



# wwPDB EM Validation Summary Report ⓘ

Aug 7, 2023 – 12:58 PM EDT

PDB ID : 7UMH  
EMDB ID : EMD-26601  
Title : Energetic robustness to large scale structural dynamics in a photosynthetic supercomplex  
Authors : Harris, D.; Toporik, H.; Schlau-Cohen, G.S.; Mazor, Y.  
Deposited on : 2022-04-07  
Resolution : 2.60 Å (reported)  
Based on initial model : 6NWA

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

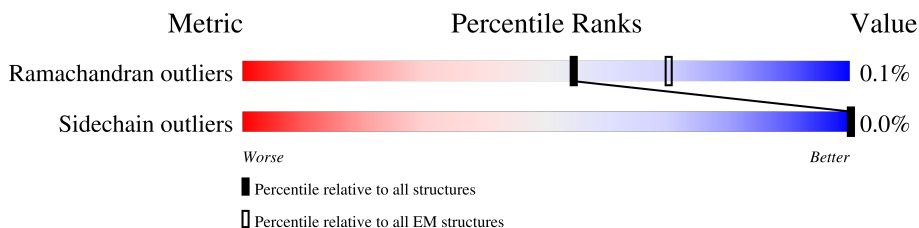
EMDB validation analysis : 0.0.1.dev50  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.35

# 1 Overall quality at a glance i

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

The reported resolution of this entry is 2.60 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	751	98% .
1	H	751	98% .
1	a	751	98% .
2	B	731	100% .
2	G	731	100% .
2	b	731	100% .
3	C	81	99% .
3	N	81	99% .
3	c	81	99% .

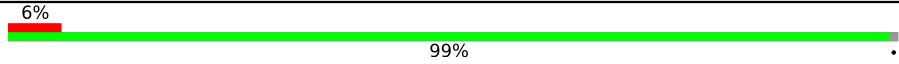
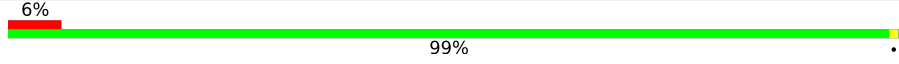
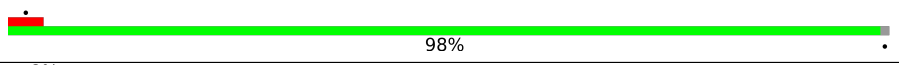
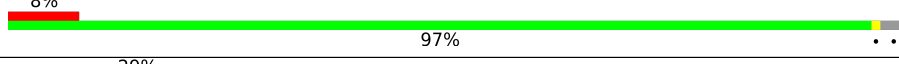
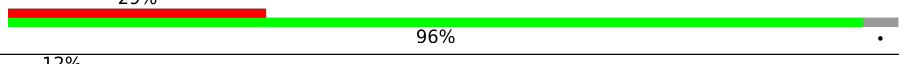
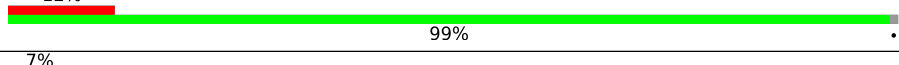
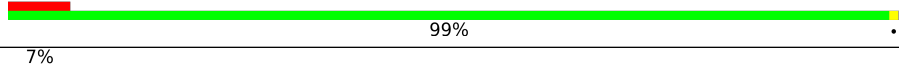
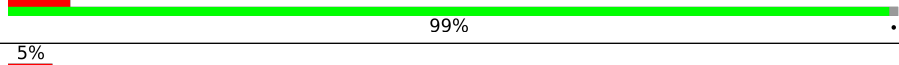
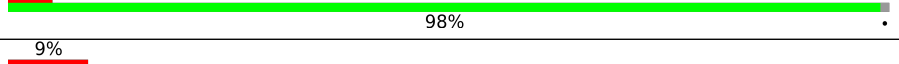
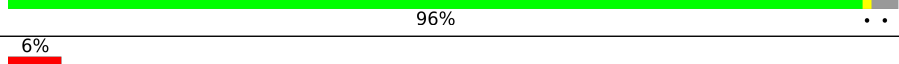
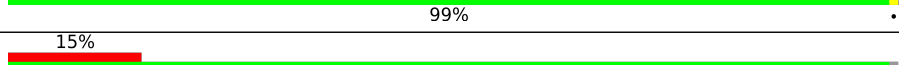
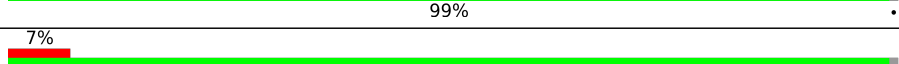
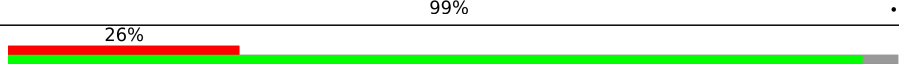
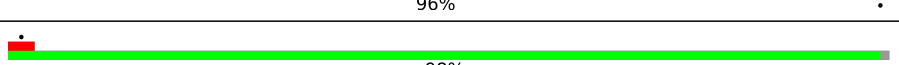
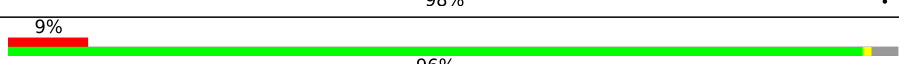
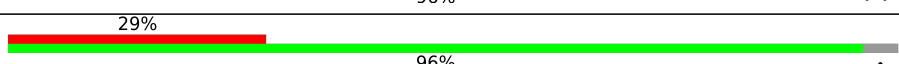
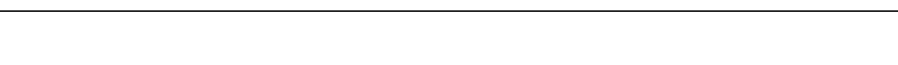
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Mol	Chain	Length	Quality of chain
4	D	141	10% 98%
4	P	141	10% 98%
4	d	141	14% 98%
5	E	74	9% 92% 8%
5	O	74	16% 92% 8%
5	e	74	19% 92% 8%
6	F	165	14% 85% 15%
6	Q	165	12% 85% 15%
6	f	165	11% 85% 15%
7	I	40	5% 92% 8%
7	R	40	5% 92% 8%
7	i	40	5% 92% 8%
8	J	40	5% 98%
8	S	40	8% 98%
8	j	40	8% 98%
9	K	86	15% 90% 10%
9	T	86	17% 90% 10%
9	k	86	14% 90% 10%
10	L	157	7% 97%
10	U	157	6% 97%
10	l	157	8% 97%
11	M	31	6% 100%
11	V	31	6% 100%
11	m	31	6% 100%
12	W	342	15% 98%

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Mol	Chain	Length	Quality of chain
12	X	342	
12	Y	342	
12	Z	342	
12	g	342	
12	h	342	
12	n	342	
12	o	342	
12	p	342	
12	q	342	
12	r	342	
12	s	342	
12	t	342	
12	u	342	
12	v	342	
12	w	342	
12	x	342	
12	y	342	

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
15	CL0	A	1011	X	-	-	-
15	CL0	H	1011	X	-	-	-
15	CL0	a	1011	X	-	-	-
16	CLA	A	1013	X	-	-	-
16	CLA	A	1022	X	-	-	-
16	CLA	A	1101	X	-	-	-
16	CLA	A	1102	X	-	-	-
16	CLA	A	1103	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	A	1104	X	-	-	-
16	CLA	A	1105	X	-	-	-
16	CLA	A	1106	X	-	-	-
16	CLA	A	1109	X	-	-	-
16	CLA	A	1110	X	-	-	-
16	CLA	A	1111	X	-	-	-
16	CLA	A	1113	X	-	-	-
16	CLA	A	1114	X	-	-	-
16	CLA	A	1115	X	-	-	-
16	CLA	A	1116	X	-	-	-
16	CLA	A	1117	X	-	-	-
16	CLA	A	1119	X	-	-	-
16	CLA	A	1121	X	-	-	-
16	CLA	A	1122	X	-	-	-
16	CLA	A	1124	X	-	-	-
16	CLA	A	1126	X	-	-	-
16	CLA	A	1127	X	-	-	-
16	CLA	A	1128	X	-	-	-
16	CLA	A	1130	X	-	-	-
16	CLA	A	1132	X	-	-	-
16	CLA	A	1133	X	-	-	-
16	CLA	A	1135	X	-	-	-
16	CLA	A	1136	X	-	-	-
16	CLA	A	1137	X	-	-	-
16	CLA	A	1138	X	-	-	-
16	CLA	A	1139	X	-	-	-
16	CLA	A	1140	X	-	-	-
16	CLA	A	1237	X	-	-	-
16	CLA	A	1801	X	-	-	-
16	CLA	B	1012	X	-	-	-
16	CLA	B	1021	X	-	-	-
16	CLA	B	1201	X	-	-	-
16	CLA	B	1202	X	-	-	-
16	CLA	B	1203	X	-	-	-
16	CLA	B	1204	X	-	-	-
16	CLA	B	1205	X	-	-	-
16	CLA	B	1206	X	-	-	-
16	CLA	B	1208	X	-	-	-
16	CLA	B	1209	X	-	-	-
16	CLA	B	1211	X	-	-	-
16	CLA	B	1212	X	-	-	-
16	CLA	B	1213	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	B	1214	X	-	-	-
16	CLA	B	1215	X	-	-	-
16	CLA	B	1220	X	-	-	-
16	CLA	B	1223	X	-	-	-
16	CLA	B	1224	X	-	-	-
16	CLA	B	1227	X	-	-	-
16	CLA	B	1229	X	-	-	-
16	CLA	B	1230	X	-	-	-
16	CLA	B	1231	X	-	-	-
16	CLA	B	1232	X	-	-	-
16	CLA	B	1234	X	-	-	-
16	CLA	B	1235	X	-	-	-
16	CLA	B	1236	X	-	-	-
16	CLA	B	1238	X	-	-	-
16	CLA	B	1240	X	-	-	-
16	CLA	F	1301	X	-	-	-
16	CLA	F	1302	X	-	-	-
16	CLA	G	1012	X	-	-	-
16	CLA	G	1021	X	-	-	-
16	CLA	G	1201	X	-	-	-
16	CLA	G	1202	X	-	-	-
16	CLA	G	1203	X	-	-	-
16	CLA	G	1204	X	-	-	-
16	CLA	G	1205	X	-	-	-
16	CLA	G	1206	X	-	-	-
16	CLA	G	1208	X	-	-	-
16	CLA	G	1209	X	-	-	-
16	CLA	G	1212	X	-	-	-
16	CLA	G	1213	X	-	-	-
16	CLA	G	1214	X	-	-	-
16	CLA	G	1215	X	-	-	-
16	CLA	G	1216	X	-	-	-
16	CLA	G	1220	X	-	-	-
16	CLA	G	1221	X	-	-	-
16	CLA	G	1223	X	-	-	-
16	CLA	G	1224	X	-	-	-
16	CLA	G	1225	X	-	-	-
16	CLA	G	1228	X	-	-	-
16	CLA	G	1229	X	-	-	-
16	CLA	G	1230	X	-	-	-
16	CLA	G	1231	X	-	-	-
16	CLA	G	1232	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	G	1234	X	-	-	-
16	CLA	G	1235	X	-	-	-
16	CLA	G	1238	X	-	-	-
16	CLA	G	1239	X	-	-	-
16	CLA	G	1240	X	-	-	-
16	CLA	H	1013	X	-	-	-
16	CLA	H	1022	X	-	-	-
16	CLA	H	1101	X	-	-	-
16	CLA	H	1102	X	-	-	-
16	CLA	H	1103	X	-	-	-
16	CLA	H	1104	X	-	-	-
16	CLA	H	1105	X	-	-	-
16	CLA	H	1106	X	-	-	-
16	CLA	H	1109	X	-	-	-
16	CLA	H	1110	X	-	-	-
16	CLA	H	1111	X	-	-	-
16	CLA	H	1113	X	-	-	-
16	CLA	H	1114	X	-	-	-
16	CLA	H	1116	X	-	-	-
16	CLA	H	1117	X	-	-	-
16	CLA	H	1119	X	-	-	-
16	CLA	H	1121	X	-	-	-
16	CLA	H	1124	X	-	-	-
16	CLA	H	1126	X	-	-	-
16	CLA	H	1127	X	-	-	-
16	CLA	H	1128	X	-	-	-
16	CLA	H	1131	X	-	-	-
16	CLA	H	1132	X	-	-	-
16	CLA	H	1136	X	-	-	-
16	CLA	H	1137	X	-	-	-
16	CLA	H	1138	X	-	-	-
16	CLA	H	1139	X	-	-	-
16	CLA	H	1140	X	-	-	-
16	CLA	H	1237	X	-	-	-
16	CLA	H	1801	X	-	-	-
16	CLA	J	1302	X	-	-	-
16	CLA	K	4002	X	-	-	-
16	CLA	K	4003	X	-	-	-
16	CLA	K	4004	X	-	-	-
16	CLA	L	1503	X	-	-	-
16	CLA	Q	1301	X	-	-	-
16	CLA	Q	1302	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	S	1302	X	-	-	-
16	CLA	T	4002	X	-	-	-
16	CLA	T	4003	X	-	-	-
16	CLA	U	1503	X	-	-	-
16	CLA	W	501	X	-	-	-
16	CLA	W	502	X	-	-	-
16	CLA	W	503	X	-	-	-
16	CLA	W	504	X	-	-	-
16	CLA	W	505	X	-	-	-
16	CLA	W	508	X	-	-	-
16	CLA	W	509	X	-	-	-
16	CLA	W	511	X	-	-	-
16	CLA	W	512	X	-	-	-
16	CLA	W	514	X	-	-	-
16	CLA	W	515	X	-	-	-
16	CLA	W	517	X	-	-	-
16	CLA	X	502	X	-	-	-
16	CLA	X	505	X	-	-	-
16	CLA	X	506	X	-	-	-
16	CLA	X	508	X	-	-	-
16	CLA	X	509	X	-	-	-
16	CLA	X	511	X	-	-	-
16	CLA	X	514	X	-	-	-
16	CLA	X	515	X	-	-	-
16	CLA	Y	501	X	-	-	-
16	CLA	Y	502	X	-	-	-
16	CLA	Y	503	X	-	-	-
16	CLA	Y	504	X	-	-	-
16	CLA	Y	505	X	-	-	-
16	CLA	Y	508	X	-	-	-
16	CLA	Y	509	X	-	-	-
16	CLA	Y	511	X	-	-	-
16	CLA	Y	512	X	-	-	-
16	CLA	Y	514	X	-	-	-
16	CLA	Y	515	X	-	-	-
16	CLA	Z	501	X	-	-	-
16	CLA	Z	502	X	-	-	-
16	CLA	Z	503	X	-	-	-
16	CLA	Z	504	X	-	-	-
16	CLA	Z	505	X	-	-	-
16	CLA	Z	507	X	-	-	-
16	CLA	Z	508	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	Z	509	X	-	-	-
16	CLA	Z	511	X	-	-	-
16	CLA	Z	512	X	-	-	-
16	CLA	Z	514	X	-	-	-
16	CLA	Z	515	X	-	-	-
16	CLA	Z	516	X	-	-	-
16	CLA	Z	517	X	-	-	-
16	CLA	a	1013	X	-	-	-
16	CLA	a	1022	X	-	-	-
16	CLA	a	1101	X	-	-	-
16	CLA	a	1102	X	-	-	-
16	CLA	a	1103	X	-	-	-
16	CLA	a	1104	X	-	-	-
16	CLA	a	1105	X	-	-	-
16	CLA	a	1106	X	-	-	-
16	CLA	a	1109	X	-	-	-
16	CLA	a	1110	X	-	-	-
16	CLA	a	1111	X	-	-	-
16	CLA	a	1113	X	-	-	-
16	CLA	a	1114	X	-	-	-
16	CLA	a	1115	X	-	-	-
16	CLA	a	1116	X	-	-	-
16	CLA	a	1117	X	-	-	-
16	CLA	a	1119	X	-	-	-
16	CLA	a	1121	X	-	-	-
16	CLA	a	1124	X	-	-	-
16	CLA	a	1126	X	-	-	-
16	CLA	a	1127	X	-	-	-
16	CLA	a	1128	X	-	-	-
16	CLA	a	1132	X	-	-	-
16	CLA	a	1135	X	-	-	-
16	CLA	a	1136	X	-	-	-
16	CLA	a	1137	X	-	-	-
16	CLA	a	1138	X	-	-	-
16	CLA	a	1139	X	-	-	-
16	CLA	a	1237	X	-	-	-
16	CLA	a	1801	X	-	-	-
16	CLA	b	1012	X	-	-	-
16	CLA	b	1021	X	-	-	-
16	CLA	b	1201	X	-	-	-
16	CLA	b	1202	X	-	-	-
16	CLA	b	1203	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	b	1204	X	-	-	-
16	CLA	b	1205	X	-	-	-
16	CLA	b	1206	X	-	-	-
16	CLA	b	1208	X	-	-	-
16	CLA	b	1209	X	-	-	-
16	CLA	b	1210	X	-	-	-
16	CLA	b	1211	X	-	-	-
16	CLA	b	1212	X	-	-	-
16	CLA	b	1213	X	-	-	-
16	CLA	b	1214	X	-	-	-
16	CLA	b	1216	X	-	-	-
16	CLA	b	1221	X	-	-	-
16	CLA	b	1223	X	-	-	-
16	CLA	b	1224	X	-	-	-
16	CLA	b	1226	X	-	-	-
16	CLA	b	1227	X	-	-	-
16	CLA	b	1228	X	-	-	-
16	CLA	b	1229	X	-	-	-
16	CLA	b	1231	X	-	-	-
16	CLA	b	1232	X	-	-	-
16	CLA	b	1234	X	-	-	-
16	CLA	b	1235	X	-	-	-
16	CLA	b	1238	X	-	-	-
16	CLA	b	1240	X	-	-	-
16	CLA	f	1301	X	-	-	-
16	CLA	f	1302	X	-	-	-
16	CLA	g	502	X	-	-	-
16	CLA	g	504	X	-	-	-
16	CLA	g	505	X	-	-	-
16	CLA	g	507	X	-	-	-
16	CLA	g	508	X	-	-	-
16	CLA	g	509	X	-	-	-
16	CLA	g	511	X	-	-	-
16	CLA	g	512	X	-	-	-
16	CLA	g	514	X	-	-	-
16	CLA	g	515	X	-	-	-
16	CLA	g	516	X	-	-	-
16	CLA	h	502	X	-	-	-
16	CLA	h	503	X	-	-	-
16	CLA	h	506	X	-	-	-
16	CLA	h	507	X	-	-	-
16	CLA	h	508	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	h	509	X	-	-	-
16	CLA	h	511	X	-	-	-
16	CLA	h	513	X	-	-	-
16	CLA	h	515	X	-	-	-
16	CLA	h	516	X	-	-	-
16	CLA	h	517	X	-	-	-
16	CLA	k	4002	X	-	-	-
16	CLA	k	4003	X	-	-	-
16	CLA	k	4004	X	-	-	-
16	CLA	l	1503	X	-	-	-
16	CLA	n	501	X	-	-	-
16	CLA	n	502	X	-	-	-
16	CLA	n	503	X	-	-	-
16	CLA	n	505	X	-	-	-
16	CLA	n	507	X	-	-	-
16	CLA	n	508	X	-	-	-
16	CLA	n	509	X	-	-	-
16	CLA	n	512	X	-	-	-
16	CLA	n	514	X	-	-	-
16	CLA	n	515	X	-	-	-
16	CLA	n	517	X	-	-	-
16	CLA	o	502	X	-	-	-
16	CLA	o	505	X	-	-	-
16	CLA	o	506	X	-	-	-
16	CLA	o	508	X	-	-	-
16	CLA	o	509	X	-	-	-
16	CLA	o	511	X	-	-	-
16	CLA	o	512	X	-	-	-
16	CLA	o	514	X	-	-	-
16	CLA	o	515	X	-	-	-
16	CLA	p	501	X	-	-	-
16	CLA	p	502	X	-	-	-
16	CLA	p	503	X	-	-	-
16	CLA	p	508	X	-	-	-
16	CLA	p	509	X	-	-	-
16	CLA	p	511	X	-	-	-
16	CLA	p	512	X	-	-	-
16	CLA	p	514	X	-	-	-
16	CLA	p	515	X	-	-	-
16	CLA	p	516	X	-	-	-
16	CLA	q	501	X	-	-	-
16	CLA	q	502	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	q	503	X	-	-	-
16	CLA	q	504	X	-	-	-
16	CLA	q	505	X	-	-	-
16	CLA	q	506	X	-	-	-
16	CLA	q	507	X	-	-	-
16	CLA	q	508	X	-	-	-
16	CLA	q	509	X	-	-	-
16	CLA	q	512	X	-	-	-
16	CLA	q	514	X	-	-	-
16	CLA	q	515	X	-	-	-
16	CLA	q	516	X	-	-	-
16	CLA	r	501	X	-	-	-
16	CLA	r	502	X	-	-	-
16	CLA	r	504	X	-	-	-
16	CLA	r	507	X	-	-	-
16	CLA	r	508	X	-	-	-
16	CLA	r	511	X	-	-	-
16	CLA	r	512	X	-	-	-
16	CLA	r	514	X	-	-	-
16	CLA	r	515	X	-	-	-
16	CLA	r	516	X	-	-	-
16	CLA	s	501	X	-	-	-
16	CLA	s	502	X	-	-	-
16	CLA	s	503	X	-	-	-
16	CLA	s	504	X	-	-	-
16	CLA	s	505	X	-	-	-
16	CLA	s	508	X	-	-	-
16	CLA	s	509	X	-	-	-
16	CLA	s	511	X	-	-	-
16	CLA	s	512	X	-	-	-
16	CLA	s	514	X	-	-	-
16	CLA	s	515	X	-	-	-
16	CLA	t	501	X	-	-	-
16	CLA	t	502	X	-	-	-
16	CLA	t	503	X	-	-	-
16	CLA	t	504	X	-	-	-
16	CLA	t	506	X	-	-	-
16	CLA	t	507	X	-	-	-
16	CLA	t	508	X	-	-	-
16	CLA	t	509	X	-	-	-
16	CLA	t	511	X	-	-	-
16	CLA	t	512	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	t	514	X	-	-	-
16	CLA	t	515	X	-	-	-
16	CLA	t	516	X	-	-	-
16	CLA	t	517	X	-	-	-
16	CLA	u	502	X	-	-	-
16	CLA	u	505	X	-	-	-
16	CLA	u	506	X	-	-	-
16	CLA	u	507	X	-	-	-
16	CLA	u	508	X	-	-	-
16	CLA	u	509	X	-	-	-
16	CLA	u	511	X	-	-	-
16	CLA	u	514	X	-	-	-
16	CLA	u	516	X	-	-	-
16	CLA	v	502	X	-	-	-
16	CLA	v	503	X	-	-	-
16	CLA	v	504	X	-	-	-
16	CLA	v	506	X	-	-	-
16	CLA	v	508	X	-	-	-
16	CLA	v	511	X	-	-	-
16	CLA	v	513	X	-	-	-
16	CLA	v	514	X	-	-	-
16	CLA	v	515	X	-	-	-
16	CLA	v	516	X	-	-	-
16	CLA	v	517	X	-	-	-
16	CLA	w	501	X	-	-	-
16	CLA	w	502	X	-	-	-
16	CLA	w	503	X	-	-	-
16	CLA	w	504	X	-	-	-
16	CLA	w	507	X	-	-	-
16	CLA	w	508	X	-	-	-
16	CLA	w	509	X	-	-	-
16	CLA	w	511	X	-	-	-
16	CLA	w	512	X	-	-	-
16	CLA	w	514	X	-	-	-
16	CLA	w	515	X	-	-	-
16	CLA	w	516	X	-	-	-
16	CLA	w	517	X	-	-	-
16	CLA	x	502	X	-	-	-
16	CLA	x	504	X	-	-	-
16	CLA	x	505	X	-	-	-
16	CLA	x	507	X	-	-	-
16	CLA	x	508	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	CLA	x	509	X	-	-	-
16	CLA	x	514	X	-	-	-
16	CLA	x	515	X	-	-	-
16	CLA	x	516	X	-	-	-
16	CLA	y	501	X	-	-	-
16	CLA	y	502	X	-	-	-
16	CLA	y	503	X	-	-	-
16	CLA	y	505	X	-	-	-
16	CLA	y	506	X	-	-	-
16	CLA	y	508	X	-	-	-
16	CLA	y	509	X	-	-	-
16	CLA	y	511	X	-	-	-
16	CLA	y	513	X	-	-	-
16	CLA	y	515	X	-	-	-
16	CLA	y	516	X	-	-	-
16	CLA	y	517	X	-	-	-

## 2 Entry composition [i](#)

There are 25 unique types of molecules in this entry. The entry contains 140516 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	739	5787	3791	984	985	27	0	0
1	H	739	5787	3791	984	985	27	0	0
1	a	739	5787	3791	984	985	27	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	730	5775	3801	968	991	15	0	0
2	G	730	5775	3801	968	991	15	0	0
2	b	730	5775	3801	968	991	15	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	80	600	369	103	117	11	0	0
3	N	80	600	369	103	117	11	0	0
3	c	80	600	369	103	117	11	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	138	1078	683	187	205	3	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	P	138	Total	C	N	O	S	0	0
			1078	683	187	205	3		
4	d	138	Total	C	N	O	S	0	0
			1078	683	187	205	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	68	Total	C	N	O	S	0	0
			537	337	95	105			
5	O	68	Total	C	N	O	S	0	0
			537	337	95	105			
5	e	68	Total	C	N	O	S	0	0
			537	337	95	105			

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

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	141	Total	C	N	O	S	0	0
			1100	711	183	201	5		
6	Q	141	Total	C	N	O	S	0	0
			1100	711	183	201	5		
6	f	141	Total	C	N	O	S	0	0
			1100	711	183	201	5		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
7	I	37	Total	C	N	O	S	0	0
			293	200	41	49	3		
7	R	37	Total	C	N	O	S	0	0
			293	200	41	49	3		
7	i	37	Total	C	N	O	S	0	0
			293	200	41	49	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	J	39	Total	C	N	O	S	0	0
			311	210	46	52	3		
8	S	39	Total	C	N	O	S	0	0
			311	210	46	52	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	j	39	Total	C	N	O	S	0	0
			311	210	46	52	3		

- Molecule 9 is a protein called Photosystem I reaction center subunit PsaK 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	K	77	Total	C	N	O	S	0	0
			538	353	89	92	4		
9	T	77	Total	C	N	O	S	0	0
			538	353	89	92	4		
9	k	77	Total	C	N	O	S	0	0
			538	353	89	92	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L	153	Total	C	N	O	S	0	0
			1150	750	187	211	2		
10	U	153	Total	C	N	O	S	0	0
			1150	750	187	211	2		
10	l	153	Total	C	N	O	S	0	0
			1150	750	187	211	2		

- Molecule 11 is a protein called Photosystem I reaction center subunit XII.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	M	31	Total	C	N	O	S	0	0
			238	159	36	42	1		
11	V	31	Total	C	N	O	S	0	0
			238	159	36	42	1		
11	m	31	Total	C	N	O	S	0	0
			238	159	36	42	1		

- Molecule 12 is a protein called Iron stress-induced chlorophyll-binding protein.

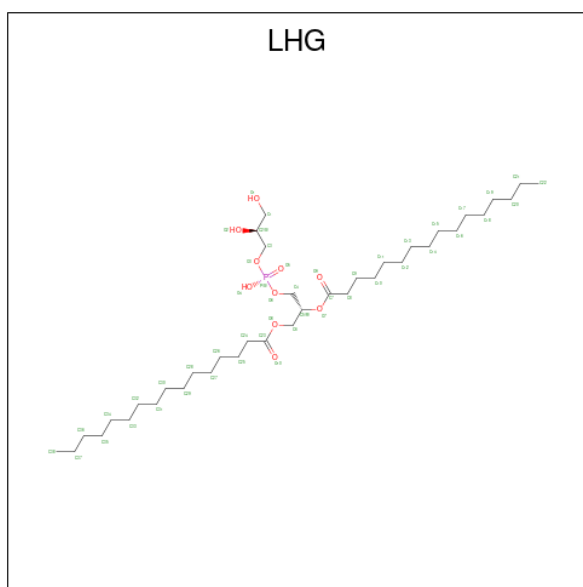
Mol	Chain	Residues	Atoms					AltConf	Trace
12	W	338	Total	C	N	O	S	0	0
			2601	1732	422	442	5		
12	X	339	Total	C	N	O	S	0	0
			2622	1744	428	446	4		
12	Y	340	Total	C	N	O	S	0	0
			2622	1744	428	445	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
12	Z	337	Total	C	N	O	S	0	0
			2603	1734	425	439	5		
12	g	333	Total	C	N	O	S	0	0
			2573	1714	420	434	5		
12	h	330	Total	C	N	O	S	0	0
			2538	1692	412	429	5		
12	n	338	Total	C	N	O	S	0	0
			2601	1732	422	442	5		
12	o	339	Total	C	N	O	S	0	0
			2622	1744	428	446	4		
12	p	340	Total	C	N	O	S	0	0
			2622	1744	428	445	5		
12	q	337	Total	C	N	O	S	0	0
			2603	1734	425	439	5		
12	r	332	Total	C	N	O	S	0	0
			2566	1709	419	433	5		
12	s	339	Total	C	N	O	S	0	0
			2617	1741	427	444	5		
12	t	338	Total	C	N	O	S	0	0
			2601	1732	422	442	5		
12	u	339	Total	C	N	O	S	0	0
			2622	1744	428	446	4		
12	v	330	Total	C	N	O	S	0	0
			2538	1692	412	429	5		
12	w	337	Total	C	N	O	S	0	0
			2603	1734	425	439	5		
12	x	332	Total	C	N	O	S	0	0
			2566	1709	419	433	5		
12	y	330	Total	C	N	O	S	0	0
			2532	1689	409	429	5		

- Molecule 13 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: C<sub>38</sub>H<sub>75</sub>O<sub>10</sub>P).



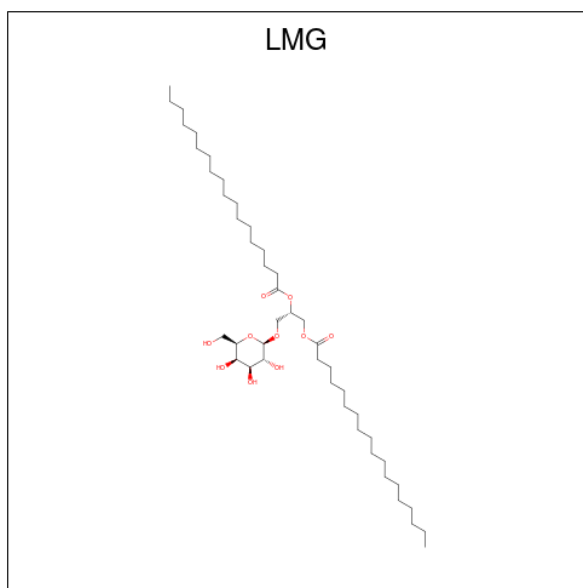
Mol	Chain	Residues	Atoms			AltConf	
			Total	C	O		P
13	A	1	43	32	10	1	0
13	A	1	26	15	10	1	0
13	B	1	38	27	10	1	0
13	G	1	38	27	10	1	0
13	H	1	43	32	10	1	0
13	H	1	26	15	10	1	0
13	I	1	40	29	10	1	0
13	R	1	40	29	10	1	0
13	X	1	27	16	10	1	0
13	Y	1	32	21	10	1	0
13	a	1	43	32	10	1	0
13	a	1	26	15	10	1	0
13	b	1	38	27	10	1	0
13	g	1	31	20	10	1	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
13	i	1	Total 40	C 29	O 10	P 1	0
13	o	1	Total 27	C 16	O 10	P 1	0
13	p	1	Total 32	C 21	O 10	P 1	0
13	r	1	Total 31	C 20	O 10	P 1	0
13	s	1	Total 32	C 21	O 10	P 1	0
13	u	1	Total 27	C 16	O 10	P 1	0
13	x	1	Total 31	C 20	O 10	P 1	0

- Molecule 14 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C<sub>45</sub>H<sub>86</sub>O<sub>10</sub>).



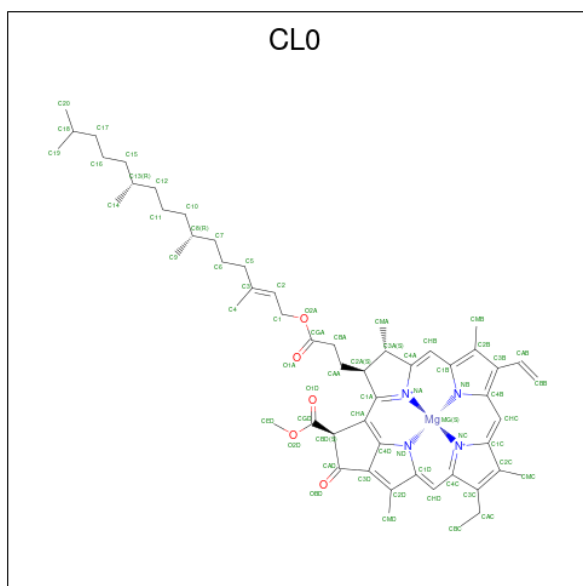
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
14	A	1	Total 38	C 28	O 10	0
14	A	1	Total 46	C 36	O 10	0
14	A	1	Total 32	C 22	O 10	0
14	B	1	Total 43	C 33	O 10	0

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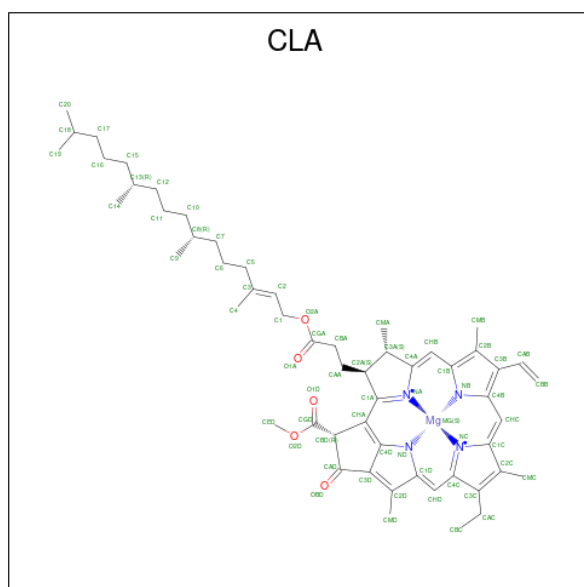
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
14	F	1	27	17	10	0
14	G	1	43	33	10	0
14	H	1	38	28	10	0
14	H	1	46	36	10	0
14	H	1	32	22	10	0
14	Q	1	27	17	10	0
14	a	1	38	28	10	0
14	a	1	46	36	10	0
14	a	1	32	22	10	0
14	b	1	43	33	10	0
14	f	1	27	17	10	0

- Molecule 15 is CHLOROPHYLL A ISOMER (three-letter code: CL0) (formula:  $C_{55}H_{72}MgN_4O_5$ ) (labeled as "Ligand of Interest" by depositor).



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

- Molecule 16 is CHLOROPHYLL A (three-letter code: CLA) (formula:  $C_{55}H_{72}MgN_4O_5$ ) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf	
16	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	A	1	Total	C	Mg	N	O	0
			56	46	1	4	5	
16	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	A	1	Total	C	Mg	N	O	0
			58	48	1	4	5	
16	A	1	Total	C	Mg	N	O	0
			65	55	1	4	5	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	A	1	50	40	1	4	5	0
16	A	1	45	35	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	54	44	1	4	5	0
16	A	1	55	45	1	4	5	0
16	A	1	45	35	1	4	5	0
16	A	1	45	35	1	4	5	0
16	A	1	46	36	1	4	5	0
16	A	1	54	44	1	4	5	0
16	A	1	54	44	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	55	45	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	49	39	1	4	5	0
16	A	1	51	41	1	4	5	0
16	A	1	59	49	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	60	50	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	A	1	65	55	1	4	5	0
16	A	1	46	36	1	4	5	0
16	A	1	60	50	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	54	44	1	4	5	0
16	A	1	45	35	1	4	5	0
16	A	1	51	41	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	47	37	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	60	50	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	65	55	1	4	5	0
16	A	1	46	36	1	4	5	0
16	B	1	55	45	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	54	44	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	B	1	65	55	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	45	35	1	4	5	0
16	B	1	45	35	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	45	35	1	4	5	0
16	B	1	55	45	1	4	5	0
16	B	1	55	45	1	4	5	0
16	B	1	60	50	1	4	5	0
16	B	1	47	37	1	4	5	0
16	B	1	45	35	1	4	5	0
16	B	1	55	45	1	4	5	0
16	B	1	45	35	1	4	5	0
16	B	1	53	43	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	50	40	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	60	50	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	B	1	65	55	1	4	5	0
16	B	1	60	50	1	4	5	0
16	B	1	49	39	1	4	5	0
16	B	1	55	45	1	4	5	0
16	B	1	58	48	1	4	5	0
16	B	1	45	35	1	4	5	0
16	B	1	45	35	1	4	5	0
16	B	1	45	35	1	4	5	0
16	B	1	50	40	1	4	5	0
16	B	1	62	52	1	4	5	0
16	B	1	50	40	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	65	55	1	4	5	0
16	B	1	46	36	1	4	5	0
16	F	1	45	35	1	4	5	0
16	F	1	46	36	1	4	5	0
16	G	1	55	45	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	54	44	1	4	5	0
16	G	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	G	1	65	55	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	45	35	1	4	5	0
16	G	1	45	35	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	45	35	1	4	5	0
16	G	1	55	45	1	4	5	0
16	G	1	55	45	1	4	5	0
16	G	1	60	50	1	4	5	0
16	G	1	47	37	1	4	5	0
16	G	1	45	35	1	4	5	0
16	G	1	55	45	1	4	5	0
16	G	1	45	35	1	4	5	0
16	G	1	54	44	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	50	40	1	4	5	0
16	G	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	G	1	60	50	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	60	50	1	4	5	0
16	G	1	49	39	1	4	5	0
16	G	1	55	45	1	4	5	0
16	G	1	58	48	1	4	5	0
16	G	1	45	35	1	4	5	0
16	G	1	45	35	1	4	5	0
16	G	1	45	35	1	4	5	0
16	G	1	50	40	1	4	5	0
16	G	1	62	52	1	4	5	0
16	G	1	50	40	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	65	55	1	4	5	0
16	G	1	46	36	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	56	46	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	H	1	58	48	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	50	40	1	4	5	0
16	H	1	45	35	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	54	44	1	4	5	0
16	H	1	55	45	1	4	5	0
16	H	1	45	35	1	4	5	0
16	H	1	45	35	1	4	5	0
16	H	1	46	36	1	4	5	0
16	H	1	54	44	1	4	5	0
16	H	1	54	44	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	55	45	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	49	39	1	4	5	0
16	H	1	51	41	1	4	5	0
16	H	1	59	49	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	60	50	1	4	5	0
16	H	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	H	1	65	55	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	46	36	1	4	5	0
16	H	1	60	50	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	54	44	1	4	5	0
16	H	1	45	35	1	4	5	0
16	H	1	51	41	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	47	37	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	60	50	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	65	55	1	4	5	0
16	H	1	46	36	1	4	5	0
16	J	1	45	35	1	4	5	0
16	J	1	37	31	1	4	1	0
16	K	1	45	35	1	4	5	0
16	K	1	45	35	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	K	1	55	45	1	4	5	0
16	L	1	60	50	1	4	5	0
16	L	1	60	50	1	4	5	0
16	L	1	65	55	1	4	5	0
16	Q	1	45	35	1	4	5	0
16	Q	1	46	36	1	4	5	0
16	S	1	45	35	1	4	5	0
16	S	1	37	31	1	4	1	0
16	T	1	45	35	1	4	5	0
16	T	1	45	35	1	4	5	0
16	T	1	55	45	1	4	5	0
16	U	1	60	50	1	4	5	0
16	U	1	60	50	1	4	5	0
16	U	1	65	55	1	4	5	0
16	W	1	50	40	1	4	5	0
16	W	1	50	40	1	4	5	0
16	W	1	46	36	1	4	5	0
16	W	1	60	50	1	4	5	0
16	W	1	65	55	1	4	5	0
16	W	1	60	50	1	4	5	0
16	W	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	W	1	55	45	1	4	5	0
16	W	1	60	50	1	4	5	0
16	W	1	65	55	1	4	5	0
16	W	1	65	55	1	4	5	0
16	W	1	60	50	1	4	5	0
16	W	1	46	36	1	4	5	0
16	W	1	50	40	1	4	5	0
16	W	1	65	55	1	4	5	0
16	W	1	46	36	1	4	5	0
16	W	1	55	45	1	4	5	0
16	X	1	46	36	1	4	5	0
16	X	1	50	40	1	4	5	0
16	X	1	46	36	1	4	5	0
16	X	1	60	50	1	4	5	0
16	X	1	65	55	1	4	5	0
16	X	1	60	50	1	4	5	0
16	X	1	65	55	1	4	5	0
16	X	1	55	45	1	4	5	0
16	X	1	60	50	1	4	5	0
16	X	1	60	50	1	4	5	0
16	X	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	X	1	65	55	1	4	5	0
16	X	1	46	36	1	4	5	0
16	X	1	50	40	1	4	5	0
16	X	1	65	55	1	4	5	0
16	X	1	46	36	1	4	5	0
16	X	1	55	45	1	4	5	0
16	Y	1	50	40	1	4	5	0
16	Y	1	50	40	1	4	5	0
16	Y	1	46	36	1	4	5	0
16	Y	1	65	55	1	4	5	0
16	Y	1	65	55	1	4	5	0
16	Y	1	60	50	1	4	5	0
16	Y	1	65	55	1	4	5	0
16	Y	1	55	45	1	4	5	0
16	Y	1	60	50	1	4	5	0
16	Y	1	65	55	1	4	5	0
16	Y	1	65	55	1	4	5	0
16	Y	1	65	55	1	4	5	0
16	Y	1	46	36	1	4	5	0
16	Y	1	50	40	1	4	5	0
16	Y	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	Y	1	46	36	1	4	5	0
16	Y	1	55	45	1	4	5	0
16	Z	1	50	40	1	4	5	0
16	Z	1	50	40	1	4	5	0
16	Z	1	46	36	1	4	5	0
16	Z	1	65	55	1	4	5	0
16	Z	1	65	55	1	4	5	0
16	Z	1	60	50	1	4	5	0
16	Z	1	65	55	1	4	5	0
16	Z	1	55	45	1	4	5	0
16	Z	1	65	55	1	4	5	0
16	Z	1	60	50	1	4	5	0
16	Z	1	65	55	1	4	5	0
16	Z	1	65	55	1	4	5	0
16	Z	1	50	40	1	4	5	0
16	Z	1	50	40	1	4	5	0
16	Z	1	65	55	1	4	5	0
16	Z	1	46	36	1	4	5	0
16	Z	1	55	45	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	a	1	65	55	1	4	5	0
16	a	1	56	46	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	58	48	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	50	40	1	4	5	0
16	a	1	45	35	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	54	44	1	4	5	0
16	a	1	55	45	1	4	5	0
16	a	1	45	35	1	4	5	0
16	a	1	45	35	1	4	5	0
16	a	1	46	36	1	4	5	0
16	a	1	54	44	1	4	5	0
16	a	1	54	44	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	55	45	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	49	39	1	4	5	0
16	a	1	51	41	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	a	1	59	49	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	60	50	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	46	36	1	4	5	0
16	a	1	60	50	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	54	44	1	4	5	0
16	a	1	45	35	1	4	5	0
16	a	1	51	41	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	47	37	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	55	45	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	65	55	1	4	5	0
16	a	1	46	36	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	b	1	55	45	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	54	44	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	45	35	1	4	5	0
16	b	1	45	35	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	45	35	1	4	5	0
16	b	1	55	45	1	4	5	0
16	b	1	55	45	1	4	5	0
16	b	1	60	50	1	4	5	0
16	b	1	47	37	1	4	5	0
16	b	1	45	35	1	4	5	0
16	b	1	55	45	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	b	1	45	35	1	4	5	0
16	b	1	54	44	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	50	40	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	60	50	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	60	50	1	4	5	0
16	b	1	49	39	1	4	5	0
16	b	1	55	45	1	4	5	0
16	b	1	58	48	1	4	5	0
16	b	1	45	35	1	4	5	0
16	b	1	45	35	1	4	5	0
16	b	1	45	35	1	4	5	0
16	b	1	50	40	1	4	5	0
16	b	1	62	52	1	4	5	0
16	b	1	50	40	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	65	55	1	4	5	0
16	b	1	46	36	1	4	5	0
16	f	1	45	35	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	f	1	46	36	1	4	5	0
16	g	1	50	40	1	4	5	0
16	g	1	50	40	1	4	5	0
16	g	1	46	36	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	60	50	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	55	45	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	46	36	1	4	5	0
16	g	1	50	40	1	4	5	0
16	g	1	65	55	1	4	5	0
16	g	1	46	36	1	4	5	0
16	g	1	55	45	1	4	5	0
16	h	1	46	36	1	4	5	0
16	h	1	50	40	1	4	5	0
16	h	1	46	36	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	h	1	60	50	1	4	5	0
16	h	1	65	55	1	4	5	0
16	h	1	60	50	1	4	5	0
16	h	1	65	55	1	4	5	0
16	h	1	55	45	1	4	5	0
16	h	1	65	55	1	4	5	0
16	h	1	65	55	1	4	5	0
16	h	1	65	55	1	4	5	0
16	h	1	65	55	1	4	5	0
16	h	1	46	36	1	4	5	0
16	h	1	50	40	1	4	5	0
16	h	1	65	55	1	4	5	0
16	h	1	46	36	1	4	5	0
16	h	1	55	45	1	4	5	0
16	j	1	45	35	1	4	5	0
16	j	1	37	31	1	4	1	0
16	k	1	45	35	1	4	5	0
16	k	1	45	35	1	4	5	0
16	k	1	55	45	1	4	5	0
16	l	1	60	50	1	4	5	0
16	l	1	60	50	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	l	1	65	55	1	4	5	0
16	n	1	50	40	1	4	5	0
16	n	1	50	40	1	4	5	0
16	n	1	46	36	1	4	5	0
16	n	1	60	50	1	4	5	0
16	n	1	65	55	1	4	5	0
16	n	1	60	50	1	4	5	0
16	n	1	65	55	1	4	5	0
16	n	1	55	45	1	4	5	0
16	n	1	60	50	1	4	5	0
16	n	1	65	55	1	4	5	0
16	n	1	65	55	1	4	5	0
16	n	1	65	55	1	4	5	0
16	n	1	46	36	1	4	5	0
16	n	1	50	40	1	4	5	0
16	n	1	65	55	1	4	5	0
16	n	1	46	36	1	4	5	0
16	n	1	55	45	1	4	5	0
16	o	1	46	36	1	4	5	0
16	o	1	50	40	1	4	5	0
16	o	1	46	36	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	o	1	60	50	1	4	5	0
16	o	1	65	55	1	4	5	0
16	o	1	60	50	1	4	5	0
16	o	1	65	55	1	4	5	0
16	o	1	55	45	1	4	5	0
16	o	1	60	50	1	4	5	0
16	o	1	60	50	1	4	5	0
16	o	1	65	55	1	4	5	0
16	o	1	65	55	1	4	5	0
16	o	1	46	36	1	4	5	0
16	o	1	50	40	1	4	5	0
16	o	1	65	55	1	4	5	0
16	o	1	46	36	1	4	5	0
16	o	1	55	45	1	4	5	0
16	p	1	50	40	1	4	5	0
16	p	1	50	40	1	4	5	0
16	p	1	46	36	1	4	5	0
16	p	1	65	55	1	4	5	0
16	p	1	65	55	1	4	5	0
16	p	1	60	50	1	4	5	0
16	p	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	p	1	55	45	1	4	5	0
16	p	1	60	50	1	4	5	0
16	p	1	65	55	1	4	5	0
16	p	1	65	55	1	4	5	0
16	p	1	65	55	1	4	5	0
16	p	1	46	36	1	4	5	0
16	p	1	50	40	1	4	5	0
16	p	1	65	55	1	4	5	0
16	p	1	46	36	1	4	5	0
16	p	1	55	45	1	4	5	0
16	q	1	50	40	1	4	5	0
16	q	1	50	40	1	4	5	0
16	q	1	46	36	1	4	5	0
16	q	1	65	55	1	4	5	0
16	q	1	65	55	1	4	5	0
16	q	1	60	50	1	4	5	0
16	q	1	65	55	1	4	5	0
16	q	1	55	45	1	4	5	0
16	q	1	65	55	1	4	5	0
16	q	1	60	50	1	4	5	0
16	q	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	q	1	65	55	1	4	5	0
16	q	1	50	40	1	4	5	0
16	q	1	50	40	1	4	5	0
16	q	1	65	55	1	4	5	0
16	q	1	46	36	1	4	5	0
16	q	1	55	45	1	4	5	0
16	r	1	50	40	1	4	5	0
16	r	1	50	40	1	4	5	0
16	r	1	46	36	1	4	5	0
16	r	1	65	55	1	4	5	0
16	r	1	65	55	1	4	5	0
16	r	1	60	50	1	4	5	0
16	r	1	65	55	1	4	5	0
16	r	1	55	45	1	4	5	0
16	r	1	65	55	1	4	5	0
16	r	1	65	55	1	4	5	0
16	r	1	65	55	1	4	5	0
16	r	1	65	55	1	4	5	0
16	r	1	46	36	1	4	5	0
16	r	1	50	40	1	4	5	0
16	r	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	r	1	46	36	1	4	5	0
16	r	1	55	45	1	4	5	0
16	s	1	50	40	1	4	5	0
16	s	1	50	40	1	4	5	0
16	s	1	46	36	1	4	5	0
16	s	1	65	55	1	4	5	0
16	s	1	65	55	1	4	5	0
16	s	1	60	50	1	4	5	0
16	s	1	65	55	1	4	5	0
16	s	1	55	45	1	4	5	0
16	s	1	60	50	1	4	5	0
16	s	1	65	55	1	4	5	0
16	s	1	65	55	1	4	5	0
16	s	1	65	55	1	4	5	0
16	s	1	46	36	1	4	5	0
16	s	1	50	40	1	4	5	0
16	s	1	65	55	1	4	5	0
16	s	1	46	36	1	4	5	0
16	s	1	55	45	1	4	5	0
16	t	1	50	40	1	4	5	0
16	t	1	50	40	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	t	1	46	36	1	4	5	0
16	t	1	60	50	1	4	5	0
16	t	1	65	55	1	4	5	0
16	t	1	60	50	1	4	5	0
16	t	1	65	55	1	4	5	0
16	t	1	55	45	1	4	5	0
16	t	1	60	50	1	4	5	0
16	t	1	65	55	1	4	5	0
16	t	1	65	55	1	4	5	0
16	t	1	65	55	1	4	5	0
16	t	1	46	36	1	4	5	0
16	t	1	50	40	1	4	5	0
16	t	1	65	55	1	4	5	0
16	t	1	46	36	1	4	5	0
16	t	1	55	45	1	4	5	0
16	u	1	46	36	1	4	5	0
16	u	1	50	40	1	4	5	0
16	u	1	46	36	1	4	5	0
16	u	1	60	50	1	4	5	0
16	u	1	65	55	1	4	5	0
16	u	1	60	50	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	u	1	65	55	1	4	5	0
16	u	1	55	45	1	4	5	0
16	u	1	60	50	1	4	5	0
16	u	1	60	50	1	4	5	0
16	u	1	65	55	1	4	5	0
16	u	1	65	55	1	4	5	0
16	u	1	46	36	1	4	5	0
16	u	1	50	40	1	4	5	0
16	u	1	65	55	1	4	5	0
16	u	1	46	36	1	4	5	0
16	u	1	55	45	1	4	5	0
16	v	1	46	36	1	4	5	0
16	v	1	50	40	1	4	5	0
16	v	1	46	36	1	4	5	0
16	v	1	60	50	1	4	5	0
16	v	1	65	55	1	4	5	0
16	v	1	60	50	1	4	5	0
16	v	1	65	55	1	4	5	0
16	v	1	55	45	1	4	5	0
16	v	1	65	55	1	4	5	0
16	v	1	65	55	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	v	1	65	55	1	4	5	0
16	v	1	65	55	1	4	5	0
16	v	1	46	36	1	4	5	0
16	v	1	50	40	1	4	5	0
16	v	1	65	55	1	4	5	0
16	v	1	46	36	1	4	5	0
16	v	1	55	45	1	4	5	0
16	w	1	50	40	1	4	5	0
16	w	1	50	40	1	4	5	0
16	w	1	46	36	1	4	5	0
16	w	1	65	55	1	4	5	0
16	w	1	65	55	1	4	5	0
16	w	1	60	50	1	4	5	0
16	w	1	65	55	1	4	5	0
16	w	1	55	45	1	4	5	0
16	w	1	65	55	1	4	5	0
16	w	1	60	50	1	4	5	0
16	w	1	65	55	1	4	5	0
16	w	1	65	55	1	4	5	0
16	w	1	50	40	1	4	5	0
16	w	1	50	40	1	4	5	0

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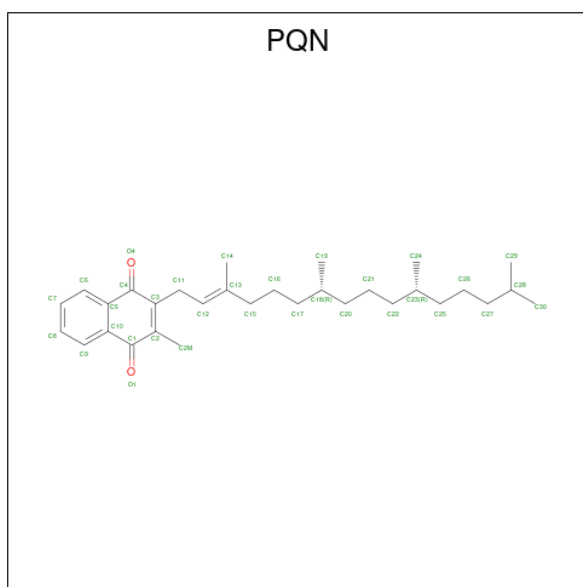
Mol	Chain	Residues	Atoms					AltConf
			Total	C	Mg	N	O	
16	w	1	65	55	1	4	5	0
16	w	1	46	36	1	4	5	0
16	w	1	55	45	1	4	5	0
16	x	1	50	40	1	4	5	0
16	x	1	50	40	1	4	5	0
16	x	1	46	36	1	4	5	0
16	x	1	65	55	1	4	5	0
16	x	1	65	55	1	4	5	0
16	x	1	60	50	1	4	5	0
16	x	1	65	55	1	4	5	0
16	x	1	55	45	1	4	5	0
16	x	1	65	55	1	4	5	0
16	x	1	65	55	1	4	5	0
16	x	1	65	55	1	4	5	0
16	x	1	65	55	1	4	5	0
16	x	1	46	36	1	4	5	0
16	x	1	50	40	1	4	5	0
16	x	1	65	55	1	4	5	0
16	x	1	46	36	1	4	5	0
16	x	1	55	45	1	4	5	0
16	y	1	46	36	1	4	5	0

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Mol	Chain	Residues	Atoms					AltConf
16	y	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			60	50	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			55	45	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			50	40	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			65	55	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			46	36	1	4	5	
16	y	1	Total	C	Mg	N	O	0
			55	45	1	4	5	

- Molecule 17 is PHYLLOQUINONE (three-letter code: PQN) (formula: C<sub>31</sub>H<sub>46</sub>O<sub>2</sub>).



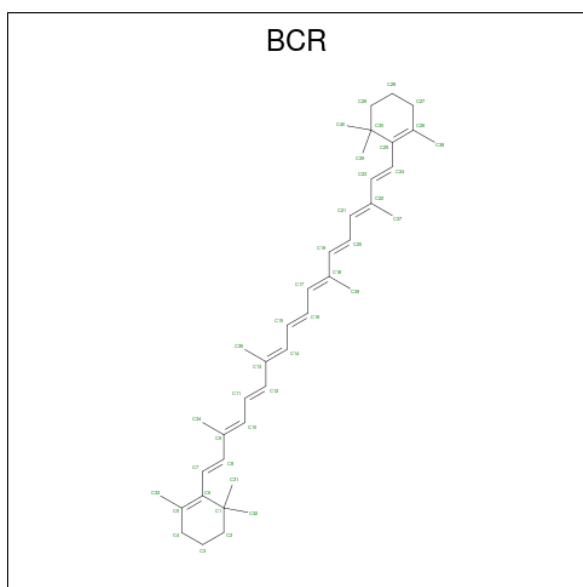
Mol	Chain	Residues	Atoms			AltConf
17	A	1	Total	C	O	0
			33	31	2	
17	B	1	Total	C	O	0
			33	31	2	
17	G	1	Total	C	O	0
			33	31	2	
17	H	1	Total	C	O	0
			33	31	2	
17	a	1	Total	C	O	0
			33	31	2	
17	b	1	Total	C	O	0
			33	31	2	

- Molecule 18 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe<sub>4</sub>S<sub>4</sub>).



Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
18	A	1	8	4	4	0
18	C	1	8	4	4	0
18	C	1	8	4	4	0
18	H	1	8	4	4	0
18	N	1	8	4	4	0
18	N	1	8	4	4	0
18	a	1	8	4	4	0
18	c	1	8	4	4	0
18	c	1	8	4	4	0

- Molecule 19 is BETA-CAROTENE (three-letter code: BCR) (formula: C<sub>40</sub>H<sub>56</sub>) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
19	A	1	Total C 40 40	0
19	A	1	Total C 40 40	0
19	A	1	Total C 40 40	0
19	A	1	Total C 40 40	0
19	A	1	Total C 40 40	0
19	B	1	Total C 40 40	0
19	B	1	Total C 40 40	0
19	B	1	Total C 30 30	0
19	B	1	Total C 40 40	0
19	B	1	Total C 40 40	0
19	B	1	Total C 40 40	0
19	F	1	Total C 40 40	0
19	G	1	Total C 40 40	0
19	G	1	Total C 40 40	0

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Mol	Chain	Residues	Atoms	AltConf
19	G	1	Total C 30 30	0
19	G	1	Total C 40 40	0
19	G	1	Total C 40 40	0
19	G	1	Total C 40 40	0
19	H	1	Total C 40 40	0
19	H	1	Total C 40 40	0
19	H	1	Total C 40 40	0
19	H	1	Total C 40 40	0
19	H	1	Total C 40 40	0
19	I	1	Total C 40 40	0
19	J	1	Total C 40 40	0
19	J	1	Total C 40 40	0
19	J	1	Total C 40 40	0
19	K	1	Total C 40 40	0
19	K	1	Total C 40 40	0
19	L	1	Total C 40 40	0
19	L	1	Total C 40 40	0
19	Q	1	Total C 40 40	0
19	R	1	Total C 40 40	0
19	S	1	Total C 40 40	0
19	S	1	Total C 40 40	0

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Mol	Chain	Residues	Atoms	AltConf
19	S	1	Total C 40 40	0
19	T	1	Total C 40 40	0
19	T	1	Total C 40 40	0
19	U	1	Total C 40 40	0
19	U	1	Total C 40 40	0
19	W	1	Total C 40 40	0
19	W	1	Total C 40 40	0
19	W	1	Total C 40 40	0
19	X	1	Total C 40 40	0
19	X	1	Total C 40 40	0
19	X	1	Total C 40 40	0
19	X	1	Total C 40 40	0
19	X	1	Total C 40 40	0
19	Y	1	Total C 40 40	0
19	Y	1	Total C 40 40	0
19	Y	1	Total C 40 40	0
19	Y	1	Total C 40 40	0
19	Z	1	Total C 40 40	0
19	Z	1	Total C 40 40	0
19	Z	1	Total C 40 40	0
19	a	1	Total C 40 40	0
19	a	1	Total C 40 40	0

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Mol	Chain	Residues	Atoms	AltConf
19	a	1	Total C 40 40	0
19	a	1	Total C 40 40	0
19	a	1	Total C 40 40	0
19	b	1	Total C 40 40	0
19	b	1	Total C 40 40	0
19	b	1	Total C 30 30	0
19	b	1	Total C 40 40	0
19	b	1	Total C 40 40	0
19	b	1	Total C 40 40	0
19	f	1	Total C 40 40	0
19	g	1	Total C 40 40	0
19	g	1	Total C 40 40	0
19	g	1	Total C 40 40	0
19	g	1	Total C 40 40	0
19	h	1	Total C 40 40	0
19	h	1	Total C 40 40	0
19	h	1	Total C 40 40	0
19	i	1	Total C 40 40	0
19	j	1	Total C 40 40	0
19	j	1	Total C 40 40	0
19	j	1	Total C 40 40	0

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Mol	Chain	Residues	Atoms	AltConf
19	k	1	Total C 40 40	0
19	k	1	Total C 40 40	0
19	l	1	Total C 40 40	0
19	l	1	Total C 40 40	0
19	n	1	Total C 40 40	0
19	n	1	Total C 40 40	0
19	n	1	Total C 40 40	0
19	o	1	Total C 40 40	0
19	o	1	Total C 40 40	0
19	o	1	Total C 40 40	0
19	o	1	Total C 40 40	0
19	p	1	Total C 40 40	0
19	p	1	Total C 40 40	0
19	p	1	Total C 40 40	0
19	p	1	Total C 40 40	0
19	q	1	Total C 40 40	0
19	q	1	Total C 40 40	0
19	q	1	Total C 40 40	0
19	r	1	Total C 40 40	0
19	r	1	Total C 40 40	0
19	r	1	Total C 40 40	0

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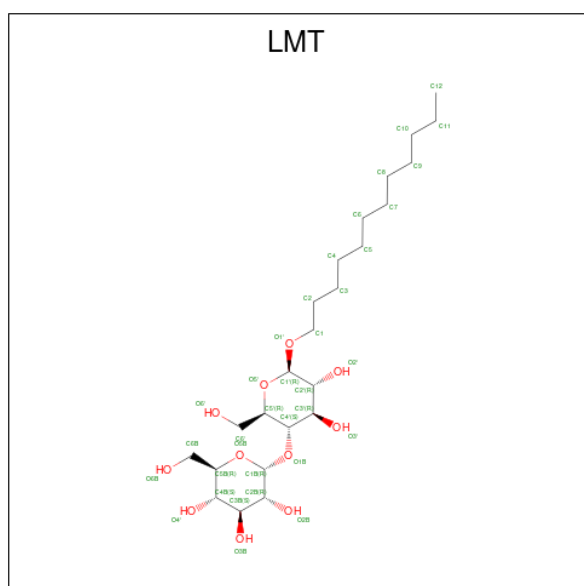
Mol	Chain	Residues	Atoms	AltConf
19	r	1	Total C 40 40	0
19	s	1	Total C 40 40	0
19	s	1	Total C 40 40	0
19	s	1	Total C 40 40	0
19	s	1	Total C 40 40	0
19	t	1	Total C 40 40	0
19	t	1	Total C 40 40	0
19	t	1	Total C 40 40	0
19	u	1	Total C 40 40	0
19	u	1	Total C 40 40	0
19	u	1	Total C 40 40	0
19	u	1	Total C 40 40	0
19	u	1	Total C 40 40	0
19	v	1	Total C 40 40	0
19	v	1	Total C 40 40	0
19	v	1	Total C 40 40	0
19	w	1	Total C 40 40	0
19	w	1	Total C 40 40	0
19	w	1	Total C 40 40	0
19	x	1	Total C 40 40	0
19	x	1	Total C 40 40	0
19	x	1	Total C 40 40	0

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Mol	Chain	Residues	Atoms	AltConf
19	x	1	Total C 40 40	0
19	y	1	Total C 40 40	0
19	y	1	Total C 40 40	0
19	y	1	Total C 40 40	0

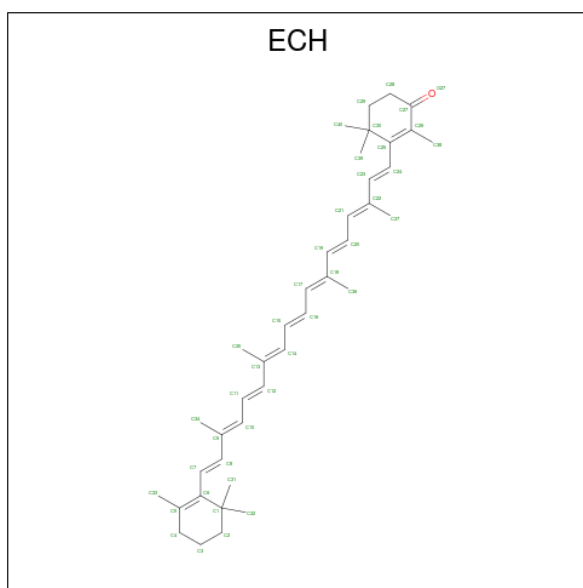
- Molecule 20 is DODECYL-BETA-D-MALTOSE (three-letter code: LMT) (formula:  $C_{24}H_{46}O_{11}$ ).



Mol	Chain	Residues	Atoms	AltConf
20	A	1	Total C O 35 24 11	0
20	H	1	Total C O 35 24 11	0
20	L	1	Total C O 35 24 11	0
20	U	1	Total C O 35 24 11	0
20	a	1	Total C O 35 24 11	0
20	l	1	Total C O 35 24 11	0

- Molecule 21 is beta,beta-caroten-4-one (three-letter code: ECH) (formula:  $C_{40}H_{54}O$ ) (labeled

as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
21	B	1	Total	C	O	0
			41	40	1	
21	G	1	Total	C	O	0
			41	40	1	
21	I	1	Total	C	O	0
			41	40	1	
21	M	1	Total	C	O	0
			41	40	1	
21	R	1	Total	C	O	0
			41	40	1	
21	V	1	Total	C	O	0
			41	40	1	
21	b	1	Total	C	O	0
			41	40	1	
21	i	1	Total	C	O	0
			41	40	1	
21	m	1	Total	C	O	0
			41	40	1	

- Molecule 22 is CALCIUM ION (three-letter code: CA) (formula: Ca).

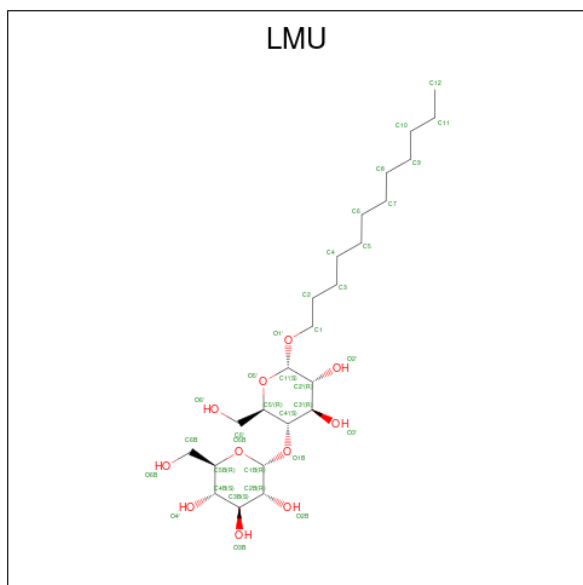
Mol	Chain	Residues	Atoms		AltConf
22	L	1	Total	Ca	0
			1	1	
22	U	1	Total	Ca	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
			Total	Ca	
22	1	1	1	1	0

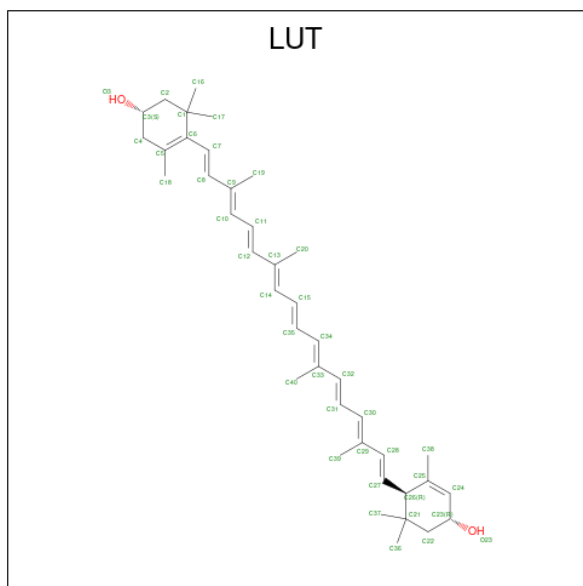
- Molecule 23 is DODECYL-ALPHA-D-MALTOSE (three-letter code: LMU) (formula:  $C_{24}H_{46}O_{11}$ ).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
23	Y	1	35	24	11	0
23	Z	1	35	24	11	0
23	g	1	35	24	11	0
23	p	1	35	24	11	0
23	q	1	35	24	11	0
23	r	1	35	24	11	0
23	s	1	35	24	11	0
23	w	1	35	24	11	0
23	x	1	35	24	11	0

- Molecule 24 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3

,3'-DIOL (three-letter code: LUT) (formula: C<sub>40</sub>H<sub>56</sub>O<sub>2</sub>).



Mol	Chain	Residues	Atoms		AltConf
24	Z	1	Total	C O	0
			42	40 2	
24	q	1	Total	C O	0
			42	40 2	
24	w	1	Total	C O	0
			42	40 2	

- Molecule 25 is water.

Mol	Chain	Residues	Atoms		AltConf
25	A	56	Total	O	0
			56	56	
25	B	52	Total	O	0
			52	52	
25	C	7	Total	O	0
			7	7	
25	D	3	Total	O	0
			3	3	
25	E	4	Total	O	0
			4	4	
25	F	3	Total	O	0
			3	3	
25	G	55	Total	O	0
			55	55	
25	H	52	Total	O	0
			52	52	

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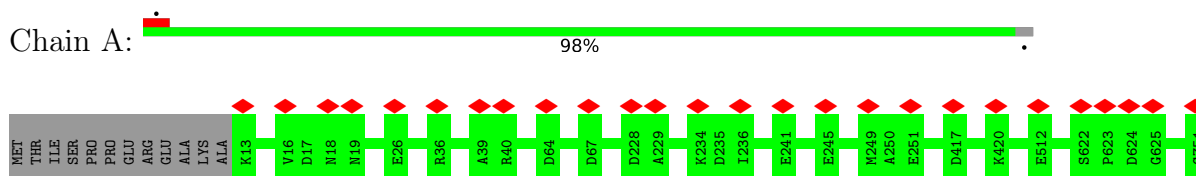
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Mol	Chain	Residues	Atoms		AltConf
25	I	1	Total 1	O 1	0
25	J	1	Total 1	O 1	0
25	L	5	Total 5	O 5	0
25	N	13	Total 13	O 13	0
25	O	11	Total 11	O 11	0
25	P	6	Total 6	O 6	0
25	Q	4	Total 4	O 4	0
25	R	1	Total 1	O 1	0
25	S	3	Total 3	O 3	0
25	U	3	Total 3	O 3	0
25	a	57	Total 57	O 57	0
25	b	74	Total 74	O 74	0
25	c	17	Total 17	O 17	0
25	d	7	Total 7	O 7	0
25	e	10	Total 10	O 10	0
25	f	7	Total 7	O 7	0
25	i	1	Total 1	O 1	0
25	j	1	Total 1	O 1	0
25	k	1	Total 1	O 1	0
25	l	6	Total 6	O 6	0

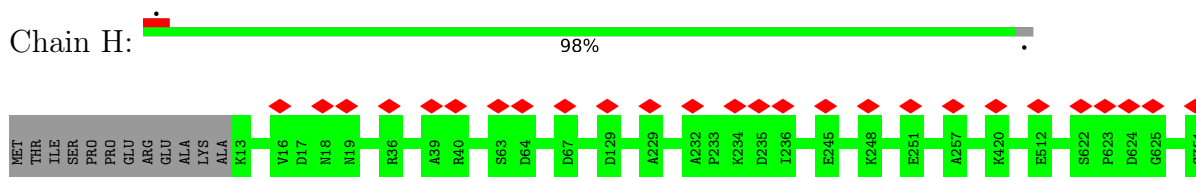
### 3 Residue-property plots [i](#)

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

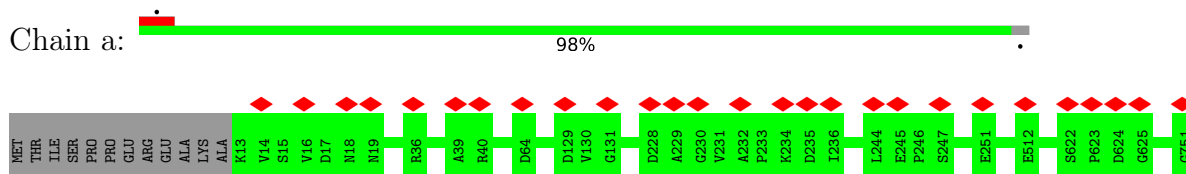
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1



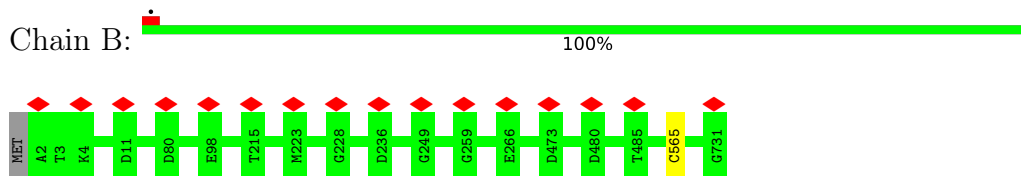
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1



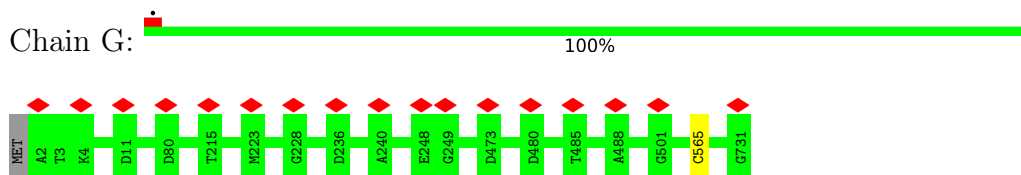
- Molecule 1: Photosystem I P700 chlorophyll a apoprotein A1



- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

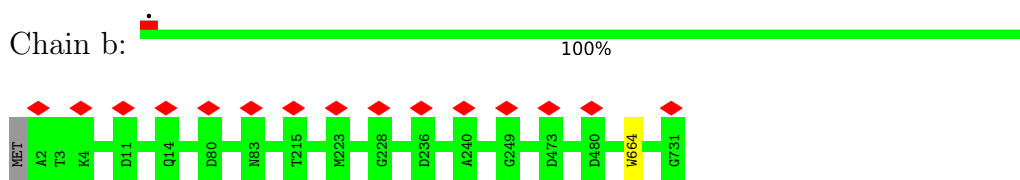


- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2

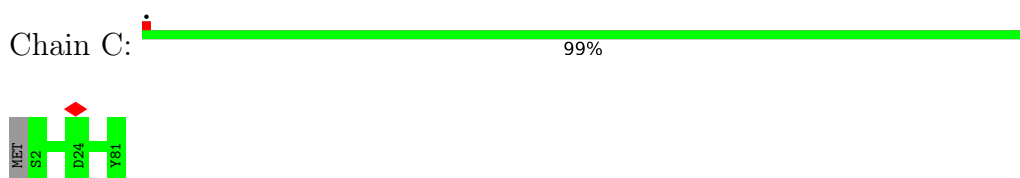




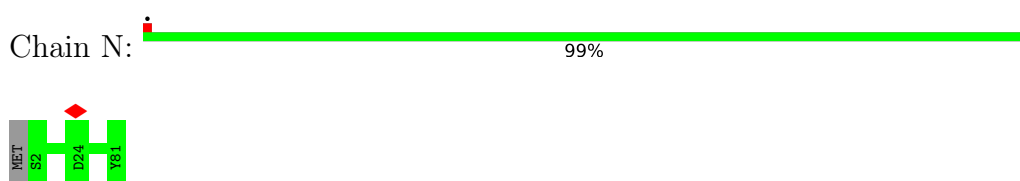
- Molecule 2: Photosystem I P700 chlorophyll a apoprotein A2



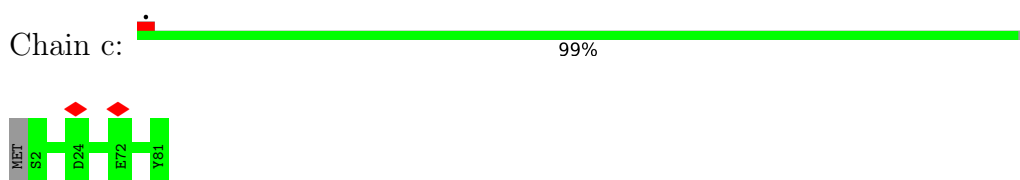
- Molecule 3: Photosystem I iron-sulfur center



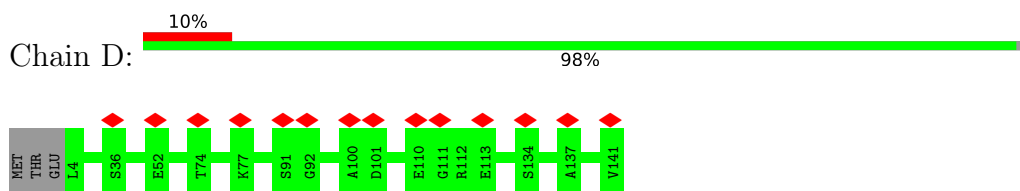
- Molecule 3: Photosystem I iron-sulfur center



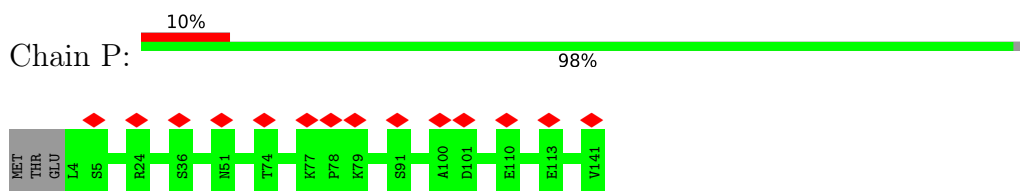
- Molecule 3: Photosystem I iron-sulfur center



- Molecule 4: Photosystem I reaction center subunit II

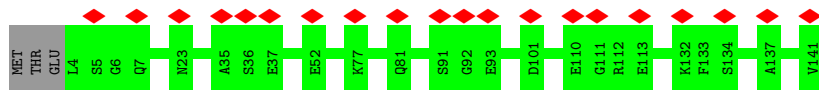


- Molecule 4: Photosystem I reaction center subunit II

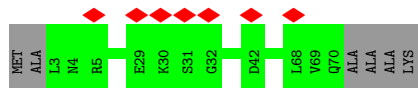


- Molecule 4: Photosystem I reaction center subunit II

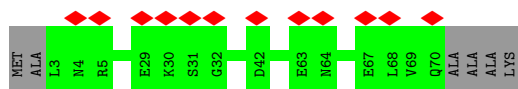




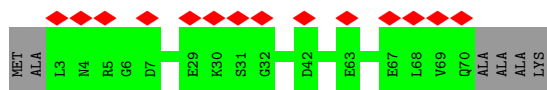
• Molecule 5: Photosystem I reaction center subunit IV



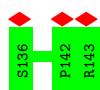
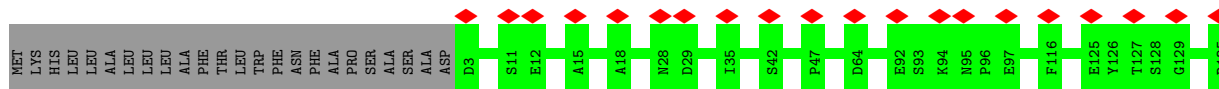
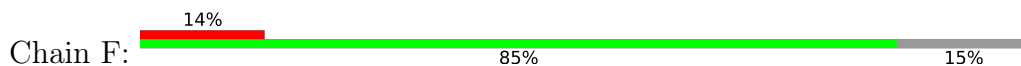
• Molecule 5: Photosystem I reaction center subunit IV



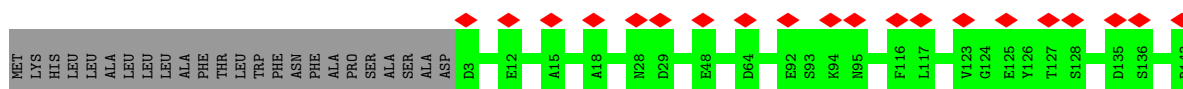
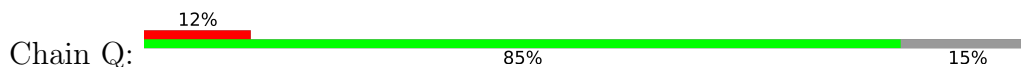
• Molecule 5: Photosystem I reaction center subunit IV



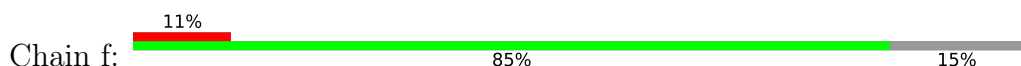
• Molecule 6: Photosystem I reaction center subunit III

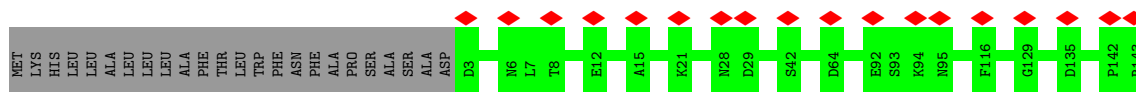


• Molecule 6: Photosystem I reaction center subunit III

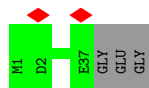
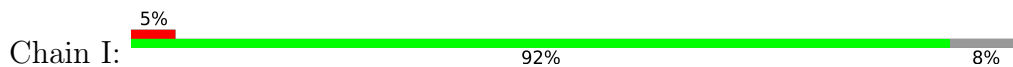


• Molecule 6: Photosystem I reaction center subunit III

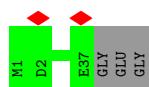




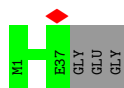
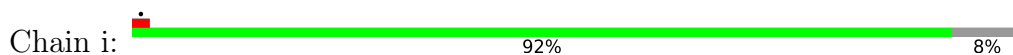
• Molecule 7: Photosystem I reaction center subunit VIII



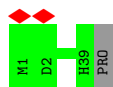
• Molecule 7: Photosystem I reaction center subunit VIII



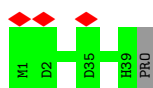
• Molecule 7: Photosystem I reaction center subunit VIII



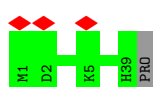
• Molecule 8: Photosystem I reaction center subunit IX



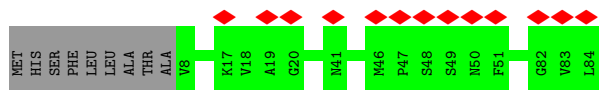
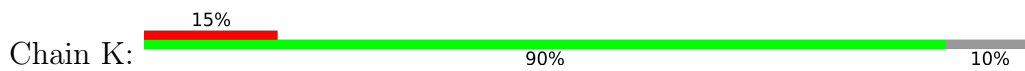
• Molecule 8: Photosystem I reaction center subunit IX



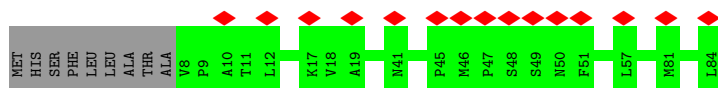
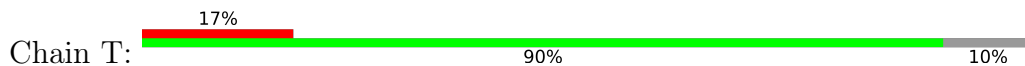
• Molecule 8: Photosystem I reaction center subunit IX



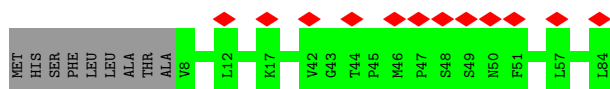
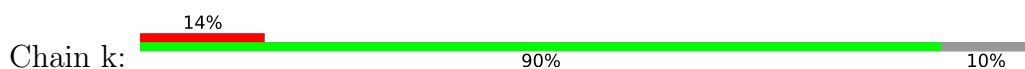
• Molecule 9: Photosystem I reaction center subunit PsaK 1



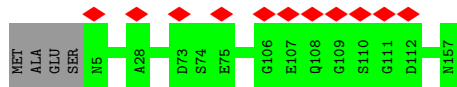
• Molecule 9: Photosystem I reaction center subunit PsaK 1



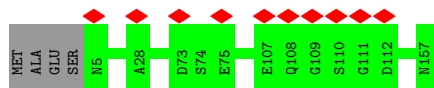
• Molecule 9: Photosystem I reaction center subunit PsaK 1



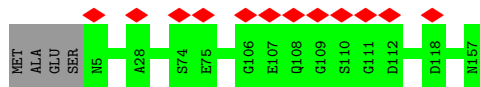
• Molecule 10: Photosystem I reaction center subunit XI



• Molecule 10: Photosystem I reaction center subunit XI



• Molecule 10: Photosystem I reaction center subunit XI



• Molecule 11: Photosystem I reaction center subunit XII



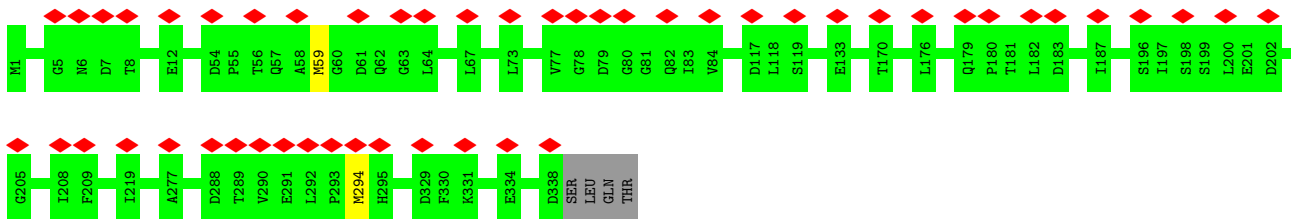
- Molecule 11: Photosystem I reaction center subunit XII



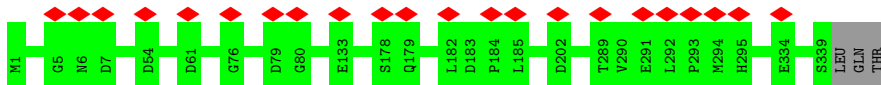
- Molecule 11: Photosystem I reaction center subunit XII



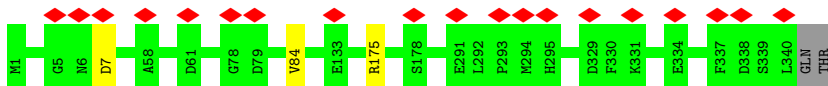
- Molecule 12: Iron stress-induced chlorophyll-binding protein



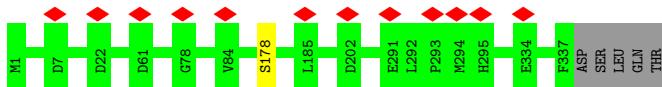
- Molecule 12: Iron stress-induced chlorophyll-binding protein



- Molecule 12: Iron stress-induced chlorophyll-binding protein

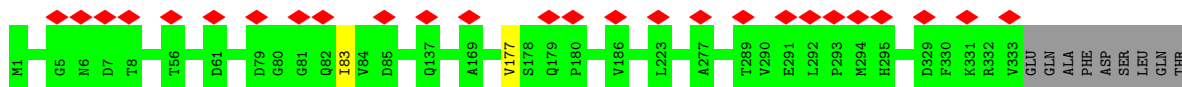


- Molecule 12: Iron stress-induced chlorophyll-binding protein



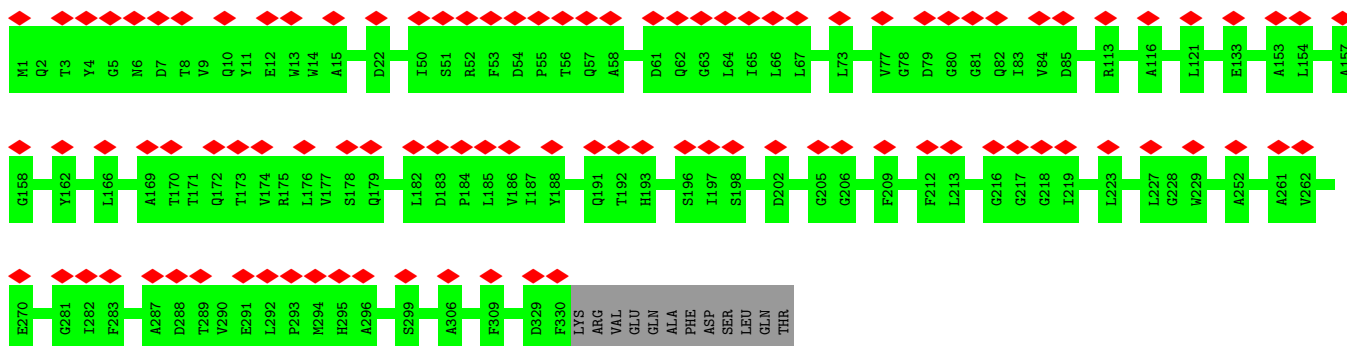
- Molecule 12: Iron stress-induced chlorophyll-binding protein

Chain g:  8% 97%



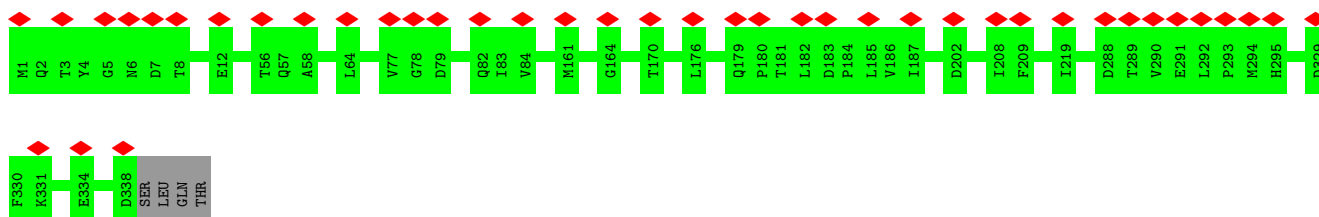
- Molecule 12: Iron stress-induced chlorophyll-binding protein

Chain h:  29% 96%



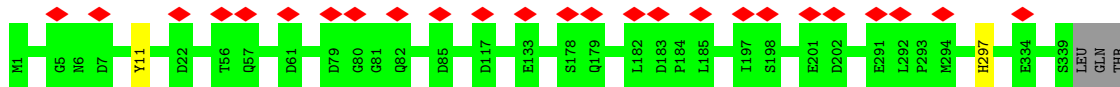
- Molecule 12: Iron stress-induced chlorophyll-binding protein

Chain n:  12% 99%



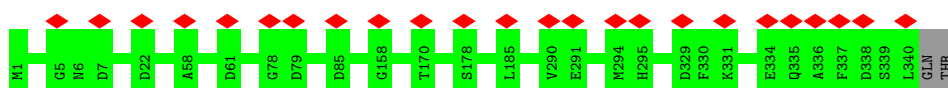
- Molecule 12: Iron stress-induced chlorophyll-binding protein

Chain o:  7% 99%



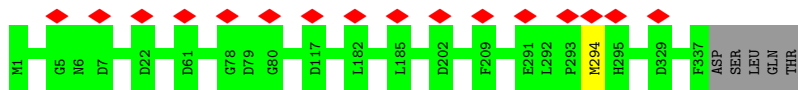
- Molecule 12: Iron stress-induced chlorophyll-binding protein

Chain p:  7% 99%

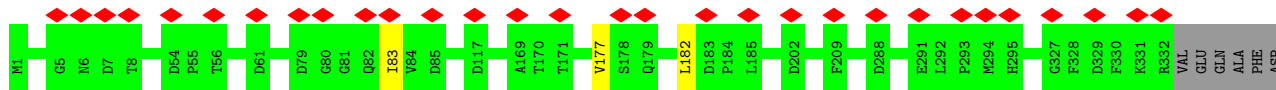


- Molecule 12: Iron stress-induced chlorophyll-binding protein

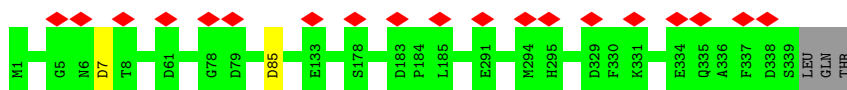
Chain q:  5% 98%



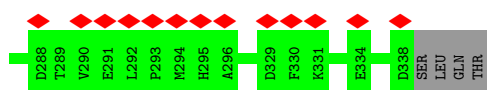
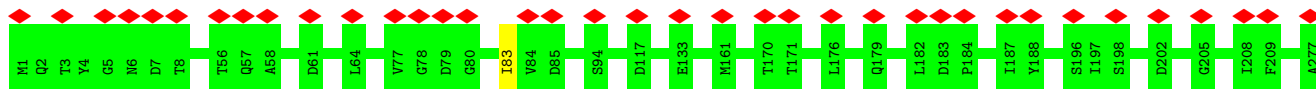
• Molecule 12: Iron stress-induced chlorophyll-binding protein



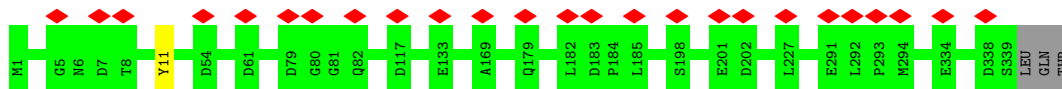
• Molecule 12: Iron stress-induced chlorophyll-binding protein



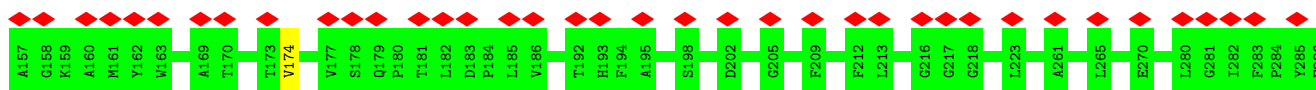
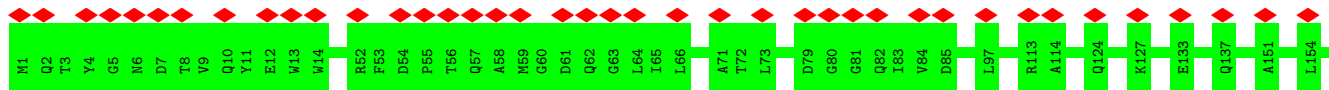
• Molecule 12: Iron stress-induced chlorophyll-binding protein

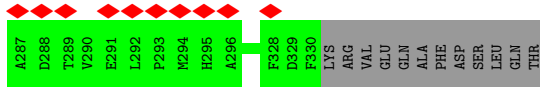


• Molecule 12: Iron stress-induced chlorophyll-binding protein

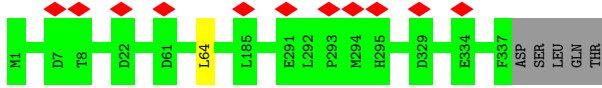


• Molecule 12: Iron stress-induced chlorophyll-binding protein

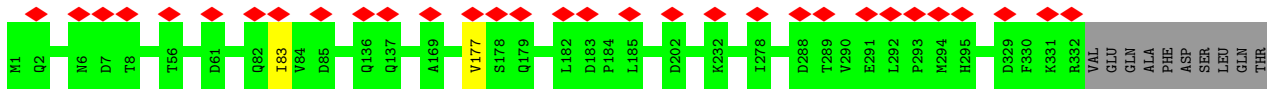




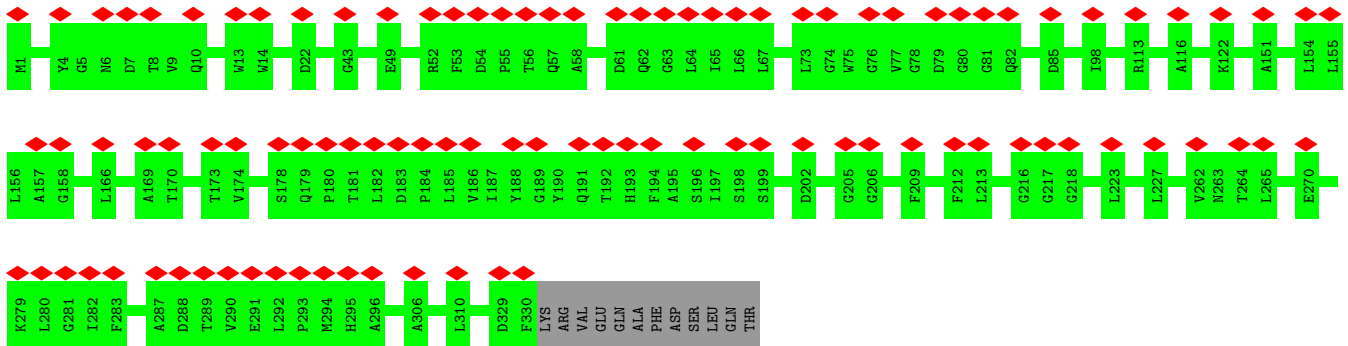
• Molecule 12: Iron stress-induced chlorophyll-binding protein



• Molecule 12: Iron stress-induced chlorophyll-binding protein



• Molecule 12: Iron stress-induced chlorophyll-binding protein





## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	143739	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	1.6	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	70.466	Depositor
Minimum map value	-42.667	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	2.305	Depositor
Recommended contour level	9.2	Depositor
Map size ( $\text{\AA}$ )	419.99997, 419.99997, 419.99997	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.05, 1.05, 1.05	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: BCR, CL0, LMT, CA, CLA, LMG, PQN, SF4, ECH, LMU, LUT, LHG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.31	0/5985	0.50	0/8158
1	H	0.31	0/5985	0.51	0/8158
1	a	0.31	0/5985	0.51	0/8158
2	B	0.31	0/5986	0.51	1/8185 (0.0%)
2	G	0.31	1/5986 (0.0%)	0.51	0/8185
2	b	0.31	0/5986	0.51	0/8185
3	C	0.30	0/610	0.58	0/826
3	N	0.31	0/610	0.58	0/826
3	c	0.31	0/610	0.61	0/826
4	D	0.28	0/1102	0.55	0/1485
4	P	0.28	0/1102	0.53	0/1485
4	d	0.29	0/1102	0.53	0/1485
5	E	0.29	0/546	0.54	0/738
5	O	0.28	0/546	0.51	0/738
5	e	0.29	0/546	0.55	0/738
6	F	0.28	0/1130	0.54	0/1535
6	Q	0.28	0/1130	0.54	0/1535
6	f	0.29	0/1130	0.54	0/1535
7	I	0.32	0/304	0.57	0/416
7	R	0.34	0/304	0.59	0/416
7	i	0.31	0/304	0.56	0/416
8	J	0.30	0/319	0.53	0/431
8	S	0.30	0/319	0.54	0/431
8	j	0.32	0/319	0.52	0/431
9	K	0.27	0/549	0.47	0/745
9	T	0.27	0/549	0.51	0/745
9	k	0.27	0/549	0.48	0/745
10	L	0.29	0/1180	0.52	0/1603
10	U	0.30	0/1180	0.53	0/1603
10	l	0.30	0/1180	0.53	0/1603
11	M	0.26	0/241	0.50	0/326
11	V	0.27	0/241	0.58	0/326

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
11	m	0.29	0/241	0.53	0/326
12	W	0.28	0/2691	0.52	0/3678
12	X	0.28	0/2712	0.51	0/3703
12	Y	0.30	0/2712	0.52	0/3704
12	Z	0.29	0/2693	0.50	0/3678
12	g	0.28	0/2662	0.51	0/3636
12	h	0.28	0/2627	0.51	0/3592
12	n	0.27	0/2691	0.48	0/3678
12	o	0.28	0/2712	0.52	0/3703
12	p	0.29	0/2712	0.51	0/3704
12	q	0.28	0/2693	0.49	0/3678
12	r	0.29	0/2655	0.53	1/3626 (0.0%)
12	s	0.29	0/2707	0.52	0/3697
12	t	0.27	0/2691	0.50	0/3678
12	u	0.28	0/2712	0.50	0/3703
12	v	0.27	0/2627	0.50	0/3592
12	w	0.28	0/2693	0.51	1/3678 (0.0%)
12	x	0.28	0/2655	0.52	0/3626
12	y	0.27	0/2621	0.51	0/3585
All	All	0.29	1/102122 (0.0%)	0.51	3/139283 (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	b	0	1
12	Y	0	1
All	All	0	2

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	G	565	CYS	CB-SG	-5.05	1.73	1.81

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	565	CYS	CA-CB-SG	6.14	125.06	114.00
12	r	182	LEU	CA-CB-CG	5.39	127.69	115.30
12	w	64	LEU	CA-CB-CG	5.13	127.09	115.30

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
12	Y	84	VAL	Peptide
2	b	664	TRP	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	737/751 (98%)	712 (97%)	25 (3%)	0	100	100
1	H	737/751 (98%)	711 (96%)	26 (4%)	0	100	100
1	a	737/751 (98%)	711 (96%)	26 (4%)	0	100	100
2	B	728/731 (100%)	713 (98%)	15 (2%)	0	100	100
2	G	728/731 (100%)	712 (98%)	16 (2%)	0	100	100
2	b	728/731 (100%)	711 (98%)	17 (2%)	0	100	100
3	C	78/81 (96%)	78 (100%)	0	0	100	100
3	N	78/81 (96%)	77 (99%)	1 (1%)	0	100	100
3	c	78/81 (96%)	77 (99%)	1 (1%)	0	100	100
4	D	136/141 (96%)	126 (93%)	10 (7%)	0	100	100
4	P	136/141 (96%)	126 (93%)	10 (7%)	0	100	100
4	d	136/141 (96%)	130 (96%)	6 (4%)	0	100	100
5	E	66/74 (89%)	65 (98%)	1 (2%)	0	100	100
5	O	66/74 (89%)	64 (97%)	2 (3%)	0	100	100
5	e	66/74 (89%)	64 (97%)	2 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	F	139/165 (84%)	135 (97%)	4 (3%)	0	100	100
6	Q	139/165 (84%)	134 (96%)	5 (4%)	0	100	100
6	f	139/165 (84%)	134 (96%)	5 (4%)	0	100	100
7	I	35/40 (88%)	34 (97%)	1 (3%)	0	100	100
7	R	35/40 (88%)	34 (97%)	1 (3%)	0	100	100
7	i	35/40 (88%)	34 (97%)	1 (3%)	0	100	100
8	J	37/40 (92%)	37 (100%)	0	0	100	100
8	S	37/40 (92%)	37 (100%)	0	0	100	100
8	j	37/40 (92%)	37 (100%)	0	0	100	100
9	K	75/86 (87%)	74 (99%)	1 (1%)	0	100	100
9	T	75/86 (87%)	74 (99%)	1 (1%)	0	100	100
9	k	75/86 (87%)	71 (95%)	4 (5%)	0	100	100
10	L	151/157 (96%)	150 (99%)	1 (1%)	0	100	100
10	U	151/157 (96%)	148 (98%)	3 (2%)	0	100	100
10	l	151/157 (96%)	147 (97%)	4 (3%)	0	100	100
11	M	29/31 (94%)	29 (100%)	0	0	100	100
11	V	29/31 (94%)	29 (100%)	0	0	100	100
11	m	29/31 (94%)	29 (100%)	0	0	100	100
12	W	336/342 (98%)	317 (94%)	18 (5%)	1 (0%)	41	64
12	X	337/342 (98%)	318 (94%)	19 (6%)	0	100	100
12	Y	338/342 (99%)	320 (95%)	17 (5%)	1 (0%)	41	64
12	Z	335/342 (98%)	326 (97%)	8 (2%)	1 (0%)	41	64
12	g	331/342 (97%)	304 (92%)	25 (8%)	2 (1%)	25	47
12	h	328/342 (96%)	308 (94%)	20 (6%)	0	100	100
12	n	336/342 (98%)	322 (96%)	14 (4%)	0	100	100
12	o	337/342 (98%)	318 (94%)	17 (5%)	2 (1%)	25	47
12	p	338/342 (99%)	317 (94%)	21 (6%)	0	100	100
12	q	335/342 (98%)	326 (97%)	9 (3%)	0	100	100
12	r	330/342 (96%)	316 (96%)	12 (4%)	2 (1%)	25	47
12	s	337/342 (98%)	321 (95%)	14 (4%)	2 (1%)	25	47
12	t	336/342 (98%)	319 (95%)	16 (5%)	1 (0%)	41	64

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	u	337/342 (98%)	322 (96%)	14 (4%)	1 (0%)	41	64
12	v	328/342 (96%)	312 (95%)	15 (5%)	1 (0%)	41	64
12	w	335/342 (98%)	322 (96%)	13 (4%)	0	100	100
12	x	330/342 (96%)	311 (94%)	17 (5%)	2 (1%)	25	47
12	y	328/342 (96%)	307 (94%)	21 (6%)	0	100	100
All	All	12645/13047 (97%)	12150 (96%)	479 (4%)	16 (0%)	54	75

5 of 16 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	W	59	MET
12	v	174	VAL
12	s	85	ASP
12	o	11	TYR
12	s	7	ASP

### 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	593/603 (98%)	593 (100%)	0	100	100
1	H	593/603 (98%)	593 (100%)	0	100	100
1	a	593/603 (98%)	593 (100%)	0	100	100
2	B	582/583 (100%)	582 (100%)	0	100	100
2	G	582/583 (100%)	582 (100%)	0	100	100
2	b	582/583 (100%)	582 (100%)	0	100	100
3	C	68/69 (99%)	68 (100%)	0	100	100
3	N	68/69 (99%)	68 (100%)	0	100	100
3	c	68/69 (99%)	68 (100%)	0	100	100
4	D	113/116 (97%)	113 (100%)	0	100	100
4	P	113/116 (97%)	113 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	d	113/116 (97%)	113 (100%)	0	100	100
5	E	58/60 (97%)	58 (100%)	0	100	100
5	O	58/60 (97%)	58 (100%)	0	100	100
5	e	58/60 (97%)	58 (100%)	0	100	100
6	F	118/137 (86%)	118 (100%)	0	100	100
6	Q	118/137 (86%)	118 (100%)	0	100	100
6	f	118/137 (86%)	118 (100%)	0	100	100
7	I	31/32 (97%)	31 (100%)	0	100	100
7	R	31/32 (97%)	31 (100%)	0	100	100
7	i	31/32 (97%)	31 (100%)	0	100	100
8	J	34/35 (97%)	34 (100%)	0	100	100
8	S	34/35 (97%)	34 (100%)	0	100	100
8	j	34/35 (97%)	34 (100%)	0	100	100
9	K	55/62 (89%)	55 (100%)	0	100	100
9	T	55/62 (89%)	55 (100%)	0	100	100
9	k	55/62 (89%)	55 (100%)	0	100	100
10	L	115/118 (98%)	115 (100%)	0	100	100
10	U	115/118 (98%)	115 (100%)	0	100	100
10	l	115/118 (98%)	115 (100%)	0	100	100
11	M	25/25 (100%)	25 (100%)	0	100	100
11	V	25/25 (100%)	25 (100%)	0	100	100
11	m	25/25 (100%)	25 (100%)	0	100	100
12	W	252/260 (97%)	251 (100%)	1 (0%)	91	97
12	X	256/260 (98%)	256 (100%)	0	100	100
12	Y	255/260 (98%)	254 (100%)	1 (0%)	91	97
12	Z	253/260 (97%)	253 (100%)	0	100	100
12	g	251/260 (96%)	251 (100%)	0	100	100
12	h	246/260 (95%)	246 (100%)	0	100	100
12	n	252/260 (97%)	252 (100%)	0	100	100
12	o	256/260 (98%)	256 (100%)	0	100	100
12	p	255/260 (98%)	255 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	q	253/260 (97%)	252 (100%)	1 (0%)	91	97
12	r	250/260 (96%)	250 (100%)	0	100	100
12	s	255/260 (98%)	255 (100%)	0	100	100
12	t	252/260 (97%)	252 (100%)	0	100	100
12	u	256/260 (98%)	256 (100%)	0	100	100
12	v	246/260 (95%)	246 (100%)	0	100	100
12	w	253/260 (97%)	253 (100%)	0	100	100
12	x	250/260 (96%)	250 (100%)	0	100	100
12	y	245/260 (94%)	245 (100%)	0	100	100
All	All	9912/10200 (97%)	9909 (100%)	3 (0%)	100	100

All (3) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
12	W	294	MET
12	Y	175	ARG
12	q	294	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 74 such sidechains are listed below:

Mol	Chain	Res	Type
12	s	136	GLN
12	x	62	GLN
12	t	191	GLN
12	v	137	GLN
9	T	26	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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



## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 798 ligands modelled in this entry, 3 are monoatomic - leaving 795 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
16	CLA	H	1116	-	54,62,73	1.13	4 (7%)	62,99,113	1.08	4 (6%)
14	LMG	A	4101	-	46,46,55	0.93	2 (4%)	54,54,63	1.22	4 (7%)
16	CLA	a	1140	-	65,73,73	1.02	3 (4%)	76,113,113	1.04	3 (3%)
16	CLA	y	507	-	65,73,73	1.02	3 (4%)	76,113,113	0.91	2 (2%)
19	BCR	k	4005	-	41,41,41	0.88	0	56,56,56	1.24	5 (8%)
23	LMU	r	606	-	36,36,36	0.86	0	47,47,47	1.09	2 (4%)
16	CLA	U	1502	-	60,68,73	1.03	3 (5%)	70,107,113	1.14	3 (4%)
16	CLA	b	1239	-	65,73,73	1.00	3 (4%)	76,113,113	1.07	6 (7%)
16	CLA	j	1303	-	38,45,73	1.30	4 (10%)	43,78,113	1.07	2 (4%)
16	CLA	B	1220	-	53,61,73	1.14	3 (5%)	61,98,113	1.13	6 (9%)
16	CLA	Y	515	-	65,73,73	1.00	3 (4%)	76,113,113	1.07	5 (6%)
16	CLA	r	503	-	46,54,73	1.19	3 (6%)	53,90,113	1.05	2 (3%)
16	CLA	L	1502	-	60,68,73	1.04	3 (5%)	70,107,113	1.16	3 (4%)
16	CLA	B	1232	-	45,53,73	1.21	3 (6%)	52,89,113	1.29	5 (9%)
16	CLA	A	1117	-	65,73,73	1.01	3 (4%)	76,113,113	1.21	5 (6%)
16	CLA	n	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.06	6 (7%)
16	CLA	x	508	12	55,63,73	1.10	3 (5%)	64,101,113	0.97	2 (3%)
16	CLA	y	506	-	60,68,73	1.07	3 (5%)	70,107,113	1.14	5 (7%)
16	CLA	Q	1302	6	46,54,73	1.20	3 (6%)	53,90,113	1.04	2 (3%)
16	CLA	H	1130	-	60,68,73	1.06	3 (5%)	70,107,113	0.97	4 (5%)
16	CLA	Q	1301	25	45,53,73	1.24	3 (6%)	52,89,113	1.15	4 (7%)
16	CLA	u	511	-	65,73,73	1.00	3 (4%)	76,113,113	1.15	4 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	g	516	-	46,54,73	1.20	3 (6%)	53,90,113	1.22	3 (5%)
16	CLA	A	1128	-	65,73,73	1.00	4 (6%)	76,113,113	1.18	6 (7%)
16	CLA	y	501	-	46,54,73	1.20	3 (6%)	53,90,113	1.25	4 (7%)
16	CLA	Z	501	-	50,58,73	1.15	3 (6%)	58,95,113	1.04	4 (6%)
19	BCR	B	4017	-	41,41,41	0.92	0	56,56,56	1.21	5 (8%)
16	CLA	o	515	-	65,73,73	1.00	3 (4%)	76,113,113	1.07	4 (5%)
19	BCR	Z	604	-	41,41,41	0.90	0	56,56,56	1.22	7 (12%)
18	SF4	A	3001	-	0,12,12	-	-	-	-	-
16	CLA	x	515	-	65,73,73	1.00	3 (4%)	76,113,113	1.18	5 (6%)
16	CLA	t	508	12	55,63,73	1.10	3 (5%)	64,101,113	0.99	2 (3%)
16	CLA	o	504	-	60,68,73	1.07	3 (5%)	70,107,113	1.05	3 (4%)
16	CLA	H	1136	-	65,73,73	1.02	3 (4%)	76,113,113	0.99	2 (2%)
13	LHG	u	605	-	26,26,48	0.82	0	29,32,54	1.22	2 (6%)
16	CLA	b	1204	-	65,73,73	1.02	3 (4%)	76,113,113	0.97	2 (2%)
19	BCR	R	4018	-	41,41,41	0.88	0	56,56,56	1.19	7 (12%)
16	CLA	G	1209	-	45,53,73	1.24	3 (6%)	52,89,113	1.11	3 (5%)
16	CLA	x	501	-	50,58,73	1.16	3 (6%)	58,95,113	1.25	3 (5%)
16	CLA	G	1203	-	65,73,73	1.02	3 (4%)	76,113,113	1.13	4 (5%)
16	CLA	h	501	-	46,54,73	1.21	3 (6%)	53,90,113	1.19	4 (7%)
16	CLA	B	1228	-	55,63,73	1.10	3 (5%)	64,101,113	1.05	3 (4%)
16	CLA	B	1202	-	65,73,73	1.03	3 (4%)	76,113,113	0.97	2 (2%)
16	CLA	H	1109	16	65,73,73	1.02	3 (4%)	76,113,113	1.09	4 (5%)
16	CLA	B	1217	-	45,53,73	1.22	3 (6%)	52,89,113	1.05	3 (5%)
16	CLA	n	505	-	65,73,73	1.02	4 (6%)	76,113,113	1.22	5 (6%)
16	CLA	G	1208	-	45,53,73	1.22	3 (6%)	52,89,113	1.19	4 (7%)
14	LMG	H	4101	-	46,46,55	0.92	2 (4%)	54,54,63	1.22	4 (7%)
16	CLA	X	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.07	4 (5%)
16	CLA	b	1201	-	54,62,73	1.11	3 (5%)	62,99,113	1.16	3 (4%)
13	LHG	o	605	-	26,26,48	0.84	0	29,32,54	1.22	2 (6%)
19	BCR	a	4011	-	41,41,41	0.92	0	56,56,56	1.24	5 (8%)
16	CLA	Z	504	-	65,73,73	1.05	4 (6%)	76,113,113	1.09	6 (7%)
19	BCR	n	603	-	41,41,41	0.87	0	56,56,56	1.18	4 (7%)
16	CLA	q	507	-	65,73,73	1.03	3 (4%)	76,113,113	1.10	3 (3%)
16	CLA	G	1235	-	62,70,73	1.06	3 (4%)	72,109,113	1.20	7 (9%)
19	BCR	v	604	-	41,41,41	0.89	0	56,56,56	1.26	9 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	a	1103	-	65,73,73	1.01	3 (4%)	76,113,113	1.02	2 (2%)
19	BCR	r	603	-	41,41,41	0.86	0	56,56,56	1.18	6 (10%)
16	CLA	g	503	-	46,54,73	1.19	3 (6%)	53,90,113	1.05	2 (3%)
19	BCR	u	603	-	41,41,41	0.92	0	56,56,56	1.32	7 (12%)
16	CLA	W	505	-	65,73,73	1.03	3 (4%)	76,113,113	1.16	5 (6%)
16	CLA	G	1228	-	55,63,73	1.10	3 (5%)	64,101,113	1.06	3 (4%)
19	BCR	G	4009	-	30,30,41	0.88	0	39,39,56	1.31	4 (10%)
16	CLA	A	1126	-	65,73,73	1.00	3 (4%)	76,113,113	1.18	3 (3%)
16	CLA	T	4002	-	45,53,73	1.23	3 (6%)	52,89,113	1.00	2 (3%)
16	CLA	y	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.15	3 (3%)
16	CLA	h	502	-	50,58,73	1.16	3 (6%)	58,95,113	1.00	3 (5%)
16	CLA	h	516	-	46,54,73	1.21	3 (6%)	53,90,113	1.12	4 (7%)
16	CLA	G	1222	25	50,58,73	1.16	4 (8%)	58,95,113	1.13	6 (10%)
16	CLA	y	513	-	46,54,73	1.22	3 (6%)	53,90,113	0.98	2 (3%)
20	LMT	L	4101	-	36,36,36	1.19	5 (13%)	47,47,47	1.13	3 (6%)
16	CLA	Z	512	12	65,73,73	1.02	4 (6%)	76,113,113	1.13	4 (5%)
16	CLA	w	516	-	46,54,73	1.20	3 (6%)	53,90,113	1.01	3 (5%)
14	LMG	B	848	-	43,43,55	0.87	0	51,51,63	1.27	6 (11%)
16	CLA	G	1229	-	58,66,73	1.10	3 (5%)	67,104,113	1.11	4 (5%)
16	CLA	A	1120	-	49,57,73	1.14	3 (6%)	55,93,113	1.17	5 (9%)
16	CLA	b	1021	-	65,73,73	0.99	3 (4%)	76,113,113	1.09	4 (5%)
16	CLA	b	1223	-	65,73,73	1.05	3 (4%)	76,113,113	1.08	2 (2%)
16	CLA	w	517	12	55,63,73	1.13	4 (7%)	64,101,113	1.04	1 (1%)
16	CLA	l	1501	10	60,68,73	1.05	3 (5%)	70,107,113	1.01	2 (2%)
16	CLA	Y	514	-	50,58,73	1.15	3 (6%)	58,95,113	1.12	4 (6%)
23	LMU	q	605	-	36,36,36	0.83	0	47,47,47	1.12	4 (8%)
19	BCR	s	604	-	41,41,41	0.91	0	56,56,56	1.21	5 (8%)
16	CLA	G	1216	25	47,55,73	1.17	3 (6%)	54,91,113	1.33	3 (5%)
19	BCR	b	4014	-	41,41,41	0.96	0	56,56,56	1.43	8 (14%)
16	CLA	b	1012	25	55,63,73	1.15	3 (5%)	64,101,113	1.26	6 (9%)
16	CLA	Y	509	-	60,68,73	1.07	3 (5%)	70,107,113	1.06	4 (5%)
16	CLA	Z	503	-	46,54,73	1.24	4 (8%)	53,90,113	1.06	2 (3%)
16	CLA	a	1109	16	65,73,73	1.01	3 (4%)	76,113,113	1.15	5 (6%)
16	CLA	x	511	-	65,73,73	1.01	4 (6%)	76,113,113	0.96	3 (3%)
14	LMG	a	4101	-	46,46,55	0.91	2 (4%)	54,54,63	1.21	4 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	p	511	-	65,73,73	1.01	3 (4%)	76,113,113	1.12	5 (6%)
16	CLA	s	509	-	60,68,73	1.07	3 (5%)	70,107,113	1.04	4 (5%)
16	CLA	b	1240	13	46,54,73	1.22	3 (6%)	53,90,113	1.15	2 (3%)
19	BCR	p	603	-	41,41,41	0.89	0	56,56,56	1.19	5 (8%)
16	CLA	n	501	-	50,58,73	1.16	3 (6%)	58,95,113	1.21	5 (8%)
16	CLA	t	501	-	50,58,73	1.15	3 (6%)	58,95,113	1.15	3 (5%)
16	CLA	A	1103	-	65,73,73	1.01	3 (4%)	76,113,113	1.03	1 (1%)
16	CLA	b	1238	25	65,73,73	1.01	3 (4%)	76,113,113	1.01	5 (6%)
16	CLA	A	1122	-	59,67,73	1.09	3 (5%)	68,105,113	1.02	3 (4%)
15	CL0	H	1011	-	65,73,73	1.01	4 (6%)	76,113,113	1.08	6 (7%)
19	BCR	Y	601	-	41,41,41	0.89	0	56,56,56	1.23	6 (10%)
13	LHG	s	605	-	31,31,48	0.77	1 (3%)	34,37,54	1.25	4 (11%)
16	CLA	k	4004	-	55,63,73	1.12	3 (5%)	64,101,113	0.97	4 (6%)
16	CLA	q	501	-	50,58,73	1.15	3 (6%)	58,95,113	1.03	3 (5%)
16	CLA	h	517	-	55,63,73	1.14	3 (5%)	64,101,113	1.02	4 (6%)
16	CLA	a	1108	-	45,53,73	1.21	3 (6%)	52,89,113	1.25	3 (5%)
16	CLA	h	510	-	65,73,73	1.02	3 (4%)	76,113,113	0.96	4 (5%)
16	CLA	A	1135	-	51,59,73	1.17	4 (7%)	59,96,113	1.17	4 (6%)
23	LMU	g	606	-	36,36,36	0.86	0	47,47,47	1.30	5 (10%)
16	CLA	s	507	12	65,73,73	1.03	3 (4%)	76,113,113	0.92	2 (2%)
16	CLA	a	1111	-	55,63,73	1.14	3 (5%)	64,101,113	1.07	2 (3%)
16	CLA	v	509	-	65,73,73	1.03	4 (6%)	76,113,113	1.03	5 (6%)
16	CLA	G	1205	-	65,73,73	1.00	4 (6%)	76,113,113	1.12	4 (5%)
19	BCR	s	601	-	41,41,41	0.90	0	56,56,56	1.27	6 (10%)
16	CLA	u	508	12	55,63,73	1.11	3 (5%)	64,101,113	0.99	2 (3%)
16	CLA	q	513	-	50,58,73	1.16	3 (6%)	58,95,113	1.04	2 (3%)
20	LMT	l	4101	-	36,36,36	1.19	5 (13%)	47,47,47	1.08	1 (2%)
19	BCR	a	4008	-	41,41,41	0.95	1 (2%)	56,56,56	1.33	5 (8%)
16	CLA	q	505	-	65,73,73	1.03	4 (6%)	76,113,113	1.22	8 (10%)
16	CLA	H	1126	-	65,73,73	1.02	3 (4%)	76,113,113	1.18	4 (5%)
16	CLA	B	1208	-	45,53,73	1.21	3 (6%)	52,89,113	1.16	4 (7%)
16	CLA	B	1023	-	65,73,73	1.04	4 (6%)	76,113,113	1.16	4 (5%)
16	CLA	L	1503	25	65,73,73	1.02	3 (4%)	76,113,113	0.93	3 (3%)
16	CLA	u	514	-	50,58,73	1.17	3 (6%)	58,95,113	1.24	3 (5%)
16	CLA	G	1221	25	65,73,73	1.03	3 (4%)	76,113,113	1.11	3 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	g	506	-	60,68,73	1.05	3 (5%)	70,107,113	1.02	5 (7%)
16	CLA	G	1206	2	65,73,73	1.01	3 (4%)	76,113,113	0.92	3 (3%)
16	CLA	n	509	-	60,68,73	1.07	3 (5%)	70,107,113	0.98	4 (5%)
16	CLA	h	506	-	60,68,73	1.07	4 (6%)	70,107,113	1.29	6 (8%)
19	BCR	w	602	-	41,41,41	0.89	0	56,56,56	1.25	7 (12%)
16	CLA	H	1119	25	65,73,73	1.01	3 (4%)	76,113,113	0.99	2 (2%)
16	CLA	A	1115	-	54,62,73	1.10	4 (7%)	62,99,113	1.24	3 (4%)
16	CLA	G	1201	-	54,62,73	1.11	3 (5%)	62,99,113	1.05	2 (3%)
16	CLA	b	1232	25	45,53,73	1.20	3 (6%)	52,89,113	1.35	3 (5%)
16	CLA	s	510	-	65,73,73	1.03	3 (4%)	76,113,113	0.94	2 (2%)
16	CLA	w	501	-	50,58,73	1.15	3 (6%)	58,95,113	1.04	3 (5%)
16	CLA	x	509	-	65,73,73	1.04	3 (4%)	76,113,113	1.00	3 (3%)
20	LMT	A	4202	-	36,36,36	1.18	5 (13%)	47,47,47	0.91	0
16	CLA	v	504	-	60,68,73	1.06	3 (5%)	70,107,113	1.04	4 (5%)
16	CLA	o	514	-	50,58,73	1.18	4 (8%)	58,95,113	1.40	4 (6%)
16	CLA	A	1110	-	54,62,73	1.10	3 (5%)	62,99,113	0.99	2 (3%)
16	CLA	a	1115	-	54,62,73	1.09	3 (5%)	62,99,113	1.17	2 (3%)
14	LMG	b	848	-	43,43,55	0.87	1 (2%)	51,51,63	1.27	5 (9%)
19	BCR	t	601	-	41,41,41	0.85	0	56,56,56	1.17	6 (10%)
16	CLA	X	514	-	50,58,73	1.19	4 (8%)	58,95,113	1.36	3 (5%)
16	CLA	G	1212	-	45,53,73	1.23	3 (6%)	52,89,113	1.30	4 (7%)
16	CLA	B	1222	25	50,58,73	1.15	3 (6%)	58,95,113	1.05	3 (5%)
16	CLA	y	515	-	65,73,73	1.02	3 (4%)	76,113,113	1.09	4 (5%)
16	CLA	x	514	-	50,58,73	1.13	3 (6%)	58,95,113	1.10	4 (6%)
16	CLA	X	509	-	60,68,73	1.07	3 (5%)	70,107,113	0.97	4 (5%)
16	CLA	W	509	-	60,68,73	1.08	3 (5%)	70,107,113	1.06	3 (4%)
16	CLA	G	1204	-	65,73,73	1.02	3 (4%)	76,113,113	0.98	3 (3%)
16	CLA	a	1125	-	65,73,73	1.03	4 (6%)	76,113,113	1.08	4 (5%)
14	LMG	F	4017	-	27,27,55	1.11	2 (7%)	35,35,63	1.16	3 (8%)
16	CLA	Z	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.15	4 (5%)
16	CLA	s	504	-	65,73,73	1.02	3 (4%)	76,113,113	0.93	2 (2%)
16	CLA	H	1133	-	54,62,73	1.11	4 (7%)	62,99,113	1.17	4 (6%)
16	CLA	s	508	12	55,63,73	1.10	3 (5%)	64,101,113	0.98	4 (6%)
23	LMU	x	606	-	36,36,36	0.88	0	47,47,47	1.25	5 (10%)
17	PQN	b	2002	-	34,34,34	0.35	0	42,45,45	1.05	2 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	v	517	-	55,63,73	1.14	3 (5%)	64,101,113	1.03	4 (6%)
16	CLA	v	510	-	65,73,73	1.03	3 (4%)	76,113,113	1.00	4 (5%)
16	CLA	H	1114	-	46,54,73	1.18	3 (6%)	53,90,113	1.26	5 (9%)
19	BCR	w	603	-	41,41,41	0.88	0	56,56,56	1.15	3 (5%)
16	CLA	B	1235	-	62,70,73	1.06	3 (4%)	72,109,113	1.25	8 (11%)
16	CLA	A	1139	25	60,68,73	1.04	3 (5%)	70,107,113	1.04	4 (5%)
16	CLA	H	1103	-	65,73,73	1.03	3 (4%)	76,113,113	1.05	3 (3%)
16	CLA	n	510	-	65,73,73	1.03	3 (4%)	76,113,113	1.03	4 (5%)
16	CLA	g	509	-	65,73,73	1.03	4 (6%)	76,113,113	1.02	2 (2%)
16	CLA	A	1108	-	45,53,73	1.22	3 (6%)	52,89,113	1.02	1 (1%)
16	CLA	s	513	-	46,54,73	1.19	3 (6%)	53,90,113	1.12	3 (5%)
16	CLA	s	505	-	65,73,73	1.04	3 (4%)	76,113,113	1.15	6 (7%)
16	CLA	G	1214	-	55,63,73	1.11	4 (7%)	64,101,113	1.13	3 (4%)
16	CLA	G	1021	-	65,73,73	1.00	3 (4%)	76,113,113	1.14	4 (5%)
16	CLA	A	1131	-	65,73,73	1.03	3 (4%)	76,113,113	1.09	3 (3%)
13	LHG	p	605	-	31,31,48	0.76	1 (3%)	34,37,54	1.25	4 (11%)
19	BCR	y	604	-	41,41,41	0.90	0	56,56,56	1.27	5 (8%)
13	LHG	b	4018	16	37,37,48	0.70	0	40,43,54	1.28	5 (12%)
16	CLA	g	502	-	50,58,73	1.13	3 (6%)	58,95,113	0.97	1 (1%)
16	CLA	w	507	-	65,73,73	1.02	3 (4%)	76,113,113	0.88	2 (2%)
19	BCR	H	4003	-	41,41,41	0.89	0	56,56,56	1.20	3 (5%)
14	LMG	H	4201	-	32,32,55	0.99	0	40,40,63	1.16	2 (5%)
16	CLA	v	506	-	60,68,73	1.07	3 (5%)	70,107,113	1.12	5 (7%)
16	CLA	H	1128	-	65,73,73	1.00	4 (6%)	76,113,113	1.07	5 (6%)
16	CLA	A	1138	-	65,73,73	1.03	3 (4%)	76,113,113	0.96	3 (3%)
19	BCR	n	601	-	41,41,41	0.87	0	56,56,56	1.24	6 (10%)
16	CLA	s	514	-	50,58,73	1.16	3 (6%)	58,95,113	1.30	4 (6%)
16	CLA	B	1209	-	45,53,73	1.23	3 (6%)	52,89,113	1.07	3 (5%)
16	CLA	A	1129	-	46,54,73	1.18	3 (6%)	53,90,113	1.14	3 (5%)
16	CLA	y	509	-	65,73,73	1.03	3 (4%)	76,113,113	0.91	2 (2%)
16	CLA	h	505	-	65,73,73	1.03	3 (4%)	76,113,113	1.16	4 (5%)
14	LMG	a	4201	-	32,32,55	0.99	0	40,40,63	1.16	2 (5%)
19	BCR	g	602	-	41,41,41	0.88	0	56,56,56	1.27	7 (12%)
16	CLA	A	1127	-	65,73,73	1.03	4 (6%)	76,113,113	1.10	3 (3%)
16	CLA	a	1113	-	45,53,73	1.23	4 (8%)	52,89,113	1.18	3 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	u	509	-	60,68,73	1.07	3 (5%)	70,107,113	1.05	4 (5%)
16	CLA	W	514	-	50,58,73	1.15	3 (6%)	58,95,113	1.12	3 (5%)
16	CLA	T	4004	-	55,63,73	1.12	3 (5%)	64,101,113	1.13	3 (4%)
23	LMU	Y	606	-	36,36,36	0.83	0	47,47,47	1.35	6 (12%)
16	CLA	X	516	-	46,54,73	1.19	3 (6%)	53,90,113	1.07	4 (7%)
19	BCR	J	4012	-	41,41,41	0.91	0	56,56,56	1.29	8 (14%)
16	CLA	A	1104	-	65,73,73	1.01	3 (4%)	76,113,113	0.95	4 (5%)
16	CLA	v	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.11	5 (6%)
16	CLA	H	1237	25	65,73,73	1.00	4 (6%)	76,113,113	1.11	6 (7%)
16	CLA	S	1303	-	38,45,73	1.29	4 (10%)	43,78,113	1.04	2 (4%)
16	CLA	r	501	-	50,58,73	1.16	3 (6%)	58,95,113	1.20	4 (6%)
19	BCR	h	604	-	41,41,41	0.88	0	56,56,56	1.23	6 (10%)
19	BCR	H	4007	-	41,41,41	0.94	1 (2%)	56,56,56	1.28	4 (7%)
16	CLA	Y	503	-	46,54,73	1.21	3 (6%)	53,90,113	1.17	3 (5%)
13	LHG	a	851	16	25,25,48	0.87	1 (4%)	28,31,54	1.27	2 (7%)
16	CLA	G	1234	-	50,58,73	1.17	4 (8%)	58,95,113	1.24	5 (8%)
16	CLA	t	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.07	4 (5%)
16	CLA	p	510	-	65,73,73	1.03	3 (4%)	76,113,113	1.00	3 (3%)
16	CLA	B	1206	2	65,73,73	1.02	3 (4%)	76,113,113	0.94	4 (5%)
16	CLA	B	1215	-	60,68,73	1.05	3 (5%)	70,107,113	1.16	3 (4%)
16	CLA	B	1226	-	60,68,73	1.06	4 (6%)	70,107,113	1.05	5 (7%)
16	CLA	u	507	12	65,73,73	1.02	3 (4%)	76,113,113	0.98	3 (3%)
16	CLA	r	513	-	46,54,73	1.19	3 (6%)	53,90,113	1.02	4 (7%)
16	CLA	v	501	-	46,54,73	1.19	3 (6%)	53,90,113	1.11	4 (7%)
16	CLA	G	1232	25	45,53,73	1.21	3 (6%)	52,89,113	1.28	5 (9%)
13	LHG	g	605	-	30,30,48	0.78	1 (3%)	33,36,54	1.23	3 (9%)
16	CLA	B	1239	-	65,73,73	0.99	3 (4%)	76,113,113	1.19	4 (5%)
16	CLA	b	1215	-	60,68,73	1.04	3 (5%)	70,107,113	1.19	4 (5%)
16	CLA	A	1124	25	60,68,73	1.06	3 (5%)	70,107,113	1.08	4 (5%)
16	CLA	r	516	-	46,54,73	1.20	3 (6%)	53,90,113	1.16	5 (9%)
16	CLA	X	505	-	65,73,73	1.02	3 (4%)	76,113,113	1.15	6 (7%)
16	CLA	Y	502	-	50,58,73	1.13	3 (6%)	58,95,113	1.02	3 (5%)
16	CLA	Z	502	-	50,58,73	1.15	4 (8%)	58,95,113	1.07	3 (5%)
16	CLA	x	516	-	46,54,73	1.21	3 (6%)	53,90,113	1.21	4 (7%)
16	CLA	A	1112	-	45,53,73	1.24	3 (6%)	52,89,113	1.08	3 (5%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	K	4002	-	45,53,73	1.23	3 (6%)	52,89,113	1.00	2 (3%)
16	CLA	H	1134	1	45,53,73	1.22	3 (6%)	52,89,113	1.03	1 (1%)
16	CLA	t	506	-	60,68,73	1.07	3 (5%)	70,107,113	1.07	4 (5%)
19	BCR	q	604	-	41,41,41	0.91	0	56,56,56	1.24	6 (10%)
16	CLA	H	1137	-	47,55,73	1.19	3 (6%)	54,91,113	1.06	4 (7%)
16	CLA	H	1115	-	54,62,73	1.08	3 (5%)	62,99,113	1.23	2 (3%)
21	ECH	m	4021	-	42,42,42	0.83	0	55,58,58	1.60	12 (21%)
16	CLA	b	1218	-	55,63,73	1.11	3 (5%)	64,101,113	1.05	6 (9%)
16	CLA	G	1223	-	65,73,73	1.03	3 (4%)	76,113,113	1.09	5 (6%)
16	CLA	A	1013	-	65,73,73	1.00	4 (6%)	76,113,113	1.23	9 (11%)
16	CLA	X	513	-	46,54,73	1.19	3 (6%)	53,90,113	1.04	2 (3%)
16	CLA	u	510	-	60,68,73	1.07	3 (5%)	70,107,113	0.92	3 (4%)
16	CLA	W	513	-	46,54,73	1.19	3 (6%)	53,90,113	1.02	3 (5%)
16	CLA	B	1221	25	65,73,73	1.03	3 (4%)	76,113,113	1.03	2 (2%)
16	CLA	g	504	-	65,73,73	1.03	3 (4%)	76,113,113	0.99	3 (3%)
19	BCR	L	4019	-	41,41,41	0.93	0	56,56,56	1.39	6 (10%)
19	BCR	b	4009	-	30,30,41	0.88	0	39,39,56	1.34	6 (15%)
19	BCR	h	601	-	41,41,41	0.86	0	56,56,56	1.26	7 (12%)
19	BCR	p	602	-	41,41,41	0.90	0	56,56,56	1.29	7 (12%)
16	CLA	A	1801	13	46,54,73	1.19	3 (6%)	53,90,113	1.26	4 (7%)
16	CLA	y	517	-	55,63,73	1.13	3 (5%)	64,101,113	1.26	5 (7%)
16	CLA	U	1503	-	65,73,73	1.02	3 (4%)	76,113,113	0.90	3 (3%)
19	BCR	o	602	-	41,41,41	0.91	0	56,56,56	1.35	7 (12%)
16	CLA	J	1302	8	45,53,73	1.23	3 (6%)	52,89,113	1.14	3 (5%)
16	CLA	S	1302	8	45,53,73	1.23	3 (6%)	52,89,113	1.05	3 (5%)
16	CLA	x	507	-	65,73,73	1.03	3 (4%)	76,113,113	1.00	2 (2%)
16	CLA	H	1108	-	45,53,73	1.21	3 (6%)	52,89,113	1.23	3 (5%)
16	CLA	Y	508	12	55,63,73	1.09	3 (5%)	64,101,113	0.96	4 (6%)
16	CLA	y	510	-	65,73,73	1.03	3 (4%)	76,113,113	0.93	3 (3%)
19	BCR	H	4002	-	41,41,41	0.88	0	56,56,56	1.18	4 (7%)
16	CLA	g	501	-	50,58,73	1.17	3 (6%)	58,95,113	1.04	3 (5%)
16	CLA	B	1238	25	65,73,73	1.02	3 (4%)	76,113,113	1.01	3 (3%)
16	CLA	w	513	-	50,58,73	1.16	3 (6%)	58,95,113	1.10	3 (5%)
16	CLA	g	514	-	50,58,73	1.15	4 (8%)	58,95,113	1.10	4 (6%)
16	CLA	o	505	-	65,73,73	1.02	3 (4%)	76,113,113	1.06	3 (3%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
19	BCR	Y	603	-	41,41,41	0.89	0	56,56,56	1.14	3 (5%)
19	BCR	J	4013	-	41,41,41	0.89	0	56,56,56	1.21	6 (10%)
16	CLA	A	1136	-	65,73,73	1.02	3 (4%)	76,113,113	0.97	2 (2%)
19	BCR	y	601	-	41,41,41	0.85	0	56,56,56	1.22	6 (10%)
16	CLA	H	1106	1	65,73,73	1.00	3 (4%)	76,113,113	1.13	3 (3%)
19	BCR	u	601	-	41,41,41	0.93	1 (2%)	56,56,56	1.36	8 (14%)
16	CLA	r	511	-	65,73,73	1.02	3 (4%)	76,113,113	0.94	2 (2%)
16	CLA	A	1237	25	65,73,73	1.02	4 (6%)	76,113,113	1.13	6 (7%)
16	CLA	k	4002	-	45,53,73	1.22	3 (6%)	52,89,113	1.10	3 (5%)
16	CLA	G	1231	25	45,53,73	1.25	3 (6%)	52,89,113	1.12	3 (5%)
16	CLA	H	1122	-	59,67,73	1.06	3 (5%)	68,105,113	0.99	3 (4%)
16	CLA	s	503	-	46,54,73	1.21	4 (8%)	53,90,113	1.23	4 (7%)
16	CLA	y	504	-	60,68,73	1.07	4 (6%)	70,107,113	1.07	5 (7%)
16	CLA	o	511	-	65,73,73	1.01	3 (4%)	76,113,113	1.08	5 (6%)
16	CLA	h	512	12	65,73,73	1.02	4 (6%)	76,113,113	0.98	4 (5%)
16	CLA	G	1213	-	55,63,73	1.10	3 (5%)	64,101,113	1.10	3 (4%)
16	CLA	o	508	12	55,63,73	1.11	3 (5%)	64,101,113	0.95	2 (3%)
19	BCR	j	4015	-	41,41,41	0.90	0	56,56,56	1.21	6 (10%)
16	CLA	G	1226	-	60,68,73	1.07	4 (6%)	70,107,113	1.13	5 (7%)
16	CLA	H	1140	-	65,73,73	1.00	4 (6%)	76,113,113	1.07	3 (3%)
19	BCR	n	604	-	41,41,41	0.88	0	56,56,56	1.30	6 (10%)
21	ECH	R	4020	-	42,42,42	0.96	3 (7%)	55,58,58	1.92	13 (23%)
16	CLA	X	507	12	65,73,73	1.03	3 (4%)	76,113,113	0.91	2 (2%)
16	CLA	b	1231	25	45,53,73	1.25	3 (6%)	52,89,113	1.21	3 (5%)
16	CLA	a	1120	-	49,57,73	1.14	3 (6%)	55,93,113	1.26	6 (10%)
19	BCR	x	603	-	41,41,41	0.89	0	56,56,56	1.25	6 (10%)
16	CLA	v	508	-	55,63,73	1.13	4 (7%)	64,101,113	1.32	5 (7%)
16	CLA	G	1236	-	50,58,73	1.15	3 (6%)	58,95,113	1.07	3 (5%)
16	CLA	p	509	-	60,68,73	1.07	3 (5%)	70,107,113	0.99	3 (4%)
16	CLA	v	512	12	65,73,73	1.02	3 (4%)	76,113,113	1.06	5 (6%)
19	BCR	S	4013	-	41,41,41	0.91	0	56,56,56	1.29	7 (12%)
16	CLA	A	1111	-	55,63,73	1.15	4 (7%)	64,101,113	1.26	4 (6%)
21	ECH	M	4021	-	42,42,42	0.84	0	55,58,58	1.58	10 (18%)
16	CLA	a	1119	-	65,73,73	1.02	3 (4%)	76,113,113	0.99	4 (5%)
16	CLA	H	1124	-	60,68,73	1.05	3 (5%)	70,107,113	0.95	1 (1%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	a	1131	-	65,73,73	1.02	3 (4%)	76,113,113	1.08	2 (2%)
16	CLA	u	505	-	65,73,73	1.03	3 (4%)	76,113,113	1.11	3 (3%)
19	BCR	G	4010	-	41,41,41	1.00	0	56,56,56	1.37	9 (16%)
16	CLA	w	510	-	60,68,73	1.09	3 (5%)	70,107,113	0.98	1 (1%)
16	CLA	A	1105	-	58,66,73	1.09	3 (5%)	67,104,113	1.02	2 (2%)
21	ECH	I	4020	-	42,42,42	0.85	1 (2%)	55,58,58	1.90	14 (25%)
16	CLA	a	1126	-	65,73,73	1.01	3 (4%)	76,113,113	1.14	3 (3%)
16	CLA	j	1302	8	45,53,73	1.22	3 (6%)	52,89,113	1.05	3 (5%)
19	BCR	A	4008	-	41,41,41	0.93	0	56,56,56	1.34	7 (12%)
19	BCR	t	603	-	41,41,41	0.88	0	56,56,56	1.17	4 (7%)
14	LMG	A	852	-	38,38,55	0.94	1 (2%)	46,46,63	1.22	4 (8%)
16	CLA	G	1012	25	55,63,73	1.14	3 (5%)	64,101,113	1.25	7 (10%)
16	CLA	n	507	-	65,73,73	1.03	3 (4%)	76,113,113	0.96	2 (2%)
16	CLA	v	515	-	65,73,73	1.02	3 (4%)	76,113,113	1.11	5 (6%)
19	BCR	G	4014	-	41,41,41	0.94	0	56,56,56	1.28	9 (16%)
19	BCR	U	4019	-	41,41,41	0.89	0	56,56,56	1.47	7 (12%)
16	CLA	b	1203	-	65,73,73	1.03	3 (4%)	76,113,113	1.11	5 (6%)
20	LMT	U	4101	-	36,36,36	1.19	6 (16%)	47,47,47	1.08	1 (2%)
16	CLA	H	1113	-	45,53,73	1.22	3 (6%)	52,89,113	1.22	3 (5%)
16	CLA	p	507	12	65,73,73	1.03	3 (4%)	76,113,113	0.97	2 (2%)
16	CLA	Z	508	12	55,63,73	1.10	3 (5%)	64,101,113	1.12	4 (6%)
16	CLA	r	507	-	65,73,73	1.02	3 (4%)	76,113,113	0.96	2 (2%)
16	CLA	h	504	-	60,68,73	1.06	3 (5%)	70,107,113	1.18	6 (8%)
16	CLA	n	503	-	46,54,73	1.19	3 (6%)	53,90,113	1.21	4 (7%)
16	CLA	b	1208	-	45,53,73	1.20	3 (6%)	52,89,113	1.14	4 (7%)
16	CLA	U	1501	10	60,68,73	1.06	3 (5%)	70,107,113	1.04	3 (4%)
16	CLA	w	504	-	65,73,73	1.05	3 (4%)	76,113,113	1.02	5 (6%)
16	CLA	s	512	12	65,73,73	1.05	4 (6%)	76,113,113	1.16	6 (7%)
16	CLA	G	1238	25	65,73,73	1.02	3 (4%)	76,113,113	0.98	3 (3%)
16	CLA	H	1112	-	45,53,73	1.23	3 (6%)	52,89,113	1.00	2 (3%)
16	CLA	b	1228	-	55,63,73	1.10	3 (5%)	64,101,113	1.05	3 (4%)
16	CLA	H	1138	-	65,73,73	1.02	3 (4%)	76,113,113	1.01	4 (5%)
16	CLA	n	506	-	60,68,73	1.06	3 (5%)	70,107,113	1.08	5 (7%)
16	CLA	h	515	-	65,73,73	1.02	3 (4%)	76,113,113	1.15	6 (7%)
19	BCR	B	4010	-	41,41,41	0.96	0	56,56,56	1.34	7 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	X	503	-	46,54,73	1.19	3 (6%)	53,90,113	1.03	2 (3%)
19	BCR	f	4016	-	41,41,41	0.90	0	56,56,56	1.27	6 (10%)
16	CLA	h	513	-	46,54,73	1.21	3 (6%)	53,90,113	0.96	2 (3%)
16	CLA	B	1216	25	47,55,73	1.19	4 (8%)	54,91,113	1.15	4 (7%)
16	CLA	a	1114	-	46,54,73	1.19	3 (6%)	53,90,113	1.27	3 (5%)
16	CLA	W	507	-	65,73,73	1.03	3 (4%)	76,113,113	0.92	2 (2%)
16	CLA	X	506	-	60,68,73	1.05	4 (6%)	70,107,113	1.29	4 (5%)
16	CLA	w	514	-	50,58,73	1.15	3 (6%)	58,95,113	1.08	4 (6%)
19	BCR	F	4016	-	41,41,41	0.89	0	56,56,56	1.30	7 (12%)
24	LUT	Z	601	-	42,43,43	0.82	1 (2%)	51,60,60	1.78	8 (15%)
16	CLA	B	1240	13	46,54,73	1.20	3 (6%)	53,90,113	1.21	2 (3%)
19	BCR	W	601	-	41,41,41	0.89	0	56,56,56	1.25	7 (12%)
19	BCR	q	602	-	41,41,41	0.89	0	56,56,56	1.23	5 (8%)
21	ECH	i	4020	-	42,42,42	0.82	1 (2%)	55,58,58	1.89	10 (18%)
16	CLA	W	503	-	46,54,73	1.19	3 (6%)	53,90,113	1.24	5 (9%)
19	BCR	t	604	-	41,41,41	0.86	0	56,56,56	1.21	3 (5%)
16	CLA	b	1221	25	65,73,73	1.01	3 (4%)	76,113,113	1.11	4 (5%)
16	CLA	b	1212	-	45,53,73	1.23	3 (6%)	52,89,113	1.25	4 (7%)
16	CLA	b	1222	25	50,58,73	1.14	3 (6%)	58,95,113	1.12	4 (6%)
19	BCR	B	4004	-	41,41,41	0.87	0	56,56,56	1.25	5 (8%)
16	CLA	h	514	-	50,58,73	1.17	3 (6%)	58,95,113	1.07	4 (6%)
13	LHG	a	849	-	42,42,48	0.70	1 (2%)	45,48,54	1.19	4 (8%)
16	CLA	y	502	-	50,58,73	1.15	3 (6%)	58,95,113	1.03	3 (5%)
16	CLA	W	506	-	60,68,73	1.05	3 (5%)	70,107,113	1.09	4 (5%)
16	CLA	t	514	-	50,58,73	1.16	3 (6%)	58,95,113	1.16	4 (6%)
23	LMU	w	605	-	36,36,36	0.83	0	47,47,47	1.09	4 (8%)
16	CLA	Y	505	-	65,73,73	1.03	3 (4%)	76,113,113	1.04	5 (6%)
19	BCR	p	601	-	41,41,41	0.90	0	56,56,56	1.30	7 (12%)
16	CLA	t	509	-	60,68,73	1.08	3 (5%)	70,107,113	1.10	4 (5%)
16	CLA	q	517	12	55,63,73	1.10	3 (5%)	64,101,113	1.07	4 (6%)
16	CLA	q	510	-	60,68,73	1.08	3 (5%)	70,107,113	0.95	2 (2%)
16	CLA	H	1013	-	65,73,73	1.01	4 (6%)	76,113,113	1.24	8 (10%)
16	CLA	r	506	-	60,68,73	1.04	3 (5%)	70,107,113	1.05	7 (10%)
19	BCR	a	4007	-	41,41,41	0.93	1 (2%)	56,56,56	1.28	5 (8%)
16	CLA	Y	517	12	55,63,73	1.10	3 (5%)	64,101,113	0.98	3 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	A	1137	-	47,55,73	1.20	3 (6%)	54,91,113	1.04	4 (7%)
16	CLA	b	1235	-	62,70,73	1.07	4 (6%)	72,109,113	1.16	7 (9%)
16	CLA	A	1119	25	65,73,73	1.02	3 (4%)	76,113,113	1.04	5 (6%)
16	CLA	A	1107	1	50,58,73	1.16	3 (6%)	58,95,113	1.10	3 (5%)
19	BCR	G	4017	-	41,41,41	0.91	0	56,56,56	1.16	6 (10%)
16	CLA	a	1123	-	65,73,73	1.01	3 (4%)	76,113,113	1.04	4 (5%)
16	CLA	b	1202	-	65,73,73	1.01	3 (4%)	76,113,113	0.98	2 (2%)
16	CLA	b	1023	-	65,73,73	1.04	4 (6%)	76,113,113	1.13	4 (5%)
19	BCR	W	604	-	41,41,41	0.89	0	56,56,56	1.34	9 (16%)
19	BCR	X	604	-	41,41,41	0.91	0	56,56,56	1.29	5 (8%)
19	BCR	S	4015	-	41,41,41	0.90	0	56,56,56	1.19	7 (12%)
16	CLA	t	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.12	3 (3%)
16	CLA	x	505	-	65,73,73	1.01	3 (4%)	76,113,113	1.26	4 (5%)
16	CLA	a	1138	-	65,73,73	1.03	3 (4%)	76,113,113	0.97	4 (5%)
16	CLA	p	505	-	65,73,73	1.04	3 (4%)	76,113,113	1.09	4 (5%)
16	CLA	y	503	-	46,54,73	1.20	4 (8%)	53,90,113	1.19	4 (7%)
18	SF4	N	102	-	0,12,12	-	-	-	-	-
16	CLA	W	508	12	55,63,73	1.11	3 (5%)	64,101,113	0.94	1 (1%)
16	CLA	u	503	-	46,54,73	1.21	3 (6%)	53,90,113	0.99	2 (3%)
16	CLA	s	517	12	55,63,73	1.11	3 (5%)	64,101,113	1.01	3 (4%)
16	CLA	H	1022	25	65,73,73	1.03	3 (4%)	76,113,113	1.11	6 (7%)
16	CLA	a	1106	1	65,73,73	1.00	3 (4%)	76,113,113	1.14	3 (3%)
16	CLA	w	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.09	5 (6%)
19	BCR	W	603	-	41,41,41	0.88	0	56,56,56	1.20	3 (5%)
19	BCR	p	604	-	41,41,41	0.90	0	56,56,56	1.21	6 (10%)
16	CLA	o	513	-	46,54,73	1.20	3 (6%)	53,90,113	0.93	1 (1%)
18	SF4	C	101	-	0,12,12	-	-	-	-	-
16	CLA	a	1121	-	51,59,73	1.14	3 (5%)	59,96,113	1.10	3 (5%)
19	BCR	r	604	-	41,41,41	0.93	0	56,56,56	1.26	6 (10%)
16	CLA	G	1230	-	45,53,73	1.22	3 (6%)	52,89,113	1.01	1 (1%)
16	CLA	g	508	12	55,63,73	1.10	3 (5%)	64,101,113	0.95	1 (1%)
16	CLA	a	1132	-	65,73,73	1.00	3 (4%)	76,113,113	1.22	4 (5%)
16	CLA	G	1215	-	60,68,73	1.05	3 (5%)	70,107,113	1.14	2 (2%)
16	CLA	h	508	-	55,63,73	1.12	3 (5%)	64,101,113	1.08	4 (6%)
16	CLA	w	502	-	50,58,73	1.15	4 (8%)	58,95,113	1.12	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	Y	516	-	46,54,73	1.19	3 (6%)	53,90,113	1.11	3 (5%)
16	CLA	l	1502	-	60,68,73	1.03	3 (5%)	70,107,113	1.21	3 (4%)
16	CLA	t	517	12	55,63,73	1.12	3 (5%)	64,101,113	0.95	1 (1%)
16	CLA	x	510	-	65,73,73	1.03	3 (4%)	76,113,113	1.01	4 (5%)
19	BCR	U	4022	-	41,41,41	0.90	0	56,56,56	1.30	6 (10%)
16	CLA	o	509	-	60,68,73	1.06	3 (5%)	70,107,113	0.94	4 (5%)
19	BCR	v	601	-	41,41,41	0.86	0	56,56,56	1.27	6 (10%)
16	CLA	a	1127	-	65,73,73	1.02	4 (6%)	76,113,113	1.10	3 (3%)
16	CLA	n	502	-	50,58,73	1.12	4 (8%)	58,95,113	1.11	2 (3%)
19	BCR	L	4022	-	41,41,41	0.89	0	56,56,56	1.28	5 (8%)
16	CLA	a	1801	13	46,54,73	1.19	3 (6%)	53,90,113	1.24	3 (5%)
16	CLA	a	1139	25	55,63,73	1.10	3 (5%)	64,101,113	0.97	4 (6%)
16	CLA	g	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.17	5 (6%)
19	BCR	a	4002	-	41,41,41	0.88	0	56,56,56	1.17	3 (5%)
16	CLA	x	503	-	46,54,73	1.19	3 (6%)	53,90,113	1.10	3 (5%)
19	BCR	Y	602	-	41,41,41	0.89	0	56,56,56	1.27	7 (12%)
16	CLA	H	1117	-	65,73,73	1.01	3 (4%)	76,113,113	1.21	5 (6%)
16	CLA	Y	501	-	50,58,73	1.14	3 (6%)	58,95,113	1.15	4 (6%)
16	CLA	a	1137	-	47,55,73	1.19	3 (6%)	54,91,113	1.07	4 (7%)
16	CLA	a	1104	-	65,73,73	1.02	4 (6%)	76,113,113	1.05	3 (3%)
16	CLA	y	508	-	55,63,73	1.12	3 (5%)	64,101,113	1.19	4 (6%)
16	CLA	y	512	12	65,73,73	1.02	3 (4%)	76,113,113	0.94	4 (5%)
16	CLA	o	502	-	50,58,73	1.14	4 (8%)	58,95,113	1.03	3 (5%)
19	BCR	y	603	-	41,41,41	0.85	0	56,56,56	1.16	3 (5%)
16	CLA	t	504	-	60,68,73	1.08	3 (5%)	70,107,113	1.02	4 (5%)
16	CLA	u	512	12	65,73,73	1.00	4 (6%)	76,113,113	1.06	3 (3%)
16	CLA	b	1236	-	50,58,73	1.17	3 (6%)	58,95,113	1.17	4 (6%)
19	BCR	o	601	-	41,41,41	0.91	0	56,56,56	1.34	7 (12%)
16	CLA	r	504	-	65,73,73	1.03	3 (4%)	76,113,113	0.97	2 (2%)
16	CLA	n	516	-	46,54,73	1.21	3 (6%)	53,90,113	0.91	2 (3%)
16	CLA	B	1021	-	65,73,73	0.99	3 (4%)	76,113,113	1.14	4 (5%)
16	CLA	G	1217	-	45,53,73	1.23	3 (6%)	52,89,113	1.01	2 (3%)
19	BCR	G	4004	-	41,41,41	0.87	0	56,56,56	1.24	6 (10%)
16	CLA	G	1227	-	49,57,73	1.16	4 (8%)	55,93,113	1.17	4 (7%)
16	CLA	X	517	12	55,63,73	1.10	3 (5%)	64,101,113	1.00	4 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
18	SF4	H	3001	-	0,12,12	-	-	-	-	-
16	CLA	B	1225	-	65,73,73	1.00	4 (6%)	76,113,113	1.10	6 (7%)
16	CLA	X	510	-	60,68,73	1.07	3 (5%)	70,107,113	0.94	2 (2%)
16	CLA	H	1105	-	58,66,73	1.08	3 (5%)	67,104,113	1.11	4 (5%)
16	CLA	B	1012	25	55,63,73	1.14	3 (5%)	64,101,113	1.19	6 (9%)
16	CLA	q	516	-	46,54,73	1.21	3 (6%)	53,90,113	0.96	1 (1%)
16	CLA	H	1110	-	54,62,73	1.11	3 (5%)	62,99,113	1.01	3 (4%)
19	BCR	s	603	-	41,41,41	0.90	0	56,56,56	1.17	5 (8%)
16	CLA	b	1226	-	60,68,73	1.07	4 (6%)	70,107,113	1.09	4 (5%)
16	CLA	a	1133	-	54,62,73	1.12	3 (5%)	62,99,113	0.95	2 (3%)
16	CLA	X	504	-	60,68,73	1.06	3 (5%)	70,107,113	1.16	3 (4%)
23	LMU	s	606	-	36,36,36	0.83	0	47,47,47	1.26	4 (8%)
16	CLA	n	517	12	55,63,73	1.12	3 (5%)	64,101,113	0.97	1 (1%)
18	SF4	C	102	-	0,12,12	-	-	-	-	-
16	CLA	o	512	12	65,73,73	1.02	4 (6%)	76,113,113	1.20	6 (7%)
16	CLA	b	1205	-	65,73,73	1.00	3 (4%)	76,113,113	1.08	4 (5%)
16	CLA	B	1218	-	55,63,73	1.11	3 (5%)	64,101,113	1.14	4 (6%)
23	LMU	p	606	-	36,36,36	0.83	0	47,47,47	1.32	5 (10%)
16	CLA	Z	516	-	46,54,73	1.20	3 (6%)	53,90,113	1.07	1 (1%)
16	CLA	x	512	12	65,73,73	1.02	4 (6%)	76,113,113	1.12	5 (6%)
16	CLA	b	1229	-	58,66,73	1.11	3 (5%)	67,104,113	1.03	4 (5%)
16	CLA	a	1101	-	65,73,73	1.02	3 (4%)	76,113,113	1.11	5 (6%)
16	CLA	r	510	-	65,73,73	1.02	3 (4%)	76,113,113	0.98	3 (3%)
16	CLA	w	508	12	55,63,73	1.11	3 (5%)	64,101,113	1.04	4 (6%)
19	BCR	j	4013	-	41,41,41	0.90	0	56,56,56	1.24	6 (10%)
19	BCR	X	602	-	41,41,41	0.91	0	56,56,56	1.34	5 (8%)
16	CLA	p	503	-	46,54,73	1.20	4 (8%)	53,90,113	1.16	3 (5%)
16	CLA	B	1211	-	65,73,73	1.02	4 (6%)	76,113,113	1.00	3 (3%)
19	BCR	r	601	-	41,41,41	0.89	0	56,56,56	1.27	6 (10%)
16	CLA	G	1207	-	65,73,73	1.03	3 (4%)	76,113,113	1.18	7 (9%)
14	LMG	G	848	-	43,43,55	0.86	0	51,51,63	1.27	6 (11%)
16	CLA	a	1136	-	65,73,73	1.02	3 (4%)	76,113,113	1.01	2 (2%)
16	CLA	k	4003	9	45,53,73	1.25	3 (6%)	52,89,113	1.11	2 (3%)
16	CLA	s	506	-	60,68,73	1.06	4 (6%)	70,107,113	1.14	6 (8%)
19	BCR	g	604	-	41,41,41	0.93	0	56,56,56	1.26	6 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	a	1112	-	45,53,73	1.23	3 (6%)	52,89,113	0.99	2 (3%)
16	CLA	q	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.13	4 (5%)
16	CLA	o	501	-	46,54,73	1.19	3 (6%)	53,90,113	1.08	3 (5%)
16	CLA	u	513	-	46,54,73	1.19	3 (6%)	53,90,113	0.95	3 (5%)
19	BCR	x	601	-	41,41,41	0.88	0	56,56,56	1.24	7 (12%)
16	CLA	Y	513	-	46,54,73	1.18	3 (6%)	53,90,113	1.00	3 (5%)
21	ECH	V	4021	-	42,42,42	0.83	0	55,58,58	1.60	7 (12%)
16	CLA	b	1207	-	65,73,73	1.03	3 (4%)	76,113,113	1.18	5 (6%)
16	CLA	w	505	-	65,73,73	1.04	3 (4%)	76,113,113	1.07	6 (7%)
16	CLA	W	517	12	55,63,73	1.12	3 (5%)	64,101,113	0.99	2 (3%)
16	CLA	W	510	-	65,73,73	1.02	3 (4%)	76,113,113	1.01	4 (5%)
19	BCR	B	4005	-	41,41,41	0.88	0	56,56,56	1.15	4 (7%)
16	CLA	A	1134	1	45,53,73	1.24	3 (6%)	52,89,113	1.05	1 (1%)
16	CLA	s	501	-	50,58,73	1.14	3 (6%)	58,95,113	1.18	4 (6%)
18	SF4	a	3001	-	0,12,12	-	-	-	-	-
19	BCR	r	602	-	41,41,41	0.88	0	56,56,56	1.23	4 (7%)
16	CLA	L	1501	10	60,68,73	1.06	3 (5%)	70,107,113	1.00	3 (4%)
16	CLA	B	1231	25	45,53,73	1.24	3 (6%)	52,89,113	1.17	3 (5%)
16	CLA	l	1503	-	65,73,73	1.02	3 (4%)	76,113,113	0.94	3 (3%)
16	CLA	q	503	-	46,54,73	1.23	4 (8%)	53,90,113	1.35	4 (7%)
13	LHG	X	605	-	26,26,48	0.81	0	29,32,54	1.22	2 (6%)
16	CLA	H	1121	-	51,59,73	1.14	3 (5%)	59,96,113	1.13	3 (5%)
16	CLA	A	1109	16	65,73,73	1.01	3 (4%)	76,113,113	1.10	4 (5%)
16	CLA	B	1234	-	50,58,73	1.16	4 (8%)	58,95,113	1.21	6 (10%)
14	LMG	f	4017	-	27,27,55	1.11	1 (3%)	35,35,63	1.15	3 (8%)
16	CLA	f	1301	25	45,53,73	1.24	3 (6%)	52,89,113	1.07	4 (7%)
13	LHG	B	4018	16	37,37,48	0.70	1 (2%)	40,43,54	1.29	5 (12%)
17	PQN	A	2001	-	34,34,34	0.36	0	42,45,45	1.08	2 (4%)
16	CLA	K	4003	9	45,53,73	1.26	3 (6%)	52,89,113	1.07	2 (3%)
19	BCR	A	4003	-	41,41,41	0.89	0	56,56,56	1.28	8 (14%)
16	CLA	F	1301	25	45,53,73	1.23	3 (6%)	52,89,113	1.16	4 (7%)
16	CLA	A	1125	-	65,73,73	1.04	3 (4%)	76,113,113	0.98	2 (2%)
16	CLA	x	513	-	46,54,73	1.19	3 (6%)	53,90,113	0.99	2 (3%)
16	CLA	v	505	-	65,73,73	1.04	3 (4%)	76,113,113	1.23	5 (6%)
16	CLA	u	504	-	60,68,73	1.07	3 (5%)	70,107,113	0.99	3 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
19	BCR	w	604	-	41,41,41	0.91	0	56,56,56	1.25	6 (10%)
16	CLA	Y	507	12	65,73,73	1.04	3 (4%)	76,113,113	0.95	2 (2%)
16	CLA	b	1216	25	47,55,73	1.17	3 (6%)	54,91,113	1.45	4 (7%)
13	LHG	r	605	-	30,30,48	0.79	1 (3%)	33,36,54	1.24	3 (9%)
16	CLA	p	502	-	50,58,73	1.14	3 (6%)	58,95,113	1.03	3 (5%)
16	CLA	h	511	-	65,73,73	1.04	4 (6%)	76,113,113	1.09	8 (10%)
16	CLA	u	506	-	60,68,73	1.08	4 (6%)	70,107,113	1.67	10 (14%)
19	BCR	g	601	-	41,41,41	0.92	0	56,56,56	1.42	10 (17%)
16	CLA	X	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.16	7 (9%)
19	BCR	u	602	-	41,41,41	0.91	0	56,56,56	1.34	6 (10%)
16	CLA	v	503	-	46,54,73	1.19	3 (6%)	53,90,113	1.20	4 (7%)
16	CLA	G	1220	-	54,62,73	1.12	3 (5%)	62,99,113	1.11	3 (4%)
19	BCR	h	603	-	41,41,41	0.85	0	56,56,56	1.17	4 (7%)
16	CLA	G	1224	-	60,68,73	1.05	4 (6%)	70,107,113	1.13	3 (4%)
16	CLA	H	1135	-	51,59,73	1.18	4 (7%)	59,96,113	1.15	3 (5%)
16	CLA	Y	506	-	60,68,73	1.05	3 (5%)	70,107,113	1.12	5 (7%)
16	CLA	Z	507	-	65,73,73	1.03	3 (4%)	76,113,113	1.04	3 (3%)
16	CLA	o	507	12	65,73,73	1.03	3 (4%)	76,113,113	1.01	2 (2%)
16	CLA	H	1139	25	60,68,73	1.07	3 (5%)	70,107,113	0.95	4 (5%)
16	CLA	a	1105	-	58,66,73	1.09	3 (5%)	67,104,113	1.03	4 (5%)
16	CLA	x	502	-	50,58,73	1.13	4 (8%)	58,95,113	1.03	2 (3%)
19	BCR	G	4005	-	41,41,41	0.88	0	56,56,56	1.12	4 (7%)
16	CLA	q	508	12	55,63,73	1.11	3 (5%)	64,101,113	1.15	4 (6%)
16	CLA	b	1230	-	45,53,73	1.22	3 (6%)	52,89,113	1.15	3 (5%)
16	CLA	q	512	12	65,73,73	1.03	4 (6%)	76,113,113	1.03	4 (5%)
16	CLA	W	501	-	50,58,73	1.15	3 (6%)	58,95,113	1.15	3 (5%)
16	CLA	o	503	-	46,54,73	1.20	3 (6%)	53,90,113	1.01	3 (5%)
16	CLA	B	1213	-	55,63,73	1.10	4 (7%)	64,101,113	1.06	3 (4%)
16	CLA	T	4003	9	45,53,73	1.24	3 (6%)	52,89,113	1.03	2 (3%)
16	CLA	v	502	-	50,58,73	1.15	3 (6%)	58,95,113	1.01	3 (5%)
16	CLA	a	1128	-	65,73,73	1.01	4 (6%)	76,113,113	1.11	4 (5%)
16	CLA	p	504	-	65,73,73	1.02	3 (4%)	76,113,113	0.98	2 (2%)
14	LMG	Q	4017	-	27,27,55	1.08	0	35,35,63	1.18	3 (8%)
16	CLA	A	1113	-	45,53,73	1.23	3 (6%)	52,89,113	1.10	2 (3%)
16	CLA	o	506	-	60,68,73	1.06	4 (6%)	70,107,113	1.07	4 (5%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	x	506	-	60,68,73	1.06	4 (6%)	70,107,113	1.11	4 (5%)
16	CLA	y	514	-	50,58,73	1.18	4 (8%)	58,95,113	1.10	4 (6%)
16	CLA	b	1234	-	50,58,73	1.17	3 (6%)	58,95,113	1.21	6 (10%)
16	CLA	Z	514	-	50,58,73	1.16	3 (6%)	58,95,113	1.16	4 (6%)
16	CLA	a	1102	16	56,64,73	1.11	3 (5%)	65,102,113	0.99	2 (3%)
19	BCR	x	602	-	41,41,41	0.89	0	56,56,56	1.28	6 (10%)
20	LMT	H	4202	-	36,36,36	1.19	5 (13%)	47,47,47	0.91	0
19	BCR	Z	603	-	41,41,41	0.88	0	56,56,56	1.15	4 (7%)
16	CLA	p	517	12	55,63,73	1.10	3 (5%)	64,101,113	0.97	2 (3%)
16	CLA	q	506	-	60,68,73	1.06	3 (5%)	70,107,113	1.03	3 (4%)
17	PQN	H	2001	-	34,34,34	0.36	0	42,45,45	1.05	2 (4%)
16	CLA	A	1102	16	56,64,73	1.11	3 (5%)	65,102,113	0.91	1 (1%)
19	BCR	b	4017	-	41,41,41	0.91	0	56,56,56	1.15	4 (7%)
16	CLA	q	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.20	4 (5%)
19	BCR	v	603	-	41,41,41	0.88	0	56,56,56	1.25	7 (12%)
16	CLA	g	513	-	46,54,73	1.21	3 (6%)	53,90,113	0.92	3 (5%)
16	CLA	a	1107	1	50,58,73	1.15	3 (6%)	58,95,113	1.11	4 (6%)
16	CLA	n	508	12	55,63,73	1.10	3 (5%)	64,101,113	0.98	1 (1%)
16	CLA	a	1118	-	55,63,73	1.12	3 (5%)	64,101,113	0.93	1 (1%)
16	CLA	x	517	12	55,63,73	1.11	3 (5%)	64,101,113	0.95	1 (1%)
16	CLA	t	512	12	65,73,73	1.02	4 (6%)	76,113,113	1.14	4 (5%)
16	CLA	p	508	12	55,63,73	1.10	3 (5%)	64,101,113	1.01	5 (7%)
19	BCR	S	4012	-	41,41,41	0.91	0	56,56,56	1.26	7 (12%)
16	CLA	W	502	-	50,58,73	1.15	4 (8%)	58,95,113	1.18	5 (8%)
19	BCR	o	603	-	41,41,41	0.89	0	56,56,56	1.28	8 (14%)
16	CLA	a	1022	-	65,73,73	1.05	3 (4%)	76,113,113	1.07	7 (9%)
16	CLA	B	1230	-	45,53,73	1.21	3 (6%)	52,89,113	1.11	2 (3%)
16	CLA	H	1131	-	65,73,73	1.02	3 (4%)	76,113,113	1.05	3 (3%)
19	BCR	I	4018	-	41,41,41	0.89	0	56,56,56	1.26	7 (12%)
16	CLA	B	1224	-	60,68,73	1.06	4 (6%)	70,107,113	1.12	3 (4%)
16	CLA	b	1211	-	65,73,73	1.02	3 (4%)	76,113,113	0.97	3 (3%)
16	CLA	W	516	-	46,54,73	1.20	3 (6%)	53,90,113	1.08	3 (5%)
16	CLA	w	515	-	65,73,73	1.00	3 (4%)	76,113,113	1.15	4 (5%)
13	LHG	i	103	-	39,39,48	0.67	1 (2%)	42,45,54	1.21	5 (11%)
16	CLA	X	508	12	55,63,73	1.11	3 (5%)	64,101,113	0.91	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	B	1214	-	55,63,73	1.11	3 (5%)	64,101,113	1.23	4 (6%)
16	CLA	Z	513	-	50,58,73	1.15	3 (6%)	58,95,113	1.03	3 (5%)
16	CLA	u	501	-	46,54,73	1.19	3 (6%)	53,90,113	0.95	2 (3%)
16	CLA	W	512	12	60,68,73	1.07	4 (6%)	70,107,113	1.10	4 (5%)
16	CLA	Z	505	-	65,73,73	1.04	3 (4%)	76,113,113	0.98	2 (2%)
19	BCR	K	4001	-	41,41,41	0.90	0	56,56,56	1.30	7 (12%)
16	CLA	a	1237	25	65,73,73	1.01	4 (6%)	76,113,113	1.15	5 (6%)
16	CLA	r	517	12	55,63,73	1.12	3 (5%)	64,101,113	0.98	2 (3%)
21	ECH	B	4006	-	42,42,42	0.72	0	55,58,58	1.58	11 (20%)
16	CLA	q	509	-	65,73,73	1.02	3 (4%)	76,113,113	1.00	4 (5%)
16	CLA	w	512	12	65,73,73	1.02	4 (6%)	76,113,113	1.13	5 (6%)
19	BCR	a	4003	-	41,41,41	0.89	0	56,56,56	1.20	4 (7%)
19	BCR	b	4010	-	41,41,41	0.95	0	56,56,56	1.32	7 (12%)
16	CLA	p	501	-	50,58,73	1.14	3 (6%)	58,95,113	1.16	4 (6%)
19	BCR	b	4004	-	41,41,41	0.88	0	56,56,56	1.25	6 (10%)
16	CLA	H	1129	-	46,54,73	1.17	3 (6%)	53,90,113	1.08	3 (5%)
16	CLA	B	1229	-	58,66,73	1.11	3 (5%)	67,104,113	1.09	4 (5%)
16	CLA	b	1227	-	49,57,73	1.17	4 (8%)	55,93,113	1.15	4 (7%)
16	CLA	H	1127	-	65,73,73	1.03	4 (6%)	76,113,113	1.14	4 (5%)
16	CLA	r	508	12	55,63,73	1.10	3 (5%)	64,101,113	0.98	2 (3%)
16	CLA	g	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.00	2 (2%)
16	CLA	s	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.03	4 (5%)
16	CLA	t	510	-	65,73,73	1.02	3 (4%)	76,113,113	0.98	4 (5%)
16	CLA	a	1130	-	60,68,73	1.06	3 (5%)	70,107,113	1.00	4 (5%)
19	BCR	T	4001	-	41,41,41	0.89	0	56,56,56	1.24	6 (10%)
19	BCR	i	4018	-	41,41,41	0.89	0	56,56,56	1.21	8 (14%)
19	BCR	o	604	-	41,41,41	0.91	0	56,56,56	1.29	9 (16%)
16	CLA	r	514	-	50,58,73	1.14	3 (6%)	58,95,113	1.12	4 (6%)
19	BCR	A	4011	-	41,41,41	0.91	0	56,56,56	1.27	4 (7%)
19	BCR	B	4014	-	41,41,41	0.92	0	56,56,56	1.24	8 (14%)
16	CLA	y	516	-	46,54,73	1.20	3 (6%)	53,90,113	1.16	5 (9%)
16	CLA	B	1203	-	65,73,73	1.02	3 (4%)	76,113,113	1.12	4 (5%)
19	BCR	g	603	-	41,41,41	0.87	0	56,56,56	1.19	5 (8%)
16	CLA	A	1114	-	46,54,73	1.18	3 (6%)	53,90,113	1.23	4 (7%)
16	CLA	u	516	-	46,54,73	1.18	3 (6%)	53,90,113	1.13	4 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	n	512	12	65,73,73	1.03	4 (6%)	76,113,113	1.09	4 (5%)
16	CLA	A	1116	-	54,62,73	1.13	3 (5%)	62,99,113	1.20	5 (8%)
16	CLA	b	1219	-	45,53,73	1.22	3 (6%)	52,89,113	1.16	4 (7%)
16	CLA	A	1132	-	65,73,73	1.01	3 (4%)	76,113,113	1.14	4 (5%)
16	CLA	B	1212	-	45,53,73	1.23	3 (6%)	52,89,113	1.21	4 (7%)
16	CLA	A	1118	-	55,63,73	1.12	3 (5%)	64,101,113	1.02	3 (4%)
16	CLA	b	1210	-	65,73,73	1.05	3 (4%)	76,113,113	1.08	6 (7%)
14	LMG	a	852	-	38,38,55	0.95	1 (2%)	46,46,63	1.23	4 (8%)
16	CLA	a	1135	-	51,59,73	1.18	4 (7%)	59,96,113	1.08	5 (8%)
16	CLA	B	1210	-	65,73,73	1.05	3 (4%)	76,113,113	1.11	4 (5%)
16	CLA	G	1202	-	65,73,73	1.01	3 (4%)	76,113,113	0.95	3 (3%)
16	CLA	Y	504	-	65,73,73	1.02	3 (4%)	76,113,113	1.02	3 (3%)
19	BCR	J	4015	-	41,41,41	0.90	0	56,56,56	1.24	8 (14%)
16	CLA	g	507	-	65,73,73	1.03	3 (4%)	76,113,113	0.95	2 (2%)
16	CLA	s	516	-	46,54,73	1.18	3 (6%)	53,90,113	1.08	4 (7%)
16	CLA	y	505	-	65,73,73	1.03	3 (4%)	76,113,113	1.24	4 (5%)
14	LMG	H	852	-	38,38,55	0.94	1 (2%)	46,46,63	1.22	4 (8%)
16	CLA	X	512	12	65,73,73	1.00	3 (4%)	76,113,113	1.03	5 (6%)
16	CLA	B	1205	-	65,73,73	1.01	3 (4%)	76,113,113	1.05	3 (3%)
17	PQN	G	2002	-	34,34,34	0.36	0	42,45,45	1.02	2 (4%)
16	CLA	Y	510	-	65,73,73	1.03	3 (4%)	76,113,113	0.99	3 (3%)
16	CLA	n	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.06	3 (3%)
16	CLA	b	1224	-	60,68,73	1.08	4 (6%)	70,107,113	1.26	4 (5%)
21	ECH	G	4006	-	42,42,42	0.77	0	55,58,58	1.55	10 (18%)
16	CLA	A	1123	25	65,73,73	1.01	3 (4%)	76,113,113	1.14	4 (5%)
16	CLA	r	505	-	65,73,73	1.01	3 (4%)	76,113,113	1.18	4 (5%)
16	CLA	H	1801	13	46,54,73	1.19	3 (6%)	53,90,113	1.19	4 (7%)
16	CLA	n	504	-	60,68,73	1.07	3 (5%)	70,107,113	1.08	4 (5%)
16	CLA	r	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.13	4 (5%)
20	LMT	a	4202	-	36,36,36	1.20	5 (13%)	47,47,47	0.92	0
16	CLA	t	507	-	65,73,73	1.04	3 (4%)	76,113,113	0.91	2 (2%)
19	BCR	A	4007	-	41,41,41	0.93	1 (2%)	56,56,56	1.38	9 (16%)
16	CLA	b	1225	-	65,73,73	1.01	4 (6%)	76,113,113	1.03	4 (5%)
19	BCR	x	604	-	41,41,41	0.92	0	56,56,56	1.28	6 (10%)
16	CLA	q	504	-	65,73,73	1.04	3 (4%)	76,113,113	1.13	5 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
15	CL0	a	1011	-	65,73,73	1.00	4 (6%)	76,113,113	1.02	4 (5%)
16	CLA	G	1211	-	65,73,73	1.02	3 (4%)	76,113,113	0.99	3 (3%)
16	CLA	G	1239	-	65,73,73	1.00	3 (4%)	76,113,113	1.22	5 (6%)
16	CLA	Z	510	-	60,68,73	1.07	3 (5%)	70,107,113	1.01	3 (4%)
16	CLA	o	510	-	60,68,73	1.07	3 (5%)	70,107,113	0.95	3 (4%)
16	CLA	B	1204	-	65,73,73	1.02	3 (4%)	76,113,113	0.93	1 (1%)
16	CLA	n	513	-	46,54,73	1.19	3 (6%)	53,90,113	1.00	3 (5%)
16	CLA	Z	509	-	65,73,73	1.03	3 (4%)	76,113,113	1.02	2 (2%)
16	CLA	r	512	12	65,73,73	1.03	4 (6%)	76,113,113	1.21	4 (5%)
13	LHG	A	849	-	42,42,48	0.68	1 (2%)	45,48,54	1.20	4 (8%)
18	SF4	c	101	-	0,12,12	-	-	-	-	-
16	CLA	W	515	-	65,73,73	1.00	3 (4%)	76,113,113	1.05	4 (5%)
16	CLA	w	503	-	46,54,73	1.23	4 (8%)	53,90,113	1.15	2 (3%)
13	LHG	I	103	-	39,39,48	0.67	1 (2%)	42,45,54	1.21	4 (9%)
16	CLA	H	1132	-	65,73,73	1.02	3 (4%)	76,113,113	1.10	4 (5%)
16	CLA	H	1102	16	56,64,73	1.10	3 (5%)	65,102,113	0.95	2 (3%)
16	CLA	p	506	-	60,68,73	1.04	3 (5%)	70,107,113	1.12	6 (8%)
16	CLA	o	516	-	46,54,73	1.20	3 (6%)	53,90,113	1.03	2 (3%)
16	CLA	b	1217	-	45,53,73	1.22	3 (6%)	52,89,113	1.18	5 (9%)
16	CLA	H	1111	-	55,63,73	1.13	3 (5%)	64,101,113	1.09	2 (3%)
16	CLA	b	1220	-	54,62,73	1.13	4 (7%)	62,99,113	1.08	4 (6%)
16	CLA	x	504	-	65,73,73	1.03	3 (4%)	76,113,113	1.02	5 (6%)
16	CLA	r	509	-	65,73,73	1.03	3 (4%)	76,113,113	0.98	3 (3%)
16	CLA	q	514	-	50,58,73	1.15	3 (6%)	58,95,113	1.19	4 (6%)
16	CLA	h	509	-	65,73,73	1.05	4 (6%)	76,113,113	1.06	4 (5%)
16	CLA	v	507	12	65,73,73	1.02	3 (4%)	76,113,113	1.06	4 (5%)
19	BCR	s	602	-	41,41,41	0.90	0	56,56,56	1.30	7 (12%)
16	CLA	p	516	-	46,54,73	1.19	3 (6%)	53,90,113	1.07	3 (5%)
16	CLA	H	1107	1	50,58,73	1.15	3 (6%)	58,95,113	1.06	4 (6%)
19	BCR	A	4002	-	41,41,41	0.88	0	56,56,56	1.14	2 (3%)
19	BCR	H	4008	-	41,41,41	0.93	0	56,56,56	1.35	6 (10%)
16	CLA	a	1013	-	65,73,73	0.99	4 (6%)	76,113,113	1.22	4 (5%)
13	LHG	Y	605	-	31,31,48	0.76	1 (3%)	34,37,54	1.26	4 (11%)
16	CLA	Y	511	-	65,73,73	1.01	3 (4%)	76,113,113	1.09	6 (7%)
19	BCR	X	601	-	41,41,41	0.91	0	56,56,56	1.32	5 (8%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	g	505	-	65,73,73	1.00	3 (4%)	76,113,113	1.20	4 (5%)
19	BCR	l	4019	-	41,41,41	0.91	0	56,56,56	1.43	7 (12%)
16	CLA	a	1122	-	59,67,73	1.08	3 (5%)	68,105,113	1.06	2 (2%)
16	CLA	a	1110	-	54,62,73	1.11	3 (5%)	62,99,113	1.01	2 (3%)
16	CLA	p	512	12	65,73,73	1.05	4 (6%)	76,113,113	1.17	5 (6%)
16	CLA	A	1106	1	65,73,73	1.00	3 (4%)	76,113,113	1.16	3 (3%)
16	CLA	A	1101	-	65,73,73	1.03	3 (4%)	76,113,113	1.05	5 (6%)
19	BCR	u	604	-	41,41,41	0.92	0	56,56,56	1.33	9 (16%)
13	LHG	A	851	16	25,25,48	0.86	1 (4%)	28,31,54	1.28	2 (7%)
16	CLA	a	1129	-	46,54,73	1.17	3 (6%)	53,90,113	1.12	3 (5%)
23	LMU	Z	605	-	36,36,36	0.87	0	47,47,47	1.19	4 (8%)
16	CLA	u	515	-	65,73,73	1.01	3 (4%)	76,113,113	1.07	5 (6%)
16	CLA	A	1121	-	51,59,73	1.14	3 (5%)	59,96,113	1.08	2 (3%)
16	CLA	K	4004	-	55,63,73	1.12	3 (5%)	64,101,113	1.11	4 (6%)
16	CLA	A	1140	-	65,73,73	1.01	4 (6%)	76,113,113	1.09	4 (5%)
16	CLA	t	513	-	46,54,73	1.19	3 (6%)	53,90,113	1.08	4 (7%)
16	CLA	A	1130	-	60,68,73	1.07	3 (5%)	70,107,113	0.96	1 (1%)
16	CLA	t	505	-	65,73,73	1.02	3 (4%)	76,113,113	1.21	5 (6%)
16	CLA	b	1206	2	65,73,73	1.00	3 (4%)	76,113,113	0.97	3 (3%)
19	BCR	j	4012	-	41,41,41	0.91	0	56,56,56	1.27	7 (12%)
16	CLA	w	509	-	65,73,73	1.03	3 (4%)	76,113,113	0.99	4 (5%)
16	CLA	G	1210	-	65,73,73	1.04	3 (4%)	76,113,113	1.07	2 (2%)
16	CLA	H	1101	-	65,73,73	1.03	3 (4%)	76,113,113	1.09	3 (3%)
16	CLA	a	1134	1	45,53,73	1.22	3 (6%)	52,89,113	1.16	4 (7%)
16	CLA	g	510	-	65,73,73	1.03	3 (4%)	76,113,113	1.10	4 (5%)
16	CLA	h	503	-	46,54,73	1.21	3 (6%)	53,90,113	1.24	4 (7%)
16	CLA	G	1023	-	65,73,73	1.04	5 (7%)	76,113,113	1.16	6 (7%)
16	CLA	a	1116	-	54,62,73	1.14	3 (5%)	62,99,113	0.99	3 (4%)
16	CLA	H	1125	-	65,73,73	1.04	3 (4%)	76,113,113	1.00	2 (2%)
16	CLA	a	1124	25	60,68,73	1.06	3 (5%)	70,107,113	1.04	2 (2%)
16	CLA	b	1213	-	55,63,73	1.10	4 (7%)	64,101,113	1.13	5 (7%)
16	CLA	G	1225	-	65,73,73	1.01	4 (6%)	76,113,113	1.11	3 (3%)
16	CLA	X	501	-	46,54,73	1.18	3 (6%)	53,90,113	1.05	3 (5%)
16	CLA	w	506	-	60,68,73	1.06	4 (6%)	70,107,113	1.10	4 (5%)
16	CLA	B	1223	-	65,73,73	1.05	3 (4%)	76,113,113	1.05	3 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	Z	511	-	65,73,73	1.02	4 (6%)	76,113,113	1.14	3 (3%)
16	CLA	u	517	12	55,63,73	1.10	3 (5%)	64,101,113	1.01	3 (4%)
19	BCR	H	4011	-	41,41,41	0.91	0	56,56,56	1.23	4 (7%)
16	CLA	W	504	-	60,68,73	1.08	3 (5%)	70,107,113	1.01	3 (4%)
16	CLA	p	515	-	65,73,73	1.02	3 (4%)	76,113,113	1.07	4 (5%)
16	CLA	v	514	-	50,58,73	1.16	3 (6%)	58,95,113	1.03	2 (3%)
19	BCR	Q	4016	-	41,41,41	0.90	0	56,56,56	1.26	6 (10%)
19	BCR	T	4005	-	41,41,41	0.88	0	56,56,56	1.24	7 (12%)
16	CLA	h	507	-	65,73,73	1.02	3 (4%)	76,113,113	1.12	4 (5%)
16	CLA	B	1207	-	65,73,73	1.03	4 (6%)	76,113,113	1.20	6 (7%)
16	CLA	v	516	-	46,54,73	1.22	3 (6%)	53,90,113	0.96	2 (3%)
16	CLA	G	1219	-	45,53,73	1.23	3 (6%)	52,89,113	1.07	3 (5%)
18	SF4	N	101	-	0,12,12	-	-	-	-	-
16	CLA	F	1302	6	46,54,73	1.21	3 (6%)	53,90,113	1.04	2 (3%)
16	CLA	p	513	-	46,54,73	1.18	3 (6%)	53,90,113	0.95	2 (3%)
16	CLA	t	502	-	50,58,73	1.14	4 (8%)	58,95,113	1.03	4 (6%)
16	CLA	H	1118	-	55,63,73	1.11	3 (5%)	64,101,113	1.04	5 (7%)
16	CLA	t	516	-	46,54,73	1.19	3 (6%)	53,90,113	1.09	2 (3%)
16	CLA	G	1240	13	46,54,73	1.20	3 (6%)	53,90,113	1.31	6 (11%)
16	CLA	q	502	-	50,58,73	1.14	4 (8%)	58,95,113	0.98	1 (1%)
13	LHG	R	103	-	39,39,48	0.67	1 (2%)	42,45,54	1.21	4 (9%)
16	CLA	n	514	-	50,58,73	1.15	4 (8%)	58,95,113	1.13	4 (6%)
16	CLA	H	1123	-	65,73,73	1.02	3 (4%)	76,113,113	1.00	3 (3%)
21	ECH	b	4006	-	42,42,42	0.82	1 (2%)	55,58,58	1.56	10 (18%)
19	BCR	B	4009	-	30,30,41	0.87	0	39,39,56	1.31	5 (12%)
13	LHG	G	4018	16	37,37,48	0.72	1 (2%)	40,43,54	1.29	5 (12%)
16	CLA	p	514	-	50,58,73	1.16	3 (6%)	58,95,113	1.09	3 (5%)
16	CLA	B	1219	-	45,53,73	1.22	3 (6%)	52,89,113	1.14	4 (7%)
17	PQN	B	2002	-	34,34,34	0.34	0	42,45,45	1.04	2 (4%)
13	LHG	x	605	-	30,30,48	0.77	1 (3%)	33,36,54	1.24	3 (9%)
16	CLA	b	1209	-	45,53,73	1.24	3 (6%)	52,89,113	1.10	2 (3%)
16	CLA	o	517	12	55,63,73	1.11	3 (5%)	64,101,113	0.95	2 (3%)
18	SF4	c	102	-	0,12,12	-	-	-	-	-
16	CLA	g	517	12	55,63,73	1.13	3 (5%)	64,101,113	0.93	1 (1%)
16	CLA	u	502	-	50,58,73	1.15	4 (8%)	58,95,113	1.08	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	X	502	-	50,58,73	1.15	4 (8%)	58,95,113	0.99	2 (3%)
16	CLA	a	1117	-	65,73,73	1.01	3 (4%)	76,113,113	1.22	5 (6%)
16	CLA	t	503	-	46,54,73	1.21	3 (6%)	53,90,113	1.27	4 (7%)
16	CLA	Z	506	-	60,68,73	1.05	3 (5%)	70,107,113	1.03	4 (5%)
15	CL0	A	1011	-	65,73,73	1.03	4 (6%)	76,113,113	1.05	4 (5%)
13	LHG	H	851	16	25,25,48	0.86	1 (4%)	28,31,54	1.27	2 (7%)
19	BCR	Z	602	-	41,41,41	0.90	0	56,56,56	1.34	8 (14%)
16	CLA	v	513	-	46,54,73	1.22	3 (6%)	53,90,113	1.00	2 (3%)
16	CLA	s	502	-	50,58,73	1.13	4 (8%)	58,95,113	1.04	3 (5%)
16	CLA	A	1133	-	54,62,73	1.11	4 (7%)	62,99,113	1.14	3 (4%)
19	BCR	l	4022	-	41,41,41	0.92	0	56,56,56	1.39	7 (12%)
24	LUT	w	601	-	42,43,43	0.79	0	51,60,60	1.77	9 (17%)
16	CLA	J	1303	-	38,45,73	1.30	4 (10%)	43,78,113	1.05	2 (4%)
16	CLA	Y	512	12	65,73,73	1.05	4 (6%)	76,113,113	1.20	7 (9%)
16	CLA	r	502	-	50,58,73	1.14	3 (6%)	58,95,113	1.01	1 (1%)
16	CLA	H	1120	-	49,57,73	1.14	3 (6%)	55,93,113	1.23	6 (10%)
13	LHG	H	849	-	42,42,48	0.67	0	45,48,54	1.19	4 (8%)
16	CLA	Z	517	12	55,63,73	1.13	3 (5%)	64,101,113	1.01	2 (3%)
19	BCR	X	603	-	41,41,41	0.88	0	56,56,56	1.14	4 (7%)
19	BCR	q	603	-	41,41,41	0.87	0	56,56,56	1.15	4 (7%)
16	CLA	B	1236	-	50,58,73	1.16	4 (8%)	58,95,113	1.09	3 (5%)
16	CLA	f	1302	6	46,54,73	1.20	3 (6%)	53,90,113	1.05	2 (3%)
19	BCR	K	4005	-	41,41,41	0.89	0	56,56,56	1.26	6 (10%)
16	CLA	s	511	-	65,73,73	1.00	3 (4%)	76,113,113	1.08	5 (6%)
16	CLA	B	1227	-	49,57,73	1.17	4 (8%)	55,93,113	1.17	4 (7%)
16	CLA	W	511	-	65,73,73	1.02	3 (4%)	76,113,113	1.13	7 (9%)
16	CLA	A	1022	25	65,73,73	1.06	3 (4%)	76,113,113	1.03	5 (6%)
17	PQN	a	2001	-	34,34,34	0.37	0	42,45,45	1.06	2 (4%)
19	BCR	Y	604	-	41,41,41	0.89	0	56,56,56	1.14	6 (10%)
16	CLA	H	1104	-	65,73,73	1.02	4 (6%)	76,113,113	1.02	4 (5%)
19	BCR	b	4005	-	41,41,41	0.88	0	56,56,56	1.13	4 (7%)
16	CLA	b	1214	-	55,63,73	1.13	3 (5%)	64,101,113	1.05	3 (4%)
14	LMG	A	4201	-	32,32,55	1.01	1 (3%)	40,40,63	1.17	3 (7%)
16	CLA	B	1201	-	54,62,73	1.11	3 (5%)	62,99,113	1.05	2 (3%)
16	CLA	G	1218	-	55,63,73	1.11	3 (5%)	64,101,113	1.06	3 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
16	CLA	g	512	12	65,73,73	1.03	4 (6%)	76,113,113	1.16	5 (6%)
24	LUT	q	601	-	42,43,43	0.80	0	51,60,60	1.77	10 (19%)
19	BCR	k	4001	-	41,41,41	0.90	0	56,56,56	1.29	5 (8%)

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
16	CLA	H	1116	-	1/1/12/20	8/24/102/115	-
14	LMG	A	4101	-	-	24/41/61/70	0/1/1/1
16	CLA	a	1140	-	-	12/37/115/115	-
16	CLA	y	507	-	-	10/37/115/115	-
19	BCR	k	4005	-	-	7/29/63/63	0/2/2/2
23	LMU	r	606	-	-	5/21/61/61	0/2/2/2
16	CLA	U	1502	-	-	8/31/109/115	-
16	CLA	b	1239	-	-	13/37/115/115	-
16	CLA	j	1303	-	-	0/2/76/115	-
16	CLA	B	1220	-	1/1/12/20	16/23/101/115	-
16	CLA	Y	515	-	1/1/15/20	7/37/115/115	-
16	CLA	r	503	-	-	9/15/93/115	-
16	CLA	L	1502	-	-	9/31/109/115	-
16	CLA	B	1232	-	1/1/11/20	8/13/91/115	-
16	CLA	A	1117	-	1/1/15/20	6/37/115/115	-
16	CLA	n	511	-	-	7/37/115/115	-
16	CLA	x	508	12	1/1/13/20	12/25/103/115	-
16	CLA	y	506	-	1/1/14/20	10/31/109/115	-
16	CLA	Q	1302	6	1/1/11/20	4/15/93/115	-
16	CLA	H	1130	-	-	9/31/109/115	-
16	CLA	Q	1301	25	1/1/11/20	0/13/91/115	-
16	CLA	u	511	-	1/1/15/20	11/37/115/115	-
16	CLA	g	516	-	1/1/11/20	4/15/93/115	-
16	CLA	A	1128	-	1/1/15/20	20/37/115/115	-
16	CLA	y	501	-	1/1/11/20	9/15/93/115	-
16	CLA	Z	501	-	1/1/12/20	9/19/97/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	BCR	B	4017	-	-	11/29/63/63	0/2/2/2
16	CLA	o	515	-	1/1/15/20	15/37/115/115	-
19	BCR	Z	604	-	-	19/29/63/63	0/2/2/2
18	SF4	A	3001	-	-	-	0/6/5/5
16	CLA	x	515	-	1/1/15/20	9/37/115/115	-
16	CLA	t	508	12	1/1/13/20	9/25/103/115	-
16	CLA	o	504	-	-	11/31/109/115	-
16	CLA	H	1136	-	1/1/15/20	9/37/115/115	-
13	LHG	u	605	-	-	13/31/31/53	-
16	CLA	b	1204	-	1/1/15/20	11/37/115/115	-
19	BCR	R	4018	-	-	13/29/63/63	0/2/2/2
16	CLA	G	1209	-	1/1/11/20	4/13/91/115	-
16	CLA	x	501	-	-	8/19/97/115	-
16	CLA	G	1203	-	1/1/15/20	16/37/115/115	-
16	CLA	h	501	-	-	7/15/93/115	-
16	CLA	B	1228	-	-	13/25/103/115	-
16	CLA	B	1202	-	1/1/15/20	17/37/115/115	-
16	CLA	H	1109	16	1/1/15/20	10/37/115/115	-
16	CLA	n	505	-	1/1/15/20	21/37/115/115	-
16	CLA	B	1217	-	-	6/13/91/115	-
16	CLA	G	1208	-	1/1/11/20	6/13/91/115	-
14	LMG	H	4101	-	-	23/41/61/70	0/1/1/1
16	CLA	X	515	-	1/1/15/20	15/37/115/115	-
16	CLA	b	1201	-	1/1/12/20	5/24/102/115	-
13	LHG	o	605	-	-	13/31/31/53	-
19	BCR	a	4011	-	-	16/29/63/63	0/2/2/2
16	CLA	Z	504	-	1/1/15/20	13/37/115/115	-
19	BCR	n	603	-	-	12/29/63/63	0/2/2/2
16	CLA	q	507	-	1/1/15/20	11/37/115/115	-
16	CLA	G	1235	-	1/1/14/20	9/34/112/115	-
19	BCR	v	604	-	-	12/29/63/63	0/2/2/2
16	CLA	a	1103	-	1/1/15/20	13/37/115/115	-
19	BCR	r	603	-	-	11/29/63/63	0/2/2/2
16	CLA	g	503	-	-	8/15/93/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	BCR	u	603	-	-	9/29/63/63	0/2/2/2
16	CLA	W	505	-	1/1/15/20	18/37/115/115	-
16	CLA	G	1228	-	1/1/13/20	12/25/103/115	-
19	BCR	G	4009	-	-	7/24/41/63	0/1/1/2
16	CLA	A	1126	-	1/1/15/20	11/37/115/115	-
16	CLA	T	4002	-	1/1/11/20	6/13/91/115	-
16	CLA	y	511	-	1/1/15/20	10/37/115/115	-
16	CLA	h	502	-	1/1/12/20	5/19/97/115	-
16	CLA	h	516	-	1/1/11/20	6/15/93/115	-
16	CLA	G	1222	25	-	6/19/97/115	-
16	CLA	y	513	-	1/1/11/20	6/15/93/115	-
20	LMT	L	4101	-	-	9/21/61/61	0/2/2/2
16	CLA	Z	512	12	1/1/15/20	14/37/115/115	-
16	CLA	w	516	-	1/1/11/20	11/15/93/115	-
14	LMG	B	848	-	-	18/38/58/70	0/1/1/1
16	CLA	G	1229	-	1/1/13/20	8/29/107/115	-
16	CLA	A	1120	-	-	8/18/96/115	-
16	CLA	b	1021	-	1/1/15/20	18/37/115/115	-
16	CLA	b	1223	-	1/1/15/20	11/37/115/115	-
16	CLA	w	517	12	1/1/13/20	7/25/103/115	-
16	CLA	l	1501	10	-	15/31/109/115	-
16	CLA	Y	514	-	1/1/12/20	6/19/97/115	-
23	LMU	q	605	-	-	5/21/61/61	0/2/2/2
19	BCR	s	604	-	-	16/29/63/63	0/2/2/2
16	CLA	G	1216	25	1/1/11/20	3/16/94/115	-
19	BCR	b	4014	-	-	15/29/63/63	0/2/2/2
16	CLA	b	1012	25	1/1/13/20	11/25/103/115	-
16	CLA	Y	509	-	1/1/14/20	18/31/109/115	-
16	CLA	Z	503	-	1/1/11/20	8/15/93/115	-
16	CLA	a	1109	16	1/1/15/20	9/37/115/115	-
16	CLA	x	511	-	-	6/37/115/115	-
16	CLA	p	511	-	1/1/15/20	16/37/115/115	-
14	LMG	a	4101	-	-	21/41/61/70	0/1/1/1
16	CLA	s	509	-	1/1/14/20	16/31/109/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	b	1240	13	1/1/11/20	6/15/93/115	-
19	BCR	p	603	-	-	7/29/63/63	0/2/2/2
16	CLA	n	501	-	1/1/12/20	7/19/97/115	-
16	CLA	t	501	-	1/1/12/20	7/19/97/115	-
16	CLA	A	1103	-	1/1/15/20	13/37/115/115	-
16	CLA	b	1238	25	1/1/15/20	15/37/115/115	-
16	CLA	A	1122	-	1/1/13/20	9/30/108/115	-
15	CL0	H	1011	-	2/2/20/25	8/37/135/135	-
19	BCR	Y	601	-	-	11/29/63/63	0/2/2/2
13	LHG	s	605	-	-	12/36/36/53	-
16	CLA	k	4004	-	1/1/13/20	6/25/103/115	-
16	CLA	q	501	-	1/1/12/20	7/19/97/115	-
16	CLA	h	517	-	1/1/13/20	10/25/103/115	-
16	CLA	a	1108	-	-	6/13/91/115	-
16	CLA	h	510	-	-	7/37/115/115	-
16	CLA	A	1135	-	1/1/12/20	5/21/99/115	-
23	LMU	g	606	-	-	7/21/61/61	0/2/2/2
16	CLA	s	507	12	-	11/37/115/115	-
16	CLA	a	1111	-	1/1/13/20	9/25/103/115	-
16	CLA	v	509	-	-	14/37/115/115	-
16	CLA	G	1205	-	1/1/15/20	8/37/115/115	-
19	BCR	s	601	-	-	11/29/63/63	0/2/2/2
16	CLA	u	508	12	1/1/13/20	11/25/103/115	-
16	CLA	q	513	-	-	7/19/97/115	-
20	LMT	l	4101	-	-	7/21/61/61	0/2/2/2
19	BCR	a	4008	-	-	10/29/63/63	0/2/2/2
16	CLA	q	505	-	1/1/15/20	12/37/115/115	-
16	CLA	H	1126	-	1/1/15/20	12/37/115/115	-
16	CLA	B	1208	-	1/1/11/20	4/13/91/115	-
16	CLA	B	1023	-	-	8/37/115/115	-
16	CLA	L	1503	25	1/1/15/20	13/37/115/115	-
16	CLA	u	514	-	1/1/12/20	6/19/97/115	-
16	CLA	G	1221	25	1/1/15/20	20/37/115/115	-
16	CLA	g	506	-	-	9/31/109/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	G	1206	2	1/1/15/20	13/37/115/115	-
16	CLA	n	509	-	1/1/14/20	9/31/109/115	-
16	CLA	h	506	-	1/1/14/20	10/31/109/115	-
19	BCR	w	602	-	-	11/29/63/63	0/2/2/2
16	CLA	H	1119	25	1/1/15/20	11/37/115/115	-
16	CLA	A	1115	-	1/1/12/20	10/24/102/115	-
16	CLA	G	1201	-	1/1/12/20	5/24/102/115	-
16	CLA	b	1232	25	1/1/11/20	8/13/91/115	-
16	CLA	w	501	-	1/1/12/20	12/19/97/115	-
16	CLA	x	509	-	1/1/15/20	14/37/115/115	-
16	CLA	s	510	-	-	13/37/115/115	-
20	LMT	A	4202	-	-	7/21/61/61	0/2/2/2
16	CLA	v	504	-	1/1/14/20	14/31/109/115	-
16	CLA	o	514	-	1/1/12/20	10/19/97/115	-
16	CLA	A	1110	-	1/1/12/20	9/24/102/115	-
16	CLA	a	1115	-	1/1/12/20	8/24/102/115	-
14	LMG	b	848	-	-	19/38/58/70	0/1/1/1
19	BCR	t	601	-	-	14/29/63/63	0/2/2/2
16	CLA	X	514	-	1/1/12/20	4/19/97/115	-
16	CLA	G	1212	-	1/1/11/20	7/13/91/115	-
16	CLA	y	515	-	1/1/15/20	17/37/115/115	-
16	CLA	B	1222	25	-	6/19/97/115	-
16	CLA	x	514	-	1/1/12/20	8/19/97/115	-
16	CLA	X	509	-	1/1/14/20	13/31/109/115	-
16	CLA	W	509	-	1/1/14/20	5/31/109/115	-
16	CLA	G	1204	-	1/1/15/20	8/37/115/115	-
16	CLA	s	508	12	1/1/13/20	8/25/103/115	-
16	CLA	Z	515	-	1/1/15/20	10/37/115/115	-
14	LMG	F	4017	-	-	5/22/42/70	0/1/1/1
16	CLA	s	504	-	1/1/15/20	16/37/115/115	-
16	CLA	H	1133	-	-	8/24/102/115	-
16	CLA	a	1125	-	-	12/37/115/115	-
23	LMU	x	606	-	-	14/21/61/61	0/2/2/2
17	PQN	b	2002	-	-	8/23/43/43	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	v	517	-	1/1/13/20	15/25/103/115	-
16	CLA	v	510	-	-	6/37/115/115	-
16	CLA	H	1114	-	1/1/11/20	7/15/93/115	-
19	BCR	w	603	-	-	13/29/63/63	0/2/2/2
16	CLA	B	1235	-	1/1/14/20	11/34/112/115	-
16	CLA	A	1139	25	1/1/14/20	15/31/109/115	-
16	CLA	H	1103	-	1/1/15/20	13/37/115/115	-
16	CLA	n	510	-	-	16/37/115/115	-
16	CLA	g	509	-	1/1/15/20	8/37/115/115	-
16	CLA	A	1108	-	-	3/13/91/115	-
16	CLA	s	513	-	-	9/15/93/115	-
16	CLA	s	505	-	1/1/15/20	14/37/115/115	-
16	CLA	G	1214	-	1/1/13/20	12/25/103/115	-
16	CLA	G	1021	-	1/1/15/20	15/37/115/115	-
16	CLA	A	1131	-	-	12/37/115/115	-
13	LHG	p	605	-	-	13/36/36/53	-
19	BCR	y	604	-	-	11/29/63/63	0/2/2/2
16	CLA	g	502	-	1/1/12/20	6/19/97/115	-
13	LHG	b	4018	16	-	18/42/42/53	-
16	CLA	w	507	-	1/1/15/20	10/37/115/115	-
19	BCR	H	4003	-	-	10/29/63/63	0/2/2/2
14	LMG	H	4201	-	-	10/27/47/70	0/1/1/1
16	CLA	v	506	-	1/1/14/20	6/31/109/115	-
16	CLA	H	1128	-	1/1/15/20	17/37/115/115	-
16	CLA	A	1138	-	1/1/15/20	12/37/115/115	-
19	BCR	n	601	-	-	12/29/63/63	0/2/2/2
16	CLA	s	514	-	1/1/12/20	6/19/97/115	-
16	CLA	B	1209	-	1/1/11/20	6/13/91/115	-
16	CLA	A	1129	-	-	5/15/93/115	-
16	CLA	y	509	-	1/1/15/20	20/37/115/115	-
16	CLA	h	505	-	-	7/37/115/115	-
14	LMG	a	4201	-	-	11/27/47/70	0/1/1/1
19	BCR	g	602	-	-	14/29/63/63	0/2/2/2
16	CLA	A	1127	-	1/1/15/20	4/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	a	1113	-	1/1/11/20	3/13/91/115	-
16	CLA	u	509	-	1/1/14/20	10/31/109/115	-
16	CLA	W	514	-	1/1/12/20	10/19/97/115	-
16	CLA	T	4004	-	-	3/25/103/115	-
23	LMU	Y	606	-	-	6/21/61/61	0/2/2/2
16	CLA	X	516	-	-	9/15/93/115	-
19	BCR	J	4012	-	-	12/29/63/63	0/2/2/2
16	CLA	A	1104	-	1/1/15/20	19/37/115/115	-
16	CLA	v	511	-	1/1/15/20	10/37/115/115	-
16	CLA	H	1237	25	1/1/15/20	11/37/115/115	-
16	CLA	r	501	-	1/1/12/20	7/19/97/115	-
16	CLA	S	1303	-	-	0/2/76/115	-
19	BCR	h	604	-	-	13/29/63/63	0/2/2/2
19	BCR	H	4007	-	-	8/29/63/63	0/2/2/2
16	CLA	Y	503	-	1/1/11/20	5/15/93/115	-
16	CLA	G	1234	-	1/1/12/20	5/19/97/115	-
13	LHG	a	851	16	-	11/30/30/53	-
16	CLA	t	511	-	1/1/15/20	8/37/115/115	-
16	CLA	p	510	-	-	14/37/115/115	-
16	CLA	B	1206	2	1/1/15/20	18/37/115/115	-
16	CLA	B	1215	-	1/1/14/20	6/31/109/115	-
16	CLA	u	507	12	1/1/15/20	10/37/115/115	-
16	CLA	B	1226	-	-	15/31/109/115	-
16	CLA	r	513	-	-	13/15/93/115	-
16	CLA	v	501	-	-	8/15/93/115	-
16	CLA	G	1232	25	1/1/11/20	5/13/91/115	-
13	LHG	g	605	-	-	17/35/35/53	-
16	CLA	B	1239	-	-	13/37/115/115	-
16	CLA	b	1215	-	-	5/31/109/115	-
16	CLA	A	1124	25	1/1/14/20	7/31/109/115	-
16	CLA	r	516	-	1/1/11/20	5/15/93/115	-
16	CLA	X	505	-	1/1/15/20	10/37/115/115	-
16	CLA	Y	502	-	1/1/12/20	4/19/97/115	-
16	CLA	Z	502	-	1/1/12/20	8/19/97/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	x	516	-	1/1/11/20	4/15/93/115	-
16	CLA	K	4002	-	1/1/11/20	5/13/91/115	-
16	CLA	A	1112	-	-	4/13/91/115	-
16	CLA	H	1134	1	-	4/13/91/115	-
16	CLA	t	506	-	1/1/14/20	11/31/109/115	-
19	BCR	q	604	-	-	15/29/63/63	0/2/2/2
16	CLA	H	1137	-	1/1/11/20	5/16/94/115	-
16	CLA	H	1115	-	-	11/24/102/115	-
21	ECH	m	4021	-	-	14/29/66/66	0/2/2/2
16	CLA	b	1218	-	-	8/25/103/115	-
16	CLA	G	1223	-	1/1/15/20	7/37/115/115	-
16	CLA	A	1013	-	1/1/15/20	18/37/115/115	-
16	CLA	X	513	-	-	9/15/93/115	-
16	CLA	u	510	-	-	8/31/109/115	-
16	CLA	W	513	-	-	10/15/93/115	-
16	CLA	g	504	-	1/1/15/20	21/37/115/115	-
16	CLA	B	1221	25	-	14/37/115/115	-
19	BCR	L	4019	-	-	13/29/63/63	0/2/2/2
19	BCR	b	4009	-	-	7/24/41/63	0/1/1/2
19	BCR	h	601	-	-	14/29/63/63	0/2/2/2
19	BCR	p	602	-	-	10/29/63/63	0/2/2/2
16	CLA	A	1801	13	1/1/11/20	9/15/93/115	-
16	CLA	y	517	-	1/1/13/20	15/25/103/115	-
16	CLA	U	1503	-	1/1/15/20	9/37/115/115	-
19	BCR	o	602	-	-	14/29/63/63	0/2/2/2
16	CLA	J	1302	8	1/1/11/20	4/13/91/115	-
16	CLA	S	1302	8	1/1/11/20	7/13/91/115	-
16	CLA	x	507	-	1/1/15/20	9/37/115/115	-
16	CLA	H	1108	-	-	4/13/91/115	-
16	CLA	Y	508	12	1/1/13/20	11/25/103/115	-
16	CLA	y	510	-	-	8/37/115/115	-
19	BCR	H	4002	-	-	11/29/63/63	0/2/2/2
16	CLA	g	501	-	-	4/19/97/115	-
16	CLA	B	1238	25	1/1/15/20	7/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	w	513	-	-	7/19/97/115	-
16	CLA	g	514	-	1/1/12/20	7/19/97/115	-
16	CLA	o	505	-	1/1/15/20	15/37/115/115	-
19	BCR	Y	603	-	-	8/29/63/63	0/2/2/2
19	BCR	J	4013	-	-	10/29/63/63	0/2/2/2
16	CLA	A	1136	-	1/1/15/20	6/37/115/115	-
19	BCR	y	601	-	-	15/29/63/63	0/2/2/2
16	CLA	H	1106	1	1/1/15/20	15/37/115/115	-
19	BCR	u	601	-	-	8/29/63/63	0/2/2/2
16	CLA	r	511	-	1/1/15/20	6/37/115/115	-
16	CLA	A	1237	25	1/1/15/20	13/37/115/115	-
16	CLA	k	4002	-	1/1/11/20	5/13/91/115	-
16	CLA	G	1231	25	1/1/11/20	3/13/91/115	-
16	CLA	s	503	-	1/1/11/20	9/15/93/115	-
16	CLA	H	1122	-	-	9/30/108/115	-
16	CLA	y	504	-	-	13/31/109/115	-
16	CLA	o	511	-	1/1/15/20	11/37/115/115	-
16	CLA	h	512	12	-	18/37/115/115	-
16	CLA	G	1213	-	1/1/13/20	7/25/103/115	-
16	CLA	o	508	12	1/1/13/20	11/25/103/115	-
19	BCR	j	4015	-	-	14/29/63/63	0/2/2/2
16	CLA	H	1140	-	1/1/15/20	14/37/115/115	-
16	CLA	G	1226	-	-	18/31/109/115	-
19	BCR	n	604	-	-	13/29/63/63	0/2/2/2
21	ECH	R	4020	-	-	11/29/66/66	0/2/2/2
16	CLA	b	1231	25	1/1/11/20	7/13/91/115	-
16	CLA	X	507	12	-	8/37/115/115	-
16	CLA	a	1120	-	-	7/18/96/115	-
19	BCR	x	603	-	-	14/29/63/63	0/2/2/2
16	CLA	v	508	-	1/1/13/20	10/25/103/115	-
16	CLA	p	509	-	1/1/14/20	21/31/109/115	-
16	CLA	G	1236	-	-	7/19/97/115	-
16	CLA	v	512	12	-	12/37/115/115	-
19	BCR	S	4013	-	-	10/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	A	1111	-	1/1/13/20	9/25/103/115	-
21	ECH	M	4021	-	-	15/29/66/66	0/2/2/2
16	CLA	a	1119	-	1/1/15/20	7/37/115/115	-
16	CLA	H	1124	-	1/1/14/20	6/31/109/115	-
16	CLA	a	1131	-	-	12/37/115/115	-
16	CLA	u	505	-	1/1/15/20	11/37/115/115	-
19	BCR	G	4010	-	-	17/29/63/63	0/2/2/2
16	CLA	w	510	-	-	10/31/109/115	-
16	CLA	A	1105	-	1/1/13/20	10/29/107/115	-
21	ECH	I	4020	-	-	11/29/66/66	0/2/2/2
16	CLA	a	1126	-	1/1/15/20	11/37/115/115	-
16	CLA	j	1302	8	-	7/13/91/115	-
19	BCR	A	4008	-	-	12/29/63/63	0/2/2/2
19	BCR	t	603	-	-	11/29/63/63	0/2/2/2
16	CLA	n	507	-	1/1/15/20	9/37/115/115	-
16	CLA	G	1012	25	1/1/13/20	8/25/103/115	-
16	CLA	v	515	-	1/1/15/20	15/37/115/115	-
14	LMG	A	852	-	-	10/33/53/70	0/1/1/1
19	BCR	G	4014	-	-	16/29/63/63	0/2/2/2
19	BCR	U	4019	-	-	10/29/63/63	0/2/2/2
16	CLA	b	1203	-	1/1/15/20	14/37/115/115	-
20	LMT	U	4101	-	-	7/21/61/61	0/2/2/2
16	CLA	H	1113	-	1/1/11/20	1/13/91/115	-
16	CLA	p	507	12	-	8/37/115/115	-
16	CLA	Z	508	12	1/1/13/20	8/25/103/115	-
16	CLA	r	507	-	1/1/15/20	11/37/115/115	-
16	CLA	h	504	-	-	15/31/109/115	-
16	CLA	n	503	-	1/1/11/20	8/15/93/115	-
16	CLA	b	1208	-	1/1/11/20	6/13/91/115	-
16	CLA	U	1501	10	-	12/31/109/115	-
16	CLA	w	504	-	1/1/15/20	12/37/115/115	-
16	CLA	s	512	12	1/1/15/20	7/37/115/115	-
16	CLA	G	1238	25	1/1/15/20	9/37/115/115	-
16	CLA	H	1112	-	-	2/13/91/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	b	1228	-	1/1/13/20	11/25/103/115	-
16	CLA	H	1138	-	1/1/15/20	12/37/115/115	-
16	CLA	n	506	-	-	7/31/109/115	-
16	CLA	h	515	-	1/1/15/20	18/37/115/115	-
19	BCR	B	4010	-	-	16/29/63/63	0/2/2/2
16	CLA	X	503	-	-	11/15/93/115	-
19	BCR	f	4016	-	-	11/29/63/63	0/2/2/2
16	CLA	h	513	-	1/1/11/20	6/15/93/115	-
16	CLA	B	1216	25	-	5/16/94/115	-
16	CLA	a	1114	-	1/1/11/20	7/15/93/115	-
16	CLA	w	514	-	1/1/12/20	9/19/97/115	-
16	CLA	X	506	-	1/1/14/20	13/31/109/115	-
16	CLA	W	507	-	-	9/37/115/115	-
19	BCR	F	4016	-	-	10/29/63/63	0/2/2/2
24	LUT	Z	601	-	-	7/29/67/67	0/2/2/2
16	CLA	B	1240	13	1/1/11/20	7/15/93/115	-
19	BCR	W	601	-	-	16/29/63/63	0/2/2/2
19	BCR	q	602	-	-	11/29/63/63	0/2/2/2
21	ECH	i	4020	-	-	12/29/66/66	0/2/2/2
16	CLA	W	503	-	1/1/11/20	9/15/93/115	-
19	BCR	t	604	-	-	14/29/63/63	0/2/2/2
16	CLA	b	1221	25	1/1/15/20	21/37/115/115	-
16	CLA	b	1212	-	1/1/11/20	4/13/91/115	-
16	CLA	b	1222	25	-	7/19/97/115	-
19	BCR	B	4004	-	-	11/29/63/63	0/2/2/2
16	CLA	h	514	-	-	8/19/97/115	-
13	LHG	a	849	-	-	18/47/47/53	-
16	CLA	y	502	-	1/1/12/20	4/19/97/115	-
16	CLA	t	514	-	1/1/12/20	9/19/97/115	-
16	CLA	W	506	-	-	9/31/109/115	-
23	LMU	w	605	-	-	5/21/61/61	0/2/2/2
16	CLA	Y	505	-	1/1/15/20	13/37/115/115	-
19	BCR	p	601	-	-	9/29/63/63	0/2/2/2
16	CLA	t	509	-	1/1/14/20	6/31/109/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	q	517	12	-	9/25/103/115	-
16	CLA	q	510	-	-	10/31/109/115	-
16	CLA	H	1013	-	1/1/15/20	16/37/115/115	-
16	CLA	r	506	-	-	10/31/109/115	-
19	BCR	a	4007	-	-	7/29/63/63	0/2/2/2
16	CLA	Y	517	12	-	10/25/103/115	-
16	CLA	A	1137	-	1/1/11/20	7/16/94/115	-
16	CLA	b	1235	-	1/1/14/20	12/34/112/115	-
16	CLA	A	1119	25	1/1/15/20	7/37/115/115	-
16	CLA	A	1107	1	-	5/19/97/115	-
19	BCR	G	4017	-	-	13/29/63/63	0/2/2/2
16	CLA	a	1123	-	-	13/37/115/115	-
16	CLA	b	1202	-	1/1/15/20	16/37/115/115	-
16	CLA	b	1023	-	-	10/37/115/115	-
19	BCR	W	604	-	-	10/29/63/63	0/2/2/2
19	BCR	X	604	-	-	20/29/63/63	0/2/2/2
19	BCR	S	4015	-	-	10/29/63/63	0/2/2/2
16	CLA	t	515	-	1/1/15/20	13/37/115/115	-
16	CLA	x	505	-	1/1/15/20	9/37/115/115	-
16	CLA	a	1138	-	1/1/15/20	16/37/115/115	-
16	CLA	p	505	-	-	12/37/115/115	-
16	CLA	y	503	-	1/1/11/20	6/15/93/115	-
18	SF4	N	102	-	-	-	0/6/5/5
16	CLA	W	508	12	1/1/13/20	9/25/103/115	-
16	CLA	u	503	-	-	8/15/93/115	-
16	CLA	s	517	12	-	11/25/103/115	-
16	CLA	H	1022	25	1/1/15/20	12/37/115/115	-
16	CLA	a	1106	1	1/1/15/20	16/37/115/115	-
16	CLA	w	511	-	1/1/15/20	10/37/115/115	-
19	BCR	W	603	-	-	13/29/63/63	0/2/2/2
19	BCR	p	604	-	-	14/29/63/63	0/2/2/2
16	CLA	o	513	-	-	6/15/93/115	-
18	SF4	C	101	-	-	-	0/6/5/5
16	CLA	a	1121	-	1/1/12/20	6/21/99/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	BCR	r	604	-	-	15/29/63/63	0/2/2/2
16	CLA	G	1230	-	1/1/11/20	6/13/91/115	-
16	CLA	g	508	12	1/1/13/20	7/25/103/115	-
16	CLA	a	1132	-	1/1/15/20	14/37/115/115	-
16	CLA	G	1215	-	1/1/14/20	7/31/109/115	-
16	CLA	h	508	-	1/1/13/20	11/25/103/115	-
16	CLA	w	502	-	1/1/12/20	8/19/97/115	-
16	CLA	Y	516	-	-	10/15/93/115	-
16	CLA	t	517	12	1/1/13/20	7/25/103/115	-
16	CLA	l	1502	-	-	7/31/109/115	-
16	CLA	x	510	-	-	13/37/115/115	-
19	BCR	U	4022	-	-	17/29/63/63	0/2/2/2
16	CLA	o	509	-	1/1/14/20	10/31/109/115	-
19	BCR	v	601	-	-	11/29/63/63	0/2/2/2
16	CLA	a	1127	-	1/1/15/20	3/37/115/115	-
16	CLA	n	502	-	1/1/12/20	6/19/97/115	-
19	BCR	L	4022	-	-	14/29/63/63	0/2/2/2
16	CLA	a	1801	13	1/1/11/20	10/15/93/115	-
16	CLA	a	1139	25	1/1/13/20	4/25/103/115	-
16	CLA	g	515	-	1/1/15/20	9/37/115/115	-
19	BCR	a	4002	-	-	12/29/63/63	0/2/2/2
16	CLA	x	503	-	-	7/15/93/115	-
19	BCR	Y	602	-	-	10/29/63/63	0/2/2/2
16	CLA	H	1117	-	1/1/15/20	9/37/115/115	-
16	CLA	Y	501	-	1/1/12/20	8/19/97/115	-
16	CLA	a	1137	-	1/1/11/20	6/16/94/115	-
16	CLA	a	1104	-	1/1/15/20	16/37/115/115	-
16	CLA	y	508	-	1/1/13/20	12/25/103/115	-
16	CLA	y	512	12	-	15/37/115/115	-
16	CLA	o	502	-	1/1/12/20	7/19/97/115	-
19	BCR	y	603	-	-	11/29/63/63	0/2/2/2
16	CLA	t	504	-	1/1/14/20	6/31/109/115	-
16	CLA	u	512	12	-	12/37/115/115	-
16	CLA	b	1236	-	-	7/19/97/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	BCR	o	601	-	-	9/29/63/63	0/2/2/2
16	CLA	r	504	-	1/1/15/20	16/37/115/115	-
16	CLA	n	516	-	-	7/15/93/115	-
16	CLA	B	1021	-	1/1/15/20	14/37/115/115	-
16	CLA	G	1217	-	-	7/13/91/115	-
19	BCR	G	4004	-	-	11/29/63/63	0/2/2/2
16	CLA	G	1227	-	-	6/18/96/115	-
16	CLA	X	517	12	-	8/25/103/115	-
18	SF4	H	3001	-	-	-	0/6/5/5
16	CLA	B	1225	-	-	11/37/115/115	-
16	CLA	X	510	-	-	9/31/109/115	-
16	CLA	H	1105	-	1/1/13/20	10/29/107/115	-
16	CLA	B	1012	25	1/1/13/20	12/25/103/115	-
16	CLA	q	516	-	1/1/11/20	13/15/93/115	-
16	CLA	H	1110	-	1/1/12/20	8/24/102/115	-
19	BCR	s	603	-	-	7/29/63/63	0/2/2/2
16	CLA	b	1226	-	1/1/14/20	15/31/109/115	-
16	CLA	a	1133	-	-	6/24/102/115	-
16	CLA	X	504	-	-	16/31/109/115	-
23	LMU	s	606	-	-	6/21/61/61	0/2/2/2
16	CLA	n	517	12	1/1/13/20	10/25/103/115	-
18	SF4	C	102	-	-	-	0/6/5/5
16	CLA	o	512	12	1/1/15/20	7/37/115/115	-
16	CLA	b	1205	-	1/1/15/20	10/37/115/115	-
16	CLA	B	1218	-	-	7/25/103/115	-
23	LMU	p	606	-	-	9/21/61/61	0/2/2/2
16	CLA	Z	516	-	1/1/11/20	11/15/93/115	-
16	CLA	x	512	12	-	8/37/115/115	-
16	CLA	b	1229	-	1/1/13/20	8/29/107/115	-
16	CLA	a	1101	-	1/1/15/20	18/37/115/115	-
16	CLA	w	508	12	1/1/13/20	8/25/103/115	-
16	CLA	r	510	-	-	13/37/115/115	-
19	BCR	j	4013	-	-	11/29/63/63	0/2/2/2
19	BCR	X	602	-	-	17/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	p	503	-	1/1/11/20	7/15/93/115	-
16	CLA	B	1211	-	1/1/15/20	17/37/115/115	-
19	BCR	r	601	-	-	15/29/63/63	0/2/2/2
16	CLA	G	1207	-	-	11/37/115/115	-
14	LMG	G	848	-	-	18/38/58/70	0/1/1/1
16	CLA	a	1136	-	1/1/15/20	9/37/115/115	-
16	CLA	k	4003	9	1/1/11/20	5/13/91/115	-
16	CLA	s	506	-	-	10/31/109/115	-
19	BCR	g	604	-	-	16/29/63/63	0/2/2/2
16	CLA	a	1112	-	-	5/13/91/115	-
16	CLA	q	511	-	-	4/37/115/115	-
16	CLA	o	501	-	-	9/15/93/115	-
16	CLA	u	513	-	-	8/15/93/115	-
19	BCR	x	601	-	-	10/29/63/63	0/2/2/2
16	CLA	Y	513	-	-	9/15/93/115	-
21	ECH	V	4021	-	-	14/29/66/66	0/2/2/2
16	CLA	b	1207	-	-	10/37/115/115	-
16	CLA	w	505	-	-	7/37/115/115	-
16	CLA	W	517	12	1/1/13/20	11/25/103/115	-
16	CLA	W	510	-	-	14/37/115/115	-
19	BCR	B	4005	-	-	10/29/63/63	0/2/2/2
16	CLA	A	1134	1	-	6/13/91/115	-
16	CLA	s	501	-	1/1/12/20	9/19/97/115	-
19	BCR	r	602	-	-	16/29/63/63	0/2/2/2
18	SF4	a	3001	-	-	-	0/6/5/5
16	CLA	l	1503	-	1/1/15/20	14/37/115/115	-
16	CLA	B	1231	25	1/1/11/20	8/13/91/115	-
16	CLA	q	503	-	1/1/11/20	8/15/93/115	-
16	CLA	L	1501	10	-	13/31/109/115	-
13	LHG	X	605	-	-	13/31/31/53	-
16	CLA	H	1121	-	1/1/12/20	7/21/99/115	-
16	CLA	A	1109	16	1/1/15/20	10/37/115/115	-
16	CLA	B	1234	-	1/1/12/20	6/19/97/115	-
14	LMG	f	4017	-	-	5/22/42/70	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	f	1301	25	1/1/11/20	3/13/91/115	-
13	LHG	B	4018	16	-	18/42/42/53	-
17	PQN	A	2001	-	-	3/23/43/43	0/2/2/2
16	CLA	K	4003	9	1/1/11/20	8/13/91/115	-
19	BCR	A	4003	-	-	11/29/63/63	0/2/2/2
16	CLA	F	1301	25	1/1/11/20	2/13/91/115	-
16	CLA	A	1125	-	-	12/37/115/115	-
16	CLA	x	513	-	-	10/15/93/115	-
16	CLA	v	505	-	-	13/37/115/115	-
16	CLA	u	504	-	-	17/31/109/115	-
19	BCR	w	604	-	-	17/29/63/63	0/2/2/2
16	CLA	Y	507	12	-	9/37/115/115	-
16	CLA	b	1216	25	1/1/11/20	0/16/94/115	-
13	LHG	r	605	-	-	19/35/35/53	-
16	CLA	p	502	-	1/1/12/20	4/19/97/115	-
16	CLA	h	511	-	1/1/15/20	15/37/115/115	-
16	CLA	u	506	-	1/1/14/20	12/31/109/115	-
19	BCR	g	601	-	-	17/29/63/63	0/2/2/2
16	CLA	X	511	-	1/1/15/20	12/37/115/115	-
19	BCR	u	602	-	-	13/29/63/63	0/2/2/2
16	CLA	v	503	-	1/1/11/20	7/15/93/115	-
16	CLA	G	1220	-	1/1/12/20	13/24/102/115	-
19	BCR	h	603	-	-	11/29/63/63	0/2/2/2
16	CLA	G	1224	-	1/1/14/20	14/31/109/115	-
16	CLA	H	1135	-	-	5/21/99/115	-
16	CLA	Y	506	-	-	11/31/109/115	-
16	CLA	Z	507	-	1/1/15/20	14/37/115/115	-
16	CLA	o	507	12	-	12/37/115/115	-
16	CLA	H	1139	25	1/1/14/20	12/31/109/115	-
16	CLA	a	1105	-	1/1/13/20	10/29/107/115	-
16	CLA	x	502	-	1/1/12/20	6/19/97/115	-
19	BCR	G	4005	-	-	11/29/63/63	0/2/2/2
16	CLA	q	508	12	1/1/13/20	9/25/103/115	-
16	CLA	b	1230	-	-	6/13/91/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	q	512	12	1/1/15/20	13/37/115/115	-
16	CLA	W	501	-	1/1/12/20	8/19/97/115	-
16	CLA	o	503	-	-	4/15/93/115	-
16	CLA	B	1213	-	1/1/13/20	7/25/103/115	-
16	CLA	T	4003	9	1/1/11/20	8/13/91/115	-
16	CLA	v	502	-	1/1/12/20	8/19/97/115	-
16	CLA	a	1128	-	1/1/15/20	17/37/115/115	-
16	CLA	p	504	-	-	15/37/115/115	-
16	CLA	o	506	-	1/1/14/20	16/31/109/115	-
16	CLA	A	1113	-	1/1/11/20	7/13/91/115	-
14	LMG	Q	4017	-	-	4/22/42/70	0/1/1/1
16	CLA	x	506	-	-	13/31/109/115	-
16	CLA	y	514	-	-	6/19/97/115	-
16	CLA	b	1234	-	1/1/12/20	4/19/97/115	-
16	CLA	Z	514	-	1/1/12/20	9/19/97/115	-
16	CLA	a	1102	16	1/1/13/20	8/27/105/115	-
19	BCR	x	602	-	-	17/29/63/63	0/2/2/2
20	LMT	H	4202	-	-	8/21/61/61	0/2/2/2
19	BCR	Z	603	-	-	8/29/63/63	0/2/2/2
16	CLA	p	517	12	-	9/25/103/115	-
16	CLA	q	506	-	1/1/14/20	14/31/109/115	-
17	PQN	H	2001	-	-	5/23/43/43	0/2/2/2
16	CLA	A	1102	16	1/1/13/20	7/27/105/115	-
19	BCR	b	4017	-	-	12/29/63/63	0/2/2/2
16	CLA	q	515	-	1/1/15/20	11/37/115/115	-
19	BCR	v	603	-	-	13/29/63/63	0/2/2/2
16	CLA	g	513	-	-	8/15/93/115	-
16	CLA	n	508	12	1/1/13/20	9/25/103/115	-
16	CLA	a	1107	1	-	6/19/97/115	-
16	CLA	a	1118	-	-	10/25/103/115	-
16	CLA	x	517	12	-	8/25/103/115	-
16	CLA	t	512	12	1/1/15/20	13/37/115/115	-
16	CLA	p	508	12	1/1/13/20	9/25/103/115	-
19	BCR	S	4012	-	-	10/29/63/63	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	W	502	-	1/1/12/20	9/19/97/115	-
19	BCR	o	603	-	-	10/29/63/63	0/2/2/2
16	CLA	a	1022	-	1/1/15/20	8/37/115/115	-
16	CLA	B	1230	-	1/1/11/20	6/13/91/115	-
16	CLA	H	1131	-	1/1/15/20	11/37/115/115	-
19	BCR	I	4018	-	-	11/29/63/63	0/2/2/2
16	CLA	B	1224	-	1/1/14/20	10/31/109/115	-
16	CLA	b	1211	-	1/1/15/20	14/37/115/115	-
16	CLA	W	516	-	-	7/15/93/115	-
16	CLA	w	515	-	1/1/15/20	10/37/115/115	-
13	LHG	i	103	-	-	23/44/44/53	-
16	CLA	X	508	12	1/1/13/20	14/25/103/115	-
16	CLA	B	1214	-	1/1/13/20	8/25/103/115	-
16	CLA	Z	513	-	-	7/19/97/115	-
16	CLA	u	501	-	-	8/15/93/115	-
16	CLA	W	512	12	1/1/14/20	17/31/109/115	-
16	CLA	Z	505	-	1/1/15/20	13/37/115/115	-
19	BCR	K	4001	-	-	11/29/63/63	0/2/2/2
16	CLA	a	1237	25	1/1/15/20	12/37/115/115	-
16	CLA	r	517	12	-	10/25/103/115	-
21	ECH	B	4006	-	-	10/29/66/66	0/2/2/2
16	CLA	q	509	-	1/1/15/20	13/37/115/115	-
16	CLA	w	512	12	1/1/15/20	11/37/115/115	-
19	BCR	a	4003	-	-	12/29/63/63	0/2/2/2
19	BCR	b	4010	-	-	14/29/63/63	0/2/2/2
16	CLA	p	501	-	1/1/12/20	7/19/97/115	-
19	BCR	b	4004	-	-	11/29/63/63	0/2/2/2
16	CLA	H	1129	-	-	4/15/93/115	-
16	CLA	B	1229	-	1/1/13/20	8/29/107/115	-
16	CLA	b	1227	-	1/1/11/20	5/18/96/115	-
16	CLA	H	1127	-	1/1/15/20	9/37/115/115	-
16	CLA	r	508	12	1/1/13/20	5/25/103/115	-
16	CLA	g	511	-	1/1/15/20	8/37/115/115	-
16	CLA	s	515	-	1/1/15/20	13/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	t	510	-	-	9/37/115/115	-
16	CLA	a	1130	-	-	9/31/109/115	-
19	BCR	T	4001	-	-	12/29/63/63	0/2/2/2
19	BCR	i	4018	-	-	14/29/63/63	0/2/2/2
19	BCR	o	604	-	-	17/29/63/63	0/2/2/2
16	CLA	r	514	-	1/1/12/20	10/19/97/115	-
19	BCR	A	4011	-	-	18/29/63/63	0/2/2/2
19	BCR	B	4014	-	-	16/29/63/63	0/2/2/2
16	CLA	y	516	-	1/1/11/20	6/15/93/115	-
16	CLA	B	1203	-	1/1/15/20	16/37/115/115	-
19	BCR	g	603	-	-	15/29/63/63	0/2/2/2
16	CLA	A	1114	-	1/1/11/20	7/15/93/115	-
16	CLA	u	516	-	1/1/11/20	7/15/93/115	-
16	CLA	n	512	12	1/1/15/20	19/37/115/115	-
16	CLA	A	1116	-	1/1/12/20	10/24/102/115	-
16	CLA	b	1219	-	-	5/13/91/115	-
16	CLA	A	1132	-	1/1/15/20	14/37/115/115	-
16	CLA	B	1212	-	1/1/11/20	3/13/91/115	-
16	CLA	A	1118	-	-	9/25/103/115	-
16	CLA	b	1210	-	1/1/15/20	14/37/115/115	-
14	LMG	a	852	-	-	10/33/53/70	0/1/1/1
16	CLA	a	1135	-	1/1/12/20	5/21/99/115	-
16	CLA	B	1210	-	-	14/37/115/115	-
16	CLA	G	1202	-	1/1/15/20	16/37/115/115	-
16	CLA	Y	504	-	1/1/15/20	14/37/115/115	-
19	BCR	J	4015	-	-	8/29/63/63	0/2/2/2
16	CLA	g	507	-	1/1/15/20	7/37/115/115	-
16	CLA	s	516	-	-	11/15/93/115	-
16	CLA	y	505	-	1/1/15/20	11/37/115/115	-
14	LMG	H	852	-	-	6/33/53/70	0/1/1/1
16	CLA	X	512	12	-	11/37/115/115	-
16	CLA	B	1205	-	1/1/15/20	8/37/115/115	-
17	PQN	G	2002	-	-	11/23/43/43	0/2/2/2
16	CLA	Y	510	-	-	12/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	n	515	-	1/1/15/20	14/37/115/115	-
16	CLA	b	1224	-	1/1/14/20	8/31/109/115	-
21	ECH	G	4006	-	-	10/29/66/66	0/2/2/2
16	CLA	A	1123	25	-	8/37/115/115	-
16	CLA	r	505	-	-	13/37/115/115	-
16	CLA	H	1801	13	1/1/11/20	6/15/93/115	-
16	CLA	r	515	-	1/1/15/20	12/37/115/115	-
16	CLA	n	504	-	-	7/31/109/115	-
20	LMT	a	4202	-	-	8/21/61/61	0/2/2/2
16	CLA	t	507	-	1/1/15/20	10/37/115/115	-
19	BCR	A	4007	-	-	7/29/63/63	0/2/2/2
16	CLA	b	1225	-	-	12/37/115/115	-
19	BCR	x	604	-	-	12/29/63/63	0/2/2/2
16	CLA	q	504	-	1/1/15/20	14/37/115/115	-
15	CL0	a	1011	-	2/2/20/25	7/37/135/135	-
16	CLA	G	1239	-	1/1/15/20	13/37/115/115	-
16	CLA	G	1211	-	-	22/37/115/115	-
16	CLA	Z	510	-	-	12/31/109/115	-
16	CLA	o	510	-	-	5/31/109/115	-
16	CLA	B	1204	-	1/1/15/20	8/37/115/115	-
16	CLA	n	513	-	-	10/15/93/115	-
16	CLA	Z	509	-	1/1/15/20	16/37/115/115	-
16	CLA	r	512	12	1/1/15/20	9/37/115/115	-
13	LHG	A	849	-	-	21/47/47/53	-
18	SF4	c	101	-	-	-	0/6/5/5
16	CLA	W	515	-	1/1/15/20	14/37/115/115	-
16	CLA	w	503	-	1/1/11/20	8/15/93/115	-
13	LHG	I	103	-	-	21/44/44/53	-
16	CLA	H	1132	-	1/1/15/20	15/37/115/115	-
16	CLA	H	1102	16	1/1/13/20	6/27/105/115	-
16	CLA	p	506	-	-	11/31/109/115	-
16	CLA	o	516	-	-	8/15/93/115	-
16	CLA	b	1217	-	-	2/13/91/115	-
16	CLA	H	1111	-	1/1/13/20	9/25/103/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	b	1220	-	-	12/24/102/115	-
16	CLA	x	504	-	1/1/15/20	21/37/115/115	-
16	CLA	r	509	-	-	11/37/115/115	-
16	CLA	q	514	-	1/1/12/20	10/19/97/115	-
16	CLA	h	509	-	1/1/15/20	14/37/115/115	-
16	CLA	v	507	12	-	9/37/115/115	-
19	BCR	s	602	-	-	10/29/63/63	0/2/2/2
16	CLA	p	516	-	1/1/11/20	11/15/93/115	-
16	CLA	H	1107	1	-	4/19/97/115	-
19	BCR	A	4002	-	-	12/29/63/63	0/2/2/2
19	BCR	H	4008	-	-	13/29/63/63	0/2/2/2
16	CLA	a	1013	-	1/1/15/20	14/37/115/115	-
16	CLA	Y	511	-	1/1/15/20	16/37/115/115	-
13	LHG	Y	605	-	-	16/36/36/53	-
19	BCR	X	601	-	-	10/29/63/63	0/2/2/2
16	CLA	g	505	-	1/1/15/20	12/37/115/115	-
19	BCR	l	4019	-	-	12/29/63/63	0/2/2/2
16	CLA	a	1122	-	-	8/30/108/115	-
16	CLA	a	1110	-	1/1/12/20	8/24/102/115	-
16	CLA	p	512	12	1/1/15/20	9/37/115/115	-
16	CLA	A	1106	1	1/1/15/20	13/37/115/115	-
16	CLA	A	1101	-	1/1/15/20	16/37/115/115	-
19	BCR	u	604	-	-	17/29/63/63	0/2/2/2
13	LHG	A	851	16	-	9/30/30/53	-
16	CLA	a	1129	-	-	3/15/93/115	-
23	LMU	Z	605	-	-	5/21/61/61	0/2/2/2
16	CLA	u	515	-	-	16/37/115/115	-
16	CLA	A	1121	-	1/1/12/20	8/21/99/115	-
16	CLA	K	4004	-	1/1/13/20	6/25/103/115	-
16	CLA	A	1140	-	1/1/15/20	15/37/115/115	-
16	CLA	t	513	-	-	8/15/93/115	-
16	CLA	A	1130	-	1/1/14/20	9/31/109/115	-
16	CLA	t	505	-	-	10/37/115/115	-
16	CLA	b	1206	2	1/1/15/20	15/37/115/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	BCR	j	4012	-	-	10/29/63/63	0/2/2/2
16	CLA	w	509	-	1/1/15/20	15/37/115/115	-
16	CLA	G	1210	-	-	16/37/115/115	-
16	CLA	H	1101	-	1/1/15/20	20/37/115/115	-
16	CLA	a	1134	1	-	6/13/91/115	-
16	CLA	g	510	-	-	12/37/115/115	-
16	CLA	h	503	-	1/1/11/20	4/15/93/115	-
16	CLA	a	1116	-	1/1/12/20	8/24/102/115	-
16	CLA	G	1023	-	-	11/37/115/115	-
16	CLA	H	1125	-	-	12/37/115/115	-
16	CLA	a	1124	25	1/1/14/20	8/31/109/115	-
16	CLA	b	1213	-	1/1/13/20	6/25/103/115	-
16	CLA	G	1225	-	1/1/15/20	11/37/115/115	-
16	CLA	X	501	-	-	9/15/93/115	-
16	CLA	w	506	-	-	5/31/109/115	-
16	CLA	B	1223	-	1/1/15/20	12/37/115/115	-
16	CLA	Z	511	-	1/1/15/20	3/37/115/115	-
16	CLA	u	517	12	-	7/25/103/115	-
19	BCR	H	4011	-	-	16/29/63/63	0/2/2/2
16	CLA	W	504	-	1/1/14/20	4/31/109/115	-
16	CLA	p	515	-	1/1/15/20	15/37/115/115	-
16	CLA	v	514	-	1/1/12/20	5/19/97/115	-
19	BCR	Q	4016	-	-	11/29/63/63	0/2/2/2
19	BCR	T	4005	-	-	9/29/63/63	0/2/2/2
16	CLA	h	507	-	1/1/15/20	15/37/115/115	-
16	CLA	v	516	-	1/1/11/20	5/15/93/115	-
16	CLA	B	1207	-	-	16/37/115/115	-
16	CLA	G	1219	-	-	8/13/91/115	-
18	SF4	N	101	-	-	-	0/6/5/5
16	CLA	F	1302	6	1/1/11/20	8/15/93/115	-
16	CLA	p	513	-	-	7/15/93/115	-
16	CLA	t	502	-	1/1/12/20	9/19/97/115	-
16	CLA	H	1118	-	-	11/25/103/115	-
16	CLA	t	516	-	1/1/11/20	8/15/93/115	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	G	1240	13	1/1/11/20	6/15/93/115	-
16	CLA	q	502	-	1/1/12/20	7/19/97/115	-
13	LHG	R	103	-	-	23/44/44/53	-
16	CLA	n	514	-	1/1/12/20	7/19/97/115	-
16	CLA	H	1123	-	-	11/37/115/115	-
21	ECH	b	4006	-	-	10/29/66/66	0/2/2/2
19	BCR	B	4009	-	-	7/24/41/63	0/1/1/2
13	LHG	G	4018	16	-	13/42/42/53	-
16	CLA	p	514	-	1/1/12/20	7/19/97/115	-
16	CLA	B	1219	-	-	7/13/91/115	-
17	PQN	B	2002	-	-	9/23/43/43	0/2/2/2
13	LHG	x	605	-	-	21/35/35/53	-
16	CLA	b	1209	-	1/1/11/20	4/13/91/115	-
16	CLA	o	517	12	-	10/25/103/115	-
18	SF4	c	102	-	-	-	0/6/5/5
16	CLA	g	517	12	-	10/25/103/115	-
16	CLA	u	502	-	1/1/12/20	7/19/97/115	-
16	CLA	X	502	-	1/1/12/20	6/19/97/115	-
16	CLA	a	1117	-	1/1/15/20	9/37/115/115	-
16	CLA	t	503	-	1/1/11/20	8/15/93/115	-
16	CLA	Z	506	-	-	9/31/109/115	-
15	CL0	A	1011	-	2/2/20/25	8/37/135/135	-
13	LHG	H	851	16	-	8/30/30/53	-
19	BCR	Z	602	-	-	11/29/63/63	0/2/2/2
16	CLA	v	513	-	1/1/11/20	3/15/93/115	-
16	CLA	s	502	-	1/1/12/20	5/19/97/115	-
16	CLA	A	1133	-	1/1/12/20	9/24/102/115	-
19	BCR	l	4022	-	-	18/29/63/63	0/2/2/2
24	LUT	w	601	-	-	7/29/67/67	0/2/2/2
16	CLA	J	1303	-	-	0/2/76/115	-
16	CLA	Y	512	12	1/1/15/20	8/37/115/115	-
16	CLA	r	502	-	1/1/12/20	7/19/97/115	-
16	CLA	Z	517	12	1/1/13/20	6/25/103/115	-
13	LHG	H	849	-	-	18/47/47/53	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	CLA	H	1120	-	-	8/18/96/115	-
19	BCR	X	603	-	-	12/29/63/63	0/2/2/2
19	BCR	q	603	-	-	6/29/63/63	0/2/2/2
16	CLA	B	1236	-	1/1/12/20	9/19/97/115	-
16	CLA	f	1302	6	1/1/11/20	9/15/93/115	-
19	BCR	K	4005	-	-	9/29/63/63	0/2/2/2
16	CLA	s	511	-	1/1/15/20	14/37/115/115	-
16	CLA	B	1227	-	1/1/11/20	8/18/96/115	-
16	CLA	W	511	-	1/1/15/20	9/37/115/115	-
16	CLA	A	1022	25	1/1/15/20	12/37/115/115	-
17	PQN	a	2001	-	-	5/23/43/43	0/2/2/2
19	BCR	Y	604	-	-	14/29/63/63	0/2/2/2
16	CLA	H	1104	-	1/1/15/20	15/37/115/115	-
19	BCR	b	4005	-	-	12/29/63/63	0/2/2/2
16	CLA	b	1214	-	1/1/13/20	5/25/103/115	-
14	LMG	A	4201	-	-	13/27/47/70	0/1/1/1
16	CLA	B	1201	-	1/1/12/20	5/24/102/115	-
16	CLA	G	1218	-	-	11/25/103/115	-
16	CLA	g	512	12	1/1/15/20	9/37/115/115	-
24	LUT	q	601	-	-	7/29/67/67	0/2/2/2
19	BCR	k	4001	-	-	12/29/63/63	0/2/2/2

The worst 5 of 1972 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	b	1023	CLA	C4D-ND	-4.14	1.32	1.37
16	B	1023	CLA	C4D-ND	-4.13	1.32	1.37
16	a	1125	CLA	C4D-ND	-4.12	1.32	1.37
16	G	1023	CLA	C4D-ND	-4.10	1.32	1.37
16	q	503	CLA	C4D-ND	-4.08	1.32	1.37

The worst 5 of 3152 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	u	506	CLA	C4A-NA-C1A	8.47	110.52	106.71
21	i	4020	ECH	C8-C9-C10	7.16	129.93	118.94
16	x	505	CLA	C4A-NA-C1A	6.67	109.70	106.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	v	505	CLA	C4A-NA-C1A	6.63	109.69	106.71
16	b	1216	CLA	C4A-NA-C1A	6.61	109.68	106.71

5 of 405 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
15	A	1011	CL0	ND
15	A	1011	CL0	NC
15	H	1011	CL0	ND
15	H	1011	CL0	NC
15	a	1011	CL0	ND

5 of 7998 torsion outliers are listed below:

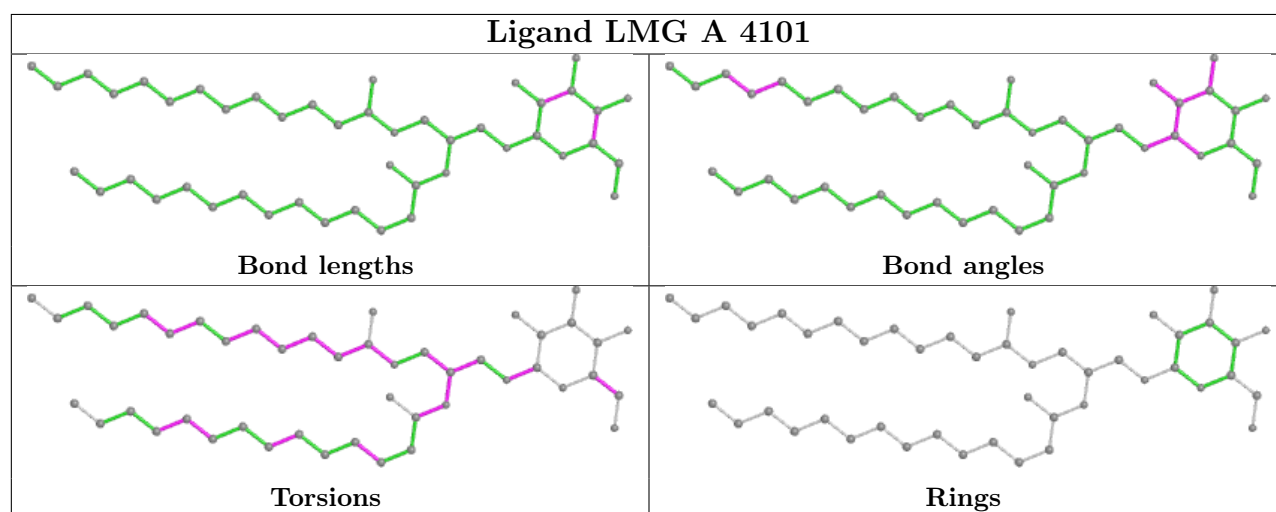
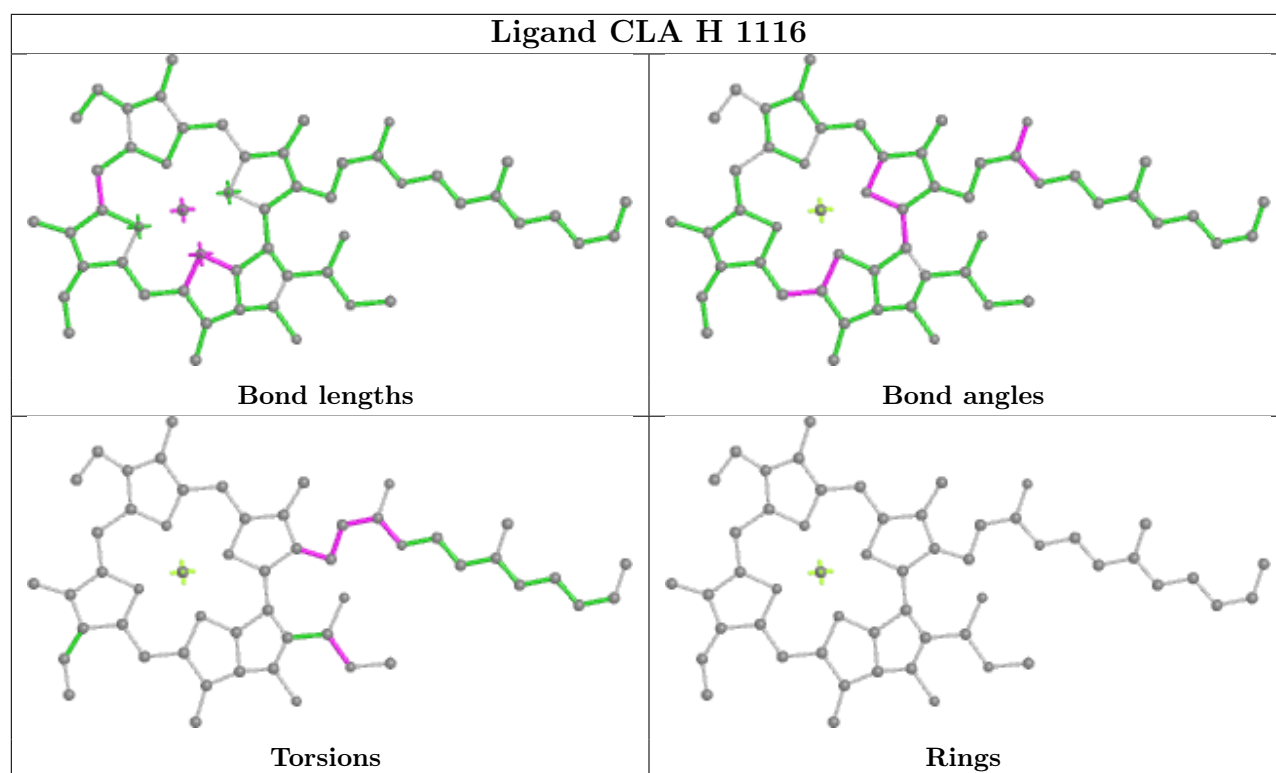
Mol	Chain	Res	Type	Atoms
13	A	849	LHG	O1-C1-C2-O2
13	A	849	LHG	O1-C1-C2-C3
13	A	849	LHG	C3-O3-P-O5
13	A	851	LHG	C3-O3-P-O5
13	B	4018	LHG	O1-C1-C2-O2

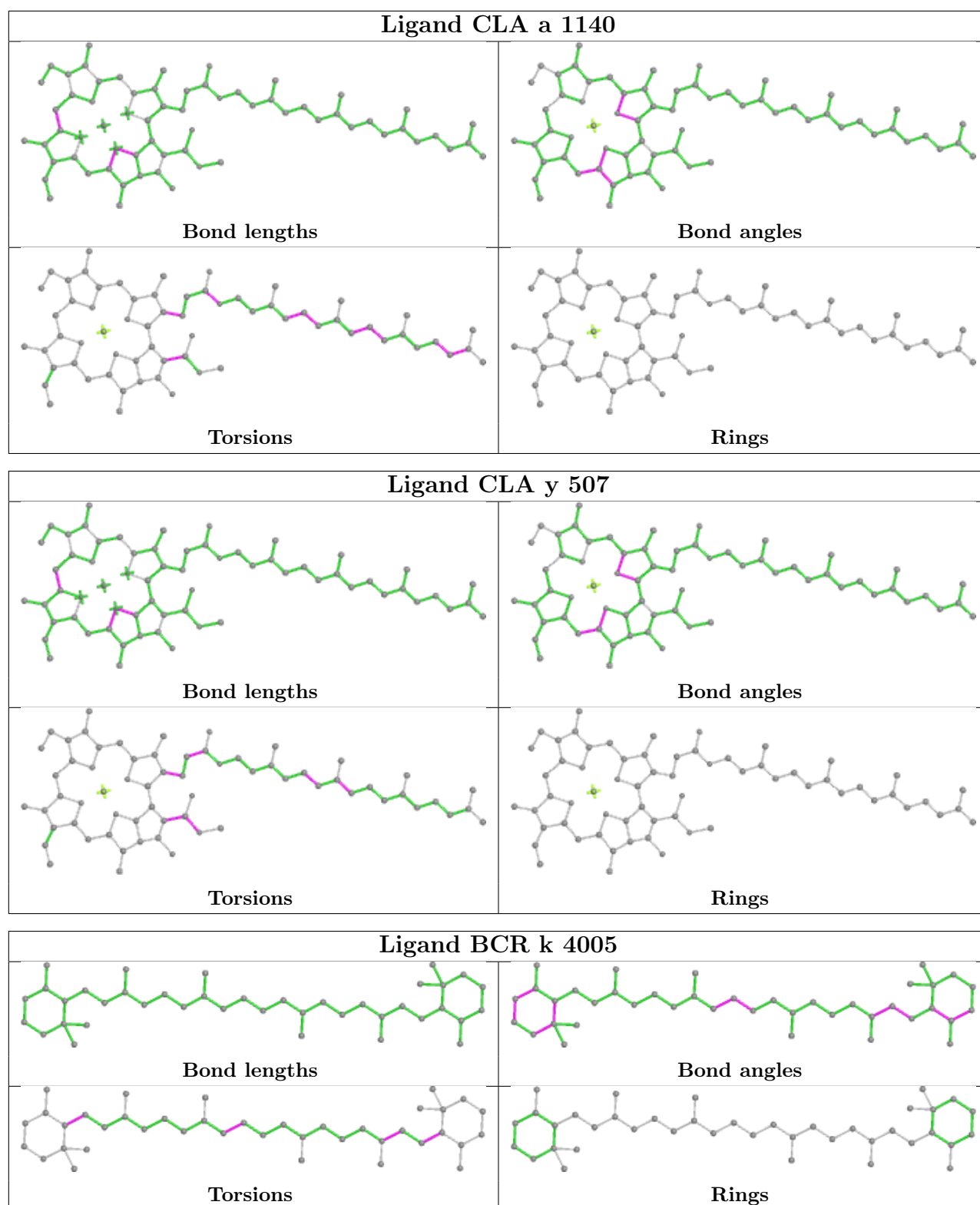
There are no ring outliers.

