



wwPDB EM Validation Summary Report ⓘ

Aug 15, 2023 – 08:03 pm BST

PDB ID : 8BQS
EMDB ID : EMD-16184
Title : Cryo-EM structure of the I-II-III2-IV2 respiratory supercomplex from *Tetrahymena thermophila*
Authors : Muhleip, A.; Kock Flygaard, R.; Baradaran, R.; Amunts, A.
Deposited on : 2022-11-21
Resolution : 2.90 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

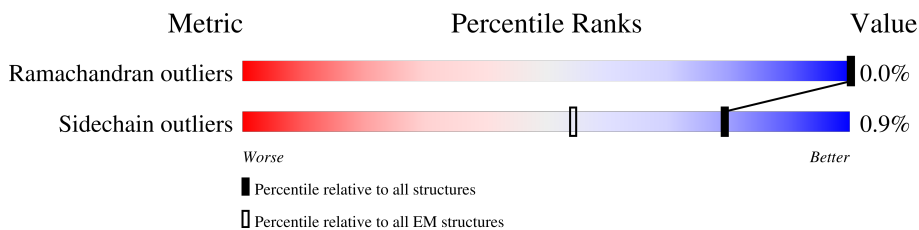
EMDB validation analysis : 0.0.1.dev50
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : 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 2.90 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A0	516	20% (red) 97% (green) .. (grey)
2	A1	362	. (red) 93% (green) 7% (grey)
3	A2	317	6% (red) 84% (green) . (yellow) 15% (grey)
4	A3	333	58% (red) 87% (green) 13% (grey)
5	A4	311	39% (red) 100% (green)
6	A5	282	10% (red) 100% (green)
7	A6	251	10% (red) 91% (green) 8% (grey)
8	A7	238	6% (red) 55% (green) 44% (grey)
9	A8	217	12% (red) 100% (green)

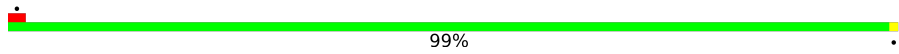
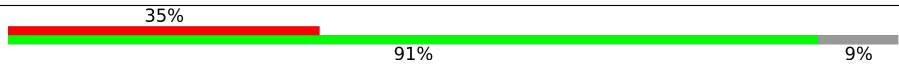
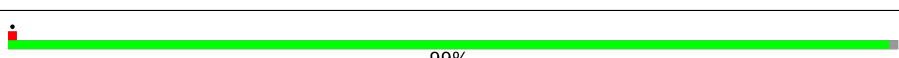
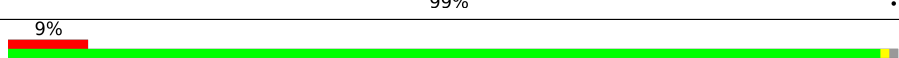
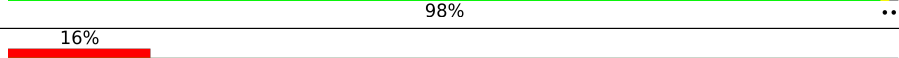
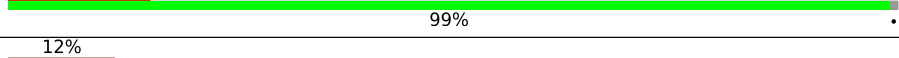
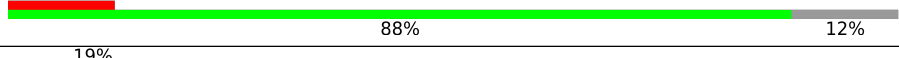
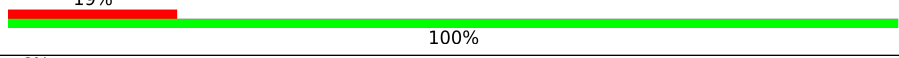

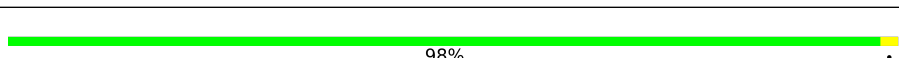
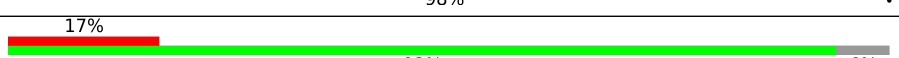
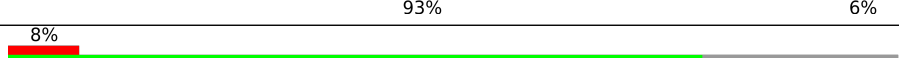


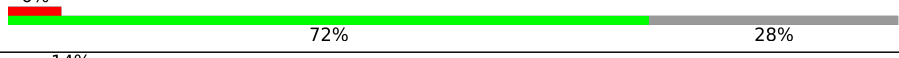

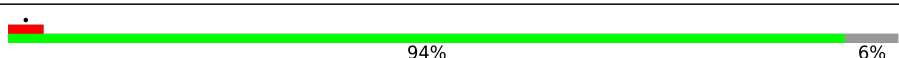
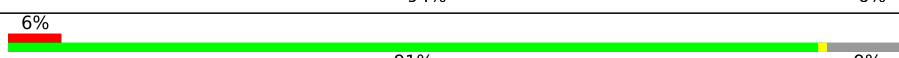
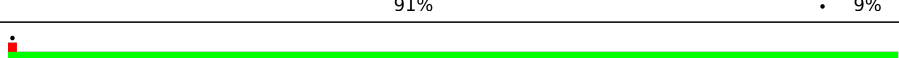
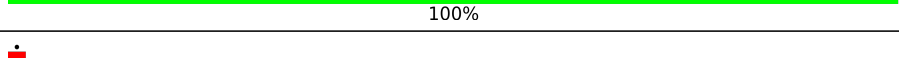



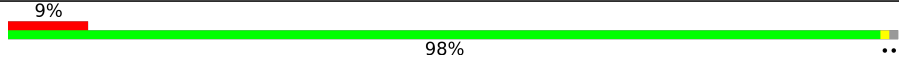
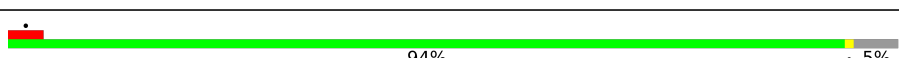
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
10	A9	231	6% 98%
11	AA	750	6% 93% 5%
12	AB	718	25% 96%
13	AC	505	99%
14	AD	474	39% 93% 7%
15	AE	442	99%
16	AF	360	100%
17	AG	346	100%
18	AH	284	98%
19	AI	274	36% 84% 16%
20	AJ	255	99%
21	AK	257	89% 11%
22	AL	236	91% 8%
23	AM	233	99%
24	AN	206	9% 76% 24%
25	AO	198	99%
26	AP	194	11% 98%
27	AQ	189	5% 98%
28	AR	185	14% 97%
29	AS	172	99%
30	AT	162	97%
31	AU	150	7% 99%
32	AV	138	81% 19%
33	AW	133	74% 26%
34	AX	121	98%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
35	AY	116	 99%
36	AZ	103	 35% 91% 9%
37	B0	94	 99%
38	B1	93	 9% 98%
39	B2	94	 16% 99%
40	B3	83	 12% 88% 12%
41	B4	73	 19% 100%
42	B5	71	 6% 76% 24%
43	B6	59	 98%
44	BA	212	 17% 93% 6%
45	BB	214	 8% 78% 22%
46	BC	207	 6% 84% 16%
47	BD	205	 14% 72% 28%
48	BE	189	 6% 88% 11%
49	BF	188	 94% 6%
50	BG	175	 6% 91% 9%
51	BH	178	 100%
52	BI	172	 87% 13%
53	BJ	166	 86% 13%
54	BK	144	 5% 76% 24%
55	BL	143	 9% 98%
56	BM	135	 94% 5%
57	BN	135	 7% 99%
58	BO	136	 8% 100%
59	BP	129	 56% 44%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
60	BQ	127	80% 20%
61	BR	132	68% 31% 5%
62	BS	126	95% 5%
63	BT	125	94% 6%
64	BU	134	100% 13%
65	BV	125	100% 10%
66	BW	120	98% 7%
67	BX	113	85% 15%
68	BY	100	100%
69	BZ	102	100% 5%
70	CH	195	56% 44% 32%
71	CM	76	97% 51%
72	CL	89	99% 36%
73	CA	636	93% 92% 6%
74	CI	114	100% 39%
75	CB	312	90% 76% 9%
76	CF	296	74% 35% 26%
77	CG	198	98% 82%
78	CK	93	98% 59%
79	CE	322	98% 92%
80	CJ	103	100% 68%
81	CN	62	100% 71%
82	CC	60	98% 70%
83	CO	46	93% 59% 7%
84	CD	44	100% 77%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
85	A	513	6% 93% 6%
85	a	513	37% 93% 6%
86	B	482	22% 95% 5%
86	b	482	26% 95% 5%
87	C	426	15% 99%
87	c	426	97%
88	D	319	92% 8%
88	d	319	21% 91% 8%
89	E	269	33% 90% 9%
89	e	269	60% 90% 9%
90	F	86	13% 100%
90	f	86	56% 98% ..
91	G	328	33% 99%
91	g	328	12% 99%
92	H	130	22% 99%
92	h	130	98% ..
93	I	119	8% 96% ..
93	i	119	34% 97% ..
94	J	66	74% 100%
94	j	66	76% 100%
95	K	62	16% 94% 6%
95	k	62	29% 94% 6%
96	L	41	22% 76% 22%
96	l	41	7% 78% 22%
97	DA	688	96% ..

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
97	Da	688	96%
98	DB	604	98%
98	Db	604	98%
99	DC	594	97%
99	Dc	594	98%
100	DD	637	86%
100	Dd	637	87%
101	DE	130	97%
101	De	130	96%
102	DF	230	95%
102	Df	230	95%
103	DG	103	94%
103	Dg	103	95%
104	DH	133	99%
104	Dh	133	98%
105	DI	236	86%
105	Di	236	86%
106	DJ	220	98%
106	Dj	220	98%
107	DK	990	87%
107	Dk	990	87%
108	DM	490	92%
108	Dm	490	92%
109	DN	453	99%
109	Dn	453	99%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
110	DO	473	19% 92% 8%
110	Do	473	41% 92% 8%
111	DP	402	7% 72% 28%
111	Dp	402	13% 72% 28%
112	DQ	385	98% ..
112	Dq	385	99% ..
113	DR	348	69% . 30%
113	Dr	348	70% . 30%
114	DS	346	99% .
114	Ds	346	99% .
115	DT	318	92% 8%
115	Dt	318	92% 8%
116	DU	330	5% 99% .
116	Du	330	9% 99% .
117	DV	318	99% .
117	Dv	318	99% .
118	DW	318	13% 93% . 5%
118	Dw	318	9% 93% . 5%
119	DX	252	9% 99% .
119	Dx	252	7% 98% .
120	DY	234	79% 20%
120	Dy	234	6% 79% . 20%
121	DZ	231	90% 10%
121	Dz	231	6% 90% 10%
122	EA	215	89% 10%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
122	Ea	215	6% 89% 10%
123	EB	210	99%
123	Eb	210	6% 98%
124	EC	212	35% 99%
124	Ec	212	50% 99%
125	ED	190	10% 99%
125	Ed	190	18% 99%
126	EE	193	5% 65% 35%
126	Ee	193	6% 65% 35%
127	EF	188	99%
127	Ef	188	99%
128	EG	100	98%
128	Eg	100	98%
129	EH	173	99%
129	Eh	173	100%
130	EI	173	97%
130	Ei	173	5% 97%
131	EV	88	7% 89% 11%
131	Ev	88	13% 89% 11%
132	EK	170	6% 99%
132	Ek	170	98%
133	EL	158	96%
133	El	158	96%
134	EM	154	99%
134	Em	154	99%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
135	EN	149	5% 97%
135	En	149	7% 97%
136	EO	124	10% 98%
136	Eo	124	7% 98%
137	EP	127	78% 21%
137	Ep	127	78% 21%
138	EQ	122	98%
138	Eq	122	98%
139	ER	105	98%
139	Er	105	99%
140	ES	89	100%
140	Es	89	100%
141	ET	93	30% 85% 12%
141	Et	93	38% 86% 12%
142	EU	90	8% 98%
142	Eu	90	8% 98%
143	EJ	175	8% 98%
143	Ej	175	14% 99%
144	EW	81	22% 78% 22%
144	Ew	81	35% 78% 22%
145	EX	72	19% 94%
145	Ex	72	26% 94%
146	EY	72	24% 96%
146	Ey	72	19% 96%
147	EZ	68	12% 82% 15%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
147	Ez	68	
148	FA	72	
148	Fa	72	
149	DL	462	
149	Dl	462	

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
169	HEA	DA	702	X	-	-	-
169	HEA	DA	703	X	-	-	-
169	HEA	Da	702	X	-	-	-
169	HEA	Da	703	X	-	-	-

2 Entry composition [i](#)

There are 173 unique types of molecules in this entry. The entry contains 805862 atoms, of which 406234 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 Lipid-A-disaccharide synthase.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
1	A0	503	8090	2609	4019	699	750	13	0	0

- Molecule 2 is a protein called NAD-dependent epimerase/dehydratase family protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
2	A1	338	5368	1737	2650	475	494	12	0	0

- Molecule 3 is a protein called DnaJ domain protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
3	A2	269	4362	1392	2163	408	396	3	0	0

- Molecule 4 is a protein called Acyl-CoA synthetase (AMP-forming)/AMP-acid ligase II.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
4	A3	291	4523	1438	2260	390	434	1	0	0

- Molecule 5 is a protein called RNase III domain-containing protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
5	A4	311	4985	1583	2491	434	469	8	0	0

- Molecule 6 is a protein called 37S ribosomal protein S25, mitochondrial.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
6	A5	282	4596	1478	2249	413	453	3	0	0

- Molecule 7 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
7	A6	230	Total	C	H	N	O	S	0	0
			3770	1241	1862	322	340	5		

- Molecule 8 is a protein called CX9C domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
8	A7	133	Total	C	H	N	O	S	0	0
			2124	682	1040	182	209	11		

- Molecule 9 is a protein called ND5a.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
9	A8	217	Total	C	H	N	O	S	0	0
			3597	1153	1803	305	328	8		

- Molecule 10 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
10	A9	231	Total	C	H	N	O	S	0	0
			3697	1219	1818	317	336	7		

- Molecule 11 is a protein called NADH dehydrogenase subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
11	AA	713	Total	C	H	N	O	S	0	0
			11919	4066	5978	855	1004	16		

- Molecule 12 is a protein called NADH-ubiquinone oxidoreductase 75 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
12	AB	688	Total	C	H	N	O	S	0	0
			10762	3410	5359	935	1030	28		

- Molecule 13 is a protein called NADH-ubiquinone oxidoreductase chain 4.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
13	AC	505	Total	C	H	N	O	S	0	0
			8393	2859	4223	601	692	18		

- Molecule 14 is a protein called NADH dehydrogenase [ubiquinone] flavoprotein 1, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
14	AD	441	6744	2140	3345	596	639	24	0	0

- Molecule 15 is a protein called NADH dehydrogenase subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
15	AE	441	7126	2285	3539	620	658	24	0	0

- Molecule 16 is a protein called Ymf65.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
16	AF	359	6216	2132	3148	435	494	7	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AF	208	VAL	GLY	variant	UNP Q951A3

- Molecule 17 is a protein called Transcription factor apfi protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
17	AG	346	5531	1766	2727	481	549	8	0	0

- Molecule 18 is a protein called NADH-ubiquinone oxidoreductase chain 1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
18	AH	283	4656	1581	2350	334	379	12	0	0

- Molecule 19 is a protein called NADH-ubiquinone oxidoreductase 24 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
19	AI	231	3710	1173	1848	321	358	10	0	0

- Molecule 20 is a protein called Ymf62.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
20	AJ	254	4316	1478	2156	305	373	4	0	0

- Molecule 21 is a protein called Gamma-carbonic anhydrase.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
21	AK	230	3519	1117	1740	306	351	5	0	0

- Molecule 22 is a protein called NADH-ubiquinone oxidoreductase 1, chain, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
22	AL	218	3501	1155	1689	299	347	11	0	0

- Molecule 23 is a protein called Gamma-carbonic anhydrase.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
23	AM	231	3558	1112	1788	316	335	7	0	0

- Molecule 24 is a protein called ETC complex I subunit motif protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
24	AN	157	2651	846	1329	221	249	6	0	0

- Molecule 25 is a protein called NADH dehydrogenase subunit 9.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
25	AO	198	3363	1097	1680	268	312	6	0	0

- Molecule 26 is a protein called NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
26	AP	191	3104	1013	1505	301	280	5	0	0

- Molecule 27 is a protein called NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 10, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
27	AQ	187	3084	1027	1496	254	303	4	0	0

- Molecule 28 is a protein called NADH dehydrogenase [ubiquinone] iron-sulfur protein 4, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
28	AR	181	2937	948	1445	267	269	8	0	0

- Molecule 29 is a protein called NADH dehydrogenase, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
29	AS	172	2802	903	1382	253	256	8	0	0

- Molecule 30 is a protein called NADH dehydrogenase subunit 10.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
30	AT	161	2549	822	1272	220	225	10	0	0

- Molecule 31 is a protein called NADH-ubiquinone oxidoreductase complex I, 21 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
31	AU	149	2436	800	1209	213	214	0	0

- Molecule 32 is a protein called Acyl carrier protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
32	AV	112	1829	586	904	158	181	0	0

- Molecule 33 is a protein called Acyl carrier protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
33	AW	98	1584	512	781	133	157	1	0	0

- Molecule 34 is a protein called NADH-ubiquinone oxidoreductase chain 3.

Mol	Chain	Residues	Atoms					AltConf	Trace	
34	AX	121	Total	C	H	N	O	S	0	0
			2047	710	1020	143	170	4		

- Molecule 35 is a protein called Ymf58.

Mol	Chain	Residues	Atoms					AltConf	Trace	
35	AY	116	Total	C	H	N	O	S	0	0
			1944	648	987	142	163	4		

- Molecule 36 is a protein called Ribosomal protein L51/S25/CI-B8 domain protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
36	AZ	94	Total	C	H	N	O	S	0	0
			1552	491	775	140	144	2		

- Molecule 37 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
37	B0	93	Total	C	H	N	O	S	0	0
			1607	531	802	139	135			

- Molecule 38 is a protein called ATP synthase subunit e, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace	
38	B1	92	Total	C	H	N	O	S	0	0
			1536	497	746	146	146	1		

- Molecule 39 is a protein called GRAM domain protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
39	B2	93	Total	C	H	N	O	S	0	0
			1485	480	728	129	142	6		

- Molecule 40 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
40	B3	73	Total	C	H	N	O	S	0	0
			1251	414	618	113	105	1		

- Molecule 41 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
41	B4	73	1247	408	623	111	104	1	0	0

- Molecule 42 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
42	B5	54	917	305	464	71	75	2	0	0

- Molecule 43 is a protein called NADH dehydrogenase subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
43	B6	59	1043	362	528	78	72	3	0	0

- Molecule 44 is a protein called Transmembrane protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
44	BA	199	3289	1071	1638	285	292	3	0	0

- Molecule 45 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
45	BB	167	2626	848	1280	228	265	5	0	0

- Molecule 46 is a protein called NDUB8.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
46	BC	173	2848	928	1406	244	264	6	0	0

- Molecule 47 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
47	BD	148	2414	764	1223	211	214	2	0	0

- Molecule 48 is a protein called NDUPH2.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
48	BE	168	2807	930	1385	227	260	5	0	0

- Molecule 49 is a protein called NDUB10.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
49	BF	177	2961	934	1486	267	270	4	0	0

- Molecule 50 is a protein called NDUA13.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
50	BG	160	2725	858	1376	256	227	8	0	0

- Molecule 51 is a protein called NADH dehydrogenase subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
51	BH	178	3036	1015	1554	215	247	5	0	0

- Molecule 52 is a protein called 2 iron, 2 sulfur cluster-binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
52	BI	149	2318	731	1139	211	227	10	0	0

- Molecule 53 is a protein called Thioredoxin.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
53	BJ	144	2361	767	1156	205	226	7	0	0

- Molecule 54 is a protein called COX assembly mitochondrial protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
54	BK	109	1757	562	854	161	174	6	0	0

- Molecule 55 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
55	BL	142	2325	770	1138	202	209	6	0	0

- Molecule 56 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
56	BM	128	2074	695	1002	194	180	3	0	0

- Molecule 57 is a protein called PH domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
57	BN	133	2229	716	1126	196	191		0	0

- Molecule 58 is a protein called NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
58	BO	136	2156	690	1058	190	208	10	0	0

- Molecule 59 is a protein called NDUB6.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
59	BP	72	1194	404	590	100	96	4	0	0

- Molecule 60 is a protein called NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
60	BQ	101	1674	547	829	140	153	5	0	0

- Molecule 61 is a protein called Zinc-finger protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
61	BR	91	1449	460	719	129	137	4	0	0

- Molecule 62 is a protein called NDUB4.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
62	BS	120	1907	621	941	167	175	3	0	0

- Molecule 63 is a protein called NDUTT10.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
63	BT	125	2016	696	953	172	190	5	0	0

- Molecule 64 is a protein called NDUTT11.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
64	BU	134	2176	683	1094	194	204	1	0	0

- Molecule 65 is a protein called NDUTT12.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
65	BV	125	2001	632	1014	177	177	1	0	0

- Molecule 66 is a protein called CHCH domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
66	BW	118	1848	603	893	167	179	6	0	0

- Molecule 67 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
67	BX	96	1552	512	755	139	146	0	0

- Molecule 68 is a protein called Ymf57.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
68	BY	100	1806	620	917	128	138	3	0	0

- Molecule 69 is a protein called Complex I-MNLL.

Mol	Chain	Residues	Atoms					AltConf	Trace	
69	BZ	102	Total	C	H	N	O	S	0	0
			1690	553	840	139	150	8		

- Molecule 70 is a protein called Diphthamide synthesis protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
70	CH	110	Total	C	H	N	O	S	0	0
			1700	529	845	147	171	8		

- Molecule 71 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
71	CM	74	Total	C	H	N	O	S	0	0
			1232	403	603	115	109	2		

- Molecule 72 is a protein called Transposase.

Mol	Chain	Residues	Atoms					AltConf	Trace	
72	CL	88	Total	C	H	N	O	S	0	0
			1522	499	752	125	144	2		

- Molecule 73 is a protein called Succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace	
73	CA	599	Total	C	H	N	O	S	0	0
			9198	2907	4574	825	866	26		

- Molecule 74 is a protein called DUF4885 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
74	CI	114	Total	C	H	N	O	S	0	0
			1805	580	890	153	180	2		

- Molecule 75 is a protein called succinate dehydrogenase.

Mol	Chain	Residues	Atoms					AltConf	Trace	
75	CB	285	Total	C	H	N	O	S	0	0
			4561	1457	2261	392	430	21		

- Molecule 76 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
76	CF	218	3598	1171	1786	306	331	4	0	0

- Molecule 77 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
77	CG	196	3247	1072	1593	273	305	4	0	0

- Molecule 78 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
78	CK	93	1577	530	782	129	134	2	0	0

- Molecule 79 is a protein called NmrA domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
79	CE	321	5115	1623	2554	449	488	1	0	0

- Molecule 80 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
80	CJ	103	1663	554	815	140	151	3	0	0

- Molecule 81 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
81	CN	62	1029	345	515	80	87	2	0	0

- Molecule 82 is a protein called Transmembrane protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
82	CC	59	976	319	487	86	83	1	0	0

- Molecule 83 is a protein called SDHTT11.

Mol	Chain	Residues	Atoms					AltConf	Trace	
83	CO	43	Total	C	H	N	O	S	0	0
			740	245	376	60	57	2		

- Molecule 84 is a protein called succinate dehydrogenase complex iron-sulfur subunit D.

Mol	Chain	Residues	Atoms					AltConf	Trace	
84	CD	44	Total	C	H	N	O	S	0	0
			807	271	412	61	62	1		

- Molecule 85 is a protein called Peptidase M16 inactive domain protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
85	A	482	Total	C	H	N	O	S	0	0
			7587	2437	3740	671	734	5		
85	a	482	Total	C	H	N	O	S	0	0
			7587	2437	3740	671	734	5		

- Molecule 86 is a protein called M16 family peptidase, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
86	B	460	Total	C	H	N	O	S	0	0
			7118	2240	3555	609	708	6		
86	b	460	Total	C	H	N	O	S	0	0
			7118	2240	3555	609	708	6		

- Molecule 87 is a protein called Apocytochrome b.

Mol	Chain	Residues	Atoms					AltConf	Trace	
87	C	426	Total	C	H	N	O	S	0	0
			7075	2417	3485	541	610	22		
87	c	426	Total	C	H	N	O	S	0	0
			7074	2417	3484	541	610	22		

- Molecule 88 is a protein called Cytochrome protein c1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
88	D	295	Total	C	H	N	O	S	0	0
			4832	1627	2343	418	431	13		
88	d	295	Total	C	H	N	O	S	0	0
			4832	1627	2343	418	431	13		

- Molecule 89 is a protein called Rieske iron-sulfur protein, ubiquinol-cytochrome C reductase iron-sulfur subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
89	E	245	3893	1251	1927	344	362	9	0	0
89	e	245	3891	1251	1925	344	362	9	0	0

- Molecule 90 is a protein called Ubiquinol-cytochrome C reductase hinge protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
90	F	86	1372	432	686	116	128	10	0	0
90	f	85	1352	427	674	115	127	9	0	0

- Molecule 91 is a protein called UQCRTT1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
91	G	327	5474	1789	2706	482	491	6	0	0
91	g	327	5474	1789	2706	482	491	6	0	0

- Molecule 92 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
92	H	129	2138	708	1040	195	187	8	0	0
92	h	129	2138	708	1040	195	187	8	0	0

- Molecule 93 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
93	I	117	1998	664	1003	164	166	1	0	0
93	i	117	1998	664	1003	164	166	1	0	0

- Molecule 94 is a protein called UQCRTT3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
94	J	66	596	198	266	66	66	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	H	N	O		
94	j	66	596	198	266	66	66	0	0

- Molecule 95 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			
95	K	58	1004	341	503	79	79	2	0	0
95	k	58	1004	341	503	79	79	2	0	0

- Molecule 96 is a protein called UQCRTT2.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			
96	L	32	535	178	273	41	42	1	0	0
96	l	32	535	178	273	41	42	1	0	0

- Molecule 97 is a protein called Cytochrome c oxidase subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			
97	DA	671	11168	3720	5609	907	896	36	0	0
97	Da	671	11167	3720	5608	907	896	36	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DA	288	ALA	GLY	variant	UNP Q950Y4
Da	288	ALA	GLY	variant	UNP Q950Y4

- Molecule 98 is a protein called Cytochrome c oxidase subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			
98	DB	604	10232	3340	5101	888	892	11	0	0
98	Db	604	10233	3340	5102	888	892	11	0	0

- Molecule 99 is a protein called Ymf68.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
99	DC	582	10151	3451	5067	787	838	8	0	0
99	Dc	582	10151	3451	5067	787	838	8	0	0

- Molecule 100 is a protein called Cytochrome C oxidase subunit Vb protein.

Mol	Chain	Residues	Atoms							AltConf	Trace
			Total	C	H	N	O	P	S		
100	DD	558	9076	2930	4424	782	921	2	17	0	0
100	Dd	558	9076	2930	4424	782	921	2	17	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DD	520	PSE	SER	modified residue	UNP Q23FF5
Dd	520	PSE	SER	modified residue	UNP Q23FF5

- Molecule 101 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
101	DE	126	2104	698	1021	184	199	2	0	0
101	De	126	2103	698	1020	184	199	2	0	0

- Molecule 102 is a protein called Structural protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
102	DF	222	3681	1238	1768	312	350	13	0	0
102	Df	222	3681	1238	1768	312	350	13	0	0

- Molecule 103 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
103	DG	98	1659	567	788	155	147	2	0	0
103	Dg	98	1659	567	788	155	147	2	0	0

- Molecule 104 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
104	DH	133	Total	C	H	N	O	S	0	0
			2299	771	1129	197	201	1		
104	Dh	133	Total	C	H	N	O	S	0	0
			2299	771	1129	197	201	1		

- Molecule 105 is a protein called Transmembrane protein.

Mol	Chain	Residues	Atoms							AltConf	Trace
			Total	C	H	N	O	P	S		
105	DI	206	Total	C	H	N	O	P	S	0	0
			3381	1134	1604	286	348	1	8		
105	Di	206	Total	C	H	N	O	P	S	0	0
			3381	1134	1604	286	348	1	8		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DI	120	PSE	SER	modified residue	UNP W7X287
Di	120	PSE	SER	modified residue	UNP W7X287

- Molecule 106 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
106	DJ	220	Total	C	H	N	O	S	0	0
			3653	1223	1772	316	330	12		
106	Dj	220	Total	C	H	N	O	S	0	0
			3653	1223	1772	316	330	12		

- Molecule 107 is a protein called CTF/NF-I domain-containing protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
107	DK	130	Total	C	H	N	O	S	0	0
			2133	693	1062	174	196	8		
107	Dk	130	Total	C	H	N	O	S	0	0
			2133	693	1062	174	196	8		

- Molecule 108 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
108	DM	455	Total	C	H	N	O	S	0	0
			7385	2430	3592	645	709	9		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
108	Dm	455	Total	C	H	N	O	S	0	0
			7385	2430	3592	645	709	9		

- Molecule 109 is a protein called Ymf67.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
109	DN	453	Total	C	H	N	O	S	0	0
			7849	2578	3980	618	666	7		
109	Dn	453	Total	C	H	N	O	S	0	0
			7849	2578	3980	618	666	7		

- Molecule 110 is a protein called Protein phosphatase 2C, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
110	DO	435	Total	C	H	N	O	S	0	0
			6956	2192	3508	603	650	3		
110	Do	435	Total	C	H	N	O	S	0	0
			6956	2192	3508	603	650	3		

- Molecule 111 is a protein called SURF1-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
111	DP	290	Total	C	H	N	O	S	0	0
			4660	1525	2291	400	439	5		
111	Dp	290	Total	C	H	N	O	S	0	0
			4660	1525	2291	400	439	5		

- Molecule 112 is a protein called TraB family protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
112	DQ	383	Total	C	H	N	O	S	0	0
			6271	2041	3102	546	575	7		
112	Dq	383	Total	C	H	N	O	S	0	0
			6271	2041	3102	546	575	7		

- Molecule 113 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
113	DR	243	Total	C	H	N	O	S	0	0
			3982	1304	1958	335	380	5		
113	Dr	243	Total	C	H	N	O	S	0	0
			3982	1304	1958	335	380	5		

- Molecule 114 is a protein called Oxoglutarate/malate translocator protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
114	DS	346	Total	C	H	N	O	S	0	0
			5636	1892	2770	469	492	13		
114	Ds	346	Total	C	H	N	O	S	0	0
			5636	1892	2770	469	492	13		

- Molecule 115 is a protein called NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 8, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace	
115	DT	293	Total	C	H	N	O	S	0	0
			4733	1555	2290	410	466	12		
115	Dt	293	Total	C	H	N	O	S	0	0
			4733	1555	2290	410	466	12		

- Molecule 116 is a protein called Carrier protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
116	DU	329	Total	C	H	N	O	S	0	0
			5204	1700	2584	446	470	4		
116	Du	329	Total	C	H	N	O	S	0	0
			5204	1700	2584	446	470	4		

- Molecule 117 is a protein called 2-oxoglutarate/malate carrier protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
117	DV	318	Total	C	H	N	O	S	0	0
			5114	1667	2552	440	451	4		
117	Dv	318	Total	C	H	N	O	S	0	0
			5114	1667	2552	440	451	4		

- Molecule 118 is a protein called SURF1-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
118	DW	301	Total	C	H	N	O	S	0	0
			4738	1515	2344	415	454	10		
118	Dw	301	Total	C	H	N	O	S	0	0
			4738	1515	2344	415	454	10		

- Molecule 119 is a protein called COXTT9.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
119	DX	251	4126	1358	2018	368	377	5	0	0
119	Dx	251	4126	1358	2018	368	377	5	0	0

- Molecule 120 is a protein called COXTT10.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
120	DY	187	3135	1023	1562	276	273	1	0	0
120	Dy	187	3135	1023	1562	276	273	1	0	0

- Molecule 121 is a protein called 39S ribosomal protein L9, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
121	DZ	208	3382	1089	1671	302	317	3	0	0
121	Dz	208	3383	1089	1672	302	317	3	0	0

- Molecule 122 is a protein called COXTT12, Transmembrane protein, Transmembrane protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
122	EA	193	3296	1084	1637	283	290	2	0	0
122	Ea	193	3296	1084	1637	283	290	2	0	0

- Molecule 123 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
123	EB	209	3417	1131	1678	291	310	7	0	0
123	Eb	209	3417	1131	1678	291	310	7	0	0

- Molecule 124 is a protein called COXTT27.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
124	EC	212	3307	1045	1660	276	324	2	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
124	Ec	212	Total	C	H	N	O	S	0	0
			3307	1045	1660	276	324	2		

- Molecule 125 is a protein called Ymf75.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
125	ED	190	Total	C	H	N	O	S	0	0
			3384	1141	1725	249	265	4		
125	Ed	190	Total	C	H	N	O	S	0	0
			3384	1141	1725	249	265	4		

- Molecule 126 is a protein called Mobilization protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
126	EE	125	Total	C	H	N	O	S	0	0
			2073	656	1024	186	201	6		
126	Ee	125	Total	C	H	N	O	S	0	0
			2073	656	1024	186	201	6		

- Molecule 127 is a protein called Iron-binding zinc finger CDGSH type protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
127	EF	188	Total	C	H	N	O	S	0	0
			2986	978	1477	260	257	14		
127	Ef	188	Total	C	H	N	O	S	0	0
			2986	978	1477	260	257	14		

- Molecule 128 is a protein called COXTT28.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
128	EG	98	Total	C	H	N	O	S	0	0
			1523	492	752	136	141	2		
128	Eg	98	Total	C	H	N	O	S	0	0
			1523	492	752	136	141	2		

- Molecule 129 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
129	EH	173	Total	C	H	N	O	S	0	0
			2820	929	1382	243	257	9		
129	Eh	173	Total	C	H	N	O	S	0	0
			2820	929	1382	243	257	9		

- Molecule 130 is a protein called Transmembrane protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
130	EI	172	2827	921	1419	231	253	3	0	0
130	Ei	172	2827	921	1419	231	253	3	0	0

- Molecule 131 is a protein called Decapping nuclease.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
131	EV	78	1276	411	633	109	117	6	0	0
131	Ev	78	1276	411	633	109	117	6	0	0

- Molecule 132 is a protein called Complex III subunit VII.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
132	EK	169	2796	878	1407	243	264	4	0	0
132	Ek	169	2796	878	1407	243	264	4	0	0

- Molecule 133 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
133	EL	153	2544	841	1253	226	220	4	0	0
133	El	153	2544	841	1253	226	220	4	0	0

- Molecule 134 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
134	EM	153	2603	848	1299	221	230	5	0	0
134	Em	153	2603	848	1299	221	230	5	0	0

- Molecule 135 is a protein called COXTT2.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
135	EN	145	2417	798	1190	216	211	2	0	0
135	En	145	2417	798	1190	216	211	2	0	0

- Molecule 136 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
136	EO	123	2128	716	1031	183	194	4	0	0
136	Eo	123	2128	716	1031	183	194	4	0	0

- Molecule 137 is a protein called Phage protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
137	EP	100	1612	519	795	144	152	2	0	0
137	Ep	100	1612	519	795	144	152	2	0	0

- Molecule 138 is a protein called Transmembrane protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
138	EQ	122	2004	667	989	171	173	4	0	0
138	Eq	122	2004	667	989	171	173	4	0	0

- Molecule 139 is a protein called Lysozyme.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
139	ER	104	1651	535	800	156	152	8	0	0
139	Er	104	1651	535	800	156	152	8	0	0

- Molecule 140 is a protein called Ymf70.

Mol	Chain	Residues	Atoms					AltConf	Trace	
			Total	C	H	N	O			S
140	ES	89	1574	535	798	115	124	2	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace	
140	Es	89	Total	C	H	N	O	S	0	0
			1574	535	798	115	124	2		

- Molecule 141 is a protein called Zf-Tim10_DDP domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
141	ET	82	Total	C	H	N	O	S	0	0
			1302	407	655	108	127	5		
141	Et	82	Total	C	H	N	O	S	0	0
			1302	407	655	108	127	5		

- Molecule 142 is a protein called ABC transporter.

Mol	Chain	Residues	Atoms					AltConf	Trace
142	EU	88	Total	C	H	N	O	0	0
			1423	462	699	131	131		
142	Eu	88	Total	C	H	N	O	0	0
			1423	462	699	131	131		

- Molecule 143 is a protein called YfT domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
143	EJ	175	Total	C	H	N	O	S	0	0
			2802	889	1391	247	274	1		
143	Ej	175	Total	C	H	N	O	S	0	0
			2802	889	1391	247	274	1		

- Molecule 144 is a protein called Cullin domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
144	EW	63	Total	C	H	N	O	S	0	0
			1025	327	510	90	96	2		
144	Ew	63	Total	C	H	N	O	S	0	0
			1025	327	510	90	96	2		

- Molecule 145 is a protein called Zf-Tim10_DDP domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace	
145	EX	69	Total	C	H	N	O	S	0	0
			1117	347	559	98	109	4		
145	Ex	69	Total	C	H	N	O	S	0	0
			1117	347	559	98	109	4		

- Molecule 146 is a protein called Annexin.

Mol	Chain	Residues	Atoms						AltConf	Trace
146	EY	70	Total	C	H	N	O	S	0	0
			1123	362	562	90	105	4		
146	Ey	70	Total	C	H	N	O	S	0	0
			1123	362	562	90	105	4		

- Molecule 147 is a protein called Transposase.

Mol	Chain	Residues	Atoms						AltConf	Trace
147	EZ	58	Total	C	H	N	O	S	0	0
			966	314	474	84	91	3		
147	Ez	58	Total	C	H	N	O	S	0	0
			966	314	474	84	91	3		

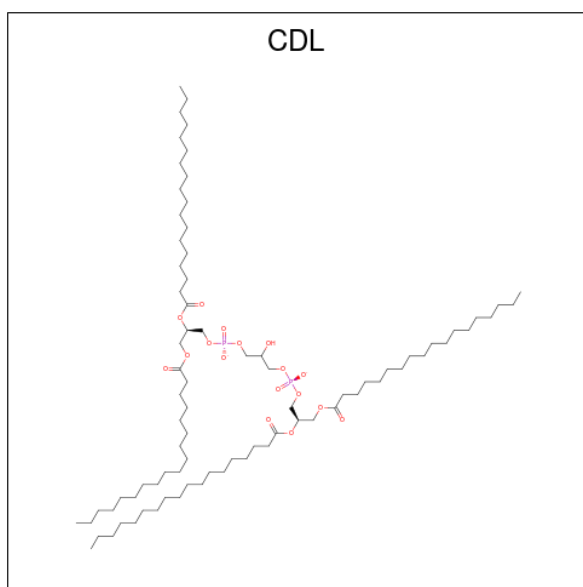
- Molecule 148 is a protein called Tim10/DDP family zinc finger protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
148	FA	71	Total	C	H	N	O	S	0	0
			1084	333	536	99	112	4		
148	Fa	71	Total	C	H	N	O	S	0	0
			1084	333	536	99	112	4		

- Molecule 149 is a protein called Chromosome condensation regulator RCC1 repeat protein,Chromosome condensation regulator RCC1 repeat protein,Chromosome condensation regulator RCC1 repeat protein,chain 150.

Mol	Chain	Residues	Atoms						AltConf	Trace
149	DI	380	Total	C	H	N	O	S	0	0
			5730	1856	2814	492	566	2		
149	DL	380	Total	C	H	N	O	S	0	0
			5730	1856	2814	492	566	2		

- Molecule 150 is CARDIOLIPIN (three-letter code: CDL) (formula: C₈₁H₁₅₆O₁₇P₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	A0	1	256	81	156	17	2	0
150	A0	1	256	81	156	17	2	0
150	A1	1	256	81	156	17	2	0
150	AA	1	256	81	156	17	2	0
150	AA	1	256	81	156	17	2	0
150	AC	1	256	81	156	17	2	0
150	AC	1	256	81	156	17	2	0
150	AF	1	256	81	156	17	2	0
150	AF	1	256	81	156	17	2	0
150	AM	1	256	81	156	17	2	0
150	AP	1	256	81	156	17	2	0
150	B0	1	256	81	156	17	2	0
150	B0	1	256	81	156	17	2	0
150	B1	1	256	81	156	17	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	BC	1	256	81	156	17	2	0
150	BC	1	256	81	156	17	2	0
150	BE	1	256	81	156	17	2	0
150	BG	1	256	81	156	17	2	0
150	BL	1	256	81	156	17	2	0
150	BT	1	256	81	156	17	2	0
150	BT	1	256	81	156	17	2	0
150	BV	1	256	81	156	17	2	0
150	BY	1	256	81	156	17	2	0
150	CG	1	256	81	156	17	2	0
150	CG	1	256	81	156	17	2	0
150	CJ	1	256	81	156	17	2	0
150	CC	1	256	81	156	17	2	0
150	CC	1	256	81	156	17	2	0
150	CD	1	256	81	156	17	2	0
150	CD	1	256	81	156	17	2	0
150	C	1	256	81	156	17	2	0
150	C	1	256	81	156	17	2	0
150	C	1	256	81	156	17	2	0
150	C	1	256	81	156	17	2	0
150	C	1	256	81	156	17	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	E	1	256	81	156	17	2	0
150	H	1	256	81	156	17	2	0
150	H	1	256	81	156	17	2	0
150	c	1	256	81	156	17	2	0
150	c	1	256	81	156	17	2	0
150	c	1	256	81	156	17	2	0
150	c	1	256	81	156	17	2	0
150	g	1	256	81	156	17	2	0
150	h	1	256	81	156	17	2	0
150	DA	1	256	81	156	17	2	0
150	DA	1	256	81	156	17	2	0
150	DC	1	256	81	156	17	2	0
150	DD	1	256	81	156	17	2	0
150	DD	1	256	81	156	17	2	0
150	DD	1	256	81	156	17	2	0
150	DD	1	256	81	156	17	2	0
150	DG	1	256	81	156	17	2	0
150	DG	1	256	81	156	17	2	0
150	DH	1	256	81	156	17	2	0
150	DH	1	256	81	156	17	2	0
150	DI	1	256	81	156	17	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	DJ	1	256	81	156	17	2	0
150	DJ	1	256	81	156	17	2	0
150	DJ	1	256	81	156	17	2	0
150	DJ	1	256	81	156	17	2	0
150	DJ	1	256	81	156	17	2	0
150	DM	1	256	81	156	17	2	0
150	DM	1	256	81	156	17	2	0
150	DN	1	256	81	156	17	2	0
150	DN	1	256	81	156	17	2	0
150	DN	1	256	81	156	17	2	0
150	DN	1	256	81	156	17	2	0
150	DO	1	256	81	156	17	2	0
150	DQ	1	256	81	156	17	2	0
150	DQ	1	256	81	156	17	2	0
150	DQ	1	256	81	156	17	2	0
150	DR	1	256	81	156	17	2	0
150	DR	1	256	81	156	17	2	0
150	DS	1	256	81	156	17	2	0
150	DS	1	256	81	156	17	2	0
150	DS	1	256	81	156	17	2	0
150	DU	1	256	81	156	17	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	DU	1	256	81	156	17	2	0
150	DU	1	256	81	156	17	2	0
150	DU	1	256	81	156	17	2	0
150	DV	1	256	81	156	17	2	0
150	DV	1	256	81	156	17	2	0
150	DV	1	256	81	156	17	2	0
150	DX	1	256	81	156	17	2	0
150	DX	1	256	81	156	17	2	0
150	DX	1	256	81	156	17	2	0
150	DY	1	256	81	156	17	2	0
150	DZ	1	256	81	156	17	2	0
150	EA	1	256	81	156	17	2	0
150	EB	1	256	81	156	17	2	0
150	ED	1	256	81	156	17	2	0
150	ED	1	255	81	155	17	2	0
150	ED	1	256	81	156	17	2	0
150	EH	1	256	81	156	17	2	0
150	EI	1	256	81	156	17	2	0
150	EK	1	256	81	156	17	2	0
150	EL	1	256	81	156	17	2	0
150	EL	1	256	81	156	17	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	EL	1	256	81	156	17	2	0
150	EN	1	256	81	156	17	2	0
150	EN	1	256	81	156	17	2	0
150	EO	1	256	81	156	17	2	0
150	ES	1	256	81	156	17	2	0
150	Da	1	256	81	156	17	2	0
150	Dc	1	256	81	156	17	2	0
150	Dc	1	256	81	156	17	2	0
150	Dd	1	256	81	156	17	2	0
150	Dd	1	256	81	156	17	2	0
150	Dd	1	256	81	156	17	2	0
150	Dd	1	256	81	156	17	2	0
150	Dg	1	256	81	156	17	2	0
150	Dg	1	256	81	156	17	2	0
150	Dh	1	256	81	156	17	2	0
150	Dh	1	256	81	156	17	2	0
150	Di	1	256	81	156	17	2	0
150	Di	1	256	81	156	17	2	0
150	Dj	1	256	81	156	17	2	0
150	Dj	1	256	81	156	17	2	0
150	Dj	1	256	81	156	17	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	Dj	1	256	81	156	17	2	0
150	Dj	1	256	81	156	17	2	0
150	Dj	1	256	81	156	17	2	0
150	Dm	1	256	81	156	17	2	0
150	Dm	1	256	81	156	17	2	0
150	Dn	1	256	81	156	17	2	0
150	Dn	1	256	81	156	17	2	0
150	Dn	1	256	81	156	17	2	0
150	Dn	1	256	81	156	17	2	0
150	Do	1	256	81	156	17	2	0
150	Dq	1	256	81	156	17	2	0
150	Dq	1	256	81	156	17	2	0
150	Dq	1	256	81	156	17	2	0
150	Dr	1	256	81	156	17	2	0
150	Dr	1	256	81	156	17	2	0
150	Ds	1	256	81	156	17	2	0
150	Ds	1	256	81	156	17	2	0
150	Ds	1	256	81	156	17	2	0
150	Ds	1	256	81	156	17	2	0
150	Du	1	256	81	156	17	2	0
150	Du	1	256	81	156	17	2	0

Continued on next page...

Continued from previous page...

