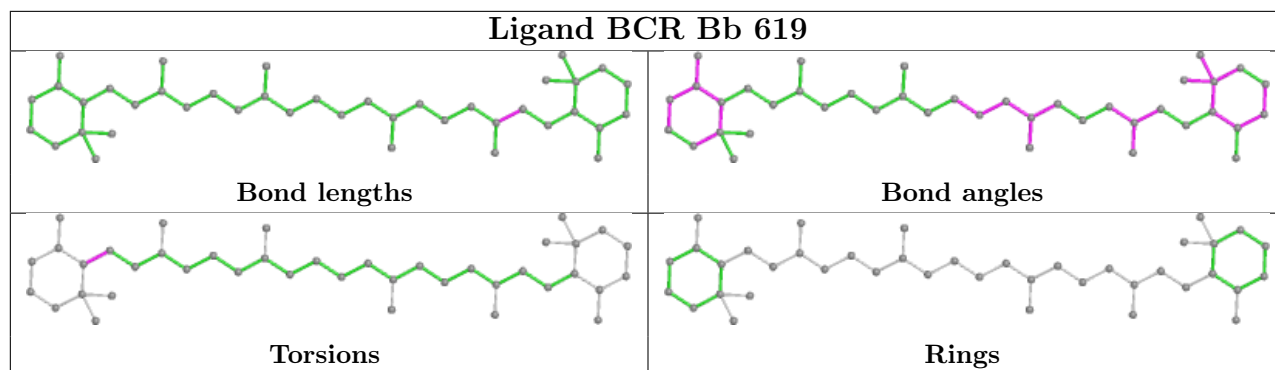


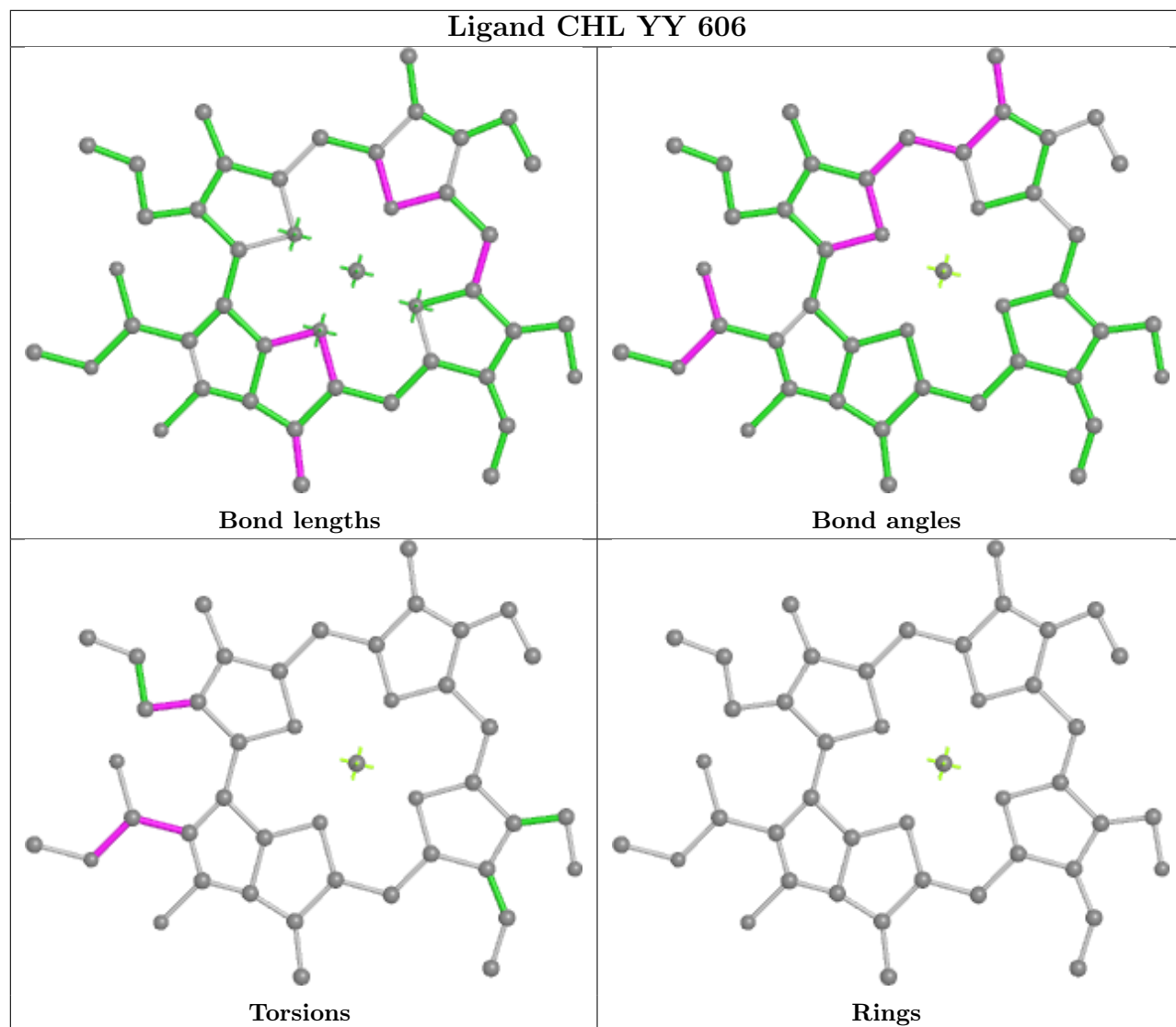


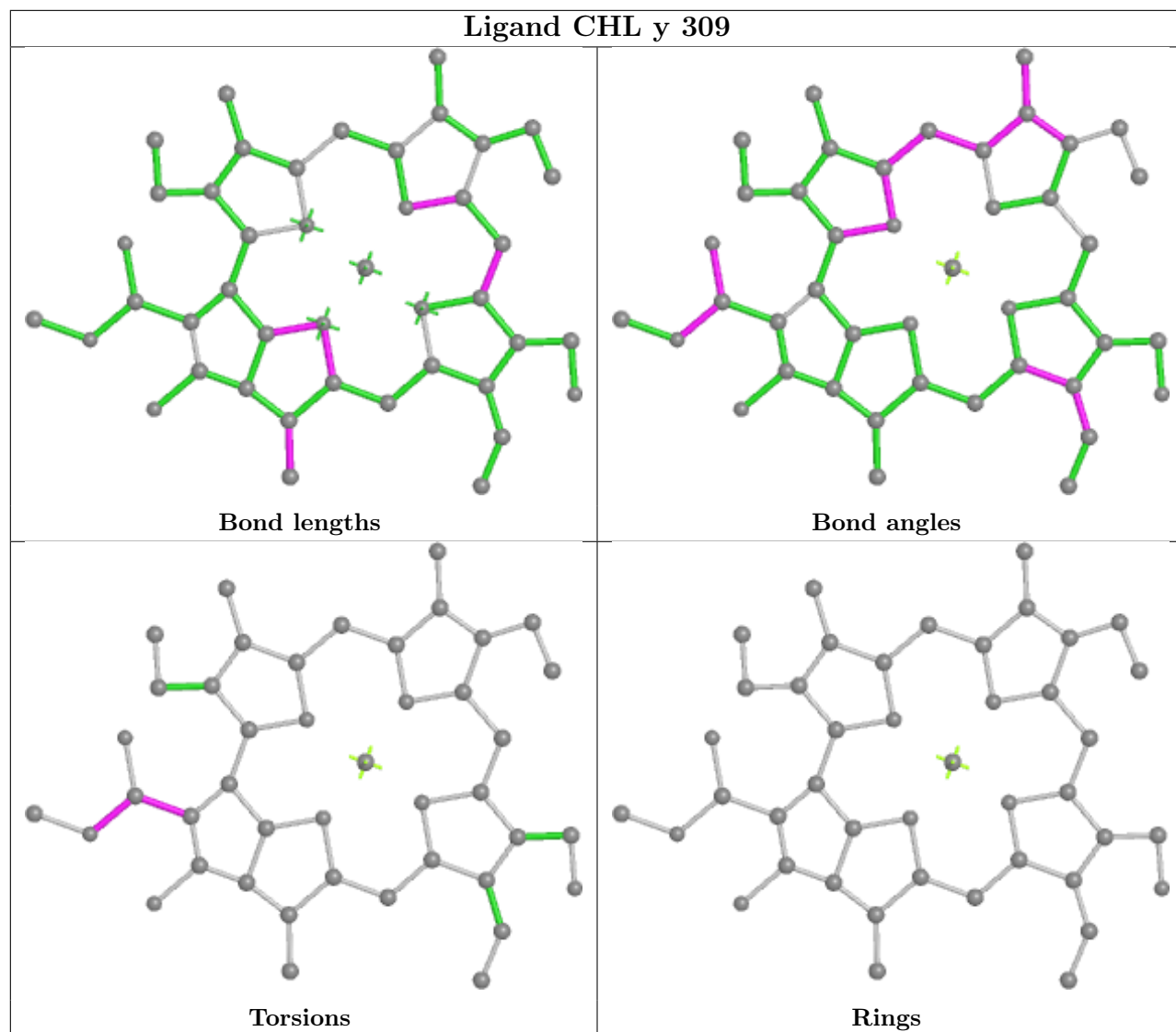


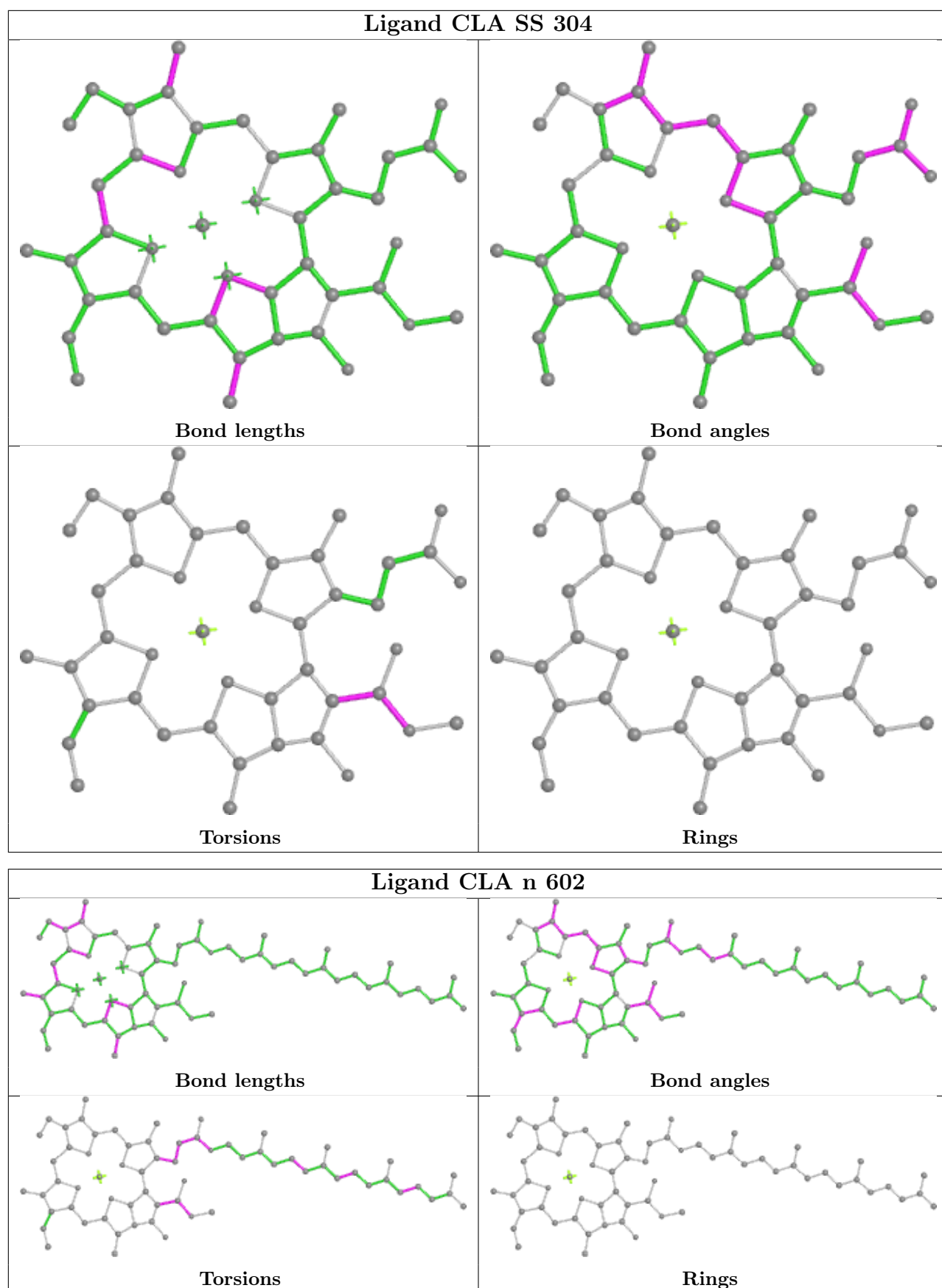


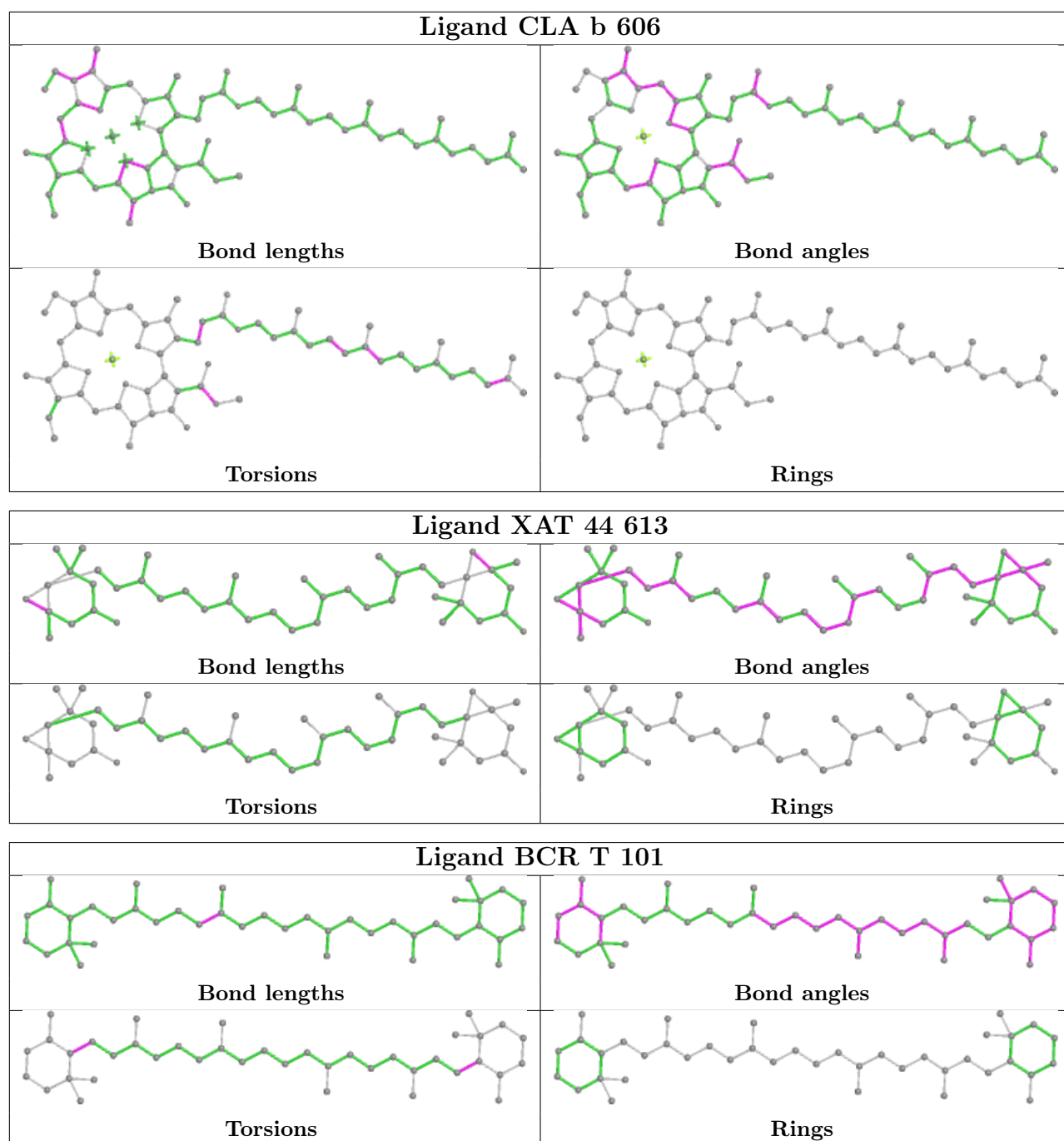


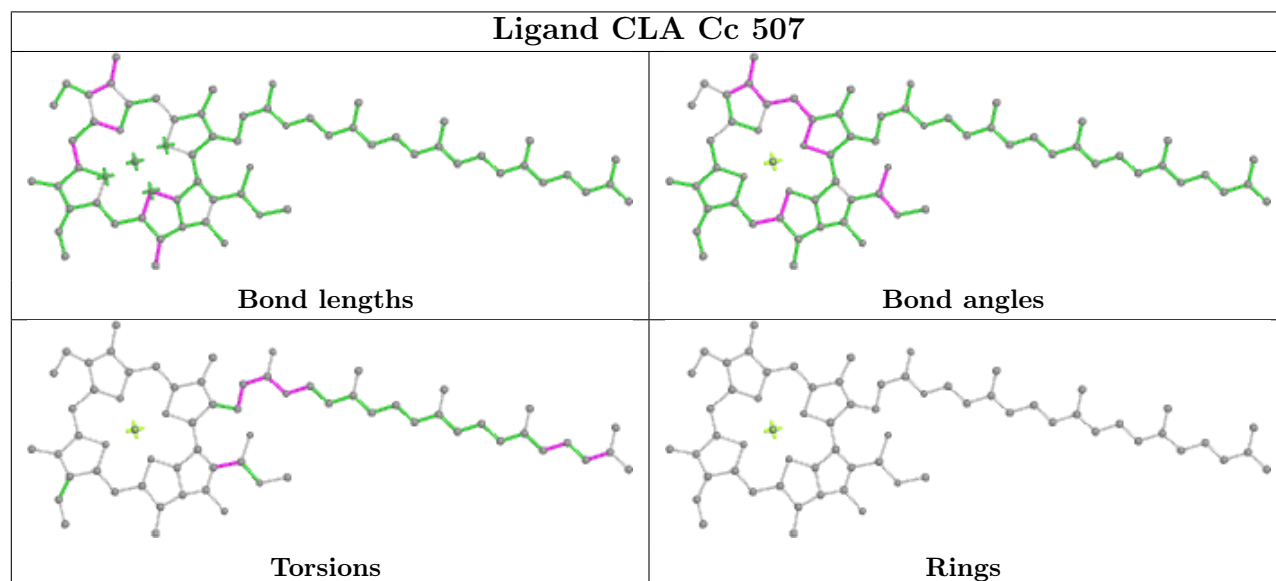
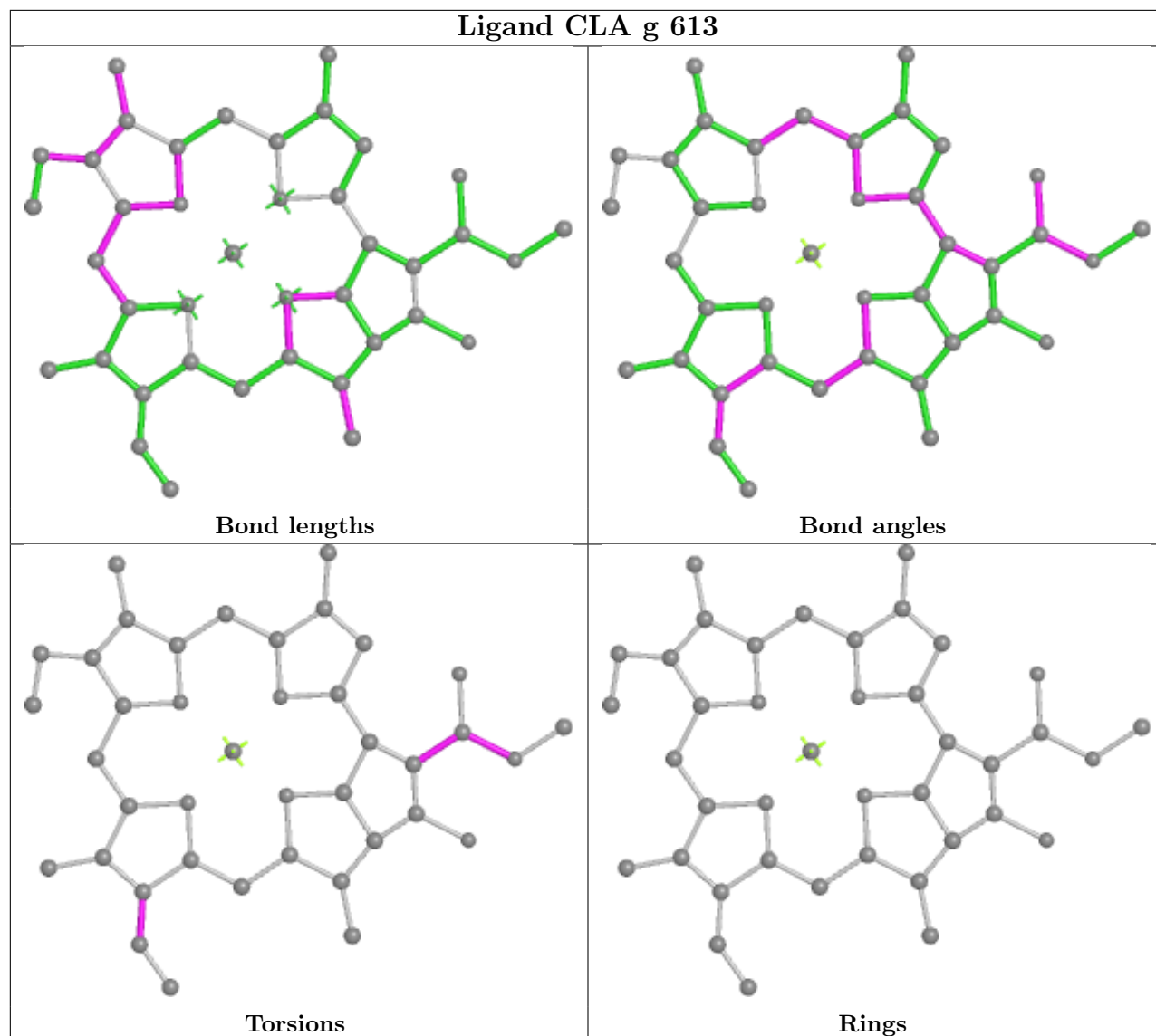


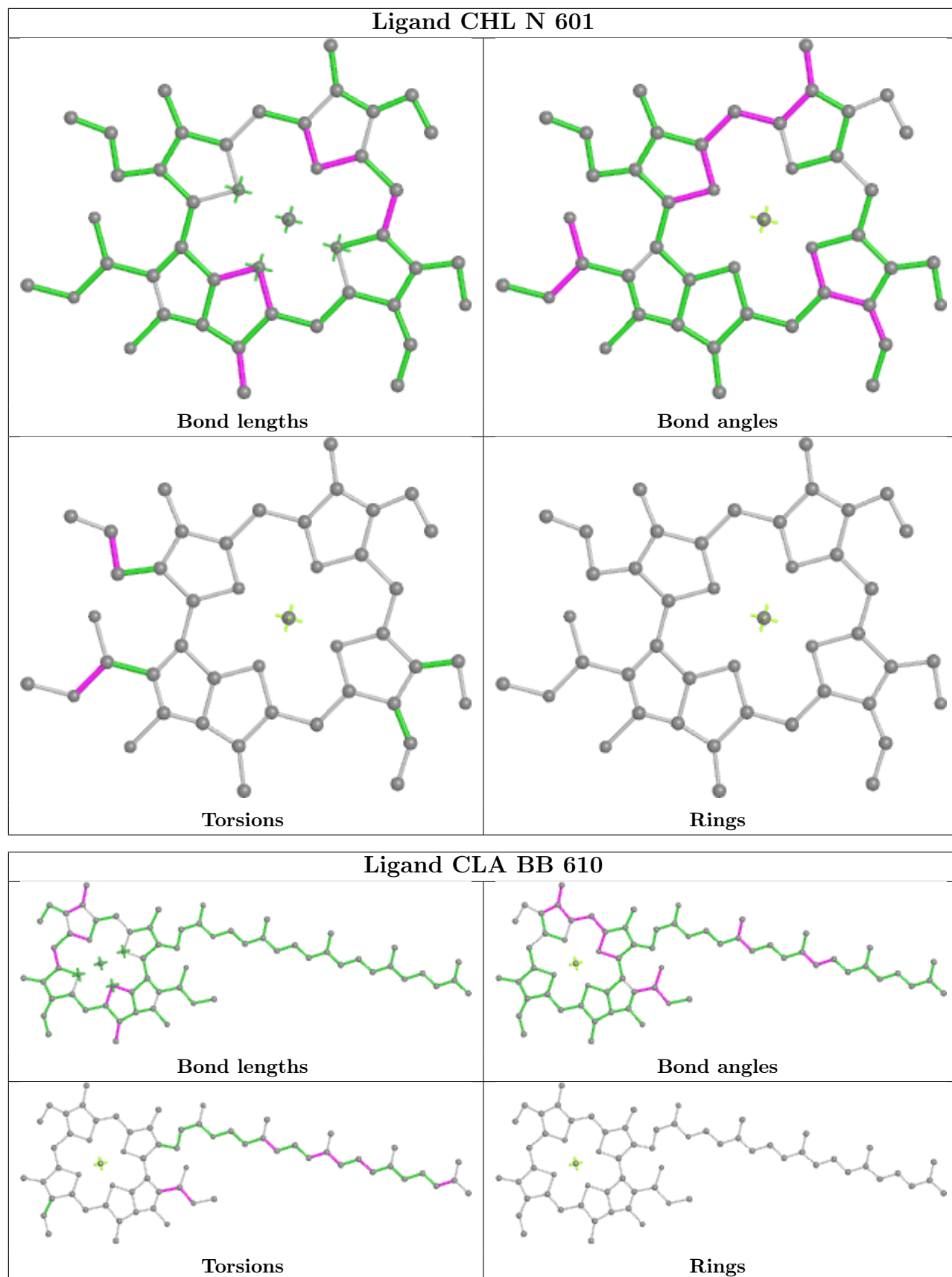


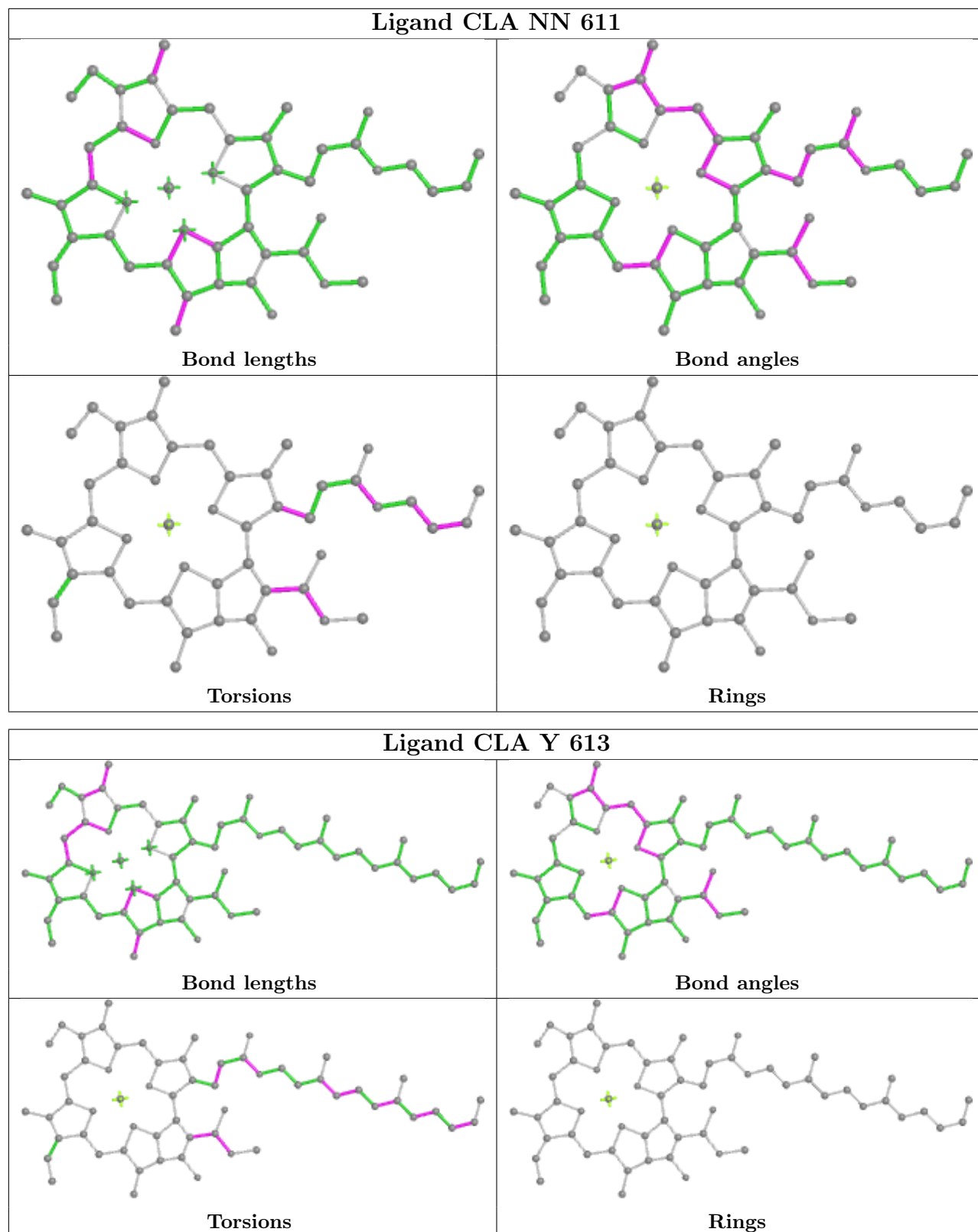


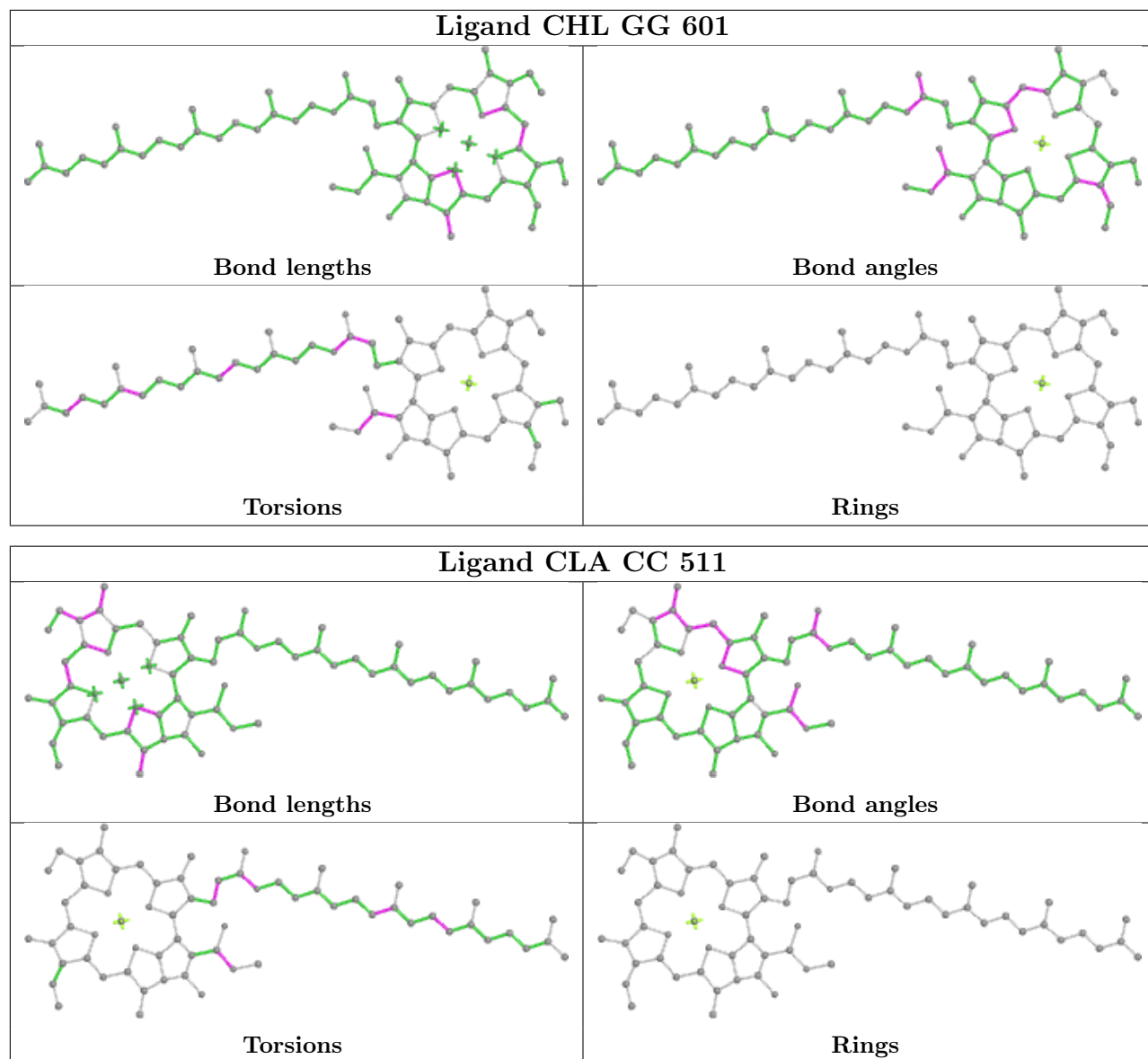


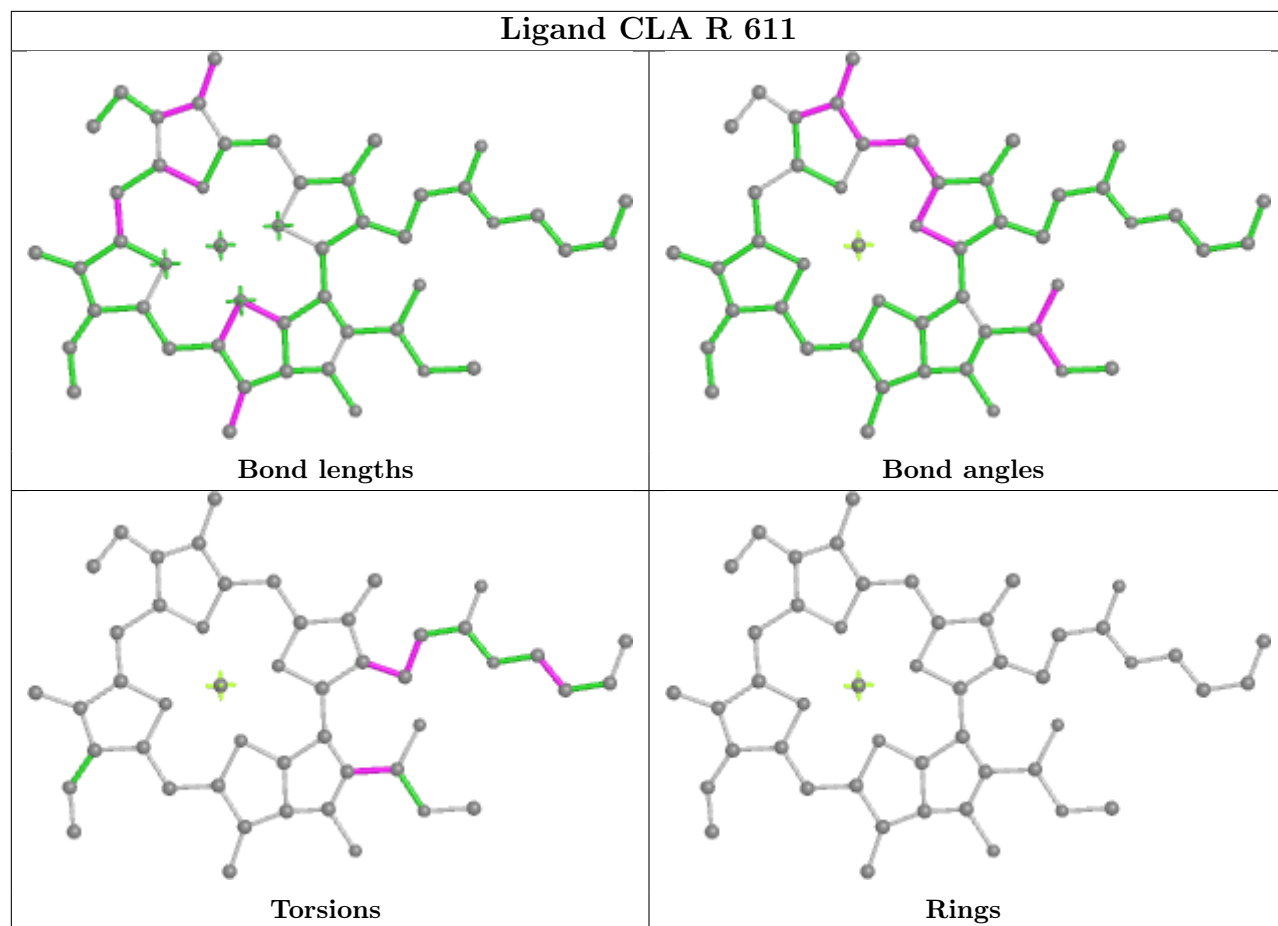


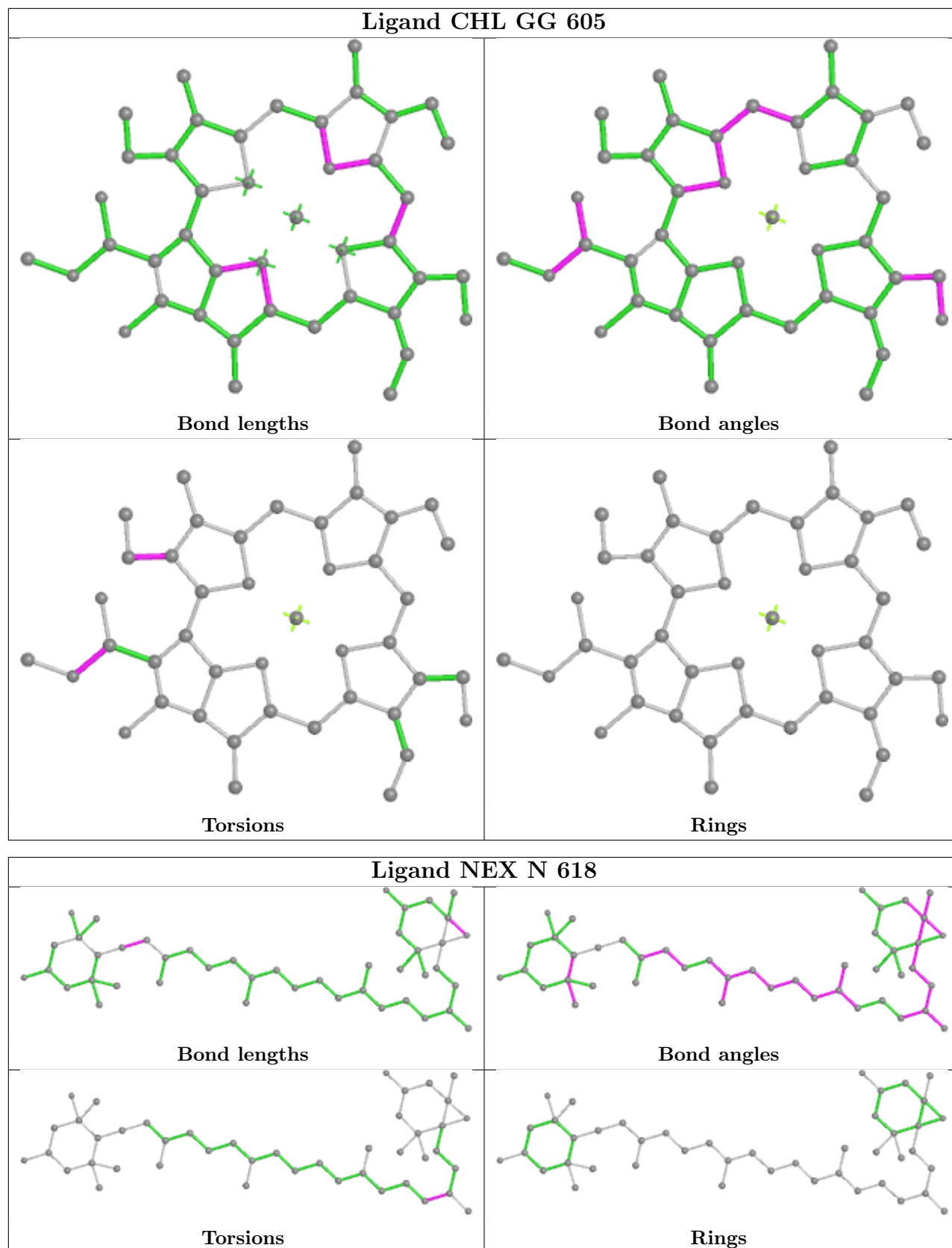


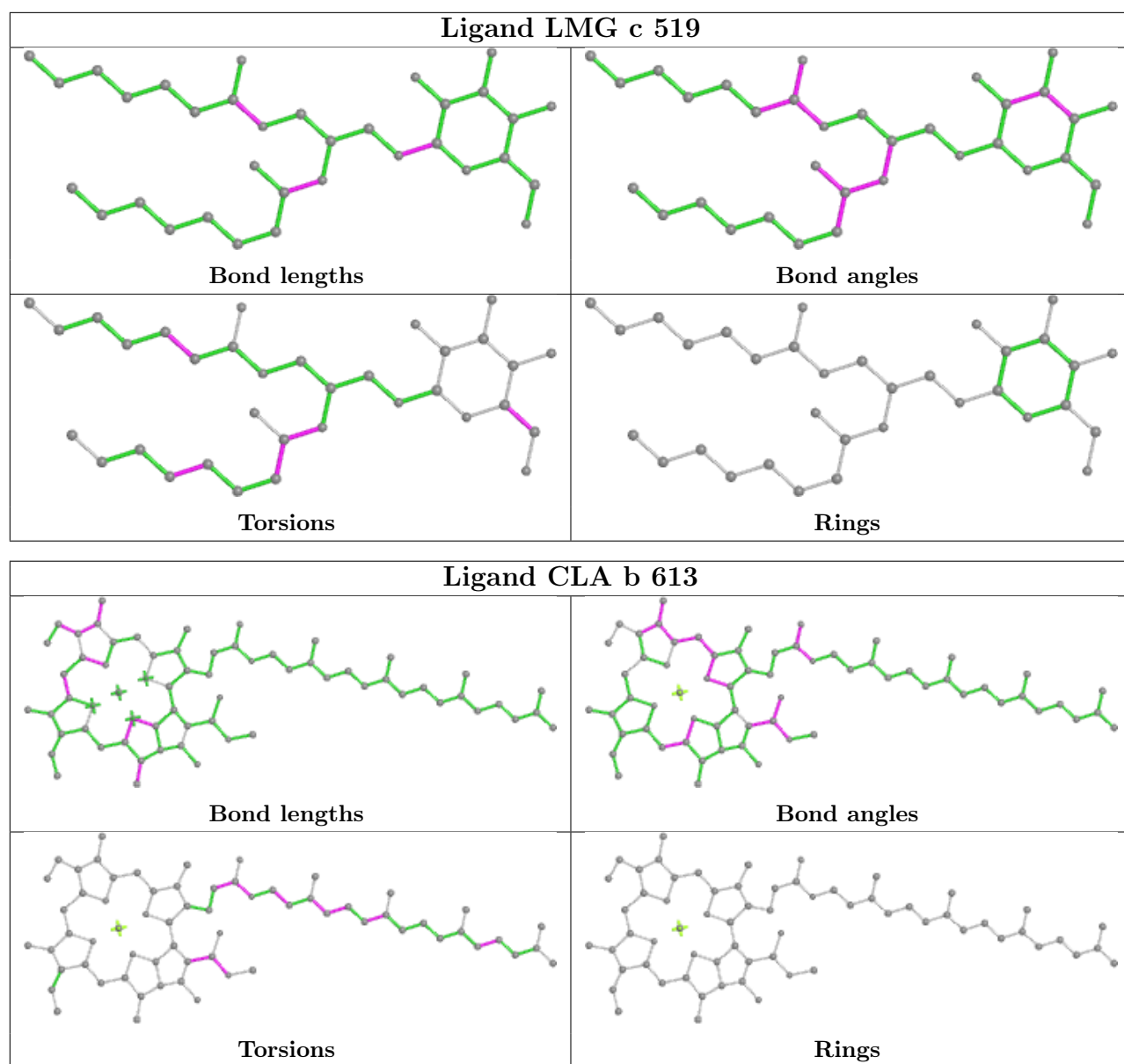


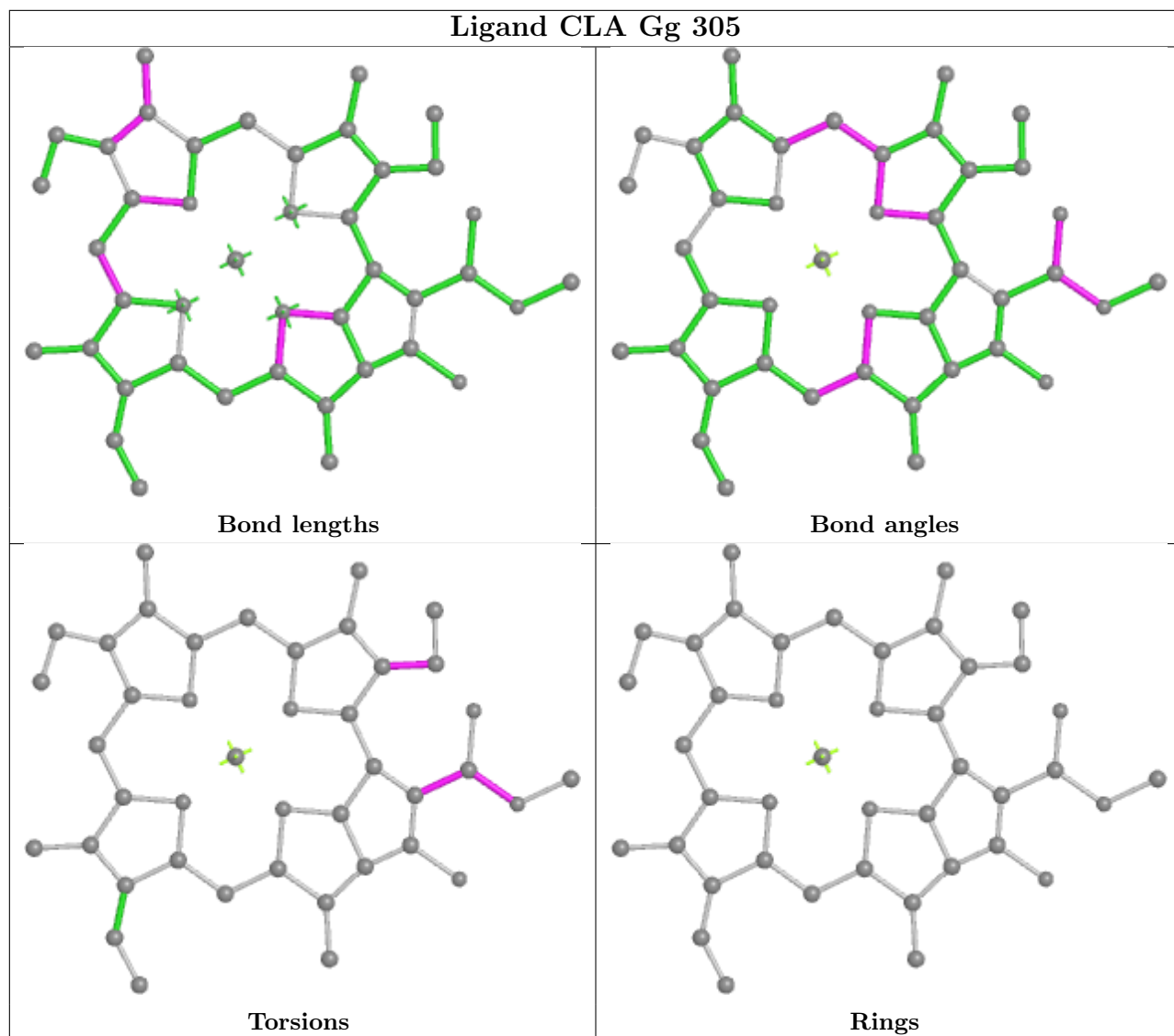


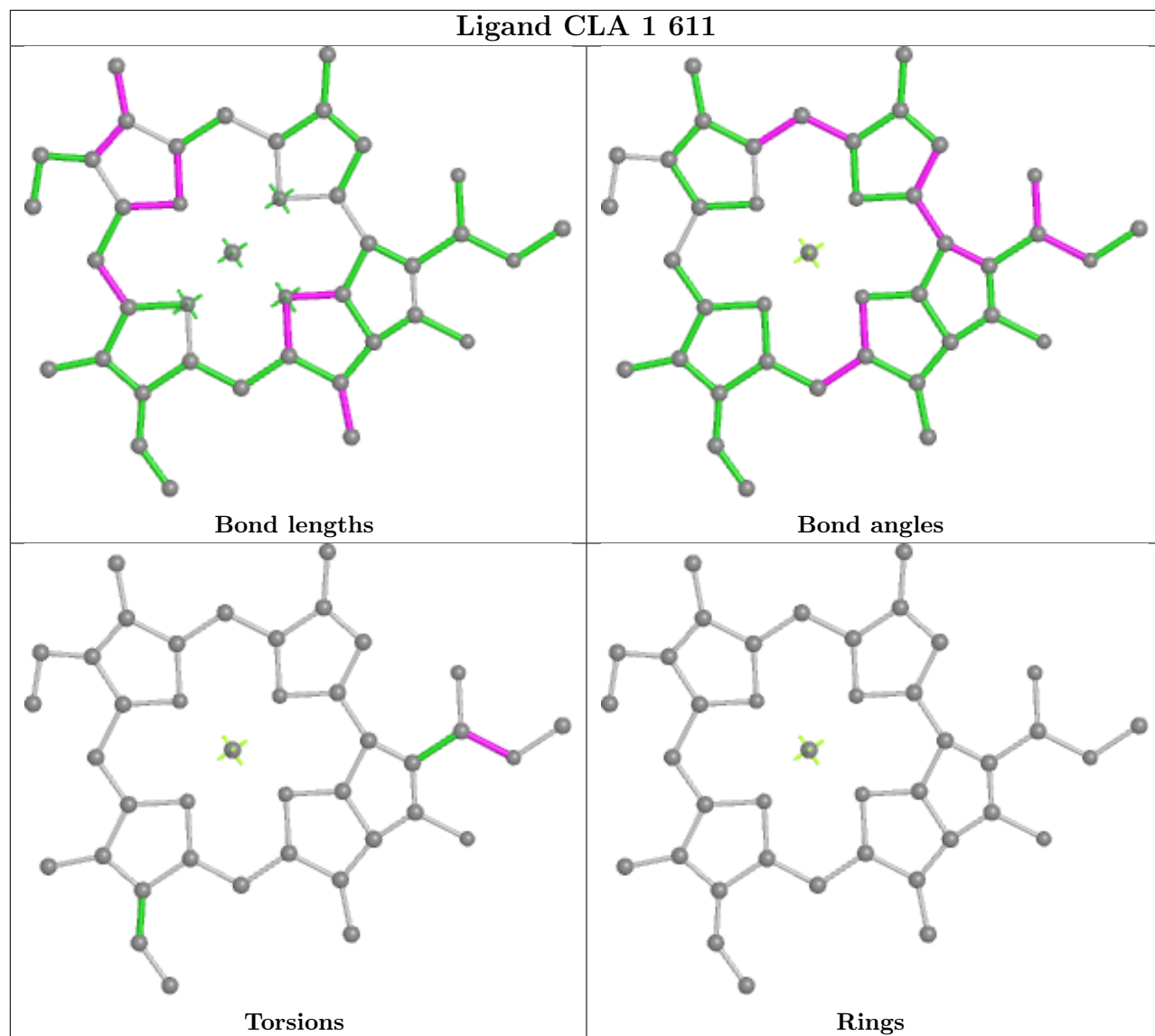


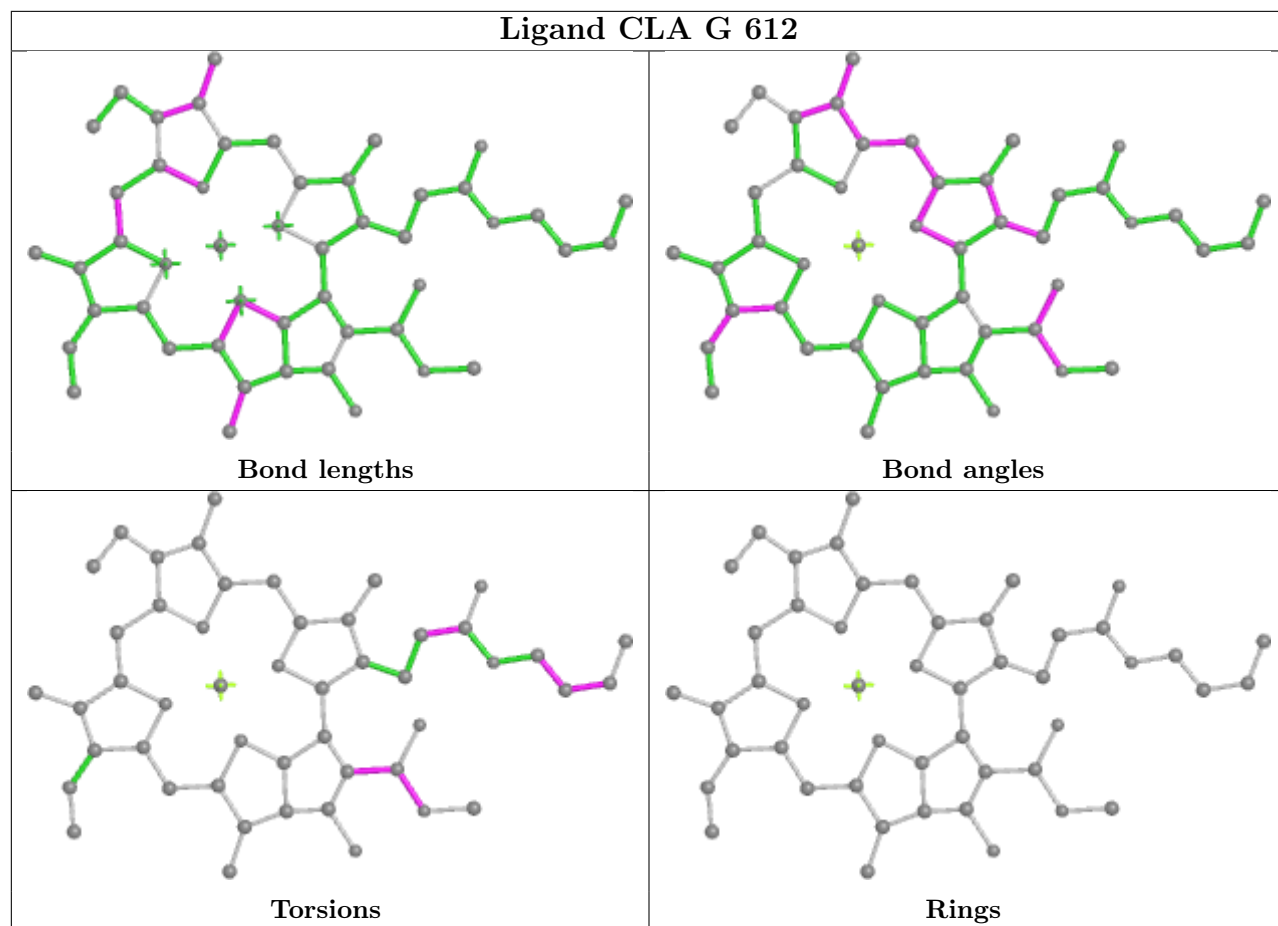


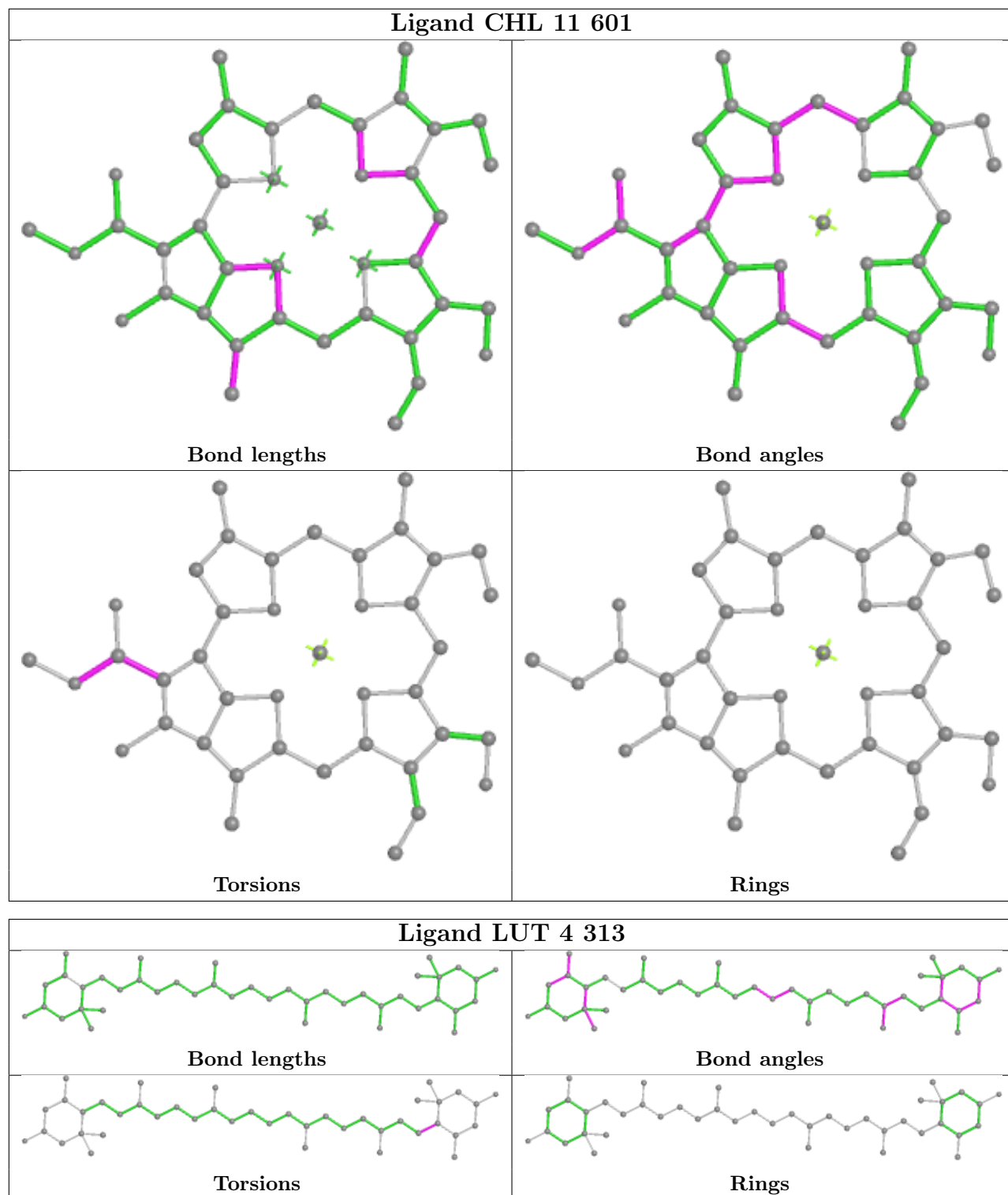


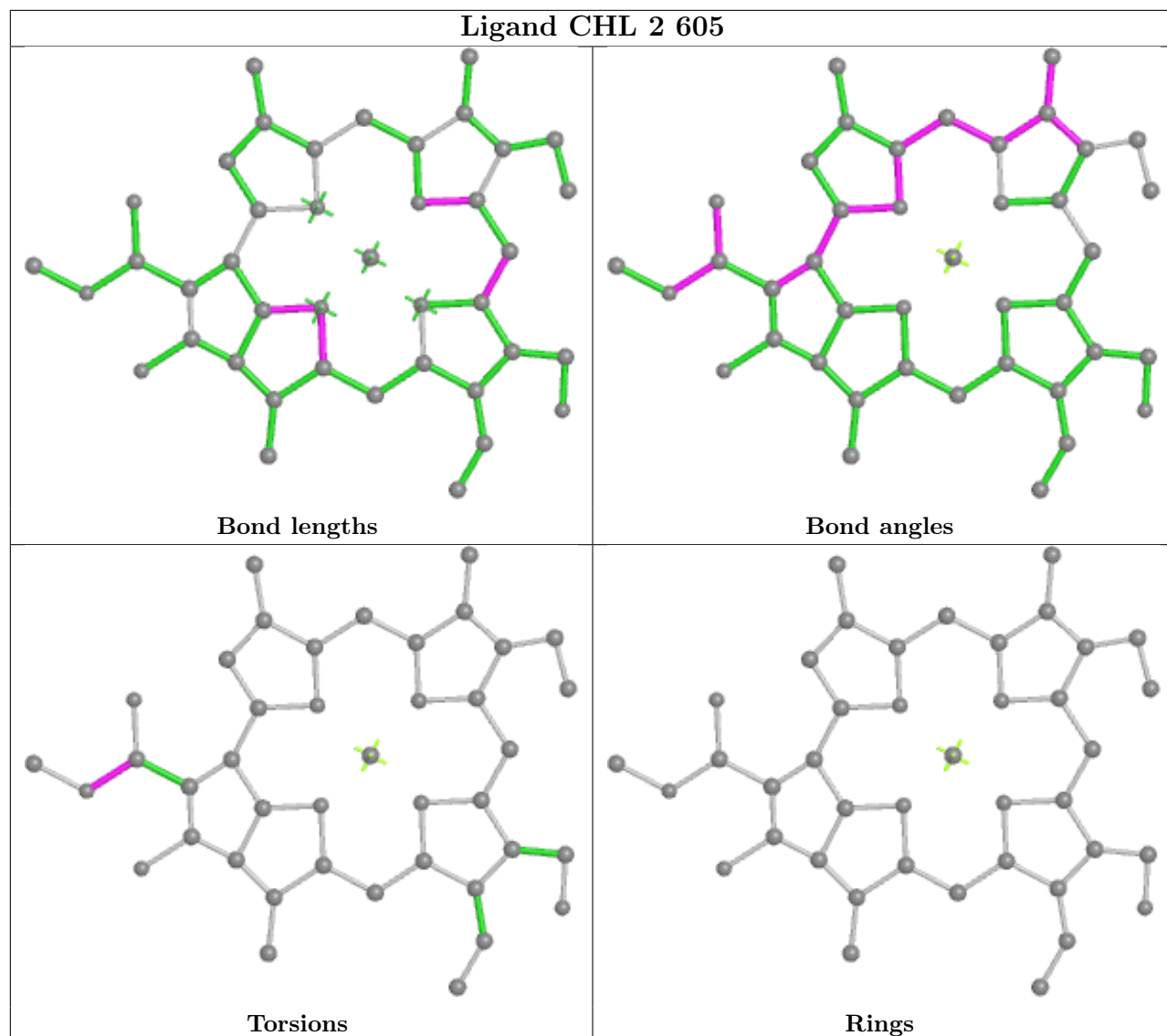


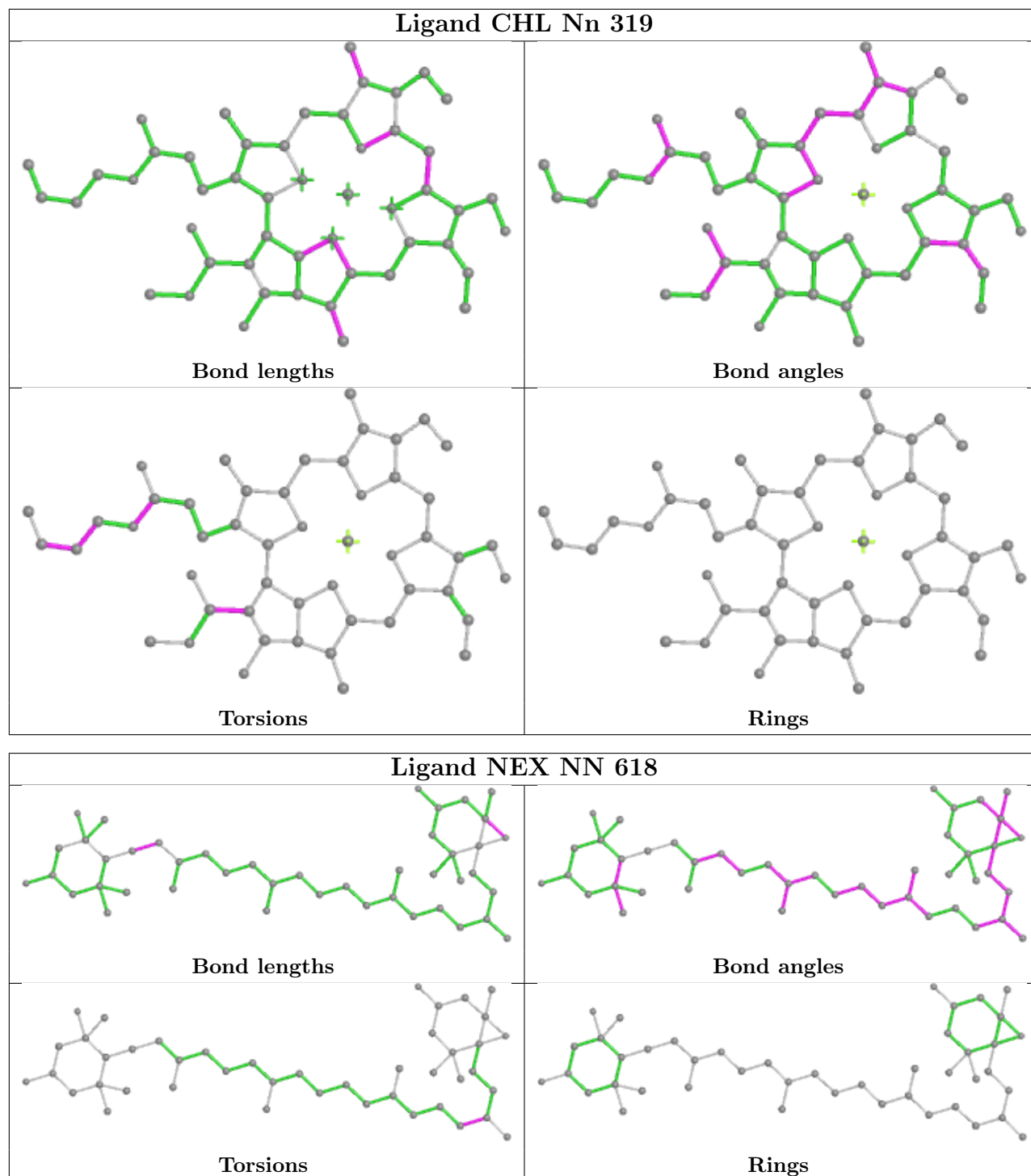


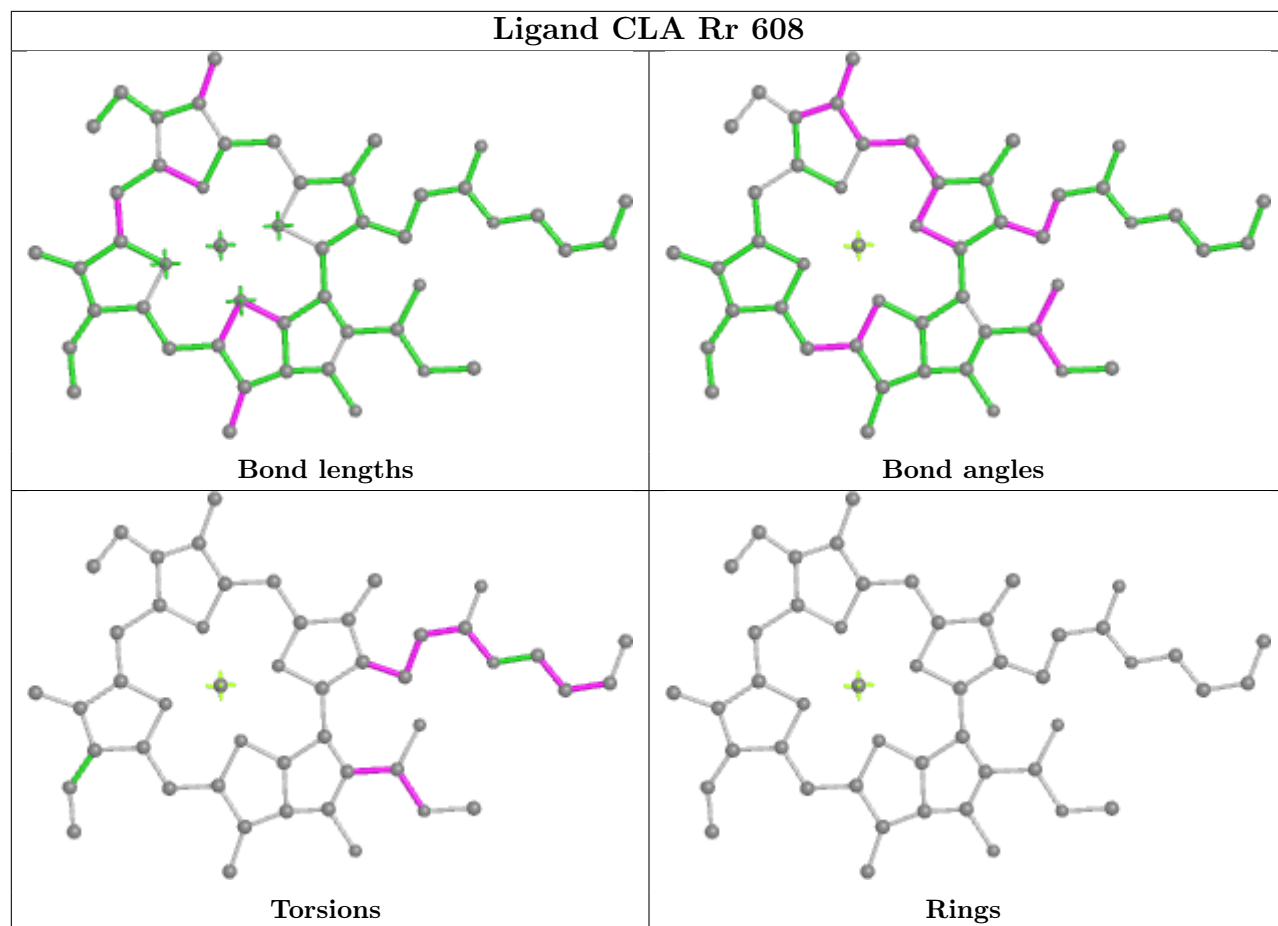


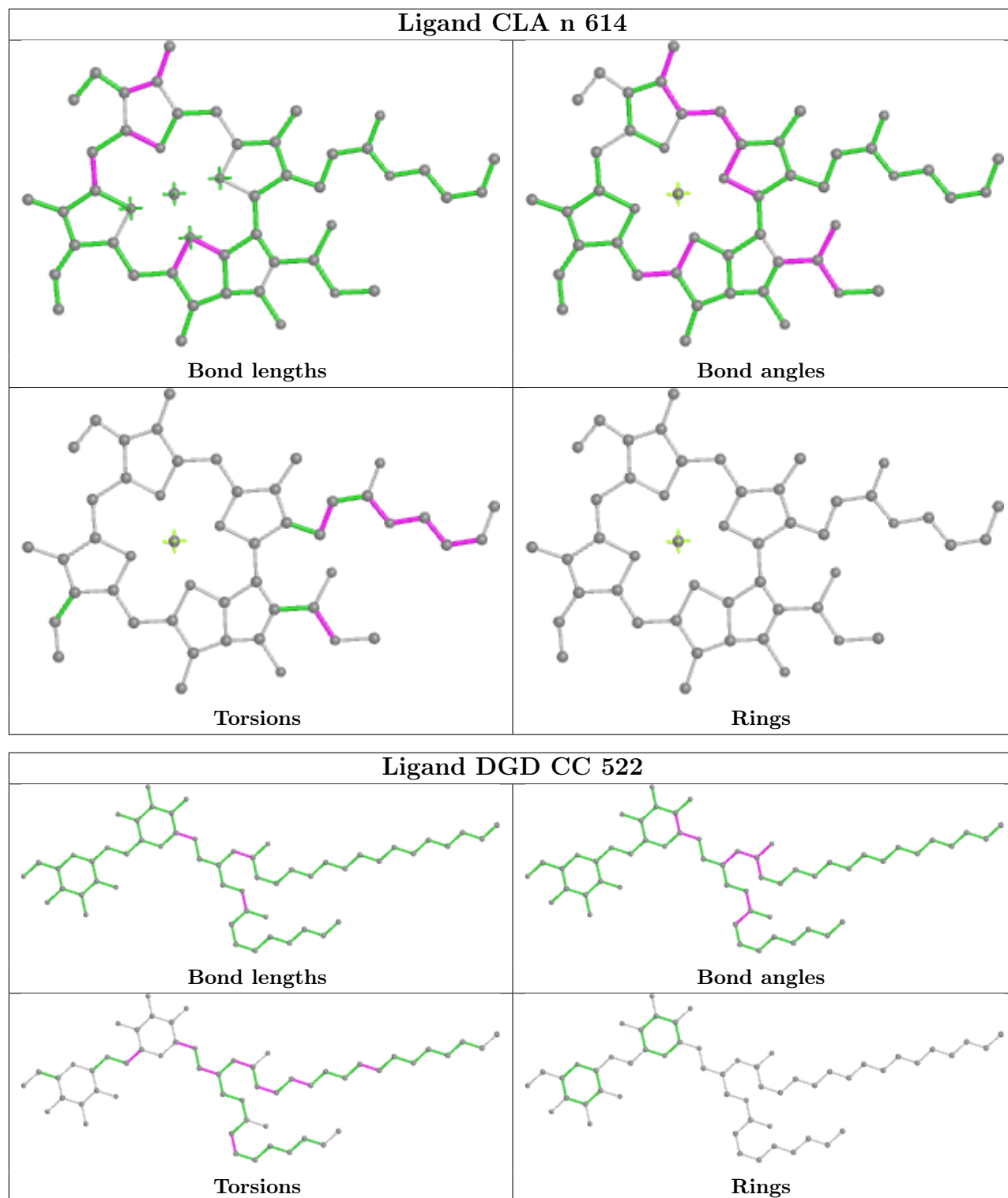


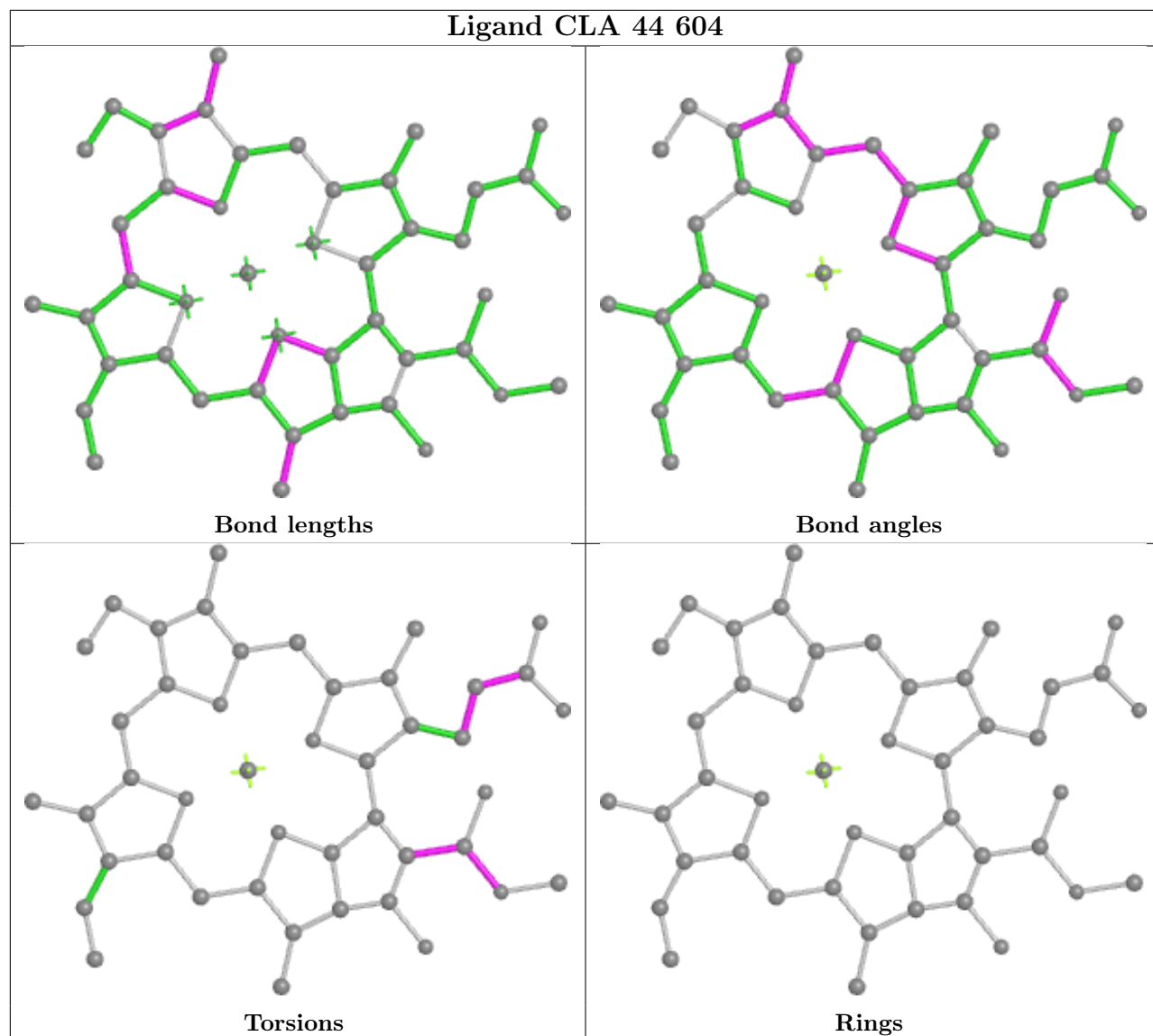


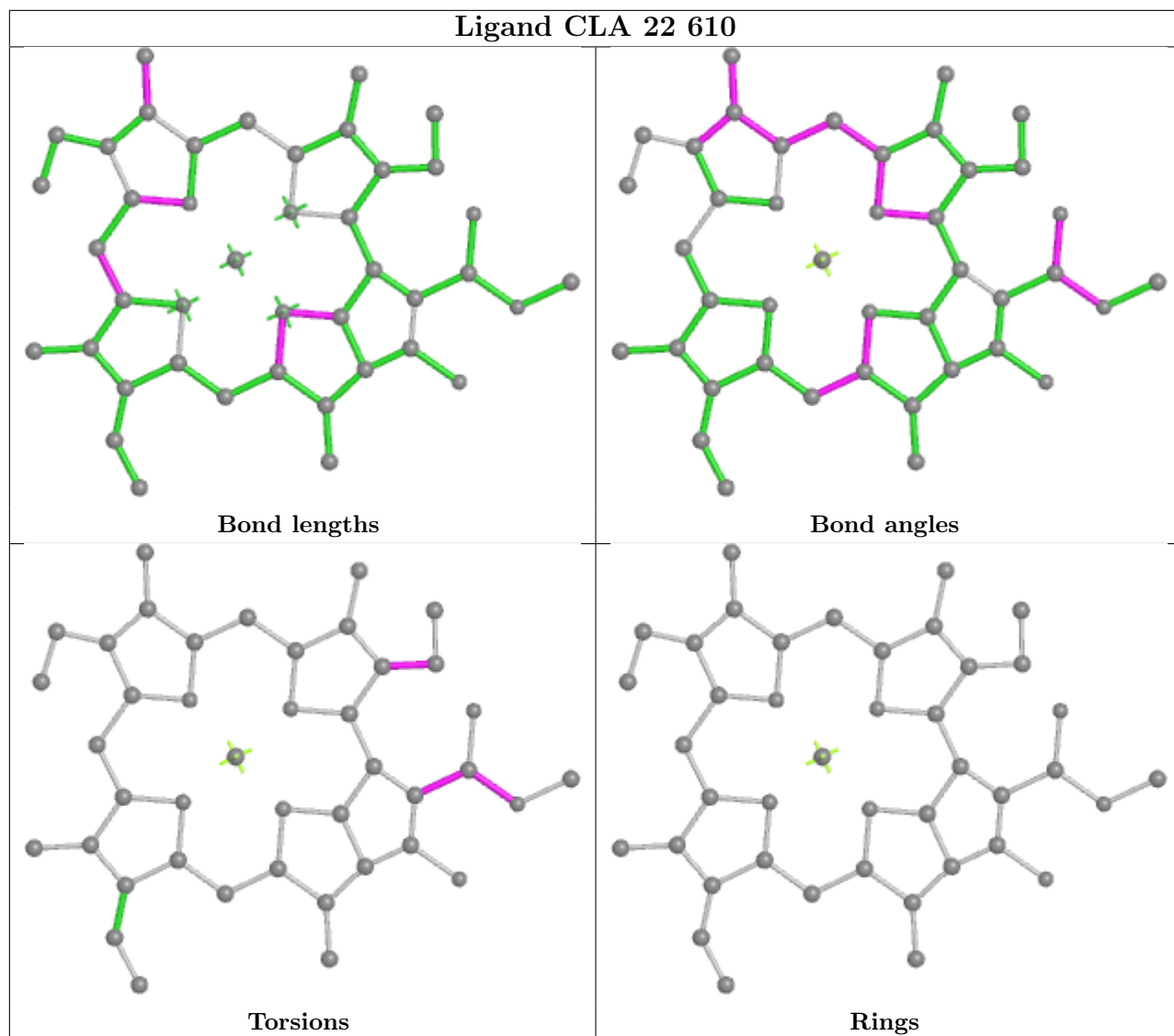


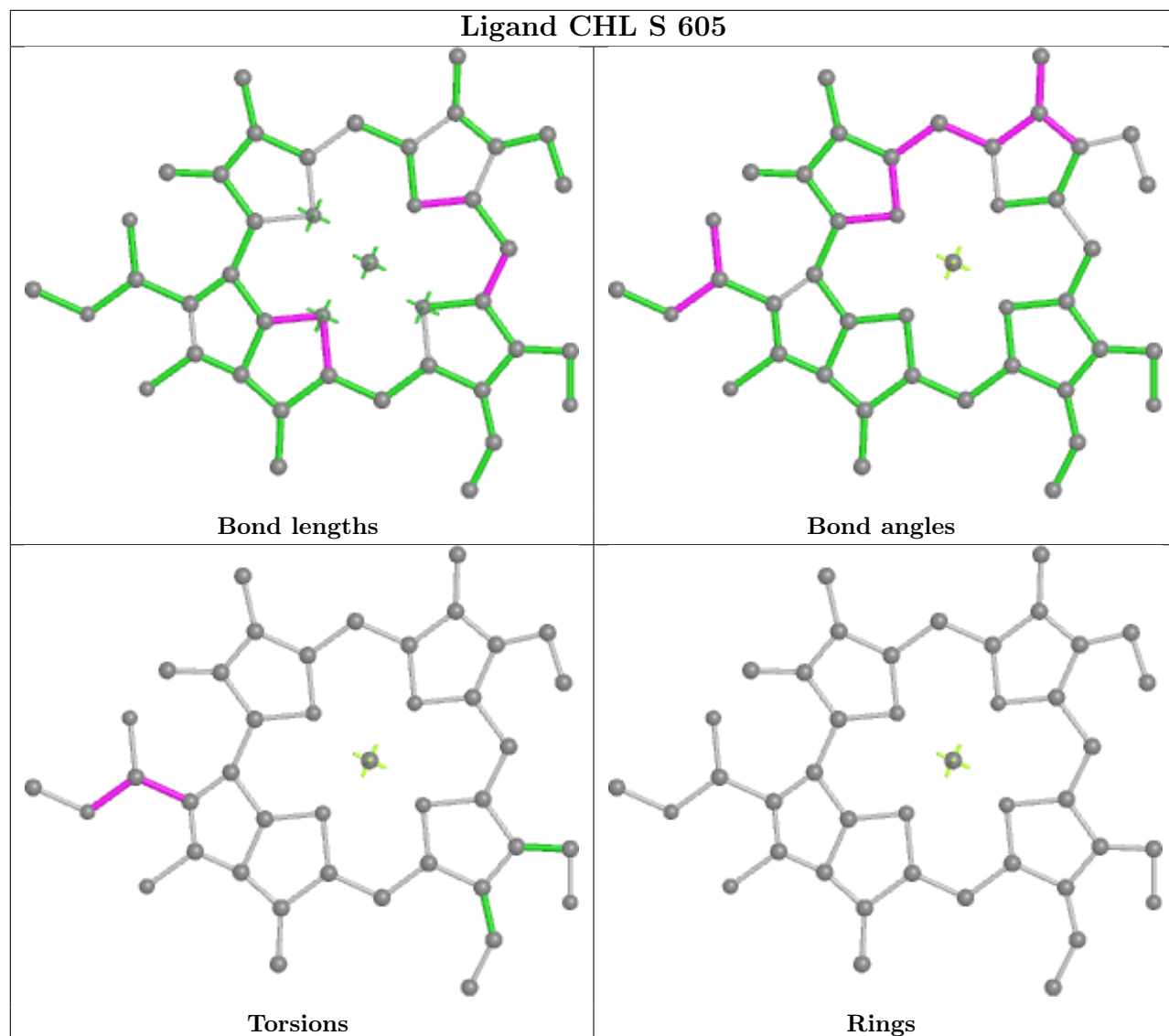


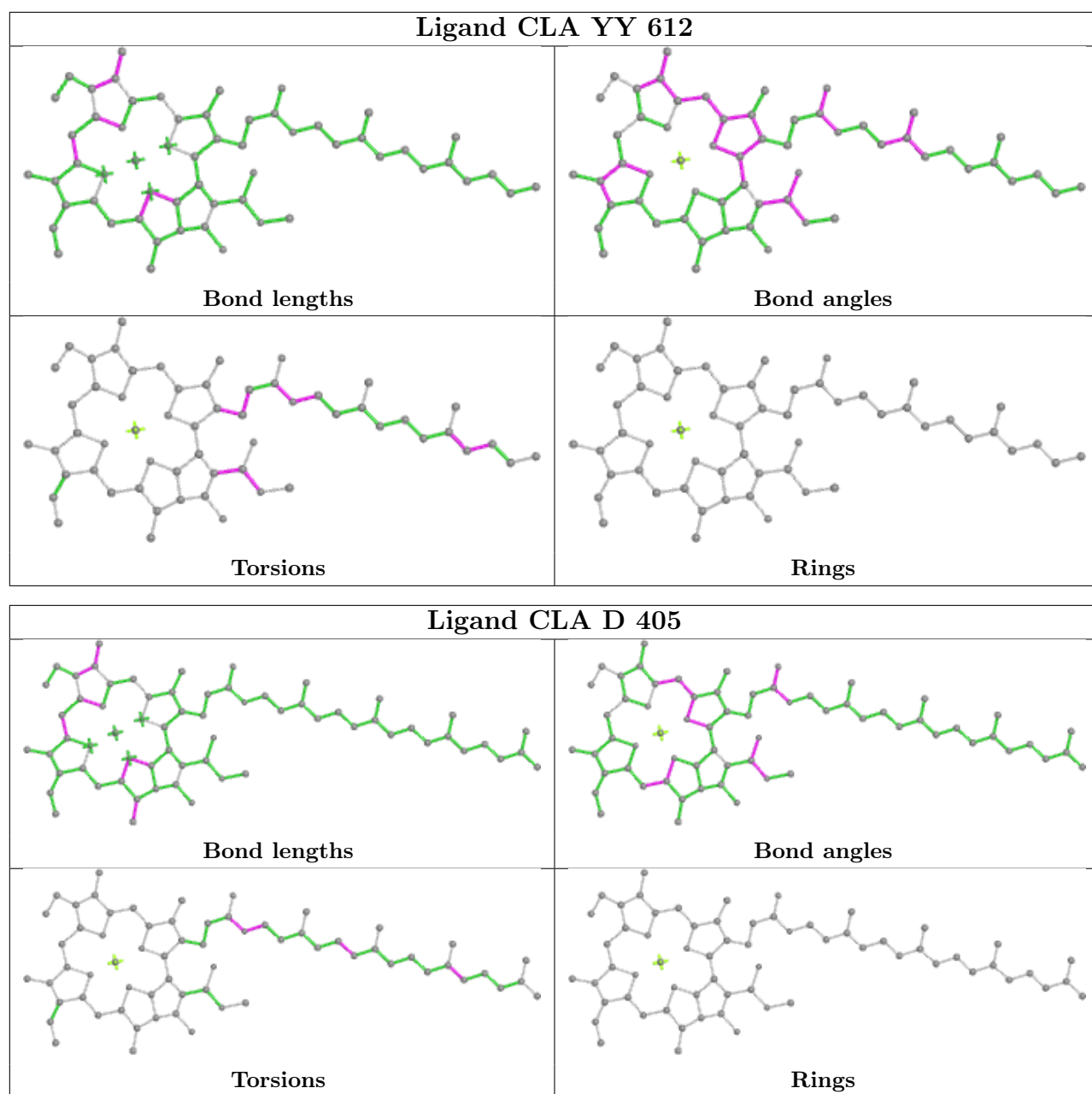


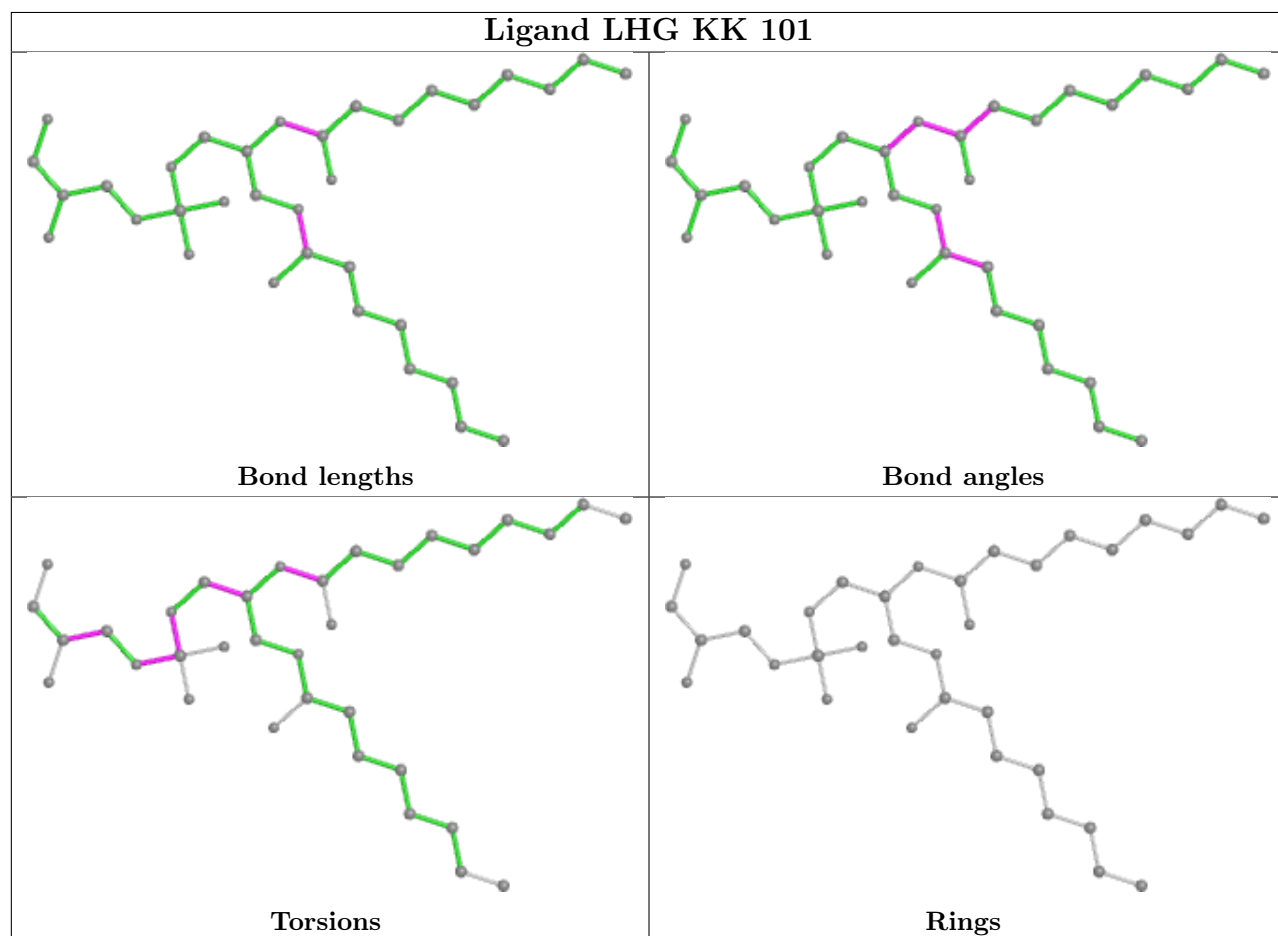
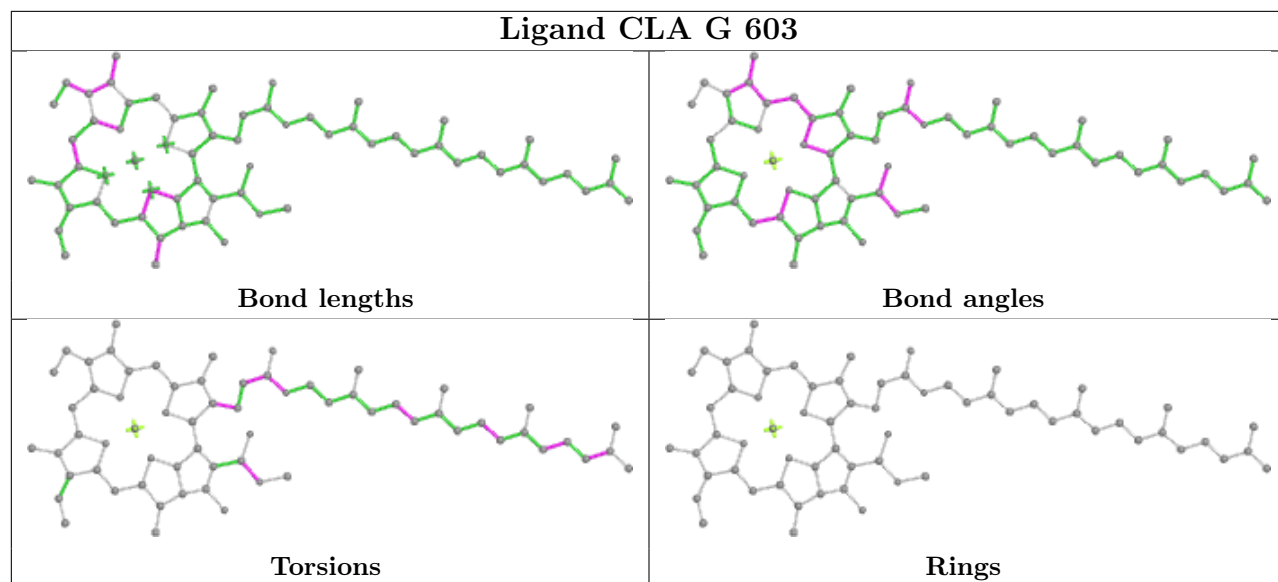


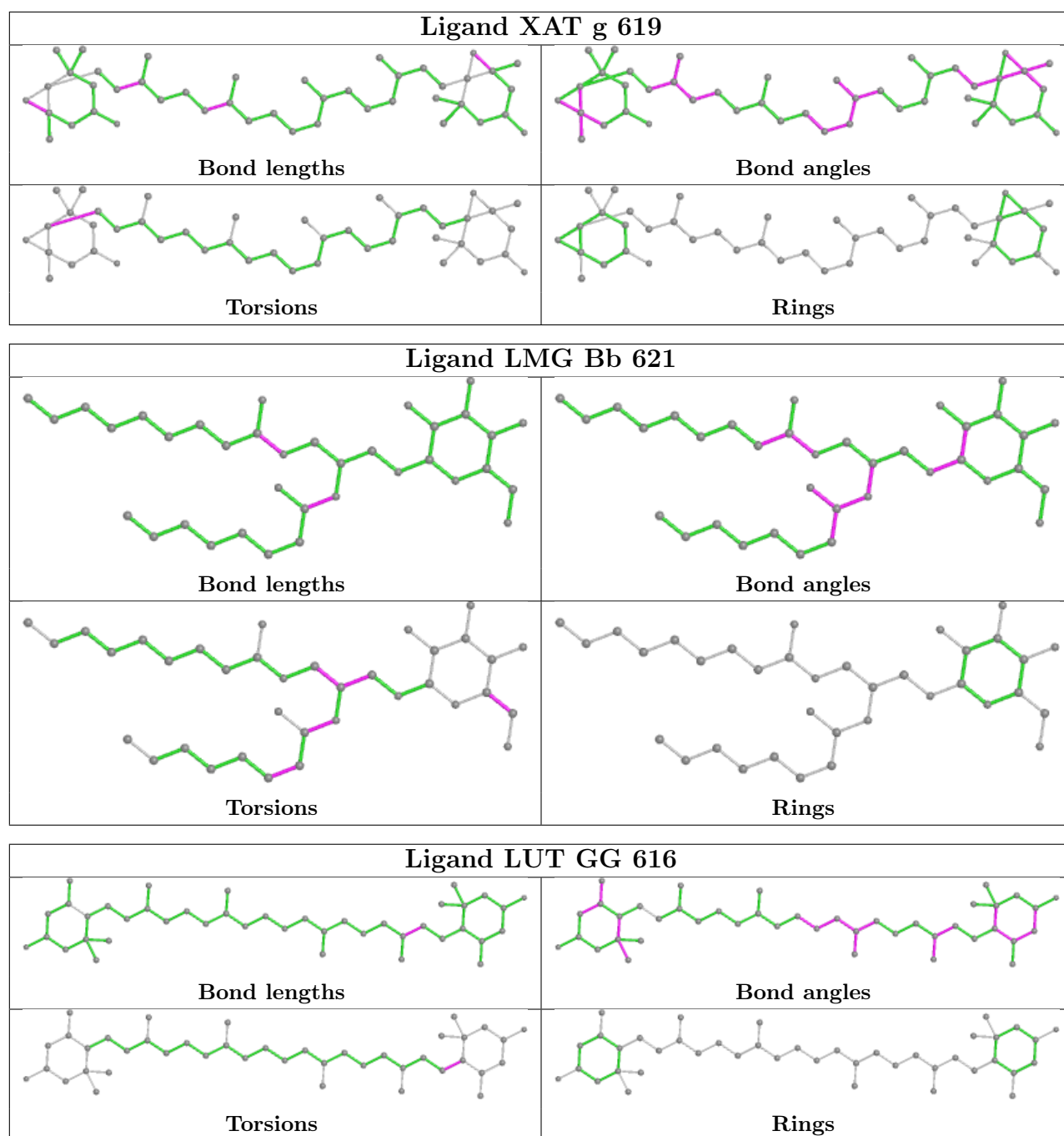


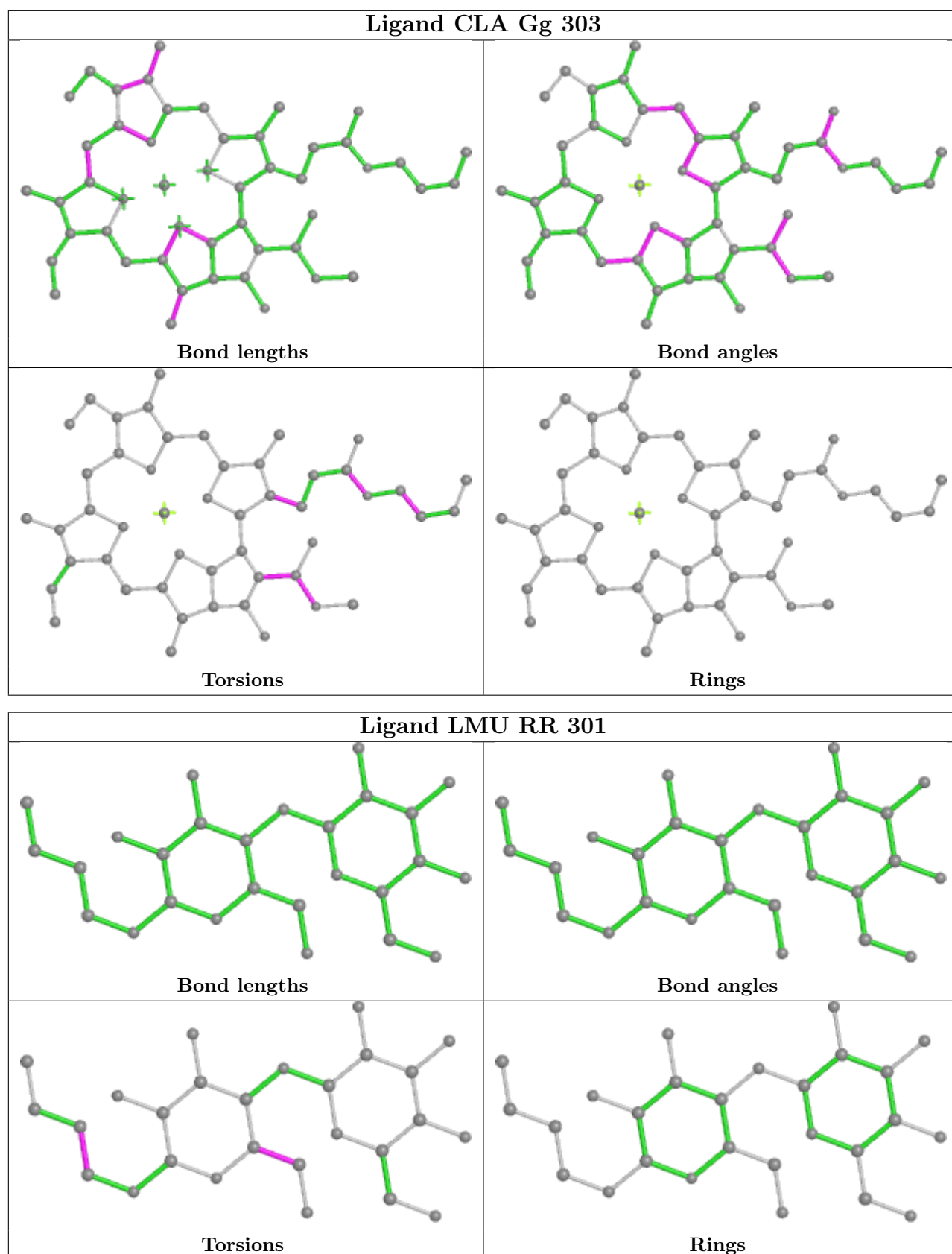


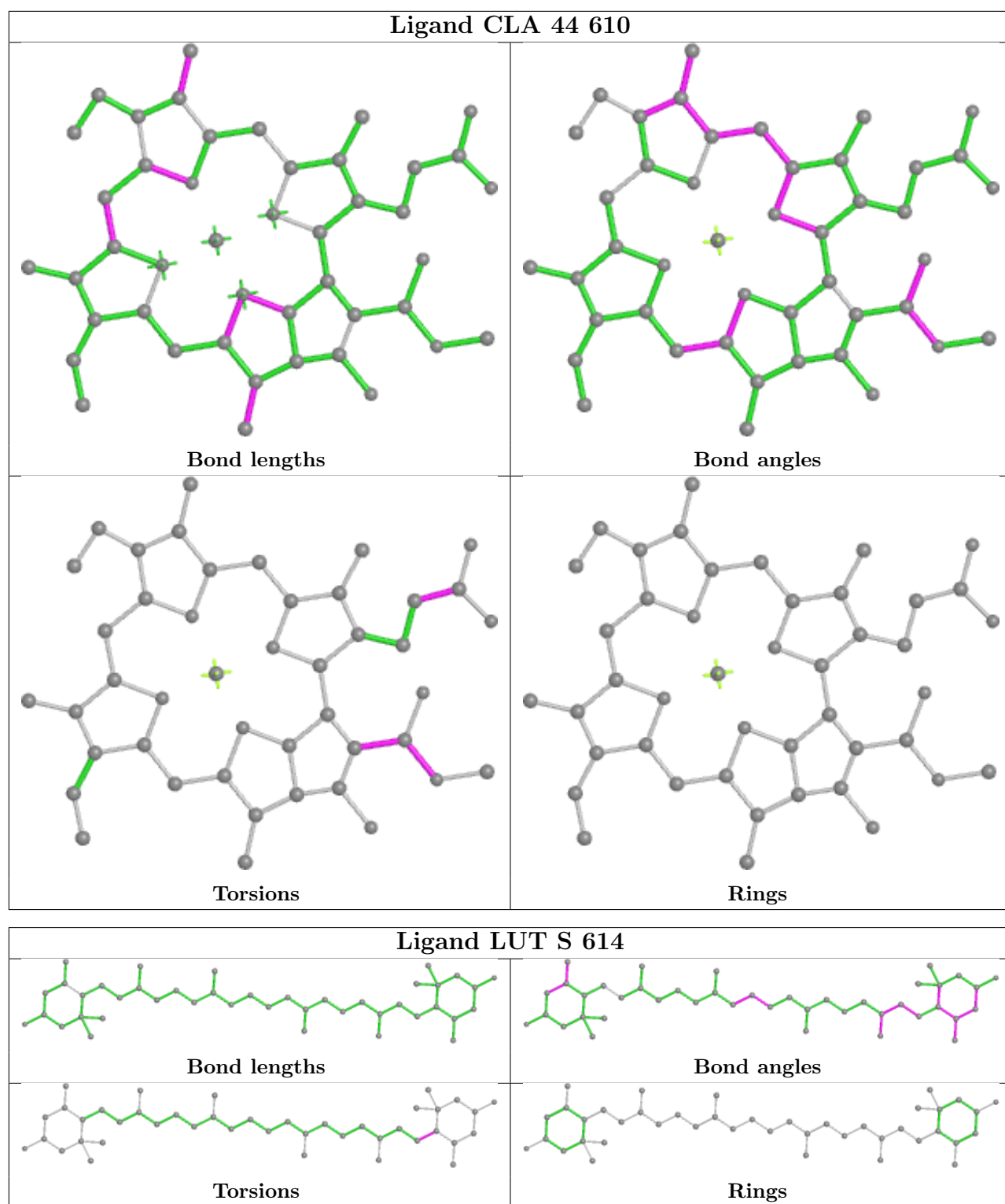


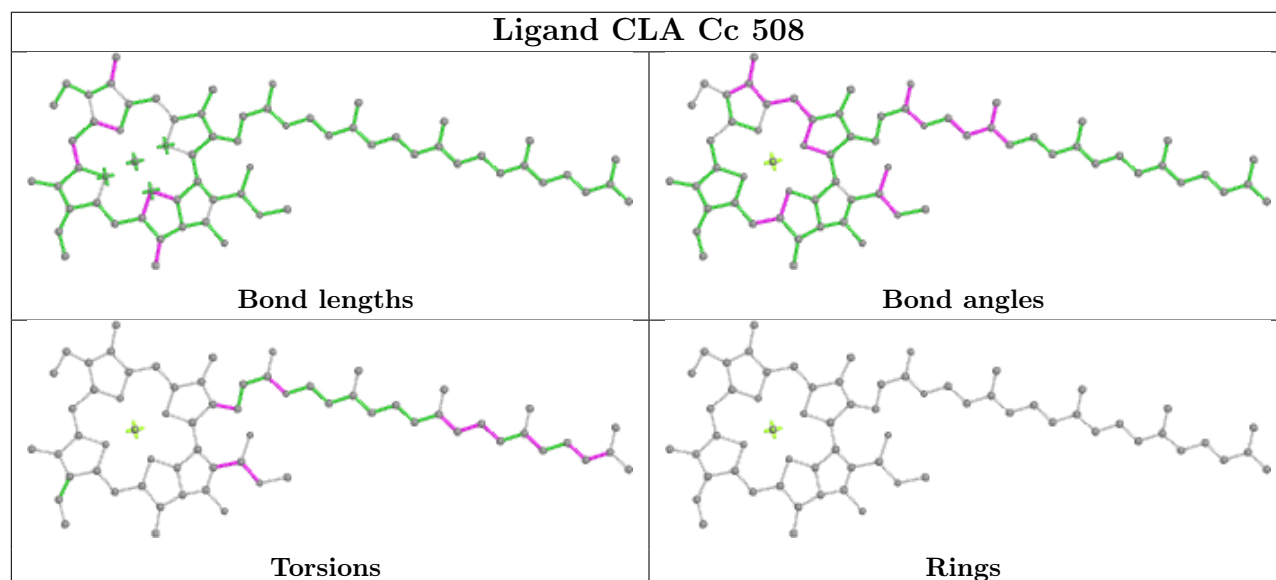
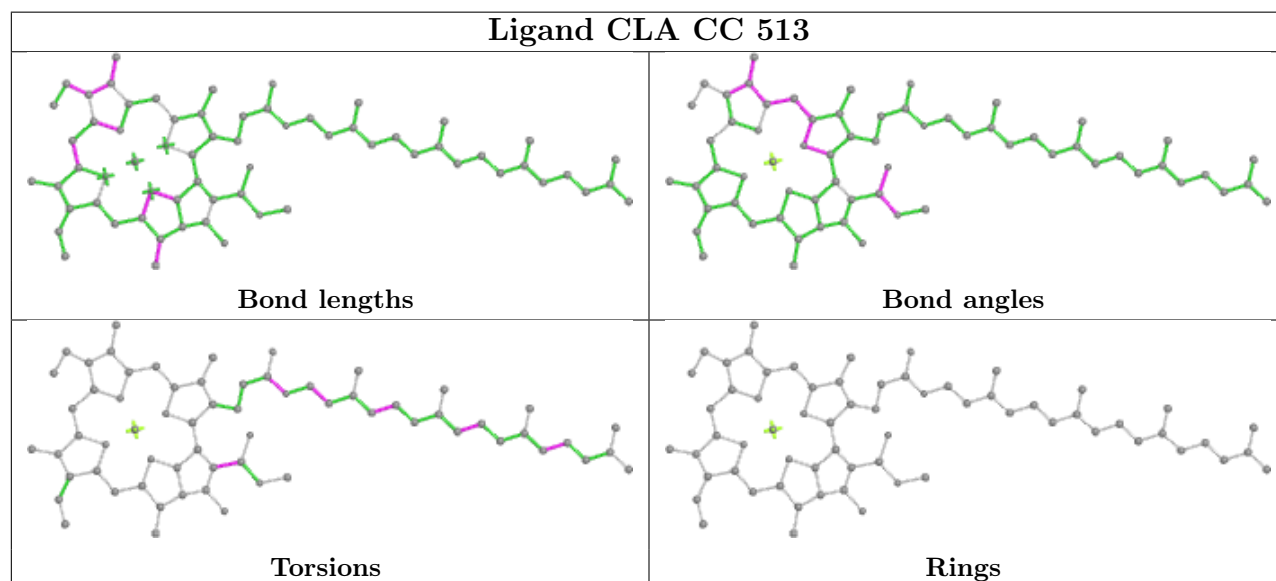
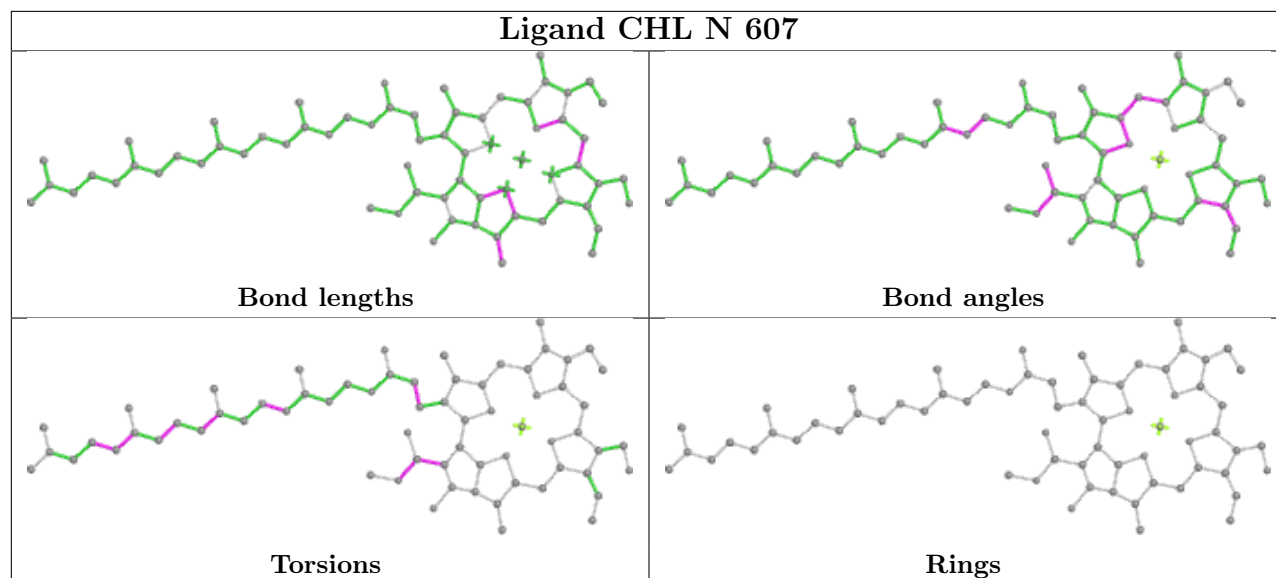


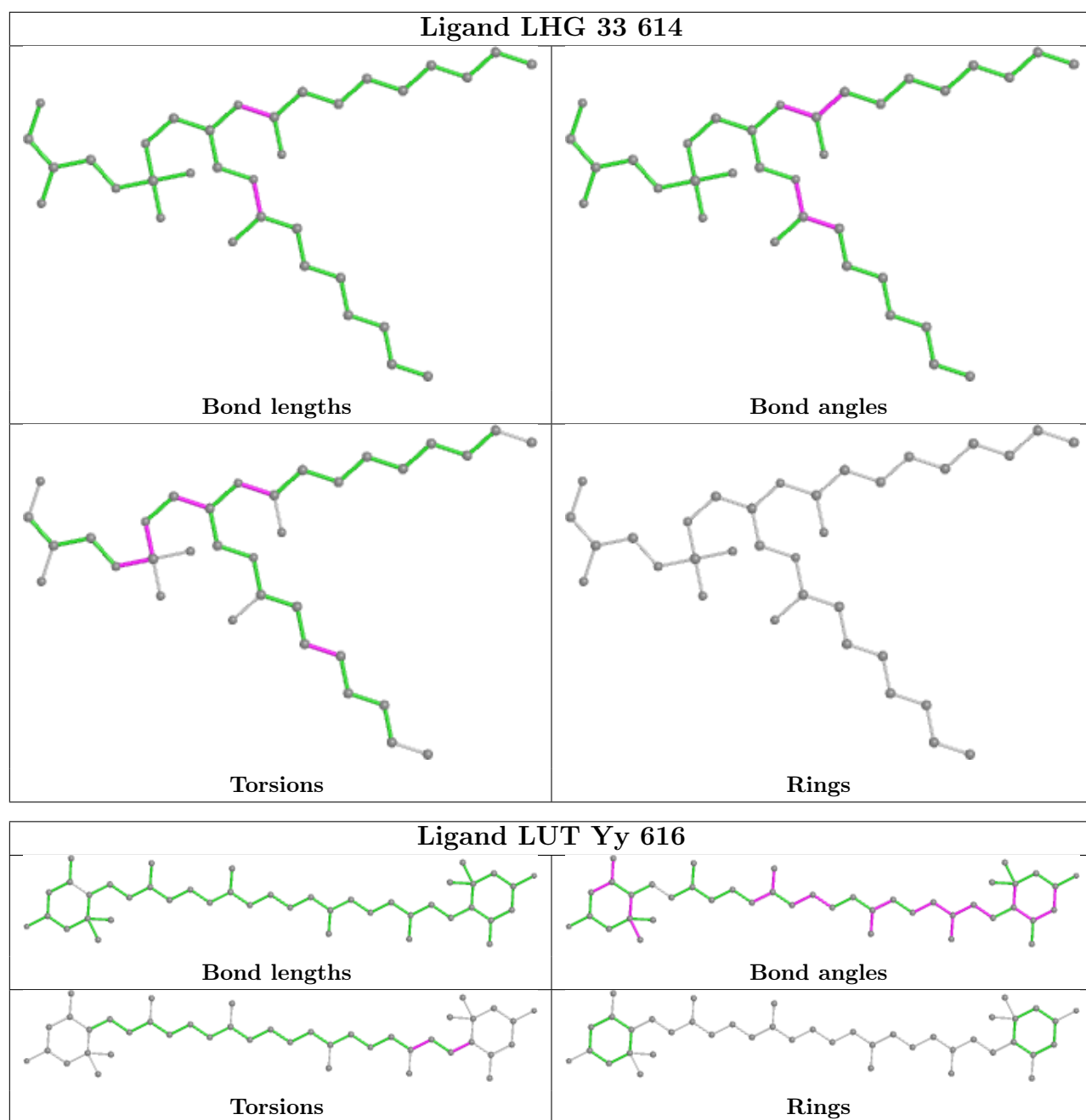


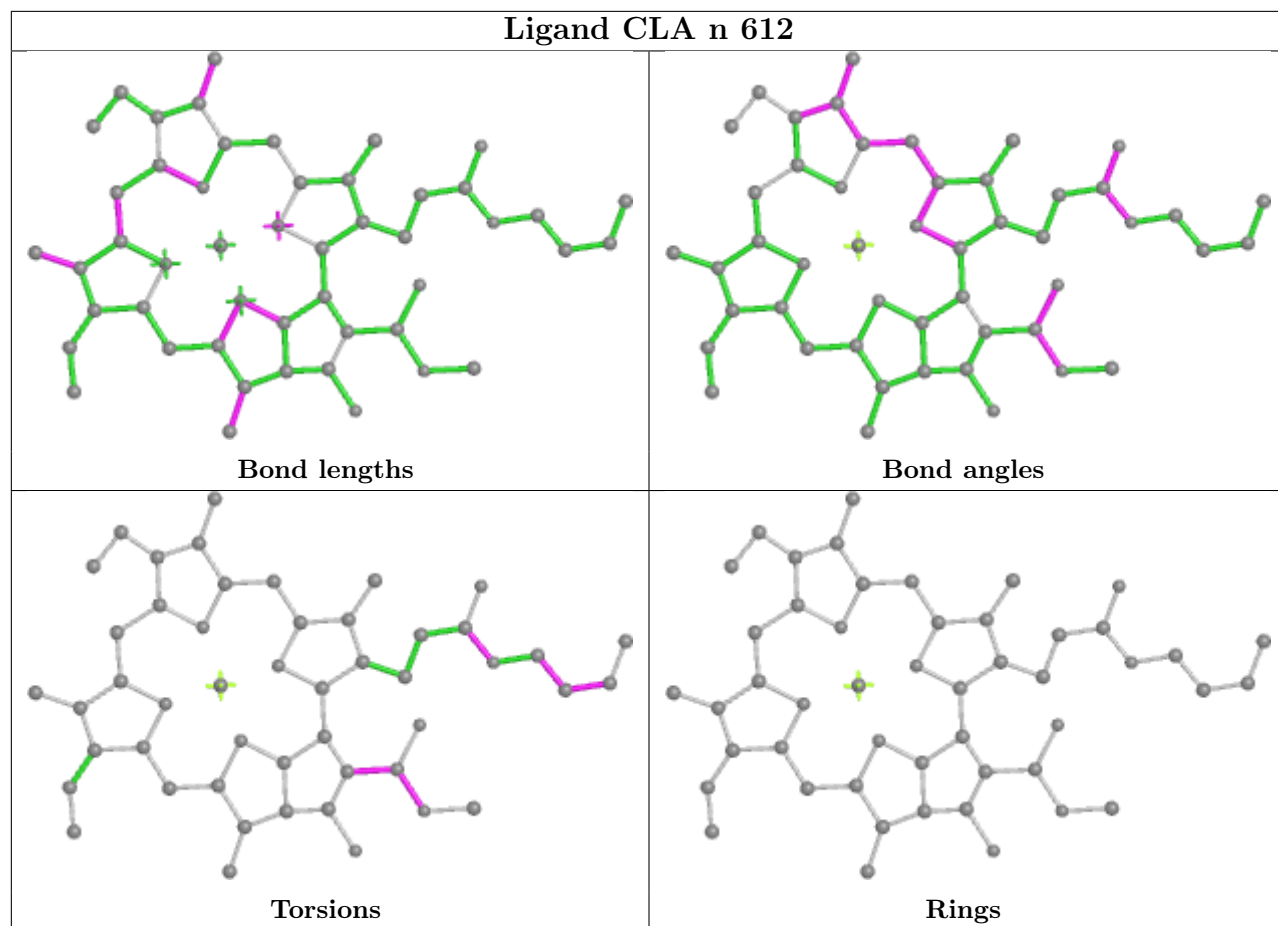


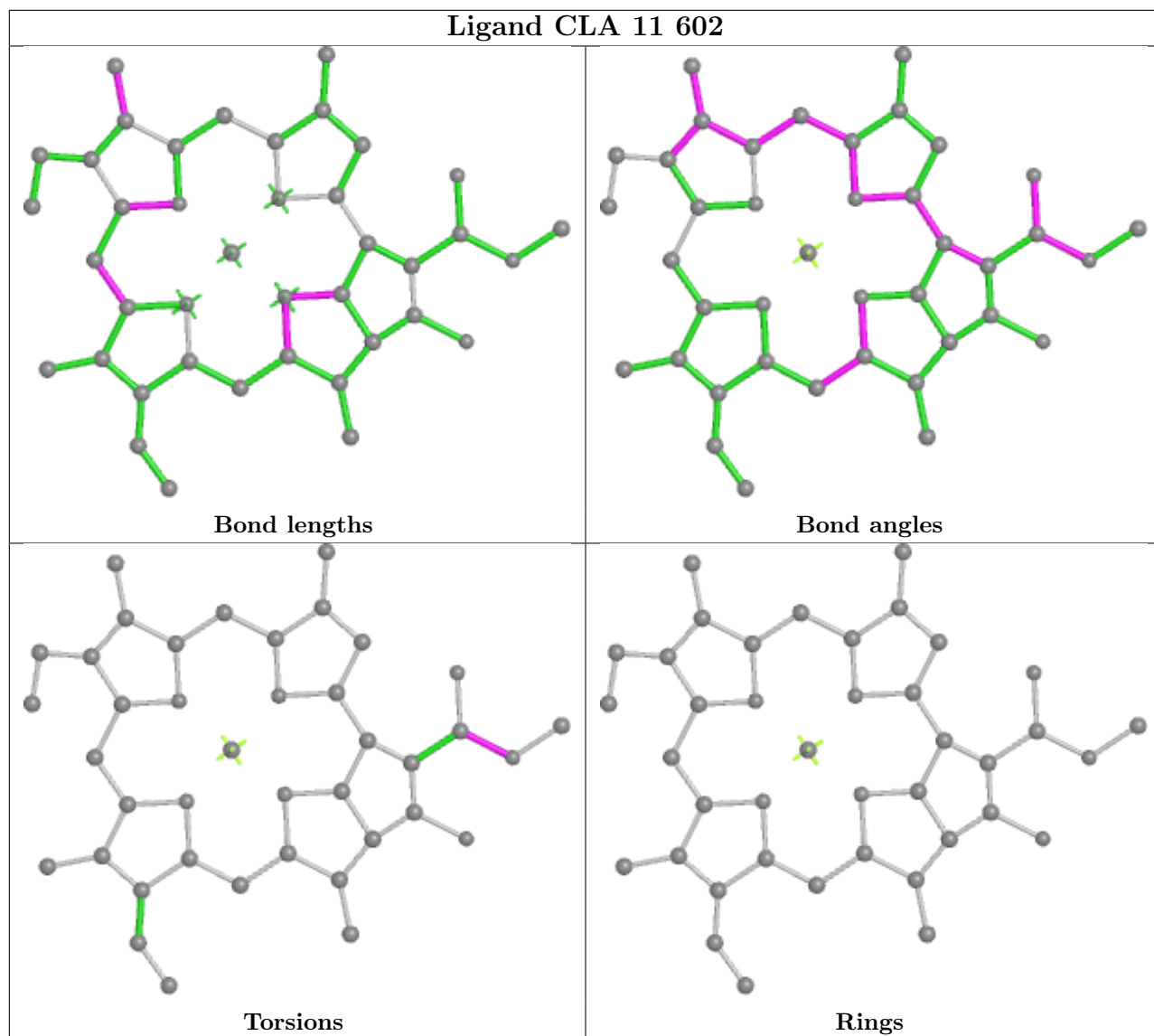


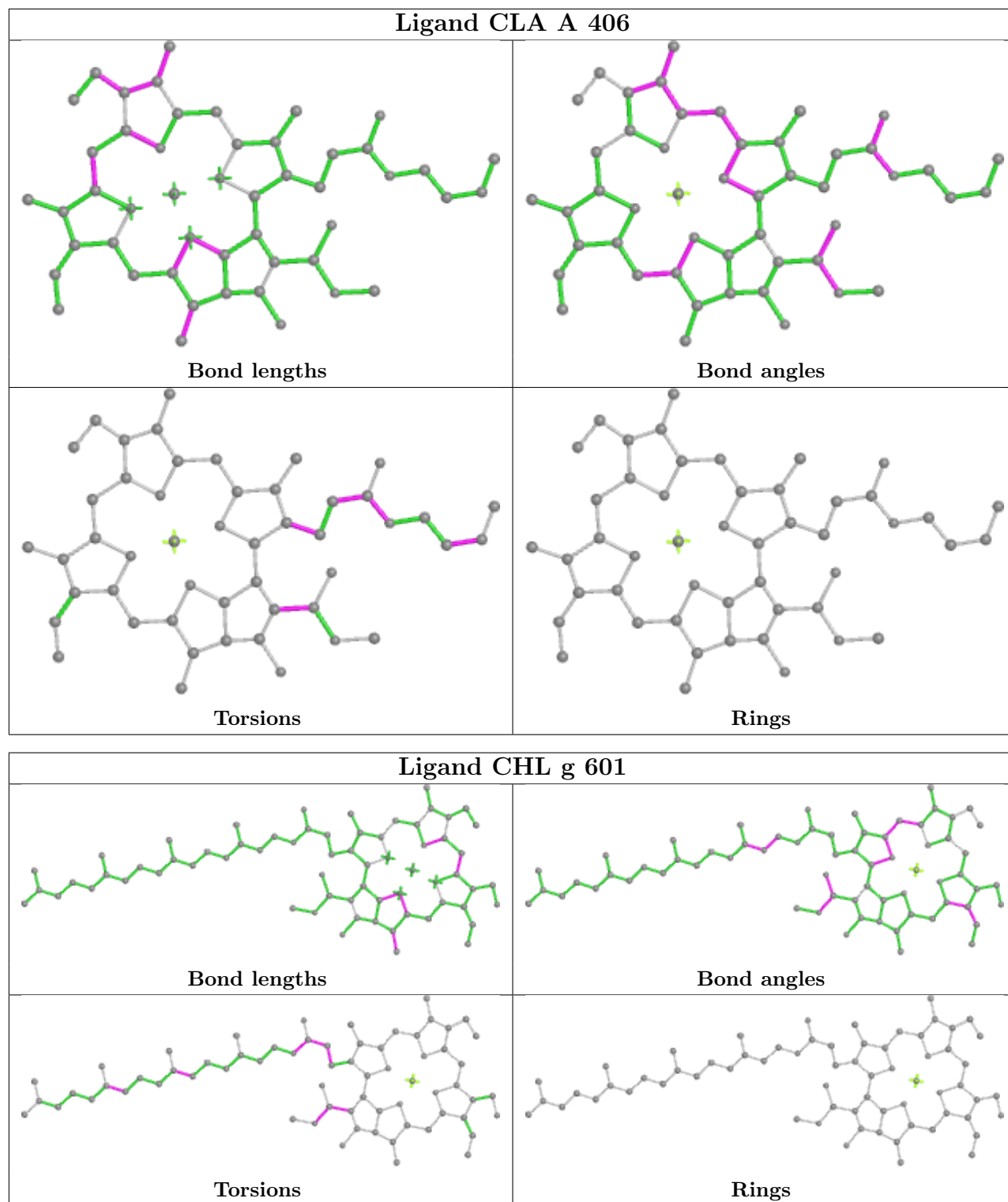


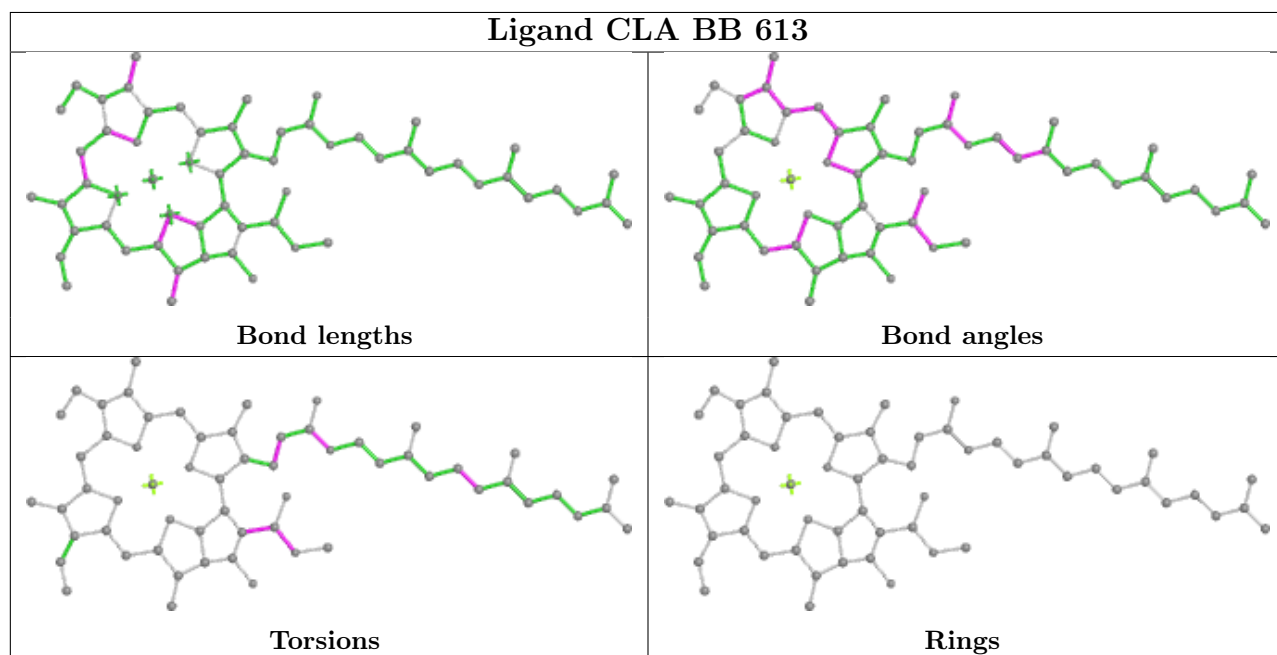
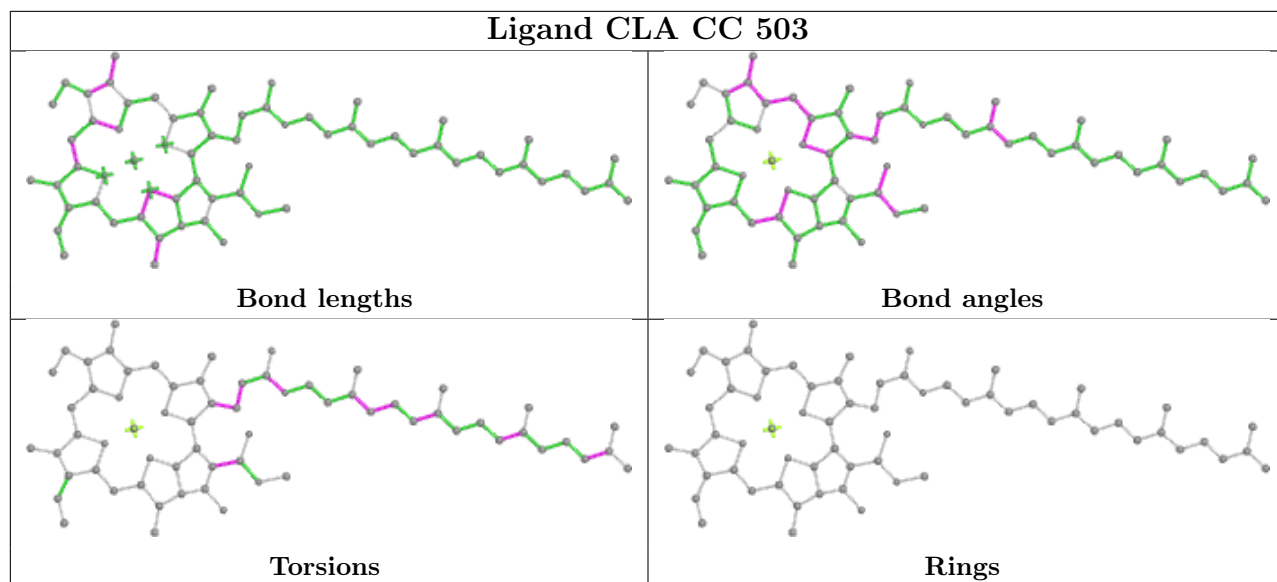


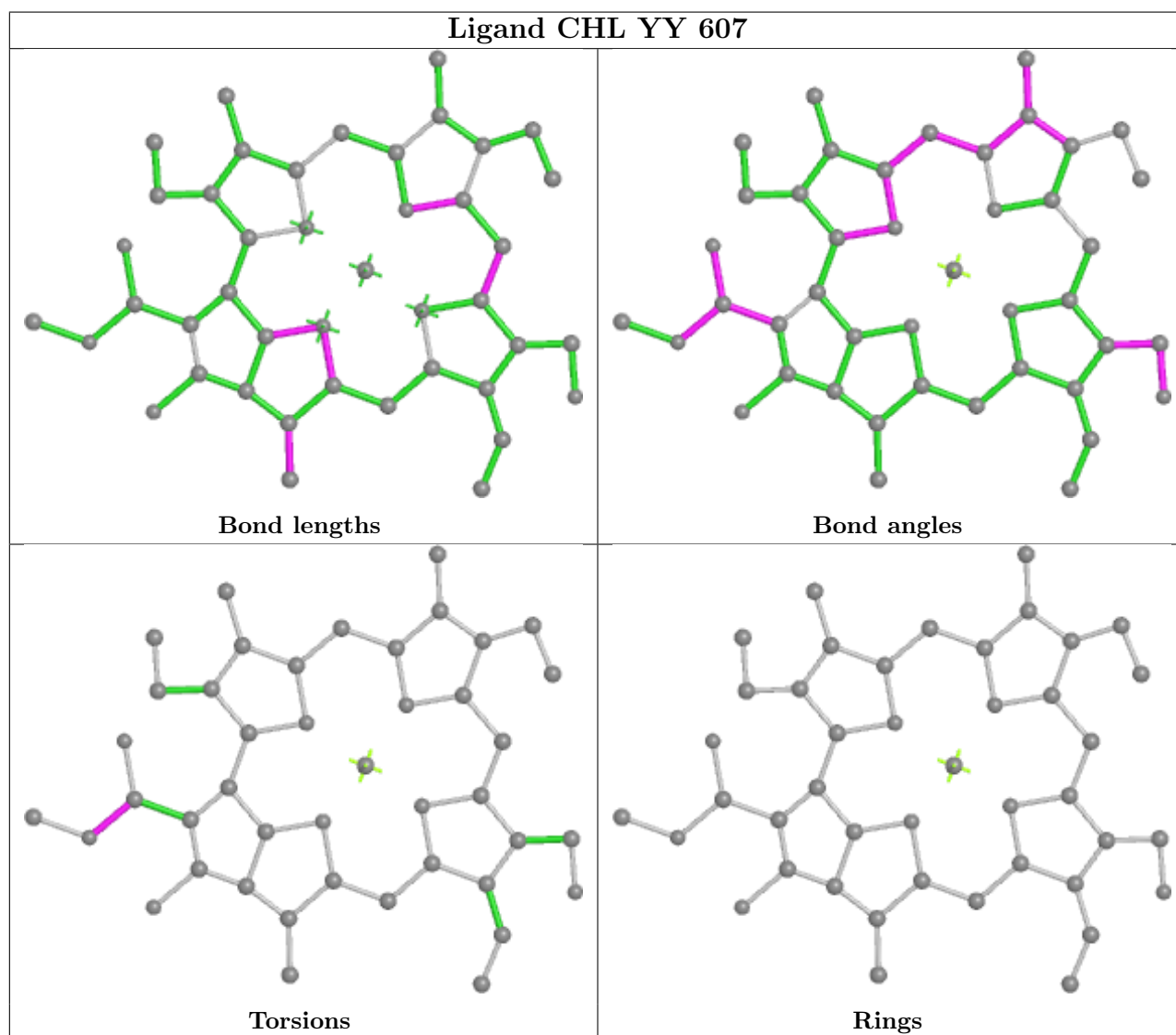
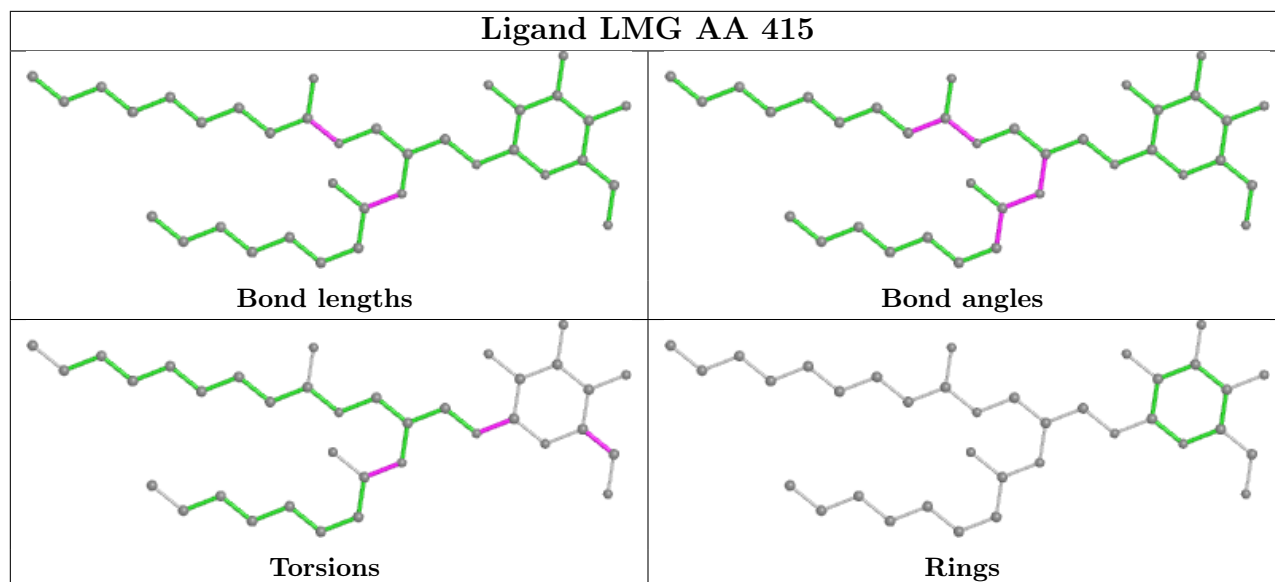


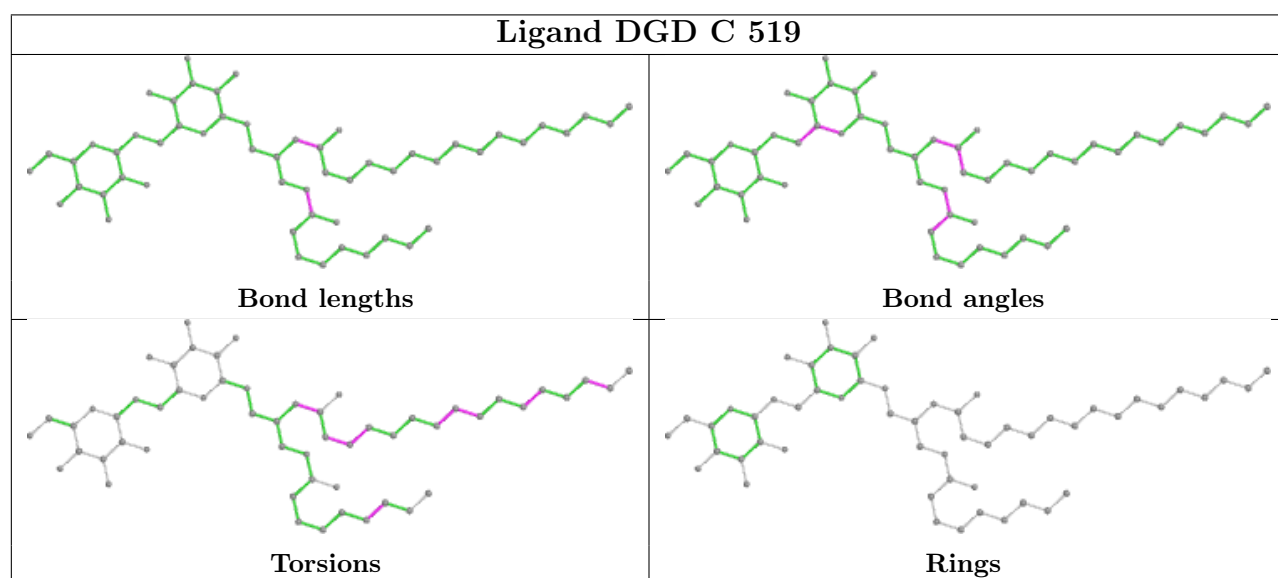
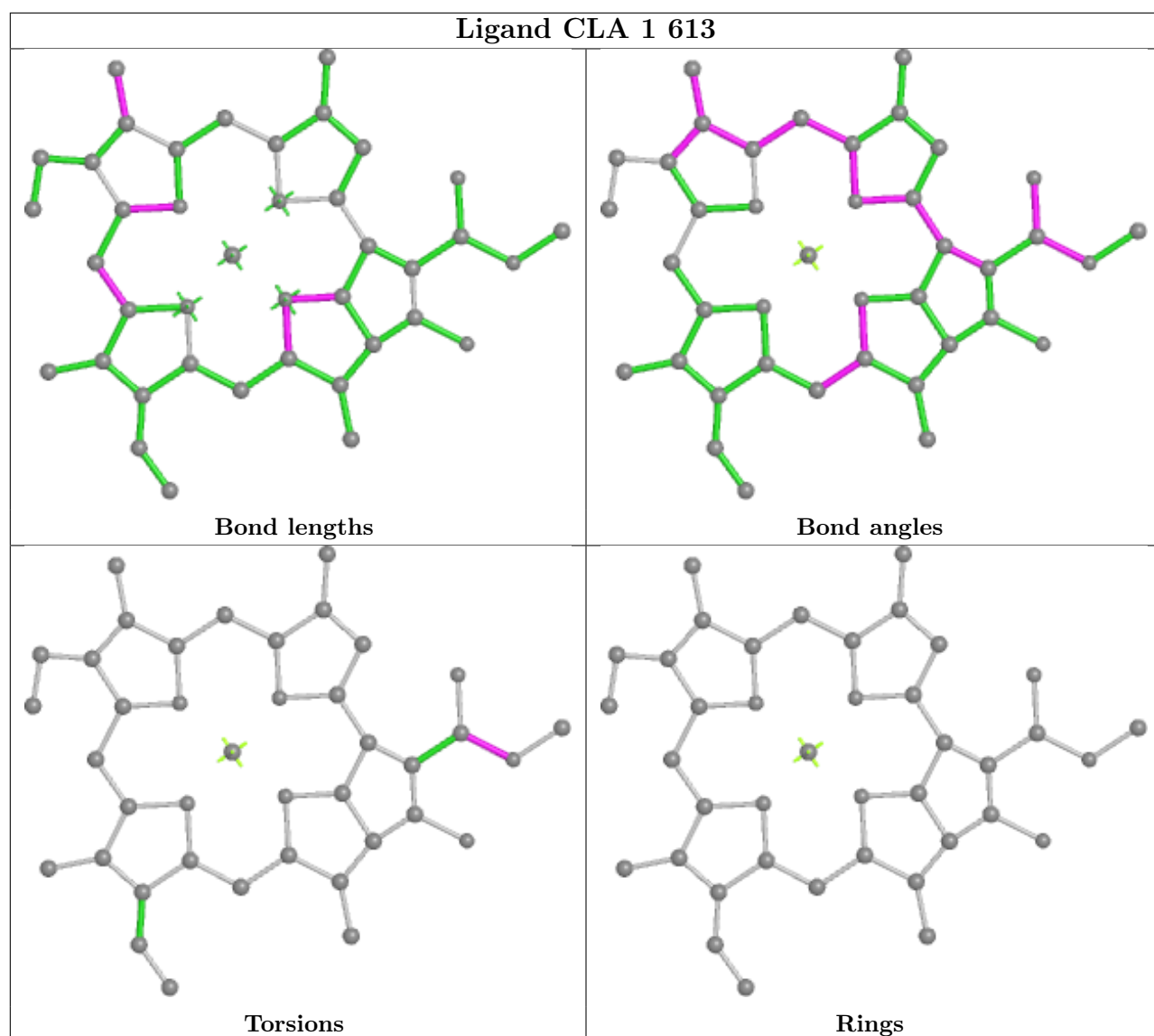


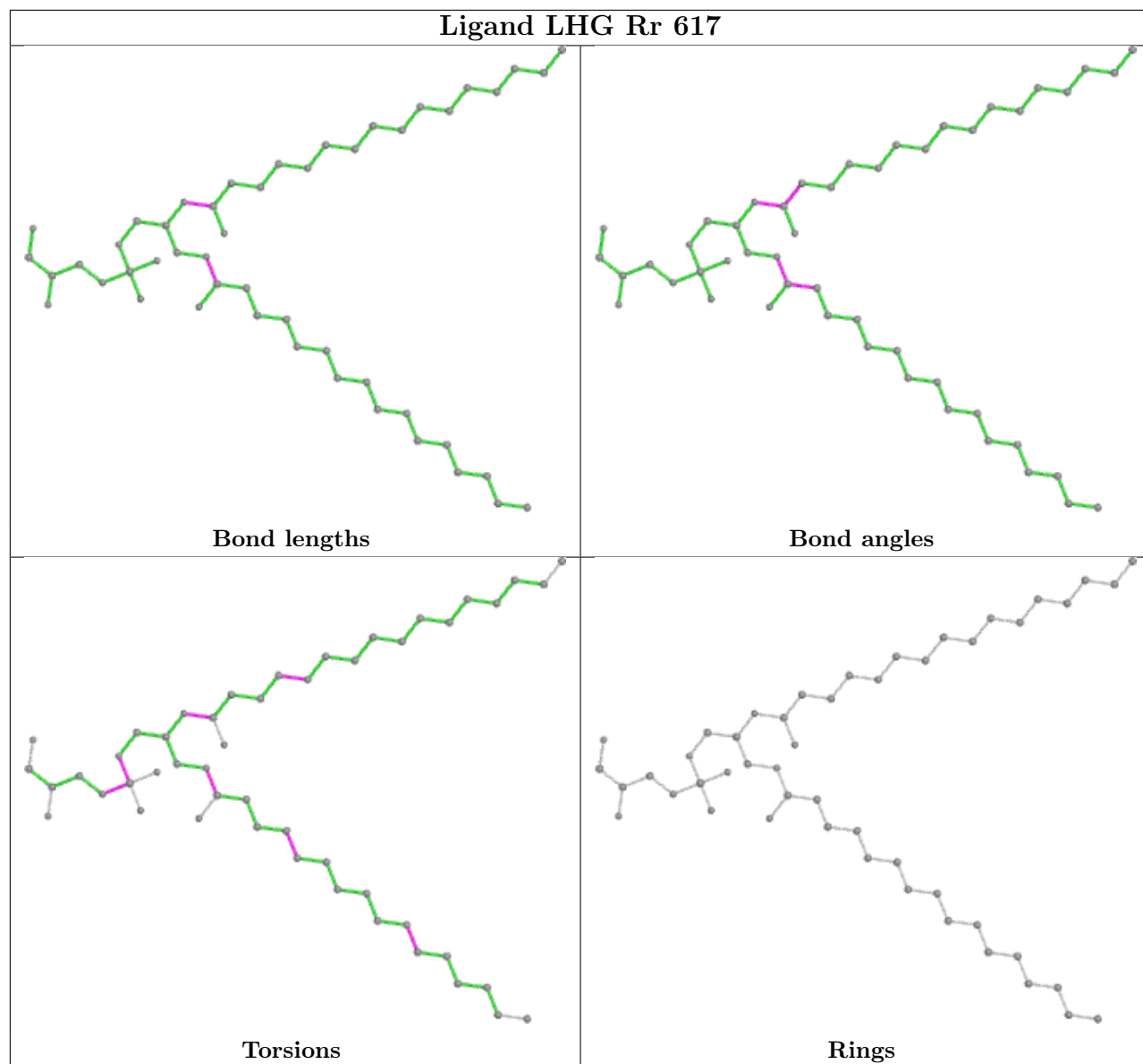


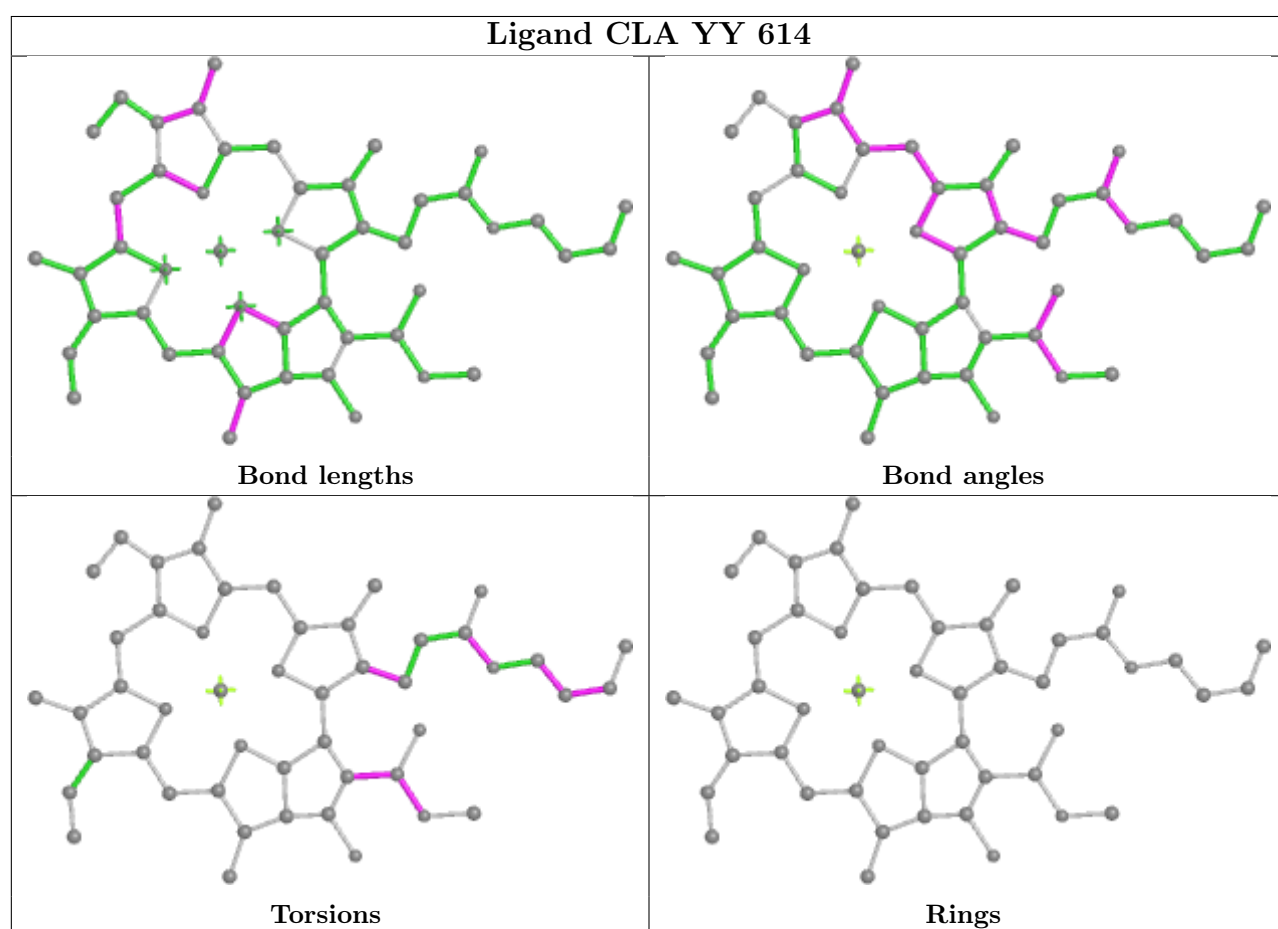
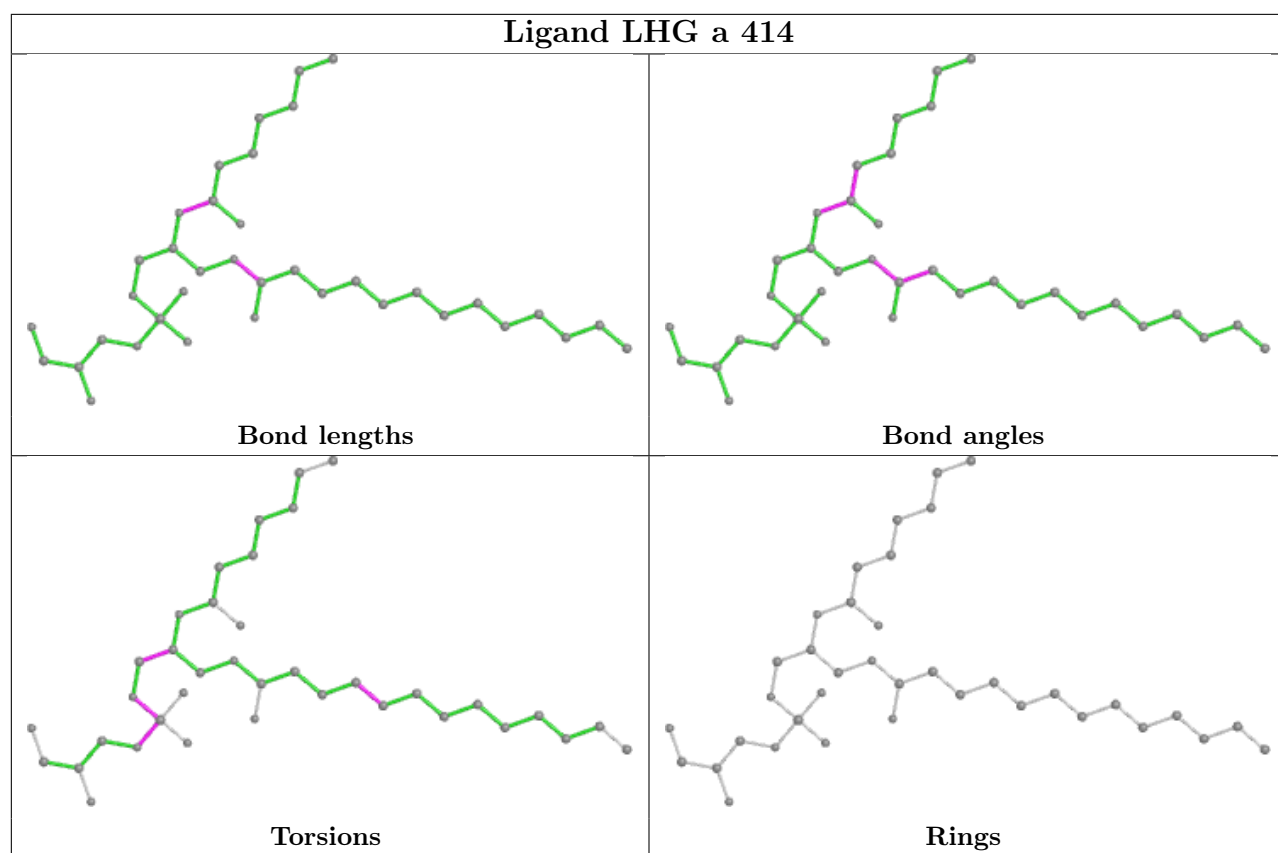


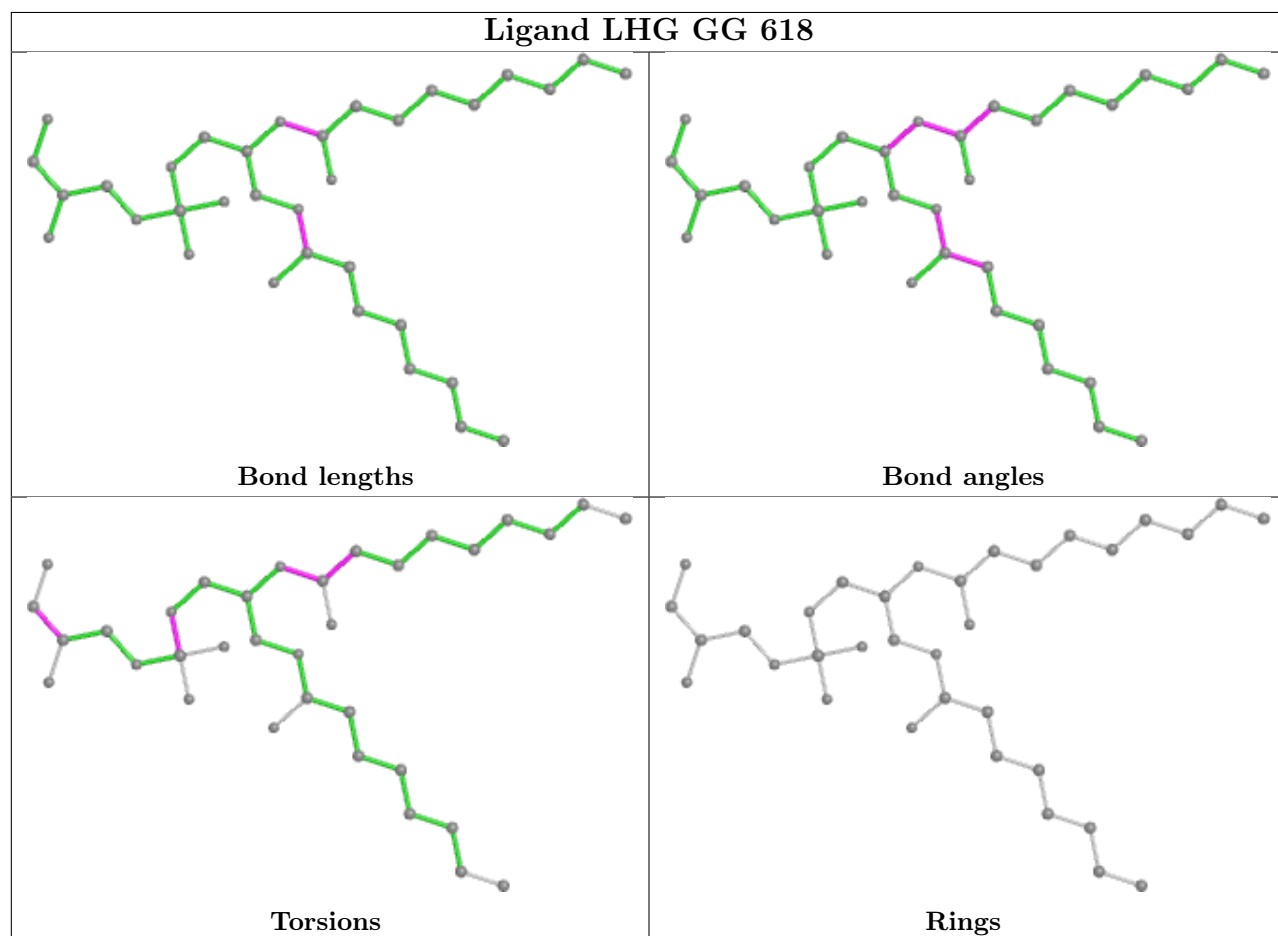
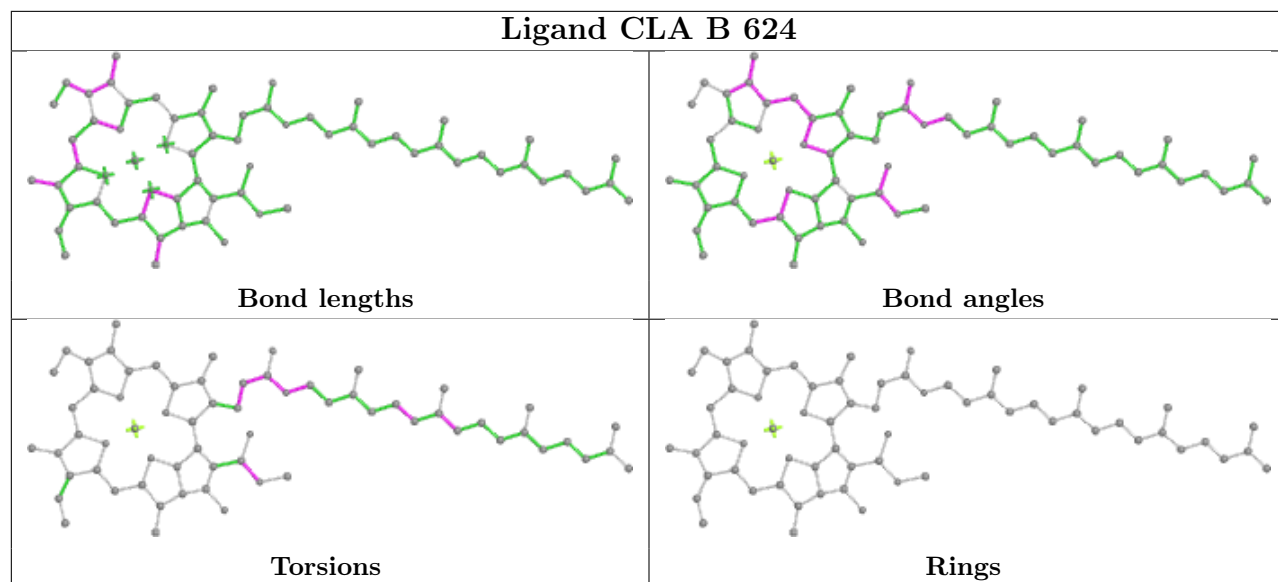