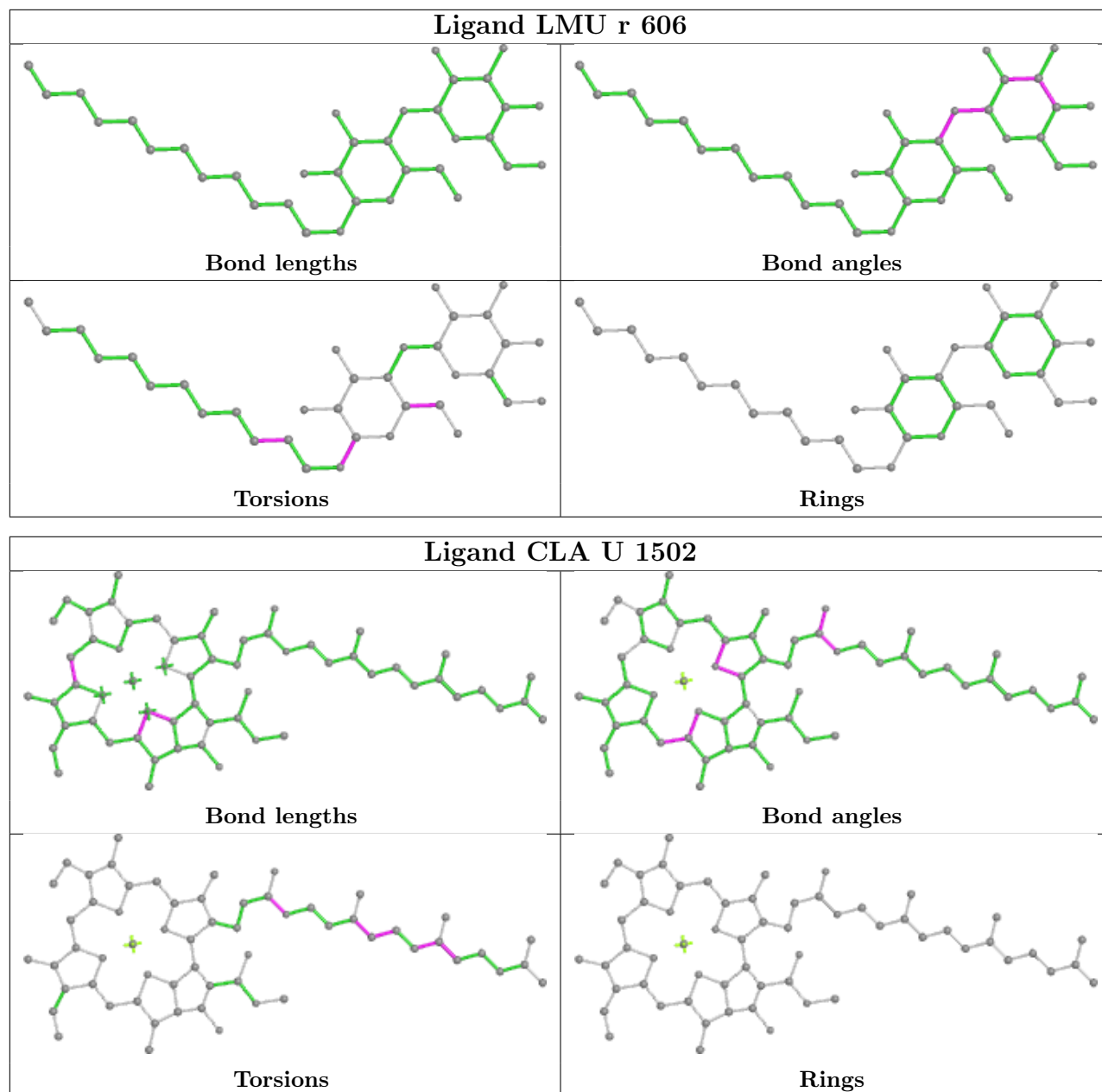
No monomer is involved in short contacts.

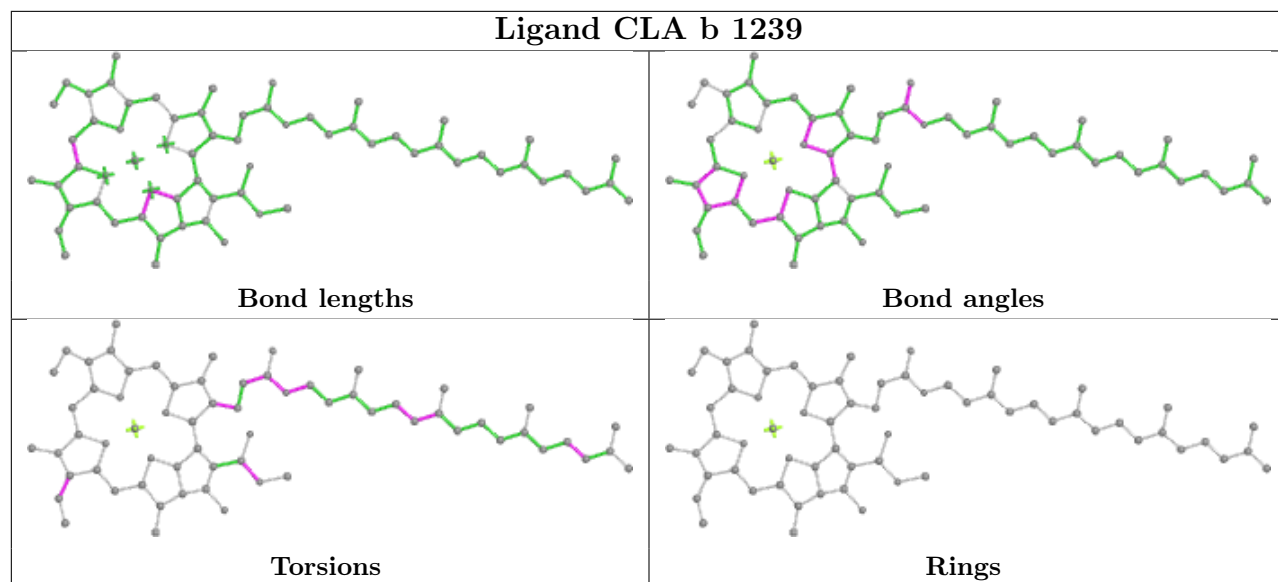
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

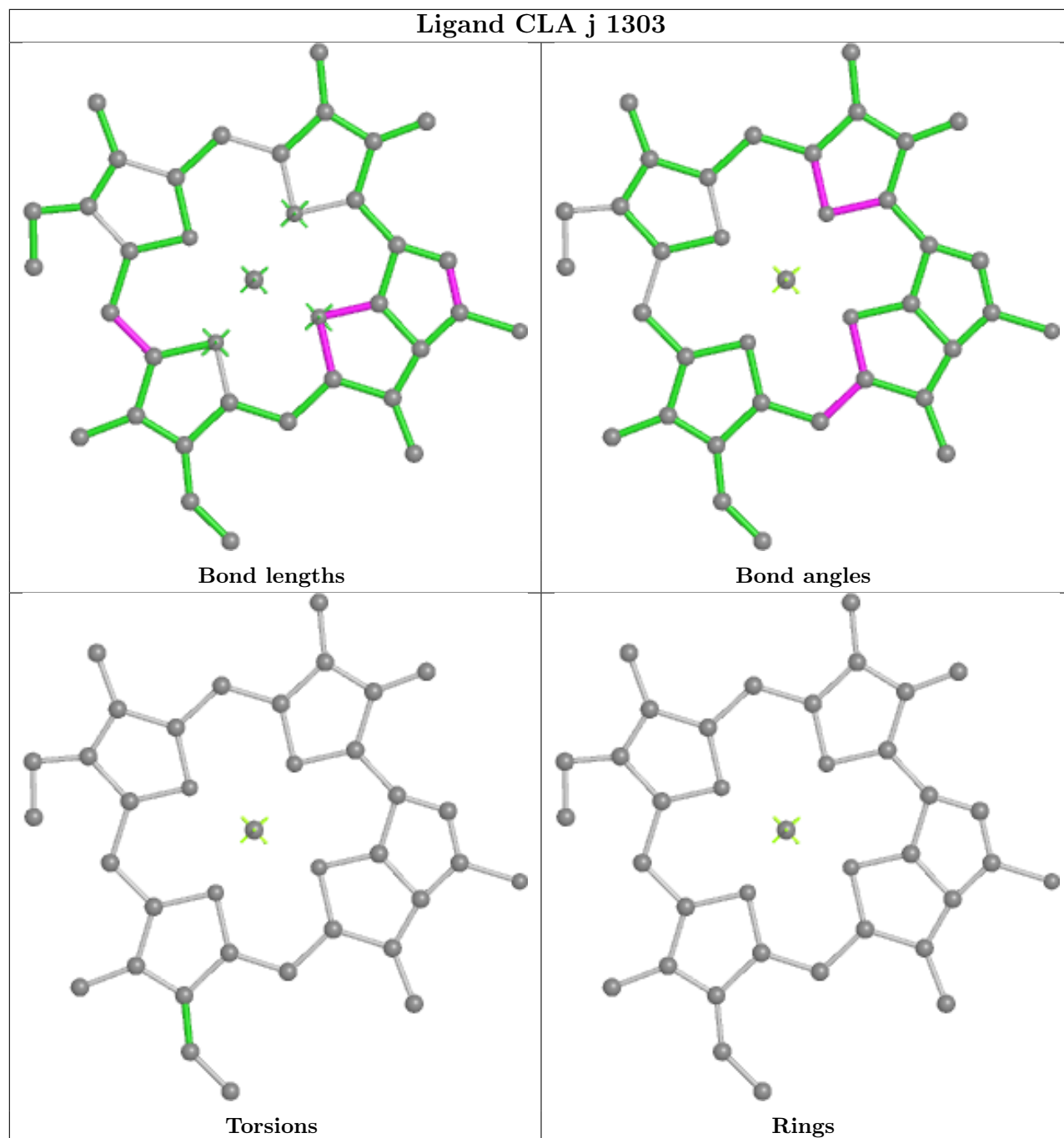


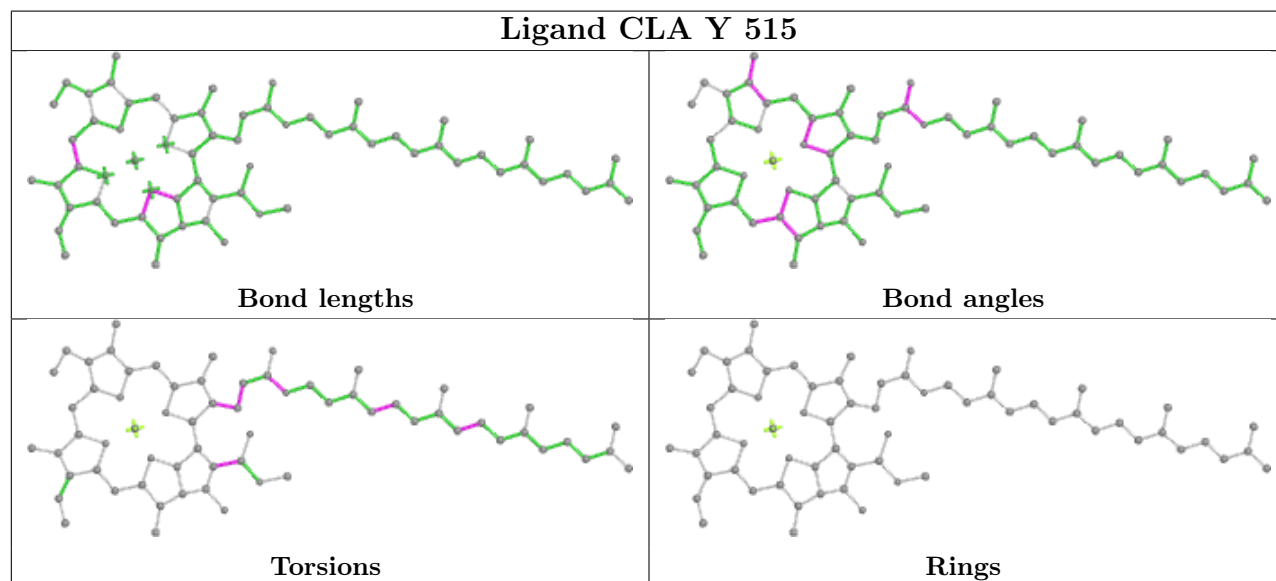
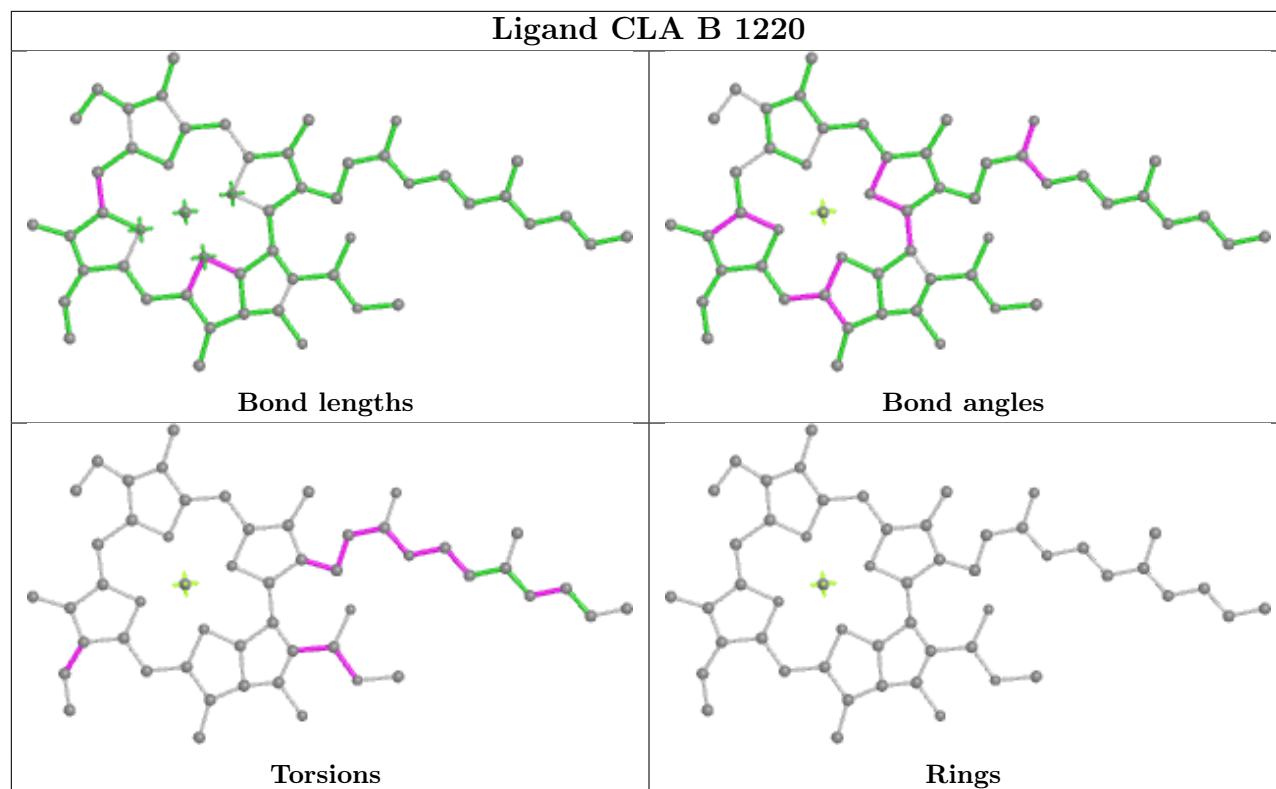


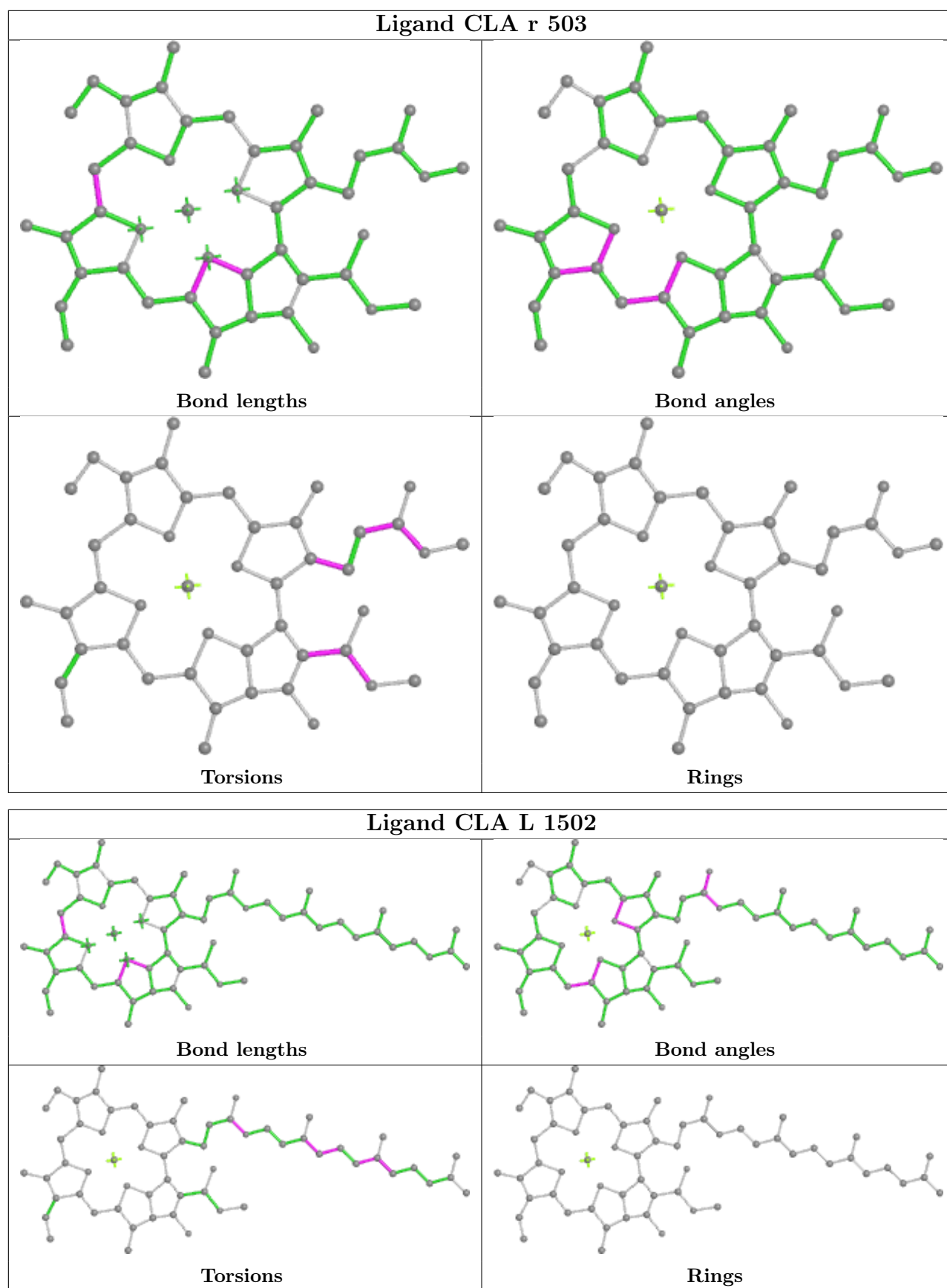


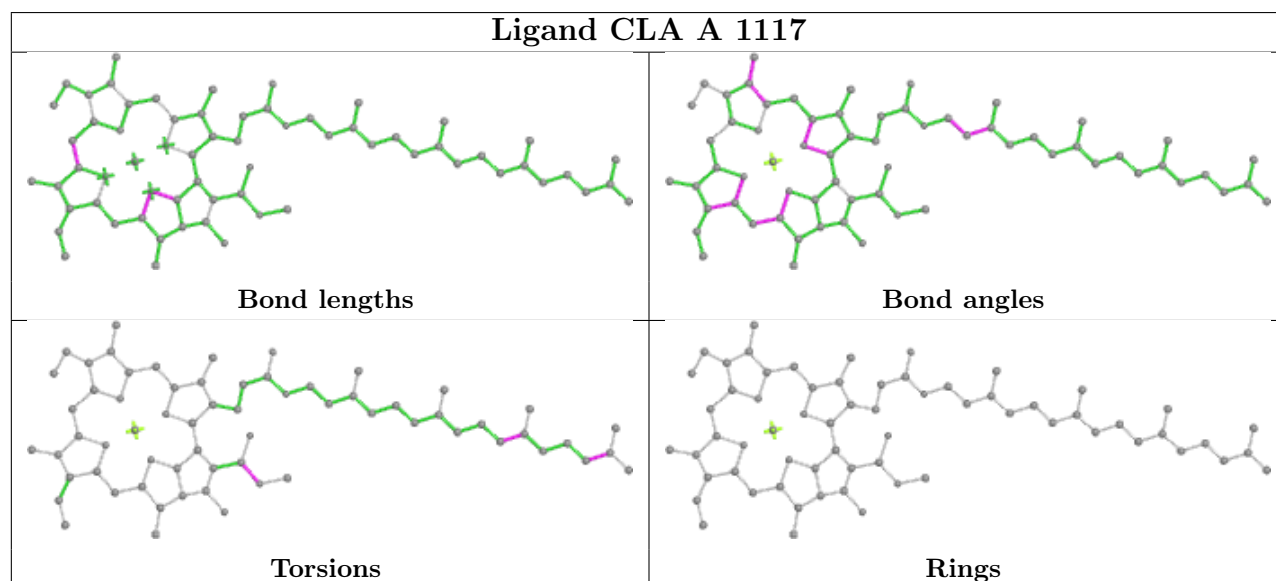
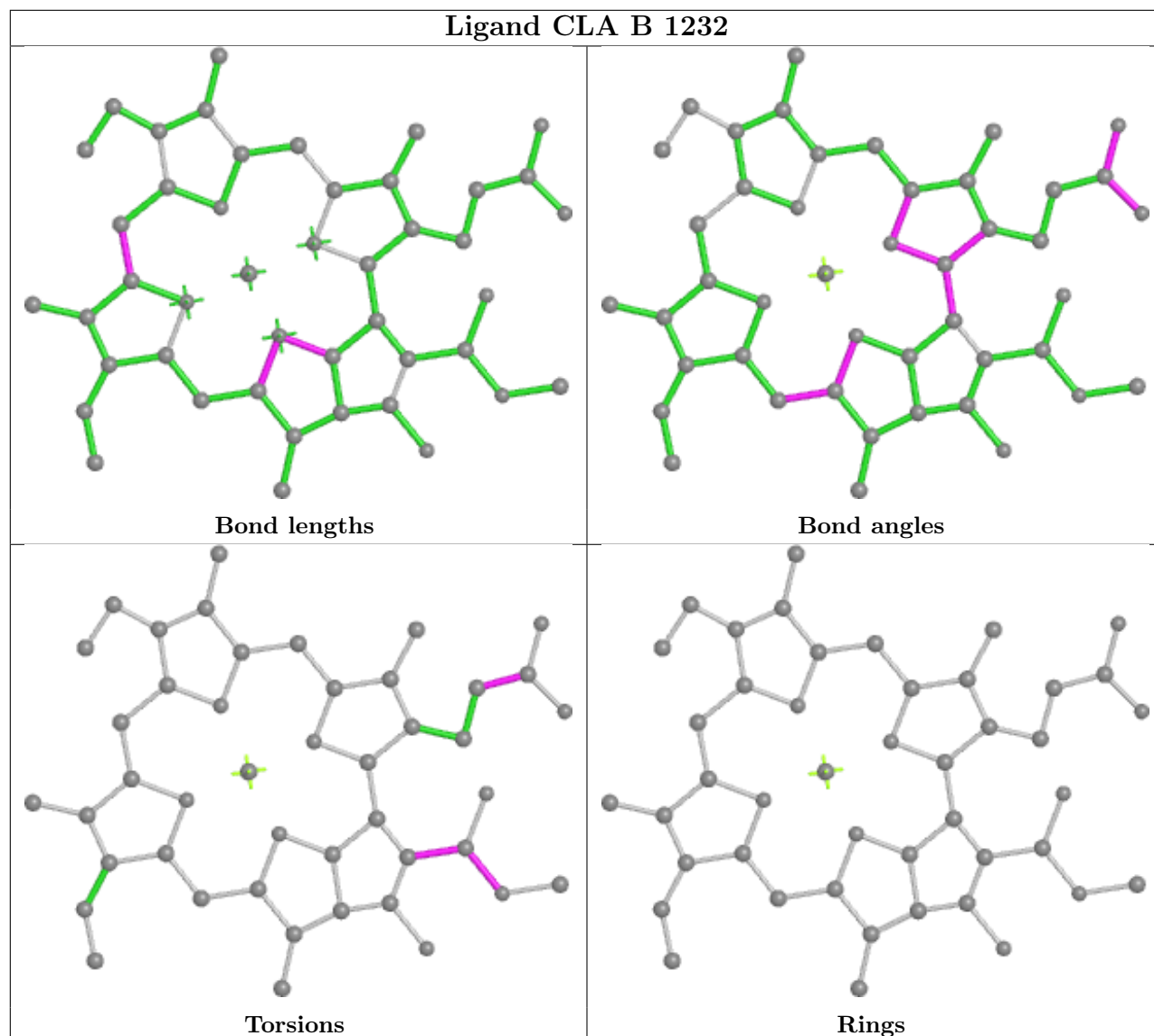




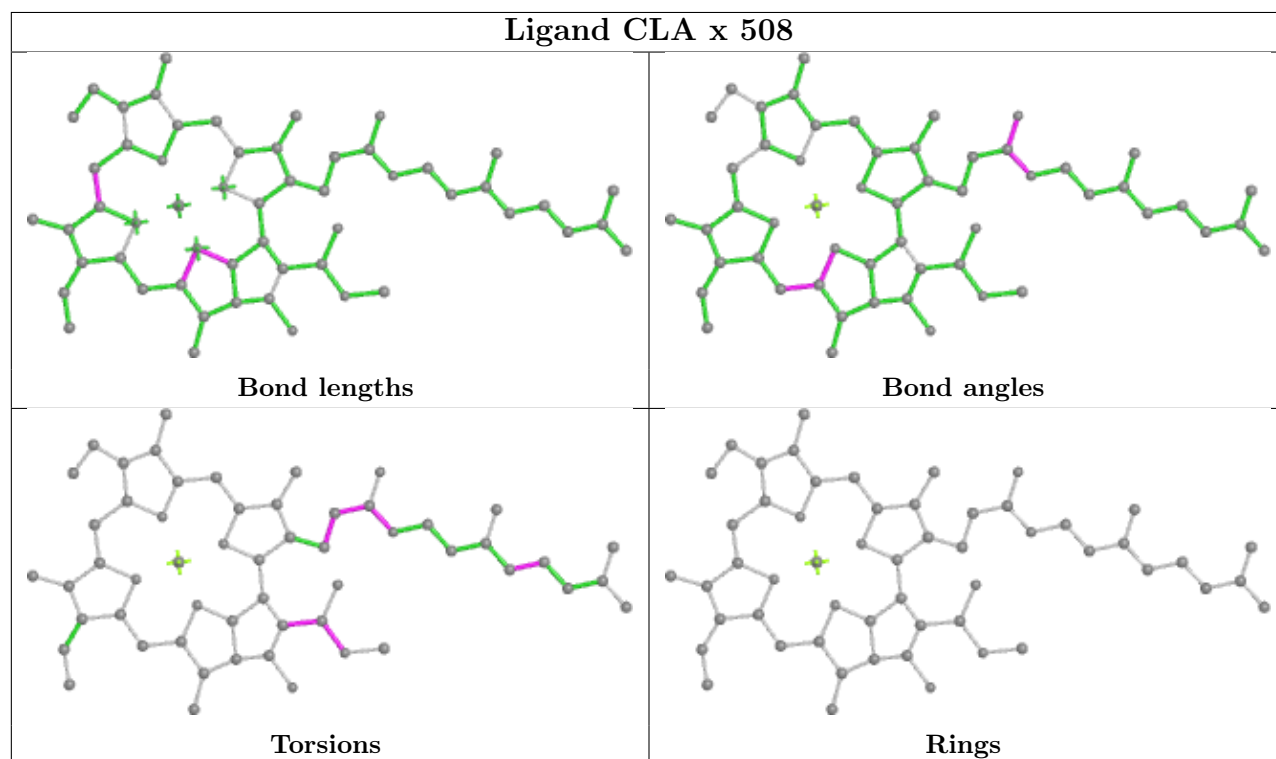
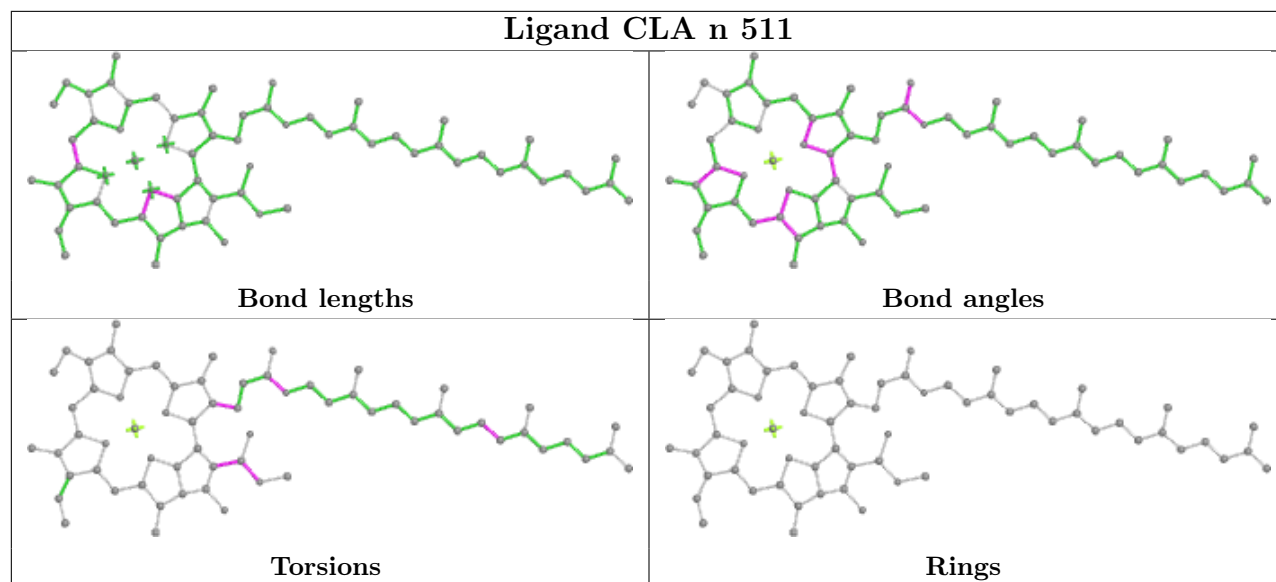


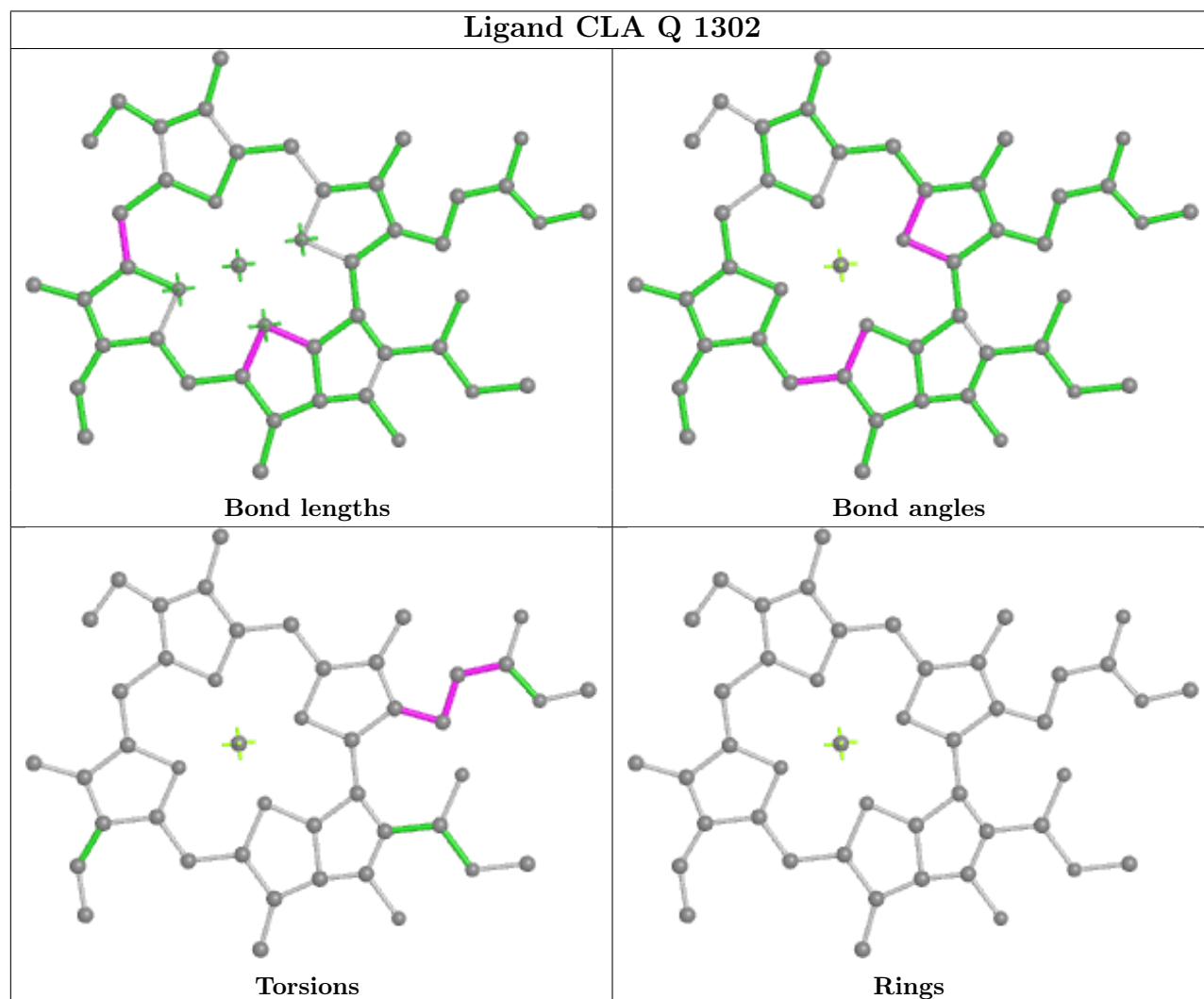
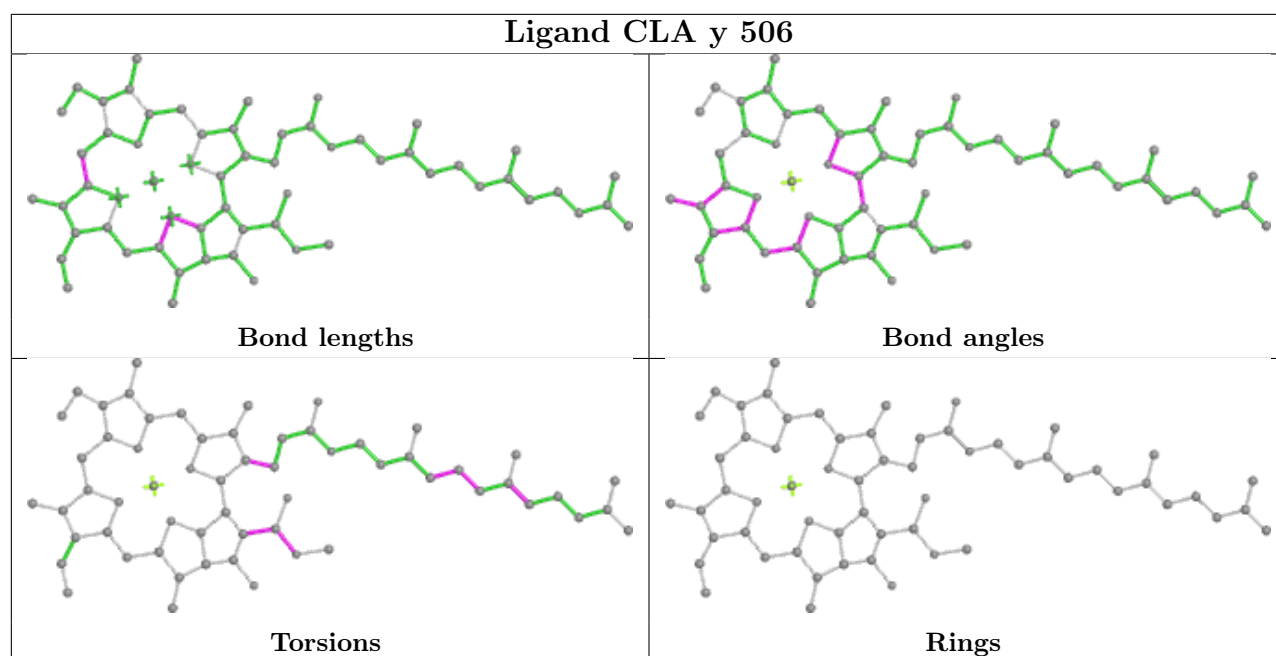


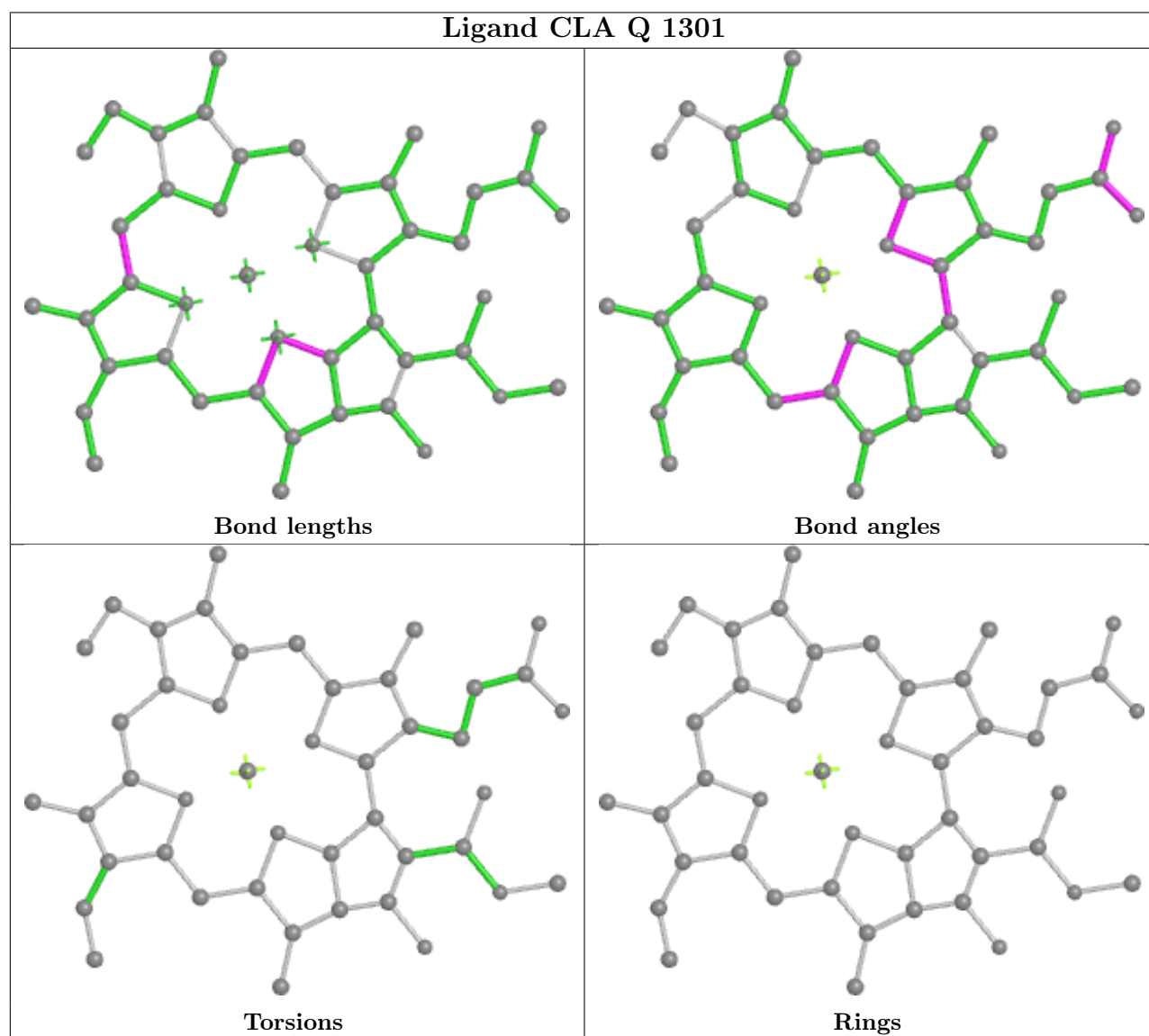
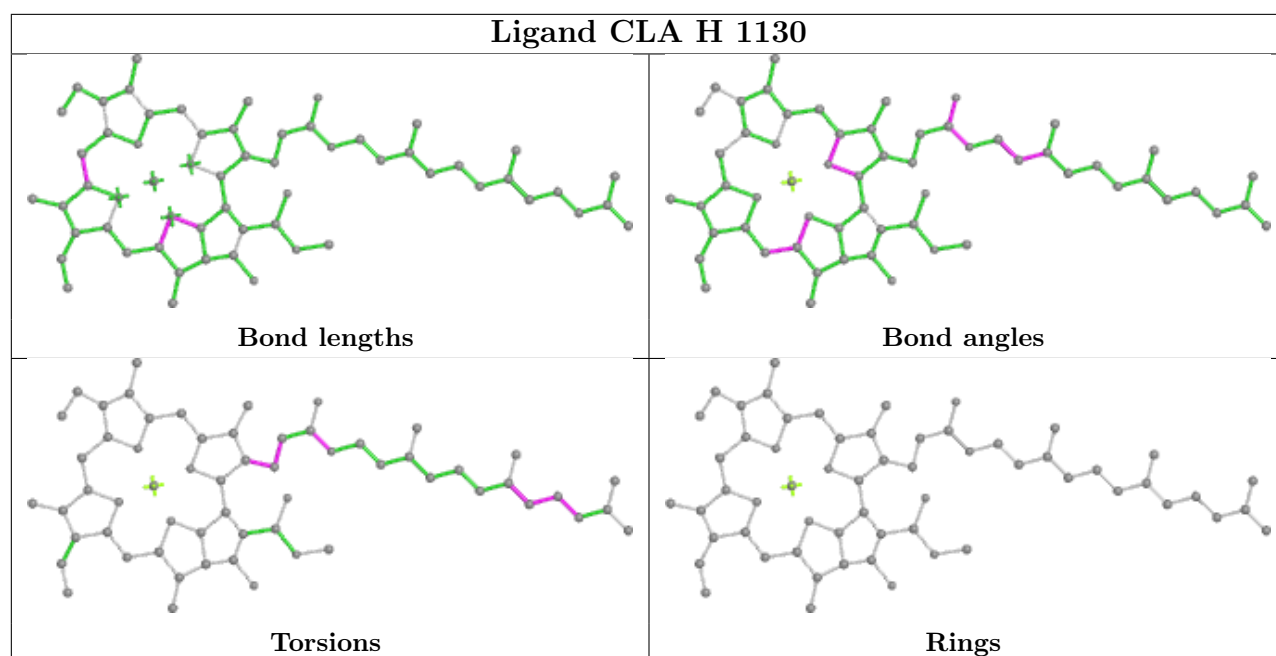


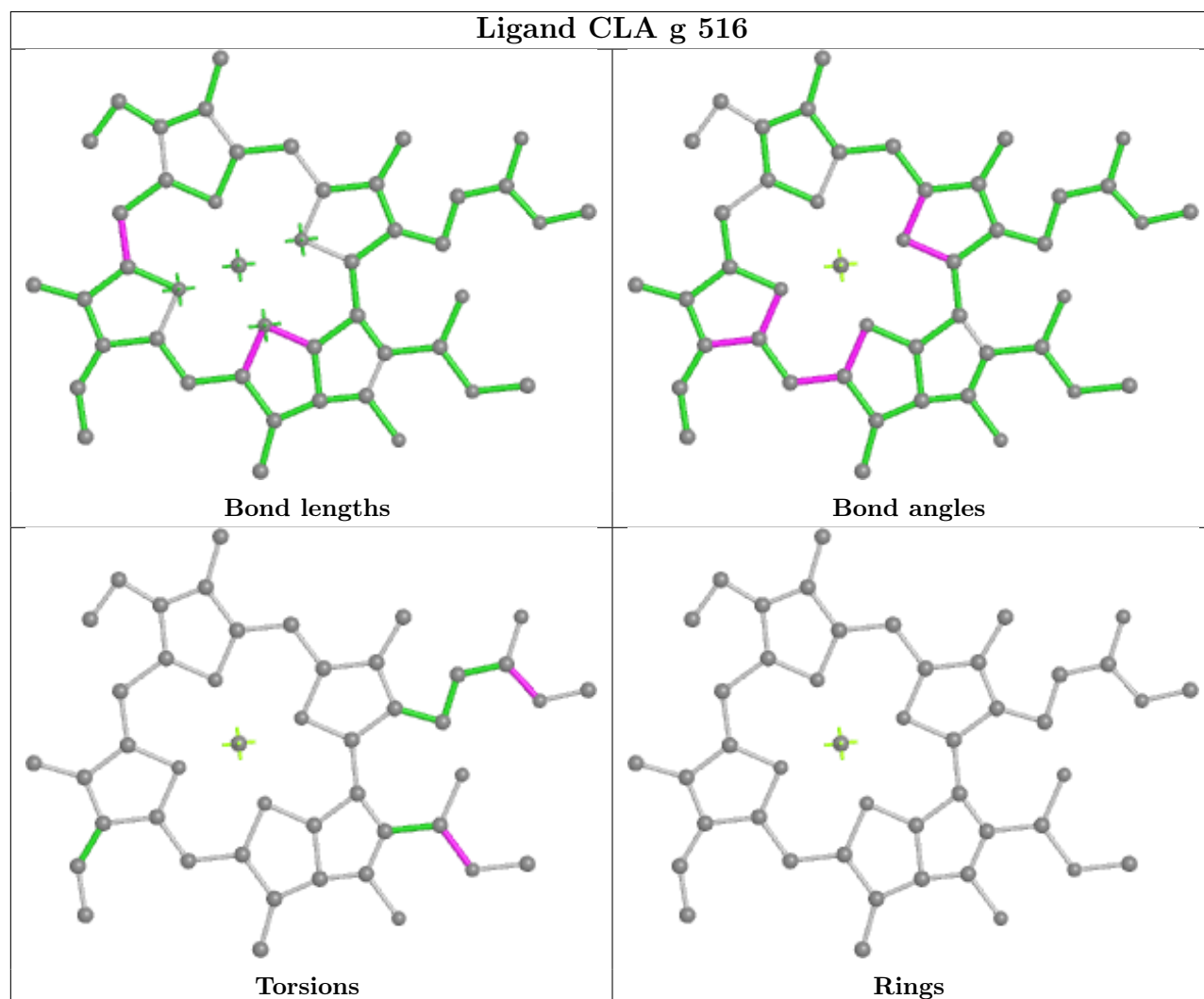
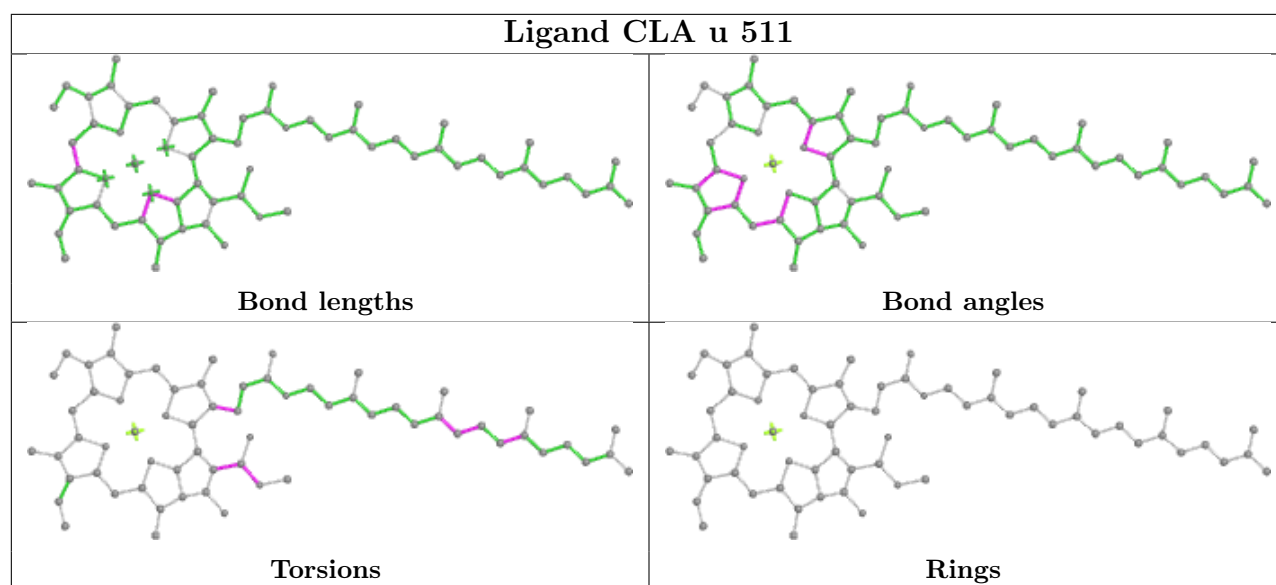


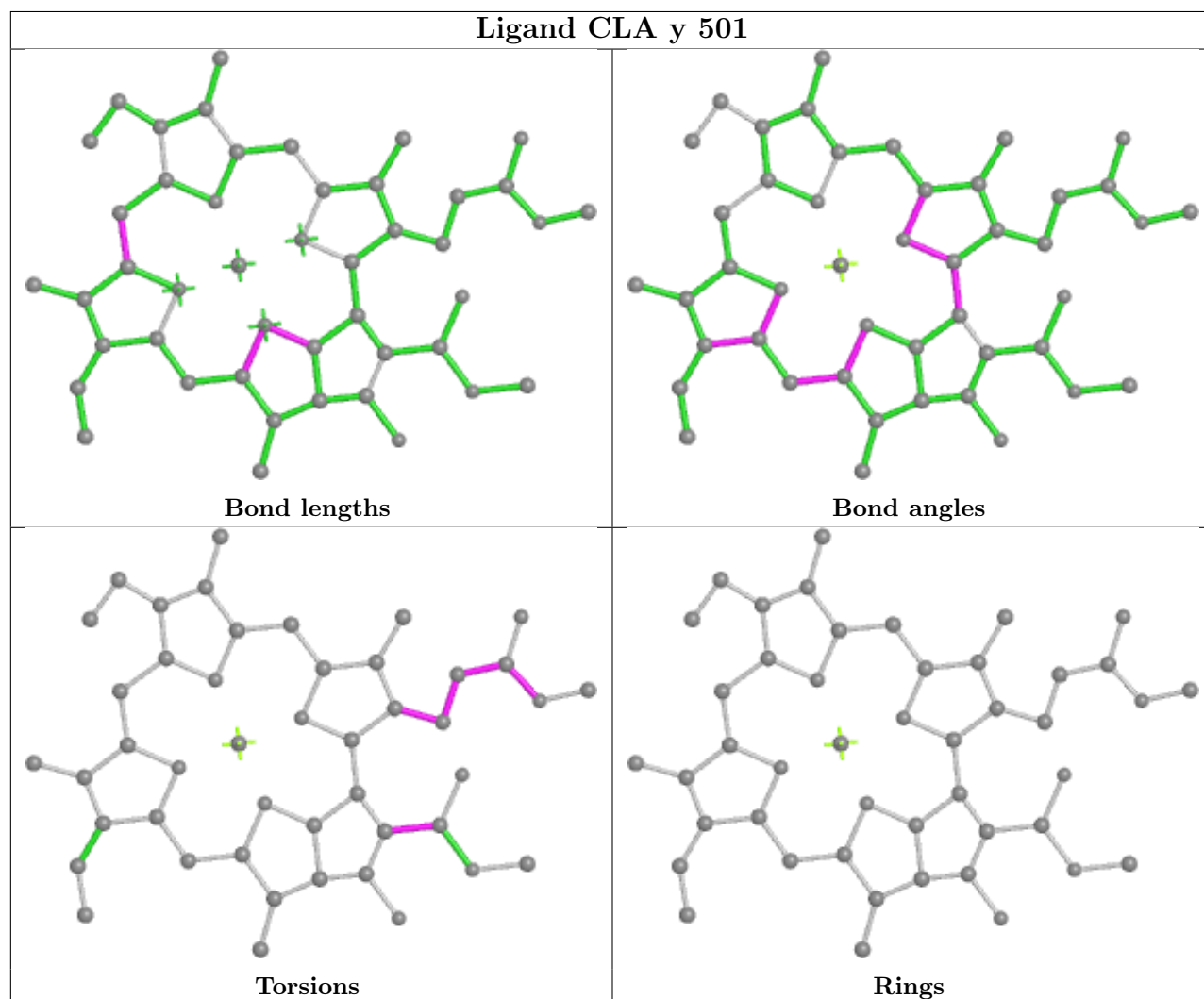
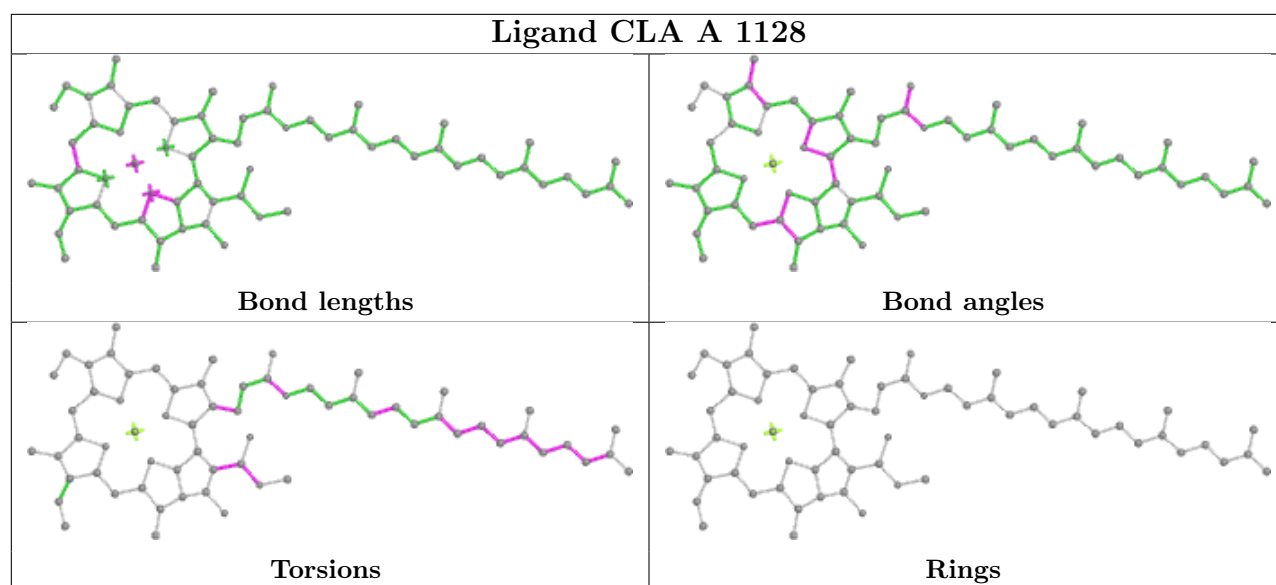


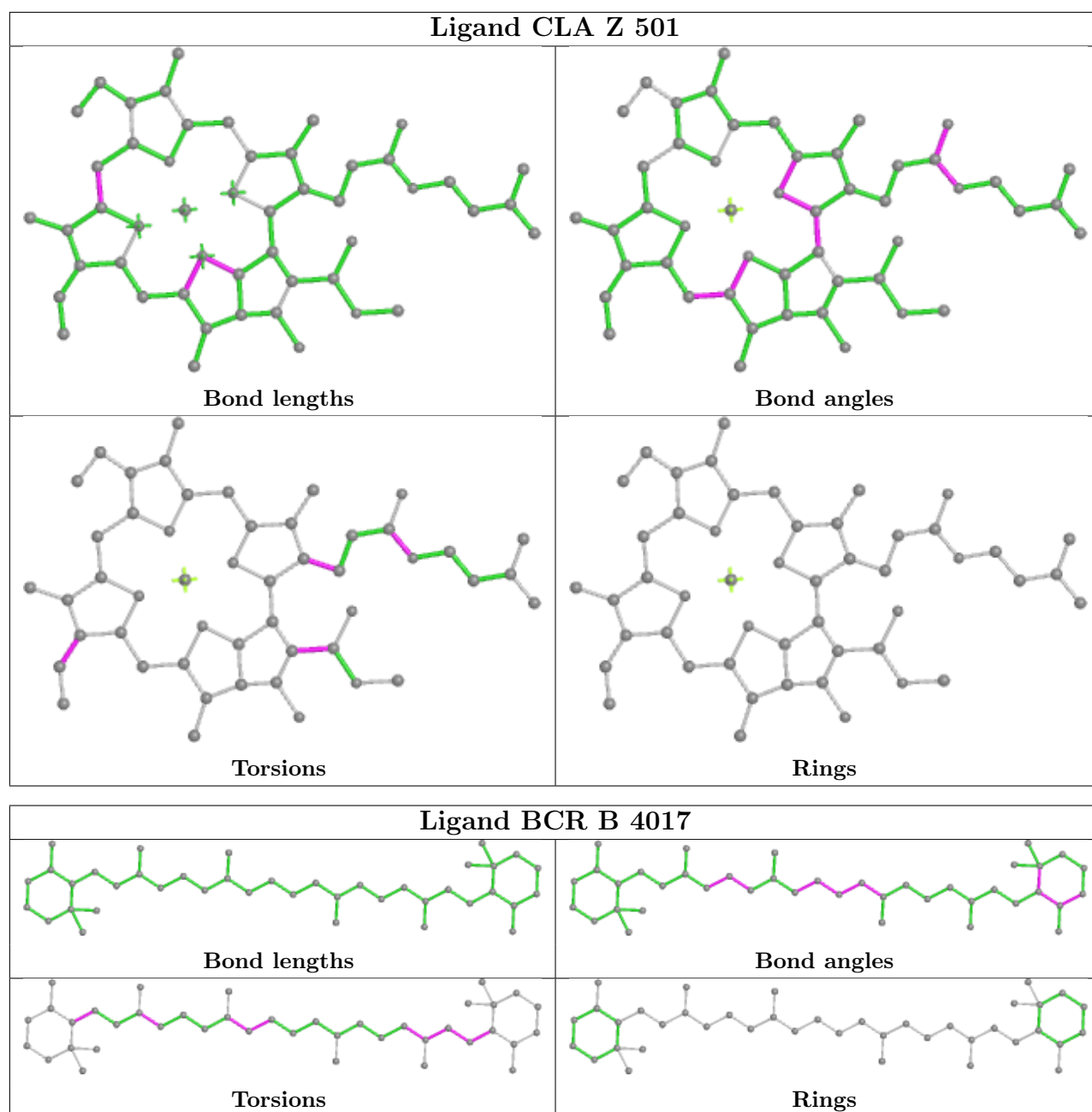


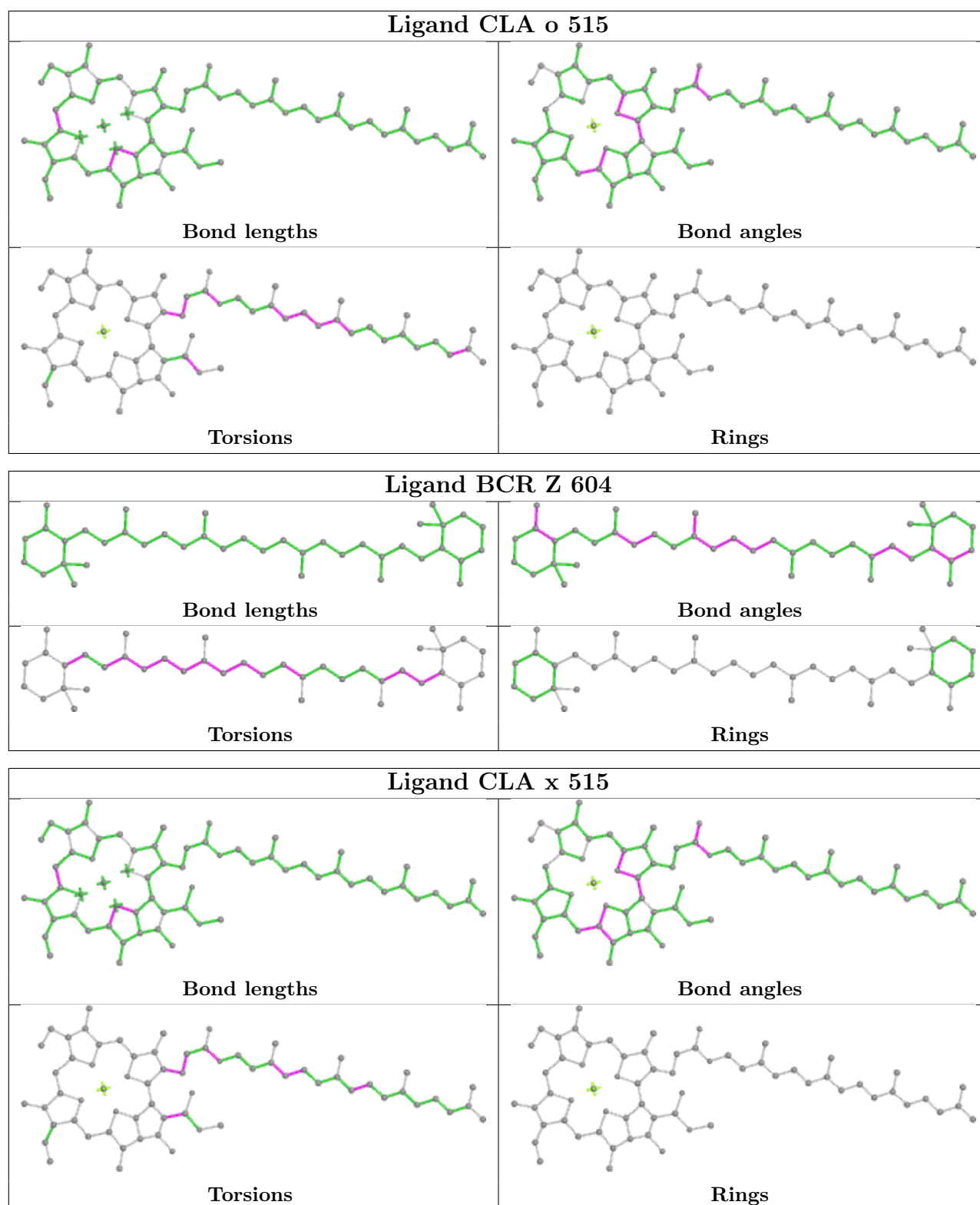


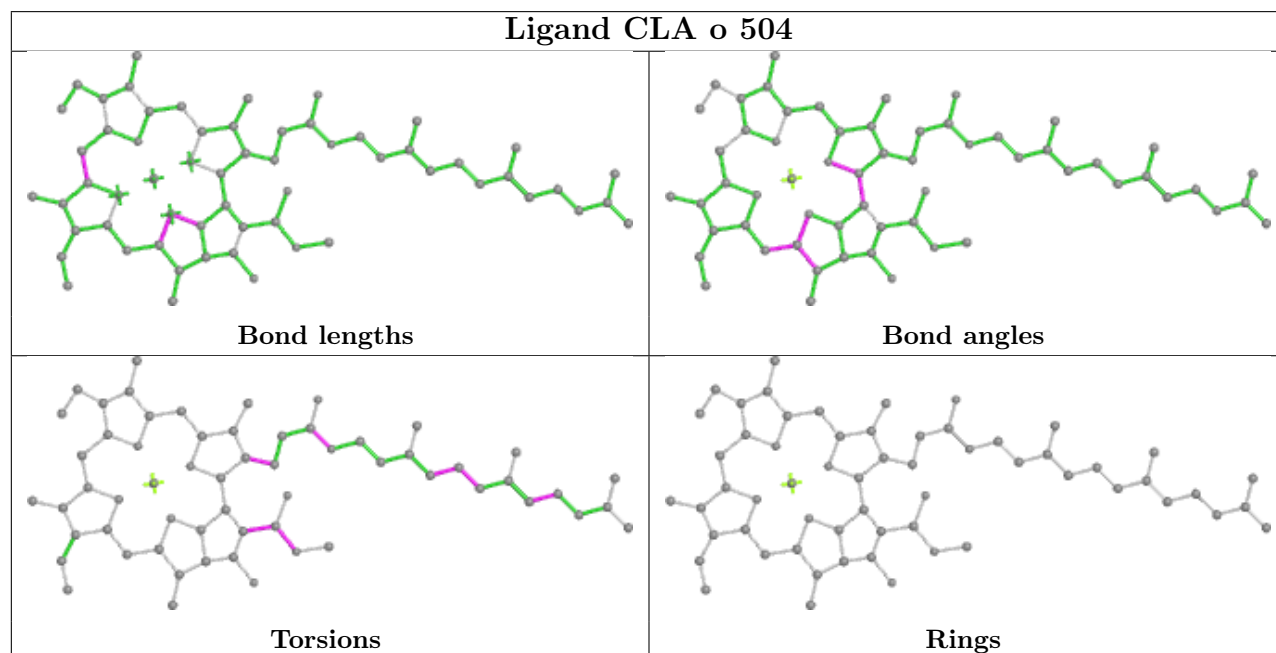
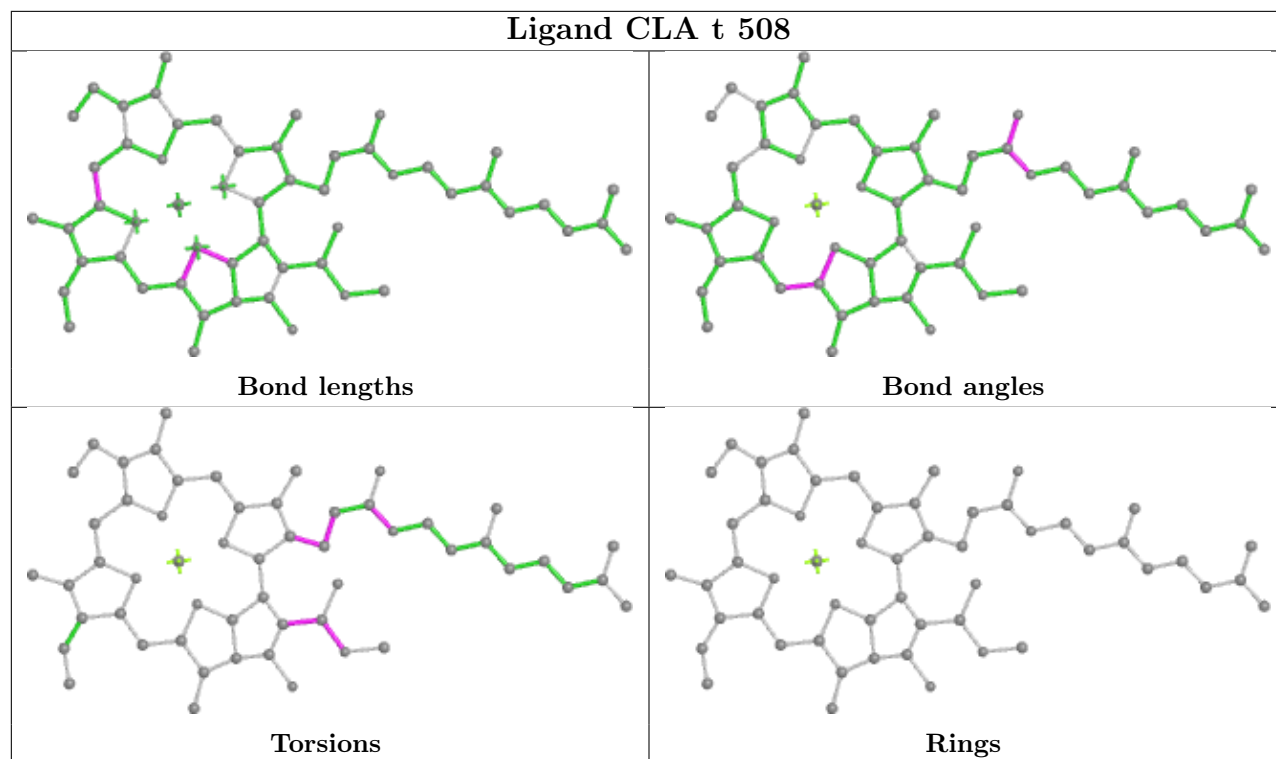




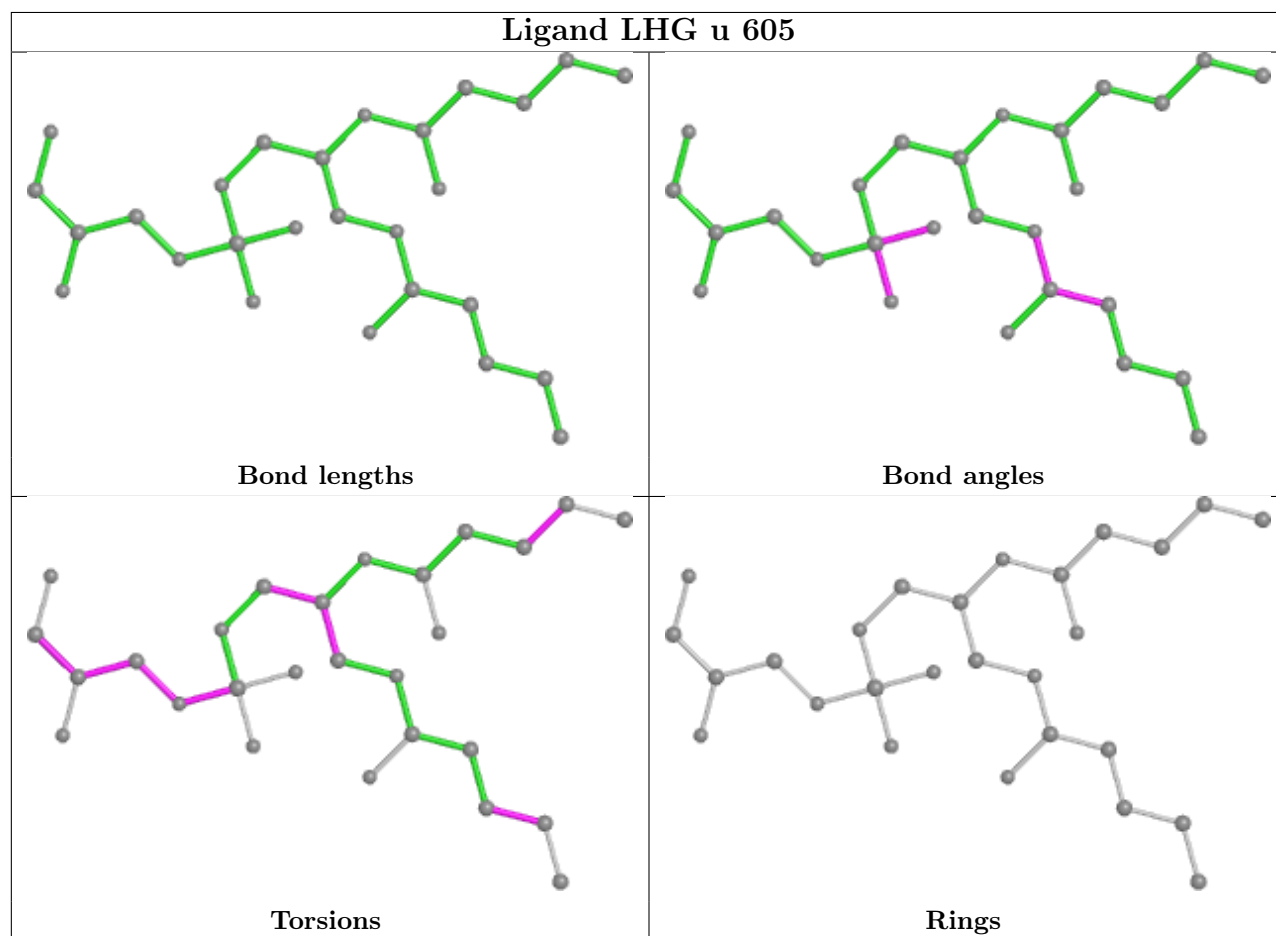
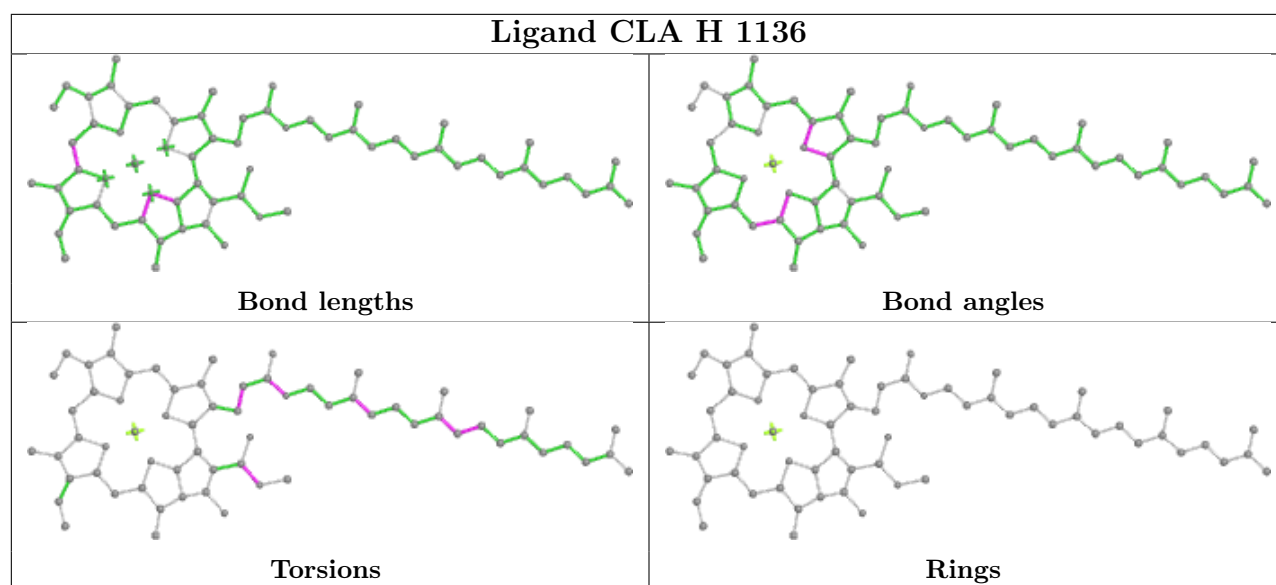


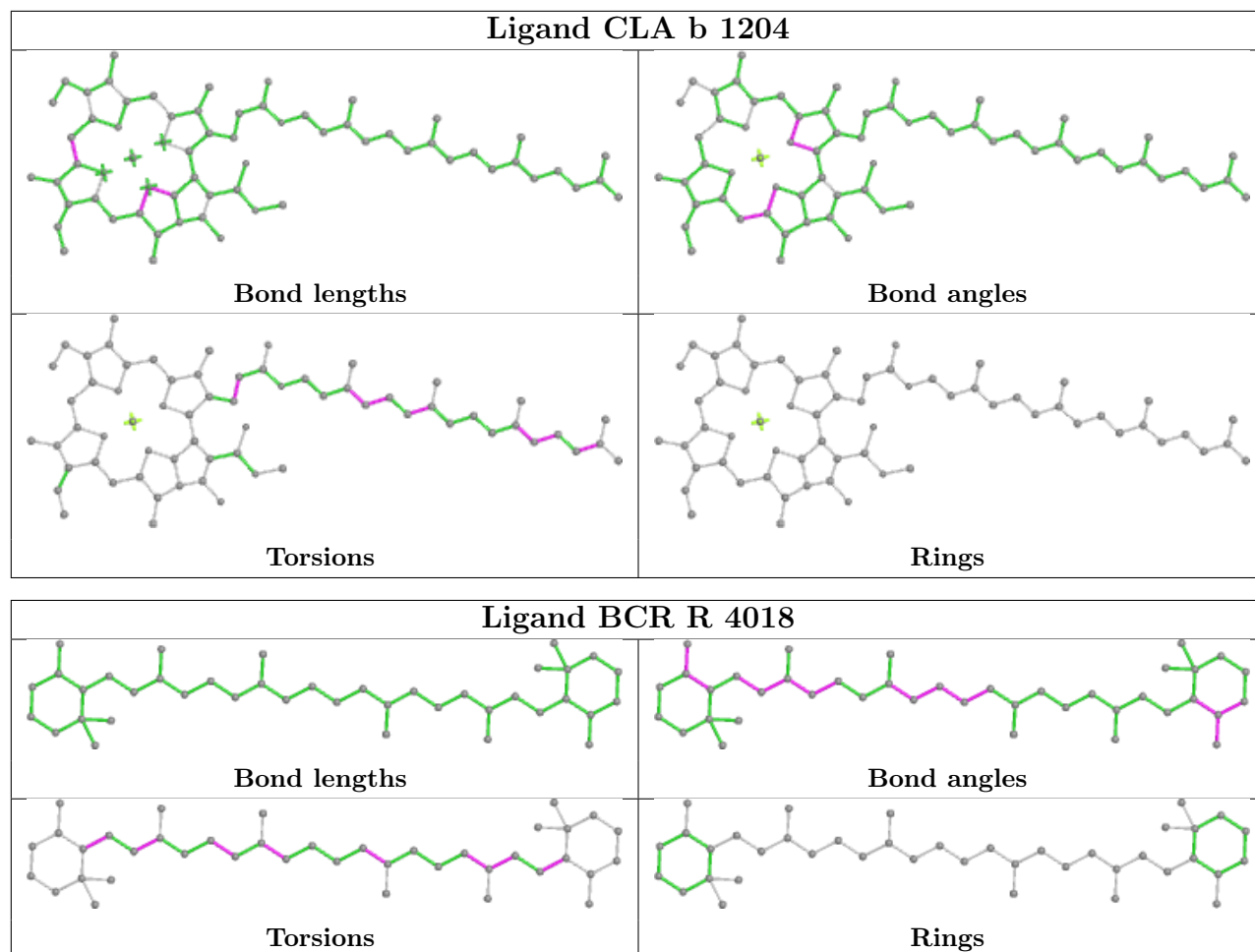


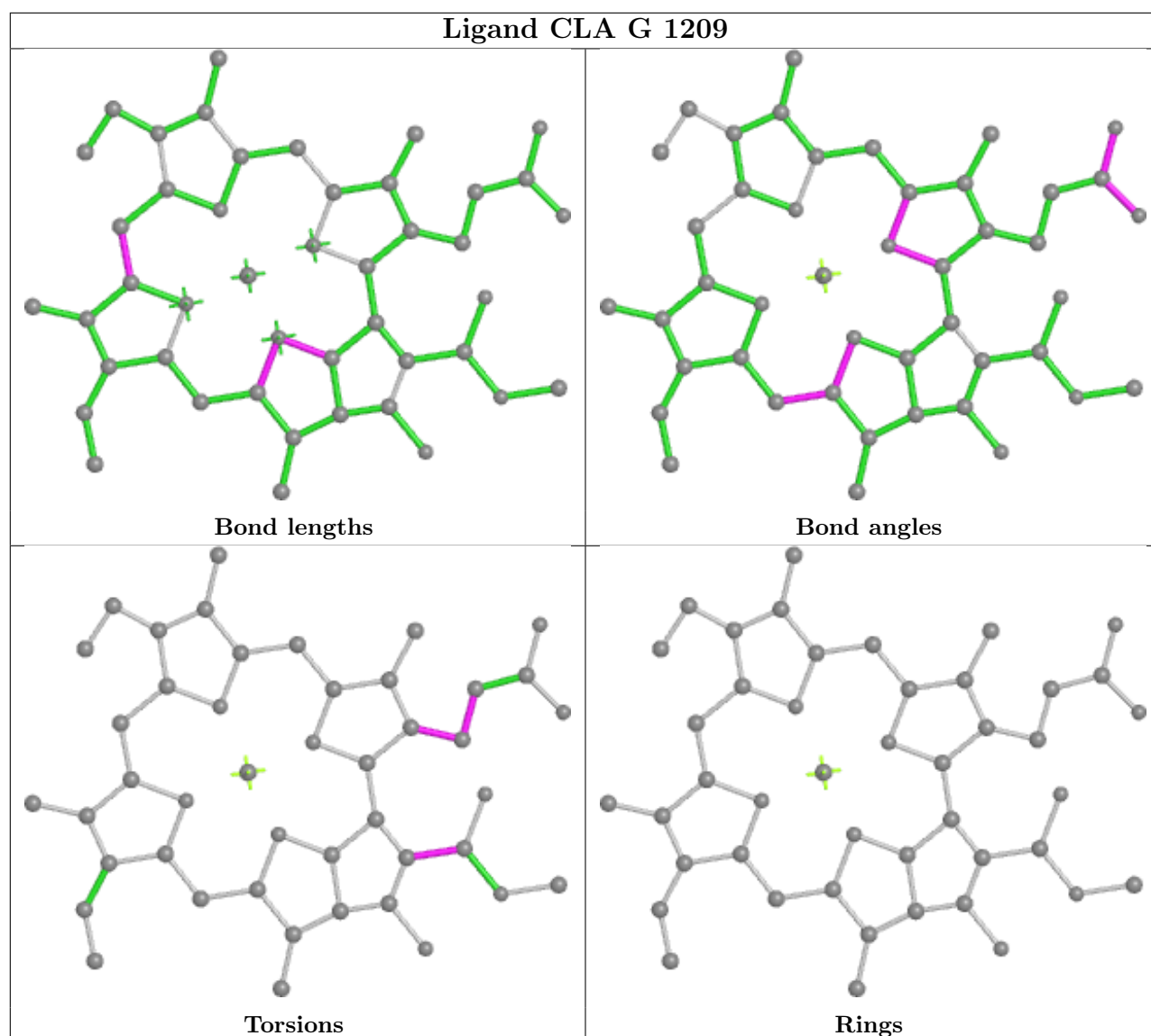


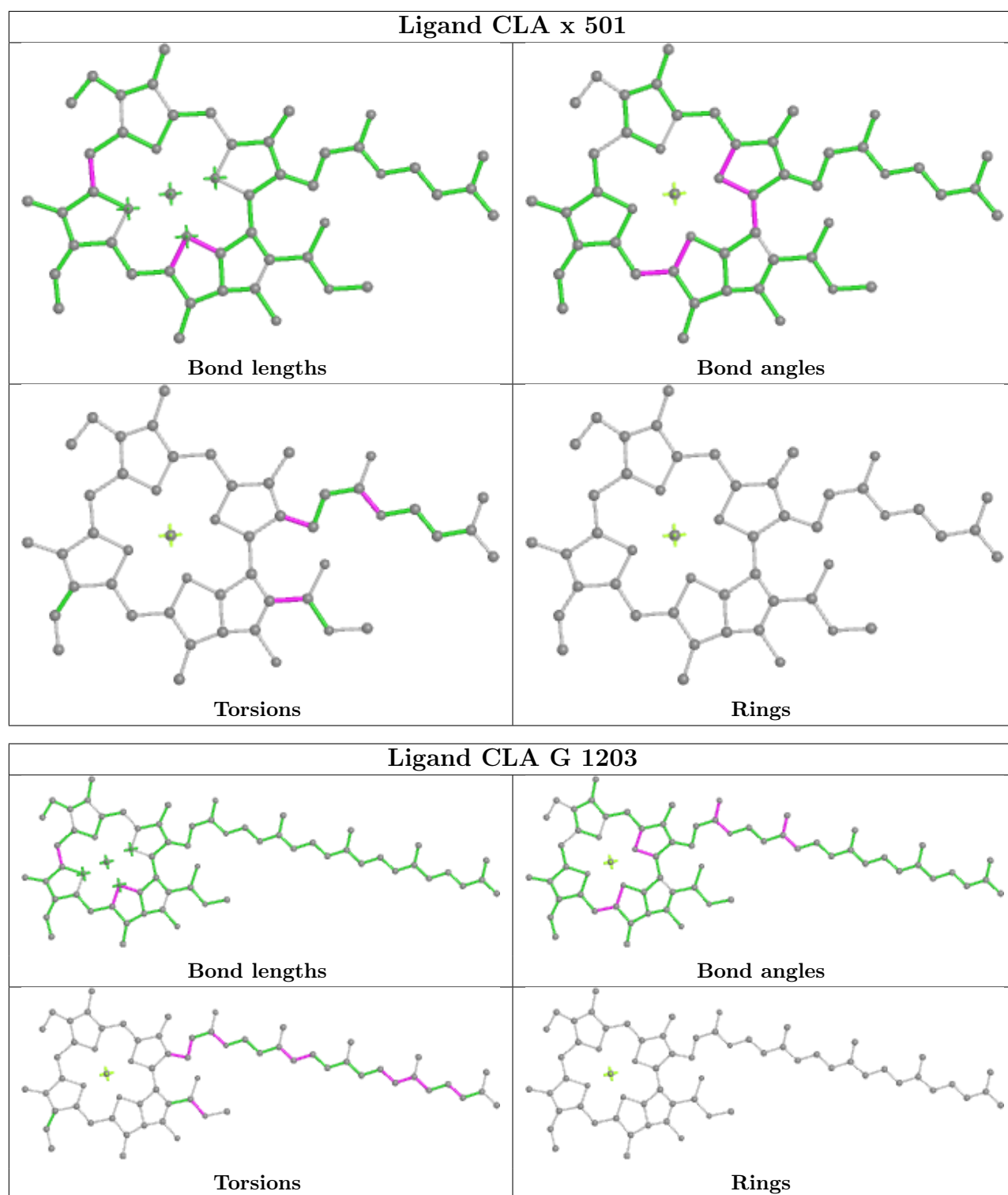


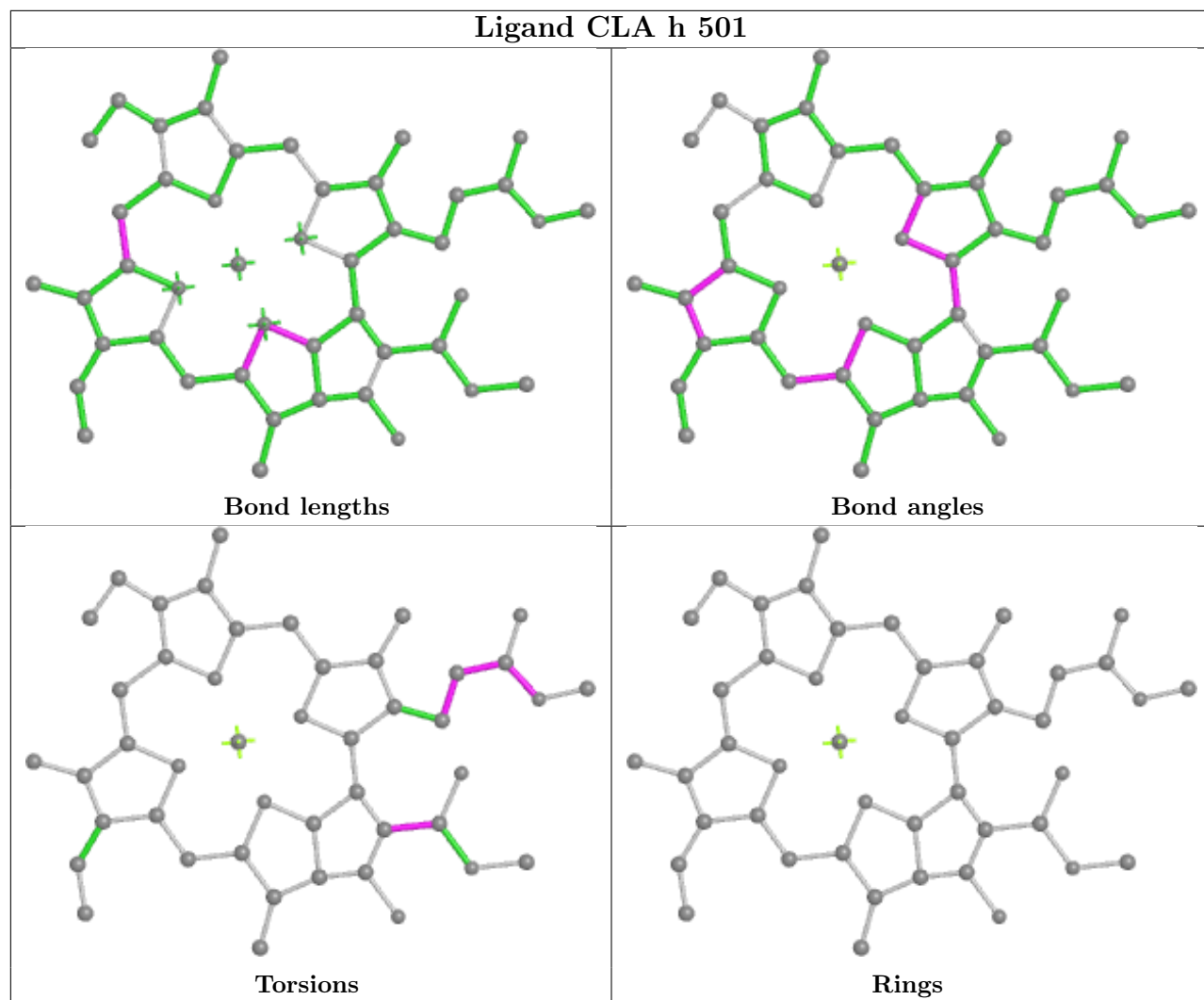


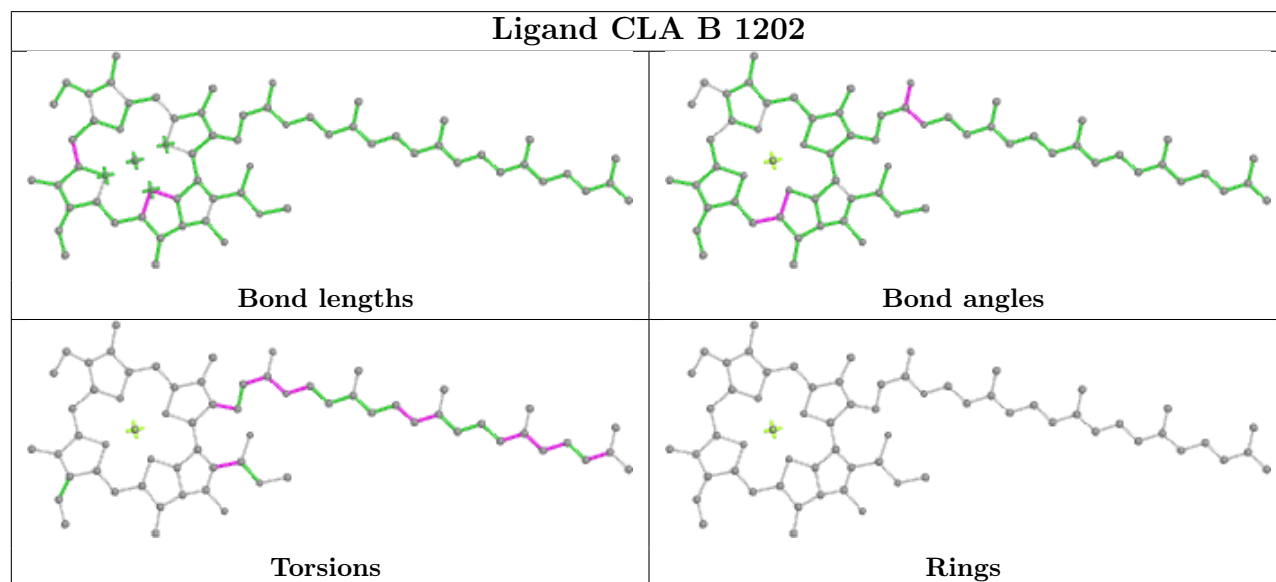
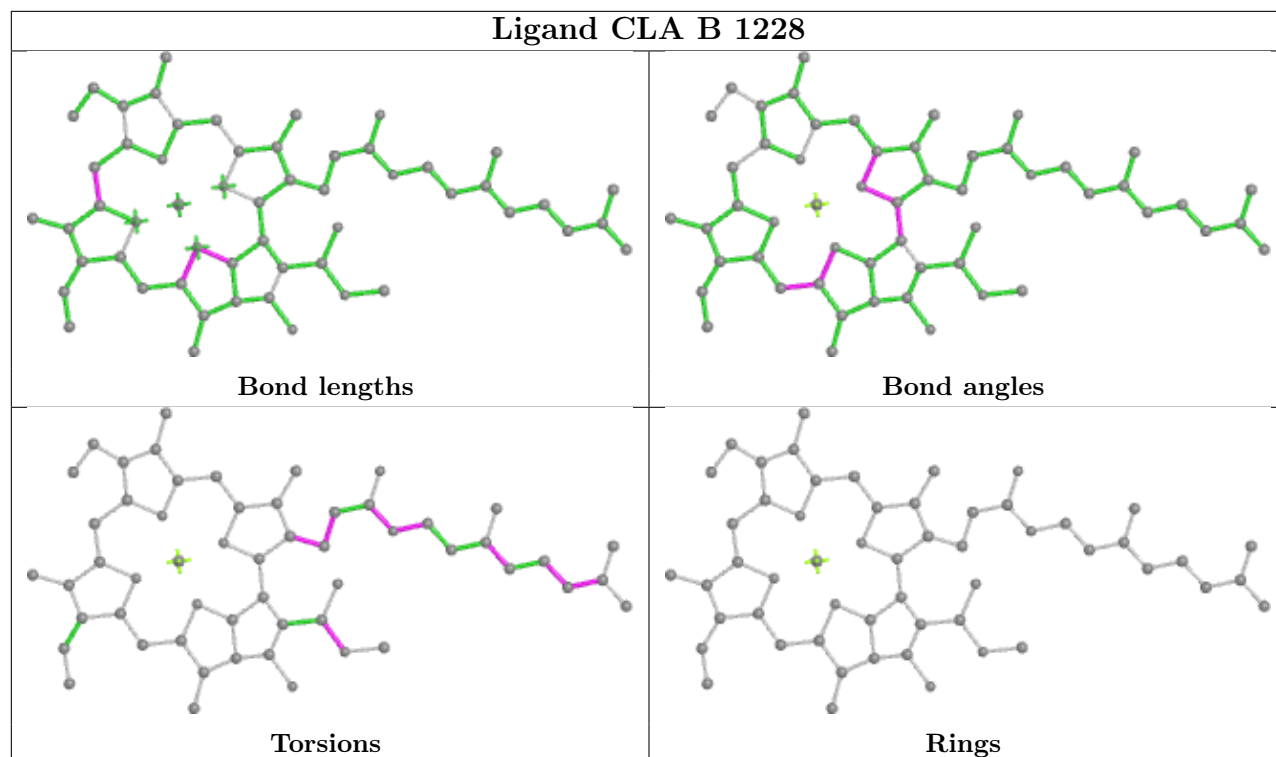


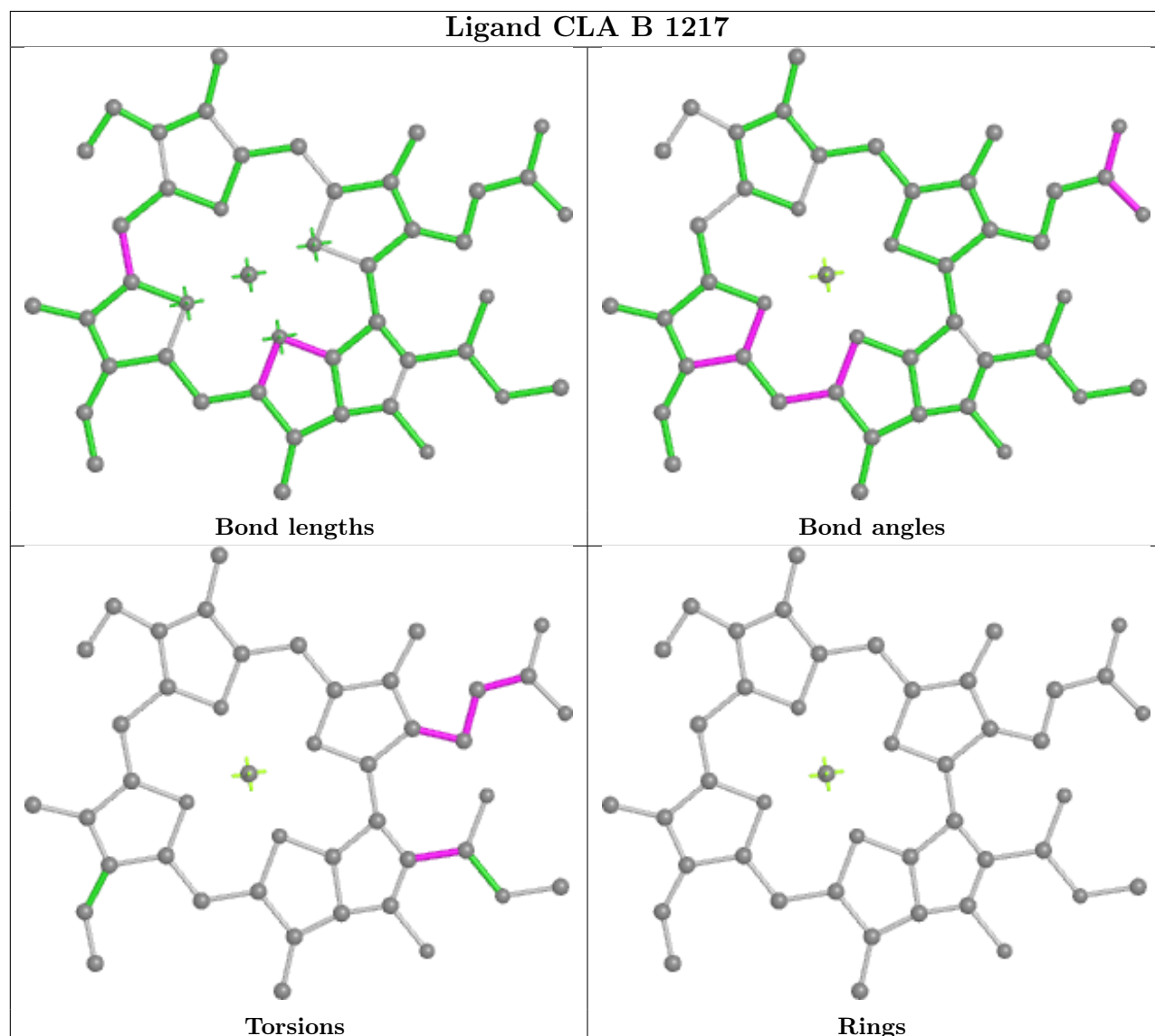
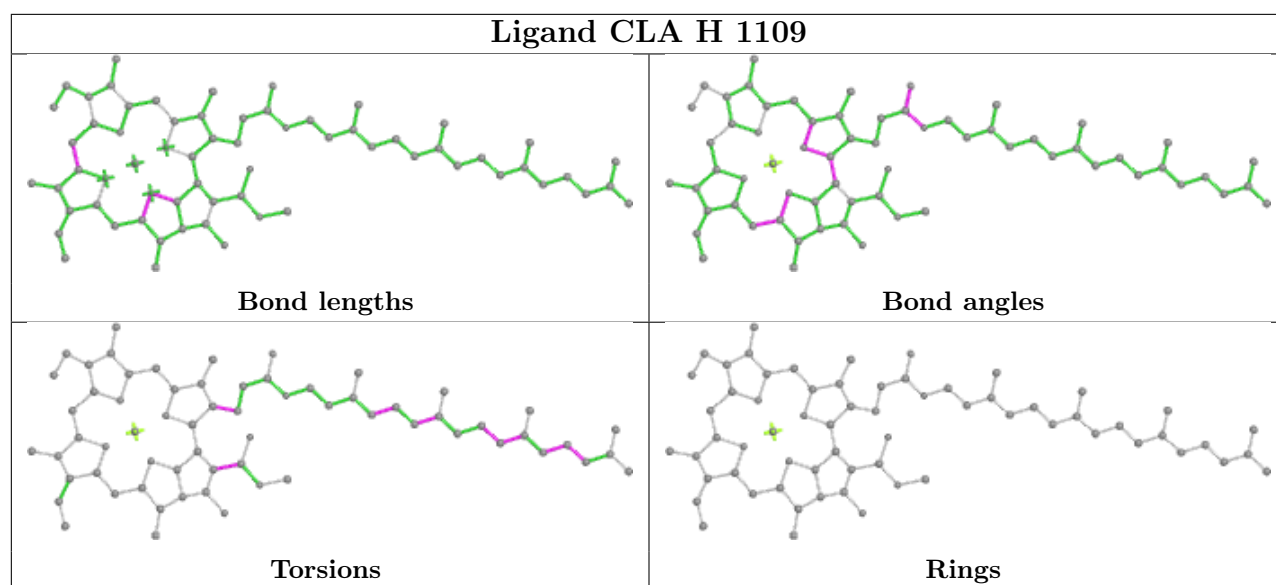


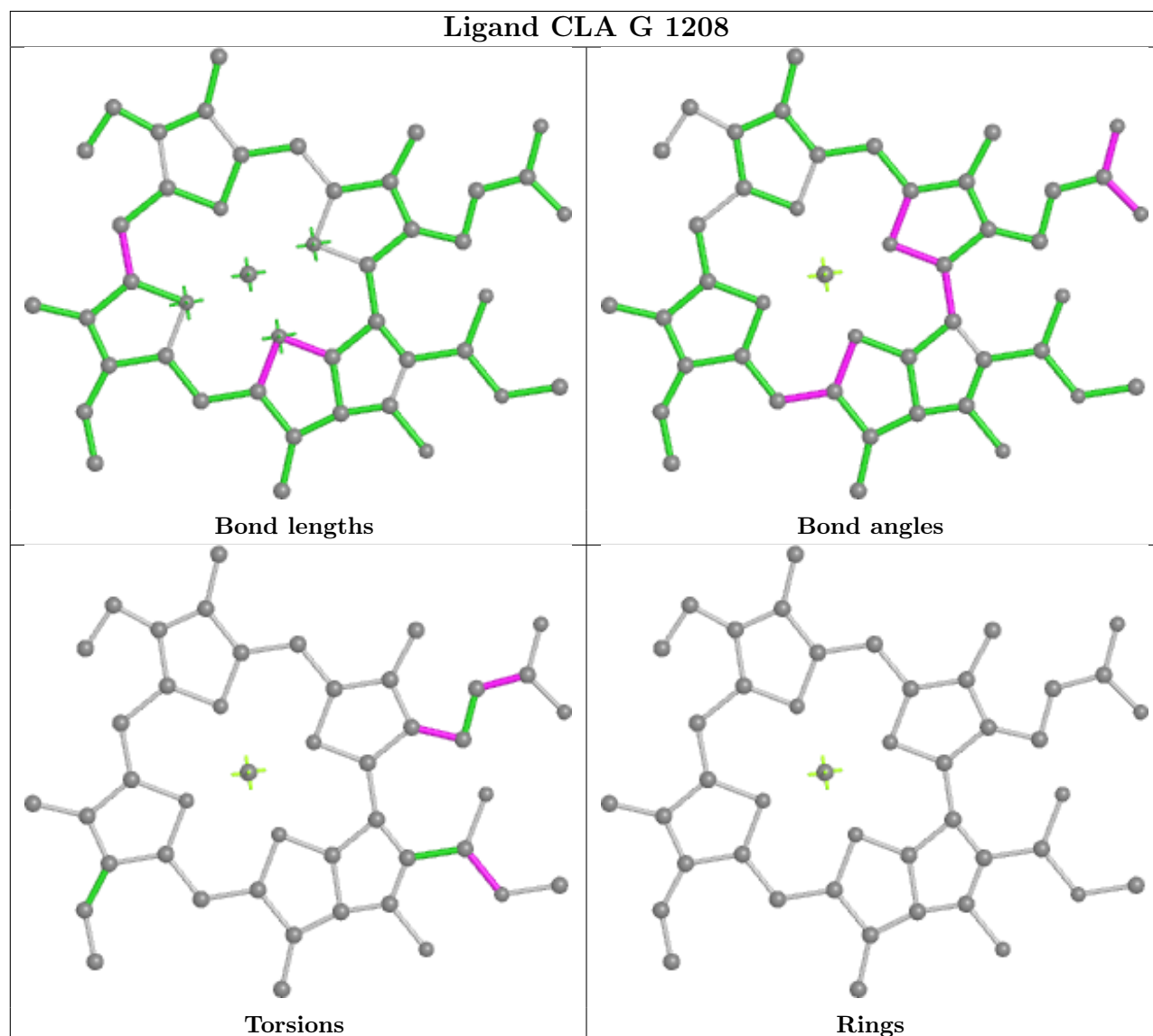
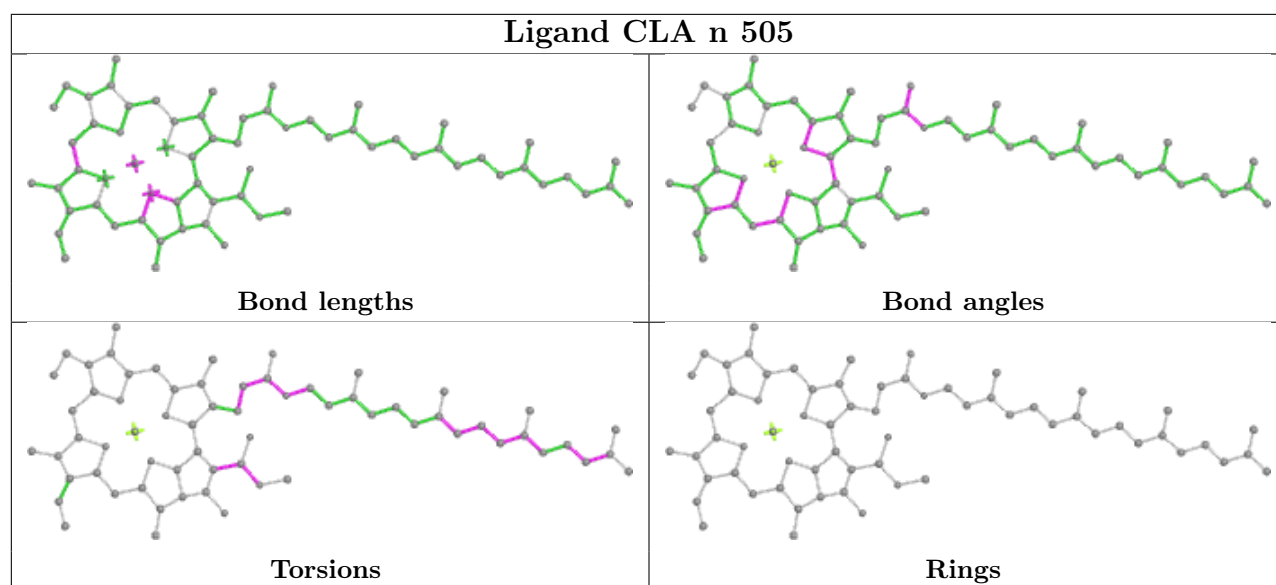




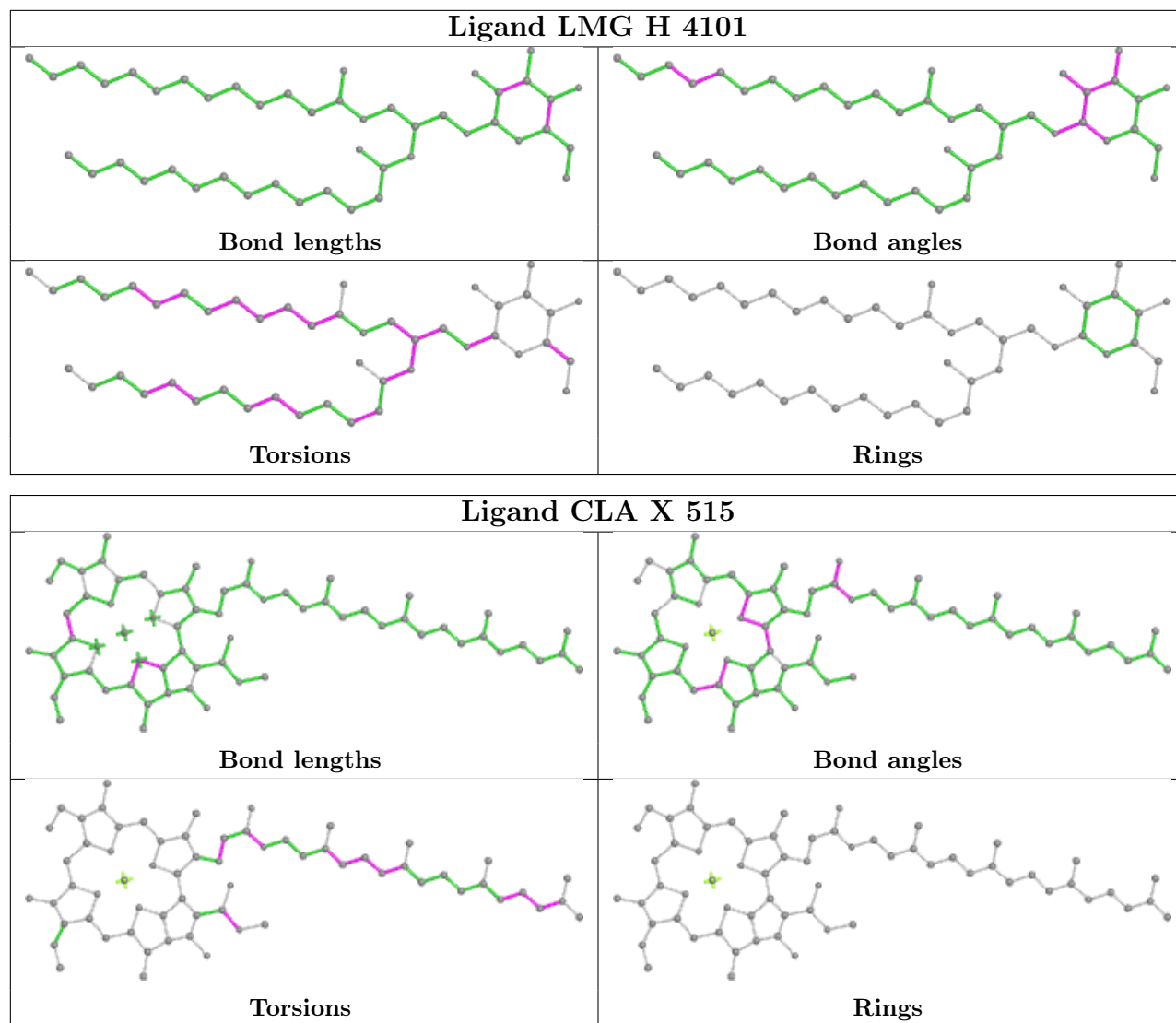


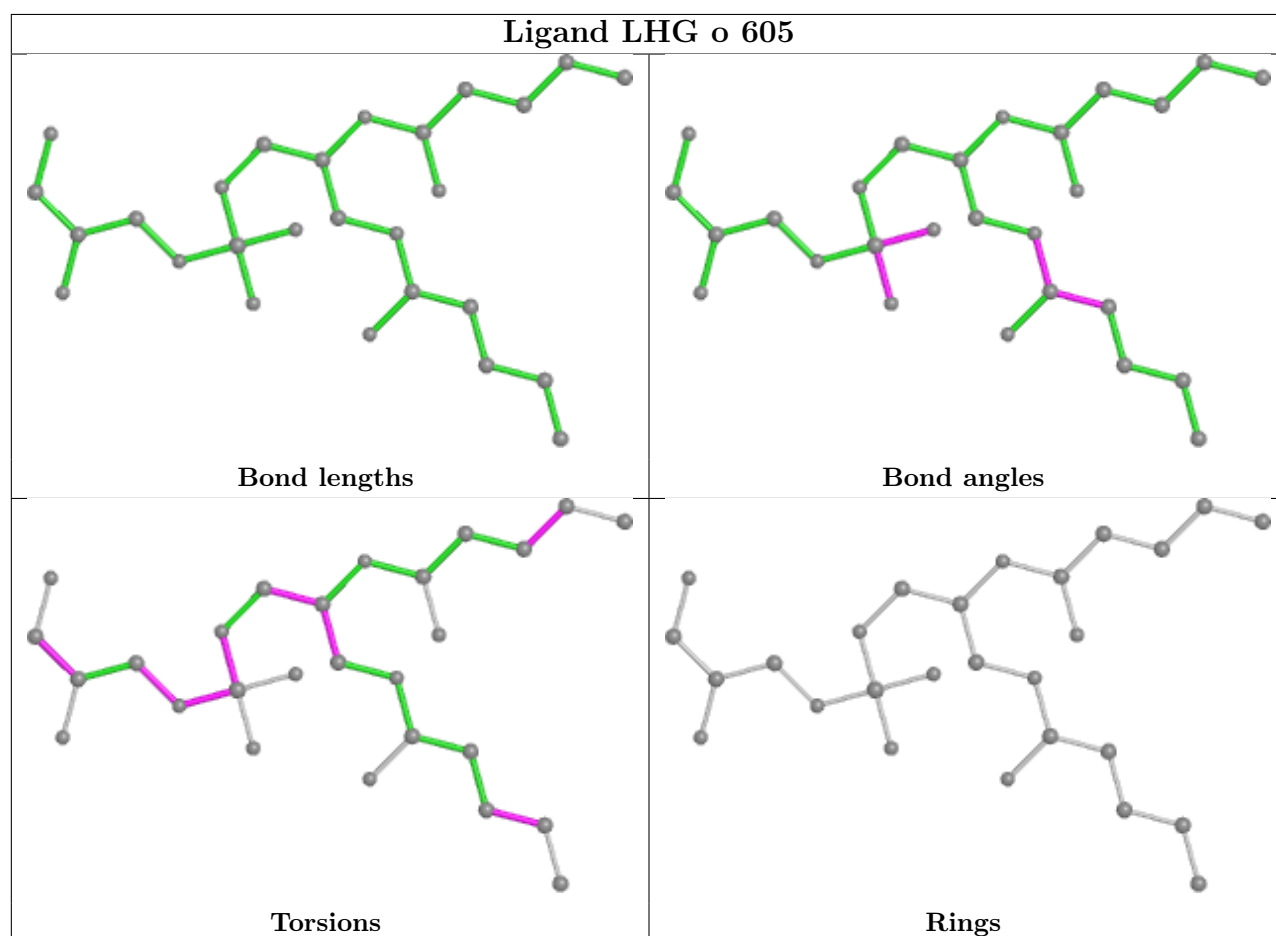
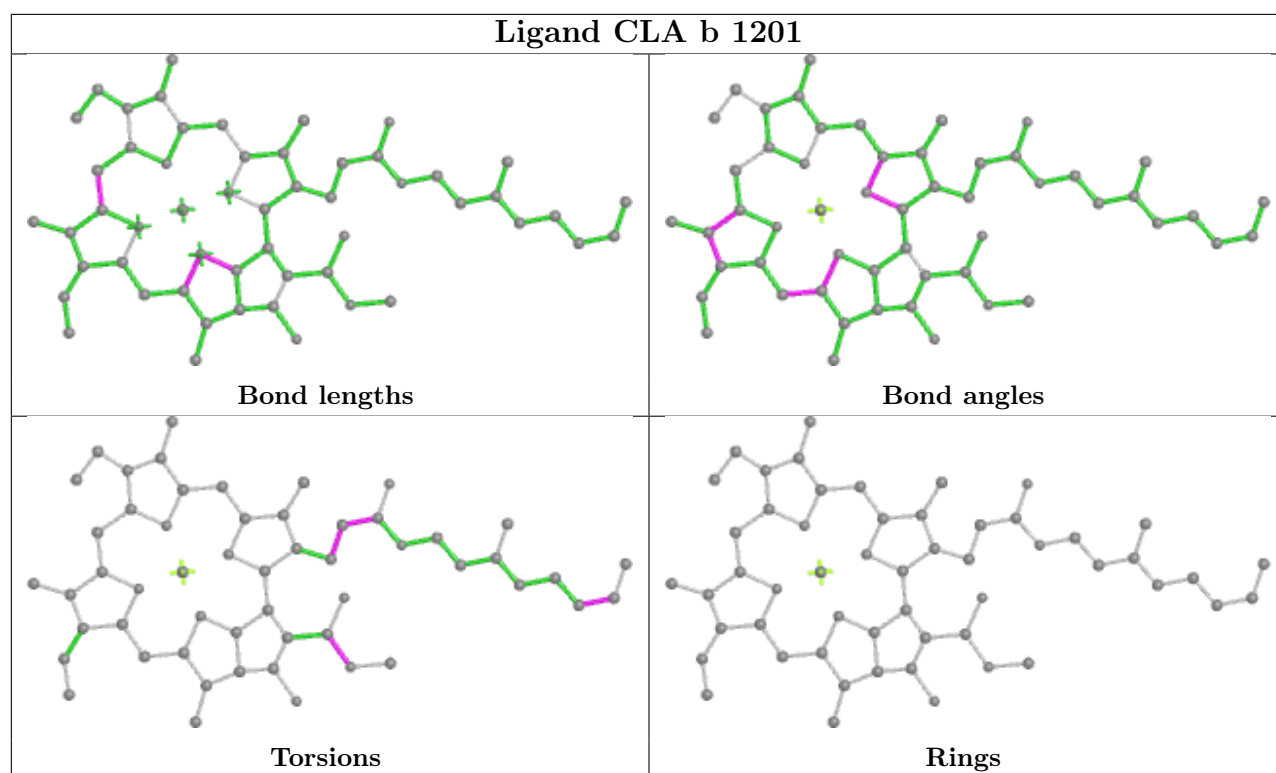


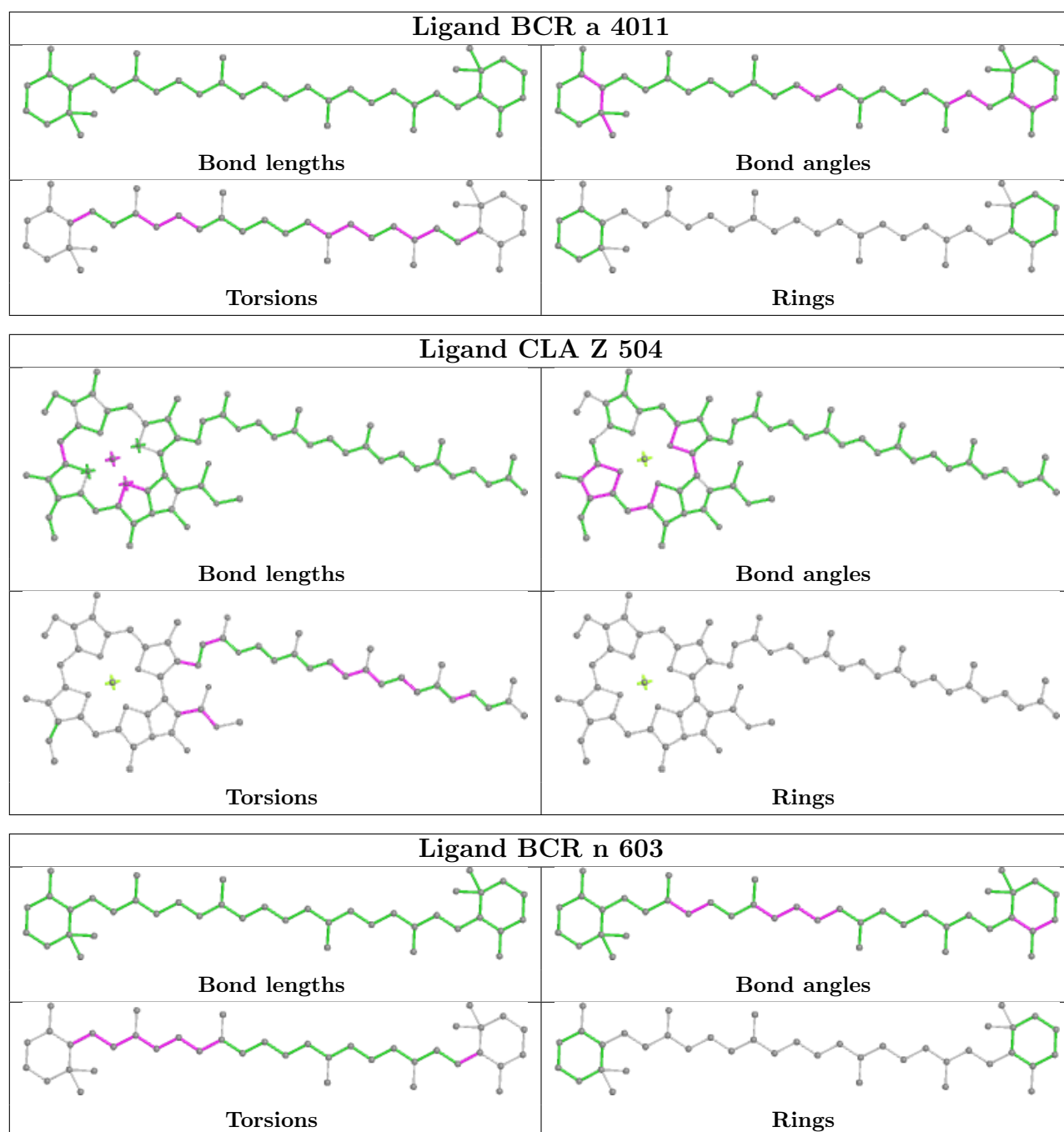


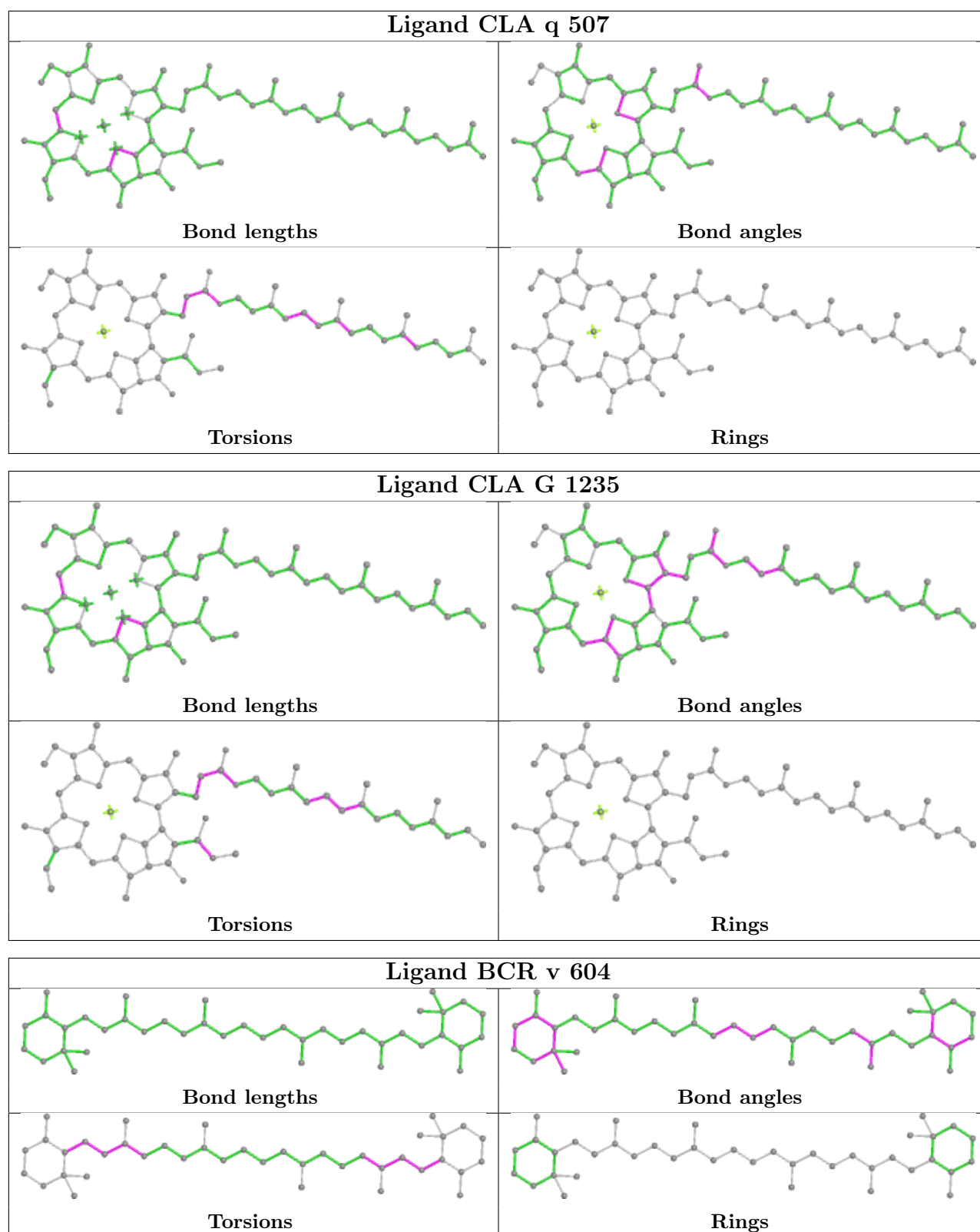


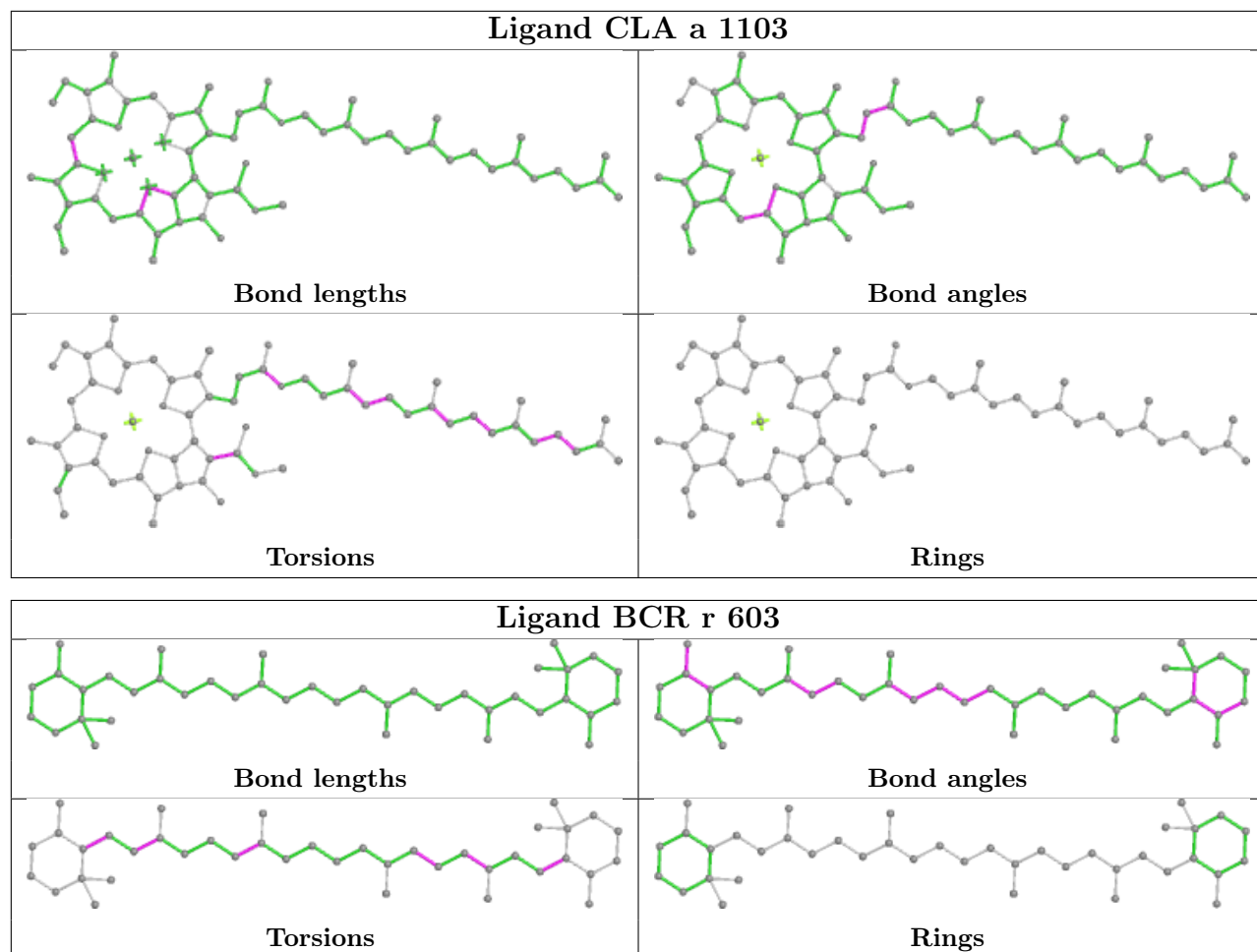


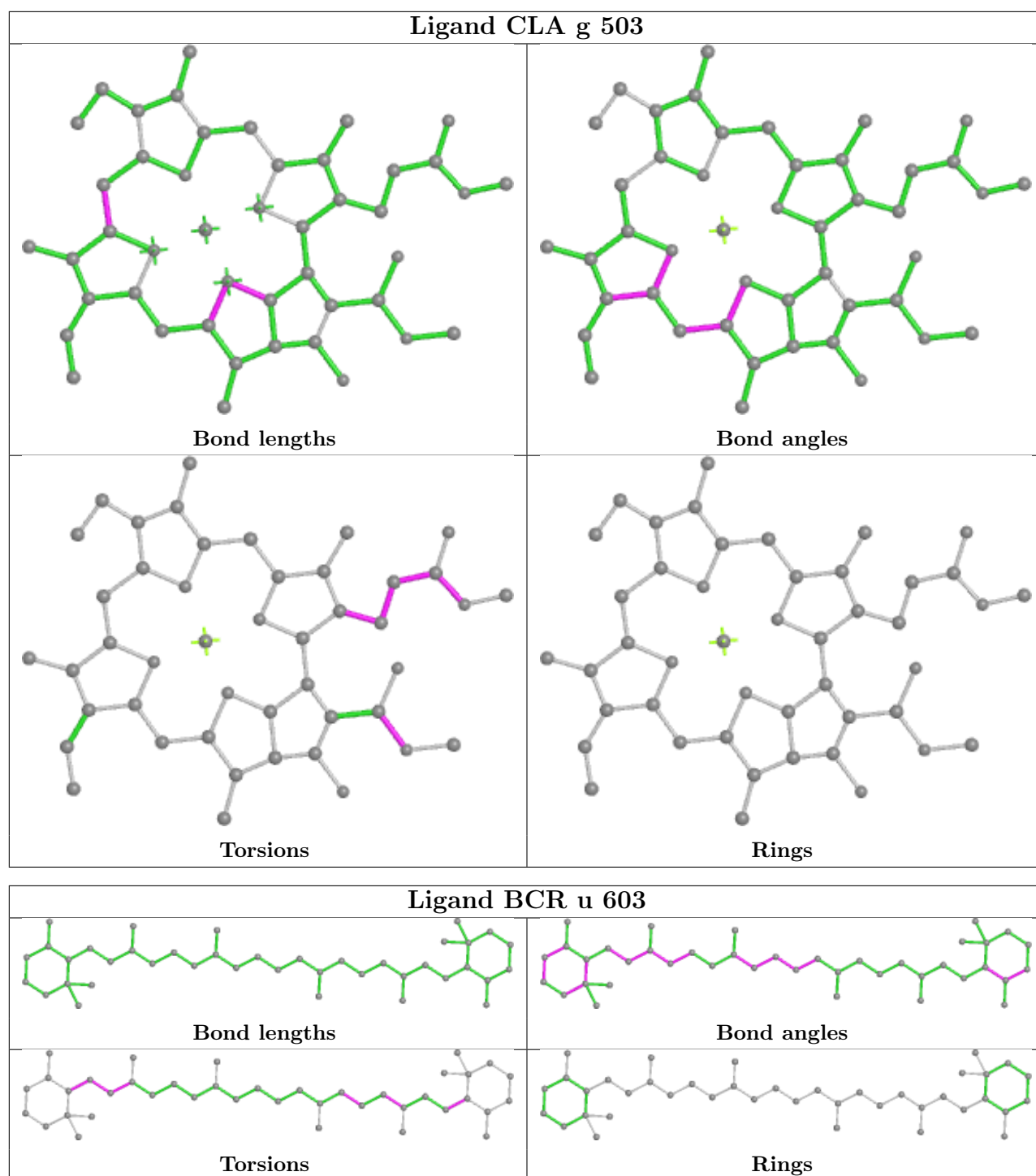


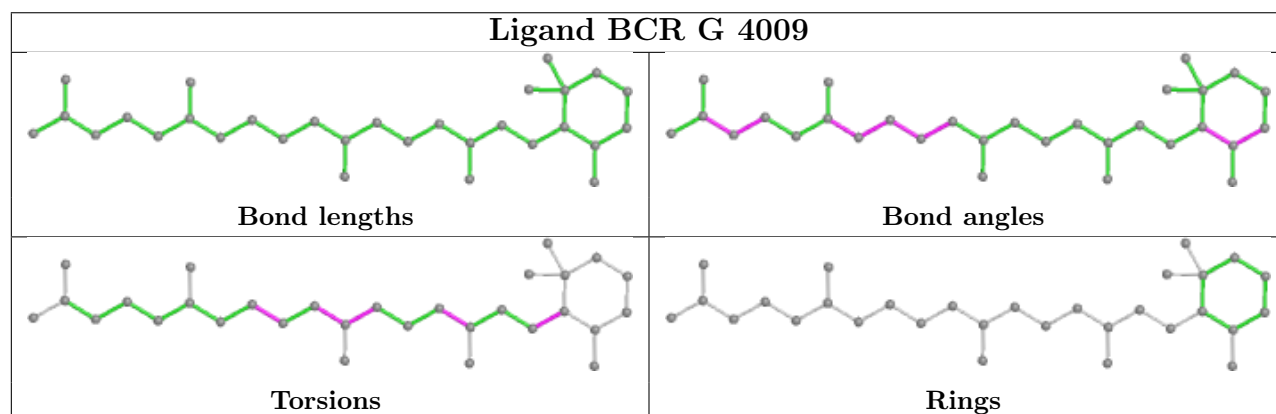
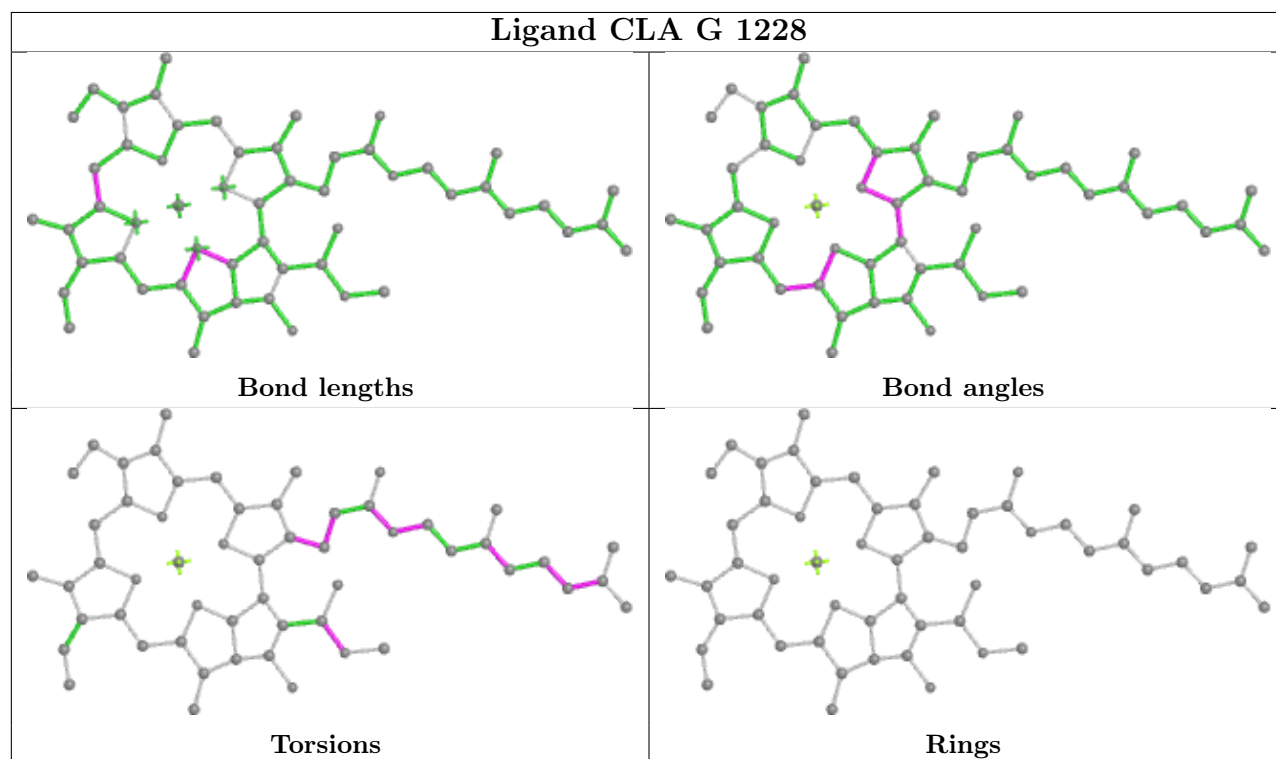
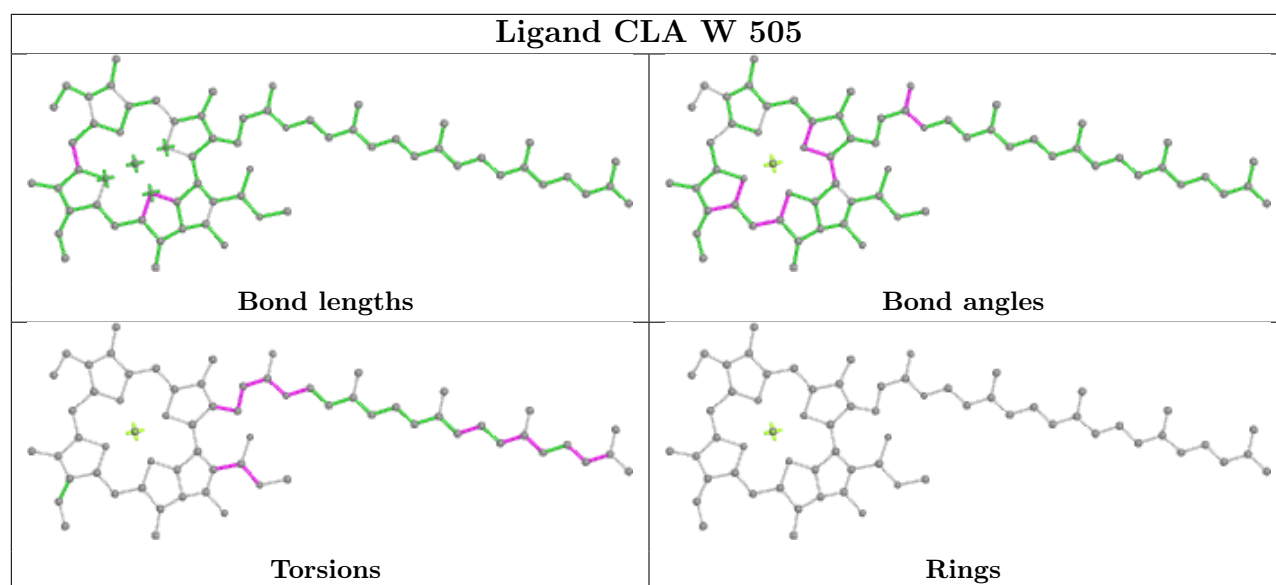


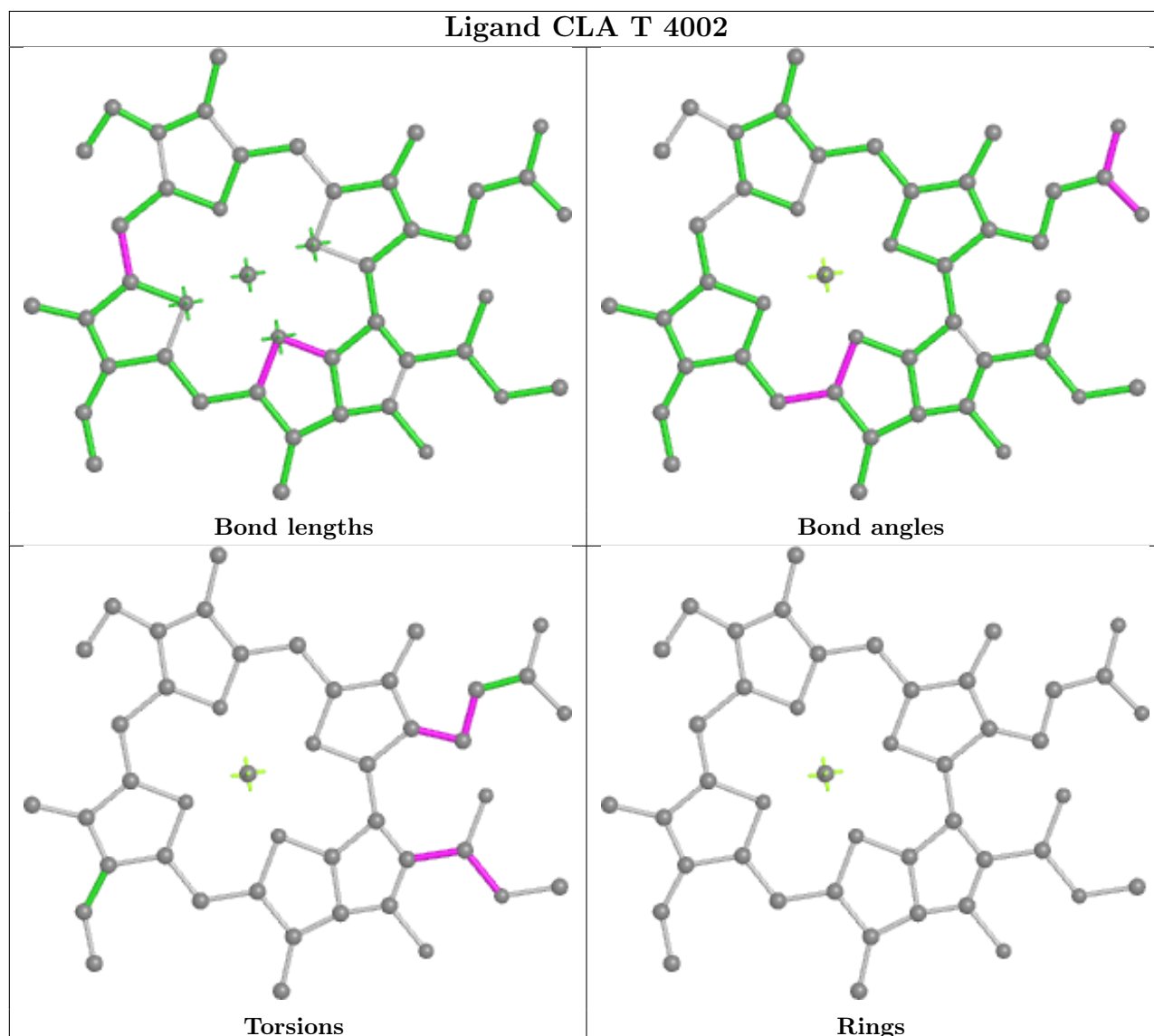
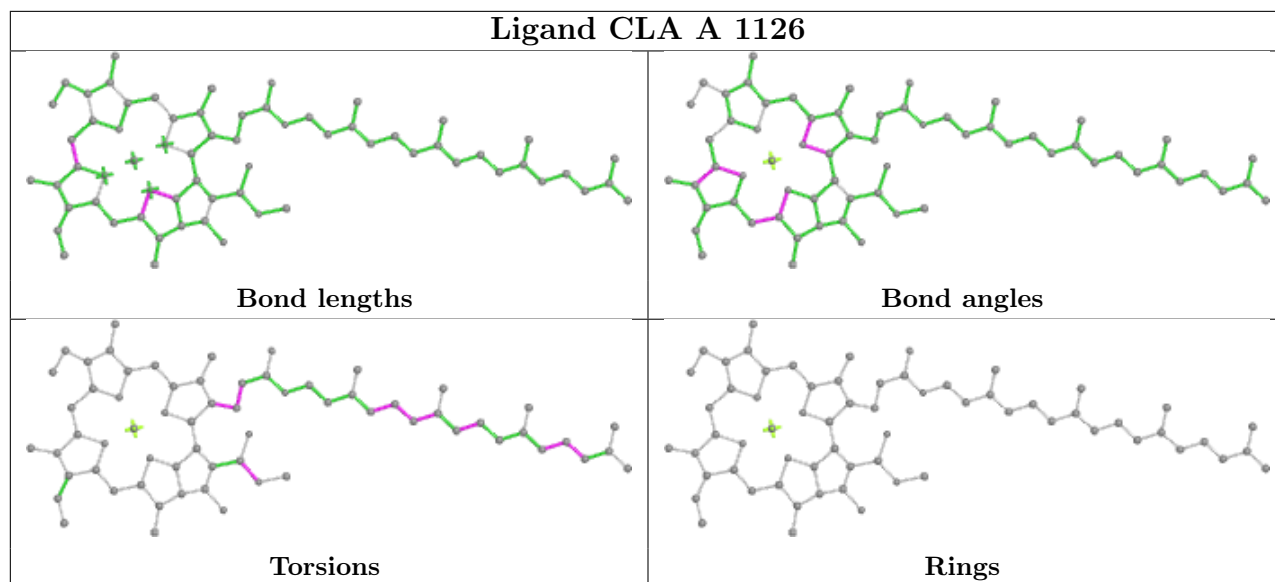




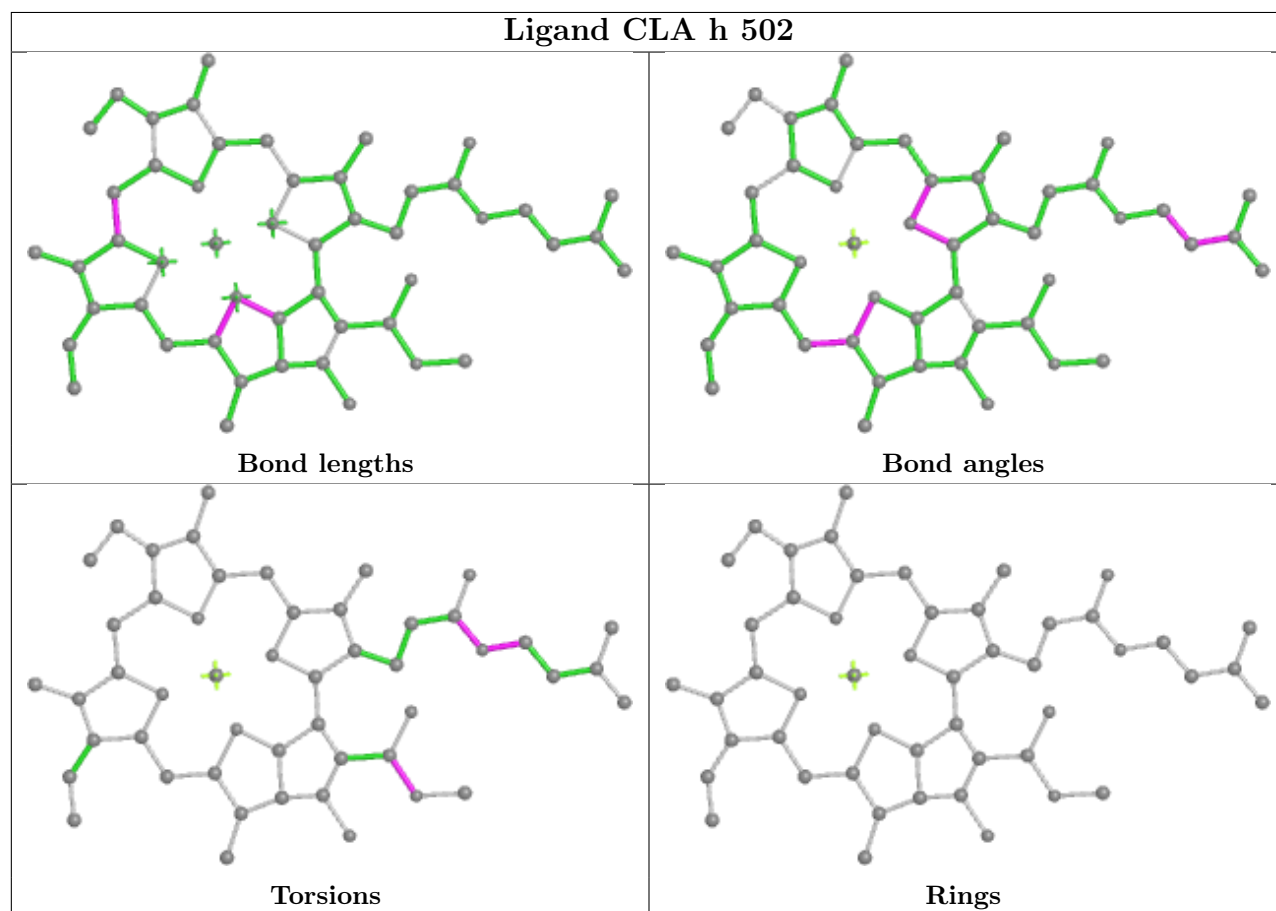
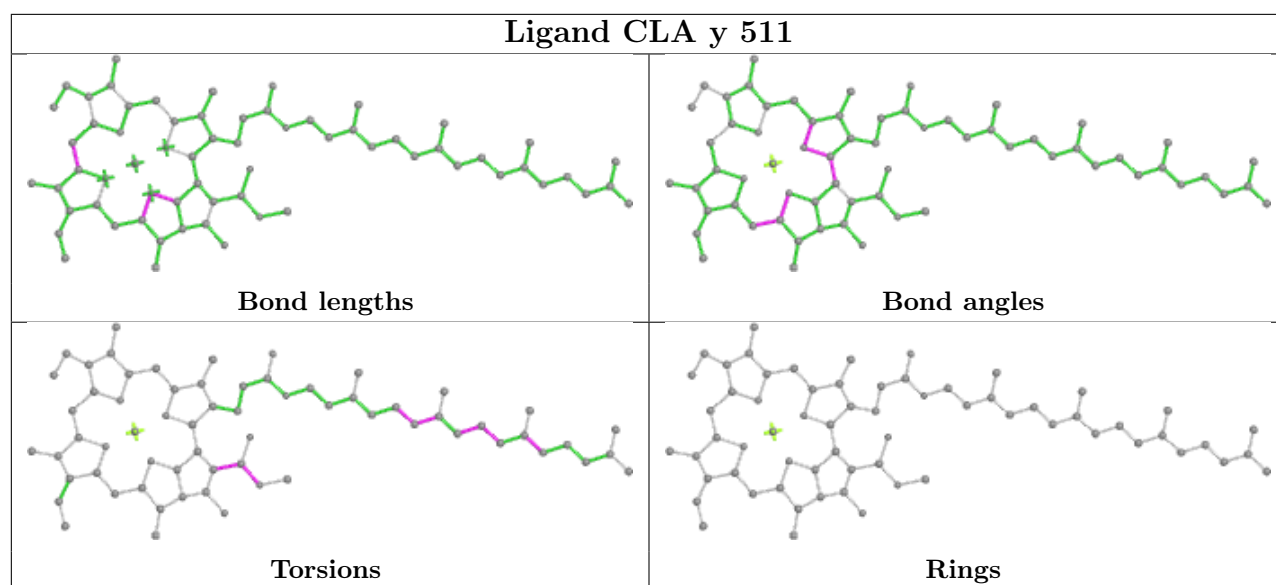


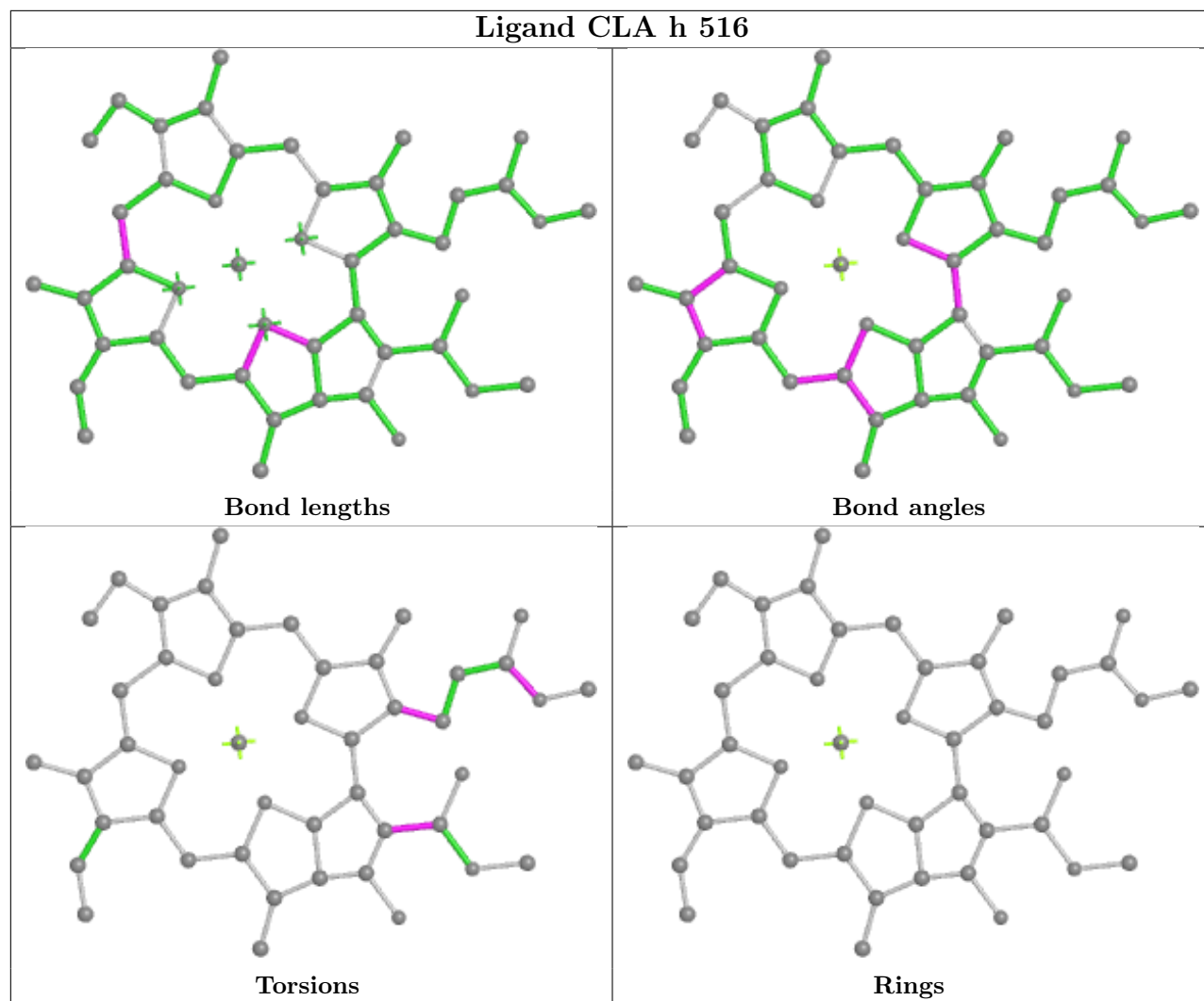


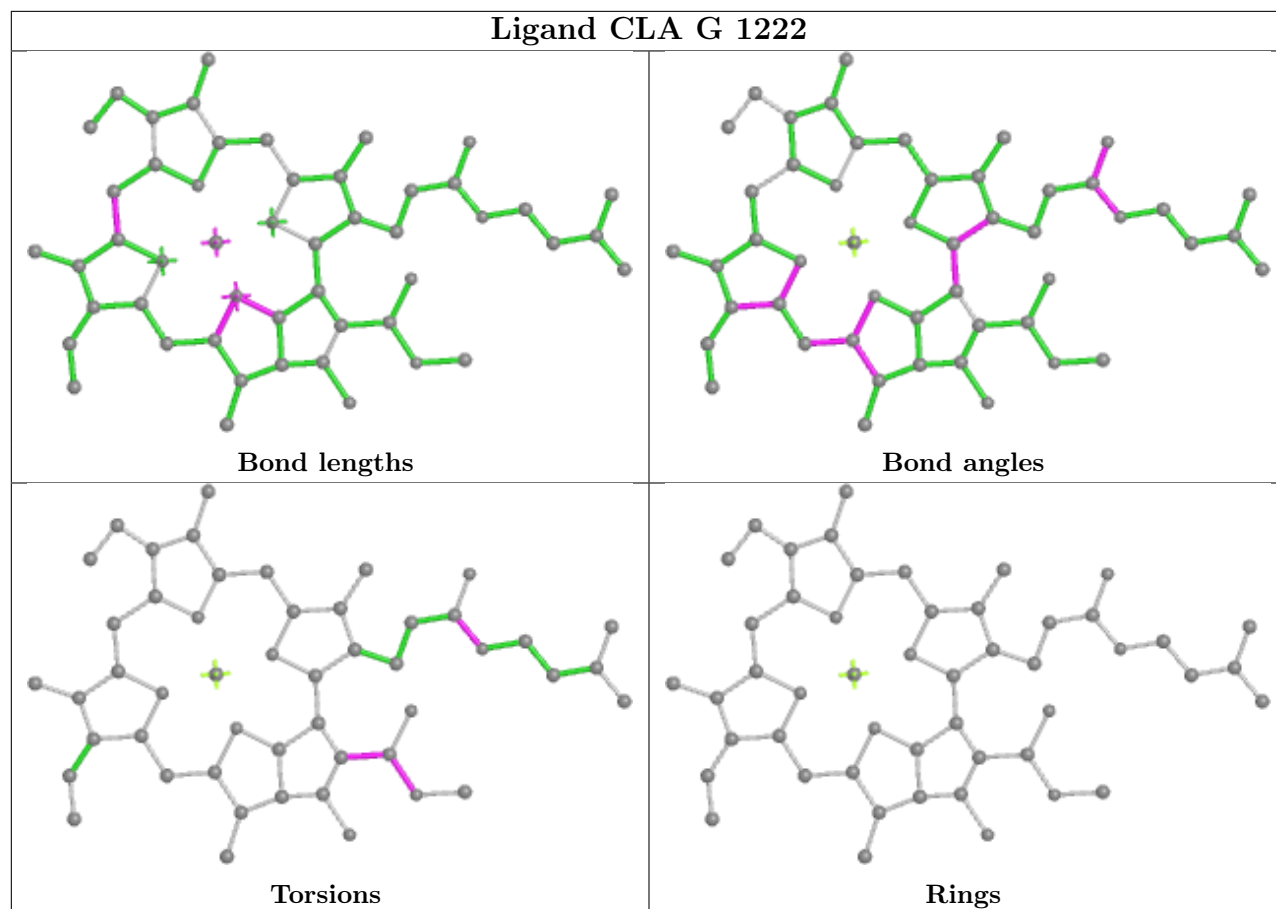


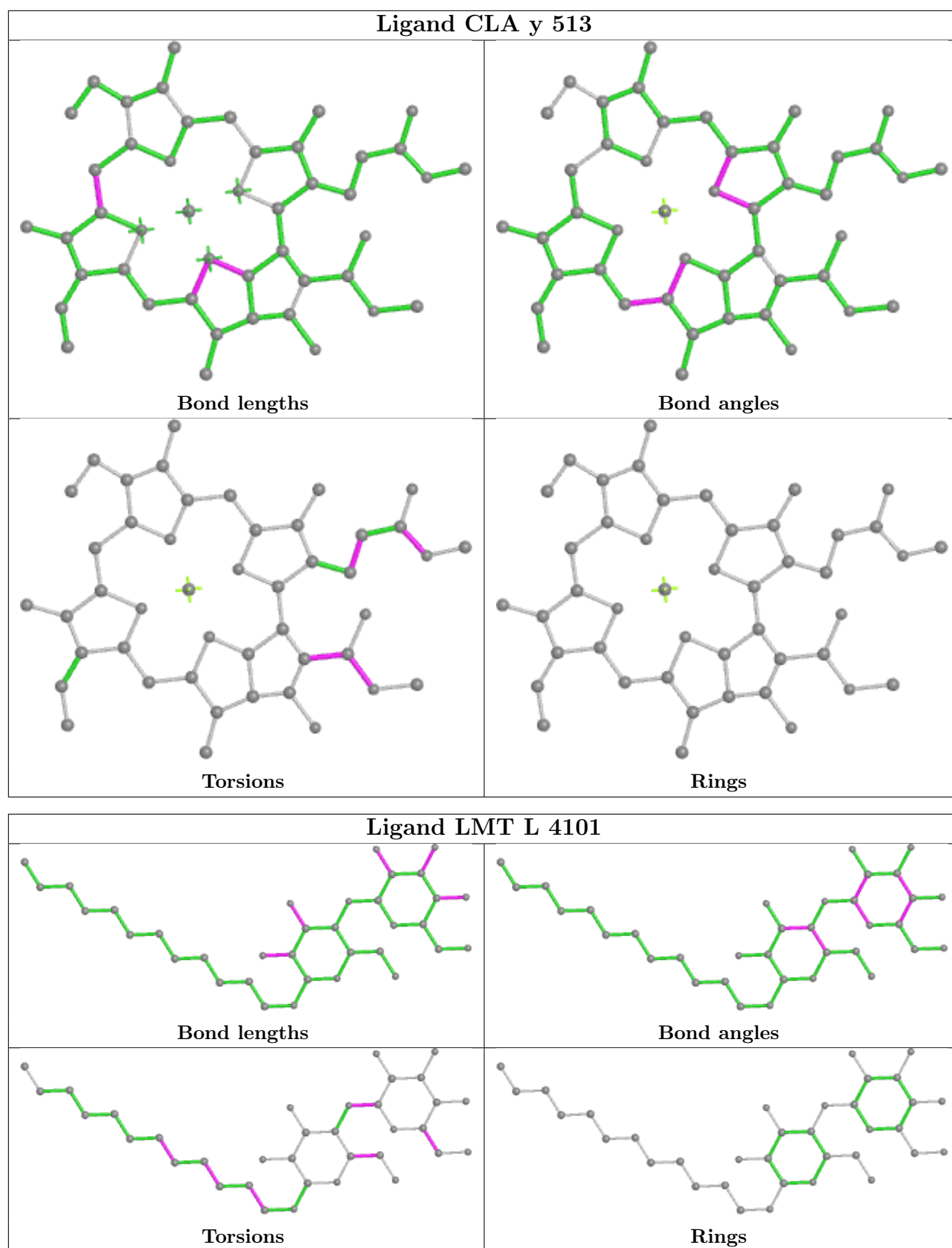


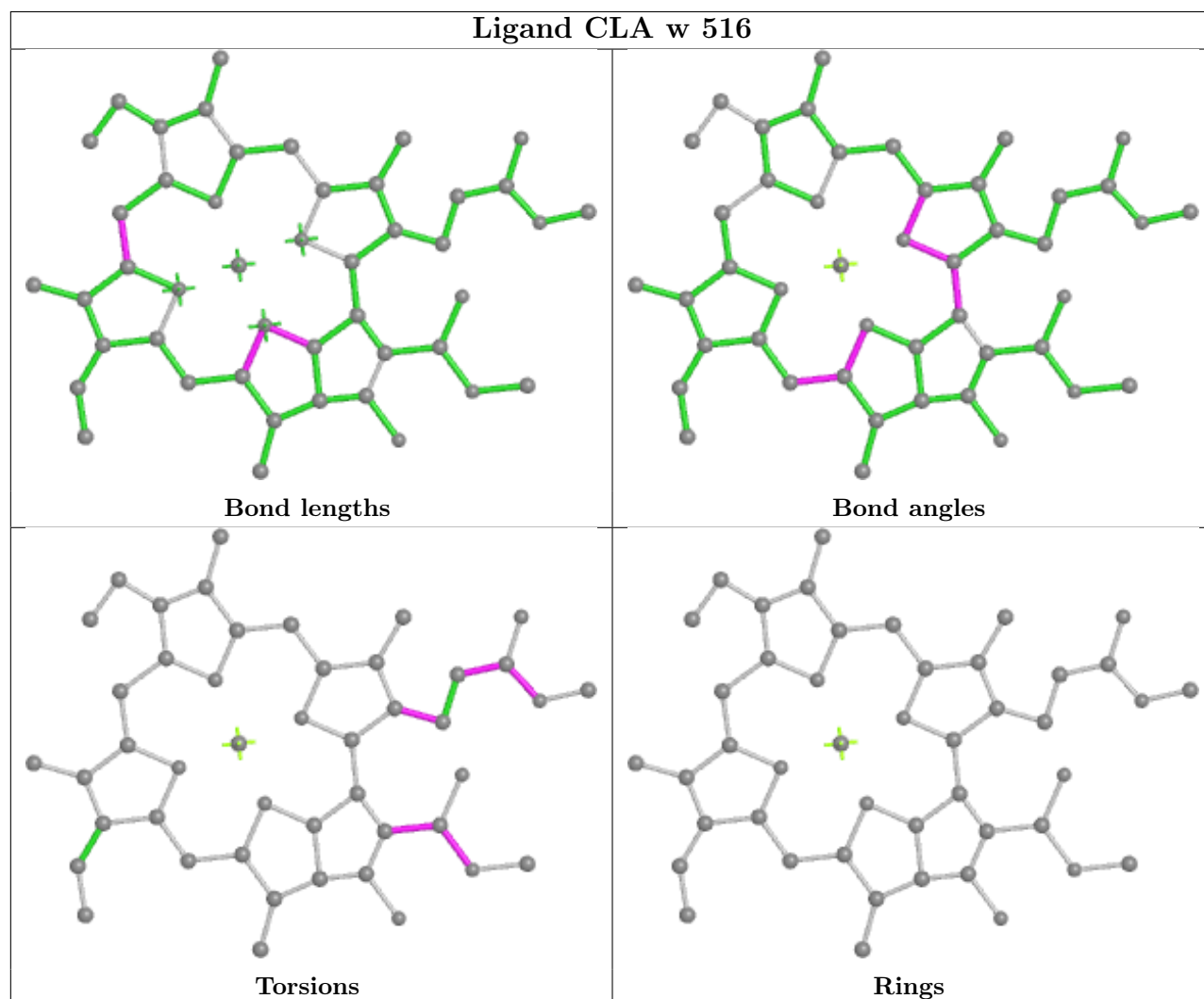
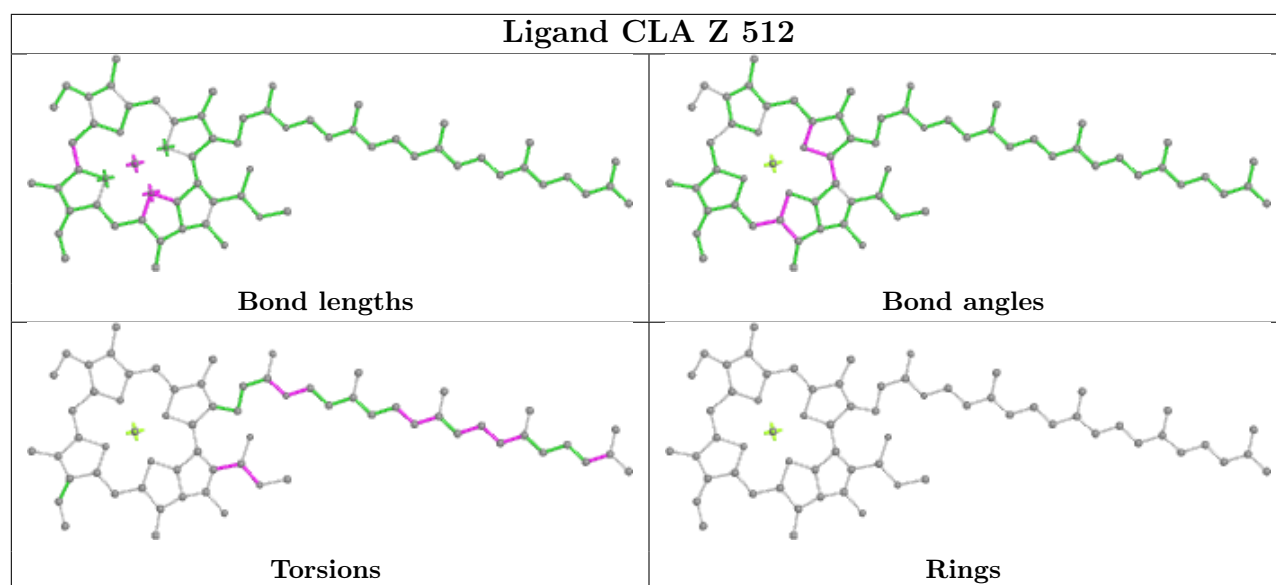


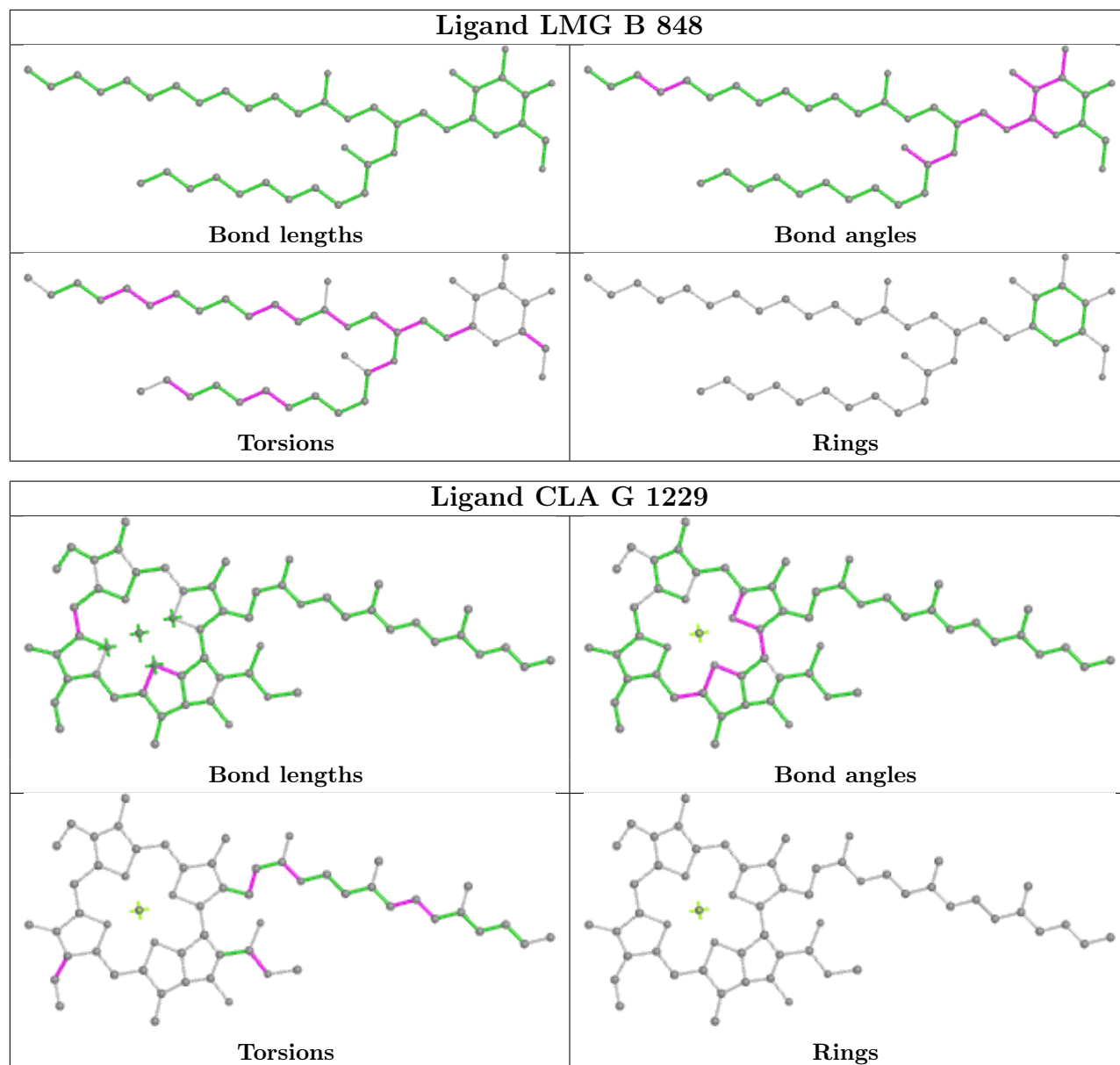


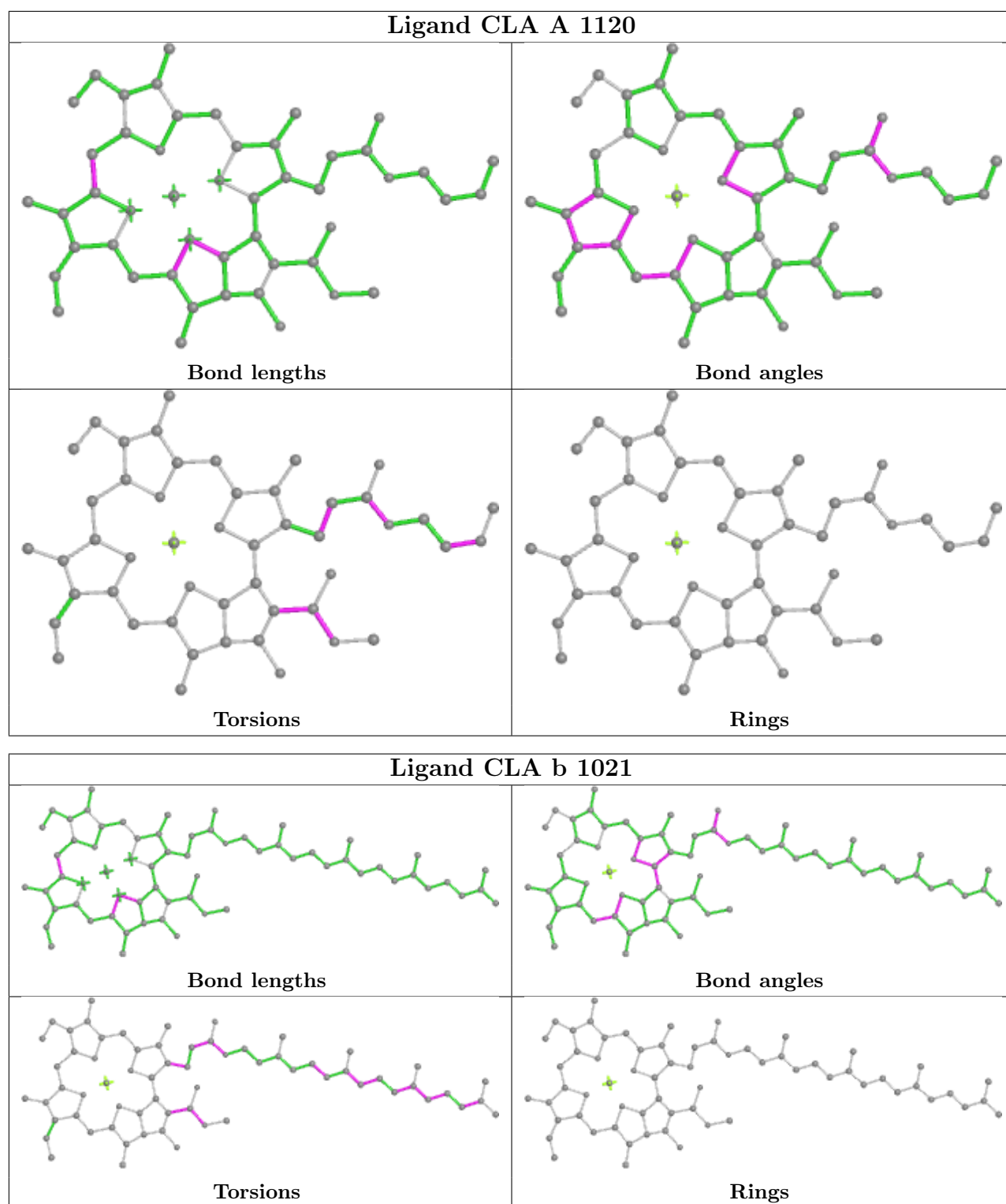


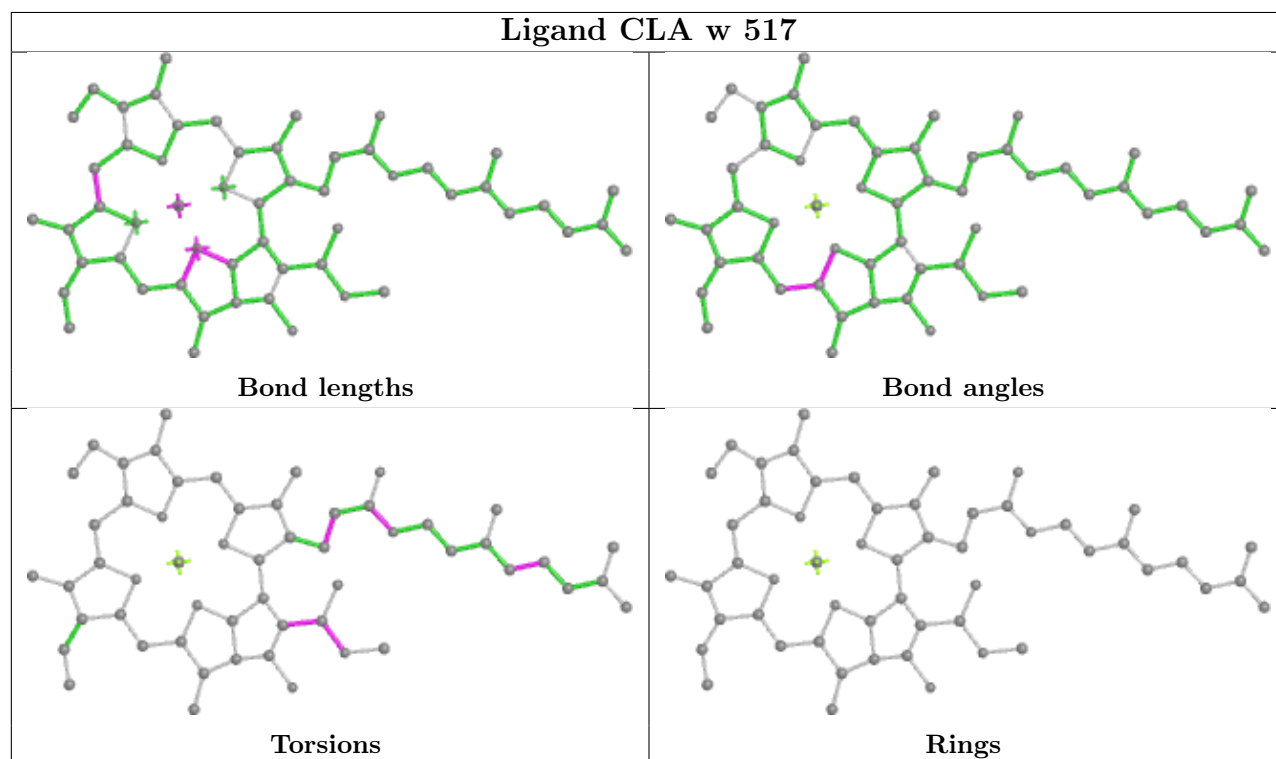
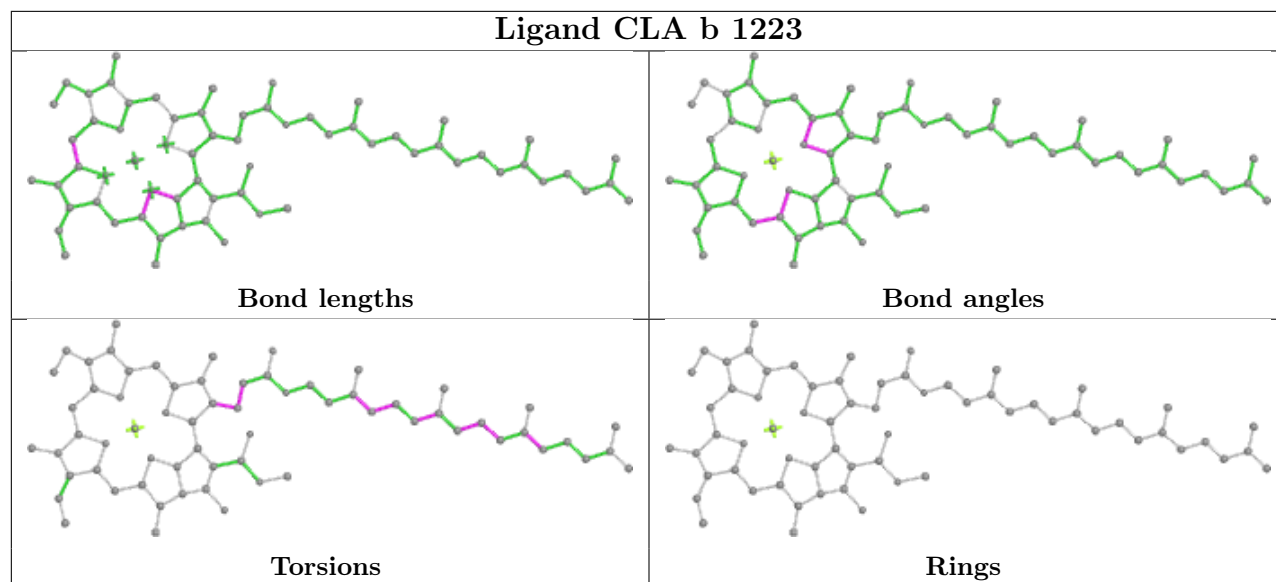




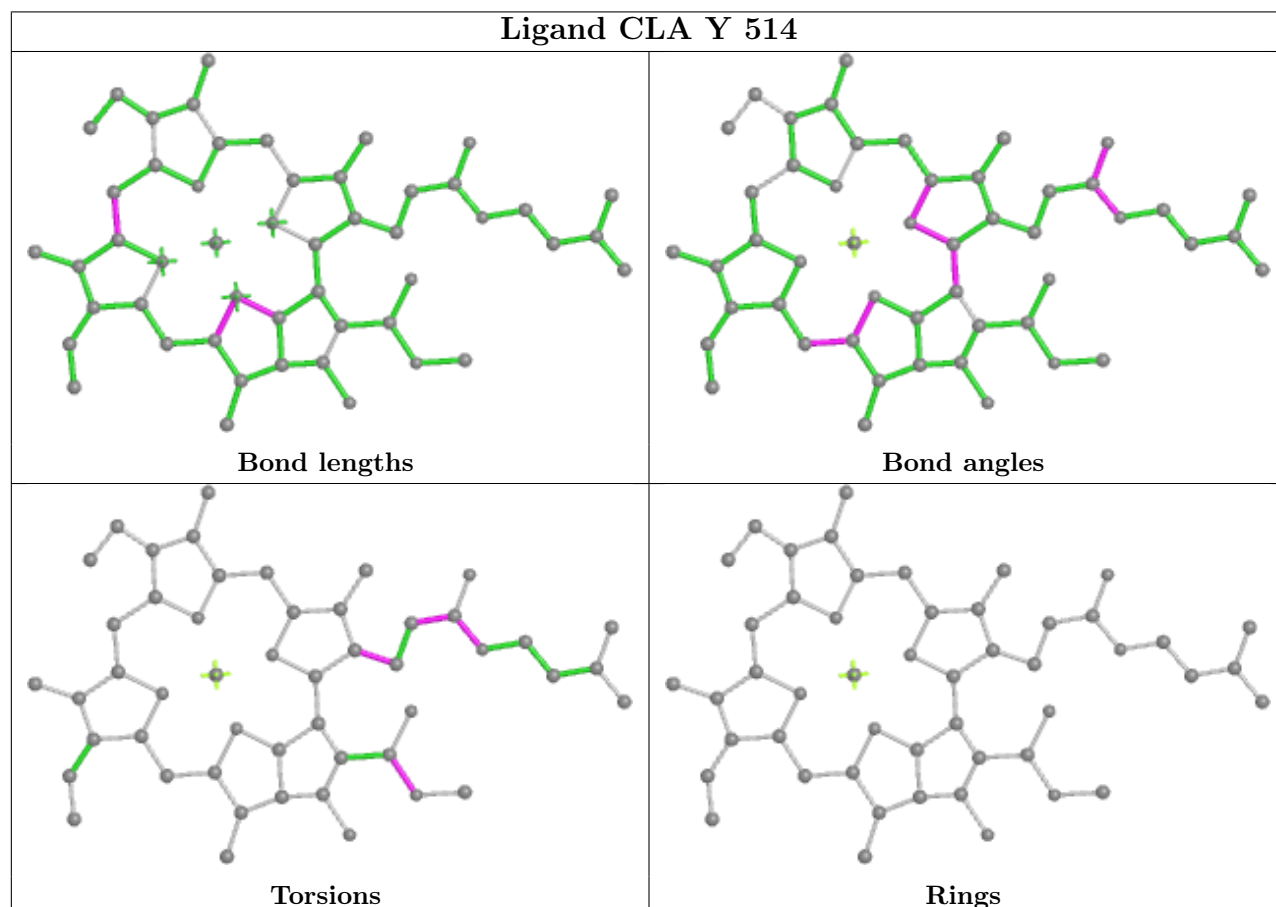
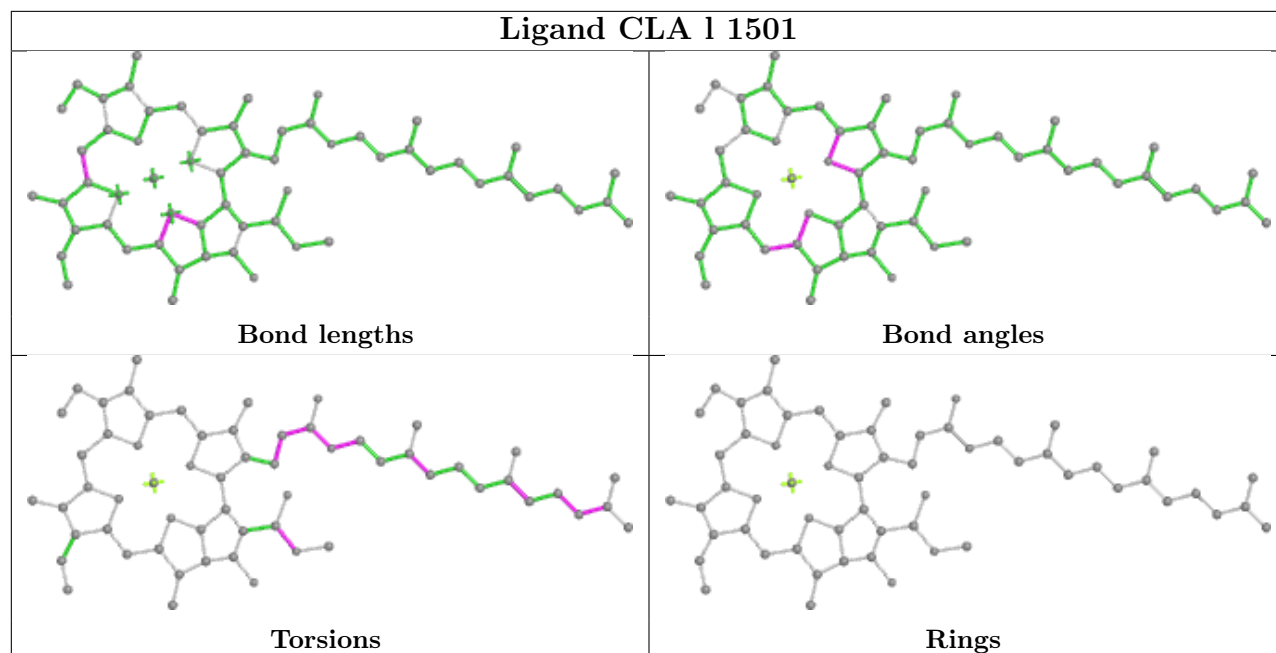


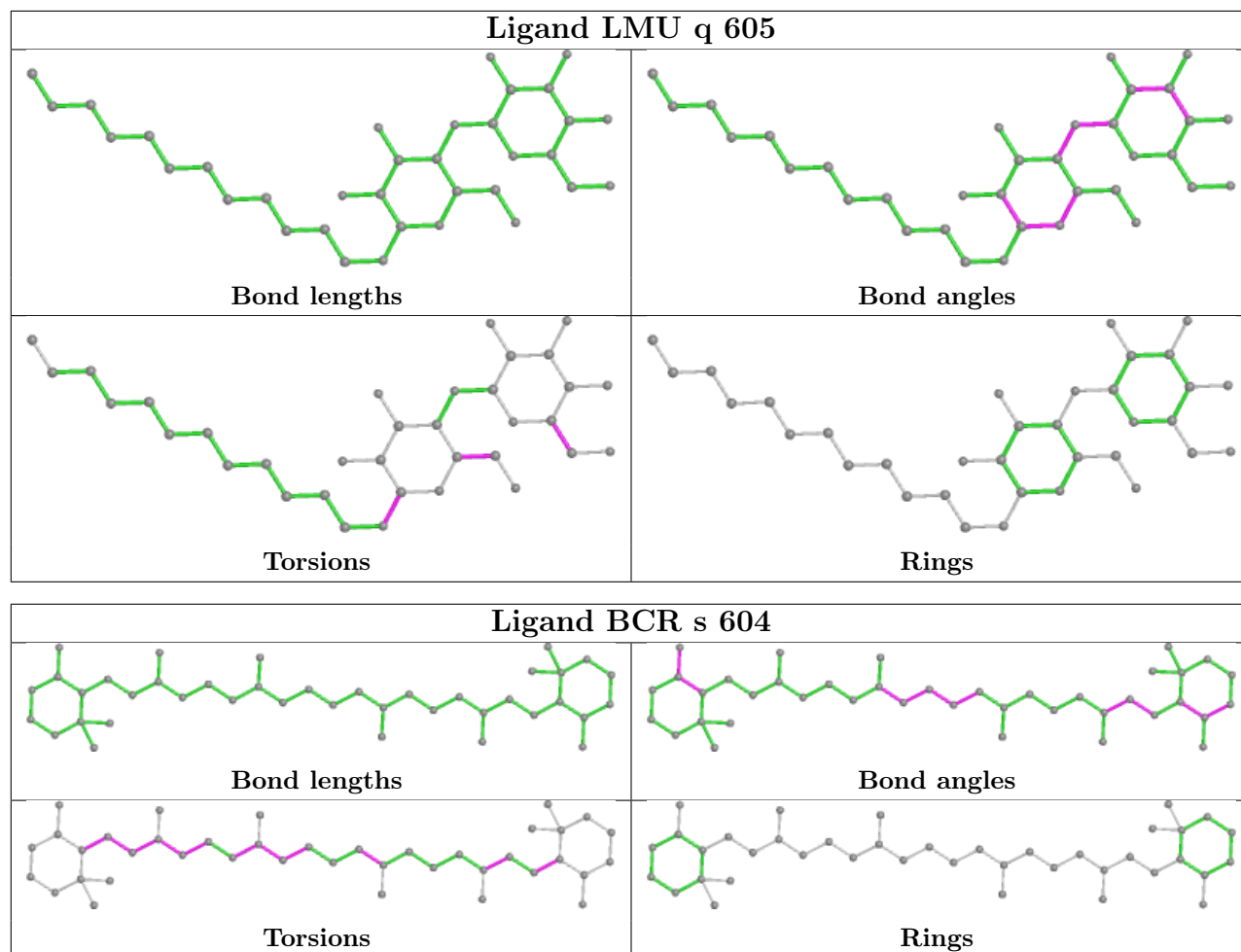


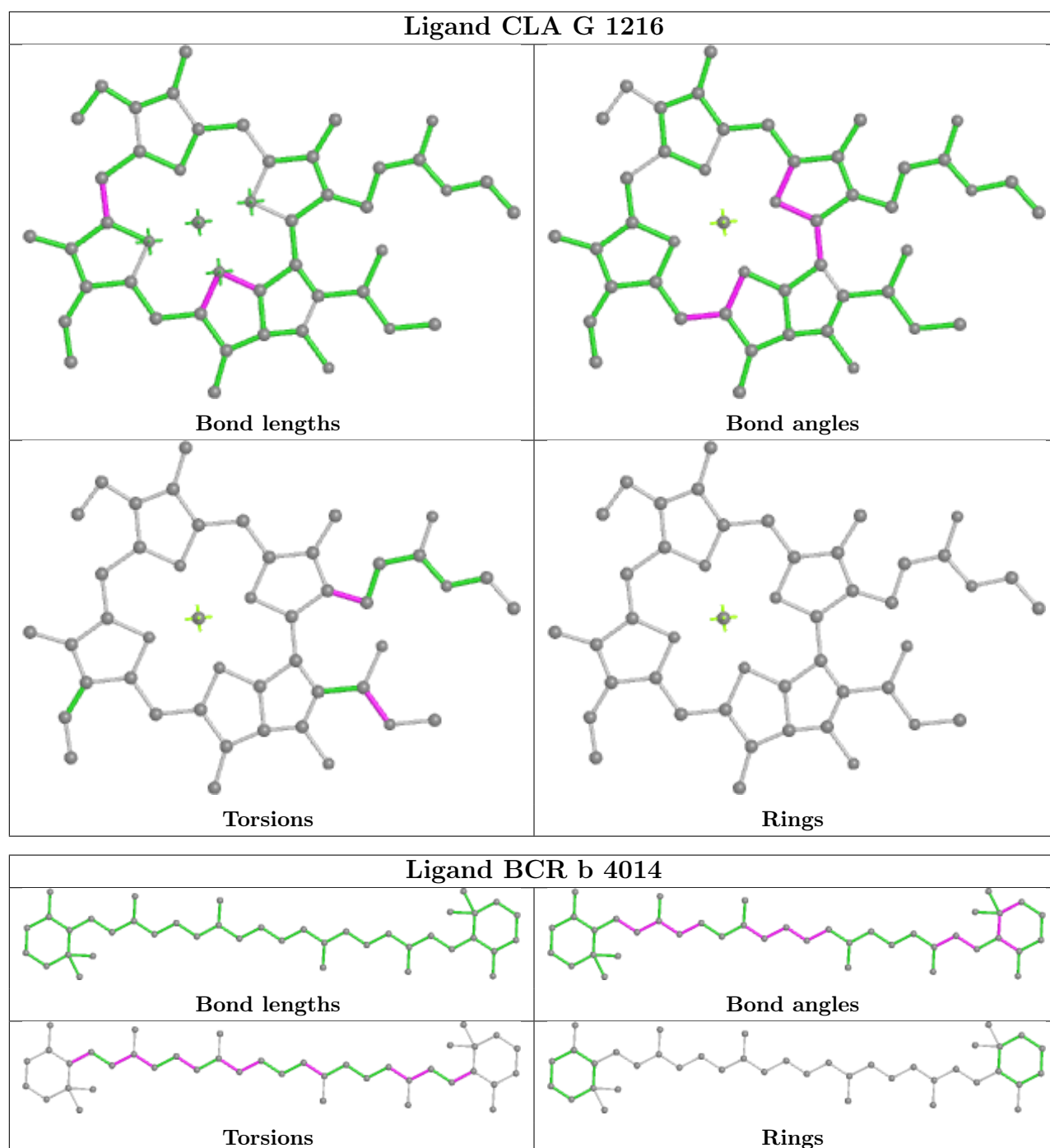


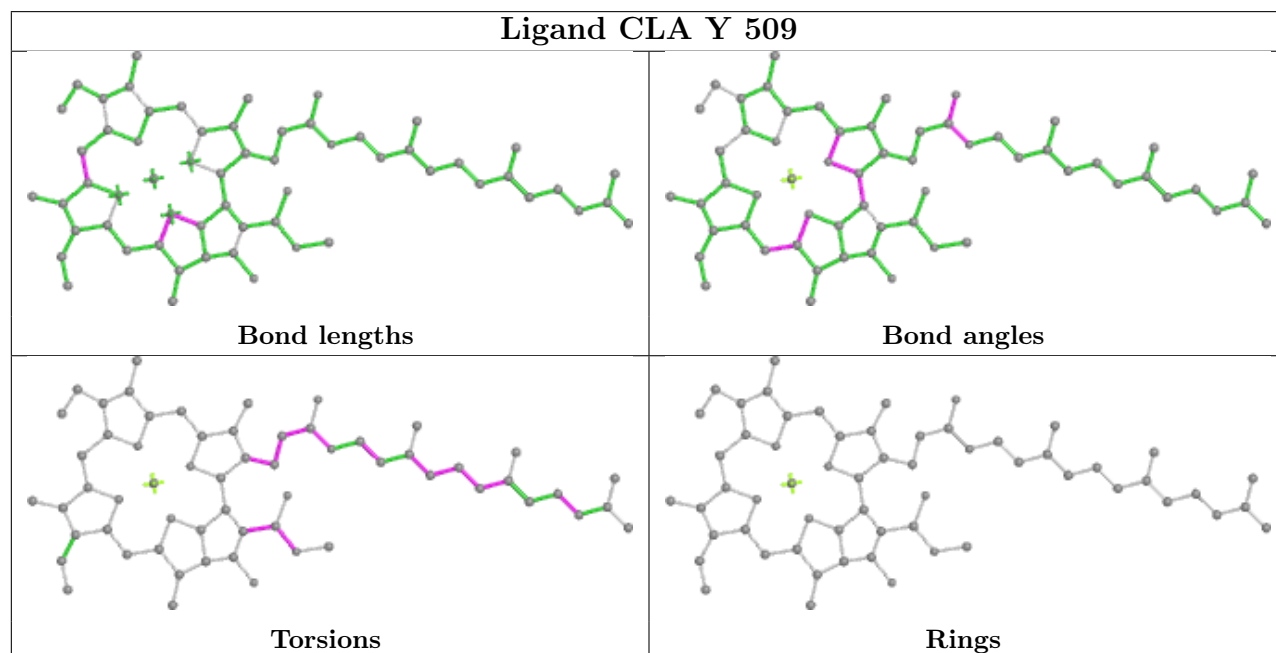
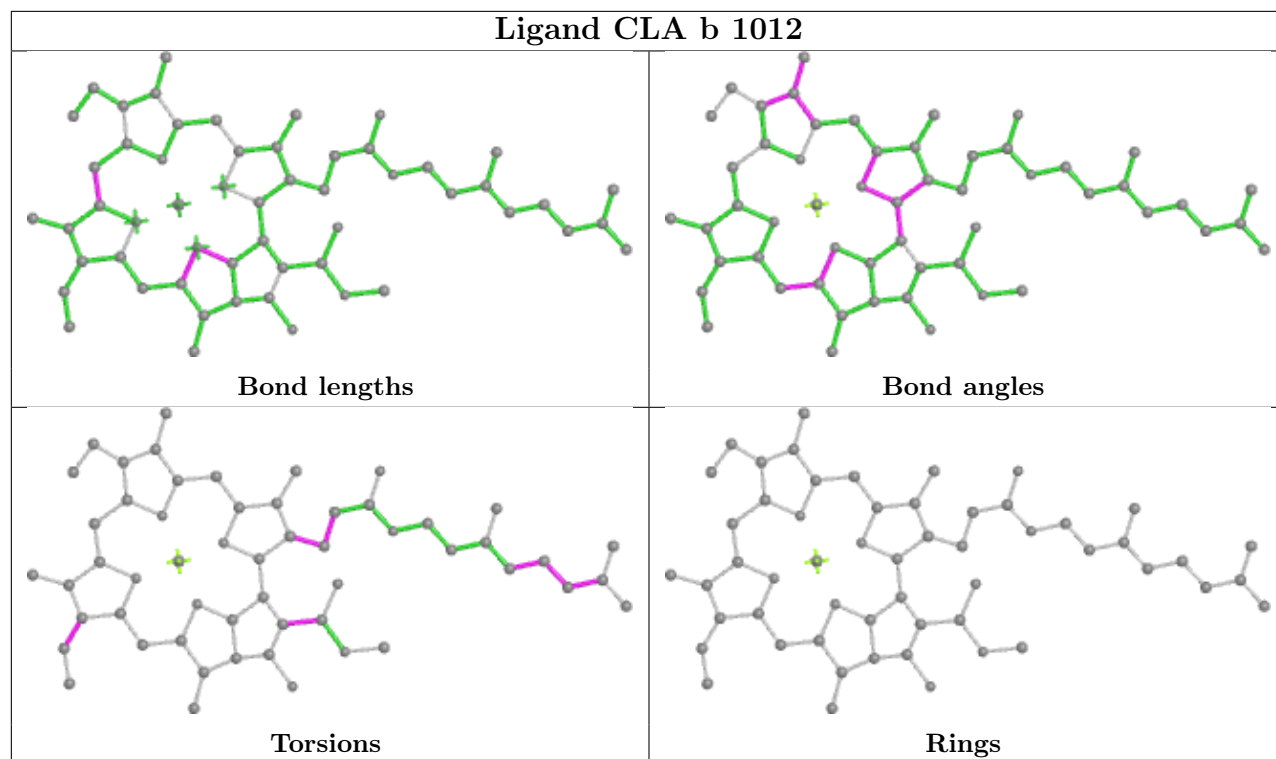


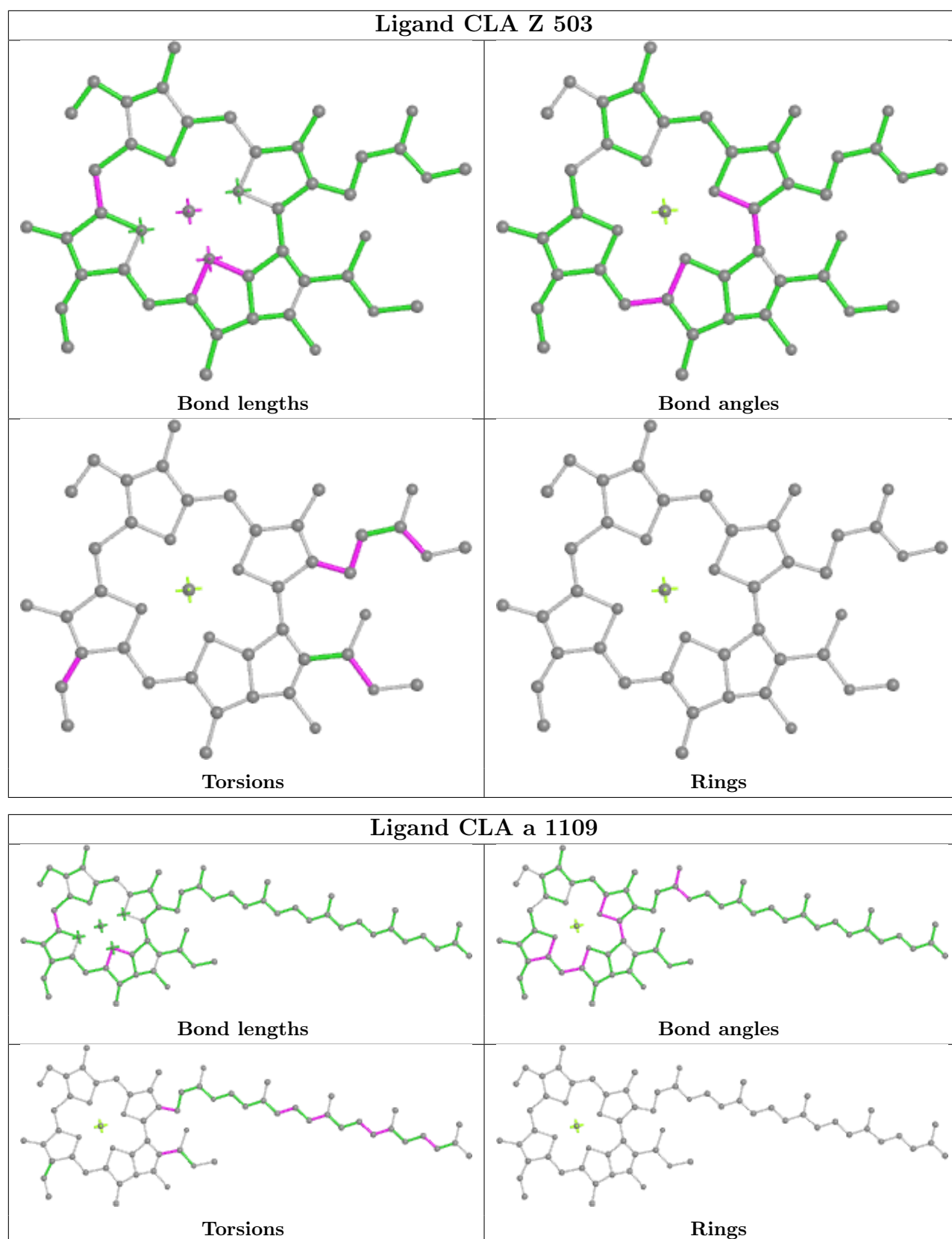


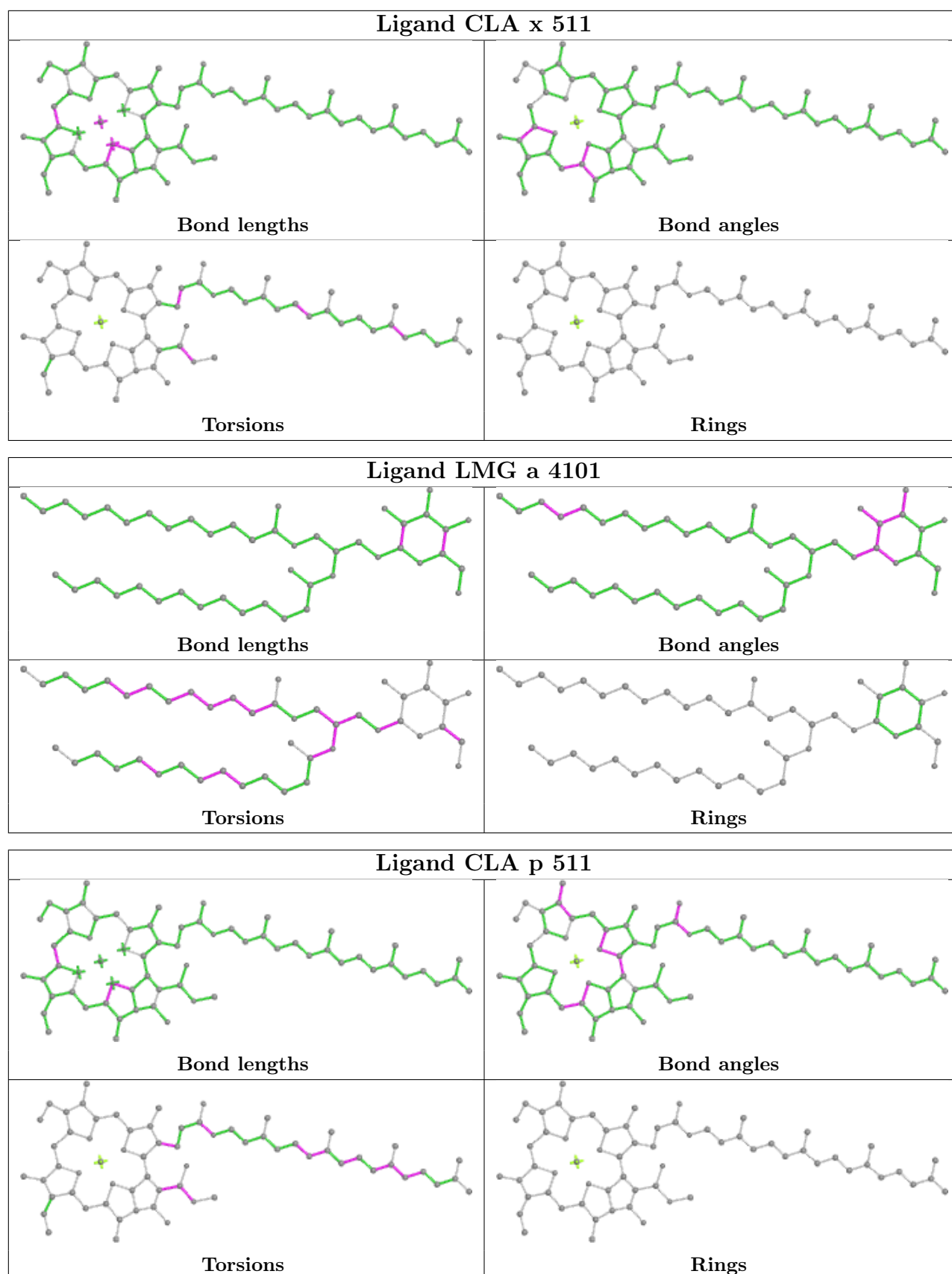


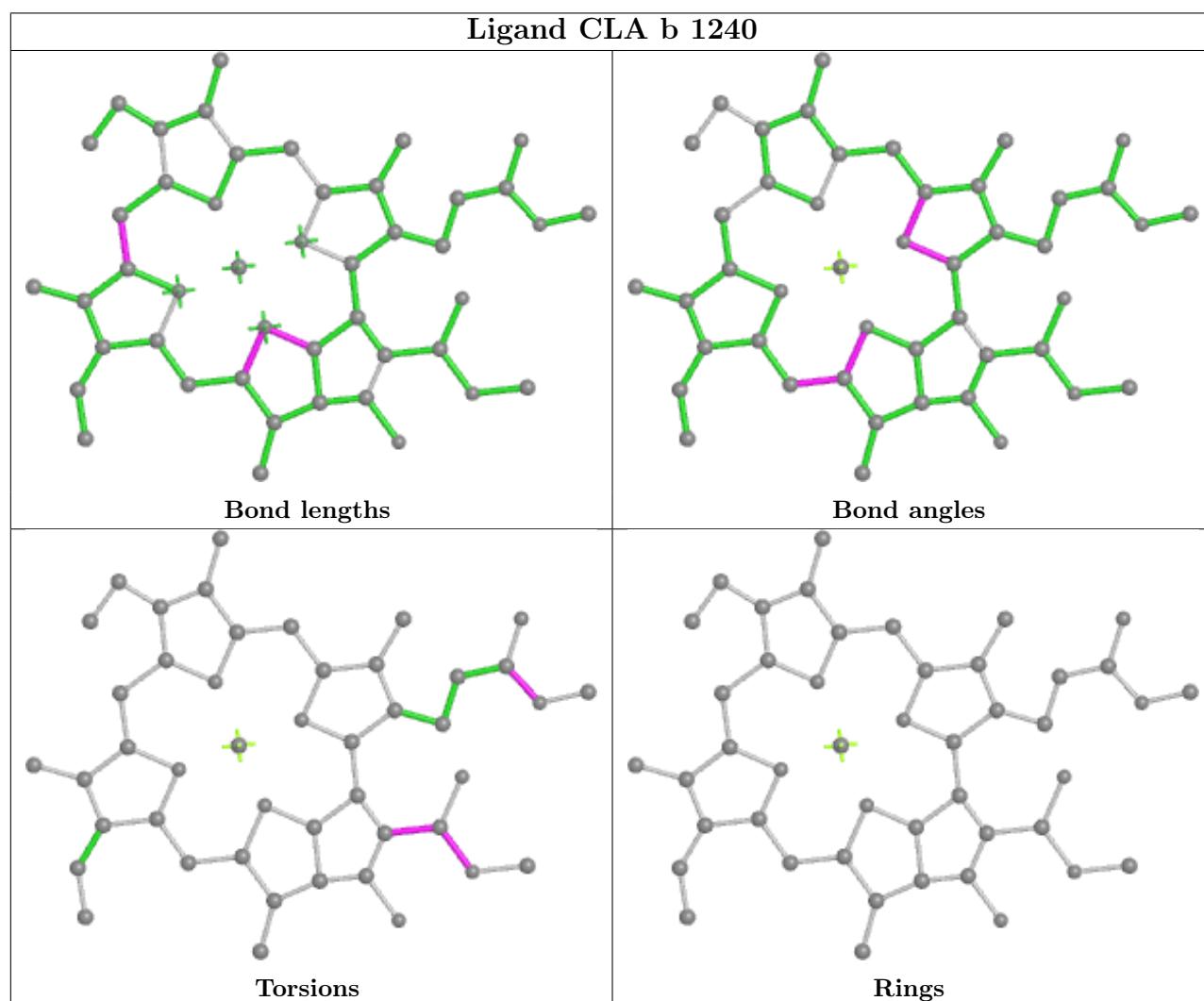
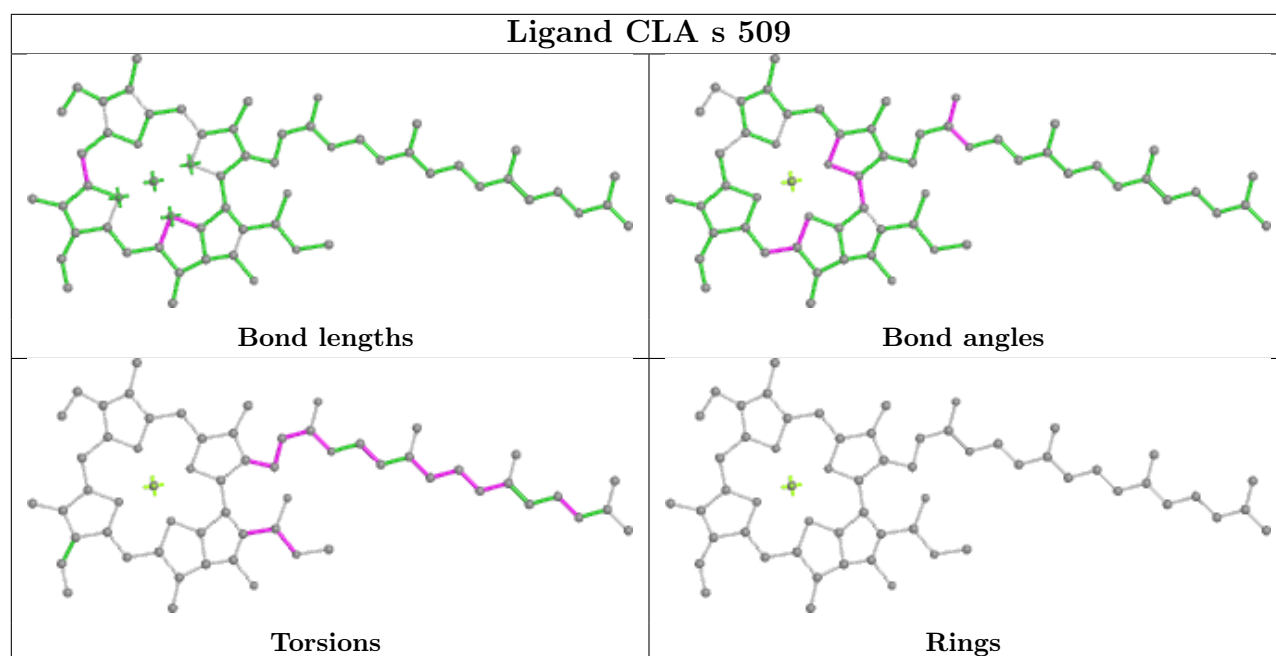


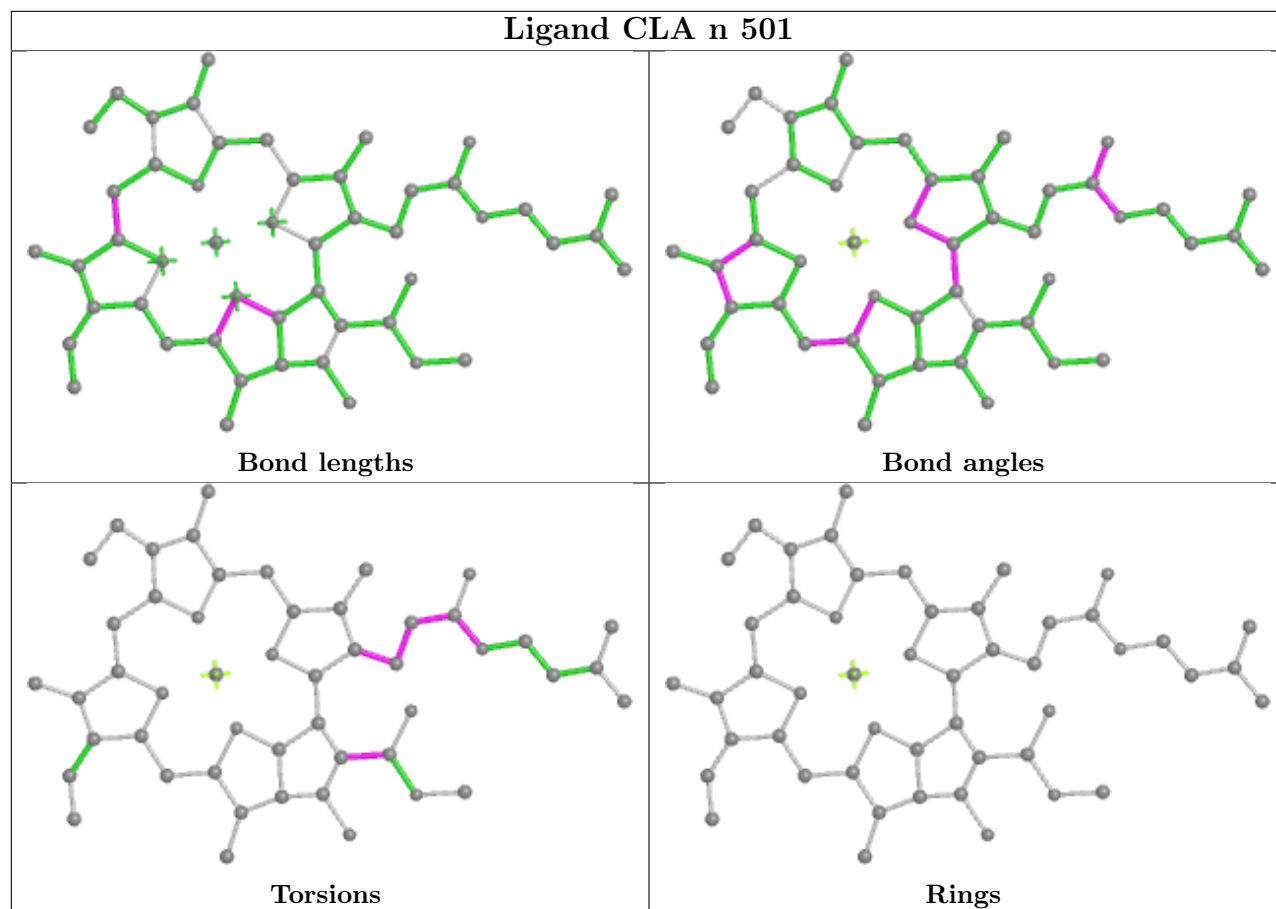
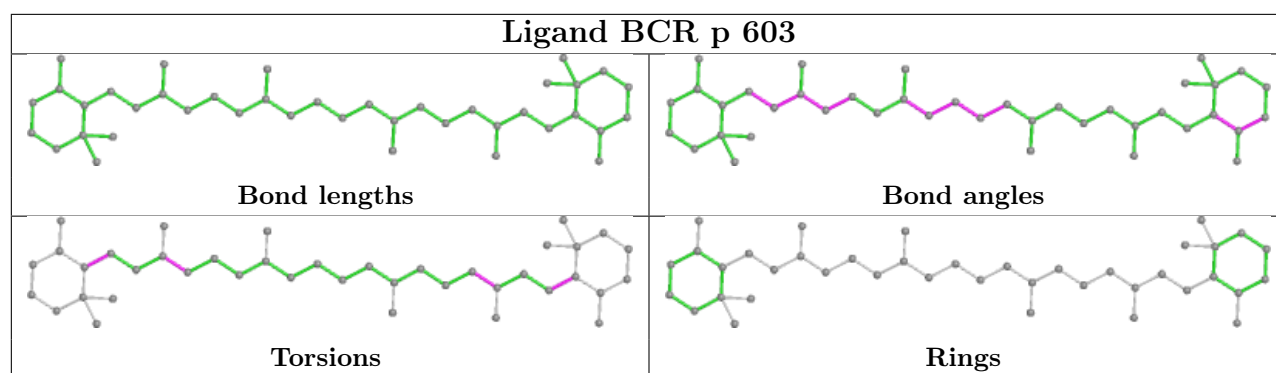




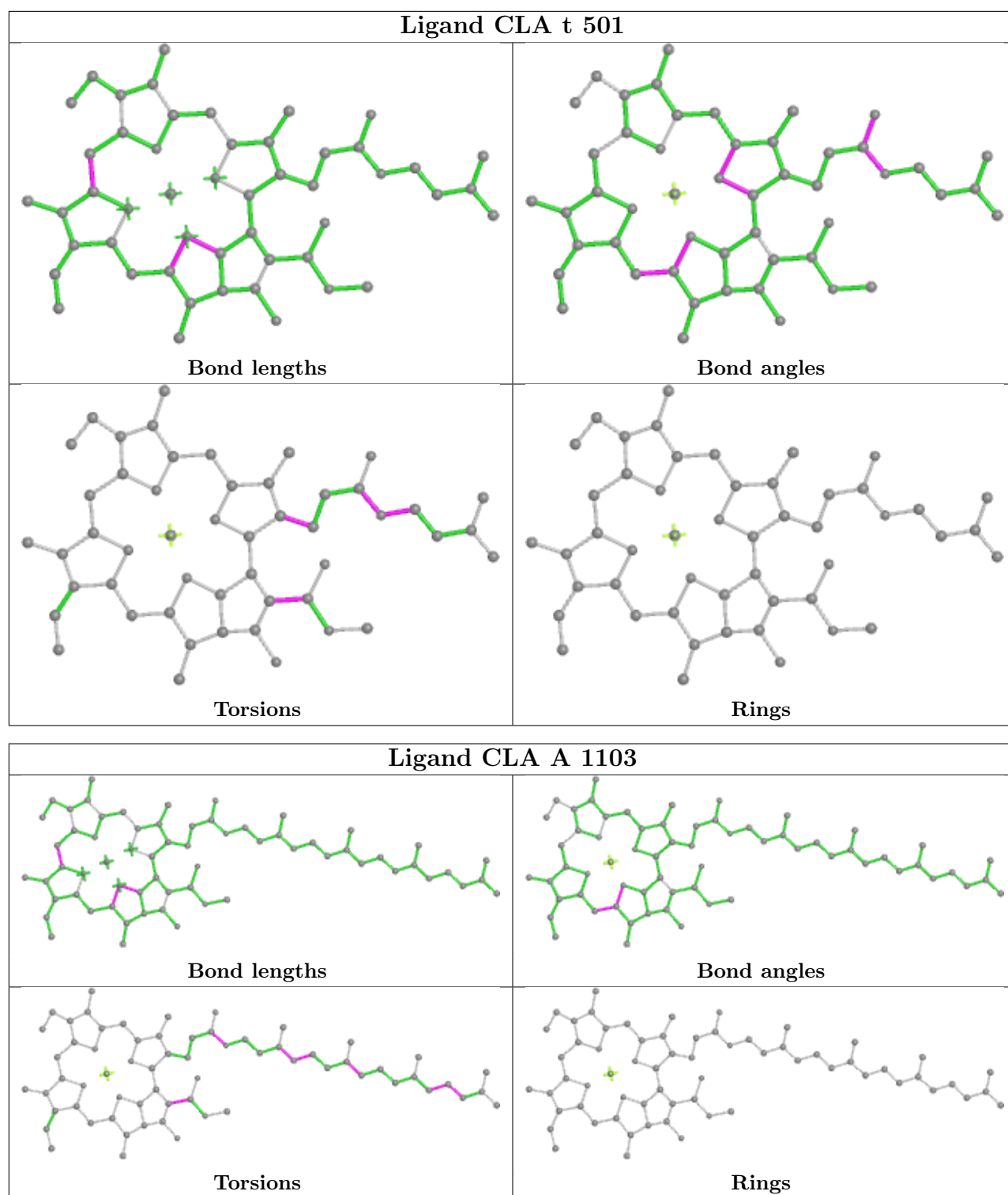


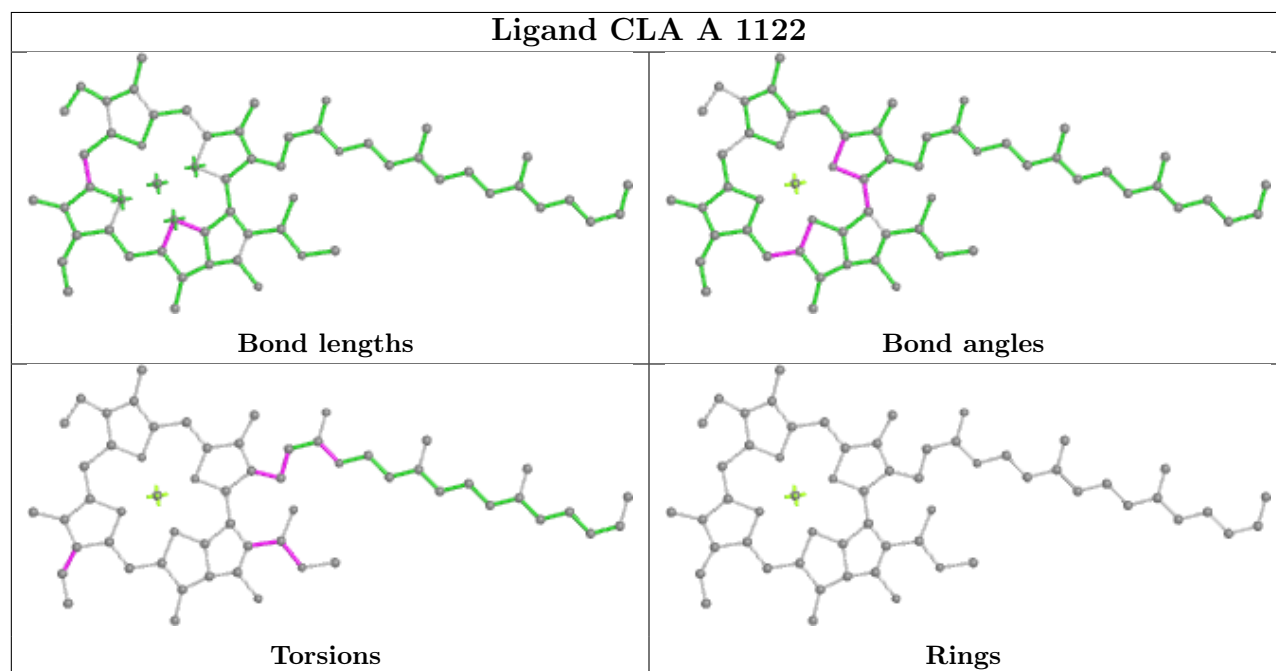
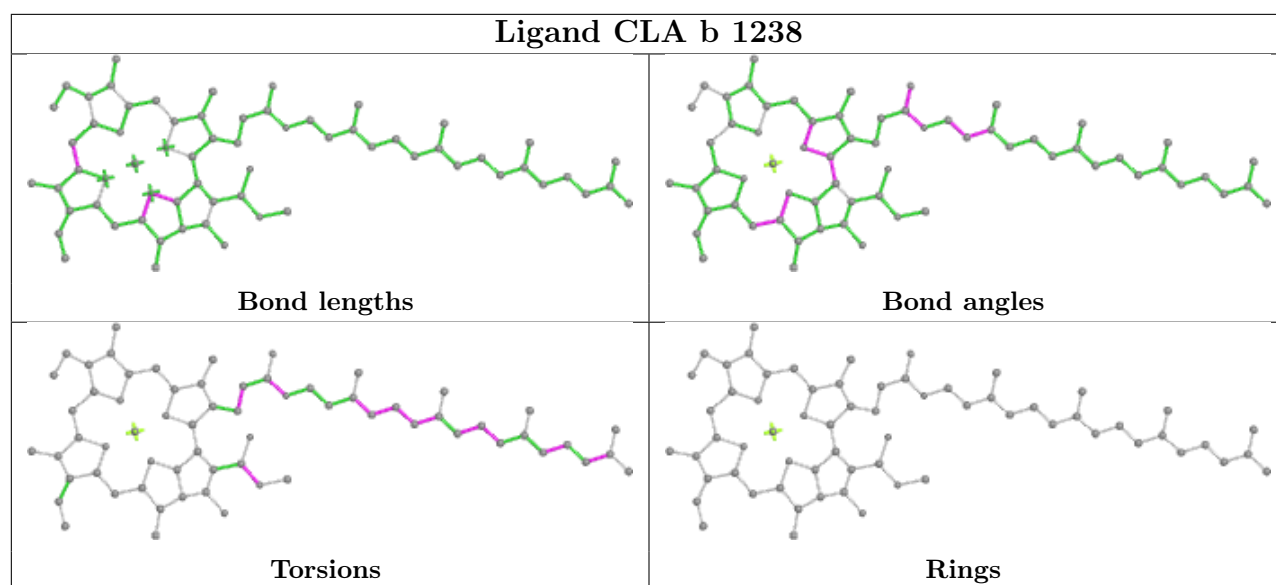


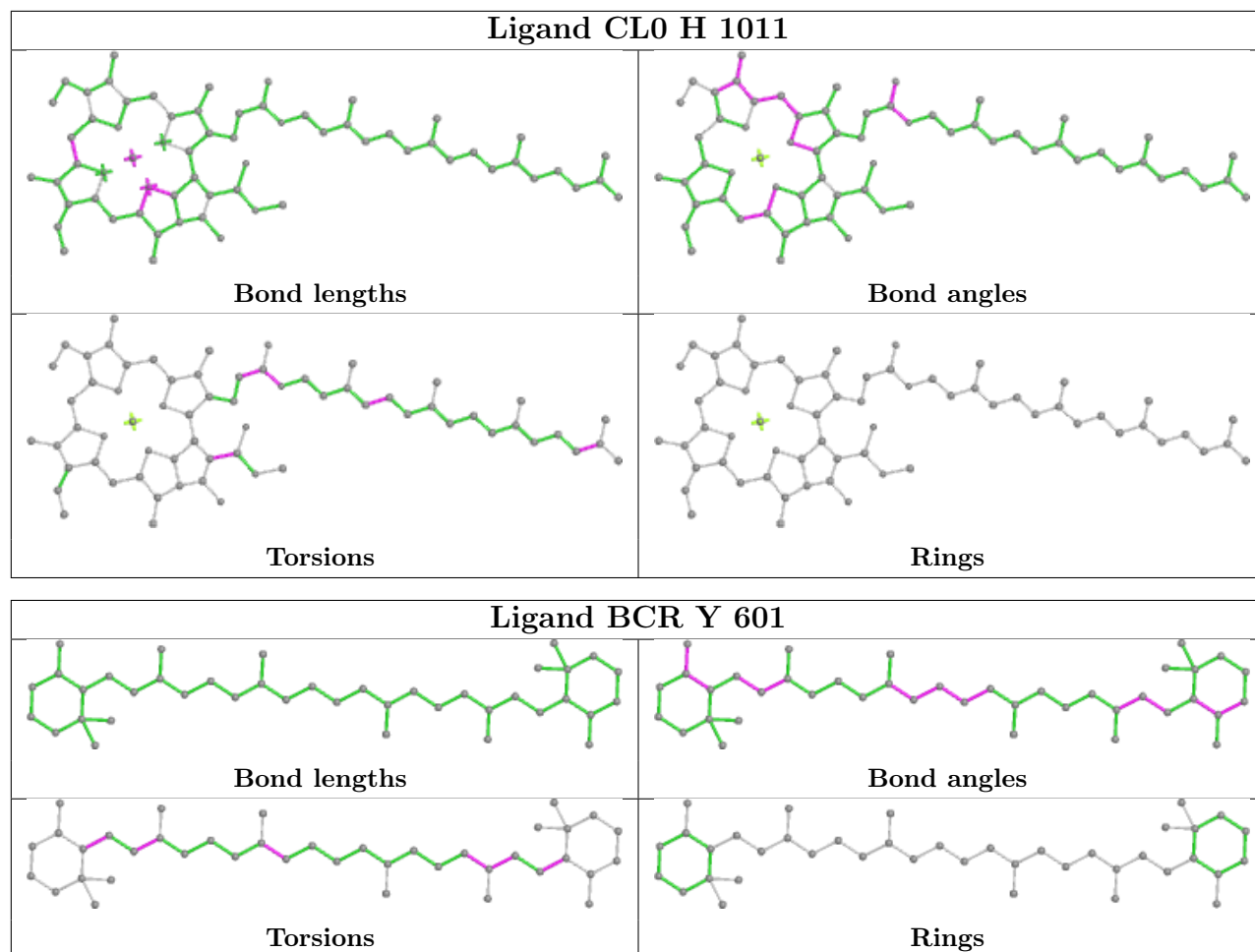


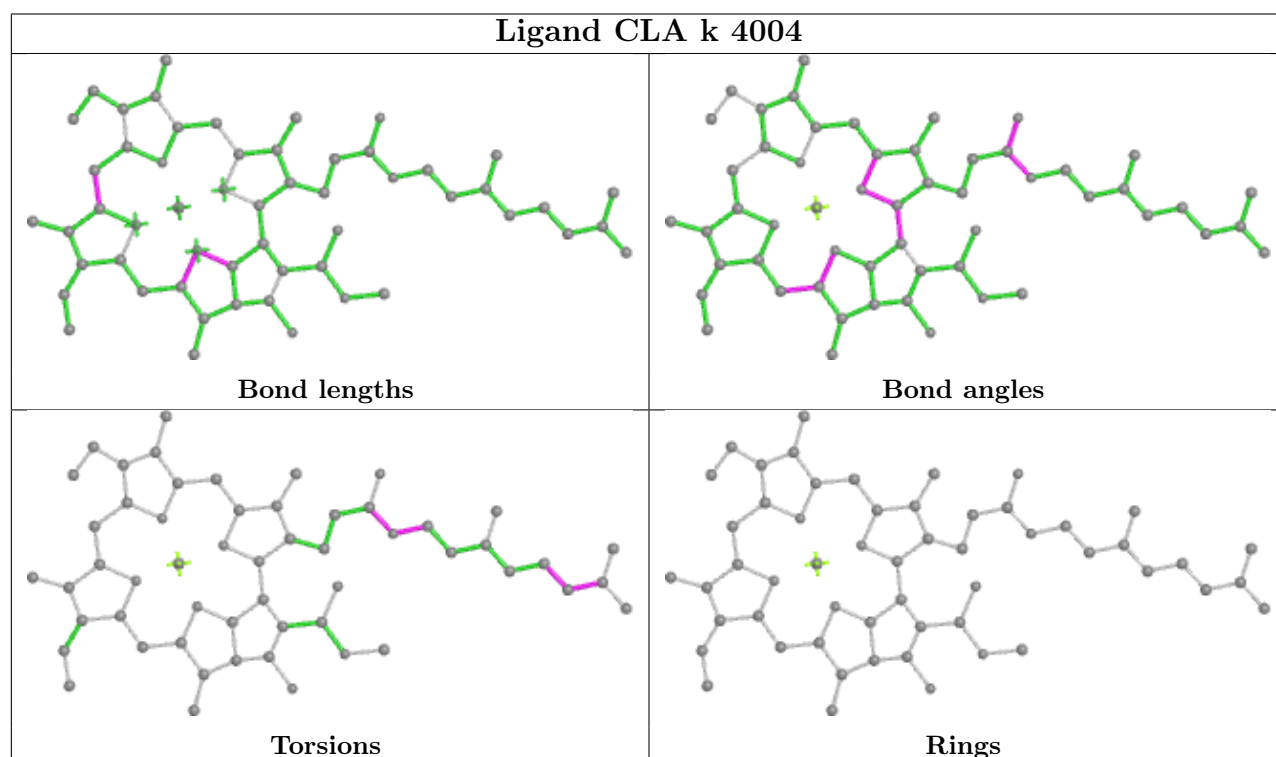
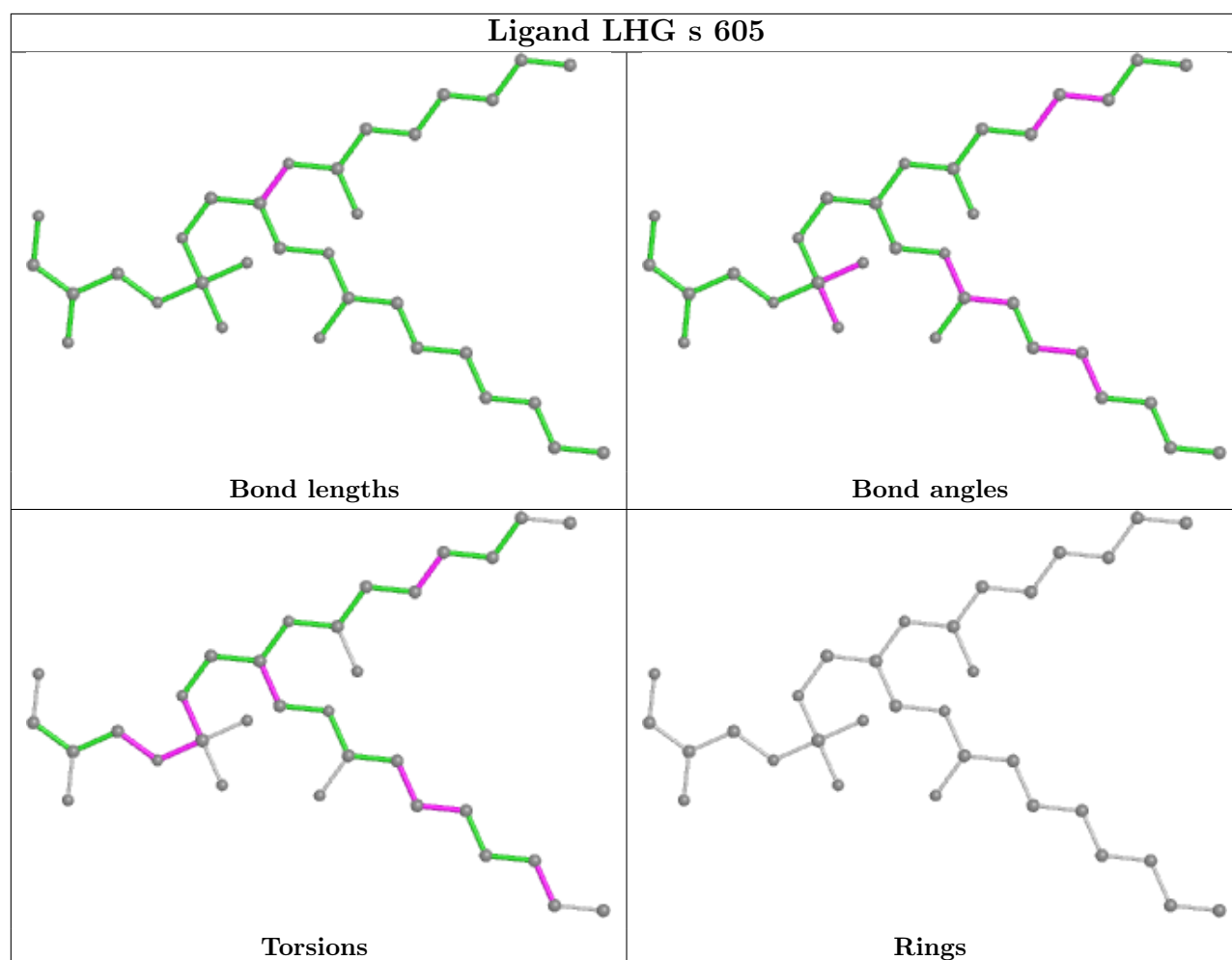


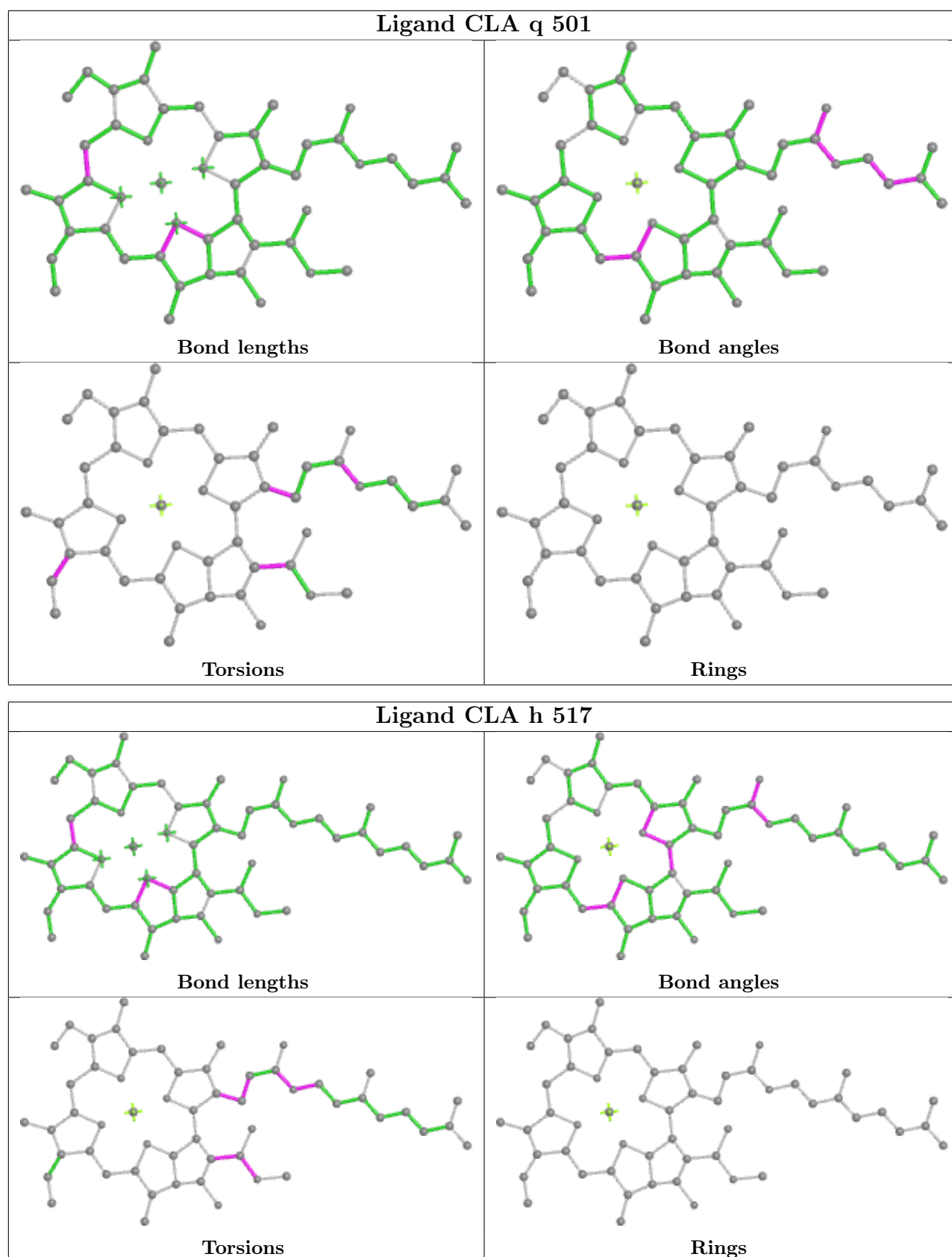


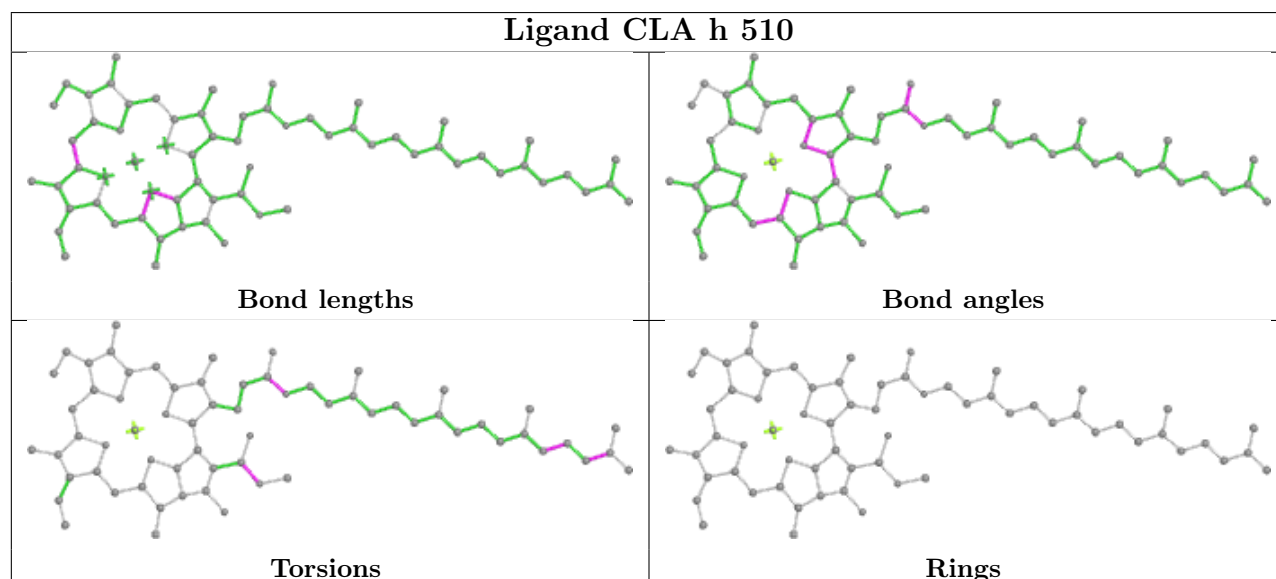
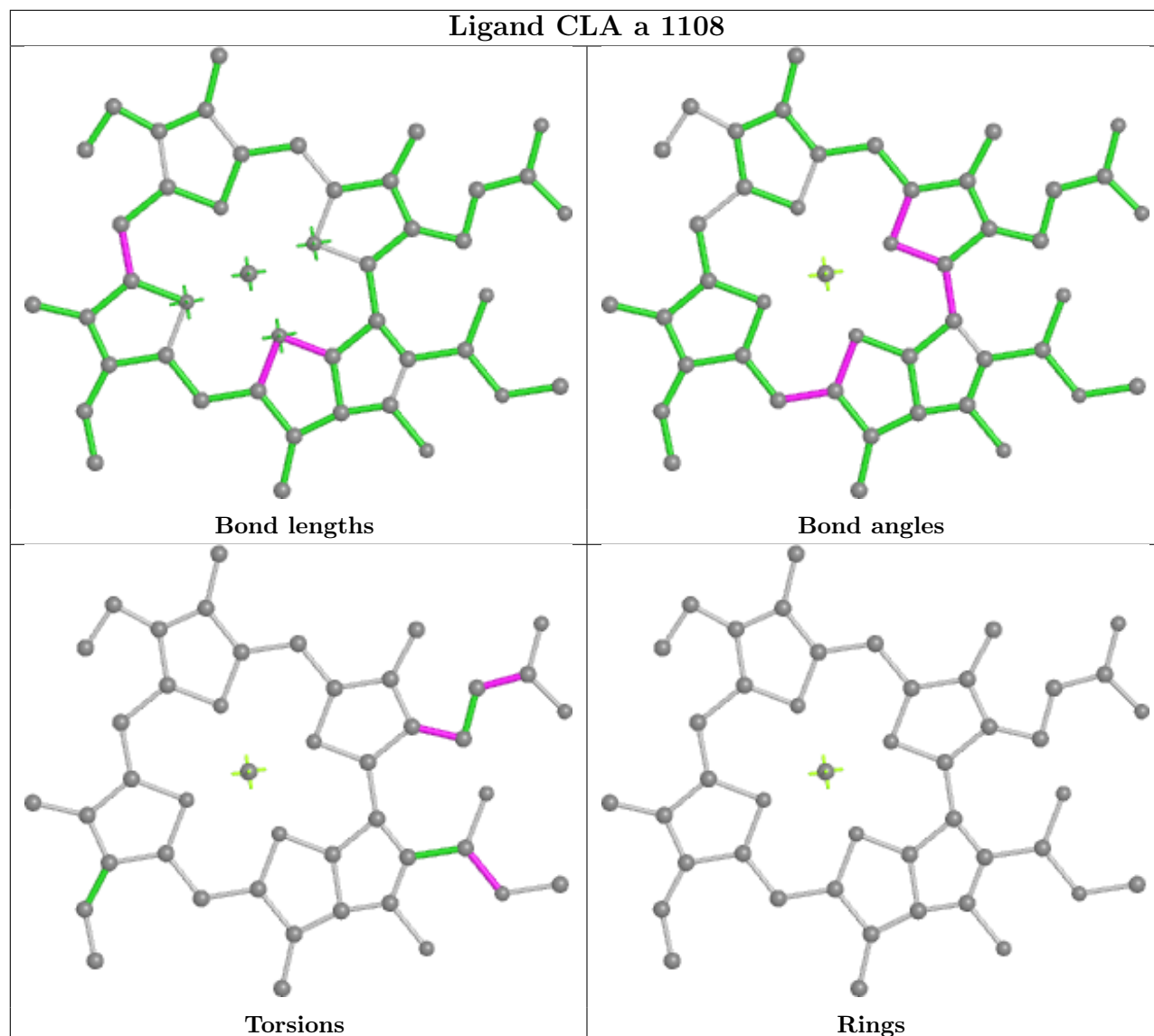