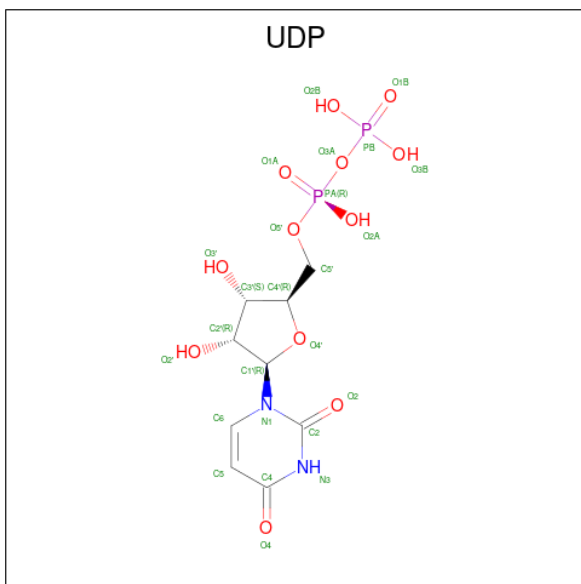
Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	Du	1	256	81	156	17	2	0
150	Dv	1	256	81	156	17	2	0
150	Dv	1	256	81	156	17	2	0
150	Dv	1	256	81	156	17	2	0
150	Dx	1	256	81	156	17	2	0
150	Dx	1	256	81	156	17	2	0
150	Dy	1	256	81	156	17	2	0
150	Ea	1	256	81	156	17	2	0
150	Ea	1	256	81	156	17	2	0
150	Eb	1	256	81	156	17	2	0
150	Ed	1	255	81	155	17	2	0
150	Ed	1	256	81	156	17	2	0
150	Eg	1	256	81	156	17	2	0
150	Eh	1	256	81	156	17	2	0
150	Ei	1	256	81	156	17	2	0
150	Ek	1	256	81	156	17	2	0
150	El	1	256	81	156	17	2	0
150	El	1	256	81	156	17	2	0
150	El	1	256	81	156	17	2	0
150	En	1	256	81	156	17	2	0
150	Ep	1	256	81	156	17	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
150	Eu	1	256	81	156	17	2	0

- Molecule 151 is URIDINE-5'-DIPHOSPHATE (three-letter code: UDP) (formula: $C_9H_{14}N_2O_{12}P_2$).

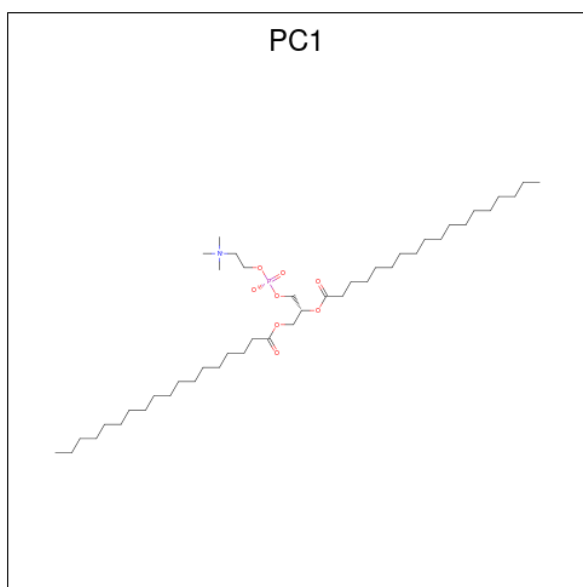


Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
151	A0	1	36	9	11	2	12	2	0

- Molecule 152 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
152	A0	1	Total	Mg	0
			1	1	
152	A8	1	Total	Mg	0
			1	1	
152	DA	1	Total	Mg	0
			1	1	
152	Da	1	Total	Mg	0
			1	1	

- Molecule 153 is 1,2-DIACYL-SN-GLYCERO-3-PHOSPHOCHOLINE (three-letter code: PC1) (formula: $C_{44}H_{88}NO_8P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
153	A0	1	142	44	88	1	8	1	0
153	A1	1	142	44	88	1	8	1	0
153	A2	1	142	44	88	1	8	1	0
153	A6	1	142	44	88	1	8	1	0
153	A6	1	142	44	88	1	8	1	0
153	A9	1	142	44	88	1	8	1	0
153	A9	1	142	44	88	1	8	1	0
153	AA	1	142	44	88	1	8	1	0
153	AA	1	142	44	88	1	8	1	0
153	AA	1	142	44	88	1	8	1	0
153	AA	1	142	44	88	1	8	1	0
153	AA	1	142	44	88	1	8	1	0
153	AA	1	142	44	88	1	8	1	0
153	AC	1	142	44	88	1	8	1	0
153	AH	1	142	44	88	1	8	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
153	AJ	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	AL	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	AM	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	AQ	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	AU	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	AU	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	AX	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	B1	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	B1	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	BG	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	BS	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	BS	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	BT	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	CC	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	A	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	C	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	C	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	C	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	D	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	E	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	K	1	Total 142	C 44	H 88	N 1	O 8	P 1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
153	K	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	c	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	c	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	c	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	d	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	e	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	g	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	k	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DA	1	Total 141	C 44	H 87	N 1	O 8	P 1	0
153	DA	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DB	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DC	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DC	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DC	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DC	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DC	1	Total 141	C 44	H 87	N 1	O 8	P 1	0
153	DG	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DI	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DJ	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DQ	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DS	1	Total 142	C 44	H 88	N 1	O 8	P 1	0

Continued on next page...

Continued from previous page...

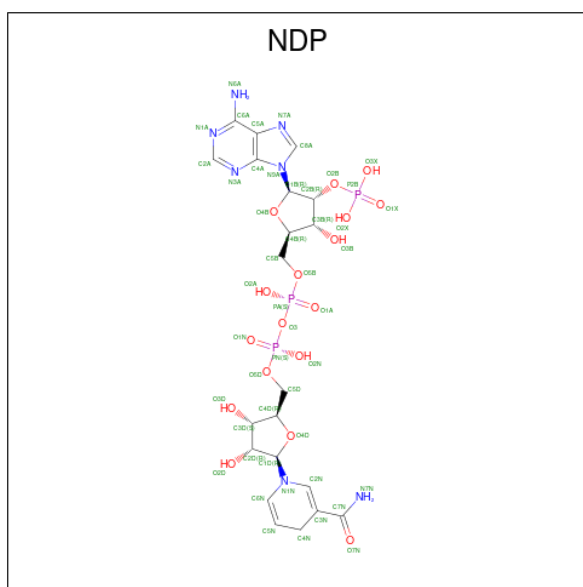
Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
153	DV	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DV	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DV	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DX	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DX	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	DY	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	EB	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	EB	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	EN	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	EO	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	EO	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	EO	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	EO	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	Da	1	Total 141	C 44	H 87	N 1	O 8	P 1	0
153	Da	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	Db	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	Dc	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	Dc	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	Dc	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	Dc	1	Total 142	C 44	H 88	N 1	O 8	P 1	0
153	Dc	1	Total 141	C 44	H 87	N 1	O 8	P 1	0

Continued on next page...

Continued from previous page...

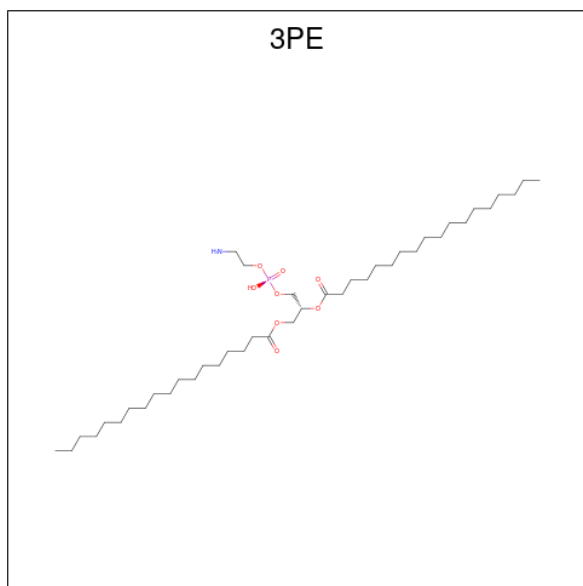
Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
153	Dg	1	142	44	88	1	8	1	0
153	Di	1	142	44	88	1	8	1	0
153	Dj	1	142	44	88	1	8	1	0
153	Dq	1	142	44	88	1	8	1	0
153	Ds	1	142	44	88	1	8	1	0
153	Dv	1	142	44	88	1	8	1	0
153	Dv	1	142	44	88	1	8	1	0
153	Dv	1	142	44	88	1	8	1	0
153	Dv	1	142	44	88	1	8	1	0
153	Dx	1	142	44	88	1	8	1	0
153	Dx	1	142	44	88	1	8	1	0
153	Dx	1	142	44	88	1	8	1	0
153	Dy	1	142	44	88	1	8	1	0
153	Eb	1	142	44	88	1	8	1	0
153	Eb	1	142	44	88	1	8	1	0
153	Ef	1	142	44	88	1	8	1	0
153	El	1	142	44	88	1	8	1	0
153	Eo	1	142	44	88	1	8	1	0
153	Eo	1	142	44	88	1	8	1	0
153	Eo	1	142	44	88	1	8	1	0

- Molecule 154 is NADPH DIHYDRO-NICOTINAMIDE-ADENINE-DINUCLEOTIDE PHOSPHATE (three-letter code: NDP) (formula: C₂₁H₃₀N₇O₁₇P₃).



Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
154	A1	1	74	21	26	7	17	3	0

- Molecule 155 is 1,2-Distearoyl-sn-glycerophosphoethanolamine (three-letter code: 3PE) (formula: $C_{41}H_{82}NO_8P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
155	A2	1	133	41	82	1	8	1	0
155	A9	1	133	41	82	1	8	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
155	AJ	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	BA	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	BP	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	BT	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	CK	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	CC	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	CD	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	C	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	G	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DC	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DC	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DG	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DG	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DI	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DJ	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DN	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DR	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DS	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DX	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DX	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	DX	1	Total 133	C 41	H 82	N 1	O 8	P 1	0

Continued on next page...

Continued from previous page...

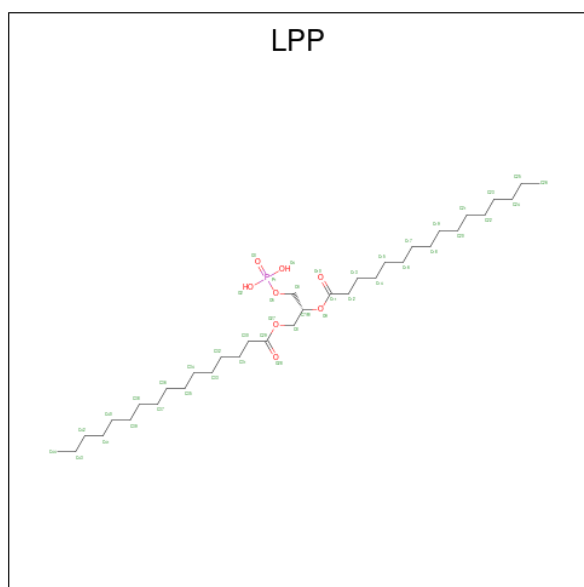
Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
155	EL	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	EM	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	EN	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	EO	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Da	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dc	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dc	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dd	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dg	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Di	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dr	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dr	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Ds	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Ds	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dx	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dx	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dx	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Dx	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	El	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Em	1	Total 133	C 41	H 82	N 1	O 8	P 1	0
155	Eo	1	Total 133	C 41	H 82	N 1	O 8	P 1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
155	Eo	1	133	41	82	1	8	1	0

- Molecule 156 is 2-(HEXADECANOYLOXY)-1-[(PHOSPHONOOXY)METHYL]ETHYL HEXADECANOATE (three-letter code: LPP) (formula: C₃₅H₆₉O₈P) (labeled as "Ligand of Interest" by depositor).



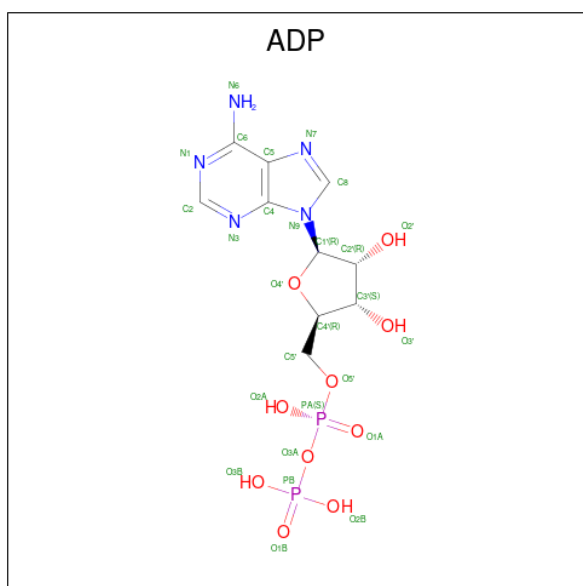
Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
156	A6	1	111	35	67	8	1	0
156	AA	1	111	35	67	8	1	0
156	AC	1	111	35	67	8	1	0
156	AL	1	111	35	67	8	1	0
156	DA	1	111	35	67	8	1	0
156	DN	1	111	35	67	8	1	0
156	DN	1	111	35	67	8	1	0
156	EI	1	111	35	67	8	1	0
156	Dn	1	111	35	67	8	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
			Total	C	H	O	P	
156	Dn	1	Total	C	H	O	P	0
			111	35	67	8	1	
156	Ed	1	Total	C	H	O	P	0
			111	35	67	8	1	
156	Dl	1	Total	C	H	O	P	0
			111	35	67	8	1	

- Molecule 157 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
157	A8	1	Total	C	H	N	O	P	0
			39	10	12	5	10	2	
157	AQ	1	Total	C	H	N	O	P	0
			39	10	12	5	10	2	

- Molecule 158 is FE2/S2 (INORGANIC) CLUSTER (three-letter code: FES) (formula: Fe_2S_2) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
158	AB	1	4	2	2	0
158	AI	1	4	2	2	0
158	BI	1	4	2	2	0
158	CB	1	4	2	2	0
158	E	1	4	2	2	0
158	e	1	4	2	2	0
158	EF	1	4	2	2	0
158	EF	1	4	2	2	0
158	Ef	1	4	2	2	0
158	Ef	1	4	2	2	0

- Molecule 159 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄) (labeled as "Ligand of Interest" by depositor).



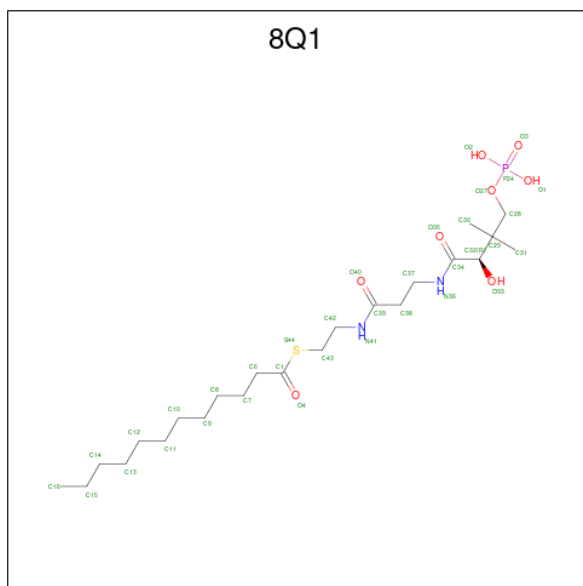
Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
159	AB	1	8	4	4	0
159	AB	1	8	4	4	0
159	AD	1	8	4	4	0
159	AL	1	8	4	4	0
159	AL	1	8	4	4	0
159	AT	1	8	4	4	0
159	CB	1	8	4	4	0

- Molecule 160 is FLAVIN MONONUCLEOTIDE (three-letter code: FMN) (formula: C₁₇H₂₁N₄O₉P) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
160	AD	1	49	17	18	4	9	1	0

- Molecule 161 is S-[2-(N-[(2R)-2-hydroxy-3,3-dimethyl-4-(phosphonoxy)butanoyl]-beta-alanyl}amino)ethyl] dodecanethioate (three-letter code: 8Q1) (formula: C₂₃H₄₅N₂O₈PS).



Mol	Chain	Residues	Atoms						AltConf	
			Total	C	H	N	O	P		S
161	AS	1	77	23	43	2	7	1	1	0

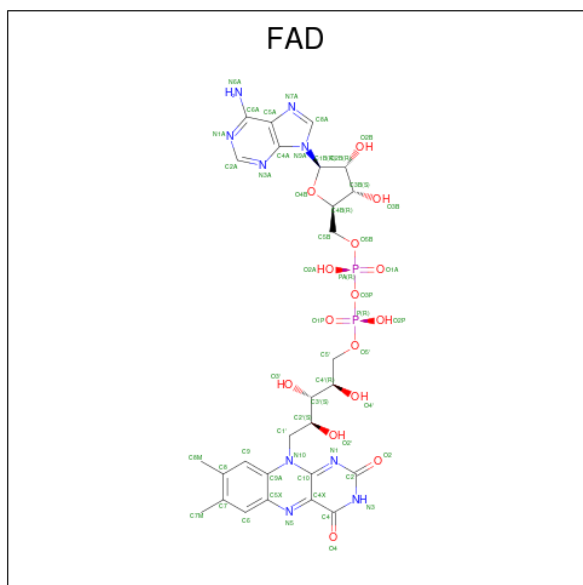
- Molecule 162 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
162	BR	1	Total	Zn	0
			1	1	
162	DD	1	Total	Zn	0
			1	1	
162	Dd	1	Total	Zn	0
			1	1	

- Molecule 163 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		AltConf
163	CA	1	Total	Ca	0
			1	1	
163	CB	1	Total	Ca	0
			1	1	
163	DA	1	Total	Ca	0
			1	1	
163	Da	1	Total	Ca	0
			1	1	

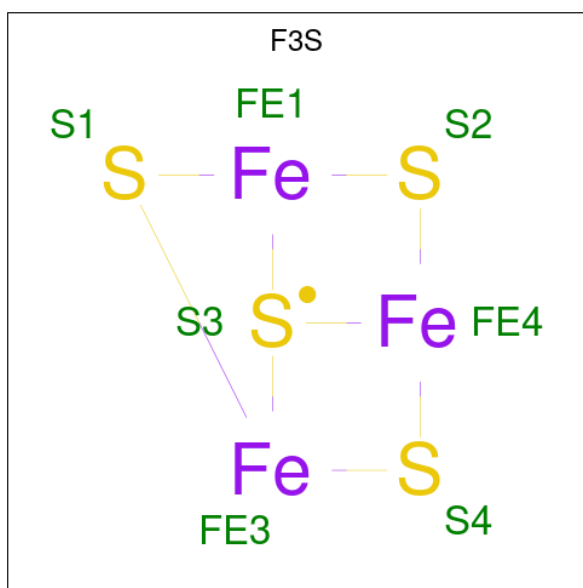
- Molecule 164 is FLAVIN-ADENINE DINUCLEOTIDE (three-letter code: FAD) (formula: $C_{27}H_{33}N_9O_{15}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf	
164	CA	1	Total	C	H	N	O	P	0
			84	27	31	9	15	2	

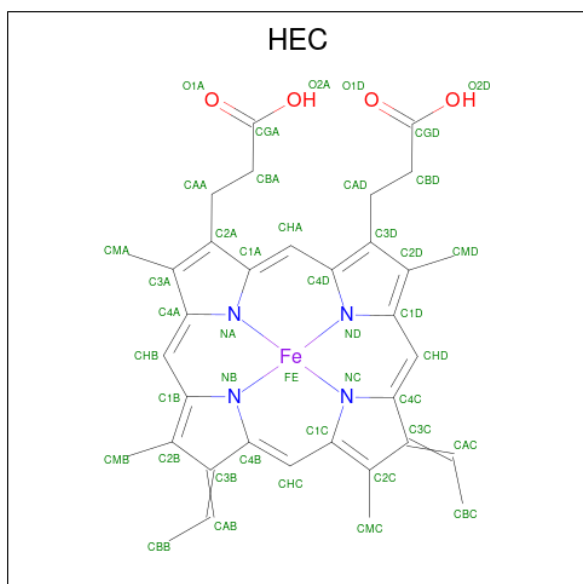
- Molecule 165 is FE3-S4 CLUSTER (three-letter code: F3S) (formula: Fe_3S_4) (labeled as

"Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
165	CB	1	Total	Fe	S	0
			7	3	4	

- Molecule 166 is HEME C (three-letter code: HEC) (formula: $C_{34}H_{34}FeN_4O_4$) (labeled as "Ligand of Interest" by depositor).



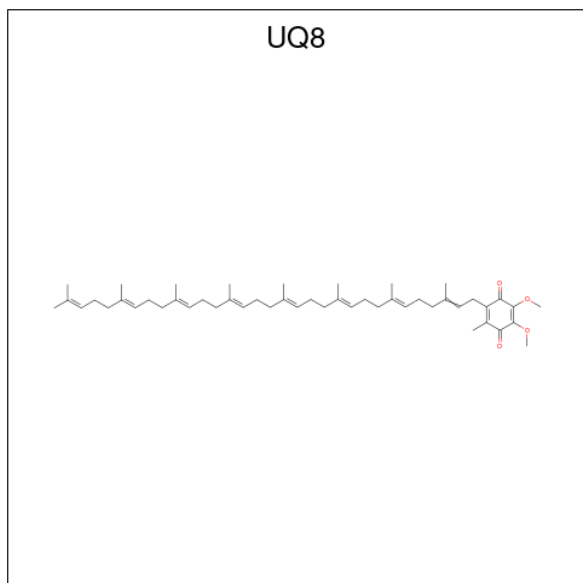
Mol	Chain	Residues	Atoms					AltConf	
166	CE	1	Total	C	Fe	H	N	O	0
			75	34	1	32	4	4	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	
			Total	C	Fe	H	N		O
166	D	1	Total 73	C 34	Fe 1	H 30	N 4	O 4	0
166	d	1	Total 73	C 34	Fe 1	H 30	N 4	O 4	0

- Molecule 167 is Ubiquinone-8 (three-letter code: UQ8) (formula: C₄₉H₇₄O₄) (labeled as "Ligand of Interest" by depositor).



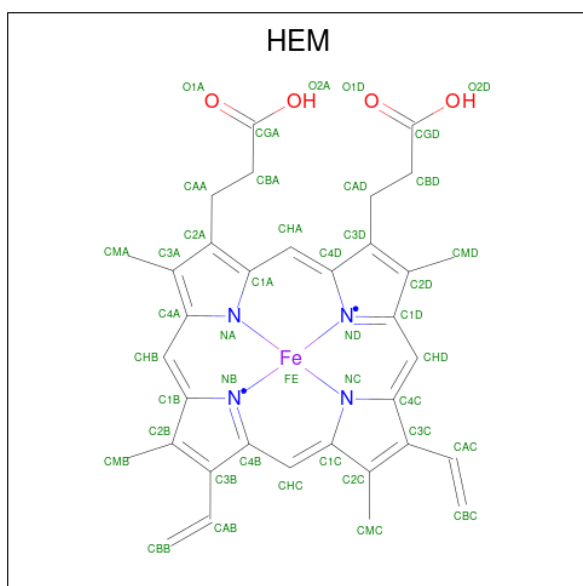
Mol	Chain	Residues	Atoms			AltConf	
			Total	C	H		O
167	CC	1	Total 127	C 49	H 74	O 4	0
167	C	1	Total 53	C 49	O 4		0
167	C	1	Total 53	C 49	O 4		0
167	c	1	Total 53	C 49	O 4		0
167	DS	1	Total 127	C 49	H 74	O 4	0
167	ED	1	Total 127	C 49	H 74	O 4	0
167	EL	1	Total 127	C 49	H 74	O 4	0
167	EN	1	Total 127	C 49	H 74	O 4	0
167	Ds	1	Total 127	C 49	H 74	O 4	0

Continued on next page...

Continued from previous page...

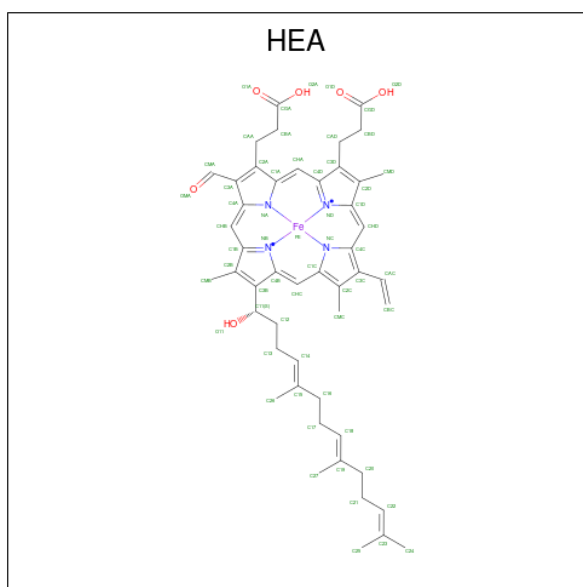
Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
167	Ed	1	Total	C	H	O	0
			127	49	74	4	
167	El	1	Total	C	H	O	0
			127	49	74	4	
167	En	1	Total	C	H	O	0
			127	49	74	4	

- Molecule 168 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: $C_{34}H_{32}FeN_4O_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						AltConf
			Total	C	Fe	H	N	O	
168	C	1	Total	C	Fe	H	N	O	0
			73	34	1	30	4	4	
168	C	1	Total	C	Fe	H	N	O	0
			73	34	1	30	4	4	
168	c	1	Total	C	Fe	H	N	O	0
			73	34	1	30	4	4	
168	c	1	Total	C	Fe	H	N	O	0
			73	34	1	30	4	4	
168	ED	1	Total	C	Fe	H	N	O	0
			65	34	1	22	4	4	
168	Ed	1	Total	C	Fe	H	N	O	0
			67	34	1	24	4	4	

- Molecule 169 is HEME-A (three-letter code: HEA) (formula: $C_{49}H_{56}FeN_4O_6$) (labeled as "Ligand of Interest" by depositor).

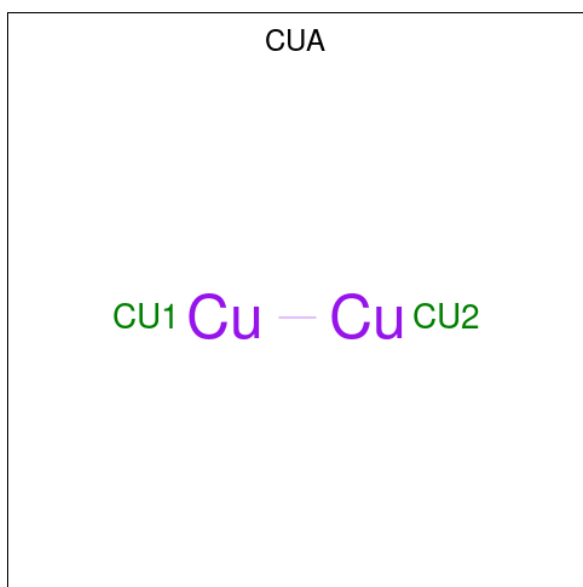


Mol	Chain	Residues	Atoms					AltConf	
			Total	C	Fe	H	N		O
169	DA	1	Total	C	Fe	H	N	O	0
			114	49	1	54	4	6	
169	DA	1	Total	C	Fe	H	N	O	0
			114	49	1	54	4	6	
169	Da	1	Total	C	Fe	H	N	O	0
			114	49	1	54	4	6	
169	Da	1	Total	C	Fe	H	N	O	0
			114	49	1	54	4	6	

- Molecule 170 is COPPER (II) ION (three-letter code: CU) (formula: Cu) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
			Total	Cu	
170	DA	1	Total	Cu	0
			1	1	
170	Da	1	Total	Cu	0
			1	1	

- Molecule 171 is DINUCLEAR COPPER ION (three-letter code: CUA) (formula: Cu₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
171	DB	1	Total Cu 2 2	0
171	Db	1	Total Cu 2 2	0

- Molecule 172 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	AltConf
172	DD	1	Total K 1 1	0

- Molecule 173 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: C₁₀H₁₆N₅O₁₃P₃).

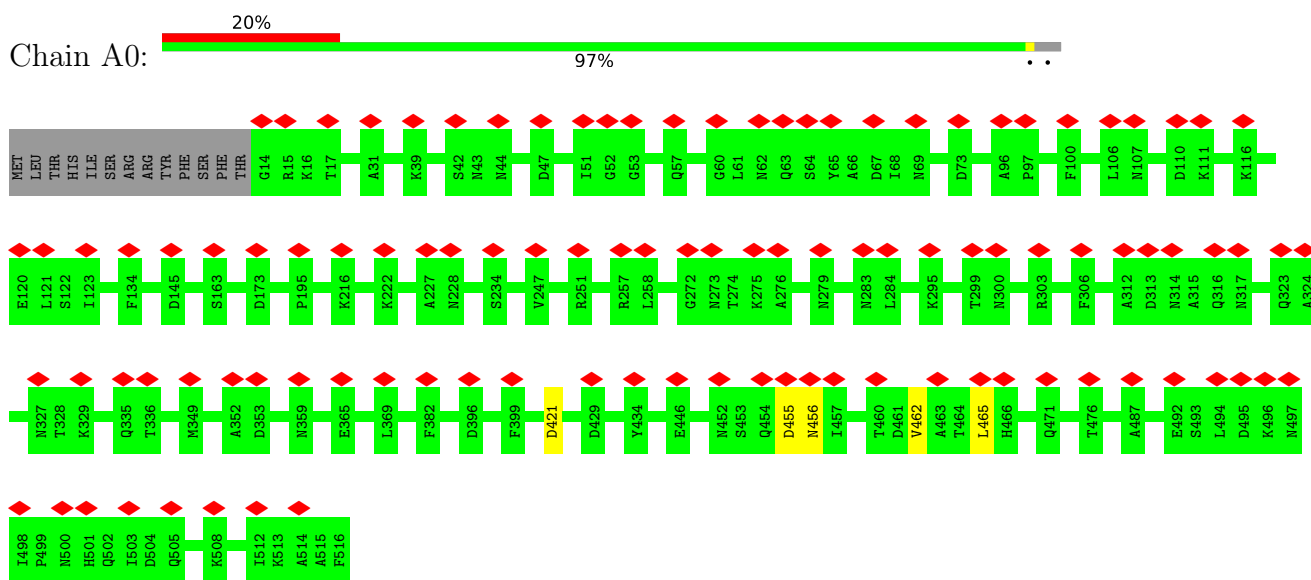


Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
173	ER	1	43	10	12	5	13	3	0
173	Er	1	43	10	12	5	13	3	0

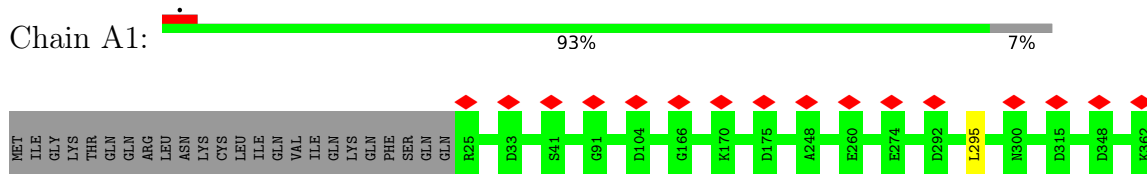
3 Residue-property plots [i](#)

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.

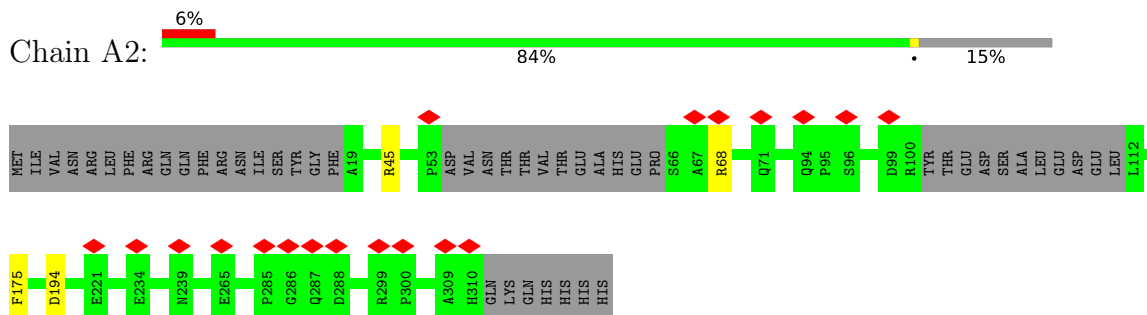
- Molecule 1: Lipid-A-disaccharide synthase



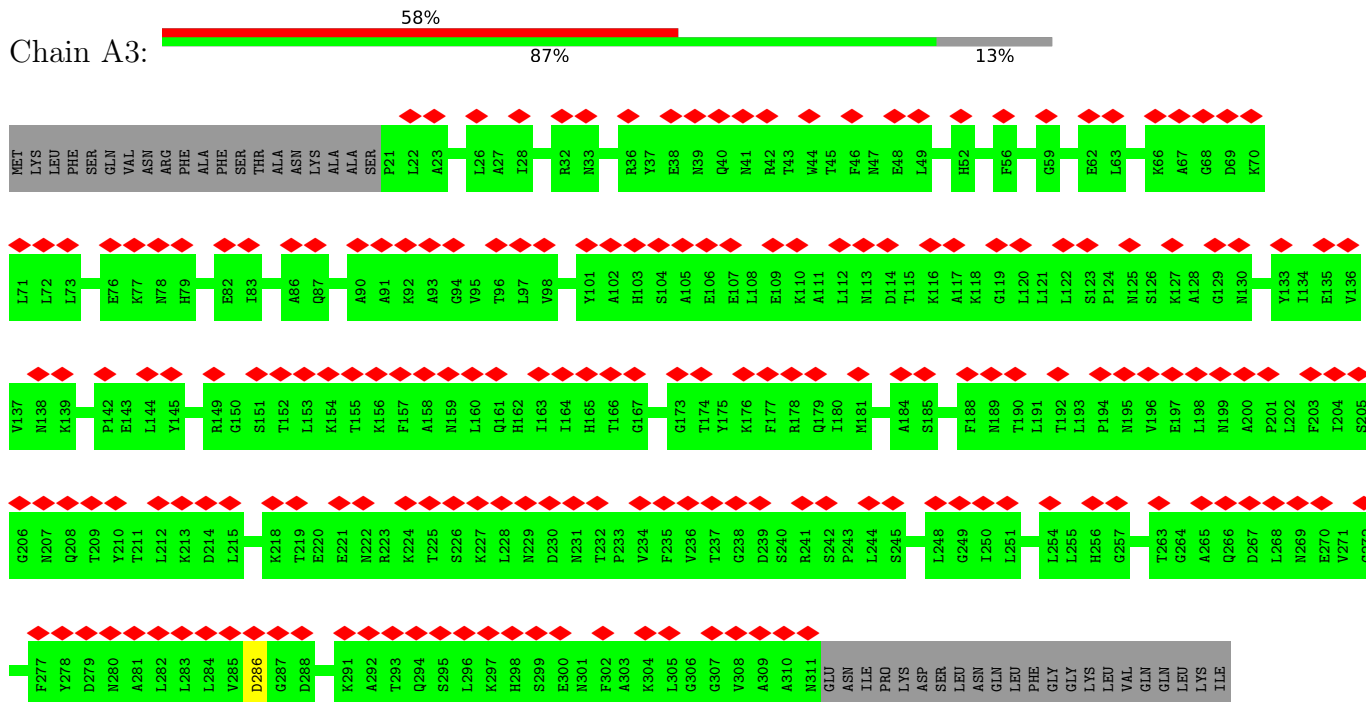
- Molecule 2: NAD-dependent epimerase/dehydratase family protein



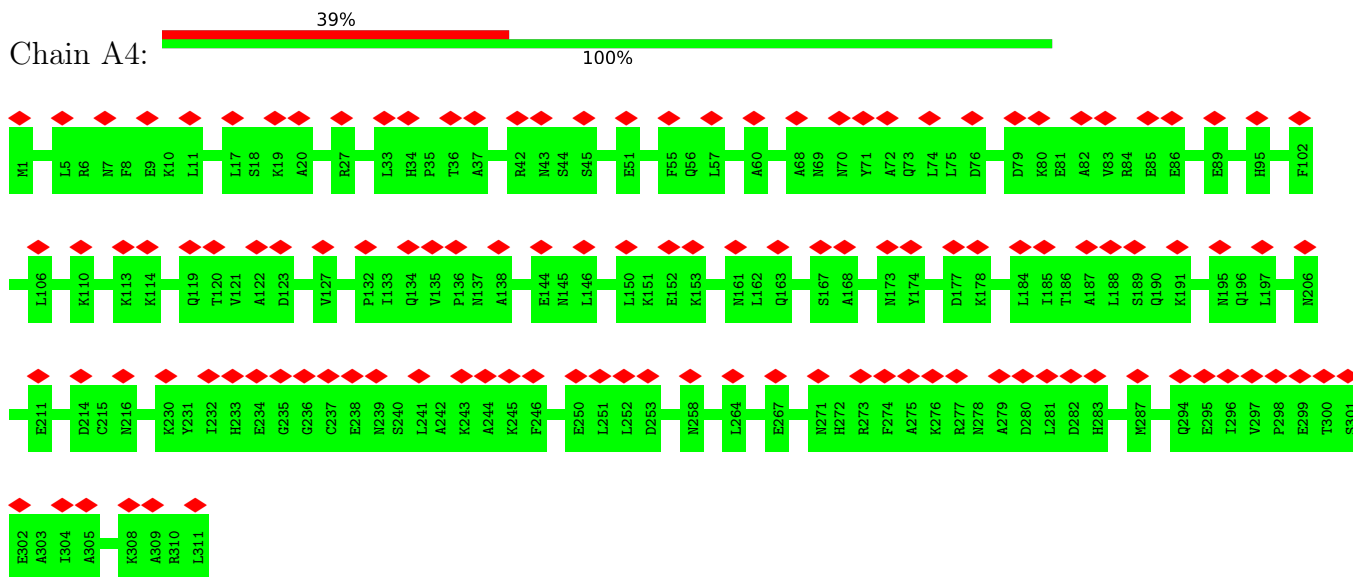
- Molecule 3: DnaJ domain protein



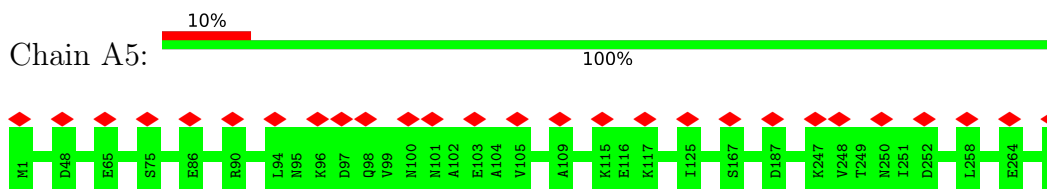
- Molecule 4: Acyl-CoA synthetase (AMP-forming)/AMP-acid ligase II



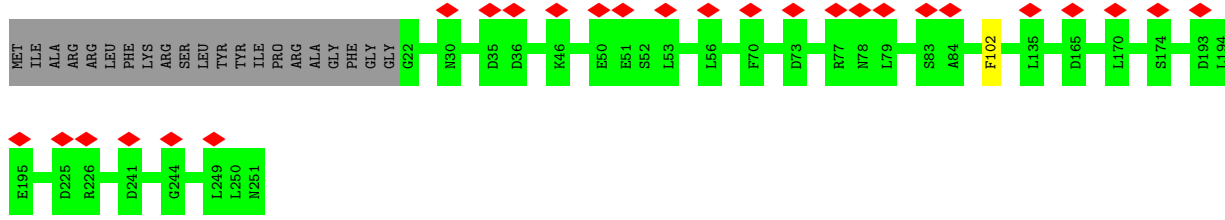
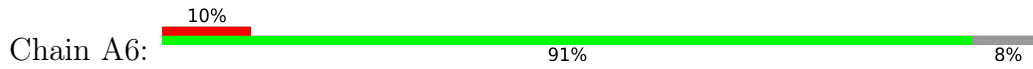
- Molecule 5: RNase III domain-containing protein



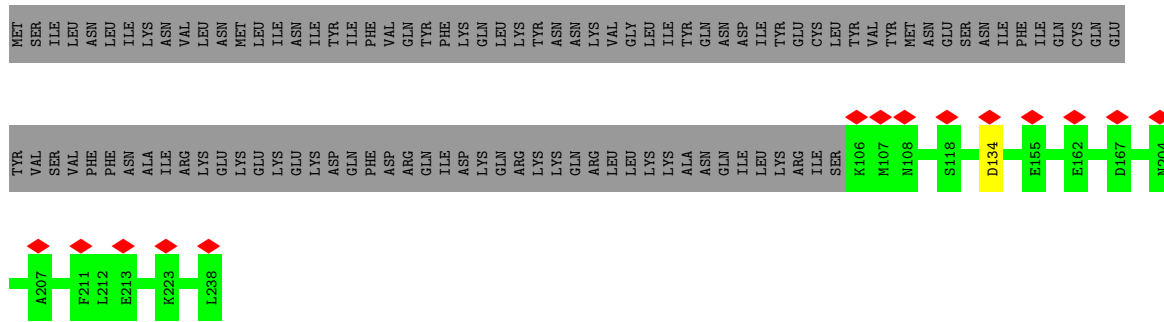
- Molecule 6: 37S ribosomal protein S25, mitochondrial



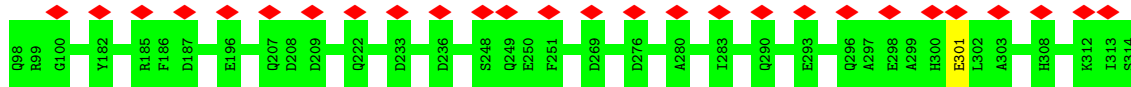
- Molecule 7: Transmembrane protein, putative



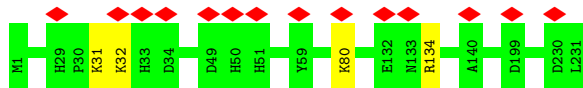
- Molecule 8: CX9C domain-containing protein



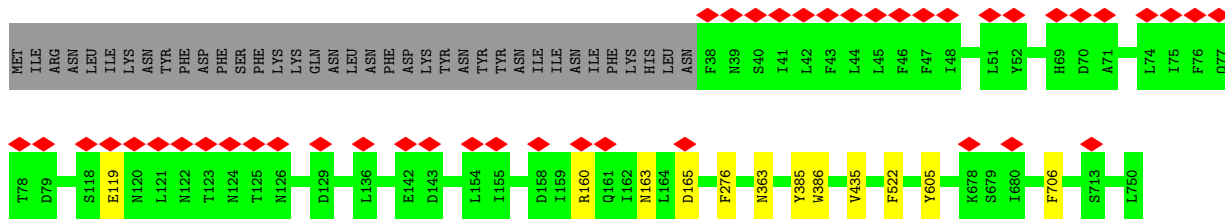
- Molecule 9: ND5a



- Molecule 10: Transmembrane protein, putative



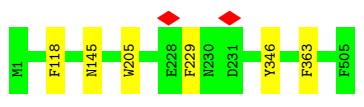
- Molecule 11: NADH dehydrogenase subunit 5



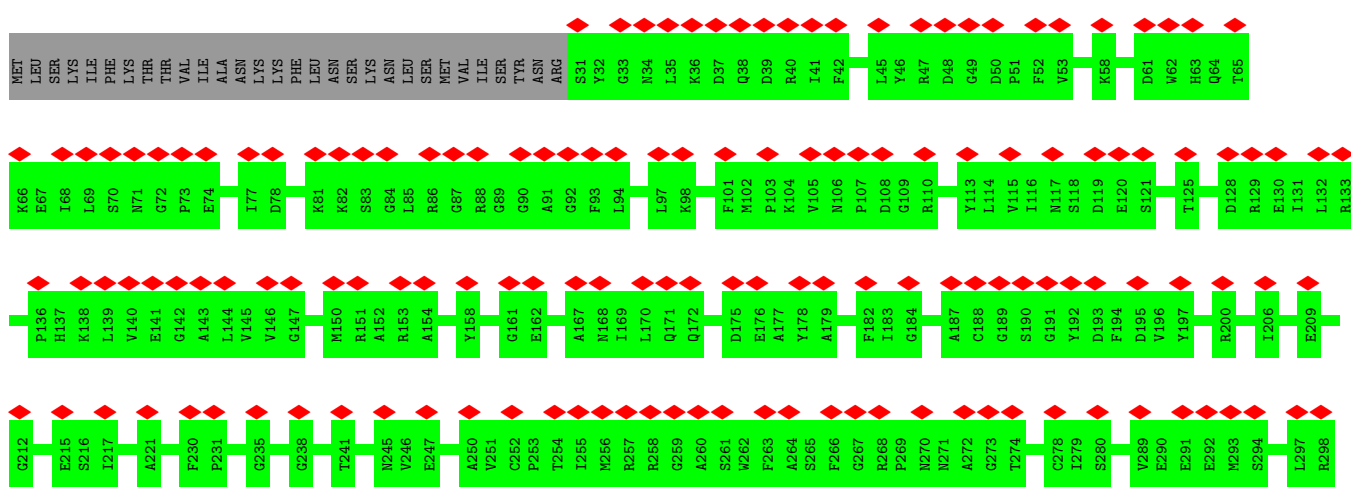
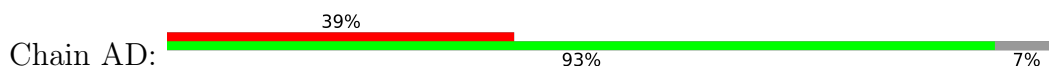
- Molecule 12: NADH-ubiquinone oxidoreductase 75 kDa subunit

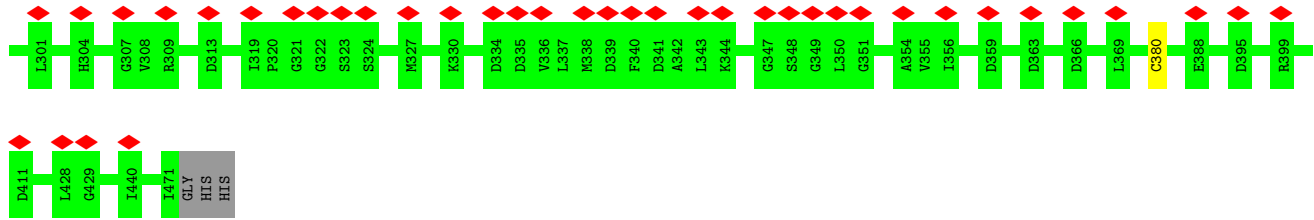


- Molecule 13: NADH-ubiquinone oxidoreductase chain 4



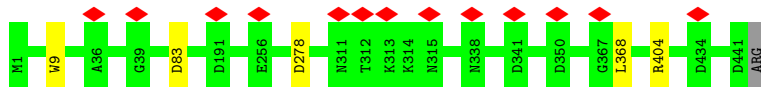
- Molecule 14: NADH dehydrogenase [ubiquinone] flavoprotein 1, mitochondrial





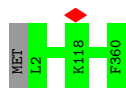
- Molecule 15: NADH dehydrogenase subunit 7

Chain AE: 99%



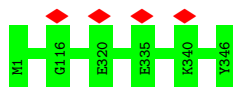
- Molecule 16: Ymf65

Chain AF: 100%



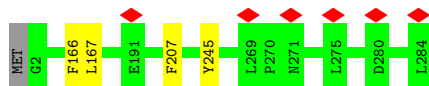
- Molecule 17: Transcription factor apfi protein, putative