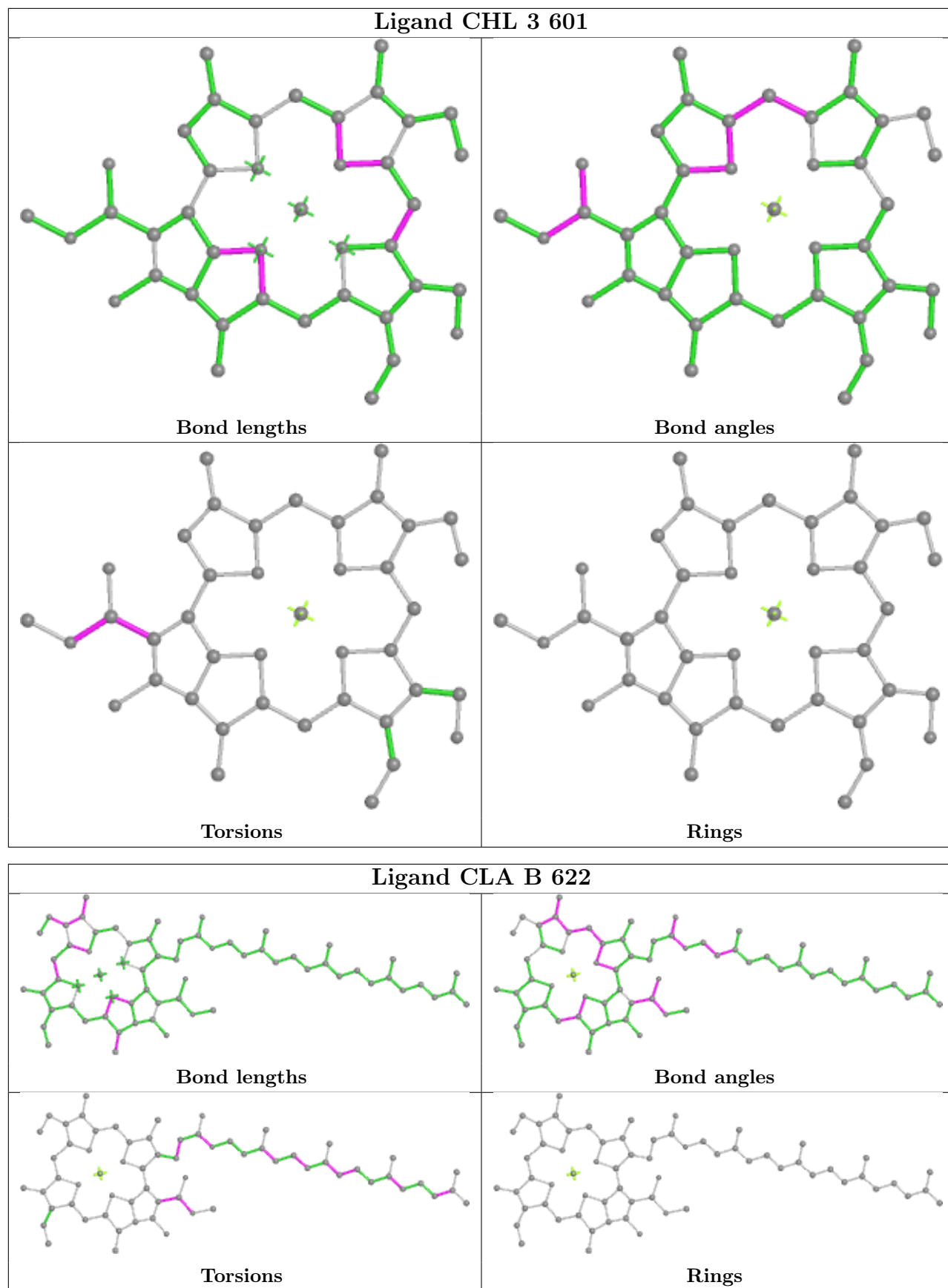


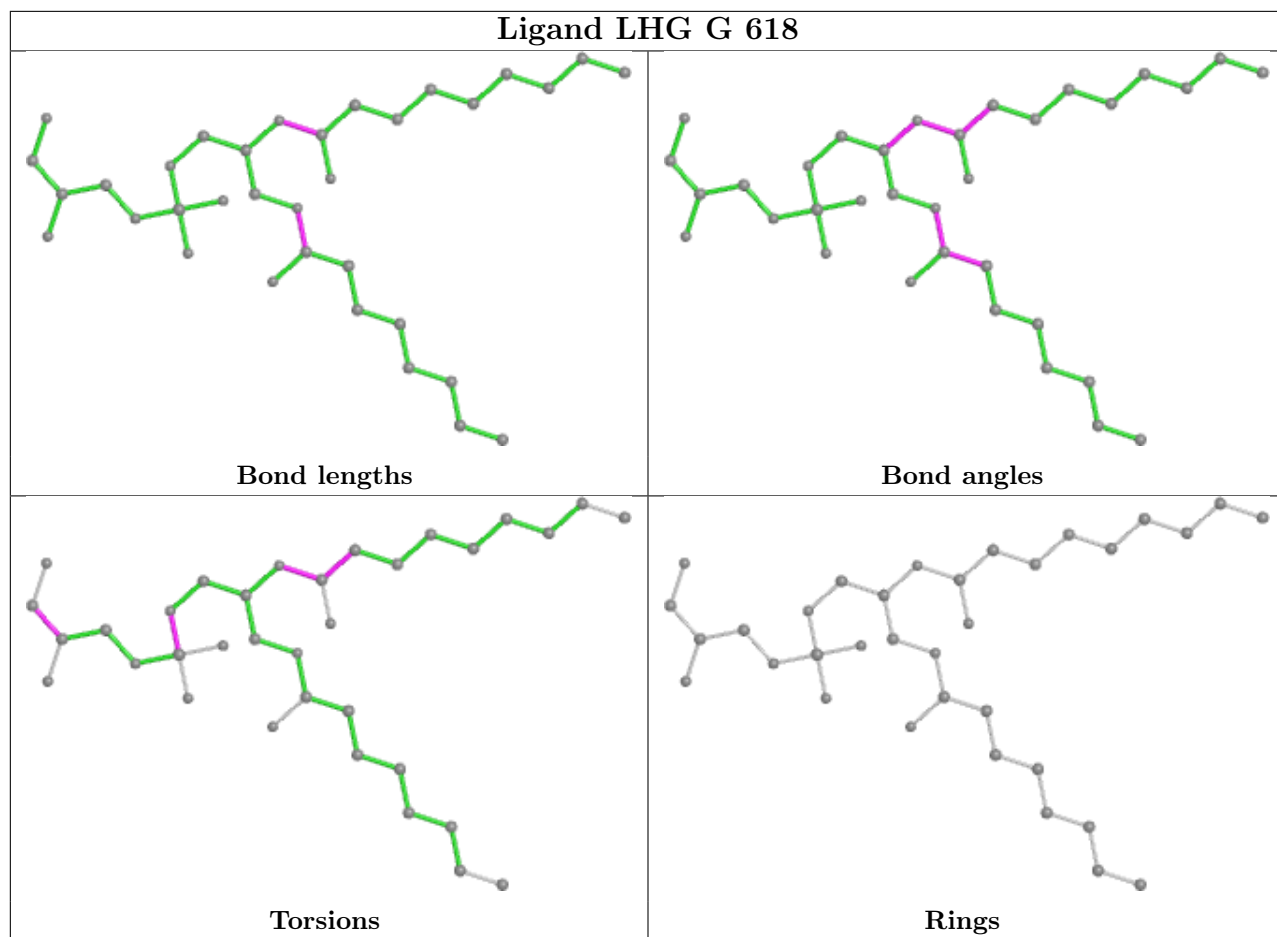


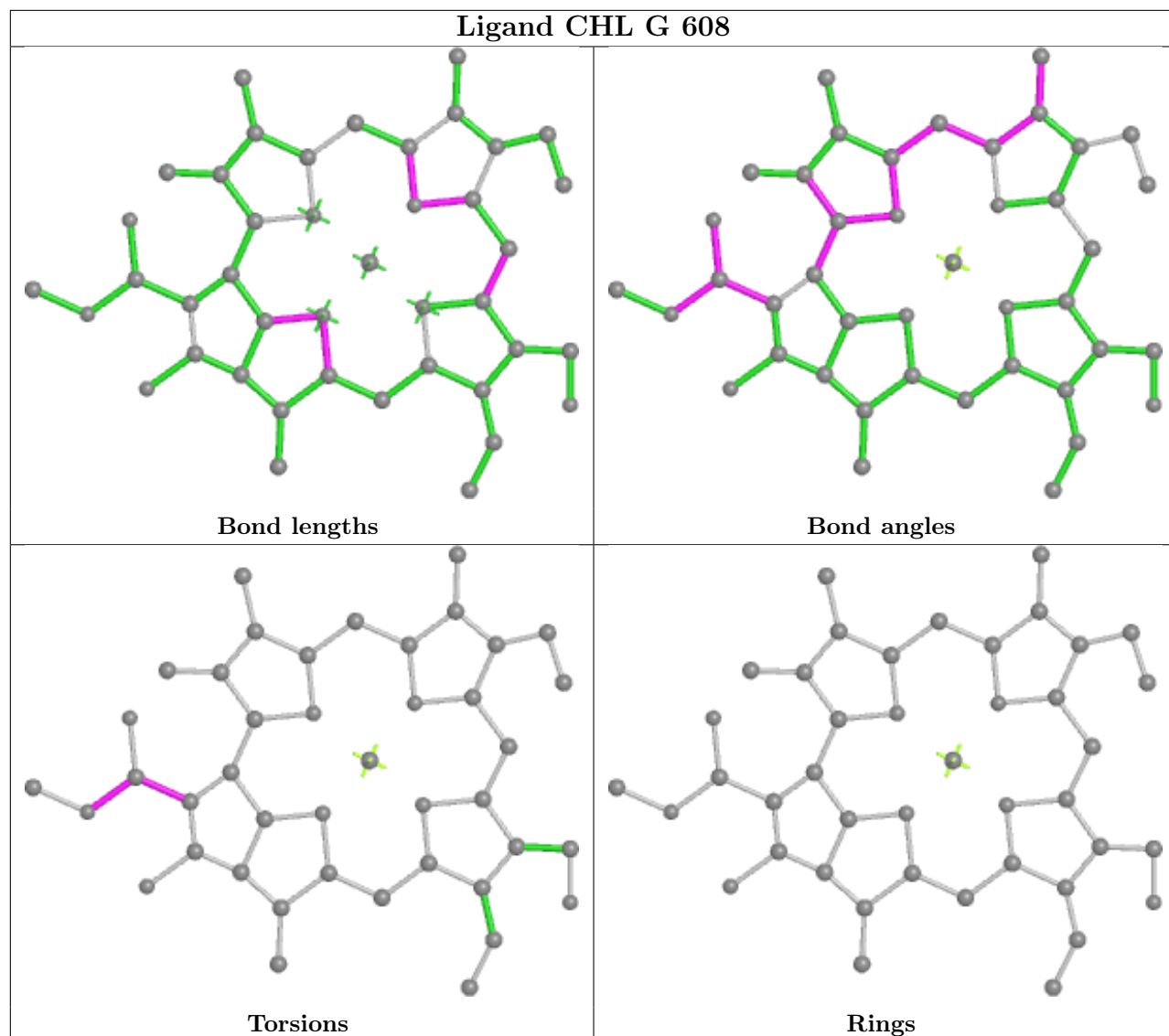


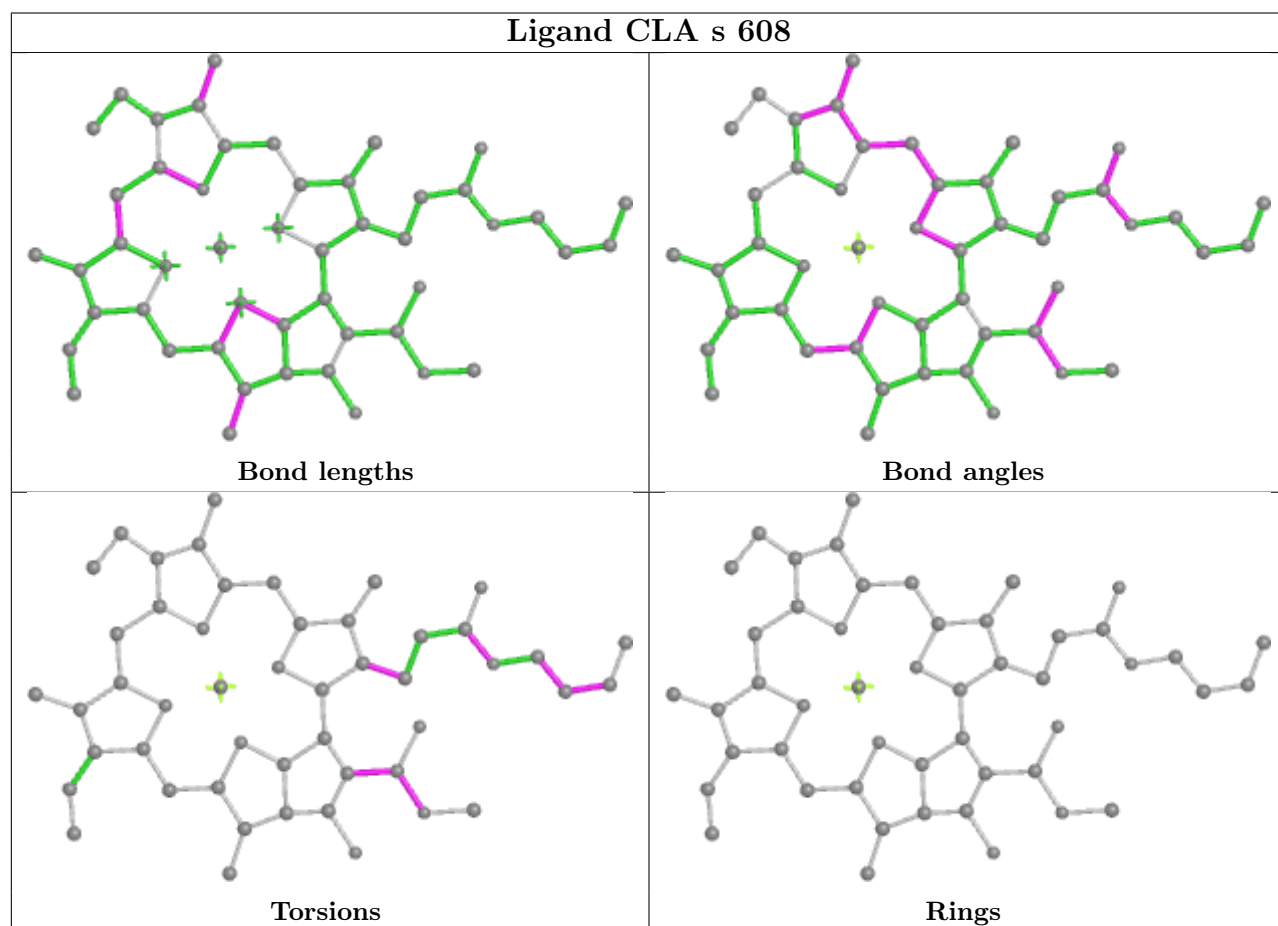
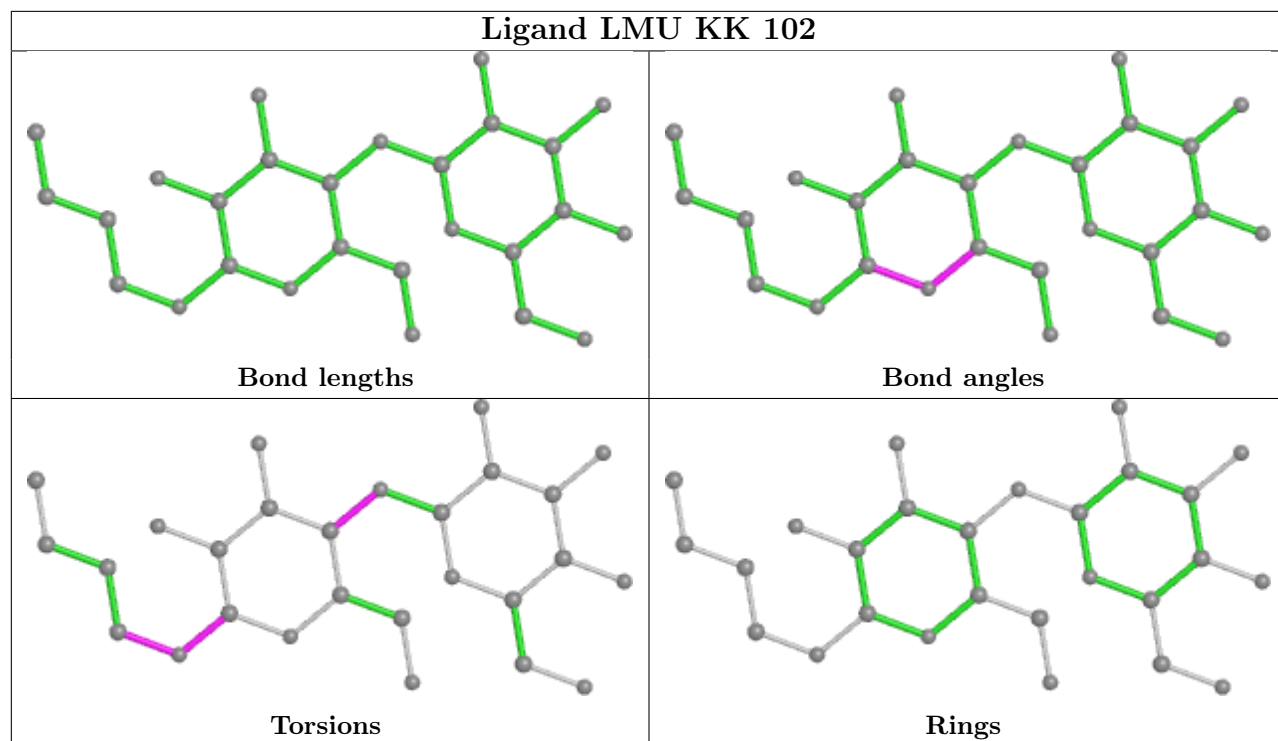


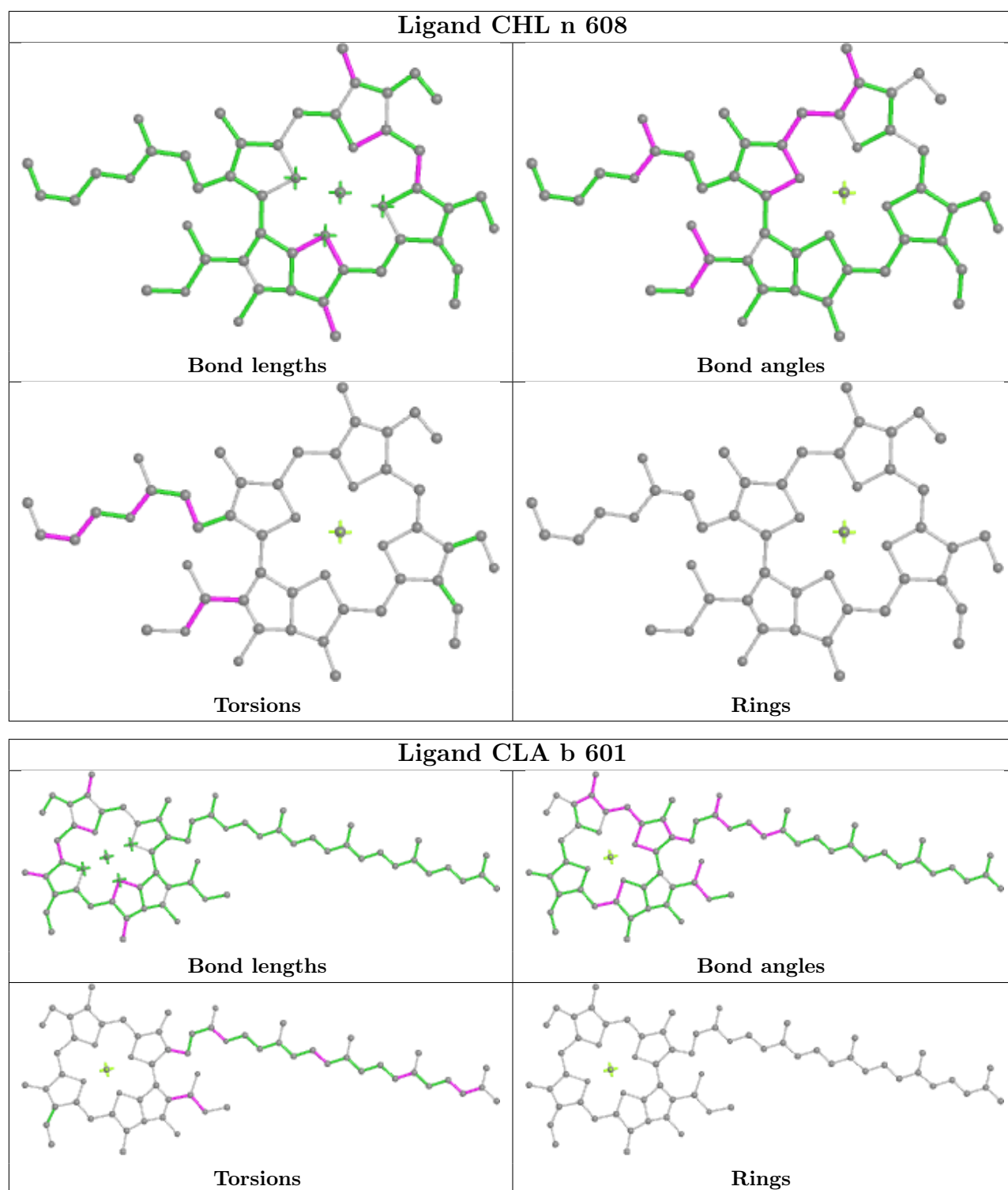


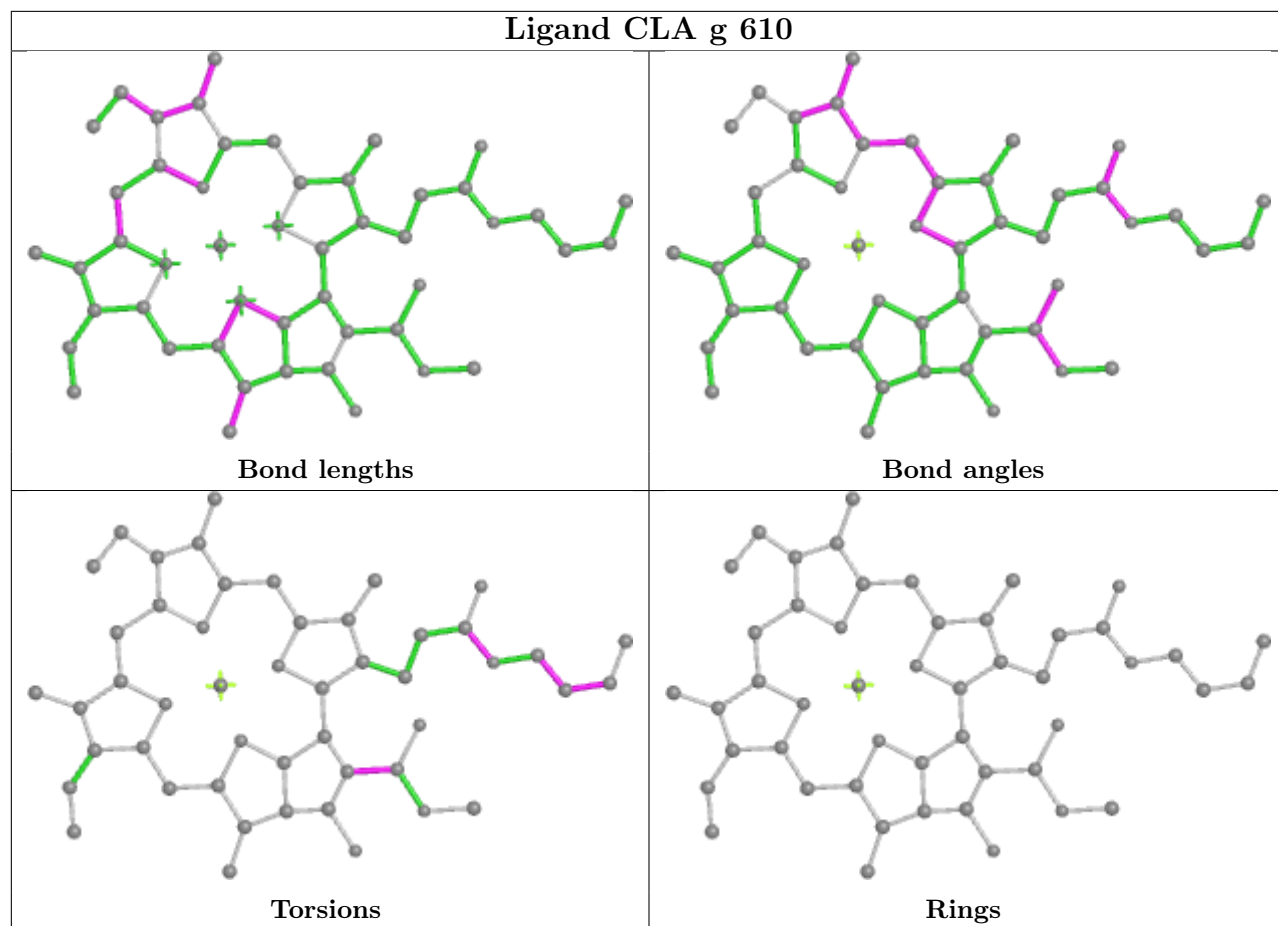


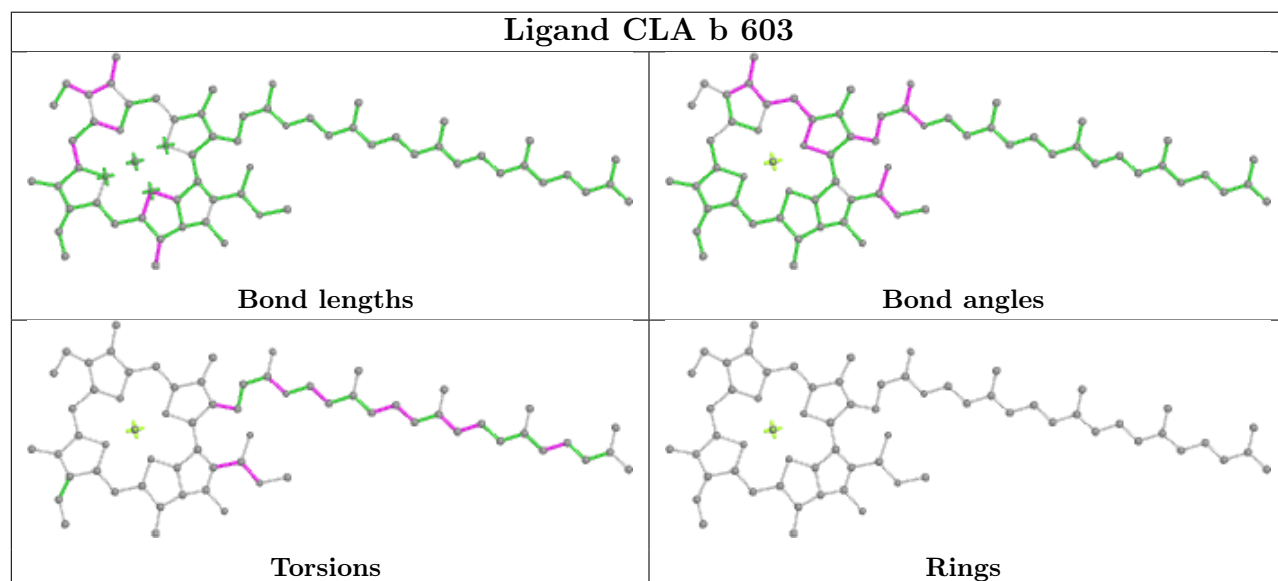
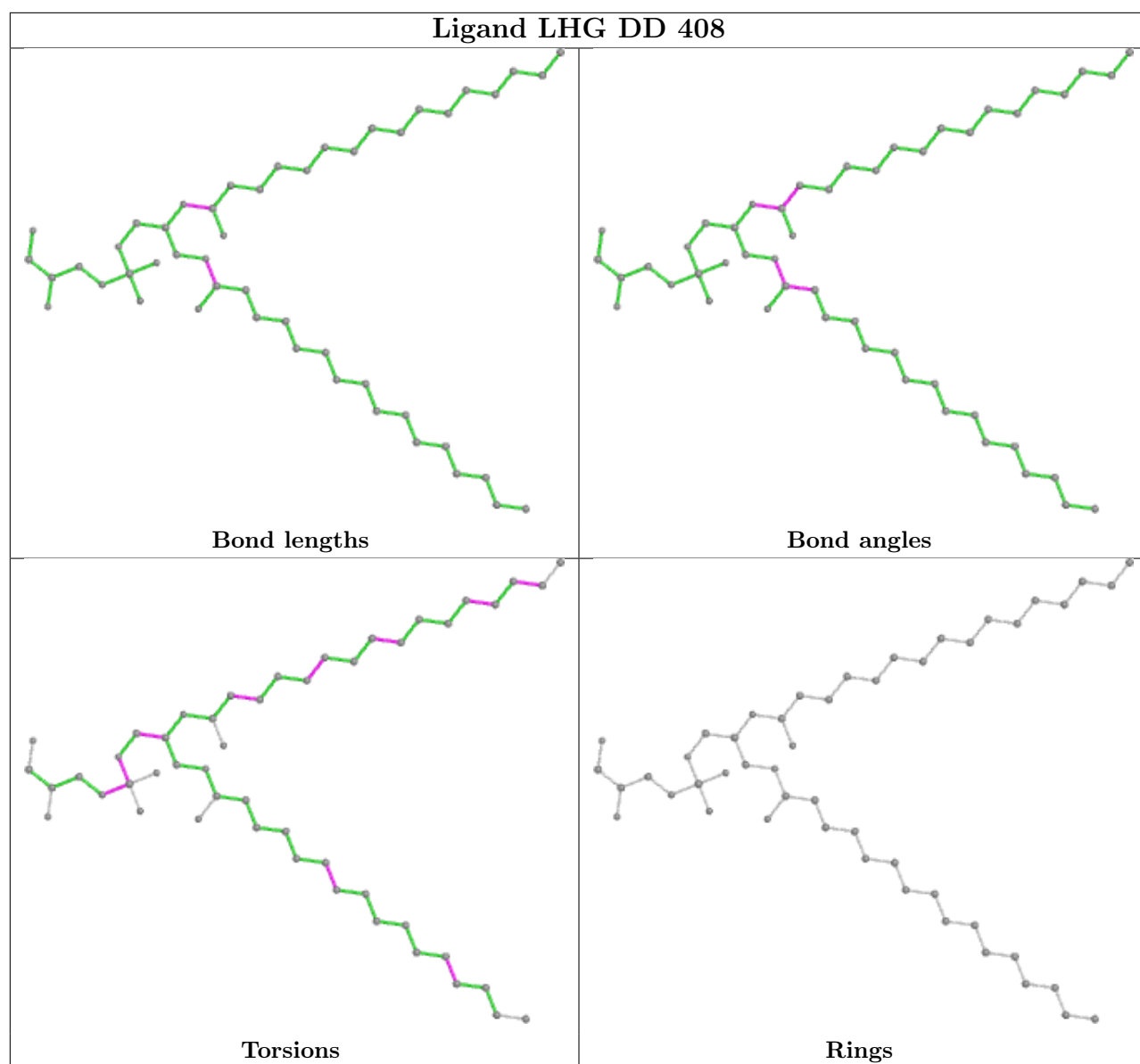


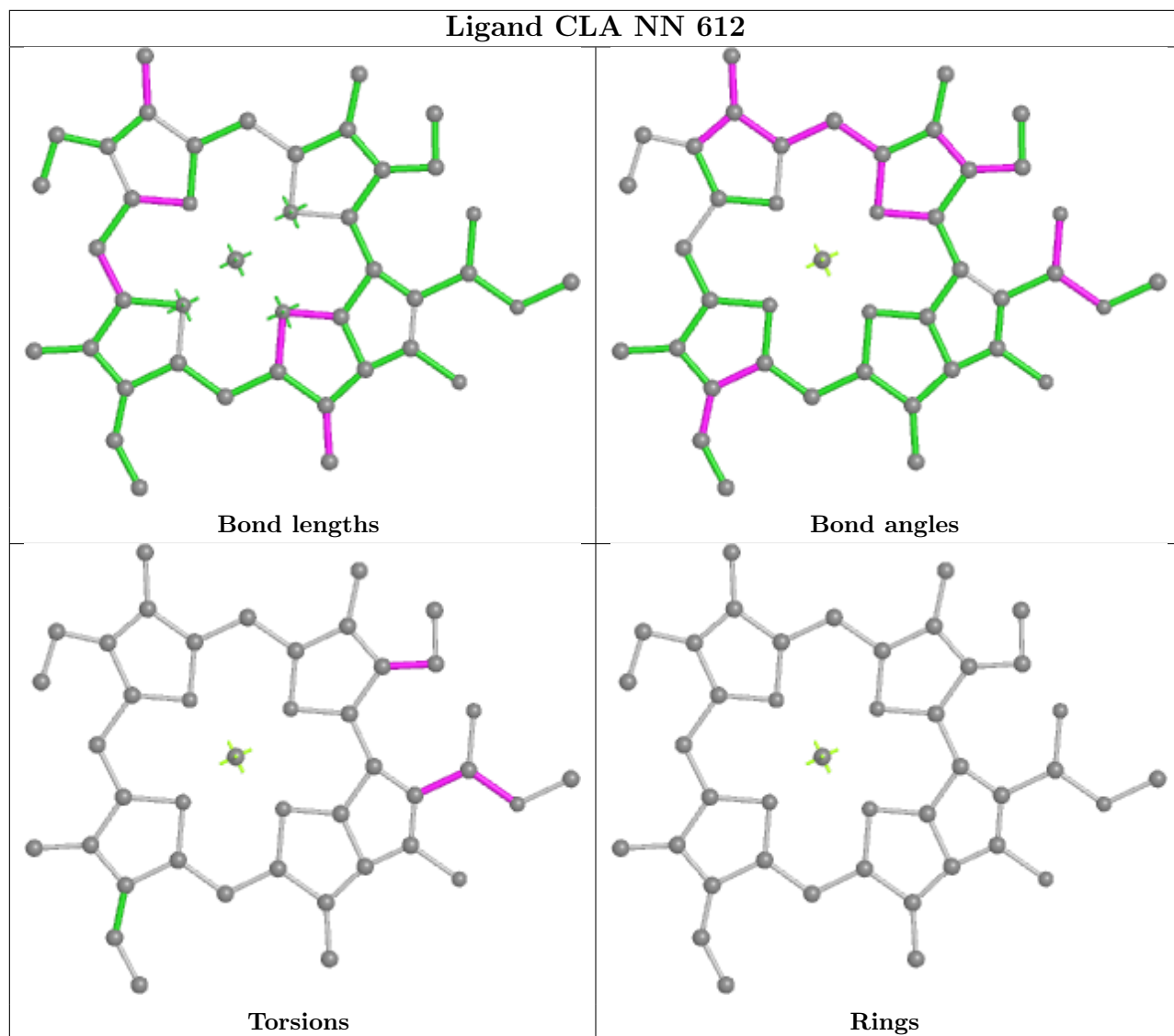


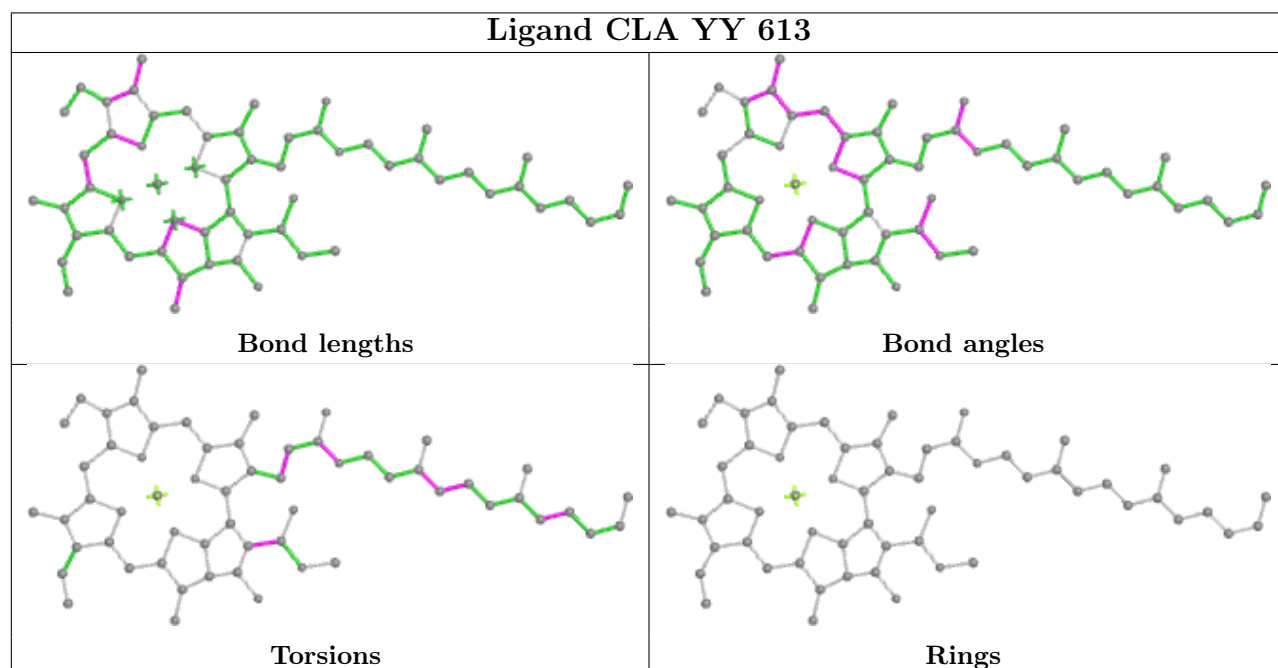
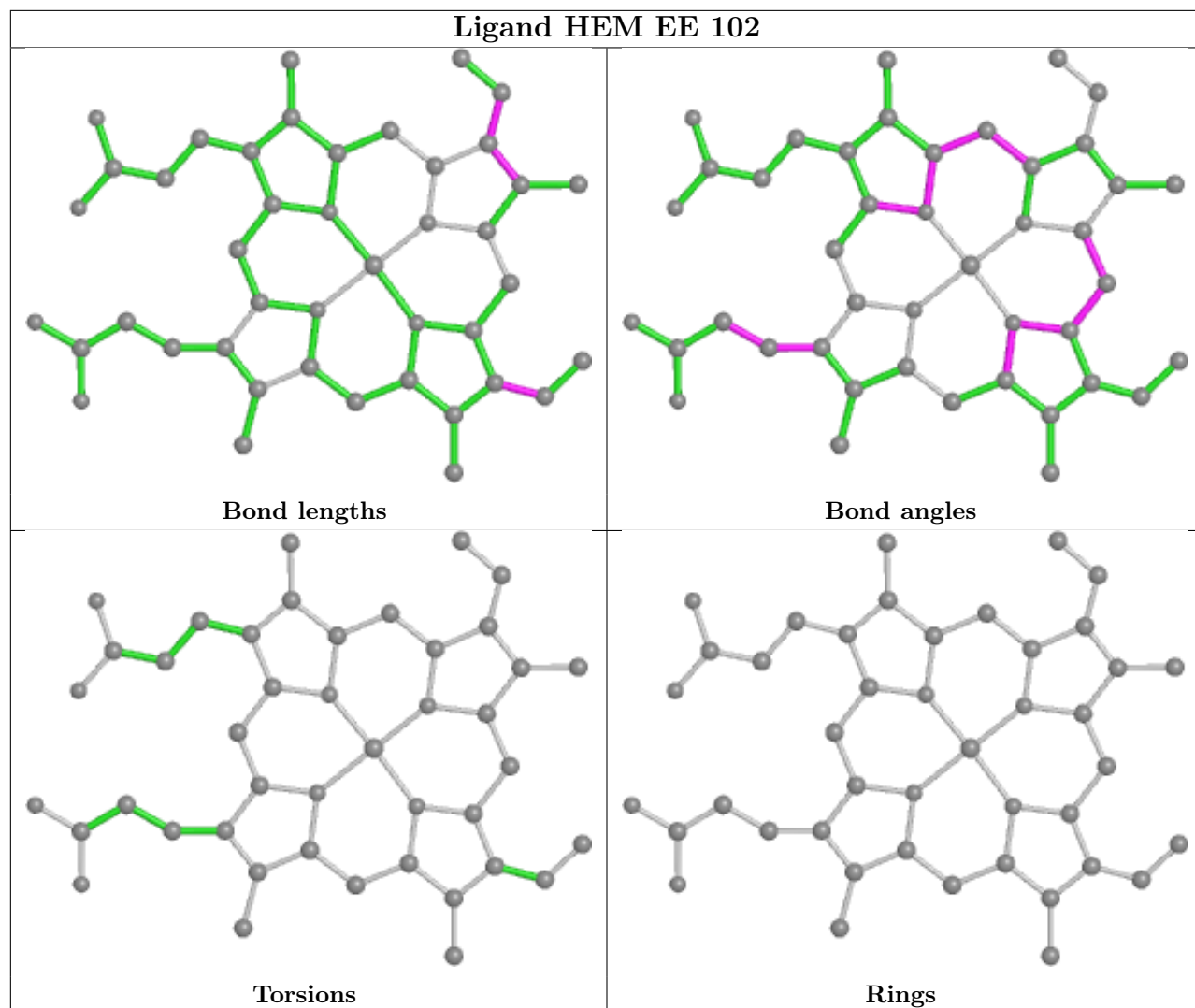


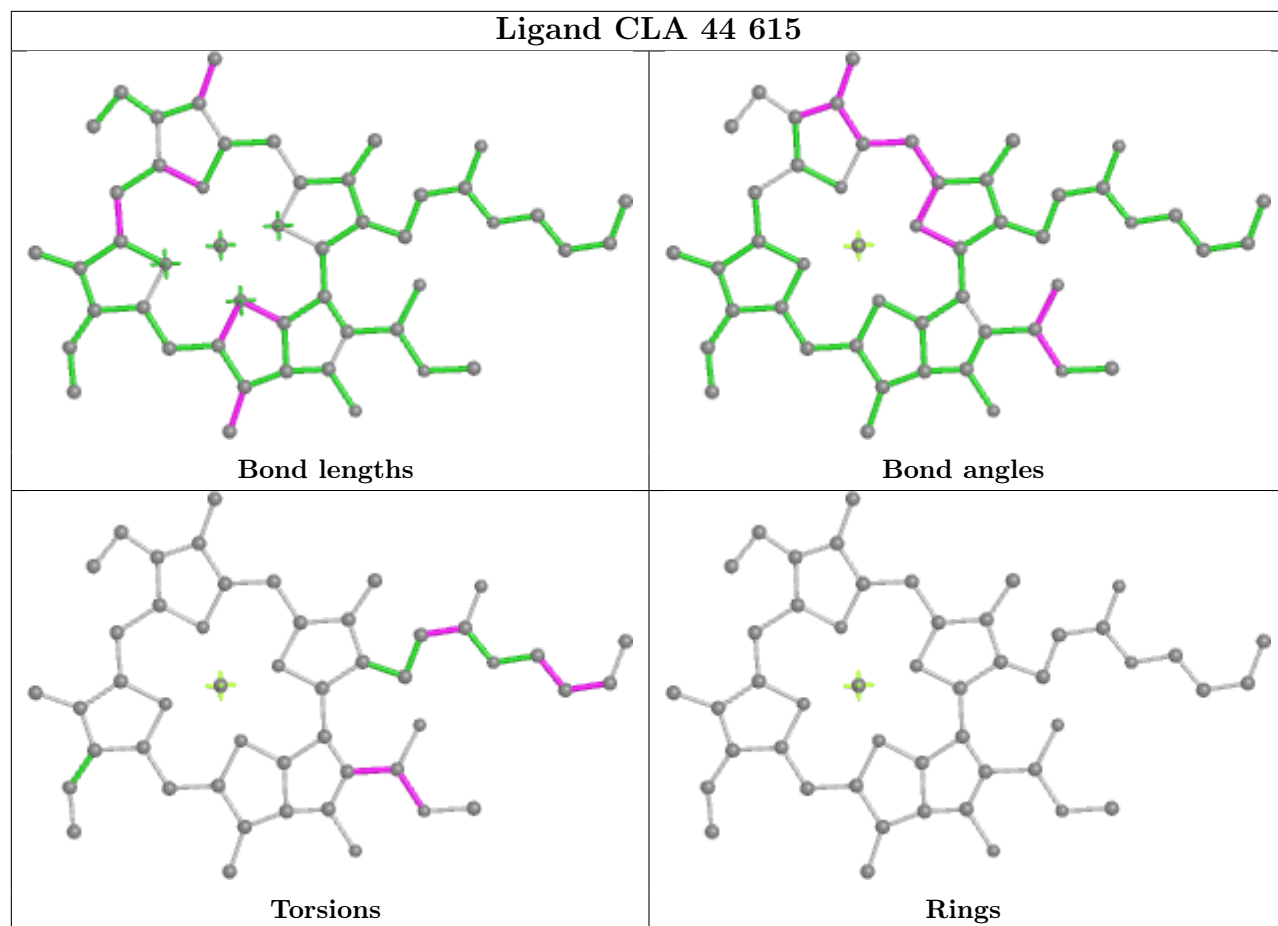


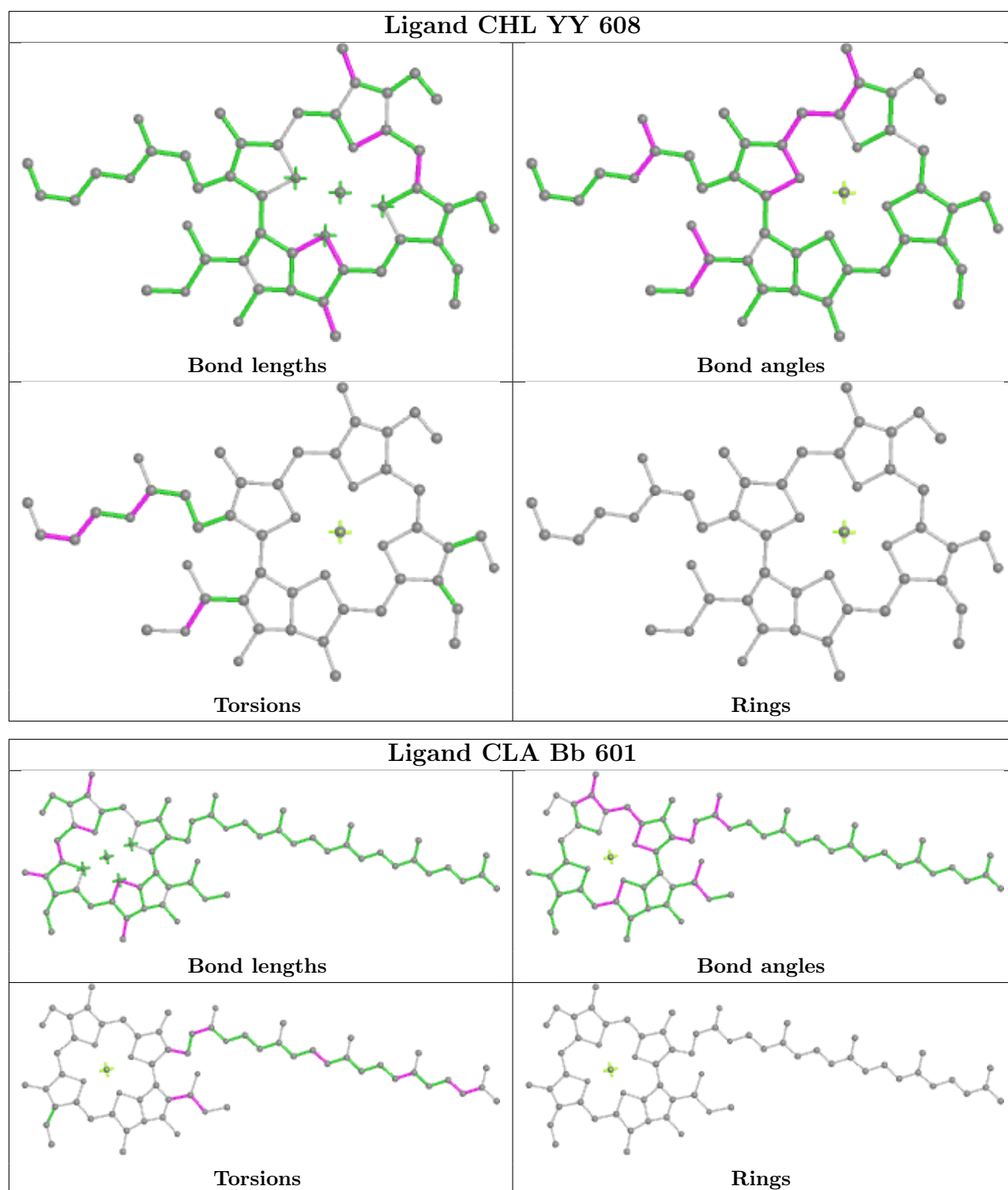


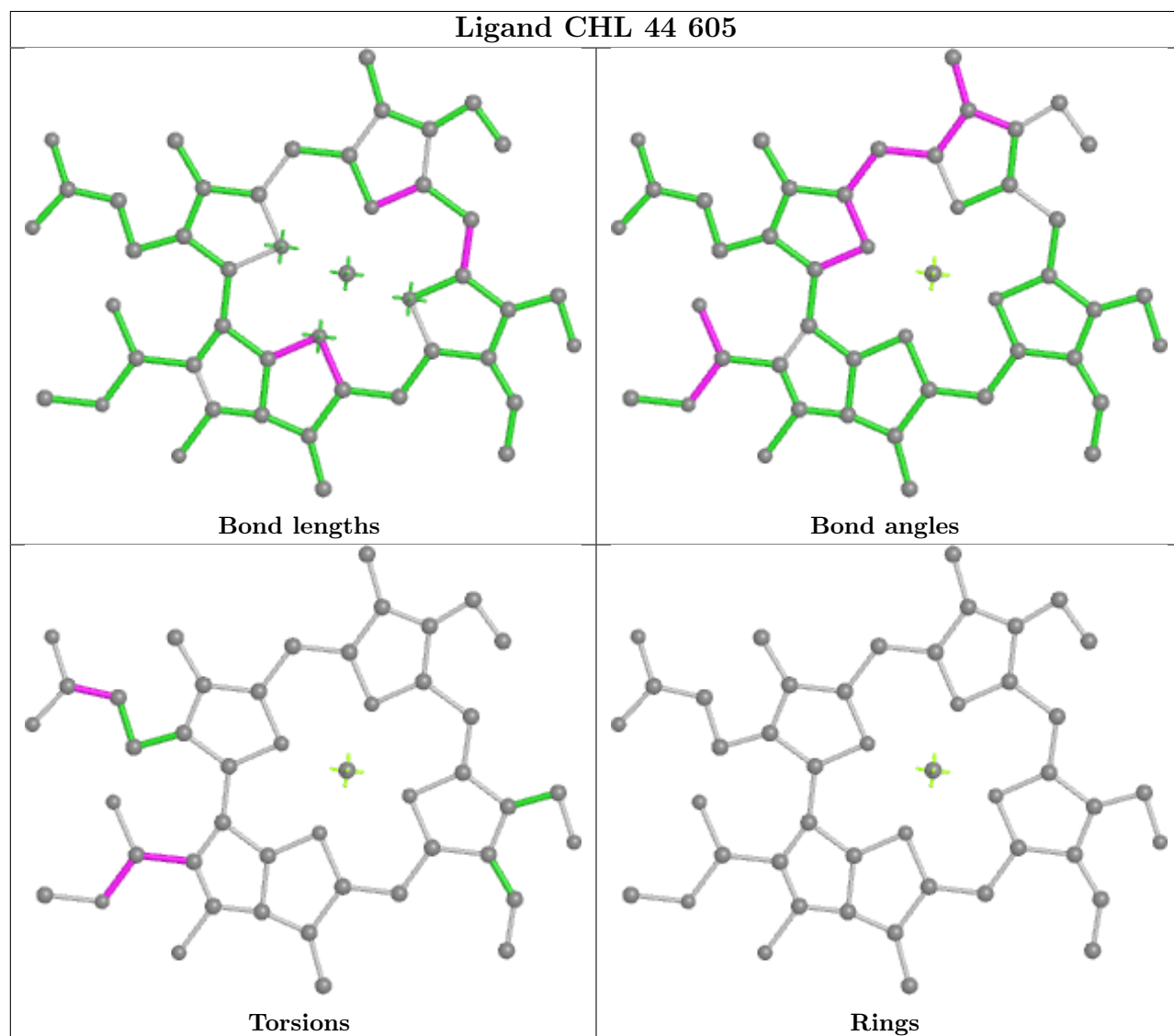
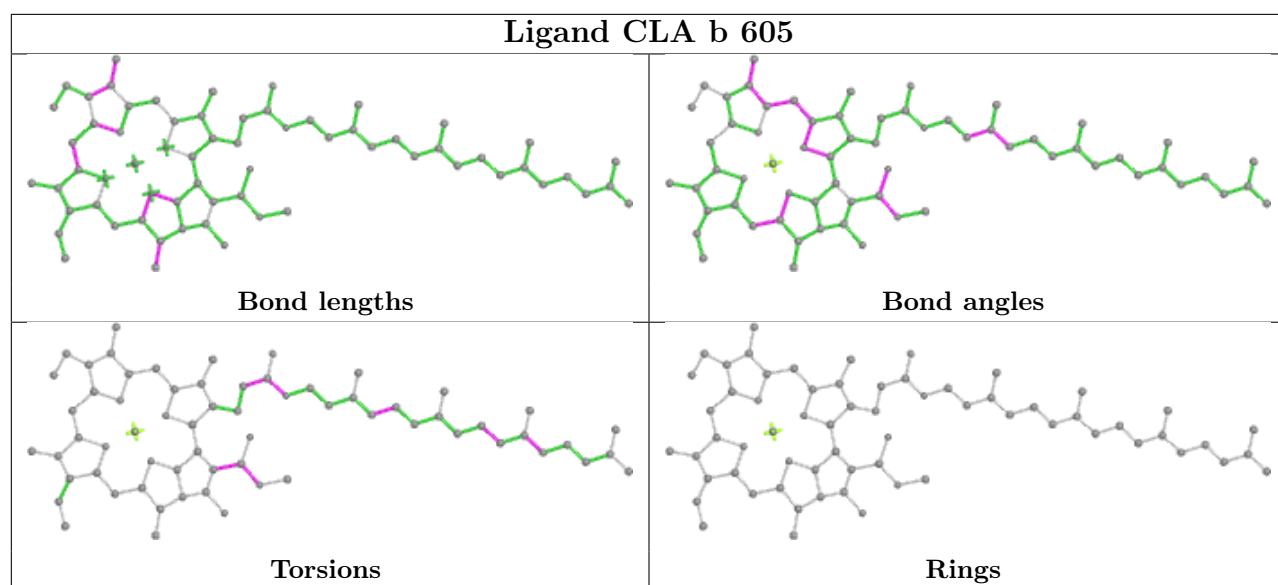


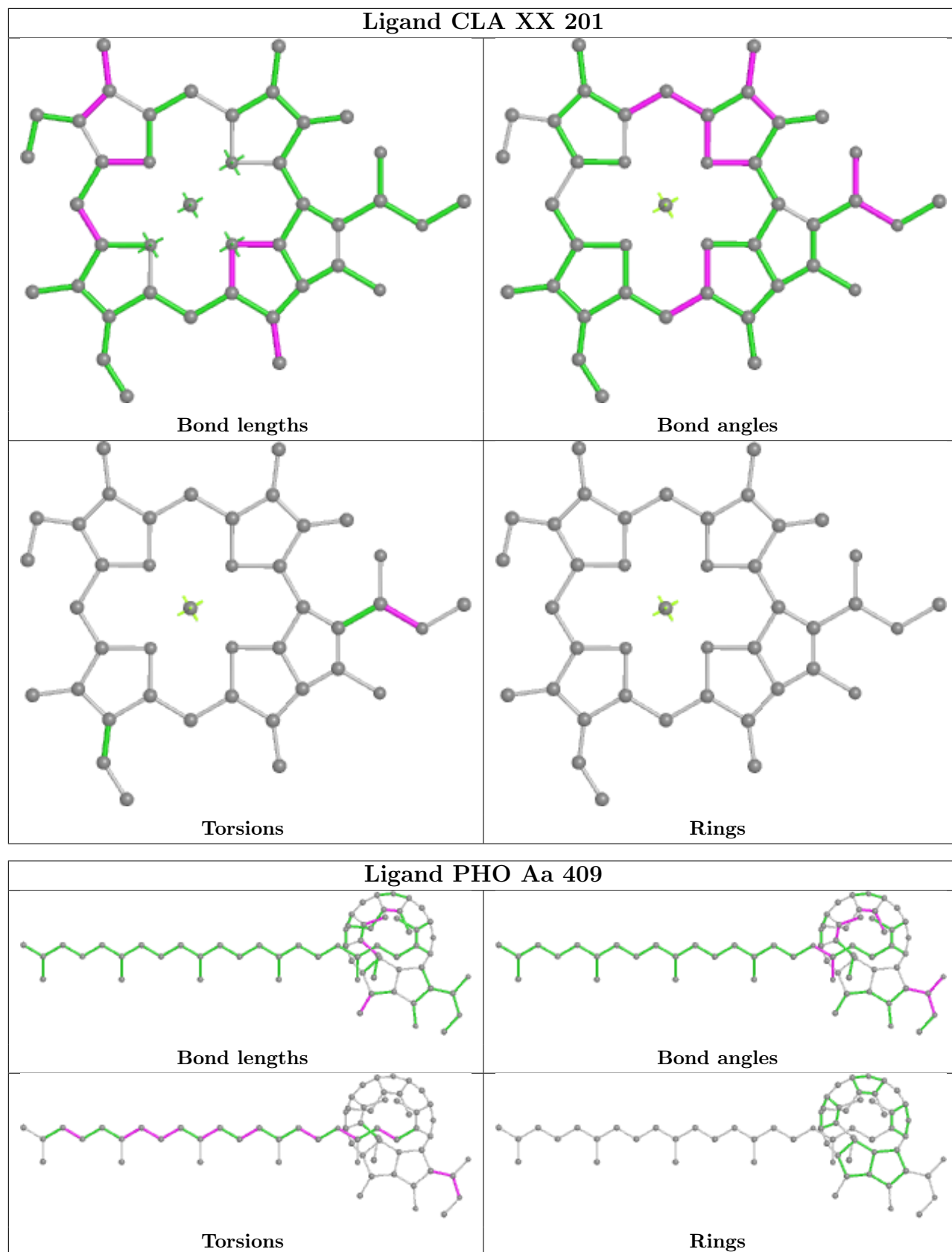


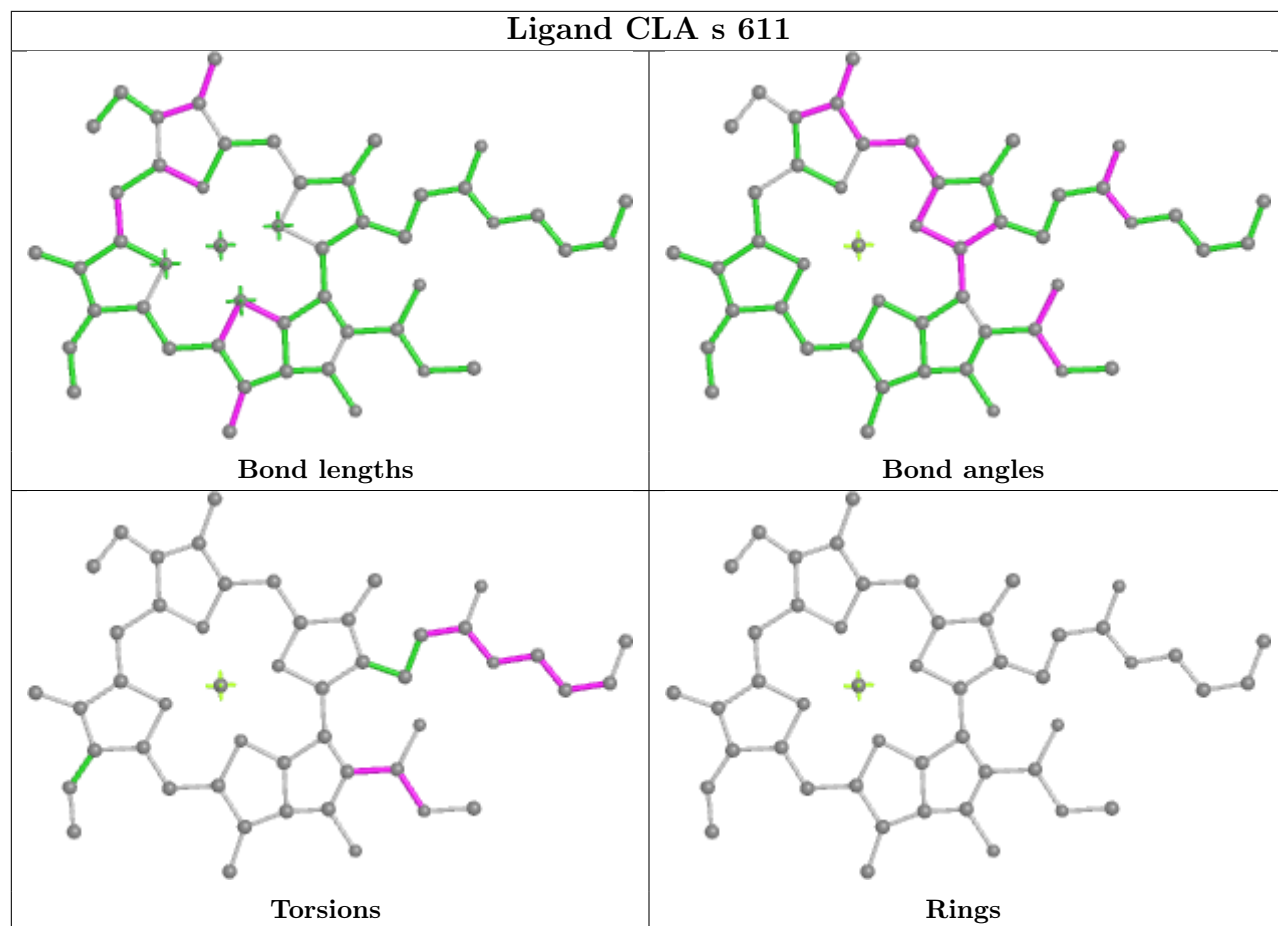


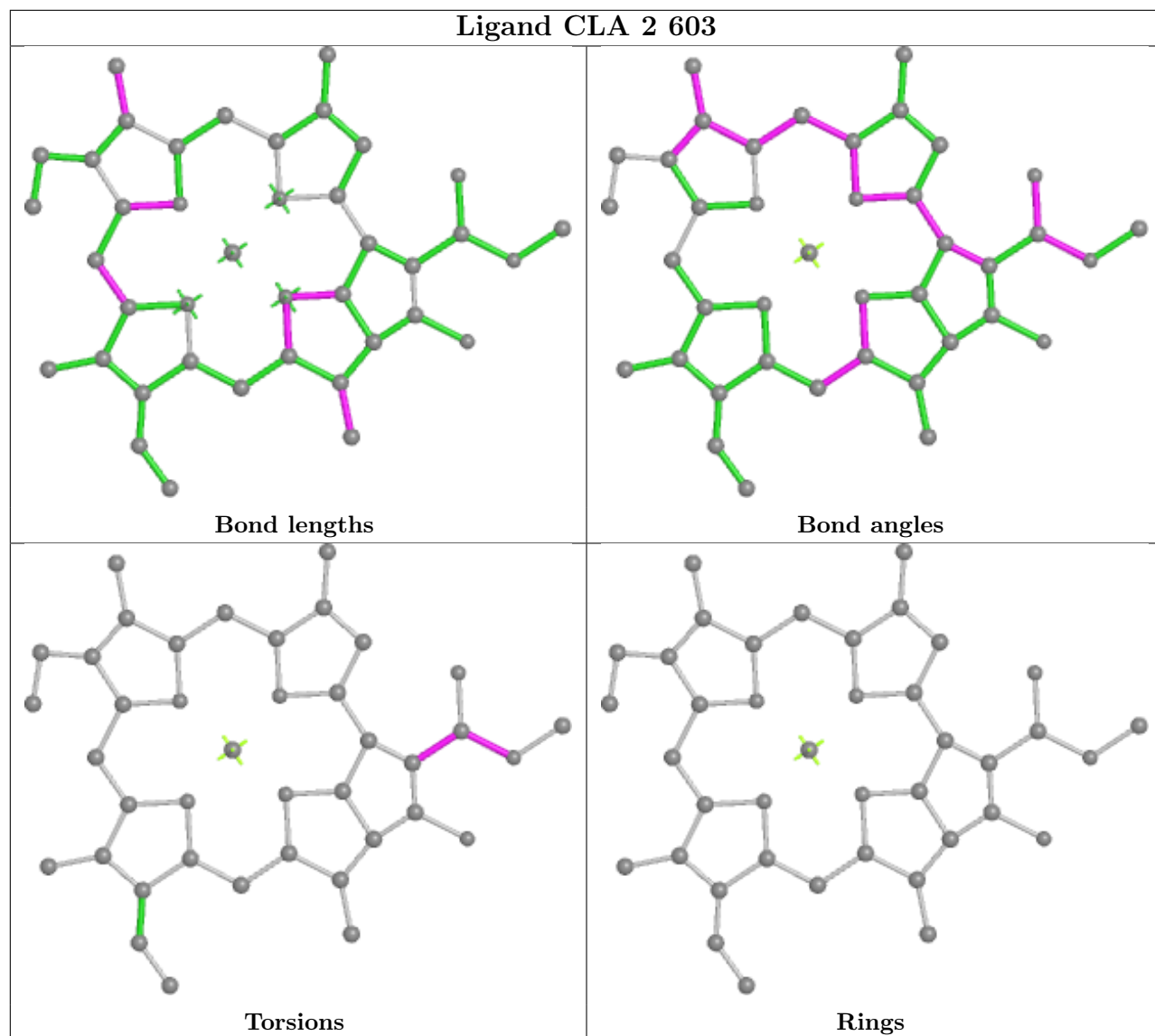


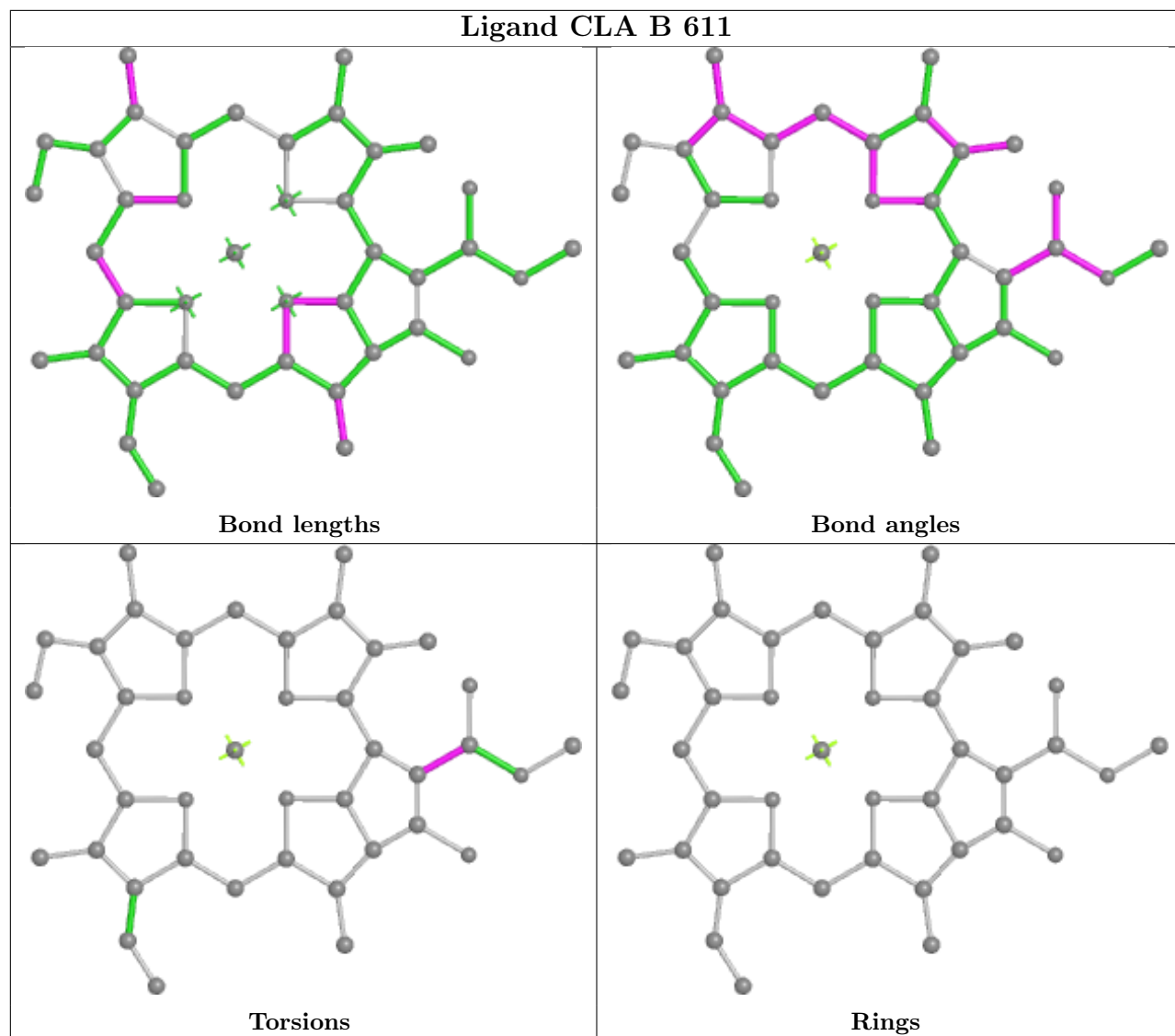


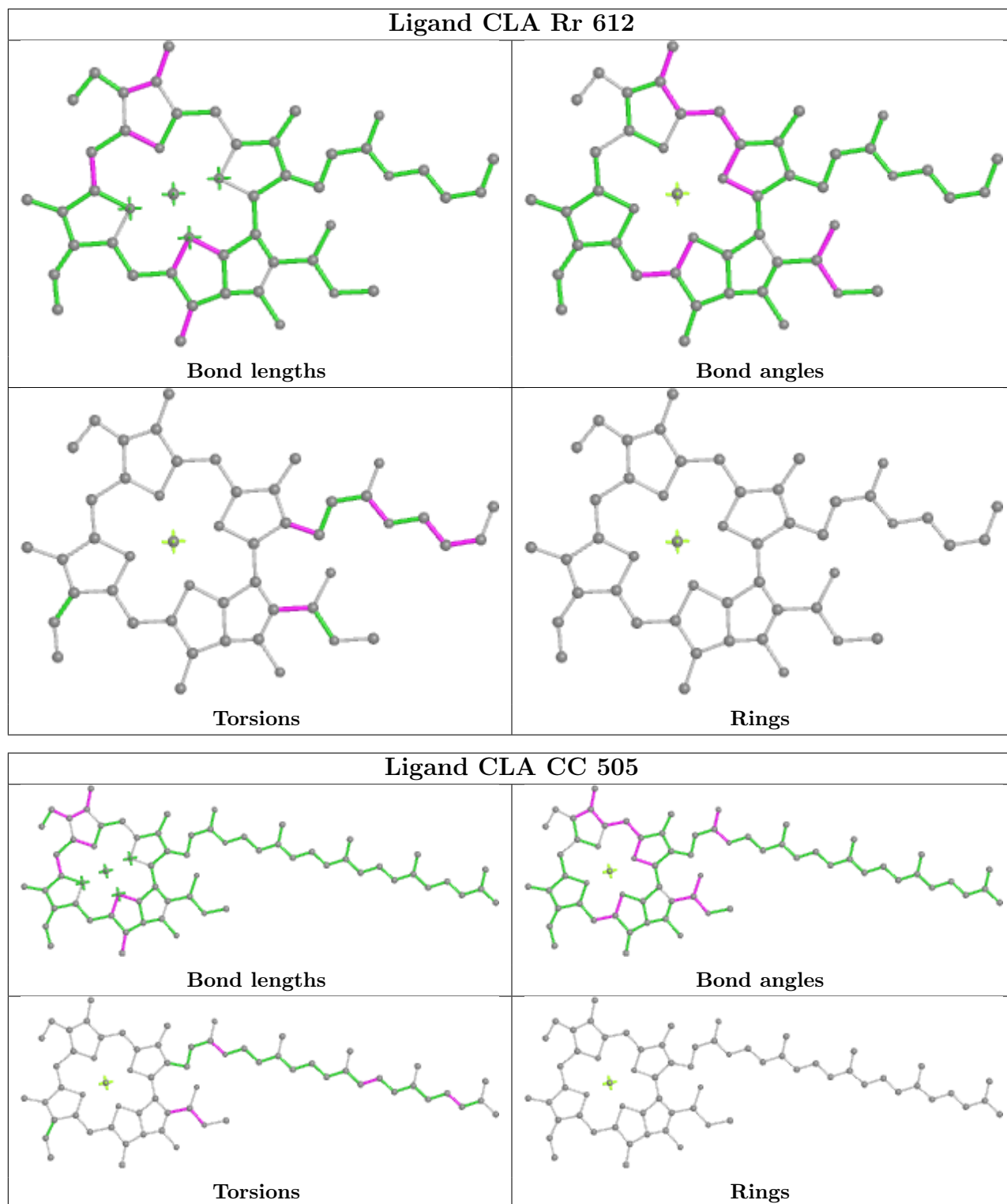


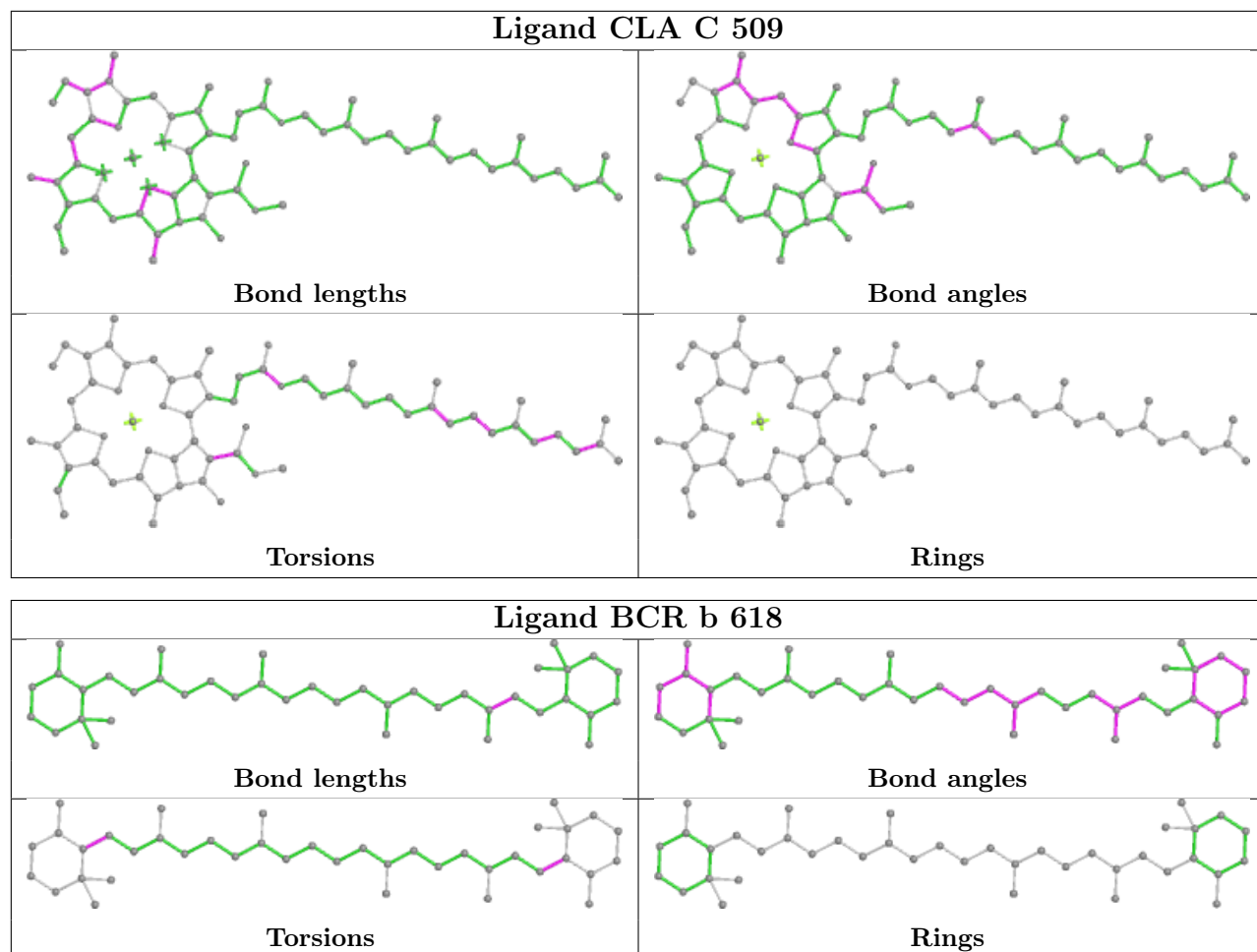


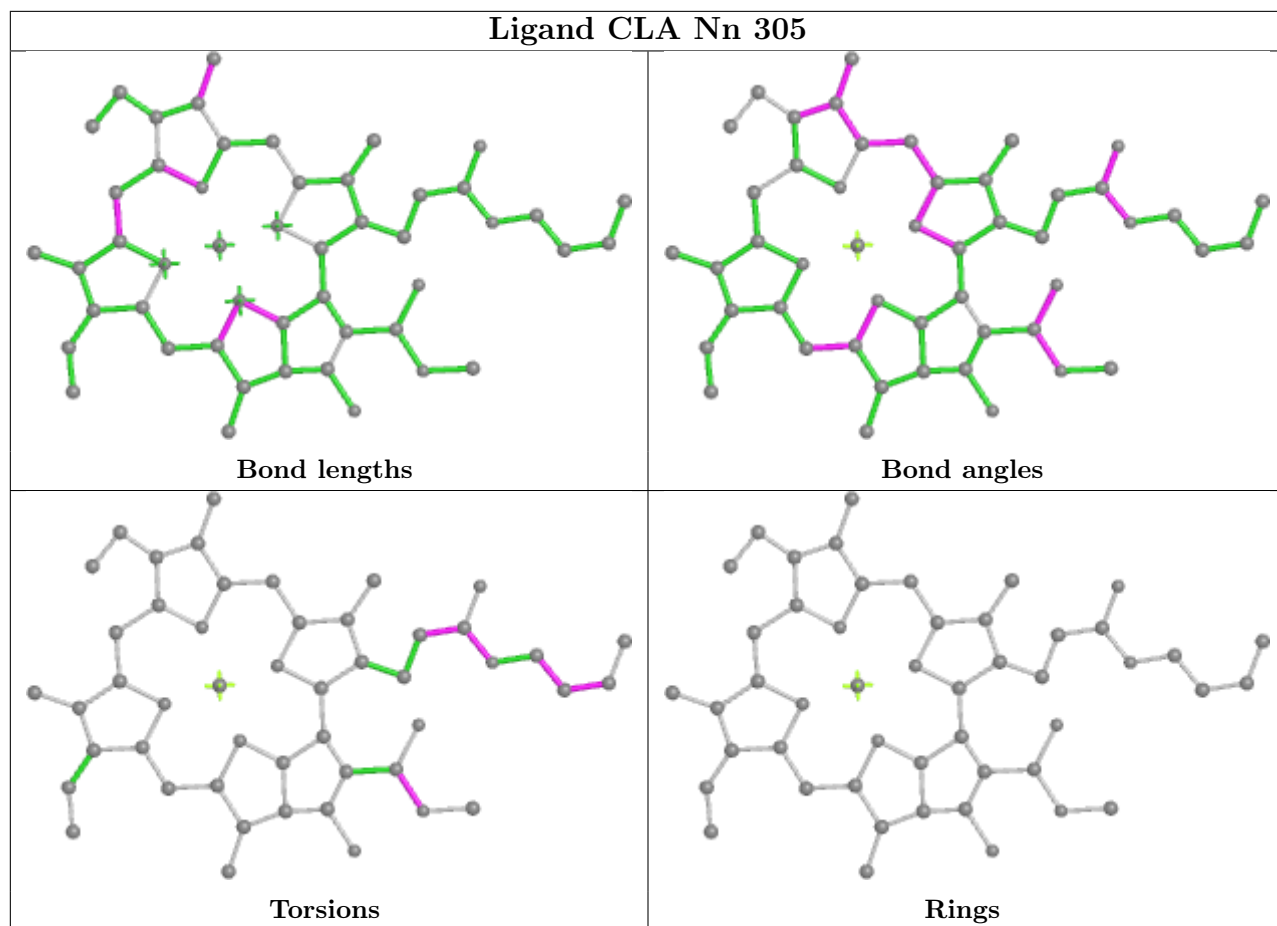


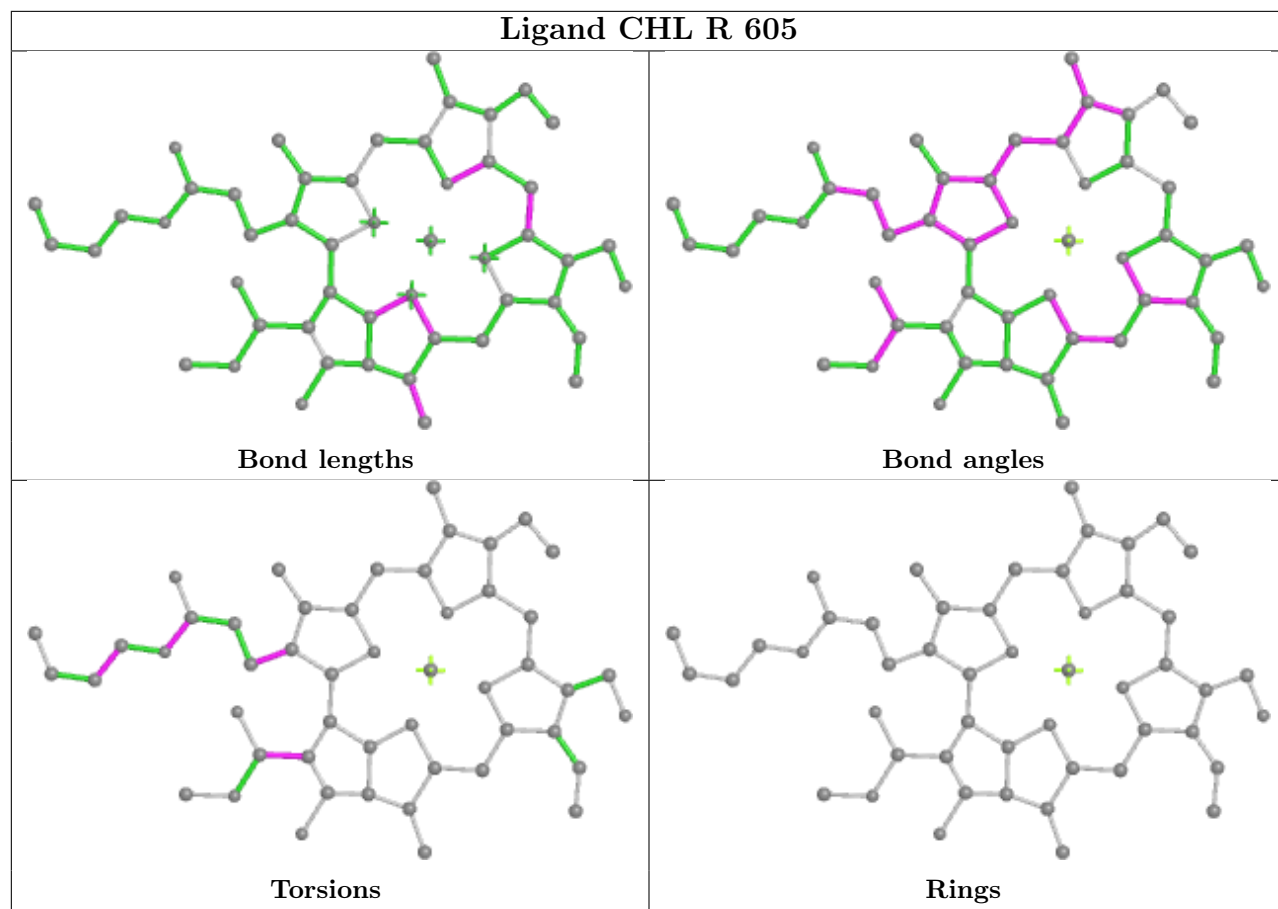


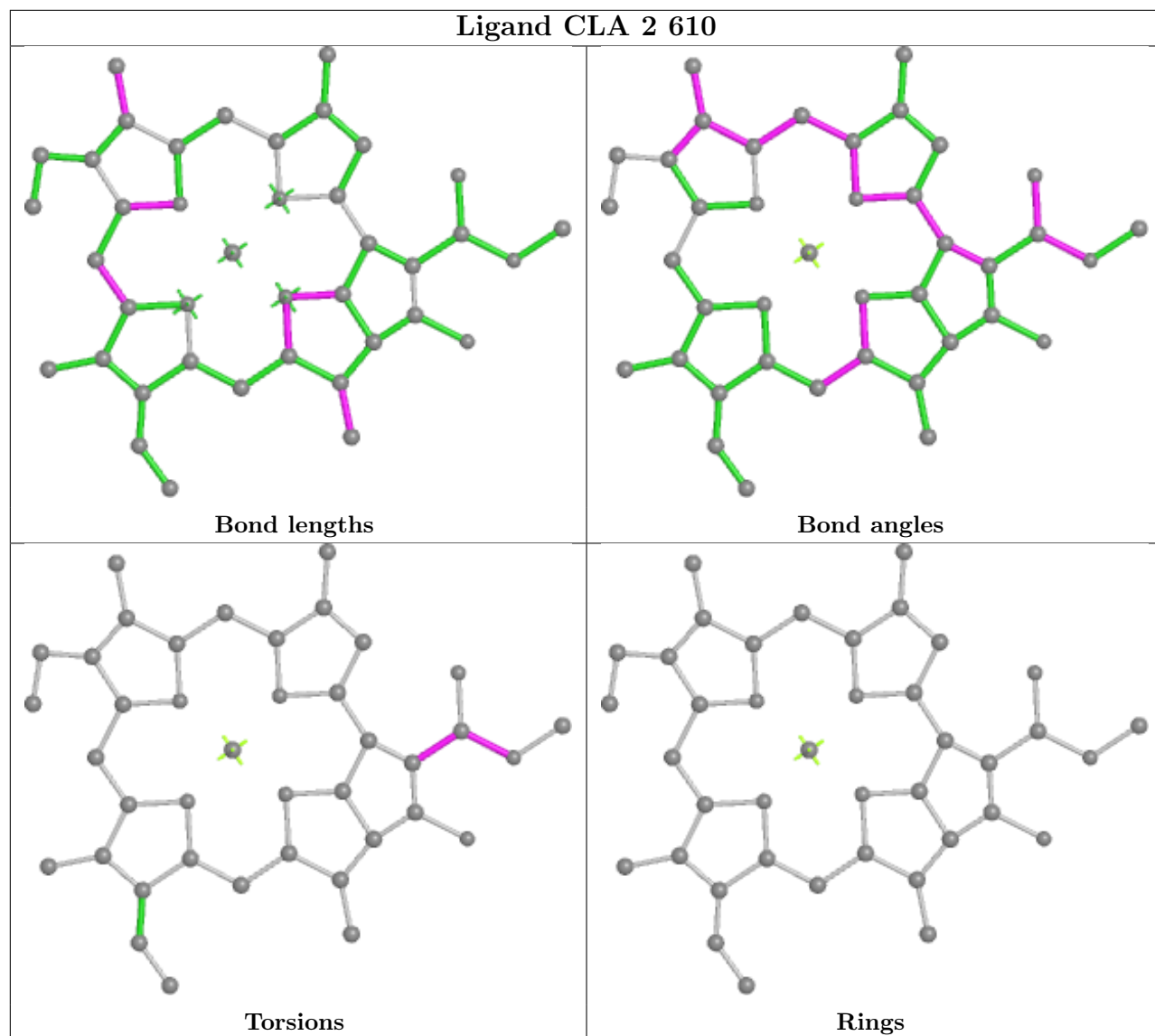


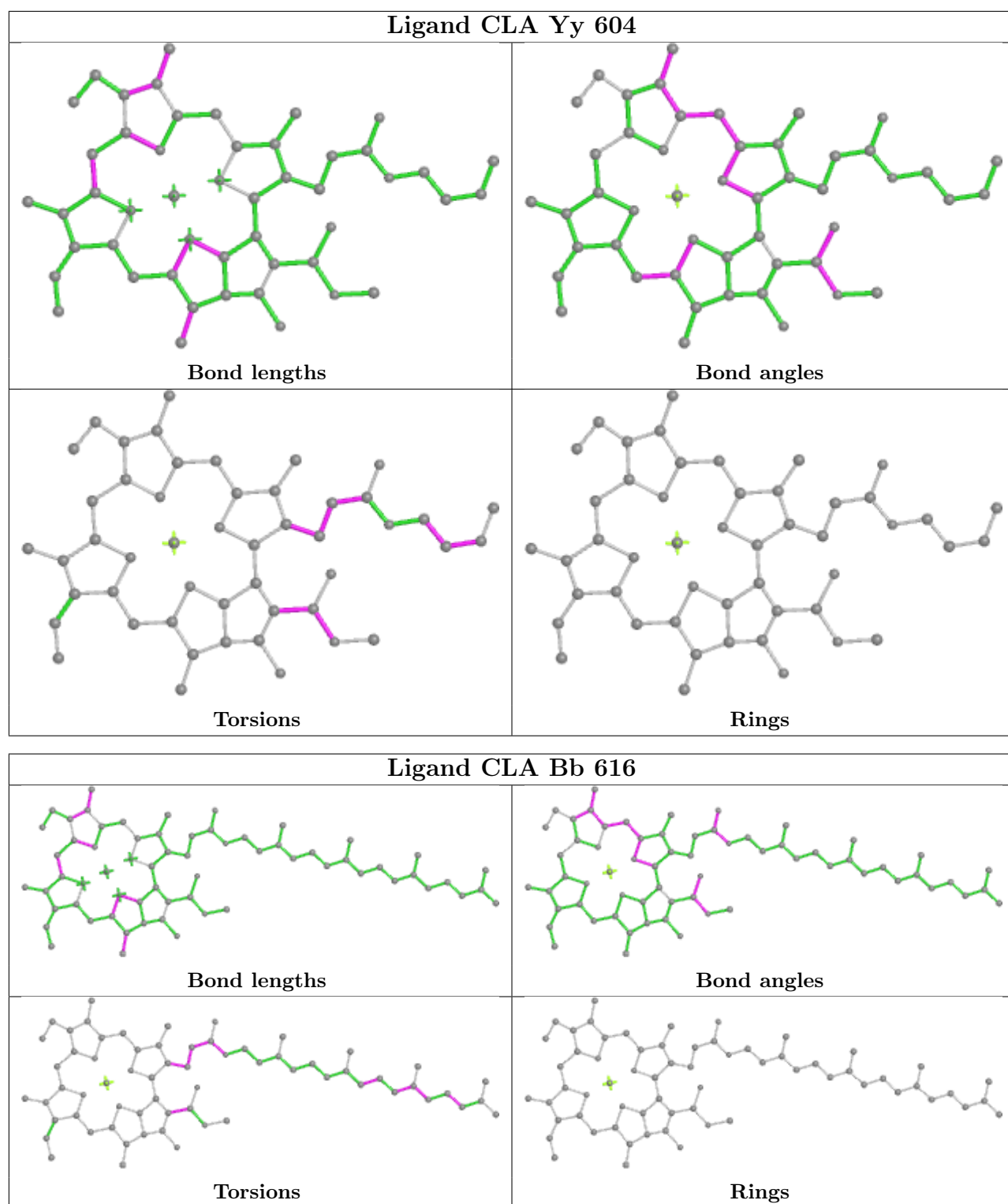


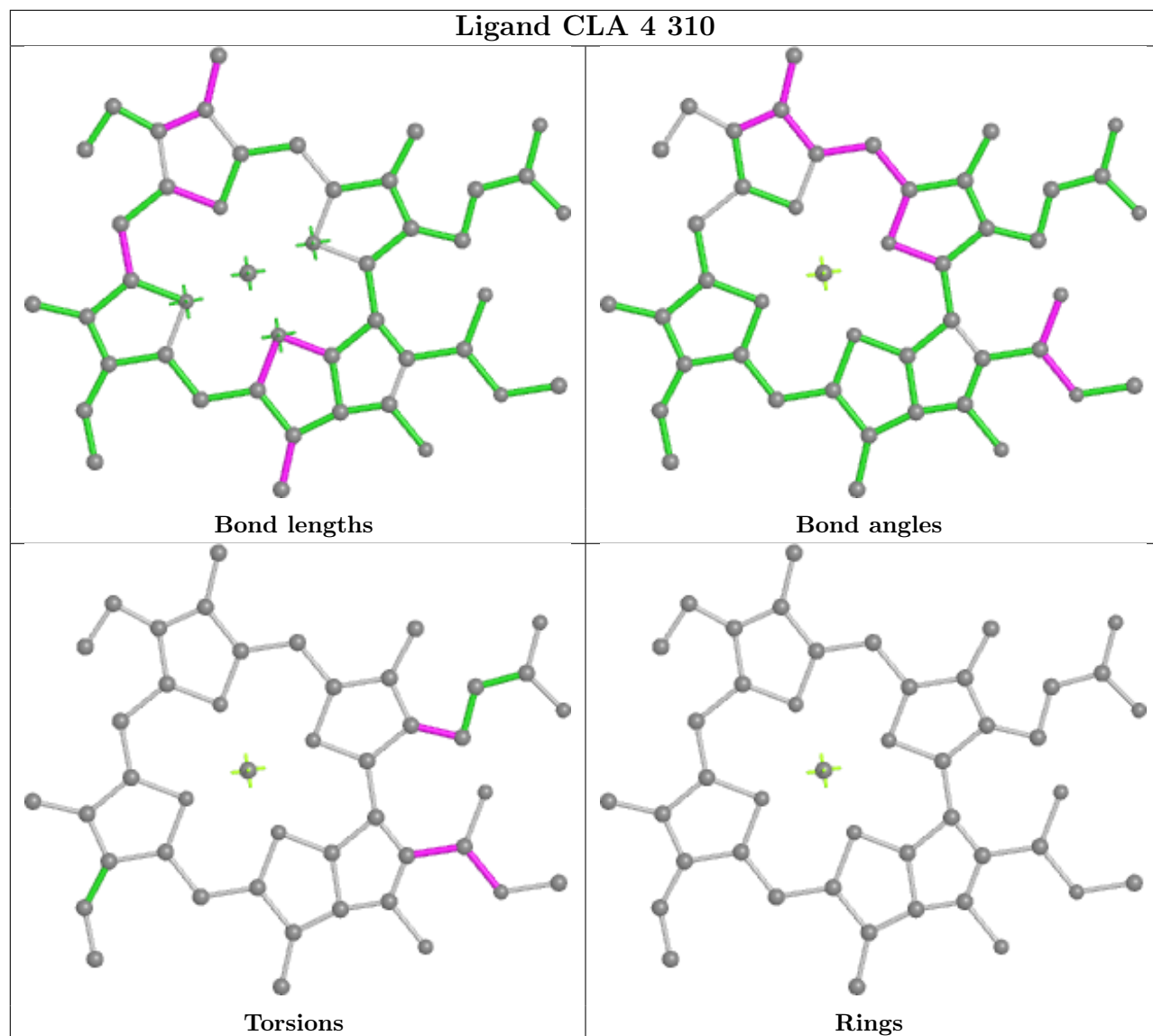


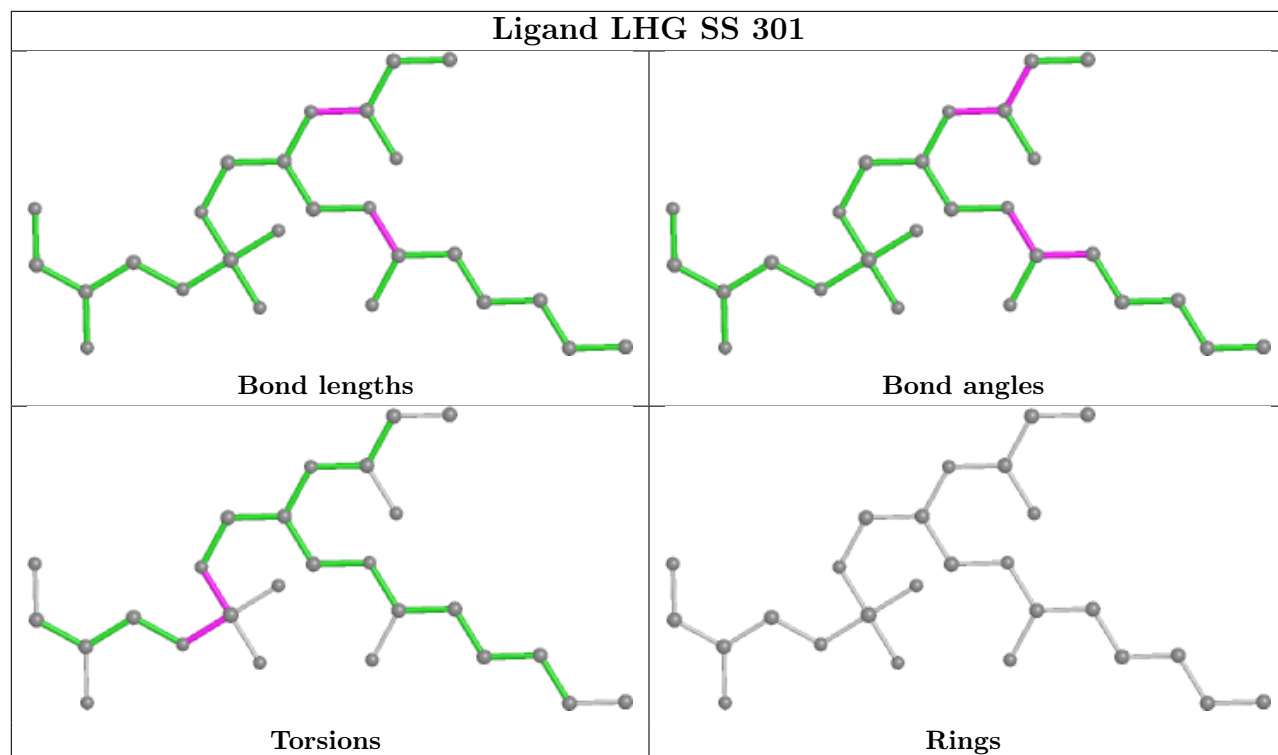


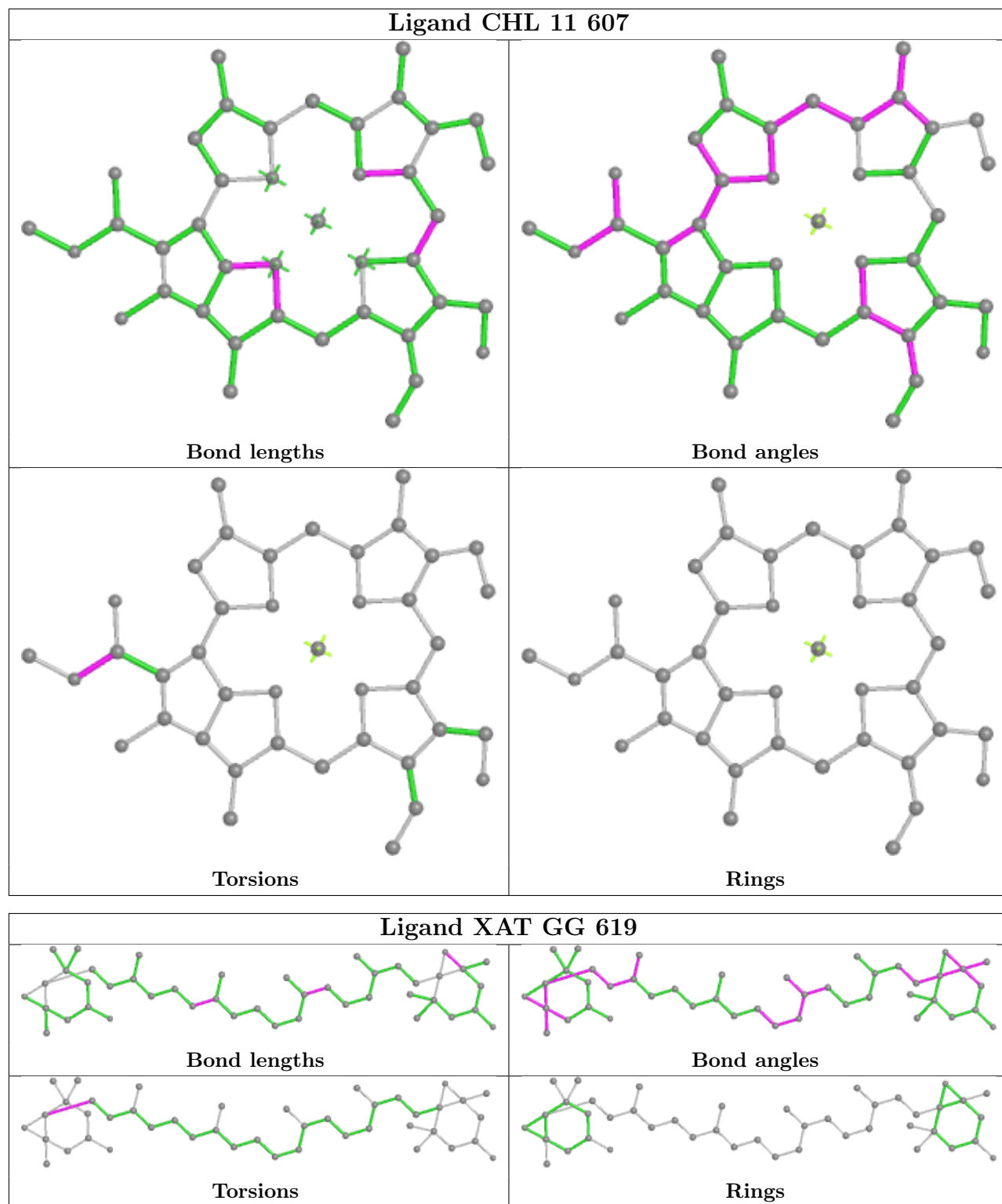


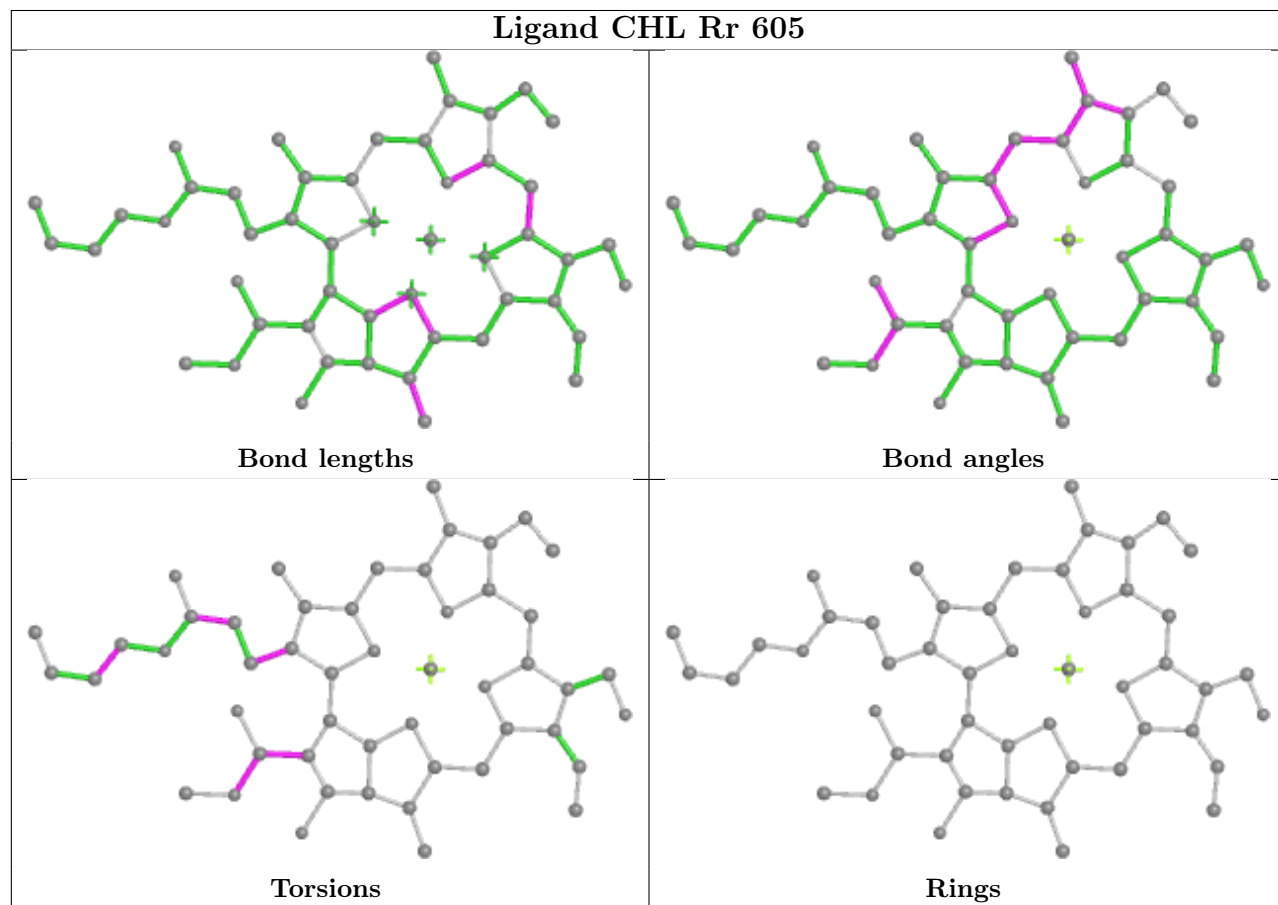
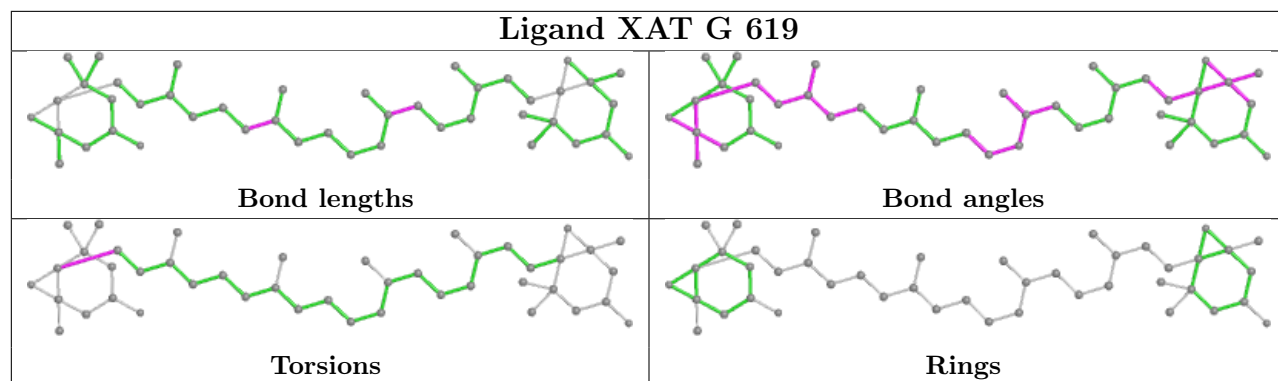


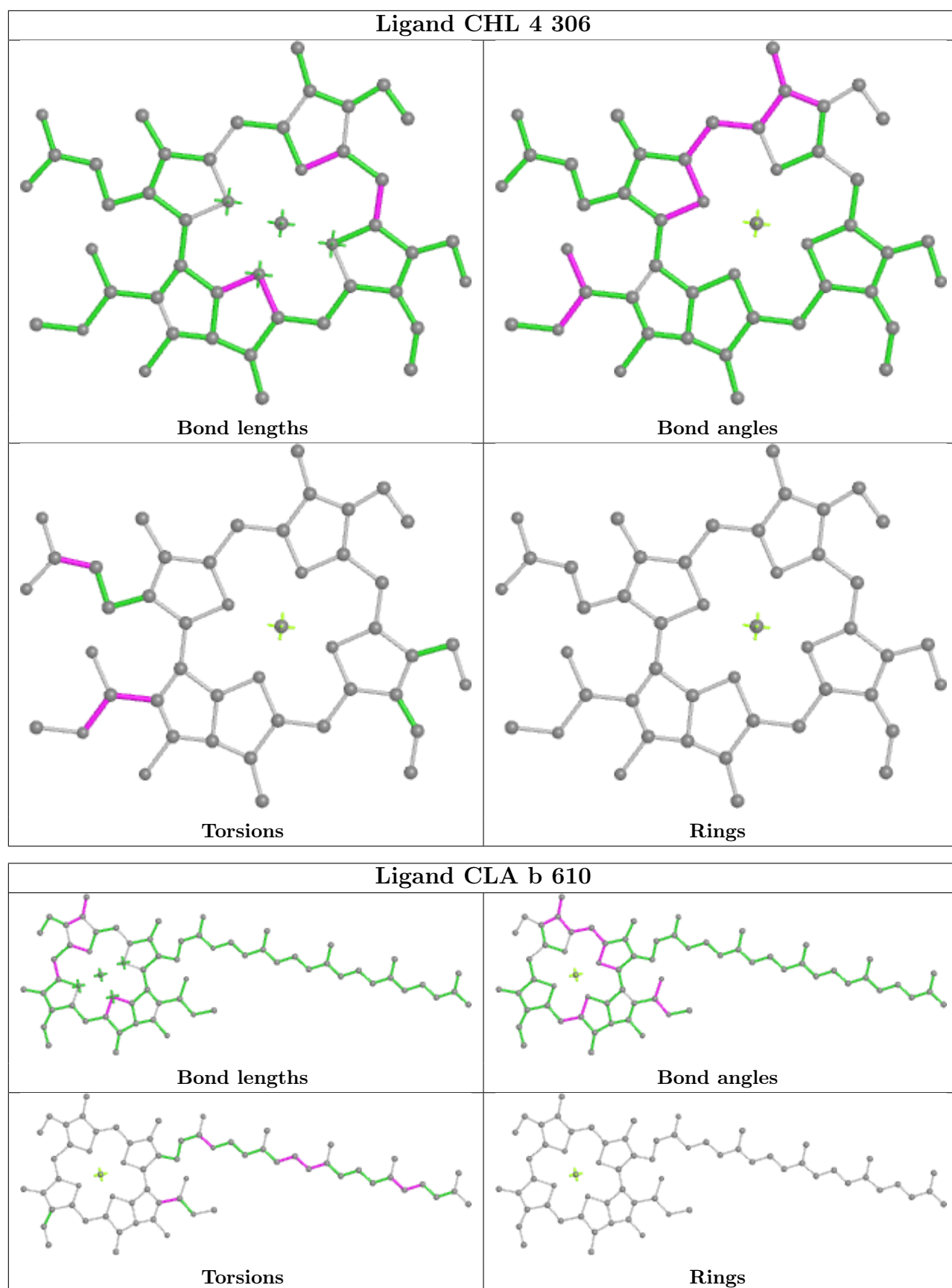


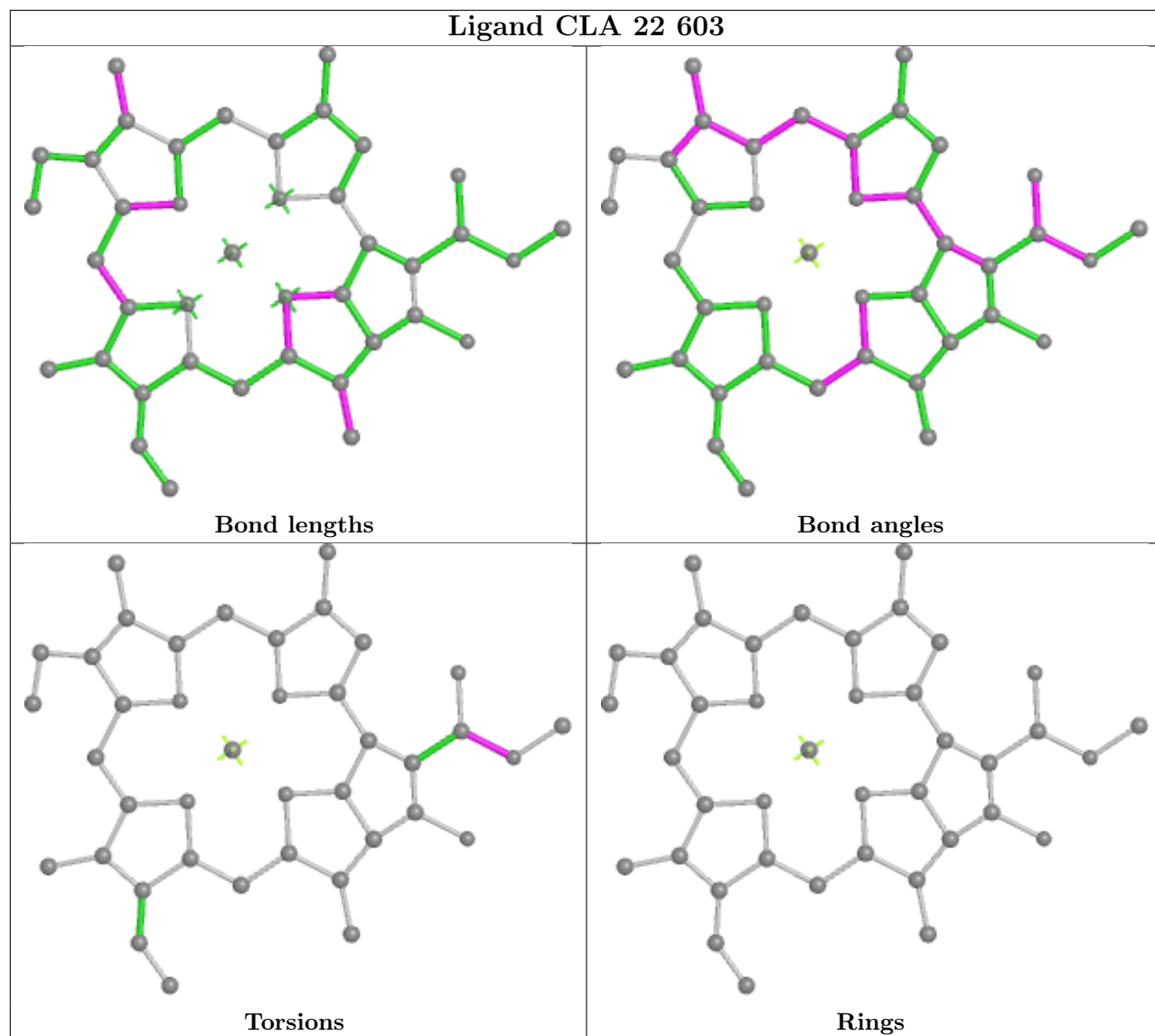


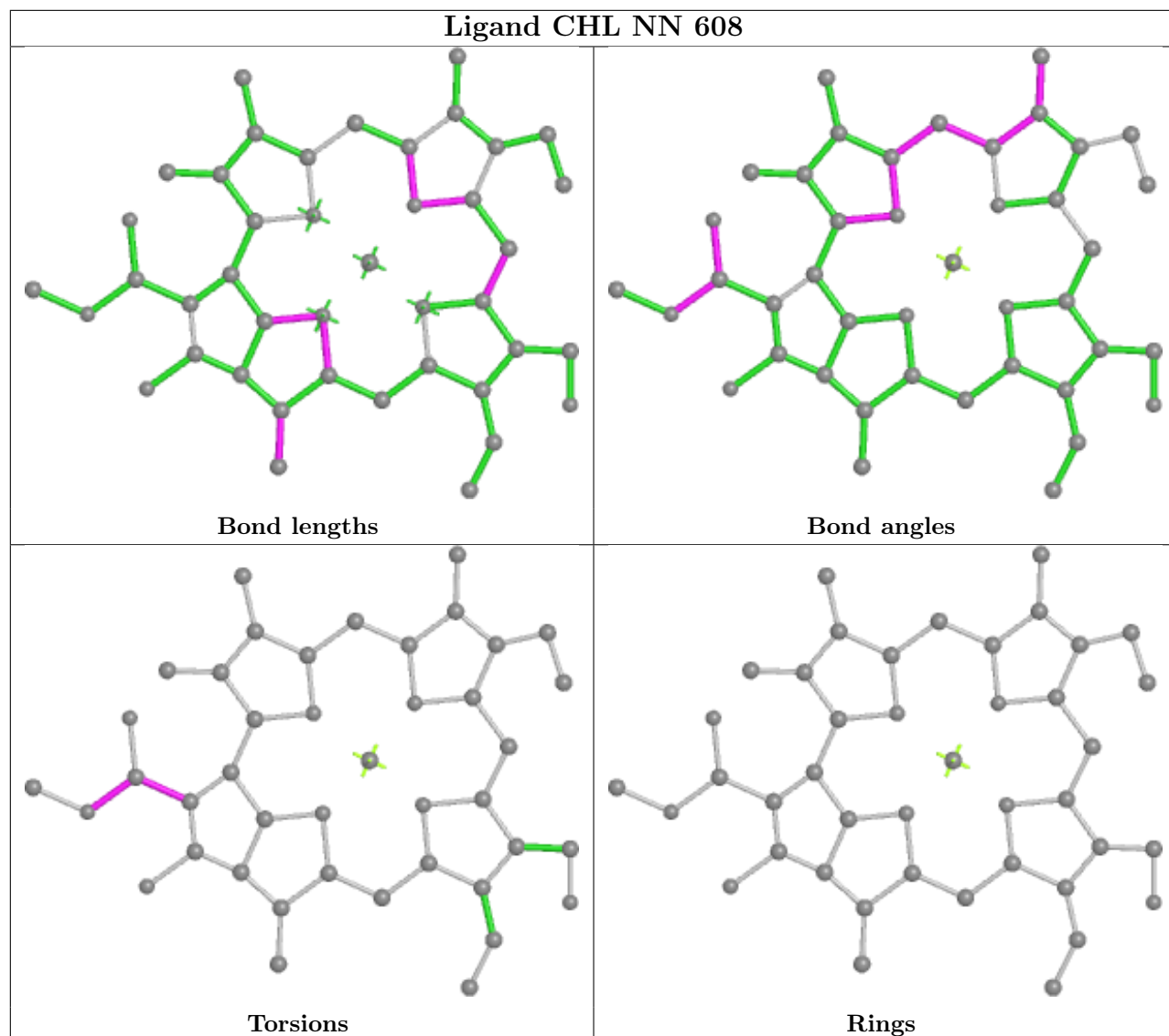


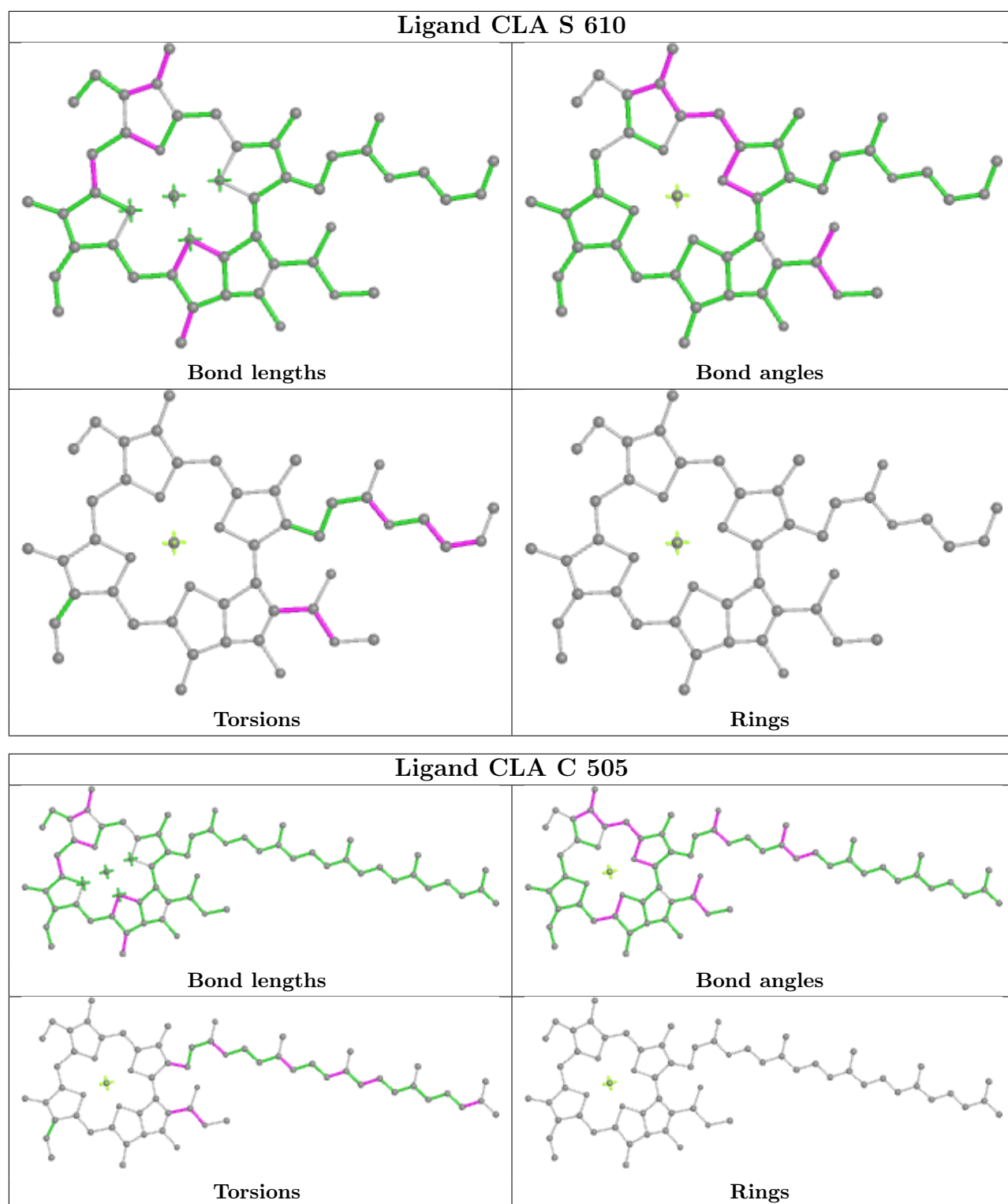


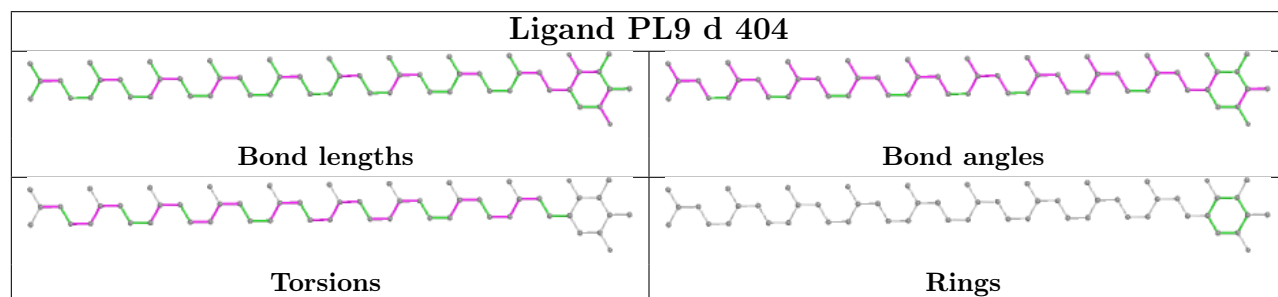
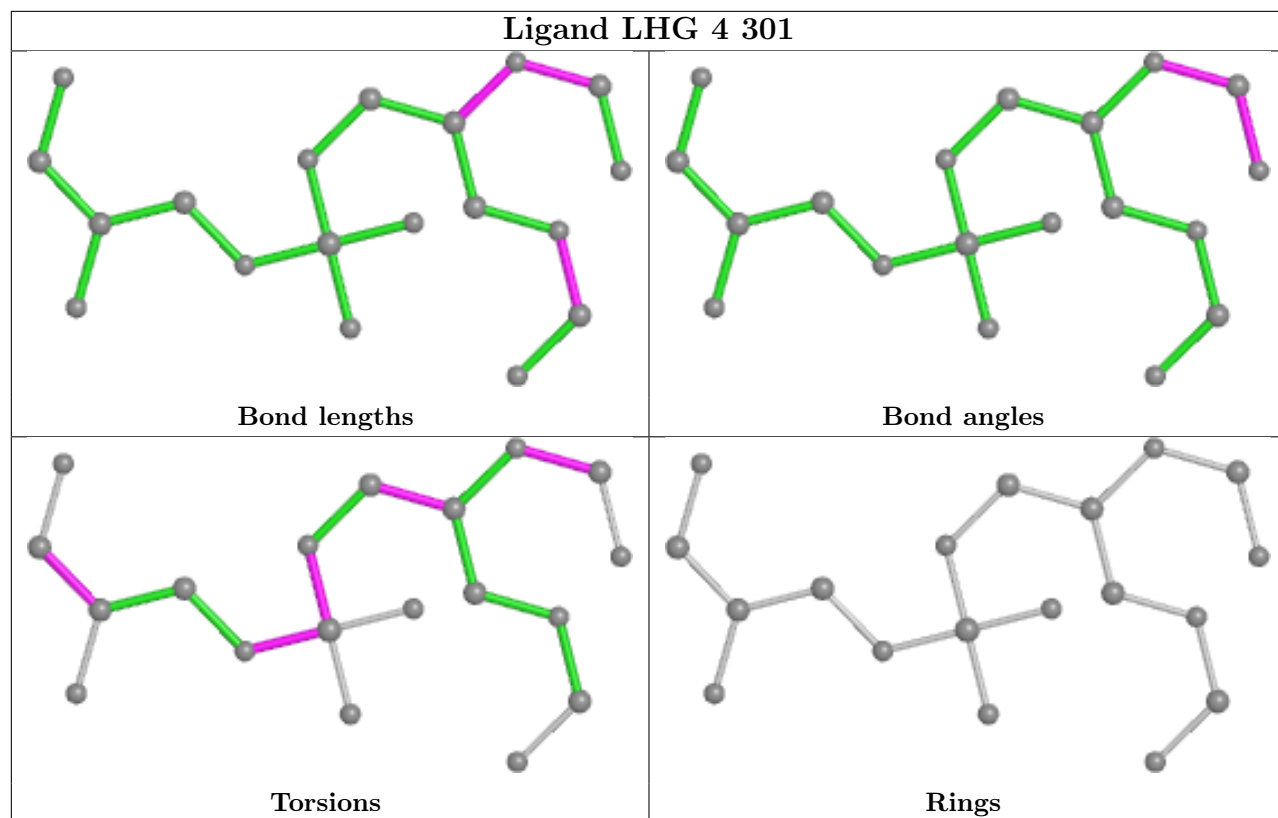


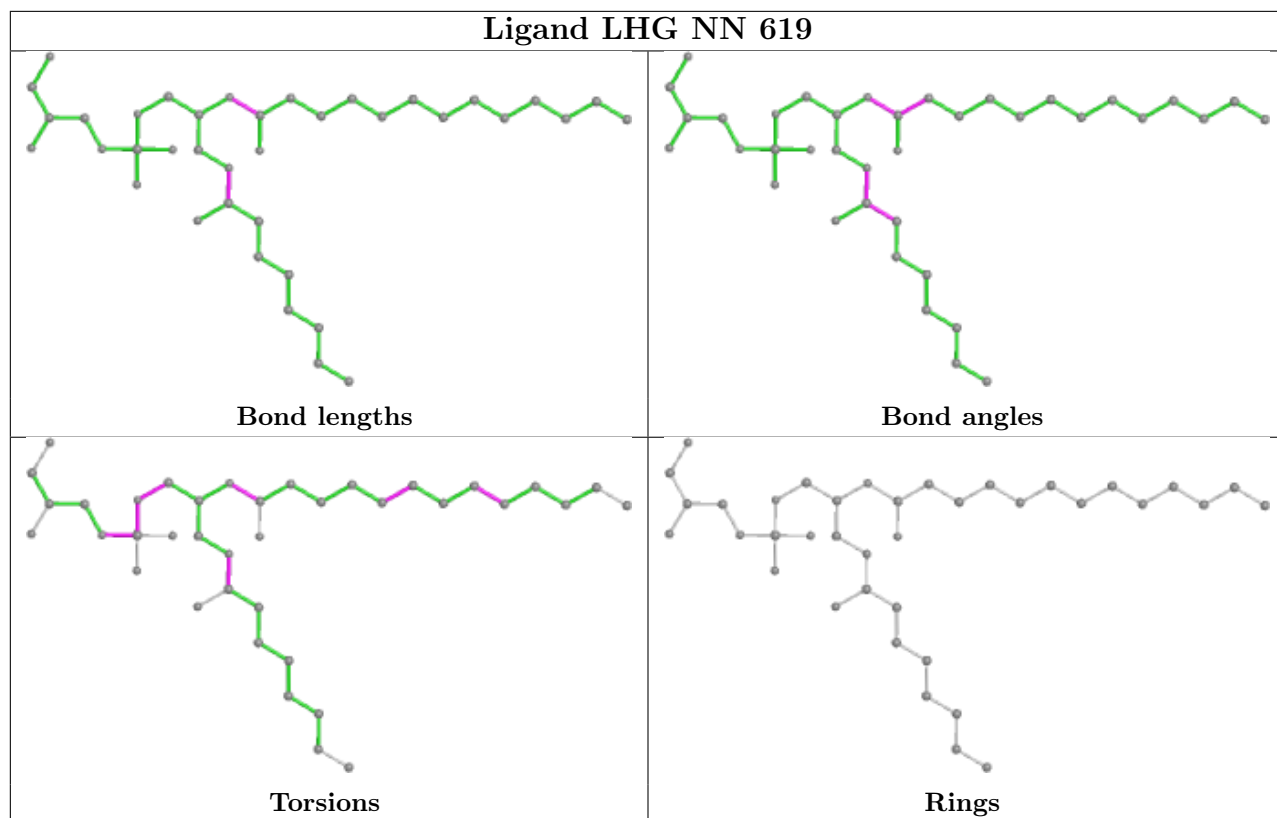


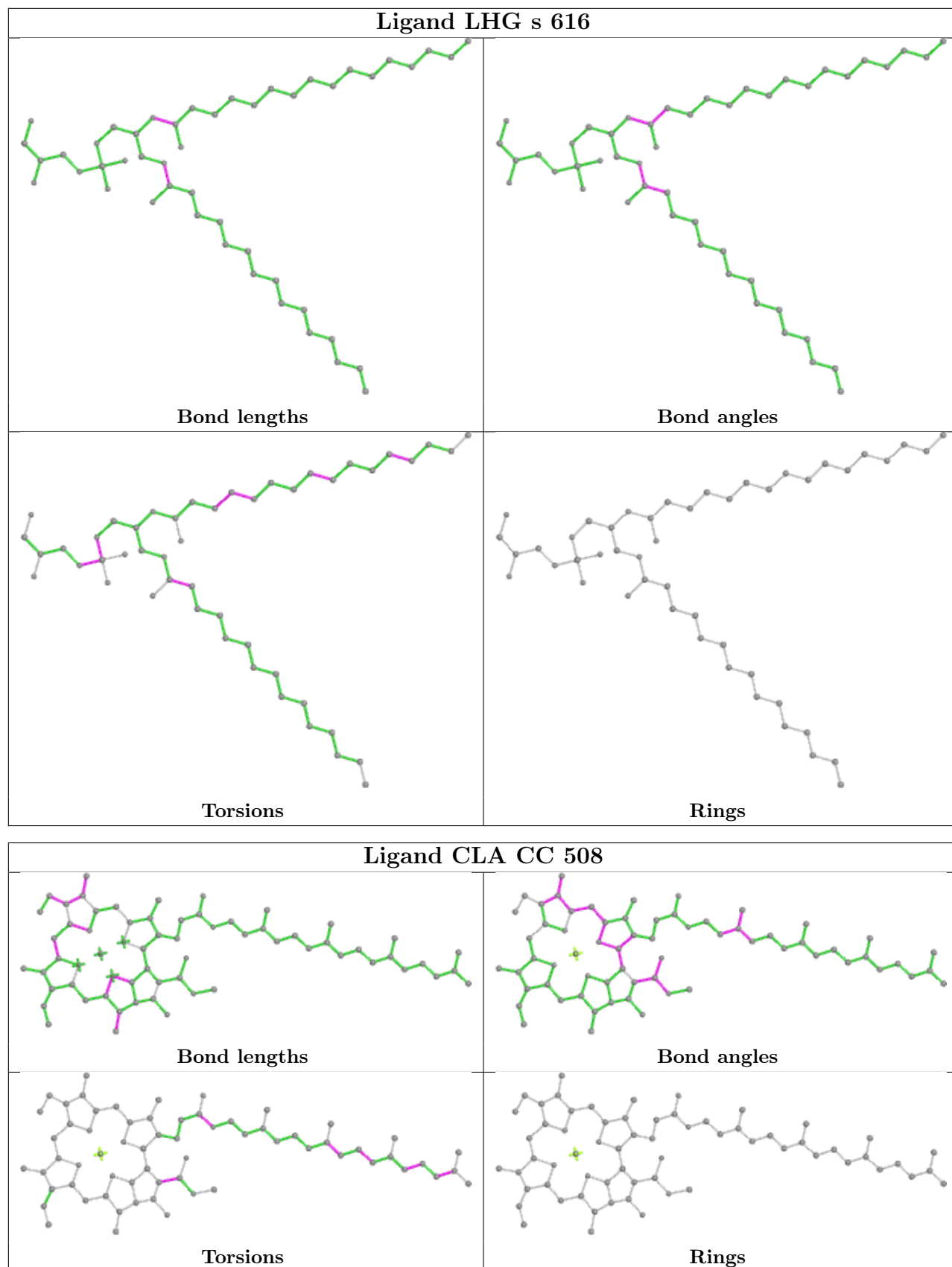


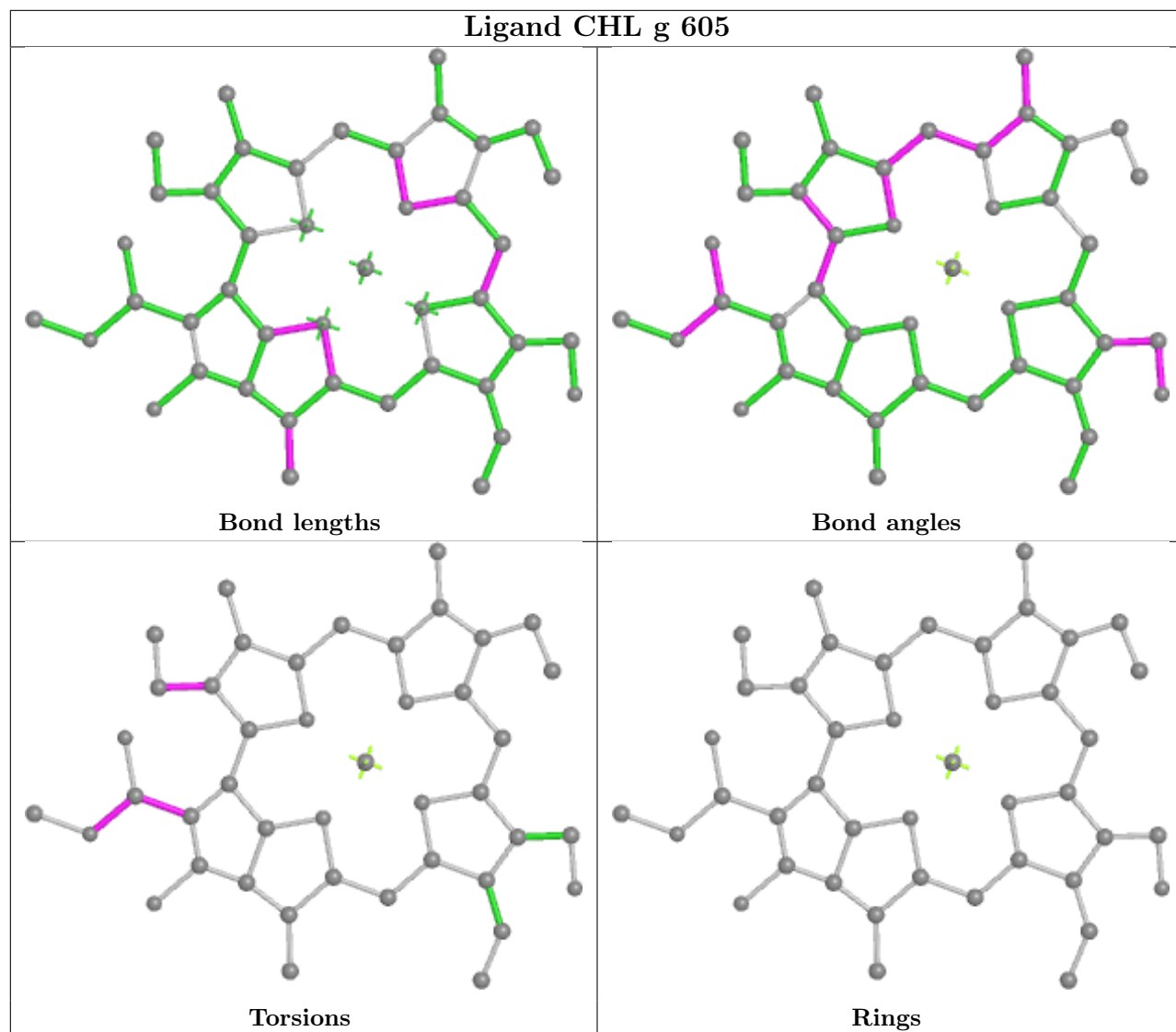


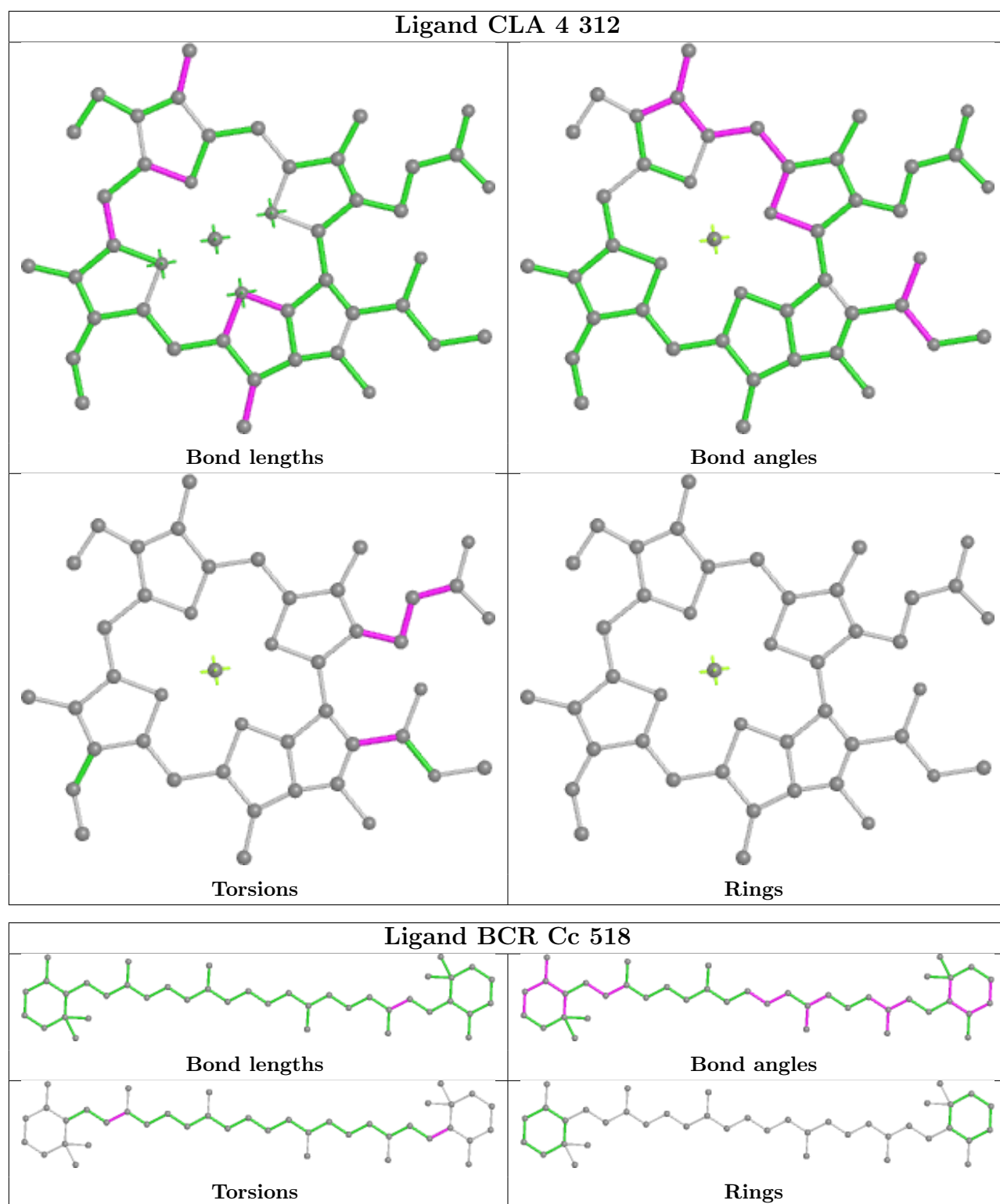


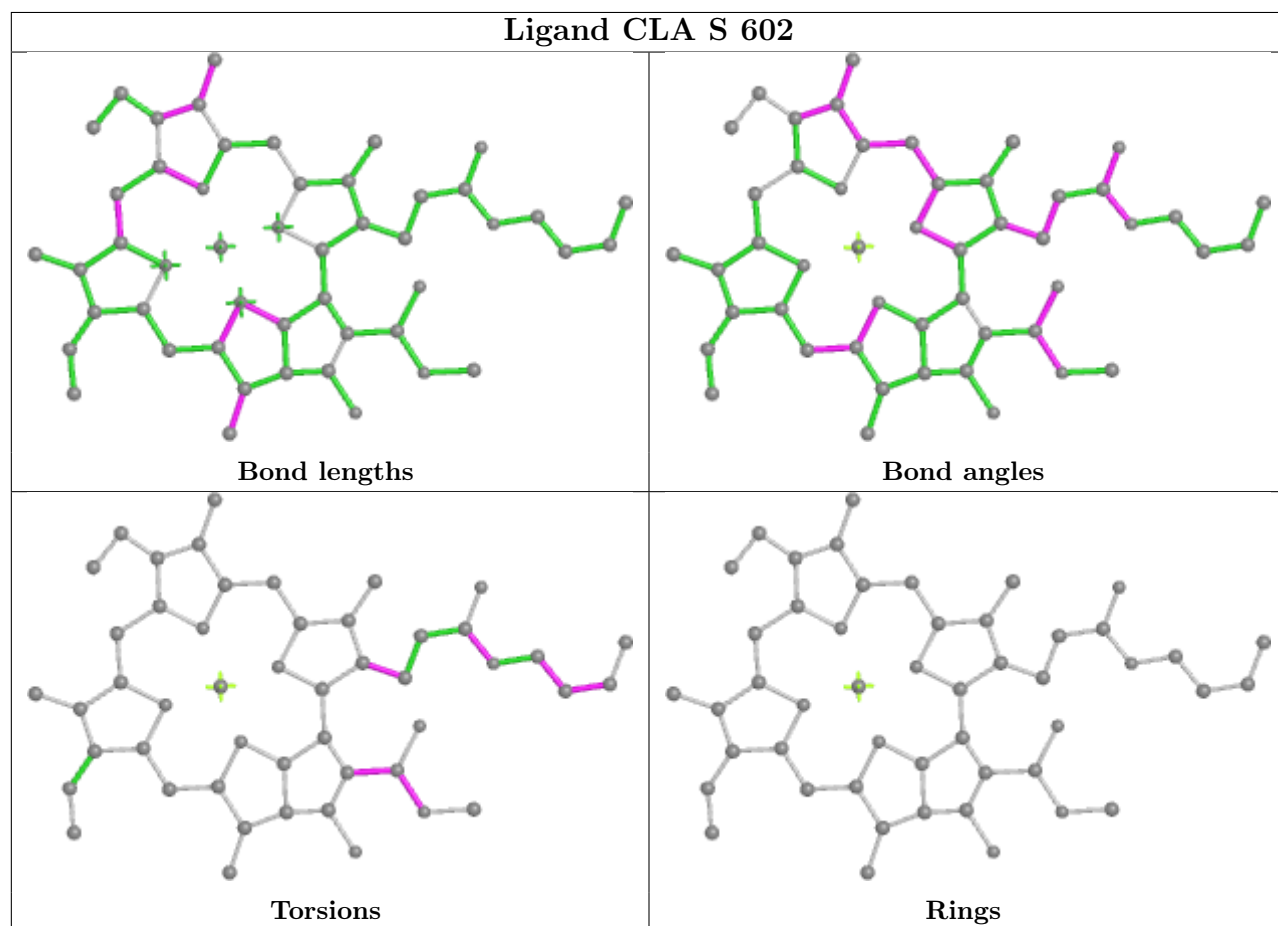
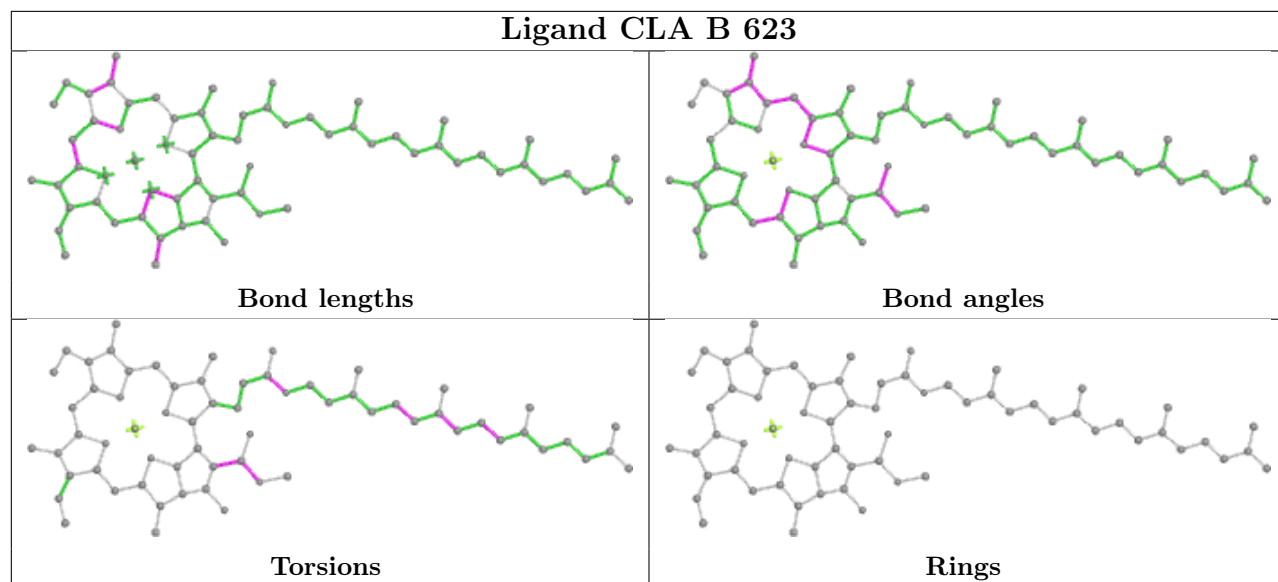


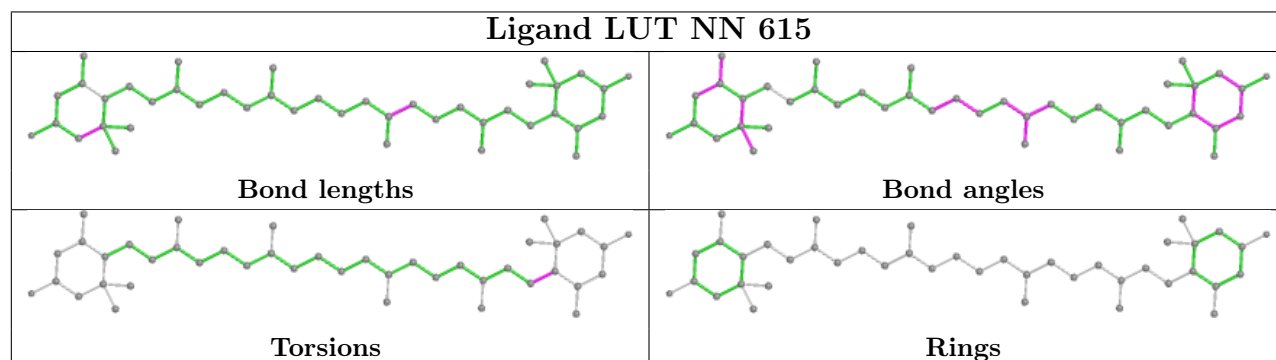
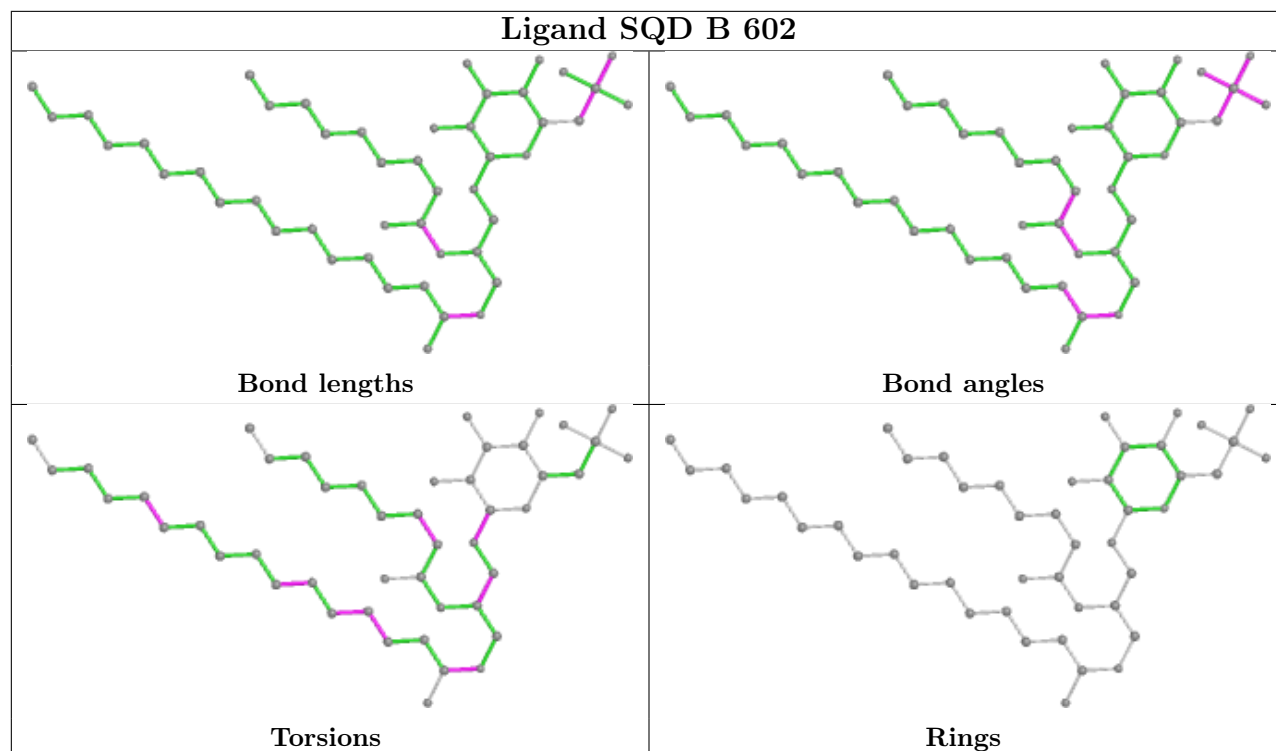


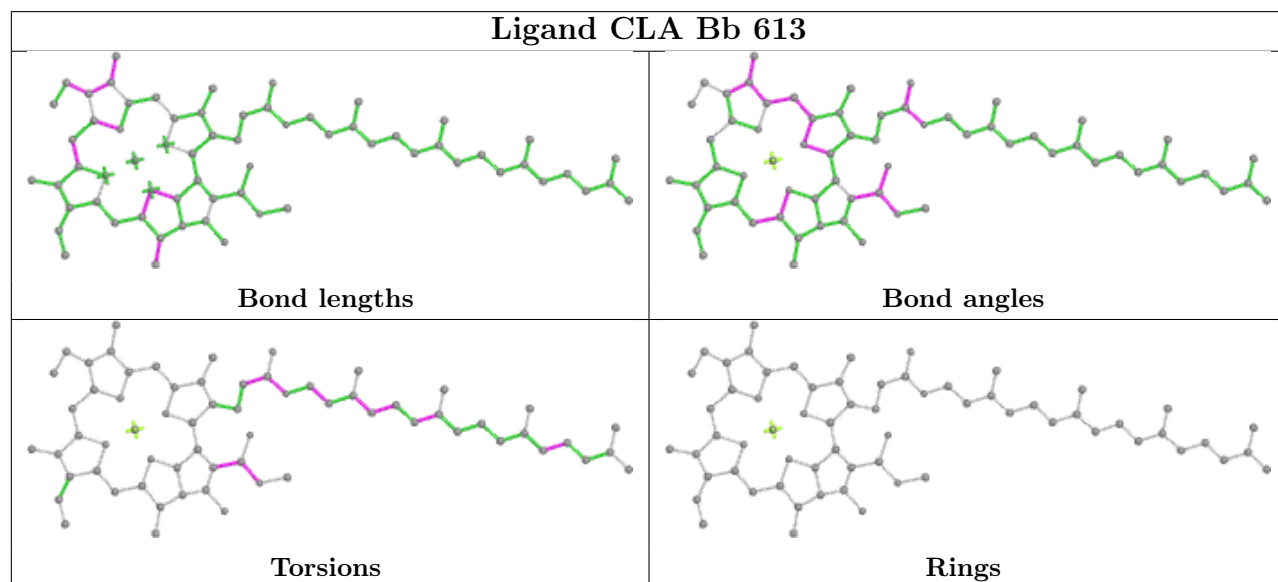
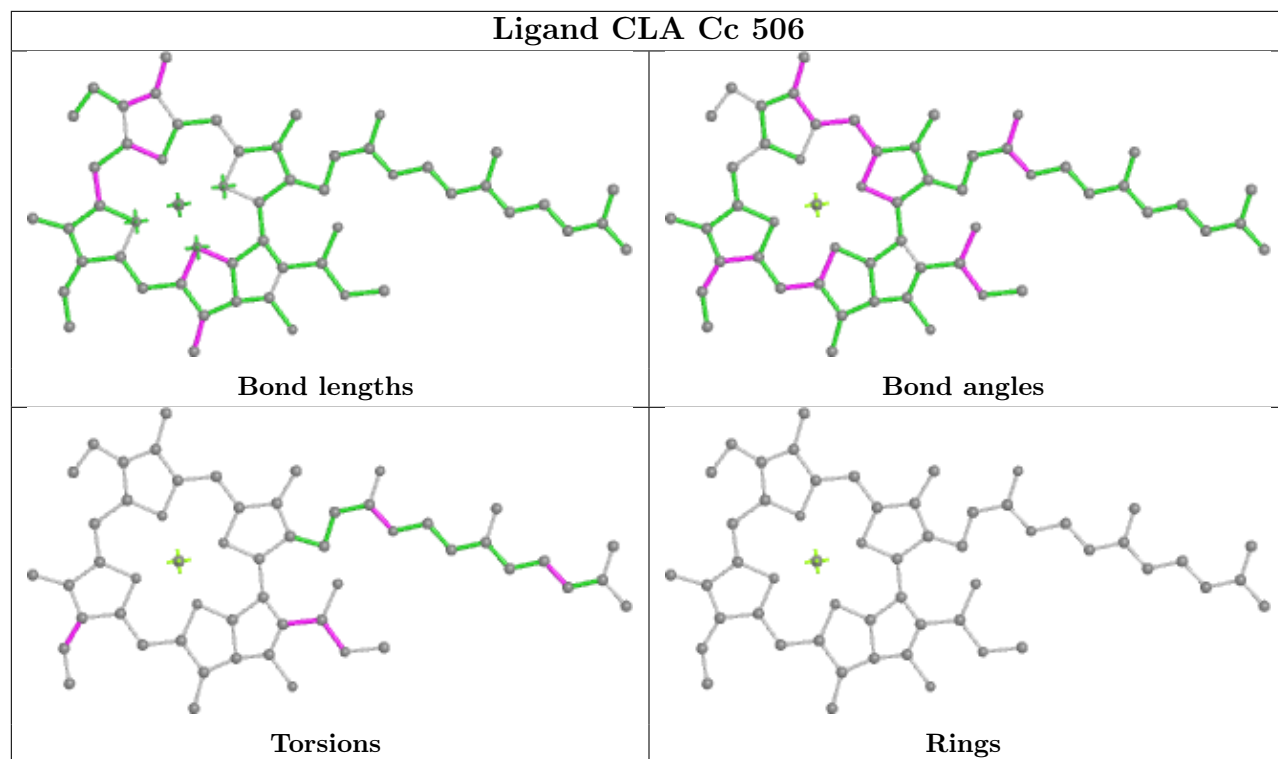