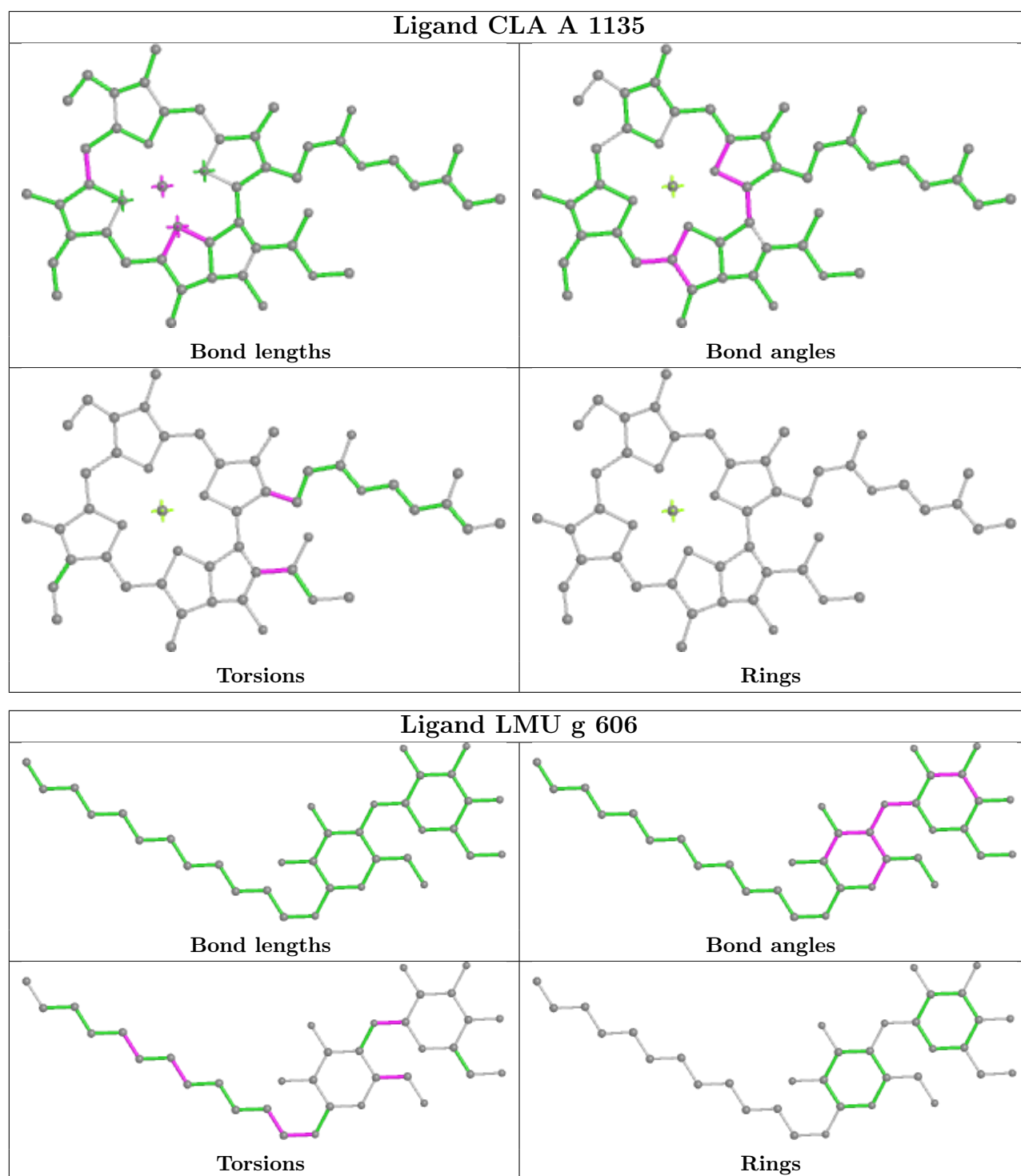


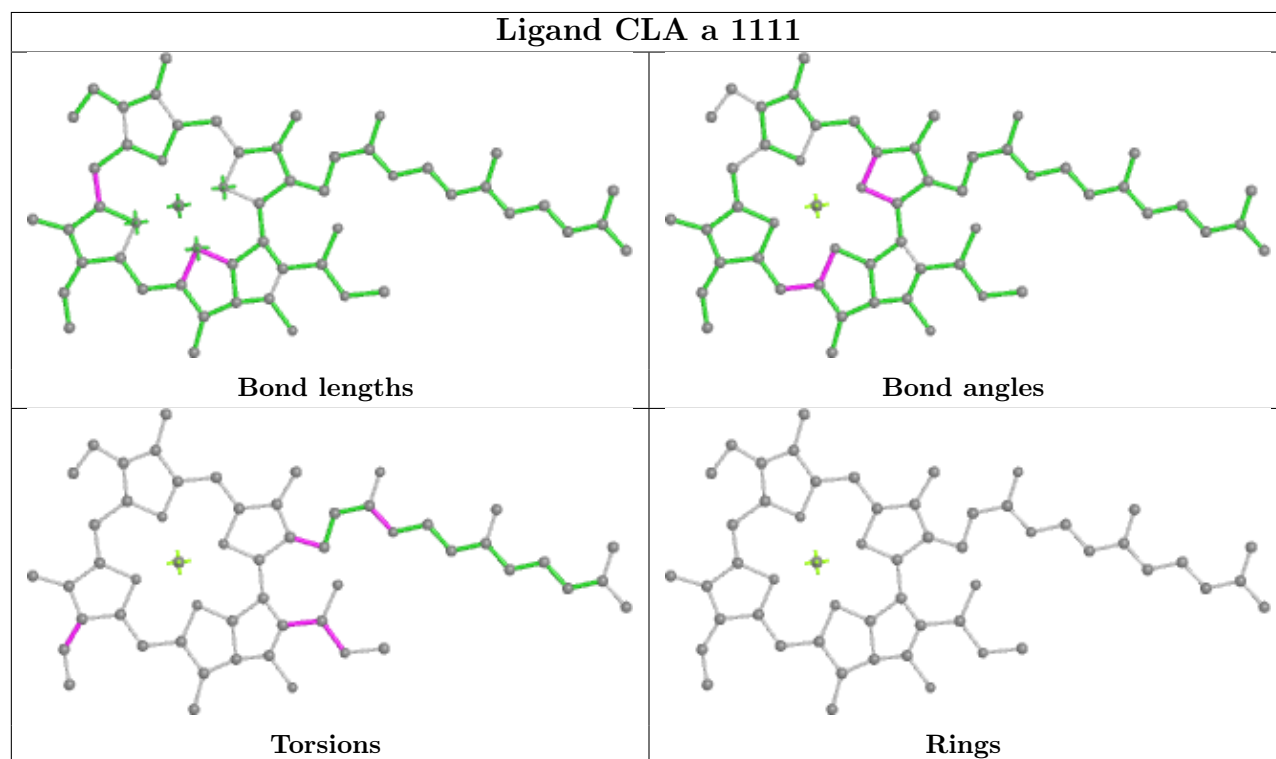
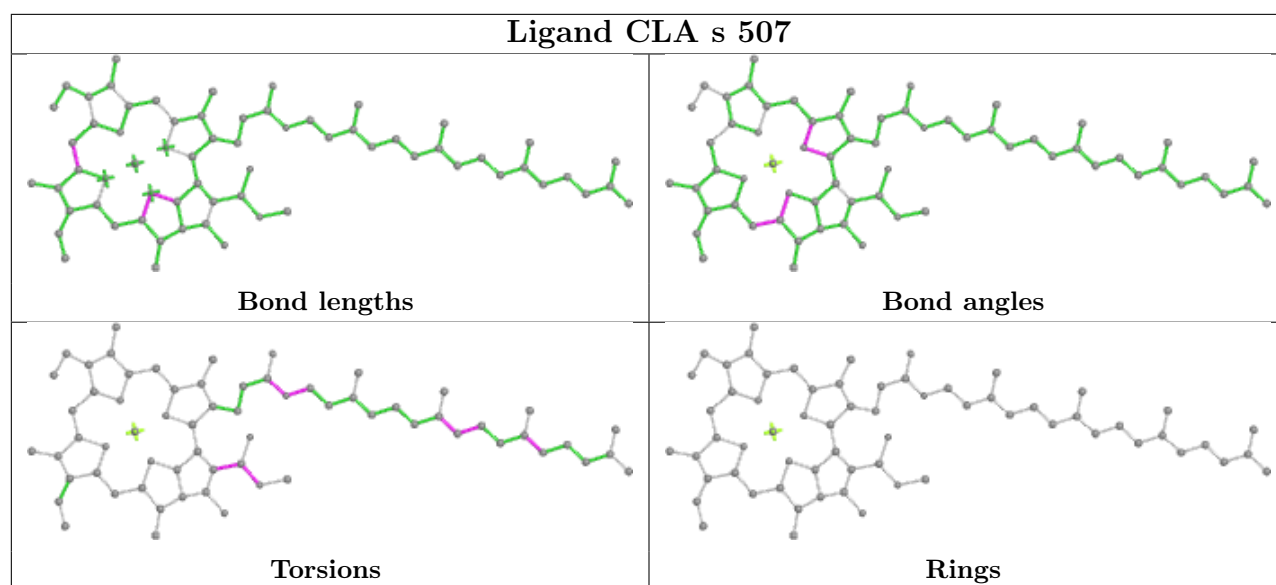




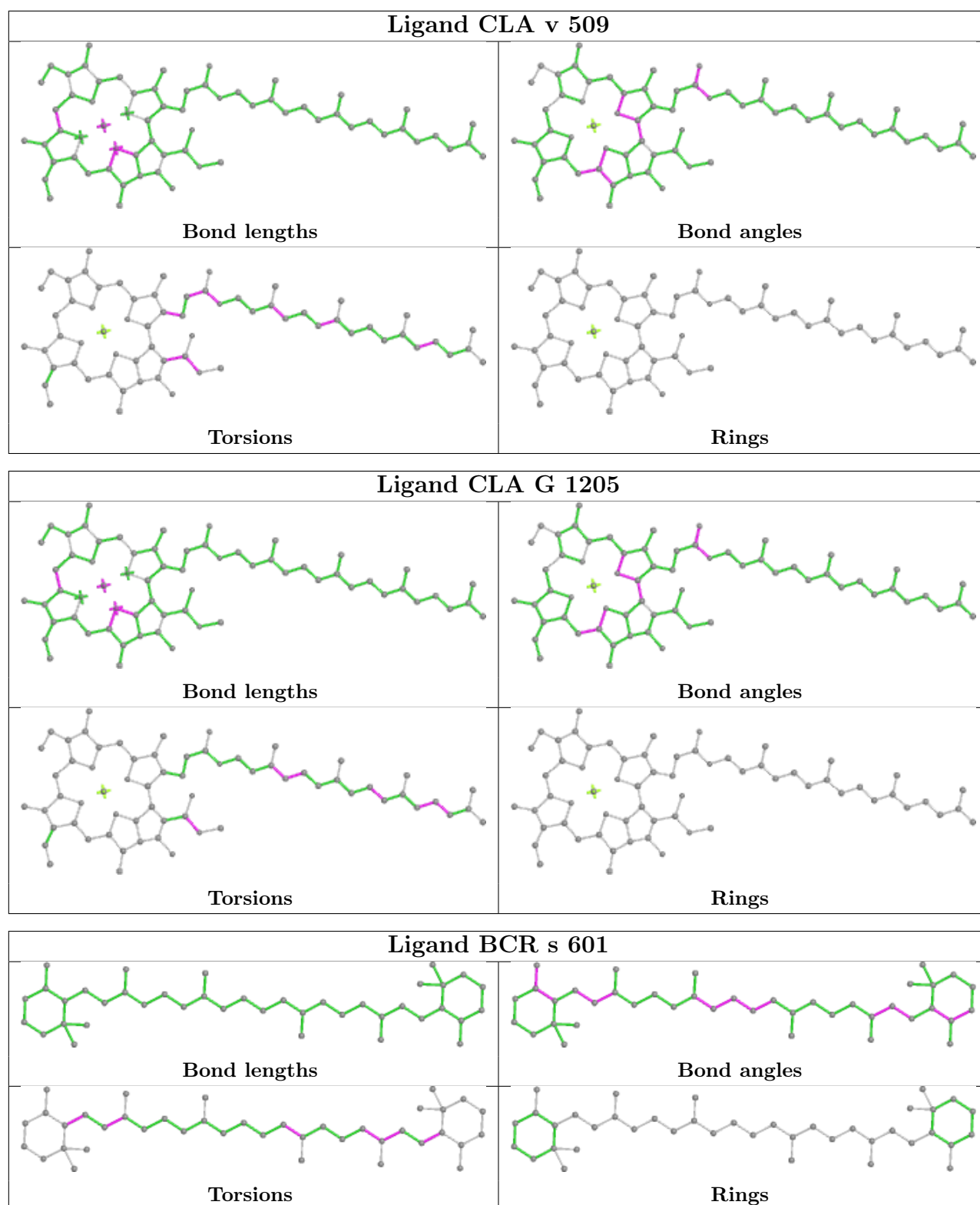




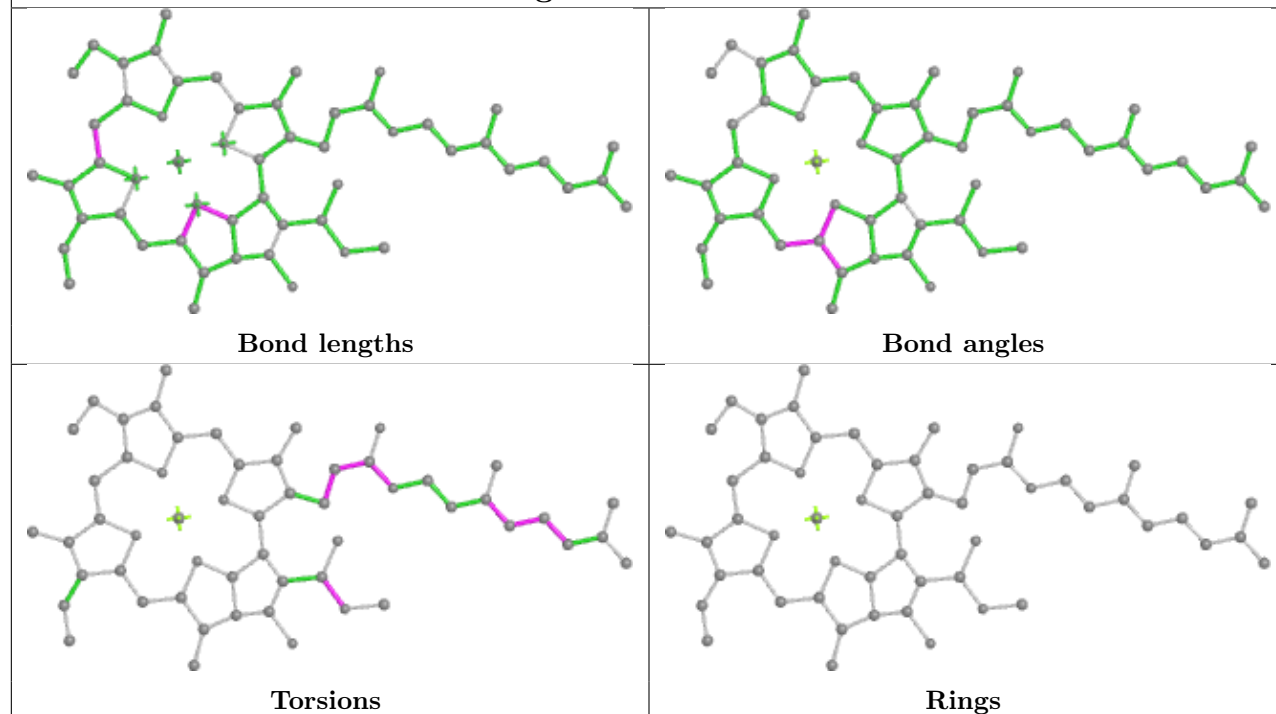




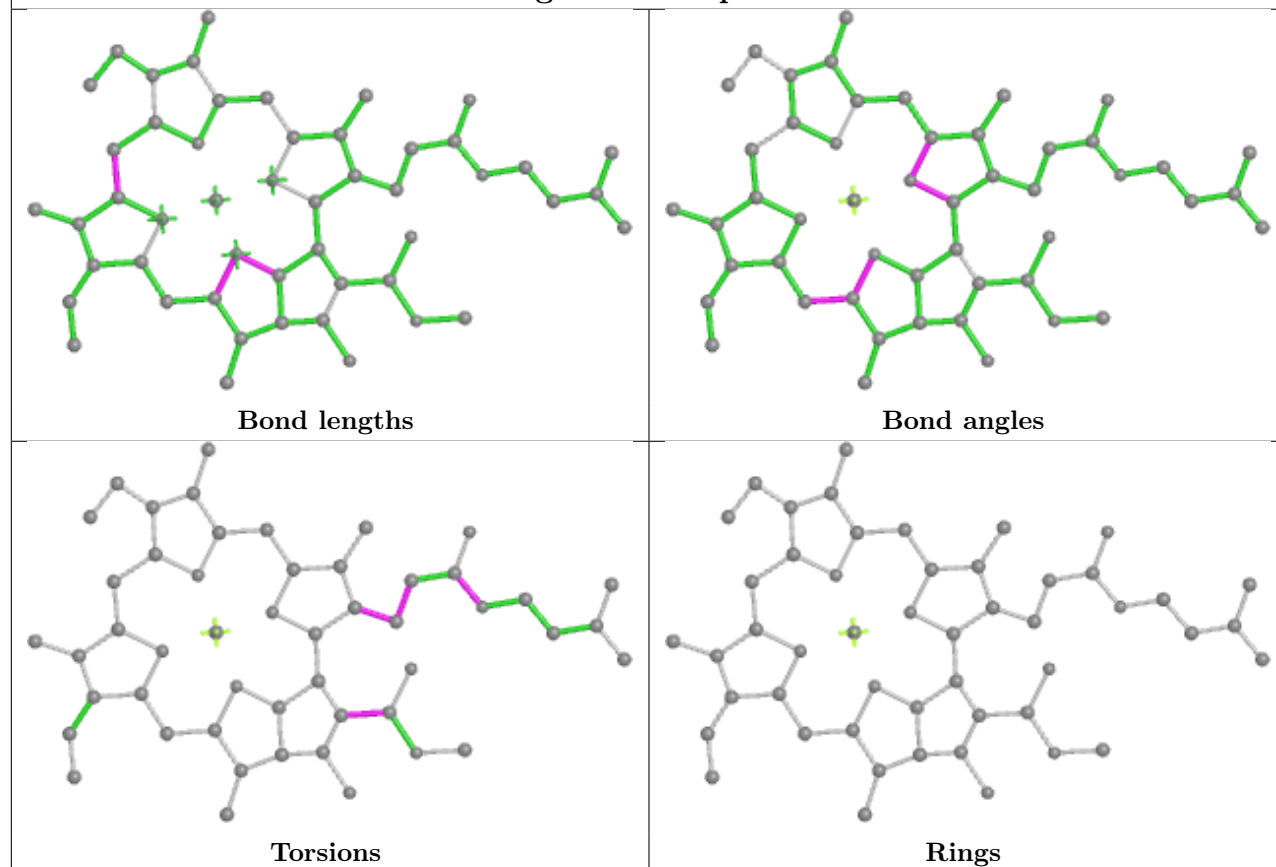


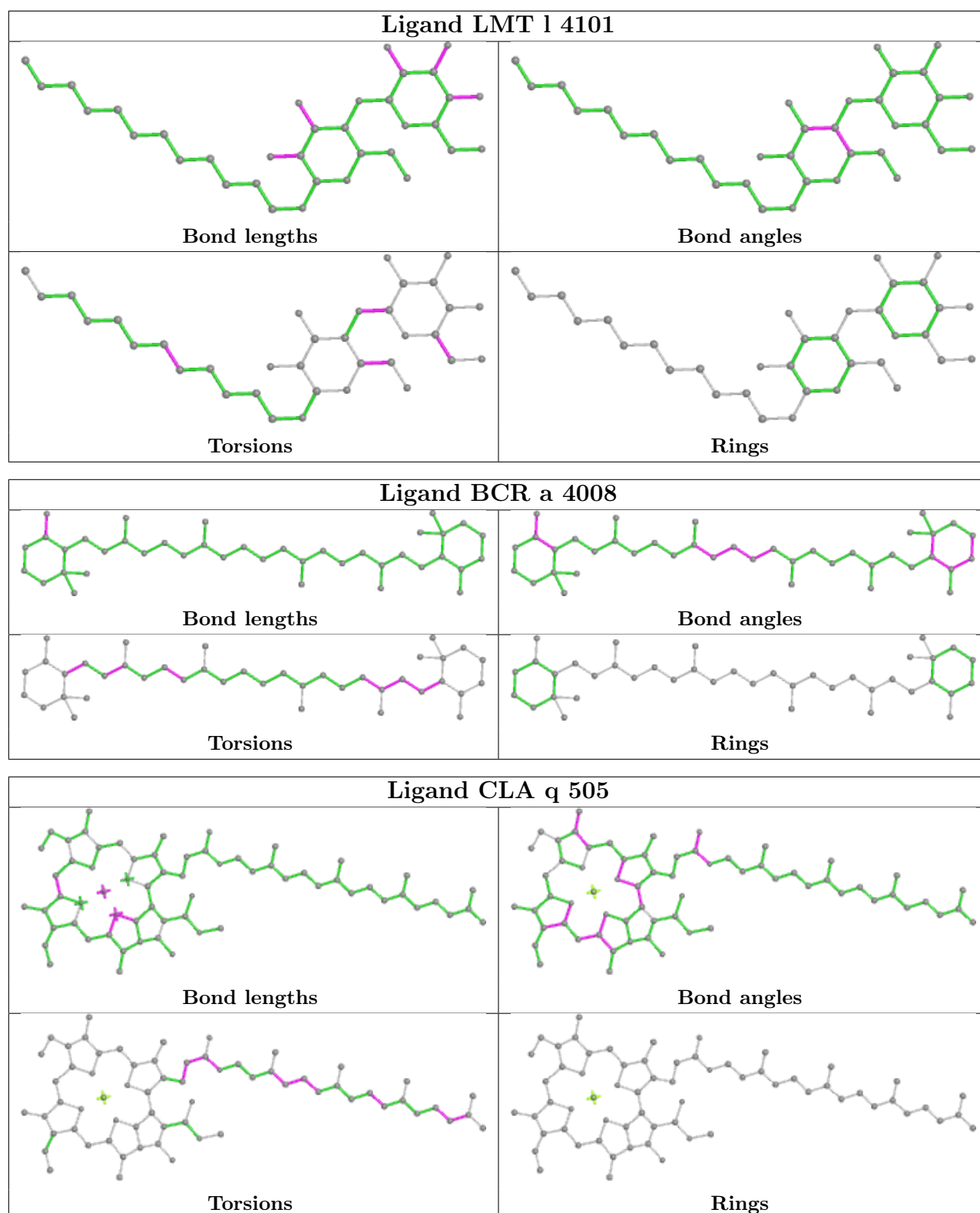


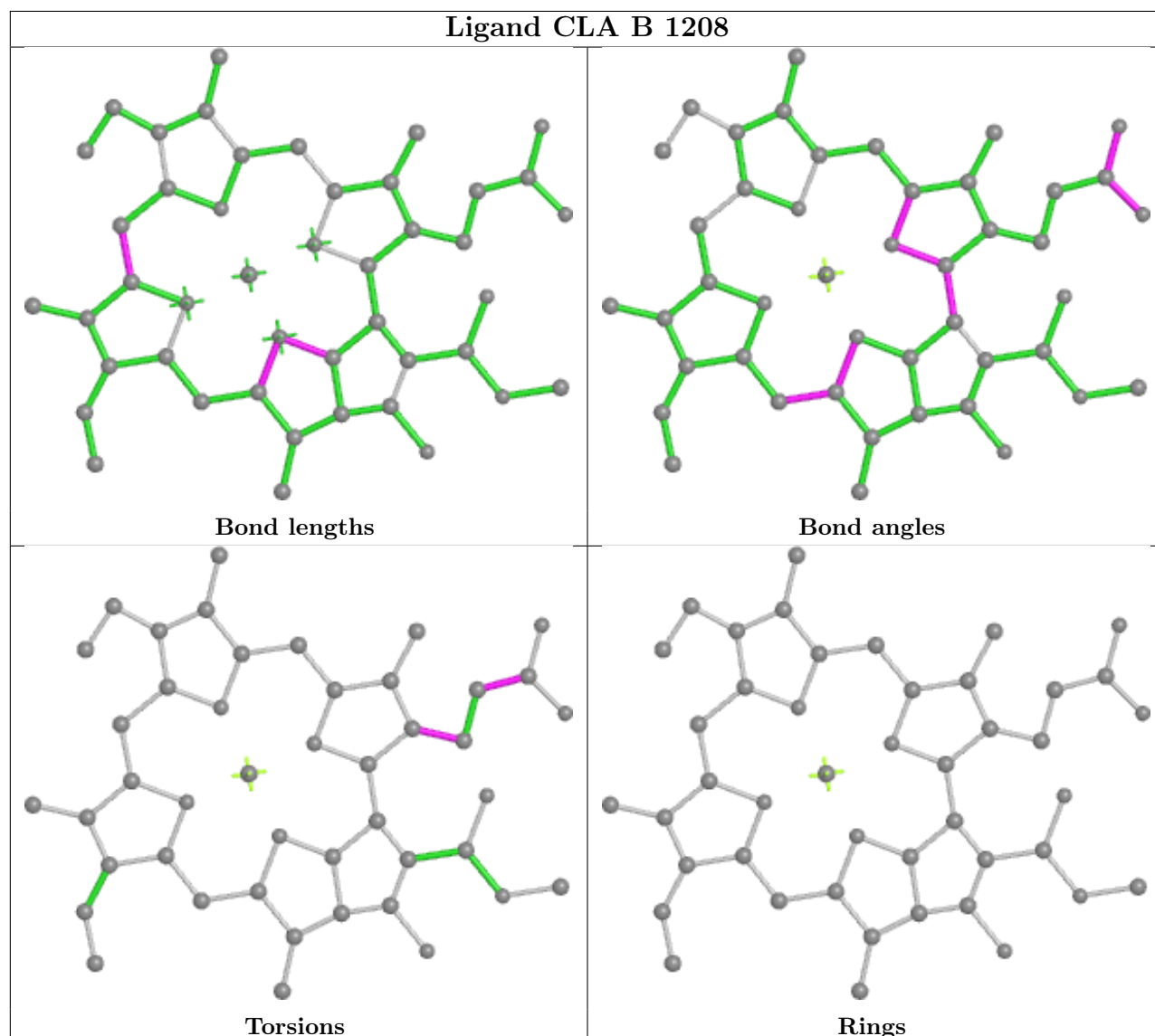
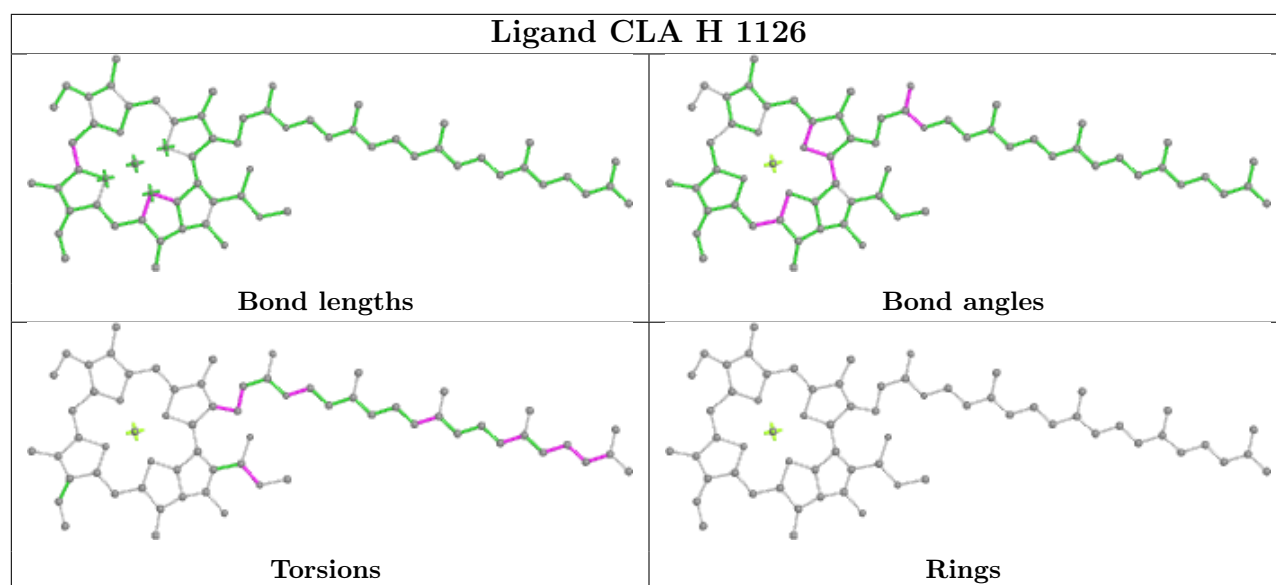
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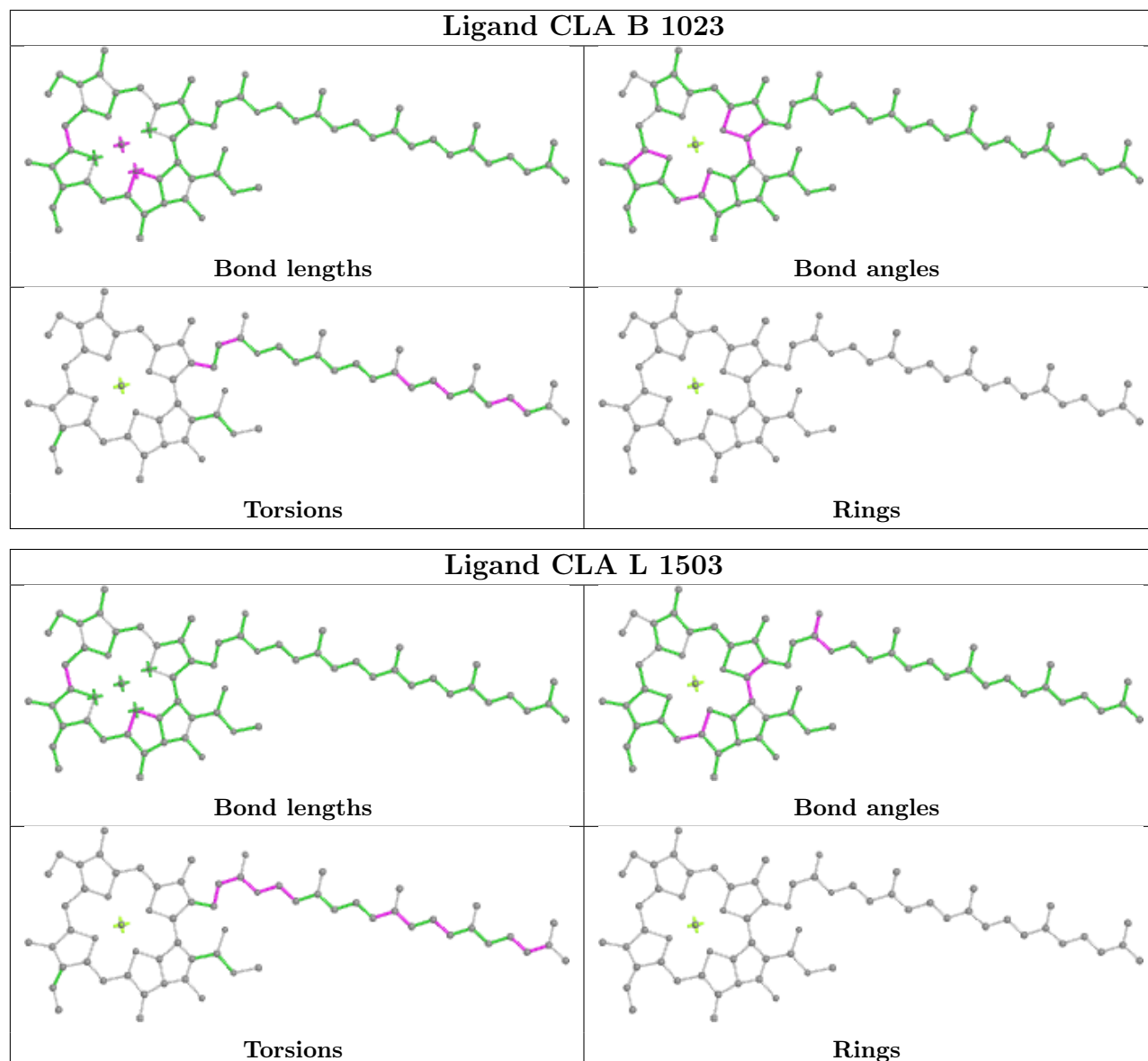


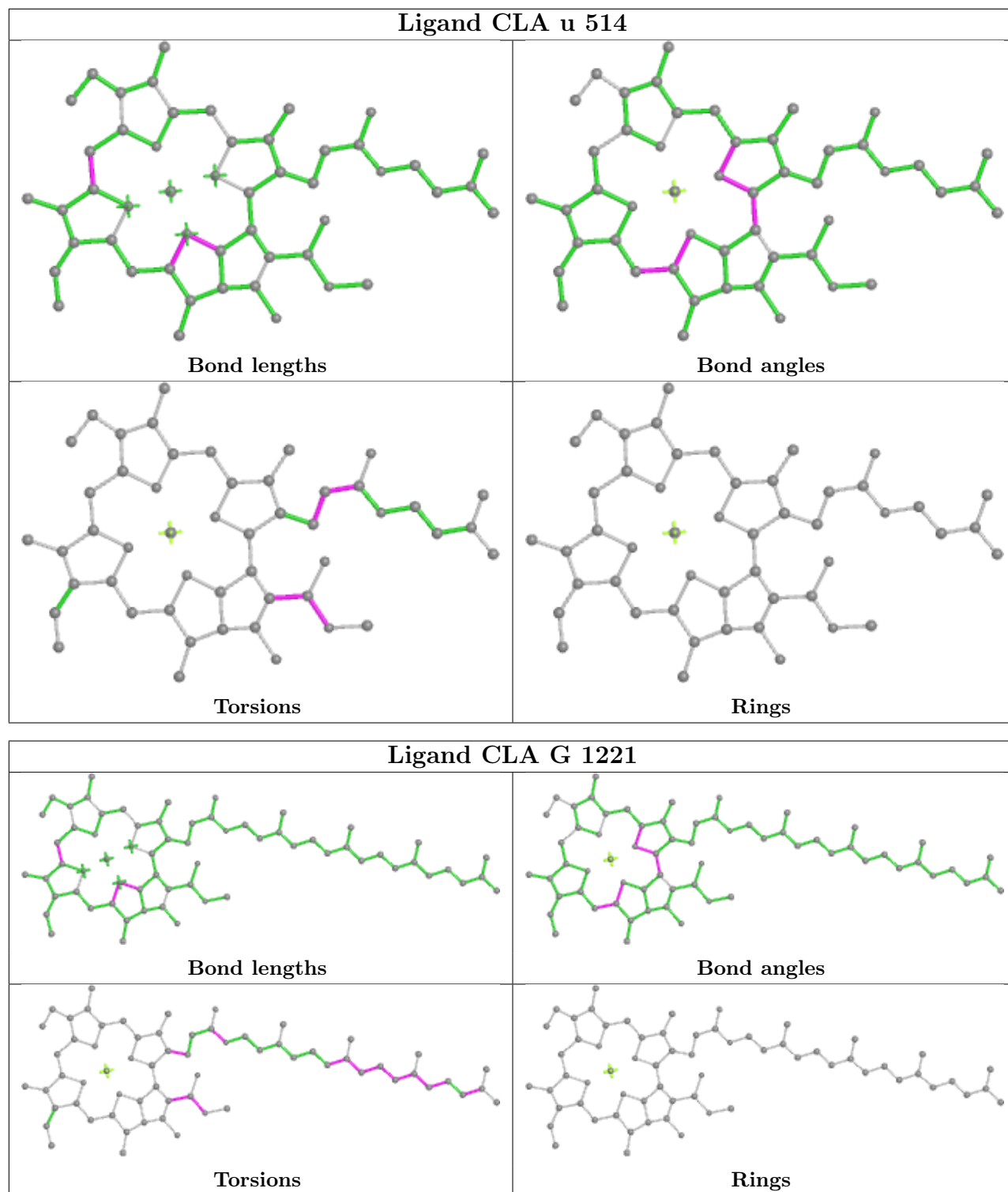
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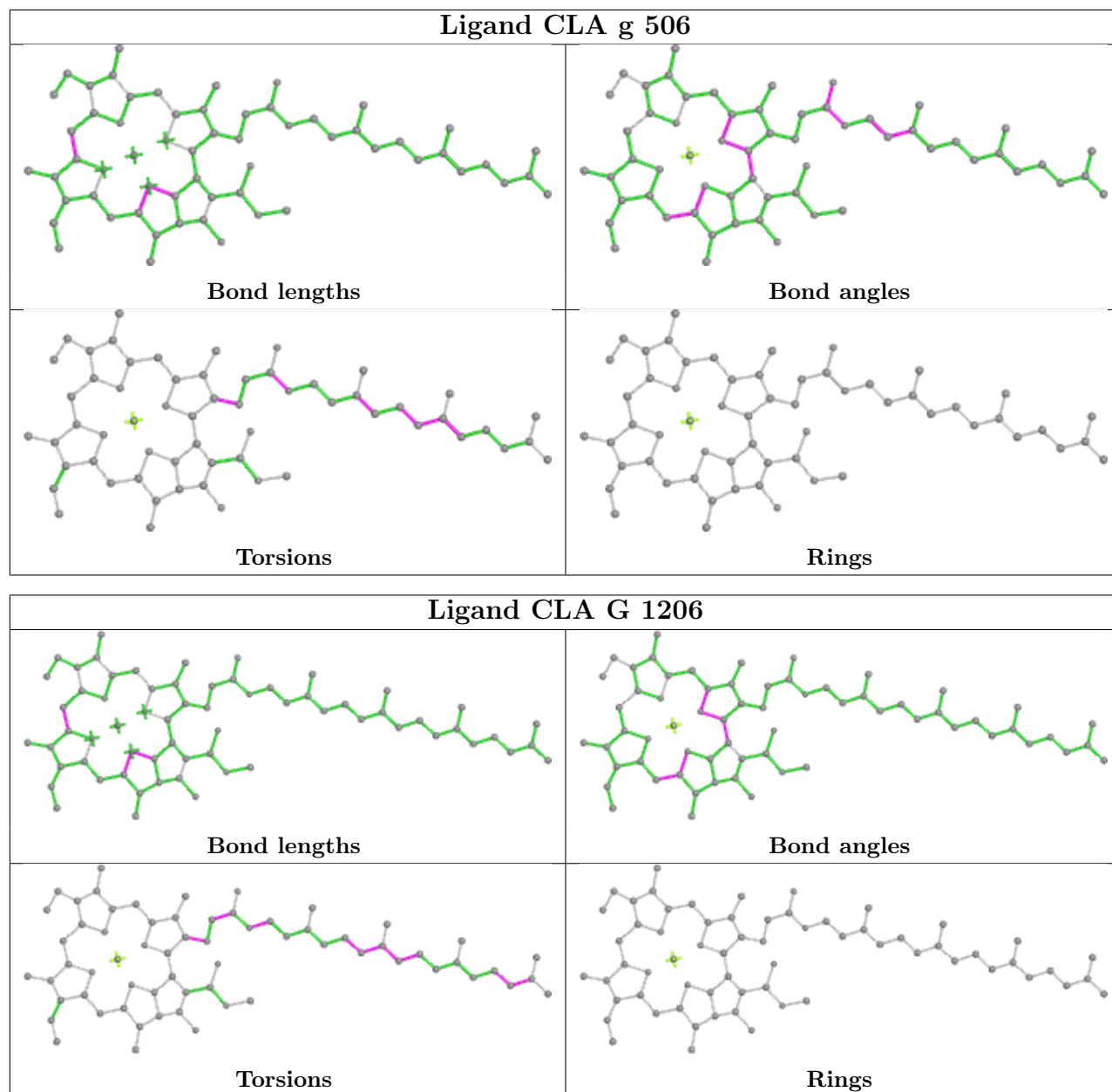


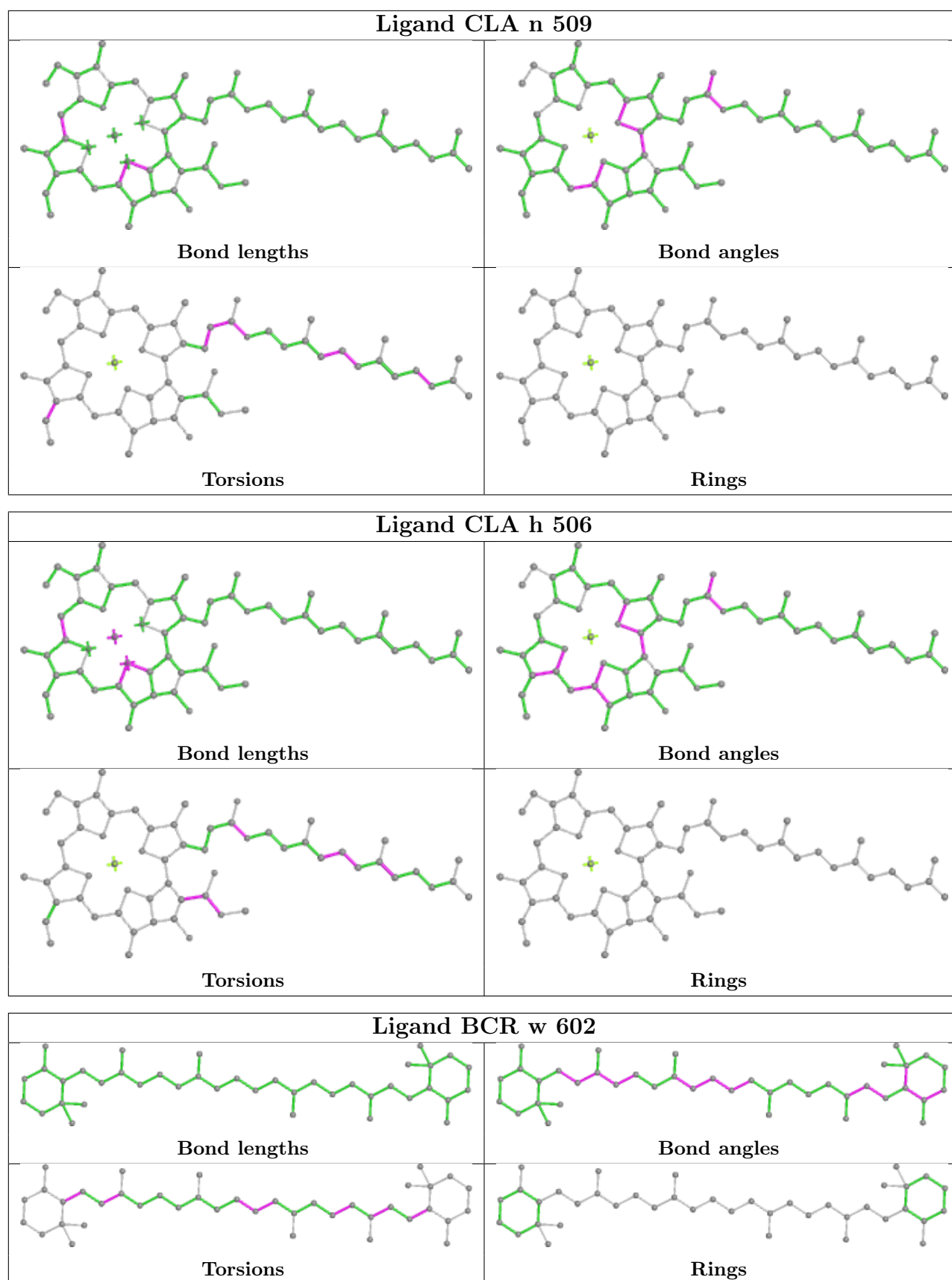




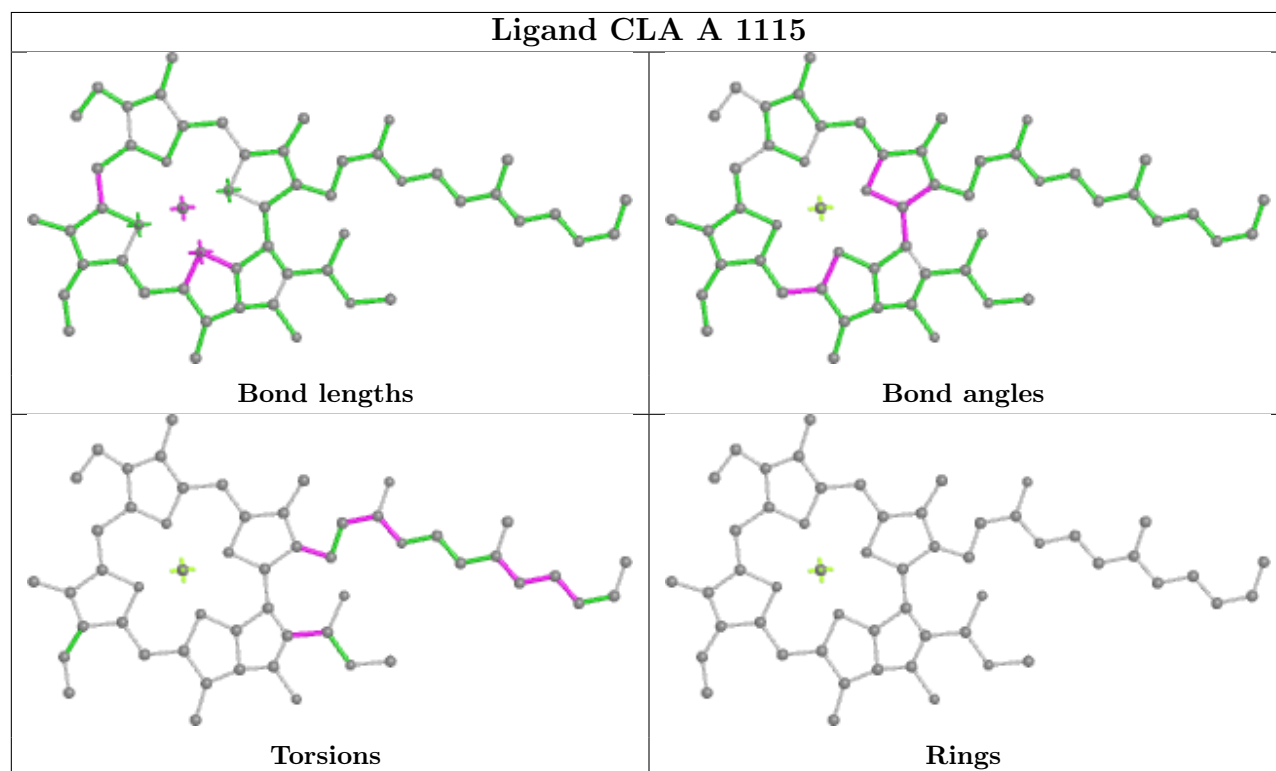
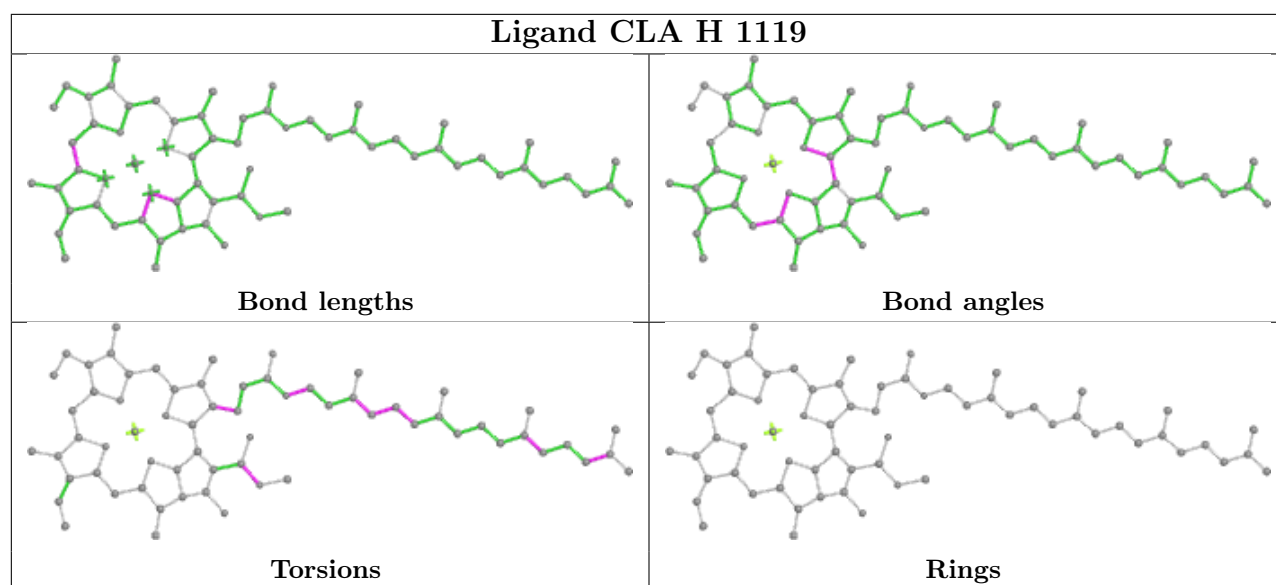


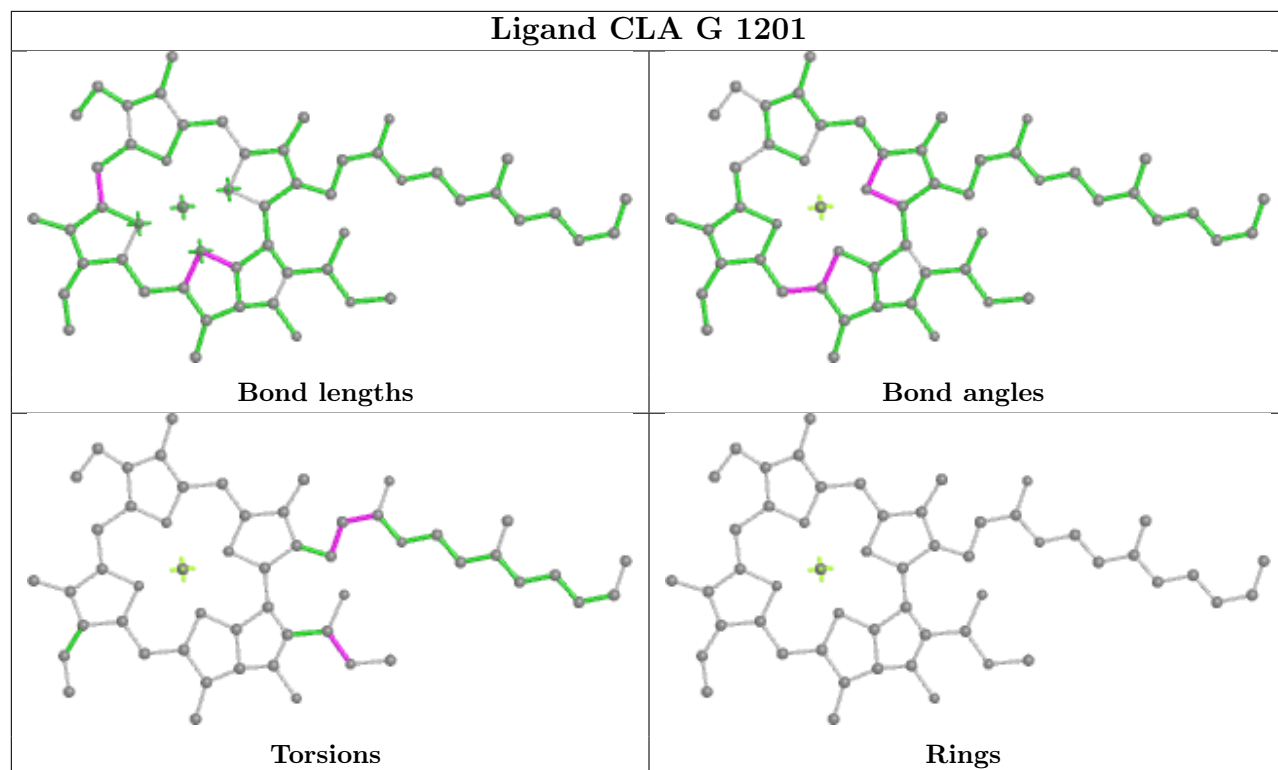


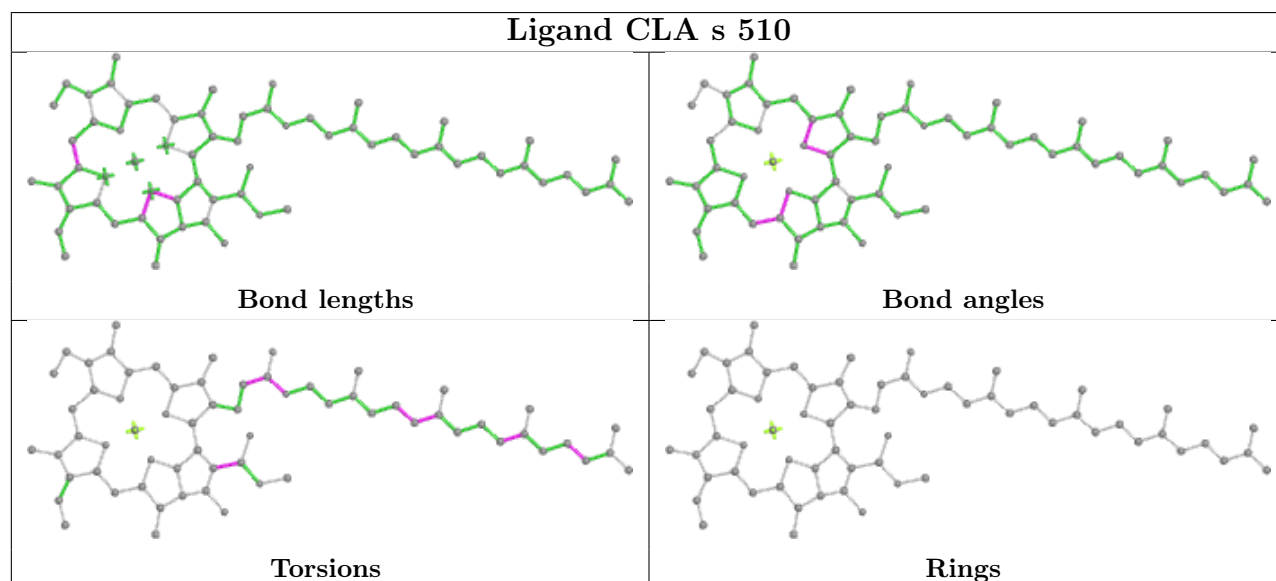
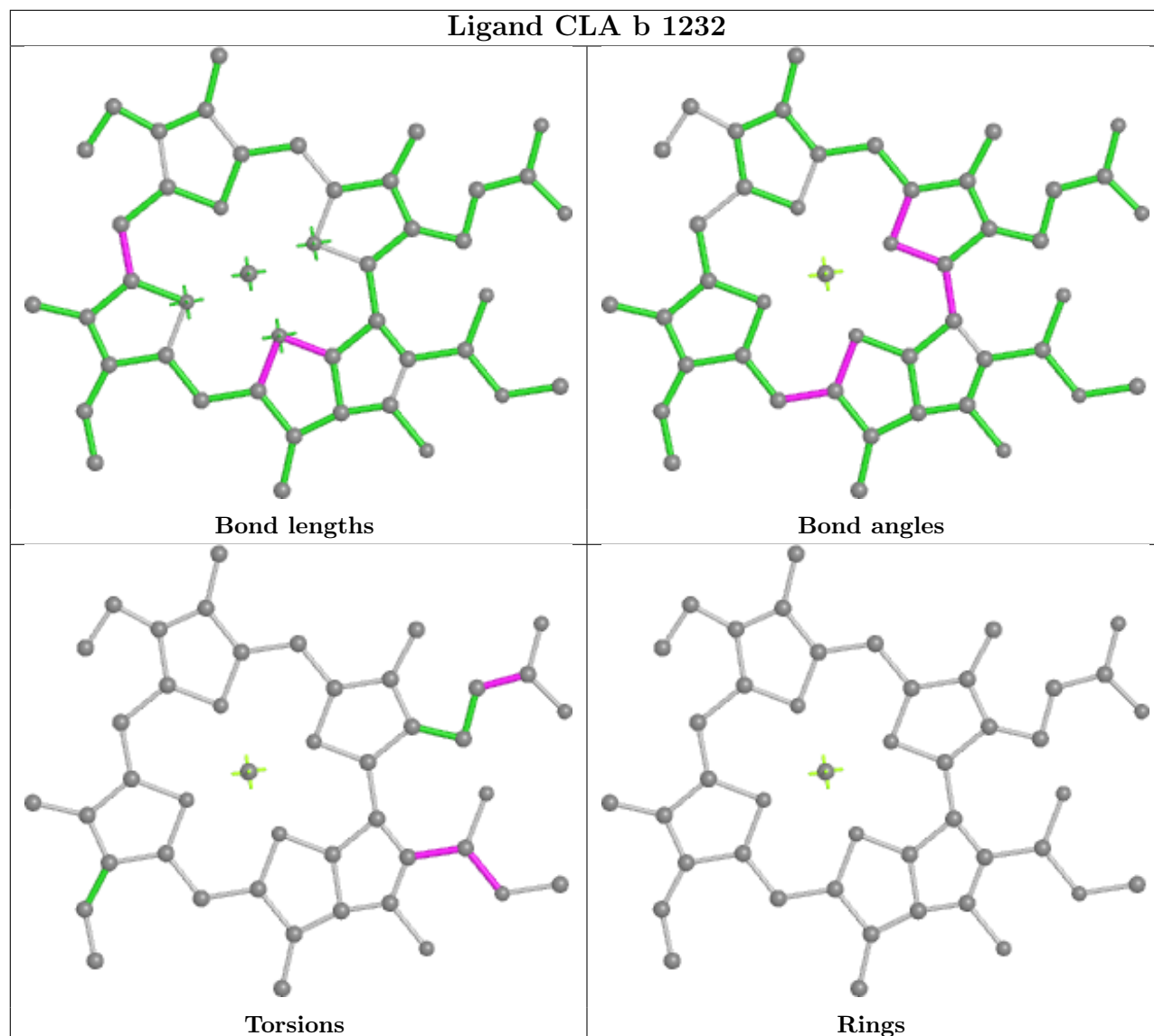


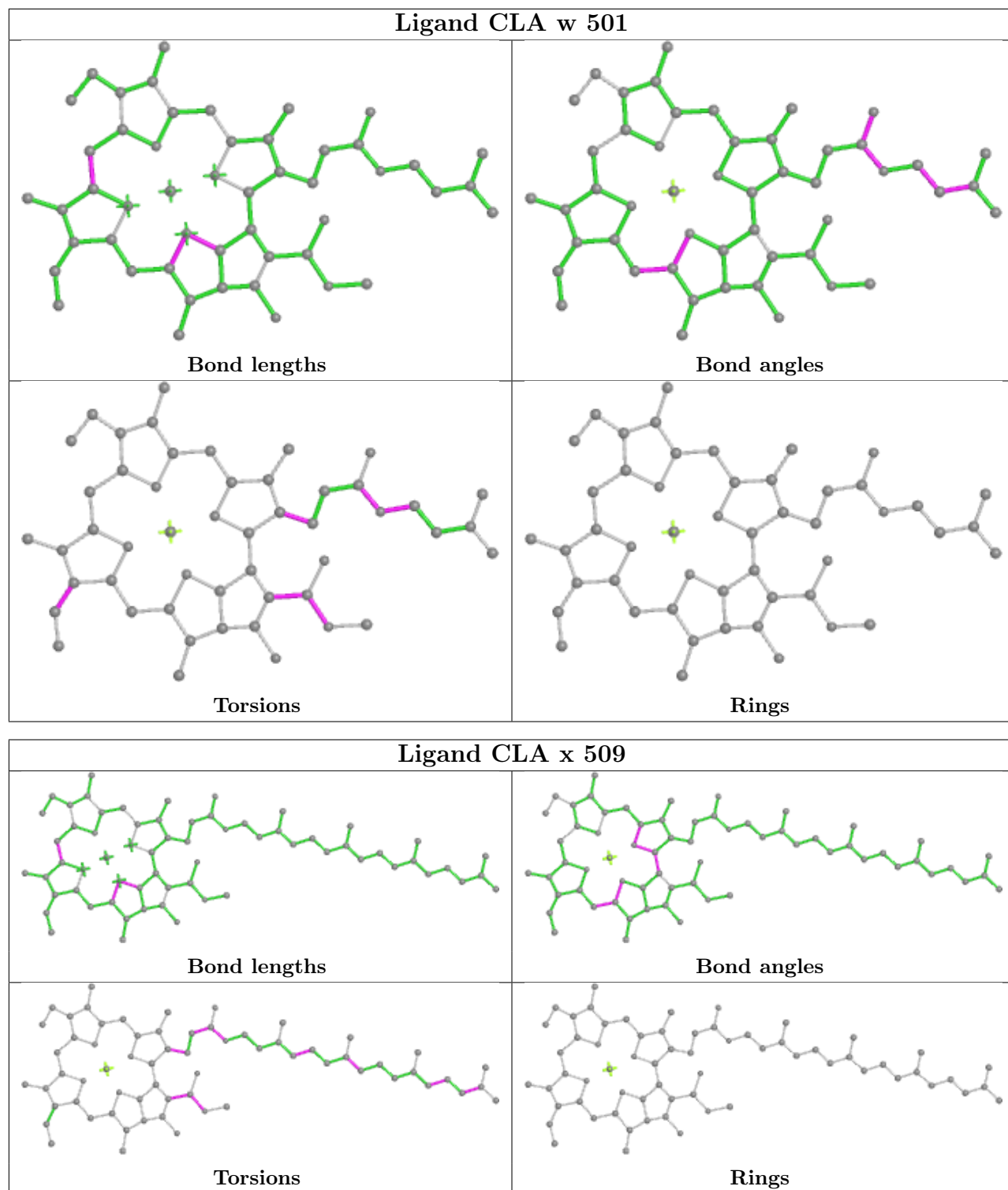


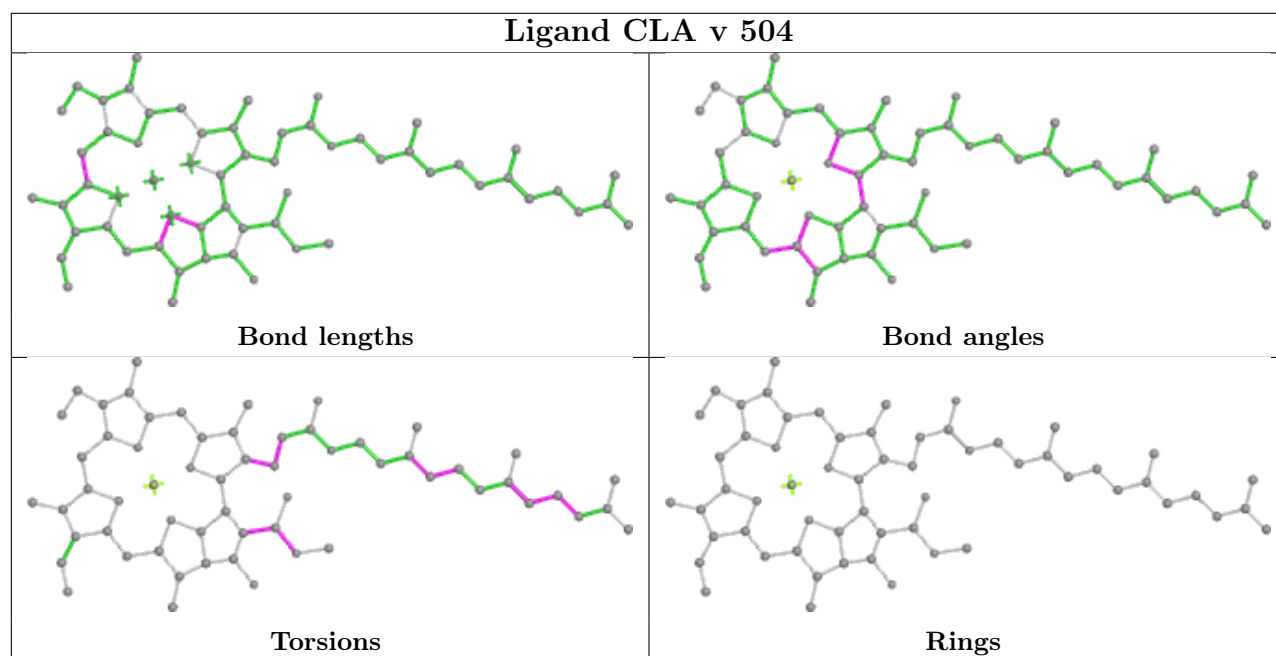
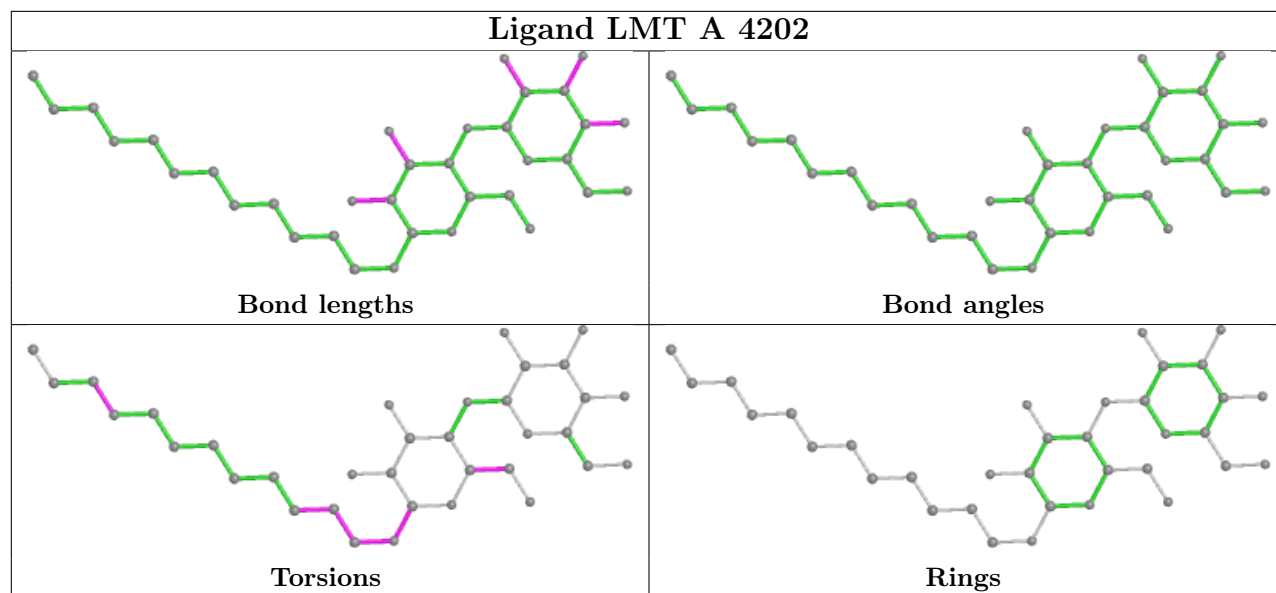


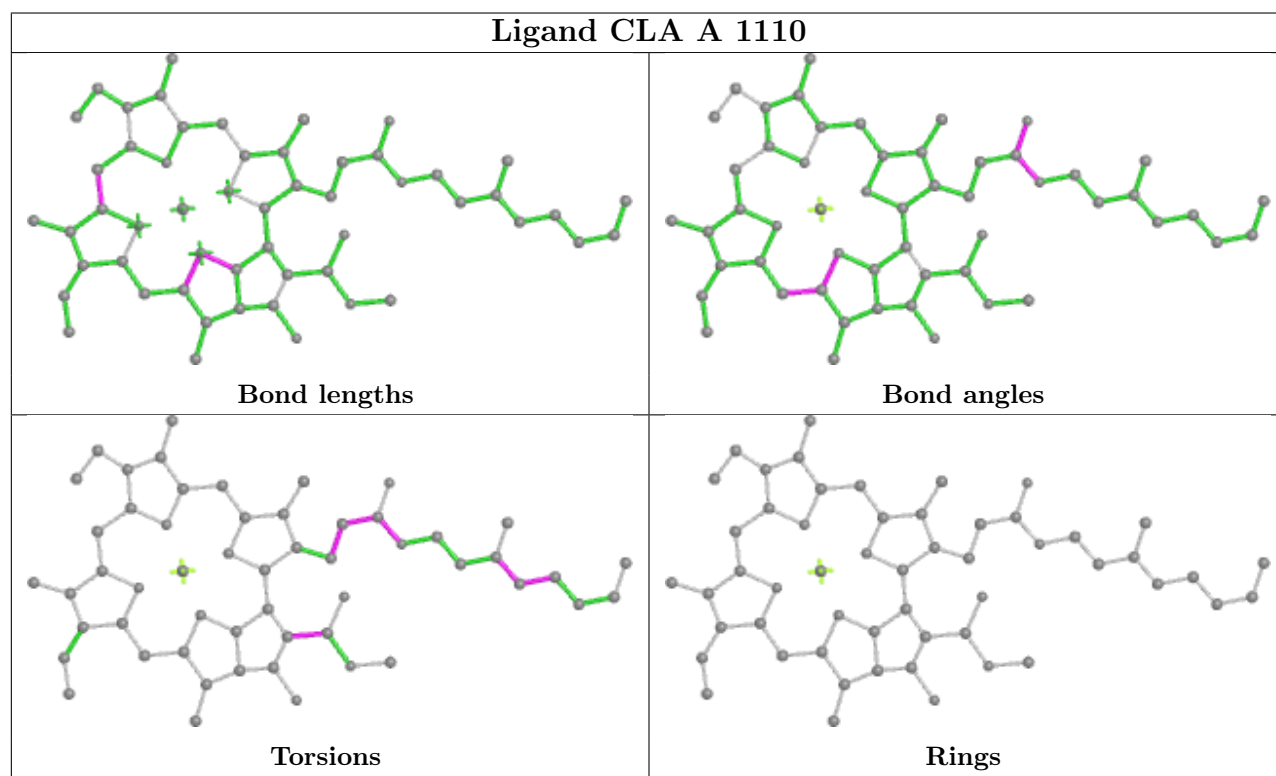
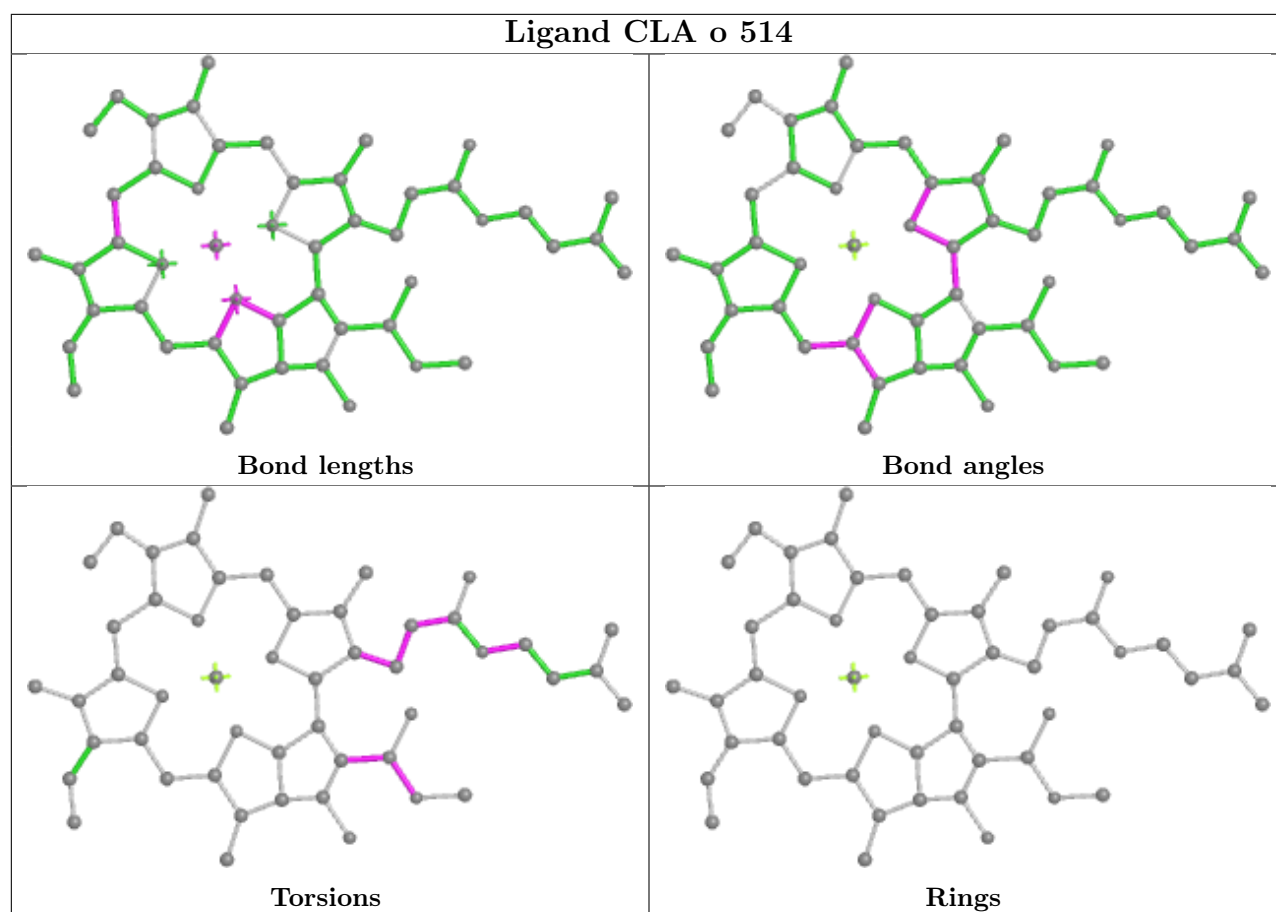


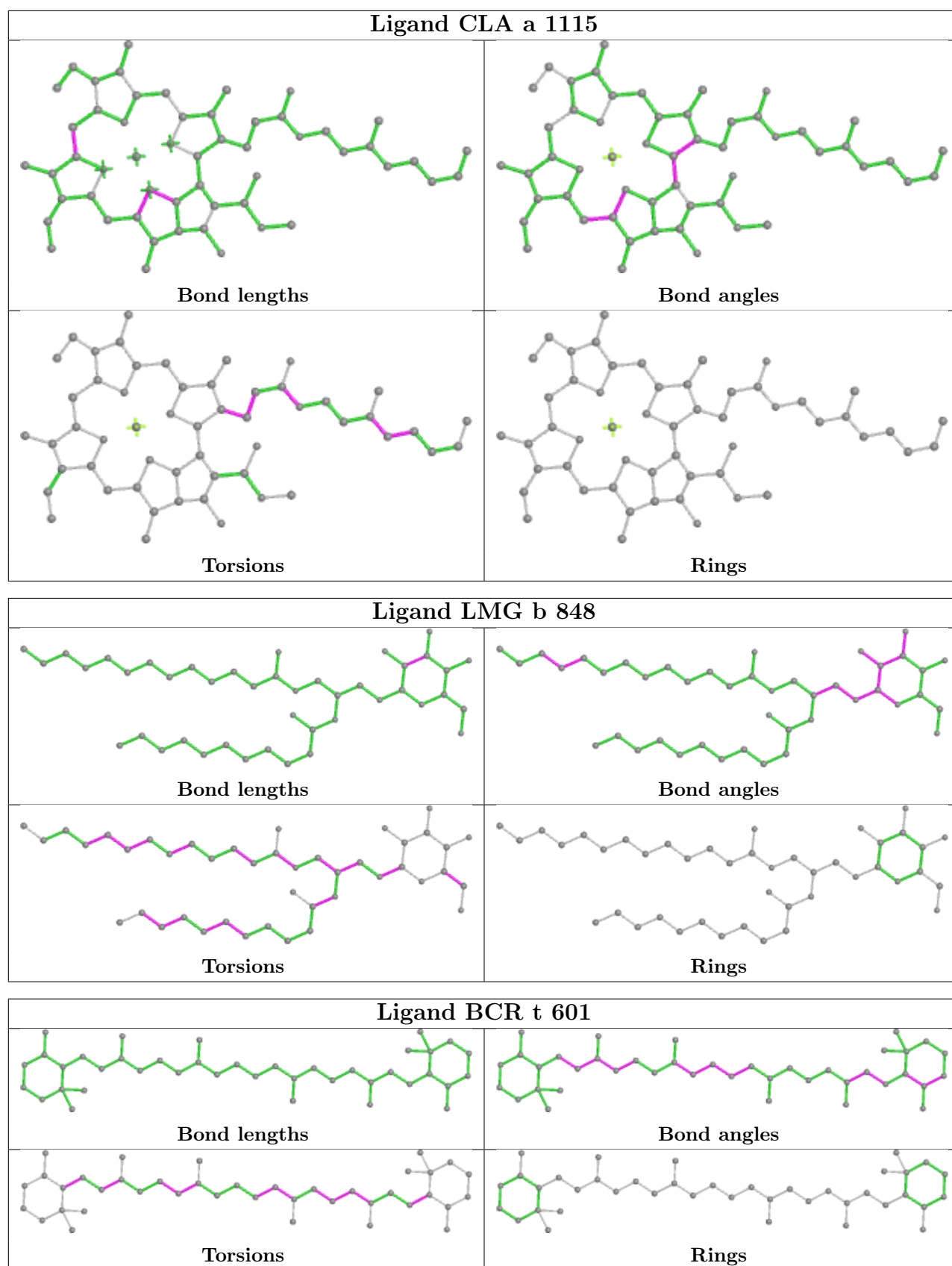


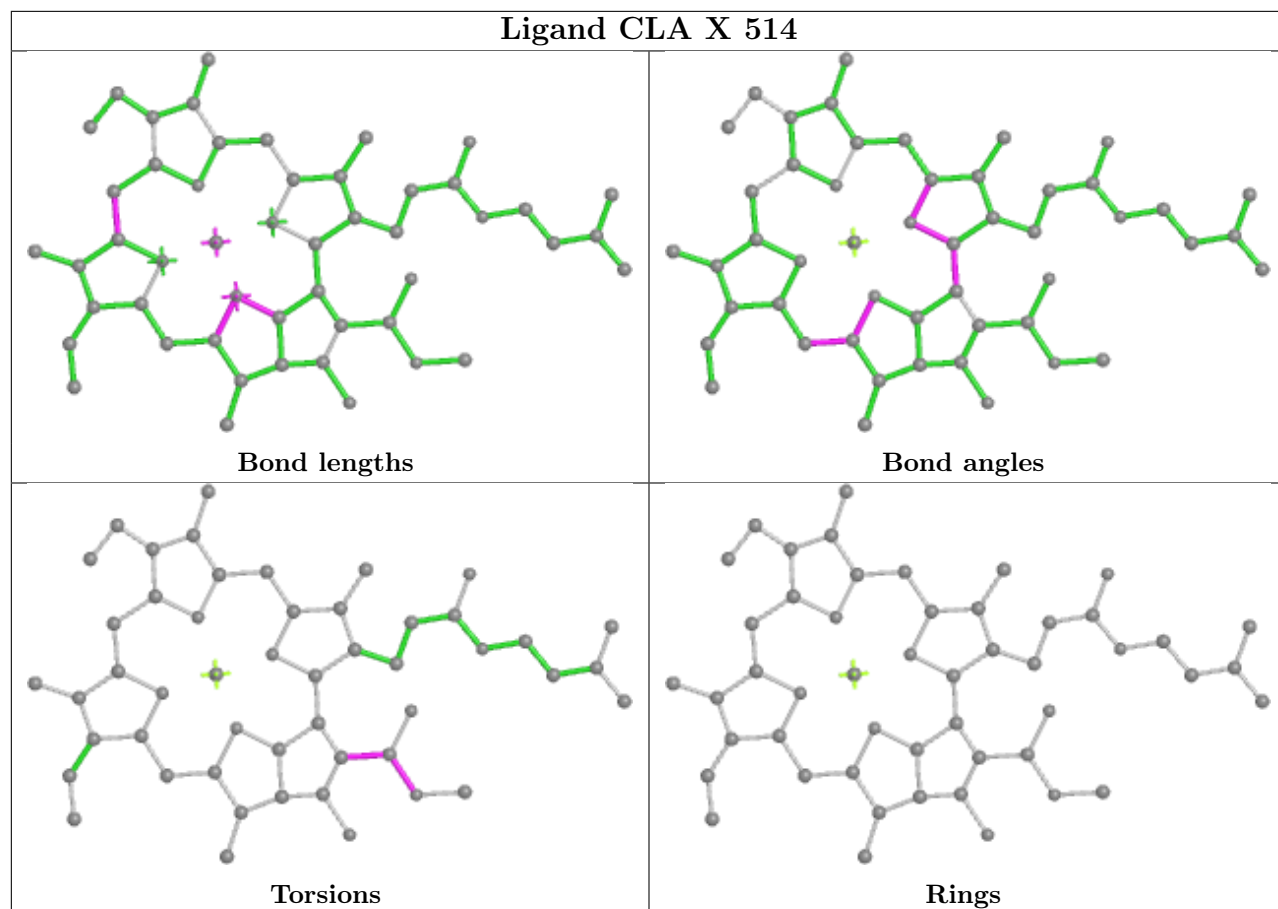




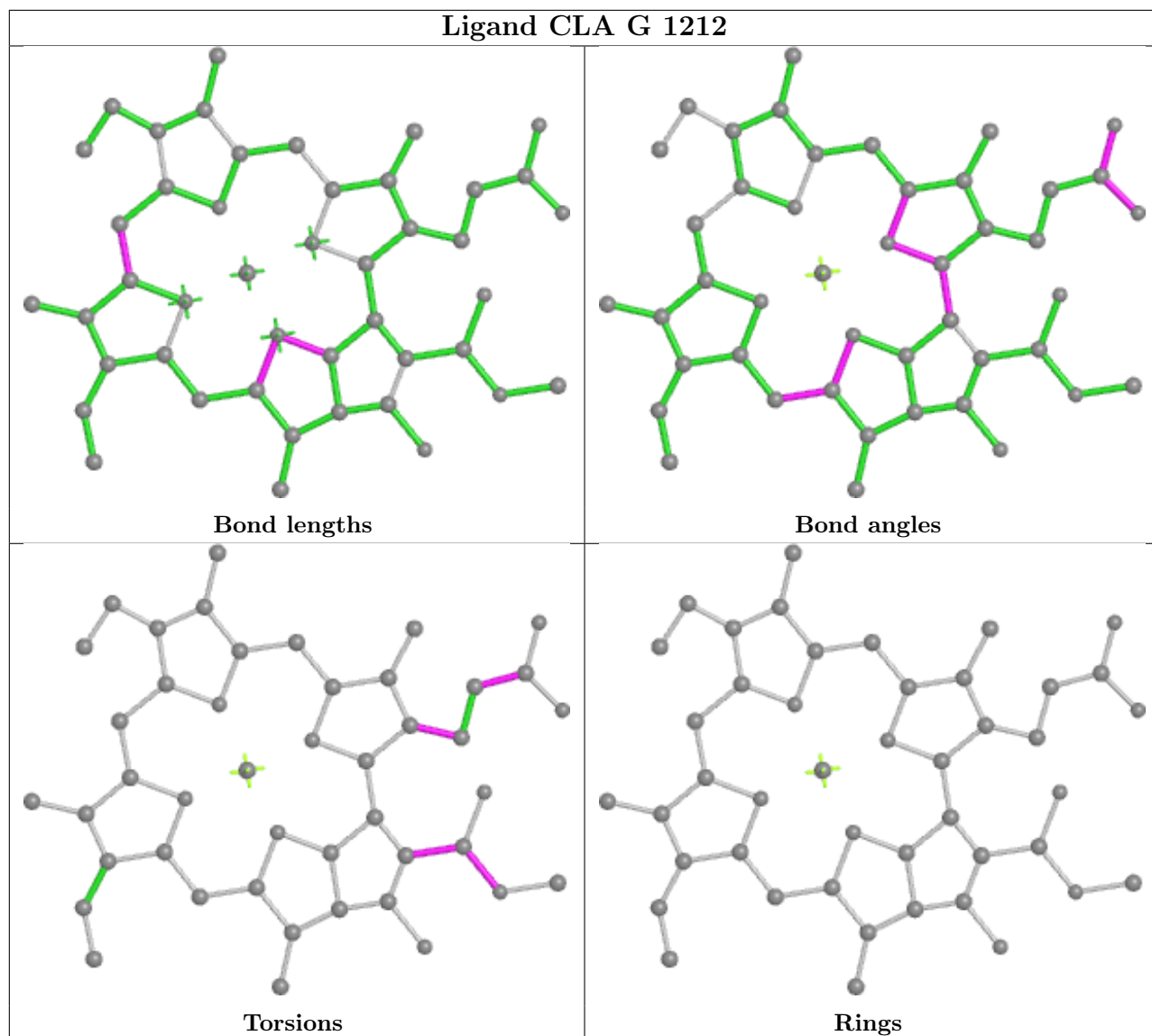


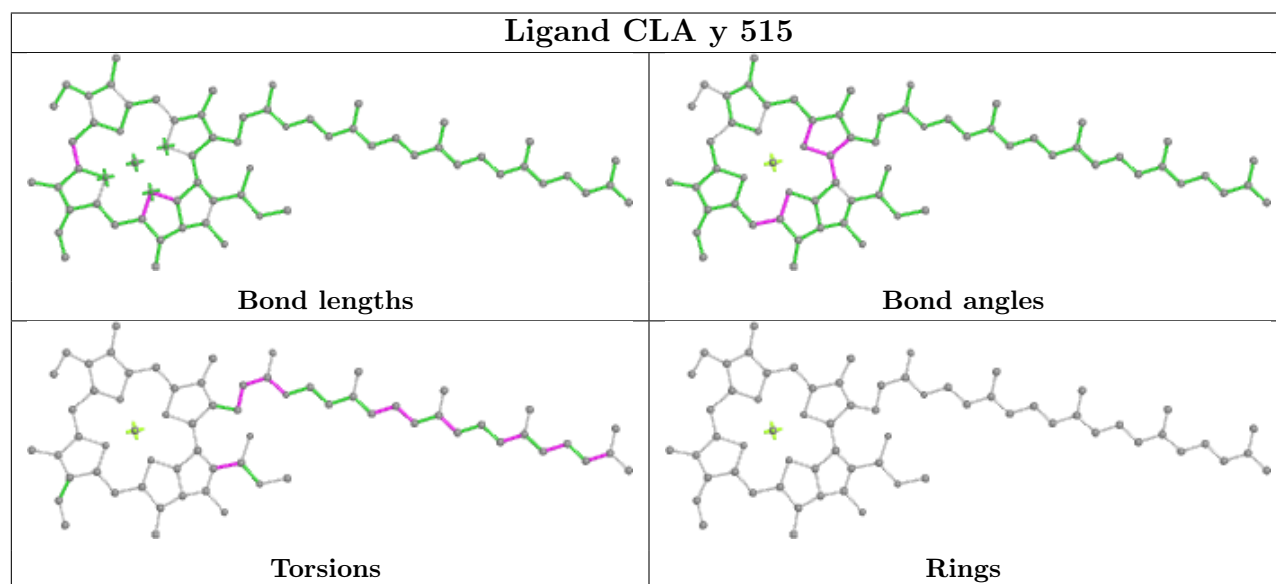
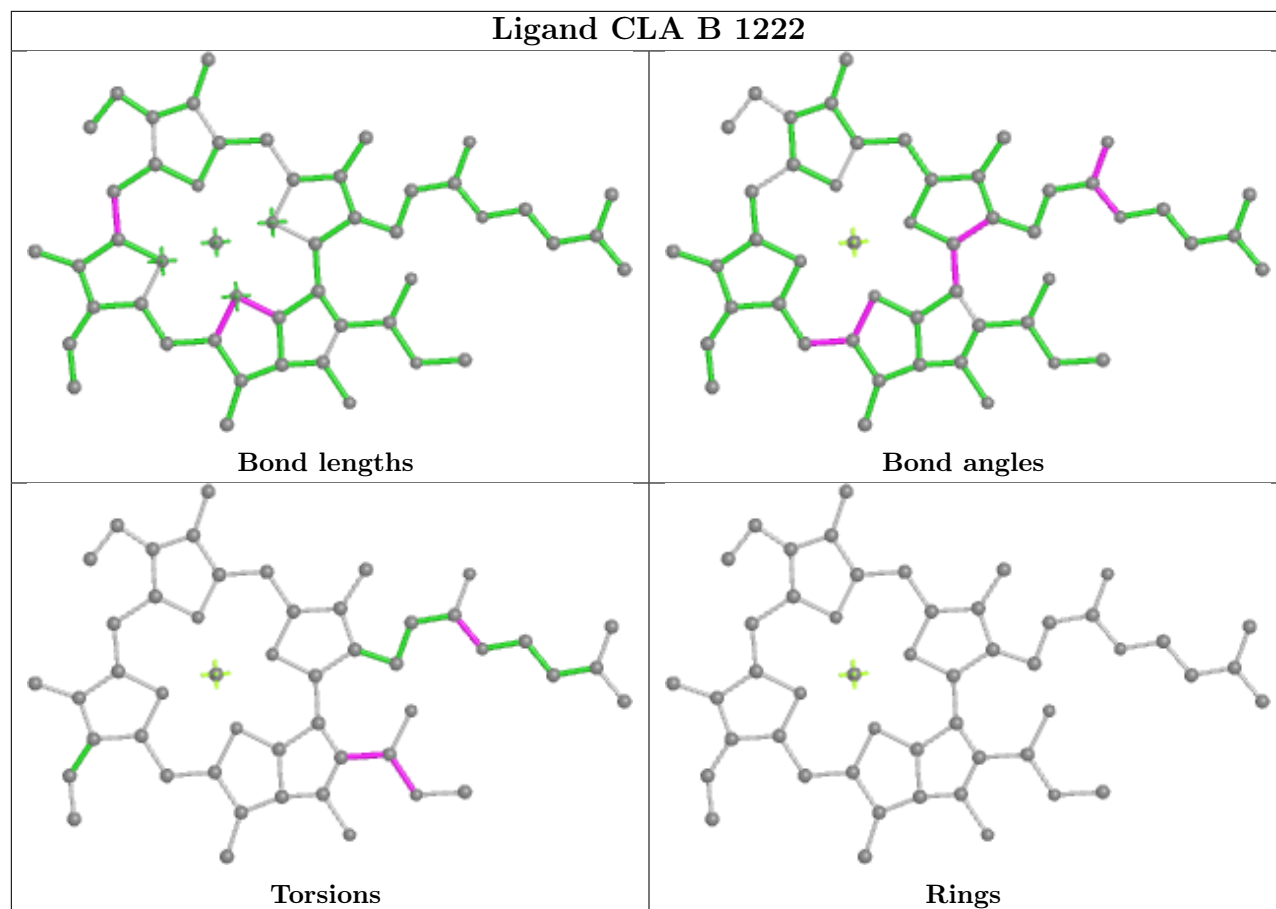


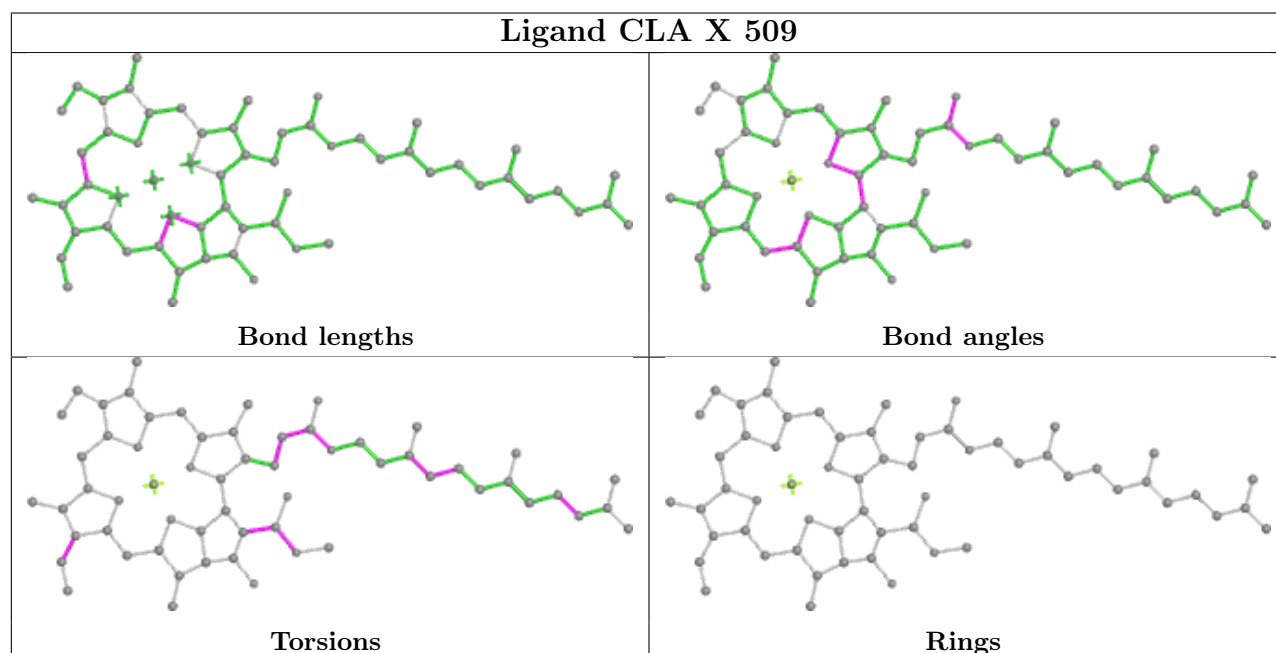
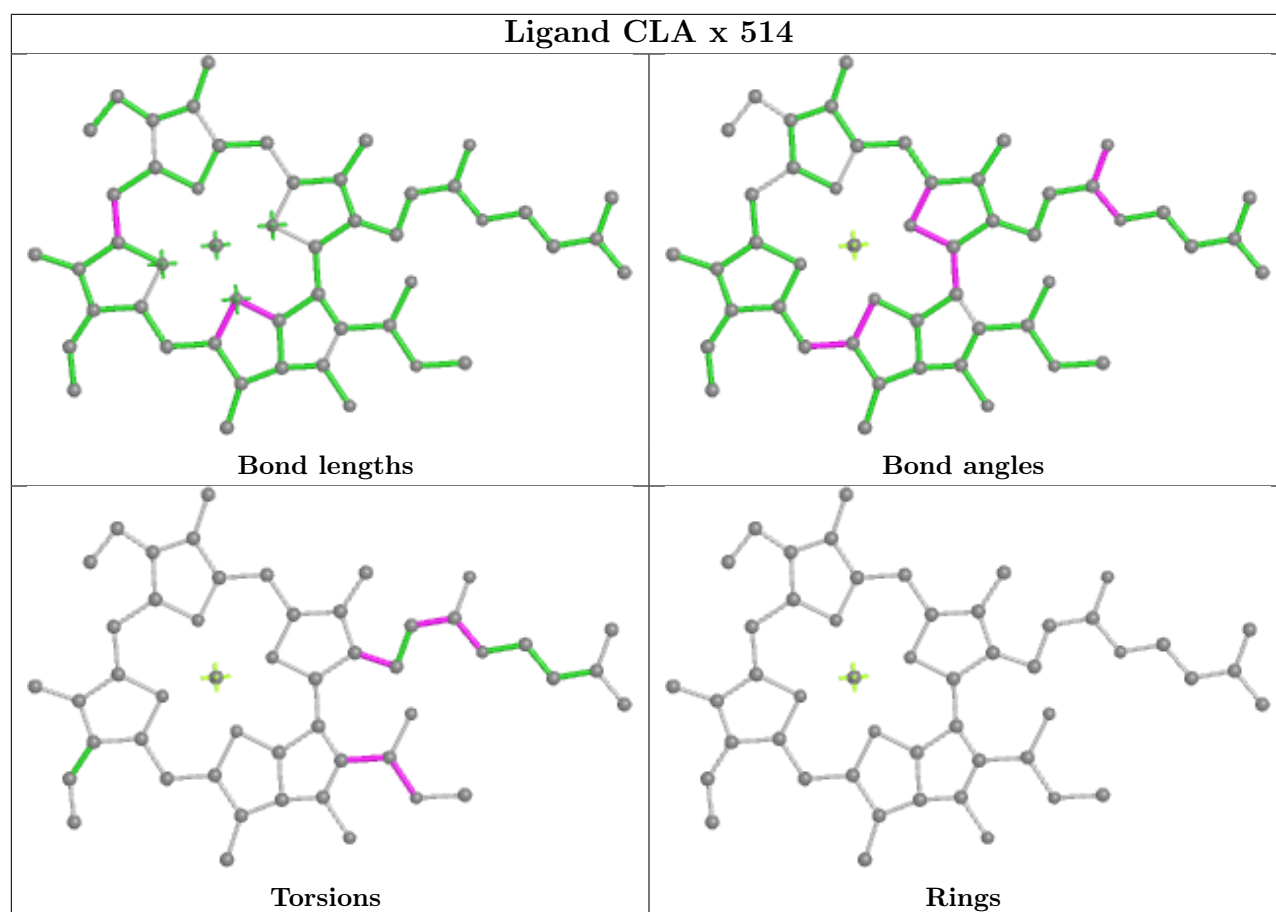


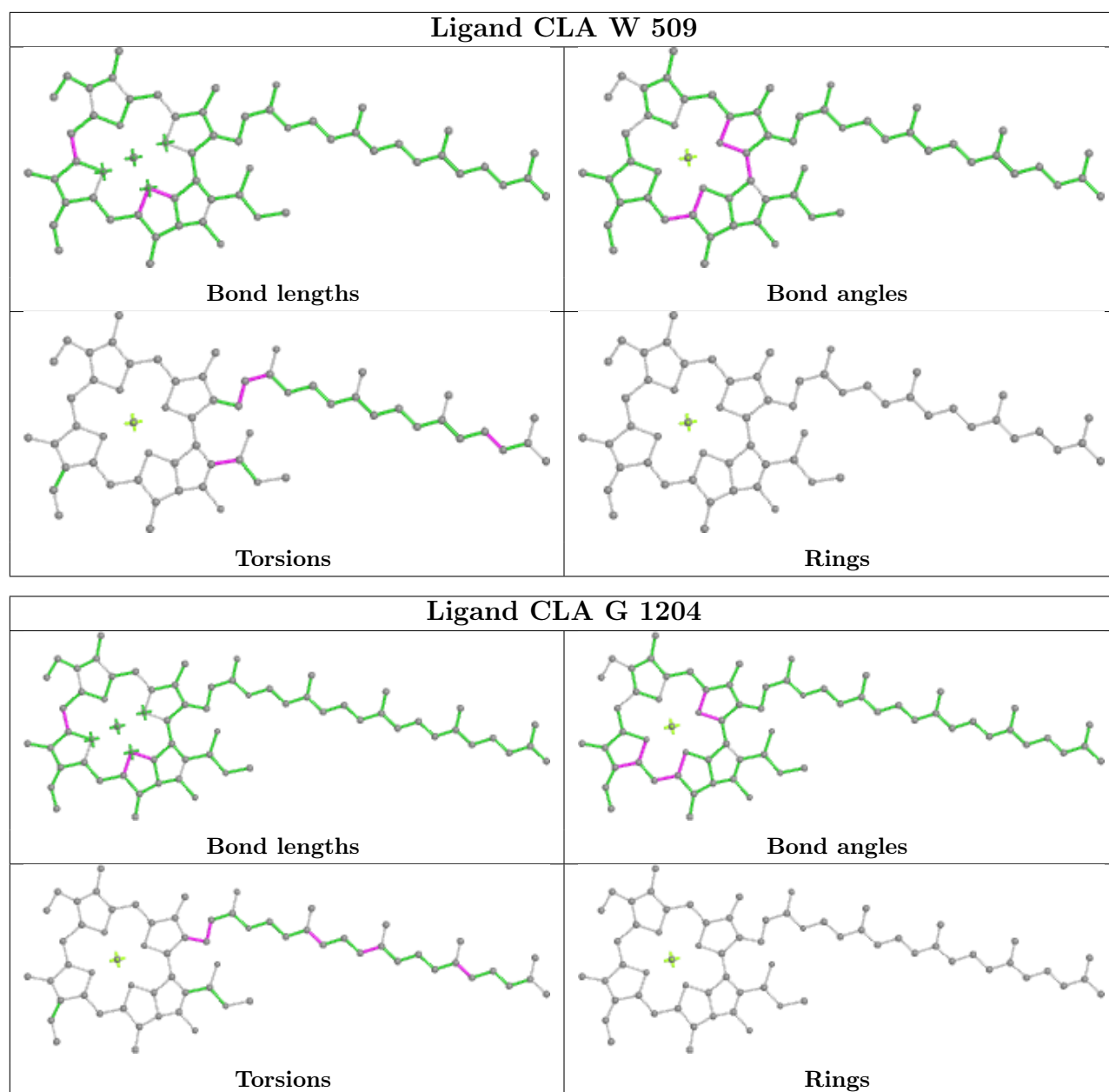


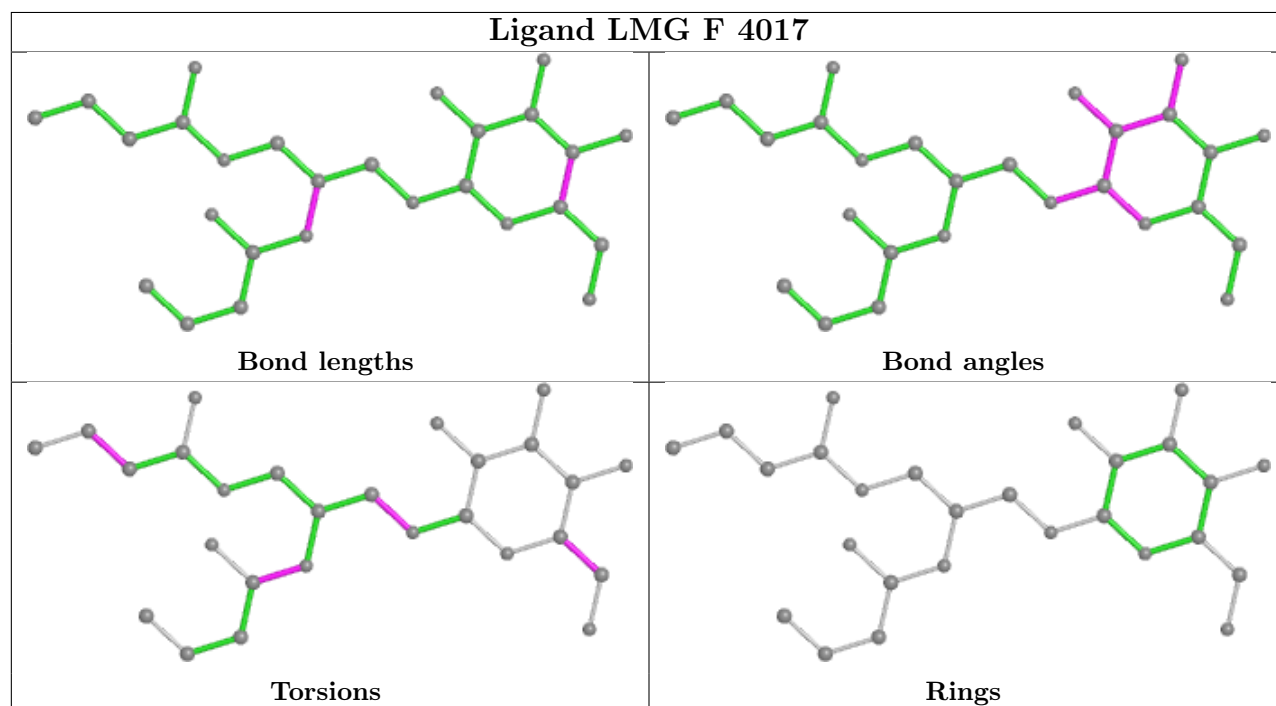
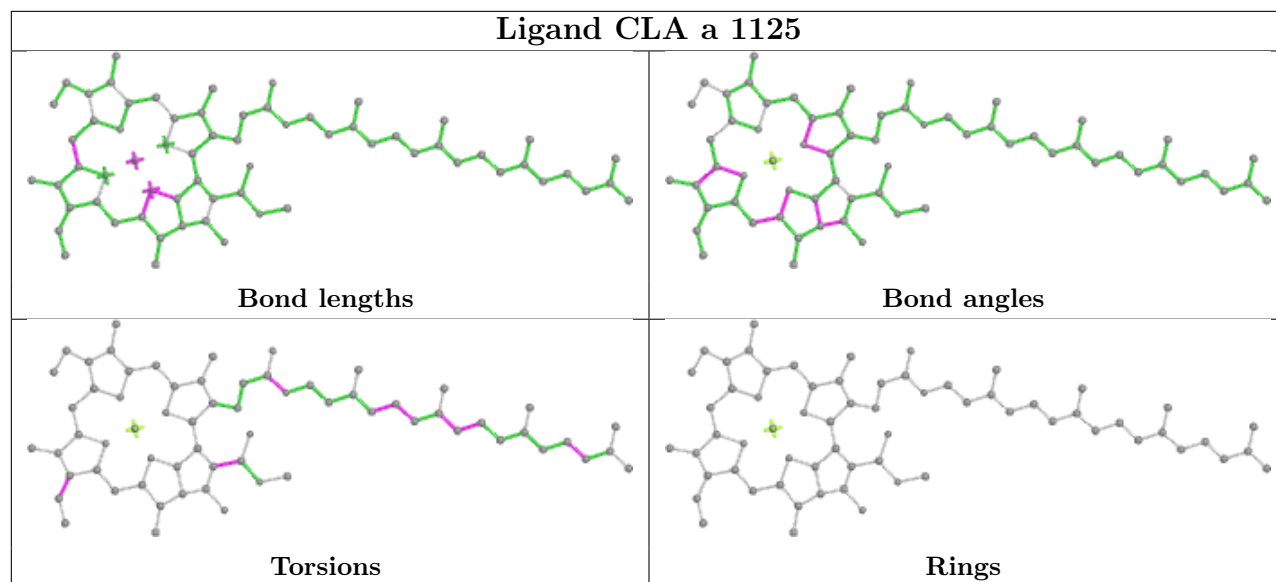


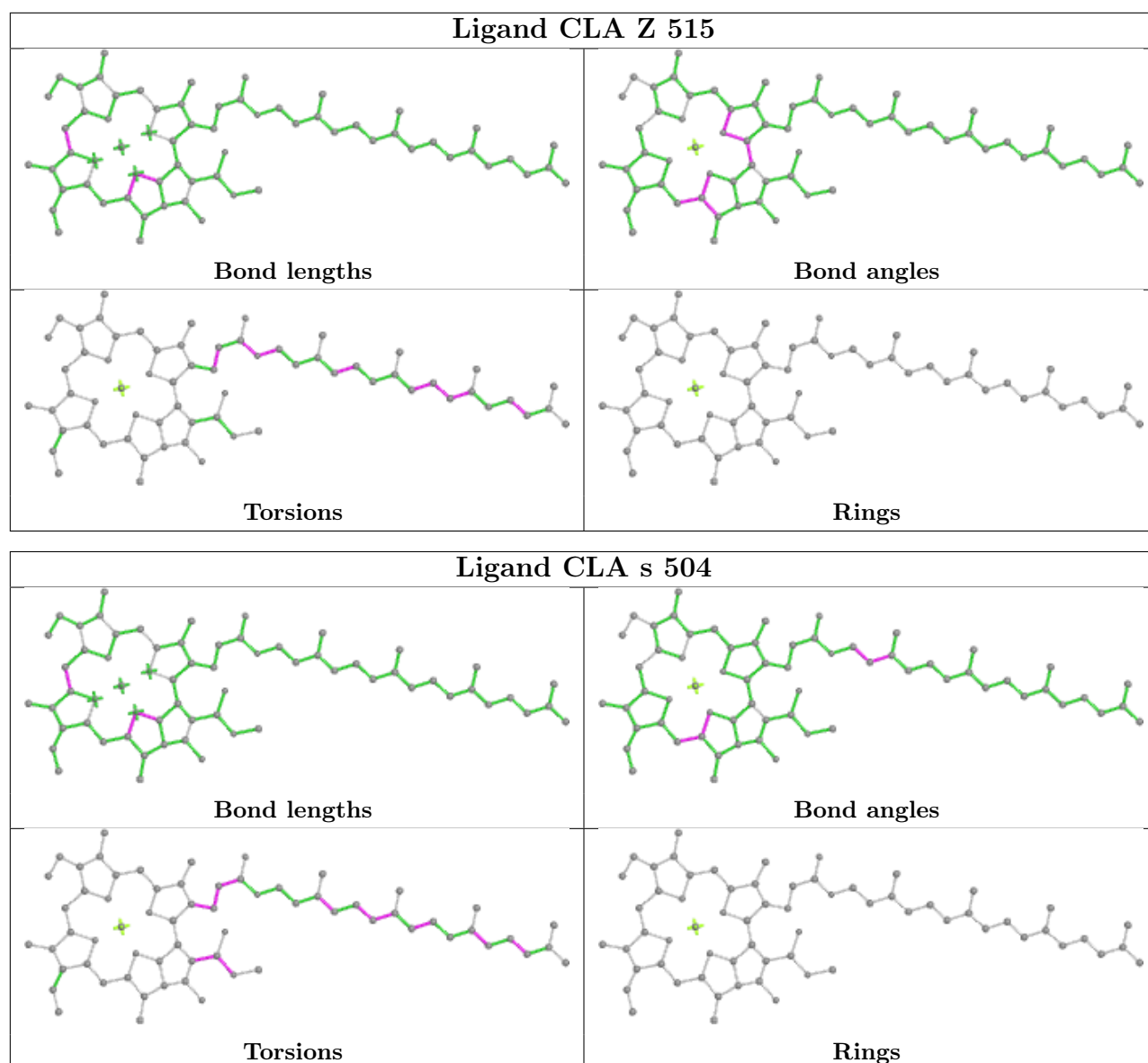


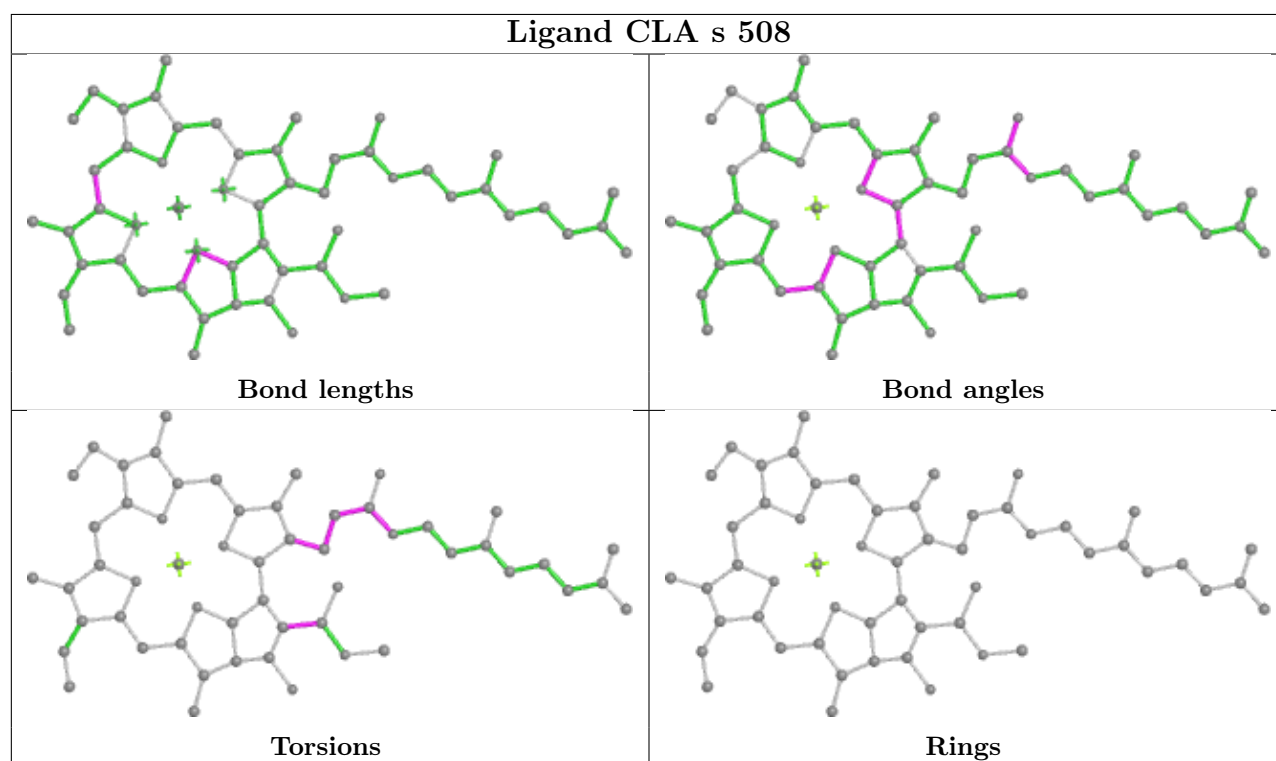
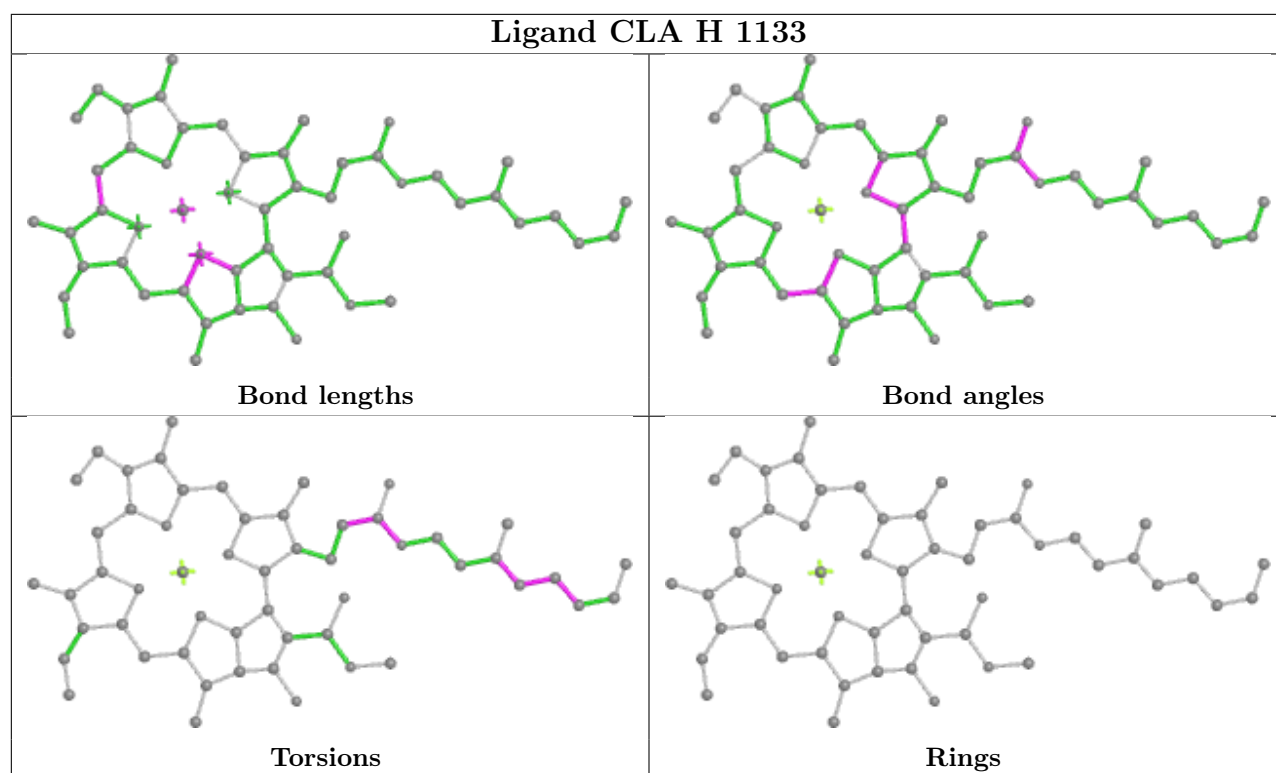


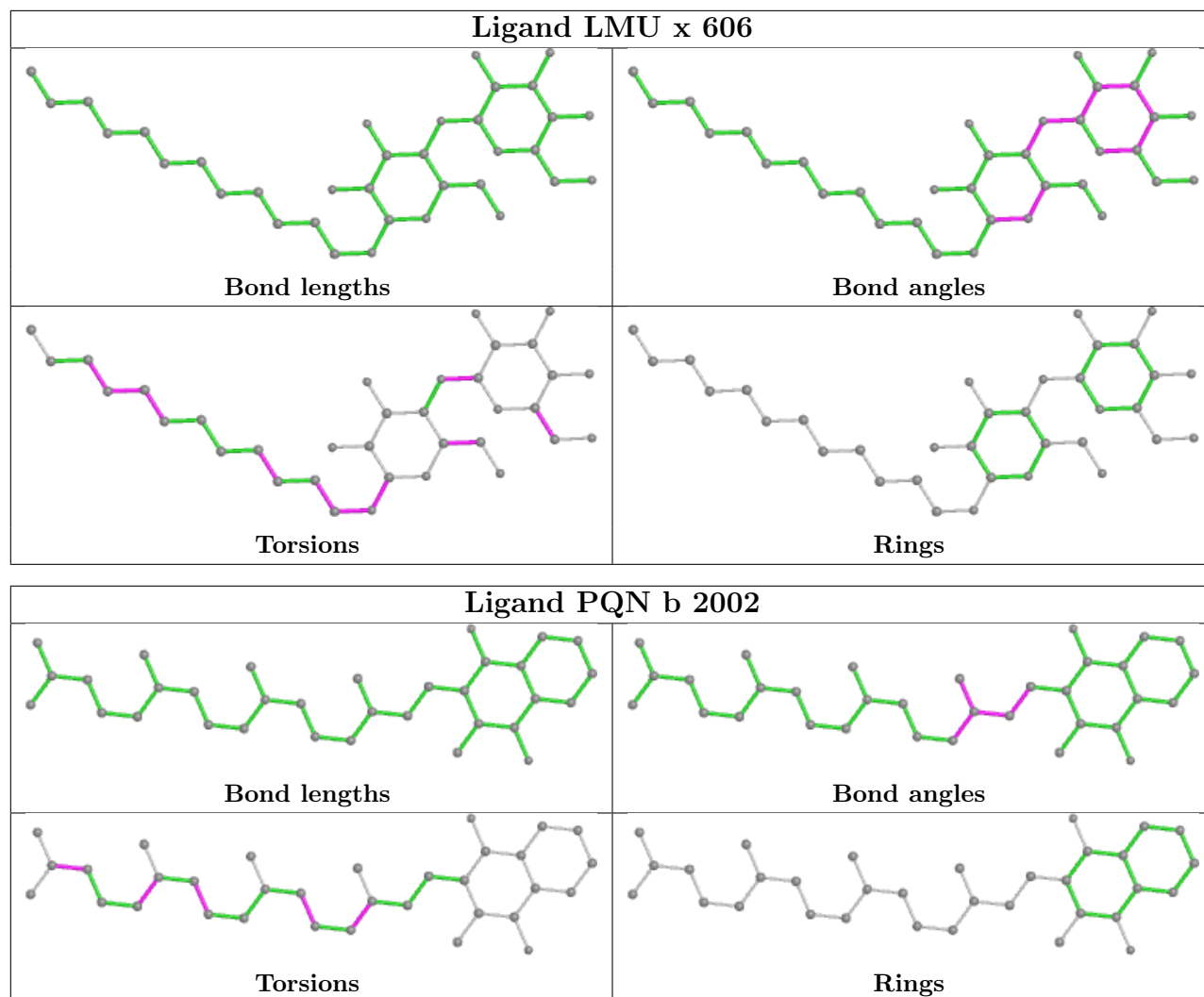




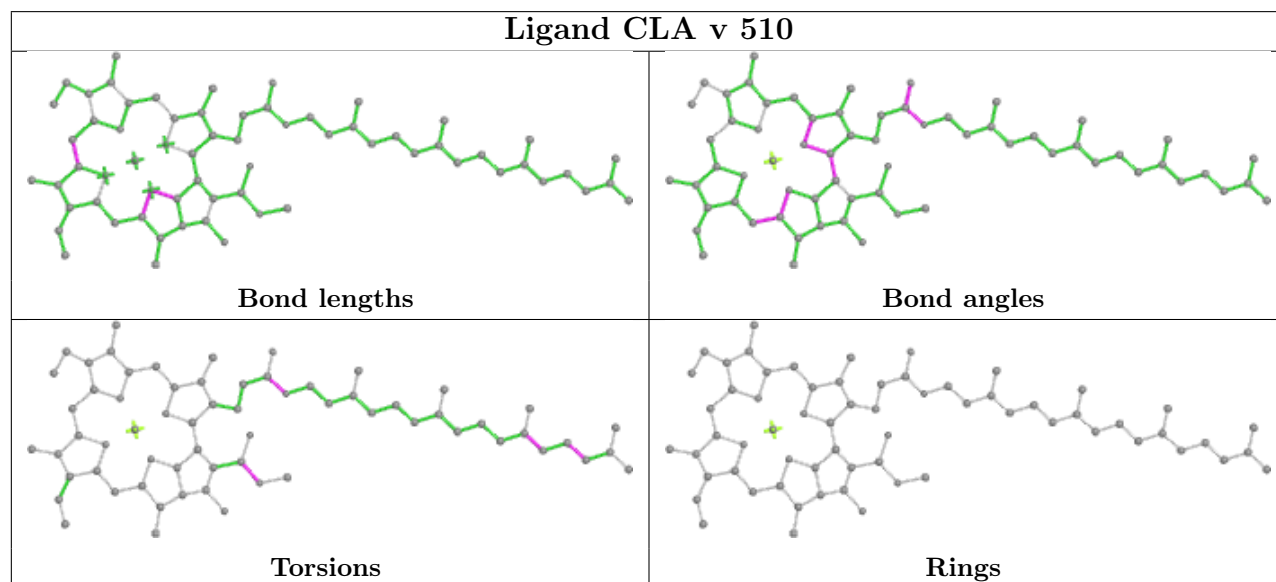
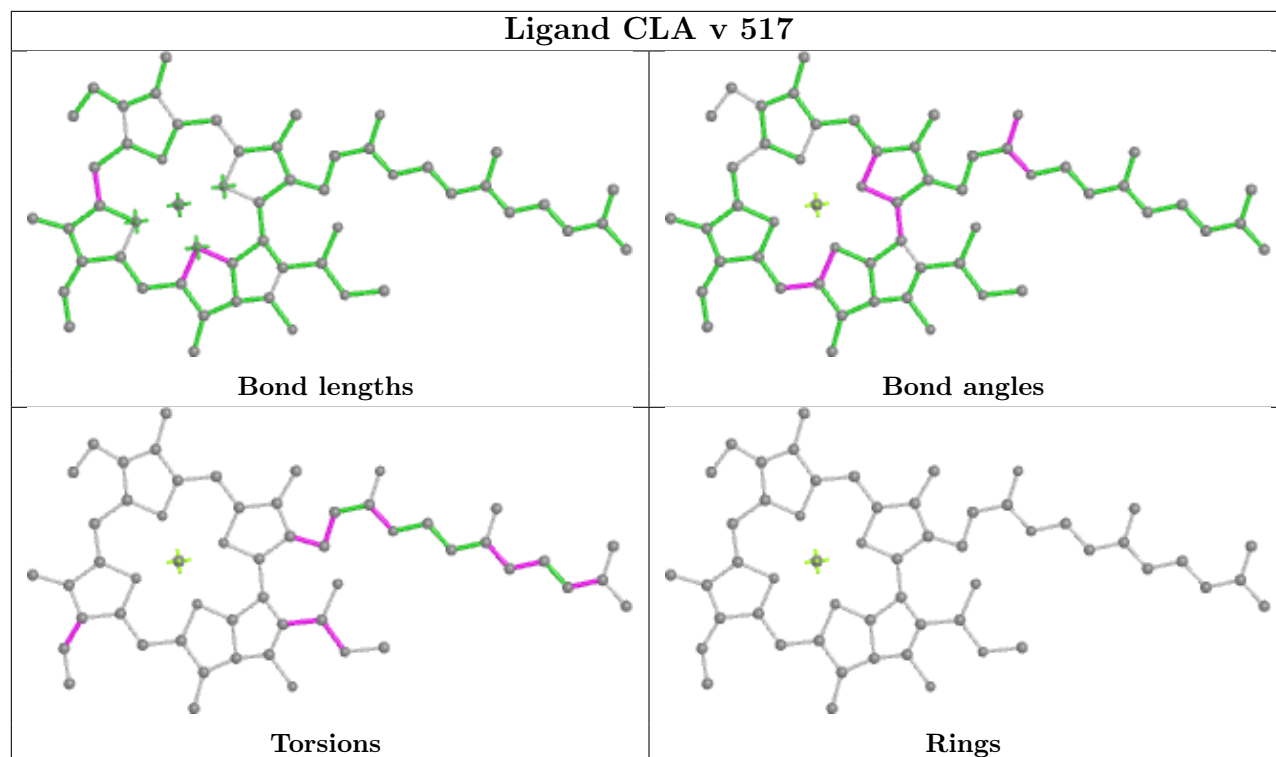


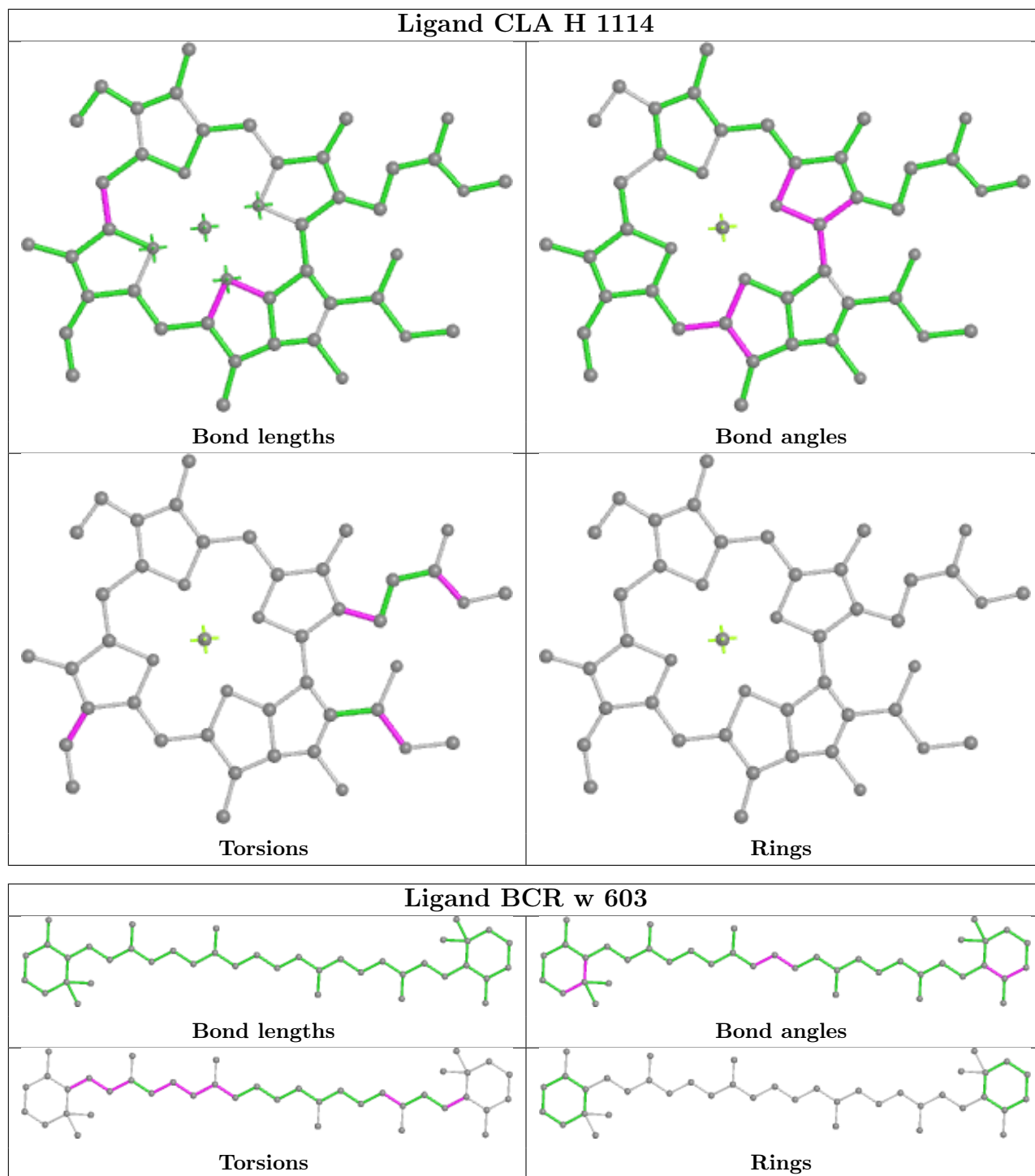


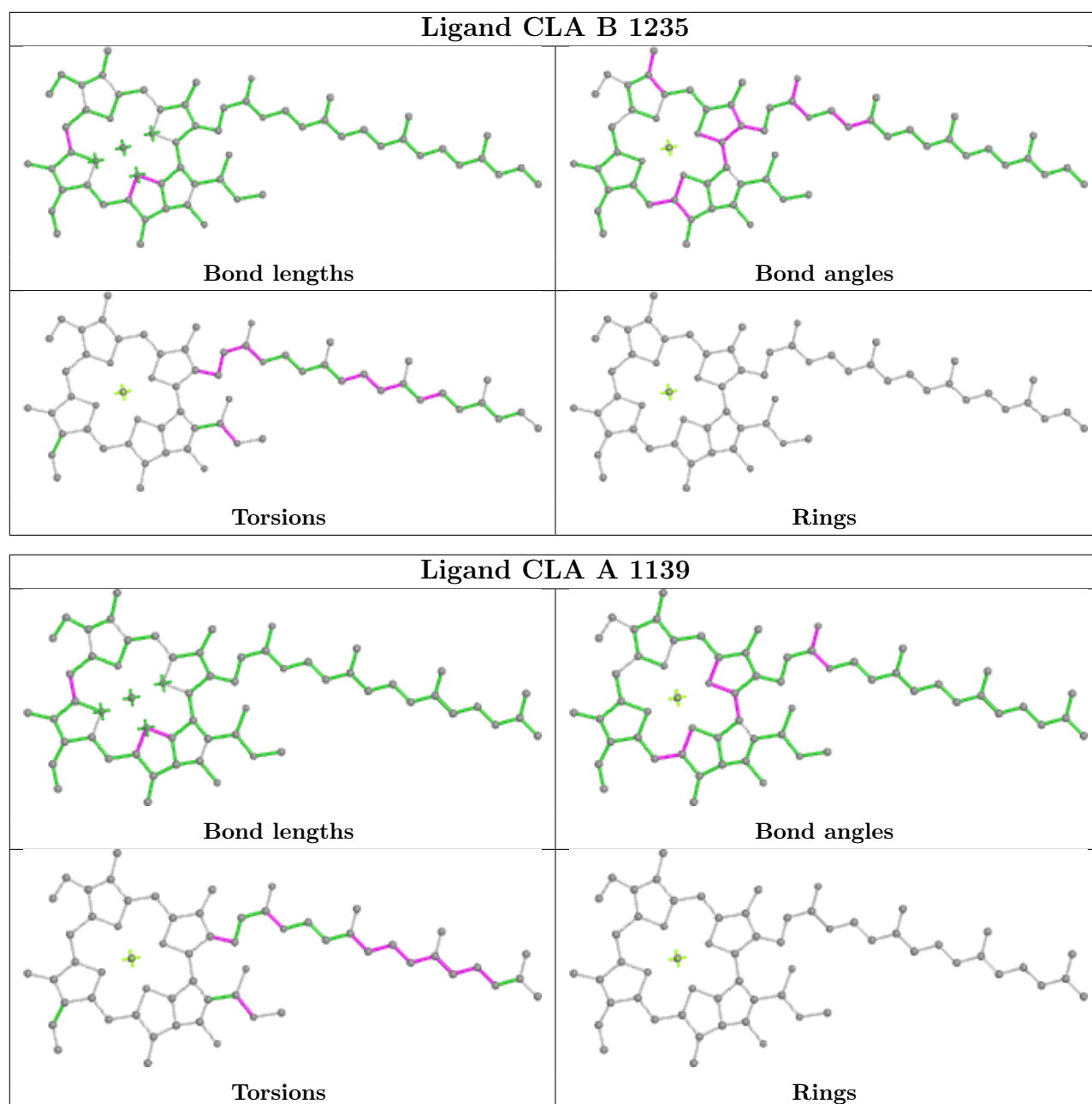


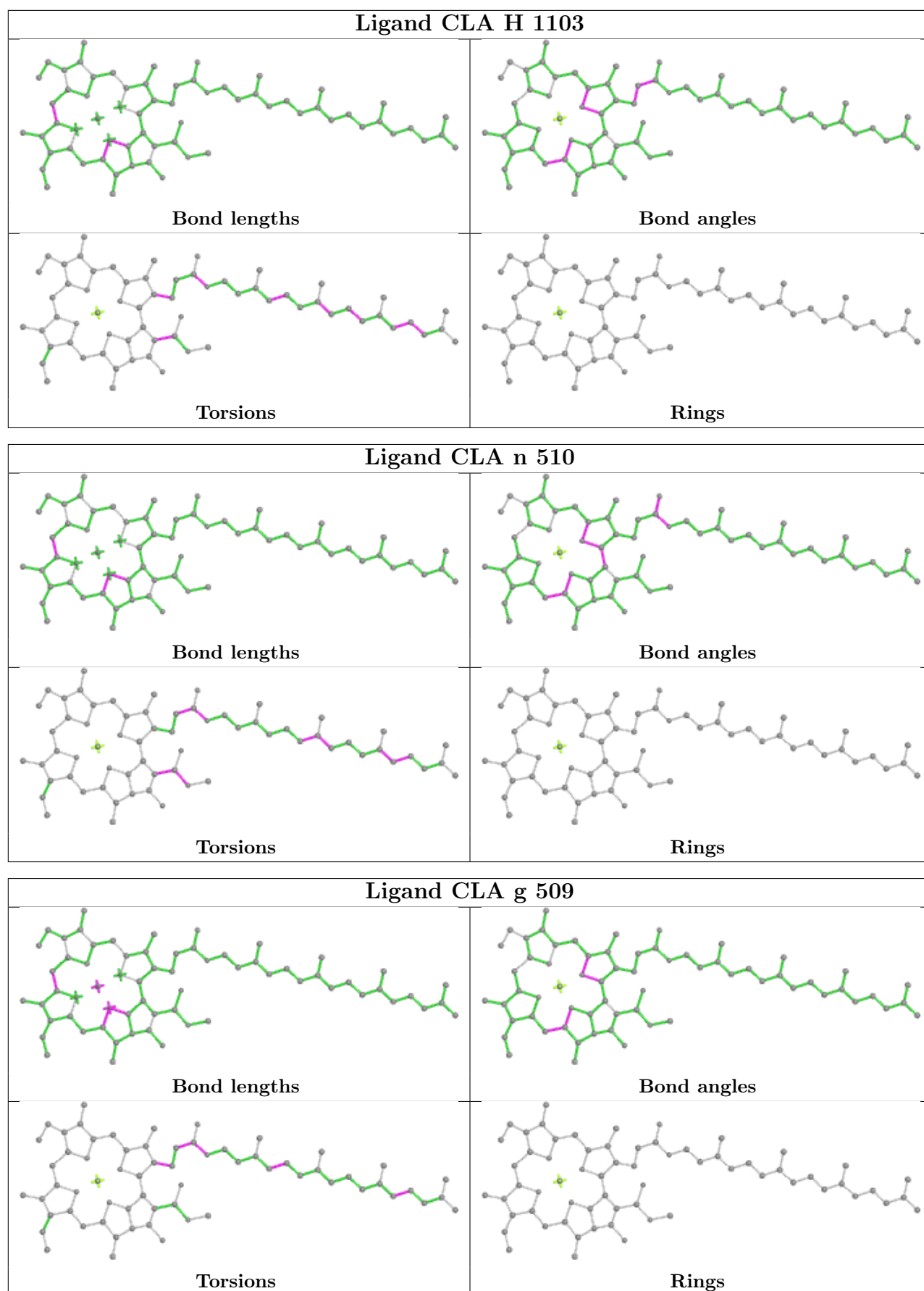


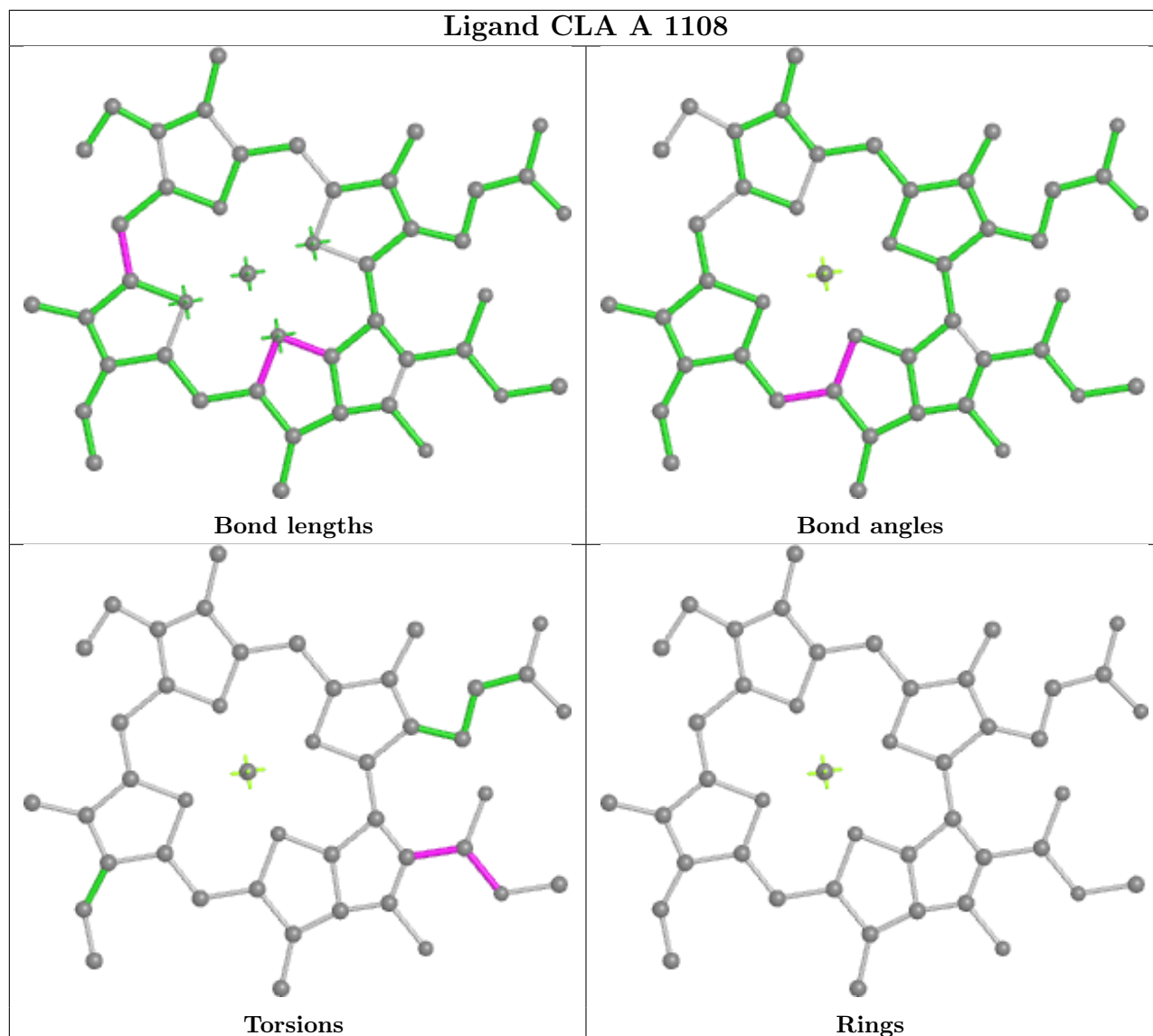


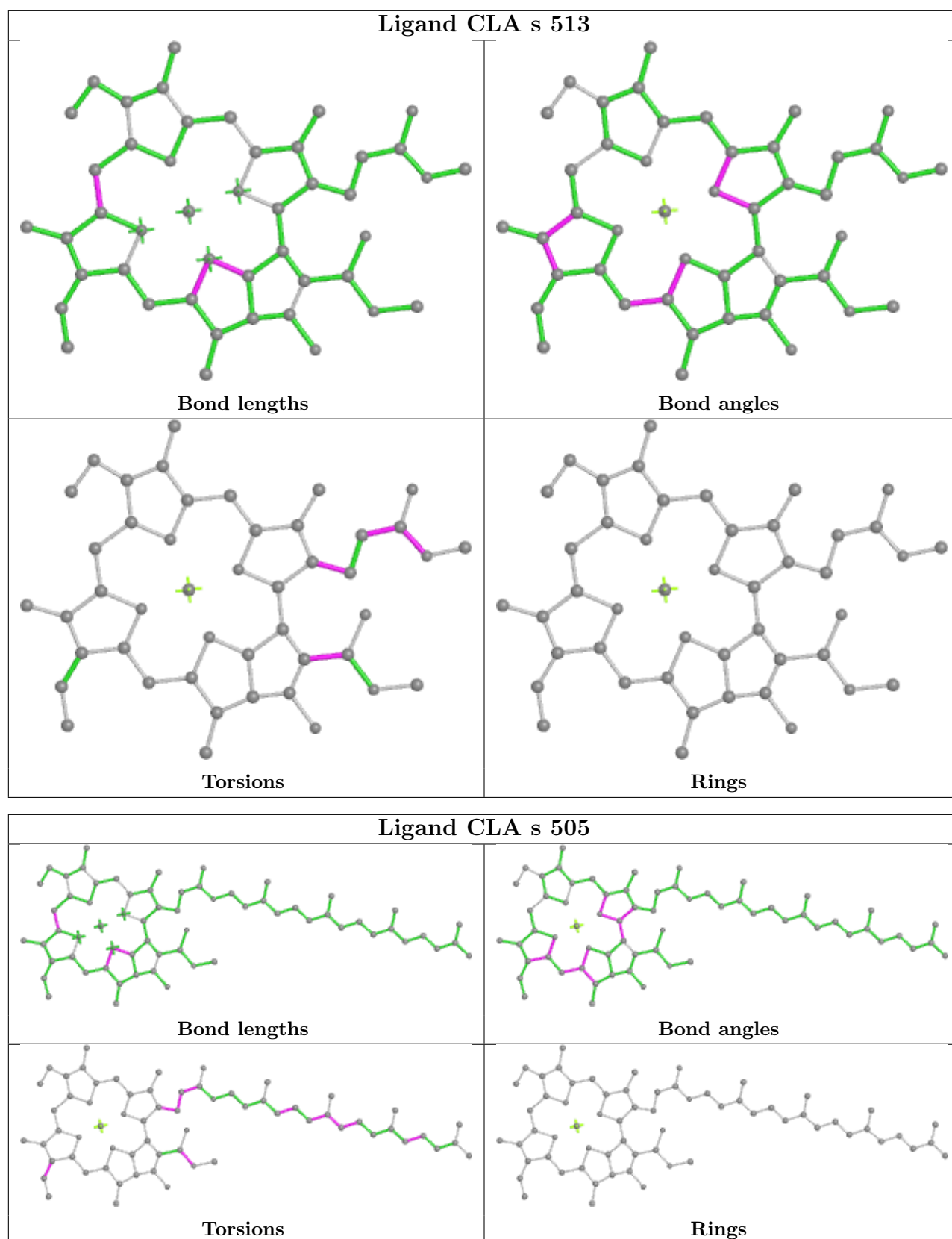


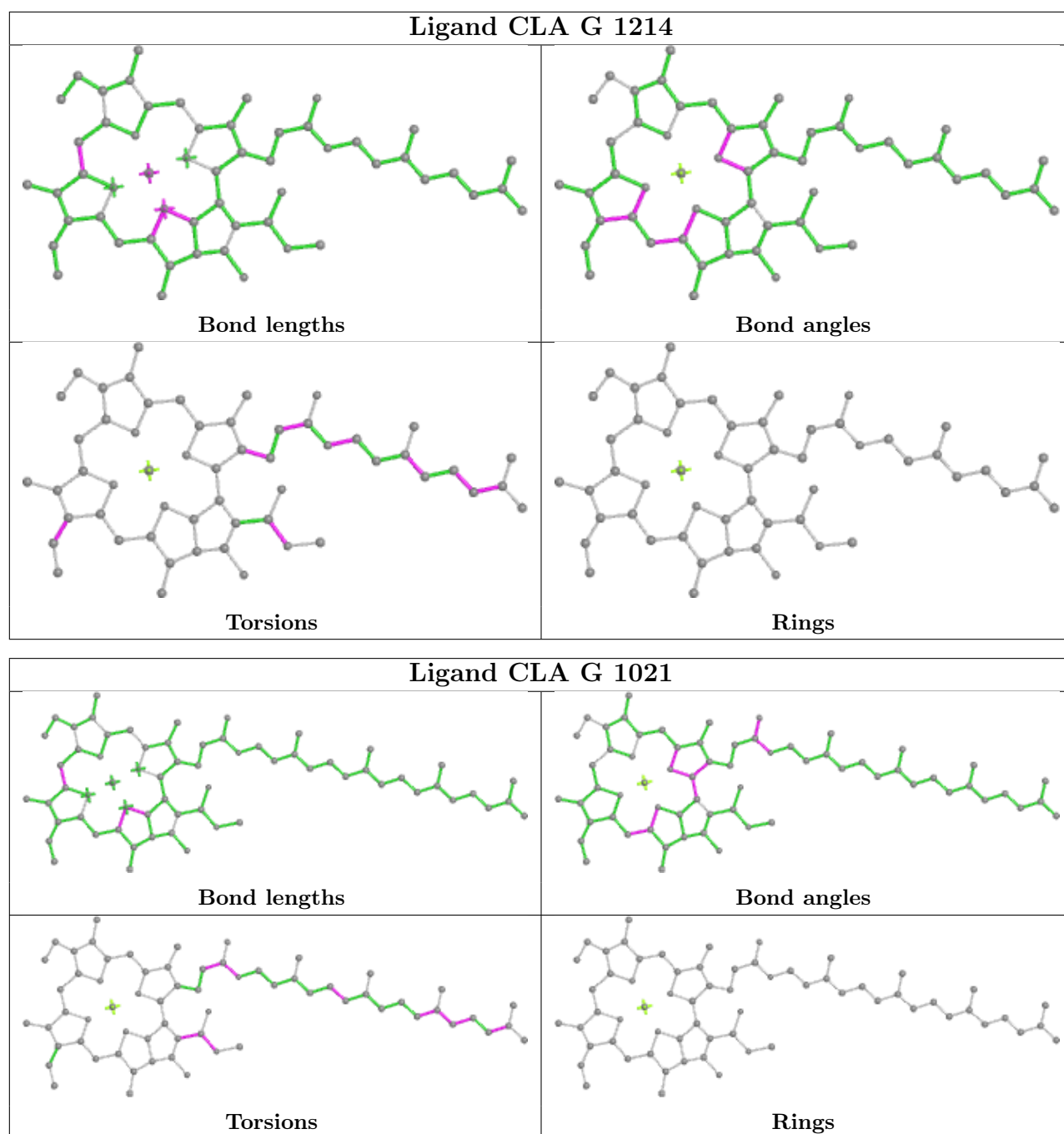


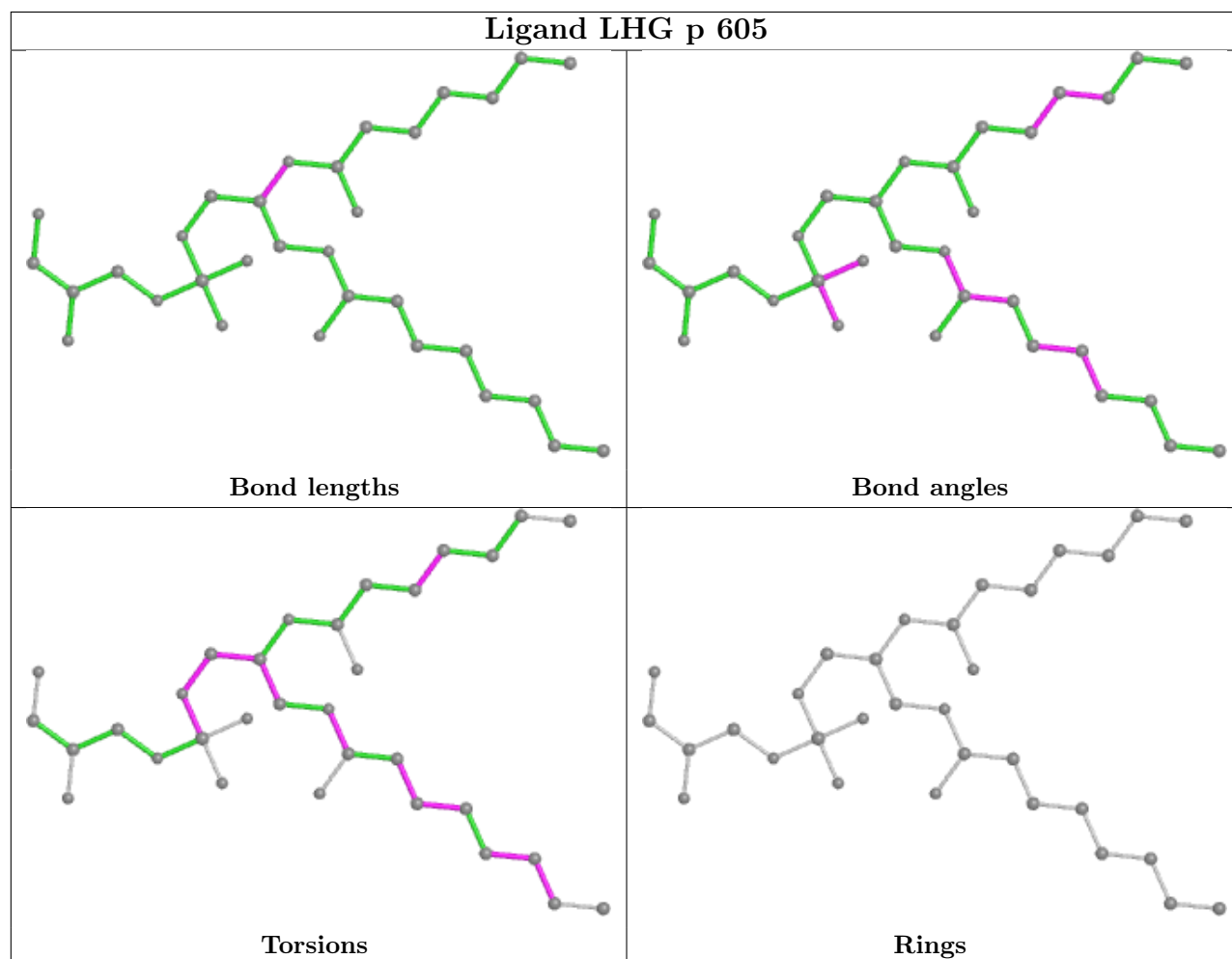
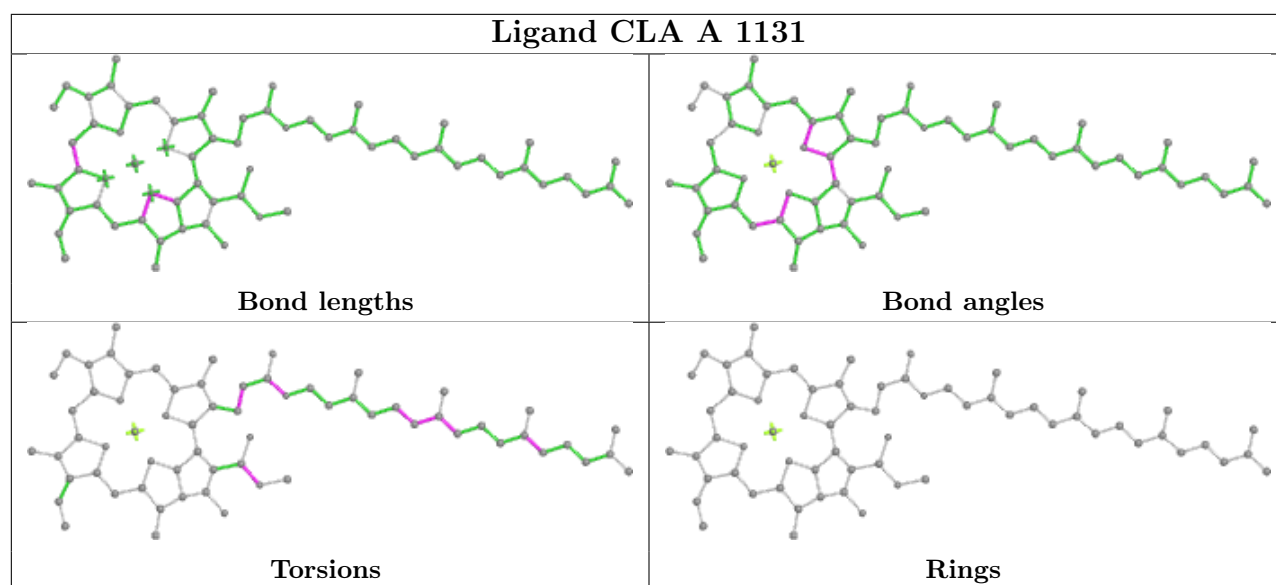




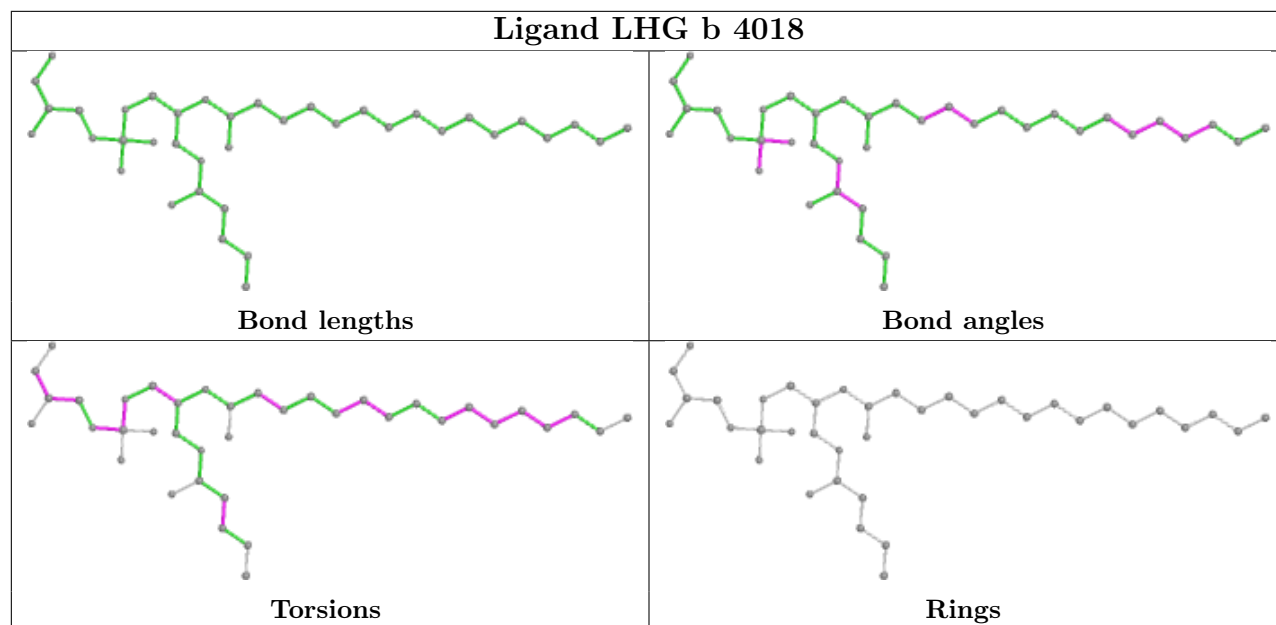
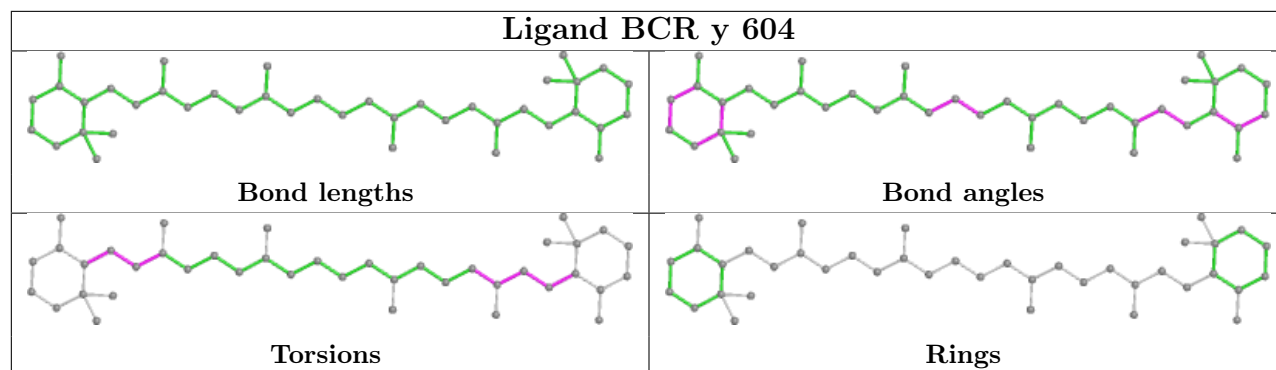


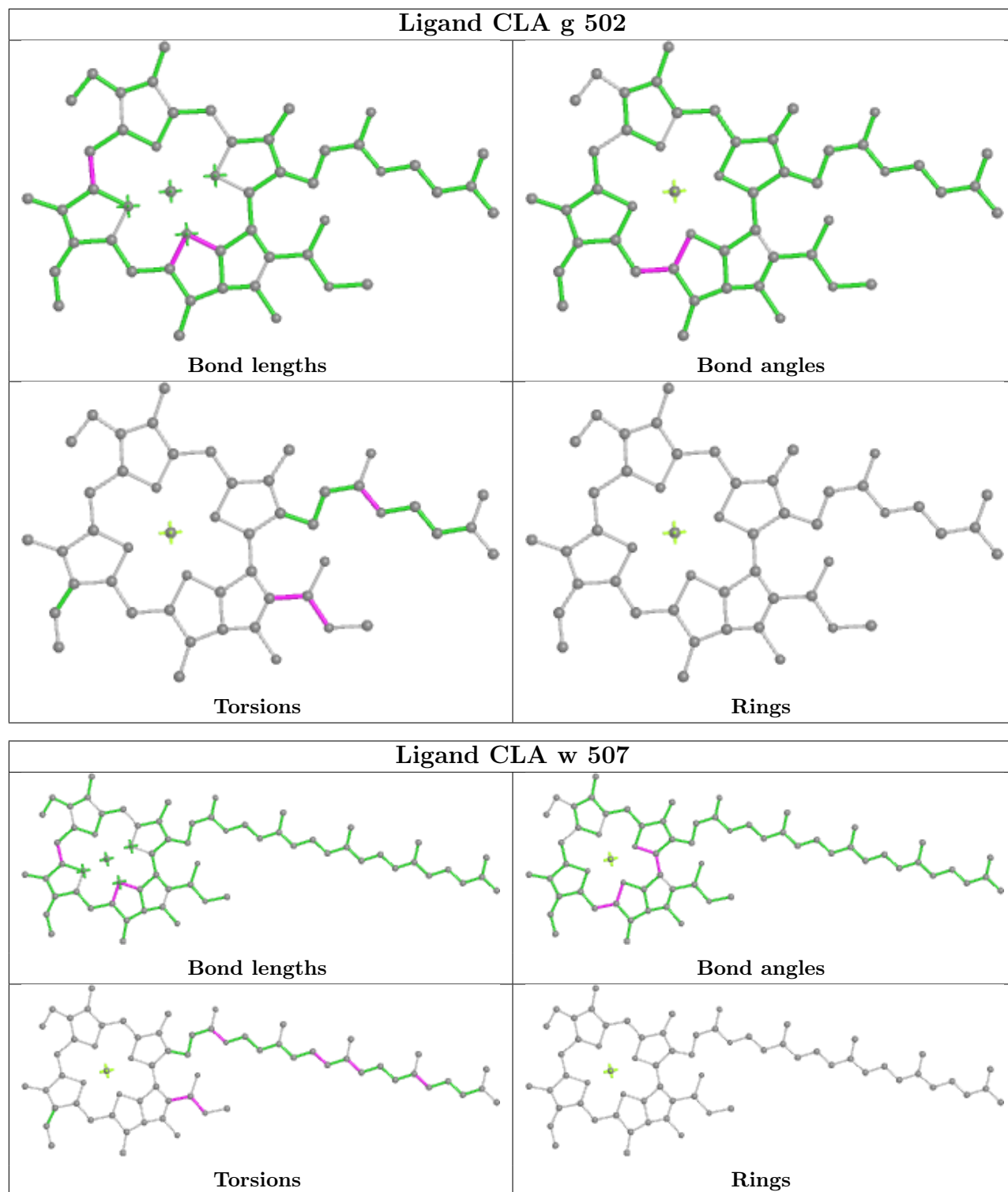


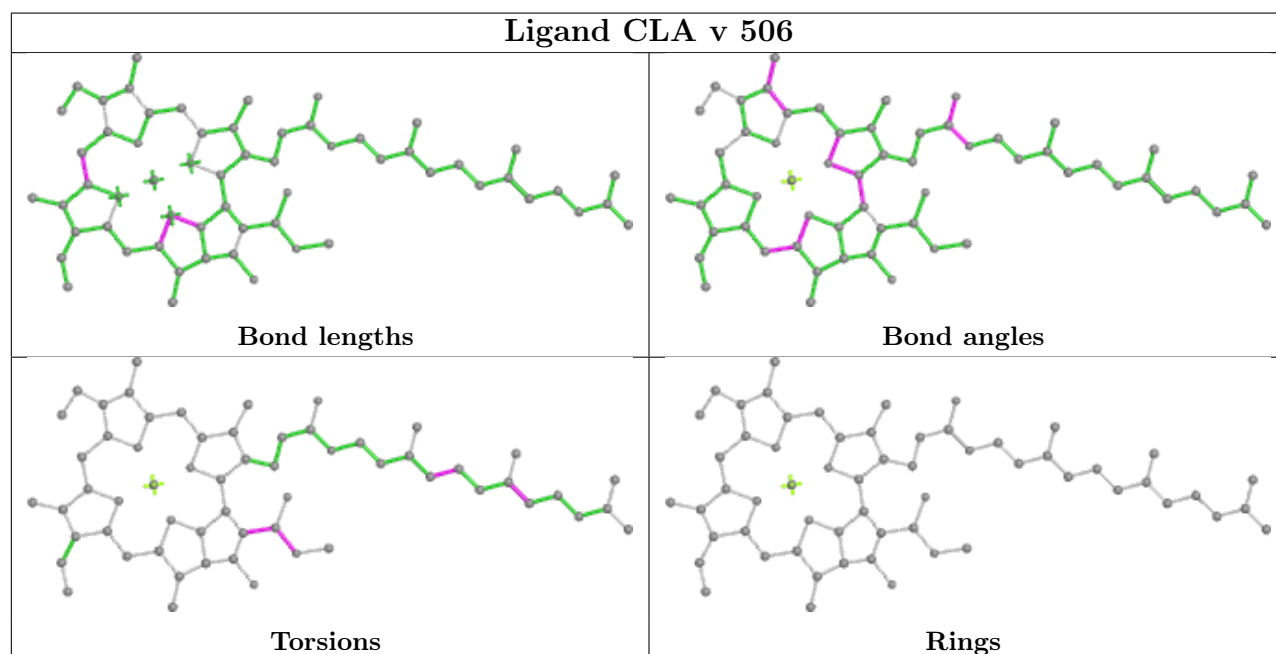
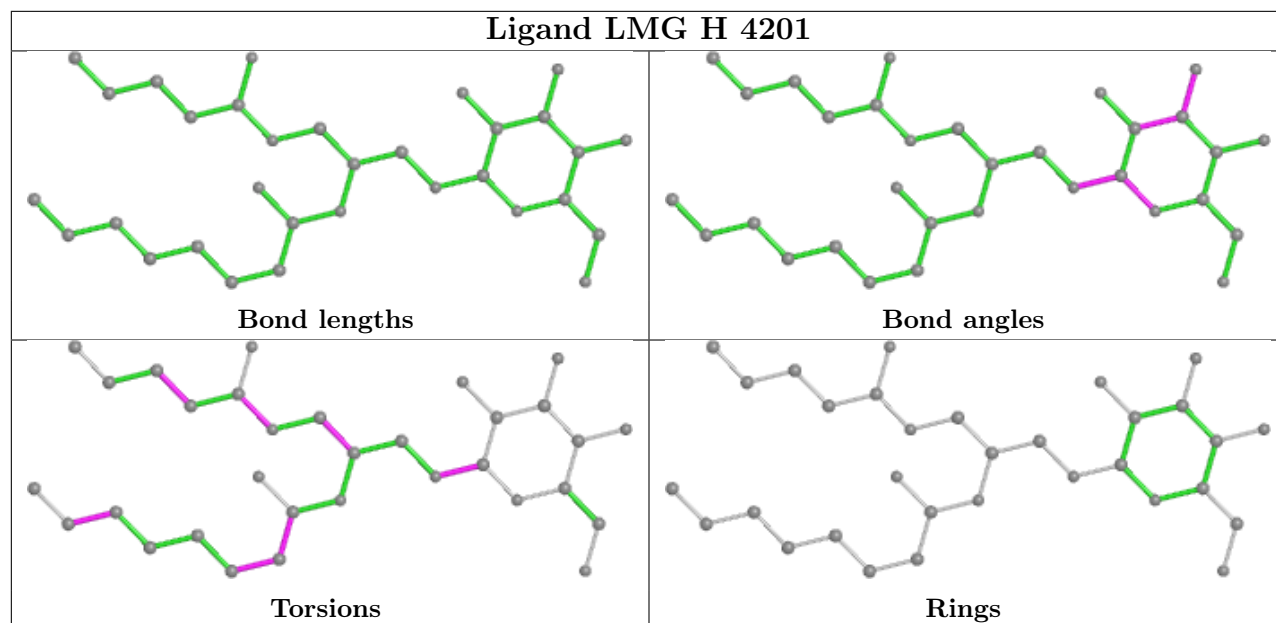
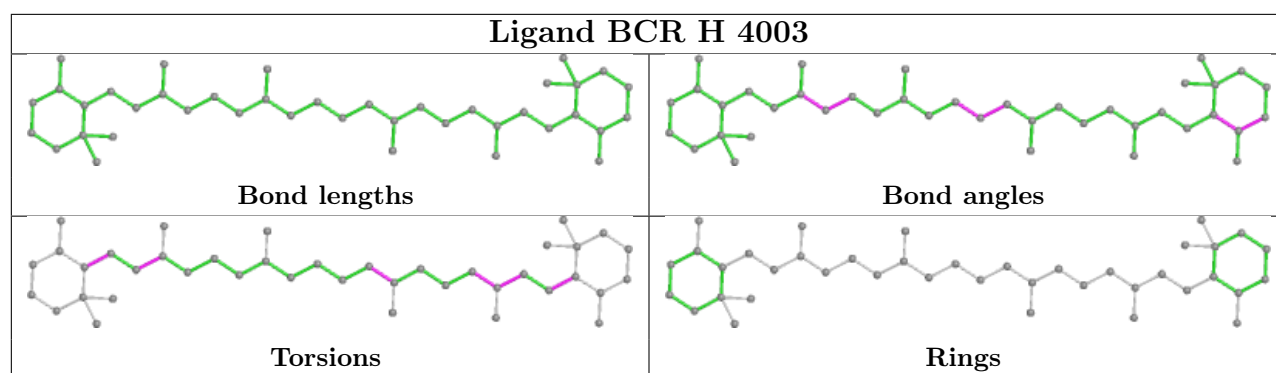


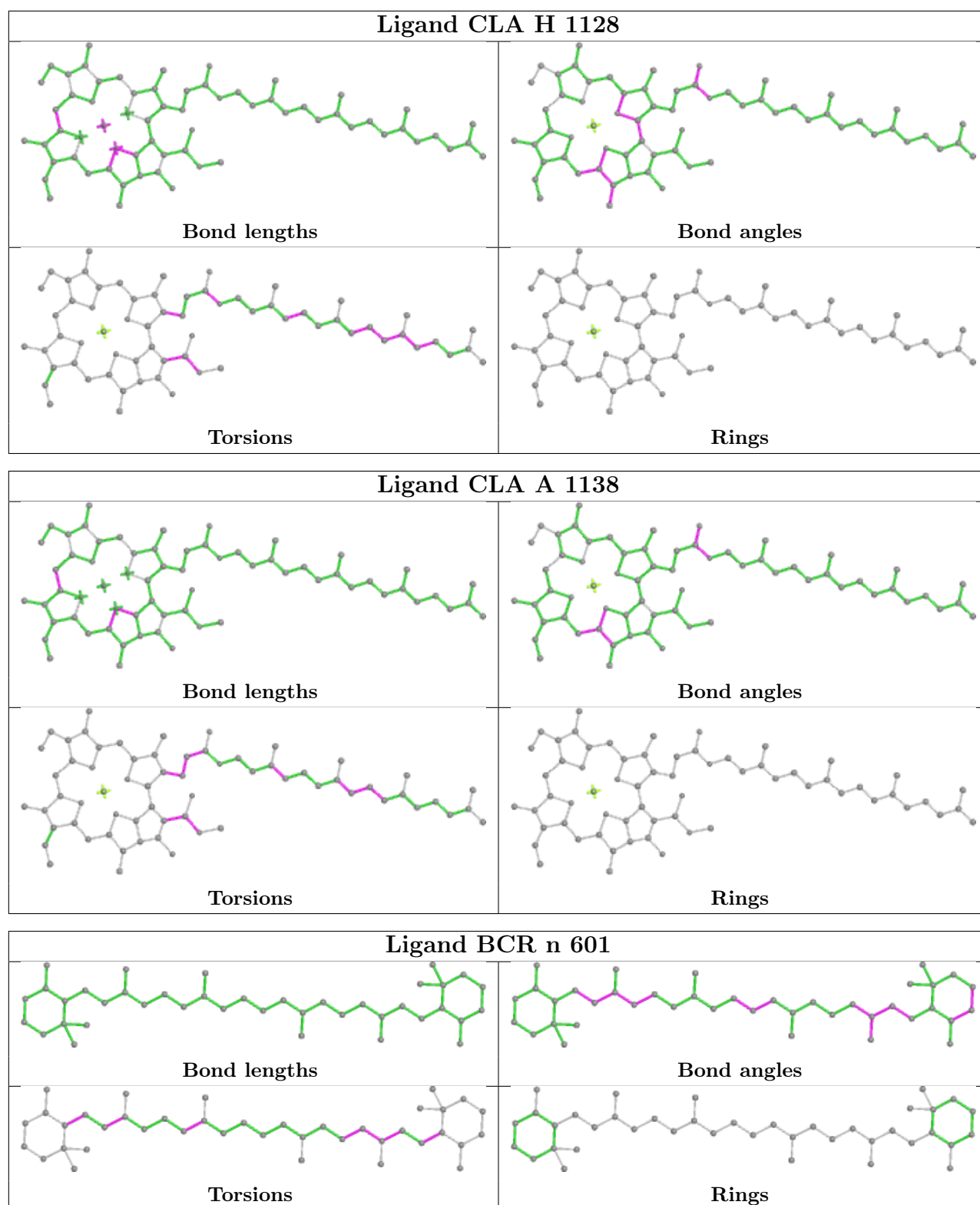


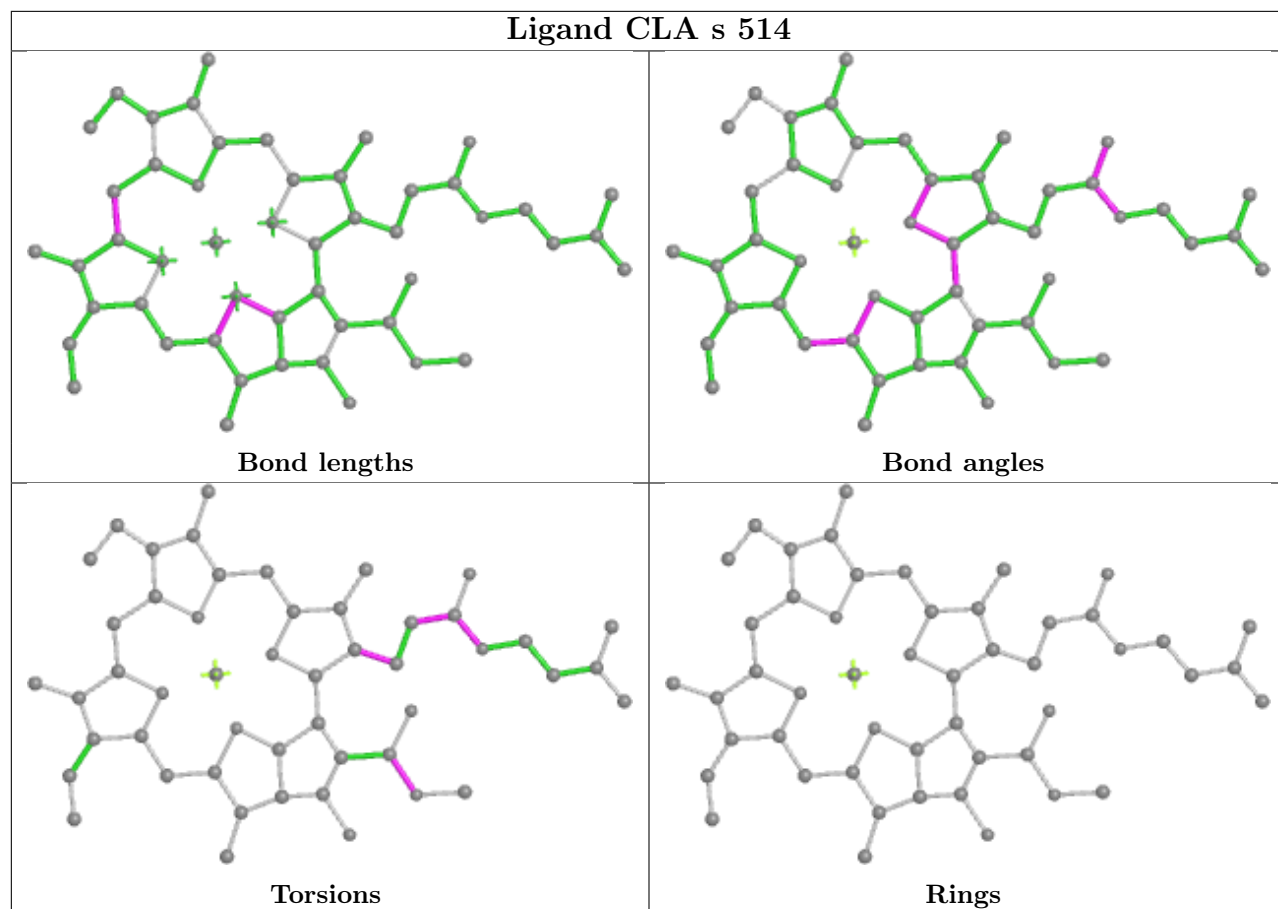


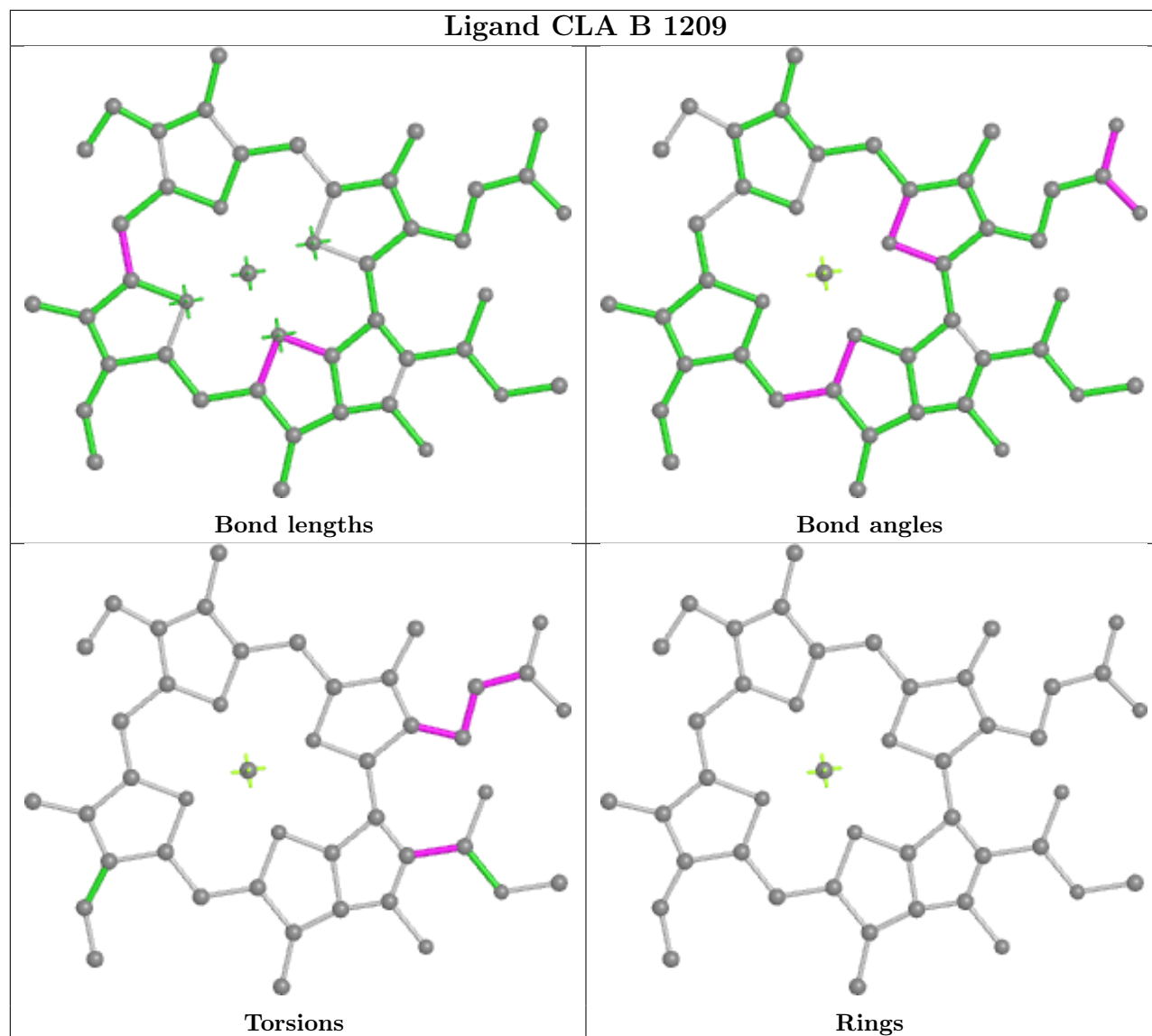


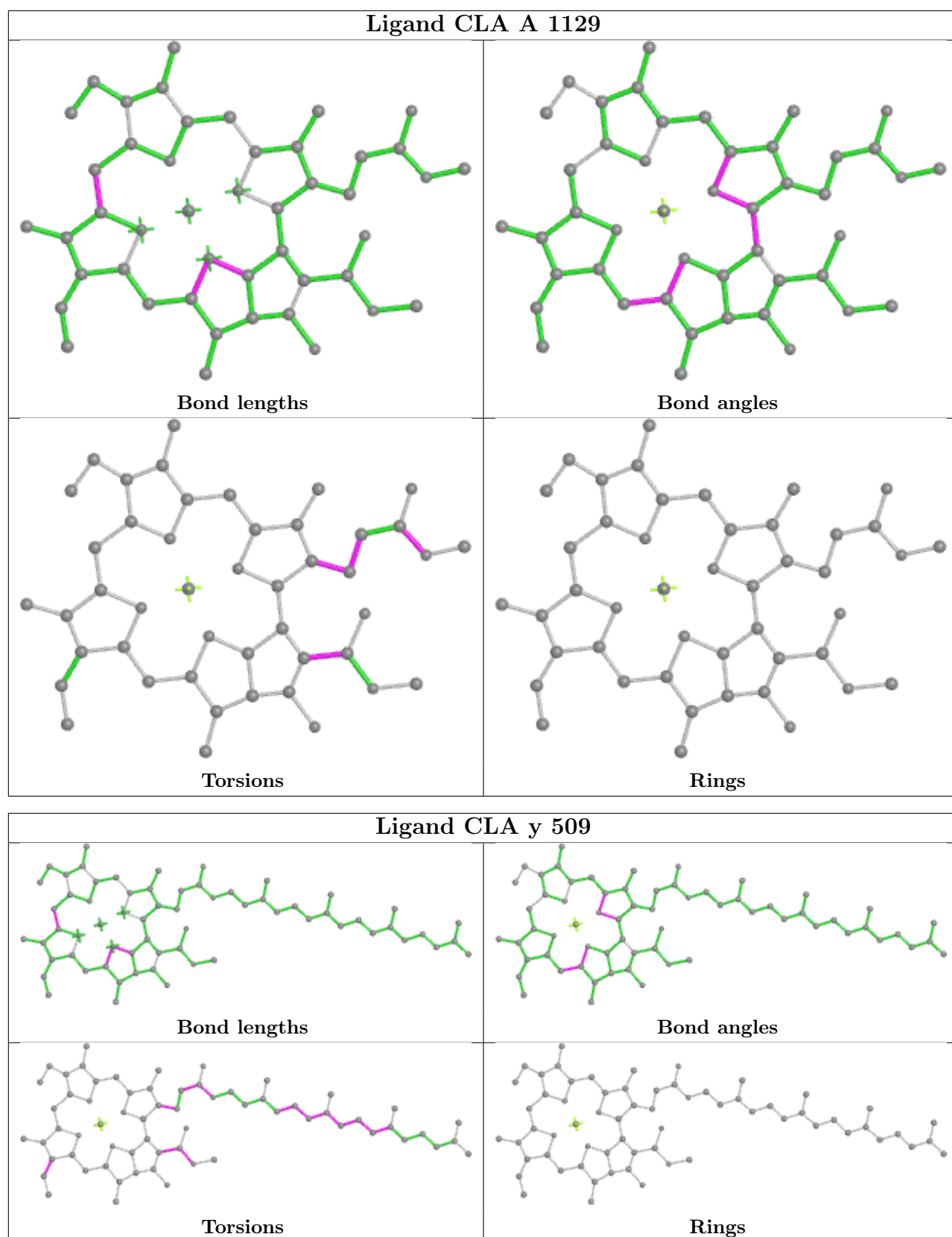


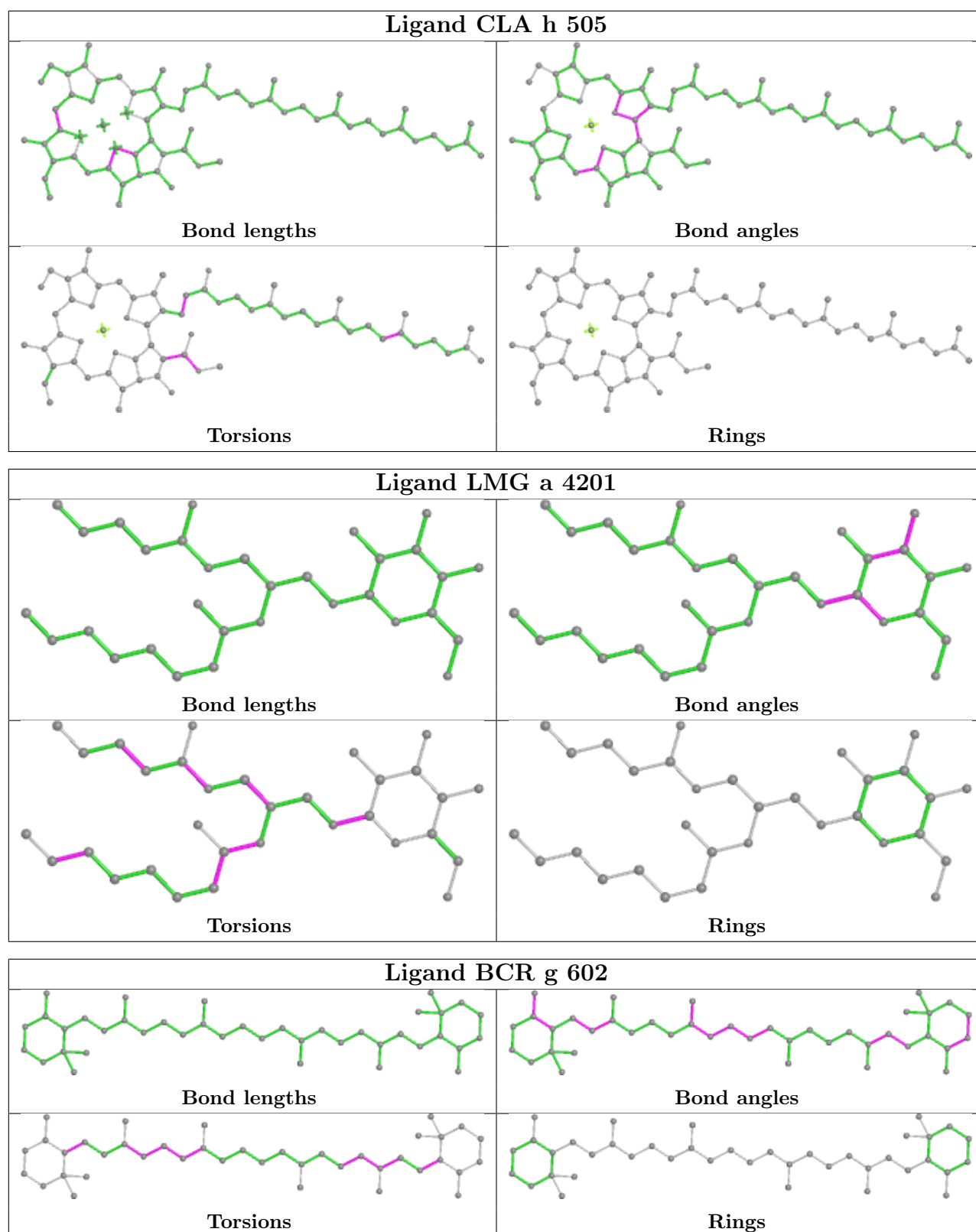




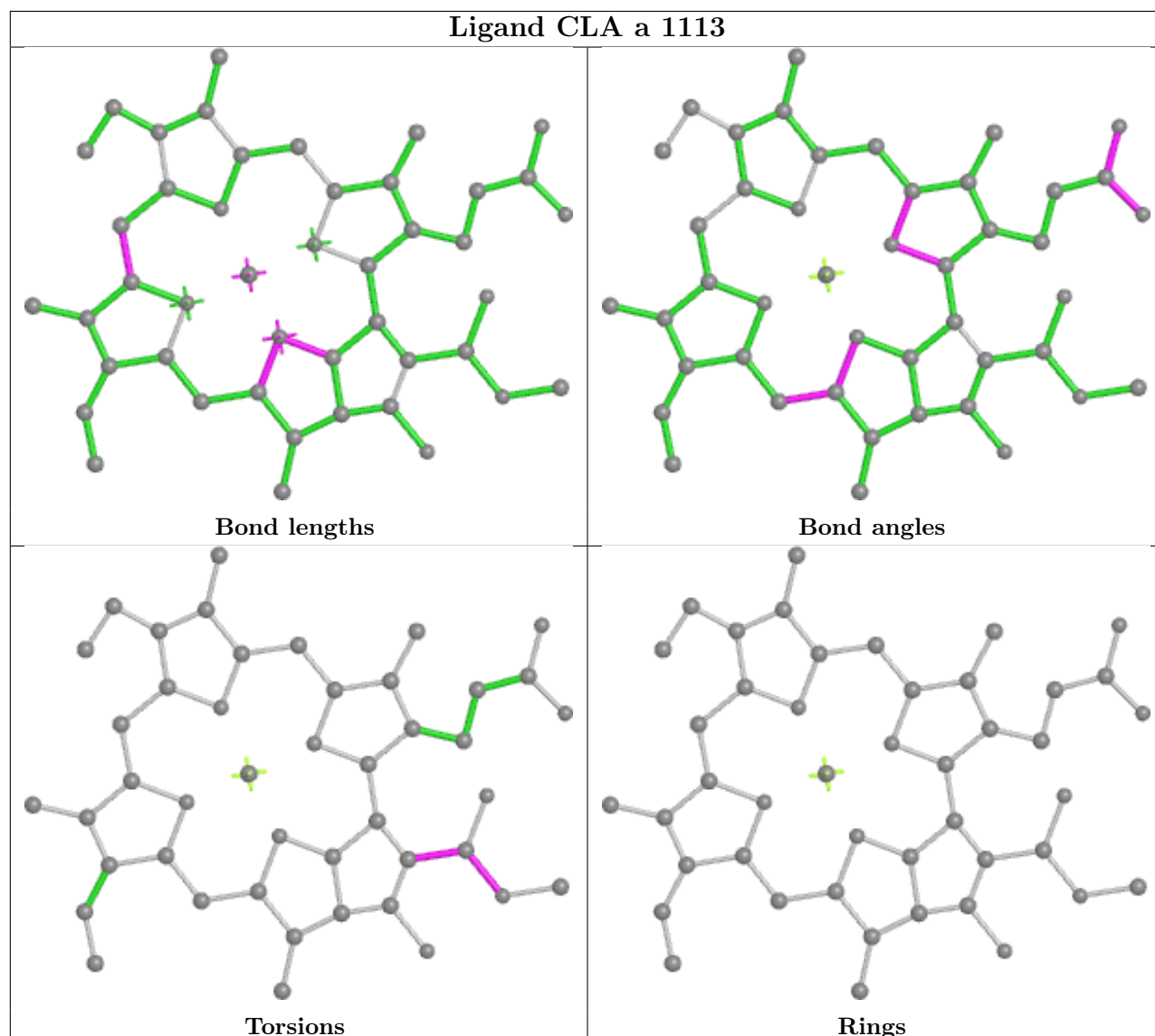
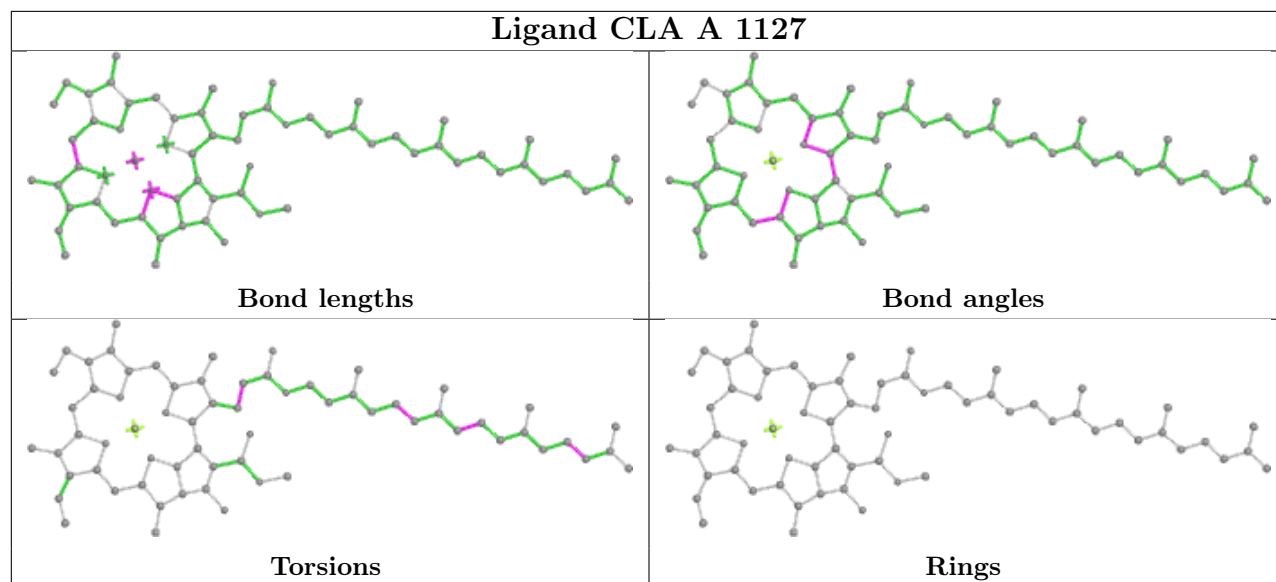


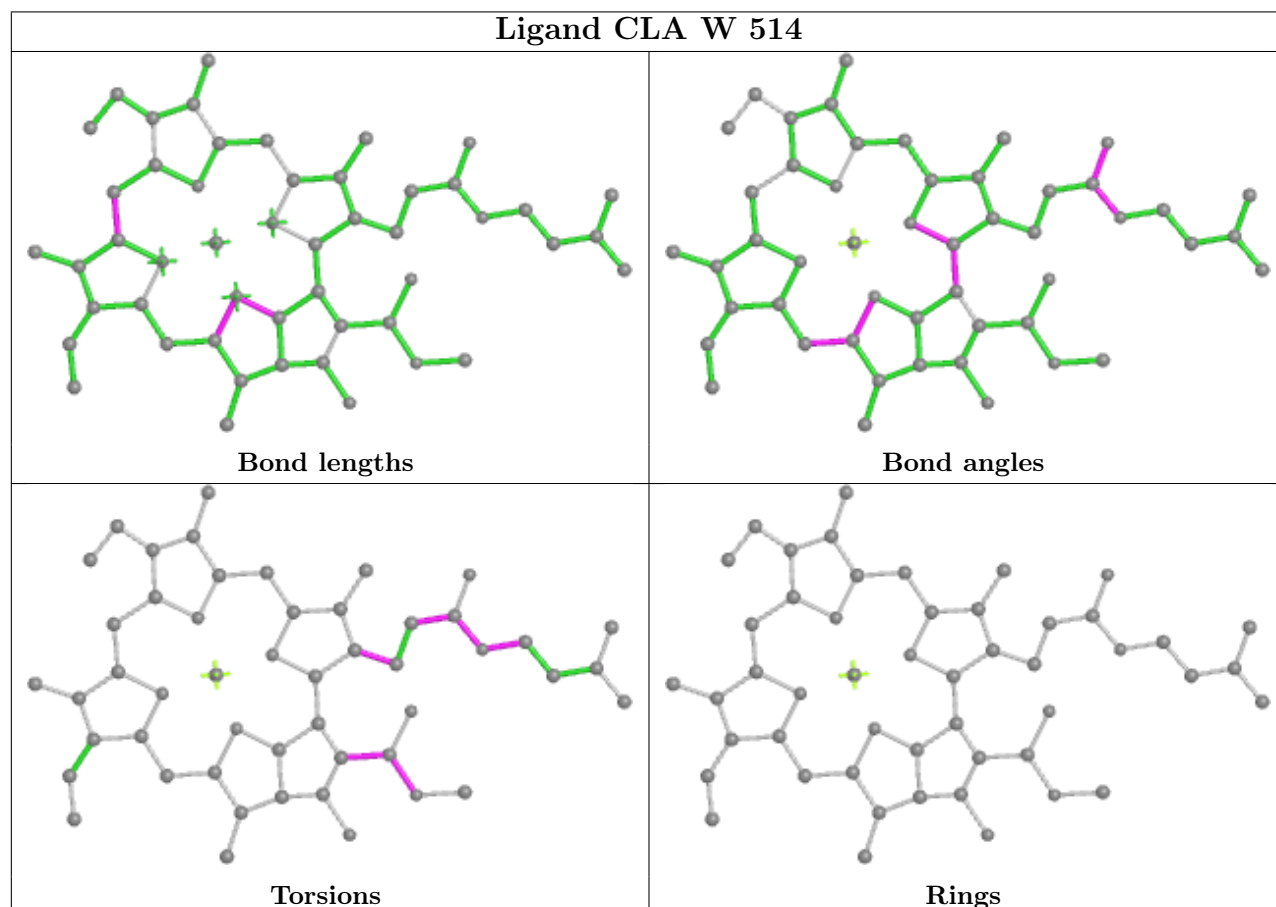
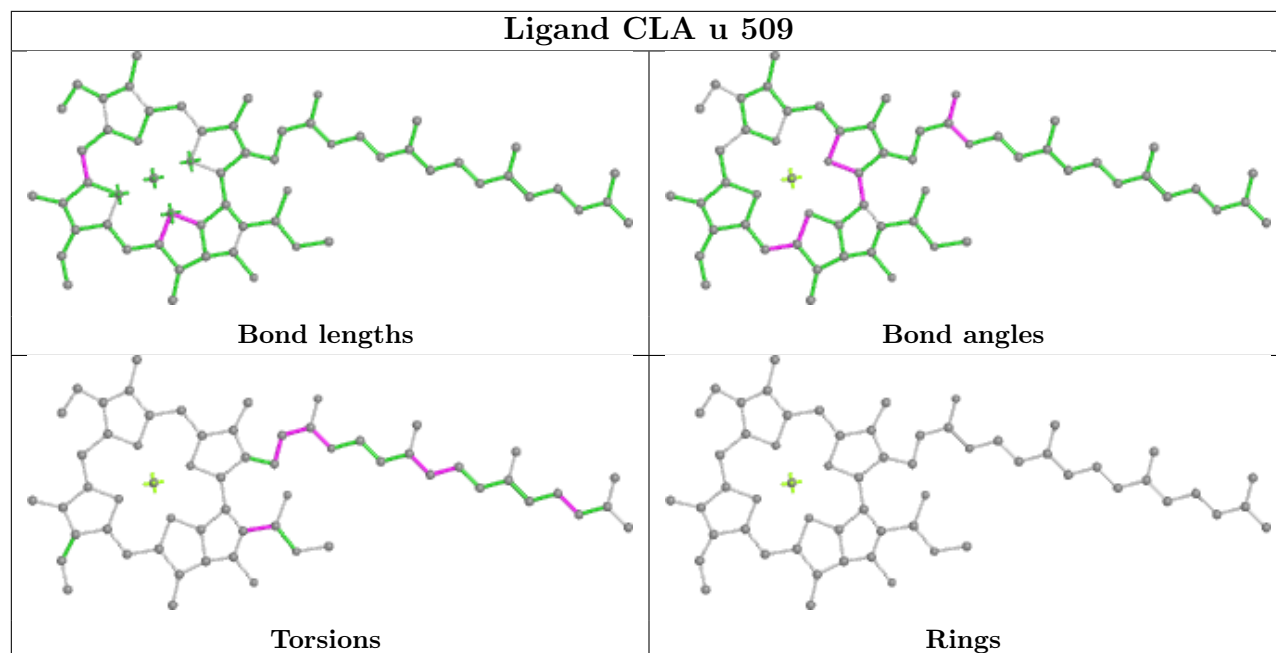


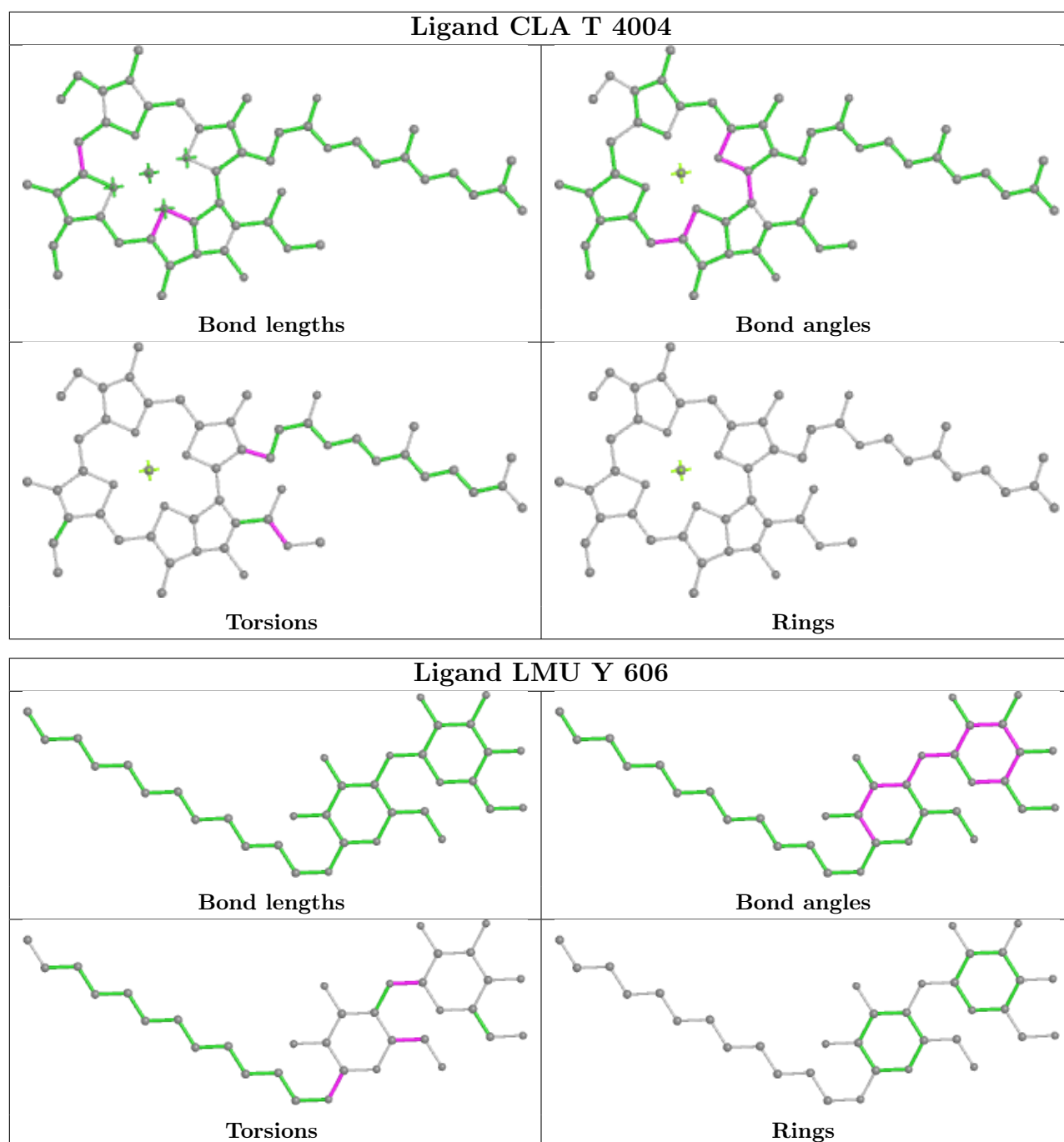


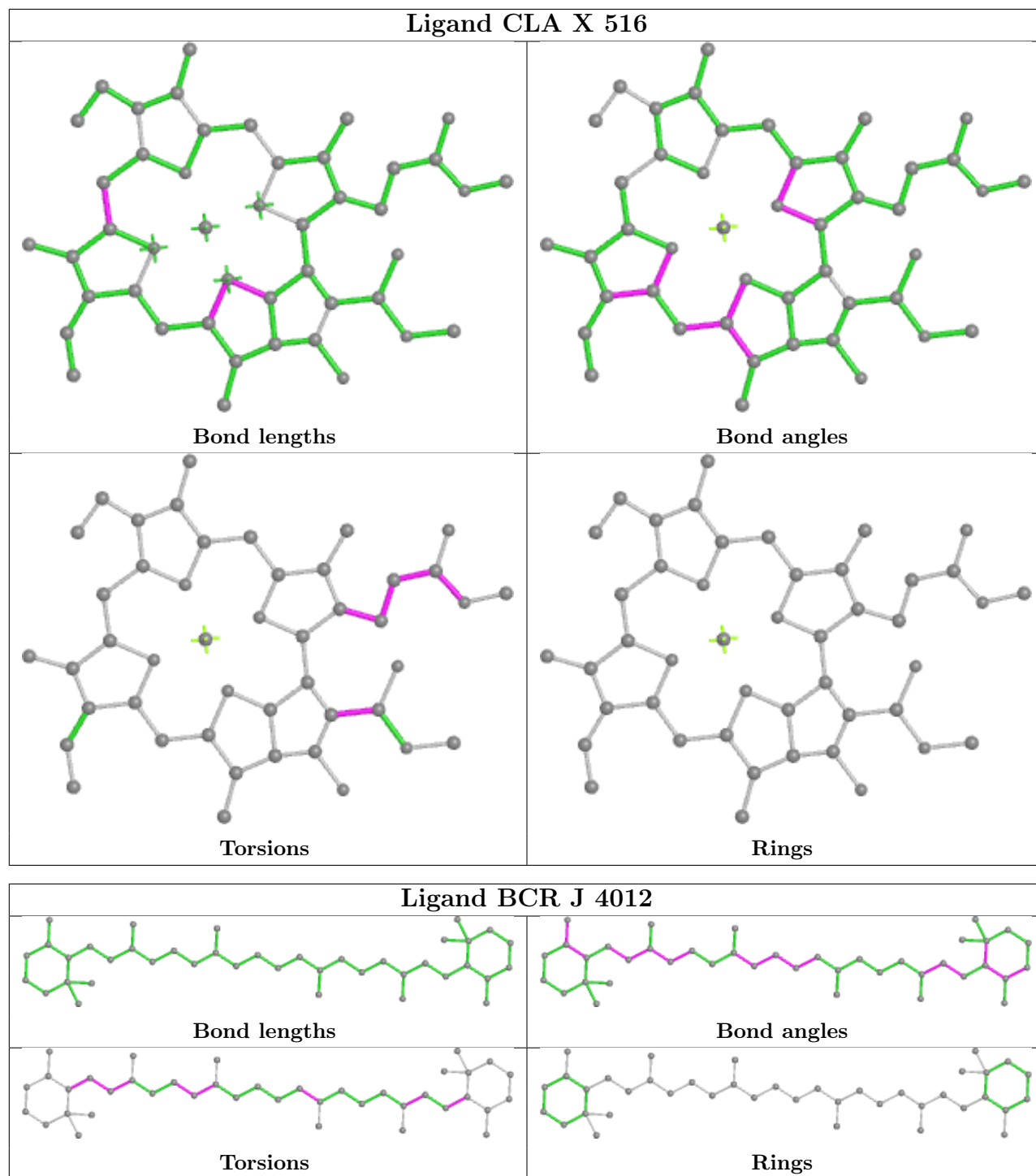


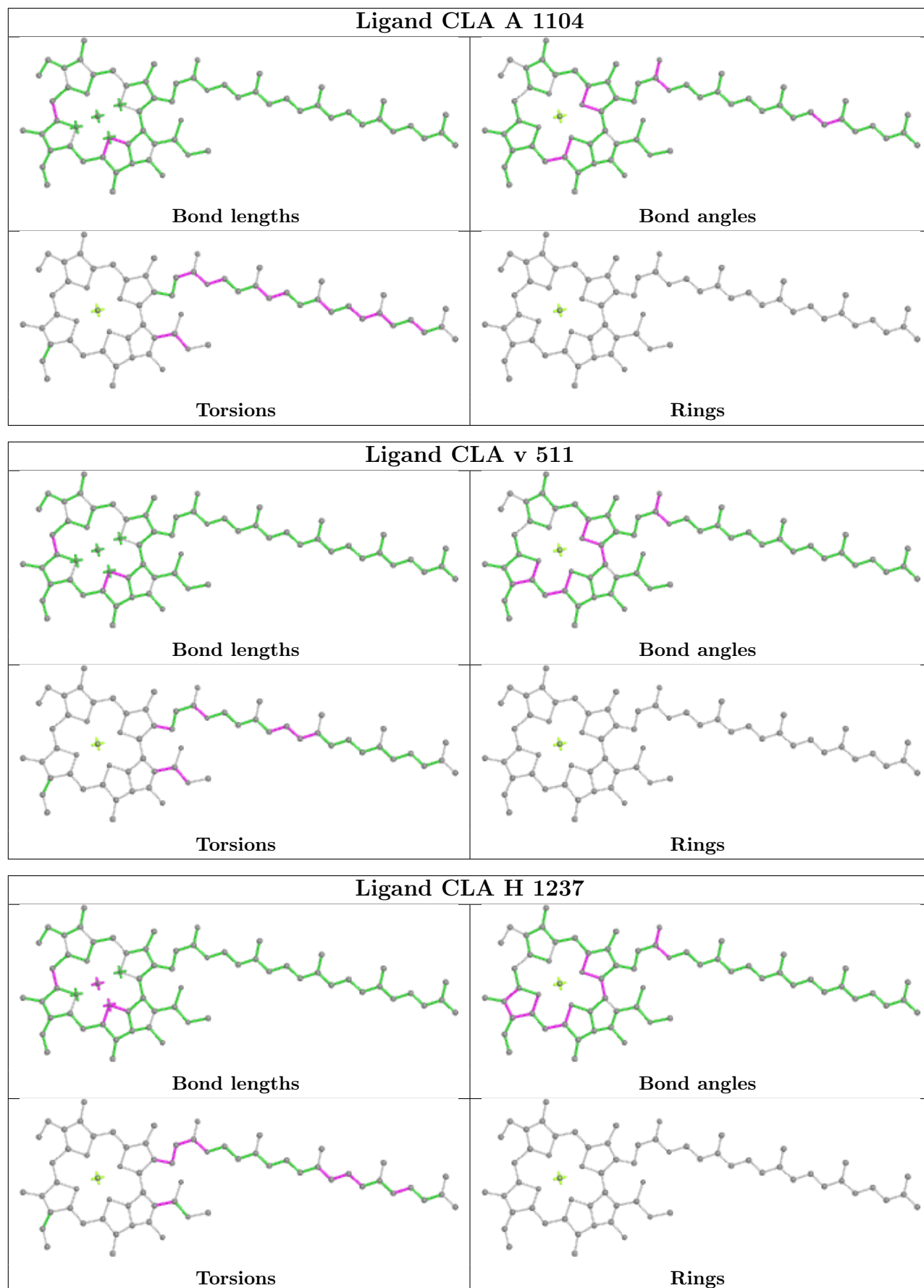


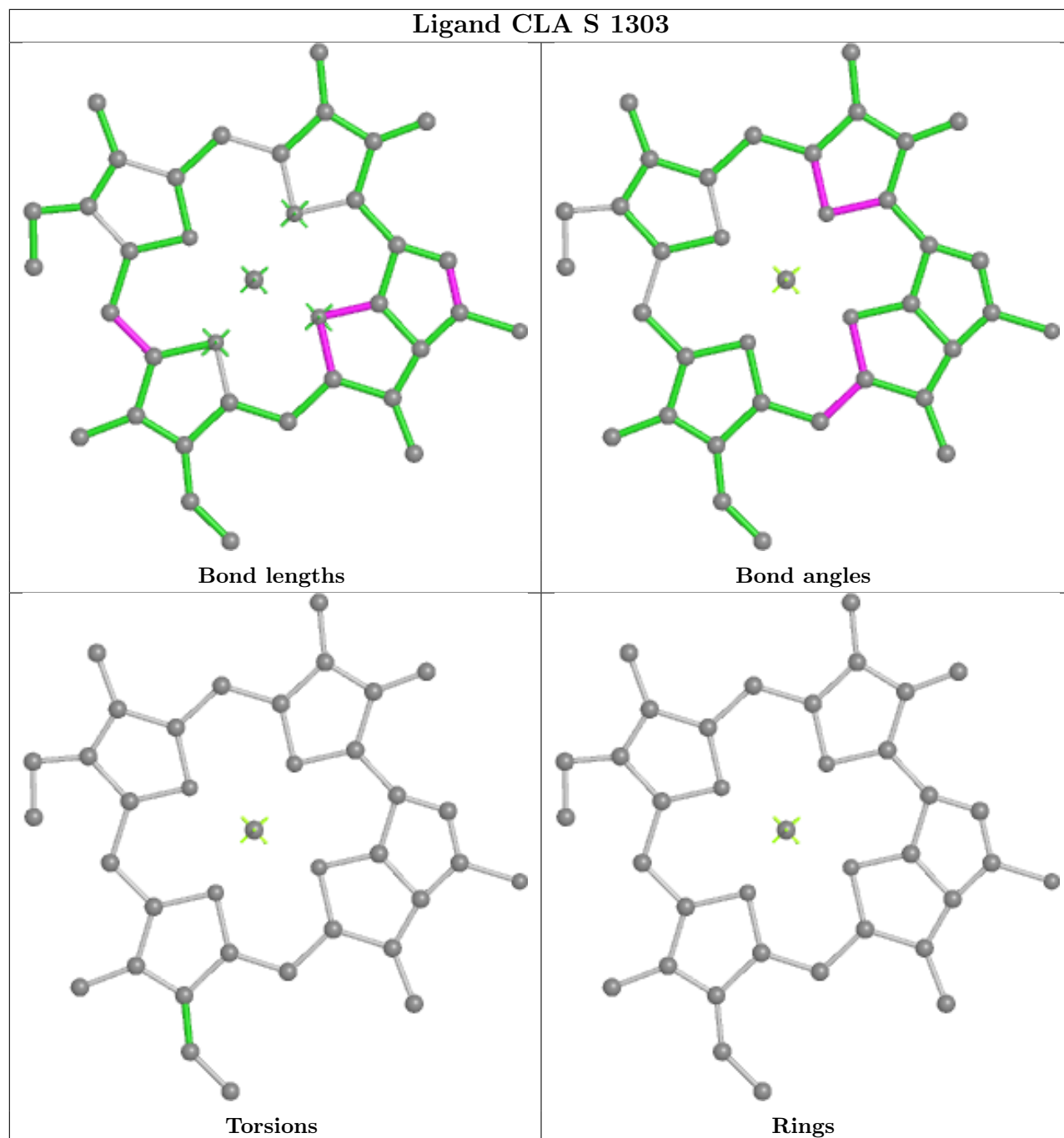


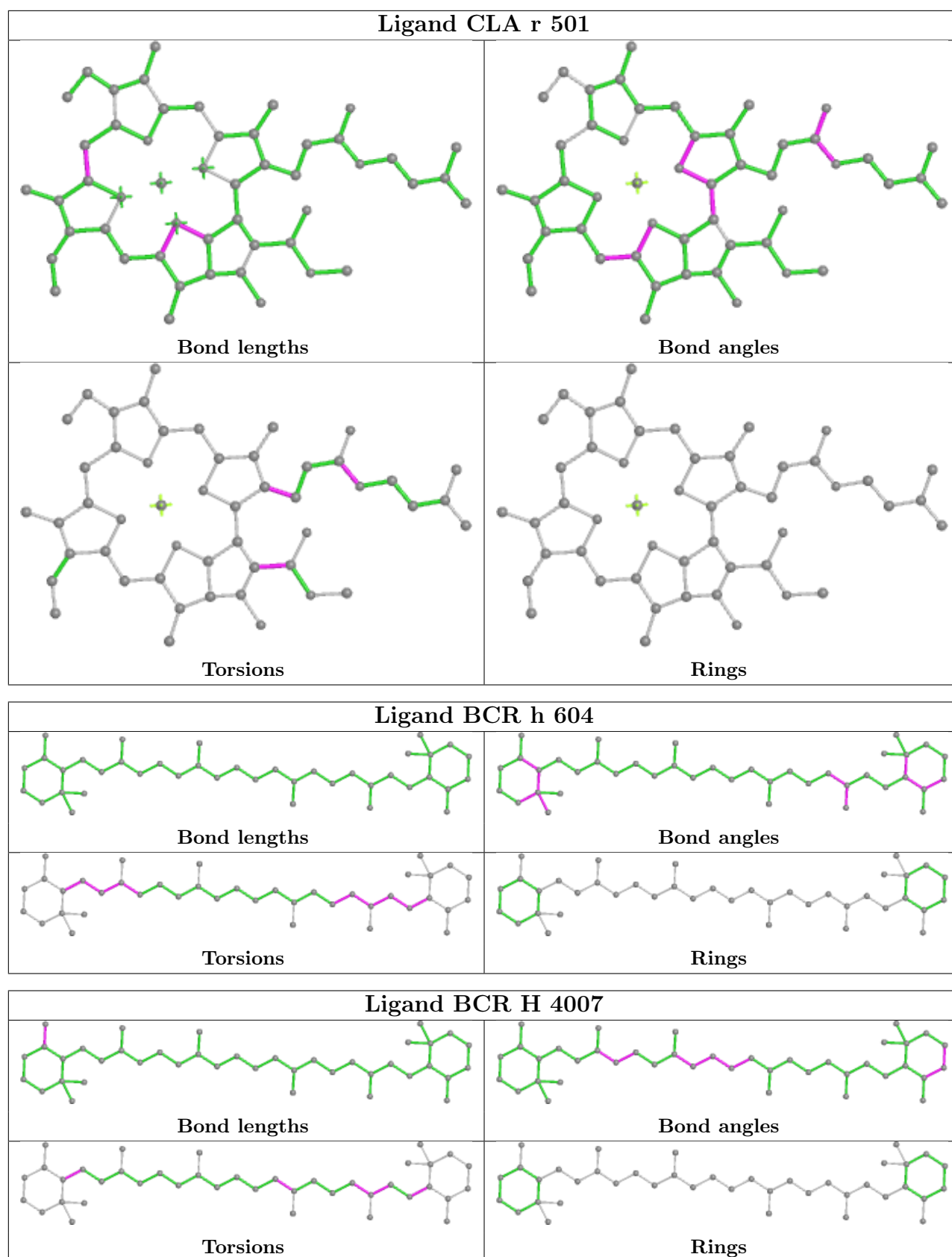


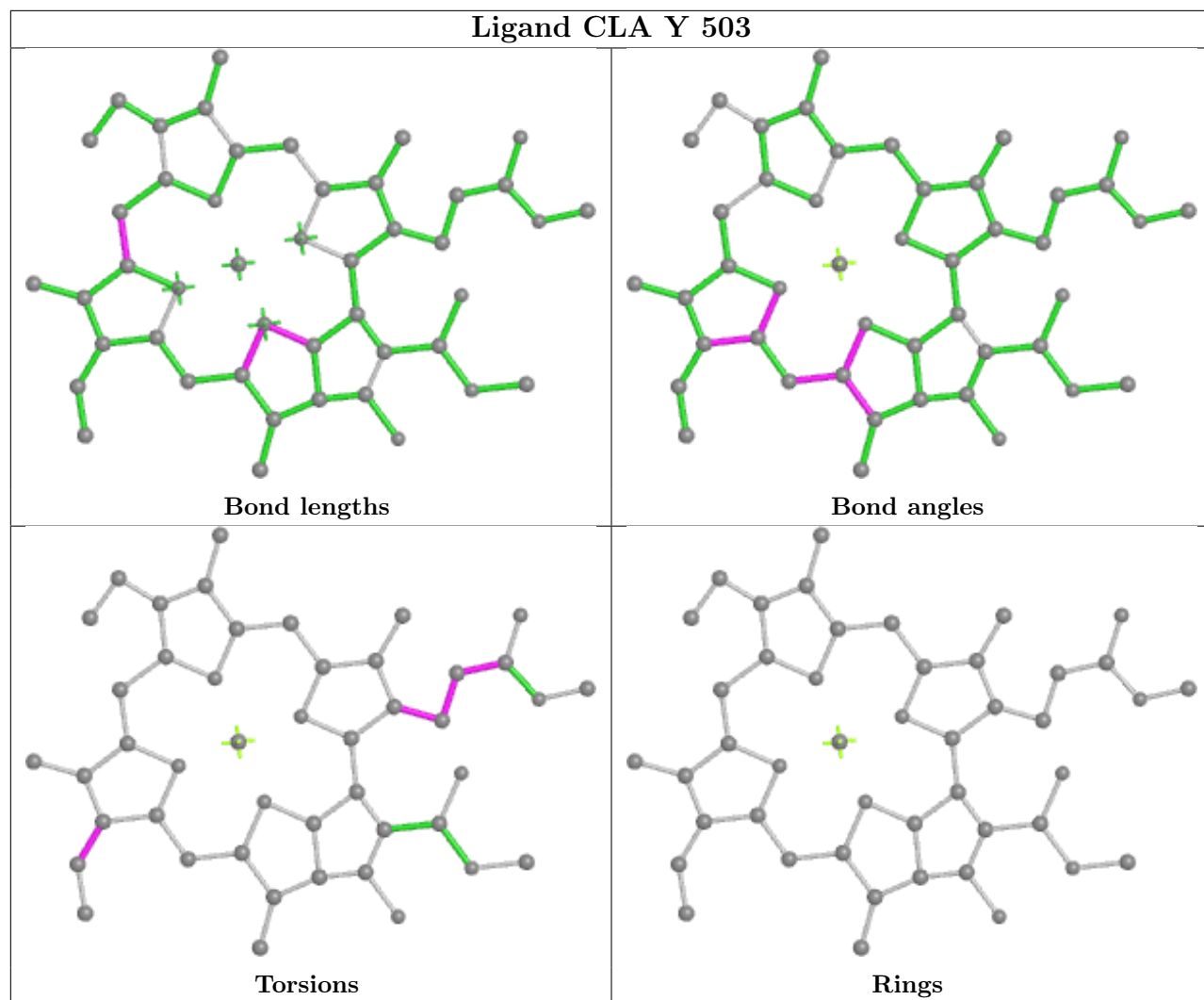




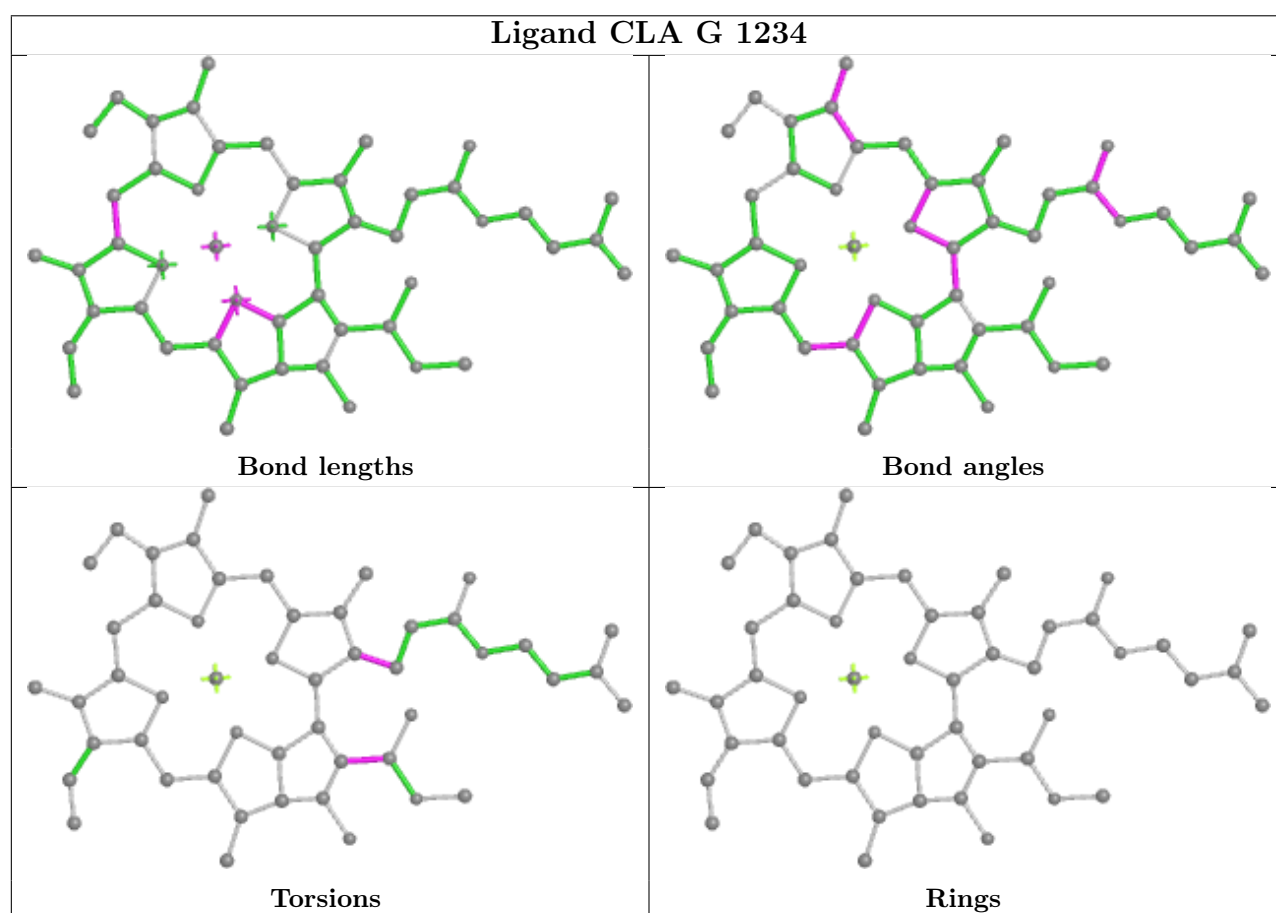
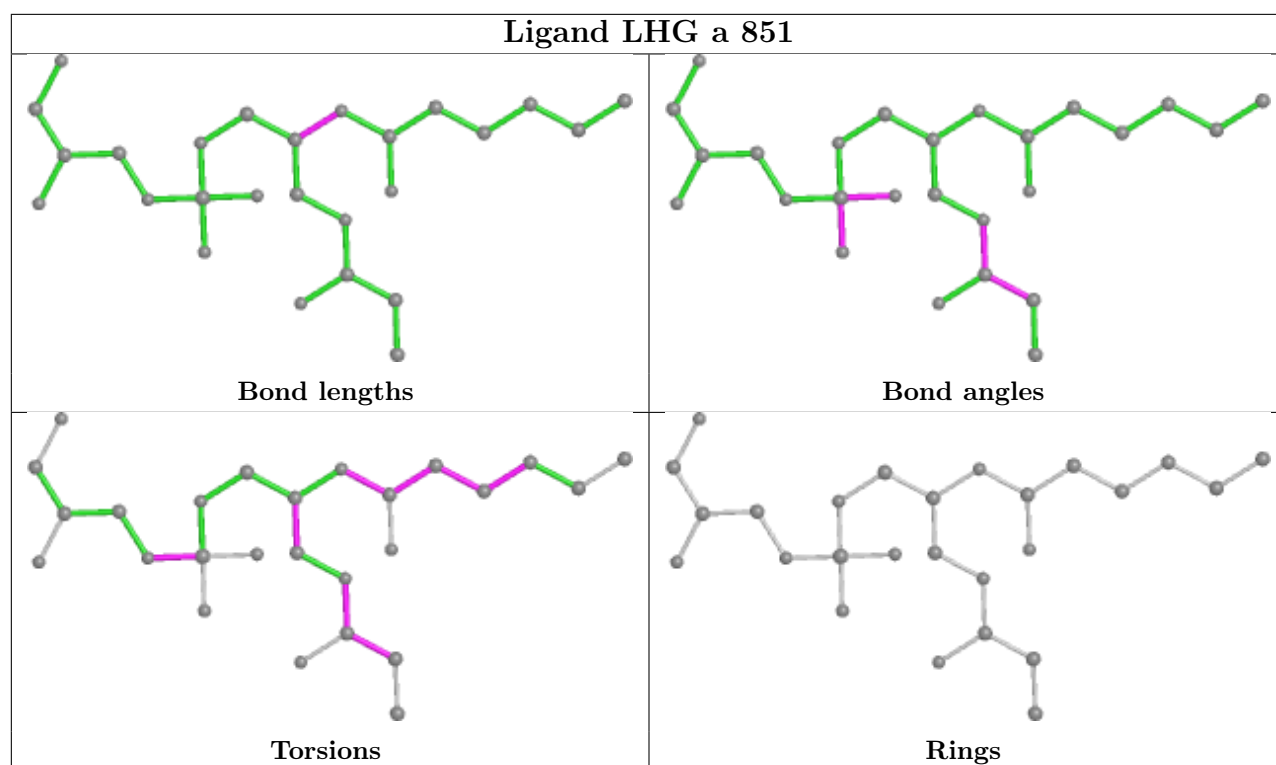


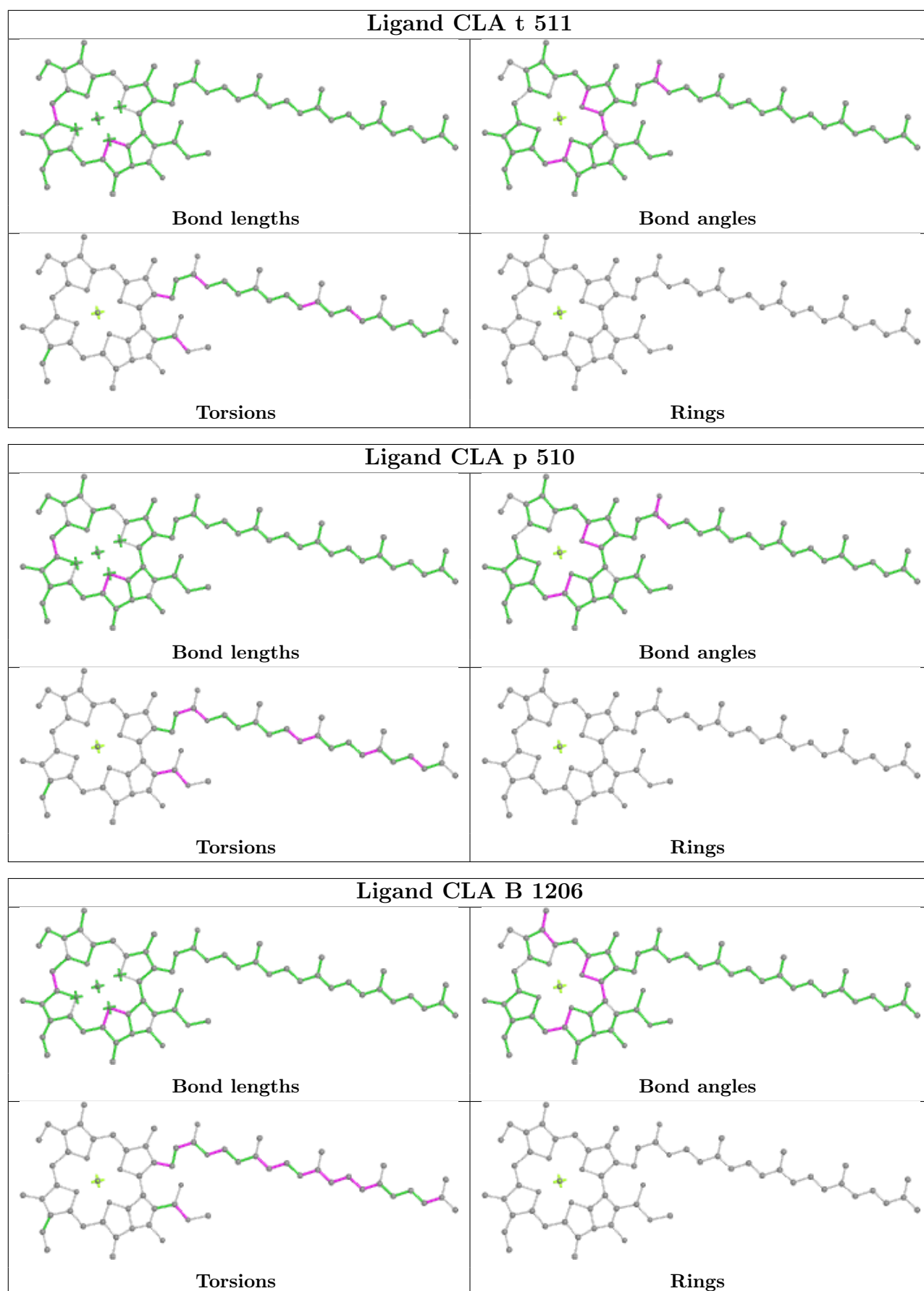


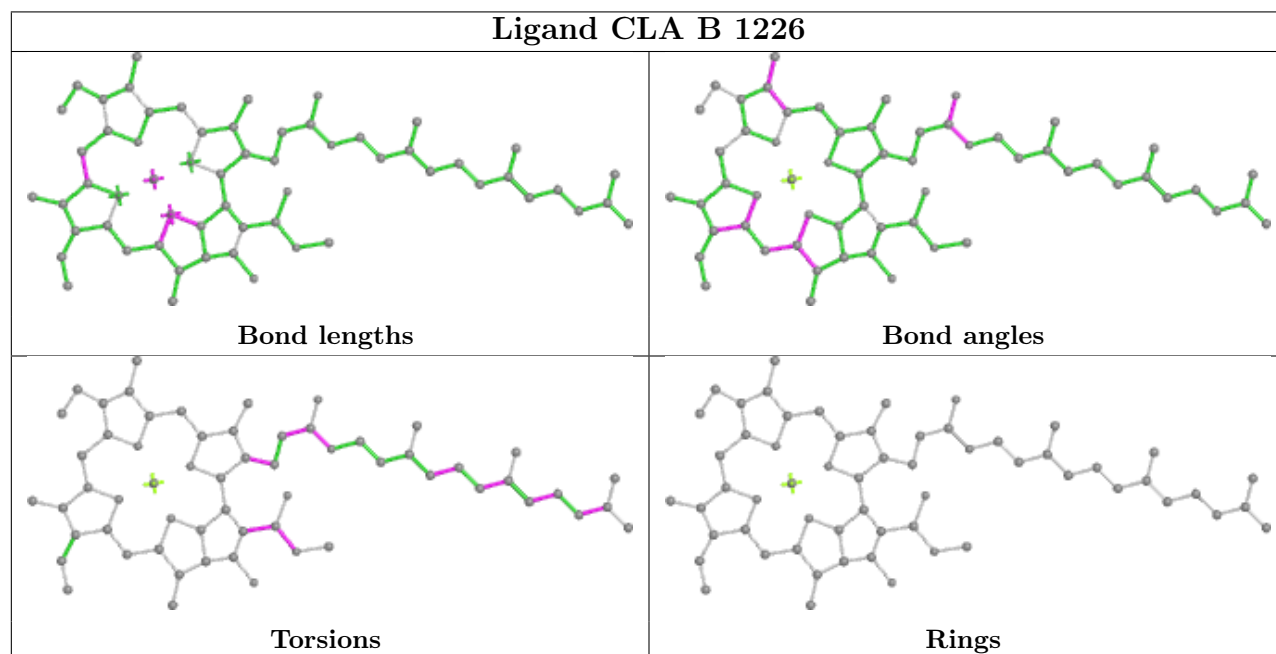
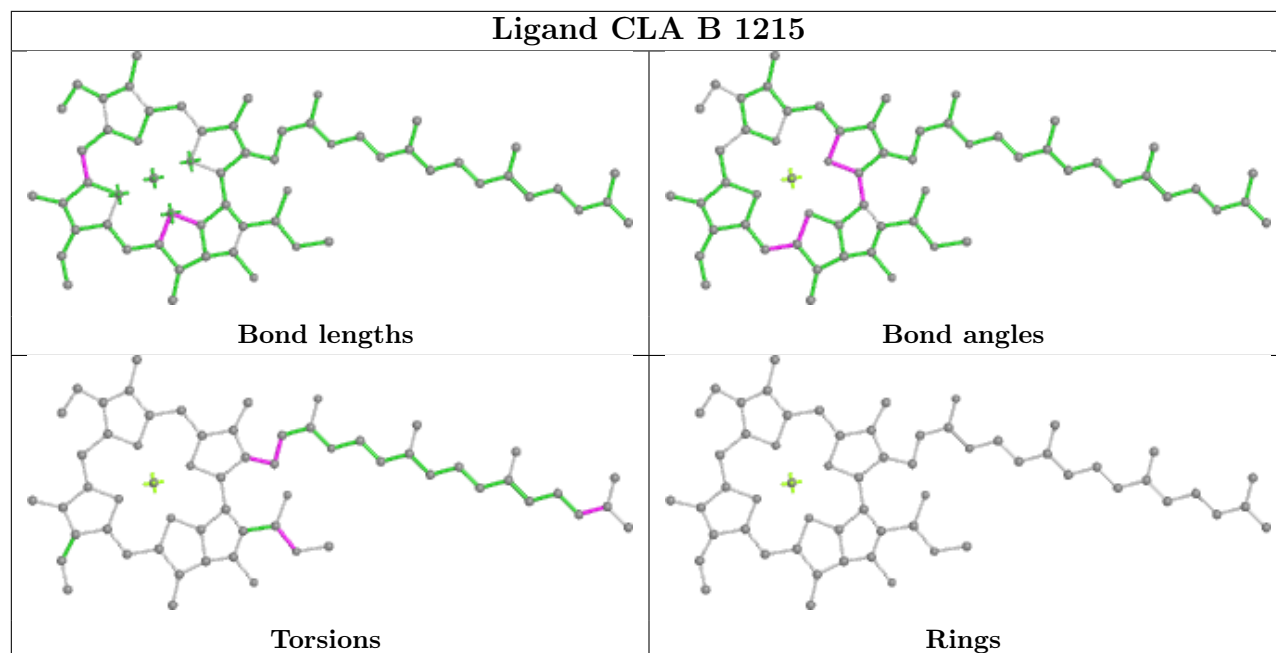


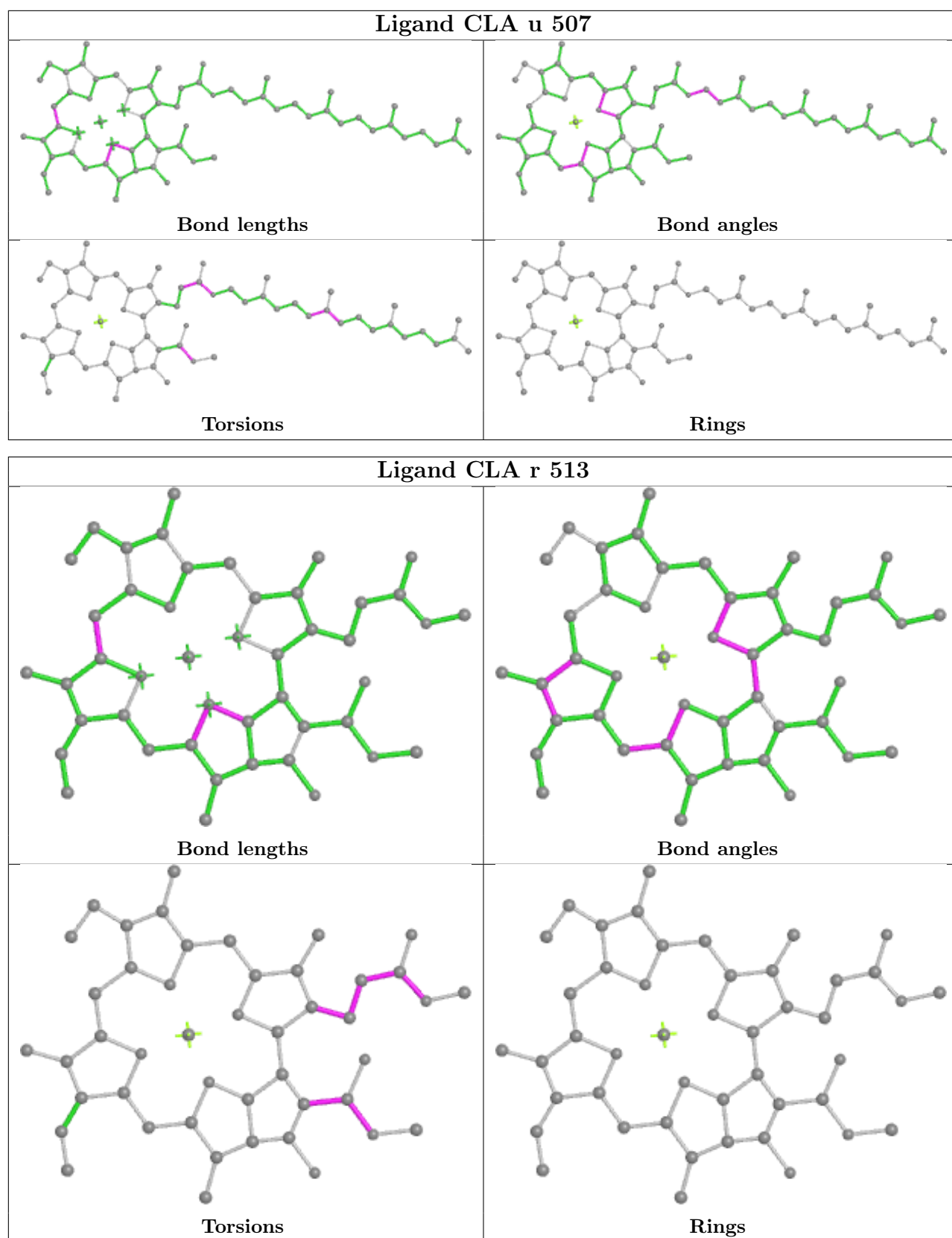


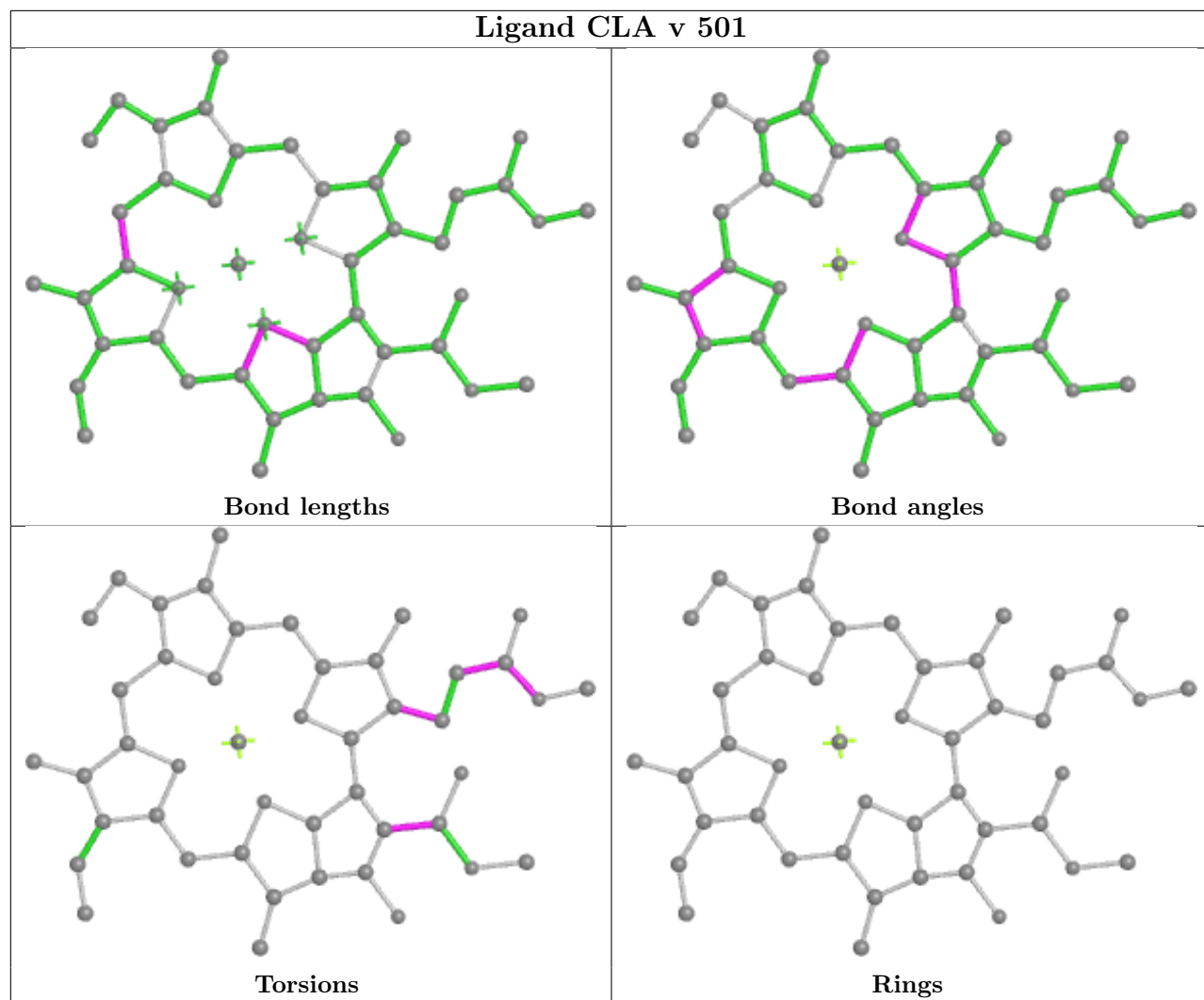


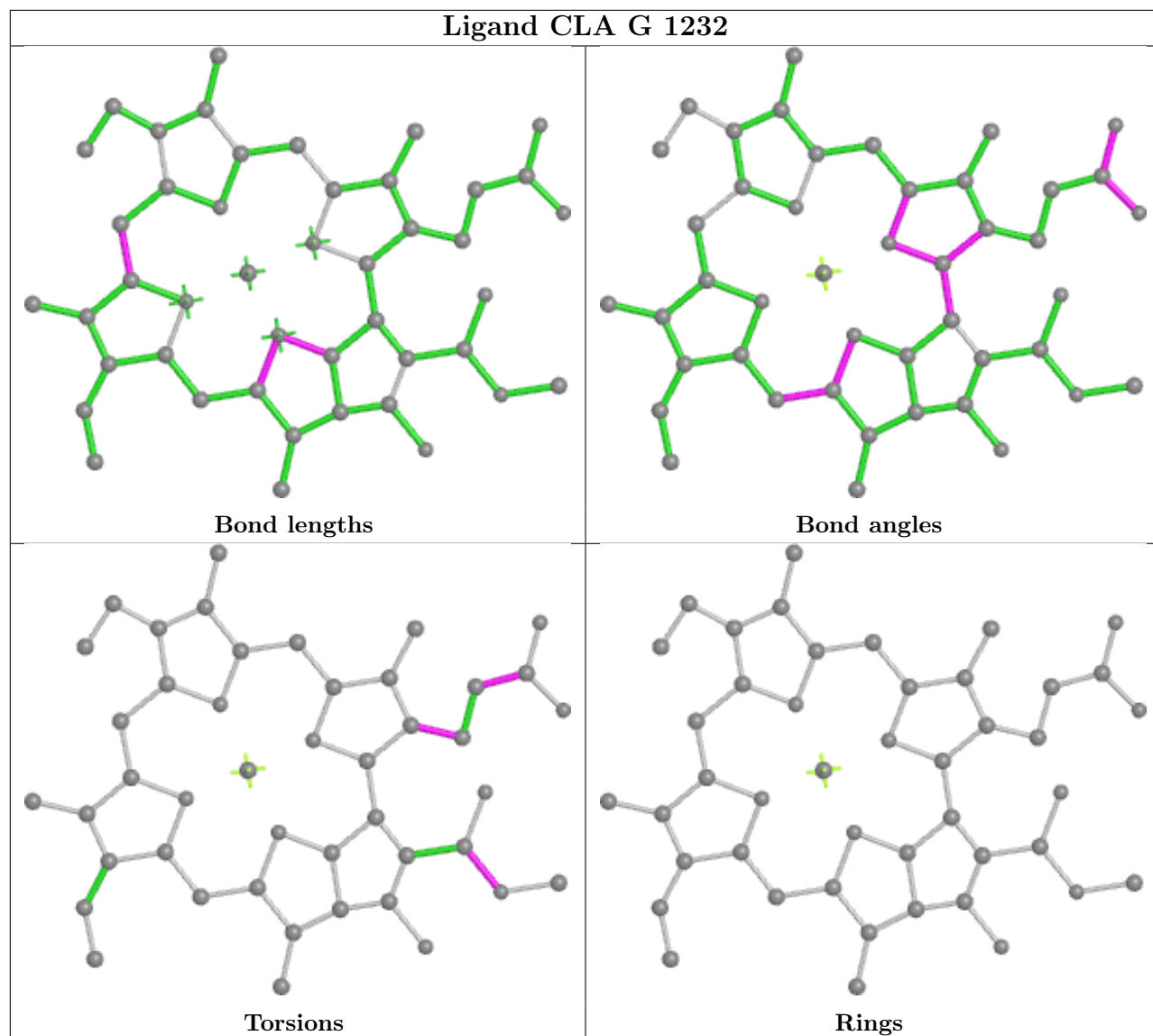


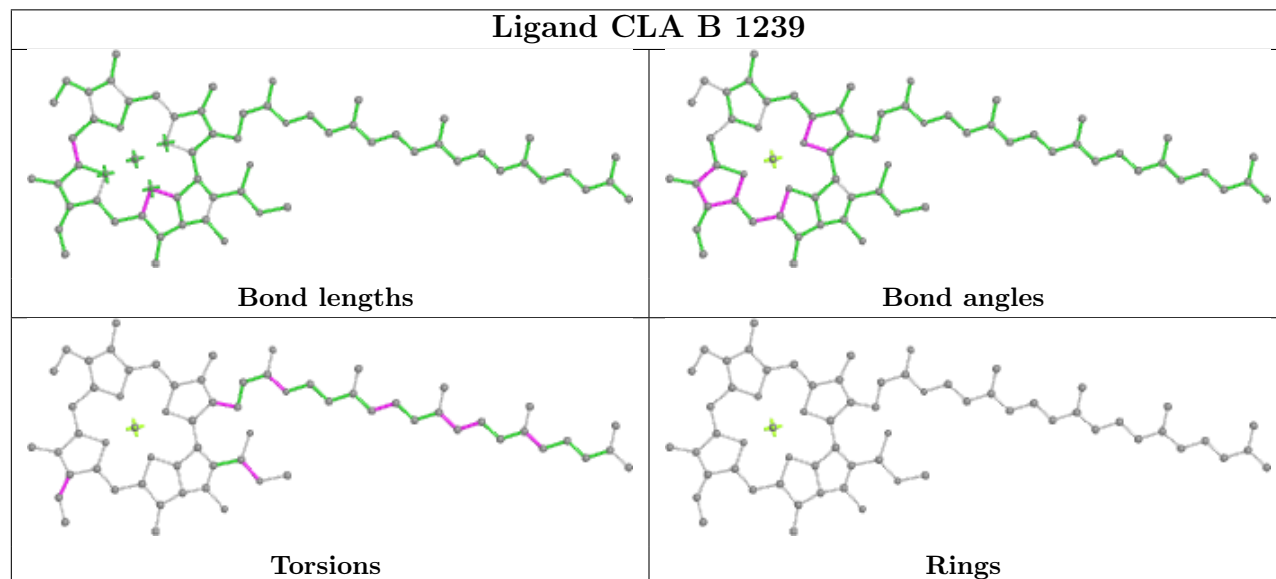
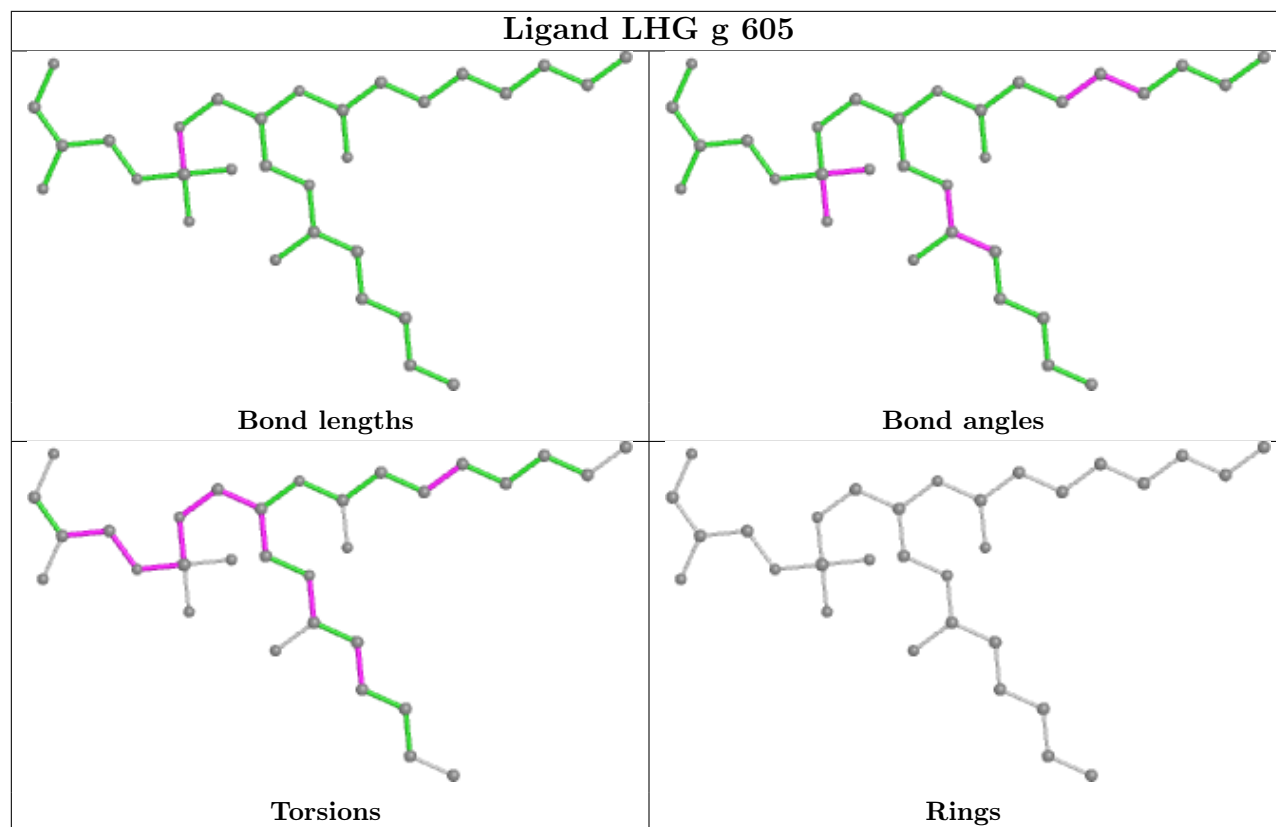