Chain AG: 100%



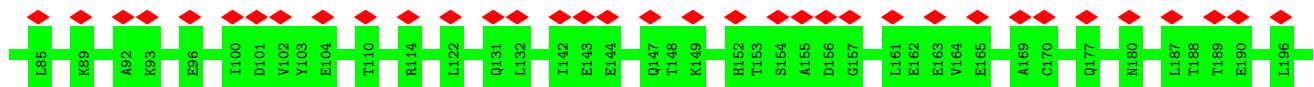
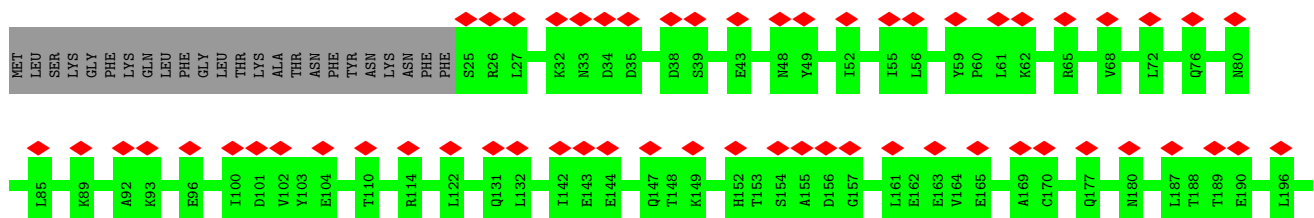
- Molecule 18: NADH-ubiquinone oxidoreductase chain 1

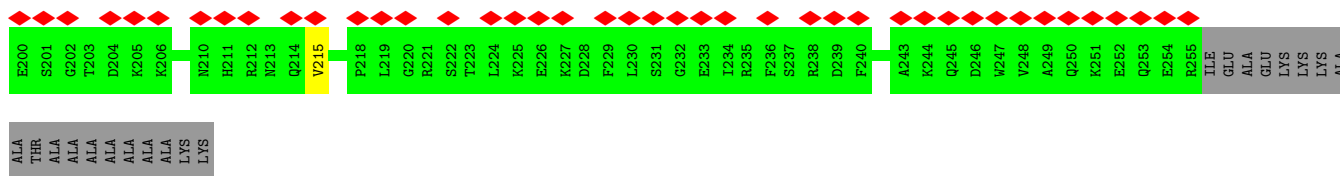
Chain AH: 98%



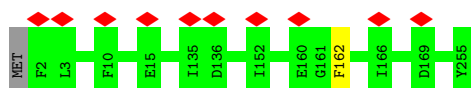
- Molecule 19: NADH-ubiquinone oxidoreductase 24 kDa subunit

Chain AI: 36% 84% 16%

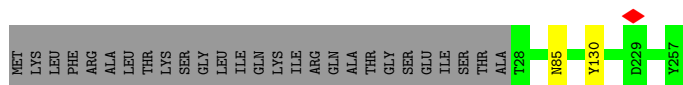




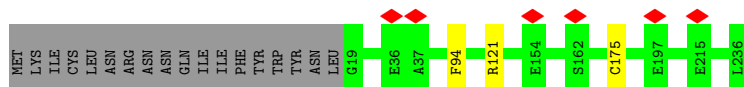
- Molecule 20: Ymf62



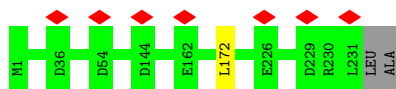
- Molecule 21: Gamma-carbonic anhydrase



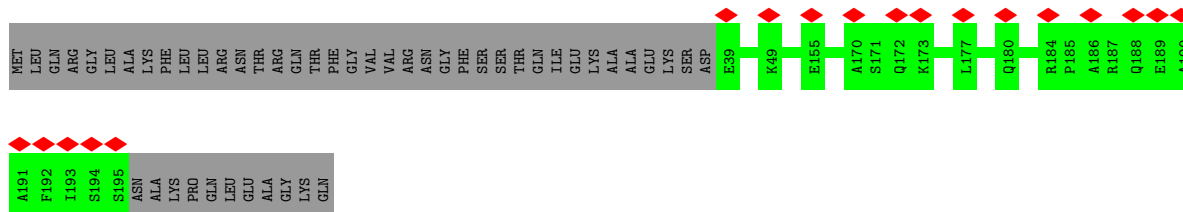
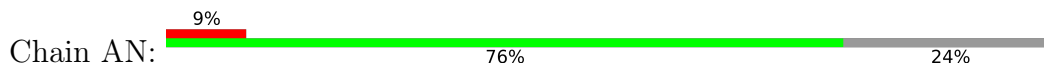
- Molecule 22: NADH-ubiquinone oxidoreductase 1, chain, putative



- Molecule 23: Gamma-carbonic anhydrase

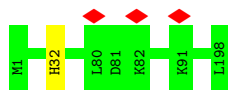


- Molecule 24: ETC complex I subunit motif protein

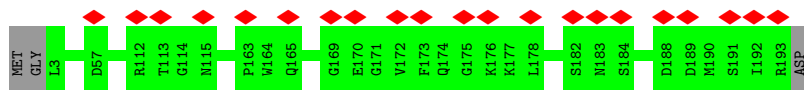


- Molecule 25: NADH dehydrogenase subunit 9

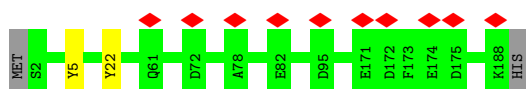




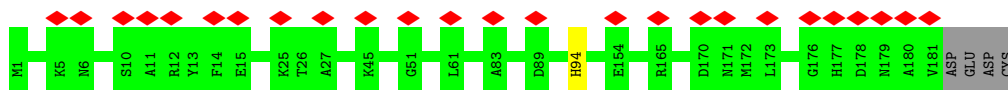
- Molecule 26: NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 12



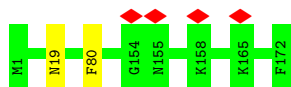
- Molecule 27: NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 10, mitochondrial



- Molecule 28: NADH dehydrogenase [ubiquinone] iron-sulfur protein 4, mitochondrial



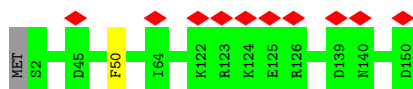
- Molecule 29: NADH dehydrogenase, putative



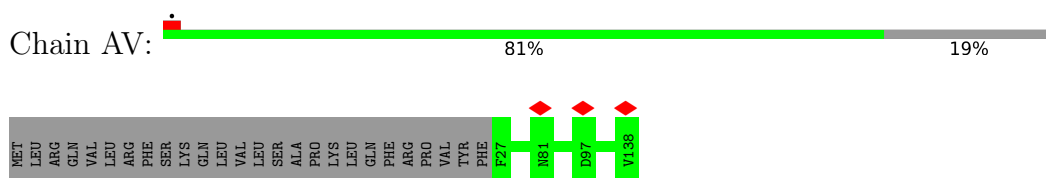
- Molecule 30: NADH dehydrogenase subunit 10



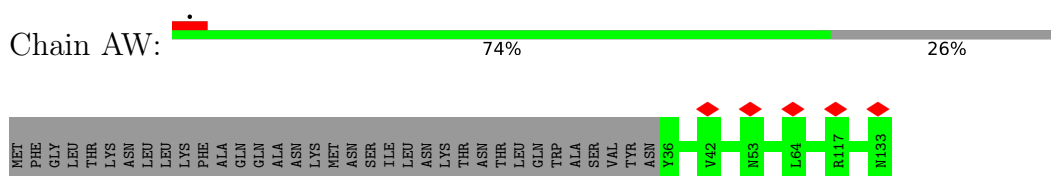
- Molecule 31: NADH-ubiquinone oxidoreductase complex I, 21 kDa subunit



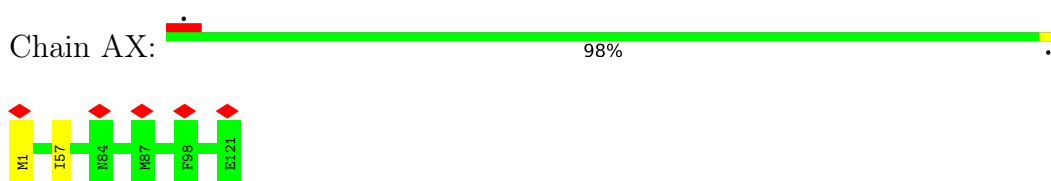
- Molecule 32: Acyl carrier protein



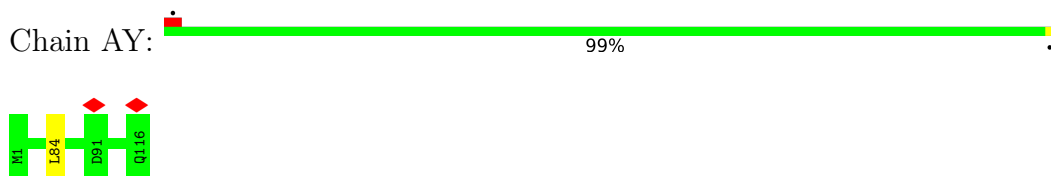
- Molecule 33: Acyl carrier protein



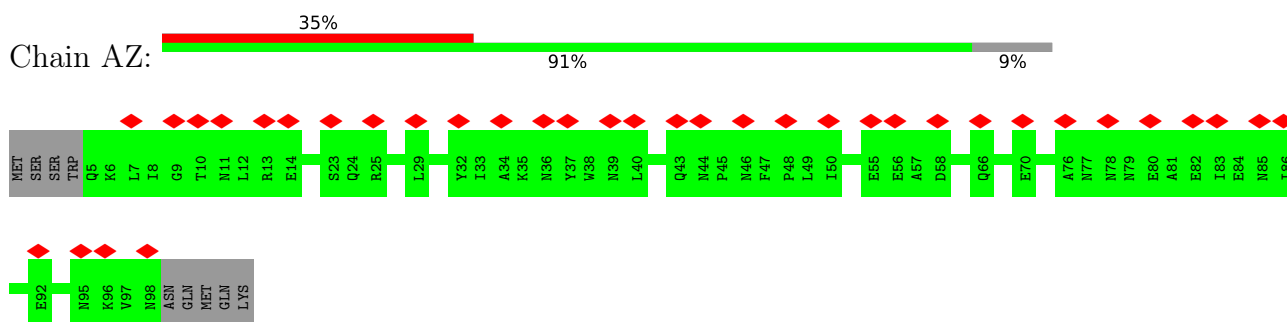
- Molecule 34: NADH-ubiquinone oxidoreductase chain 3



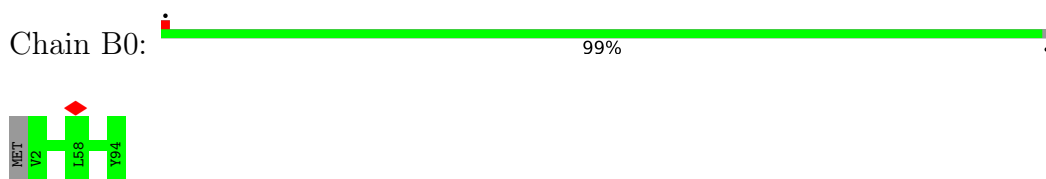
- Molecule 35: Ymf58



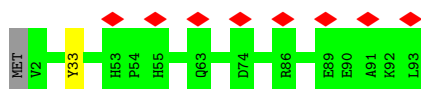
- Molecule 36: Ribosomal protein L51/S25/CI-B8 domain protein



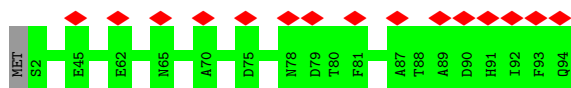
- Molecule 37: Transmembrane protein, putative



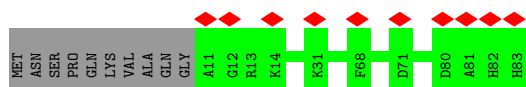
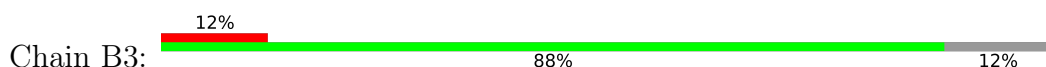
- Molecule 38: ATP synthase subunit e, mitochondrial



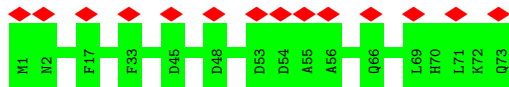
- Molecule 39: GRAM domain protein



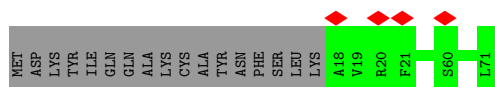
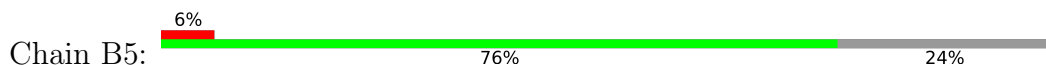
- Molecule 40: Transmembrane protein, putative



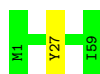
- Molecule 41: Transmembrane protein, putative



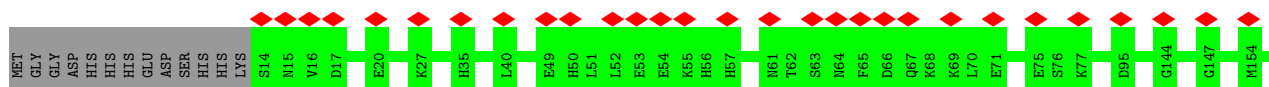
- Molecule 42: Transmembrane protein, putative

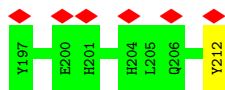


- Molecule 43: NADH dehydrogenase subunit 1

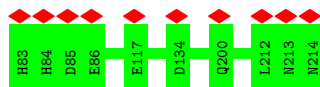
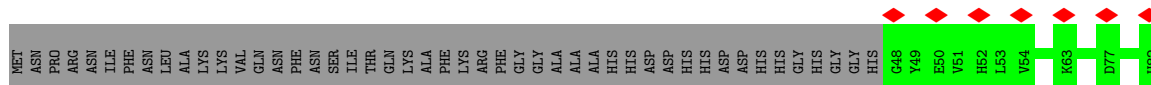
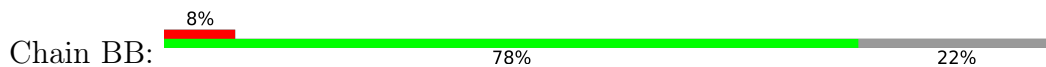


- Molecule 44: Transmembrane protein

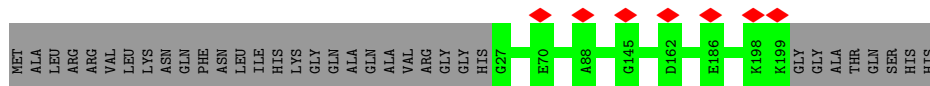
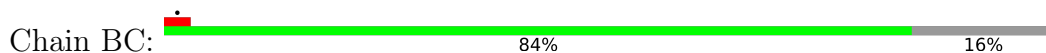




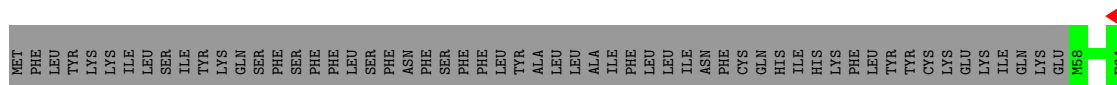
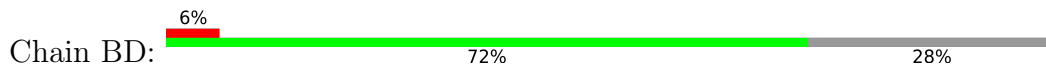
- Molecule 45: Transmembrane protein, putative



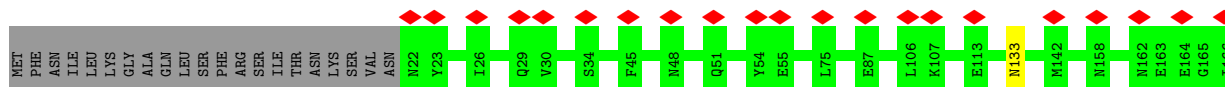
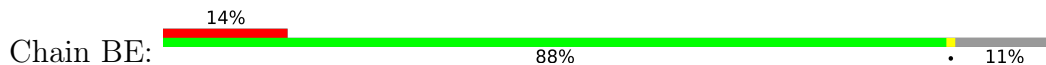
- Molecule 46: NDUB8



- Molecule 47: Transmembrane protein, putative

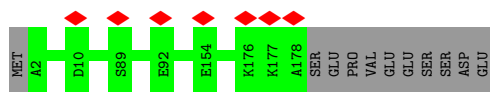


- Molecule 48: NDUPH2

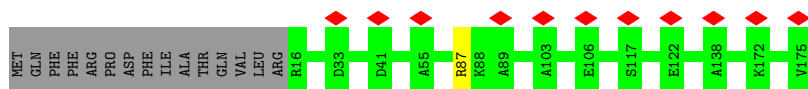
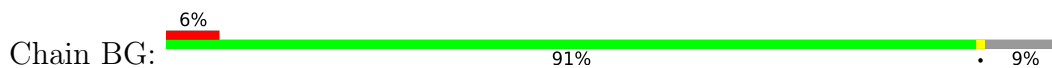


- Molecule 49: NDUB10

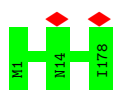




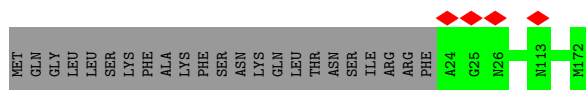
- Molecule 50: NDUA13



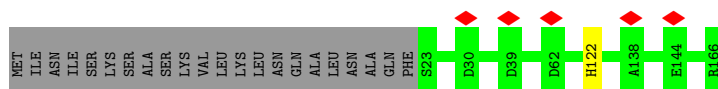
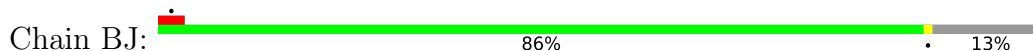
- Molecule 51: NADH dehydrogenase subunit 2



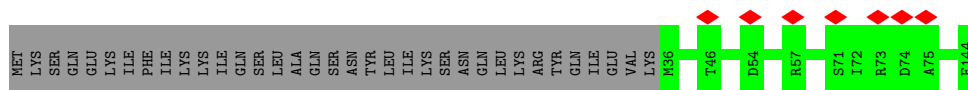
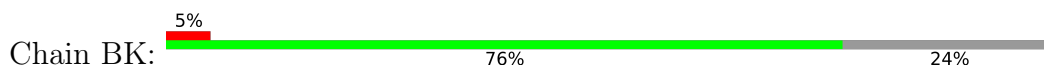
- Molecule 52: 2 iron, 2 sulfur cluster-binding protein



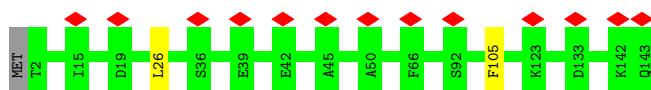
- Molecule 53: Thioredoxin



- Molecule 54: COX assembly mitochondrial protein

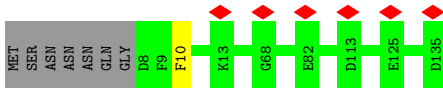


- Molecule 55: Transmembrane protein, putative



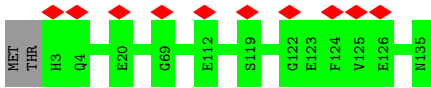
- Molecule 56: Transmembrane protein, putative

Chain BM:  94% 5%



- Molecule 57: PH domain-containing protein

Chain BN:  7% 99%



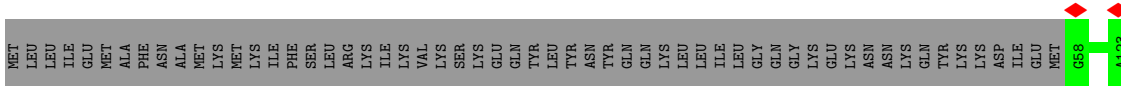
- Molecule 58: NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 8

Chain BO:  8% 100%




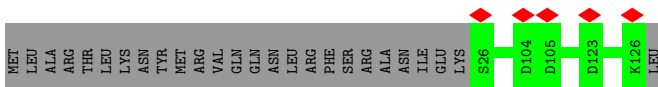
- Molecule 59: NDUB6

Chain BP:  56% 44%



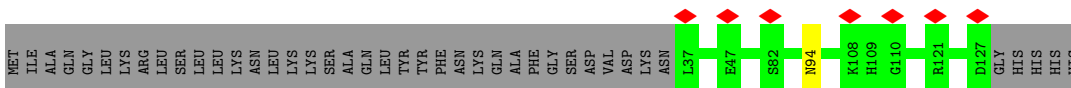
- Molecule 60: NADH dehydrogenase [ubiquinone] 1 beta subcomplex subunit 4

Chain BQ:  80% 20%



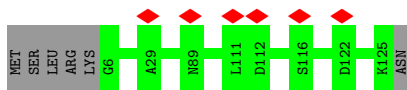
- Molecule 61: Zinc-finger protein

Chain BR:  5% 68% 31%



- Molecule 62: NDUB4

Chain BS:  5% 95% 5%



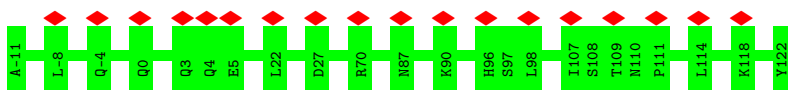
- Molecule 63: NDUTT10

Chain BT: 94% 6%



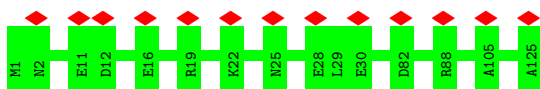
- Molecule 64: NDUTT11

Chain BU: 13% 100%



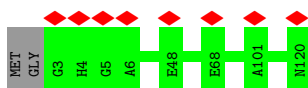
- Molecule 65: NDUTT12

Chain BV: 10% 100%



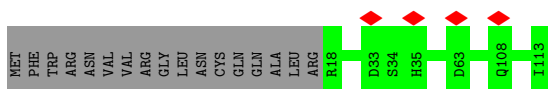
- Molecule 66: CHCH domain-containing protein

Chain BW: 7% 98%



- Molecule 67: Transmembrane protein, putative

Chain BX: 85% 15%

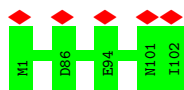


- Molecule 68: Ymf57

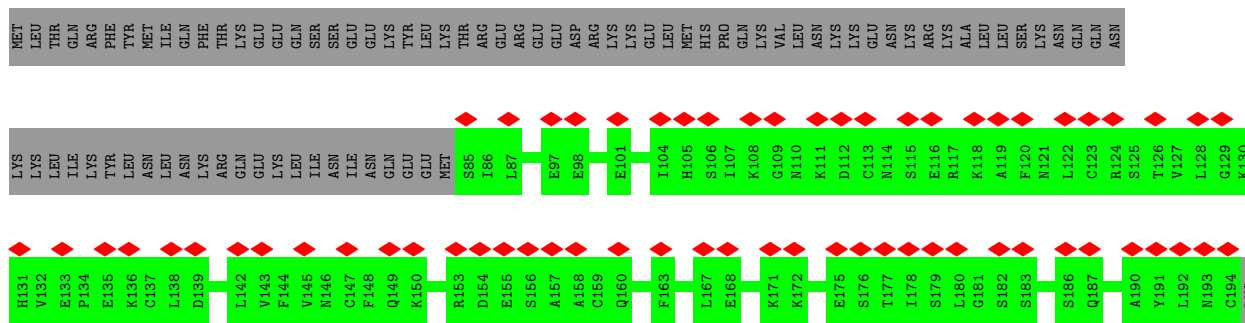
Chain BY: 100%



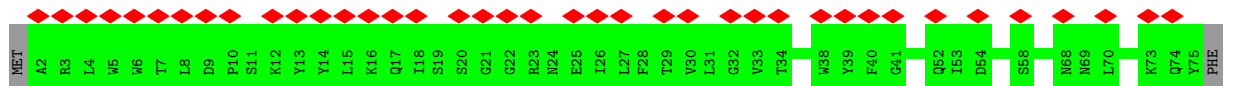
- Molecule 69: Complex I-MNLL



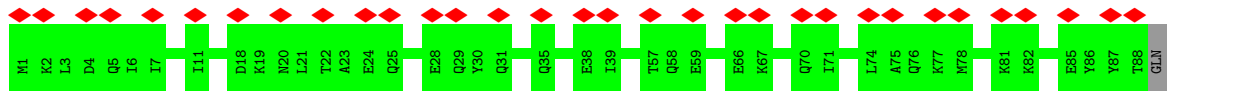
• Molecule 70: Diphthamide synthesis protein



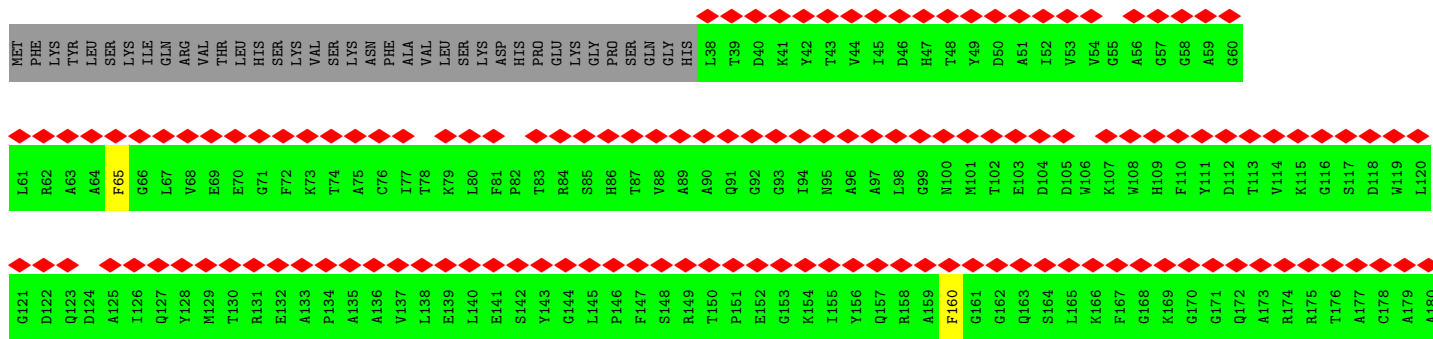
• Molecule 71: Transmembrane protein, putative

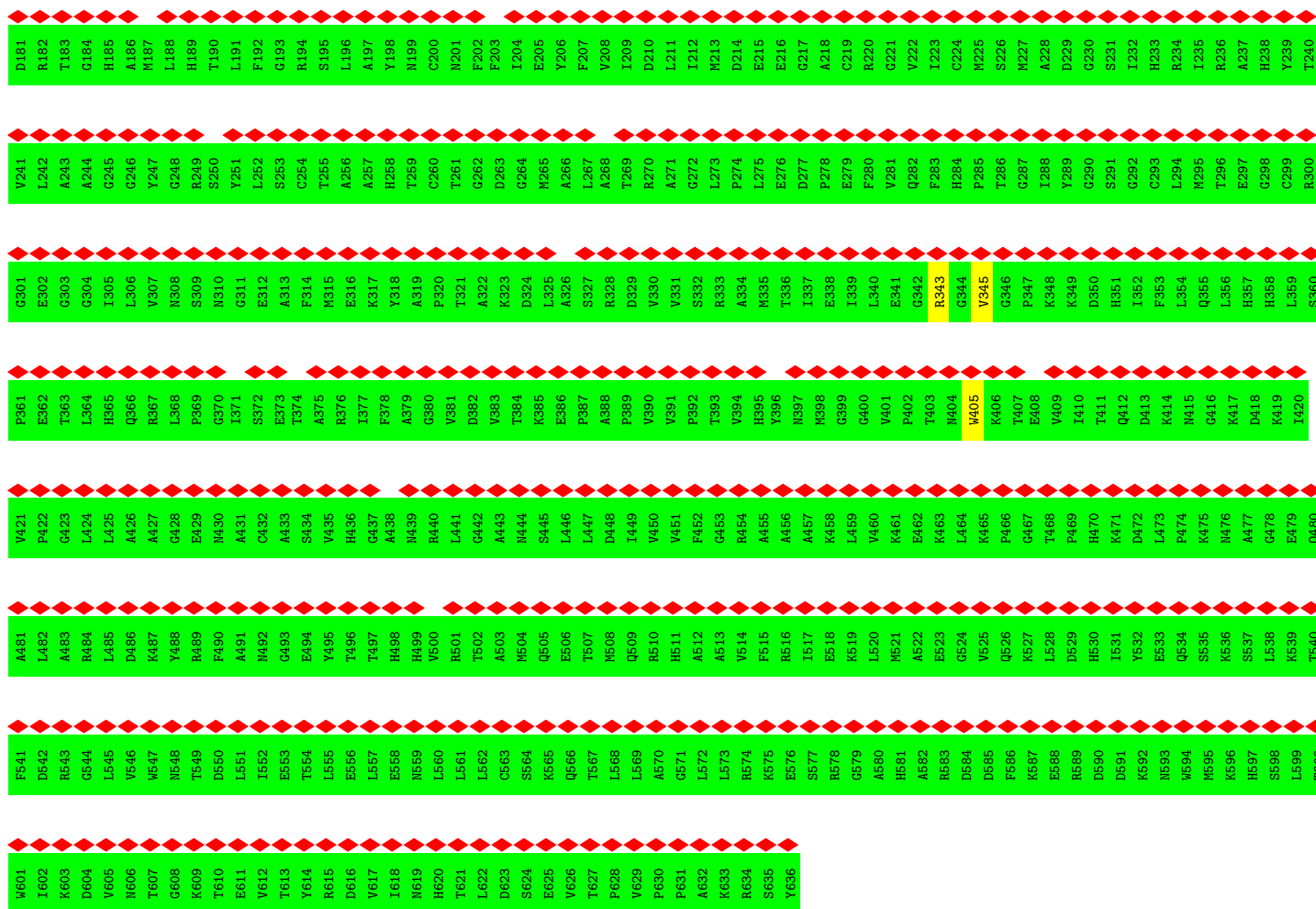


• Molecule 72: Transposase

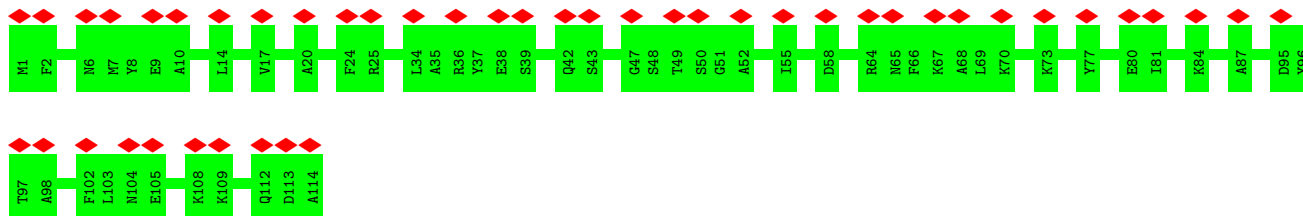
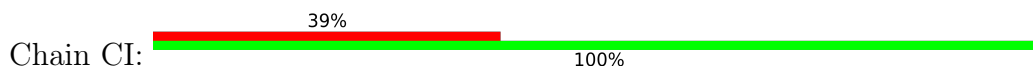


• Molecule 73: Succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial

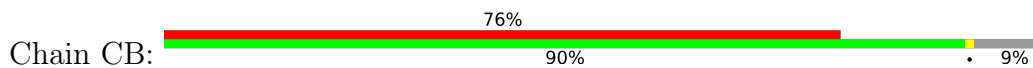




• Molecule 74: DUF4885 domain-containing protein

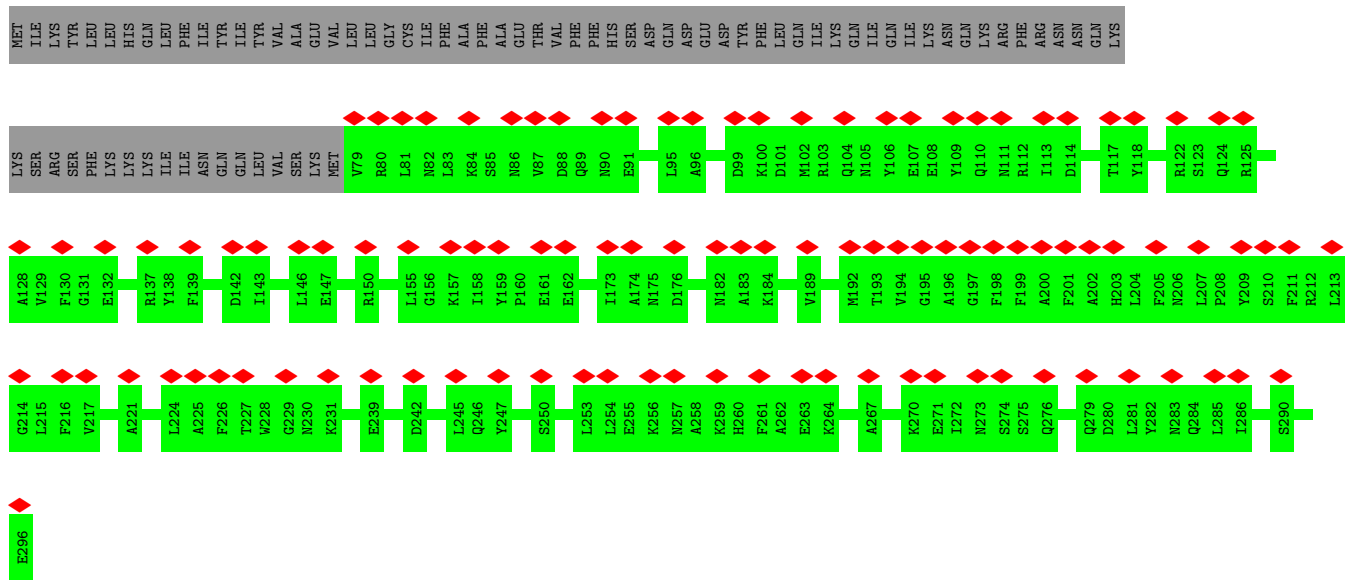
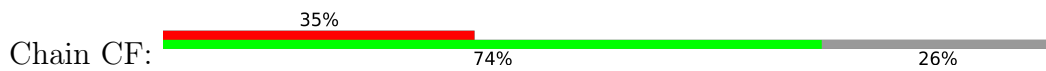


• Molecule 75: succinate dehydrogenase

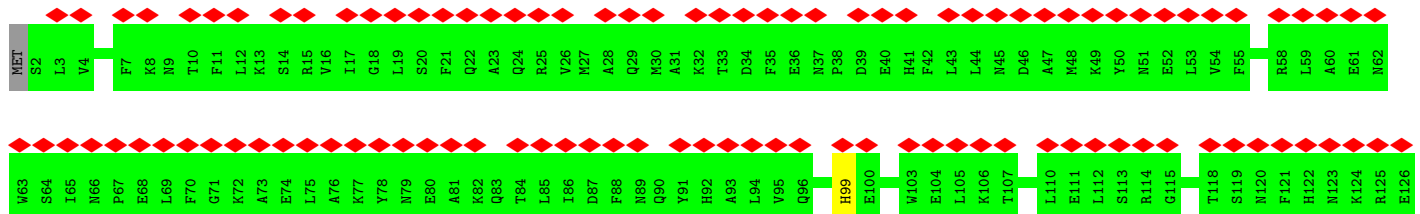
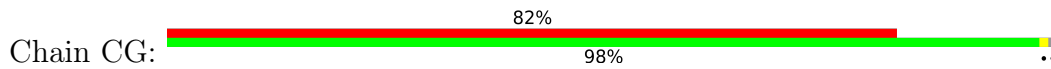


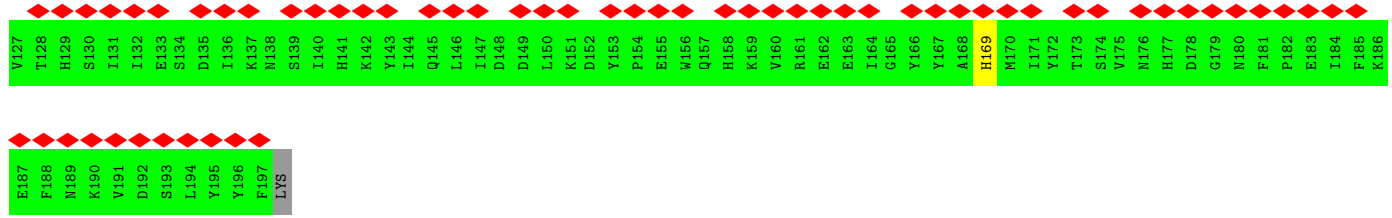


• Molecule 76: Transmembrane protein, putative

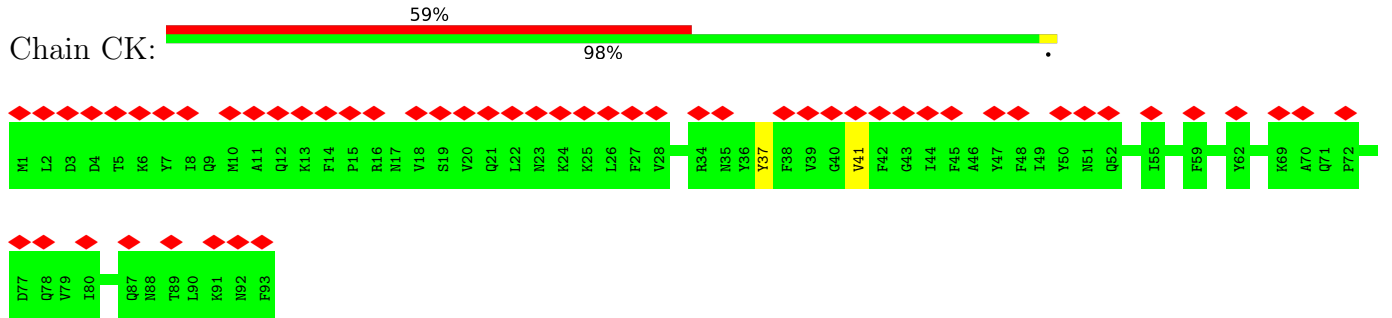


• Molecule 77: Uncharacterized protein

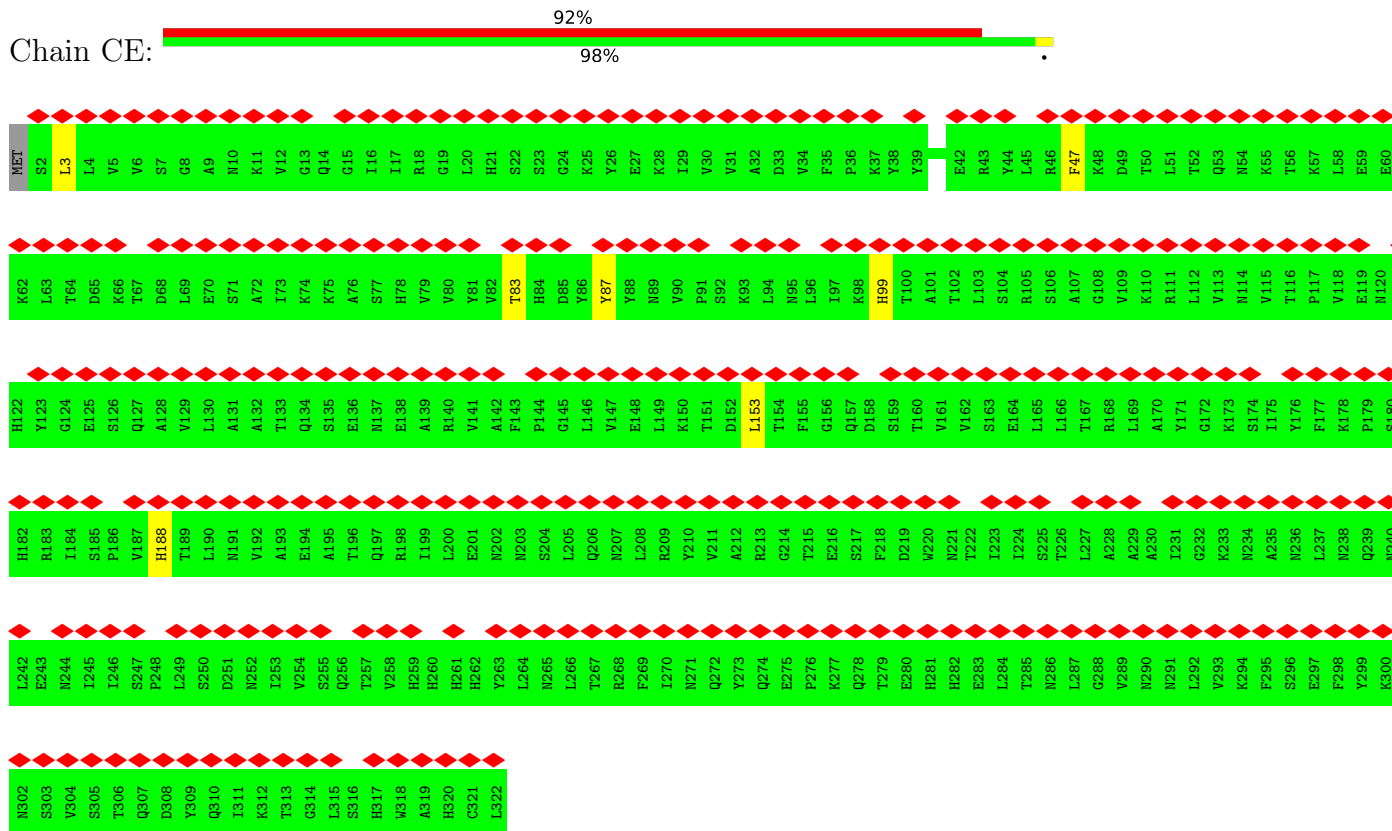




• Molecule 78: Transmembrane protein, putative

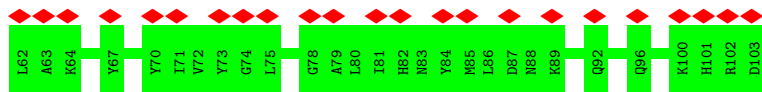
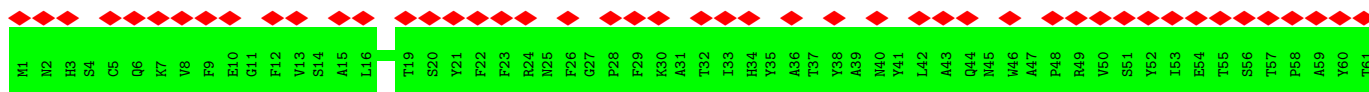


• Molecule 79: NmrA domain-containing protein

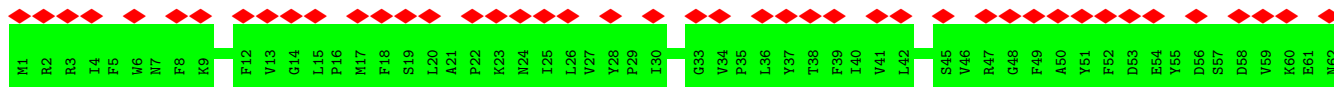
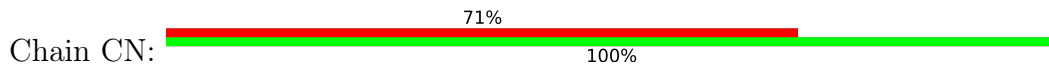


• Molecule 80: Transmembrane protein, putative

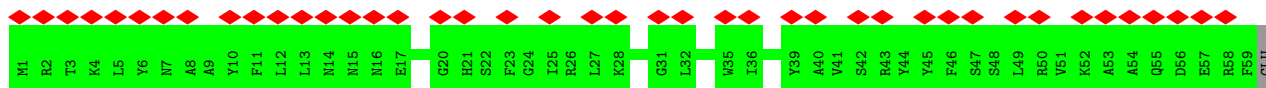




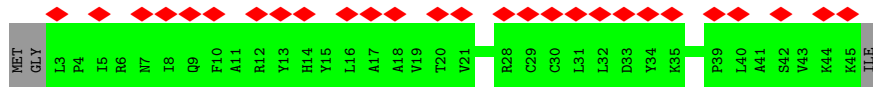
• Molecule 81: Transmembrane protein, putative



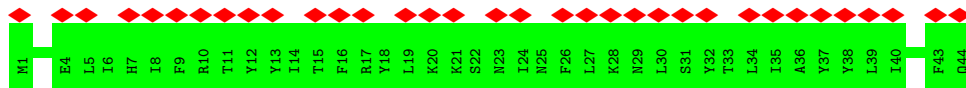
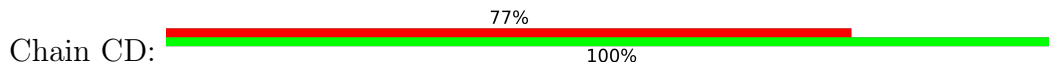
• Molecule 82: Transmembrane protein



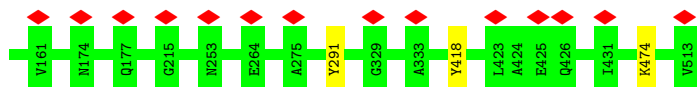
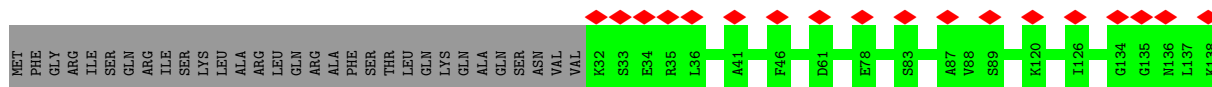
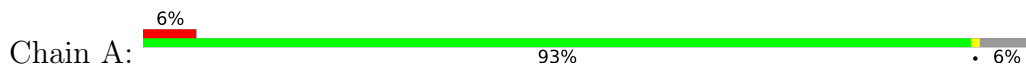
• Molecule 83: SDHTT11



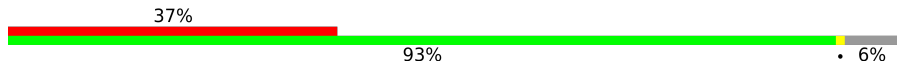
• Molecule 84: succinate dehydrogenase complex iron-sulfur subunit D