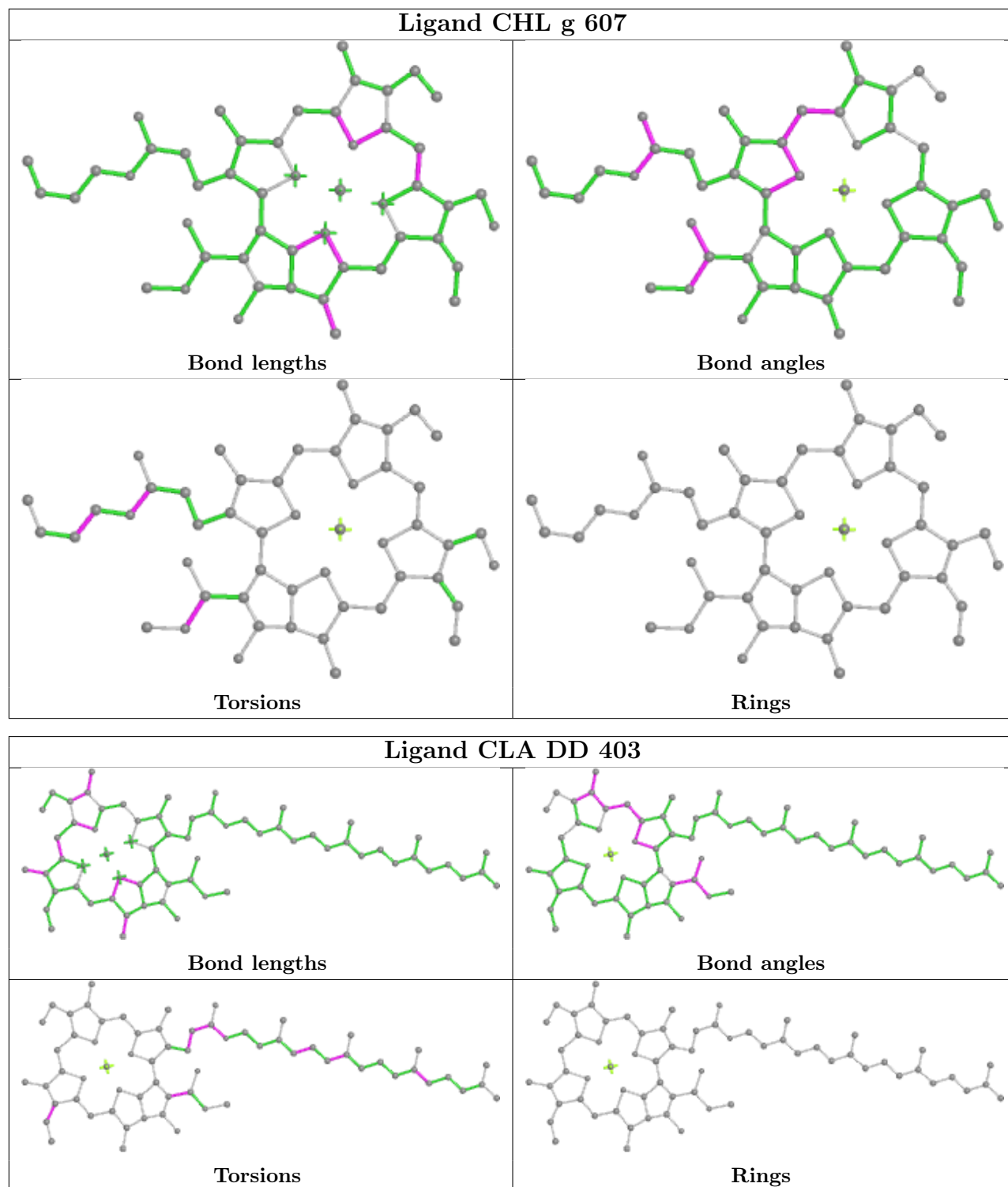


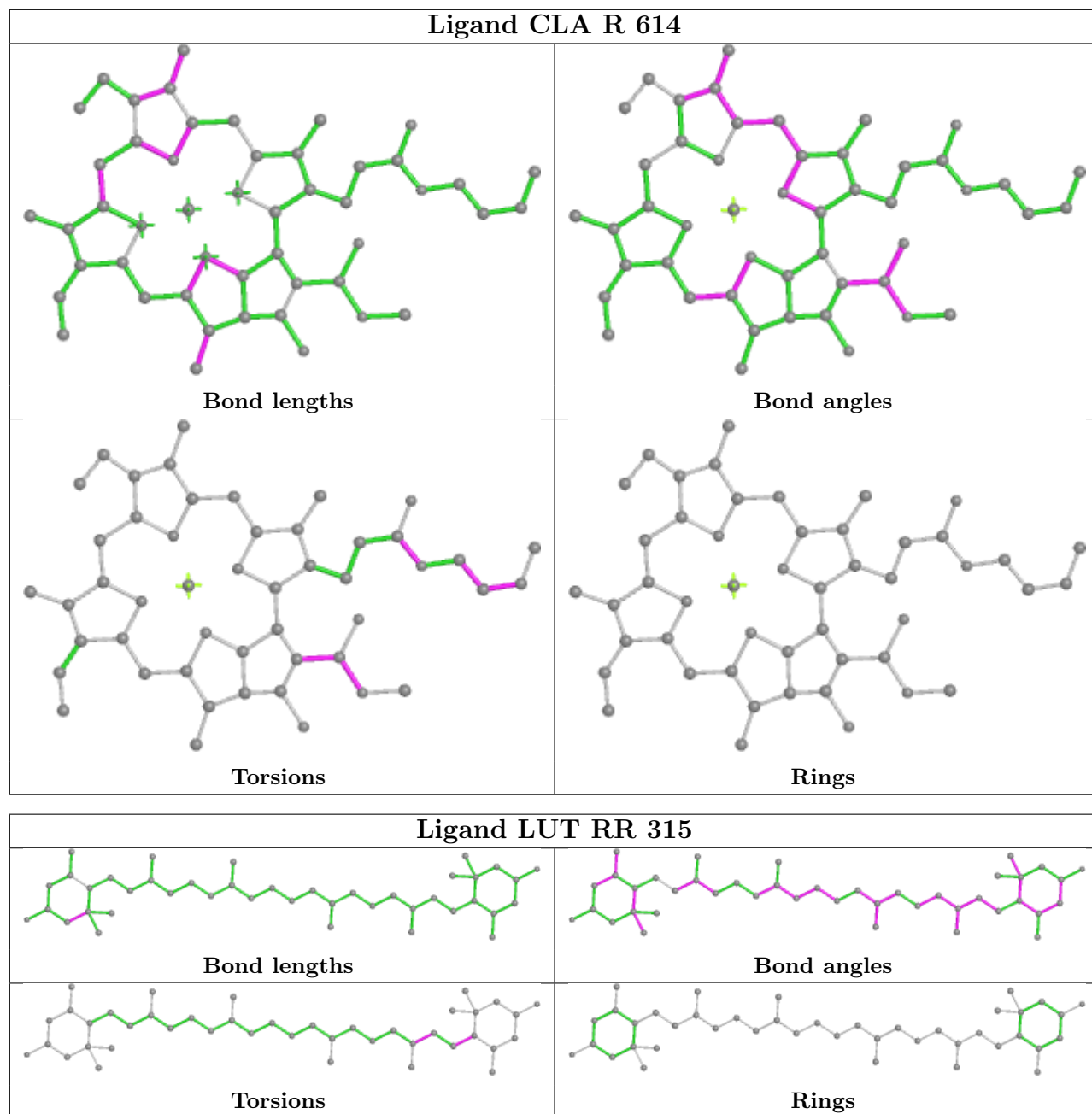


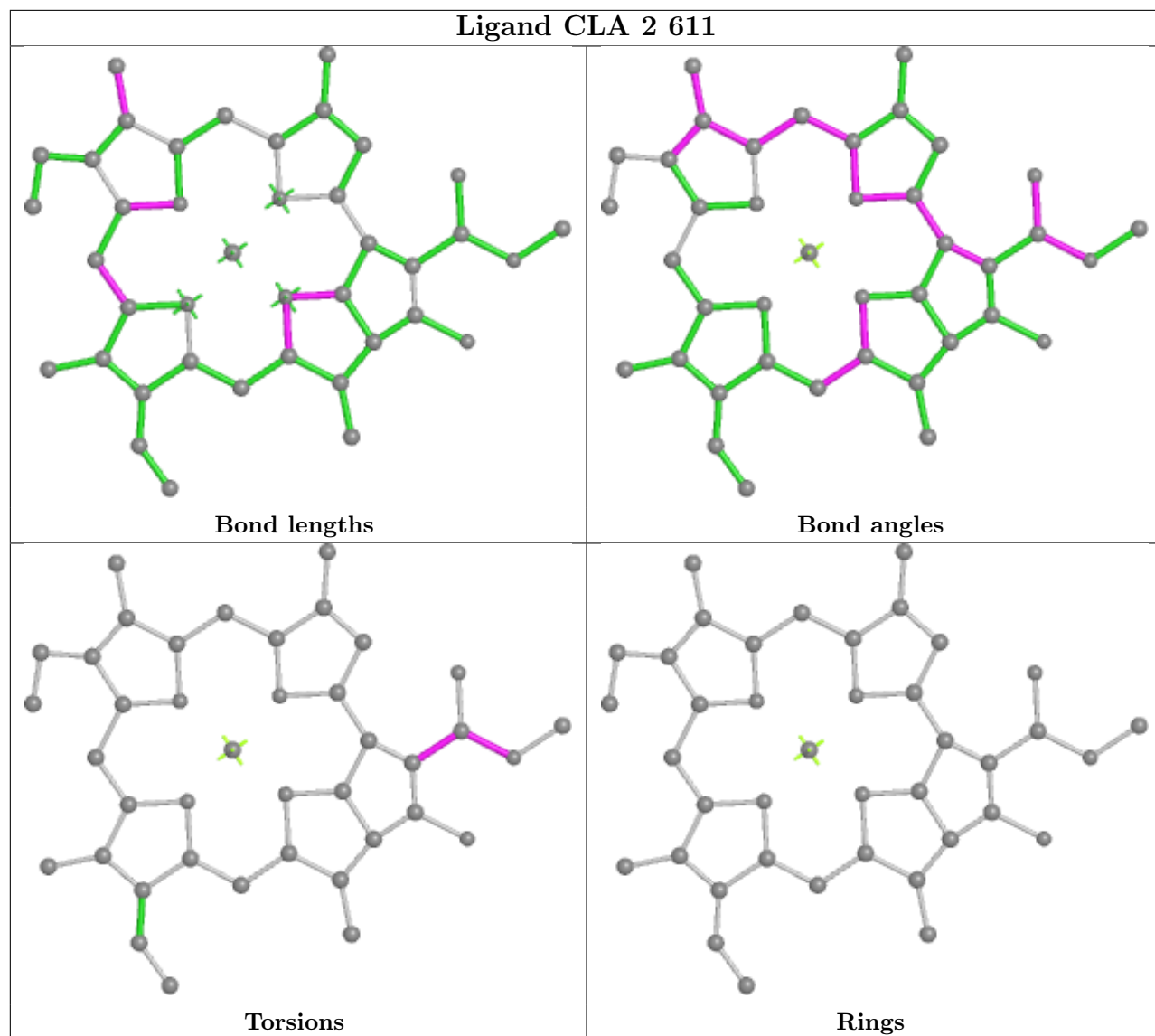


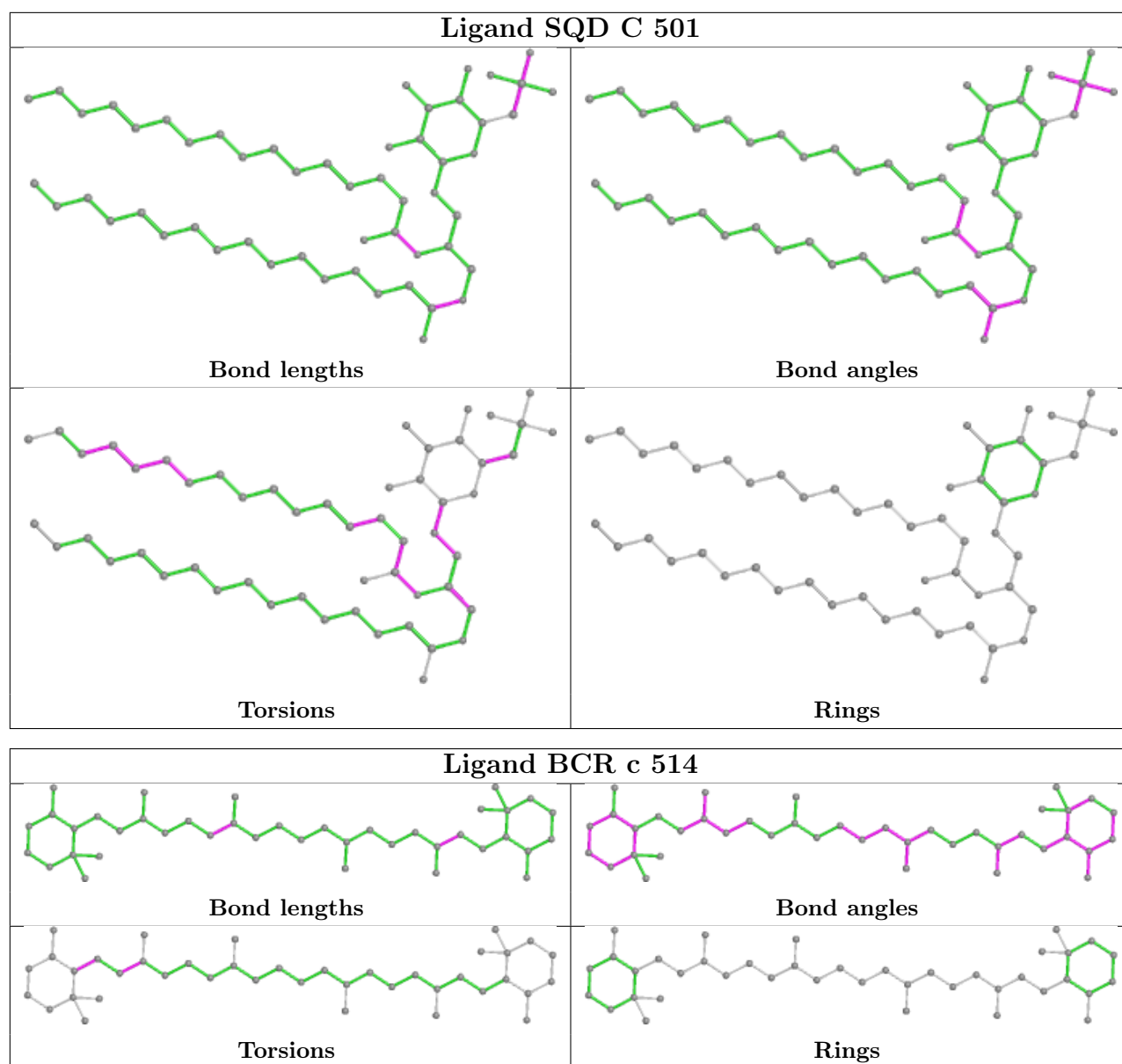


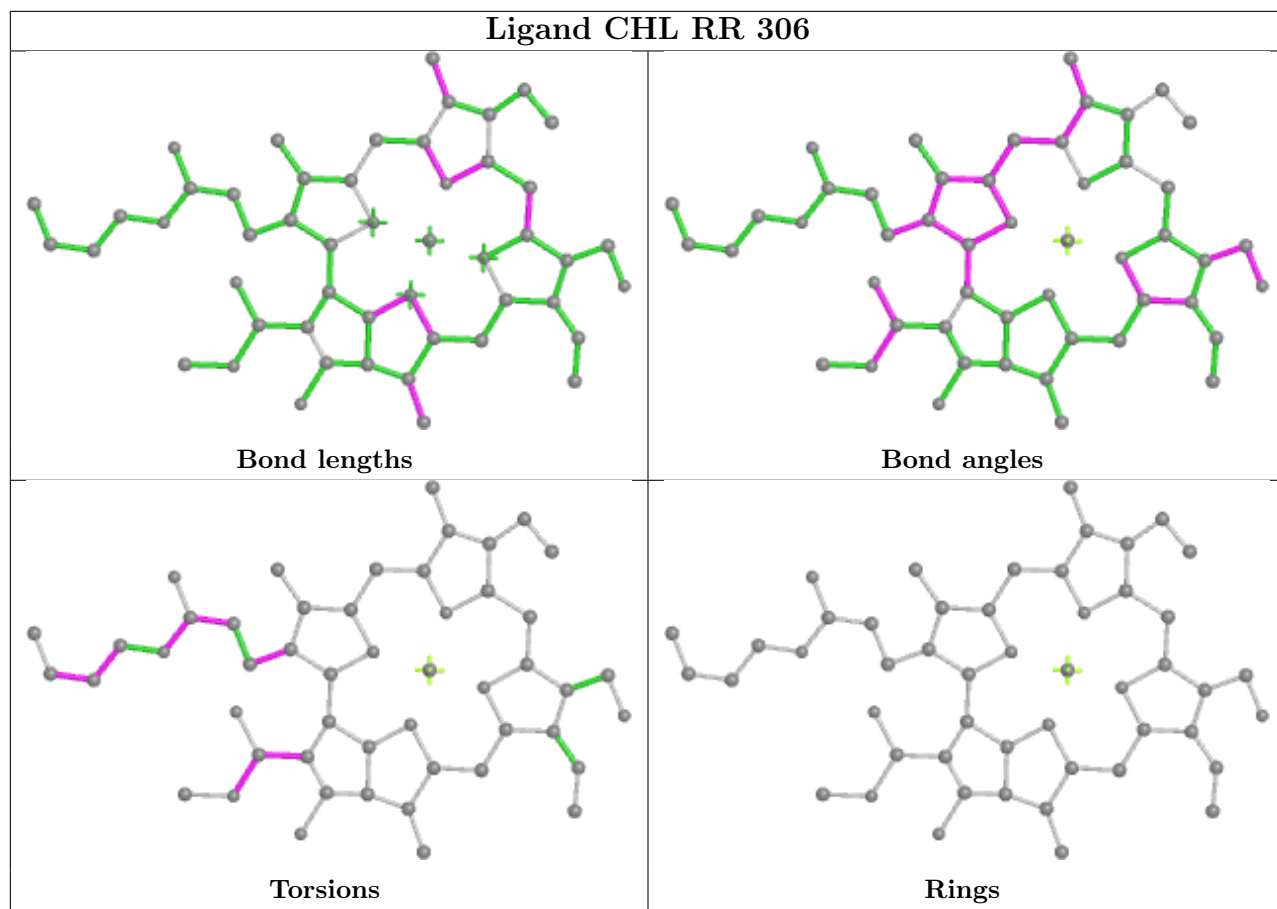


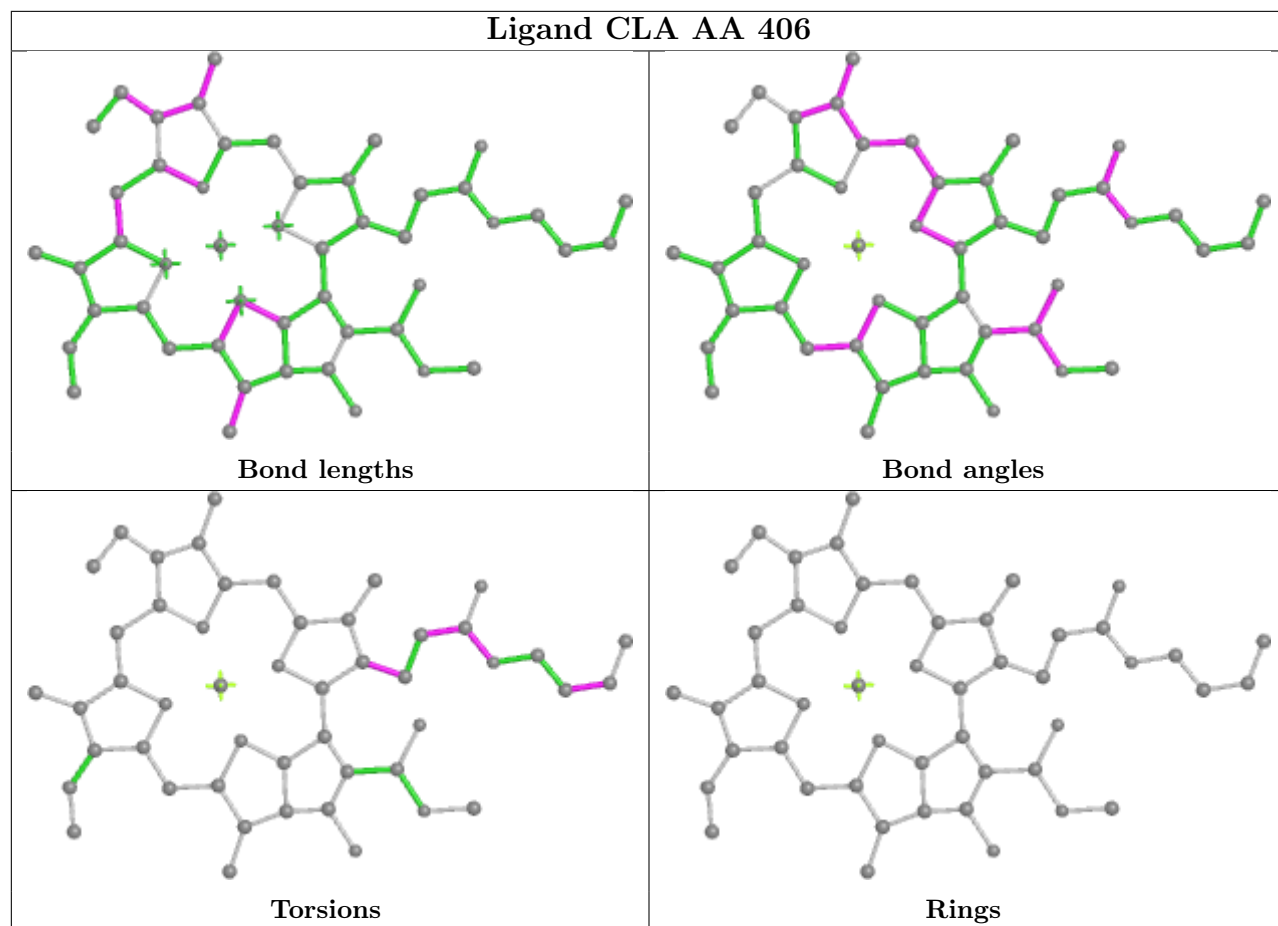


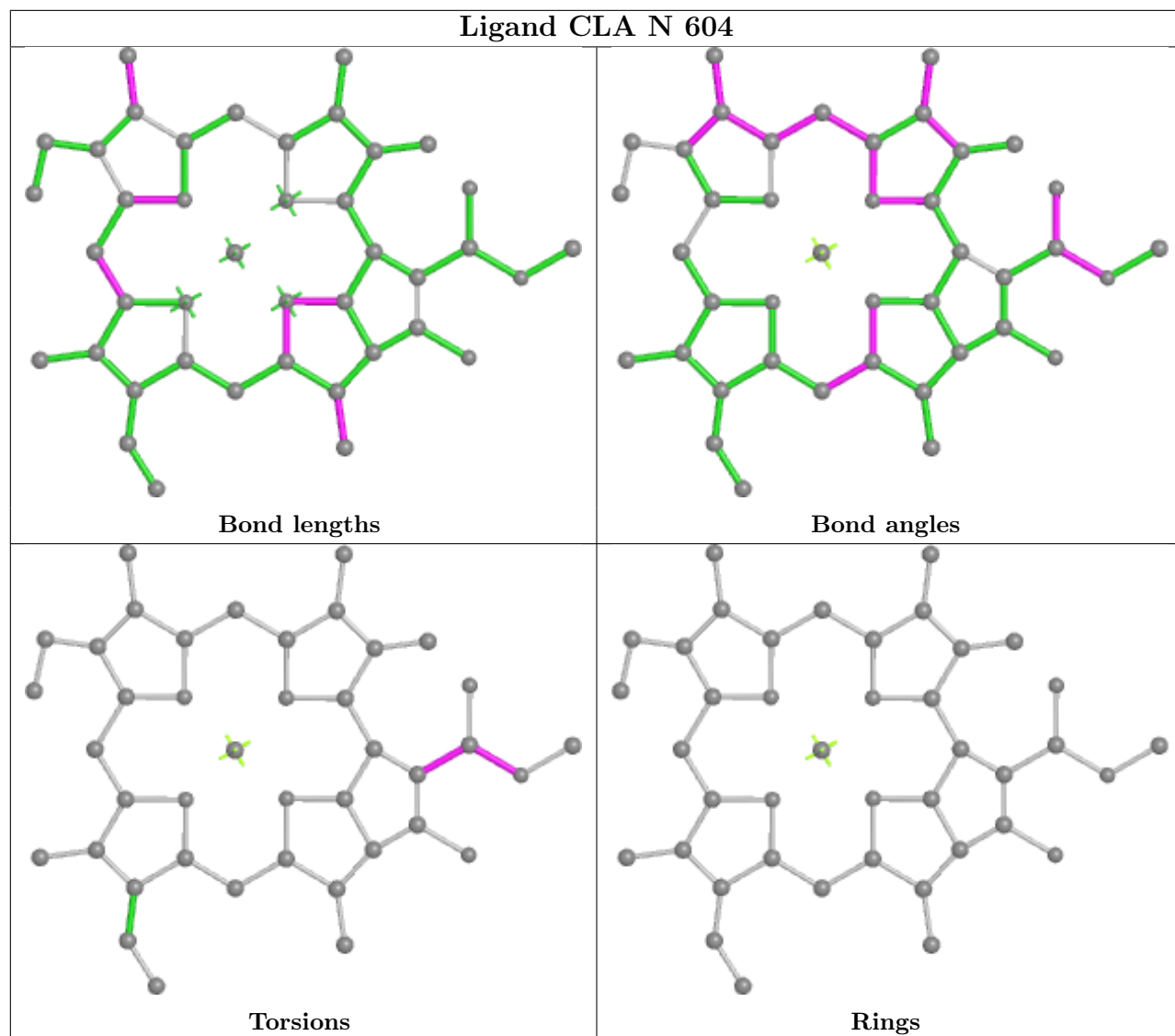


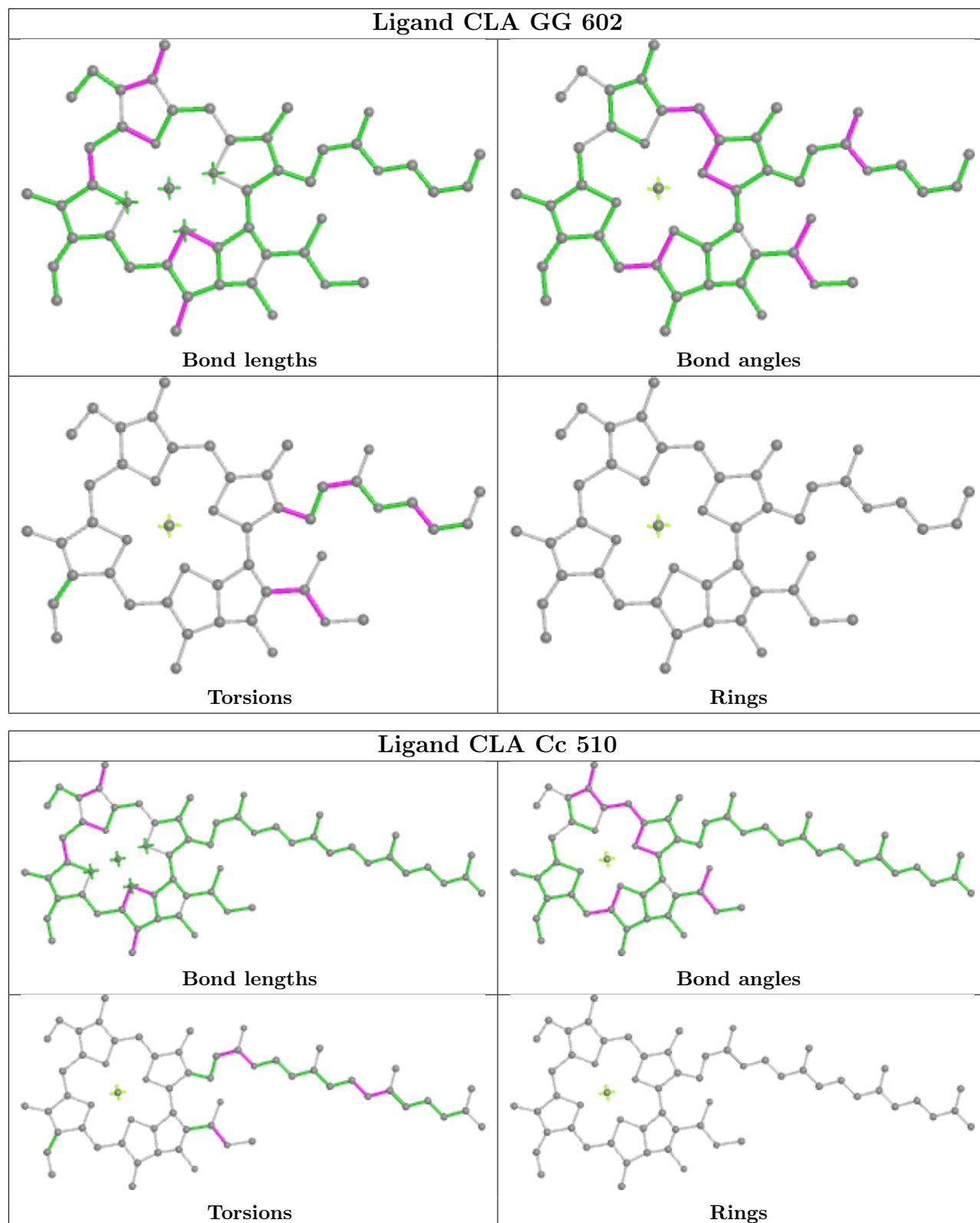


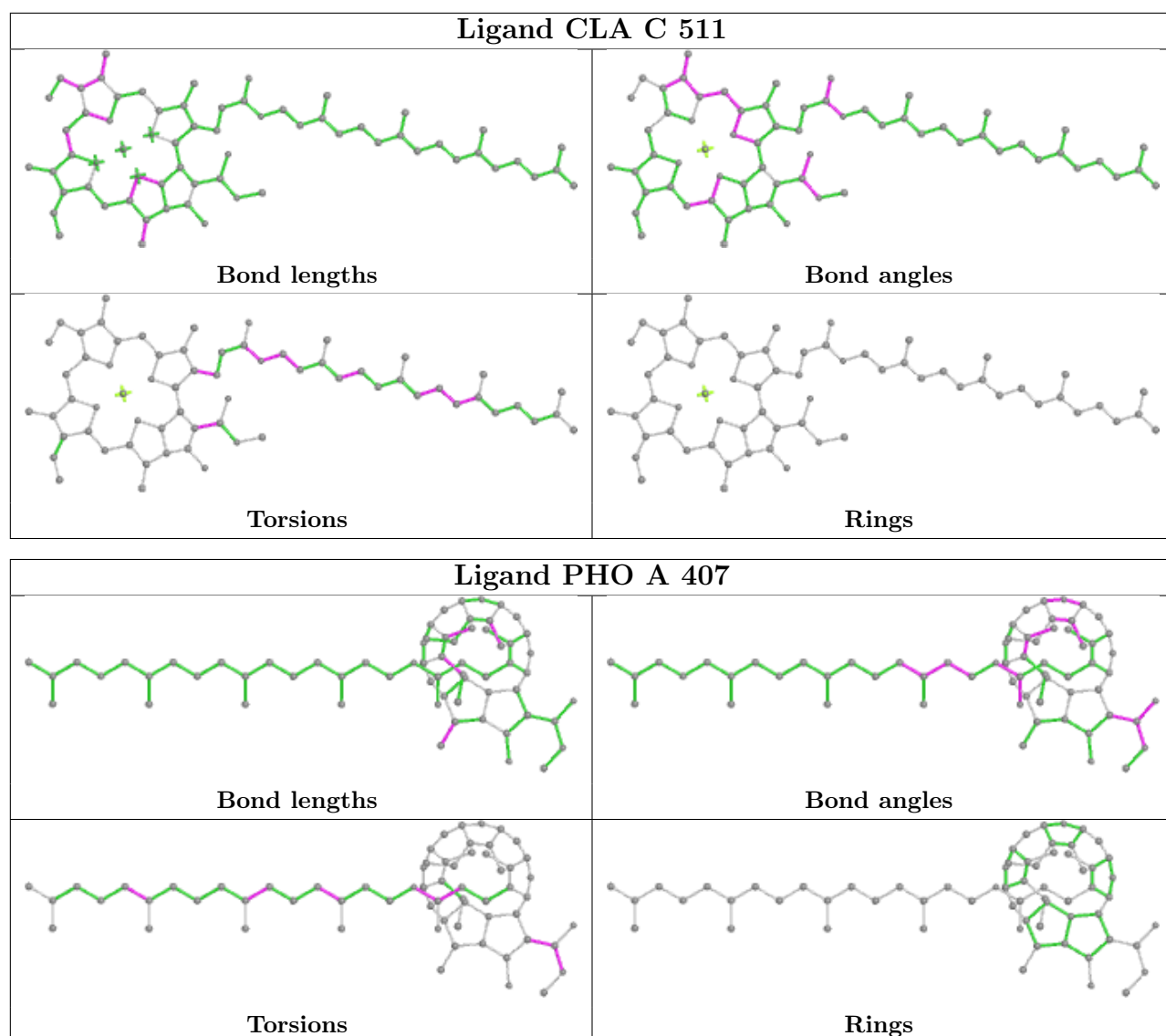


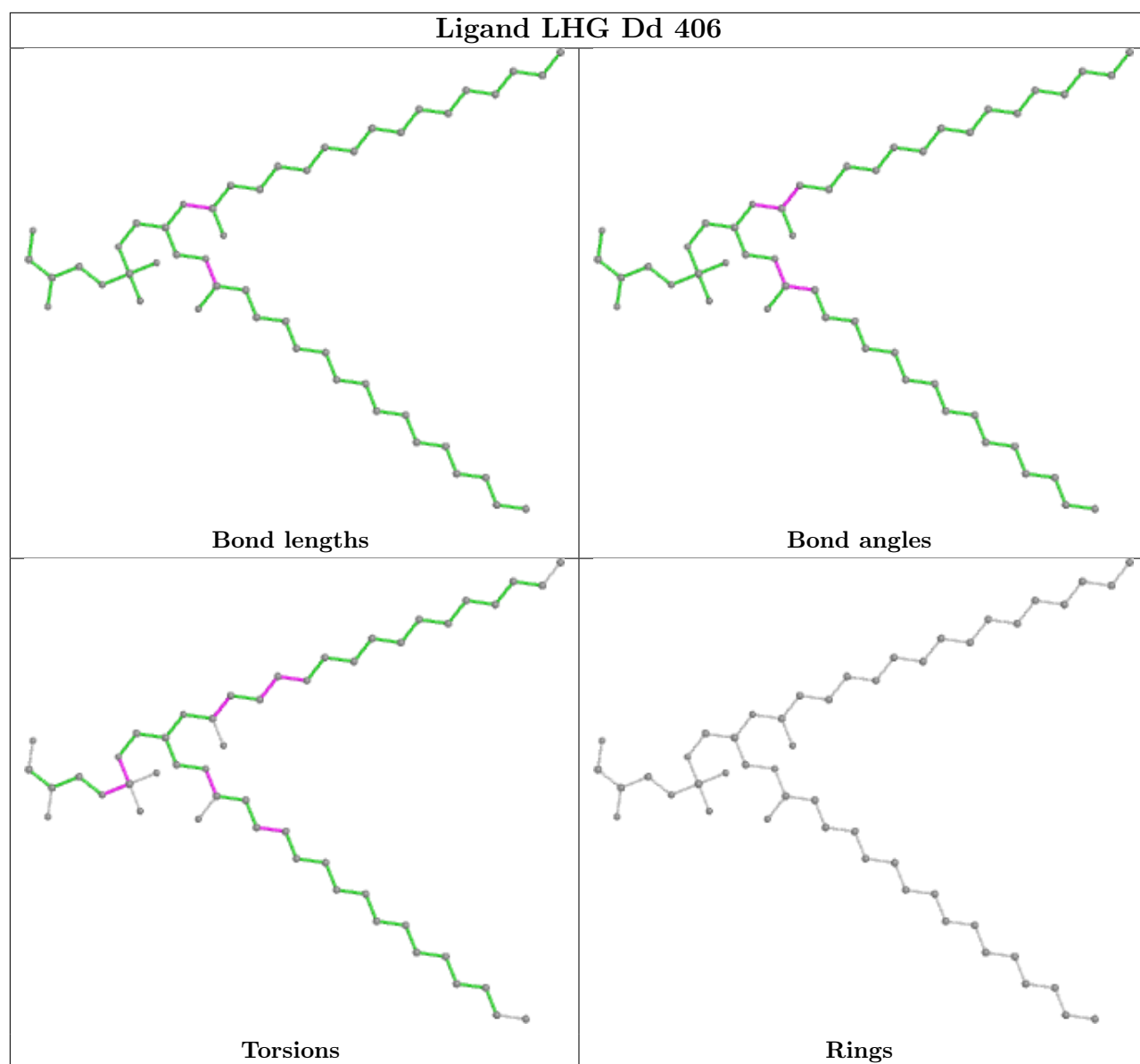


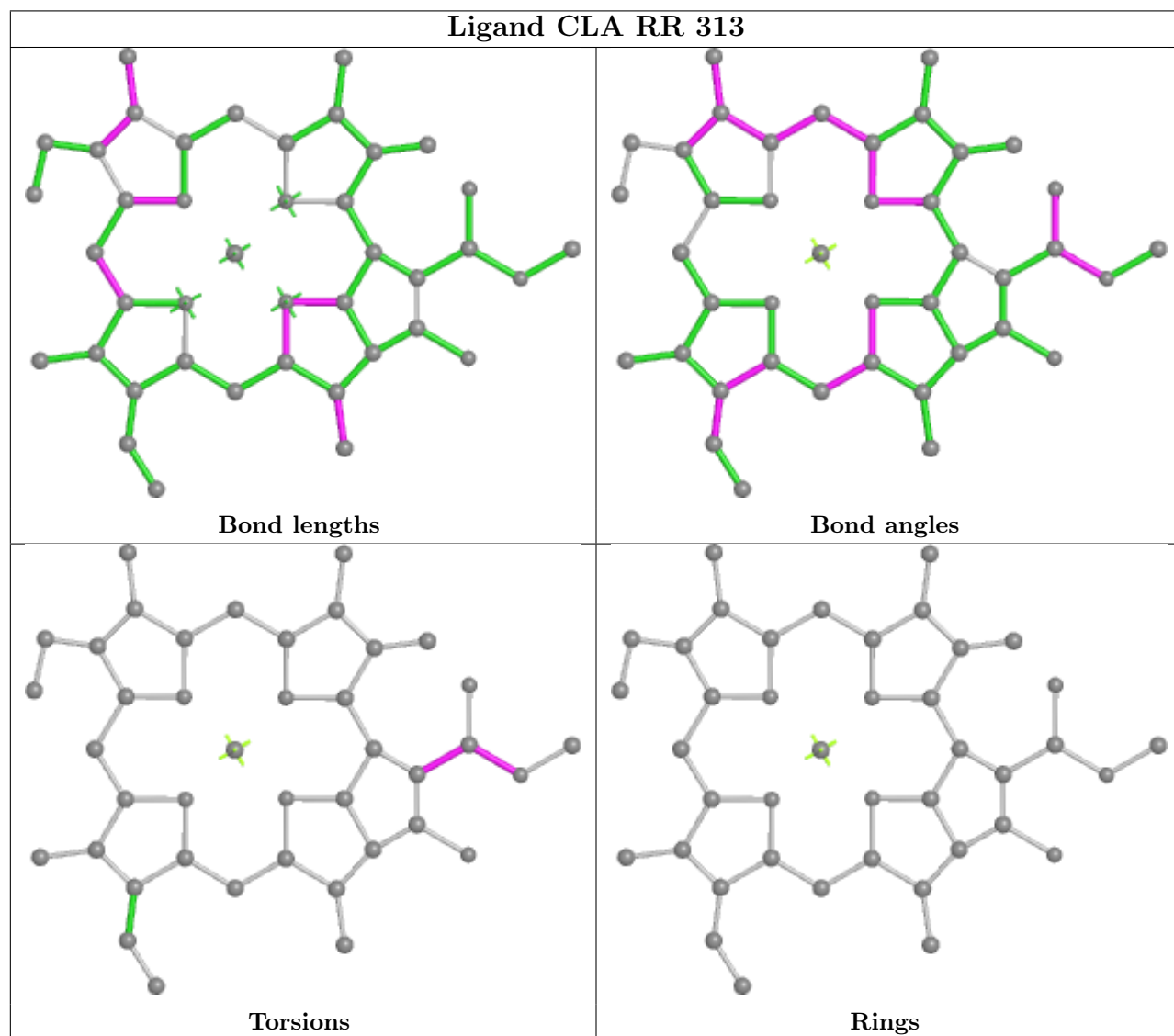
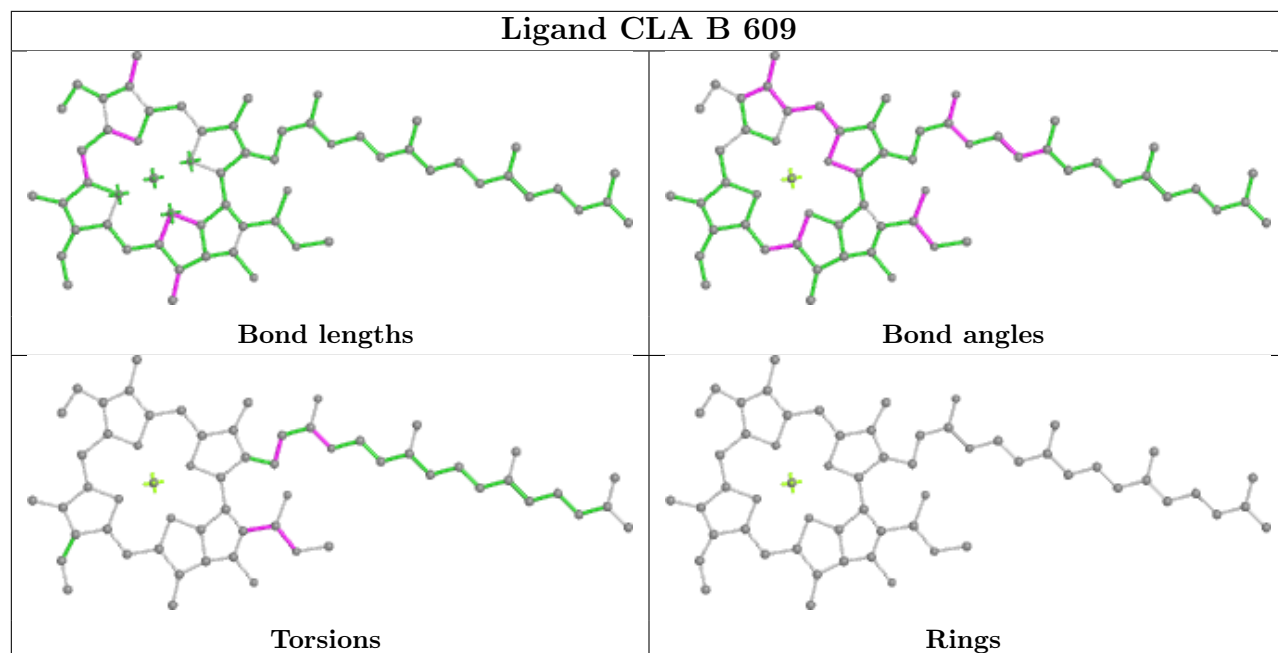


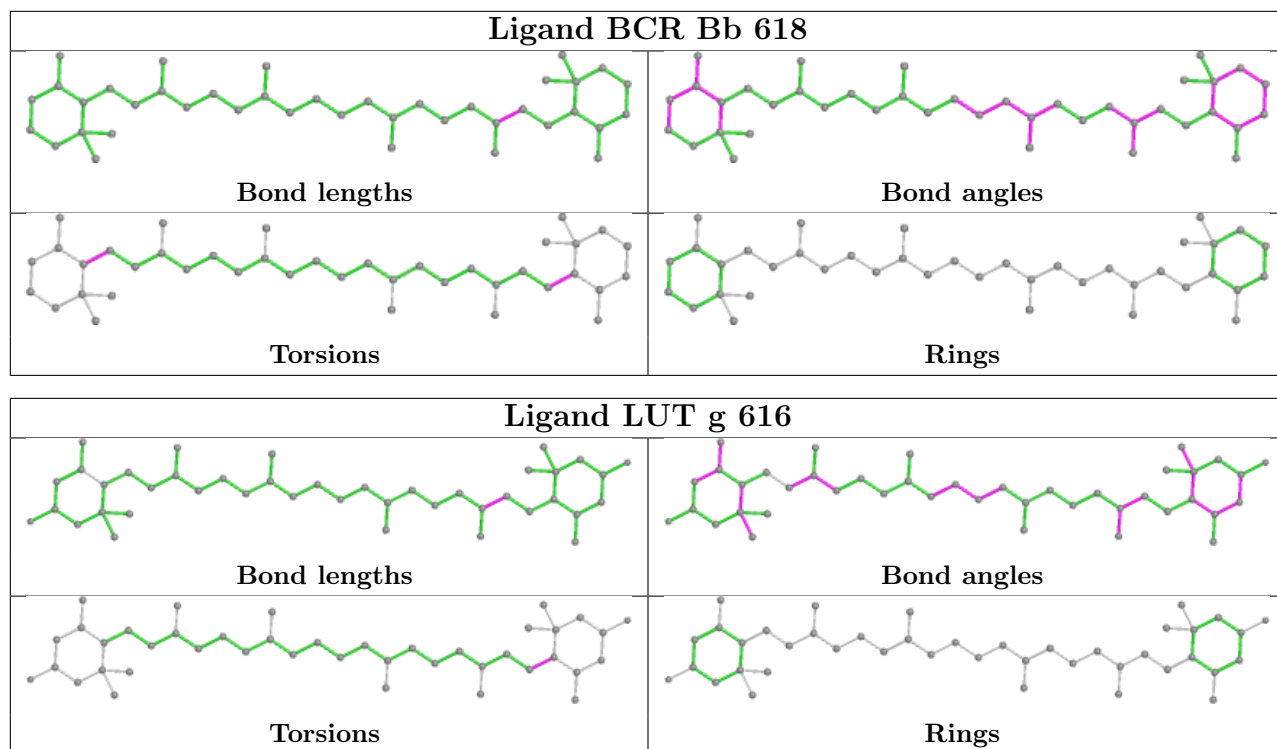


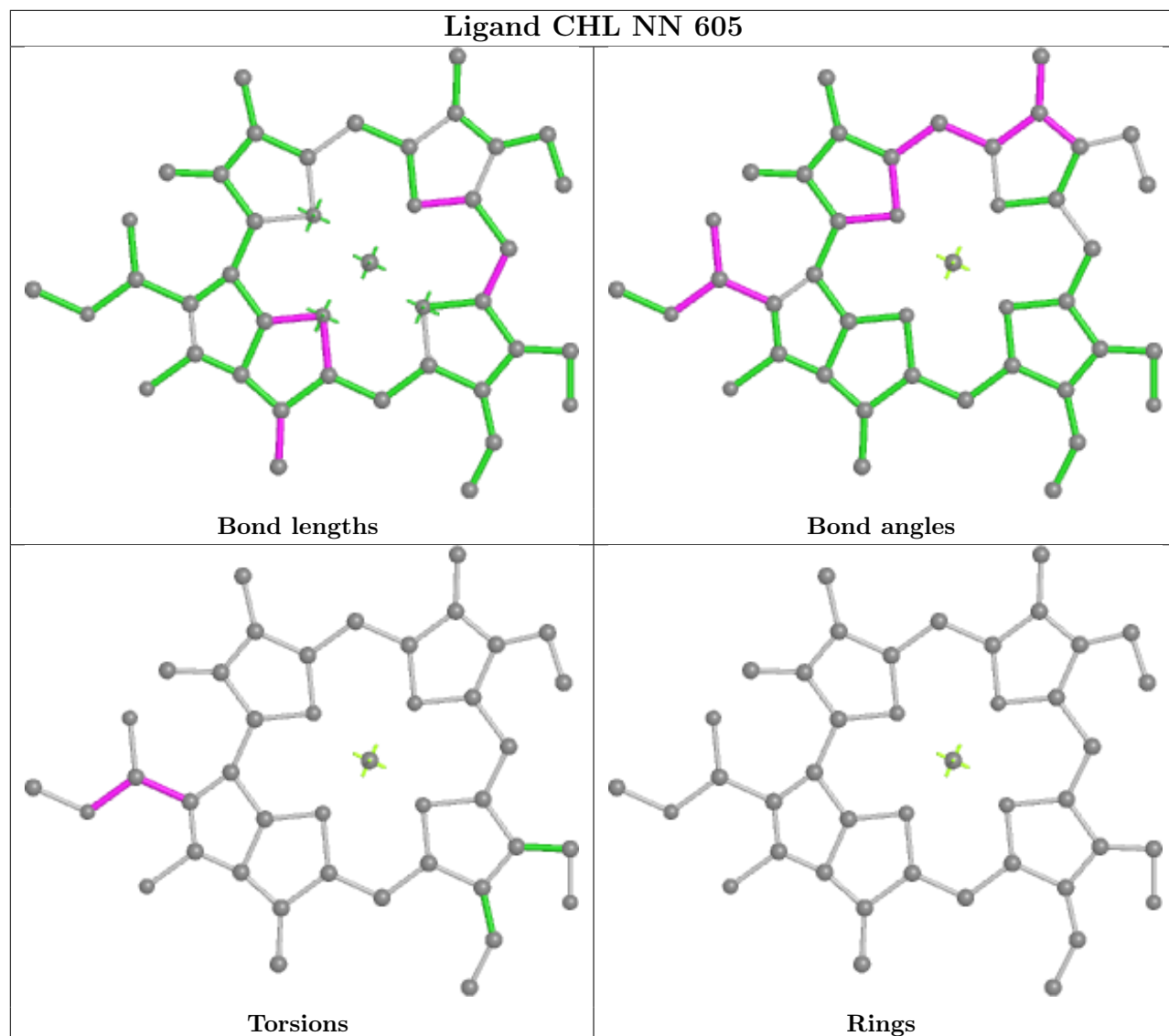


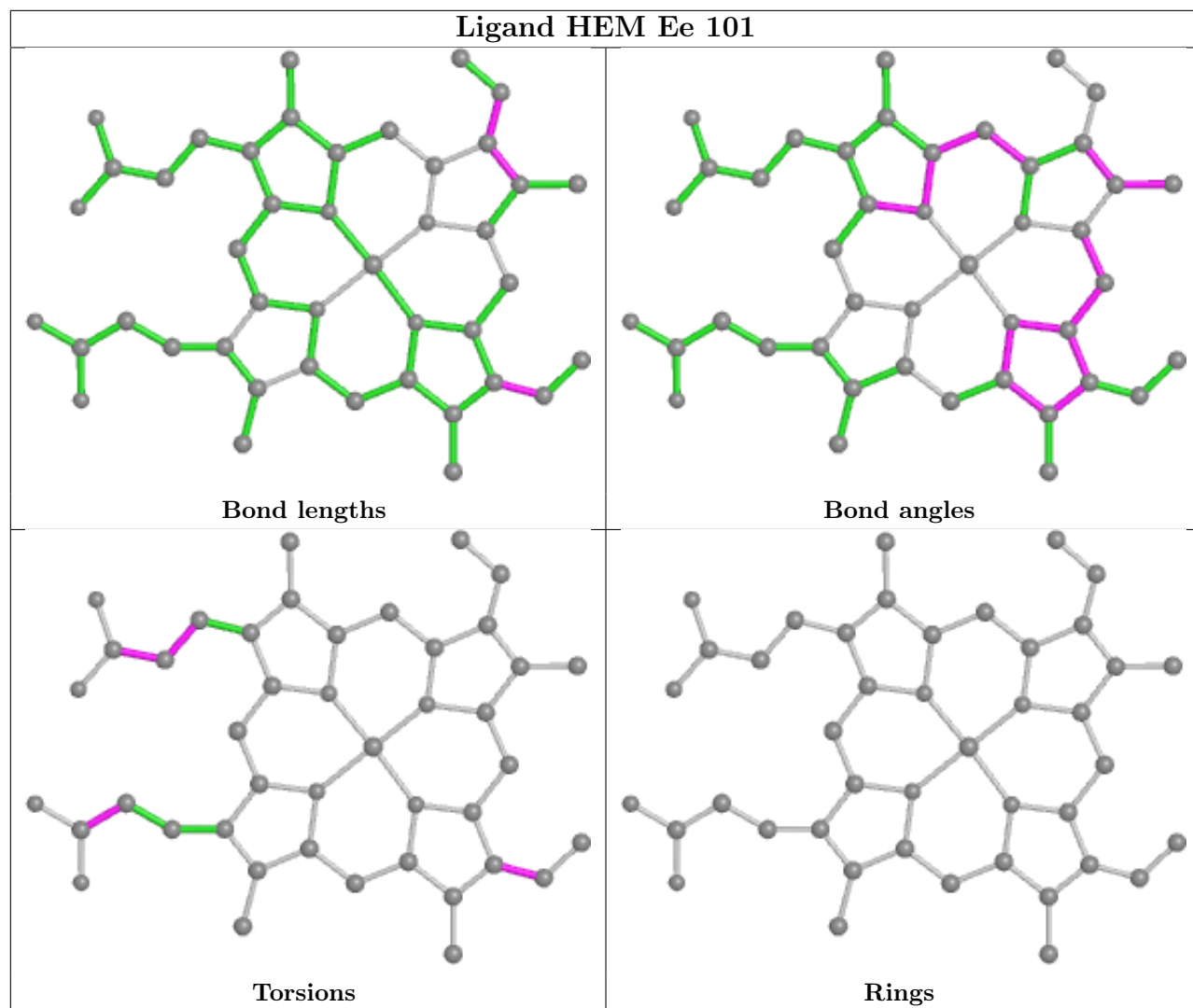


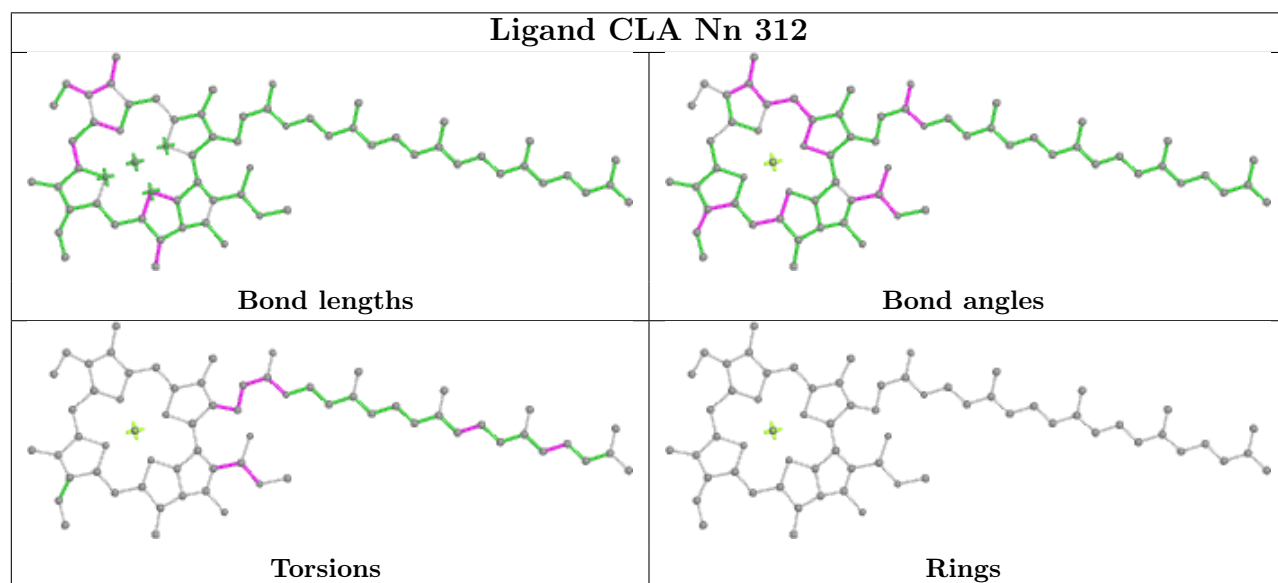
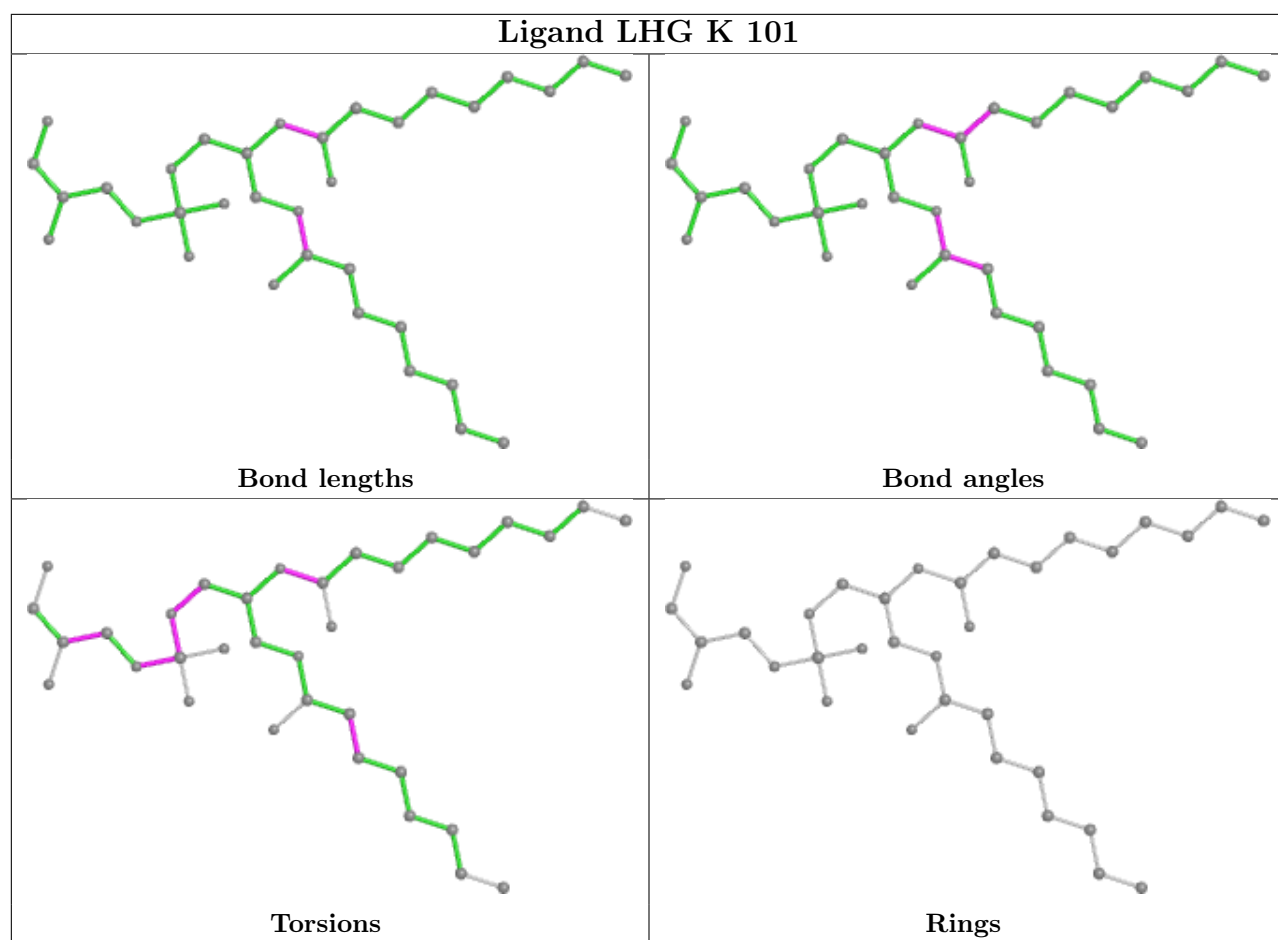


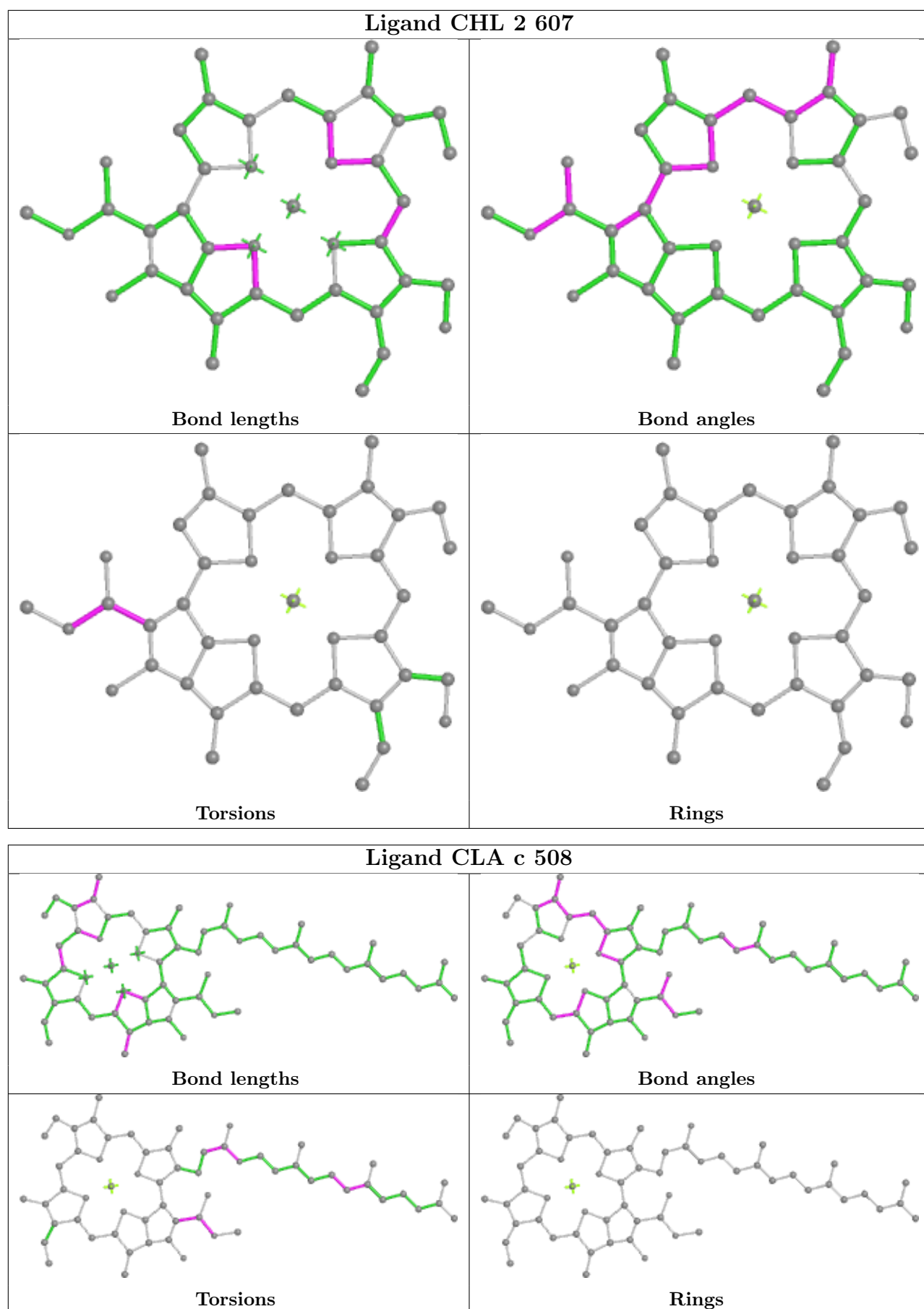


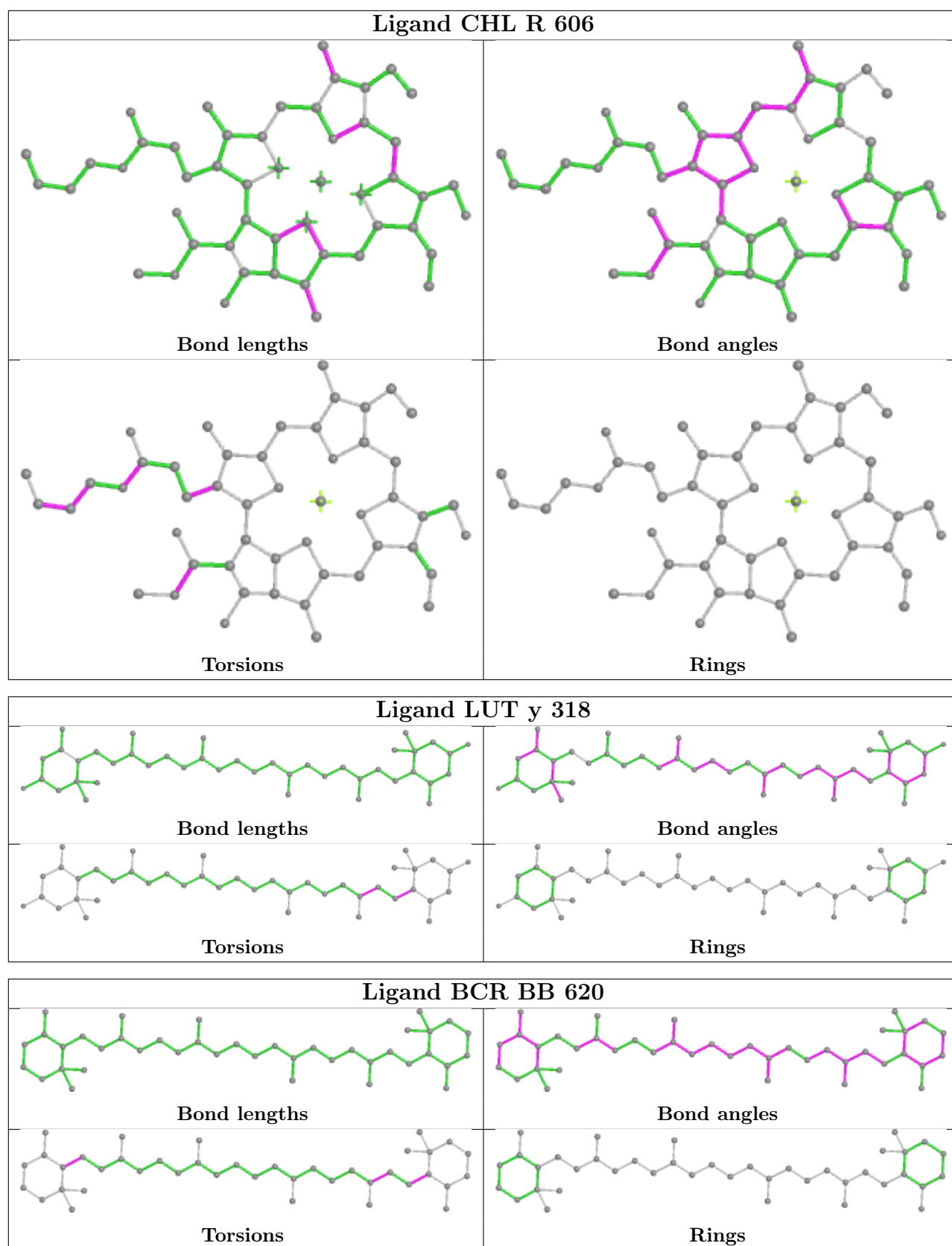


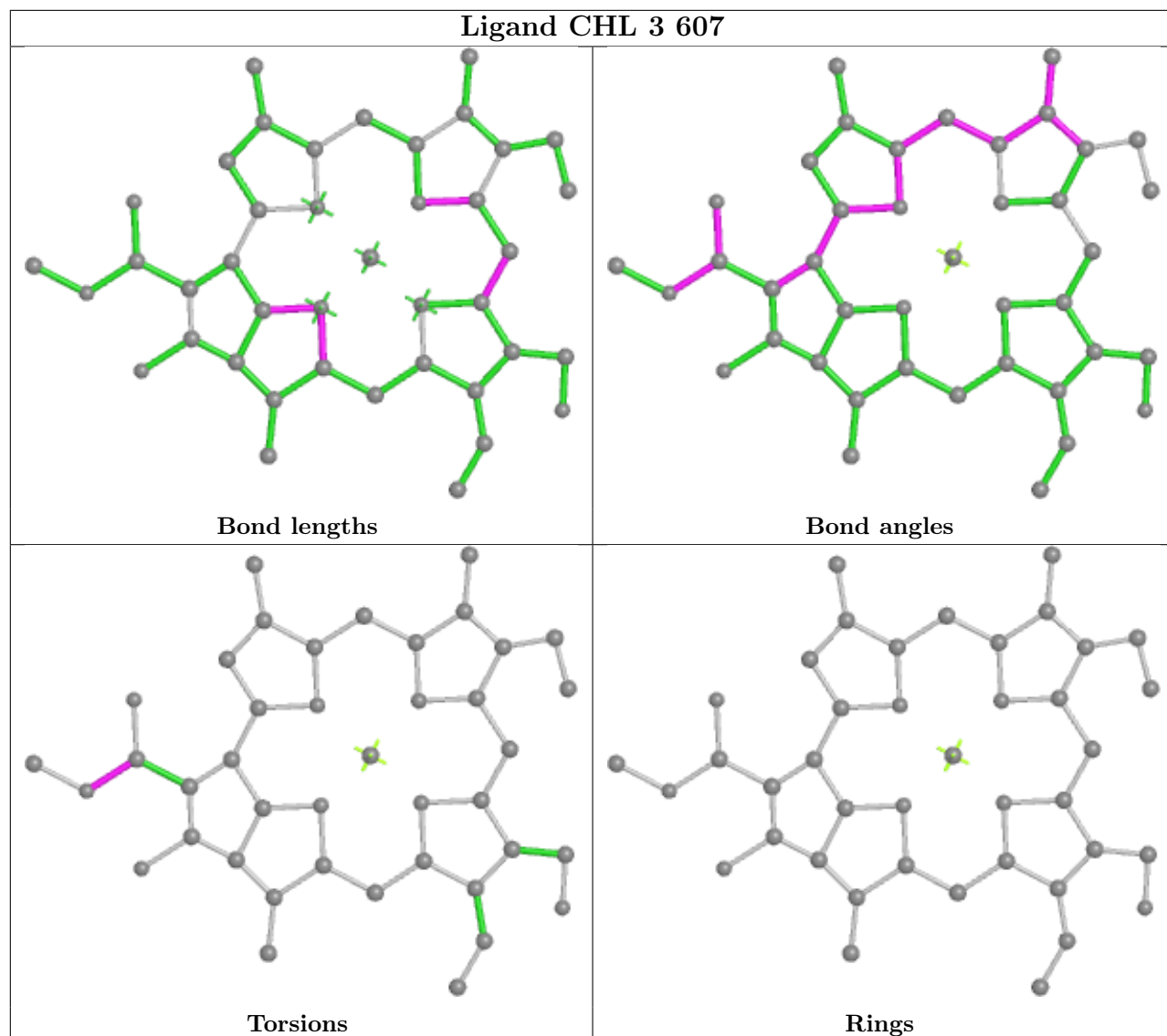


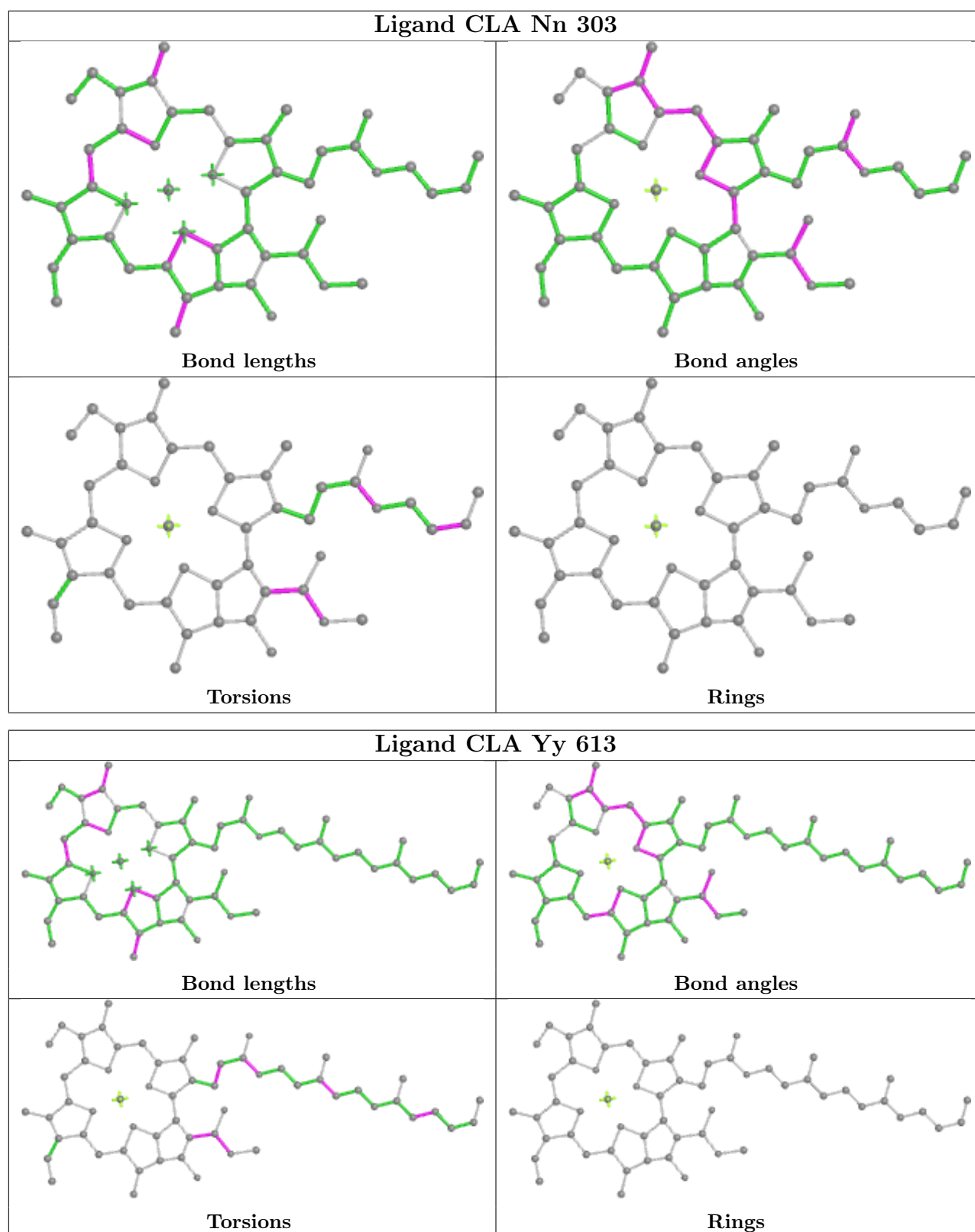


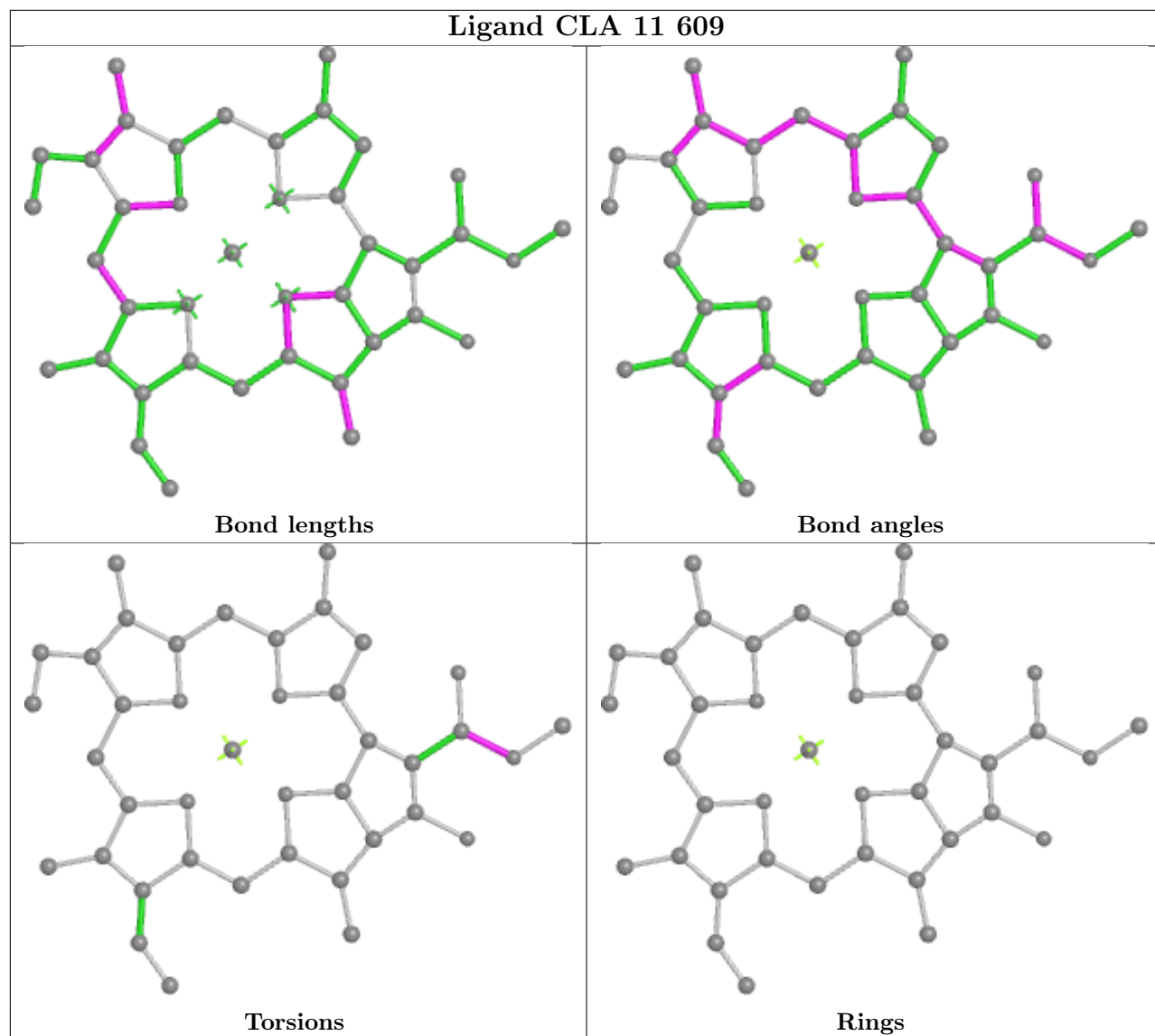


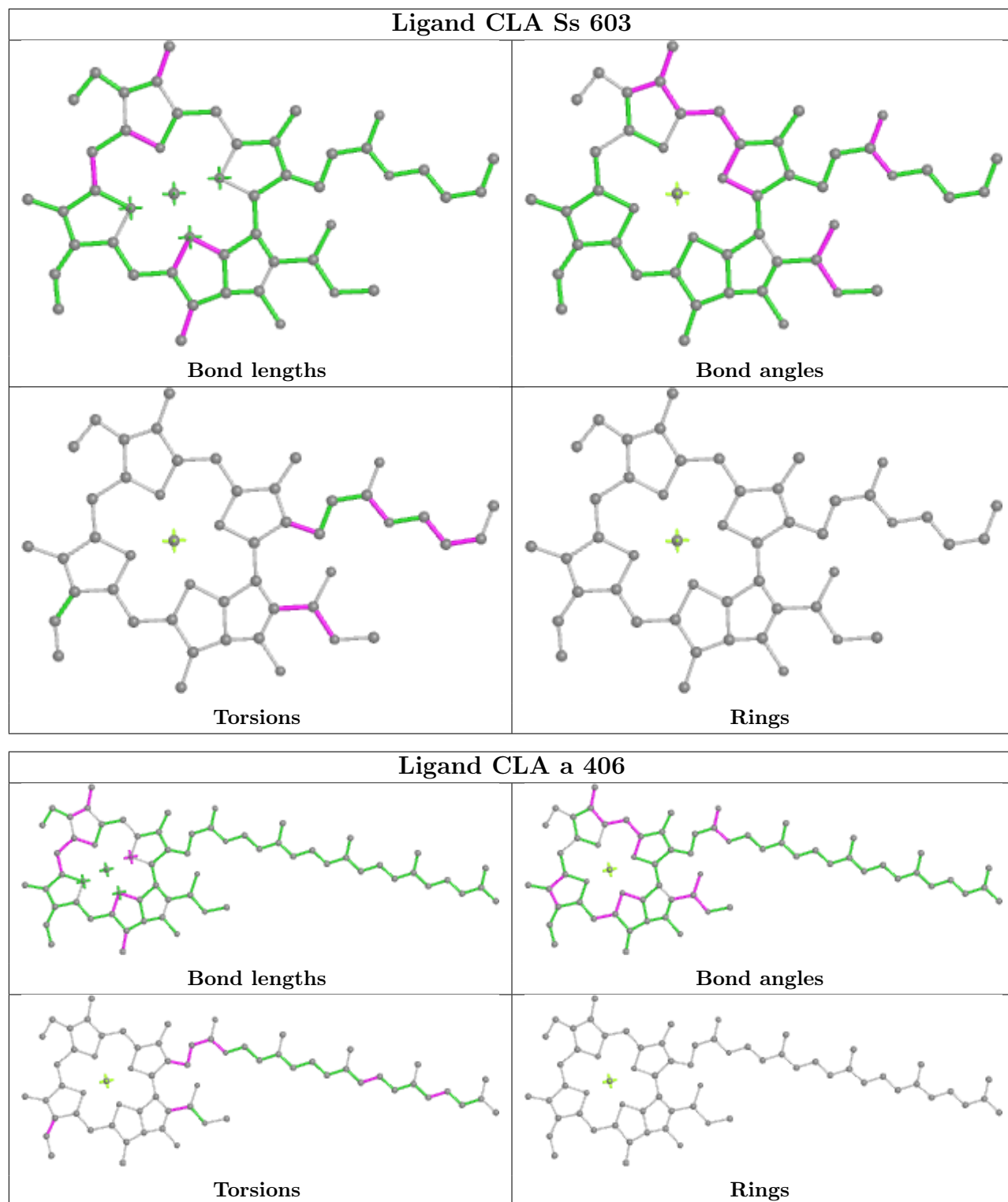


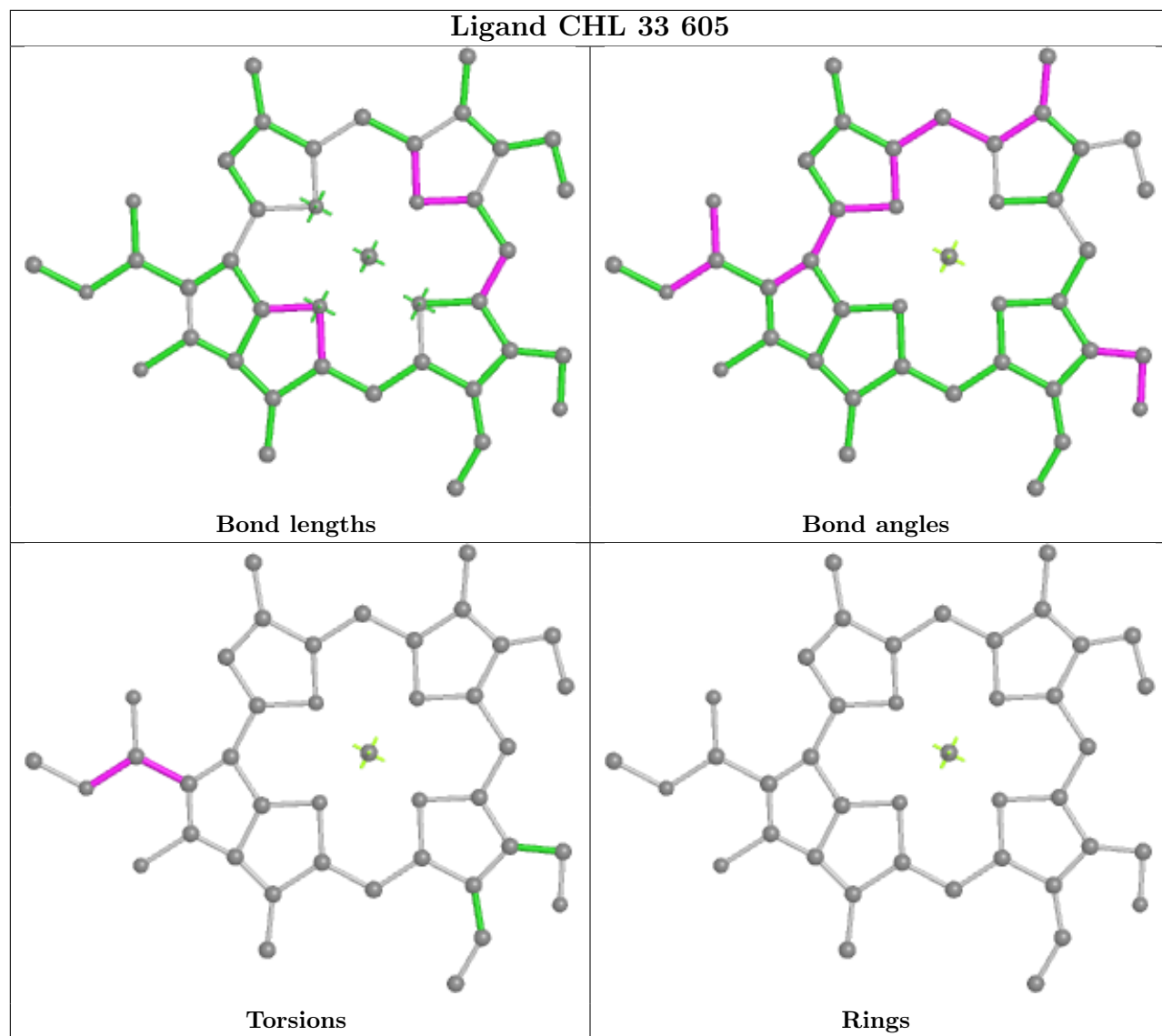
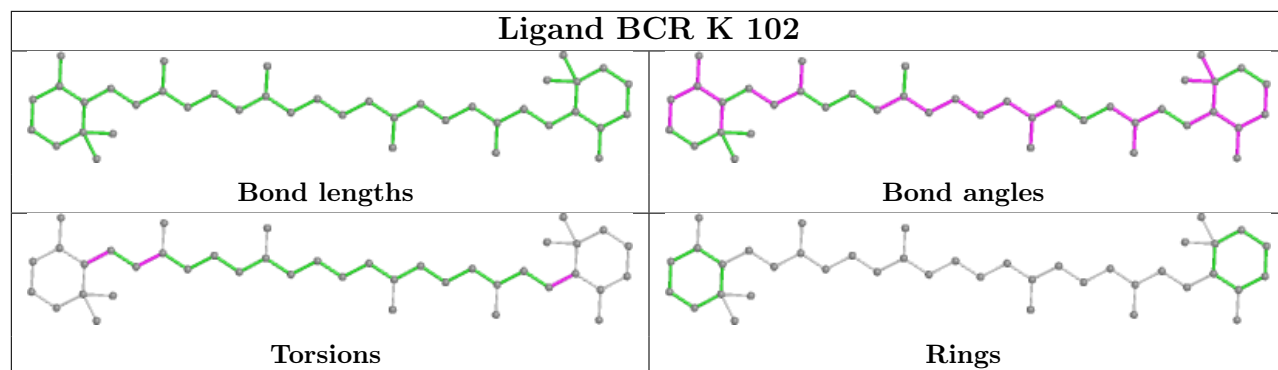


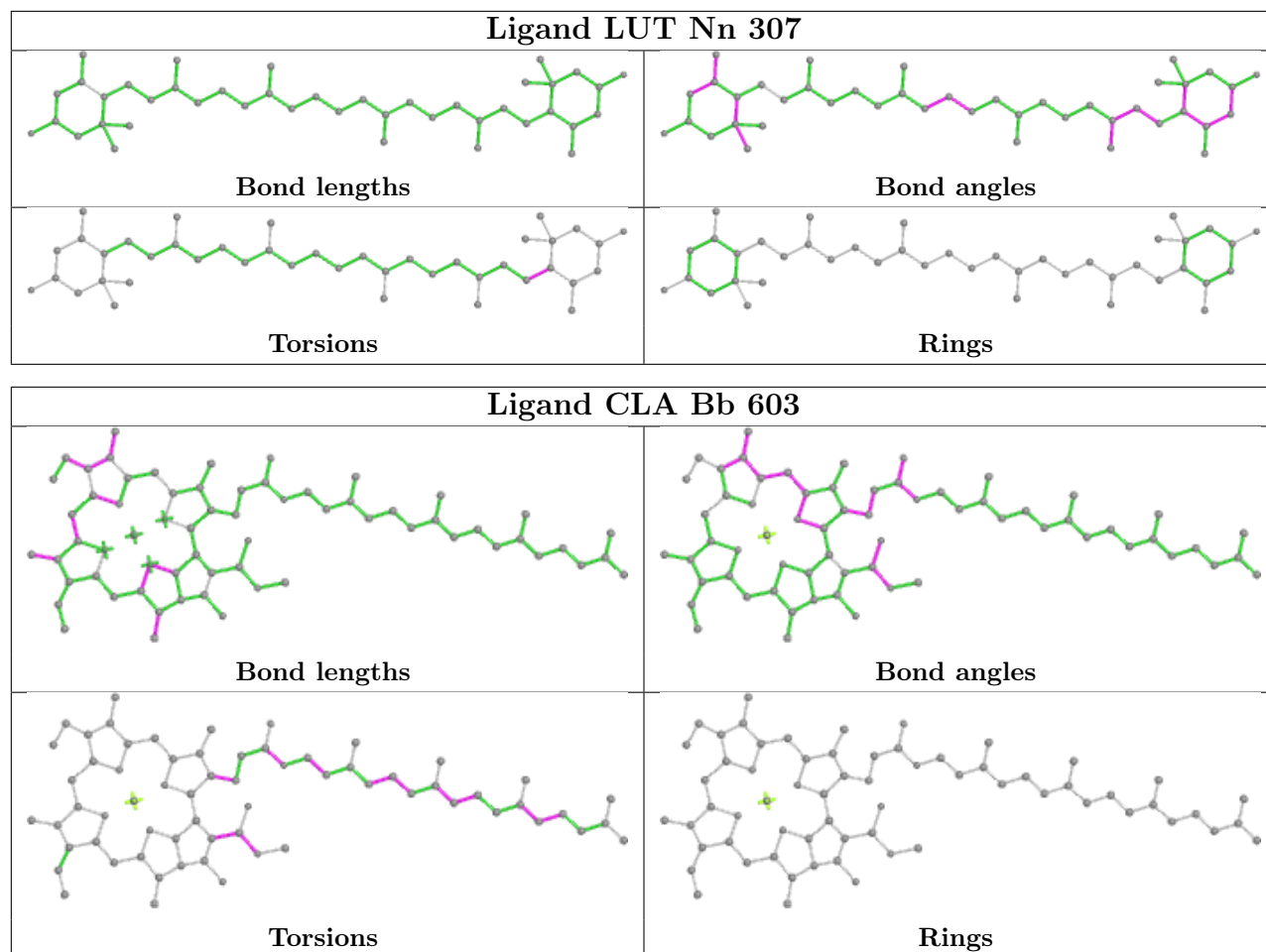


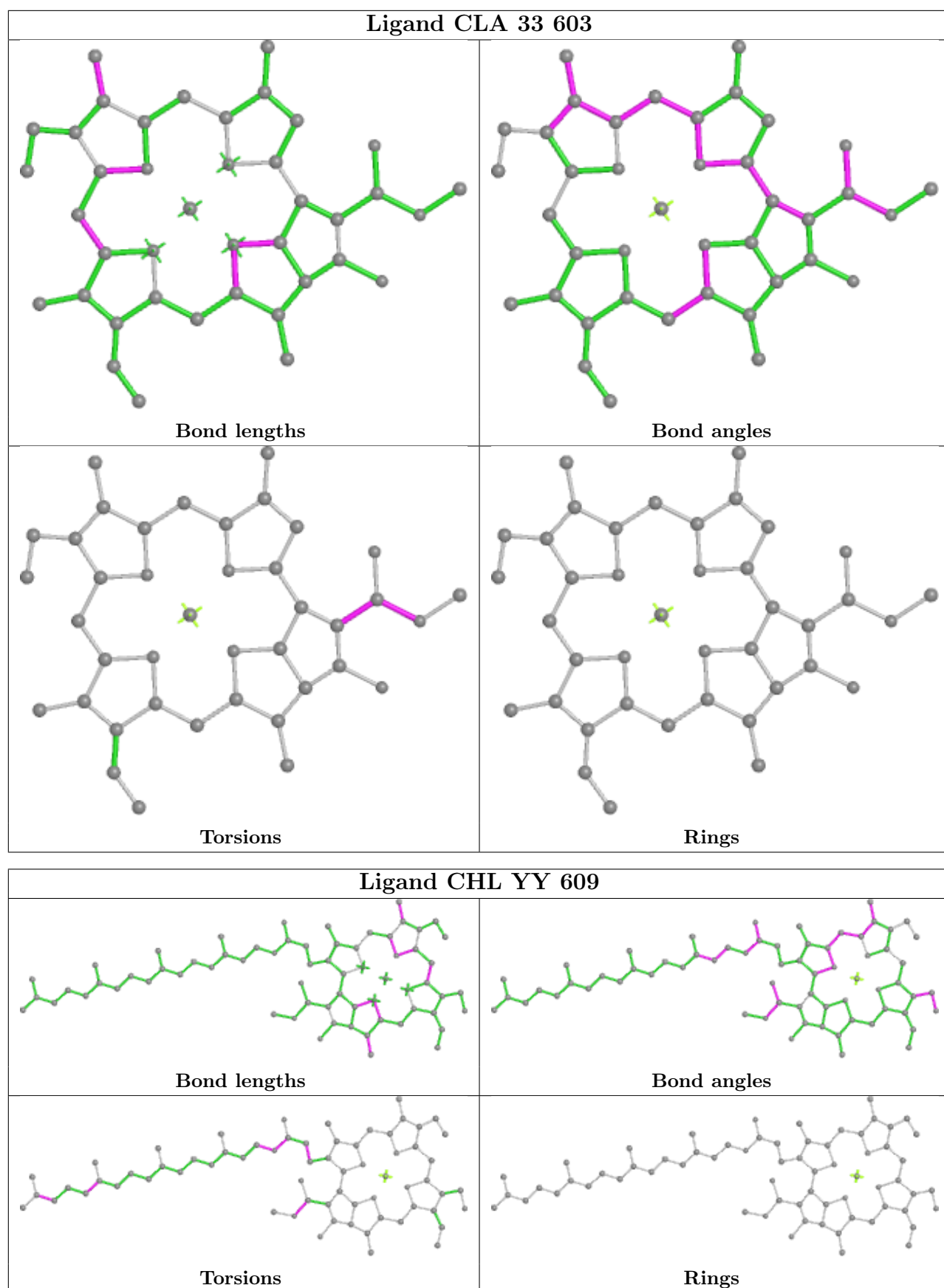


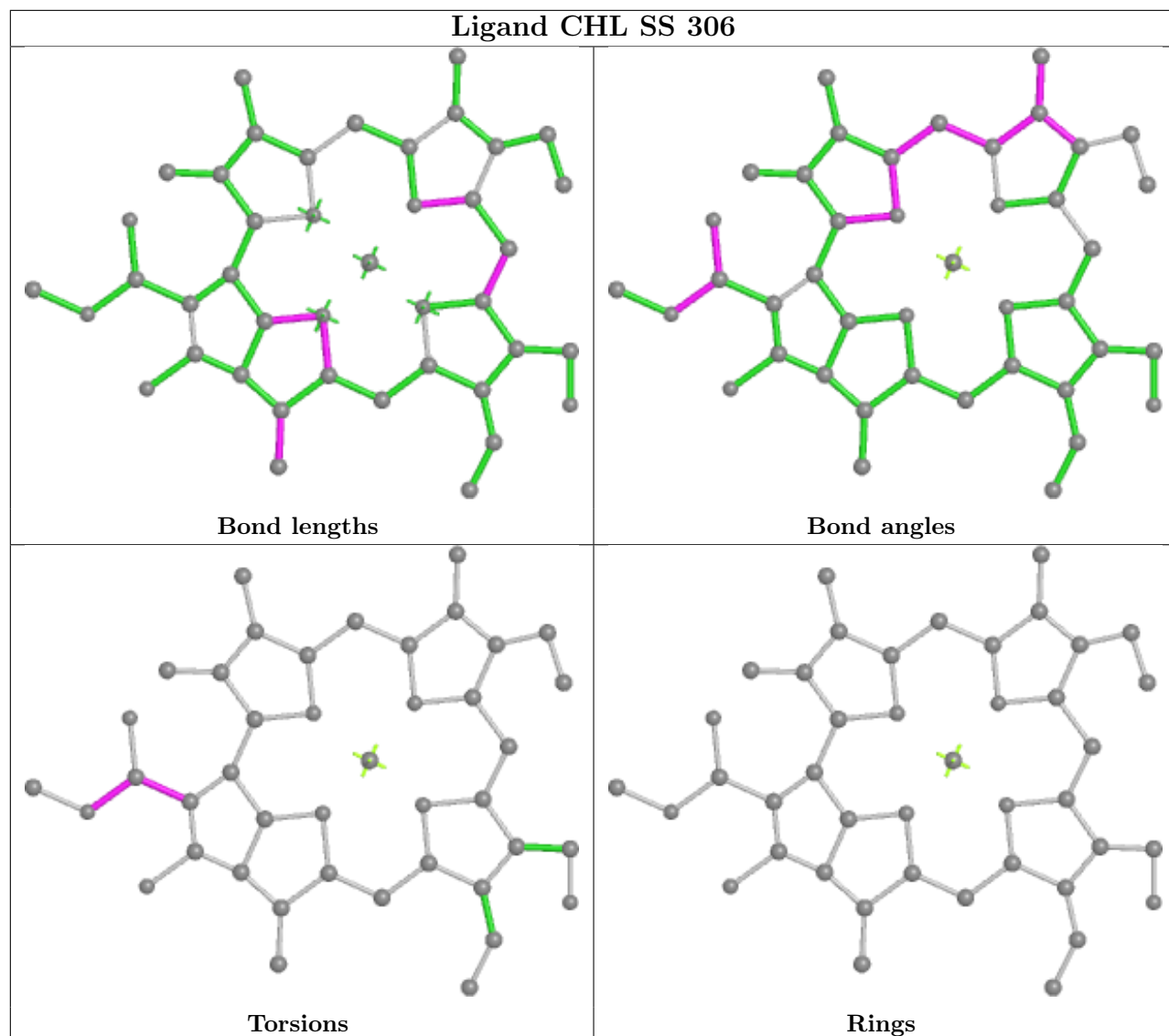


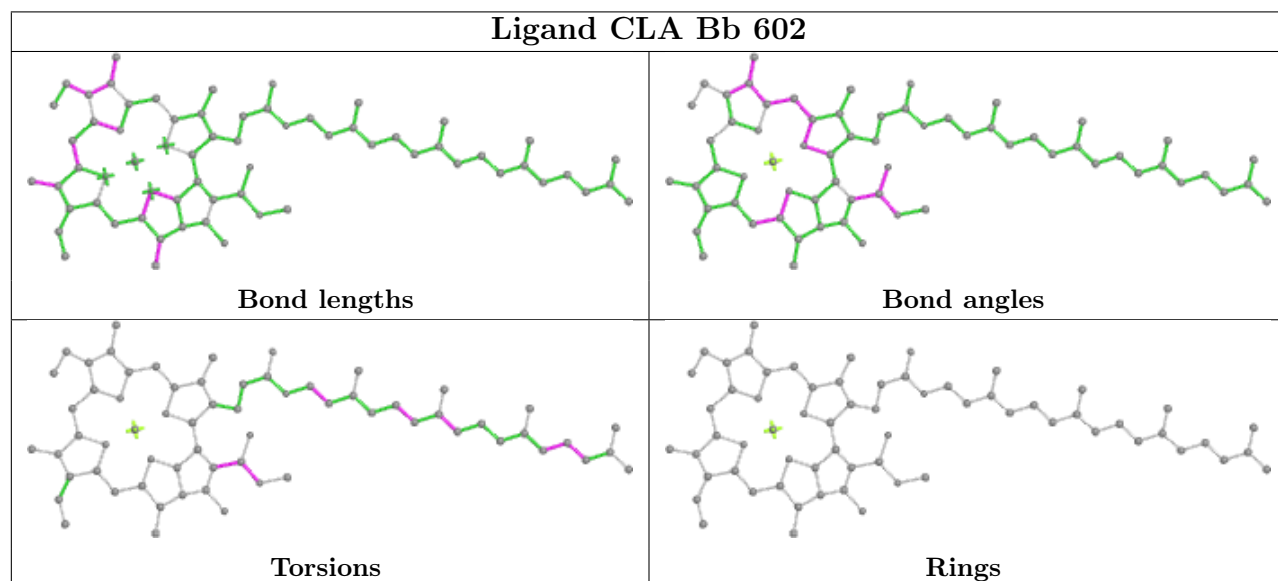
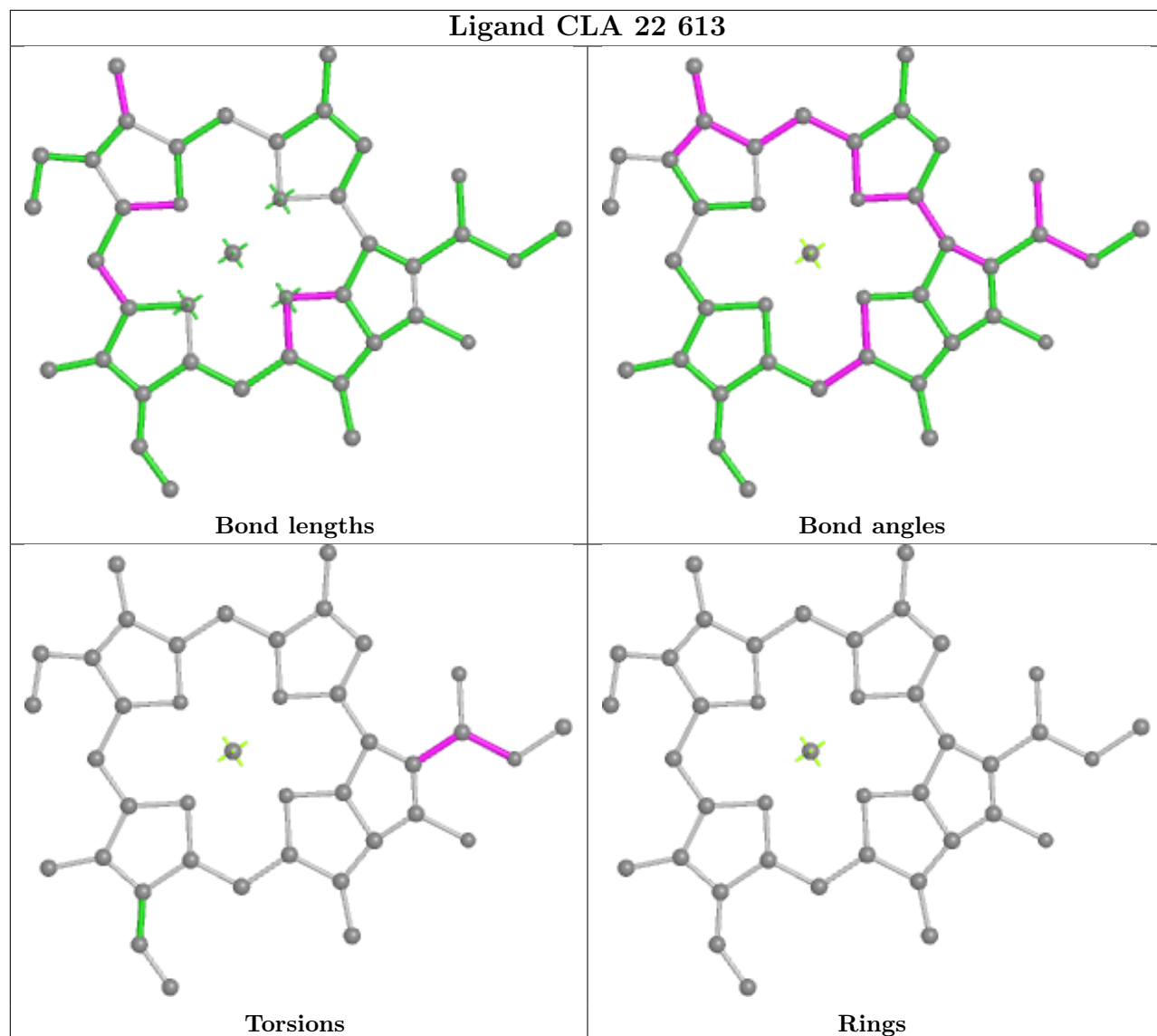


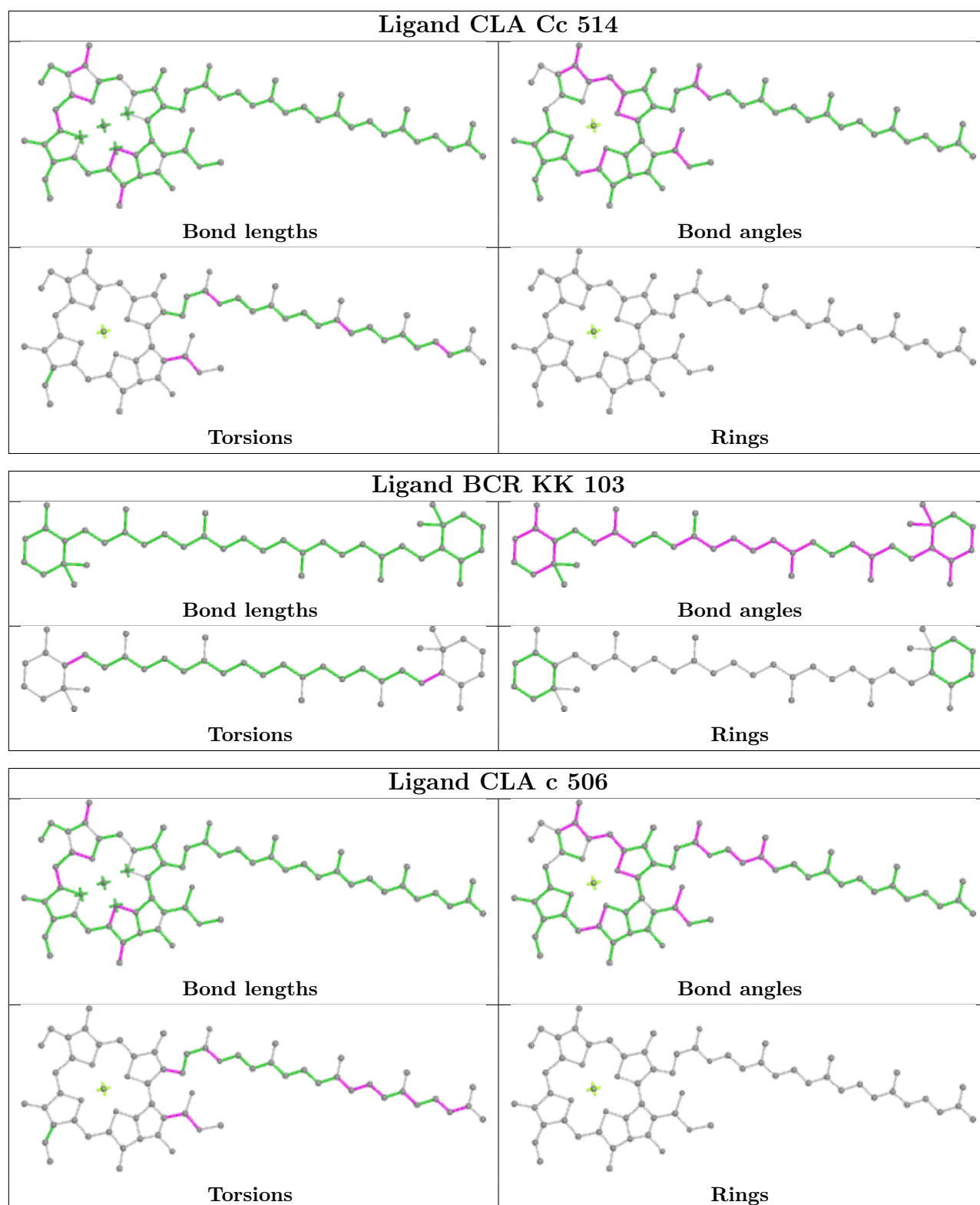


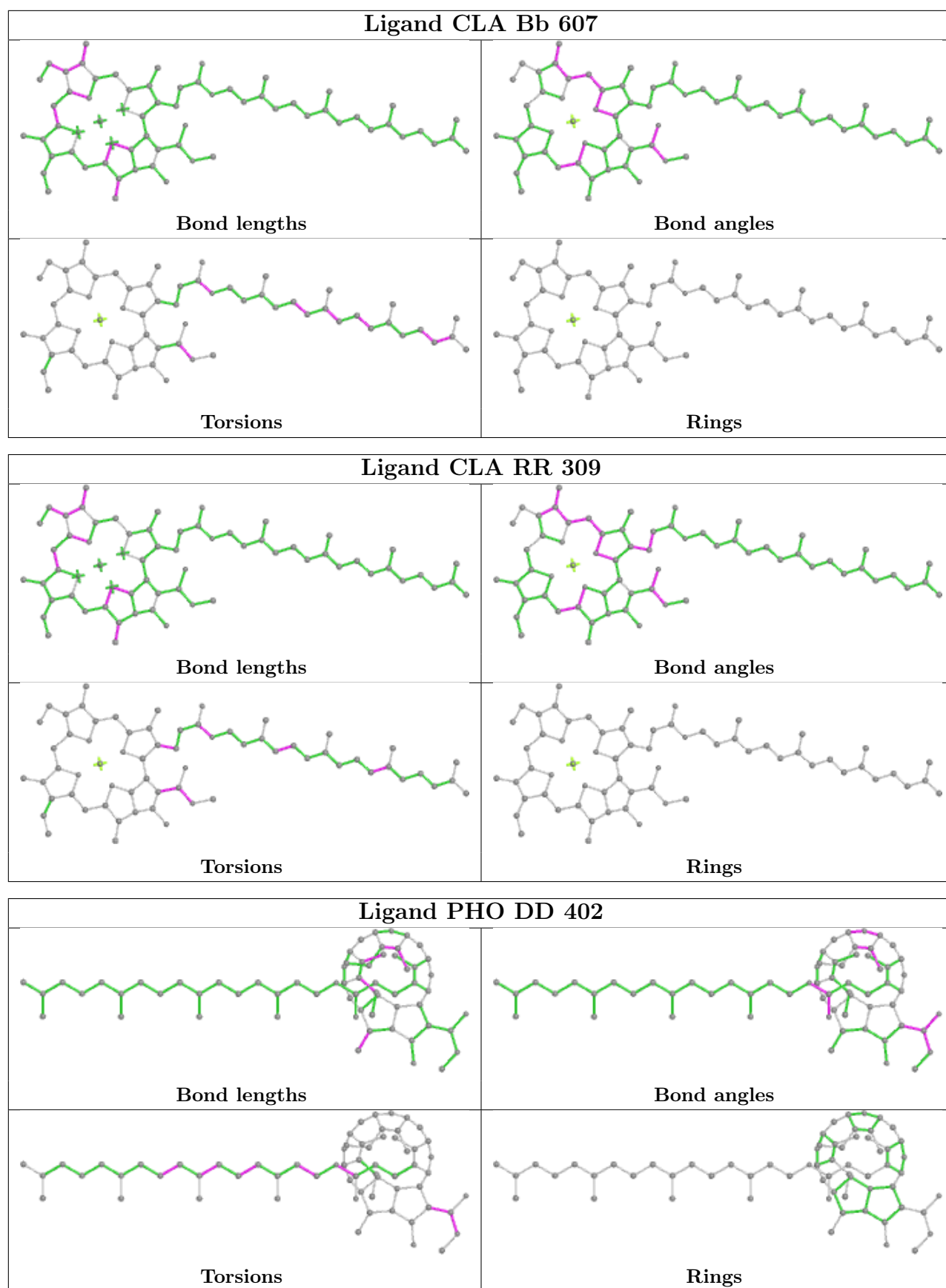


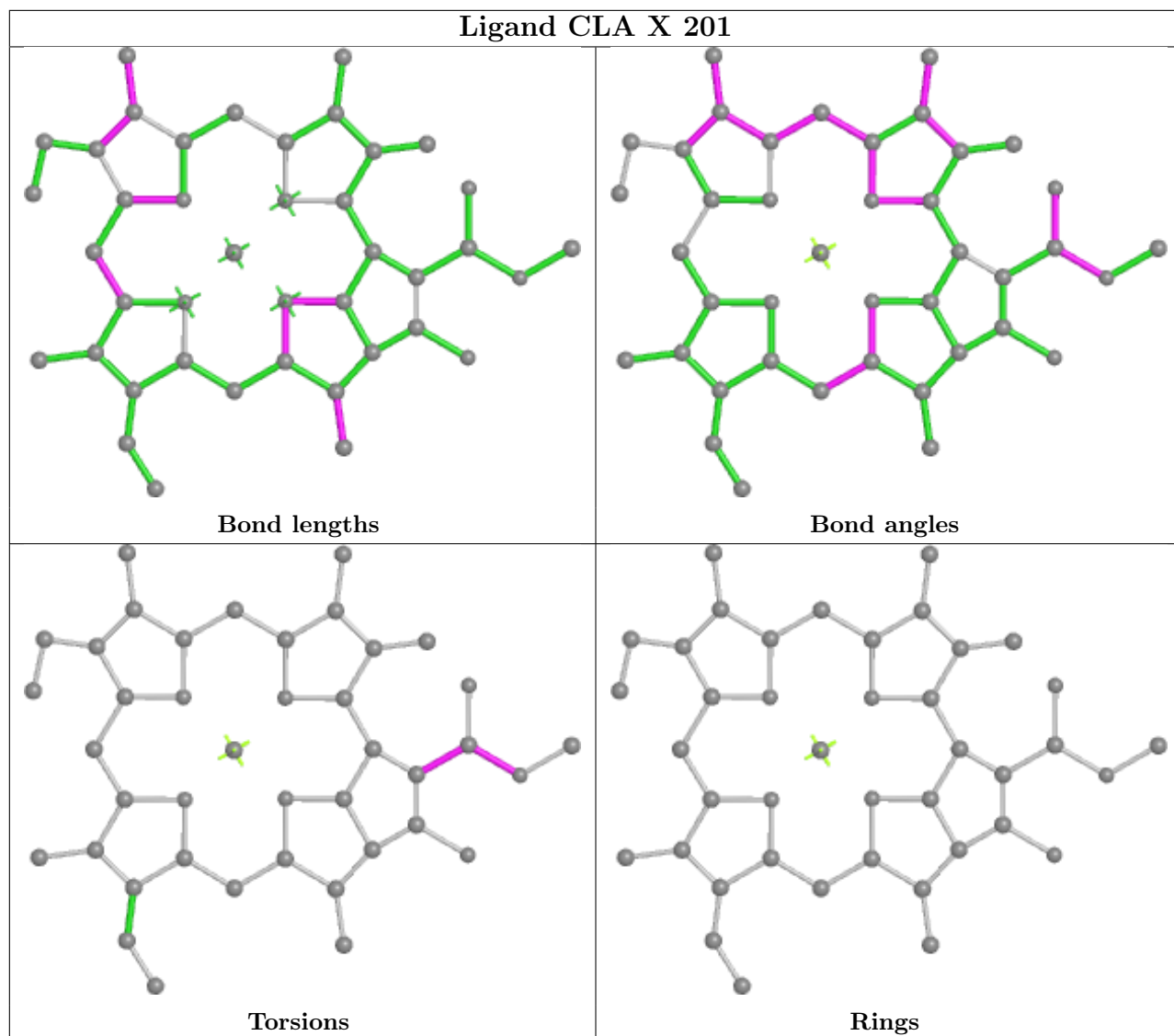


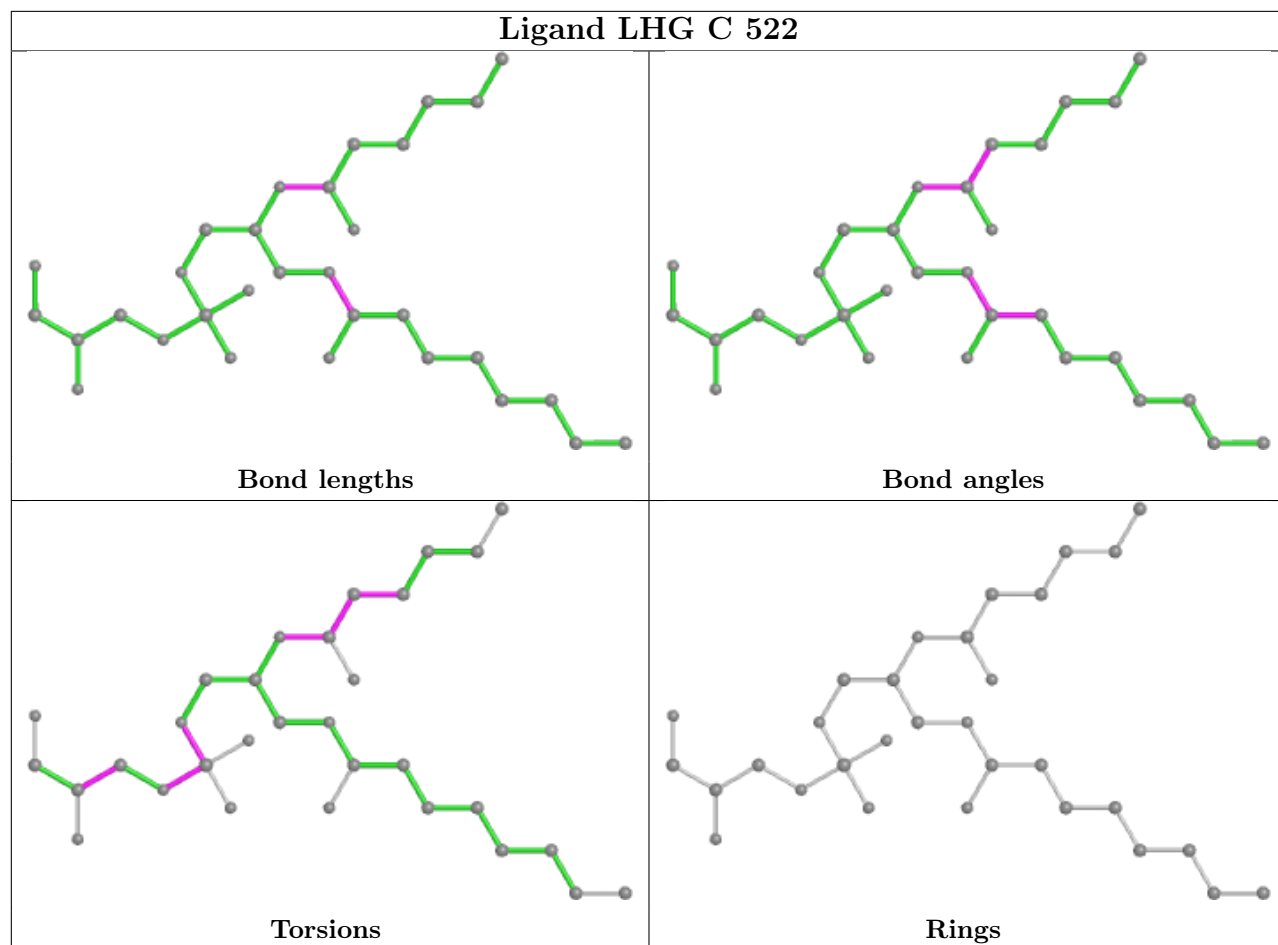


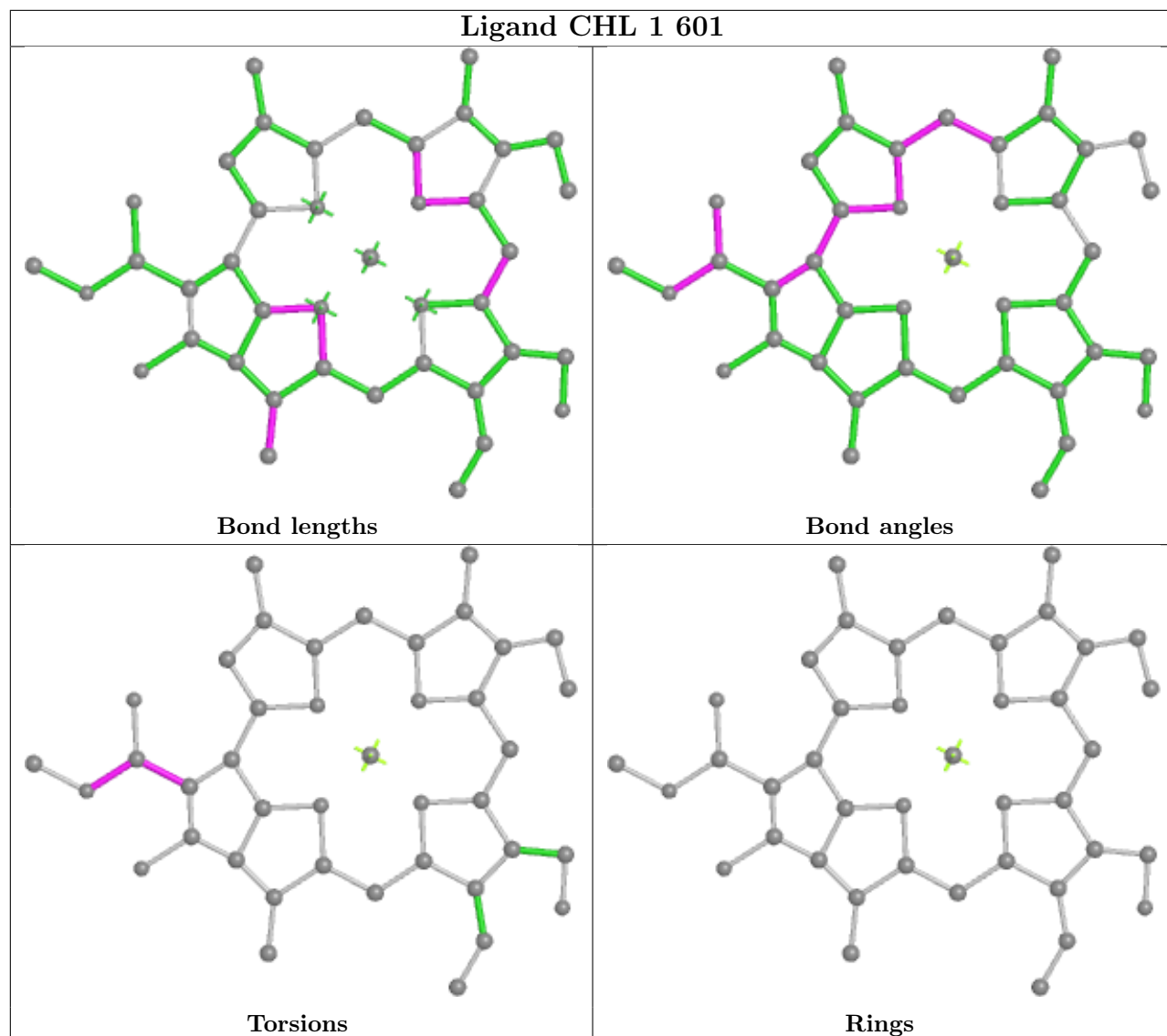


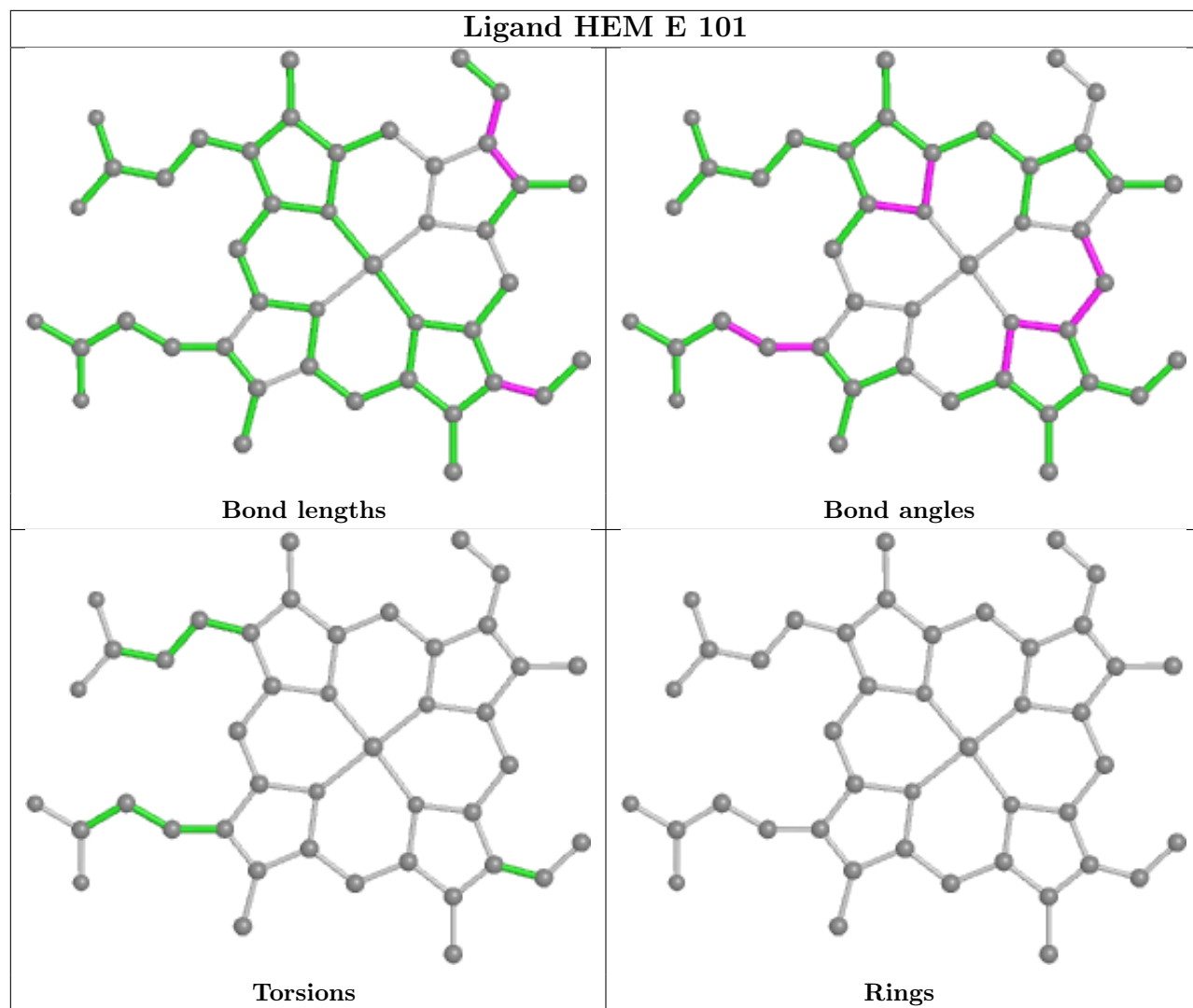


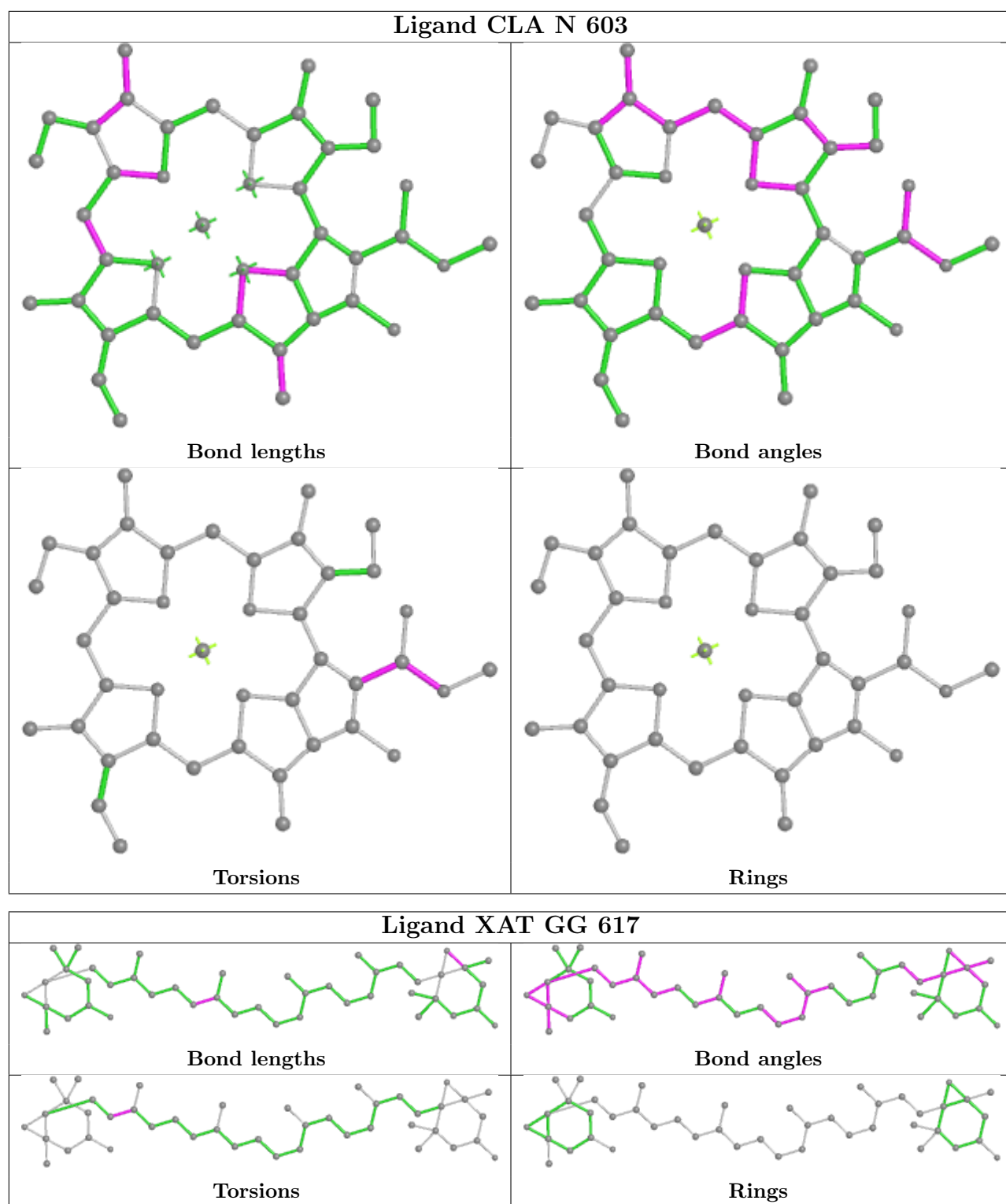


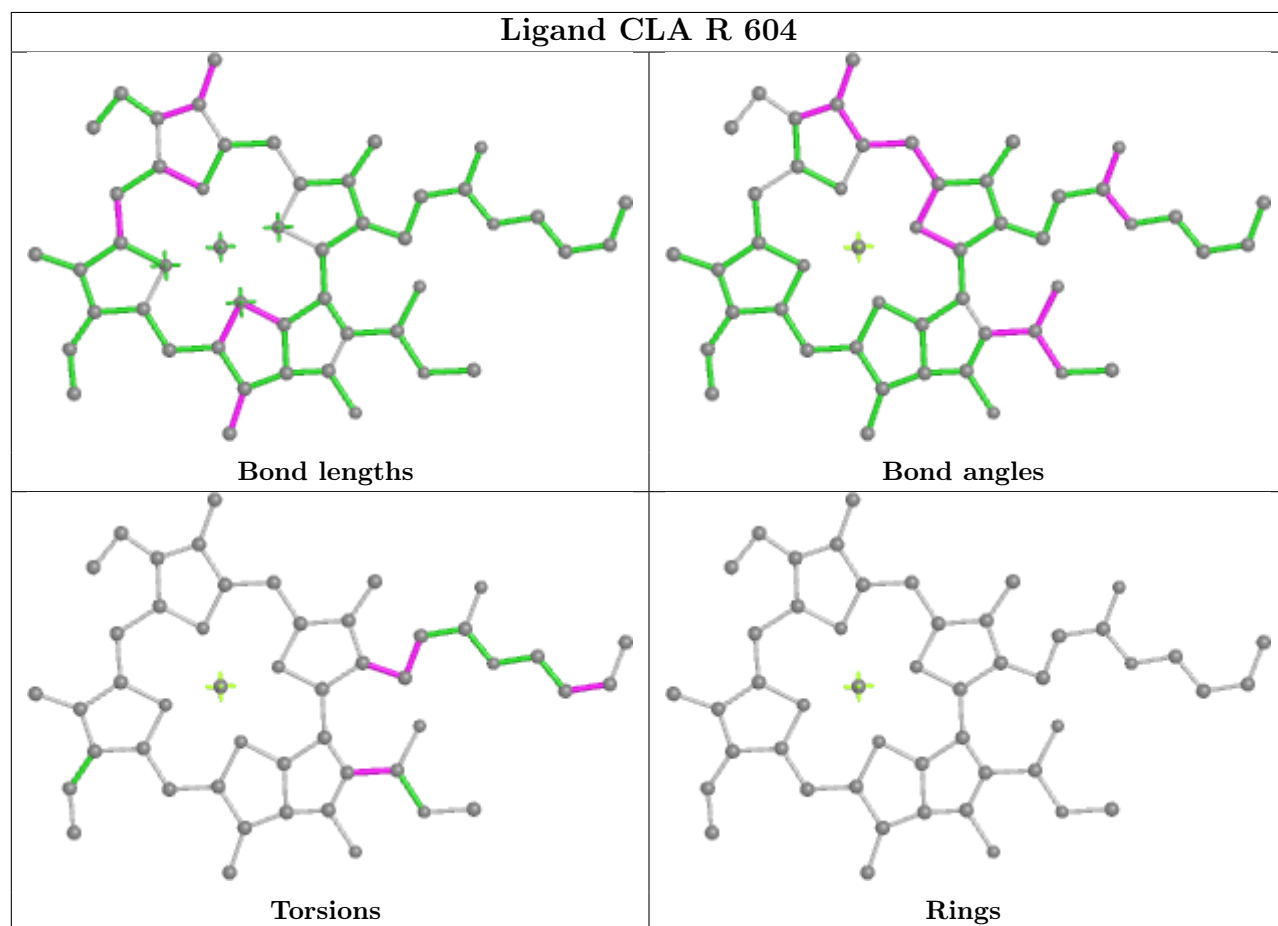
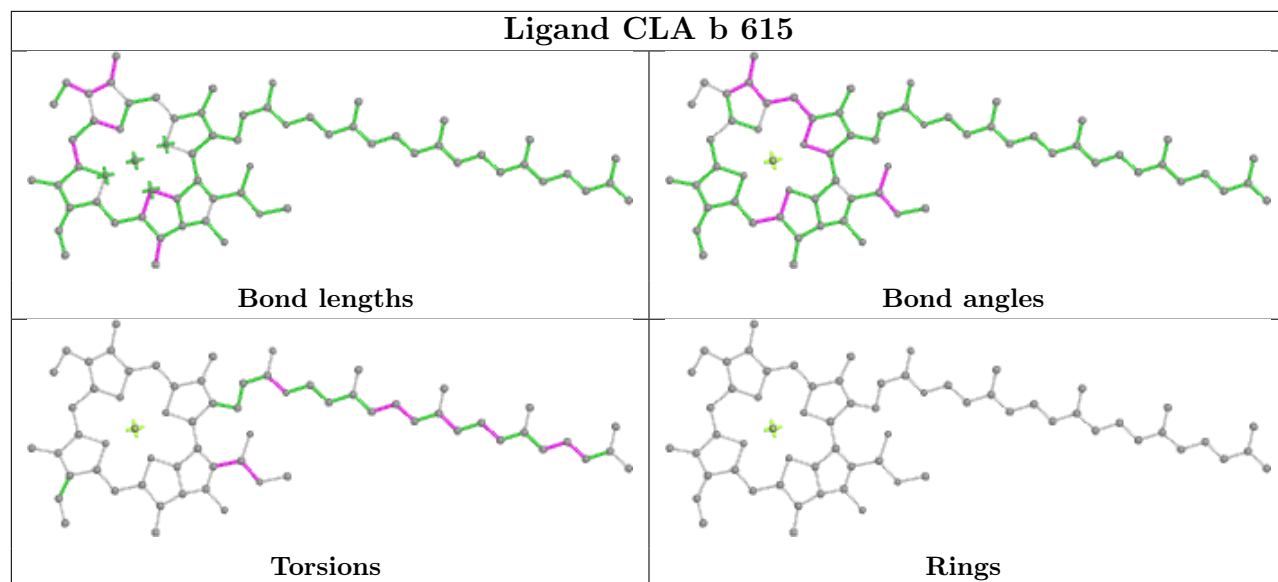


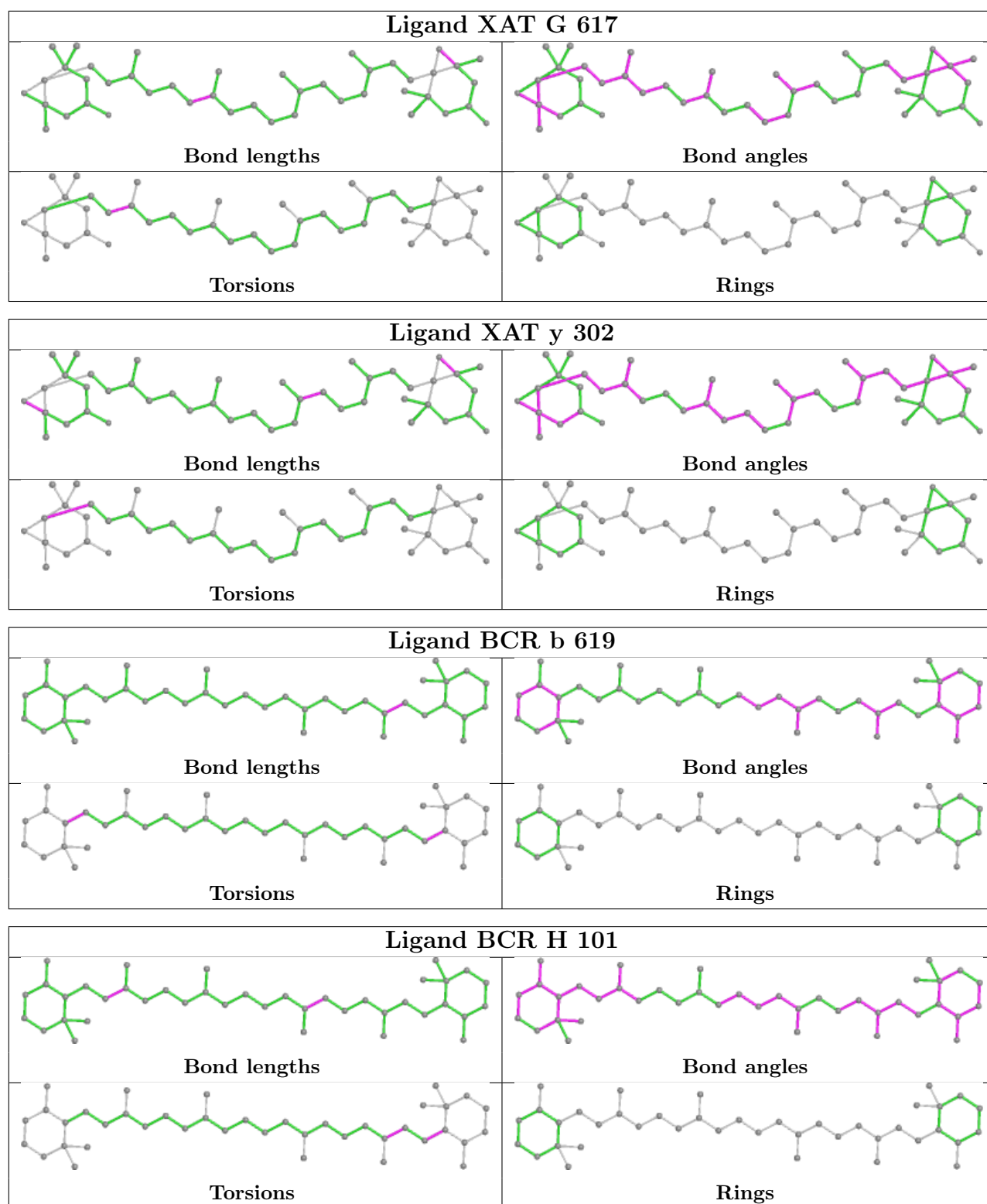


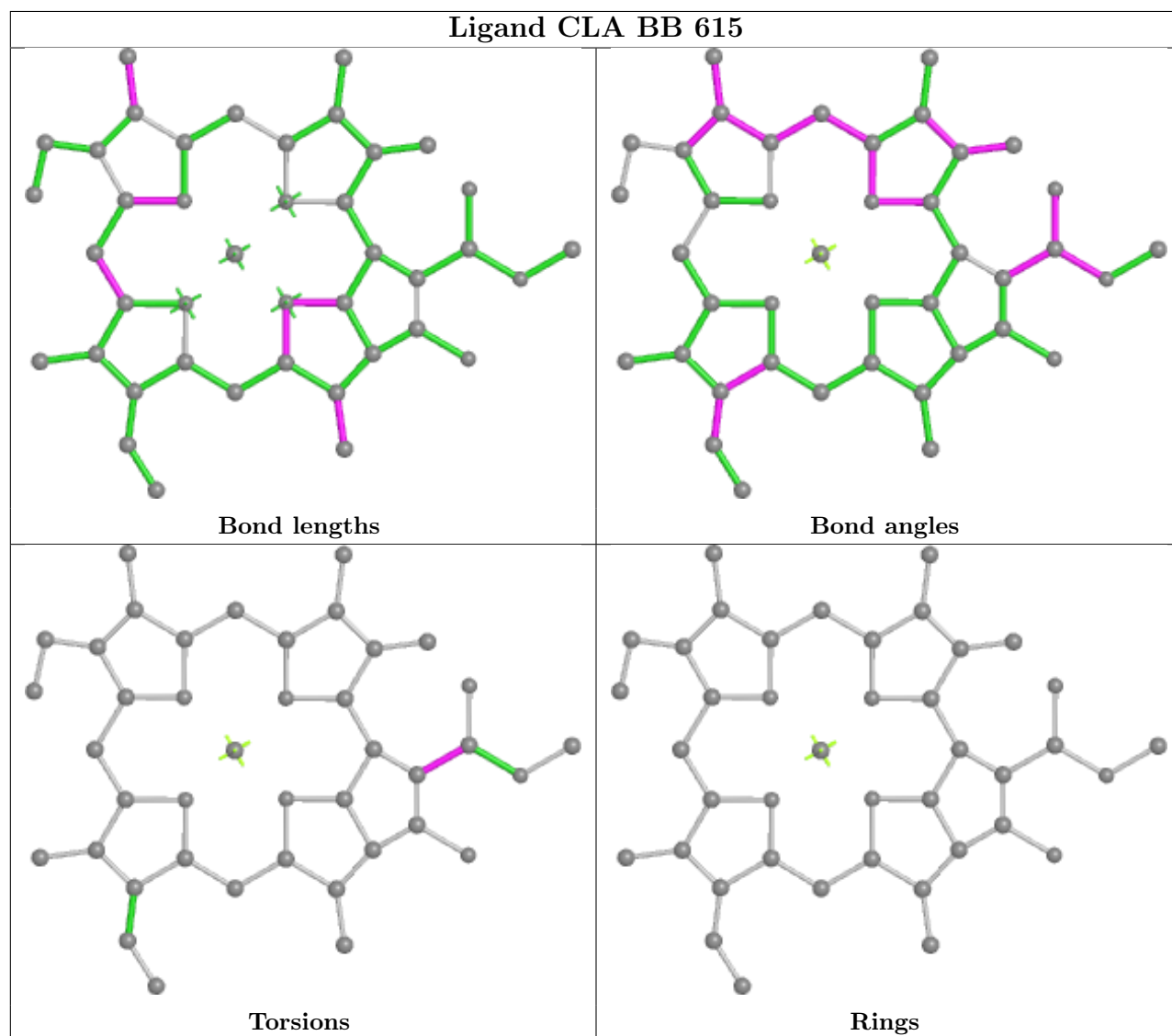
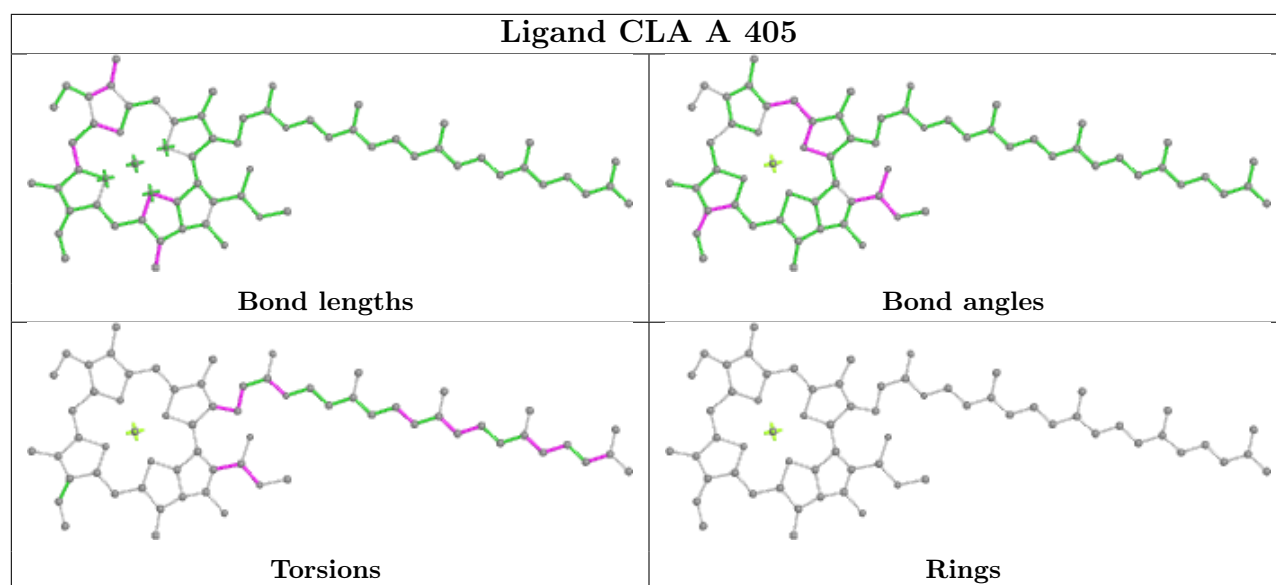


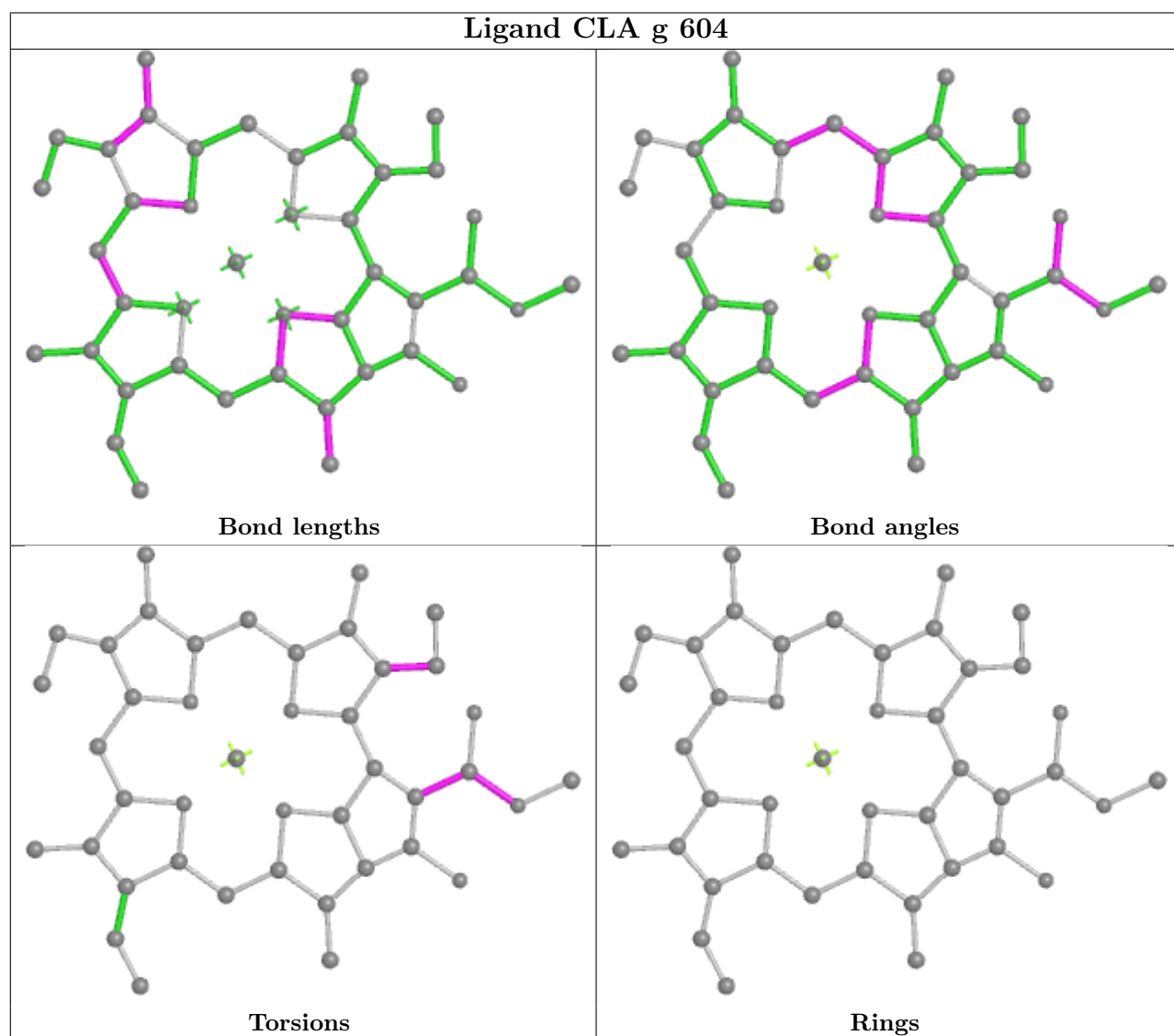
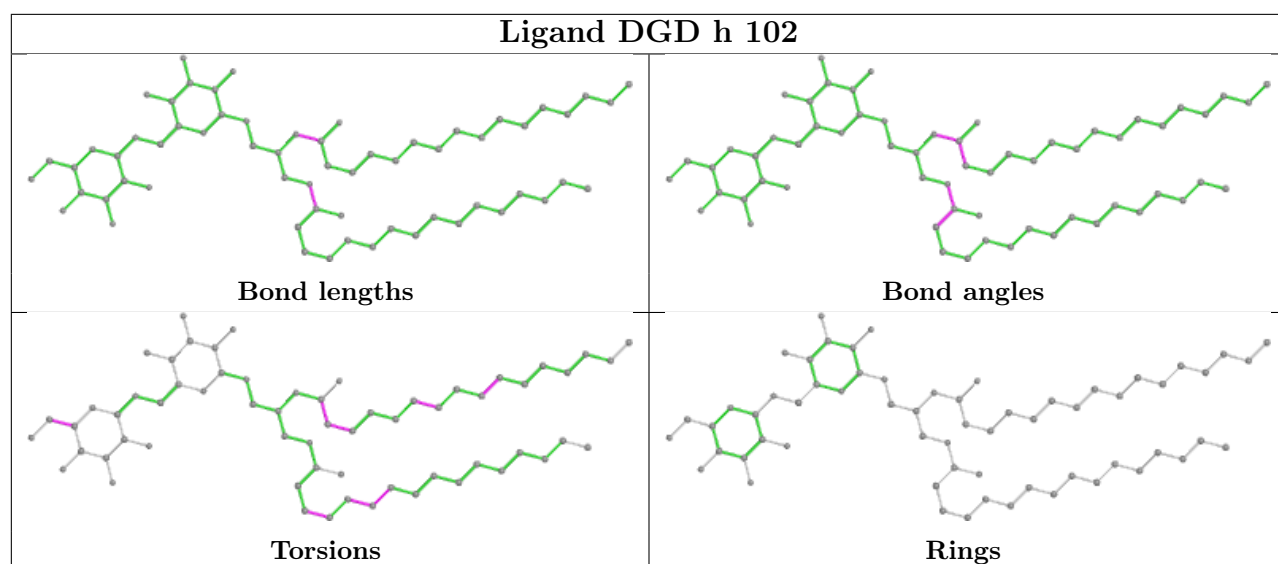


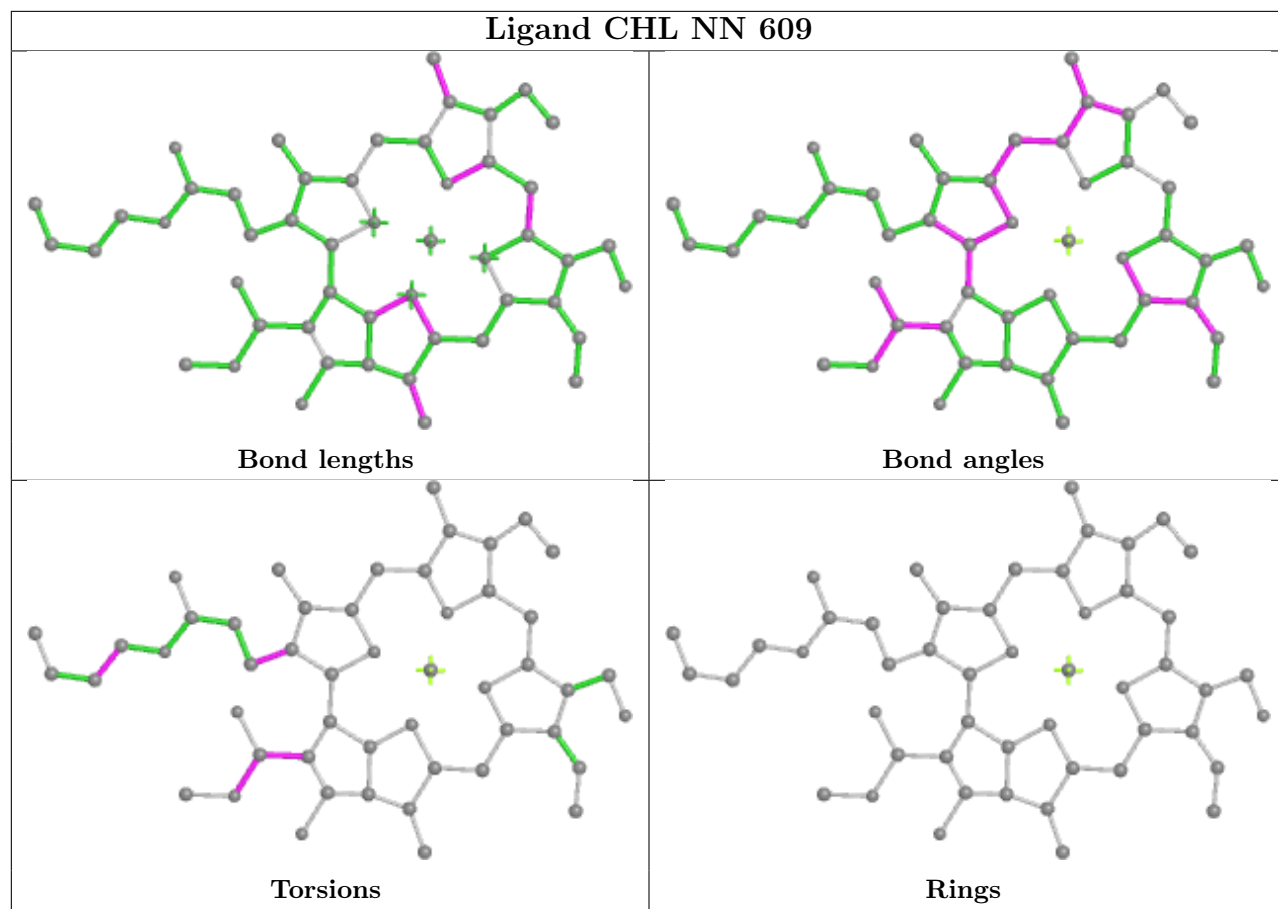


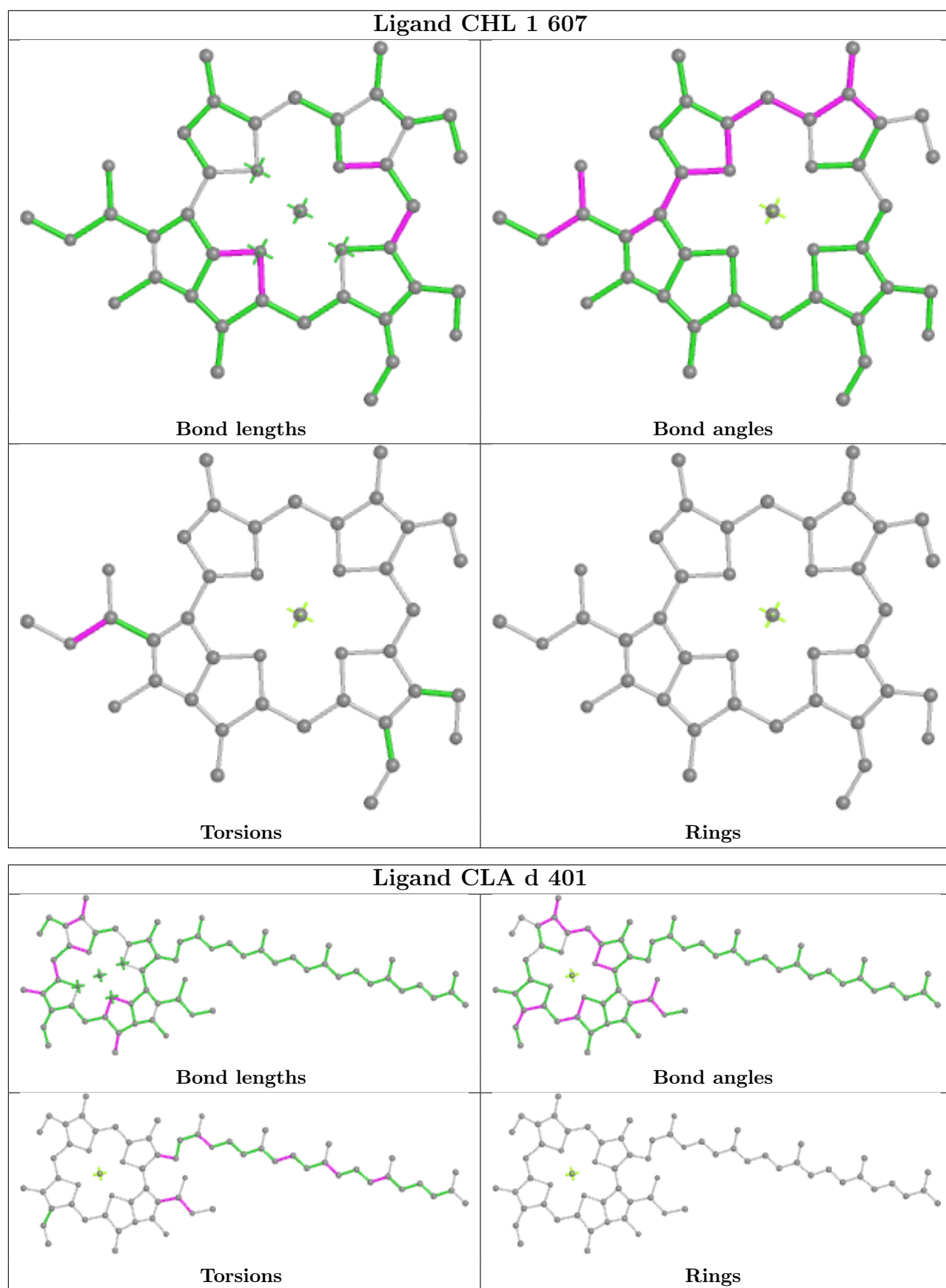


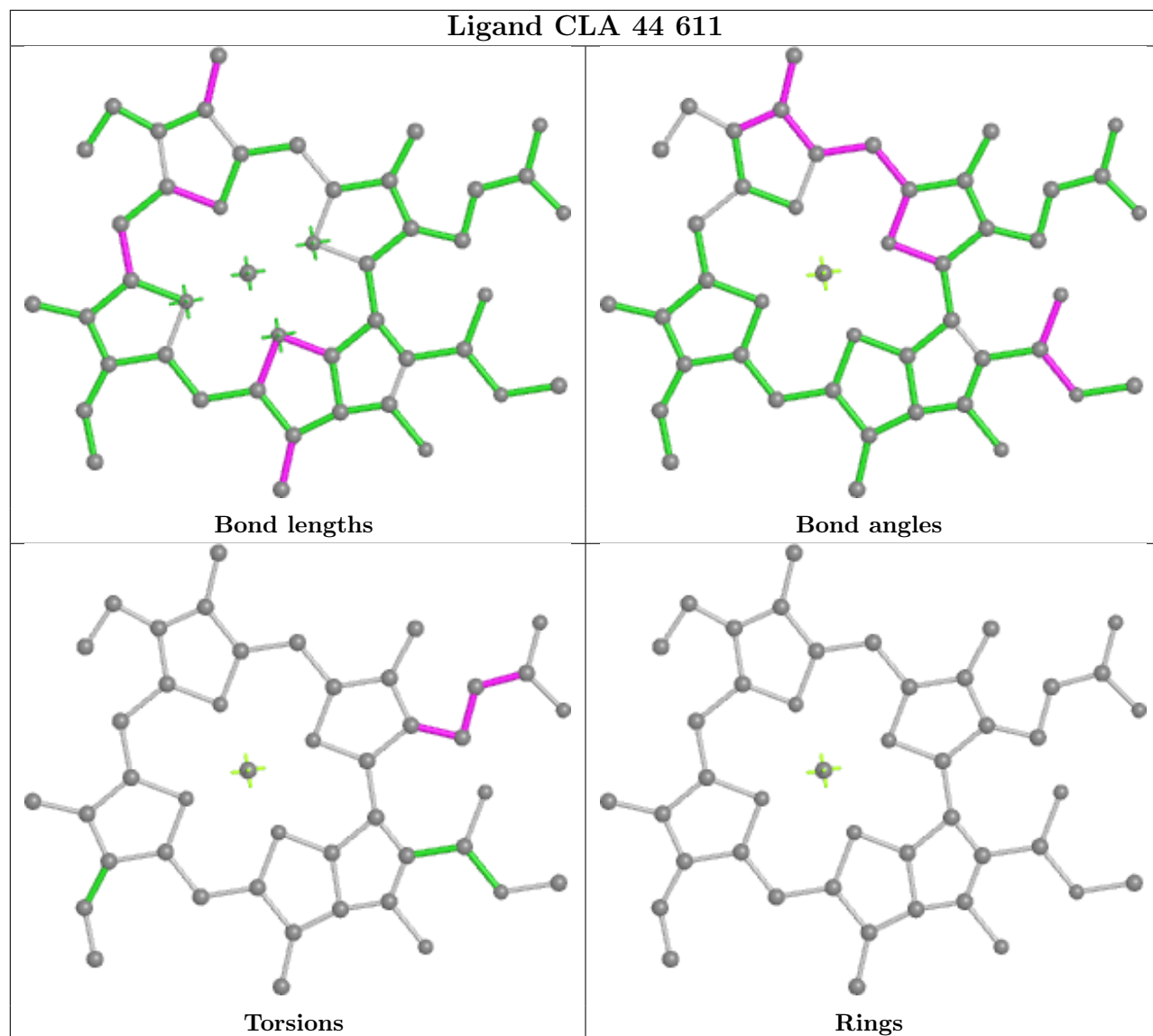


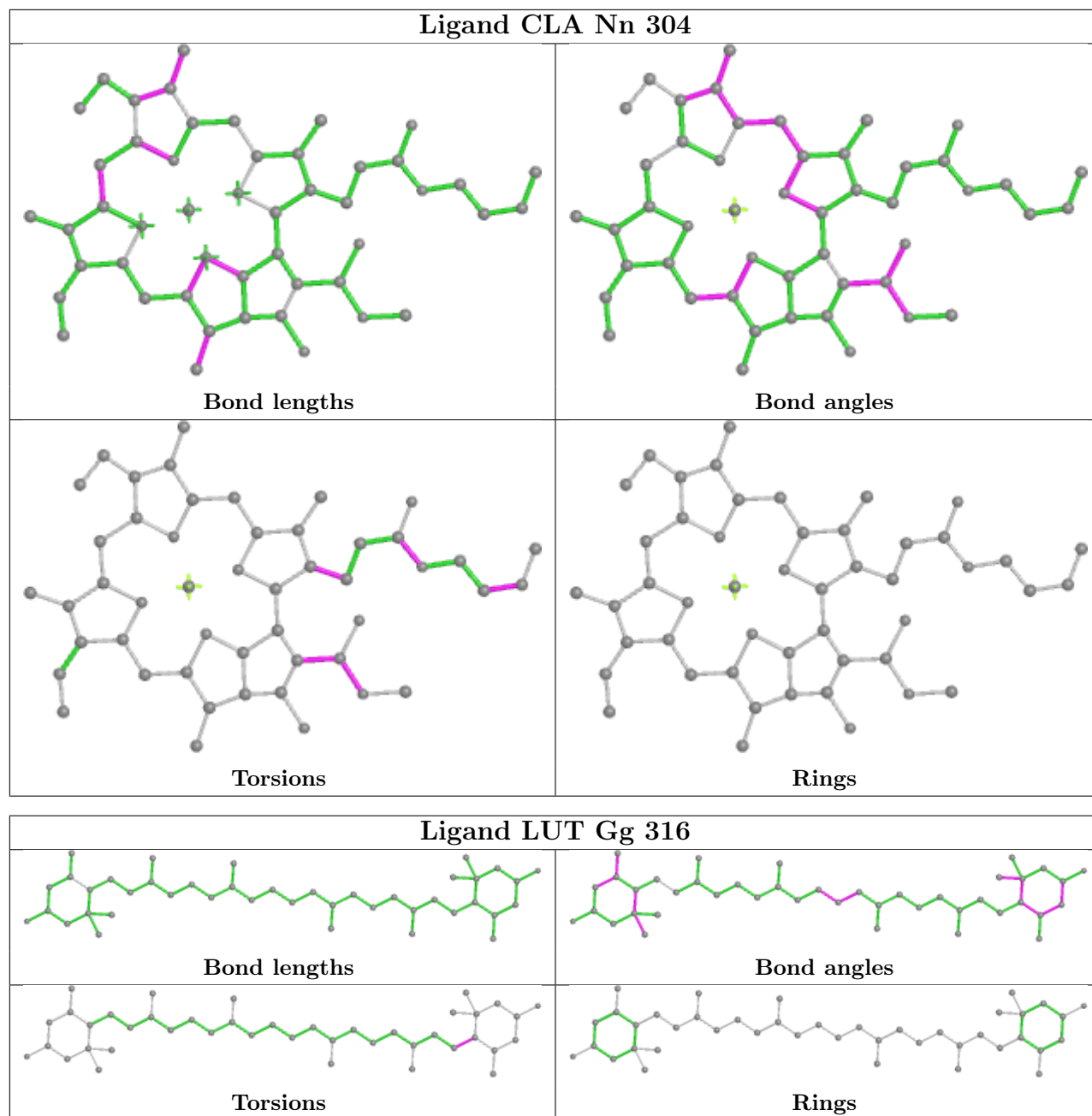


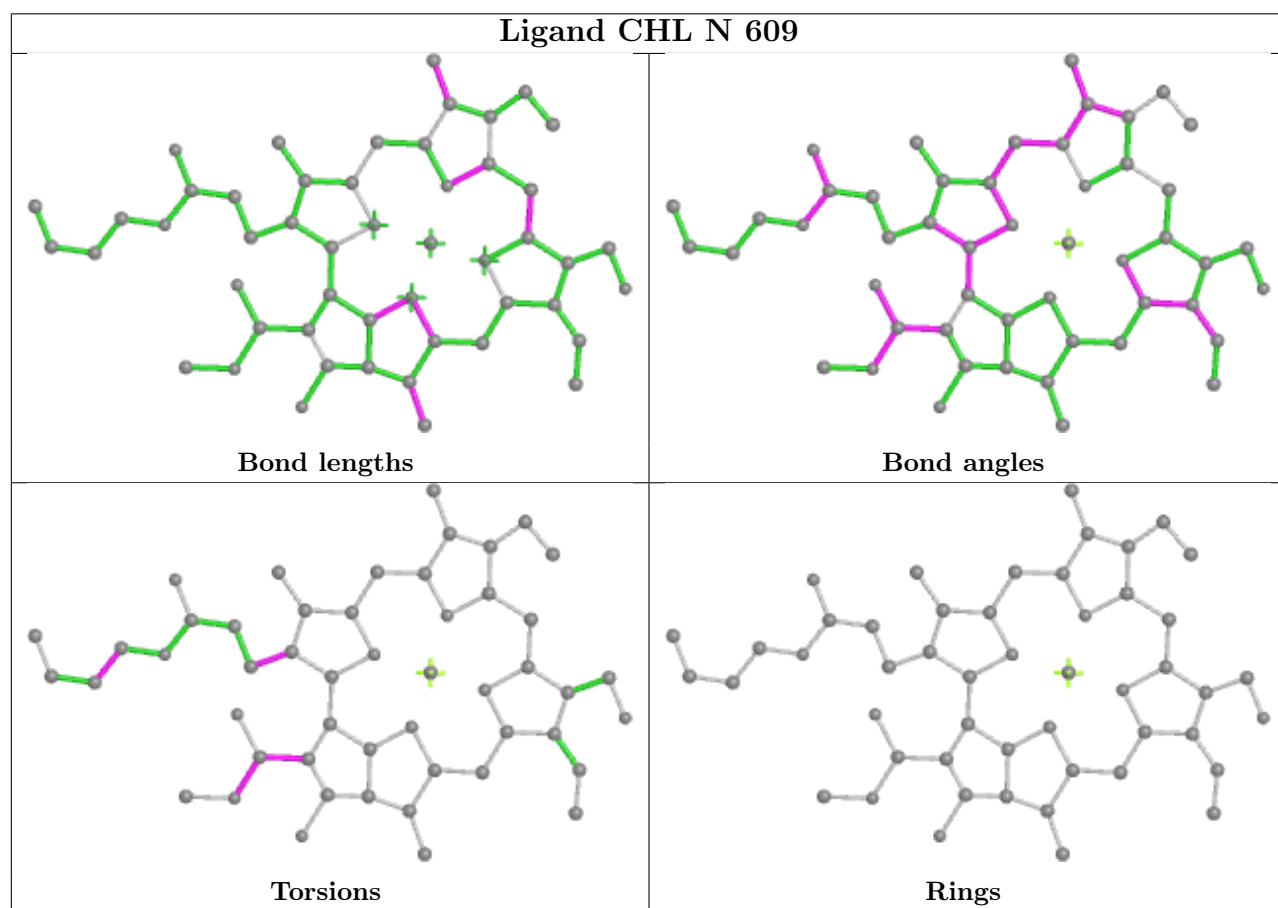
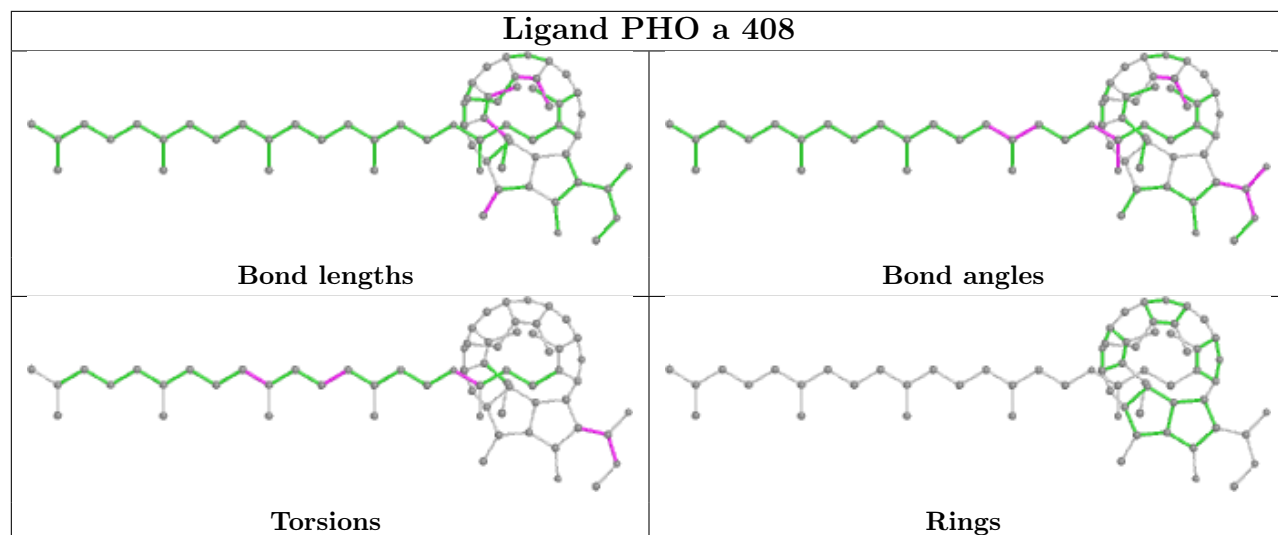