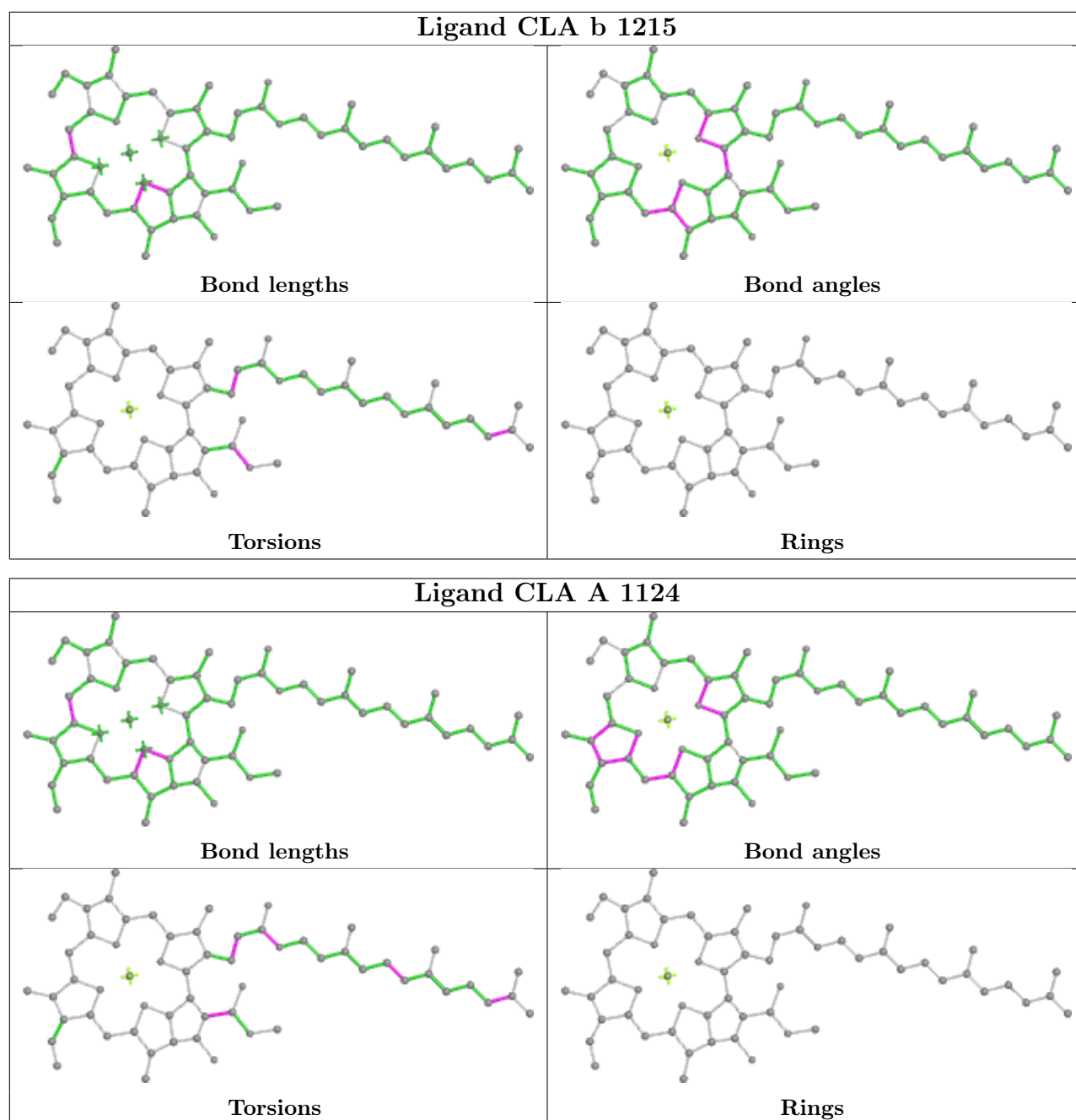




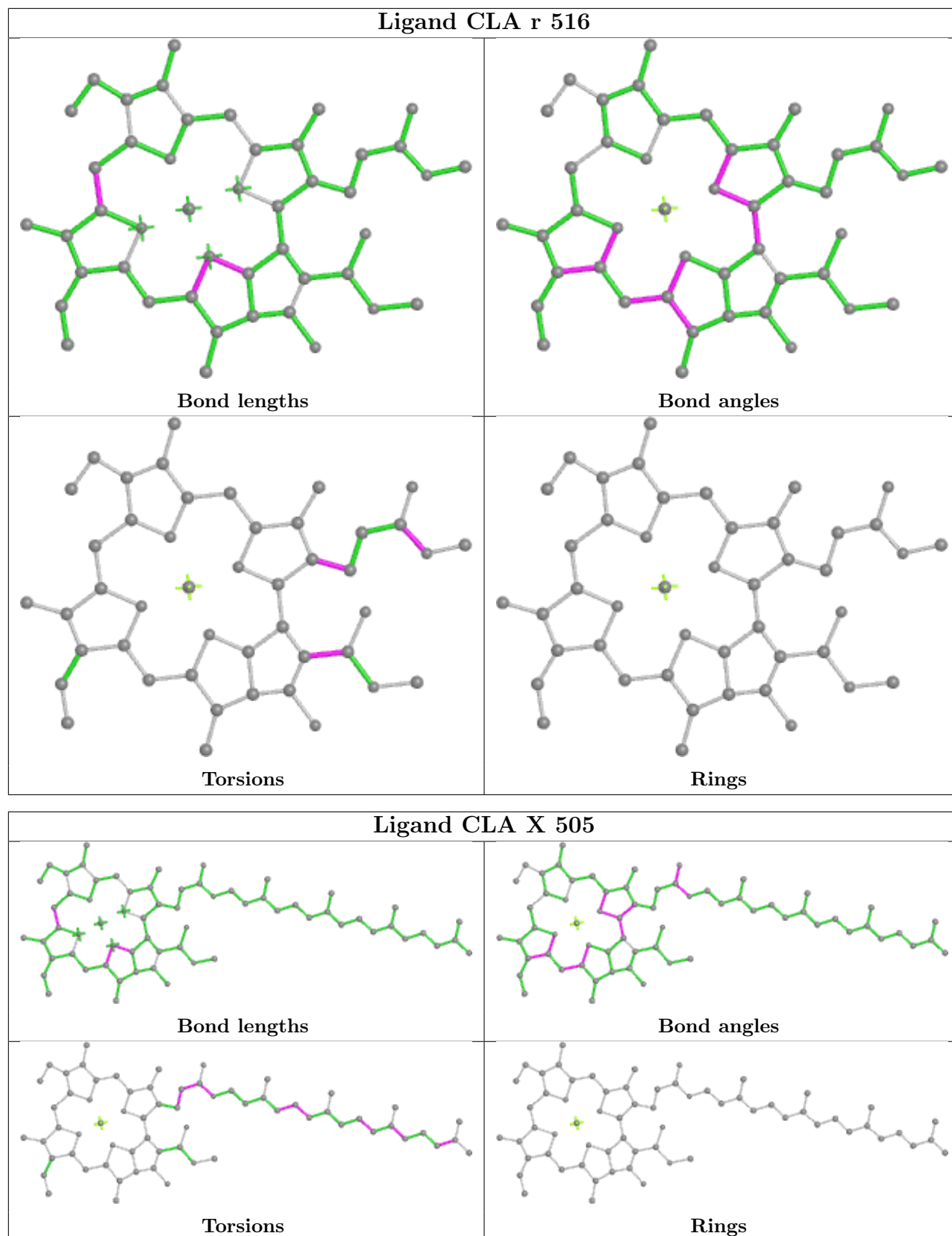


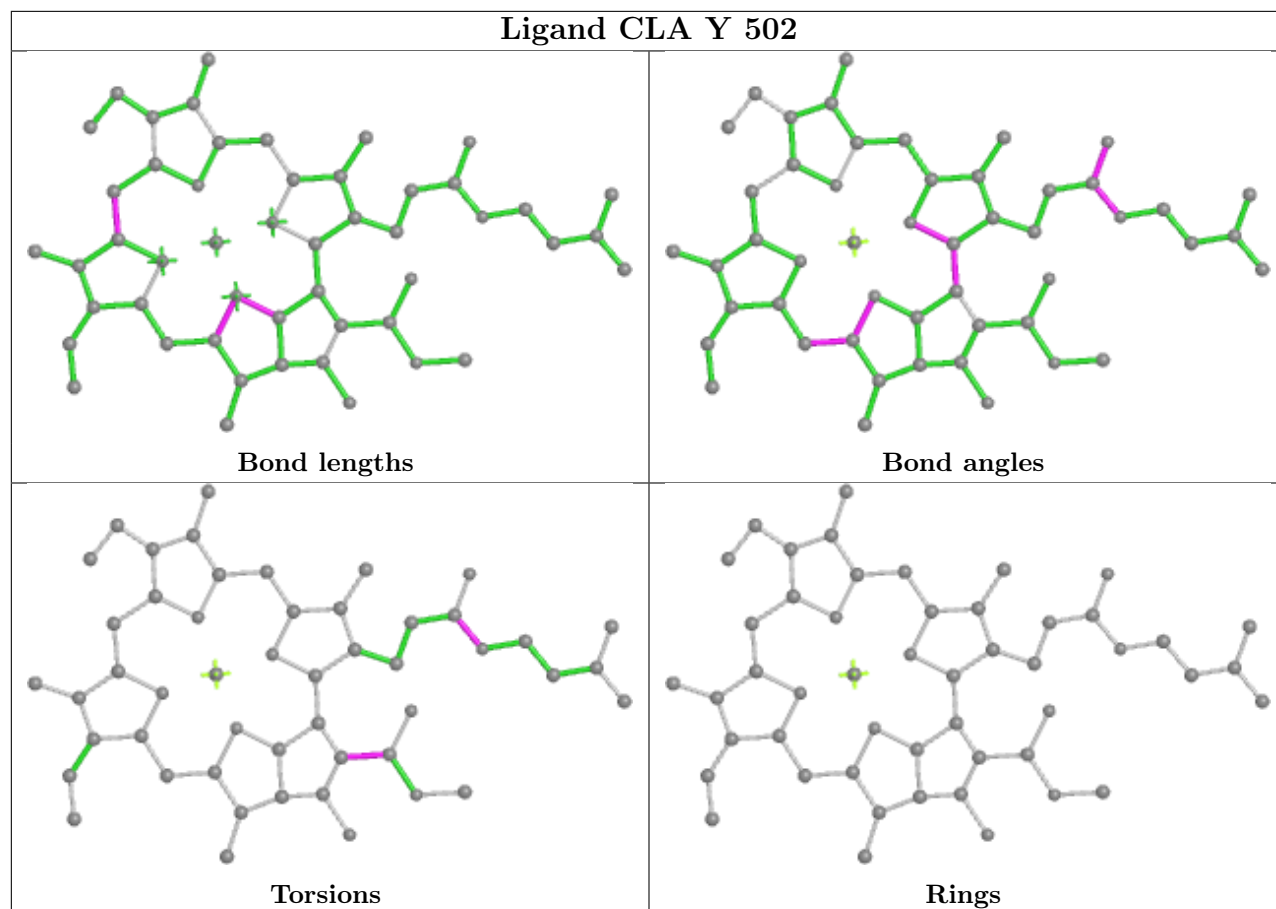


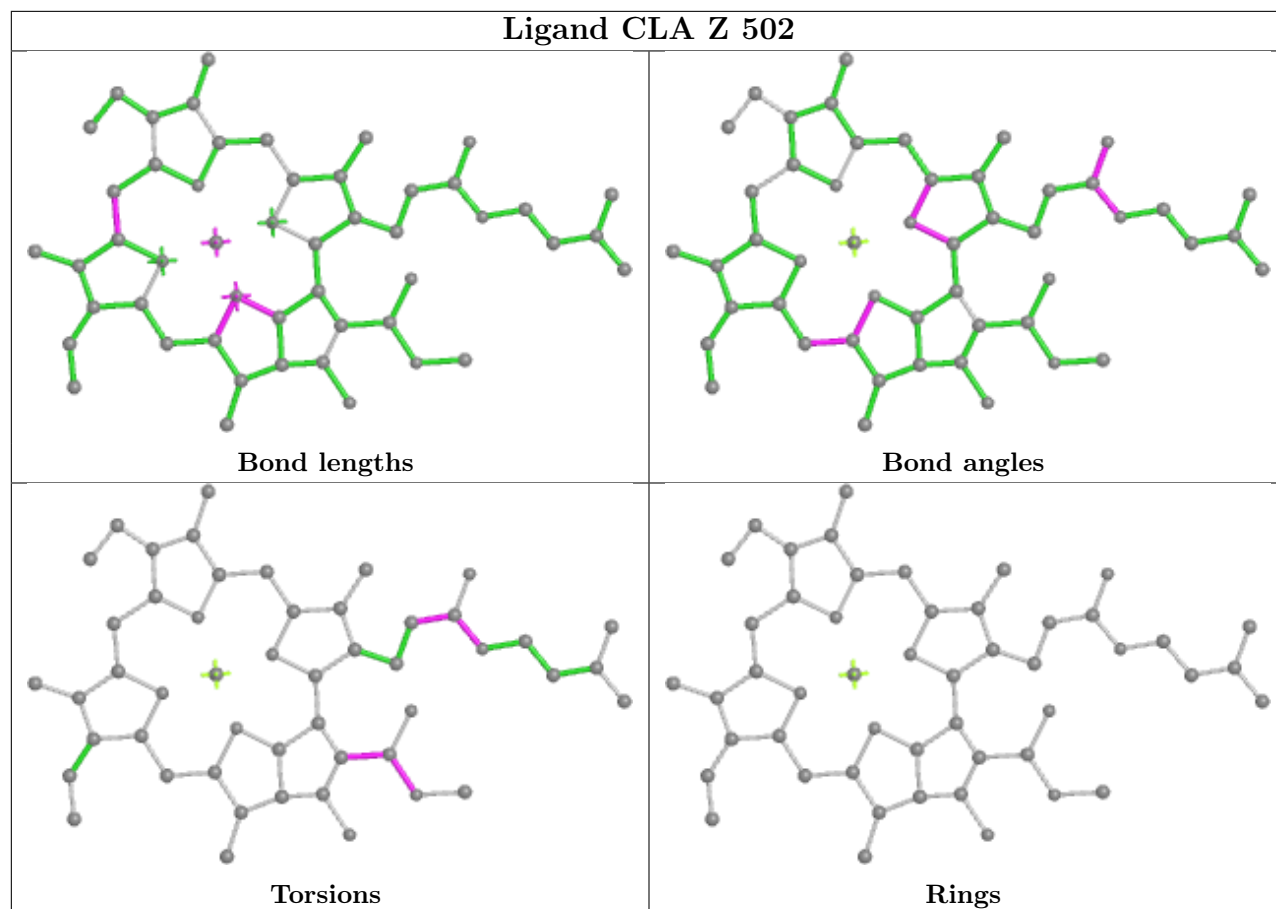


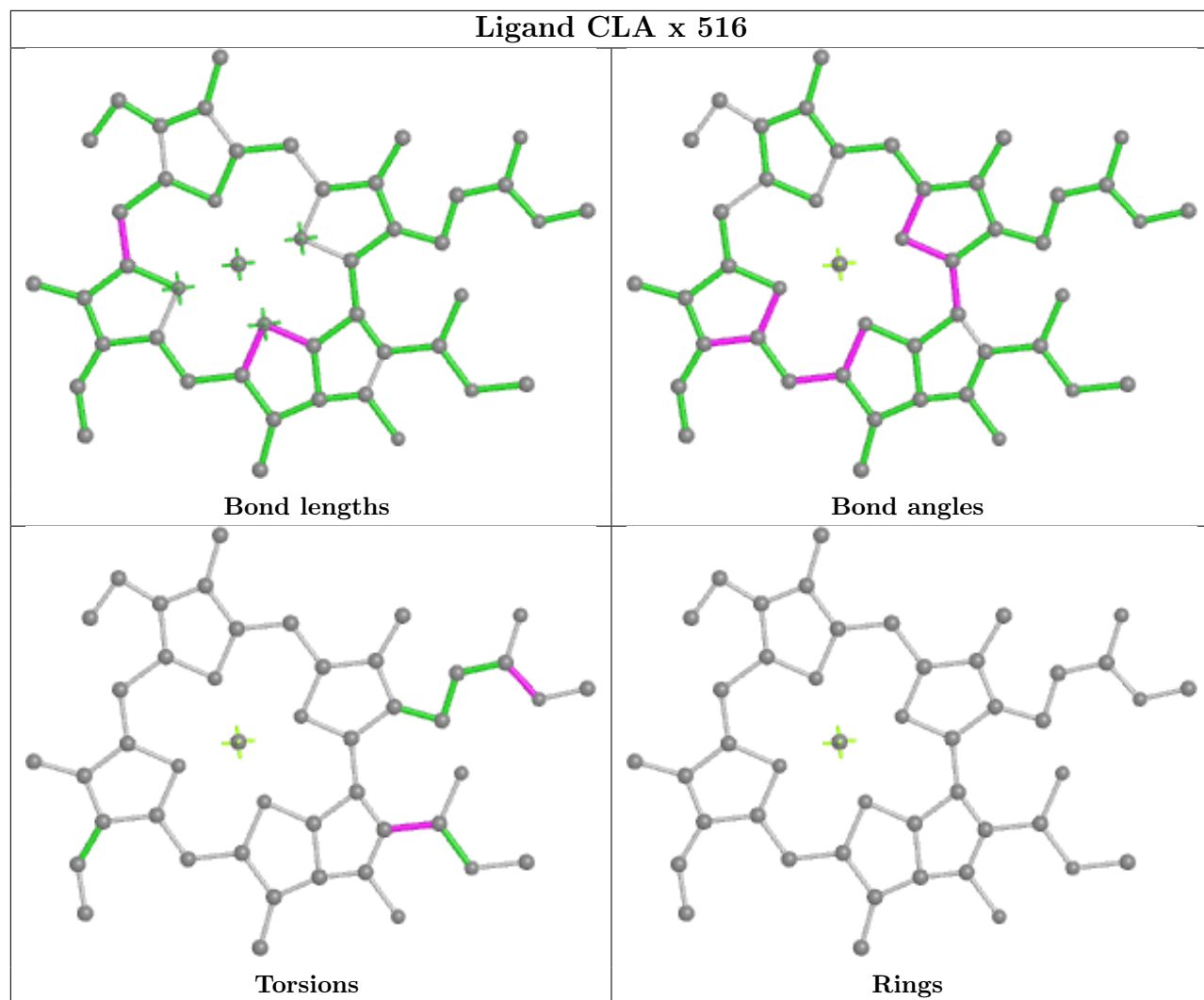


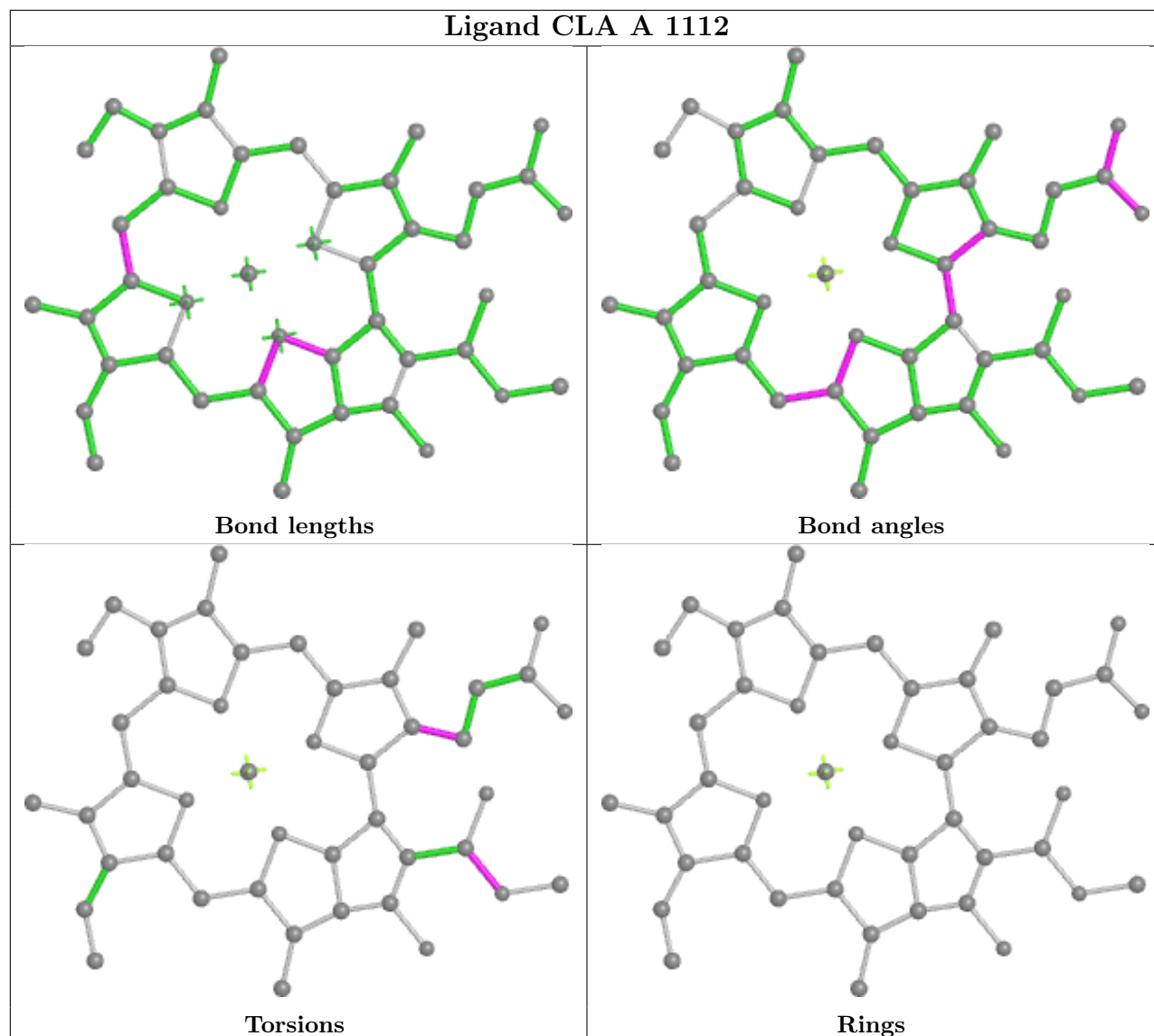


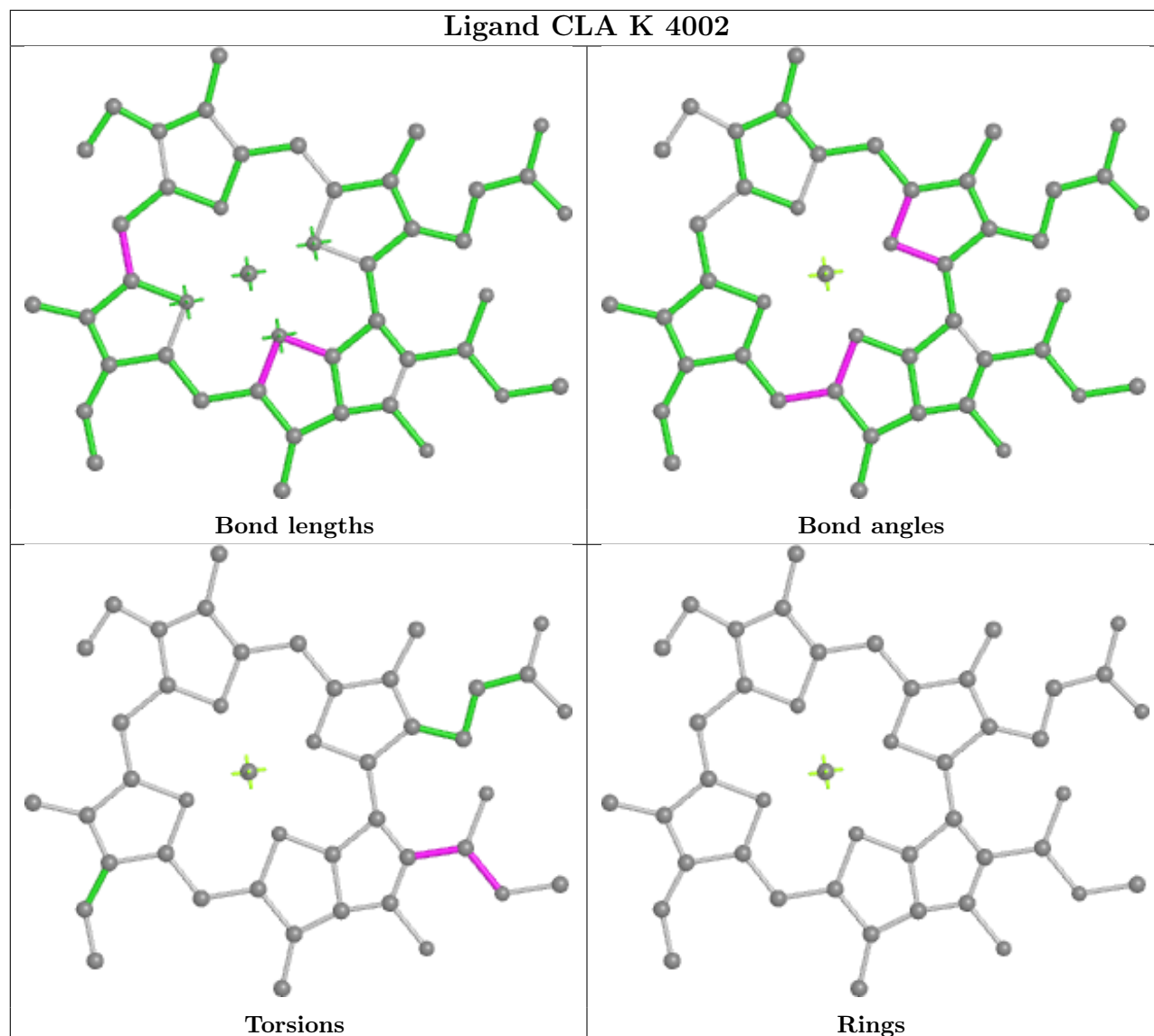


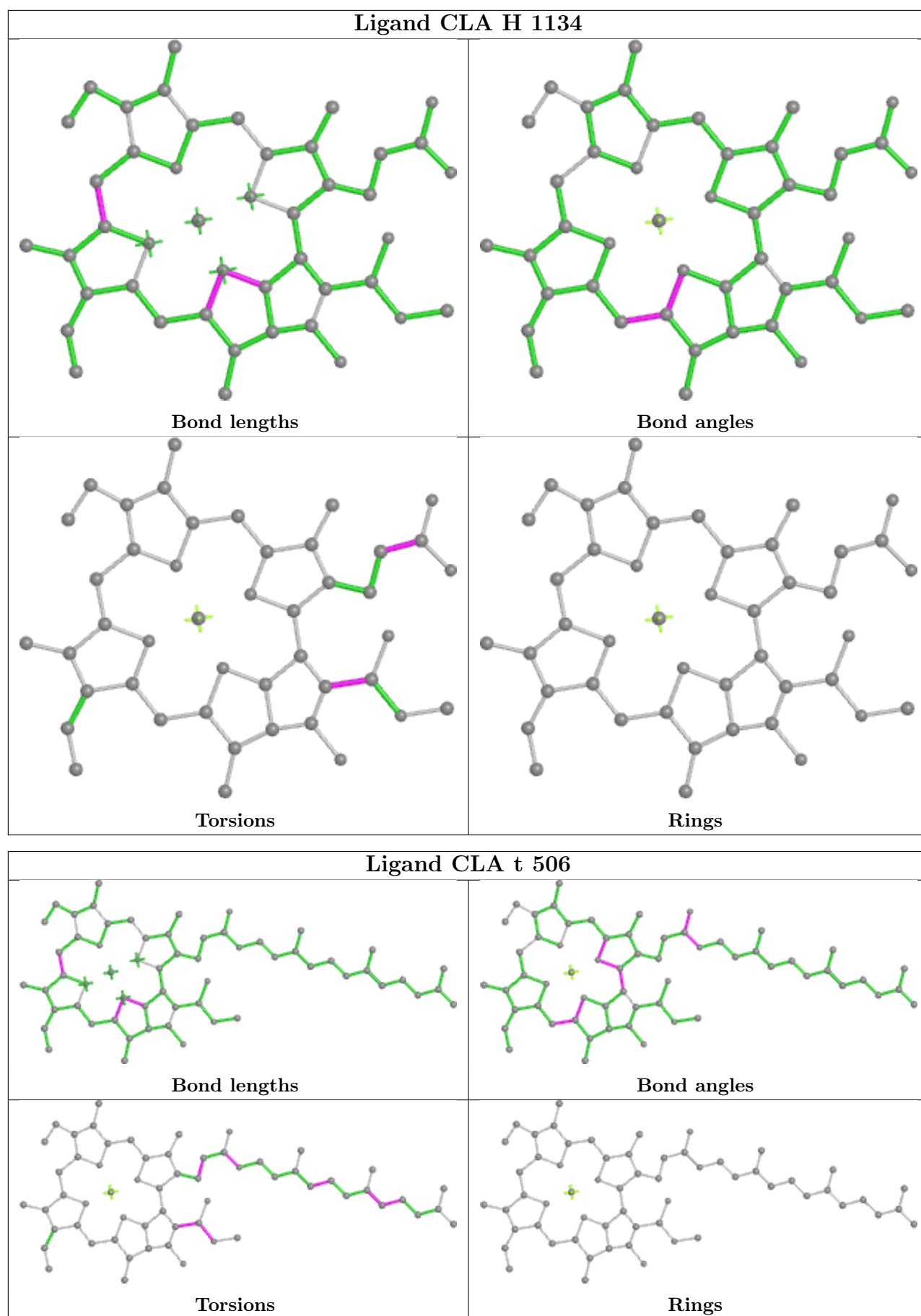


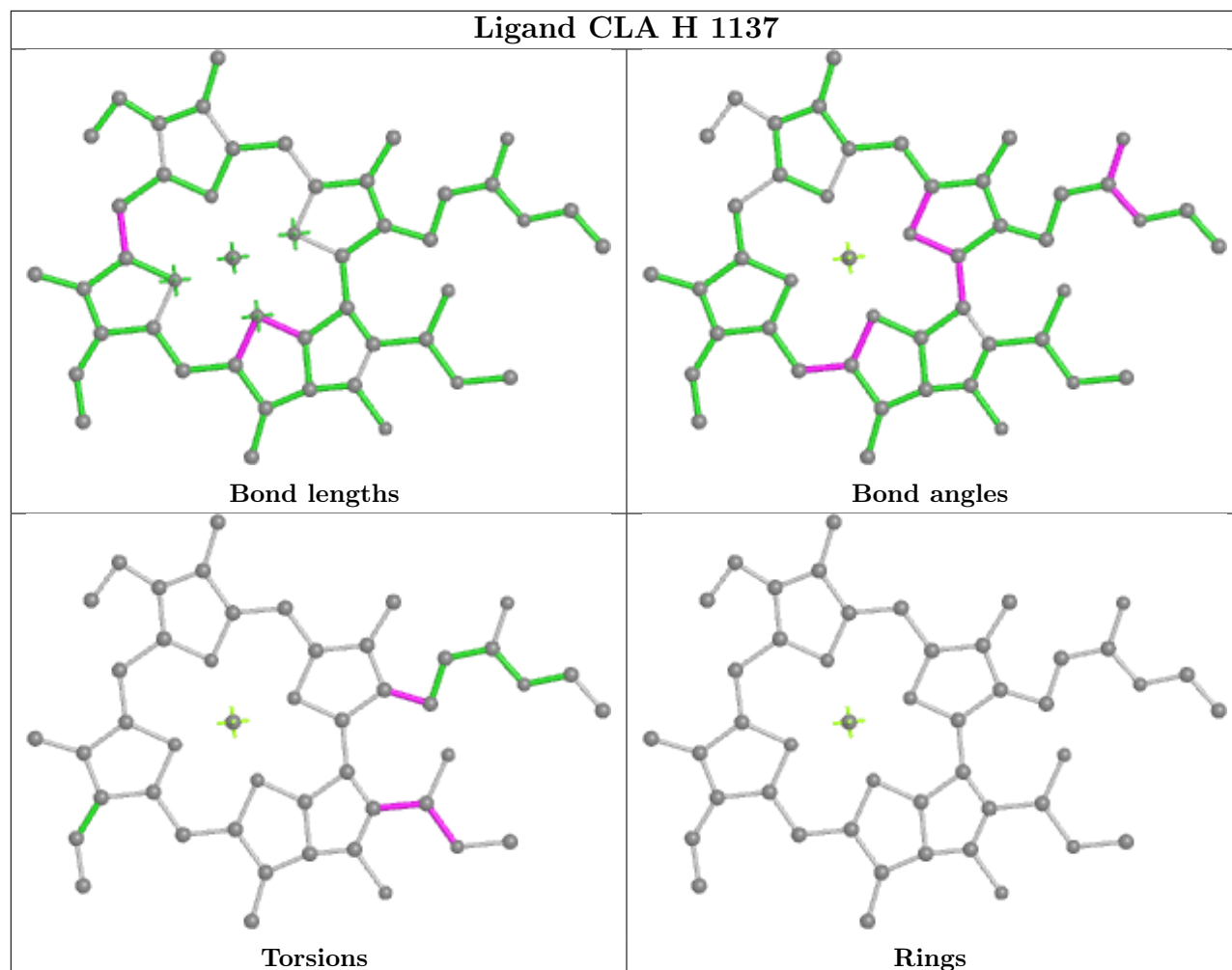
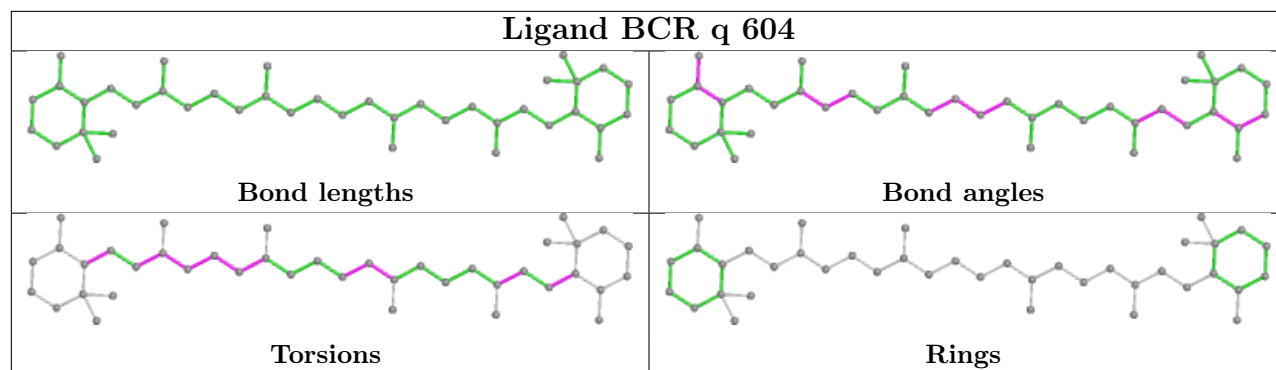




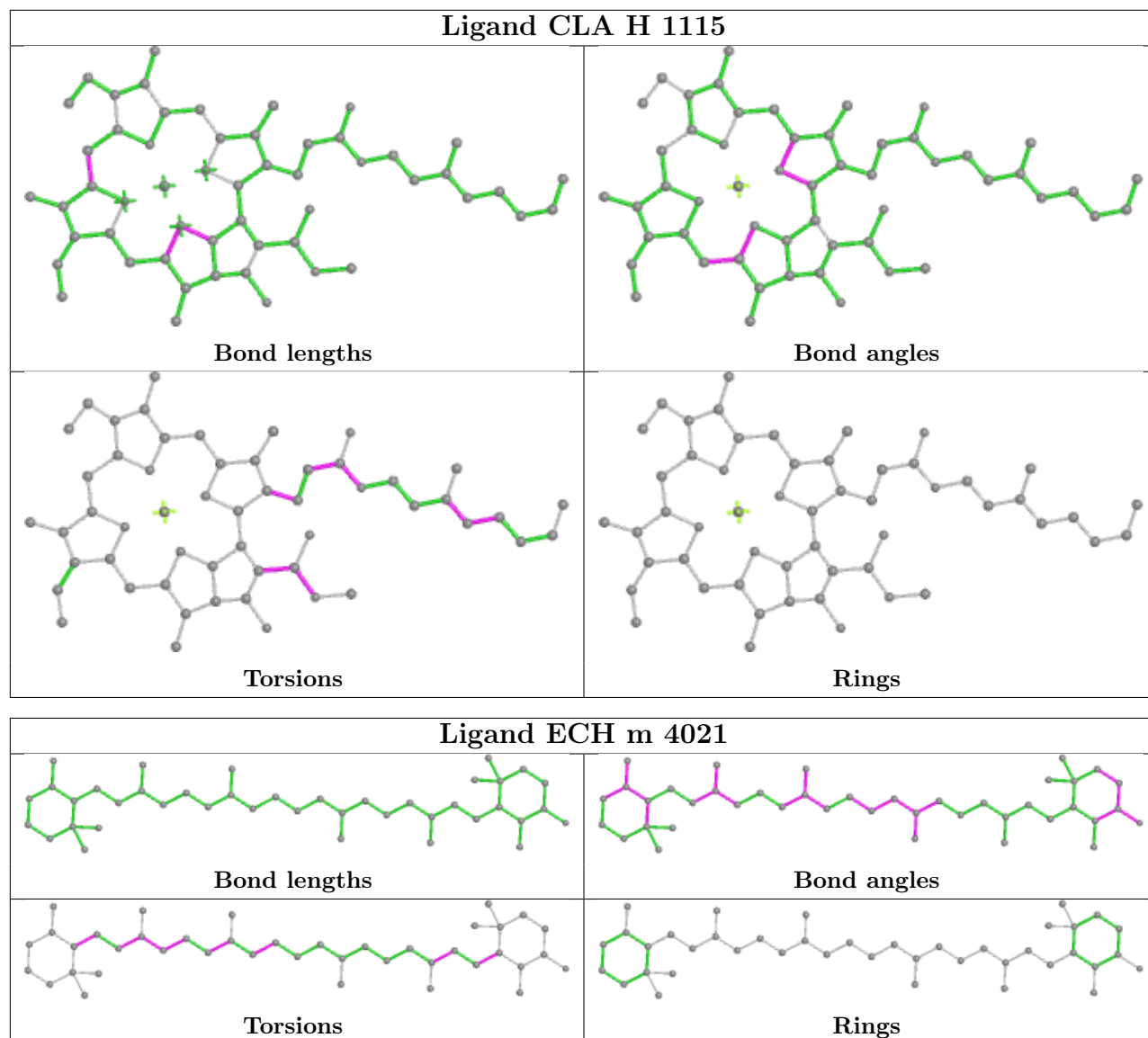


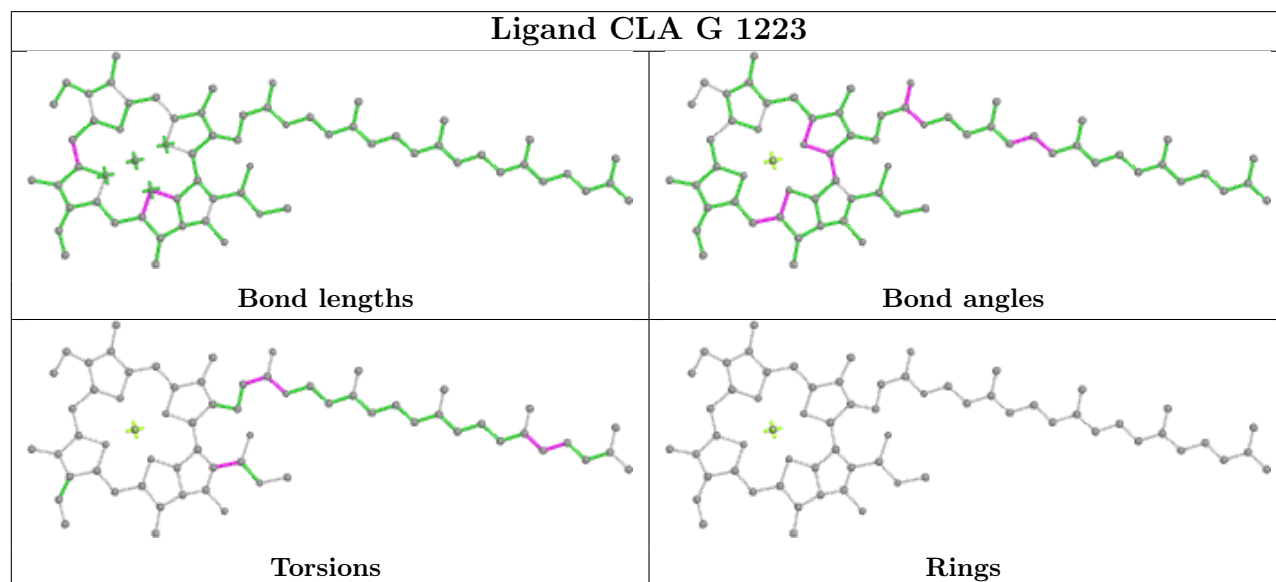
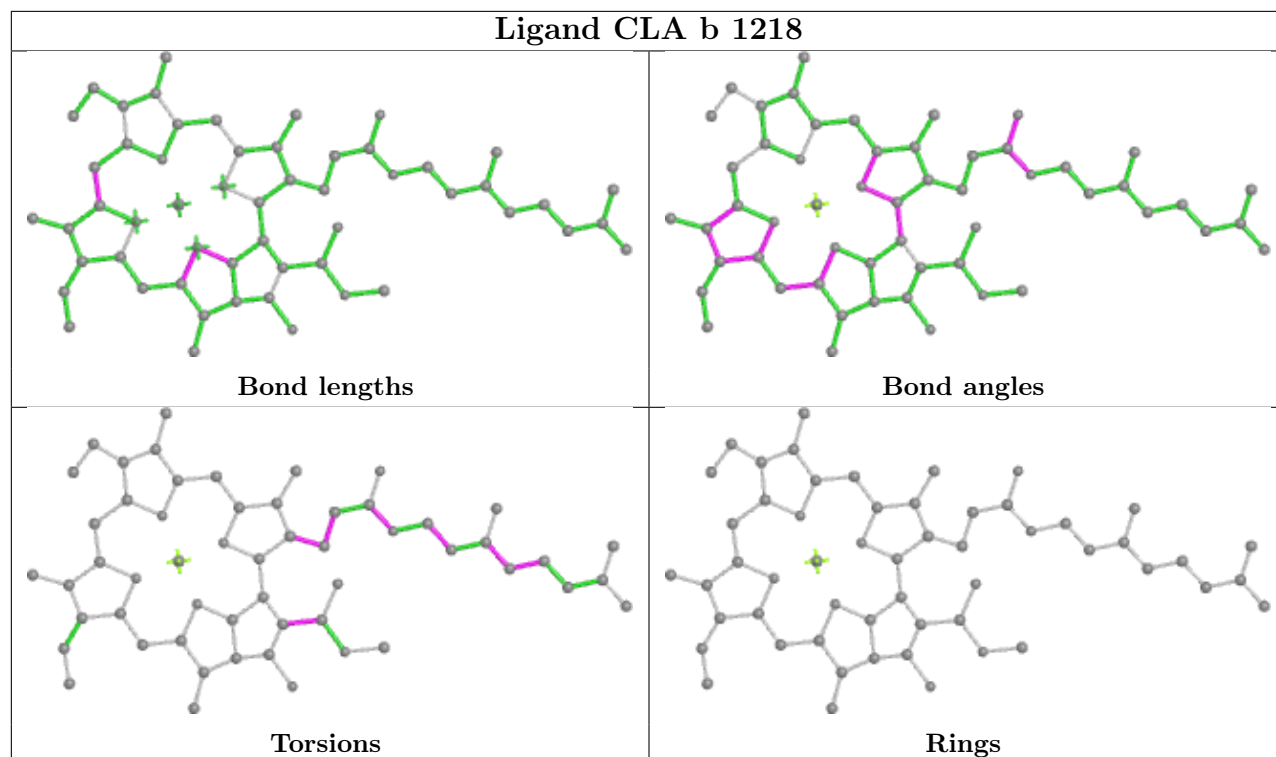


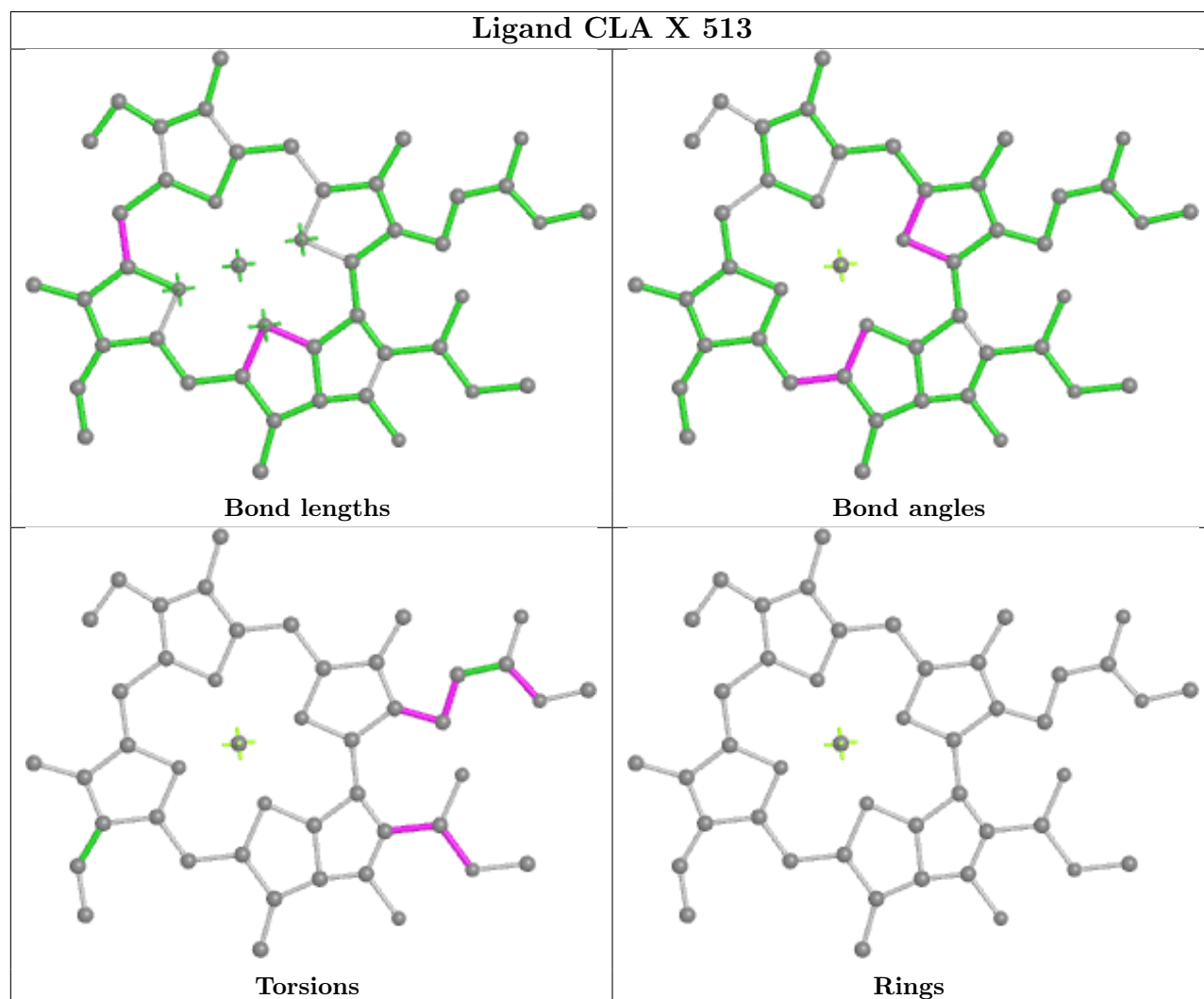
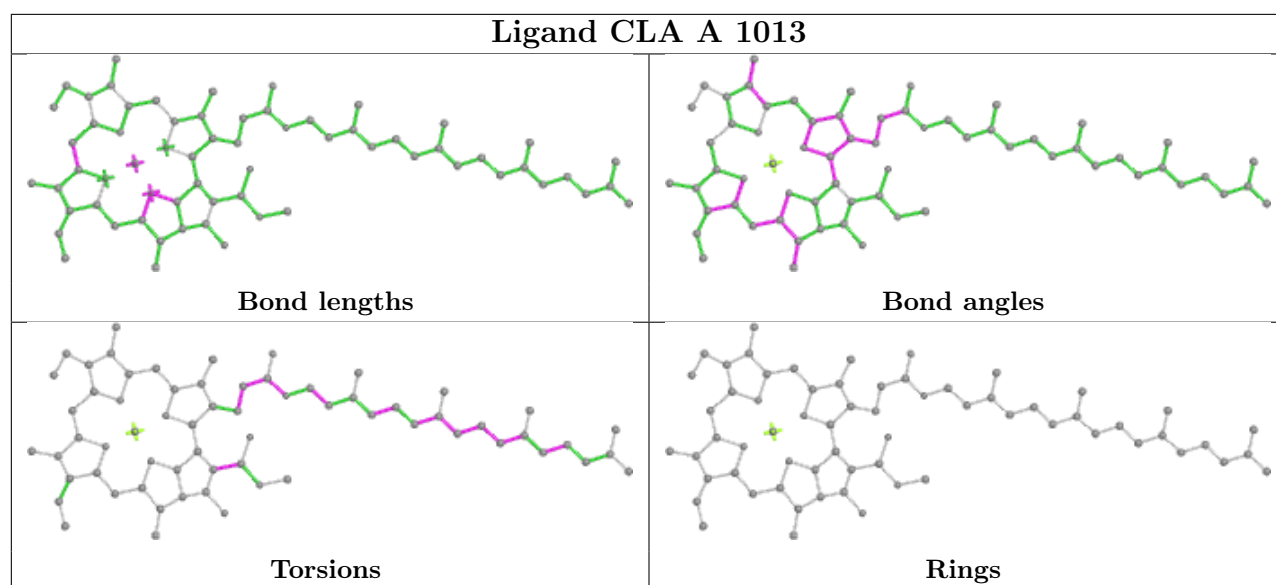


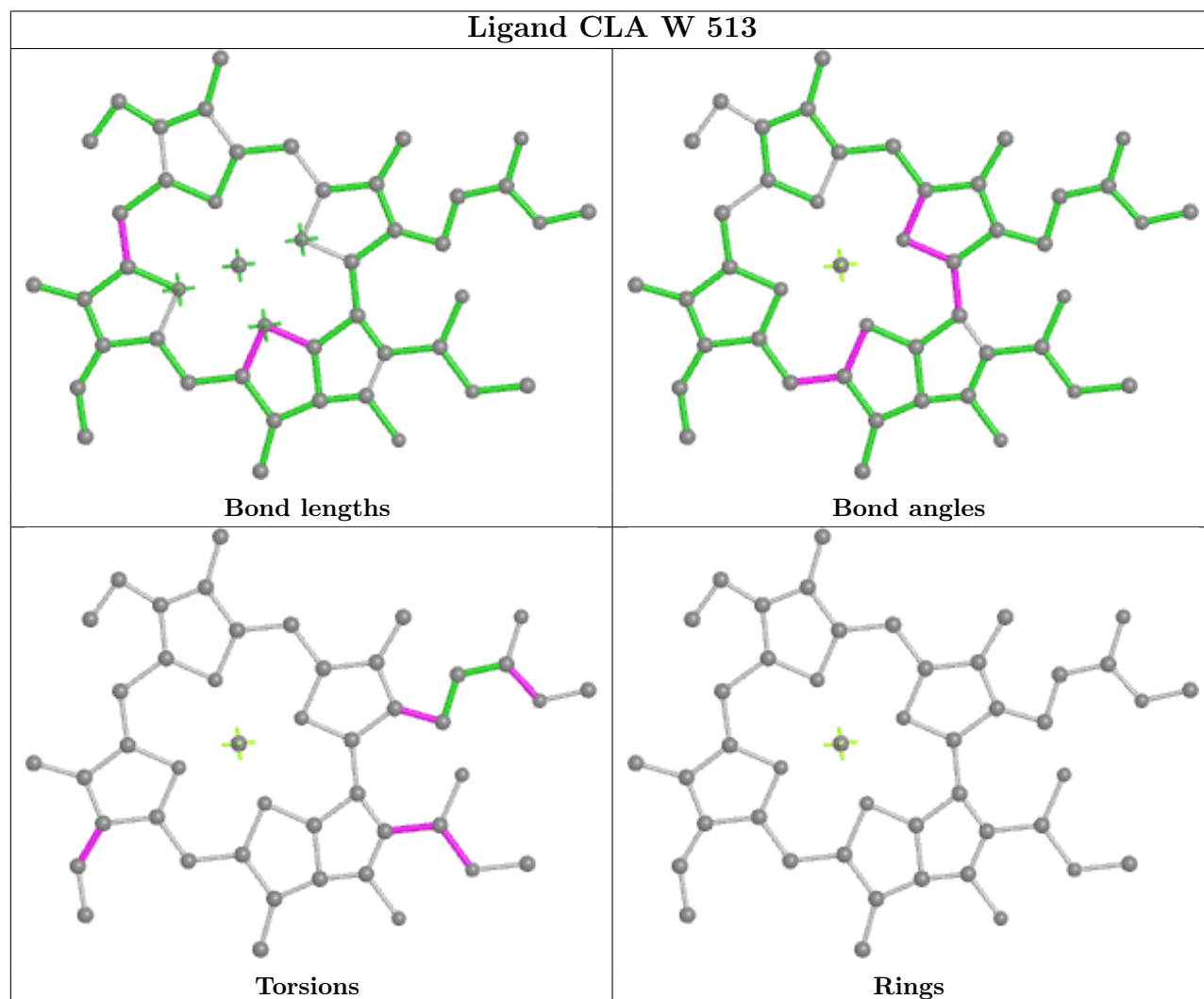
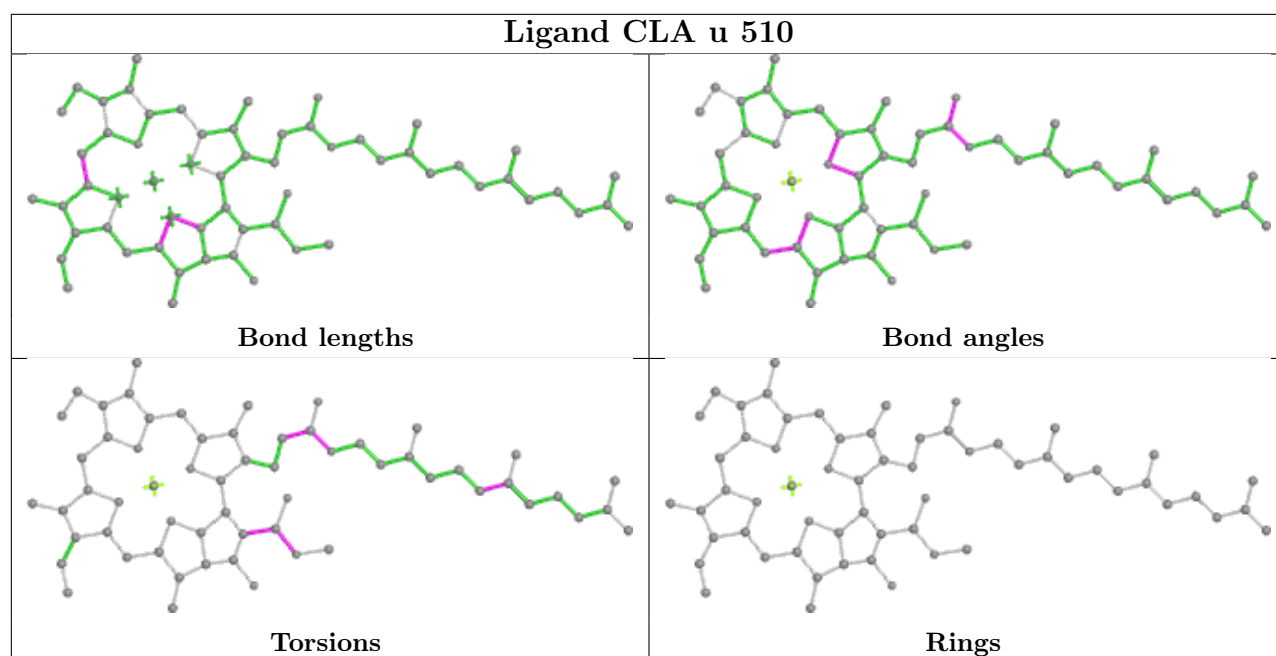


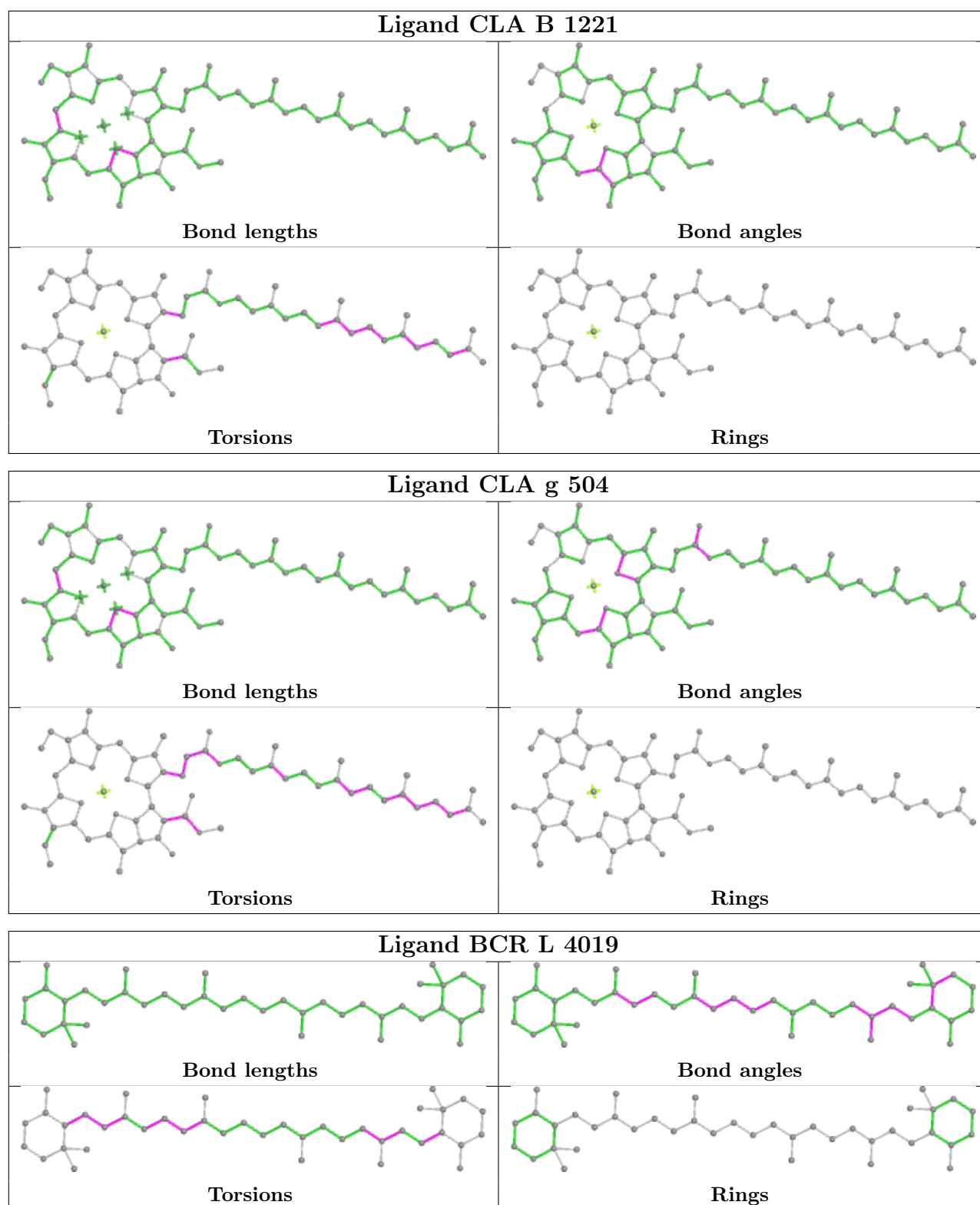


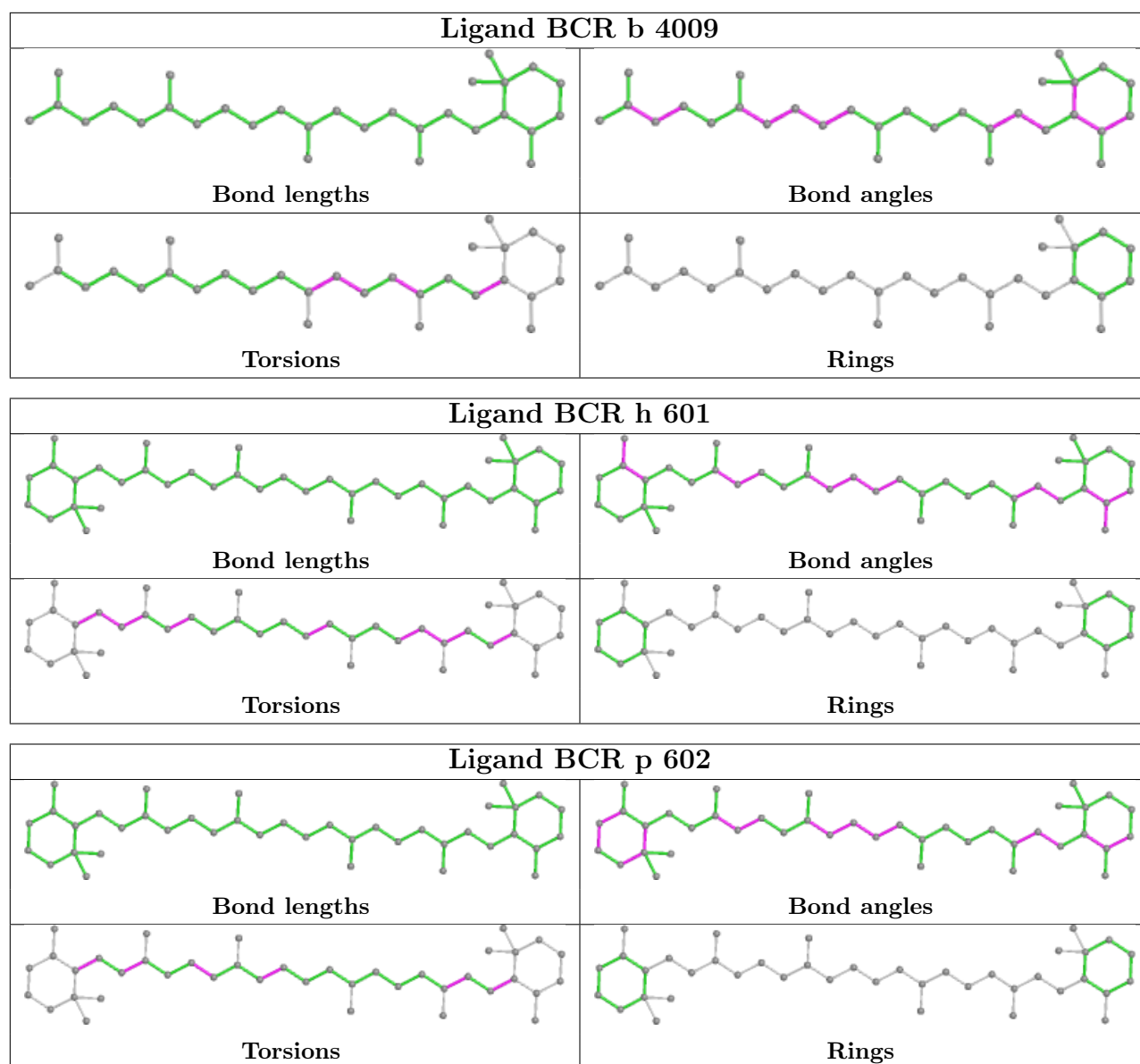


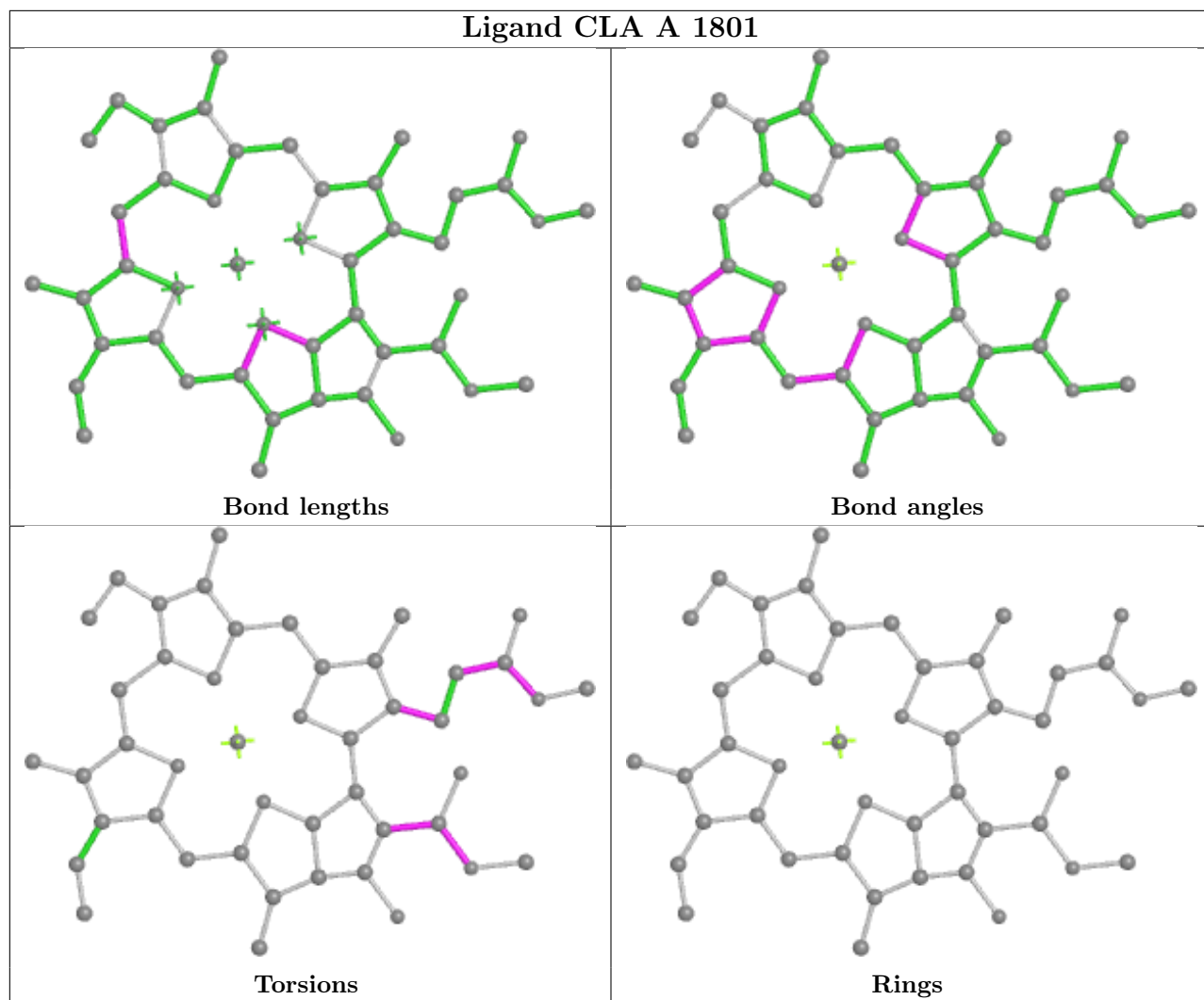


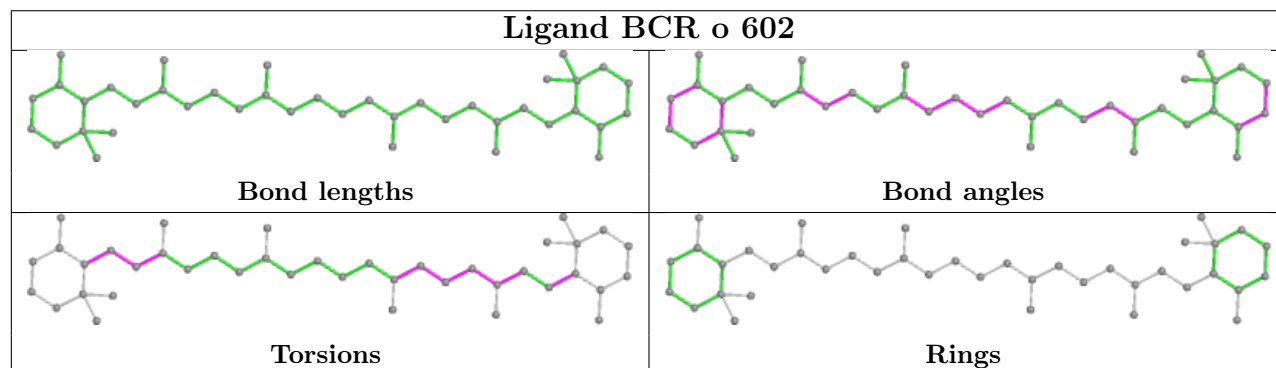
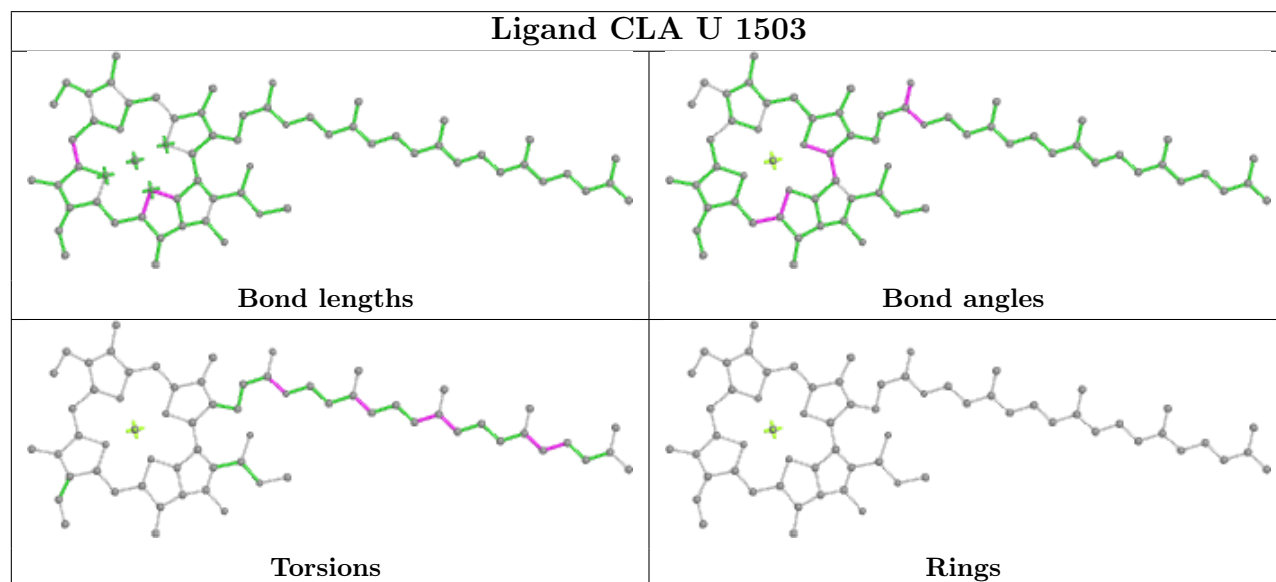
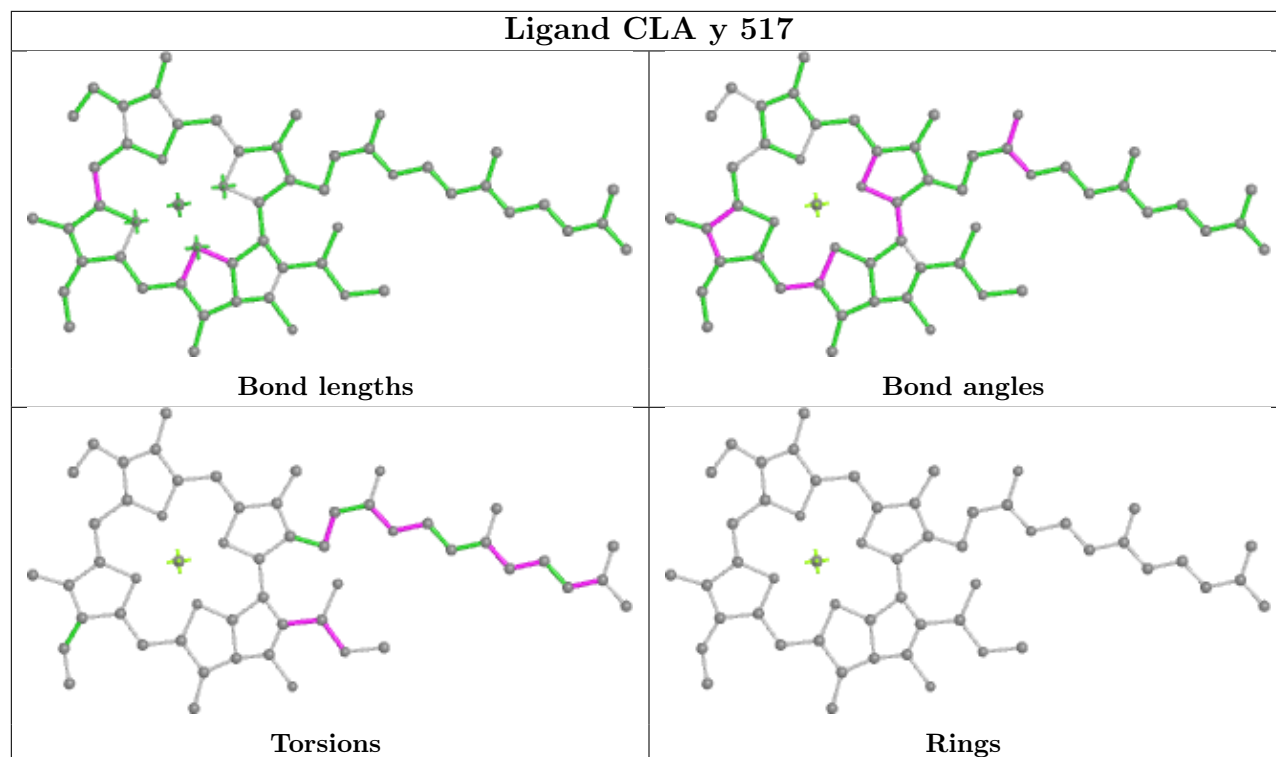




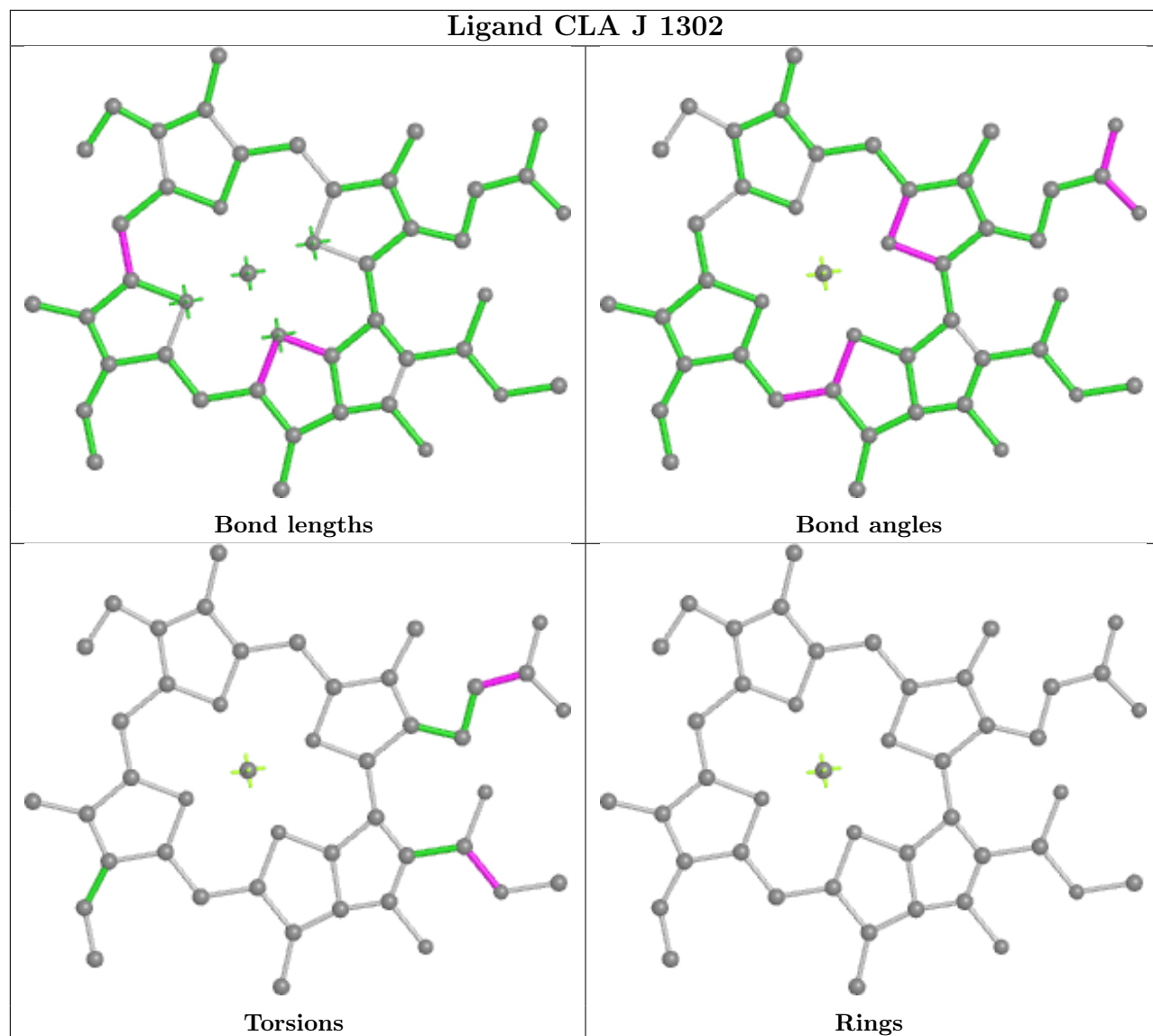


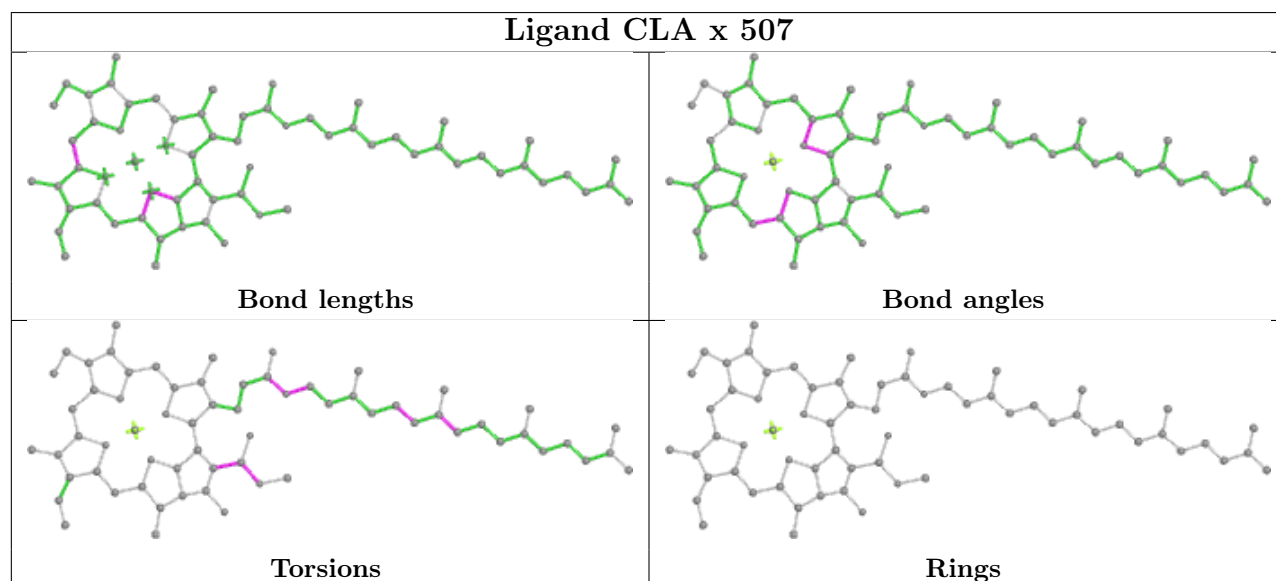
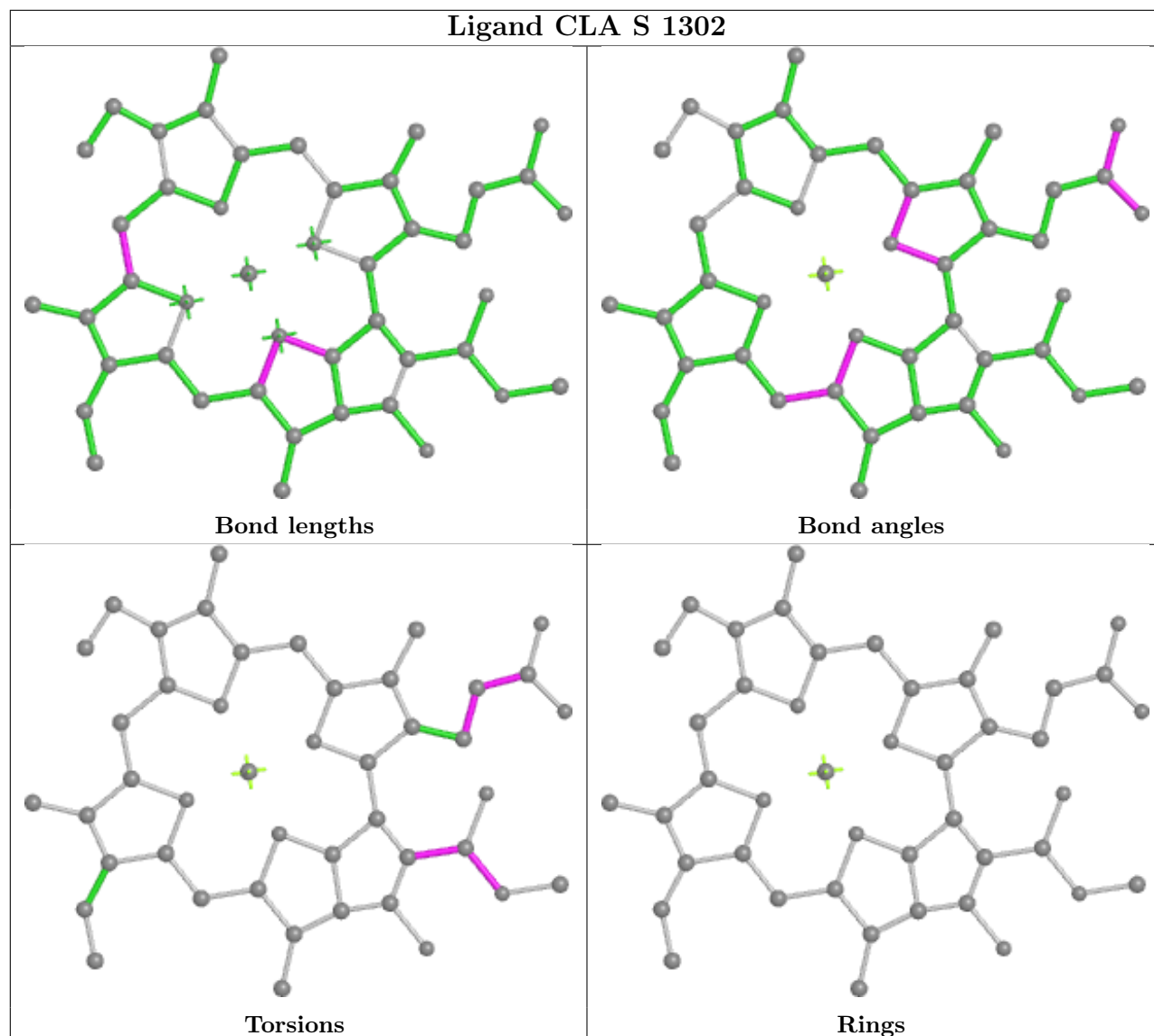


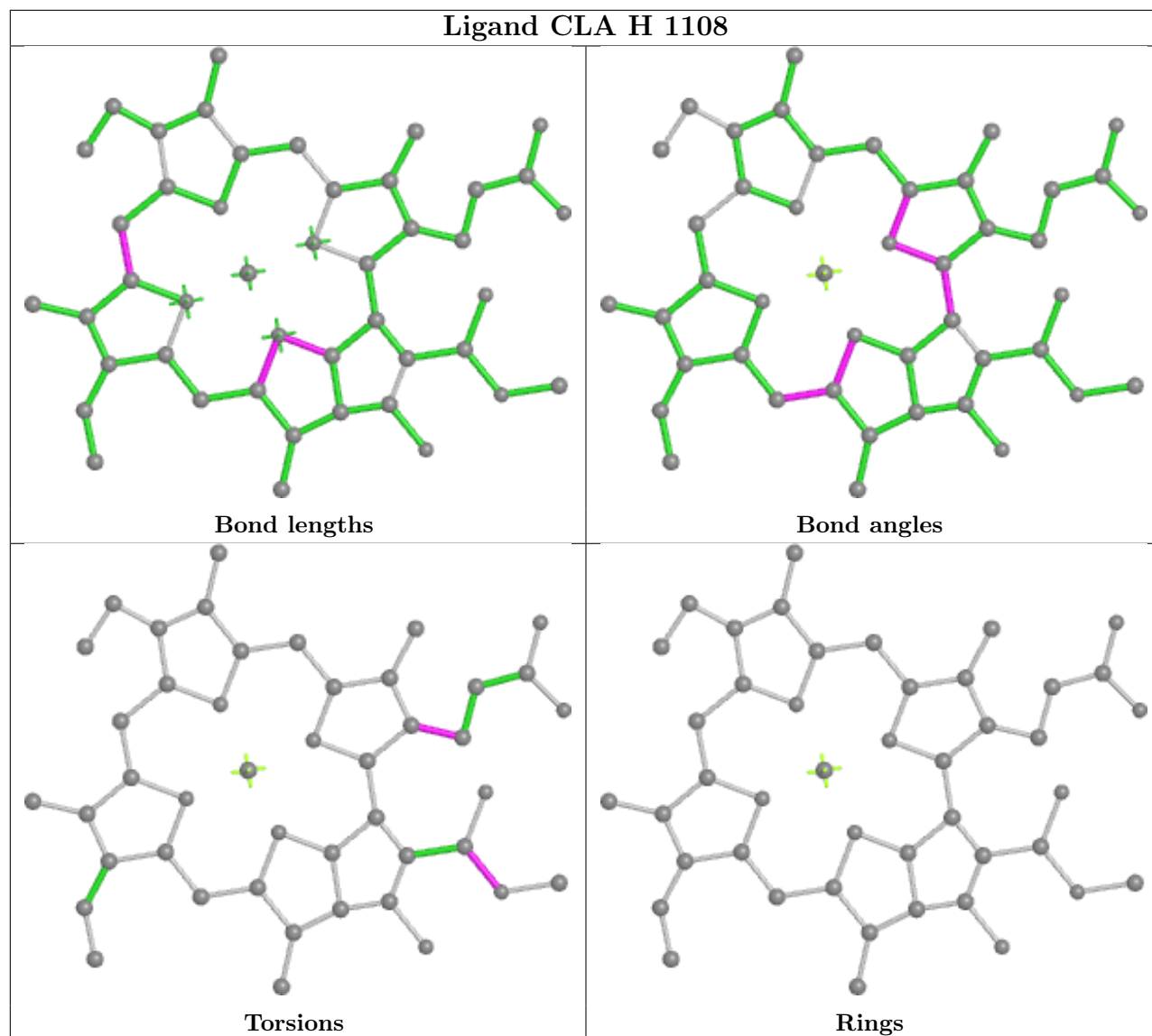


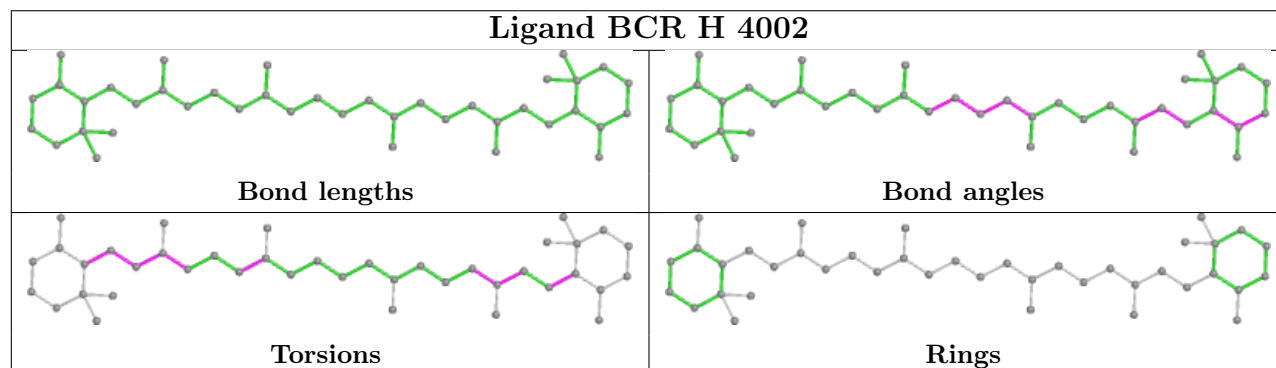
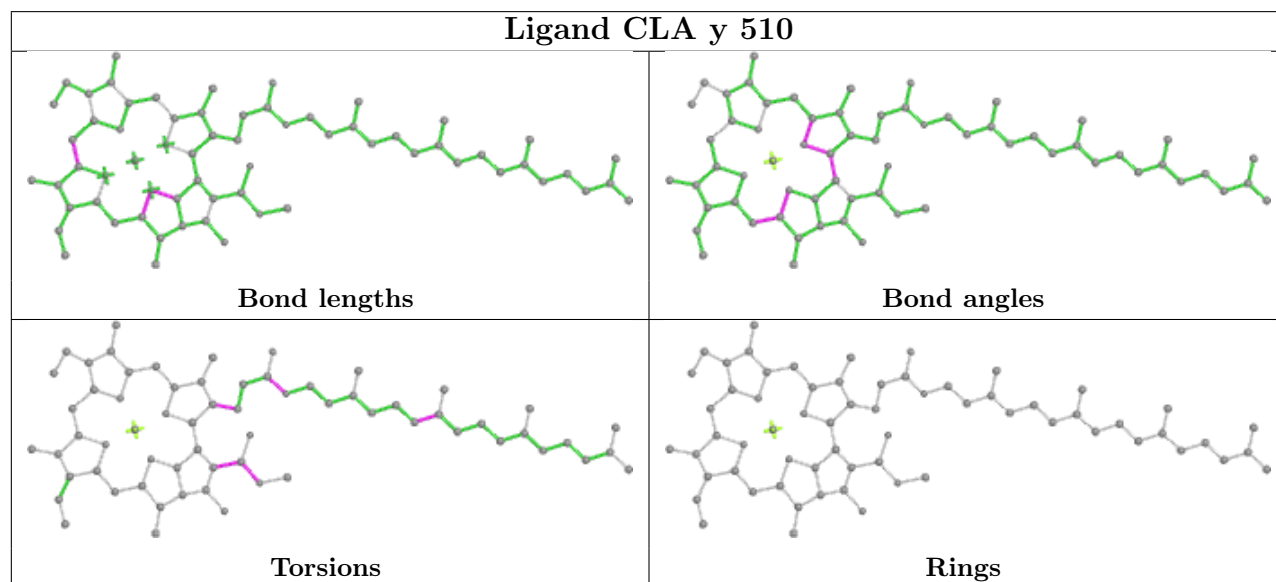
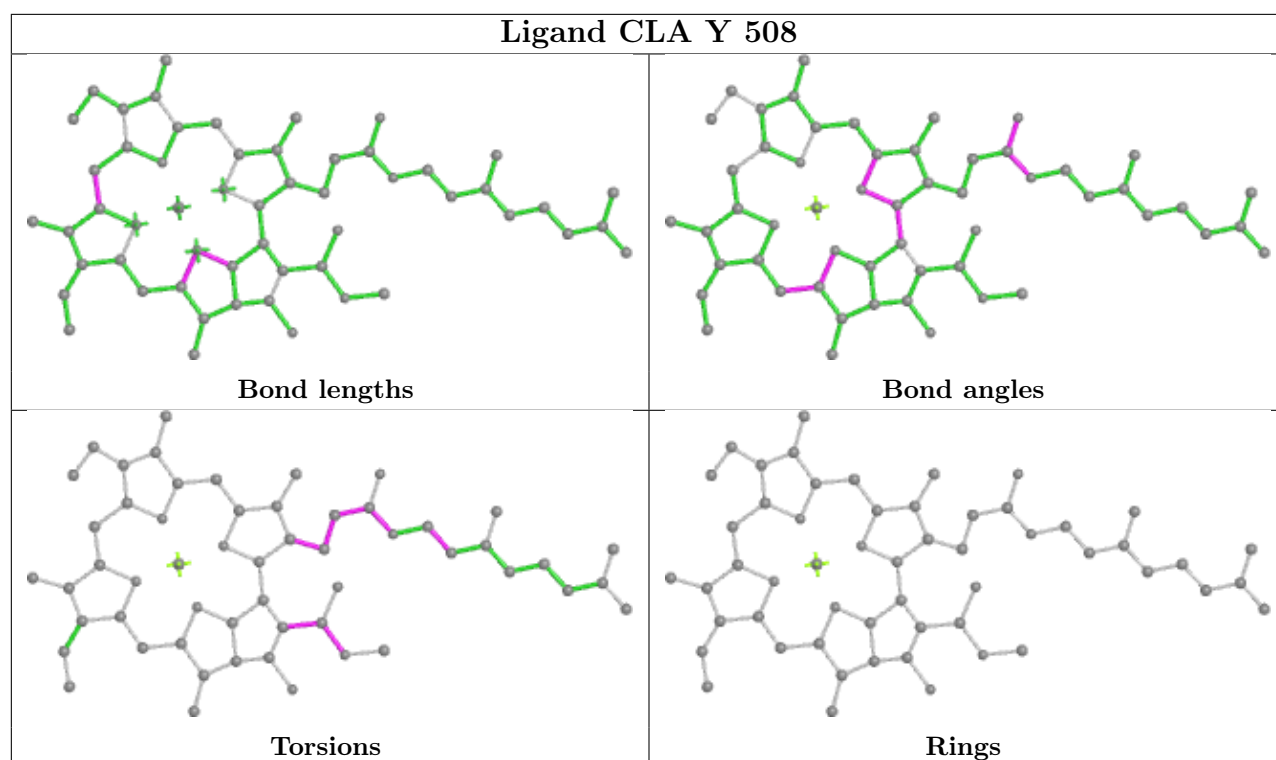


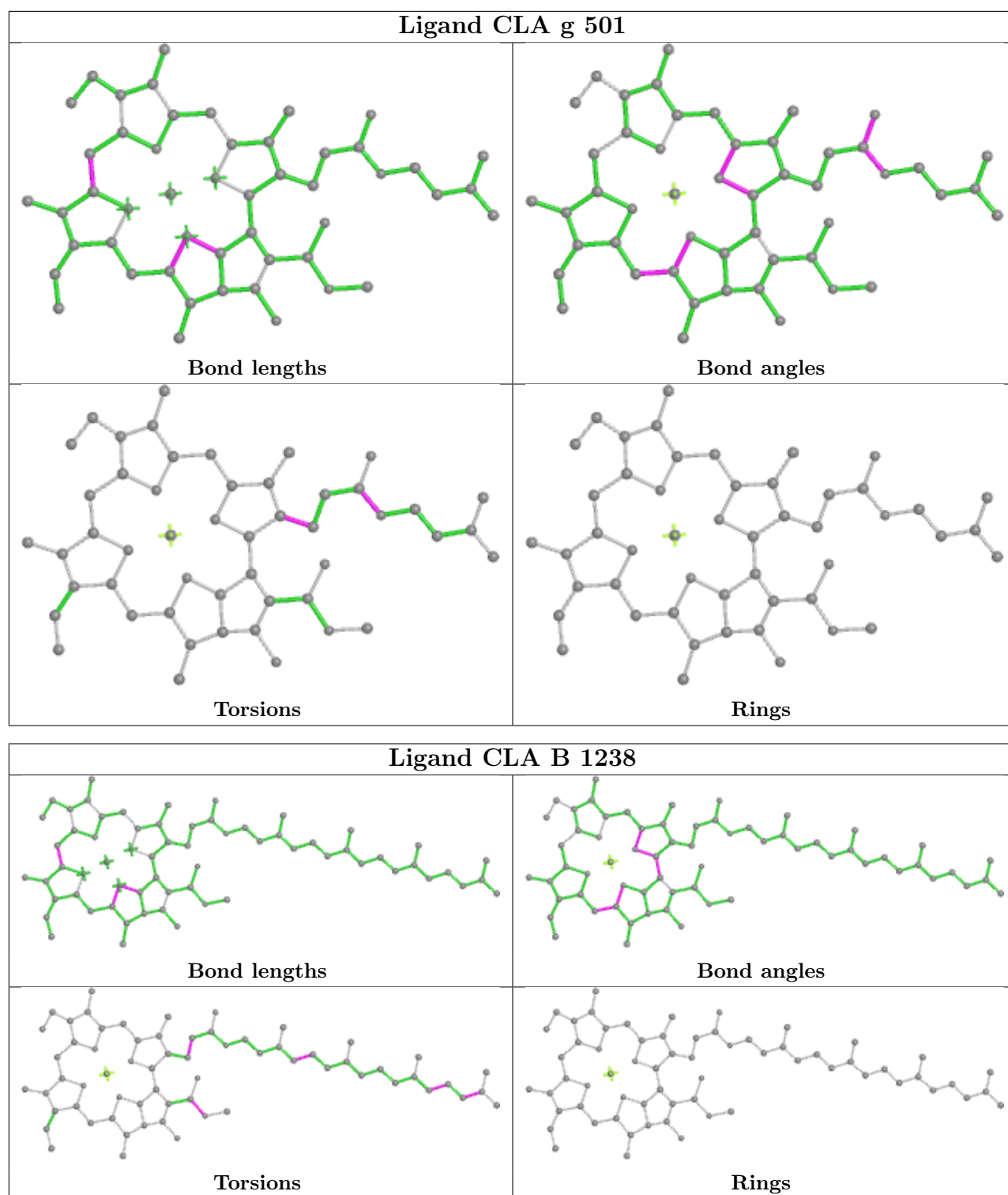


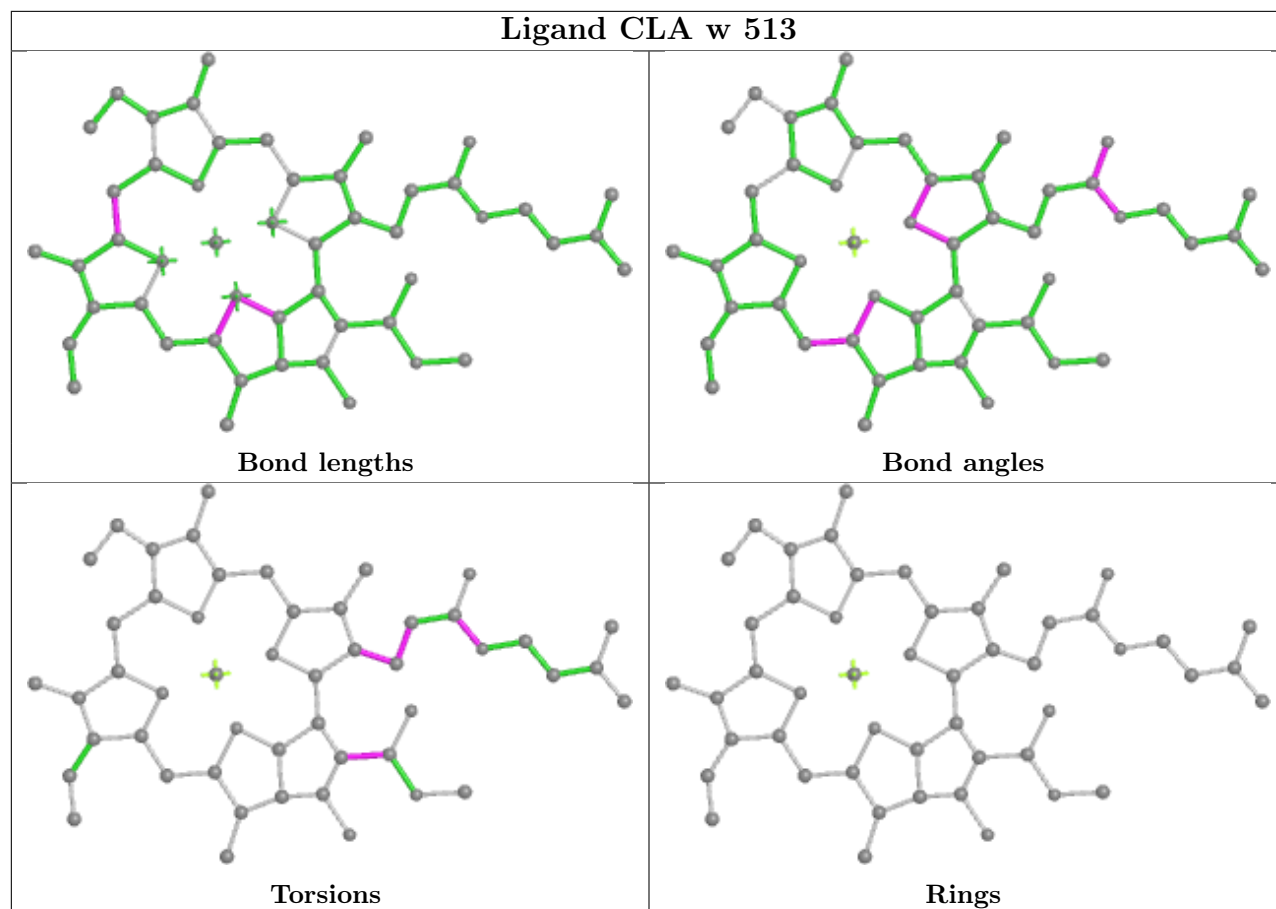


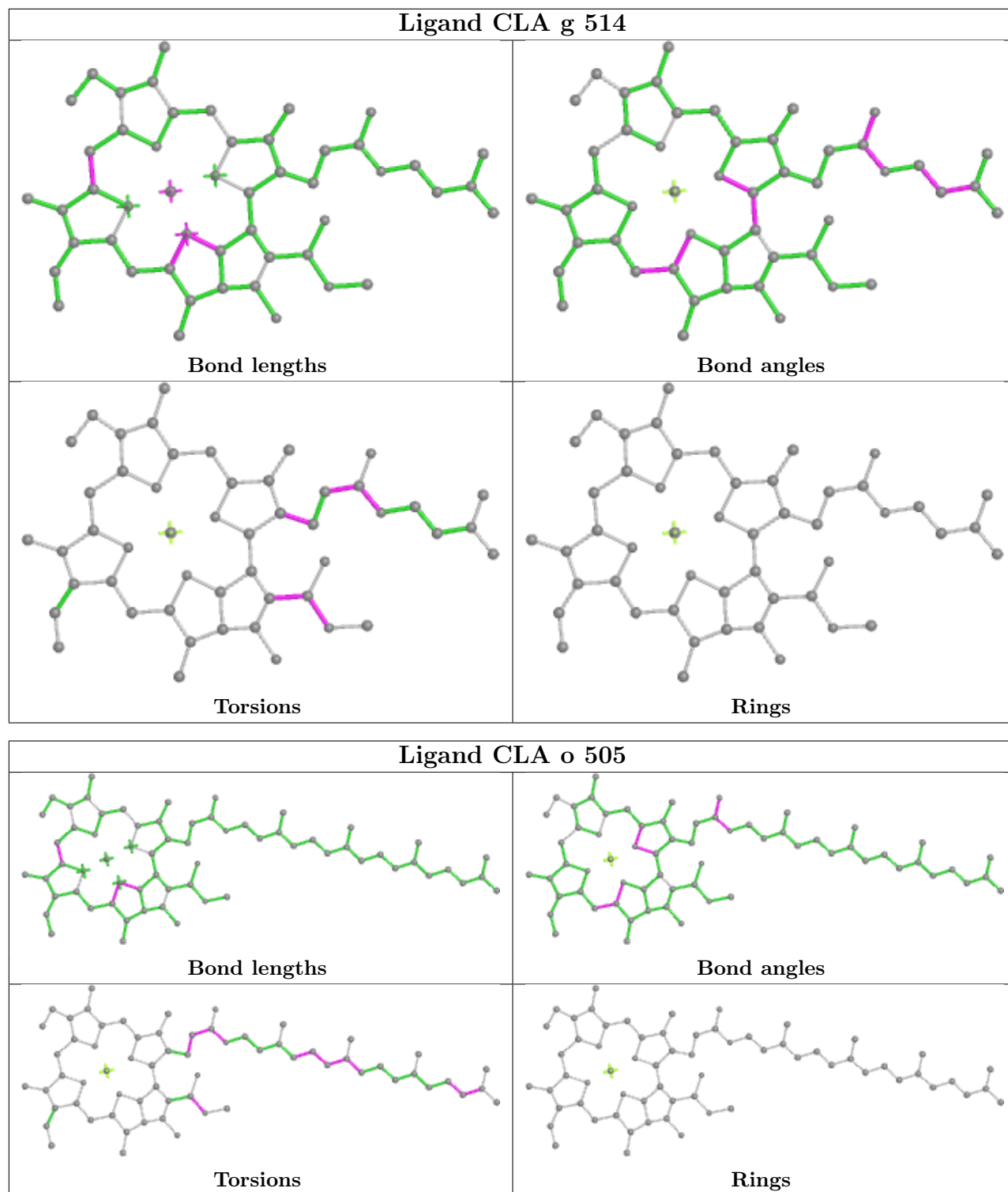


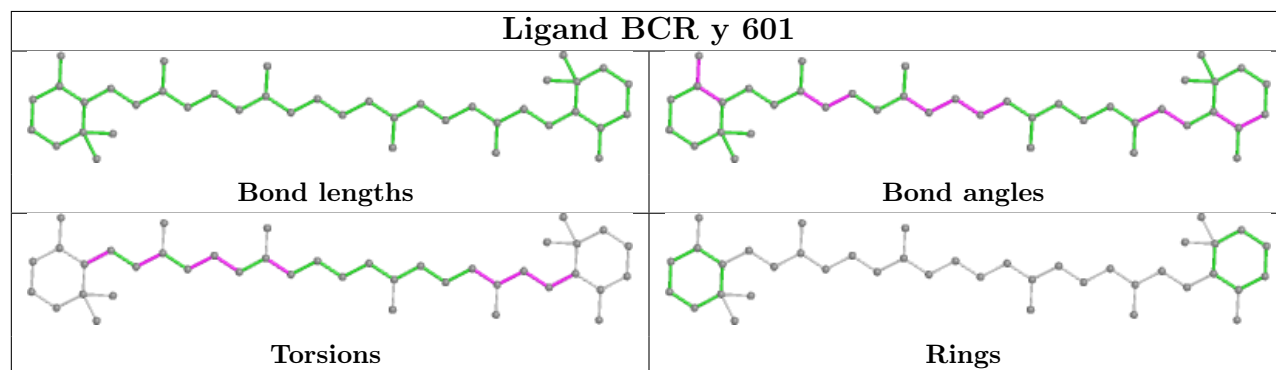
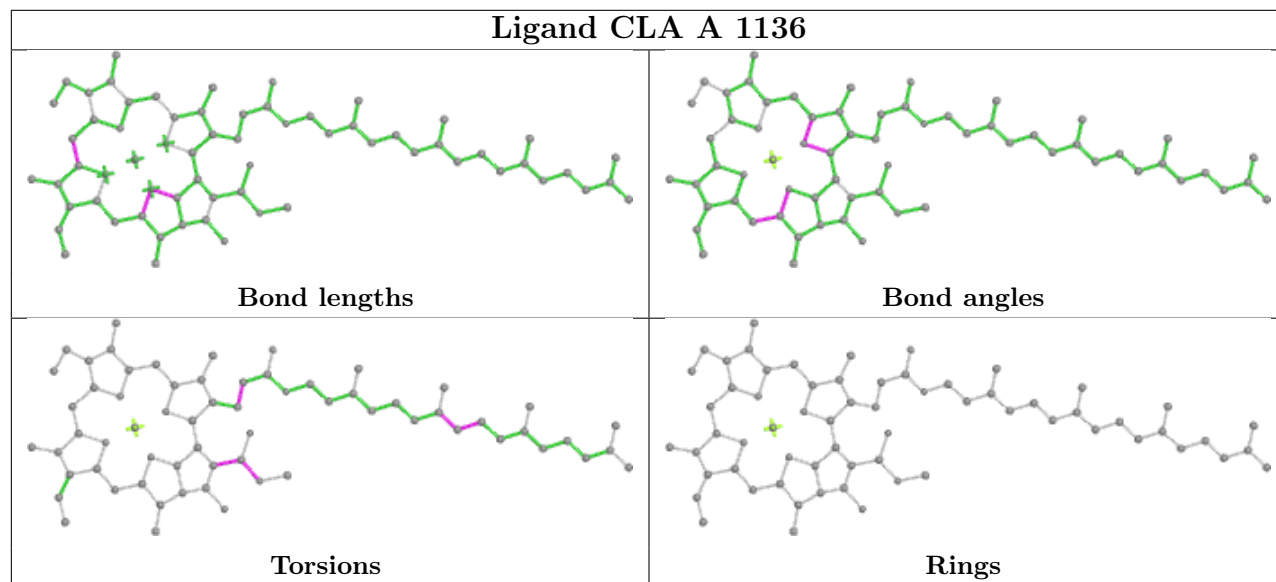
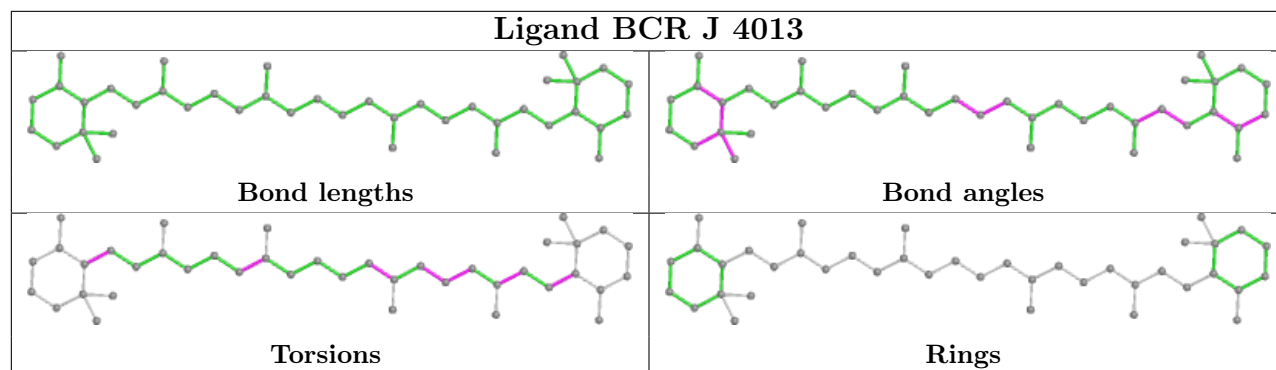
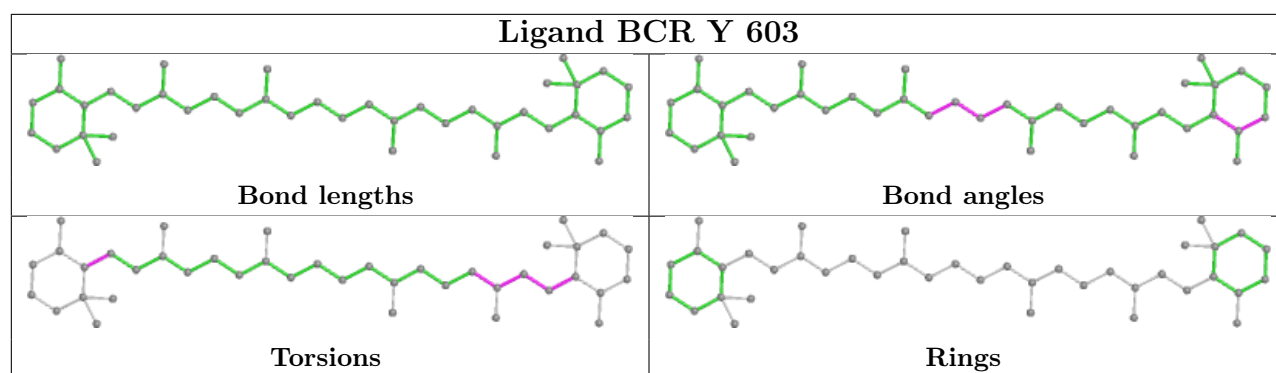




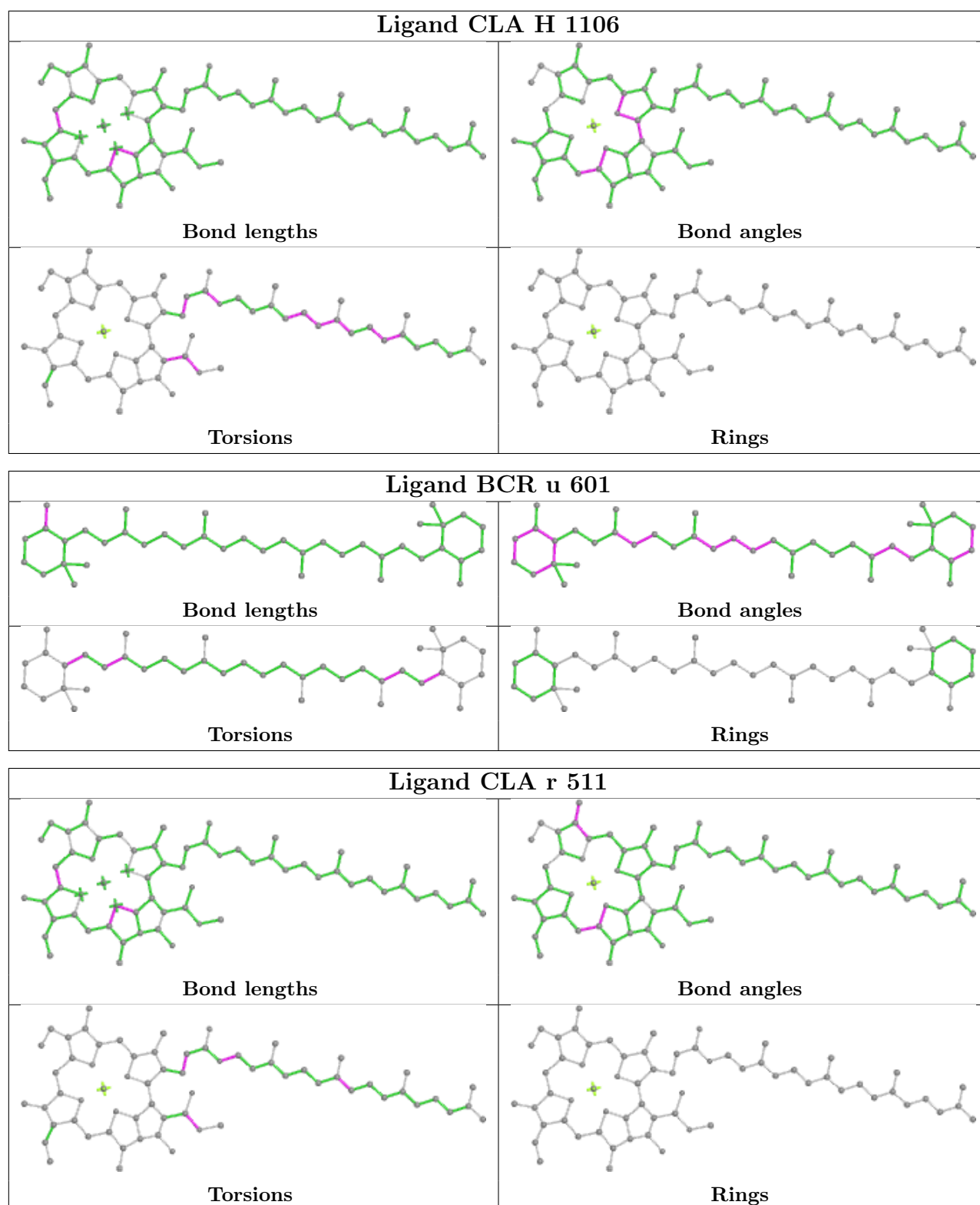


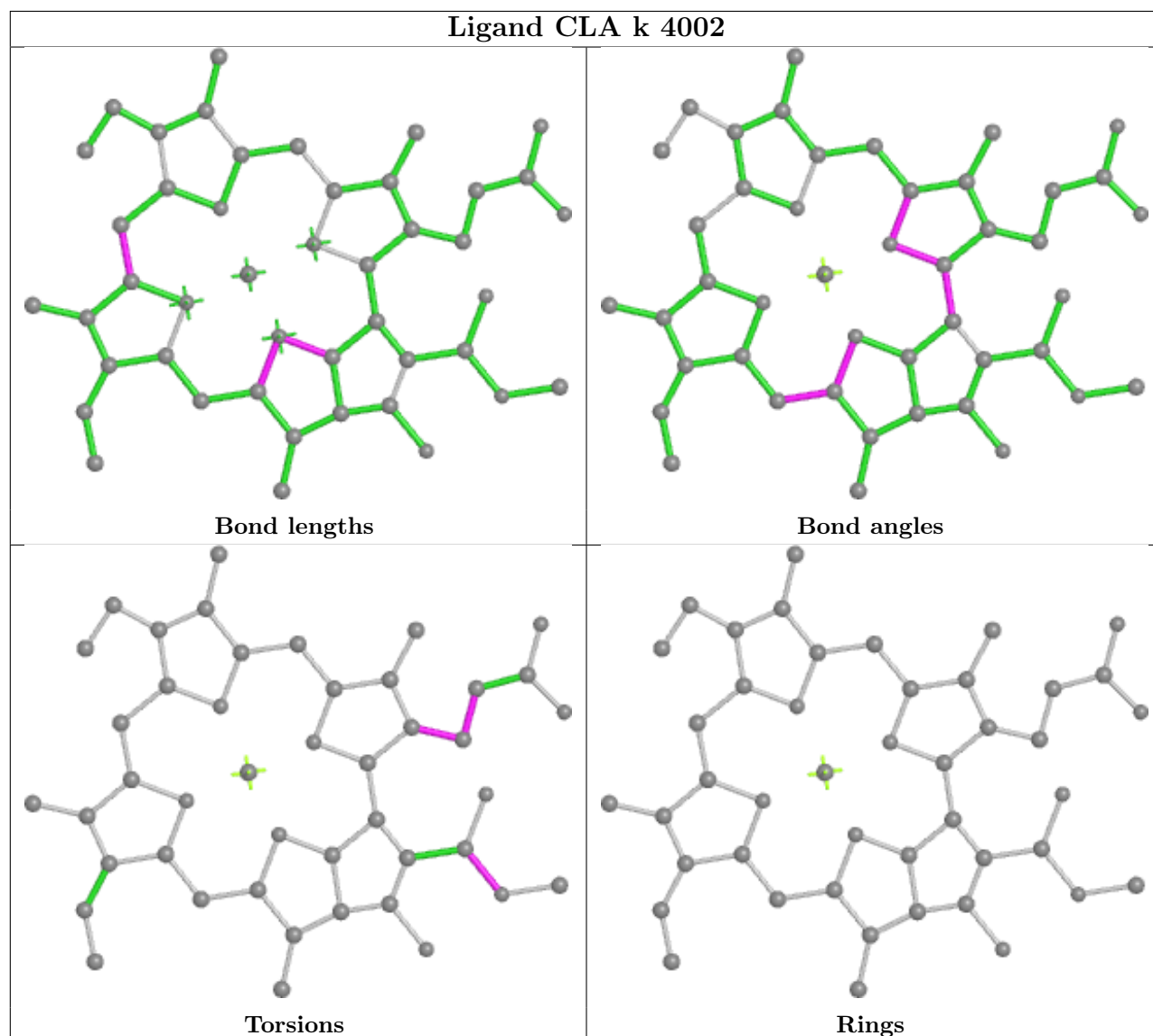
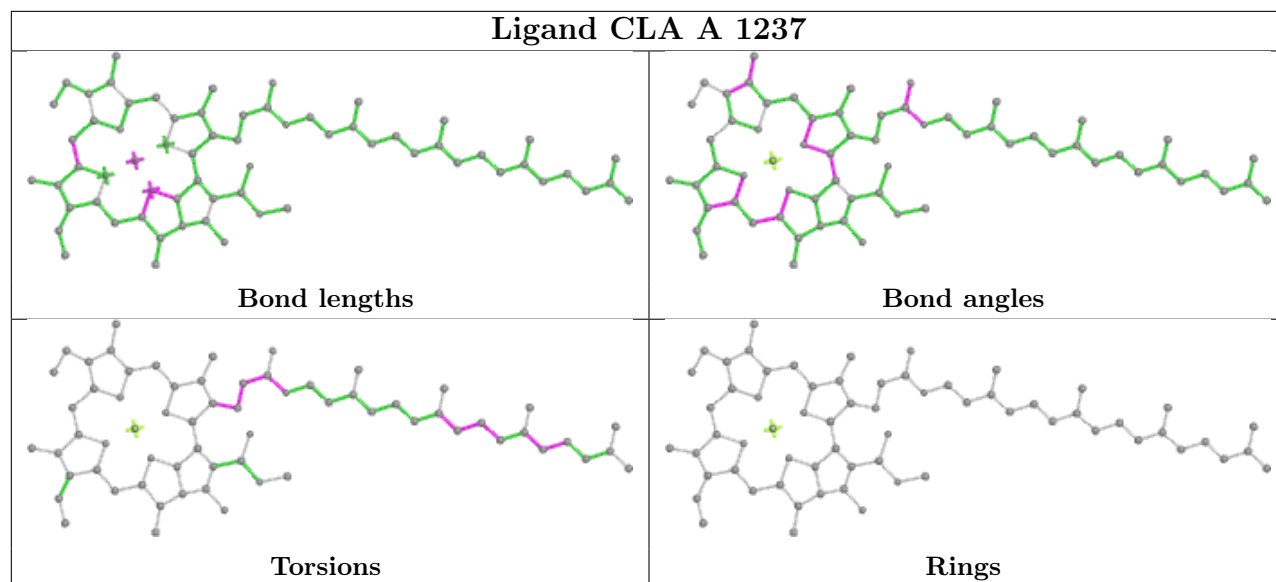


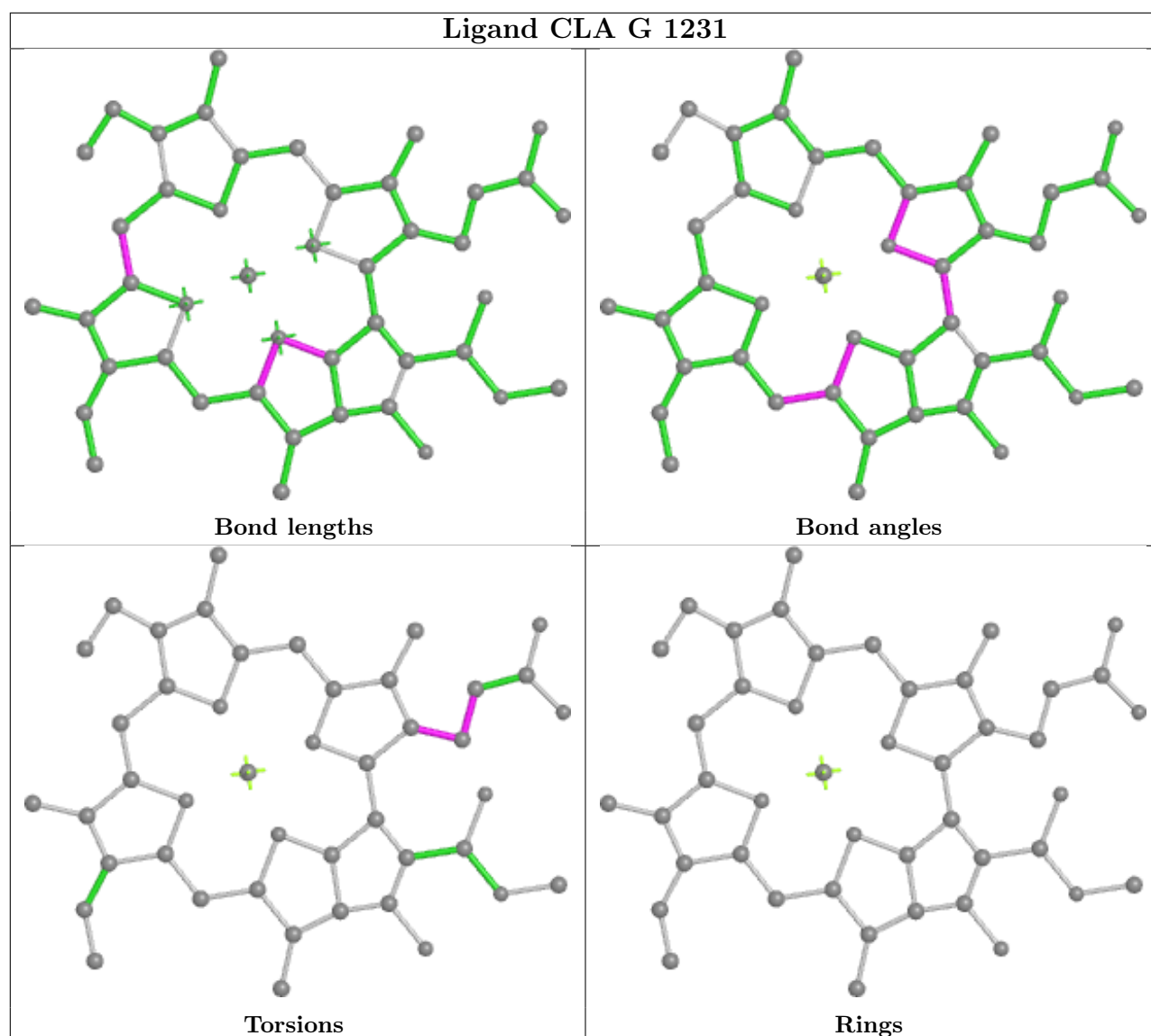


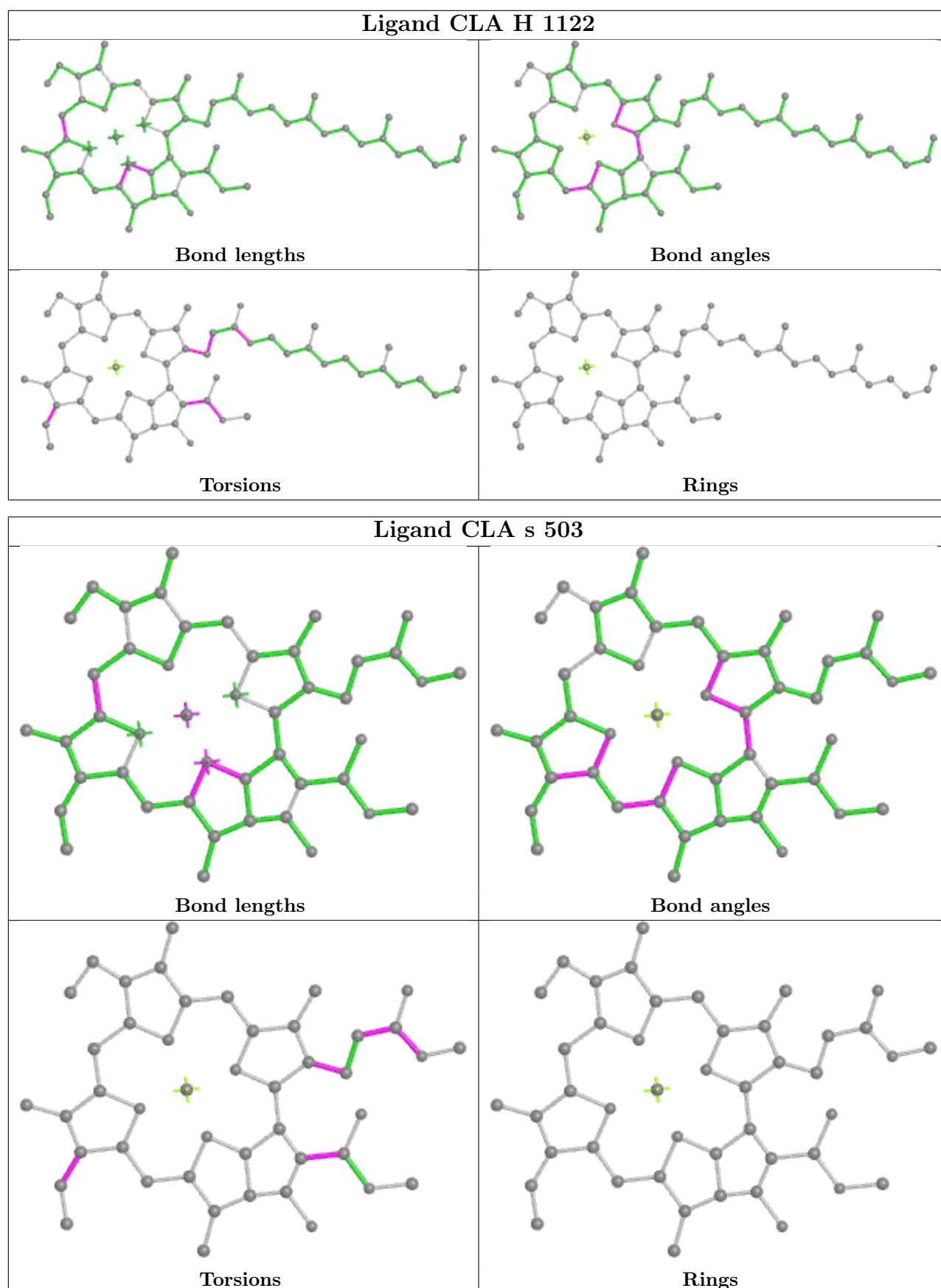


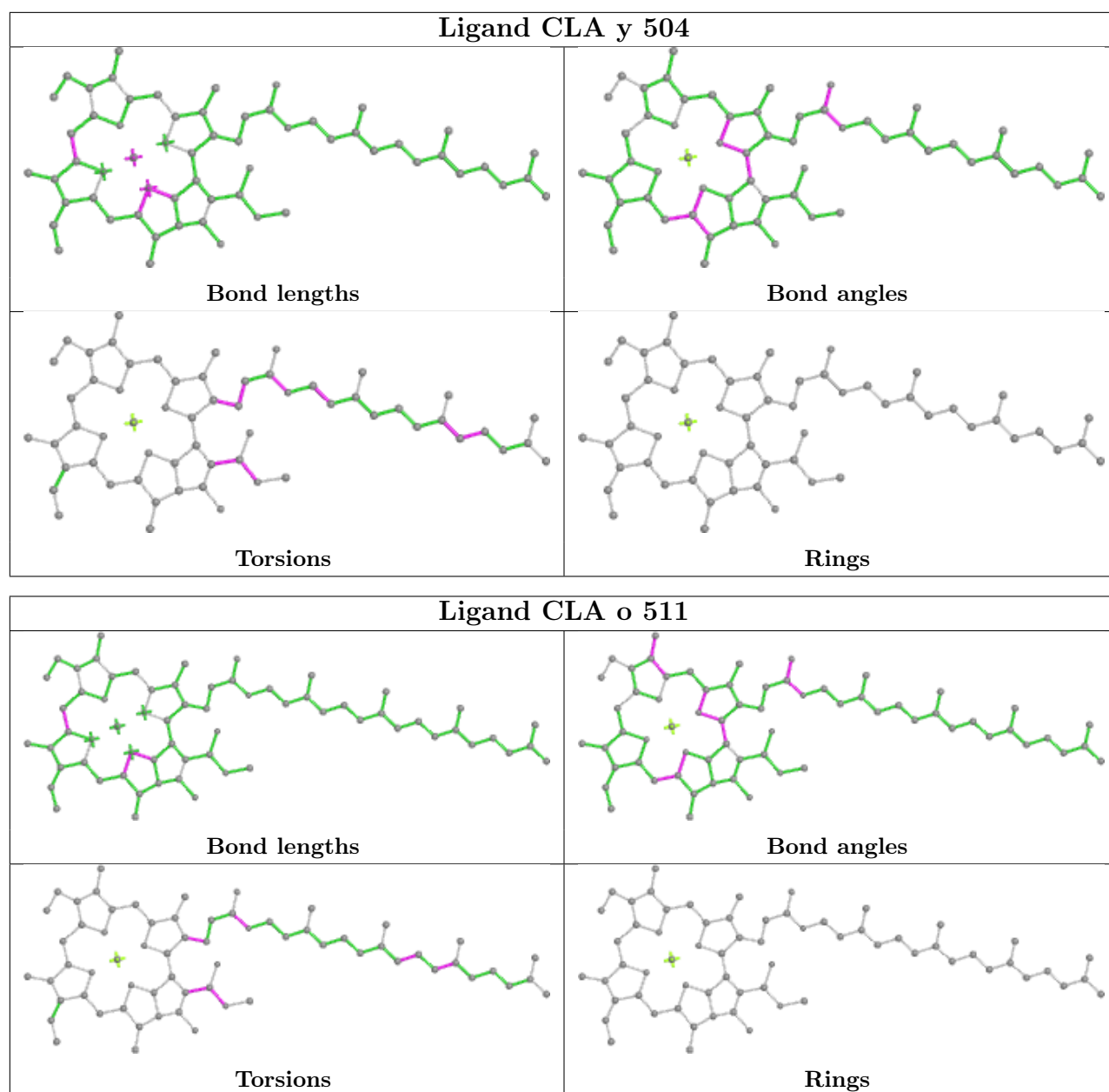


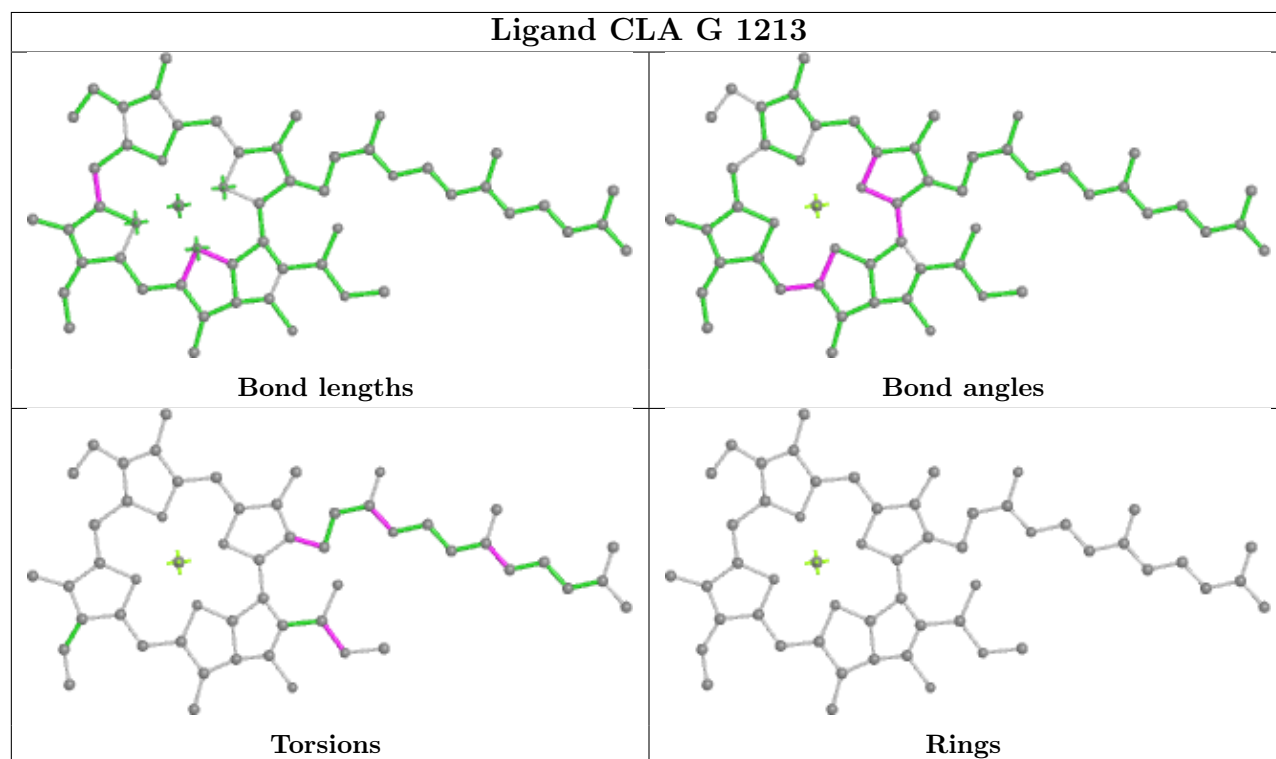
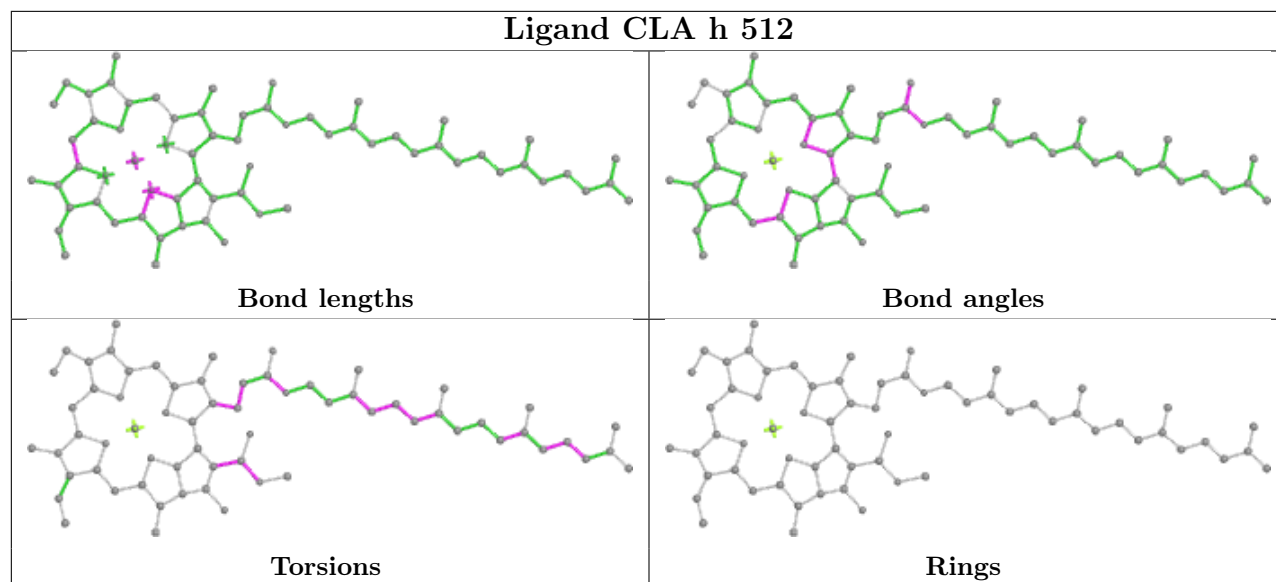


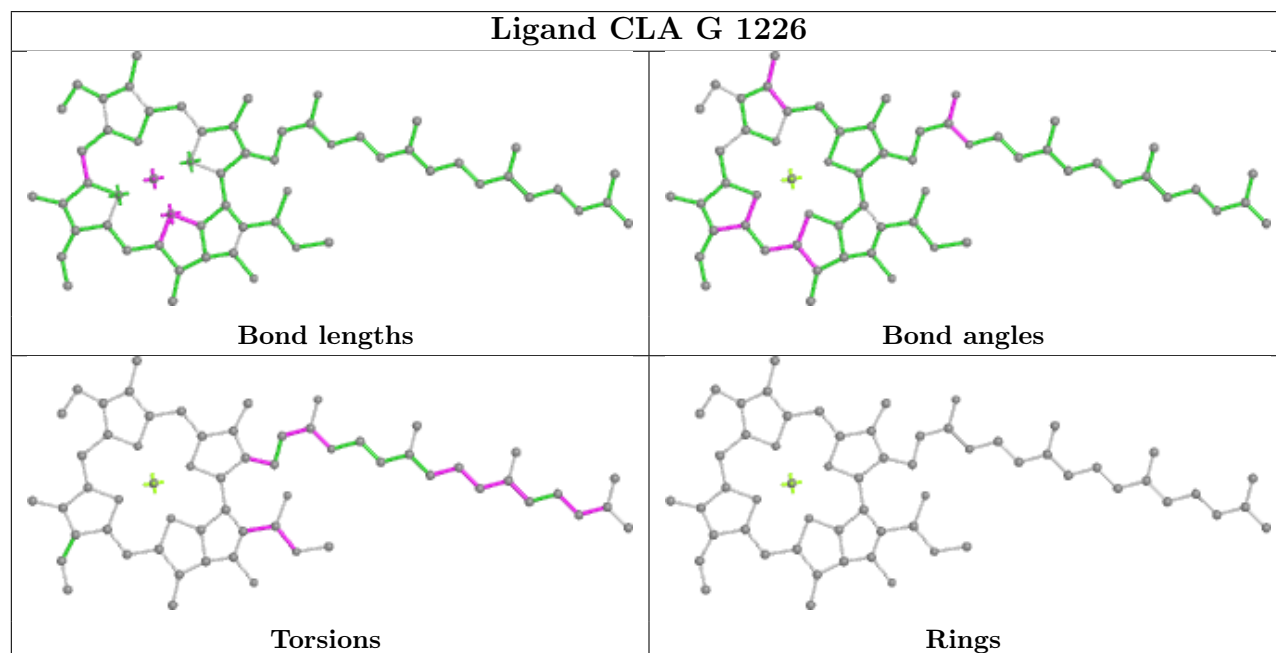
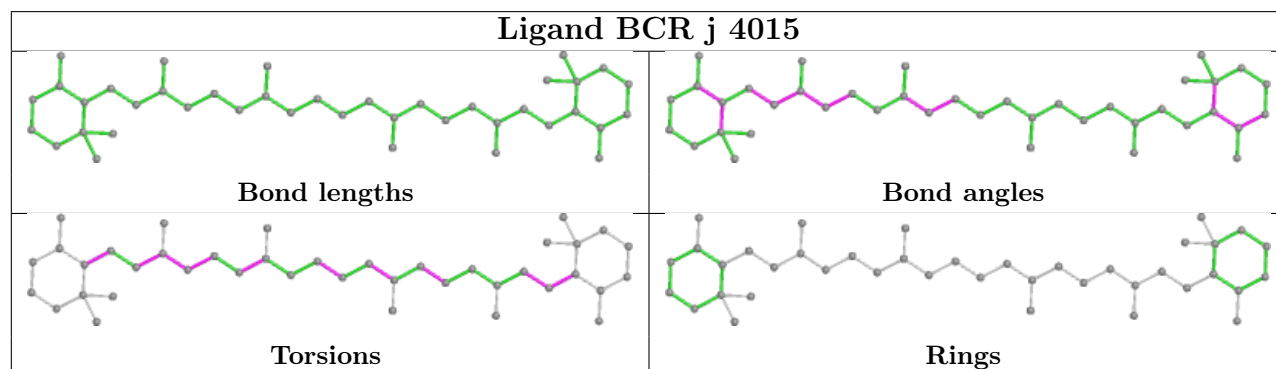
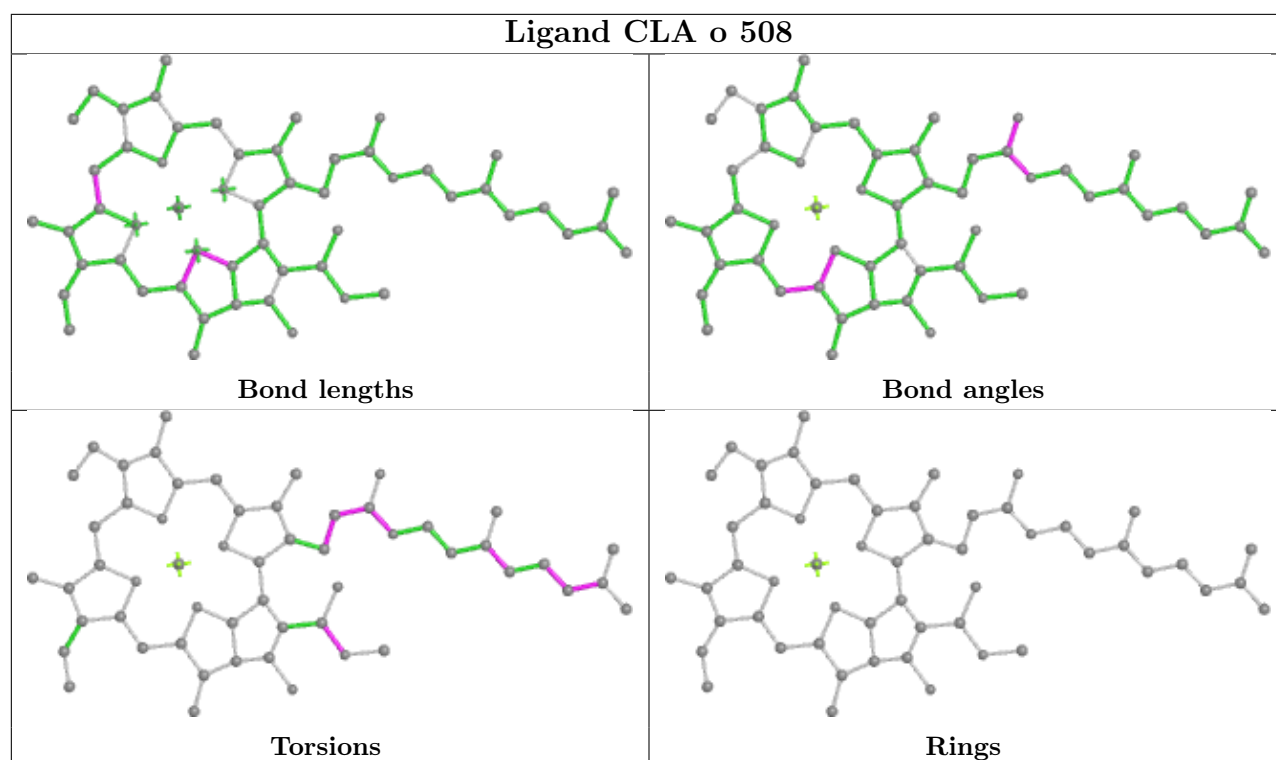


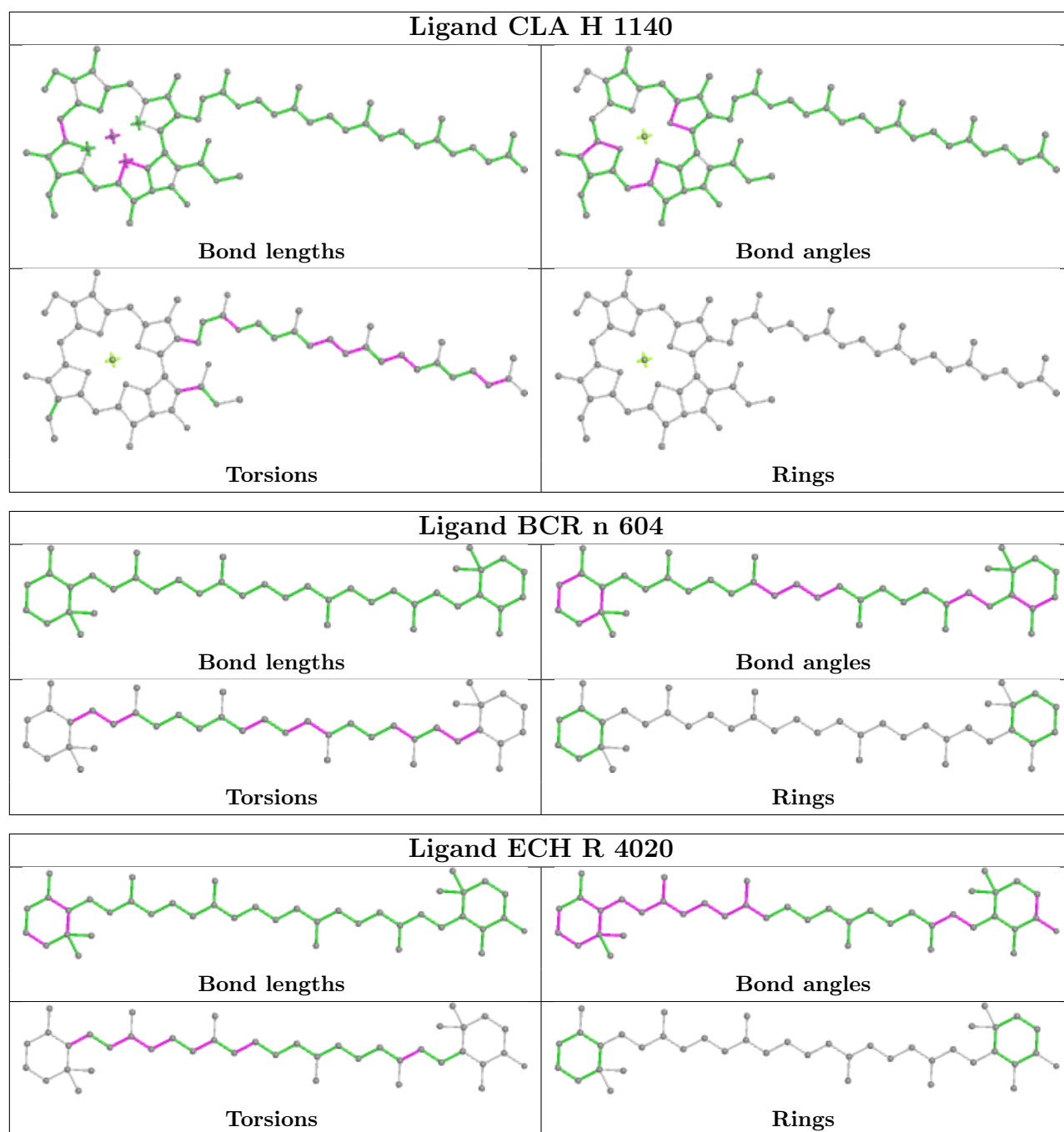




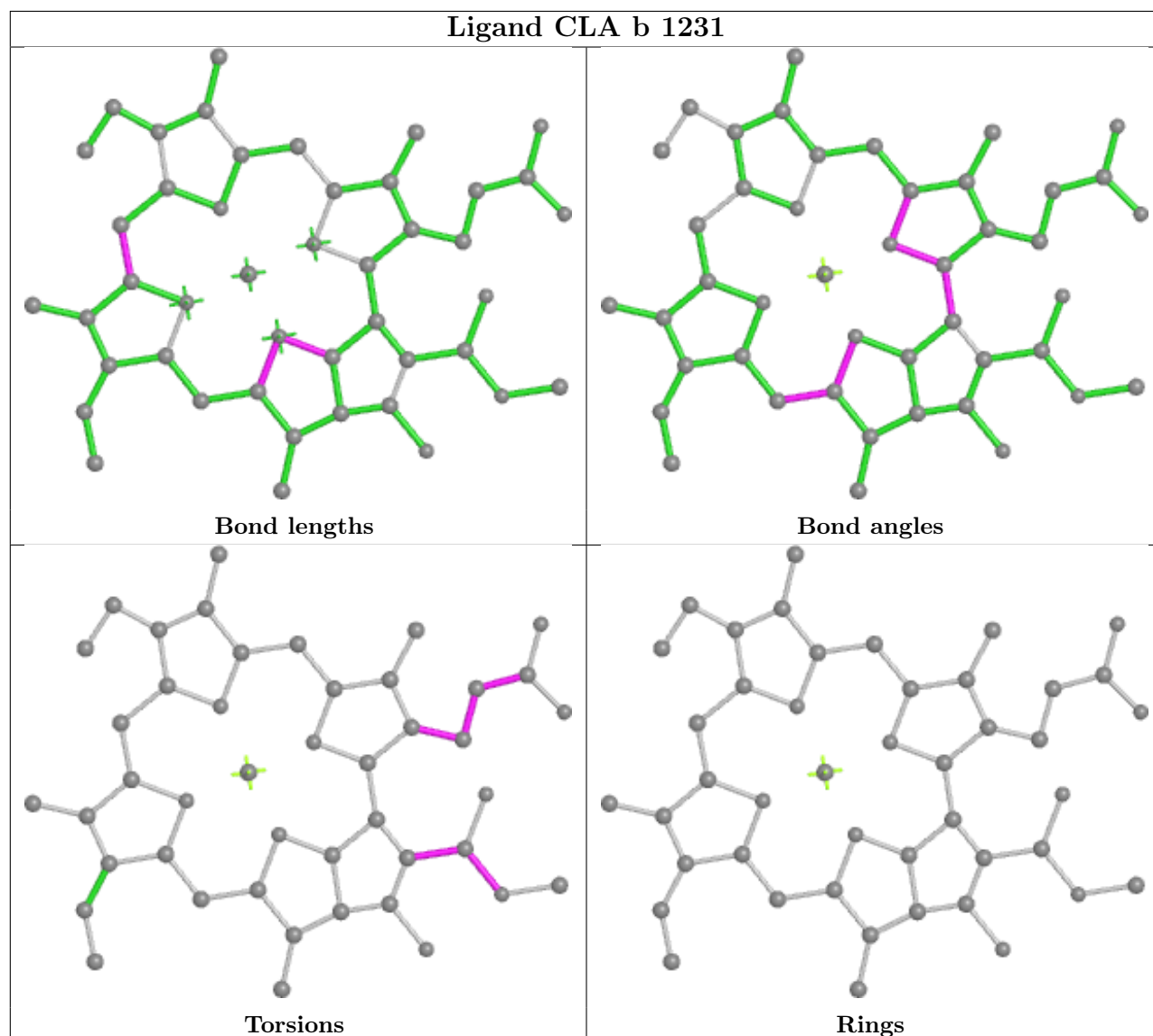
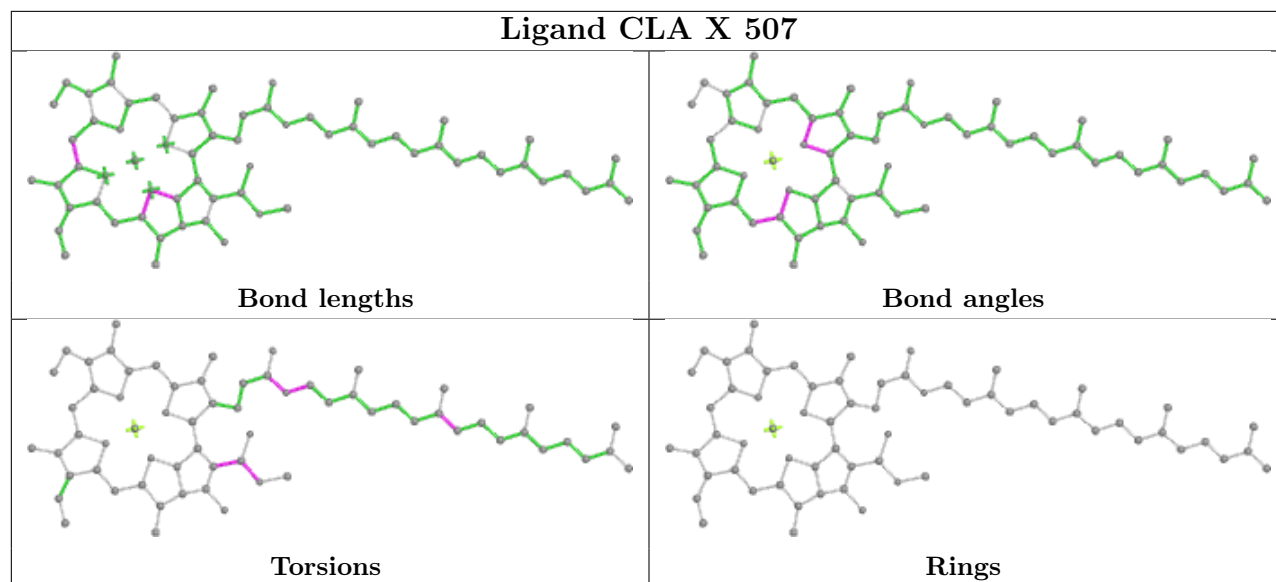


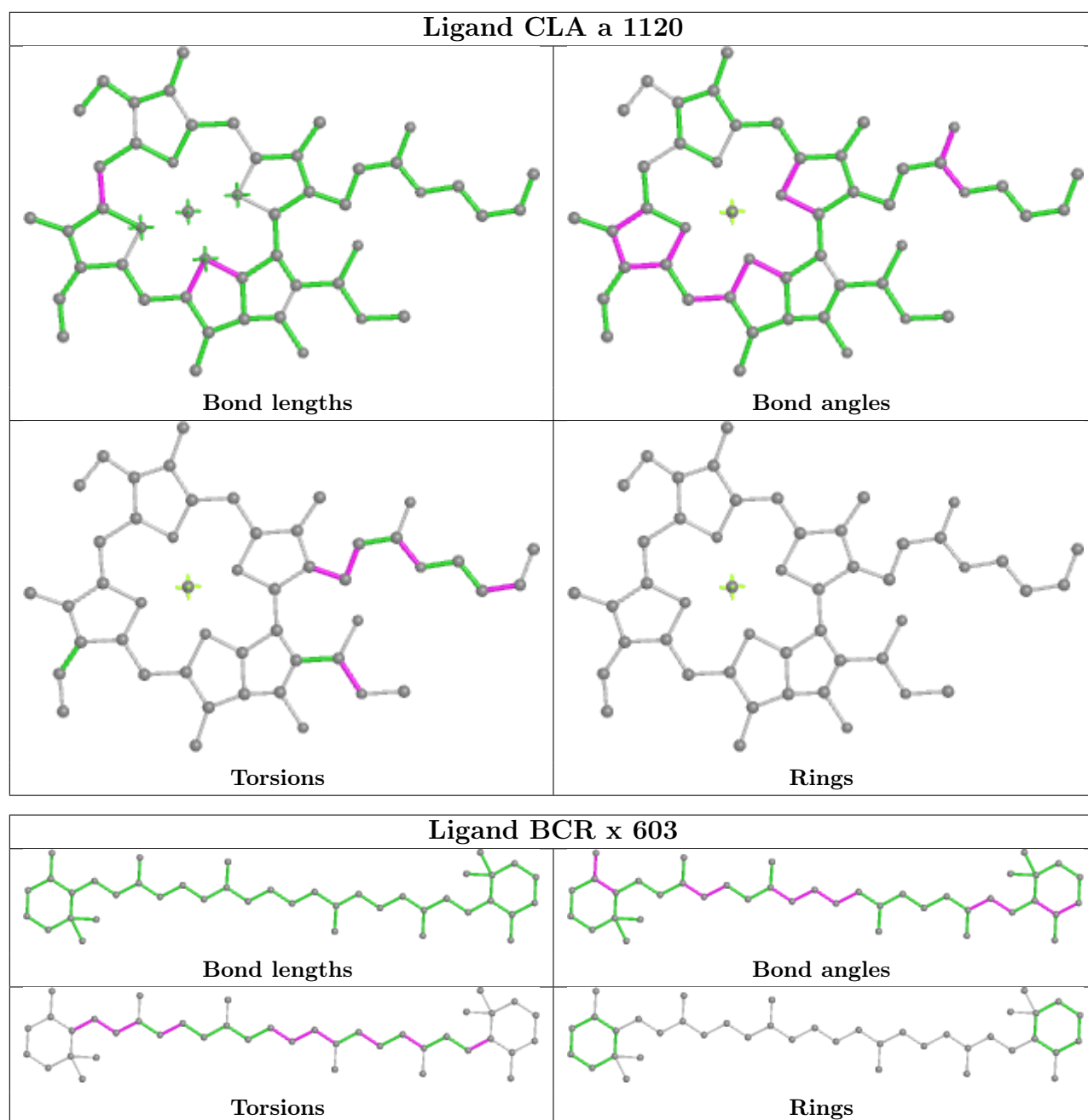


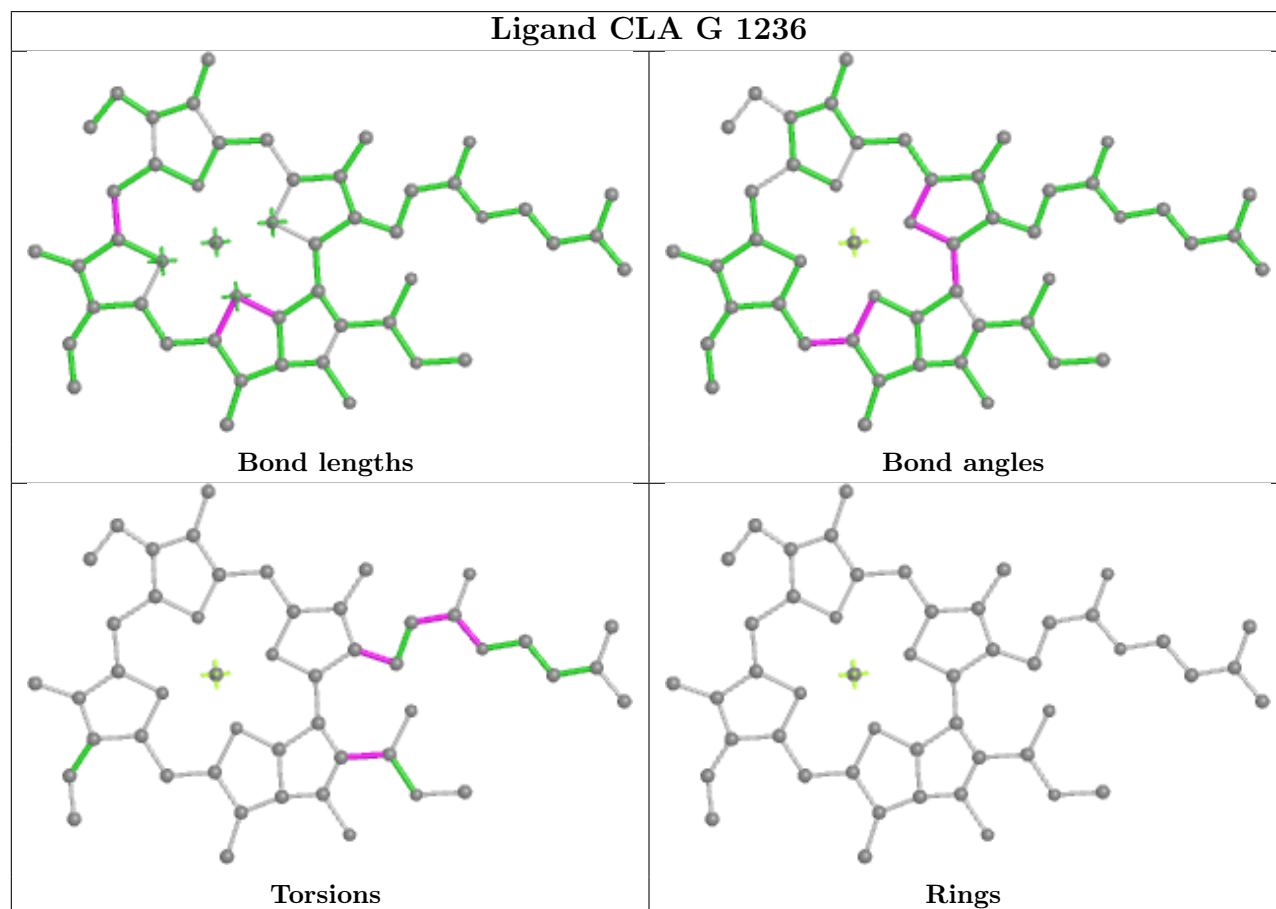
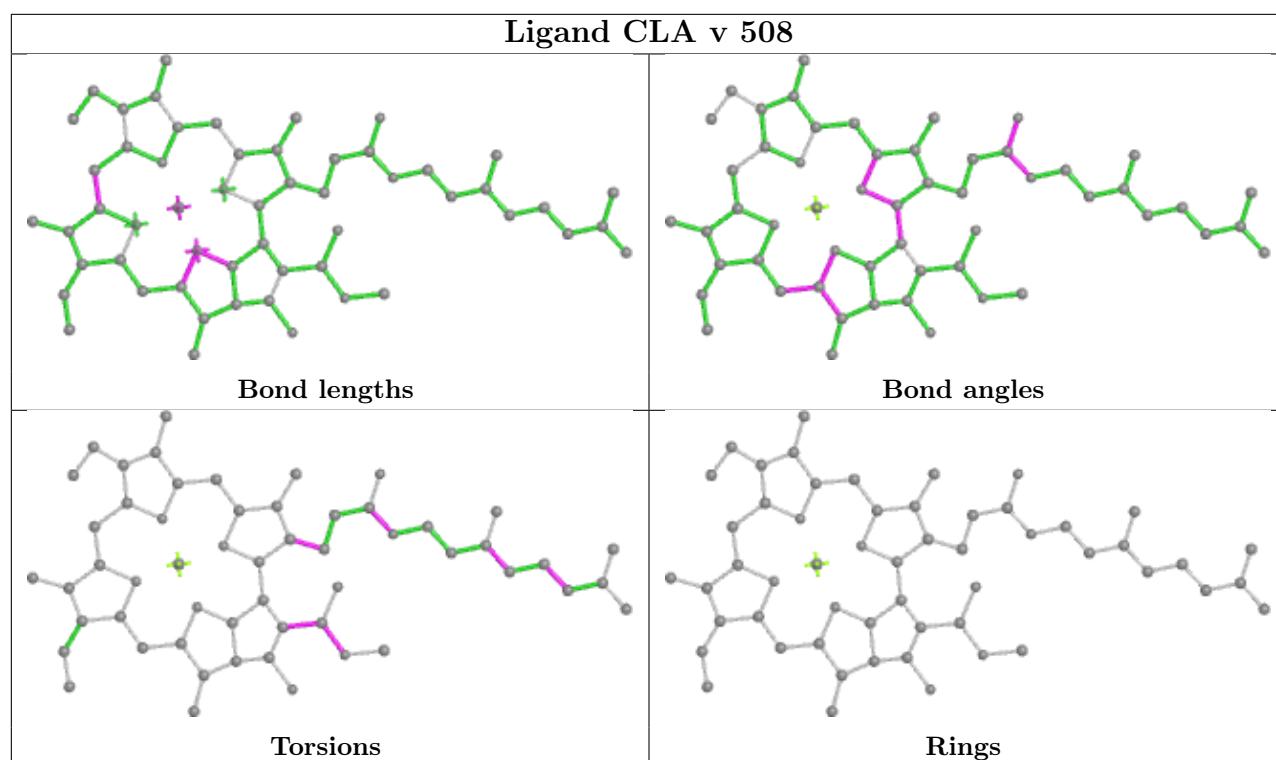


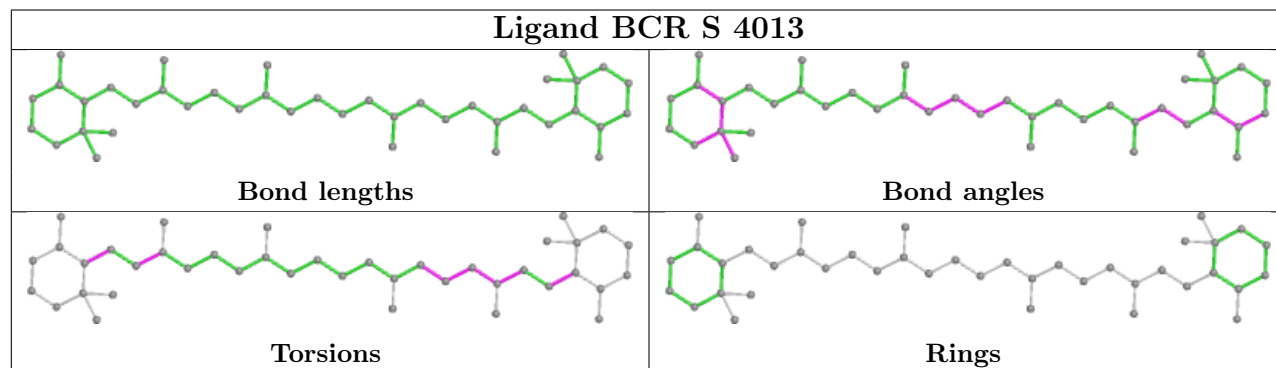
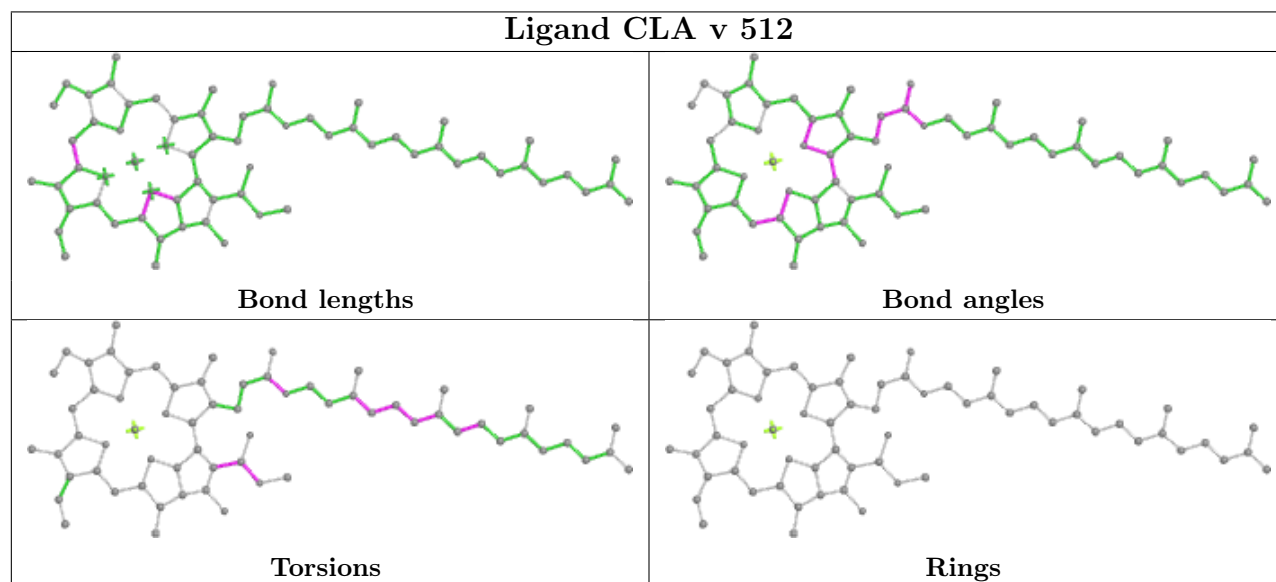
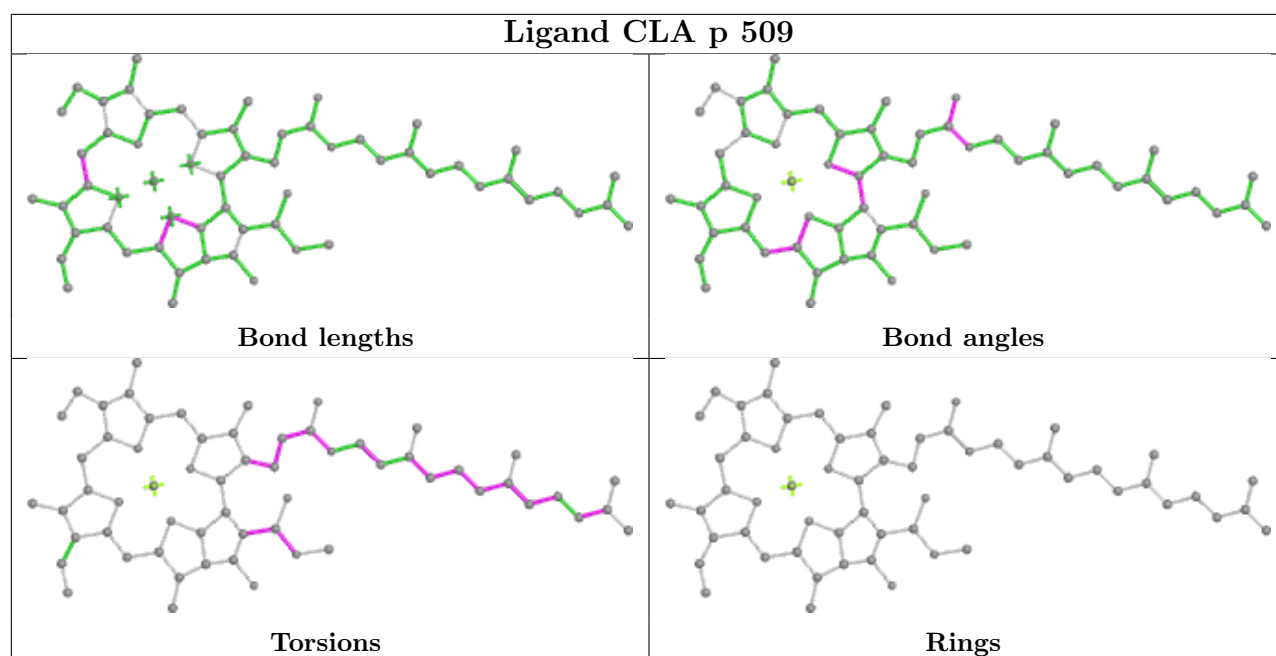


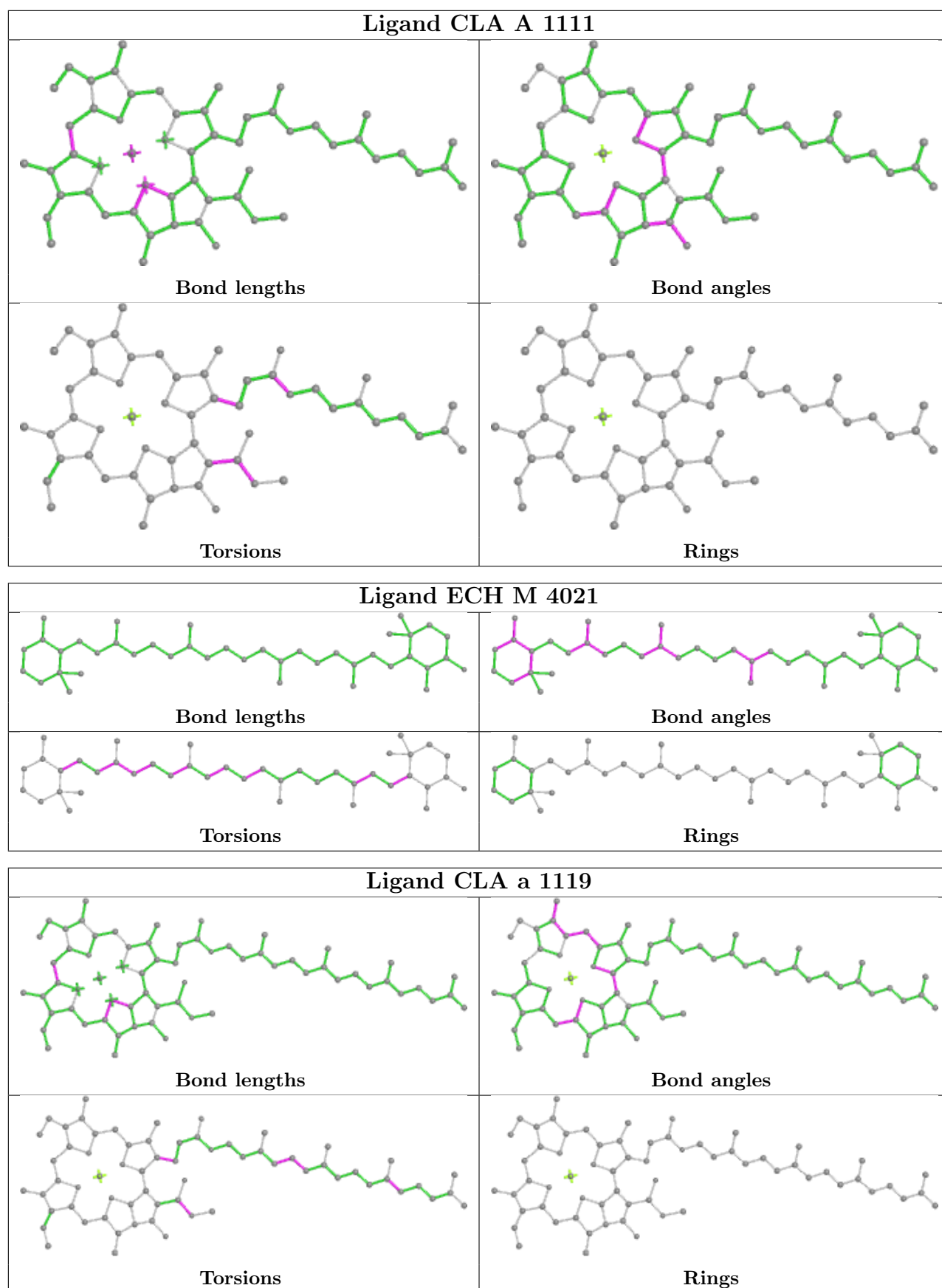


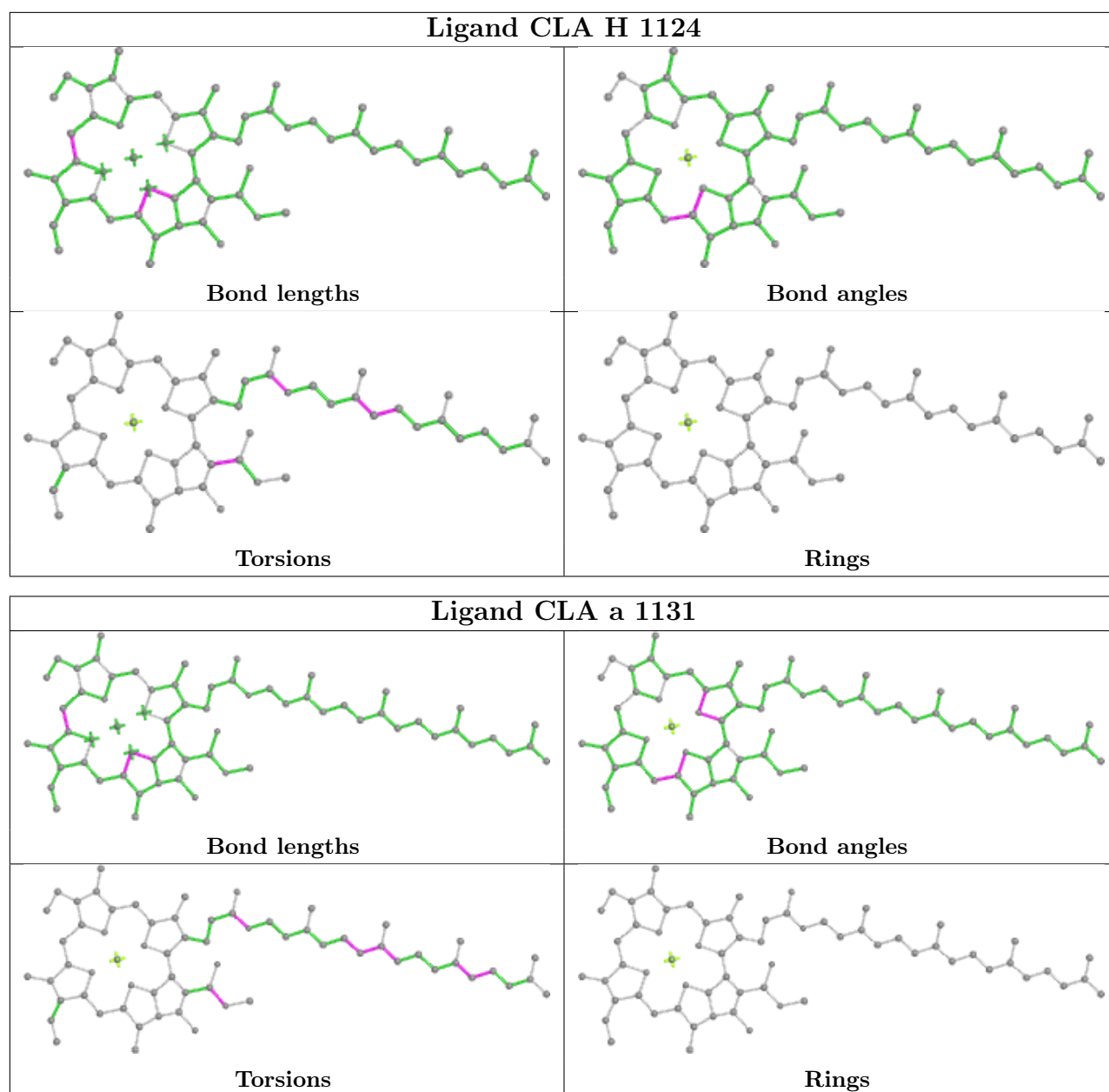


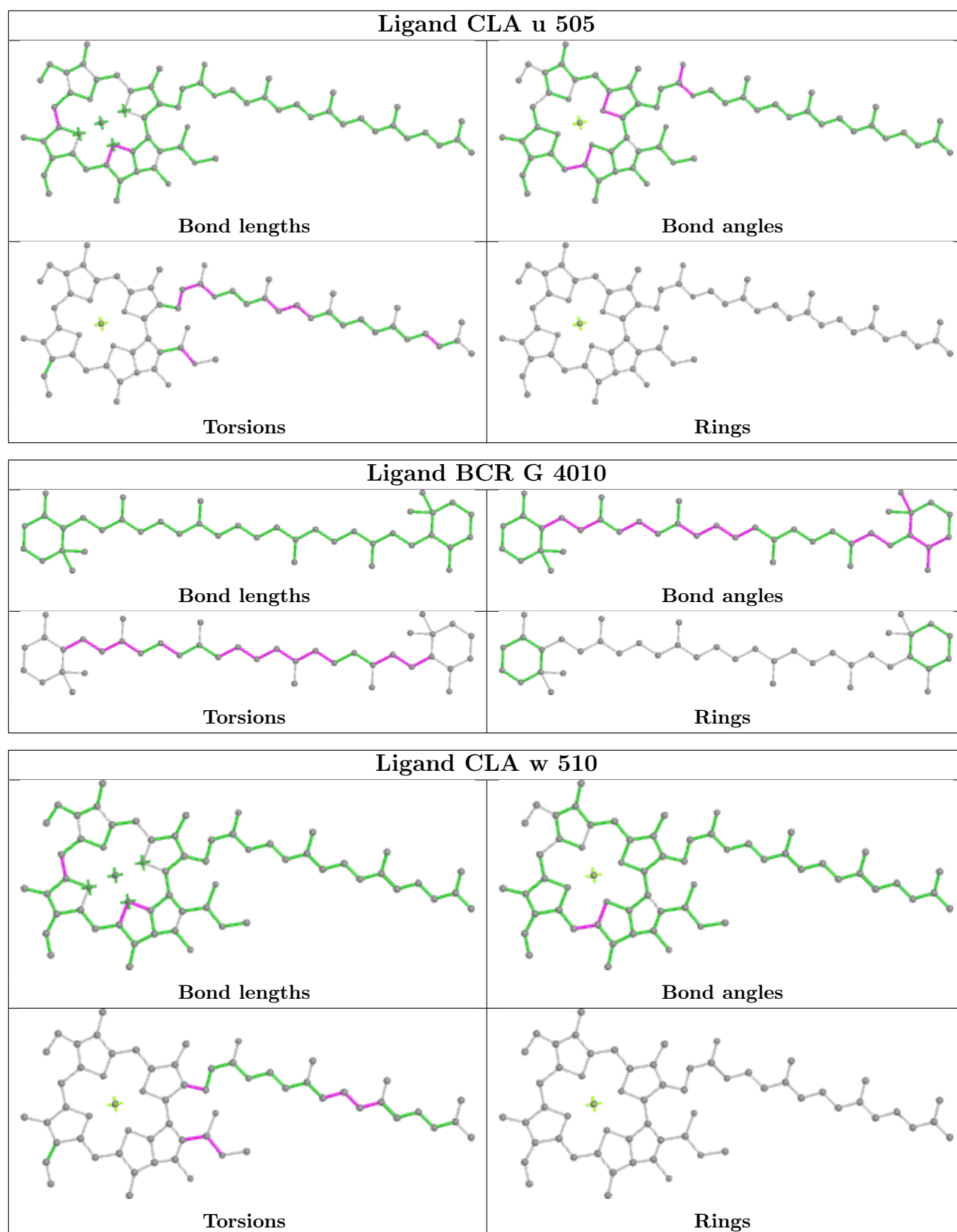


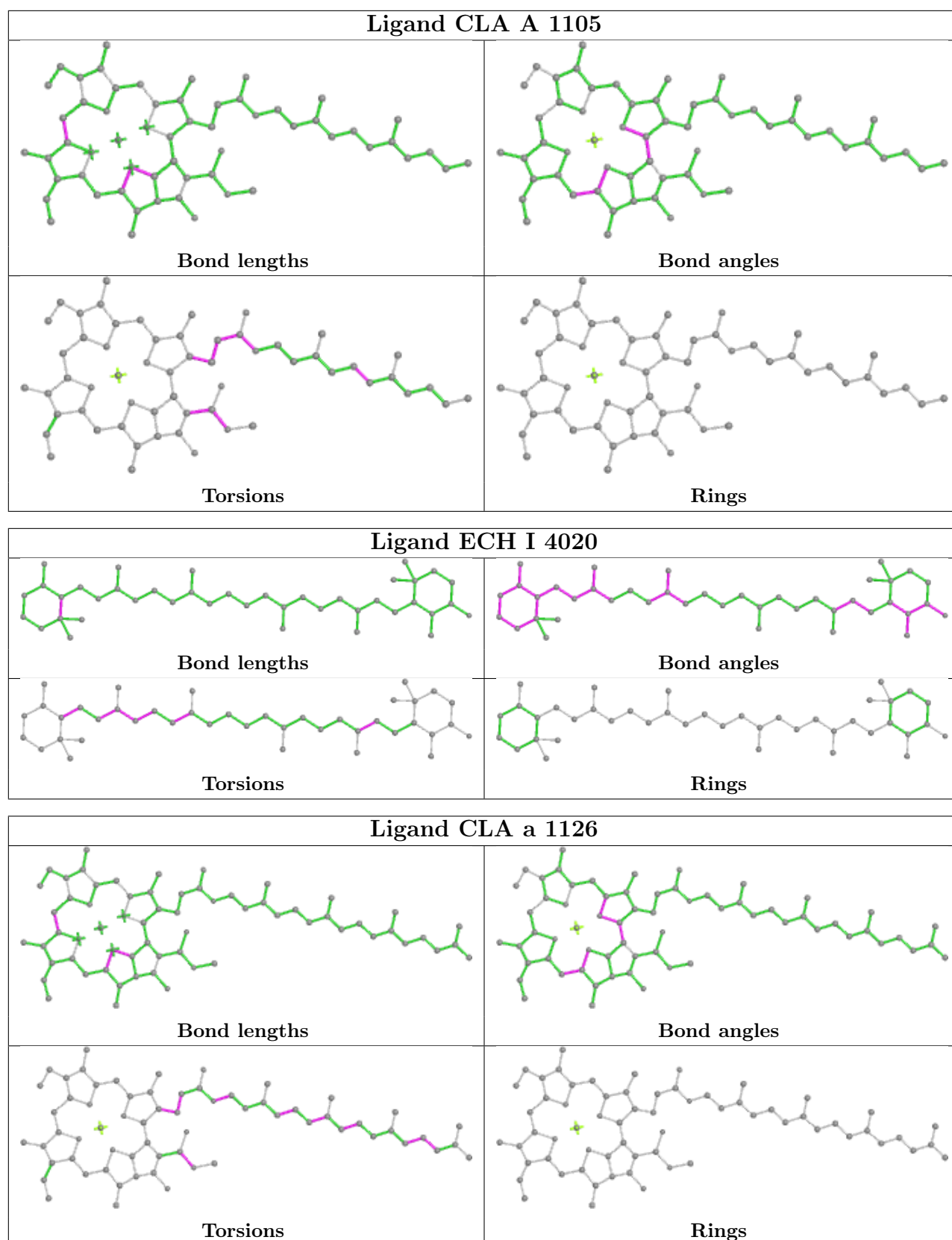




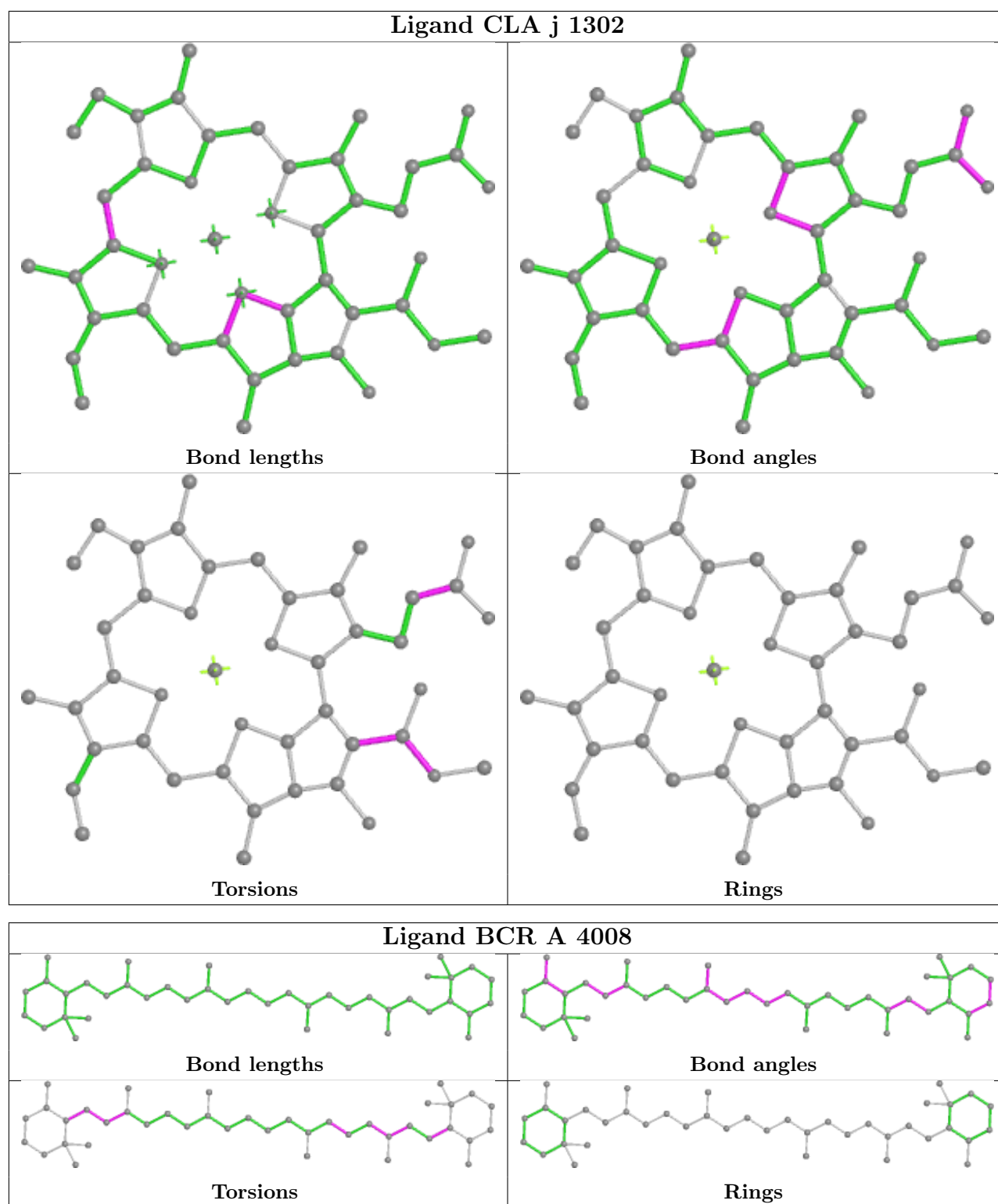


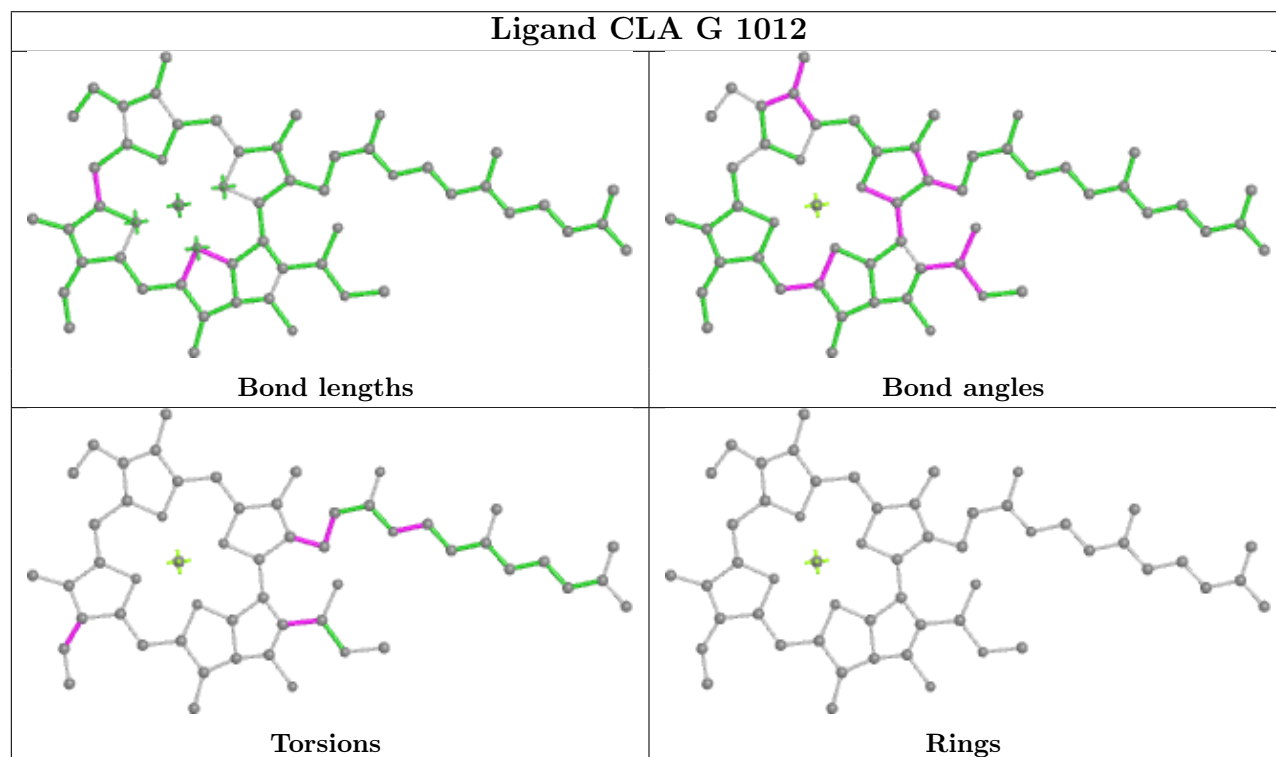
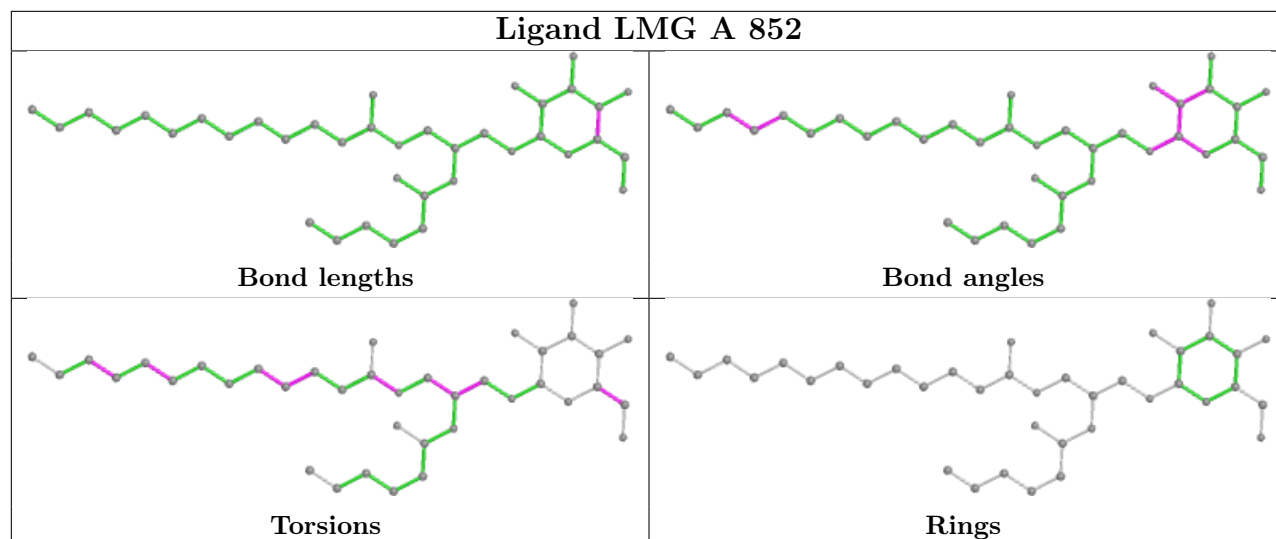
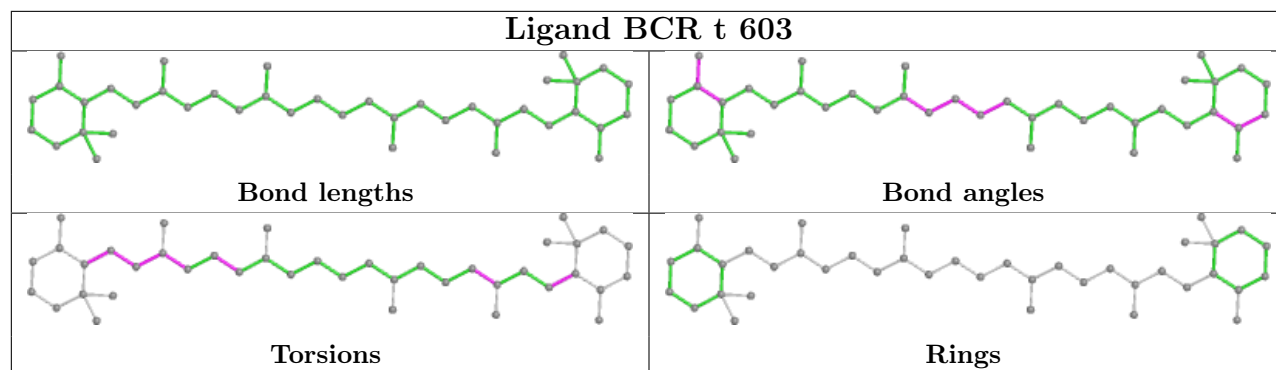


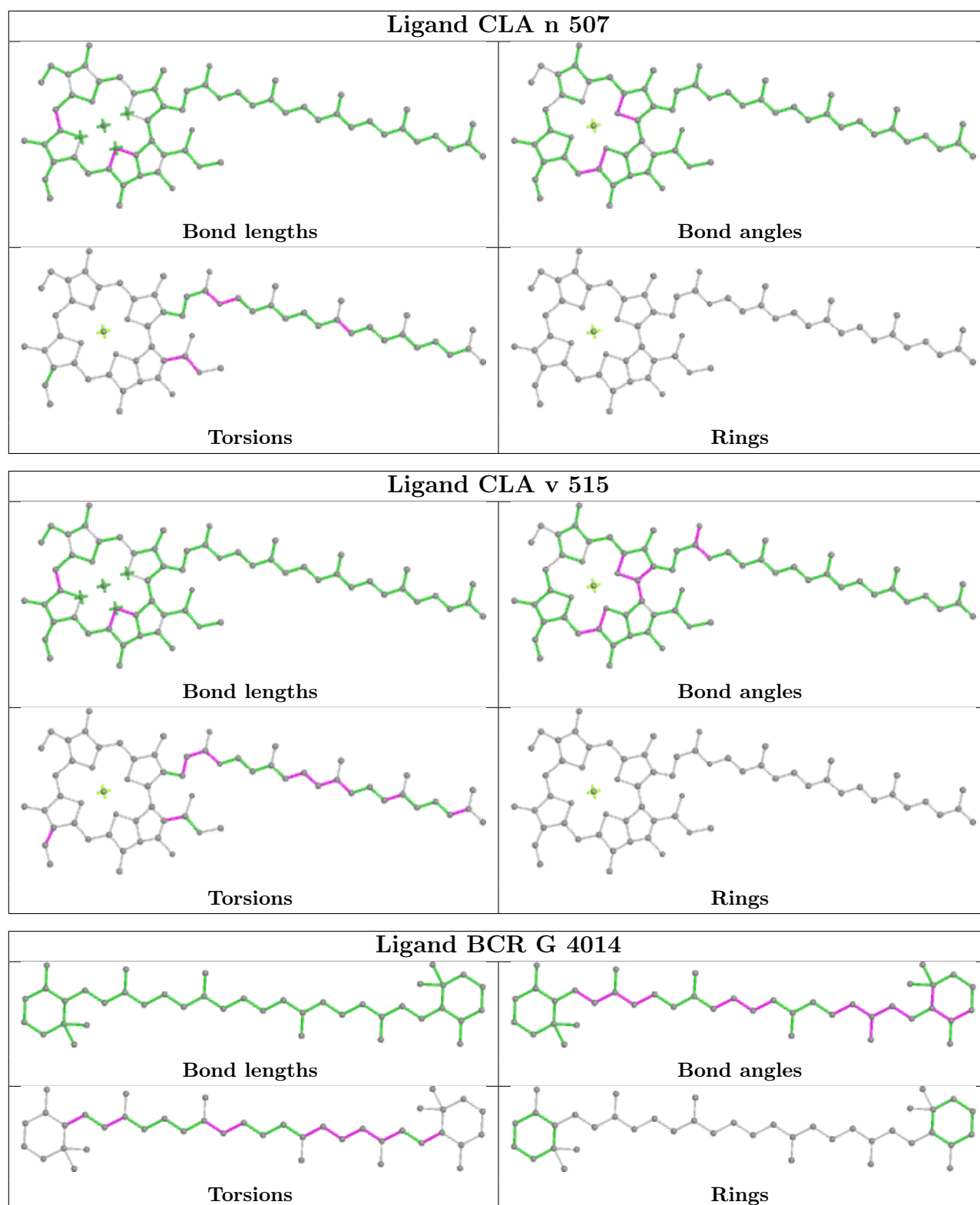


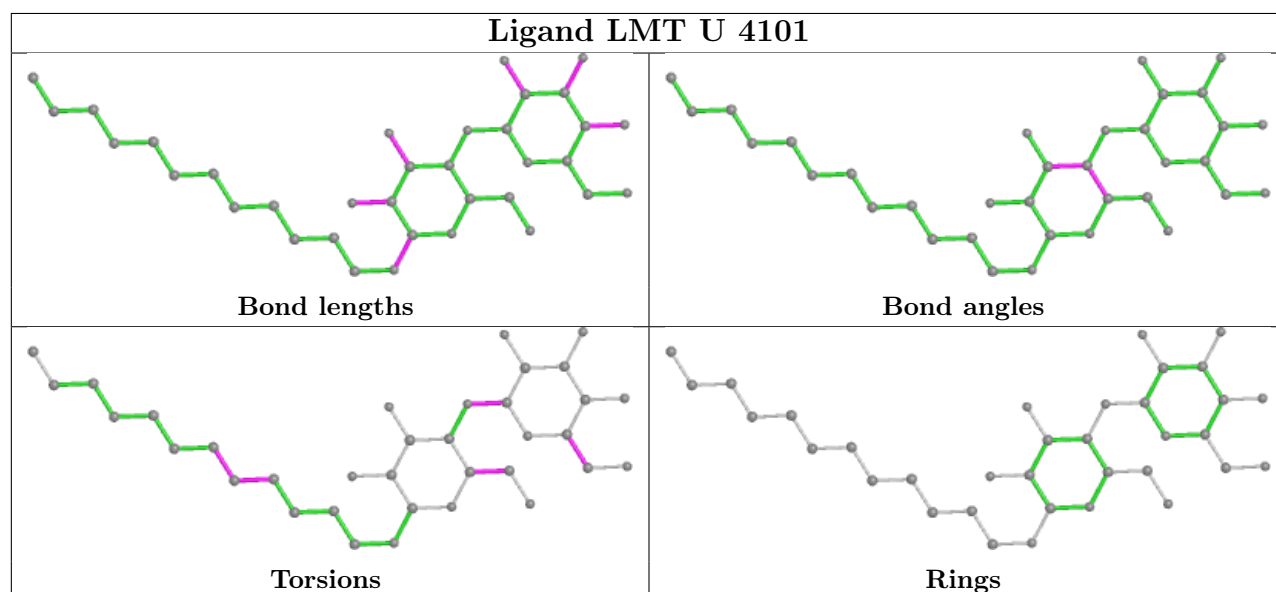
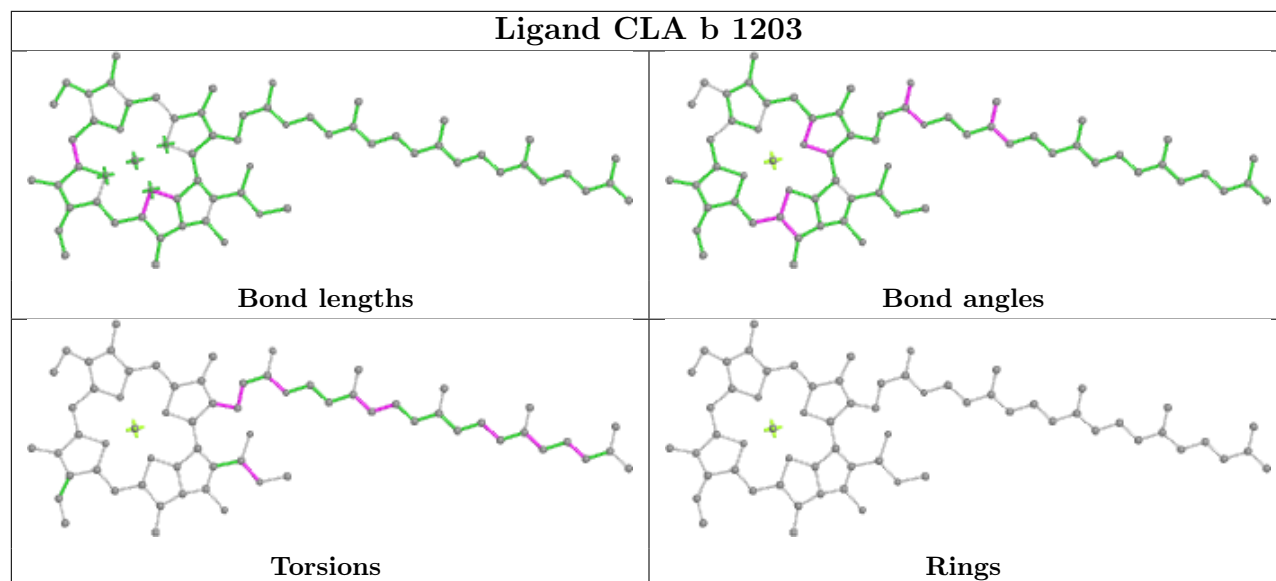
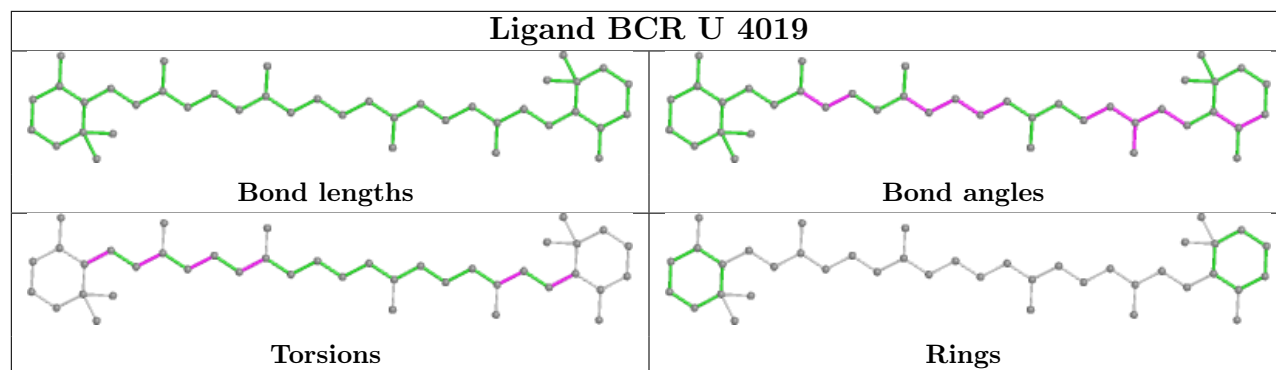


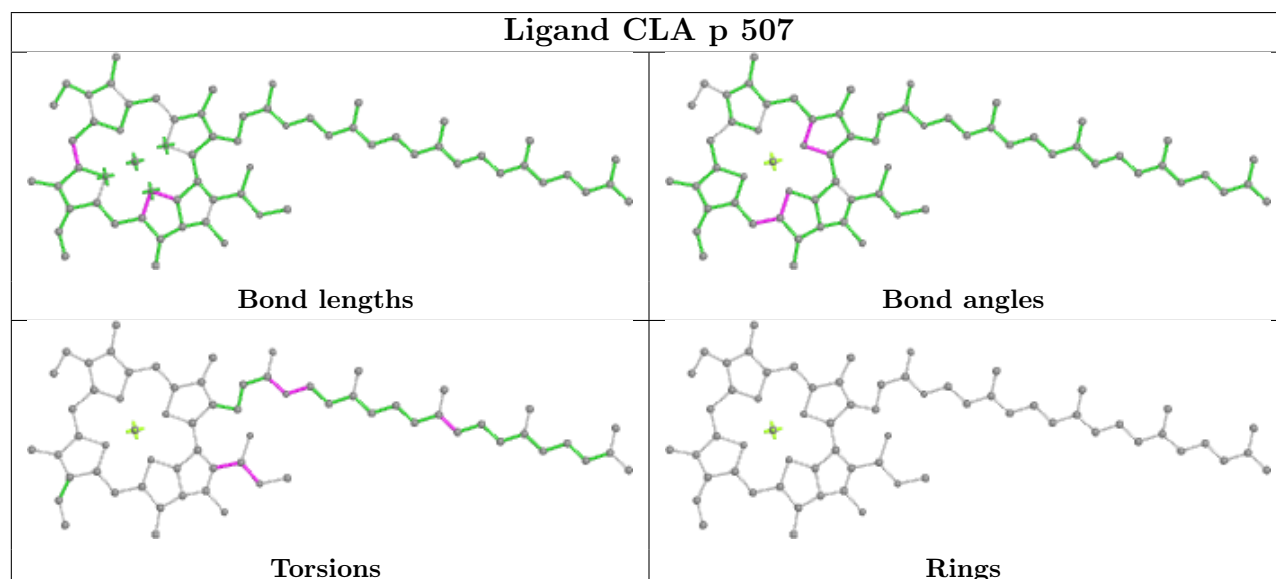
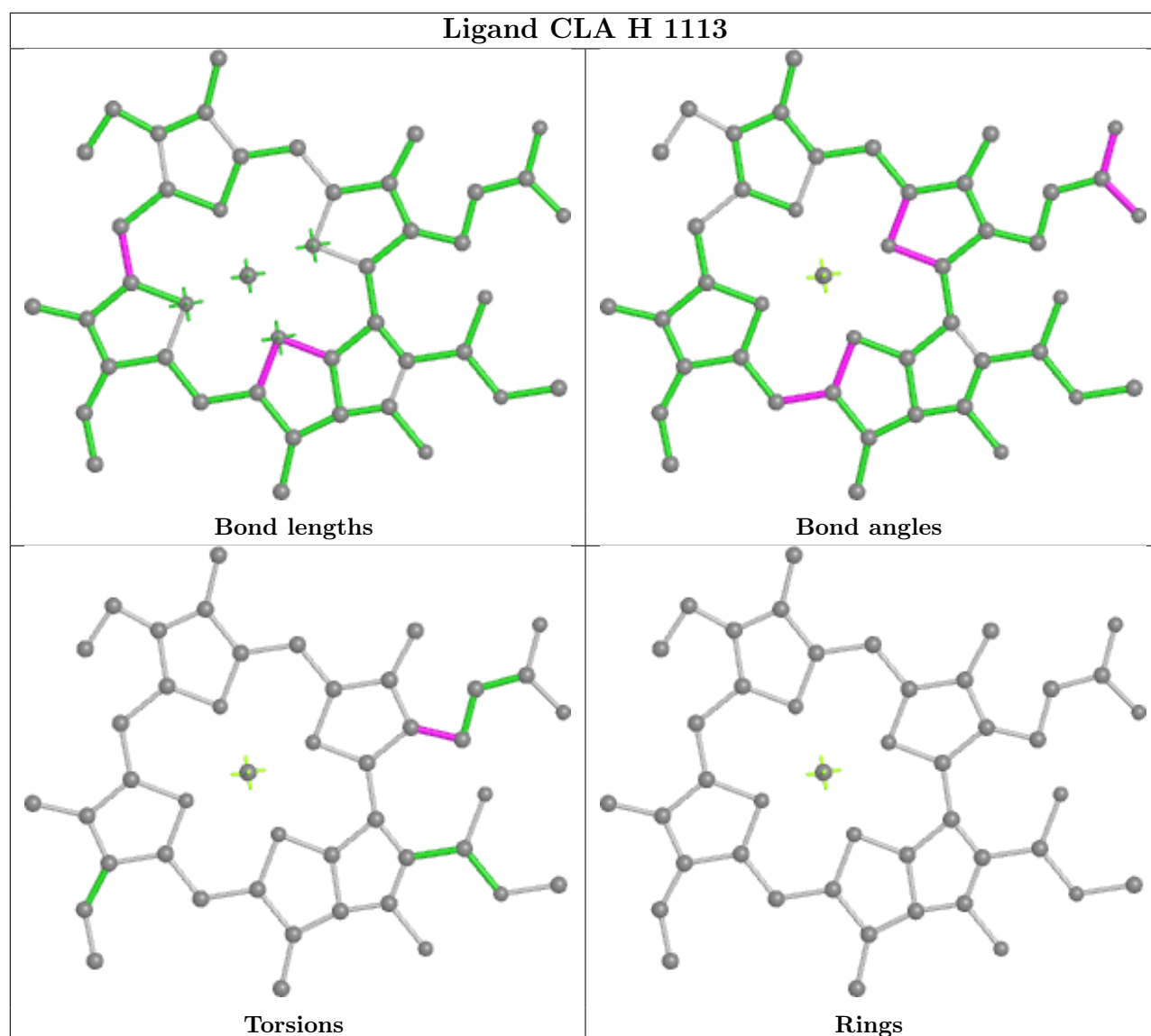


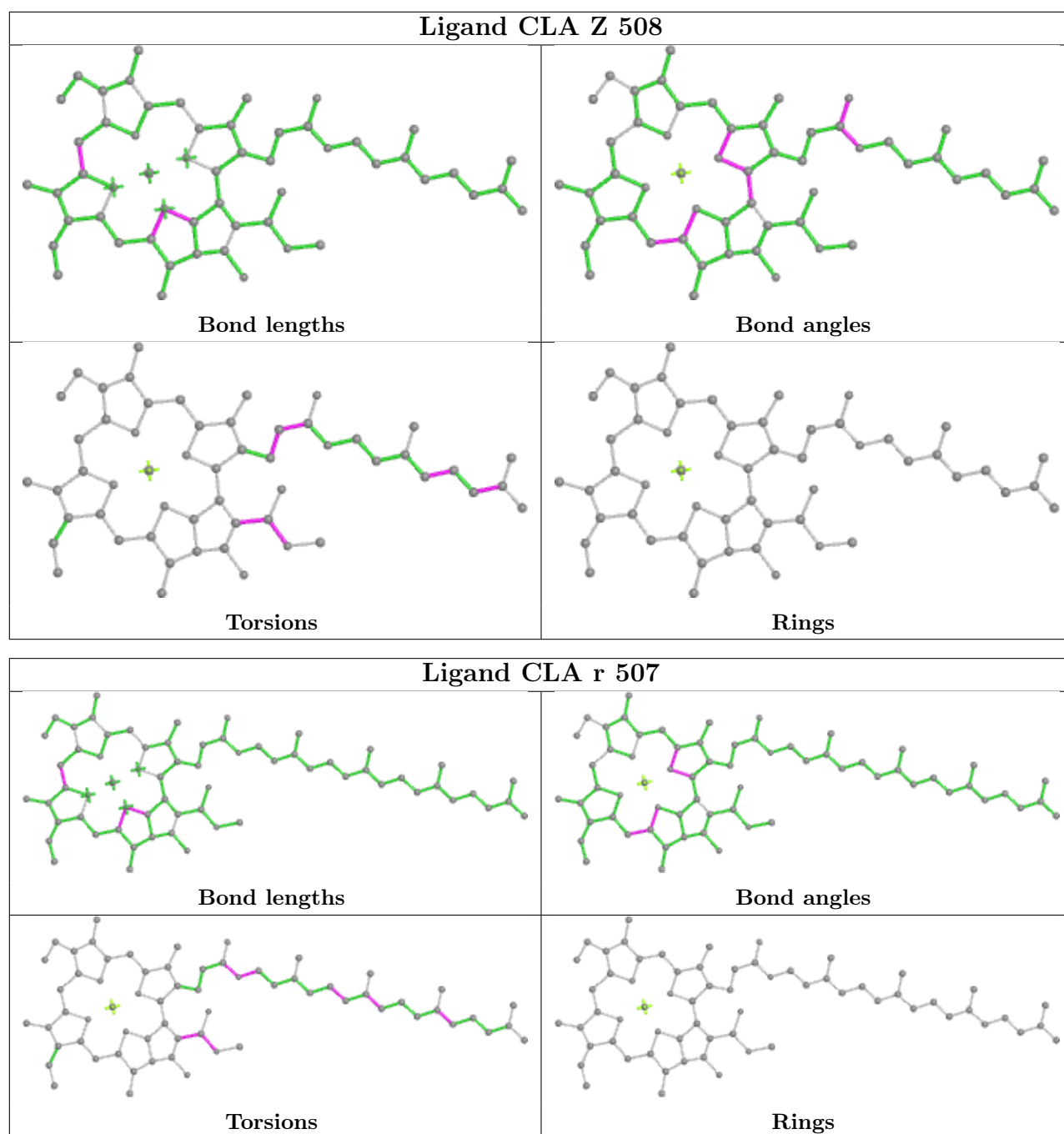


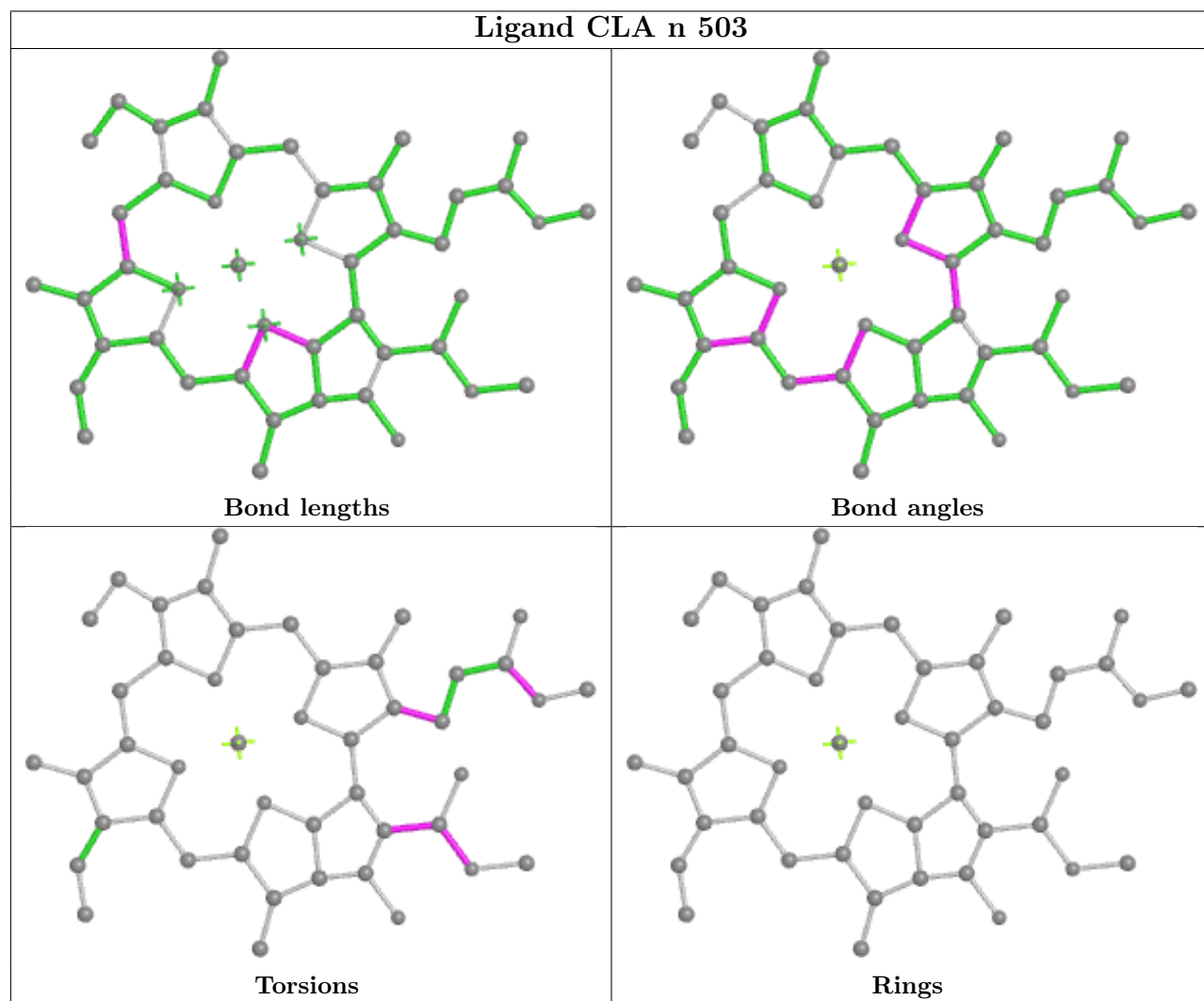
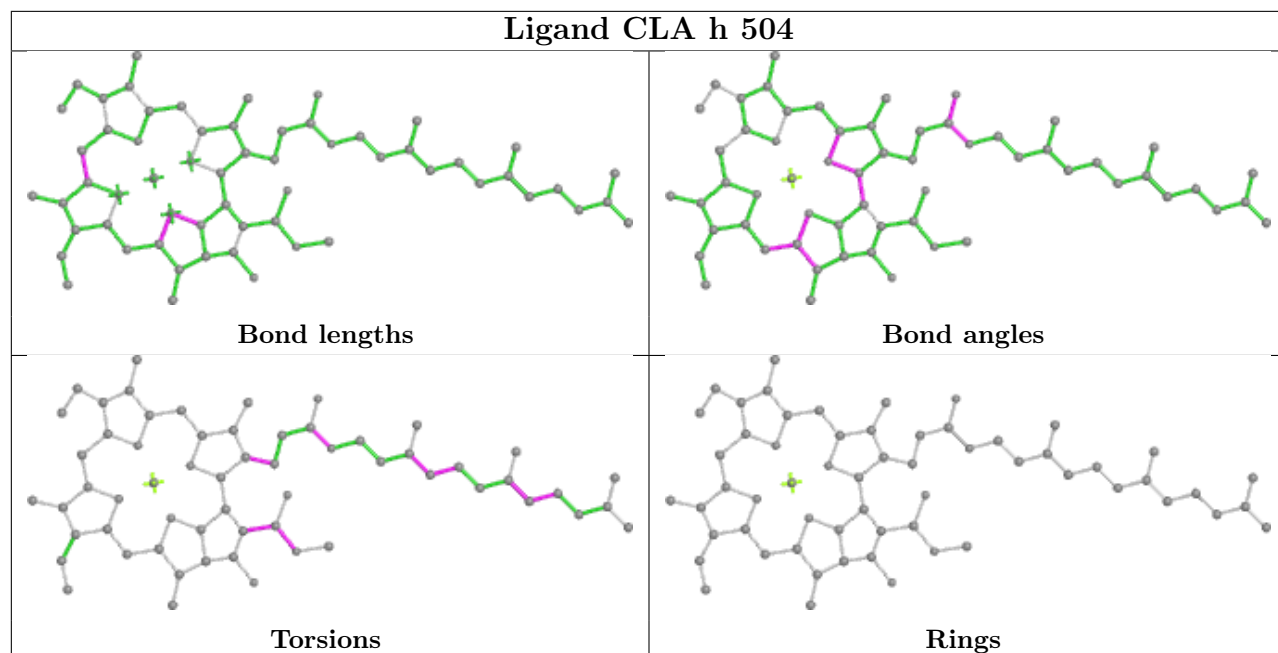


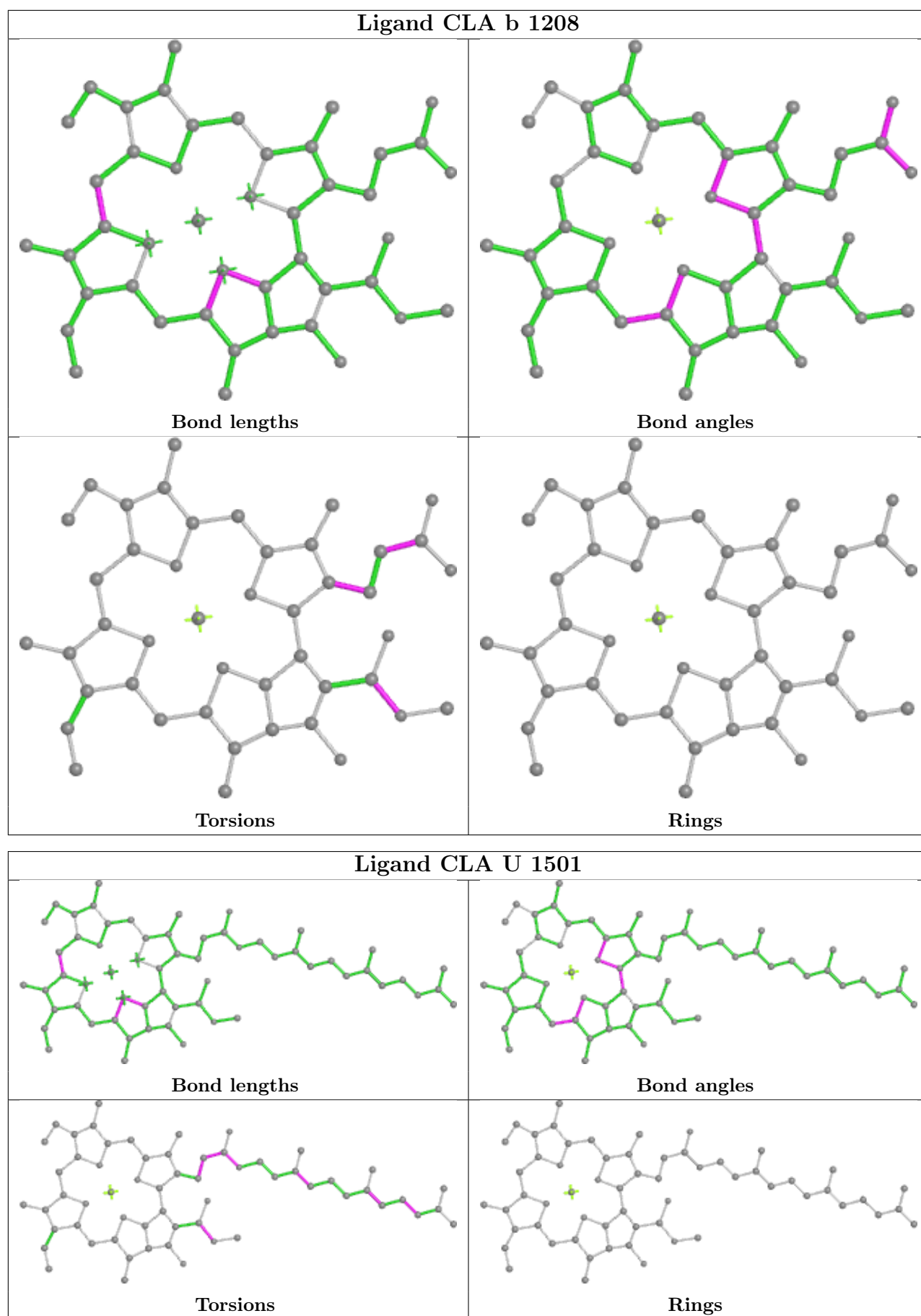




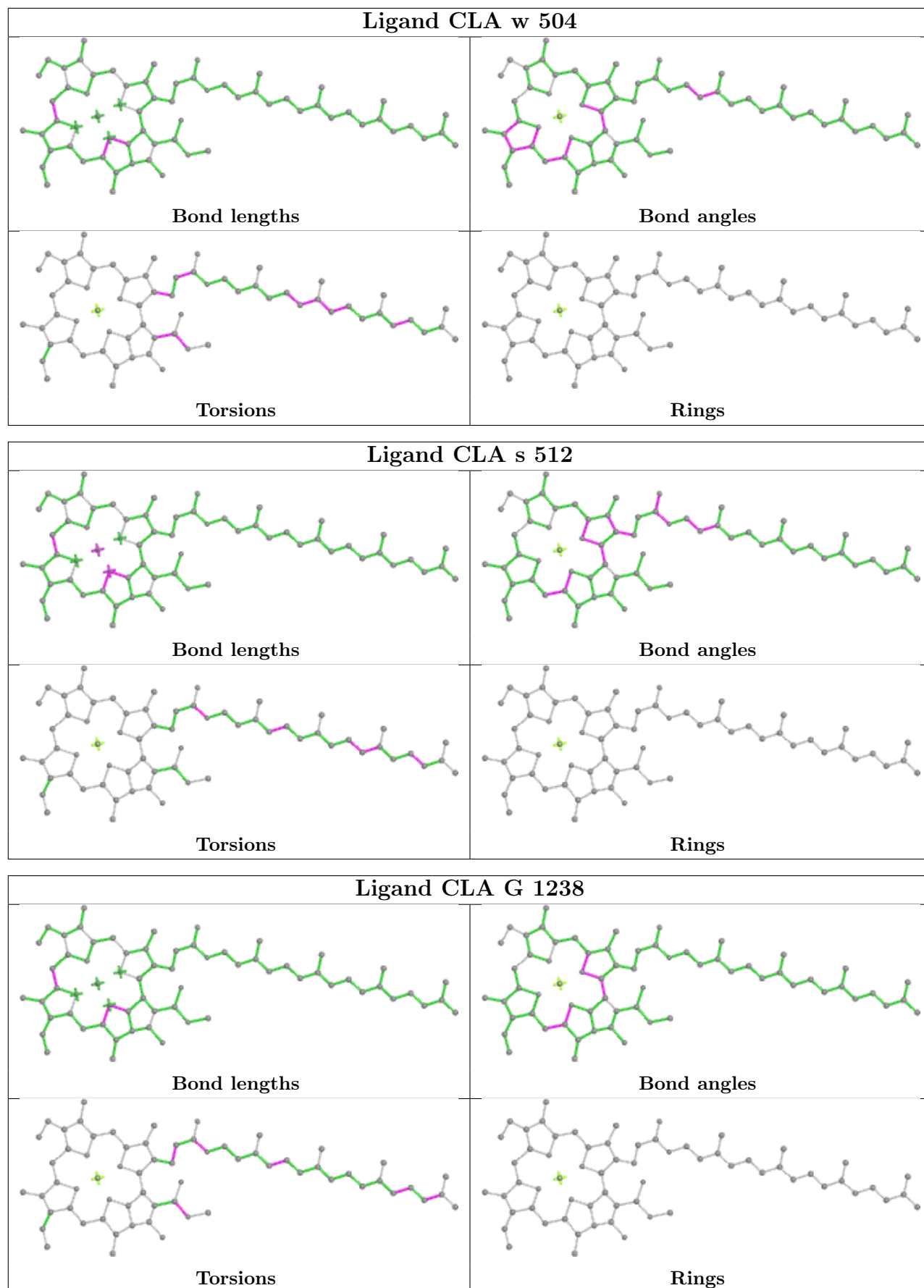


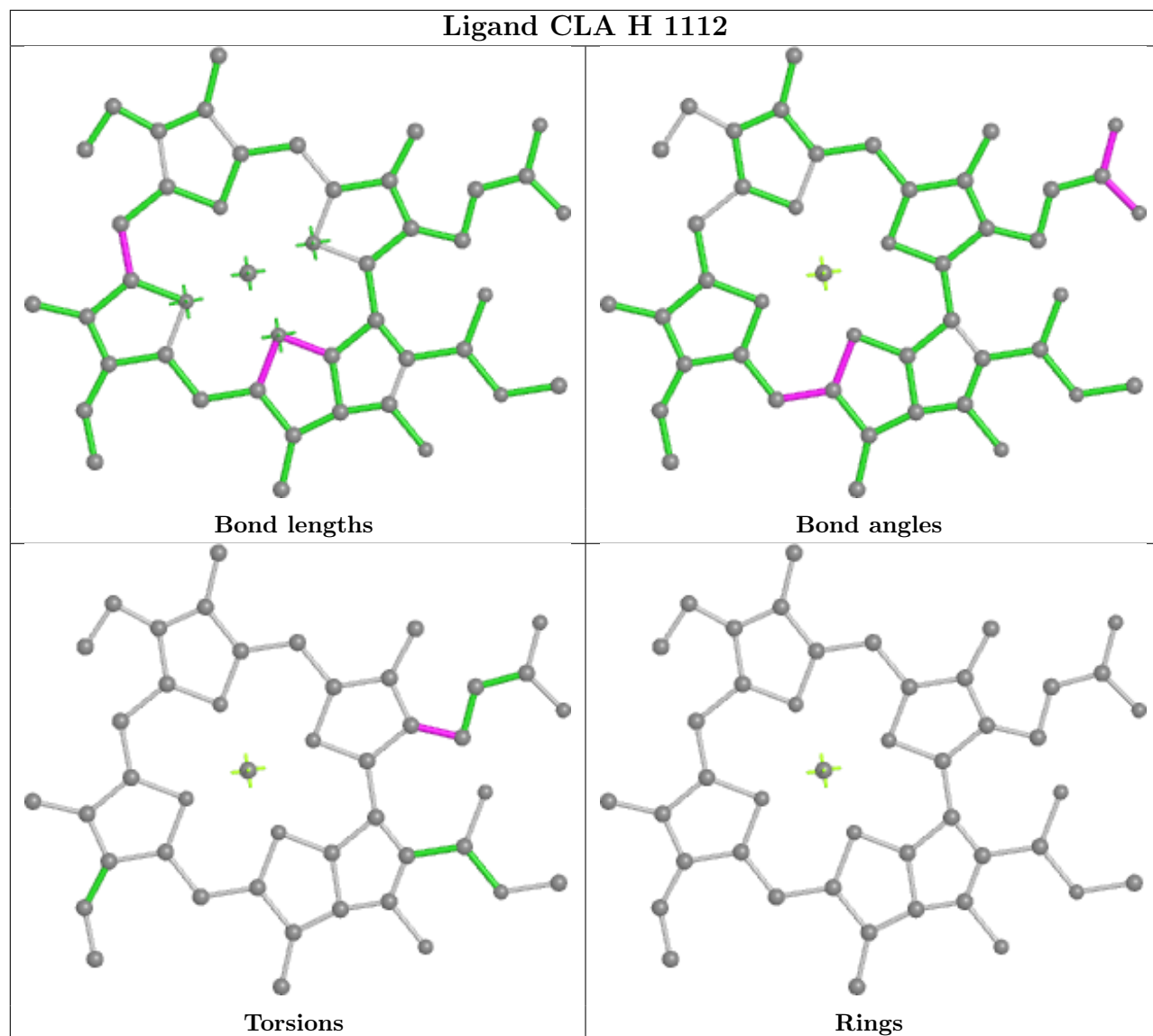


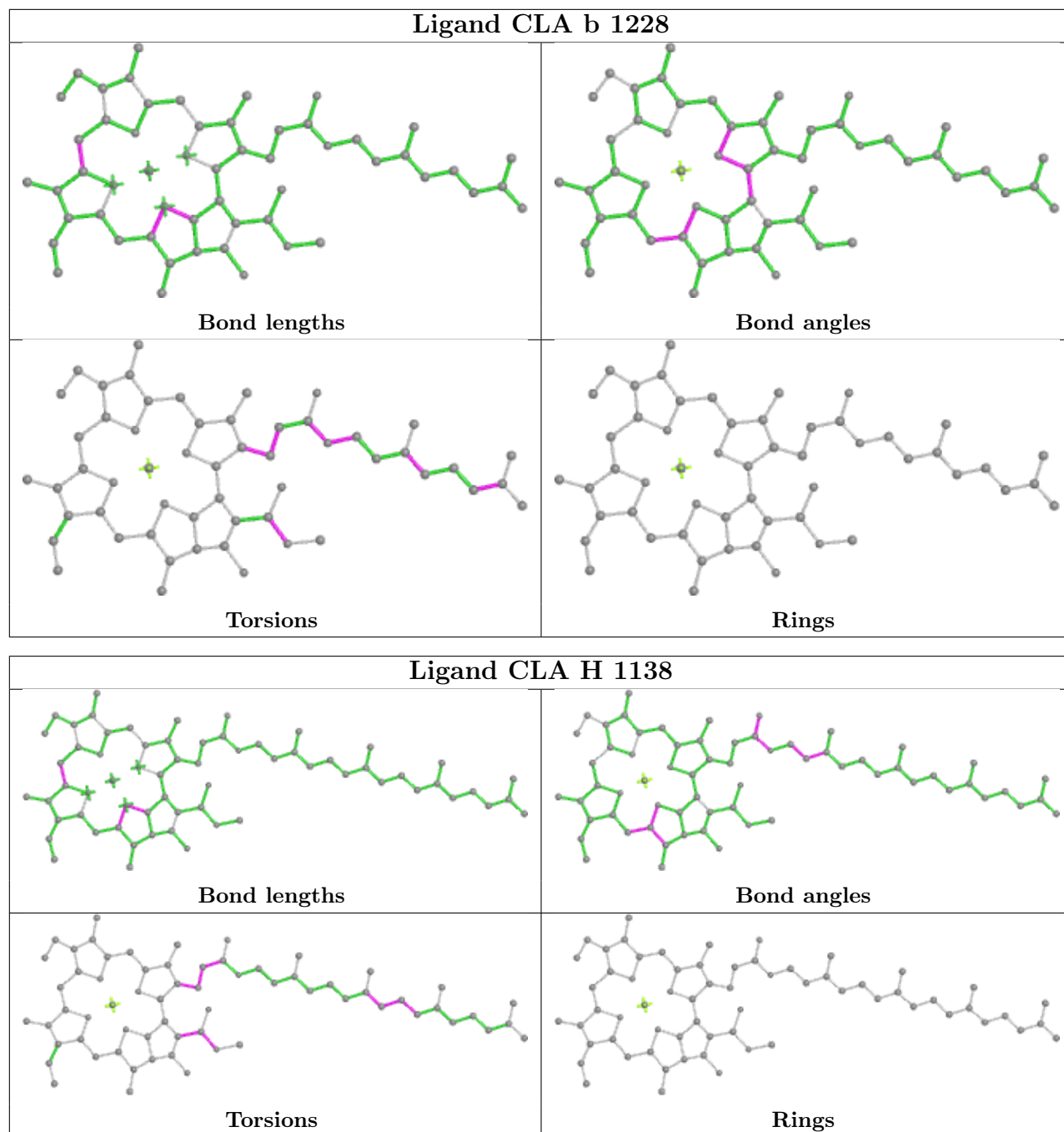


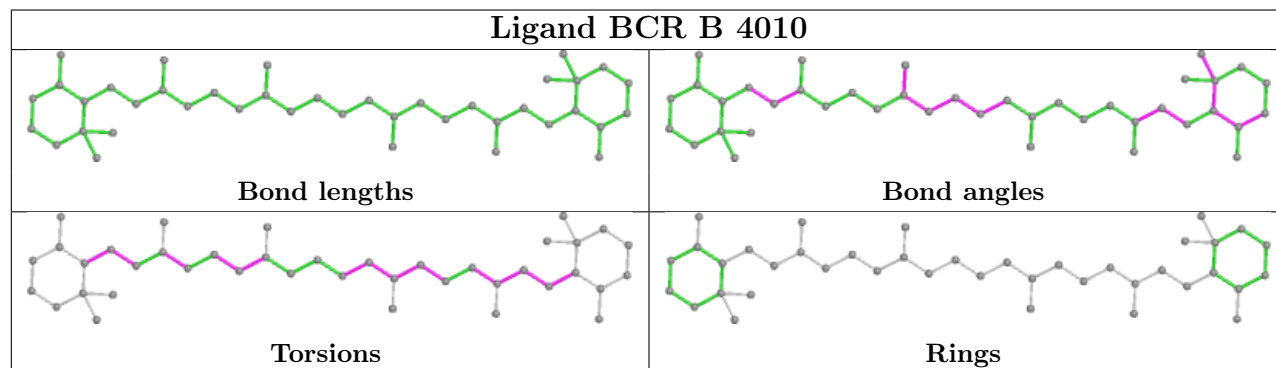
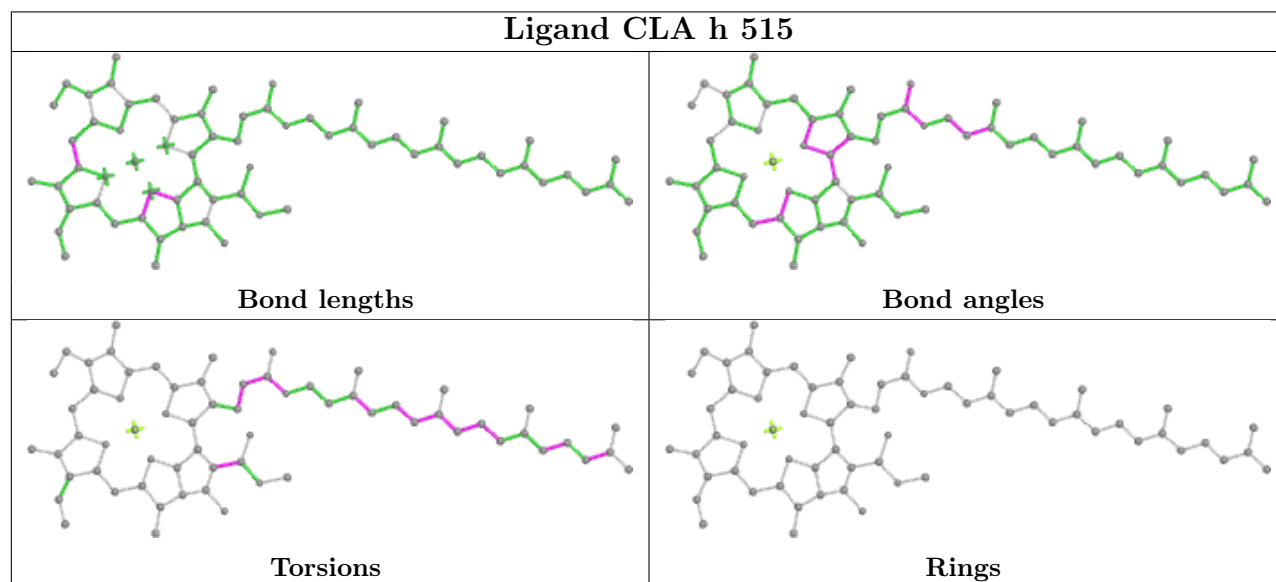
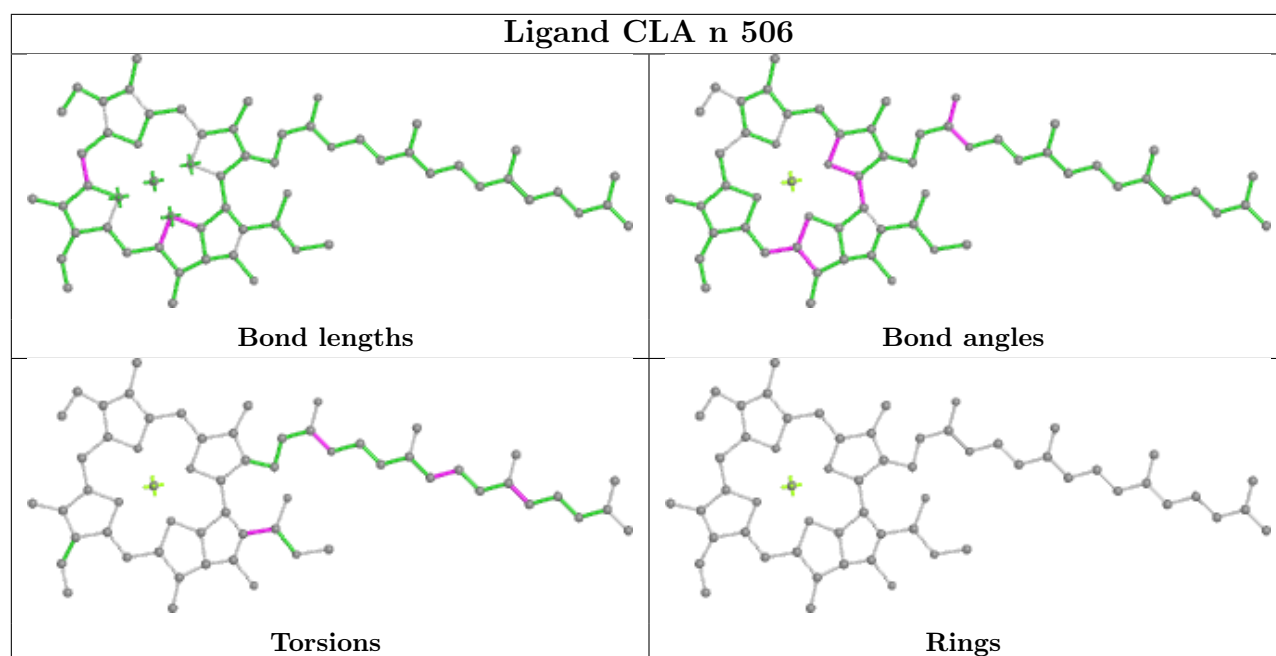