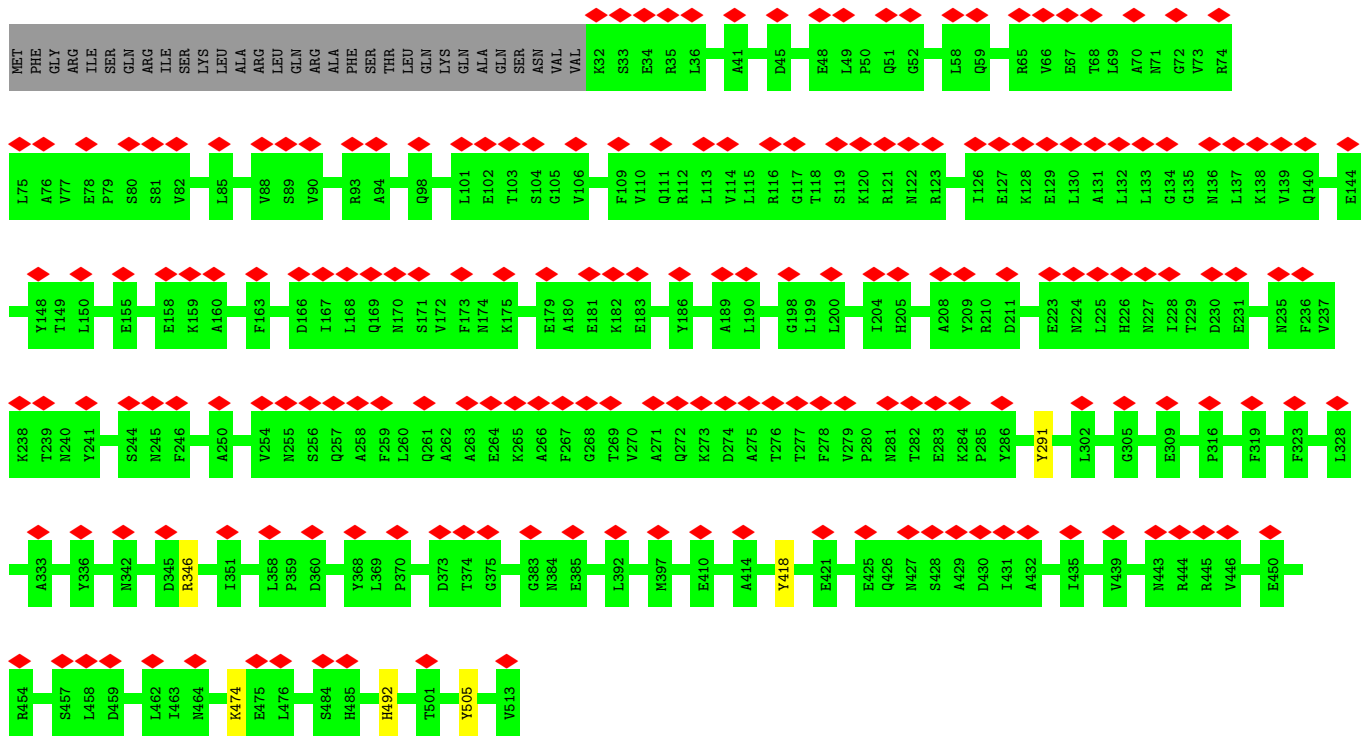


• Molecule 85: Peptidase M16 inactive domain protein



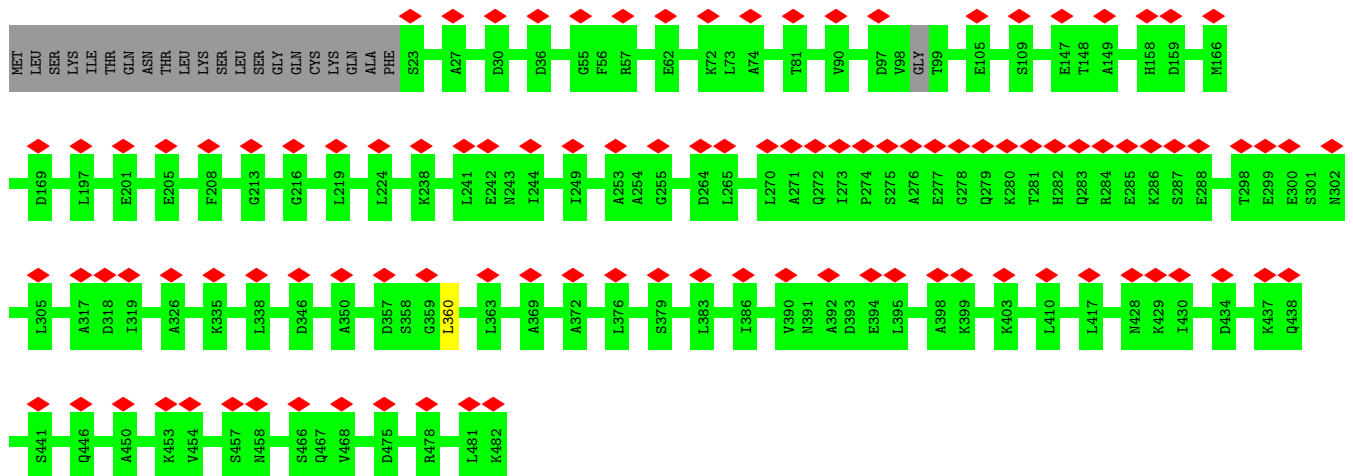
• Molecule 85: Peptidase M16 inactive domain protein

Chain a:  37% 93% 6%

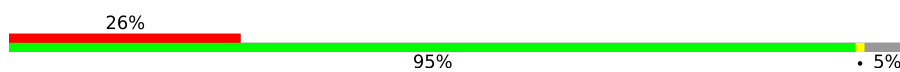


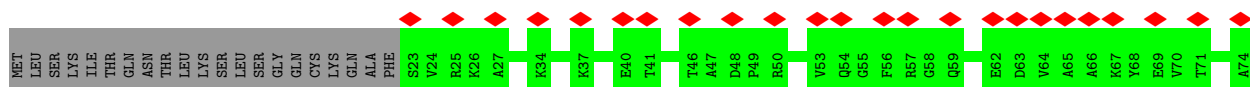
• Molecule 86: M16 family peptidase, putative

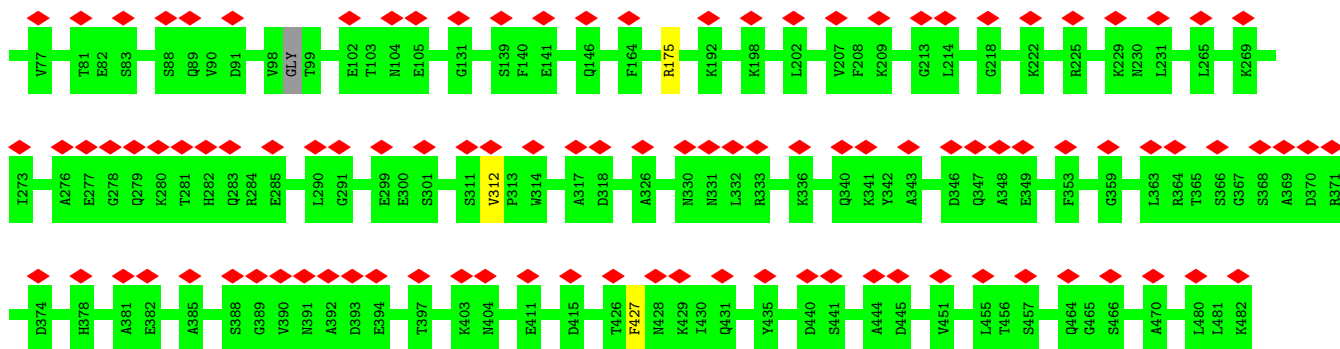
Chain B:  22% 95% 5%



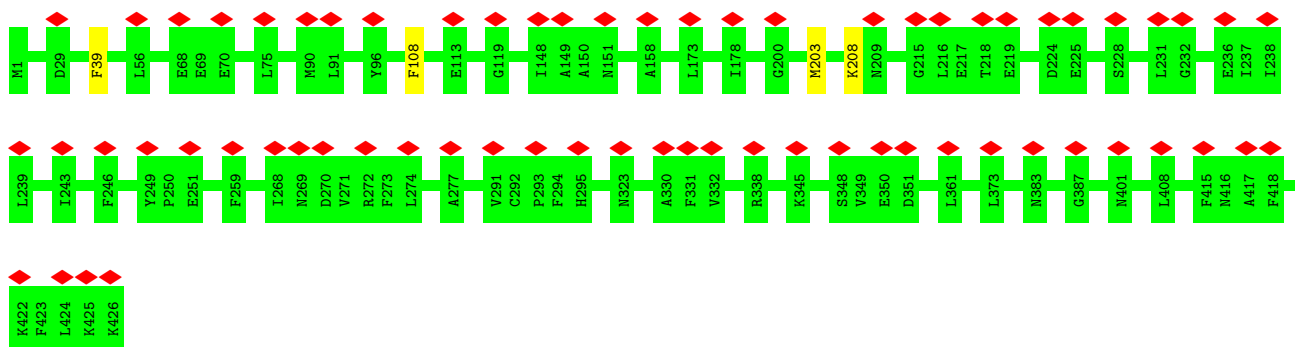
• Molecule 86: M16 family peptidase, putative

Chain b:  26% 95% 5%

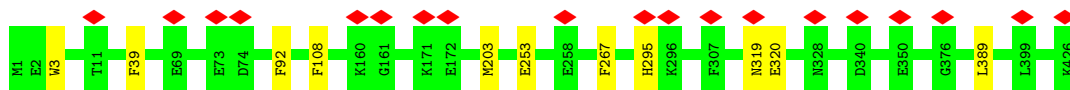




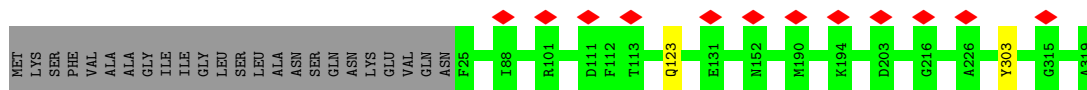
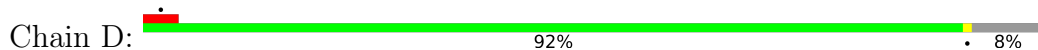
• Molecule 87: Apocytochrome b



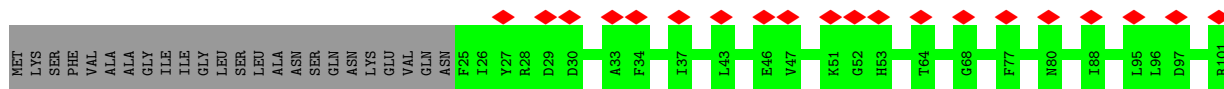
• Molecule 87: Apocytochrome b

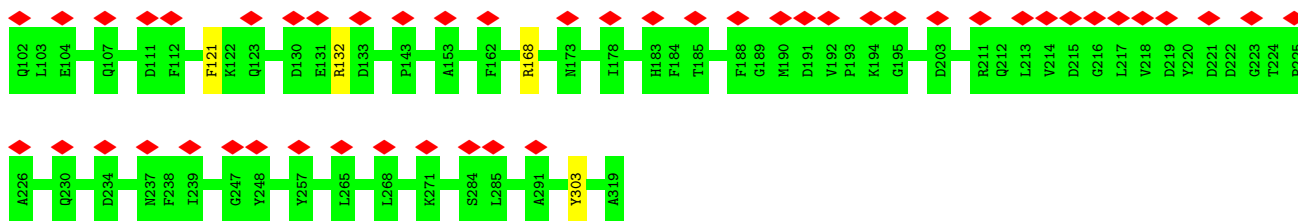


• Molecule 88: Cytochrome protein c1

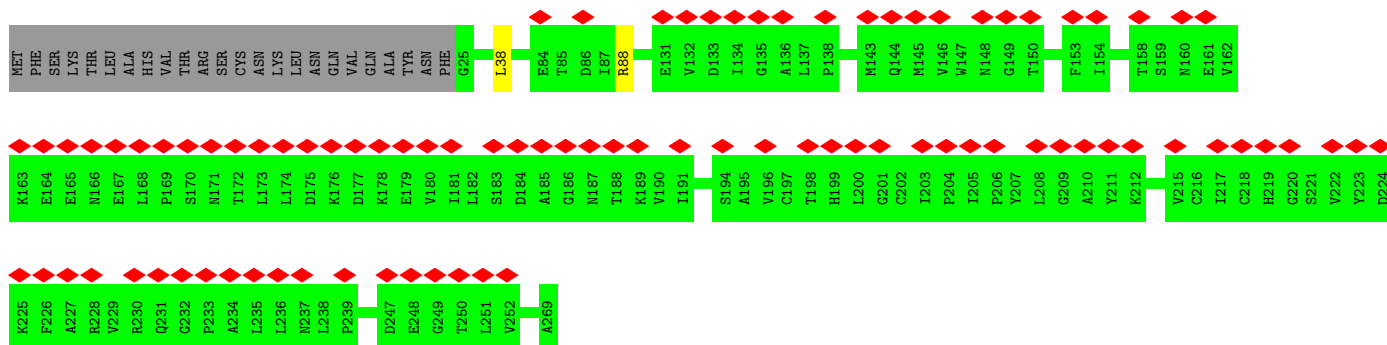
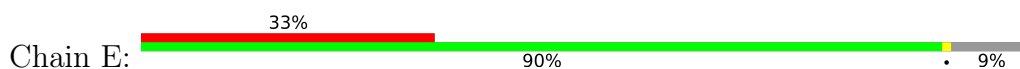


• Molecule 88: Cytochrome protein c1

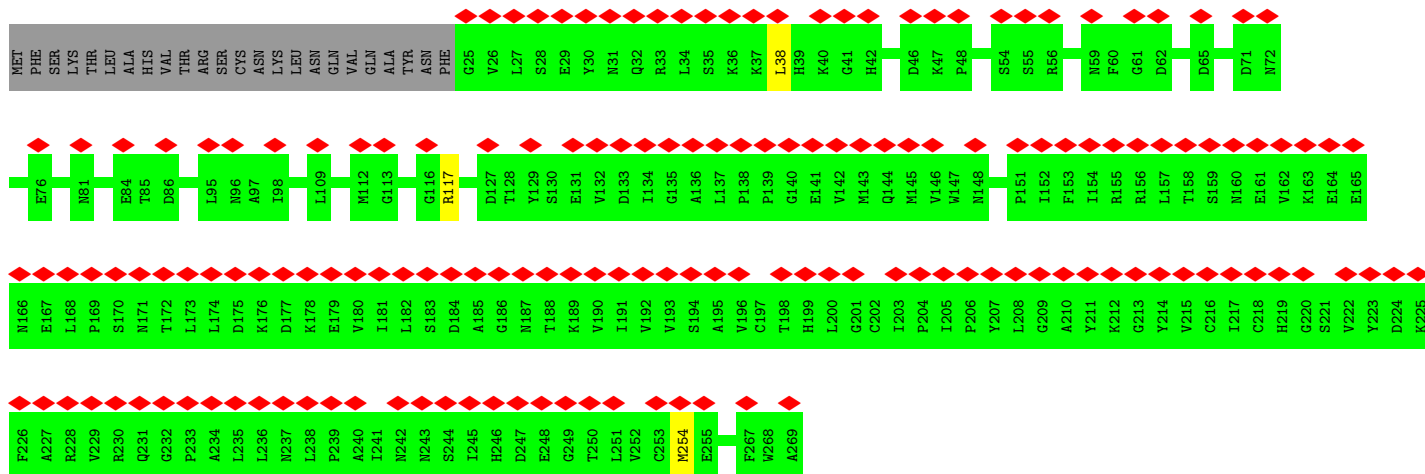
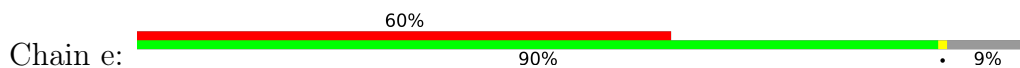




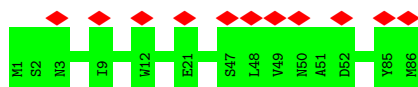
- Molecule 89: Rieske iron-sulfur protein, ubiquinol-cytochrome C reductase iron-sulfur sub-unit



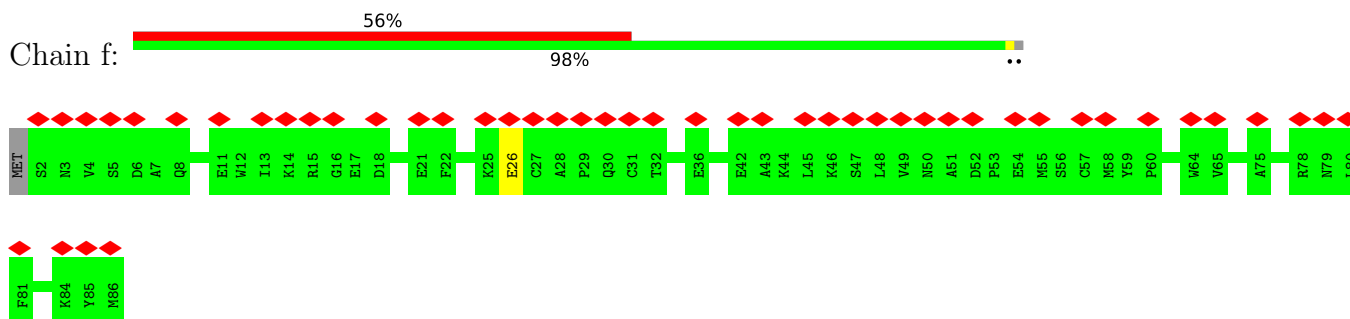
- Molecule 89: Rieske iron-sulfur protein, ubiquinol-cytochrome C reductase iron-sulfur sub-unit



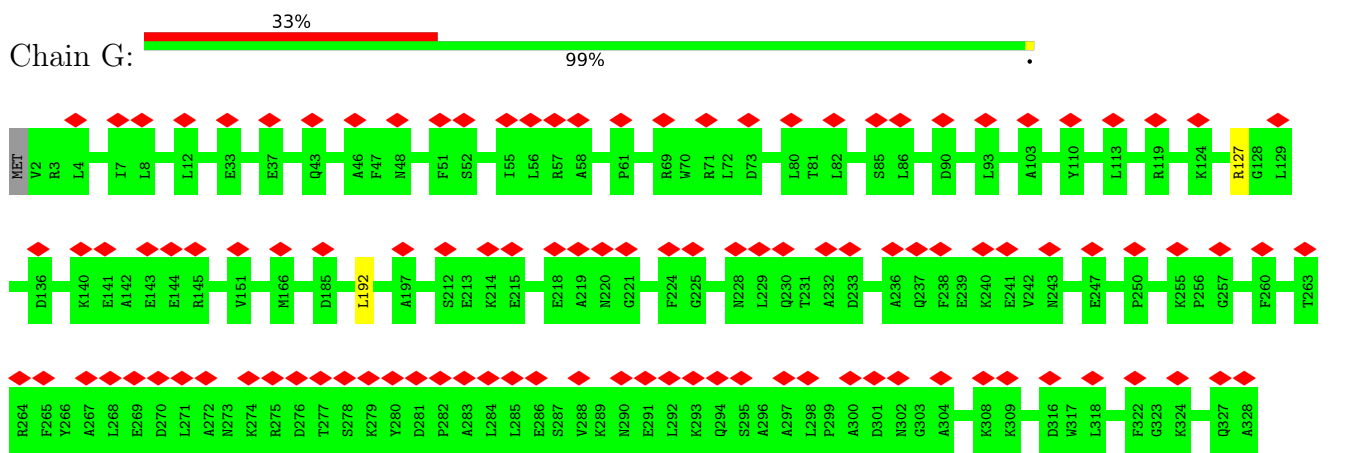
- Molecule 90: Ubiquinol-cytochrome C reductase hinge protein



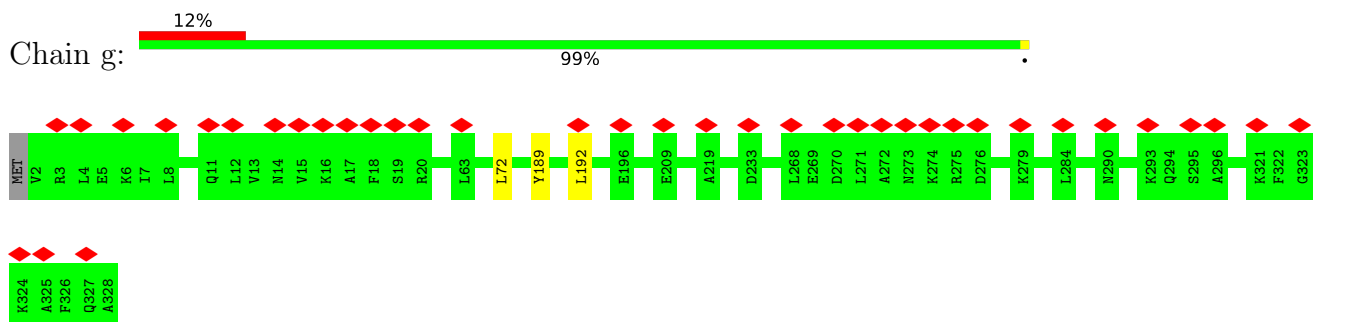
- Molecule 90: Ubiquinol-cytochrome C reductase hinge protein



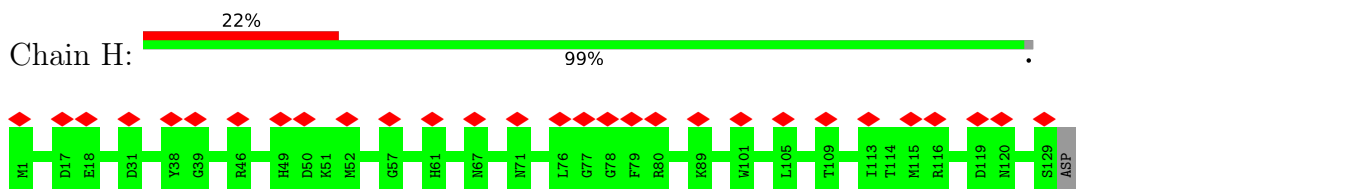
- Molecule 91: UQCRTT1



- Molecule 91: UQCRTT1

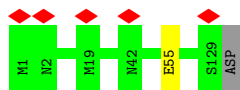


- Molecule 92: Transmembrane protein, putative

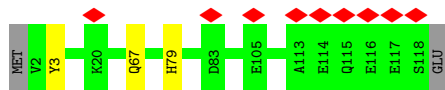
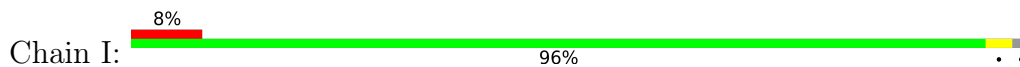


- Molecule 92: Transmembrane protein, putative





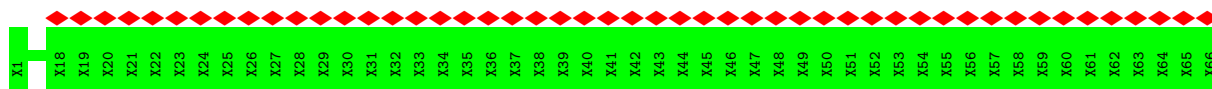
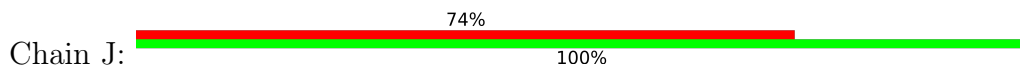
• Molecule 93: Transmembrane protein, putative



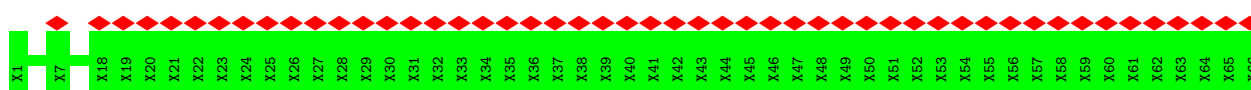
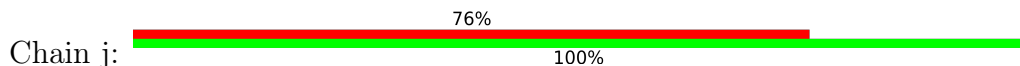
• Molecule 93: Transmembrane protein, putative



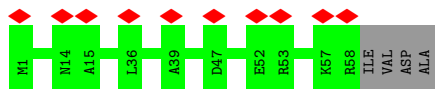
• Molecule 94: UQCRTT3



• Molecule 94: UQCRTT3

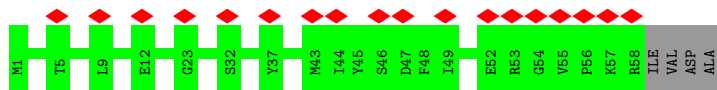


• Molecule 95: Transmembrane protein, putative

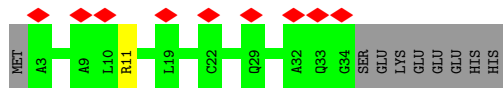
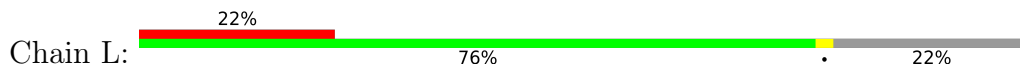


• Molecule 95: Transmembrane protein, putative

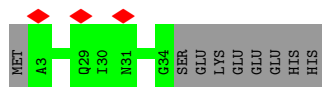
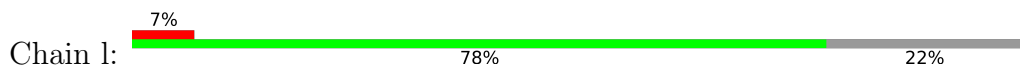




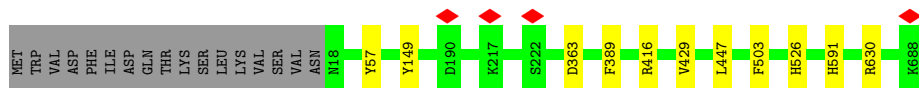
• Molecule 96: UQCRTT2



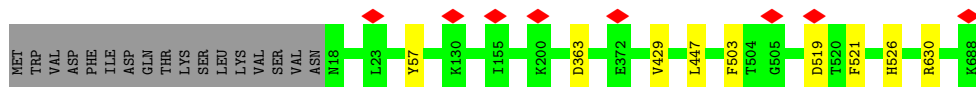
• Molecule 96: UQCRTT2



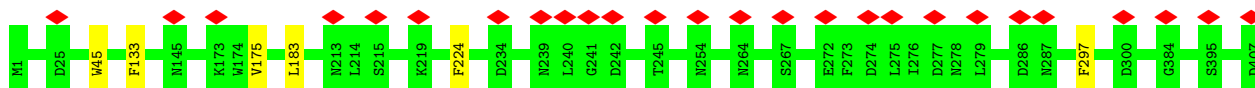
• Molecule 97: Cytochrome c oxidase subunit 1



• Molecule 97: Cytochrome c oxidase subunit 1

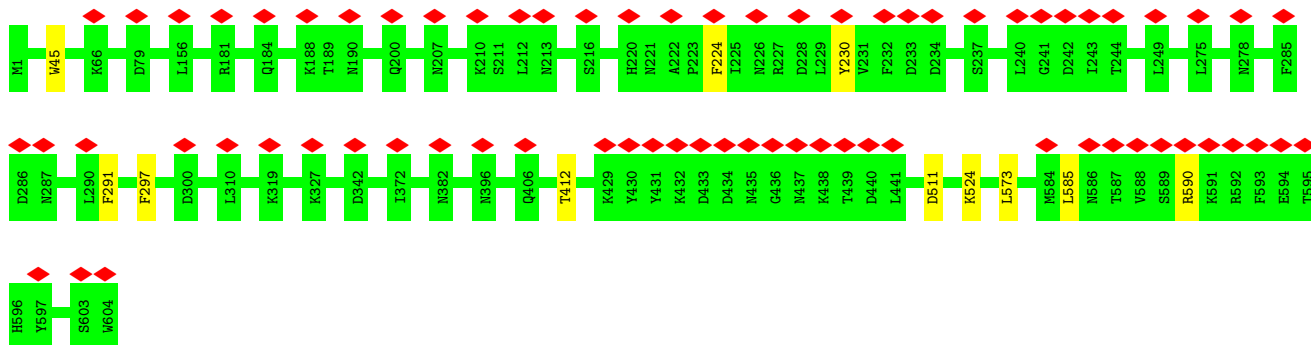


• Molecule 98: Cytochrome c oxidase subunit 2

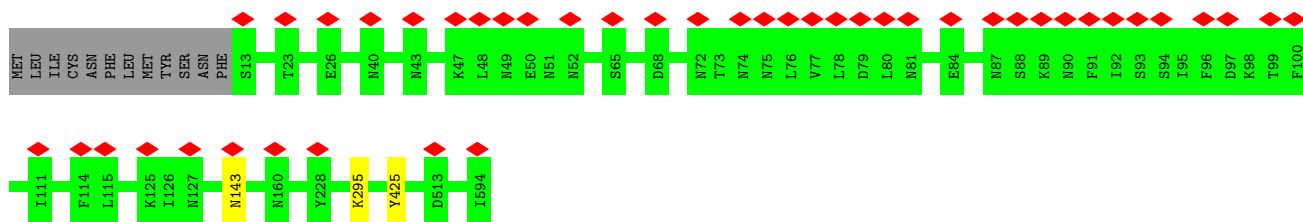


• Molecule 98: Cytochrome c oxidase subunit 2

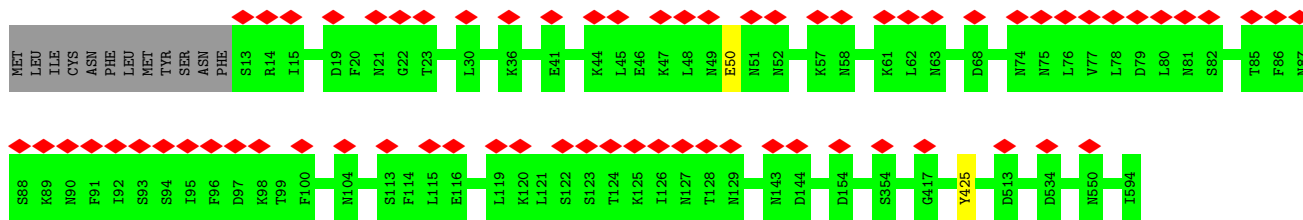




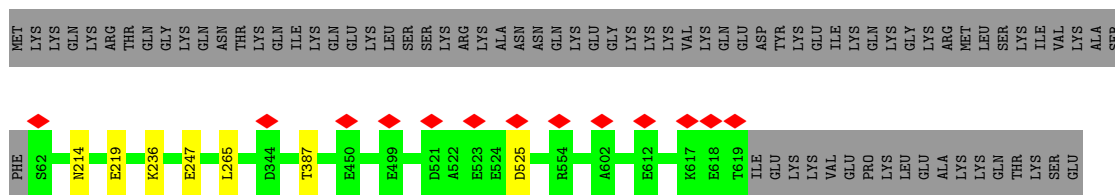
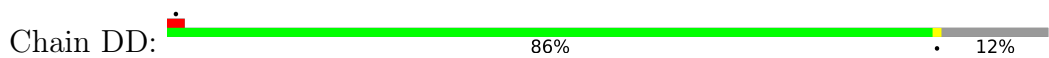
• Molecule 99: Ymf68



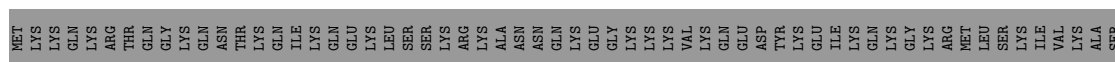
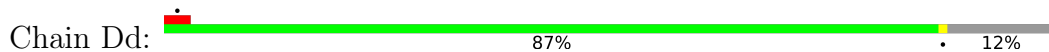
• Molecule 99: Ymf68

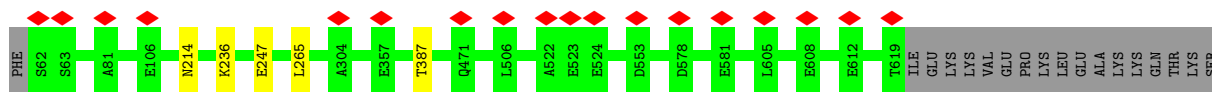


• Molecule 100: Cytochrome C oxidase subunit Vb protein



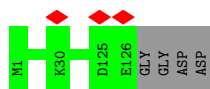
• Molecule 100: Cytochrome C oxidase subunit Vb protein



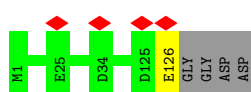


GLU

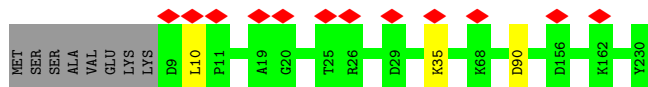
- Molecule 101: Transmembrane protein, putative



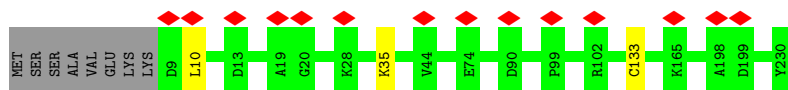
- Molecule 101: Transmembrane protein, putative



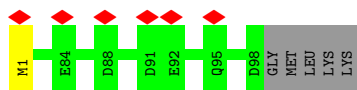
- Molecule 102: Structural protein



- Molecule 102: Structural protein

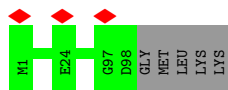


- Molecule 103: Transmembrane protein, putative

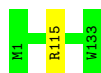


- Molecule 103: Transmembrane protein, putative

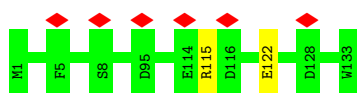




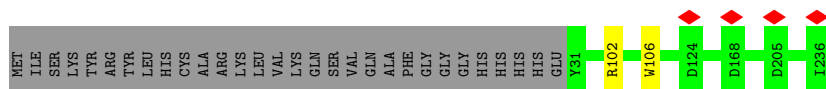
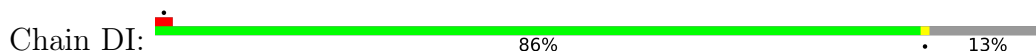
- Molecule 104: Transmembrane protein, putative



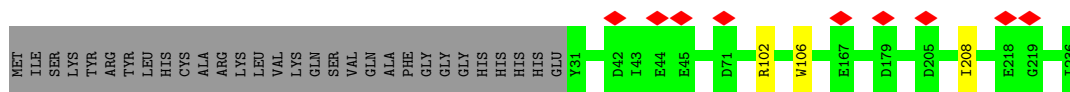
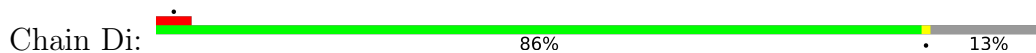
- Molecule 104: Transmembrane protein, putative



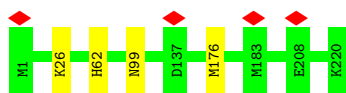
- Molecule 105: Transmembrane protein



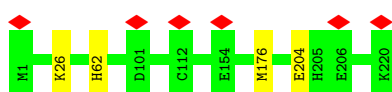
- Molecule 105: Transmembrane protein



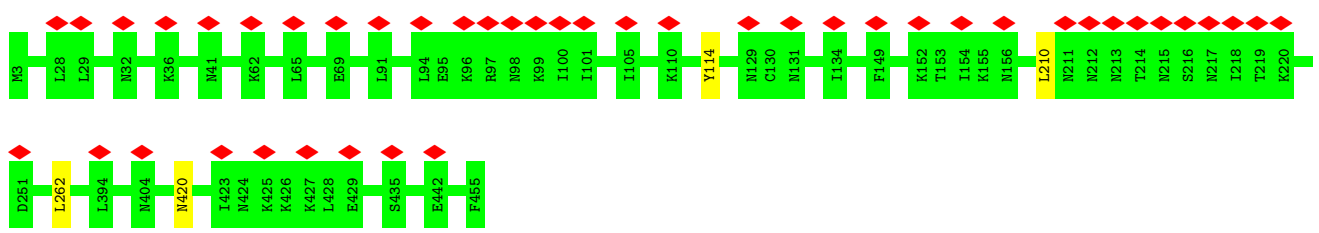
- Molecule 106: Transmembrane protein, putative



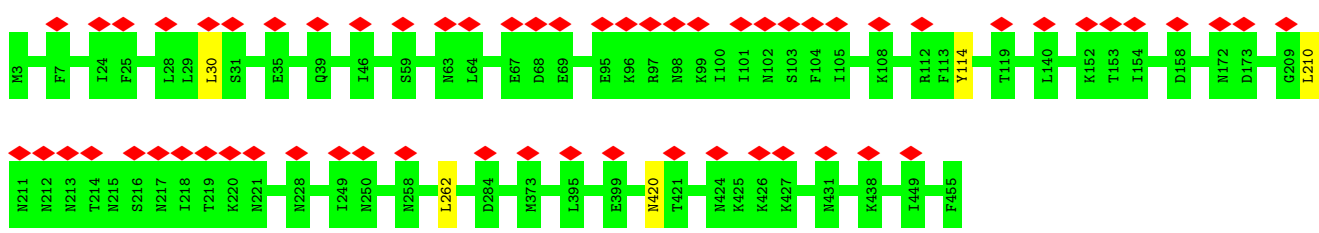
- Molecule 106: Transmembrane protein, putative



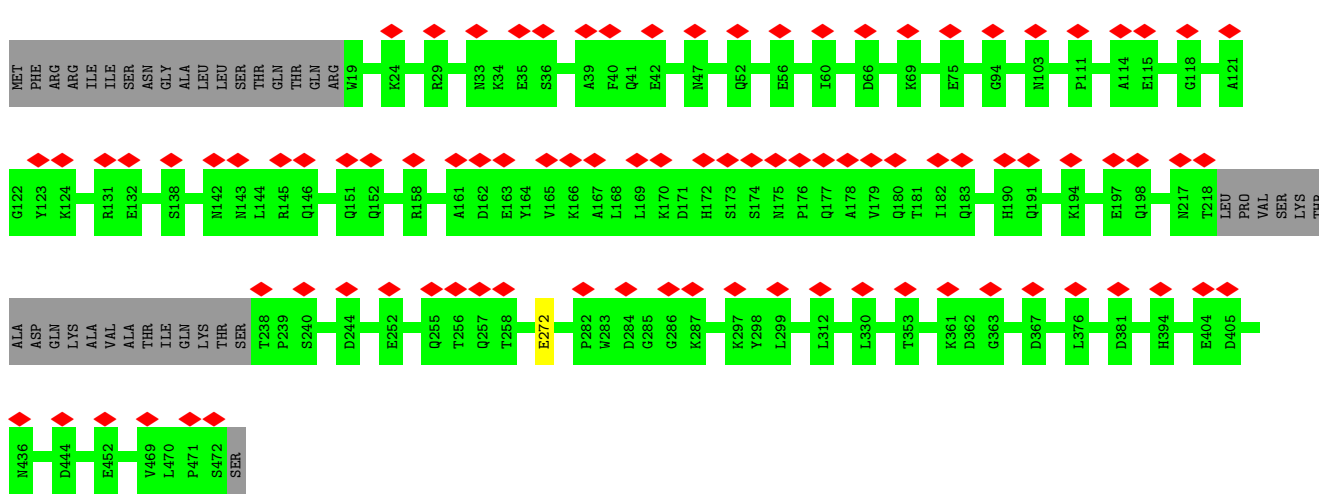
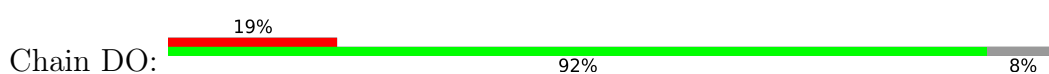
- Molecule 107: CTF/NF-I domain-containing protein



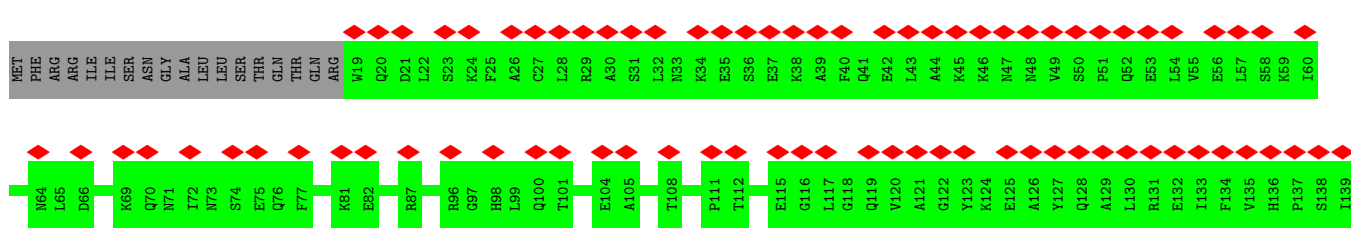
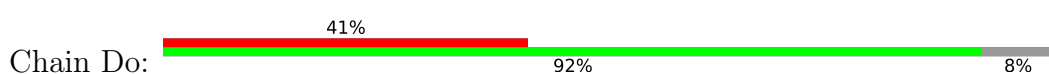
• Molecule 109: Ymf67

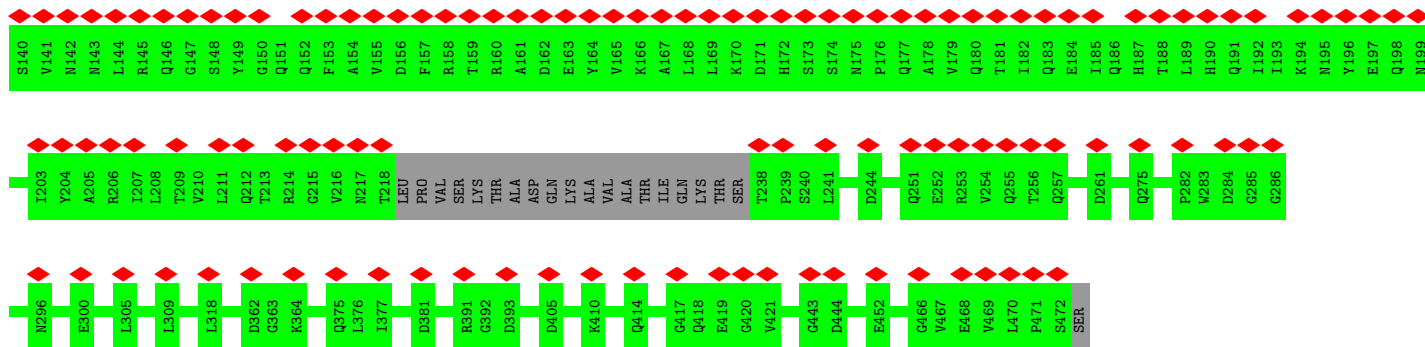


• Molecule 110: Protein phosphatase 2C, putative

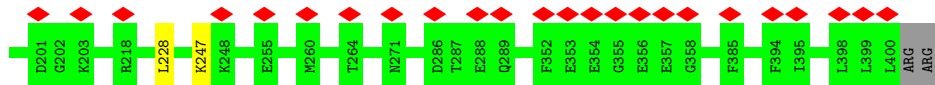
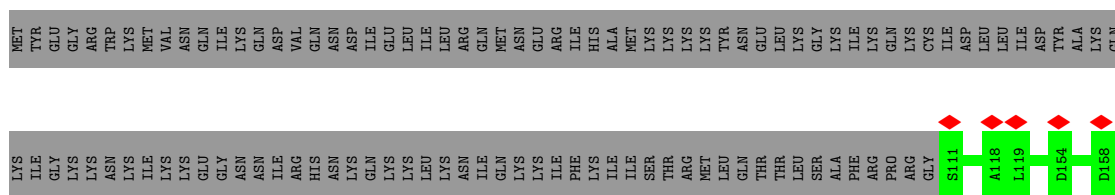
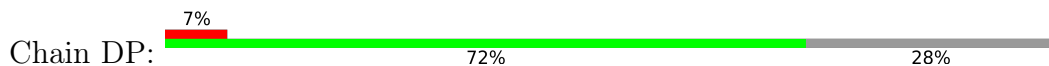


• Molecule 110: Protein phosphatase 2C, putative

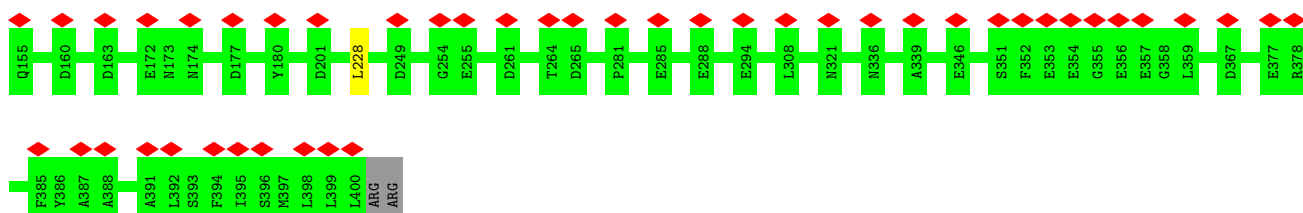
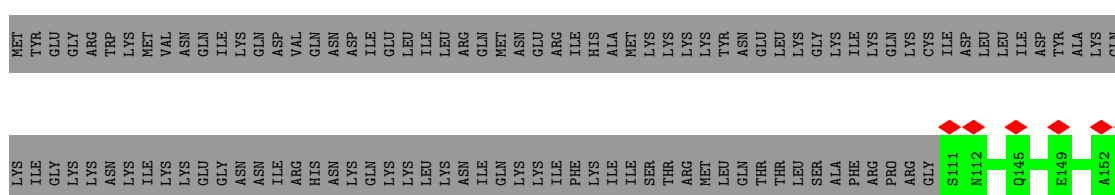
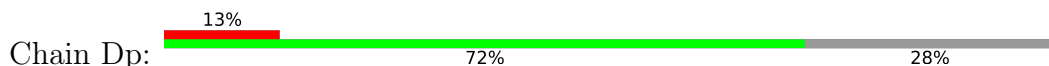