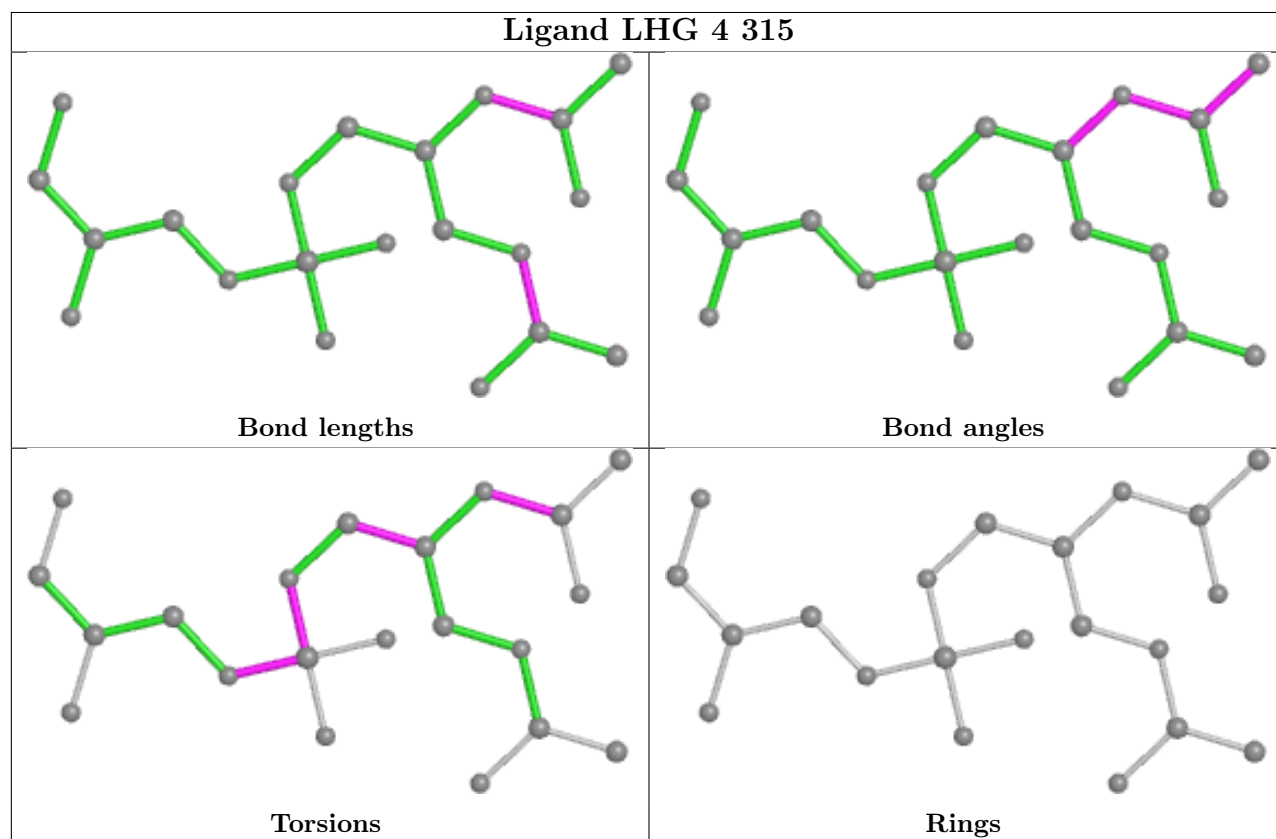
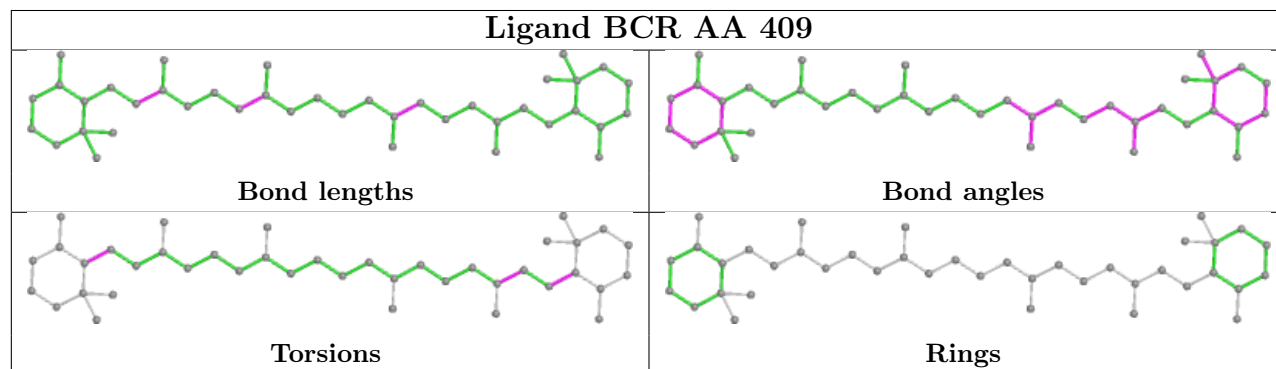
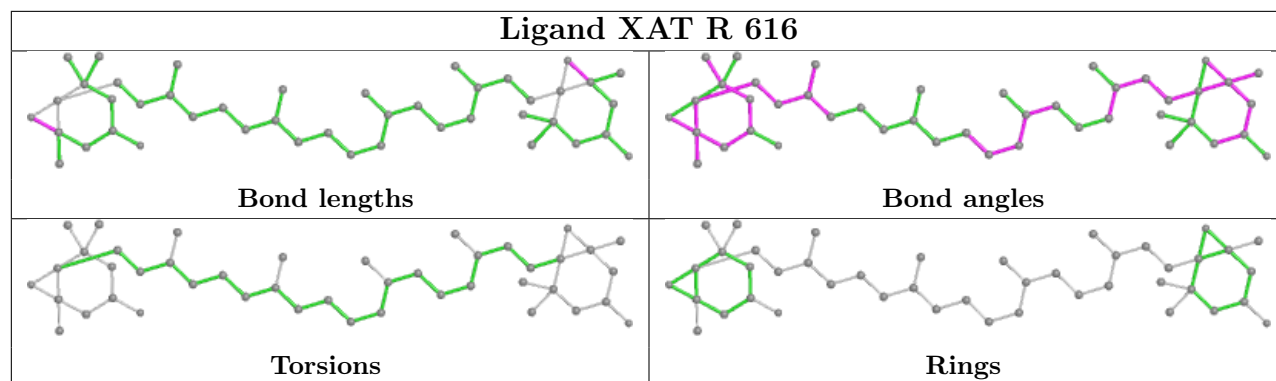


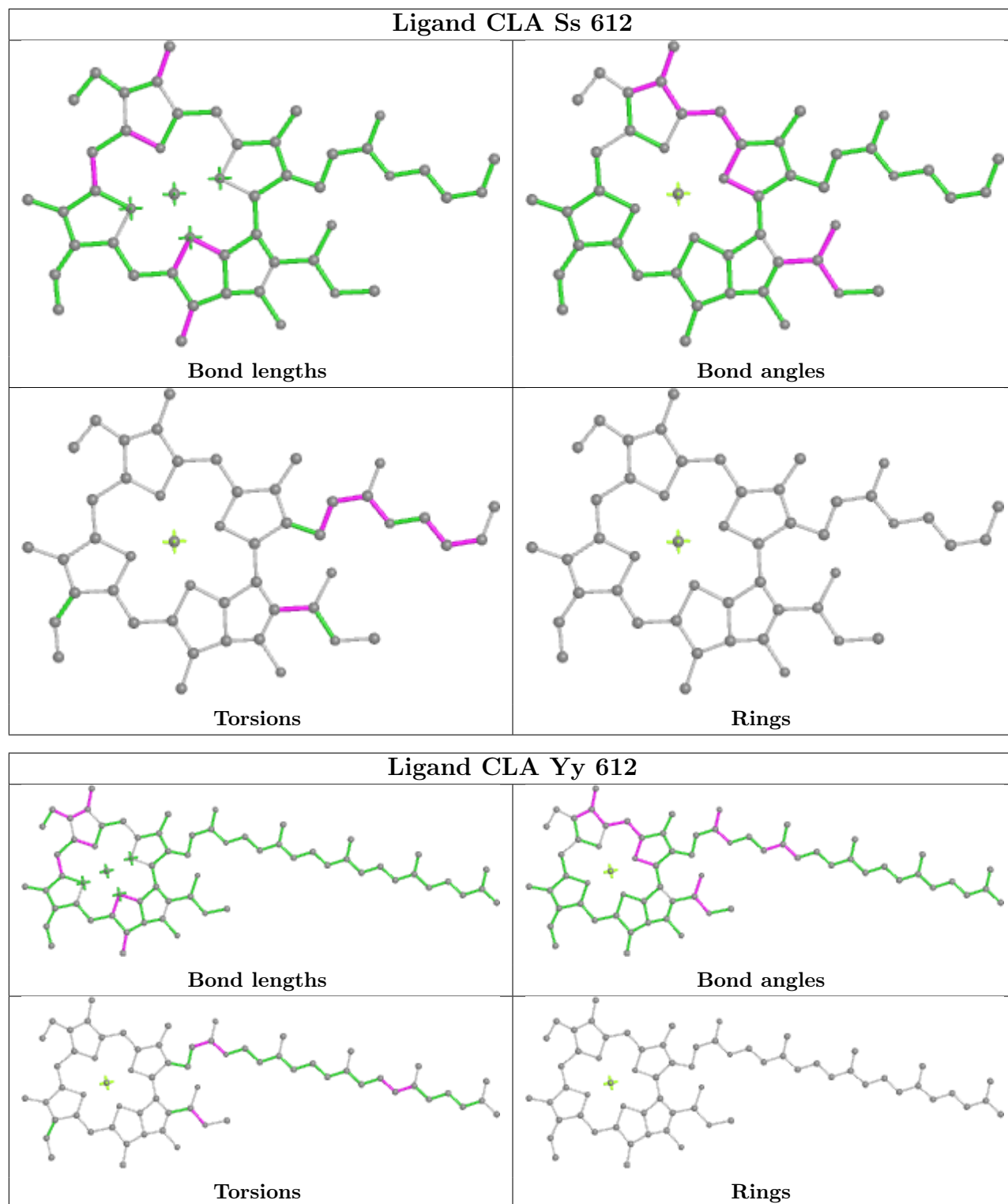


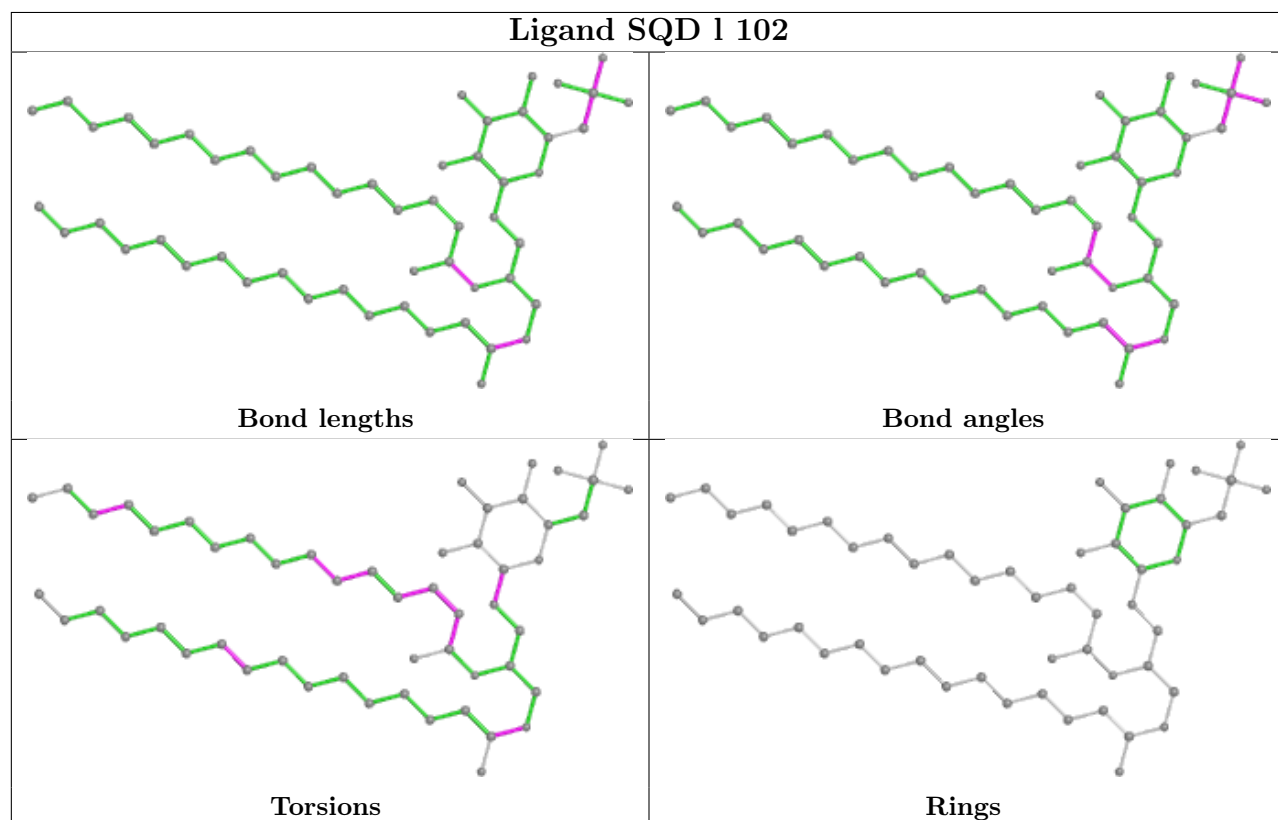
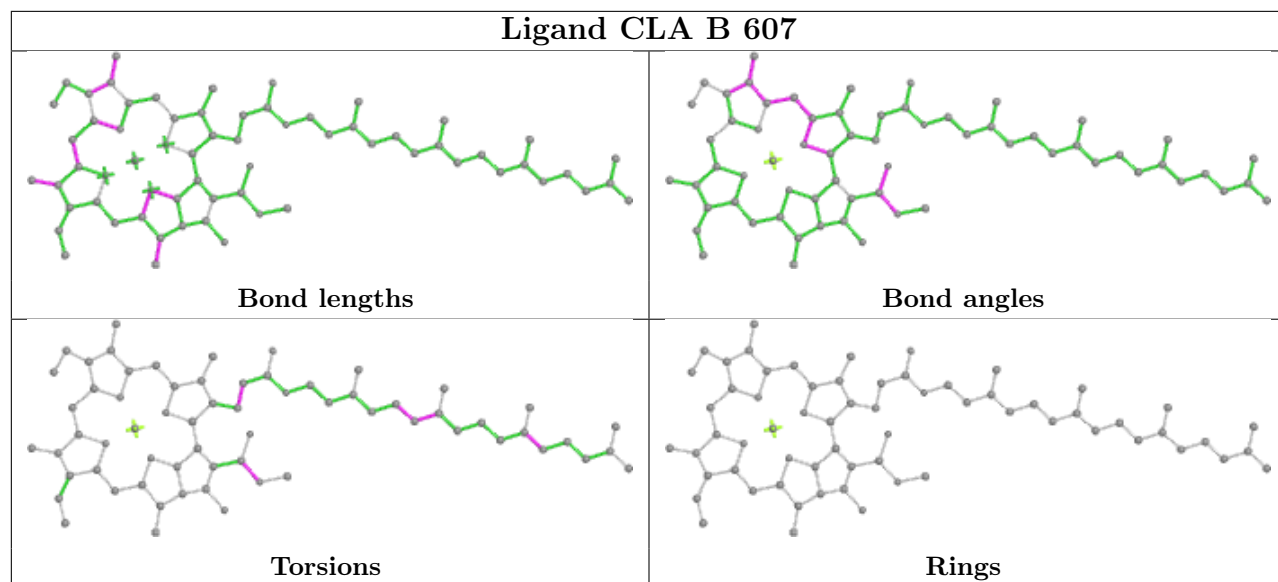


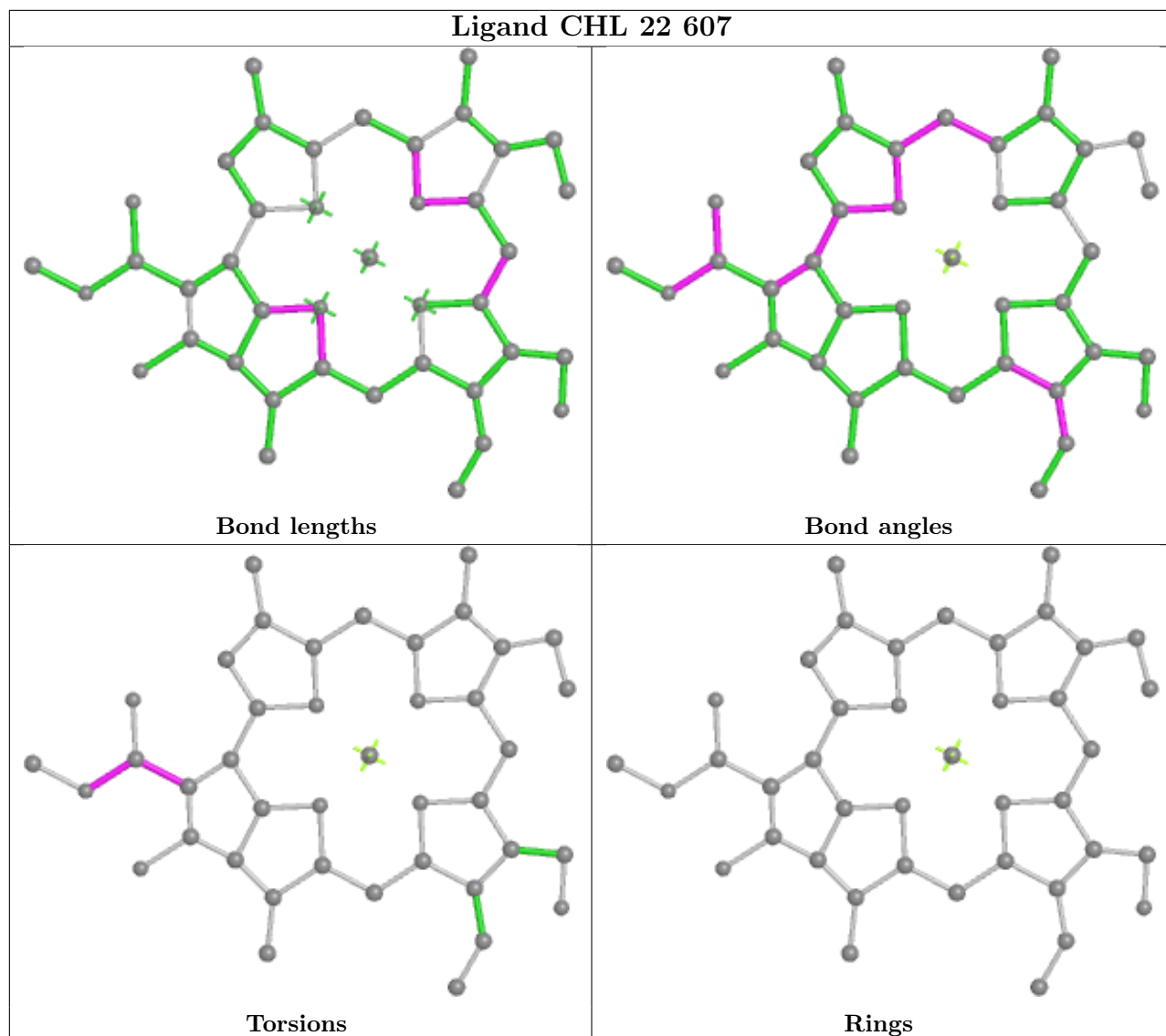


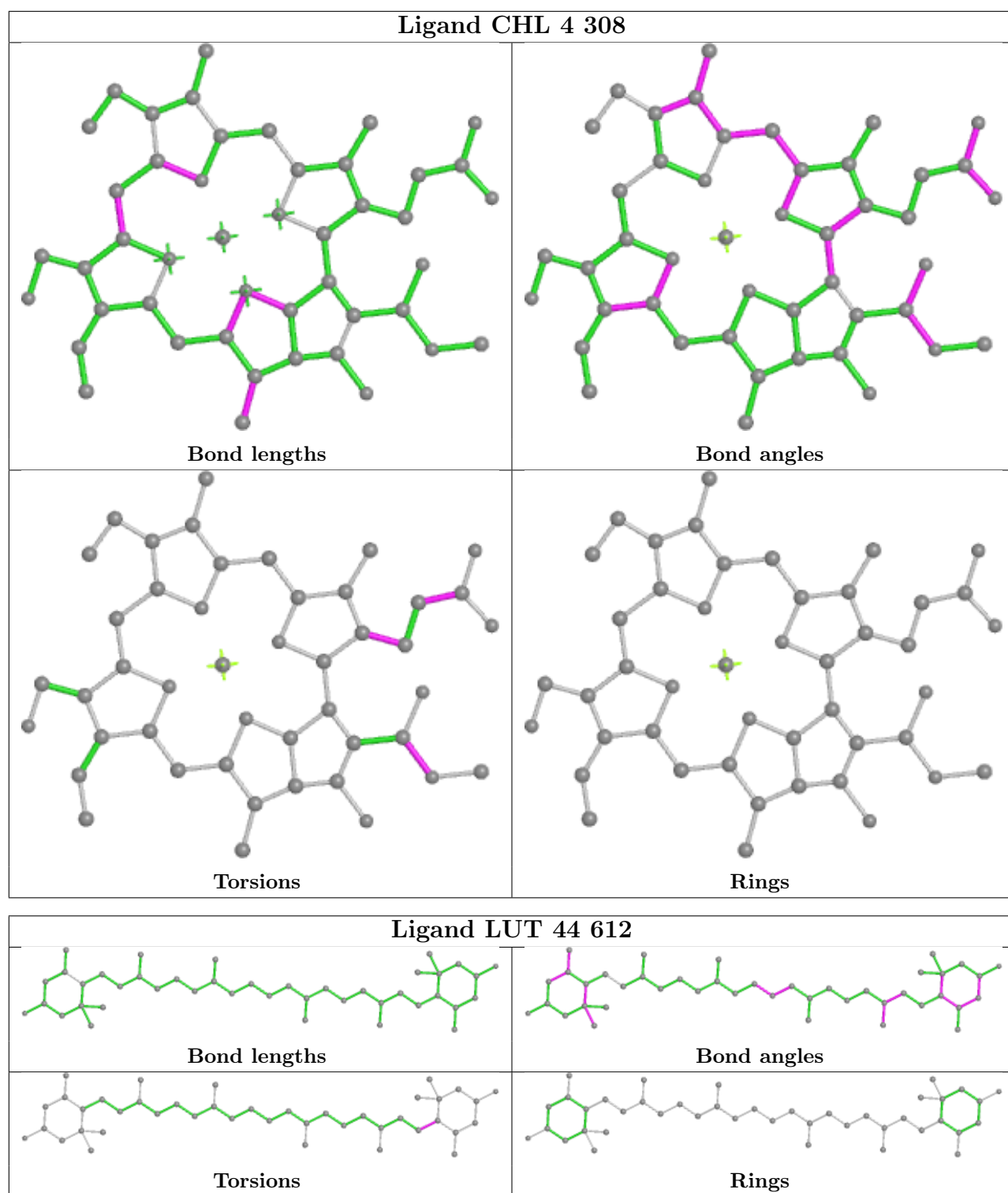


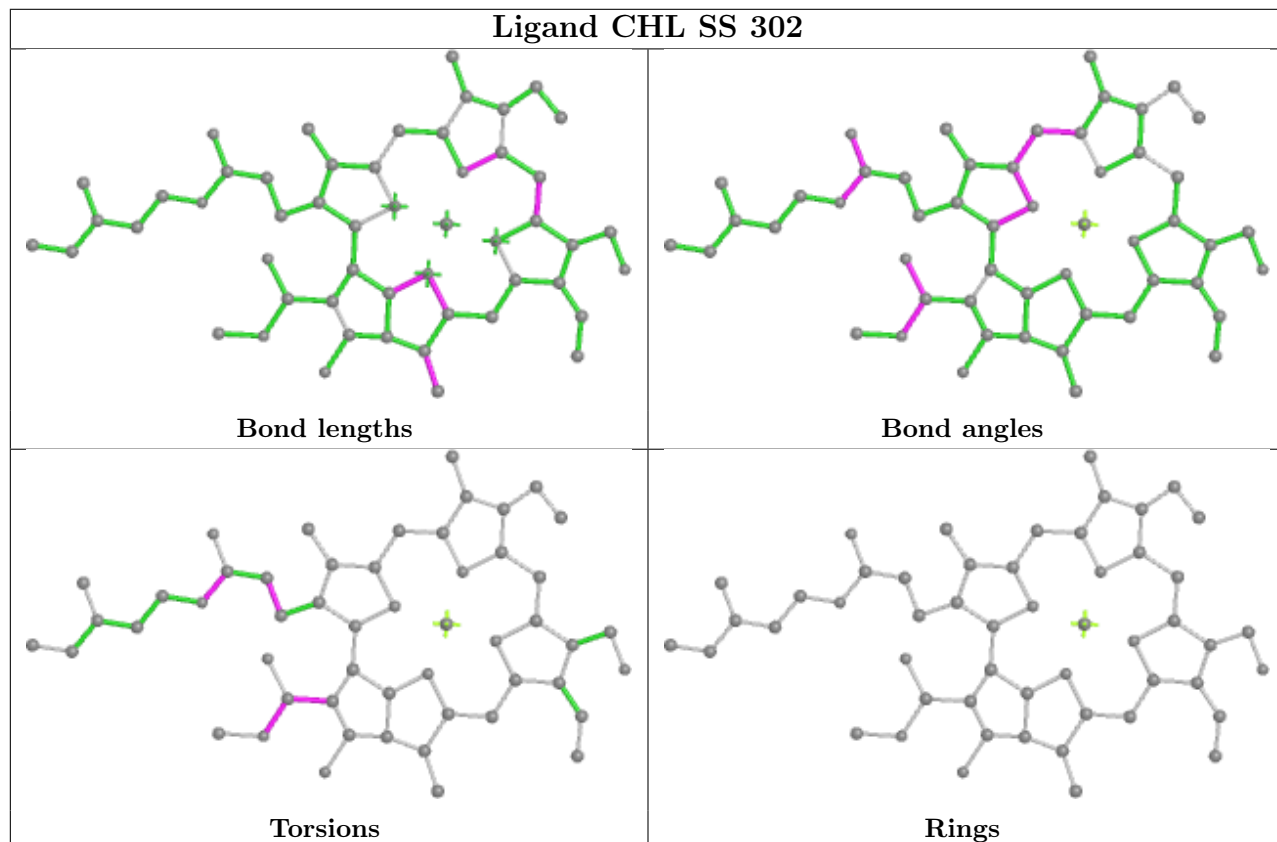
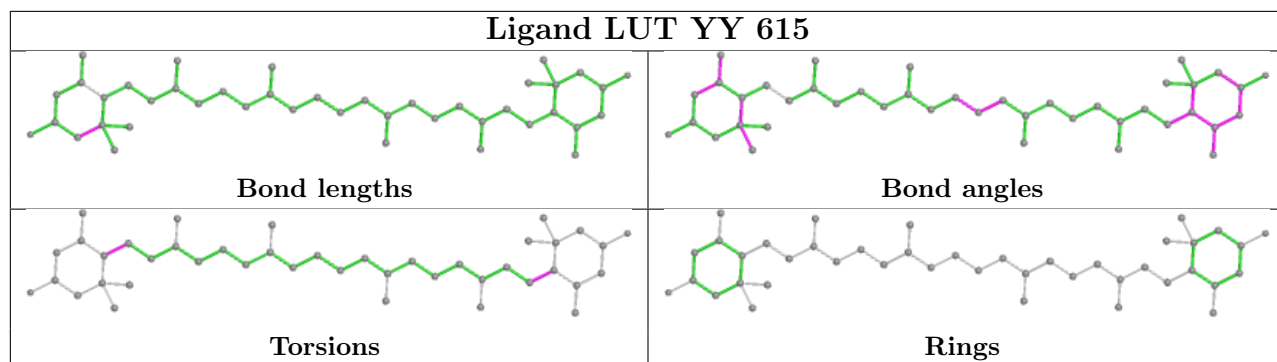


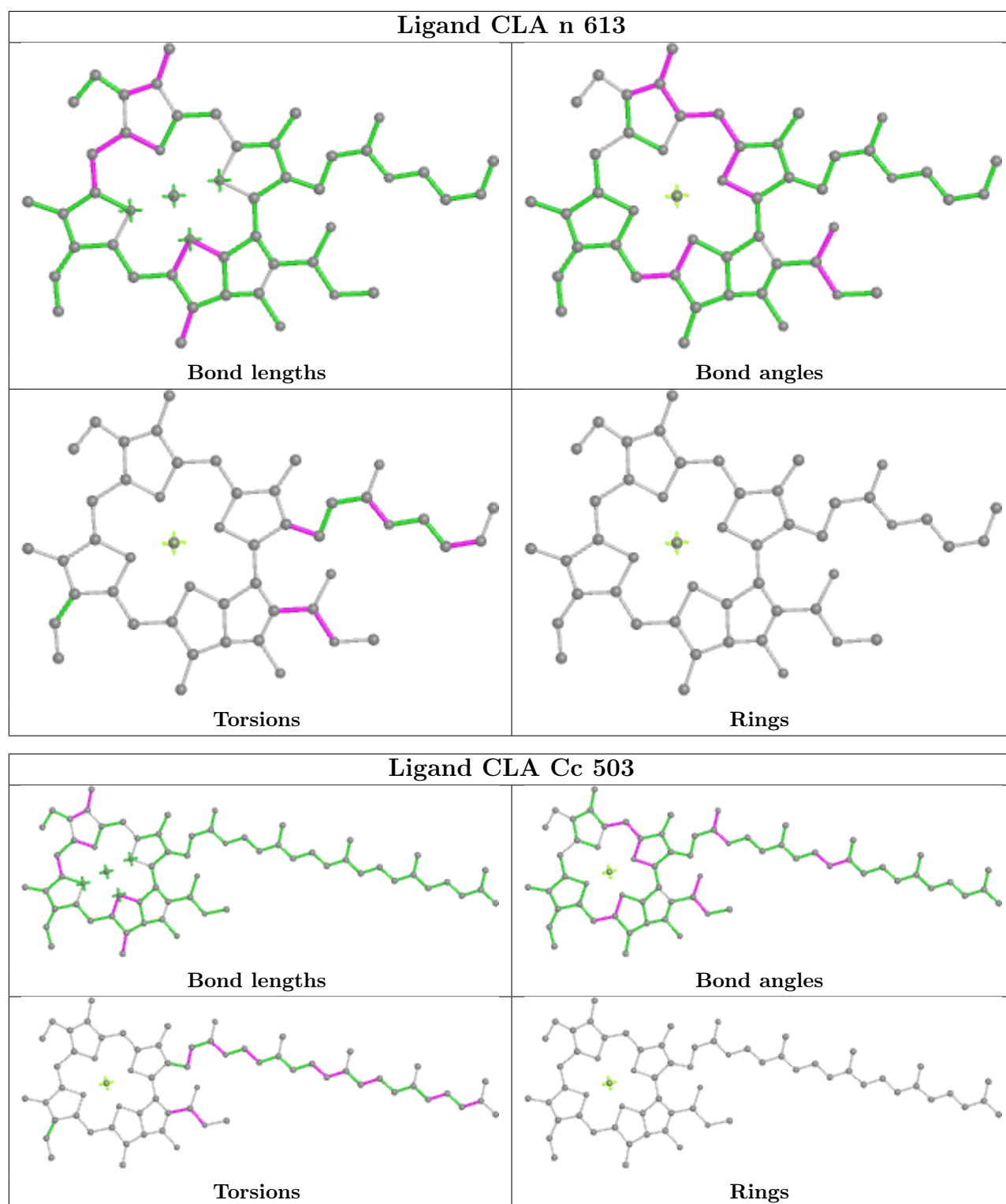


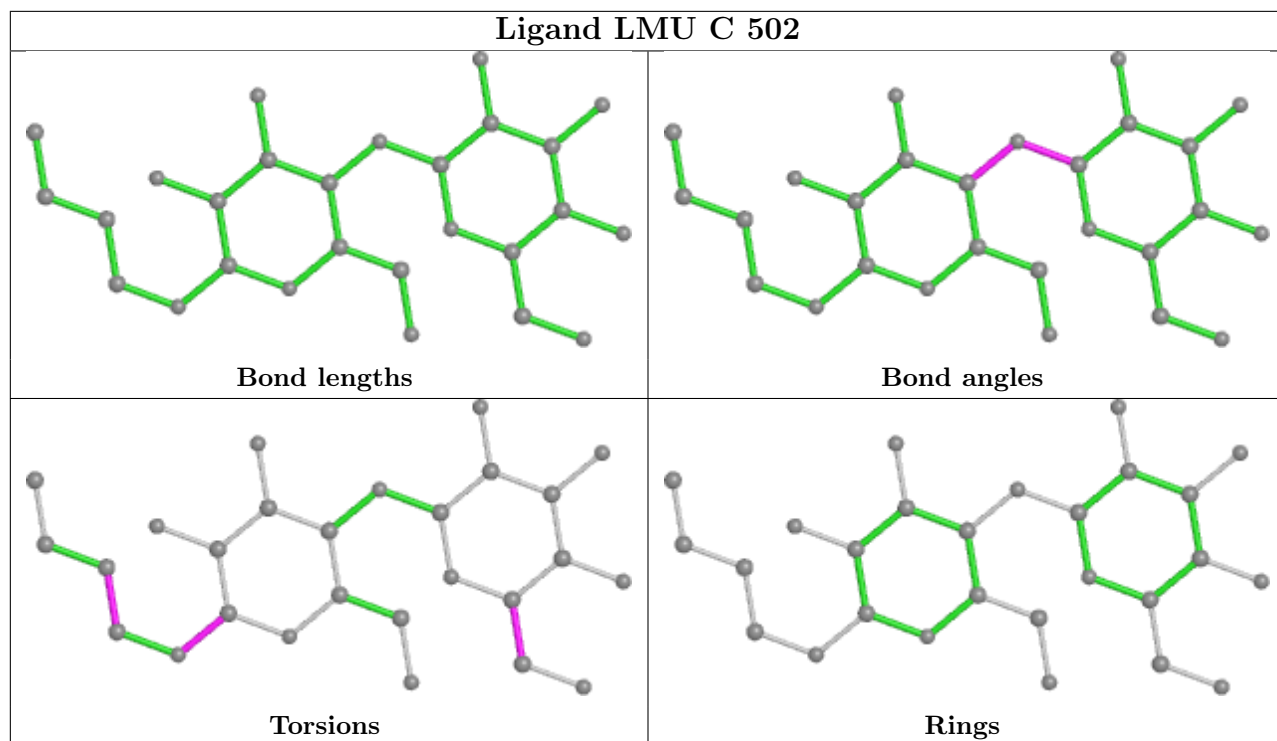


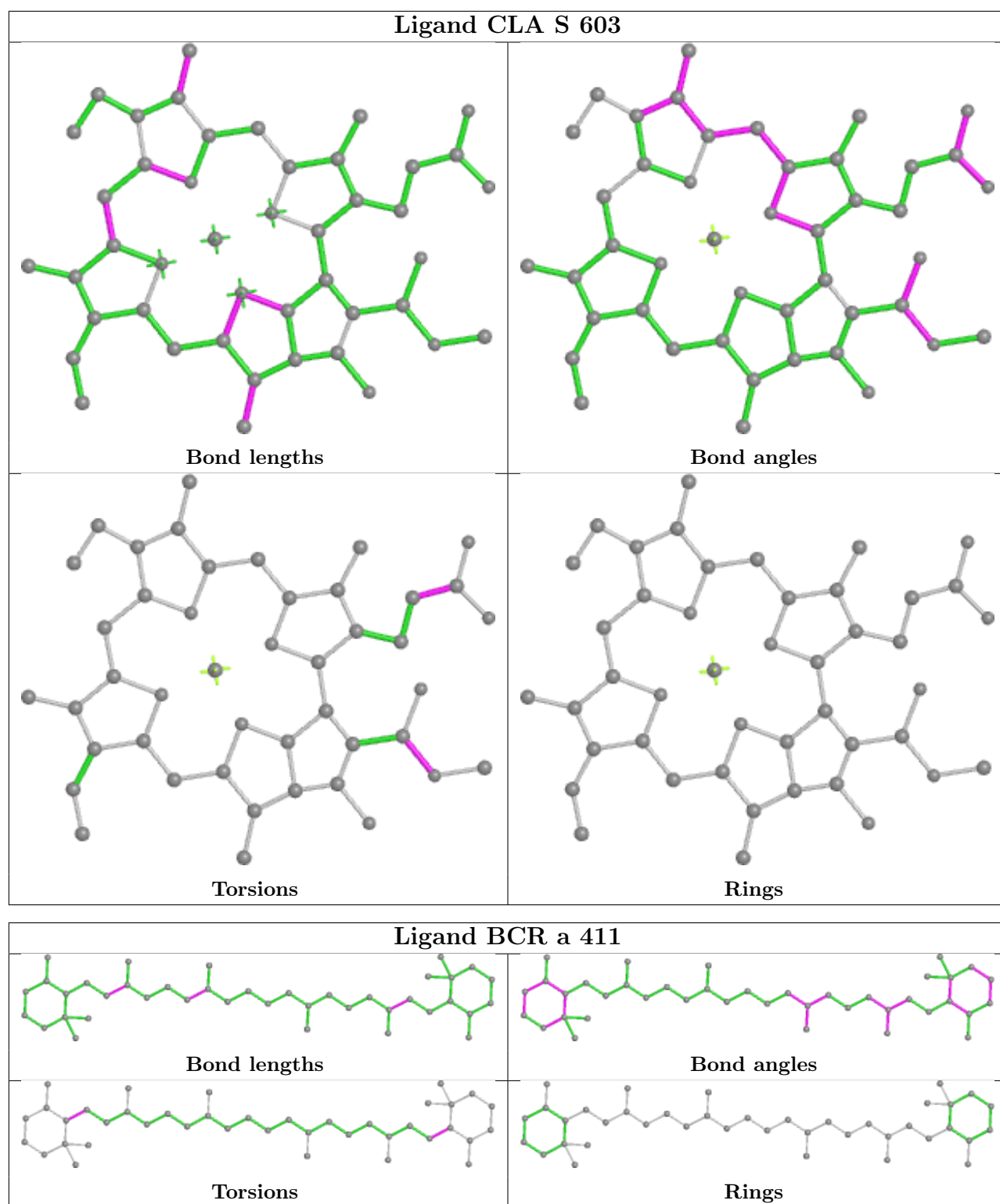


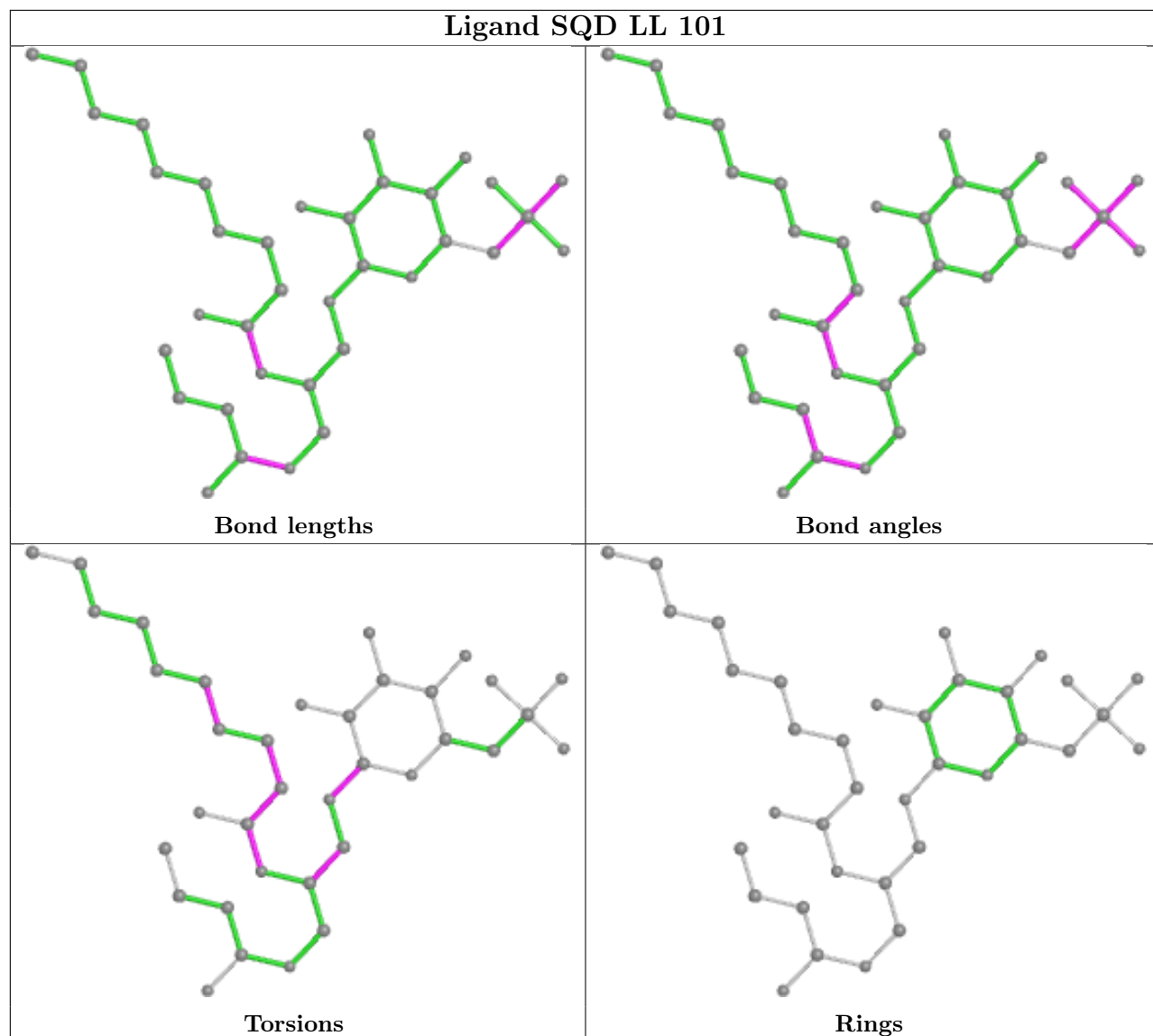


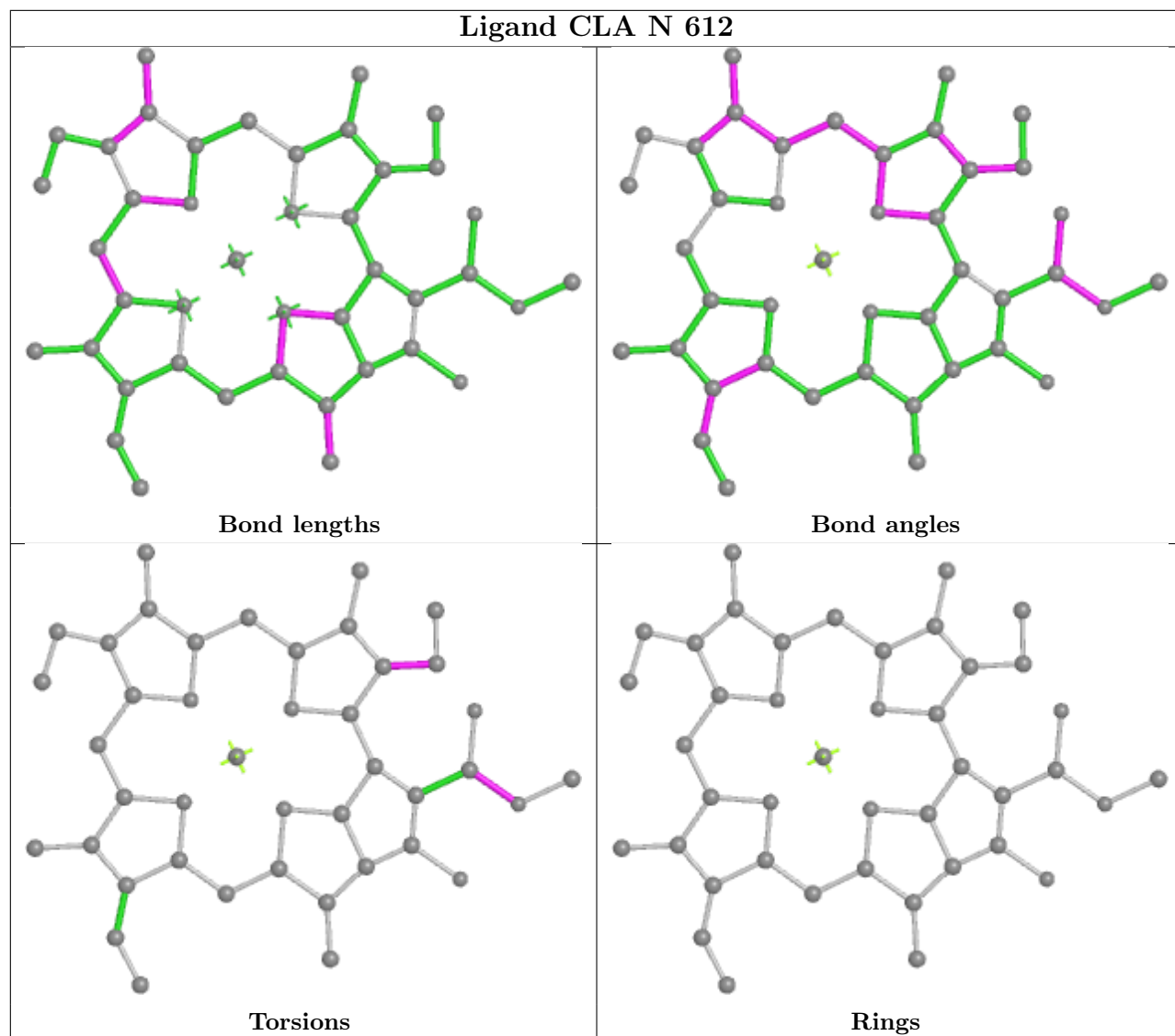


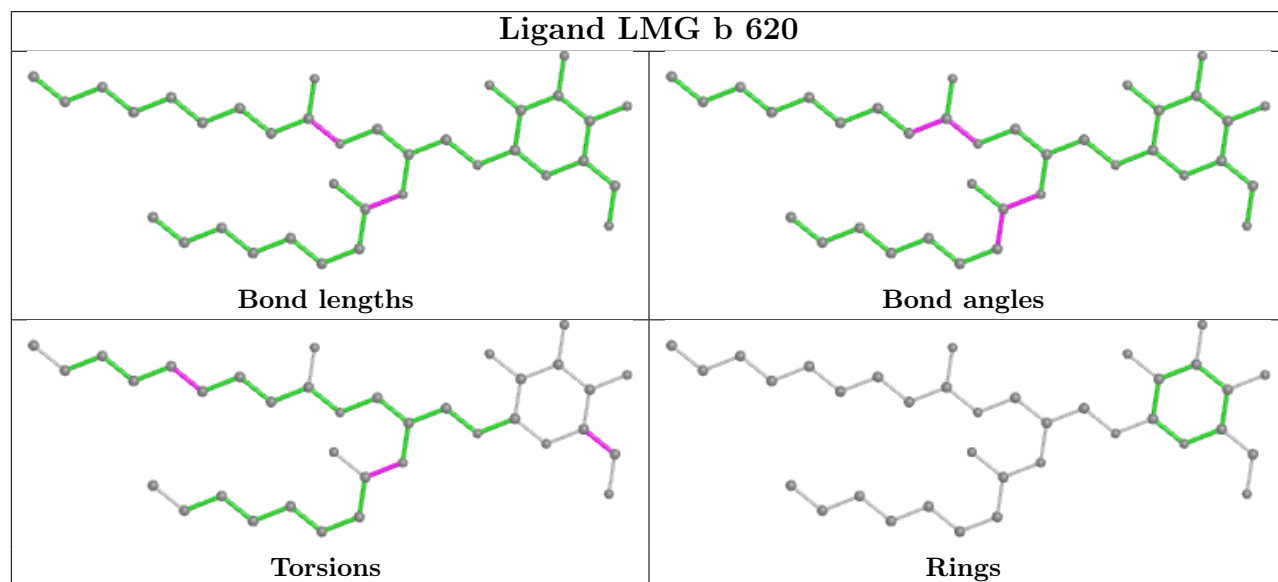
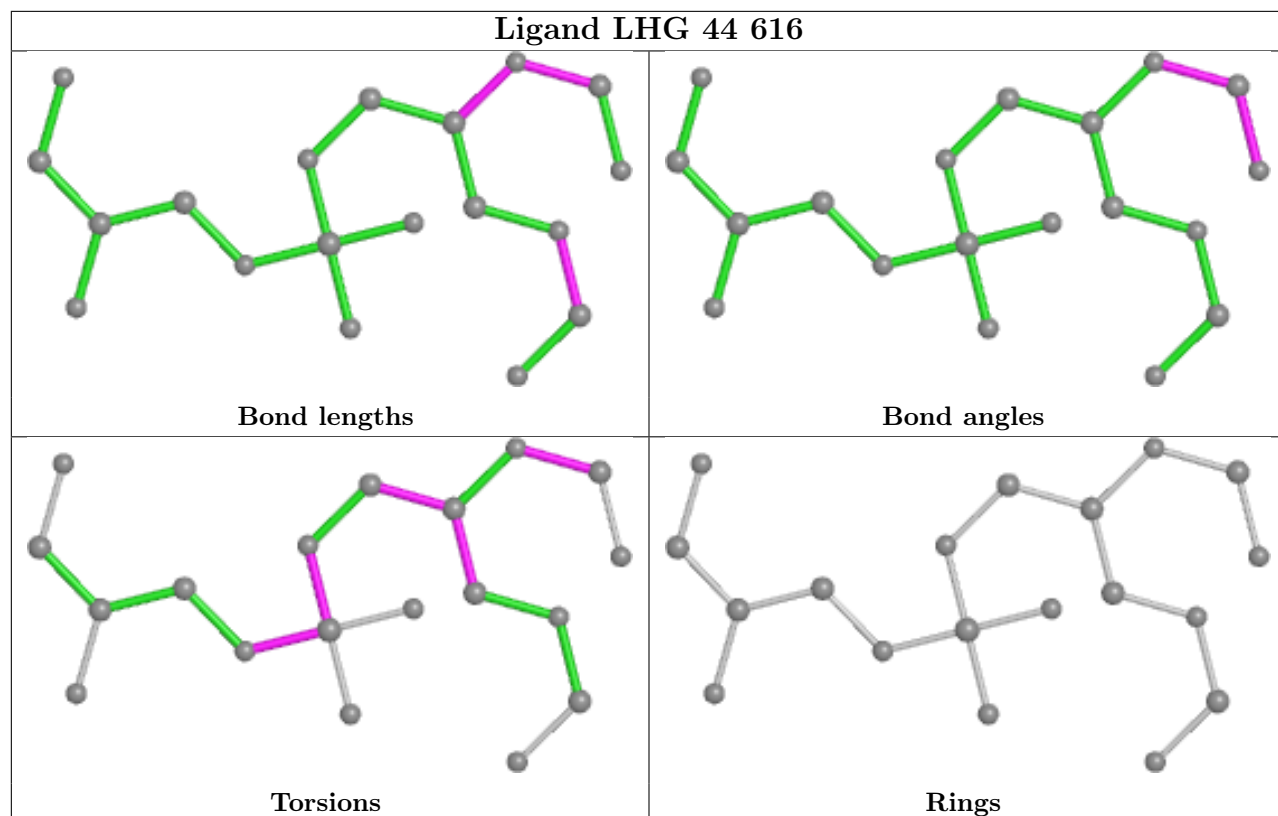


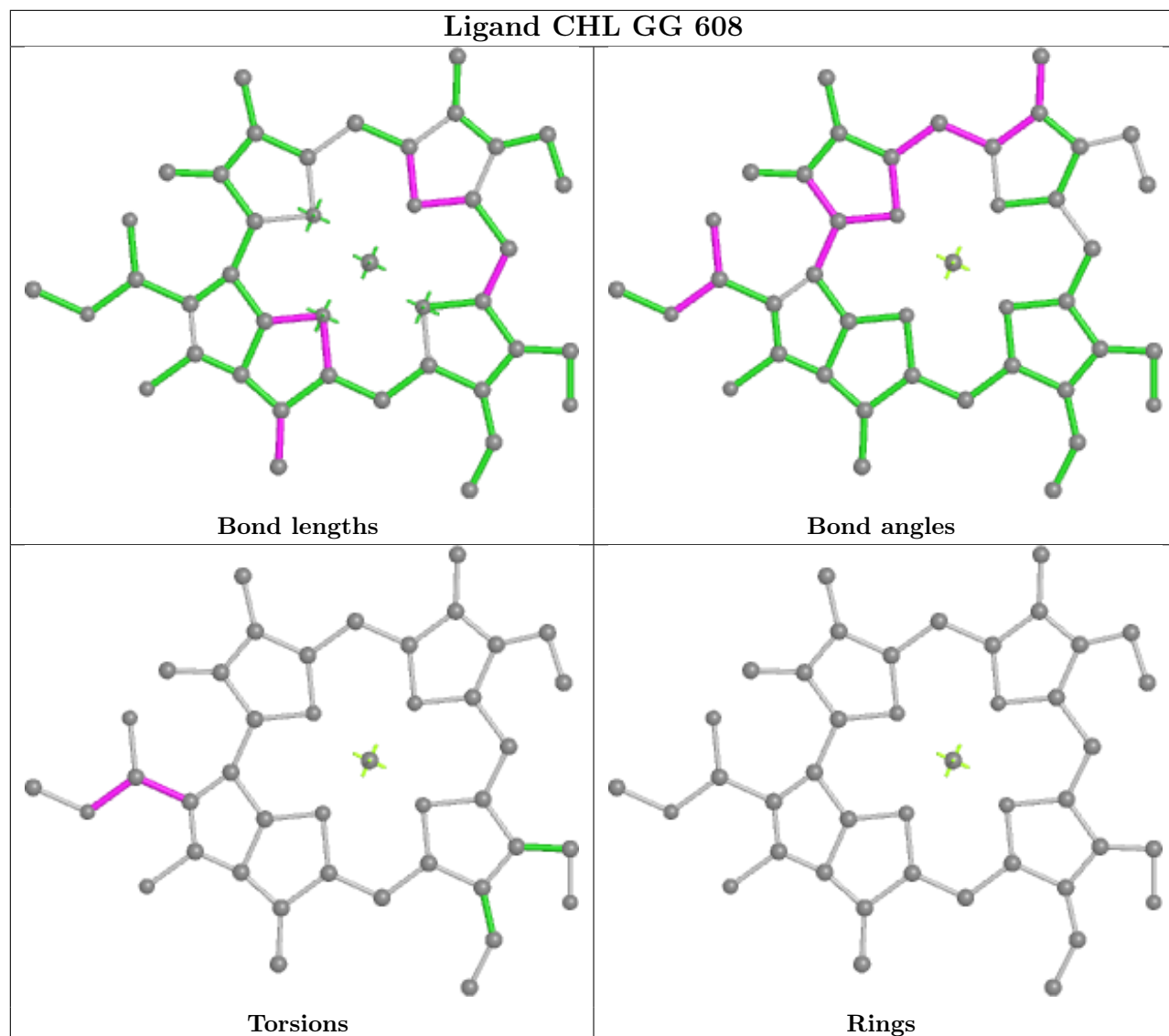


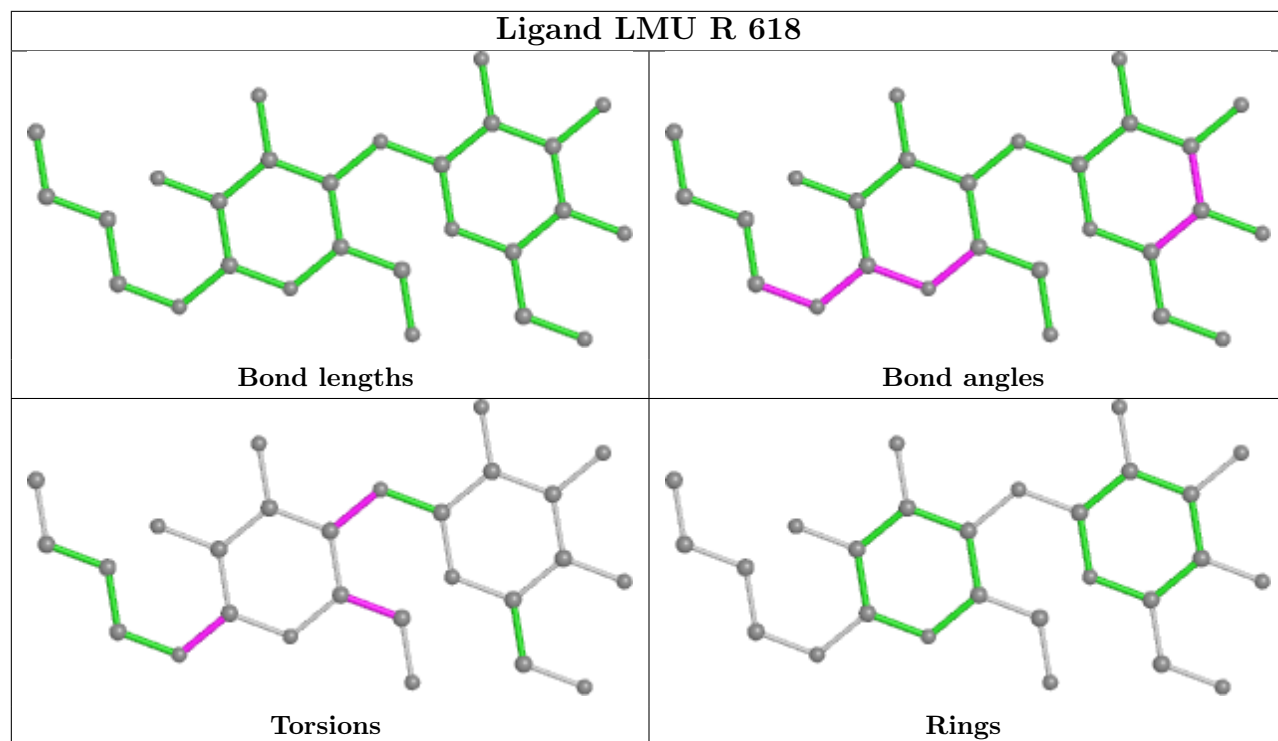


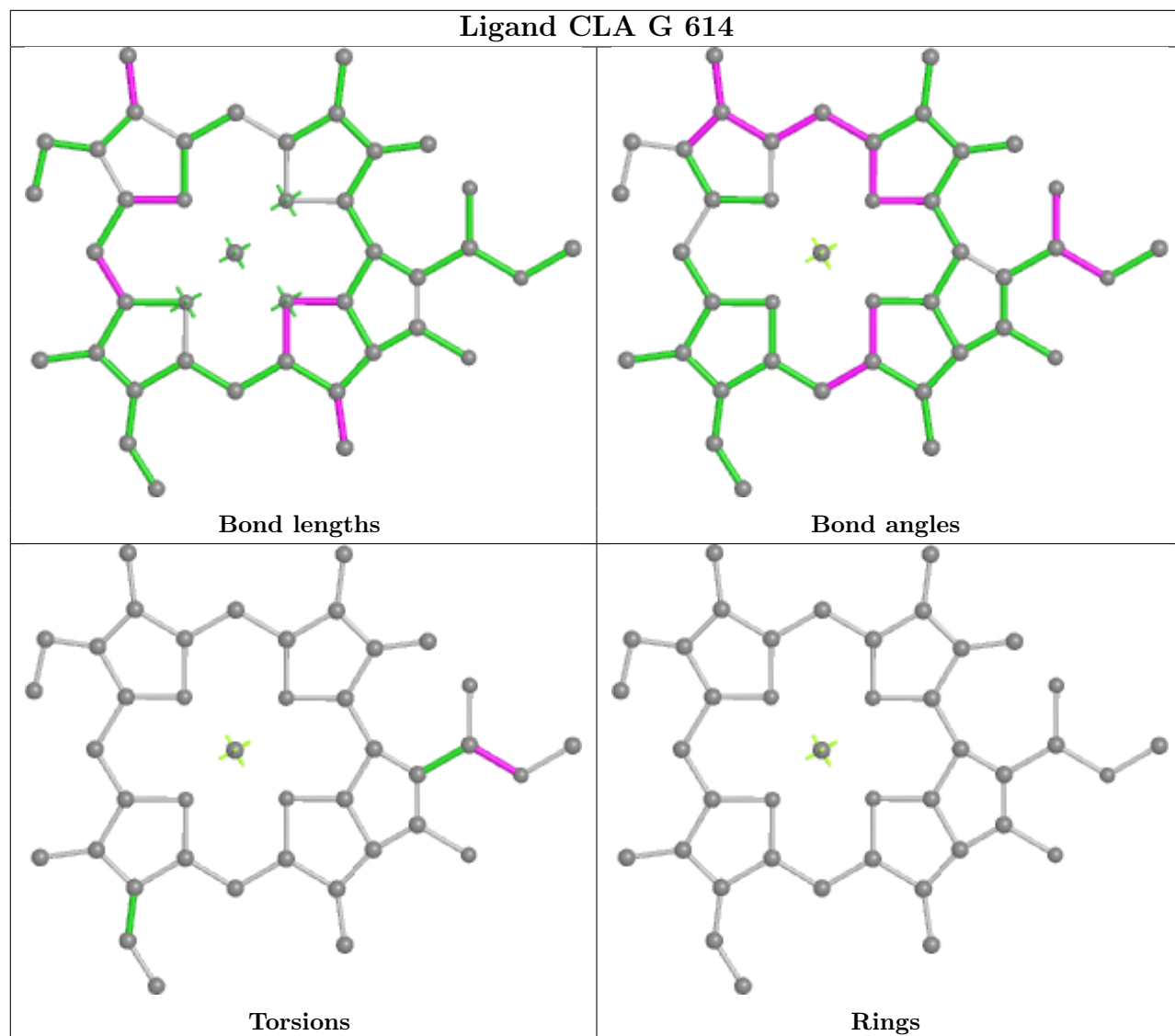


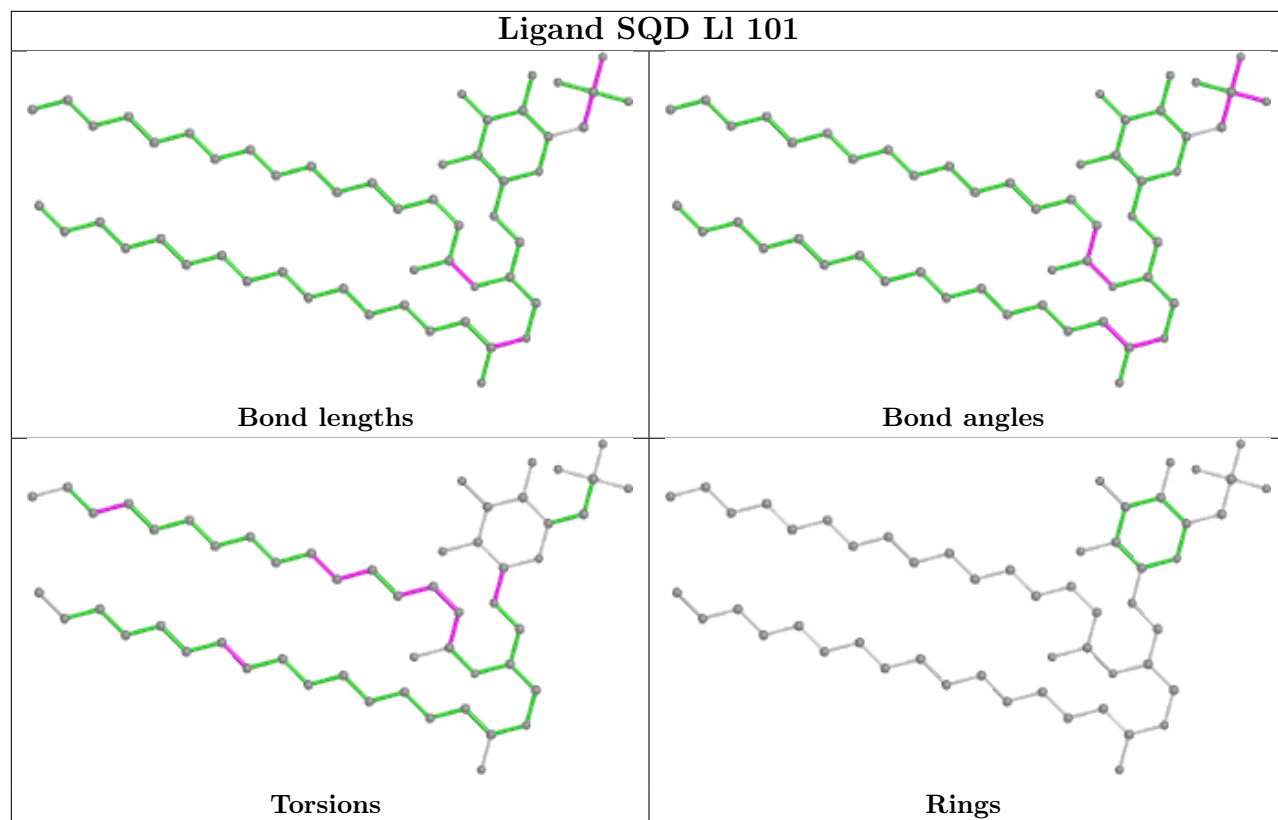


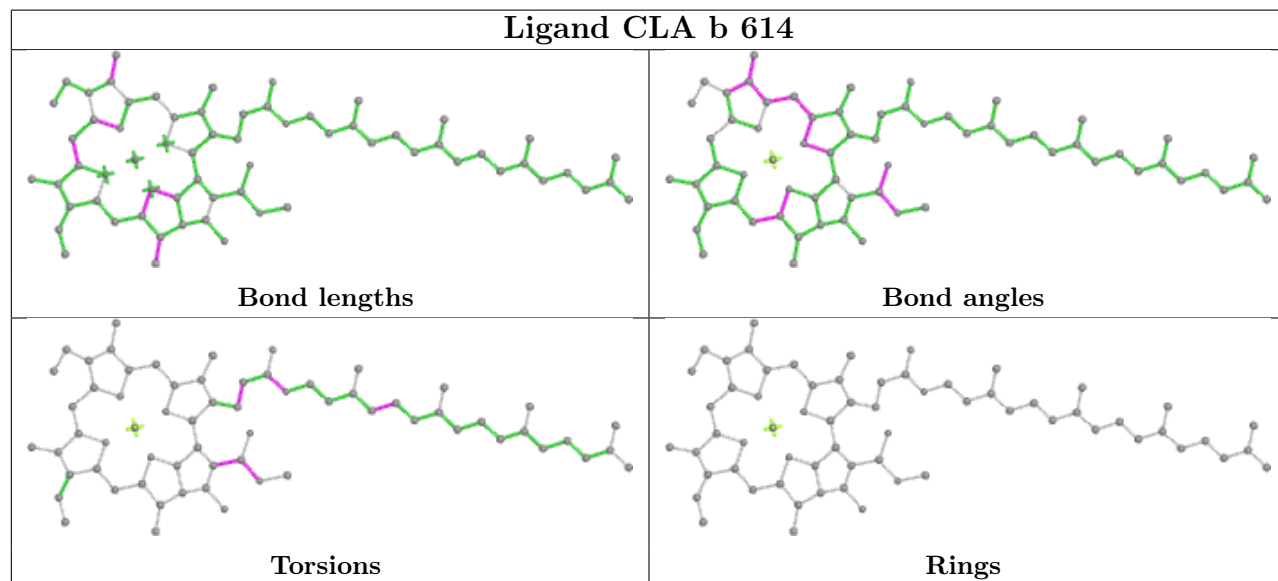
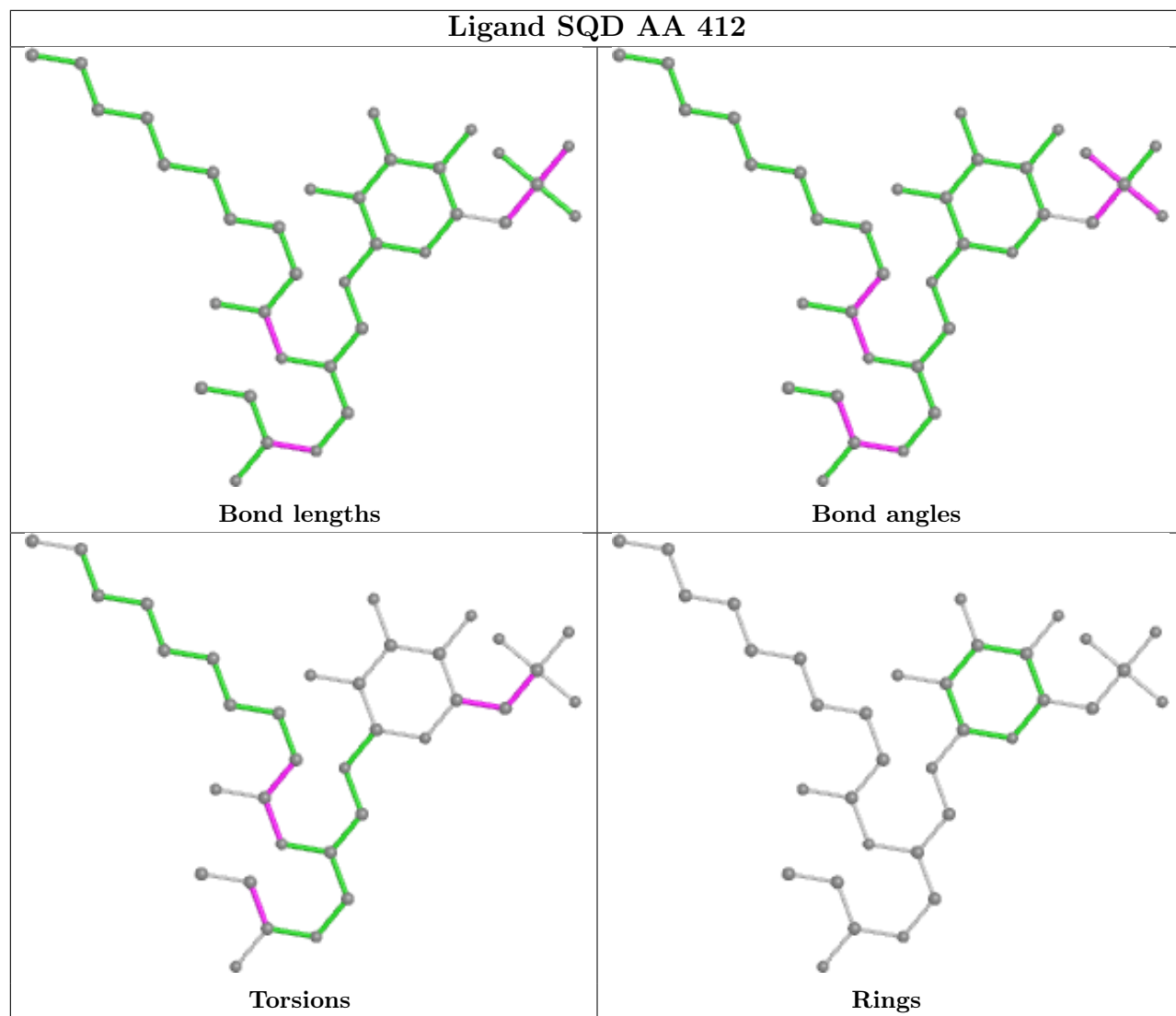


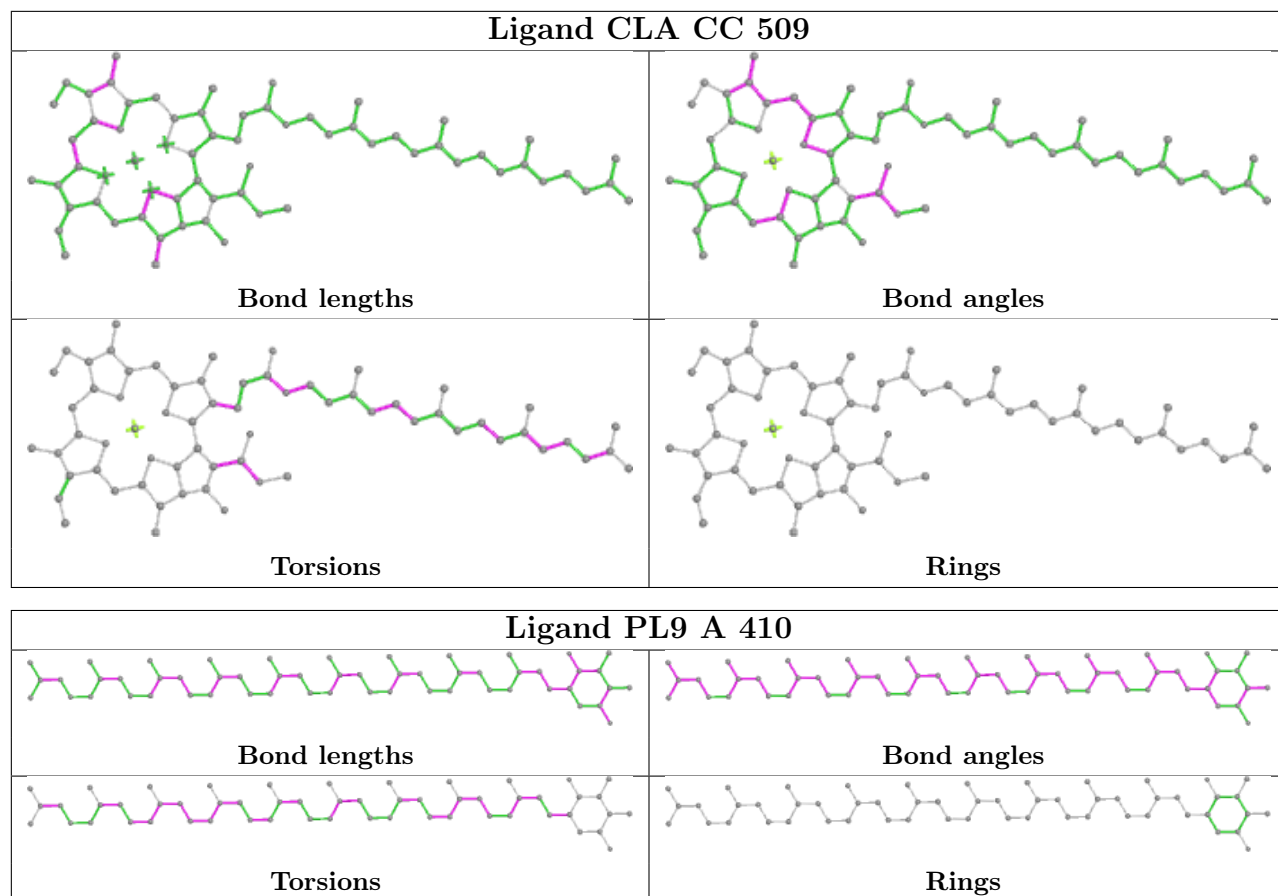


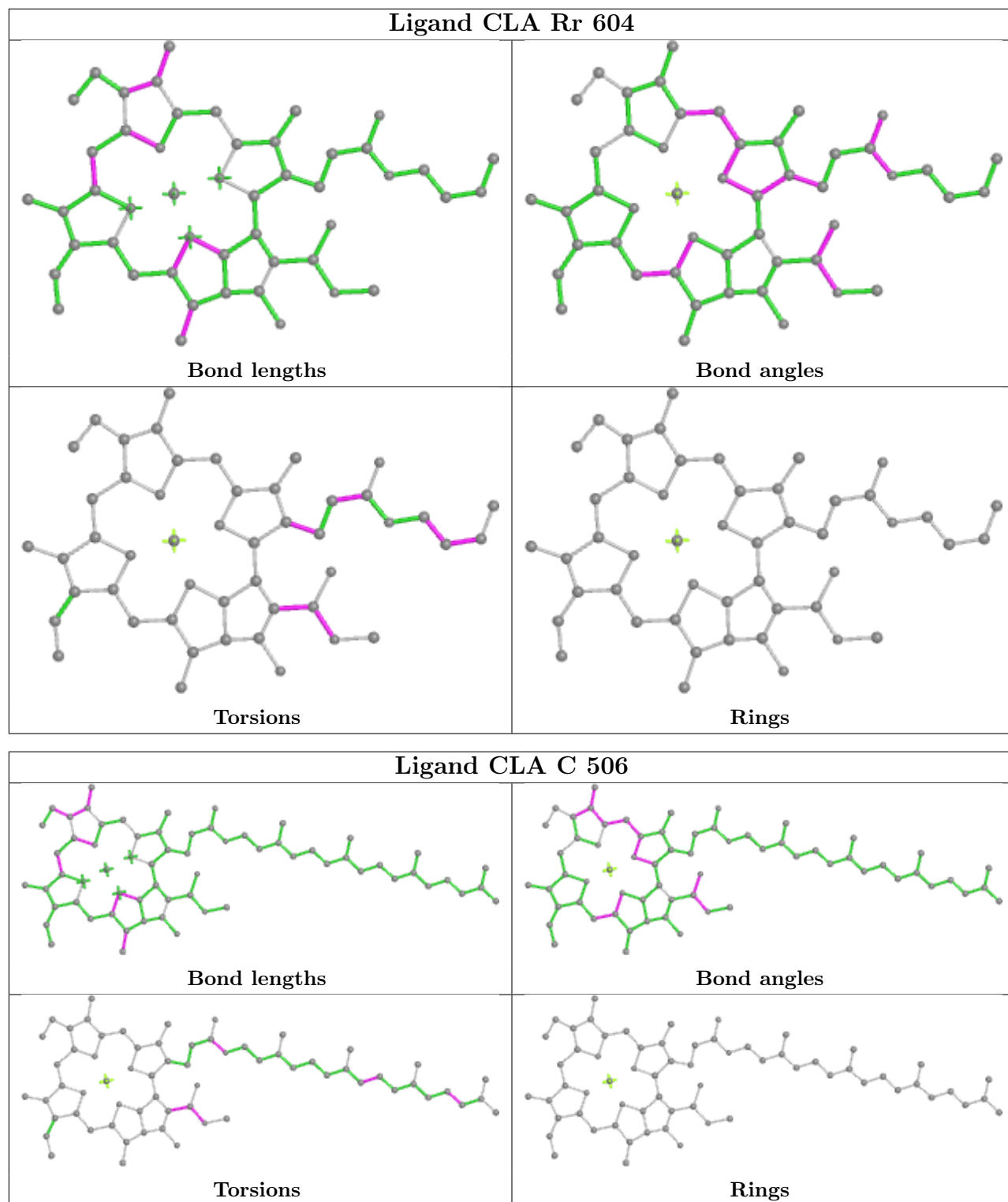


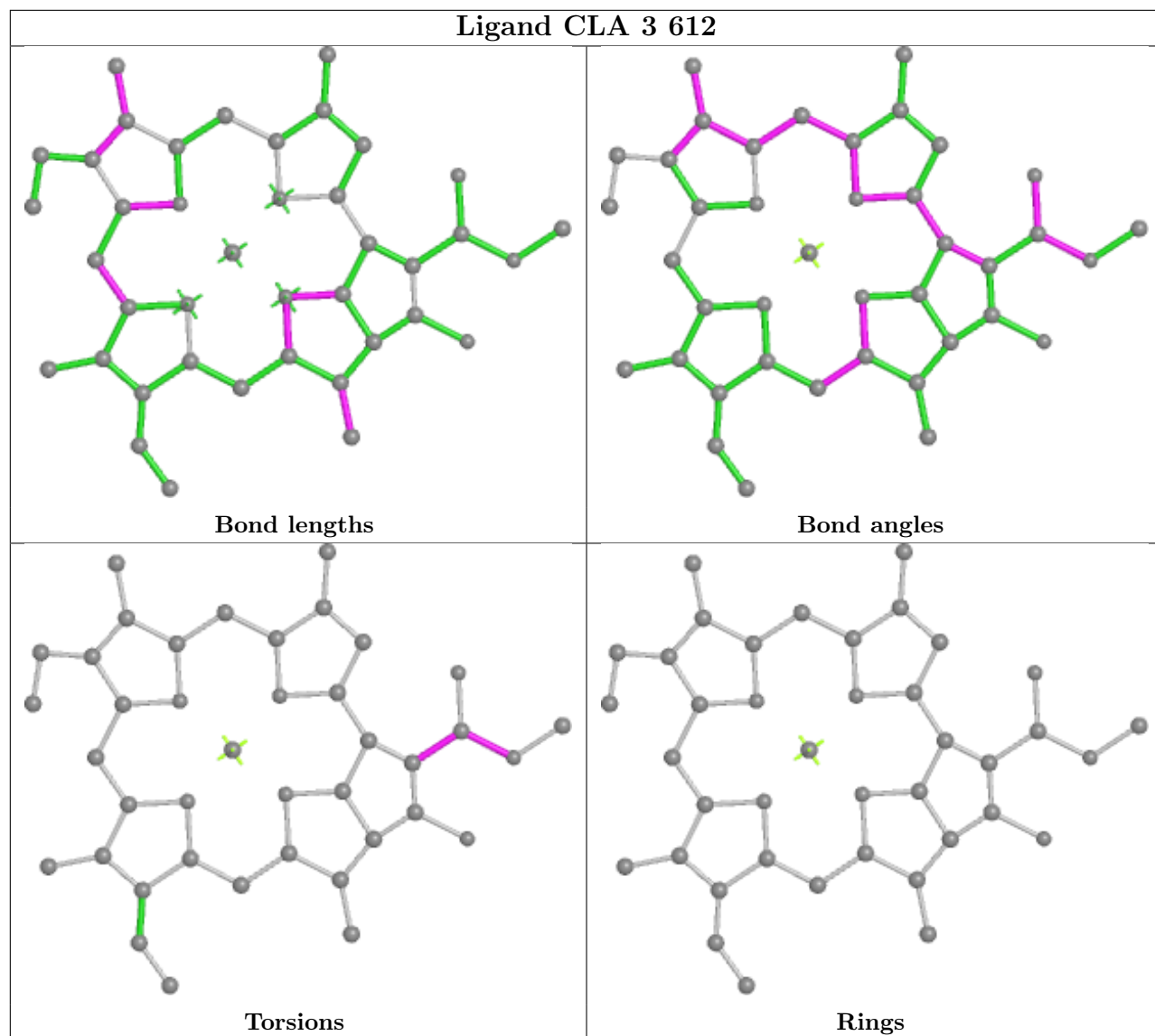


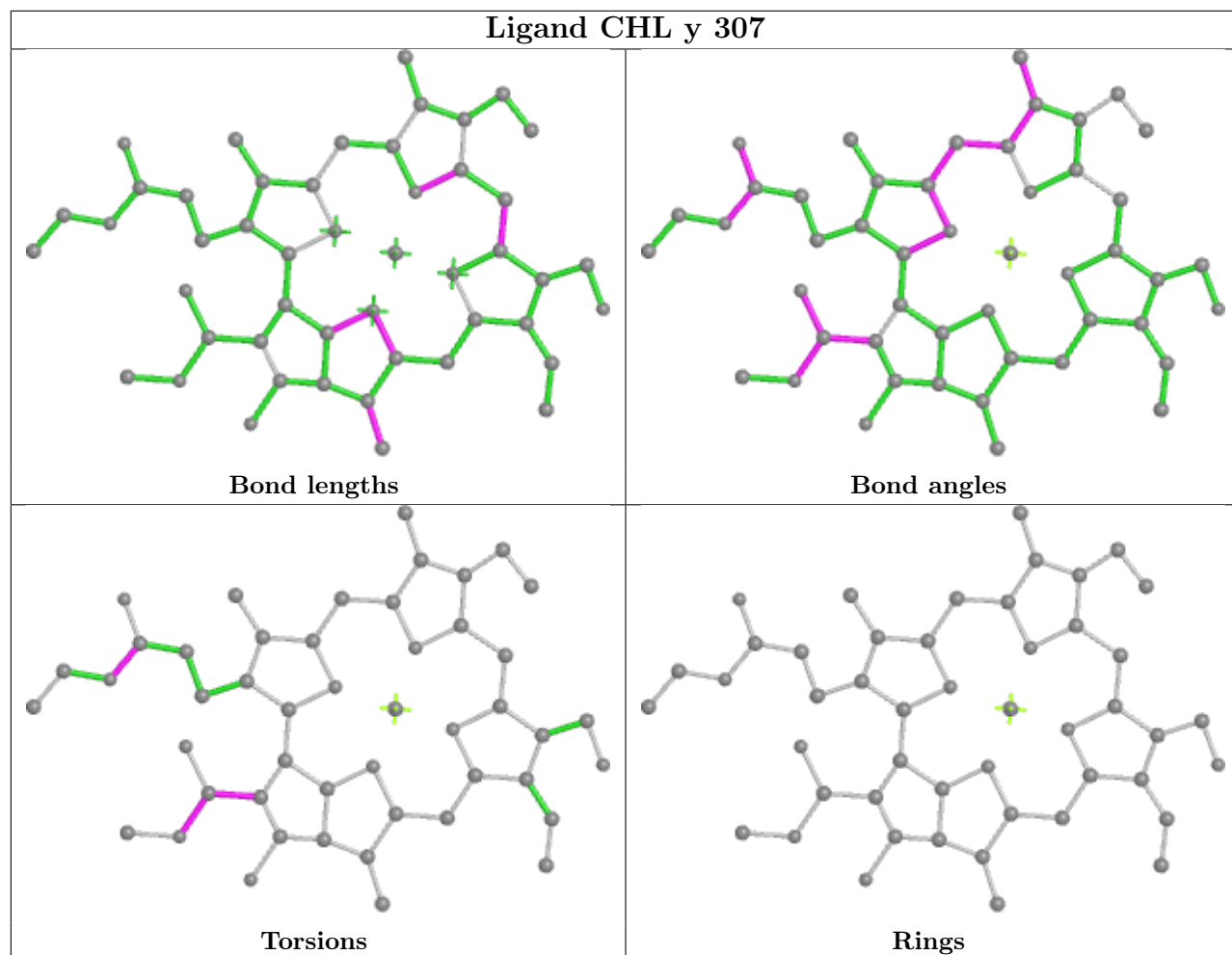


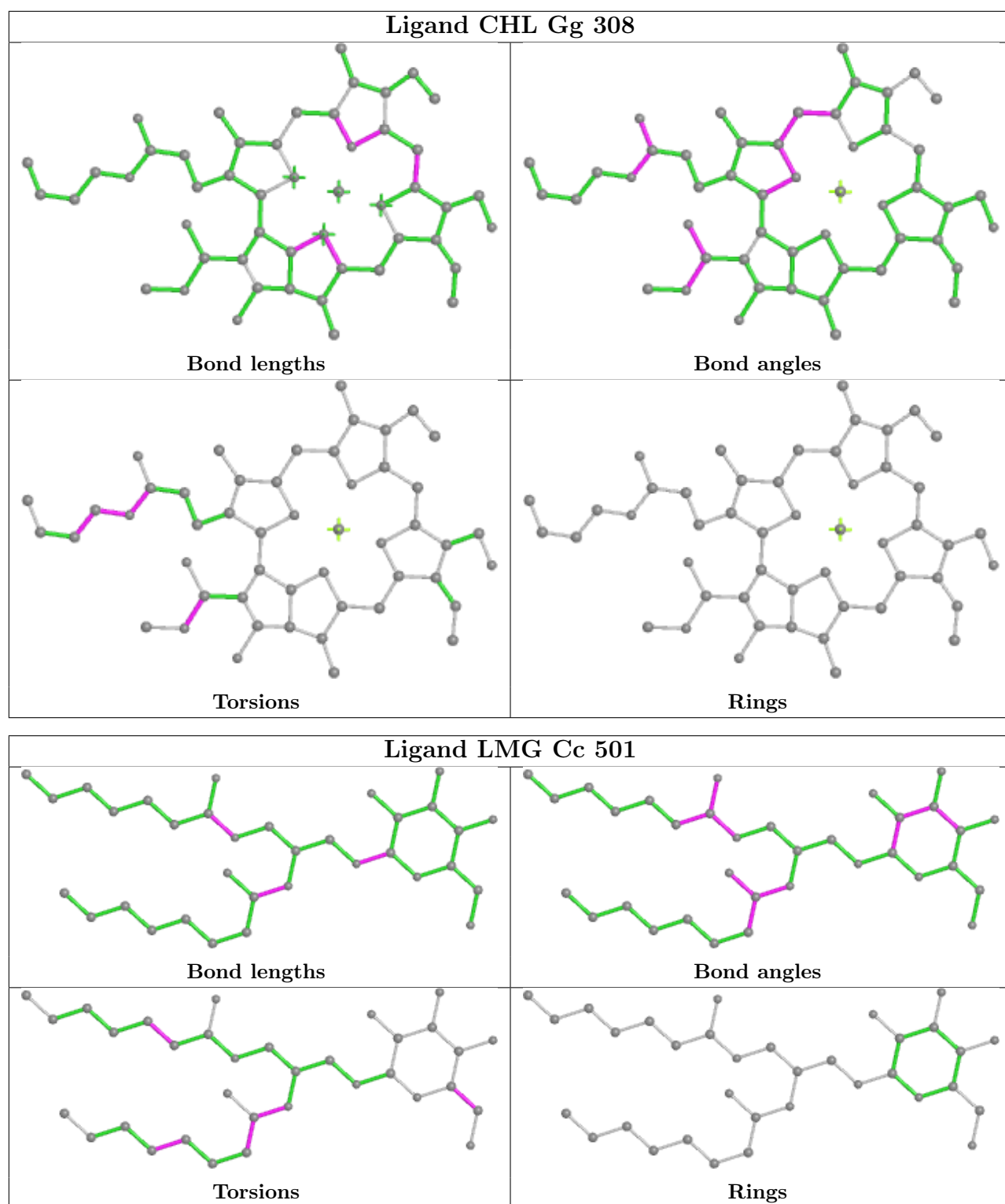


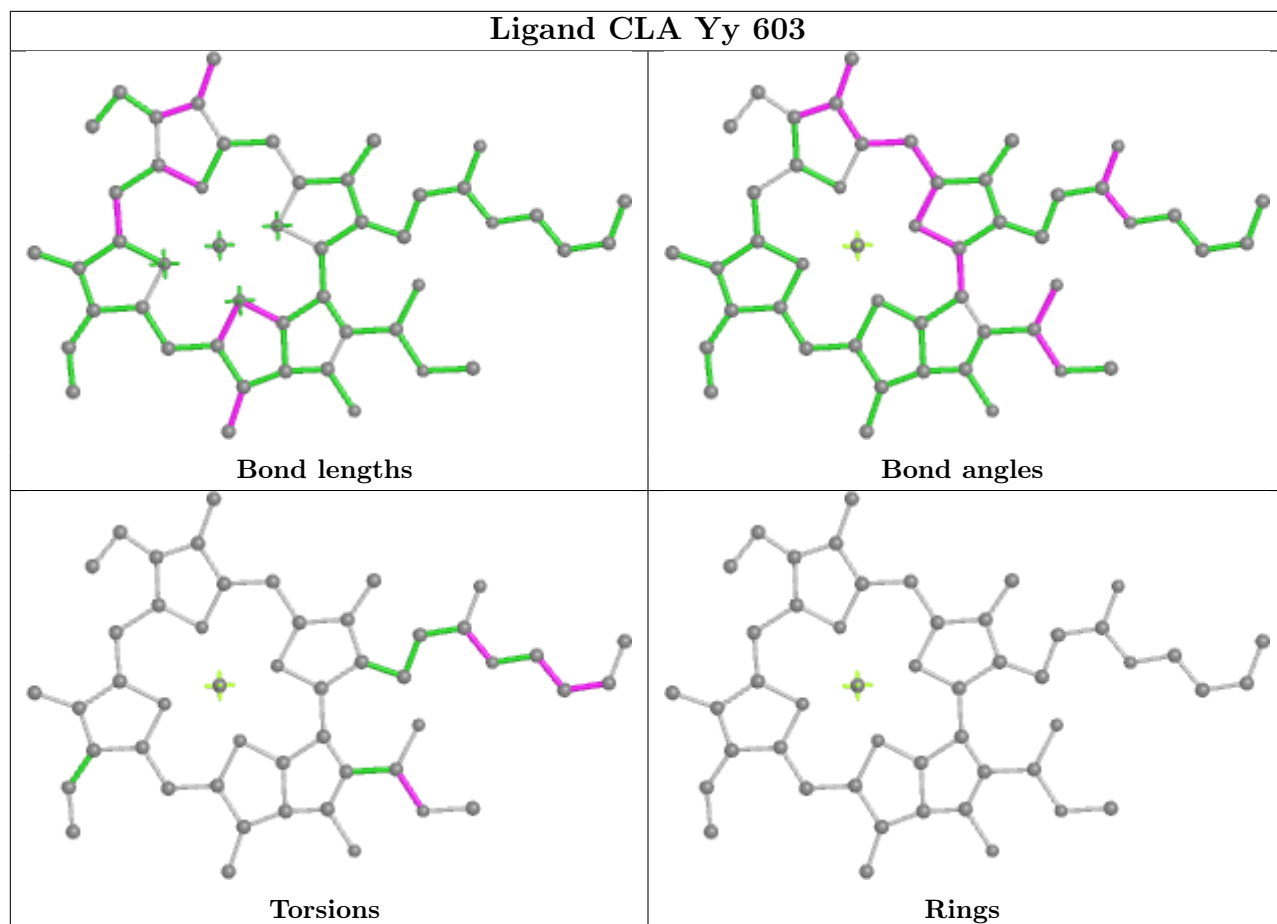
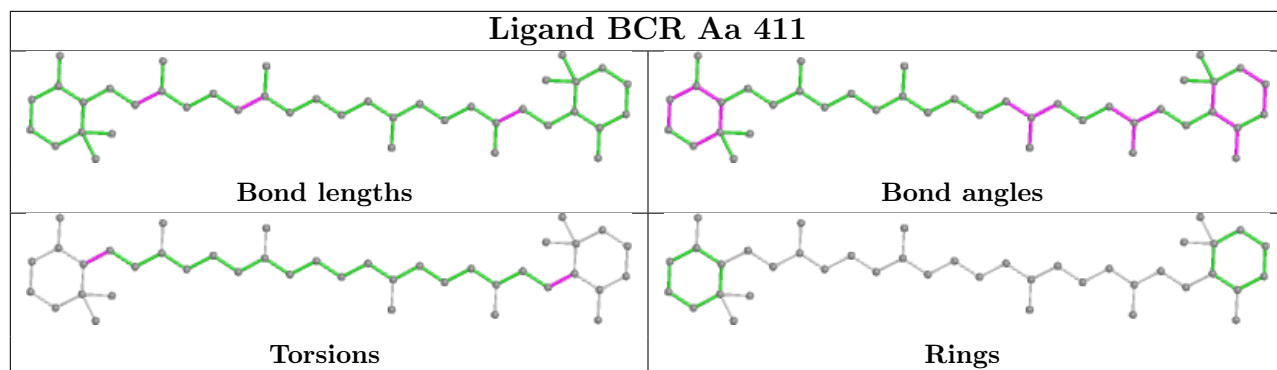


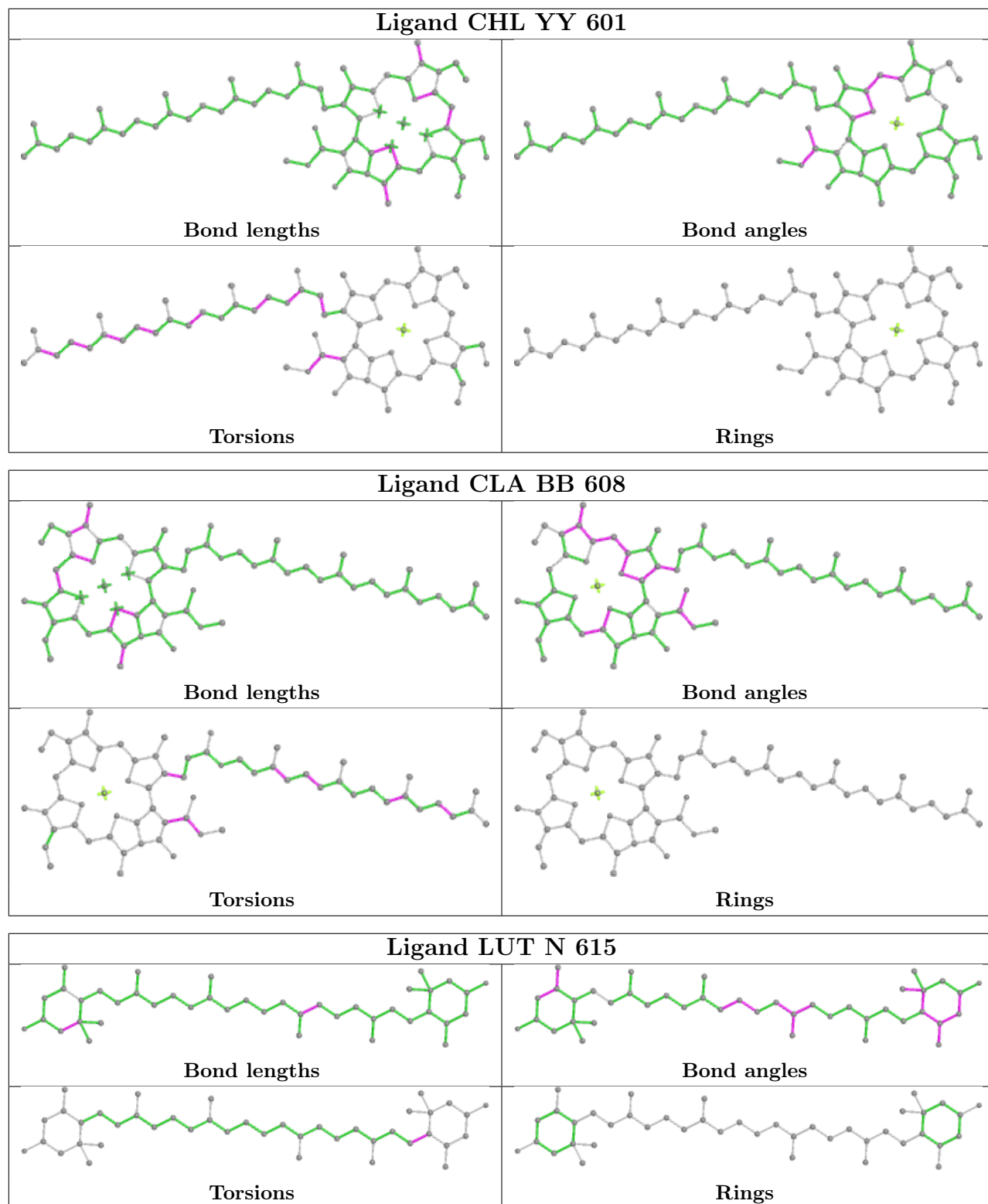


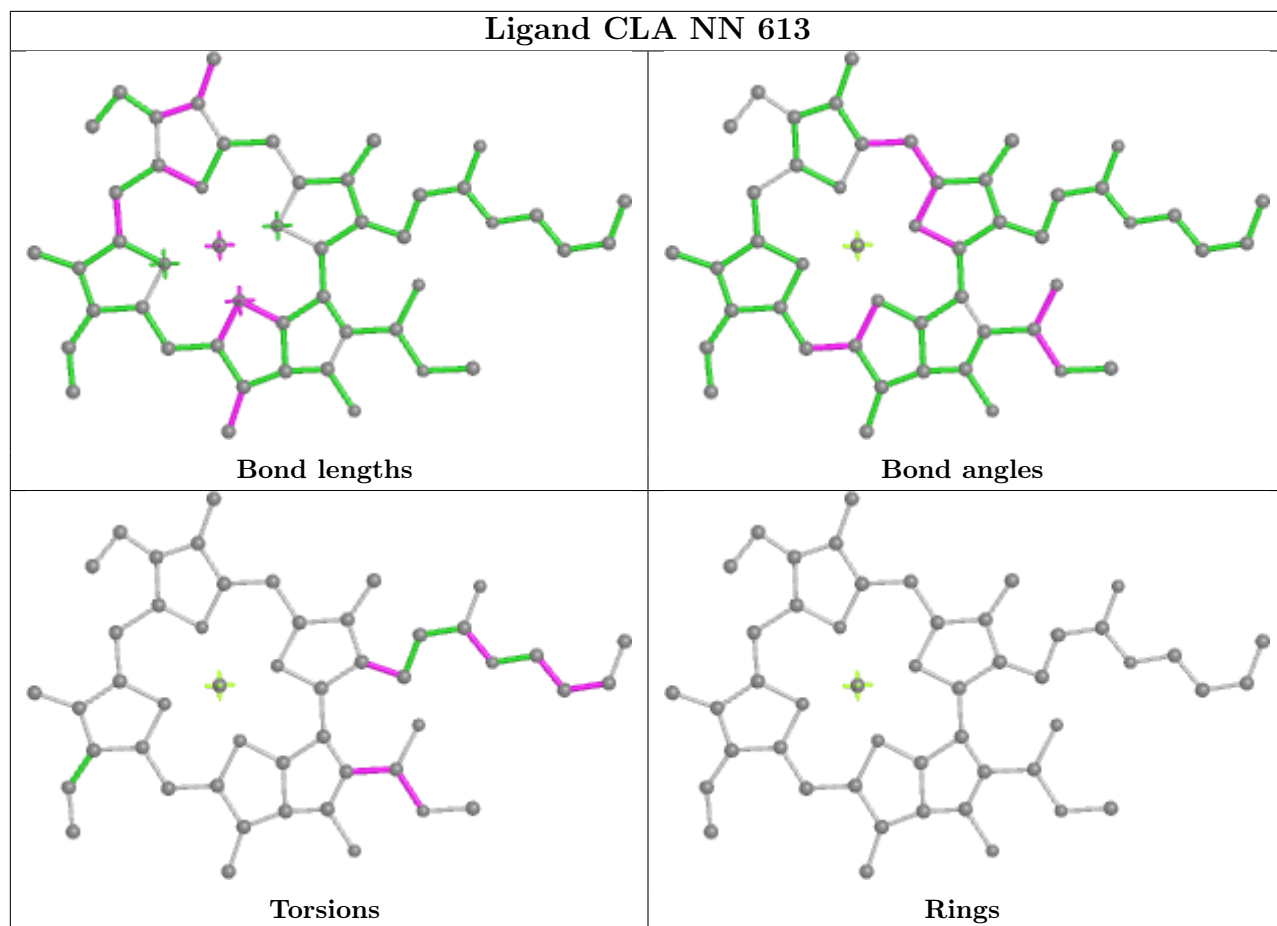


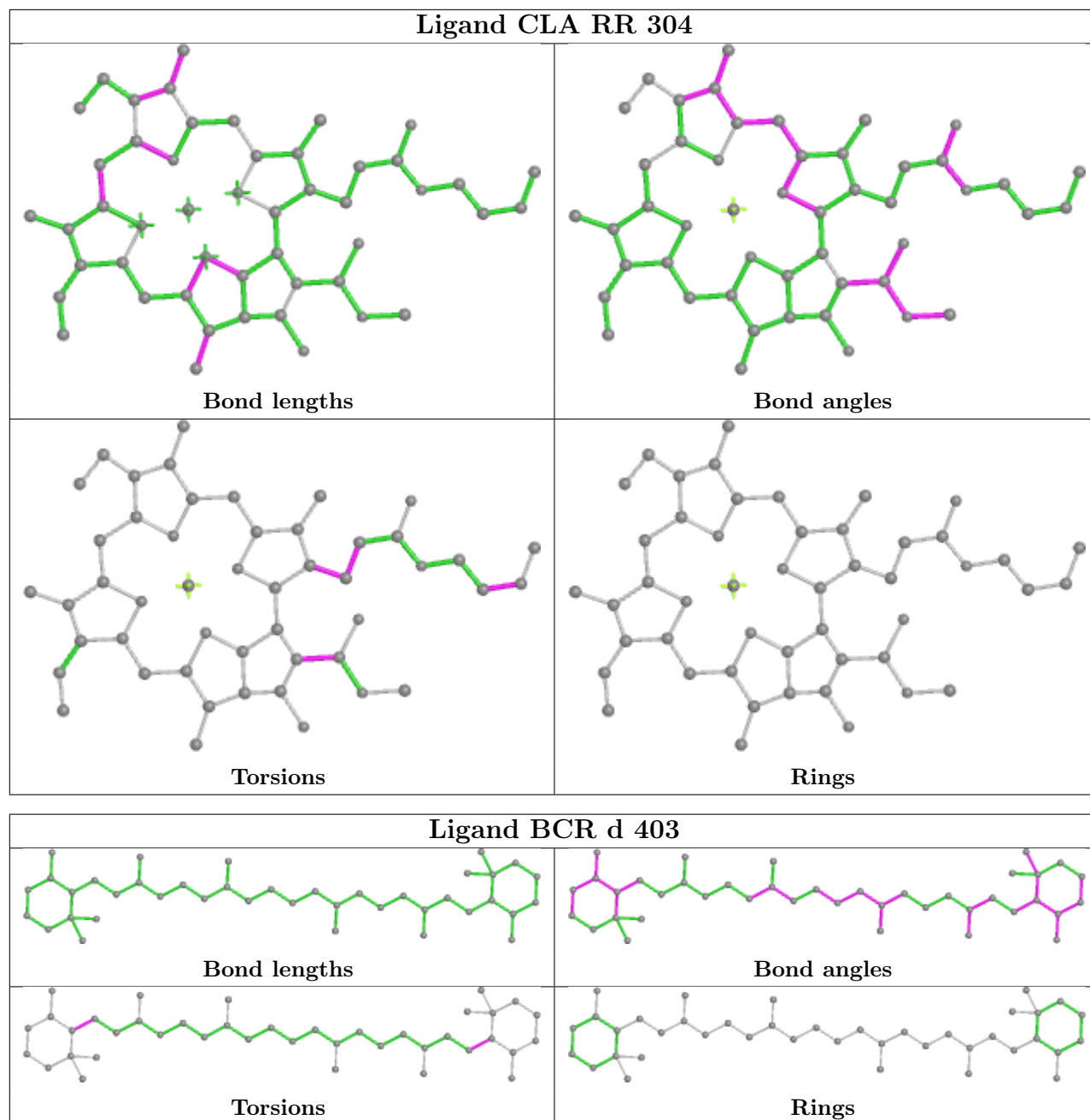


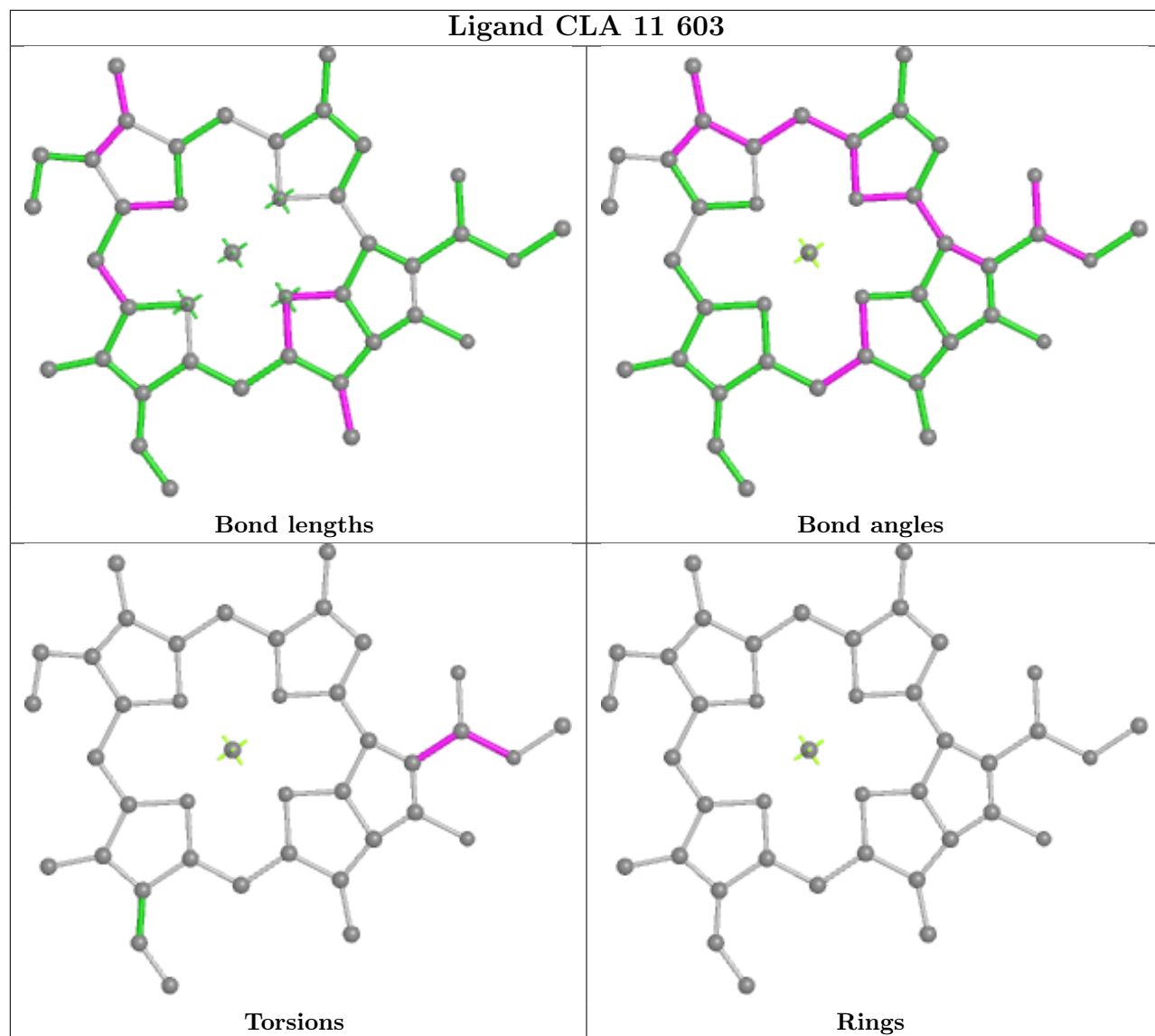


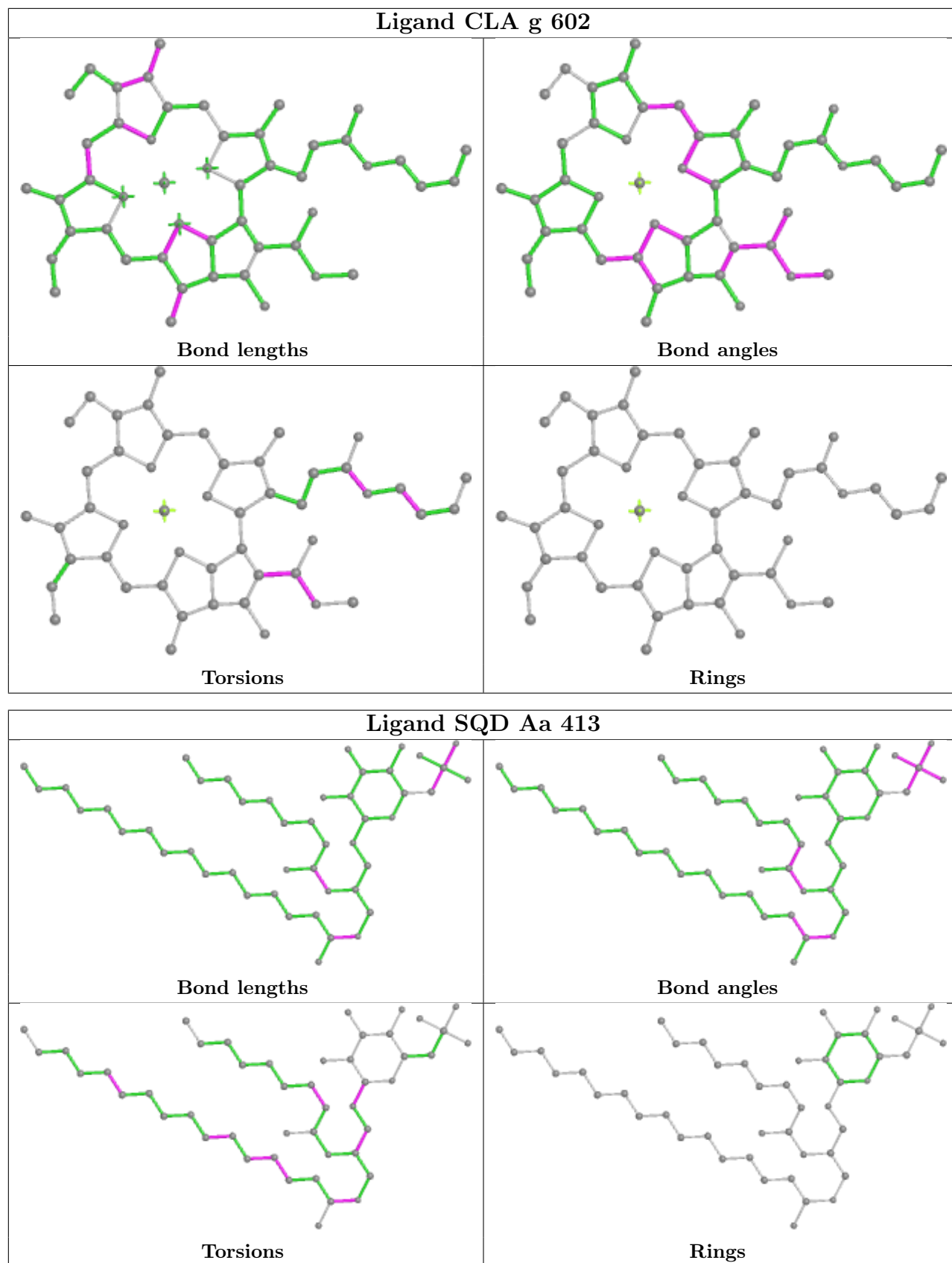


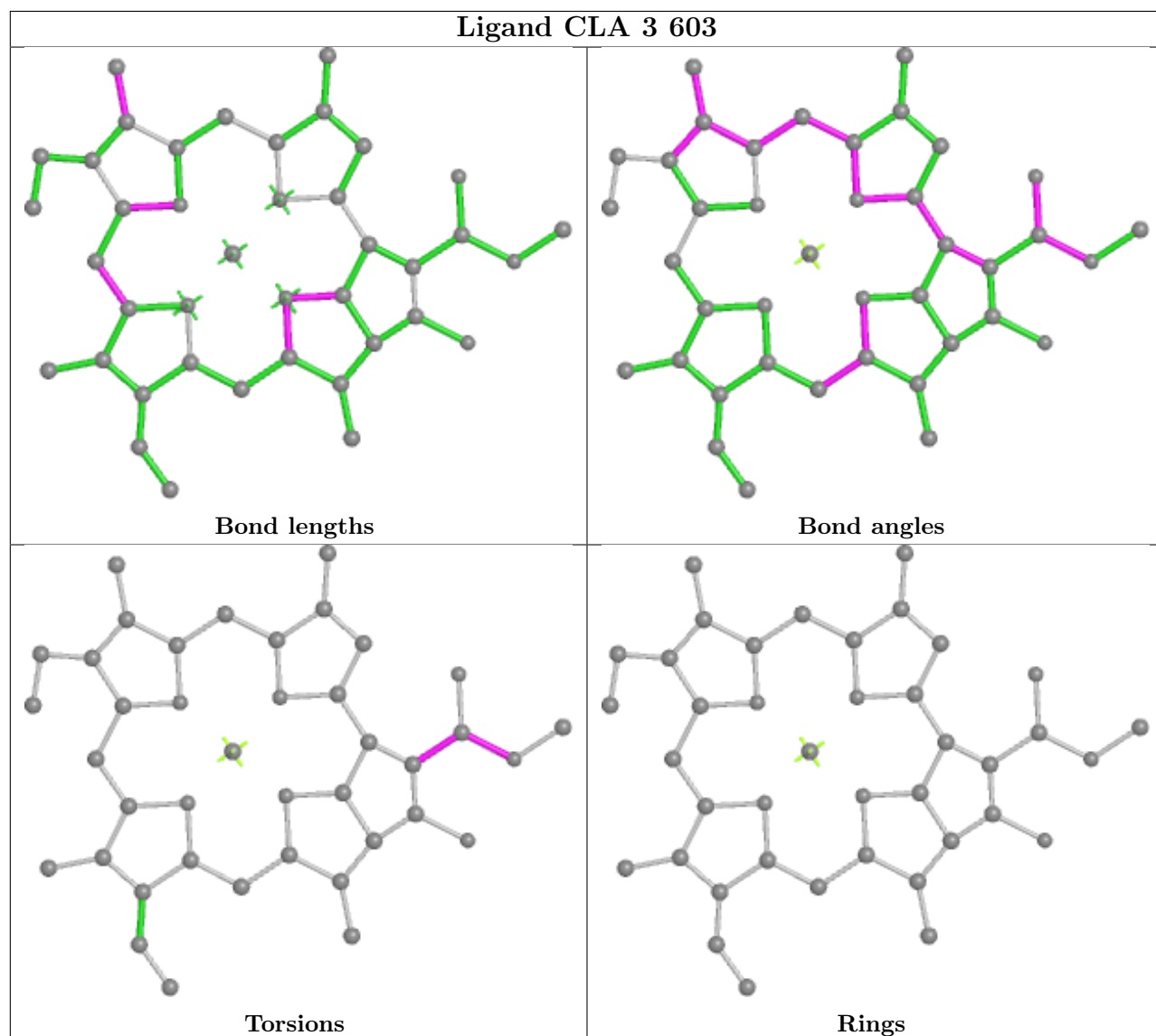
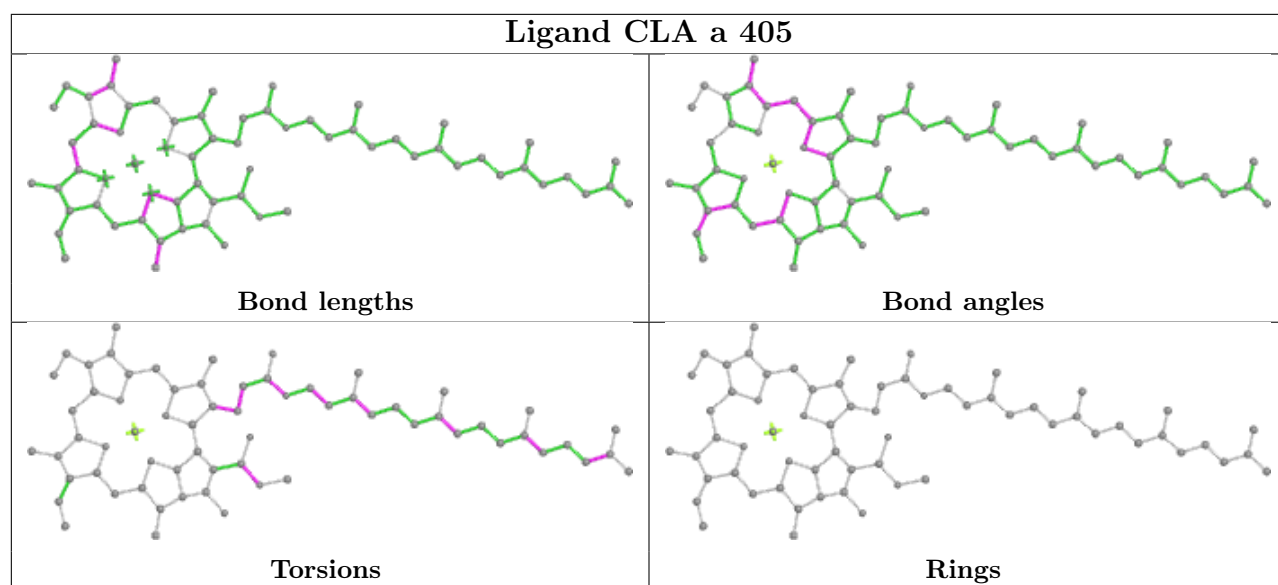


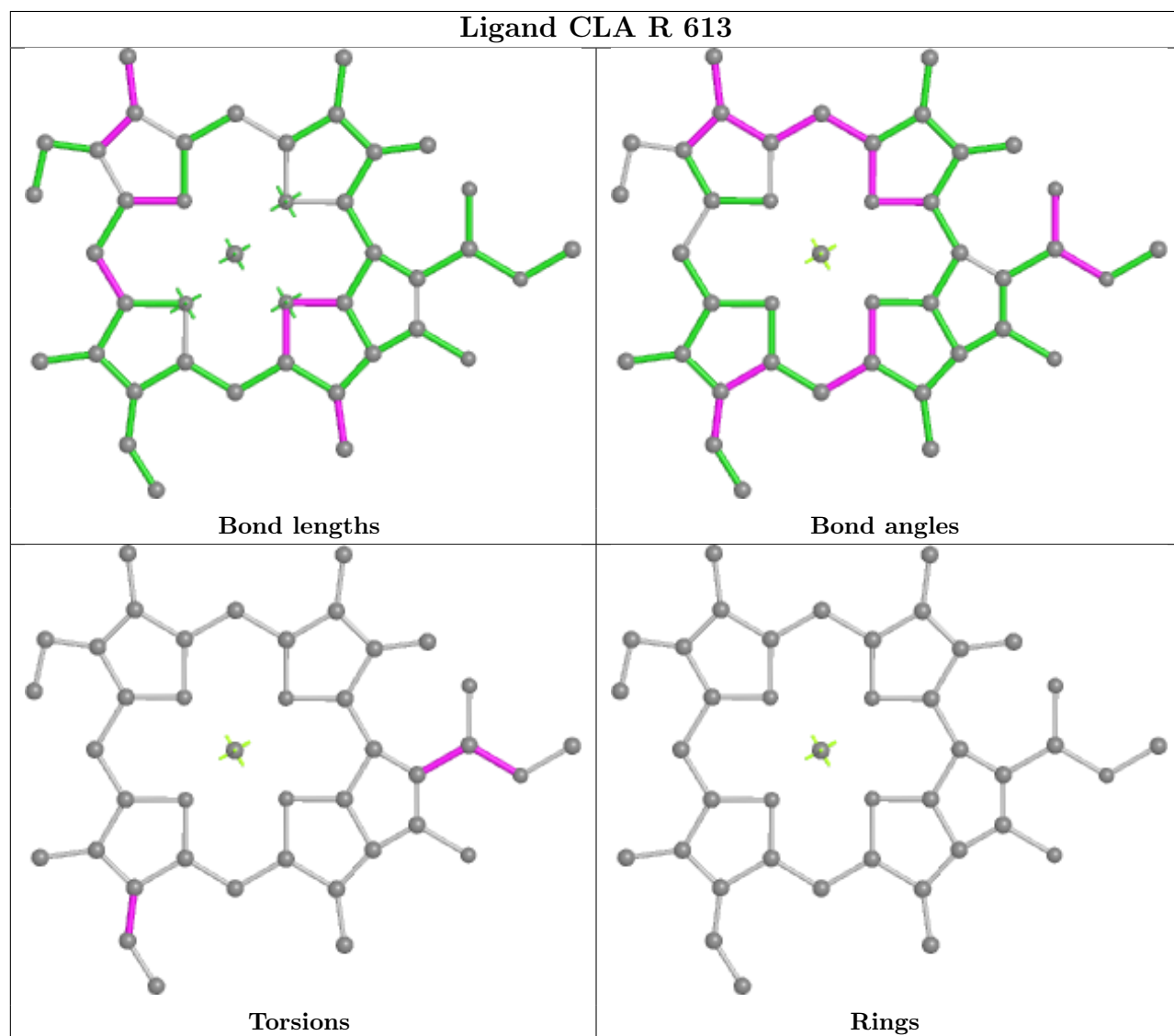
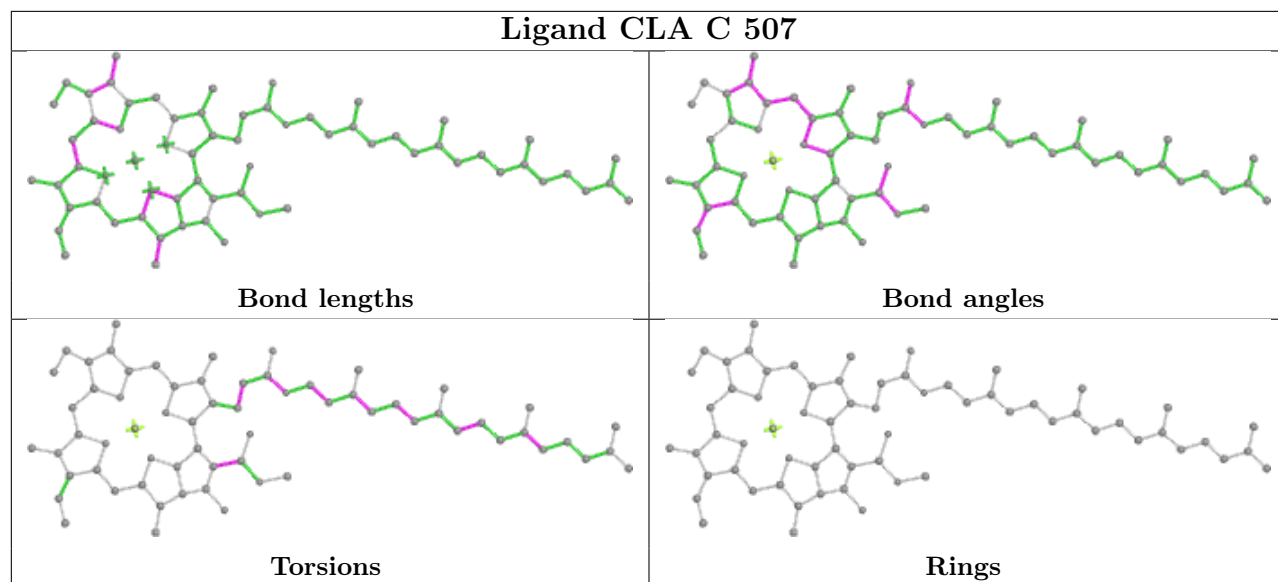


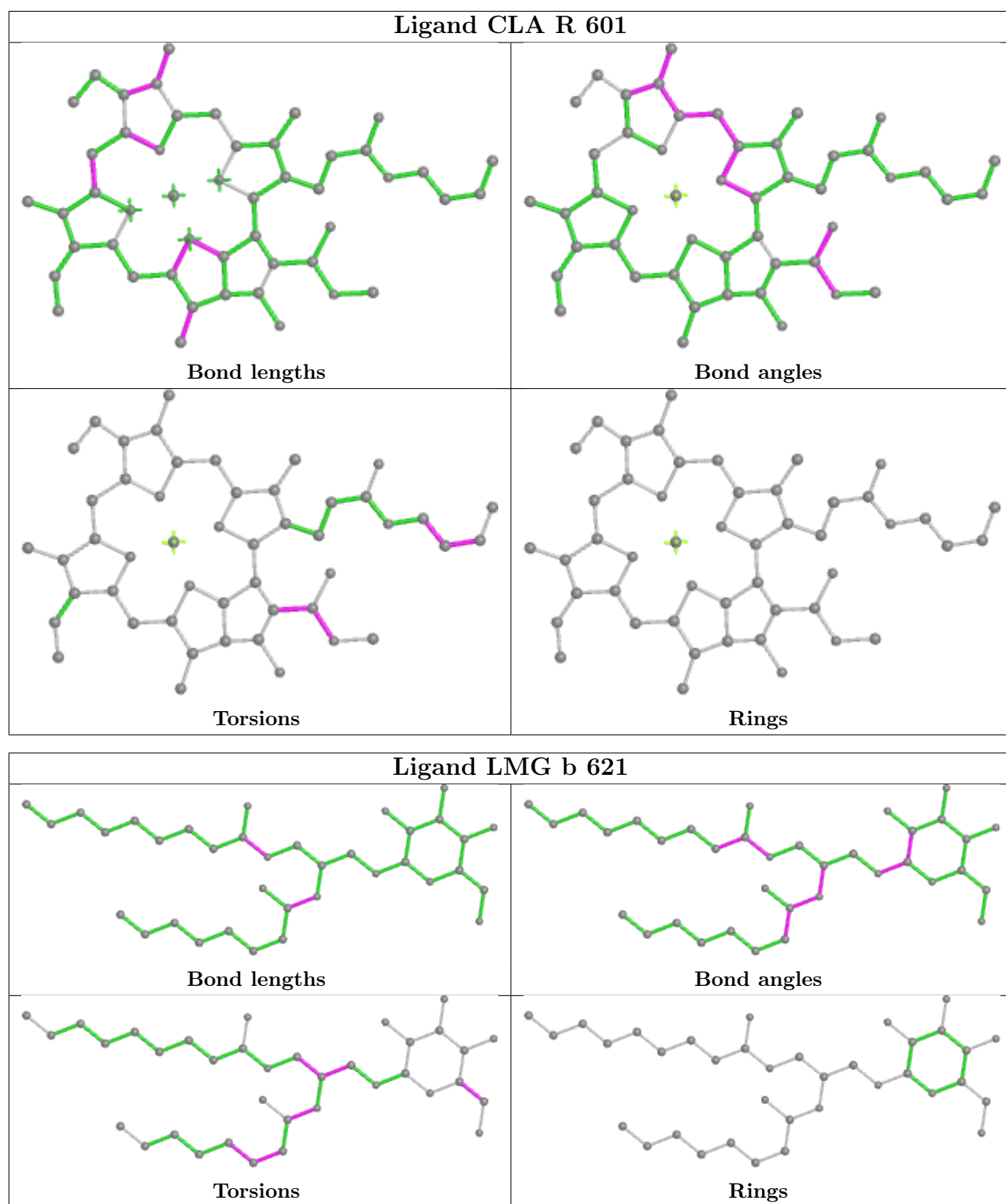


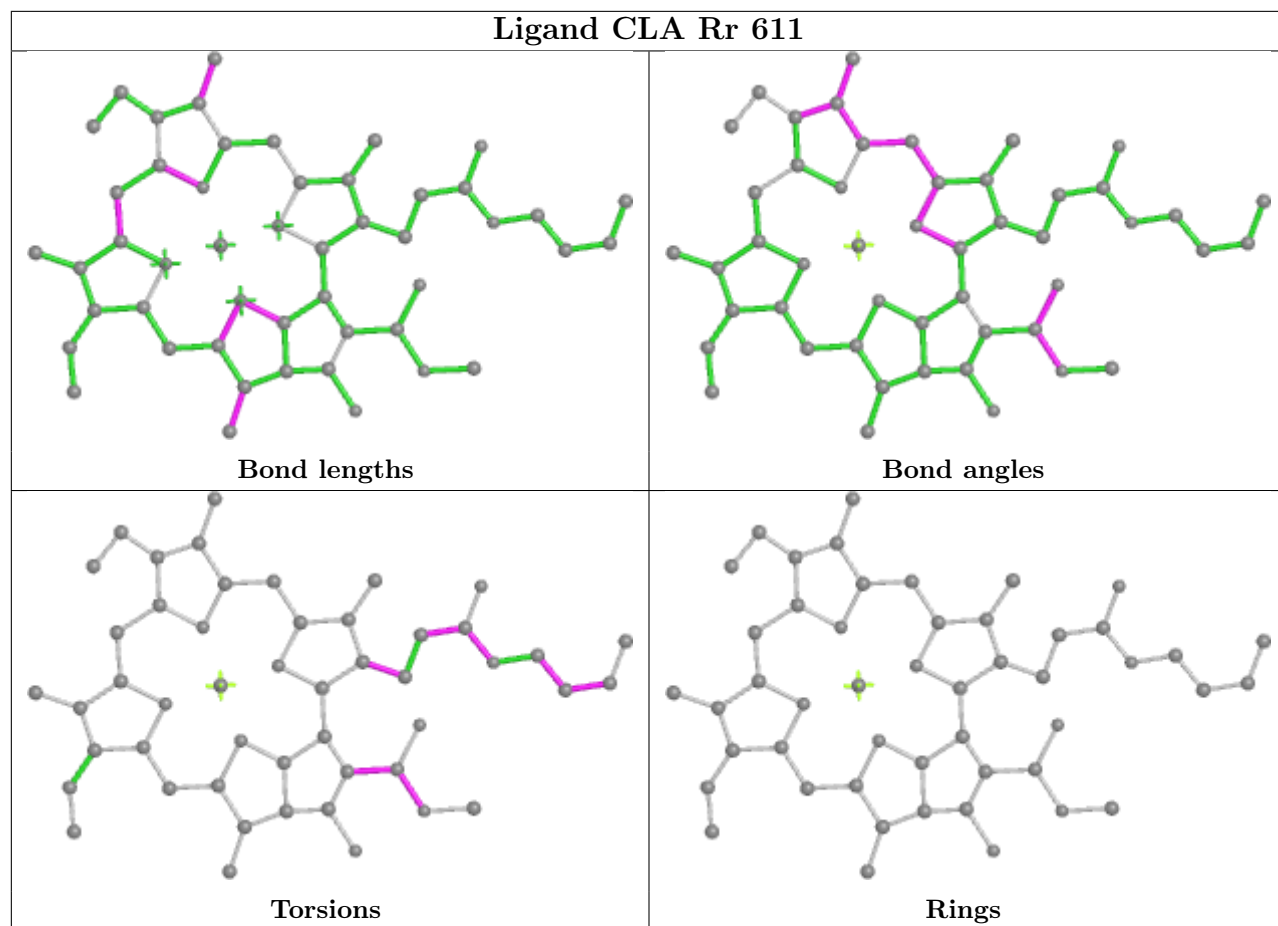


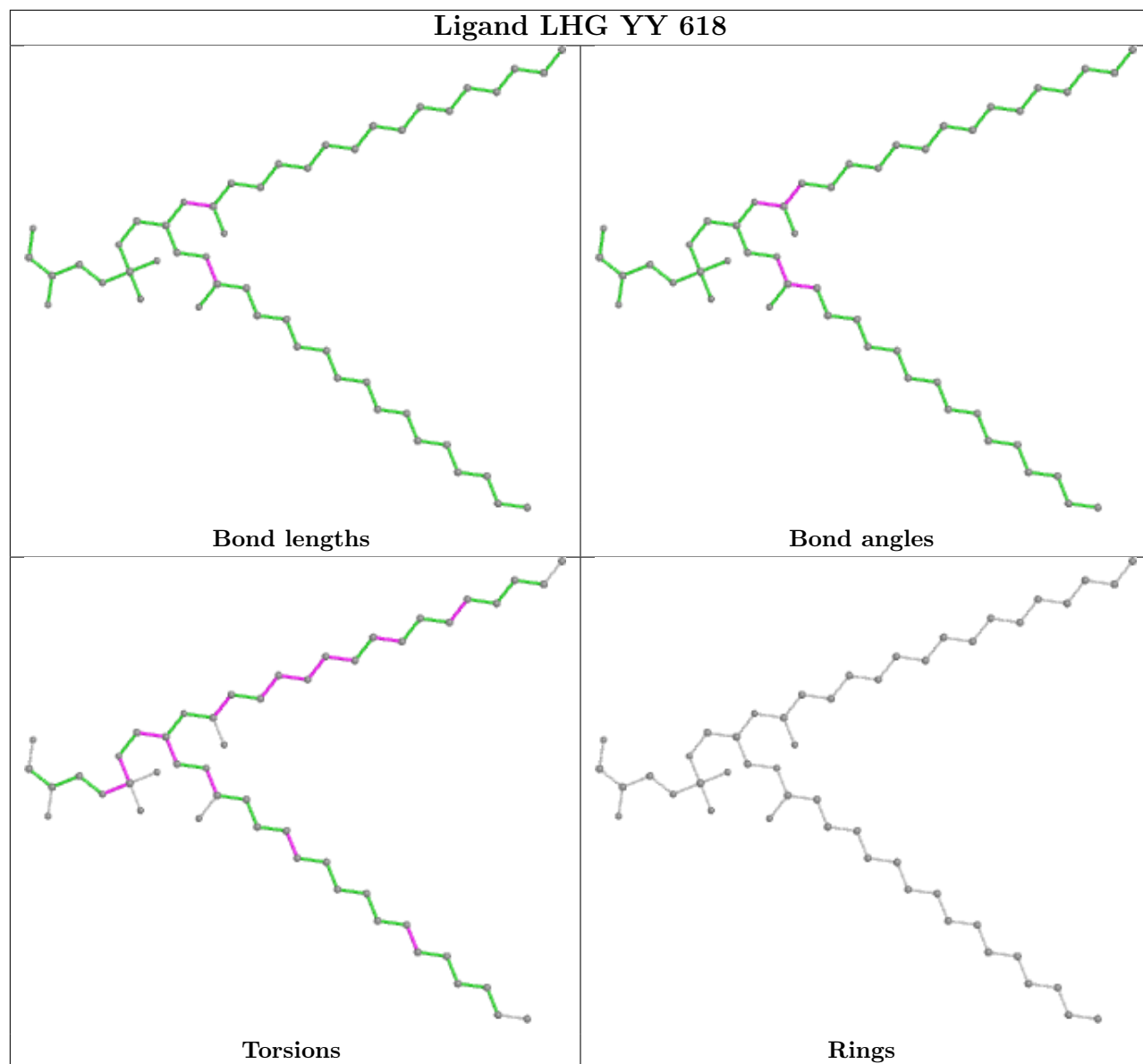


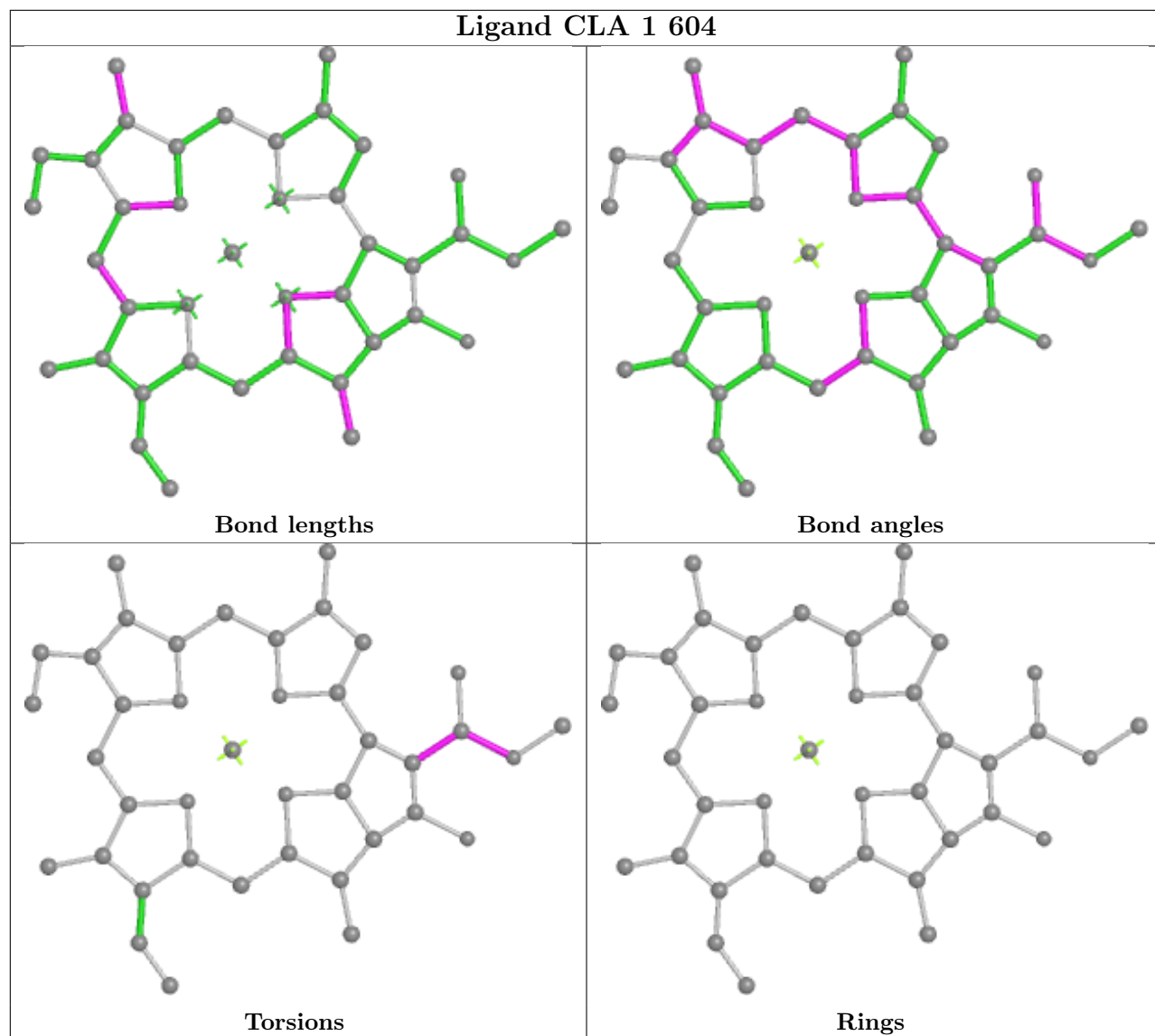


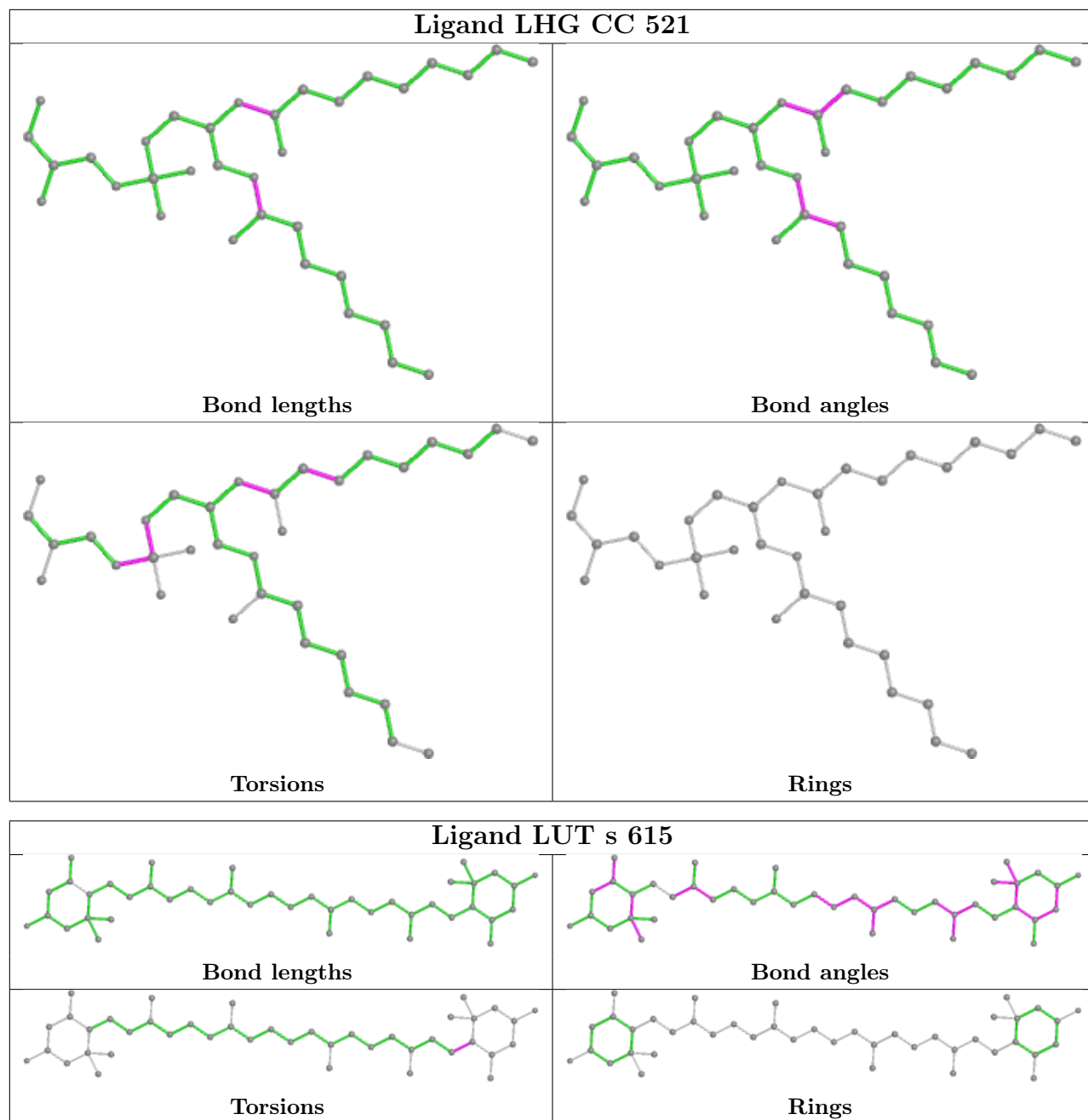


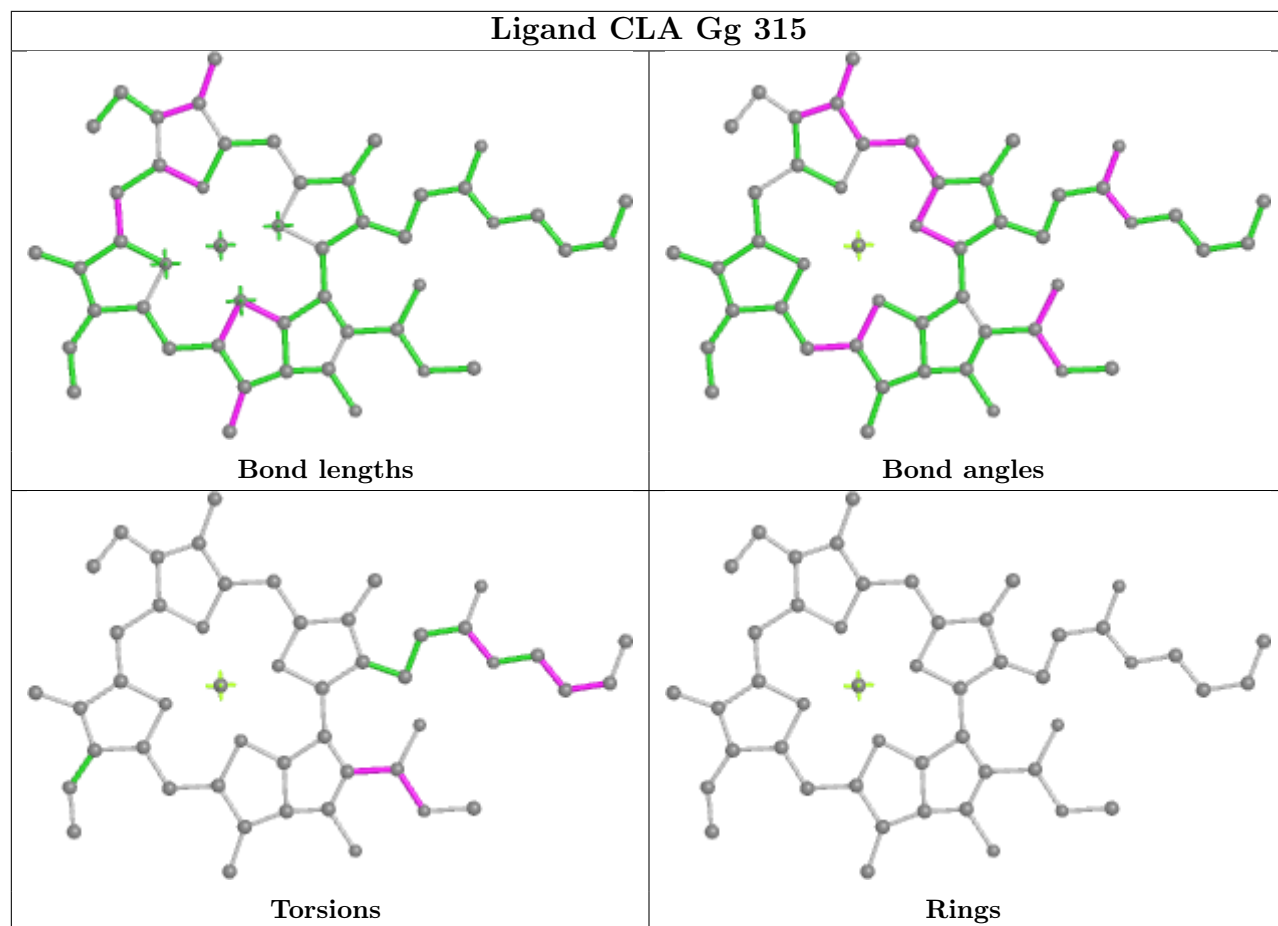


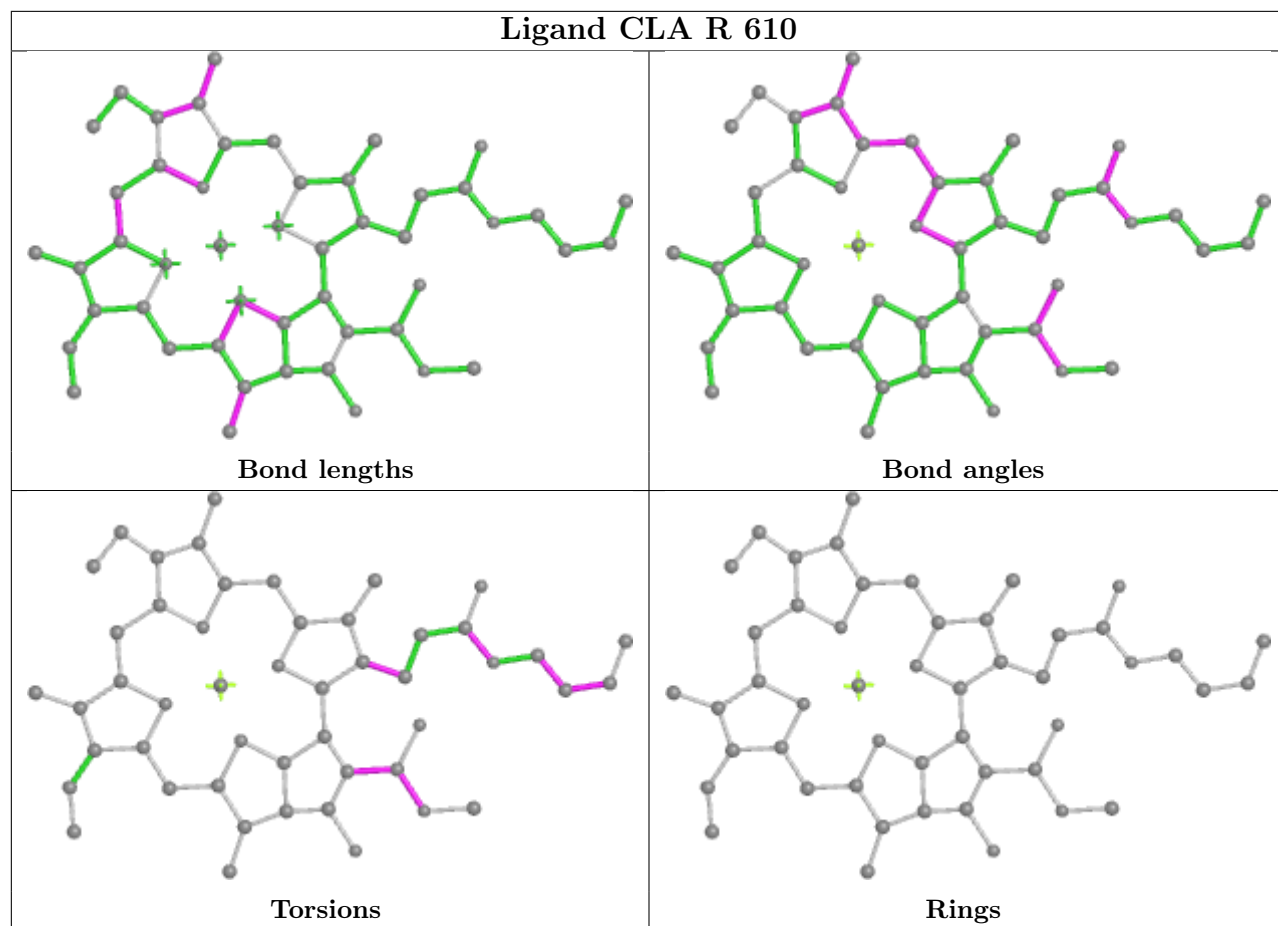


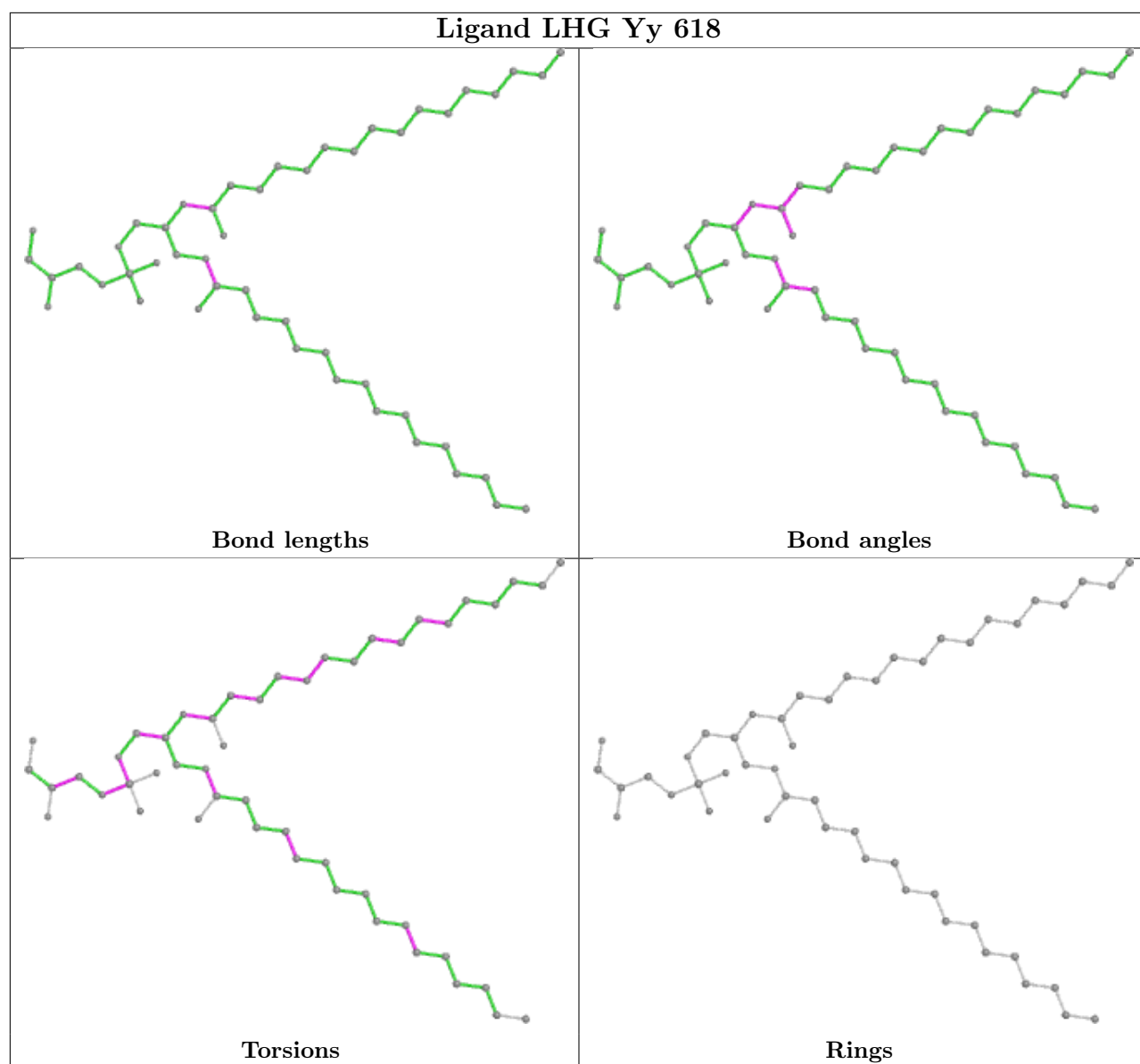


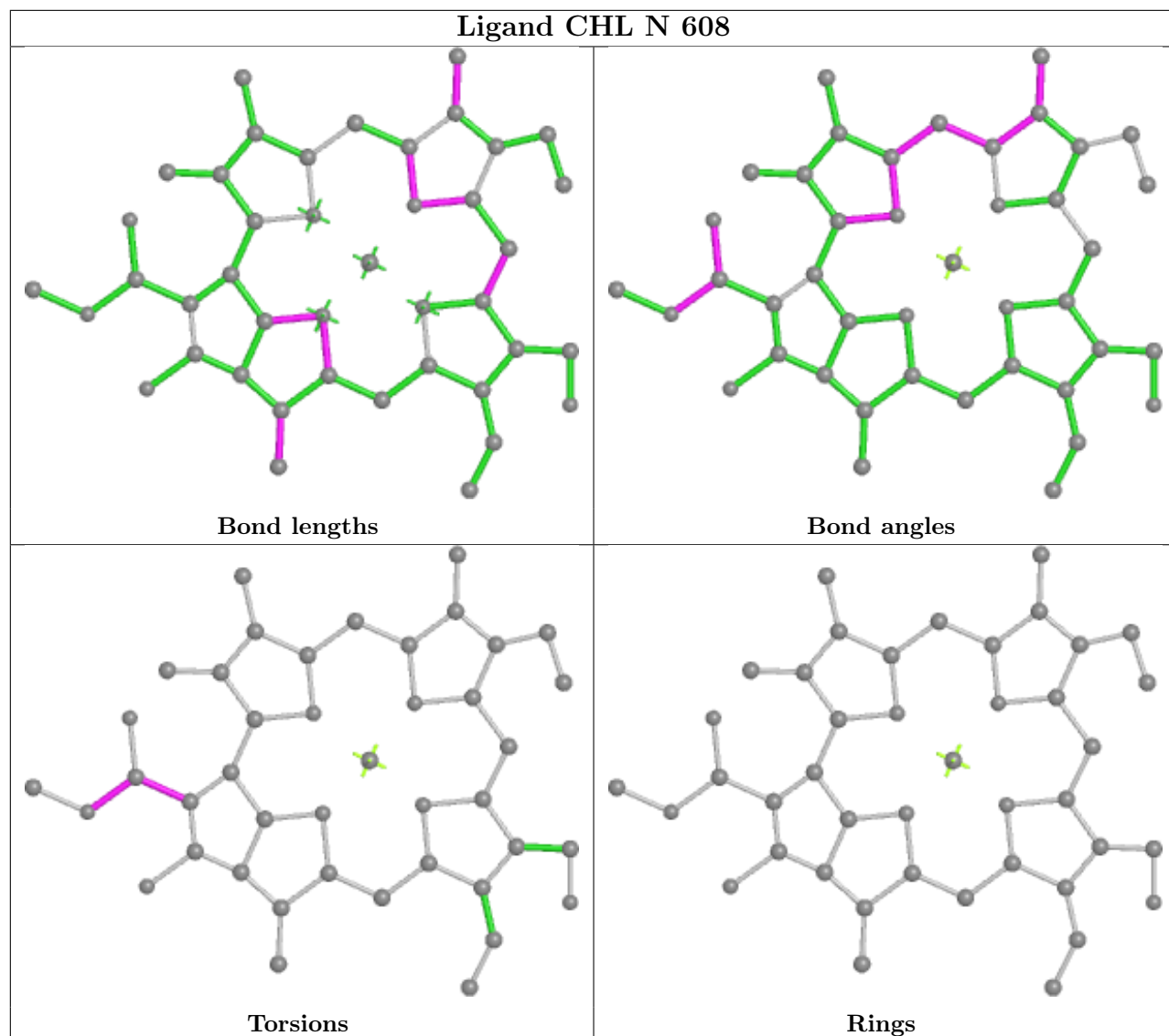


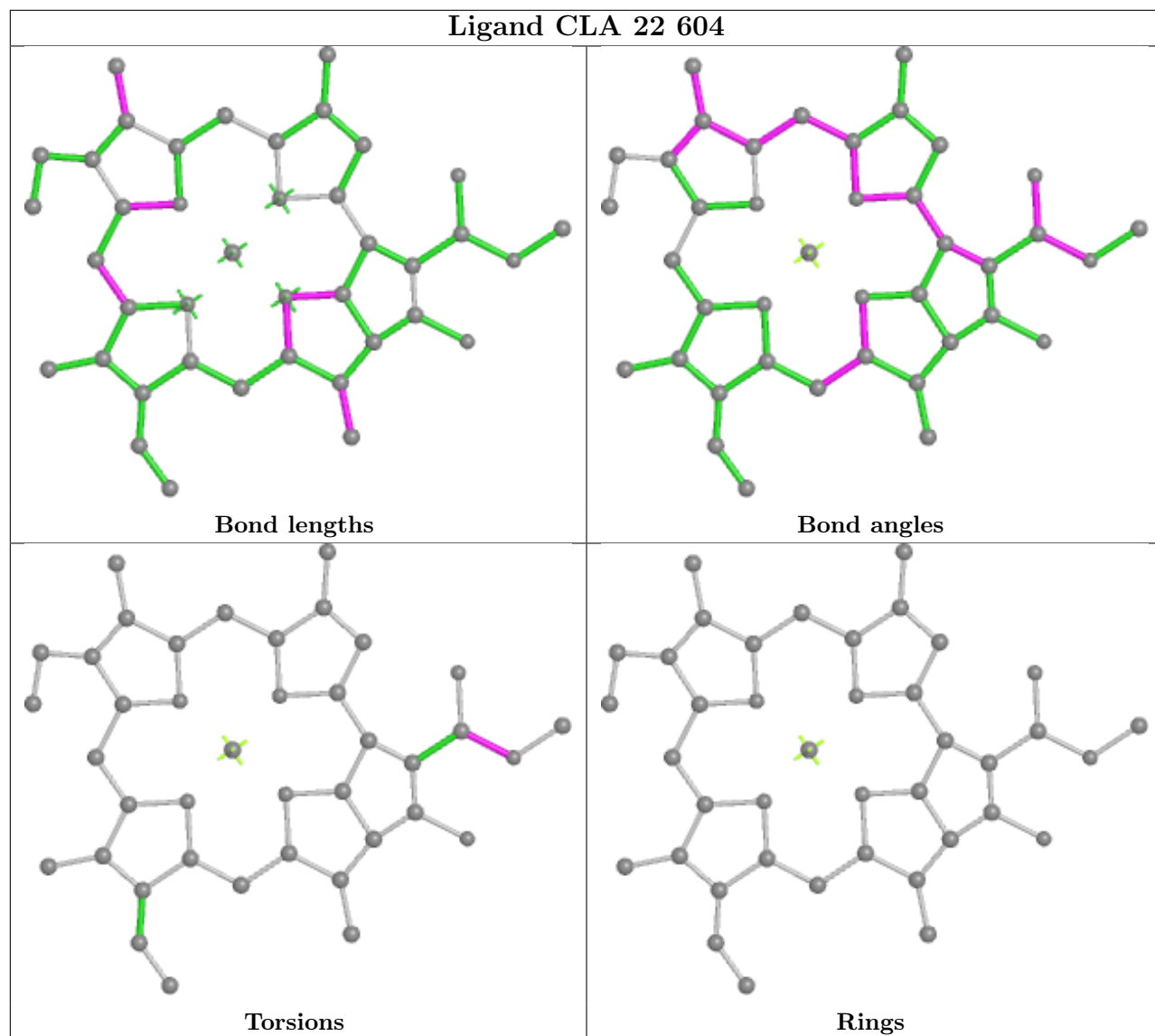


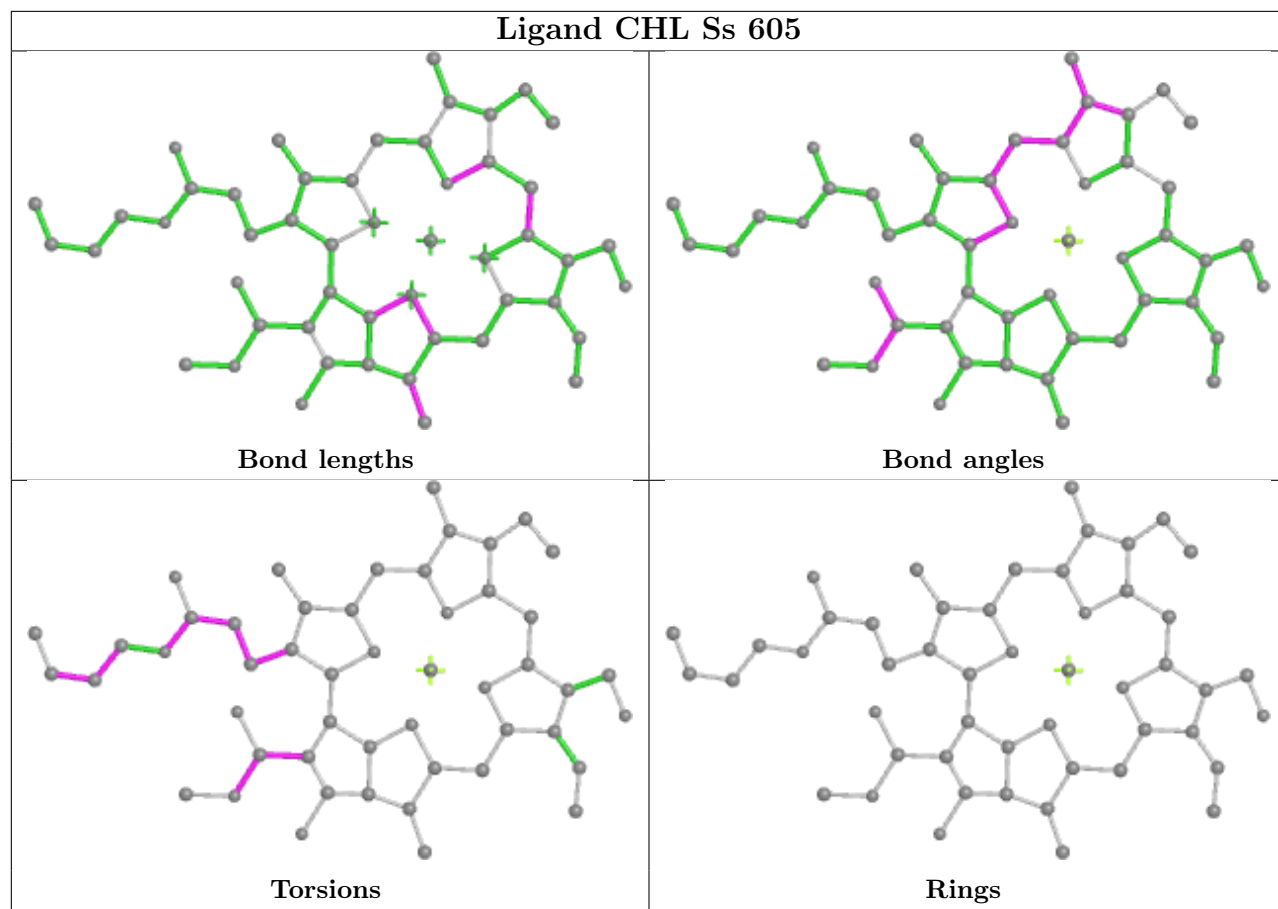


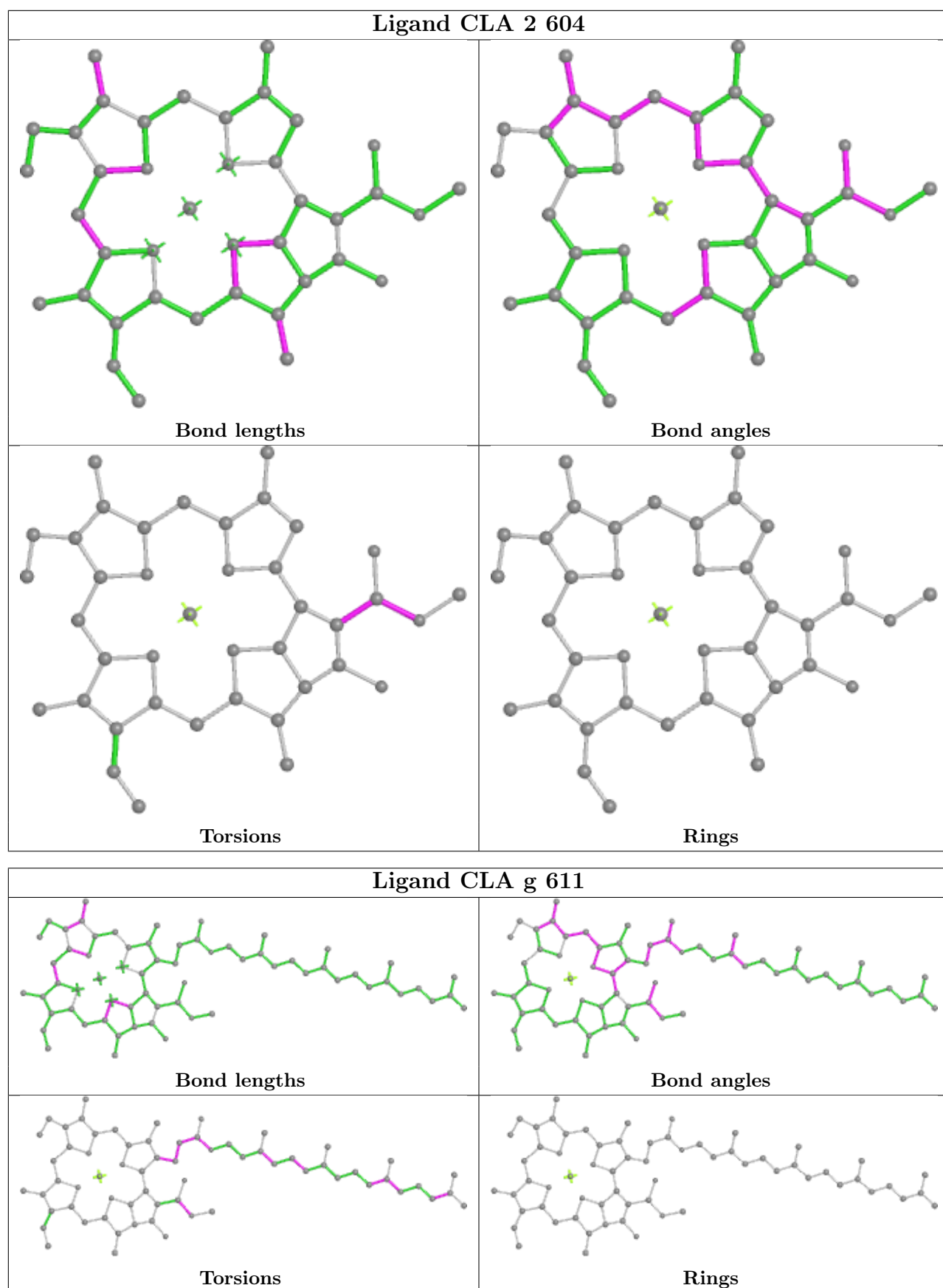


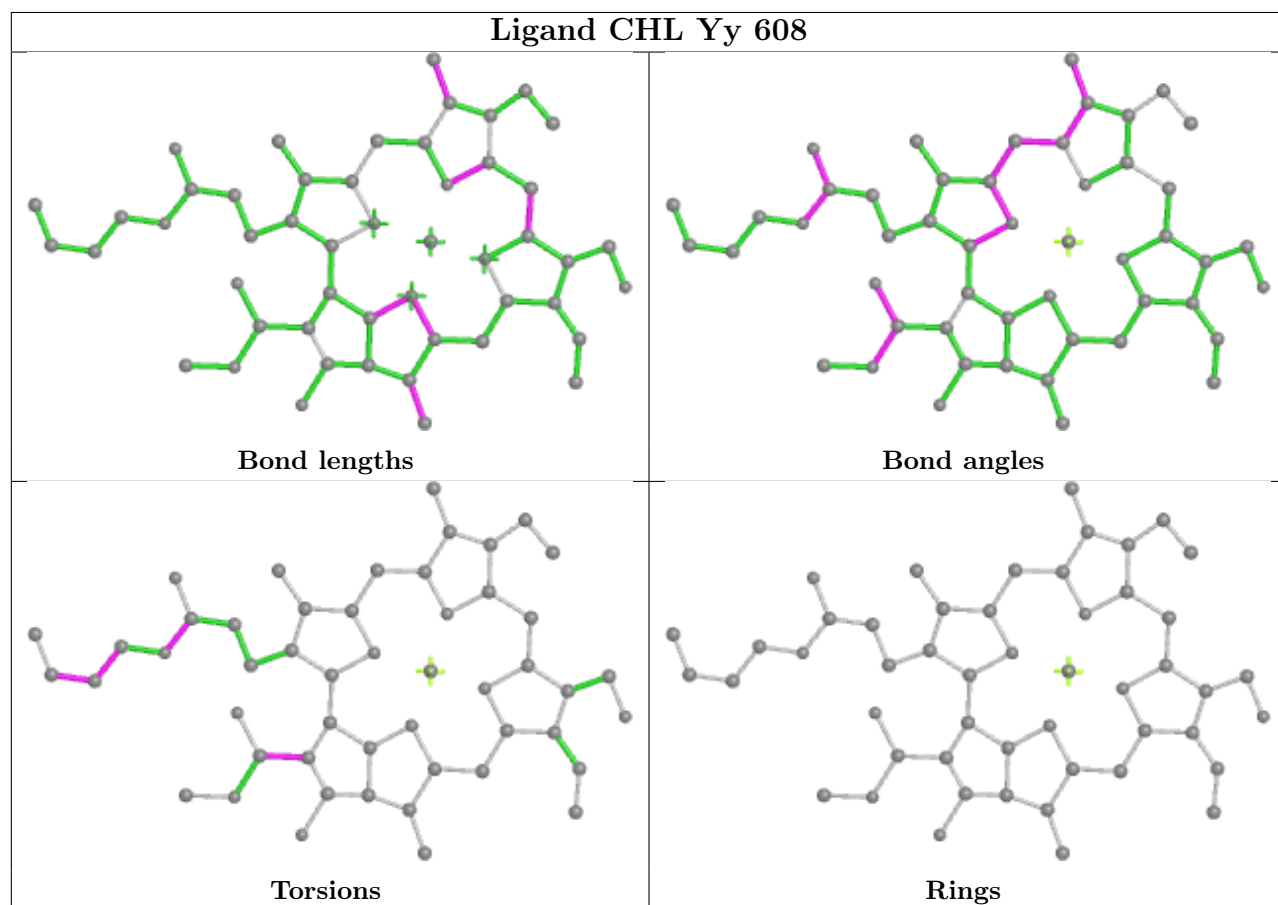
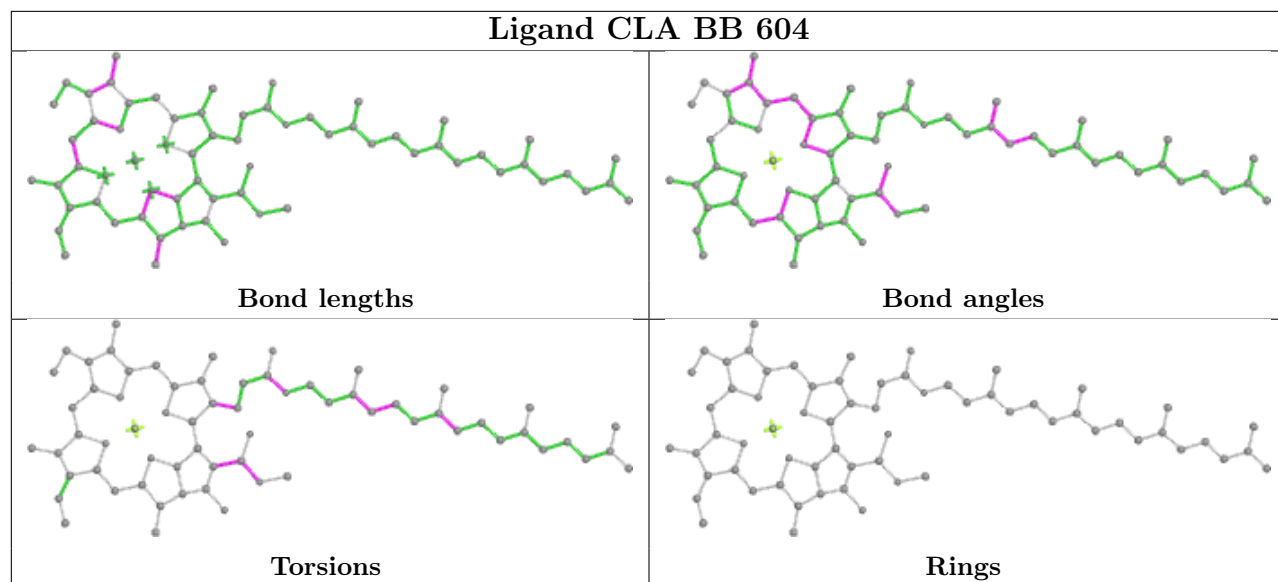