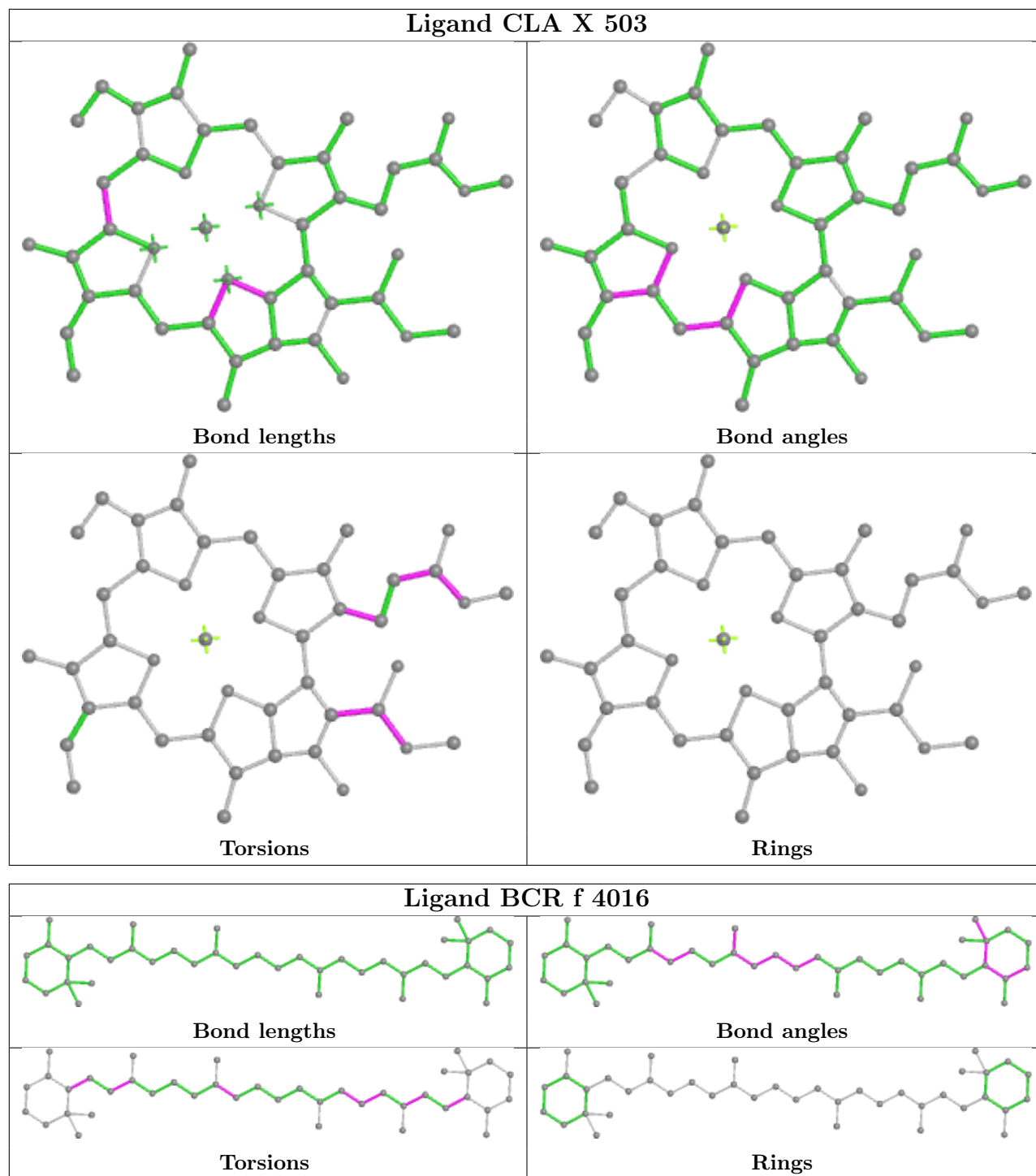


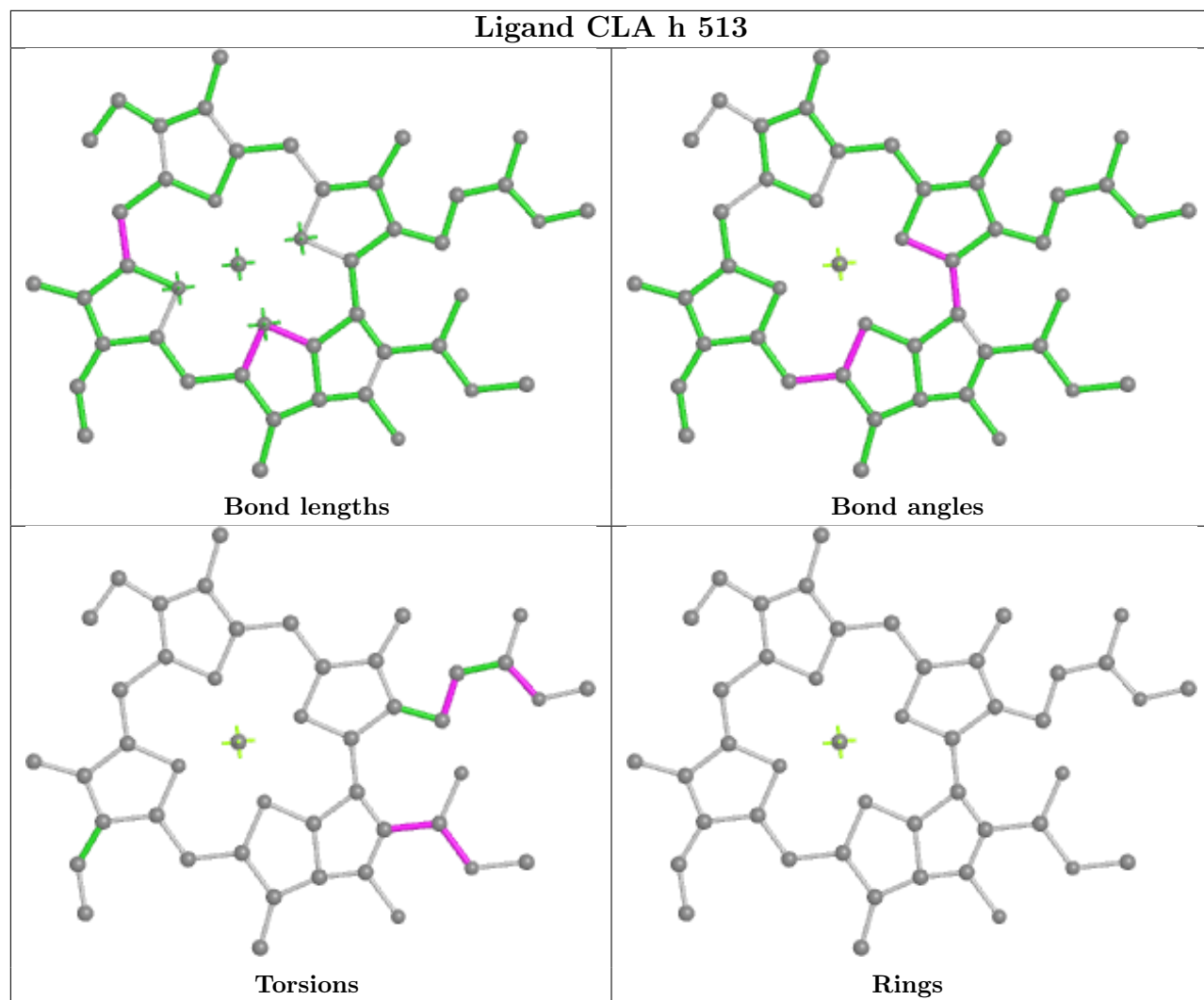


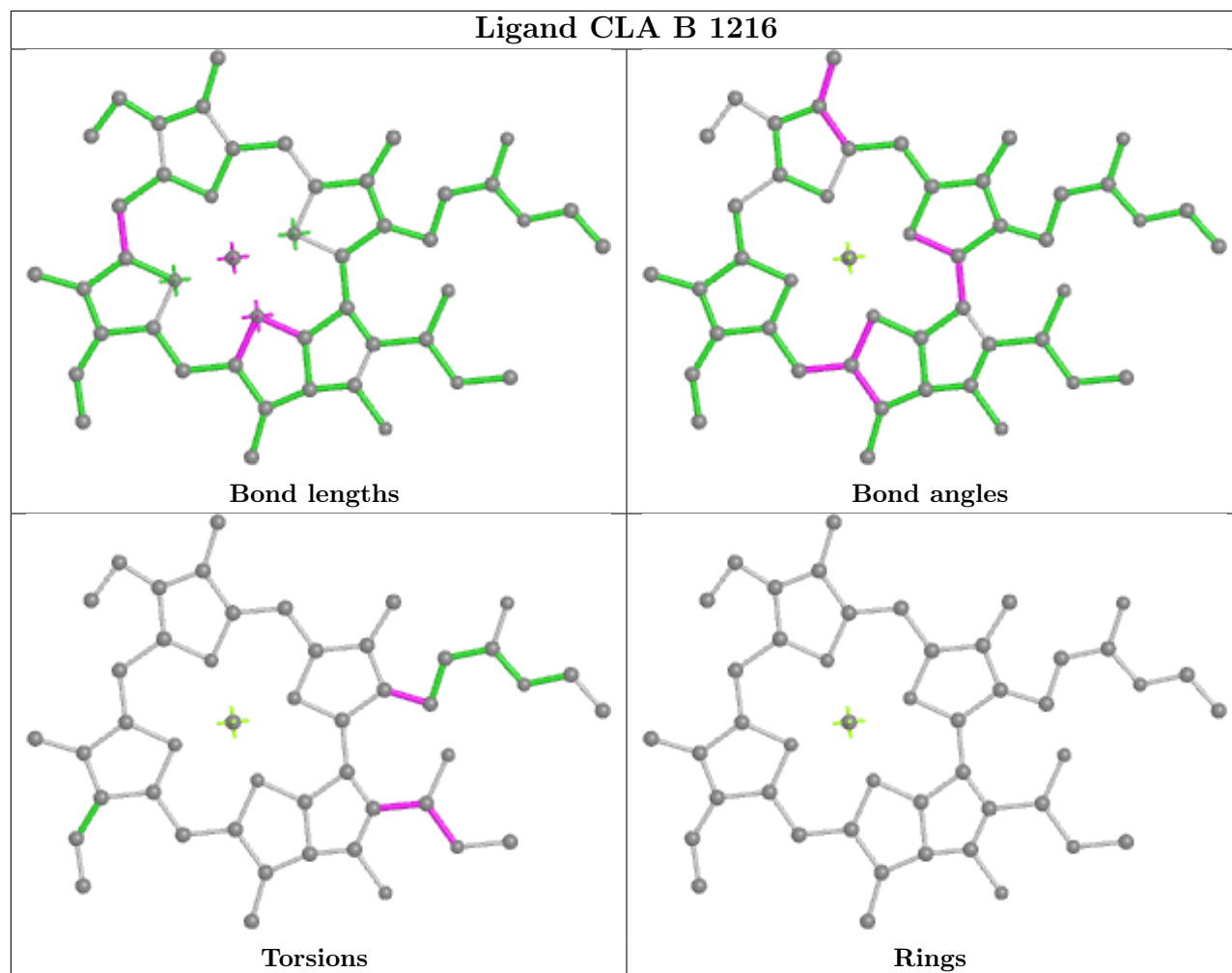


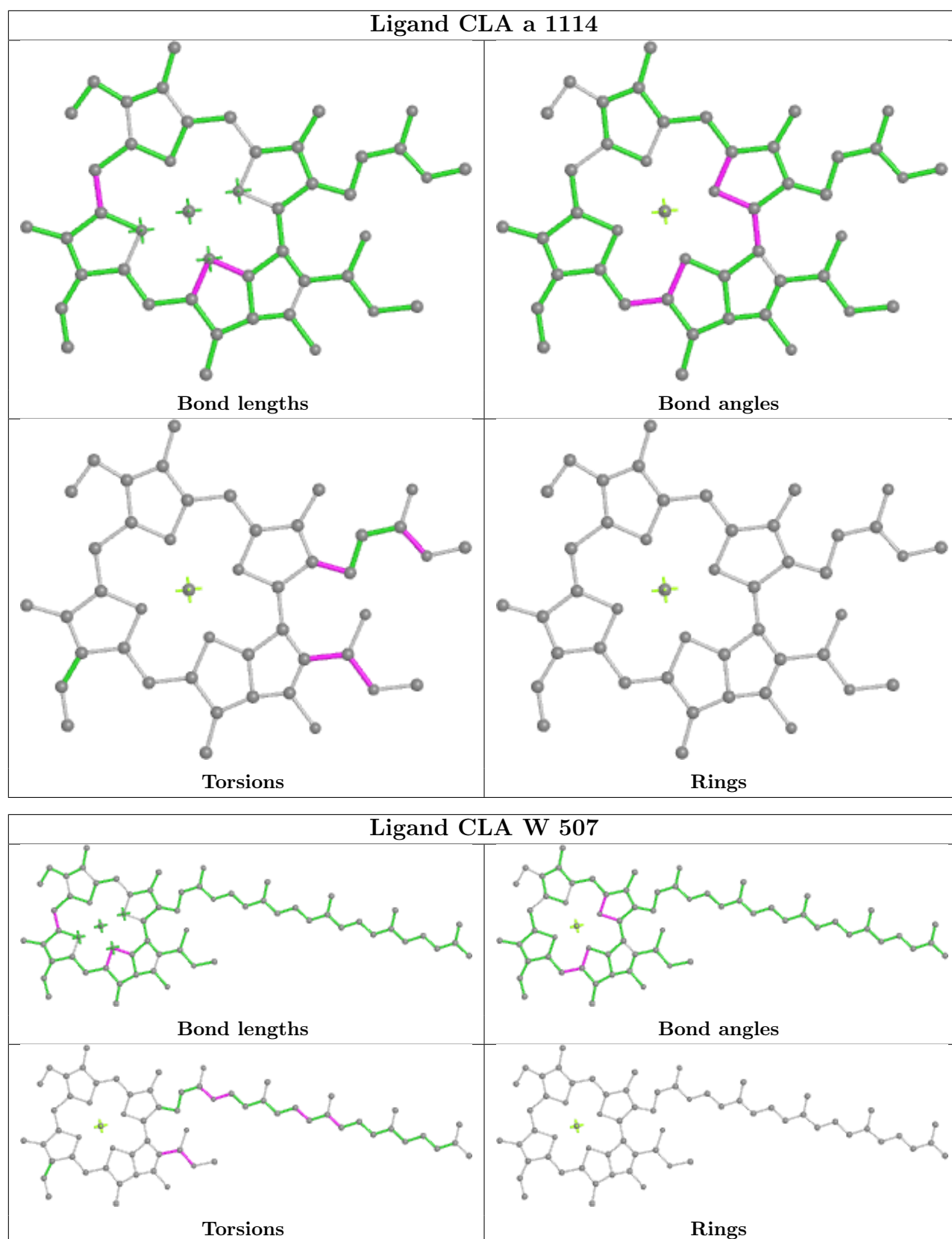




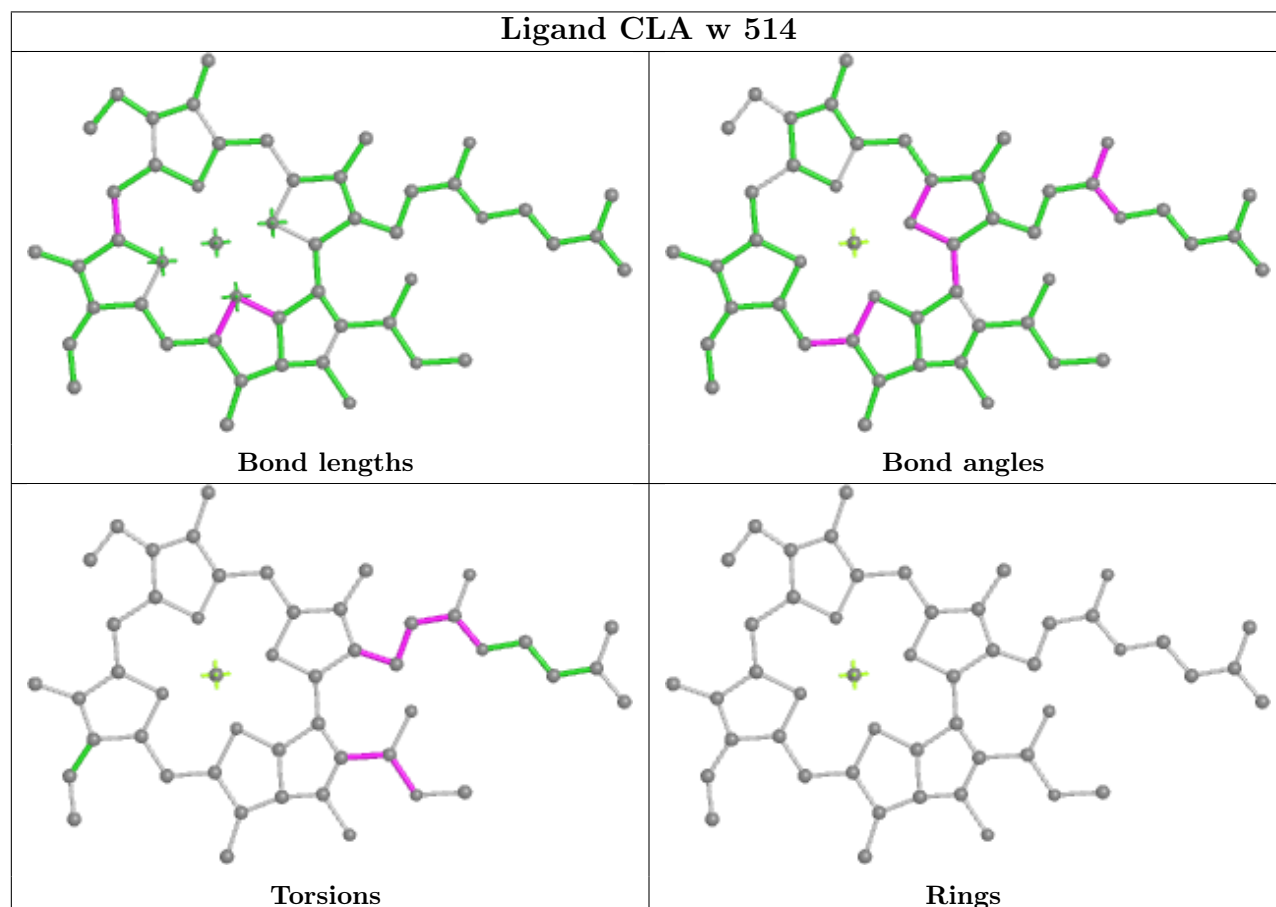
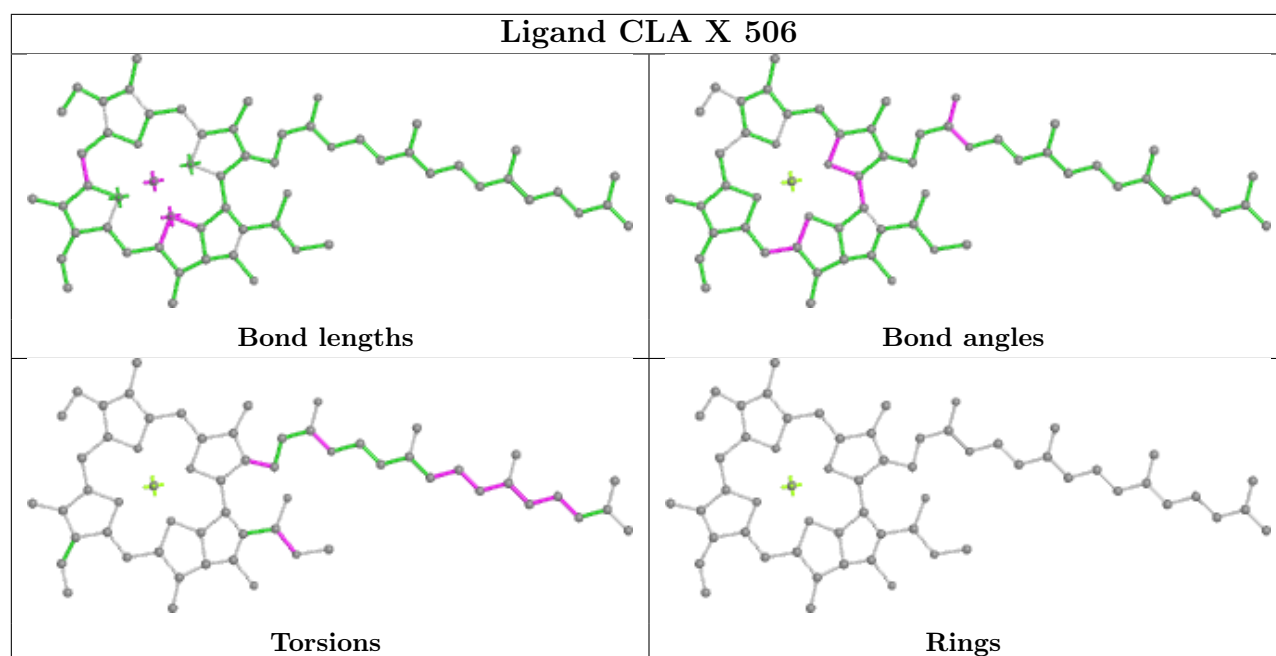


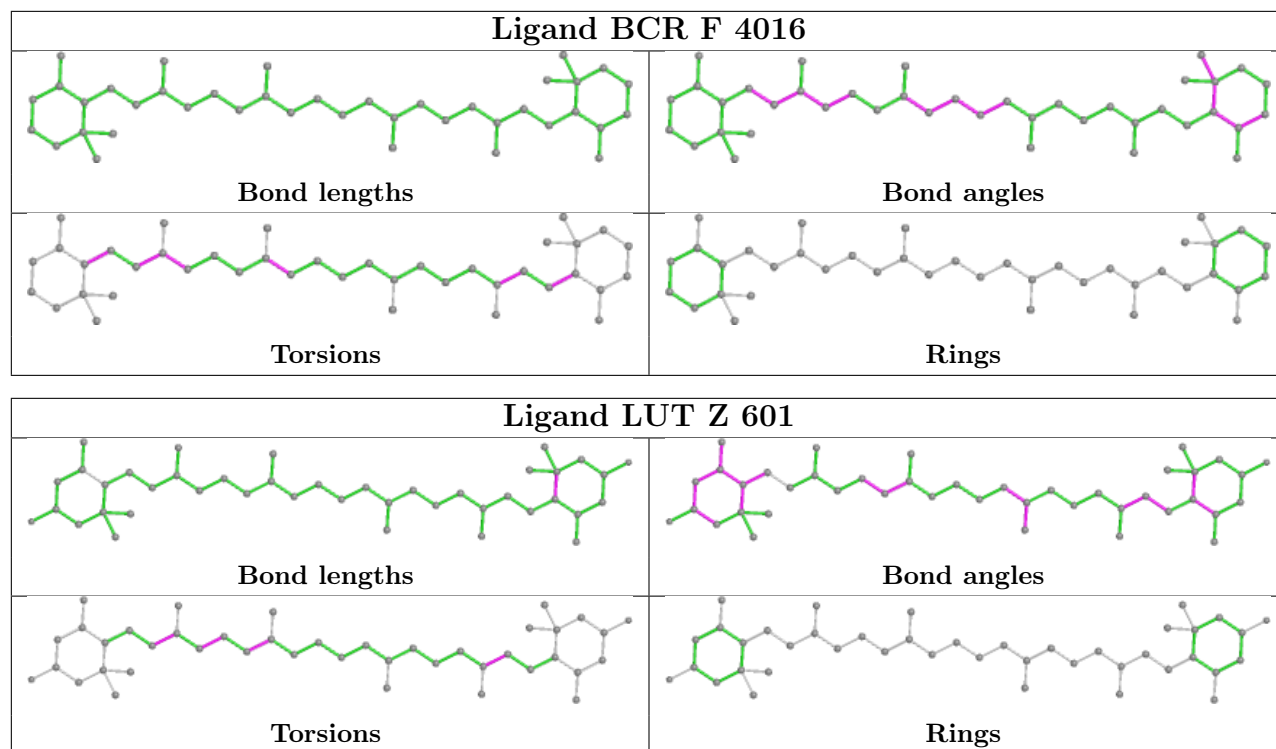


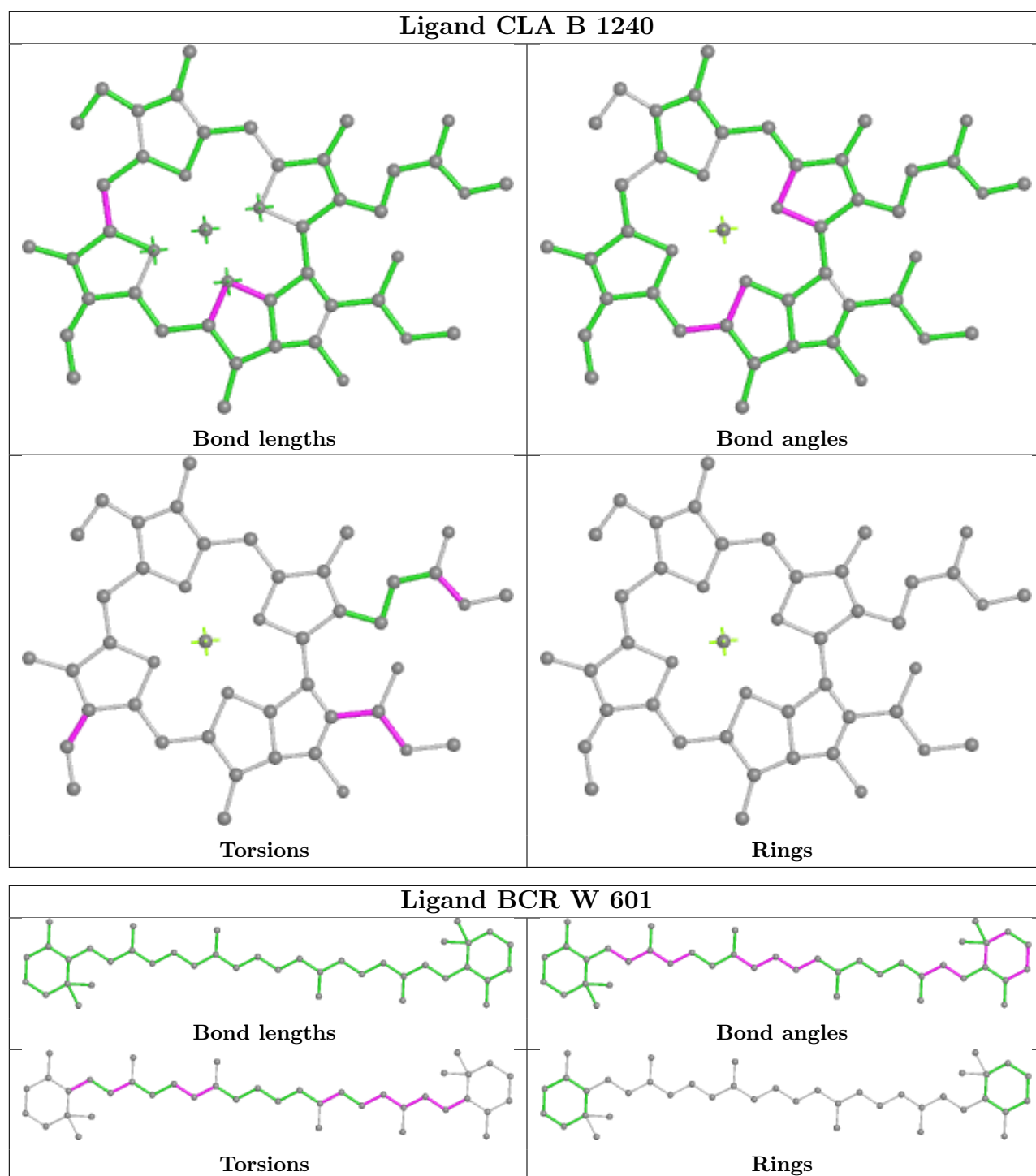


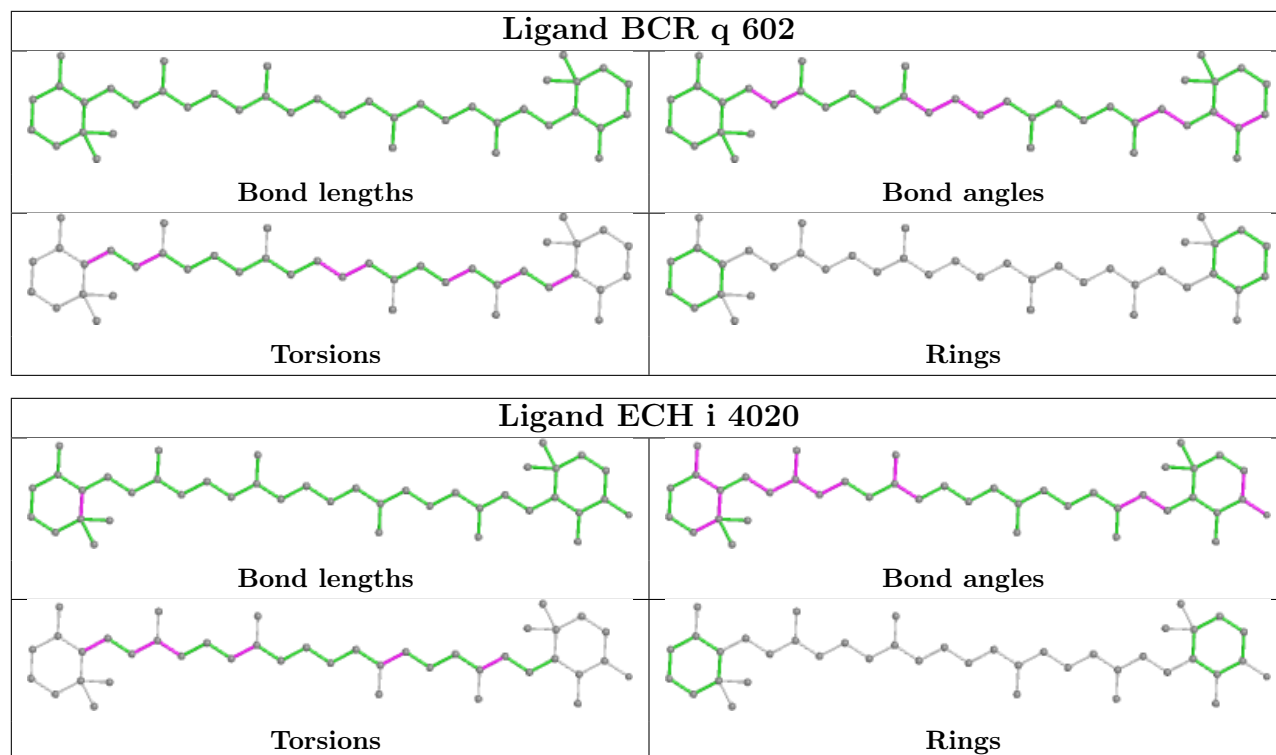


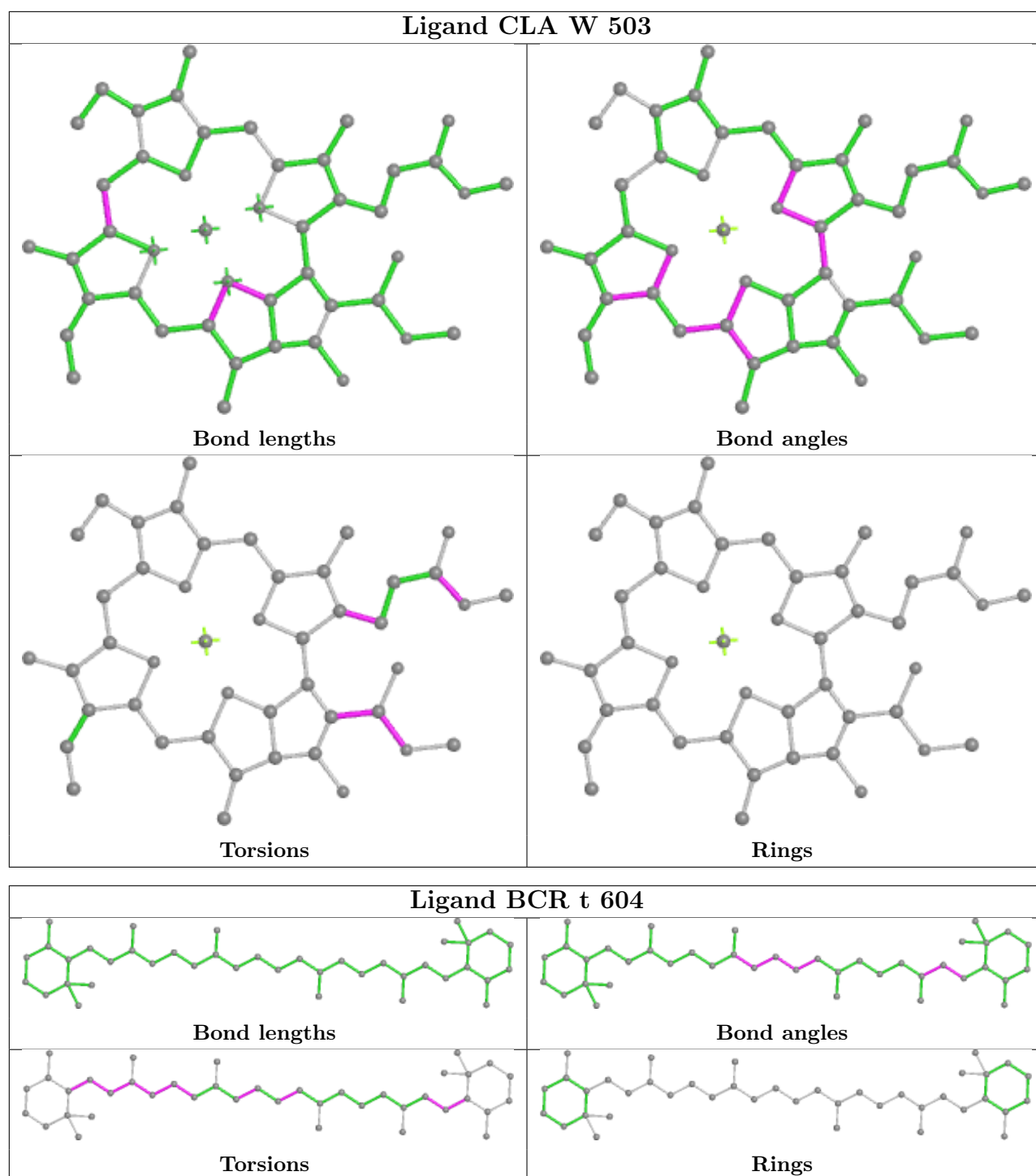


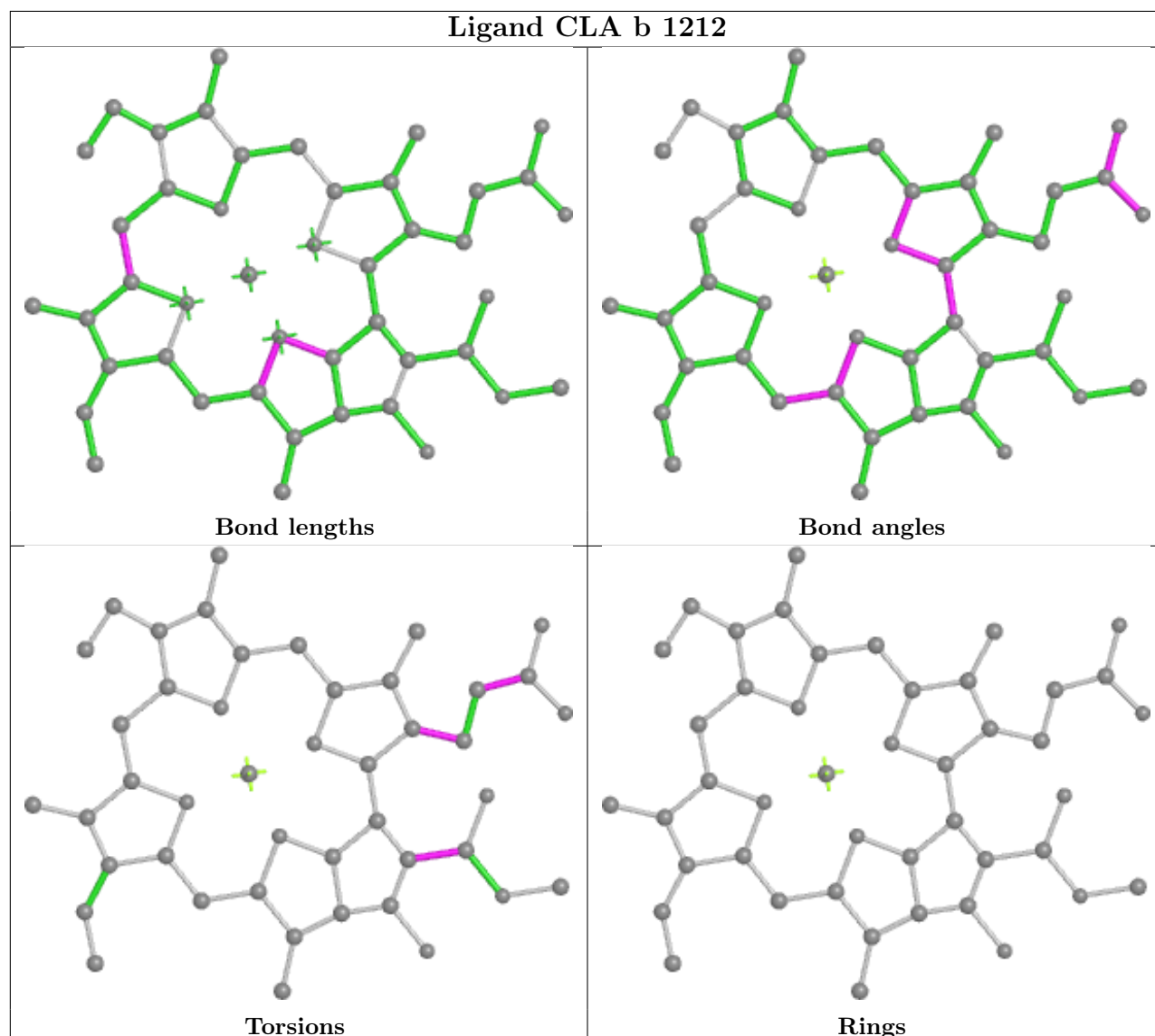
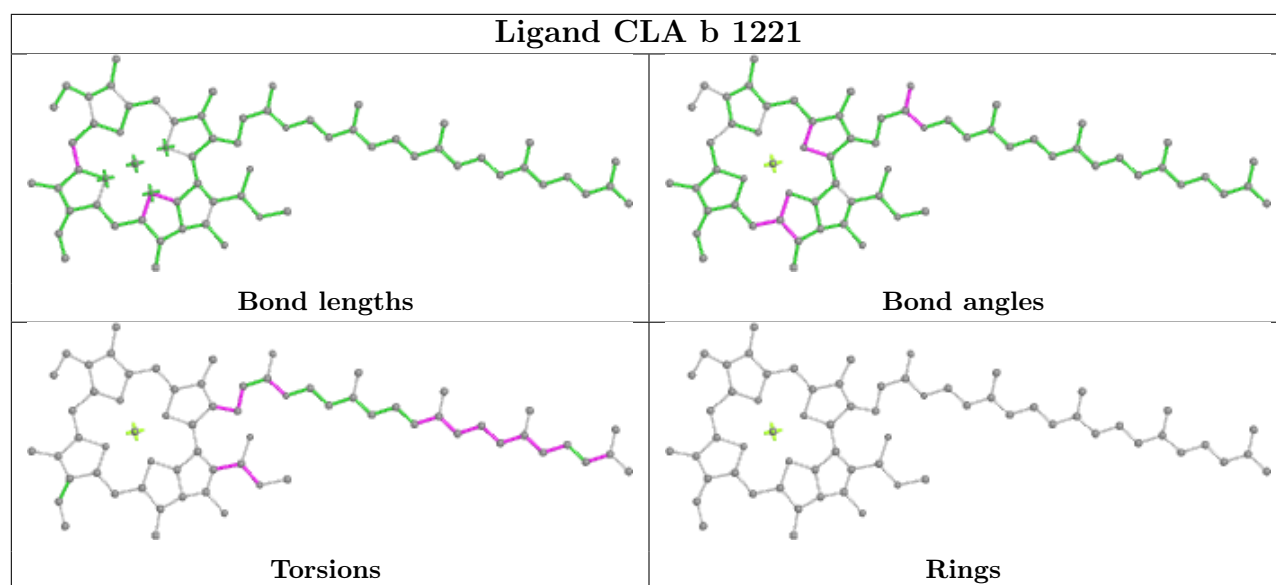


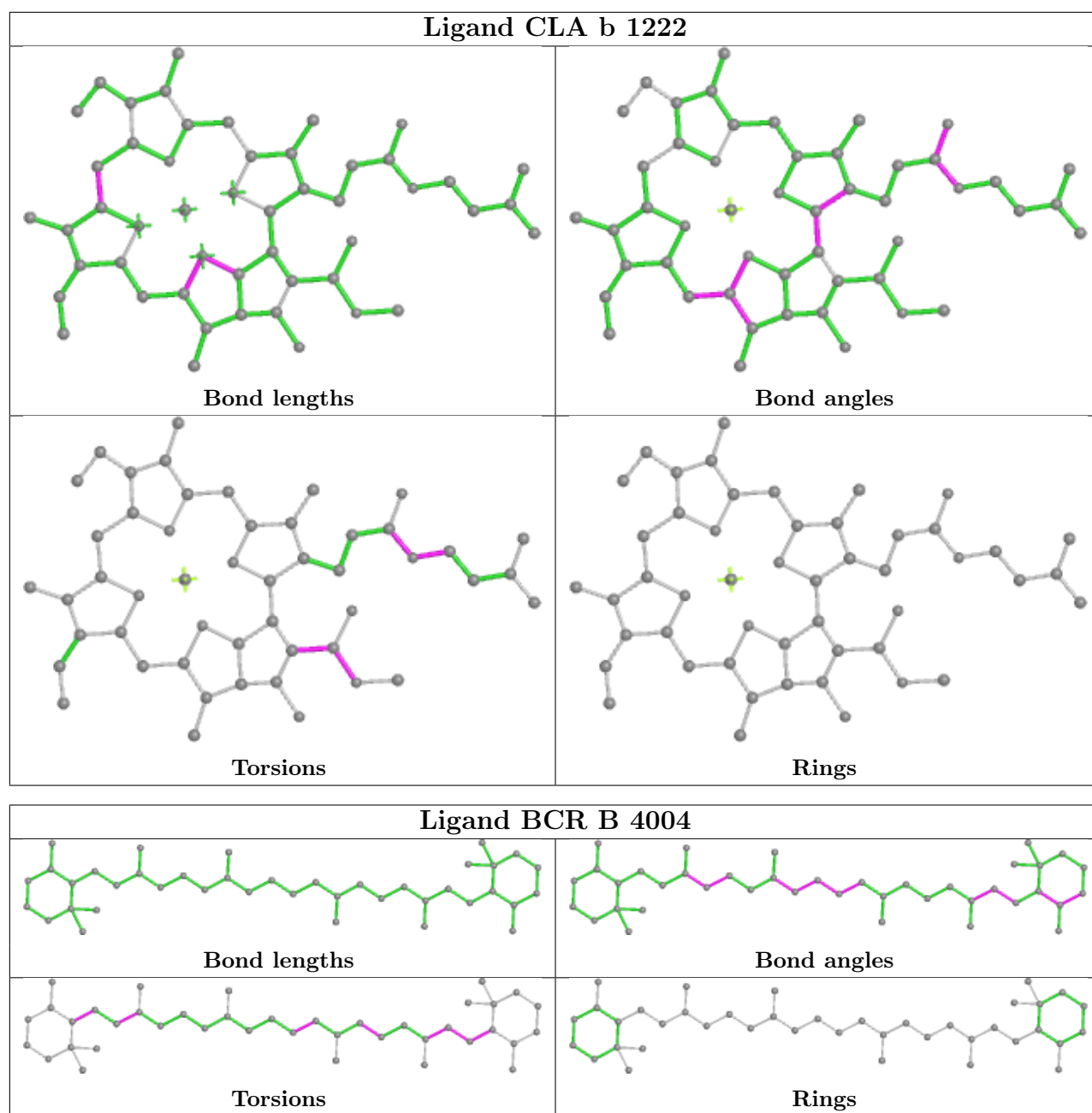


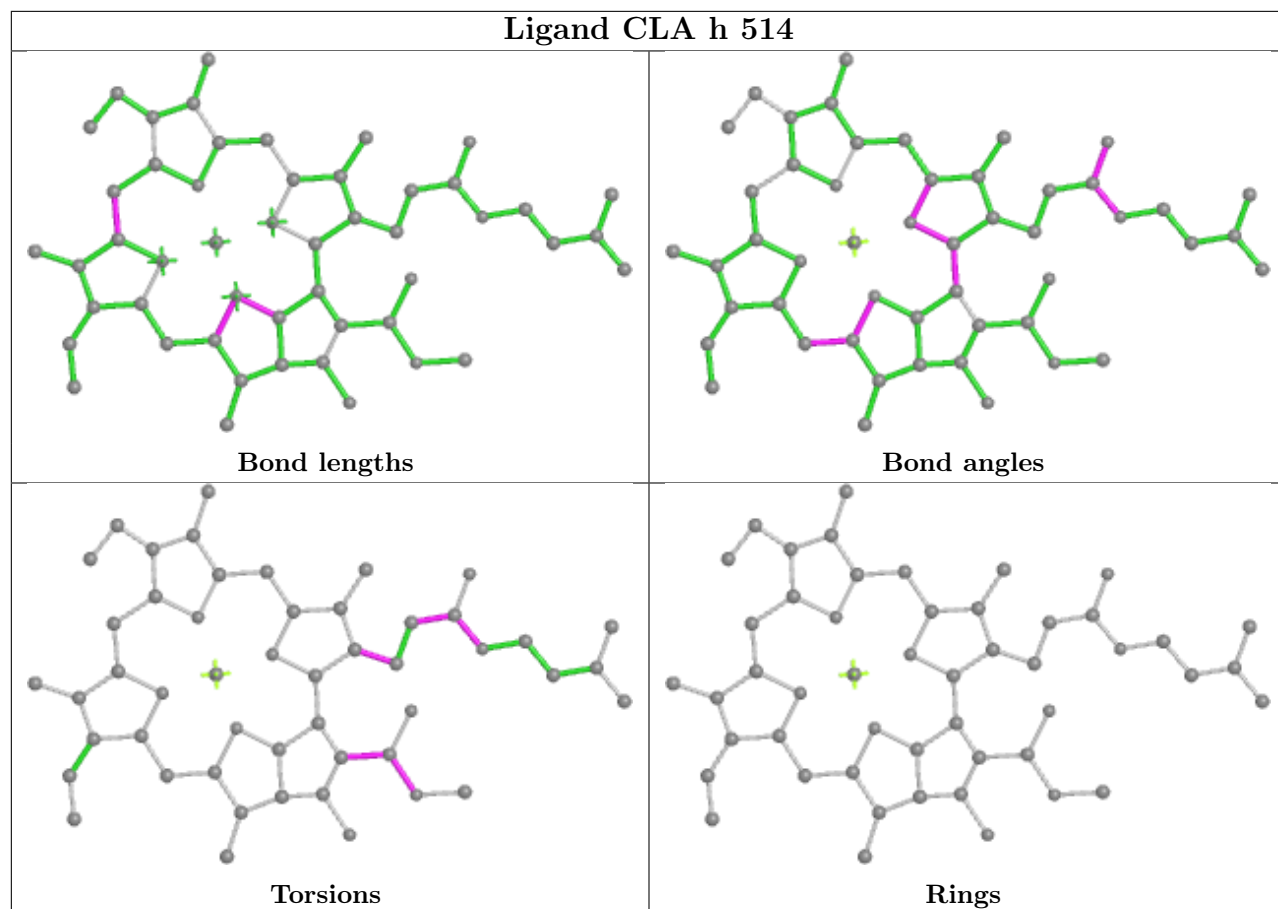




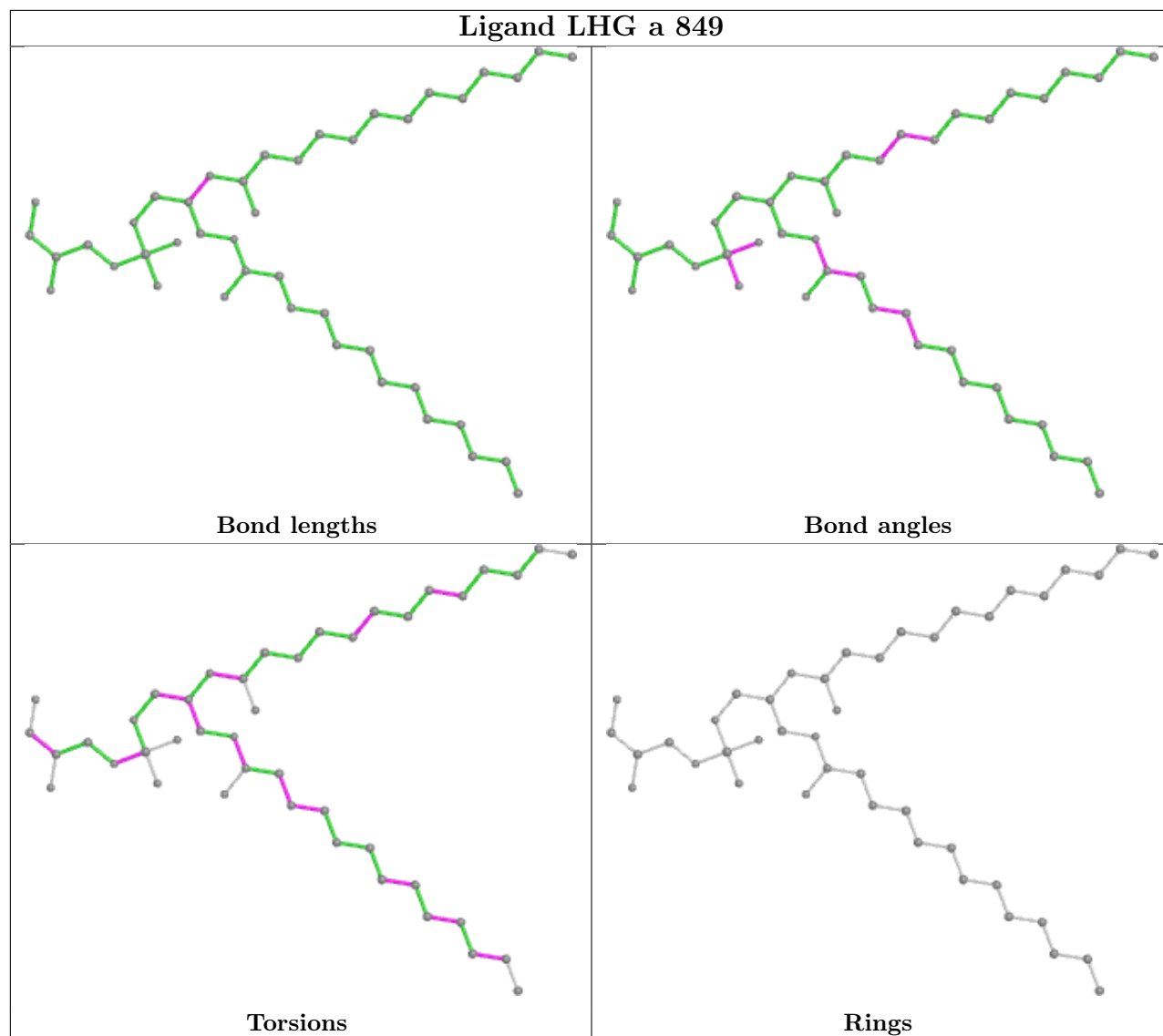


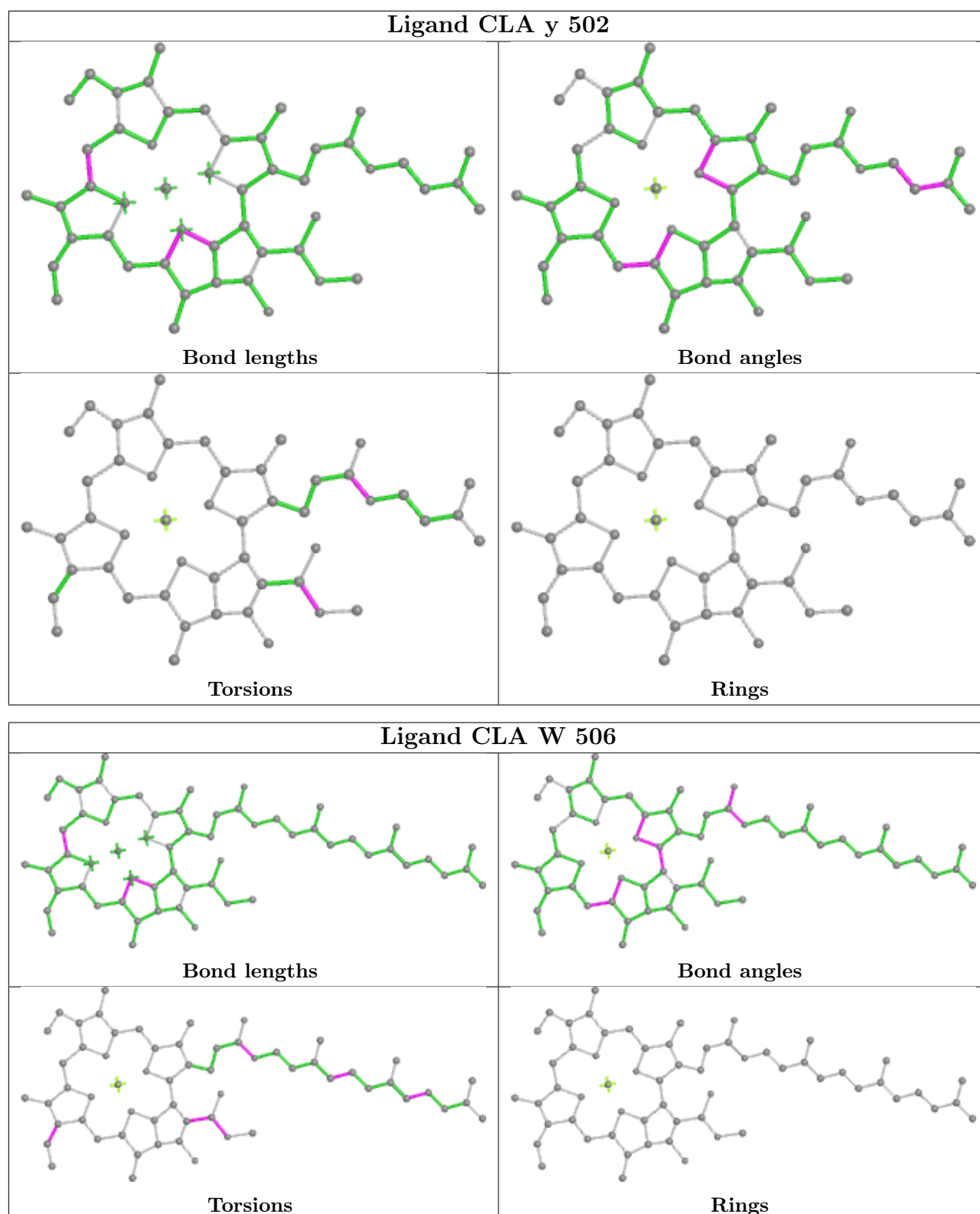


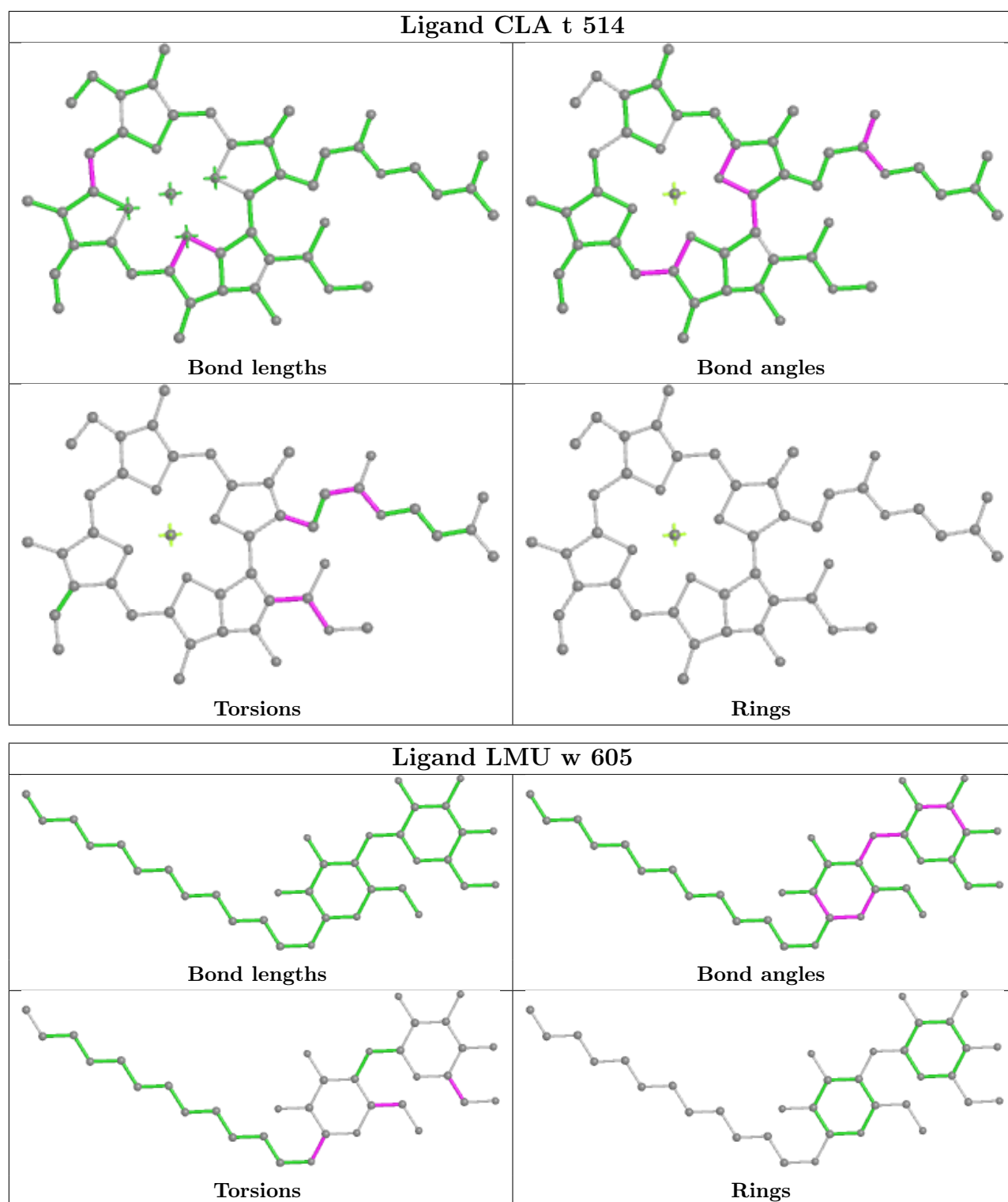


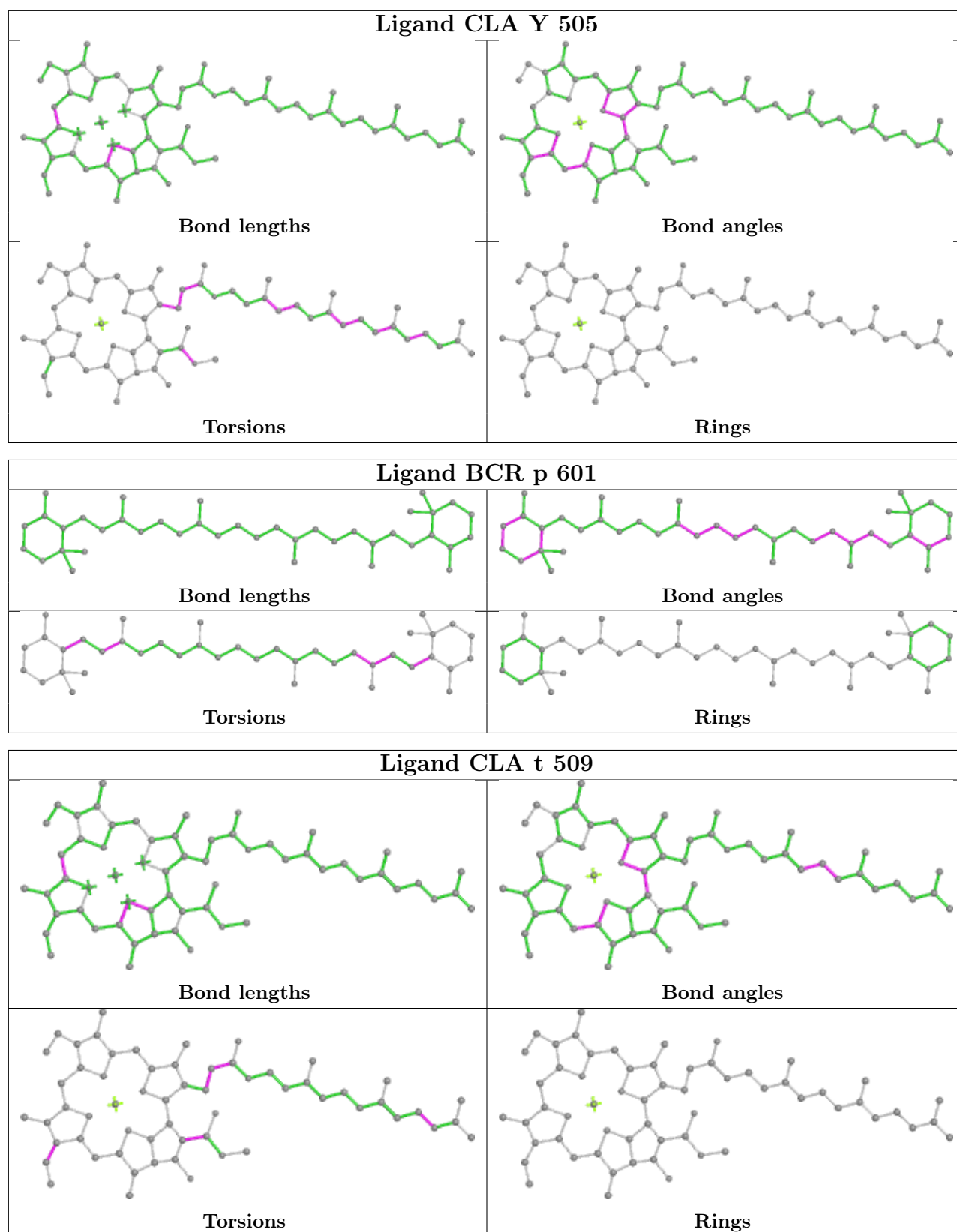


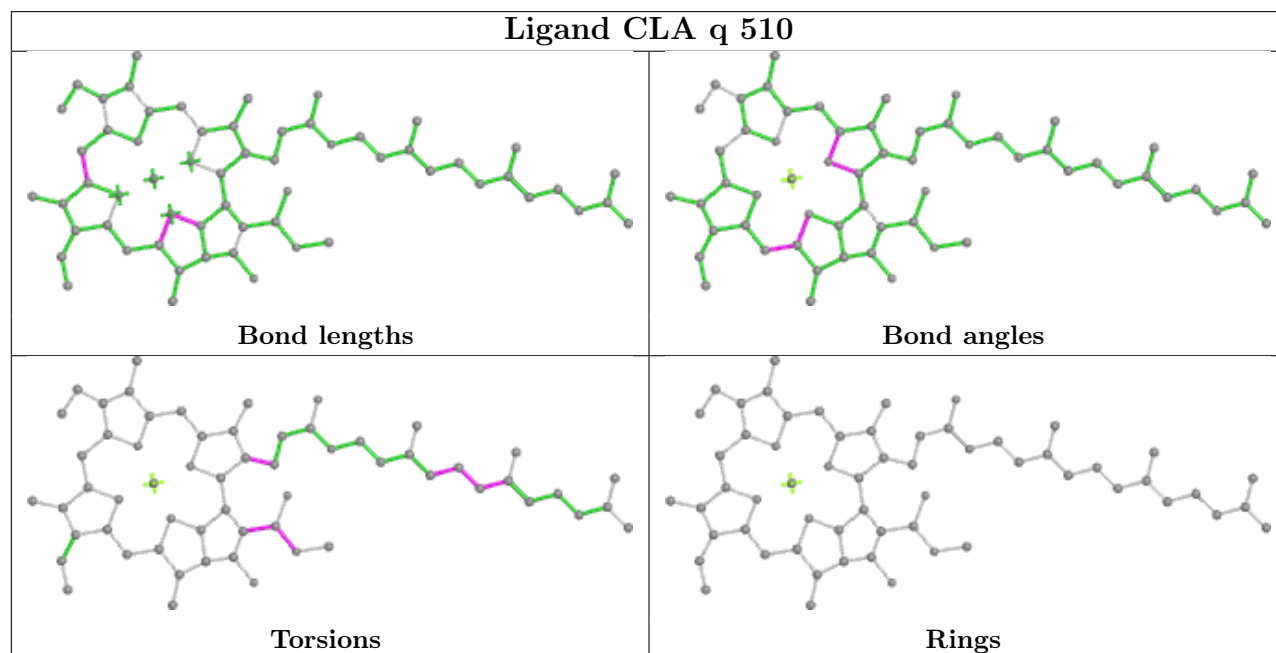
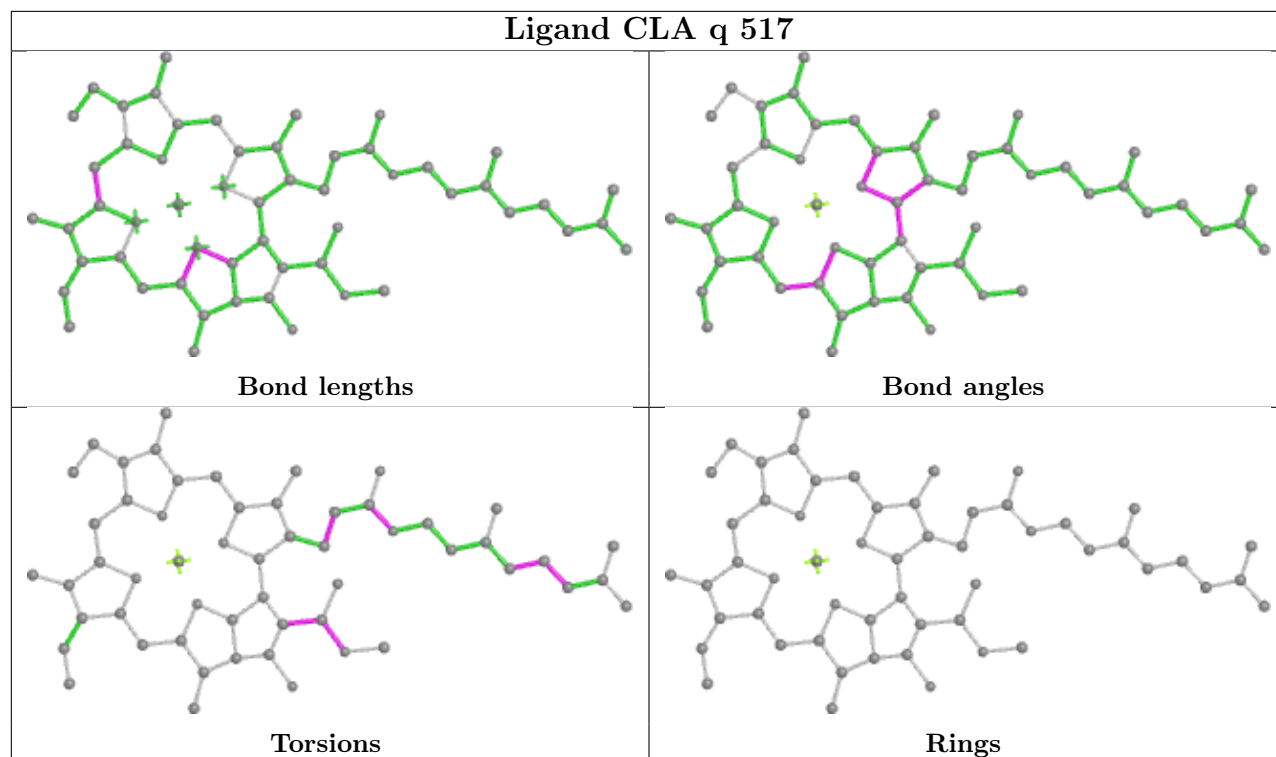


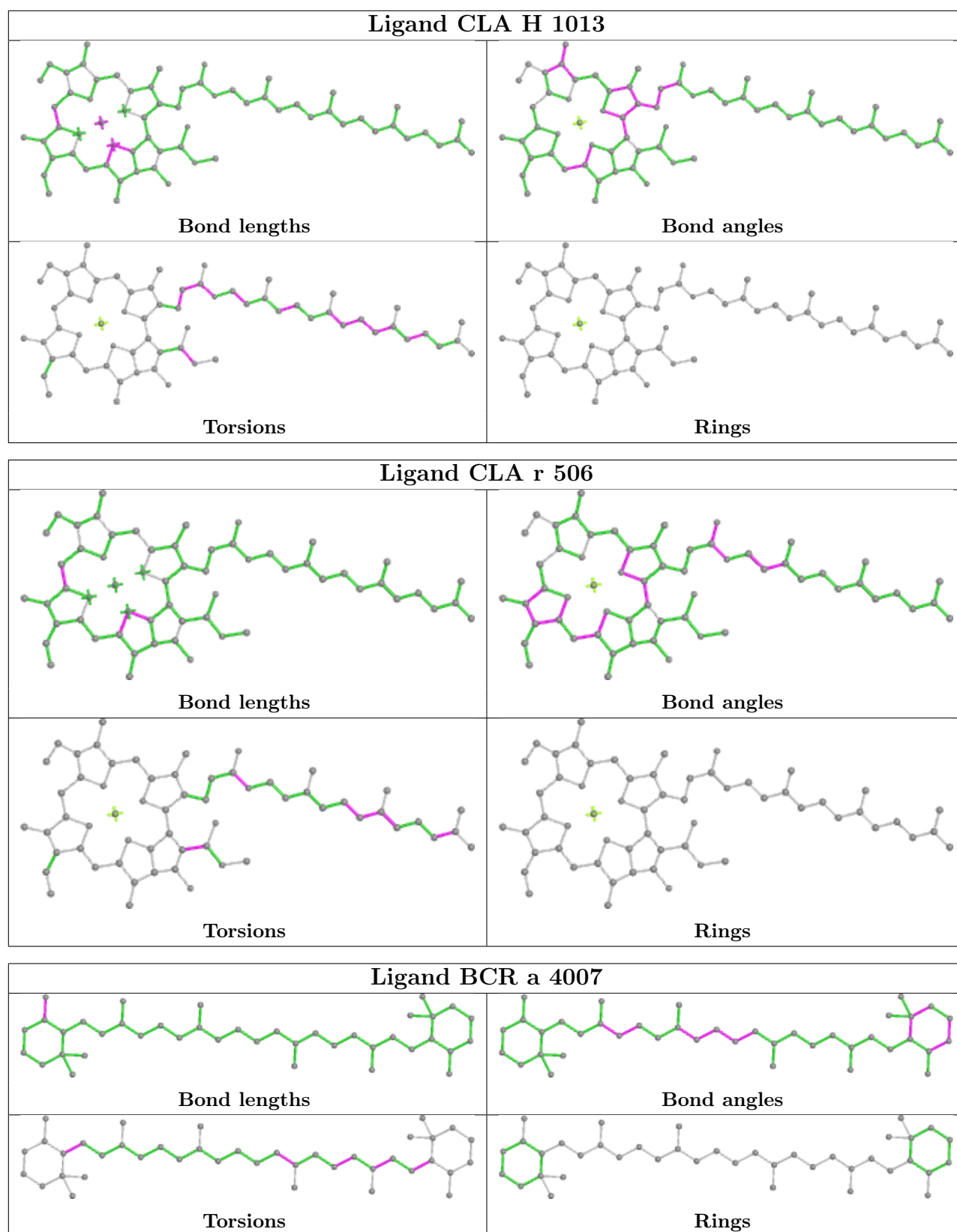


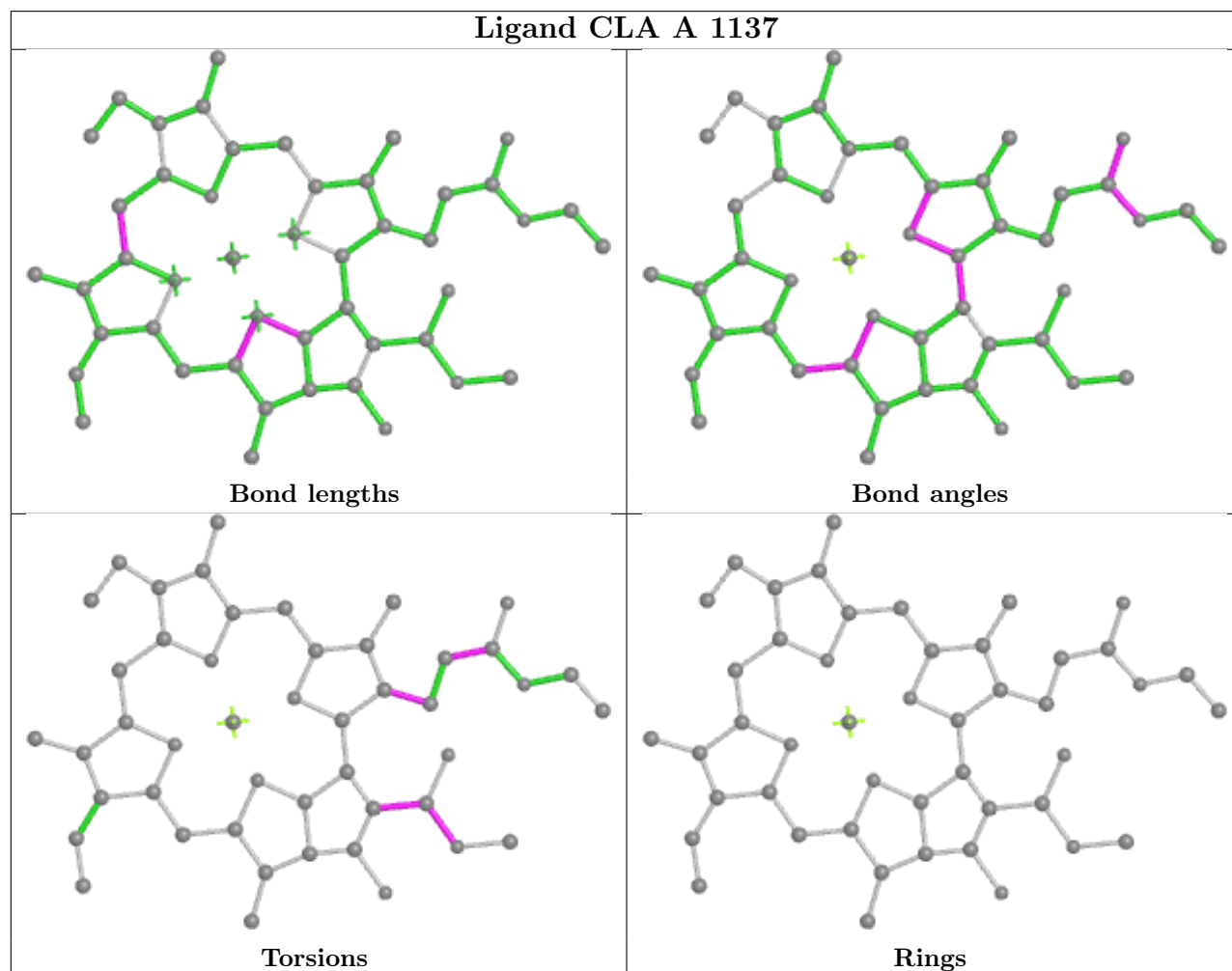
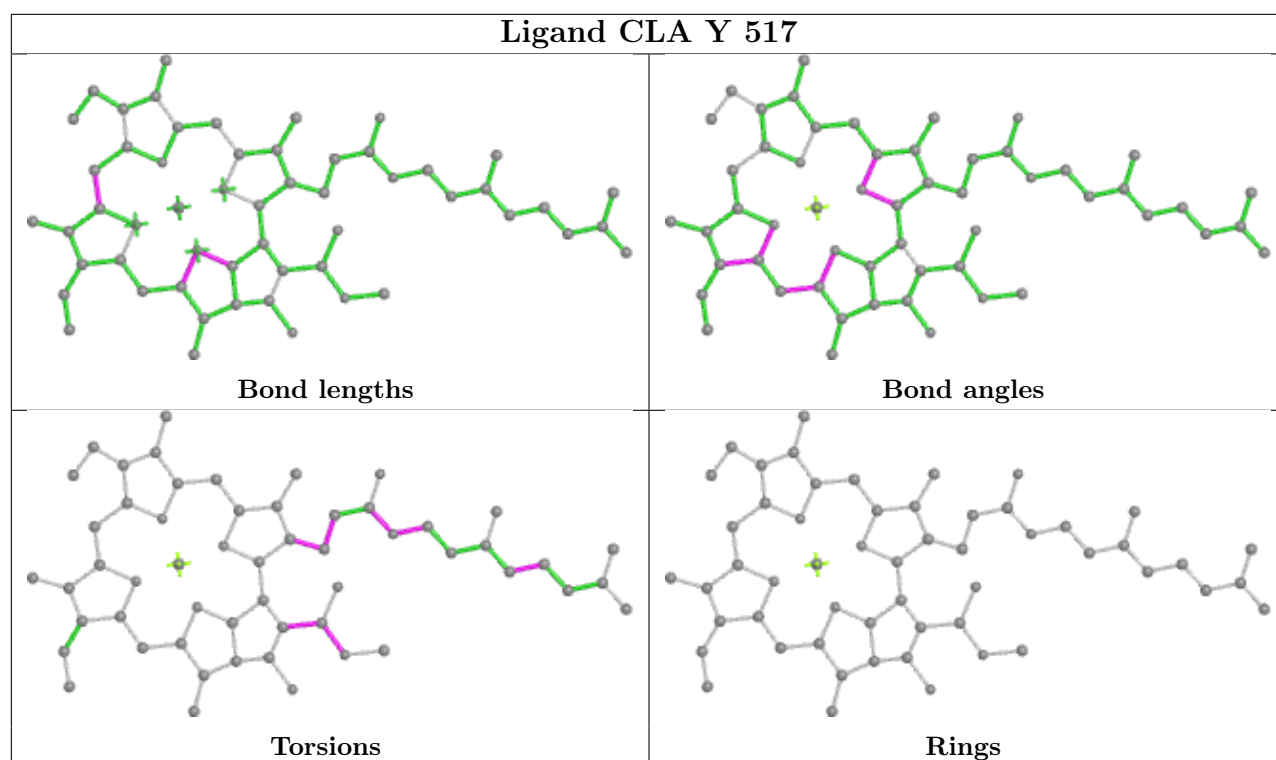


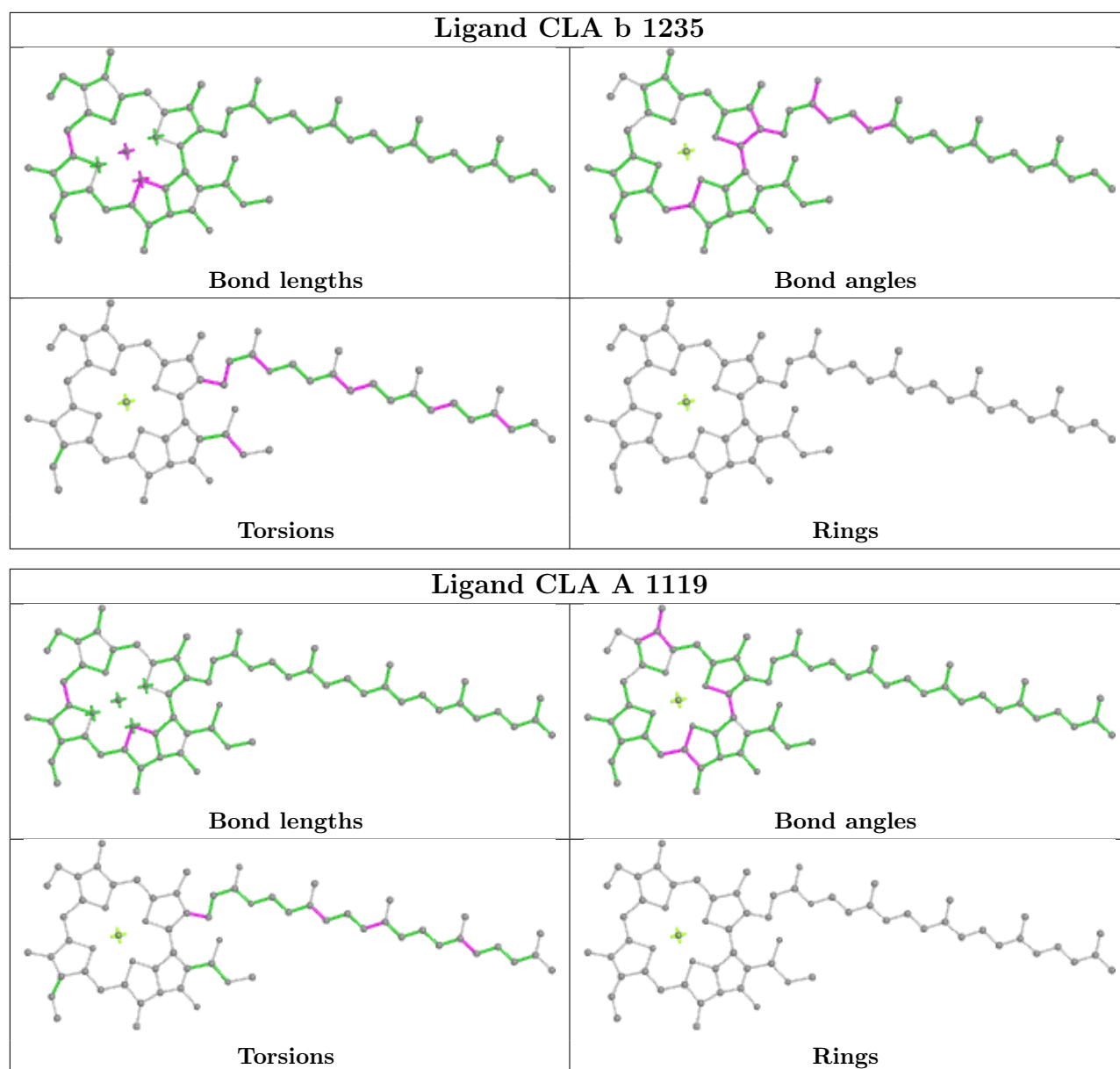




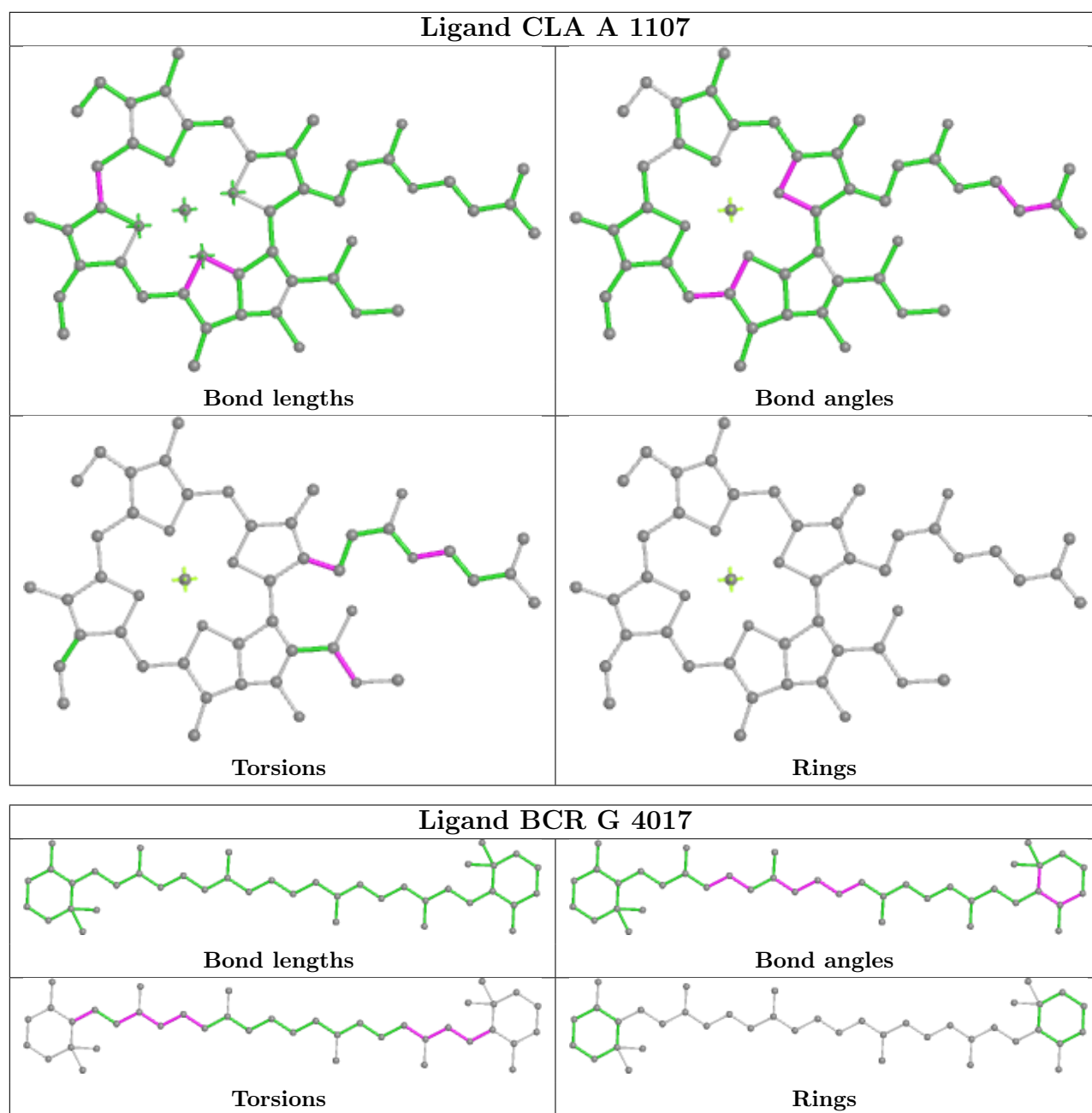


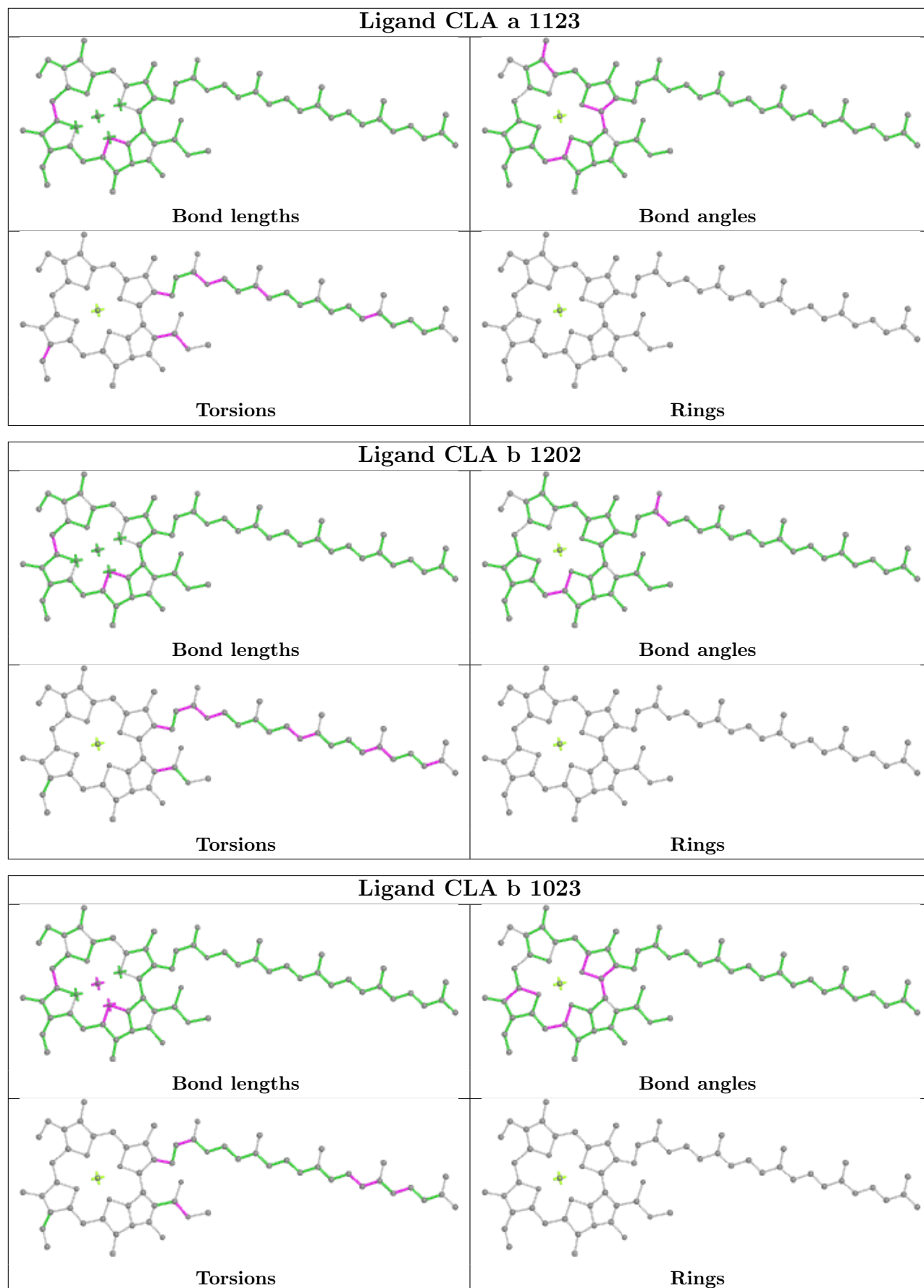


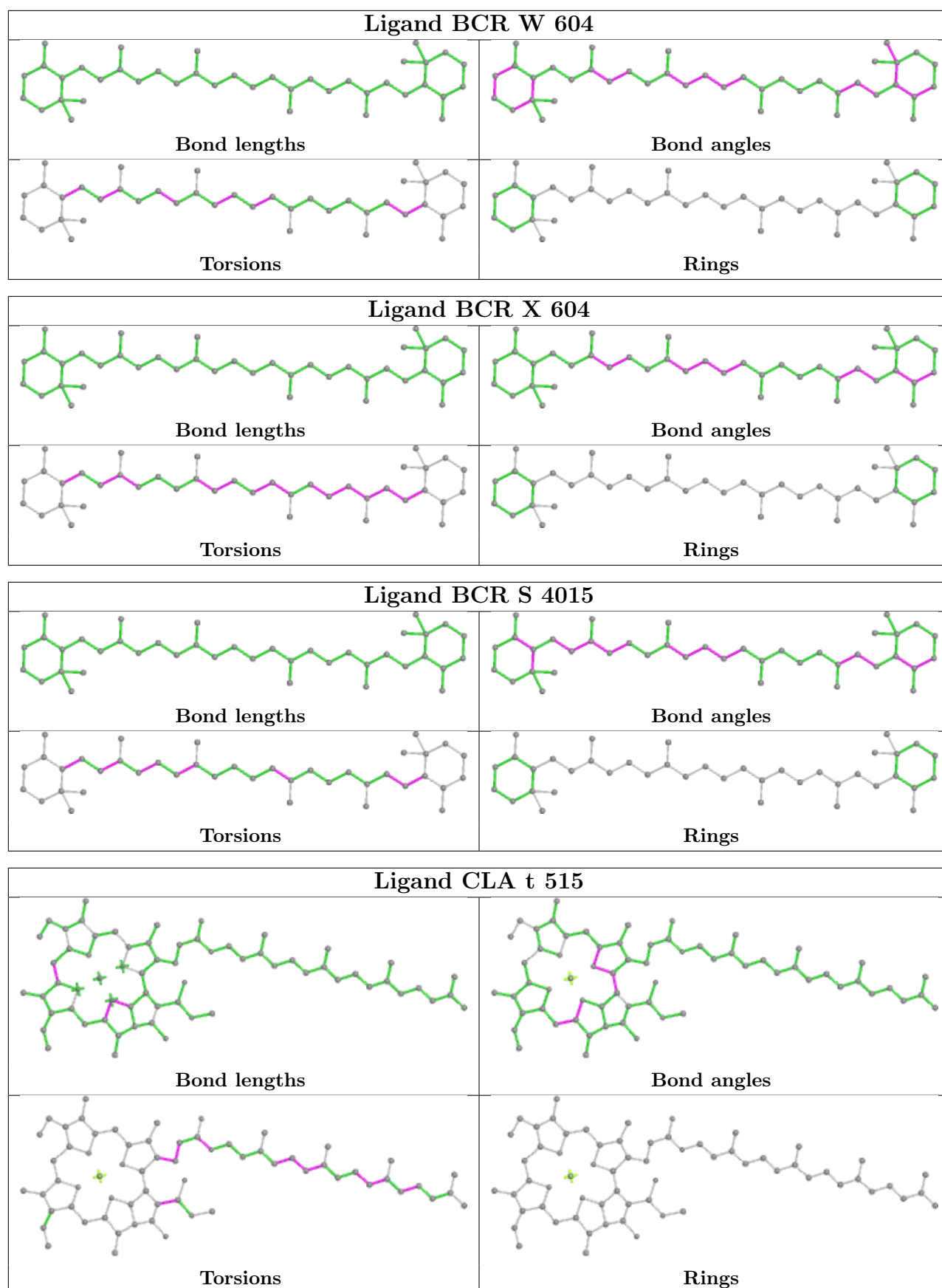


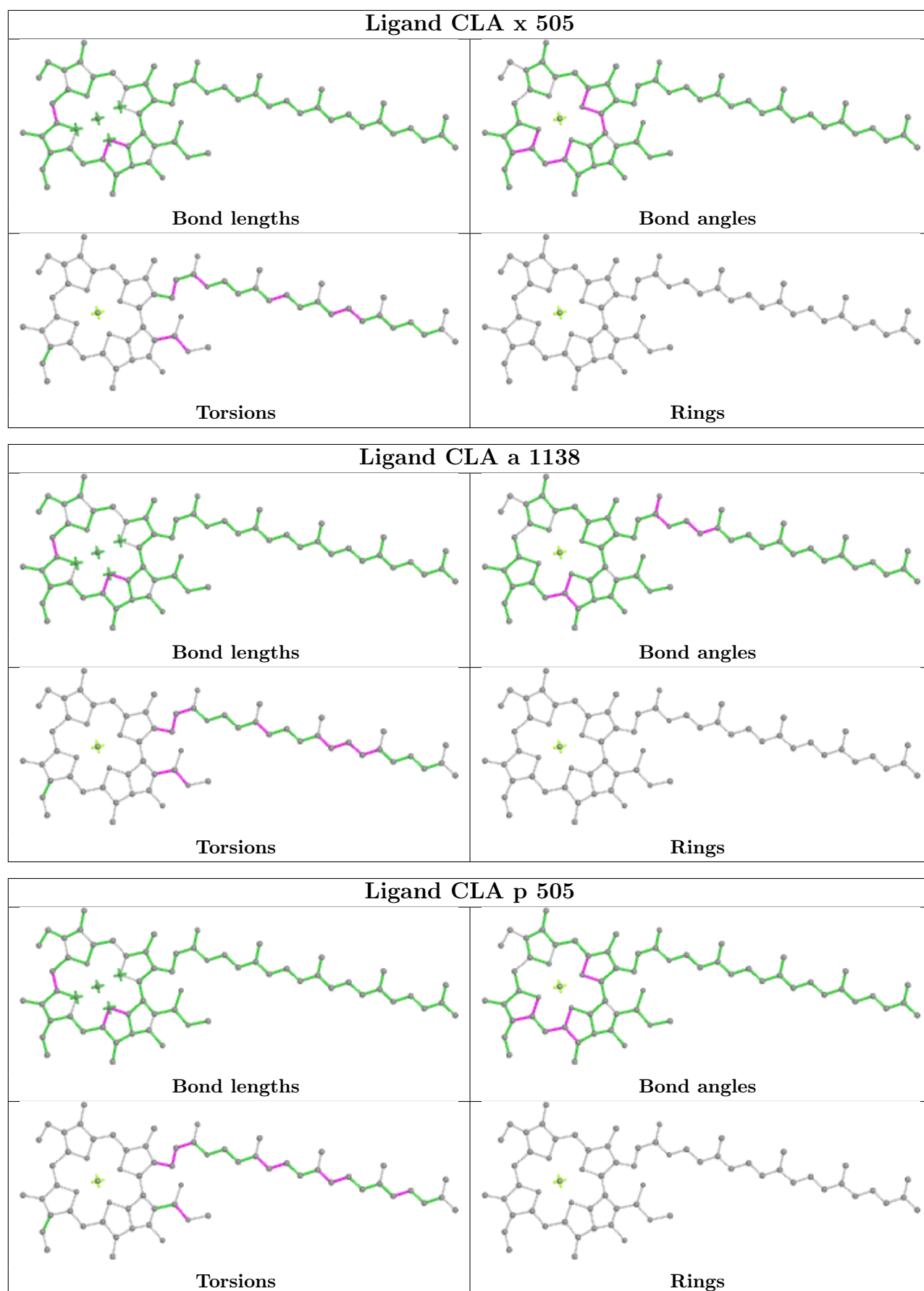


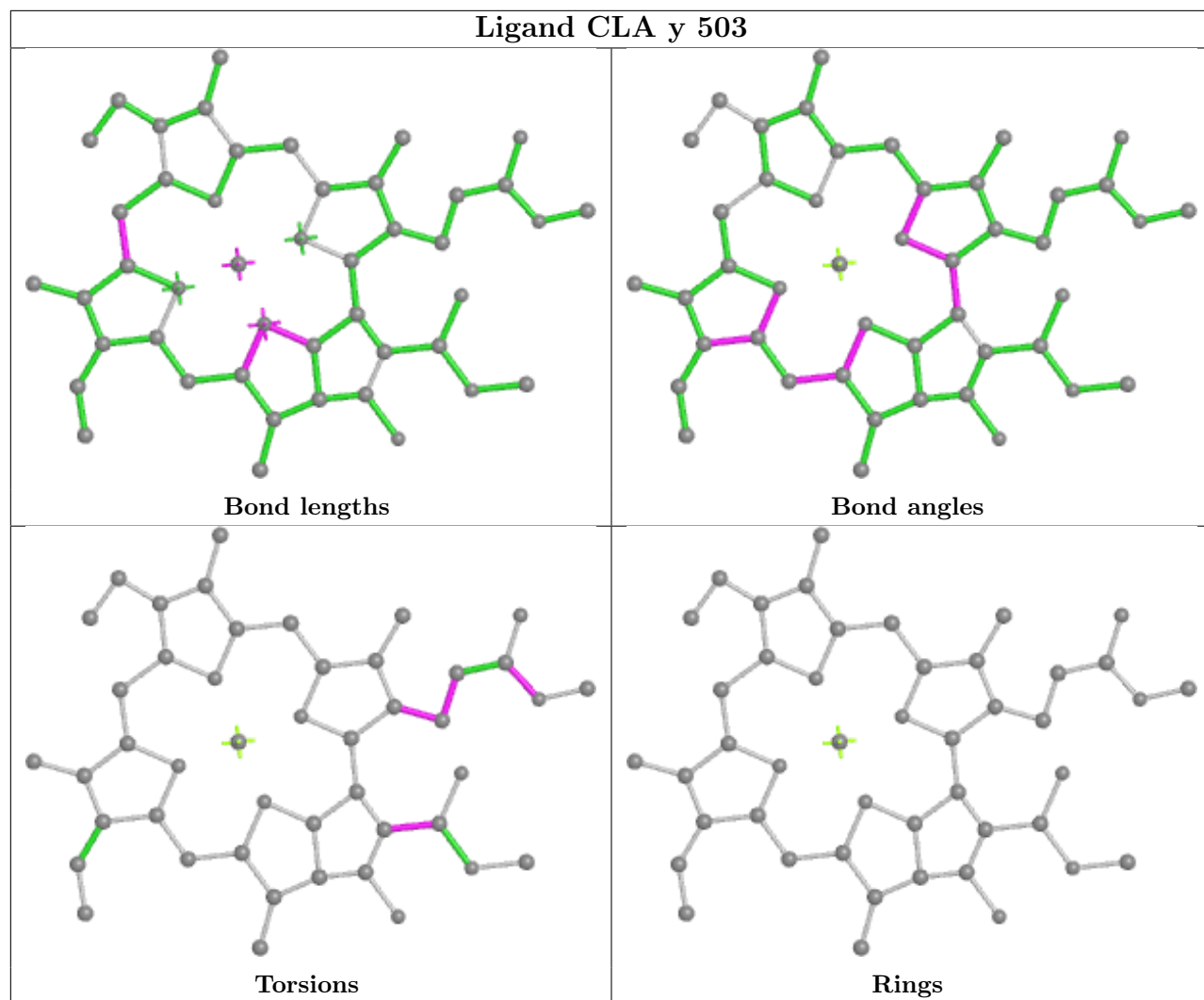


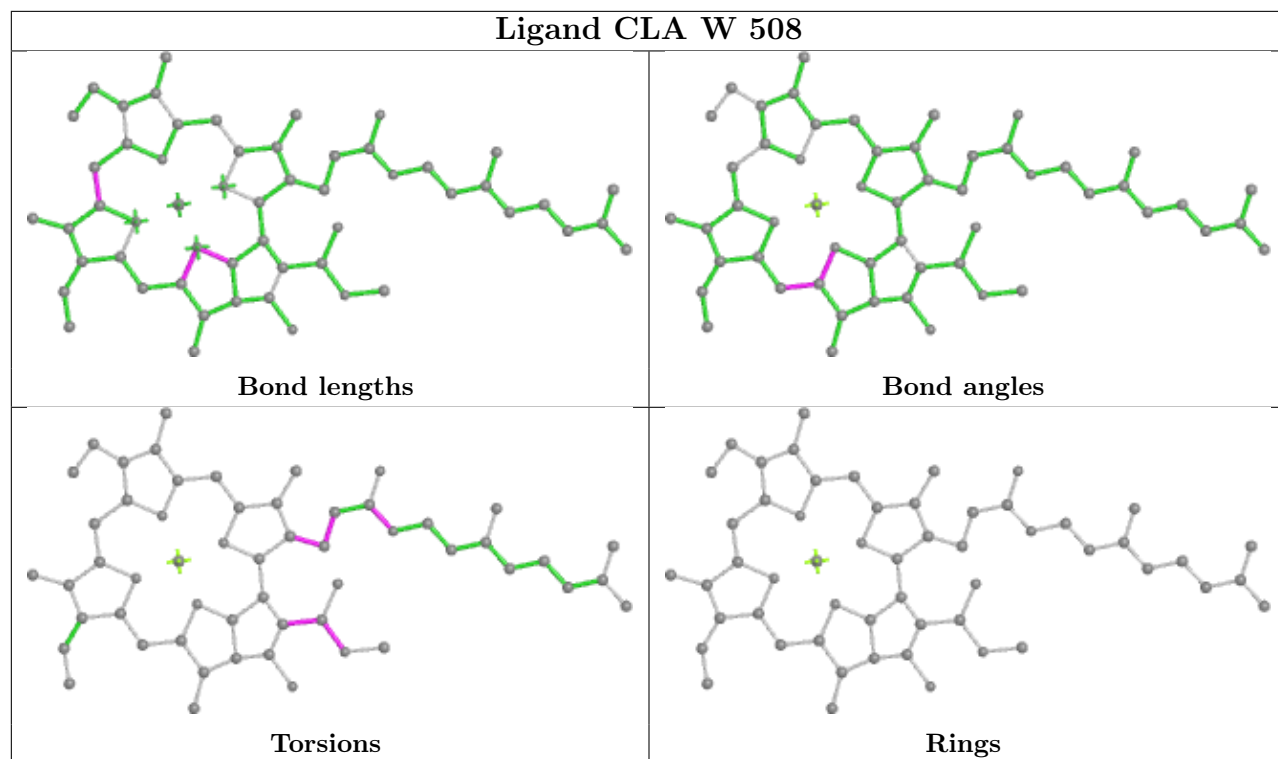


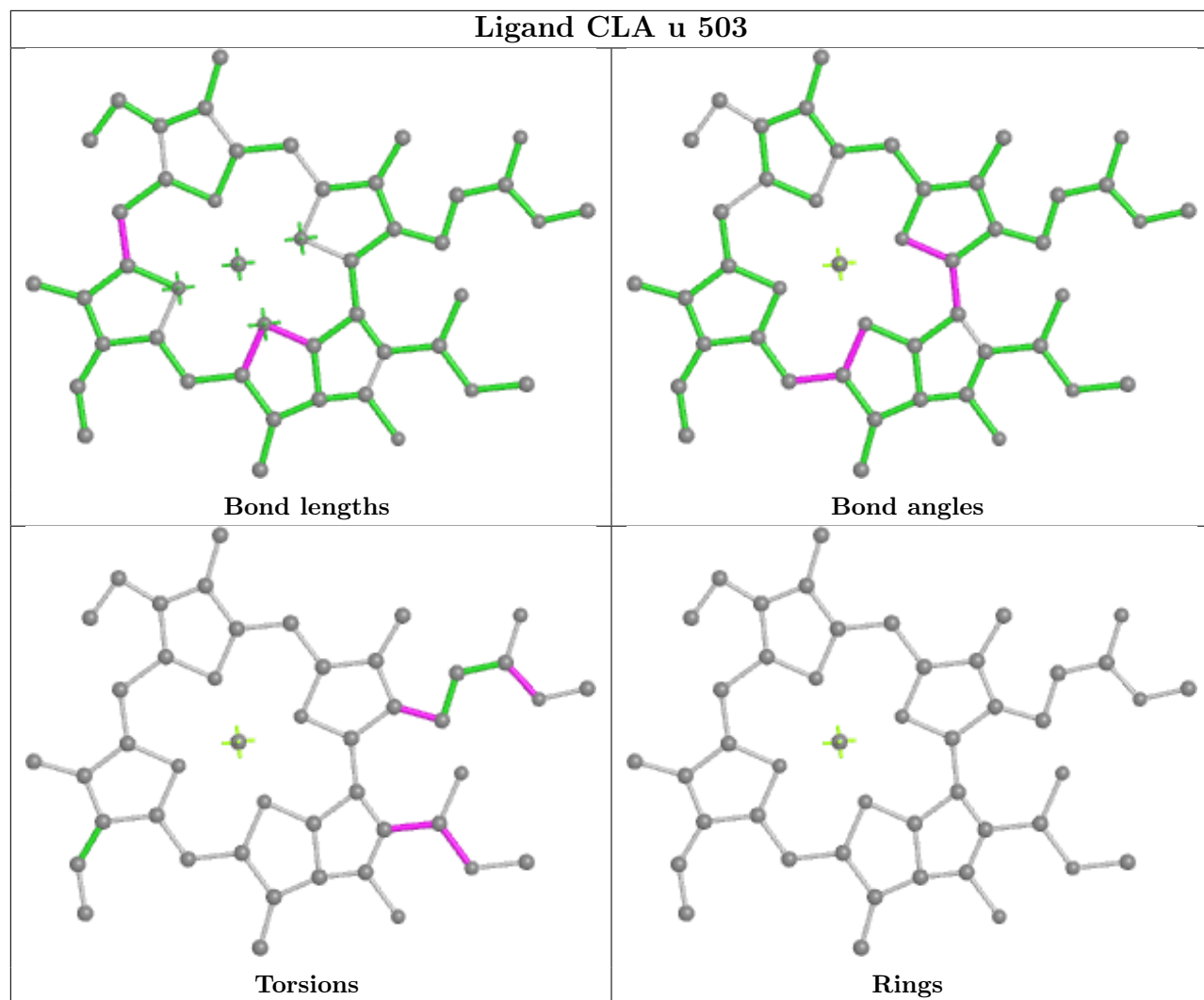


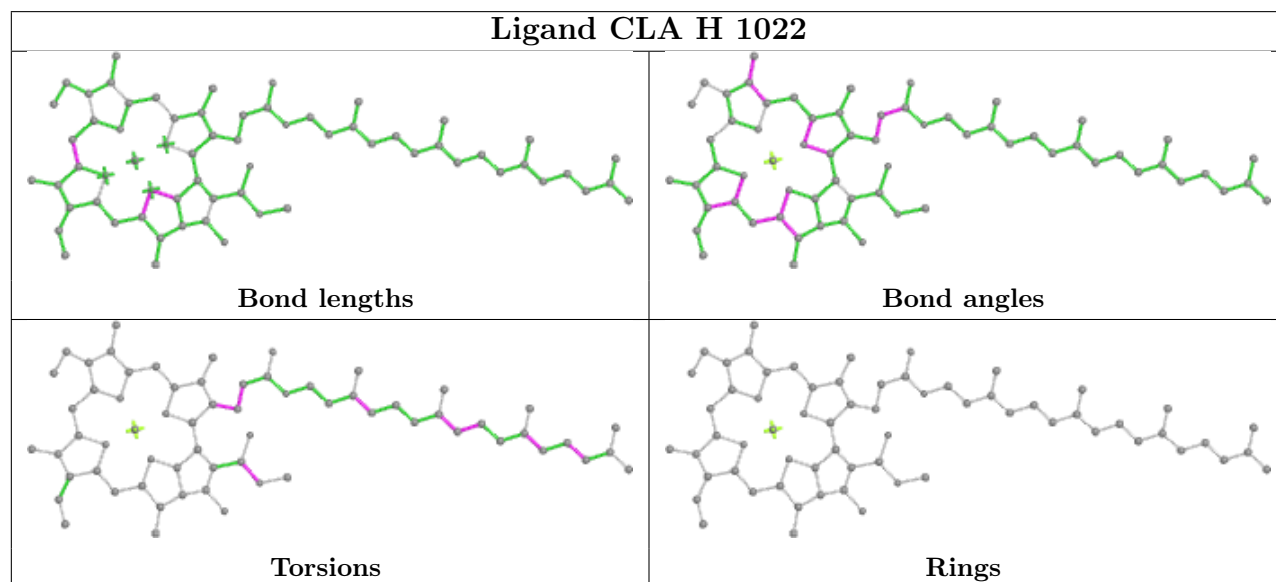
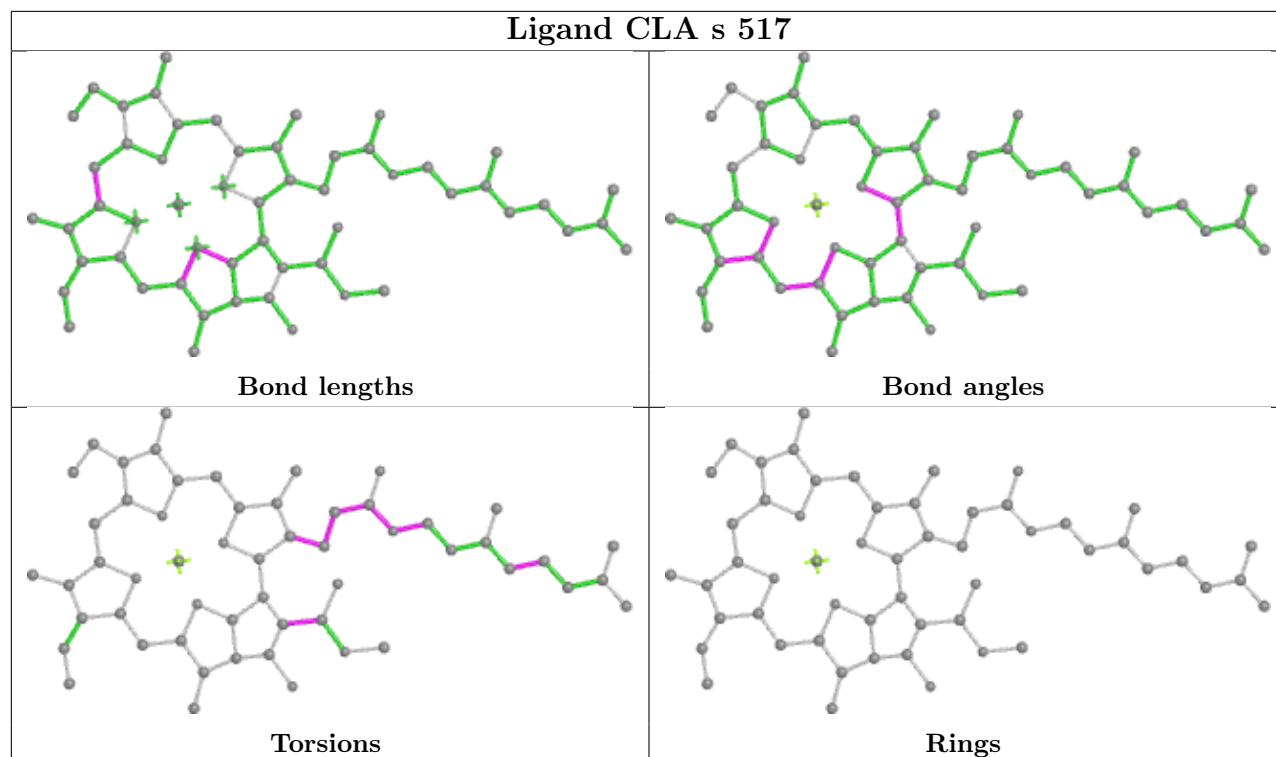




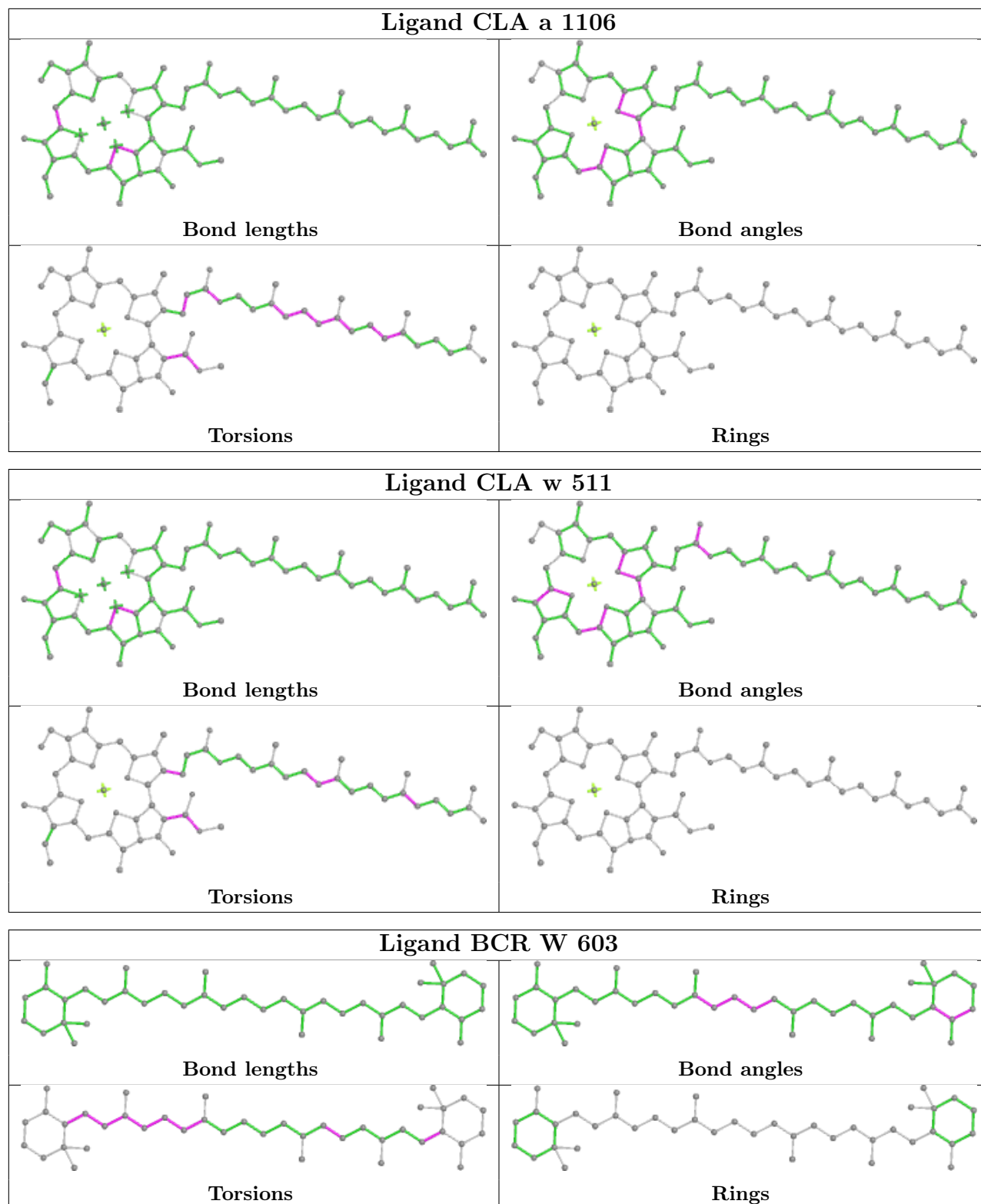


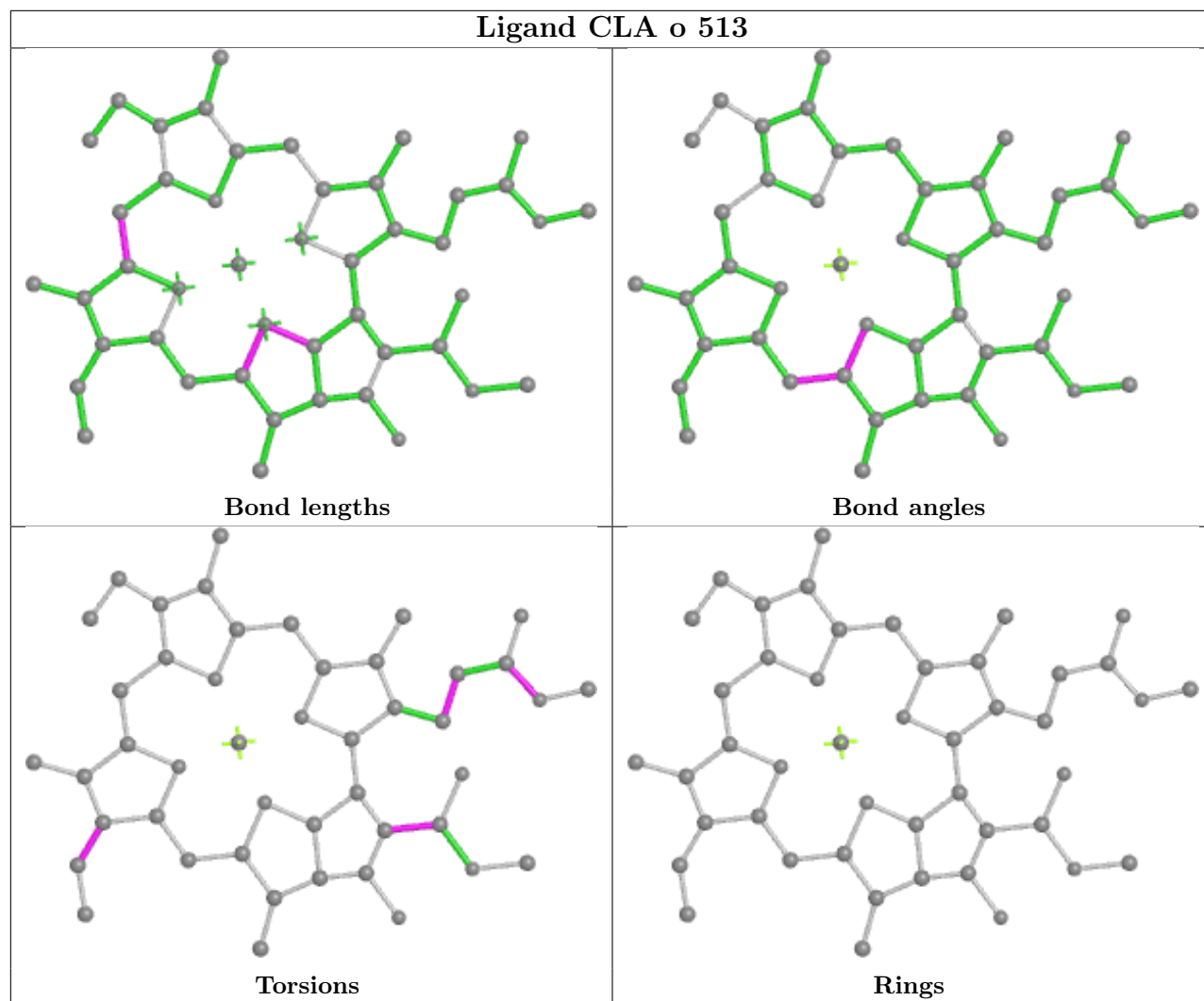
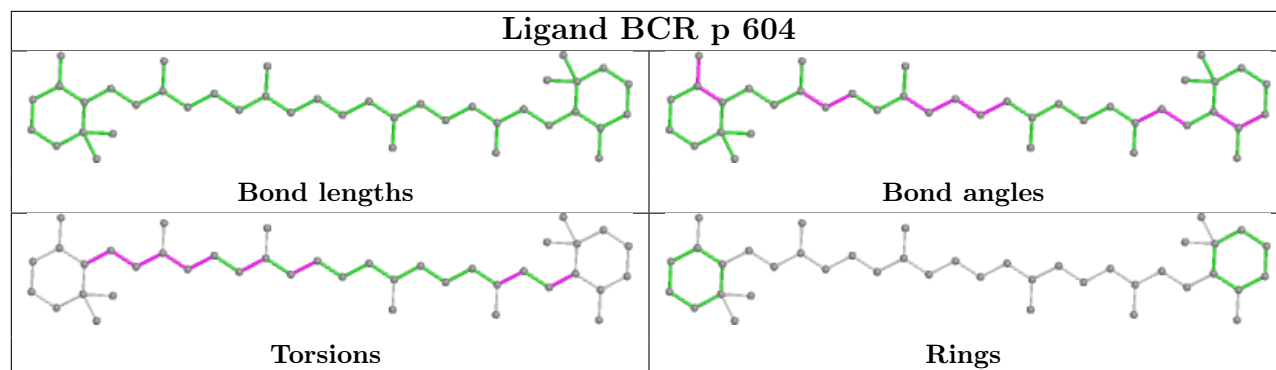


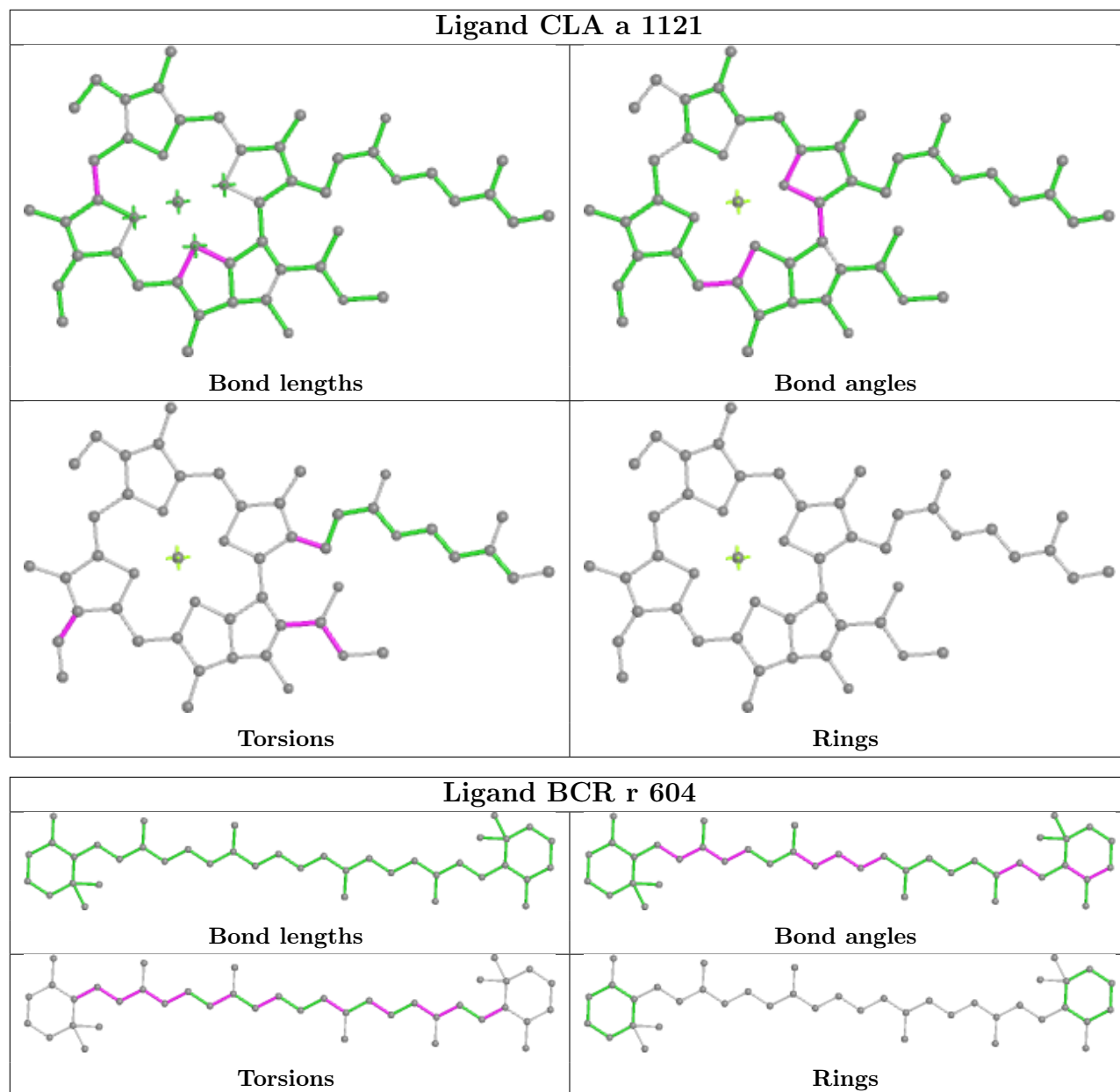


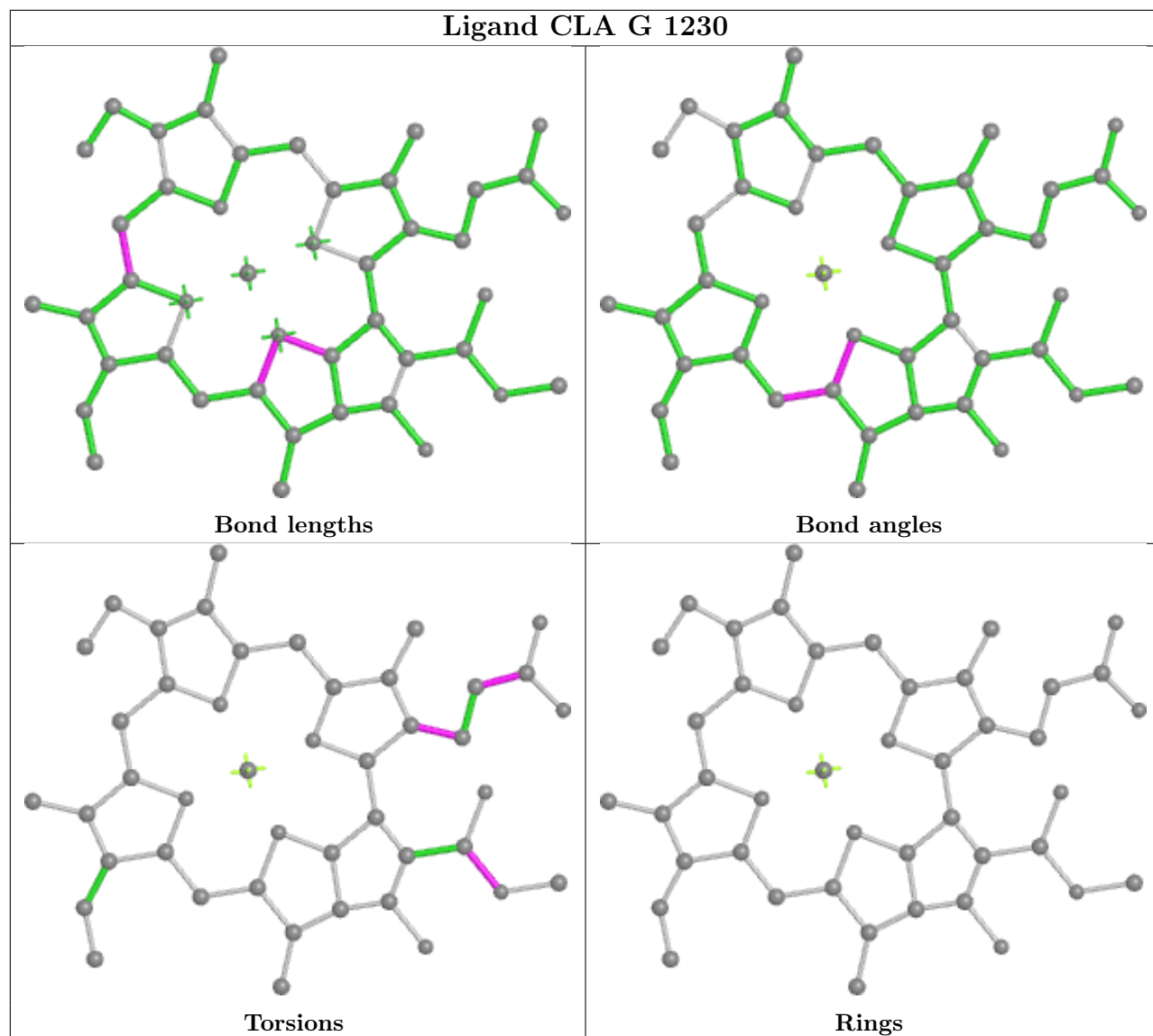


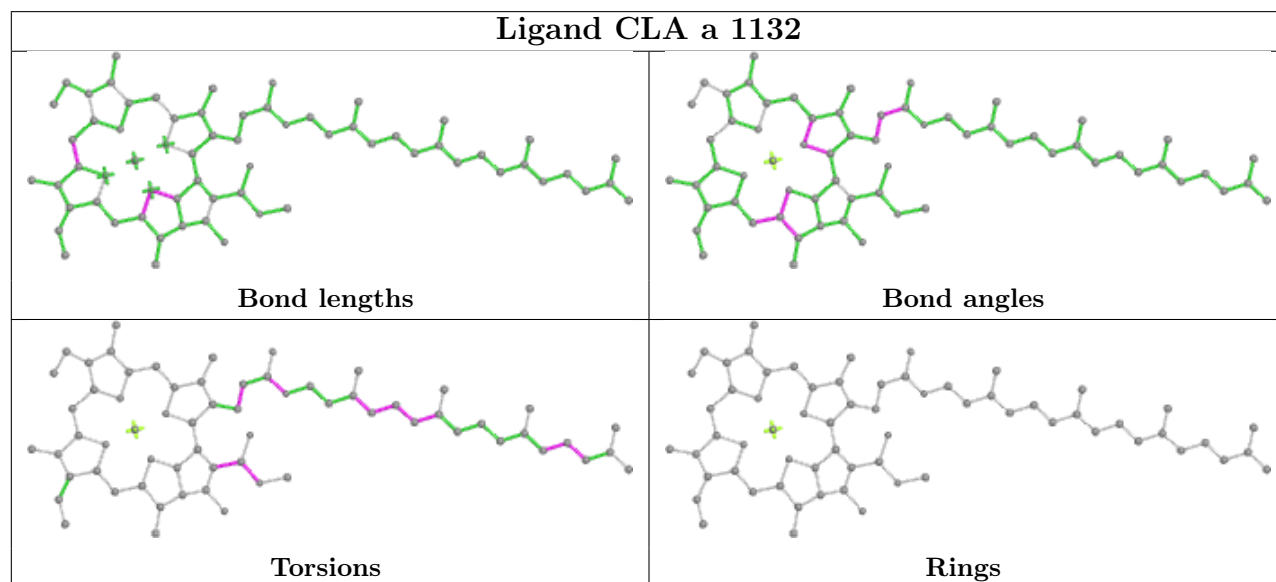
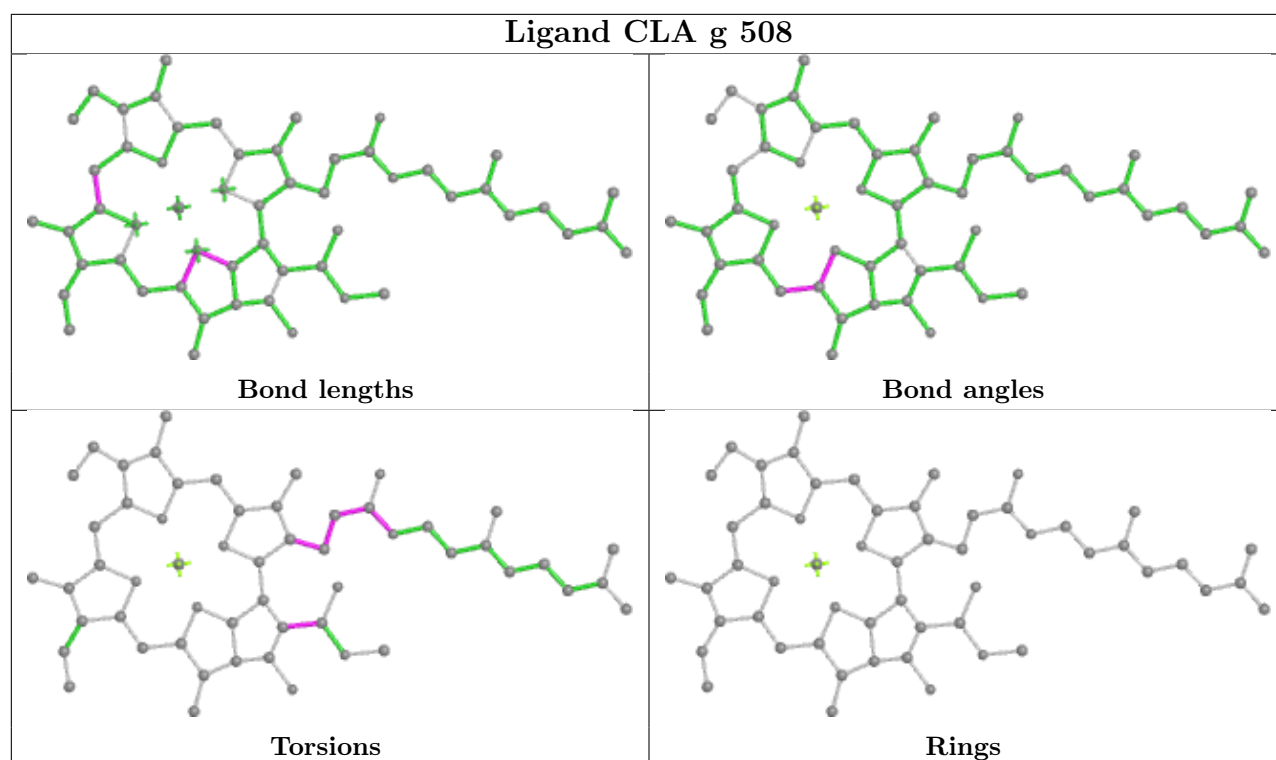


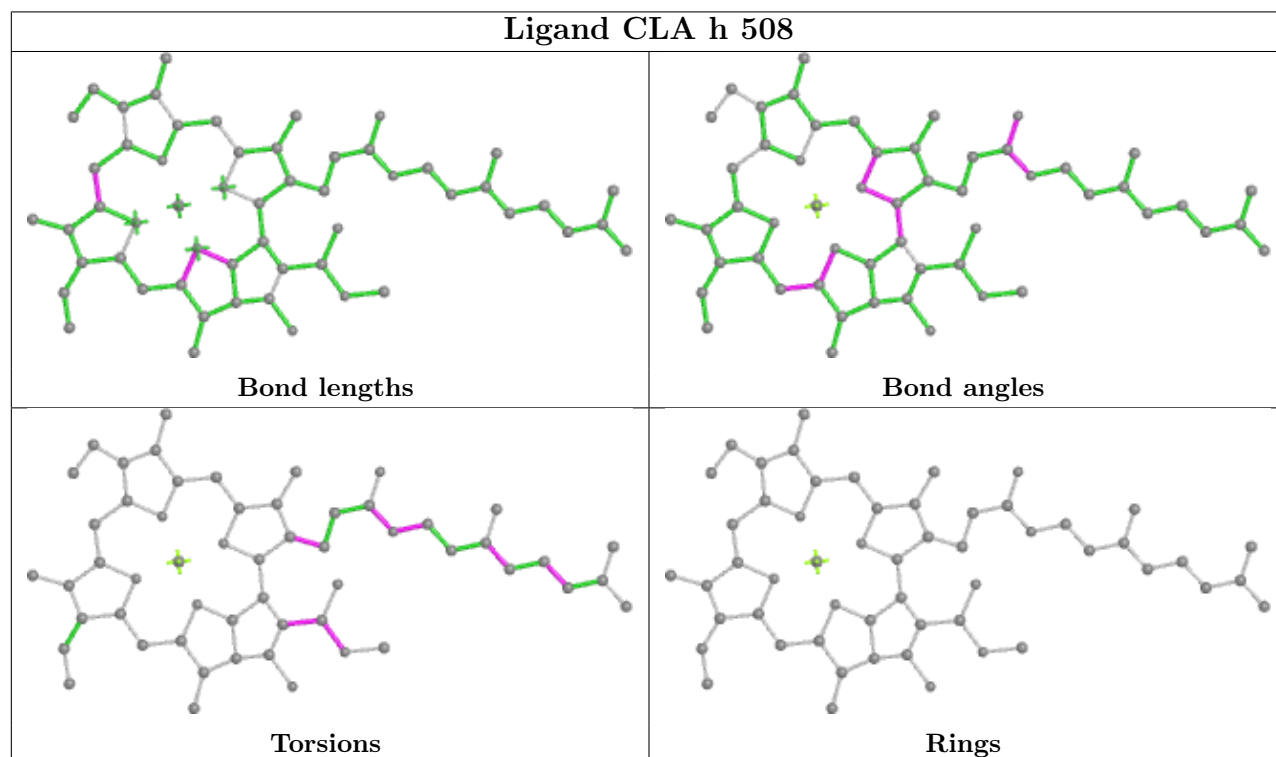
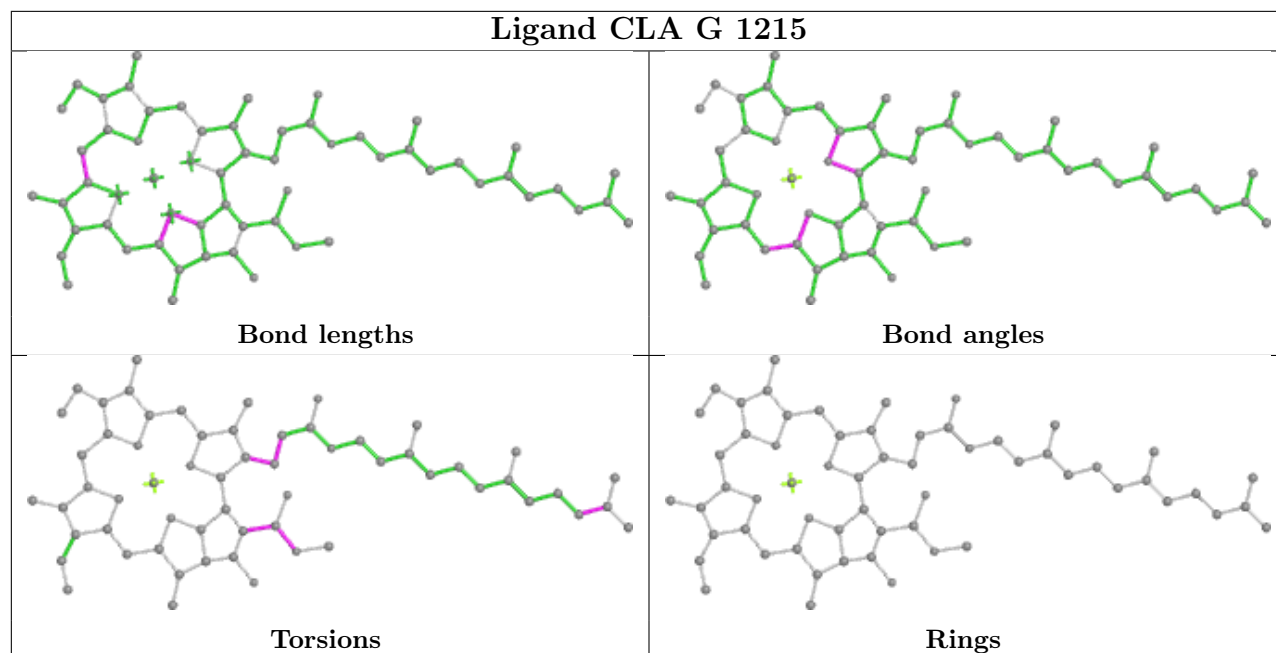


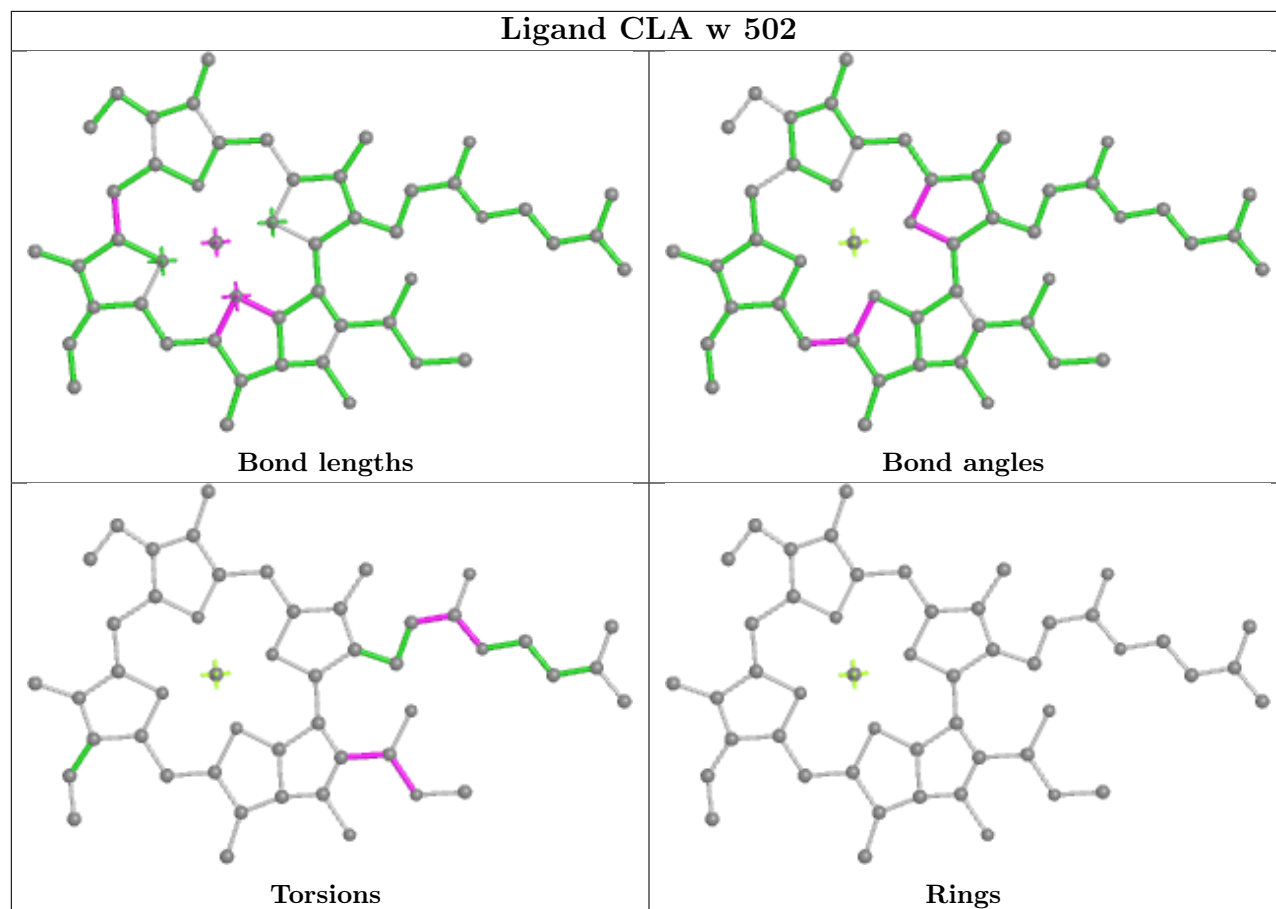


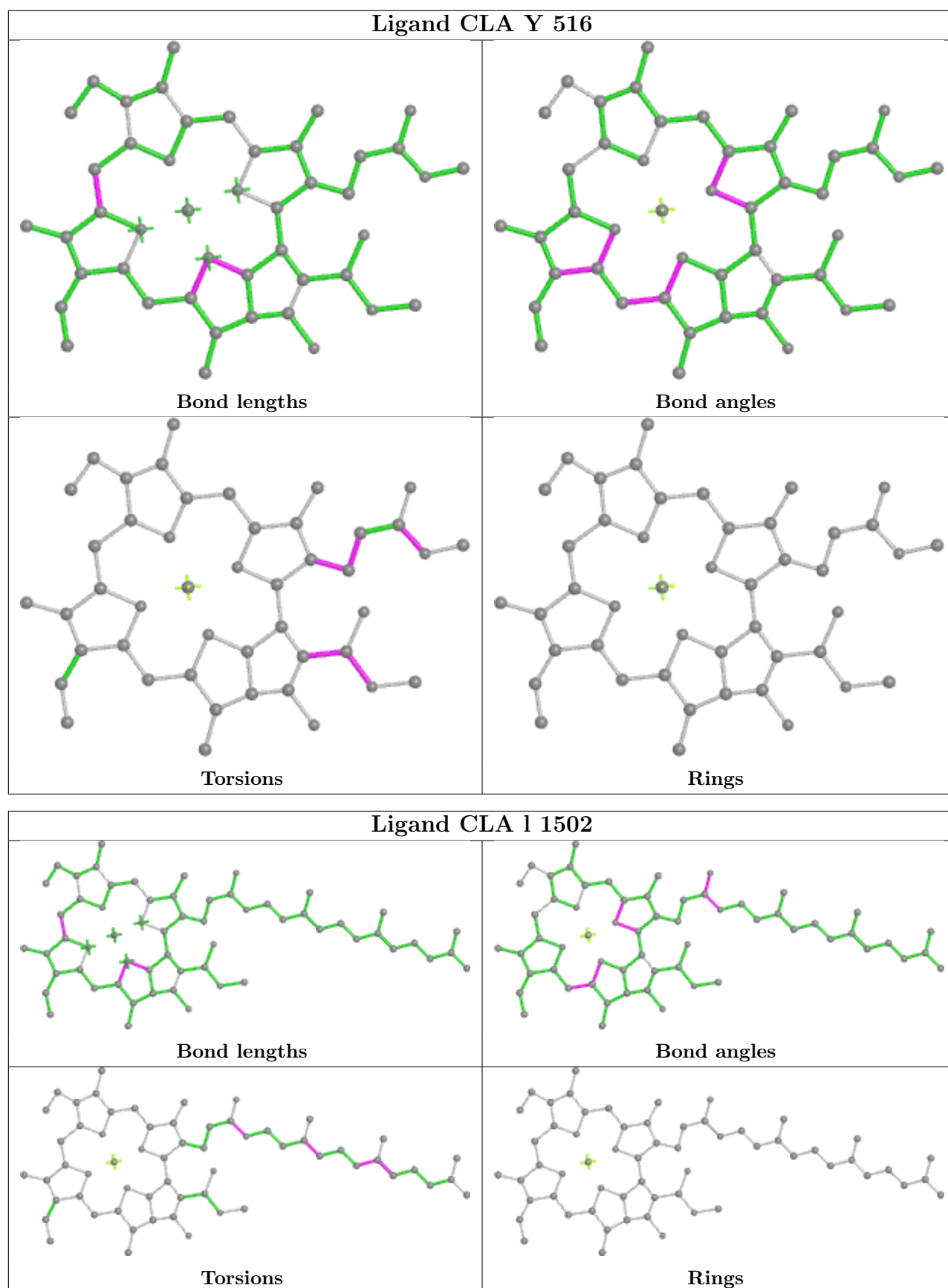




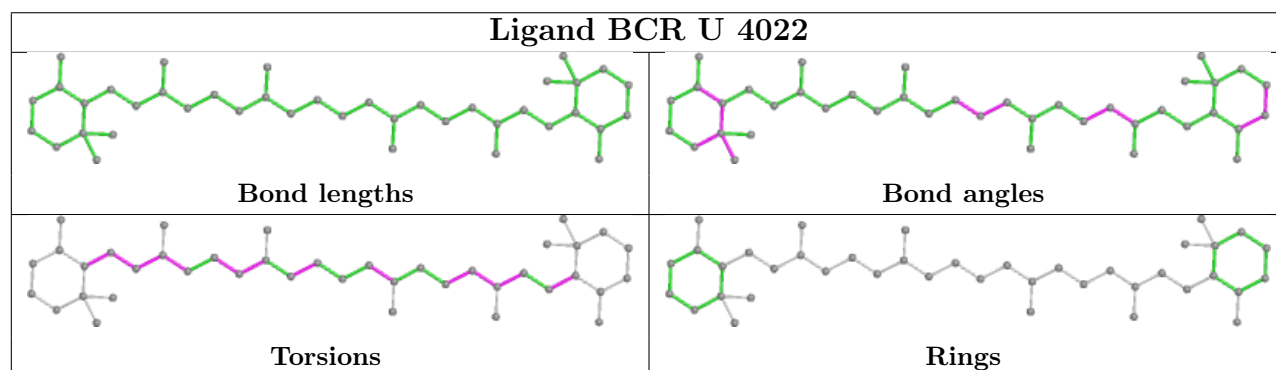
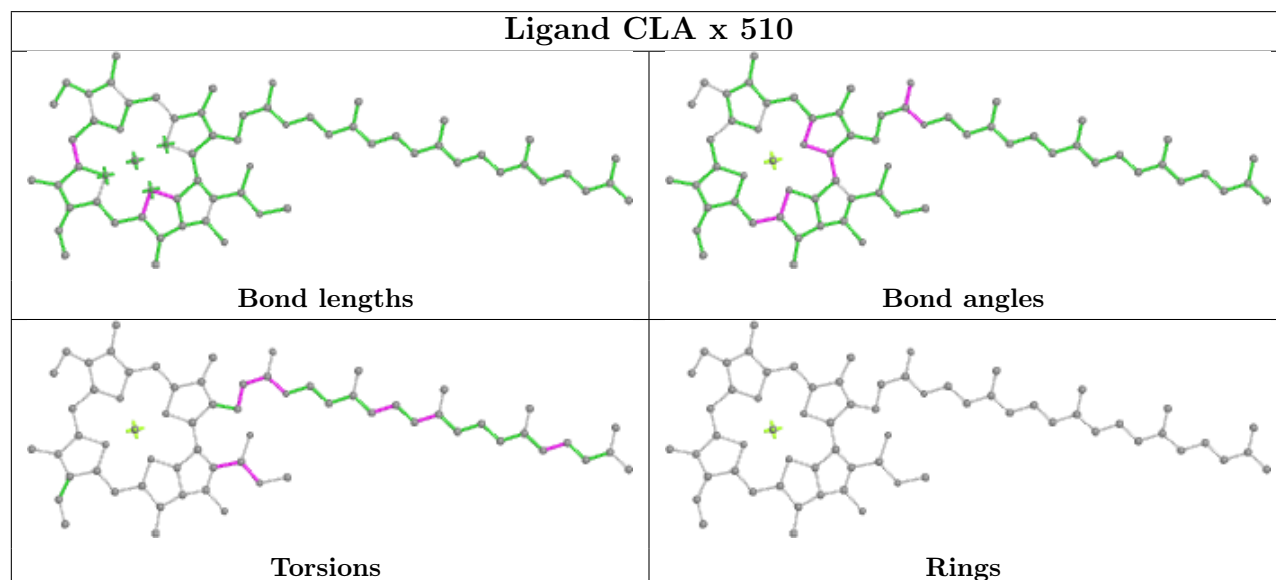
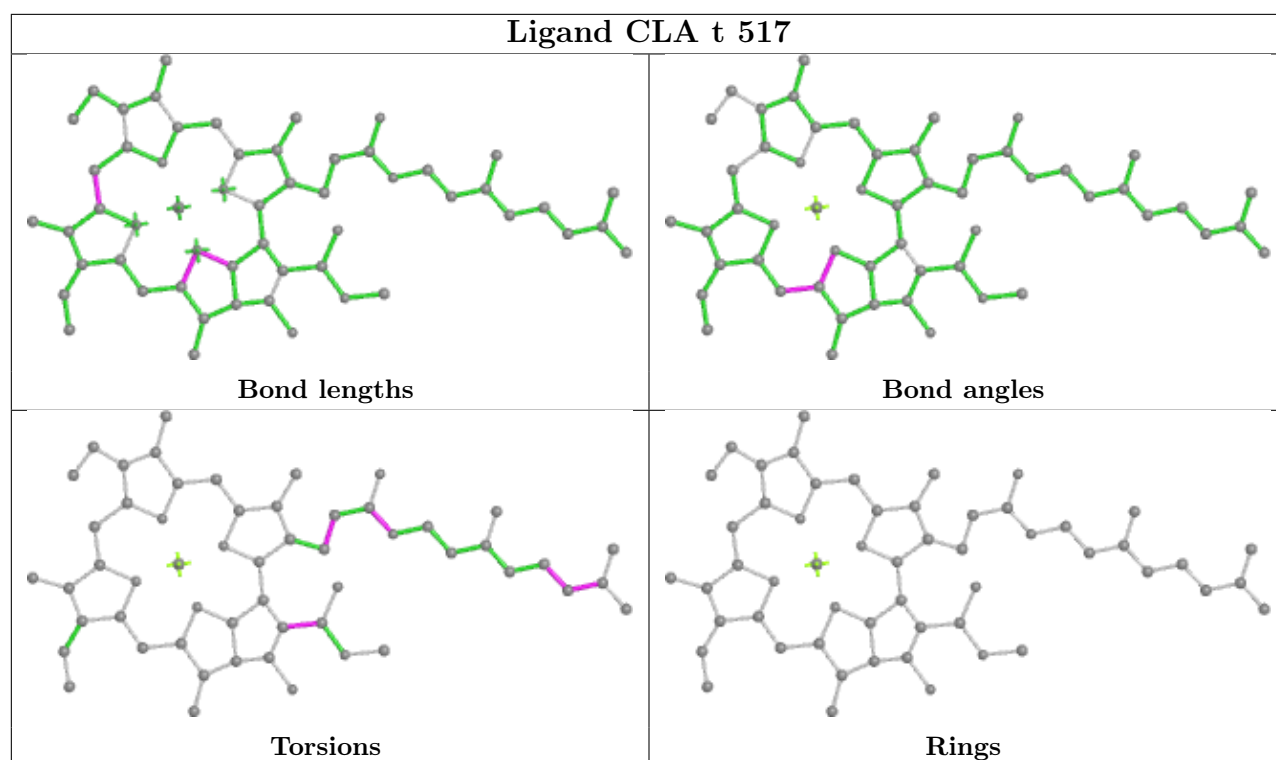


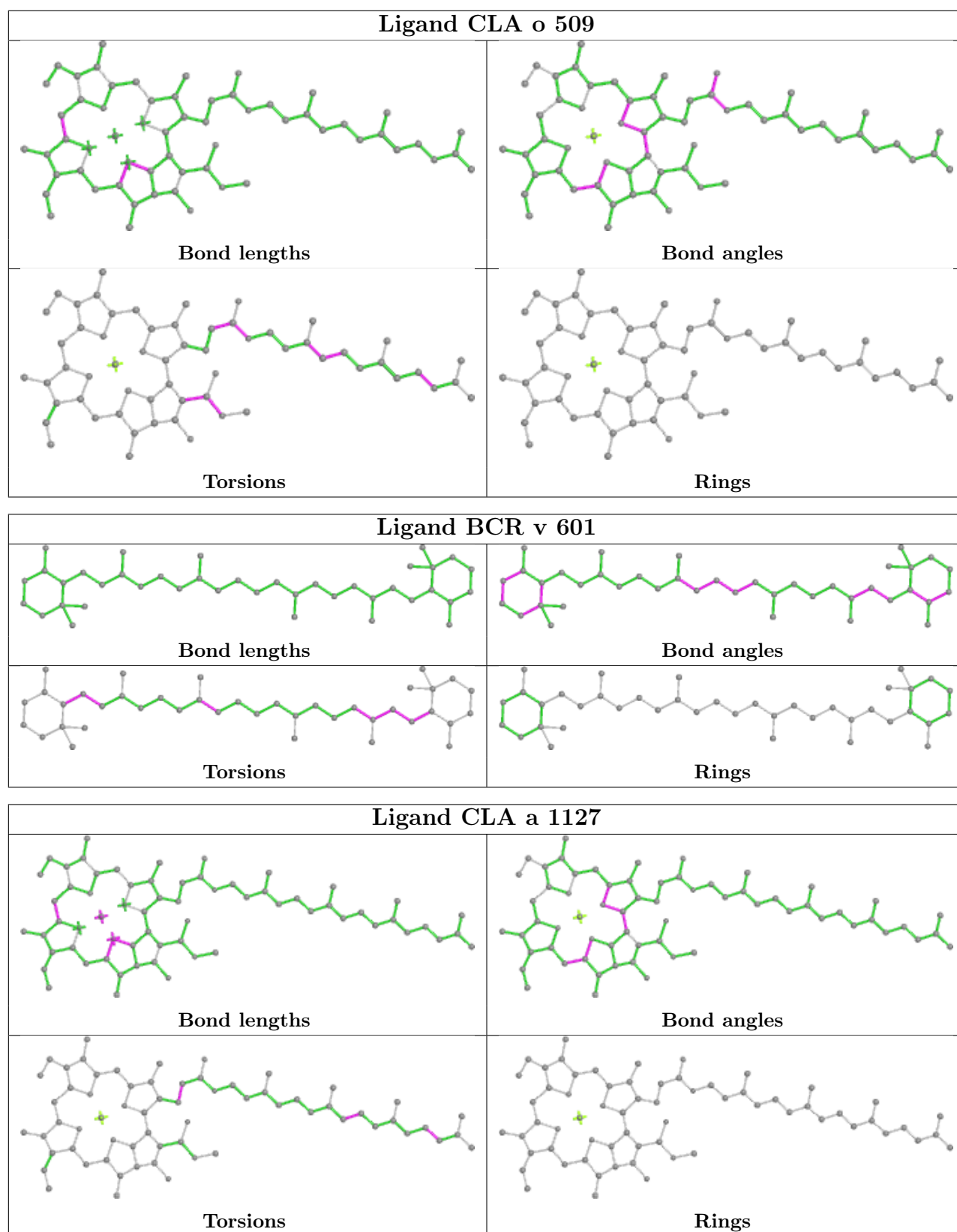


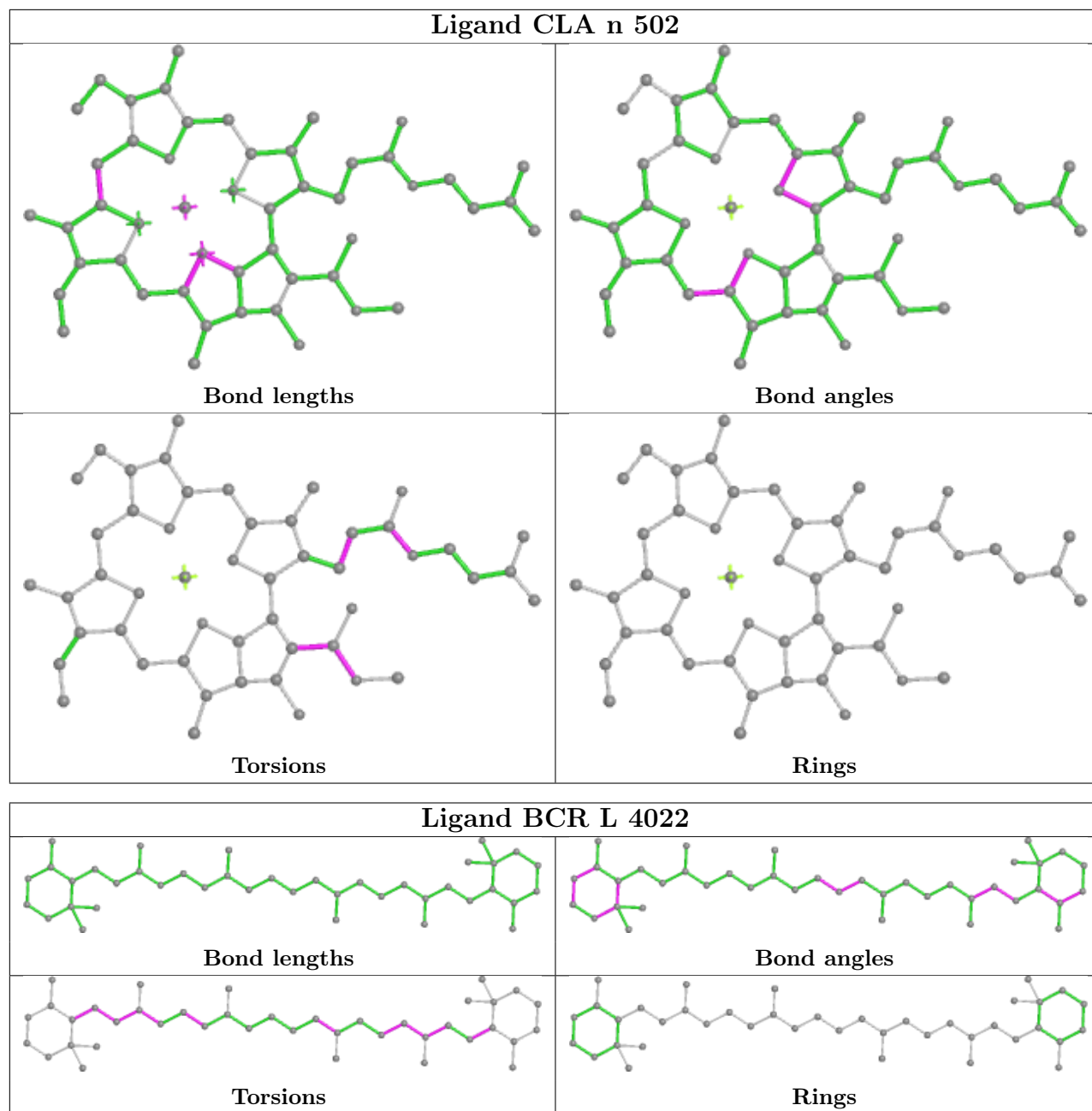


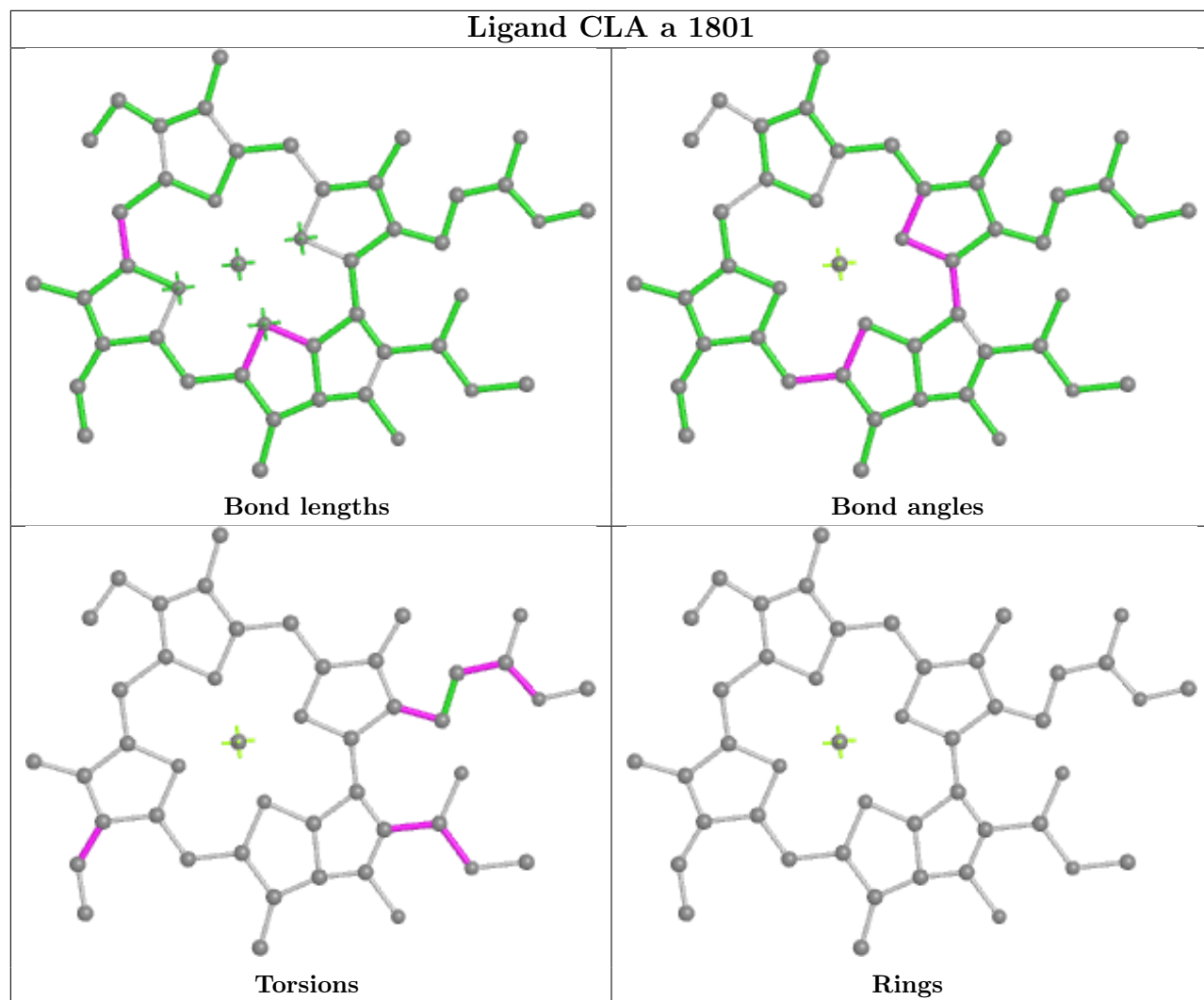


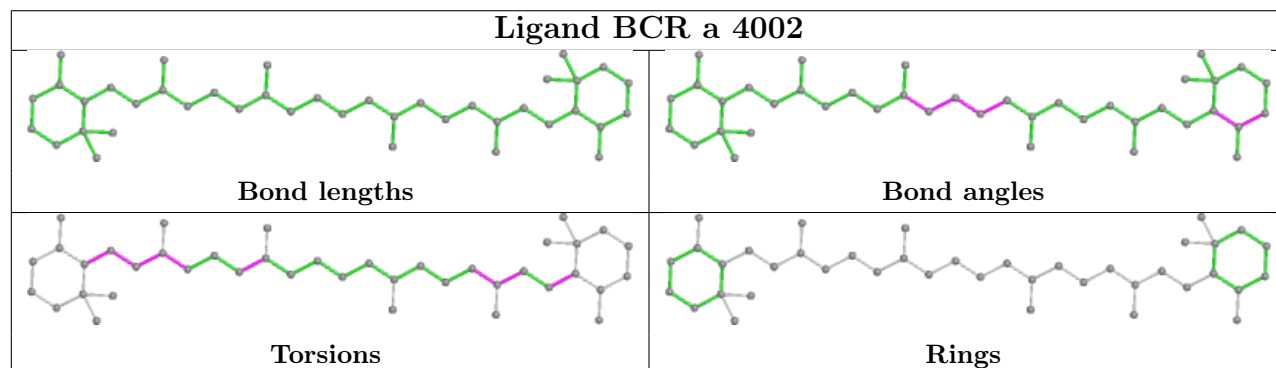
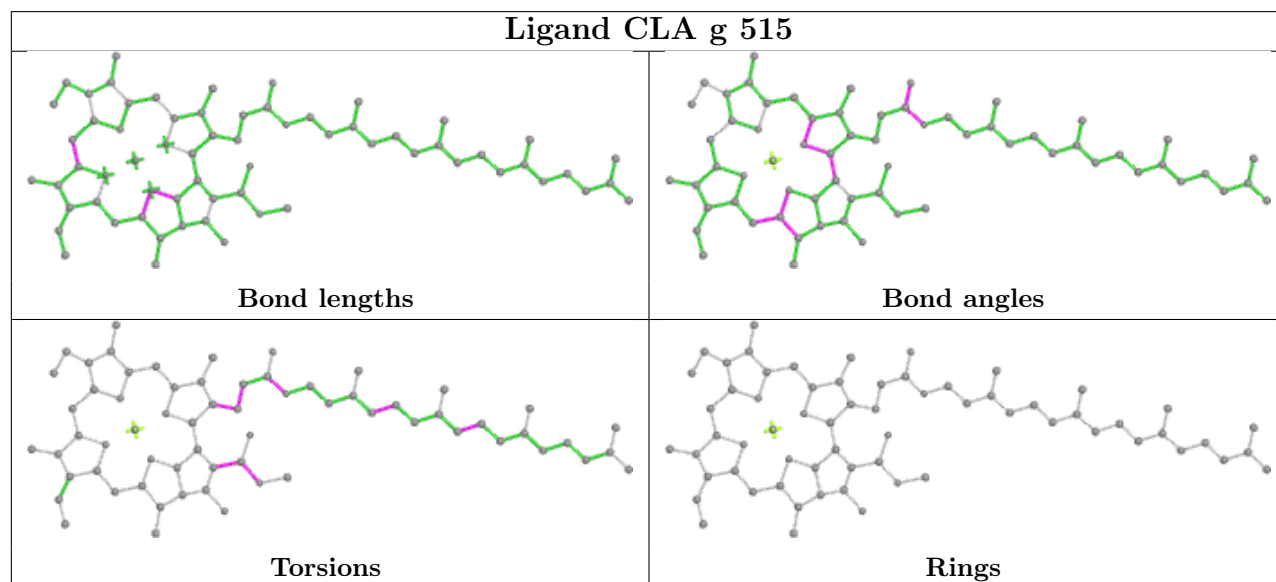
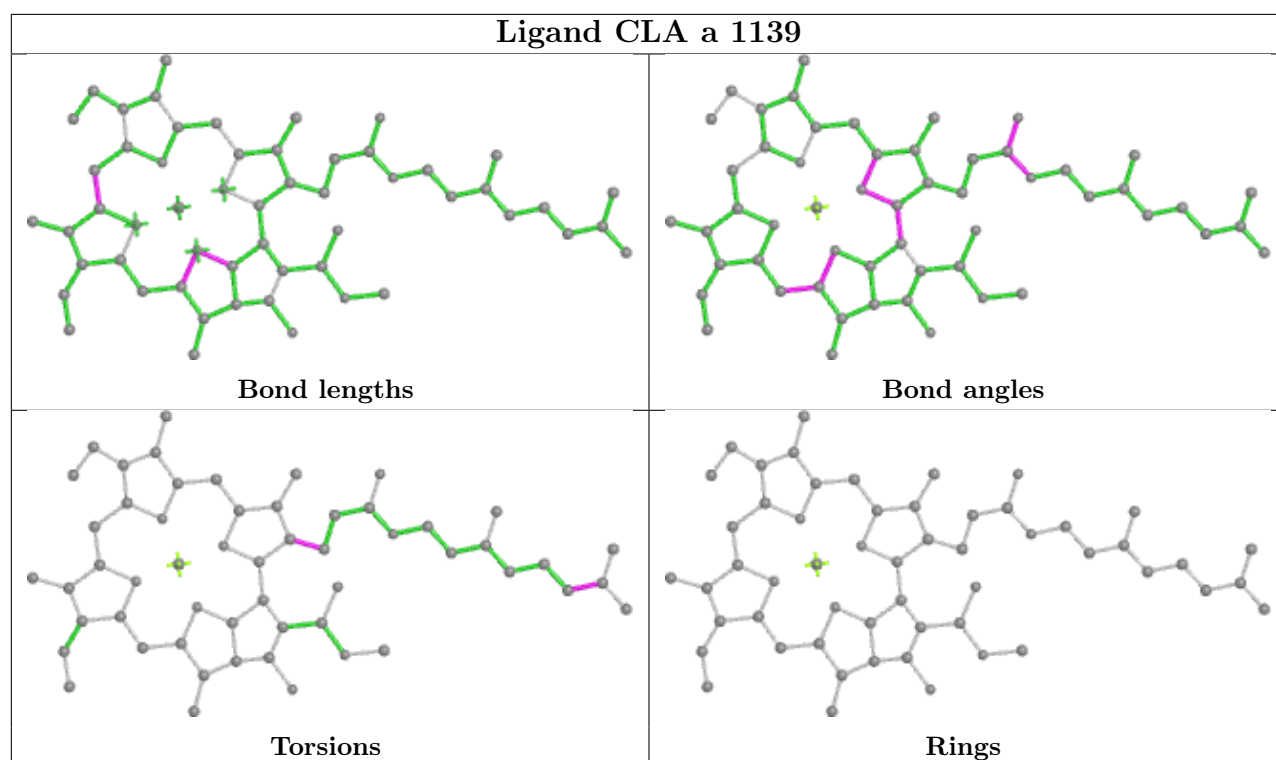


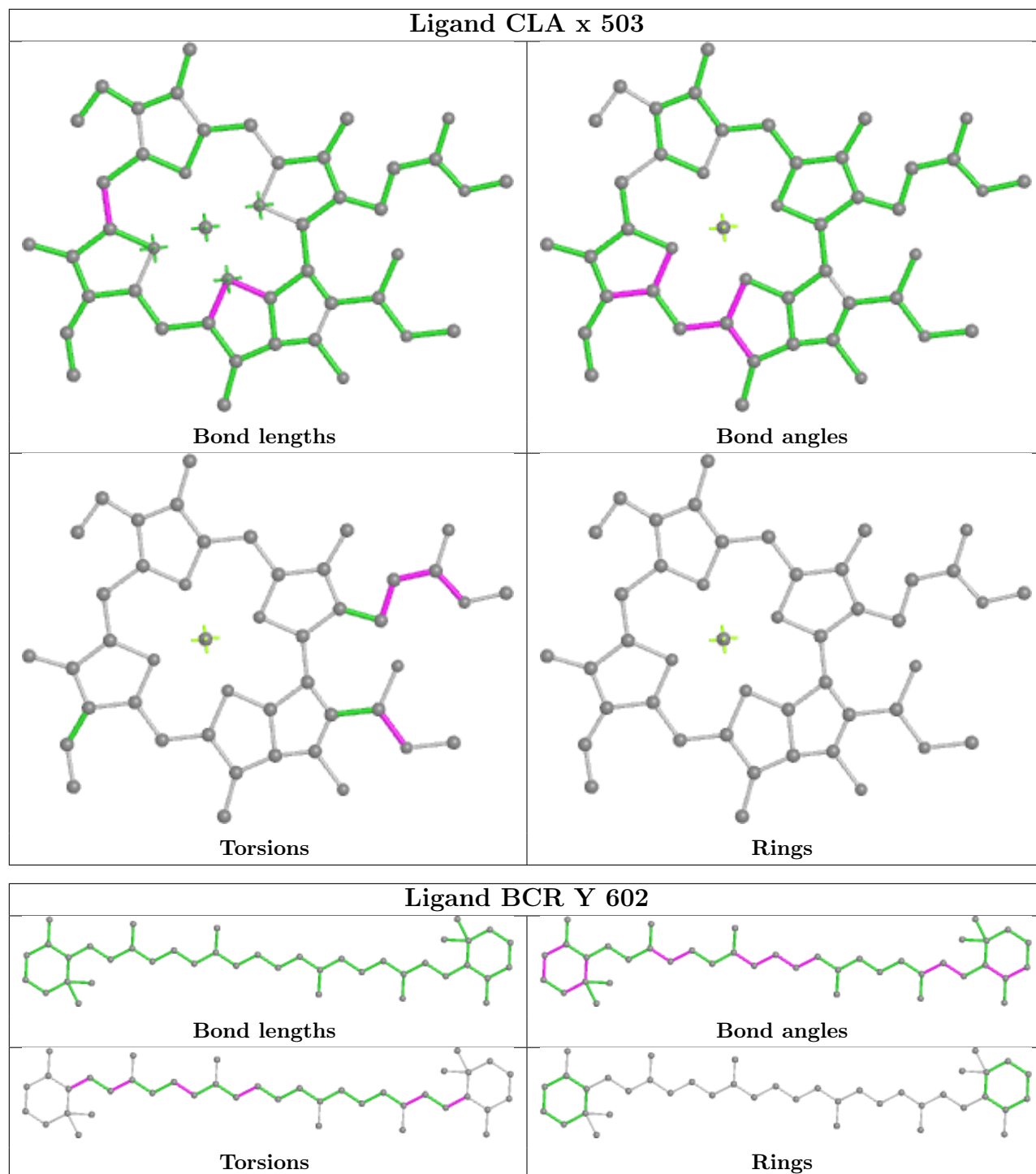


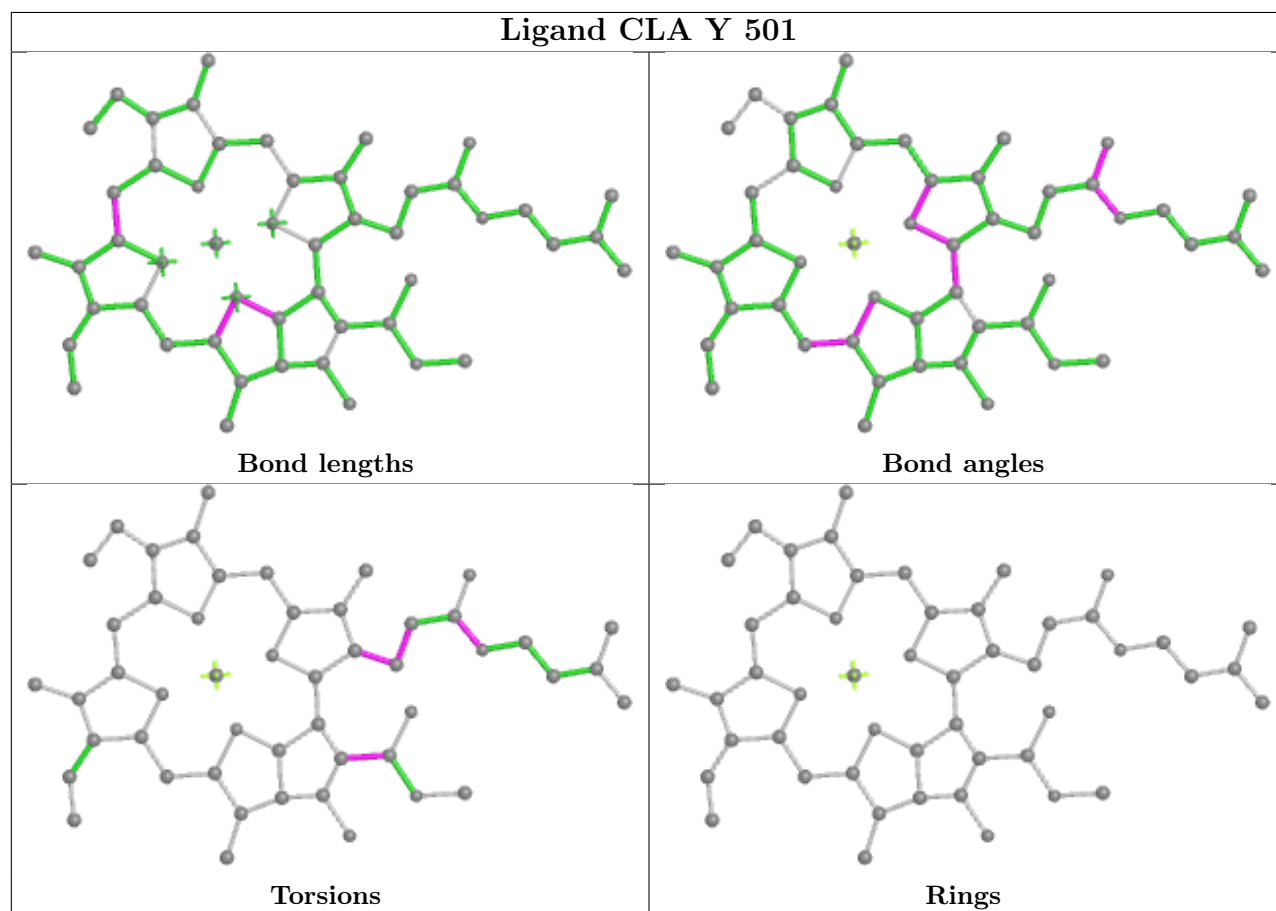
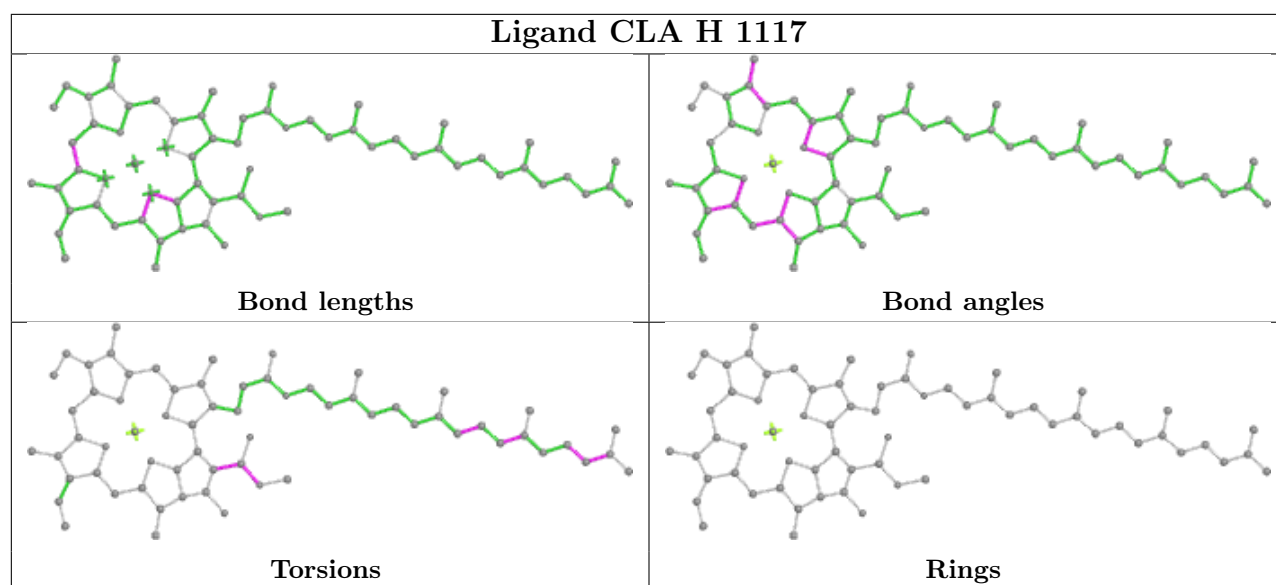


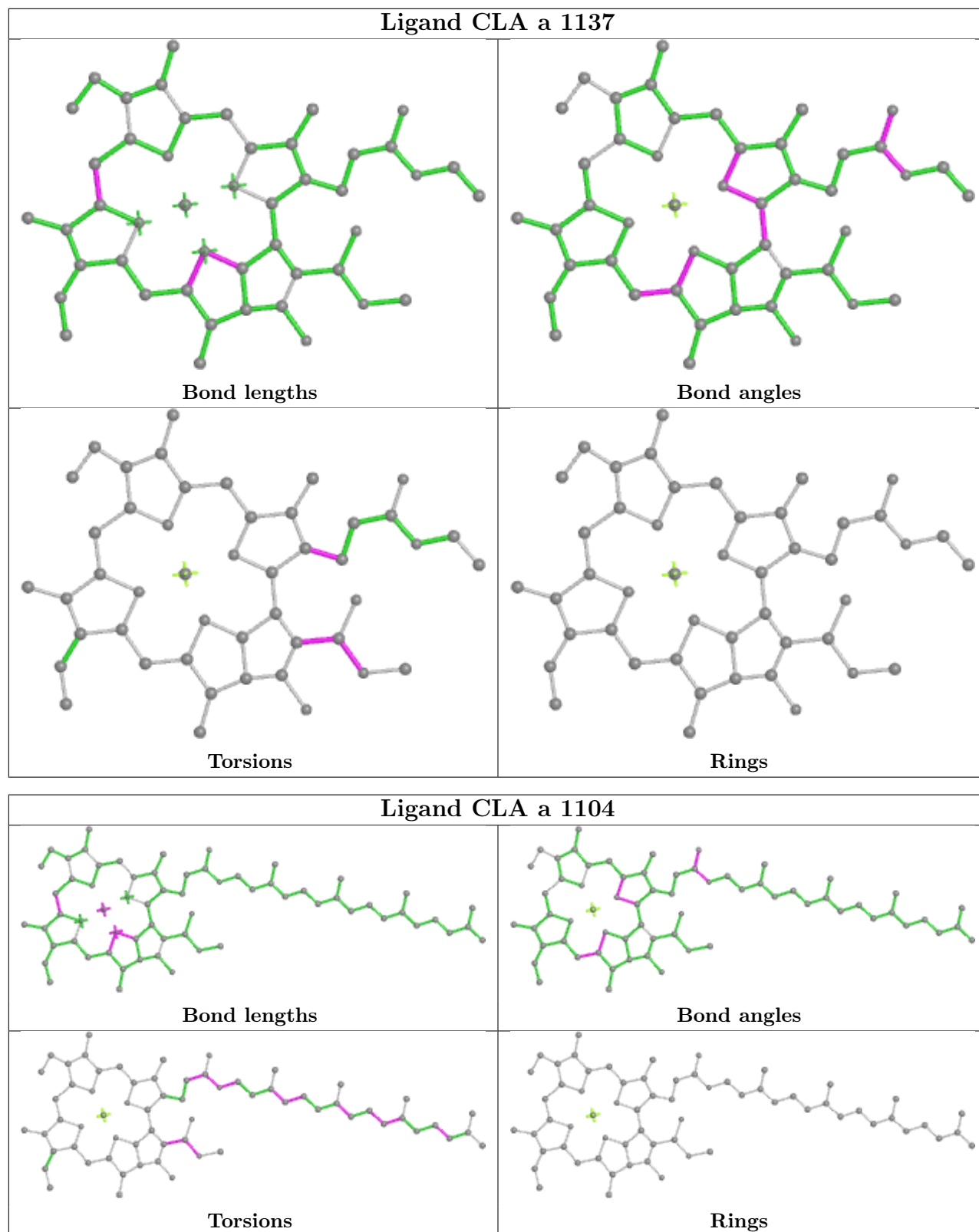




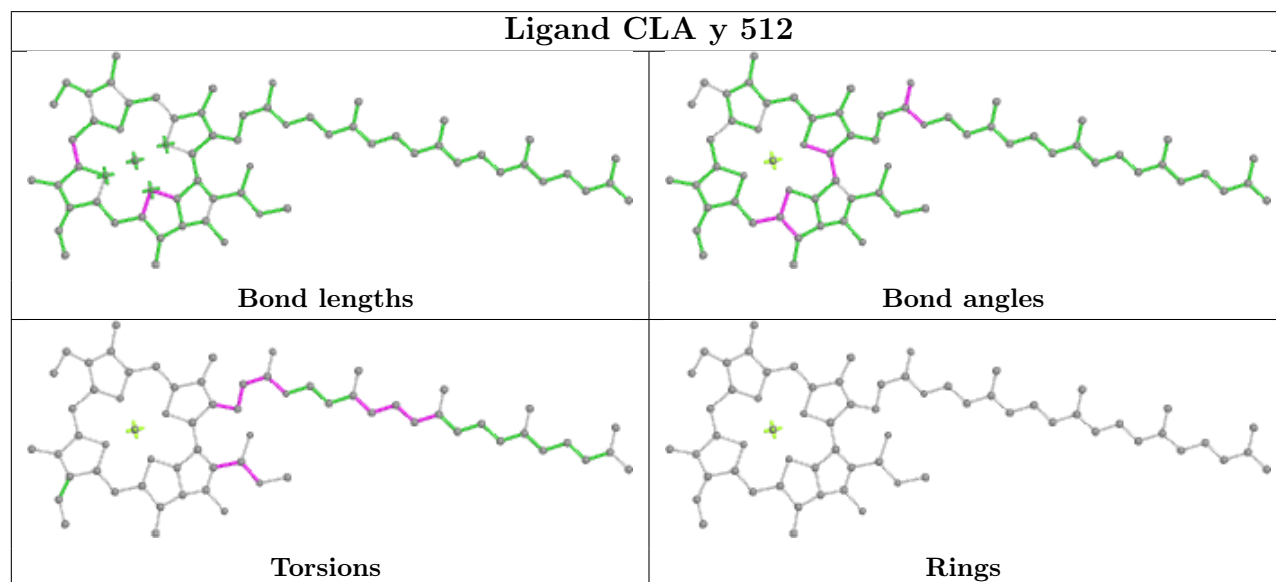
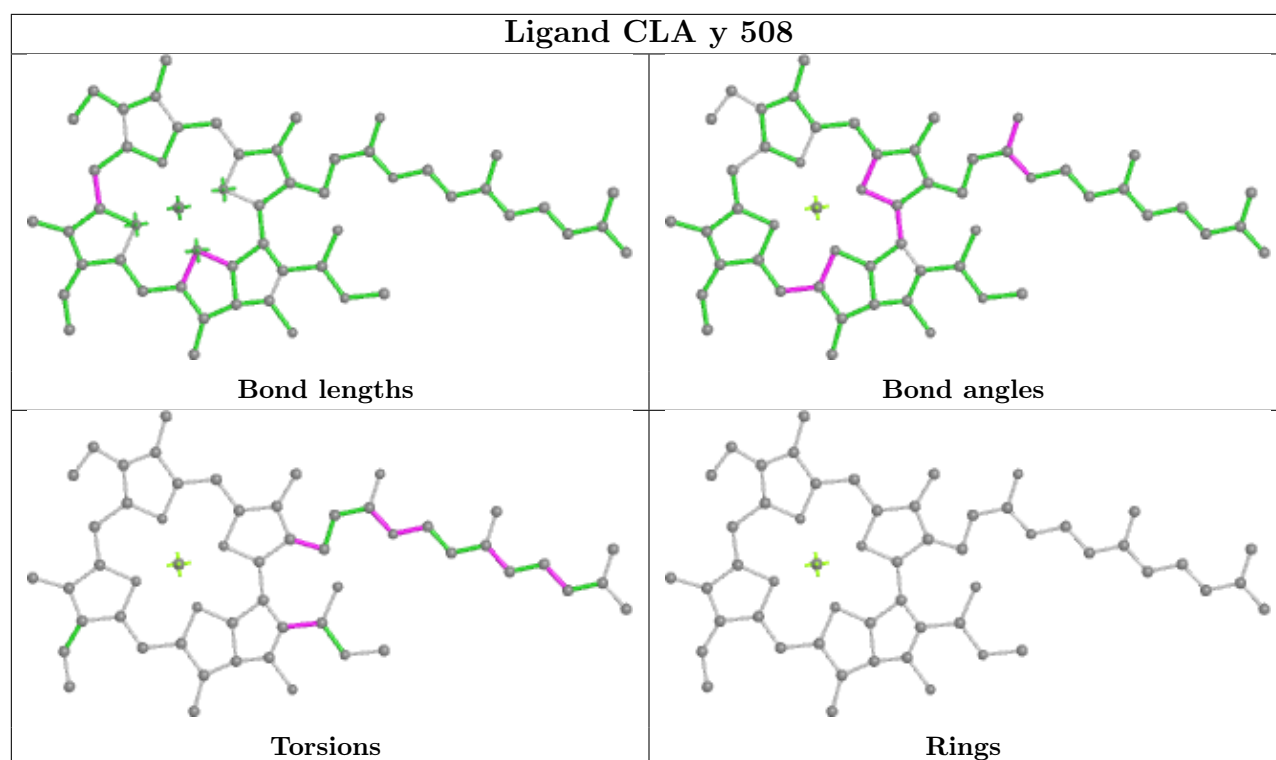


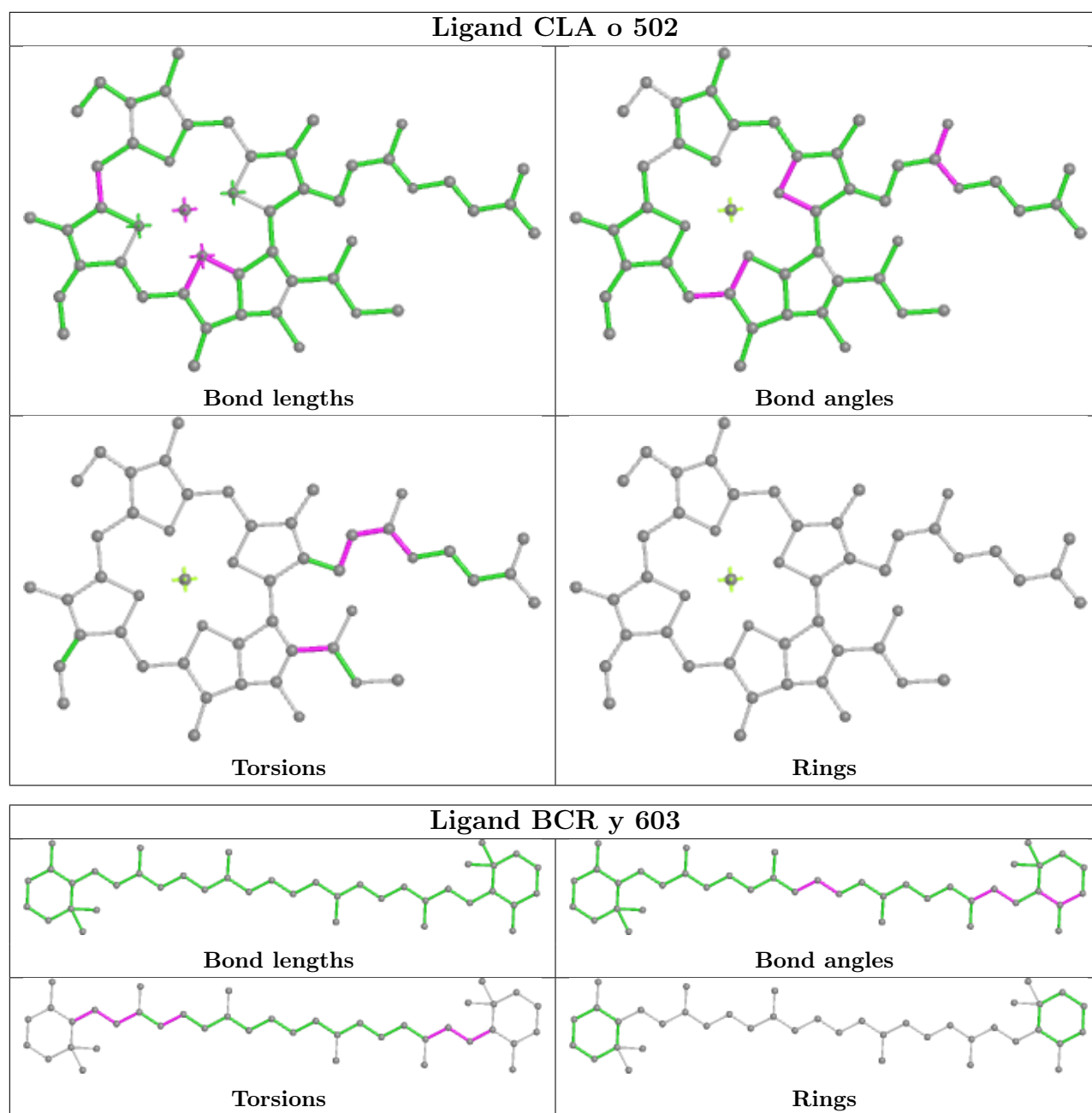


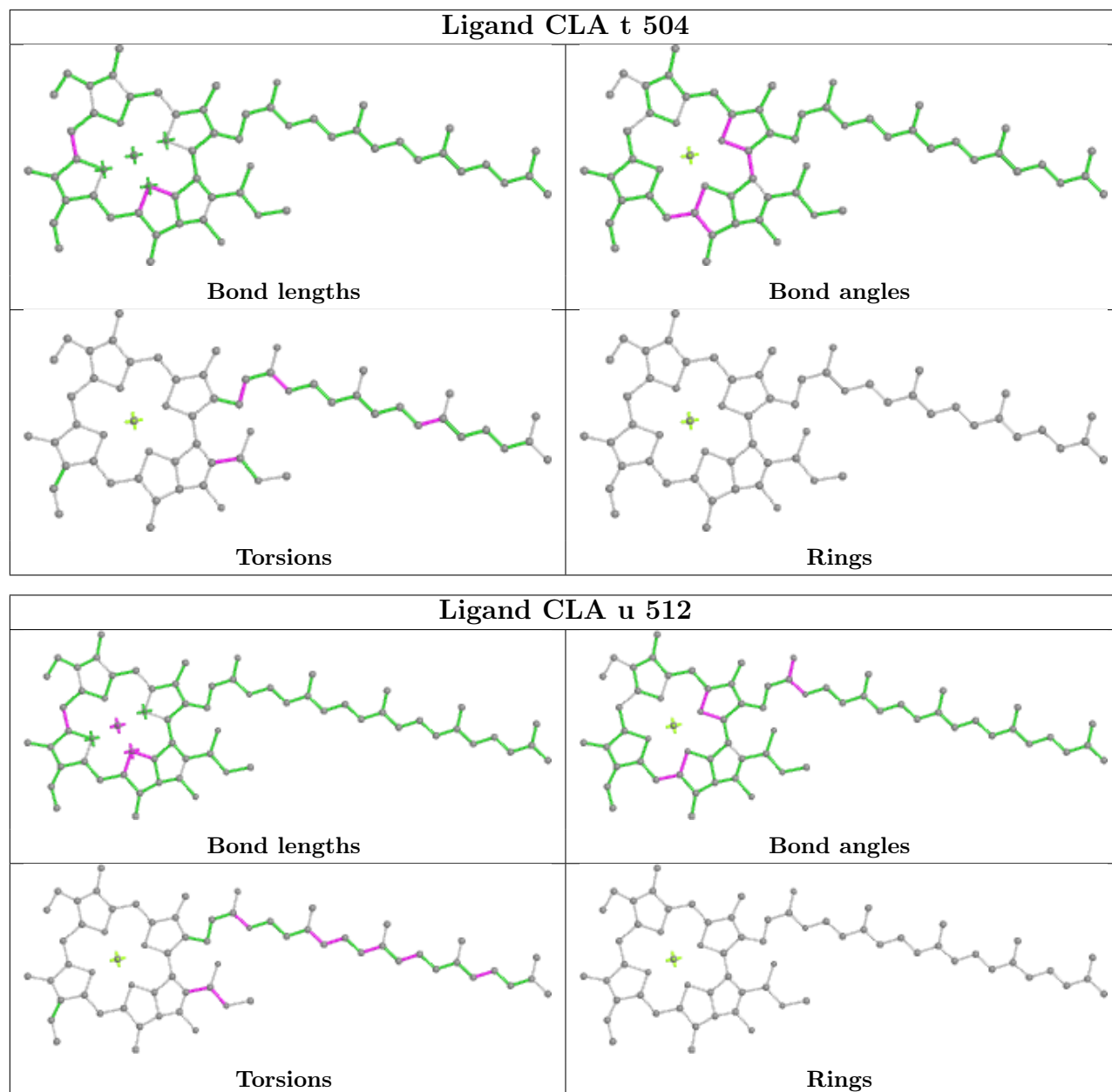


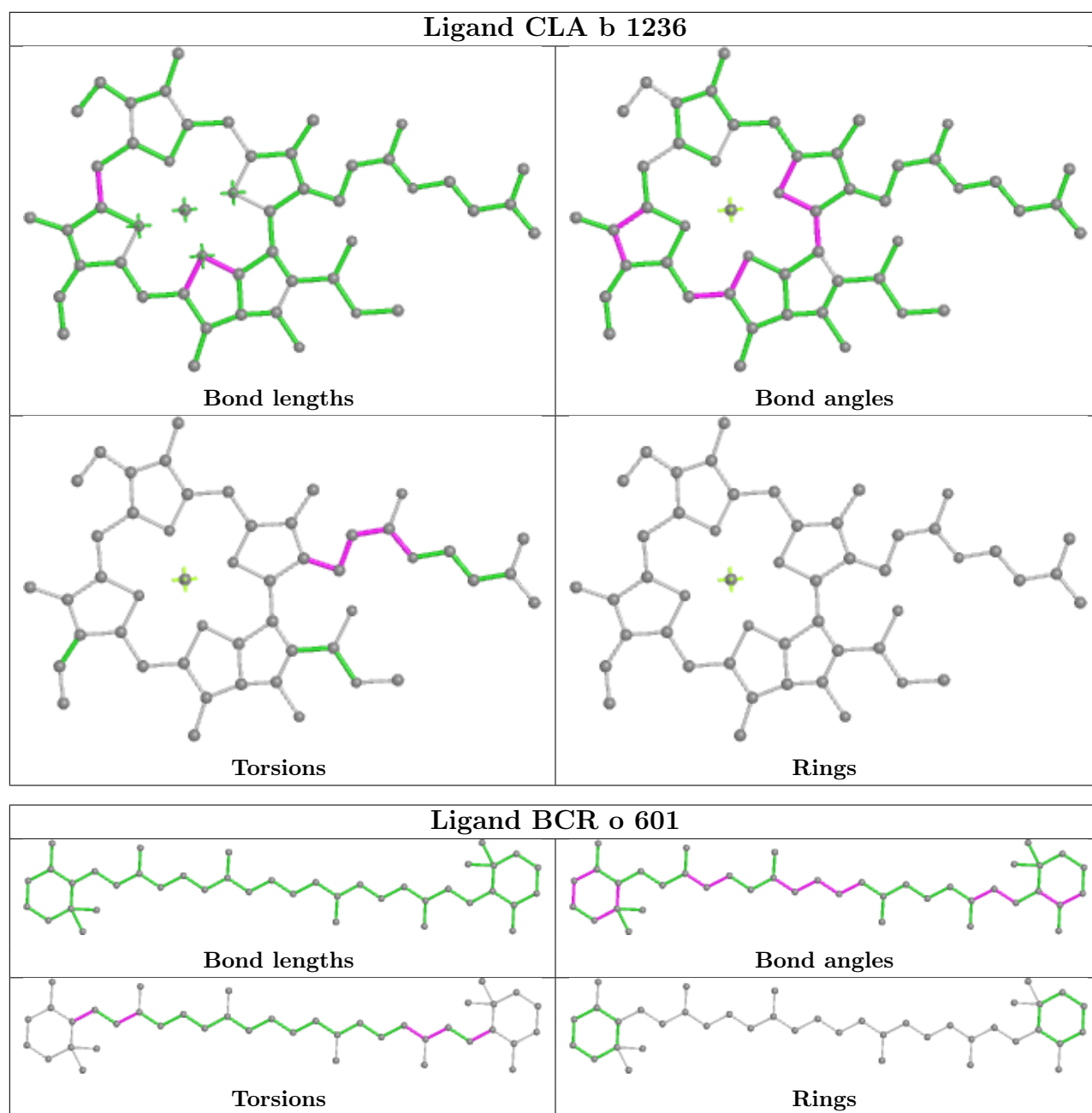


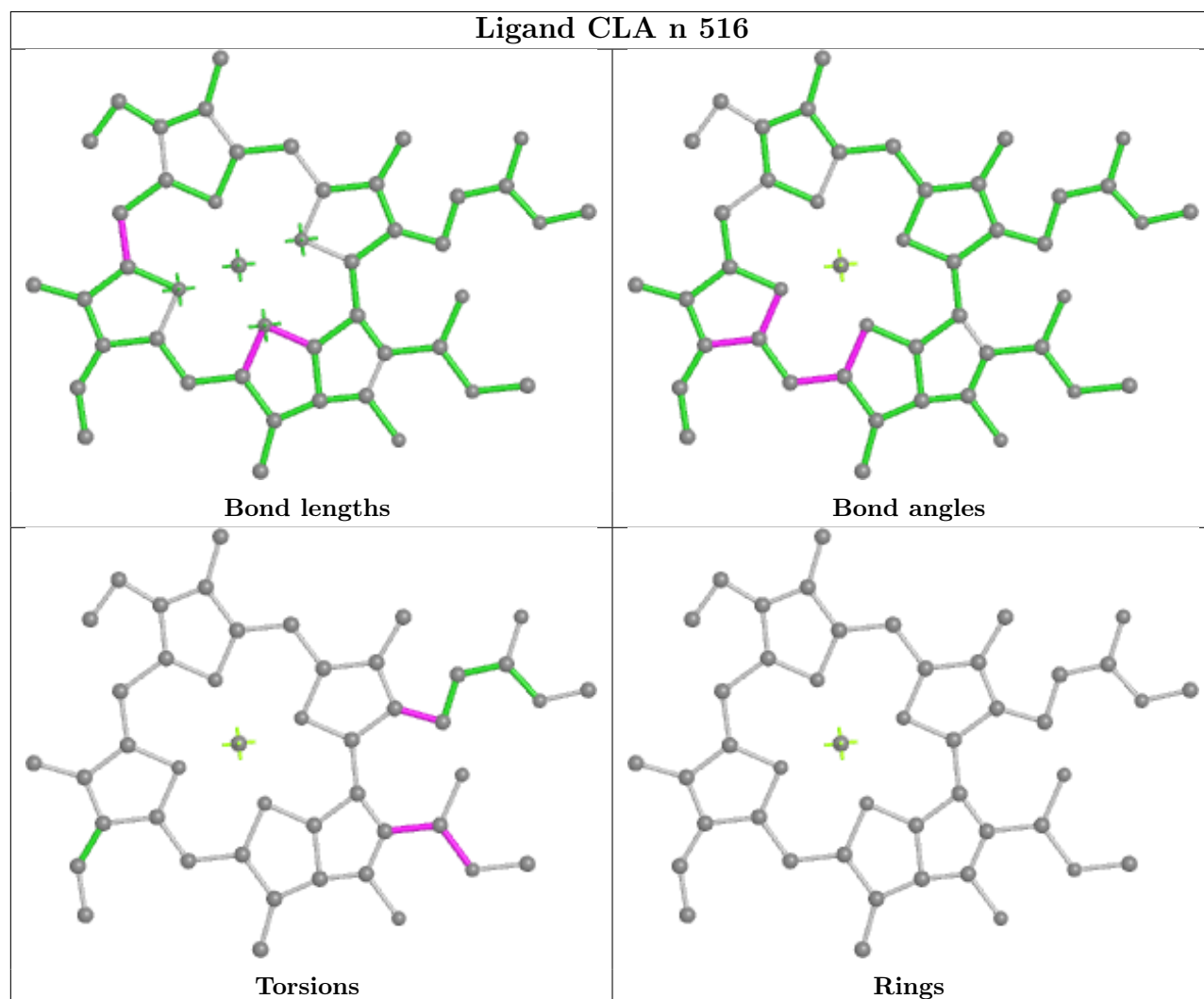
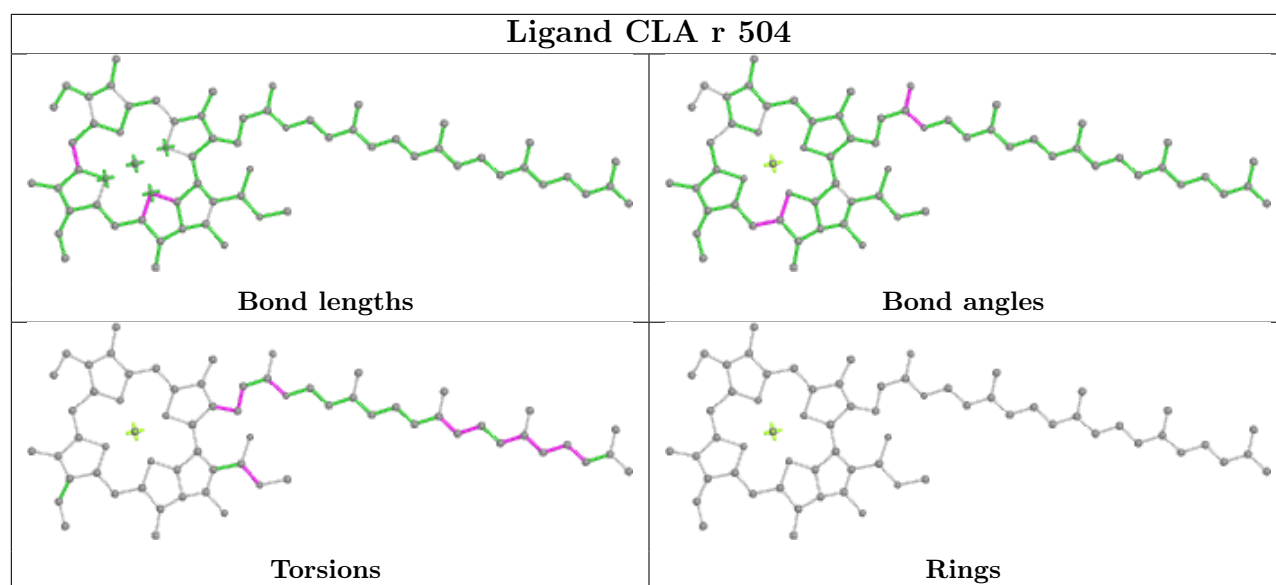


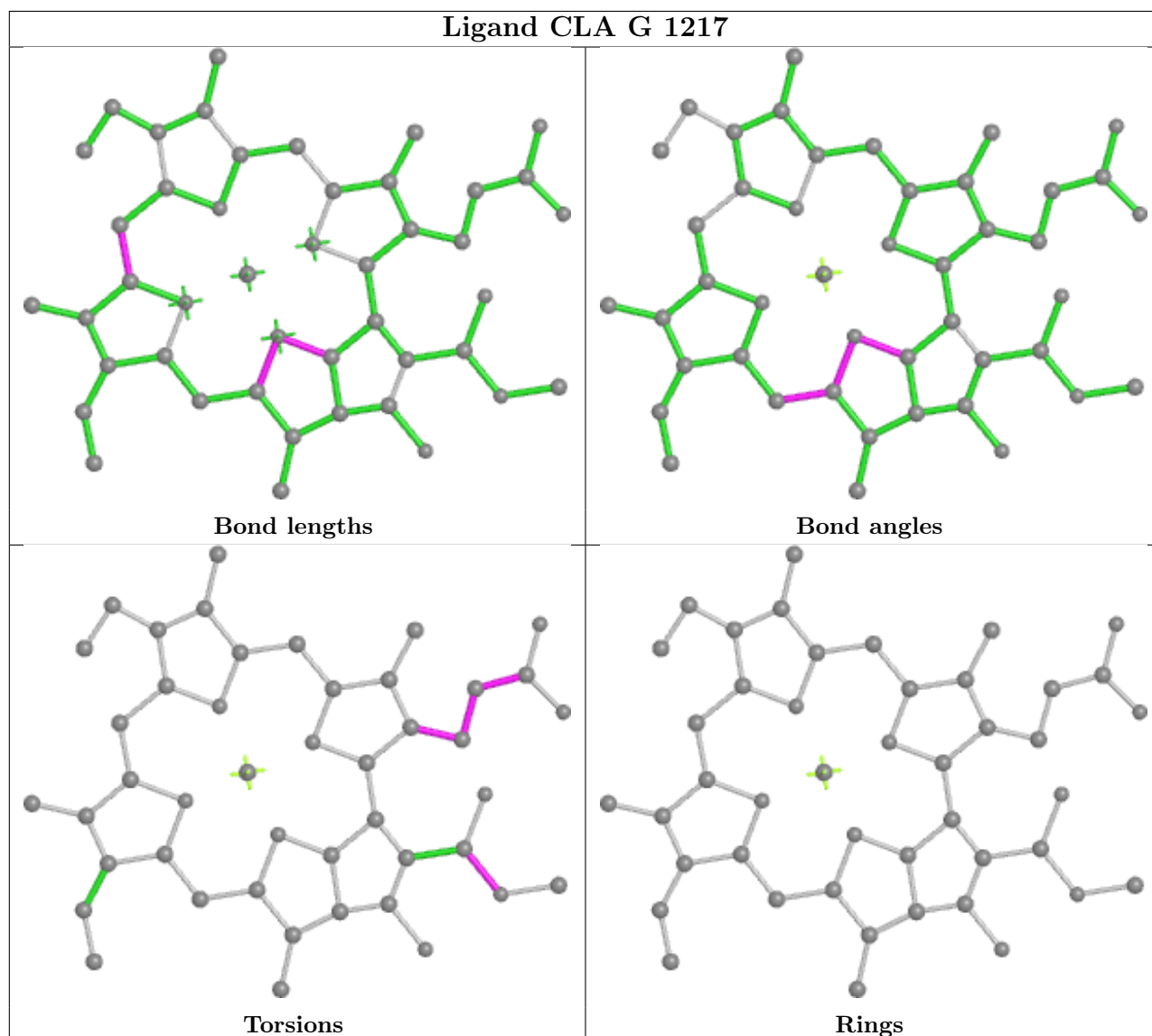
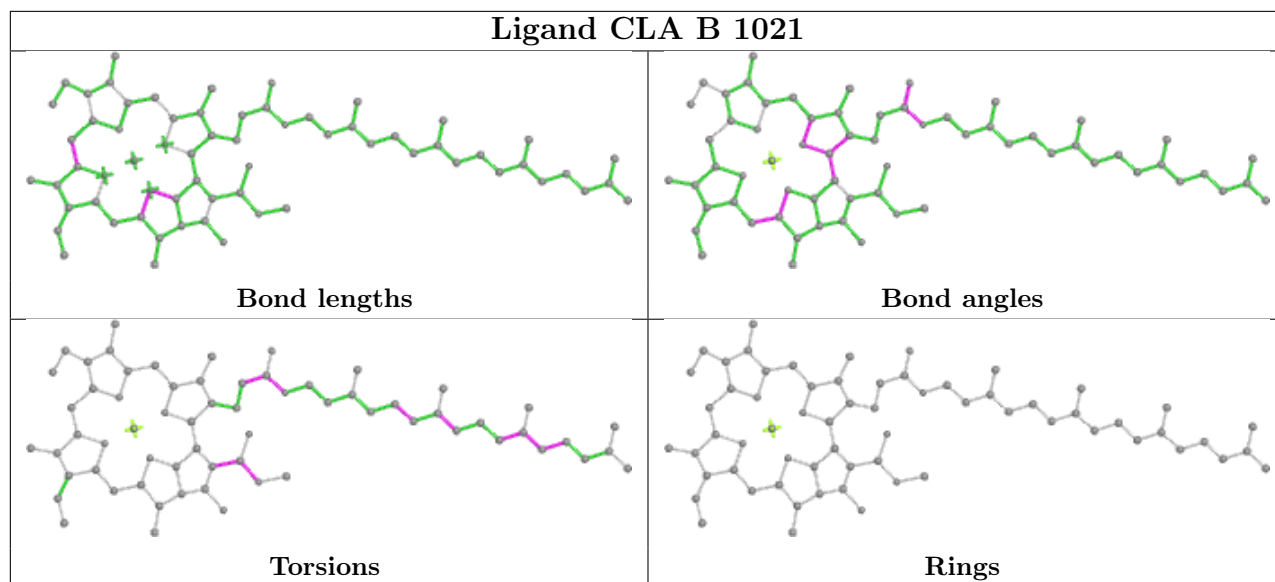


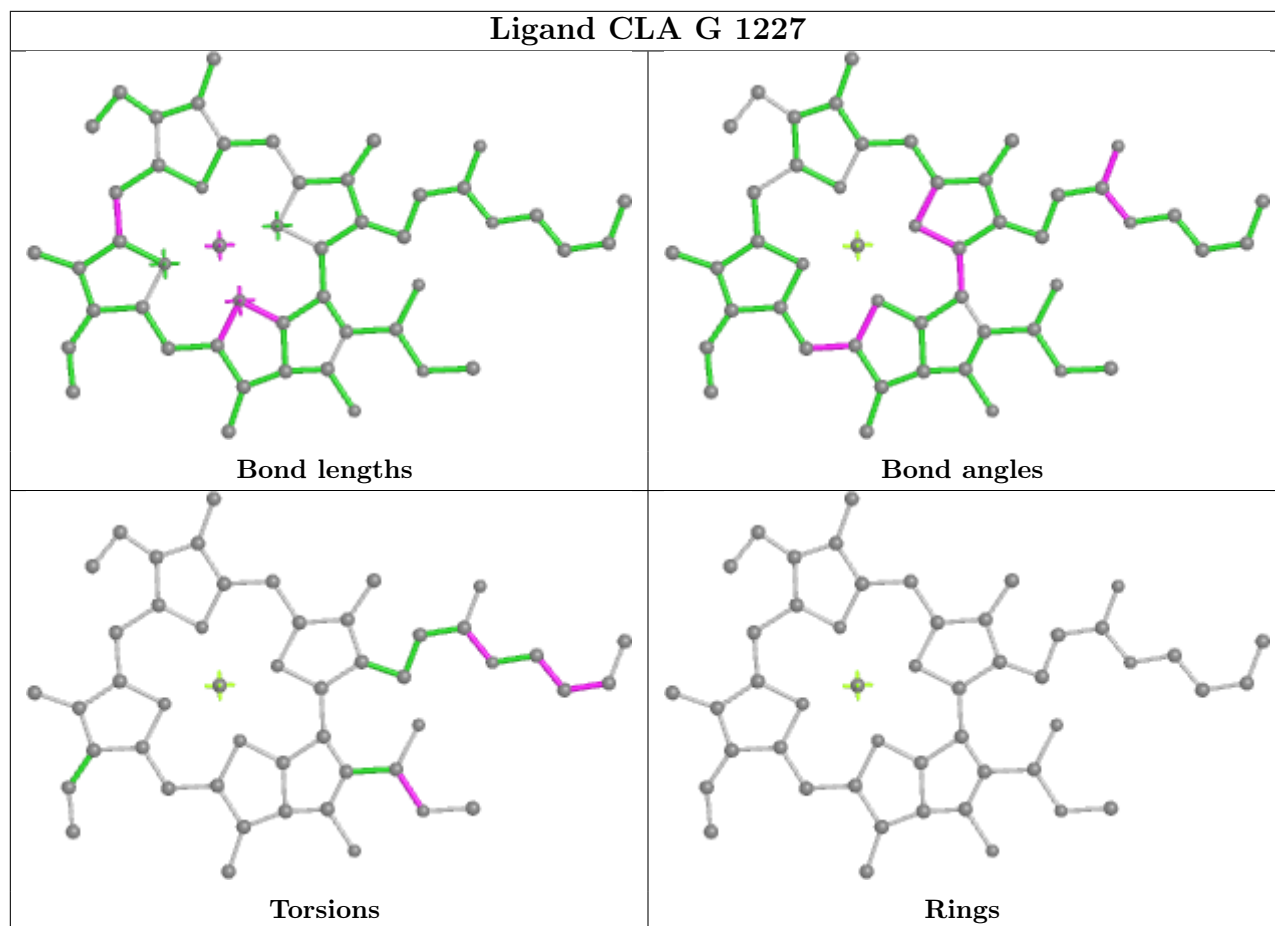
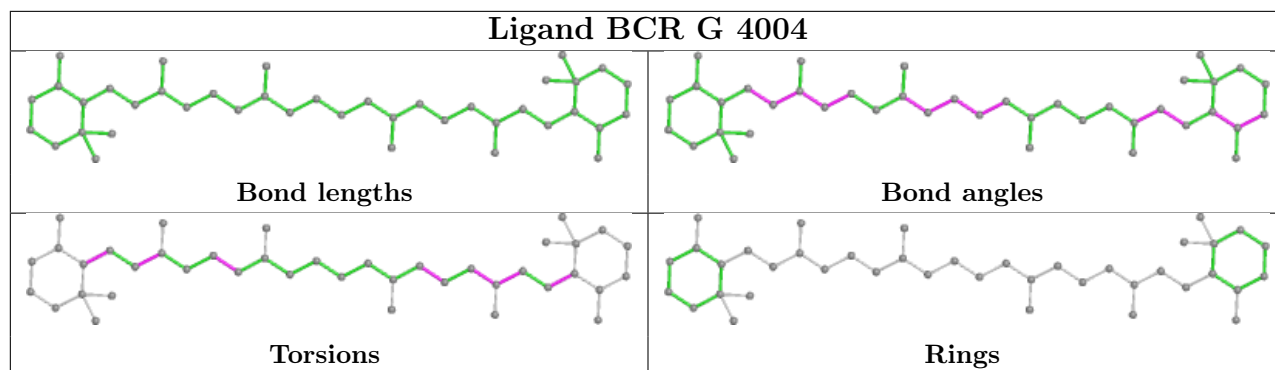


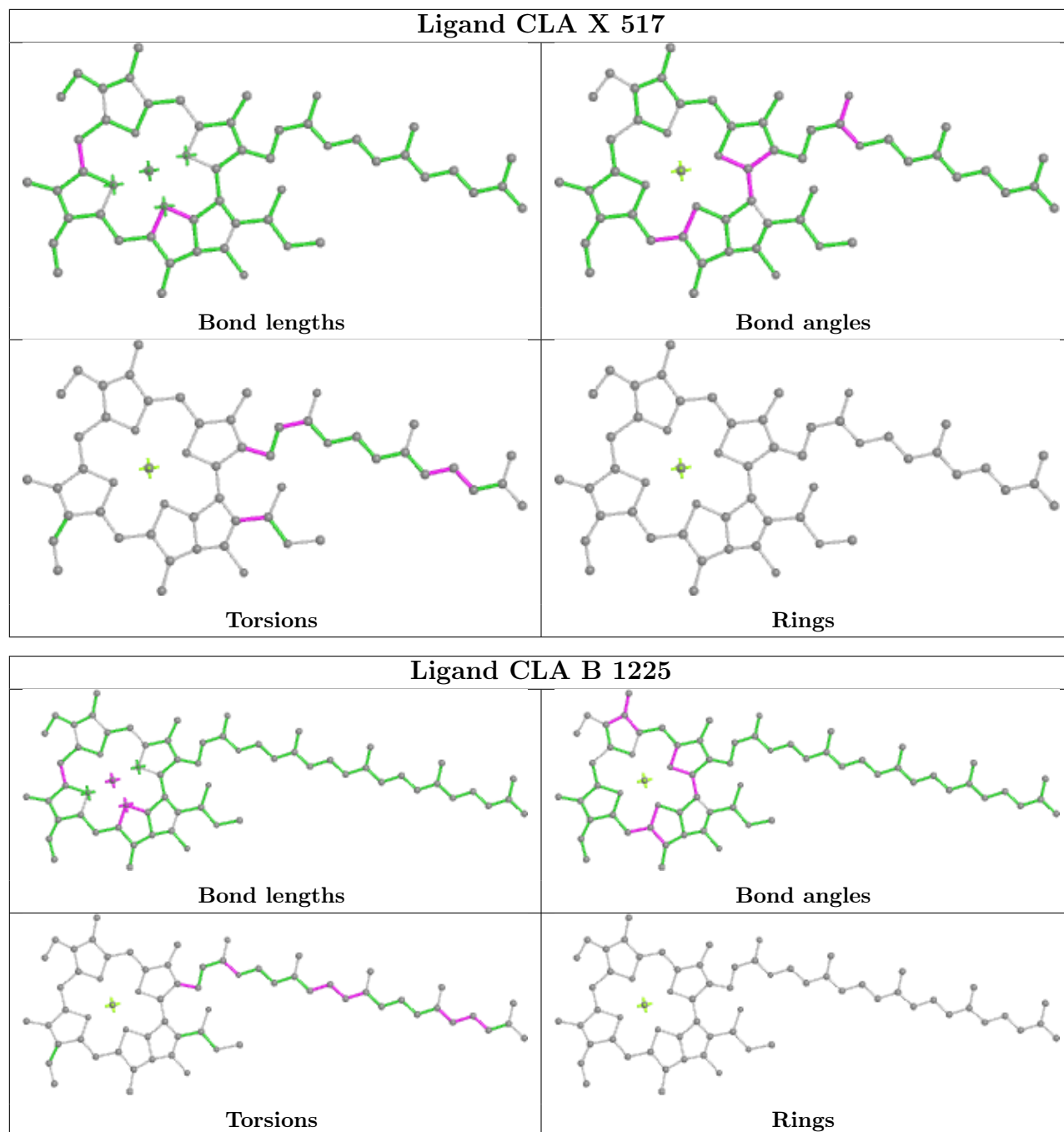




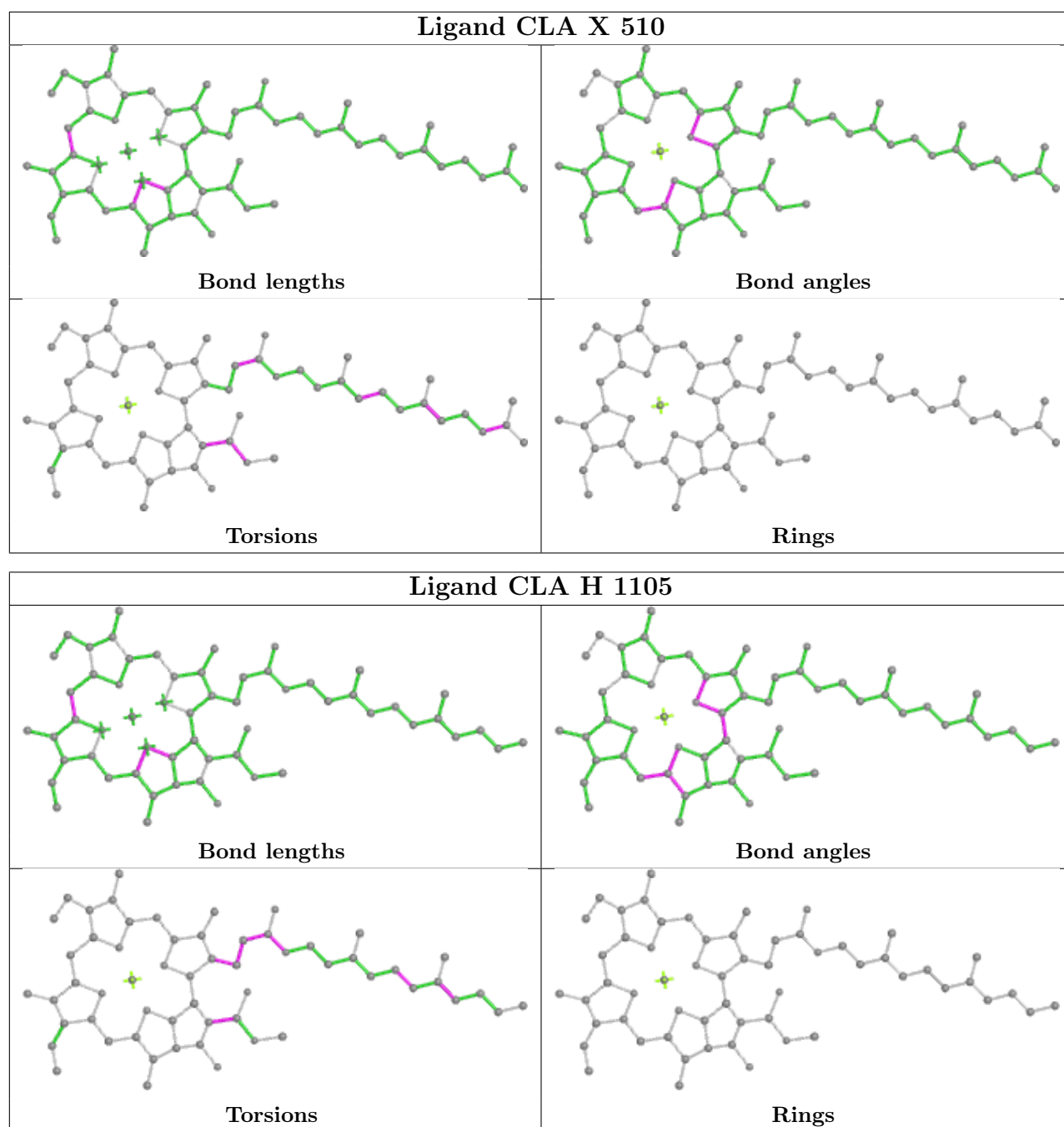


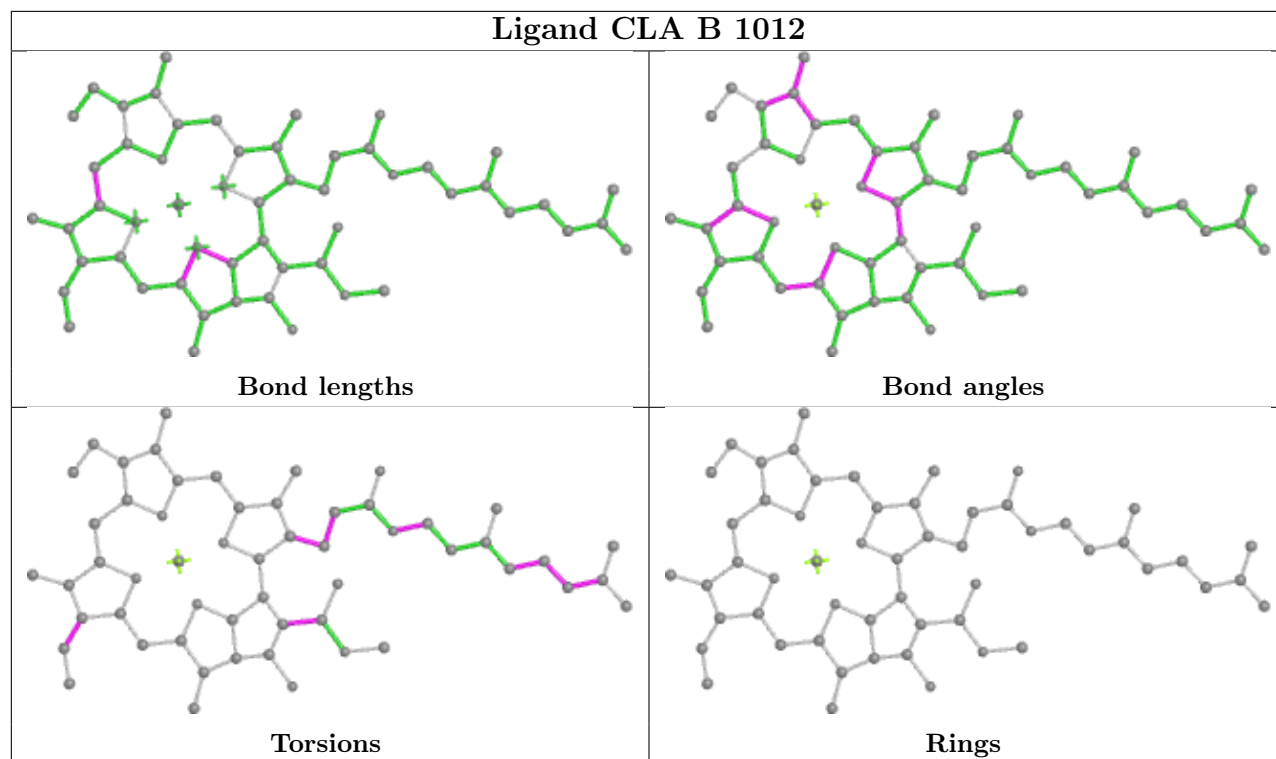


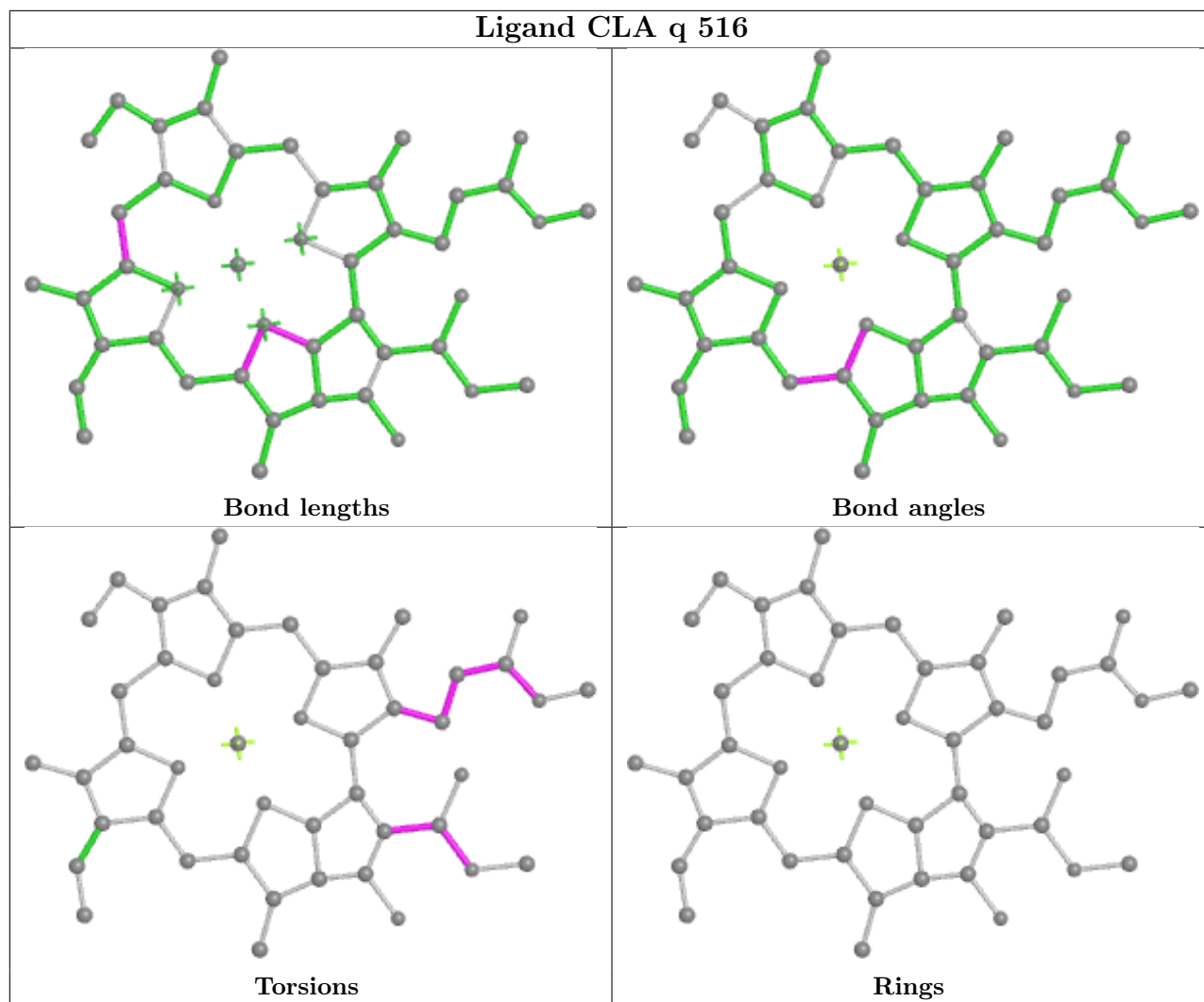


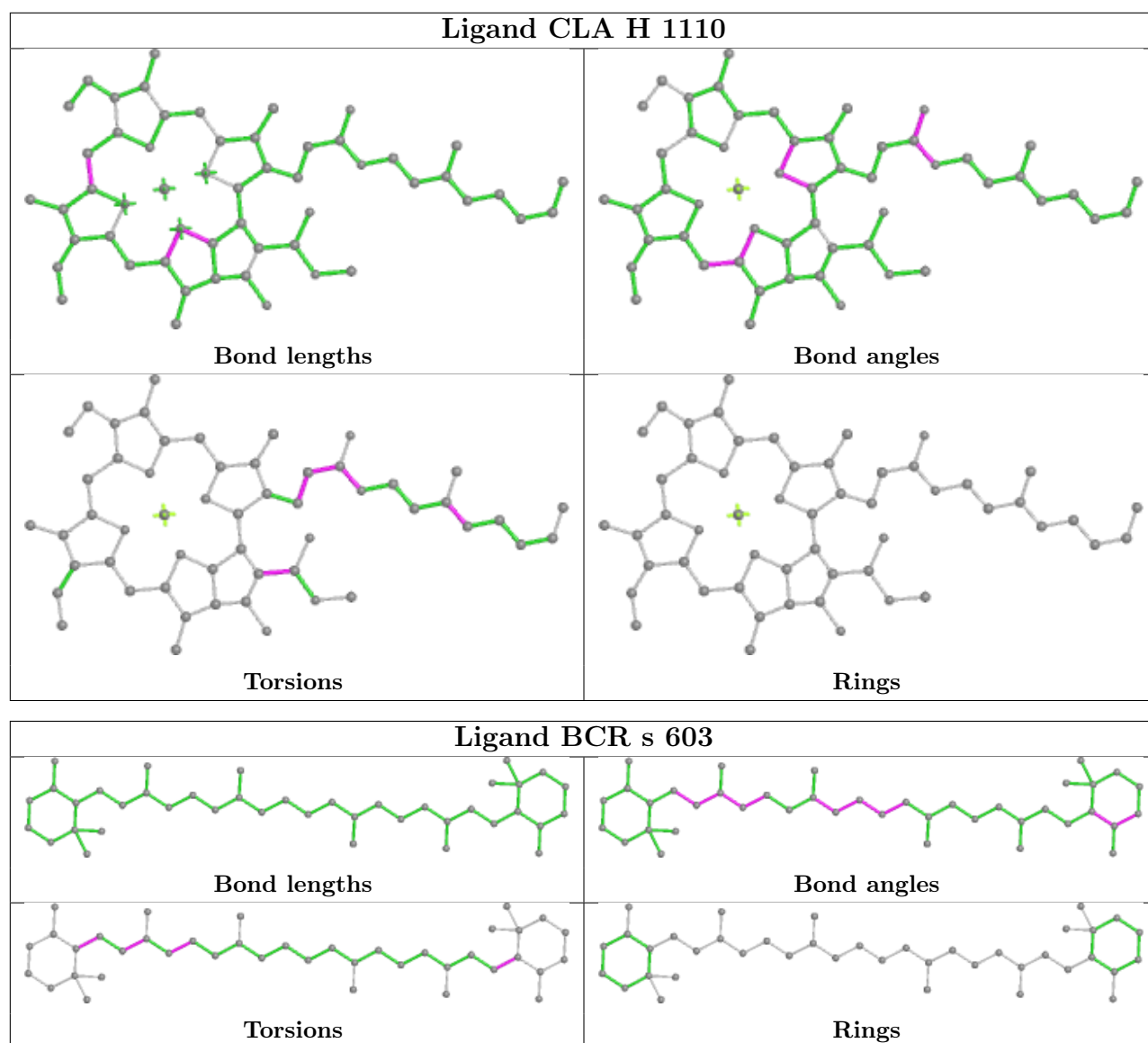


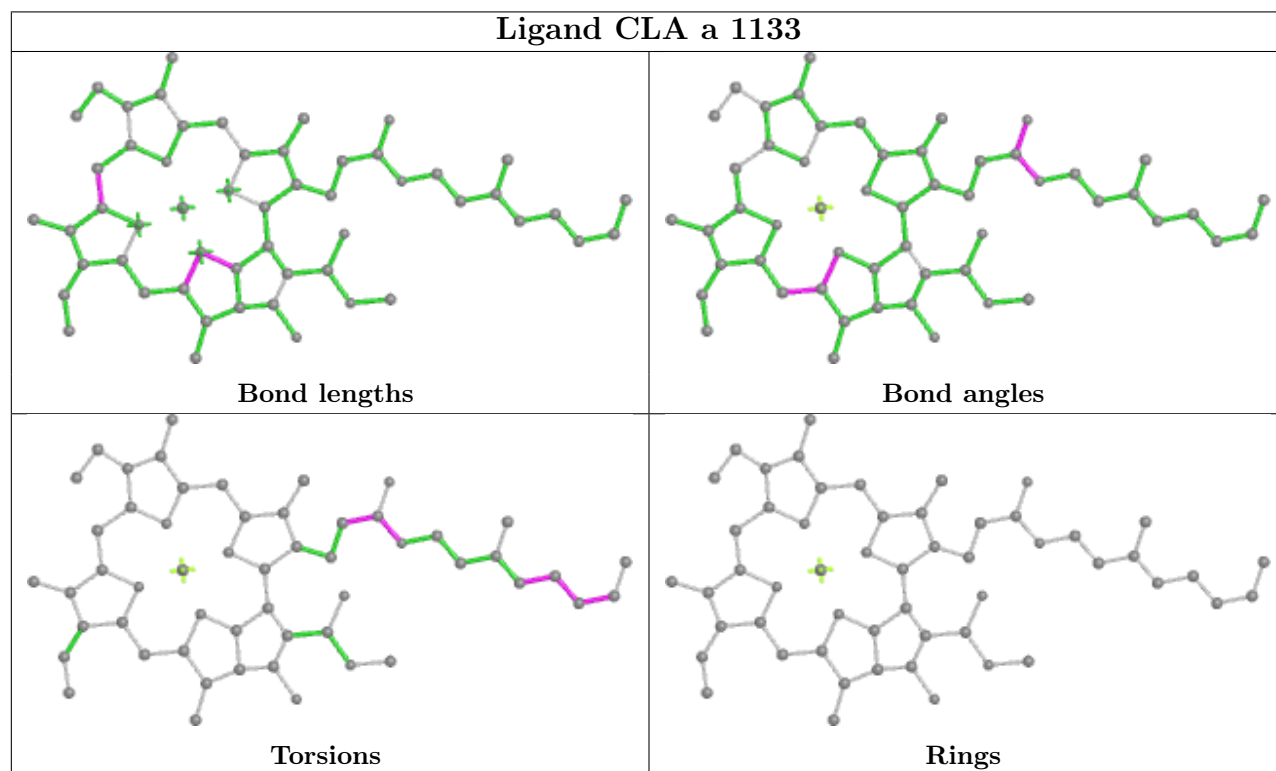
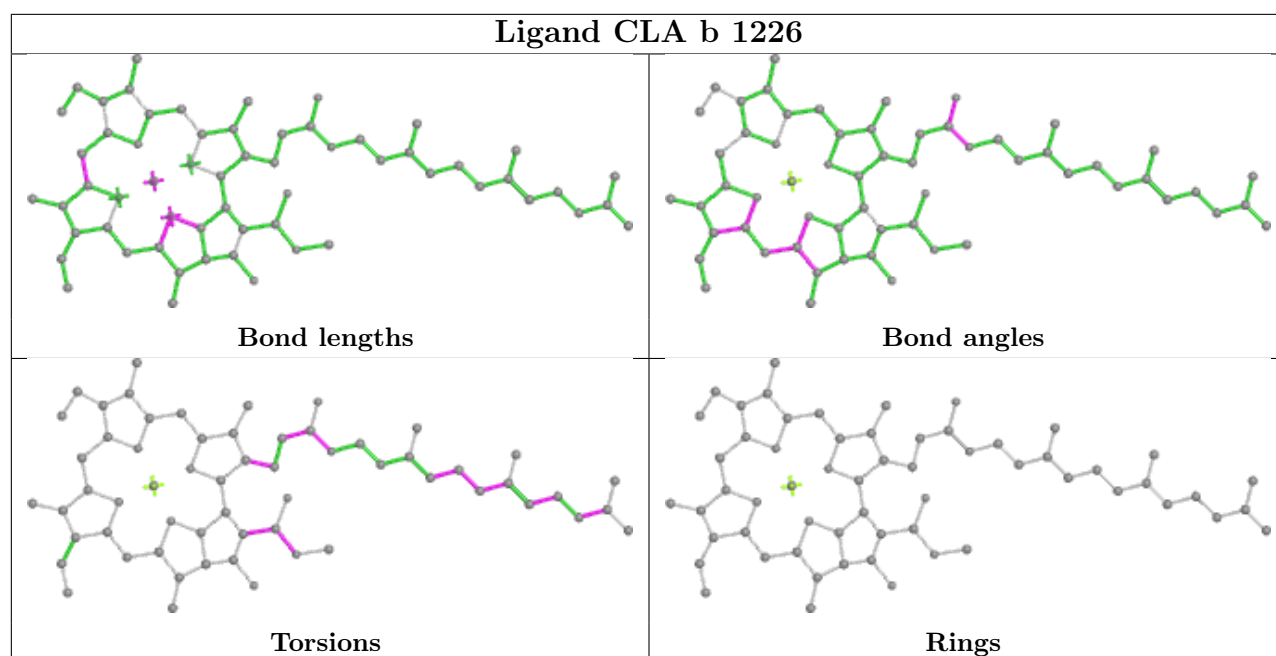


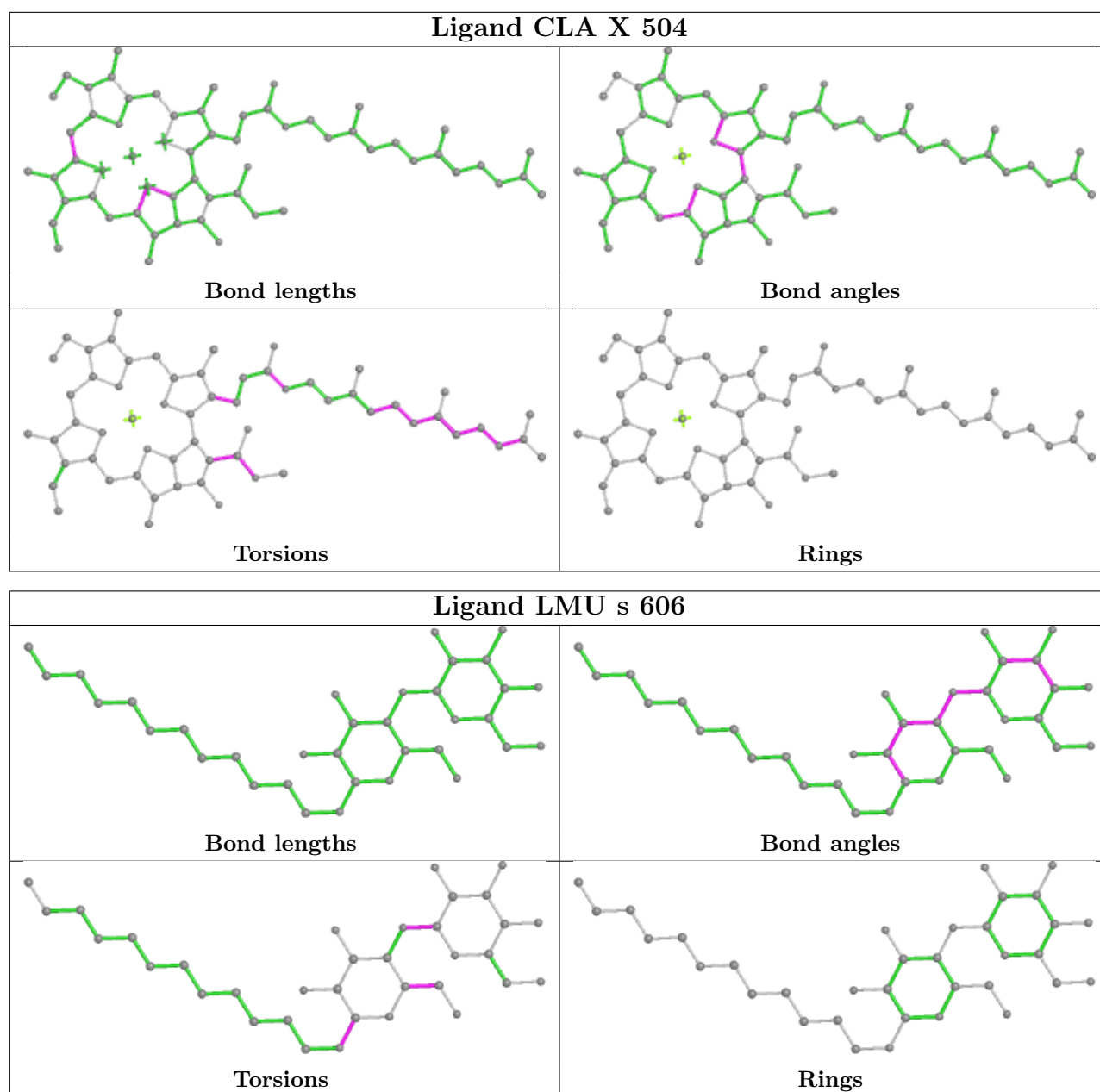


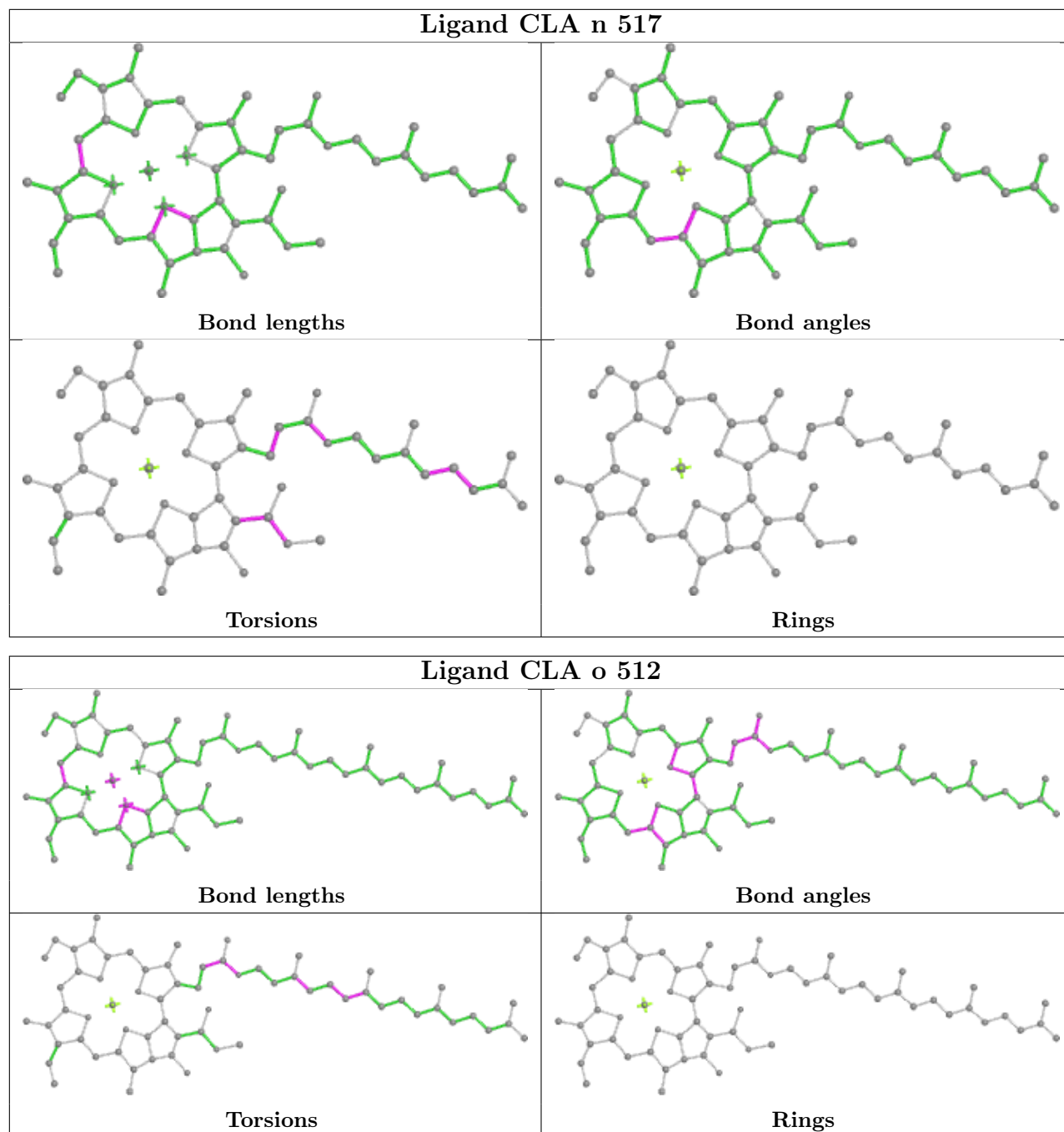


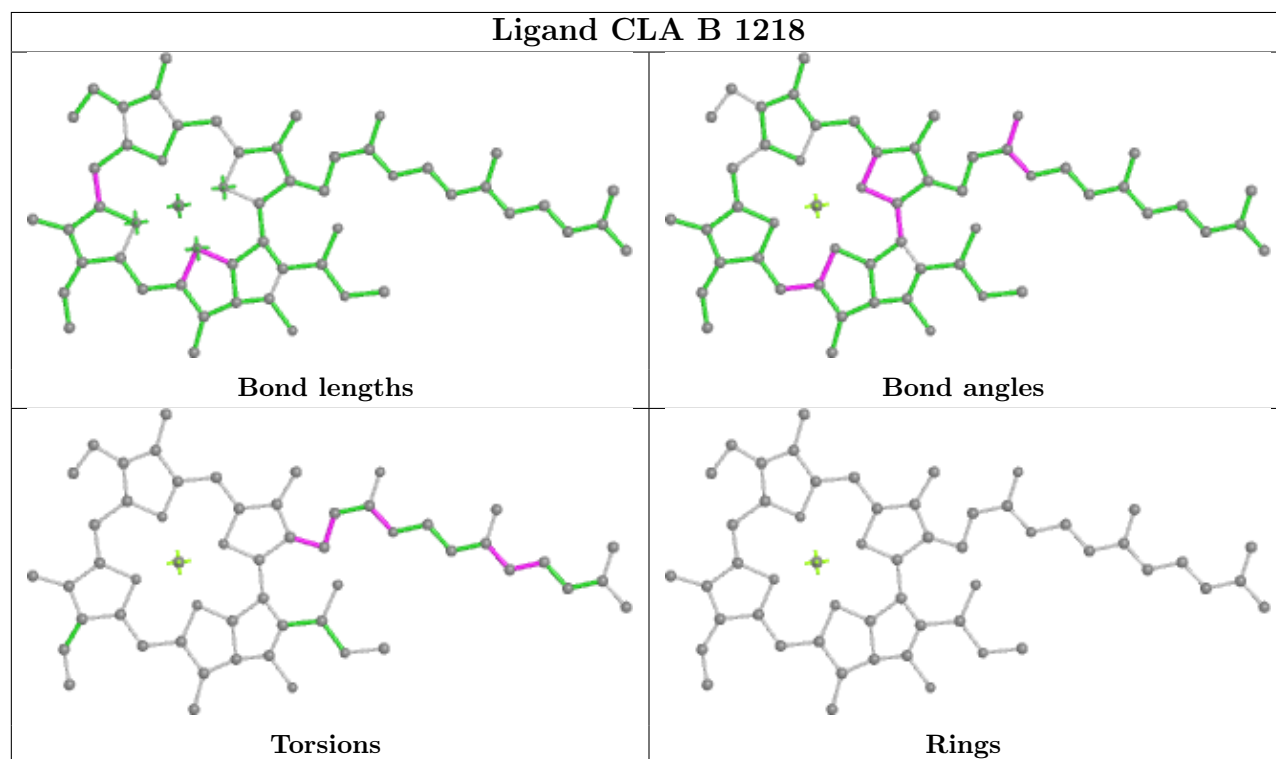
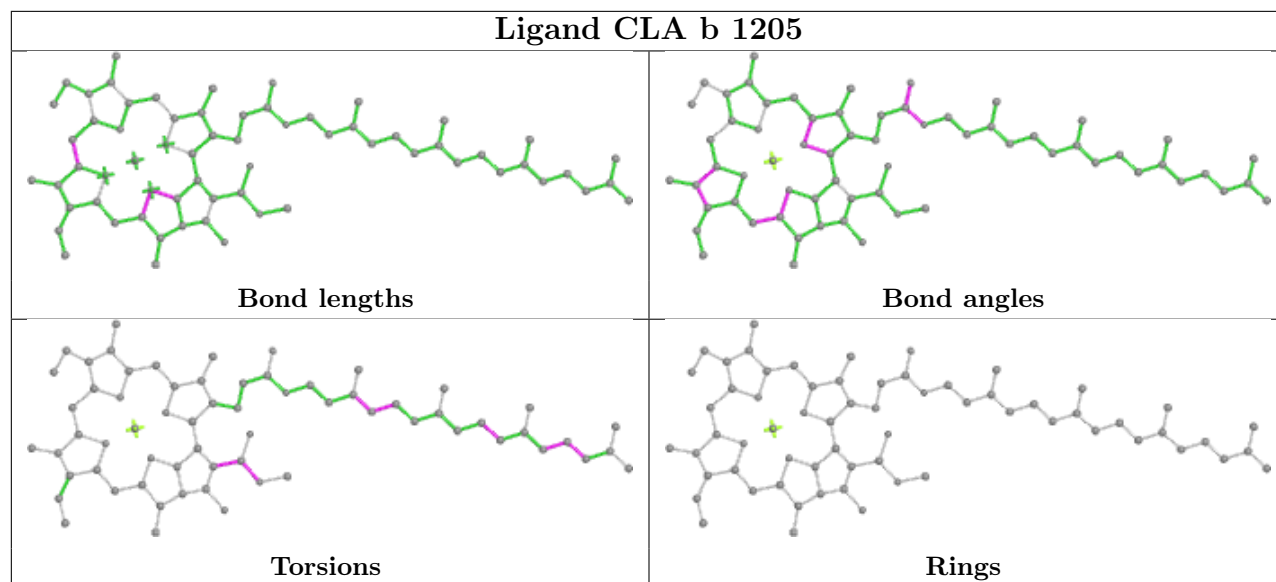




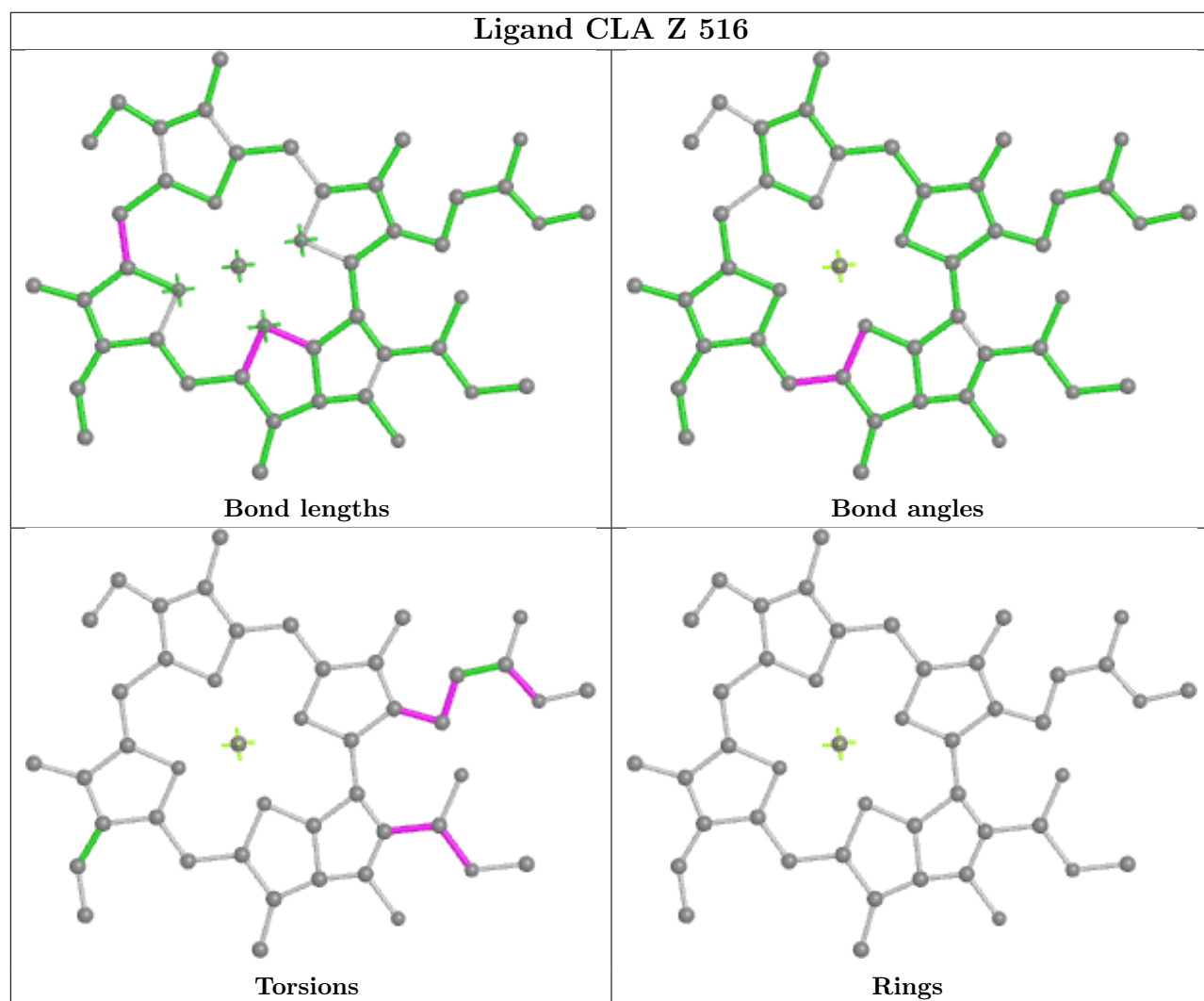
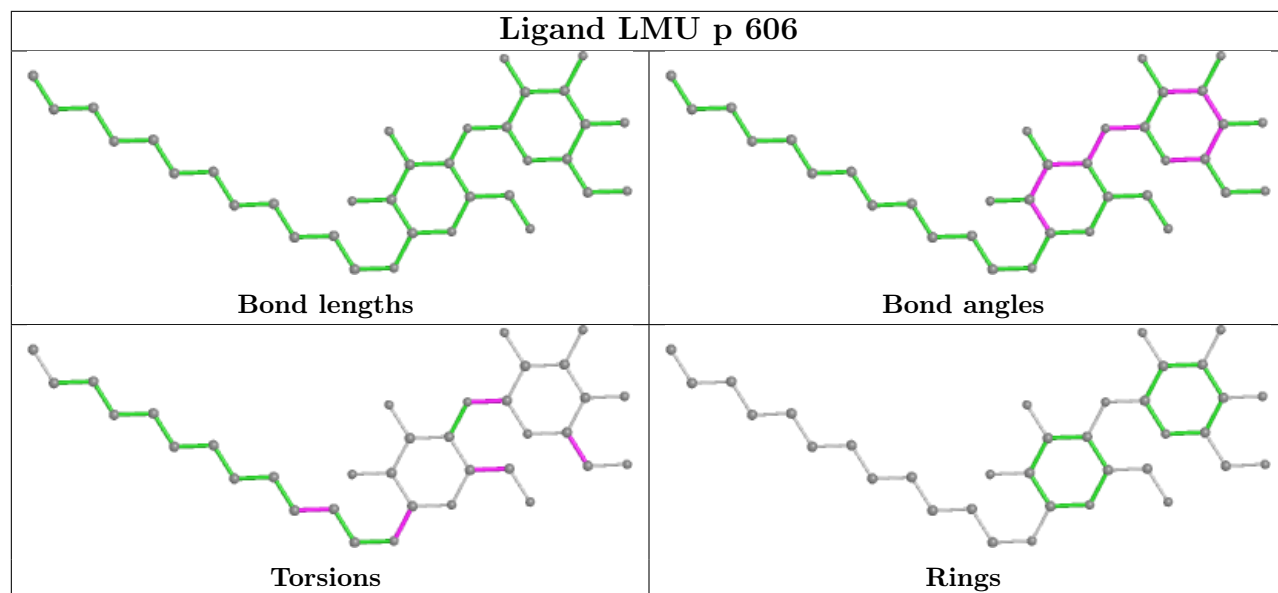