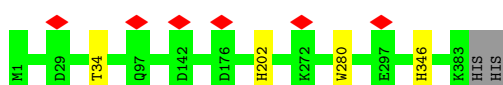
● Molecule 111: SURF1-like protein



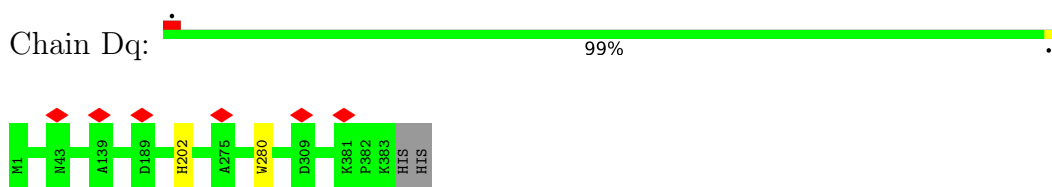
● Molecule 111: SURF1-like protein



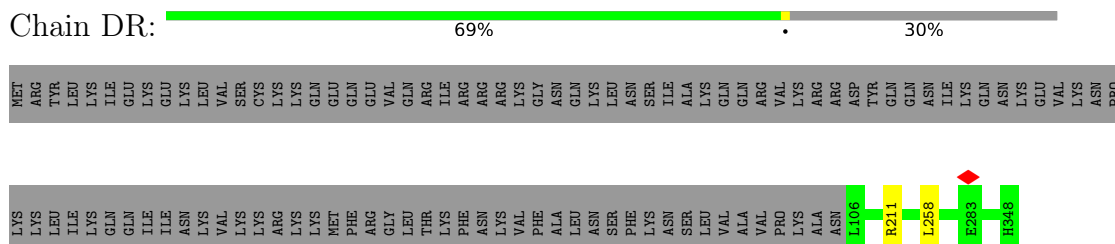
● Molecule 112: TraB family protein



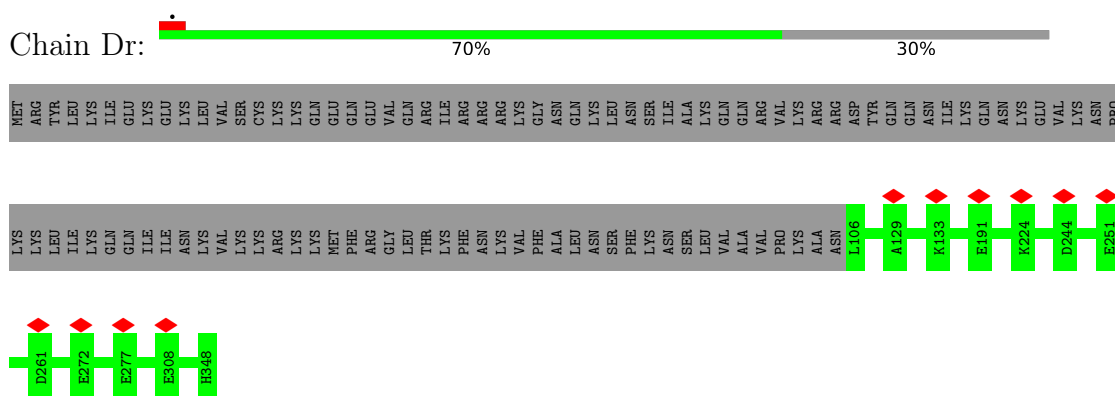
- Molecule 112: TraB family protein



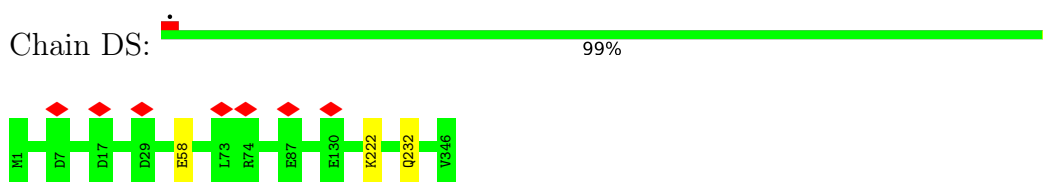
- Molecule 113: Transmembrane protein, putative



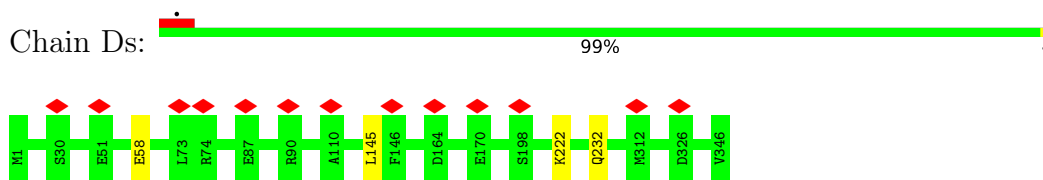
- Molecule 113: Transmembrane protein, putative



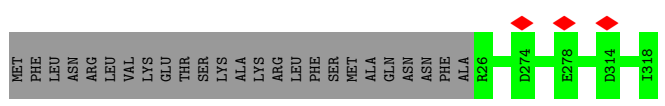
- Molecule 114: Oxoglutarate/malate translocator protein, putative



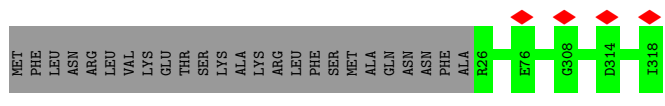
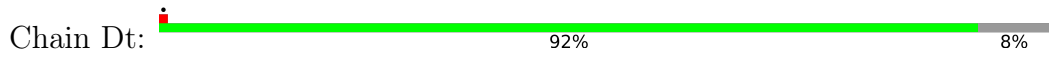
- Molecule 114: Oxoglutarate/malate translocator protein, putative



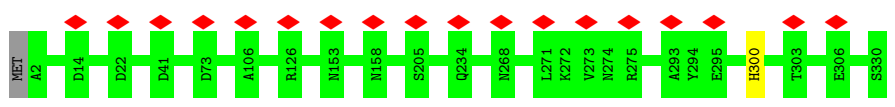
- Molecule 115: NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 8, mitochondrial



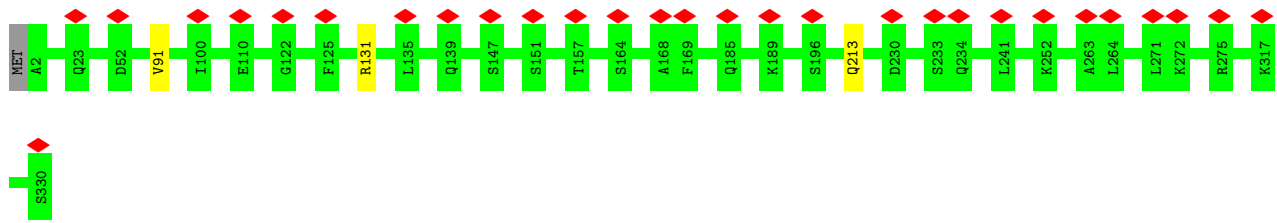
- Molecule 115: NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 8, mitochondrial



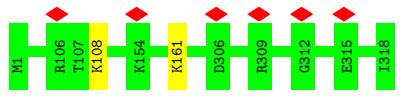
- Molecule 116: Carrier protein



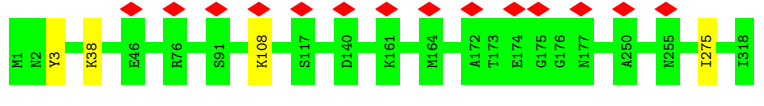
- Molecule 116: Carrier protein



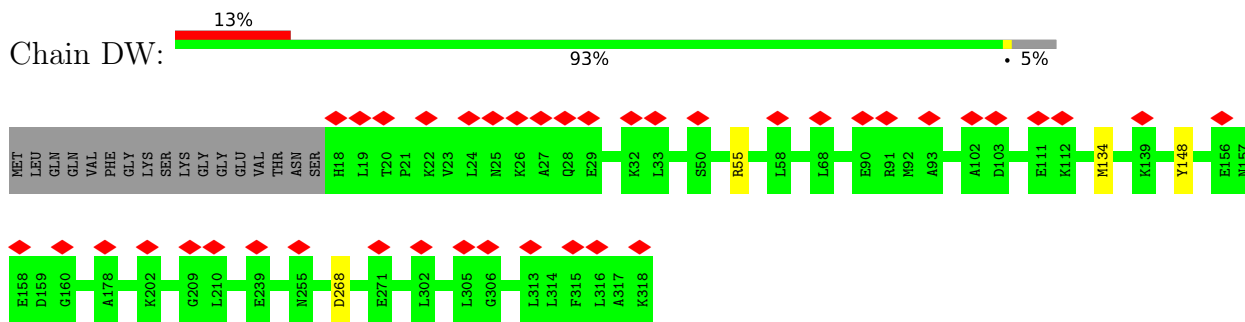
- Molecule 117: 2-oxoglutarate/malate carrier protein



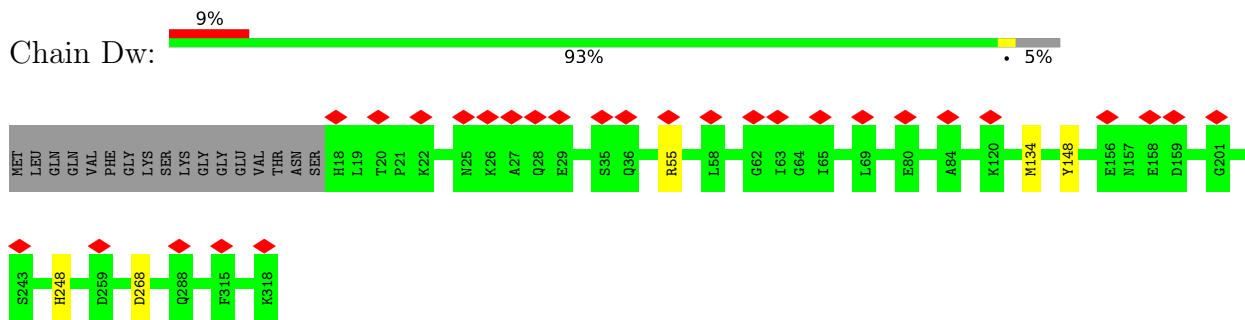
- Molecule 117: 2-oxoglutarate/malate carrier protein



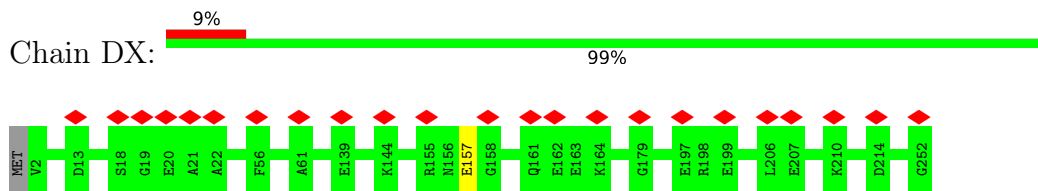
- Molecule 118: SURF1-like protein



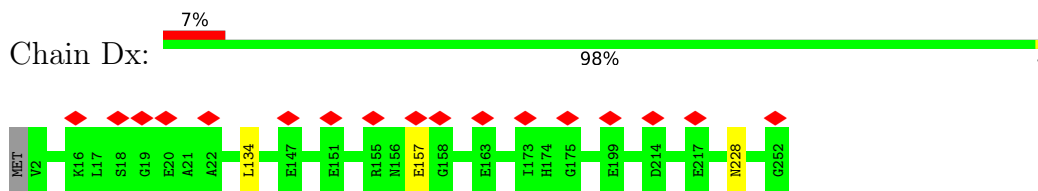
• Molecule 118: SURF1-like protein



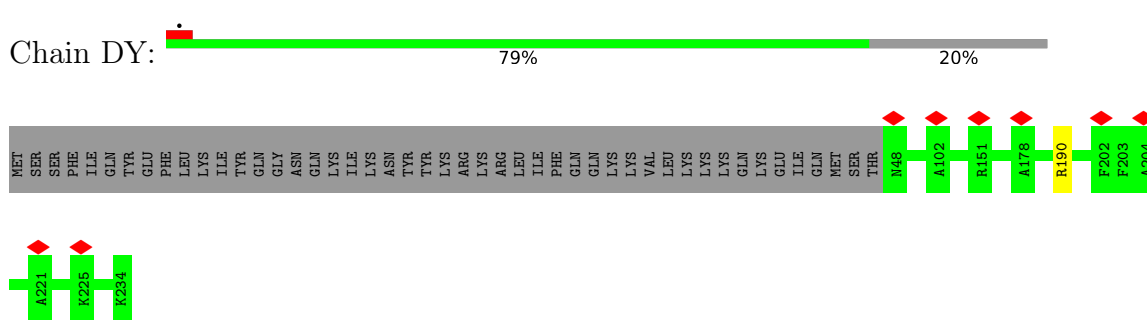
• Molecule 119: COXTT9



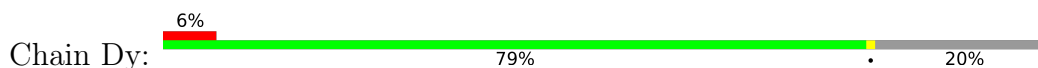
• Molecule 119: COXTT9

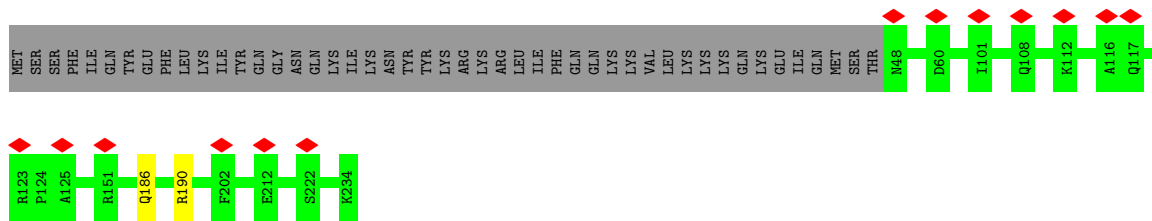


• Molecule 120: COXTT10

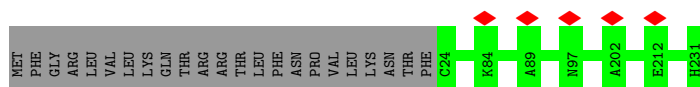


• Molecule 120: COXTT10

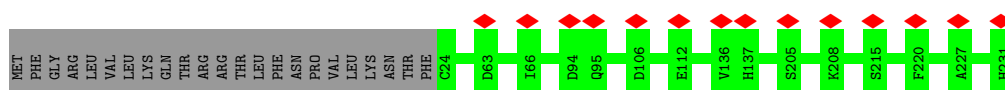




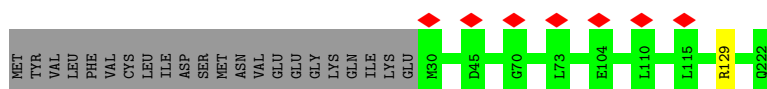
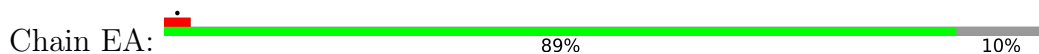
- Molecule 121: 39S ribosomal protein L9, mitochondrial



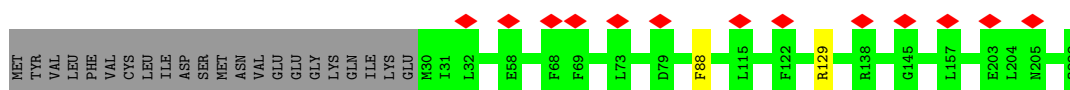
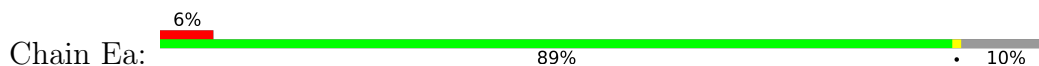
- Molecule 121: 39S ribosomal protein L9, mitochondrial



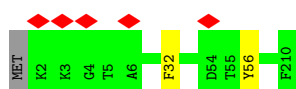
- Molecule 122: COXTT12, Transmembrane protein, Transmembrane protein



- Molecule 122: COXTT12, Transmembrane protein, Transmembrane protein

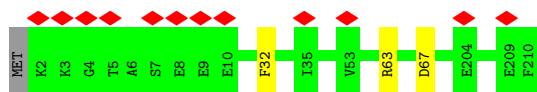


- Molecule 123: Transmembrane protein, putative

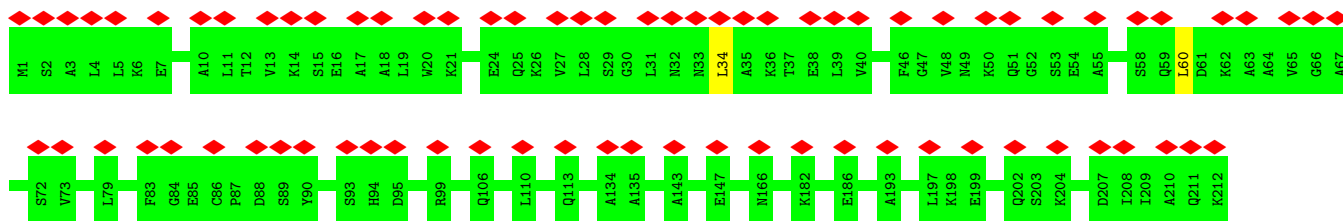


- Molecule 123: Transmembrane protein, putative

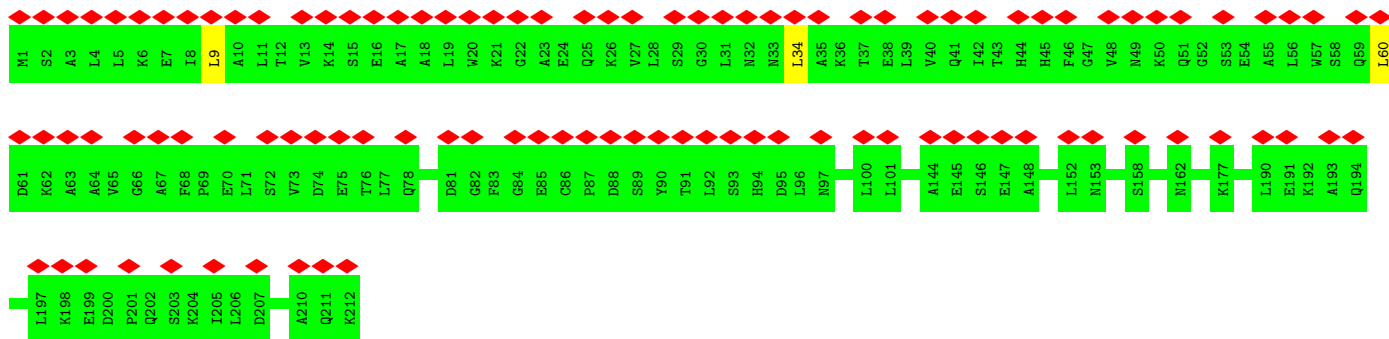




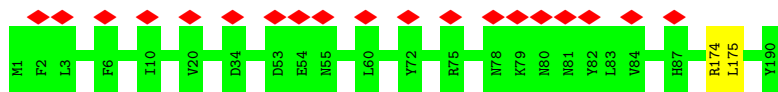
• Molecule 124: COXTT27



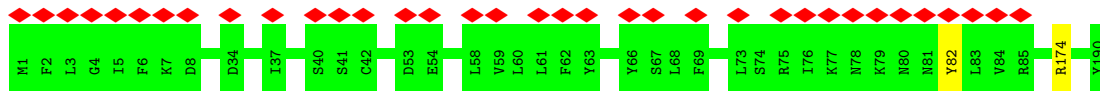
• Molecule 124: COXTT27



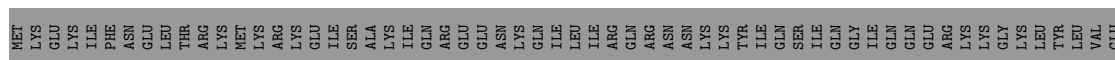
• Molecule 125: Ymf75

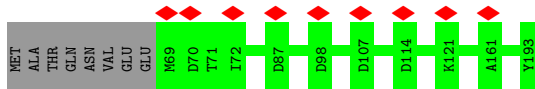


• Molecule 125: Ymf75

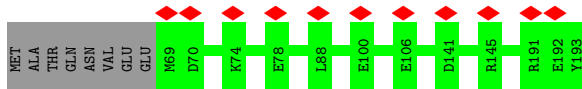
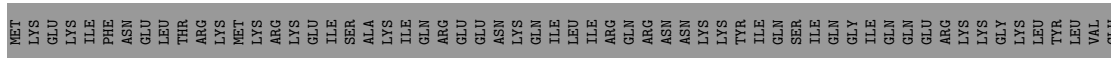


• Molecule 126: Mobilization protein

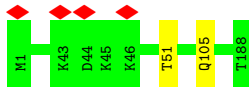




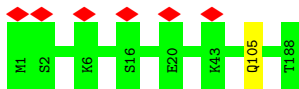
- Molecule 126: Mobilization protein



- Molecule 127: Iron-binding zinc finger CDGSH type protein



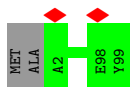
- Molecule 127: Iron-binding zinc finger CDGSH type protein



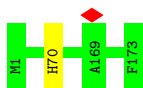
- Molecule 128: COXTT28



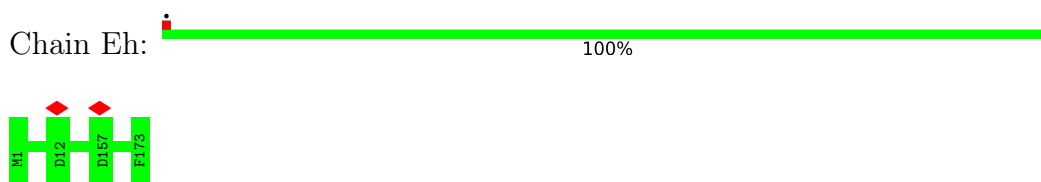
- Molecule 128: COXTT28



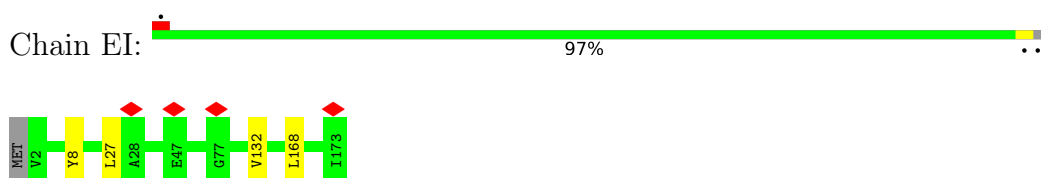
- Molecule 129: Transmembrane protein, putative



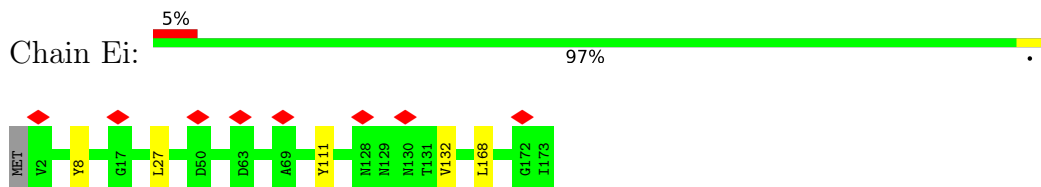
- Molecule 129: Transmembrane protein, putative



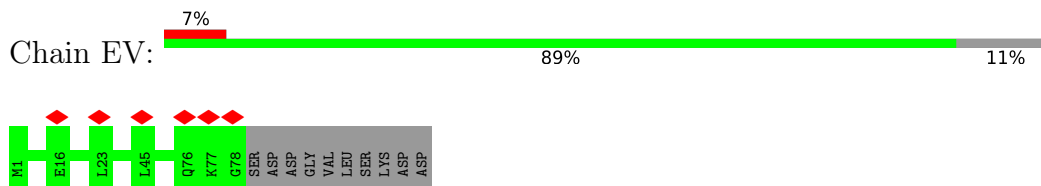
- Molecule 130: Transmembrane protein



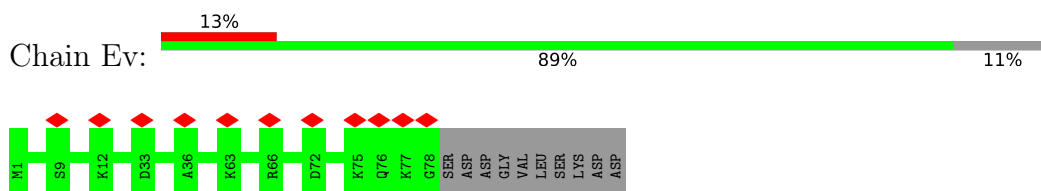
- Molecule 130: Transmembrane protein



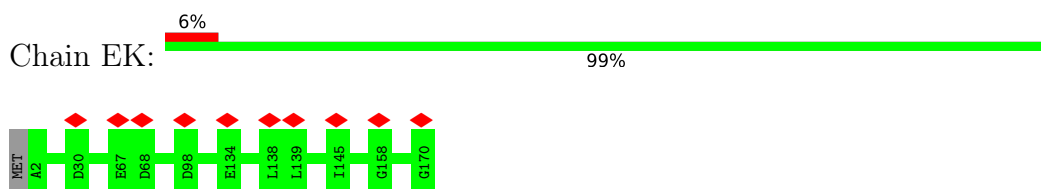
- Molecule 131: Decapping nuclease



- Molecule 131: Decapping nuclease



- Molecule 132: Complex III subunit VII



- Molecule 132: Complex III subunit VII

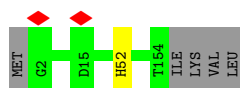




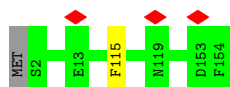
- Molecule 133: Transmembrane protein, putative



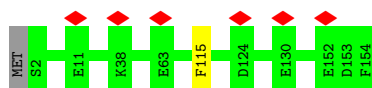
- Molecule 133: Transmembrane protein, putative



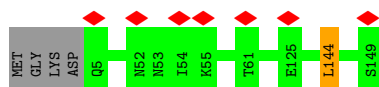
- Molecule 134: Transmembrane protein, putative



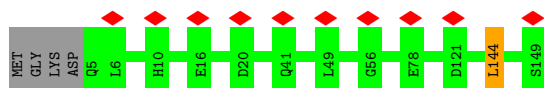
- Molecule 134: Transmembrane protein, putative



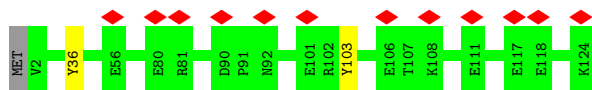
- Molecule 135: COXTT2



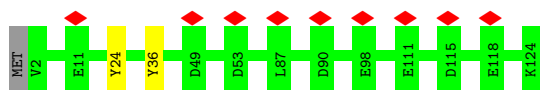
- Molecule 135: COXTT2



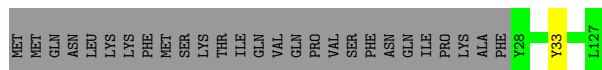
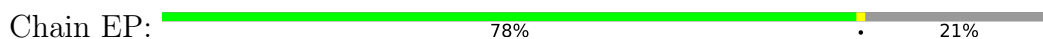
- Molecule 136: Transmembrane protein, putative



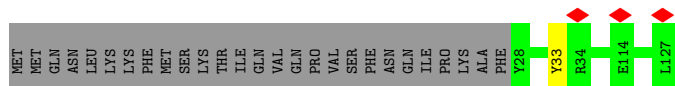
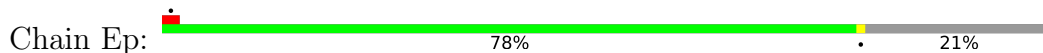
• Molecule 136: Transmembrane protein, putative



• Molecule 137: Phage protein



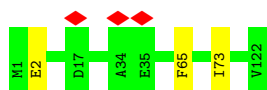
• Molecule 137: Phage protein



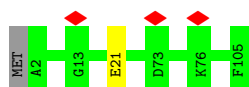
• Molecule 138: Transmembrane protein, putative



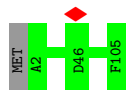
• Molecule 138: Transmembrane protein, putative



• Molecule 139: Lysozyme



• Molecule 139: Lysozyme



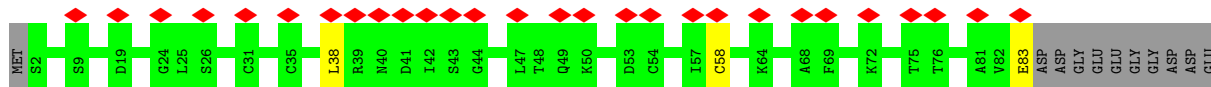
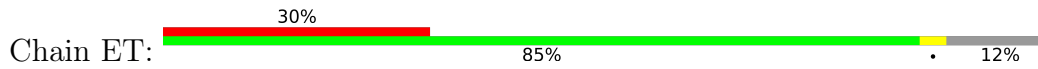
• Molecule 140: Ymf70



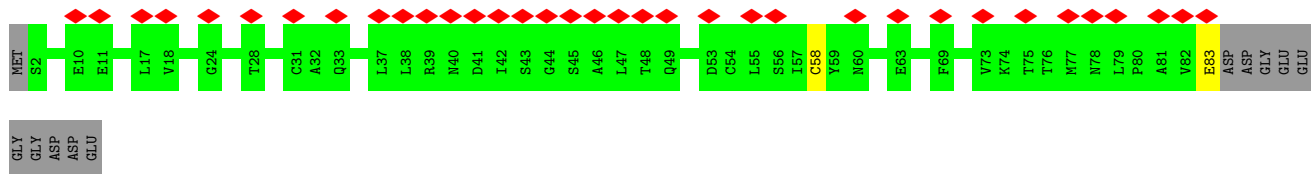
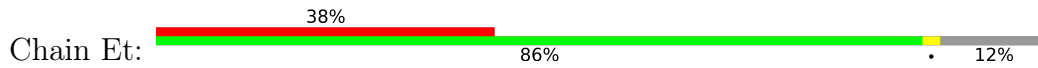
• Molecule 140: Ymf70



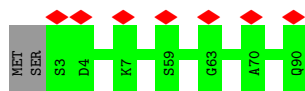
• Molecule 141: Zf-Tim10_DDP domain-containing protein



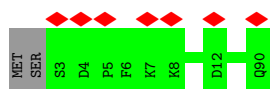
• Molecule 141: Zf-Tim10_DDP domain-containing protein



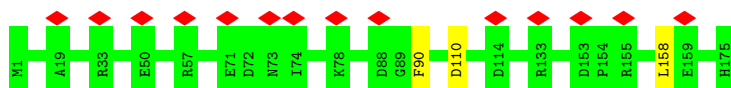
• Molecule 142: ABC transporter



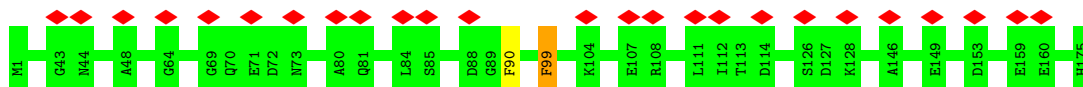
• Molecule 142: ABC transporter



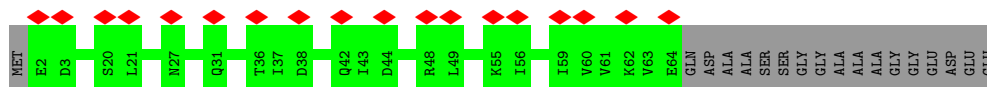
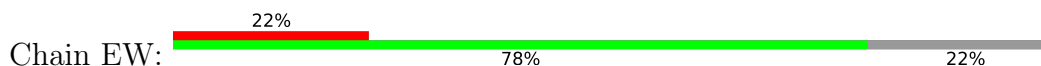
- Molecule 143: YftT domain-containing protein



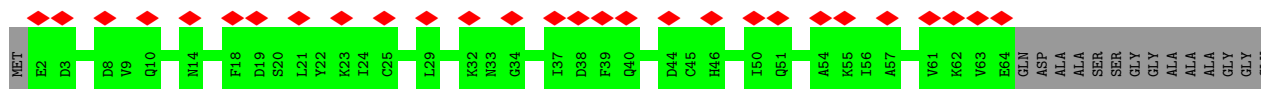
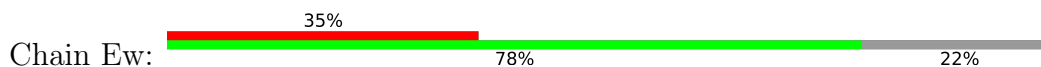
- Molecule 143: YftT domain-containing protein



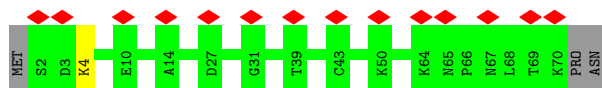
- Molecule 144: Cullin domain-containing protein



- Molecule 144: Cullin domain-containing protein

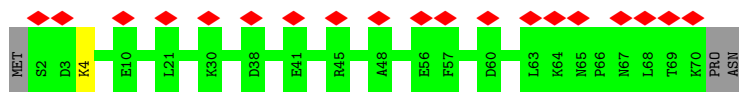


- Molecule 145: Zf-Tim10_DDP domain-containing protein

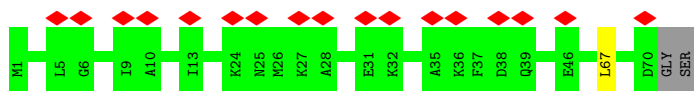


- Molecule 145: Zf-Tim10_DDP domain-containing protein

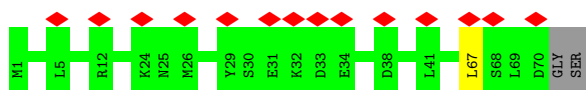




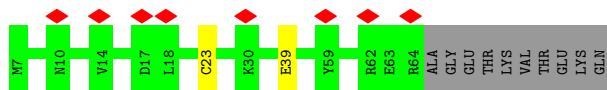
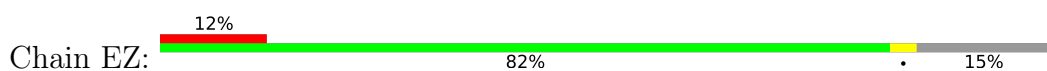
• Molecule 146: Annexin



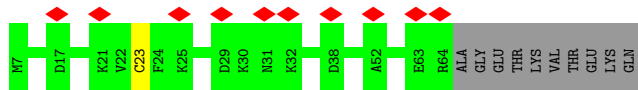
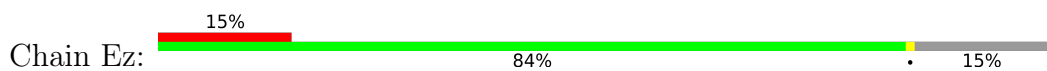
• Molecule 146: Annexin



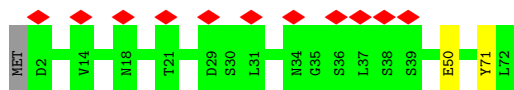
• Molecule 147: Transposase



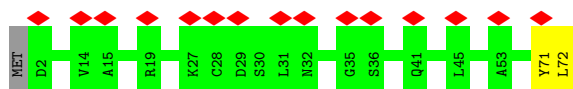
• Molecule 147: Transposase



• Molecule 148: Tim10/DDP family zinc finger protein



• Molecule 148: Tim10/DDP family zinc finger protein



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	138746	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	31	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	6.348	Depositor
Minimum map value	-3.280	Depositor
Average map value	0.011	Depositor
Map value standard deviation	0.240	Depositor
Recommended contour level	0.8	Depositor
Map size (\AA)	600.0, 600.0, 600.0	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.25, 1.25, 1.25	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: FAD, MG, NDP, F3S, AME, HEC, 3PE, ATP, CA, HEA, ADP, CU, UQ8, PC1, TPO, UDP, FES, ZN, PSE, HEM, K, 8Q1, CDL, CUA, LPP, SF4, FMN

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	A0	0.25	0/4166	0.43	0/5634
2	A1	0.24	0/2789	0.45	0/3777
3	A2	0.25	0/2248	0.47	0/3027
4	A3	0.24	0/2308	0.43	0/3134
5	A4	0.24	0/2542	0.42	0/3441
6	A5	0.24	0/2408	0.45	0/3269
7	A6	0.25	0/1963	0.46	0/2658
8	A7	0.25	0/1108	0.40	0/1488
9	A8	0.24	0/1833	0.43	0/2479
10	A9	0.25	0/1935	0.43	0/2616
11	AA	0.26	0/6132	0.39	0/8343
12	AB	0.24	0/5511	0.47	0/7465
13	AC	0.26	0/4303	0.39	0/5844
14	AD	0.25	0/3474	0.47	0/4699
15	AE	0.25	0/3669	0.46	0/4955
16	AF	0.26	0/3168	0.37	0/4307
17	AG	0.24	0/2865	0.46	0/3877
18	AH	0.26	0/2377	0.40	0/3234
19	AI	0.24	0/1899	0.43	0/2563
20	AJ	0.26	0/2224	0.39	0/3025
21	AK	0.25	0/1816	0.46	0/2475
22	AL	0.25	0/1867	0.46	0/2538
23	AM	0.24	0/1801	0.48	0/2449
24	AN	0.24	0/1351	0.44	0/1817
25	AO	0.24	0/1720	0.43	0/2322
26	AP	0.24	0/1654	0.48	0/2240
27	AQ	0.25	0/1636	0.42	0/2214
28	AR	0.25	0/1535	0.47	0/2077
29	AS	0.25	0/1458	0.47	0/1965
30	AT	0.24	0/1310	0.48	0/1779
31	AU	0.26	0/1261	0.47	0/1698

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	AV	0.24	0/941	0.42	0/1272
33	AW	0.24	0/819	0.46	0/1110
34	AX	0.26	0/1061	0.38	0/1441
35	AY	0.24	0/982	0.37	0/1335
36	AZ	0.25	0/790	0.46	0/1066
37	B0	0.25	0/833	0.50	0/1132
38	B1	0.24	0/812	0.44	0/1093
39	B2	0.25	0/776	0.43	0/1048
40	B3	0.25	0/654	0.45	0/884
41	B4	0.25	0/642	0.47	0/865
42	B5	0.26	0/466	0.41	0/630
43	B6	0.26	0/535	0.42	0/727
44	BA	0.24	0/1696	0.41	0/2292
45	BB	0.25	0/1376	0.42	0/1862
46	BC	0.25	0/1479	0.44	0/1996
47	BD	0.24	0/1216	0.44	0/1643
48	BE	0.25	0/1462	0.42	0/1981
49	BF	0.24	0/1503	0.48	0/2018
50	BG	0.24	0/1379	0.48	0/1841
51	BH	0.26	0/1519	0.38	0/2058
52	BI	0.24	0/1203	0.47	0/1630
53	BJ	0.25	0/1234	0.44	0/1662
54	BK	0.25	0/923	0.43	0/1239
55	BL	0.26	0/1223	0.45	0/1648
56	BM	0.25	0/1110	0.46	0/1502
57	BN	0.24	0/1132	0.43	0/1534
58	BO	0.25	0/1120	0.46	0/1500
59	BP	0.26	0/631	0.40	0/860
60	BQ	0.26	0/868	0.43	0/1170
61	BR	0.24	0/747	0.44	0/1011
62	BS	0.26	0/991	0.41	0/1333
63	BT	0.27	0/1106	0.42	0/1504
64	BU	0.24	0/1102	0.46	0/1486
65	BV	0.24	0/1003	0.45	0/1353
66	BW	0.25	0/983	0.40	0/1327
67	BX	0.26	0/821	0.44	0/1111
68	BY	0.27	0/916	0.41	0/1224
69	BZ	0.26	0/873	0.44	0/1175
70	CH	0.24	0/867	0.40	0/1166
71	CM	0.24	0/648	0.49	0/879
72	CL	0.25	0/788	0.42	0/1058
73	CA	0.24	0/4722	0.49	0/6385
74	CI	0.27	0/930	0.39	0/1244

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
75	CB	0.24	0/2355	0.44	0/3191
76	CF	0.26	0/1857	0.44	0/2512
77	CG	0.25	0/1699	0.40	0/2296
78	CK	0.26	0/821	0.45	0/1112
79	CE	0.24	0/2615	0.44	0/3553
80	CJ	0.26	0/875	0.39	0/1186
81	CN	0.26	0/530	0.45	0/719
82	CC	0.26	0/501	0.47	0/674
83	CO	0.26	0/375	0.45	0/508
84	CD	0.25	0/406	0.40	0/546
85	A	0.25	0/3933	0.49	0/5338
85	a	0.24	0/3933	0.48	0/5338
86	B	0.24	0/3616	0.45	0/4897
86	b	0.24	0/3616	0.45	0/4897
87	C	0.25	0/3716	0.41	0/5046
87	c	0.25	0/3716	0.41	0/5046
88	D	0.26	0/2580	0.47	0/3491
88	d	0.25	0/2580	0.46	0/3491
89	E	0.24	0/2015	0.47	0/2732
89	e	0.24	0/2015	0.47	0/2732
90	F	0.25	0/700	0.44	0/942
90	f	0.24	0/692	0.43	0/932
91	G	0.24	0/2846	0.47	0/3839
91	g	0.25	0/2846	0.48	0/3839
92	H	0.25	0/1133	0.48	0/1524
92	h	0.27	0/1133	0.51	0/1524
93	I	0.25	0/1029	0.41	0/1397
93	i	0.25	0/1029	0.40	0/1397
95	K	0.26	0/522	0.43	0/712
95	k	0.26	0/522	0.43	0/712
96	L	0.27	0/269	0.41	0/366
96	l	0.27	0/269	0.42	0/366
97	DA	0.24	0/5748	0.43	0/7793
97	Da	0.25	0/5748	0.45	0/7793
98	DB	0.24	0/5282	0.46	2/7159 (0.0%)
98	Db	0.24	0/5282	0.46	2/7159 (0.0%)
99	DC	0.25	0/5256	0.41	0/7142
99	Dc	0.25	0/5256	0.42	0/7142
100	DD	0.24	0/4734	0.46	2/6387 (0.0%)
100	Dd	0.25	0/4734	0.46	2/6387 (0.0%)
101	DE	0.25	0/1116	0.42	0/1512
101	De	0.25	0/1116	0.41	0/1512
102	DF	0.25	0/1977	0.48	2/2673 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
102	Df	0.25	0/1977	0.49	2/2673 (0.1%)
103	DG	0.24	0/906	0.45	0/1230
103	Dg	0.25	0/906	0.46	0/1230
104	DH	0.24	0/1199	0.46	0/1621
104	Dh	0.24	0/1199	0.46	0/1621
105	DI	0.24	0/1829	0.42	0/2486
105	Di	0.24	0/1829	0.42	0/2486
106	DJ	0.24	0/1950	0.44	0/2647
106	Dj	0.24	0/1950	0.44	0/2647
107	DK	0.24	0/1100	0.47	2/1495 (0.1%)
107	Dk	0.25	0/1100	0.47	2/1495 (0.1%)
108	DM	0.24	0/3910	0.44	0/5320
108	Dm	0.24	0/3910	0.44	0/5320
109	DN	0.24	0/3963	0.39	0/5359
109	Dn	0.25	0/3963	0.40	0/5359
110	DO	0.24	0/3505	0.42	0/4745
110	Do	0.24	0/3505	0.42	0/4745
111	DP	0.24	0/2433	0.46	0/3307
111	Dp	0.24	0/2433	0.46	0/3307
112	DQ	0.24	0/3247	0.44	0/4410
112	Dq	0.24	0/3247	0.45	0/4410
113	DR	0.24	0/2077	0.45	2/2824 (0.1%)
113	Dr	0.24	0/2077	0.46	2/2824 (0.1%)
114	DS	0.25	0/2950	0.44	0/4003
114	Ds	0.25	0/2950	0.44	0/4003
115	DT	0.24	0/2518	0.45	0/3433
115	Dt	0.24	0/2518	0.45	0/3433
116	DU	0.24	0/2689	0.42	0/3657
116	Du	0.24	0/2689	0.42	0/3657
117	DV	0.24	0/2622	0.44	0/3554
117	Dv	0.24	0/2622	0.45	0/3554
118	DW	0.24	0/2449	0.44	0/3312
118	Dw	0.24	0/2449	0.45	0/3312
119	DX	0.24	0/2171	0.44	0/2930
119	Dx	0.25	0/2171	0.44	0/2930
120	DY	0.23	0/1619	0.44	0/2198
120	Dy	0.23	0/1619	0.45	0/2198
121	DZ	0.23	0/1752	0.41	0/2372
121	Dz	0.23	0/1752	0.41	0/2372
122	EA	0.24	0/1709	0.43	0/2321
122	Ea	0.24	0/1709	0.44	0/2321
123	EB	0.24	0/1793	0.42	0/2418
123	Eb	0.25	0/1793	0.42	0/2418

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
124	EC	0.24	0/1673	0.45	4/2258 (0.2%)
124	Ec	0.24	0/1673	0.46	4/2258 (0.2%)
125	ED	0.25	0/1708	0.38	0/2306
125	Ed	0.26	0/1708	0.38	0/2306
126	EE	0.23	0/1066	0.44	0/1432
126	Ee	0.24	0/1066	0.45	0/1432
127	EF	0.26	0/1562	0.45	0/2123
127	Ef	0.26	0/1562	0.46	0/2123
128	EG	0.24	0/786	0.43	0/1060
128	Eg	0.25	0/786	0.44	0/1060
129	EH	0.24	0/1471	0.43	0/1995
129	Eh	0.25	0/1471	0.44	0/1995
130	EI	0.25	0/1442	0.49	4/1952 (0.2%)
130	Ei	0.25	0/1442	0.50	4/1952 (0.2%)
131	EV	0.23	0/645	0.41	0/866
131	Ev	0.24	0/645	0.42	0/866
132	EK	0.23	0/1410	0.42	0/1900
132	Ek	0.24	0/1410	0.43	0/1900
133	EL	0.24	0/1335	0.44	0/1810
133	El	0.25	0/1335	0.45	0/1810
134	EM	0.24	0/1335	0.46	0/1794
134	Em	0.24	0/1335	0.47	0/1794
135	EN	0.24	0/1270	0.50	2/1724 (0.1%)
135	En	0.24	0/1270	0.51	2/1724 (0.1%)
136	EO	0.24	0/1137	0.45	0/1545
136	Eo	0.24	0/1137	0.45	0/1545
137	EP	0.23	0/837	0.49	0/1133
137	Ep	0.24	0/837	0.49	0/1133
138	EQ	0.23	0/1035	0.42	0/1403
138	Eq	0.24	0/1035	0.43	0/1403
139	ER	0.24	0/874	0.46	0/1182
139	Er	0.24	0/874	0.46	0/1182
140	ES	0.26	0/802	0.40	0/1087
140	Es	0.26	0/802	0.41	0/1087
141	ET	0.24	0/654	0.42	0/878
141	Et	0.24	0/654	0.43	0/878
142	EU	0.24	0/744	0.44	0/1003
142	Eu	0.24	0/744	0.45	0/1003
143	EJ	0.24	0/1437	0.42	0/1941
143	Ej	0.25	0/1437	0.43	0/1941
144	EW	0.24	0/523	0.41	0/705
144	Ew	0.24	0/523	0.41	0/705
145	EX	0.23	0/564	0.41	0/757

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
145	Ex	0.23	0/564	0.42	0/757
146	EY	0.25	0/573	0.48	2/770 (0.3%)
146	Ey	0.25	0/573	0.50	2/770 (0.3%)
147	EZ	0.24	0/502	0.44	0/676
147	Ez	0.25	0/502	0.43	0/676
148	FA	0.22	0/554	0.39	0/746
148	Fa	0.23	0/554	0.40	0/746
149	DL	0.25	0/2984	0.45	0/4047
149	Dl	0.25	0/2984	0.44	0/4047
All	All	0.25	0/382811	0.44	44/518361 (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
143	Ej	0	1

There are no bond length outliers.