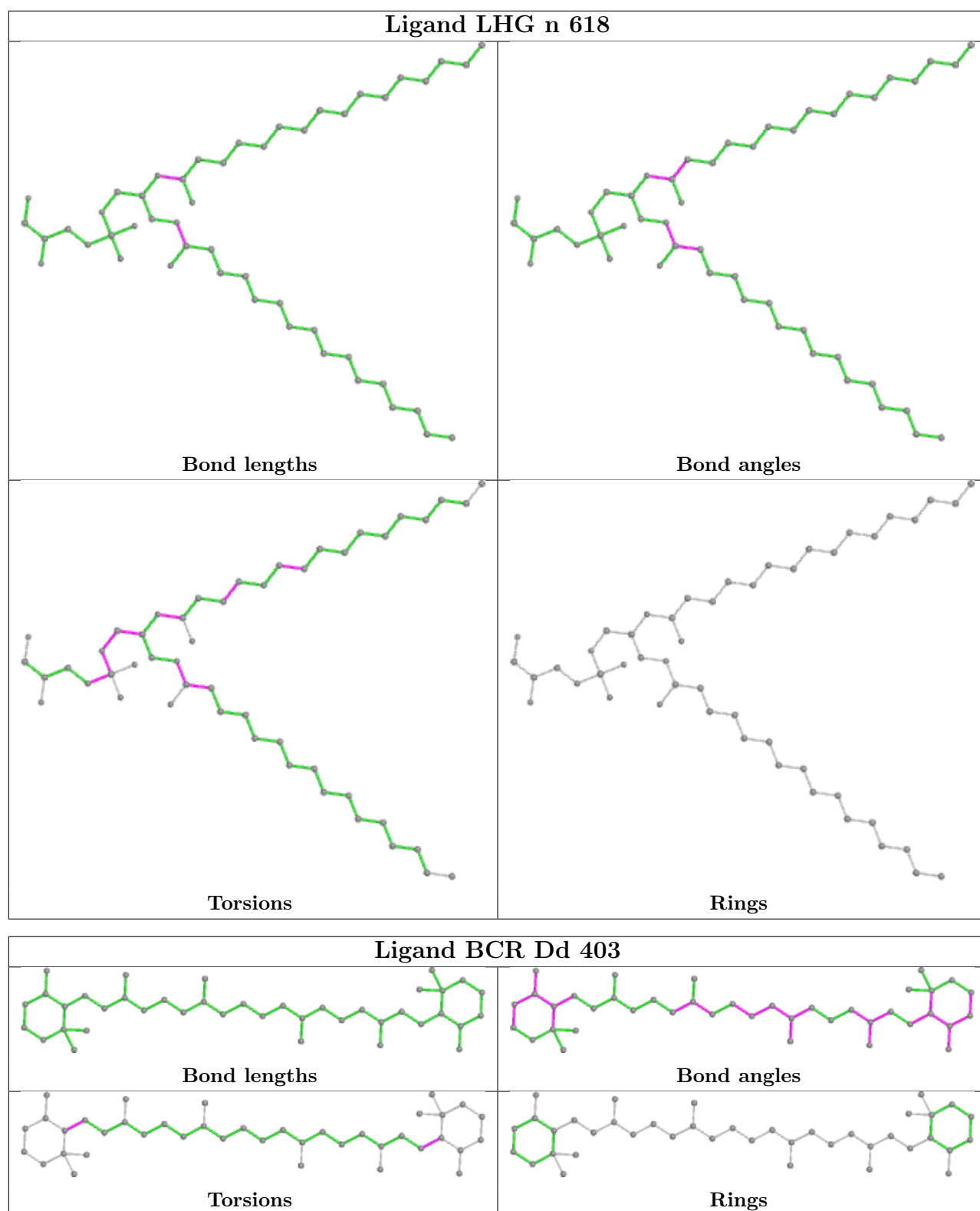


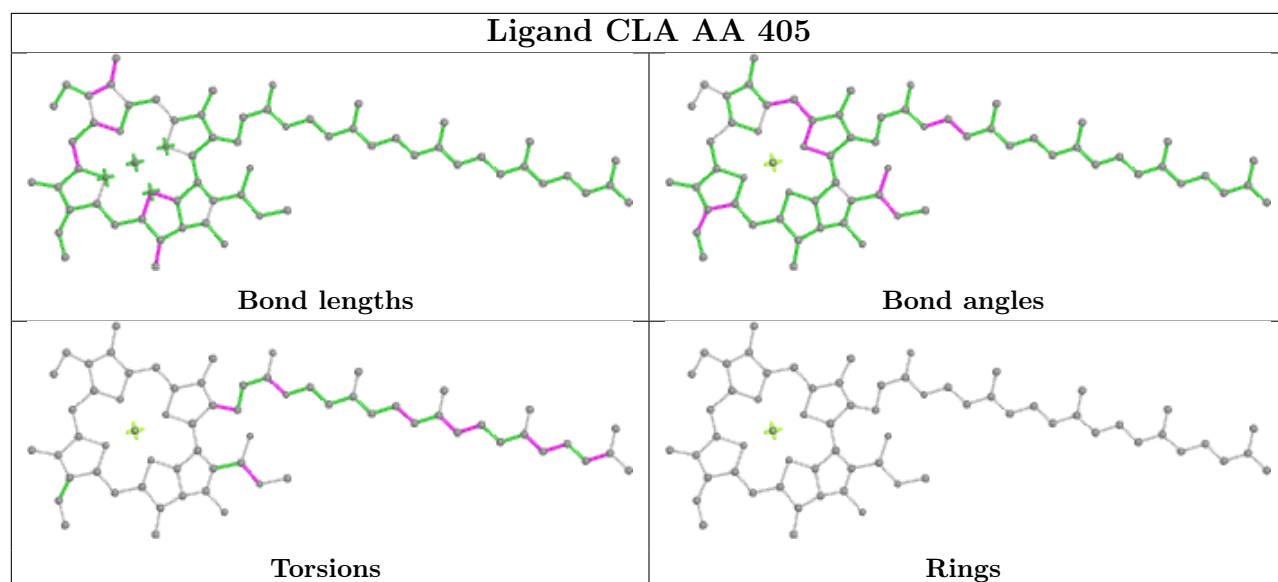
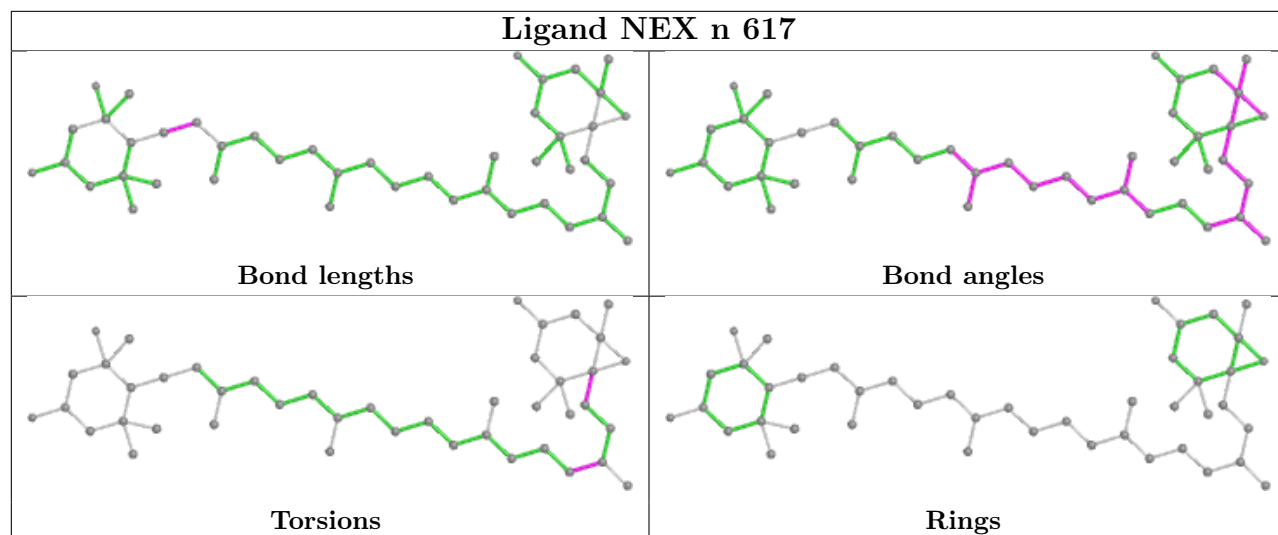


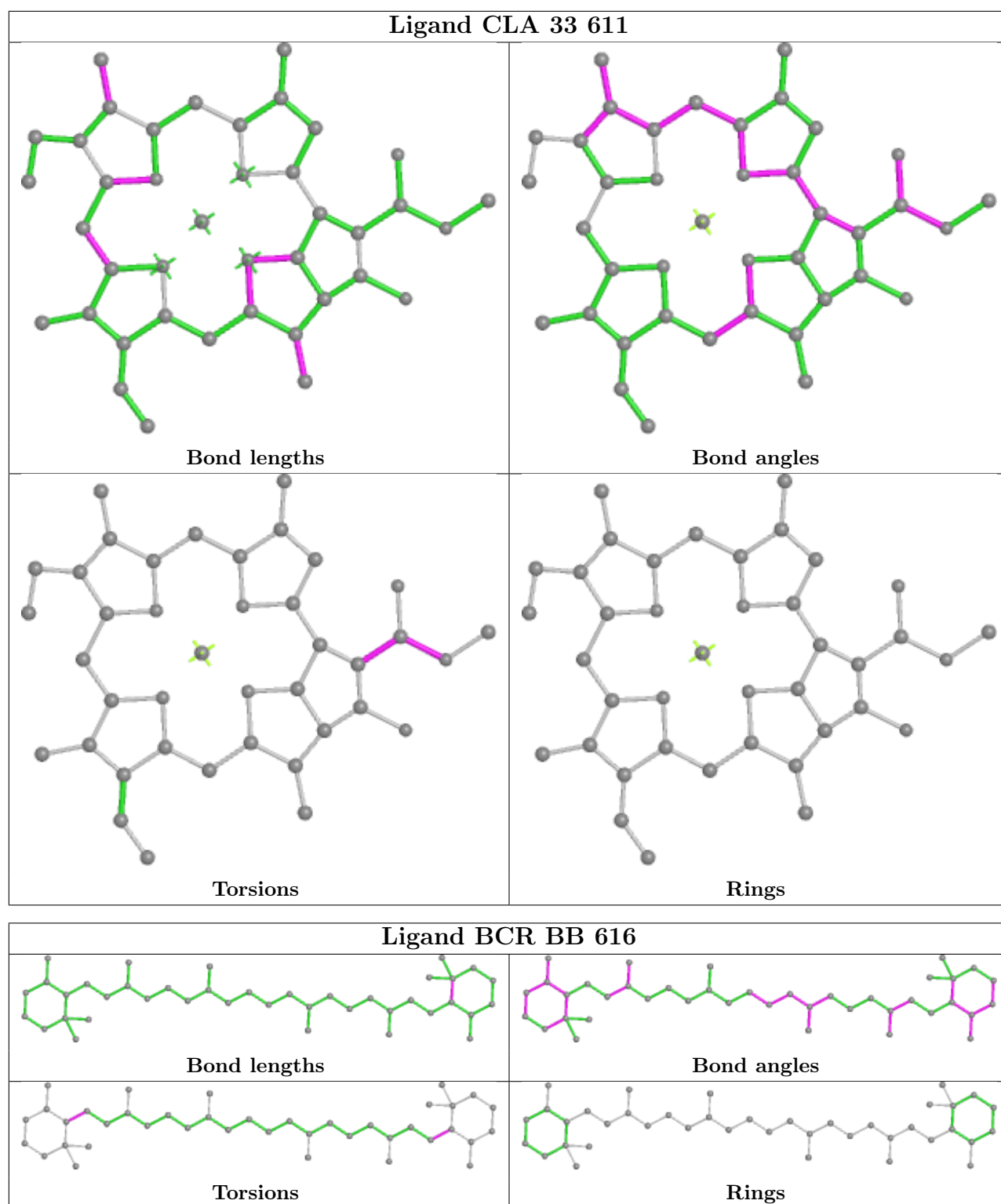


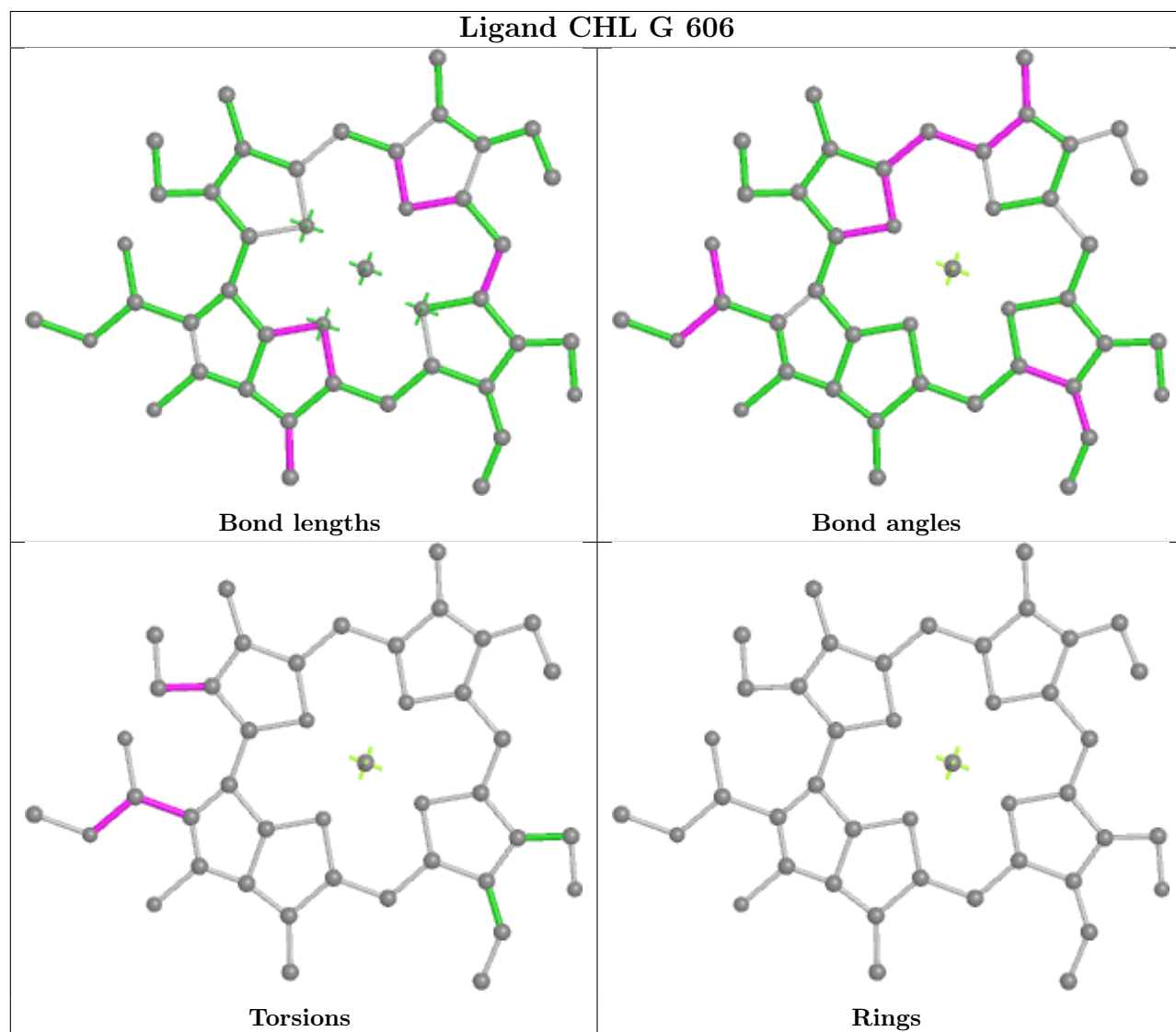
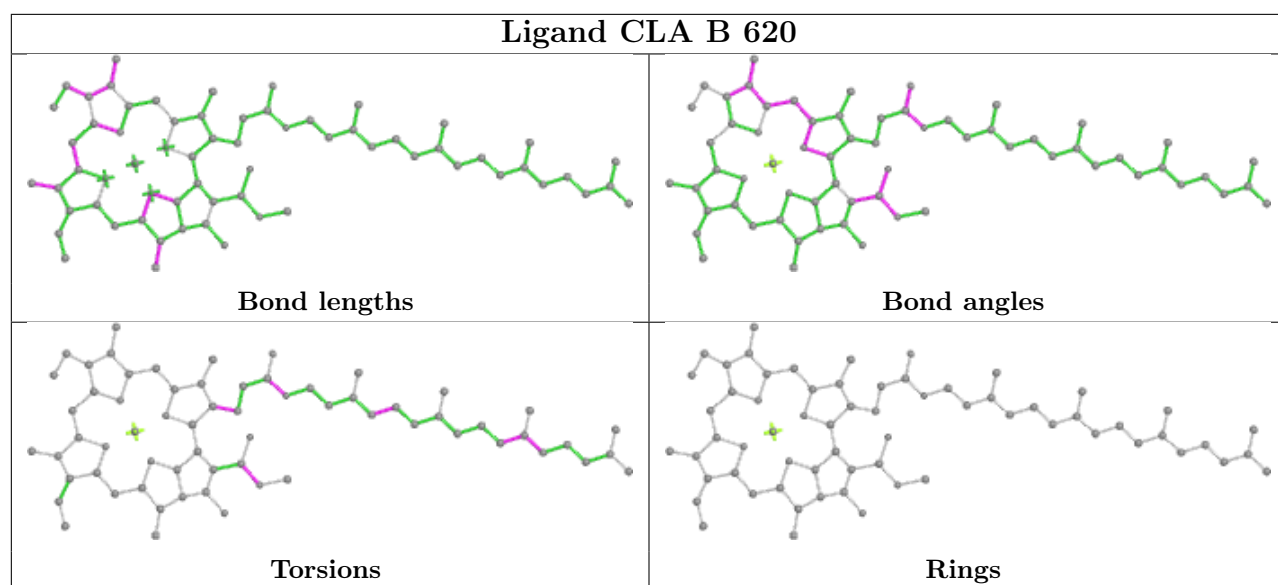


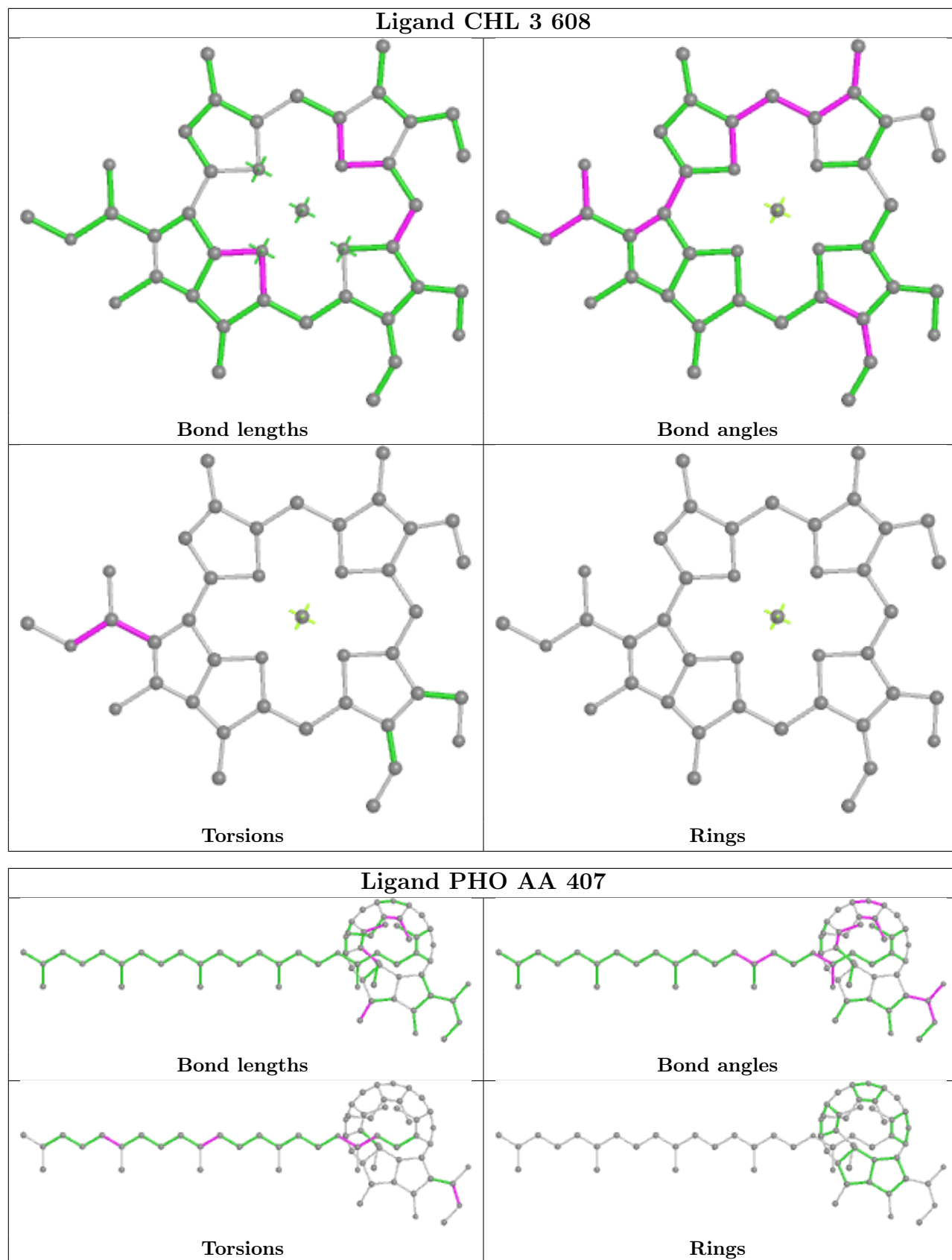


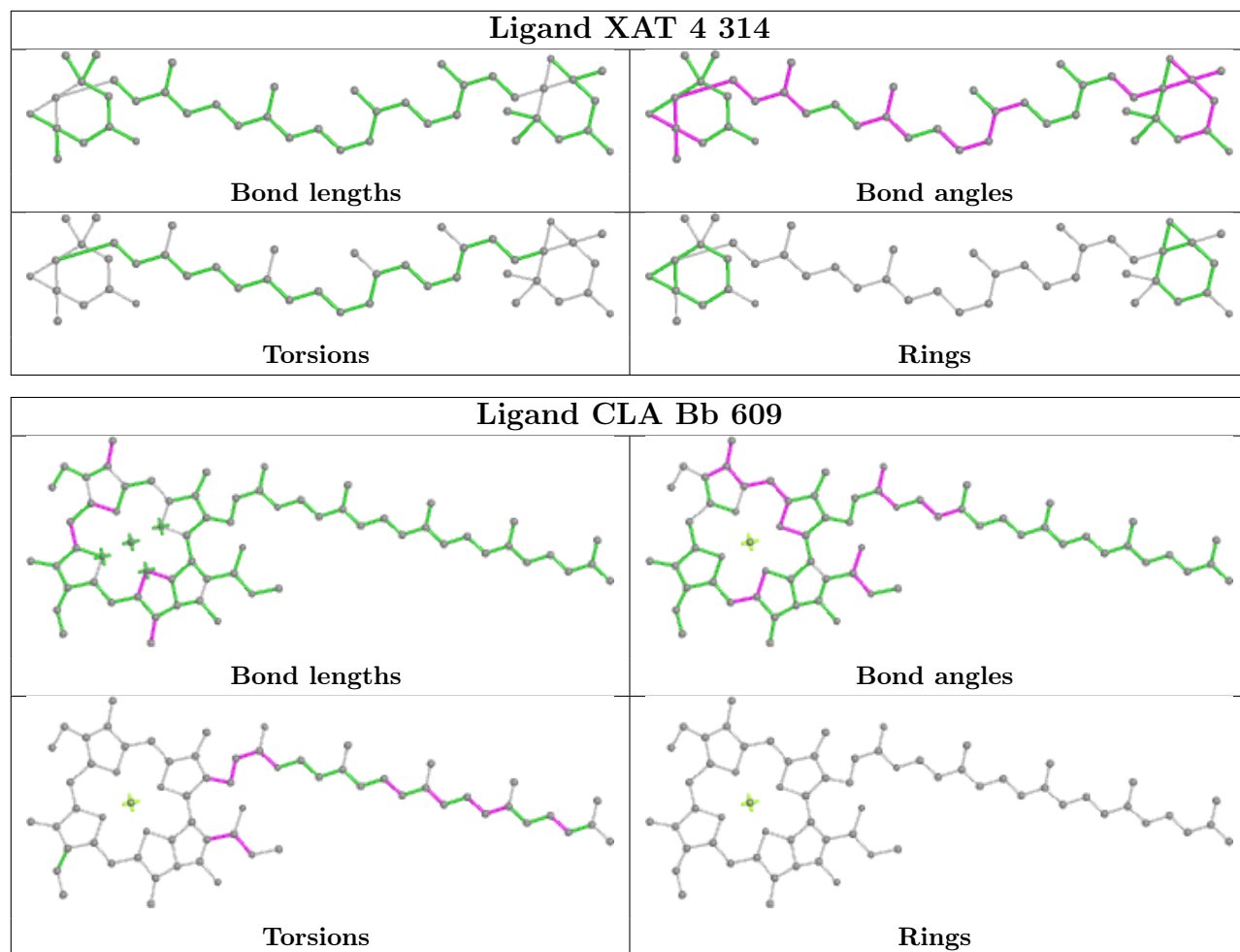


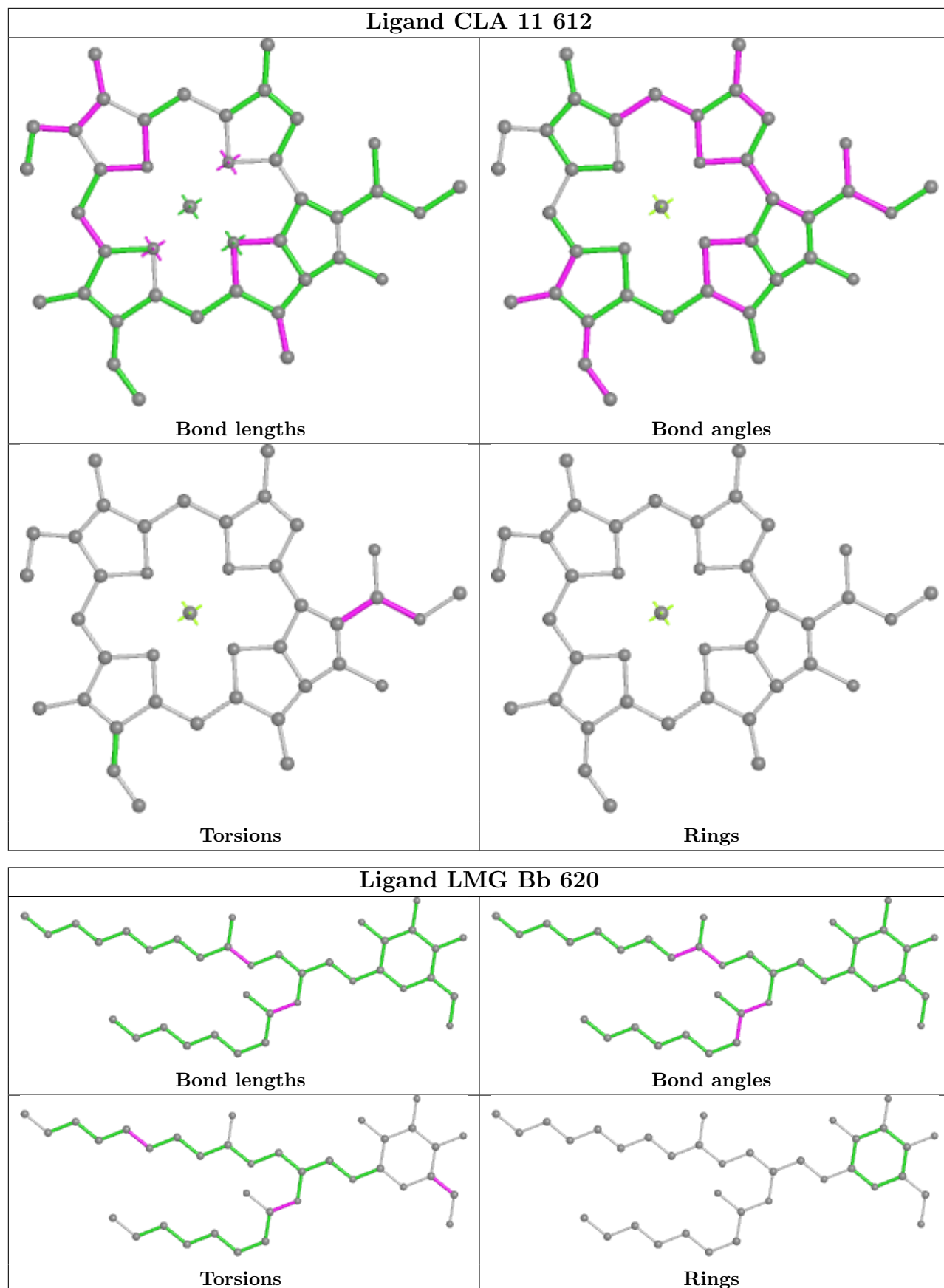


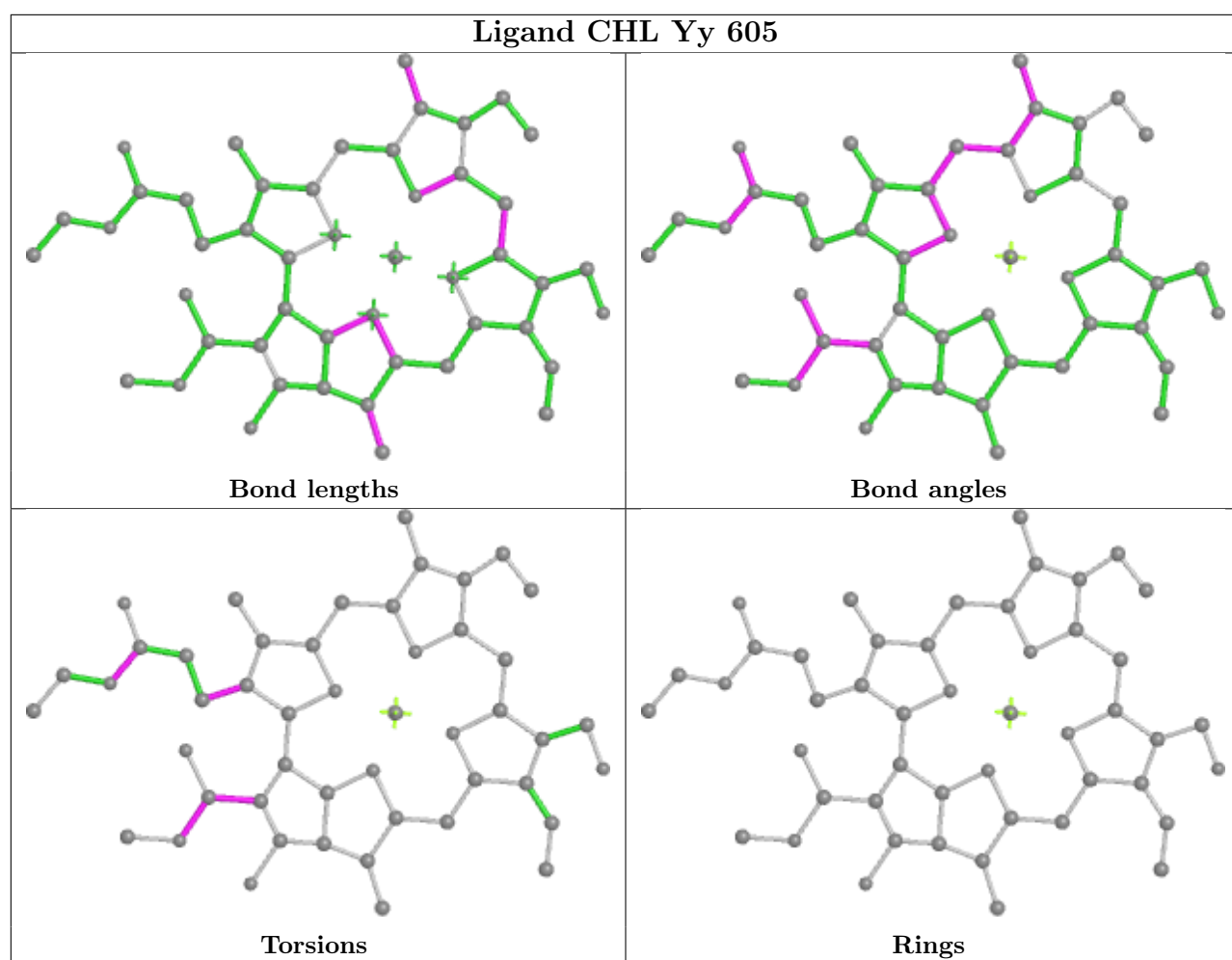
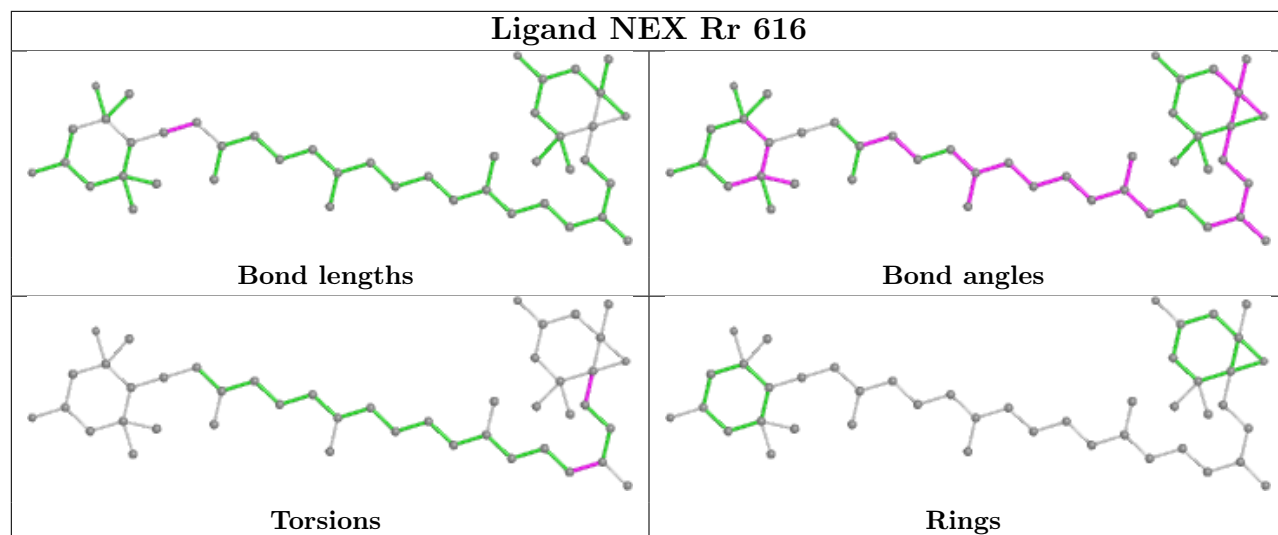


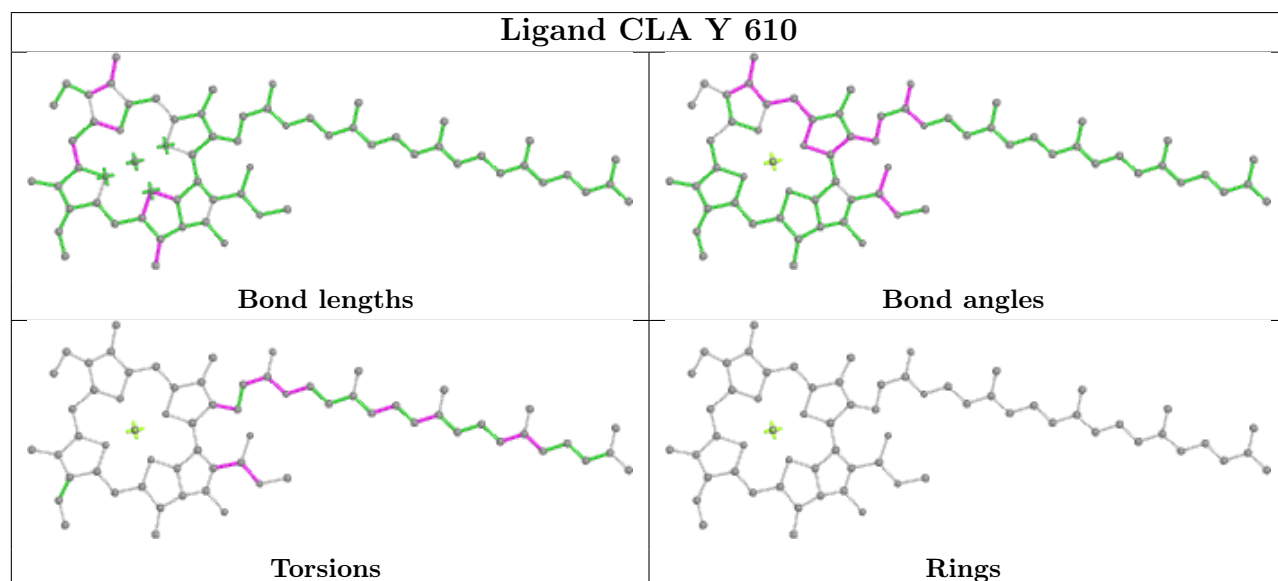
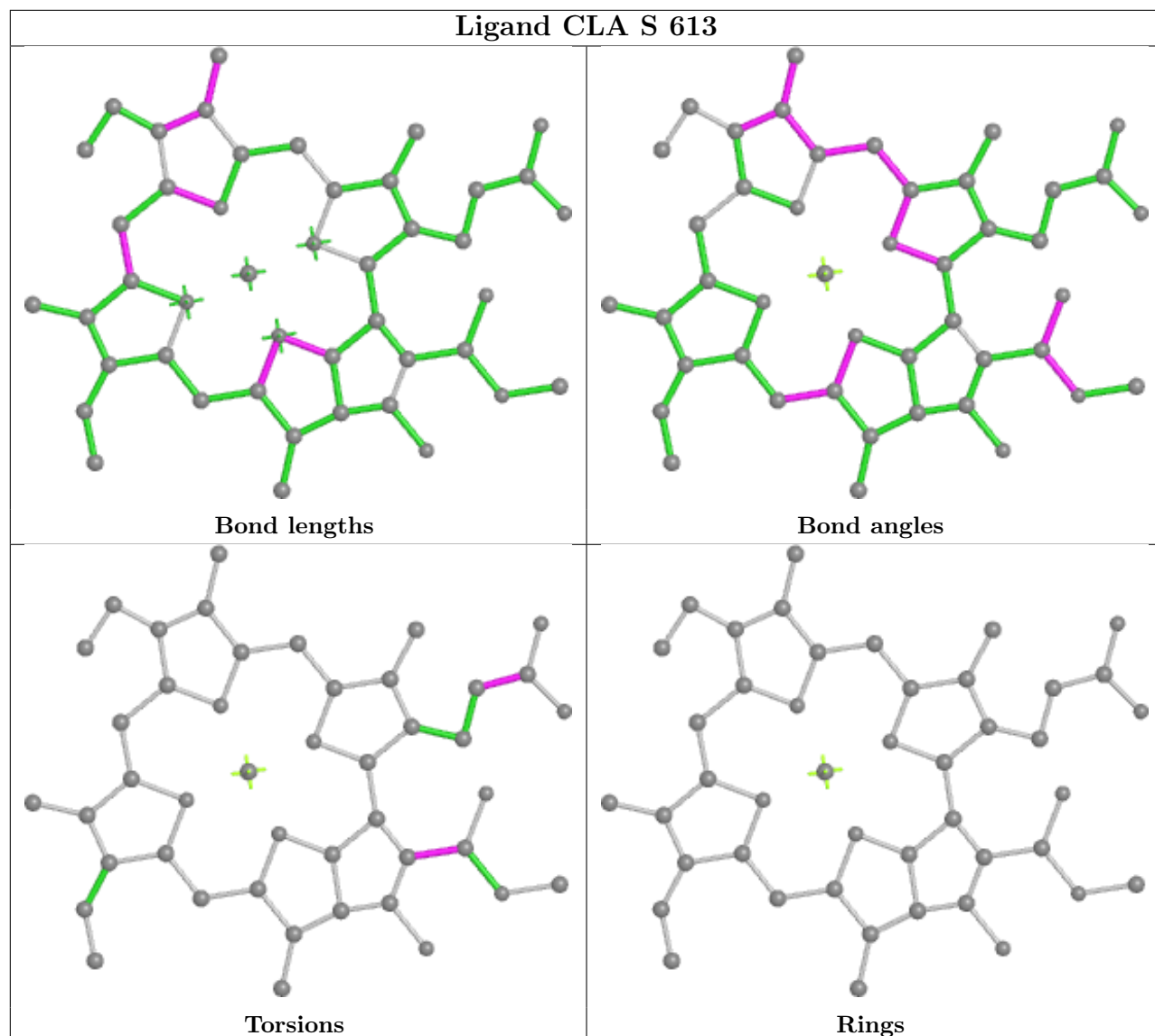


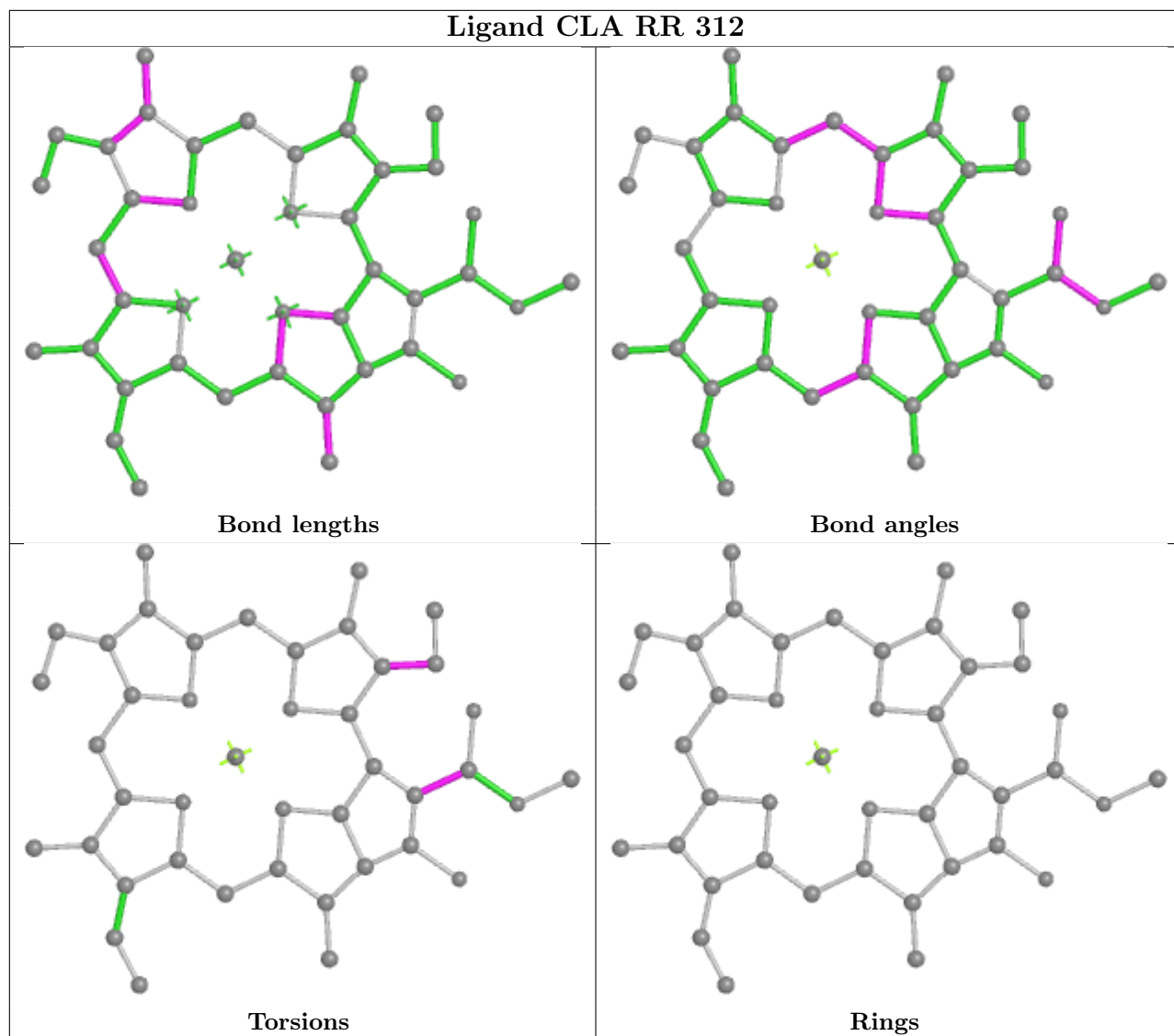


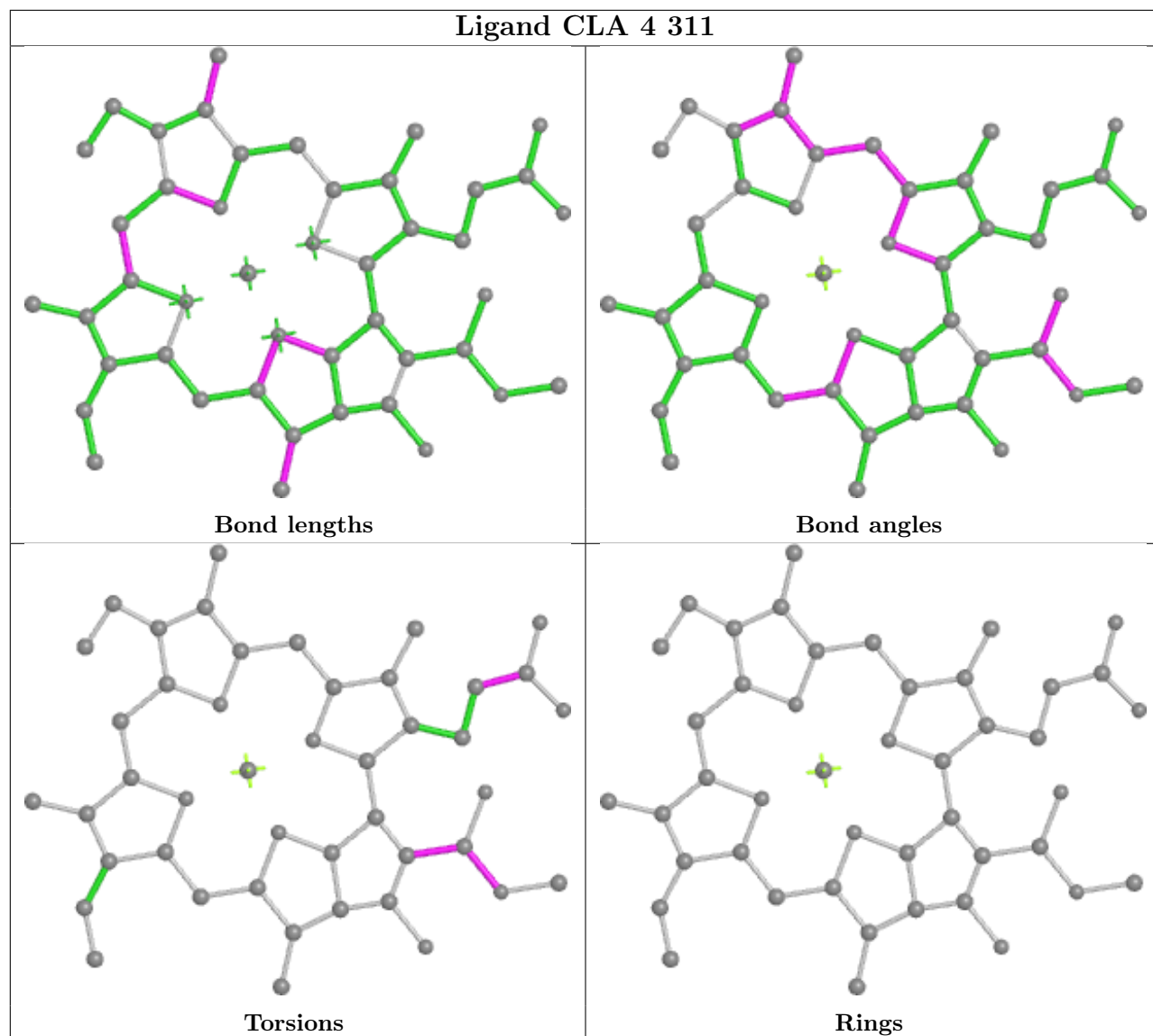


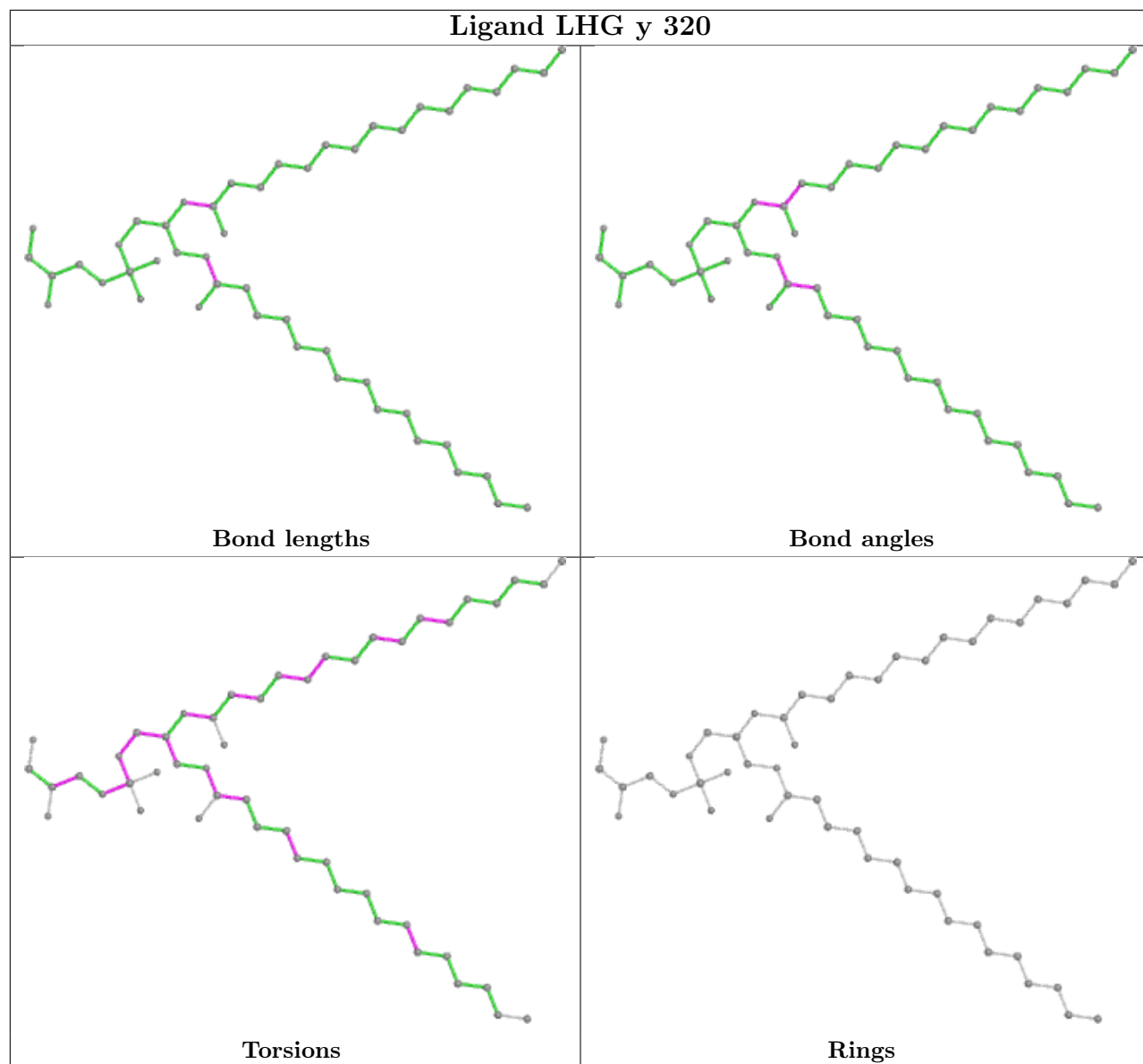


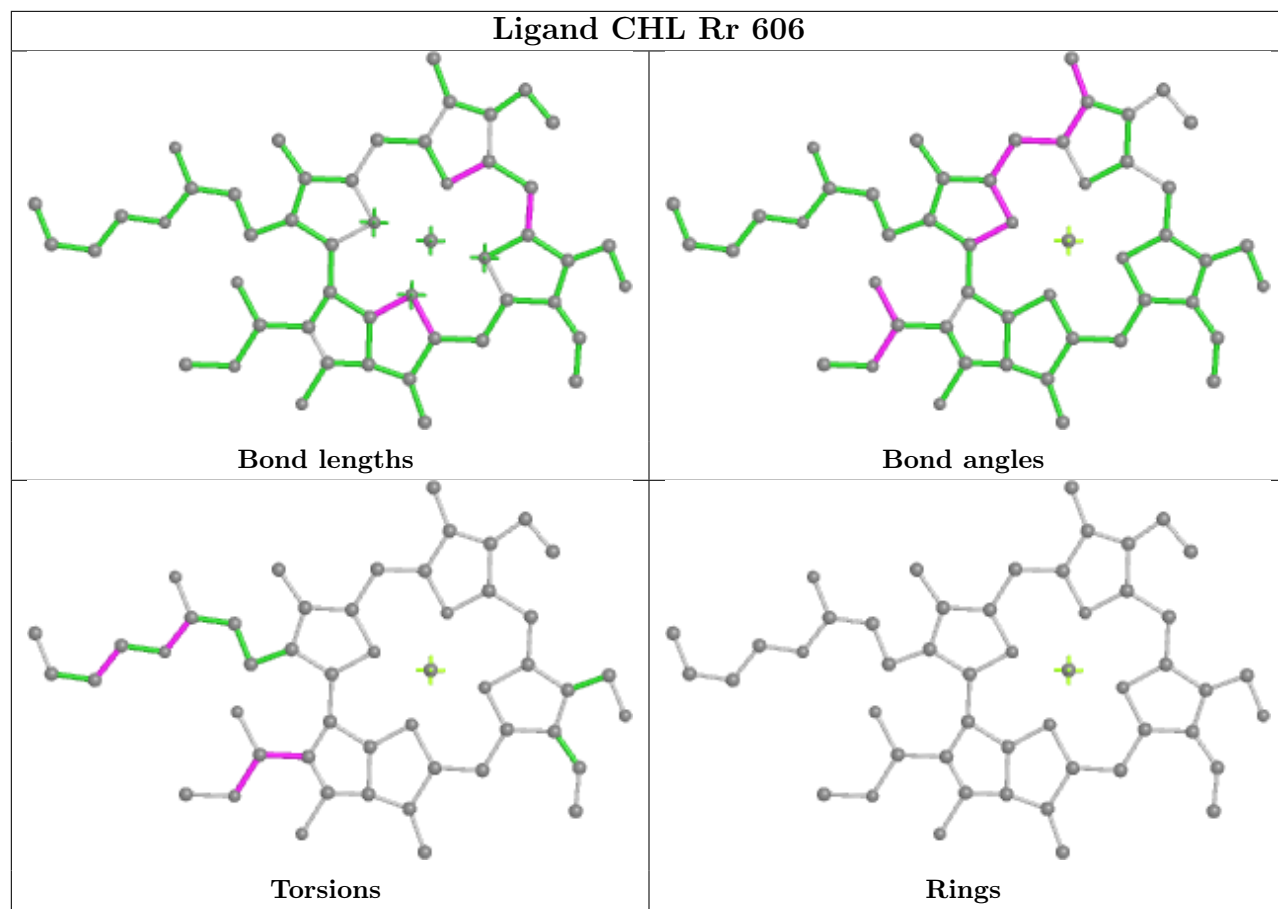


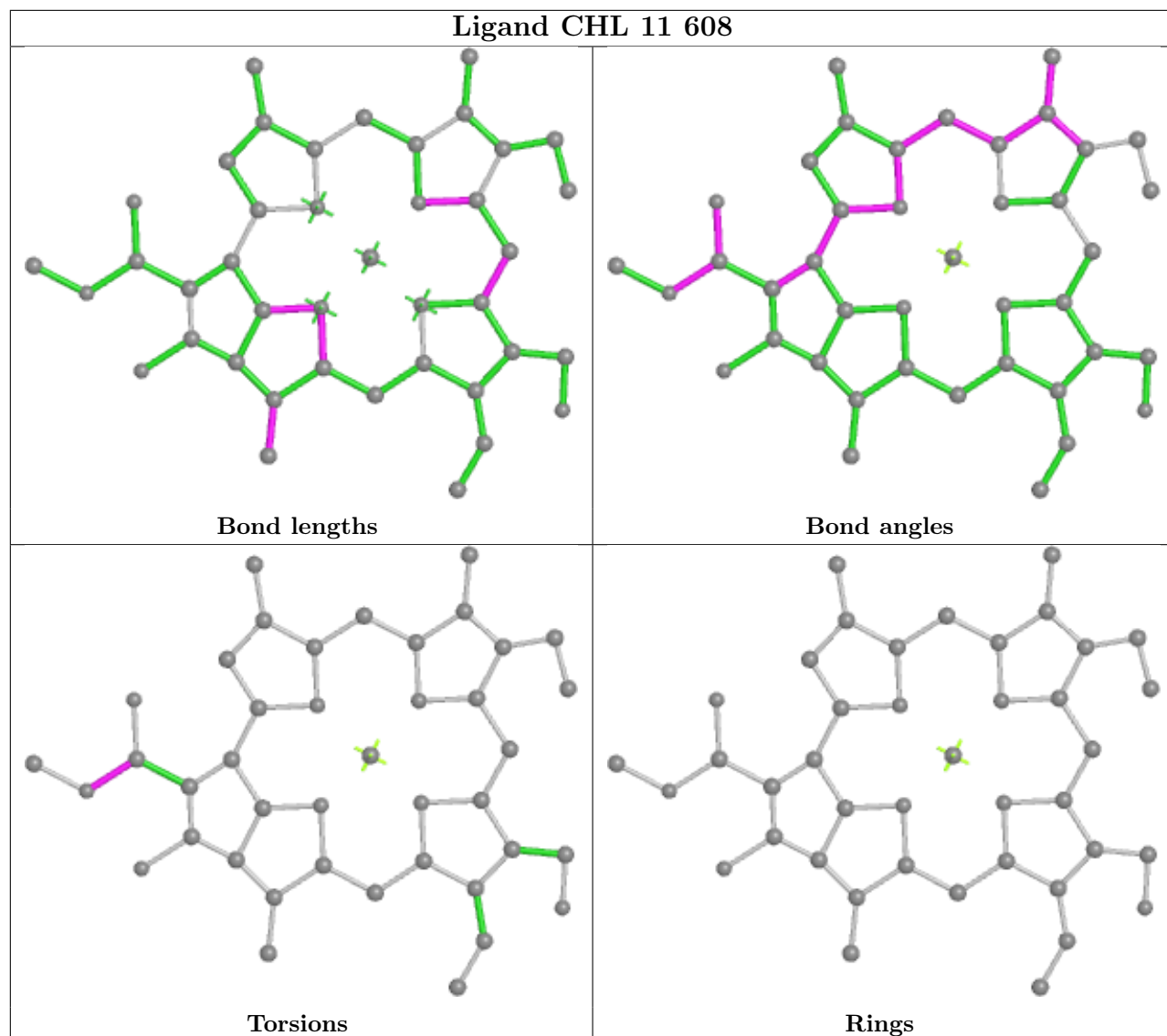


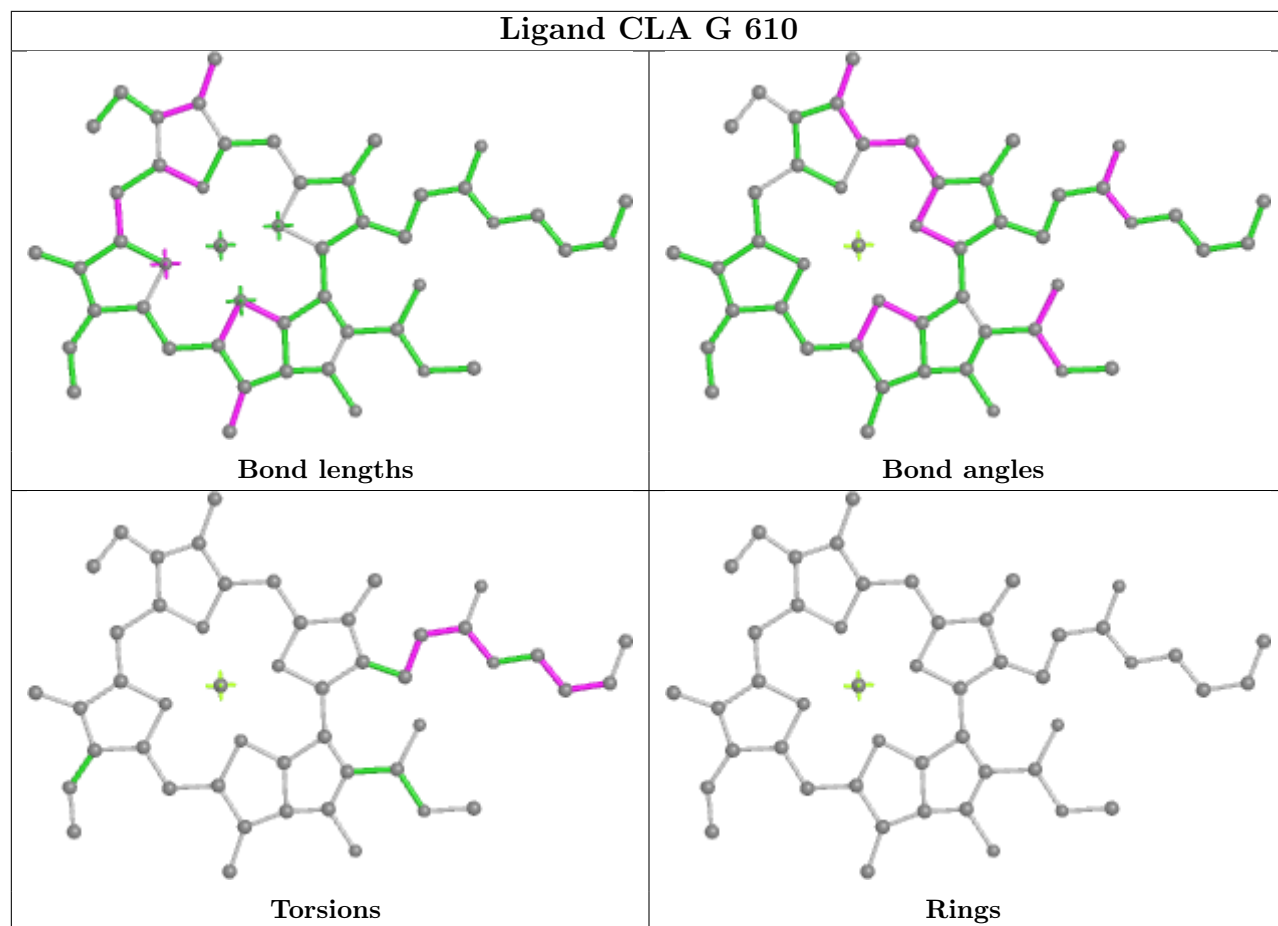


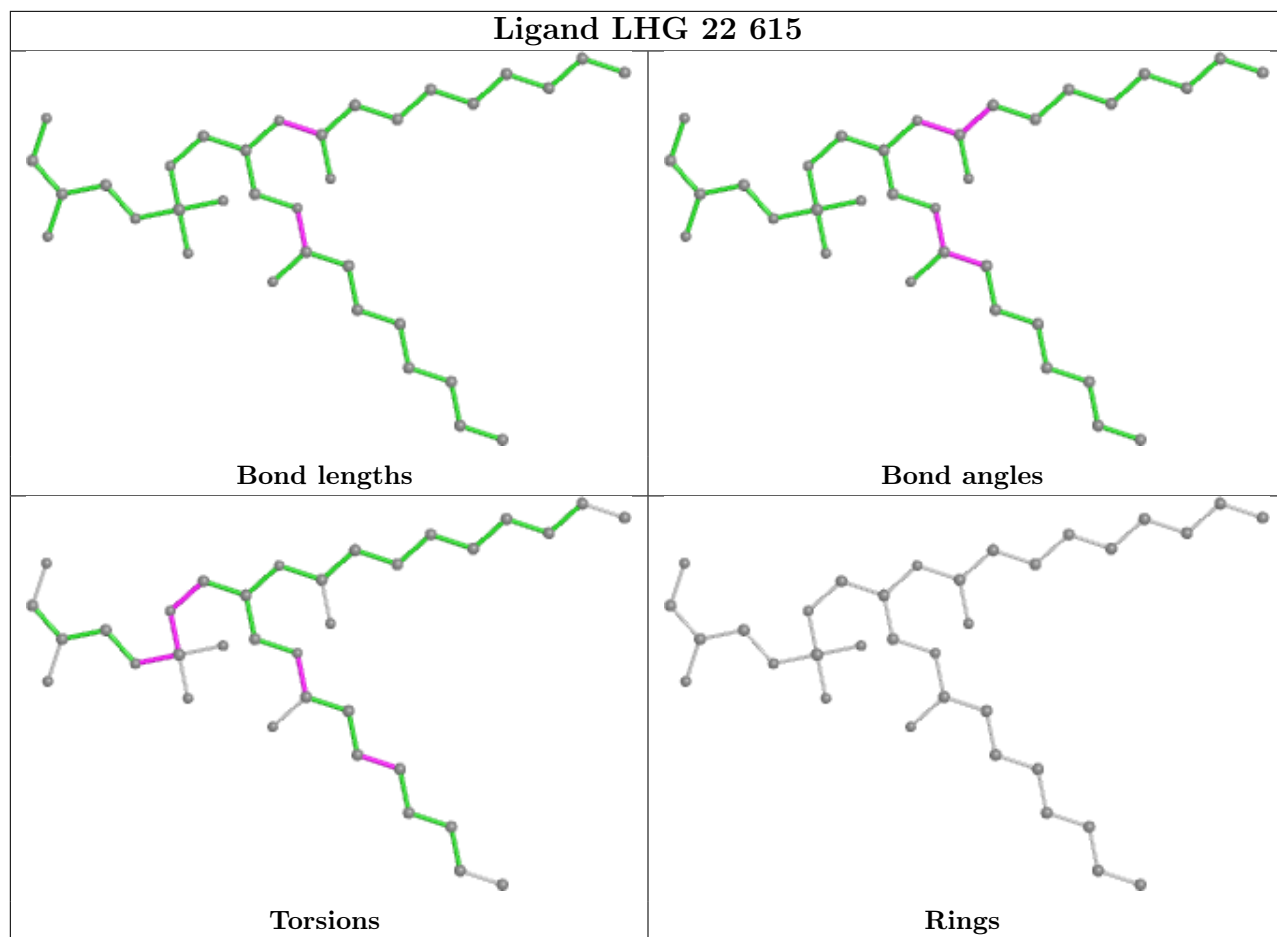


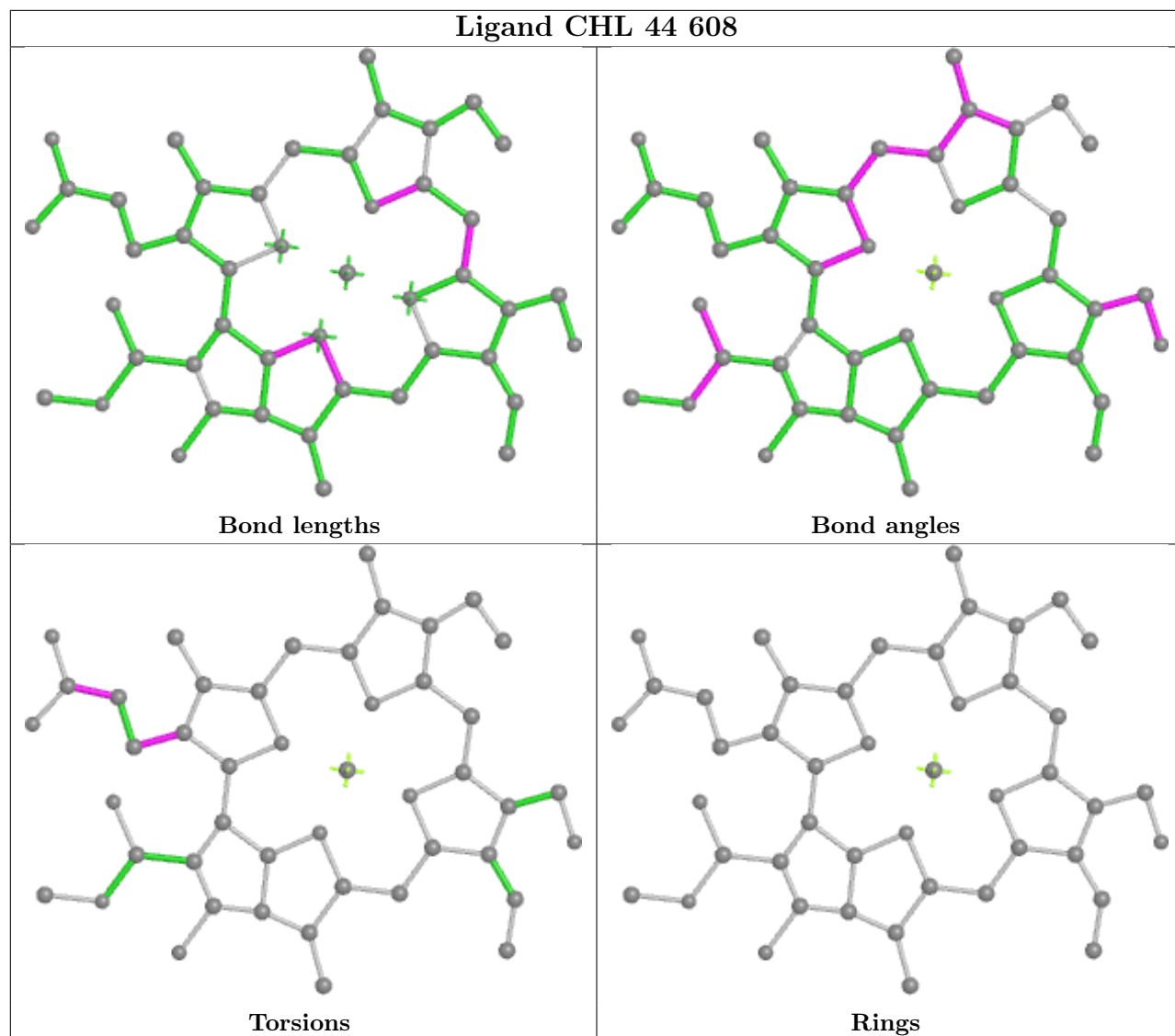


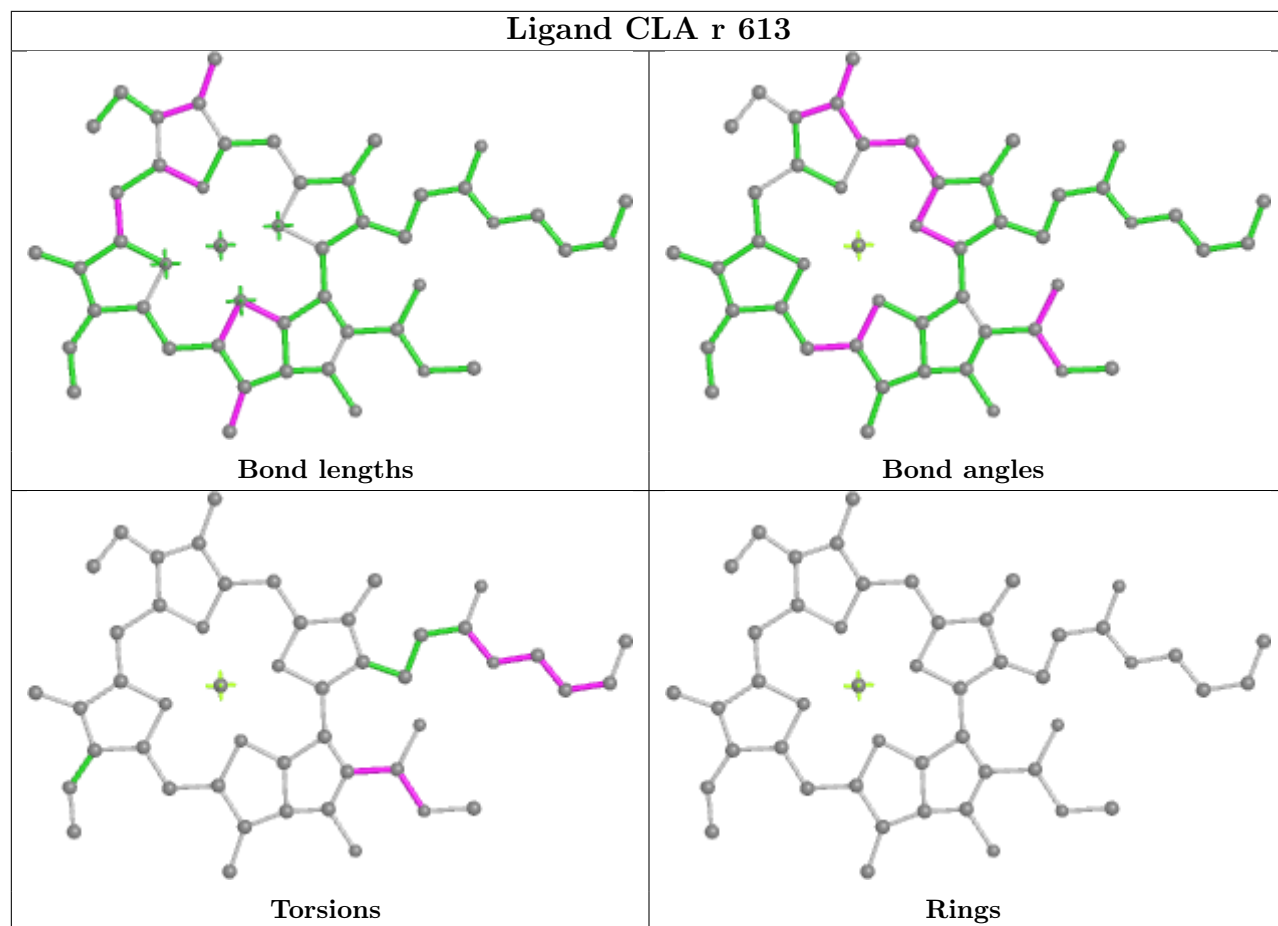


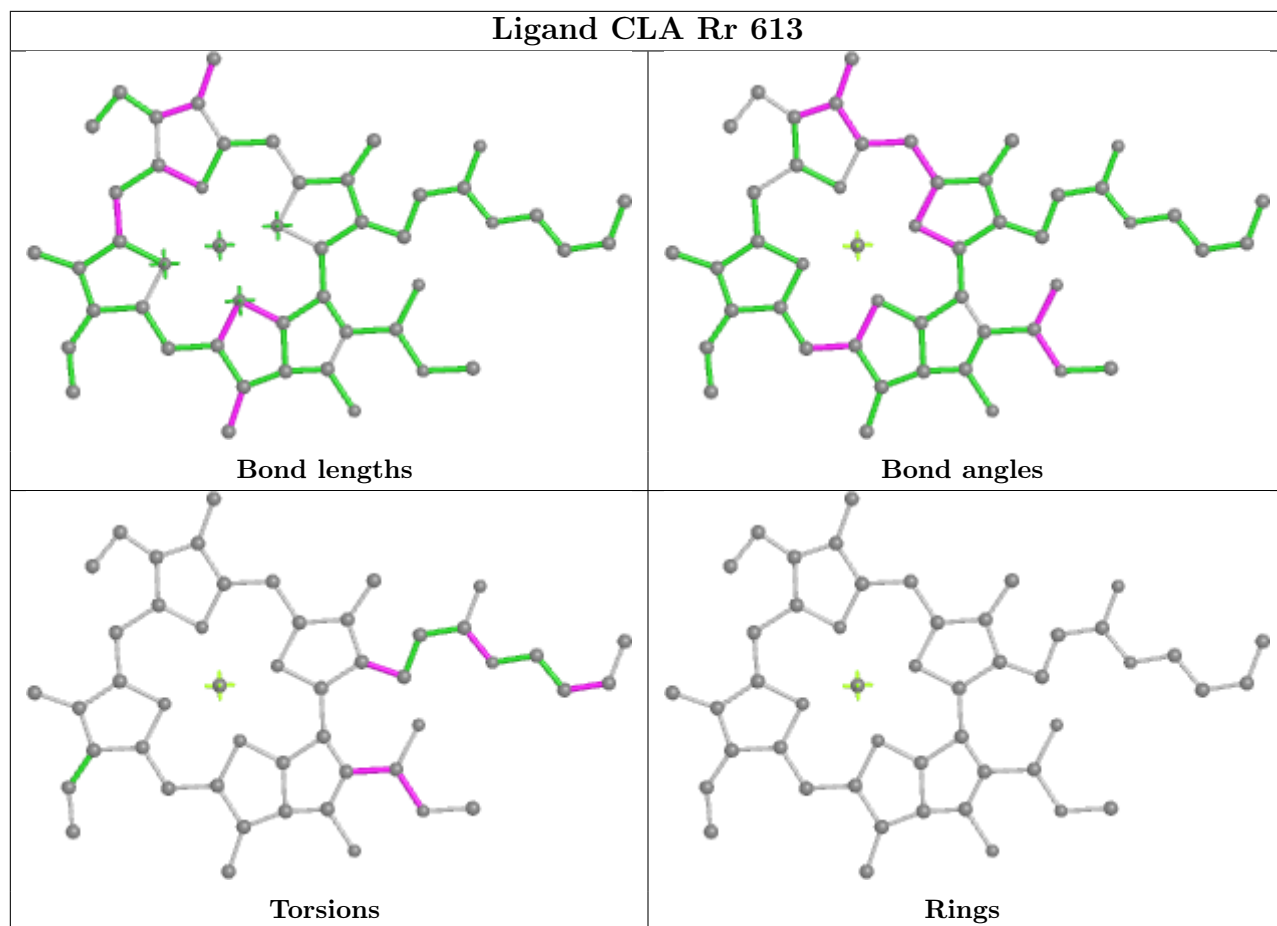


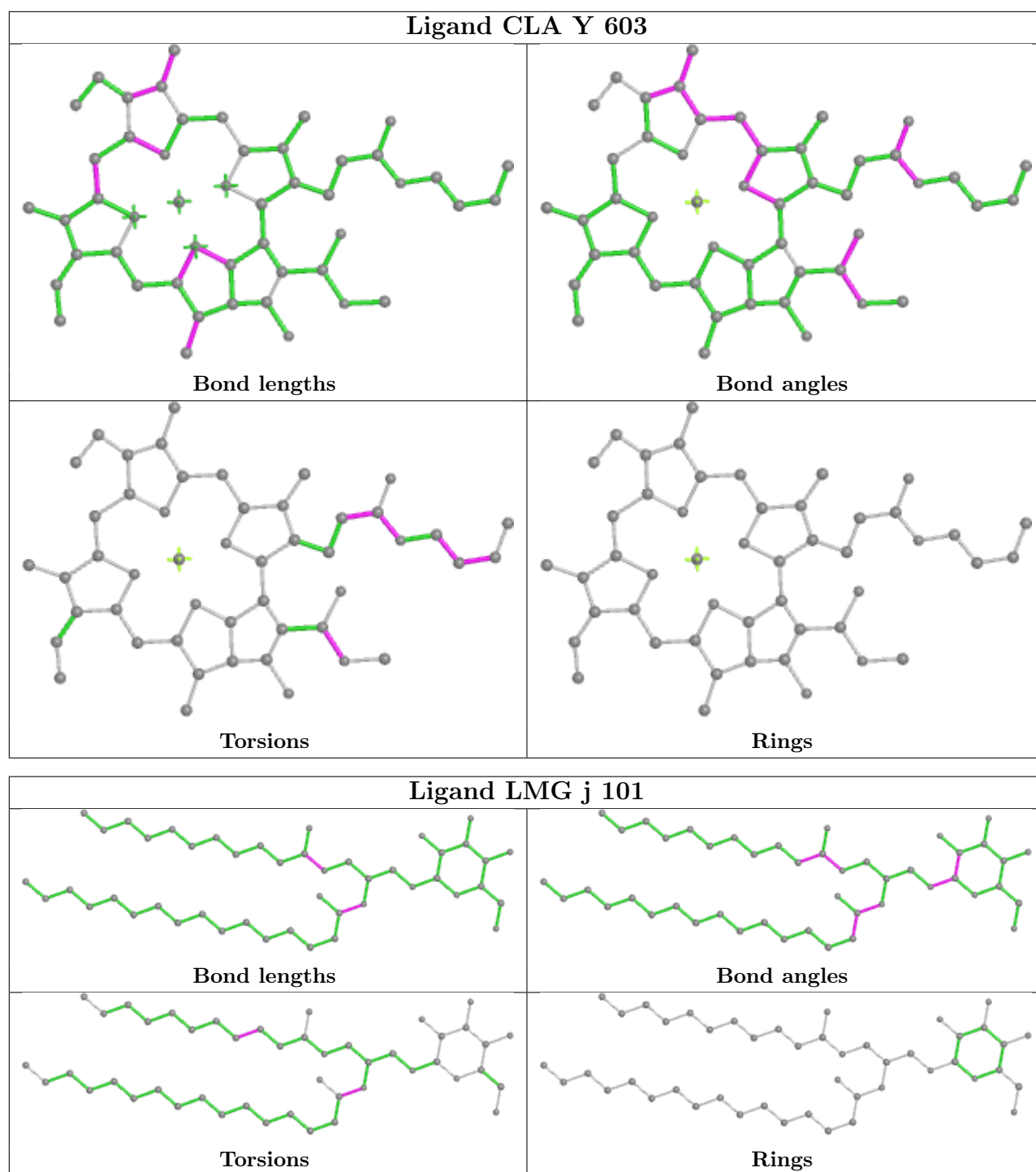


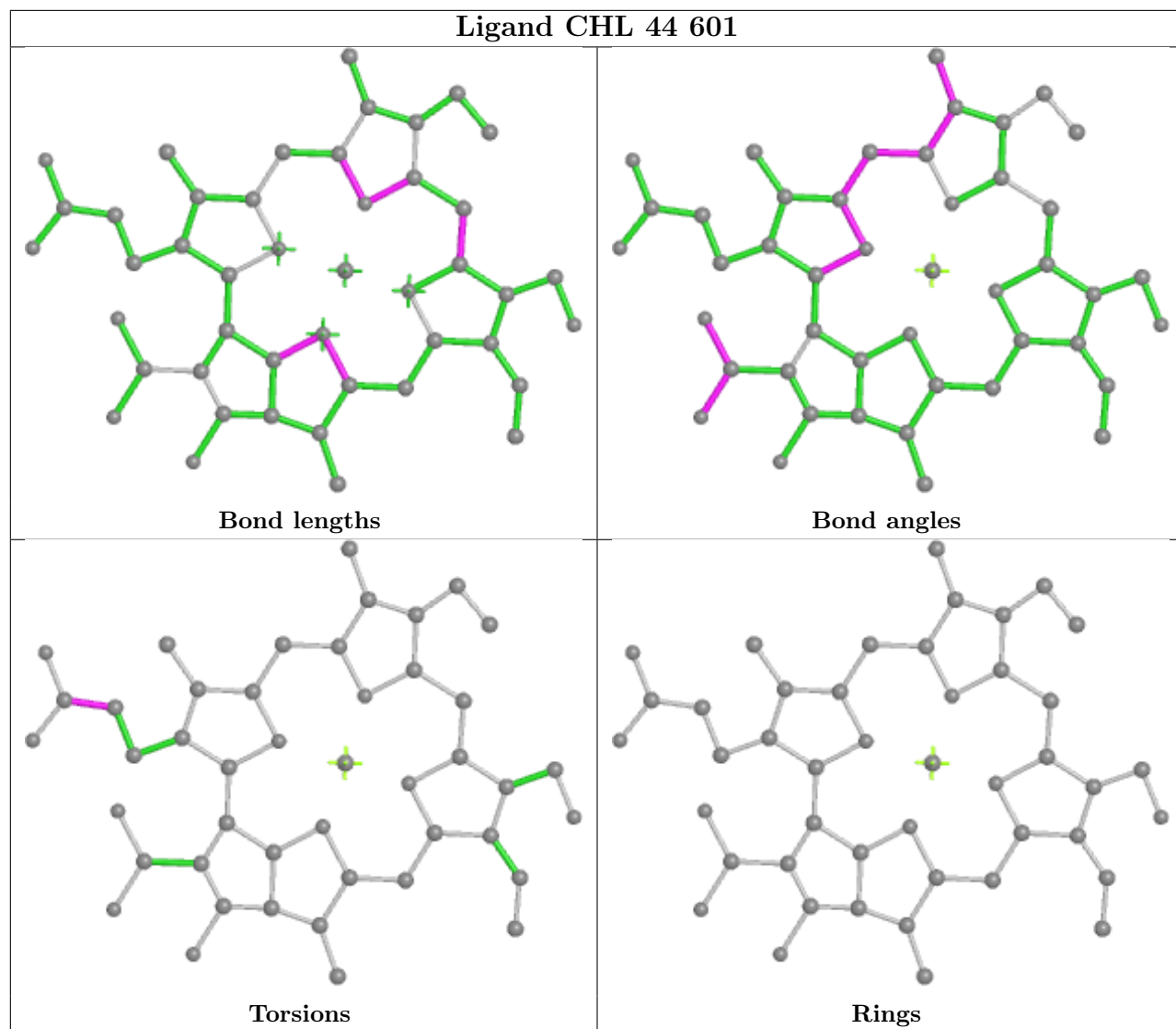


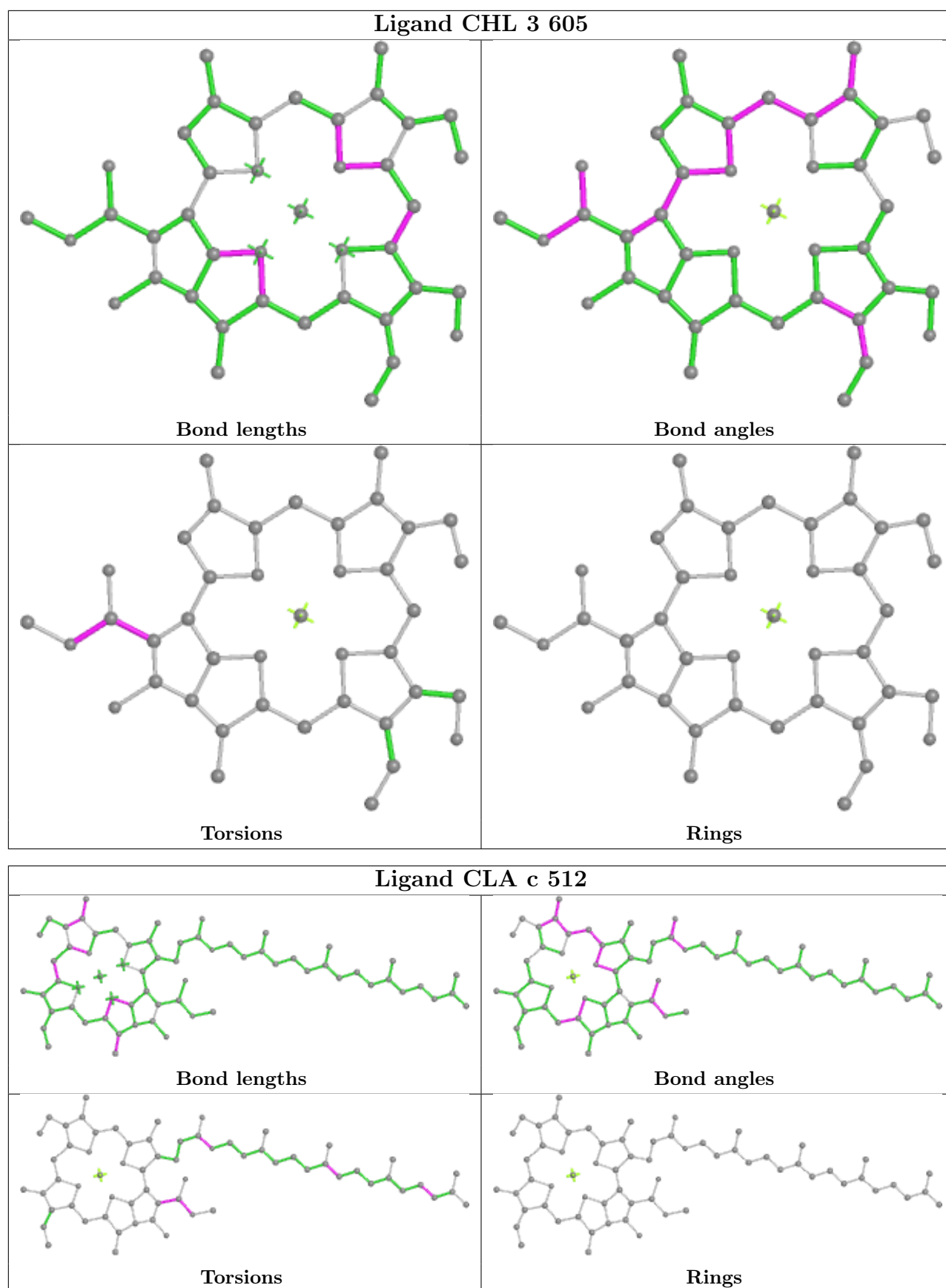


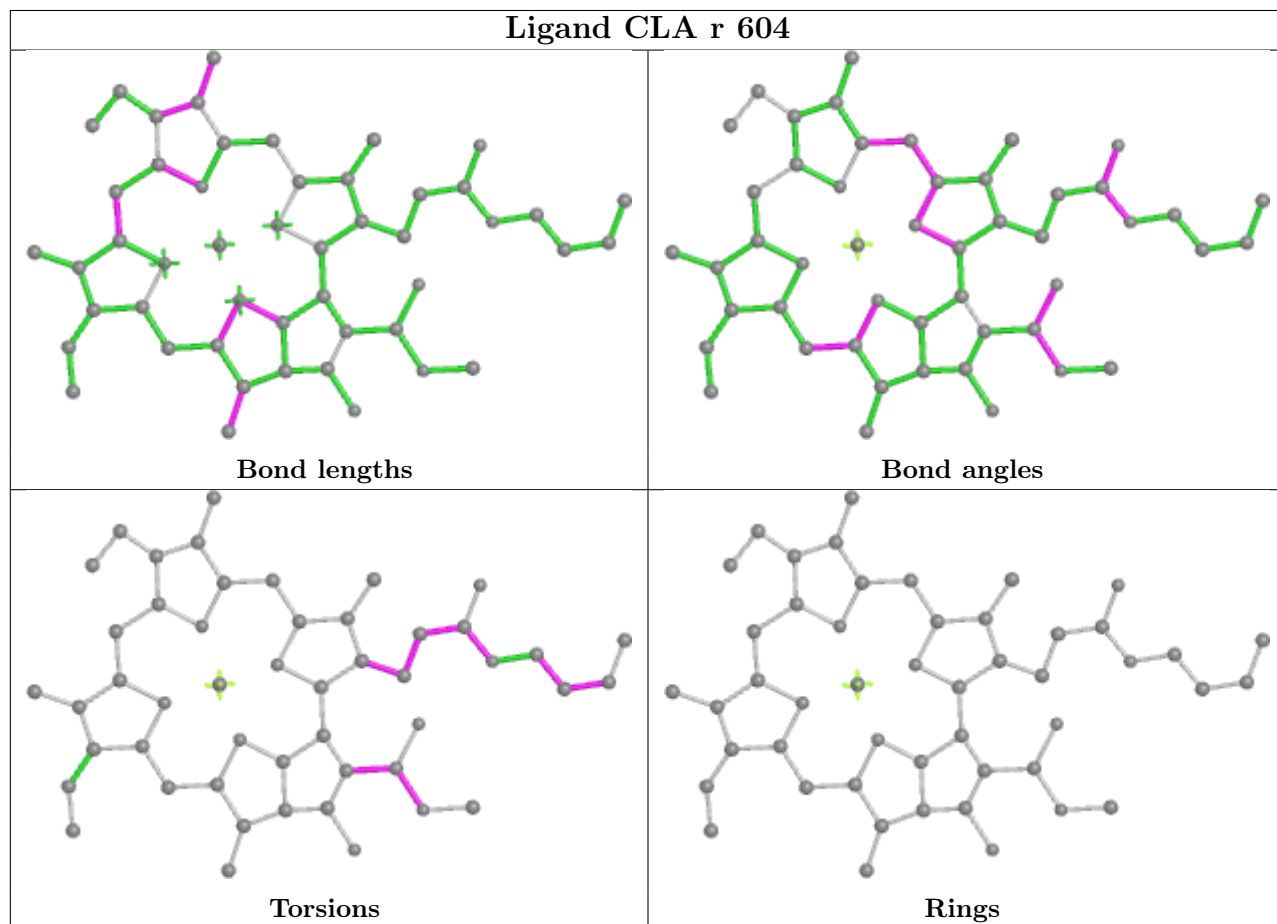
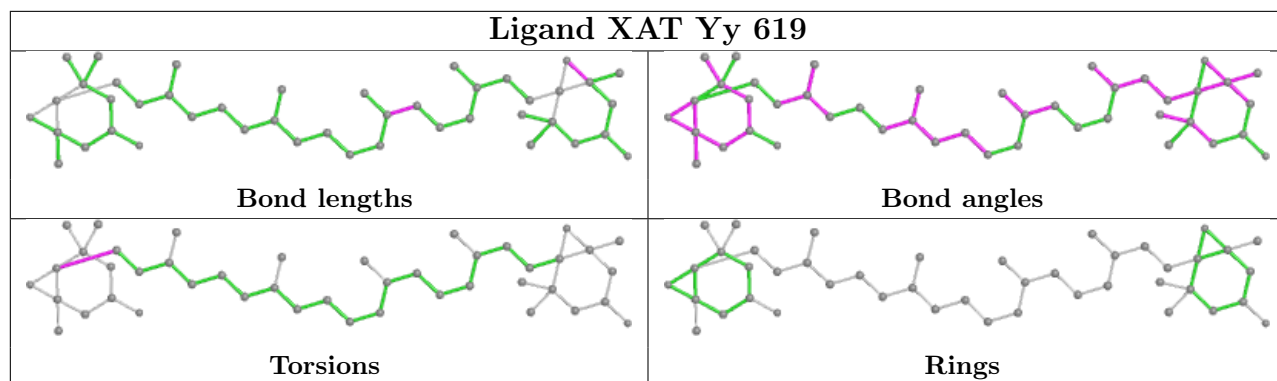


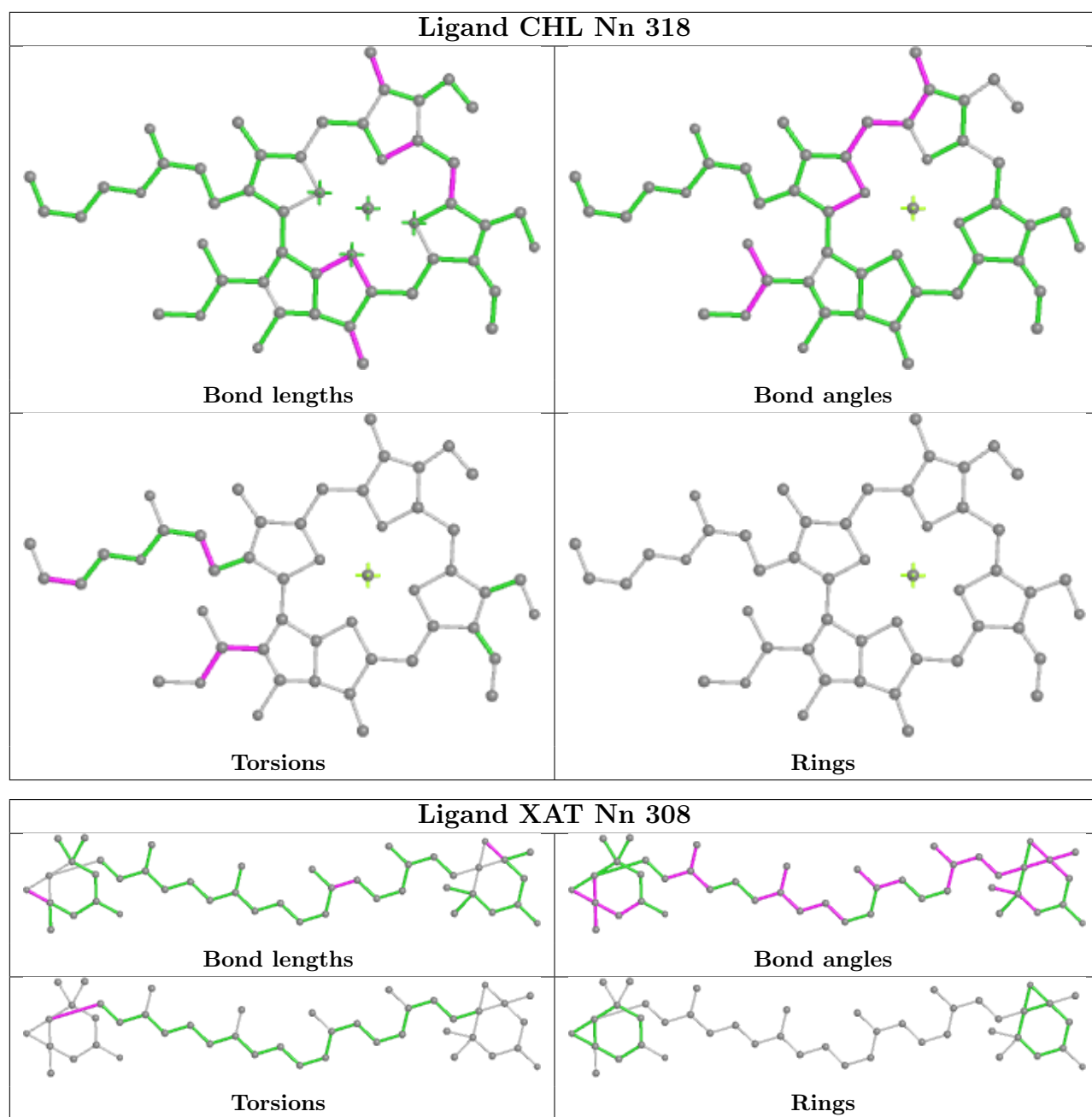


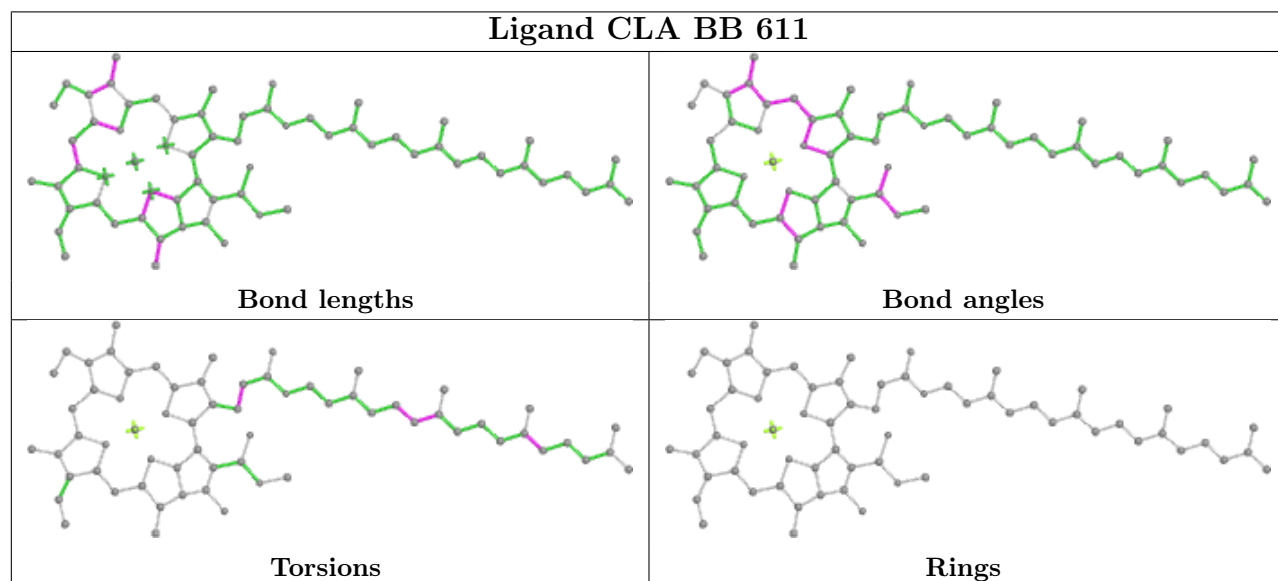
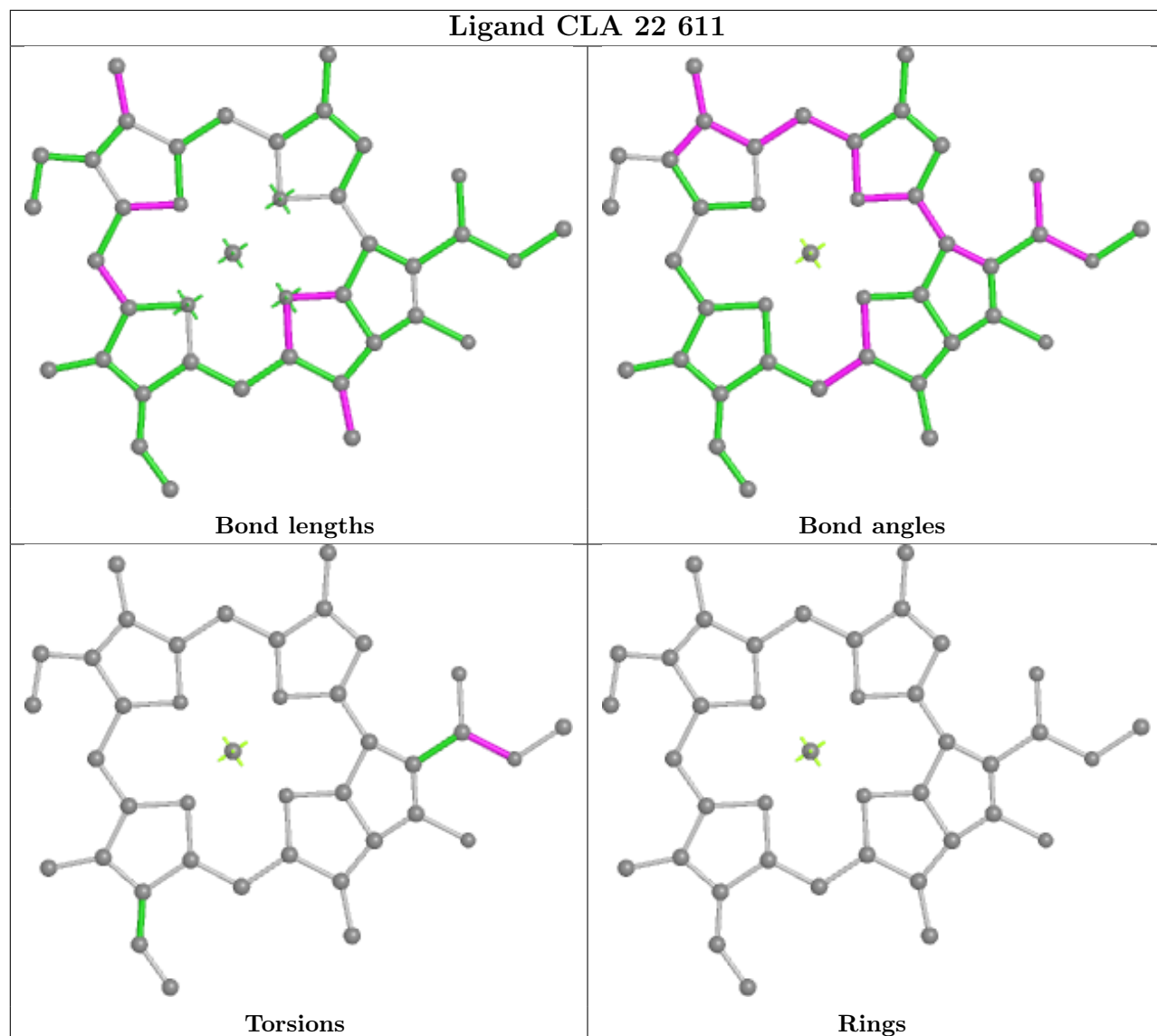


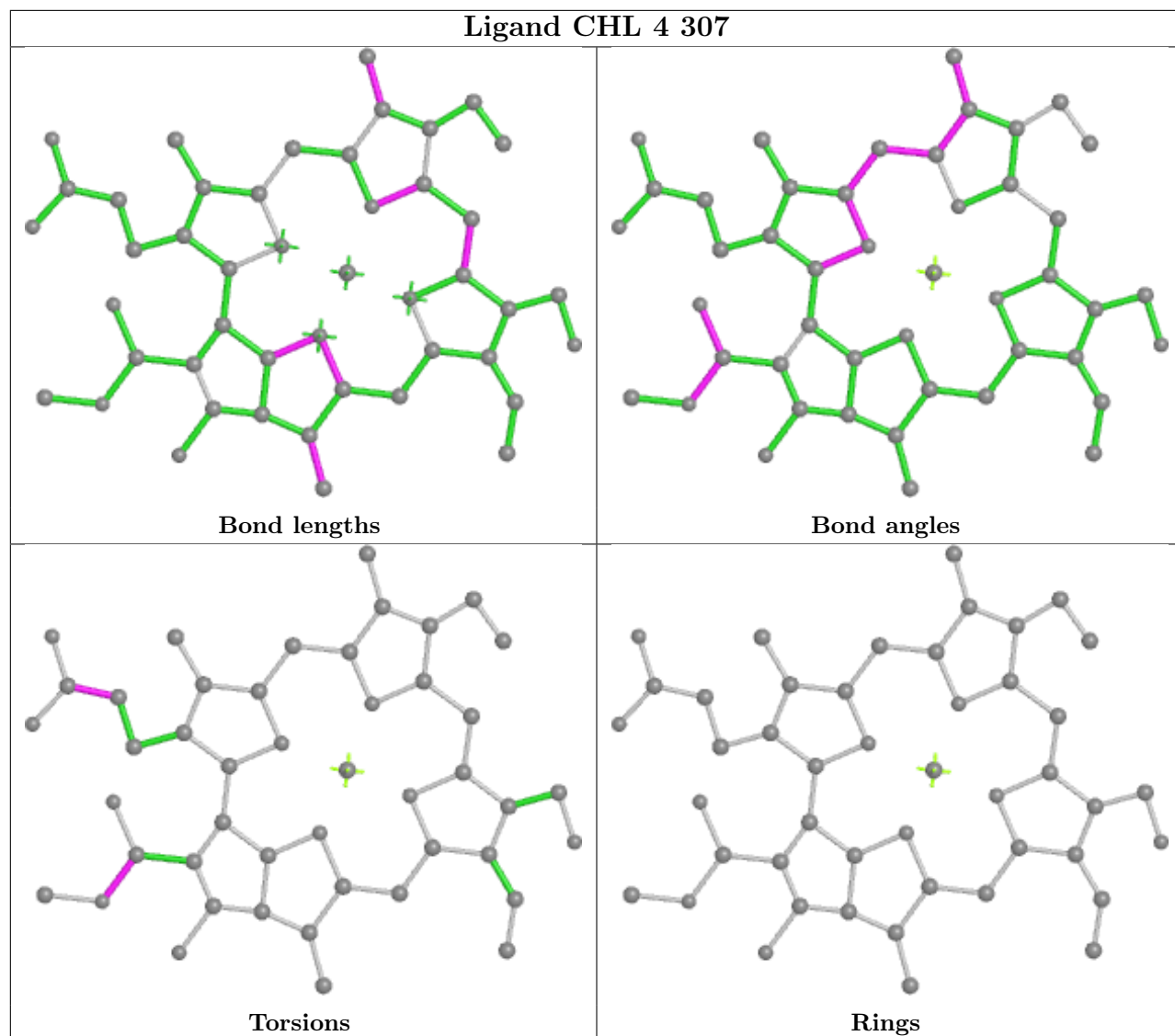


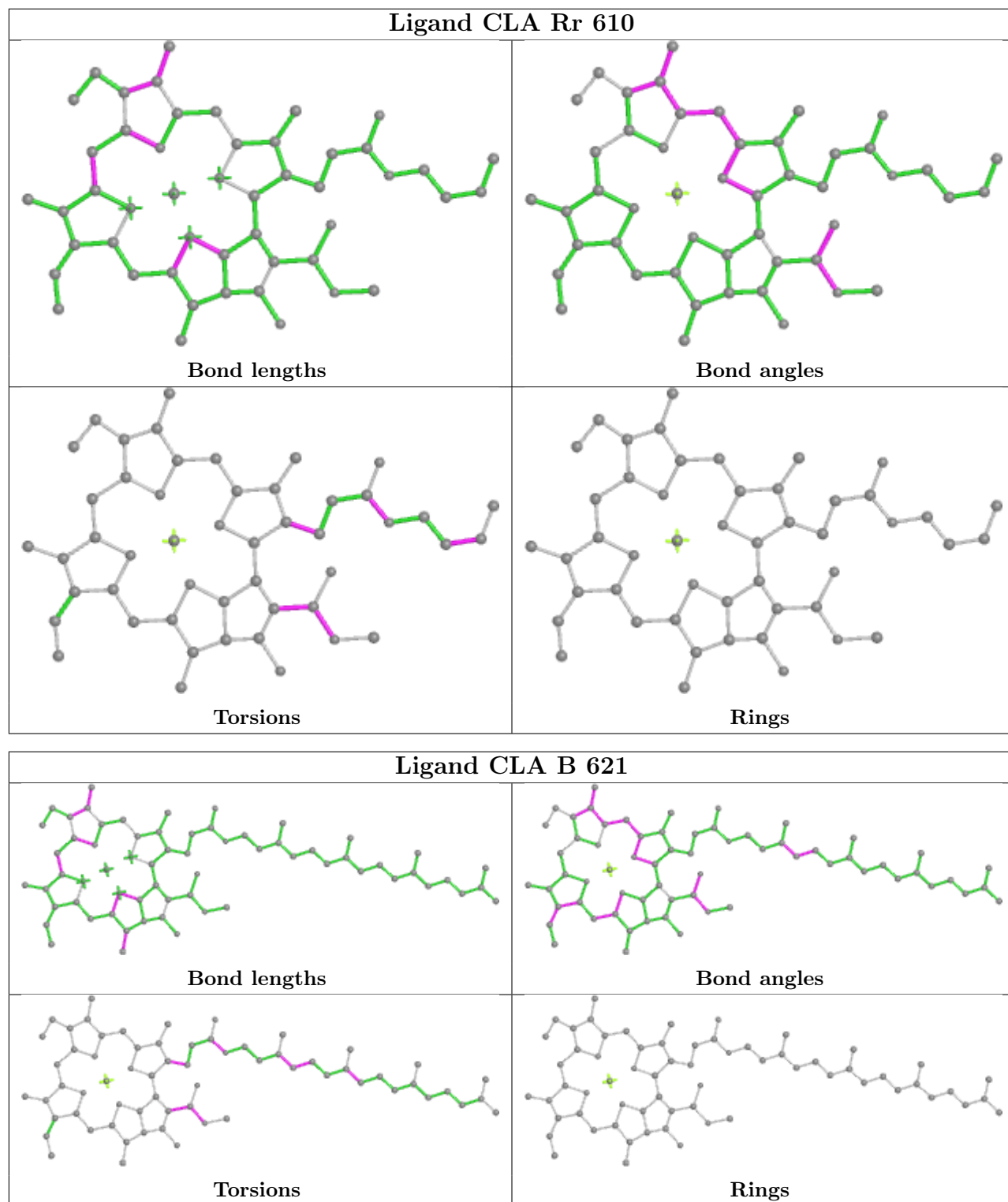


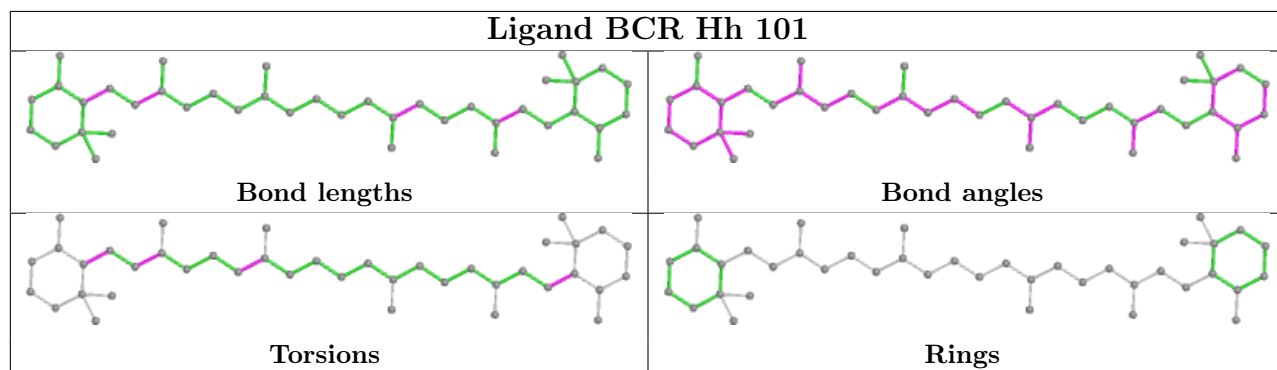
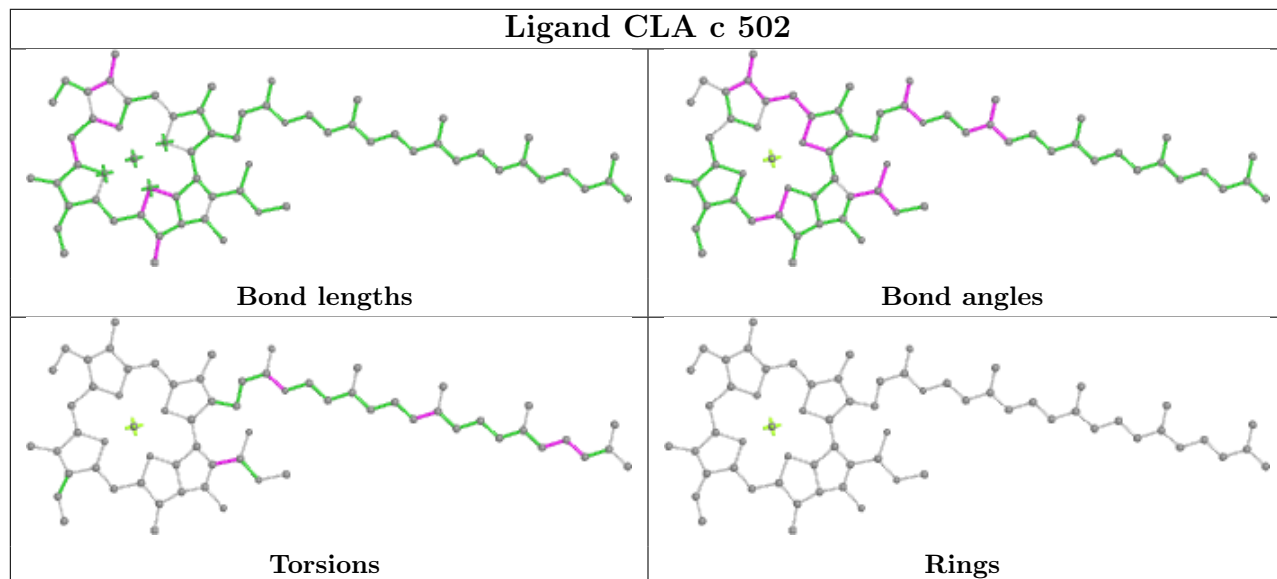
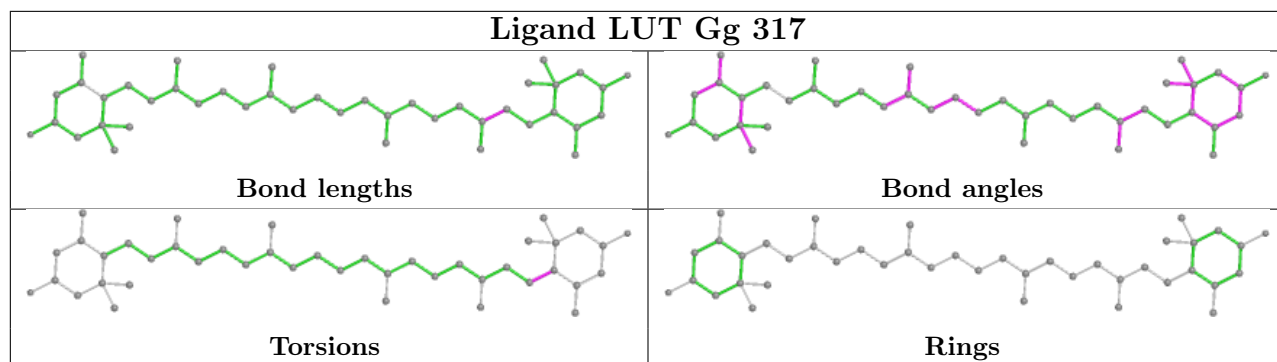


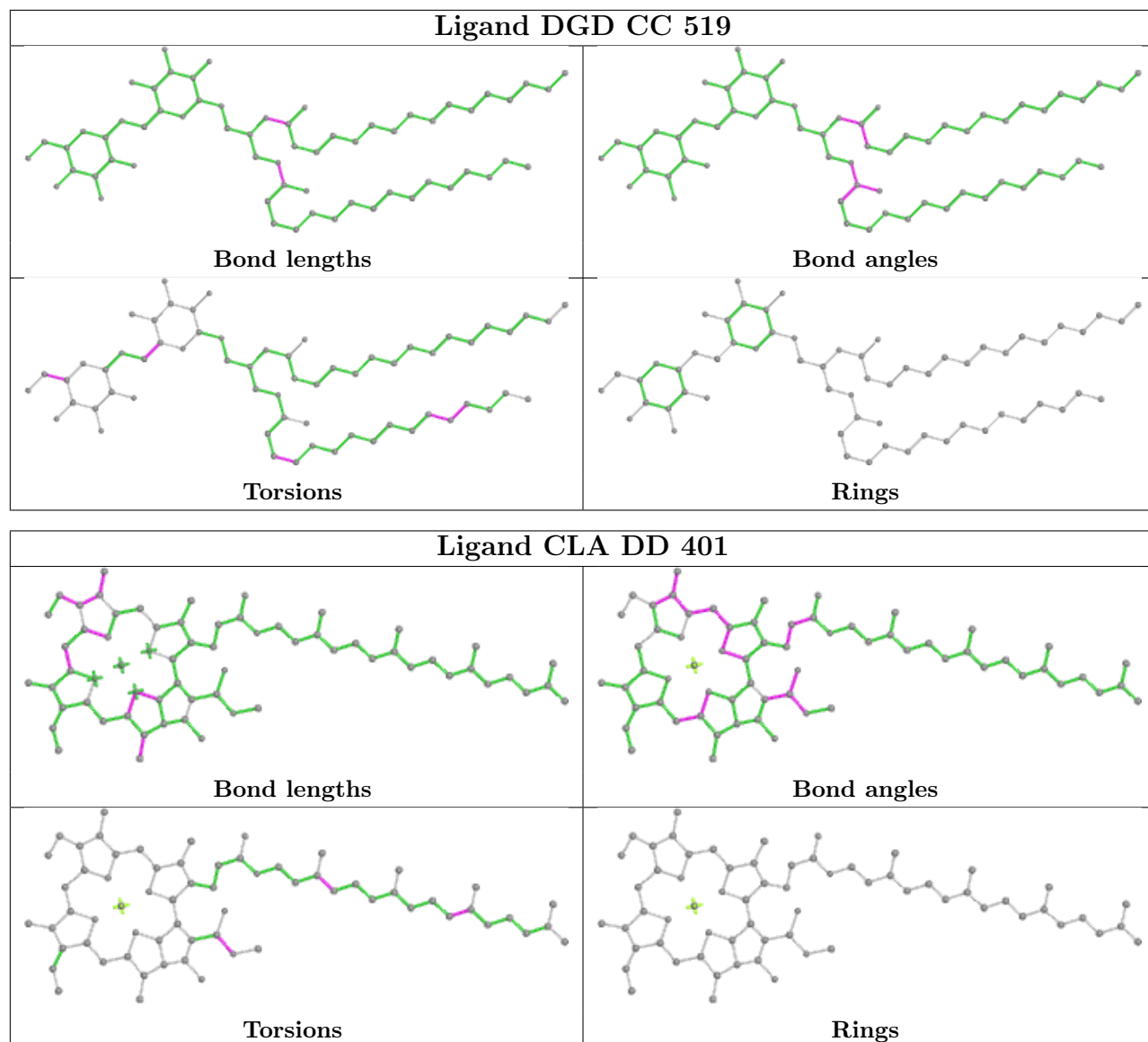


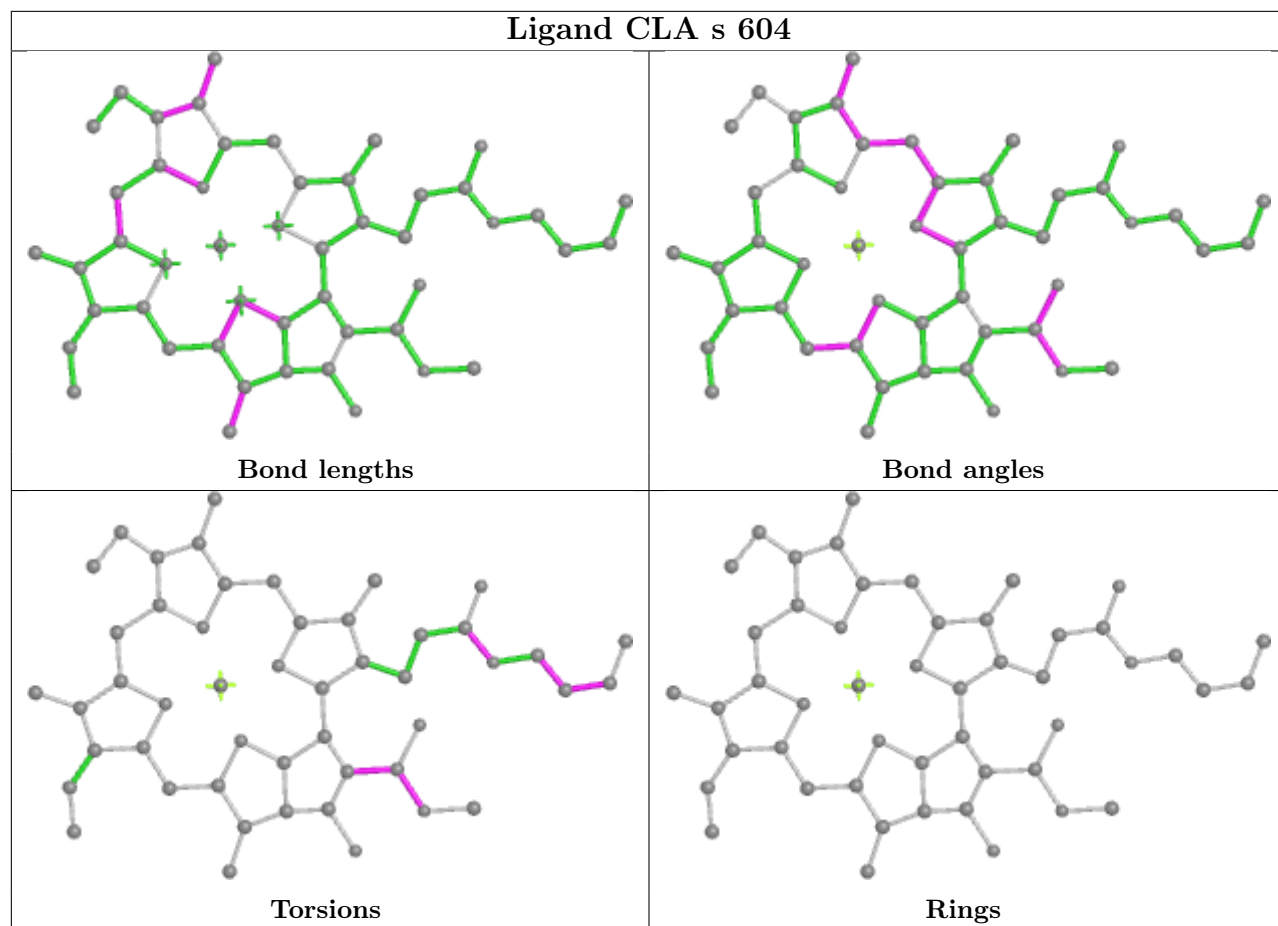


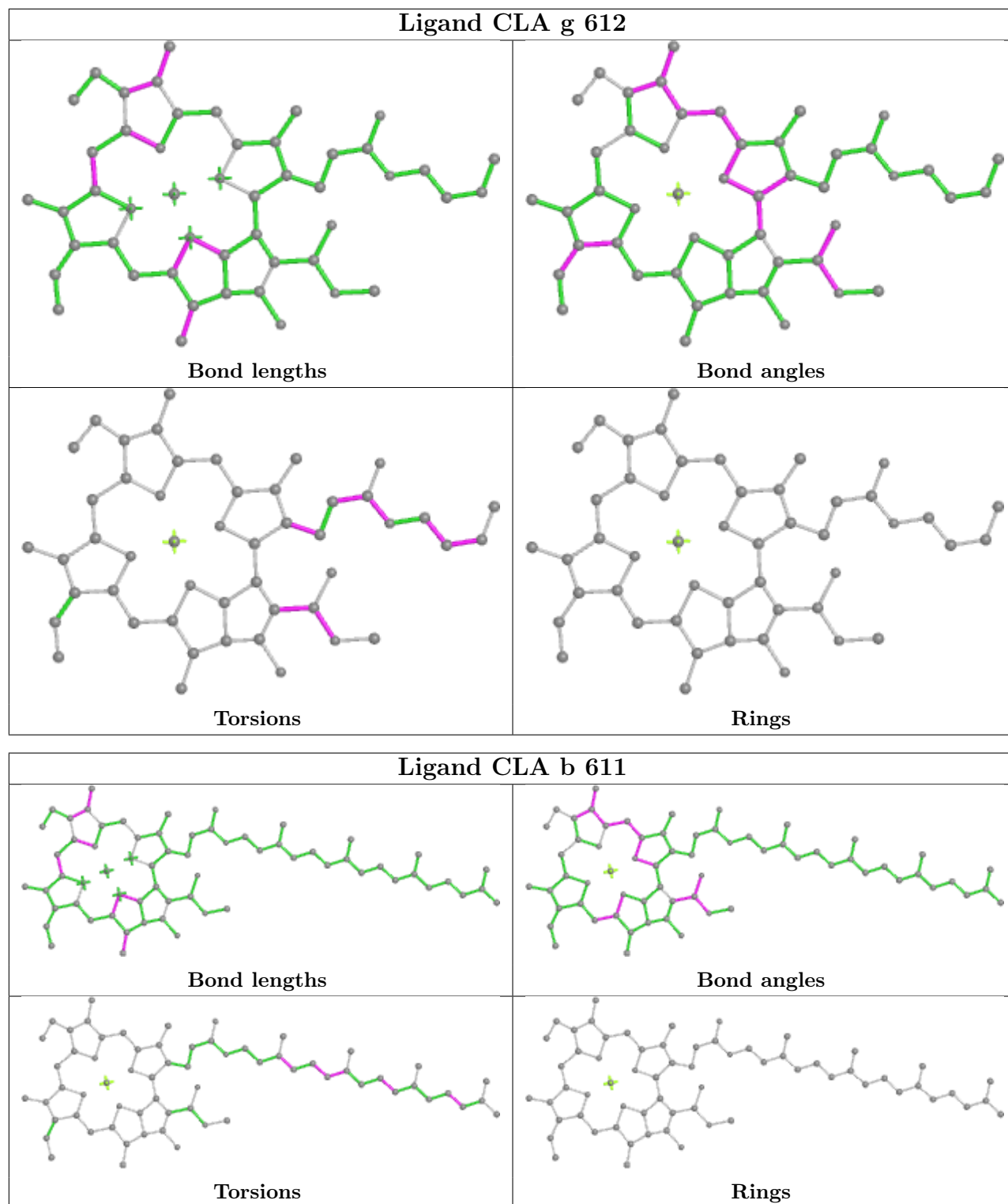


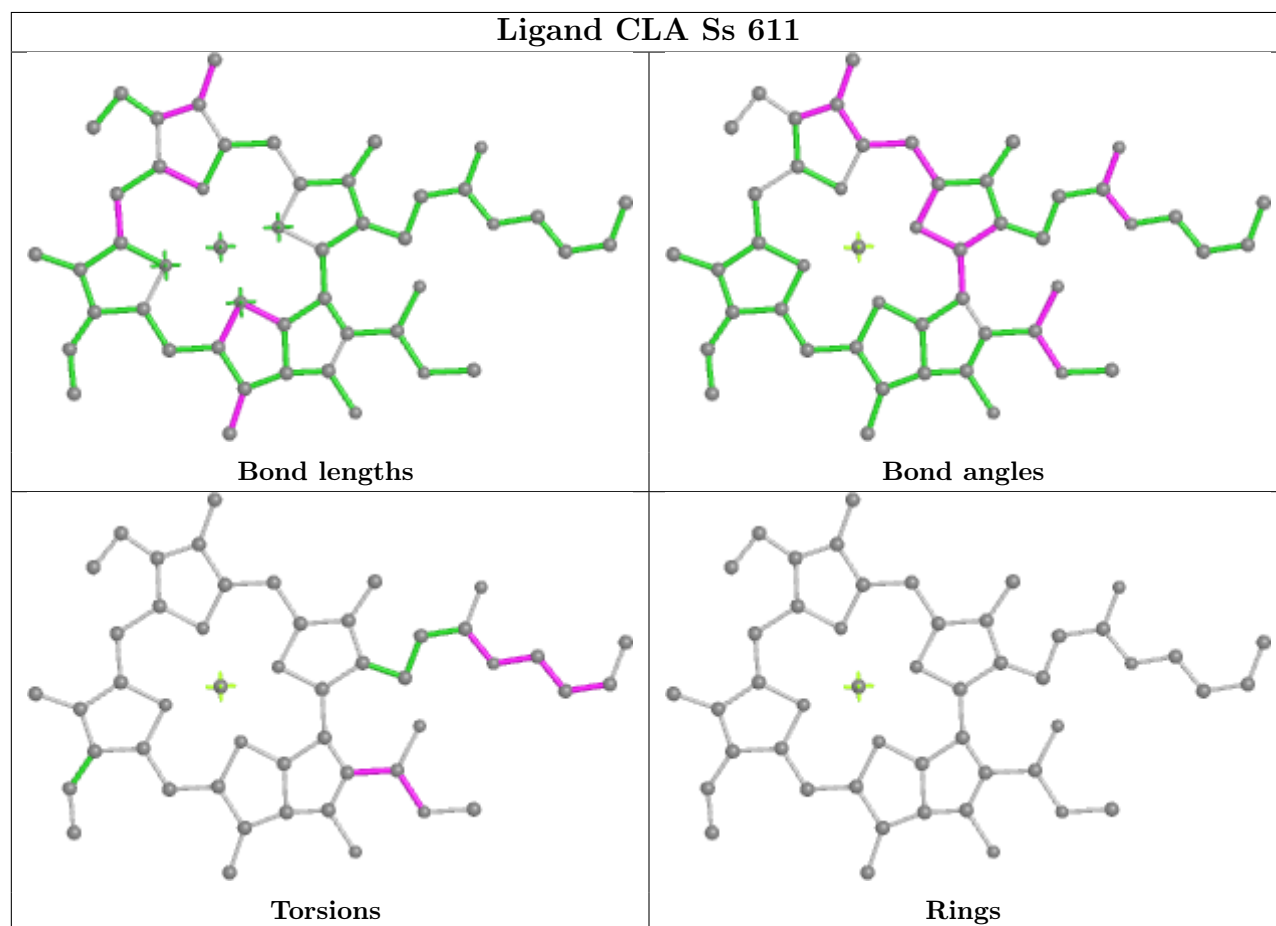
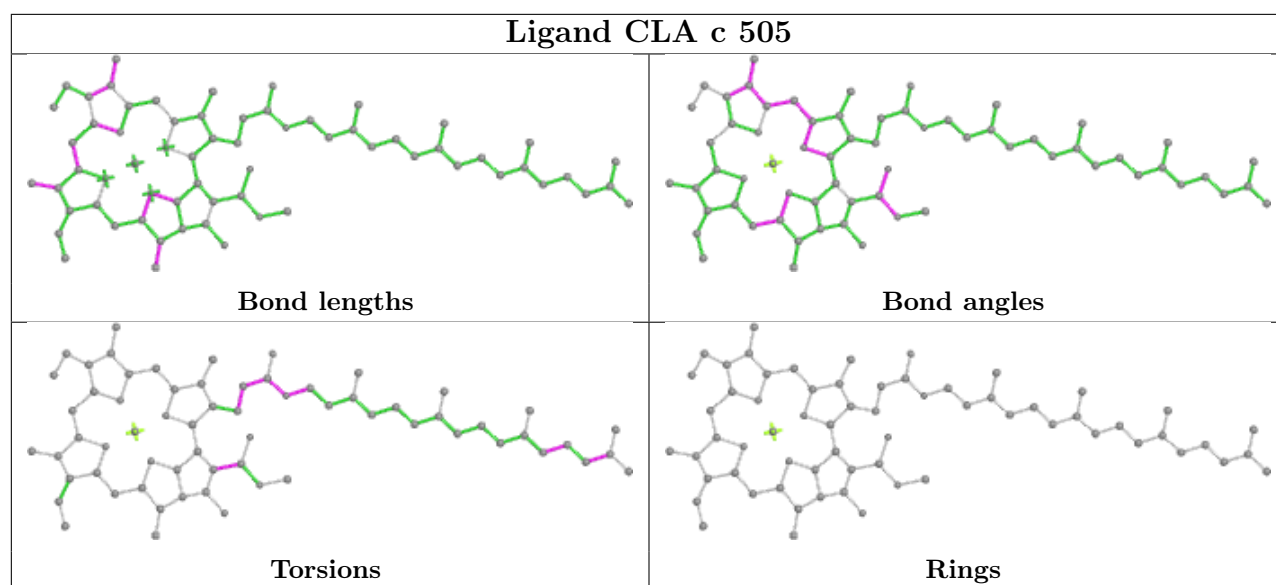


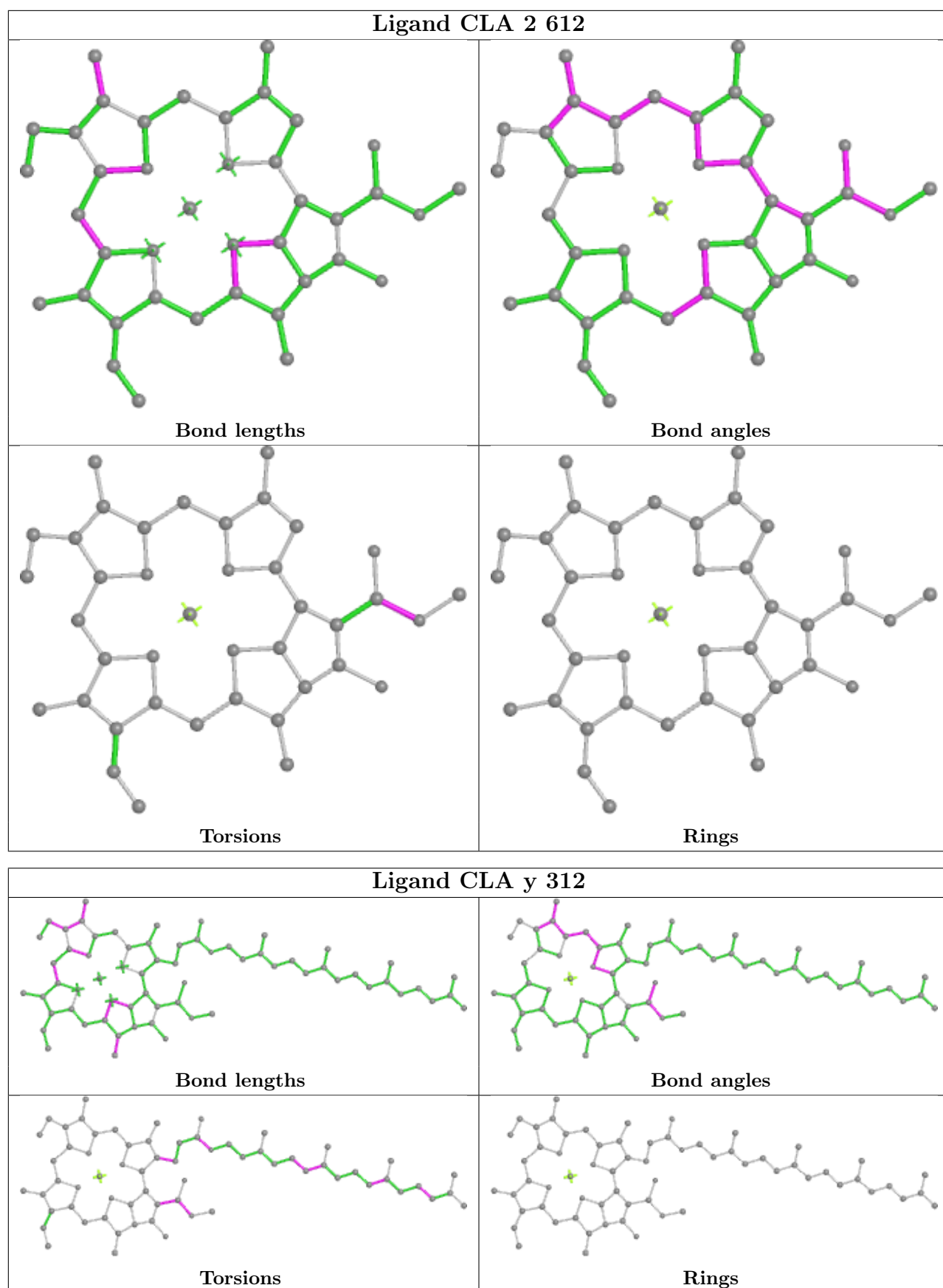


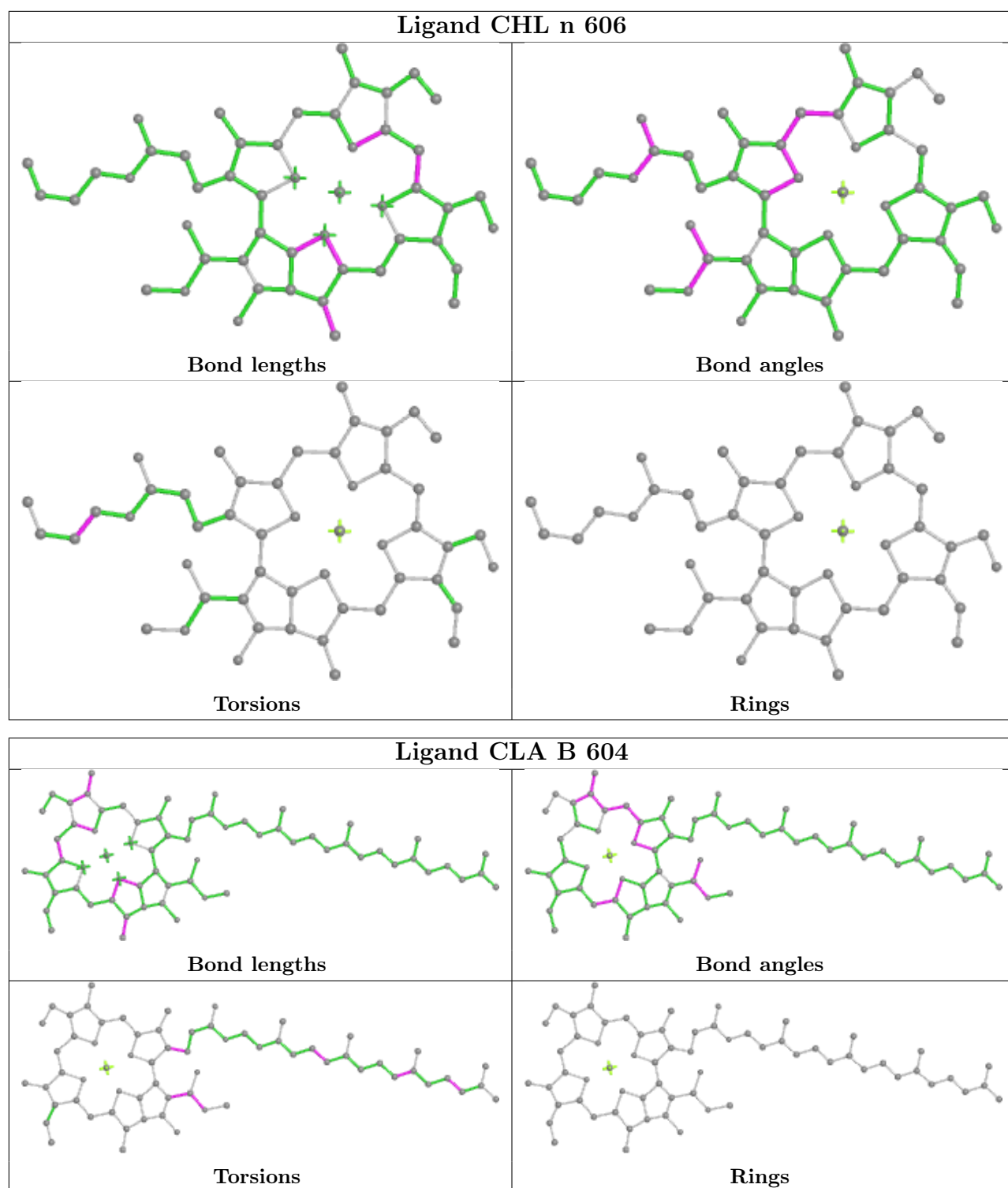


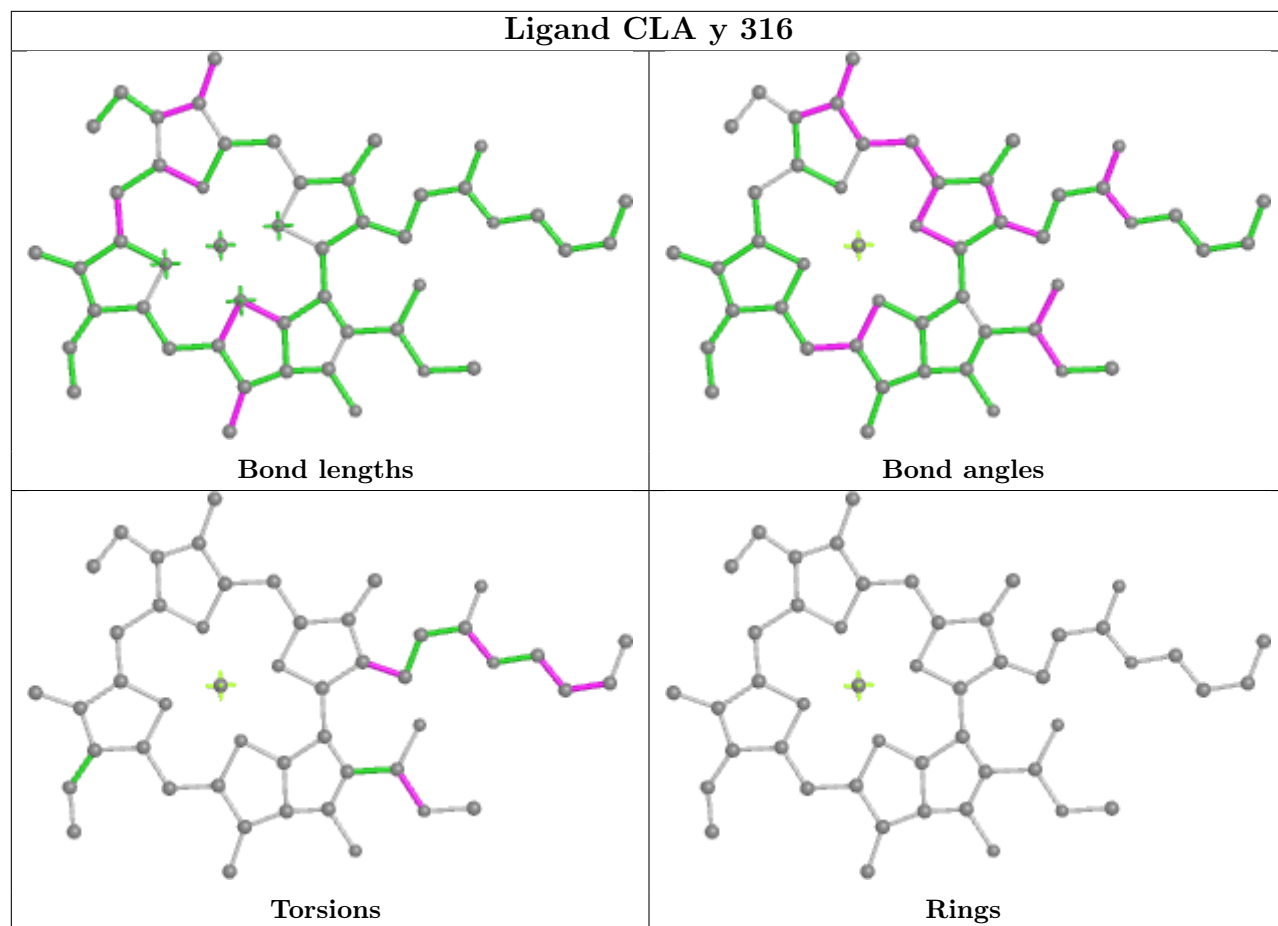


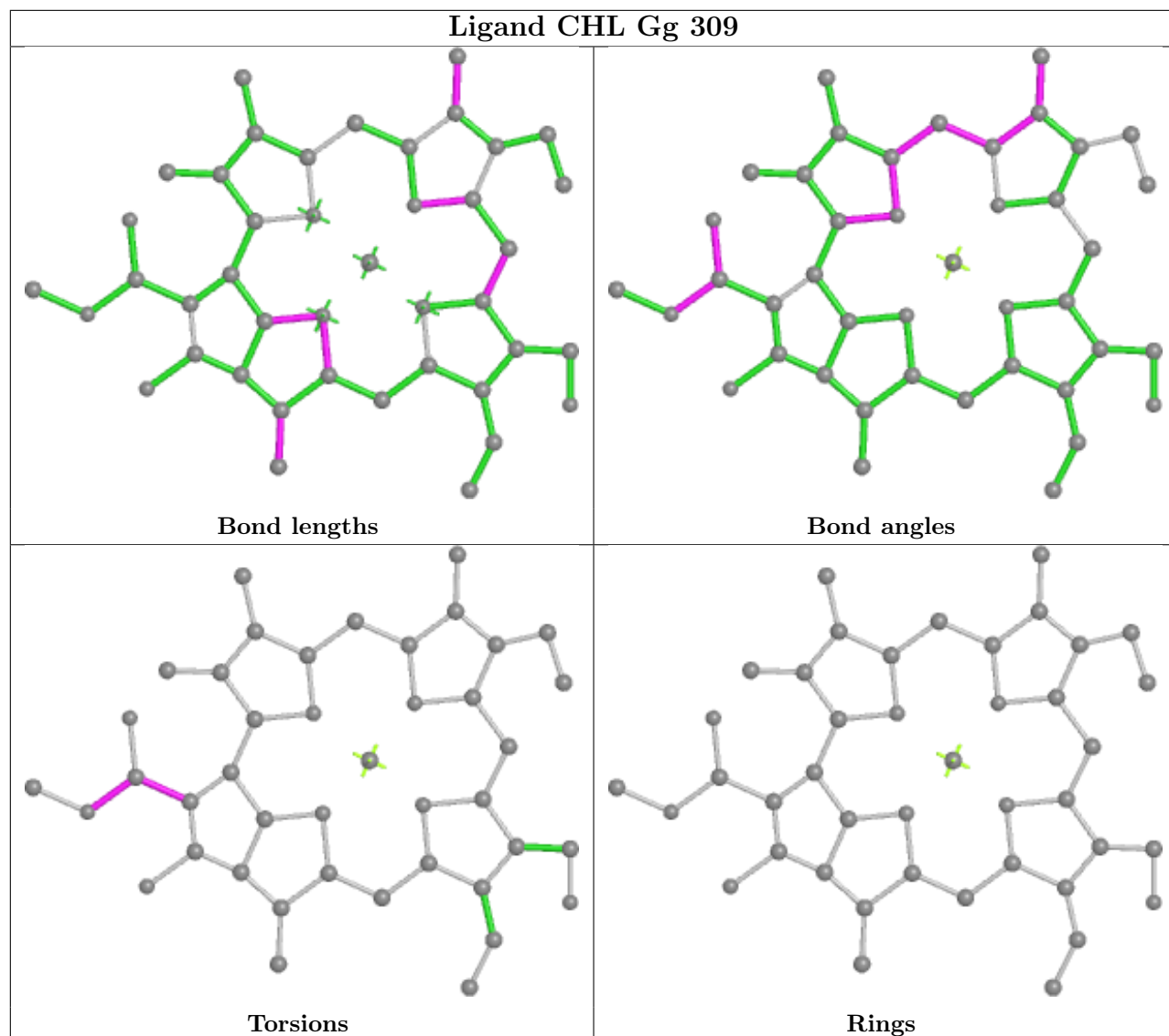


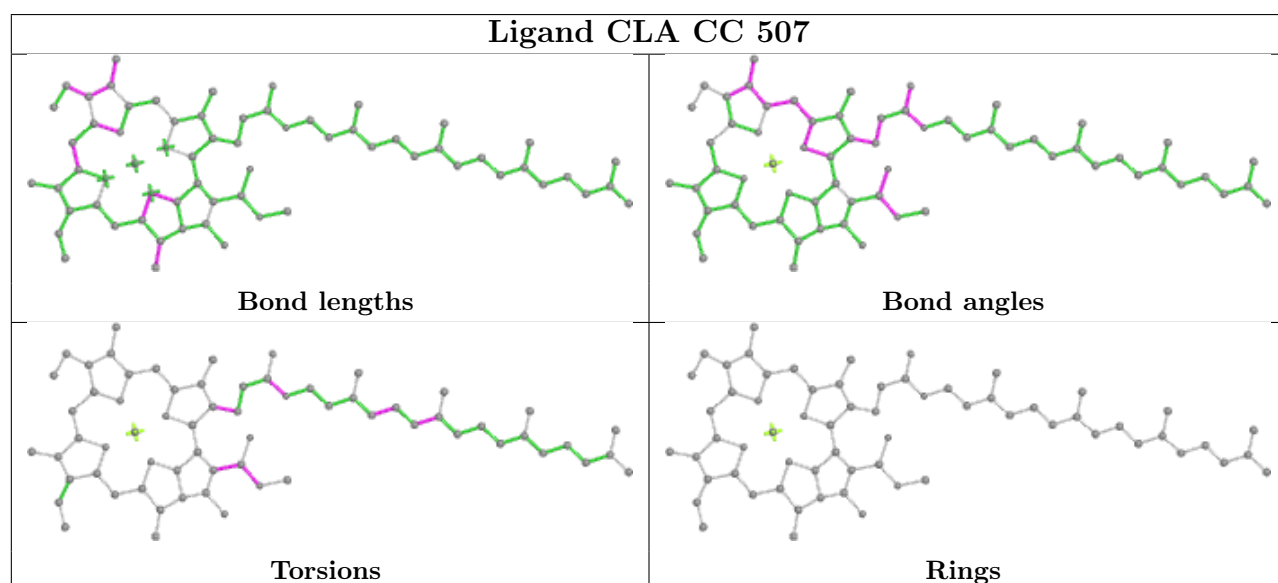
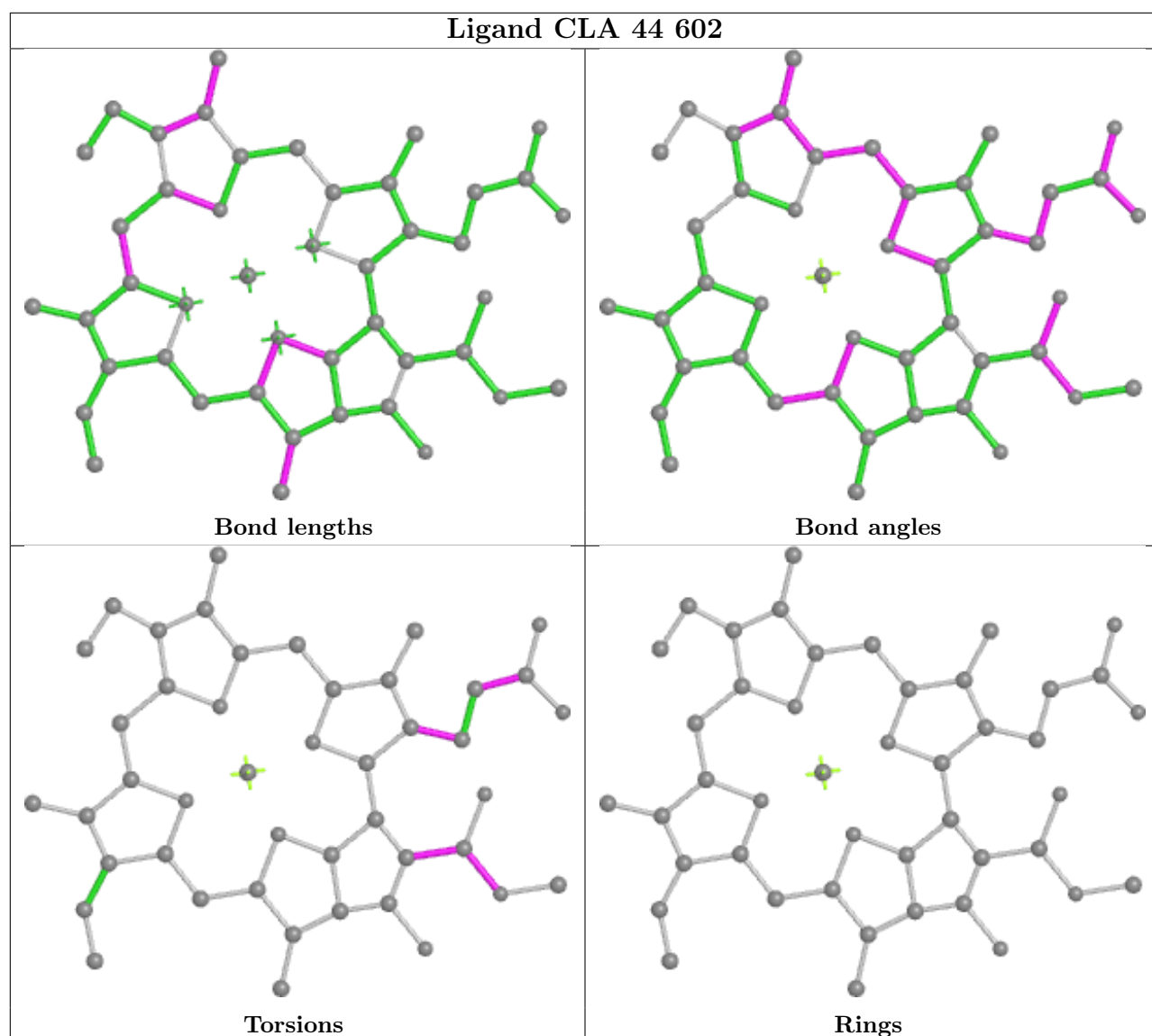