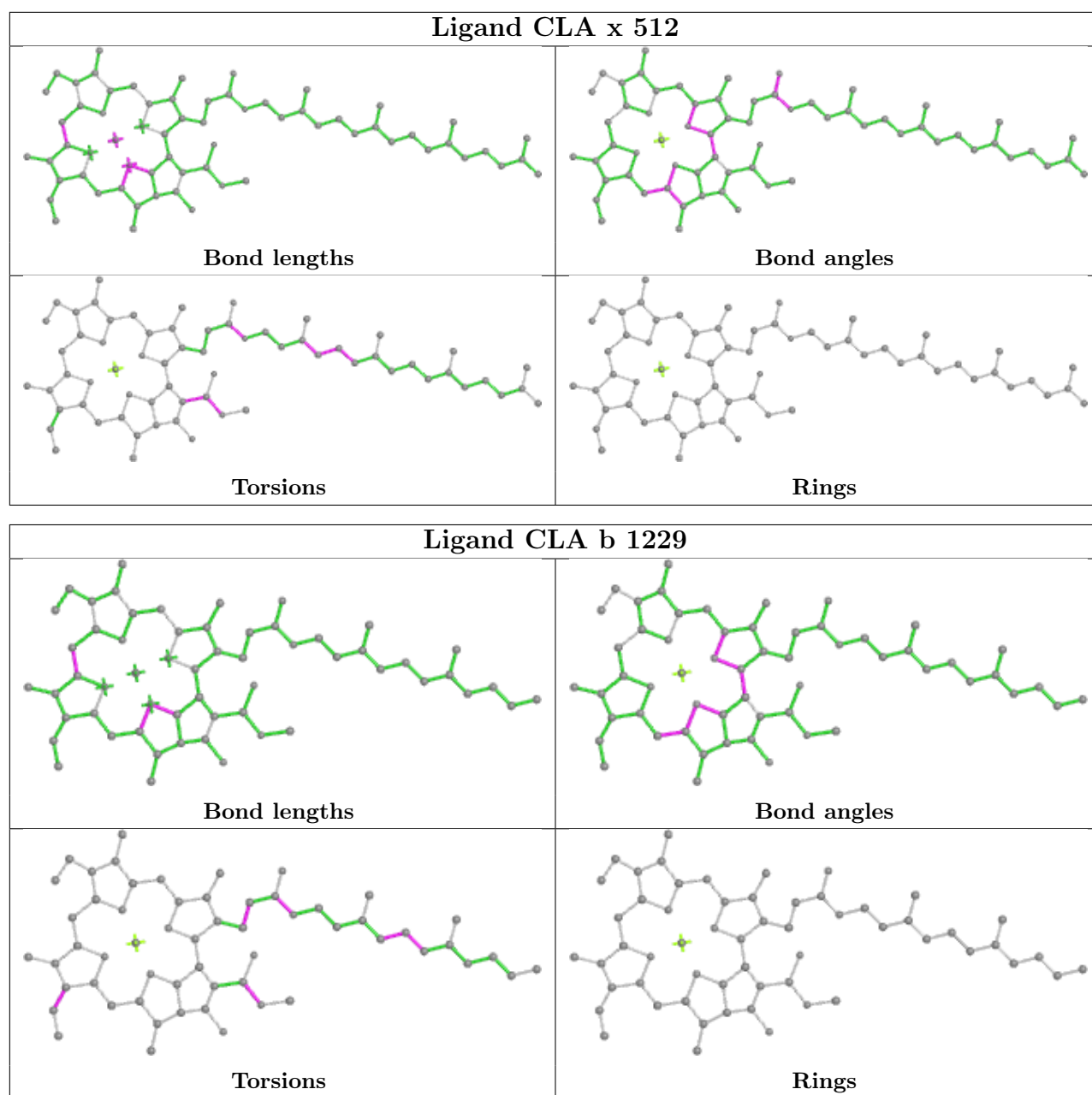


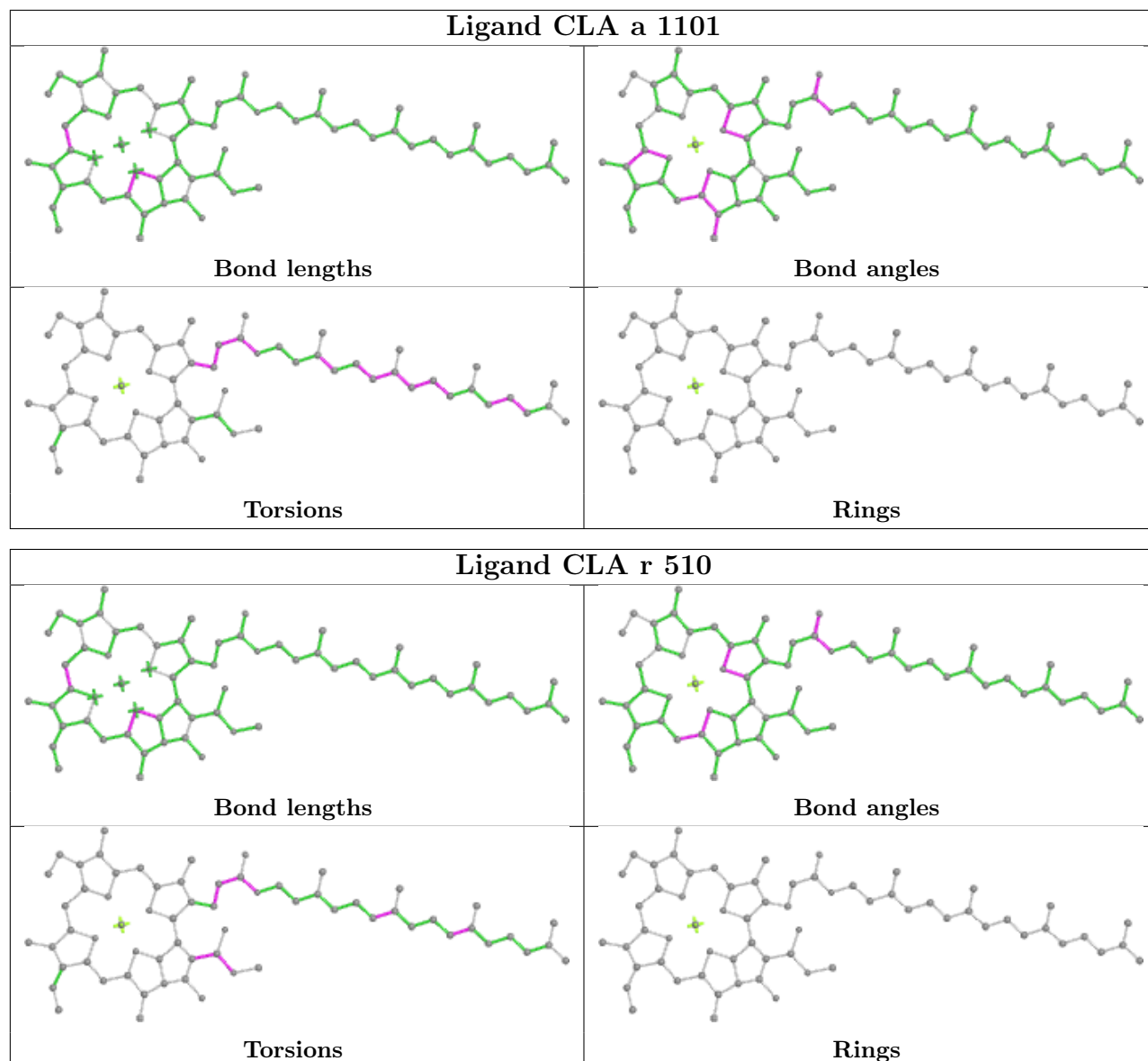


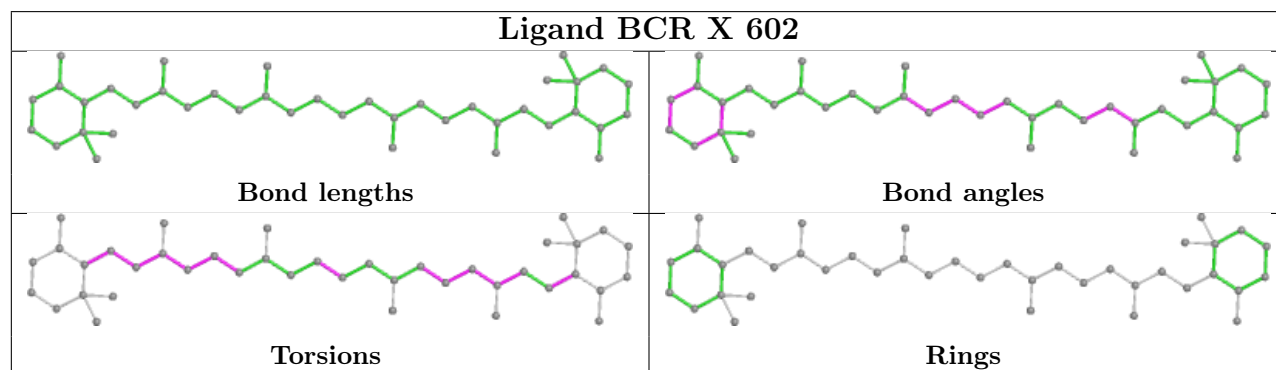
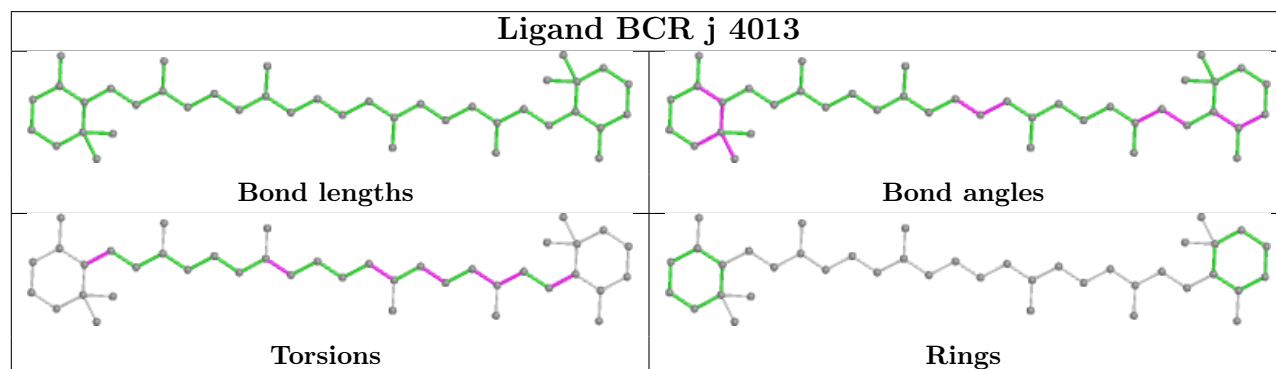
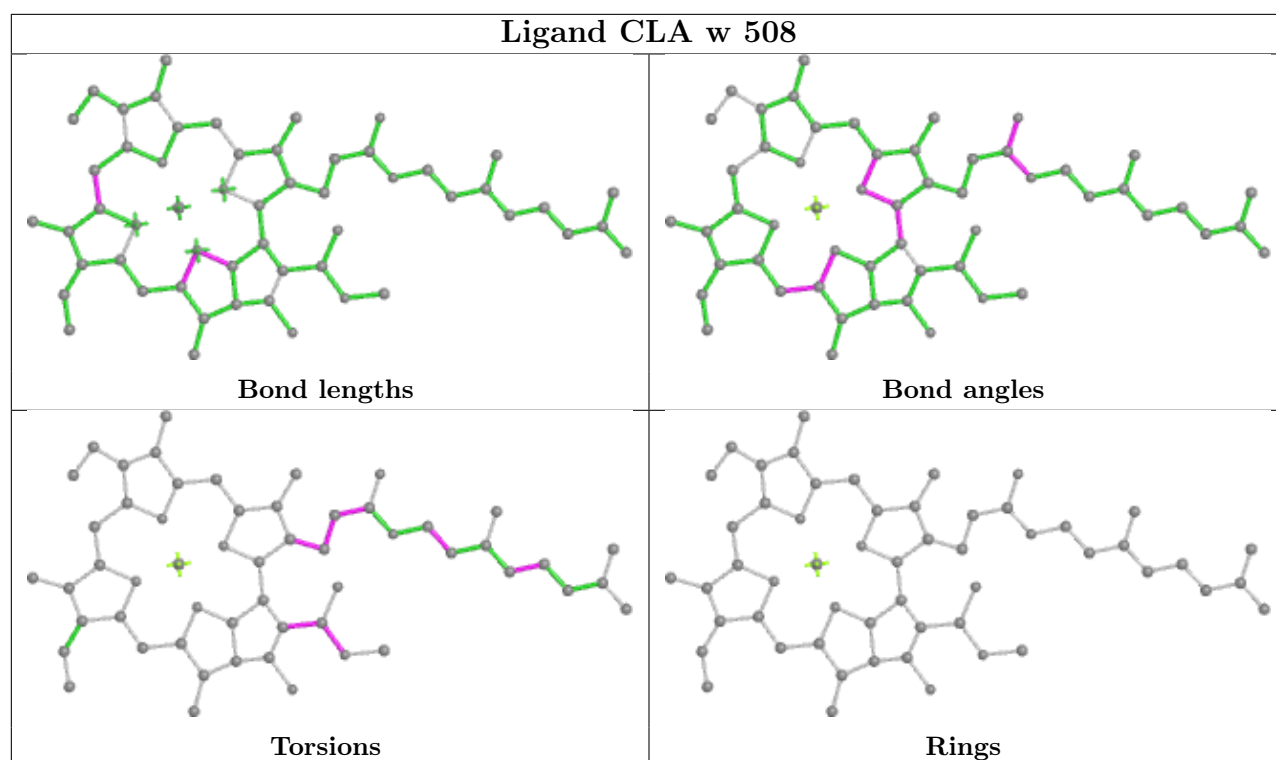


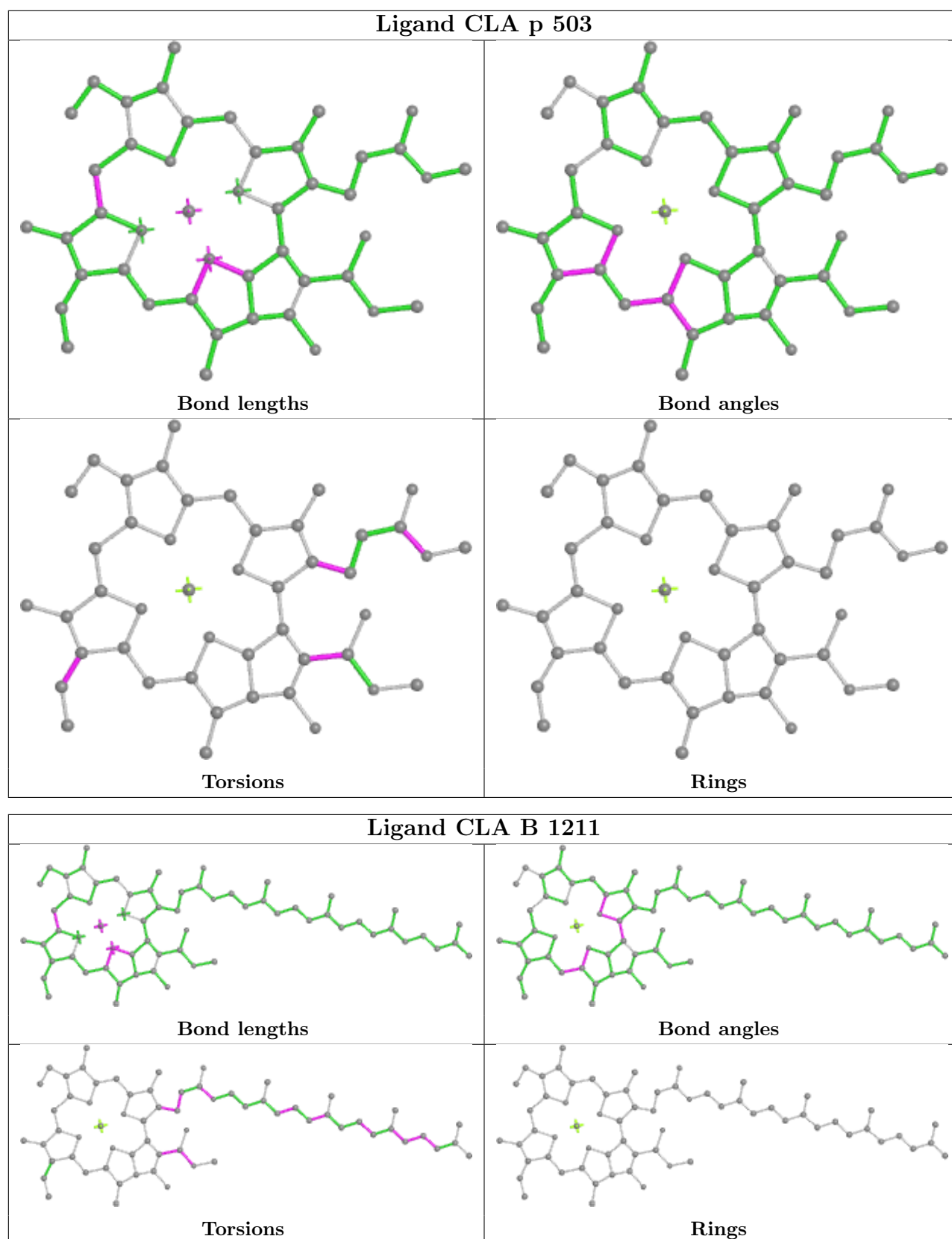


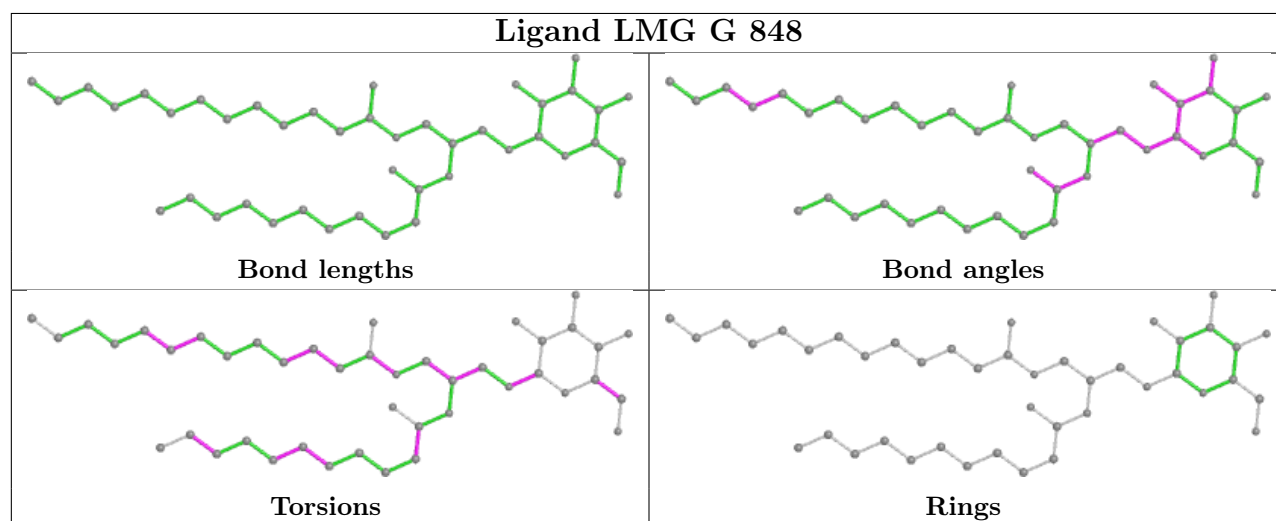
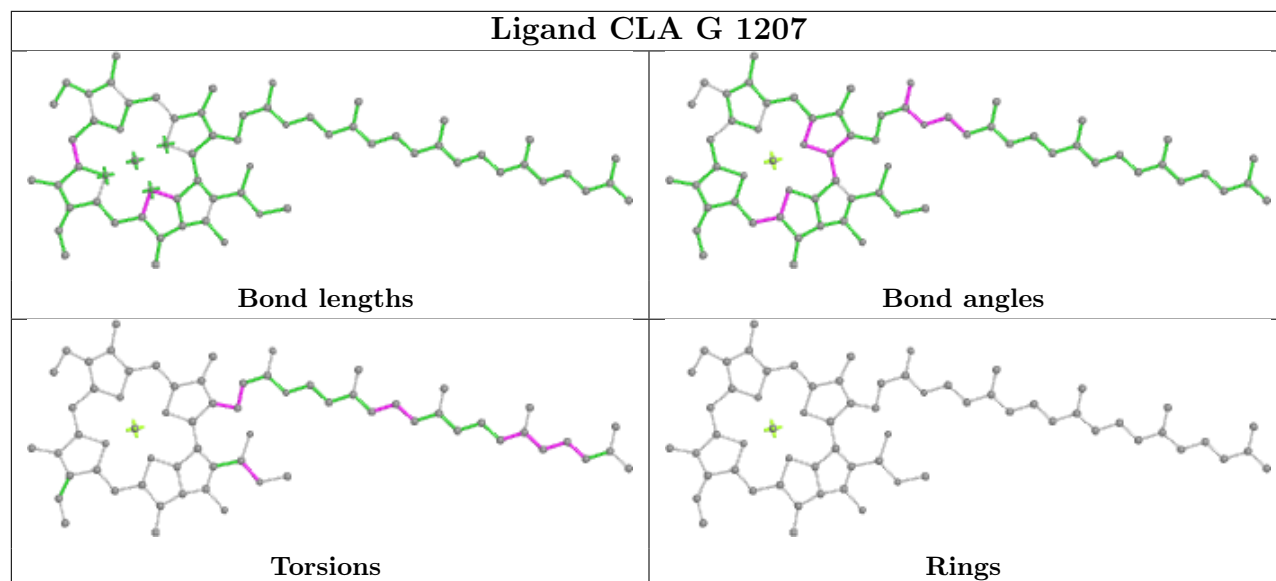
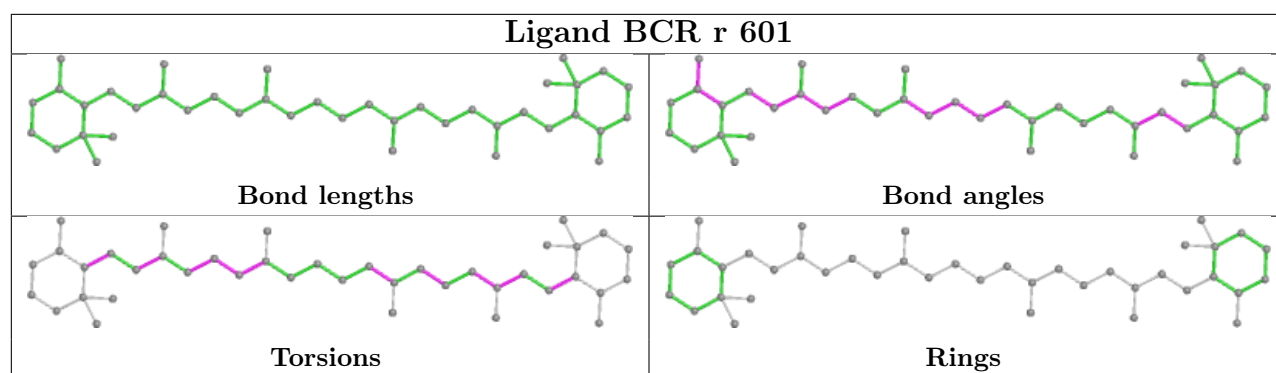


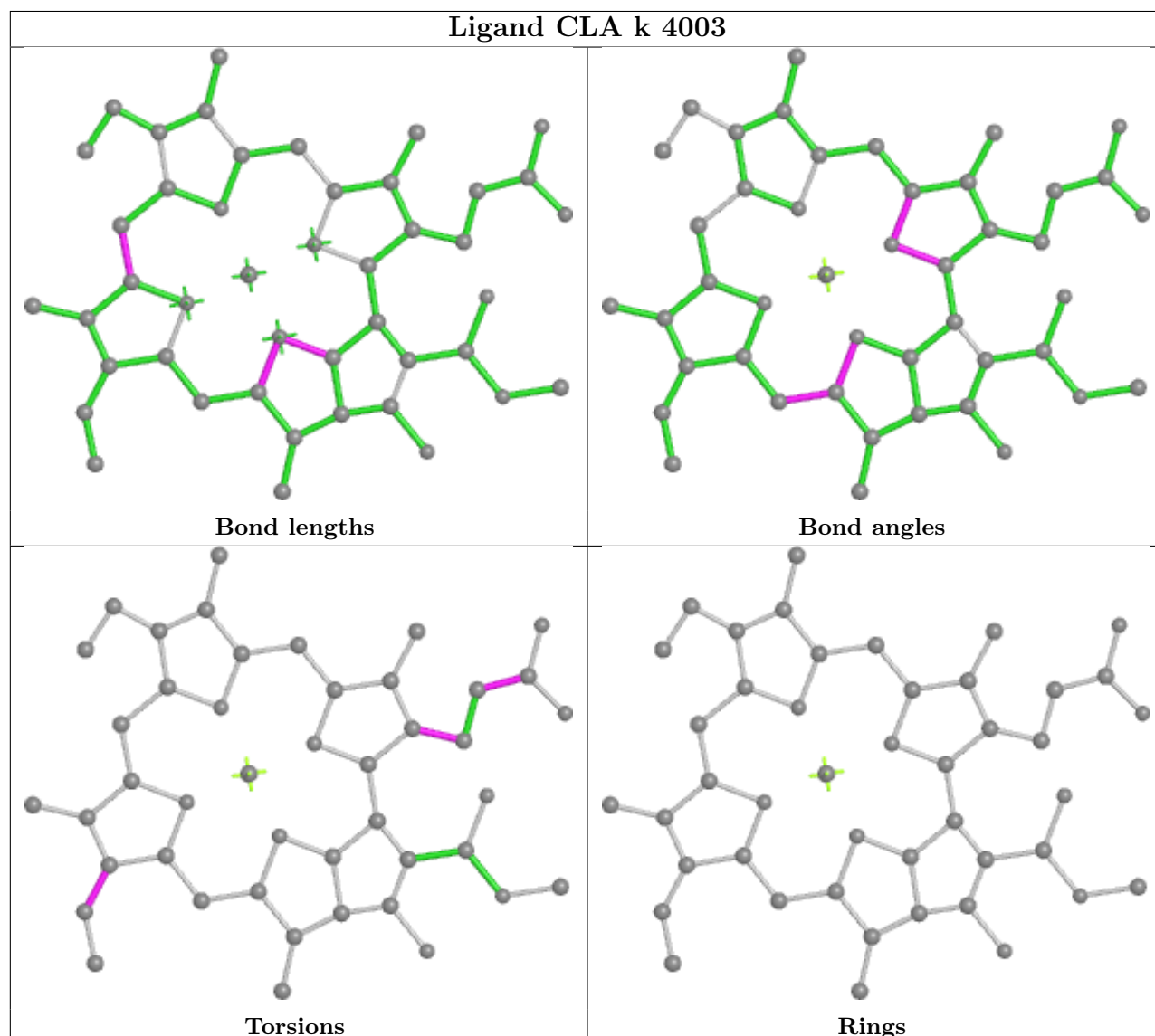
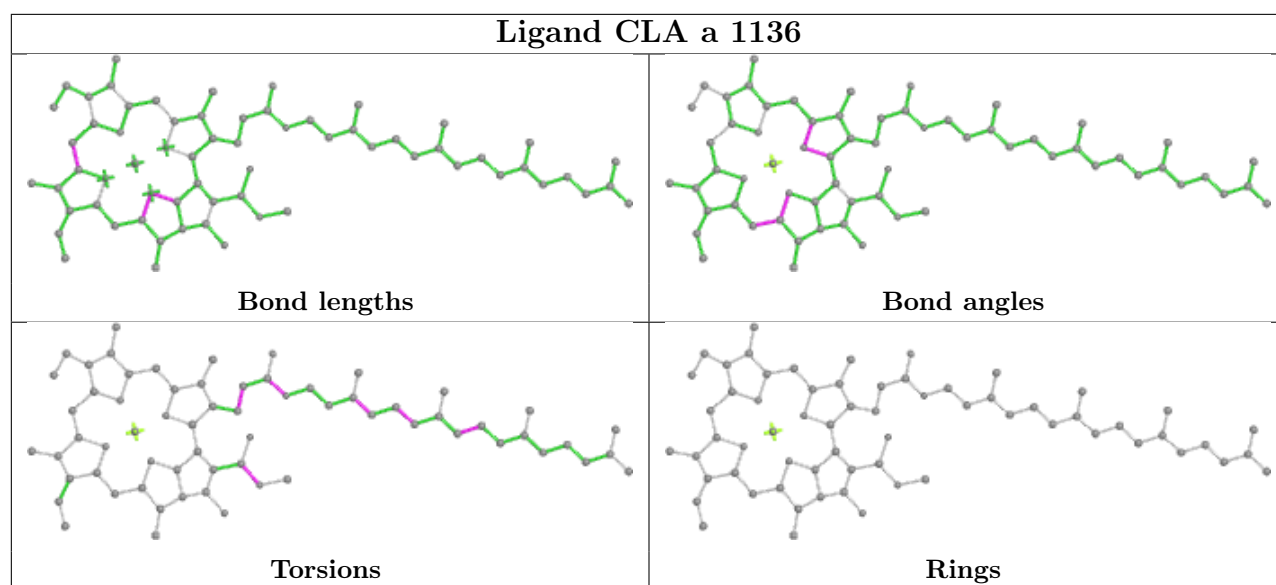


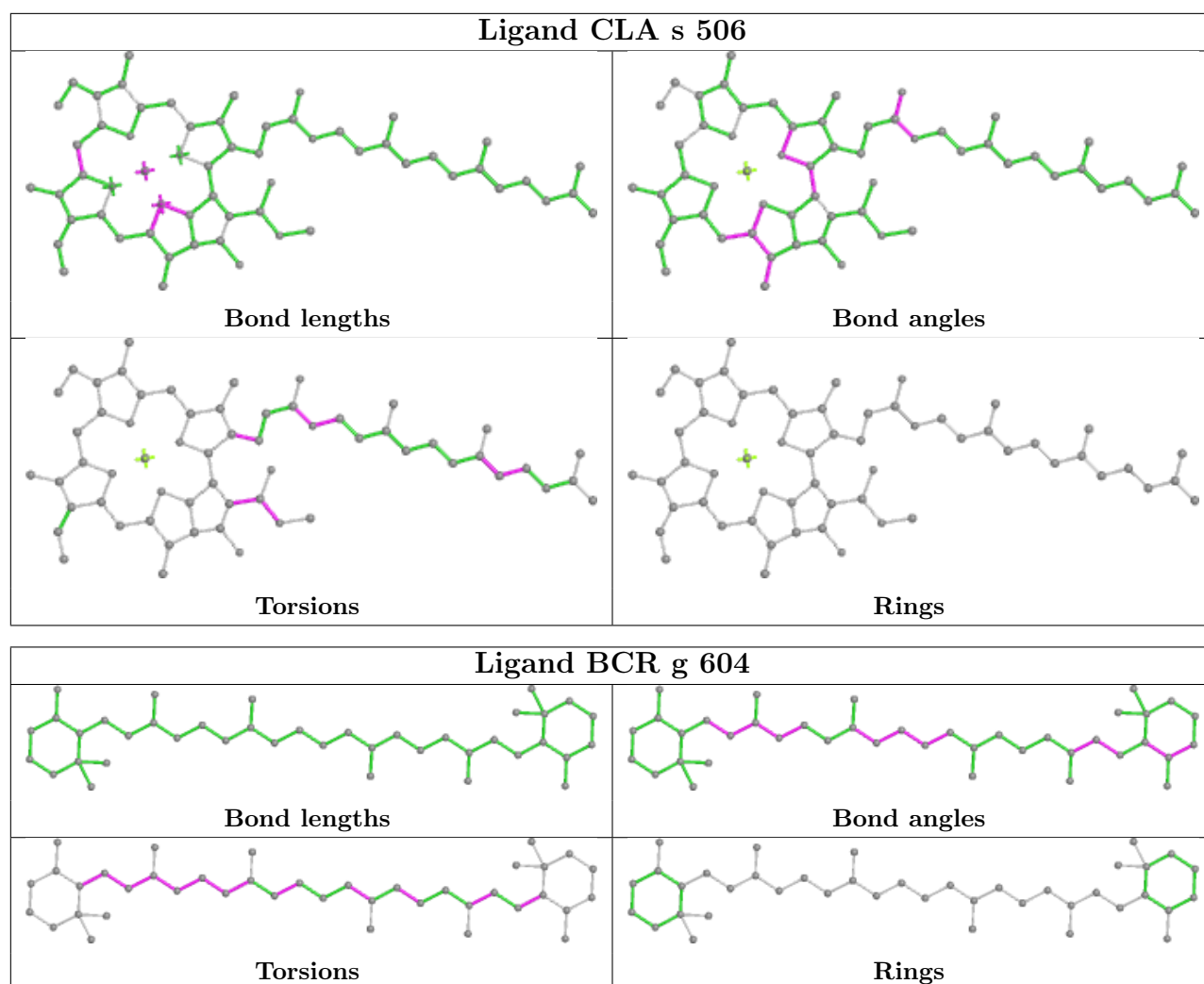




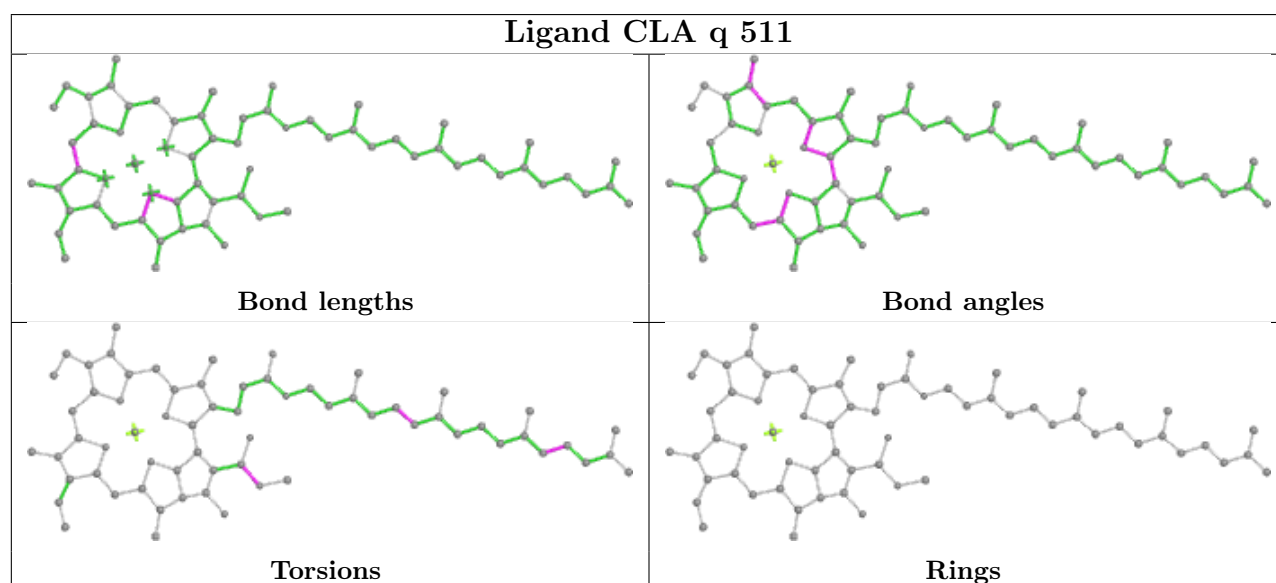
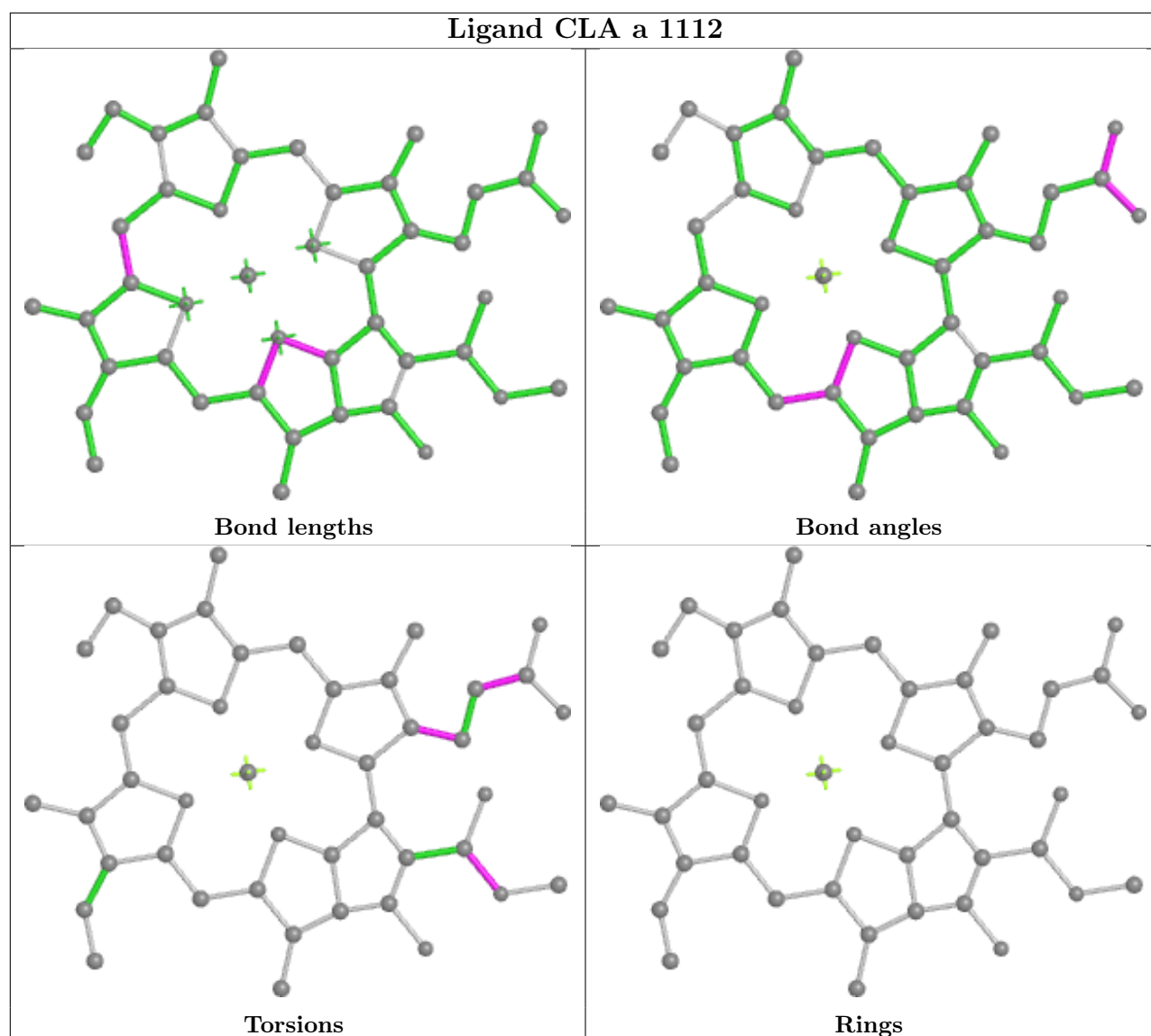


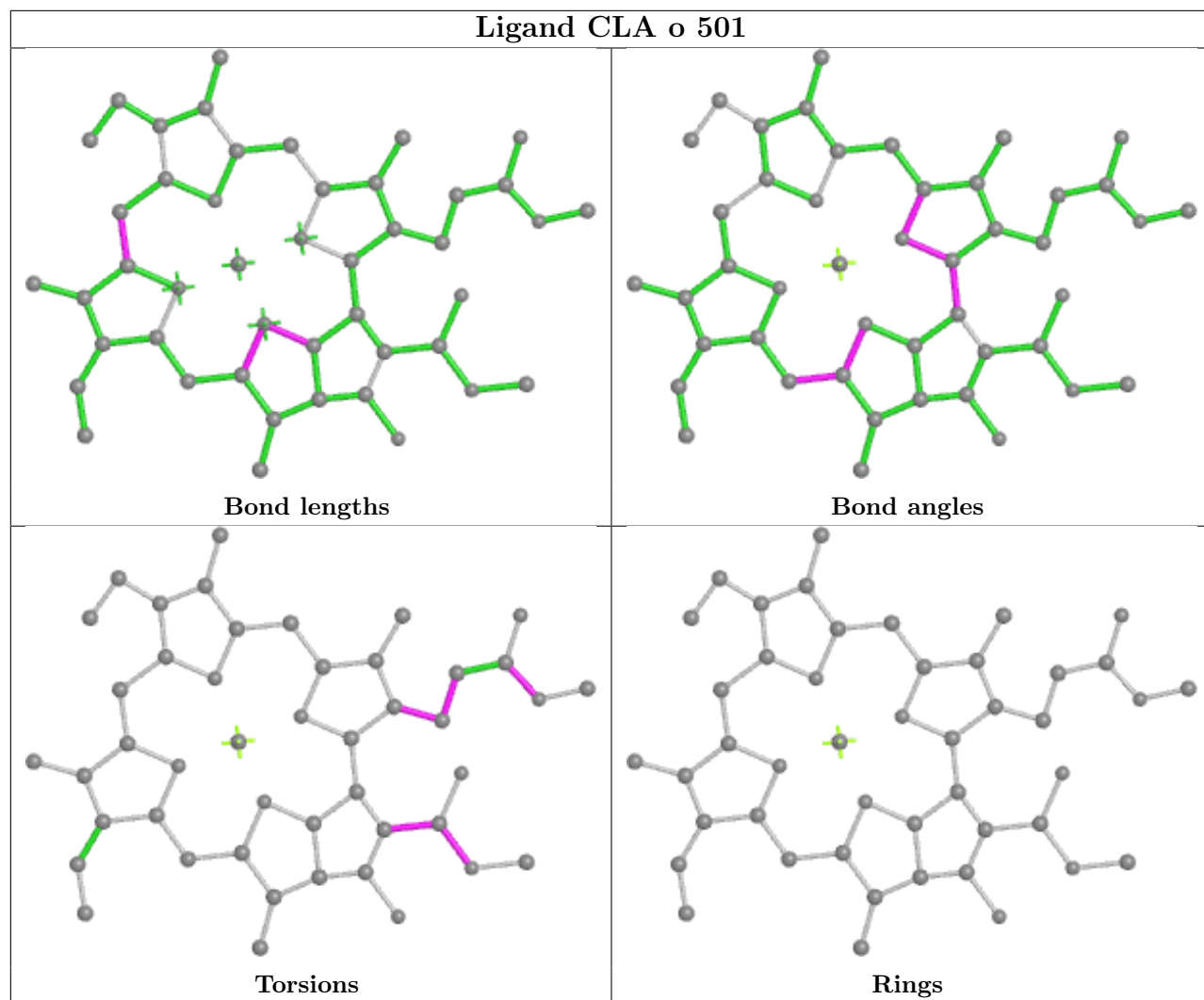


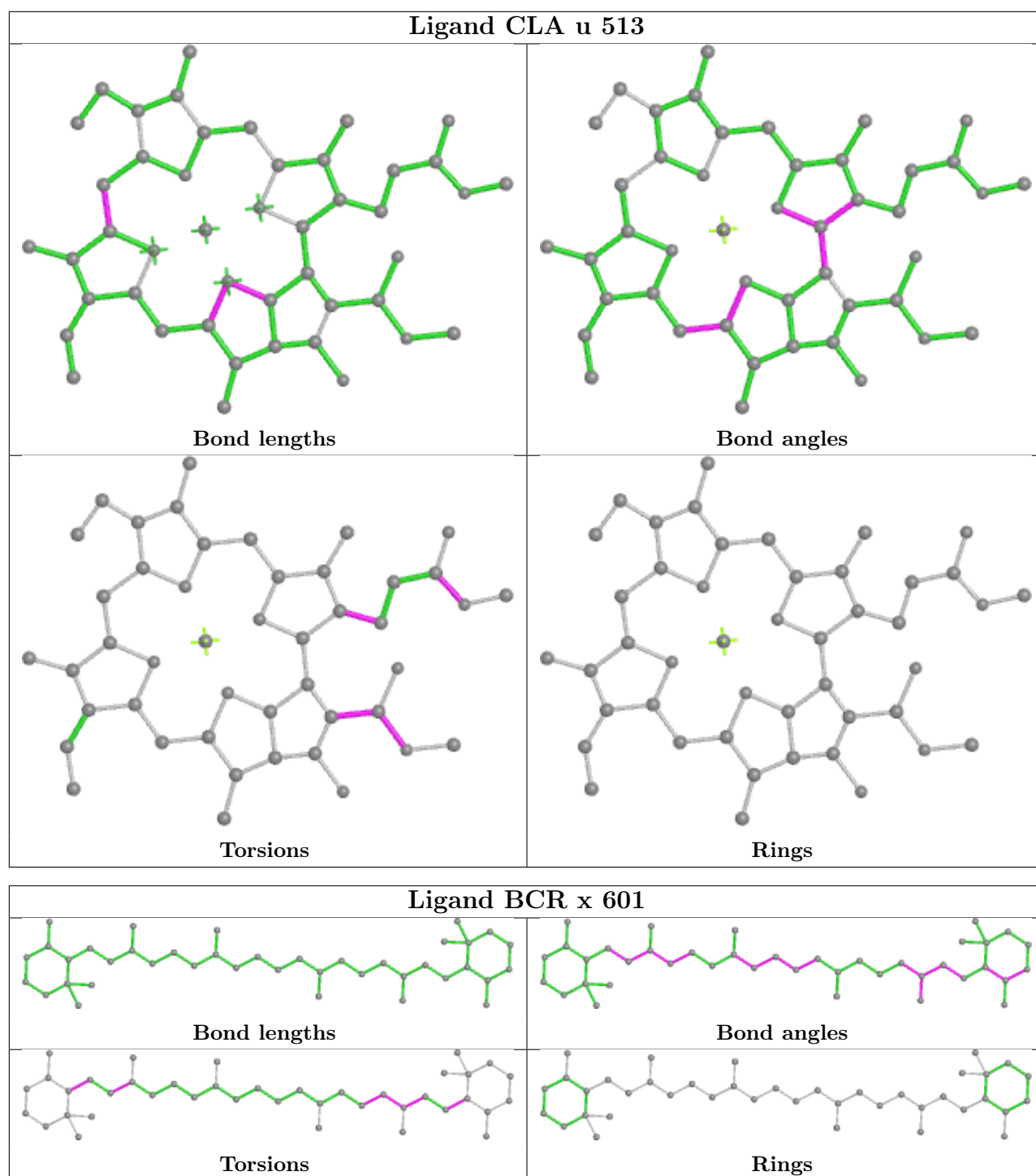


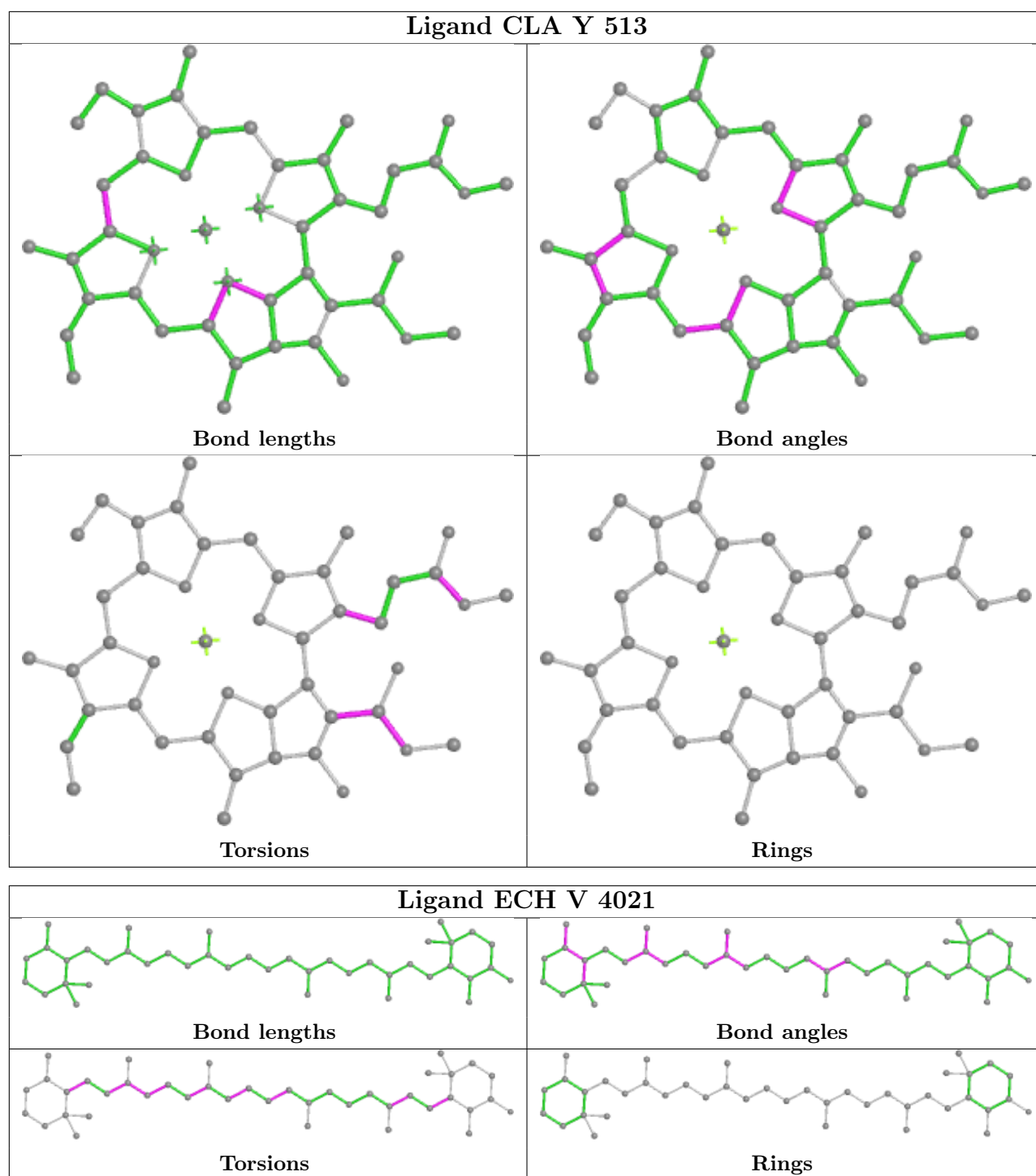


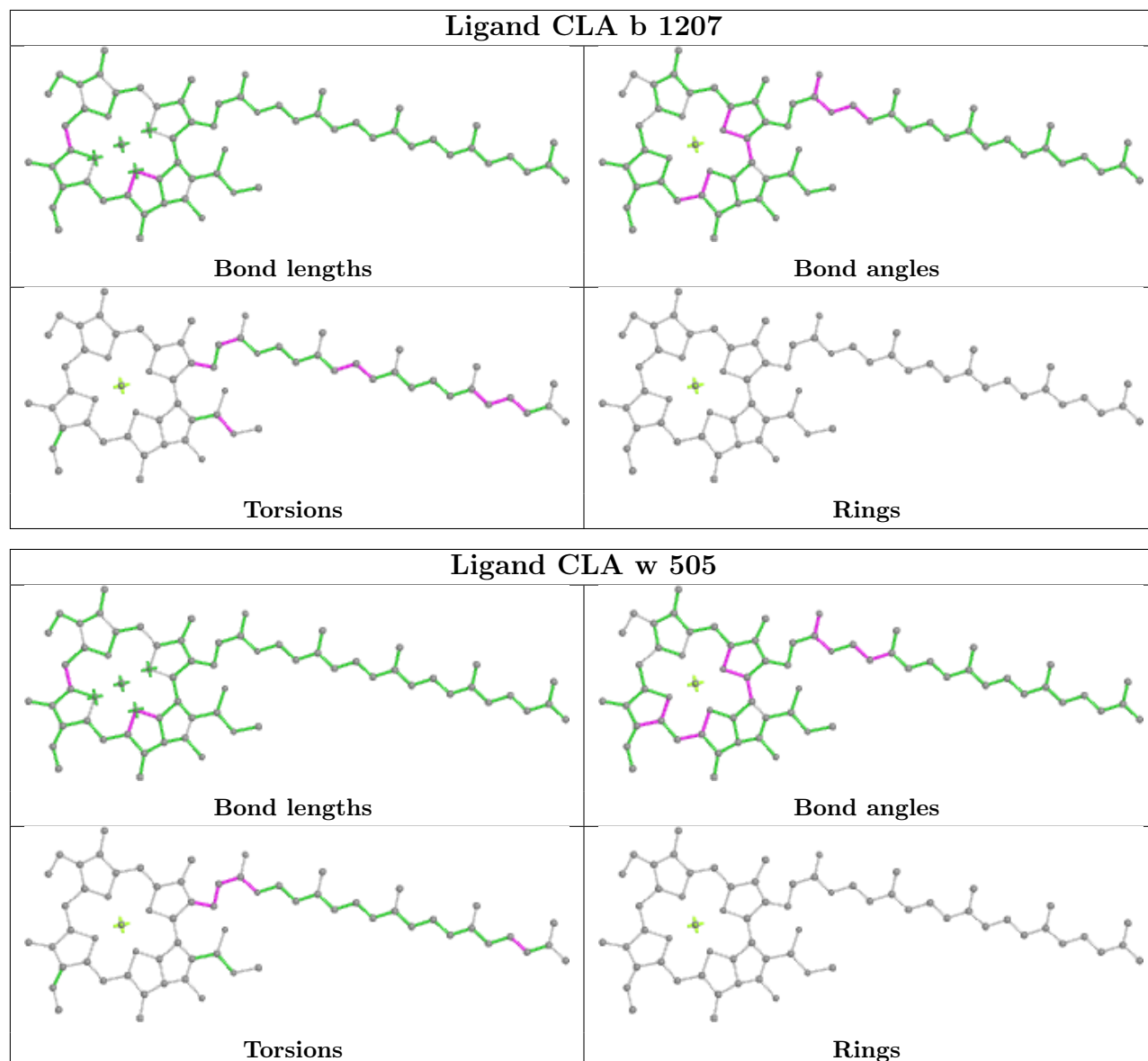


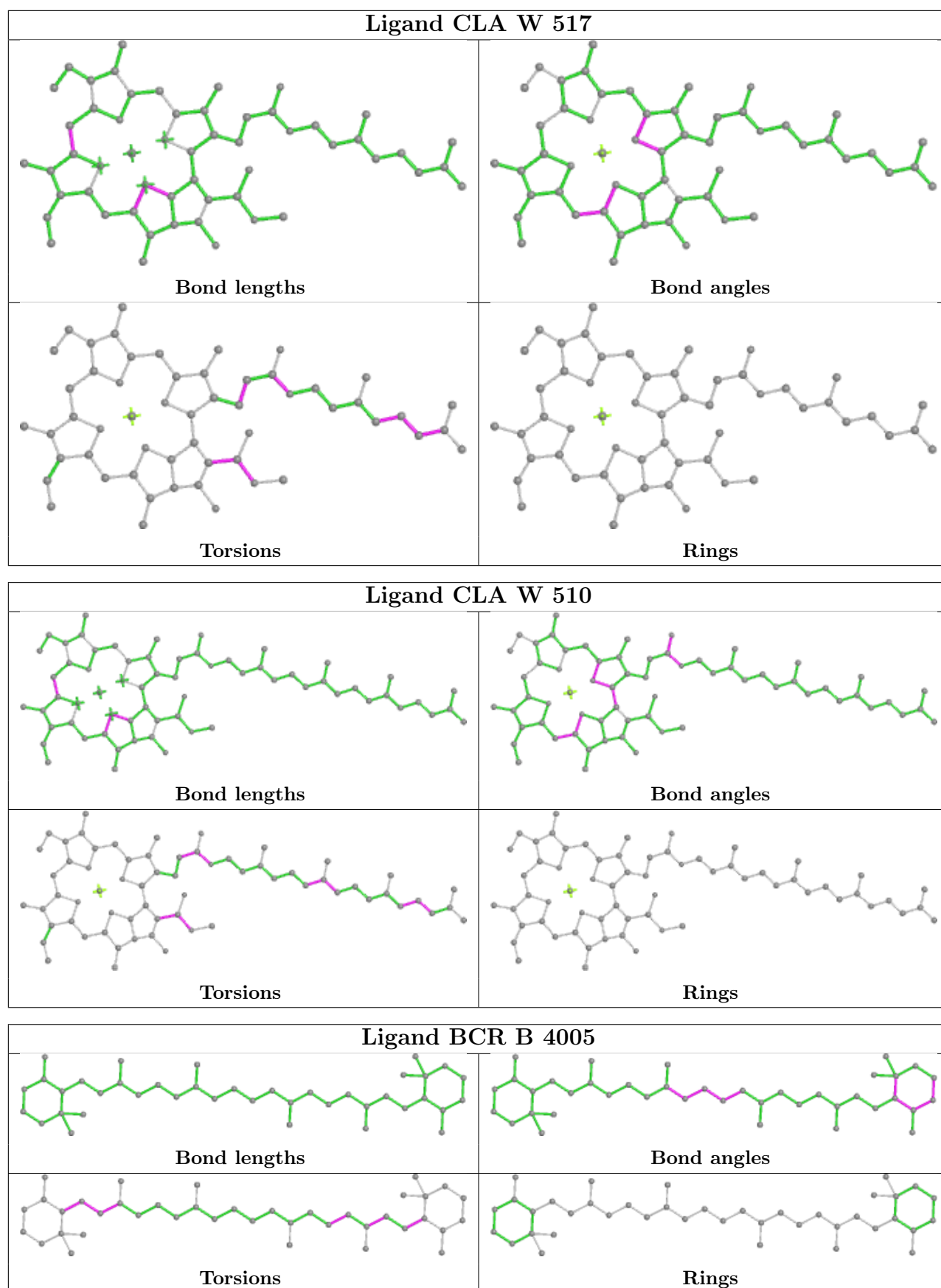


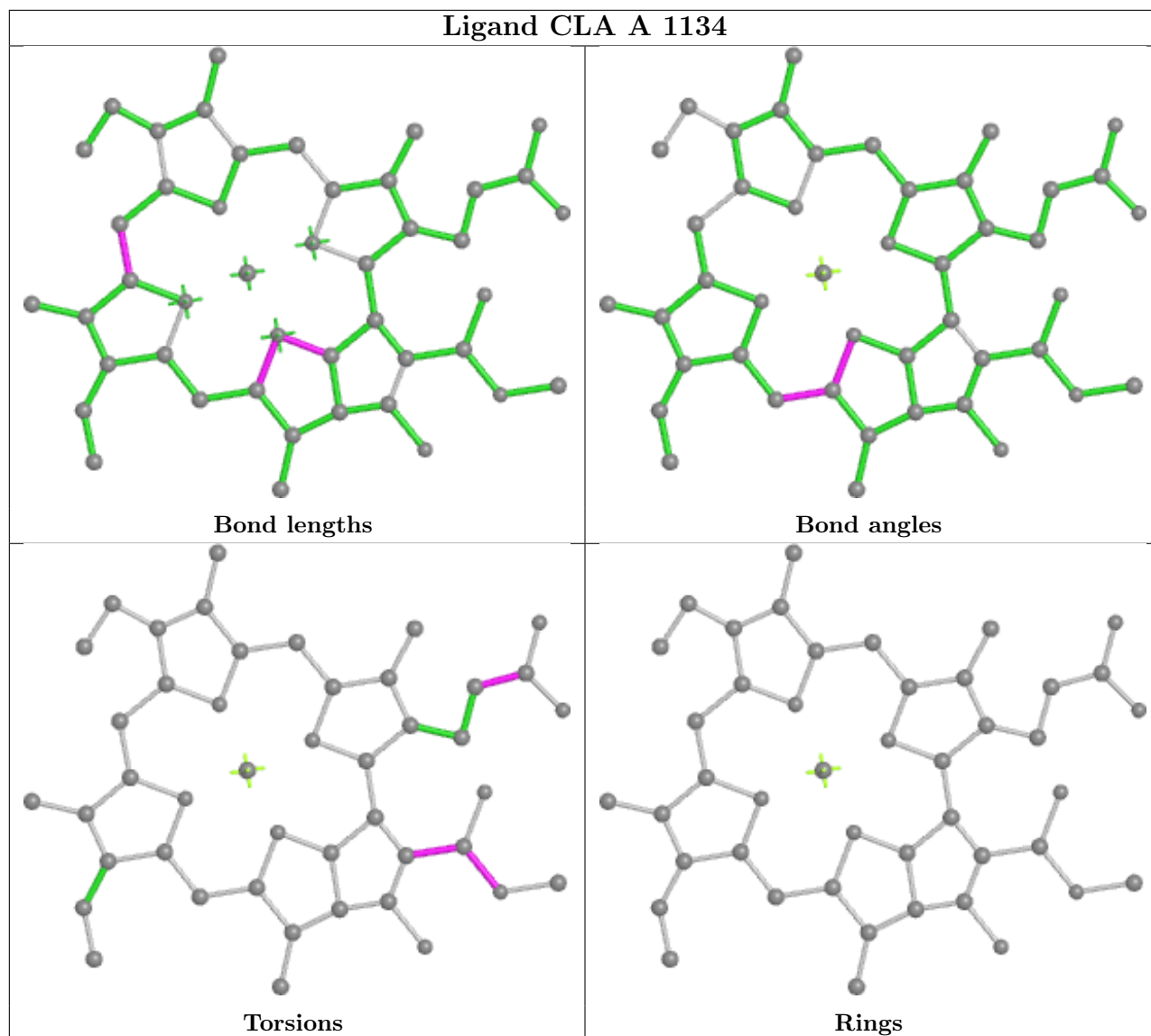


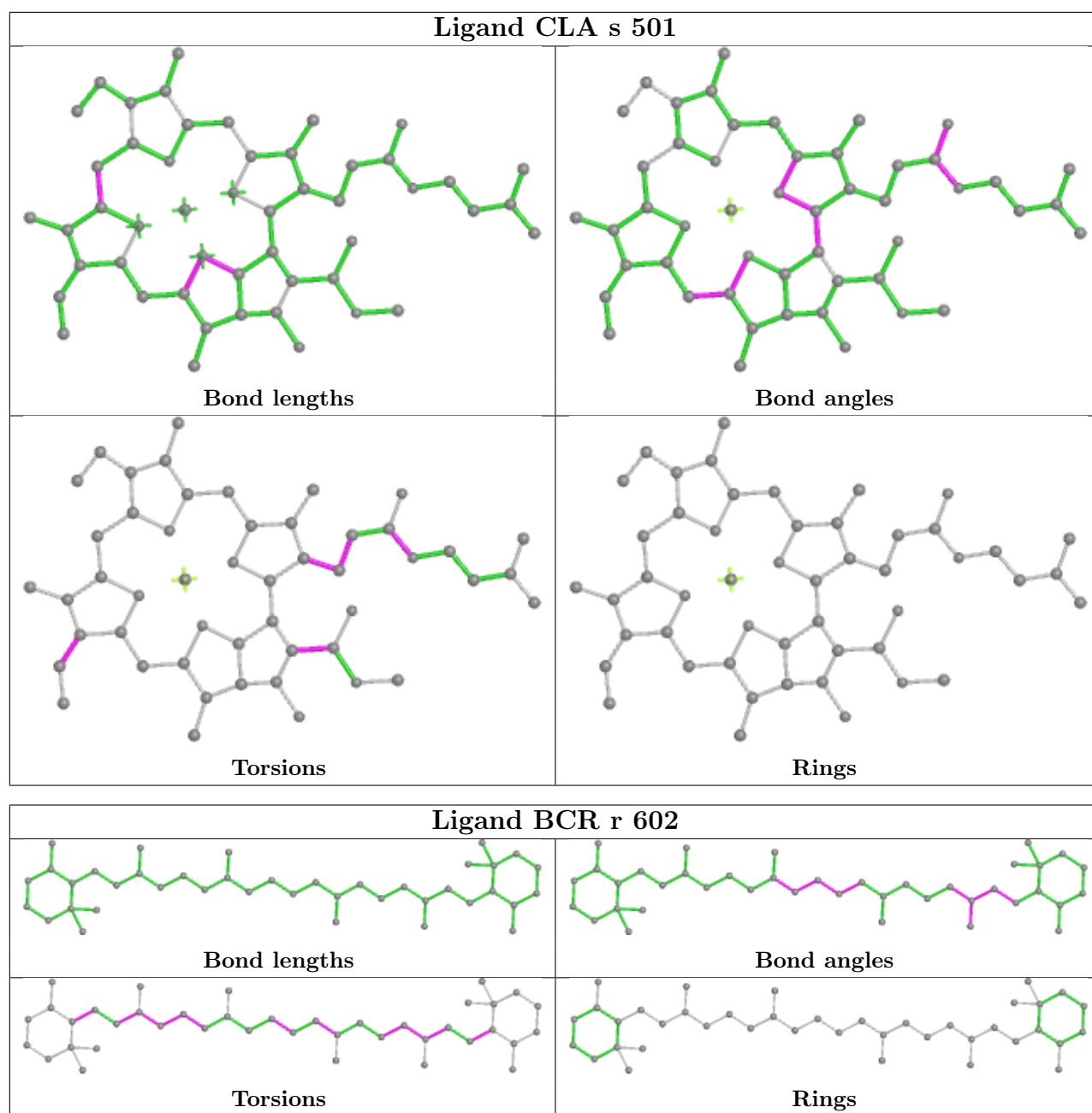




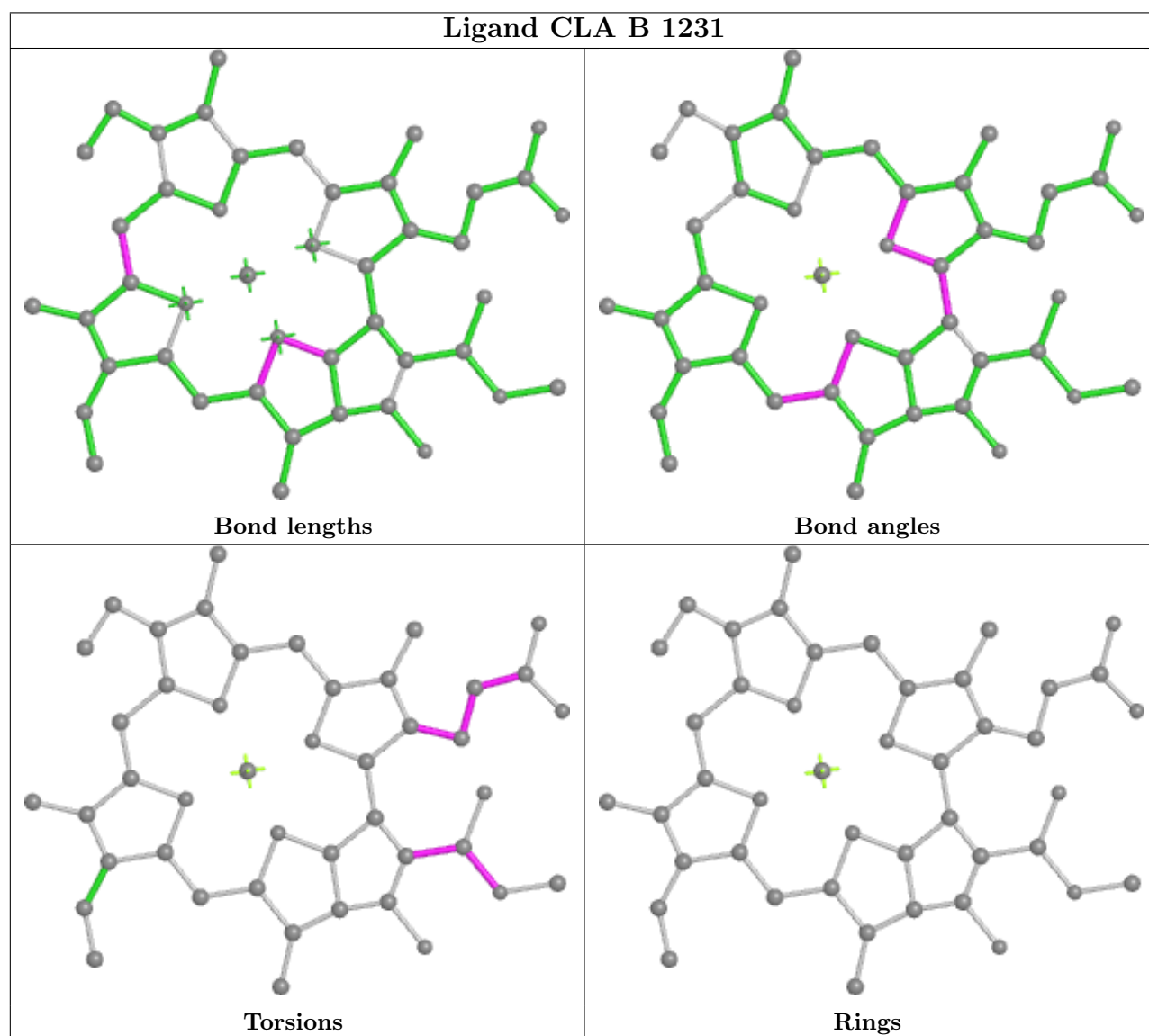
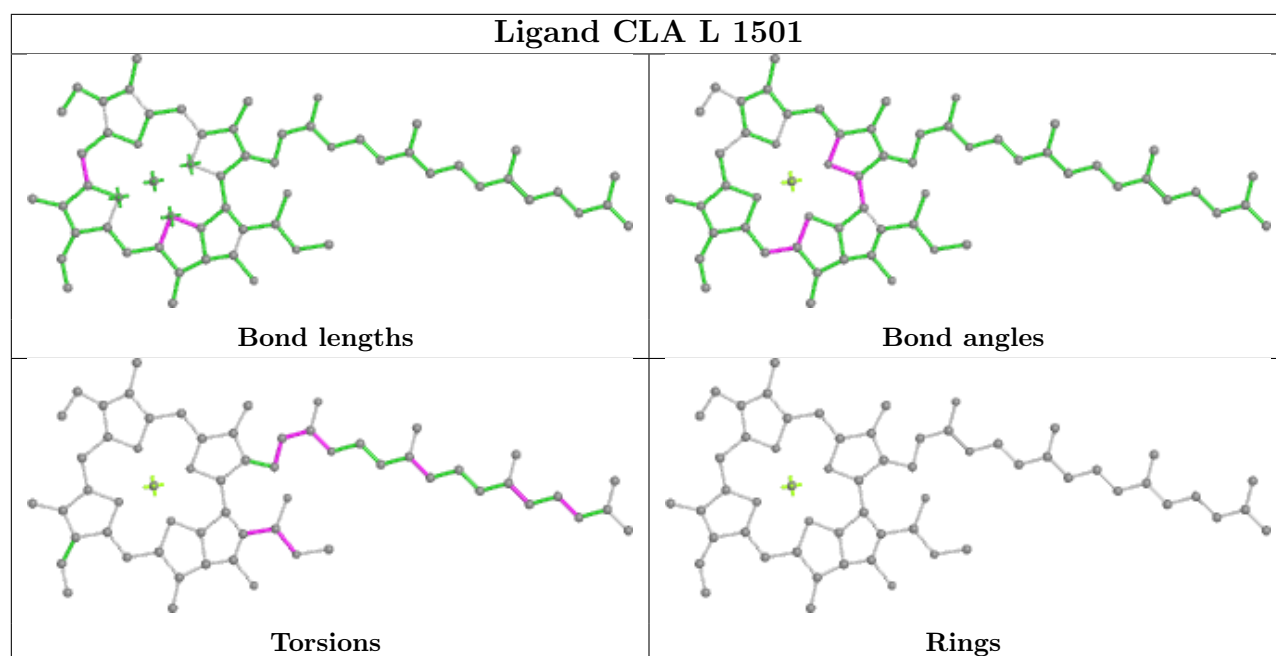


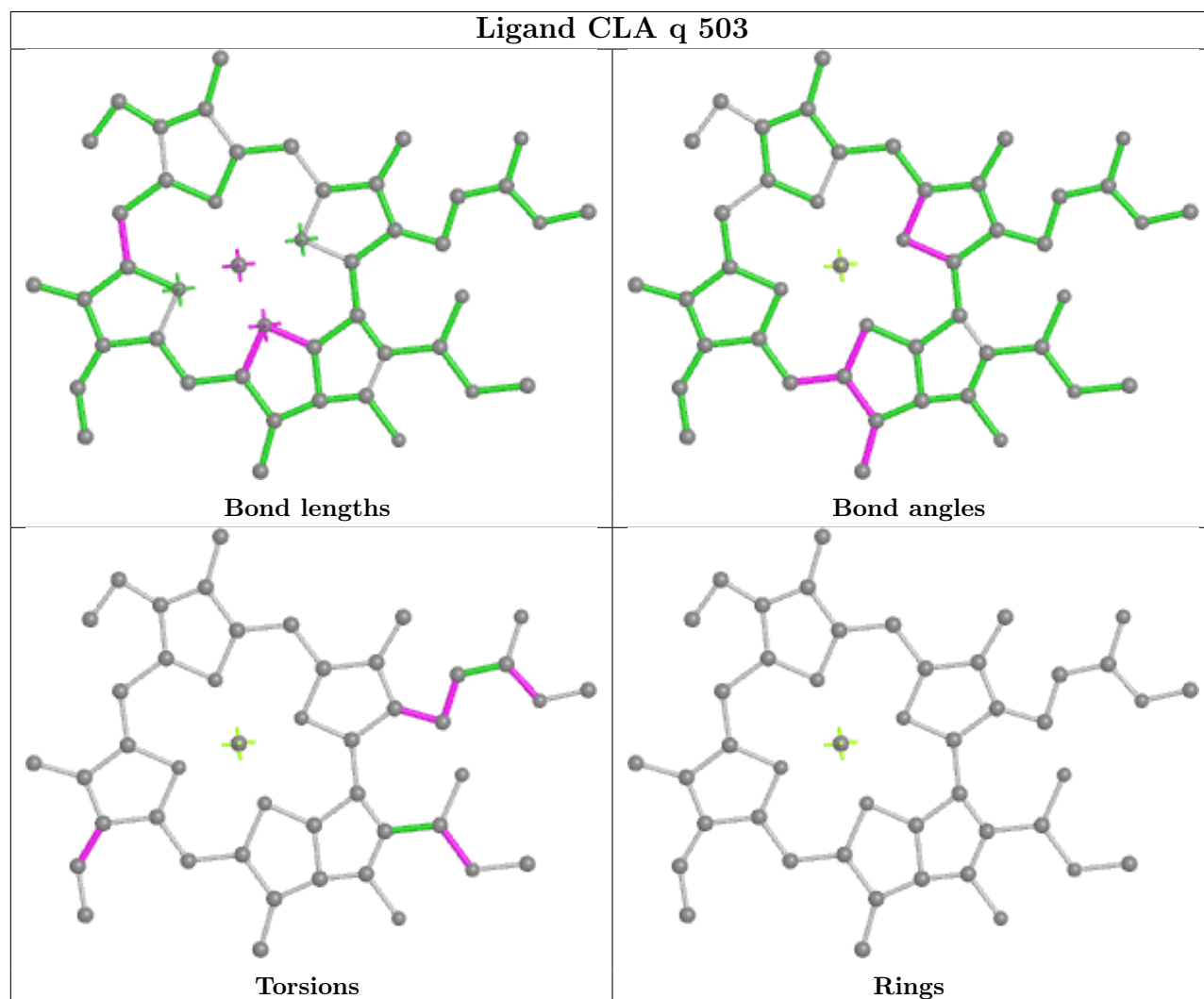
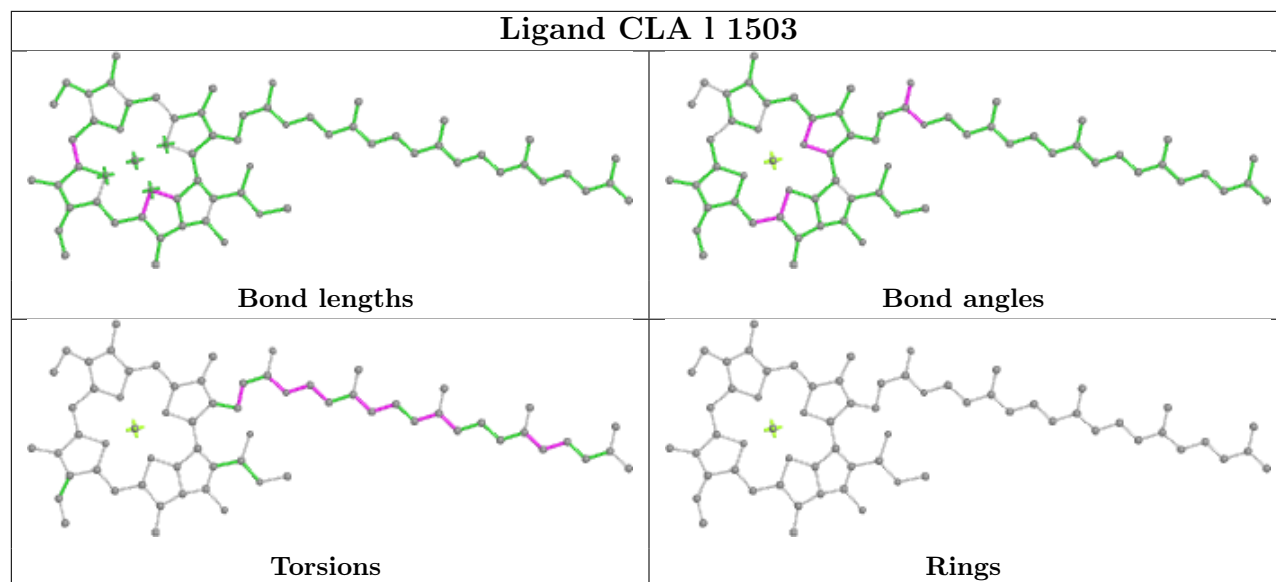


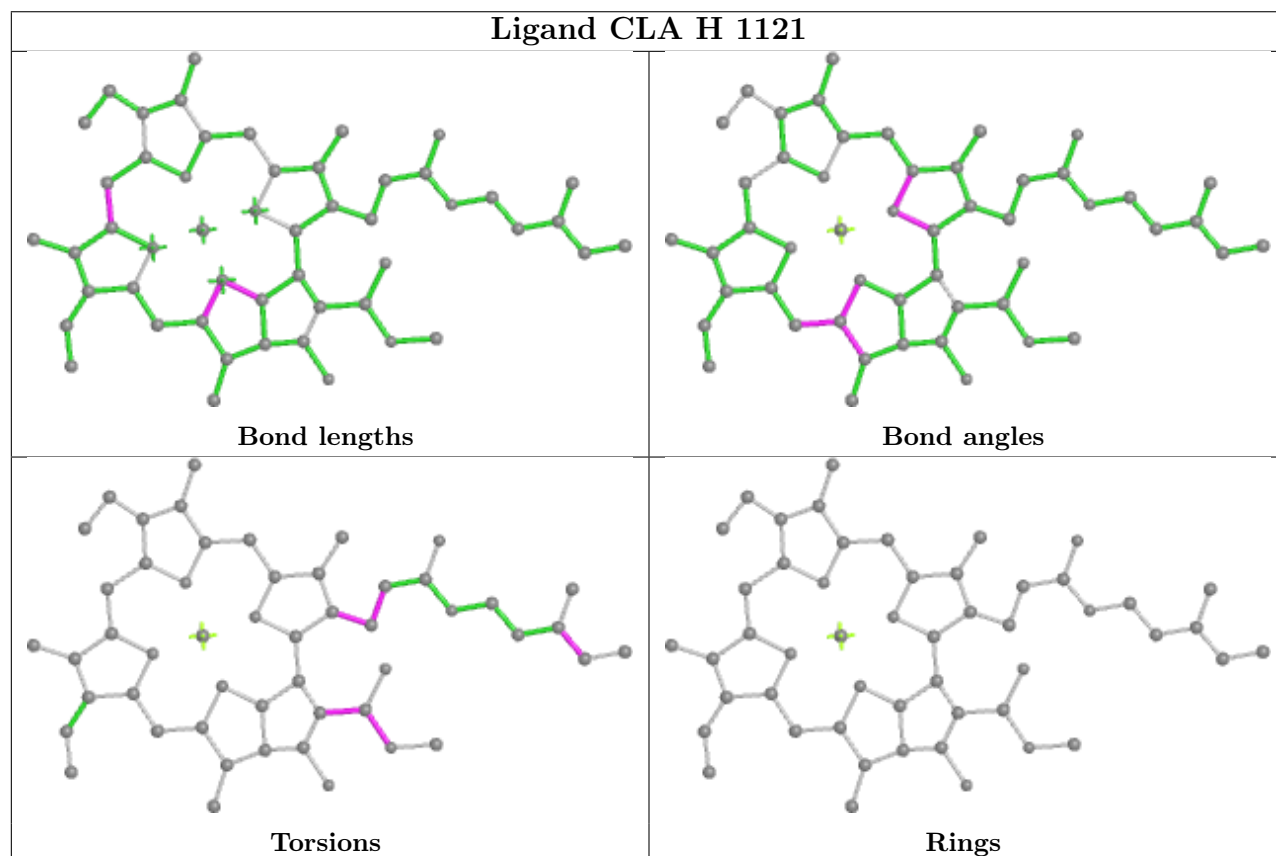
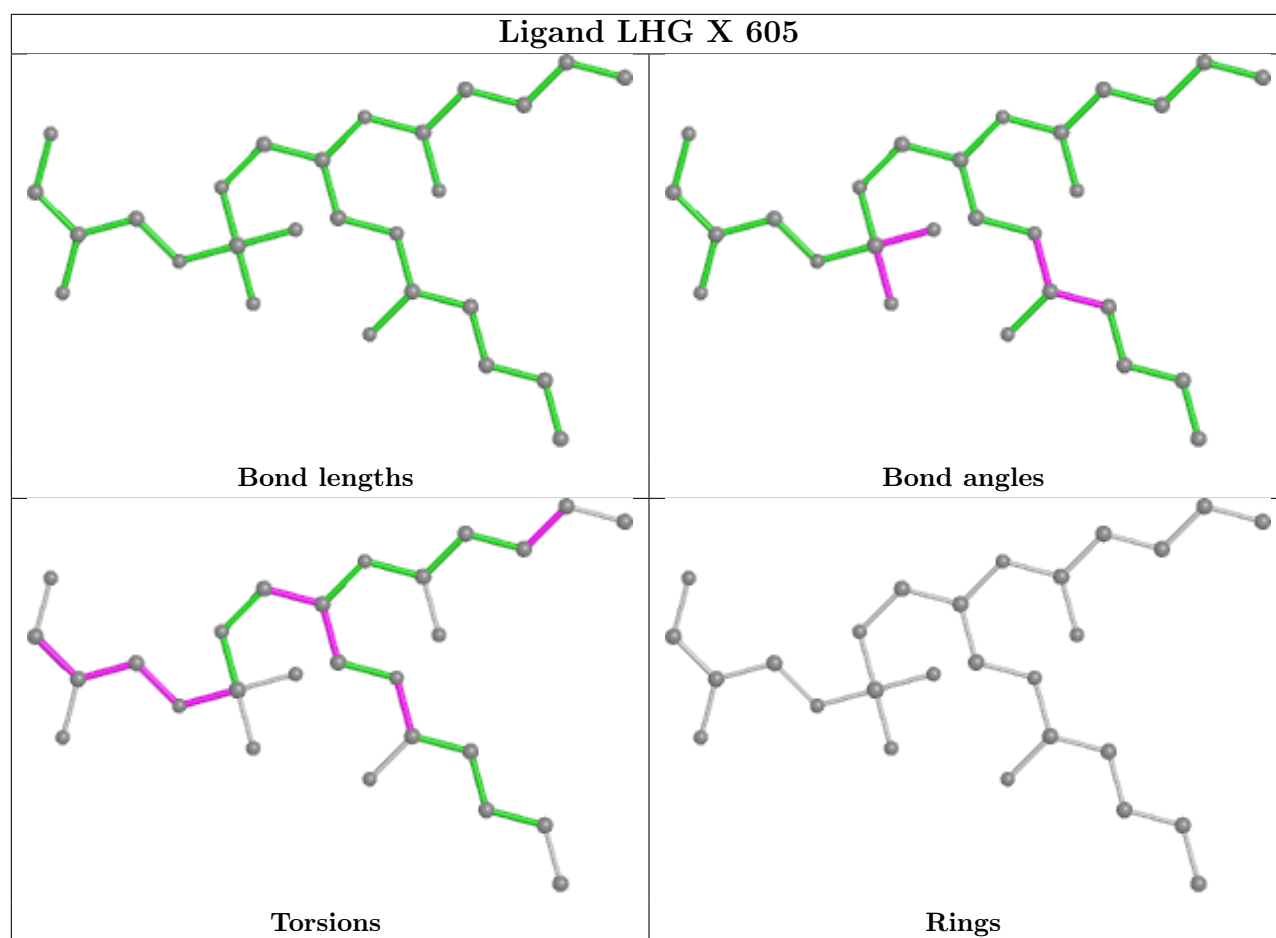


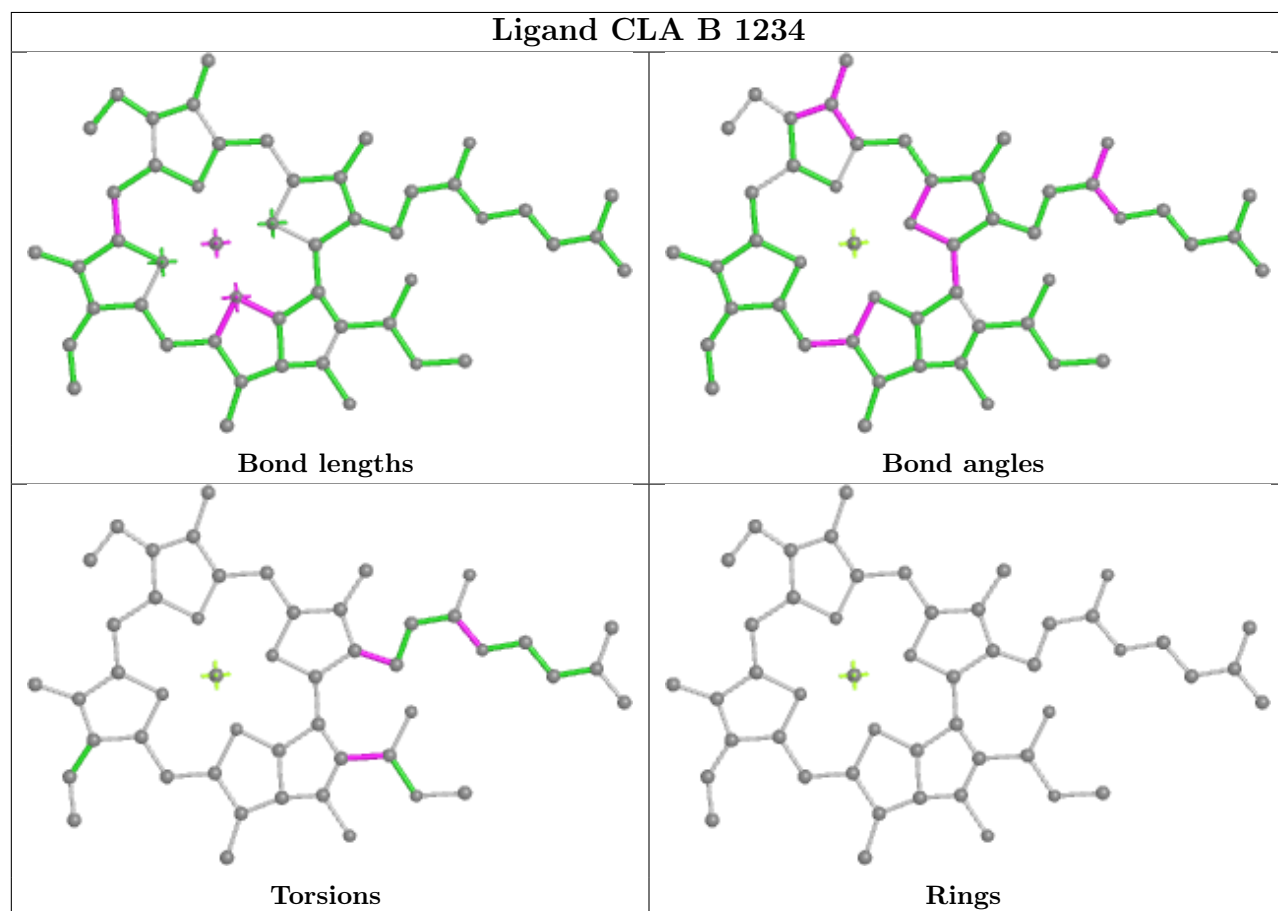
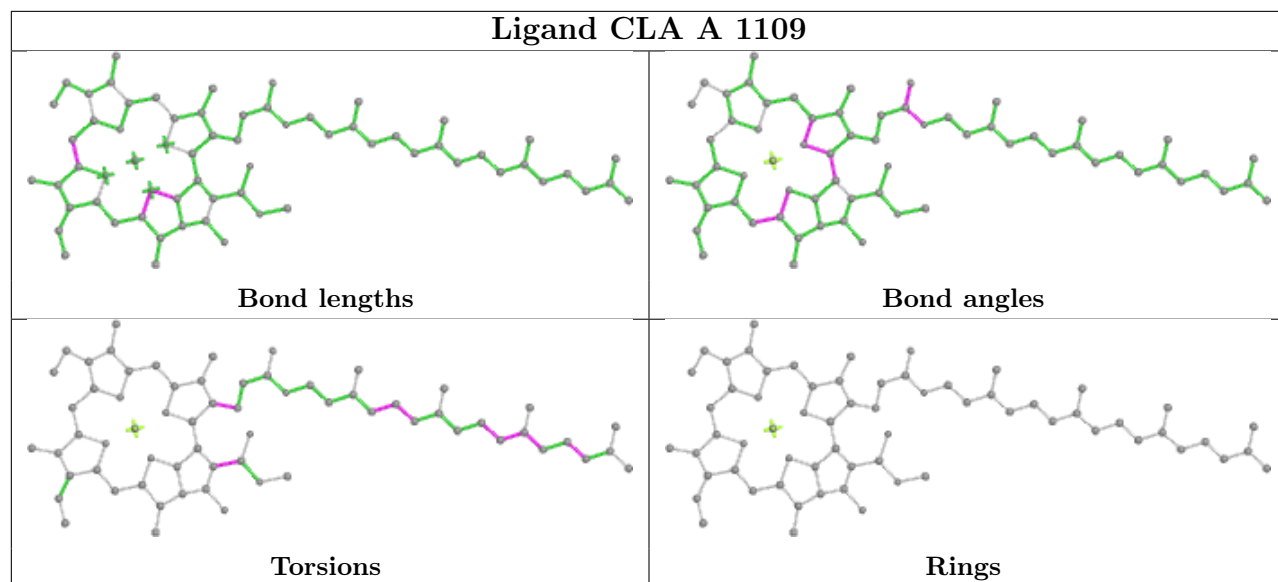


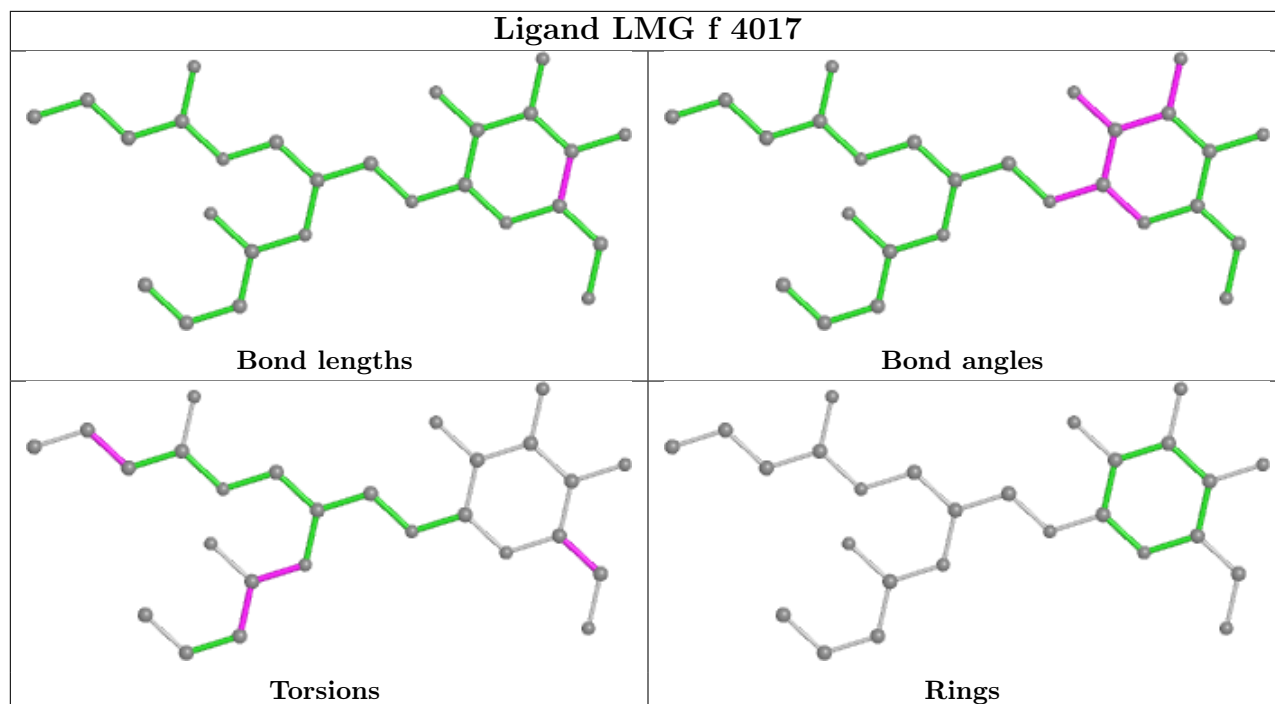


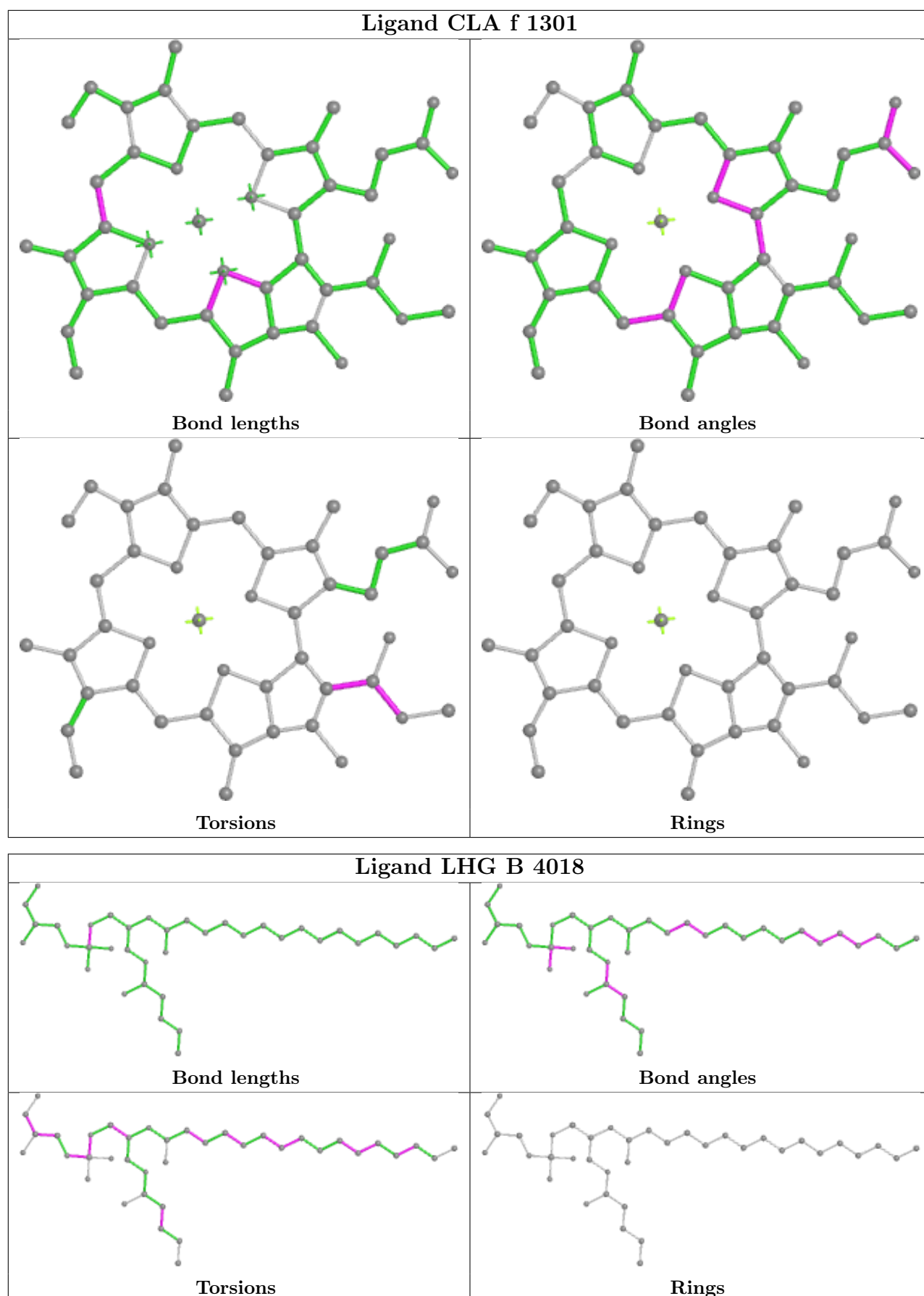


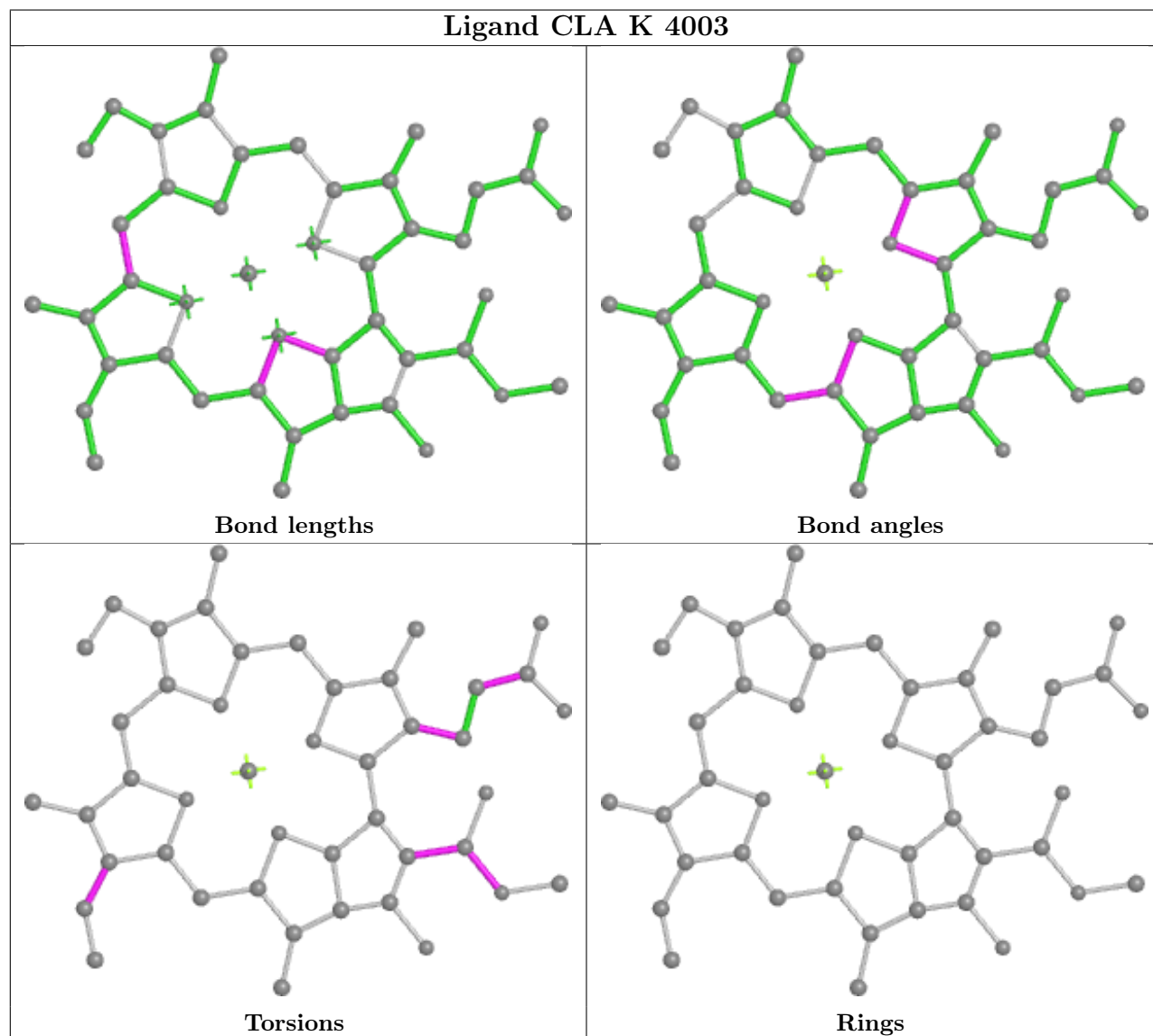
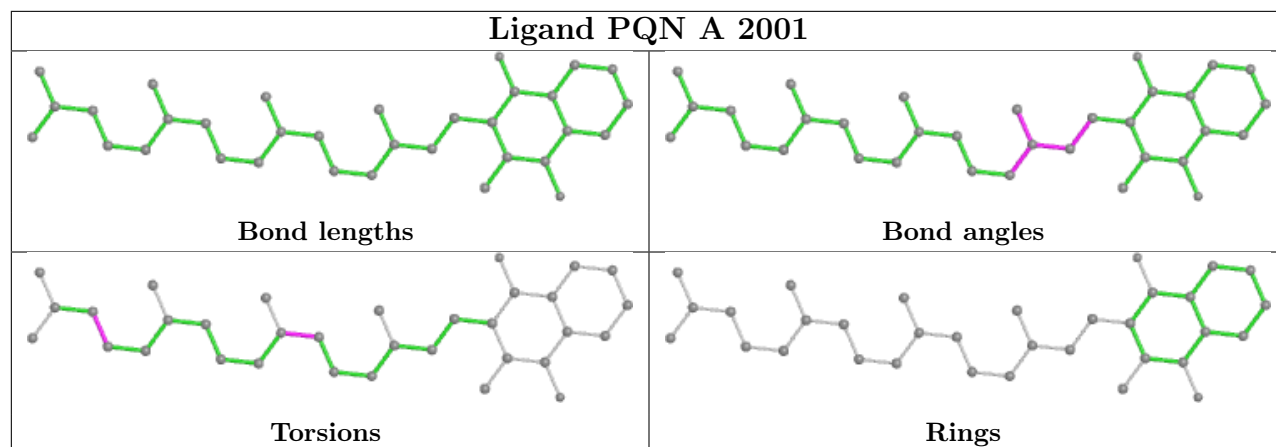


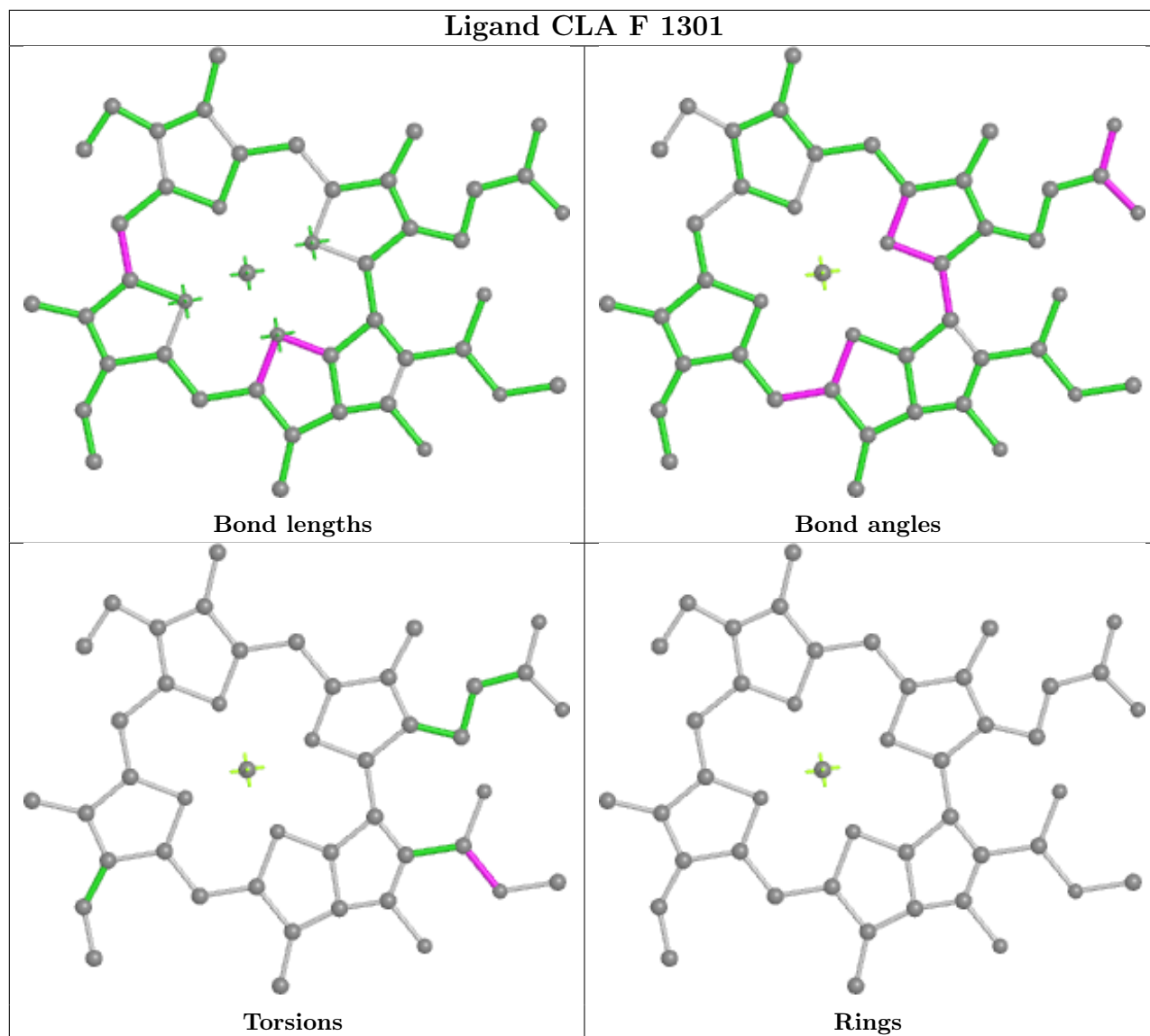
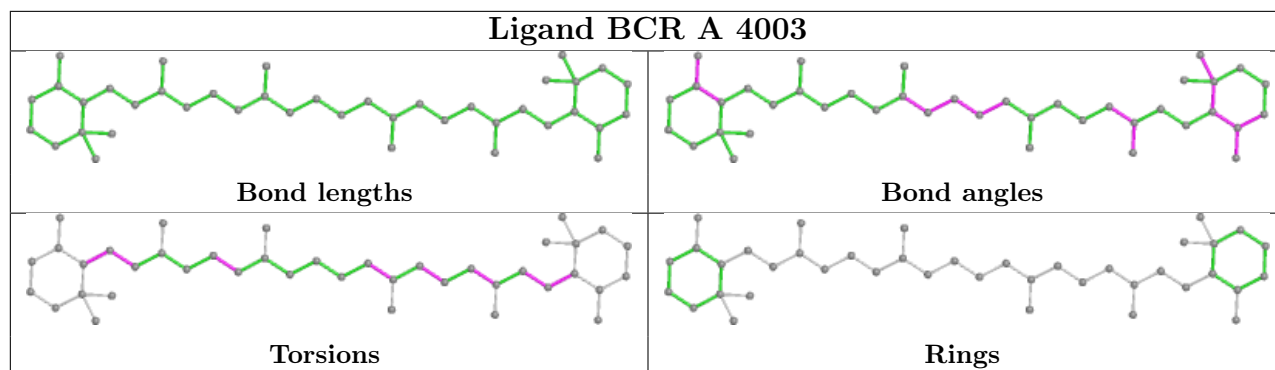




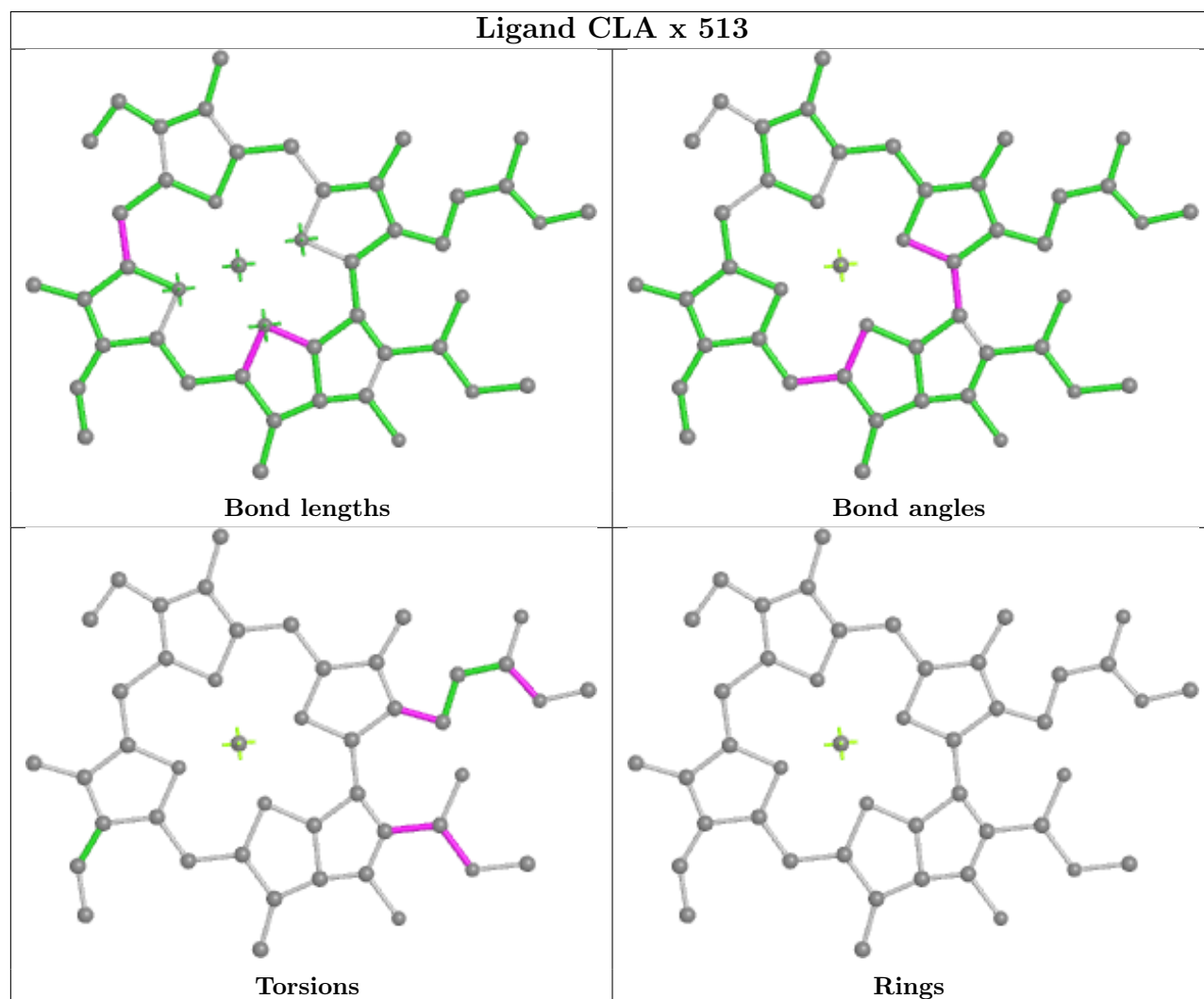
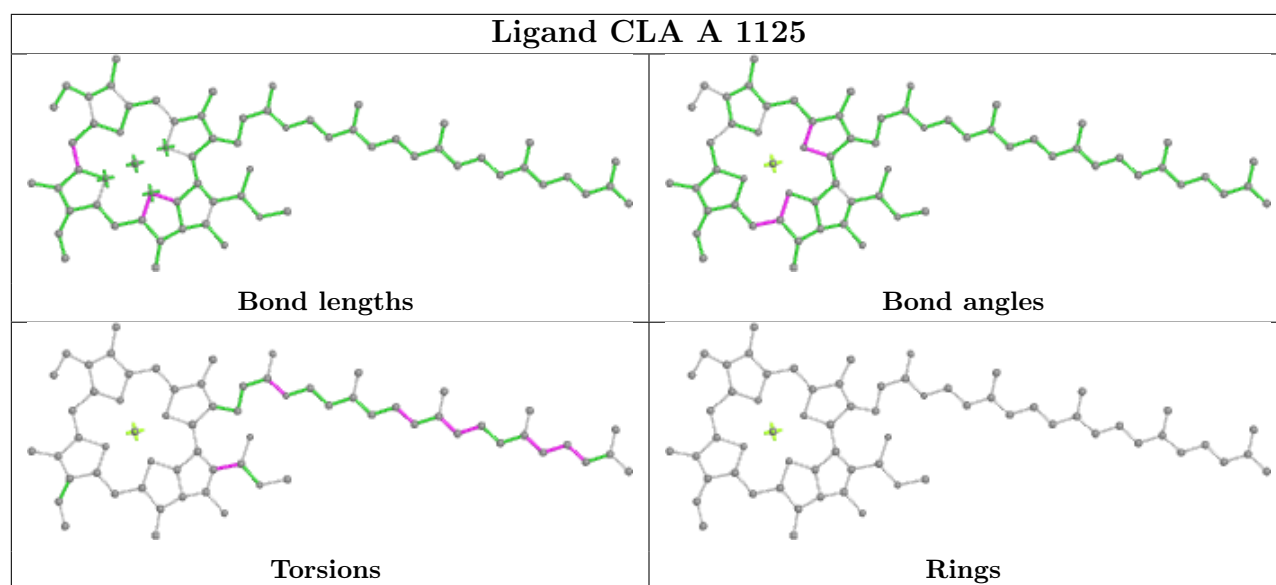


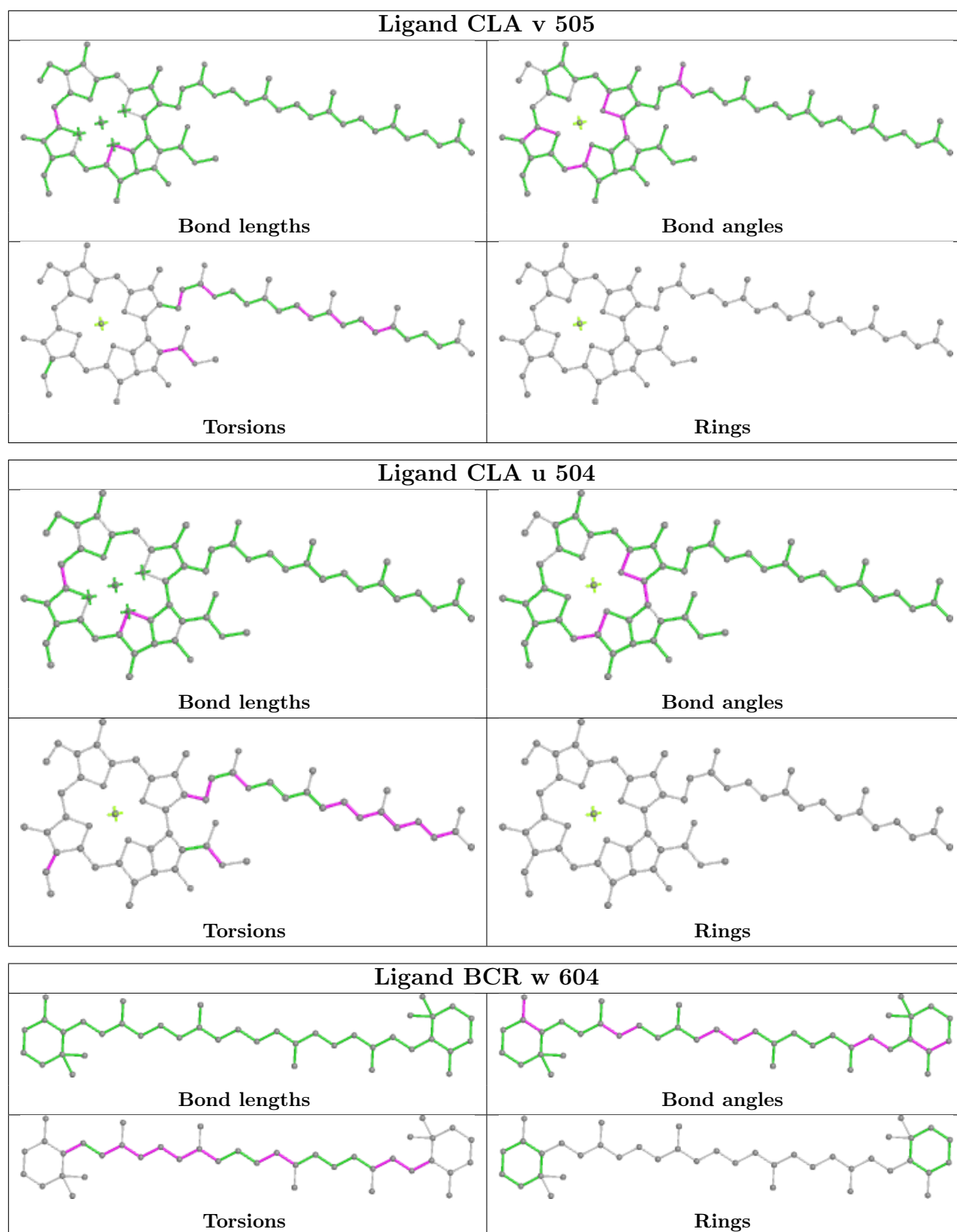


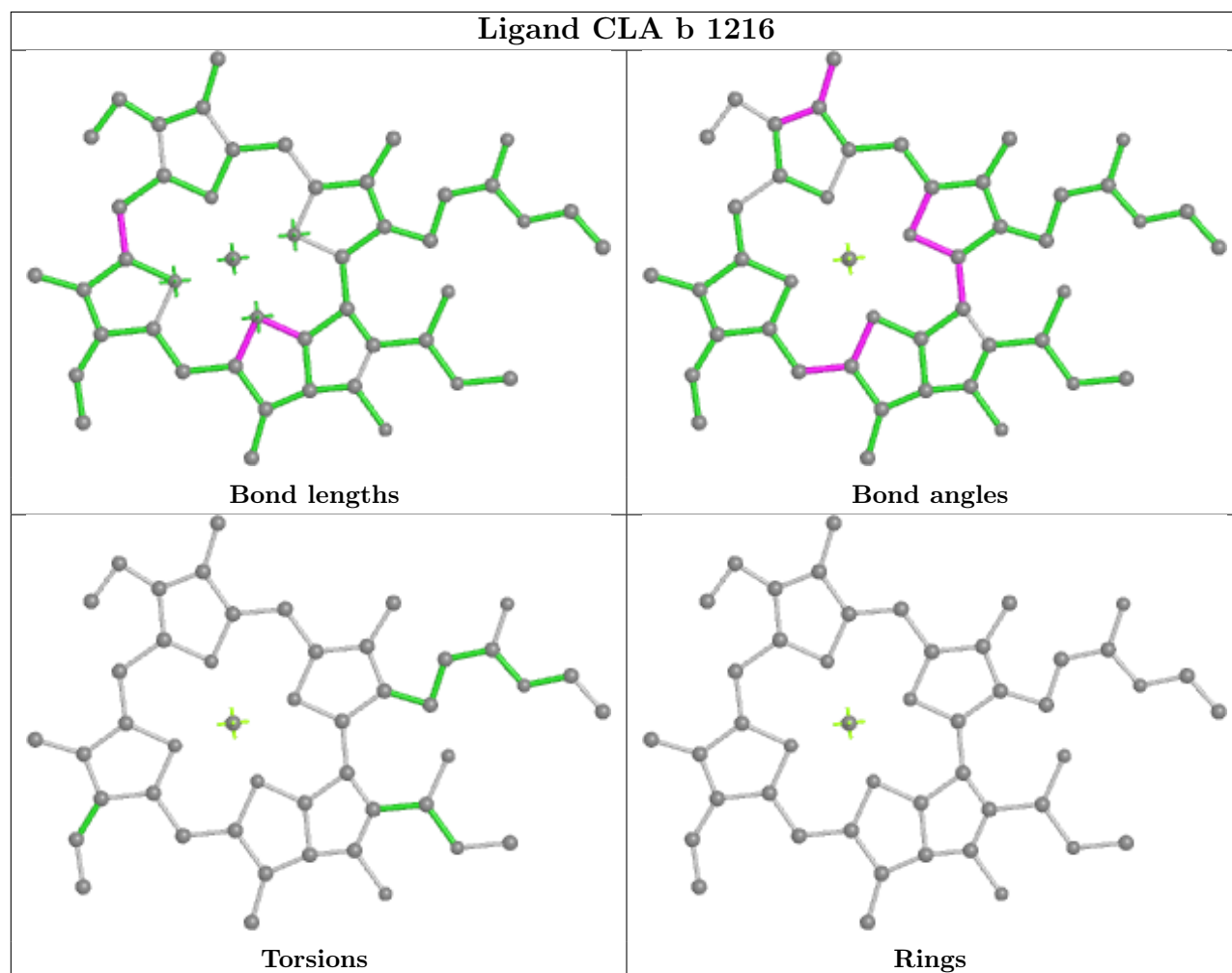
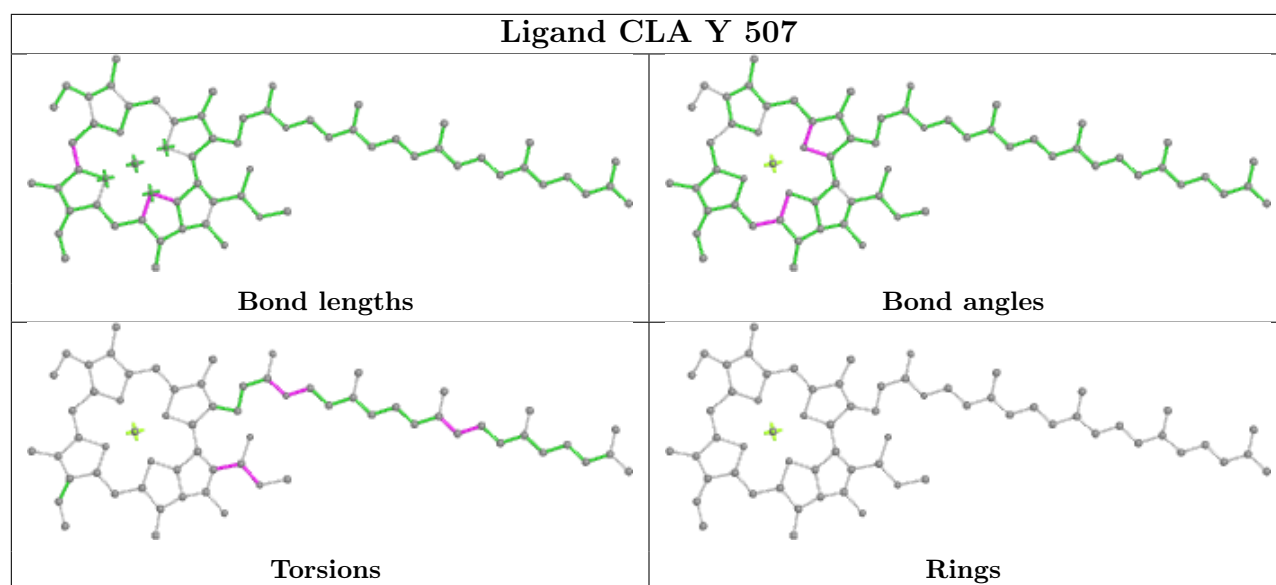


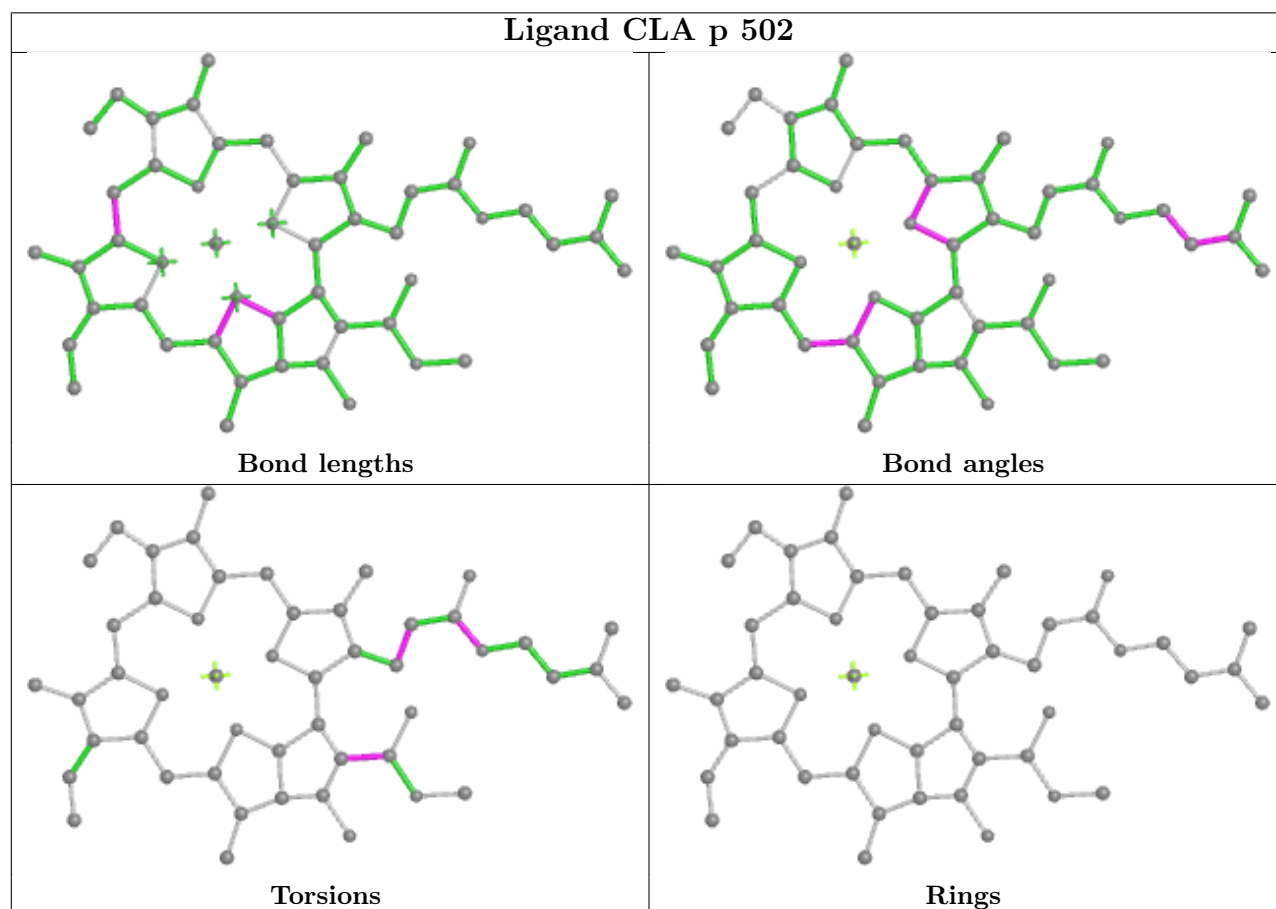
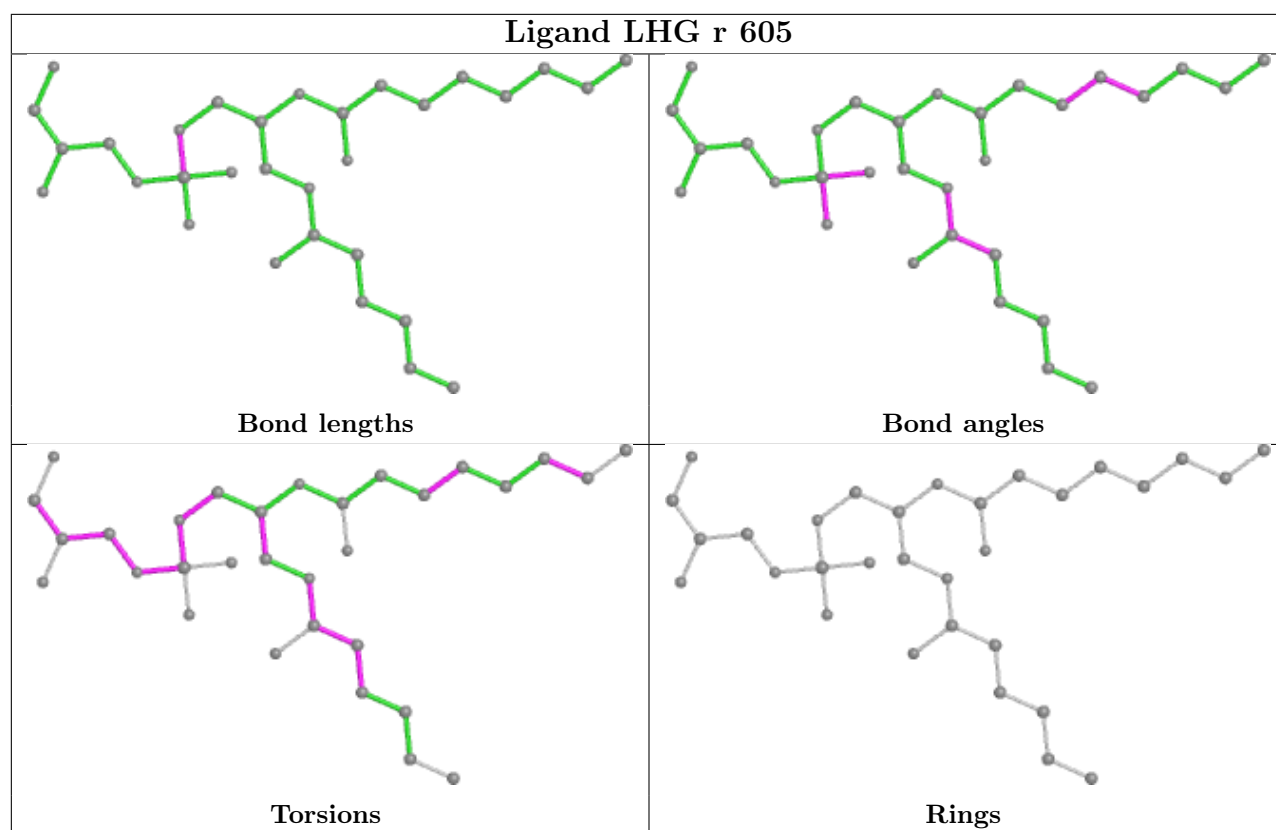


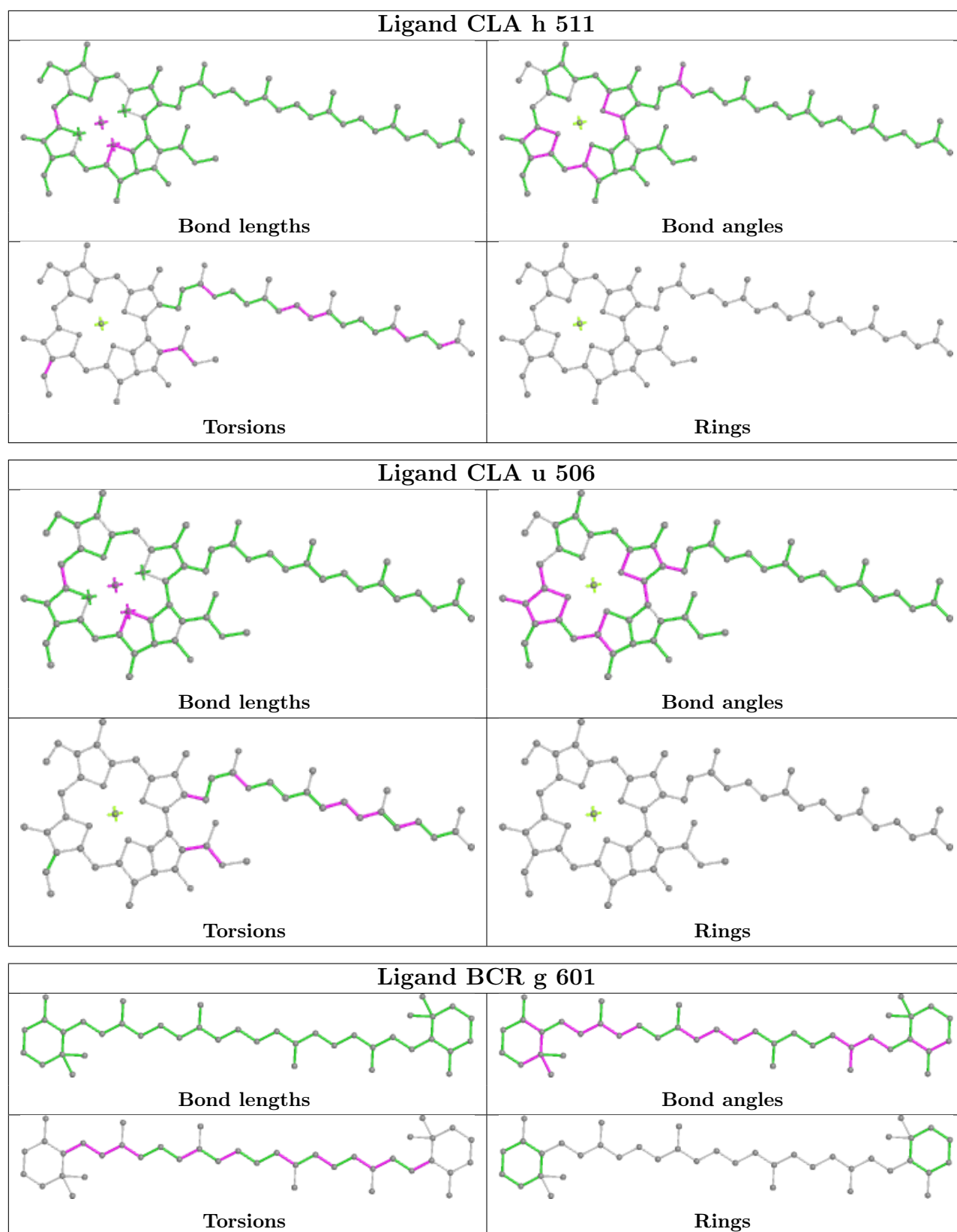


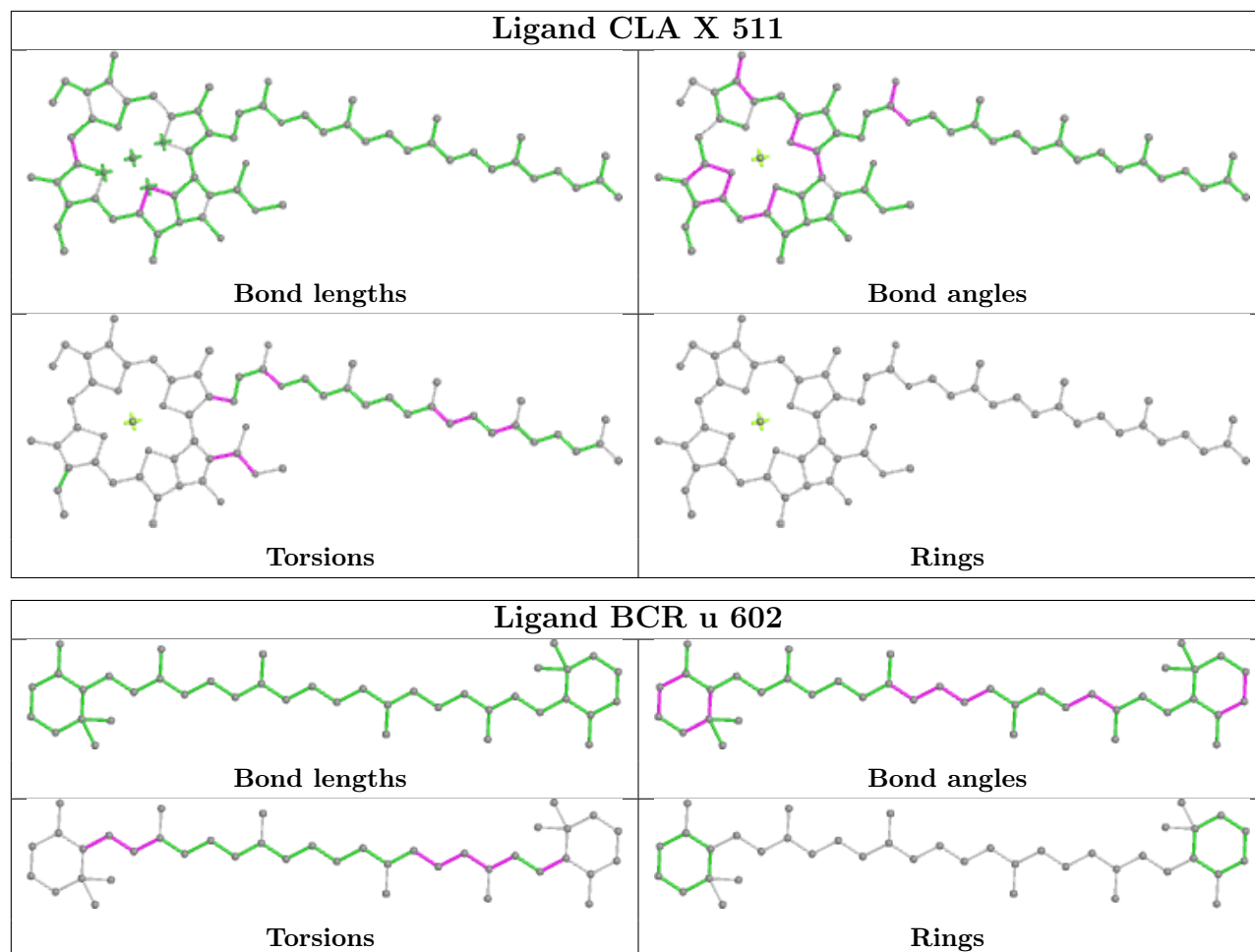


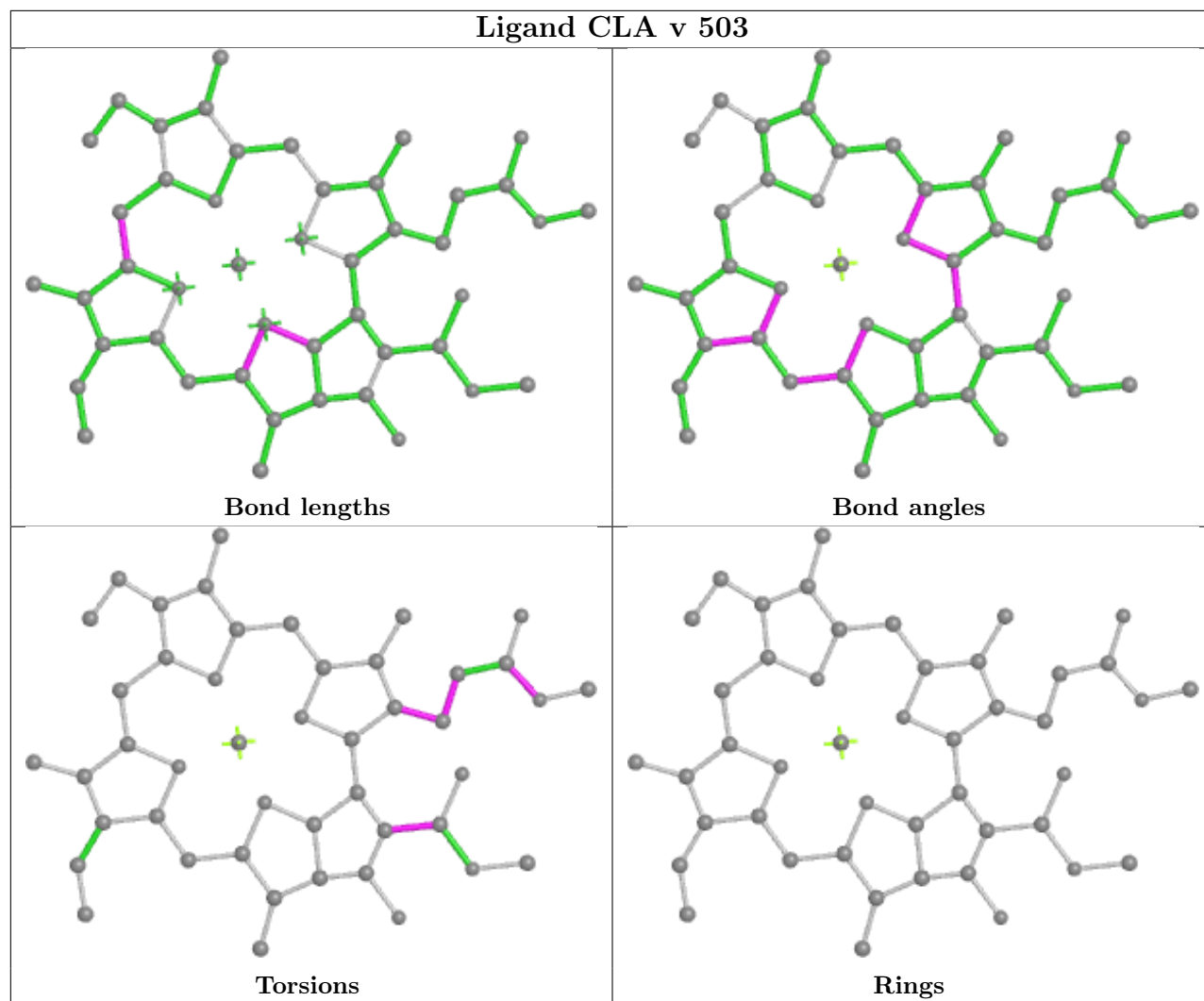


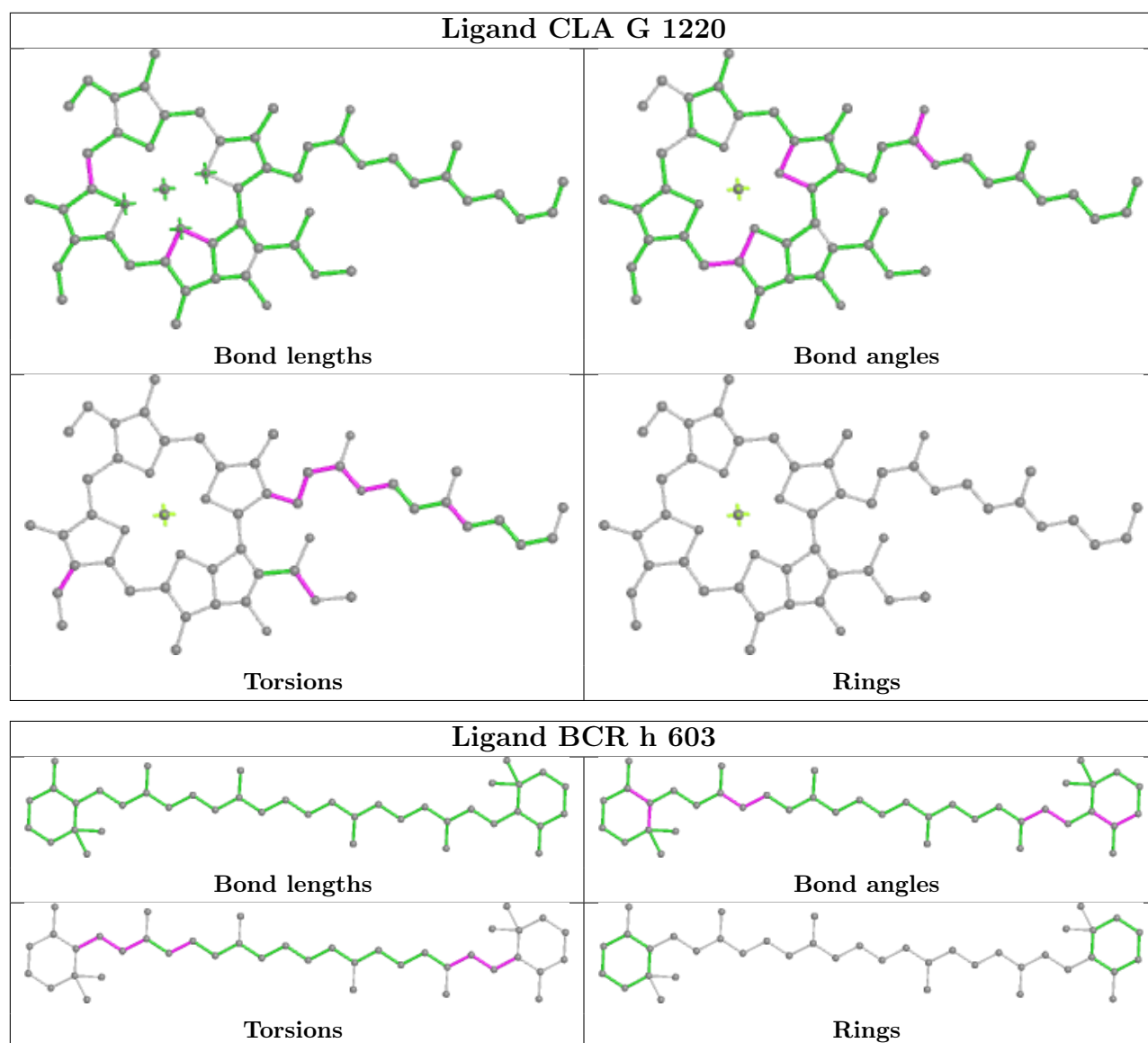




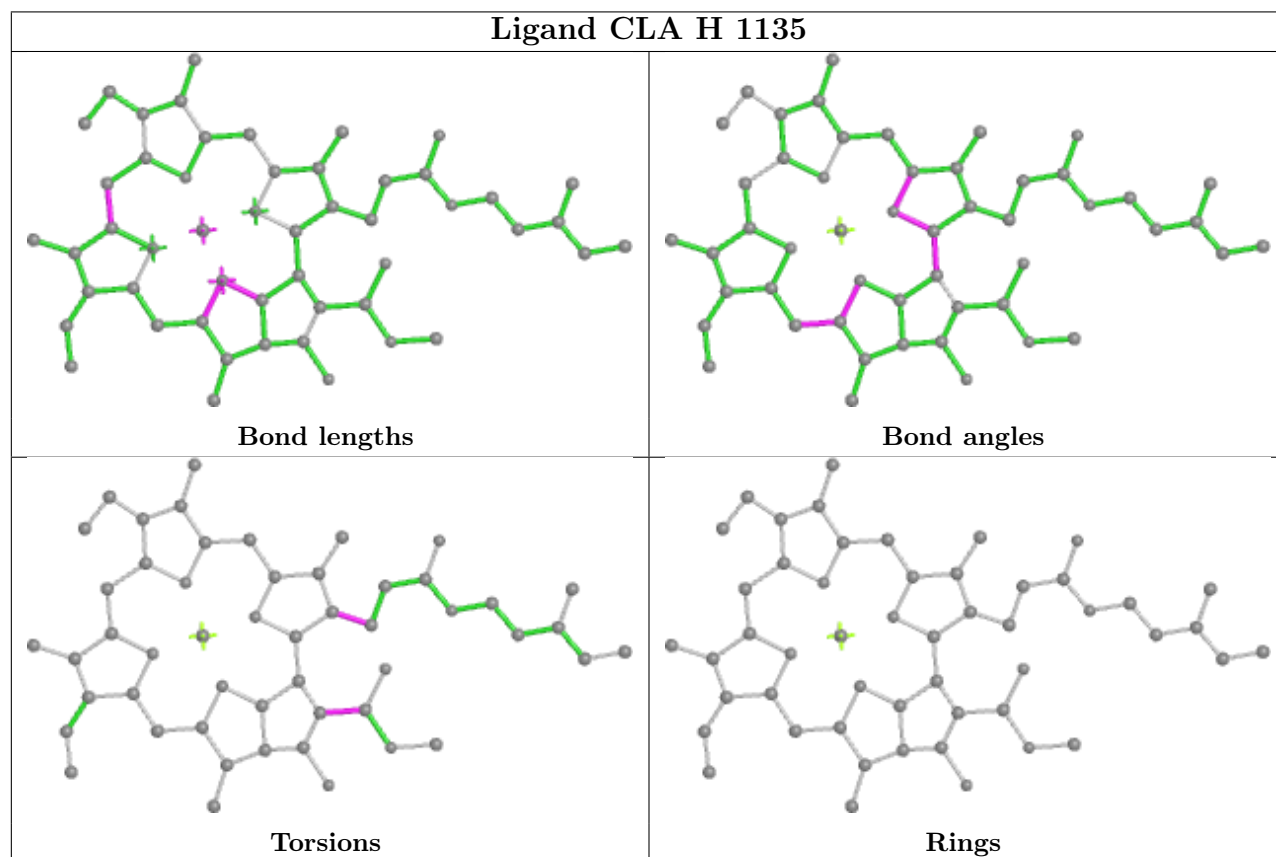
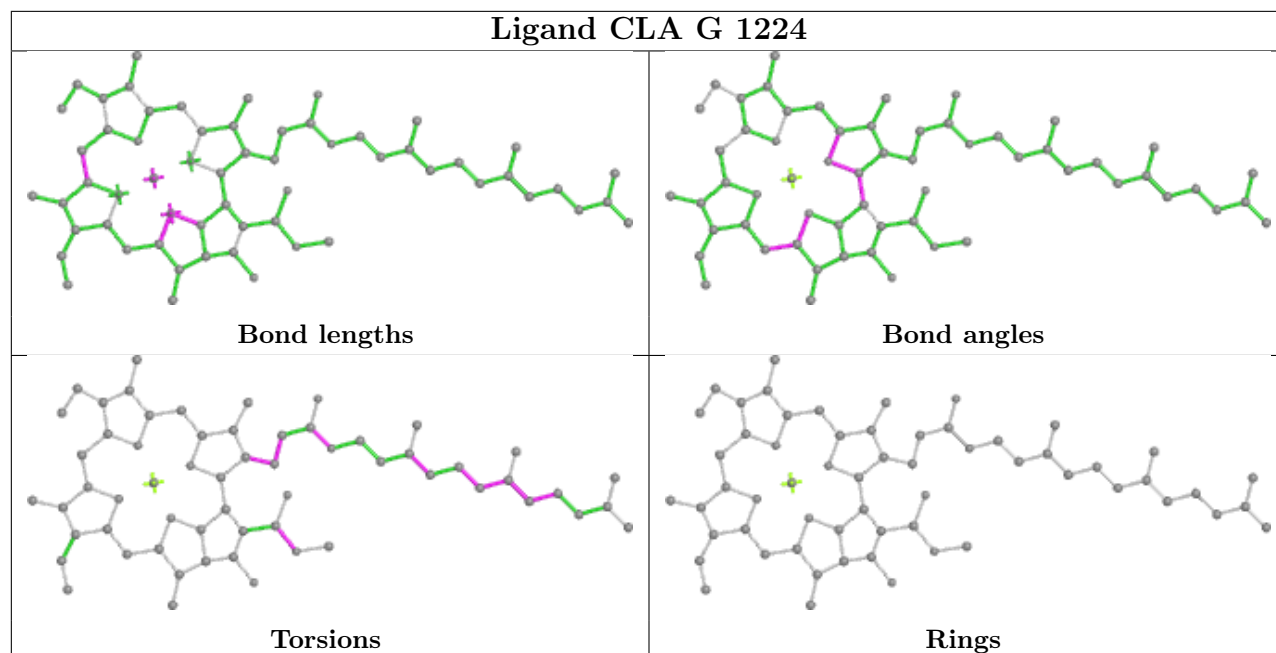


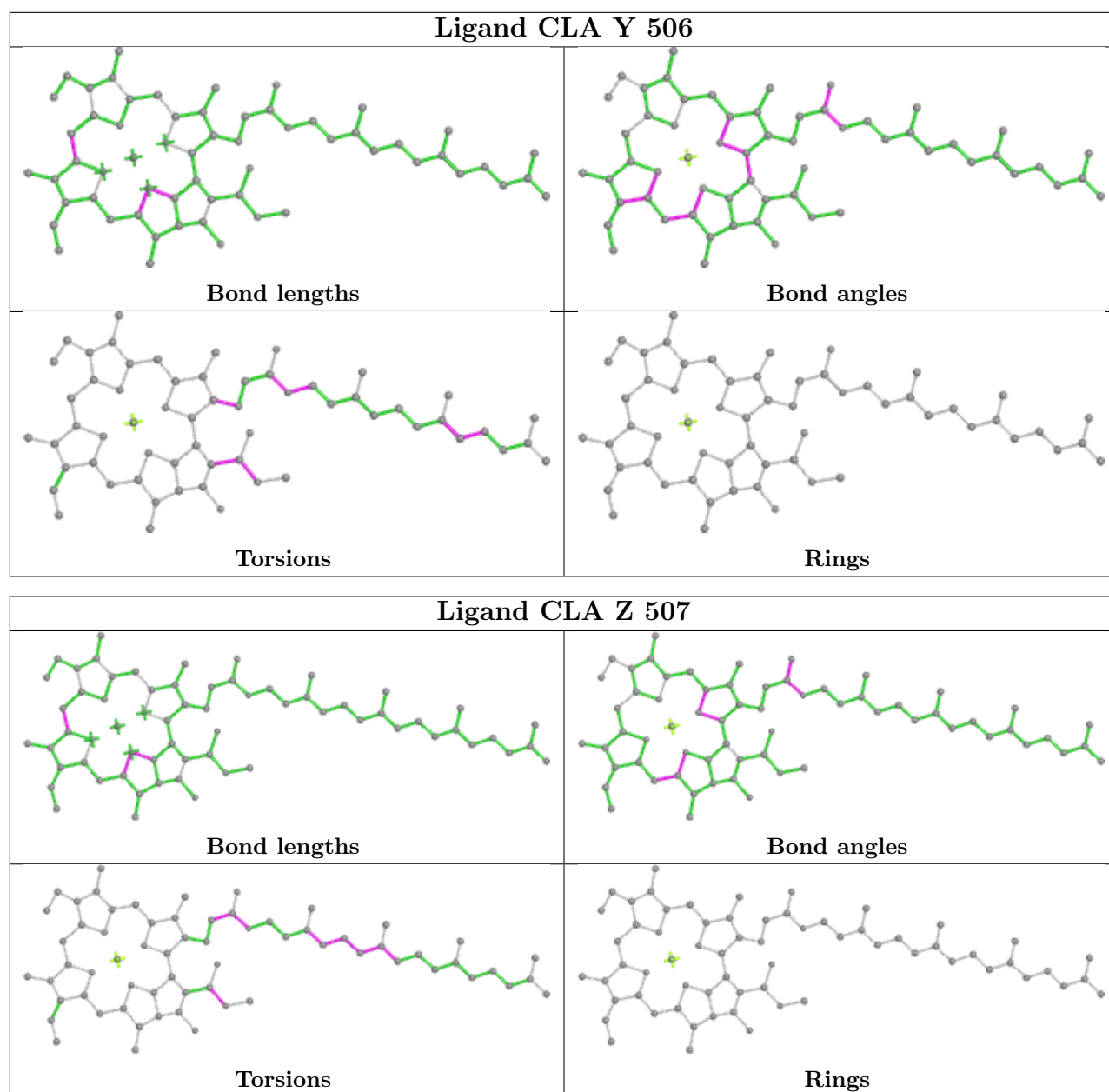


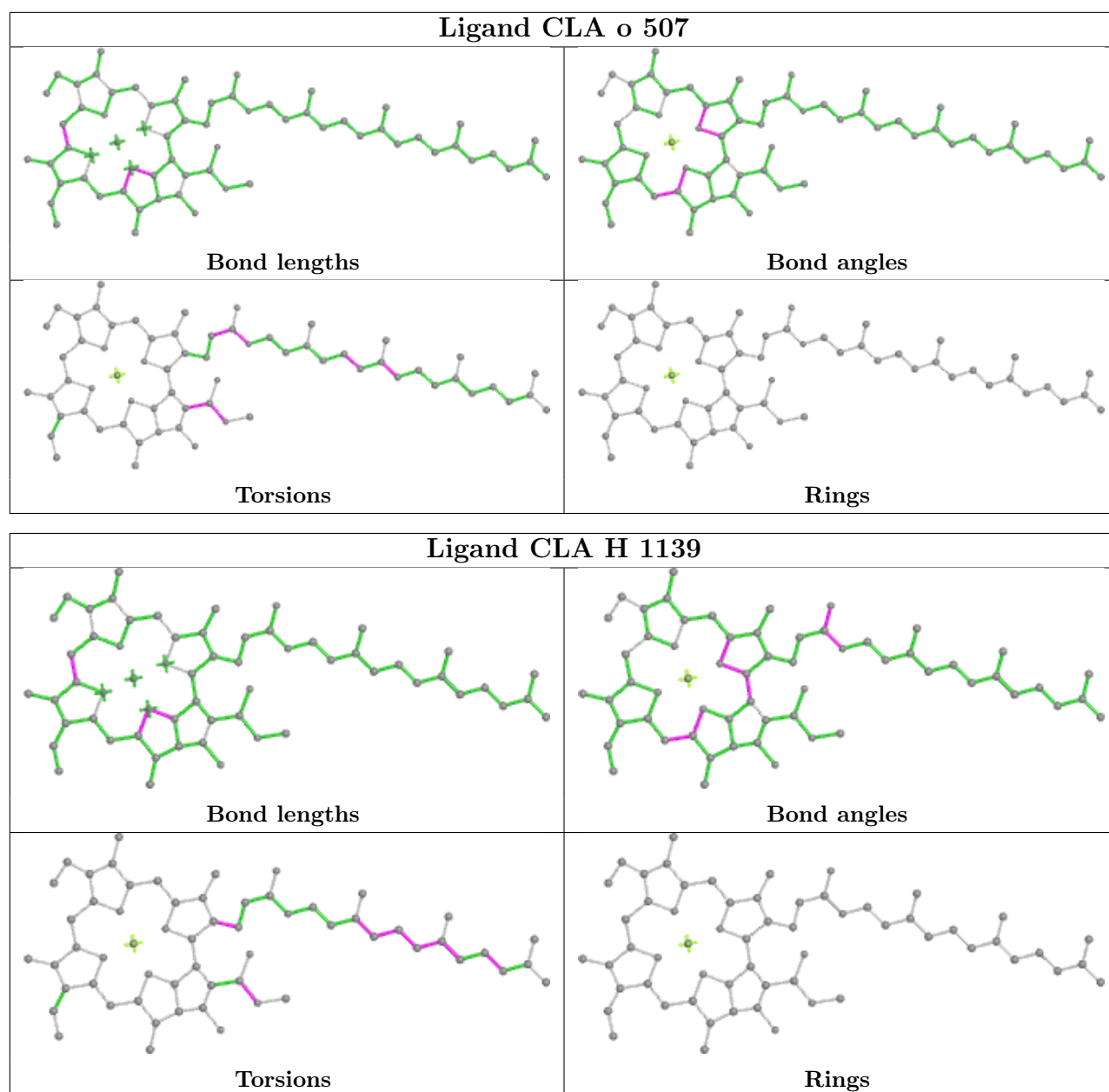


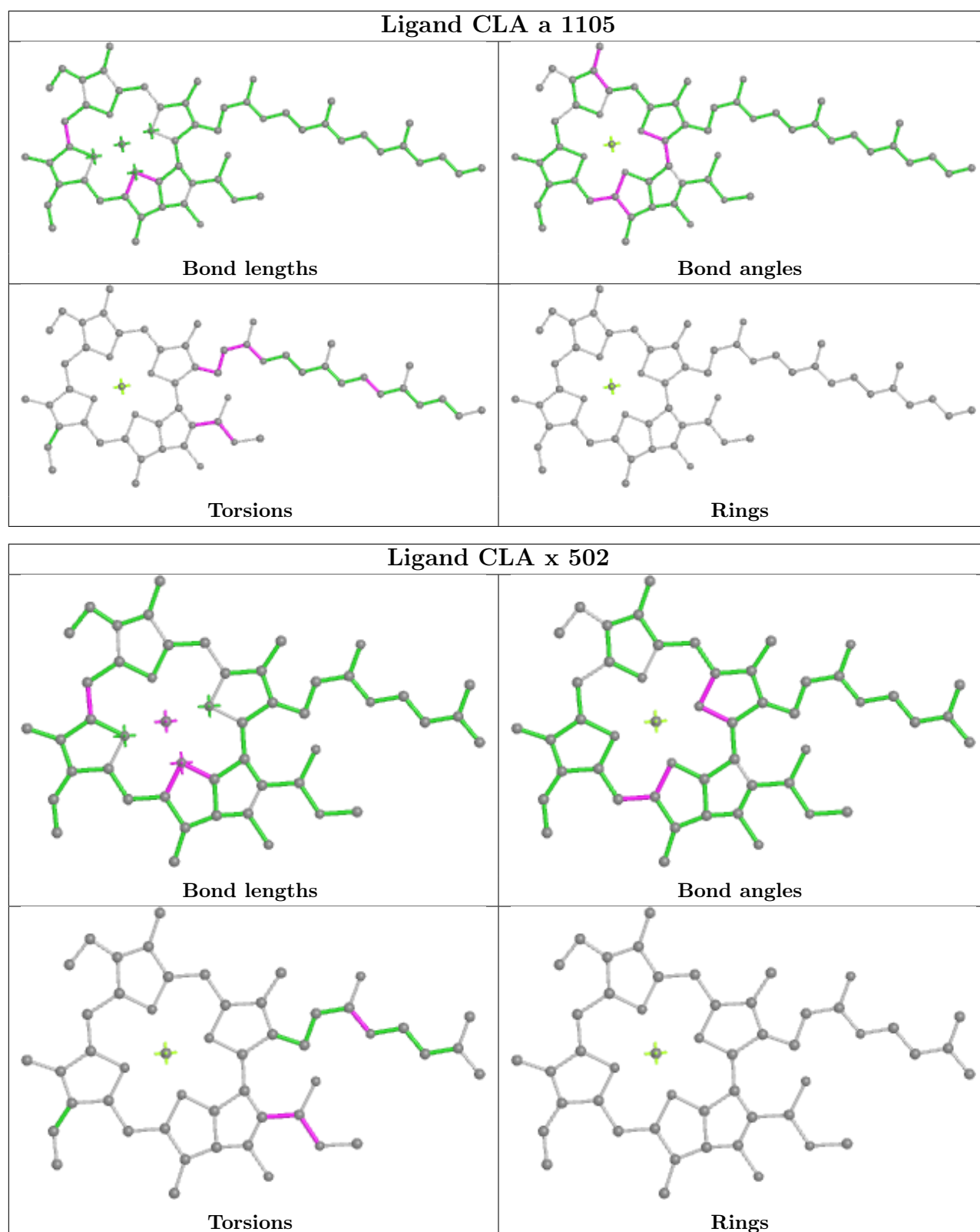


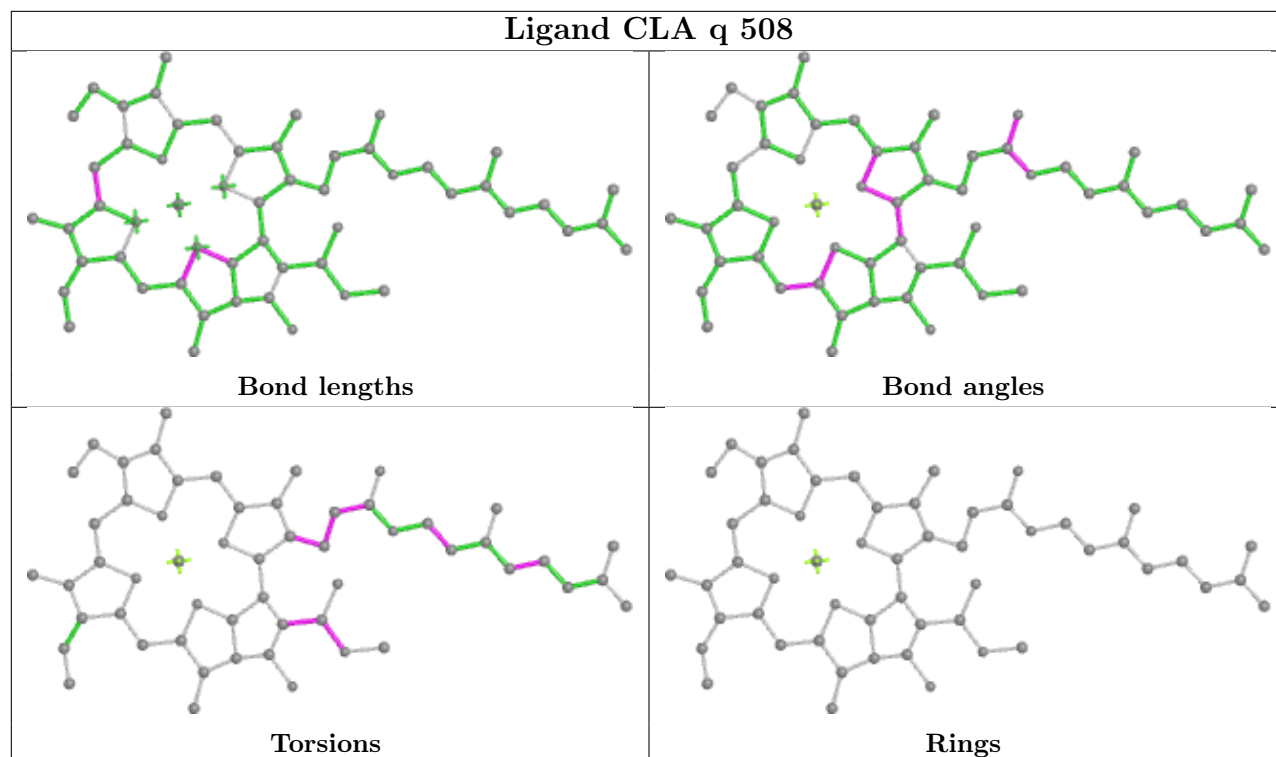
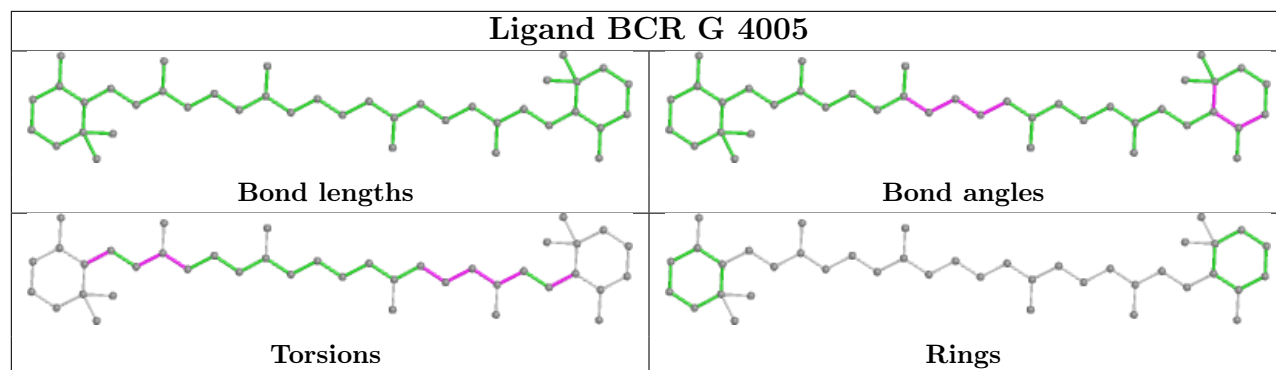


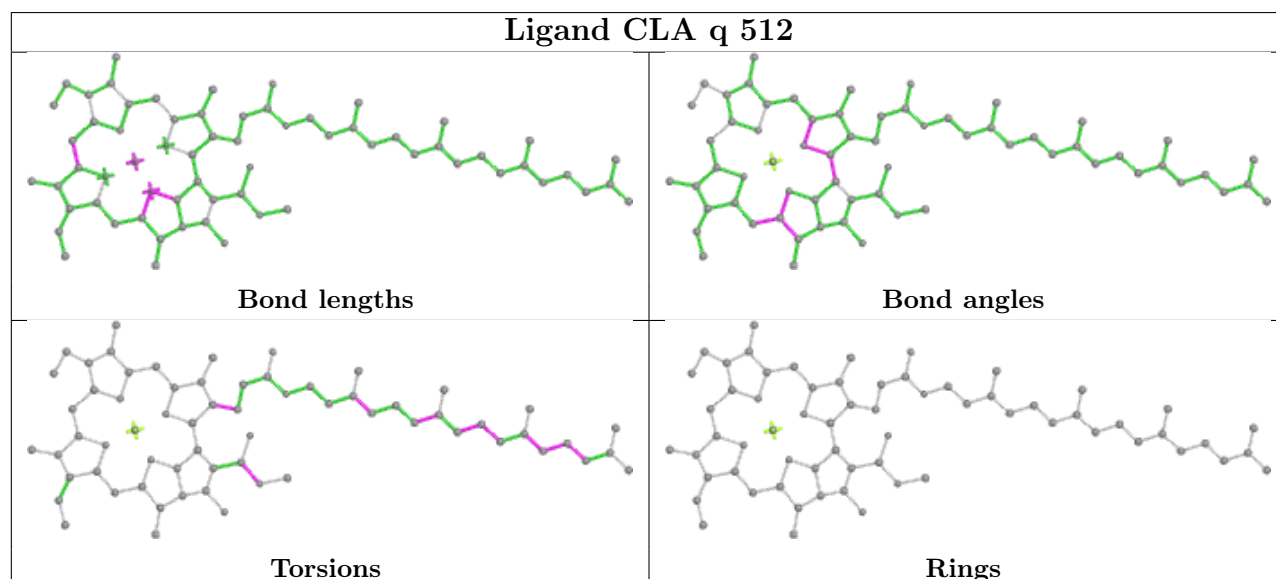
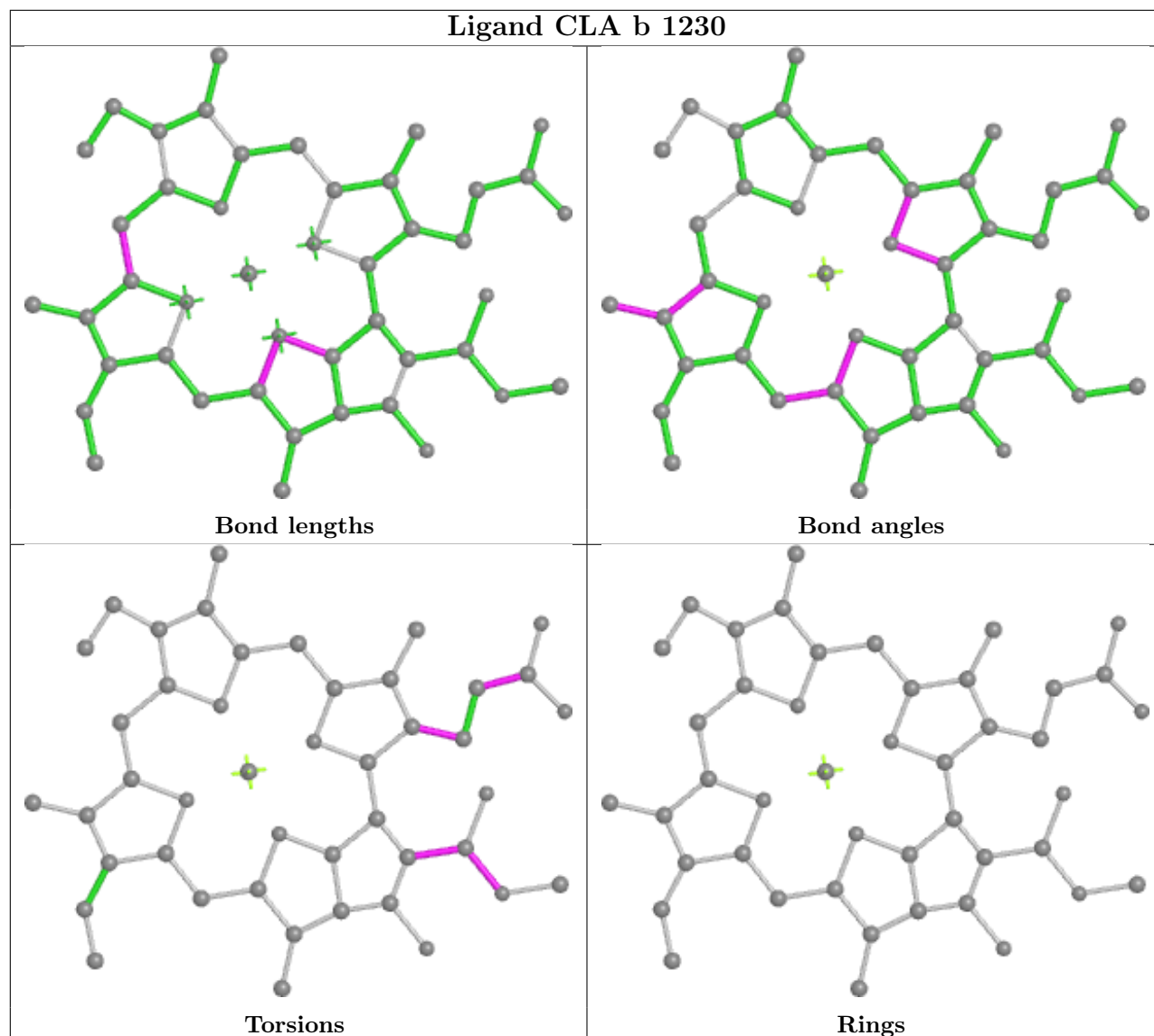


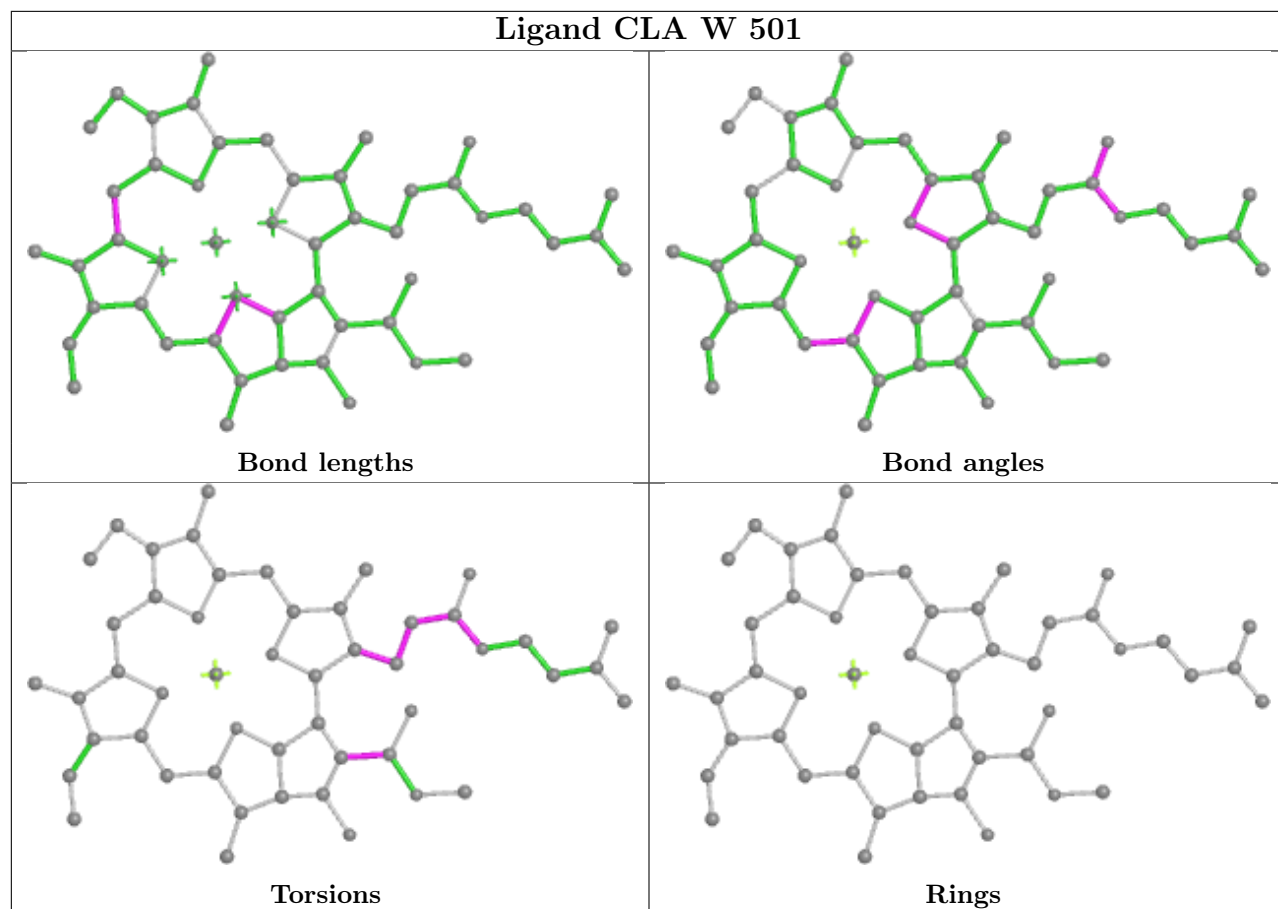


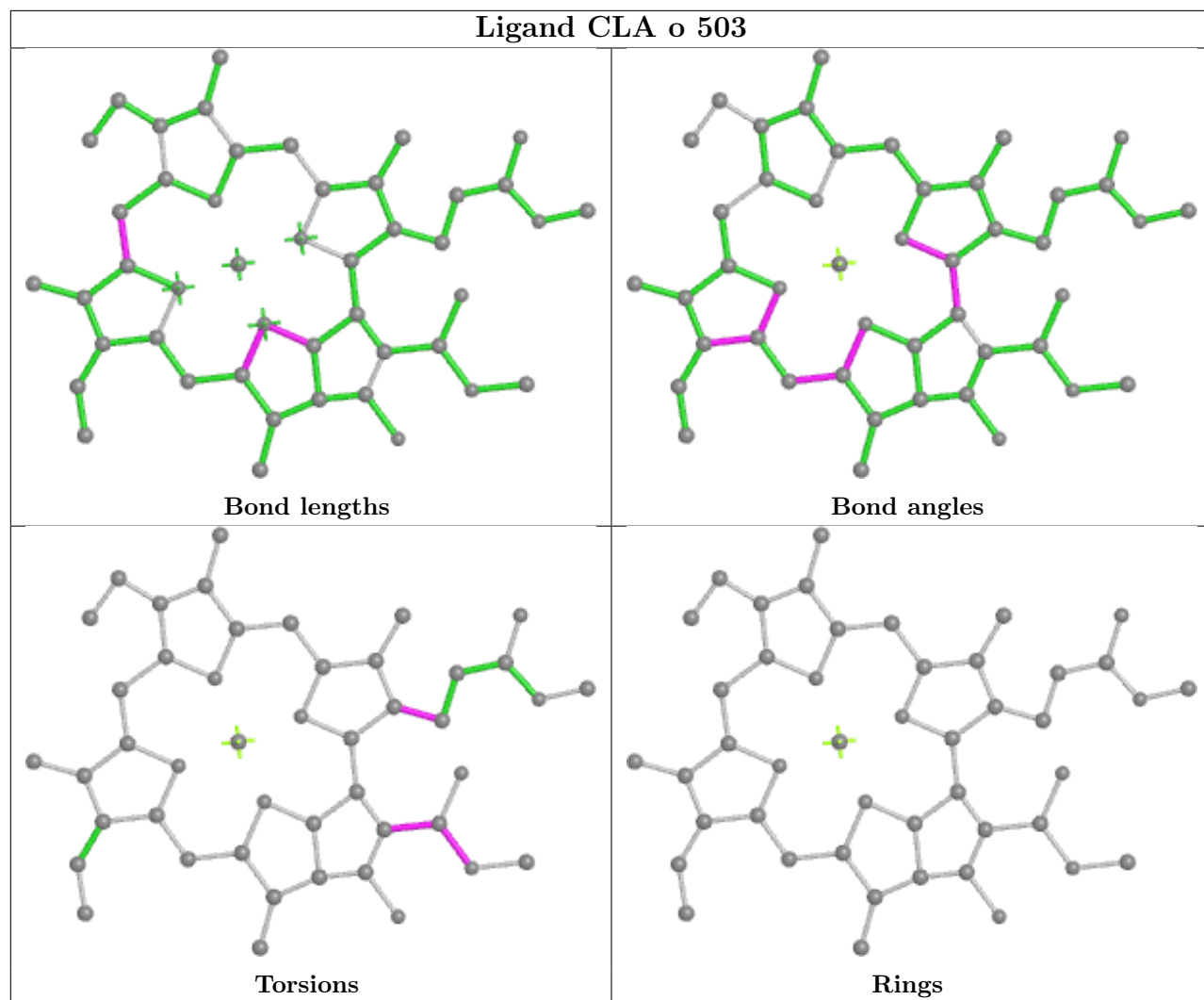




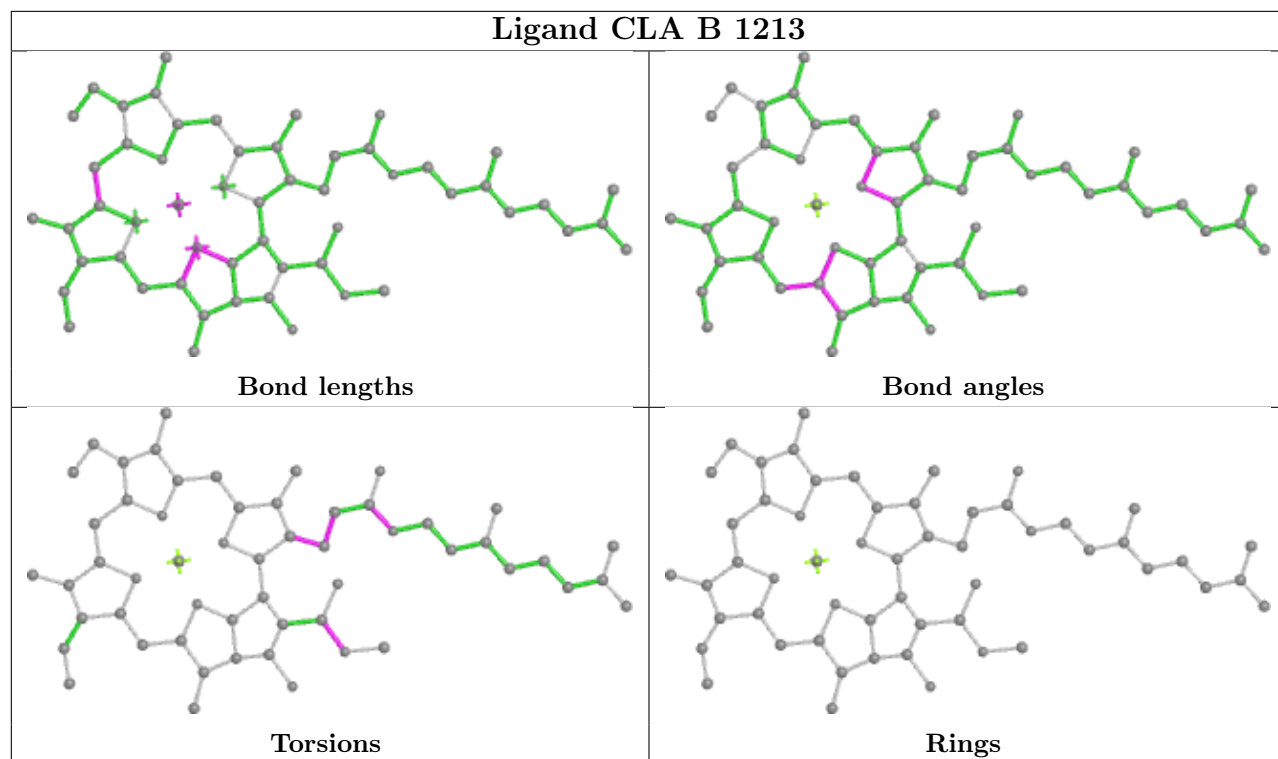


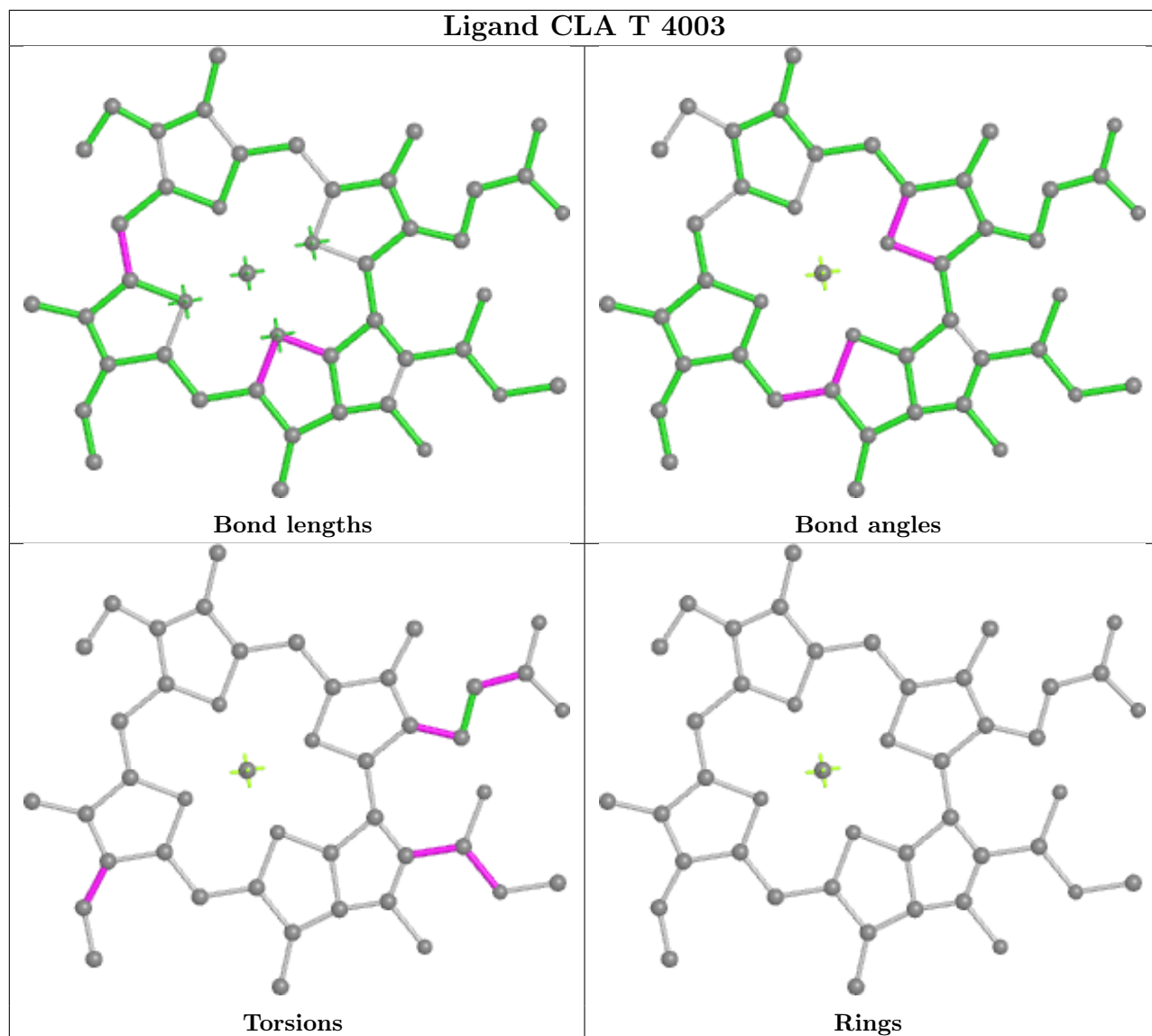


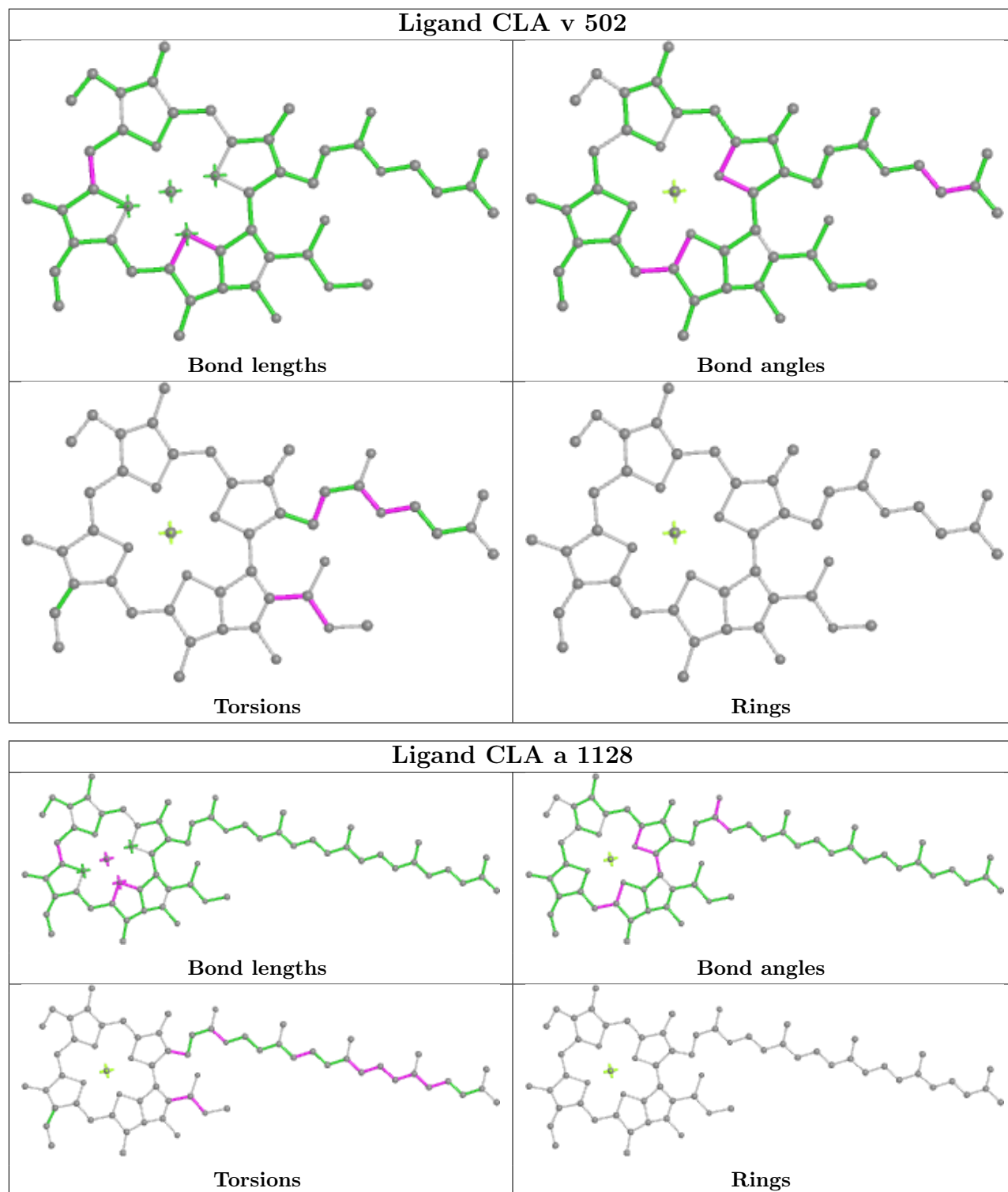


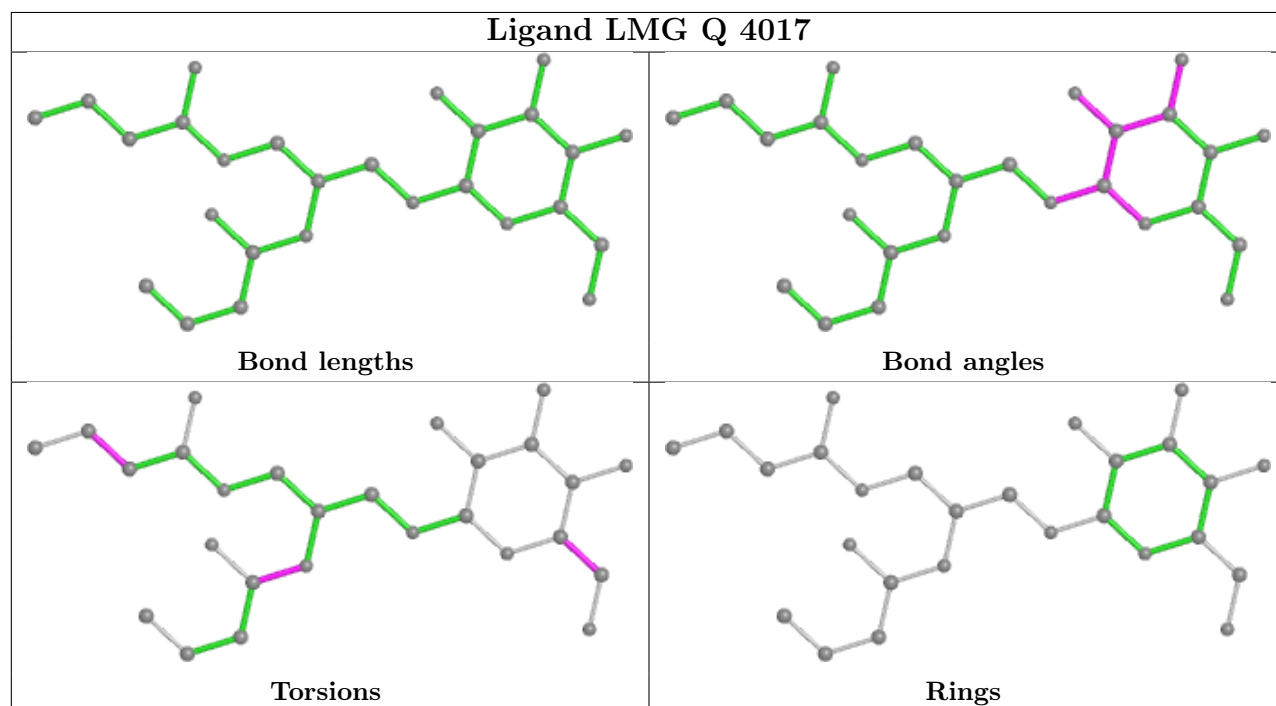
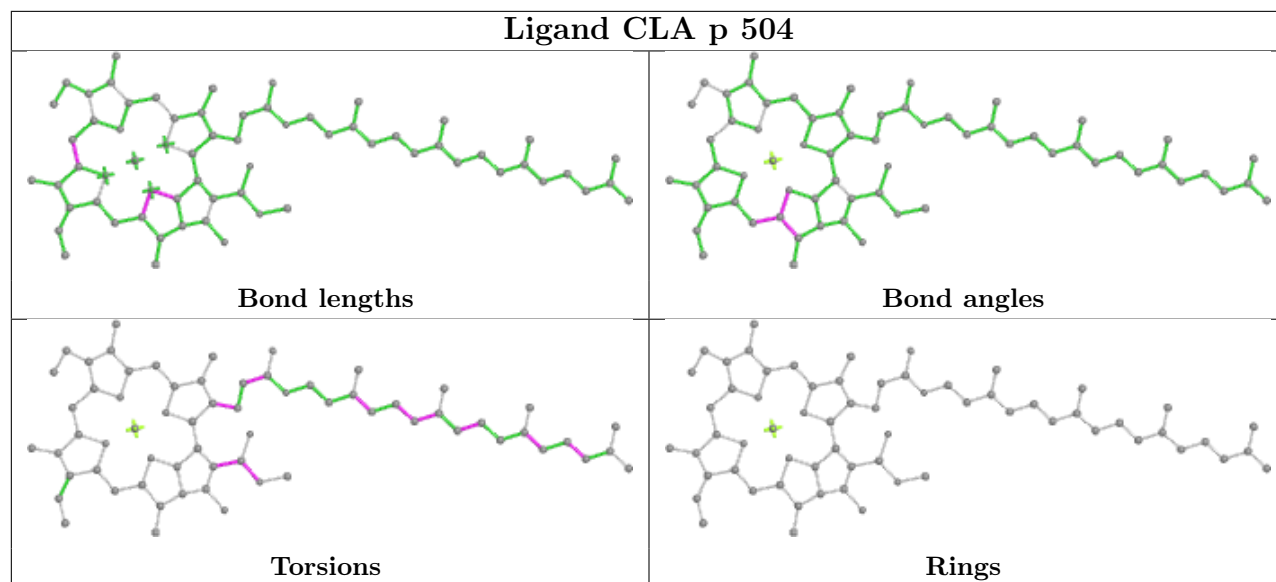


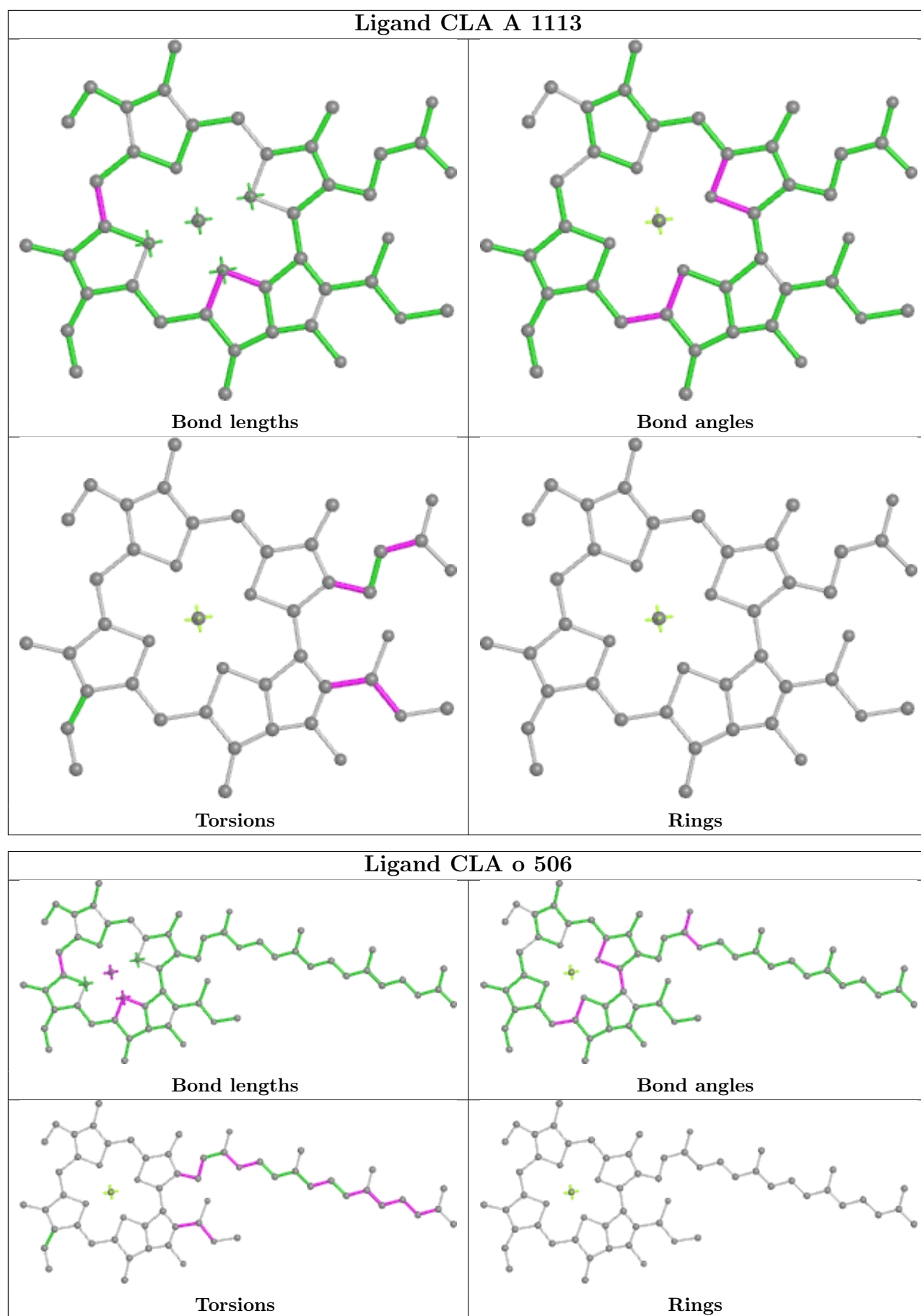


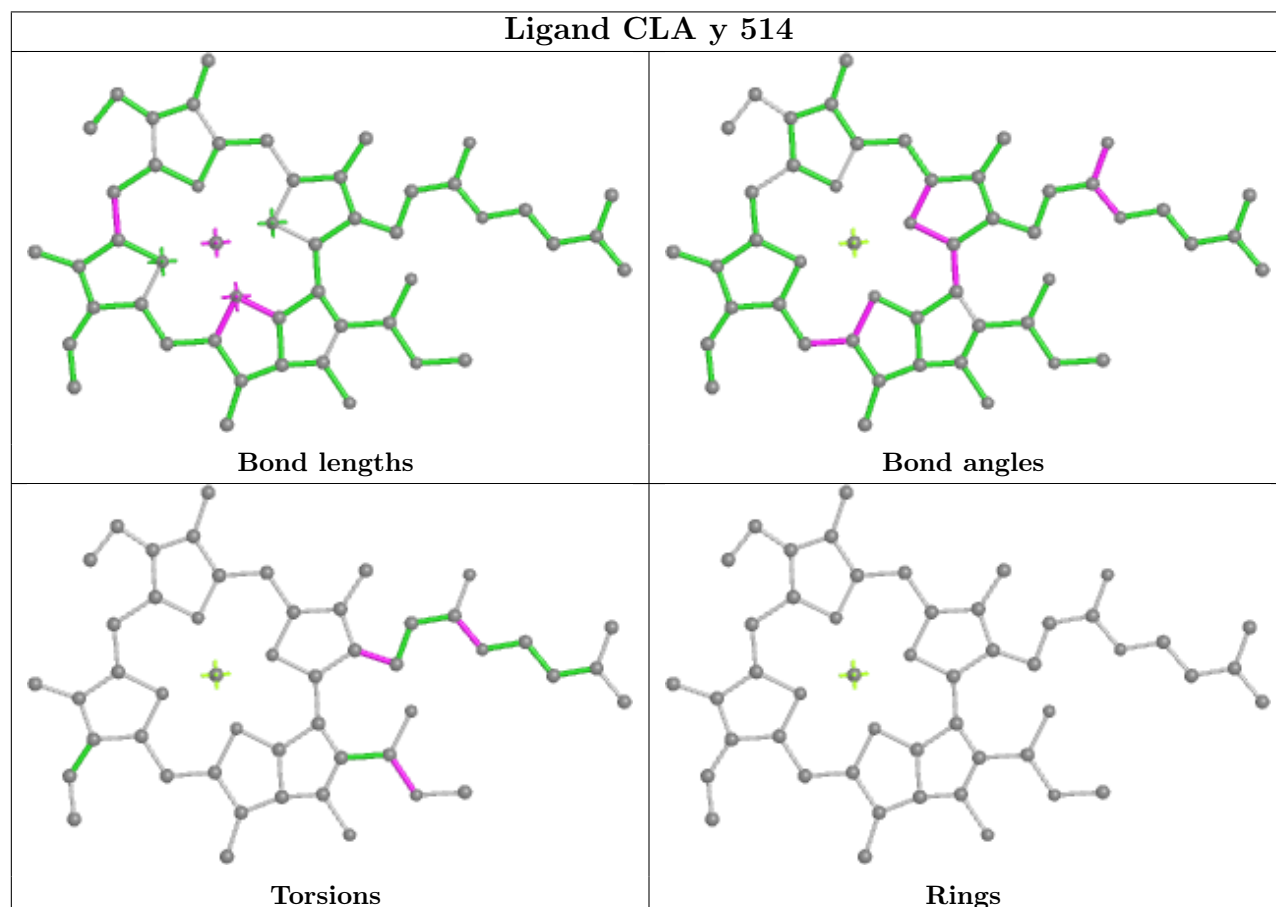
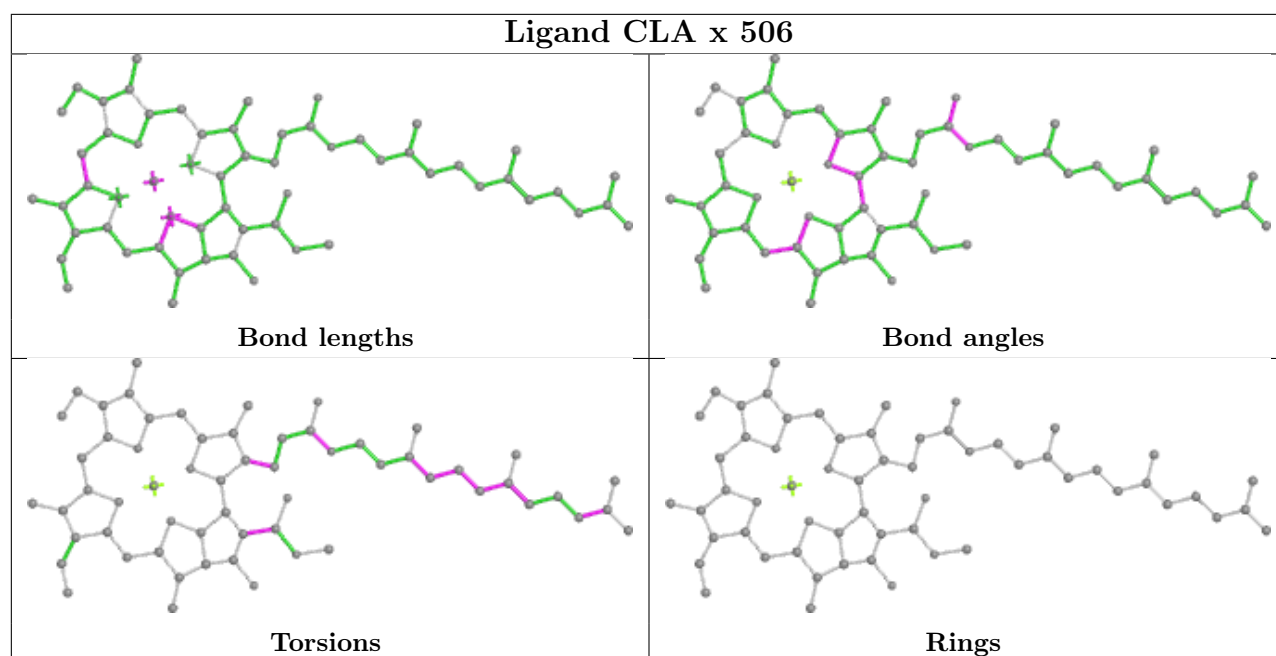


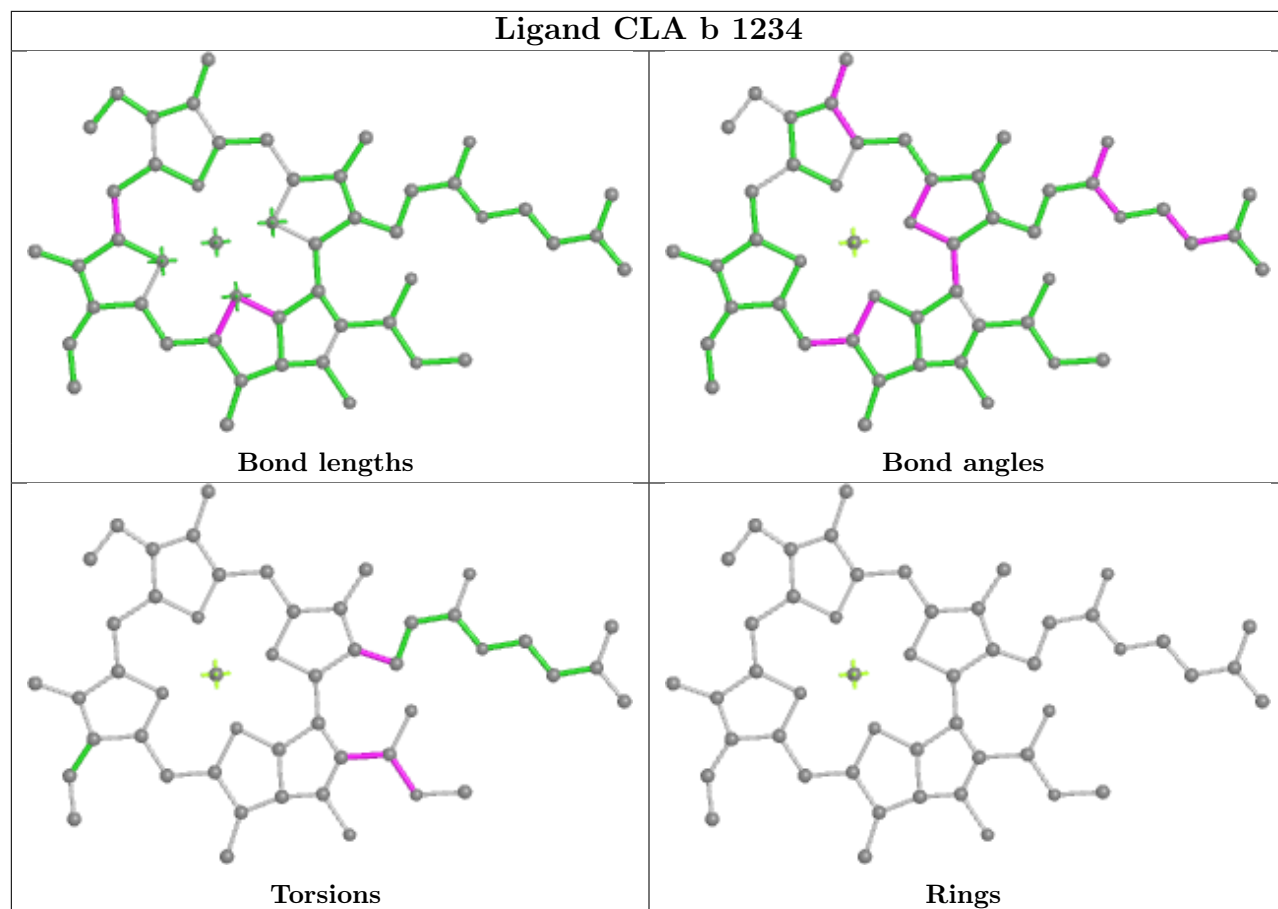


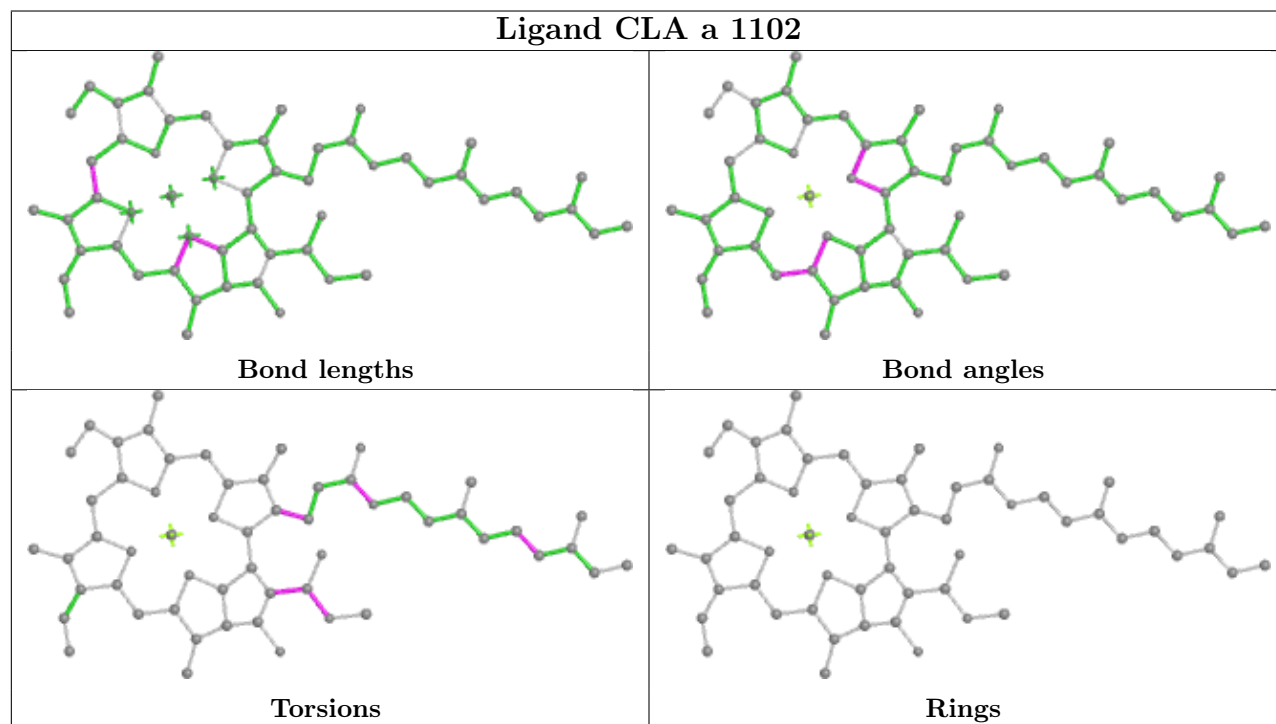
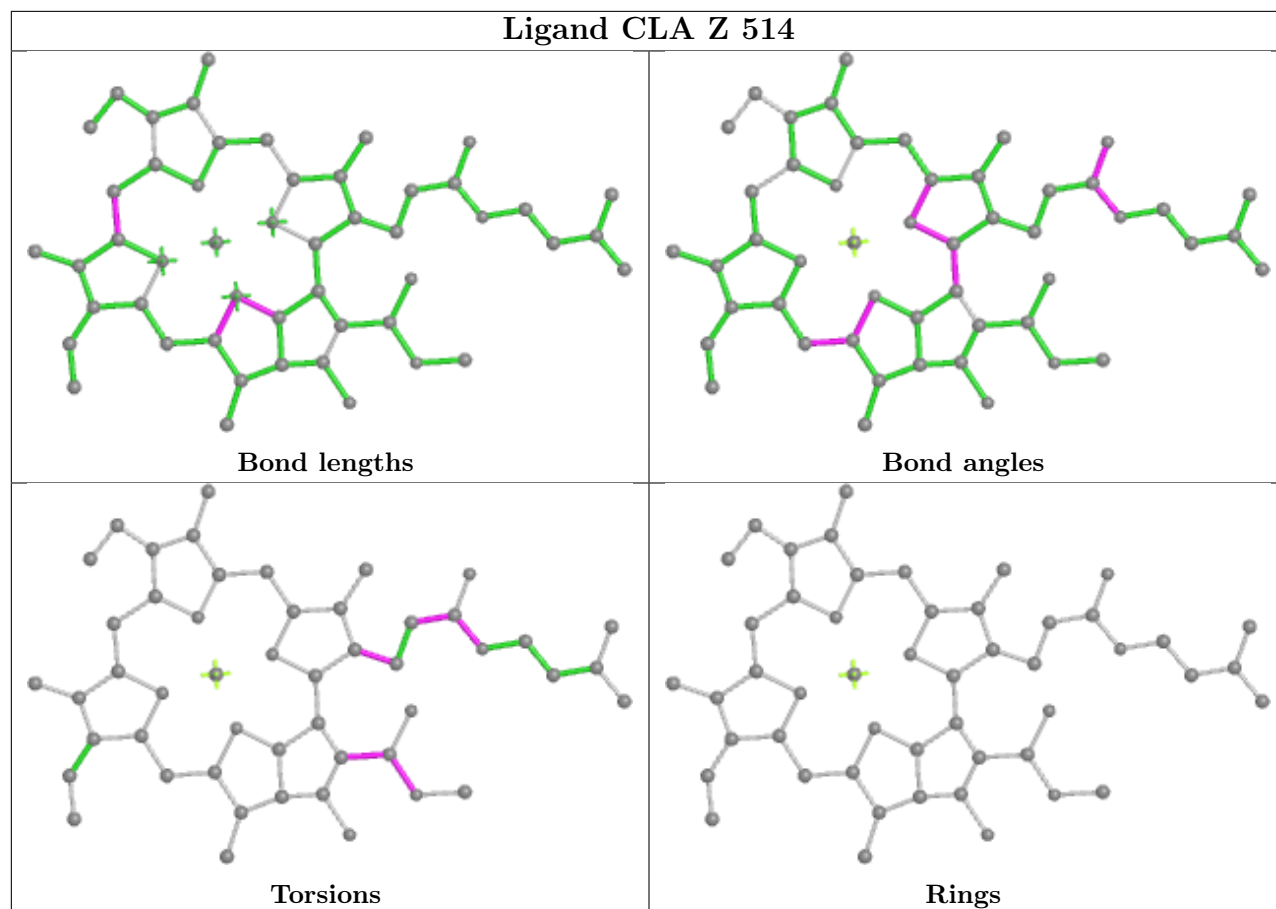




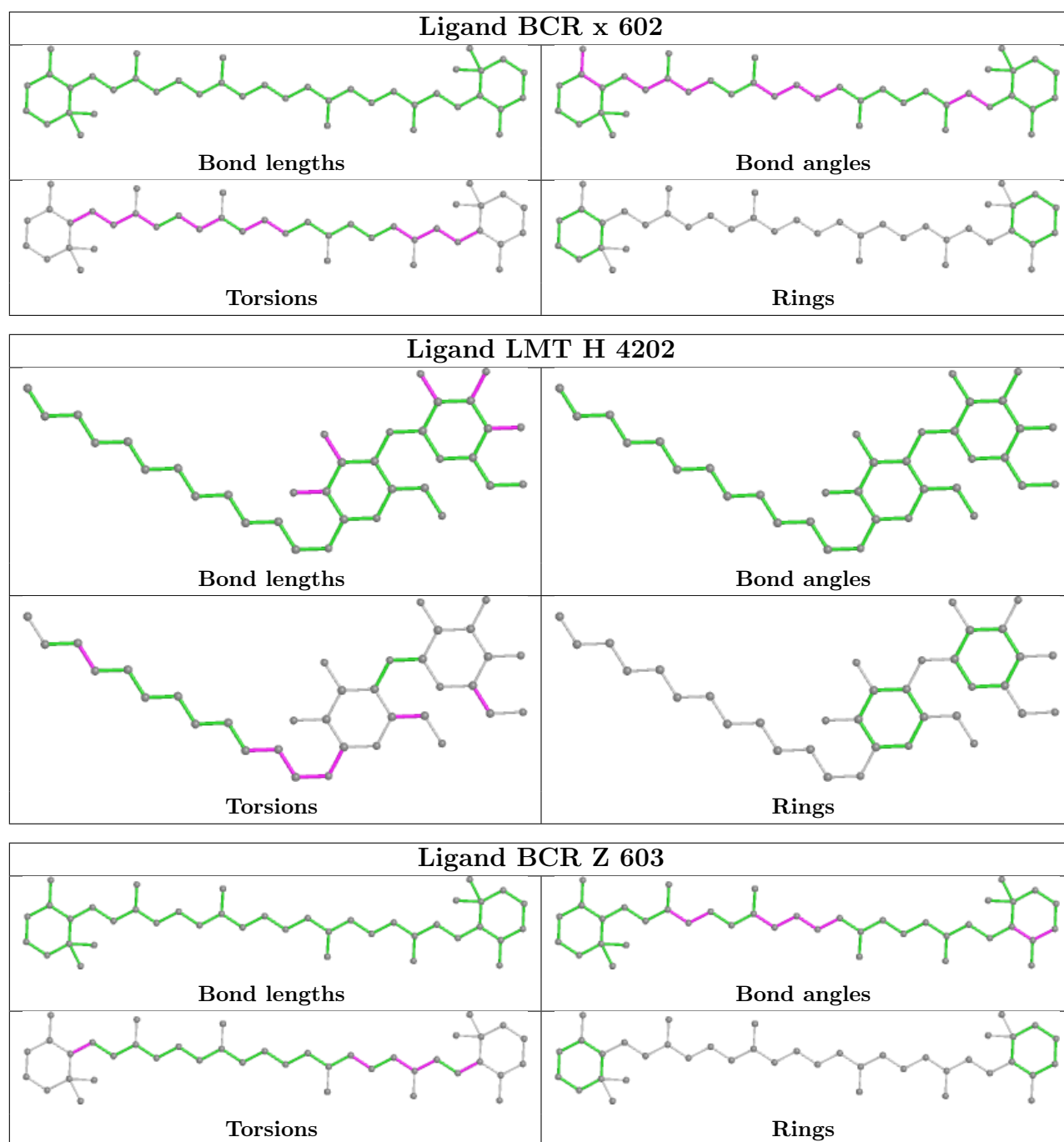


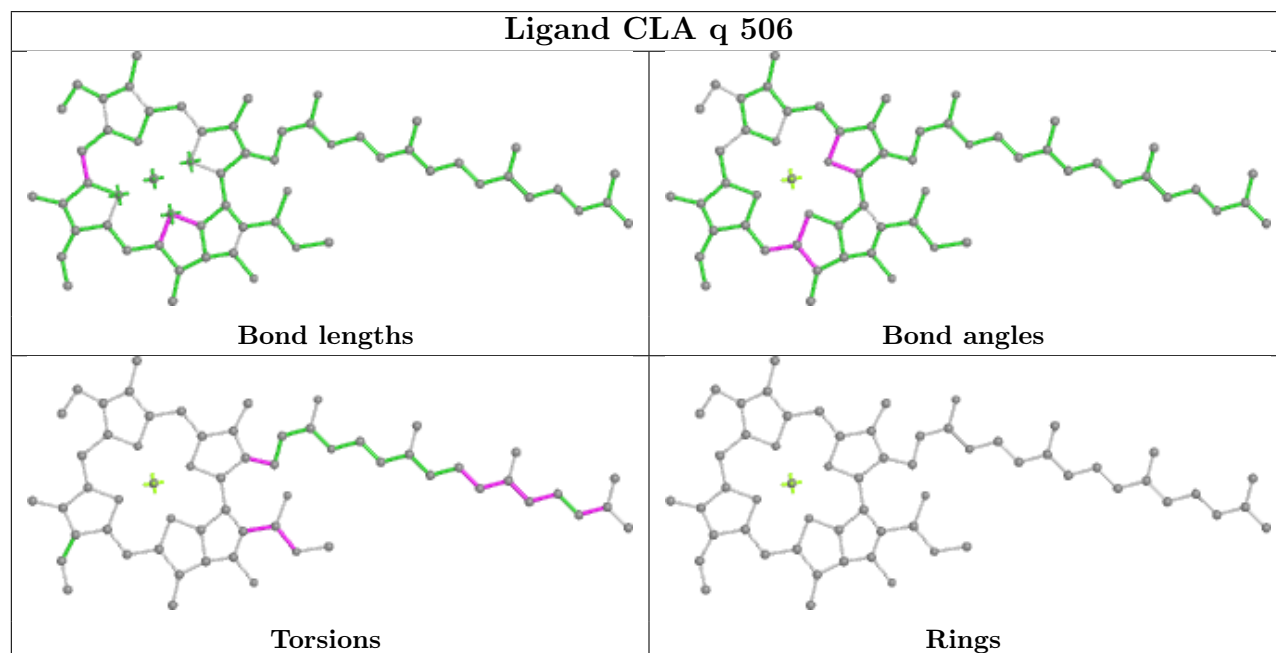
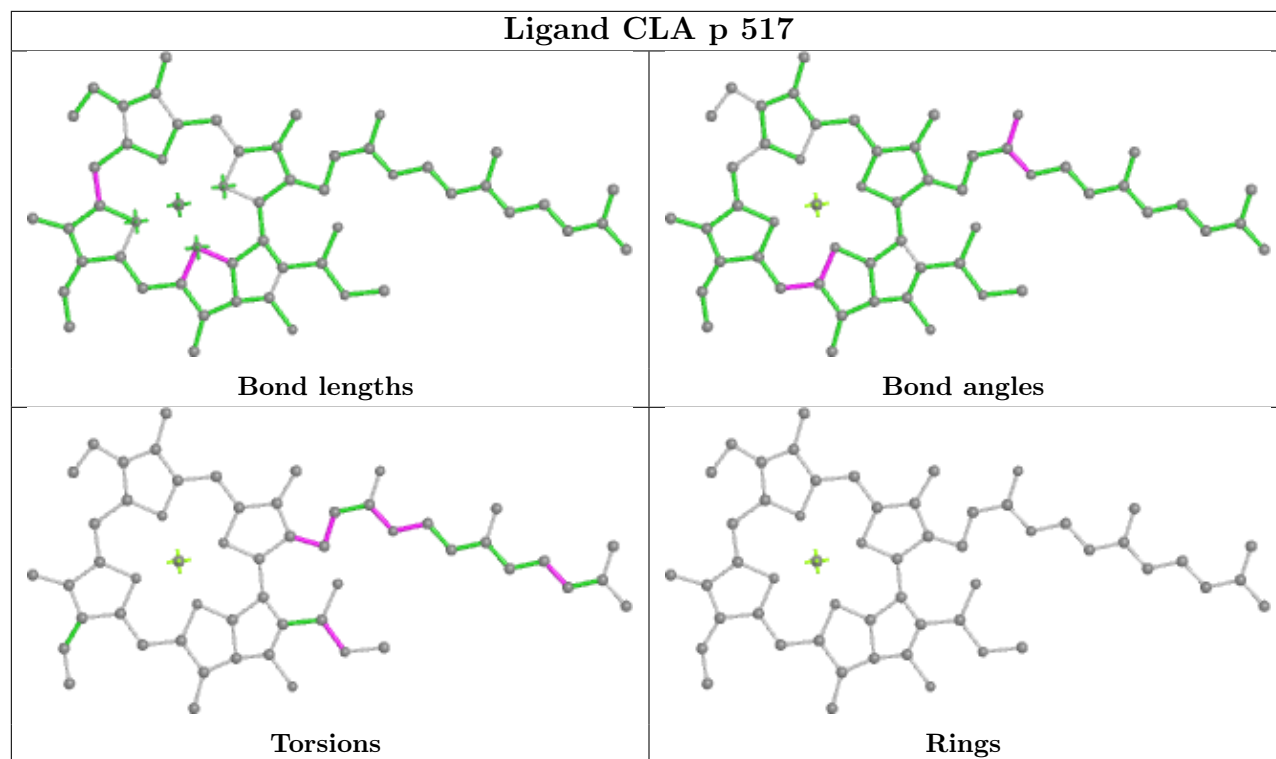


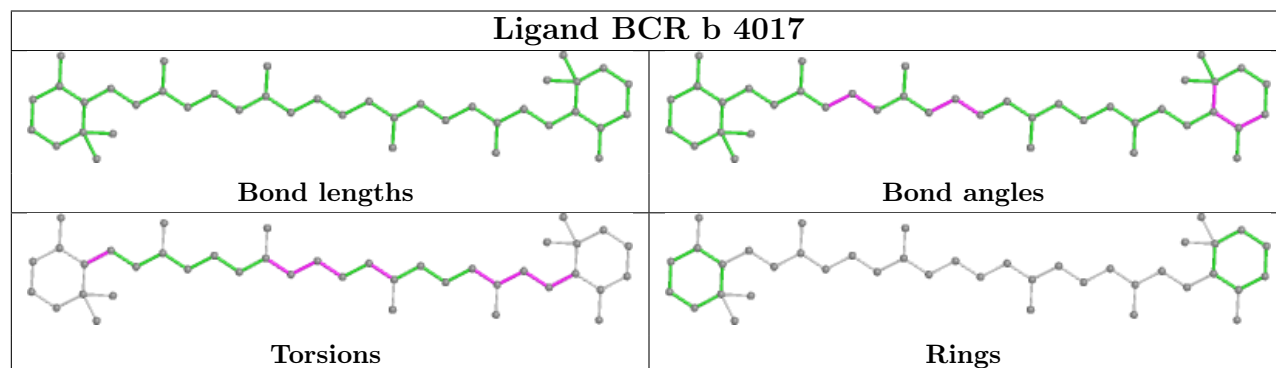
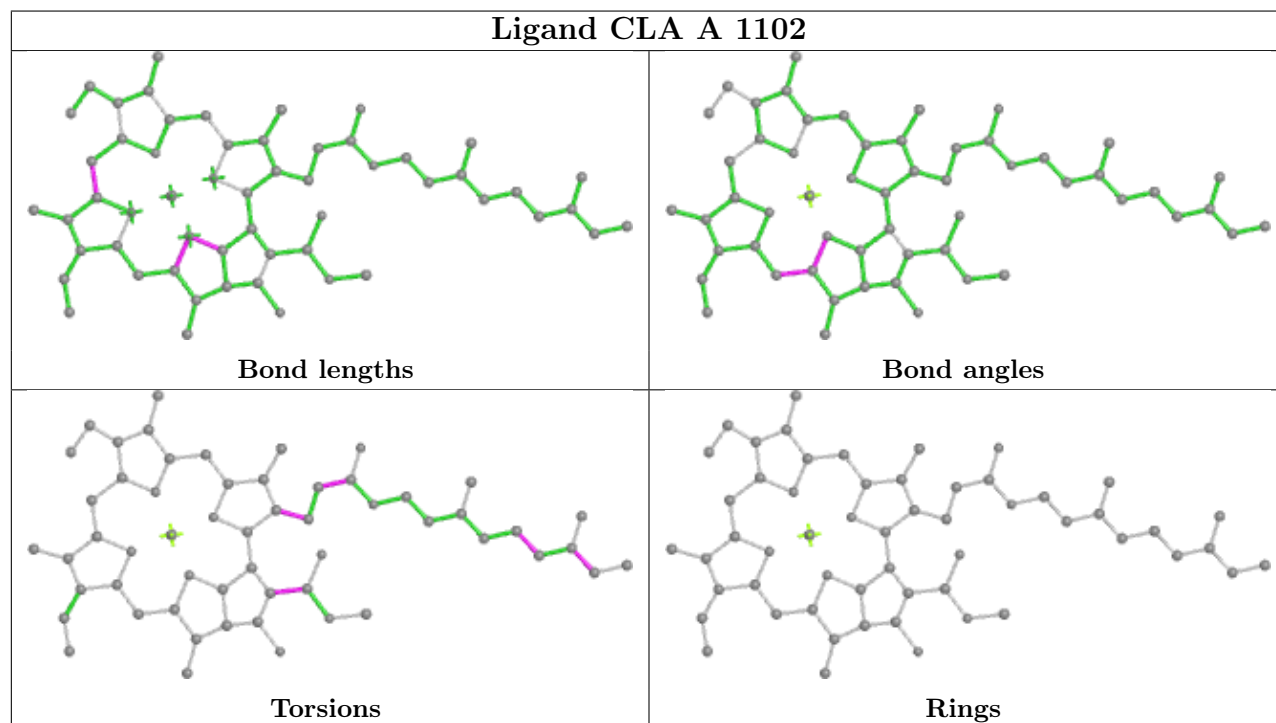
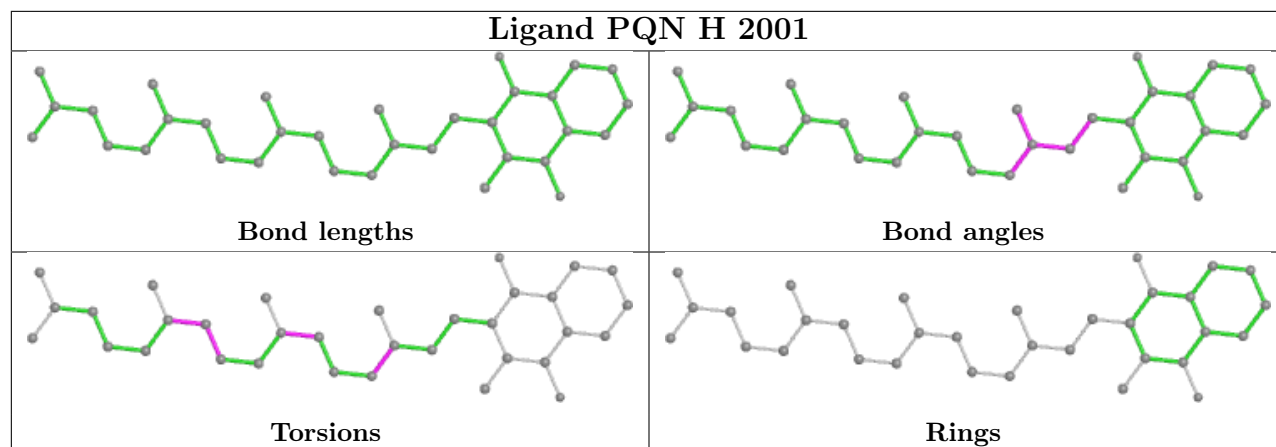


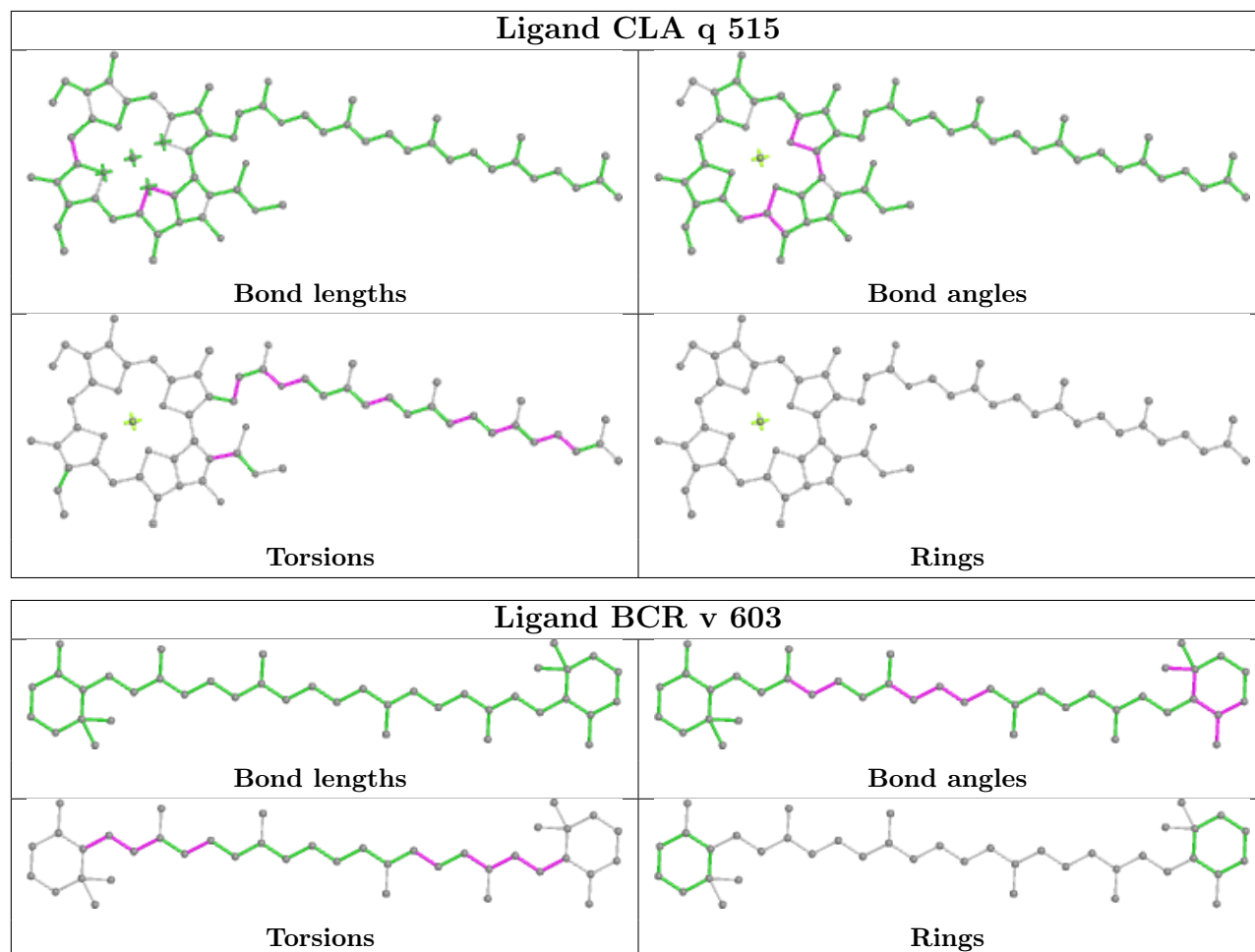


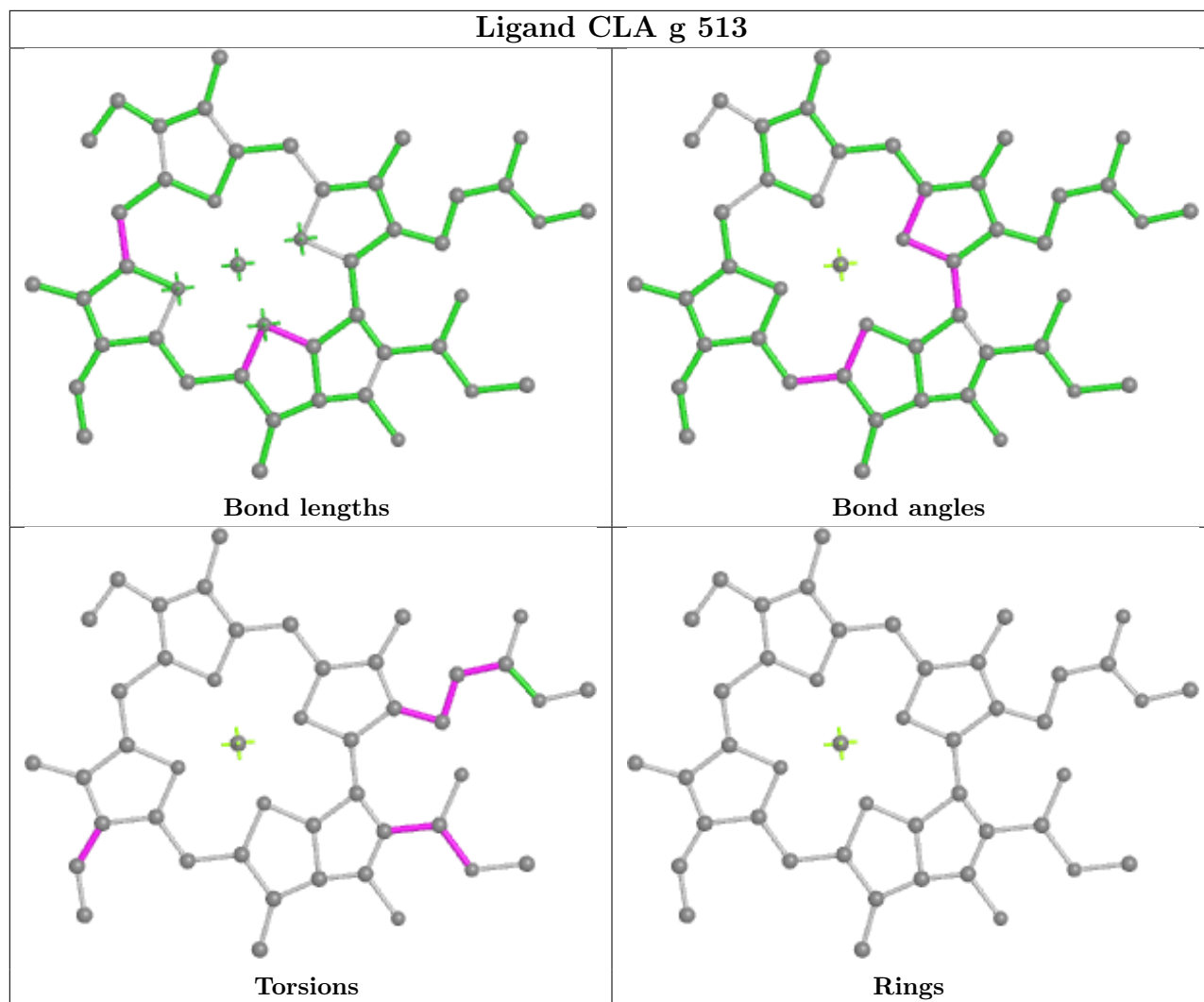


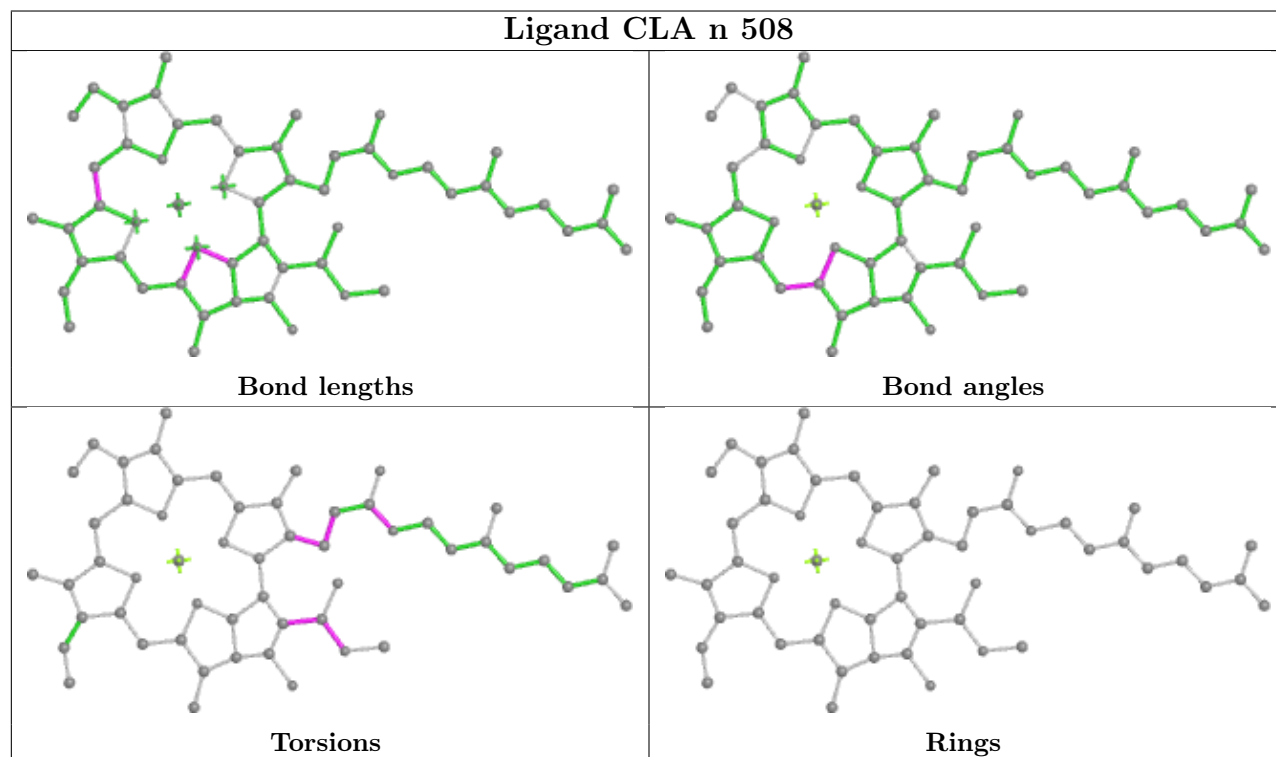
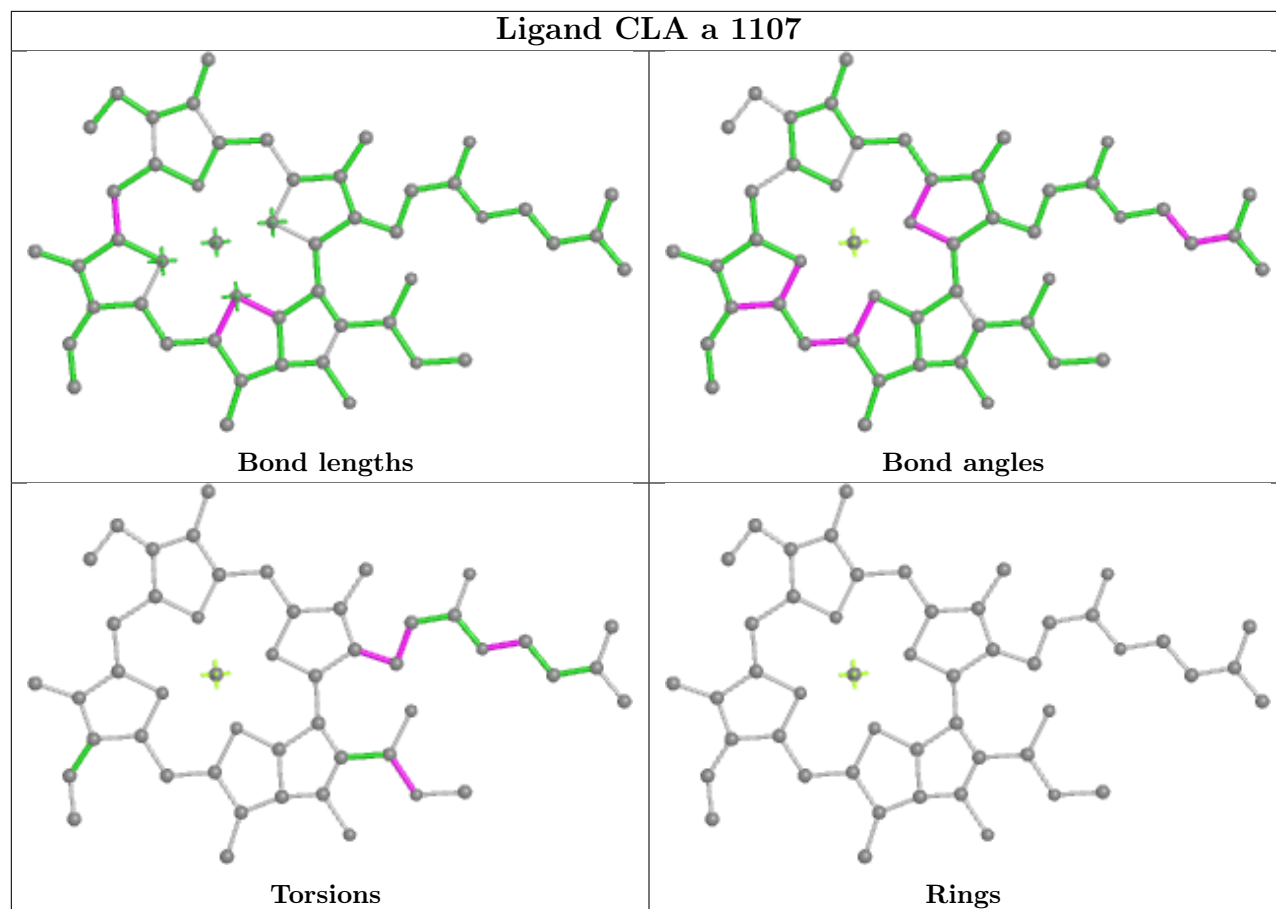


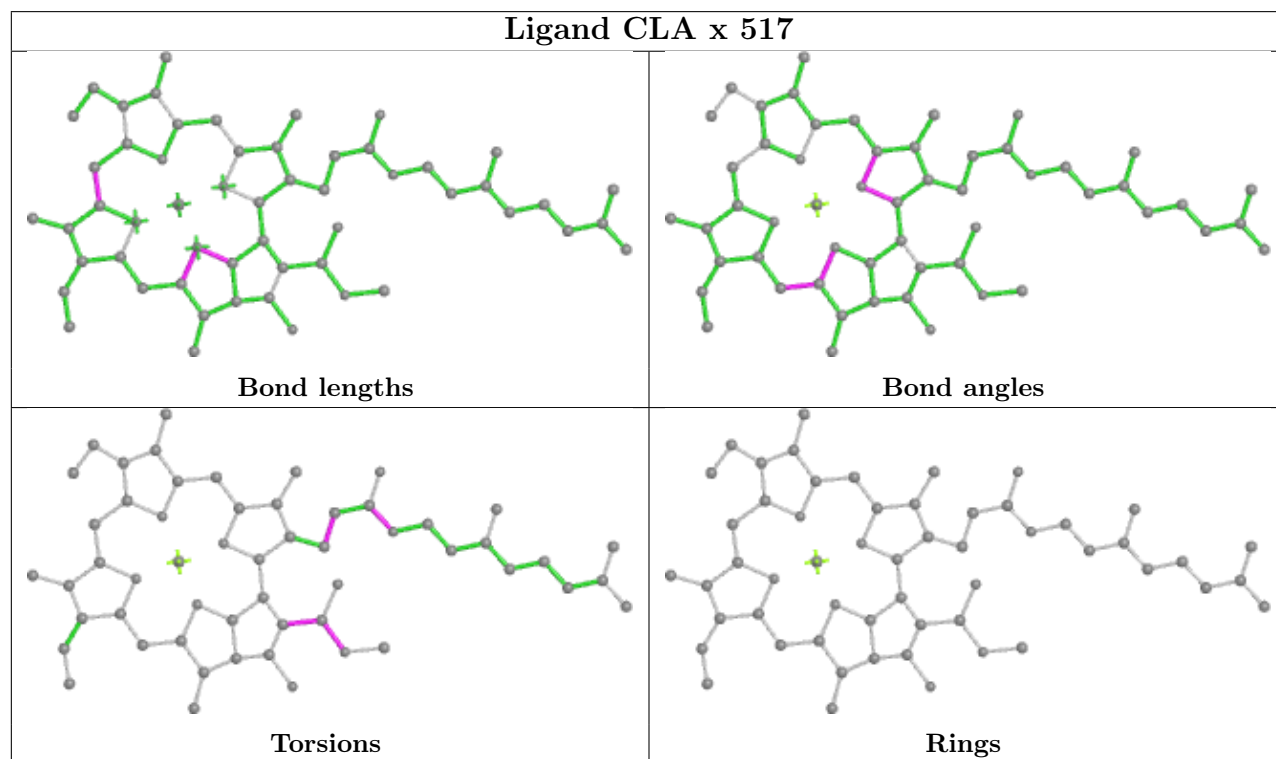
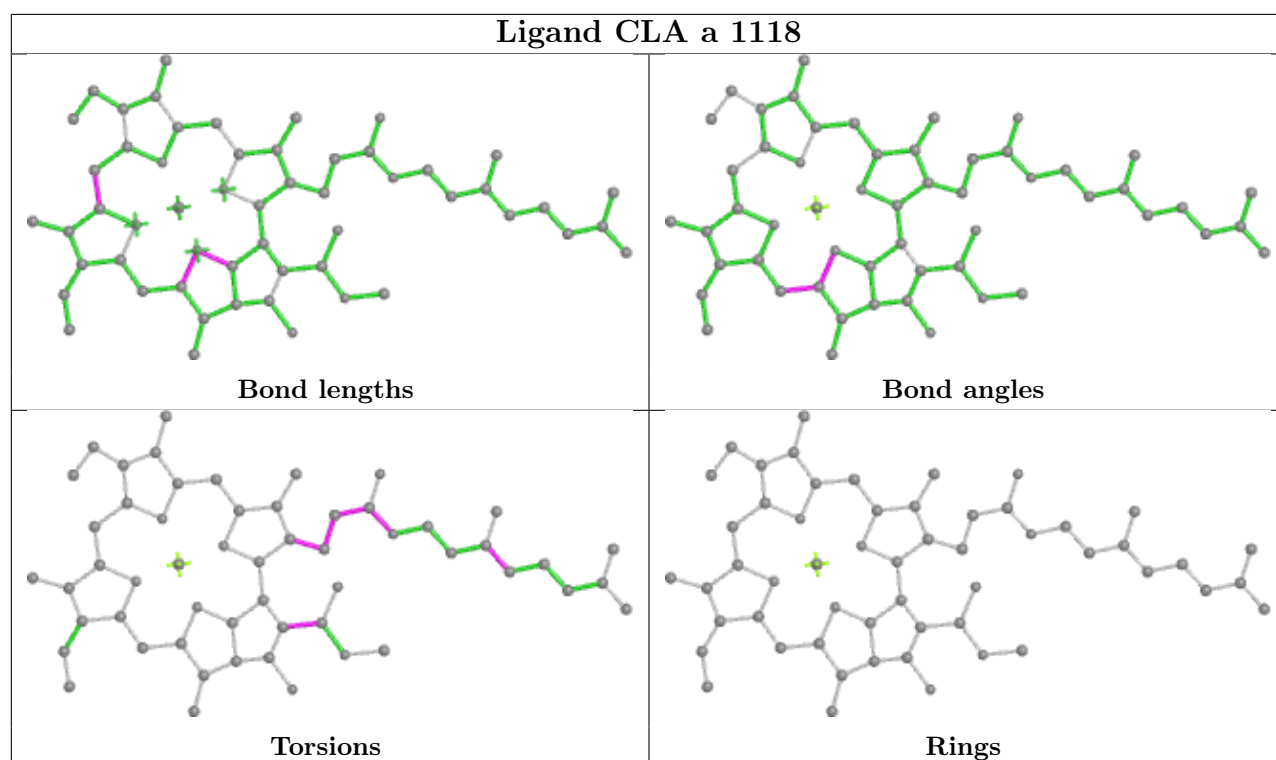