The worst 5 of 44 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
146	EY	67	LEU	CB-CG-CD2	6.21	121.56	111.00
146	Ey	67	LEU	CB-CG-CD2	6.17	121.49	111.00
130	Ei	168	LEU	CB-CG-CD2	6.15	121.45	111.00
100	Dd	265	LEU	CB-CG-CD2	6.11	121.38	111.00
130	EI	168	LEU	CB-CG-CD2	6.07	121.31	111.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
143	Ej	99	PHE	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

5.3.1 Protein backbone

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	A0	501/516 (97%)	487 (97%)	14 (3%)	0	100	100
2	A1	336/362 (93%)	330 (98%)	6 (2%)	0	100	100
3	A2	263/317 (83%)	257 (98%)	6 (2%)	0	100	100
4	A3	289/333 (87%)	287 (99%)	2 (1%)	0	100	100
5	A4	309/311 (99%)	305 (99%)	4 (1%)	0	100	100
6	A5	280/282 (99%)	279 (100%)	1 (0%)	0	100	100
7	A6	228/251 (91%)	224 (98%)	4 (2%)	0	100	100
8	A7	131/238 (55%)	129 (98%)	2 (2%)	0	100	100
9	A8	215/217 (99%)	211 (98%)	4 (2%)	0	100	100
10	A9	229/231 (99%)	226 (99%)	3 (1%)	0	100	100
11	AA	711/750 (95%)	694 (98%)	16 (2%)	1 (0%)	51	82
12	AB	686/718 (96%)	674 (98%)	12 (2%)	0	100	100
13	AC	503/505 (100%)	489 (97%)	14 (3%)	0	100	100
14	AD	439/474 (93%)	427 (97%)	12 (3%)	0	100	100
15	AE	439/442 (99%)	431 (98%)	8 (2%)	0	100	100
16	AF	357/360 (99%)	349 (98%)	8 (2%)	0	100	100
17	AG	344/346 (99%)	340 (99%)	4 (1%)	0	100	100
18	AH	281/284 (99%)	273 (97%)	8 (3%)	0	100	100
19	AI	229/274 (84%)	227 (99%)	2 (1%)	0	100	100
20	AJ	252/255 (99%)	245 (97%)	7 (3%)	0	100	100
21	AK	228/257 (89%)	219 (96%)	9 (4%)	0	100	100
22	AL	216/236 (92%)	209 (97%)	7 (3%)	0	100	100
23	AM	229/233 (98%)	223 (97%)	6 (3%)	0	100	100
24	AN	155/206 (75%)	154 (99%)	1 (1%)	0	100	100
25	AO	196/198 (99%)	192 (98%)	4 (2%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	AP	189/194 (97%)	182 (96%)	7 (4%)	0	100	100
27	AQ	185/189 (98%)	181 (98%)	4 (2%)	0	100	100
28	AR	179/185 (97%)	178 (99%)	1 (1%)	0	100	100
29	AS	170/172 (99%)	169 (99%)	1 (1%)	0	100	100
30	AT	159/162 (98%)	154 (97%)	5 (3%)	0	100	100
31	AU	147/150 (98%)	144 (98%)	3 (2%)	0	100	100
32	AV	110/138 (80%)	108 (98%)	2 (2%)	0	100	100
33	AW	96/133 (72%)	95 (99%)	1 (1%)	0	100	100
34	AX	119/121 (98%)	115 (97%)	4 (3%)	0	100	100
35	AY	114/116 (98%)	114 (100%)	0	0	100	100
36	AZ	92/103 (89%)	89 (97%)	3 (3%)	0	100	100
37	B0	91/94 (97%)	91 (100%)	0	0	100	100
38	B1	90/93 (97%)	89 (99%)	1 (1%)	0	100	100
39	B2	91/94 (97%)	90 (99%)	1 (1%)	0	100	100
40	B3	71/83 (86%)	68 (96%)	3 (4%)	0	100	100
41	B4	71/73 (97%)	71 (100%)	0	0	100	100
42	B5	52/71 (73%)	52 (100%)	0	0	100	100
43	B6	57/59 (97%)	54 (95%)	3 (5%)	0	100	100
44	BA	197/212 (93%)	192 (98%)	5 (2%)	0	100	100
45	BB	165/214 (77%)	164 (99%)	1 (1%)	0	100	100
46	BC	171/207 (83%)	168 (98%)	3 (2%)	0	100	100
47	BD	146/205 (71%)	145 (99%)	1 (1%)	0	100	100
48	BE	166/189 (88%)	159 (96%)	7 (4%)	0	100	100
49	BF	175/188 (93%)	166 (95%)	9 (5%)	0	100	100
50	BG	158/175 (90%)	153 (97%)	5 (3%)	0	100	100
51	BH	176/178 (99%)	172 (98%)	4 (2%)	0	100	100
52	BI	147/172 (86%)	146 (99%)	1 (1%)	0	100	100
53	BJ	142/166 (86%)	142 (100%)	0	0	100	100
54	BK	107/144 (74%)	105 (98%)	2 (2%)	0	100	100
55	BL	140/143 (98%)	139 (99%)	1 (1%)	0	100	100
56	BM	126/135 (93%)	119 (94%)	7 (6%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
57	BN	131/135 (97%)	129 (98%)	2 (2%)	0	100	100
58	BO	134/136 (98%)	133 (99%)	1 (1%)	0	100	100
59	BP	70/129 (54%)	69 (99%)	1 (1%)	0	100	100
60	BQ	99/127 (78%)	97 (98%)	2 (2%)	0	100	100
61	BR	89/132 (67%)	88 (99%)	1 (1%)	0	100	100
62	BS	118/126 (94%)	115 (98%)	3 (2%)	0	100	100
63	BT	123/125 (98%)	122 (99%)	1 (1%)	0	100	100
64	BU	132/134 (98%)	130 (98%)	2 (2%)	0	100	100
65	BV	123/125 (98%)	121 (98%)	2 (2%)	0	100	100
66	BW	116/120 (97%)	112 (97%)	4 (3%)	0	100	100
67	BX	94/113 (83%)	94 (100%)	0	0	100	100
68	BY	98/100 (98%)	94 (96%)	4 (4%)	0	100	100
69	BZ	100/102 (98%)	100 (100%)	0	0	100	100
70	CH	108/195 (55%)	108 (100%)	0	0	100	100
71	CM	72/76 (95%)	72 (100%)	0	0	100	100
72	CL	86/89 (97%)	84 (98%)	2 (2%)	0	100	100
73	CA	597/636 (94%)	580 (97%)	16 (3%)	1 (0%)	47	78
74	CI	112/114 (98%)	111 (99%)	1 (1%)	0	100	100
75	CB	283/312 (91%)	277 (98%)	6 (2%)	0	100	100
76	CF	216/296 (73%)	212 (98%)	4 (2%)	0	100	100
77	CG	194/198 (98%)	191 (98%)	3 (2%)	0	100	100
78	CK	91/93 (98%)	88 (97%)	3 (3%)	0	100	100
79	CE	319/322 (99%)	301 (94%)	16 (5%)	2 (1%)	25	58
80	CJ	101/103 (98%)	100 (99%)	1 (1%)	0	100	100
81	CN	60/62 (97%)	58 (97%)	2 (3%)	0	100	100
82	CC	57/60 (95%)	57 (100%)	0	0	100	100
83	CO	41/46 (89%)	41 (100%)	0	0	100	100
84	CD	42/44 (96%)	42 (100%)	0	0	100	100
85	A	480/513 (94%)	464 (97%)	16 (3%)	0	100	100
85	a	480/513 (94%)	469 (98%)	11 (2%)	0	100	100
86	B	456/482 (95%)	449 (98%)	7 (2%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
86	b	456/482 (95%)	451 (99%)	5 (1%)	0	100	100
87	C	424/426 (100%)	416 (98%)	8 (2%)	0	100	100
87	c	424/426 (100%)	415 (98%)	9 (2%)	0	100	100
88	D	293/319 (92%)	288 (98%)	5 (2%)	0	100	100
88	d	293/319 (92%)	288 (98%)	5 (2%)	0	100	100
89	E	243/269 (90%)	237 (98%)	6 (2%)	0	100	100
89	e	243/269 (90%)	240 (99%)	3 (1%)	0	100	100
90	F	84/86 (98%)	84 (100%)	0	0	100	100
90	f	83/86 (96%)	81 (98%)	2 (2%)	0	100	100
91	G	325/328 (99%)	317 (98%)	8 (2%)	0	100	100
91	g	325/328 (99%)	322 (99%)	3 (1%)	0	100	100
92	H	127/130 (98%)	124 (98%)	3 (2%)	0	100	100
92	h	127/130 (98%)	127 (100%)	0	0	100	100
93	I	115/119 (97%)	113 (98%)	2 (2%)	0	100	100
93	i	115/119 (97%)	115 (100%)	0	0	100	100
95	K	56/62 (90%)	55 (98%)	1 (2%)	0	100	100
95	k	56/62 (90%)	56 (100%)	0	0	100	100
96	L	30/41 (73%)	30 (100%)	0	0	100	100
96	l	30/41 (73%)	30 (100%)	0	0	100	100
97	DA	669/688 (97%)	655 (98%)	14 (2%)	0	100	100
97	Da	669/688 (97%)	655 (98%)	14 (2%)	0	100	100
98	DB	602/604 (100%)	589 (98%)	13 (2%)	0	100	100
98	Db	602/604 (100%)	591 (98%)	11 (2%)	0	100	100
99	DC	580/594 (98%)	569 (98%)	10 (2%)	1 (0%)	47	78
99	Dc	580/594 (98%)	568 (98%)	12 (2%)	0	100	100
100	DD	552/637 (87%)	549 (100%)	3 (0%)	0	100	100
100	Dd	552/637 (87%)	548 (99%)	4 (1%)	0	100	100
101	DE	124/130 (95%)	121 (98%)	3 (2%)	0	100	100
101	De	124/130 (95%)	121 (98%)	3 (2%)	0	100	100
102	DF	220/230 (96%)	215 (98%)	5 (2%)	0	100	100
102	Df	220/230 (96%)	215 (98%)	5 (2%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
103	DG	96/103 (93%)	95 (99%)	1 (1%)	0	100	100
103	Dg	96/103 (93%)	93 (97%)	3 (3%)	0	100	100
104	DH	131/133 (98%)	124 (95%)	7 (5%)	0	100	100
104	Dh	131/133 (98%)	125 (95%)	6 (5%)	0	100	100
105	DI	201/236 (85%)	197 (98%)	4 (2%)	0	100	100
105	Di	201/236 (85%)	196 (98%)	5 (2%)	0	100	100
106	DJ	218/220 (99%)	217 (100%)	1 (0%)	0	100	100
106	Dj	218/220 (99%)	216 (99%)	2 (1%)	0	100	100
107	DK	128/990 (13%)	121 (94%)	7 (6%)	0	100	100
107	Dk	128/990 (13%)	121 (94%)	7 (6%)	0	100	100
108	DM	453/490 (92%)	449 (99%)	4 (1%)	0	100	100
108	Dm	453/490 (92%)	448 (99%)	5 (1%)	0	100	100
109	DN	451/453 (100%)	443 (98%)	8 (2%)	0	100	100
109	Dn	451/453 (100%)	442 (98%)	9 (2%)	0	100	100
110	DO	431/473 (91%)	428 (99%)	3 (1%)	0	100	100
110	Do	431/473 (91%)	428 (99%)	3 (1%)	0	100	100
111	DP	288/402 (72%)	283 (98%)	5 (2%)	0	100	100
111	Dp	288/402 (72%)	279 (97%)	9 (3%)	0	100	100
112	DQ	381/385 (99%)	375 (98%)	6 (2%)	0	100	100
112	Dq	381/385 (99%)	368 (97%)	13 (3%)	0	100	100
113	DR	241/348 (69%)	234 (97%)	7 (3%)	0	100	100
113	Dr	241/348 (69%)	238 (99%)	3 (1%)	0	100	100
114	DS	344/346 (99%)	343 (100%)	1 (0%)	0	100	100
114	Ds	344/346 (99%)	342 (99%)	2 (1%)	0	100	100
115	DT	291/318 (92%)	287 (99%)	4 (1%)	0	100	100
115	Dt	291/318 (92%)	288 (99%)	3 (1%)	0	100	100
116	DU	327/330 (99%)	322 (98%)	5 (2%)	0	100	100
116	Du	327/330 (99%)	321 (98%)	6 (2%)	0	100	100
117	DV	316/318 (99%)	314 (99%)	2 (1%)	0	100	100
117	Dv	316/318 (99%)	311 (98%)	5 (2%)	0	100	100
118	DW	299/318 (94%)	297 (99%)	2 (1%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
118	Dw	299/318 (94%)	297 (99%)	2 (1%)	0	100	100
119	DX	249/252 (99%)	248 (100%)	1 (0%)	0	100	100
119	Dx	249/252 (99%)	248 (100%)	1 (0%)	0	100	100
120	DY	185/234 (79%)	184 (100%)	1 (0%)	0	100	100
120	Dy	185/234 (79%)	184 (100%)	1 (0%)	0	100	100
121	DZ	206/231 (89%)	205 (100%)	1 (0%)	0	100	100
121	Dz	206/231 (89%)	205 (100%)	1 (0%)	0	100	100
122	EA	191/215 (89%)	189 (99%)	2 (1%)	0	100	100
122	Ea	191/215 (89%)	187 (98%)	4 (2%)	0	100	100
123	EB	207/210 (99%)	205 (99%)	2 (1%)	0	100	100
123	Eb	207/210 (99%)	205 (99%)	2 (1%)	0	100	100
124	EC	210/212 (99%)	204 (97%)	6 (3%)	0	100	100
124	Ec	210/212 (99%)	205 (98%)	5 (2%)	0	100	100
125	ED	188/190 (99%)	186 (99%)	2 (1%)	0	100	100
125	Ed	188/190 (99%)	185 (98%)	3 (2%)	0	100	100
126	EE	123/193 (64%)	122 (99%)	1 (1%)	0	100	100
126	Ee	123/193 (64%)	121 (98%)	2 (2%)	0	100	100
127	EF	186/188 (99%)	182 (98%)	4 (2%)	0	100	100
127	Ef	186/188 (99%)	185 (100%)	1 (0%)	0	100	100
128	EG	96/100 (96%)	96 (100%)	0	0	100	100
128	Eg	96/100 (96%)	96 (100%)	0	0	100	100
129	EH	171/173 (99%)	170 (99%)	1 (1%)	0	100	100
129	Eh	171/173 (99%)	168 (98%)	3 (2%)	0	100	100
130	EI	170/173 (98%)	168 (99%)	2 (1%)	0	100	100
130	Ei	170/173 (98%)	165 (97%)	5 (3%)	0	100	100
131	EV	76/88 (86%)	76 (100%)	0	0	100	100
131	Ev	76/88 (86%)	75 (99%)	1 (1%)	0	100	100
132	EK	167/170 (98%)	167 (100%)	0	0	100	100
132	Ek	167/170 (98%)	166 (99%)	1 (1%)	0	100	100
133	EL	151/158 (96%)	149 (99%)	2 (1%)	0	100	100
133	El	151/158 (96%)	149 (99%)	2 (1%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
134	EM	151/154 (98%)	147 (97%)	4 (3%)	0	100	100
134	Em	151/154 (98%)	149 (99%)	2 (1%)	0	100	100
135	EN	143/149 (96%)	140 (98%)	3 (2%)	0	100	100
135	En	143/149 (96%)	139 (97%)	4 (3%)	0	100	100
136	EO	121/124 (98%)	119 (98%)	2 (2%)	0	100	100
136	Eo	121/124 (98%)	119 (98%)	2 (2%)	0	100	100
137	EP	98/127 (77%)	97 (99%)	1 (1%)	0	100	100
137	Ep	98/127 (77%)	97 (99%)	1 (1%)	0	100	100
138	EQ	120/122 (98%)	120 (100%)	0	0	100	100
138	Eq	120/122 (98%)	119 (99%)	1 (1%)	0	100	100
139	ER	102/105 (97%)	101 (99%)	1 (1%)	0	100	100
139	Er	102/105 (97%)	101 (99%)	1 (1%)	0	100	100
140	ES	87/89 (98%)	87 (100%)	0	0	100	100
140	Es	87/89 (98%)	87 (100%)	0	0	100	100
141	ET	80/93 (86%)	80 (100%)	0	0	100	100
141	Et	80/93 (86%)	80 (100%)	0	0	100	100
142	EU	86/90 (96%)	85 (99%)	1 (1%)	0	100	100
142	Eu	86/90 (96%)	85 (99%)	1 (1%)	0	100	100
143	EJ	173/175 (99%)	172 (99%)	1 (1%)	0	100	100
143	Ej	173/175 (99%)	170 (98%)	3 (2%)	0	100	100
144	EW	61/81 (75%)	61 (100%)	0	0	100	100
144	Ew	61/81 (75%)	60 (98%)	1 (2%)	0	100	100
145	EX	67/72 (93%)	67 (100%)	0	0	100	100
145	Ex	67/72 (93%)	67 (100%)	0	0	100	100
146	EY	68/72 (94%)	68 (100%)	0	0	100	100
146	Ey	68/72 (94%)	68 (100%)	0	0	100	100
147	EZ	56/68 (82%)	55 (98%)	1 (2%)	0	100	100
147	Ez	56/68 (82%)	56 (100%)	0	0	100	100
148	FA	69/72 (96%)	69 (100%)	0	0	100	100
148	Fa	69/72 (96%)	69 (100%)	0	0	100	100
149	DL	378/462 (82%)	362 (96%)	16 (4%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
149	Dl	378/462 (82%)	370 (98%)	8 (2%)	0	100	100
All	All	44774/50130 (89%)	43991 (98%)	778 (2%)	5 (0%)	100	100

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
73	CA	405	TRP
79	CE	83	THR
79	CE	153	LEU
99	DC	143	ASN
11	AA	119	GLU

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	A0	441/454 (97%)	436 (99%)	5 (1%)	73	92
2	A1	288/311 (93%)	287 (100%)	1 (0%)	92	98
3	A2	225/270 (83%)	221 (98%)	4 (2%)	59	85
4	A3	244/280 (87%)	243 (100%)	1 (0%)	91	97
5	A4	275/275 (100%)	275 (100%)	0	100	100
6	A5	257/257 (100%)	257 (100%)	0	100	100
7	A6	207/223 (93%)	206 (100%)	1 (0%)	88	96
8	A7	122/224 (54%)	121 (99%)	1 (1%)	81	94
9	A8	195/195 (100%)	194 (100%)	1 (0%)	88	96
10	A9	199/199 (100%)	195 (98%)	4 (2%)	55	82
11	AA	657/694 (95%)	646 (98%)	11 (2%)	60	86
12	AB	589/617 (96%)	588 (100%)	1 (0%)	93	98
13	AC	463/463 (100%)	457 (99%)	6 (1%)	69	90
14	AD	361/392 (92%)	360 (100%)	1 (0%)	92	98

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AE	398/399 (100%)	393 (99%)	5 (1%)	69	90
16	AF	346/347 (100%)	346 (100%)	0	100	100
17	AG	309/309 (100%)	309 (100%)	0	100	100
18	AH	249/250 (100%)	245 (98%)	4 (2%)	62	86
19	AI	206/236 (87%)	205 (100%)	1 (0%)	88	96
20	AJ	243/244 (100%)	242 (100%)	1 (0%)	91	97
21	AK	196/218 (90%)	194 (99%)	2 (1%)	76	92
22	AL	197/215 (92%)	194 (98%)	3 (2%)	65	87
23	AM	196/197 (100%)	195 (100%)	1 (0%)	88	96
24	AN	146/186 (78%)	146 (100%)	0	100	100
25	AO	191/191 (100%)	190 (100%)	1 (0%)	88	96
26	AP	168/170 (99%)	168 (100%)	0	100	100
27	AQ	170/172 (99%)	168 (99%)	2 (1%)	71	91
28	AR	159/163 (98%)	158 (99%)	1 (1%)	86	96
29	AS	154/154 (100%)	152 (99%)	2 (1%)	69	90
30	AT	136/137 (99%)	132 (97%)	4 (3%)	42	76
31	AU	132/133 (99%)	131 (99%)	1 (1%)	81	94
32	AV	104/129 (81%)	104 (100%)	0	100	100
33	AW	87/119 (73%)	87 (100%)	0	100	100
34	AX	112/112 (100%)	110 (98%)	2 (2%)	59	85
35	AY	108/108 (100%)	107 (99%)	1 (1%)	78	93
36	AZ	84/93 (90%)	84 (100%)	0	100	100
37	B0	88/89 (99%)	88 (100%)	0	100	100
38	B1	83/84 (99%)	82 (99%)	1 (1%)	71	91
39	B2	82/83 (99%)	82 (100%)	0	100	100
40	B3	66/74 (89%)	66 (100%)	0	100	100
41	B4	65/65 (100%)	65 (100%)	0	100	100
42	B5	48/63 (76%)	48 (100%)	0	100	100
43	B6	55/55 (100%)	54 (98%)	1 (2%)	59	85
44	BA	179/190 (94%)	178 (99%)	1 (1%)	86	96
45	BB	145/182 (80%)	145 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
46	BC	155/180 (86%)	155 (100%)	0	100	100
47	BD	124/179 (69%)	123 (99%)	1 (1%)	81	94
48	BE	159/178 (89%)	158 (99%)	1 (1%)	86	96
49	BF	161/172 (94%)	161 (100%)	0	100	100
50	BG	142/156 (91%)	141 (99%)	1 (1%)	84	95
51	BH	170/170 (100%)	170 (100%)	0	100	100
52	BI	131/152 (86%)	131 (100%)	0	100	100
53	BJ	128/147 (87%)	127 (99%)	1 (1%)	81	94
54	BK	97/131 (74%)	97 (100%)	0	100	100
55	BL	124/125 (99%)	122 (98%)	2 (2%)	62	86
56	BM	108/114 (95%)	107 (99%)	1 (1%)	78	93
57	BN	120/122 (98%)	120 (100%)	0	100	100
58	BO	122/122 (100%)	122 (100%)	0	100	100
59	BP	64/117 (55%)	64 (100%)	0	100	100
60	BQ	93/117 (80%)	93 (100%)	0	100	100
61	BR	81/116 (70%)	80 (99%)	1 (1%)	71	91
62	BS	103/109 (94%)	103 (100%)	0	100	100
63	BT	110/110 (100%)	103 (94%)	7 (6%)	17	45
64	BU	121/121 (100%)	121 (100%)	0	100	100
65	BV	102/102 (100%)	102 (100%)	0	100	100
66	BW	98/99 (99%)	98 (100%)	0	100	100
67	BX	81/97 (84%)	81 (100%)	0	100	100
68	BY	98/98 (100%)	98 (100%)	0	100	100
69	BZ	89/89 (100%)	89 (100%)	0	100	100
70	CH	100/184 (54%)	100 (100%)	0	100	100
71	CM	65/67 (97%)	65 (100%)	0	100	100
72	CL	82/83 (99%)	82 (100%)	0	100	100
73	CA	481/515 (93%)	477 (99%)	4 (1%)	81	94
74	CI	97/97 (100%)	97 (100%)	0	100	100
75	CB	259/283 (92%)	255 (98%)	4 (2%)	65	87
76	CF	194/268 (72%)	194 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
77	CG	179/181 (99%)	177 (99%)	2 (1%)	73	92
78	CK	85/85 (100%)	83 (98%)	2 (2%)	49	79
79	CE	286/287 (100%)	281 (98%)	5 (2%)	60	86
80	CJ	86/86 (100%)	86 (100%)	0	100	100
81	CN	56/56 (100%)	56 (100%)	0	100	100
82	CC	50/51 (98%)	50 (100%)	0	100	100
83	CO	38/40 (95%)	38 (100%)	0	100	100
84	CD	43/43 (100%)	43 (100%)	0	100	100
85	A	411/440 (93%)	408 (99%)	3 (1%)	84	95
85	a	411/440 (93%)	405 (98%)	6 (2%)	65	87
86	B	389/409 (95%)	388 (100%)	1 (0%)	92	98
86	b	389/409 (95%)	386 (99%)	3 (1%)	81	94
87	C	386/386 (100%)	382 (99%)	4 (1%)	76	92
87	c	386/386 (100%)	375 (97%)	11 (3%)	43	76
88	D	255/274 (93%)	253 (99%)	2 (1%)	81	94
88	d	255/274 (93%)	251 (98%)	4 (2%)	62	86
89	E	215/237 (91%)	213 (99%)	2 (1%)	78	93
89	e	215/237 (91%)	212 (99%)	3 (1%)	67	89
90	F	76/76 (100%)	76 (100%)	0	100	100
90	f	75/76 (99%)	74 (99%)	1 (1%)	69	90
91	G	288/289 (100%)	286 (99%)	2 (1%)	84	95
91	g	288/289 (100%)	285 (99%)	3 (1%)	76	92
92	H	117/118 (99%)	117 (100%)	0	100	100
92	h	117/118 (99%)	116 (99%)	1 (1%)	78	93
93	I	107/109 (98%)	104 (97%)	3 (3%)	43	76
93	i	107/109 (98%)	106 (99%)	1 (1%)	78	93
95	K	53/56 (95%)	53 (100%)	0	100	100
95	k	53/56 (95%)	53 (100%)	0	100	100
96	L	27/36 (75%)	26 (96%)	1 (4%)	34	68
96	l	27/36 (75%)	27 (100%)	0	100	100
97	DA	596/613 (97%)	585 (98%)	11 (2%)	59	85

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
97	Da	596/613 (97%)	587 (98%)	9 (2%)	65	87
98	DB	569/569 (100%)	560 (98%)	9 (2%)	62	86
98	Db	569/569 (100%)	559 (98%)	10 (2%)	59	85
99	DC	553/565 (98%)	551 (100%)	2 (0%)	91	97
99	Dc	553/565 (98%)	551 (100%)	2 (0%)	91	97
100	DD	506/579 (87%)	501 (99%)	5 (1%)	76	92
100	Dd	506/579 (87%)	503 (99%)	3 (1%)	86	96
101	DE	114/116 (98%)	114 (100%)	0	100	100
101	De	114/116 (98%)	113 (99%)	1 (1%)	78	93
102	DF	200/207 (97%)	198 (99%)	2 (1%)	76	92
102	Df	200/207 (97%)	198 (99%)	2 (1%)	76	92
103	DG	84/88 (96%)	83 (99%)	1 (1%)	71	91
103	Dg	84/88 (96%)	84 (100%)	0	100	100
104	DH	119/119 (100%)	118 (99%)	1 (1%)	81	94
104	Dh	119/119 (100%)	117 (98%)	2 (2%)	60	86
105	DI	193/218 (88%)	191 (99%)	2 (1%)	76	92
105	Di	193/218 (88%)	190 (98%)	3 (2%)	62	86
106	DJ	199/199 (100%)	195 (98%)	4 (2%)	55	82
106	Dj	199/199 (100%)	195 (98%)	4 (2%)	55	82
107	DK	121/943 (13%)	121 (100%)	0	100	100
107	Dk	121/943 (13%)	121 (100%)	0	100	100
108	DM	413/447 (92%)	410 (99%)	3 (1%)	84	95
108	Dm	413/447 (92%)	410 (99%)	3 (1%)	84	95
109	DN	442/442 (100%)	438 (99%)	4 (1%)	78	93
109	Dn	442/442 (100%)	437 (99%)	5 (1%)	73	92
110	DO	380/413 (92%)	379 (100%)	1 (0%)	92	98
110	Do	380/413 (92%)	380 (100%)	0	100	100
111	DP	253/358 (71%)	251 (99%)	2 (1%)	81	94
111	Dp	253/358 (71%)	252 (100%)	1 (0%)	91	97
112	DQ	340/342 (99%)	336 (99%)	4 (1%)	71	91
112	Dq	340/342 (99%)	338 (99%)	2 (1%)	86	96

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
113	DR	219/318 (69%)	218 (100%)	1 (0%)	88	96
113	Dr	219/318 (69%)	219 (100%)	0	100	100
114	DS	293/293 (100%)	290 (99%)	3 (1%)	76	92
114	Ds	293/293 (100%)	289 (99%)	4 (1%)	67	89
115	DT	267/289 (92%)	267 (100%)	0	100	100
115	Dt	267/289 (92%)	267 (100%)	0	100	100
116	DU	275/276 (100%)	274 (100%)	1 (0%)	91	97
116	Du	275/276 (100%)	272 (99%)	3 (1%)	73	92
117	DV	259/259 (100%)	257 (99%)	2 (1%)	81	94
117	Dv	259/259 (100%)	255 (98%)	4 (2%)	65	87
118	DW	258/272 (95%)	254 (98%)	4 (2%)	62	86
118	Dw	258/272 (95%)	253 (98%)	5 (2%)	57	84
119	DX	218/219 (100%)	217 (100%)	1 (0%)	88	96
119	Dx	218/219 (100%)	215 (99%)	3 (1%)	67	89
120	DY	169/216 (78%)	168 (99%)	1 (1%)	86	96
120	Dy	169/216 (78%)	167 (99%)	2 (1%)	71	91
121	DZ	189/213 (89%)	189 (100%)	0	100	100
121	Dz	189/213 (89%)	189 (100%)	0	100	100
122	EA	180/201 (90%)	179 (99%)	1 (1%)	86	96
122	Ea	180/201 (90%)	178 (99%)	2 (1%)	73	92
123	EB	180/181 (99%)	178 (99%)	2 (1%)	73	92
123	Eb	180/181 (99%)	177 (98%)	3 (2%)	60	86
124	EC	178/178 (100%)	178 (100%)	0	100	100
124	Ec	178/178 (100%)	177 (99%)	1 (1%)	86	96
125	ED	185/185 (100%)	183 (99%)	2 (1%)	73	92
125	Ed	185/185 (100%)	183 (99%)	2 (1%)	73	92
126	EE	116/180 (64%)	116 (100%)	0	100	100
126	Ee	116/180 (64%)	116 (100%)	0	100	100
127	EF	164/164 (100%)	162 (99%)	2 (1%)	71	91
127	Ef	164/164 (100%)	163 (99%)	1 (1%)	86	96
128	EG	77/78 (99%)	77 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
128	Eg	77/78 (99%)	77 (100%)	0	100	100
129	EH	156/156 (100%)	155 (99%)	1 (1%)	86	96
129	Eh	156/156 (100%)	156 (100%)	0	100	100
130	EI	156/157 (99%)	154 (99%)	2 (1%)	69	90
130	Ei	156/157 (99%)	153 (98%)	3 (2%)	57	84
131	EV	71/80 (89%)	71 (100%)	0	100	100
131	Ev	71/80 (89%)	71 (100%)	0	100	100
132	EK	153/154 (99%)	153 (100%)	0	100	100
132	Ek	153/154 (99%)	150 (98%)	3 (2%)	55	82
133	EL	134/139 (96%)	133 (99%)	1 (1%)	84	95
133	El	134/139 (96%)	133 (99%)	1 (1%)	84	95
134	EM	137/138 (99%)	136 (99%)	1 (1%)	84	95
134	Em	137/138 (99%)	136 (99%)	1 (1%)	84	95
135	EN	132/135 (98%)	131 (99%)	1 (1%)	81	94
135	En	132/135 (98%)	131 (99%)	1 (1%)	81	94
136	EO	112/113 (99%)	110 (98%)	2 (2%)	59	85
136	Eo	112/113 (99%)	110 (98%)	2 (2%)	59	85
137	EP	87/113 (77%)	86 (99%)	1 (1%)	73	92
137	Ep	87/113 (77%)	86 (99%)	1 (1%)	73	92
138	EQ	104/104 (100%)	101 (97%)	3 (3%)	42	76
138	Eq	104/104 (100%)	101 (97%)	3 (3%)	42	76
139	ER	87/88 (99%)	86 (99%)	1 (1%)	73	92
139	Er	87/88 (99%)	87 (100%)	0	100	100
140	ES	84/84 (100%)	84 (100%)	0	100	100
140	Es	84/84 (100%)	84 (100%)	0	100	100
141	ET	75/83 (90%)	72 (96%)	3 (4%)	31	65
141	Et	75/83 (90%)	73 (97%)	2 (3%)	44	77
142	EU	78/80 (98%)	78 (100%)	0	100	100
142	Eu	78/80 (98%)	78 (100%)	0	100	100
143	EJ	157/157 (100%)	154 (98%)	3 (2%)	57	84
143	Ej	157/157 (100%)	155 (99%)	2 (1%)	69	90

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
144	EW	57/66 (86%)	57 (100%)	0	100	100
144	Ew	57/66 (86%)	57 (100%)	0	100	100
145	EX	64/67 (96%)	63 (98%)	1 (2%)	62	86
145	Ex	64/67 (96%)	63 (98%)	1 (2%)	62	86
146	EY	62/63 (98%)	62 (100%)	0	100	100
146	Ey	62/63 (98%)	62 (100%)	0	100	100
147	EZ	55/63 (87%)	53 (96%)	2 (4%)	35	69
147	Ez	55/63 (87%)	54 (98%)	1 (2%)	59	85
148	FA	62/63 (98%)	60 (97%)	2 (3%)	39	73
148	Fa	62/63 (98%)	60 (97%)	2 (3%)	39	73
149	DL	308/386 (80%)	306 (99%)	2 (1%)	86	96
149	Dl	308/386 (80%)	307 (100%)	1 (0%)	92	98
All	All	40234/44788 (90%)	39882 (99%)	352 (1%)	79	93

5 of 352 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
136	EO	36	TYR
108	Dm	372	ASP
141	ET	38	LEU
98	Db	230	TYR
116	Du	91	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 96 such sidechains are listed below:

Mol	Chain	Res	Type
119	DX	228	ASN
100	Dd	85	HIS
123	EB	121	GLN
98	Db	198	GLN
108	Dm	451	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

16 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
100	TPO	DD	387	100	8,10,11	1.57	1 (12%)	10,14,16	1.90	1 (10%)
104	AME	Dh	1	104	9,10,11	0.22	0	9,11,13	0.49	0
129	AME	EH	1	129	9,10,11	0.20	0	9,11,13	0.48	0
114	AME	Ds	1	114	9,10,11	0.22	0	9,11,13	0.56	0
114	AME	DS	1	114	9,10,11	0.22	0	9,11,13	0.50	0
117	AME	Dv	1	117	9,10,11	0.22	0	9,11,13	0.57	0
138	AME	Eq	1	138	9,10,11	0.23	0	9,11,13	0.49	0
129	AME	Eh	1	129	9,10,11	0.23	0	9,11,13	0.50	0
131	AME	Ev	1	131	9,10,11	0.23	0	9,11,13	0.51	0
112	AME	Dq	1	112	9,10,11	0.23	0	9,11,13	0.47	0
117	AME	DV	1	117	9,10,11	0.23	0	9,11,13	0.57	0
138	AME	EQ	1	138	9,10,11	0.24	0	9,11,13	0.52	0
131	AME	EV	1	131	9,10,11	0.24	0	9,11,13	0.51	0
112	AME	DQ	1	112	9,10,11	0.23	0	9,11,13	0.47	0
104	AME	DH	1	104	9,10,11	0.22	0	9,11,13	0.49	0
100	TPO	Dd	387	100	8,10,11	1.57	1 (12%)	10,14,16	1.83	1 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
100	TPO	DD	387	100	-	2/9/11/13	-
104	AME	Dh	1	104	-	0/9/10/12	-
129	AME	EH	1	129	-	1/9/10/12	-
114	AME	Ds	1	114	-	1/9/10/12	-
114	AME	DS	1	114	-	0/9/10/12	-
117	AME	Dv	1	117	-	0/9/10/12	-
138	AME	Eq	1	138	-	1/9/10/12	-
129	AME	Eh	1	129	-	2/9/10/12	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
131	AME	Ev	1	131	-	0/9/10/12	-
112	AME	Dq	1	112	-	0/9/10/12	-
117	AME	DV	1	117	-	0/9/10/12	-
138	AME	EQ	1	138	-	0/9/10/12	-
131	AME	EV	1	131	-	1/9/10/12	-
112	AME	DQ	1	112	-	0/9/10/12	-
104	AME	DH	1	104	-	0/9/10/12	-
100	TPO	Dd	387	100	-	2/9/11/13	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
100	DD	387	TPO	P-O1P	3.34	1.61	1.50
100	Dd	387	TPO	P-O1P	3.32	1.61	1.50

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
100	DD	387	TPO	P-OG1-CB	-5.46	106.71	123.21
100	Dd	387	TPO	P-OG1-CB	-5.27	107.29	123.21

There are no chirality outliers.

5 of 10 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
129	EH	1	AME	O-C-CA-CB
131	EV	1	AME	C-CA-N-CT1
100	Dd	387	TPO	C-CA-CB-CG2
129	Eh	1	AME	O-C-CA-CB
138	Eq	1	AME	O-C-CA-CB