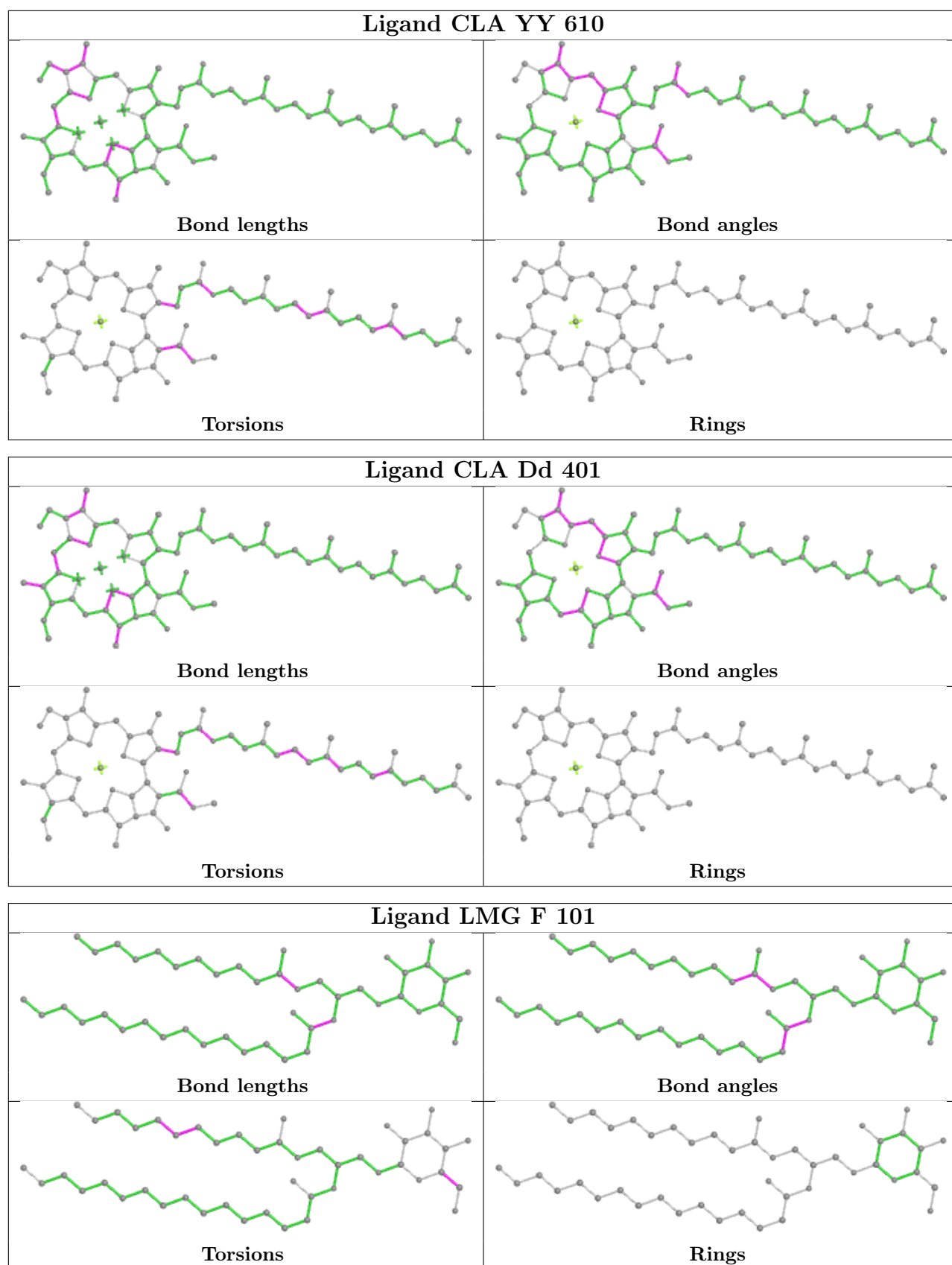


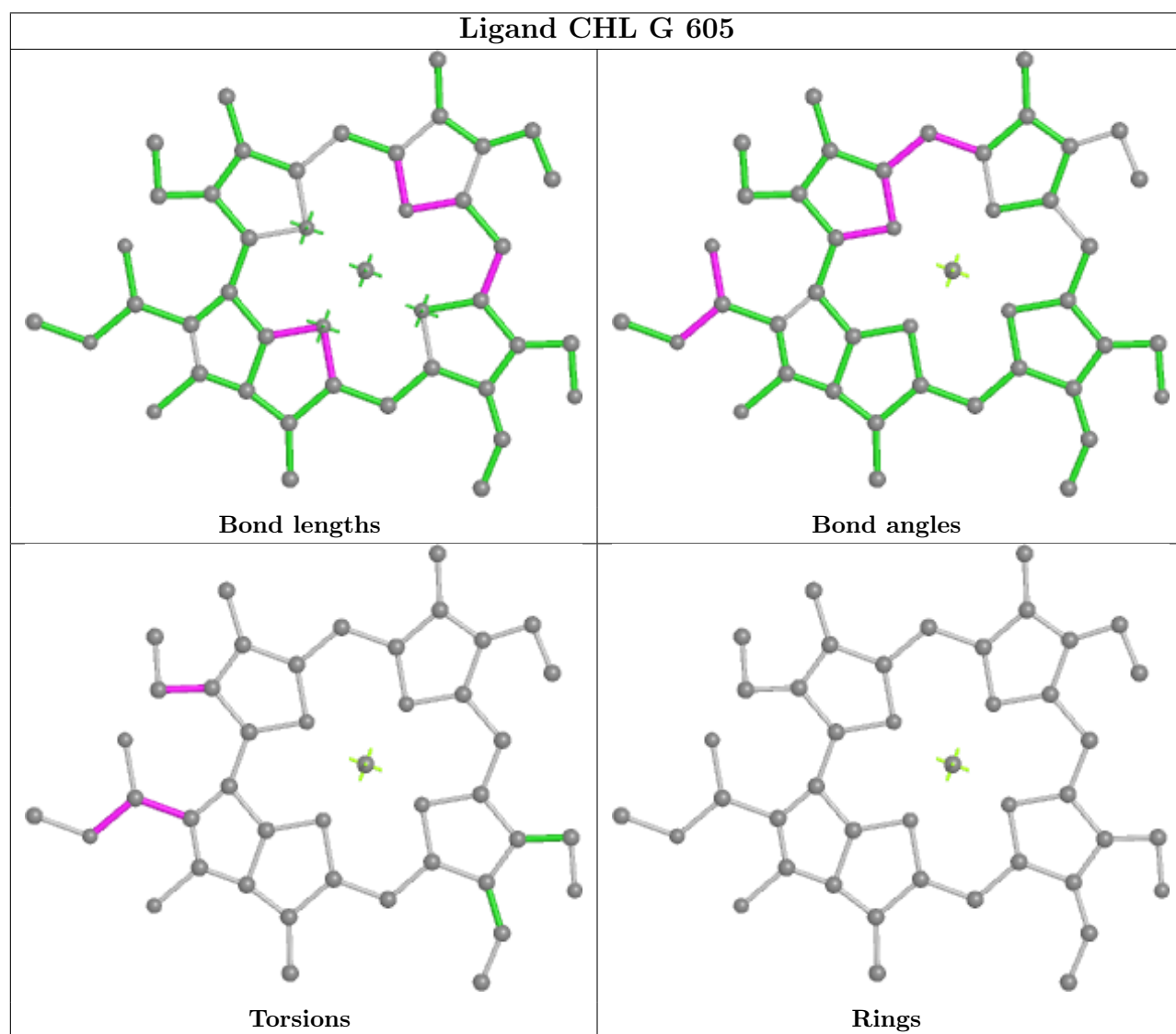
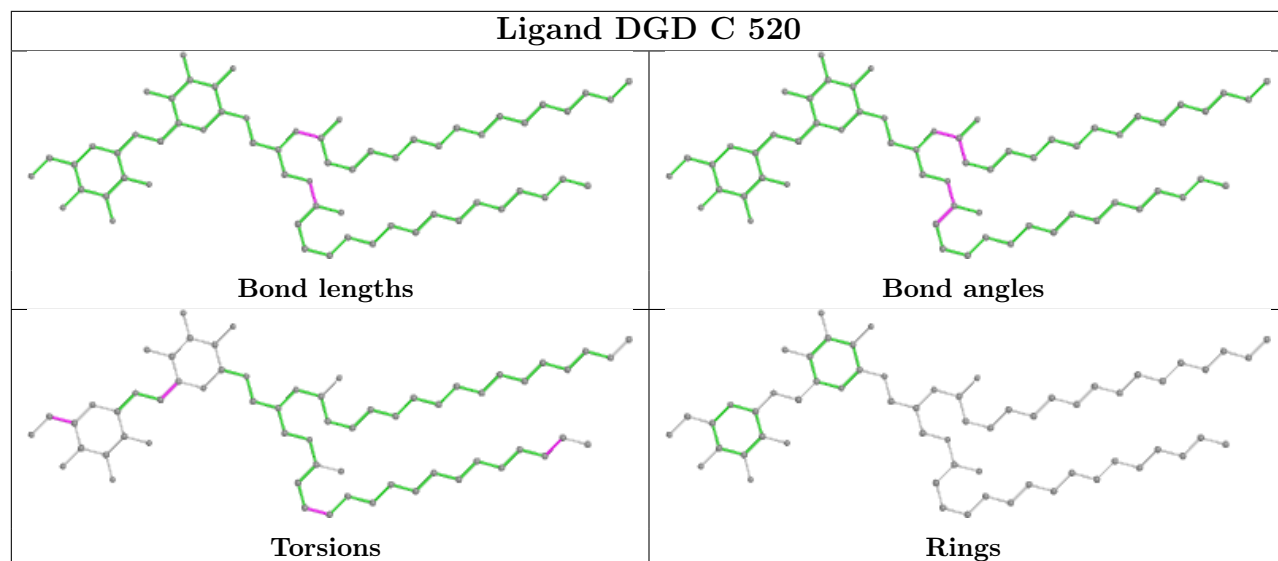


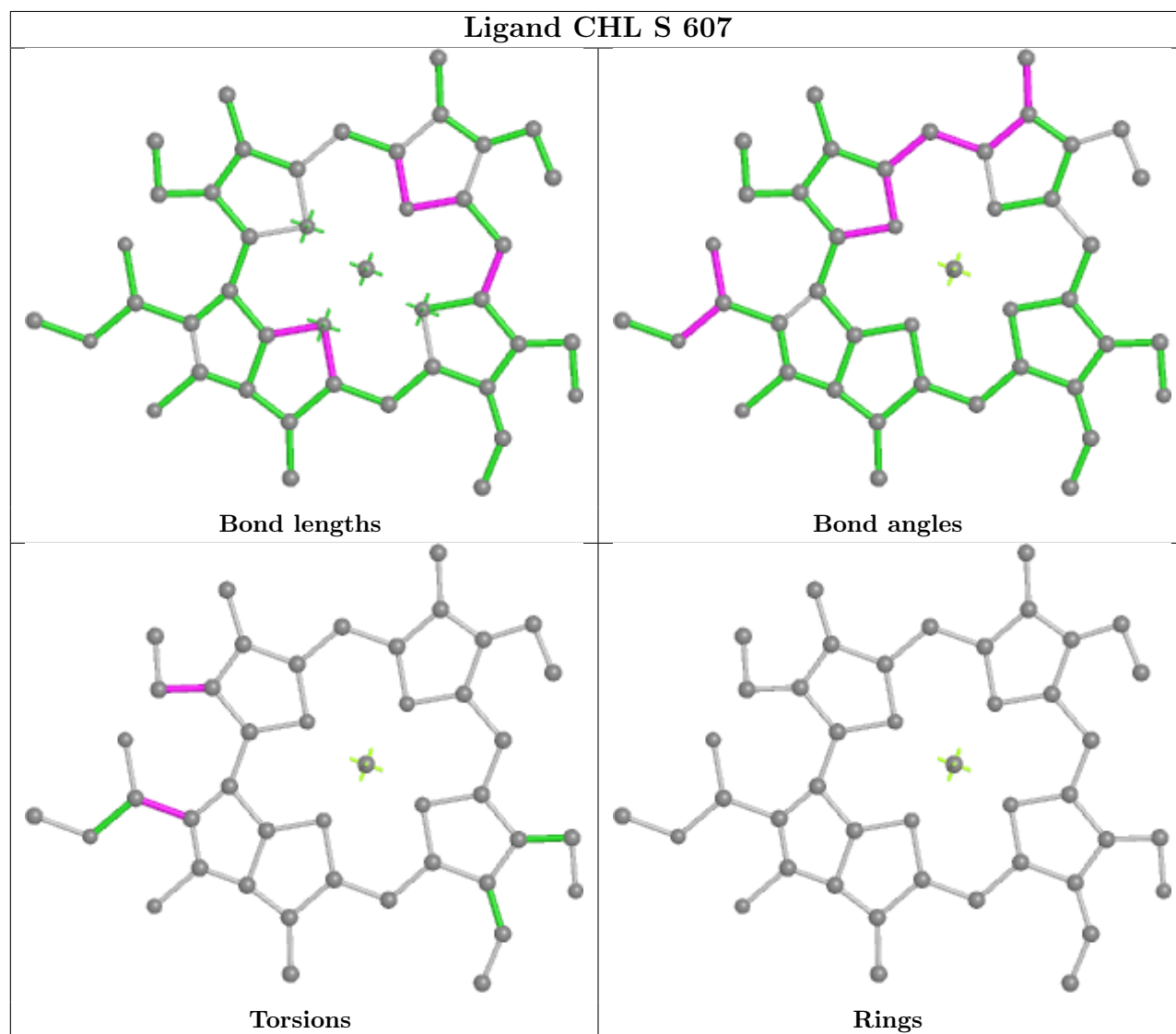
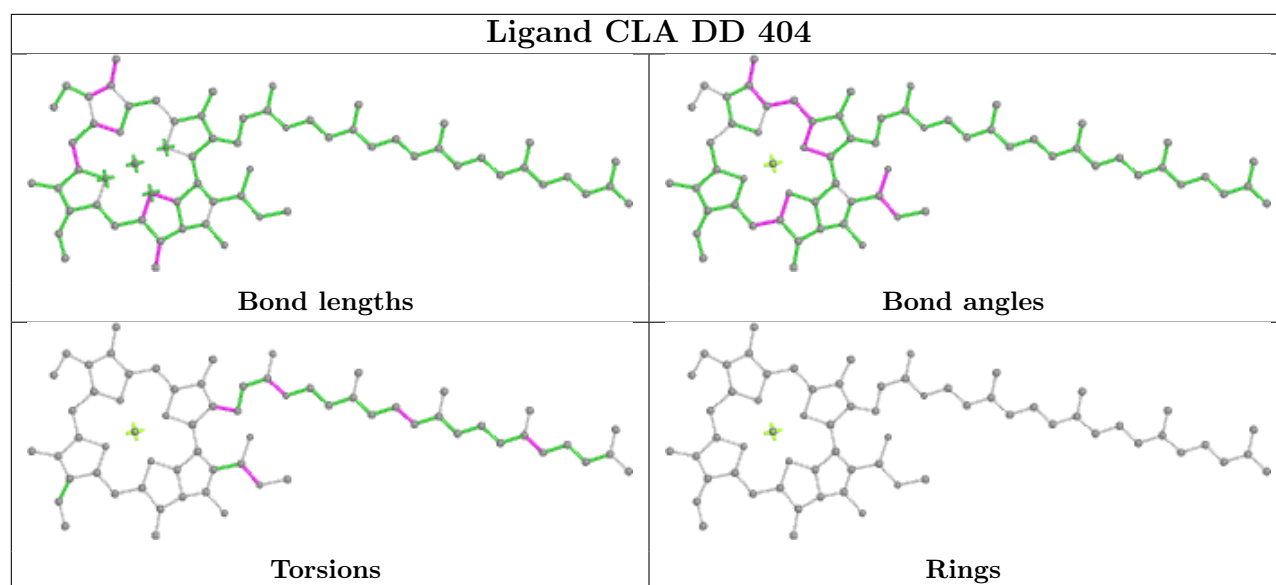


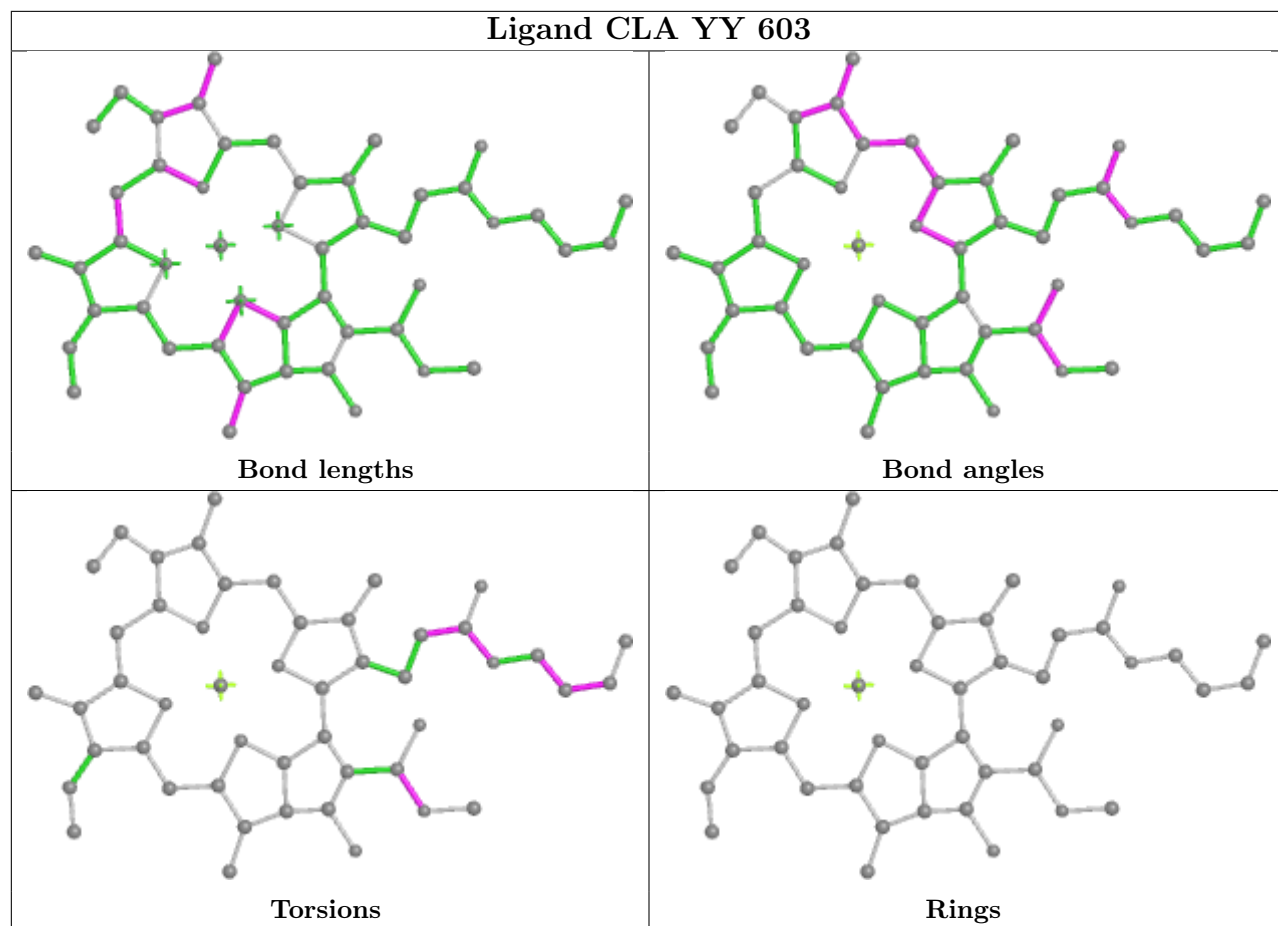


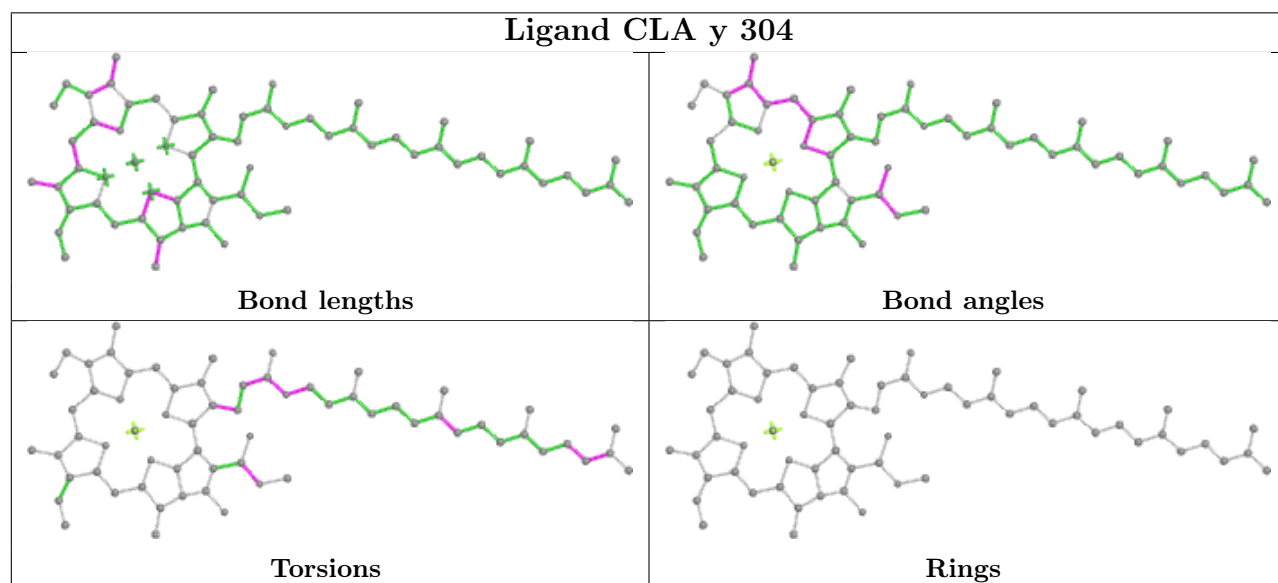
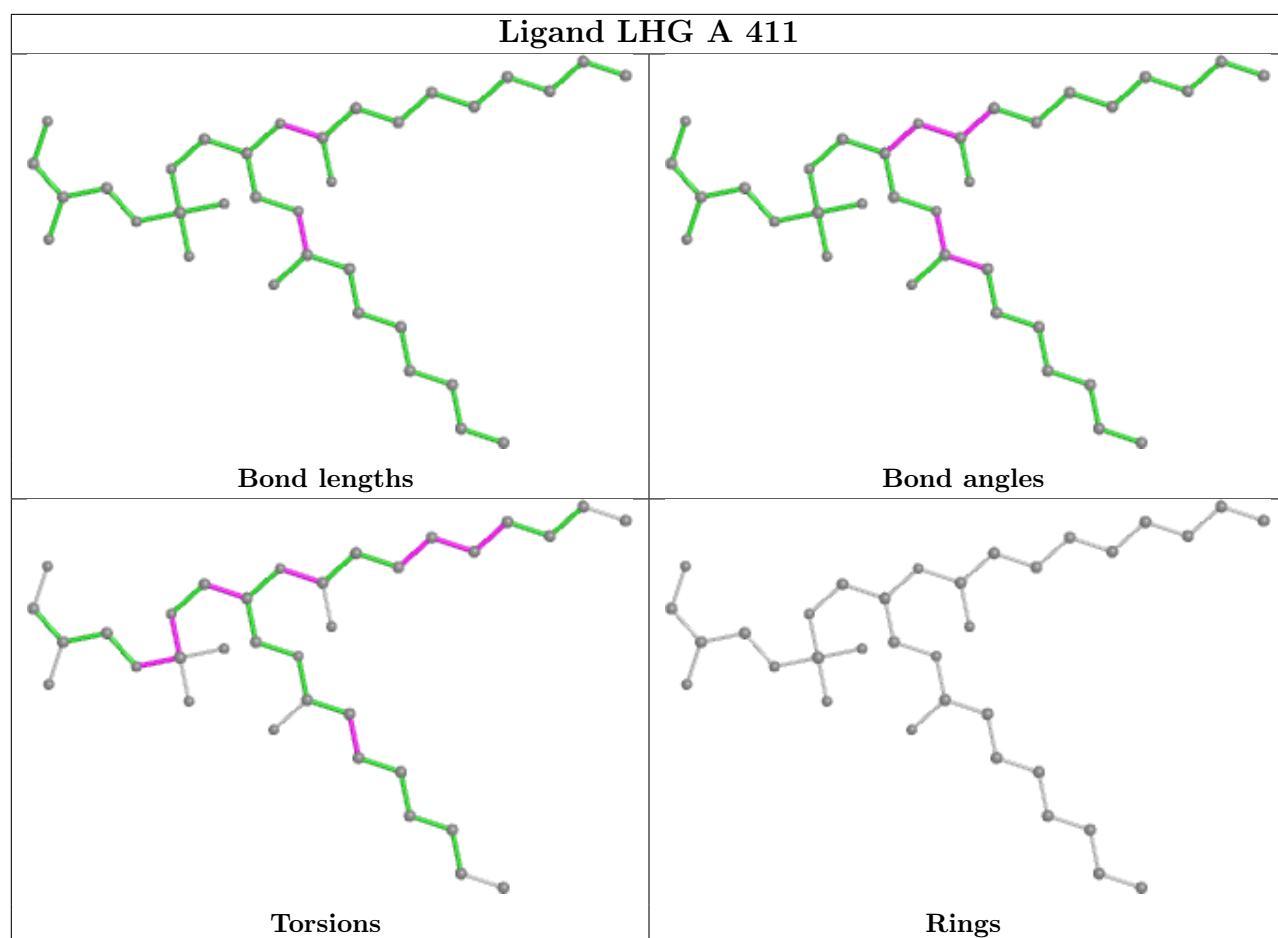


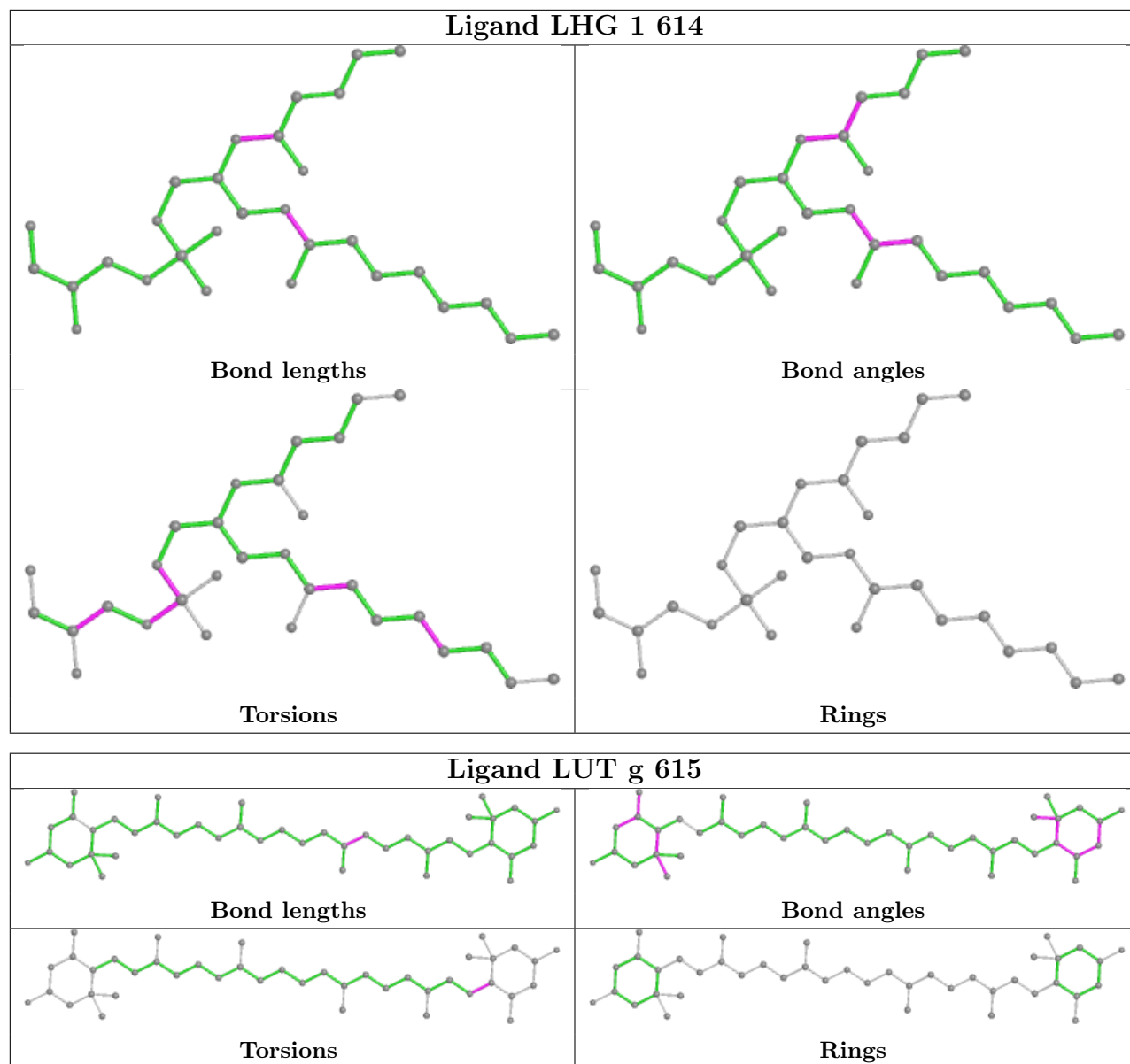


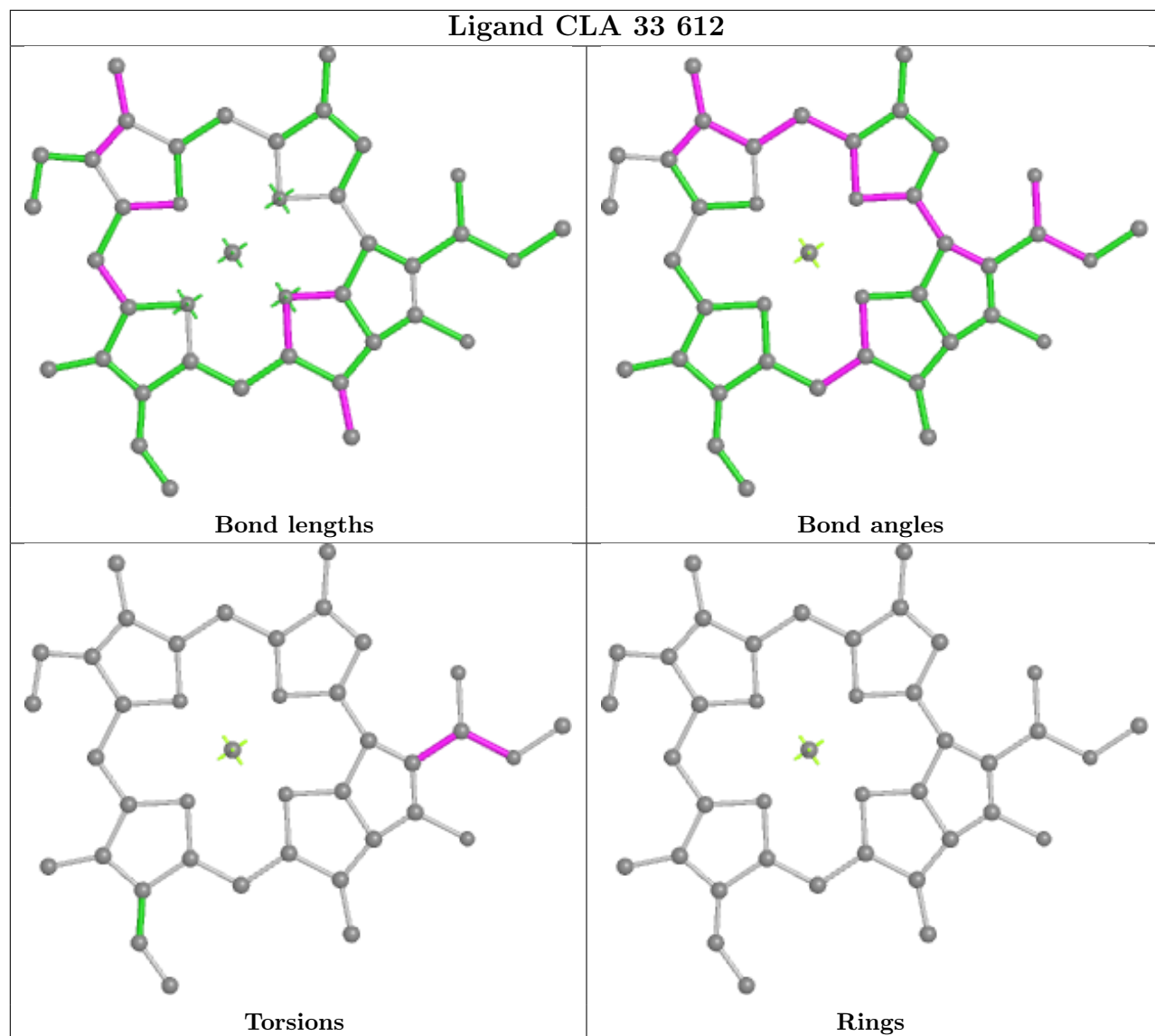


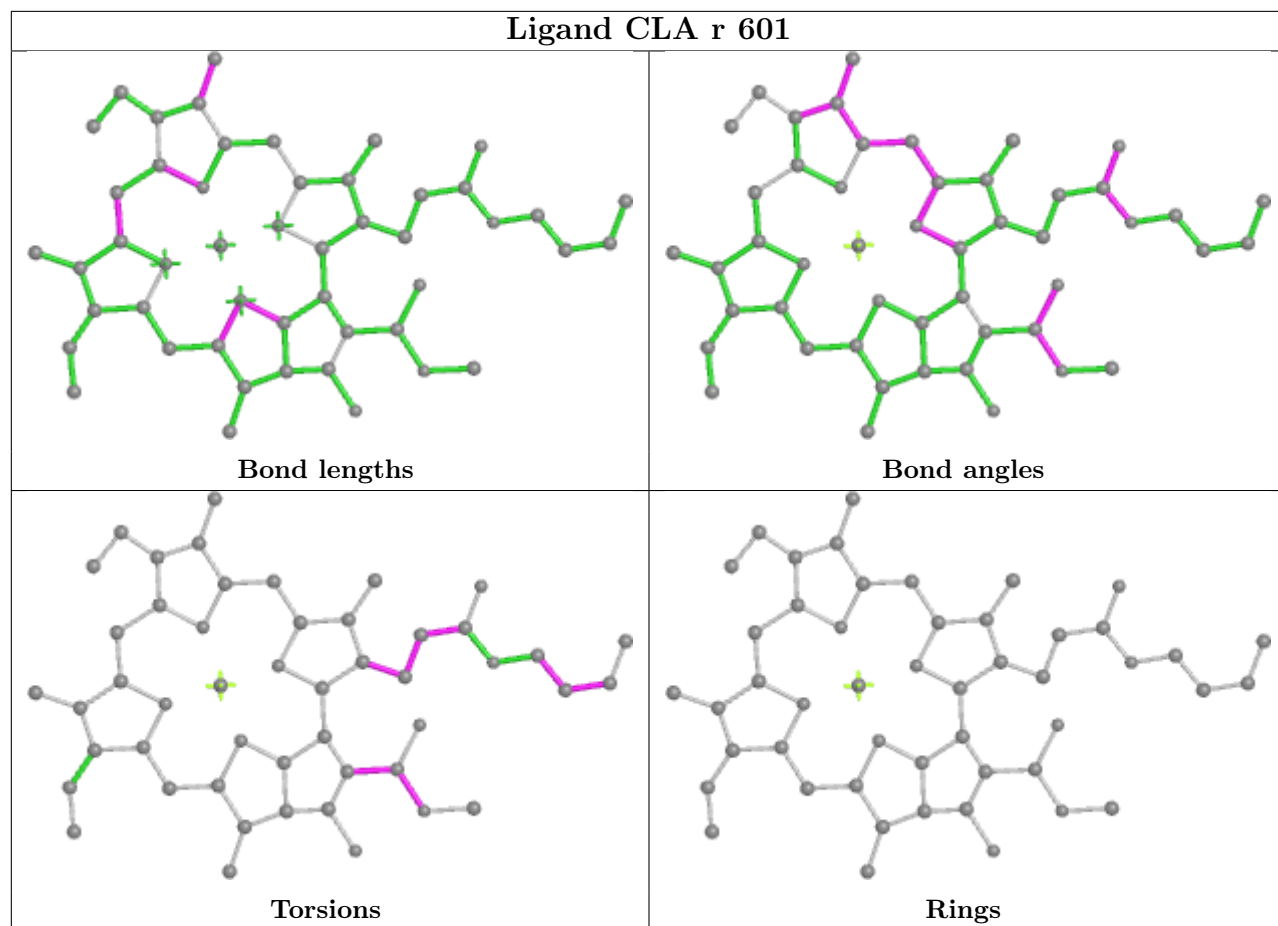


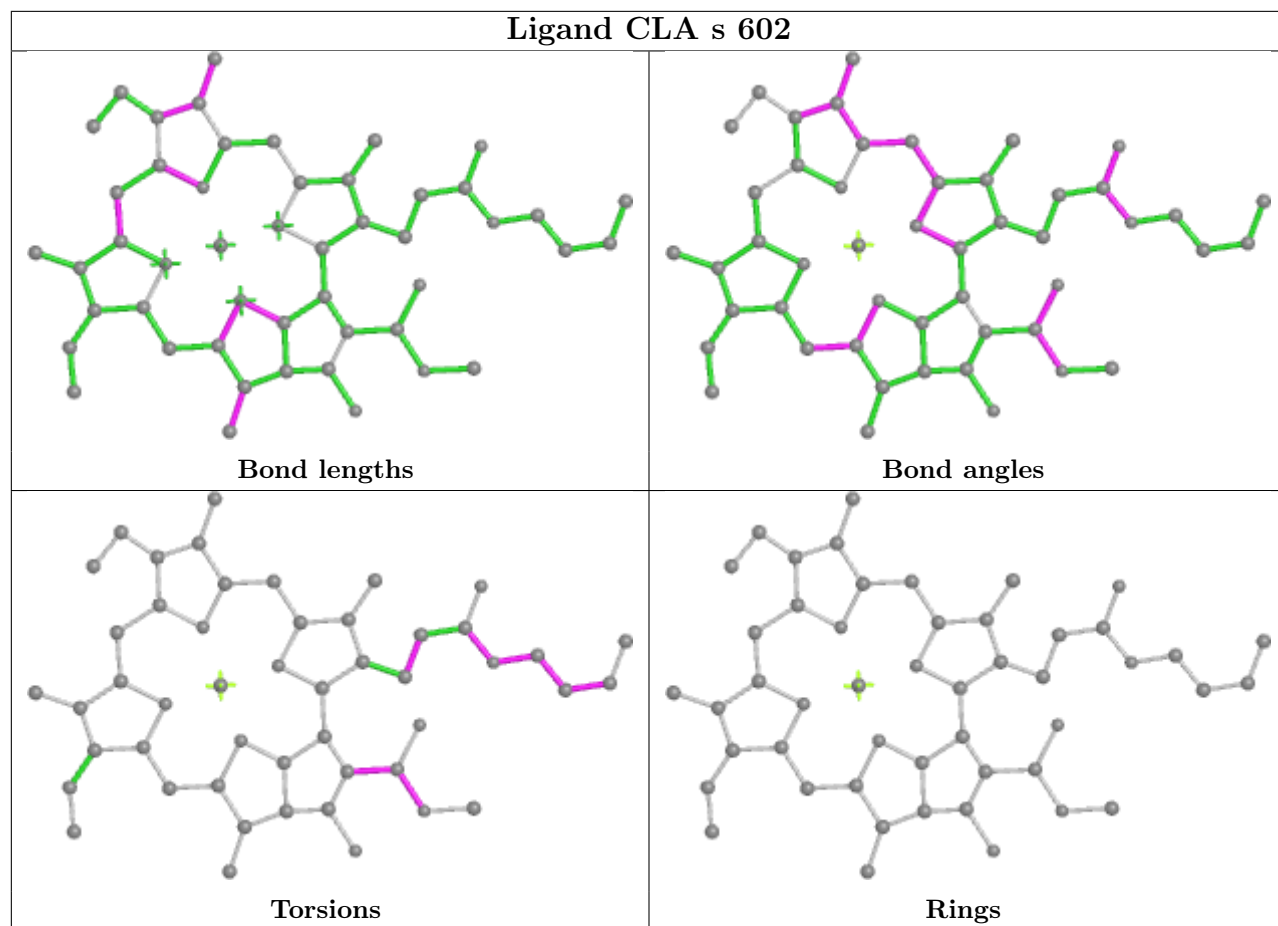


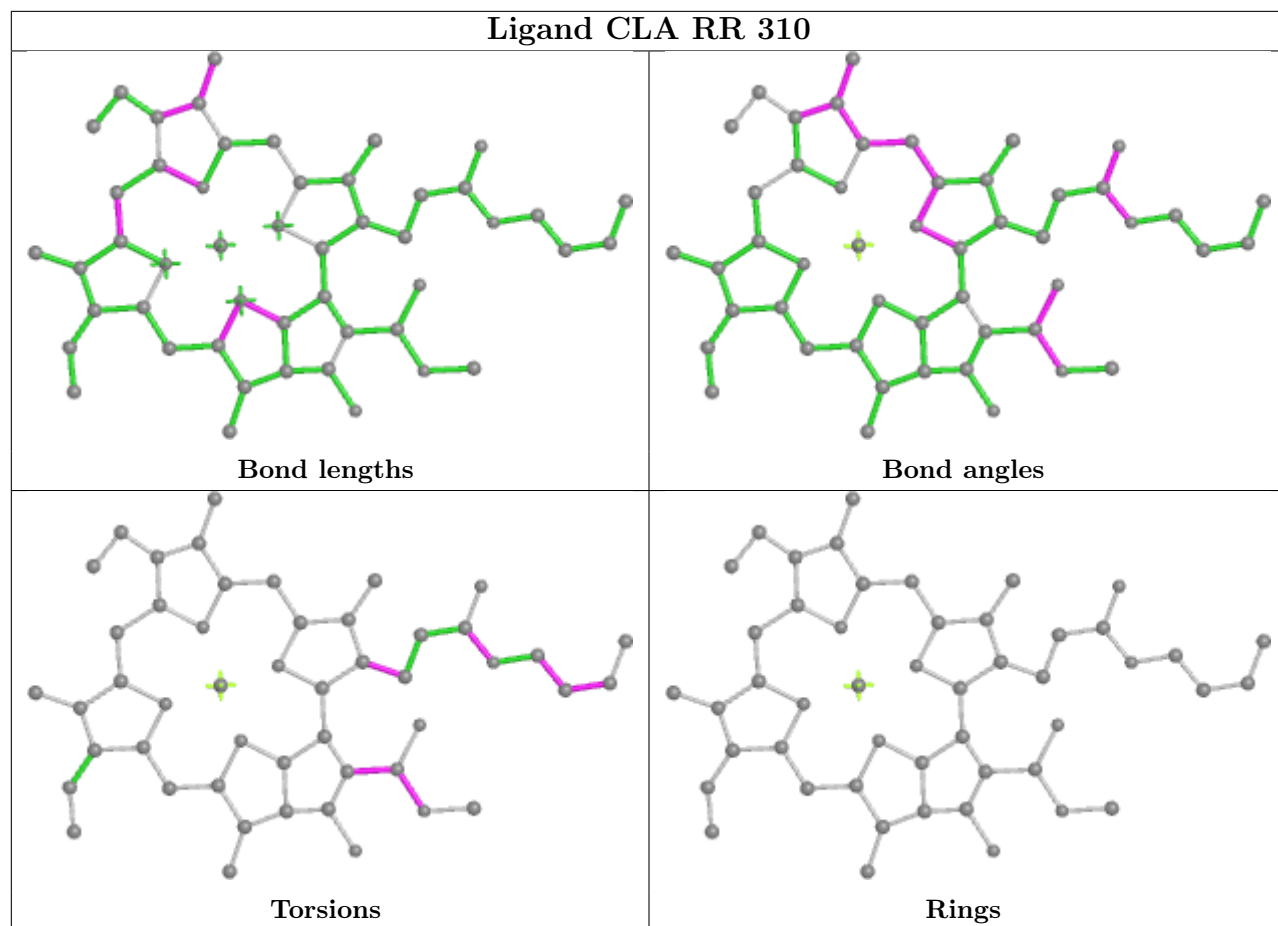


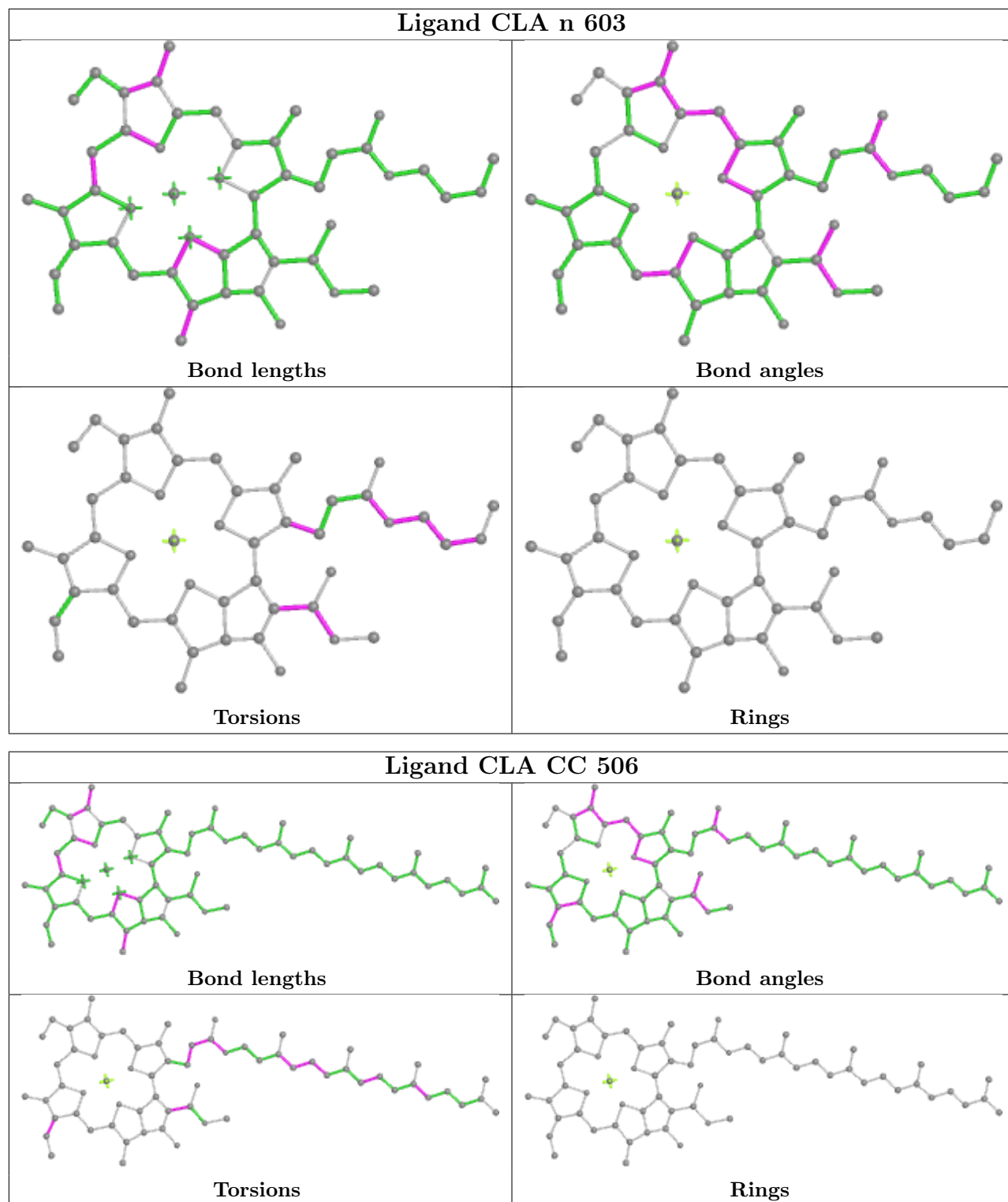


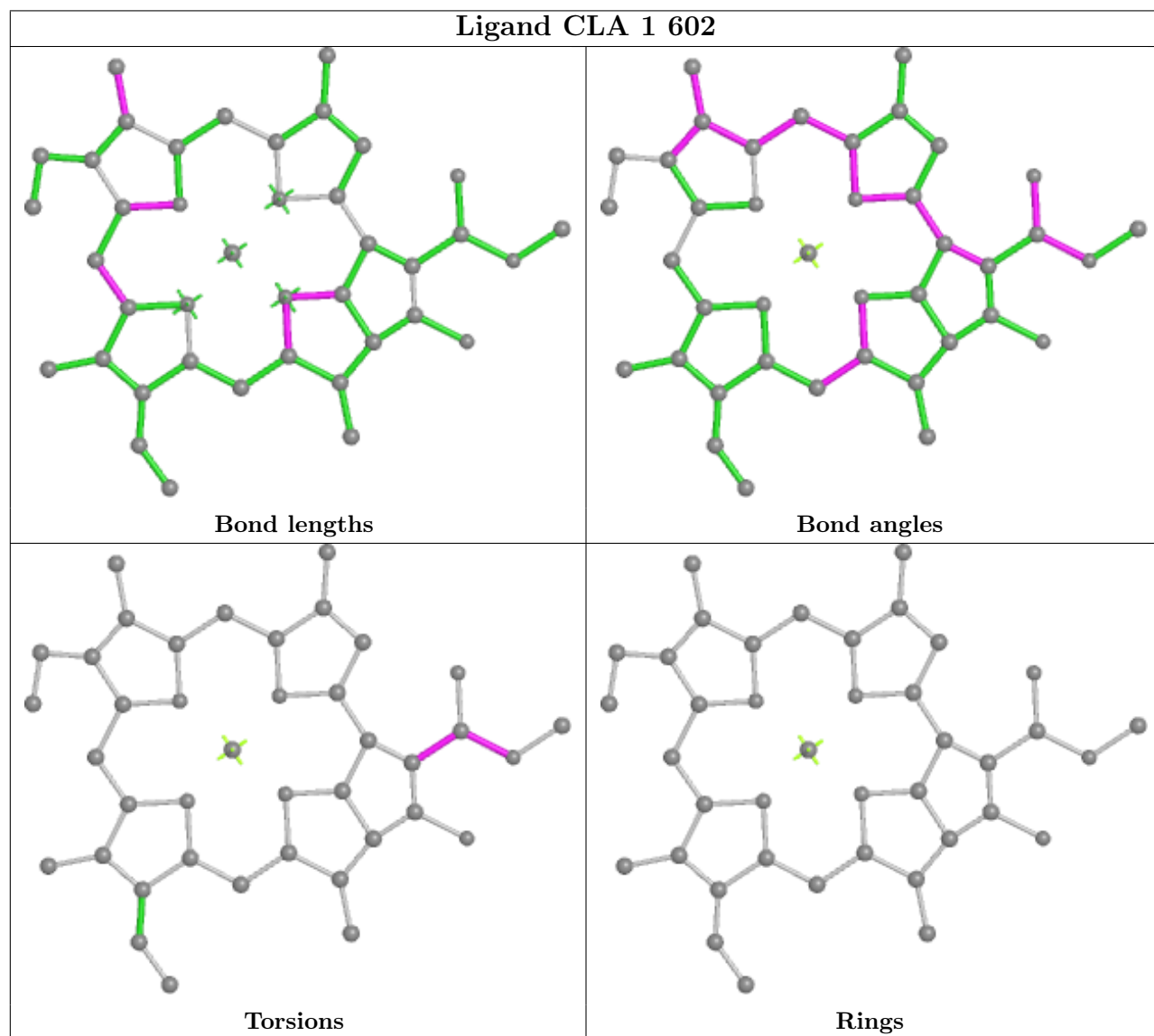
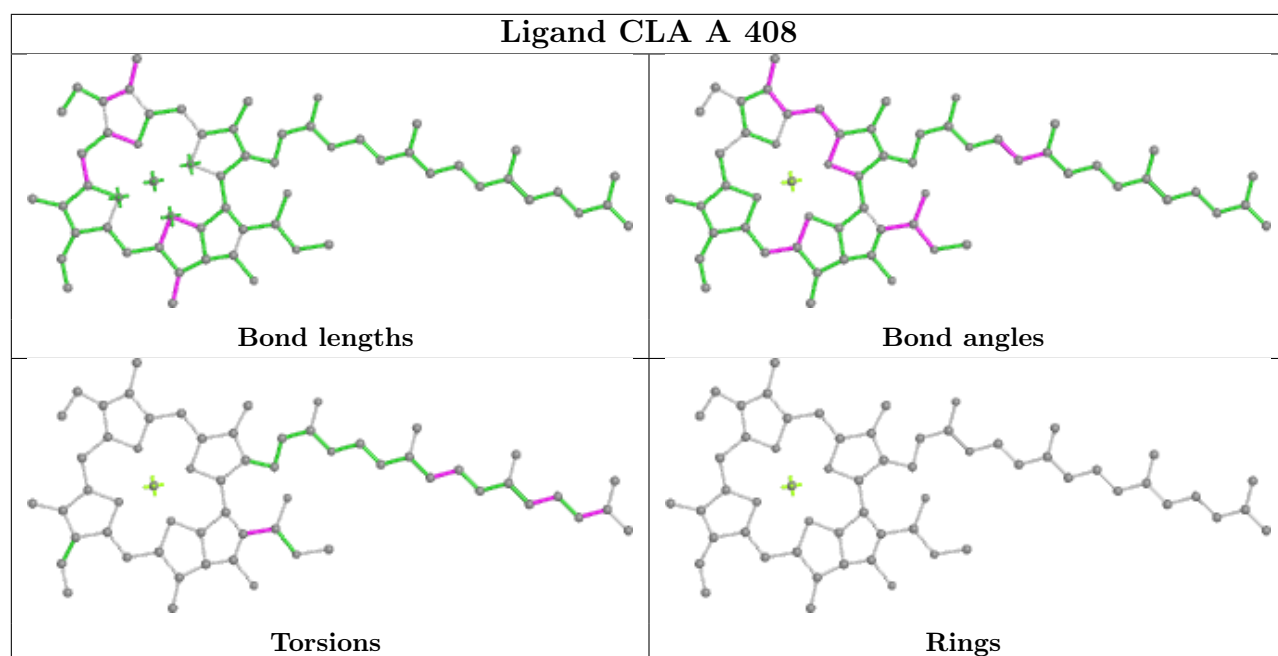


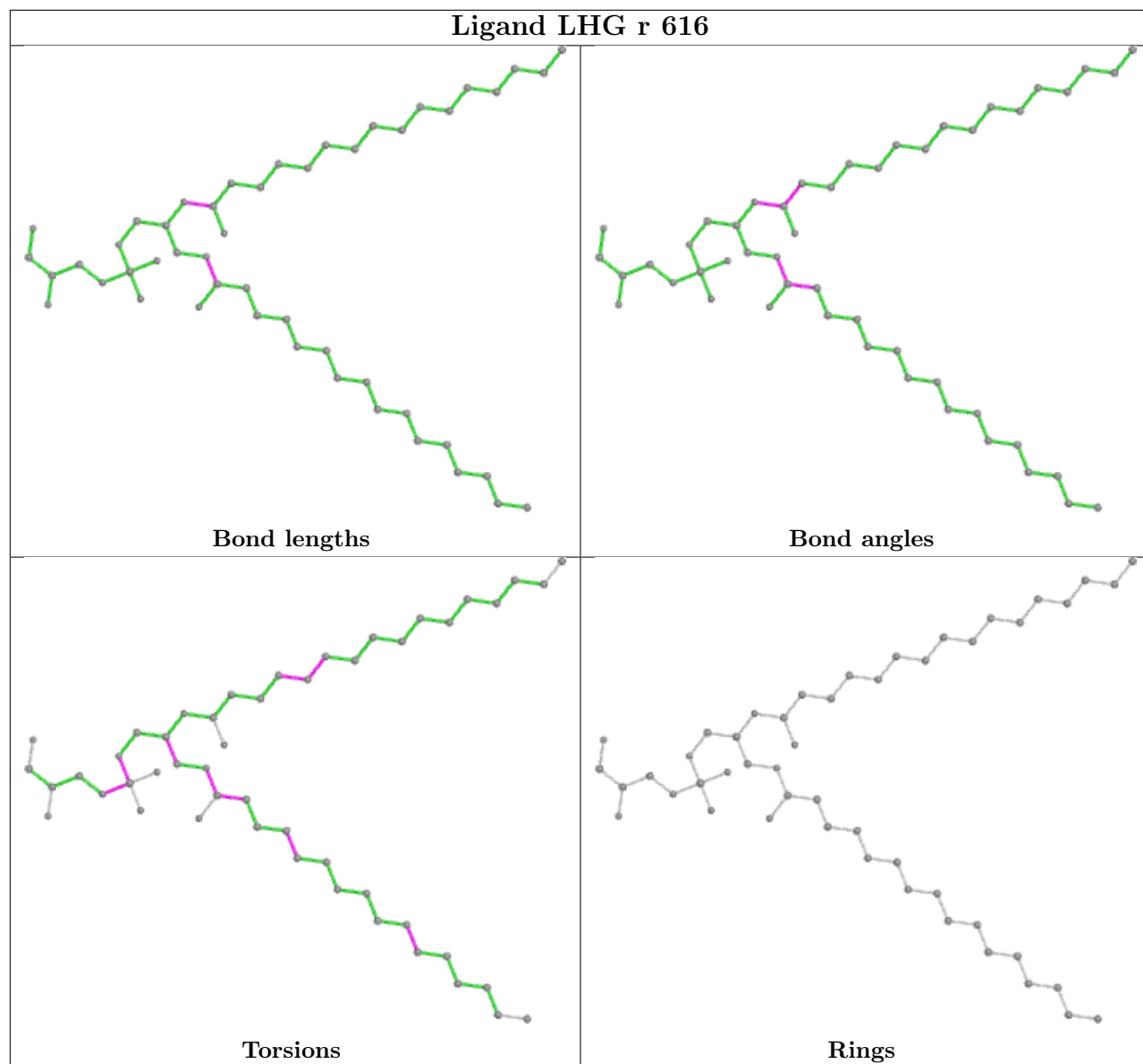


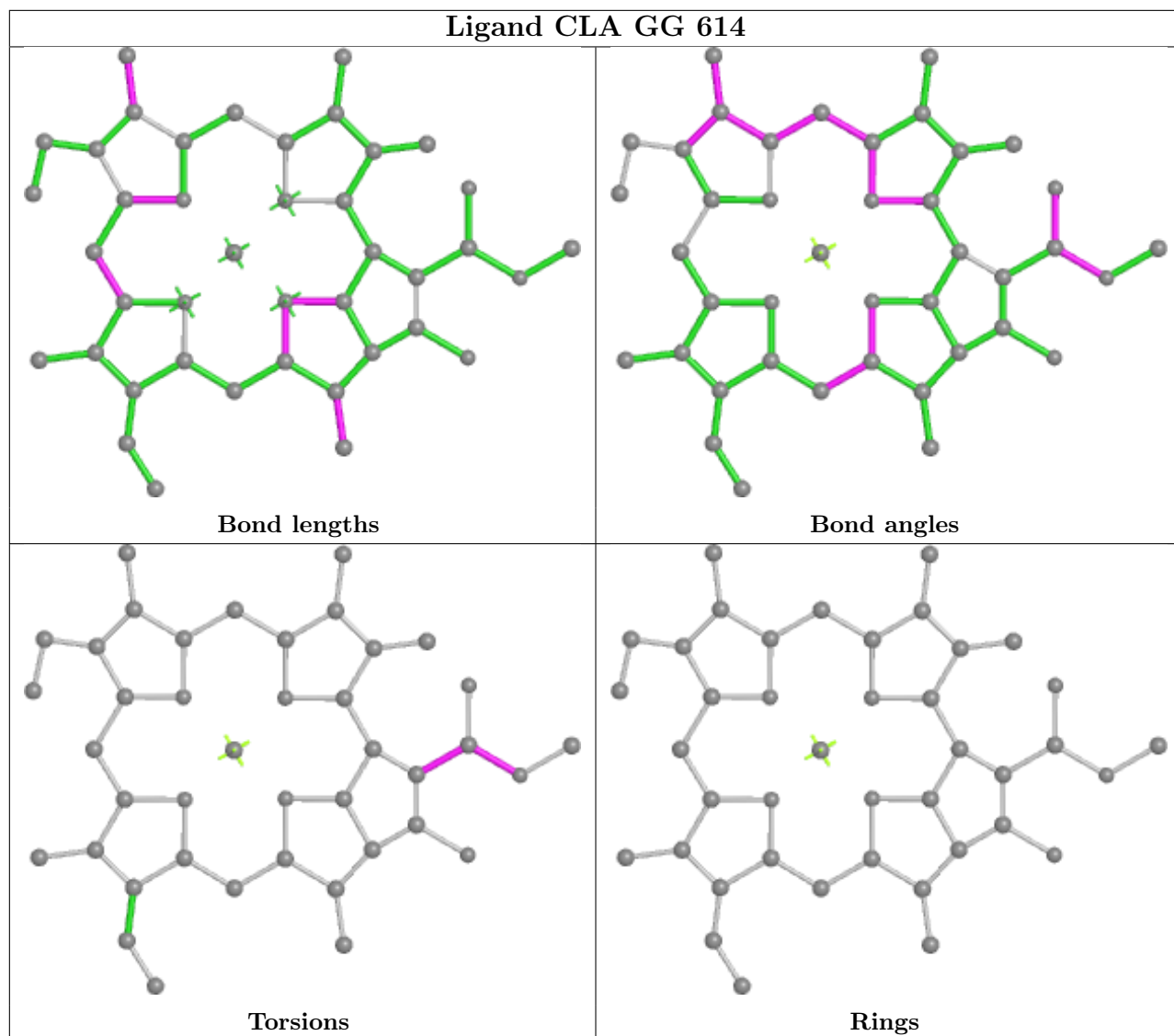


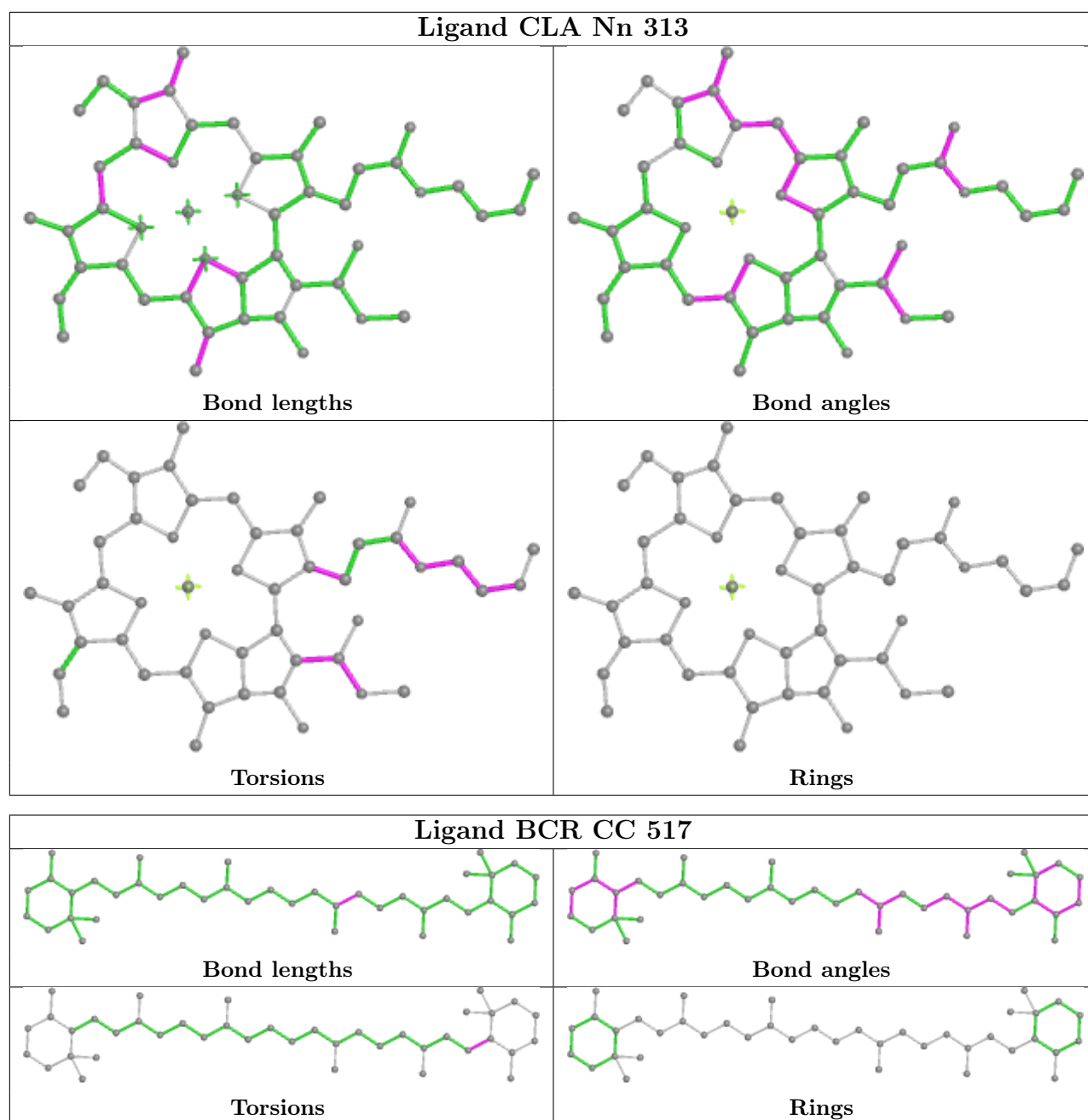


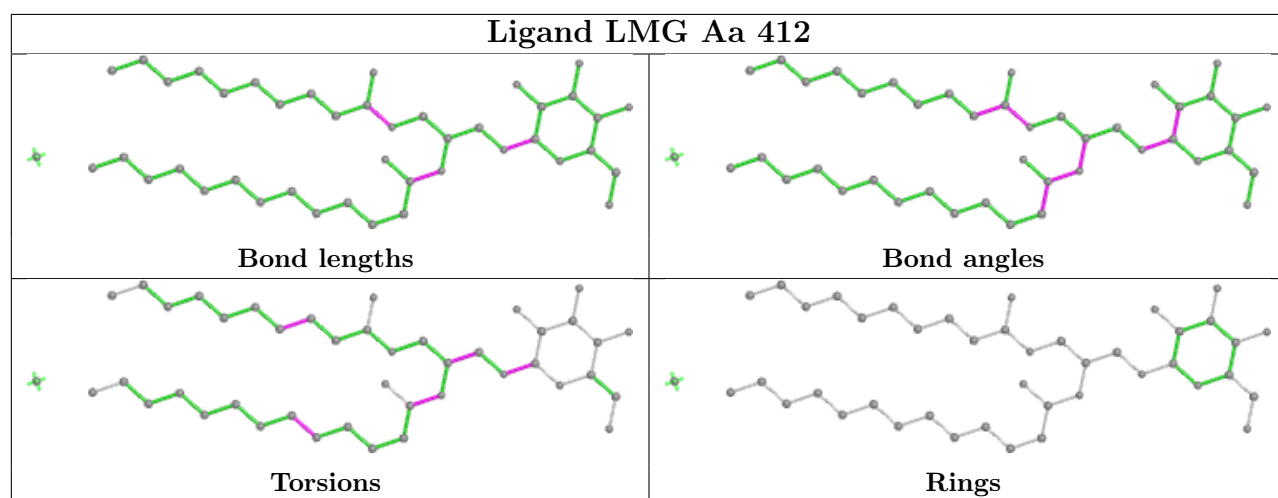
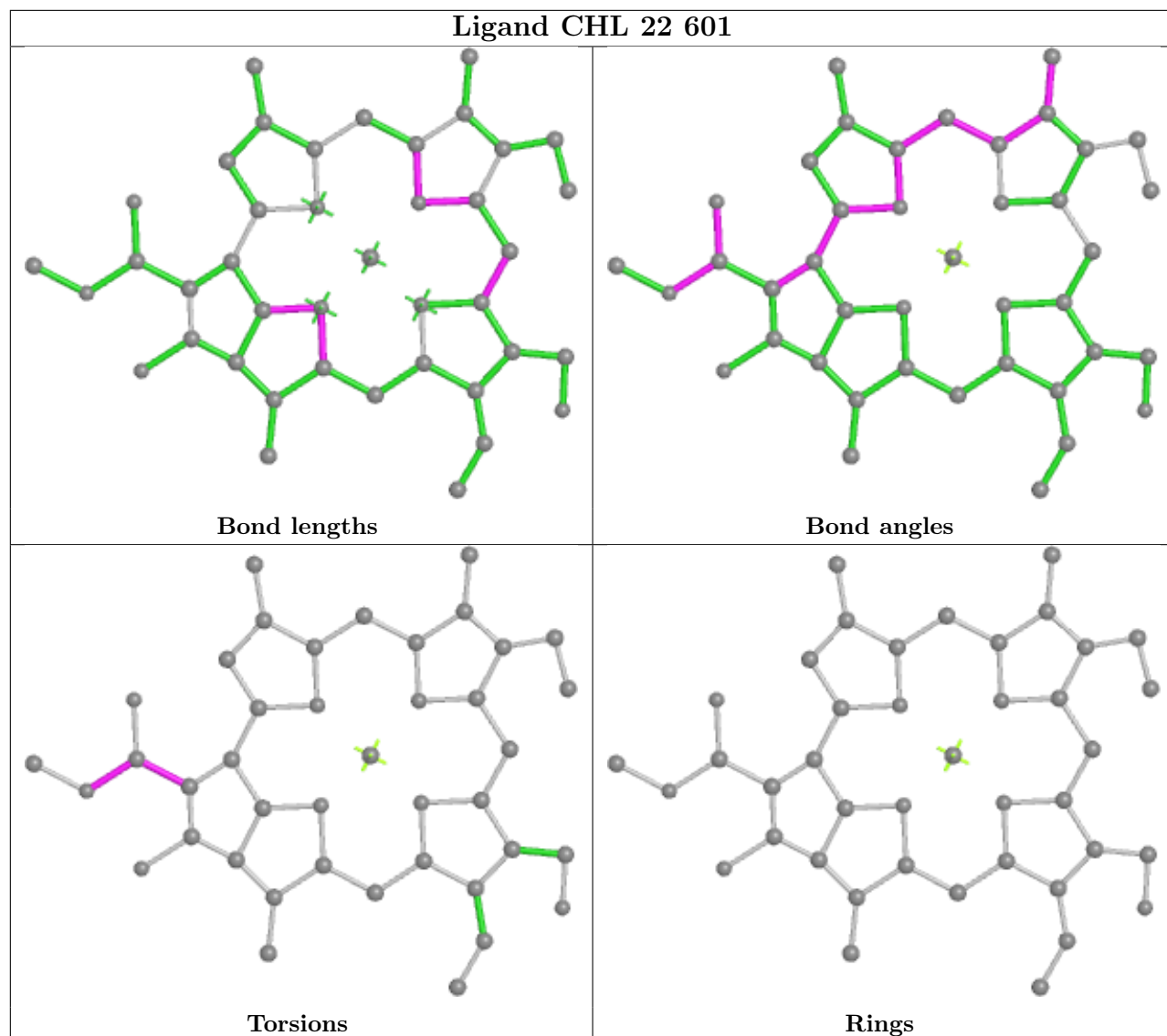


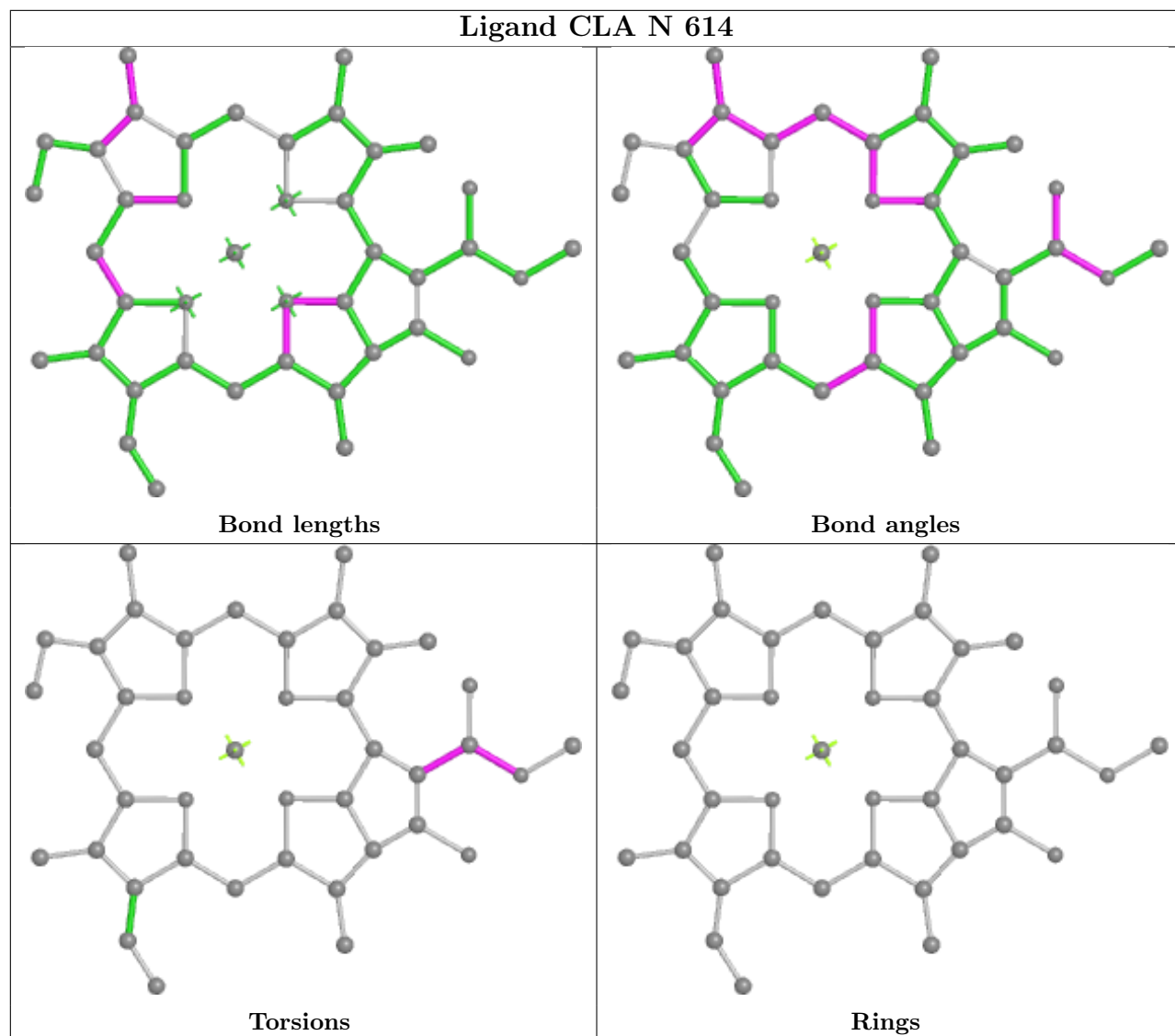


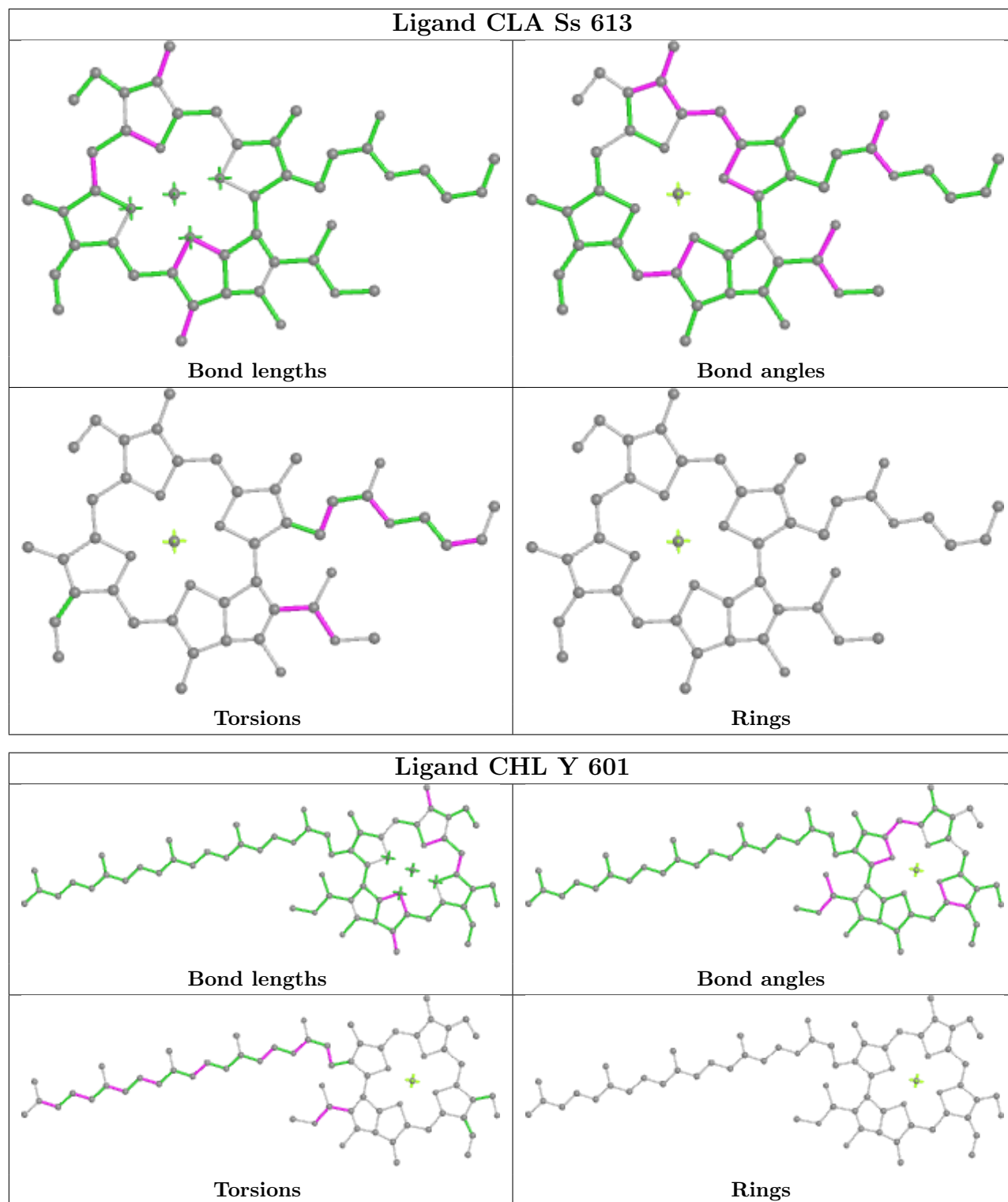


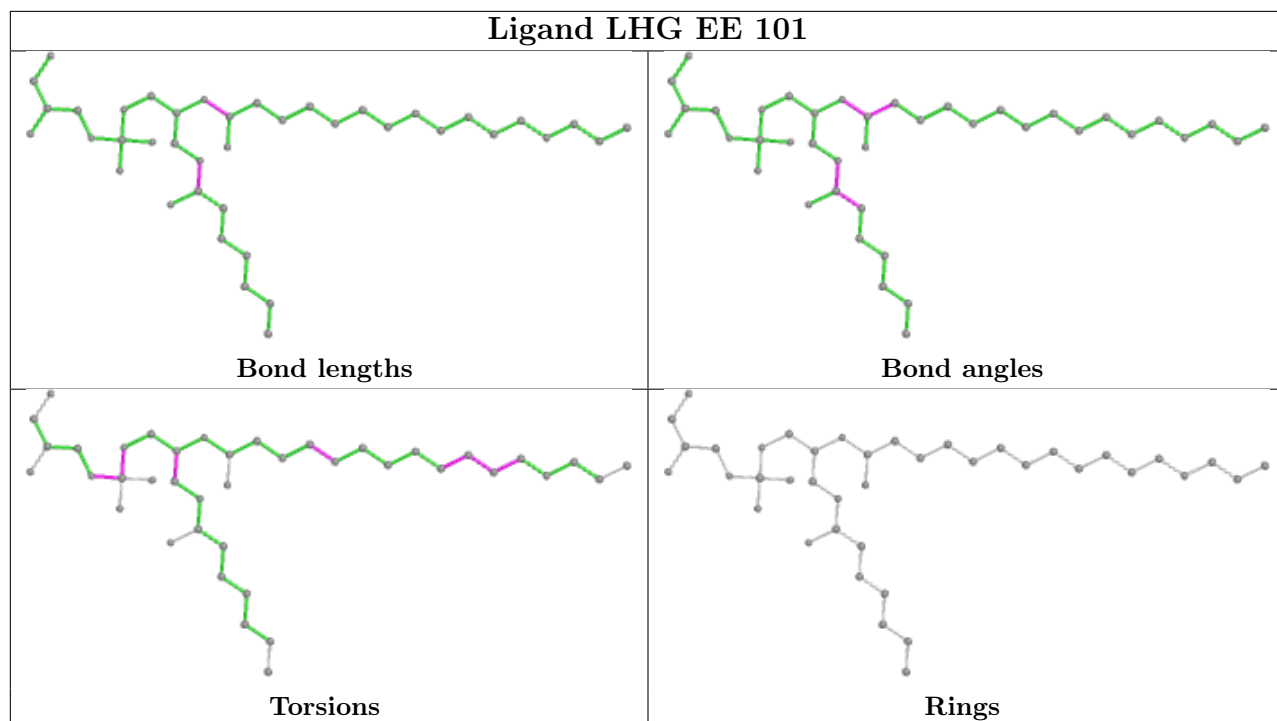


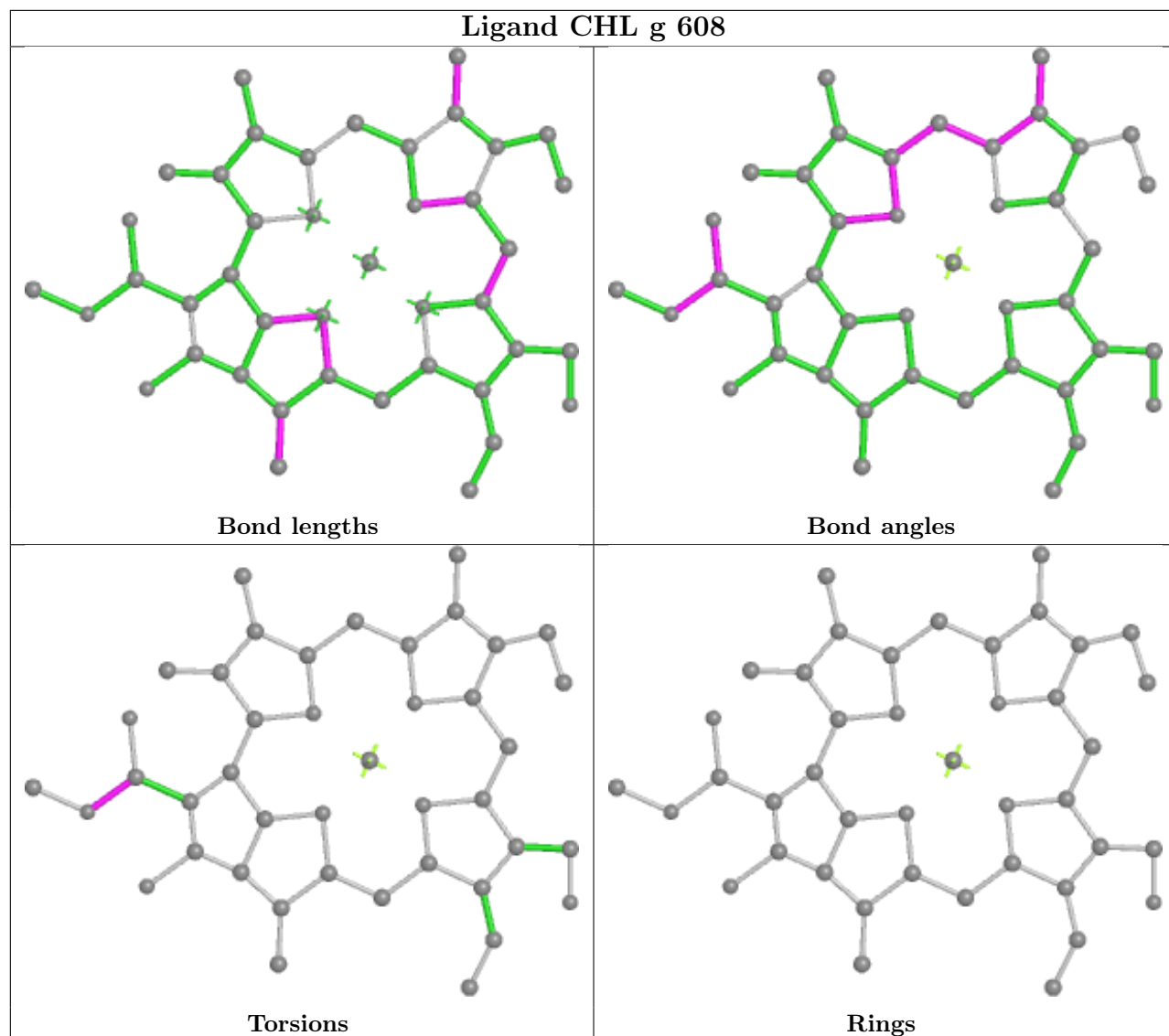


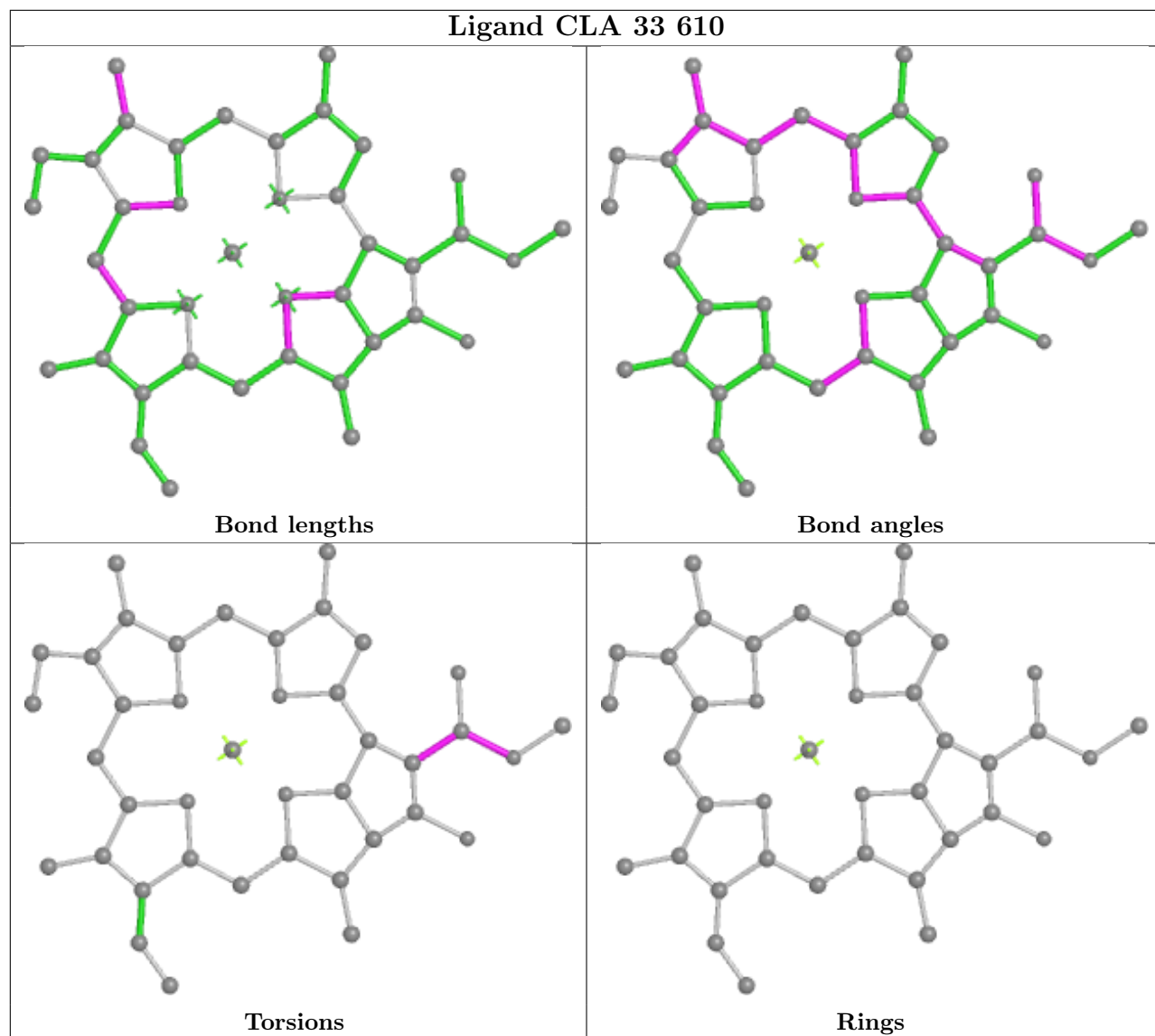


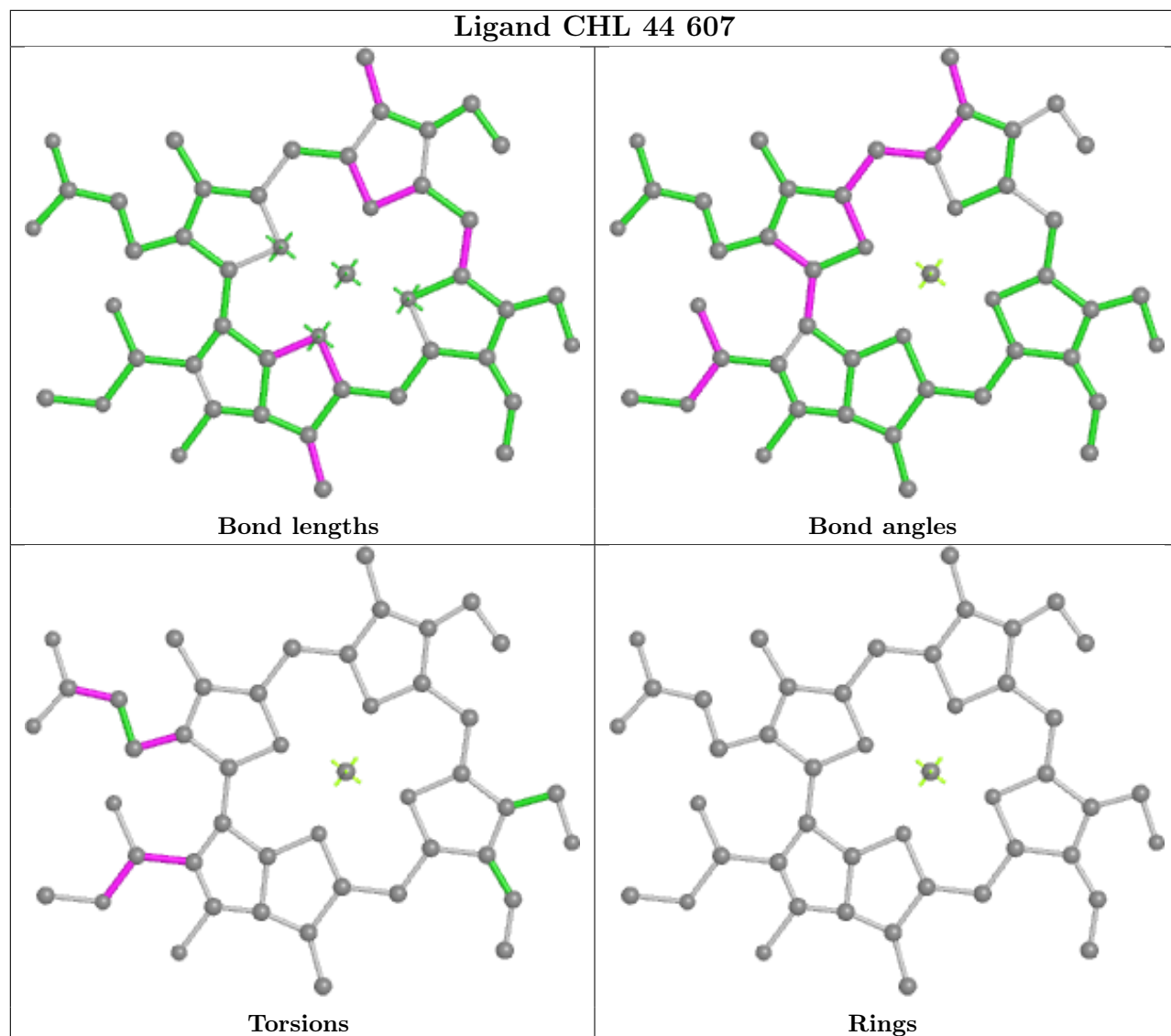


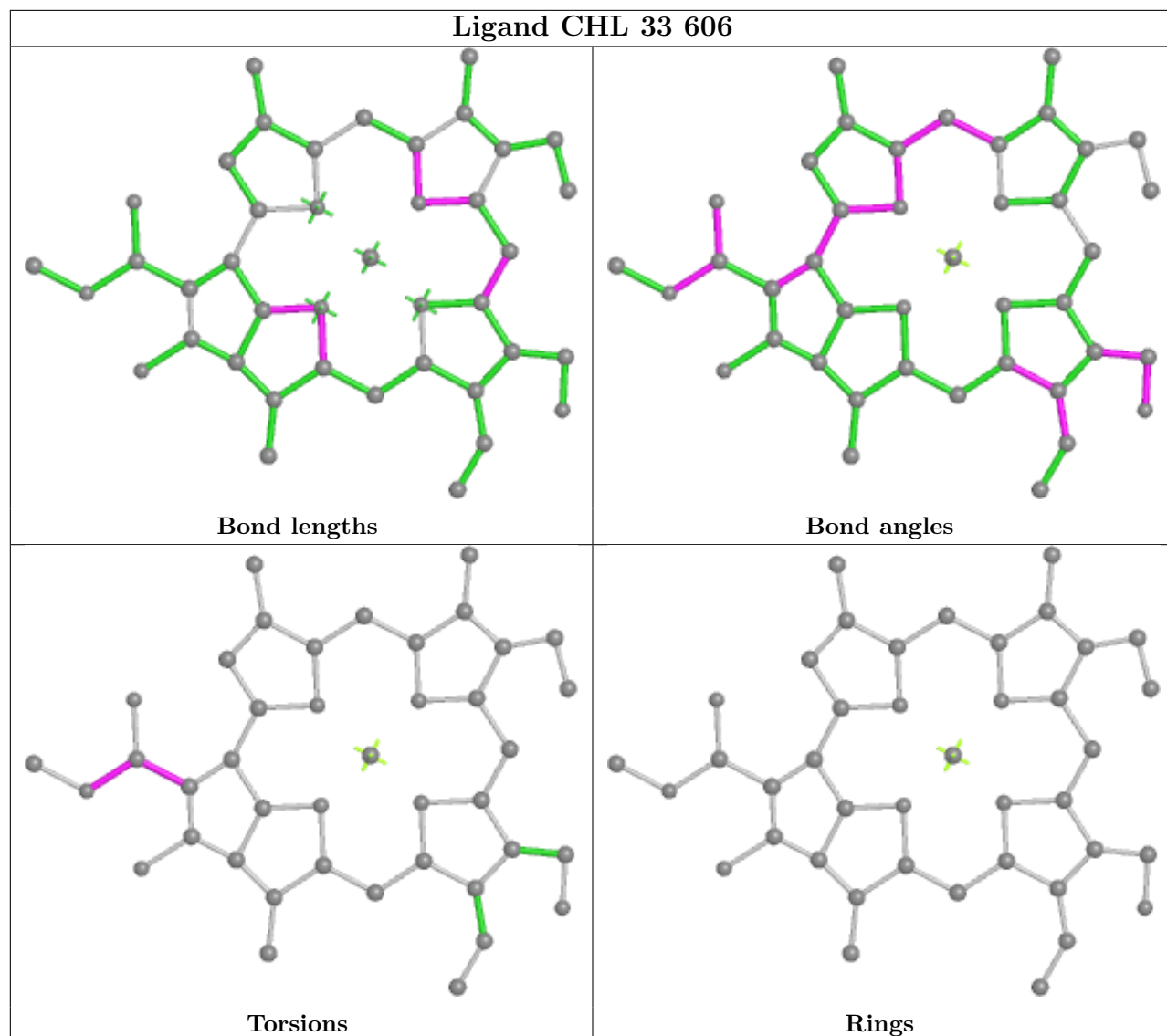


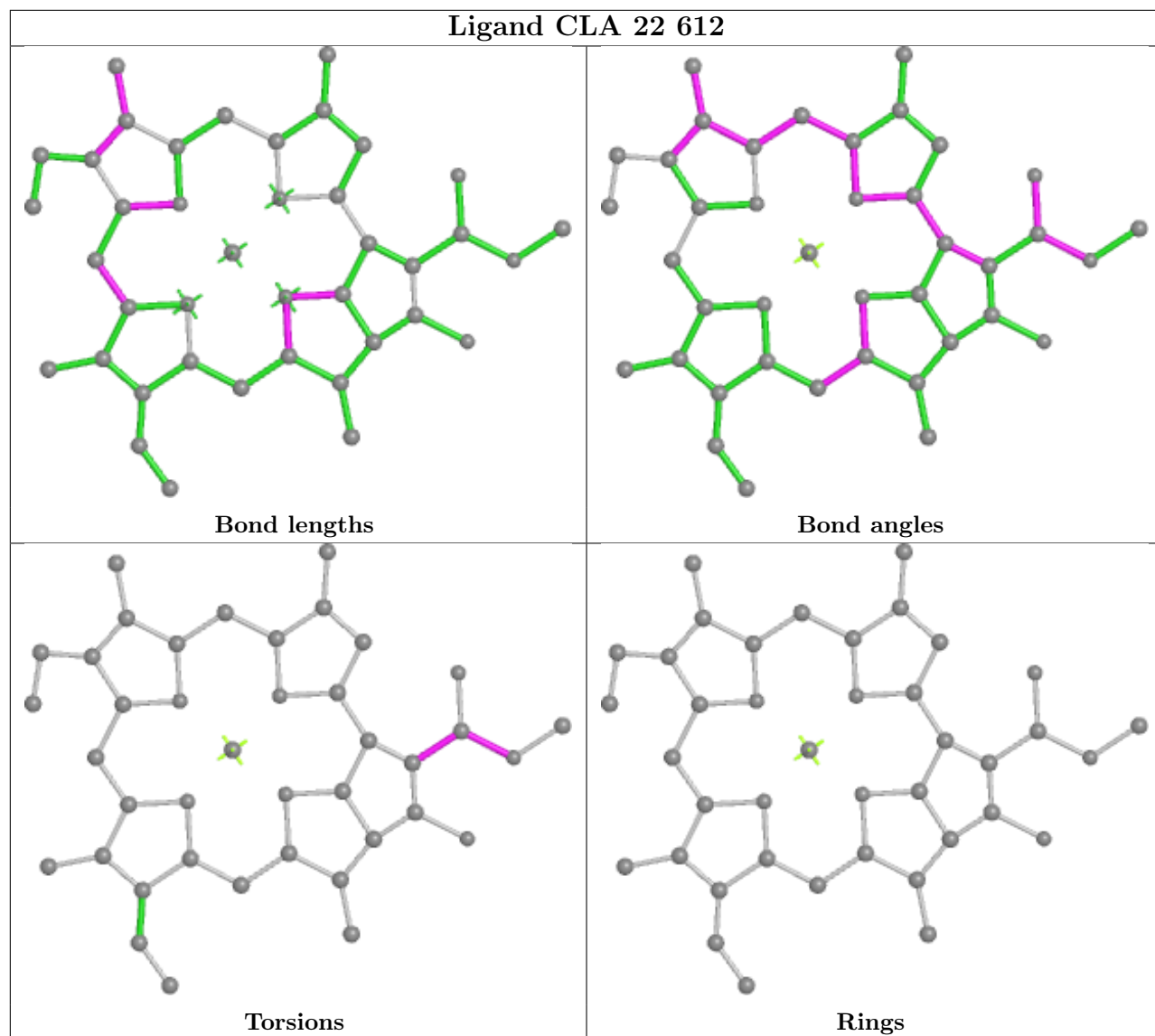


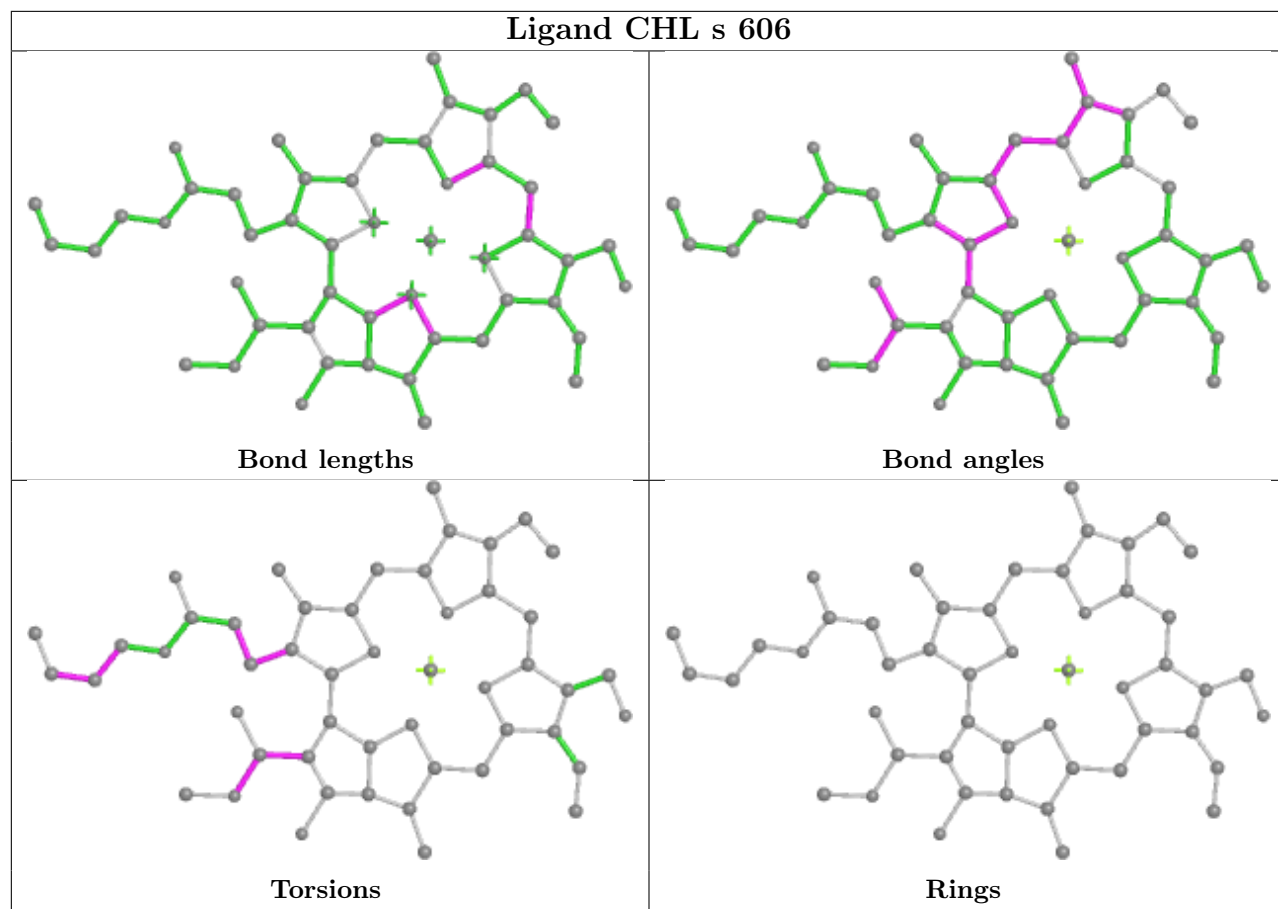


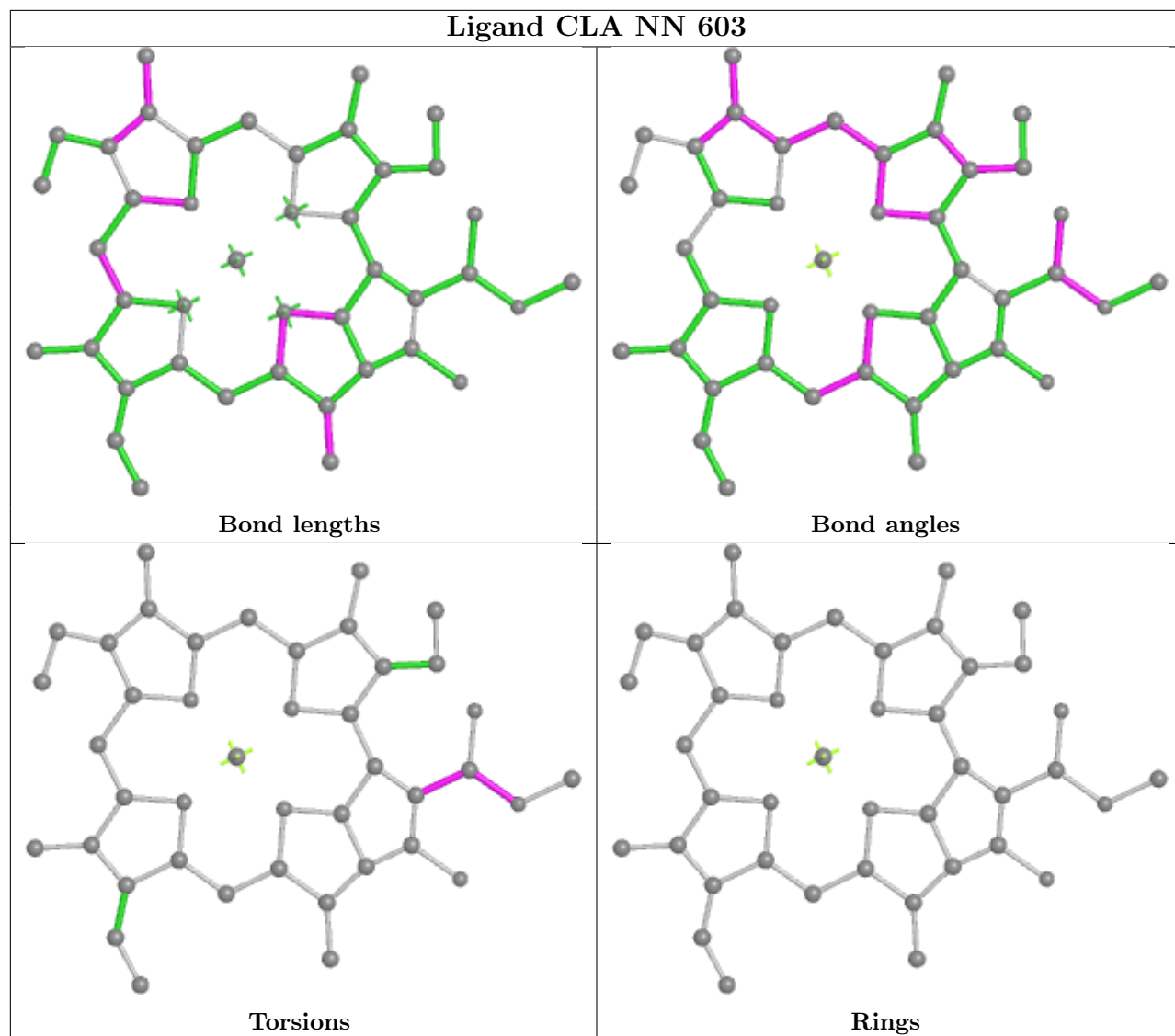


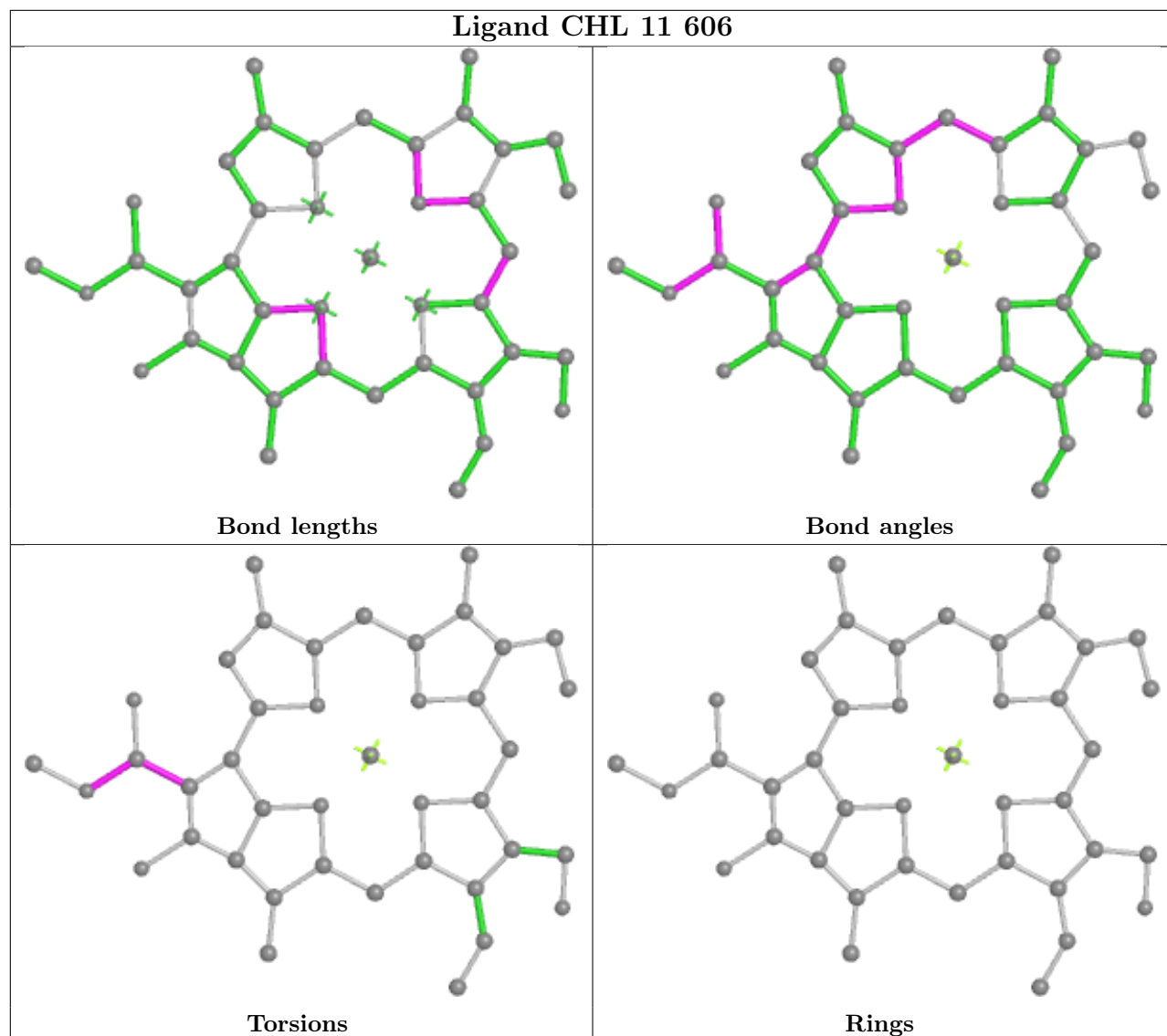


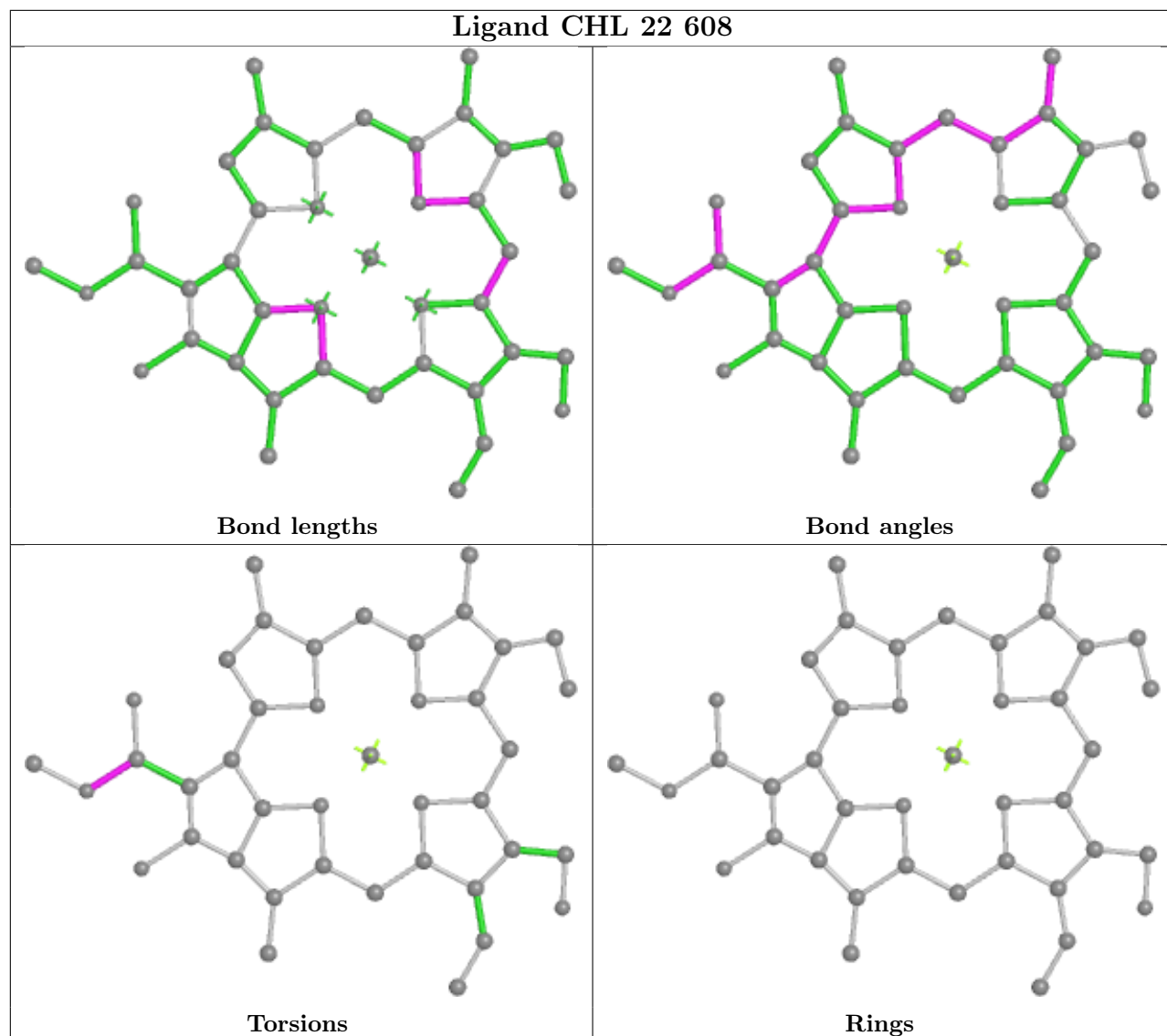


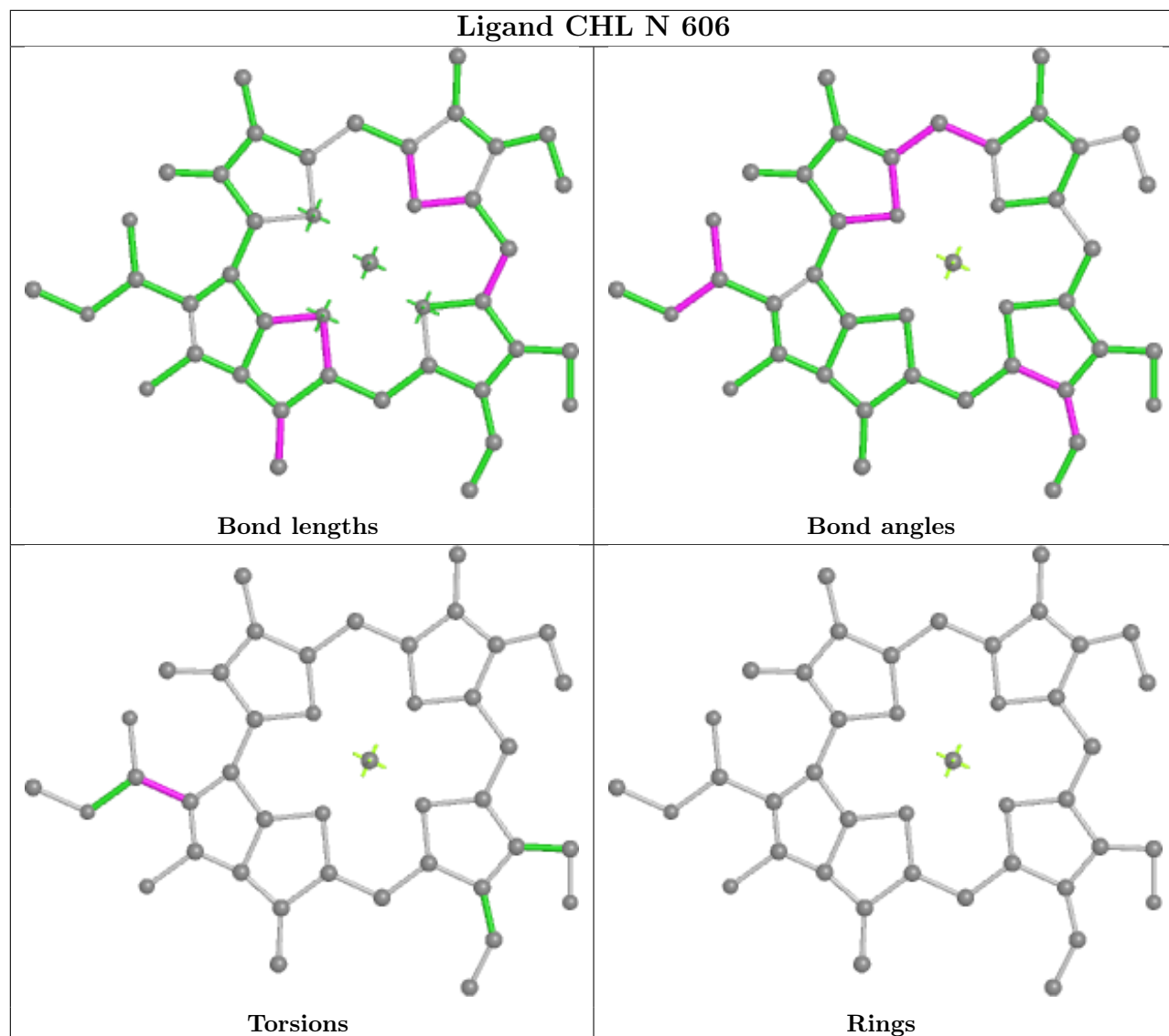


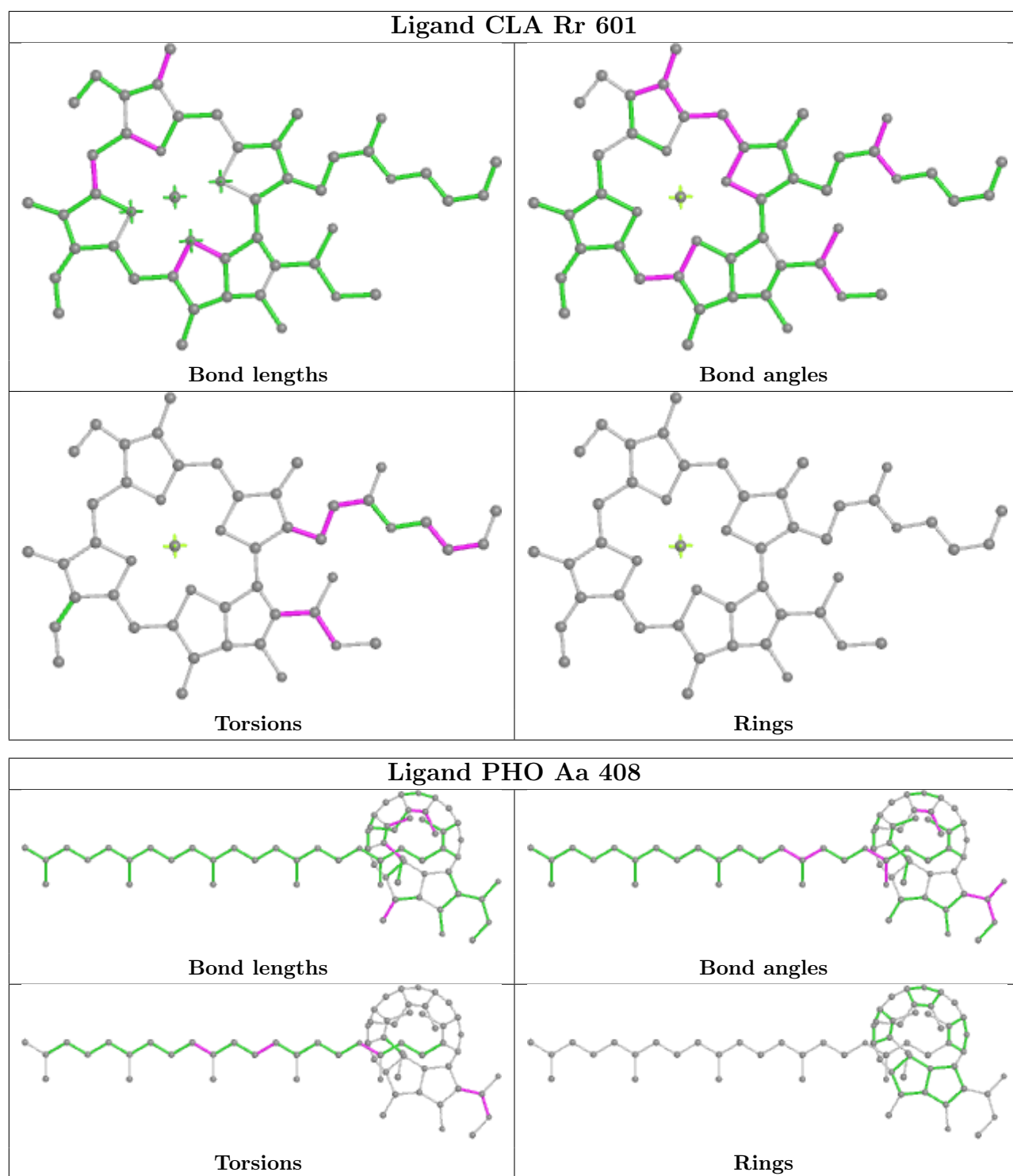


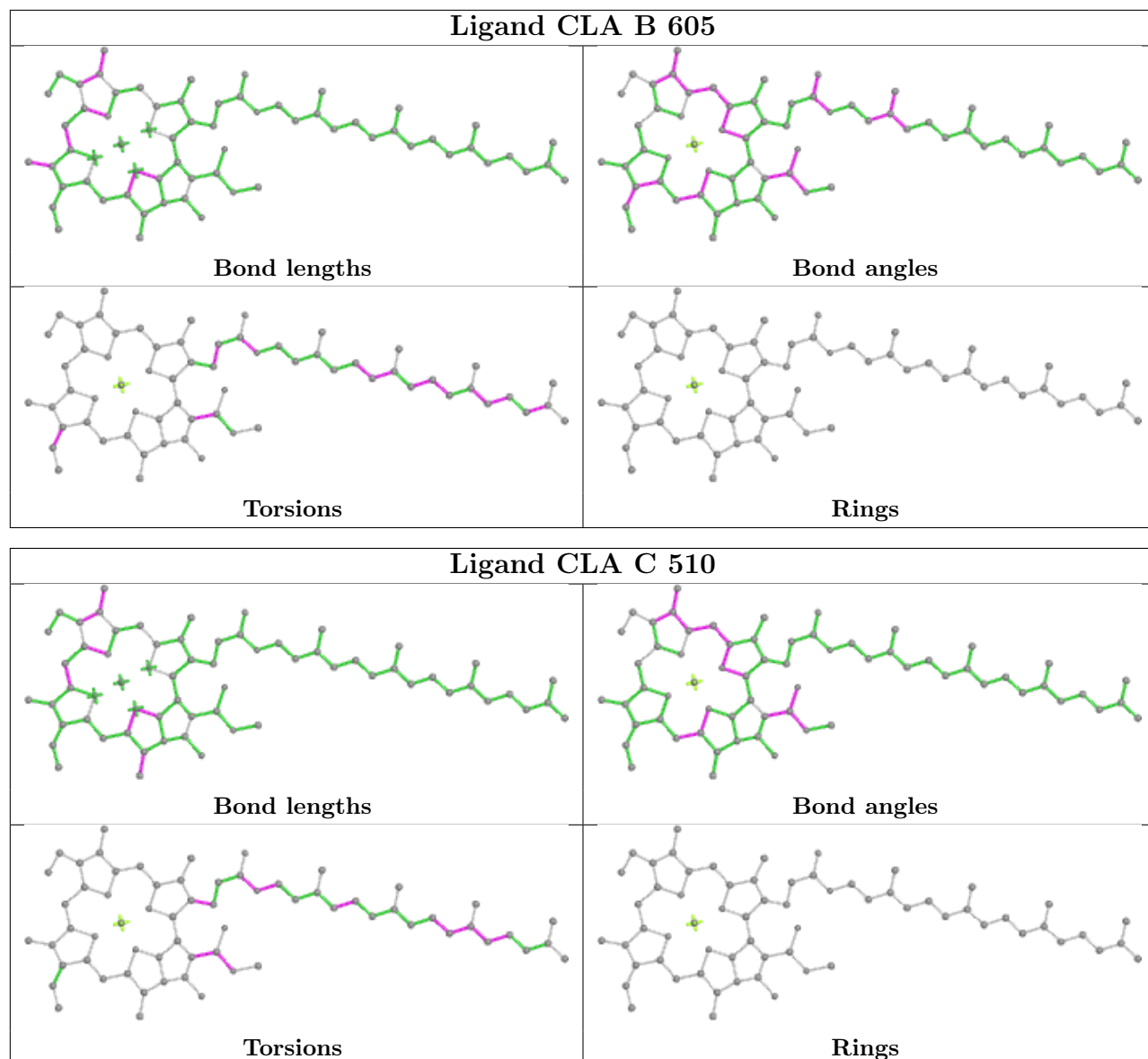


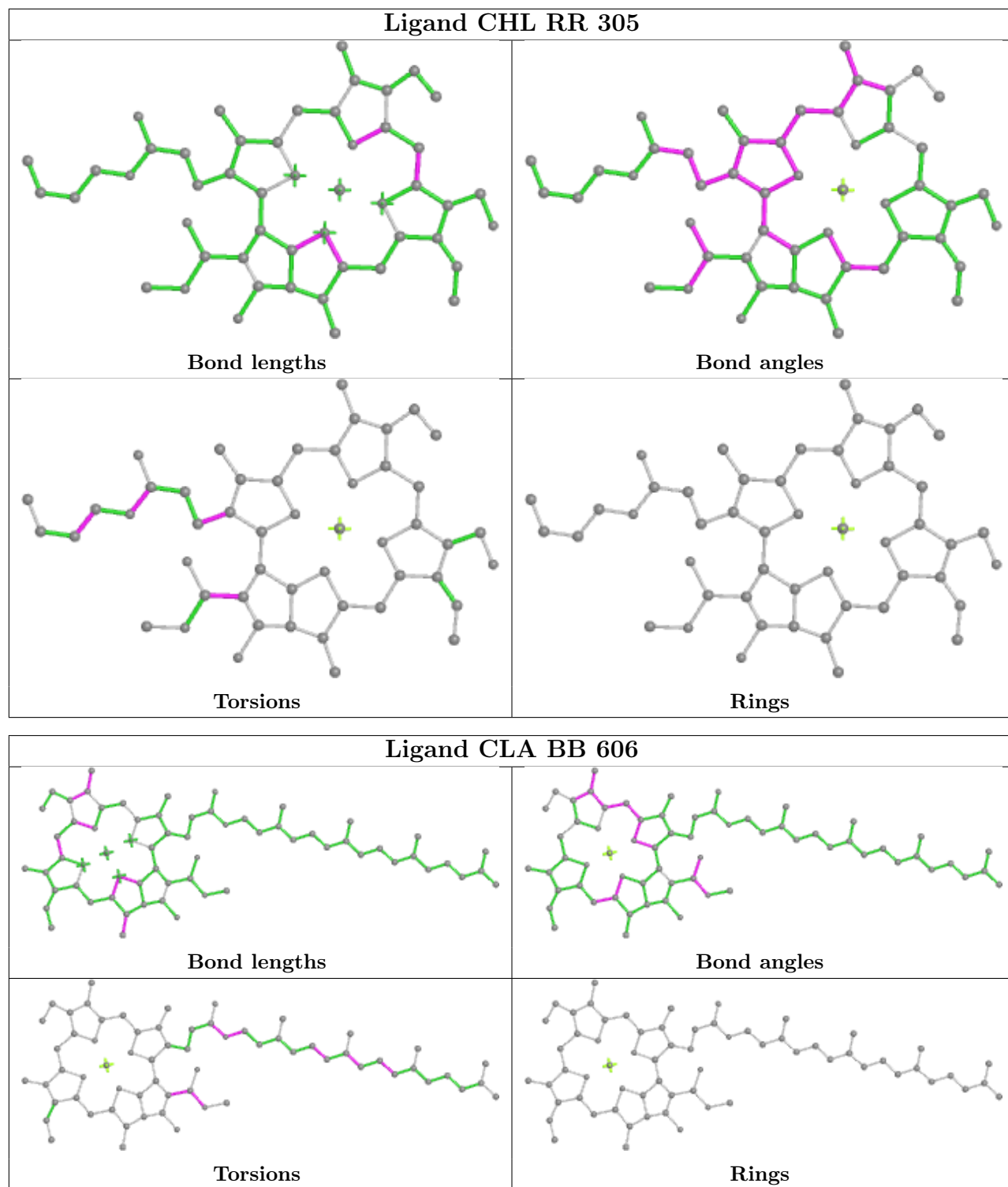


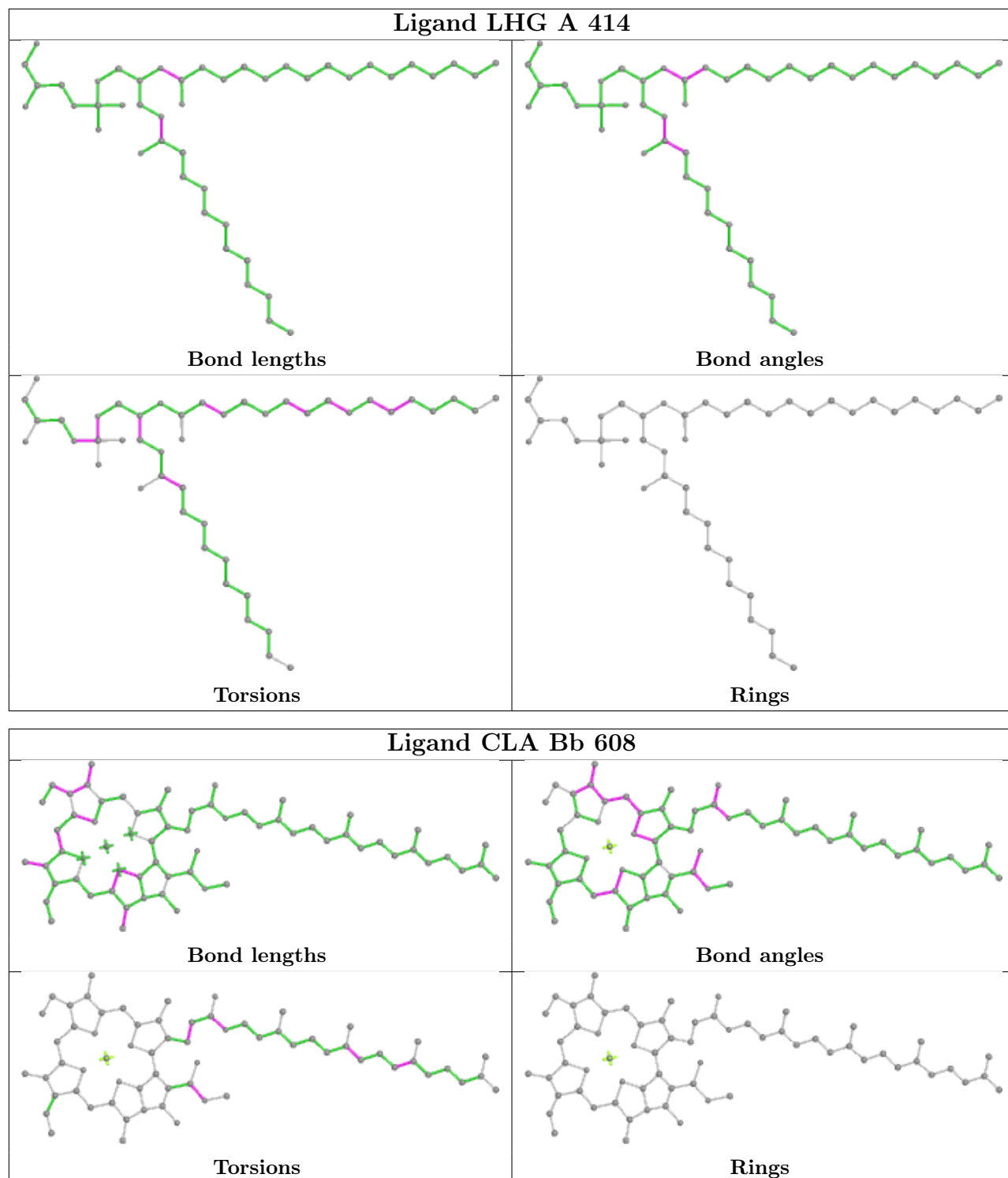


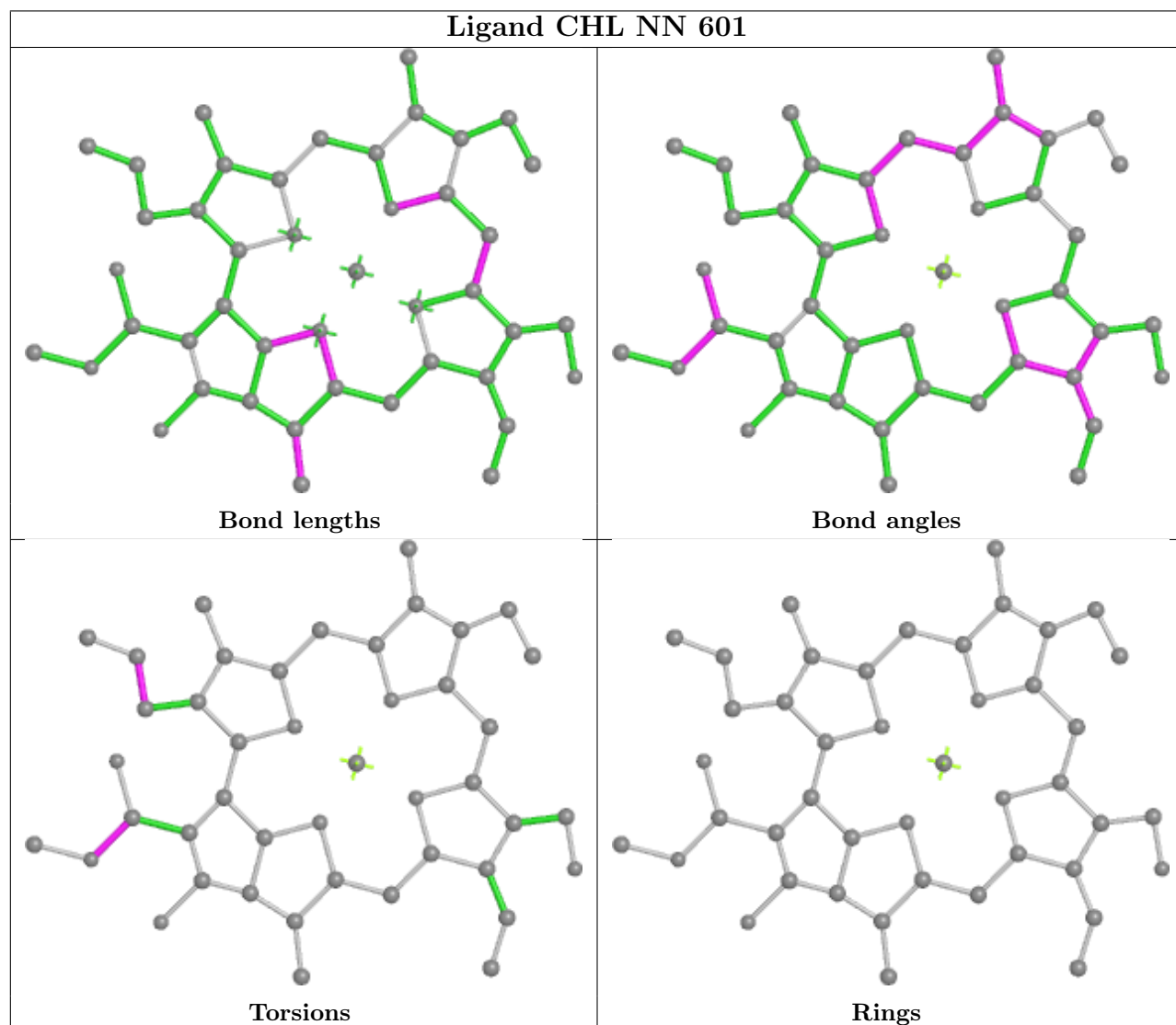
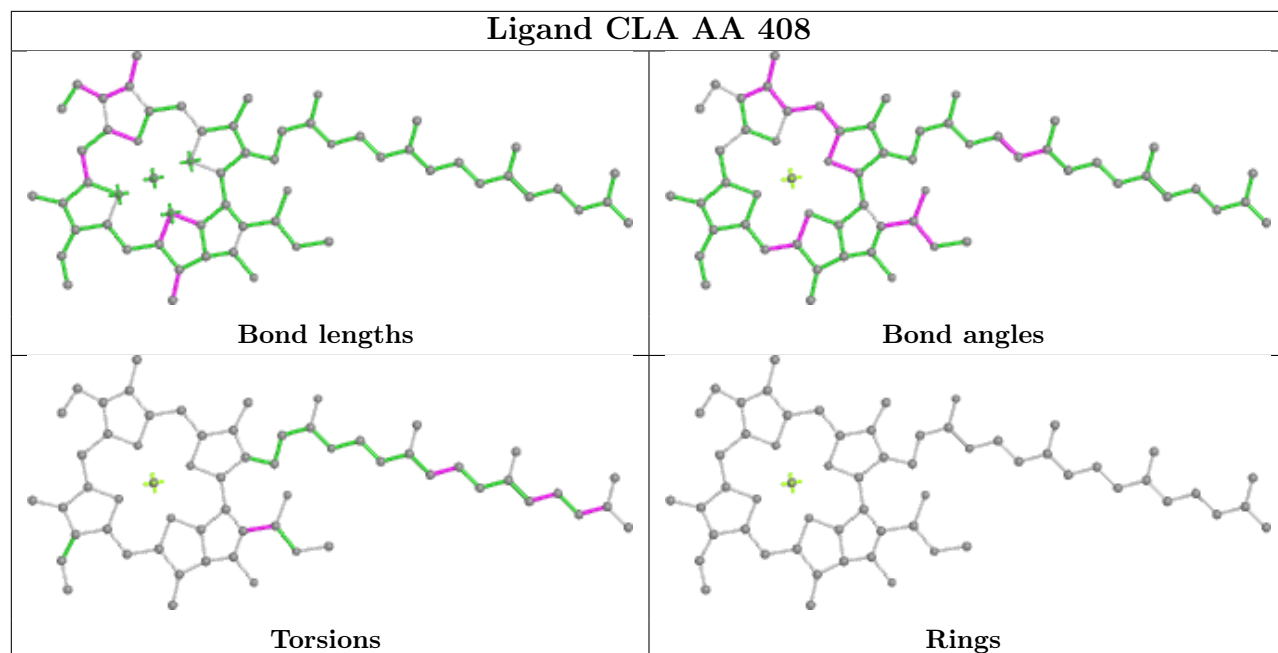


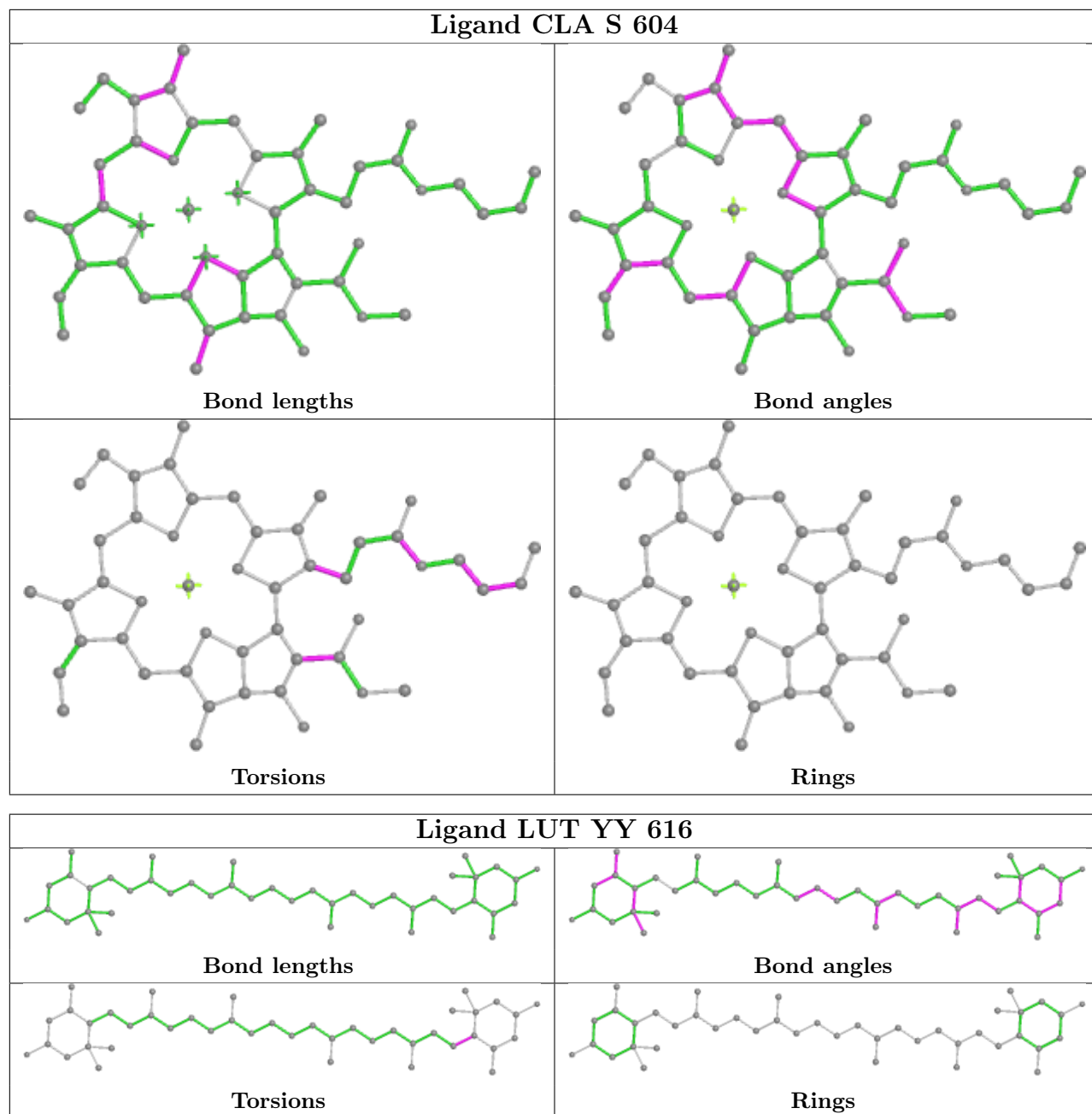


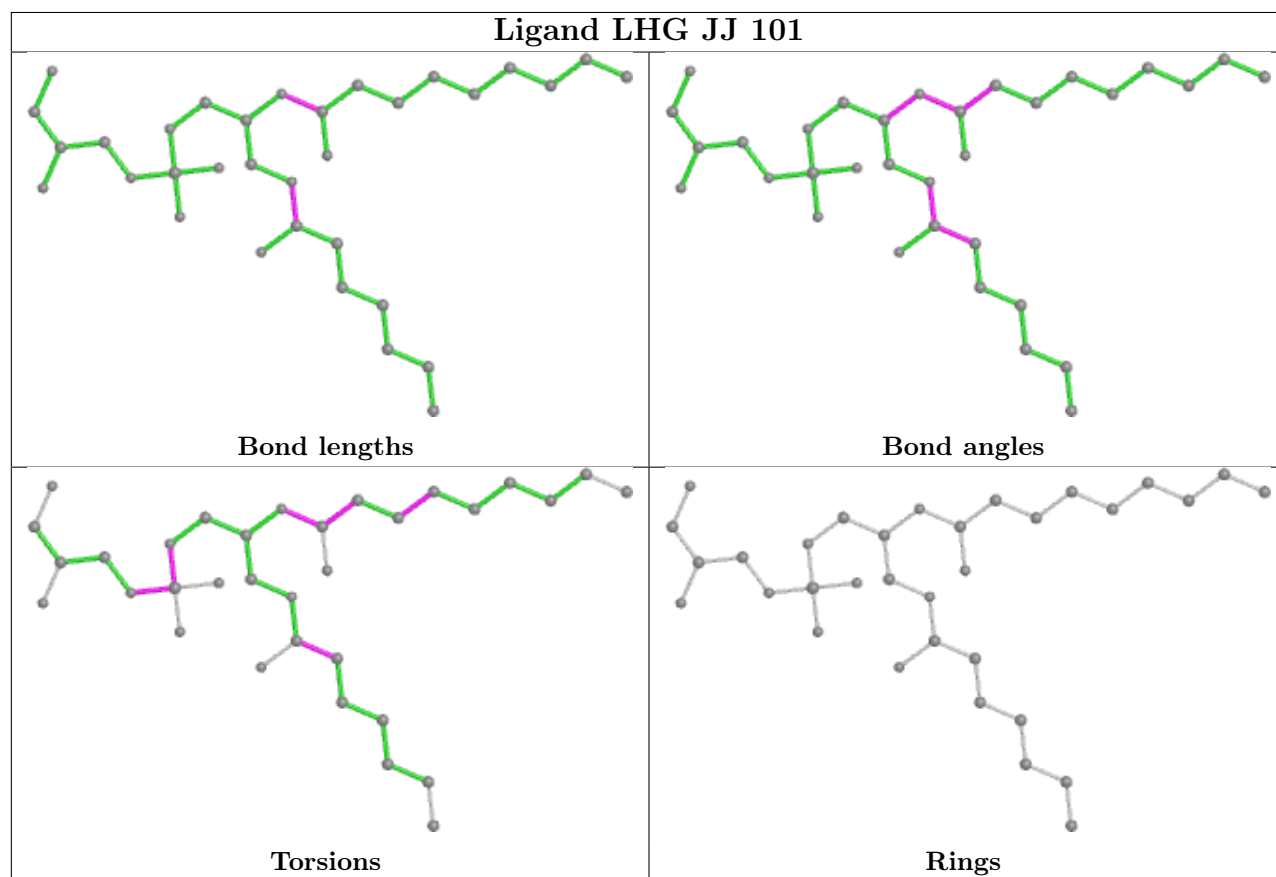
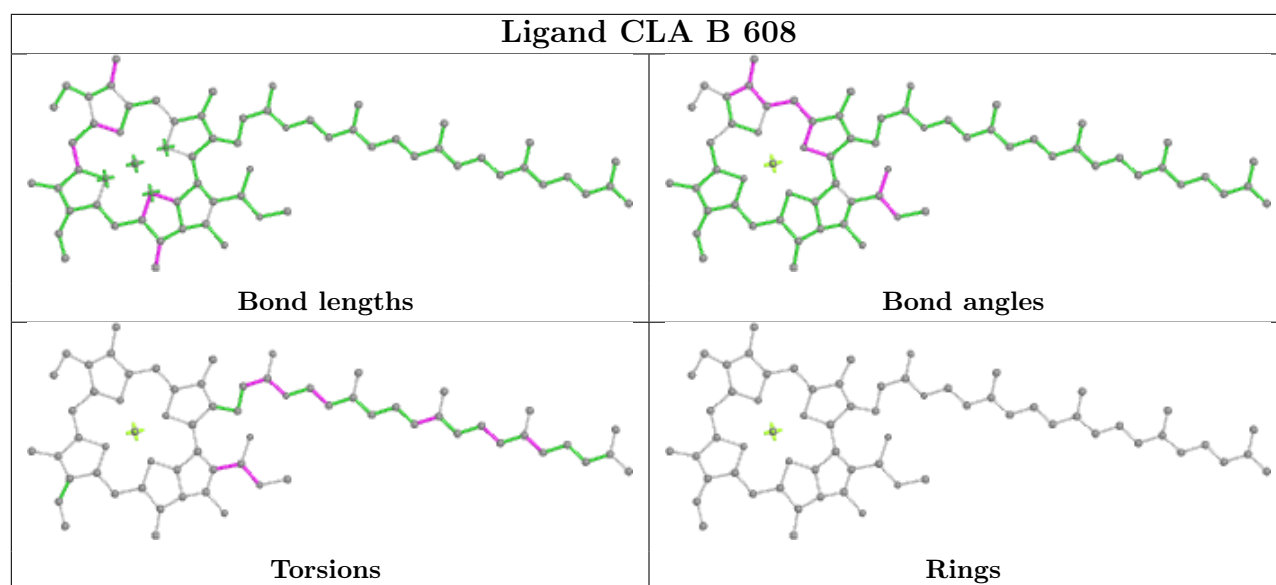