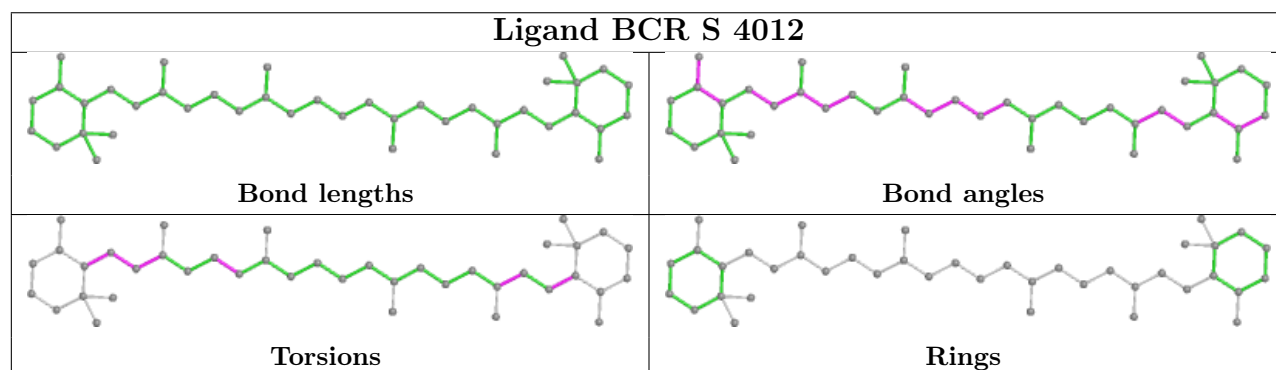
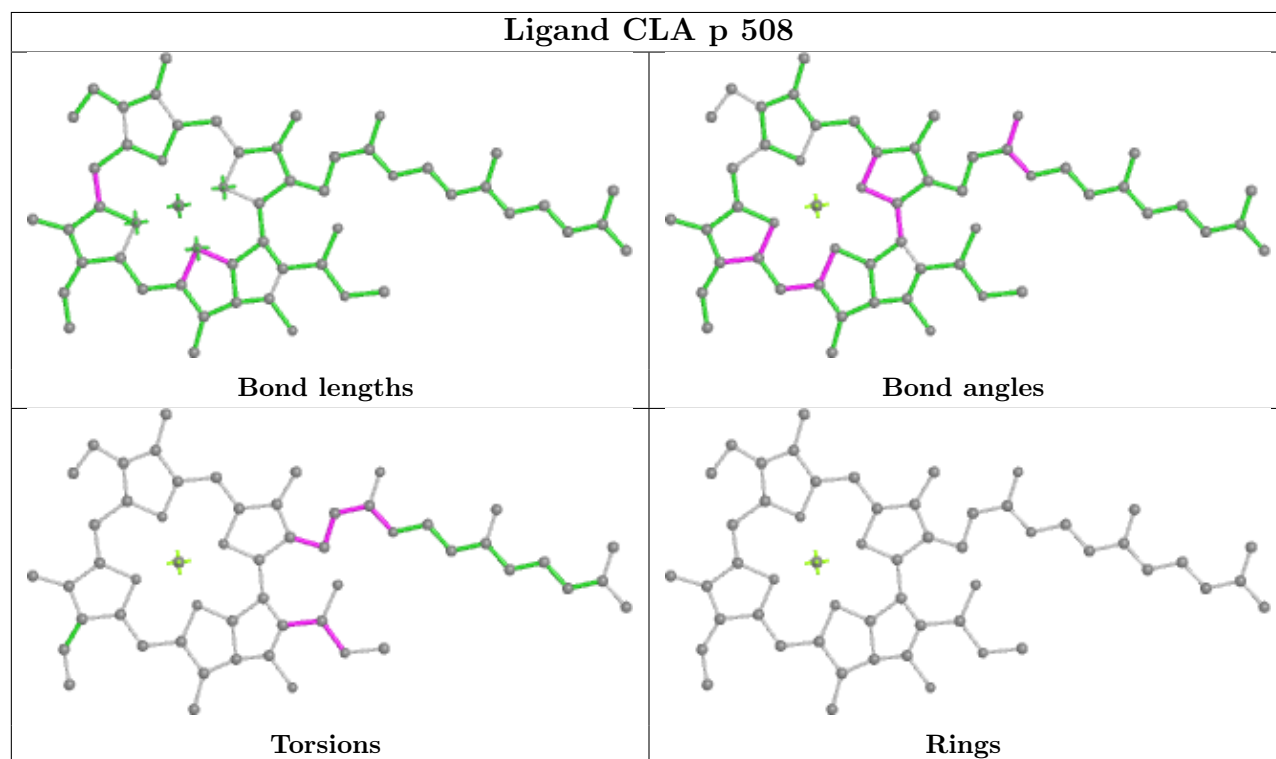
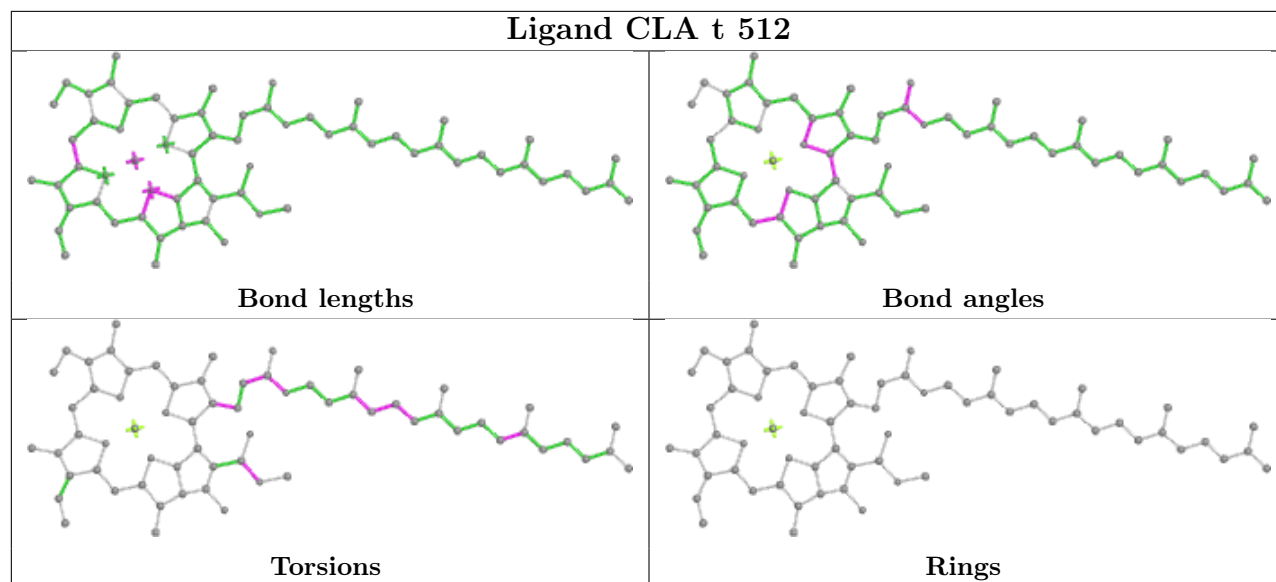




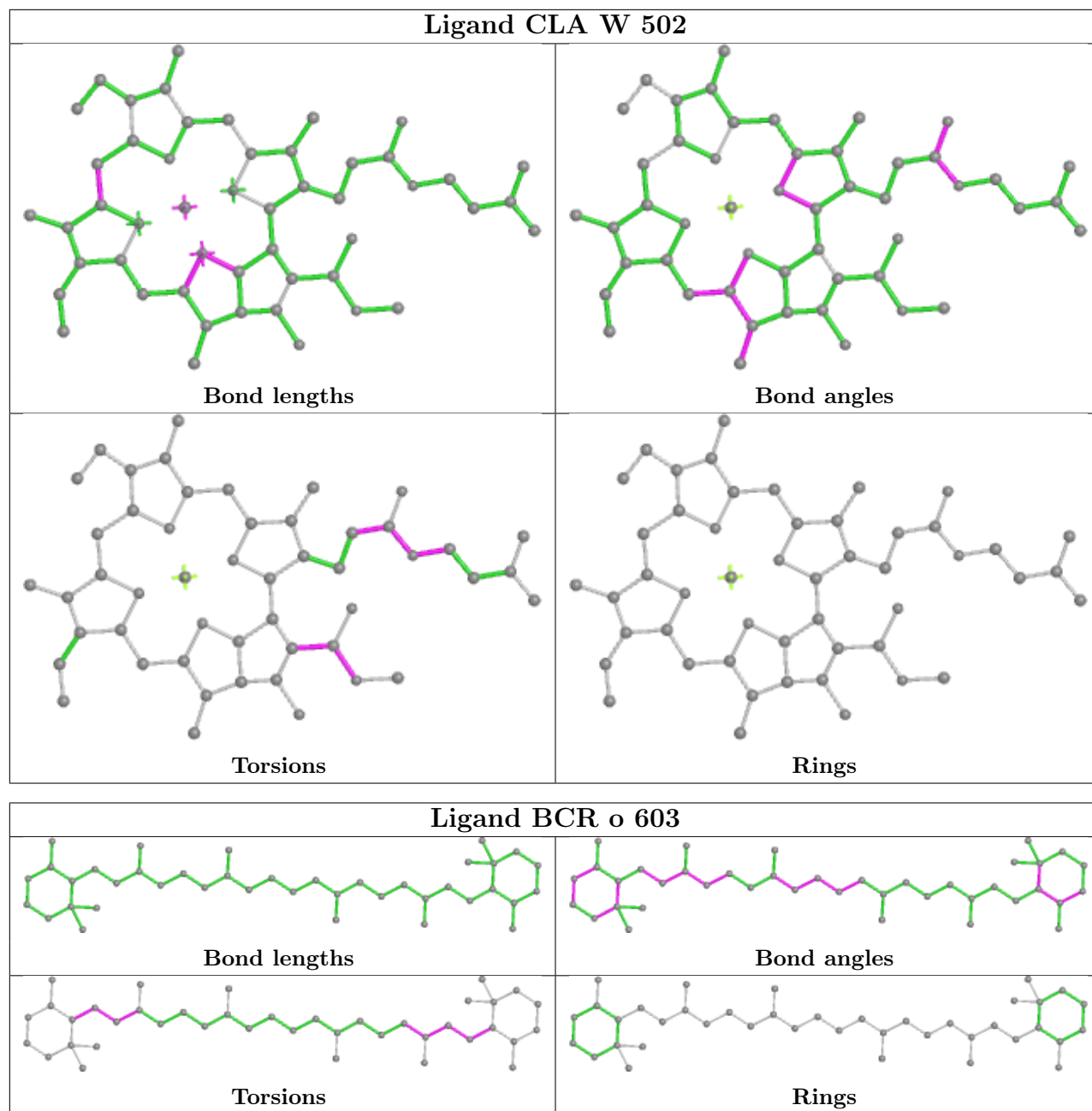


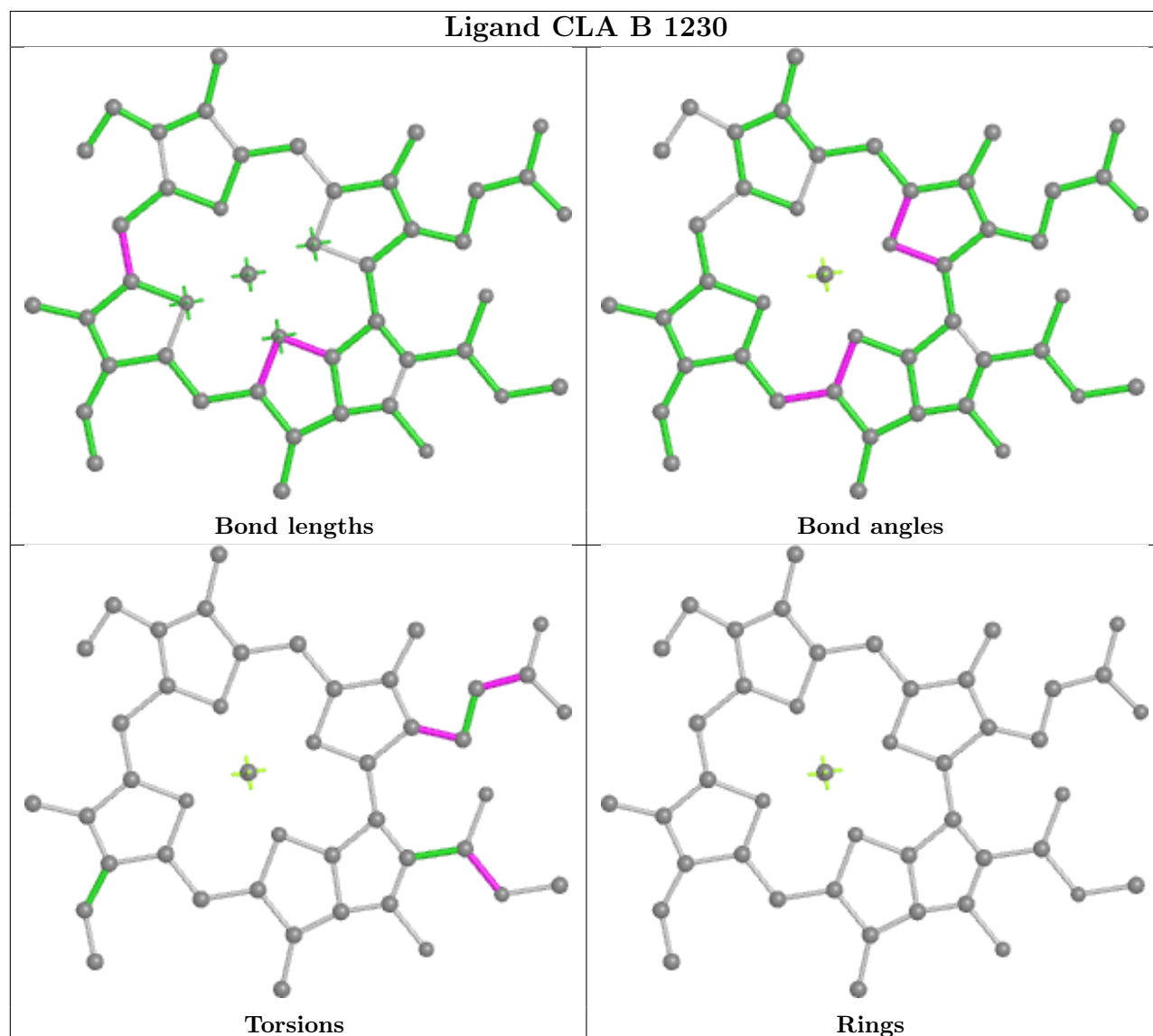
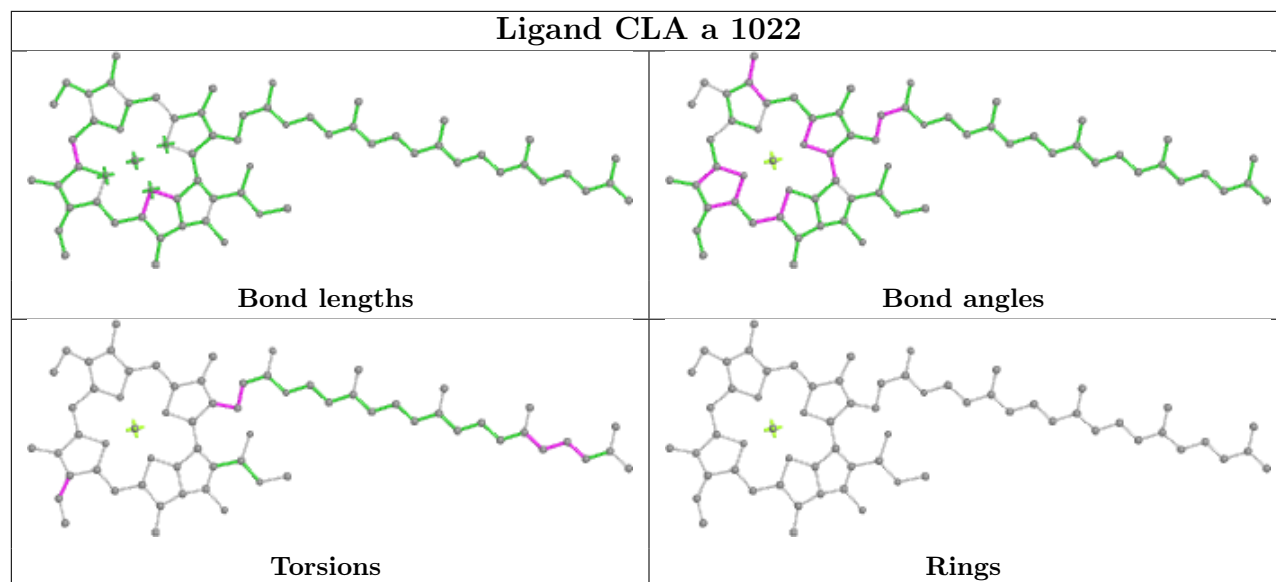


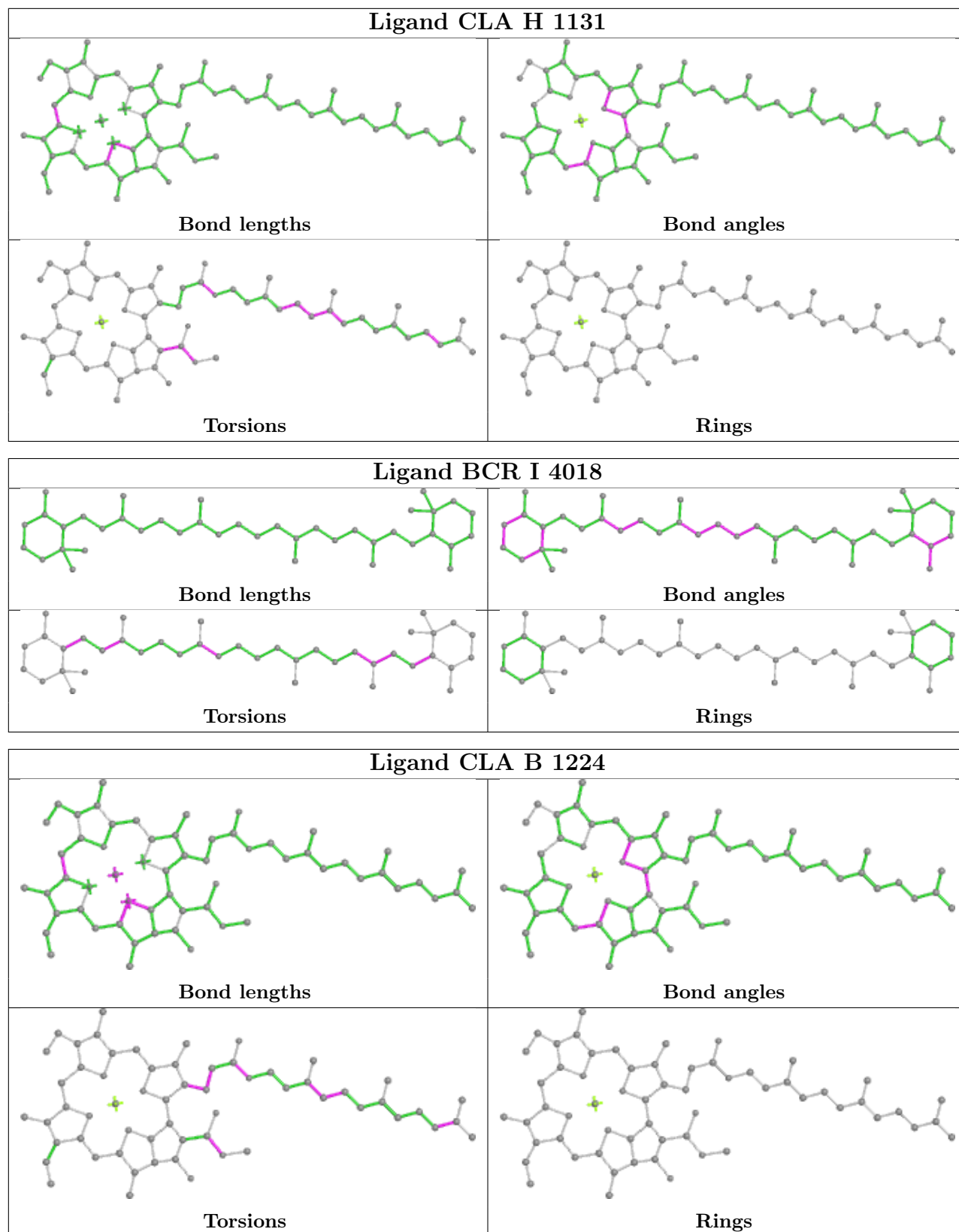


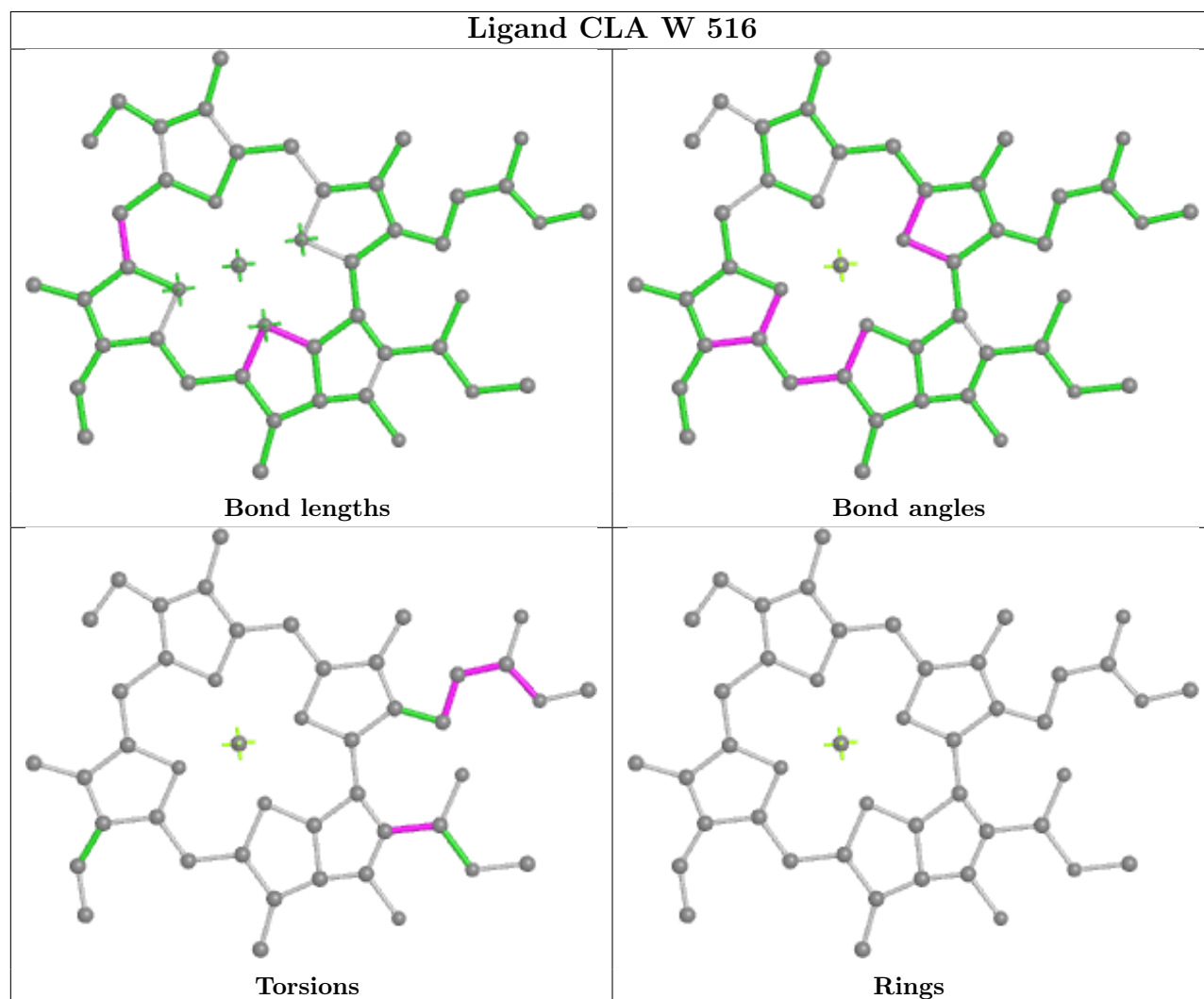
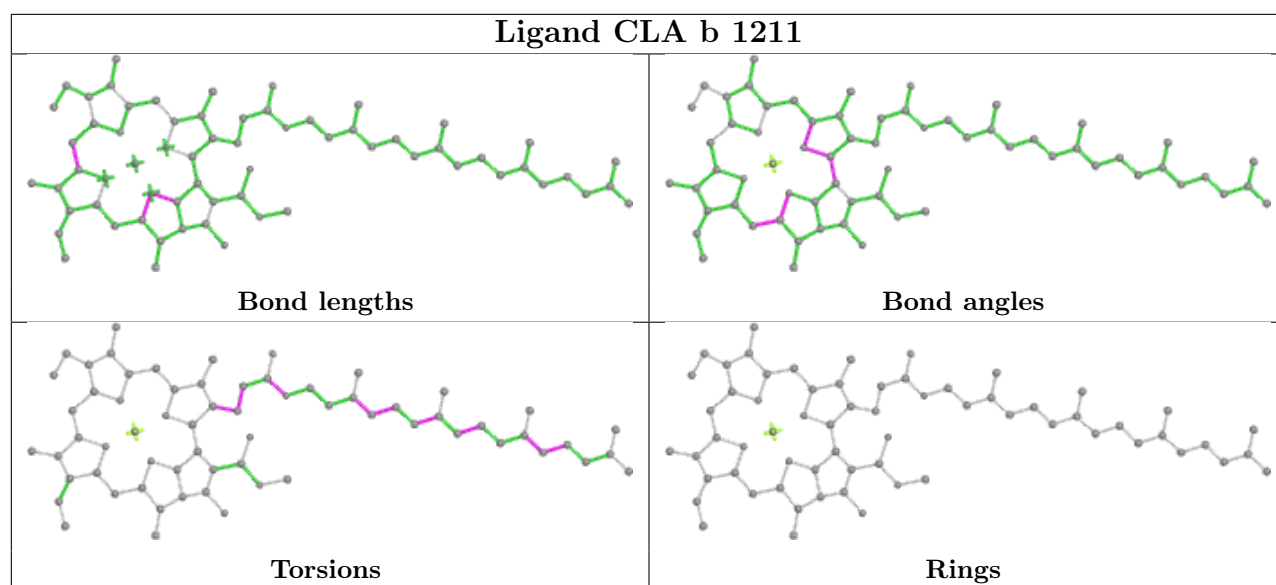


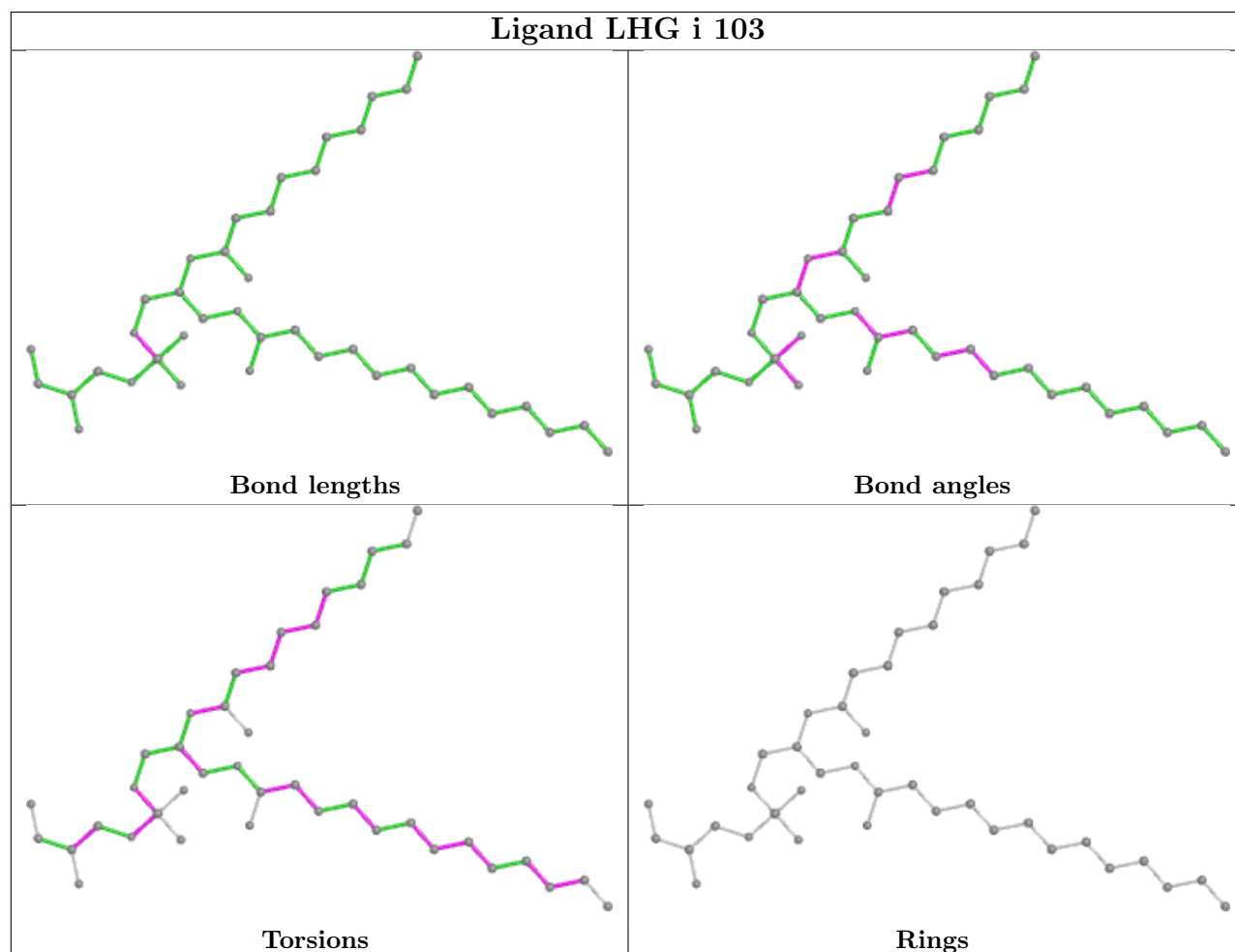
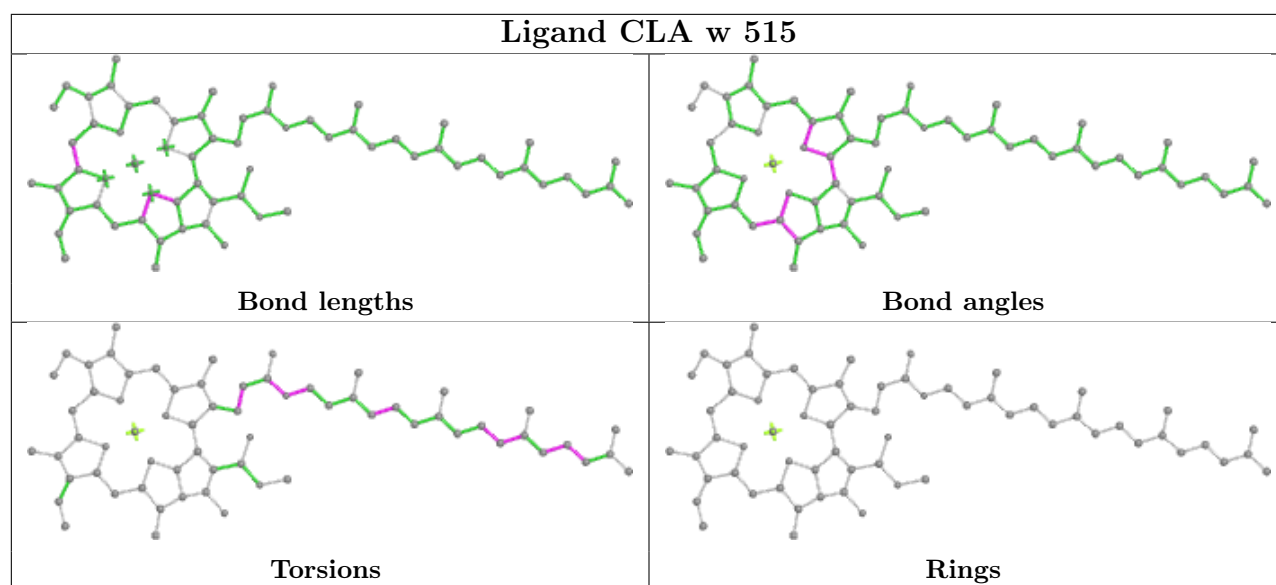


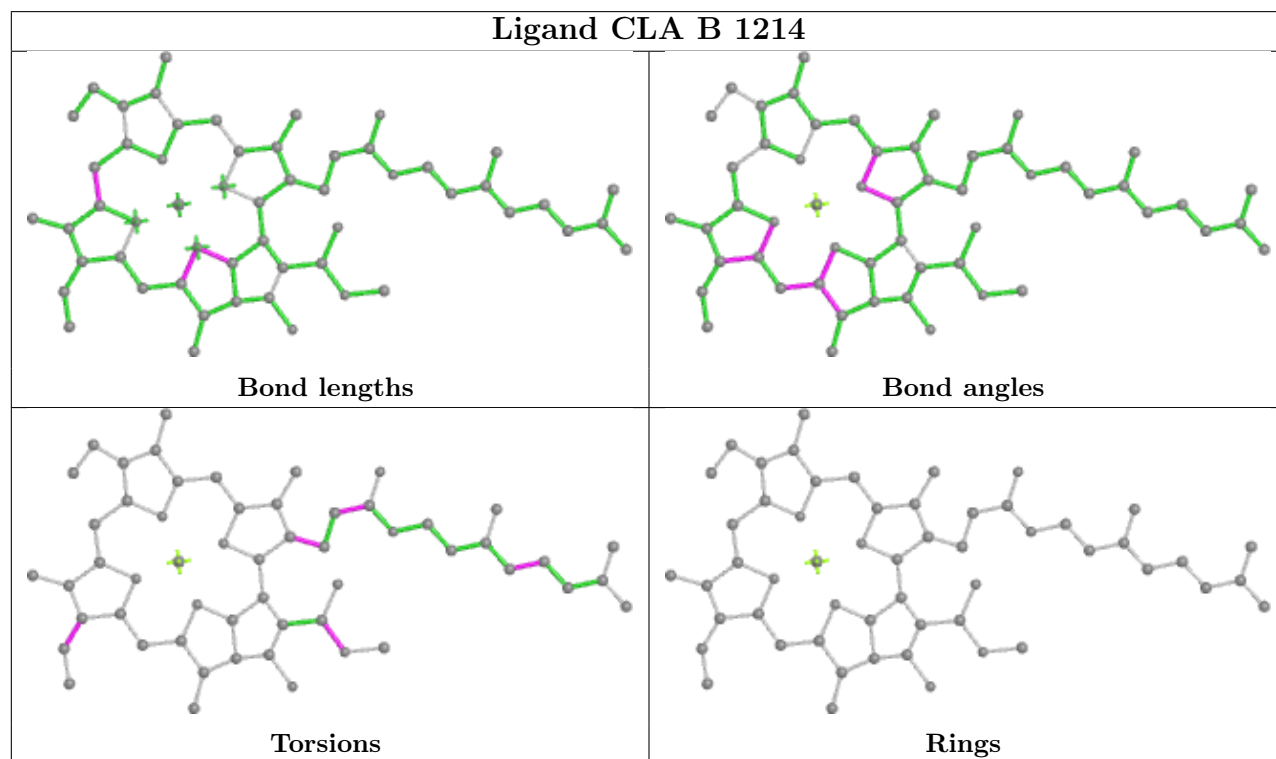
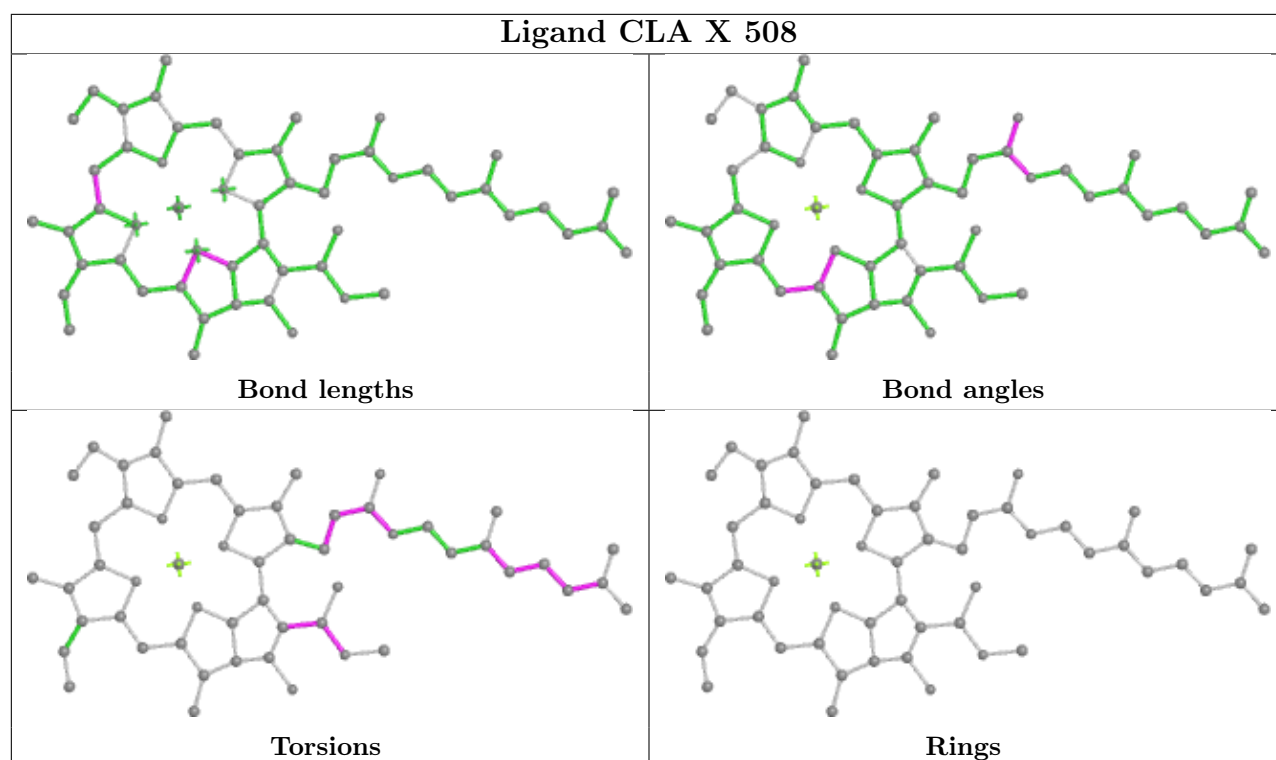


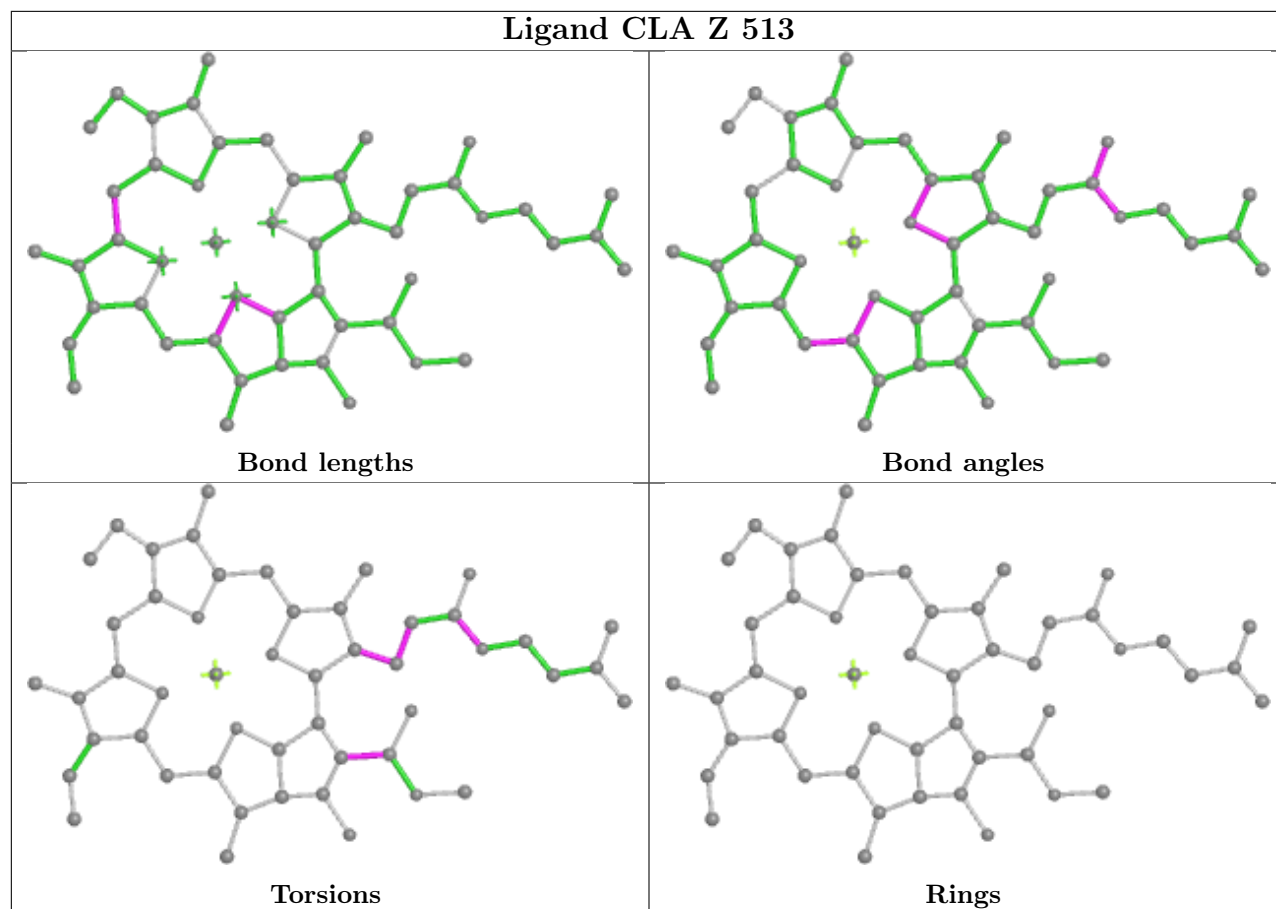


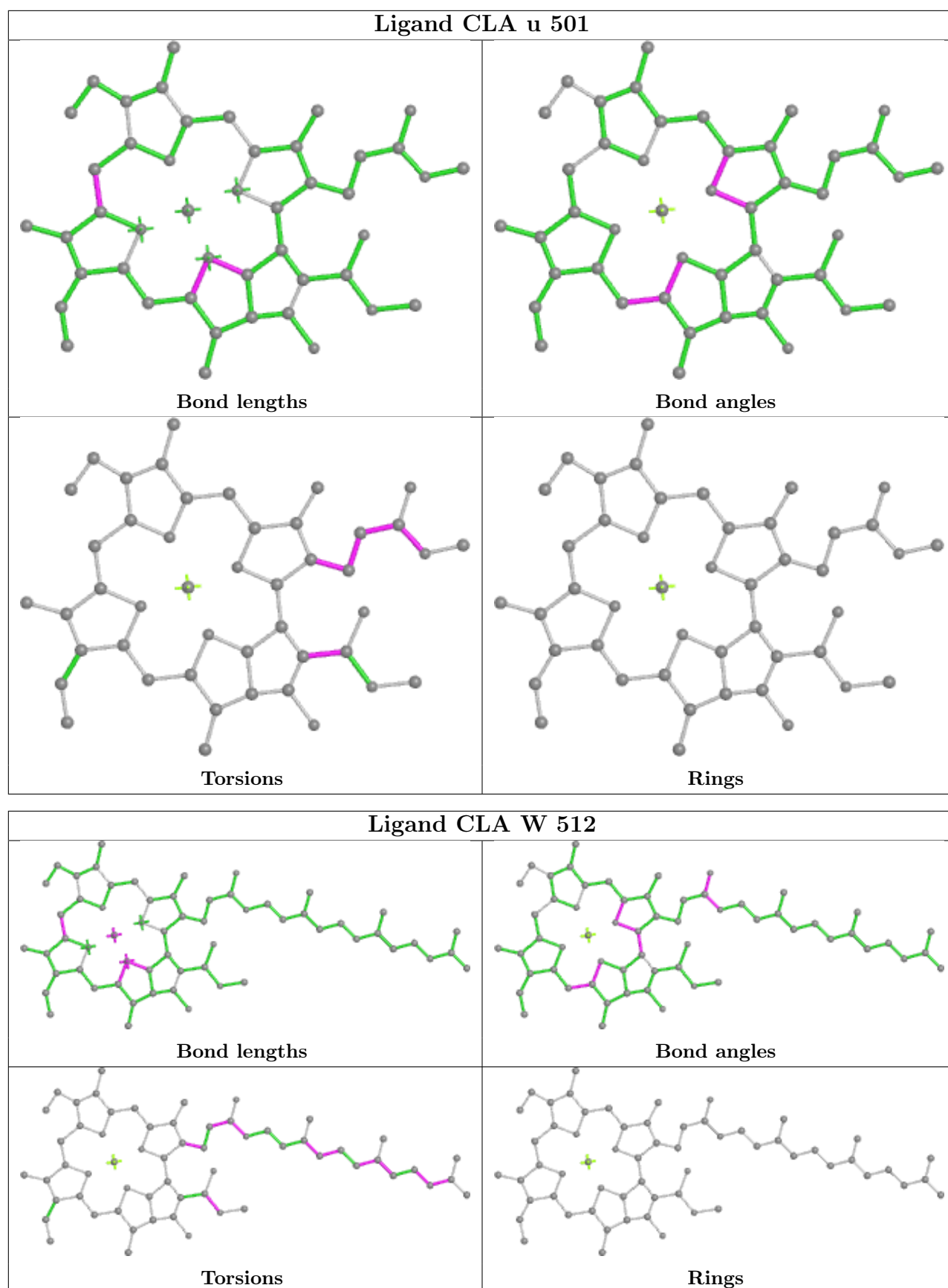




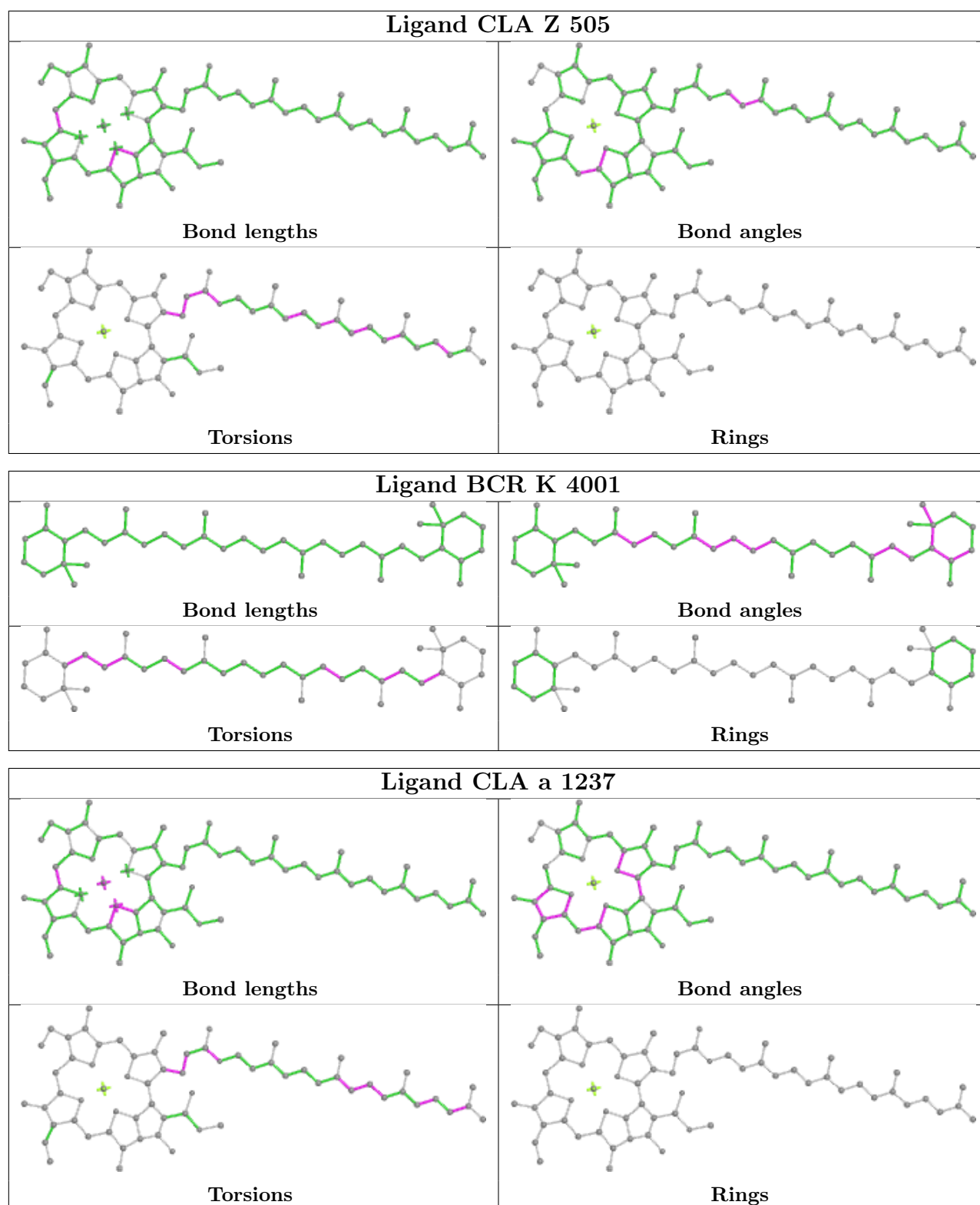


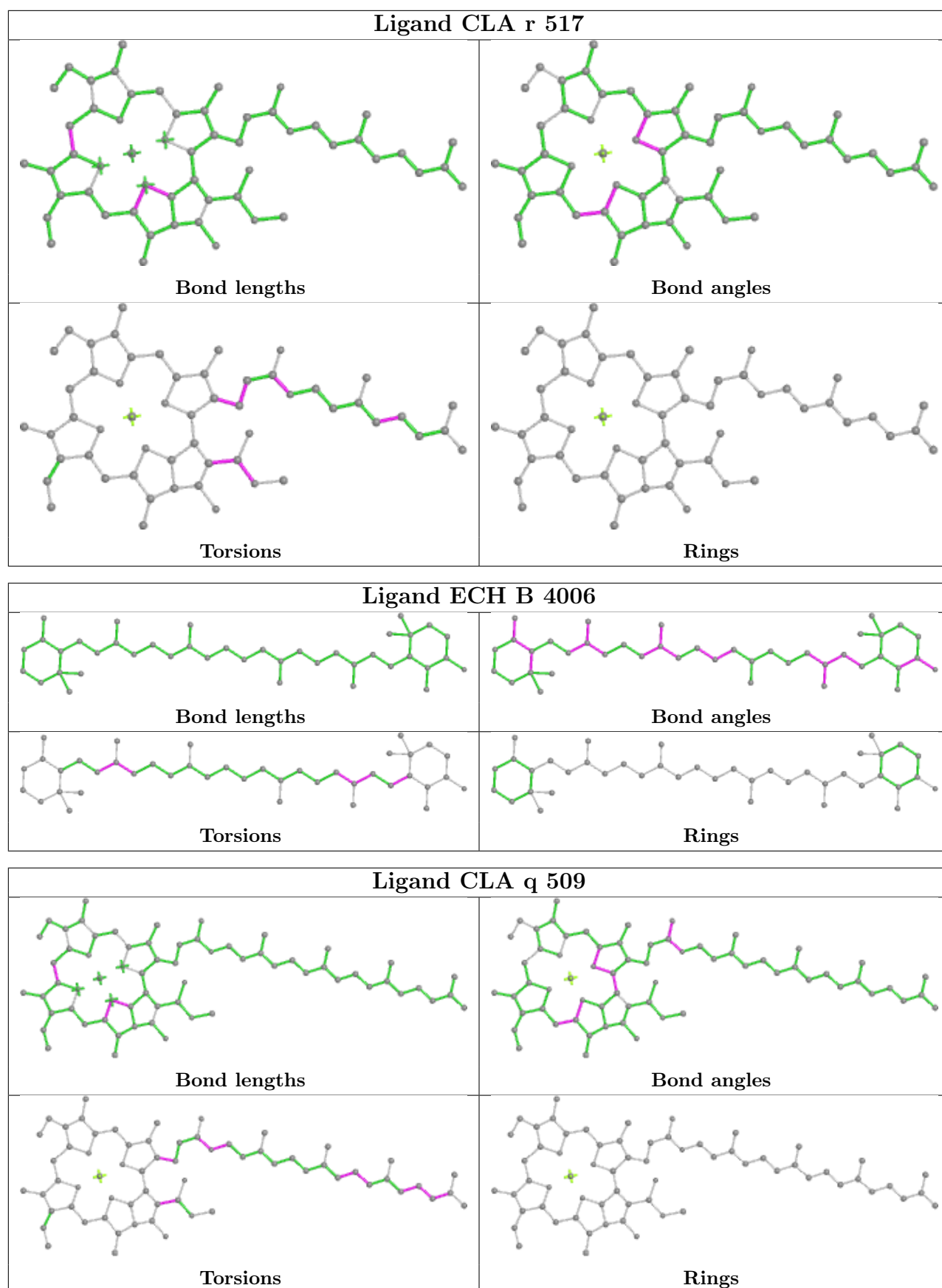


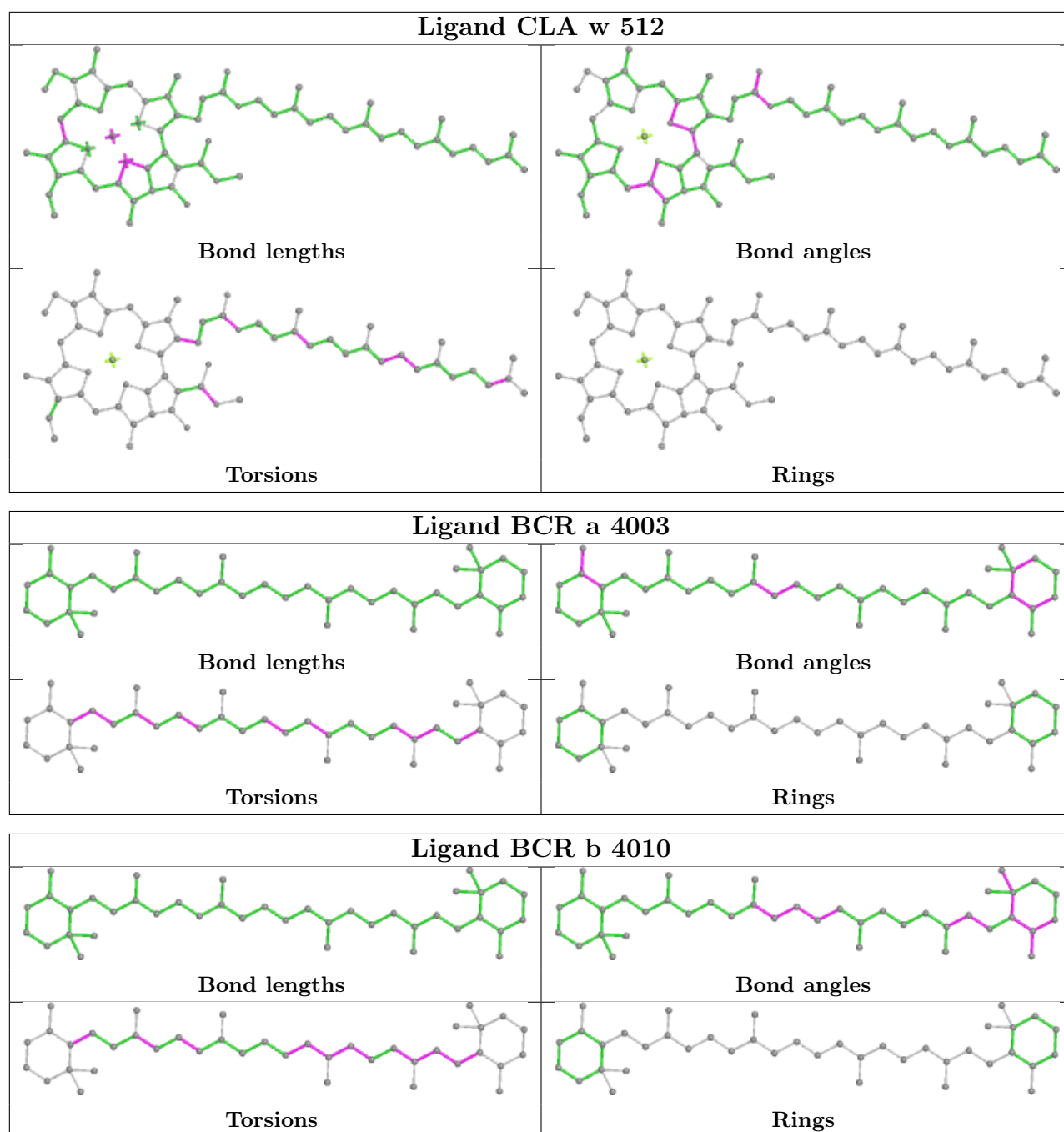


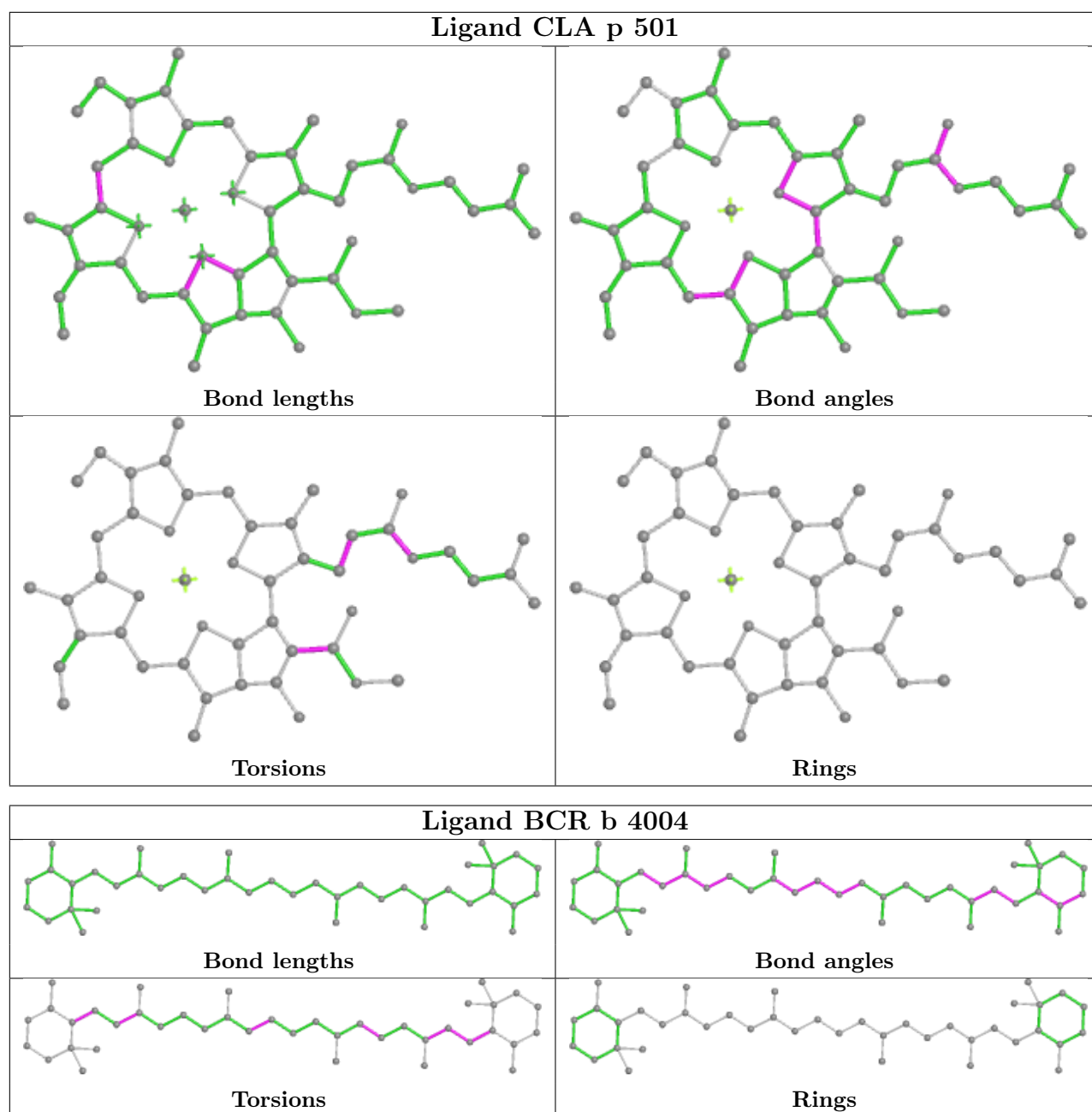


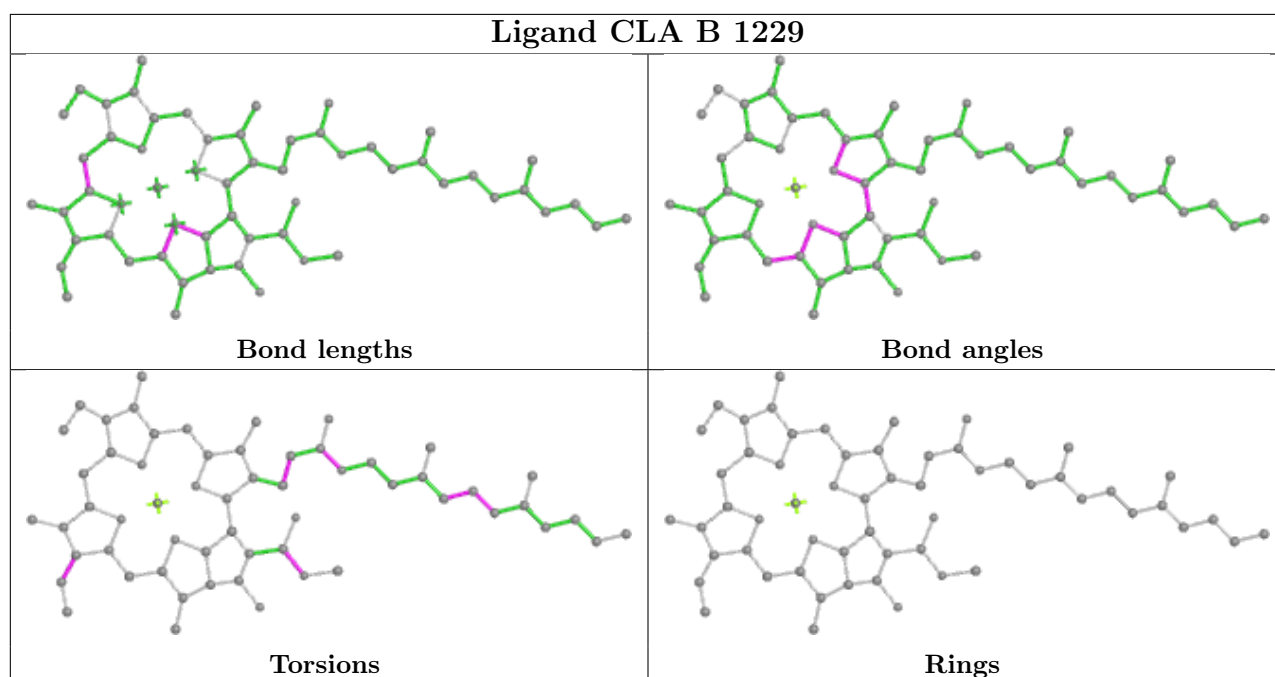
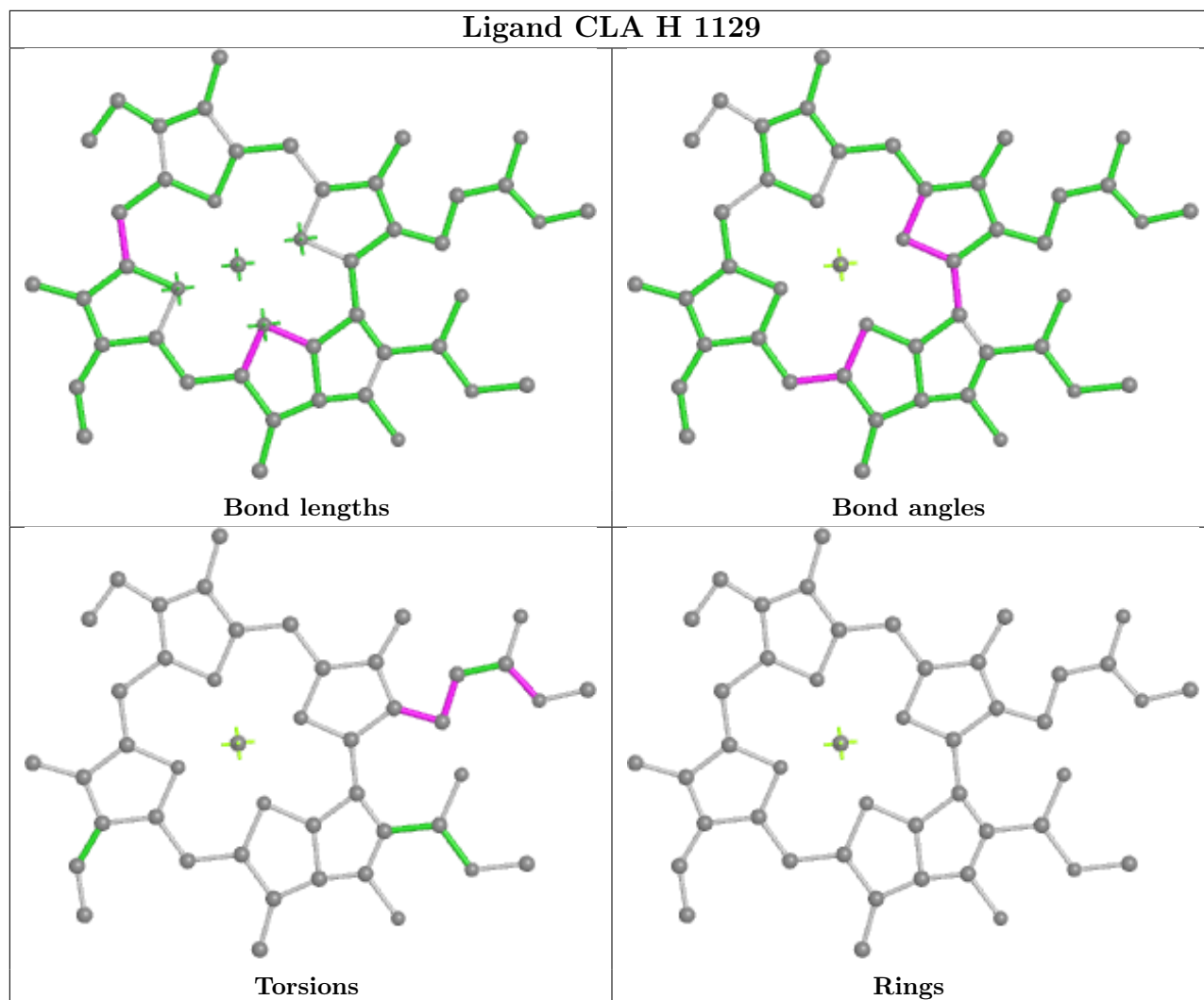


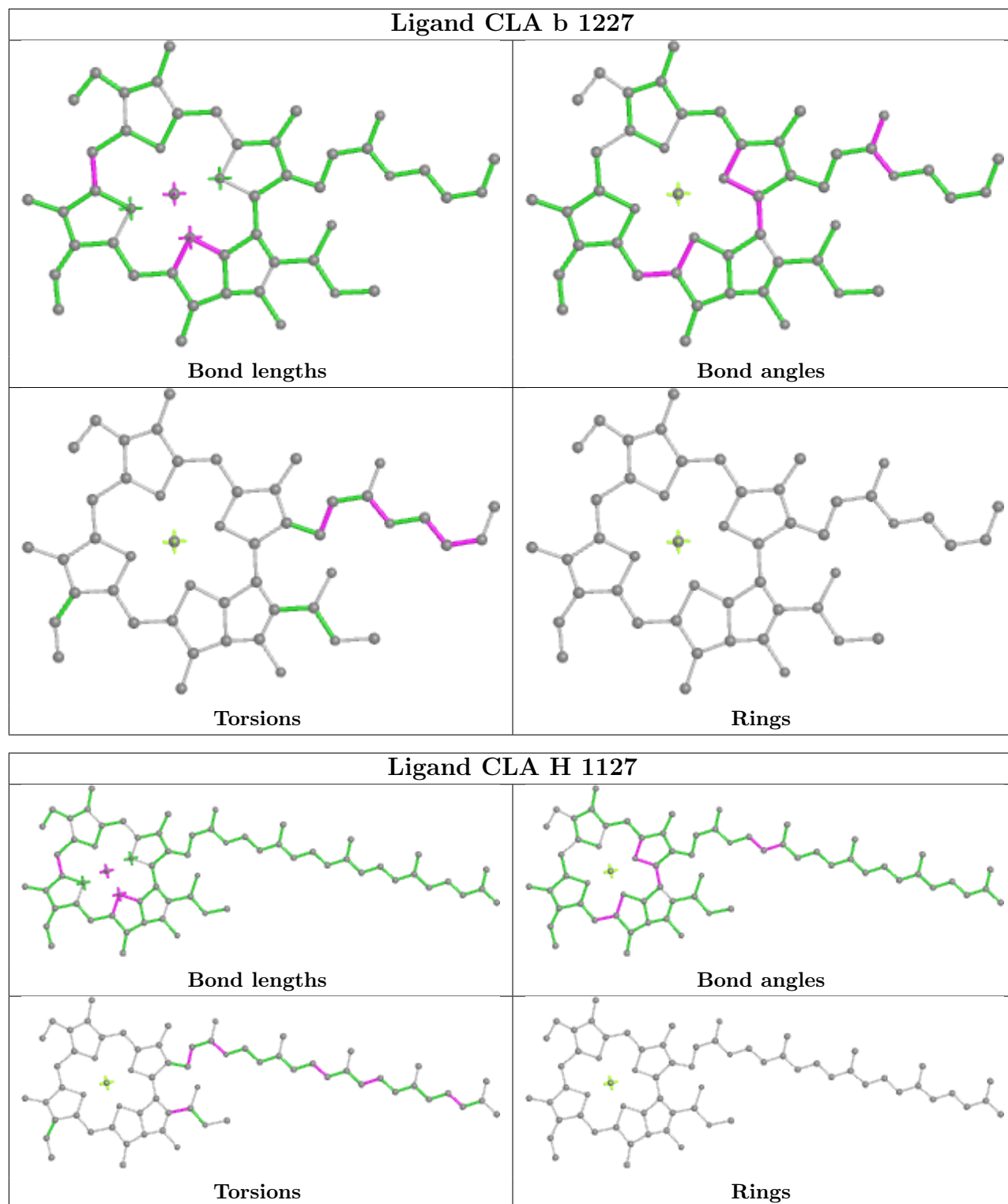


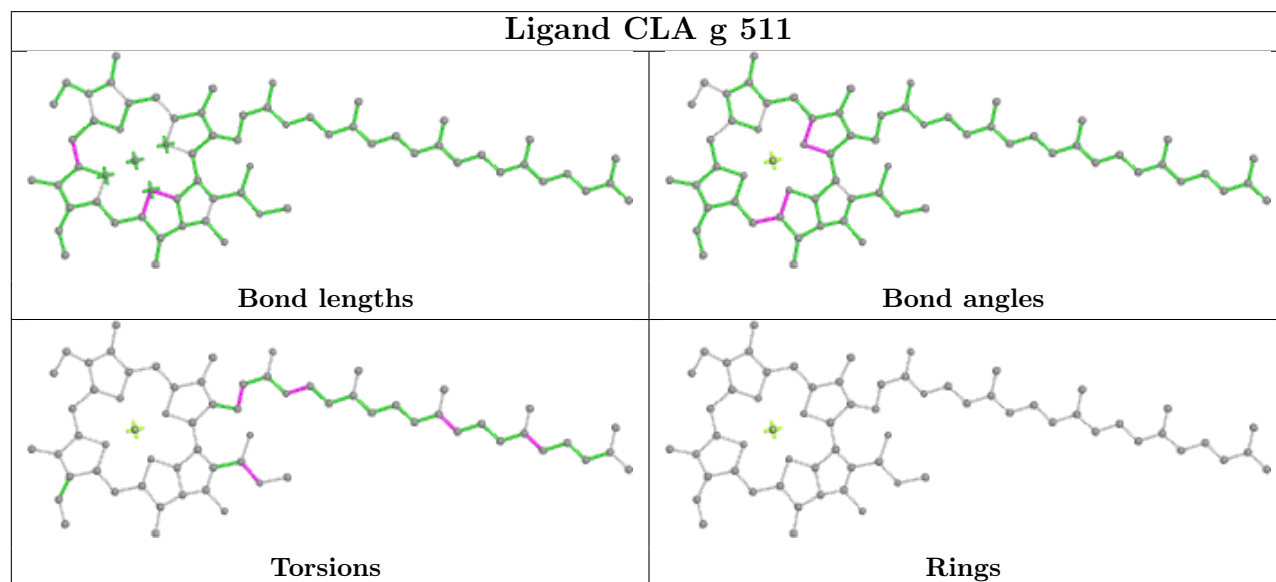
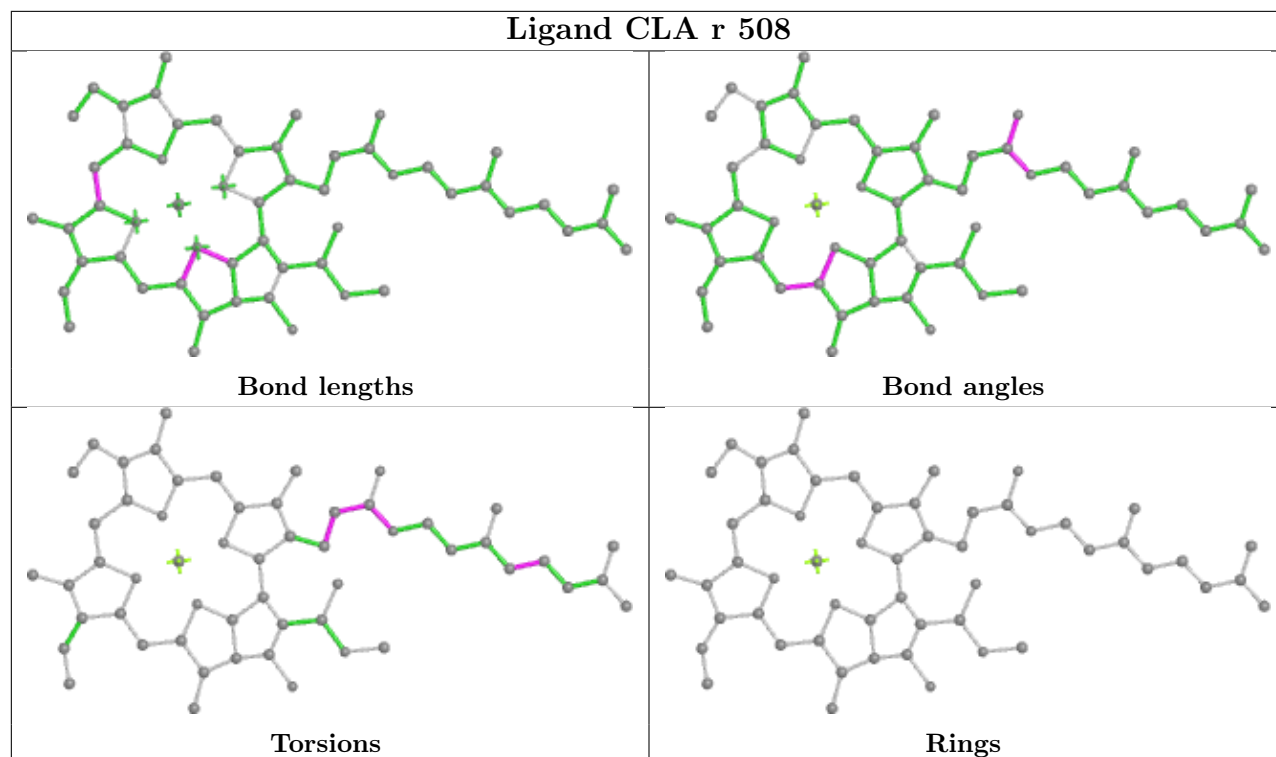


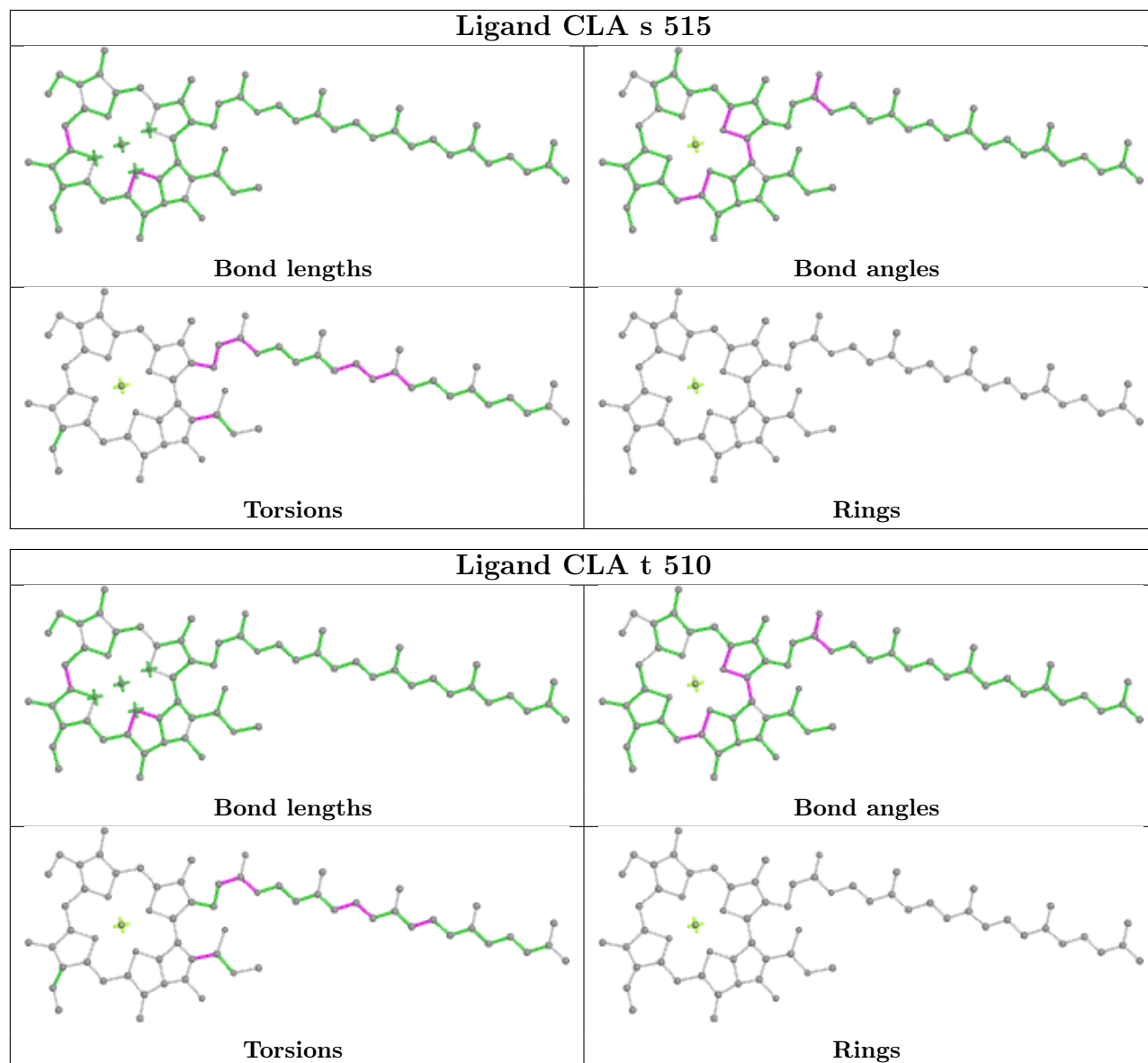




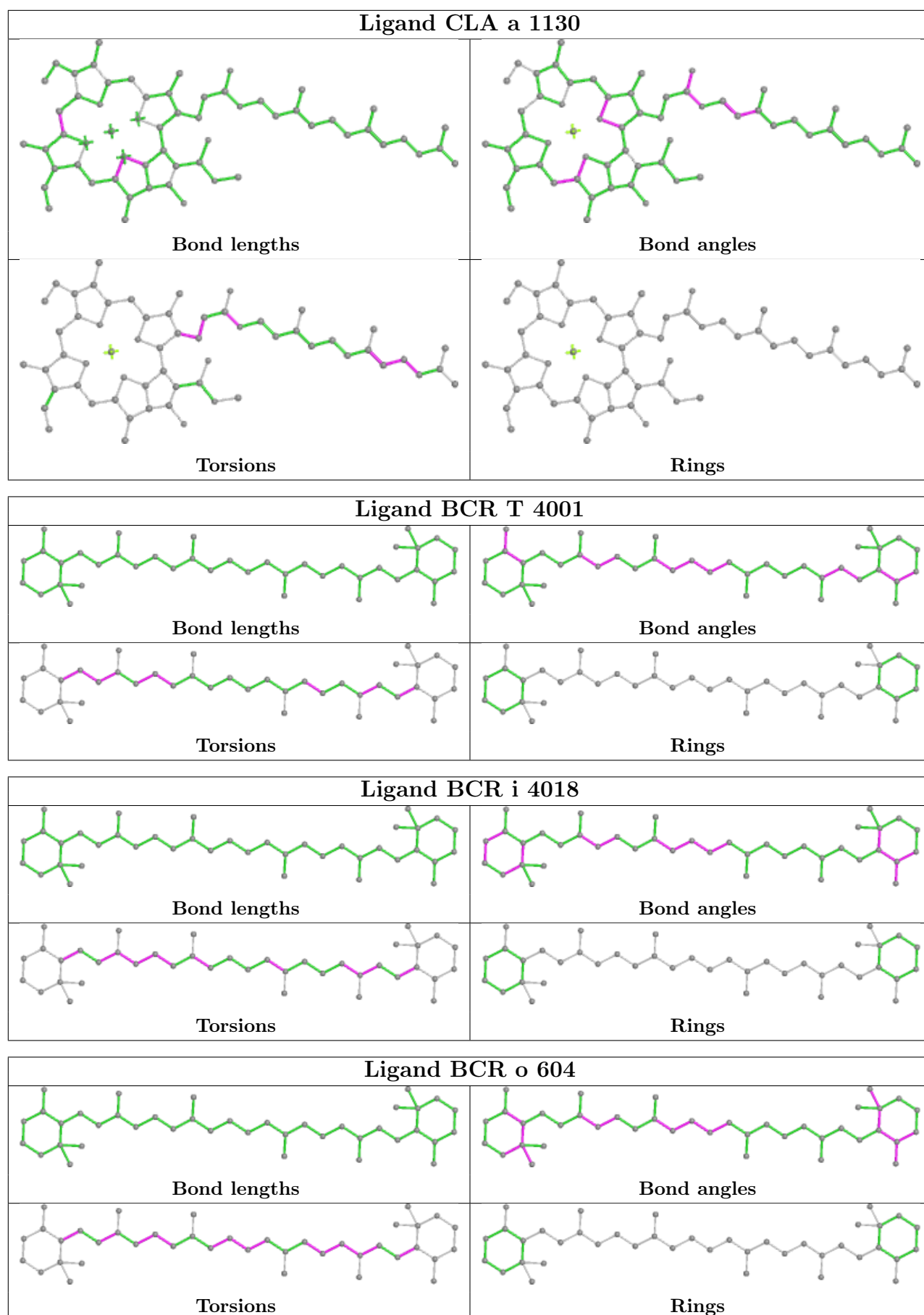


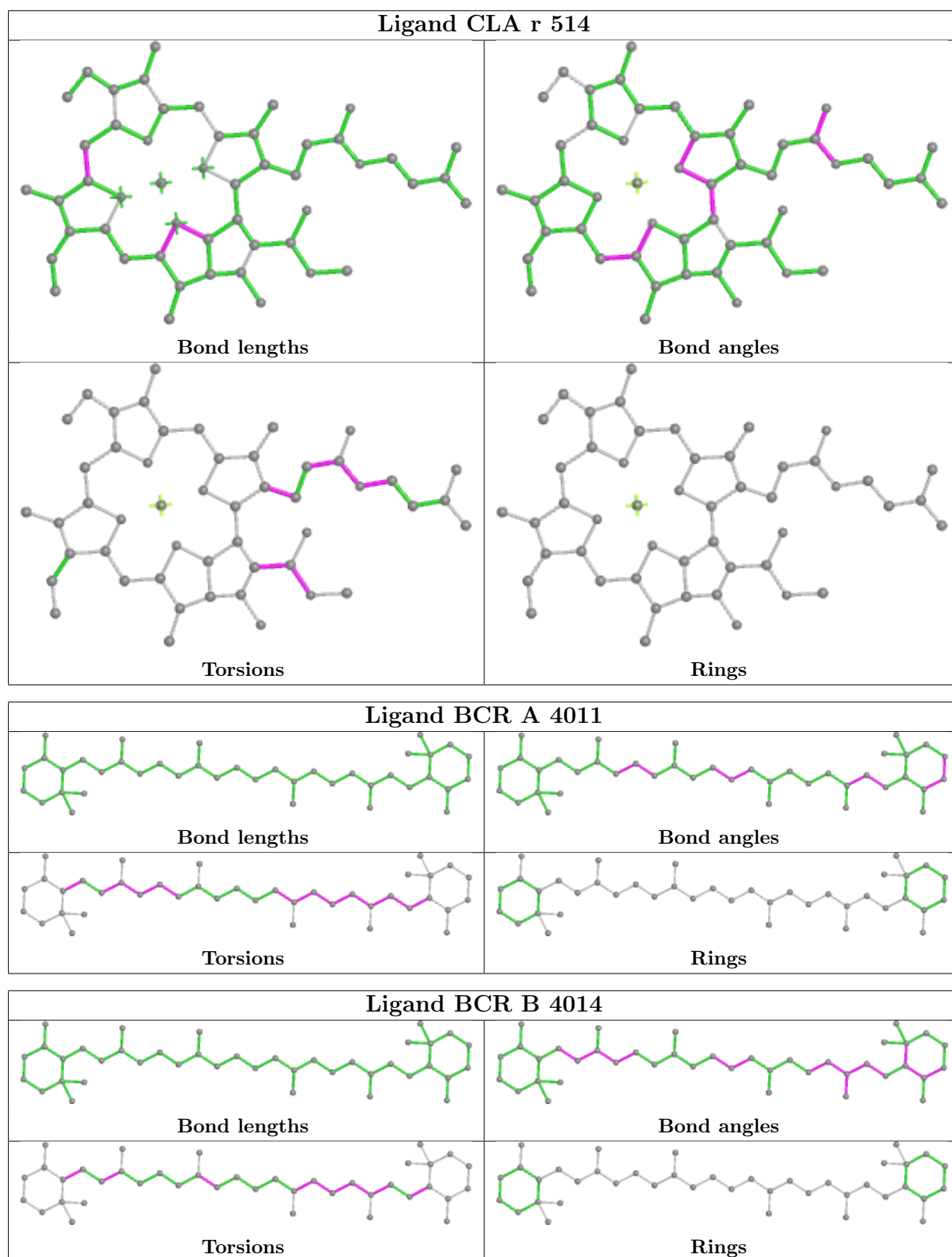


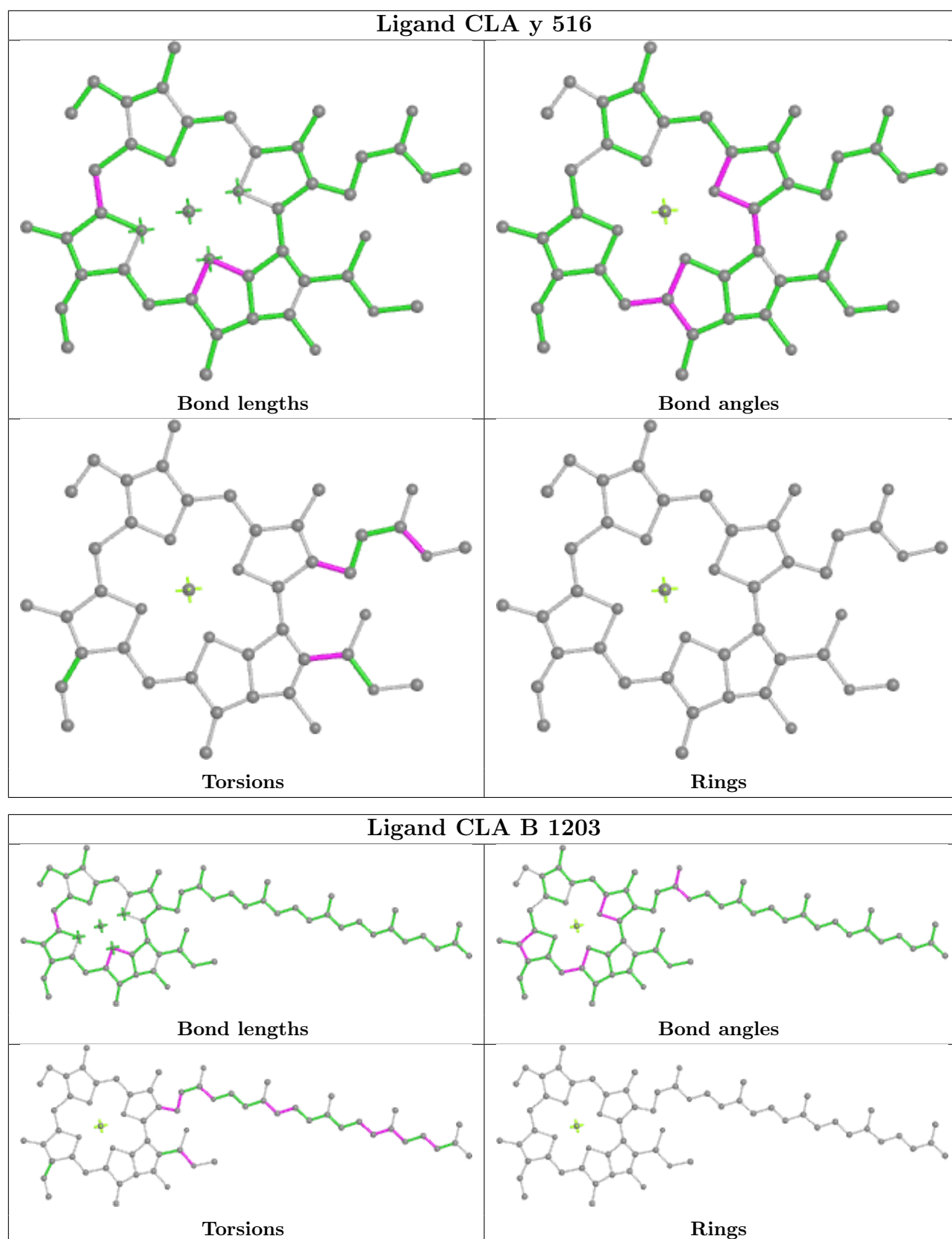


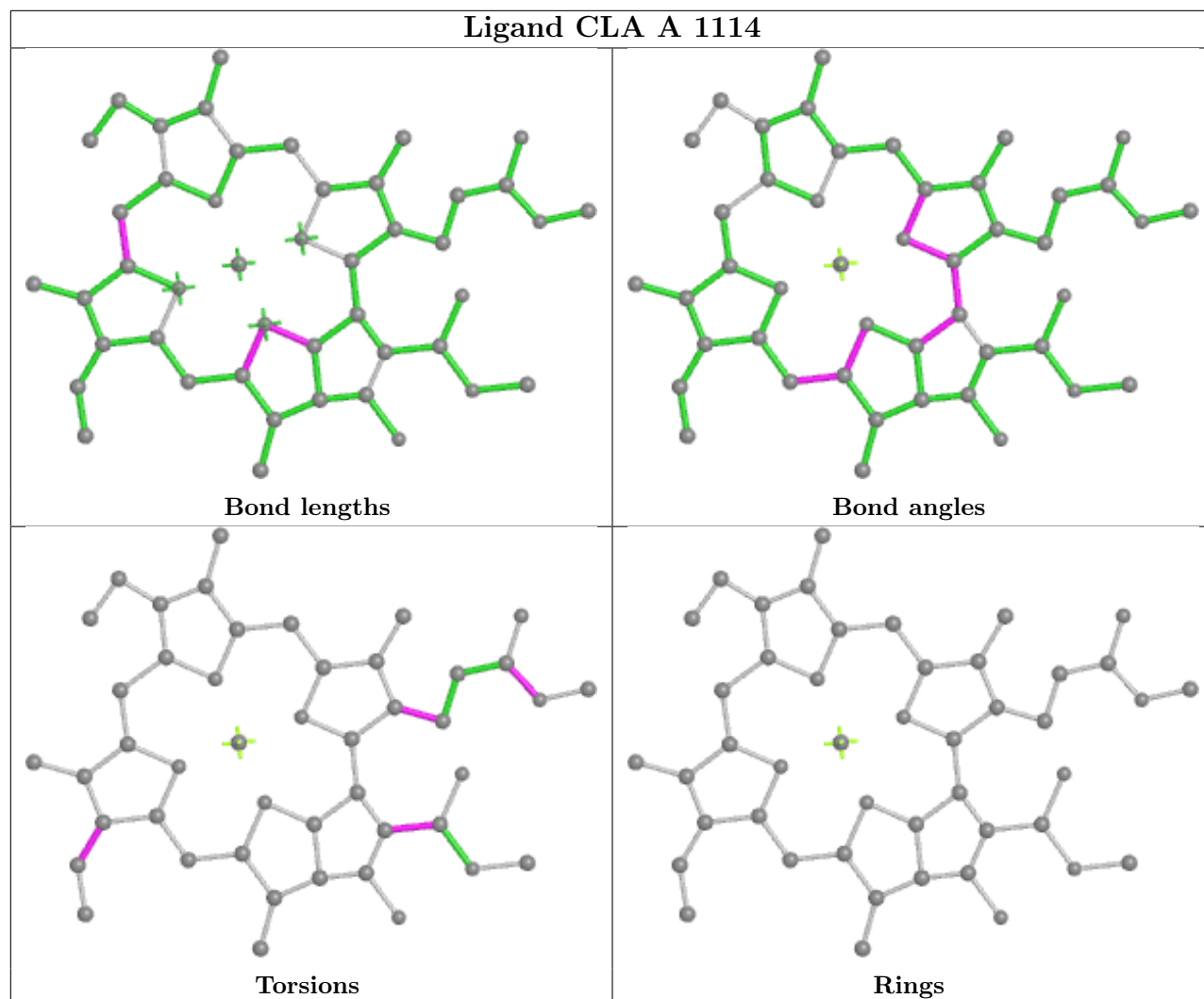
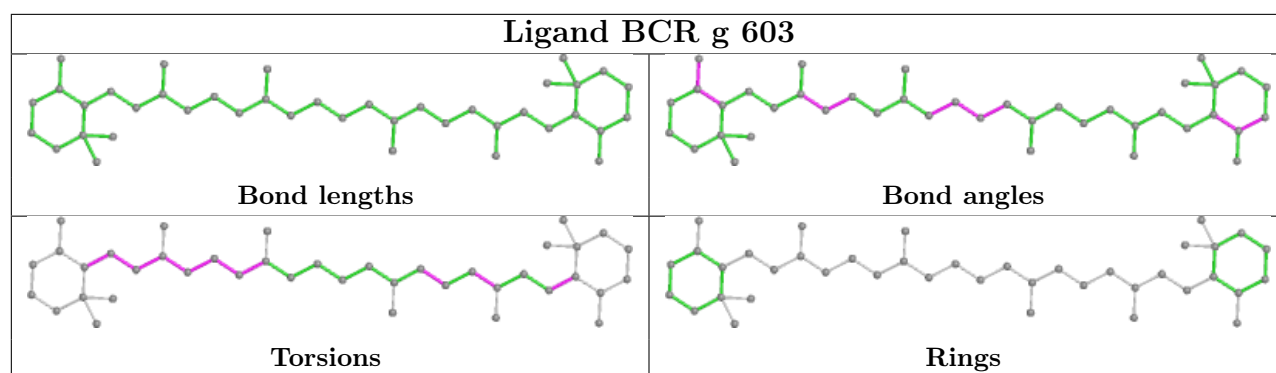


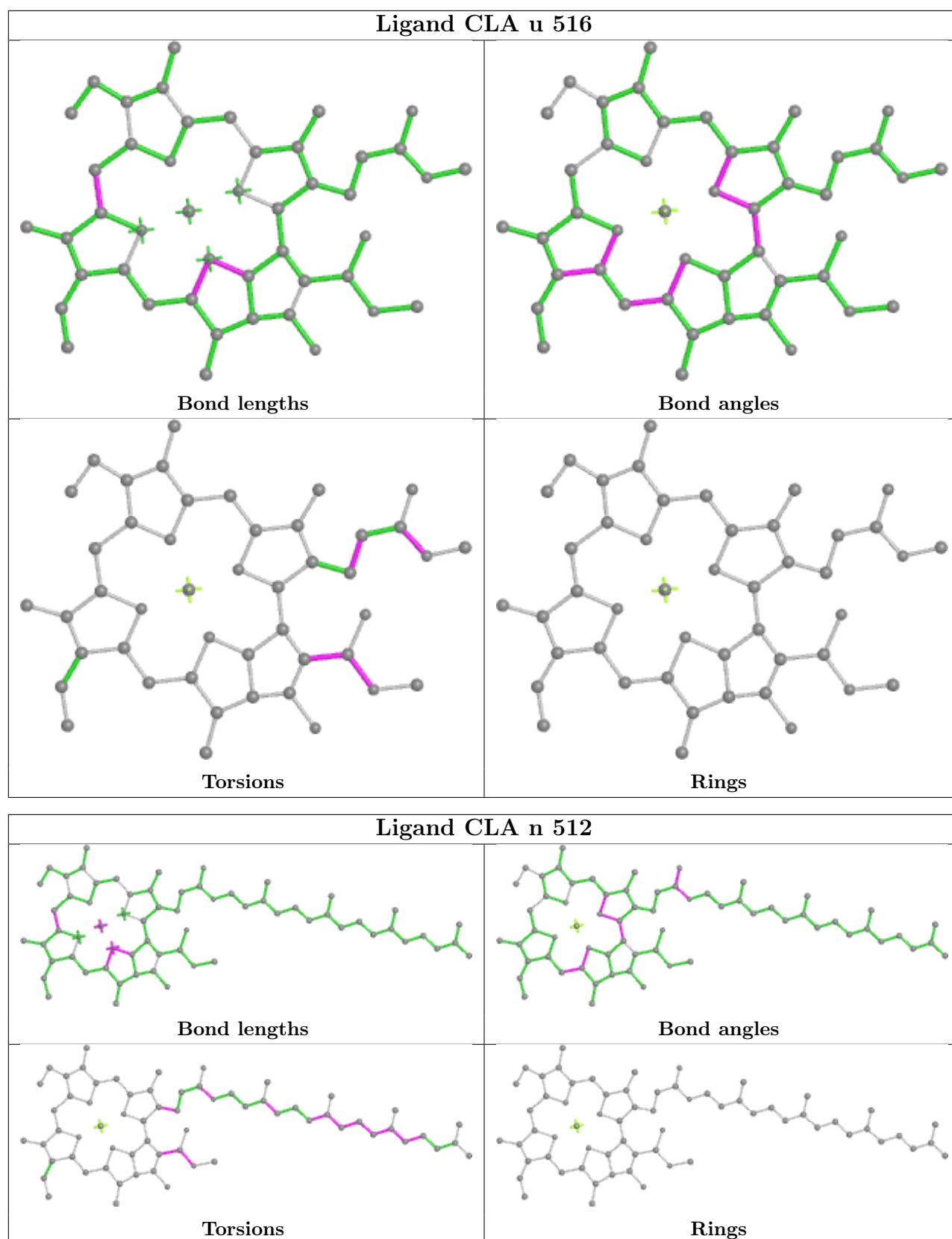


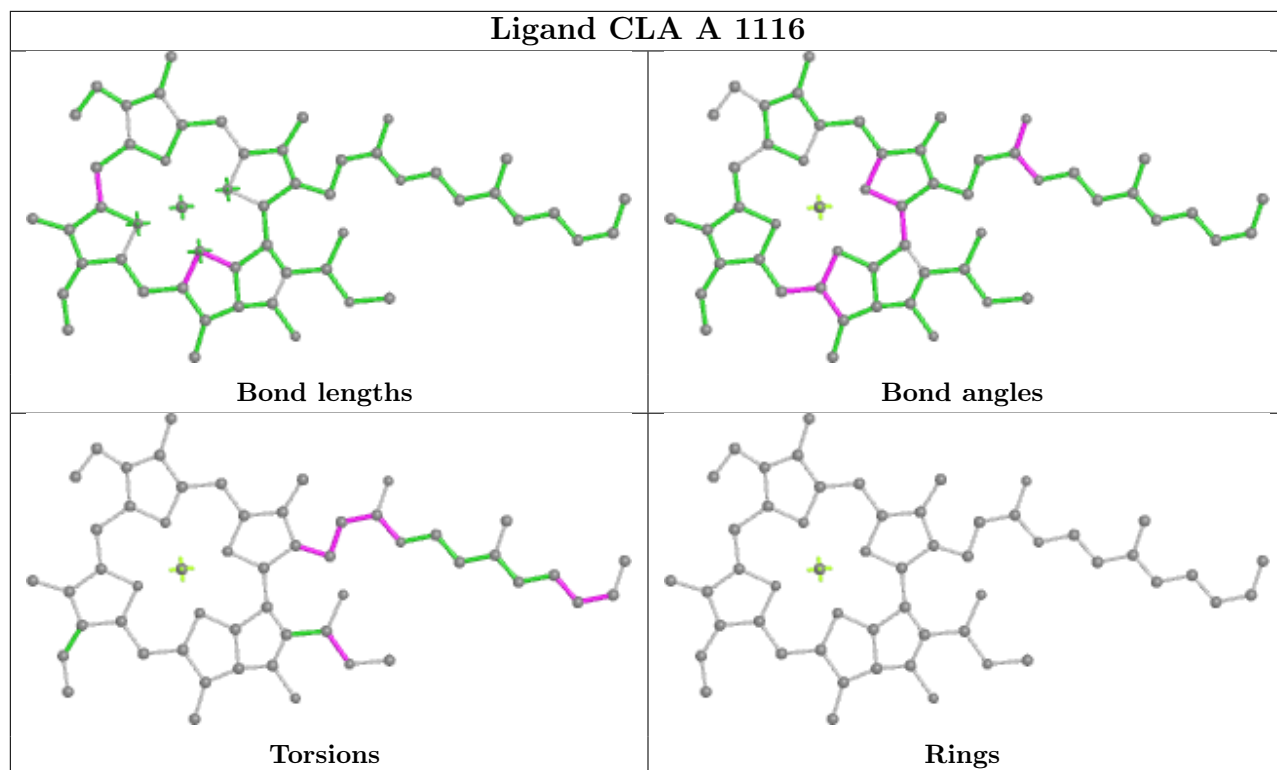


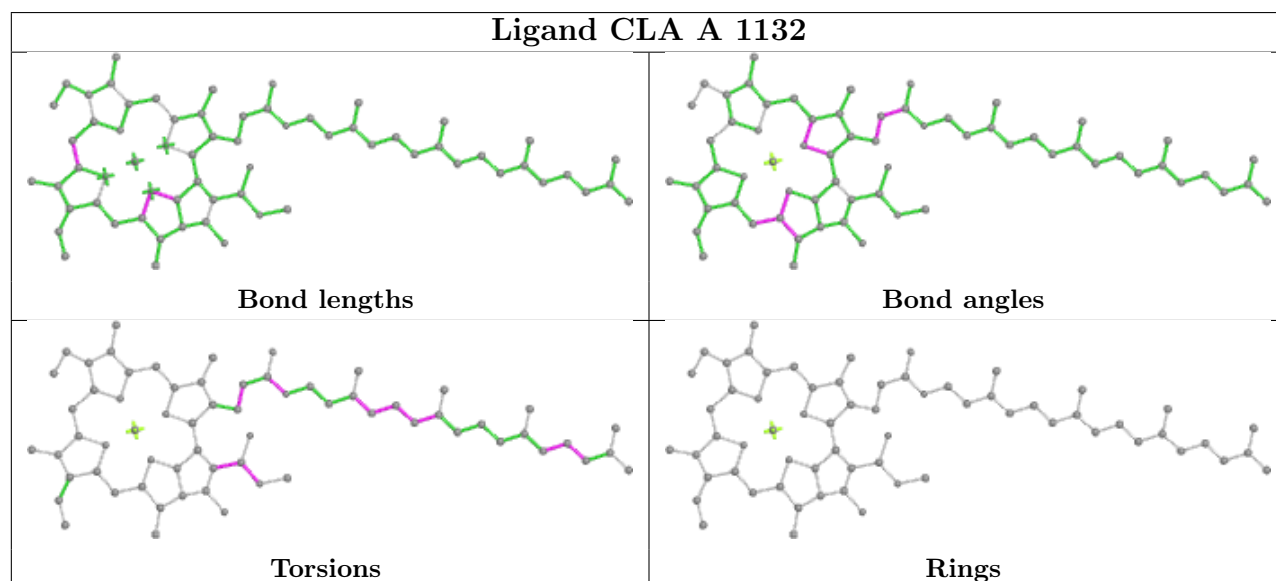
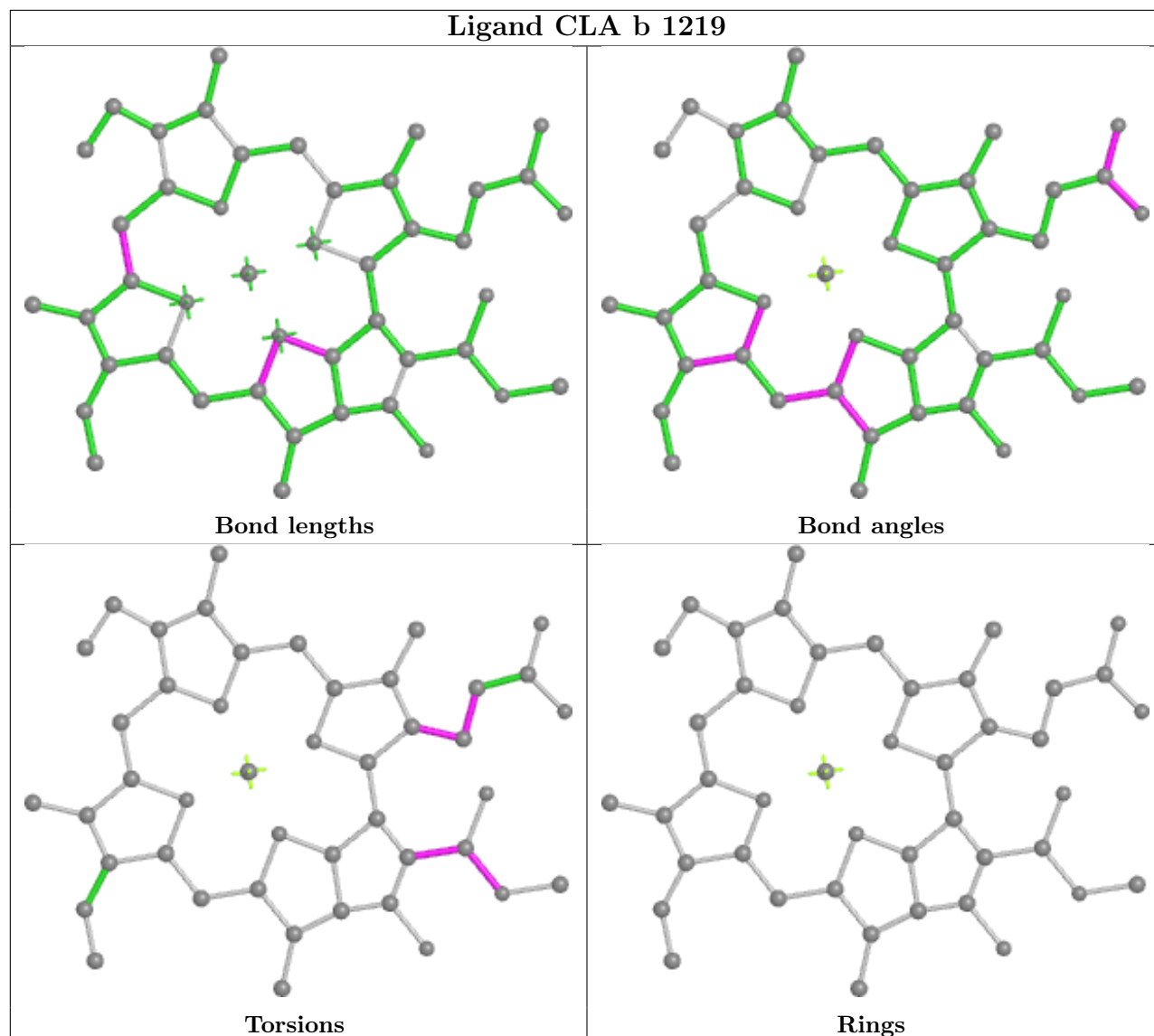


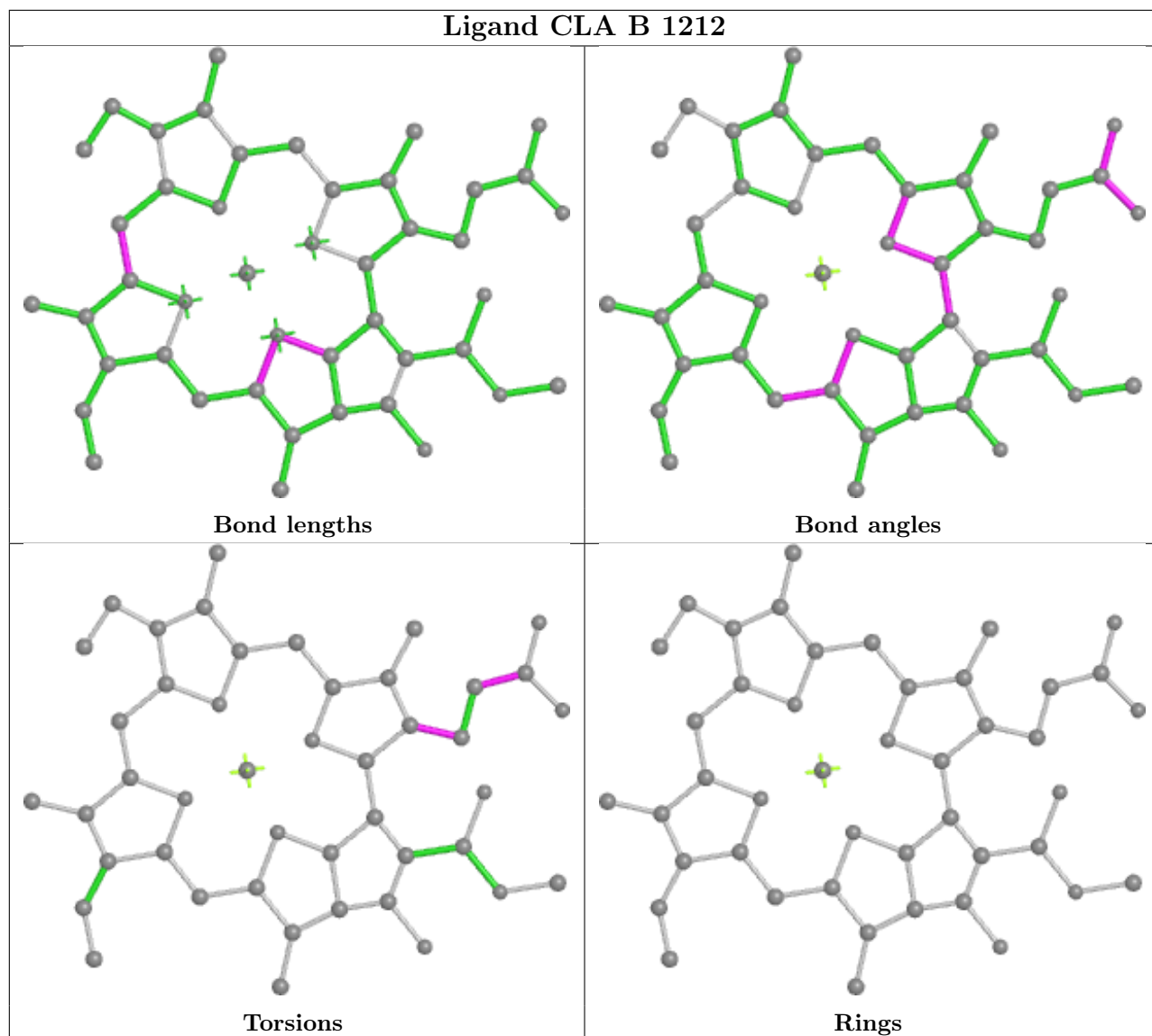




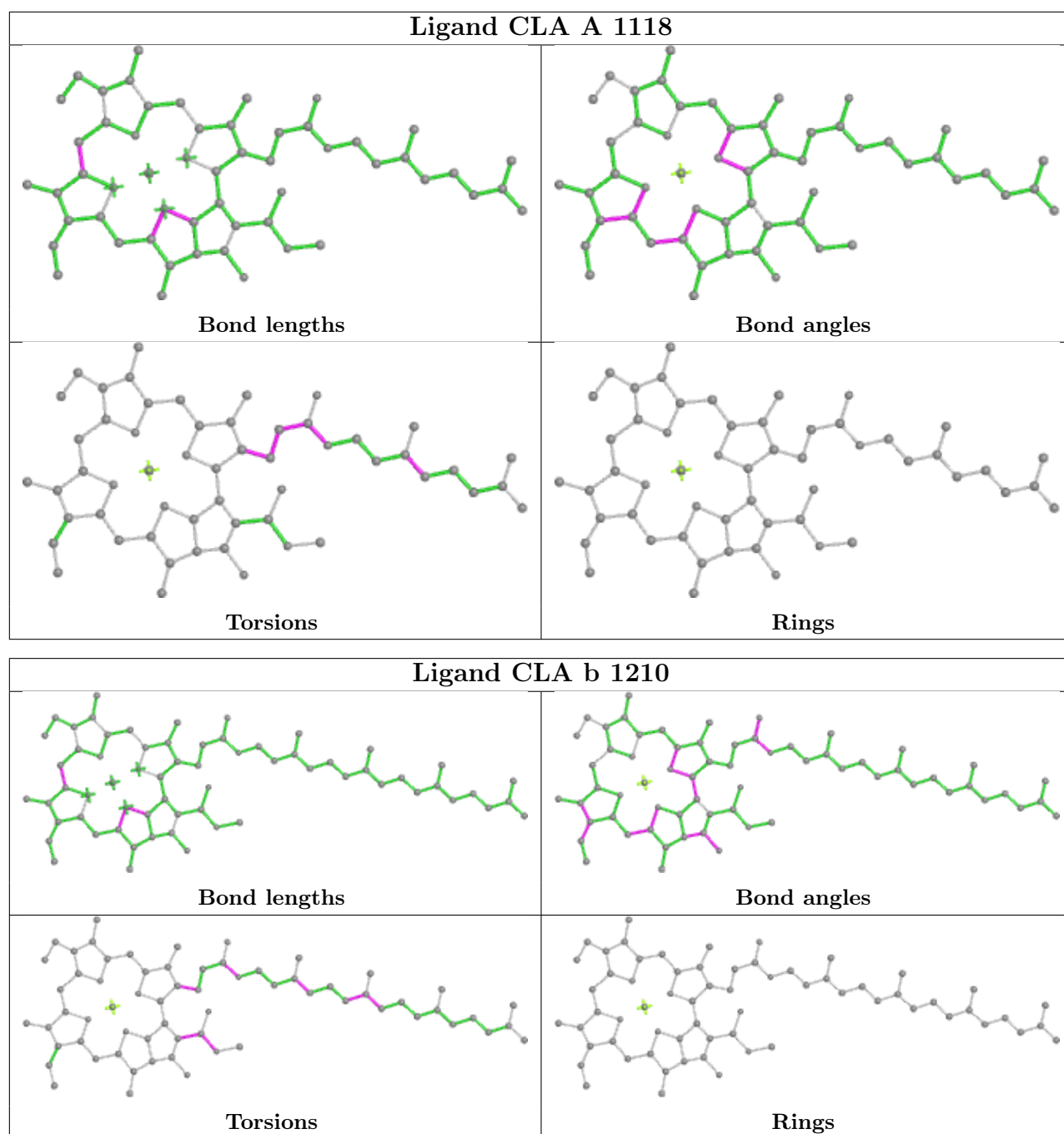


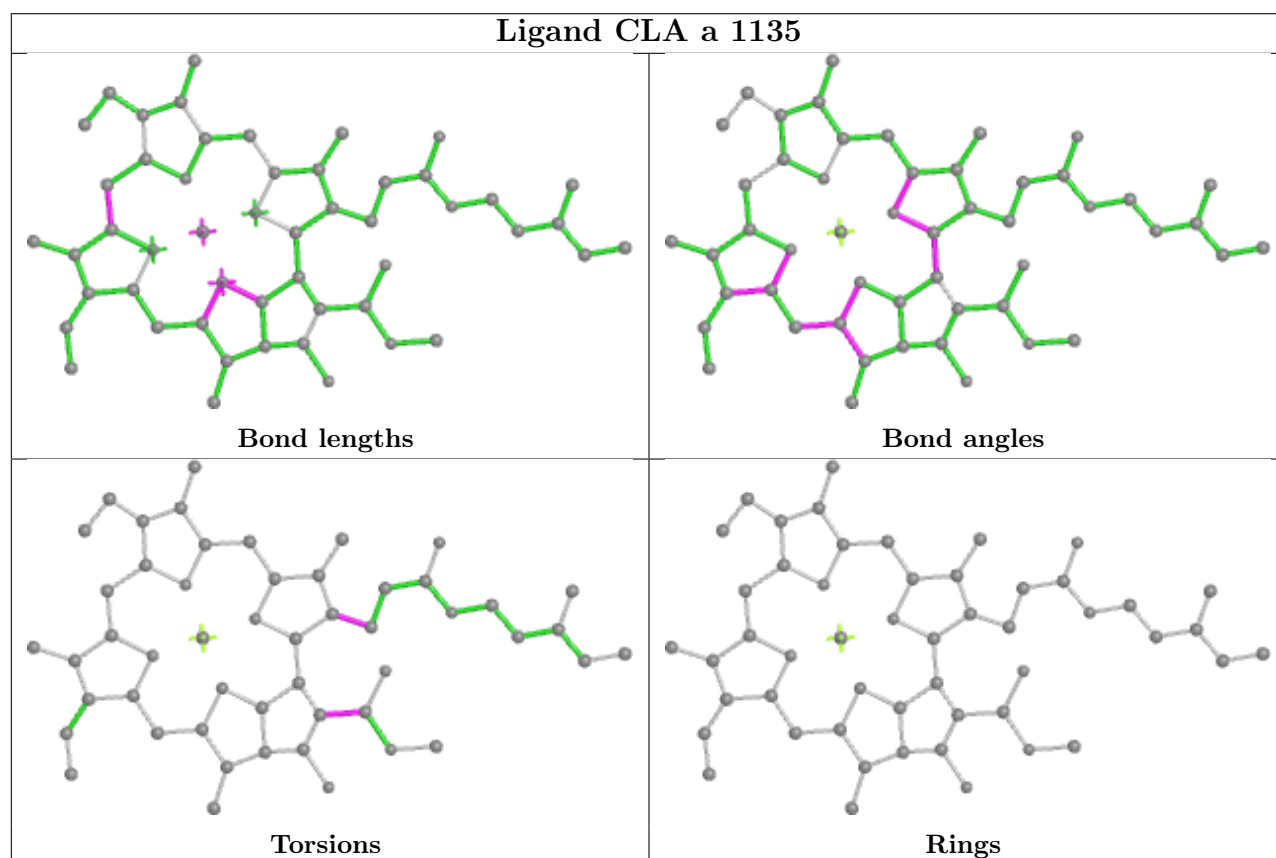
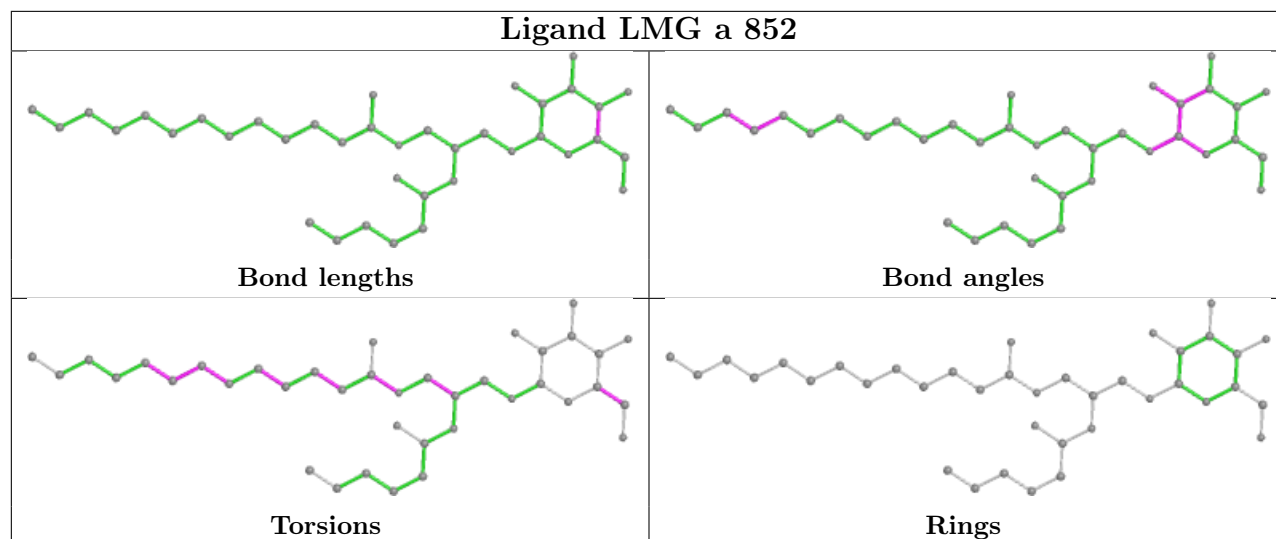


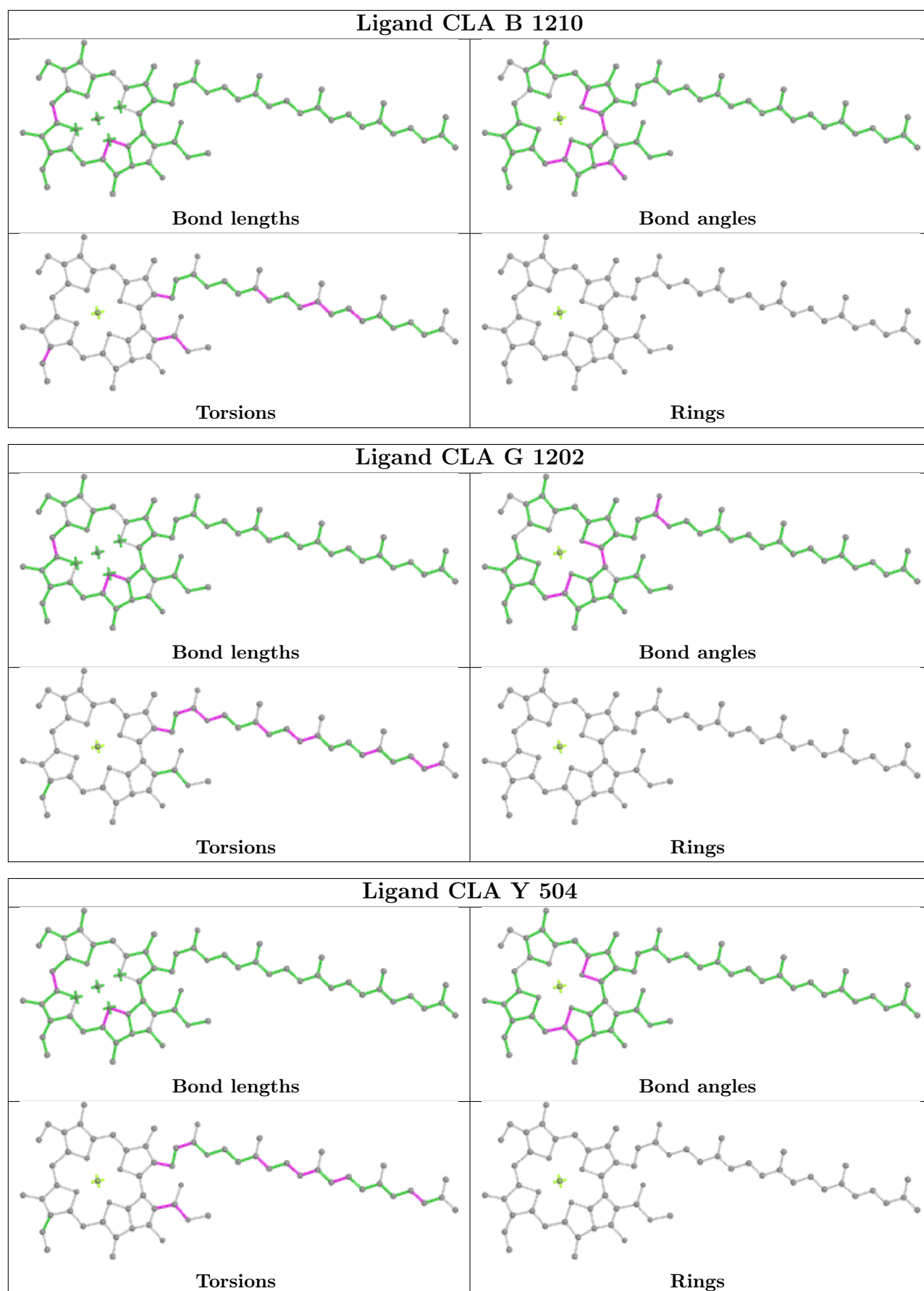


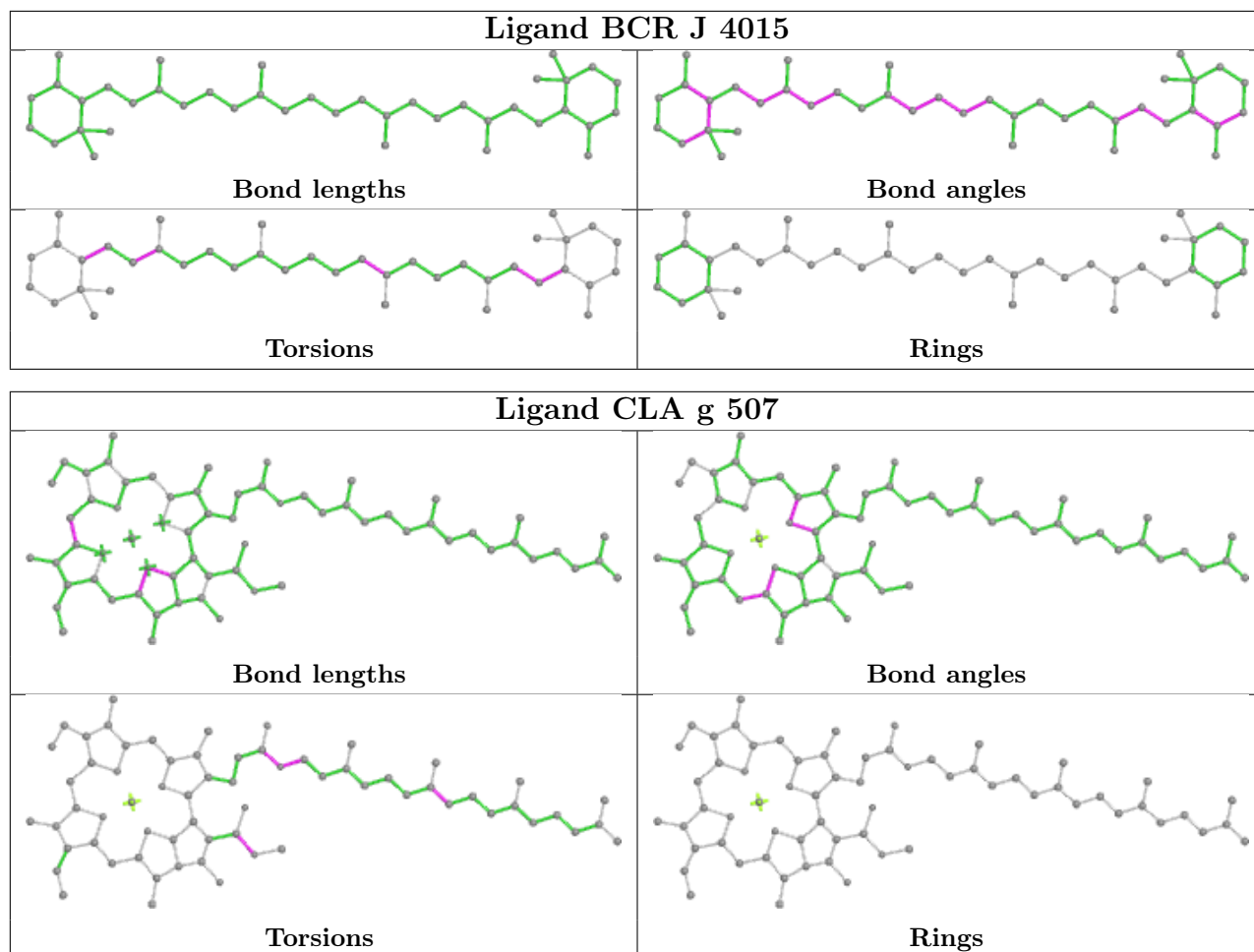


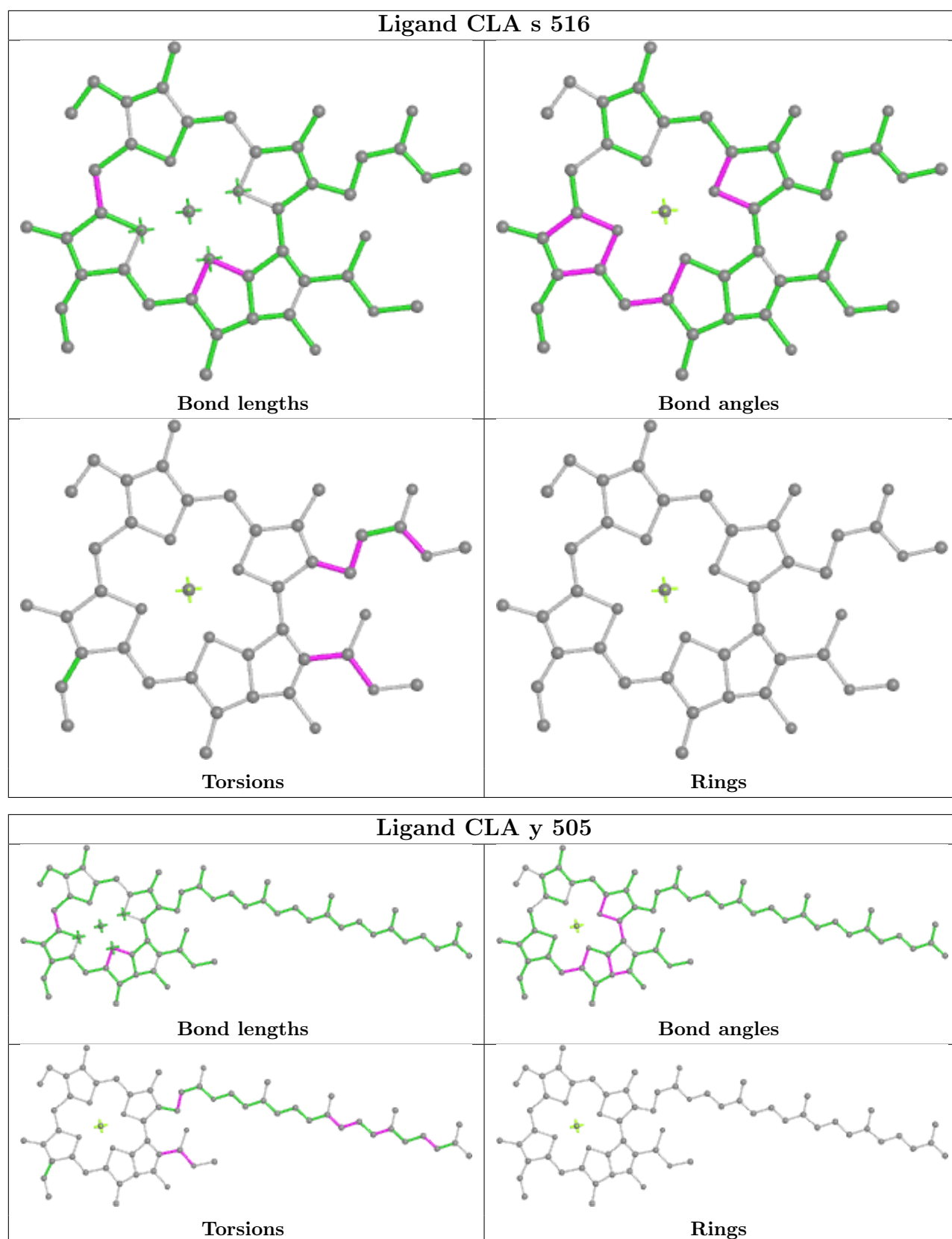


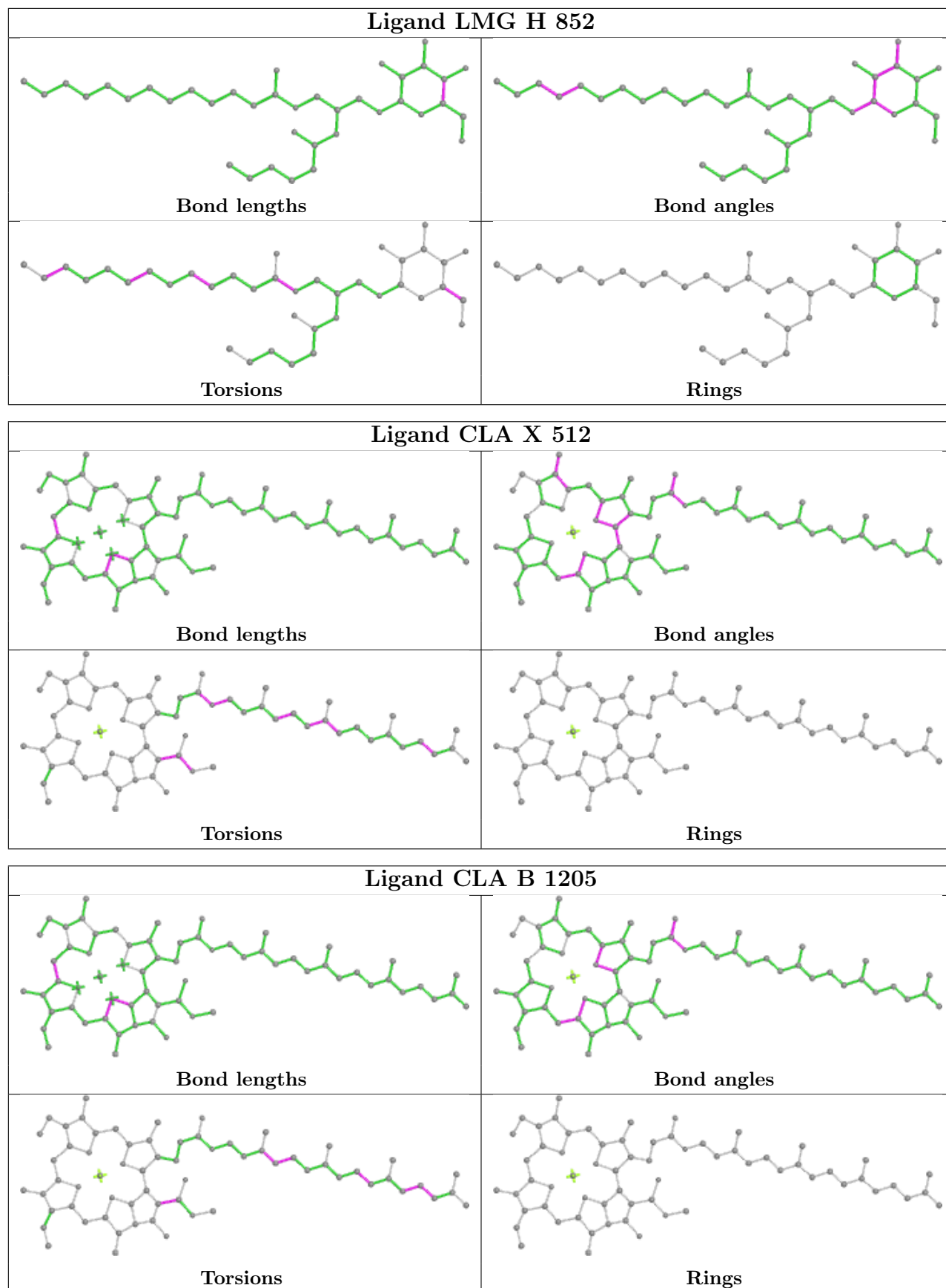


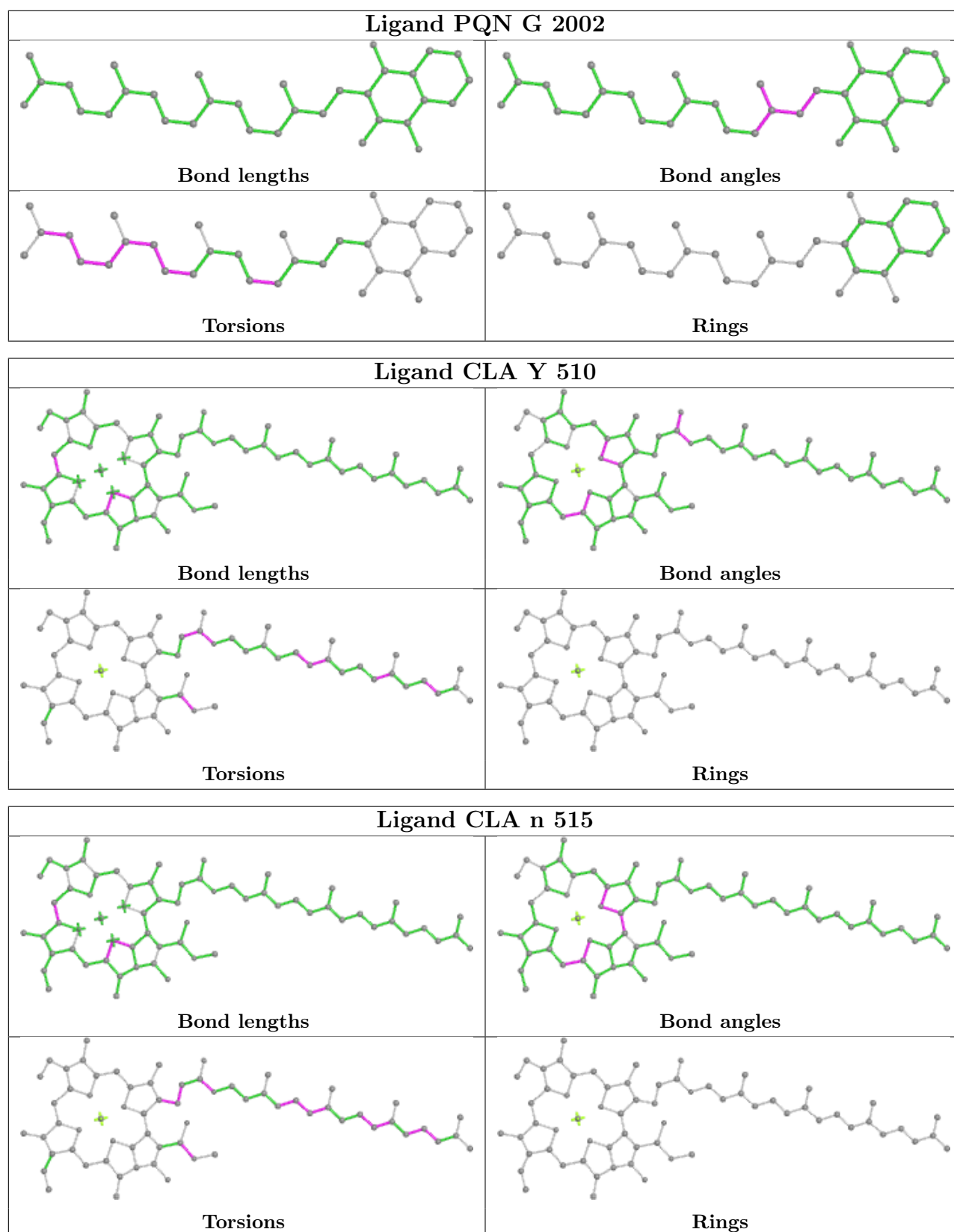


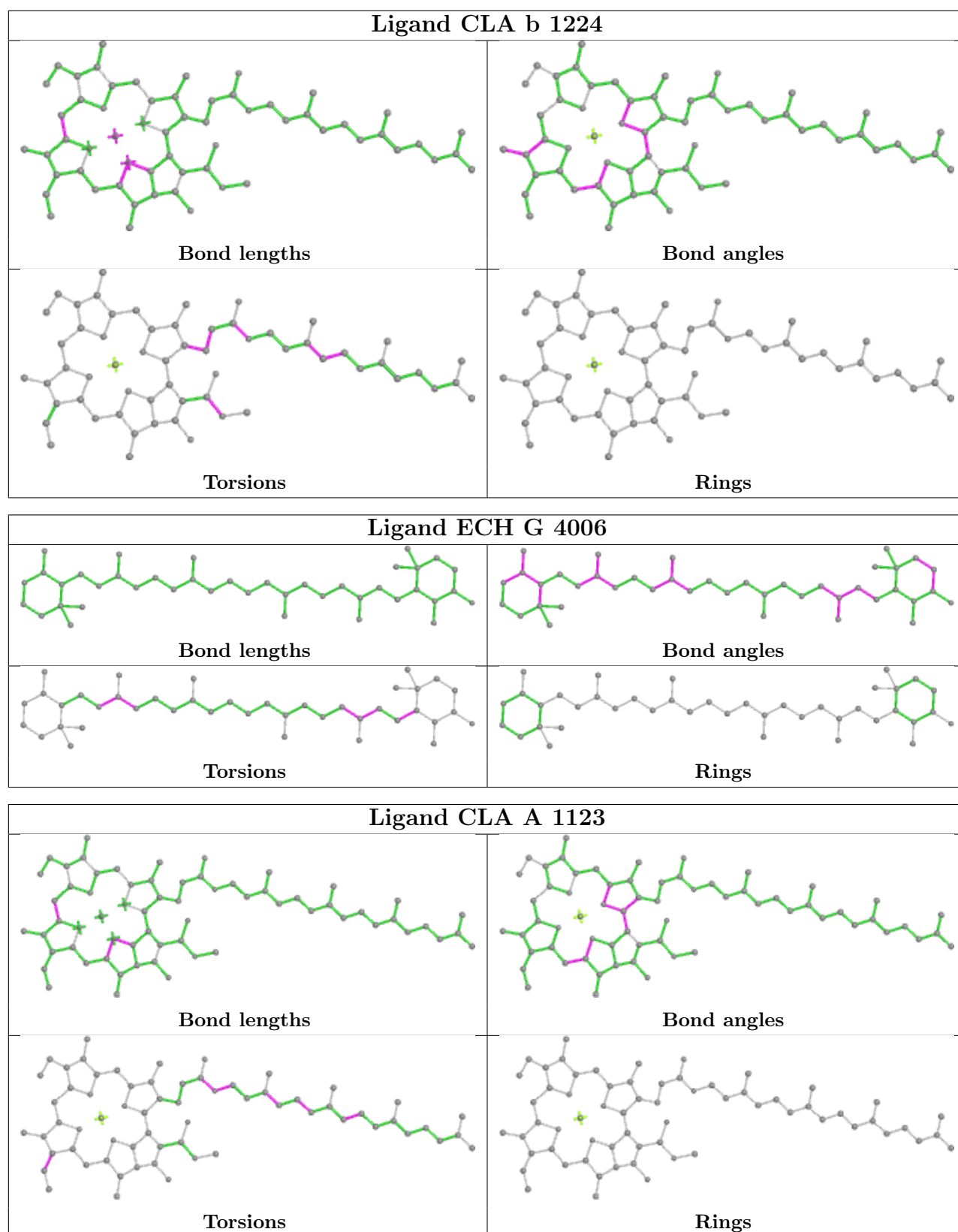




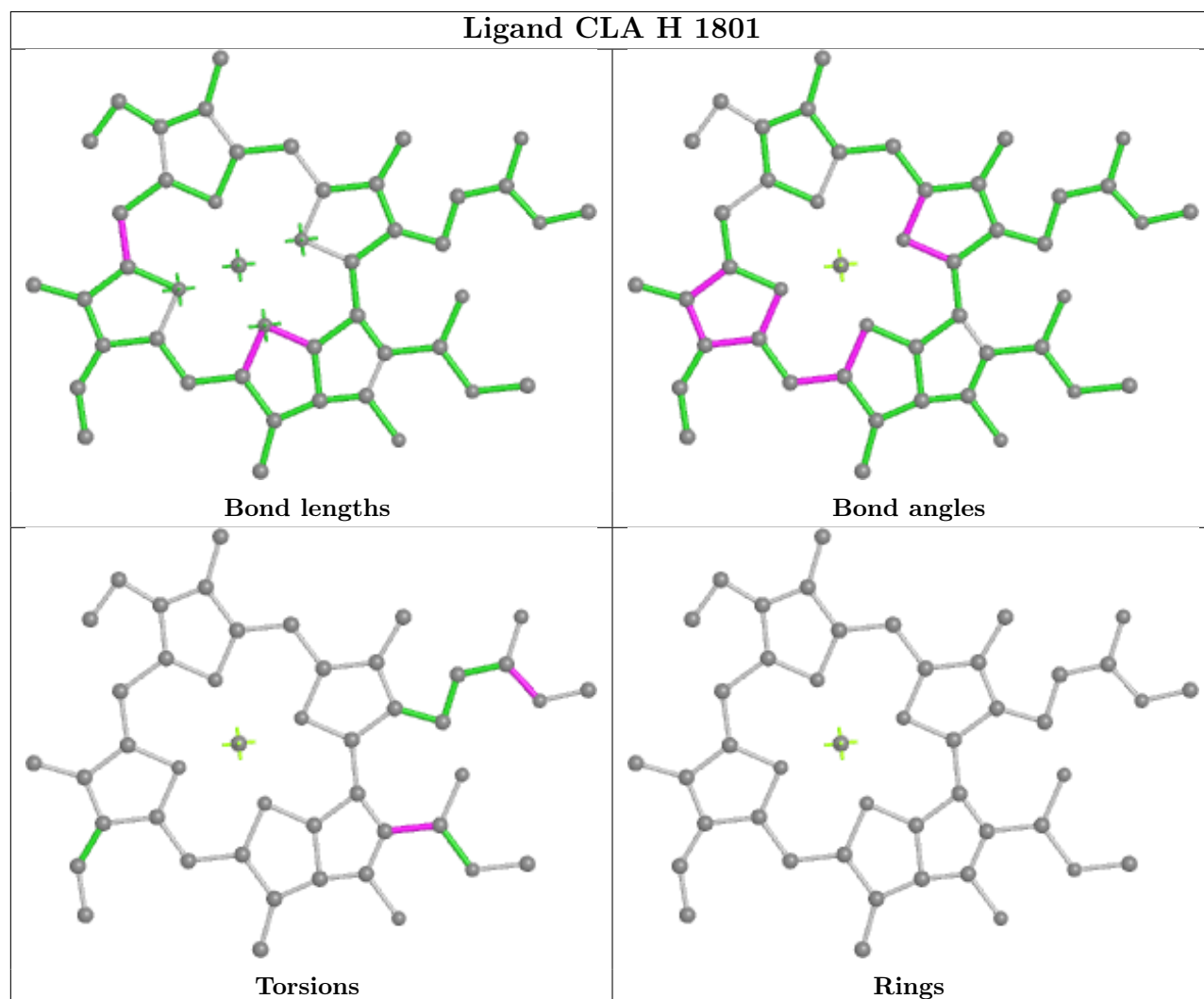
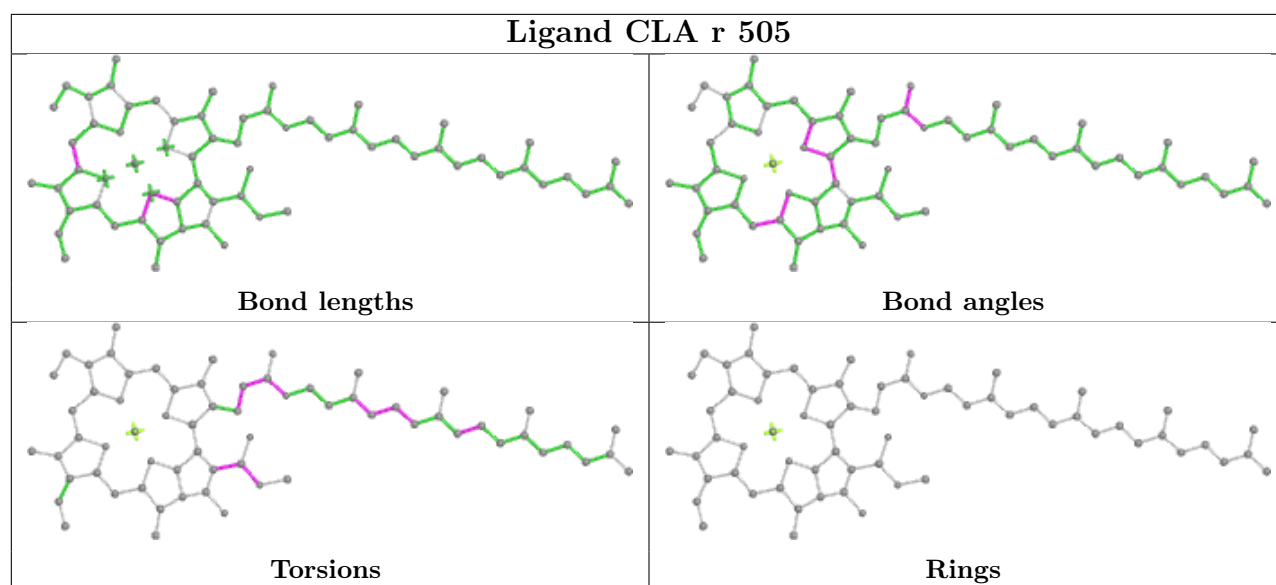


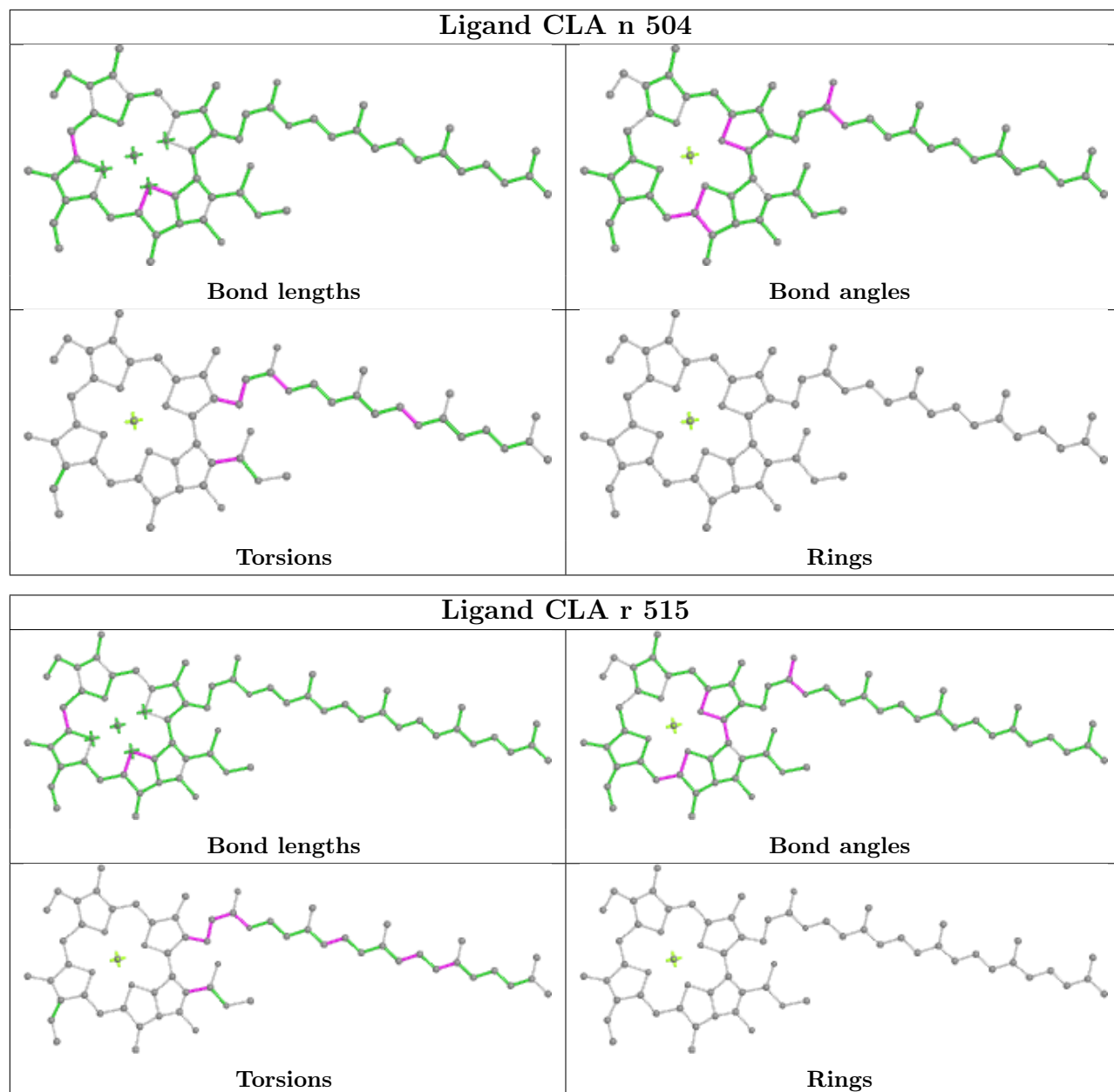


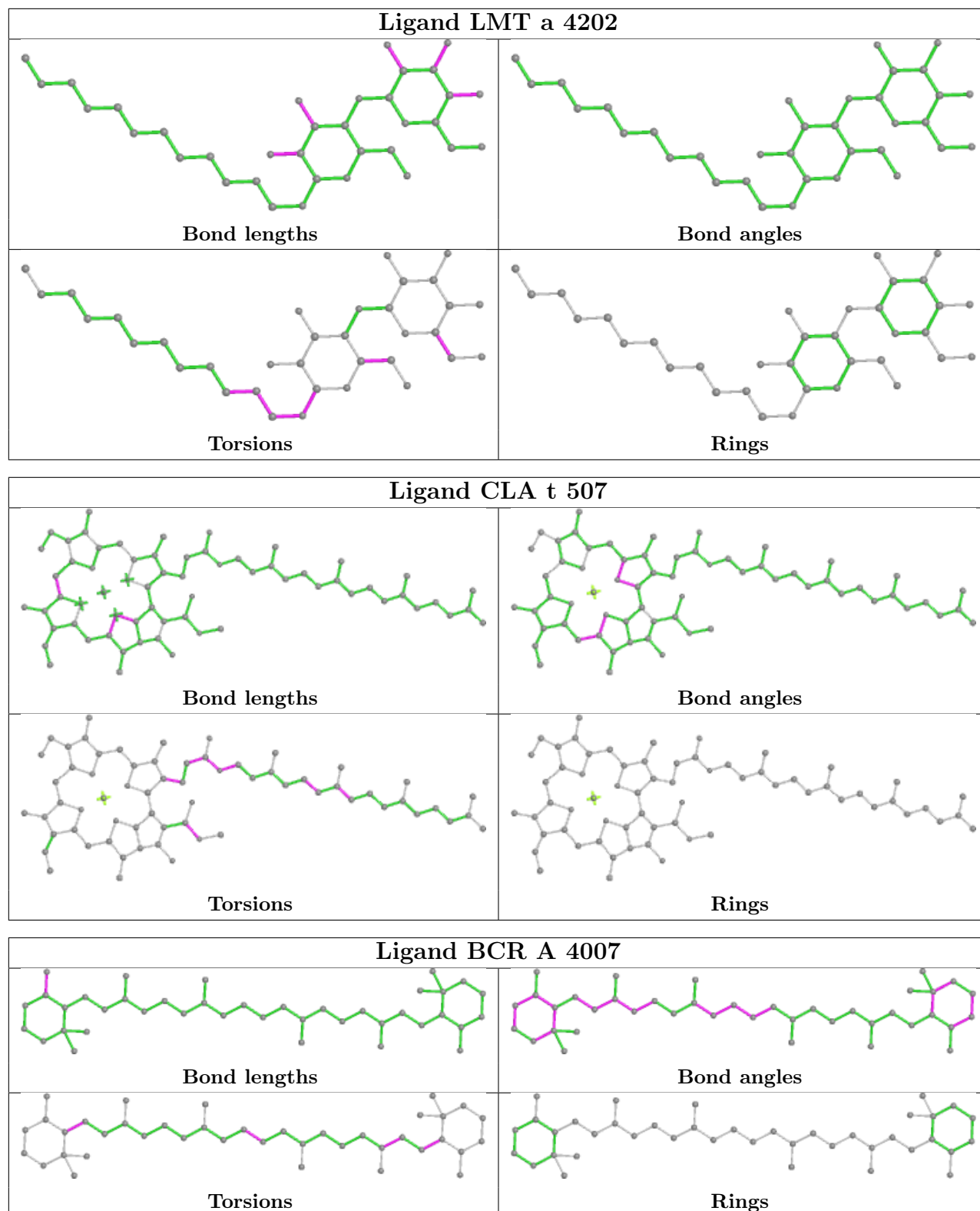


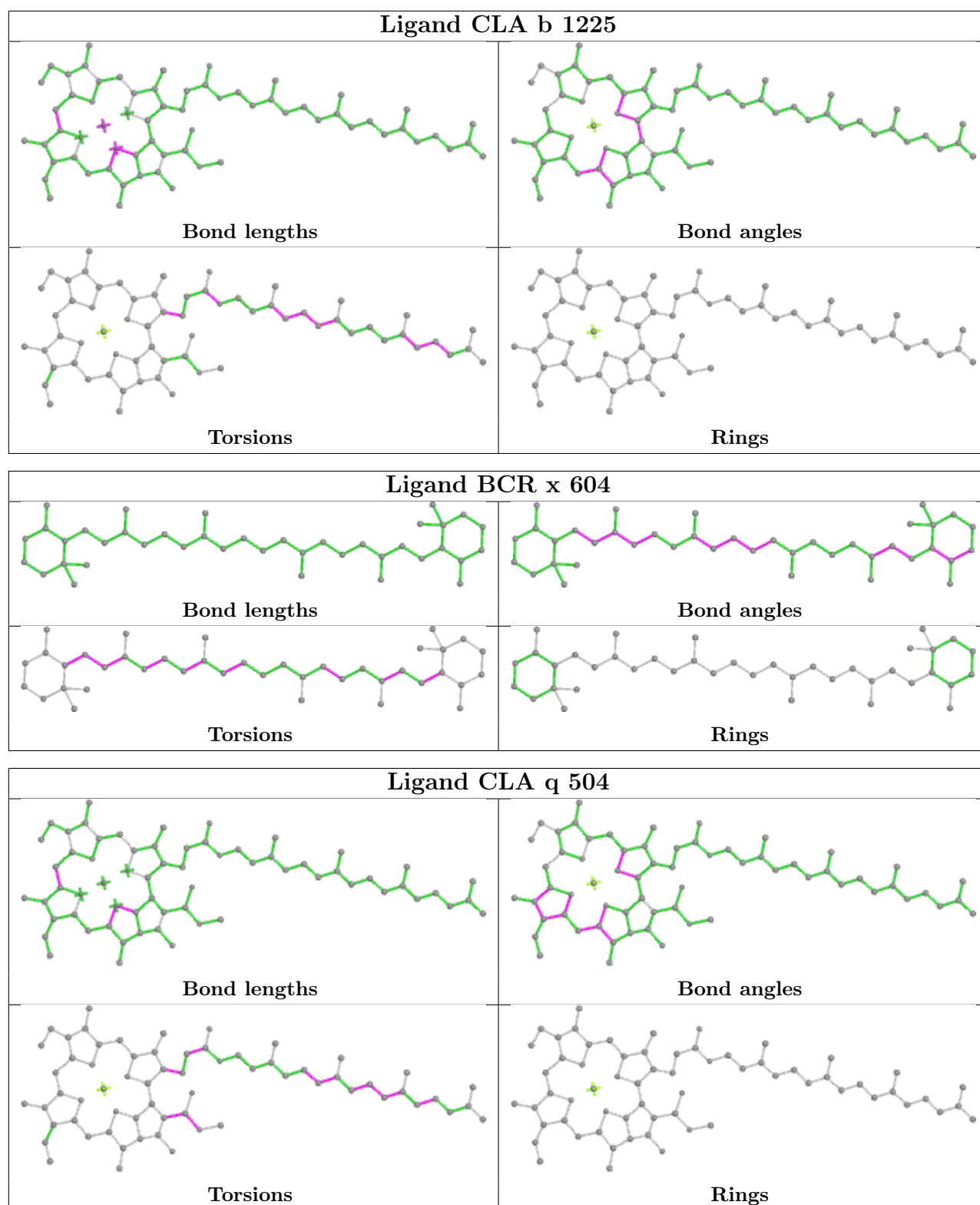


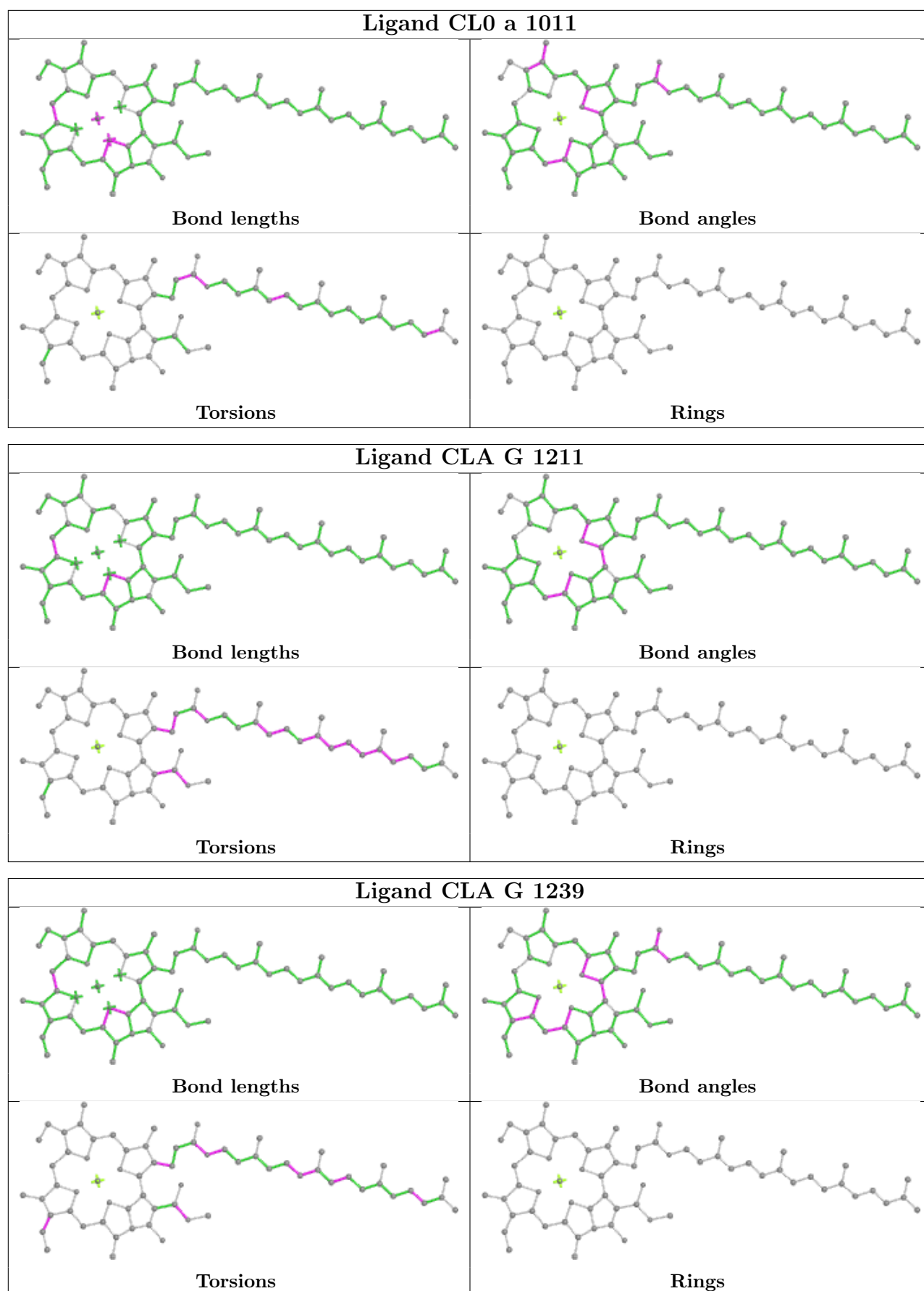


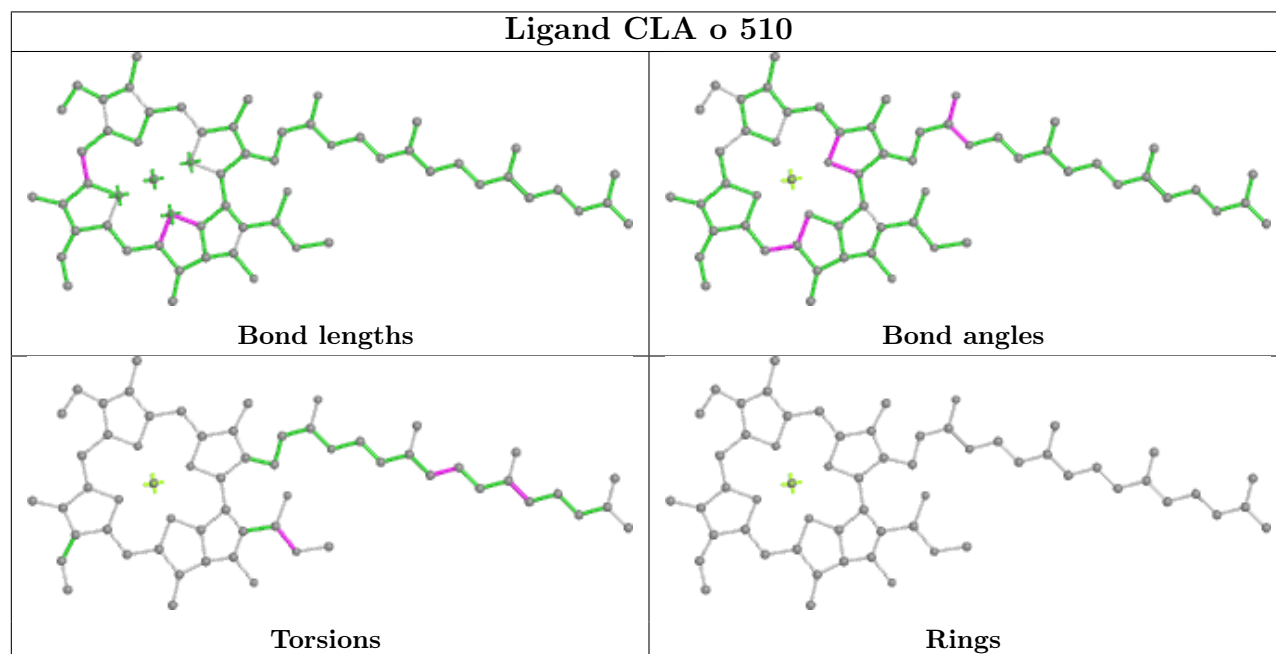
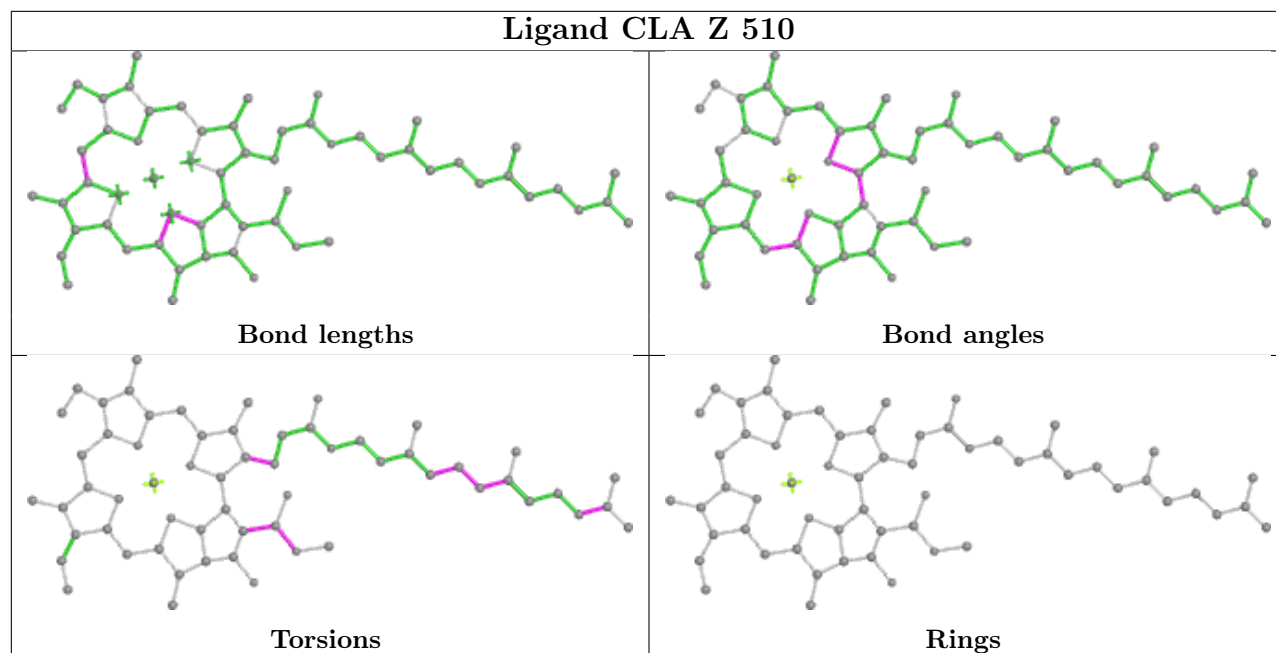


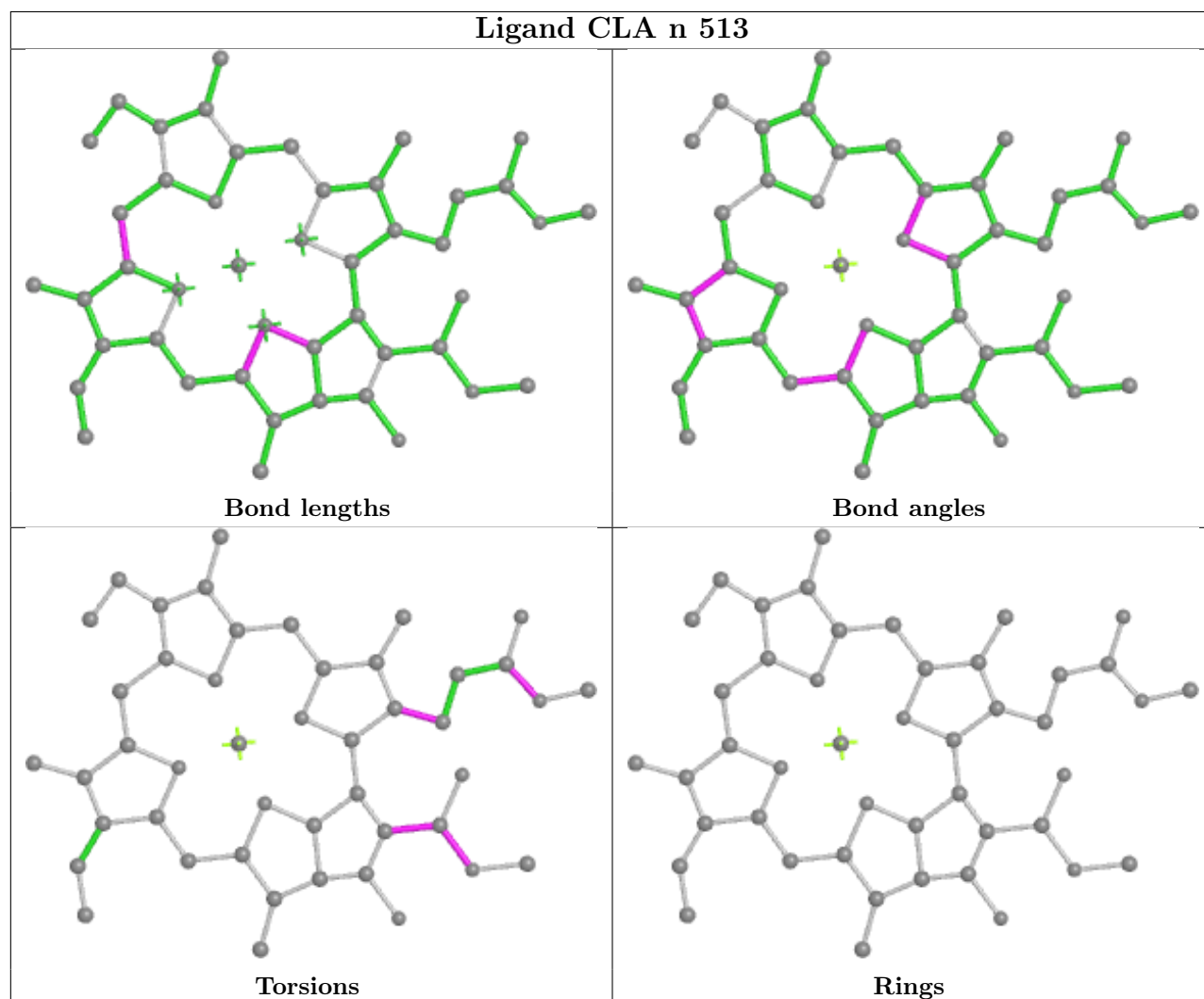
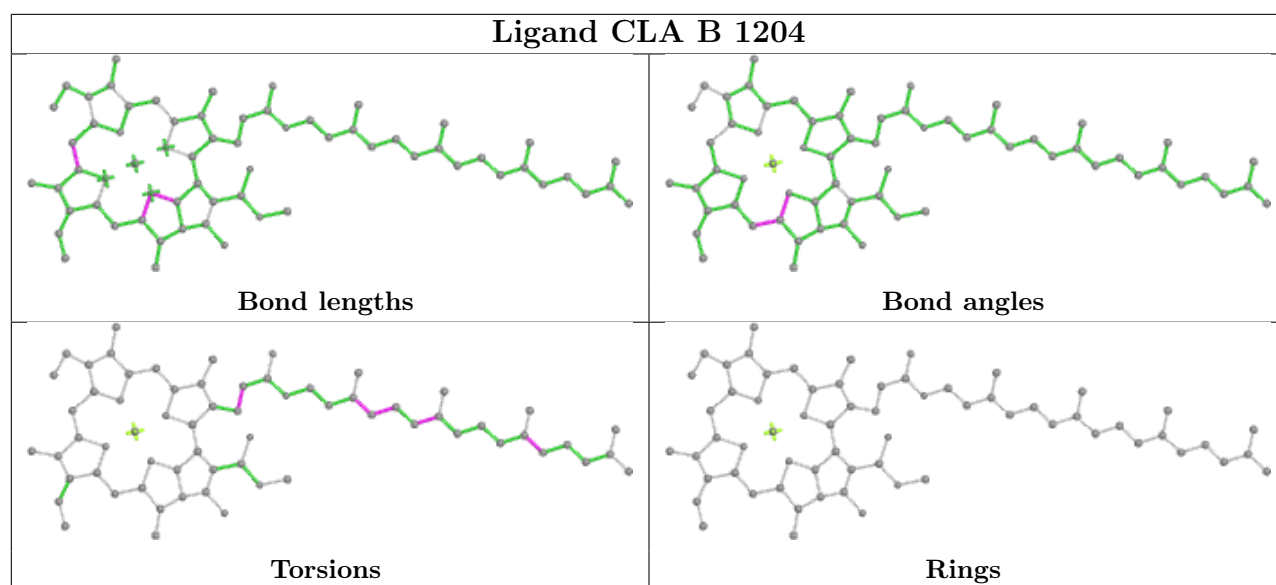


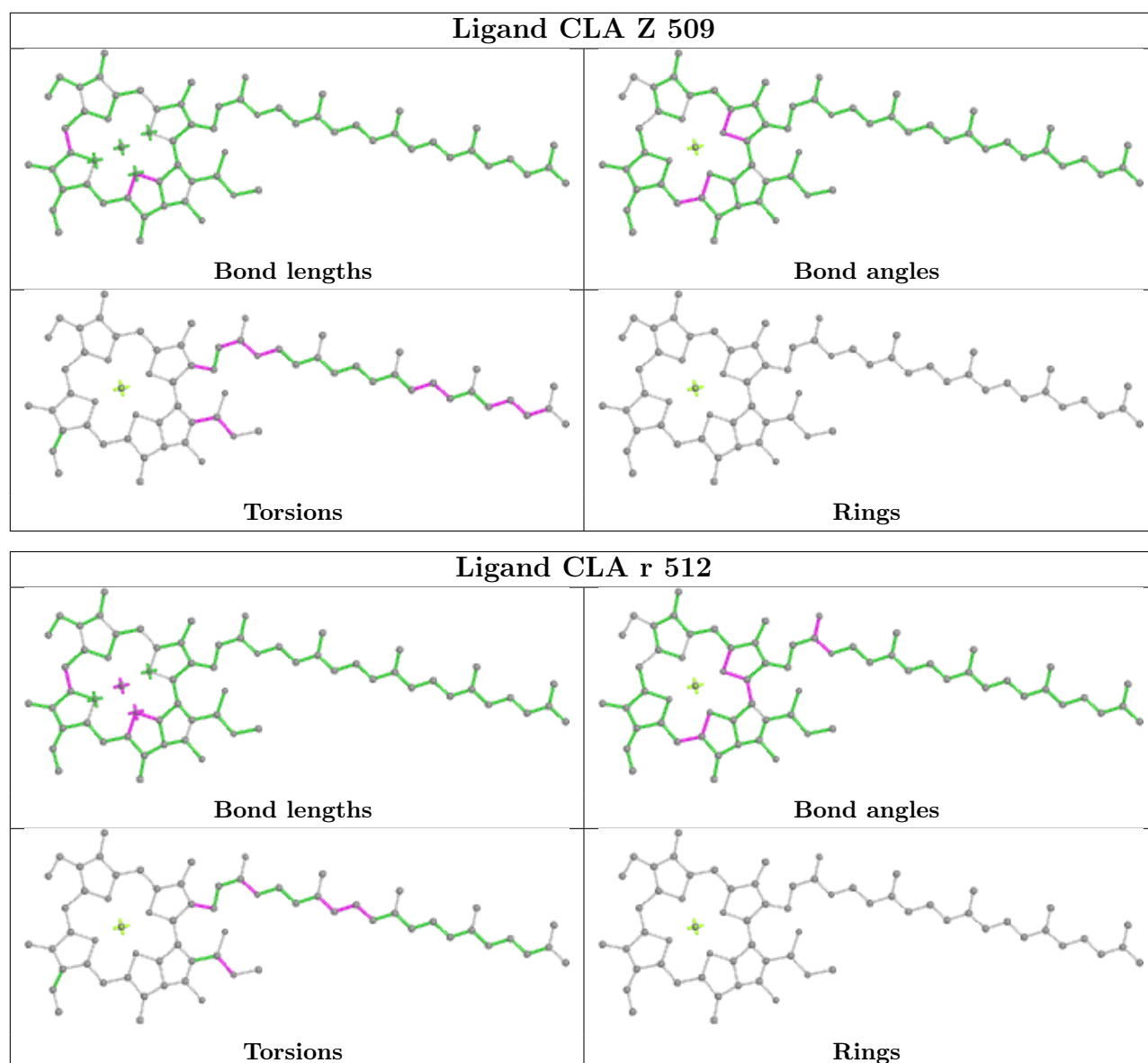




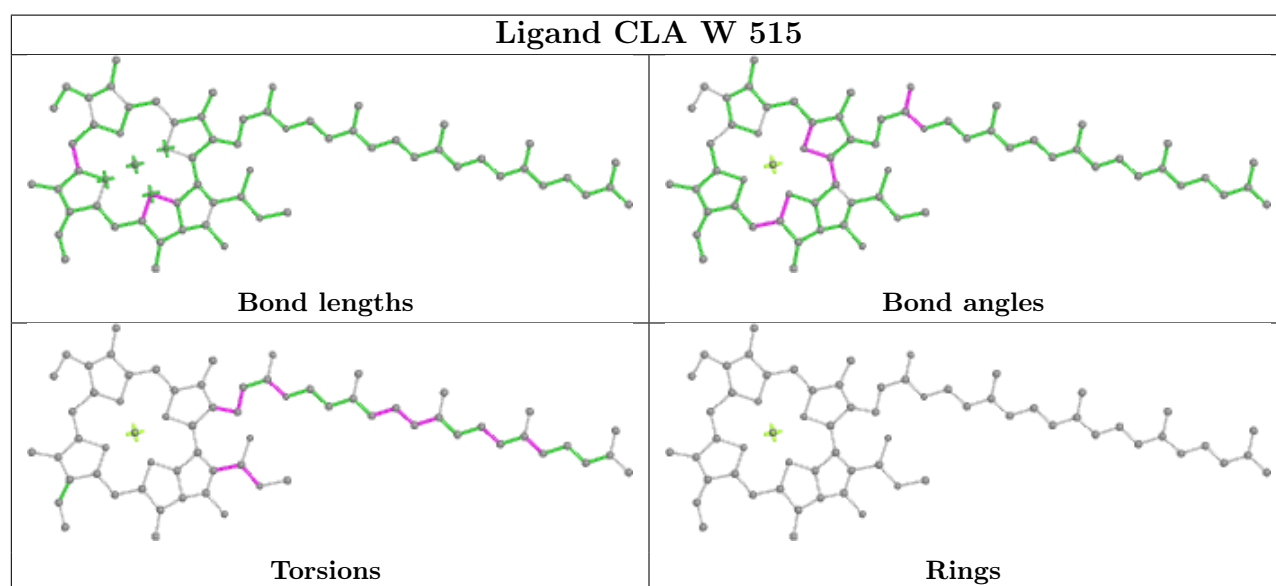
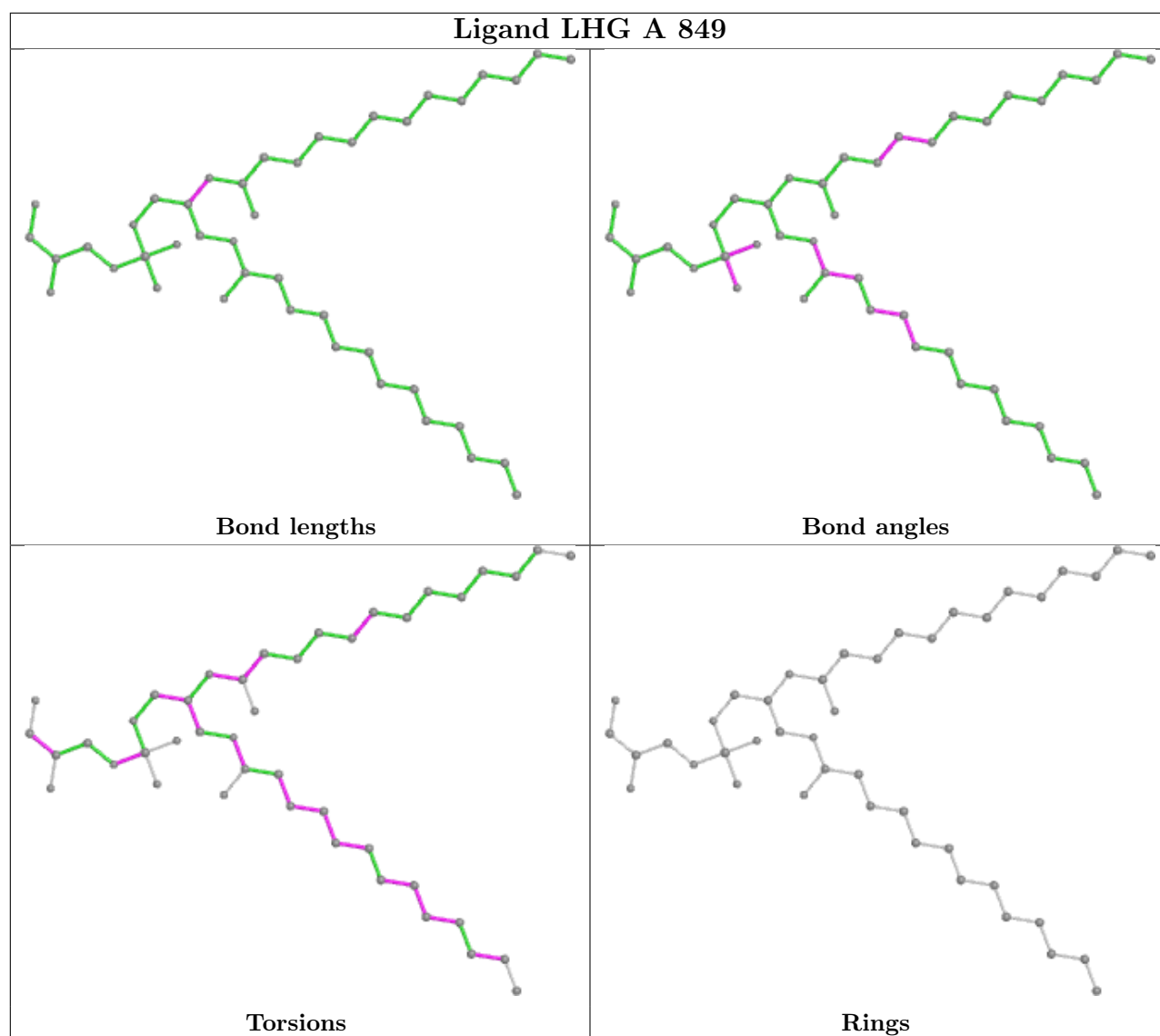


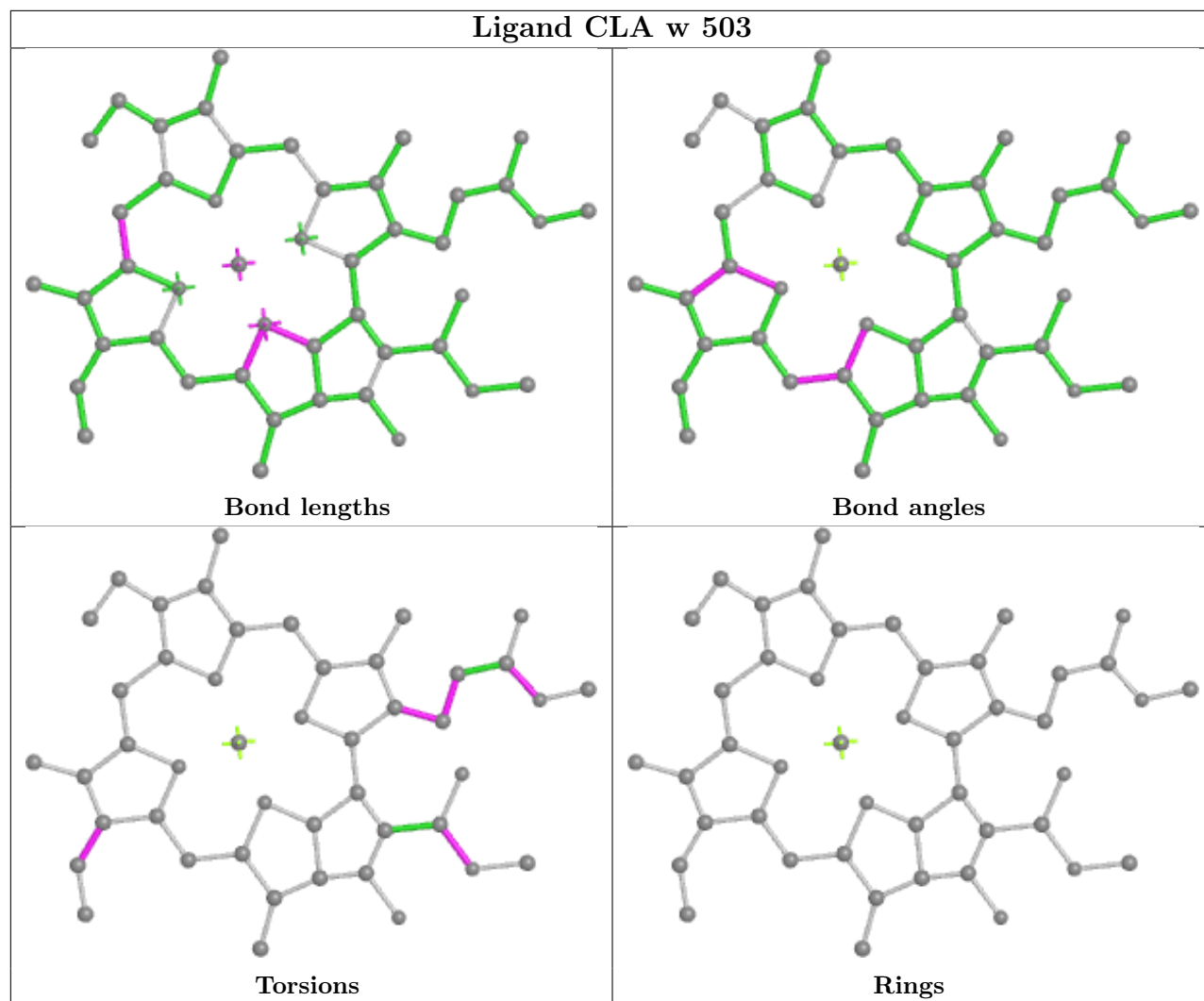


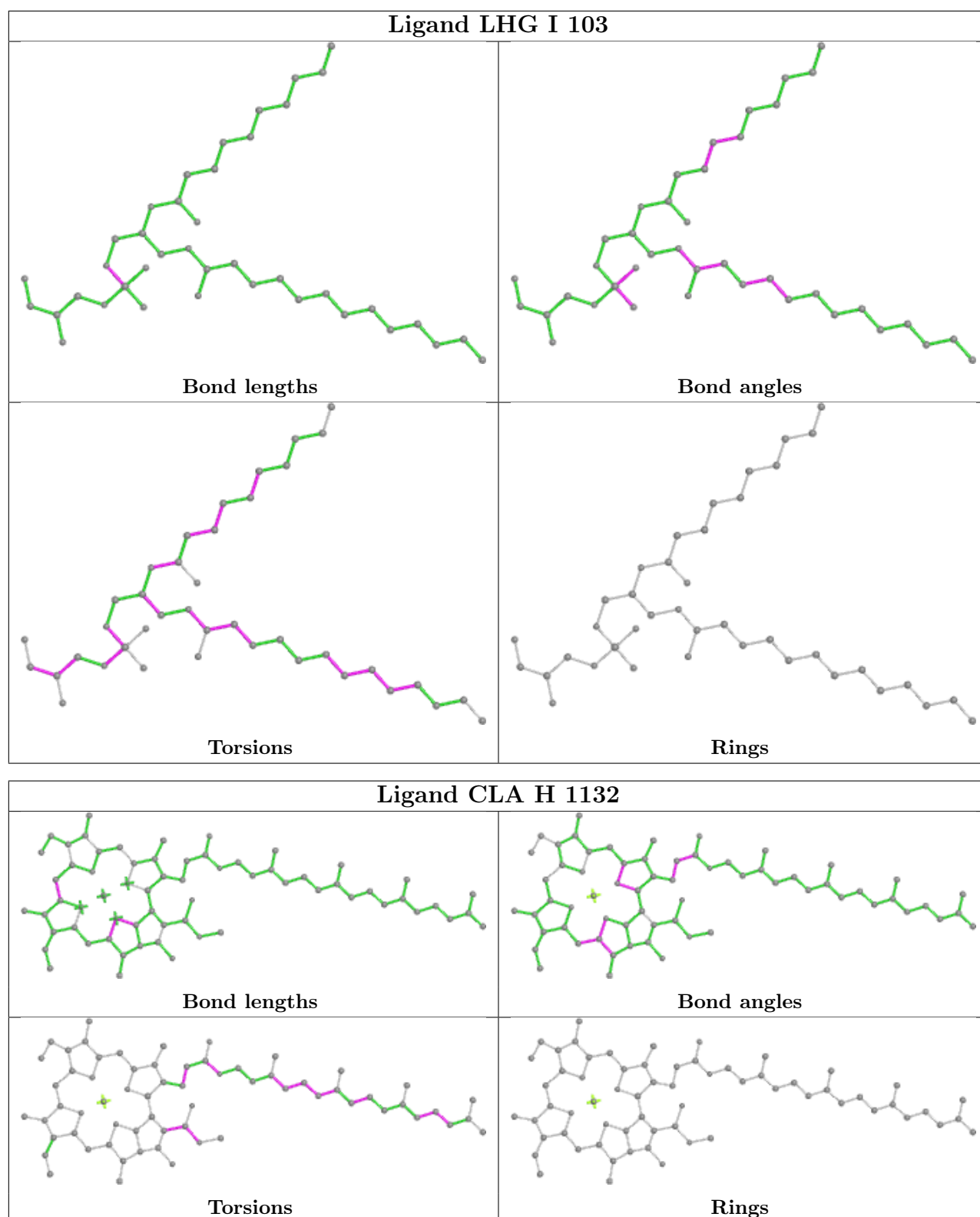


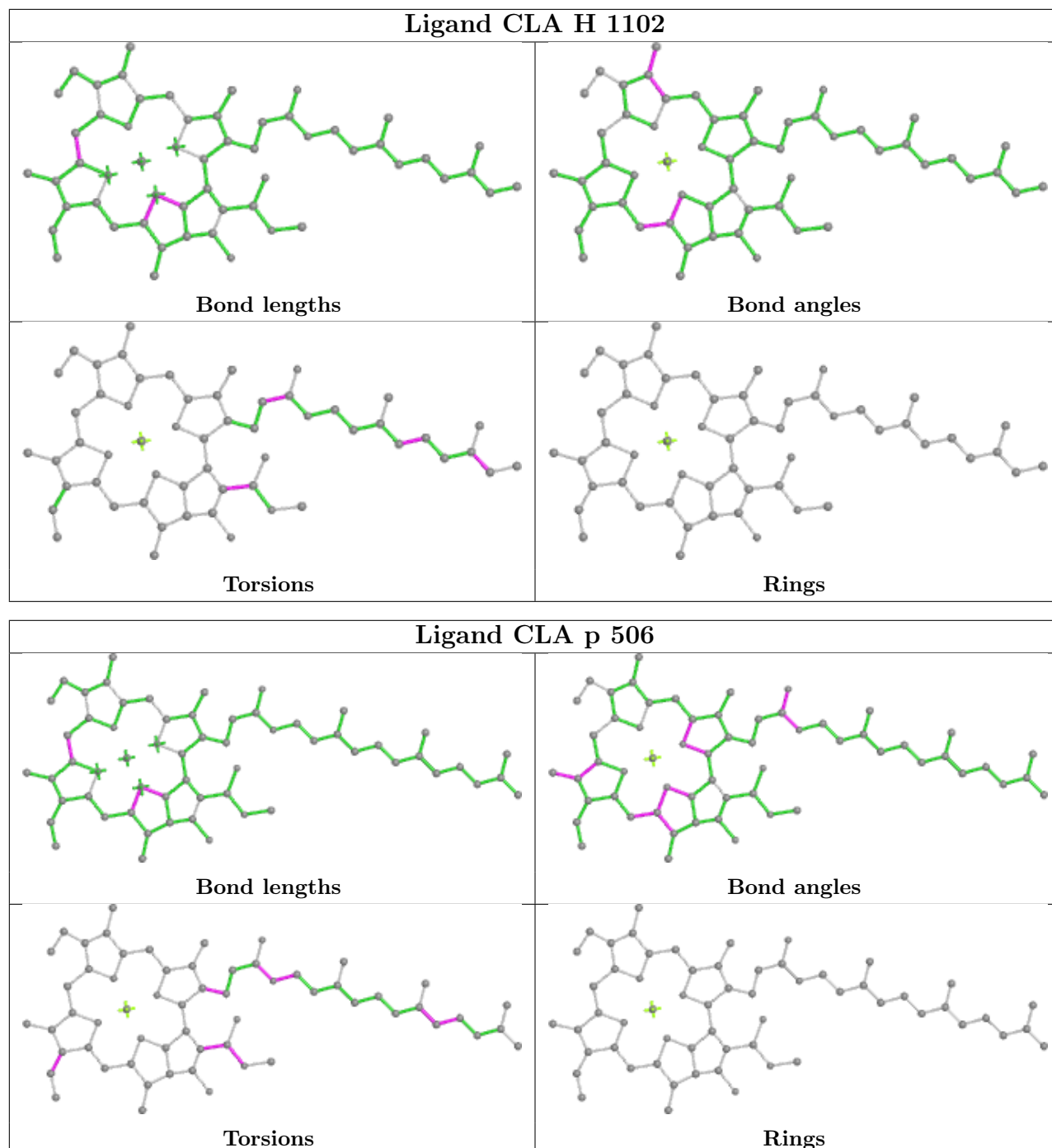


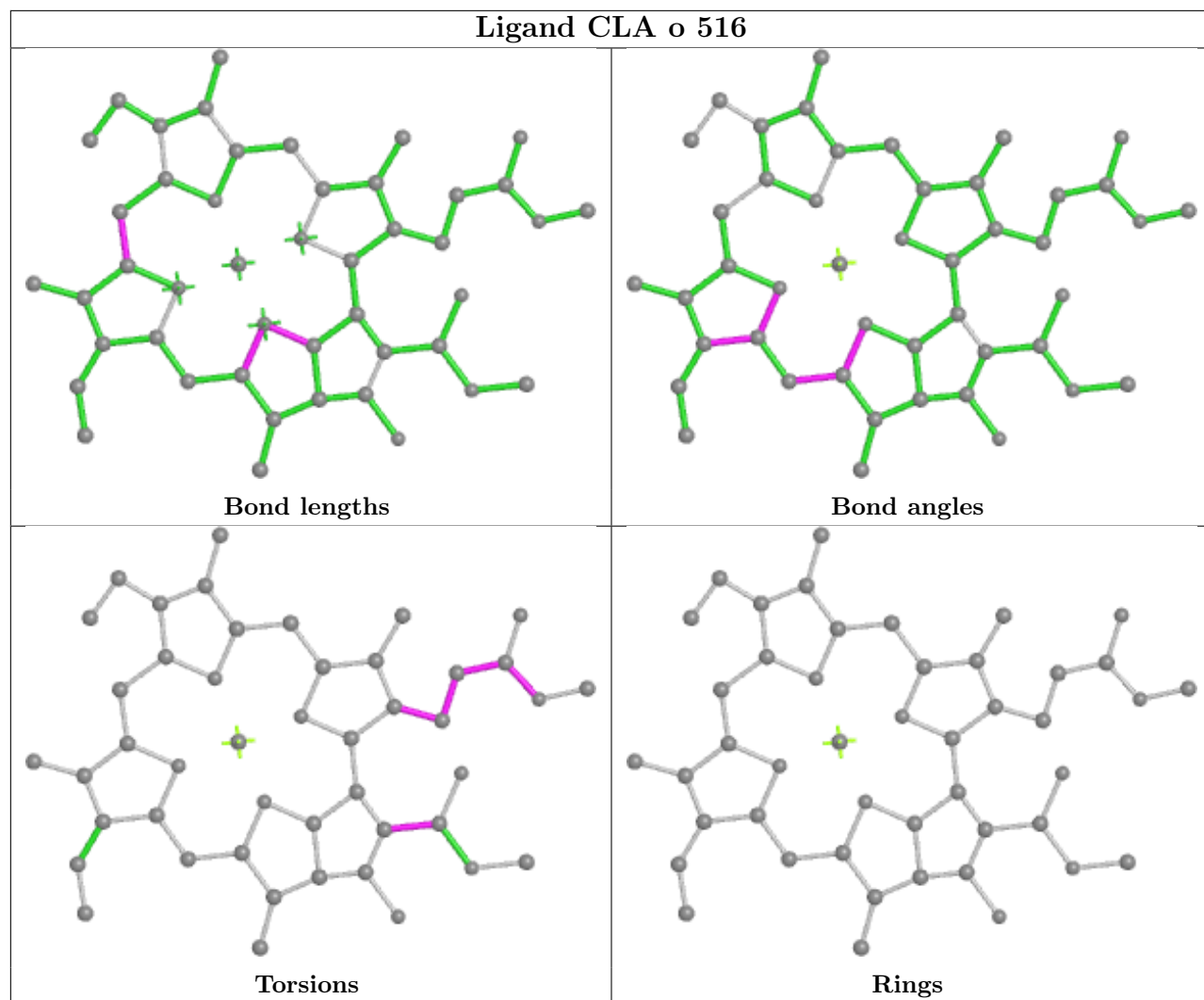


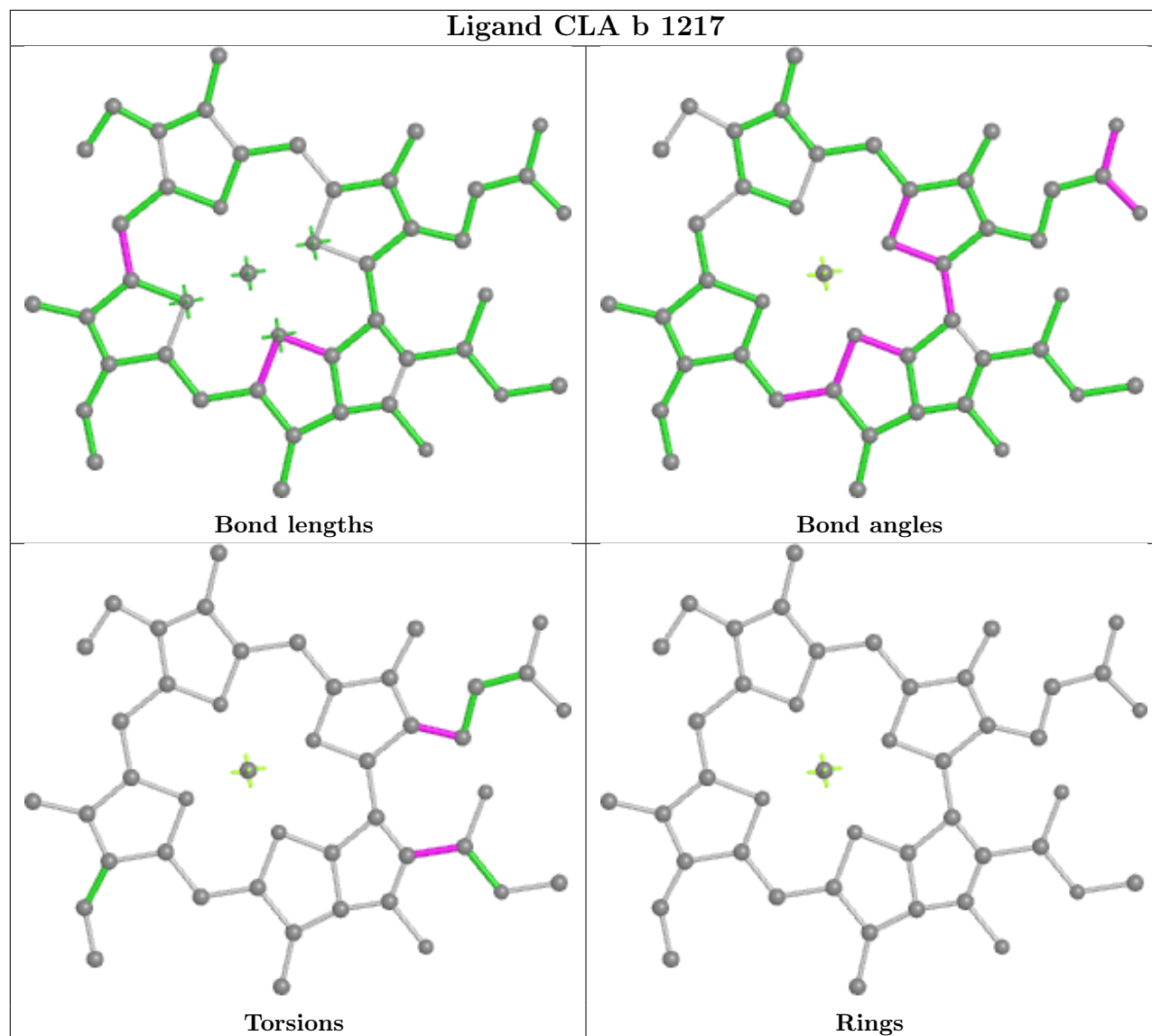


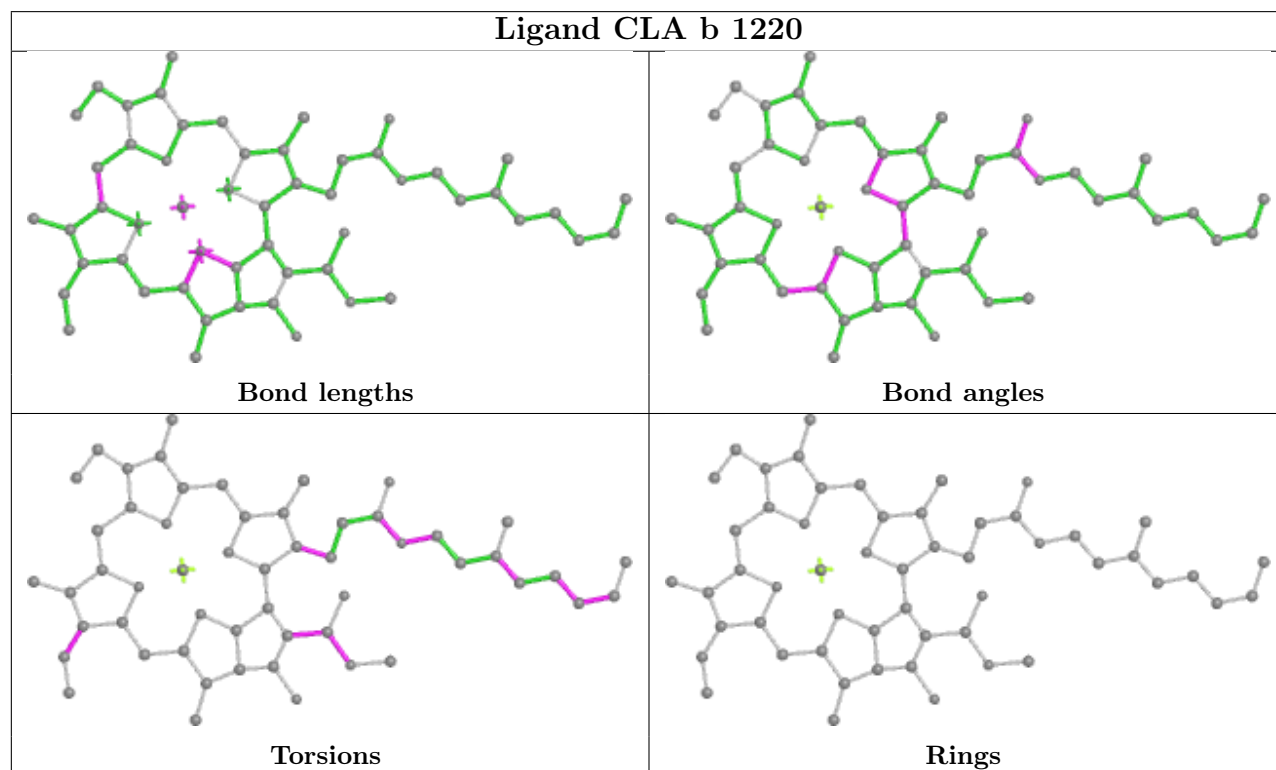
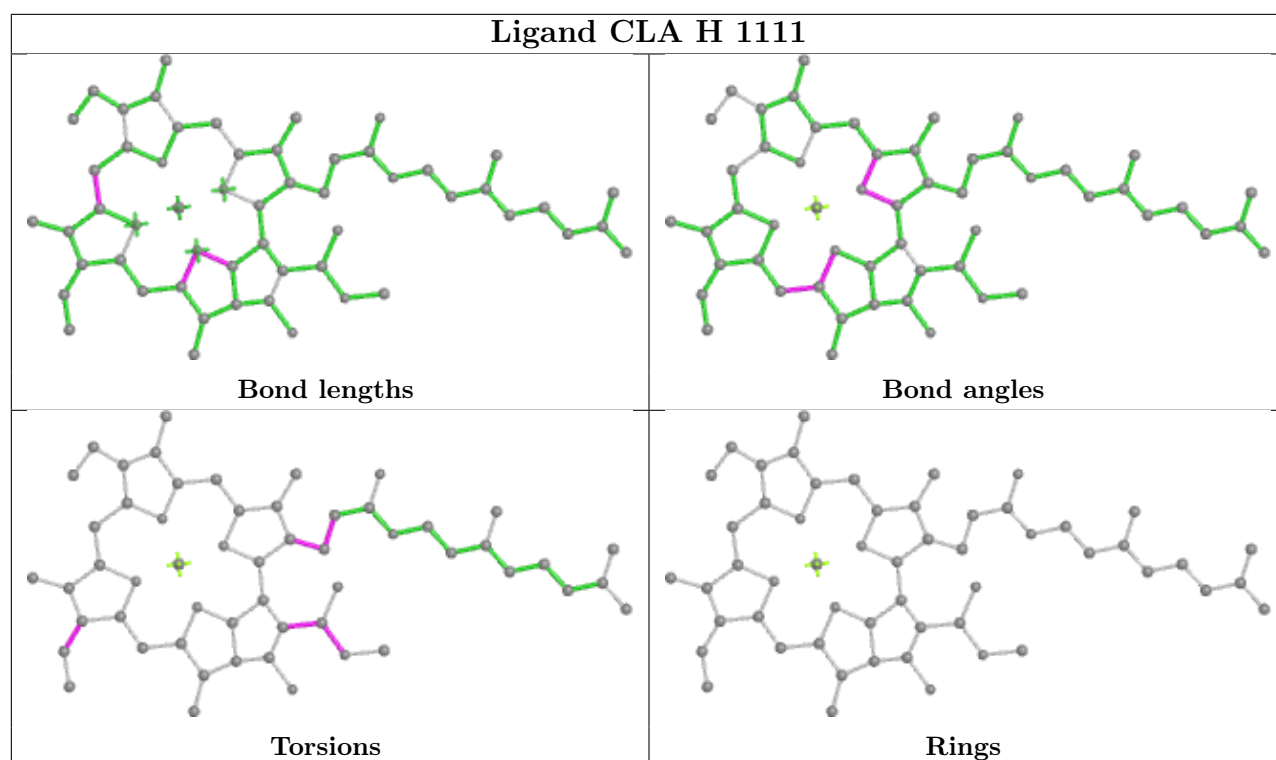


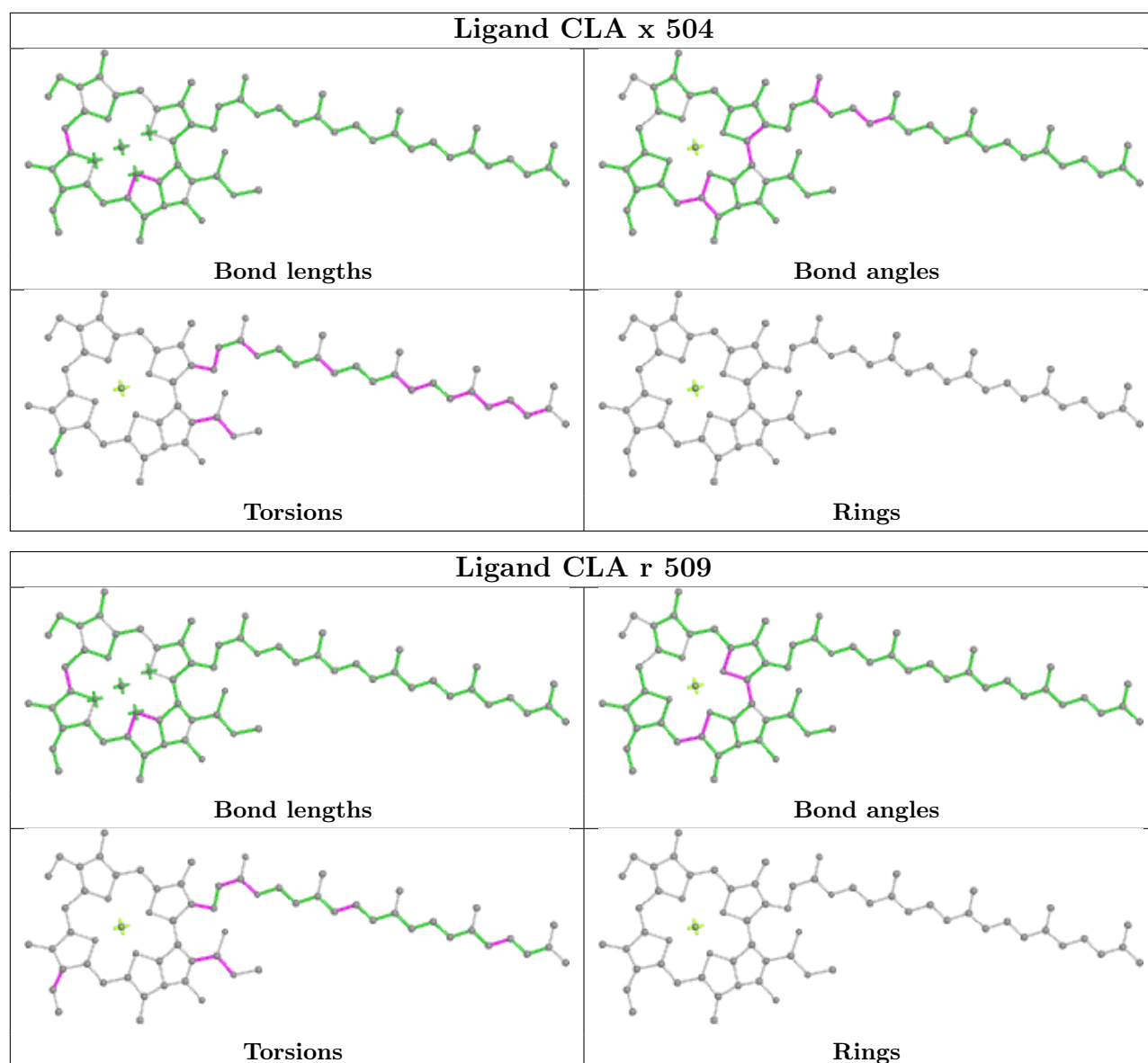




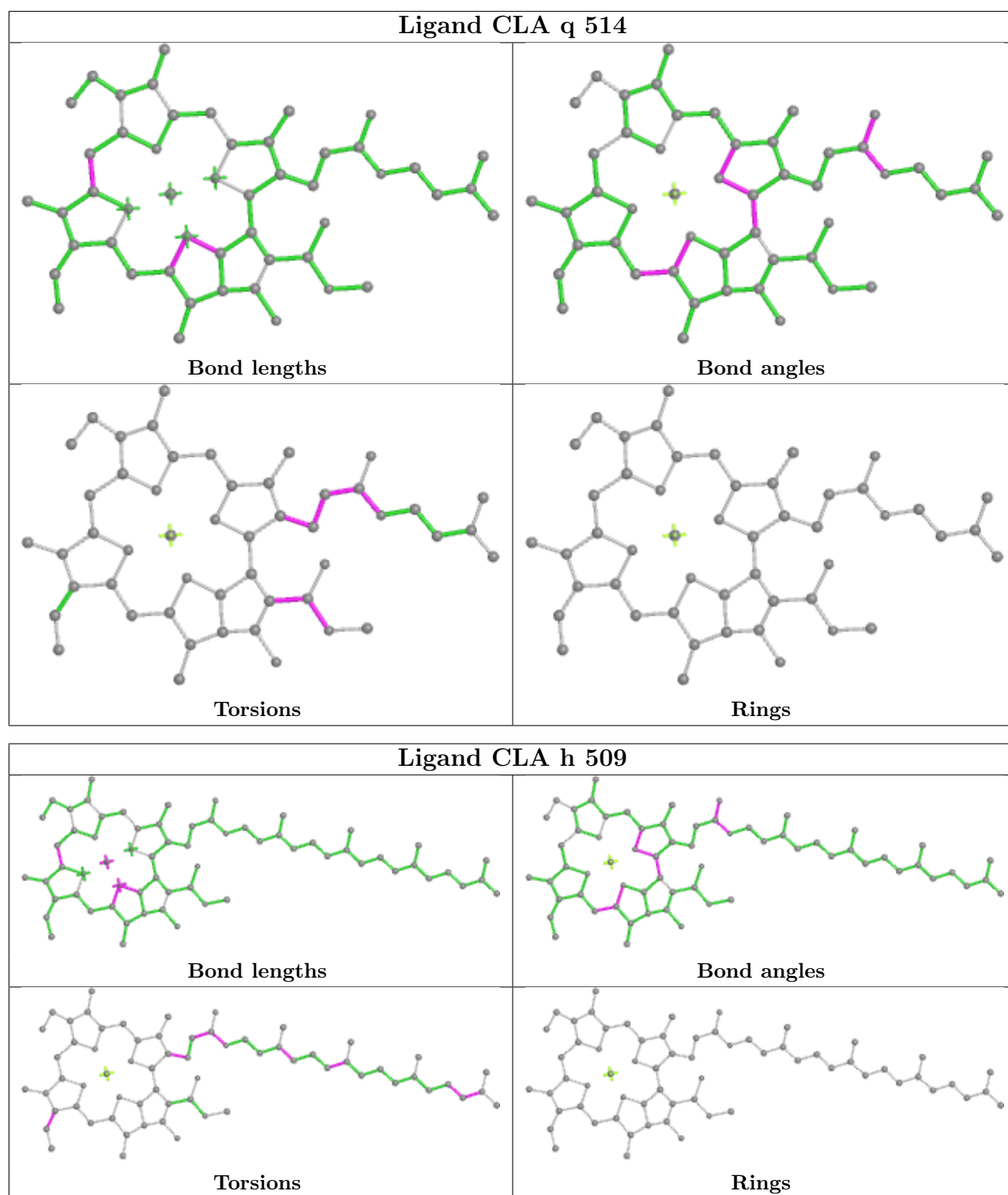


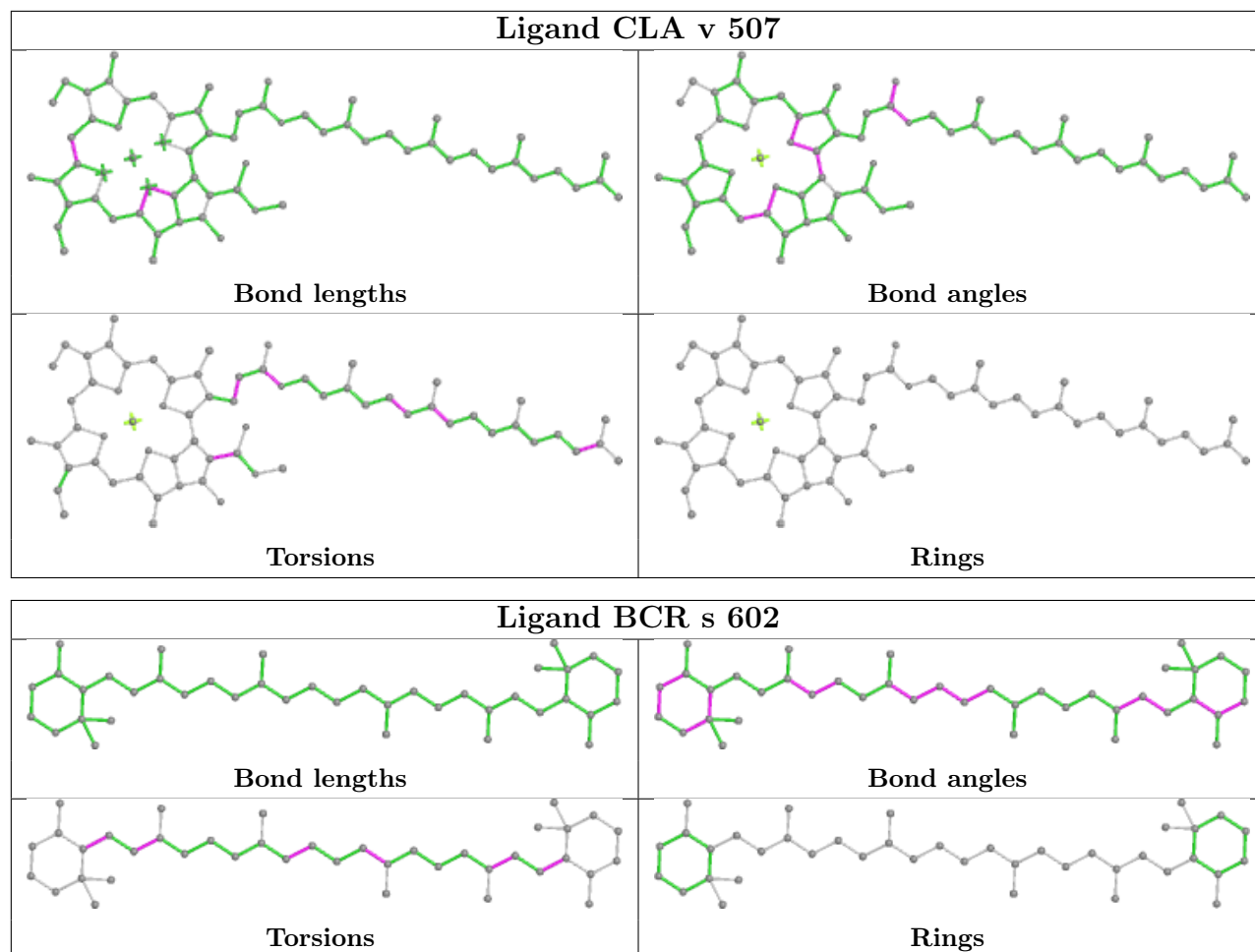


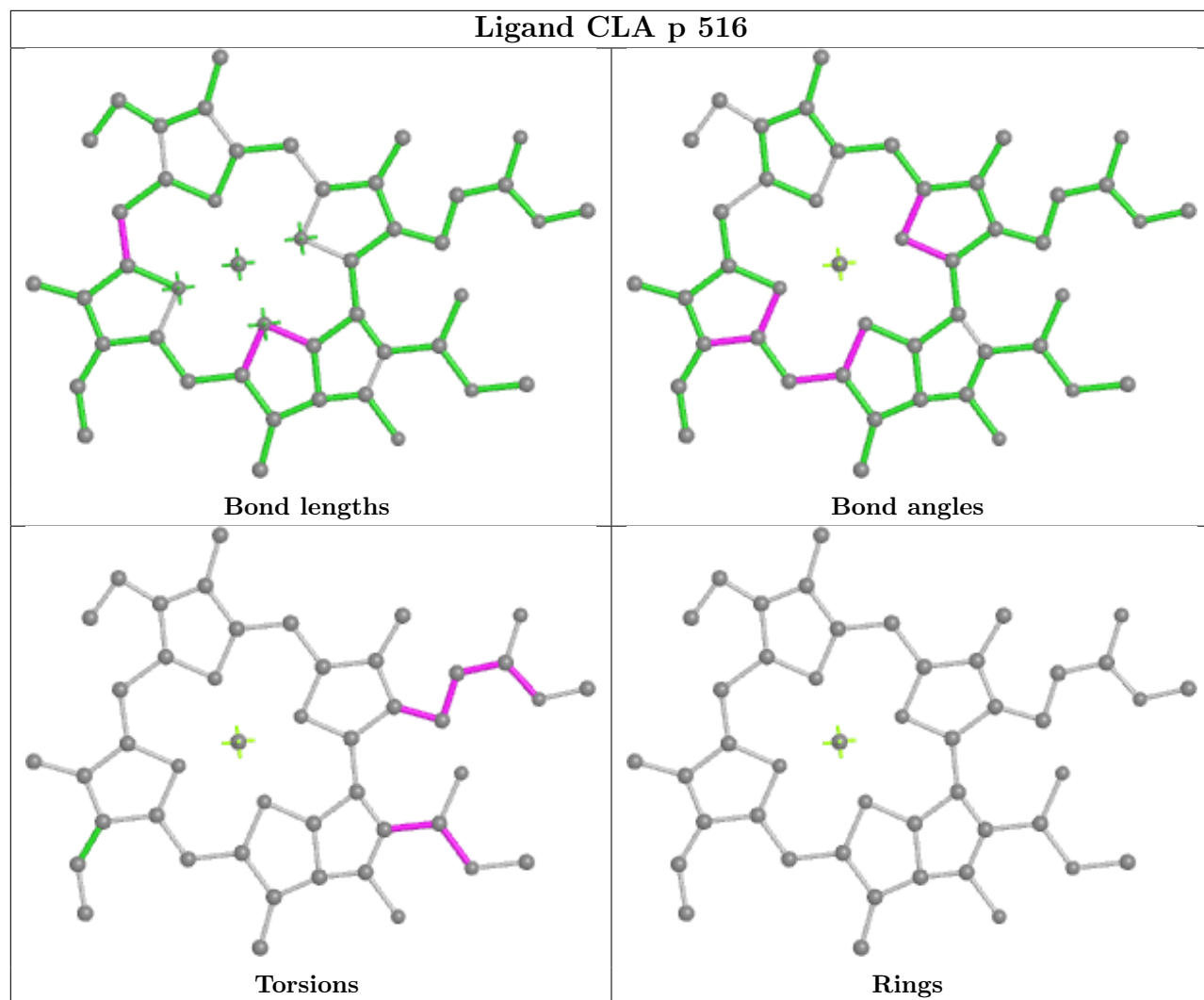


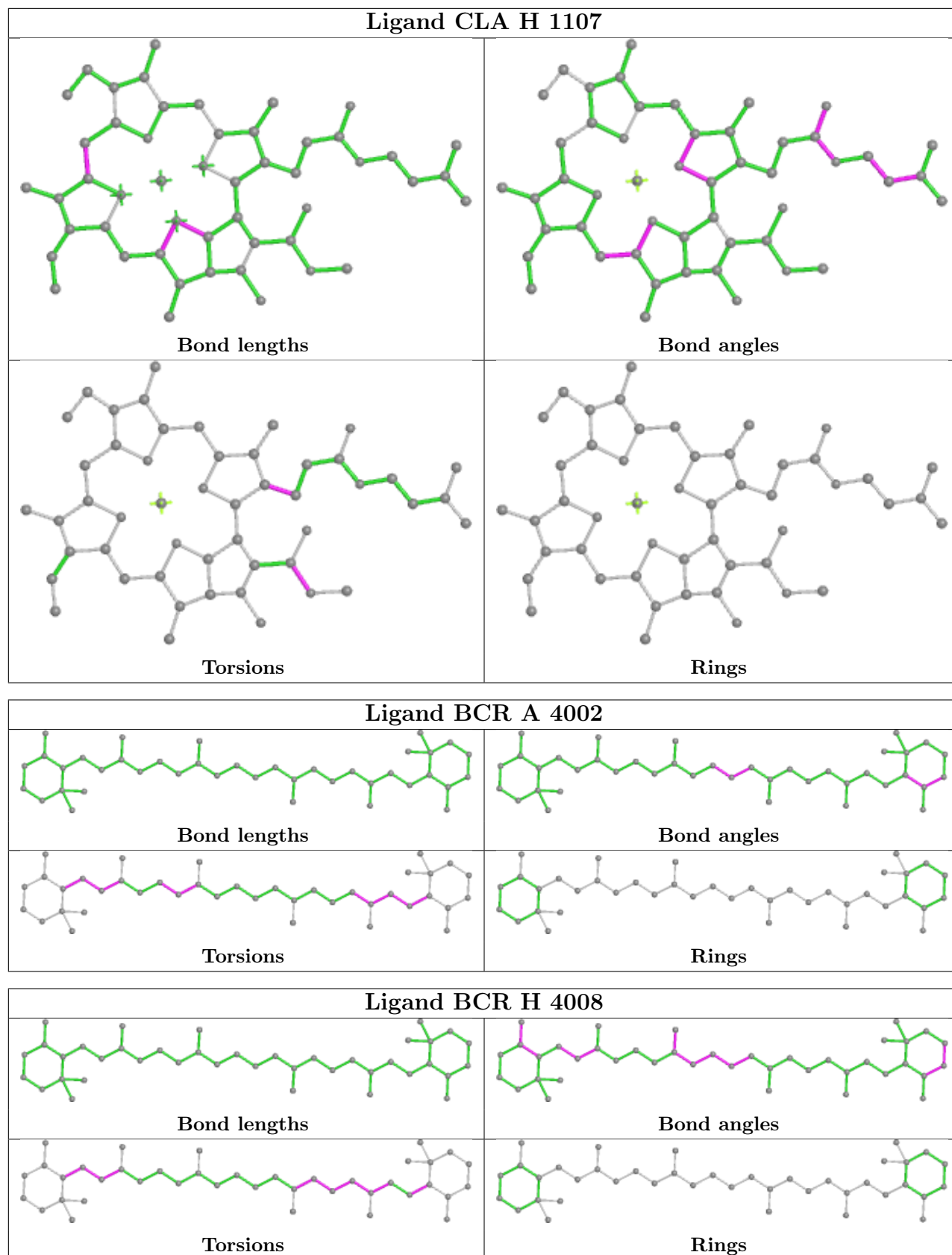


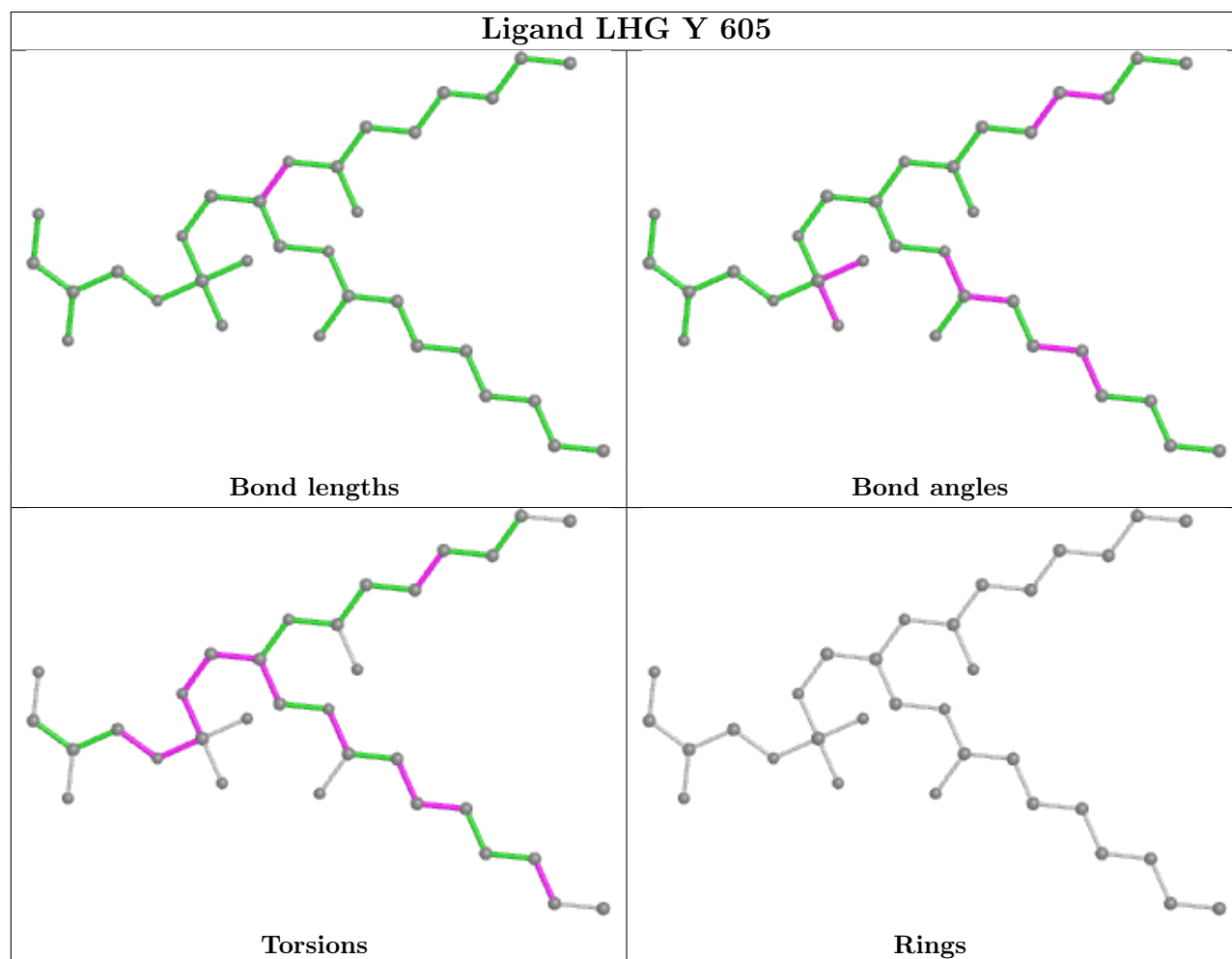
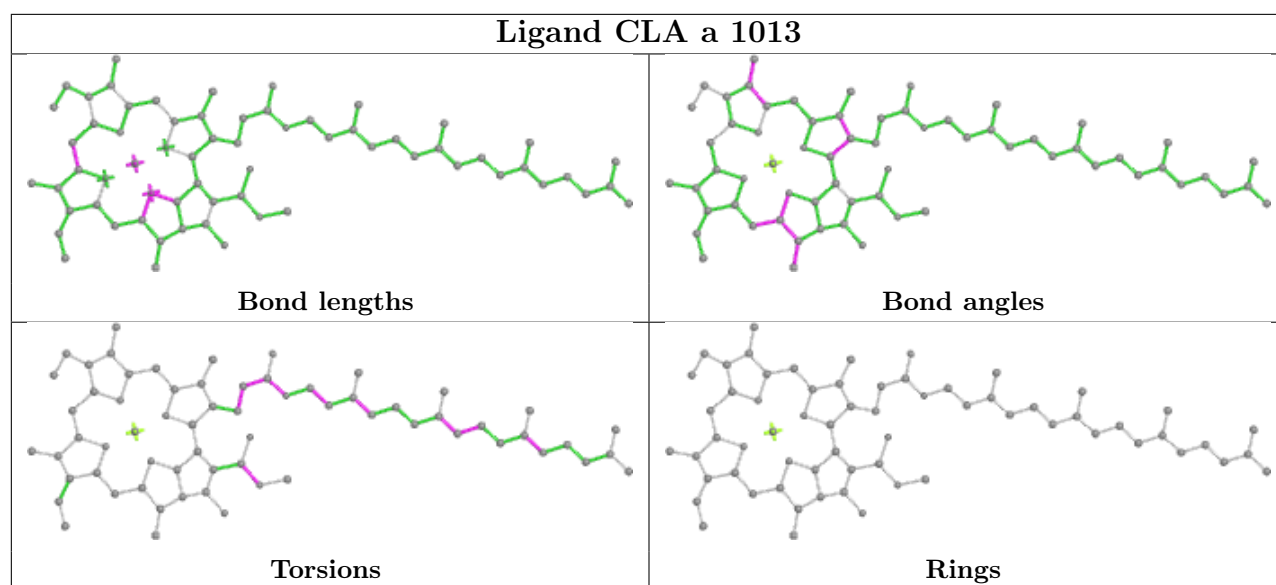


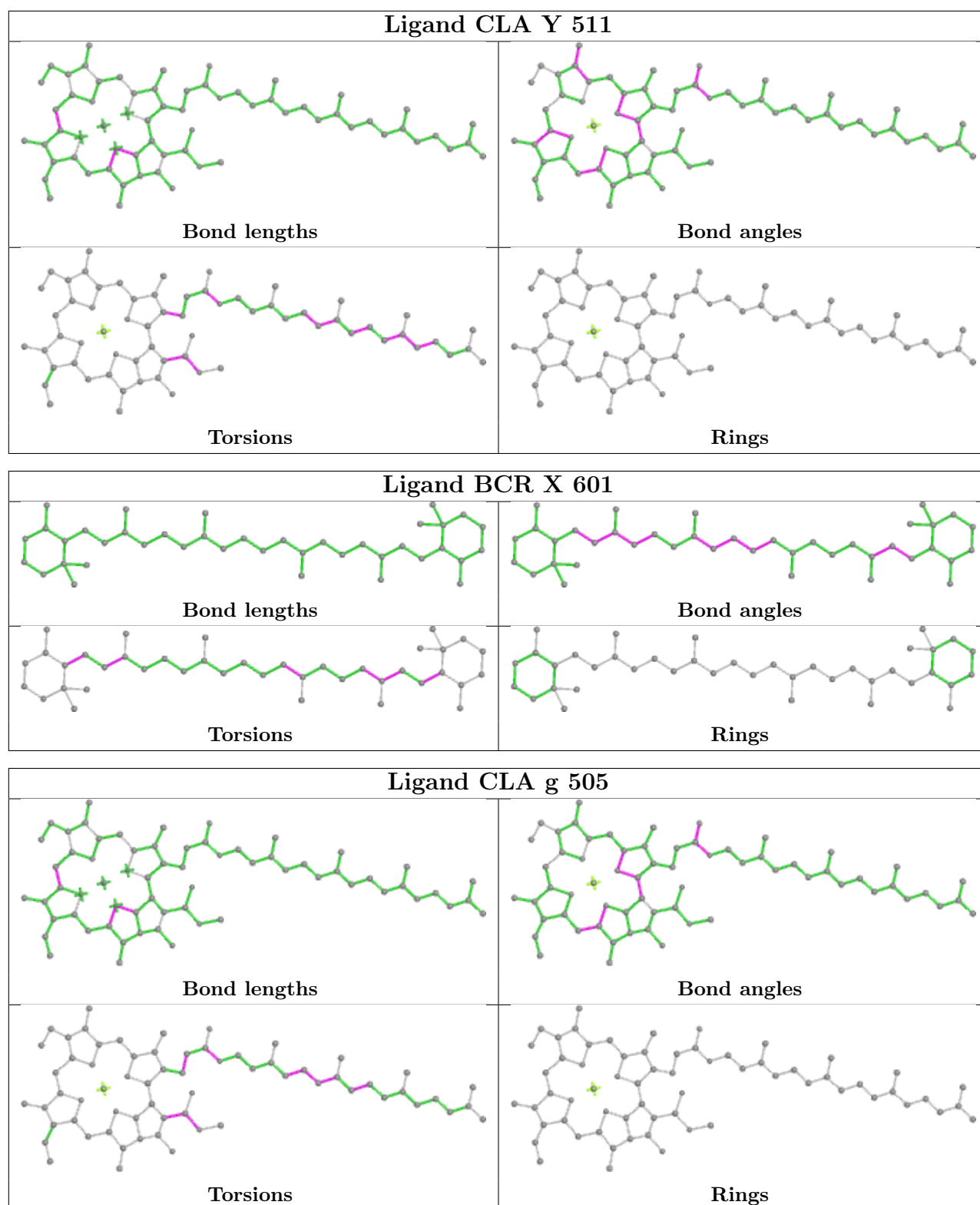


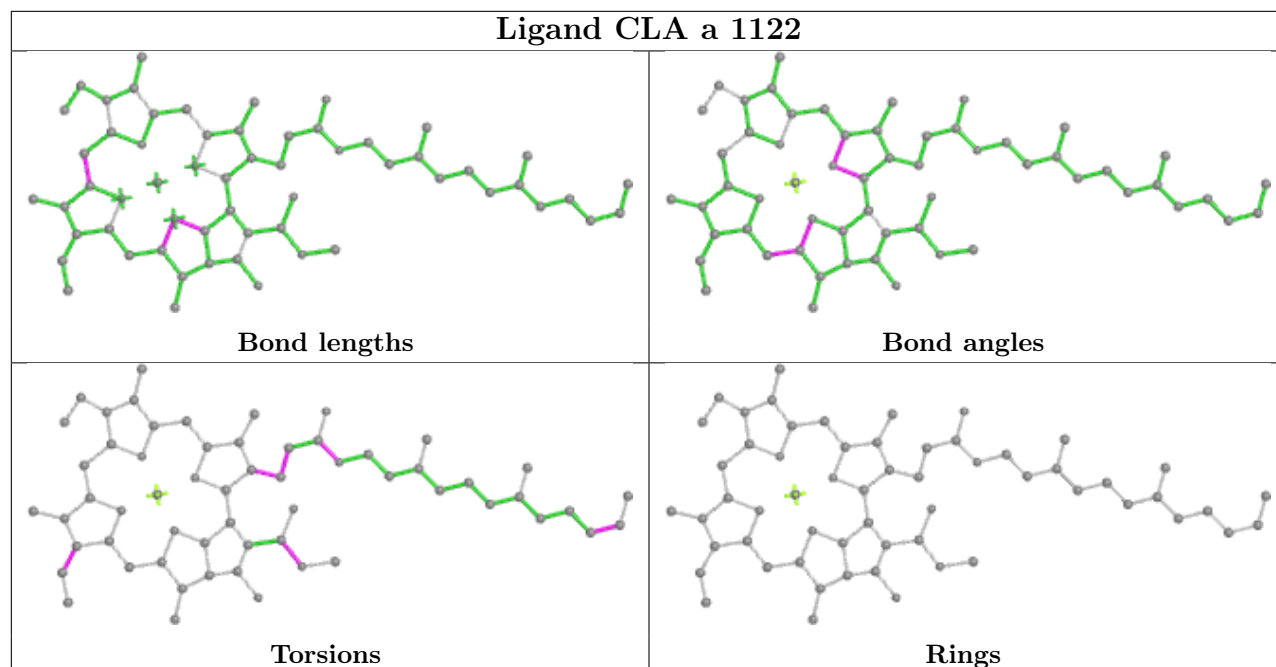
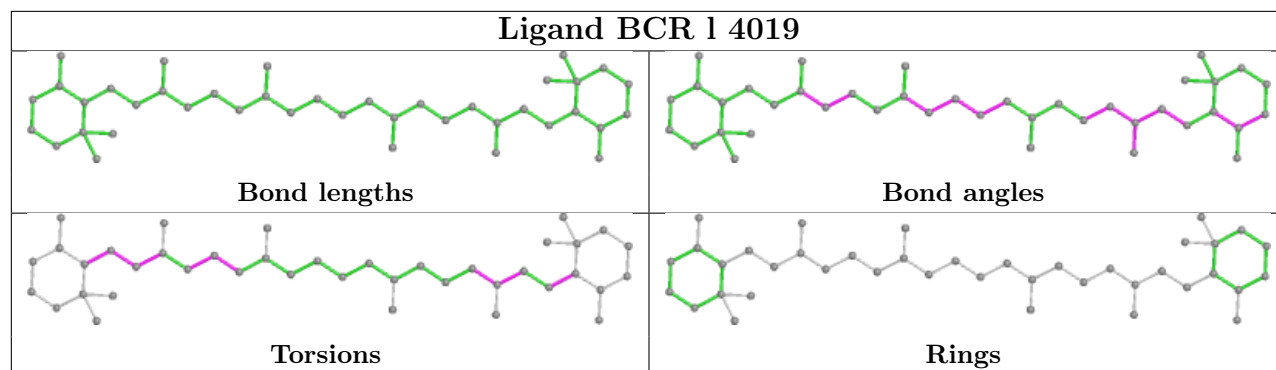


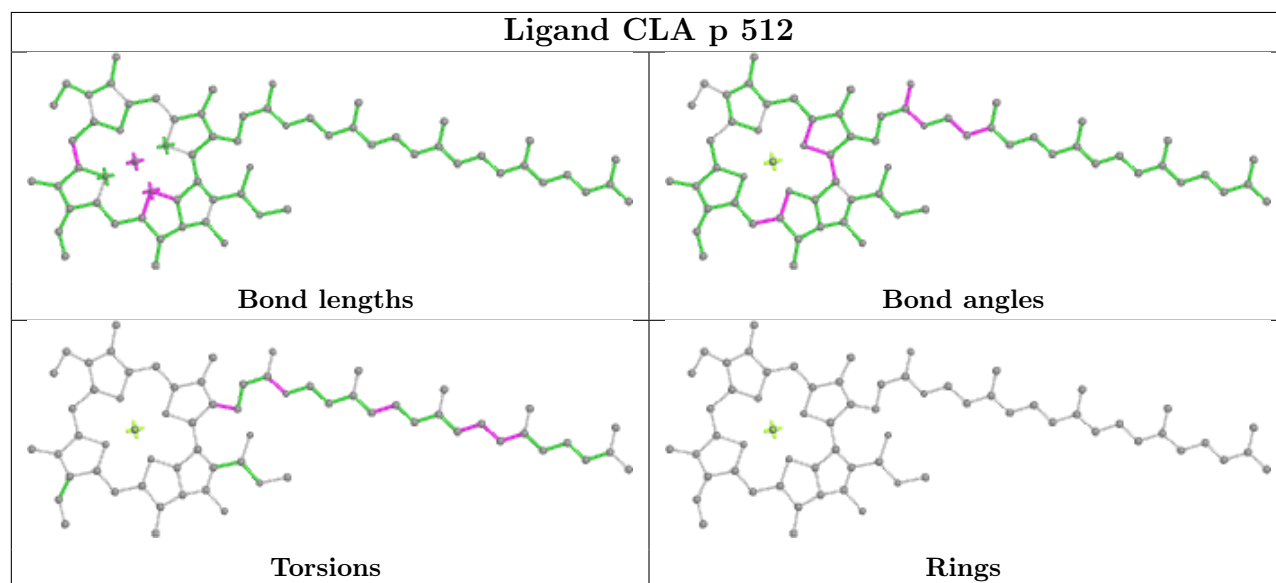
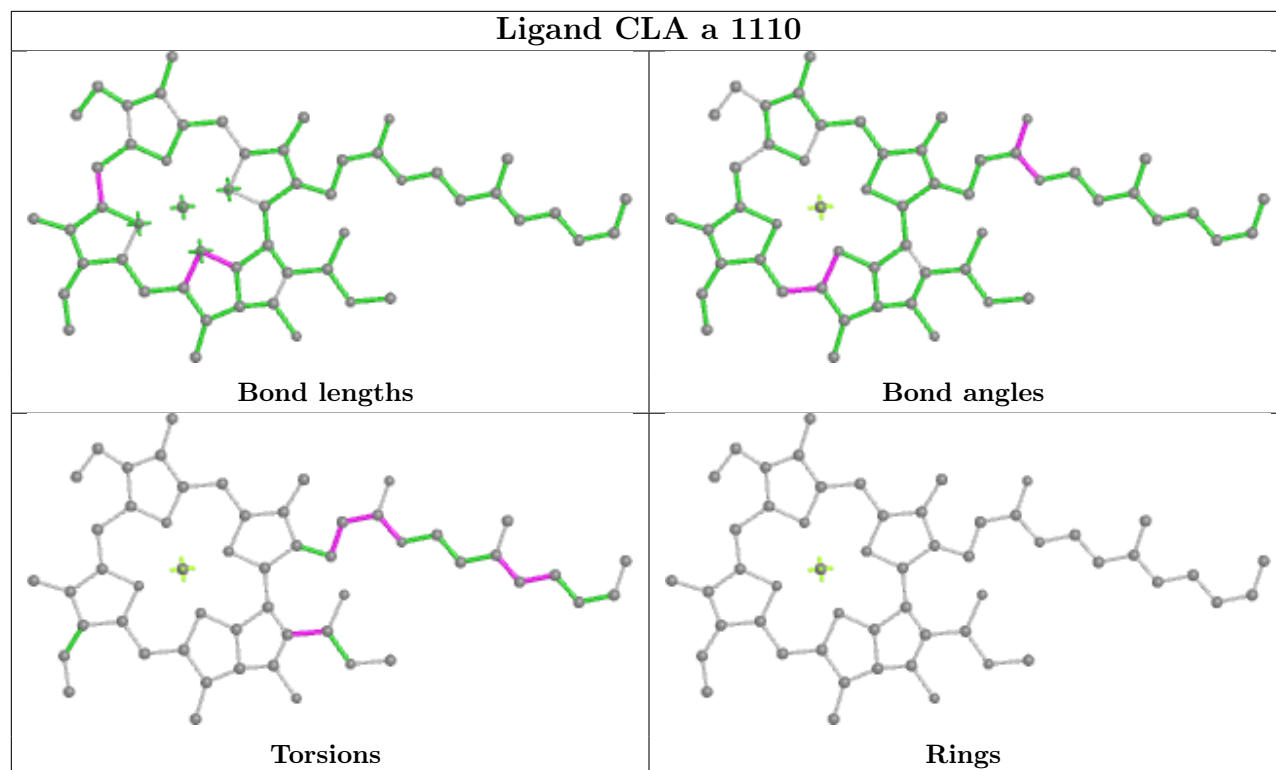