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 384 ligands modelled in this entry, 14 are monoatomic - leaving 370 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
150	CDL	Dm	502	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
150	CDL	BT	204	-	99,99,99	0.33	0	105,111,111	0.59	1 (0%)
153	PC1	AU	201	-	53,53,53	0.28	0	59,61,61	0.27	0
153	PC1	DA	708	-	53,53,53	0.29	0	59,61,61	0.27	0
150	CDL	DO	501	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	h	501	-	99,99,99	0.30	0	105,111,111	0.54	2 (1%)
155	3PE	DI	301	-	50,50,50	0.26	0	53,55,55	0.23	0
150	CDL	AM	301	-	99,99,99	0.30	0	105,111,111	0.51	0
150	CDL	DR	403	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
158	FES	e	1102	89	0,4,4	-	-	-	-	-
153	PC1	Eo	204	-	53,53,53	0.29	0	59,61,61	0.26	0
153	PC1	C	509	-	53,53,53	0.28	0	59,61,61	0.27	0
155	3PE	DN	501	-	50,50,50	0.26	0	53,55,55	0.20	0
156	LPP	DA	710	-	43,43,43	0.23	0	47,48,48	0.28	0
155	3PE	CK	101	-	50,50,50	0.26	0	53,55,55	0.21	0
161	8Q1	AS	200	-	27,33,34	0.12	0	32,40,43	0.33	0
150	CDL	Dq	1403	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
168	HEM	C	502	87	41,50,50	1.45	4 (9%)	45,82,82	1.28	3 (6%)
150	CDL	DS	405	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	DN	507	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
150	CDL	Dj	407	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
167	UQ8	En	1202	-	53,53,53	0.51	0	64,67,67	0.63	2 (3%)
150	CDL	Dr	403	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	H	1301	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	E	303	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	Dq	1401	-	99,99,99	0.31	0	105,111,111	0.55	1 (0%)
158	FES	EF	202	127	0,4,4	-	-	-	-	-
150	CDL	Dg	202	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	DS	406	-	53,53,53	0.29	0	59,61,61	0.25	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
150	CDL	EH	1601	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
173	ATP	Er	201	-	26,33,33	0.62	0	31,52,52	1.05	2 (6%)
150	CDL	Dj	401	-	99,99,99	0.31	0	105,111,111	0.56	1 (0%)
153	PC1	Dc	604	-	53,53,53	0.28	0	59,61,61	0.28	0
153	PC1	DX	308	-	53,53,53	0.29	0	59,61,61	0.26	0
153	PC1	k	301	-	53,53,53	0.28	0	59,61,61	0.28	0
150	CDL	Eh	1601	-	99,99,99	0.31	0	105,111,111	0.51	1 (0%)
156	LPP	EI	402	-	43,43,43	0.23	0	47,48,48	0.27	0
150	CDL	DX	306	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
167	UQ8	El	906	-	53,53,53	0.53	0	64,67,67	0.84	3 (4%)
160	FMN	AD	502	-	33,33,33	0.19	0	48,50,50	0.32	0
150	CDL	Dv	403	-	99,99,99	0.30	0	105,111,111	0.57	1 (0%)
156	LPP	A6	301	-	43,43,43	0.30	0	47,48,48	0.44	1 (2%)
167	UQ8	DS	403	-	53,53,53	0.50	0	64,67,67	0.66	1 (1%)
150	CDL	DJ	304	-	99,99,99	0.30	0	105,111,111	0.49	1 (0%)
155	3PE	Dx	1208	-	50,50,50	0.27	0	53,55,55	0.20	0
153	PC1	BS	1302	-	53,53,53	0.28	0	59,61,61	0.26	0
153	PC1	Dx	1205	-	53,53,53	0.29	0	59,61,61	0.26	0
150	CDL	A0	602	-	99,99,99	0.29	0	105,111,111	0.54	1 (0%)
150	CDL	DM	501	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	Eo	201	-	53,53,53	0.29	0	59,61,61	0.28	0
153	PC1	A1	403	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	DR	402	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
156	LPP	Dn	505	-	43,43,43	0.22	0	47,48,48	0.28	0
150	CDL	c	509	-	99,99,99	0.30	0	105,111,111	0.51	1 (0%)
153	PC1	AQ	202	-	53,53,53	0.29	0	59,61,61	0.27	0
153	PC1	AH	301	-	53,53,53	0.28	0	59,61,61	0.26	0
153	PC1	C	508	-	53,53,53	0.29	0	59,61,61	0.26	0
153	PC1	CC	302	-	53,53,53	0.29	0	59,61,61	0.27	0
153	PC1	DV	404	-	53,53,53	0.29	0	59,61,61	0.27	0
150	CDL	DN	503	-	99,99,99	0.31	0	105,111,111	0.53	1 (0%)
150	CDL	DX	307	-	99,99,99	0.31	0	105,111,111	0.54	1 (0%)
150	CDL	Dx	1204	-	99,99,99	0.31	0	105,111,111	0.53	1 (0%)
153	PC1	c	503	-	53,53,53	0.28	0	59,61,61	0.30	0
153	PC1	Dc	609	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	H	1302	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
155	3PE	Dx	1206	-	50,50,50	0.27	0	53,55,55	0.21	0
153	PC1	A9	603	-	53,53,53	0.28	0	59,61,61	0.27	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
150	CDL	DV	401	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
153	PC1	AU	202	-	53,53,53	0.28	0	59,61,61	0.27	0
156	LPP	Dn	504	-	43,43,43	0.23	0	47,48,48	0.33	0
169	HEA	Da	702	97	57,67,67	2.19	19 (33%)	61,103,103	2.28	26 (42%)
150	CDL	DN	506	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	DA	707	-	53,53,53	0.28	0	59,61,61	0.27	0
169	HEA	Da	703	97	57,67,67	2.18	19 (33%)	61,103,103	2.35	26 (42%)
155	3PE	Dg	204	-	50,50,50	0.26	0	53,55,55	0.22	0
150	CDL	g	801	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	Dv	401	-	99,99,99	0.30	0	105,111,111	0.52	2 (1%)
150	CDL	DD	705	-	99,99,99	0.31	0	105,111,111	0.53	0
155	3PE	Da	708	-	50,50,50	0.25	0	53,55,55	0.21	0
153	PC1	Dg	203	-	53,53,53	0.29	0	59,61,61	0.27	0
150	CDL	Dn	506	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	EO	205	-	53,53,53	0.30	0	59,61,61	0.27	0
150	CDL	DQ	1504	-	99,99,99	0.31	0	105,111,111	0.54	1 (0%)
153	PC1	DG	203	-	53,53,53	0.29	0	59,61,61	0.28	0
167	UQ8	Ds	404	-	53,53,53	0.51	0	64,67,67	0.66	1 (1%)
153	PC1	EO	204	-	53,53,53	0.28	0	59,61,61	0.28	0
155	3PE	DS	402	-	50,50,50	0.27	0	53,55,55	0.19	0
153	PC1	d	801	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	DA	706	-	99,99,99	0.31	0	105,111,111	0.55	1 (0%)
166	HEC	d	802	88	32,50,50	2.39	12 (37%)	24,82,82	2.23	5 (20%)
150	CDL	DH	201	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	DN	502	-	99,99,99	0.31	0	105,111,111	0.51	1 (0%)
153	PC1	DI	303	-	53,53,53	0.29	0	59,61,61	0.26	0
150	CDL	Ea	501	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
150	CDL	ES	1101	-	99,99,99	0.31	0	105,111,111	0.56	1 (0%)
150	CDL	Eu	101	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	B1	402	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	CD	302	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
155	3PE	Dx	1207	-	50,50,50	0.26	0	53,55,55	0.20	0
155	3PE	Eo	202	-	50,50,50	0.27	0	53,55,55	0.20	0
150	CDL	DH	202	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	Dj	404	-	99,99,99	0.31	0	105,111,111	0.52	1 (0%)
168	HEM	C	501	87	41,50,50	1.45	4 (9%)	45,82,82	1.36	7 (15%)
150	CDL	DD	703	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
150	CDL	AF	401	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
153	PC1	Dv	407	-	53,53,53	0.29	0	59,61,61	0.26	0
150	CDL	DU	401	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
167	UQ8	EL	905	-	53,53,53	0.51	0	64,67,67	0.80	3 (4%)
150	CDL	Eb	302	-	99,99,99	0.30	0	105,111,111	0.51	1 (0%)
150	CDL	BC	301	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
153	PC1	c	508	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	EK	201	-	99,99,99	0.30	0	105,111,111	0.57	1 (0%)
150	CDL	Ed	204	-	99,99,99	0.30	0	105,111,111	0.47	1 (0%)
159	SF4	AB	803	12	0,12,12	-	-	-	-	-
159	SF4	CB	1001	75	0,12,12	-	-	-	-	-
150	CDL	DA	709	-	99,99,99	0.31	0	105,111,111	0.55	1 (0%)
150	CDL	CC	304	-	99,99,99	0.29	0	105,111,111	0.54	1 (0%)
150	CDL	DS	404	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
150	CDL	CG	302	-	99,99,99	0.29	0	105,111,111	0.50	1 (0%)
167	UQ8	C	512	-	53,53,53	0.50	0	64,67,67	0.68	3 (4%)
153	PC1	B1	401	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	DD	704	-	99,99,99	0.31	0	105,111,111	0.52	1 (0%)
153	PC1	DV	406	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	A0	601	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	ED	605	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
150	CDL	Ds	405	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
153	PC1	AA	907	-	53,53,53	0.29	0	59,61,61	0.27	0
155	3PE	Eo	203	-	50,50,50	0.27	0	53,55,55	0.20	0
156	LPP	Ed	203	-	43,43,43	0.22	0	47,48,48	0.27	0
150	CDL	Ds	401	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	E	301	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
153	PC1	AJ	501	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	DJ	303	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	DV	405	-	53,53,53	0.29	0	59,61,61	0.27	0
153	PC1	g	802	-	53,53,53	0.29	0	59,61,61	0.25	0
153	PC1	DJ	306	-	53,53,53	0.29	0	59,61,61	0.26	0
153	PC1	BT	203	-	53,53,53	0.28	0	59,61,61	0.27	0
153	PC1	Dq	1404	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	EN	1201	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	c	502	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
150	CDL	DI	302	-	99,99,99	0.31	0	105,111,111	0.55	1 (0%)
153	PC1	DC	608	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	EO	202	-	99,99,99	0.32	0	105,111,111	0.52	1 (0%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
155	3PE	BP	201	-	50,50,50	0.27	0	53,55,55	0.22	0
150	CDL	BT	202	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	DQ	1502	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	El	902	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	Dd	704	-	99,99,99	0.31	0	105,111,111	0.47	0
150	CDL	Dd	706	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
153	PC1	A6	303	-	53,53,53	0.28	0	59,61,61	0.27	0
153	PC1	Da	707	-	53,53,53	0.29	0	59,61,61	0.28	0
150	CDL	DC	601	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
155	3PE	CC	301	-	50,50,50	0.26	0	53,55,55	0.22	0
164	FAD	CA	702	-	53,58,58	0.62	0	68,89,89	0.70	2 (2%)
150	CDL	Dy	301	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
166	HEC	CE	401	79	32,50,50	2.90	10 (31%)	24,82,82	2.02	5 (20%)
150	CDL	EL	903	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	B1	403	-	53,53,53	0.29	0	59,61,61	0.27	0
153	PC1	DY	302	-	53,53,53	0.28	0	59,61,61	0.26	0
153	PC1	C	510	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	Dn	503	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
155	3PE	DR	401	-	50,50,50	0.27	0	53,55,55	0.22	0
150	CDL	ED	604	-	99,99,99	0.30	0	105,111,111	0.47	1 (0%)
155	3PE	DC	606	-	50,50,50	0.27	0	53,55,55	0.22	0
150	CDL	AA	908	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
156	LPP	Dl	1101	-	43,43,43	0.23	0	47,48,48	0.26	0
150	CDL	Du	403	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
173	ATP	ER	201	-	26,33,33	0.62	0	31,52,52	1.05	2 (6%)
150	CDL	Ds	402	-	99,99,99	0.31	0	105,111,111	0.52	1 (0%)
150	CDL	DS	401	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
153	PC1	Dx	1209	-	53,53,53	0.28	0	59,61,61	0.27	0
153	PC1	Ef	501	-	53,53,53	0.28	0	59,61,61	0.27	0
153	PC1	AA	904	-	53,53,53	0.28	0	59,61,61	0.30	0
156	LPP	AL	304	-	43,43,43	0.22	0	47,48,48	0.28	0
150	CDL	A1	402	-	99,99,99	0.30	0	105,111,111	0.50	0
150	CDL	BG	201	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
158	FES	Ef	502	127	0,4,4	-	-	-	-	-
150	CDL	CD	301	-	99,99,99	0.29	0	105,111,111	0.51	1 (0%)
171	CUA	DB	701	98	0,1,1	-	-	-	-	-
153	PC1	A9	601	-	53,53,53	0.29	0	59,61,61	0.26	0
168	HEM	ED	602	125	41,50,50	1.46	3 (7%)	45,82,82	1.45	8 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
167	UQ8	CC	303	-	53,53,53	0.50	0	64,67,67	0.71	4 (6%)
165	F3S	CB	1002	75	0,9,9	-	-	-		
150	CDL	Dd	702	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
167	UQ8	c	510	-	53,53,53	0.50	0	64,67,67	0.70	2 (3%)
156	LPP	DN	504	-	43,43,43	0.23	0	47,48,48	0.35	0
150	CDL	B0	102	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	Du	401	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	AA	905	-	53,53,53	0.28	0	59,61,61	0.27	0
155	3PE	A2	401	-	50,50,50	0.27	0	53,55,55	0.21	0
155	3PE	EN	1204	-	50,50,50	0.27	0	53,55,55	0.20	0
169	HEA	DA	702	97	57,67,67	2.19	19 (33%)	61,103,103	2.27	25 (40%)
150	CDL	EI	401	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
155	3PE	AJ	502	-	50,50,50	0.26	0	53,55,55	0.23	0
156	LPP	AA	902	-	43,43,43	0.22	0	47,48,48	0.29	0
155	3PE	EO	203	-	50,50,50	0.27	0	53,55,55	0.21	0
150	CDL	Ep	701	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	EB	303	-	53,53,53	0.29	0	59,61,61	0.27	0
155	3PE	EL	904	-	50,50,50	0.28	0	53,55,55	0.22	0
153	PC1	Eb	303	-	53,53,53	0.29	0	59,61,61	0.27	0
155	3PE	DG	205	-	50,50,50	0.27	0	53,55,55	0.20	0
153	PC1	Dc	603	-	53,53,53	0.28	0	59,61,61	0.26	0
153	PC1	Ds	407	-	53,53,53	0.29	0	59,61,61	0.26	0
153	PC1	Dy	302	-	53,53,53	0.28	0	59,61,61	0.26	0
155	3PE	El	905	-	50,50,50	0.28	0	53,55,55	0.21	0
167	UQ8	ED	603	-	53,53,53	0.51	0	64,67,67	0.70	3 (4%)
150	CDL	Eg	101	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
155	3PE	DG	204	-	50,50,50	0.26	0	53,55,55	0.20	0
155	3PE	Dx	1202	-	50,50,50	0.27	0	53,55,55	0.21	0
168	HEM	Ed	201	125	41,50,50	1.47	3 (7%)	45,82,82	1.50	8 (17%)
150	CDL	Dr	402	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	Dn	502	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	DD	706	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	CJ	201	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
150	CDL	DG	202	-	99,99,99	0.31	0	105,111,111	0.56	1 (0%)
150	CDL	DJ	305	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	Dj	403	-	99,99,99	0.30	0	105,111,111	0.57	1 (0%)
155	3PE	A9	602	-	50,50,50	0.28	0	53,55,55	0.22	0
150	CDL	Di	1103	-	99,99,99	0.31	0	105,111,111	0.54	1 (0%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
153	PC1	e	1101	-	53,53,53	0.29	0	59,61,61	0.28	0
150	CDL	c	501	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
155	3PE	BA	301	-	50,50,50	0.27	0	53,55,55	0.21	0
153	PC1	DB	702	-	53,53,53	0.29	0	59,61,61	0.25	0
150	CDL	Dm	501	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	EO	201	-	53,53,53	0.29	0	59,61,61	0.27	0
150	CDL	Dv	402	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	Dh	202	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	EN	1202	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
153	PC1	AX	401	-	53,53,53	0.29	0	59,61,61	0.27	0
150	CDL	BC	302	-	99,99,99	0.30	0	105,111,111	0.57	2 (1%)
150	CDL	AA	901	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
150	CDL	DG	201	-	99,99,99	0.30	0	105,111,111	0.51	1 (0%)
153	PC1	Dv	405	-	53,53,53	0.29	0	59,61,61	0.25	0
153	PC1	Db	702	-	53,53,53	0.29	0	59,61,61	0.25	0
155	3PE	CD	303	-	50,50,50	0.27	0	53,55,55	0.22	0
153	PC1	Eo	205	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	EB	302	-	99,99,99	0.30	0	105,111,111	0.51	1 (0%)
150	CDL	DV	402	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	C	503	-	99,99,99	0.30	0	105,111,111	0.52	0
159	SF4	AB	802	12	0,12,12	-	-	-	-	-
150	CDL	C	506	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	Ea	502	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
155	3PE	DX	304	-	50,50,50	0.27	0	53,55,55	0.20	0
155	3PE	Di	1102	-	50,50,50	0.26	0	53,55,55	0.24	0
150	CDL	Dd	705	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	Dj	405	-	99,99,99	0.30	0	105,111,111	0.51	1 (0%)
155	3PE	Ds	403	-	50,50,50	0.27	0	53,55,55	0.20	0
153	PC1	AA	903	-	53,53,53	0.29	0	59,61,61	0.26	0
158	FES	AI	301	19	0,4,4	-	-	-	-	-
150	CDL	Ds	406	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
153	PC1	AA	906	-	53,53,53	0.28	0	59,61,61	0.27	0
156	LPP	AC	803	-	43,43,43	0.23	0	47,48,48	0.28	0
155	3PE	Dc	607	-	50,50,50	0.28	0	53,55,55	0.20	0
150	CDL	C	507	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
150	CDL	DY	301	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
153	PC1	DC	605	-	53,53,53	0.29	0	59,61,61	0.26	0
150	CDL	Ek	201	-	99,99,99	0.30	0	105,111,111	0.57	1 (0%)
153	PC1	A2	402	-	53,53,53	0.28	0	59,61,61	0.26	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
157	ADP	A8	401	152	24,29,29	0.61	0	29,45,45	0.61	1 (3%)
153	PC1	AM	302	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	DU	403	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	DU	402	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
153	PC1	Dx	1203	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	BY	201	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
150	CDL	Do	501	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
155	3PE	BT	201	-	50,50,50	0.28	0	53,55,55	0.20	0
150	CDL	DU	404	-	99,99,99	0.31	0	105,111,111	0.54	1 (0%)
155	3PE	Dr	404	-	50,50,50	0.26	0	53,55,55	0.20	0
159	SF4	AT	201	30	0,12,12	-	-	-	-	-
150	CDL	Dq	1402	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	B0	101	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
155	3PE	C	513	-	50,50,50	0.26	0	53,55,55	0.21	0
155	3PE	DX	302	-	50,50,50	0.26	0	53,55,55	0.19	0
150	CDL	En	1201	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	AF	402	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	DC	604	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	Dx	1201	-	99,99,99	0.31	0	105,111,111	0.54	1 (0%)
153	PC1	BG	202	-	53,53,53	0.28	0	59,61,61	0.25	0
159	SF4	AL	301	22	0,12,12	-	-	-	-	-
166	HEC	D	401	88	32,50,50	2.43	12 (37%)	24,82,82	2.24	5 (20%)
150	CDL	BV	201	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
155	3PE	Dc	606	-	50,50,50	0.28	0	53,55,55	0.20	0
153	PC1	A6	302	-	53,53,53	0.28	0	59,61,61	0.28	0
153	PC1	Dc	605	-	53,53,53	0.28	0	59,61,61	0.26	0
171	CUA	Db	701	98	0,1,1	-	-	-	-	-
159	SF4	AL	302	22	0,12,12	-	-	-	-	-
167	UQ8	C	511	-	53,53,53	0.51	0	64,67,67	0.75	3 (4%)
153	PC1	K	501	-	53,53,53	0.29	0	59,61,61	0.27	0
153	PC1	BS	1301	-	53,53,53	0.28	0	59,61,61	0.26	0
155	3PE	Ds	408	-	50,50,50	0.27	0	53,55,55	0.20	0
154	NDP	A1	401	-	45,52,52	0.50	0	53,80,80	0.54	1 (1%)
150	CDL	DZ	501	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
150	CDL	CG	301	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
150	CDL	Da	709	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	Dh	201	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	Dj	406	-	53,53,53	0.29	0	59,61,61	0.26	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
150	CDL	CC	305	-	99,99,99	0.29	0	105,111,111	0.53	1 (0%)
150	CDL	DV	403	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
150	CDL	C	505	-	99,99,99	0.29	0	105,111,111	0.55	1 (0%)
150	CDL	EA	301	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
153	PC1	EO	206	-	53,53,53	0.29	0	59,61,61	0.26	0
150	CDL	AP	301	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	DX	301	-	99,99,99	0.31	0	105,111,111	0.55	1 (0%)
153	PC1	EB	301	-	53,53,53	0.29	0	59,61,61	0.25	0
150	CDL	Dn	501	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
150	CDL	El	903	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	DJ	307	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
167	UQ8	Ed	202	-	53,53,53	0.52	0	64,67,67	0.72	3 (4%)
153	PC1	Di	1104	-	53,53,53	0.29	0	59,61,61	0.26	0
150	CDL	EL	901	-	99,99,99	0.31	0	105,111,111	0.56	1 (0%)
155	3PE	G	401	-	50,50,50	0.26	0	53,55,55	0.22	0
153	PC1	DC	603	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	AC	801	-	99,99,99	0.30	0	105,111,111	0.57	1 (0%)
150	CDL	EL	902	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	c	506	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	C	504	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
150	CDL	Ed	205	-	99,99,99	0.30	0	105,111,111	0.53	1 (0%)
150	CDL	Du	402	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
168	HEM	c	505	87	41,50,50	1.46	3 (7%)	45,82,82	1.36	4 (8%)
151	UDP	A0	603	152	24,26,26	0.38	0	37,40,40	0.76	2 (5%)
150	CDL	Dc	608	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	c	507	-	53,53,53	0.29	0	59,61,61	0.26	0
150	CDL	Dj	402	-	99,99,99	0.30	0	105,111,111	0.54	1 (0%)
153	PC1	Dc	602	-	53,53,53	0.28	0	59,61,61	0.27	0
150	CDL	BL	301	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
153	PC1	D	402	-	53,53,53	0.28	0	59,61,61	0.26	0
150	CDL	Dc	601	-	99,99,99	0.30	0	105,111,111	0.52	1 (0%)
150	CDL	DM	502	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
155	3PE	Em	901	-	50,50,50	0.27	0	53,55,55	0.19	0
159	SF4	AD	501	14	0,12,12	-	-	-	-	-
158	FES	BI	201	52	0,4,4	-	-	-	-	-
150	CDL	Di	1101	-	99,99,99	0.31	0	105,111,111	0.56	1 (0%)
150	CDL	BE	201	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
155	3PE	Dd	703	-	50,50,50	0.28	0	53,55,55	0.20	0
150	CDL	Dg	201	-	99,99,99	0.31	0	105,111,111	0.51	1 (0%)
153	PC1	AL	303	-	53,53,53	0.28	0	59,61,61	0.28	0
155	3PE	DC	607	-	50,50,50	0.27	0	53,55,55	0.20	0
155	3PE	DX	303	-	50,50,50	0.26	0	53,55,55	0.21	0
158	FES	Ef	503	127	0,4,4	-	-	-	-	-
150	CDL	AC	802	-	99,99,99	0.29	0	105,111,111	0.53	1 (0%)
158	FES	E	302	89	0,4,4	-	-	-	-	-
153	PC1	Dv	406	-	53,53,53	0.29	0	59,61,61	0.26	0
153	PC1	A0	605	-	53,53,53	0.28	0	59,61,61	0.26	0
153	PC1	Eb	301	-	53,53,53	0.28	0	59,61,61	0.25	0
150	CDL	El	901	-	99,99,99	0.31	0	105,111,111	0.57	1 (0%)
169	HEA	DA	703	97	57,67,67	2.17	19 (33%)	61,103,103	2.37	26 (42%)
158	FES	EF	201	127	0,4,4	-	-	-	-	-
150	CDL	DQ	1501	-	99,99,99	0.30	0	105,111,111	0.56	1 (0%)
153	PC1	El	904	-	53,53,53	0.27	0	59,61,61	0.28	0
167	UQ8	EN	1205	-	53,53,53	0.51	0	64,67,67	0.67	2 (3%)
150	CDL	ED	601	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
153	PC1	Dv	404	-	53,53,53	0.29	0	59,61,61	0.27	0
155	3PE	Dr	401	-	50,50,50	0.26	0	53,55,55	0.22	0
155	3PE	EM	901	-	50,50,50	0.27	0	53,55,55	0.20	0
155	3PE	DJ	301	-	50,50,50	0.27	0	53,55,55	0.21	0
153	PC1	A	1201	-	53,53,53	0.28	0	59,61,61	0.27	0
153	PC1	DQ	1503	-	53,53,53	0.29	0	59,61,61	0.26	0
150	CDL	Ei	401	-	99,99,99	0.29	0	105,111,111	0.54	1 (0%)
153	PC1	EN	1203	-	53,53,53	0.29	0	59,61,61	0.25	0
153	PC1	K	502	-	53,53,53	0.28	0	59,61,61	0.27	0
156	LPP	DN	505	-	43,43,43	0.22	0	47,48,48	0.28	0
153	PC1	DC	602	-	53,53,53	0.28	0	59,61,61	0.27	0
168	HEM	c	504	87	41,50,50	1.46	3 (7%)	45,82,82	1.35	6 (13%)
150	CDL	DJ	302	-	99,99,99	0.30	0	105,111,111	0.55	1 (0%)
157	ADP	AQ	201	-	24,29,29	0.61	0	29,45,45	0.63	1 (3%)
158	FES	CB	1000	75	0,4,4	-	-	-	-	-
153	PC1	AC	804	-	53,53,53	0.30	0	59,61,61	0.27	0
158	FES	AB	801	12	0,4,4	-	-	-	-	-
153	PC1	Da	706	-	53,53,53	0.28	0	59,61,61	0.27	0
153	PC1	DX	305	-	53,53,53	0.29	0	59,61,61	0.26	0

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
150	CDL	Dm	502	-	-	27/110/110/110	-
150	CDL	BT	204	-	-	39/110/110/110	-
153	PC1	AU	201	-	-	12/57/57/57	-
153	PC1	DA	708	-	-	10/57/57/57	-
150	CDL	DO	501	-	-	29/110/110/110	-
150	CDL	h	501	-	-	26/110/110/110	-
155	3PE	DI	301	-	-	18/54/54/54	-
150	CDL	AM	301	-	-	31/110/110/110	-
150	CDL	DR	403	-	-	29/110/110/110	-
158	FES	e	1102	89	-	-	0/1/1/1
153	PC1	Eo	204	-	-	20/57/57/57	-
153	PC1	C	509	-	-	24/57/57/57	-
155	3PE	DN	501	-	-	12/54/54/54	-
156	LPP	DA	710	-	-	7/45/45/45	-
155	3PE	CK	101	-	-	3/54/54/54	-
161	8Q1	AS	200	-	-	12/38/40/41	-
150	CDL	Dq	1403	-	-	34/110/110/110	-
168	HEM	C	502	87	-	5/12/54/54	-
150	CDL	DS	405	-	-	32/110/110/110	-
150	CDL	DN	507	-	-	38/110/110/110	-
150	CDL	Dj	407	-	-	32/110/110/110	-
167	UQ8	En	1202	-	-	11/51/75/75	0/1/1/1
150	CDL	Dr	403	-	-	30/110/110/110	-
150	CDL	H	1301	-	-	29/110/110/110	-
153	PC1	E	303	-	-	12/57/57/57	-
150	CDL	Dq	1401	-	-	40/110/110/110	-
158	FES	EF	202	127	-	-	0/1/1/1
150	CDL	Dg	202	-	-	32/110/110/110	-
153	PC1	DS	406	-	-	19/57/57/57	-
150	CDL	EH	1601	-	-	32/110/110/110	-
173	ATP	Er	201	-	-	2/18/38/38	0/3/3/3
150	CDL	Dj	401	-	-	38/110/110/110	-
153	PC1	Dc	604	-	-	11/57/57/57	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
153	PC1	DX	308	-	-	18/57/57/57	-
153	PC1	k	301	-	-	17/57/57/57	-
150	CDL	Eh	1601	-	-	40/110/110/110	-
156	LPP	EI	402	-	-	7/45/45/45	-
150	CDL	DX	306	-	-	34/110/110/110	-
167	UQ8	EI	906	-	-	13/51/75/75	0/1/1/1
160	FMN	AD	502	-	-	1/18/18/18	0/3/3/3
150	CDL	Dv	403	-	-	40/110/110/110	-
156	LPP	A6	301	-	-	3/45/45/45	-
167	UQ8	DS	403	-	-	8/51/75/75	0/1/1/1
150	CDL	DJ	304	-	-	40/110/110/110	-
155	3PE	Dx	1208	-	-	13/54/54/54	-
153	PC1	BS	1302	-	-	10/57/57/57	-
153	PC1	Dx	1205	-	-	14/57/57/57	-
150	CDL	A0	602	-	-	36/110/110/110	-
150	CDL	DM	501	-	-	41/110/110/110	-
153	PC1	Eo	201	-	-	15/57/57/57	-
153	PC1	A1	403	-	-	14/57/57/57	-
150	CDL	DR	402	-	-	33/110/110/110	-
156	LPP	Dn	505	-	-	6/45/45/45	-
150	CDL	c	509	-	-	33/110/110/110	-
153	PC1	AQ	202	-	-	15/57/57/57	-
153	PC1	AH	301	-	-	9/57/57/57	-
153	PC1	C	508	-	-	20/57/57/57	-
153	PC1	CC	302	-	-	15/57/57/57	-
153	PC1	DV	404	-	-	14/57/57/57	-
150	CDL	DN	503	-	-	26/110/110/110	-
150	CDL	DX	307	-	-	29/110/110/110	-
150	CDL	Dx	1204	-	-	46/110/110/110	-
153	PC1	c	503	-	-	16/57/57/57	-
153	PC1	Dc	609	-	-	17/57/57/57	-
150	CDL	H	1302	-	-	29/110/110/110	-
155	3PE	Dx	1206	-	-	15/54/54/54	-
153	PC1	A9	603	-	-	21/57/57/57	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
150	CDL	DV	401	-	-	32/110/110/110	-
153	PC1	AU	202	-	-	14/57/57/57	-
156	LPP	Dn	504	-	-	9/45/45/45	-
169	HEA	Da	702	97	3/3/16/16	5/32/76/76	-
150	CDL	DN	506	-	-	37/110/110/110	-
169	HEA	Da	703	97	3/3/16/16	9/32/76/76	-
153	PC1	DA	707	-	-	18/57/57/57	-
155	3PE	Dg	204	-	-	13/54/54/54	-
150	CDL	g	801	-	-	31/110/110/110	-
150	CDL	Dv	401	-	-	37/110/110/110	-
150	CDL	DD	705	-	-	34/110/110/110	-
155	3PE	Da	708	-	-	17/54/54/54	-
153	PC1	Dg	203	-	-	13/57/57/57	-
150	CDL	Dn	506	-	-	35/110/110/110	-
153	PC1	EO	205	-	-	25/57/57/57	-
150	CDL	DQ	1504	-	-	36/110/110/110	-
153	PC1	DG	203	-	-	9/57/57/57	-
167	UQ8	Ds	404	-	-	12/51/75/75	0/1/1/1
153	PC1	EO	204	-	-	10/57/57/57	-
155	3PE	DS	402	-	-	20/54/54/54	-
153	PC1	d	801	-	-	18/57/57/57	-
150	CDL	DA	706	-	-	33/110/110/110	-
166	HEC	d	802	88	-	2/10/54/54	-
150	CDL	DH	201	-	-	27/110/110/110	-
150	CDL	DN	502	-	-	40/110/110/110	-
153	PC1	DI	303	-	-	18/57/57/57	-
150	CDL	Ea	501	-	-	37/110/110/110	-
150	CDL	ES	1101	-	-	39/110/110/110	-
150	CDL	Eu	101	-	-	32/110/110/110	-
150	CDL	B1	402	-	-	33/110/110/110	-
150	CDL	CD	302	-	-	28/110/110/110	-
155	3PE	Dx	1207	-	-	19/54/54/54	-
155	3PE	Eo	202	-	-	14/54/54/54	-
150	CDL	DH	202	-	-	39/110/110/110	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
150	CDL	Dj	404	-	-	35/110/110/110	-
168	HEM	C	501	87	-	4/12/54/54	-
150	CDL	DD	703	-	-	31/110/110/110	-
150	CDL	AF	401	-	-	22/110/110/110	-
153	PC1	Dv	407	-	-	9/57/57/57	-
150	CDL	DU	401	-	-	37/110/110/110	-
167	UQ8	EL	905	-	-	11/51/75/75	0/1/1/1
150	CDL	Eb	302	-	-	37/110/110/110	-
150	CDL	BC	301	-	-	22/110/110/110	-
153	PC1	c	508	-	-	8/57/57/57	-
150	CDL	EK	201	-	-	31/110/110/110	-
150	CDL	Ed	204	-	-	27/110/110/110	-
159	SF4	AB	803	12	-	-	0/6/5/5
159	SF4	CB	1001	75	-	-	0/6/5/5
150	CDL	DA	709	-	-	23/110/110/110	-
150	CDL	CC	304	-	-	22/110/110/110	-
150	CDL	DS	404	-	-	36/110/110/110	-
150	CDL	CG	302	-	-	36/110/110/110	-
167	UQ8	C	512	-	-	10/51/75/75	0/1/1/1
153	PC1	B1	401	-	-	18/57/57/57	-
150	CDL	DD	704	-	-	32/110/110/110	-
153	PC1	DV	406	-	-	9/57/57/57	-
150	CDL	A0	601	-	-	23/110/110/110	-
150	CDL	ED	605	-	-	36/110/110/110	-
150	CDL	Ds	405	-	-	40/110/110/110	-
153	PC1	AA	907	-	-	21/57/57/57	-
155	3PE	Eo	203	-	-	8/54/54/54	-
156	LPP	Ed	203	-	-	2/45/45/45	-
150	CDL	Ds	401	-	-	28/110/110/110	-
150	CDL	E	301	-	-	28/110/110/110	-
153	PC1	AJ	501	-	-	15/57/57/57	-
150	CDL	DJ	303	-	-	31/110/110/110	-
153	PC1	DV	405	-	-	9/57/57/57	-
153	PC1	g	802	-	-	13/57/57/57	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
153	PC1	DJ	306	-	-	12/57/57/57	-
153	PC1	BT	203	-	-	16/57/57/57	-
153	PC1	Dq	1404	-	-	10/57/57/57	-
150	CDL	EN	1201	-	-	28/110/110/110	-
150	CDL	c	502	-	-	29/110/110/110	-
150	CDL	DI	302	-	-	41/110/110/110	-
153	PC1	DC	608	-	-	16/57/57/57	-
150	CDL	EO	202	-	-	33/110/110/110	-
155	3PE	BP	201	-	-	15/54/54/54	-
150	CDL	BT	202	-	-	36/110/110/110	-
150	CDL	DQ	1502	-	-	33/110/110/110	-
150	CDL	EI	902	-	-	39/110/110/110	-
150	CDL	Dd	704	-	-	34/110/110/110	-
150	CDL	Dd	706	-	-	29/110/110/110	-
153	PC1	A6	303	-	-	11/57/57/57	-
153	PC1	Da	707	-	-	12/57/57/57	-
150	CDL	DC	601	-	-	39/110/110/110	-
155	3PE	CC	301	-	-	5/54/54/54	-
164	FAD	CA	702	-	-	15/30/50/50	0/6/6/6
150	CDL	Dy	301	-	-	40/110/110/110	-
166	HEC	CE	401	79	-	5/10/54/54	-
150	CDL	EL	903	-	-	37/110/110/110	-
153	PC1	B1	403	-	-	16/57/57/57	-
153	PC1	DY	302	-	-	9/57/57/57	-
153	PC1	C	510	-	-	12/57/57/57	-
150	CDL	Dn	503	-	-	30/110/110/110	-
155	3PE	DR	401	-	-	9/54/54/54	-
150	CDL	ED	604	-	-	26/110/110/110	-
155	3PE	DC	606	-	-	10/54/54/54	-
150	CDL	AA	908	-	-	29/110/110/110	-
156	LPP	Dl	1101	-	-	8/45/45/45	-
150	CDL	Du	403	-	-	30/110/110/110	-
173	ATP	ER	201	-	-	6/18/38/38	0/3/3/3
150	CDL	Ds	402	-	-	33/110/110/110	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
150	CDL	DS	401	-	-	29/110/110/110	-
153	PC1	Dx	1209	-	-	5/57/57/57	-
153	PC1	Ef	501	-	-	14/57/57/57	-
153	PC1	AA	904	-	-	14/57/57/57	-
156	LPP	AL	304	-	-	3/45/45/45	-
150	CDL	A1	402	-	-	40/110/110/110	-
150	CDL	BG	201	-	-	34/110/110/110	-
158	FES	Ef	502	127	-	-	0/1/1/1
150	CDL	CD	301	-	-	38/110/110/110	-
153	PC1	A9	601	-	-	13/57/57/57	-
168	HEM	ED	602	125	-	0/12/54/54	-
167	UQ8	CC	303	-	-	10/51/75/75	0/1/1/1
165	F3S	CB	1002	75	-	-	2/3/3/3
150	CDL	Dd	702	-	-	30/110/110/110	-
167	UQ8	c	510	-	-	12/51/75/75	0/1/1/1
156	LPP	DN	504	-	-	9/45/45/45	-
150	CDL	B0	102	-	-	25/110/110/110	-
150	CDL	Du	401	-	-	38/110/110/110	-
153	PC1	AA	905	-	-	15/57/57/57	-
155	3PE	A2	401	-	-	9/54/54/54	-
169	HEA	DA	702	97	3/3/16/16	4/32/76/76	-
155	3PE	EN	1204	-	-	14/54/54/54	-
150	CDL	EI	401	-	-	23/110/110/110	-
155	3PE	AJ	502	-	-	14/54/54/54	-
156	LPP	AA	902	-	-	11/45/45/45	-
155	3PE	EO	203	-	-	9/54/54/54	-
150	CDL	Ep	701	-	-	33/110/110/110	-
153	PC1	EB	303	-	-	6/57/57/57	-
155	3PE	EL	904	-	-	17/54/54/54	-
153	PC1	Eb	303	-	-	6/57/57/57	-
155	3PE	DG	205	-	-	15/54/54/54	-
153	PC1	Dc	603	-	-	14/57/57/57	-
153	PC1	Ds	407	-	-	9/57/57/57	-
153	PC1	Dy	302	-	-	12/57/57/57	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
155	3PE	El	905	-	-	17/54/54/54	-
167	UQ8	ED	603	-	-	9/51/75/75	0/1/1/1
150	CDL	Eg	101	-	-	32/110/110/110	-
155	3PE	DG	204	-	-	16/54/54/54	-
155	3PE	Dx	1202	-	-	18/54/54/54	-
168	HEM	Ed	201	125	-	0/12/54/54	-
150	CDL	Dr	402	-	-	35/110/110/110	-
150	CDL	Dn	502	-	-	41/110/110/110	-
150	CDL	DD	706	-	-	31/110/110/110	-
150	CDL	CJ	201	-	-	24/110/110/110	-
150	CDL	DG	202	-	-	27/110/110/110	-
150	CDL	DJ	305	-	-	25/110/110/110	-
150	CDL	Dj	403	-	-	35/110/110/110	-
155	3PE	A9	602	-	-	8/54/54/54	-
150	CDL	Di	1103	-	-	35/110/110/110	-
153	PC1	e	1101	-	-	12/57/57/57	-
150	CDL	c	501	-	-	34/110/110/110	-
155	3PE	BA	301	-	-	17/54/54/54	-
153	PC1	DB	702	-	-	21/57/57/57	-
150	CDL	Dm	501	-	-	39/110/110/110	-
153	PC1	EO	201	-	-	12/57/57/57	-
150	CDL	Dv	402	-	-	39/110/110/110	-
150	CDL	Dh	202	-	-	39/110/110/110	-
150	CDL	EN	1202	-	-	29/110/110/110	-
153	PC1	AX	401	-	-	8/57/57/57	-
150	CDL	BC	302	-	-	32/110/110/110	-
150	CDL	AA	901	-	-	32/110/110/110	-
150	CDL	DG	201	-	-	37/110/110/110	-
153	PC1	Dv	405	-	-	19/57/57/57	-
153	PC1	Db	702	-	-	22/57/57/57	-
155	3PE	CD	303	-	-	12/54/54/54	-
153	PC1	Eo	205	-	-	14/57/57/57	-
150	CDL	EB	302	-	-	33/110/110/110	-
150	CDL	DV	402	-	-	32/110/110/110	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
150	CDL	C	503	-	-	35/110/110/110	-
159	SF4	AB	802	12	-	-	0/6/5/5
150	CDL	C	506	-	-	31/110/110/110	-
150	CDL	Ea	502	-	-	26/110/110/110	-
155	3PE	DX	304	-	-	13/54/54/54	-
155	3PE	Di	1102	-	-	17/54/54/54	-
150	CDL	Dd	705	-	-	31/110/110/110	-
150	CDL	Dj	405	-	-	29/110/110/110	-
155	3PE	Ds	403	-	-	20/54/54/54	-
153	PC1	AA	903	-	-	13/57/57/57	-
158	FES	AI	301	19	-	-	0/1/1/1
150	CDL	Ds	406	-	-	35/110/110/110	-
153	PC1	AA	906	-	-	20/57/57/57	-
156	LPP	AC	803	-	-	11/45/45/45	-
155	3PE	Dc	607	-	-	18/54/54/54	-
150	CDL	C	507	-	-	34/110/110/110	-
150	CDL	DY	301	-	-	35/110/110/110	-
153	PC1	DC	605	-	-	12/57/57/57	-
150	CDL	Ek	201	-	-	30/110/110/110	-
153	PC1	A2	402	-	-	9/57/57/57	-
157	ADP	A8	401	152	-	2/12/32/32	0/3/3/3
153	PC1	AM	302	-	-	19/57/57/57	-
150	CDL	DU	403	-	-	30/110/110/110	-
150	CDL	DU	402	-	-	29/110/110/110	-
153	PC1	Dx	1203	-	-	18/57/57/57	-
150	CDL	BY	201	-	-	28/110/110/110	-
150	CDL	Do	501	-	-	36/110/110/110	-
155	3PE	BT	201	-	-	21/54/54/54	-
150	CDL	DU	404	-	-	26/110/110/110	-
155	3PE	Dr	404	-	-	10/54/54/54	-
159	SF4	AT	201	30	-	-	0/6/5/5
150	CDL	Dq	1402	-	-	31/110/110/110	-
150	CDL	B0	101	-	-	34/110/110/110	-
155	3PE	C	513	-	-	11/54/54/54	-
155	3PE	DX	302	-	-	14/54/54/54	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
150	CDL	En	1201	-	-	32/110/110/110	-
150	CDL	AF	402	-	-	29/110/110/110	-
153	PC1	DC	604	-	-	15/57/57/57	-
150	CDL	Dx	1201	-	-	37/110/110/110	-
153	PC1	BG	202	-	-	22/57/57/57	-
159	SF4	AL	301	22	-	-	0/6/5/5
166	HEC	D	401	88	-	1/10/54/54	-
150	CDL	BV	201	-	-	24/110/110/110	-
155	3PE	Dc	606	-	-	5/54/54/54	-
153	PC1	A6	302	-	-	11/57/57/57	-
153	PC1	Dc	605	-	-	18/57/57/57	-
159	SF4	AL	302	22	-	-	0/6/5/5
167	UQ8	C	511	-	-	16/51/75/75	0/1/1/1
153	PC1	K	501	-	-	15/57/57/57	-
153	PC1	BS	1301	-	-	16/57/57/57	-
155	3PE	Ds	408	-	-	12/54/54/54	-
154	NDP	A1	401	-	-	6/30/77/77	0/5/5/5
150	CDL	DZ	501	-	-	37/110/110/110	-
150	CDL	CG	301	-	-	27/110/110/110	-
150	CDL	Da	709	-	-	41/110/110/110	-
150	CDL	Dh	201	-	-	34/110/110/110	-
153	PC1	Dj	406	-	-	10/57/57/57	-
150	CDL	CC	305	-	-	29/110/110/110	-
150	CDL	DV	403	-	-	37/110/110/110	-
150	CDL	C	505	-	-	36/110/110/110	-
150	CDL	EA	301	-	-	28/110/110/110	-
153	PC1	EO	206	-	-	17/57/57/57	-
150	CDL	AP	301	-	-	25/110/110/110	-
150	CDL	DX	301	-	-	33/110/110/110	-
153	PC1	EB	301	-	-	13/57/57/57	-
150	CDL	Dn	501	-	-	38/110/110/110	-
150	CDL	El	903	-	-	38/110/110/110	-
150	CDL	DJ	307	-	-	34/110/110/110	-
167	UQ8	Ed	202	-	-	9/51/75/75	0/1/1/1
153	PC1	Di	1104	-	-	19/57/57/57	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
150	CDL	EL	901	-	-	45/110/110/110	-
155	3PE	G	401	-	-	8/54/54/54	-
153	PC1	DC	603	-	-	14/57/57/57	-
150	CDL	AC	801	-	-	37/110/110/110	-
150	CDL	EL	902	-	-	44/110/110/110	-
150	CDL	c	506	-	-	38/110/110/110	-
150	CDL	C	504	-	-	39/110/110/110	-
150	CDL	Ed	205	-	-	30/110/110/110	-
150	CDL	Du	402	-	-	33/110/110/110	-
168	HEM	c	505	87	-	1/12/54/54	-
151	UDP	A0	603	152	-	7/16/32/32	0/2/2/2
150	CDL	Dc	608	-	-	27/110/110/110	-
153	PC1	c	507	-	-	19/57/57/57	-
150	CDL	Dj	402	-	-	34/110/110/110	-
153	PC1	Dc	602	-	-	16/57/57/57	-
150	CDL	BL	301	-	-	21/110/110/110	-
153	PC1	D	402	-	-	18/57/57/57	-
150	CDL	Dc	601	-	-	37/110/110/110	-
150	CDL	DM	502	-	-	24/110/110/110	-
155	3PE	Em	901	-	-	15/54/54/54	-
159	SF4	AD	501	14	-	-	0/6/5/5
158	FES	BI	201	52	-	-	0/1/1/1
150	CDL	Di	1101	-	-	40/110/110/110	-
150	CDL	BE	201	-	-	29/110/110/110	-
155	3PE	Dd	703	-	-	18/54/54/54	-
150	CDL	Dg	201	-	-	46/110/110/110	-
153	PC1	AL	303	-	-	9/57/57/57	-
155	3PE	DC	607	-	-	13/54/54/54	-
155	3PE	DX	303	-	-	18/54/54/54	-
158	FES	Ef	503	127	-	-	0/1/1/1
150	CDL	AC	802	-	-	34/110/110/110	-
158	FES	E	302	89	-	-	0/1/1/1
153	PC1	Dv	406	-	-	13/57/57/57	-
153	PC1	A0	605	-	-	13/57/57/57	-
153	PC1	Eb	301	-	-	12/57/57/57	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
150	CDL	EI	901	-	-	42/110/110/110	-
169	HEA	DA	703	97	3/3/16/16	9/32/76/76	-
158	FES	EF	201	127	-	-	0/1/1/1
150	CDL	DQ	1501	-	-	31/110/110/110	-
153	PC1	EI	904	-	-	10/57/57/57	-
167	UQ8	EN	1205	-	-	15/51/75/75	0/1/1/1
150	CDL	ED	601	-	-	32/110/110/110	-
153	PC1	Dv	404	-	-	11/57/57/57	-
155	3PE	Dr	401	-	-	15/54/54/54	-
155	3PE	EM	901	-	-	13/54/54/54	-
155	3PE	DJ	301	-	-	15/54/54/54	-
153	PC1	A	1201	-	-	13/57/57/57	-
153	PC1	DQ	1503	-	-	11/57/57/57	-
150	CDL	Ei	401	-	-	26/110/110/110	-
153	PC1	EN	1203	-	-	16/57/57/57	-
153	PC1	K	502	-	-	12/57/57/57	-
156	LPP	DN	505	-	-	1/45/45/45	-
153	PC1	DC	602	-	-	15/57/57/57	-
168	HEM	c	504	87	-	2/12/54/54	-
150	CDL	DJ	302	-	-	29/110/110/110	-
157	ADP	AQ	201	-	-	2/12/32/32	0/3/3/3
158	FES	CB	1000	75	-	-	0/1/1/1
153	PC1	AC	804	-	-	12/57/57/57	-
158	FES	AB	801	12	-	-	0/1/1/1
153	PC1	Da	706	-	-	16/57/57/57	-
153	PC1	DX	305	-	-	11/57/57/57	-

The worst 5 of 130 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
166	CE	401	HEC	C2B-C3B	10.60	1.51	1.40
166	D	401	HEC	C3C-C2C	7.13	1.48	1.40
166	d	802	HEC	C2B-C3B	6.80	1.47	1.40
166	D	401	HEC	C2B-C3B	6.73	1.47	1.40
166	d	802	HEC	C3C-C2C	6.71	1.47	1.40

The worst 5 of 356 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
166	D	401	HEC	CMB-C2B-C3B	6.11	133.00	125.82
169	DA	702	HEA	C3D-C4D-ND	6.04	116.21	110.36
169	DA	703	HEA	C3D-C4D-ND	6.00	116.17	110.36
169	Da	702	HEA	C3D-C4D-ND	5.91	116.08	110.36
169	Da	703	HEA	C3D-C4D-ND	5.89	116.06	110.36

5 of 12 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
169	DA	702	HEA	NB
169	DA	702	HEA	NA
169	DA	702	HEA	ND
169	DA	703	HEA	NB
169	DA	703	HEA	NA

5 of 7630 torsion outliers are listed below:

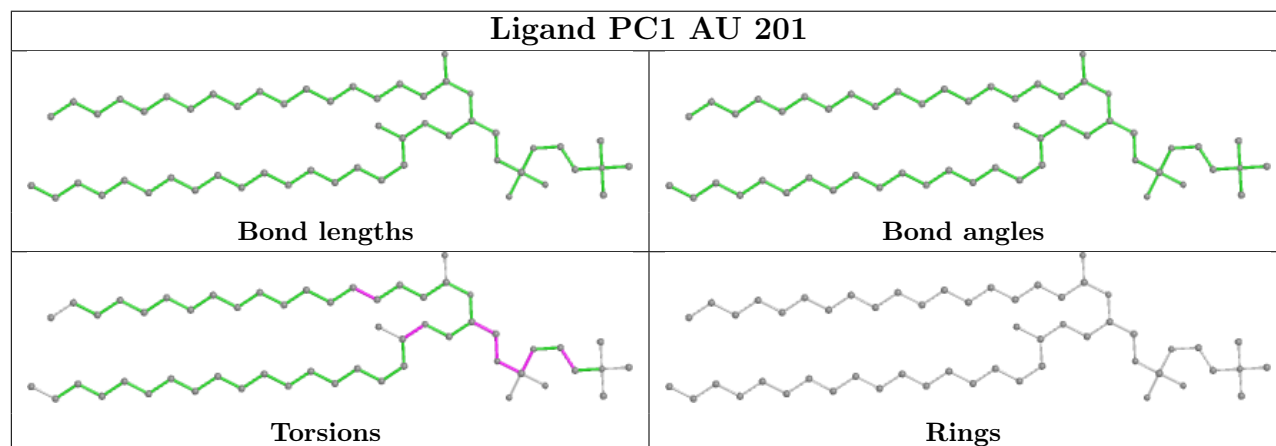
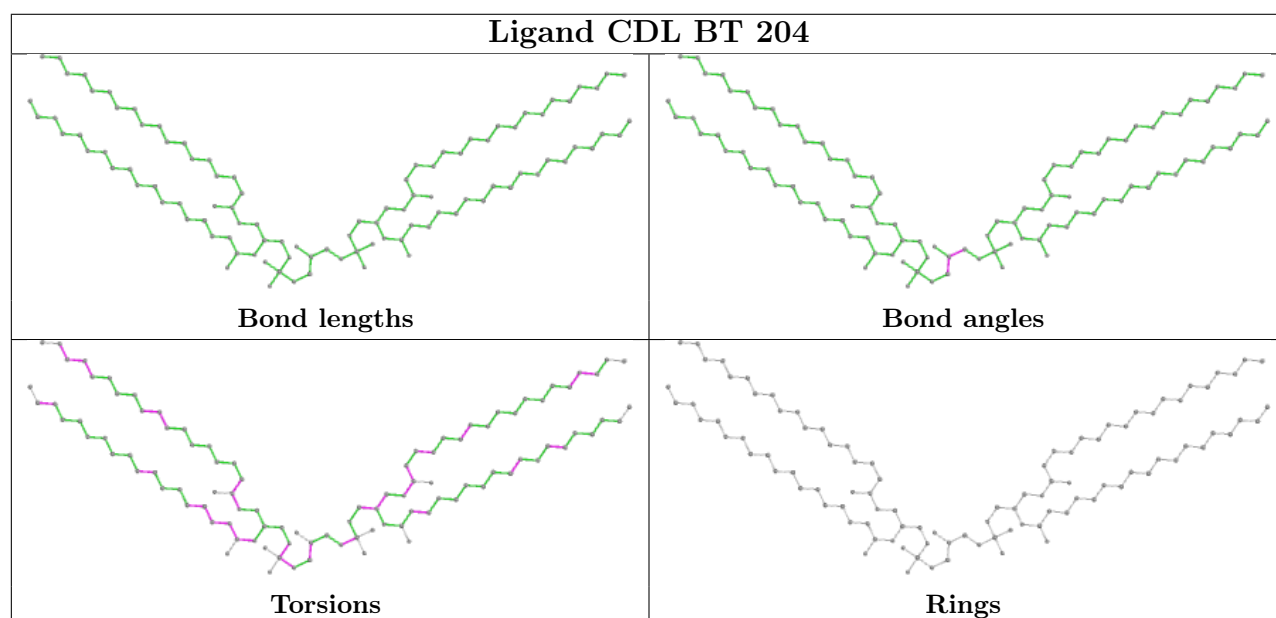
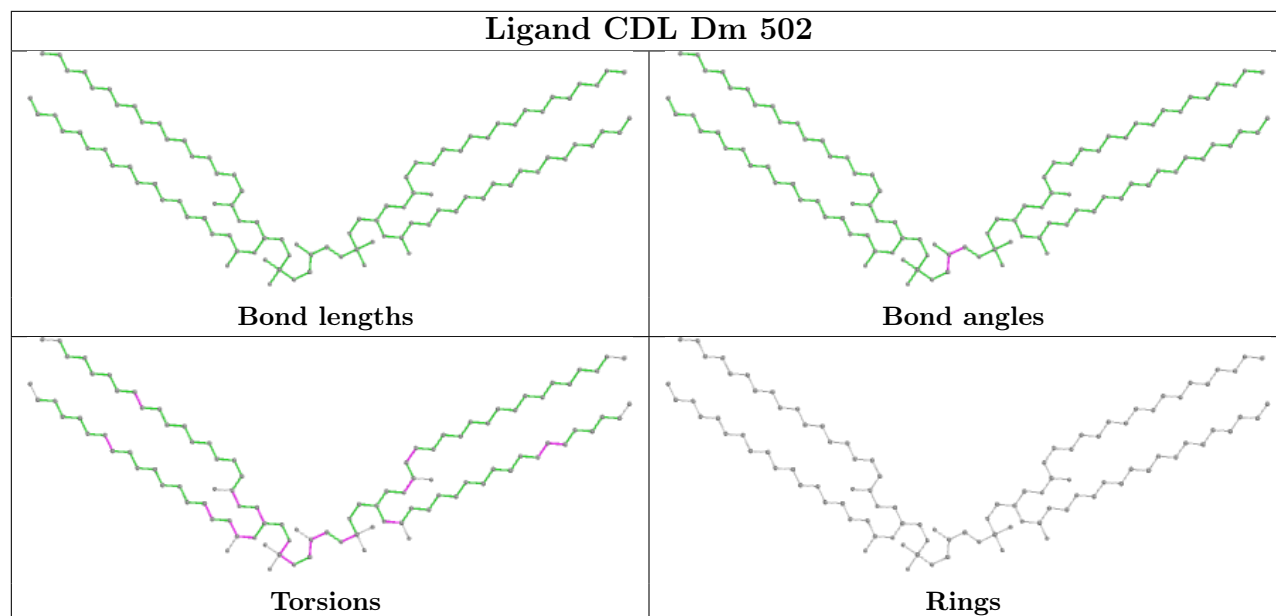
Mol	Chain	Res	Type	Atoms
150	A0	601	CDL	C11-CA5-OA6-CA4
150	A0	601	CDL	CB2-OB2-PB2-OB5
150	A0	601	CDL	CB3-OB5-PB2-OB3
150	A0	601	CDL	CB3-OB5-PB2-OB4
150	A0	601	CDL	C51-CB5-OB6-CB4