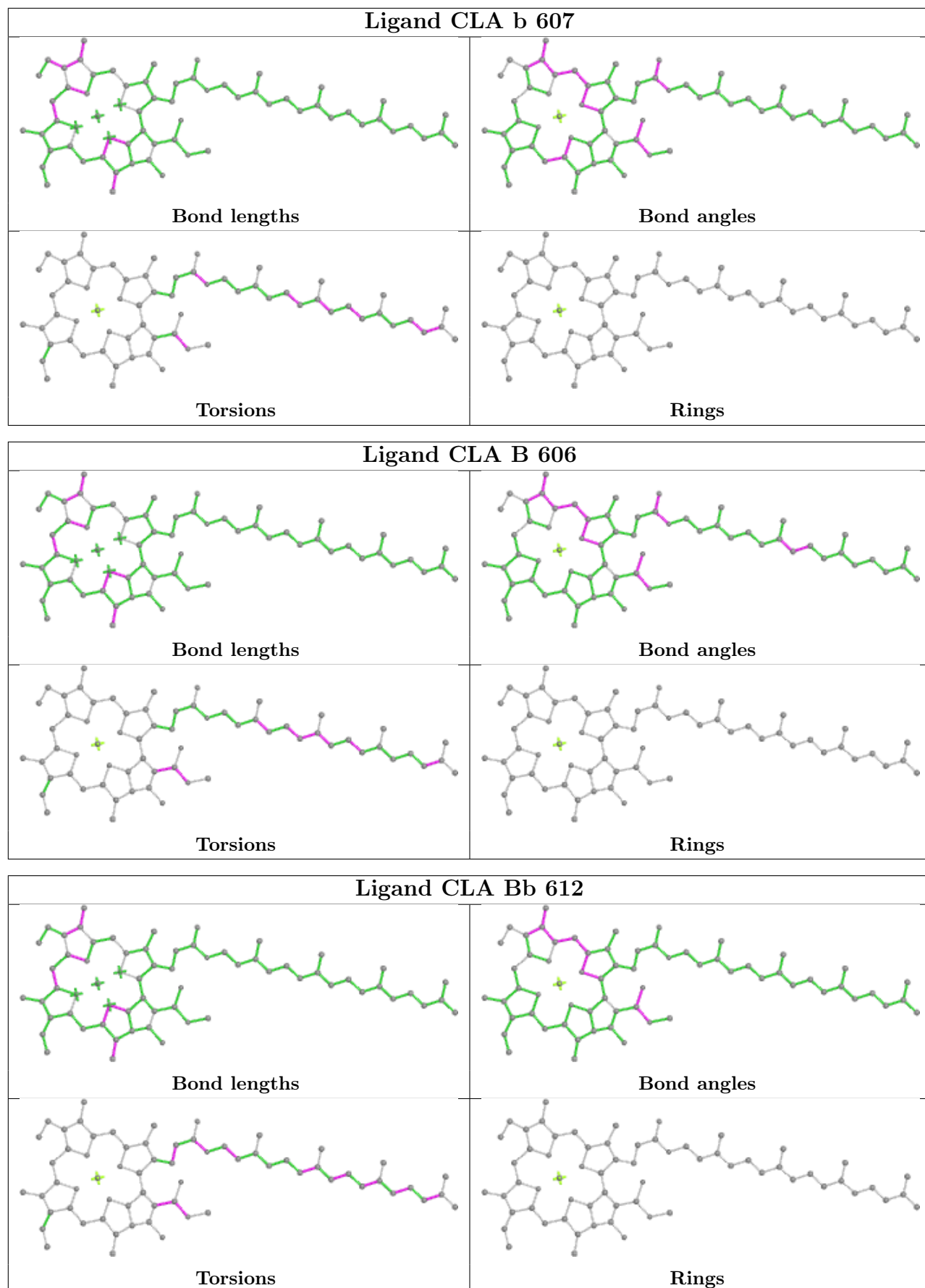


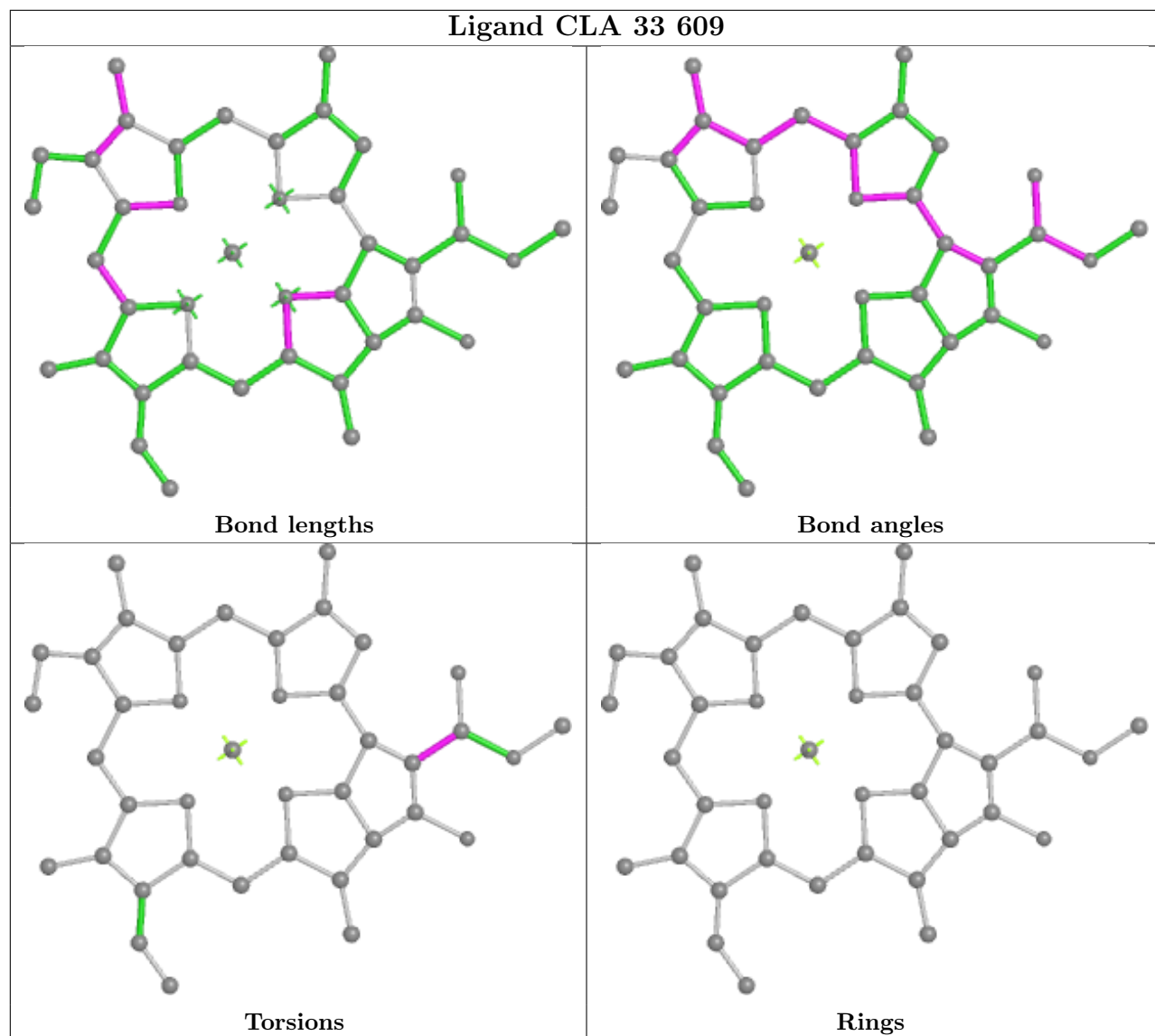


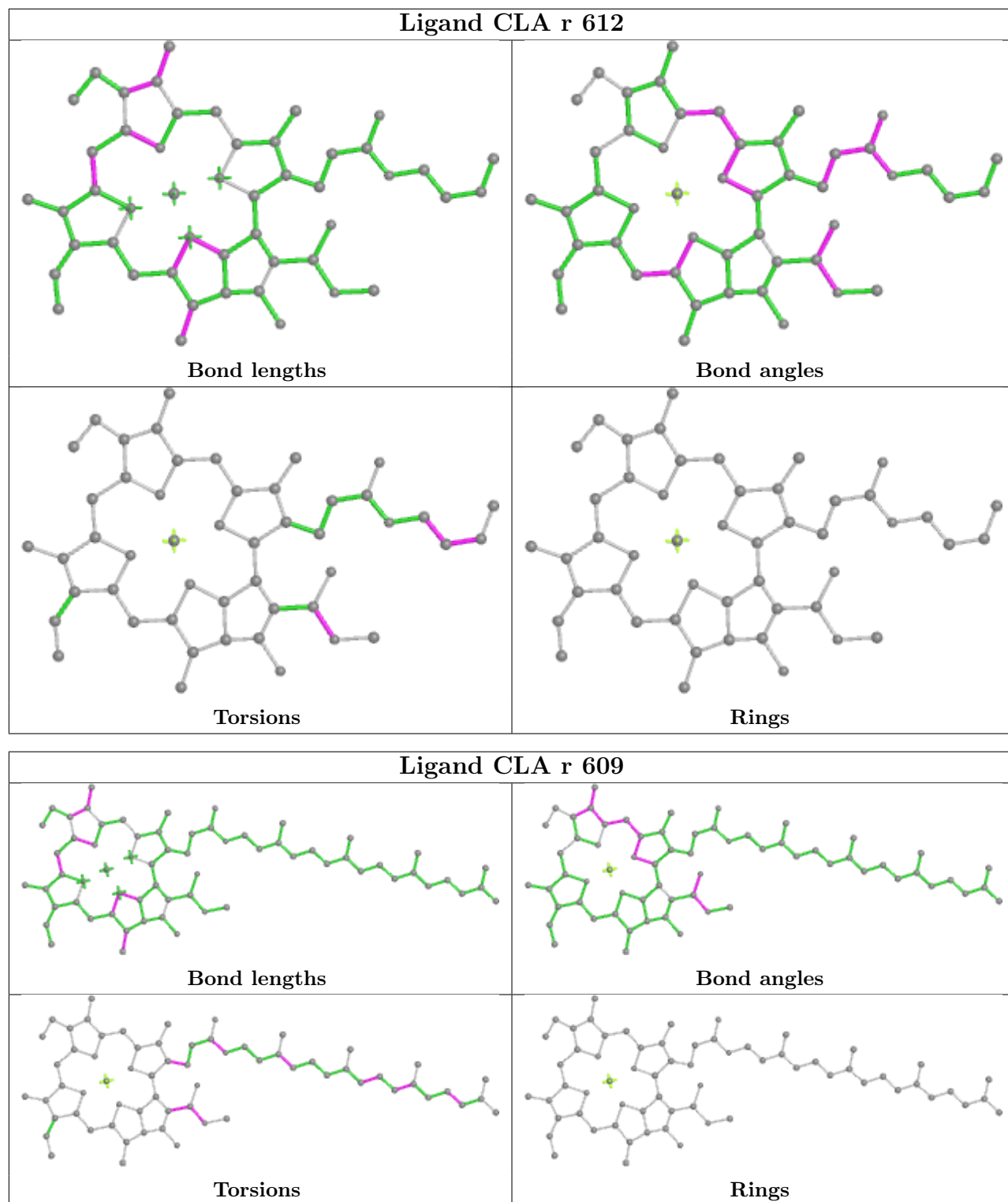


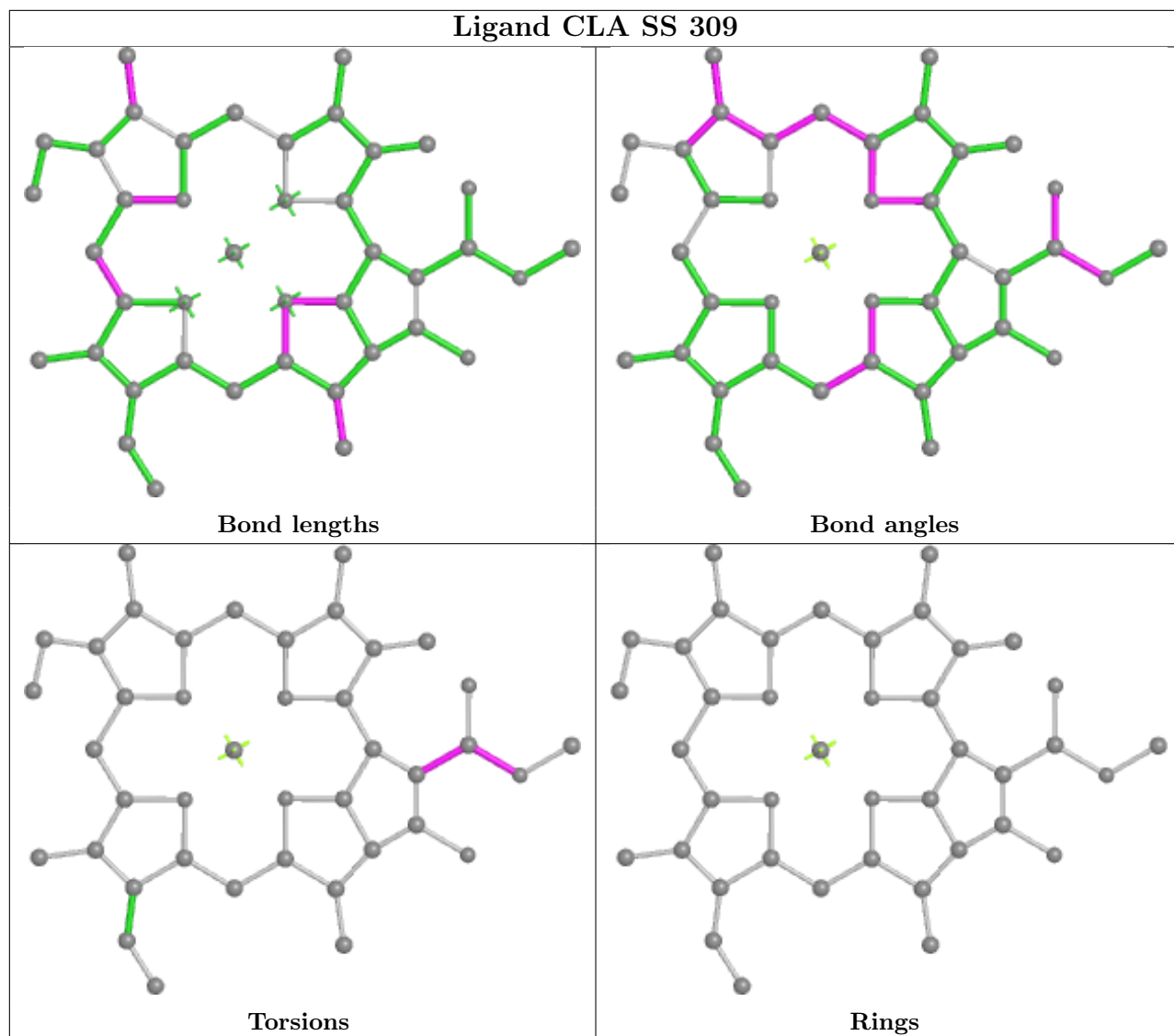


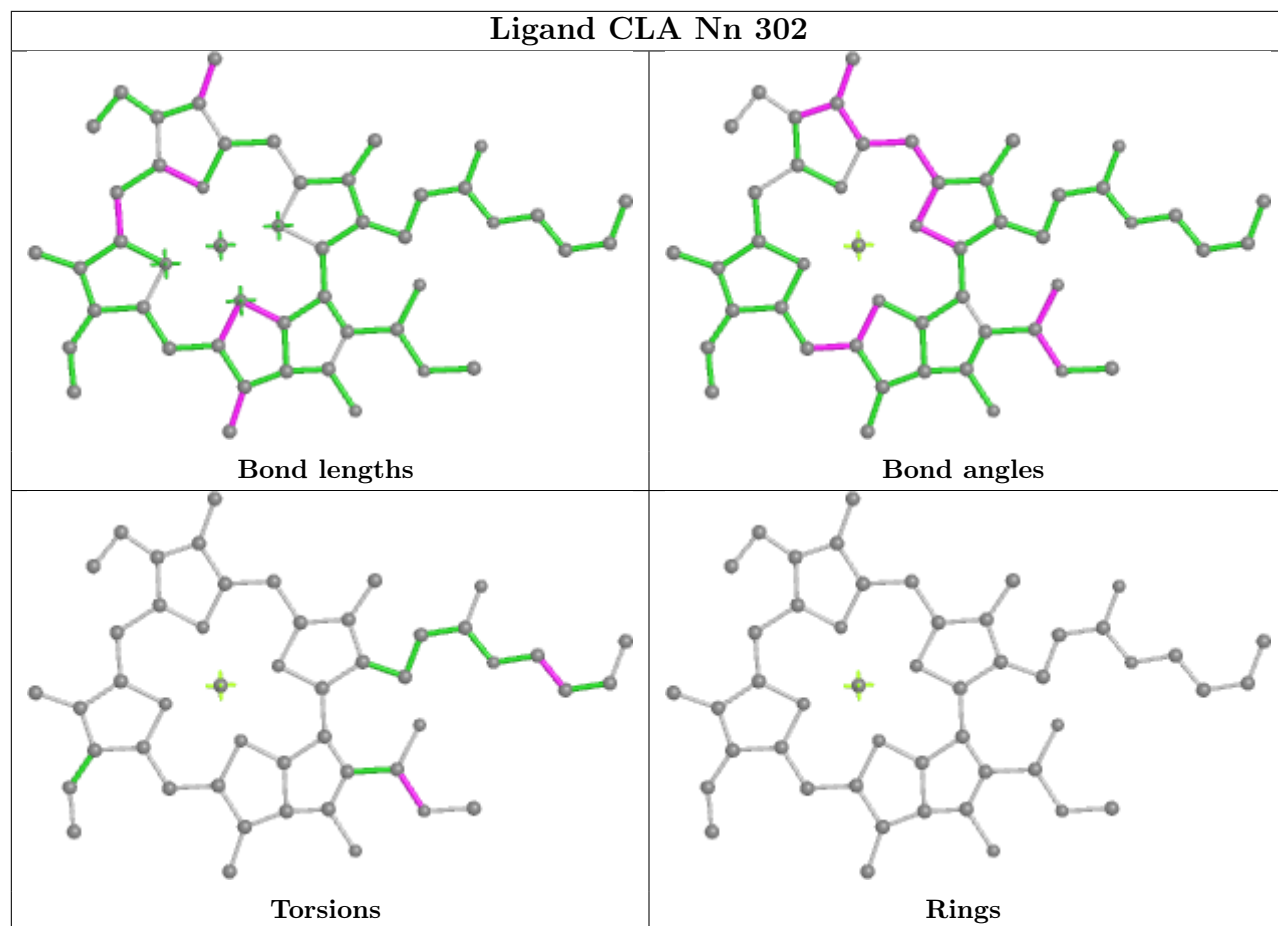


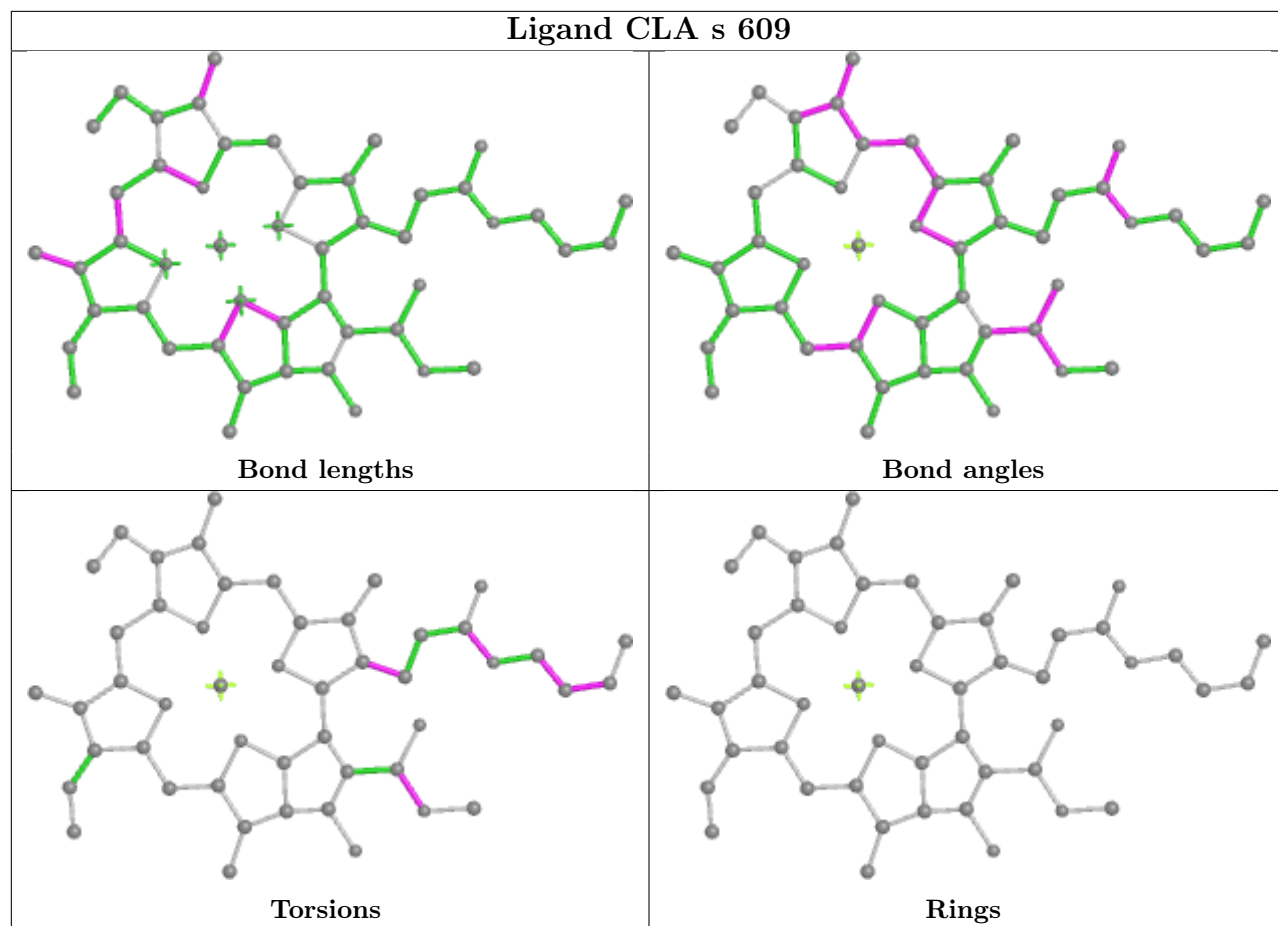


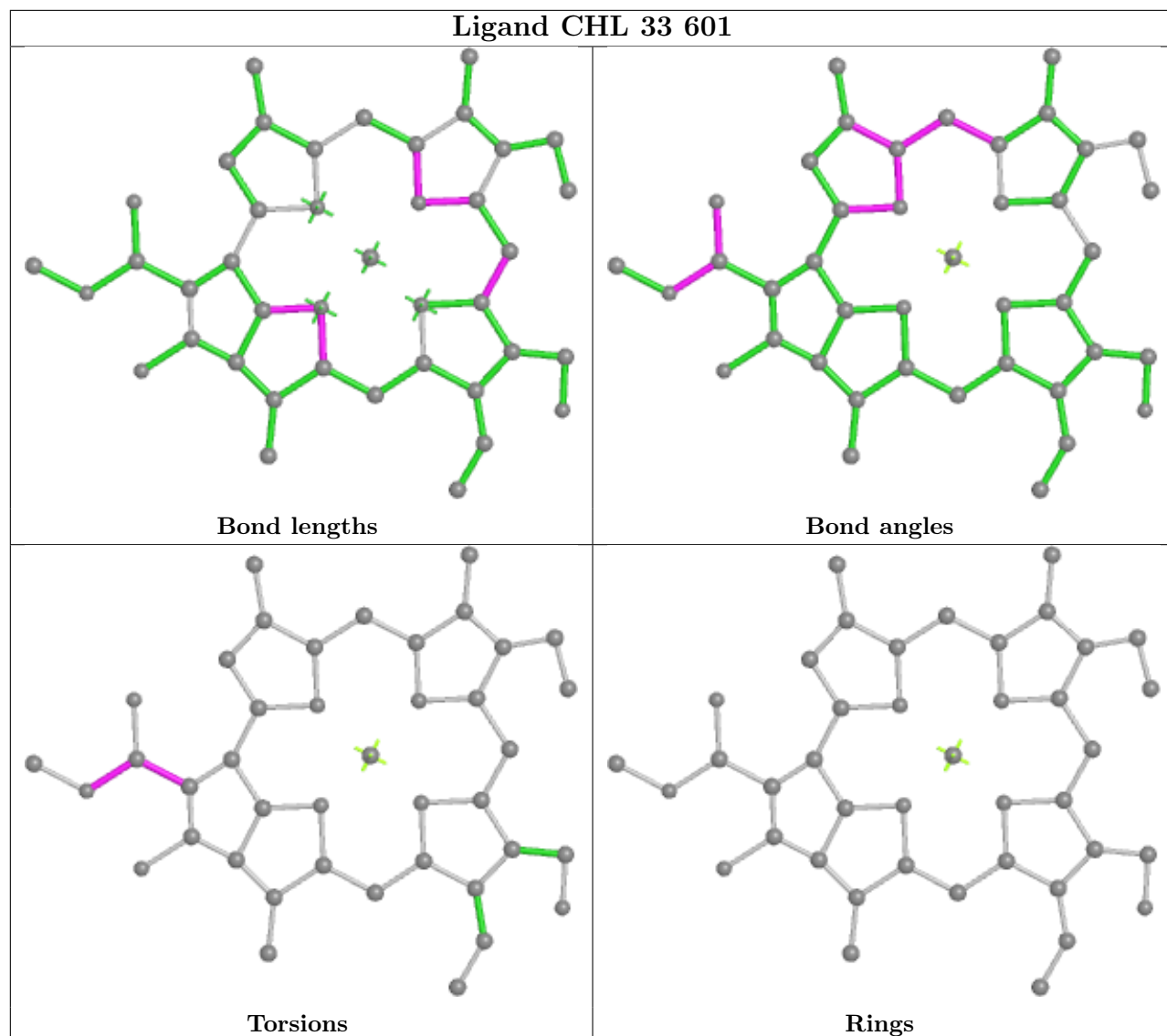


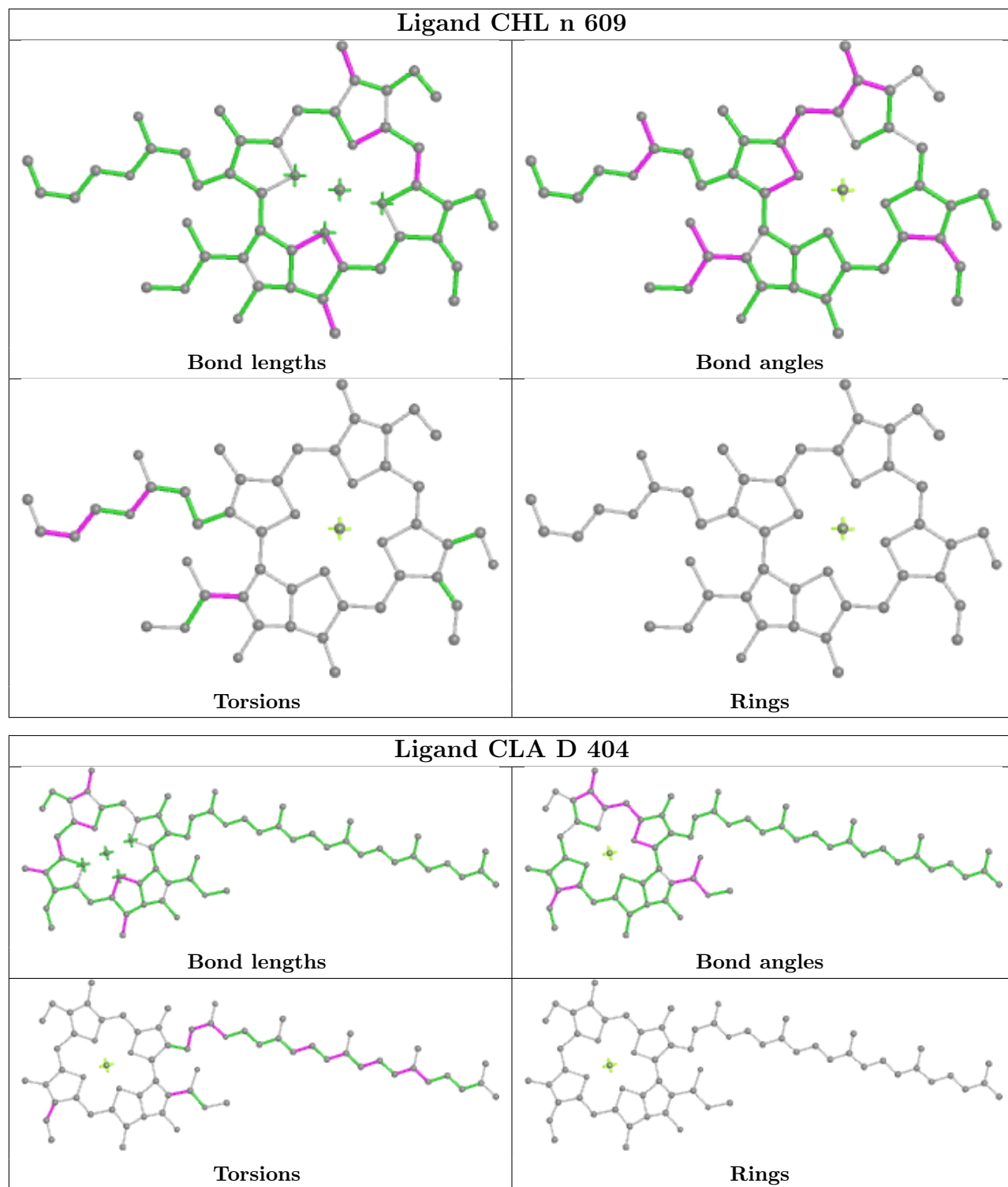


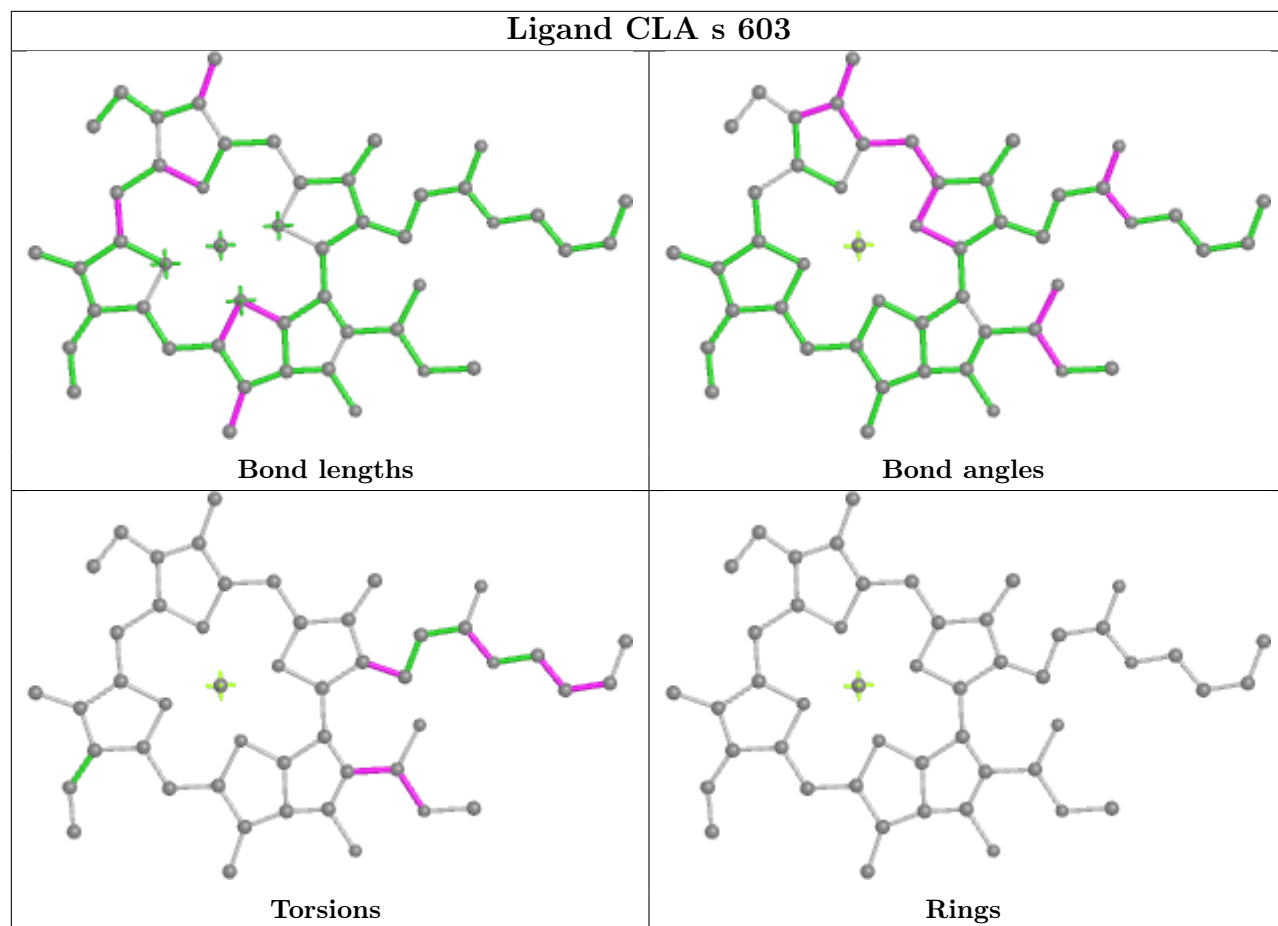


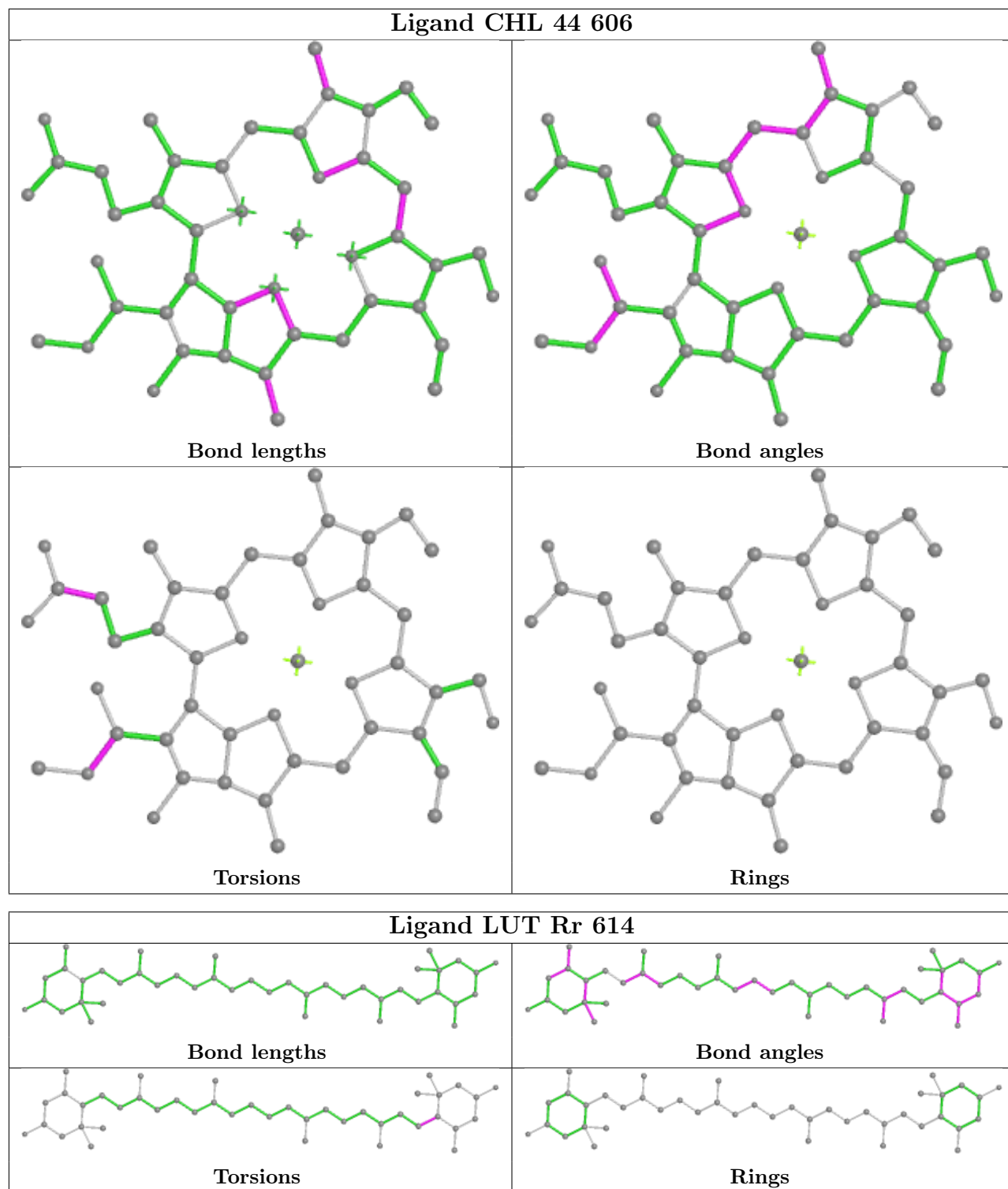


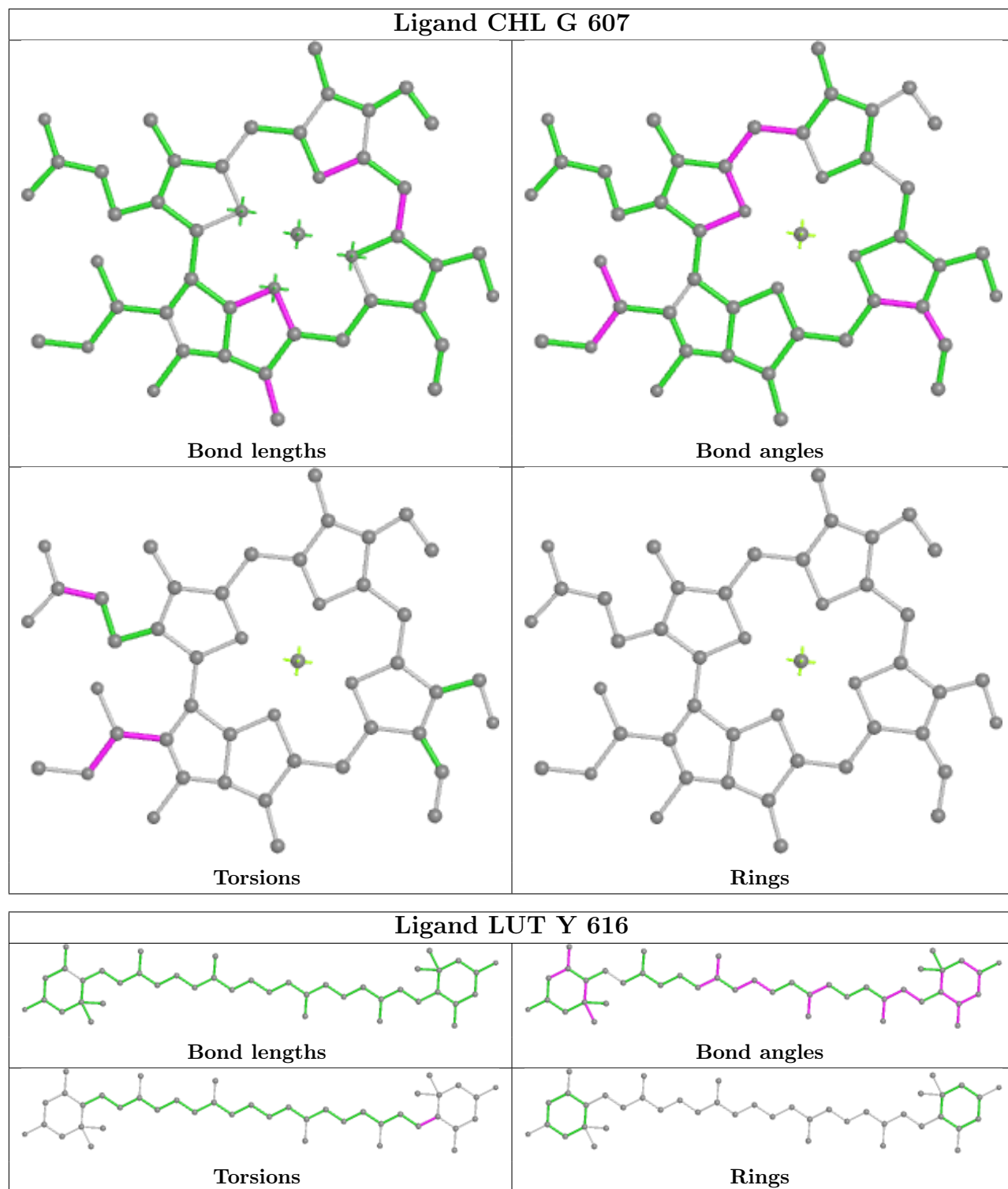


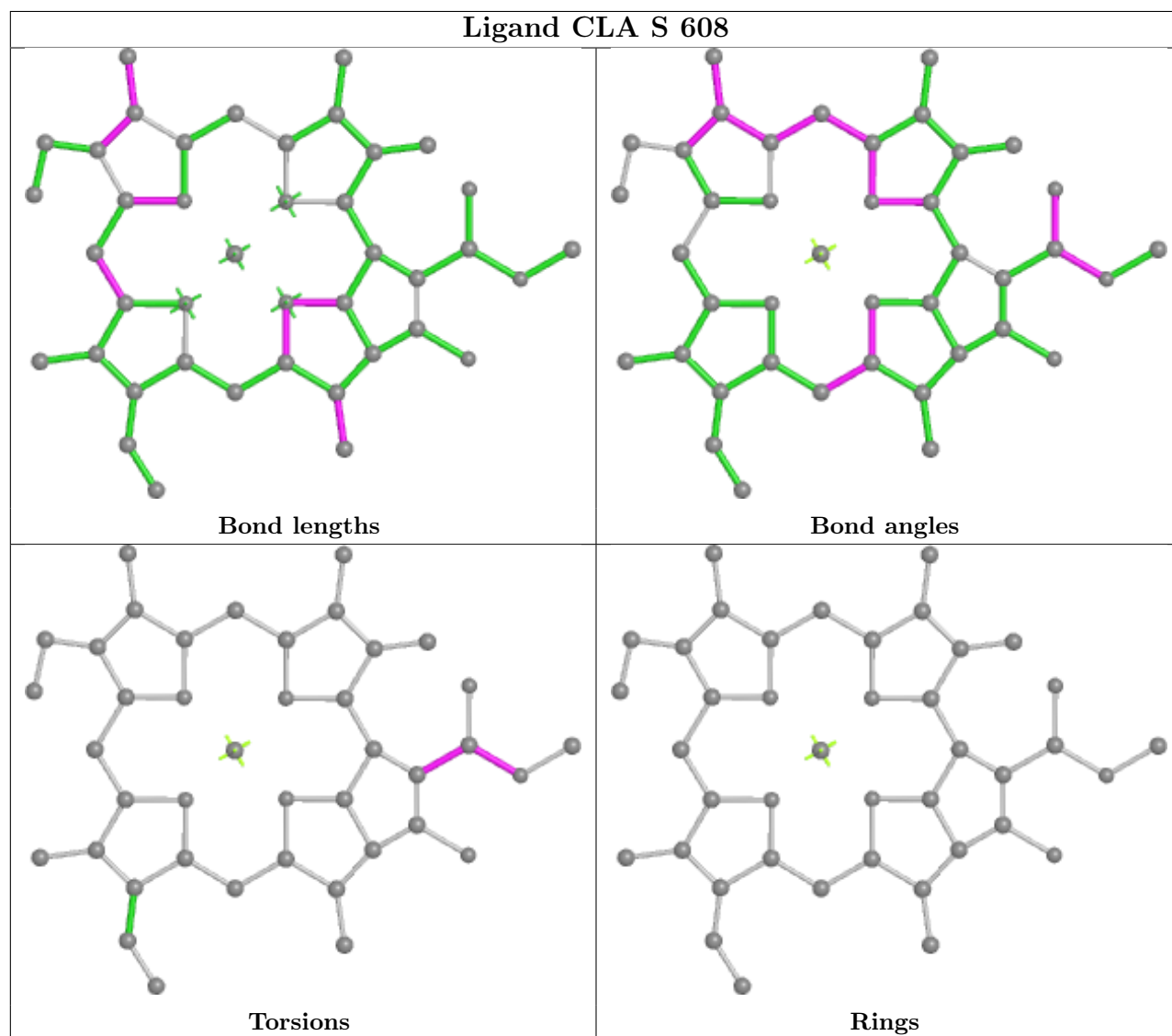
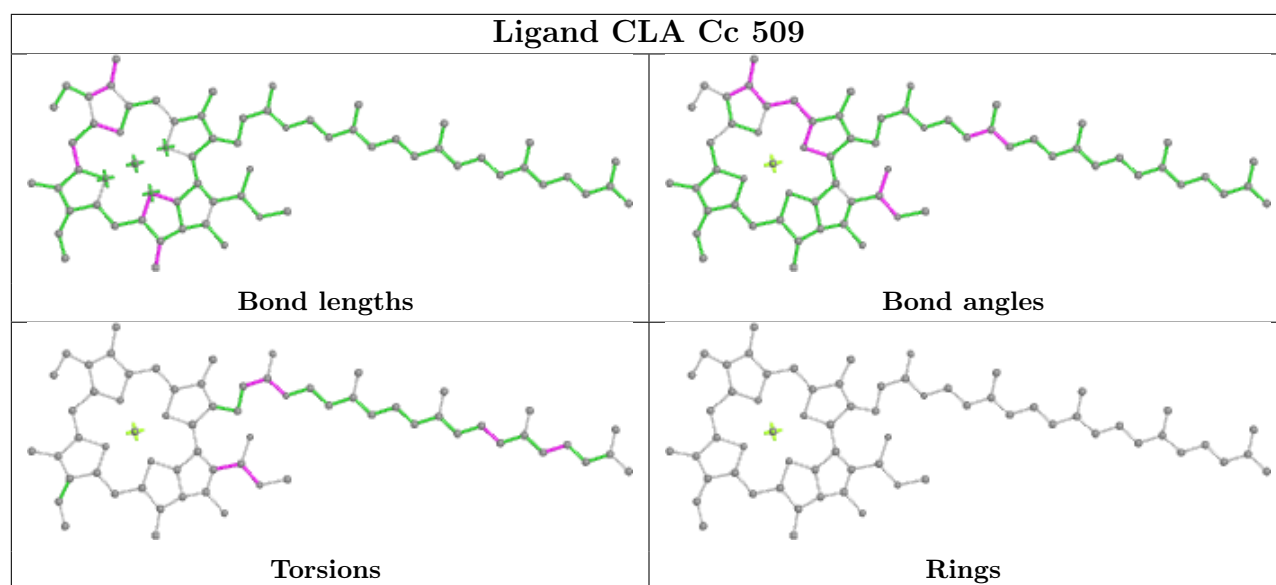


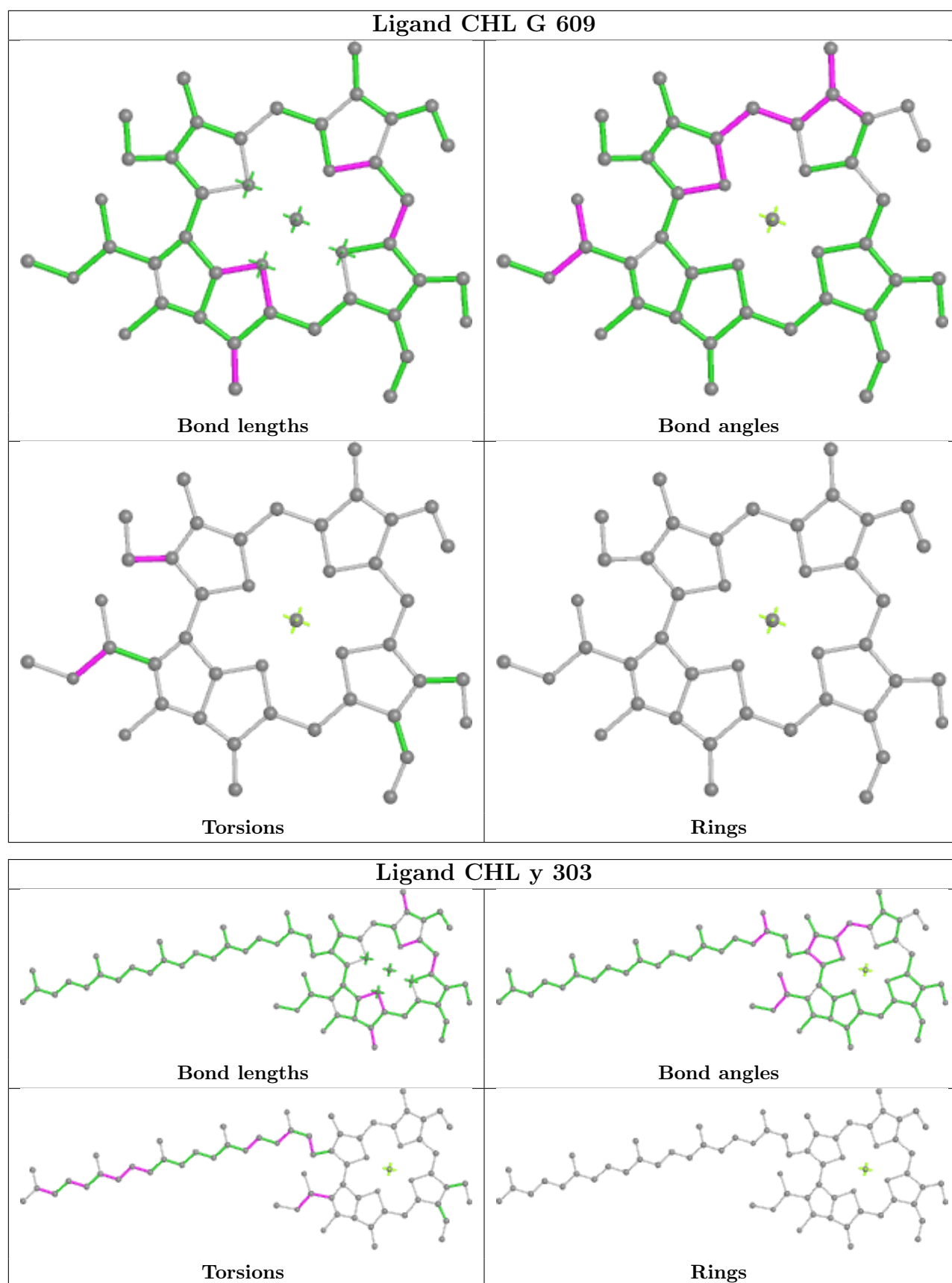


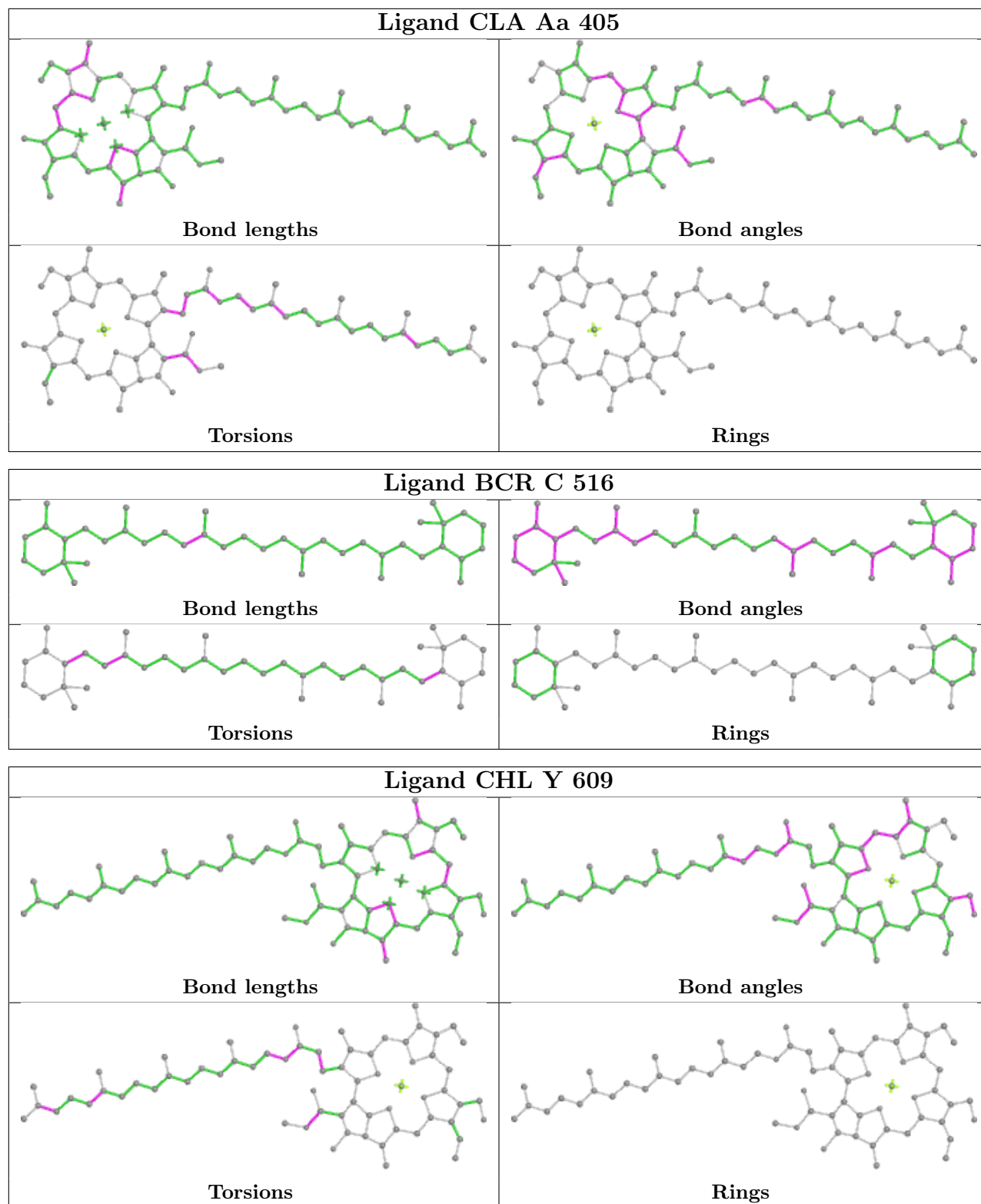


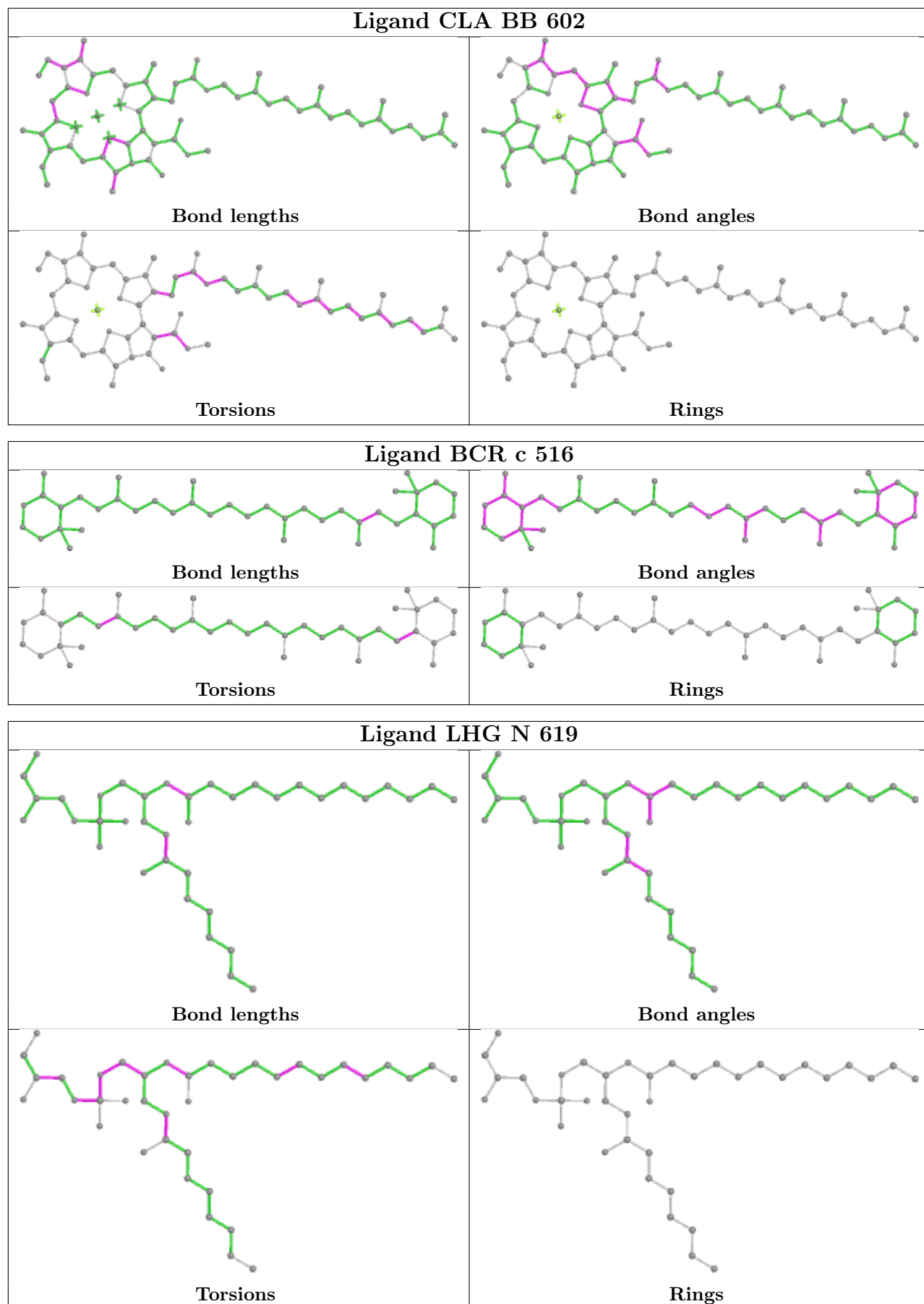


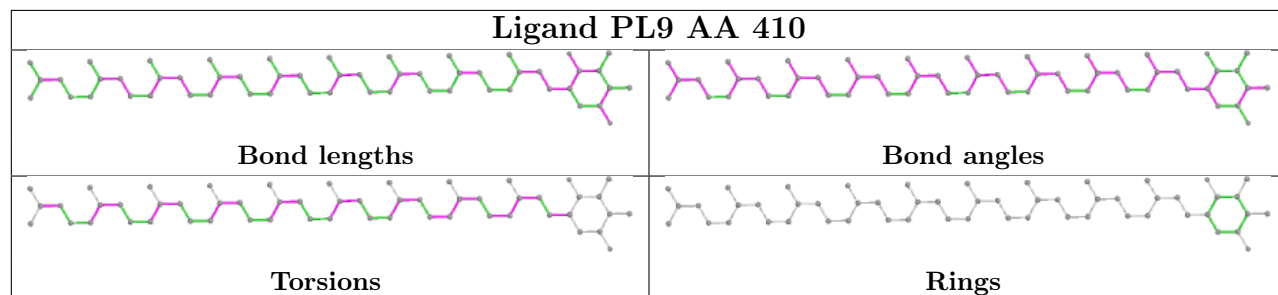
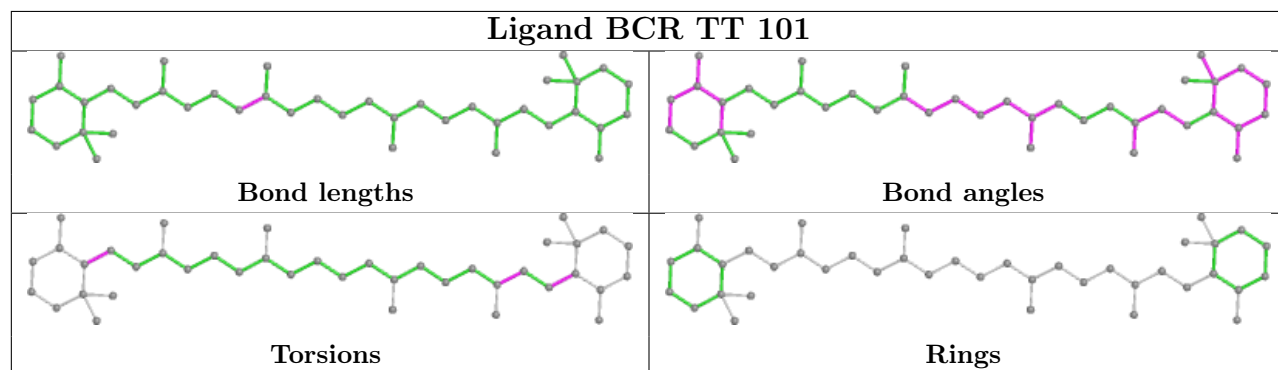
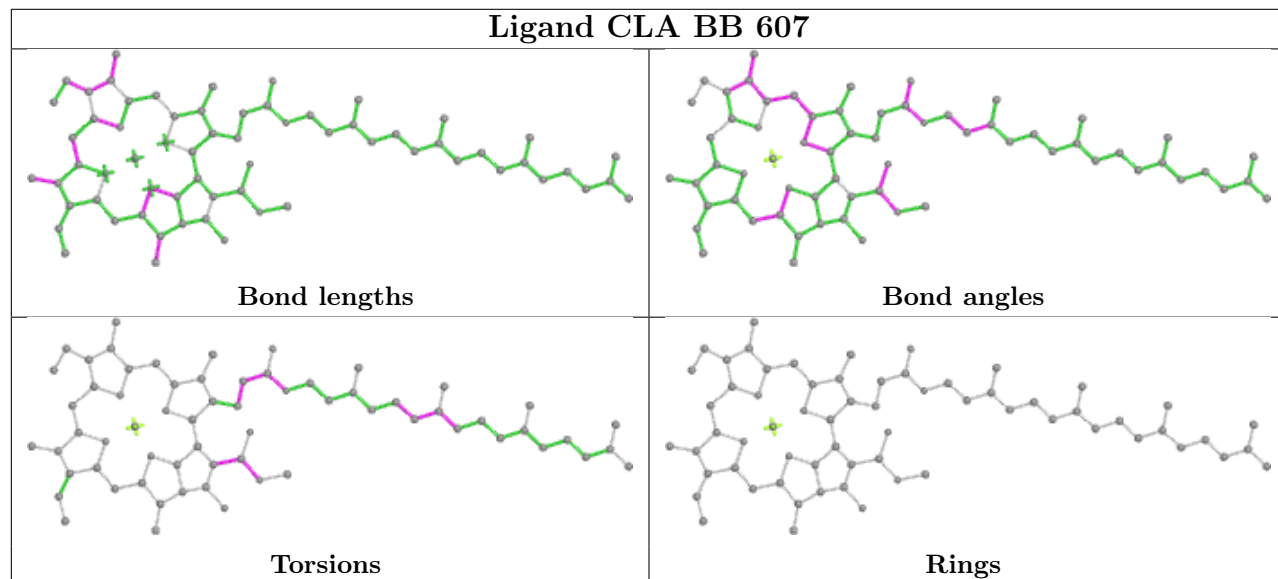
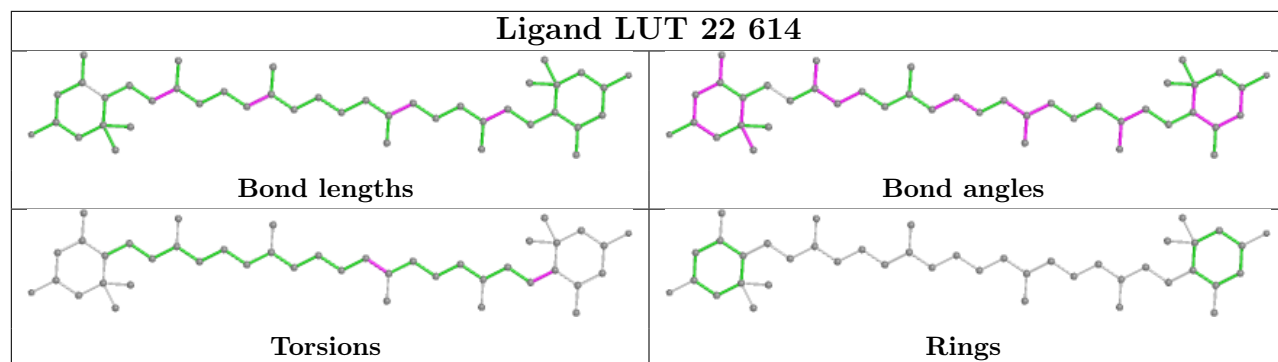


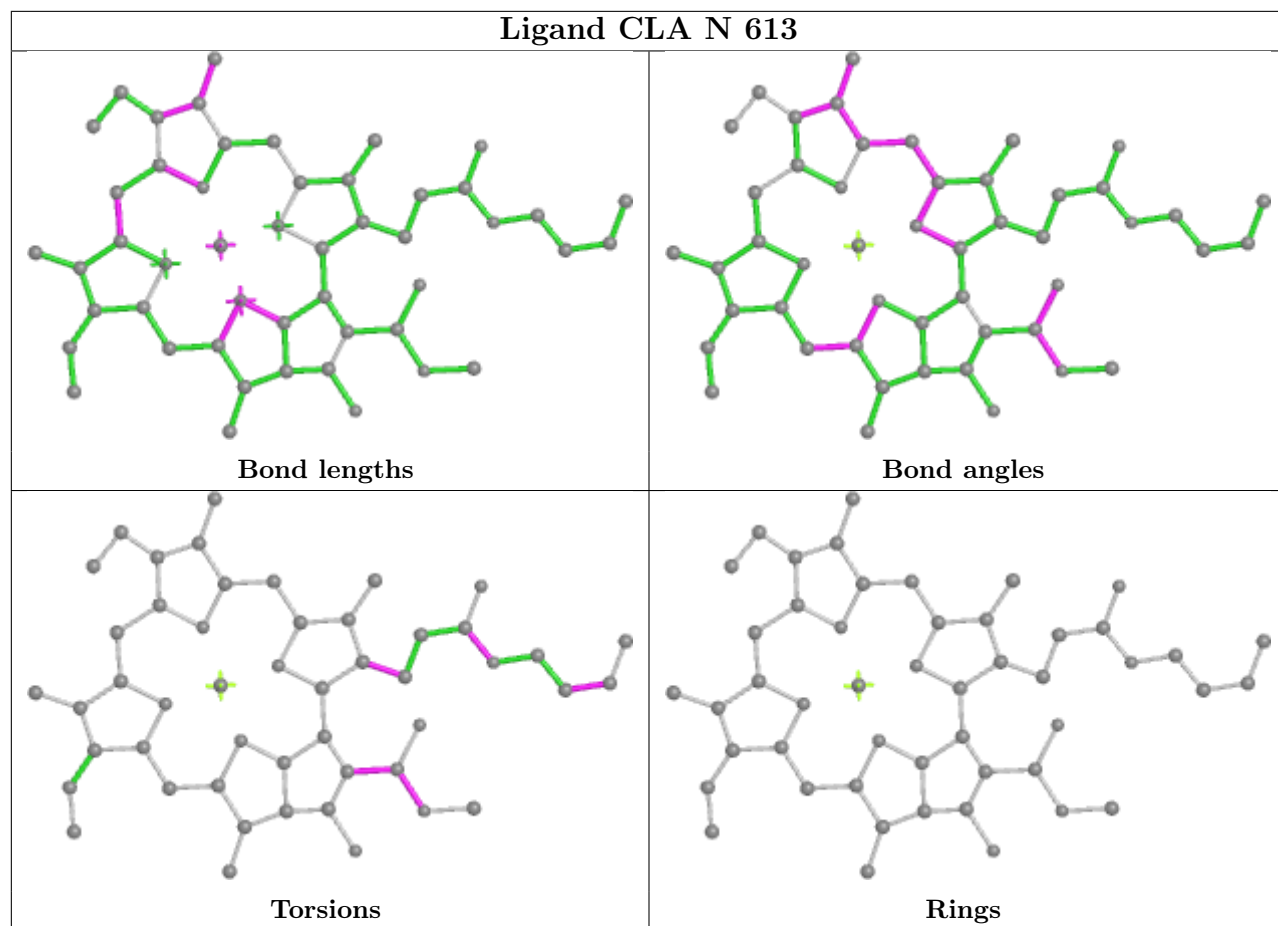


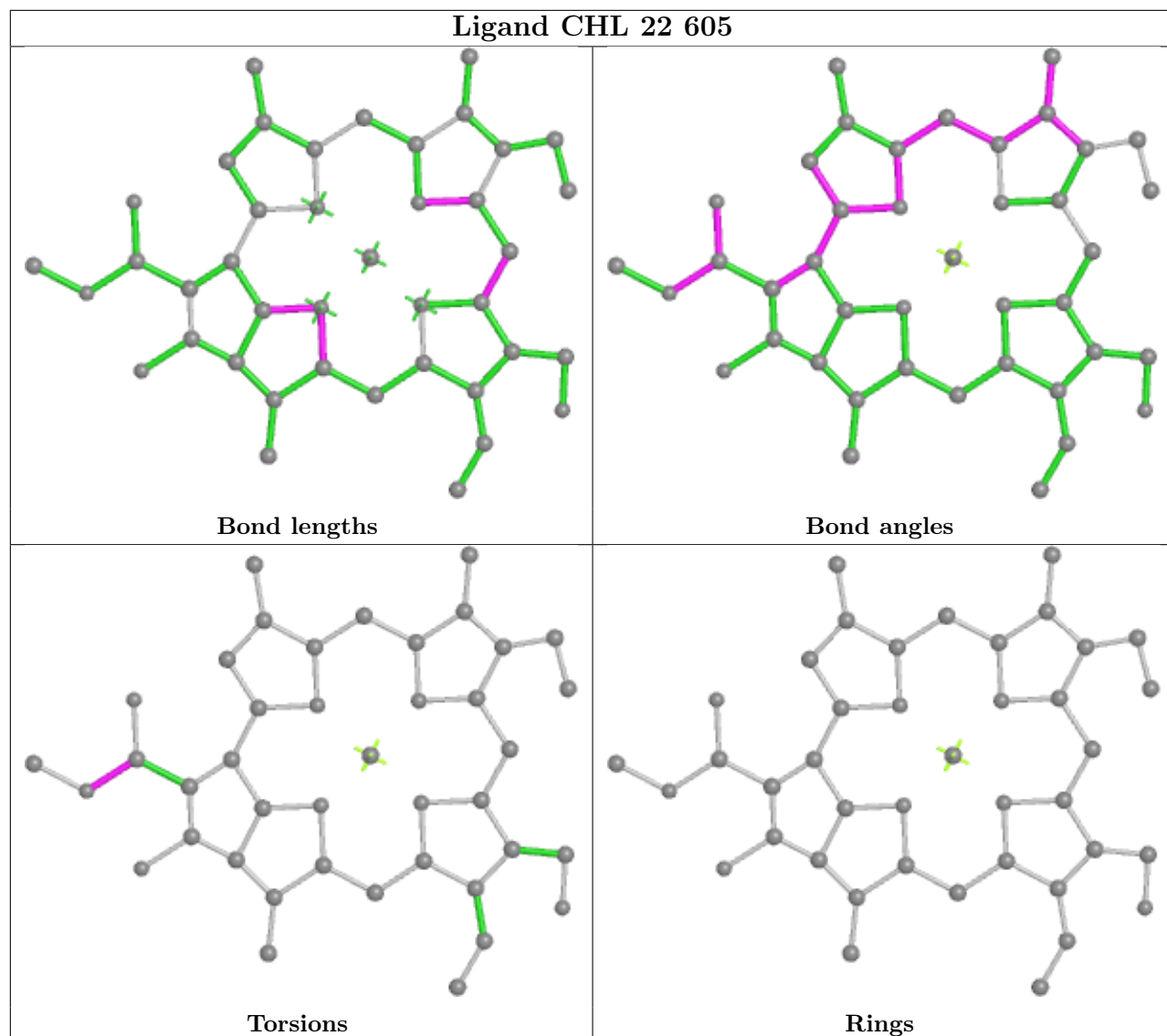


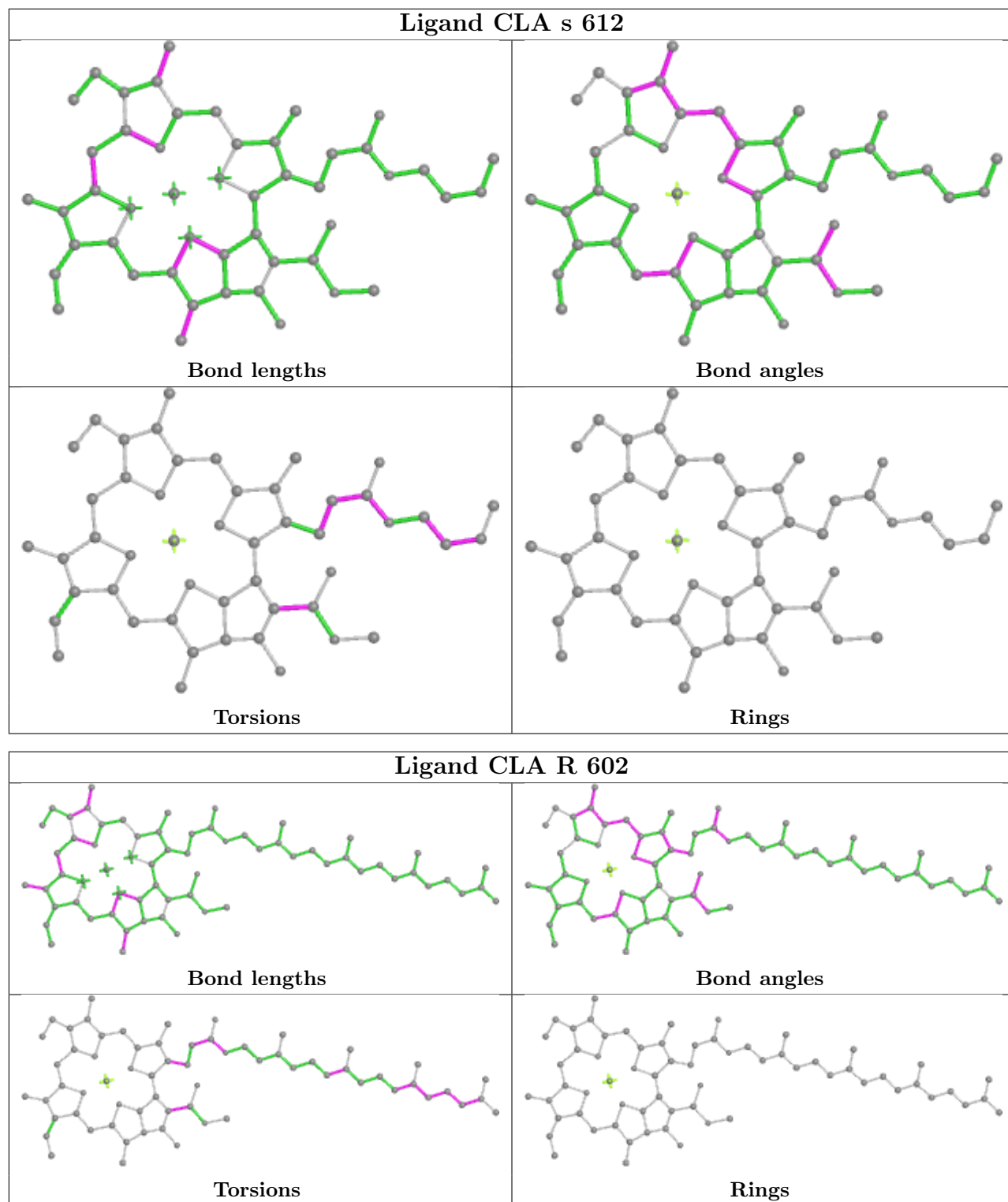


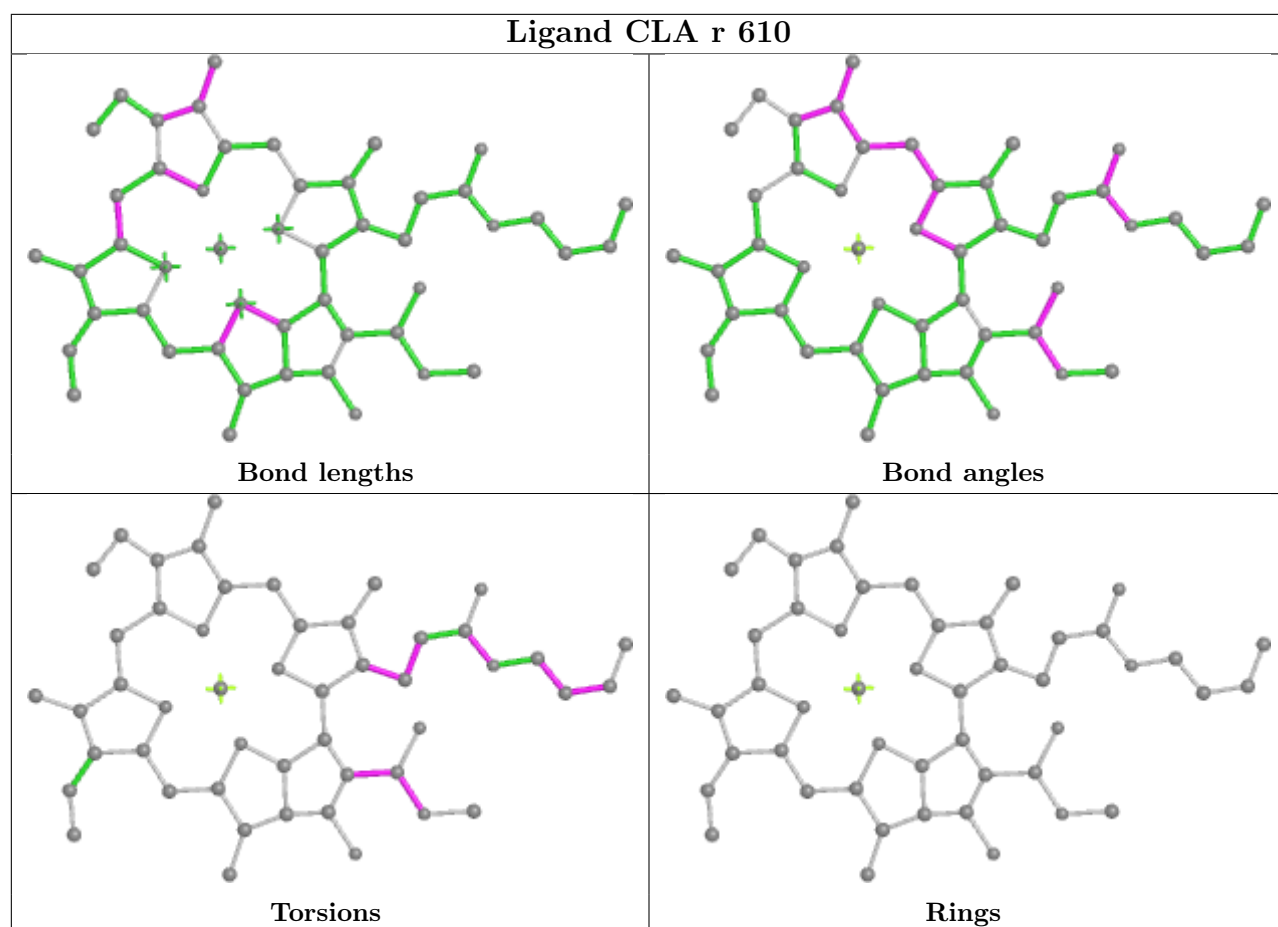


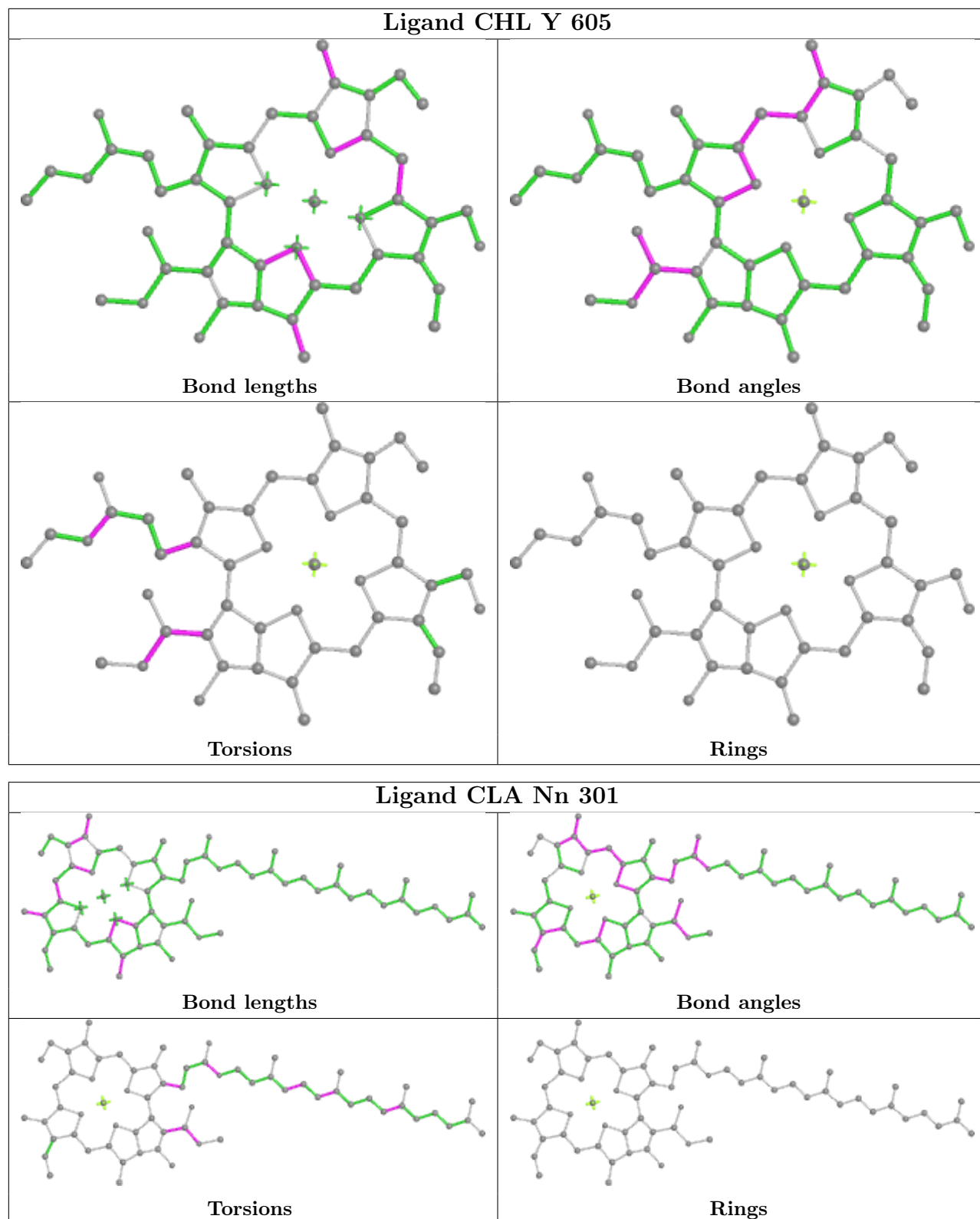


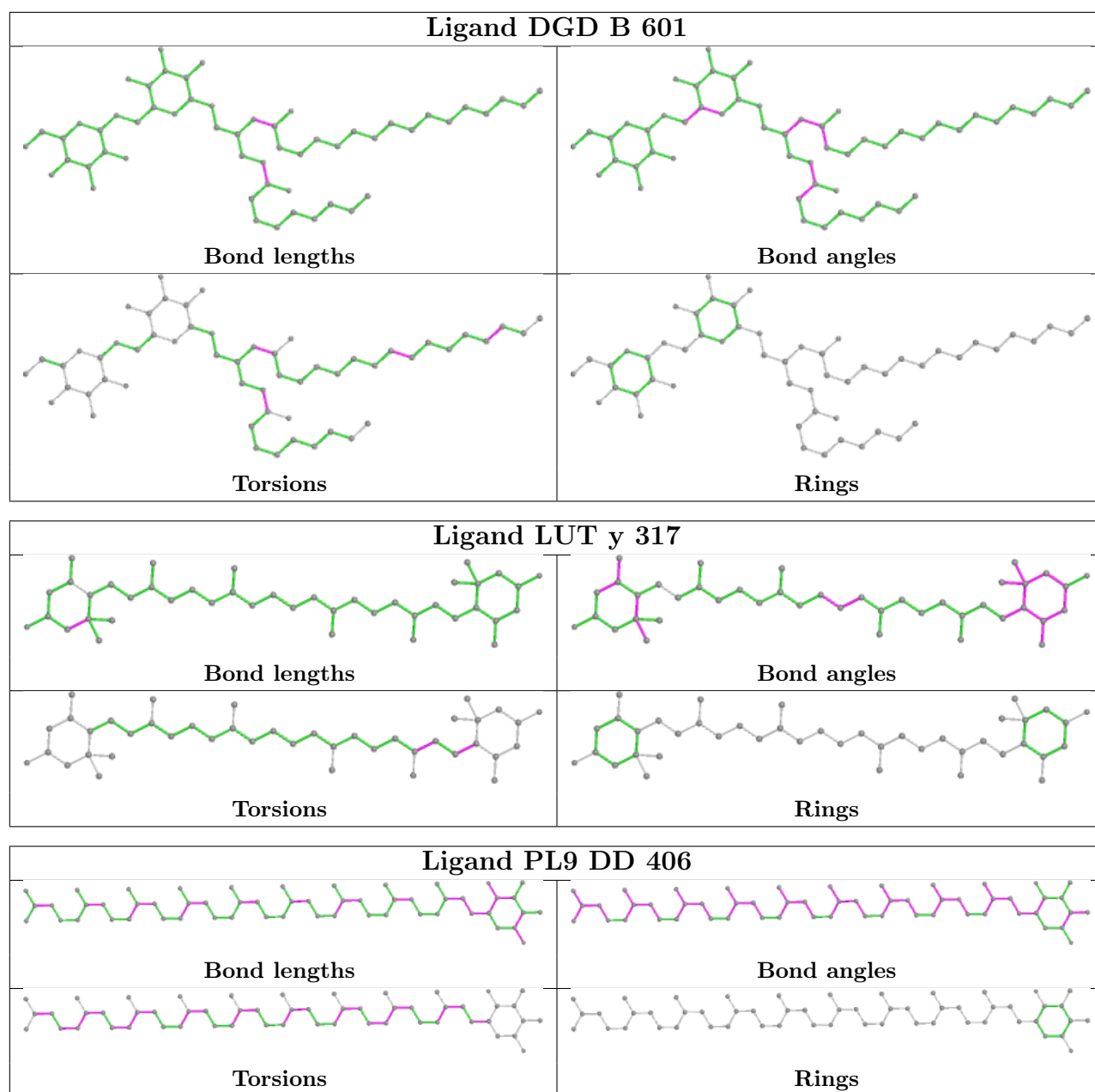


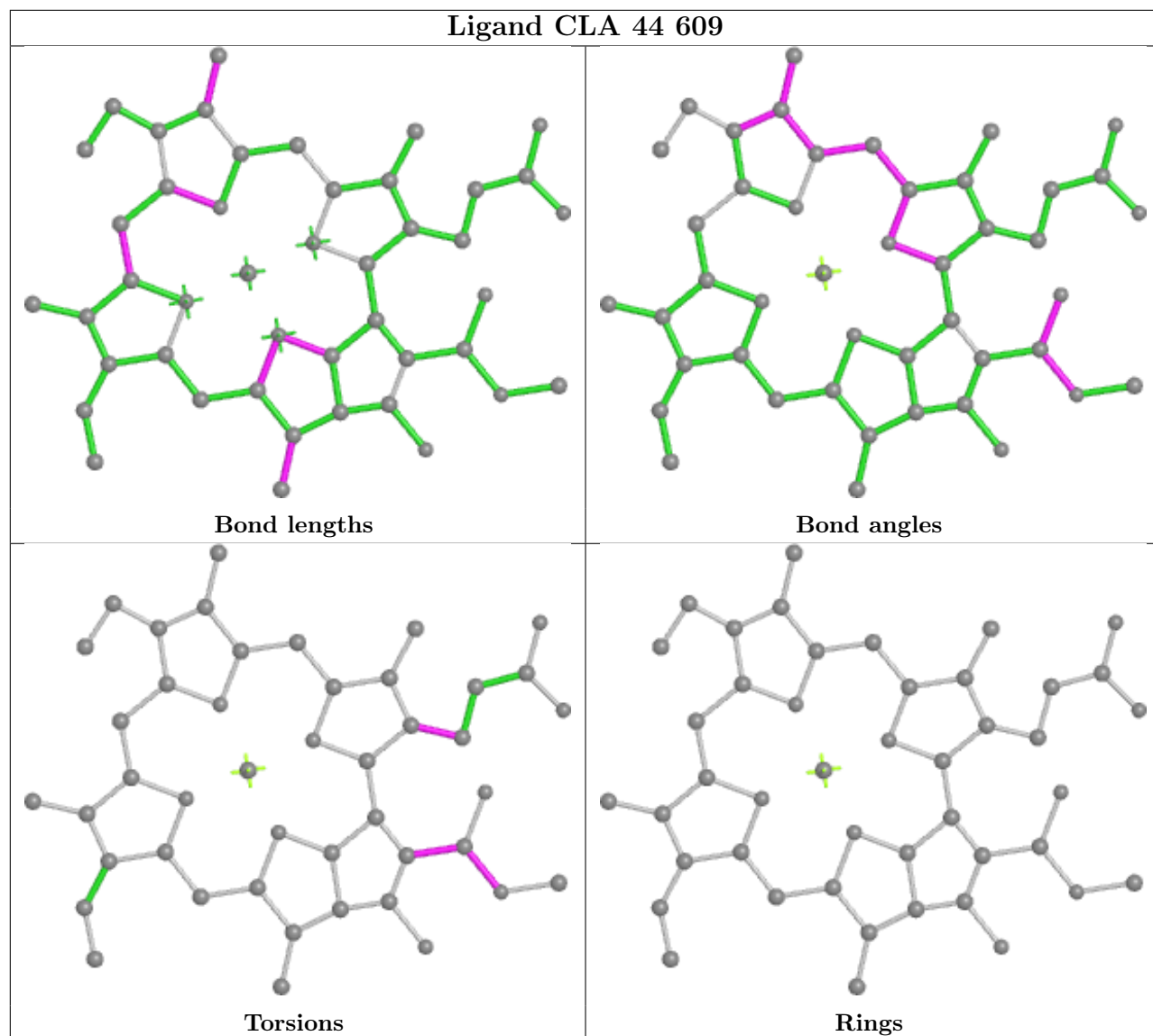


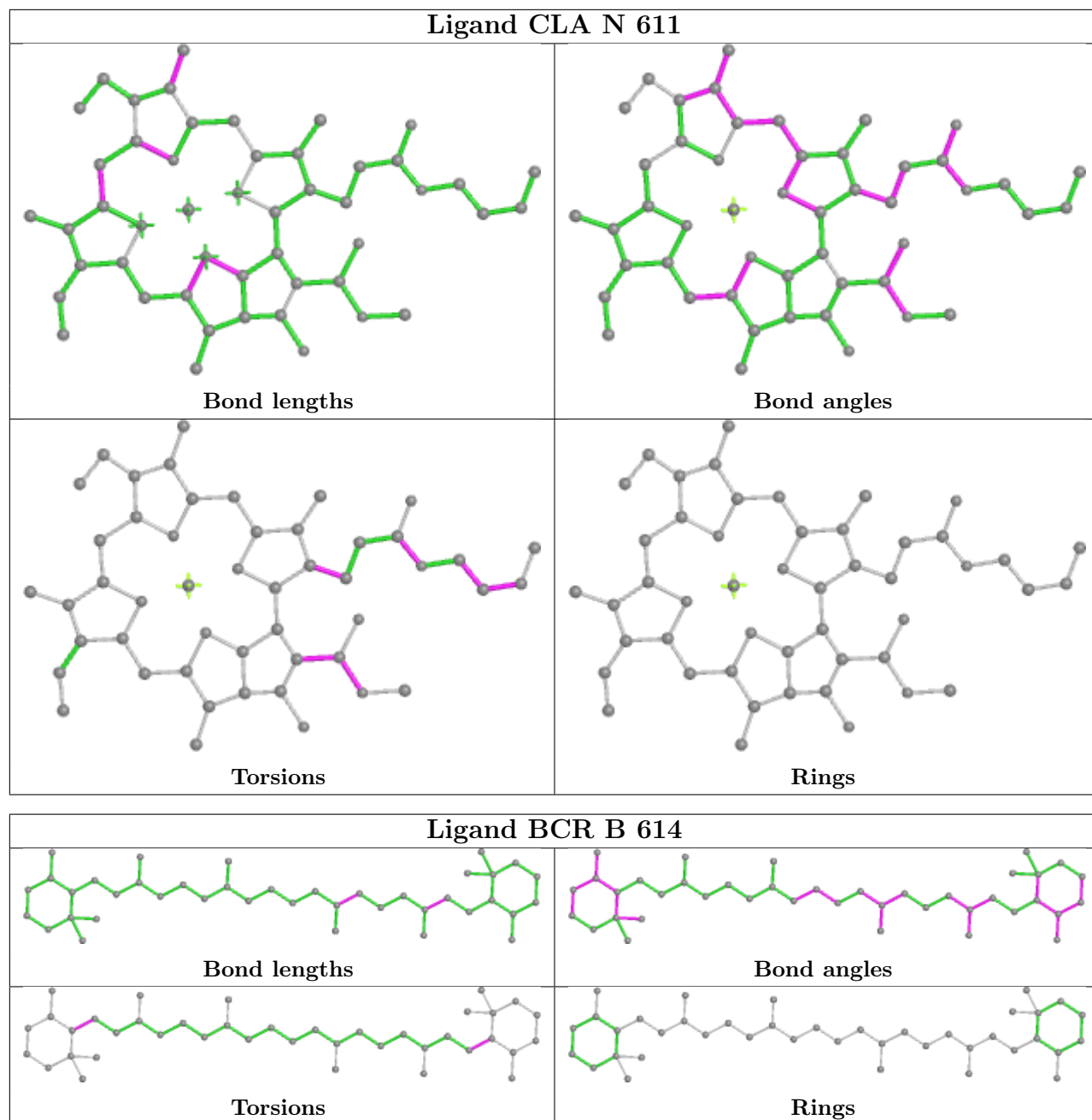


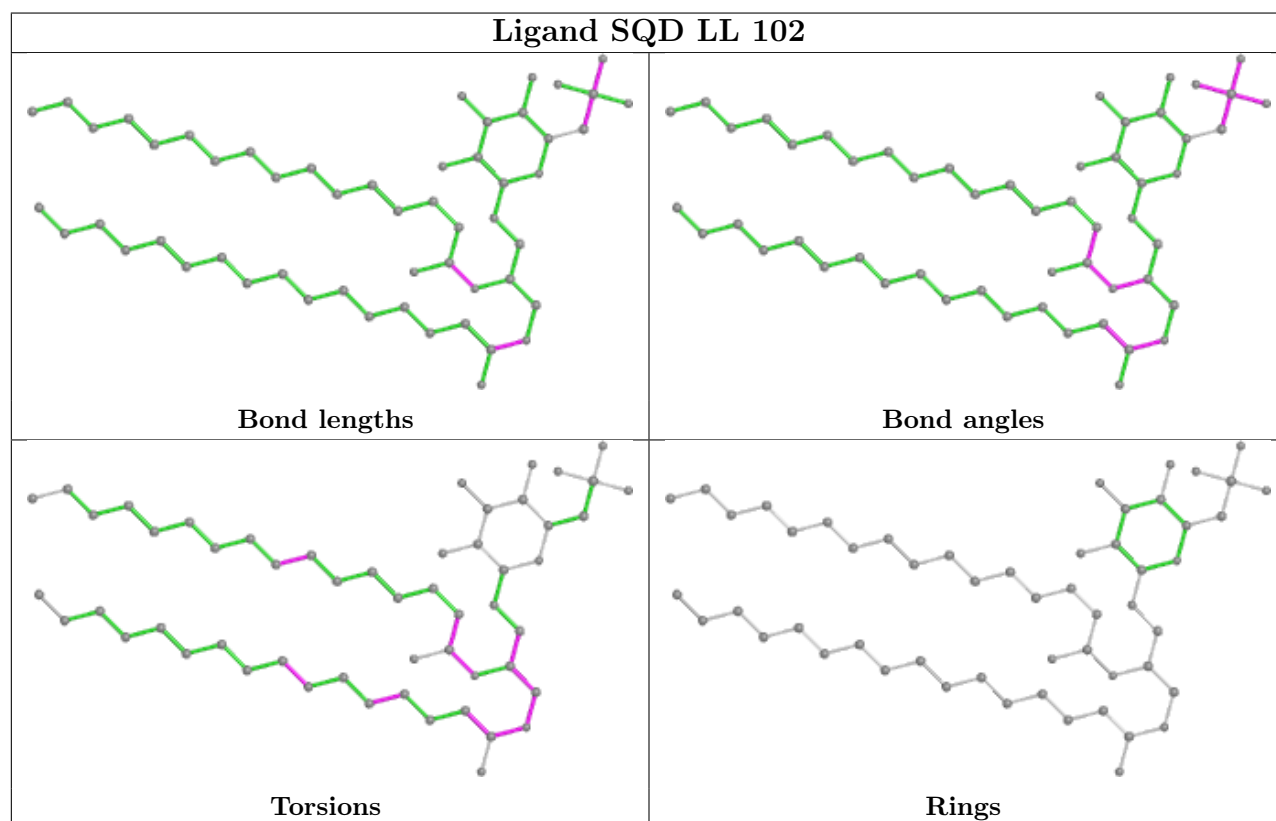
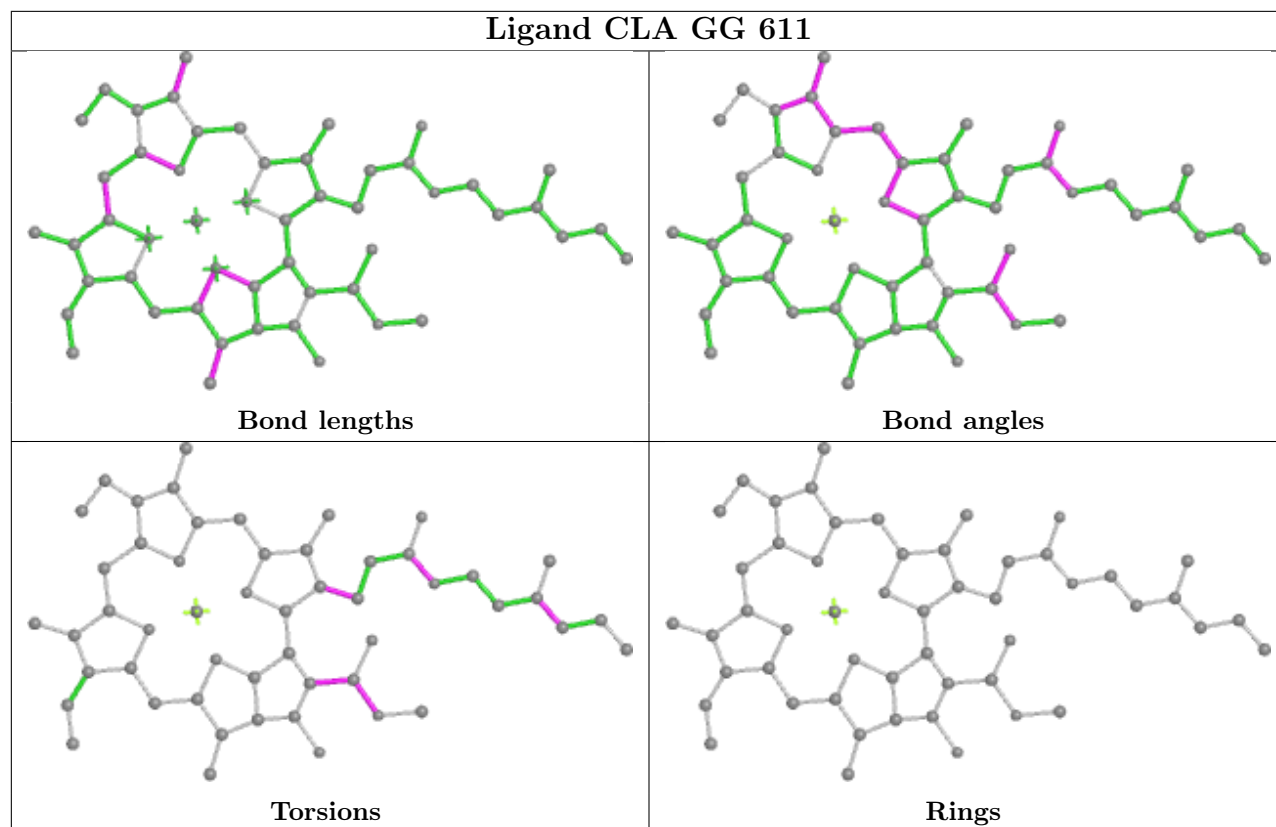


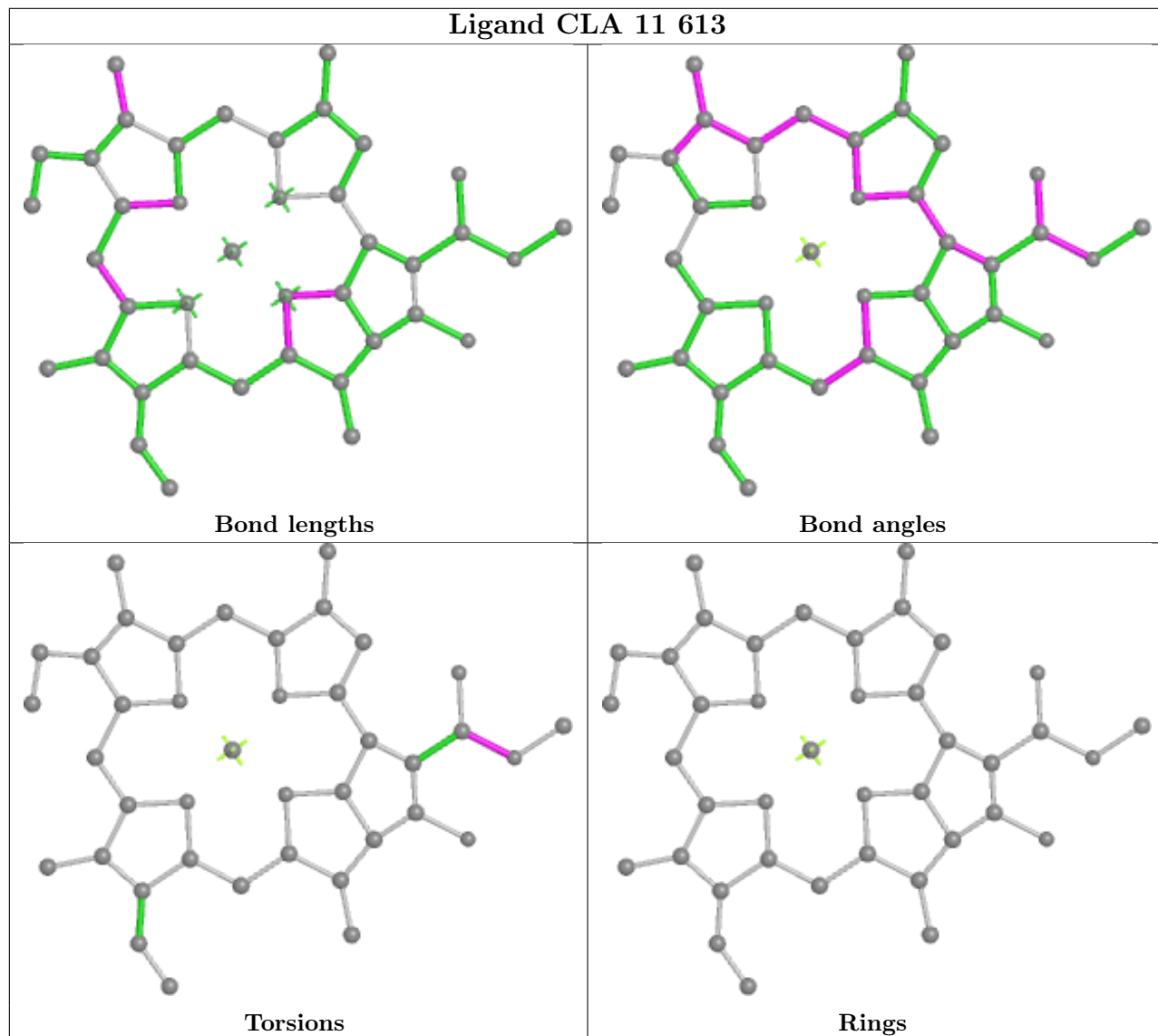
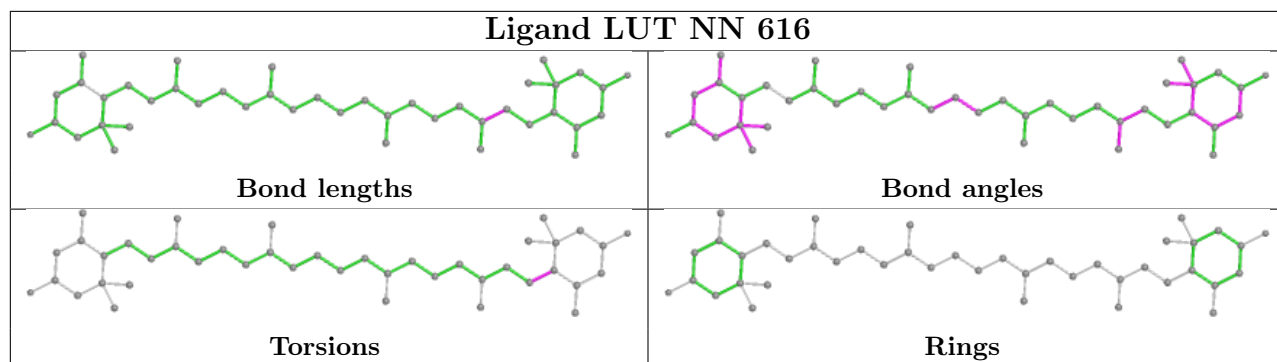


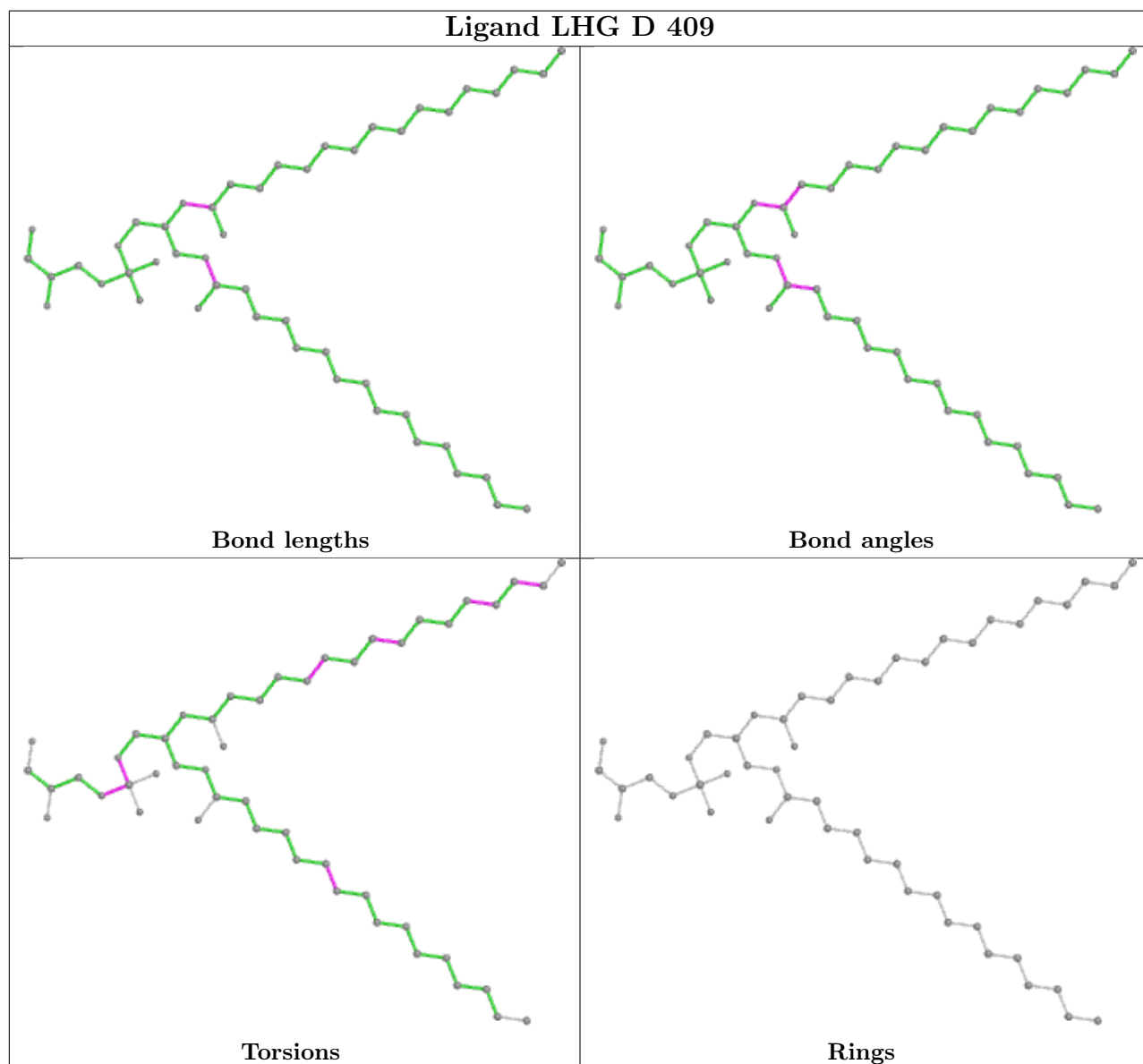
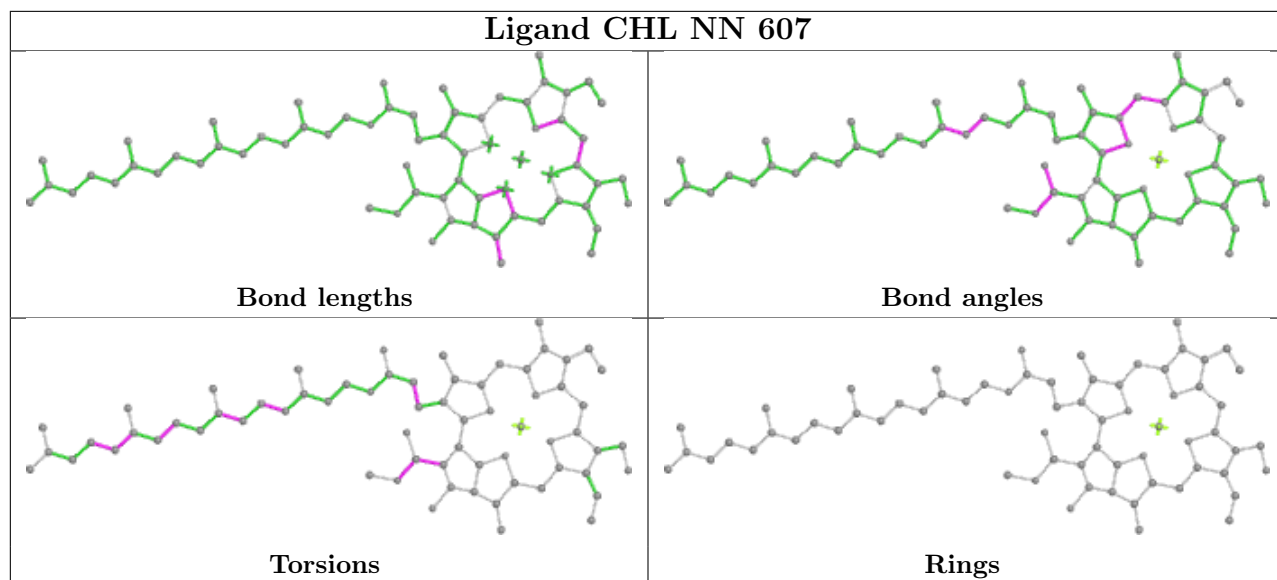


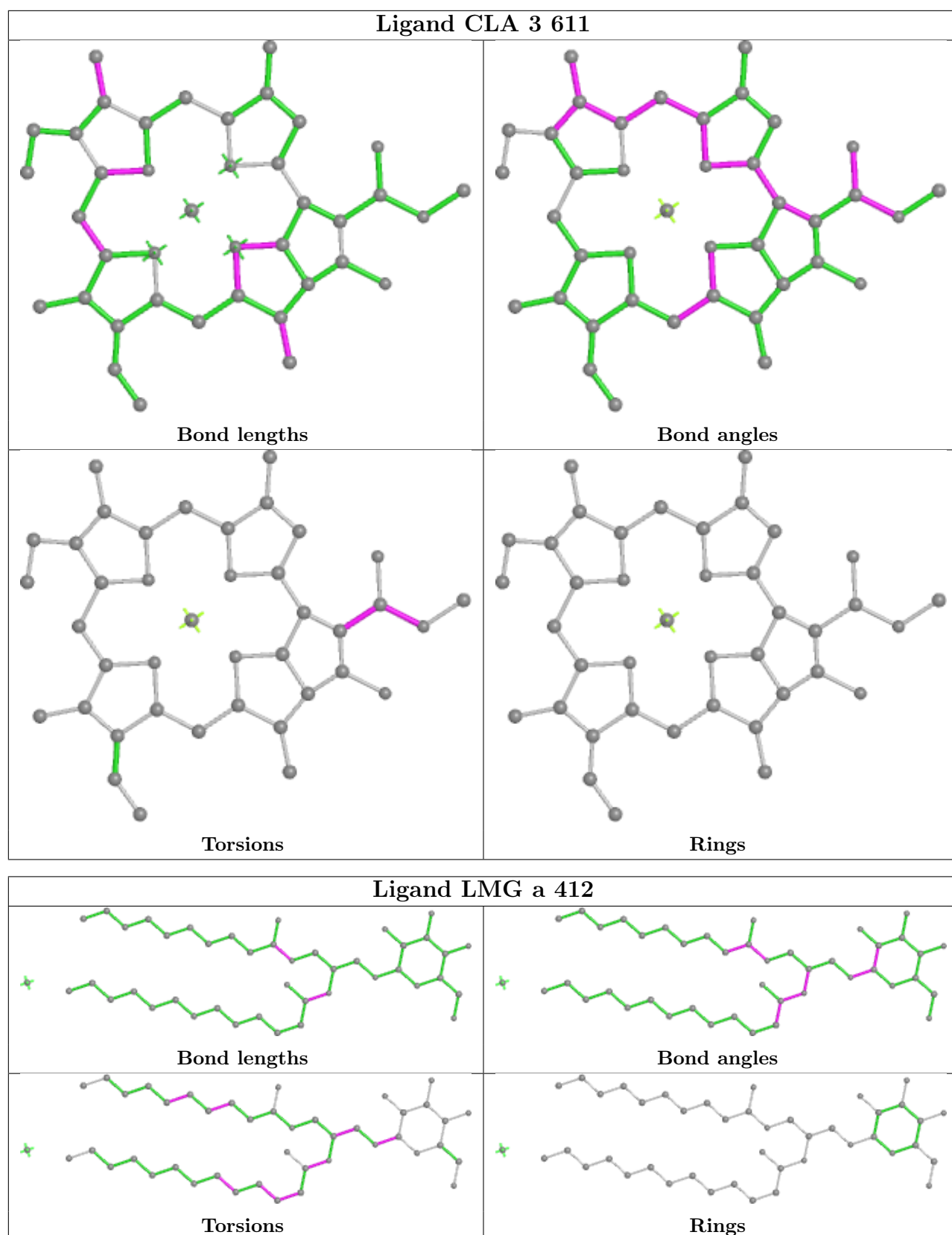


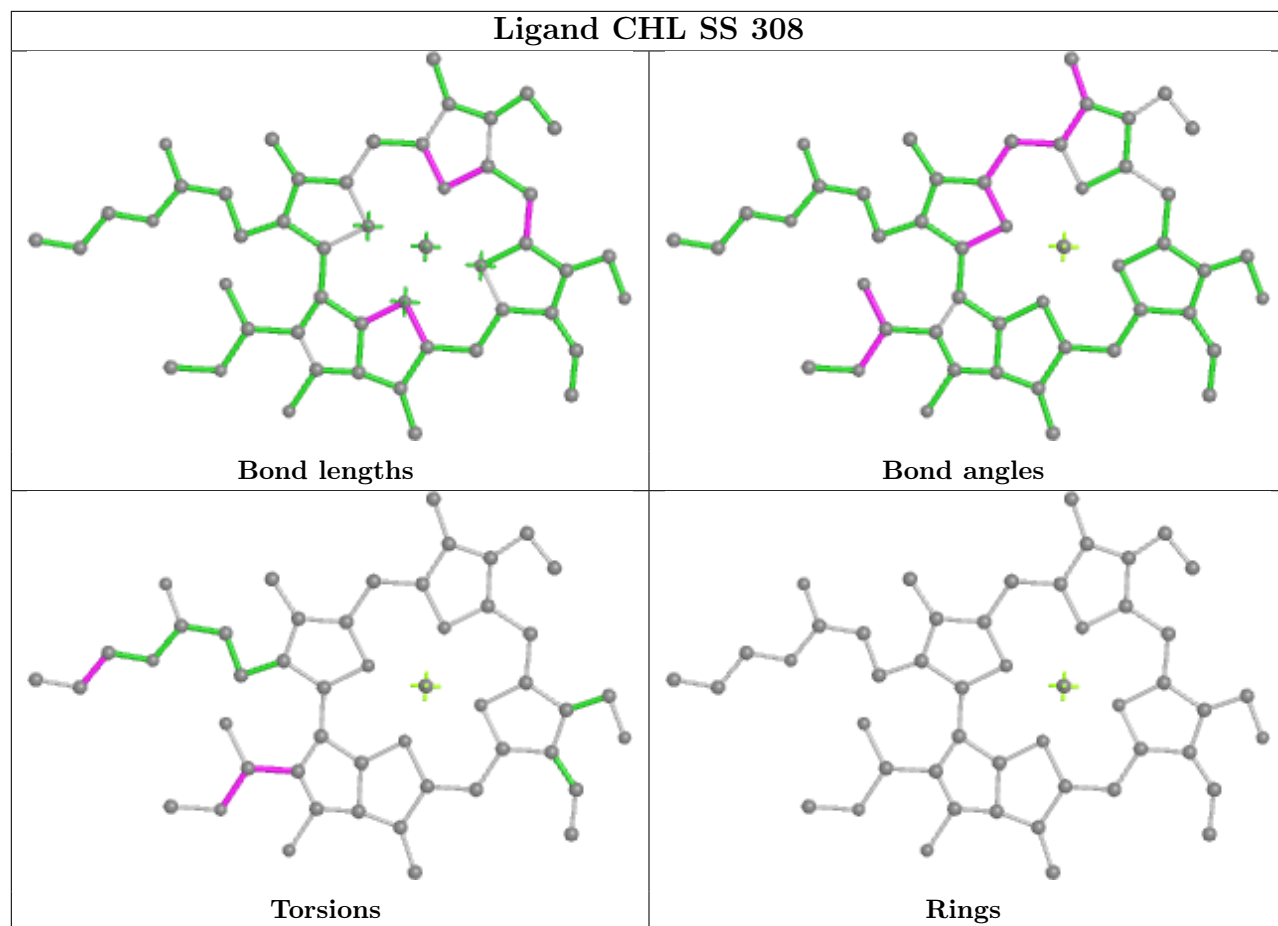


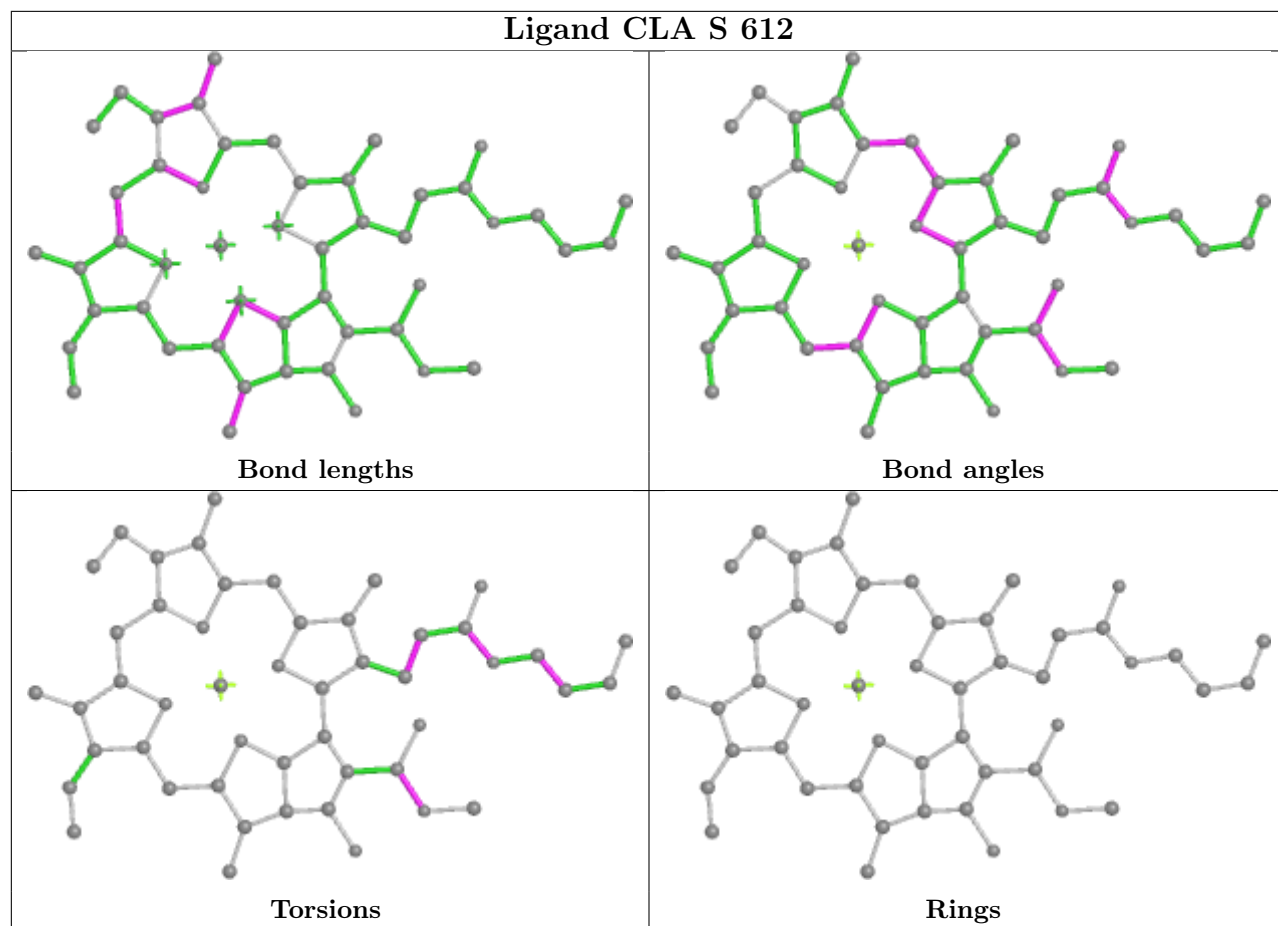


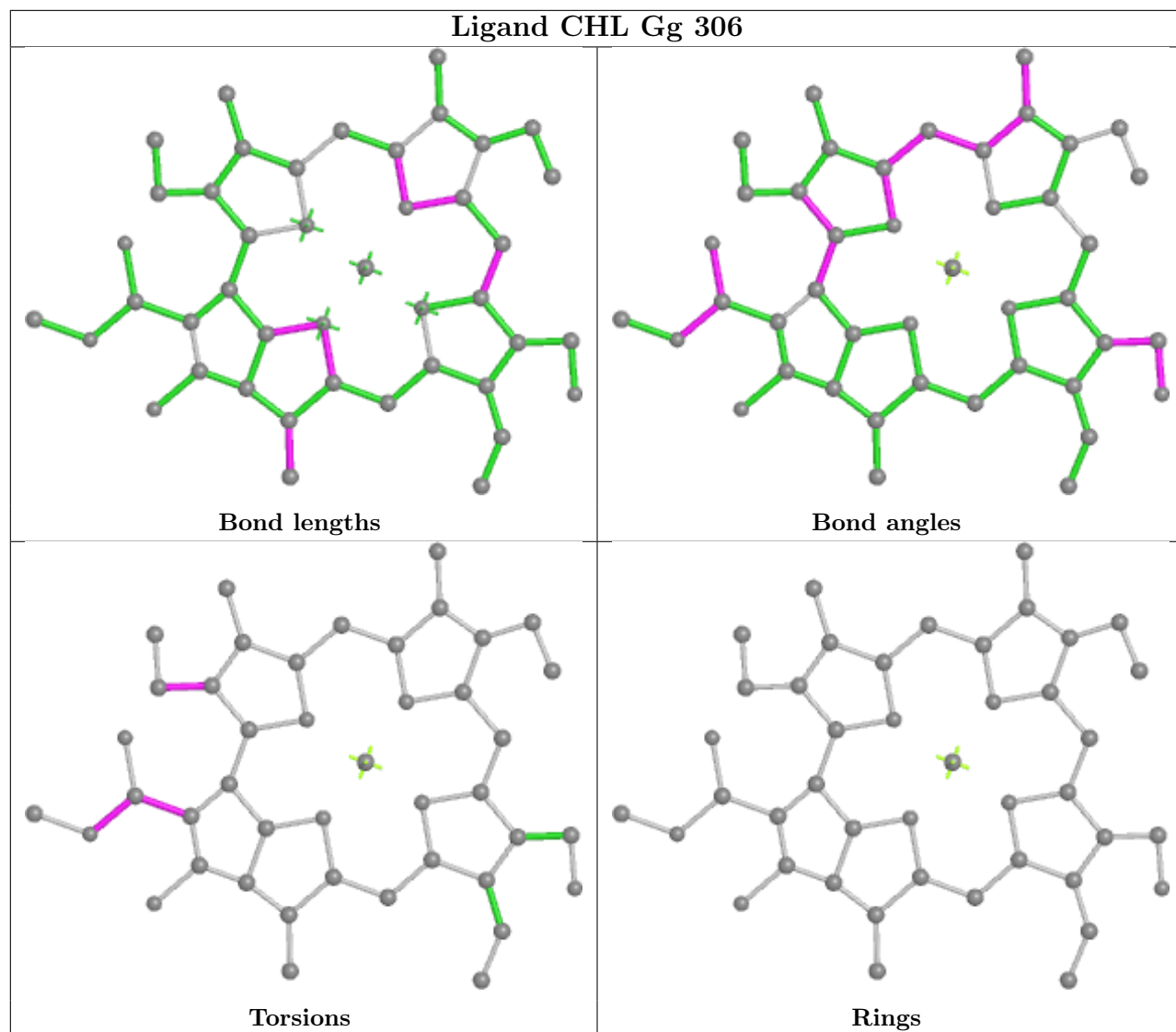


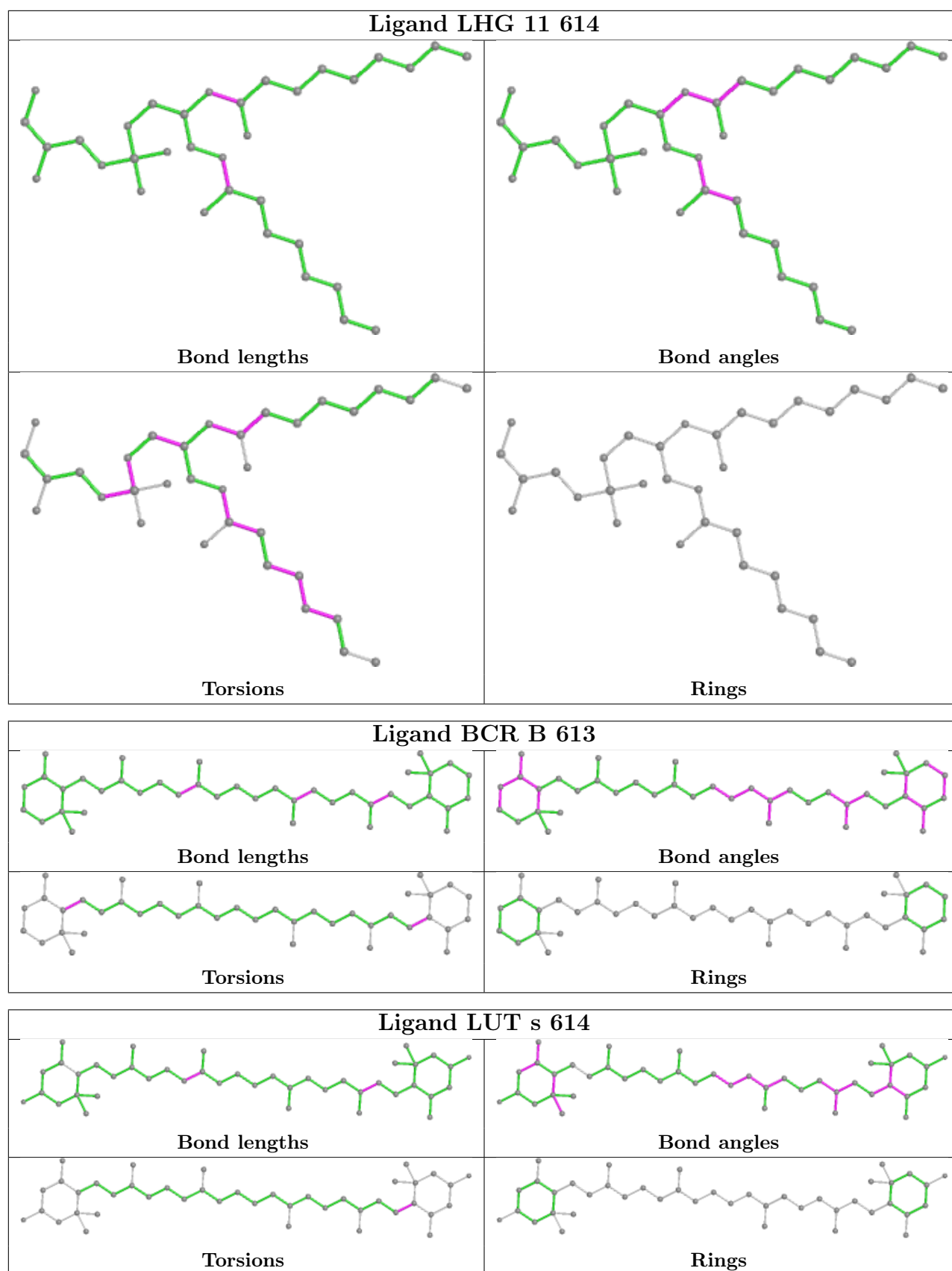


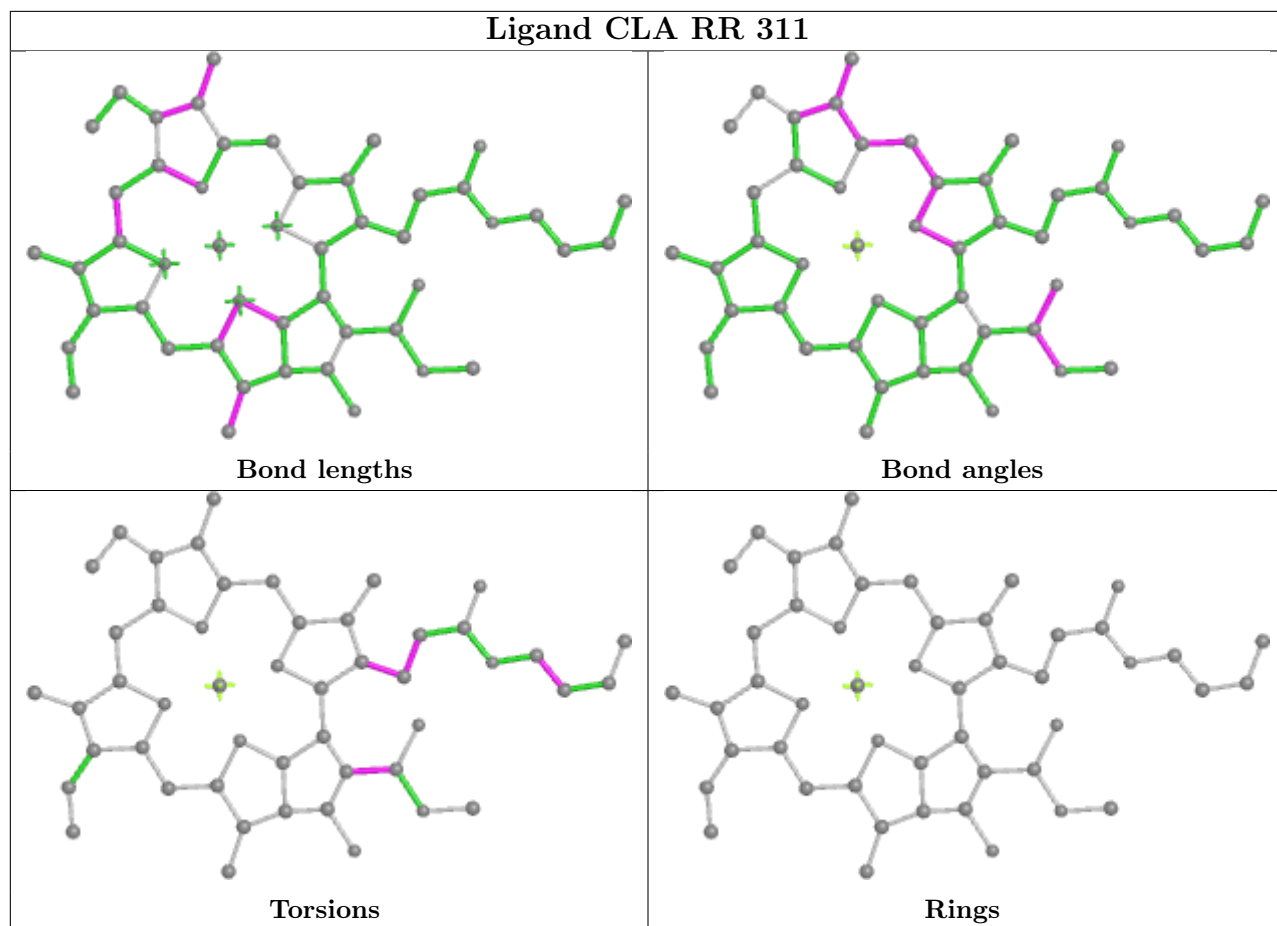


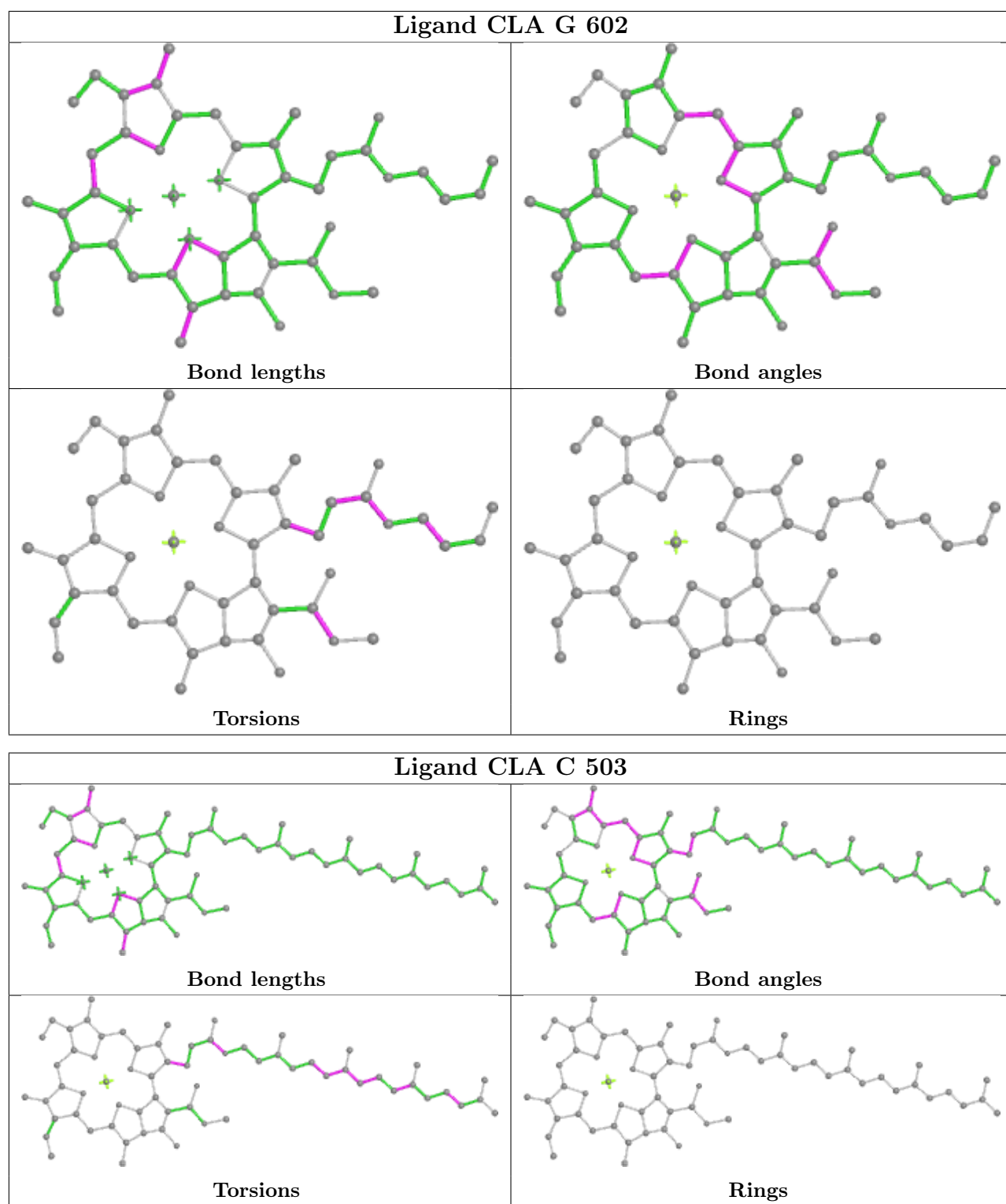


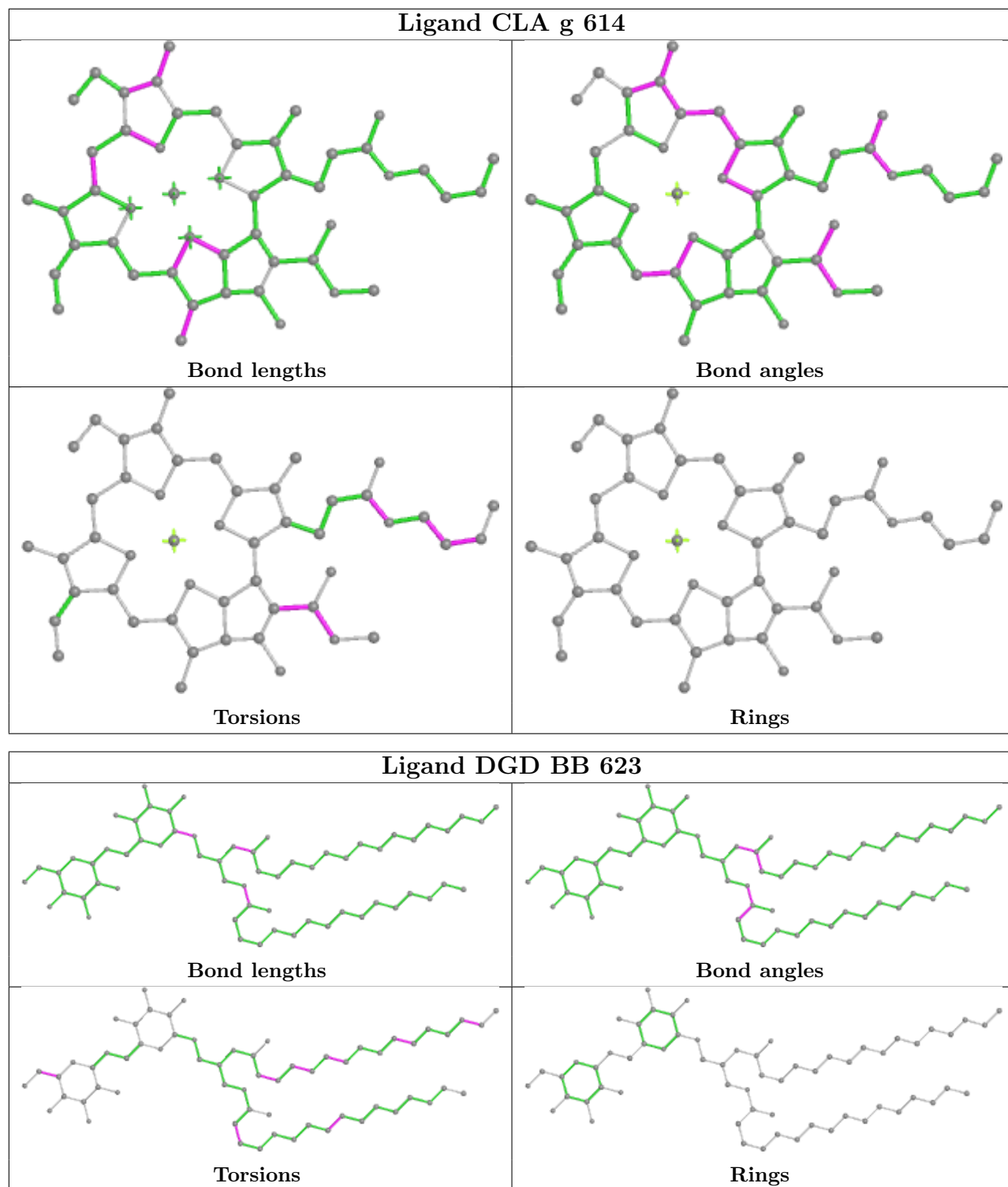


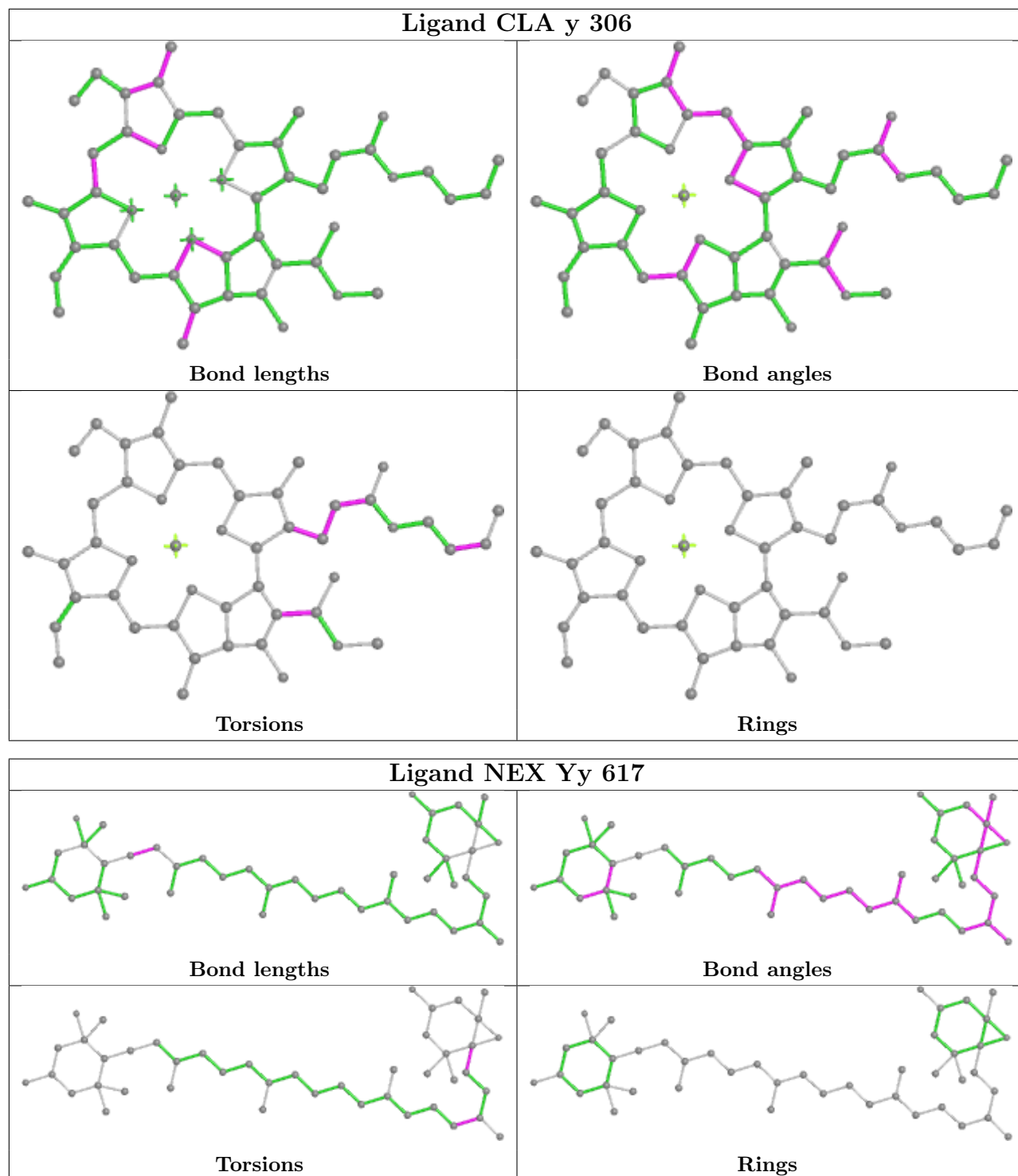


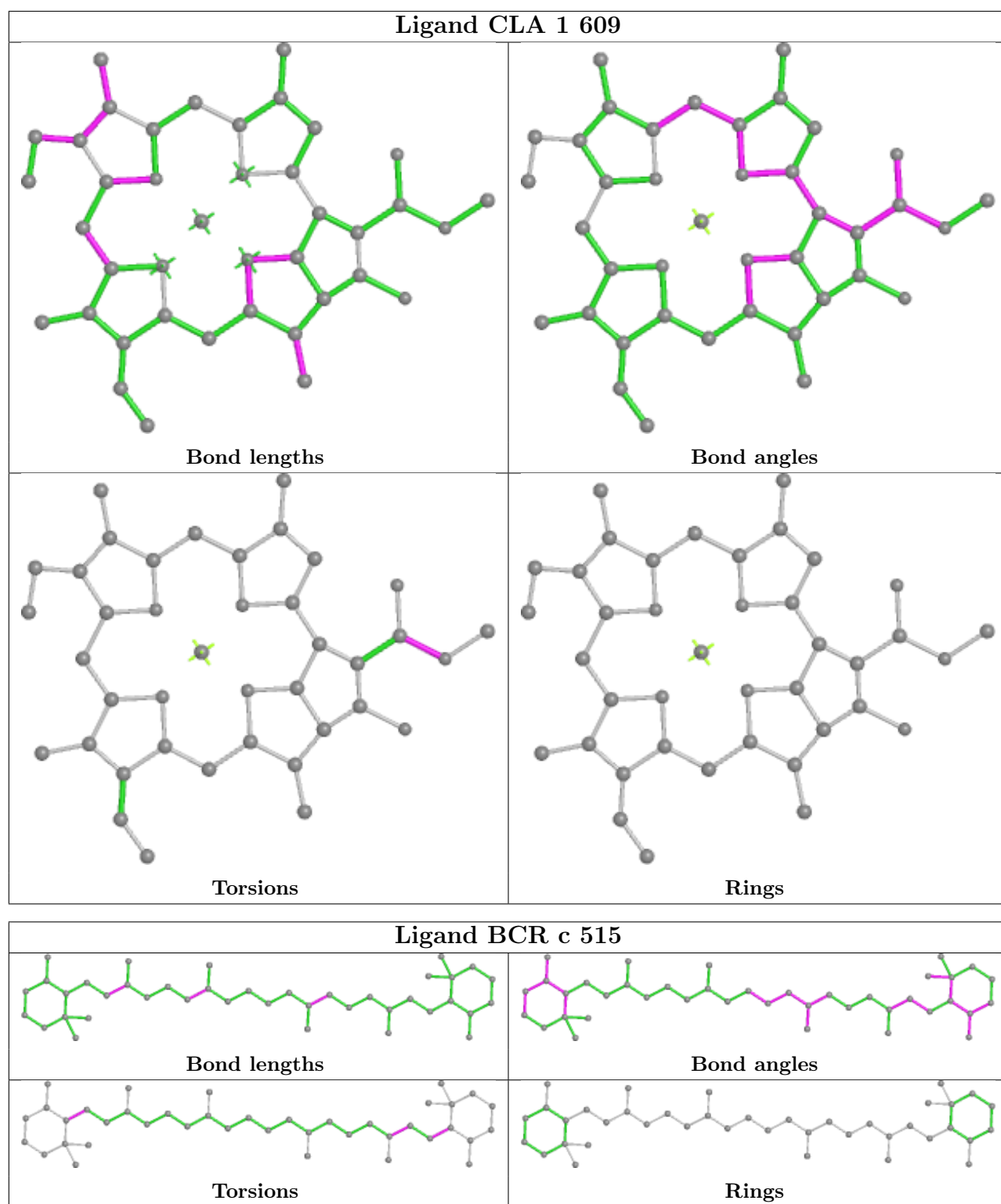


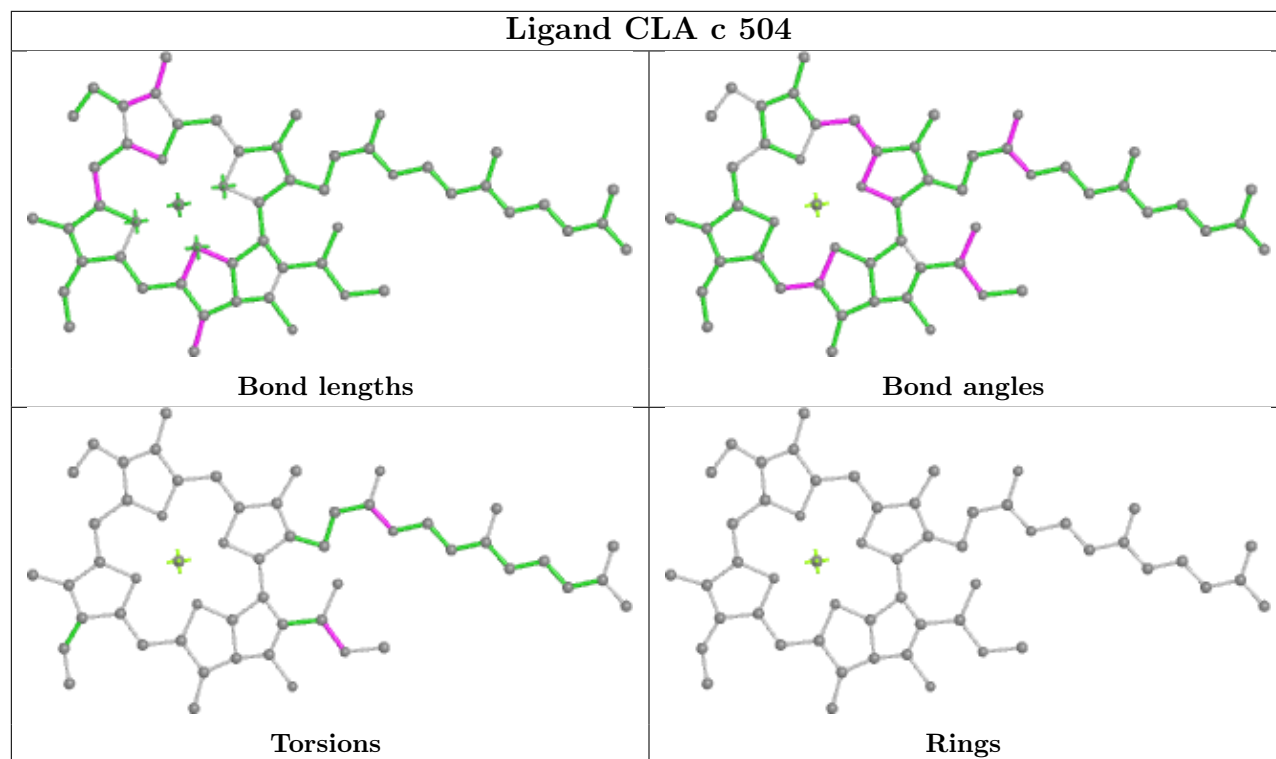
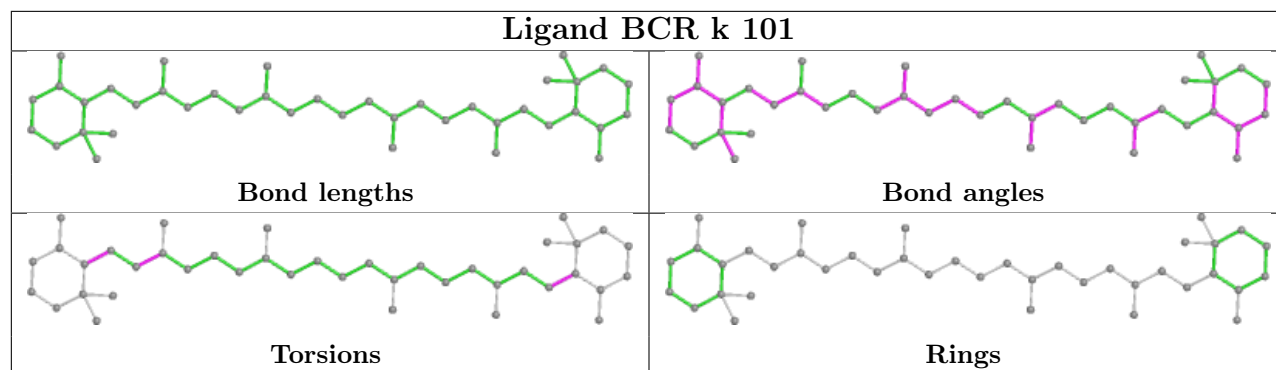