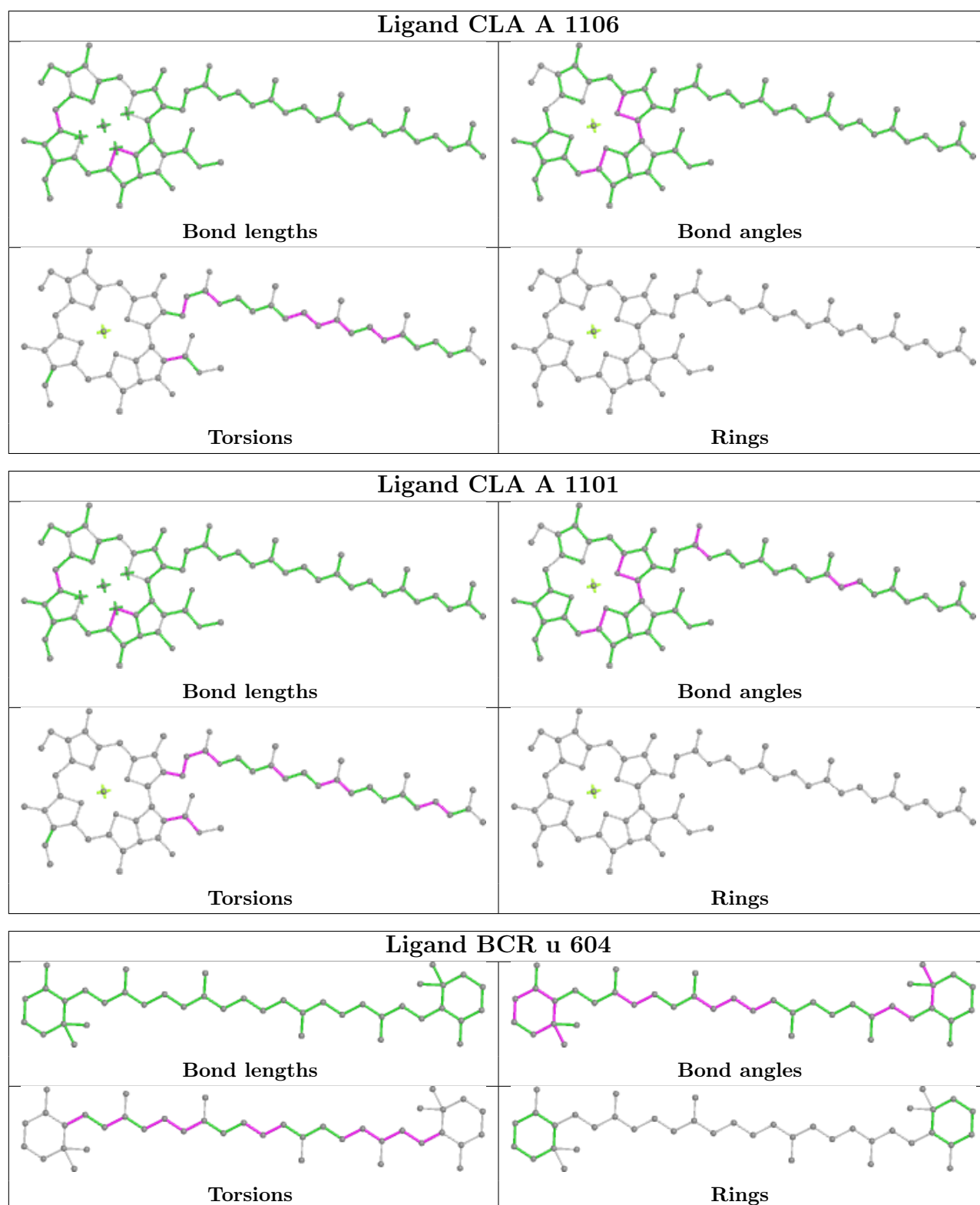


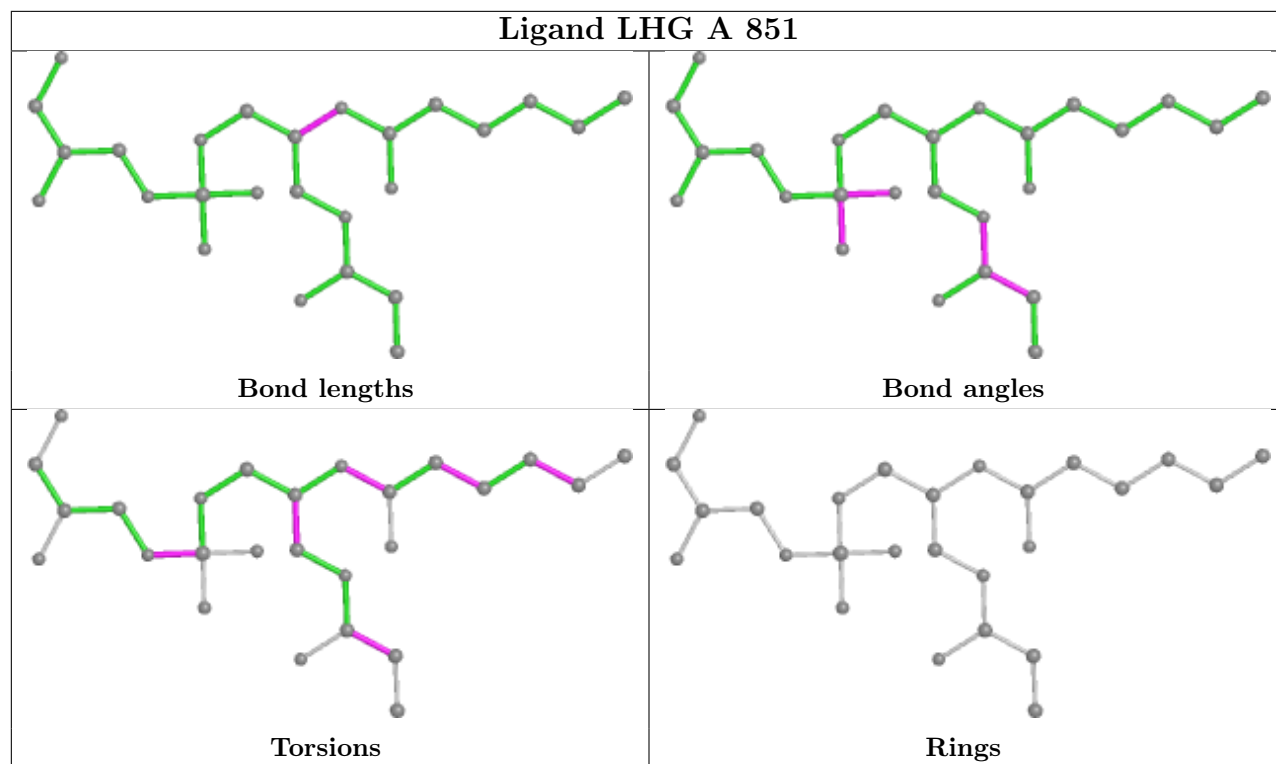


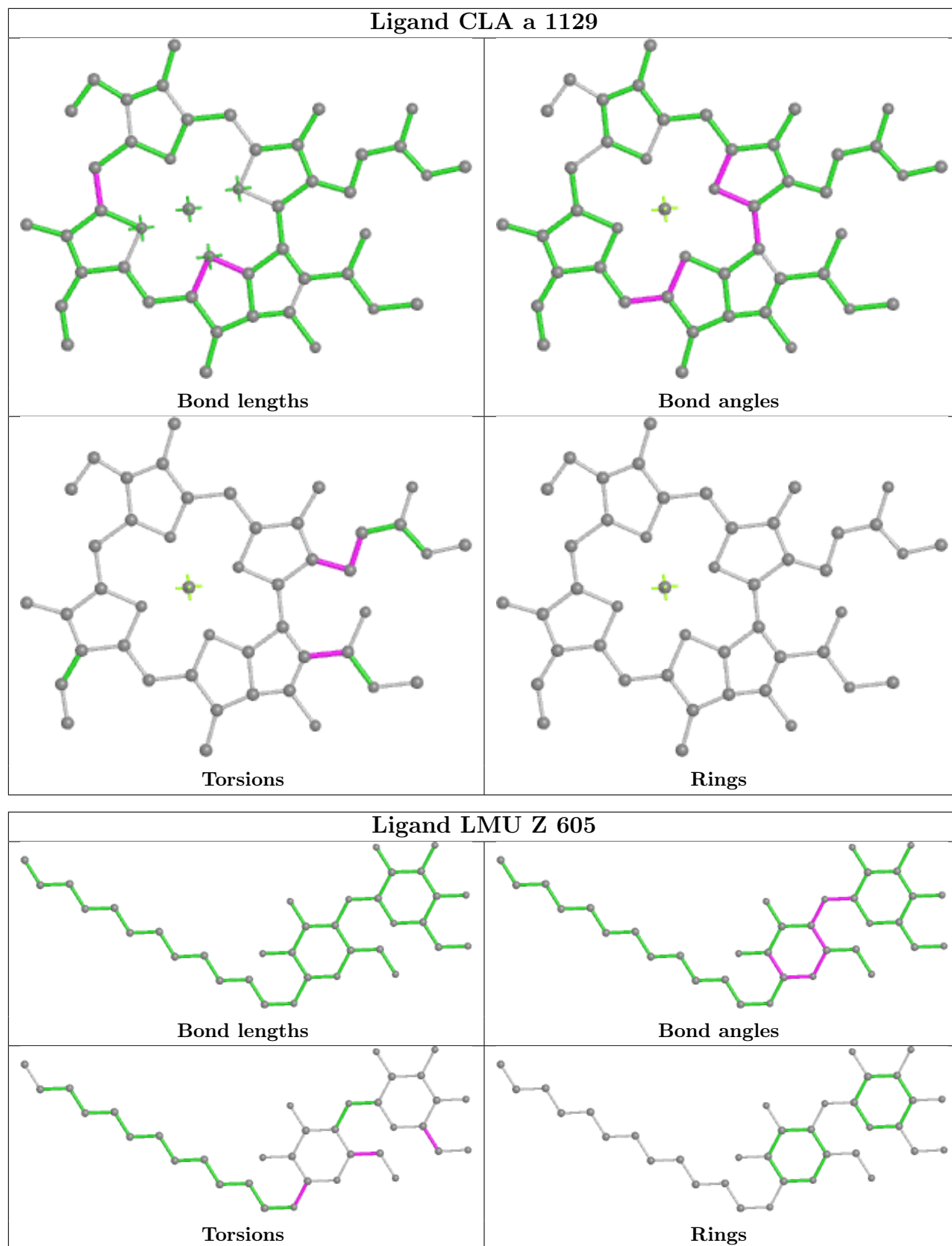


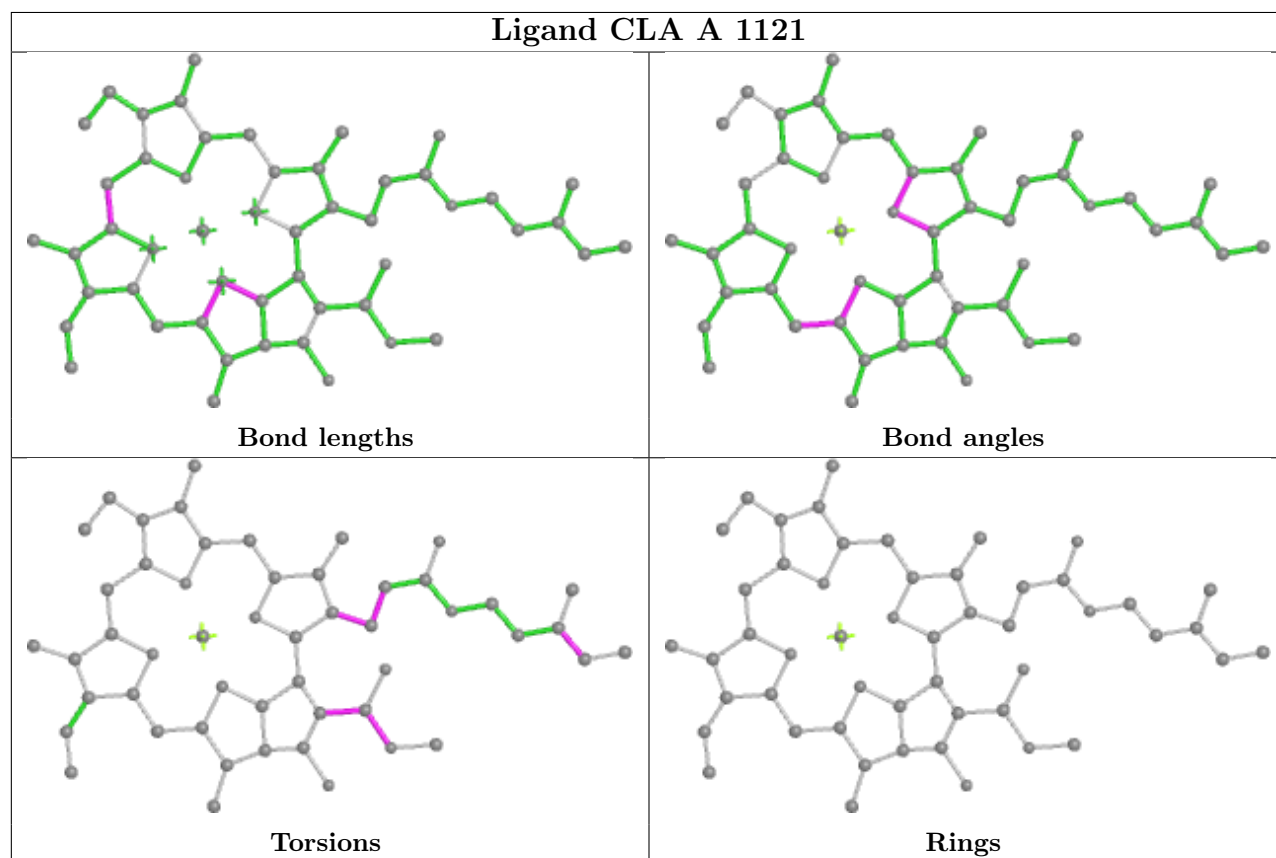
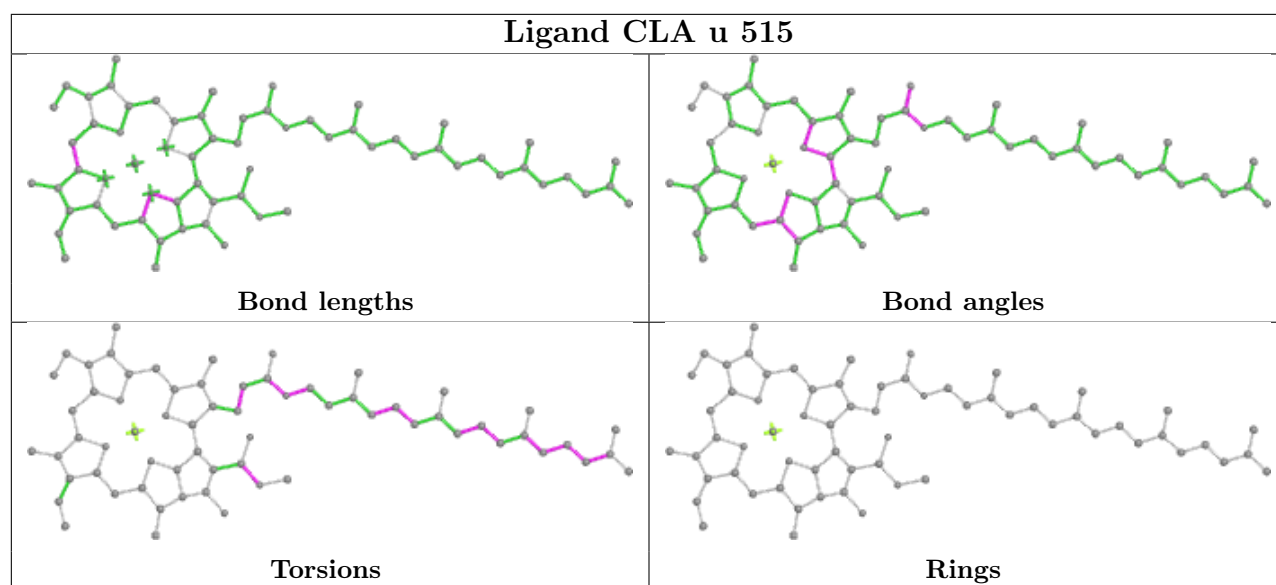


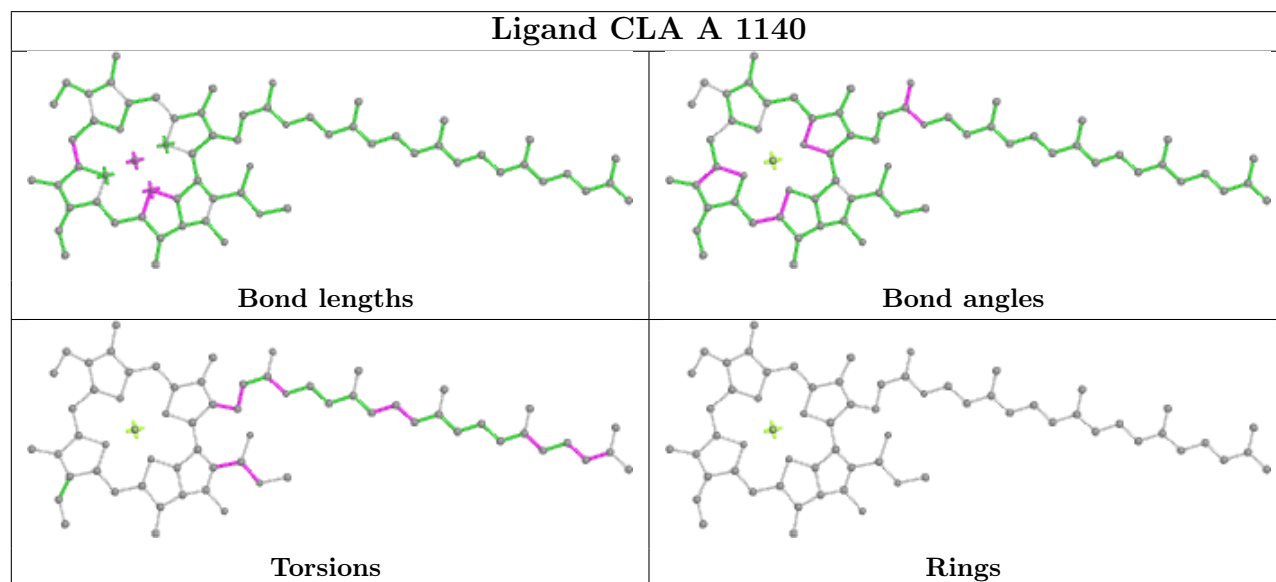
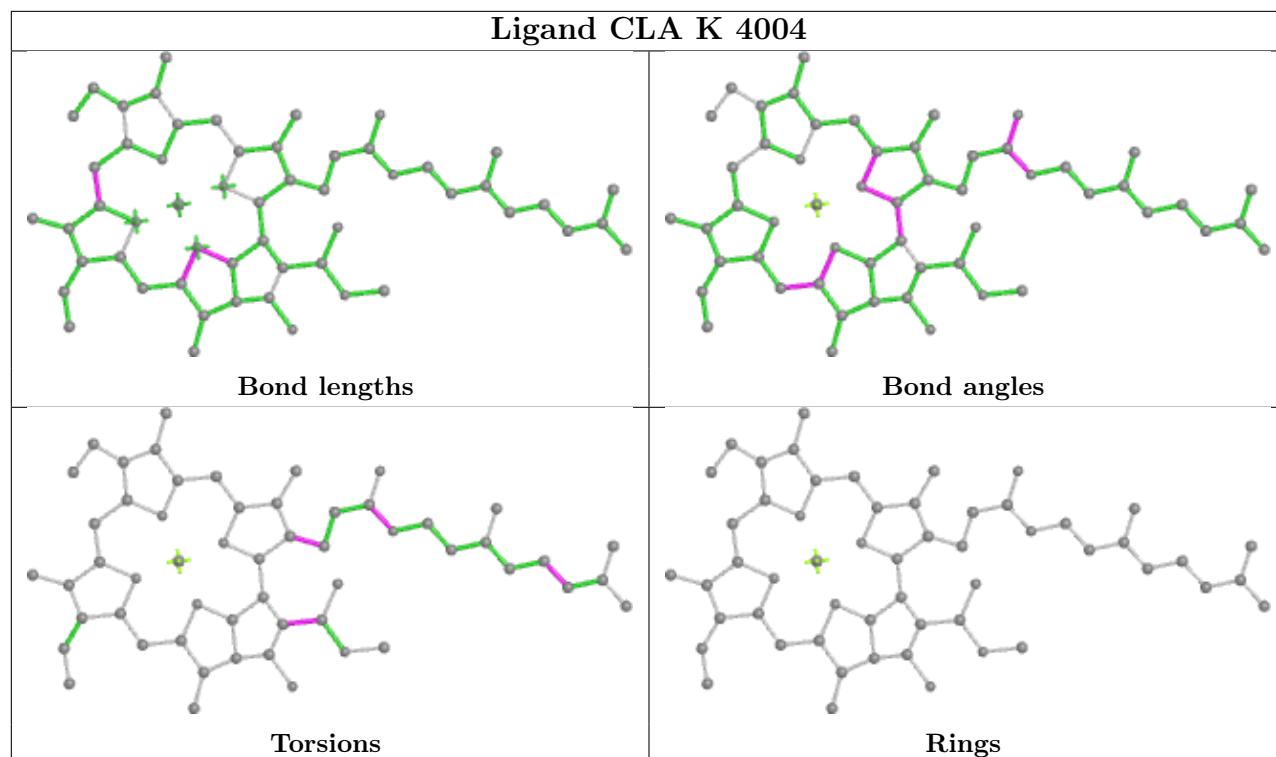


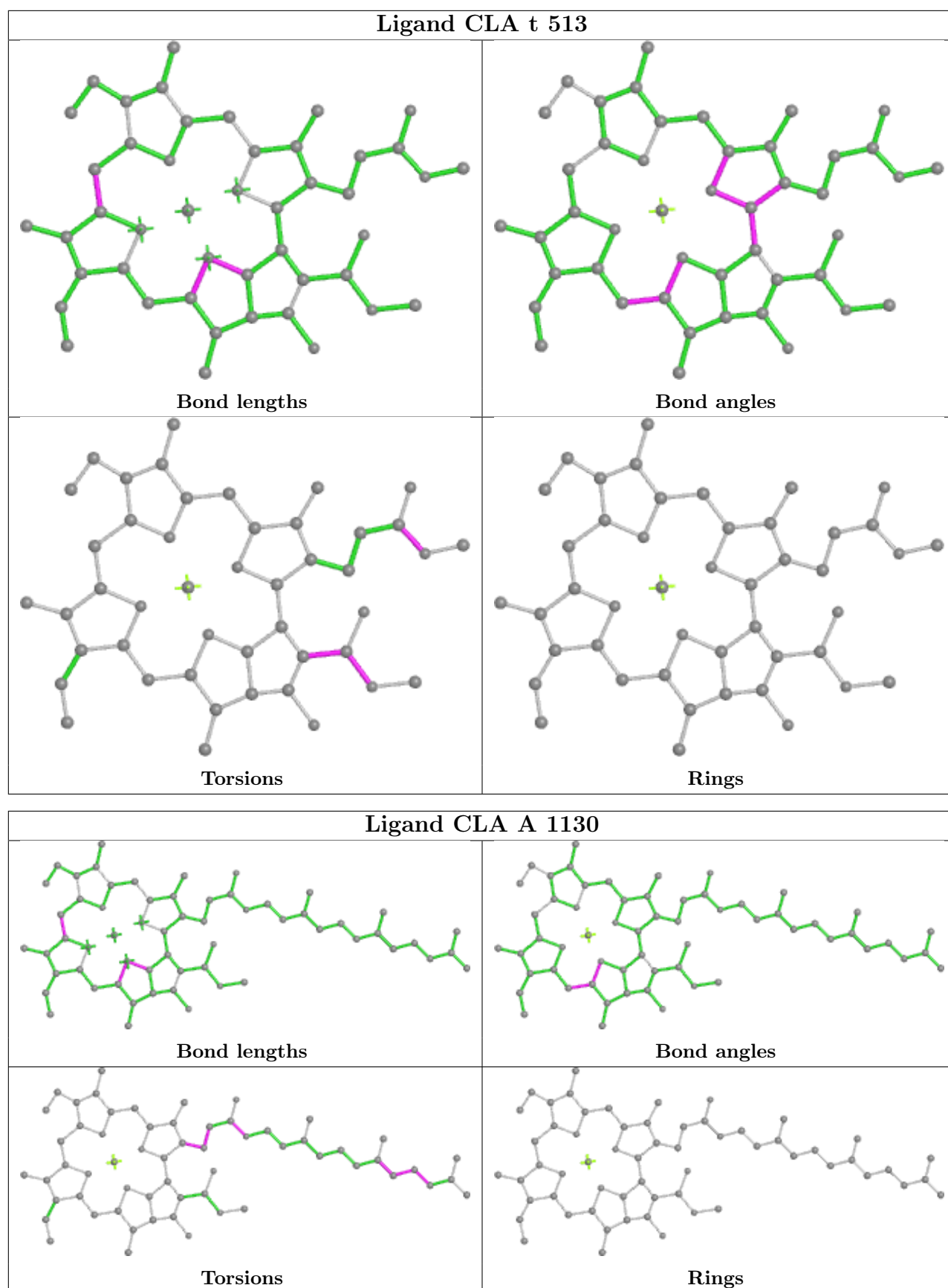


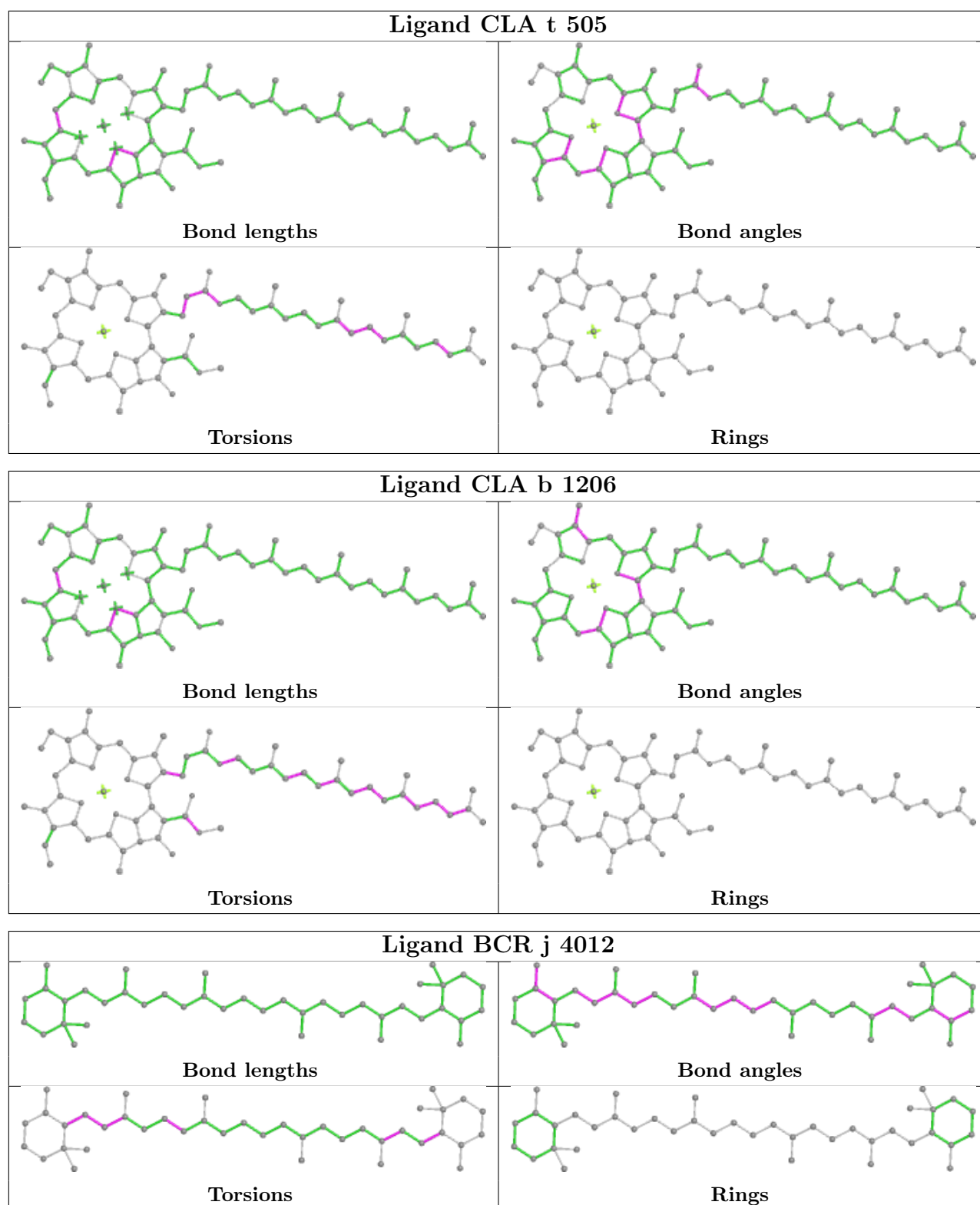


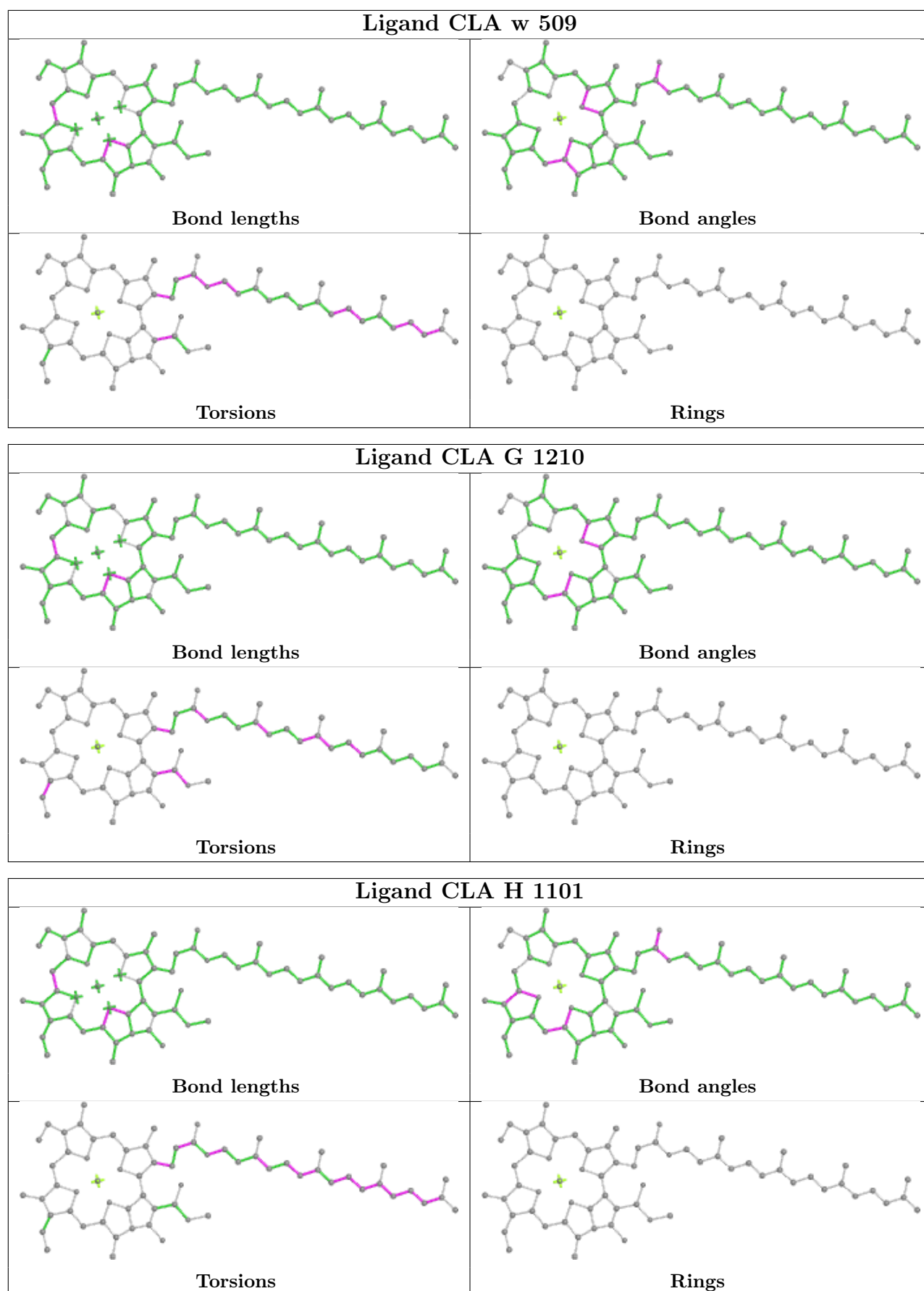




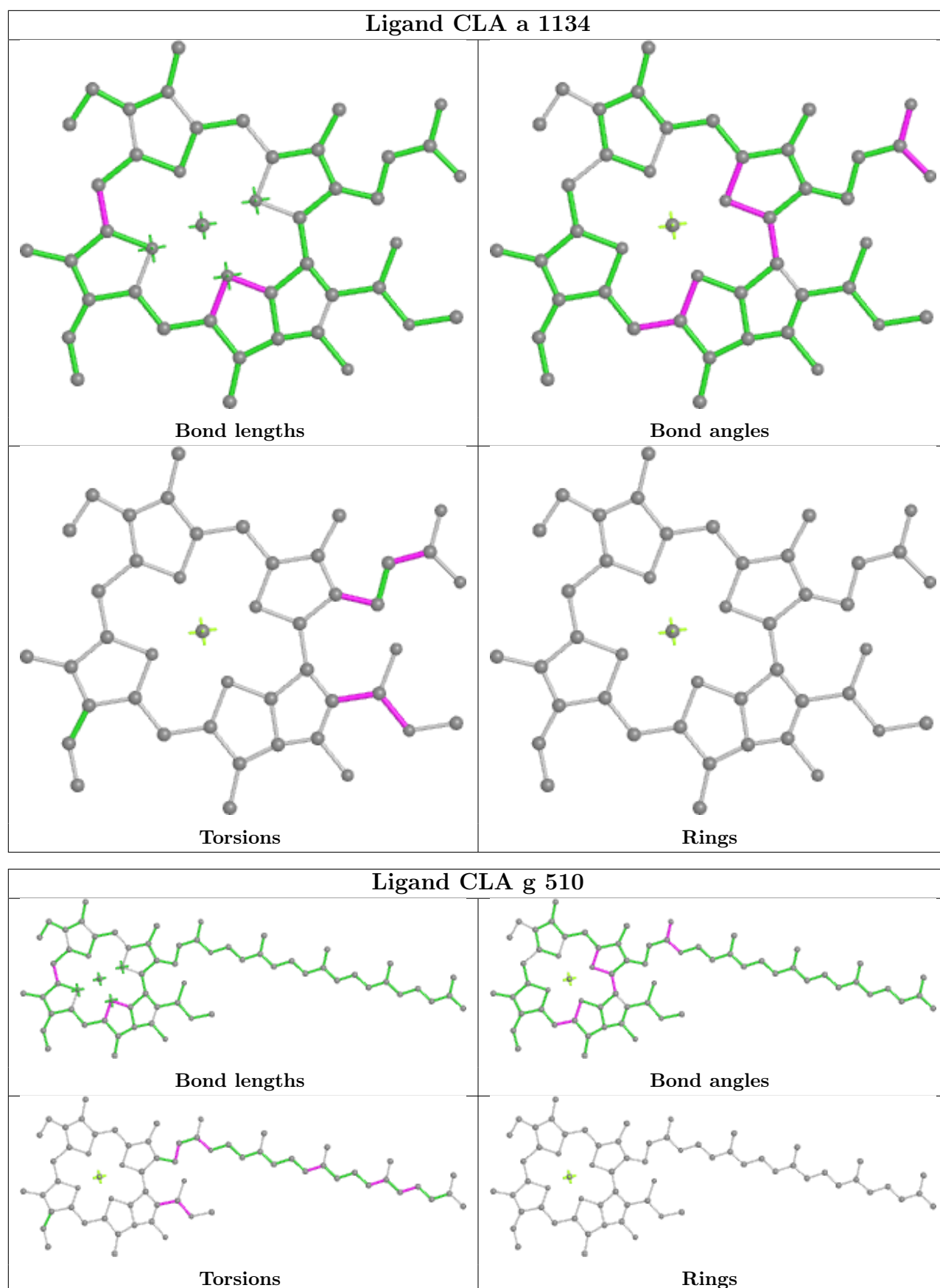


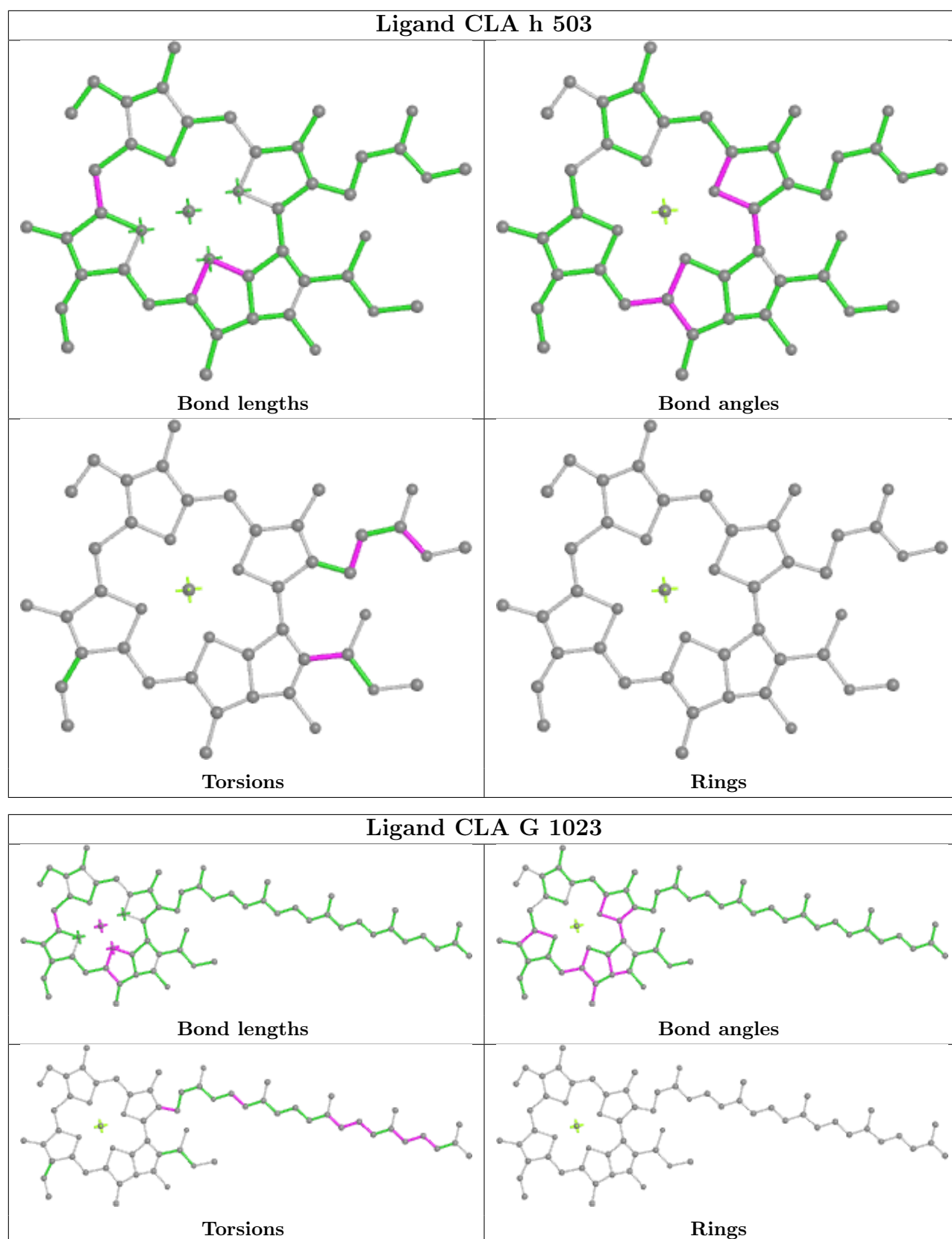


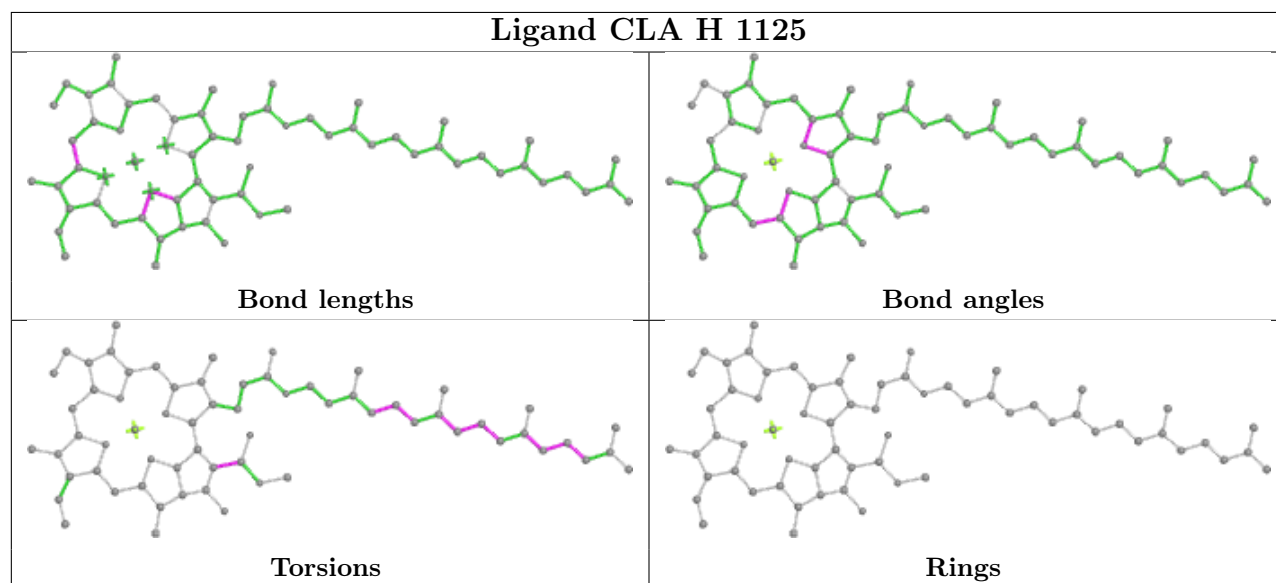
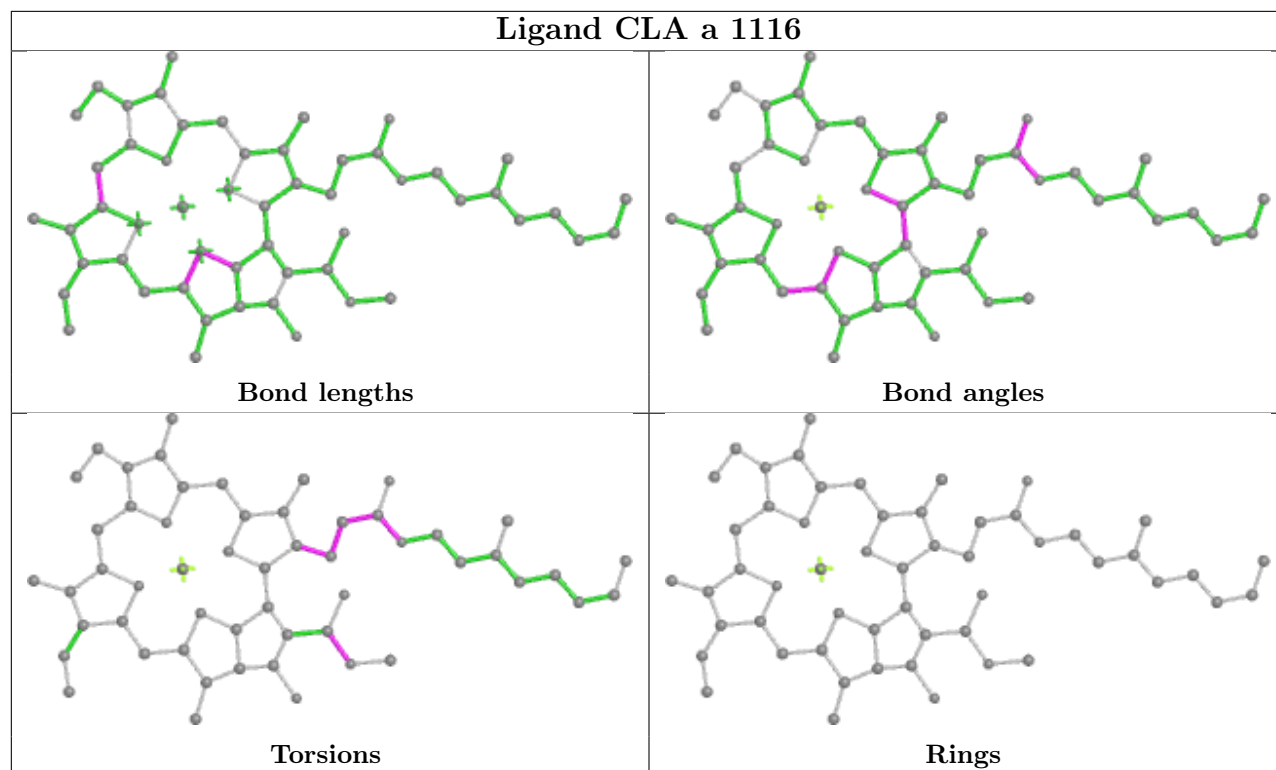


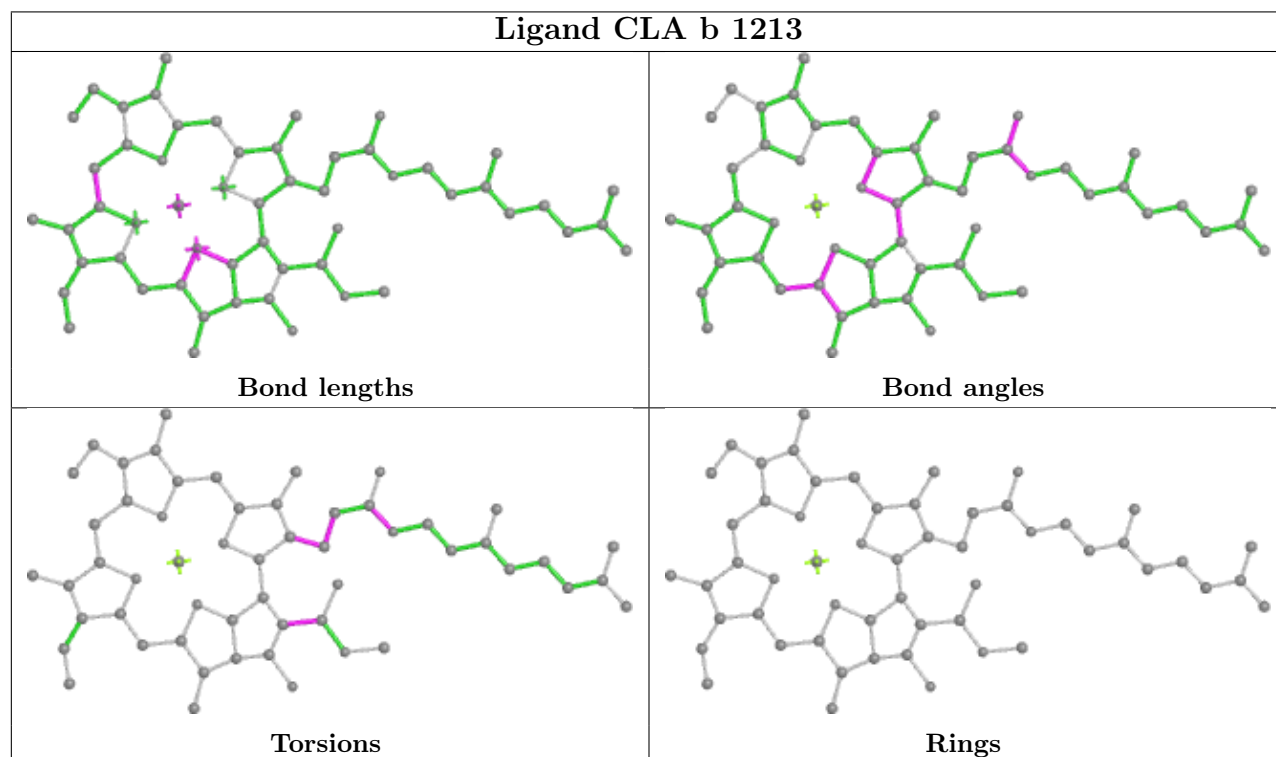
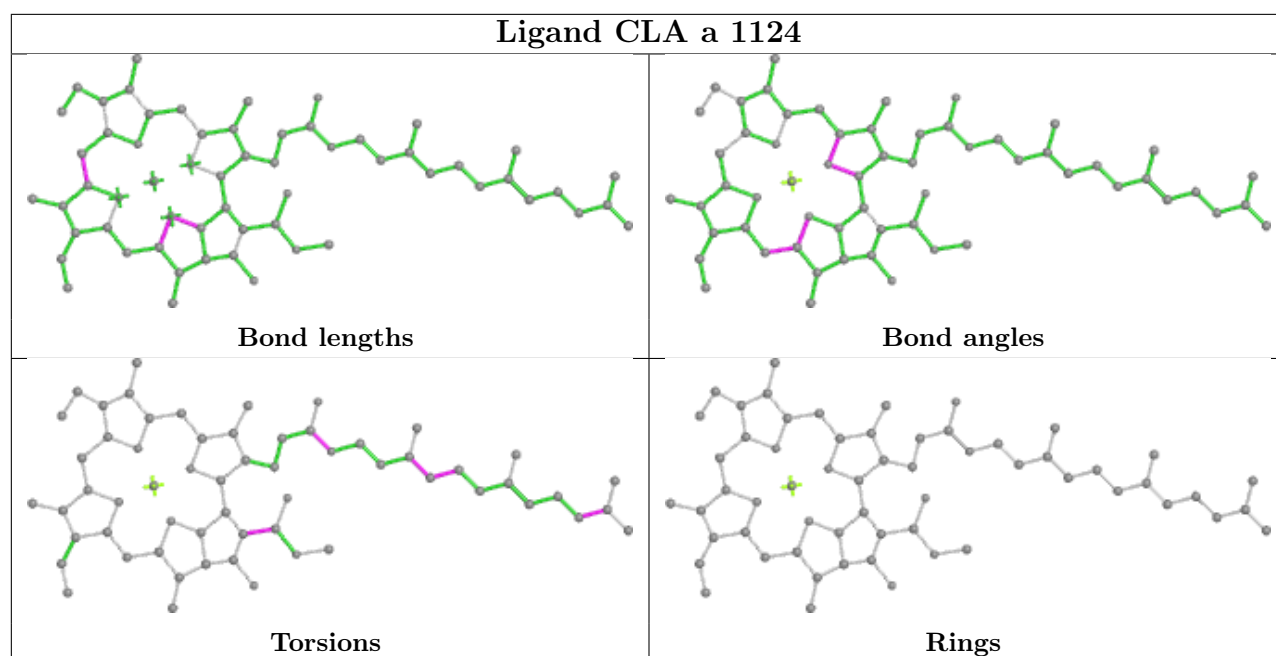


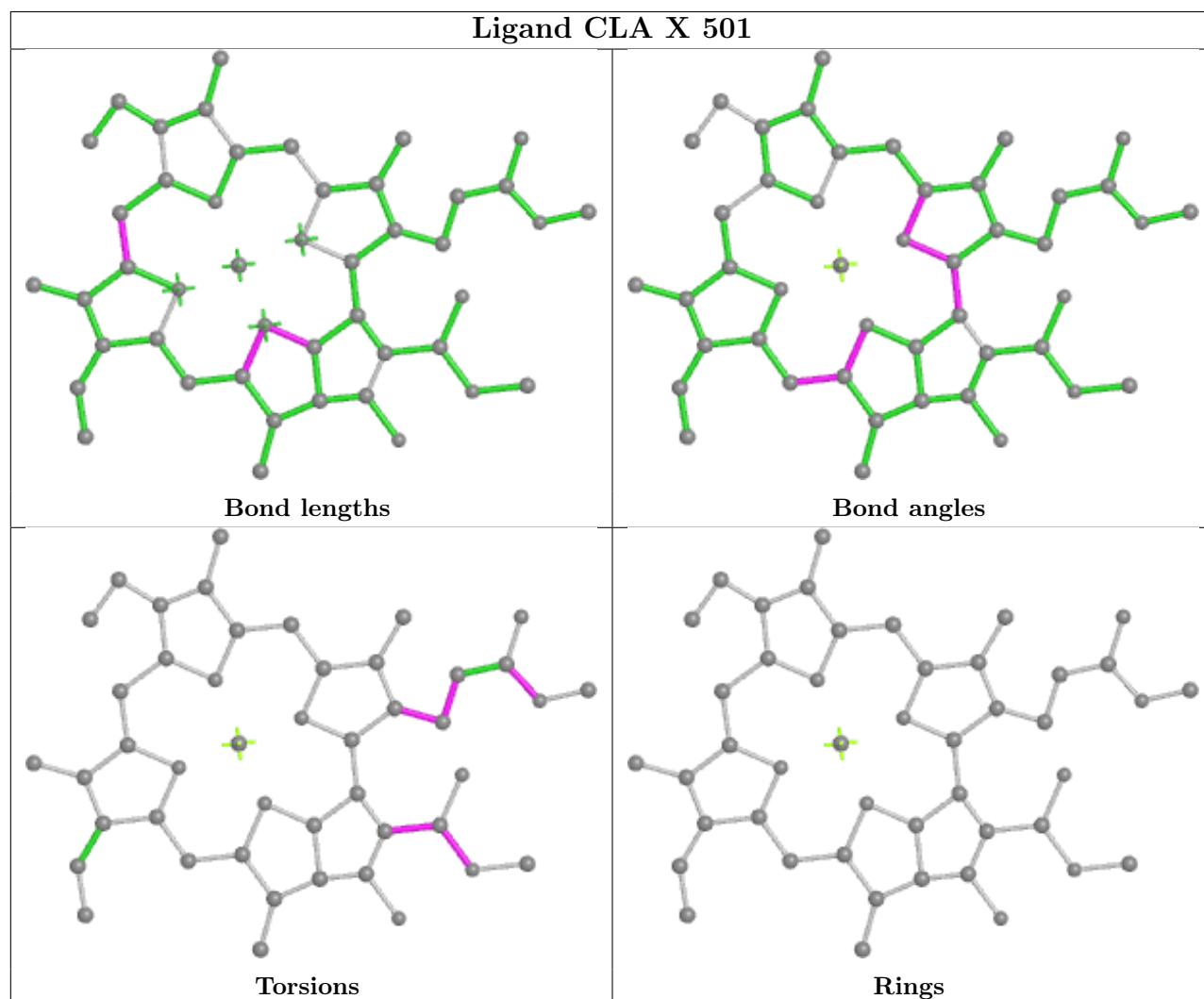
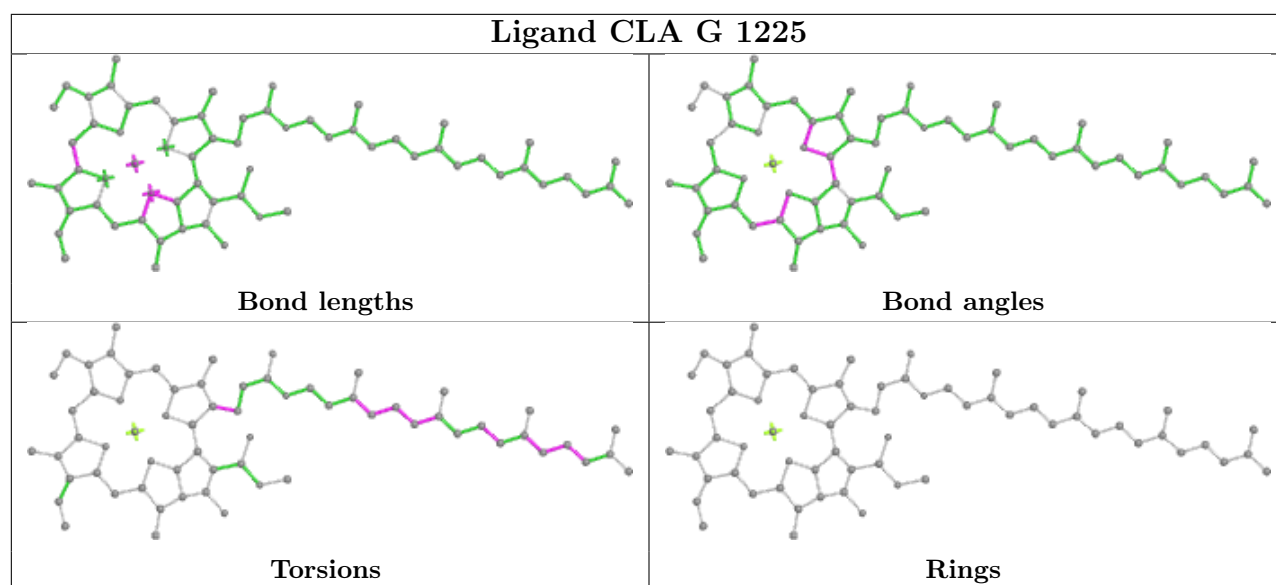


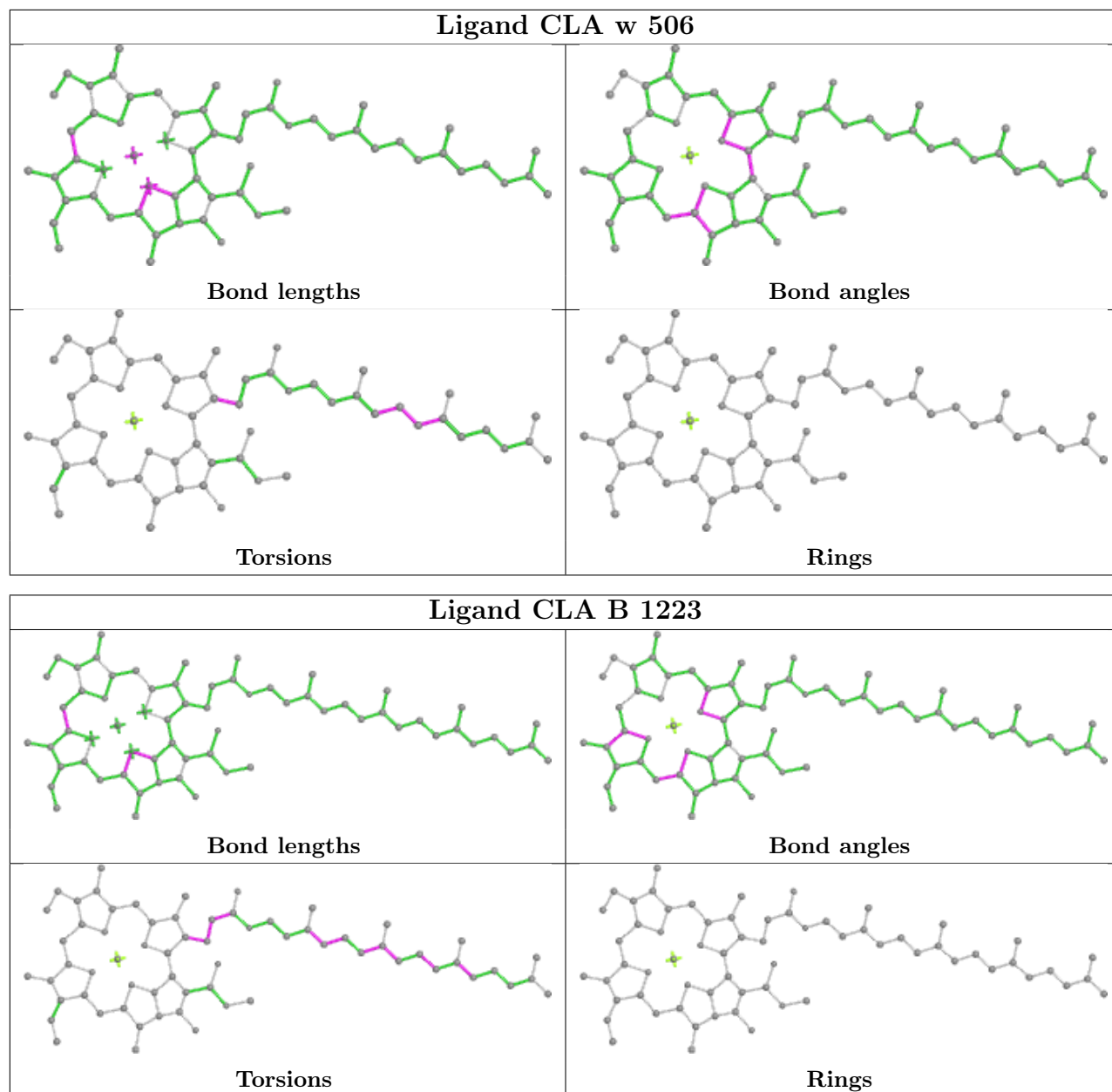


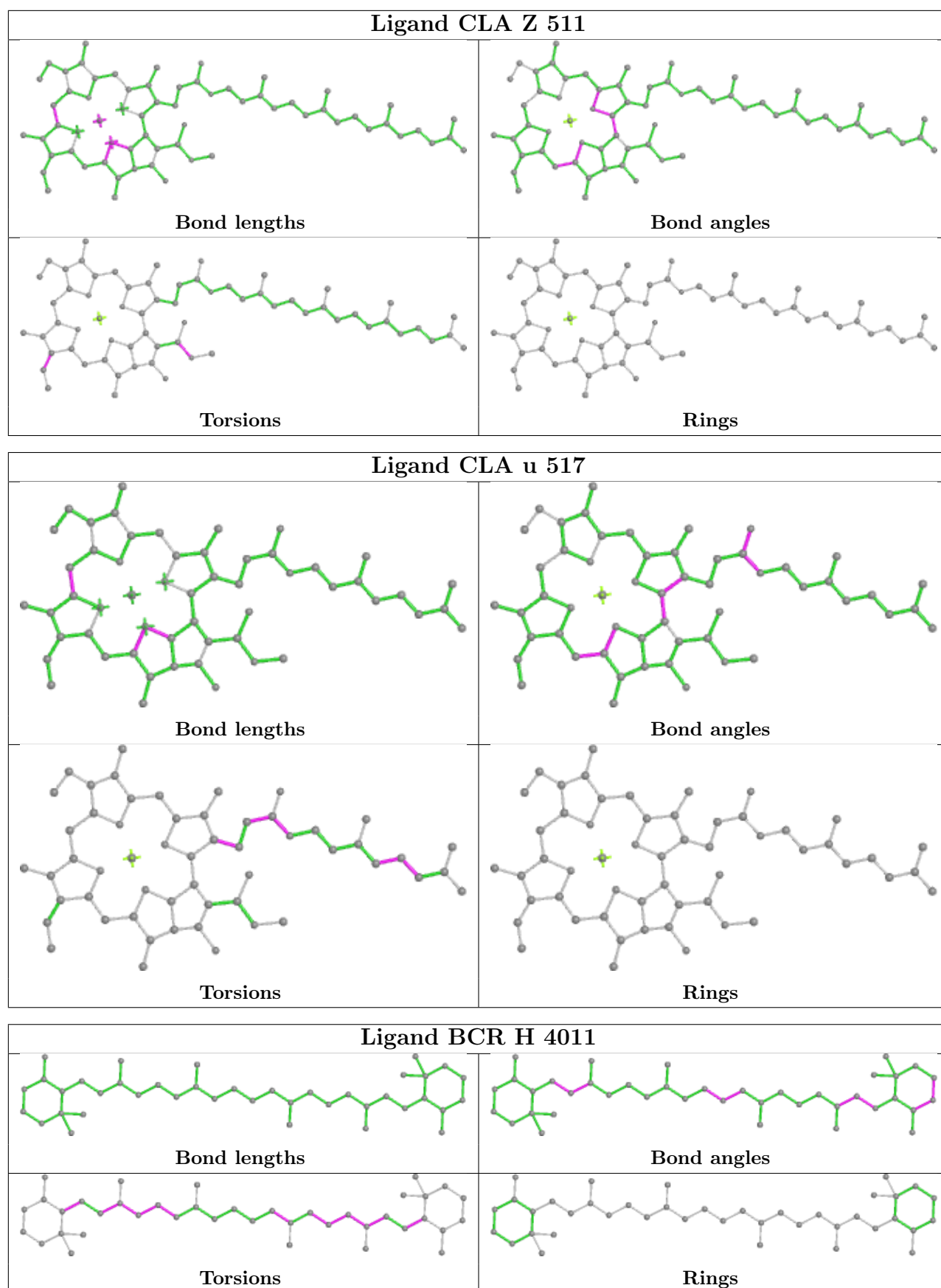


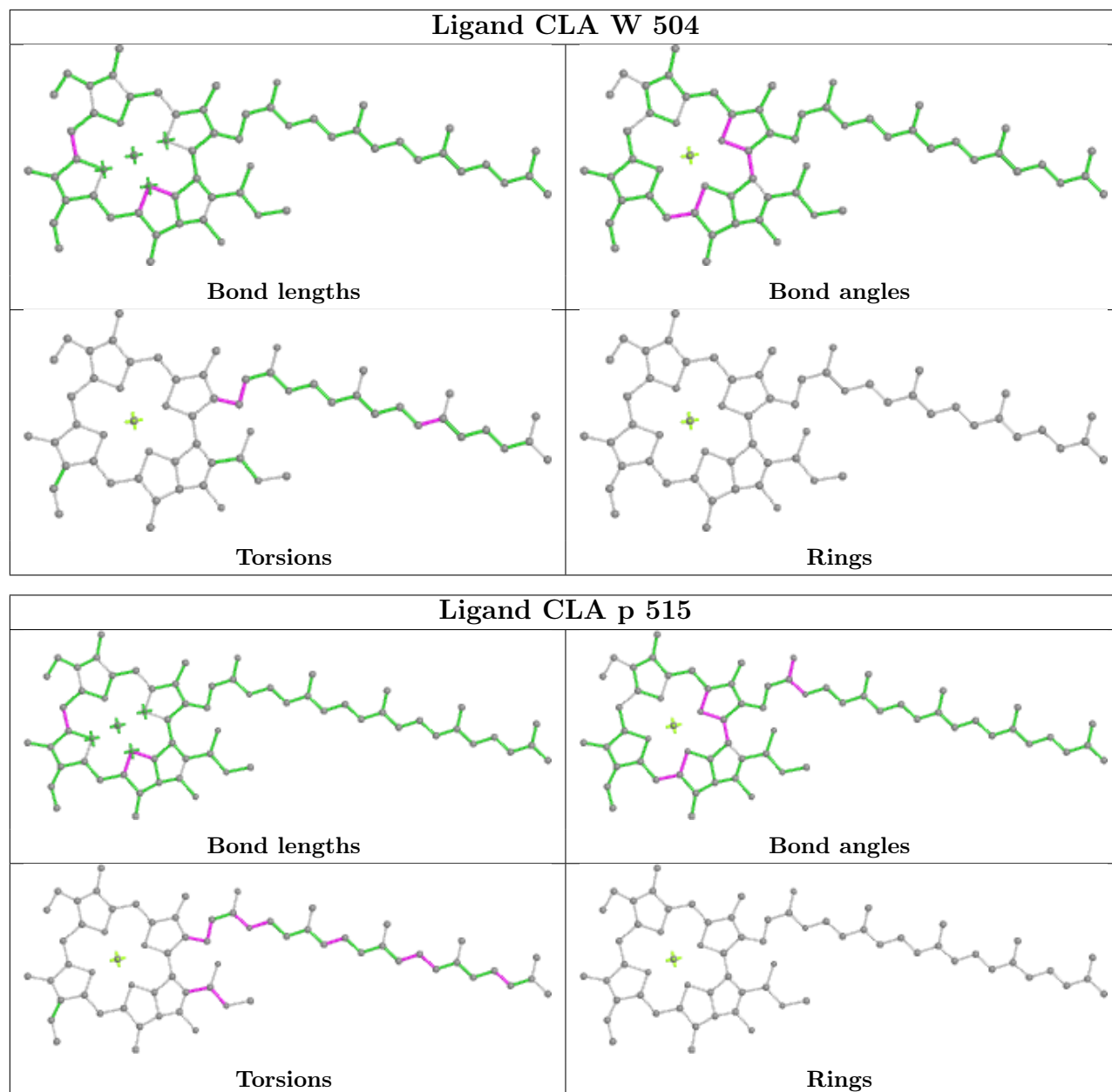




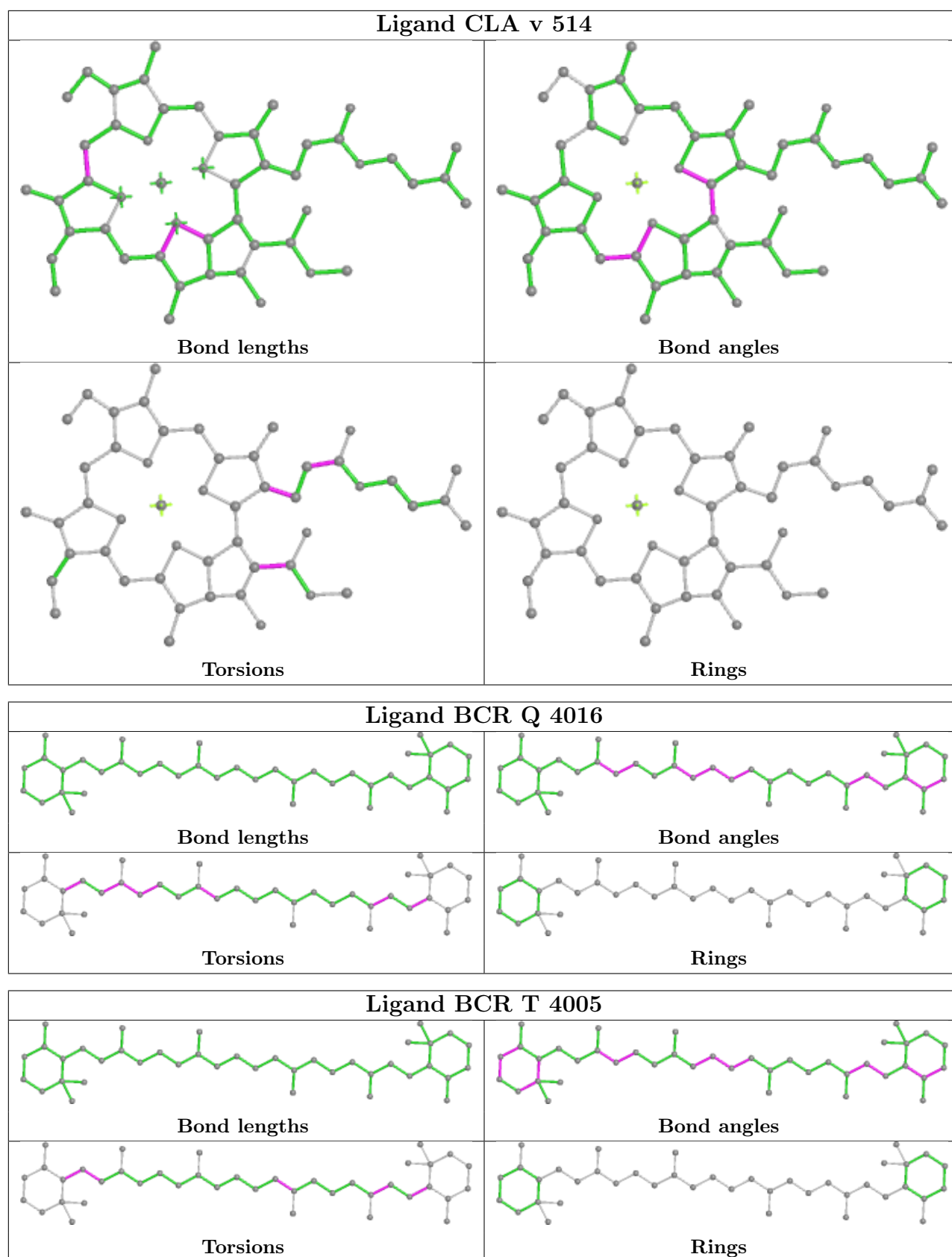


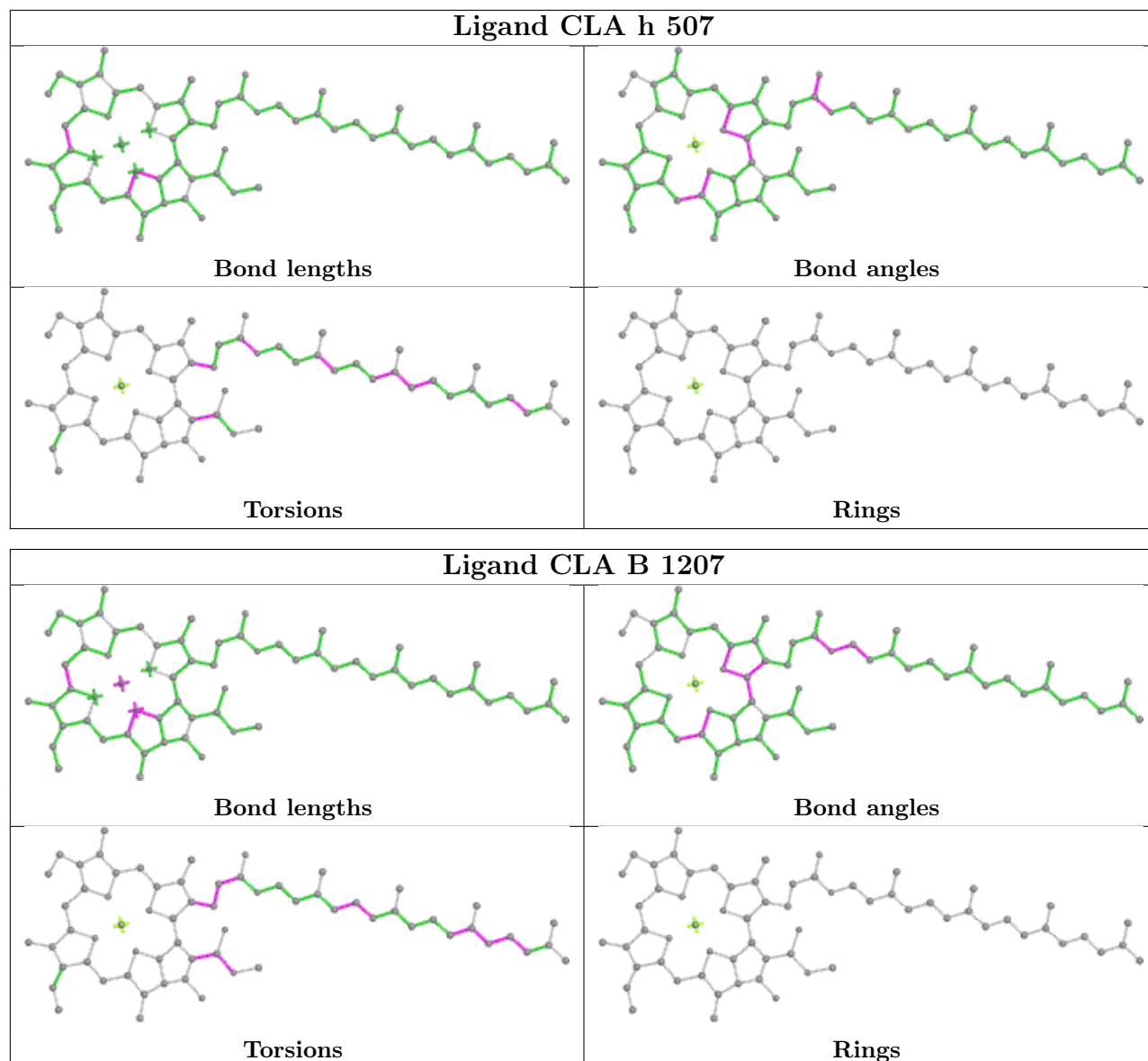


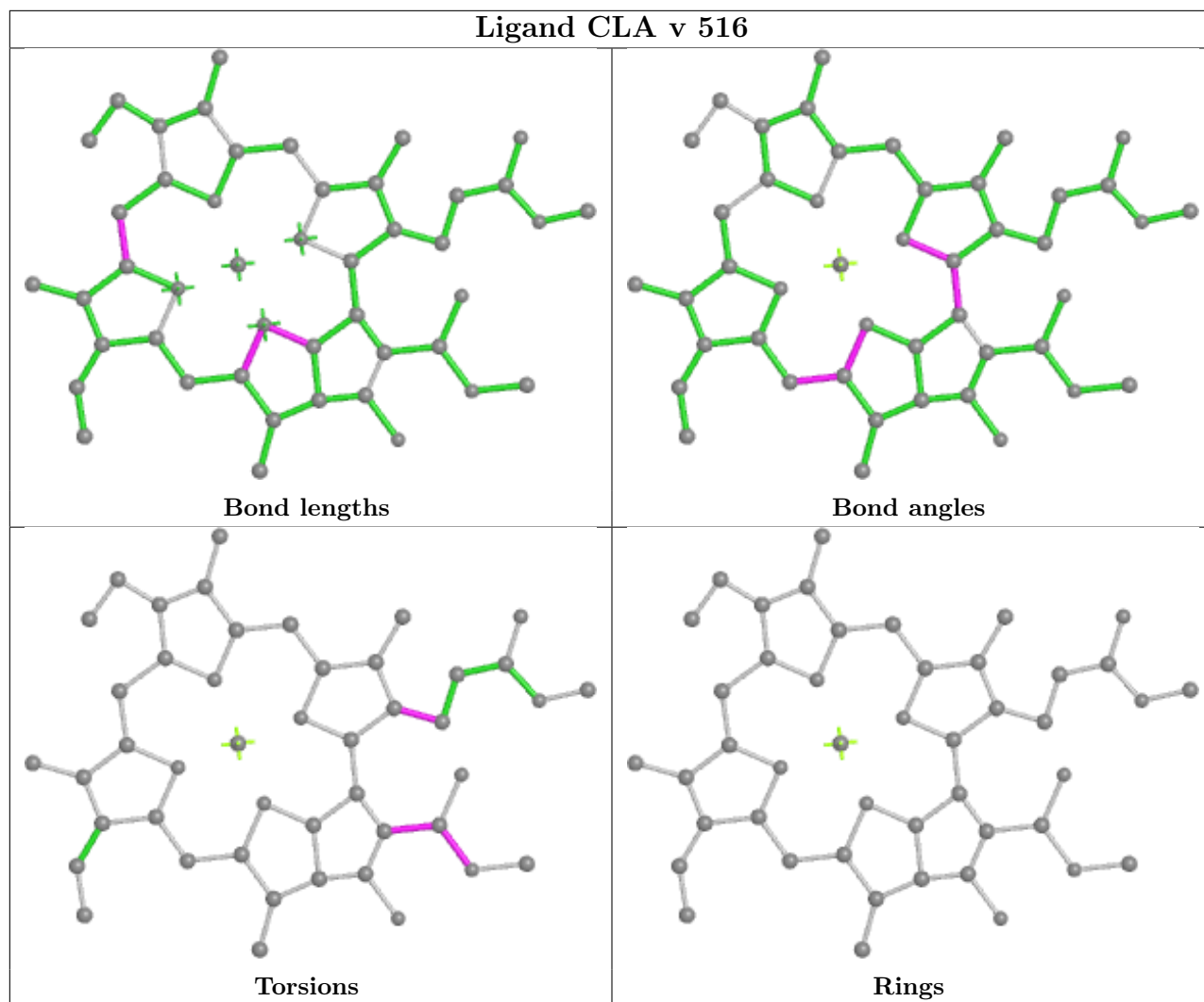


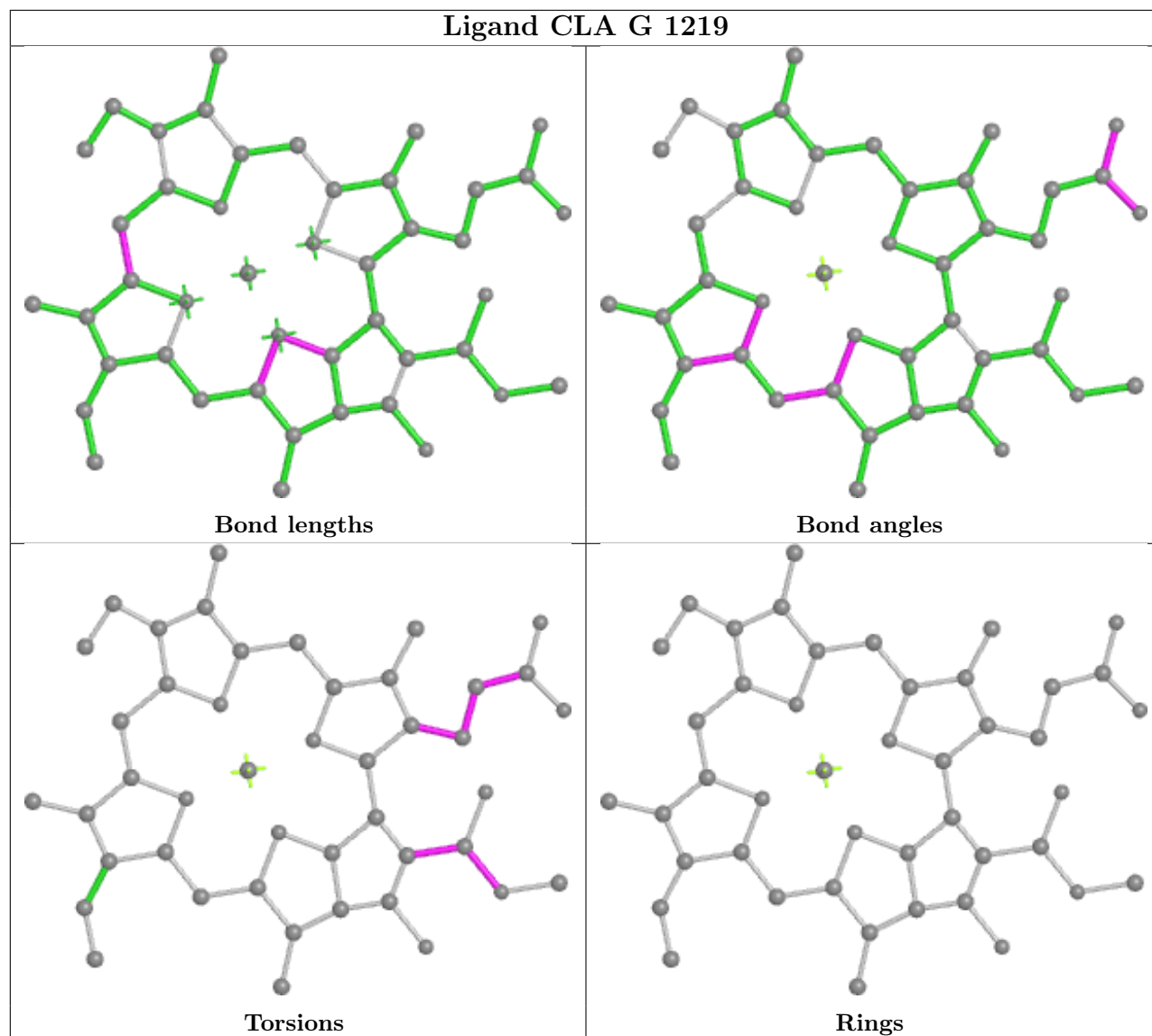


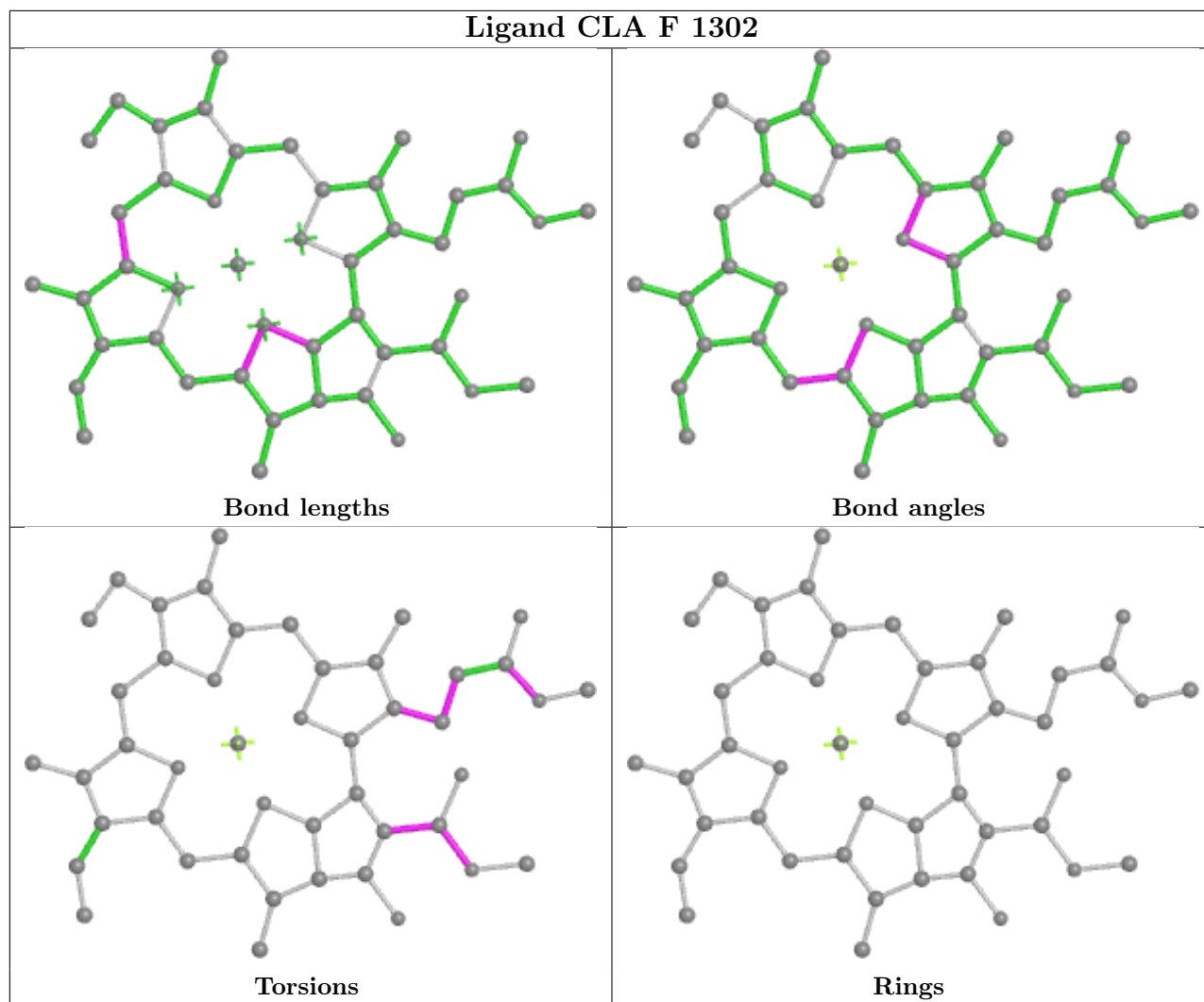


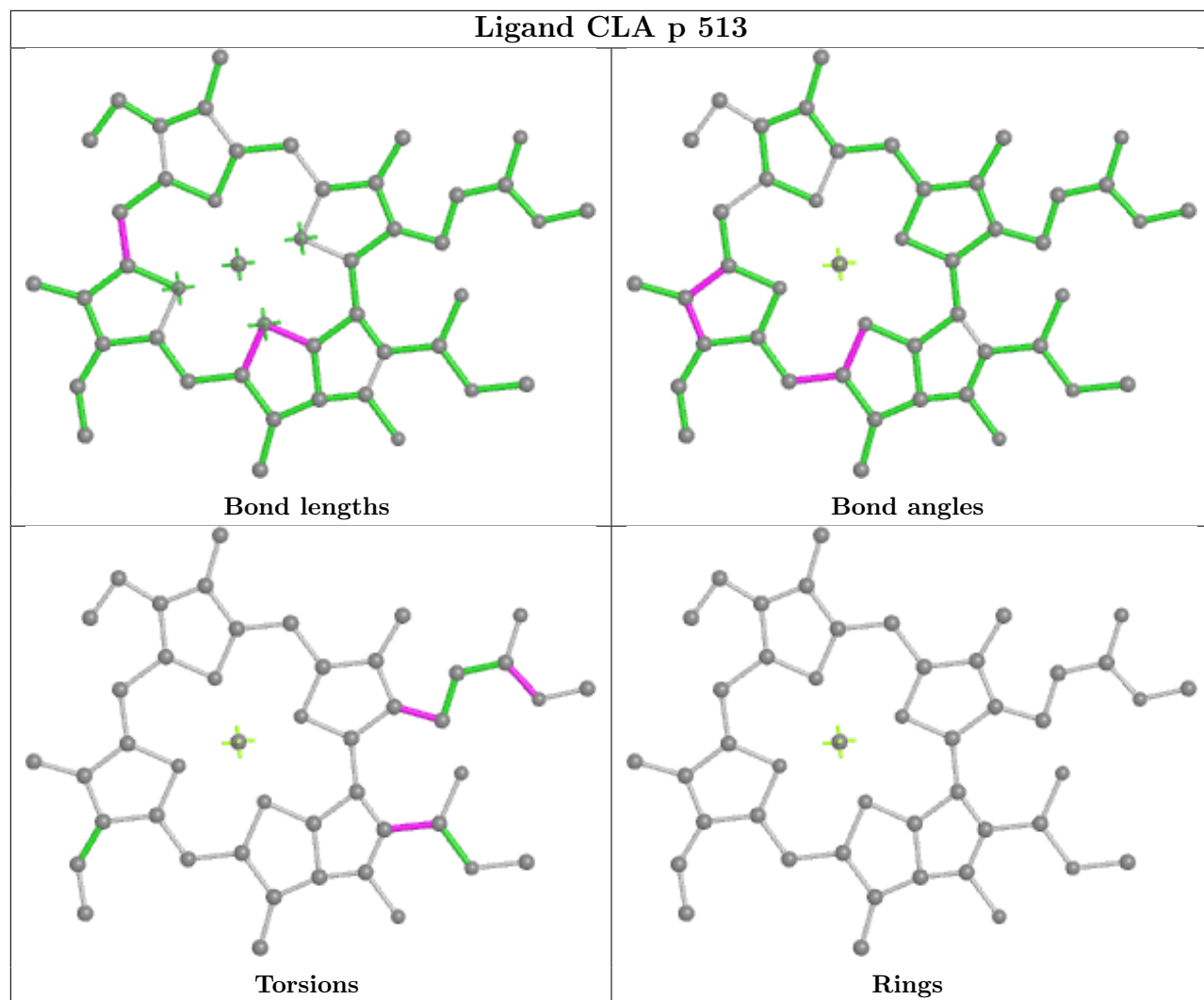


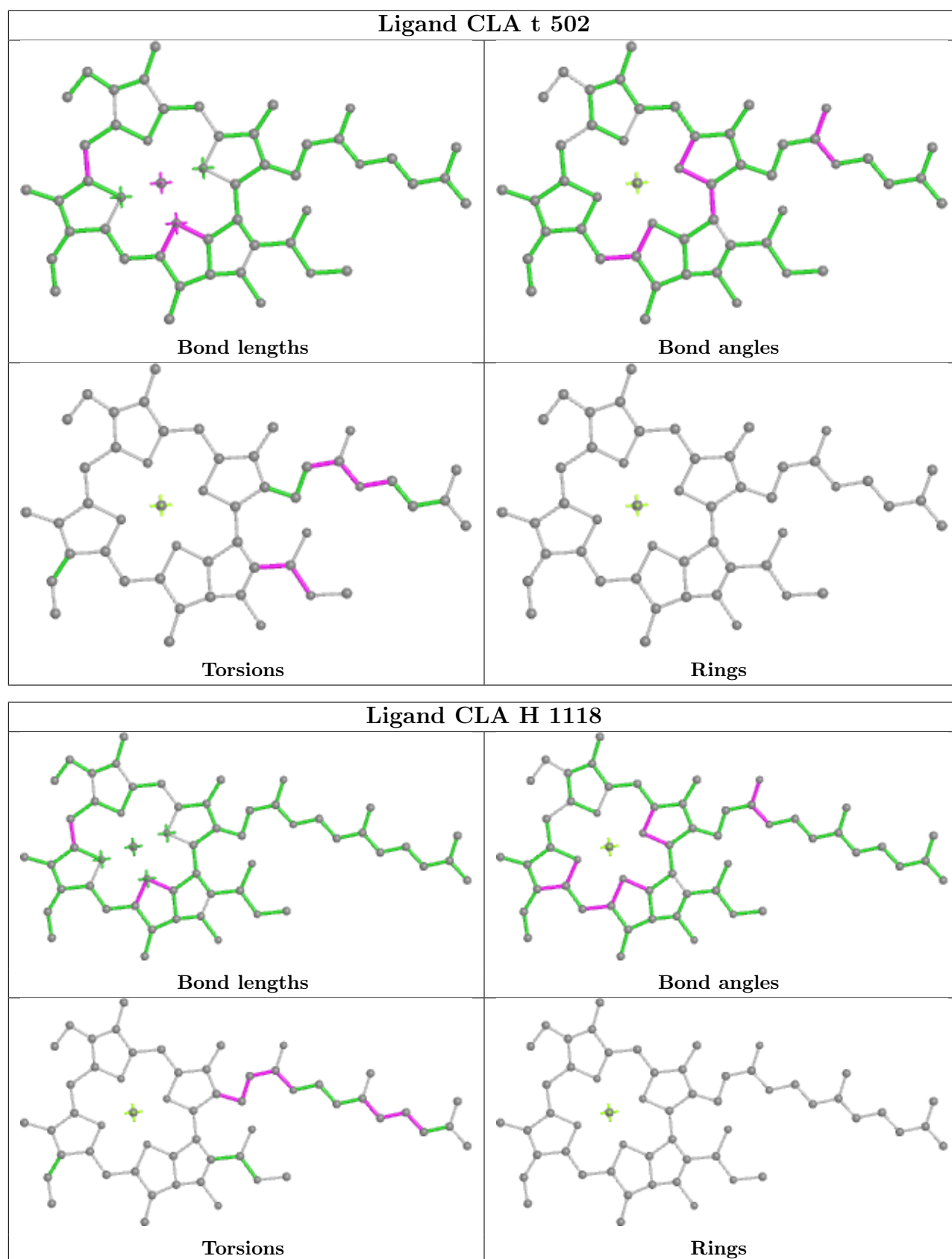


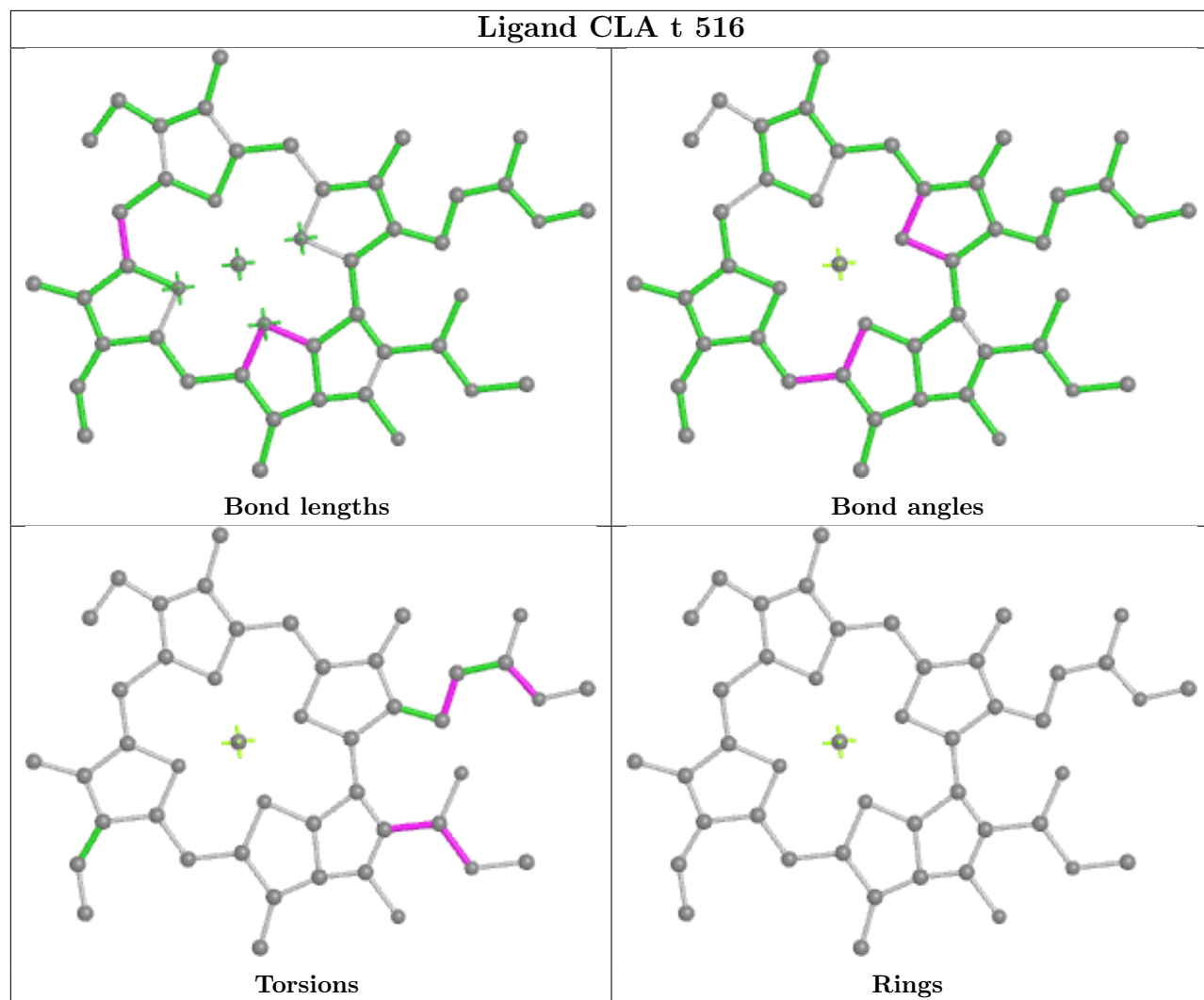




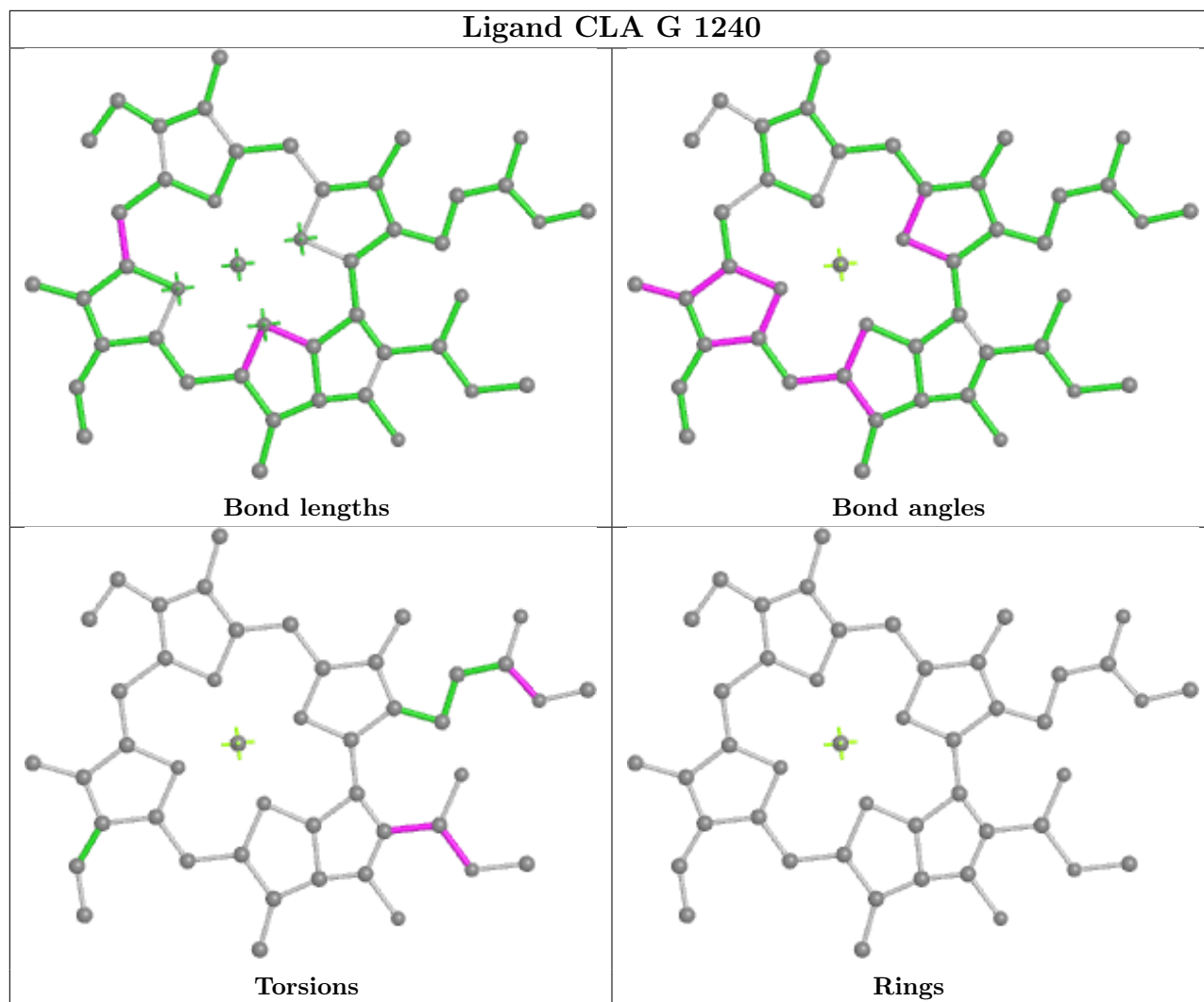


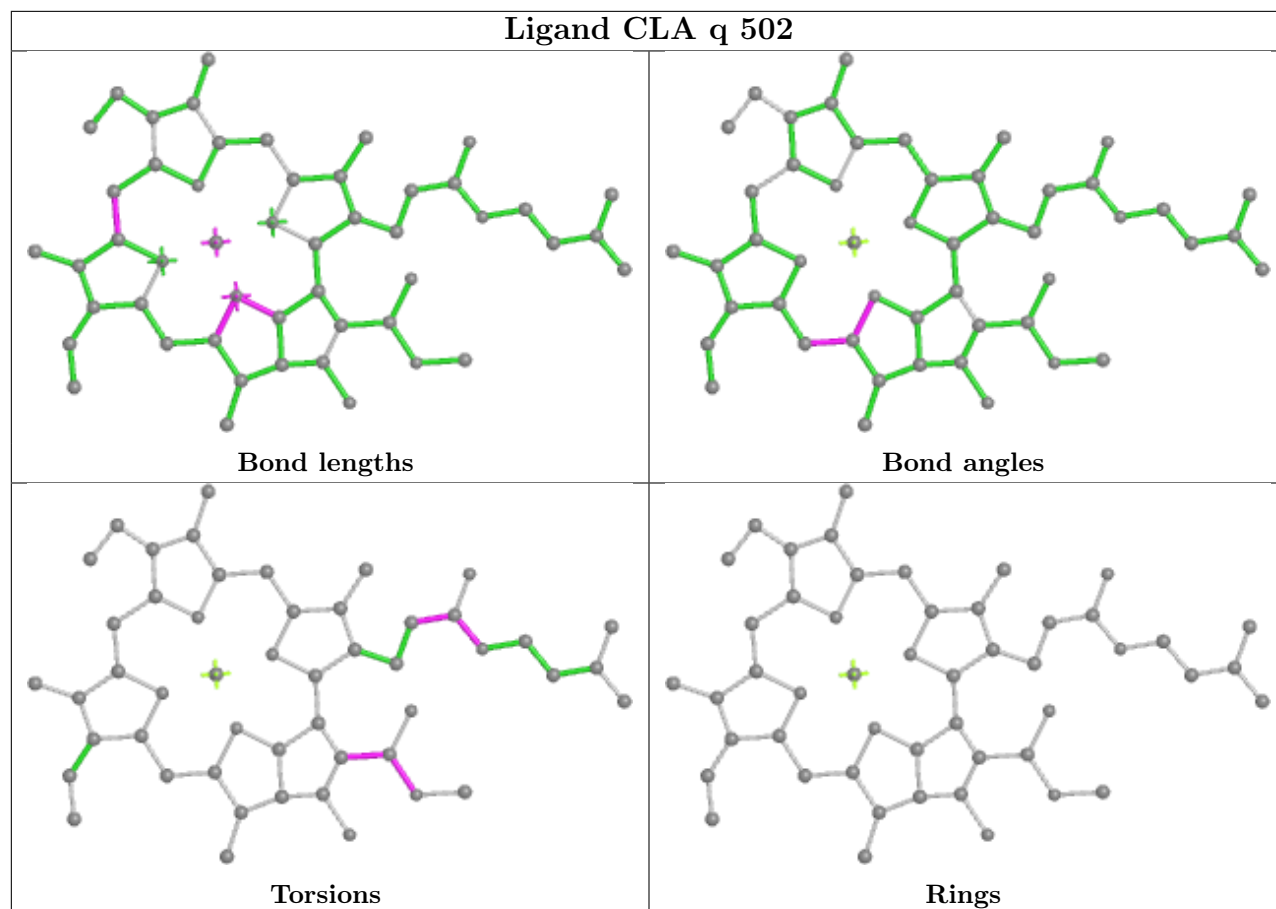


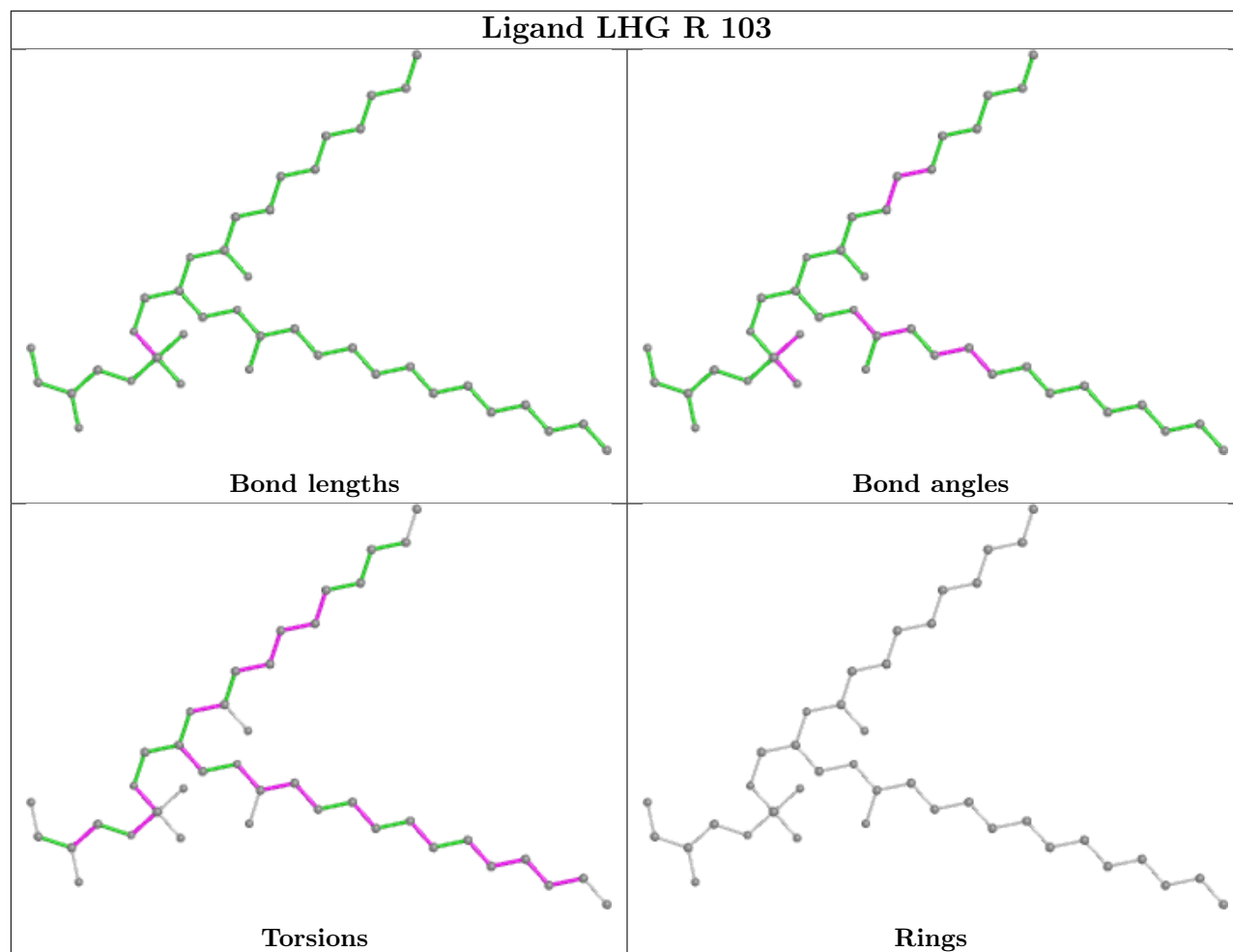


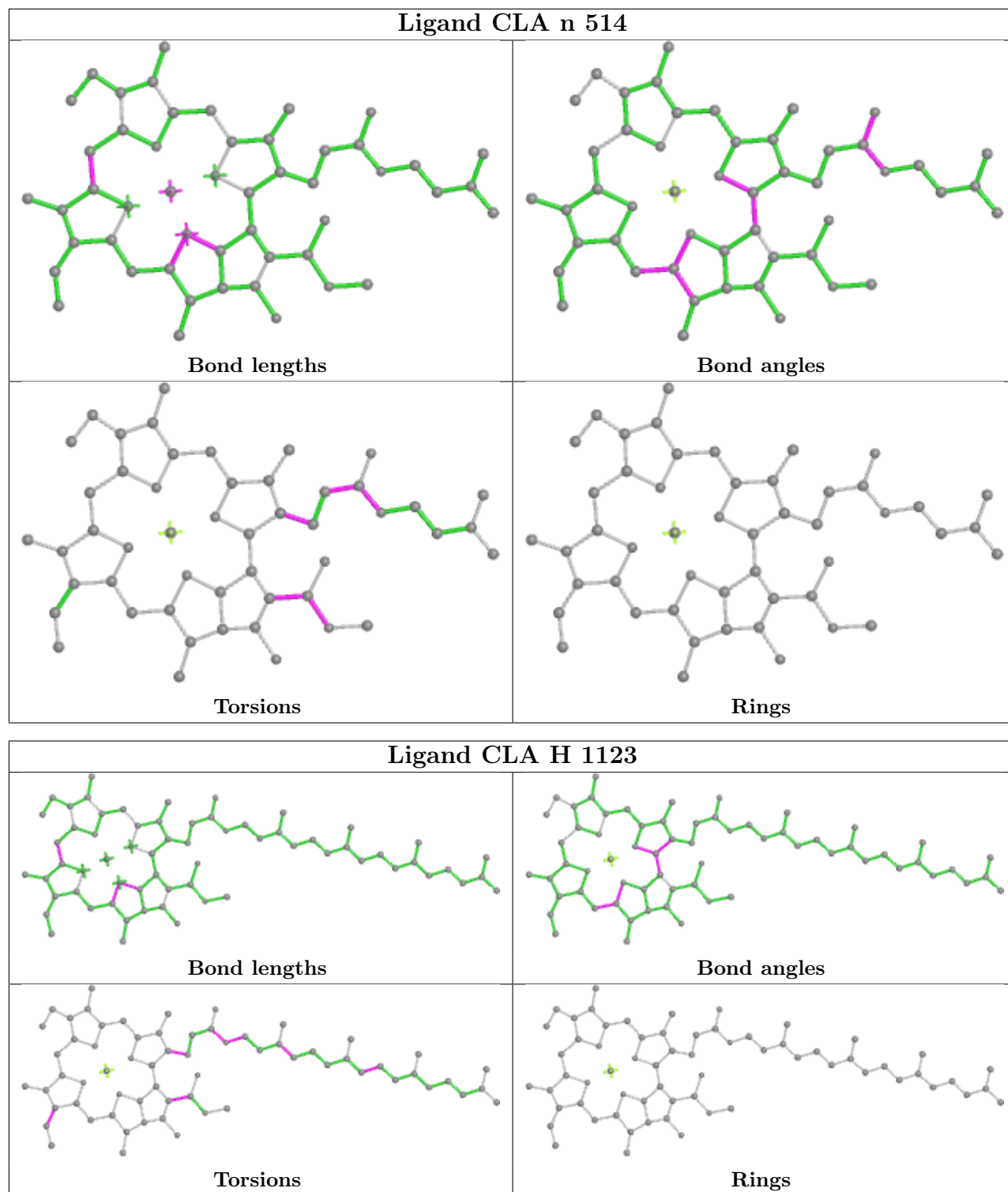


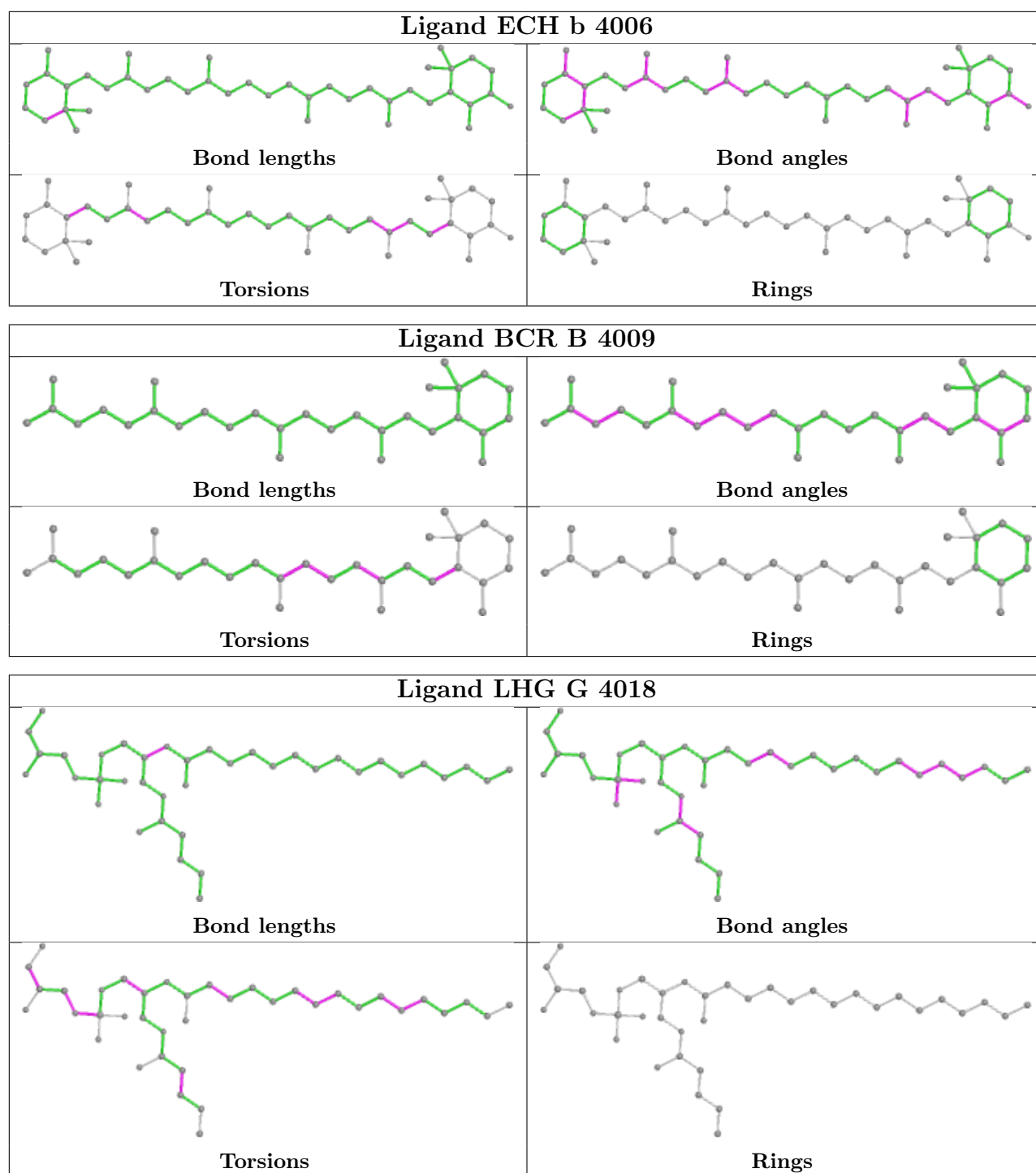


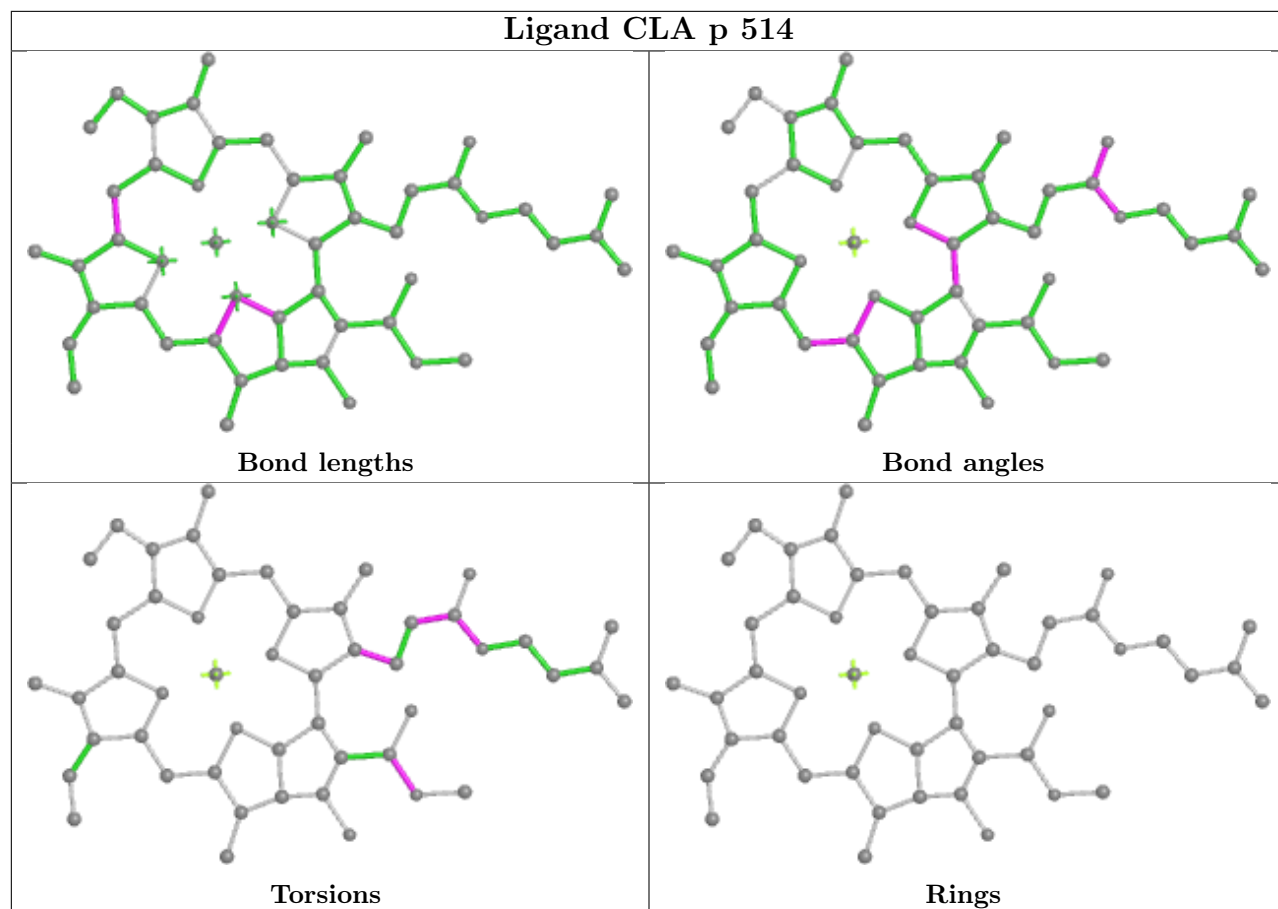


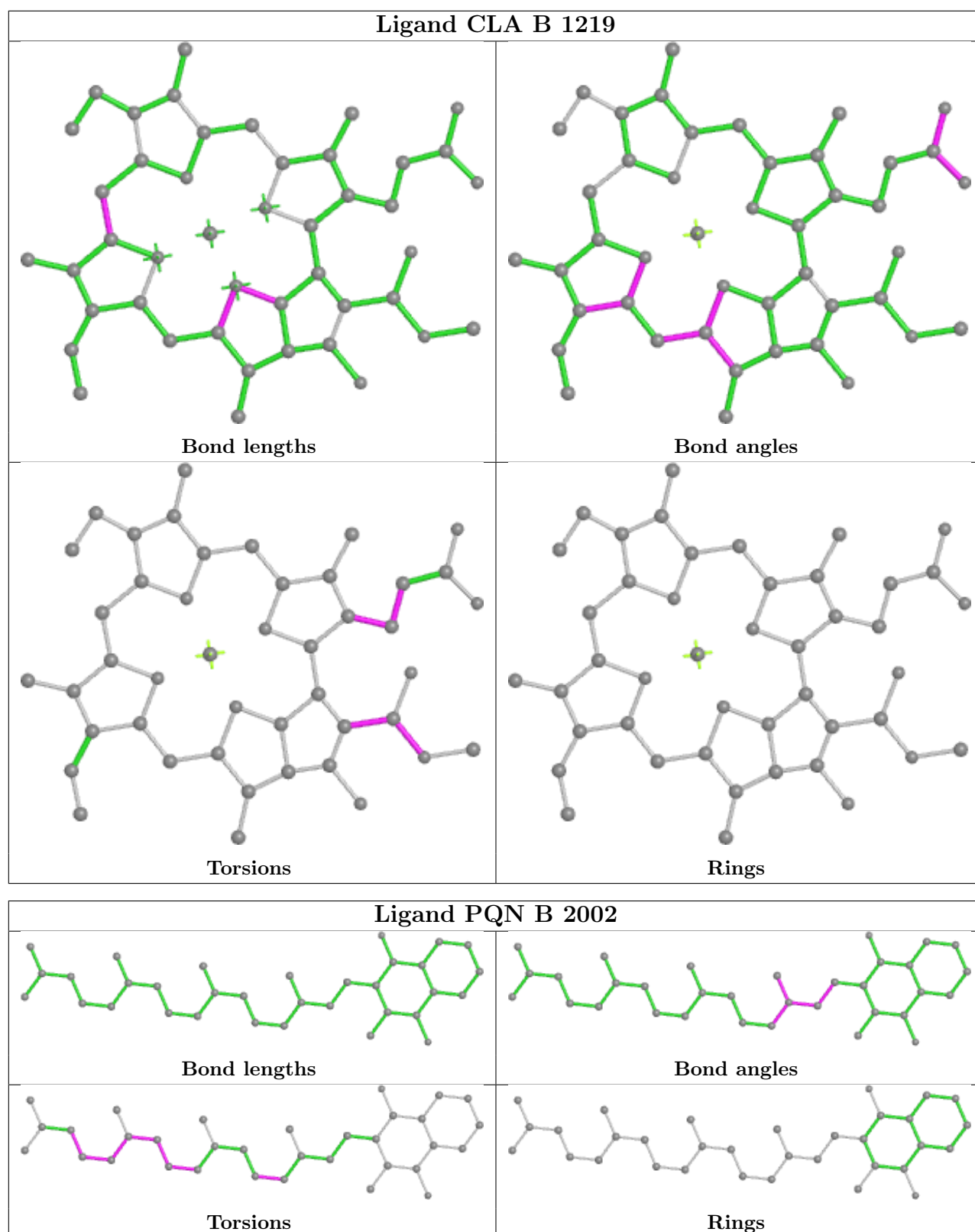


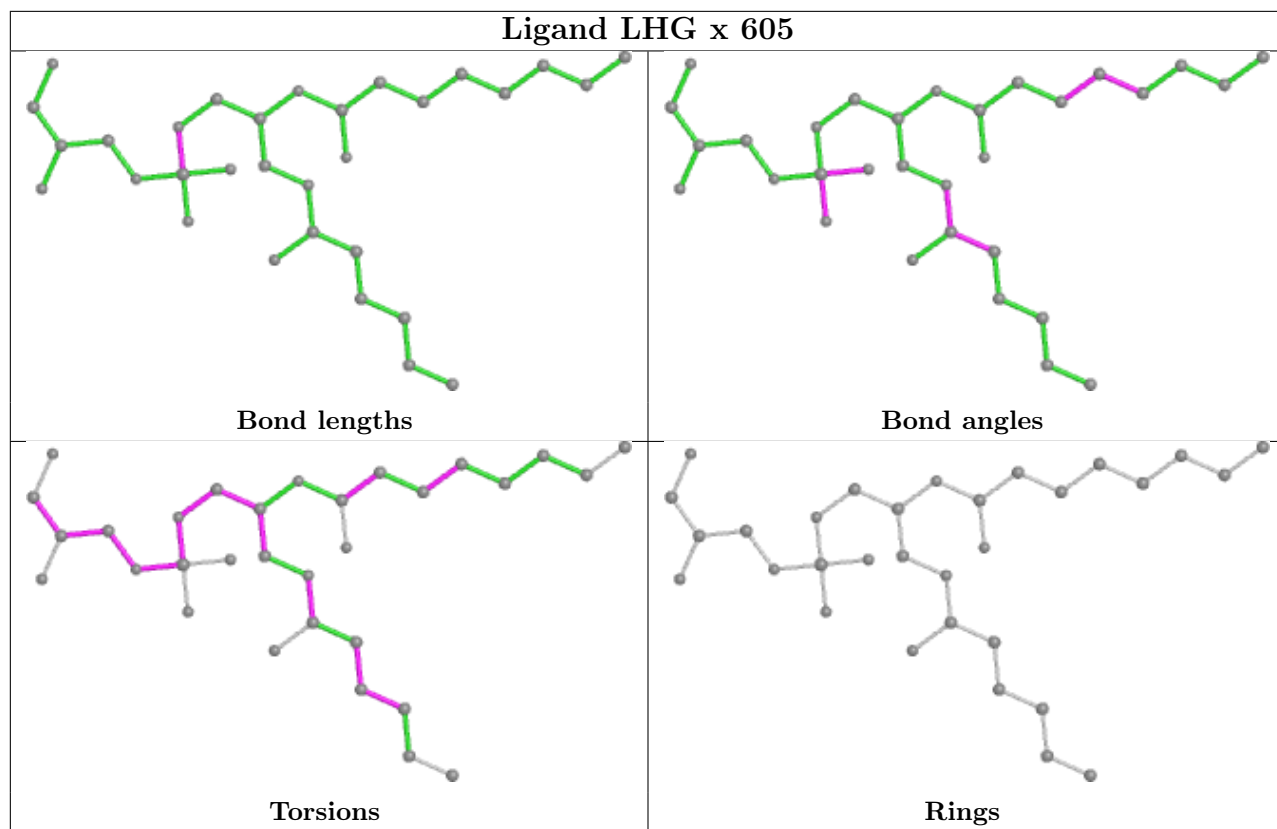




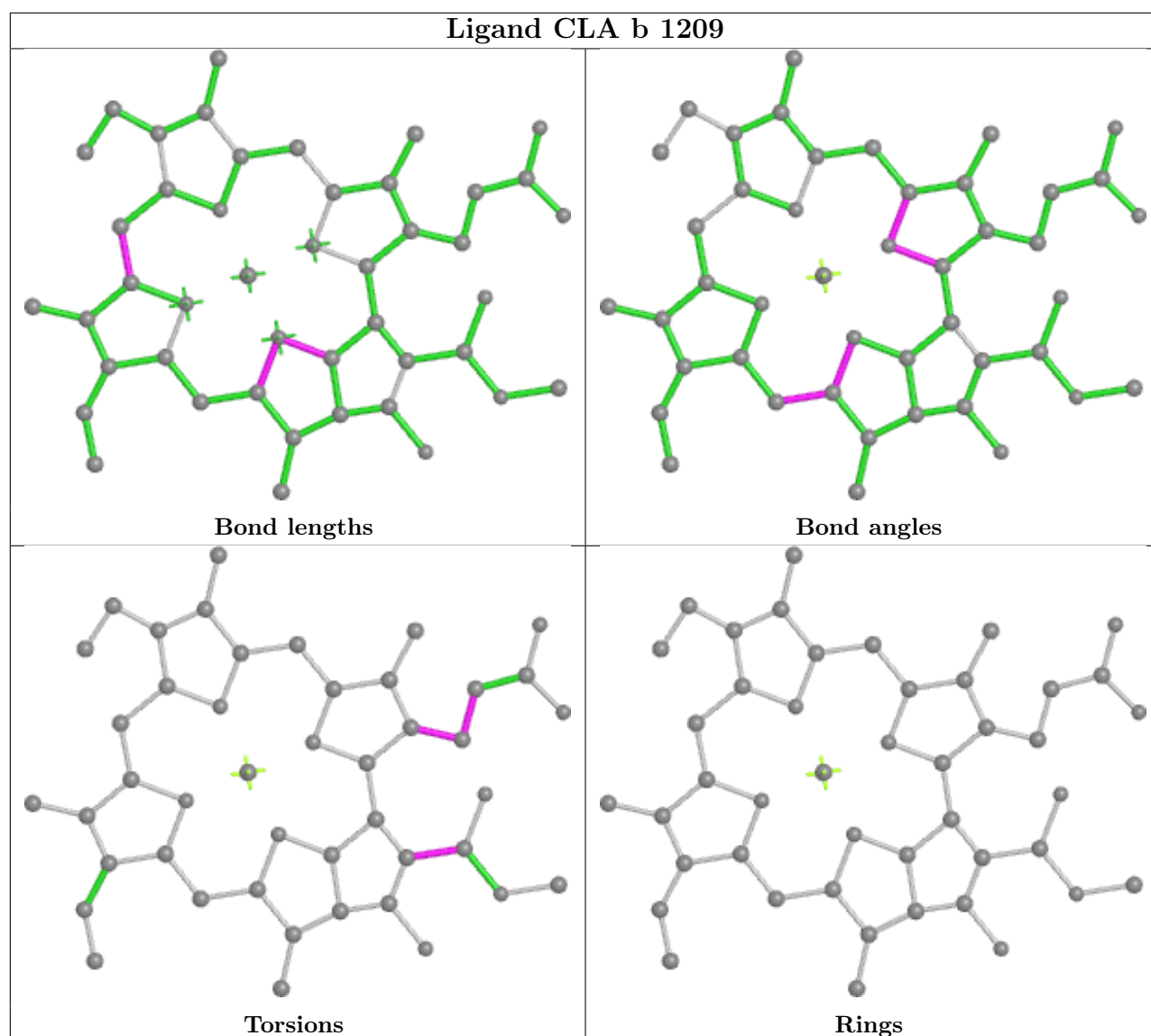


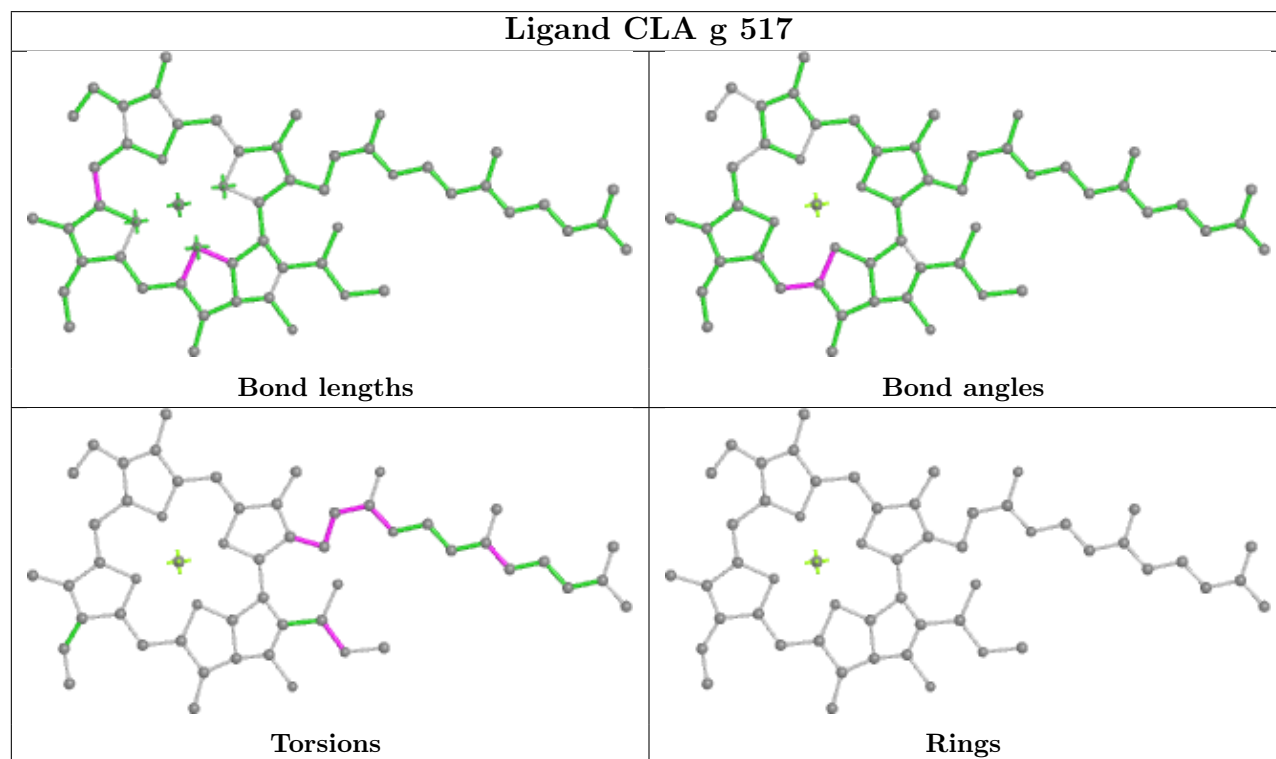
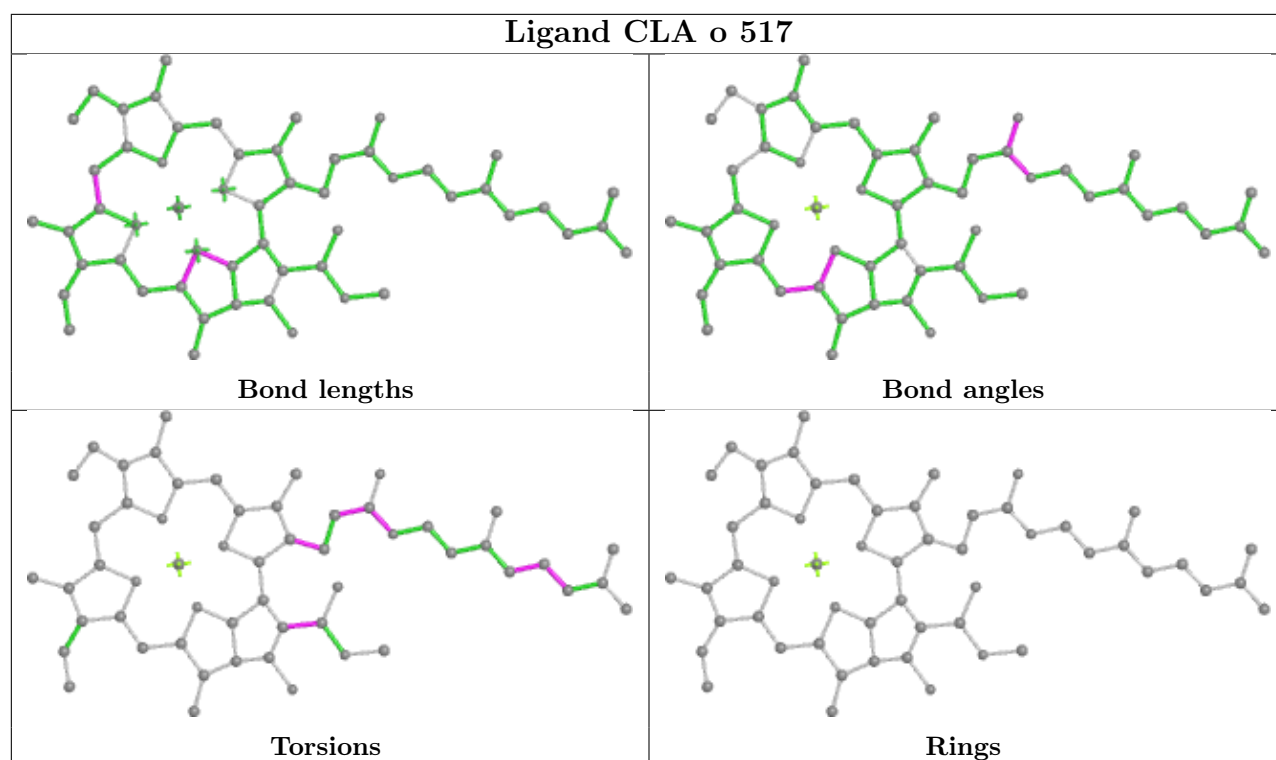


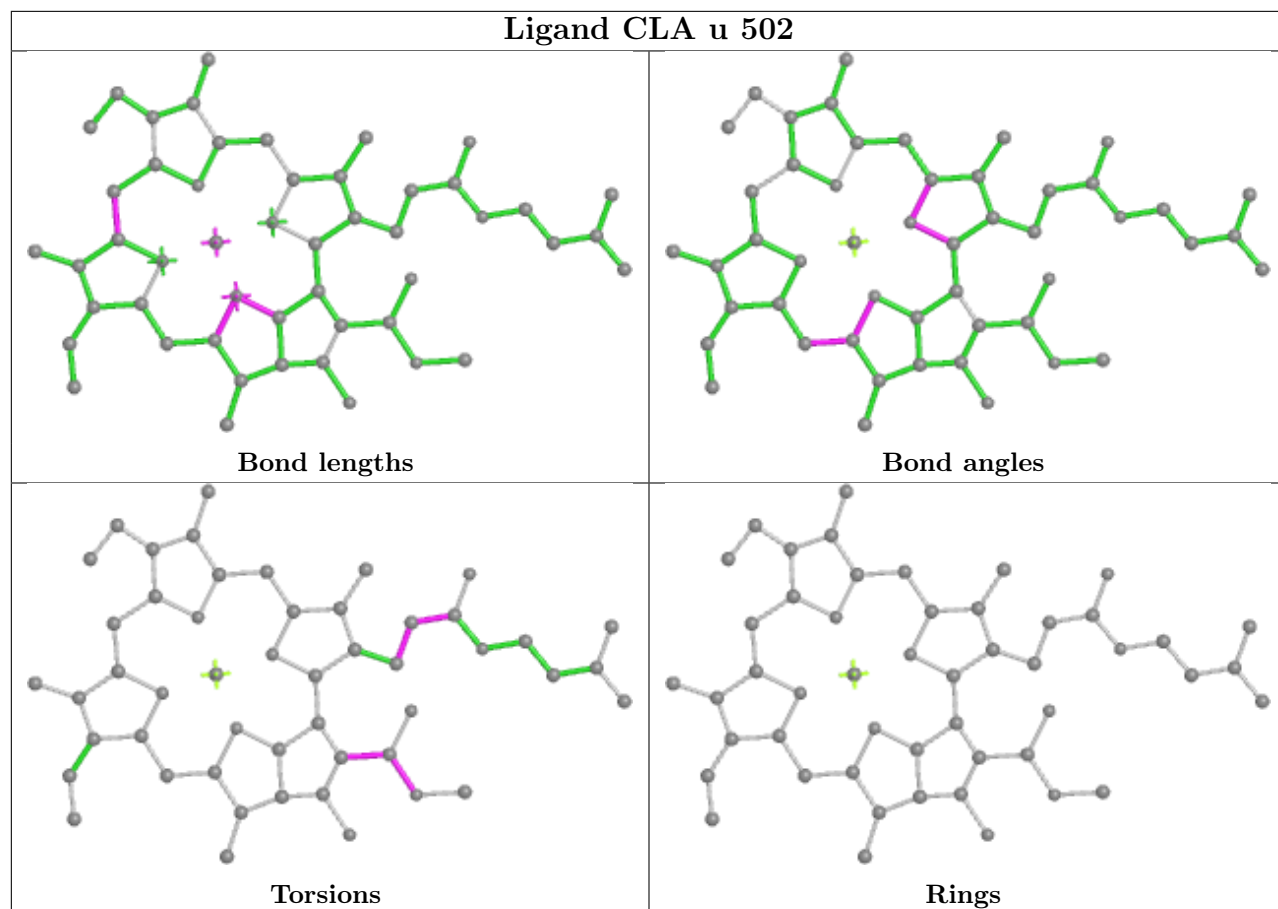


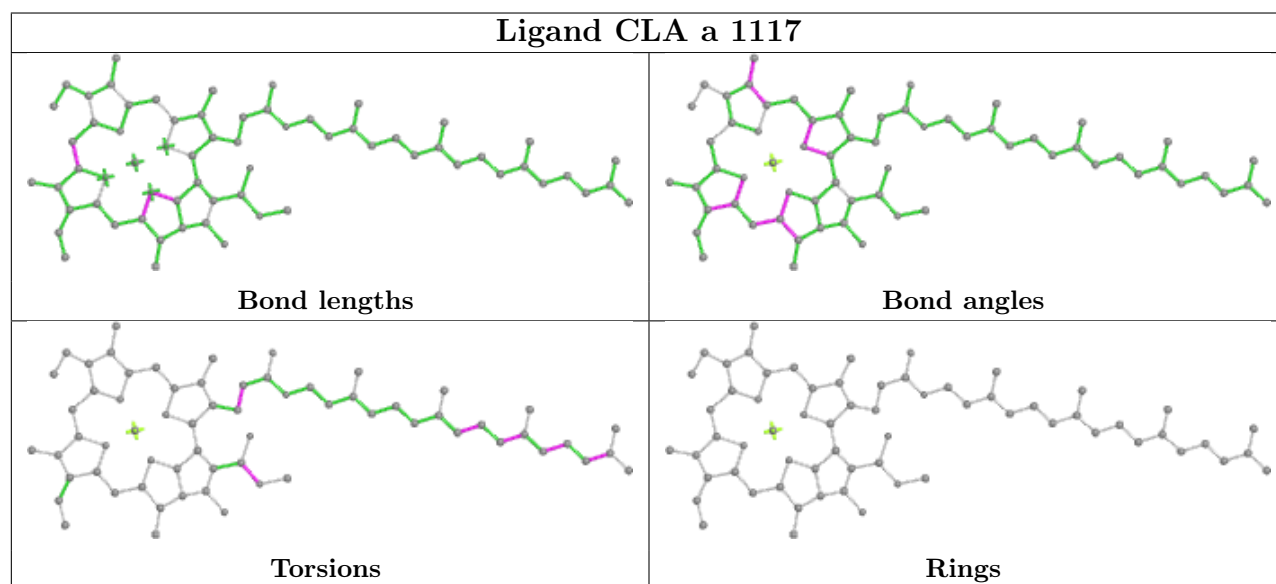
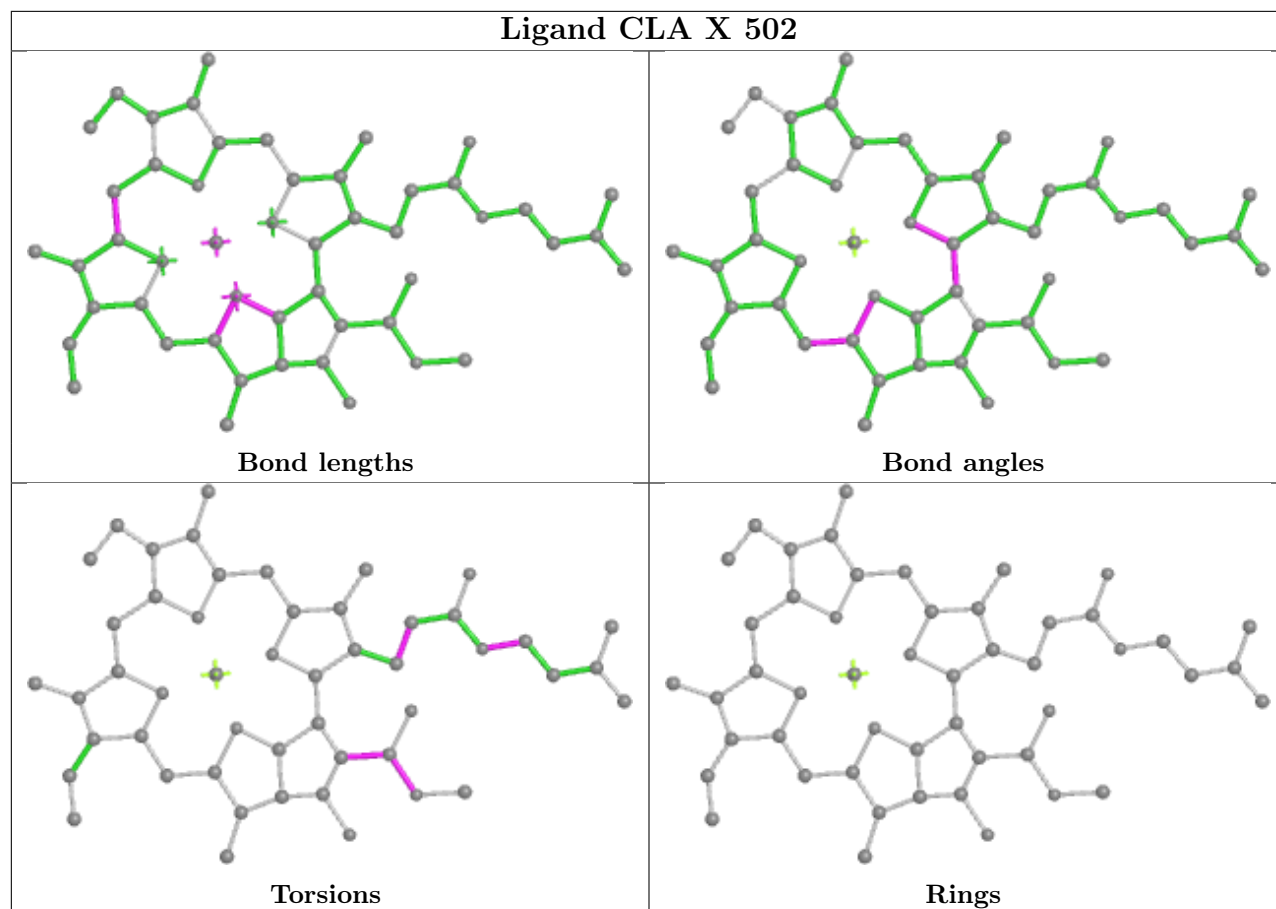


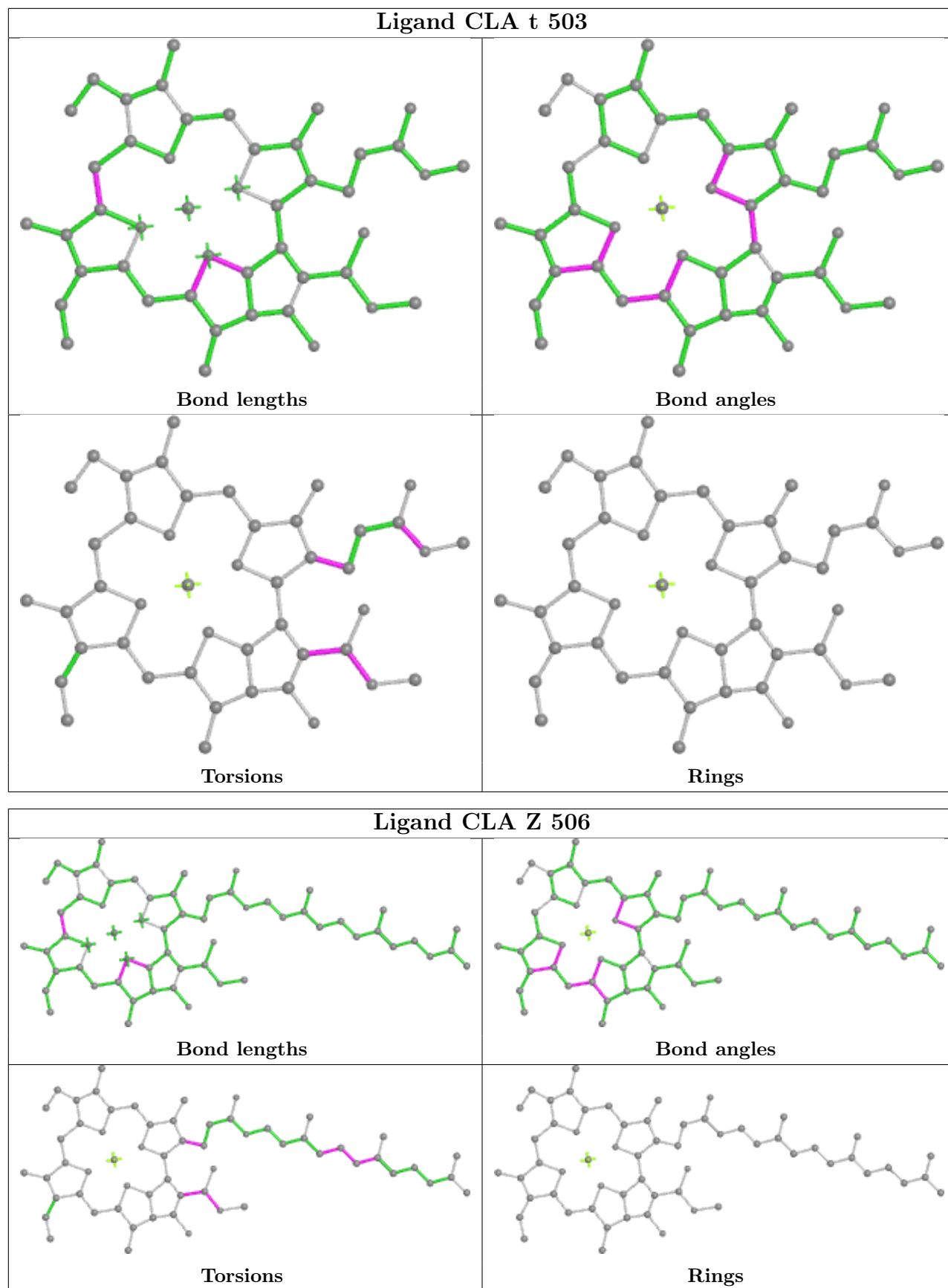


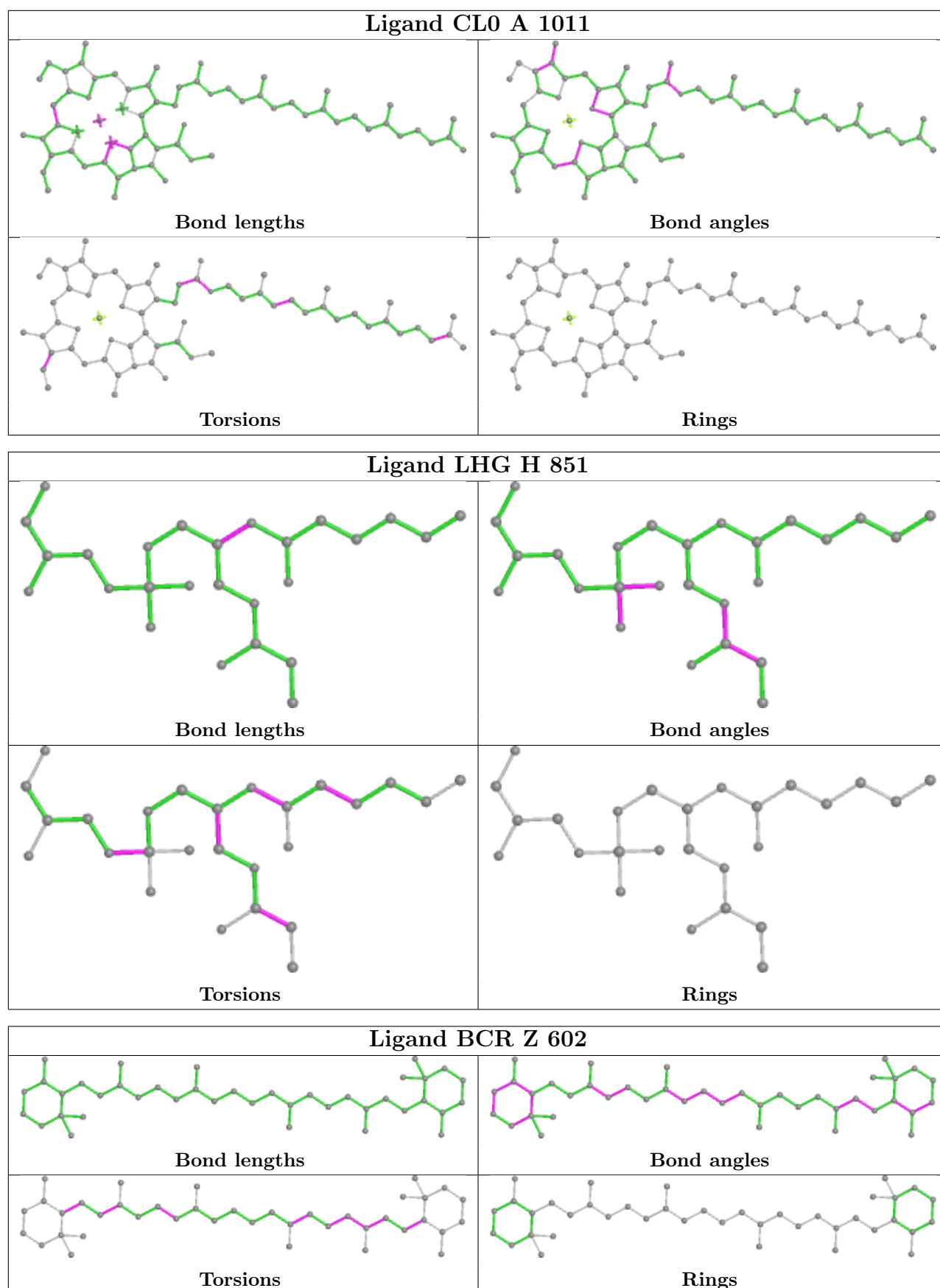


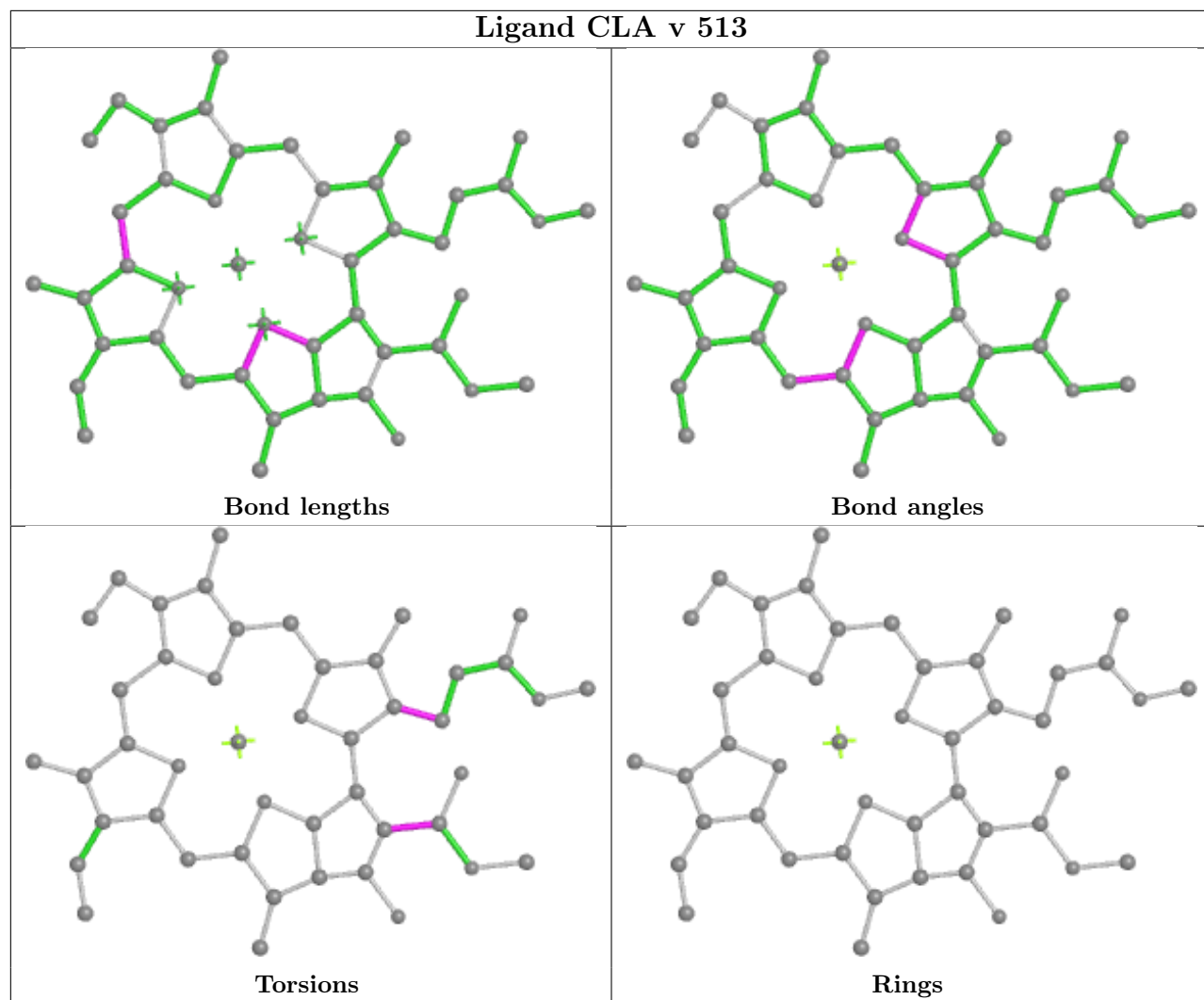


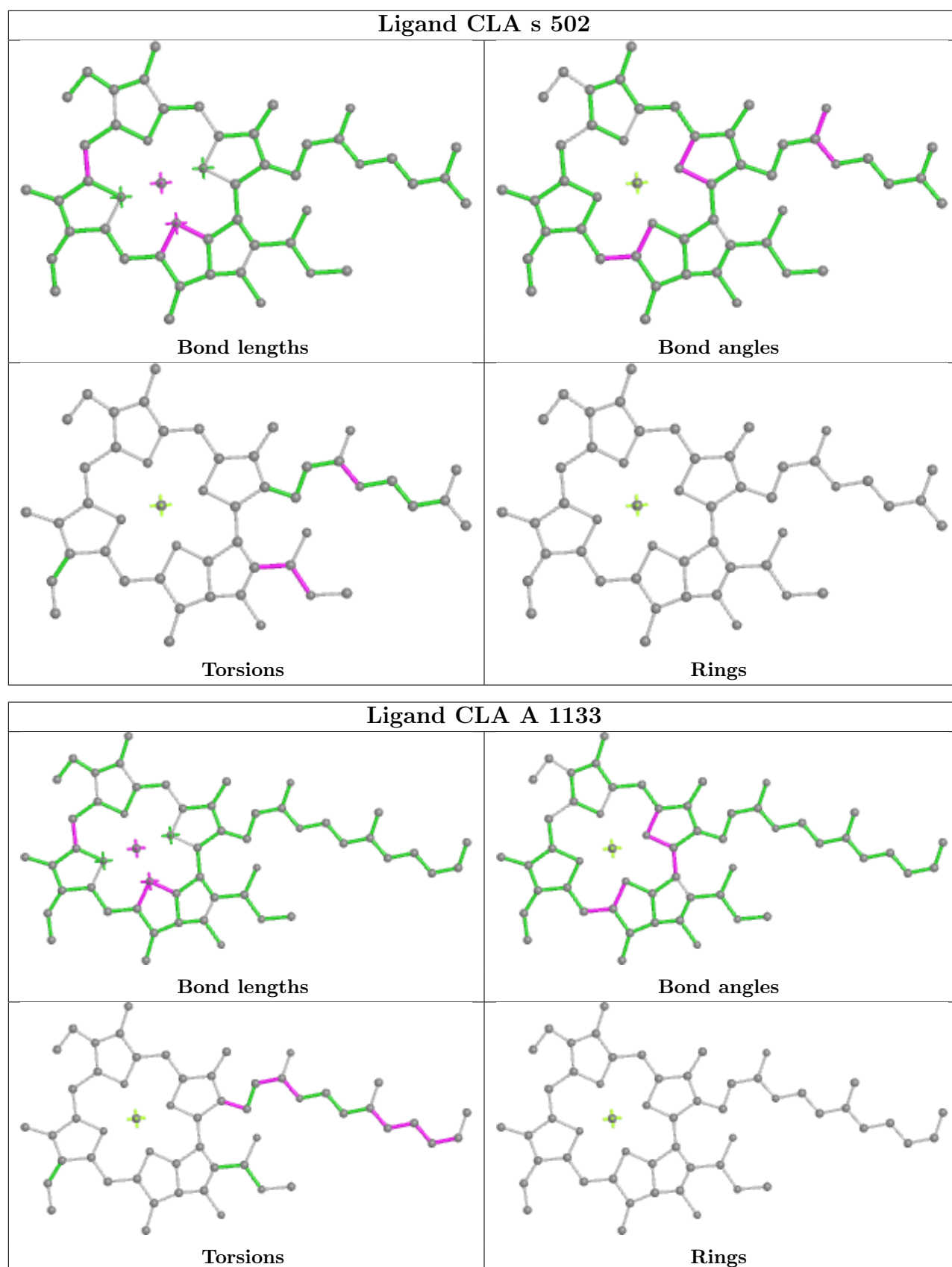




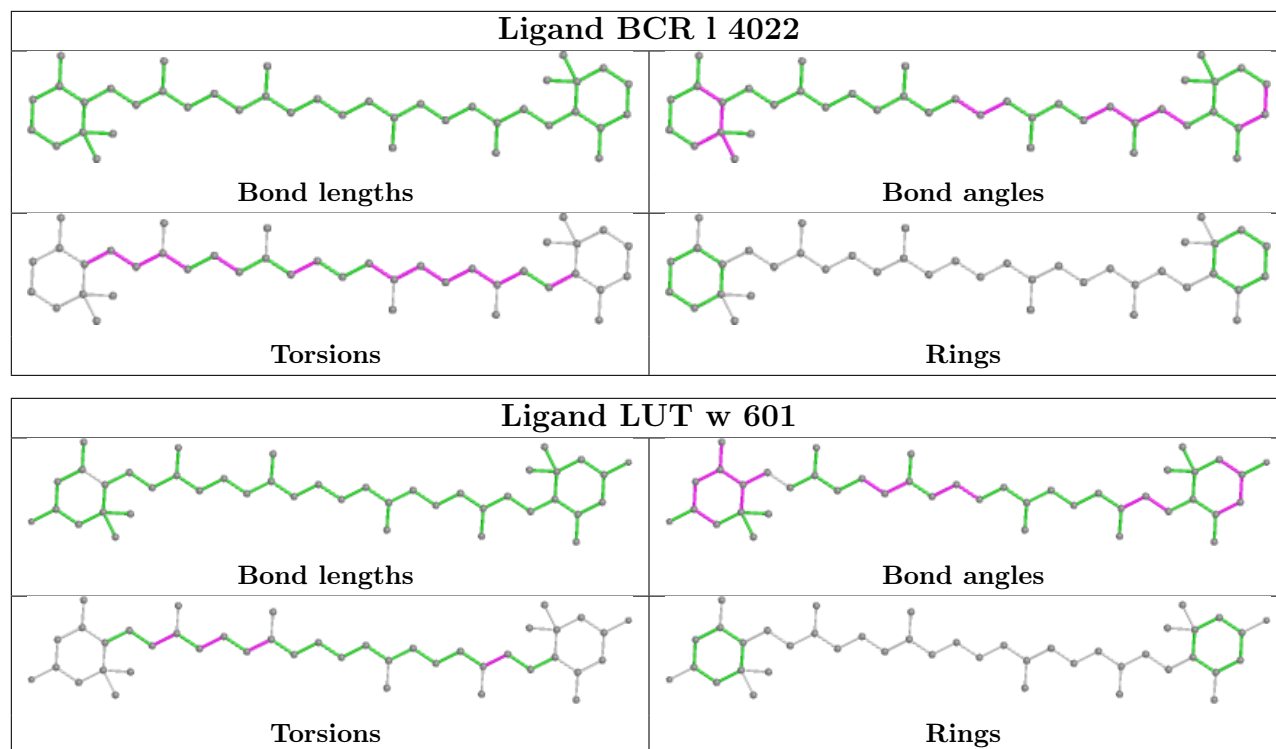


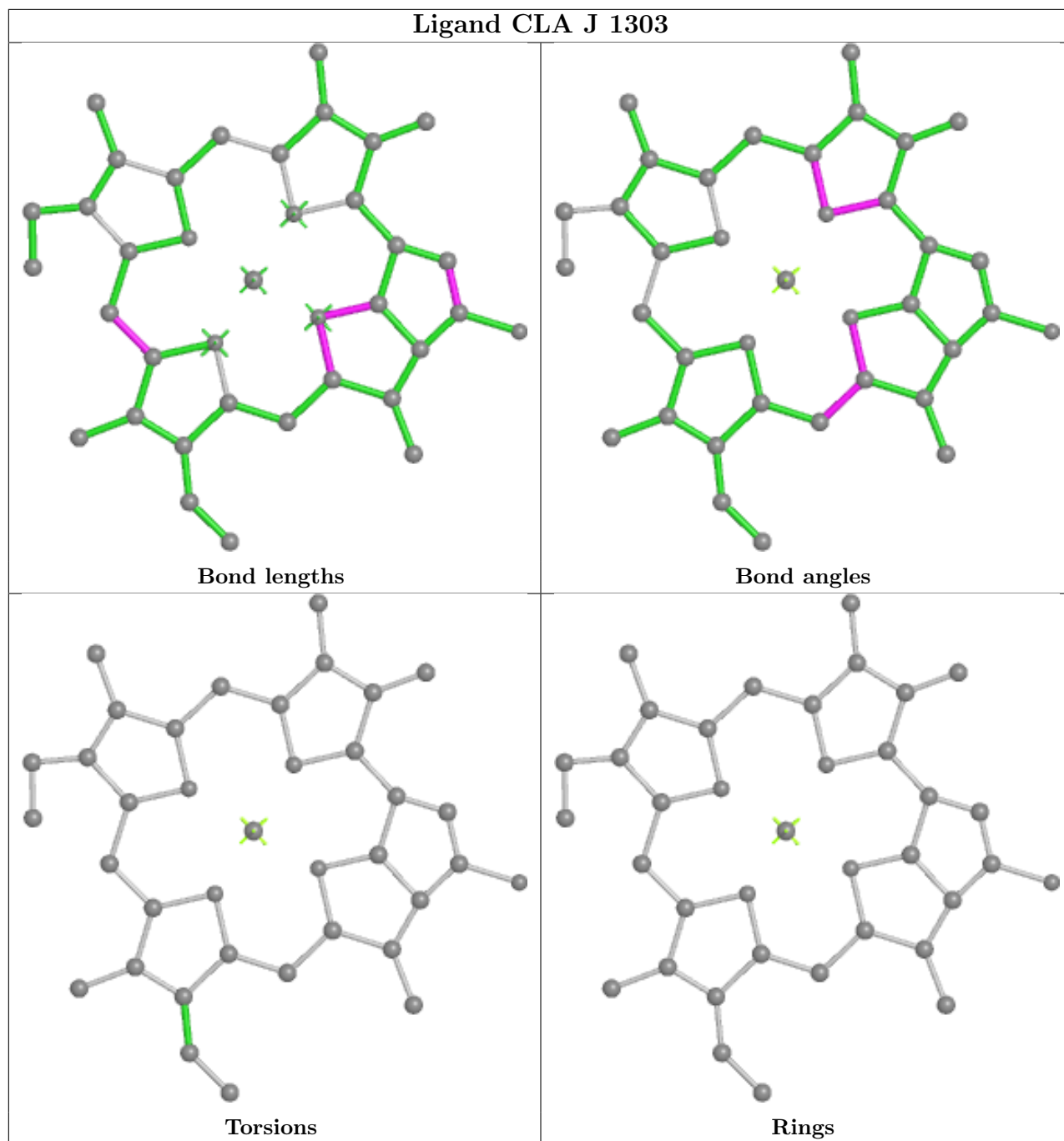


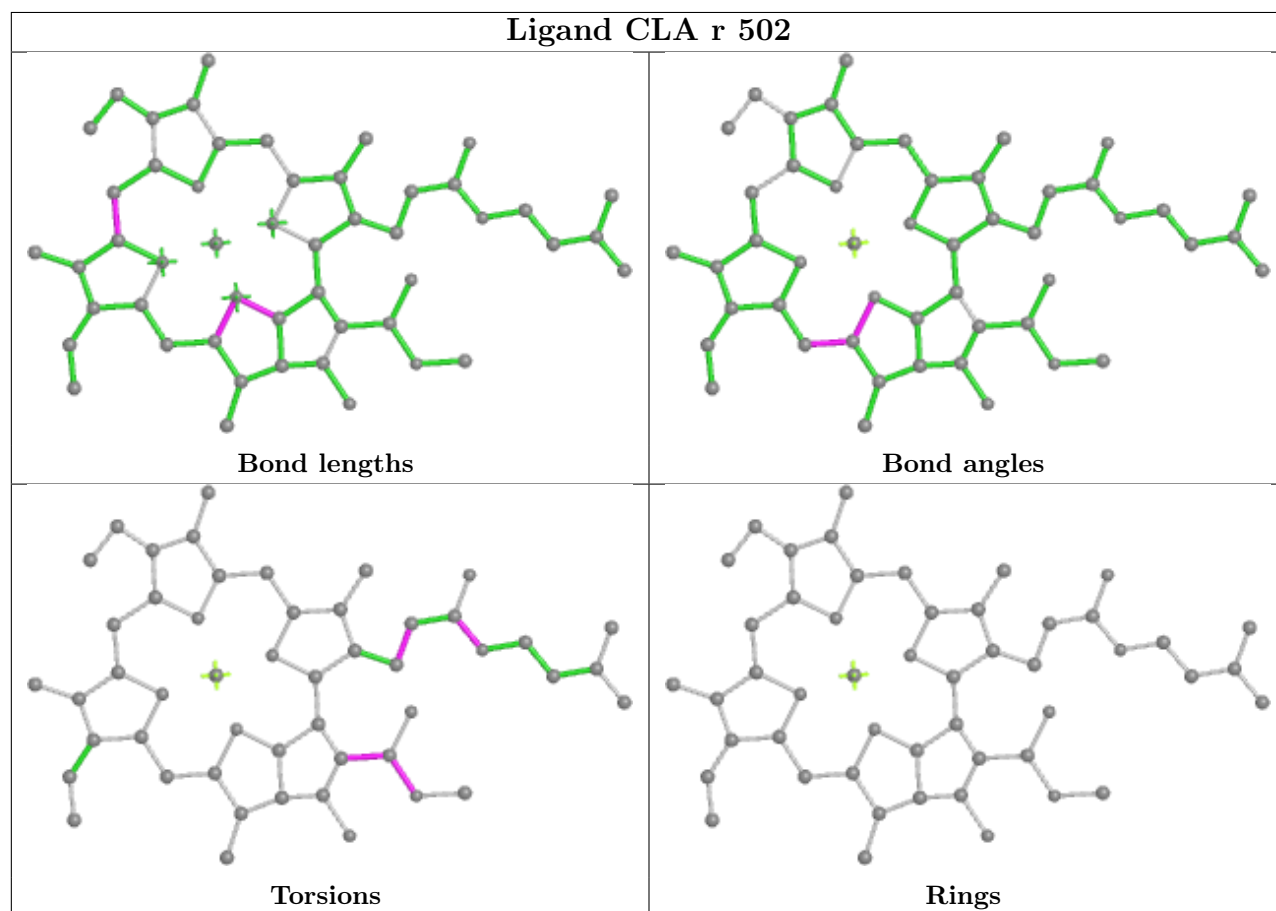
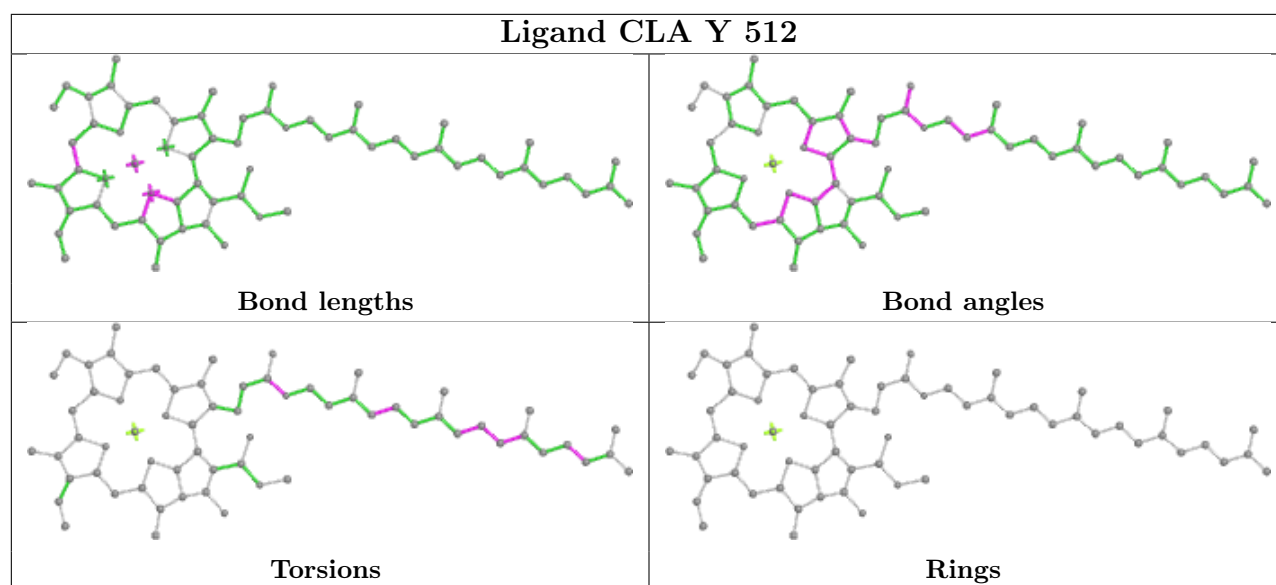


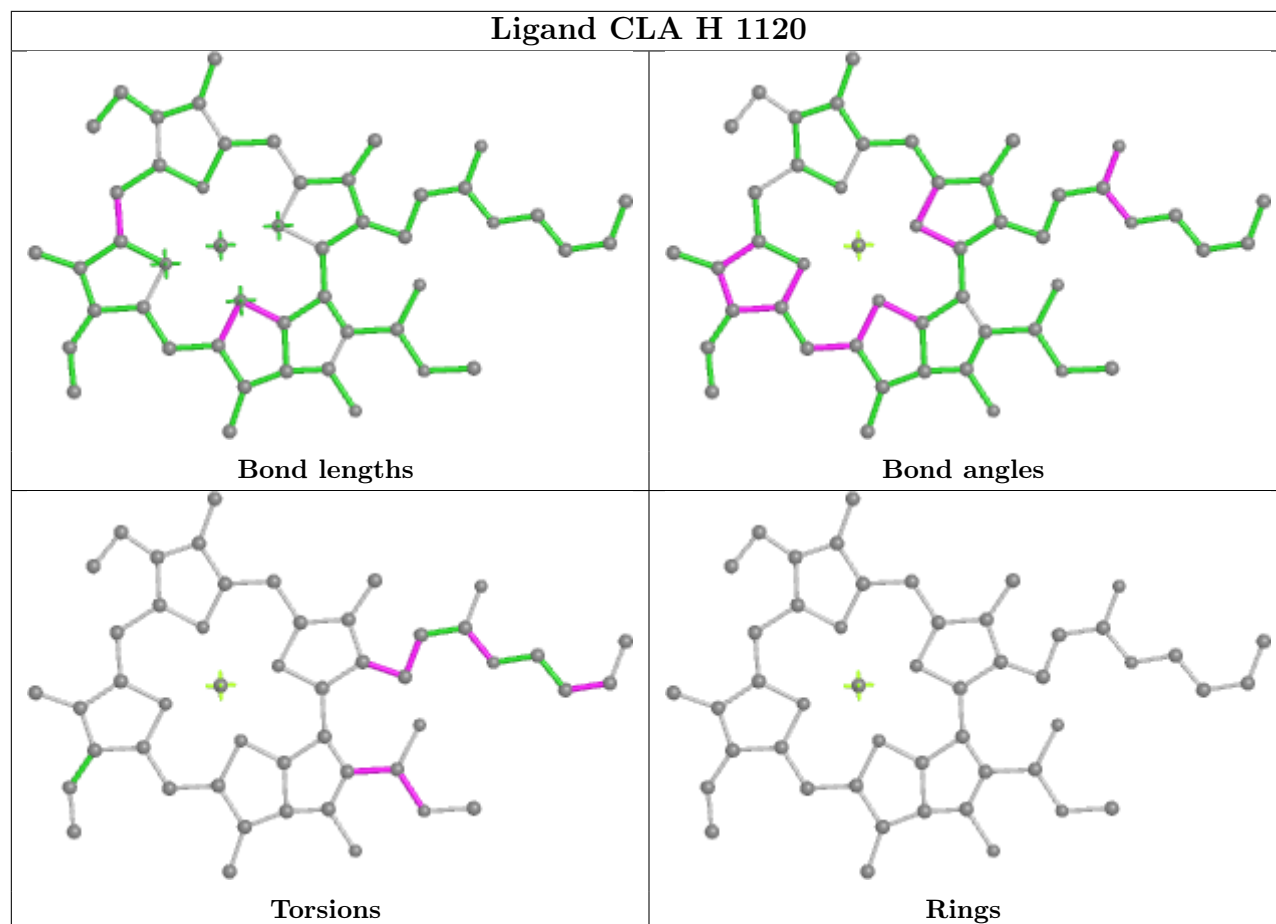


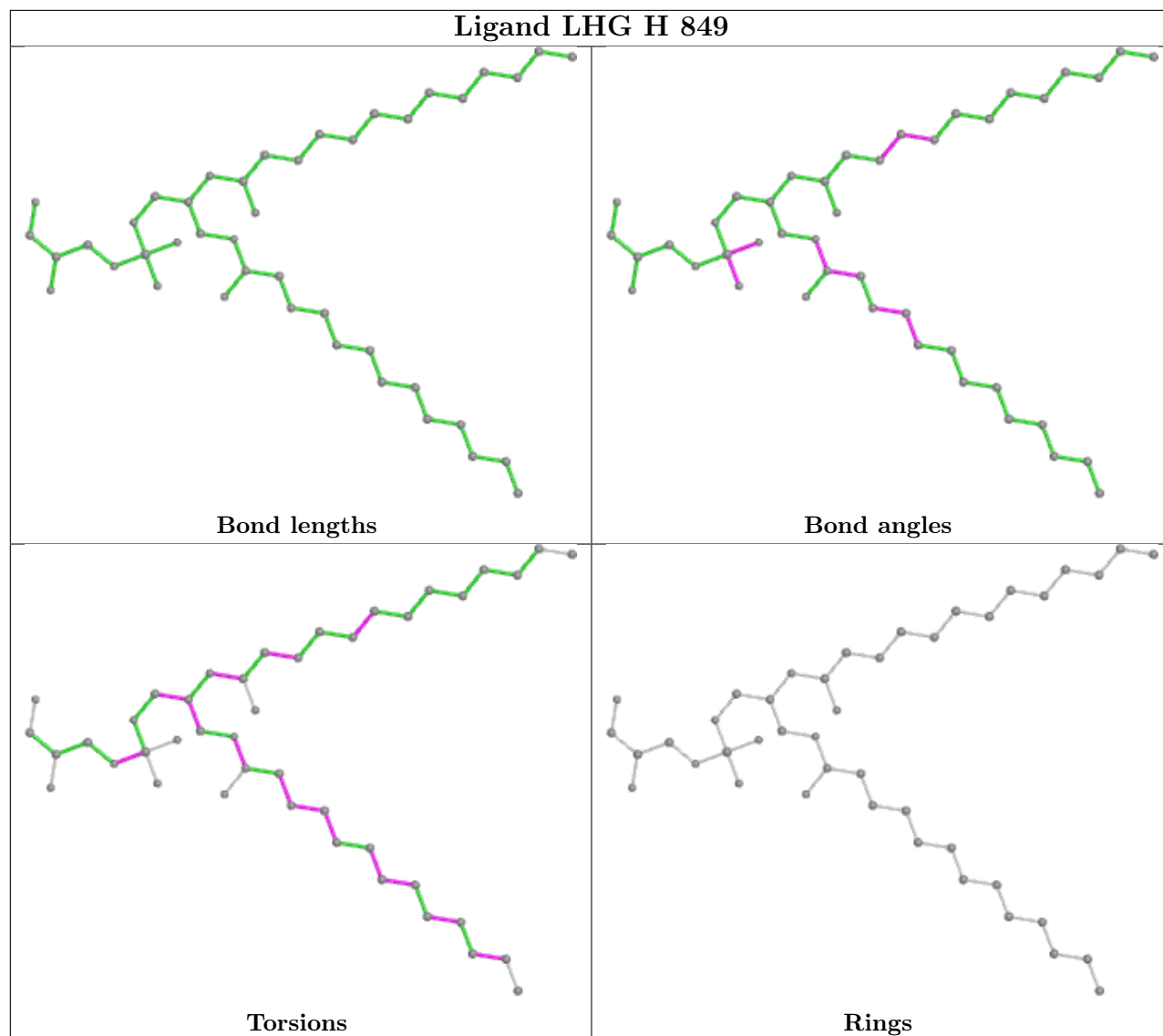


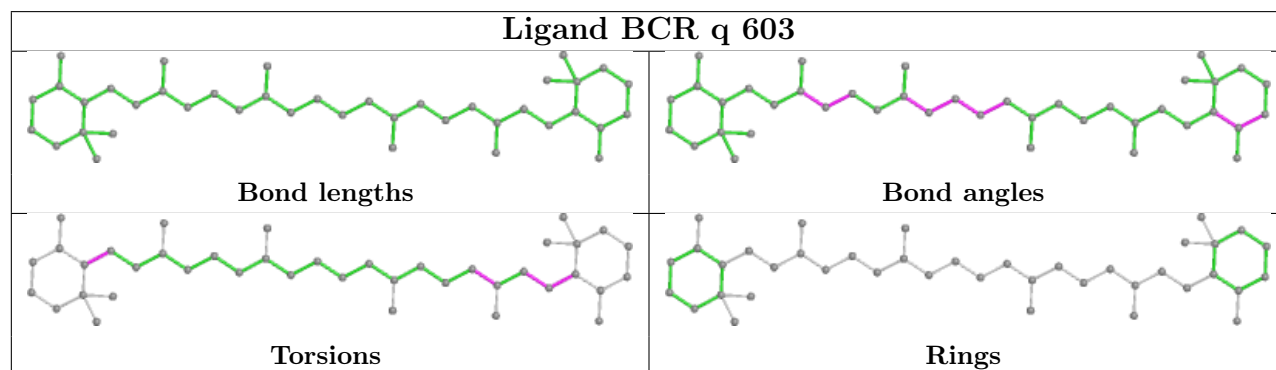
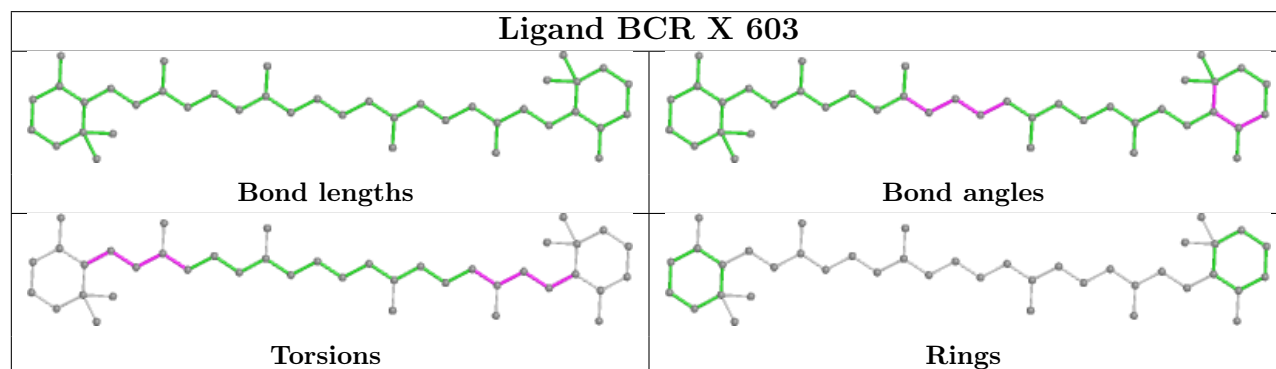
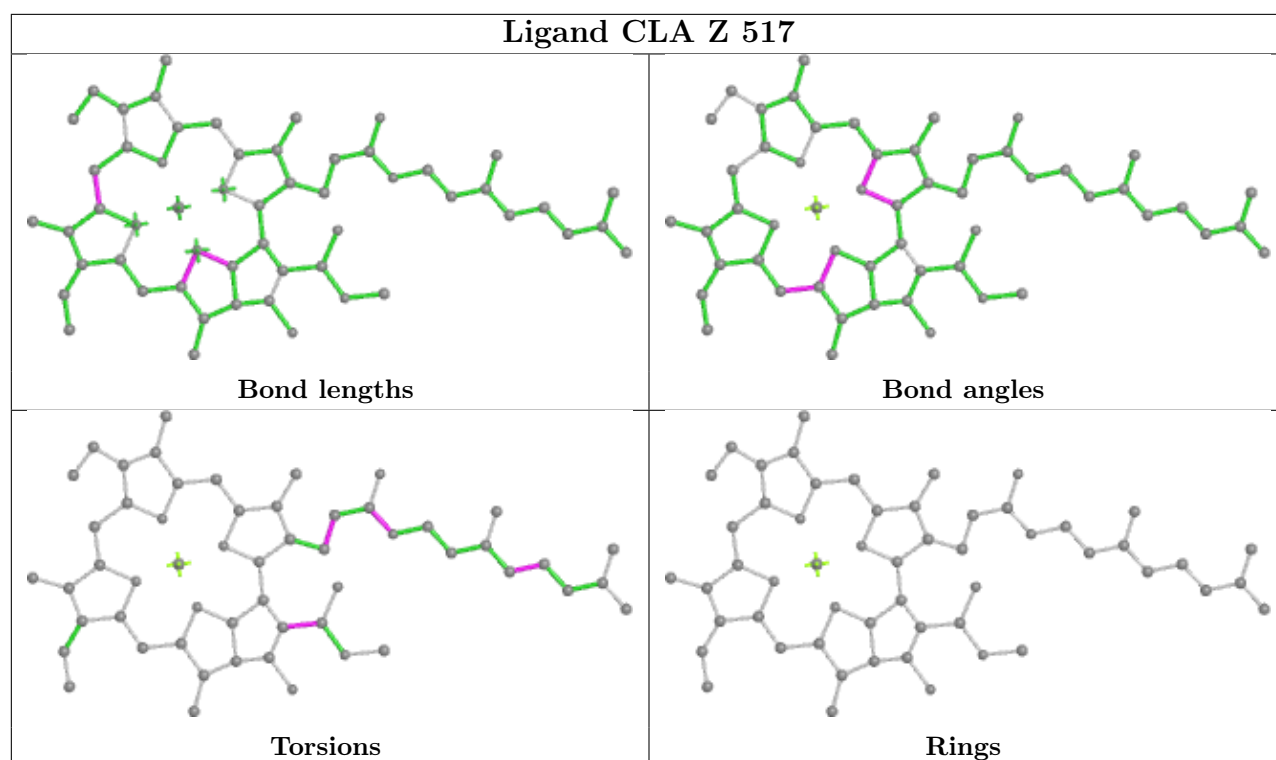


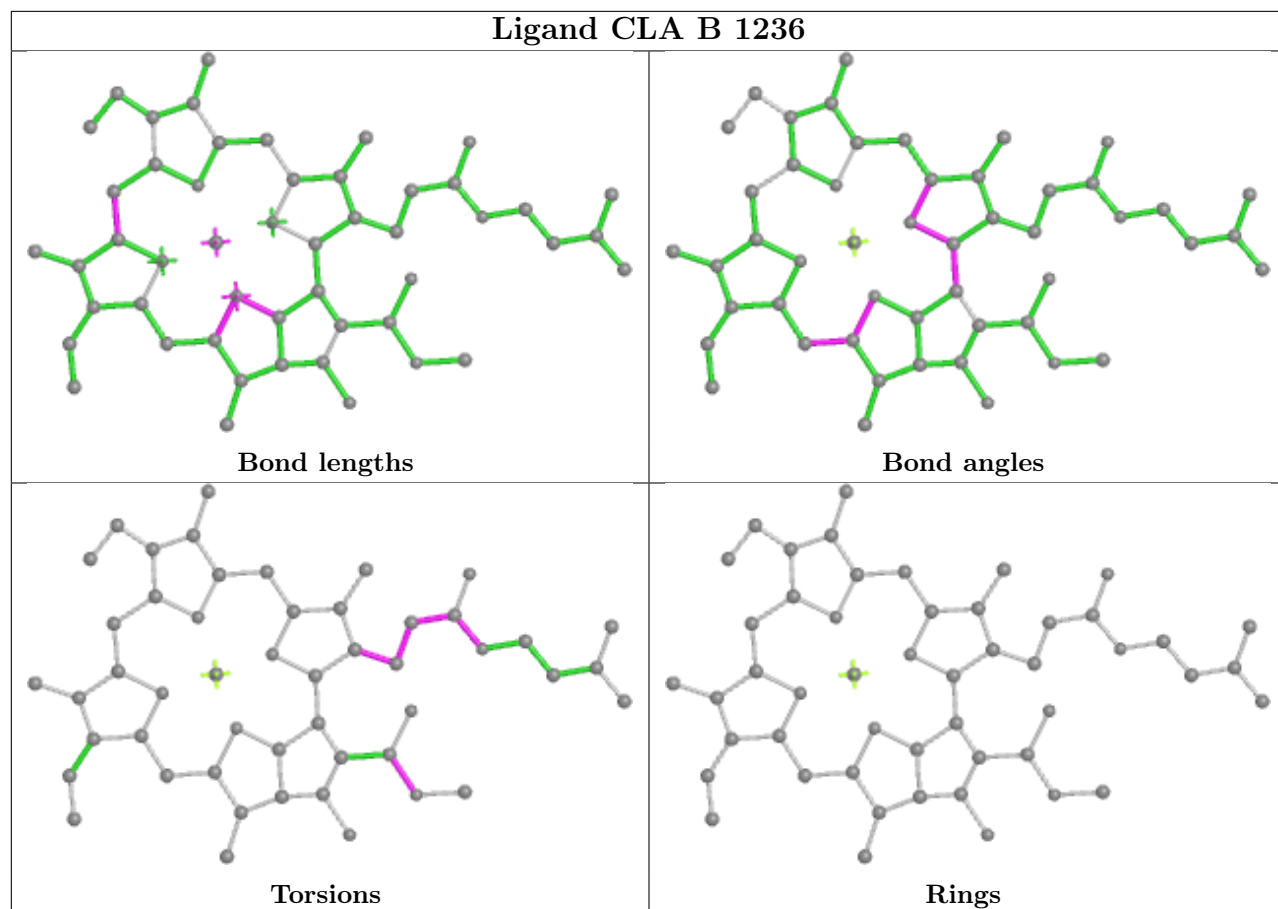


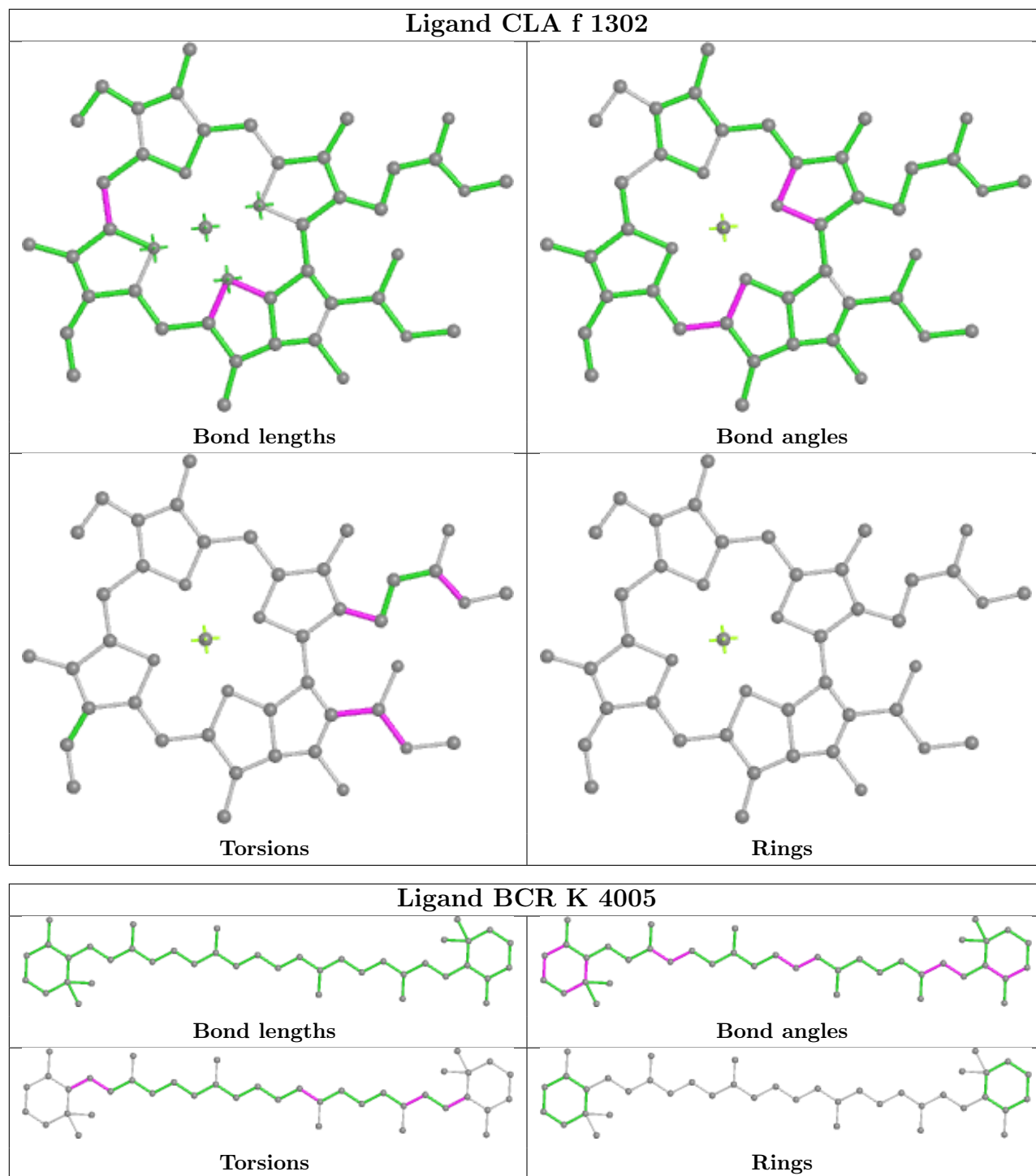




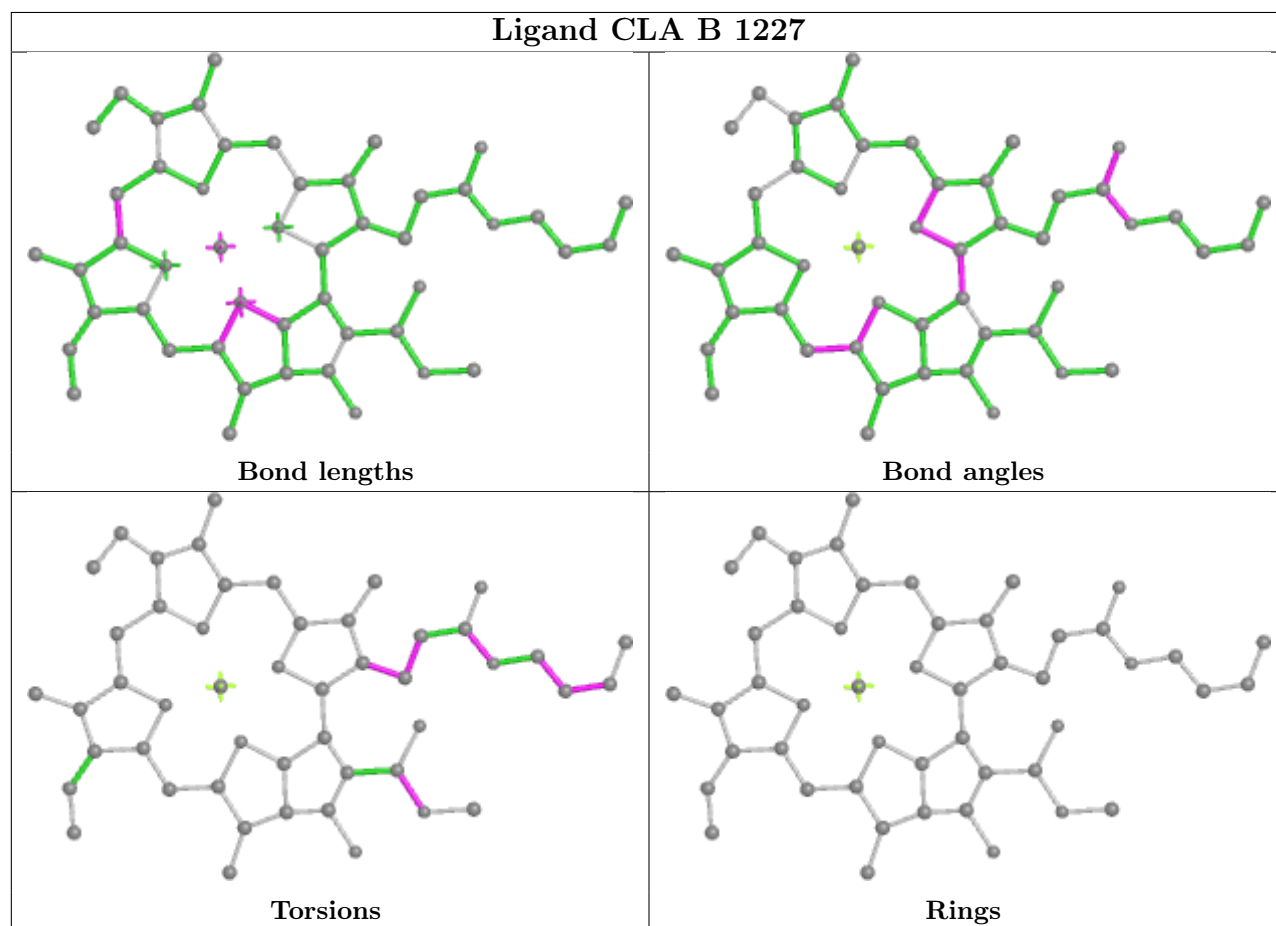
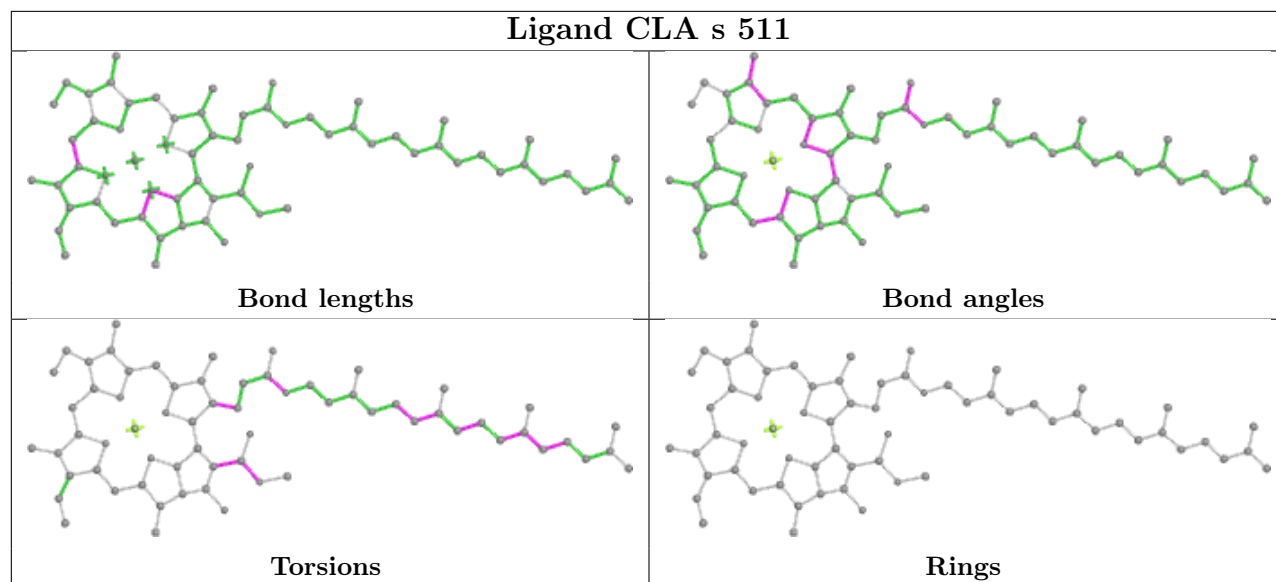


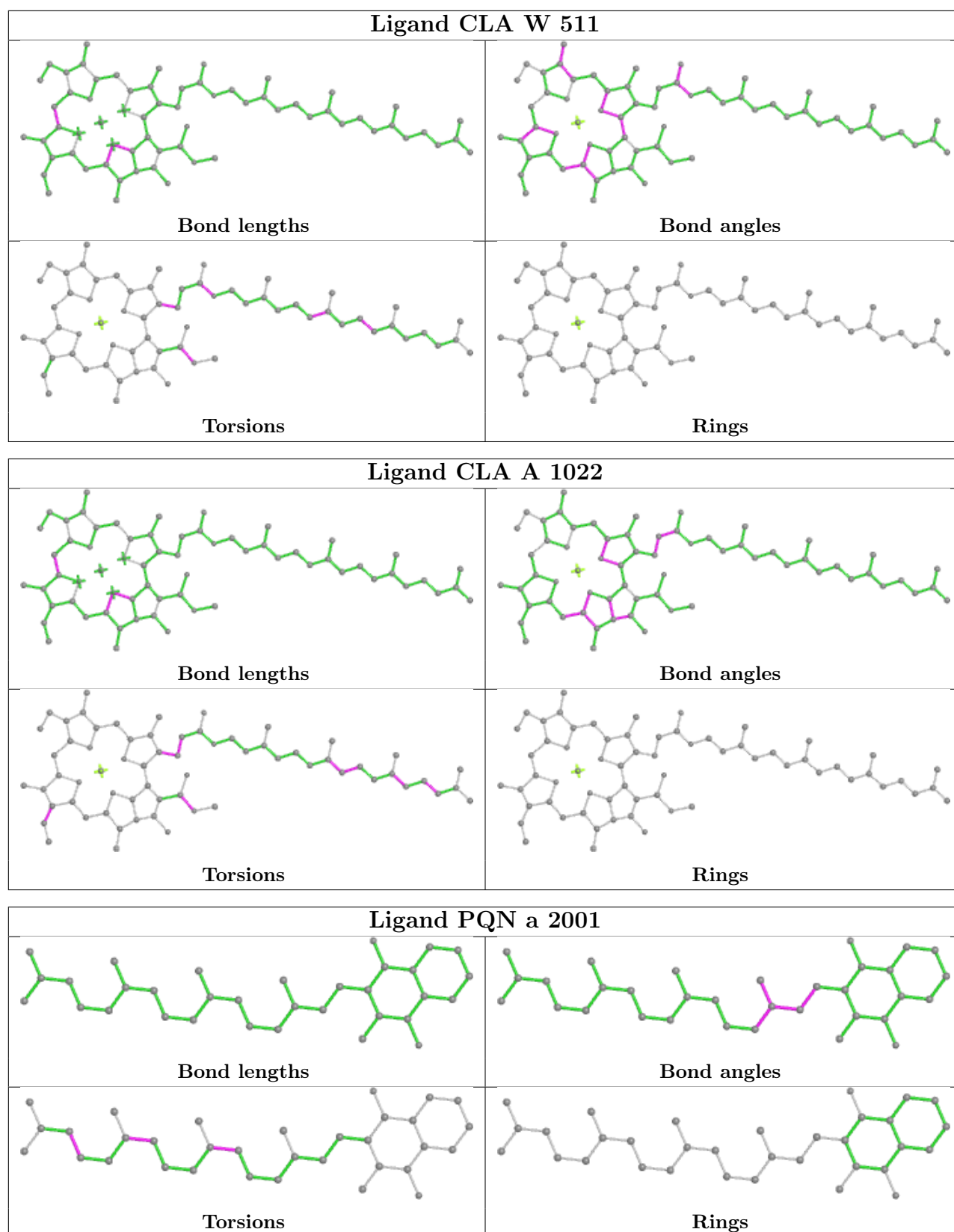


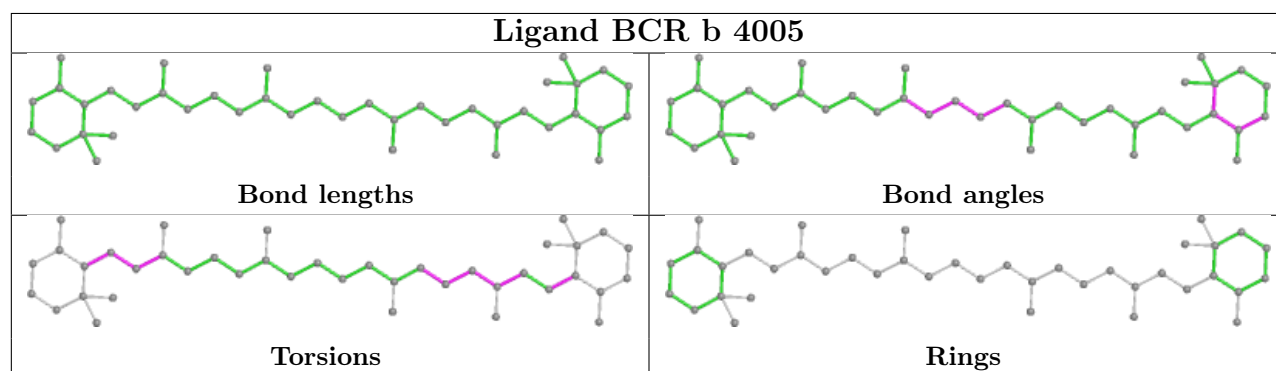
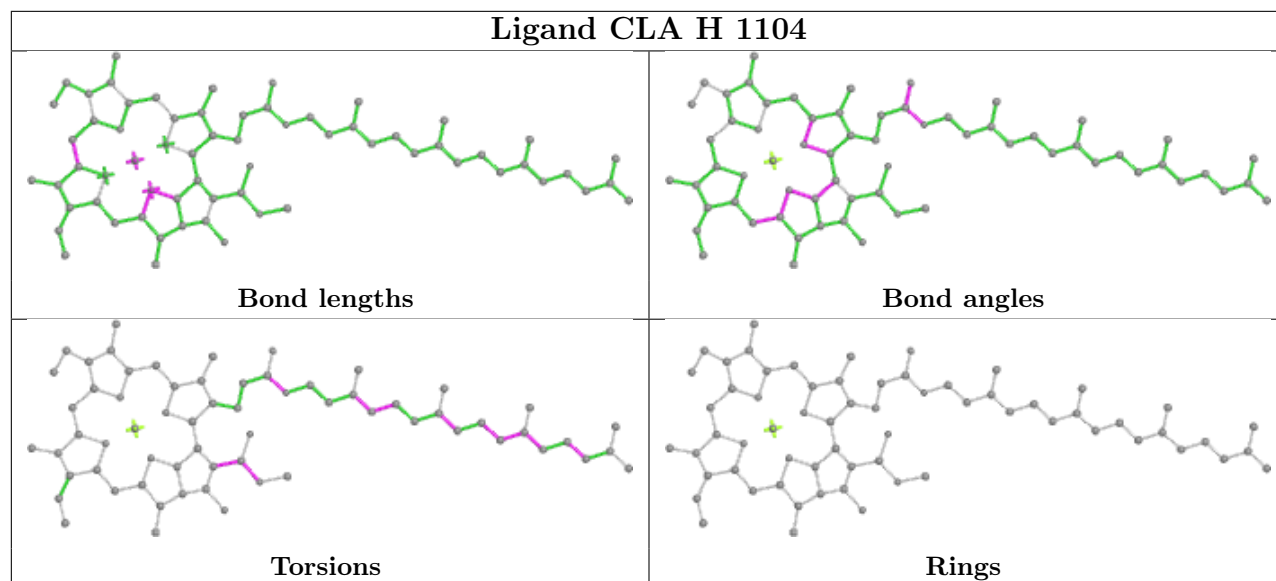
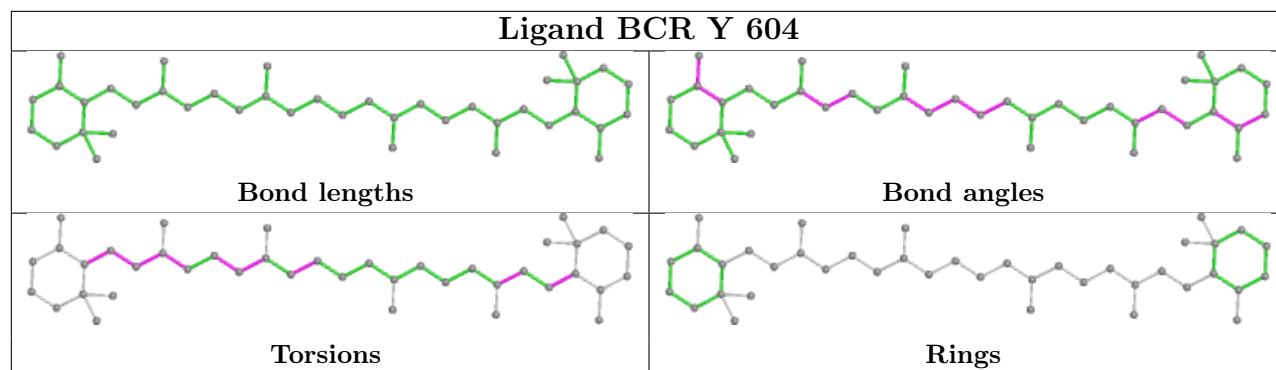


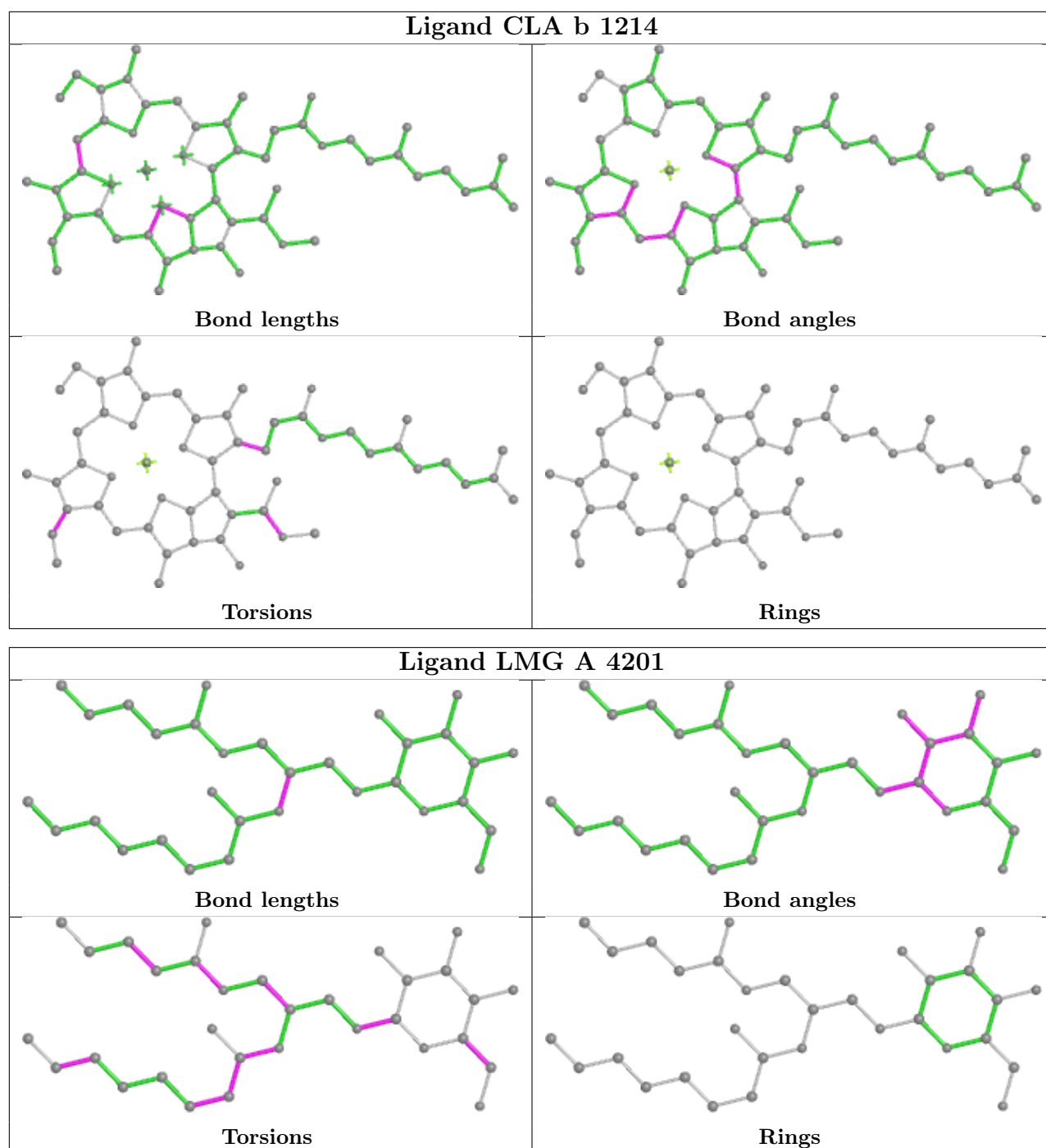


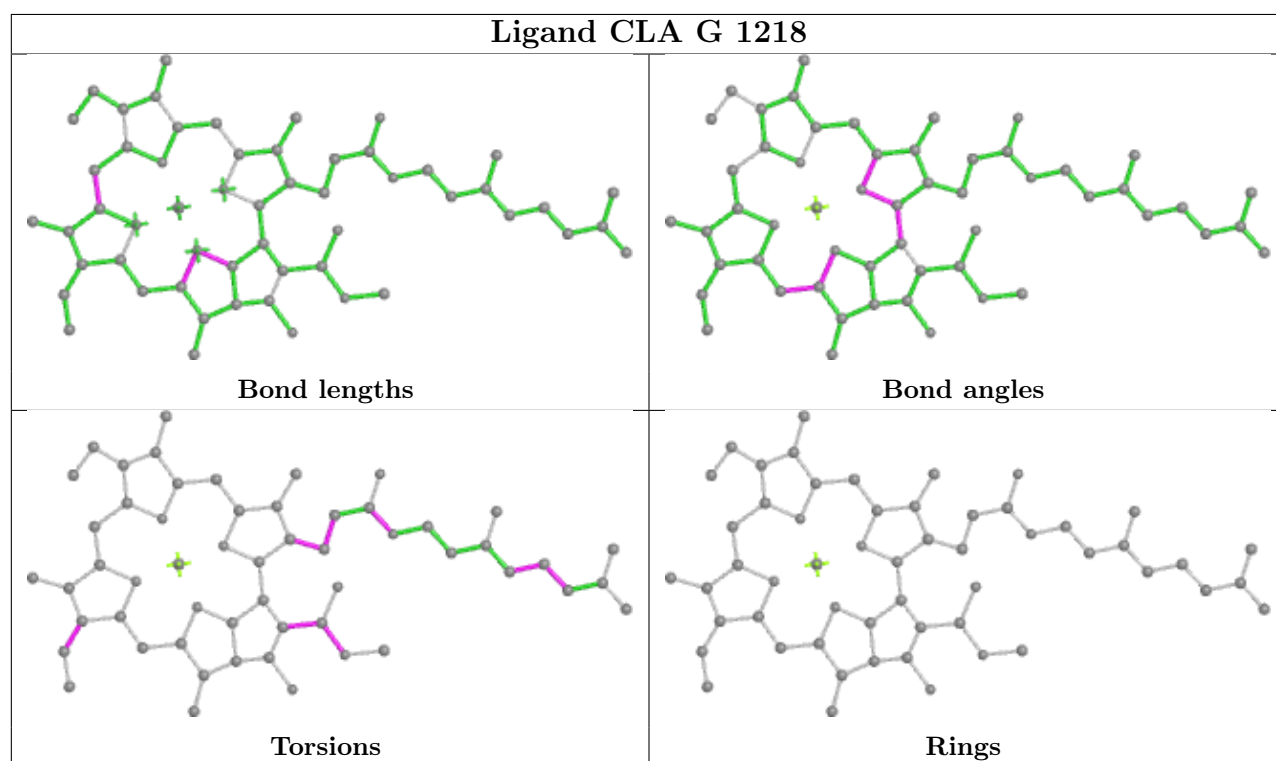
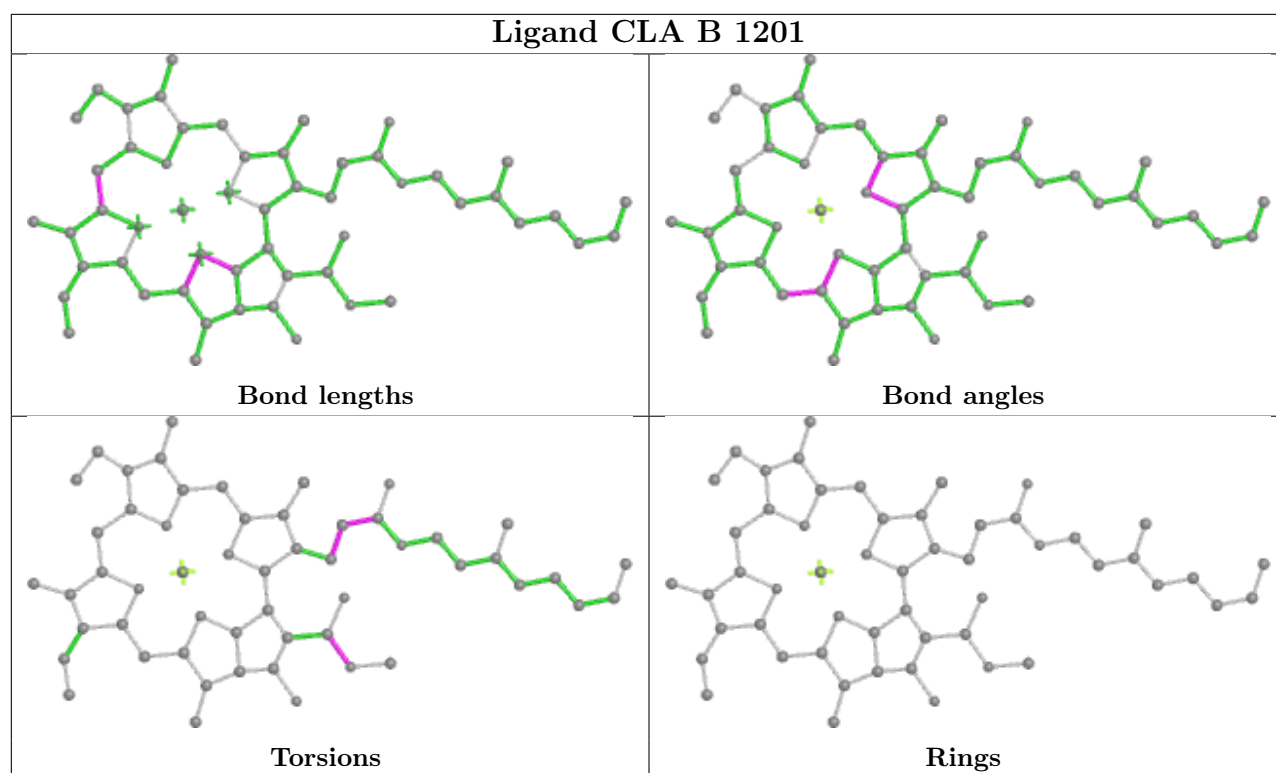


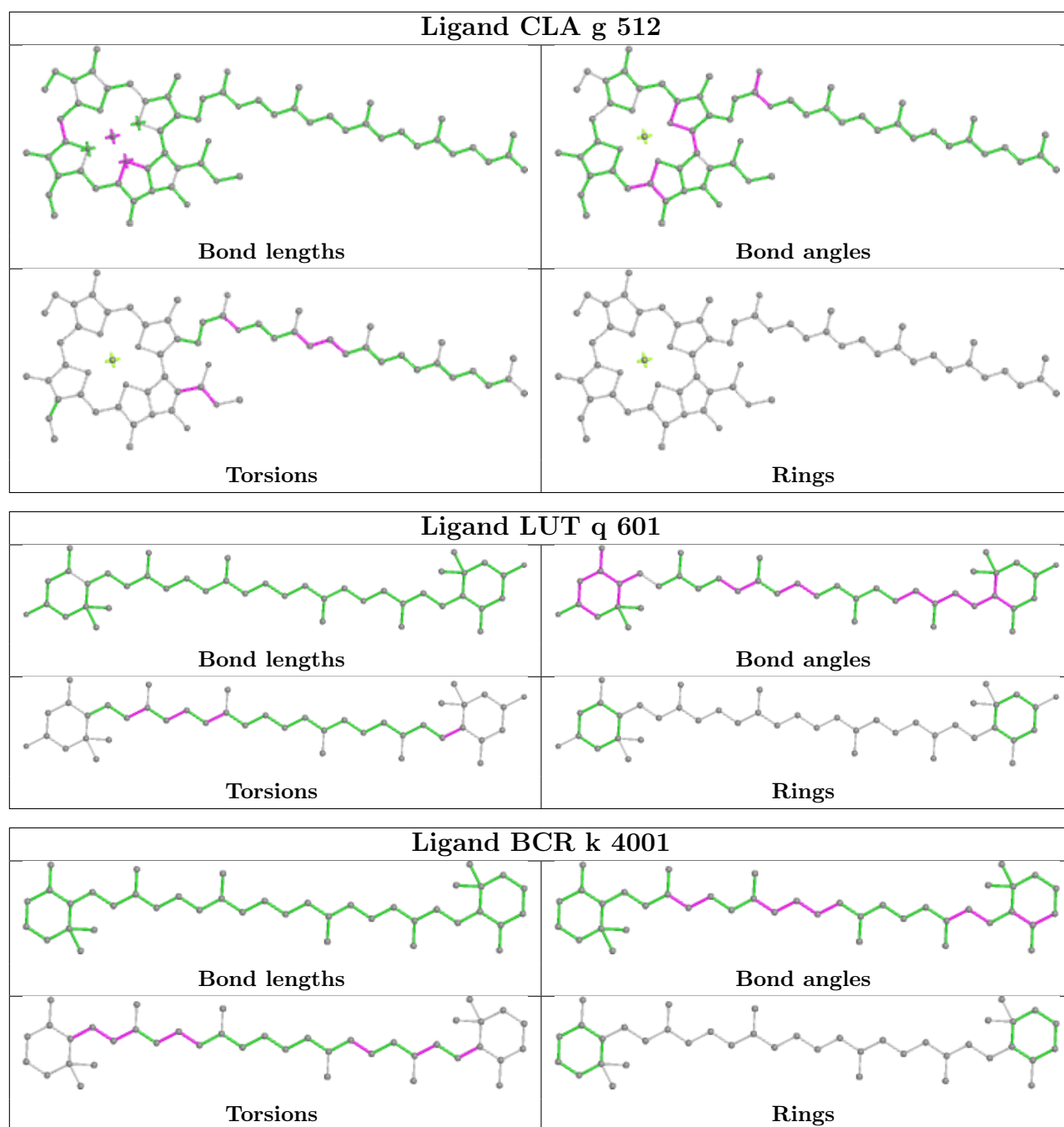












## 5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.

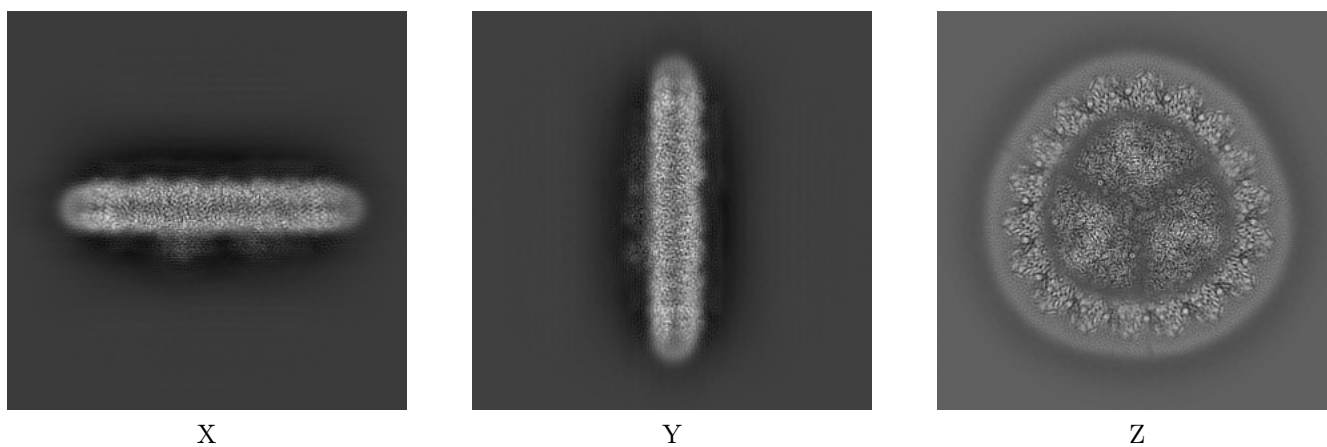
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-26601. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

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

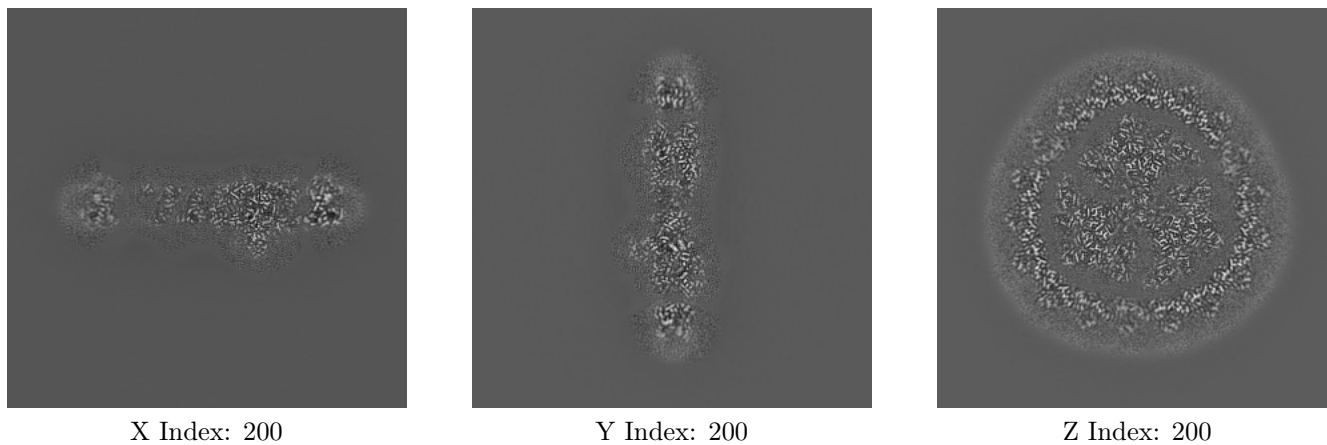
#### 6.1.1 Primary map



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

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

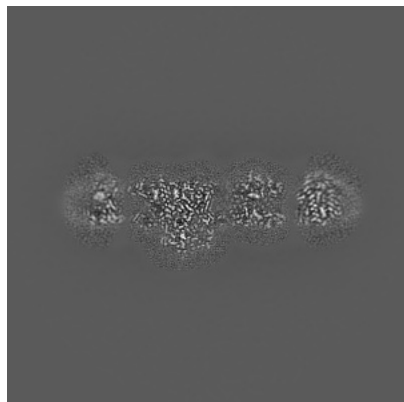
#### 6.2.1 Primary map



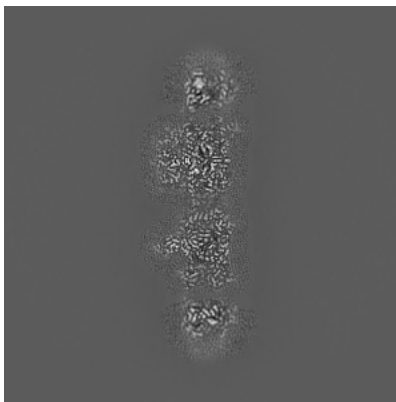
The images above show central slices of the map in three orthogonal directions.

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

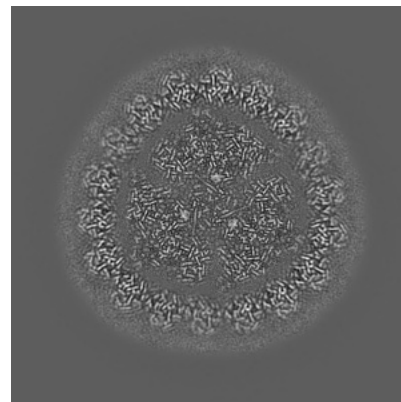
### 6.3.1 Primary map



X Index: 160



Y Index: 177

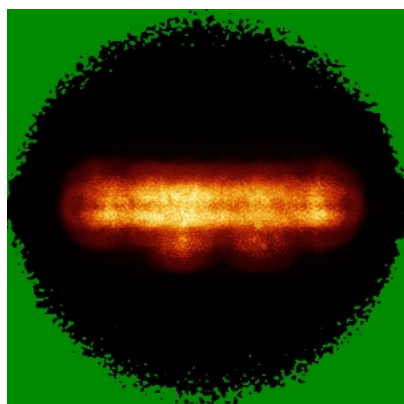


Z Index: 193

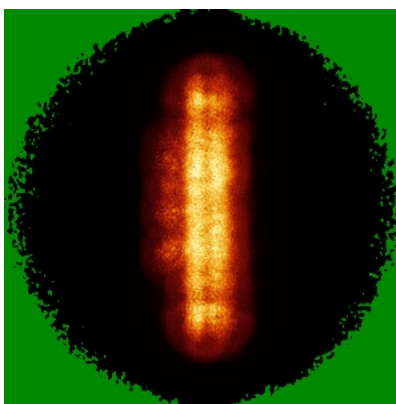
The images above show the largest variance slices of the map in three orthogonal directions.

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

### 6.4.1 Primary map



X



Y



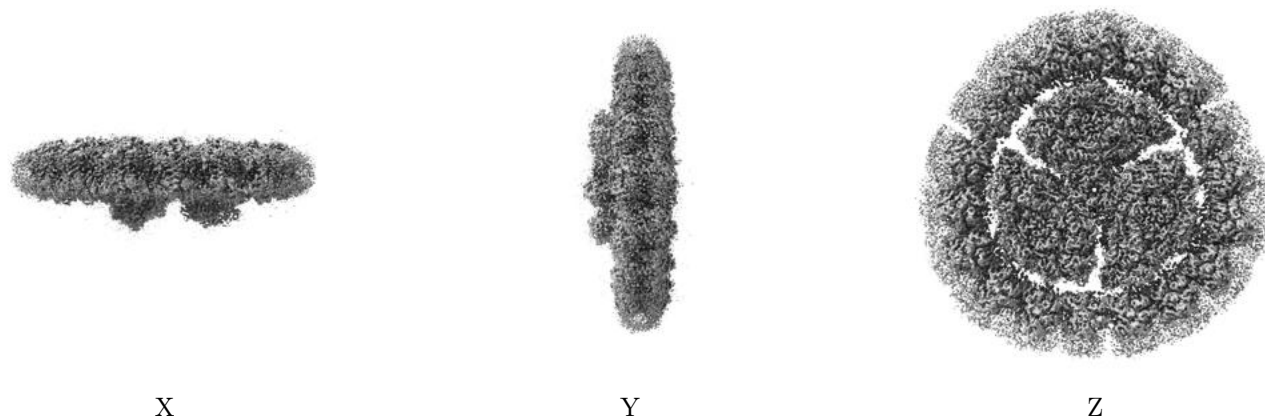
Z

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



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

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 9.2. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

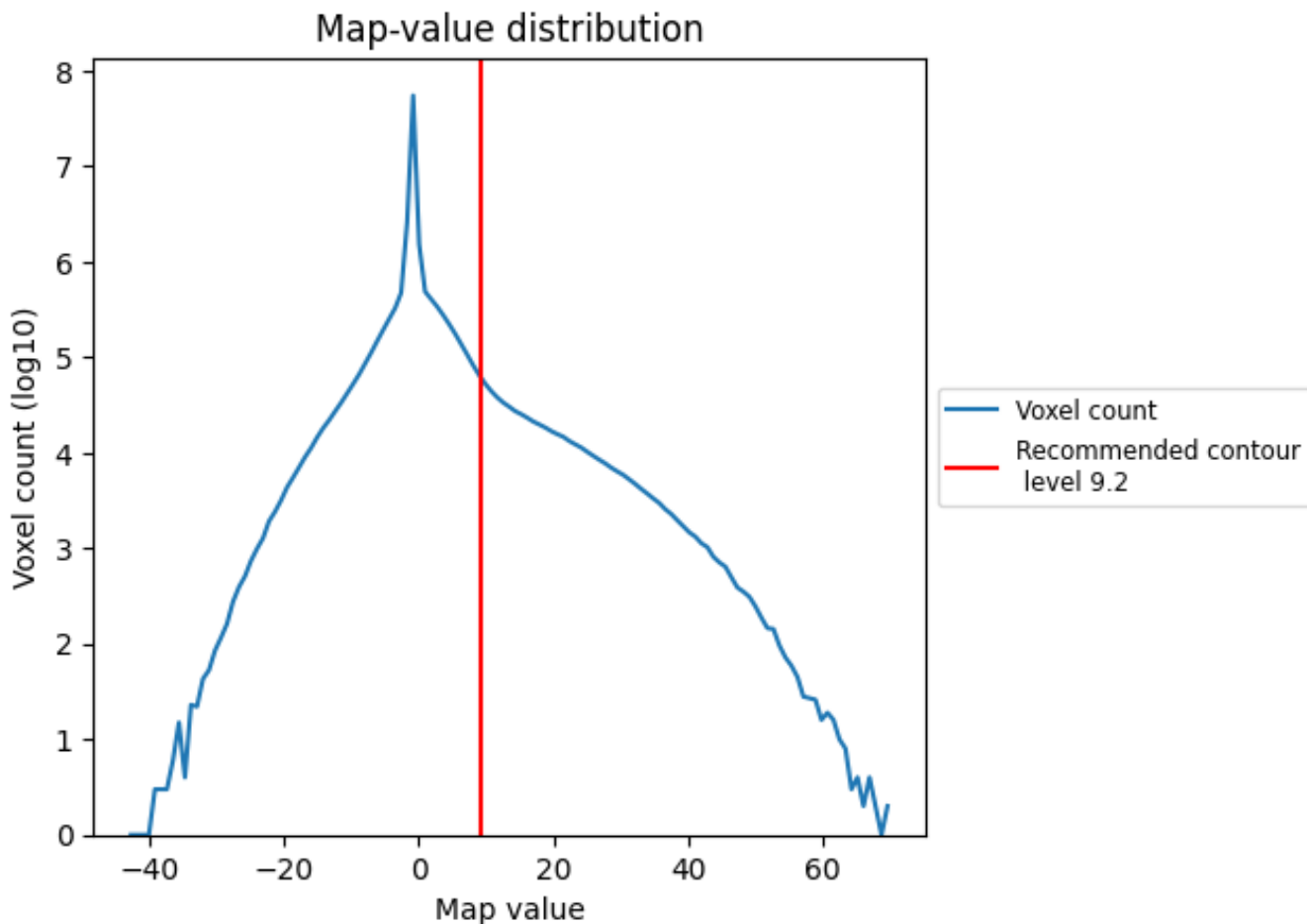
## 6.6 Mask visualisation [i](#)

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

## 7 Map analysis [i](#)

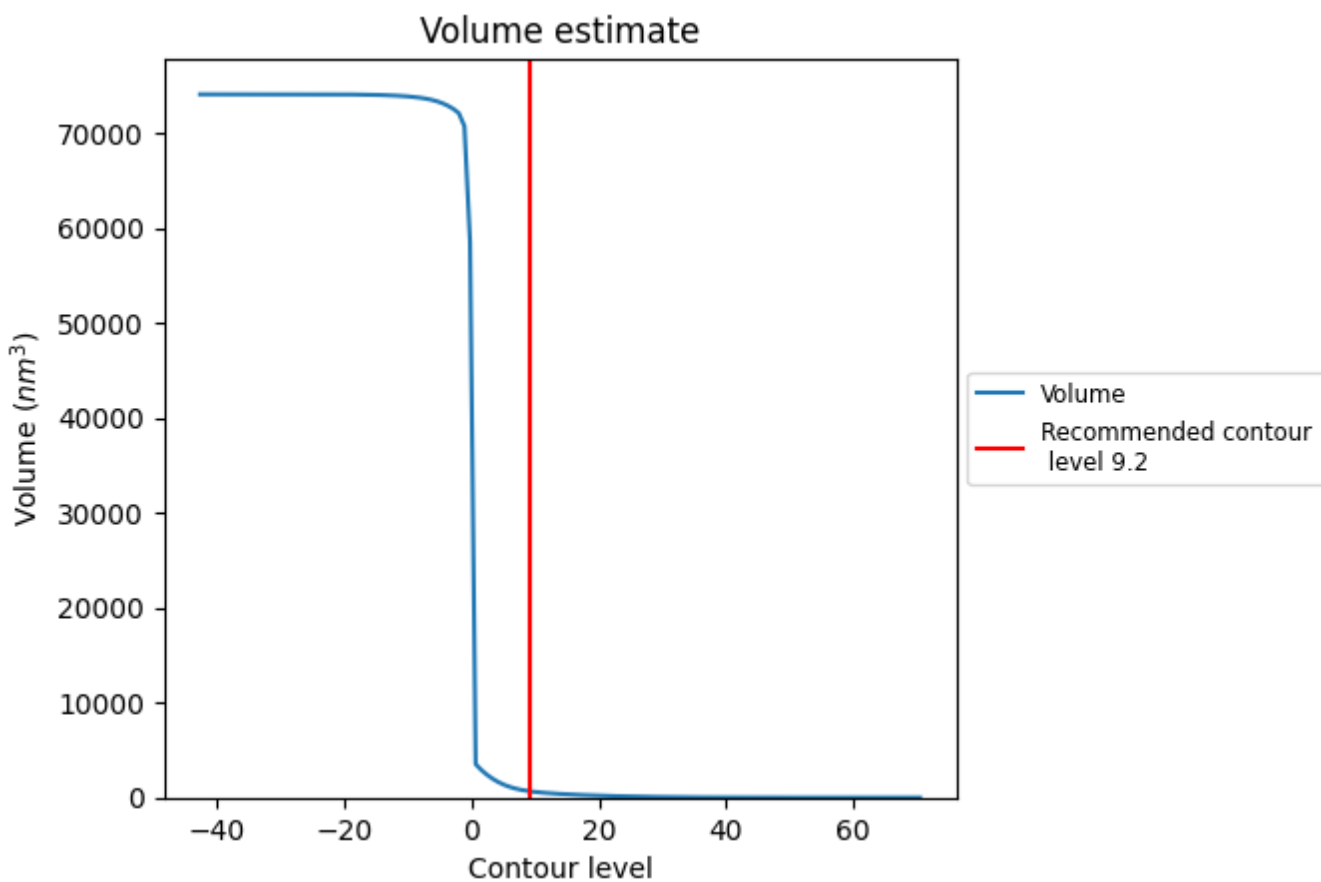
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

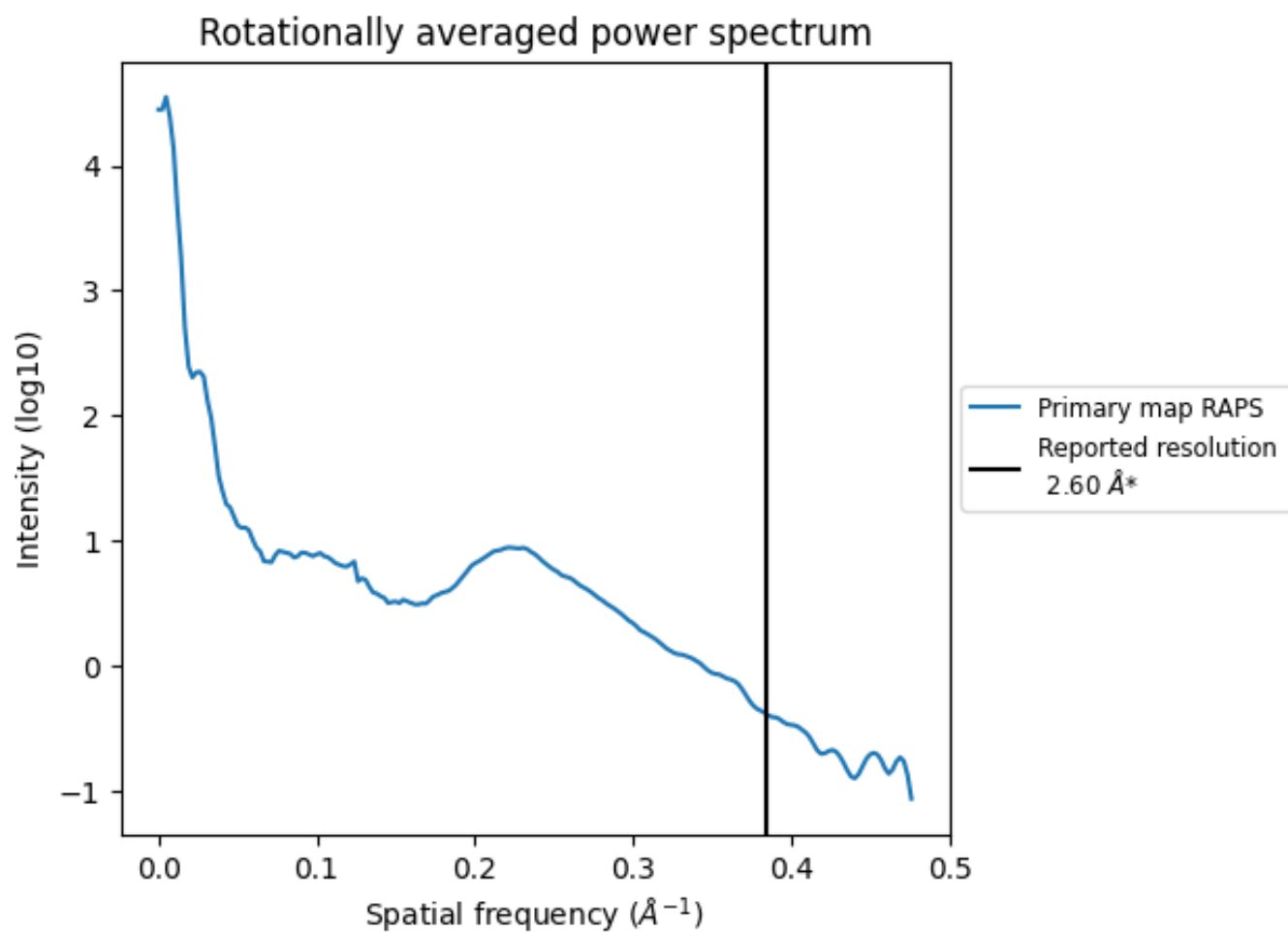
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 657 nm<sup>3</sup>; this corresponds to an approximate mass of 594 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum [i](#)



\*Reported resolution corresponds to spatial frequency of  $0.385 \text{ \AA}^{-1}$

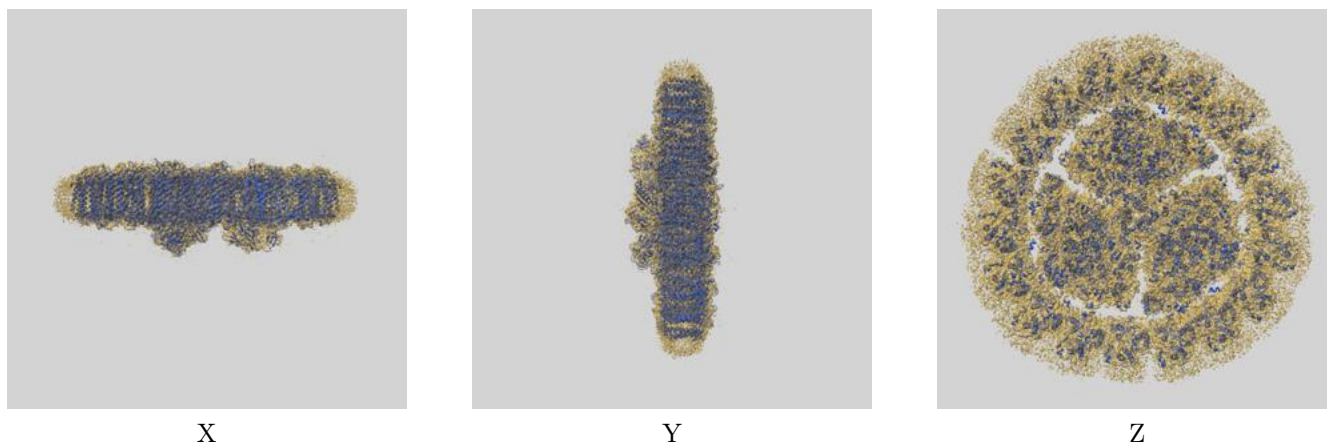
## 8 Fourier-Shell correlation

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

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

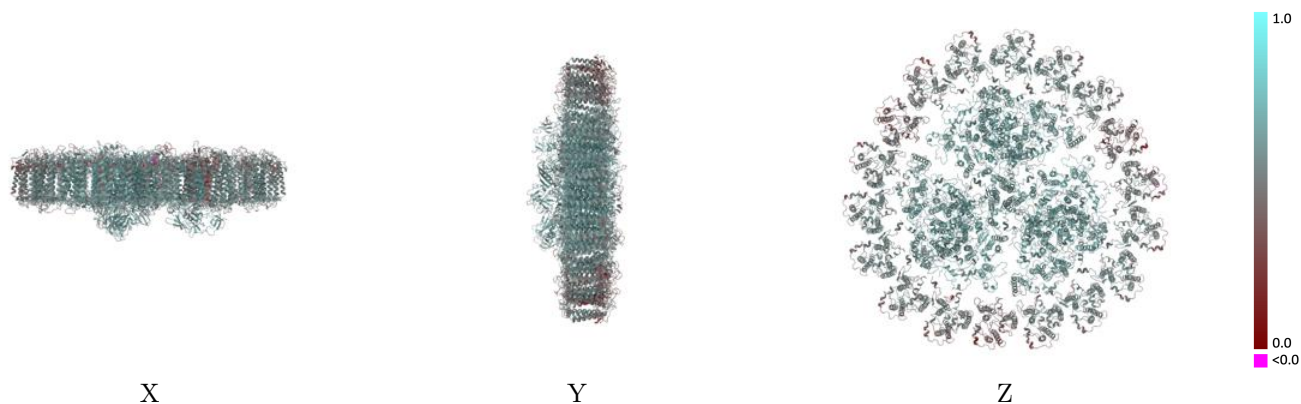
This section contains information regarding the fit between EMDB map EMD-26601 and PDB model 7UMH. Per-residue inclusion information can be found in section [3](#) on page [64](#).

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



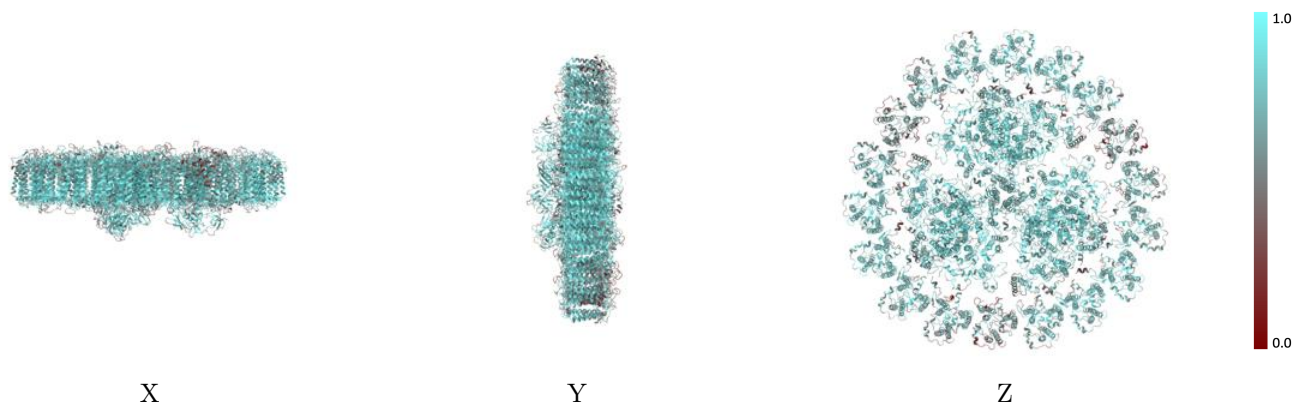
The images above show the 3D surface view of the map at the recommended contour level 9.2 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



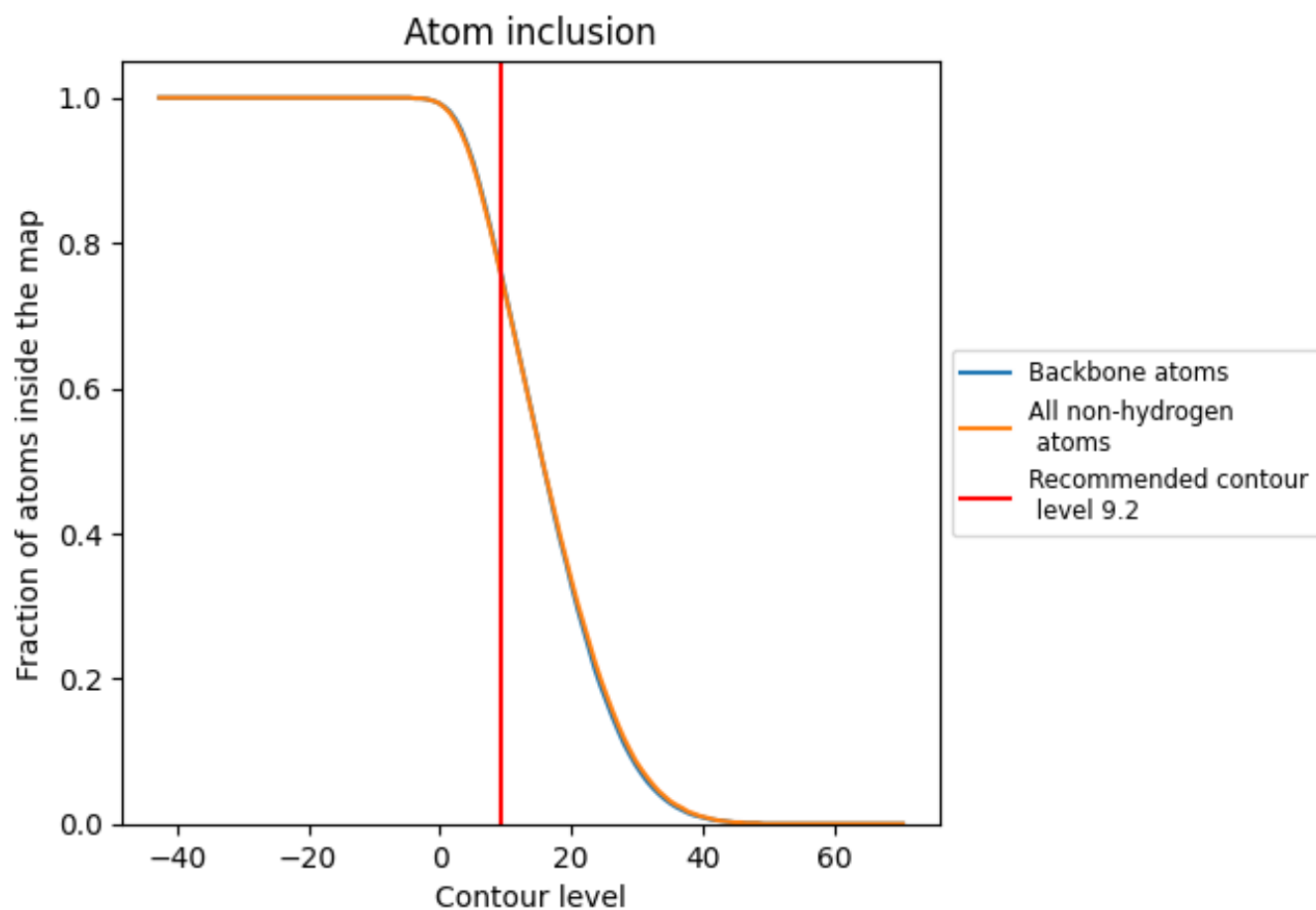
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (9.2).

## 9.4 Atom inclusion [i](#)









































































At the recommended contour level, 76% of all backbone atoms, 76% of all non-hydrogen atoms, are inside the map.



## 9.5 Map-model fit summary



































The table lists the average atom inclusion at the recommended contour level (9.2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7600	 0.5830
A	 0.8500	 0.6590
B	 0.8530	 0.6580
C	 0.8720	 0.6440
D	 0.7320	 0.6010
E	 0.7110	 0.5910
F	 0.6610	 0.6030
G	 0.8570	 0.6580
H	 0.8550	 0.6590
I	 0.7320	 0.6300
J	 0.7310	 0.6300
K	 0.5930	 0.5910
L	 0.7710	 0.6360
M	 0.7140	 0.6350
N	 0.8740	 0.6450
O	 0.6800	 0.5860
P	 0.7240	 0.6040
Q	 0.6700	 0.6070
R	 0.7320	 0.6350
S	 0.7270	 0.6340
T	 0.6090	 0.5850
U	 0.7720	 0.6400
V	 0.6770	 0.6170
W	 0.6650	 0.5000
X	 0.7490	 0.5360
Y	 0.7840	 0.5560
Z	 0.7720	 0.5460
a	 0.8490	 0.6620
b	 0.8570	 0.6610
c	 0.8700	 0.6500
d	 0.7210	 0.6020
e	 0.6720	 0.5800
f	 0.6720	 0.6070
g	 0.7050	 0.5260
h	 0.5270	 0.4200



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Chain	Atom inclusion	Q-score
i	 0.7370	 0.6290
j	 0.7590	 0.6360
k	 0.6030	 0.5890
l	 0.7650	 0.6350
m	 0.7140	 0.6350
n	 0.6720	 0.5010
o	 0.7400	 0.5370
p	 0.7770	 0.5570
q	 0.7590	 0.5430
r	 0.6990	 0.5170
s	 0.7750	 0.5550
t	 0.6620	 0.4980
u	 0.7400	 0.5300
v	 0.5460	 0.4350
w	 0.7620	 0.5450
x	 0.6830	 0.5150
y	 0.5320	 0.4260