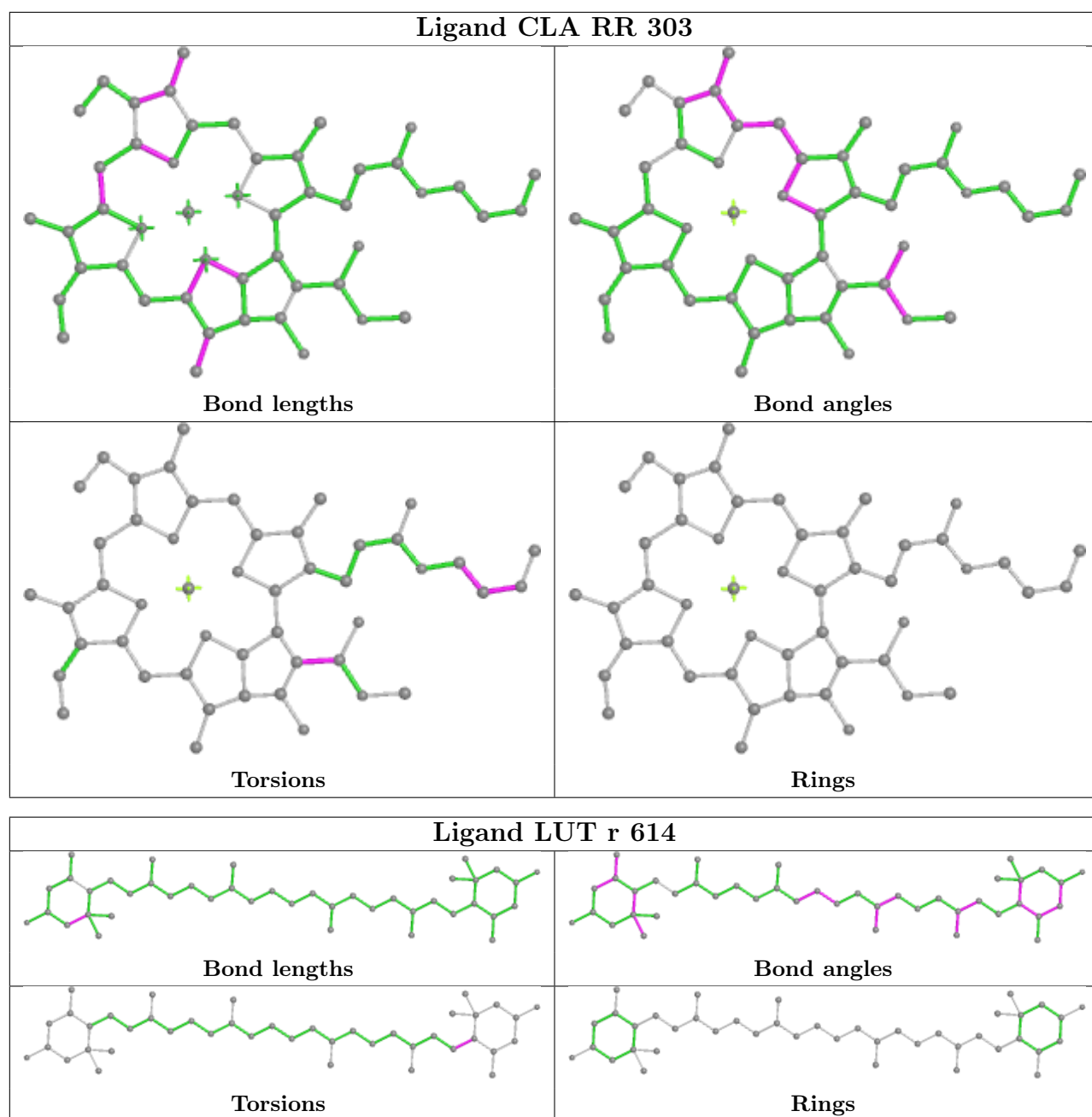


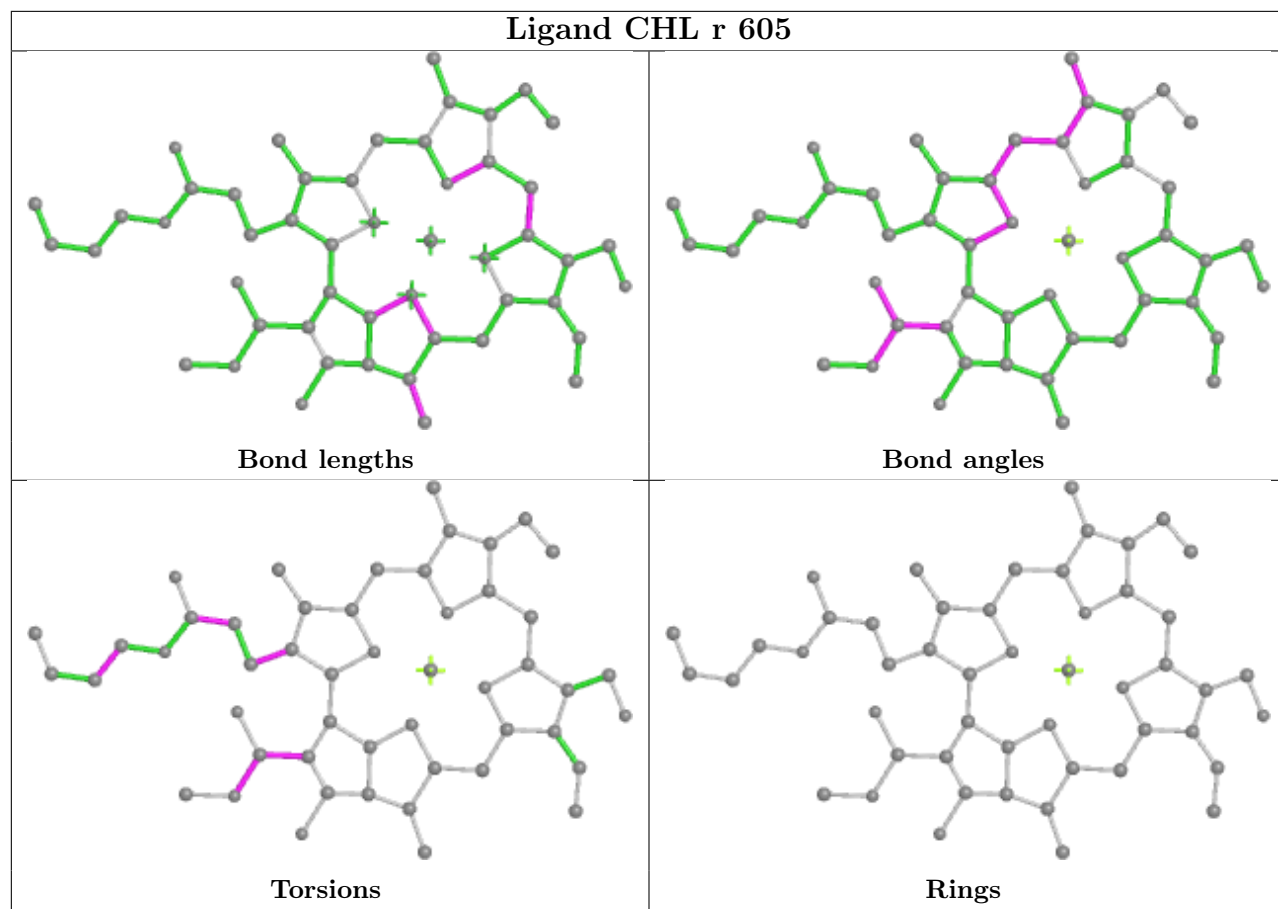


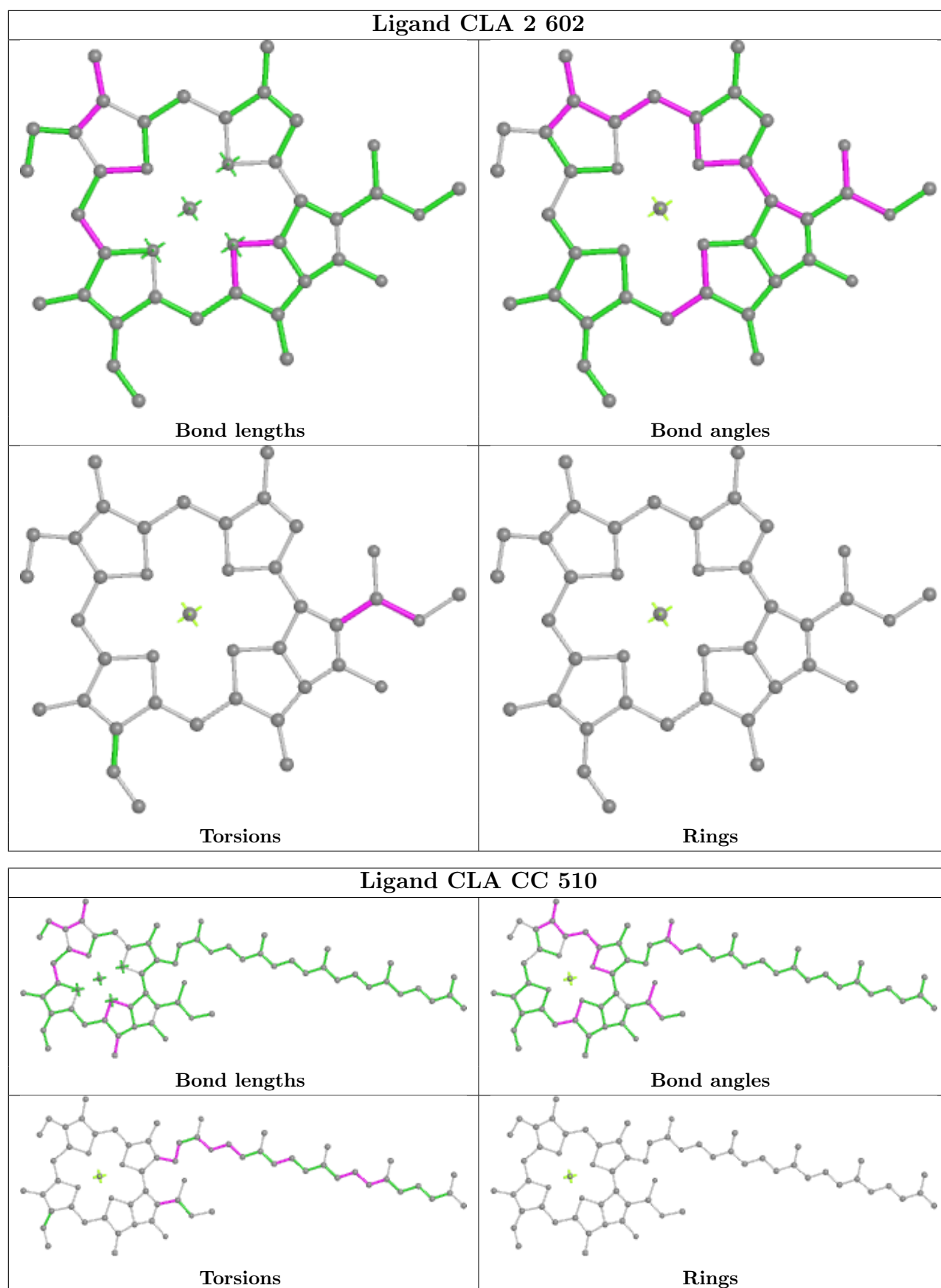


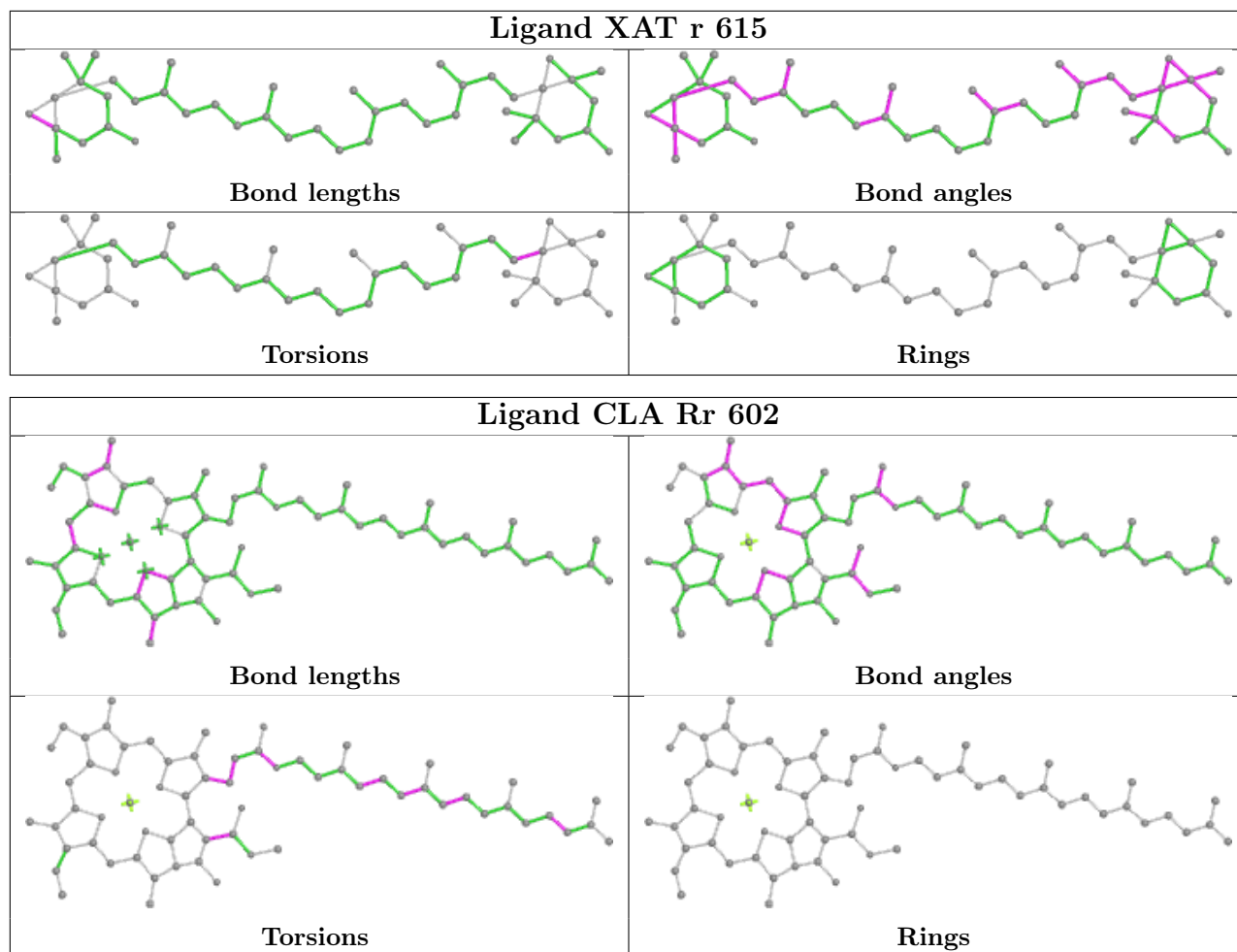


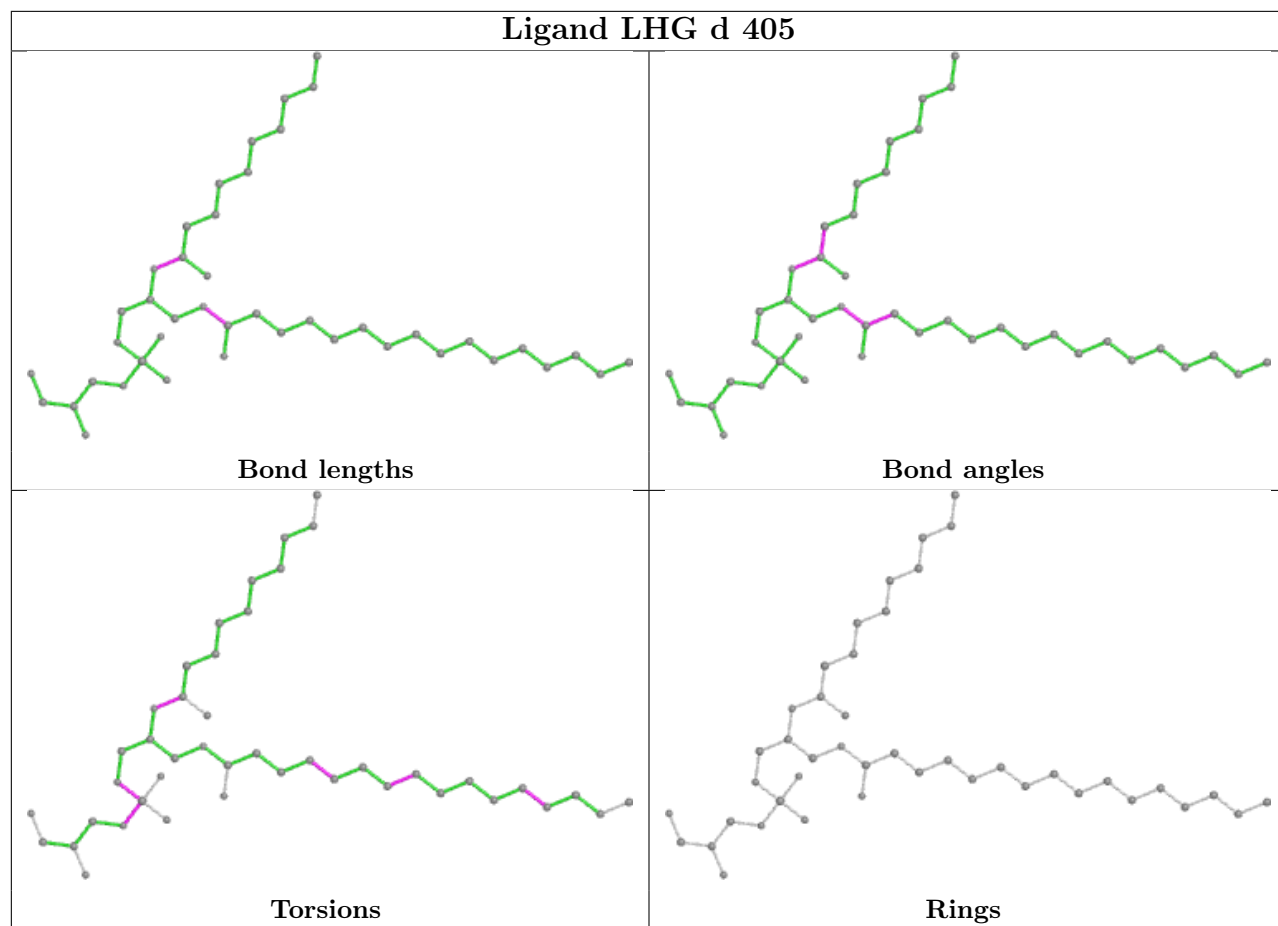


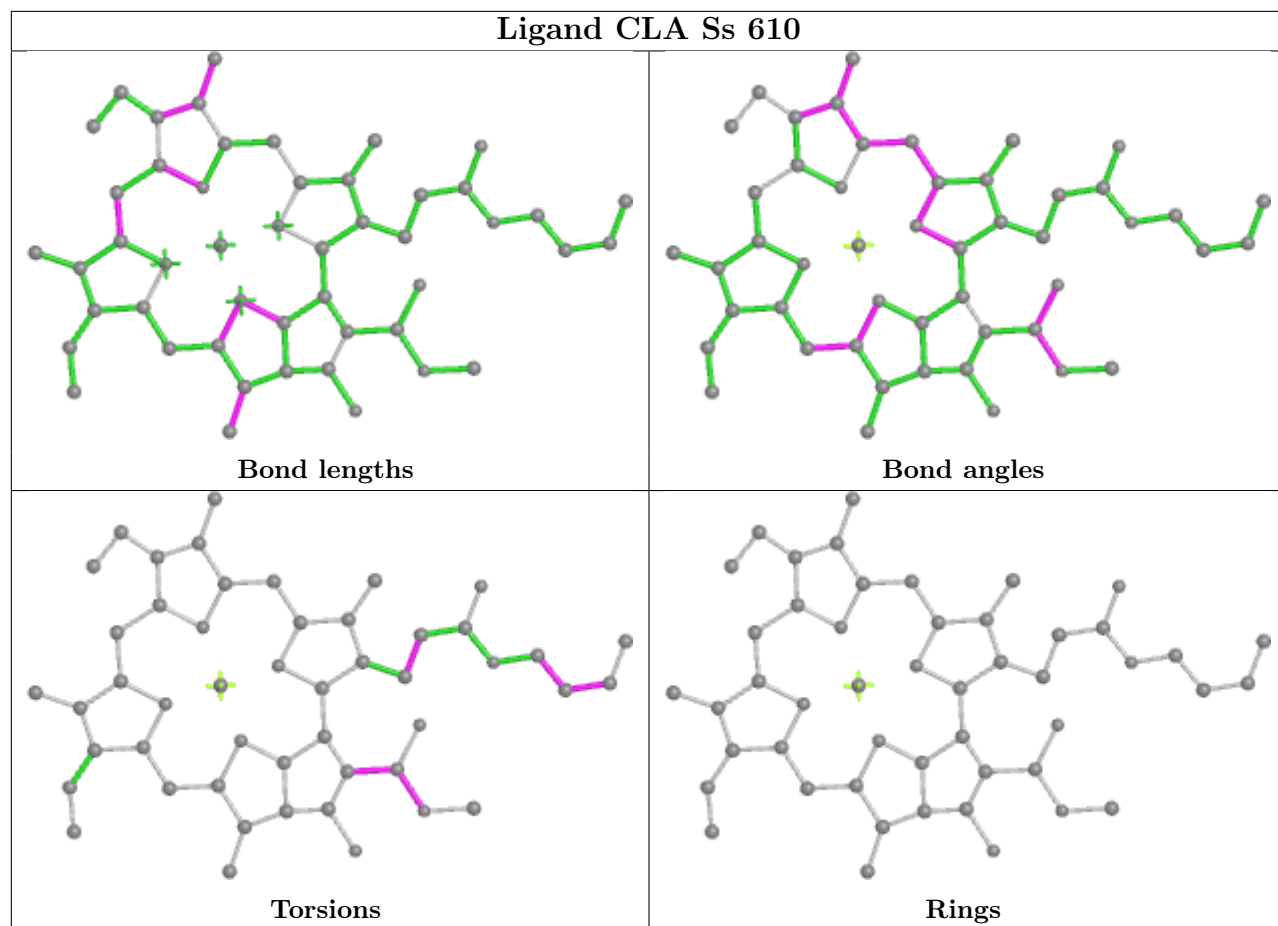


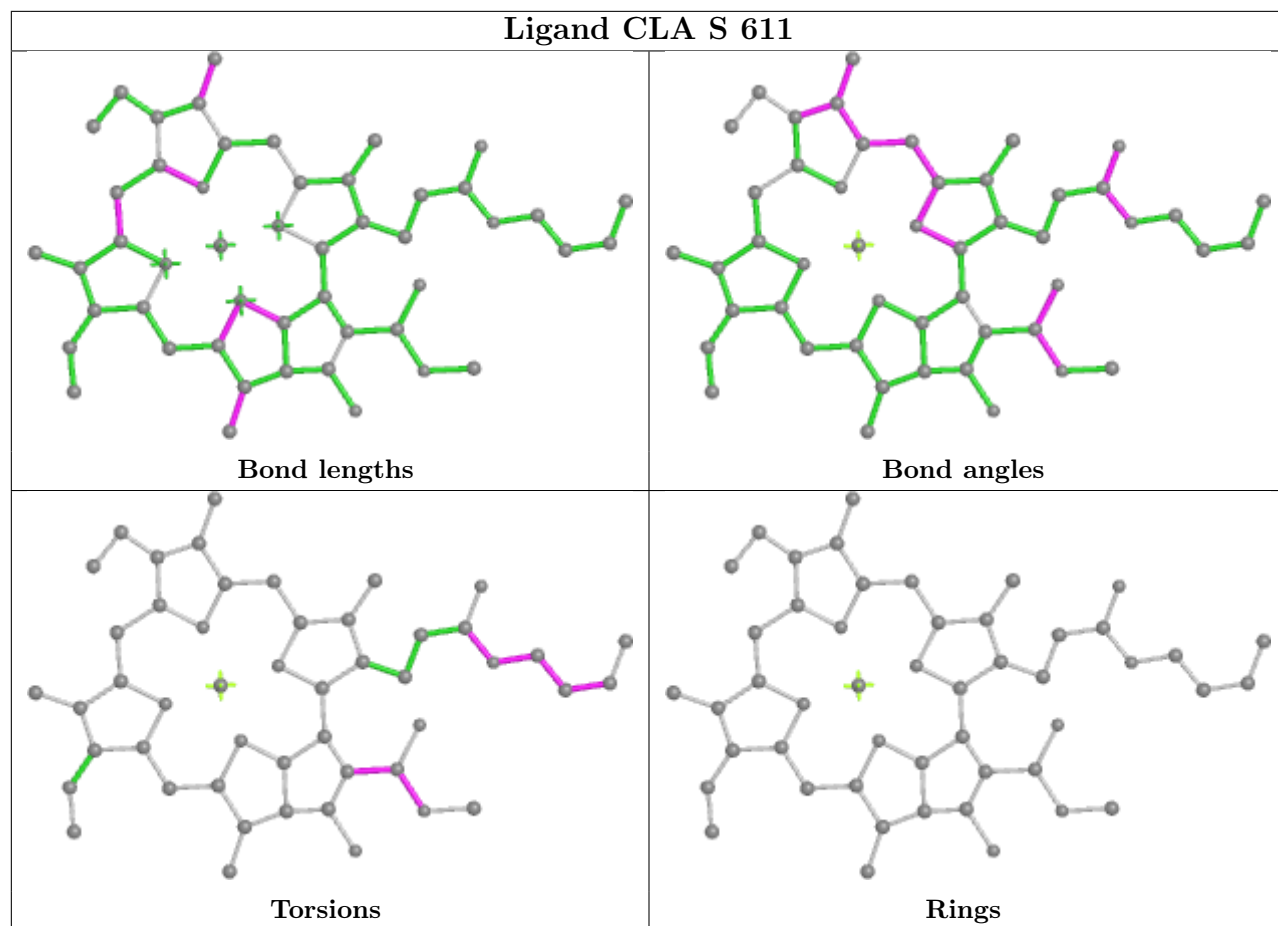


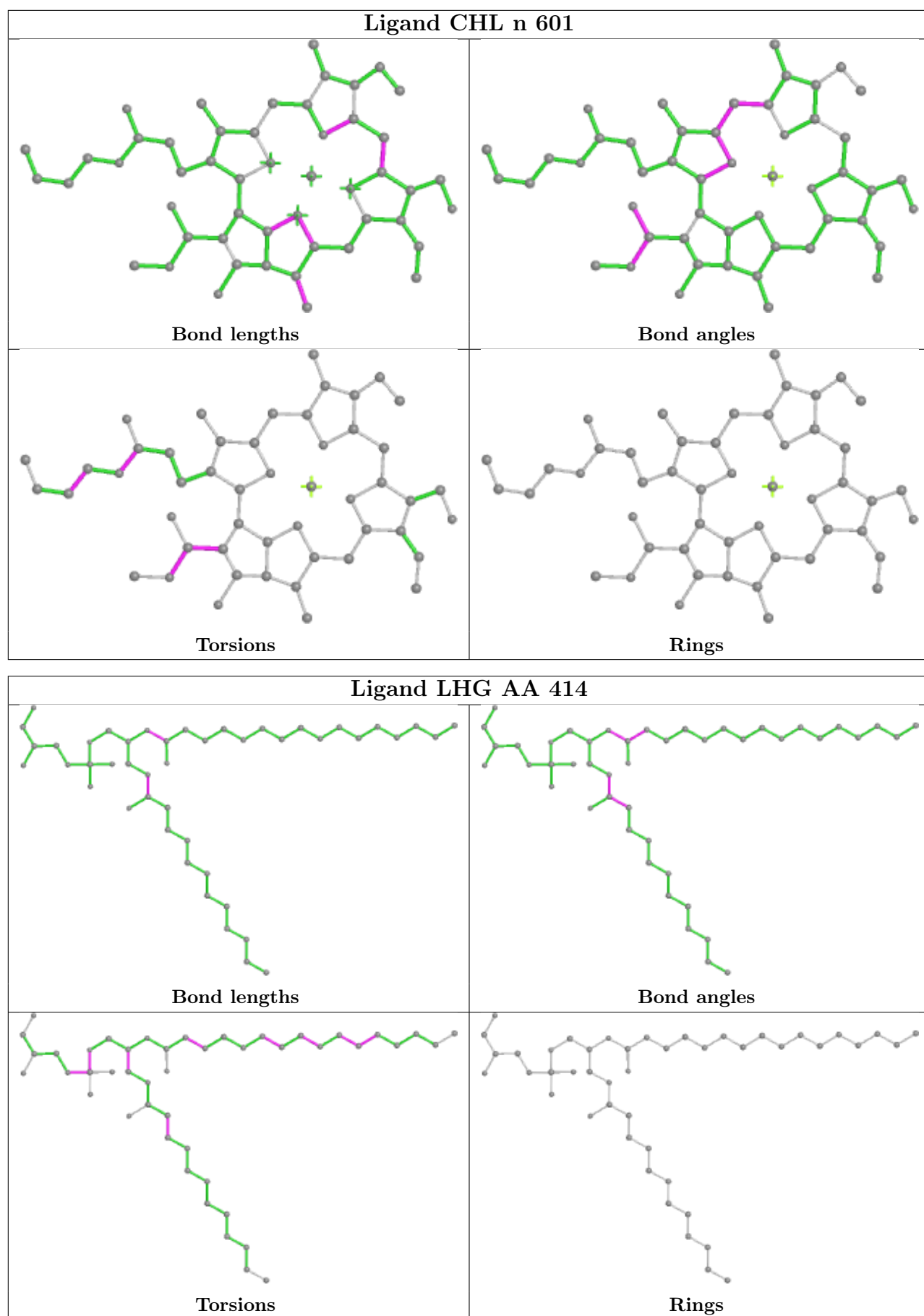


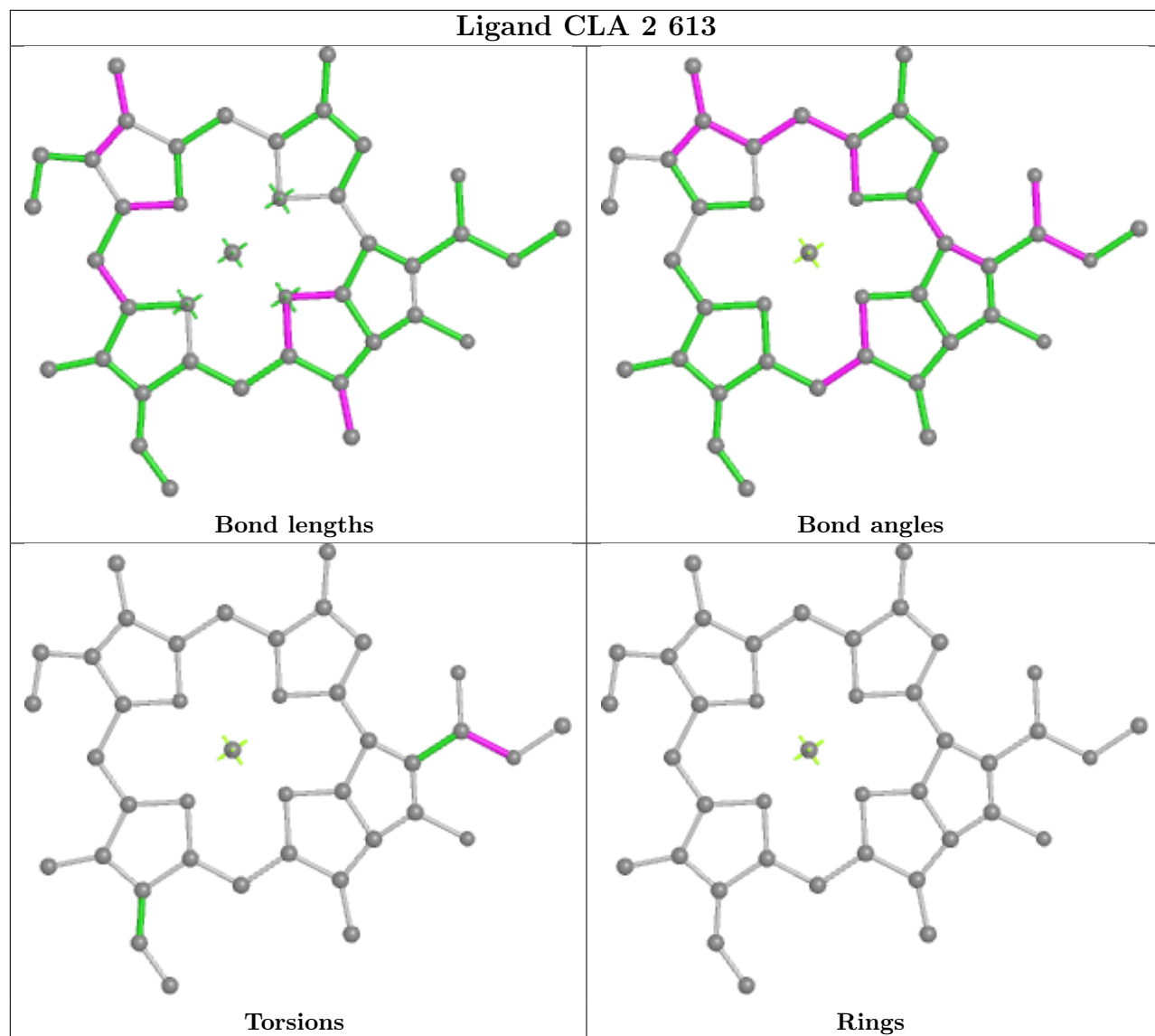


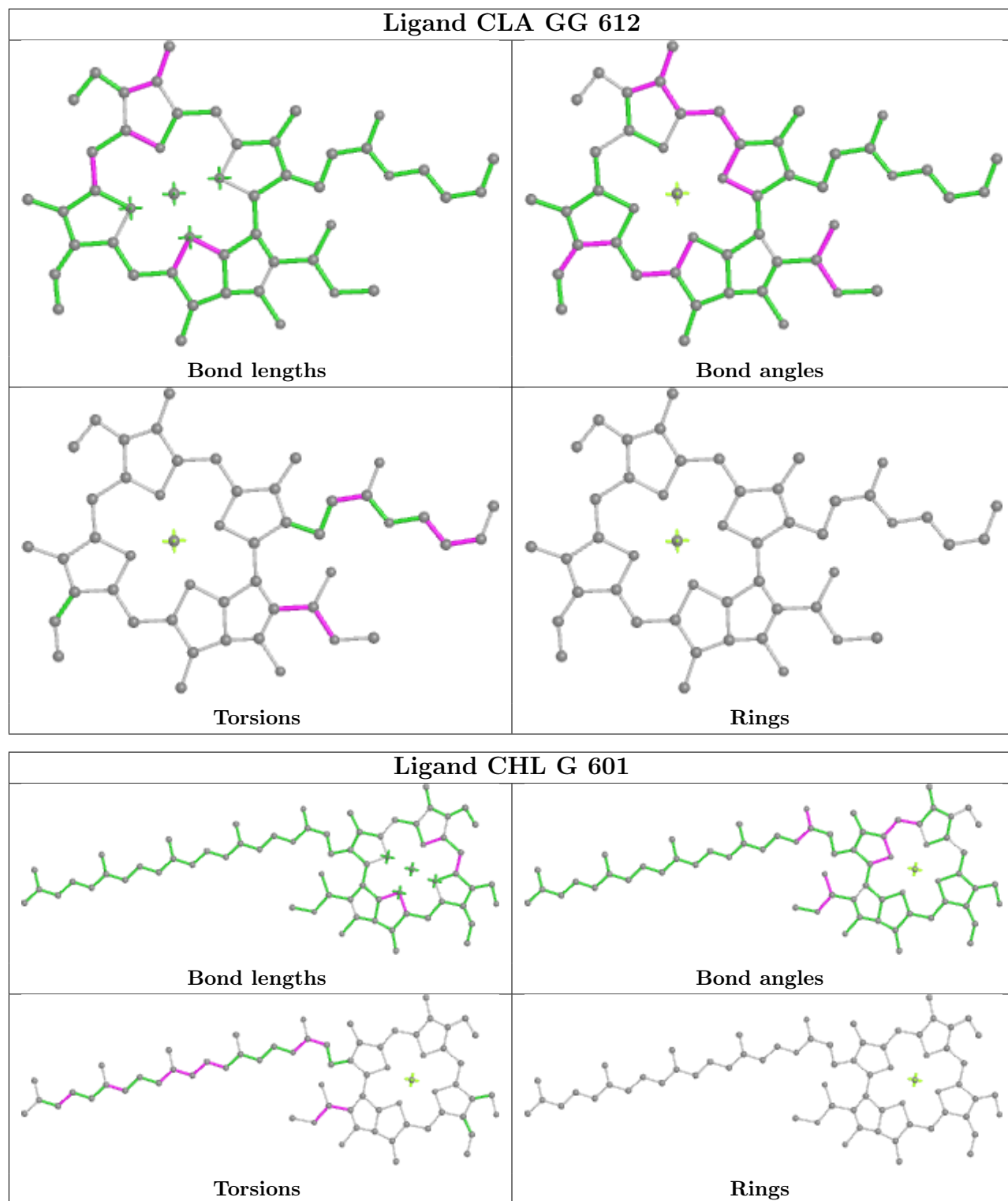


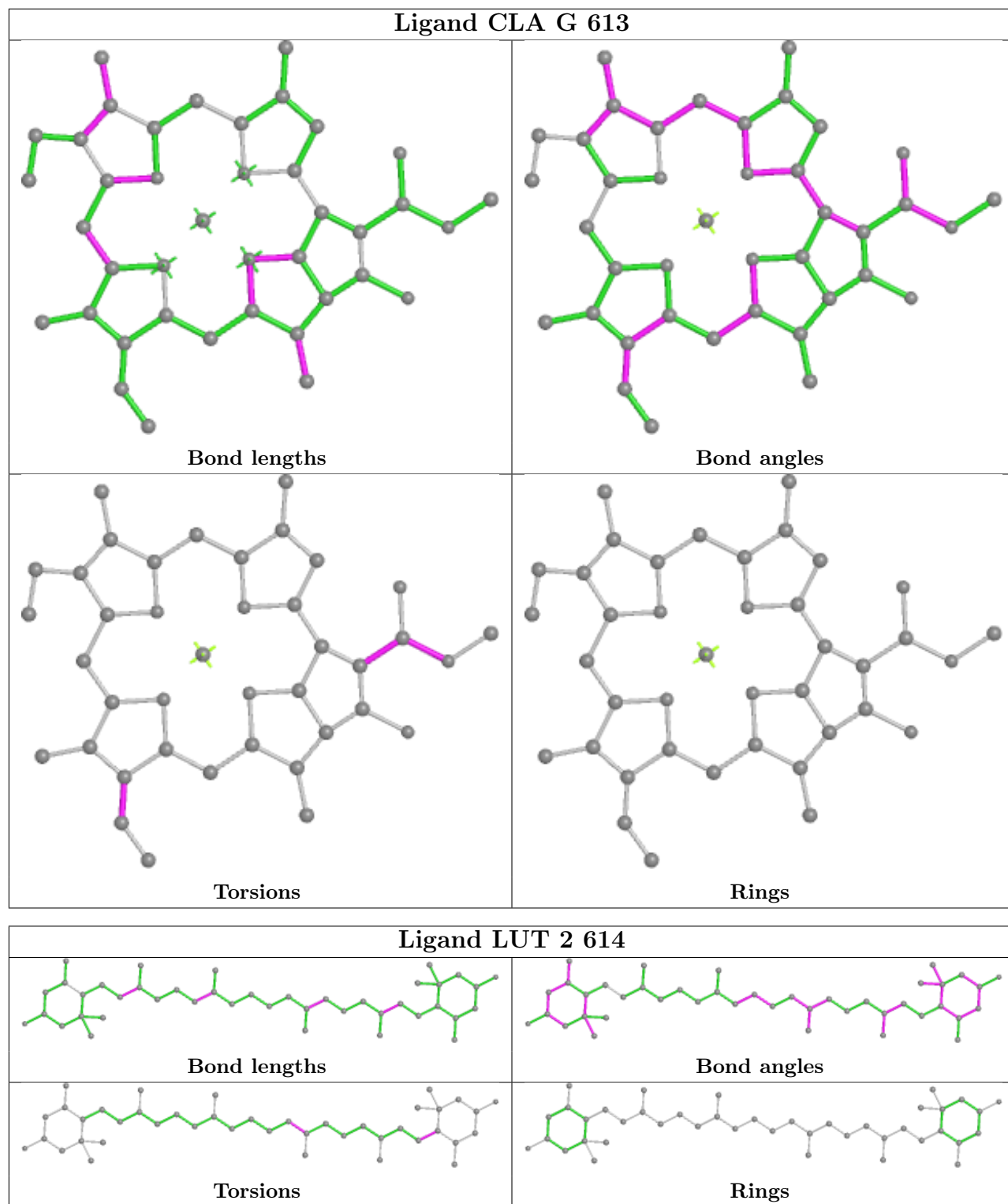


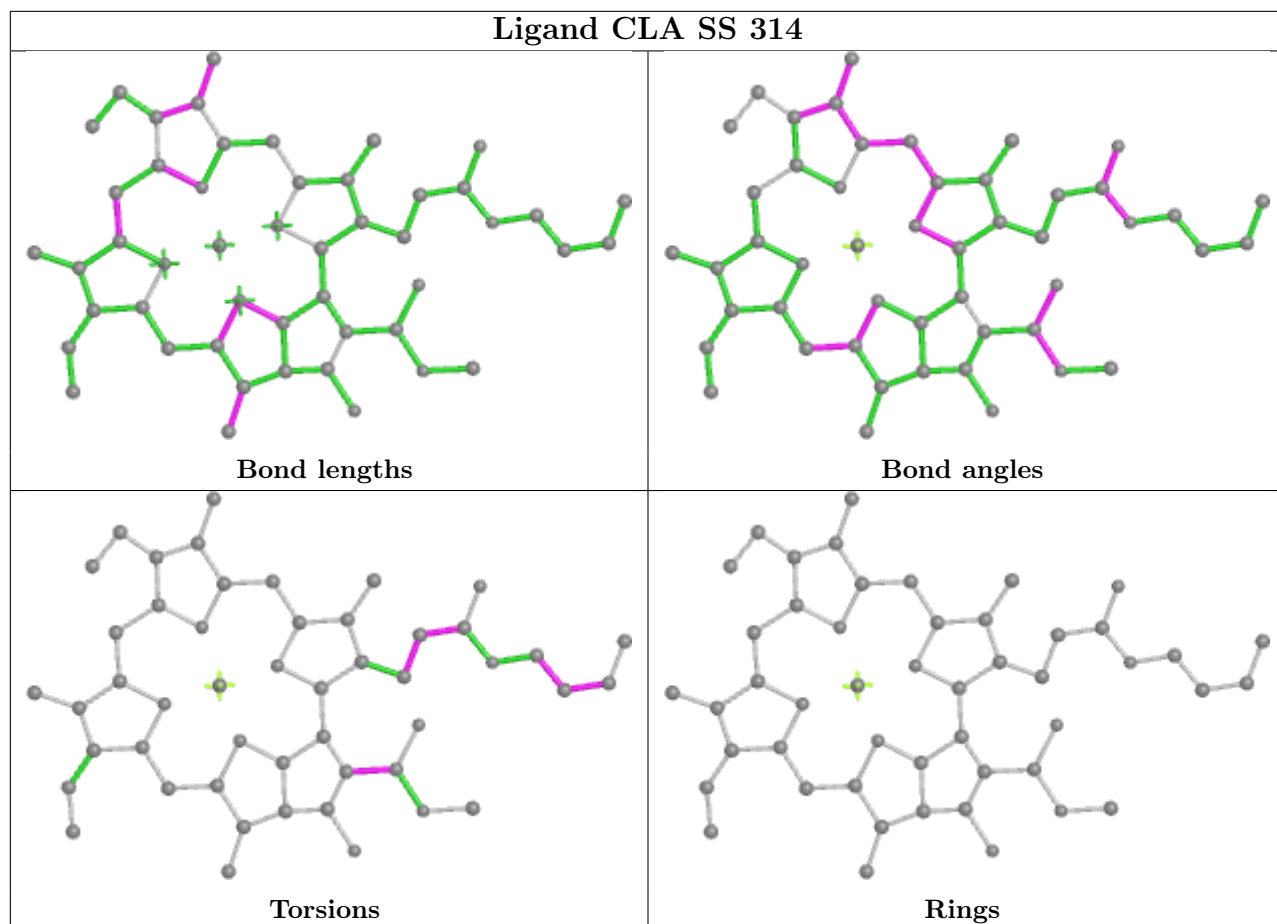
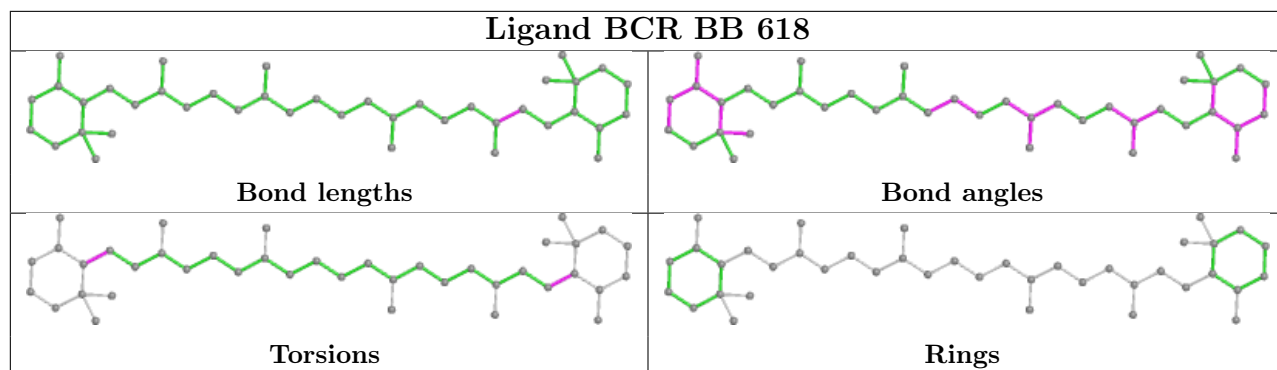


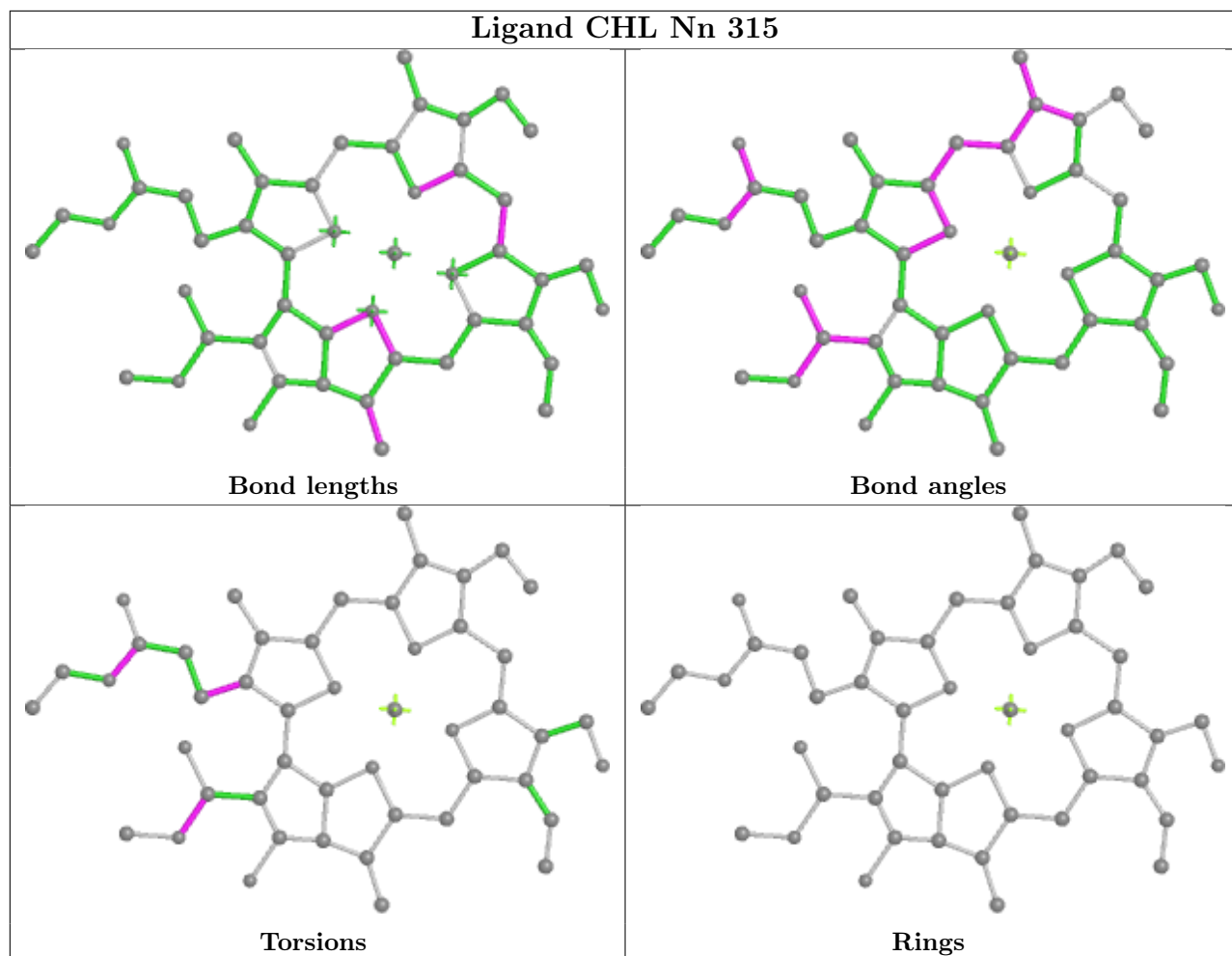


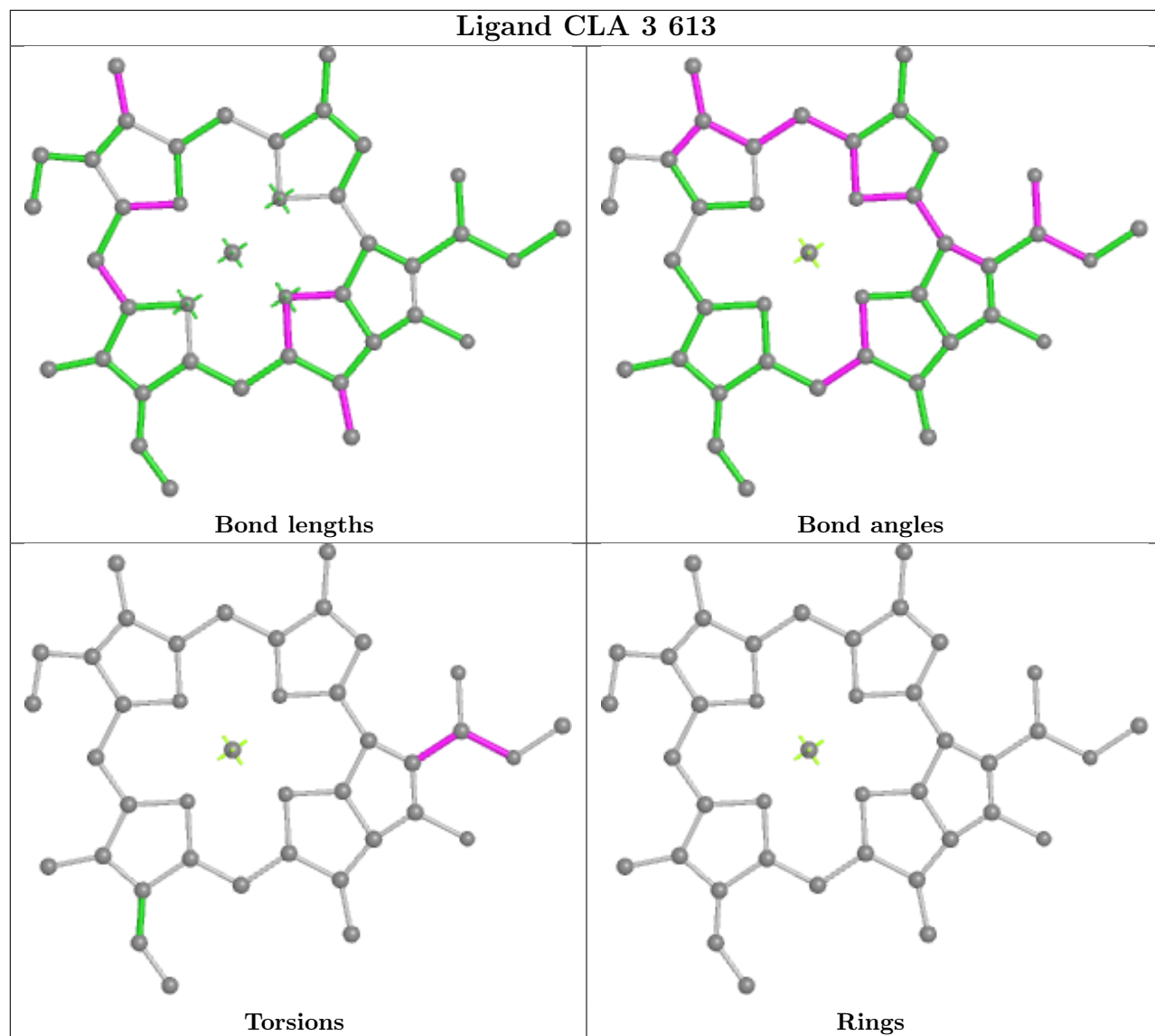


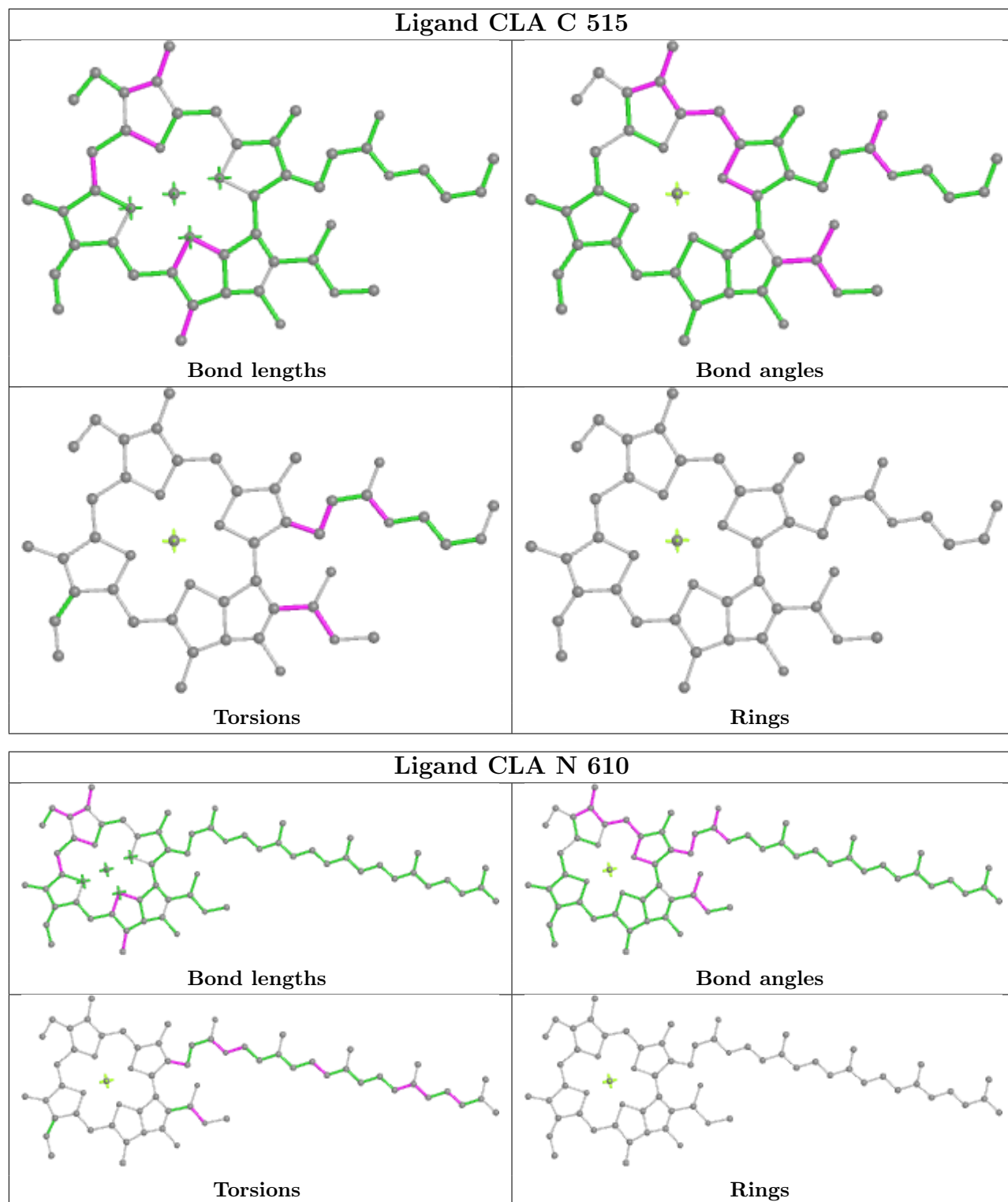


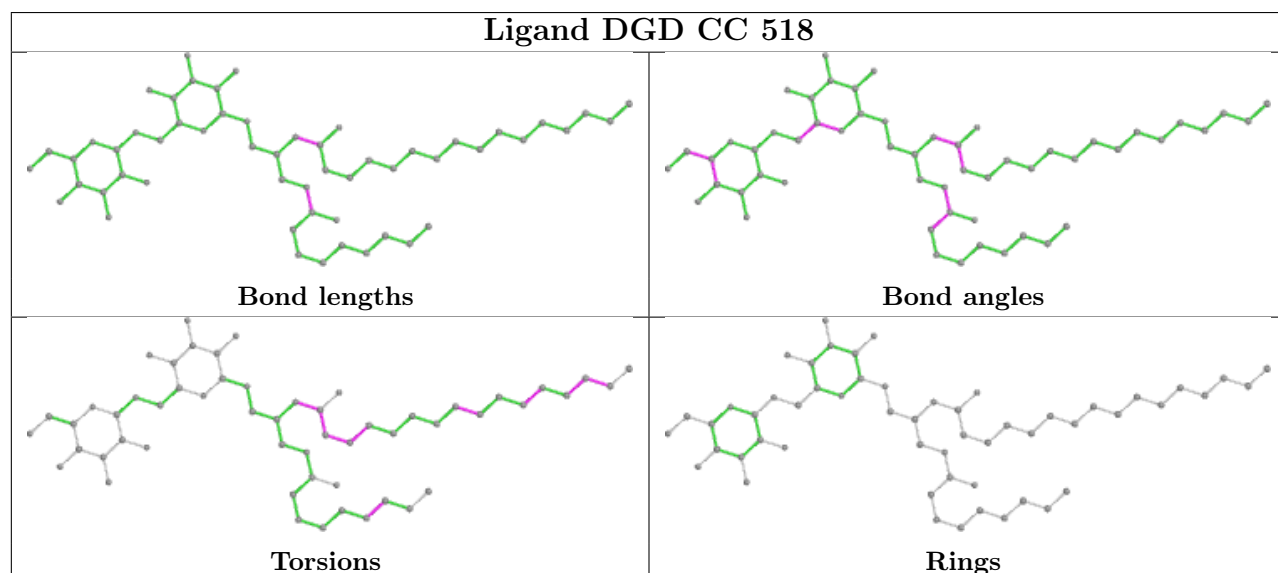
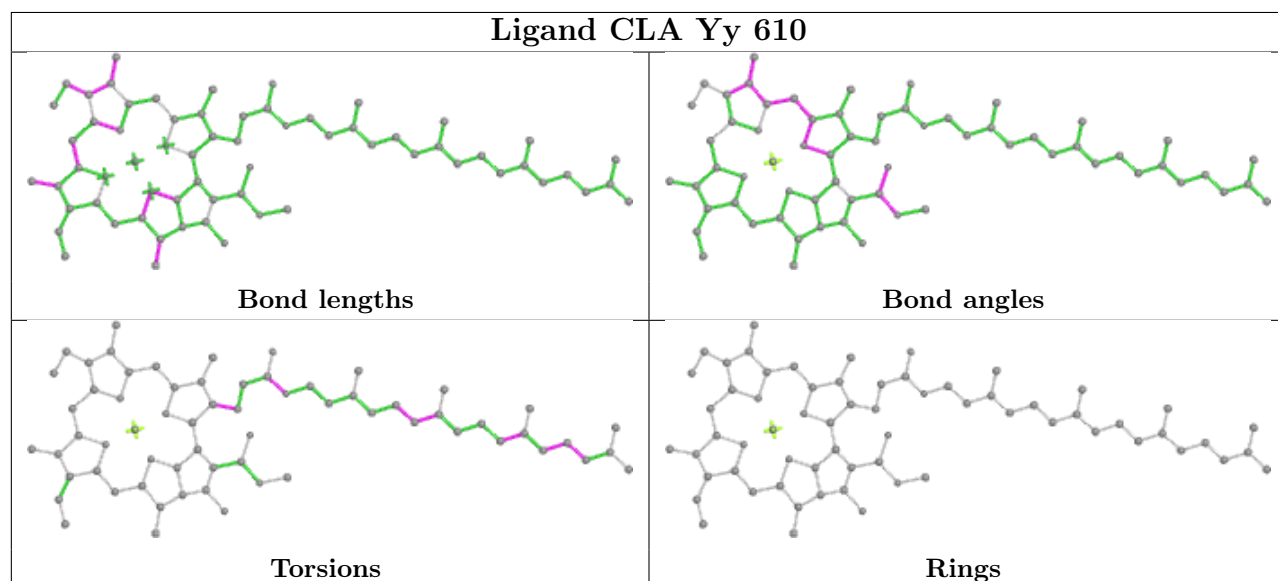
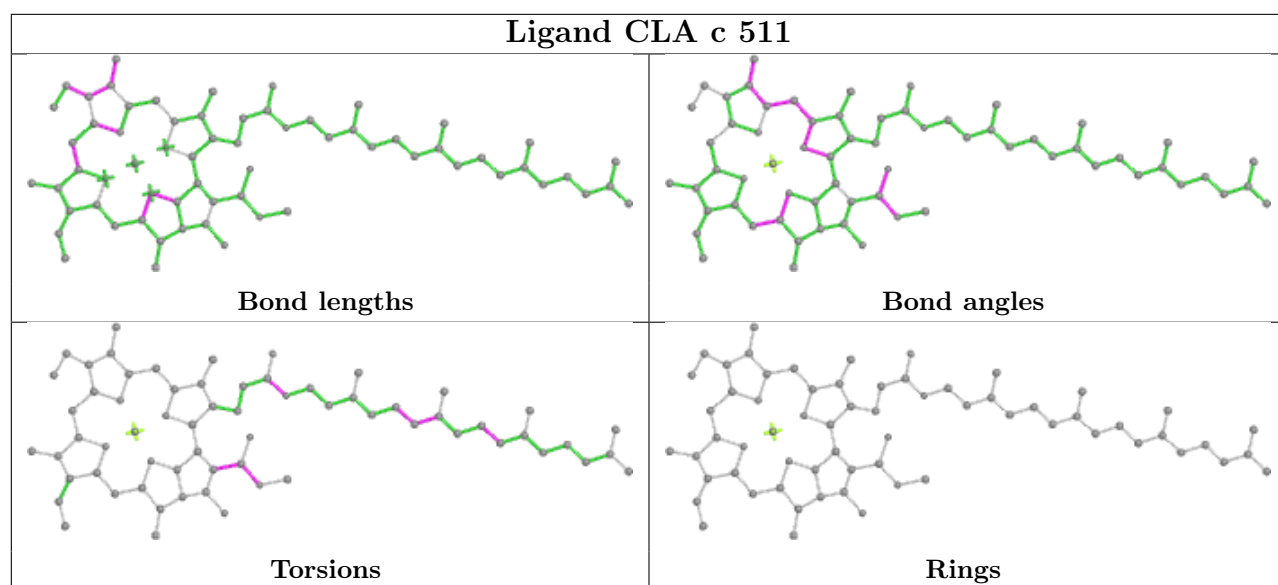


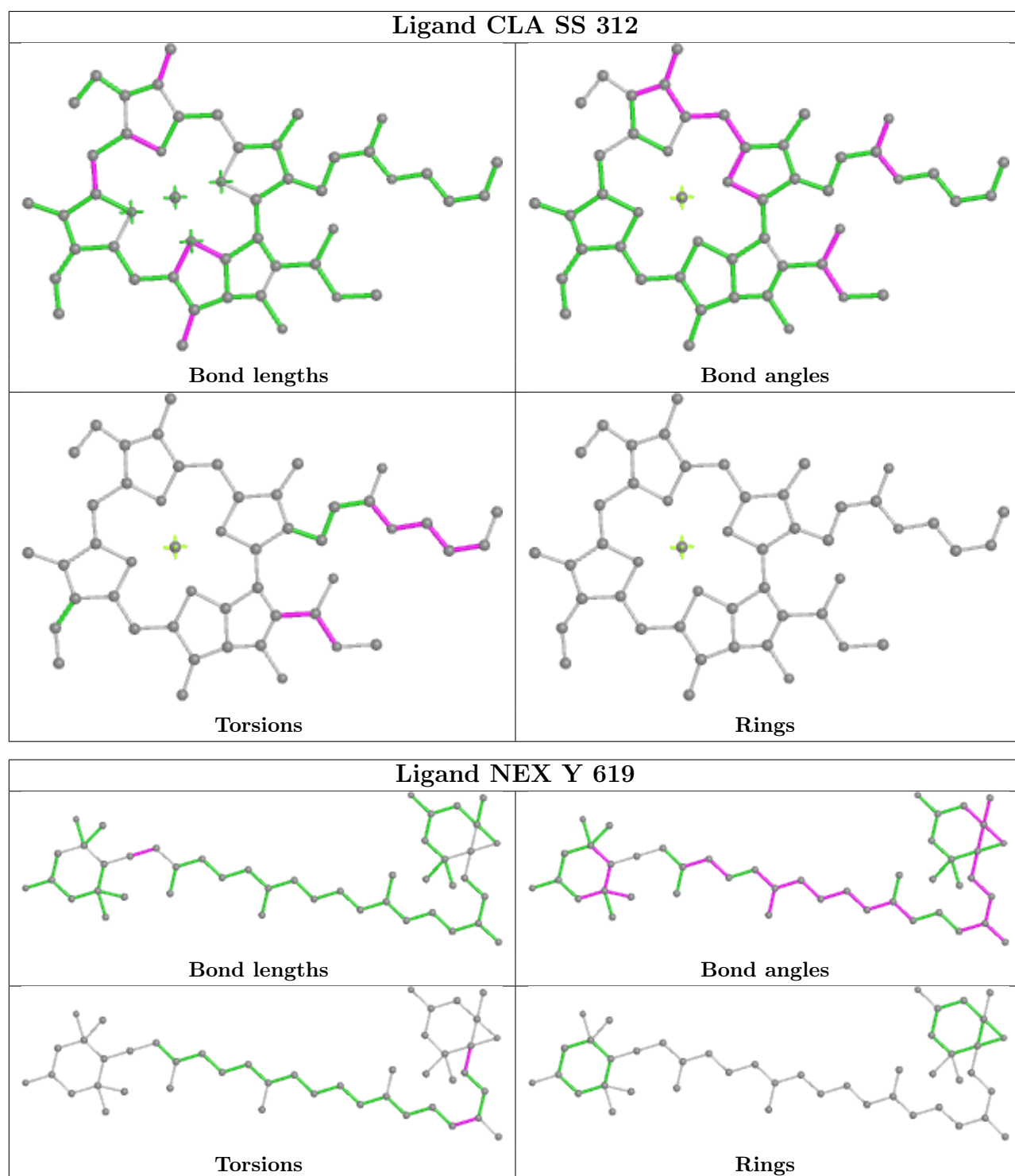


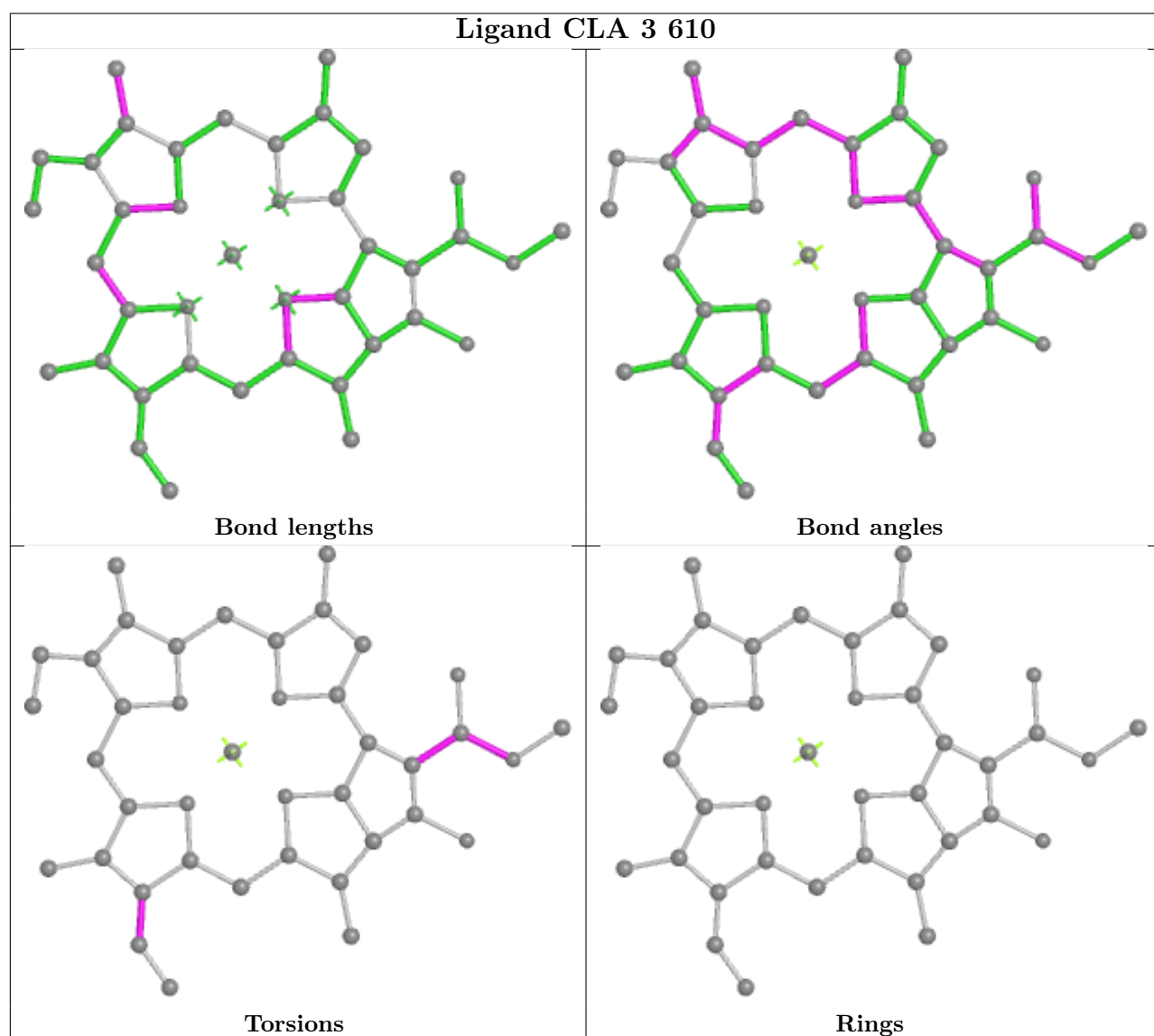
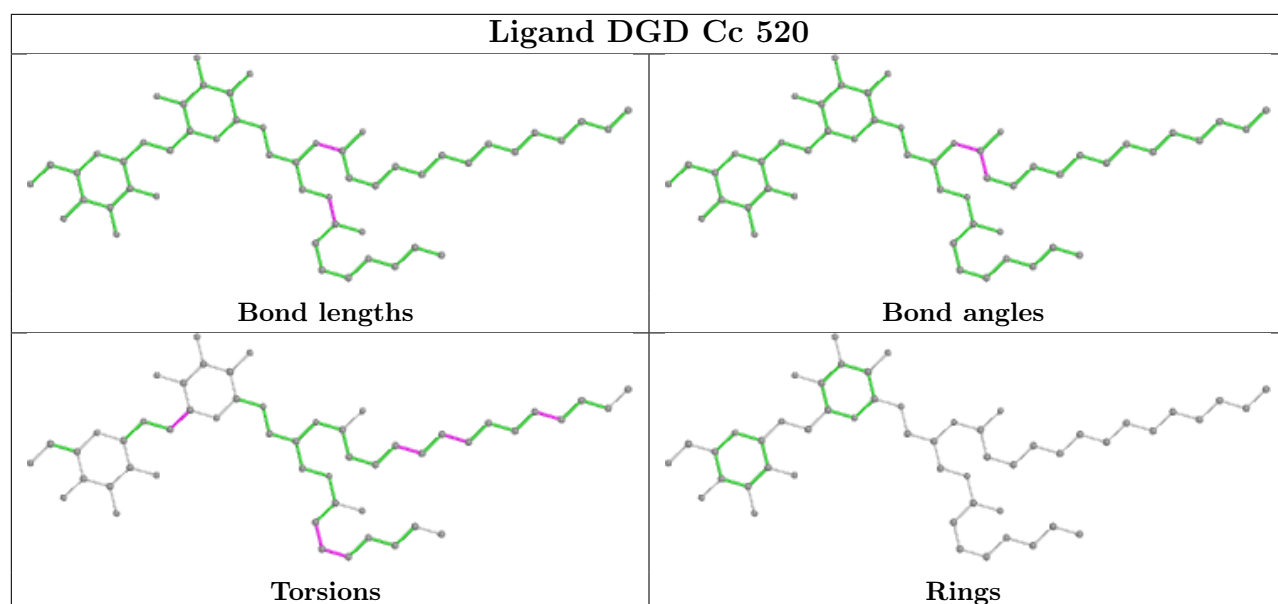


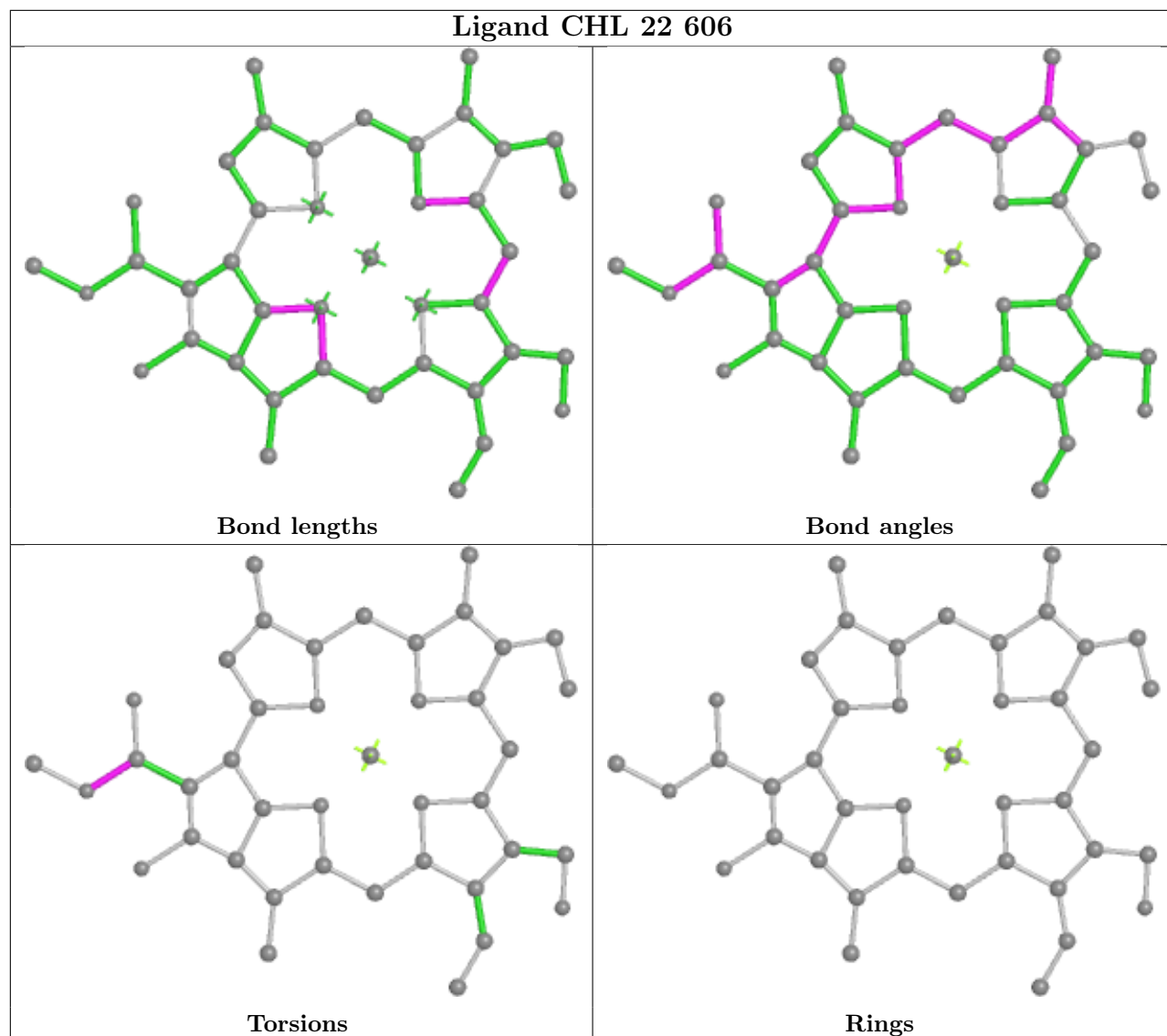


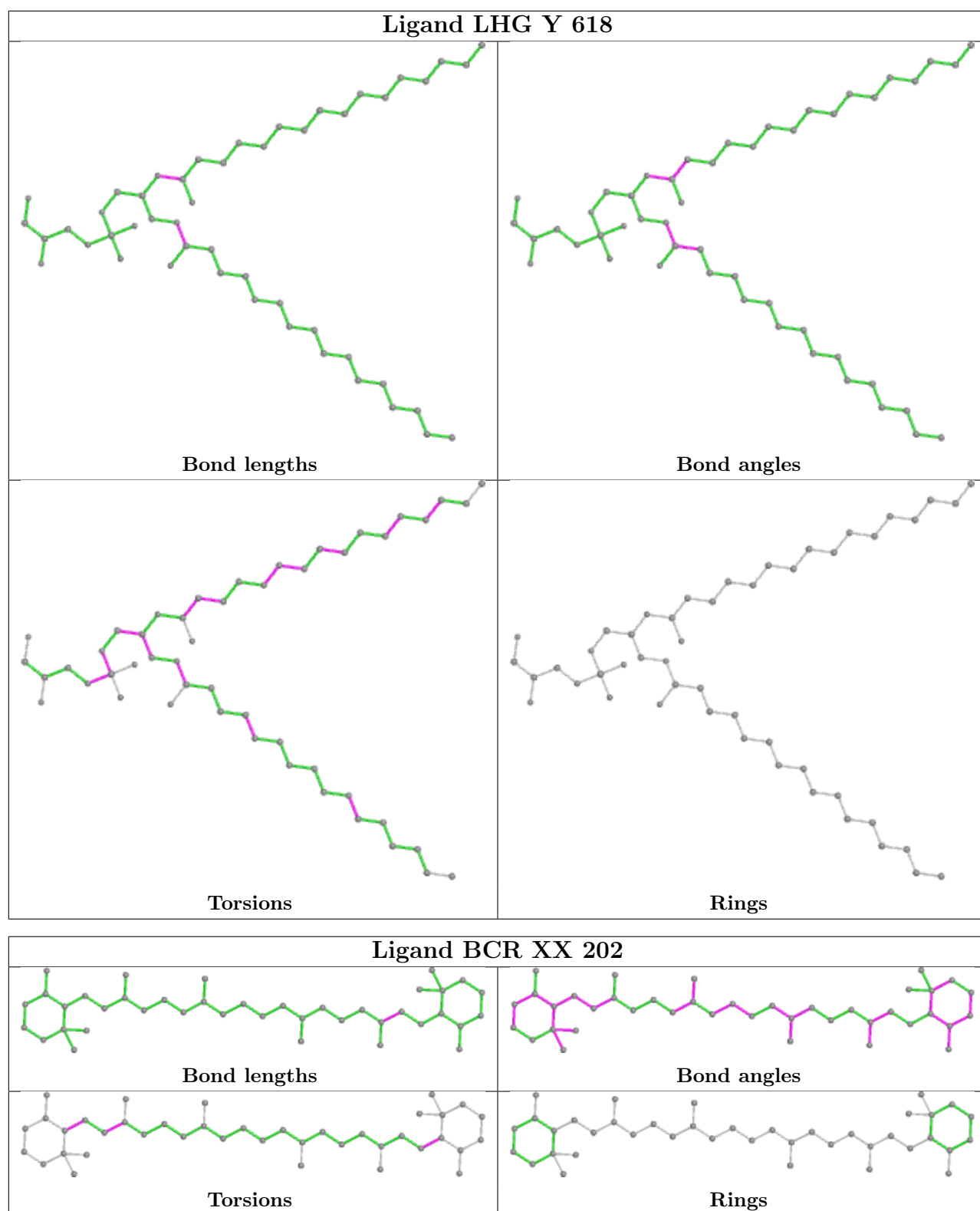


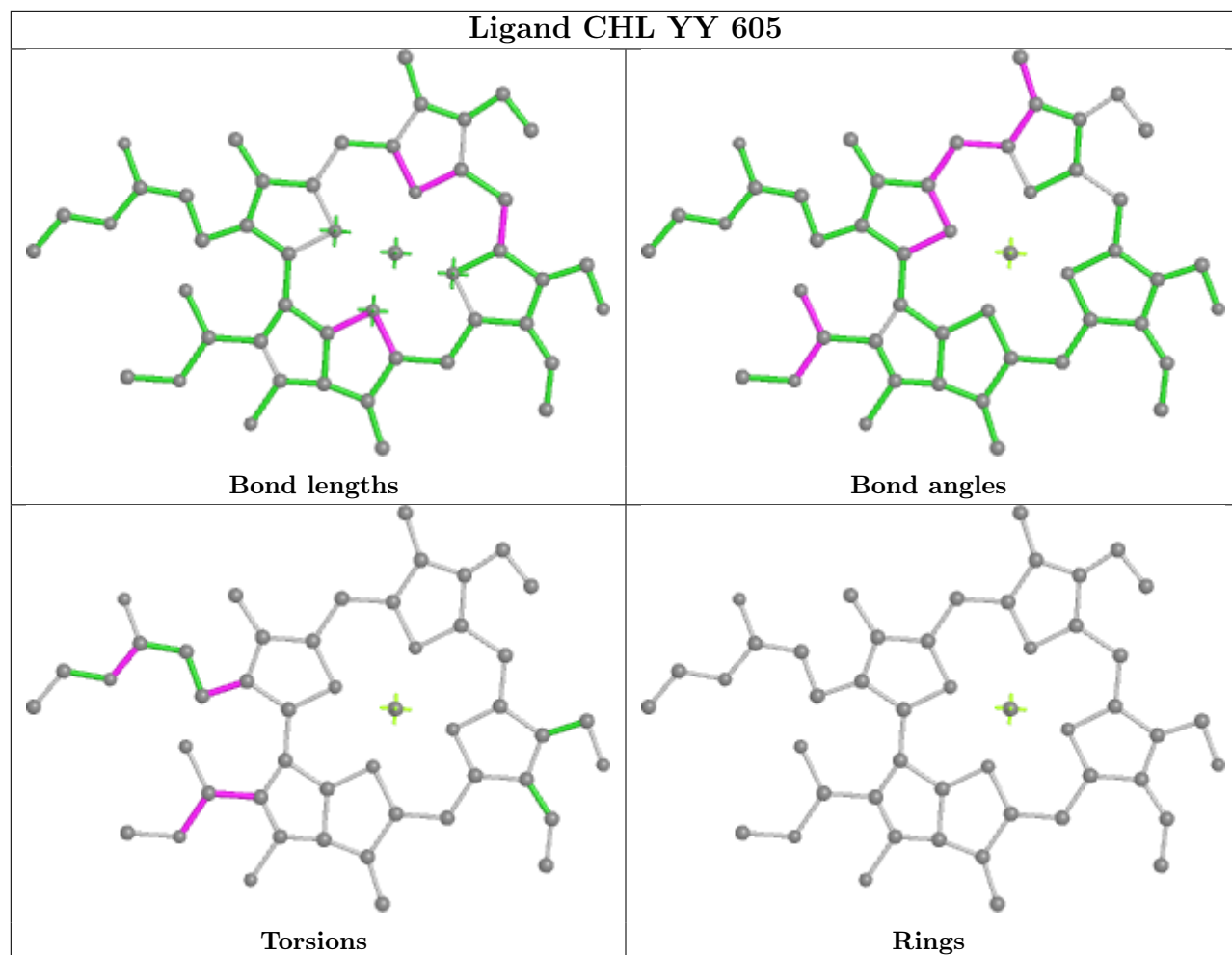


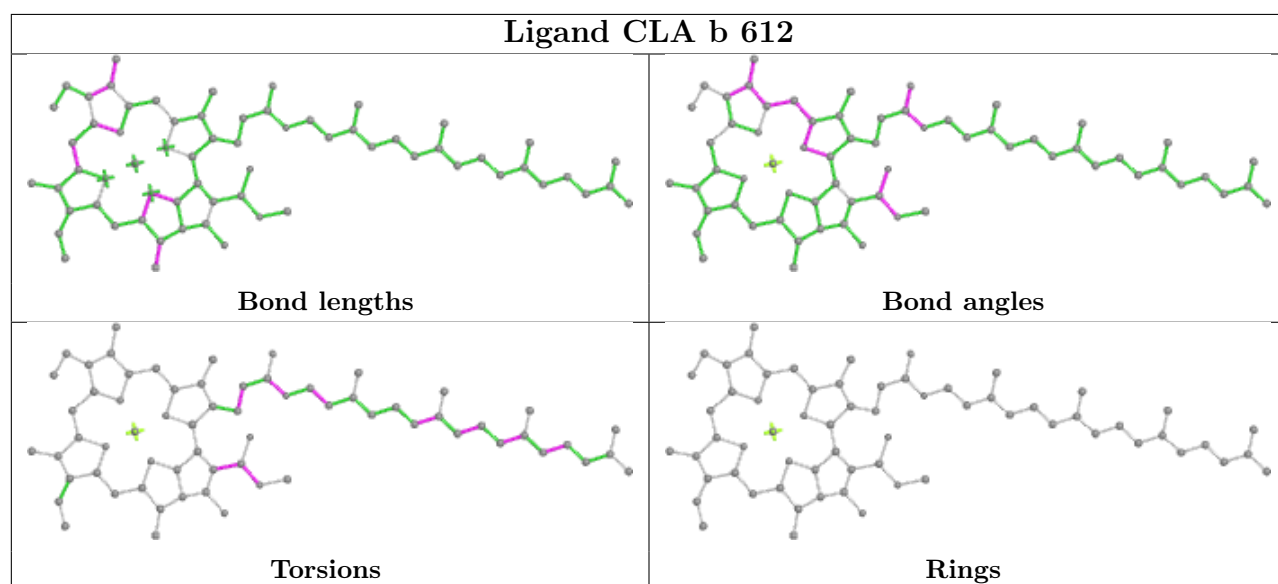
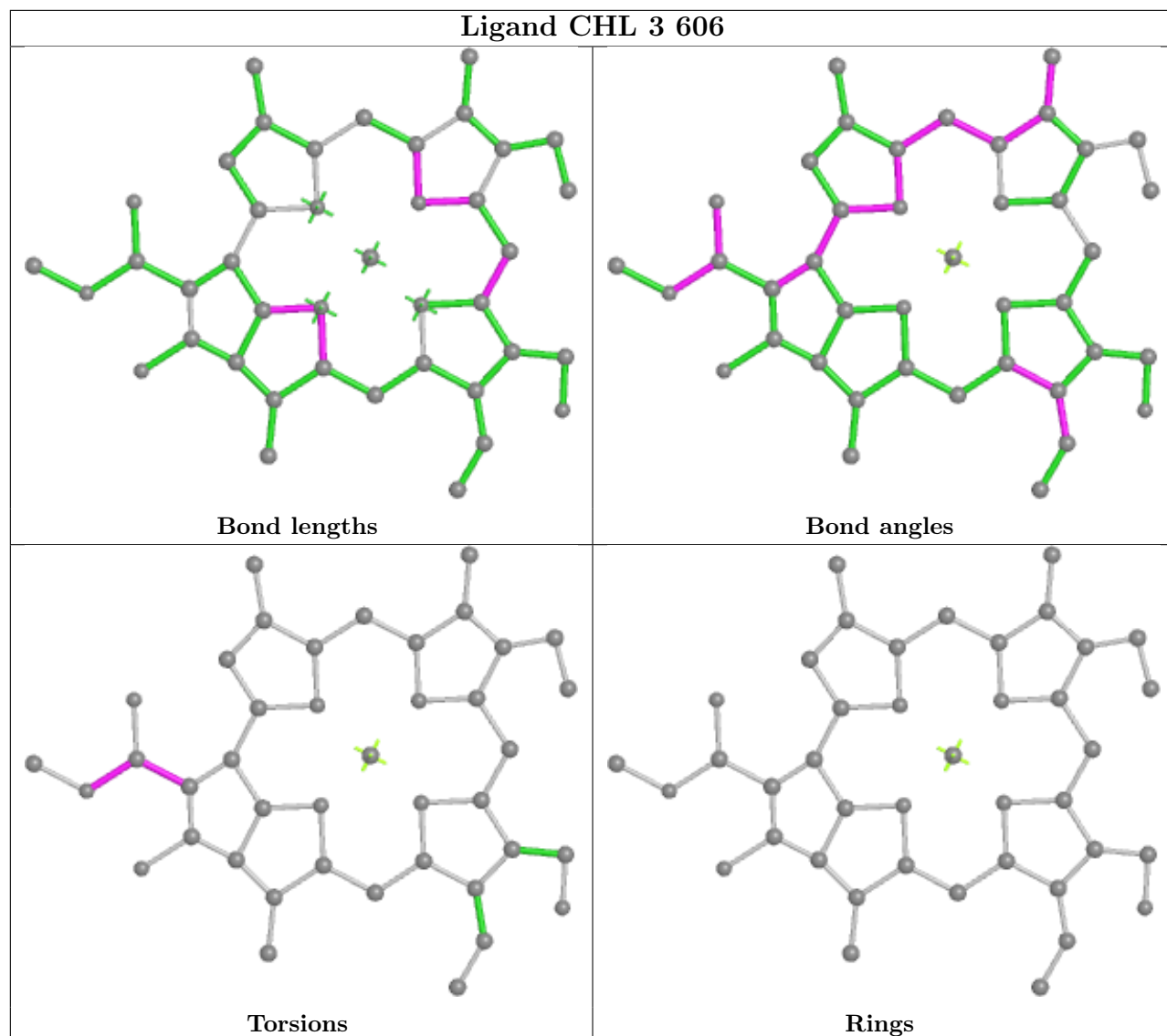


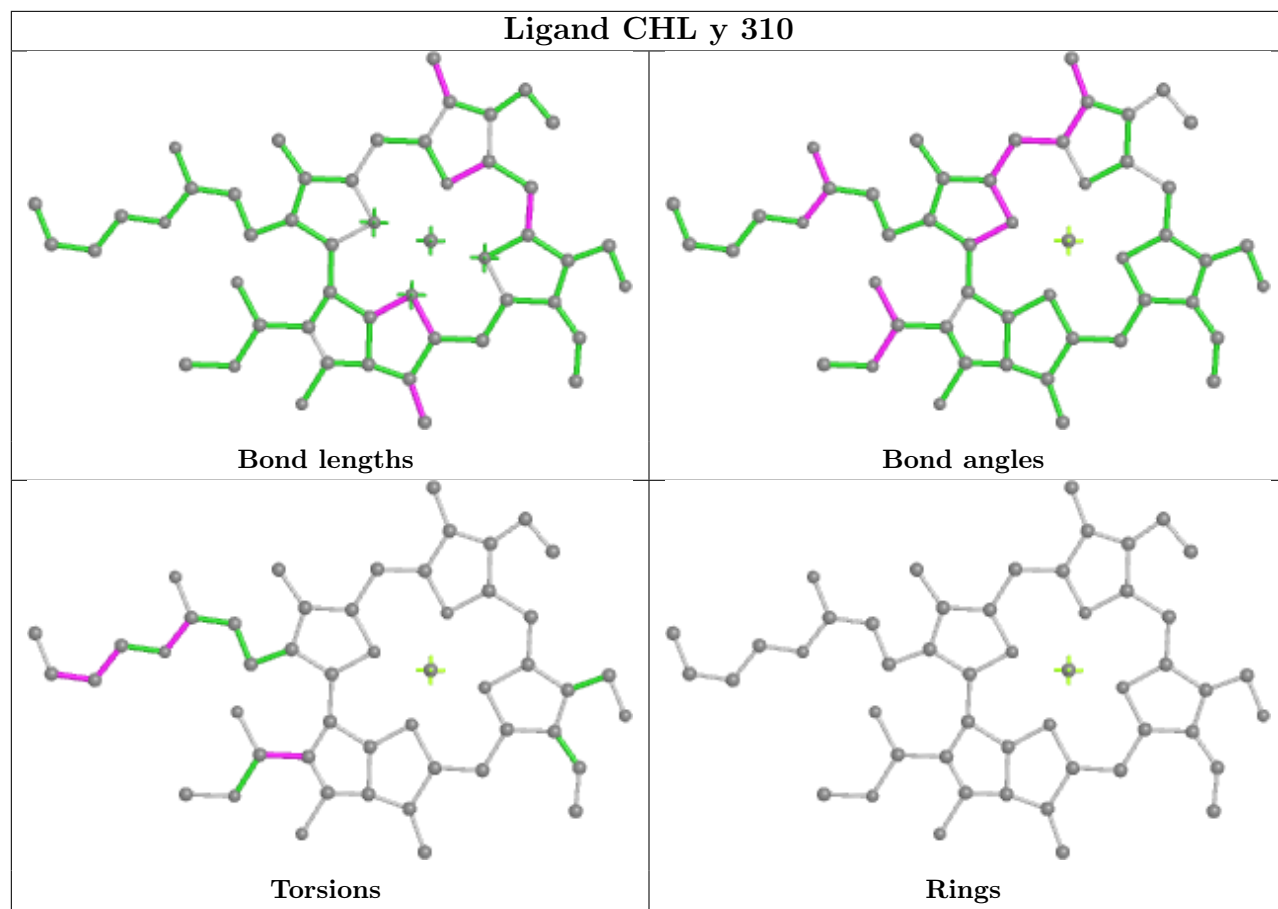


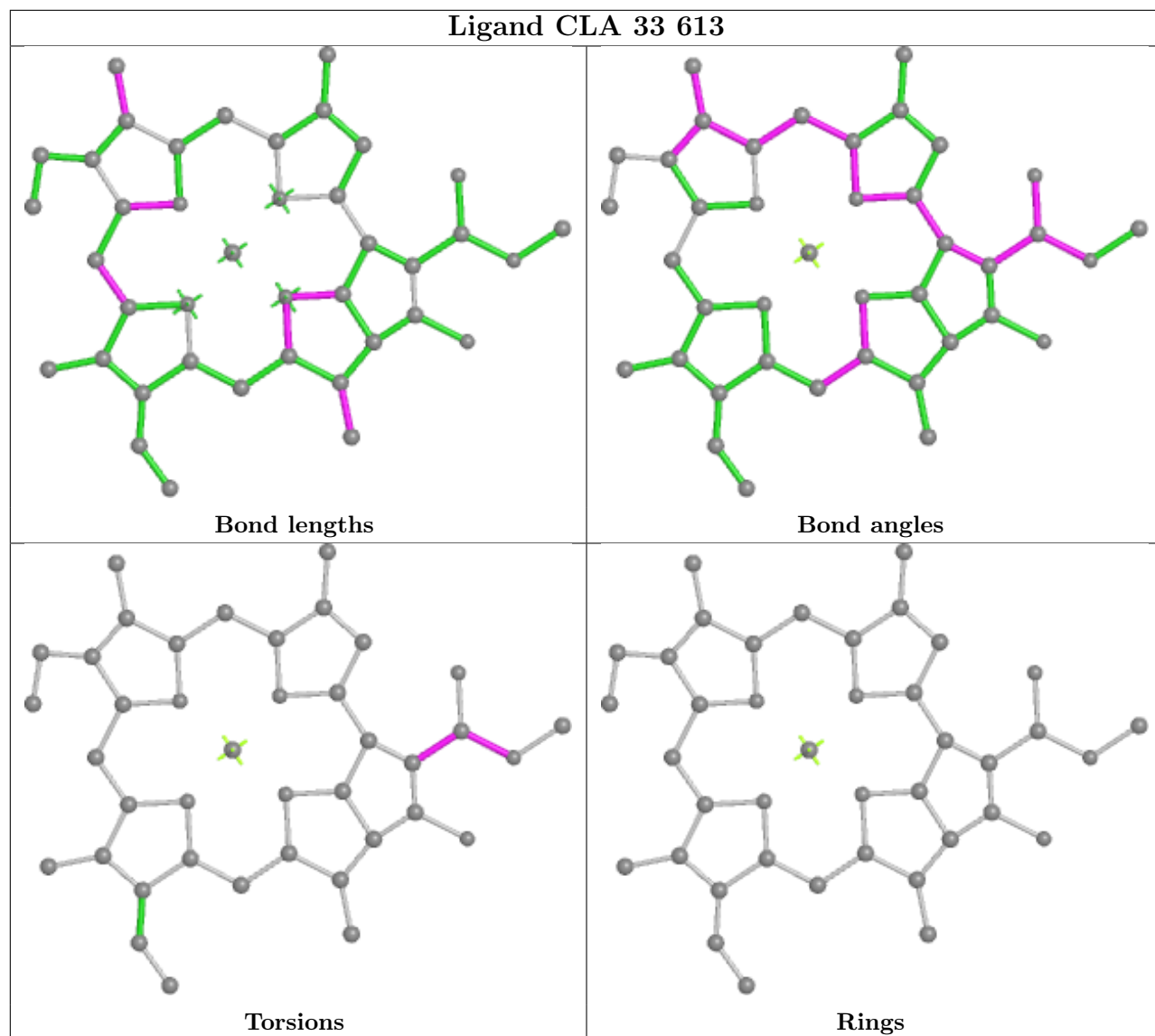


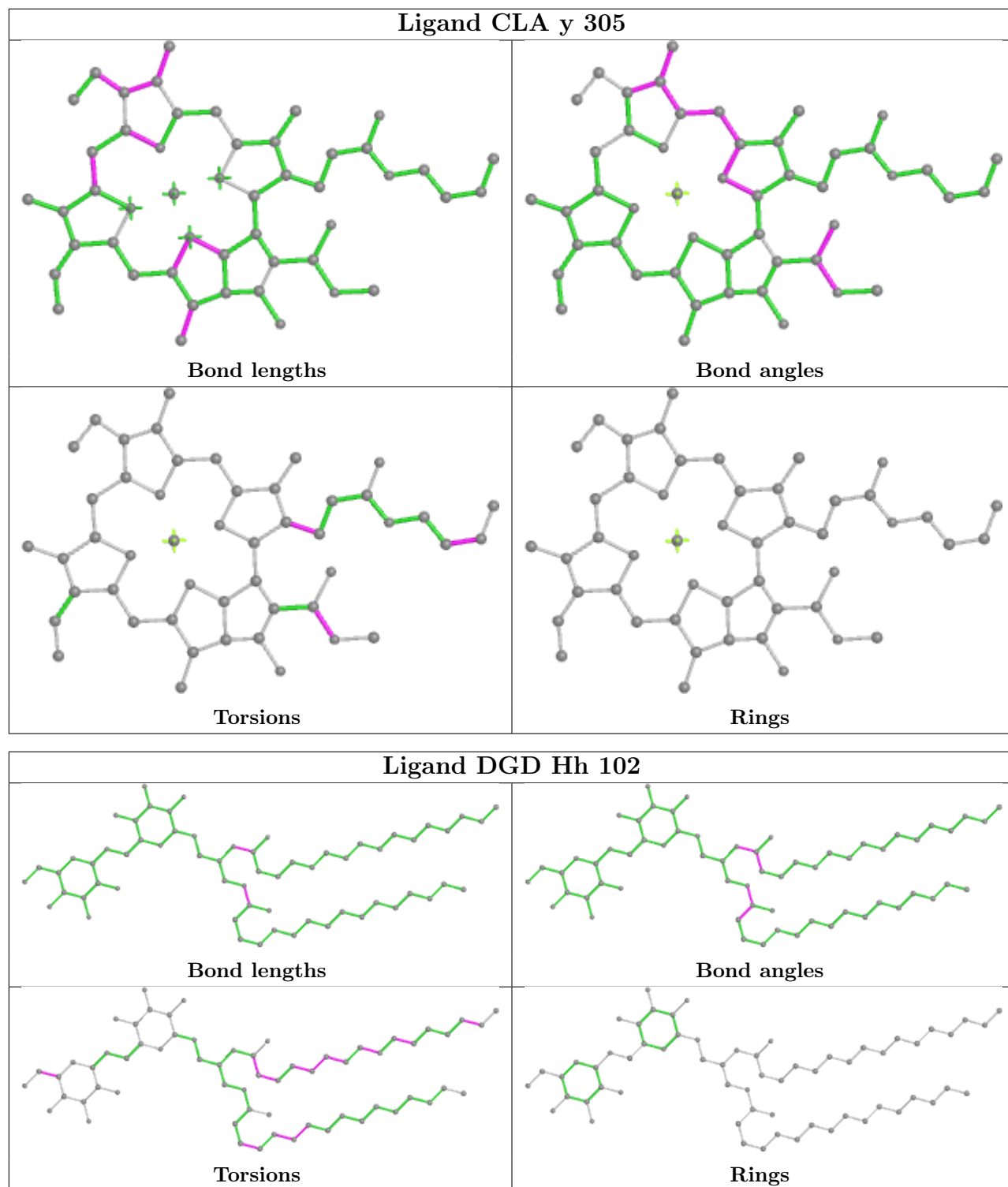


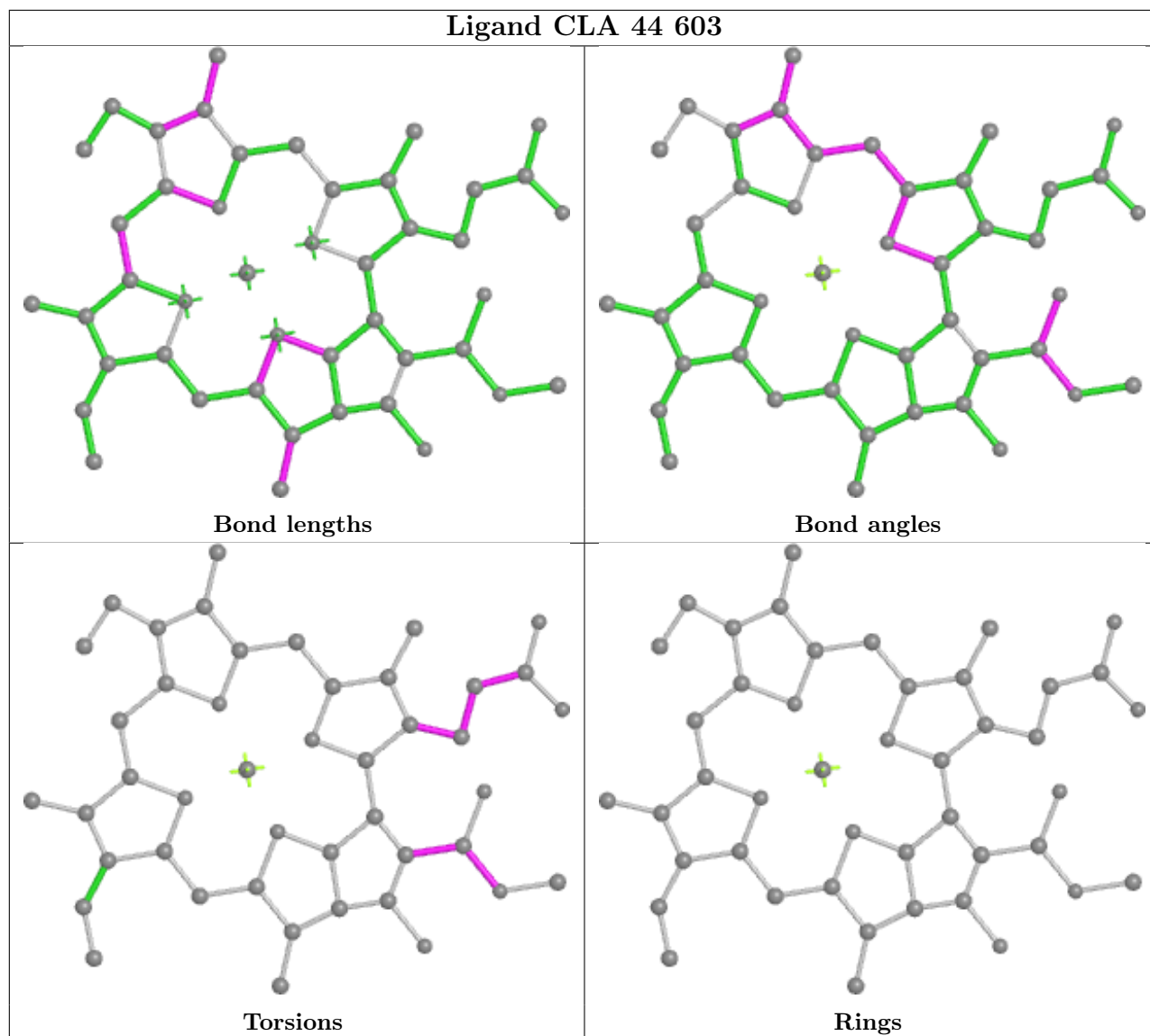
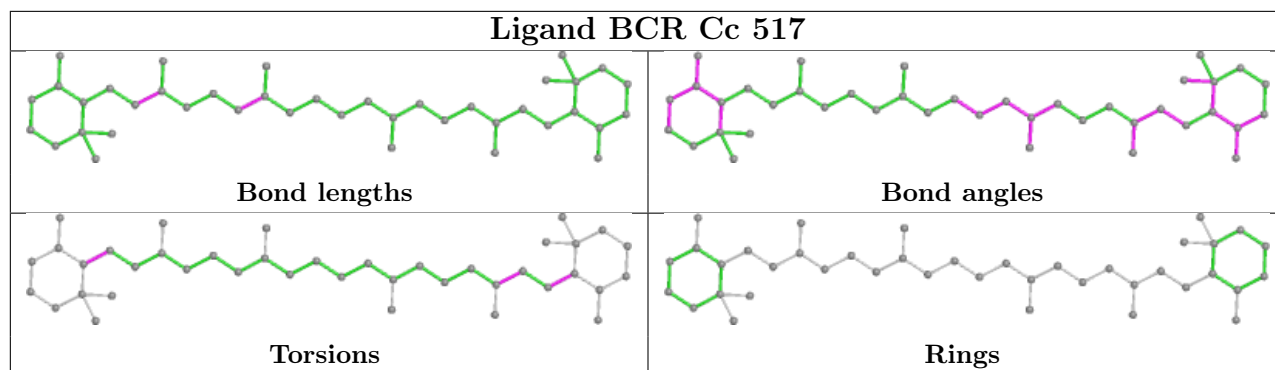


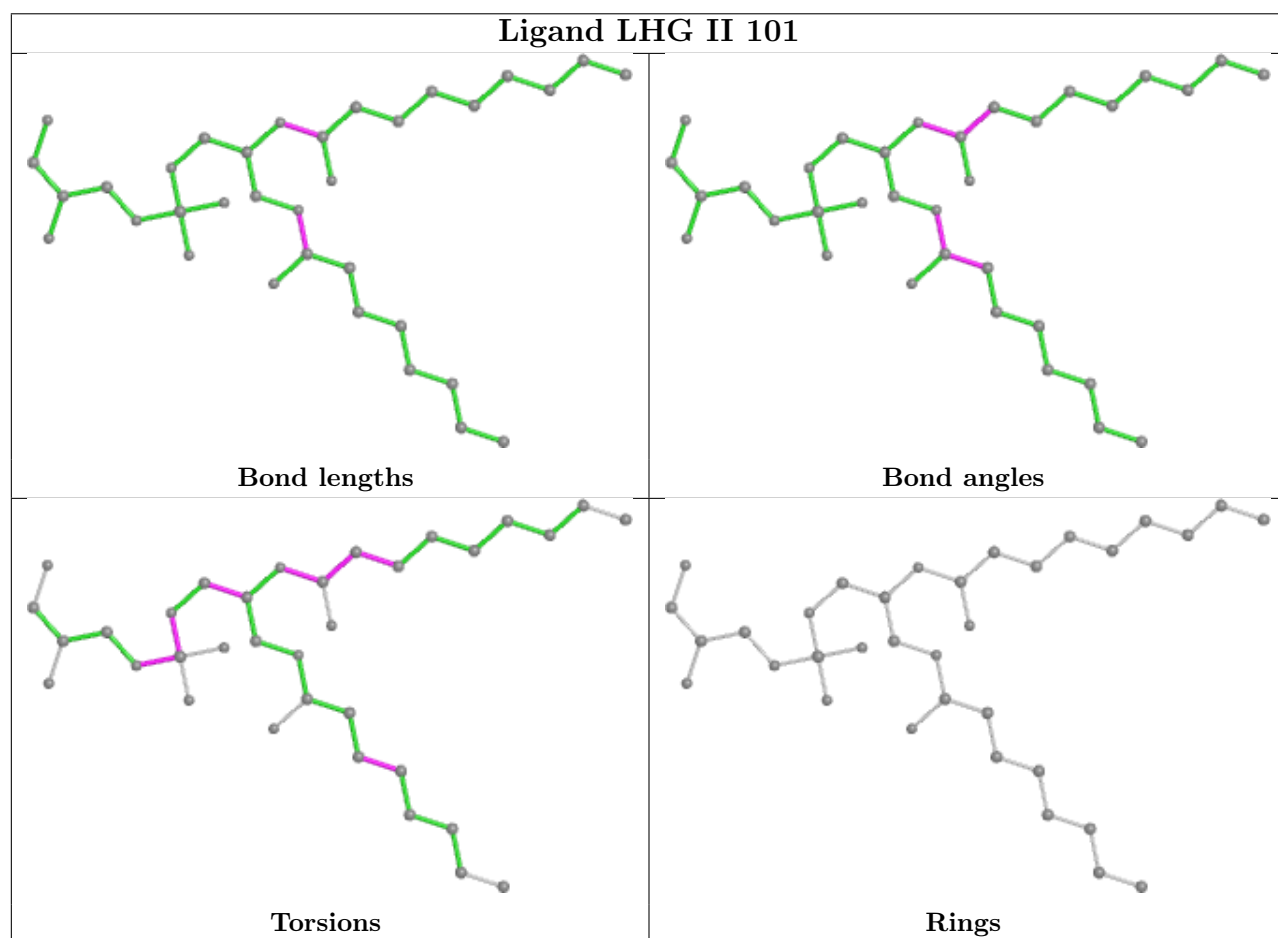
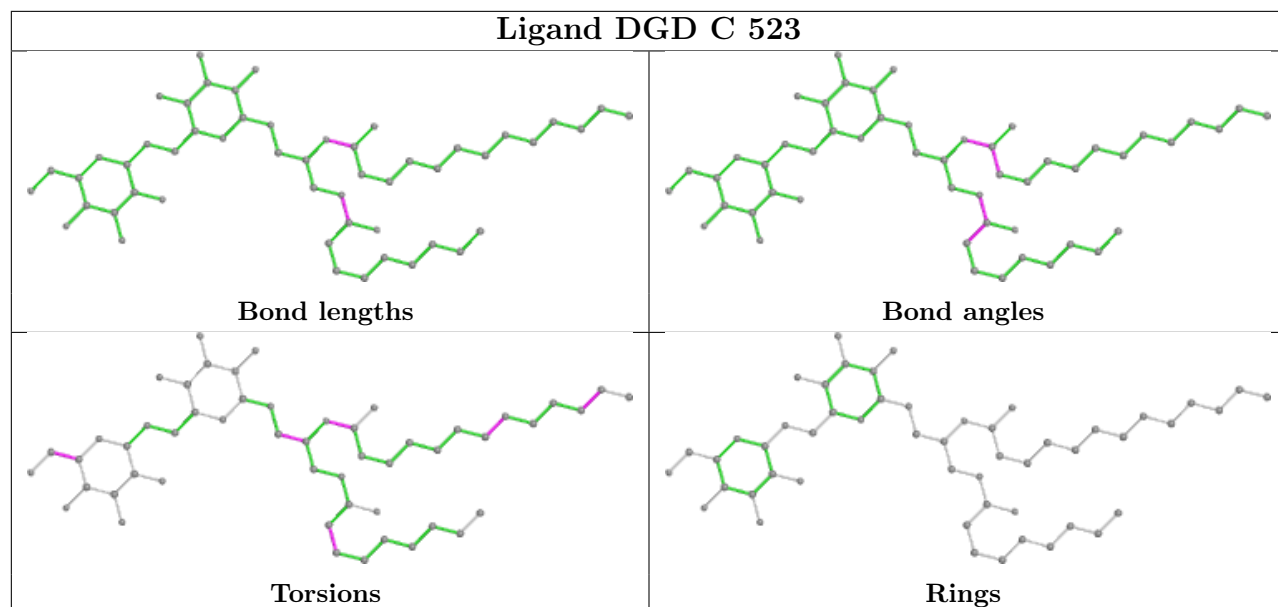


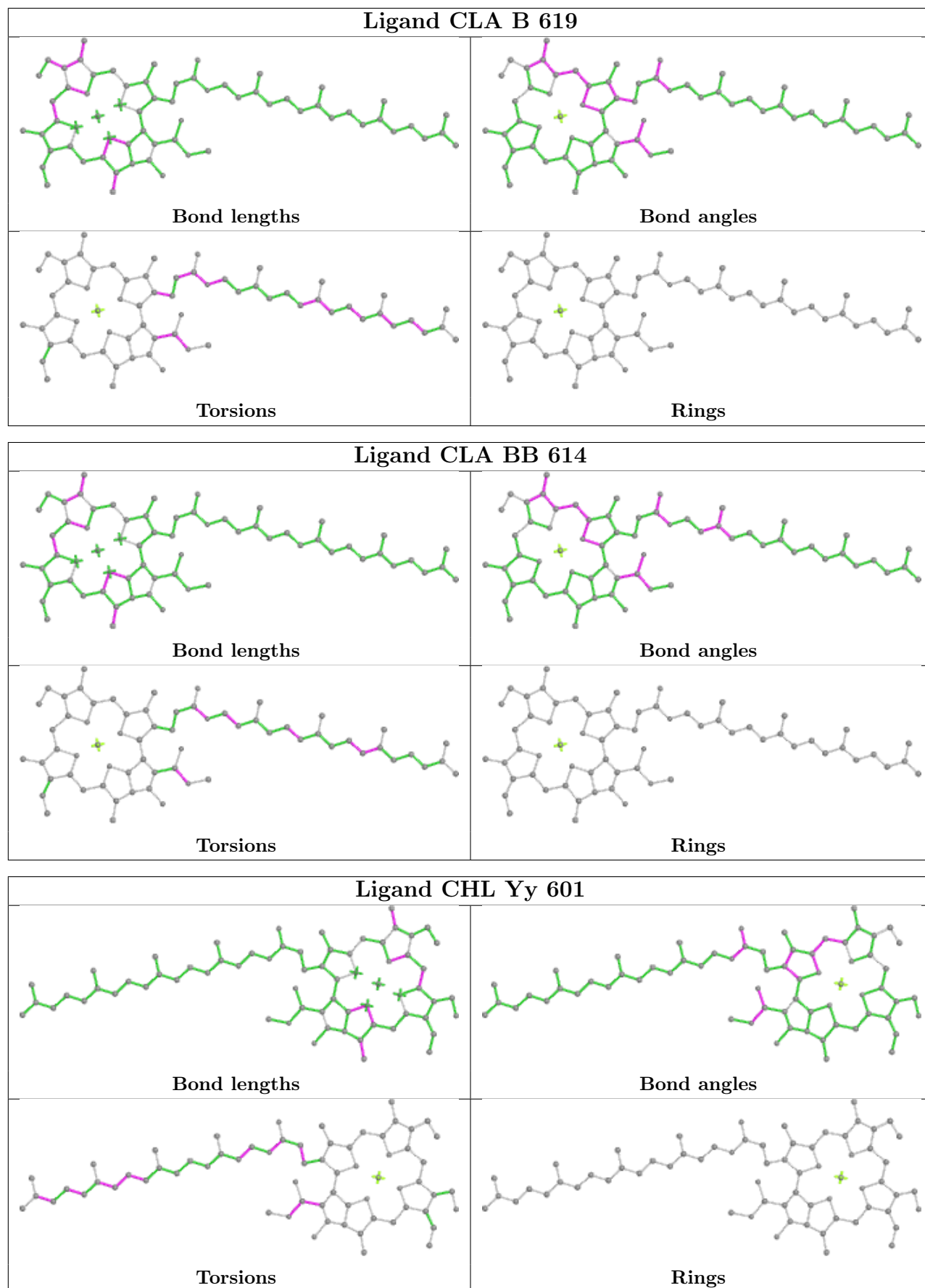


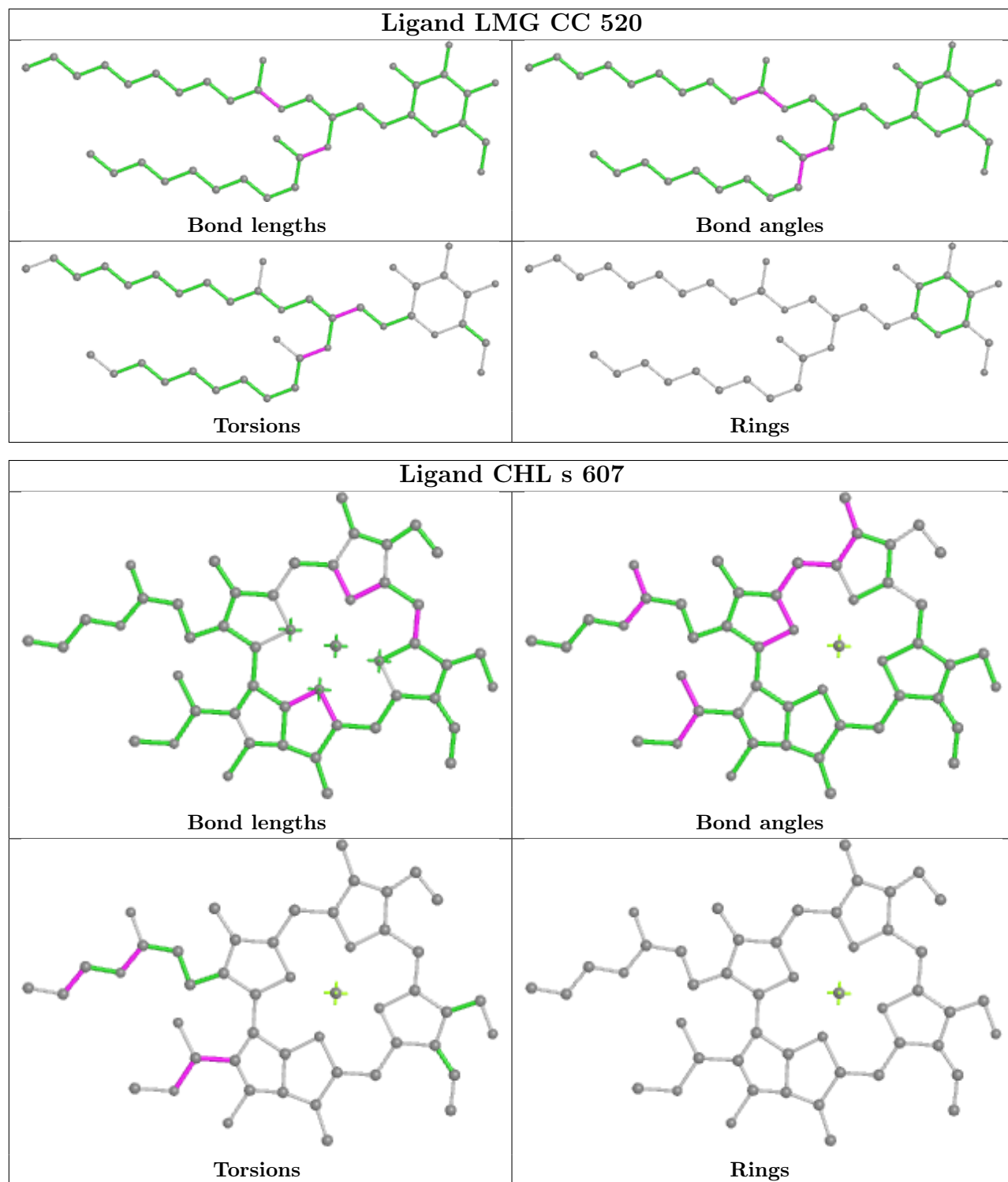


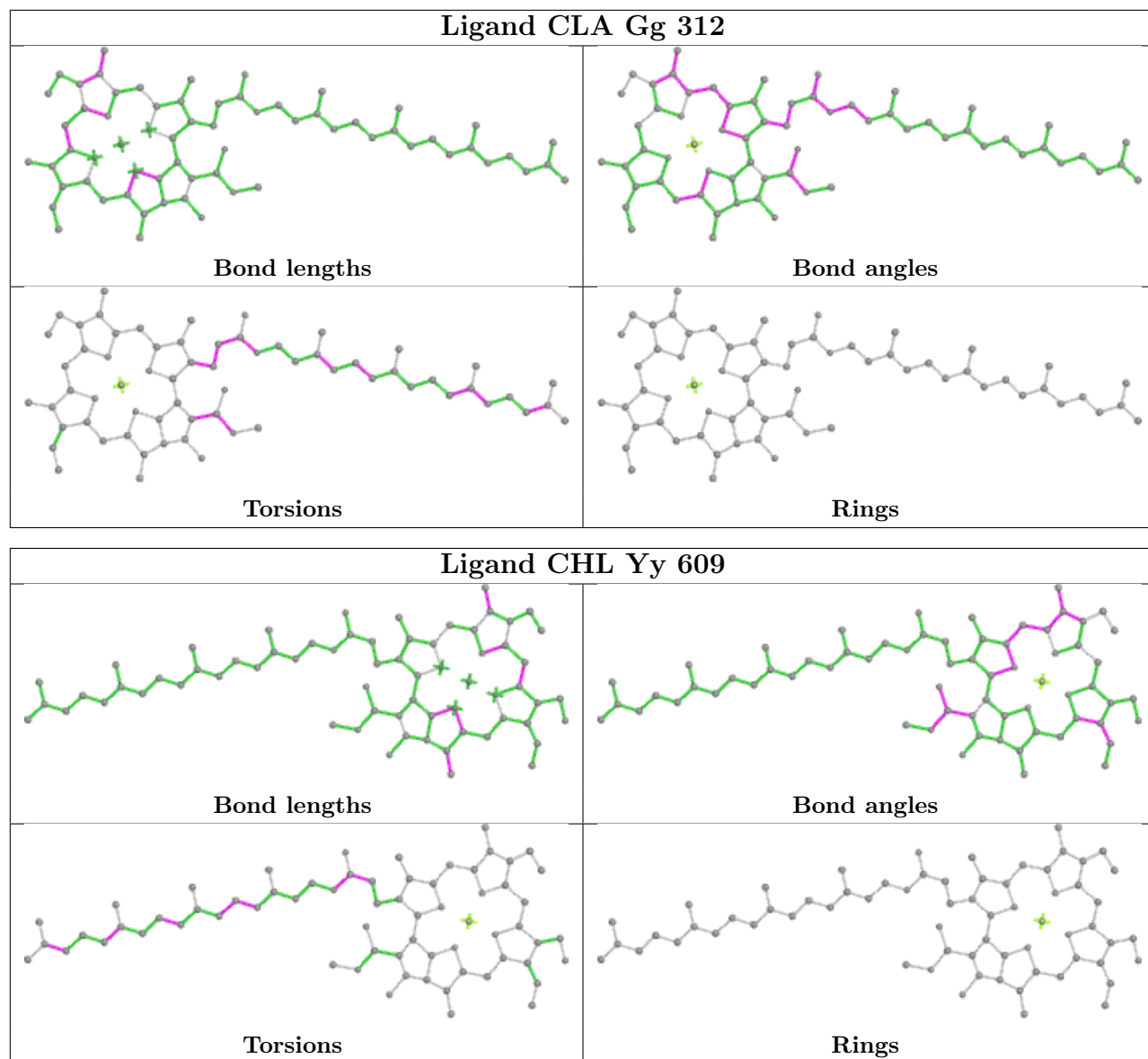


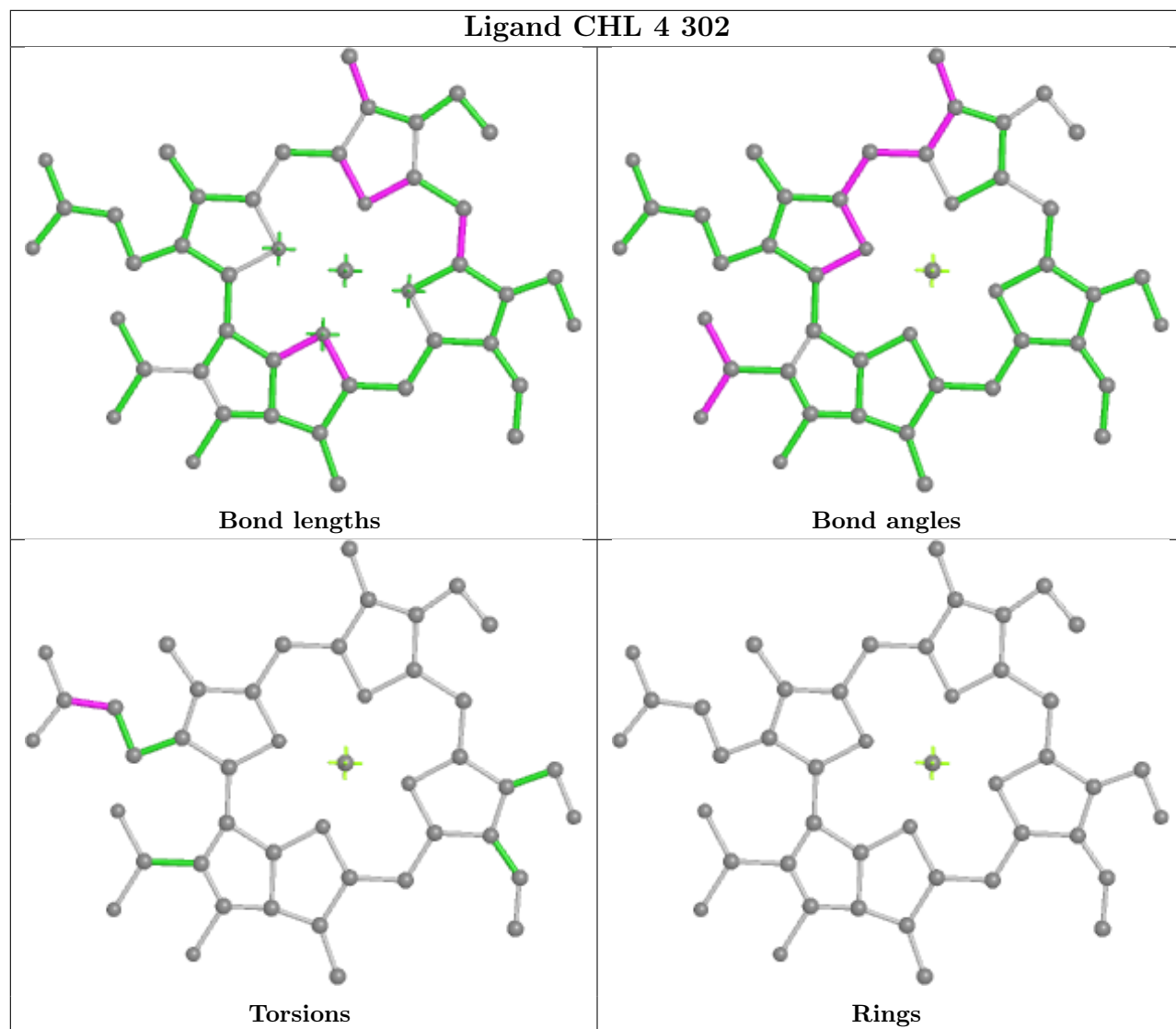


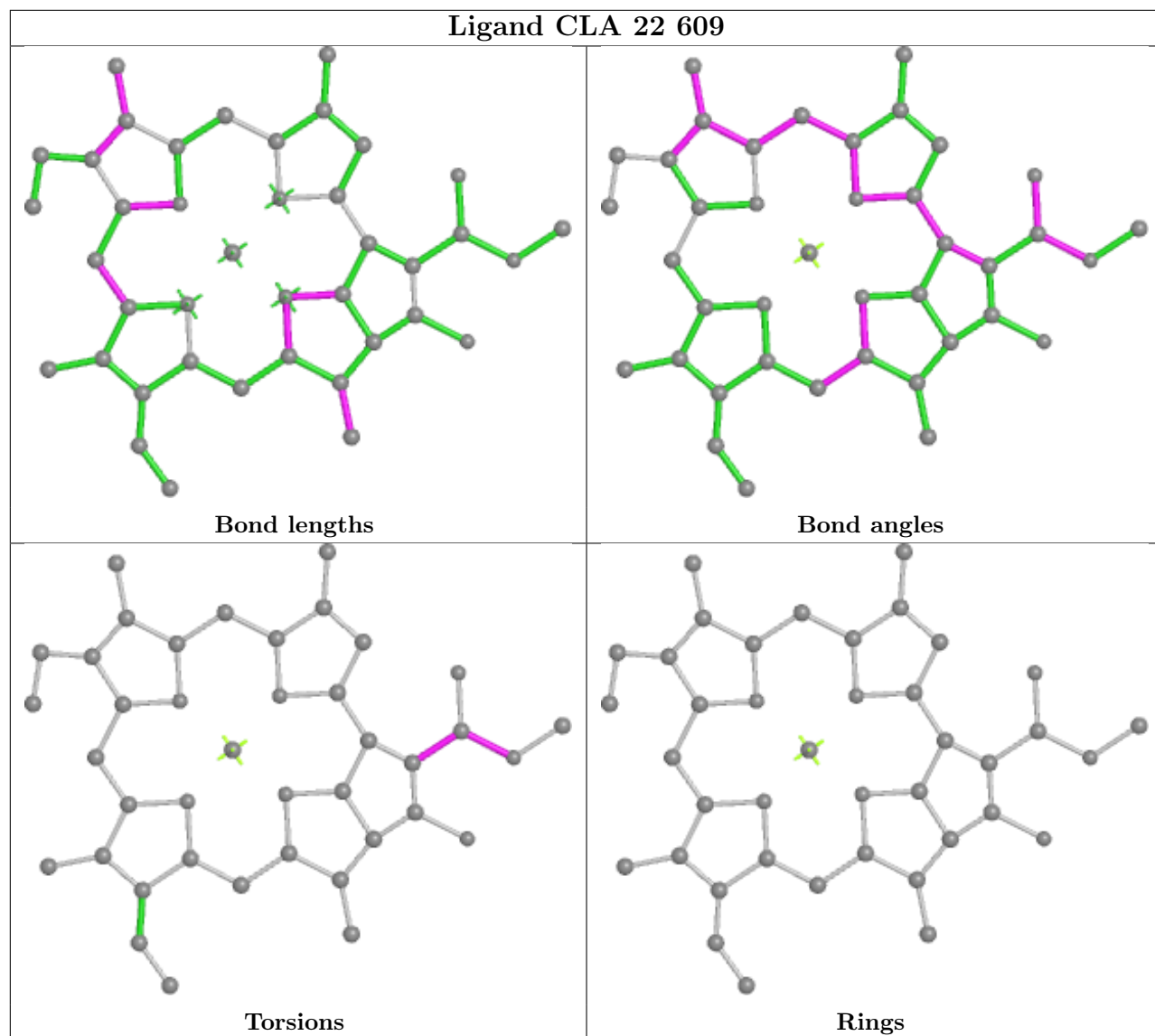


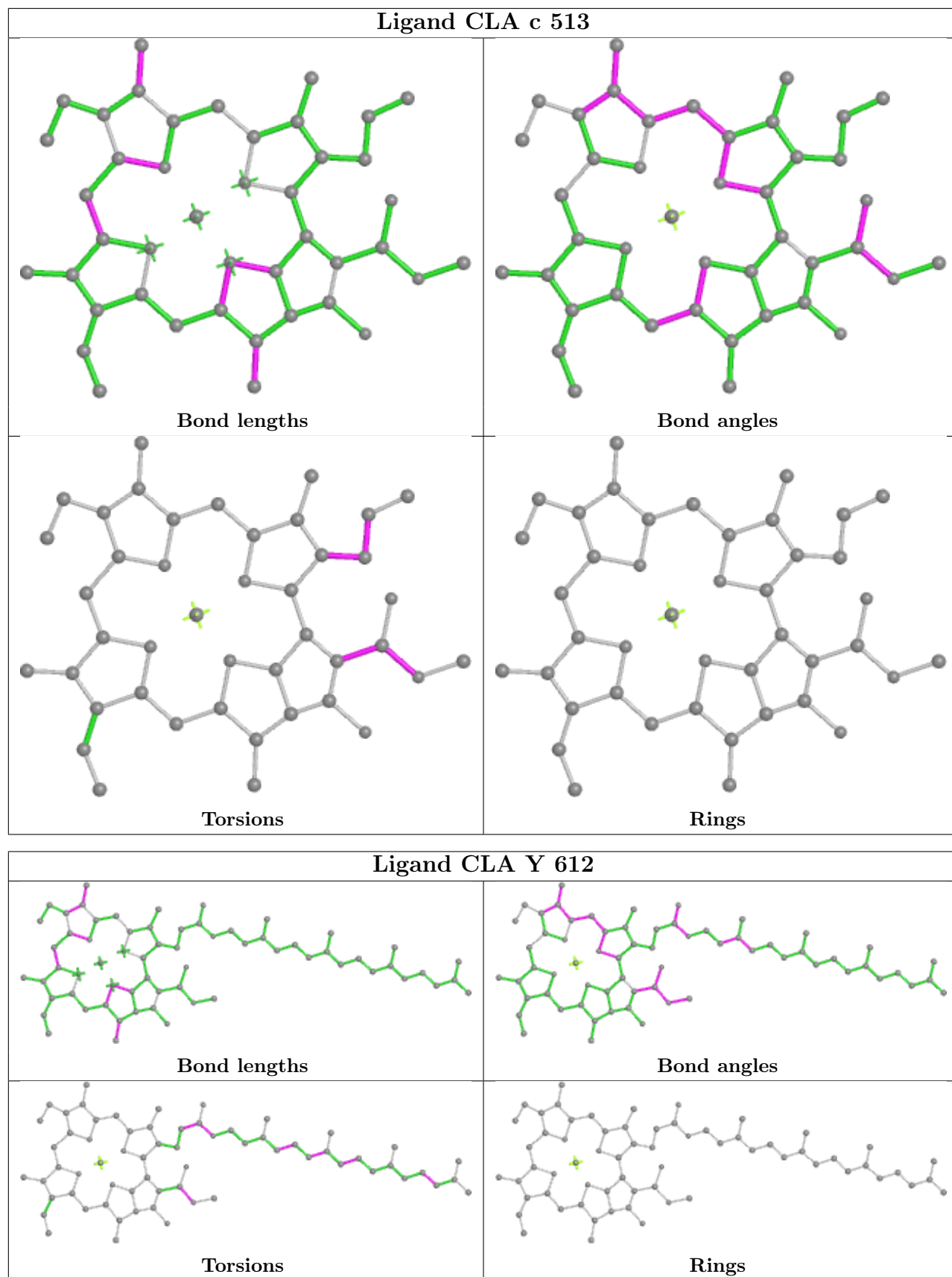


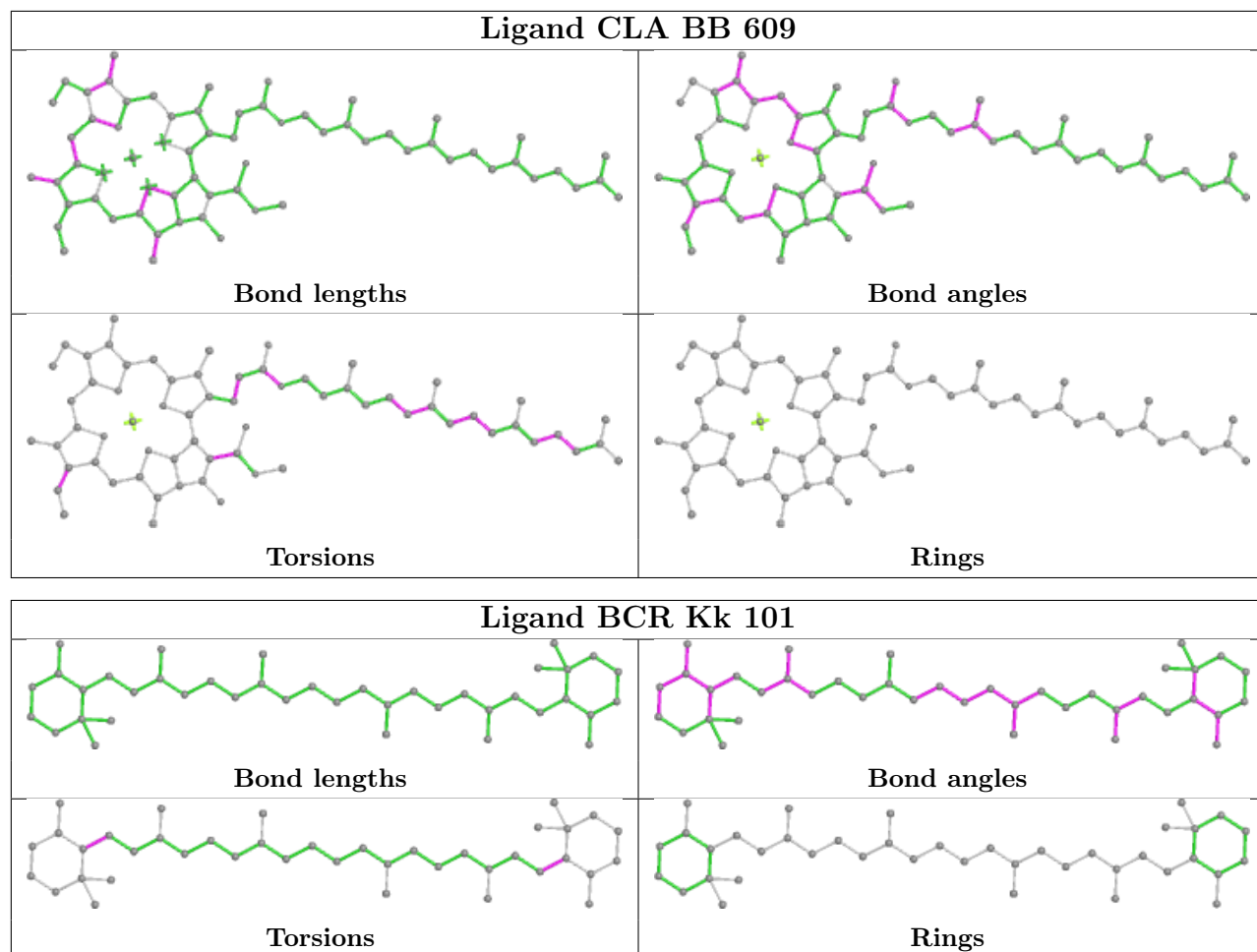


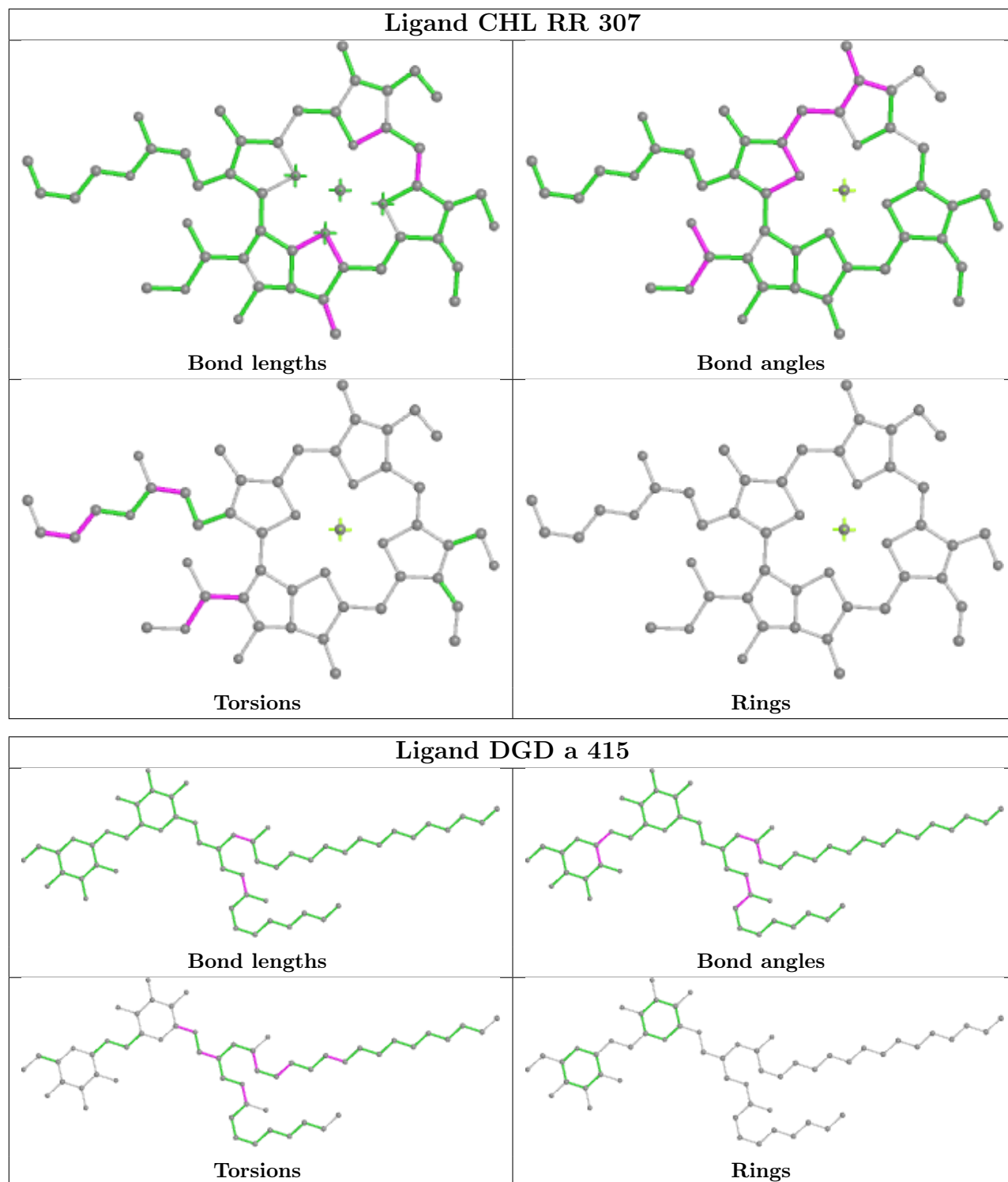


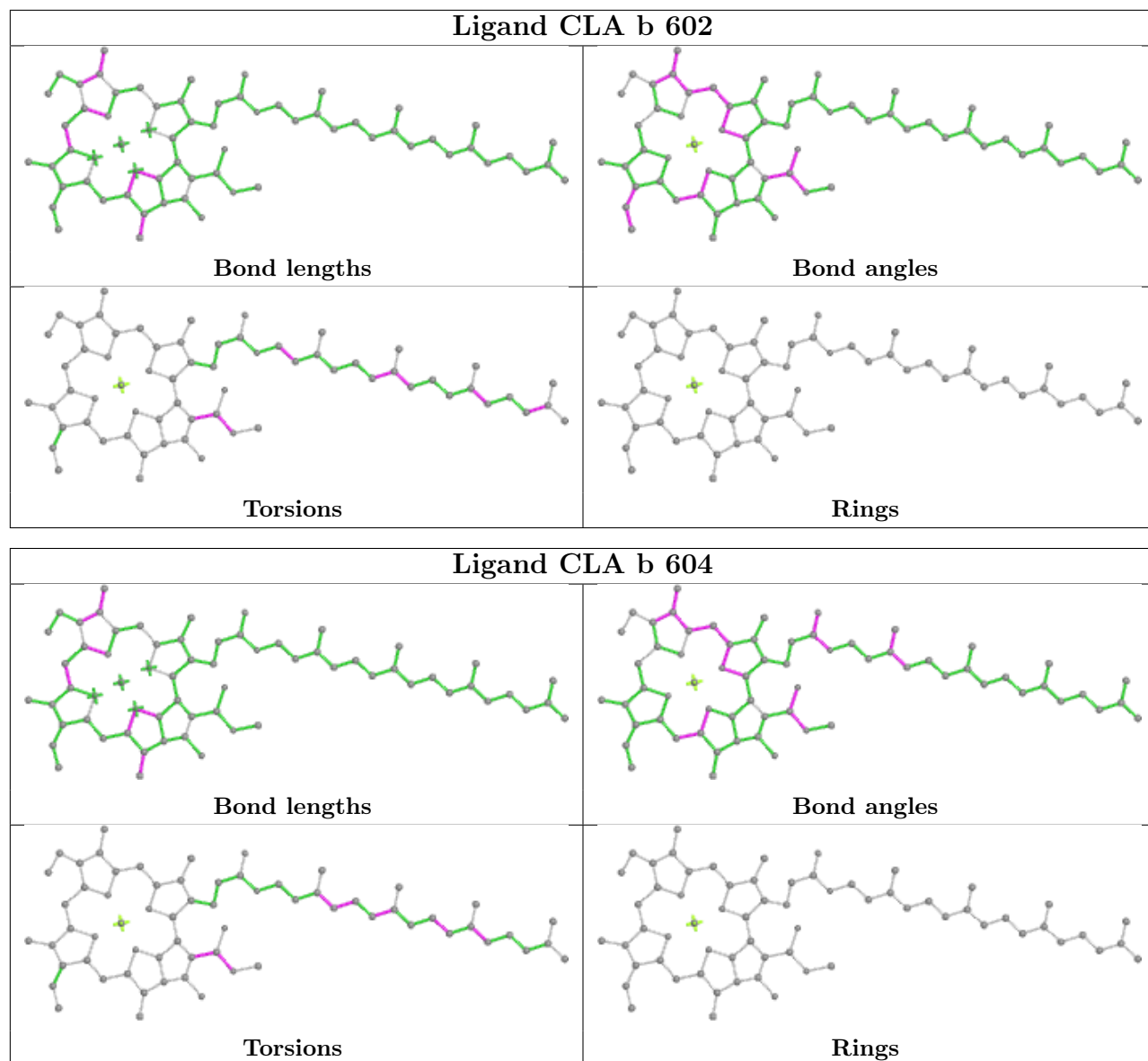


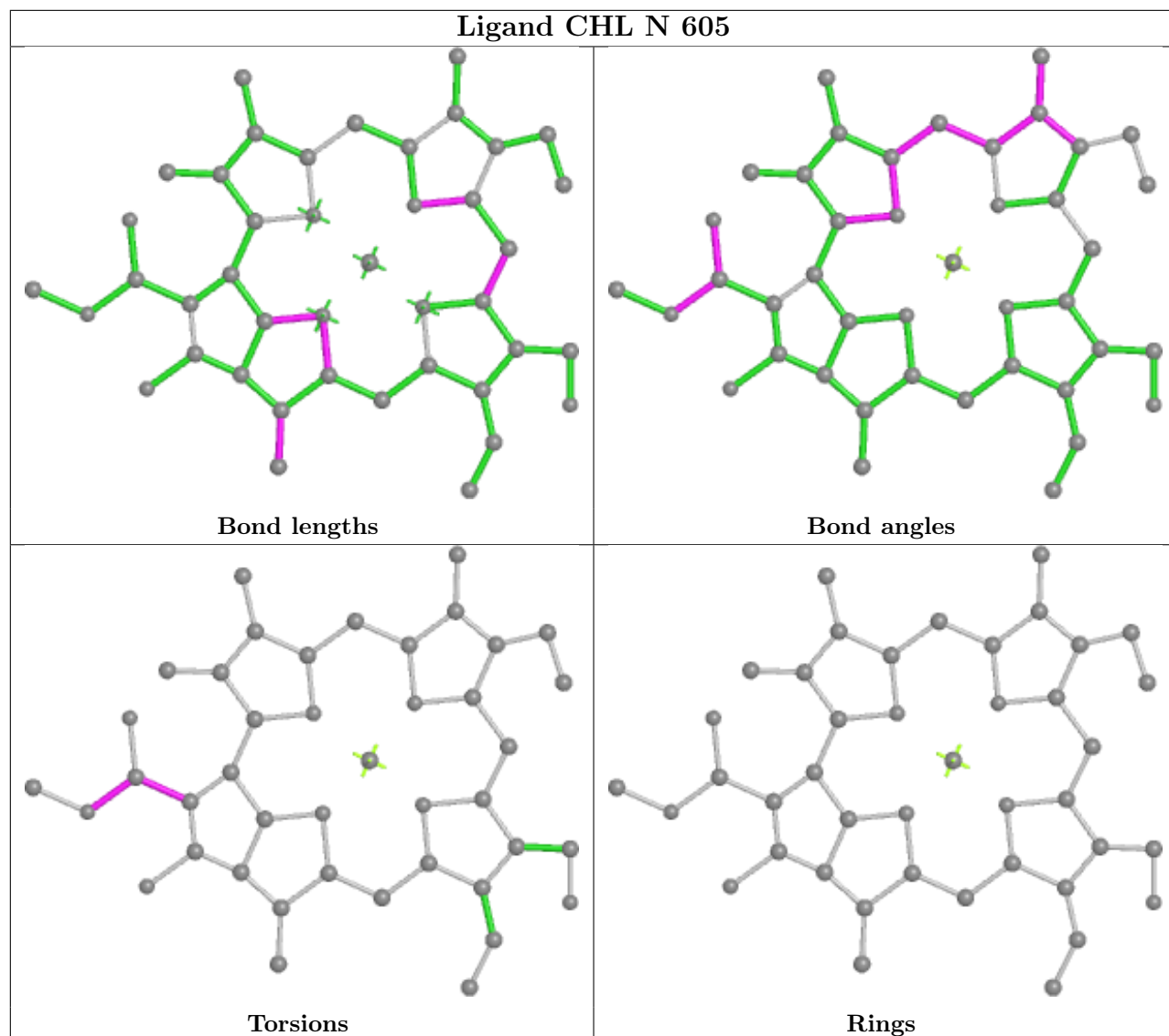


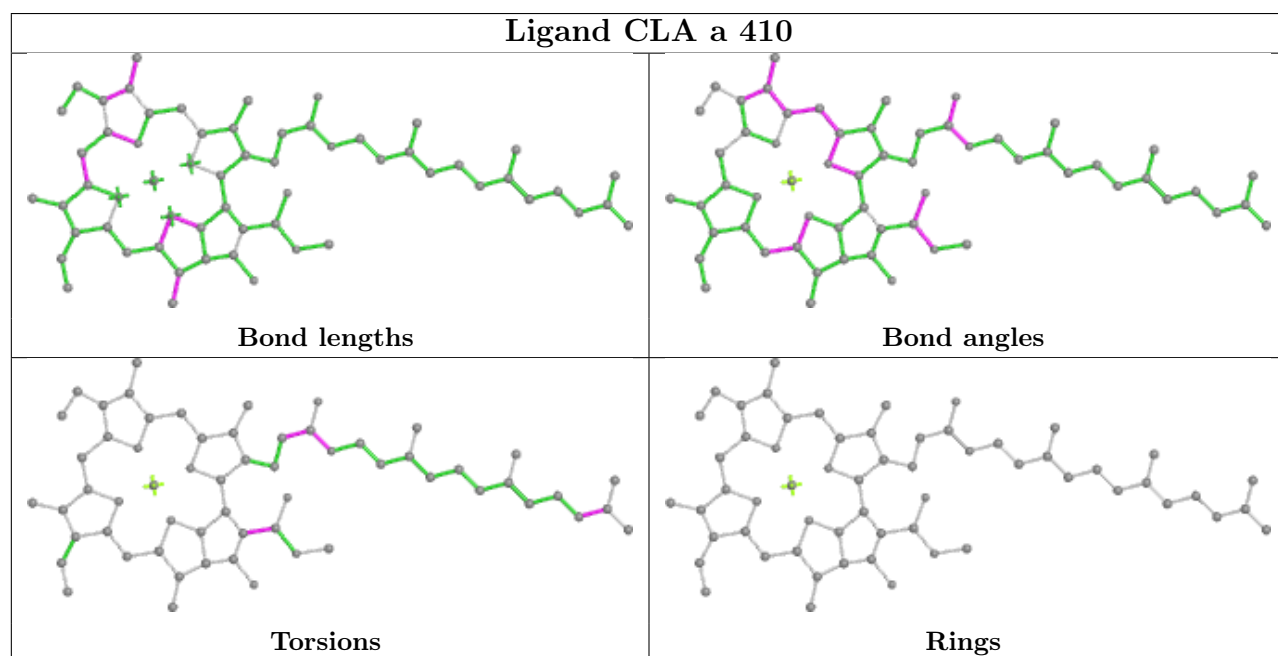
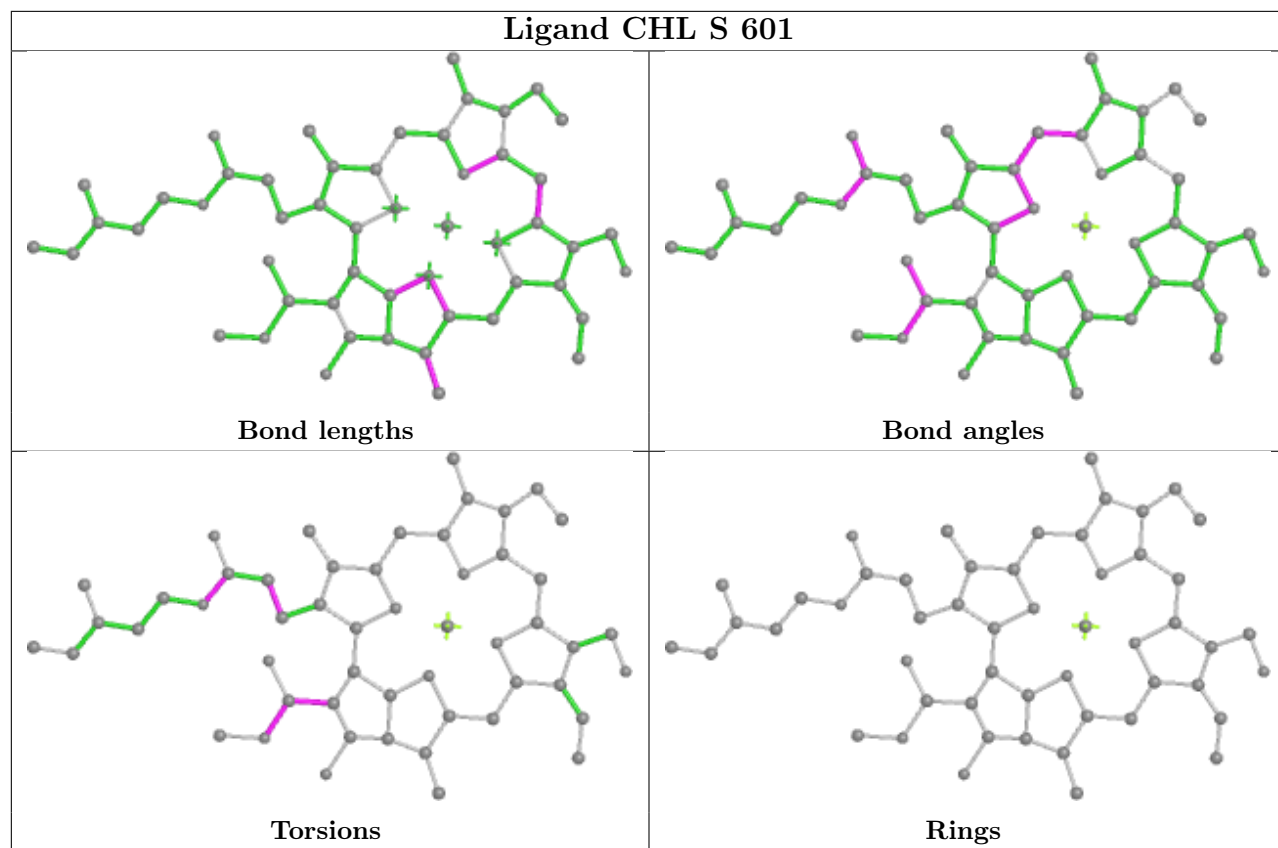


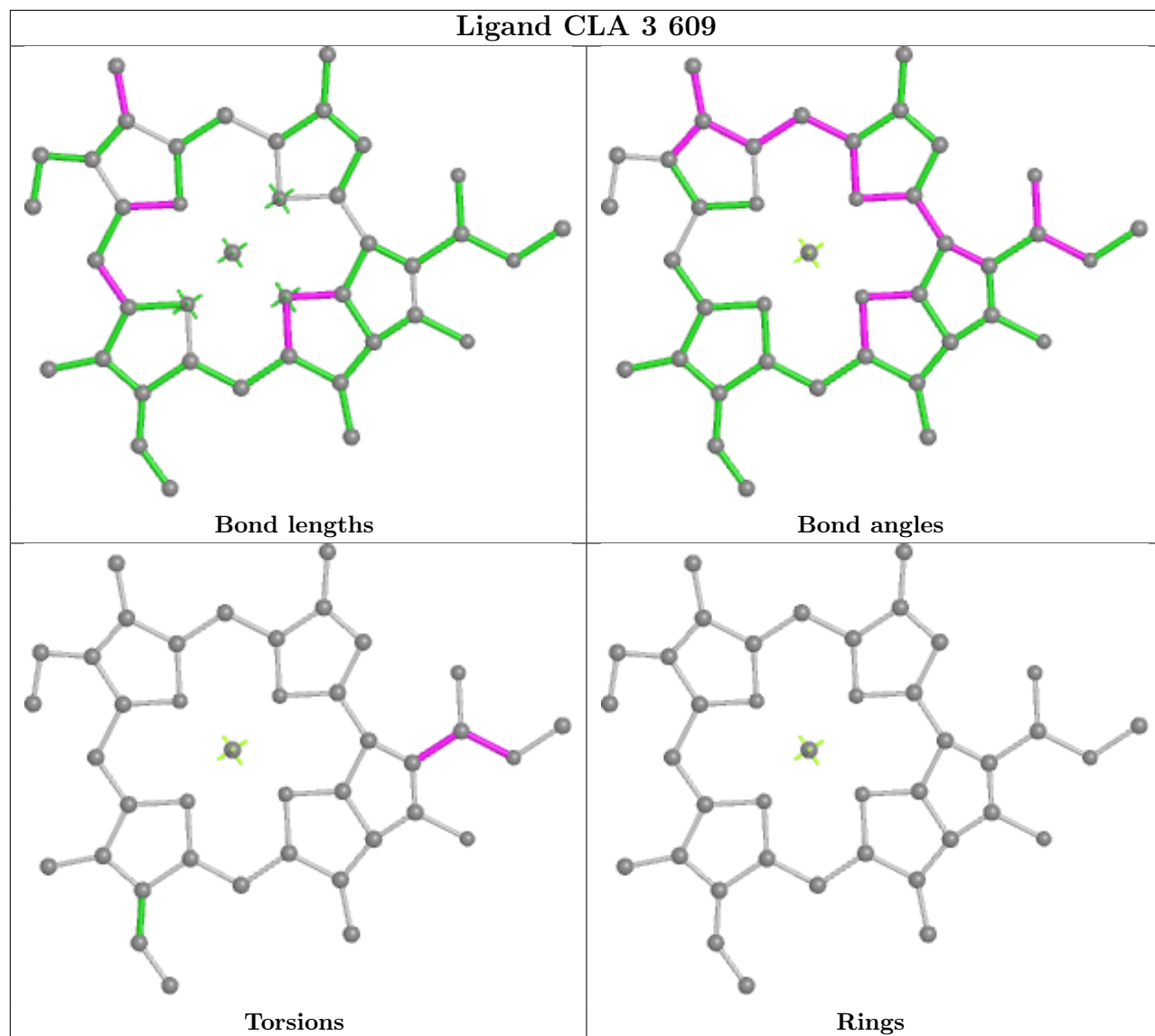


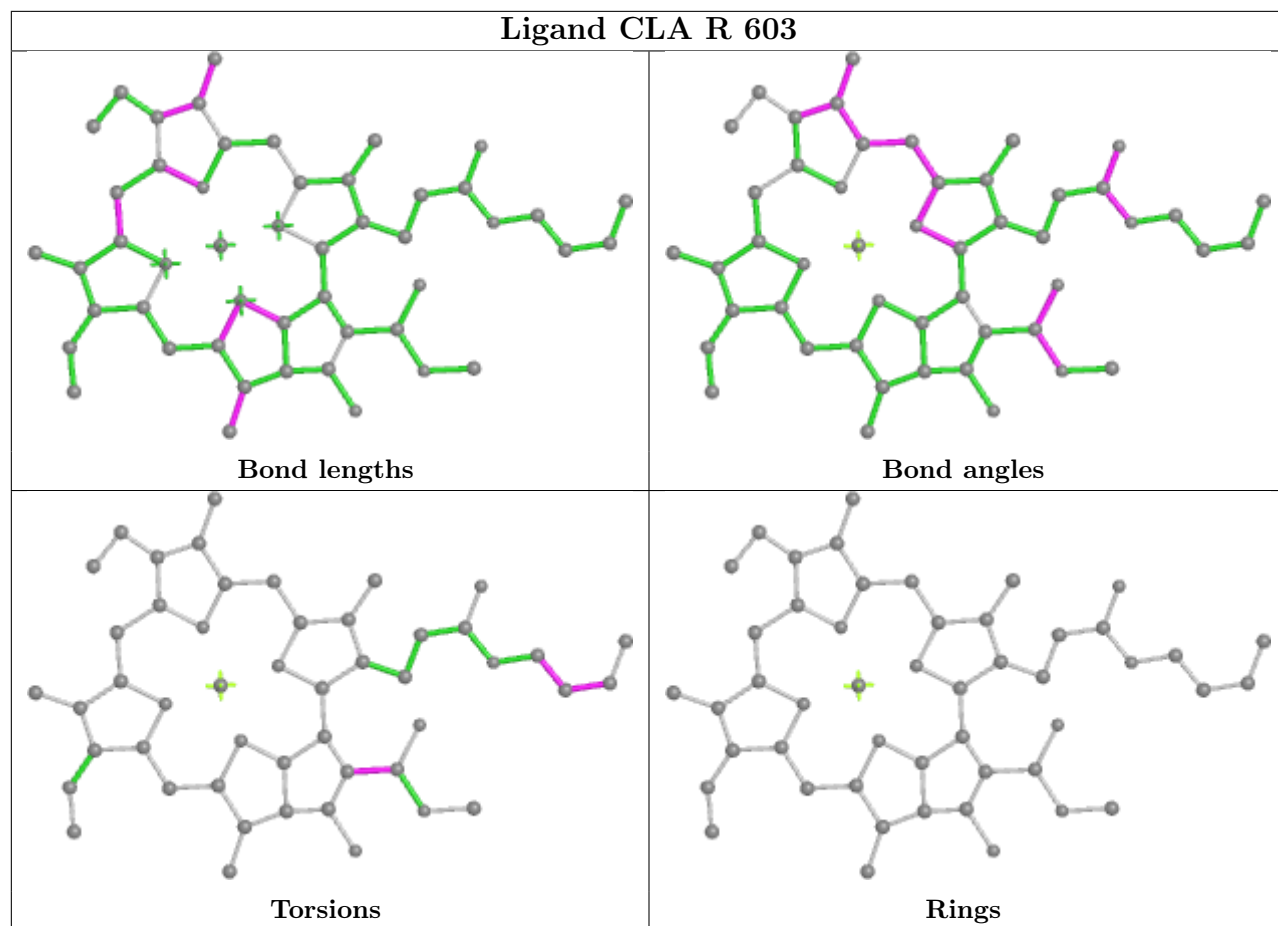


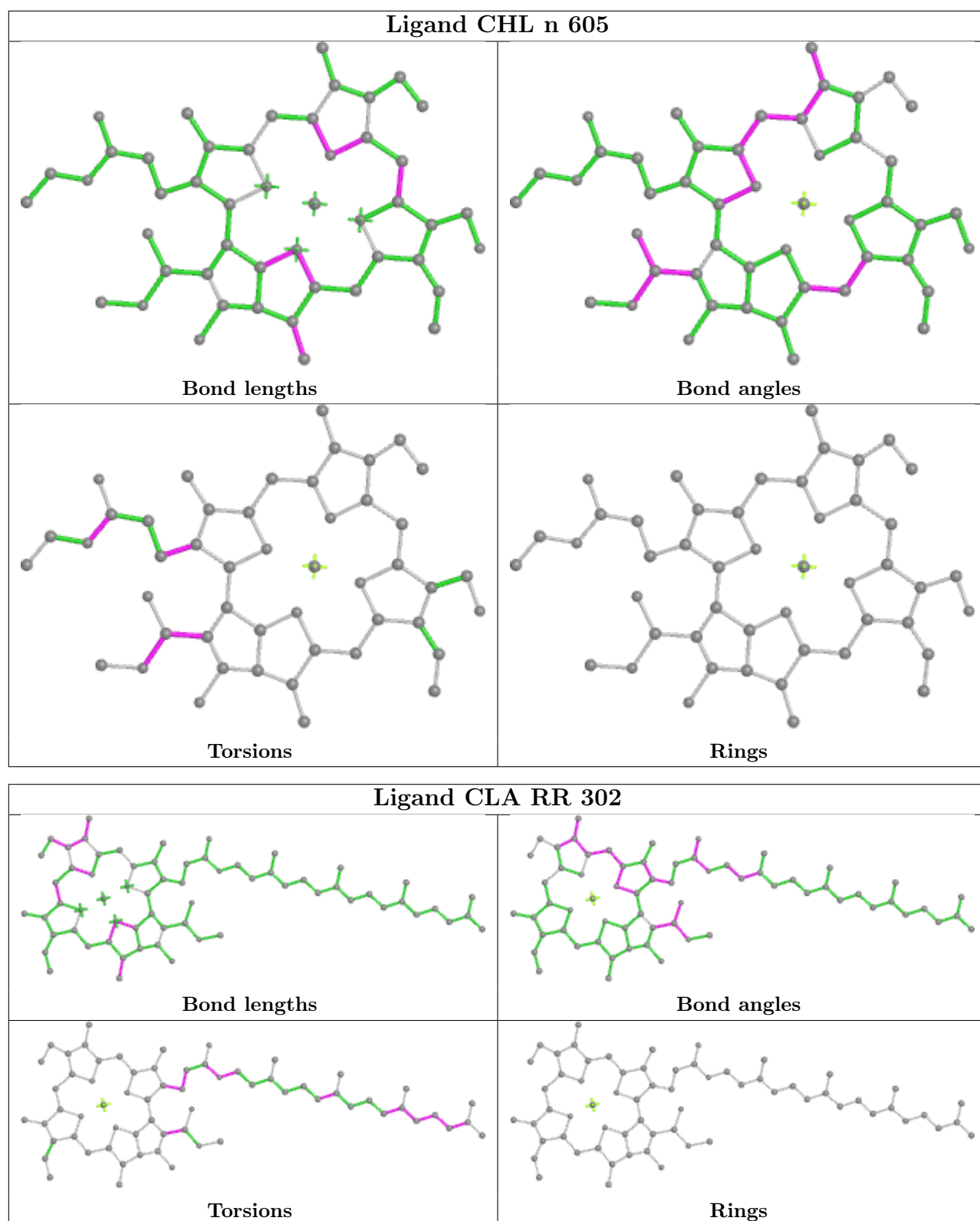


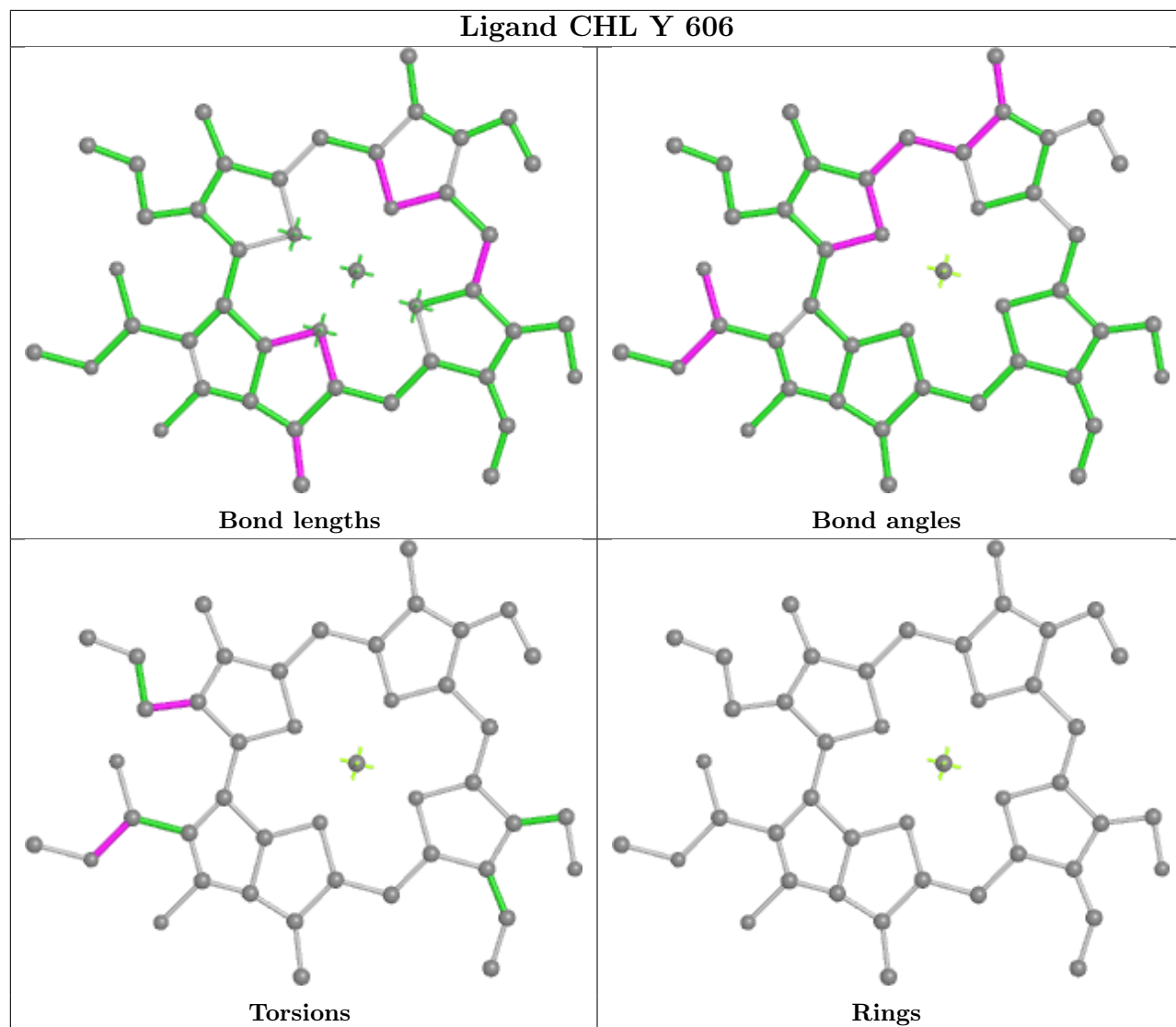


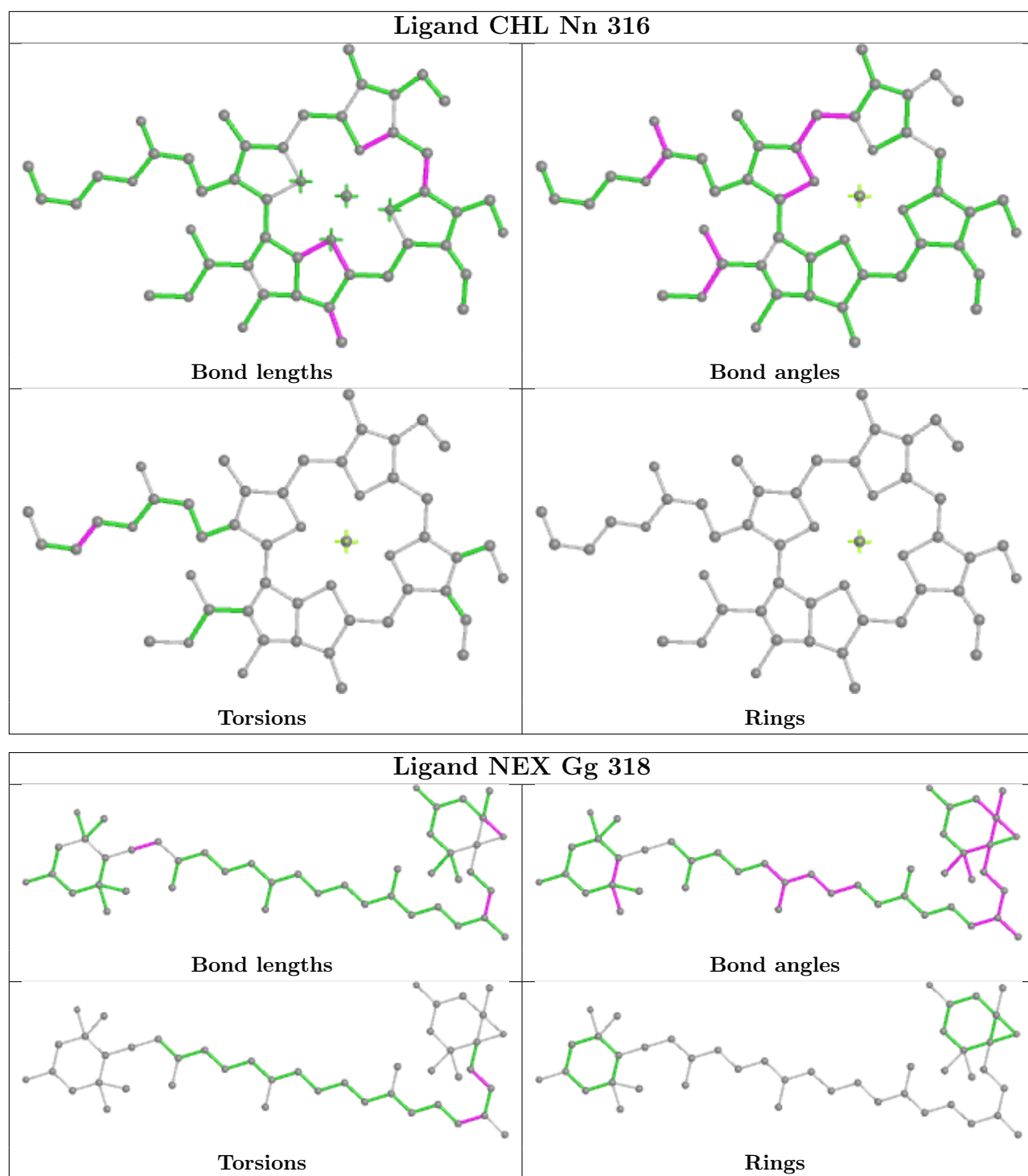












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.