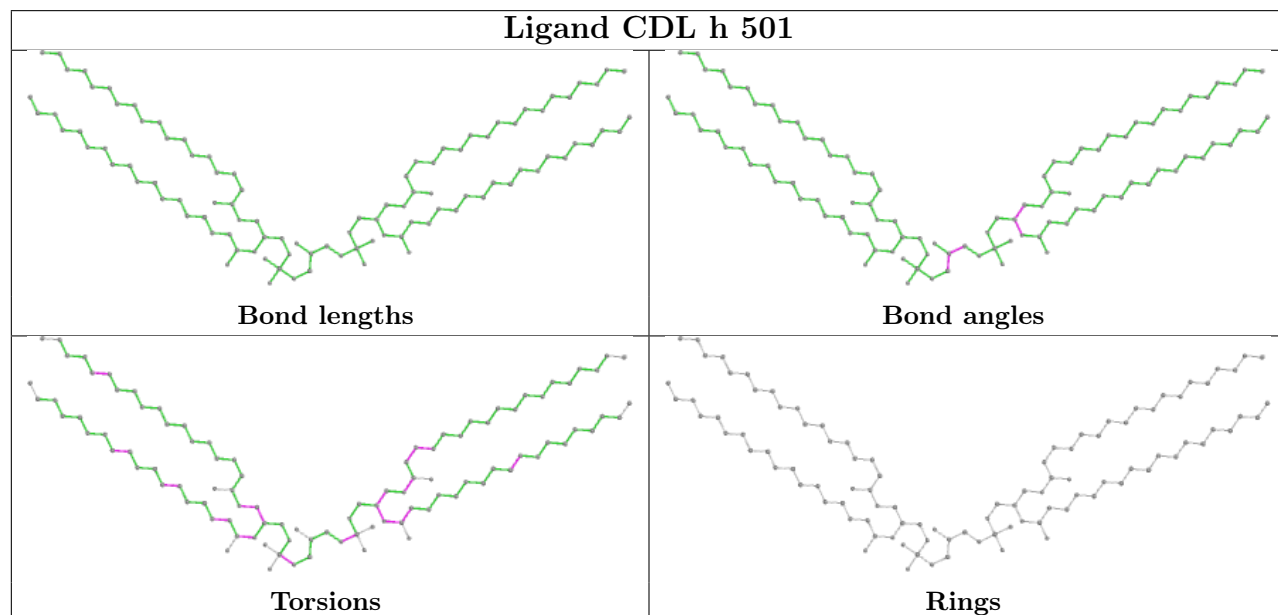
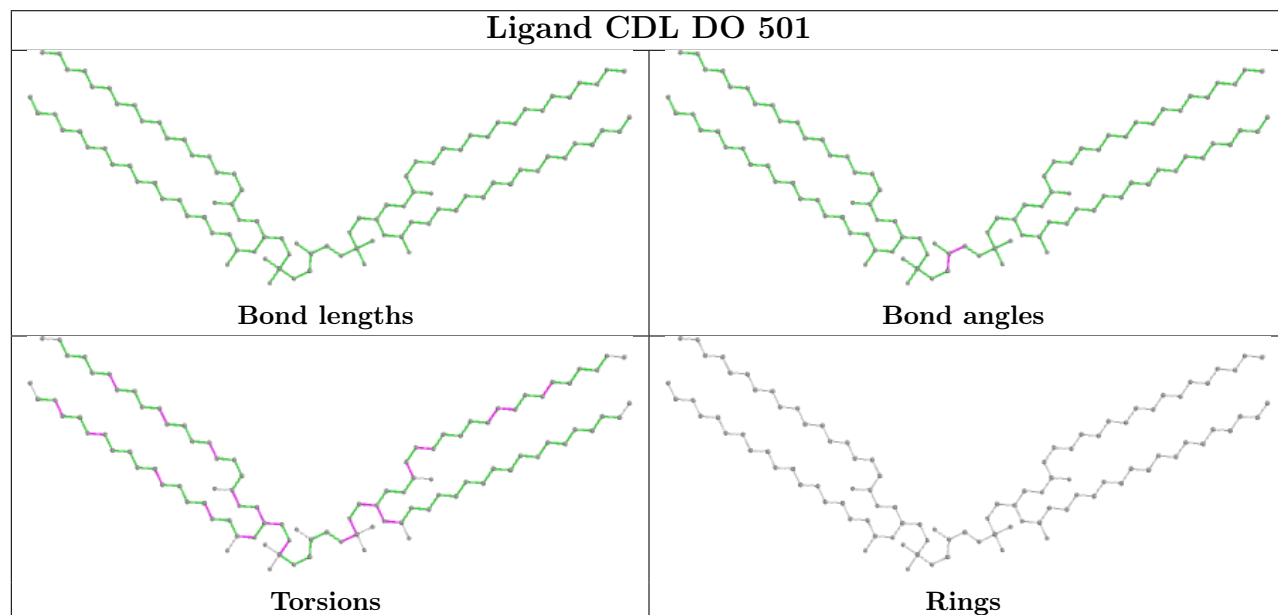
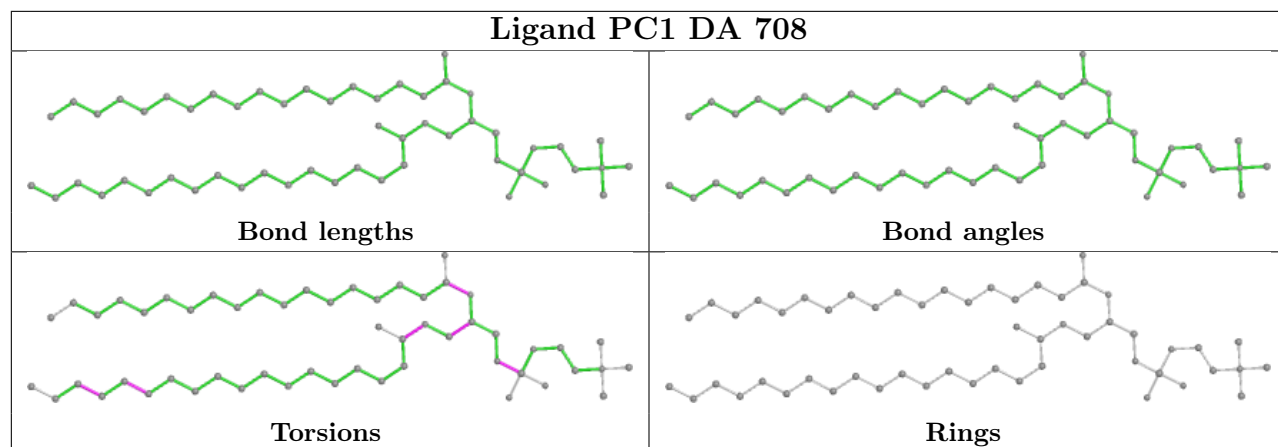
All (2) ring outliers are listed below:

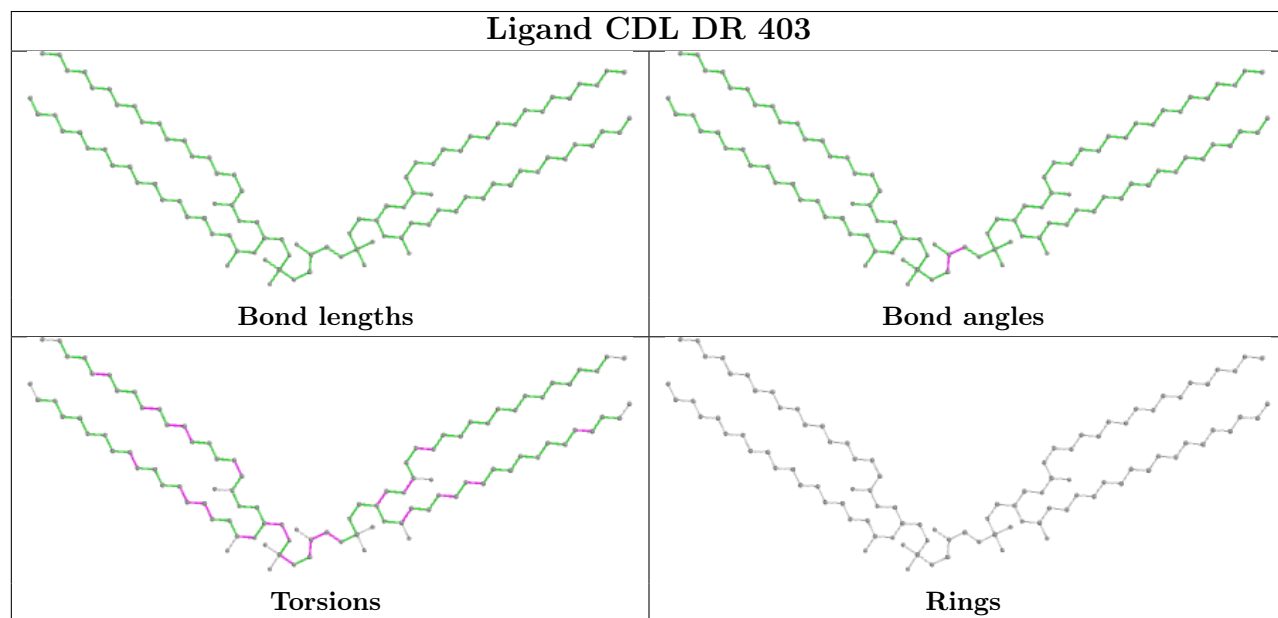
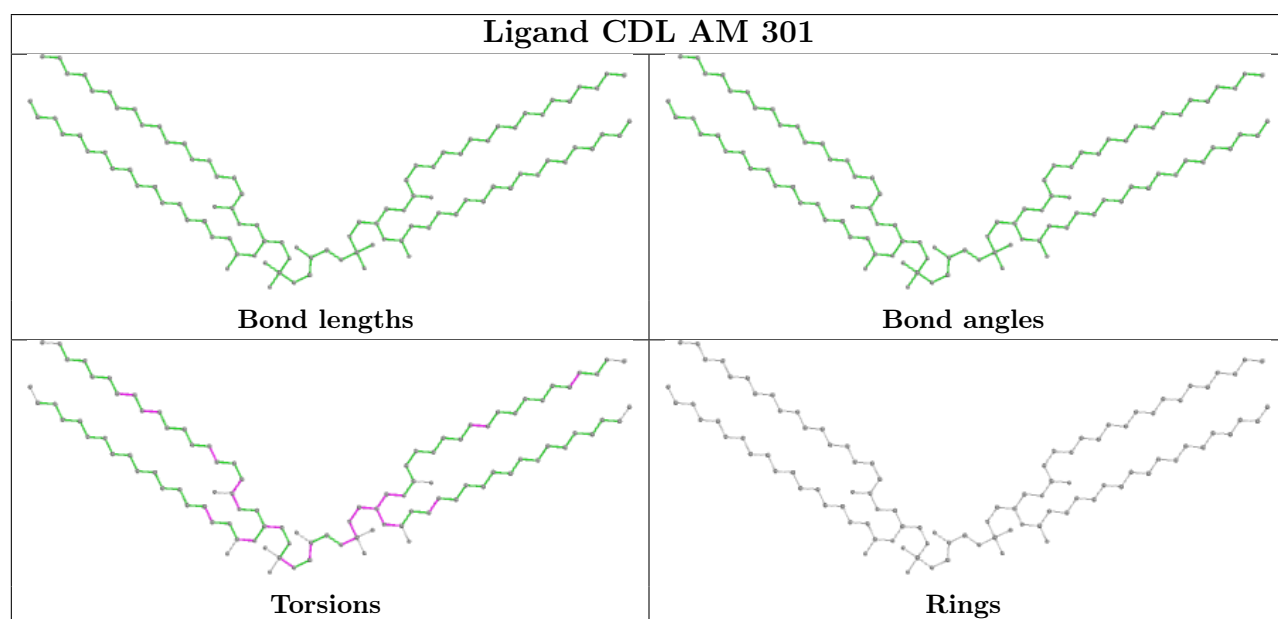
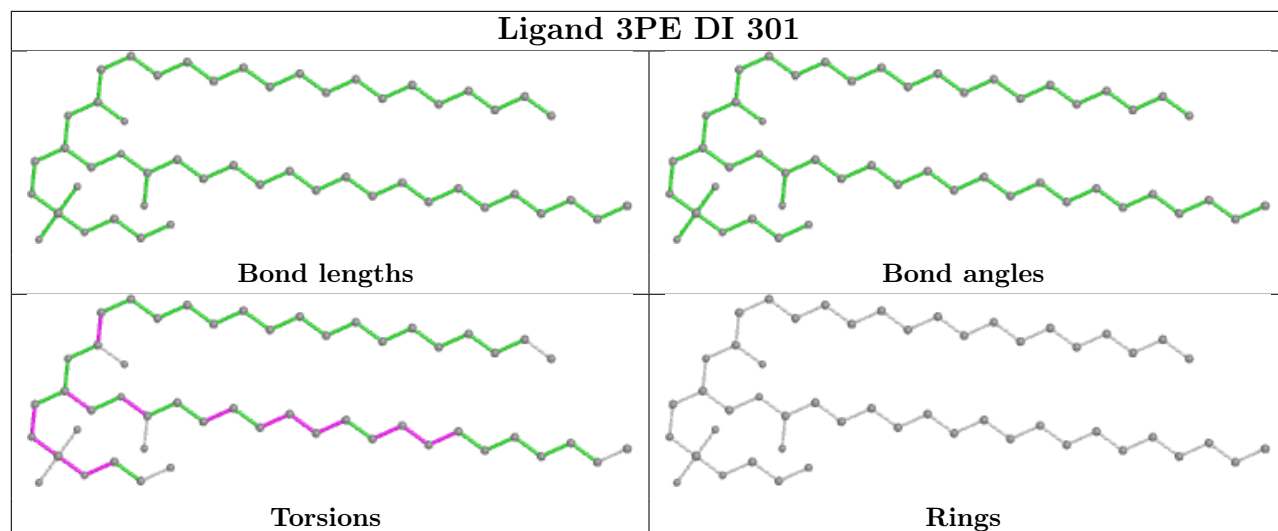
Mol	Chain	Res	Type	Atoms
165	CB	1002	F3S	FE1-FE3-S1-S3
165	CB	1002	F3S	FE3-FE4-S3-S4

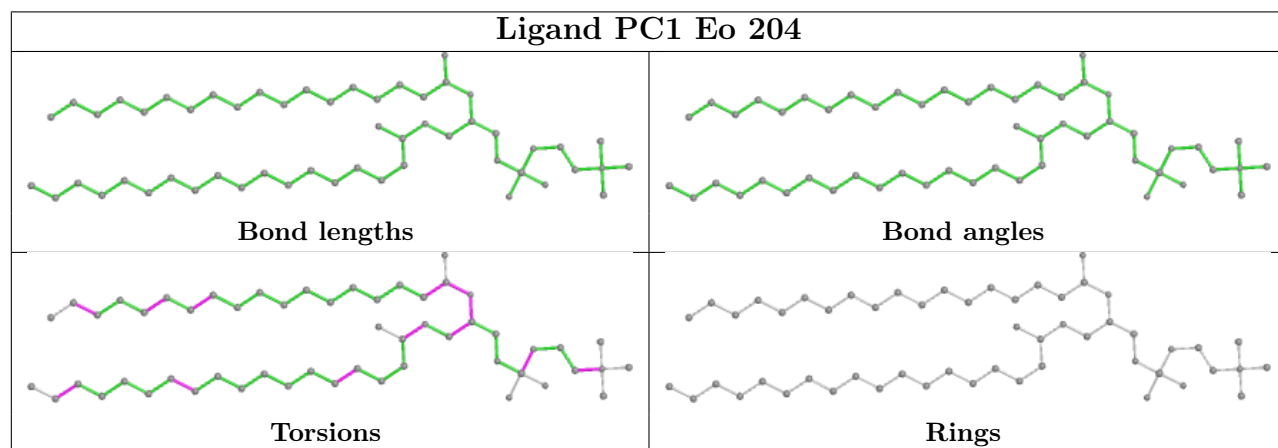
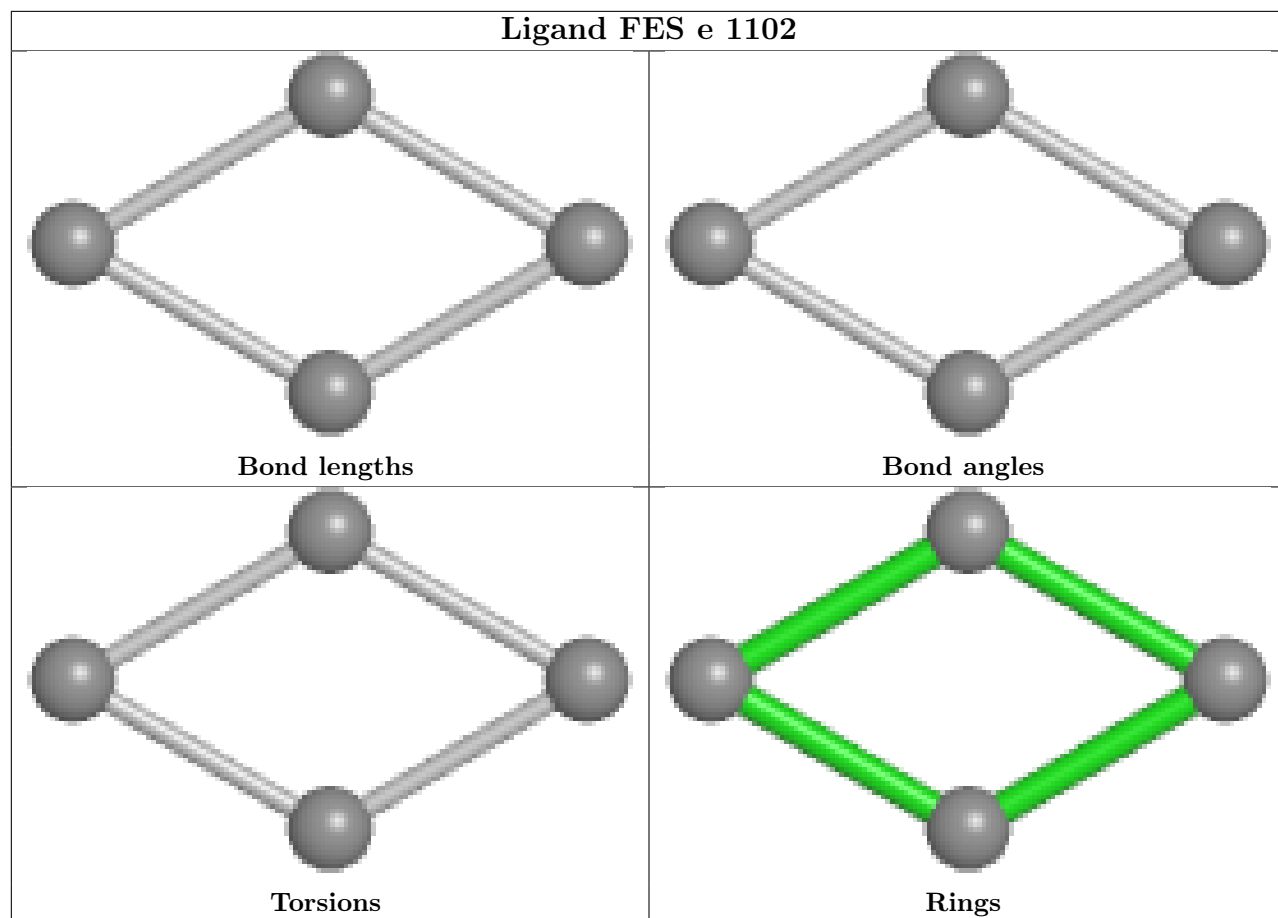
No monomer is involved in short contacts.

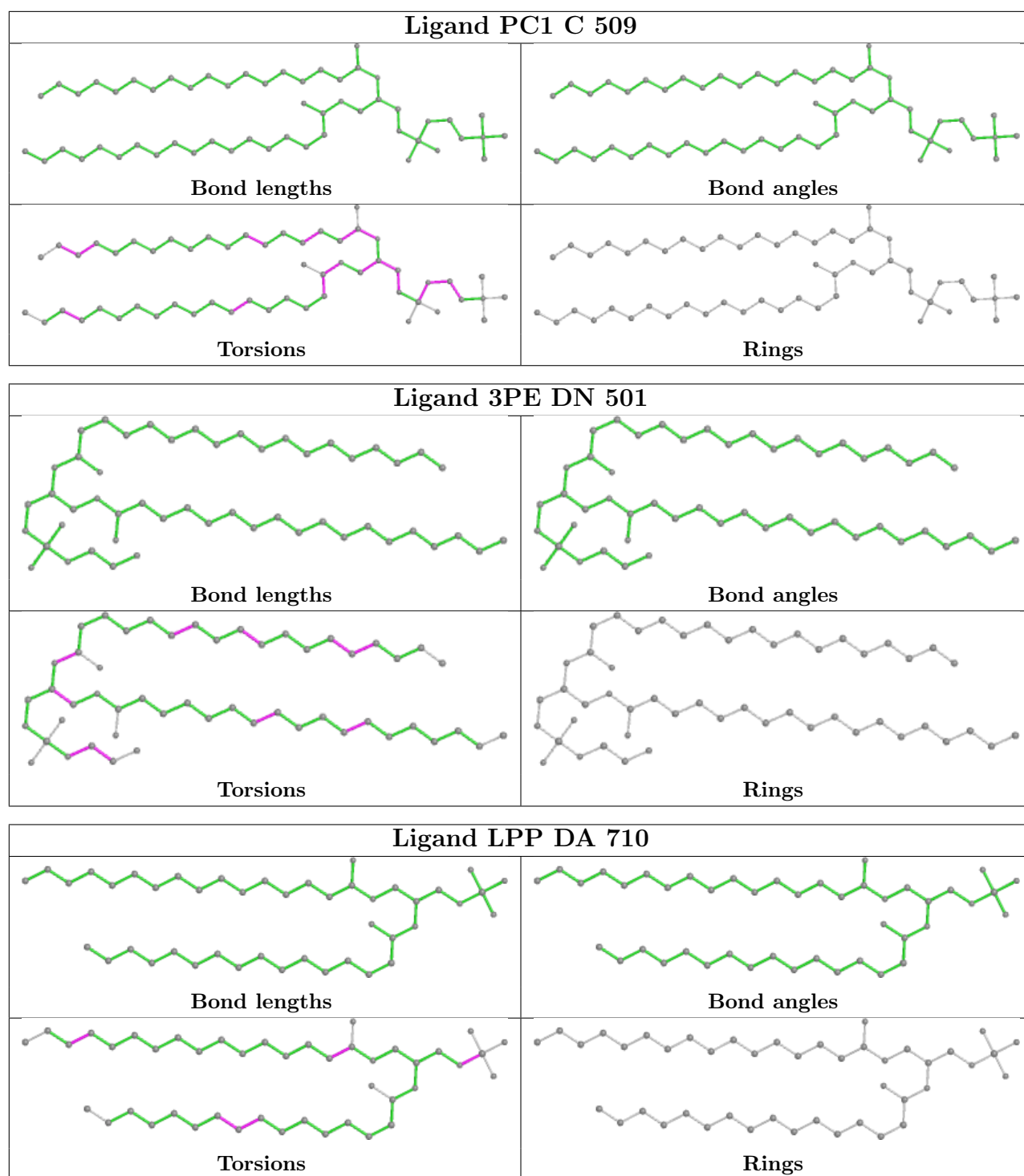
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

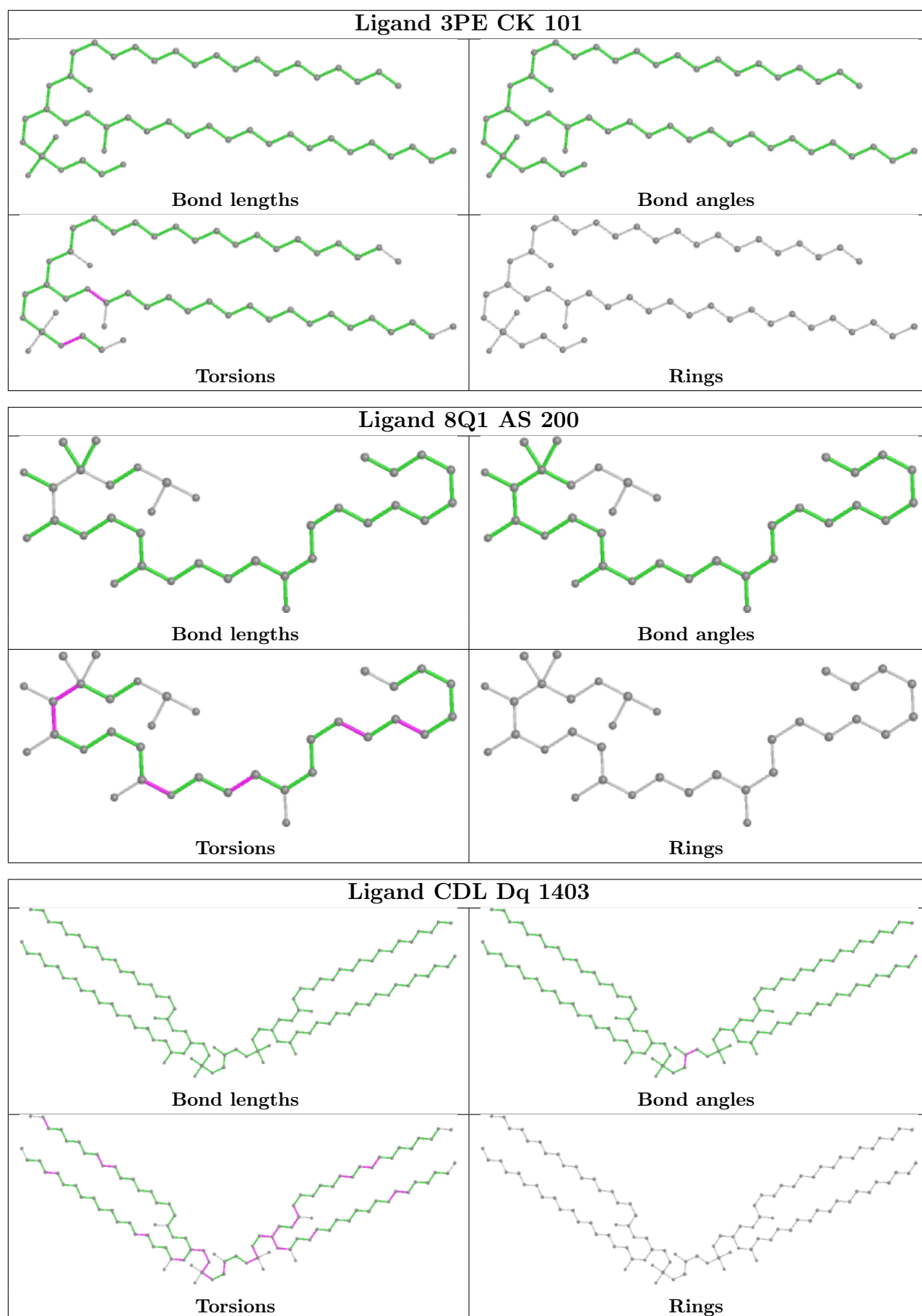


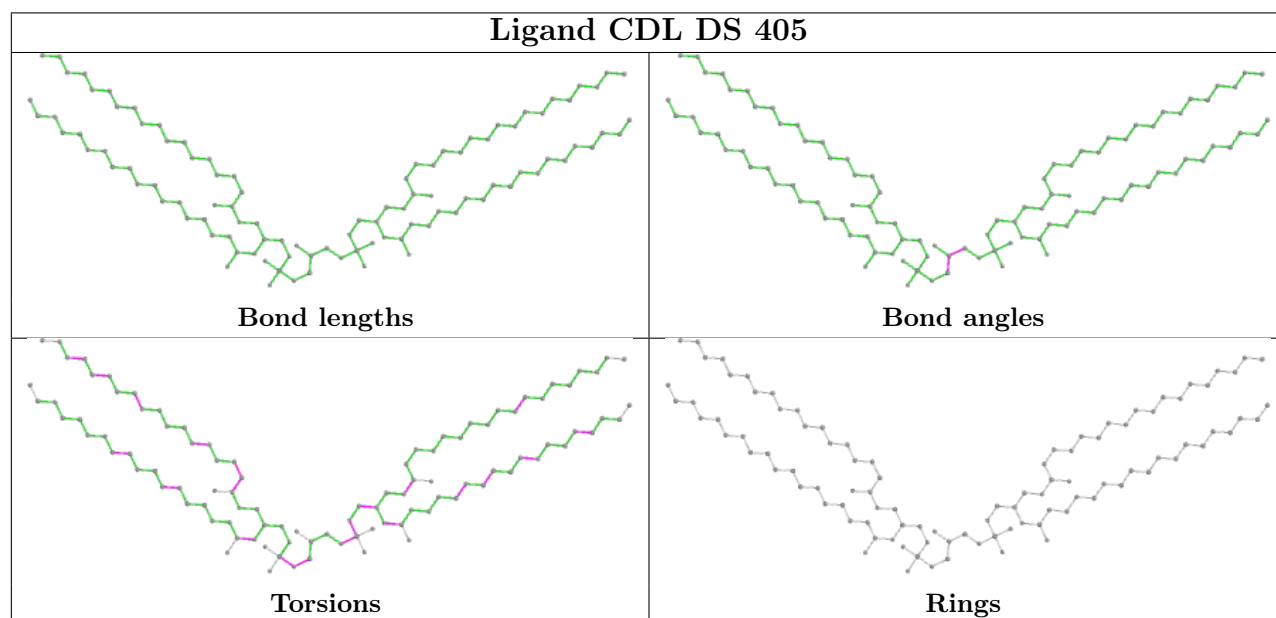
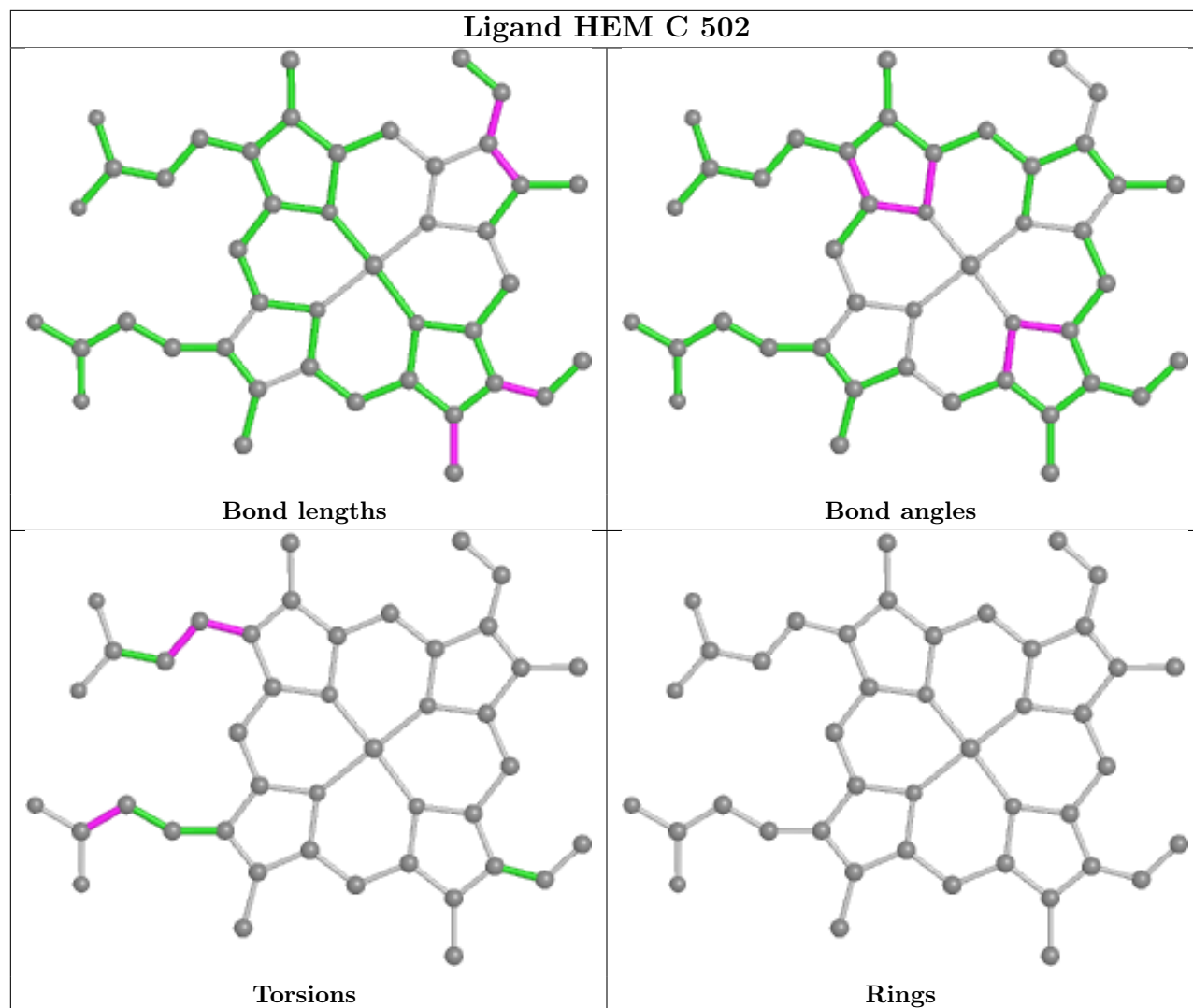


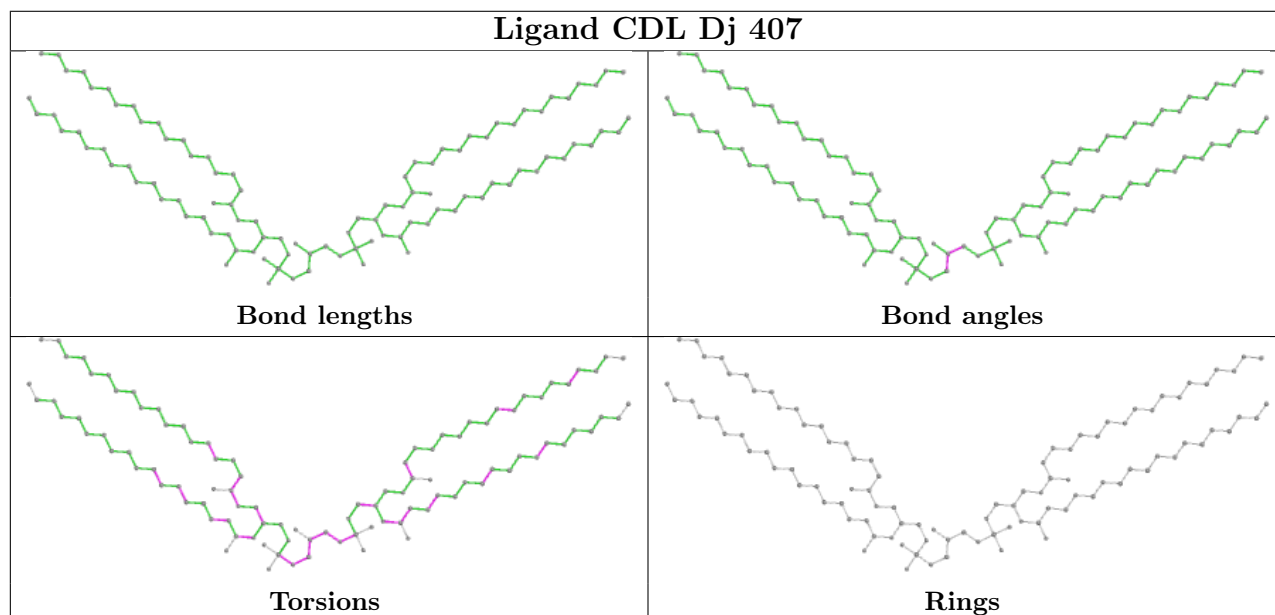
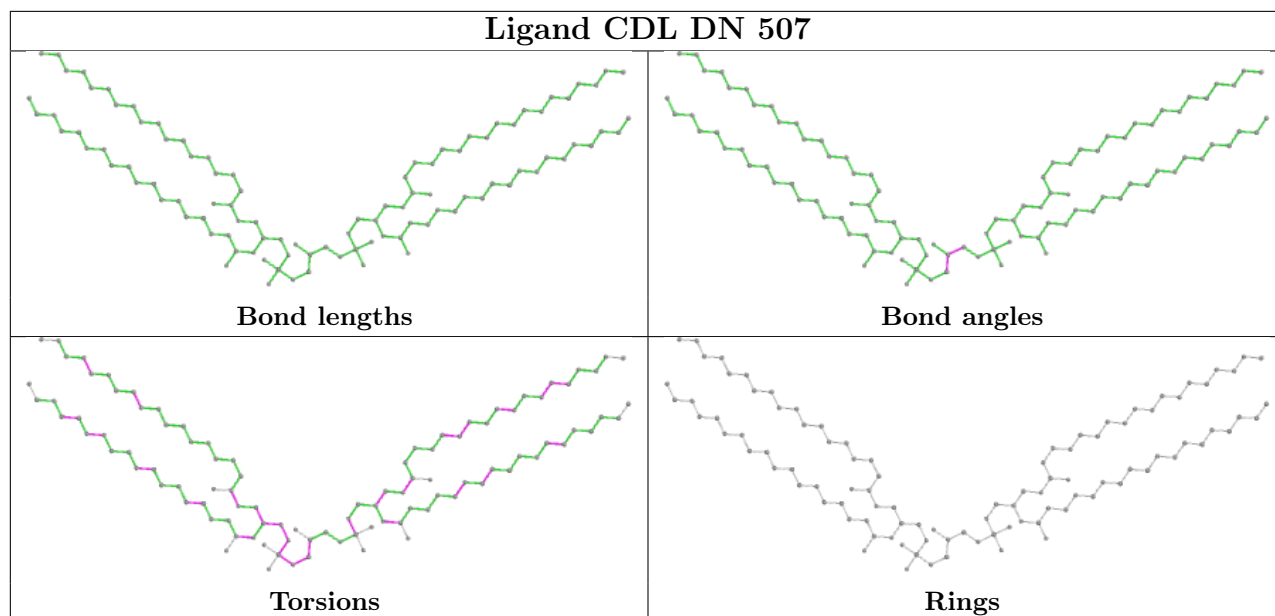


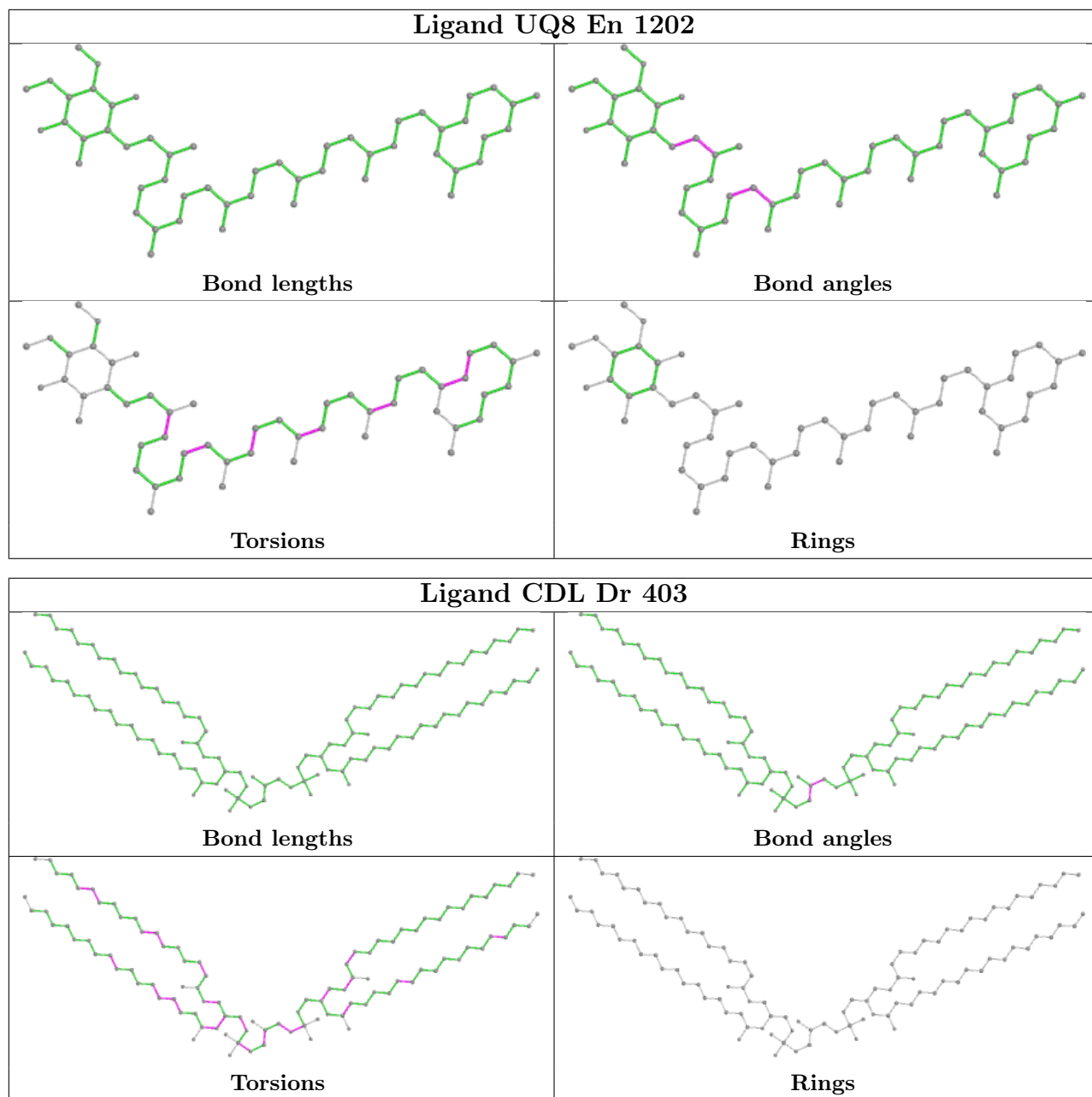


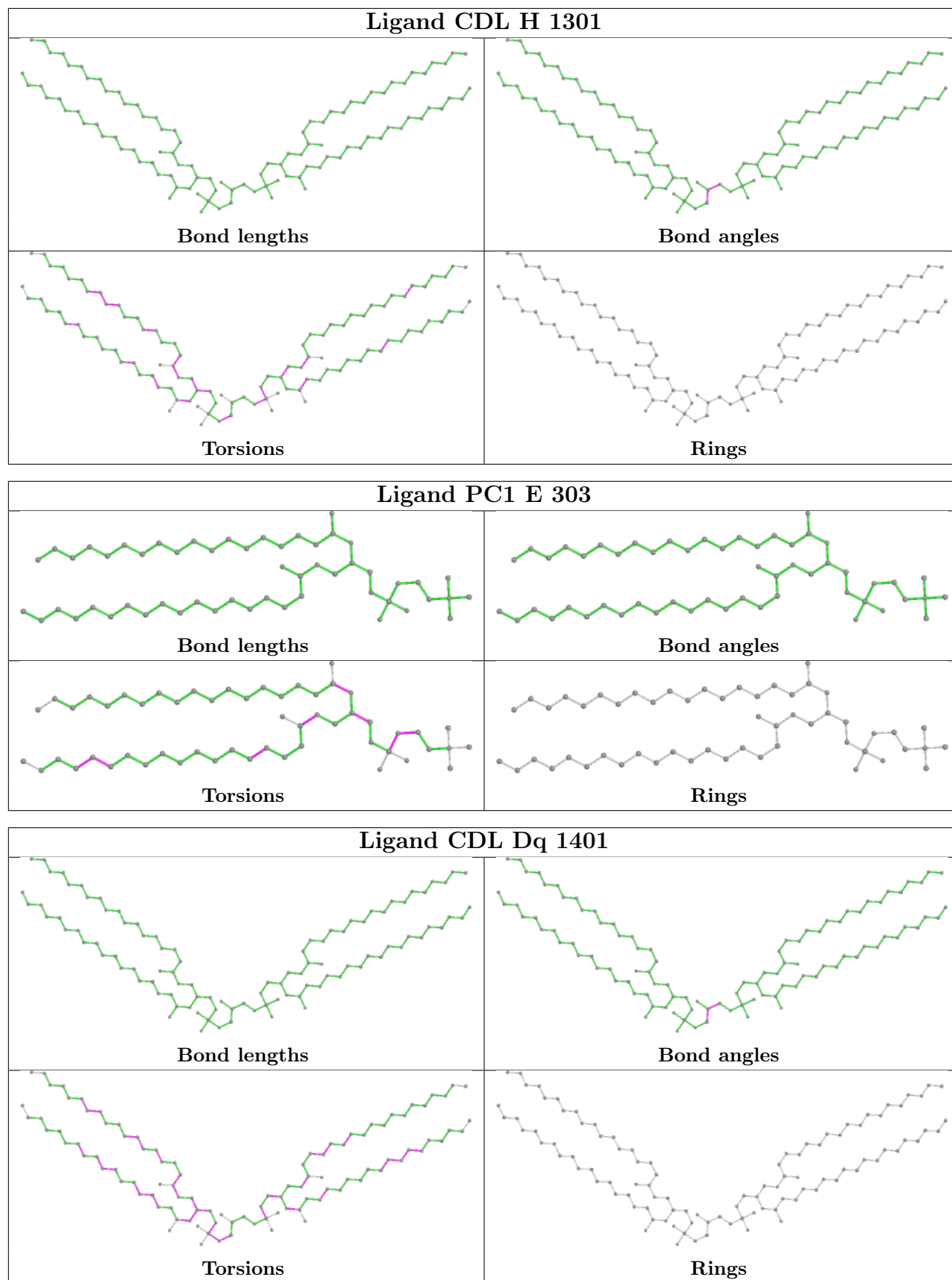


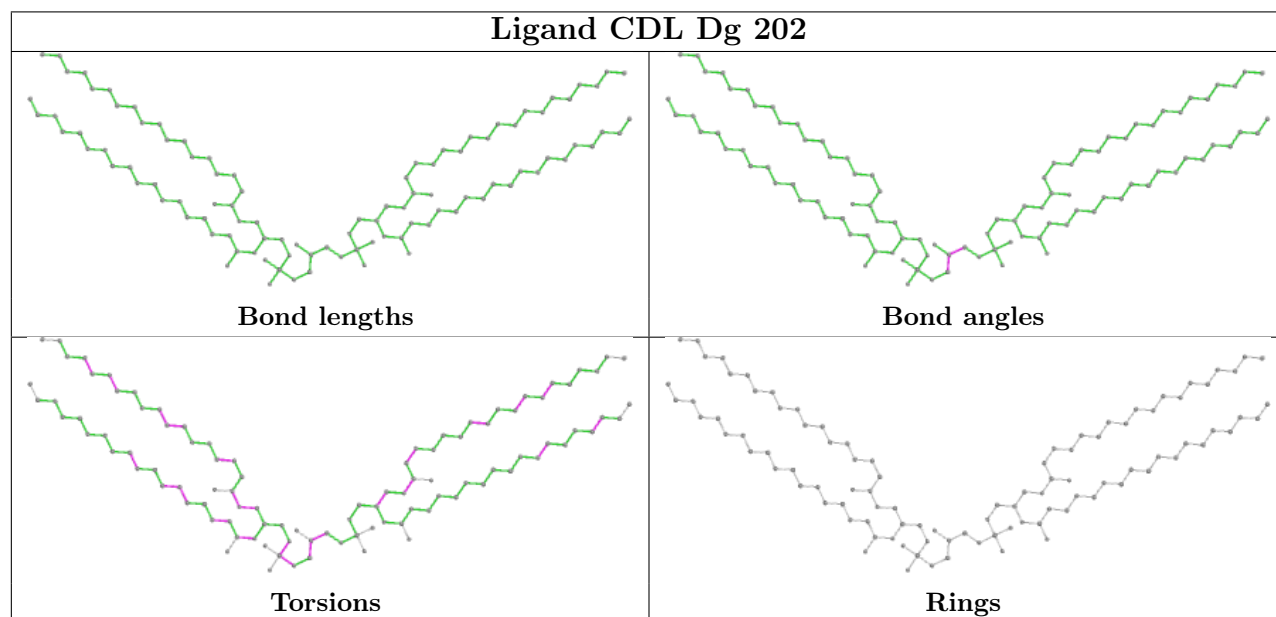
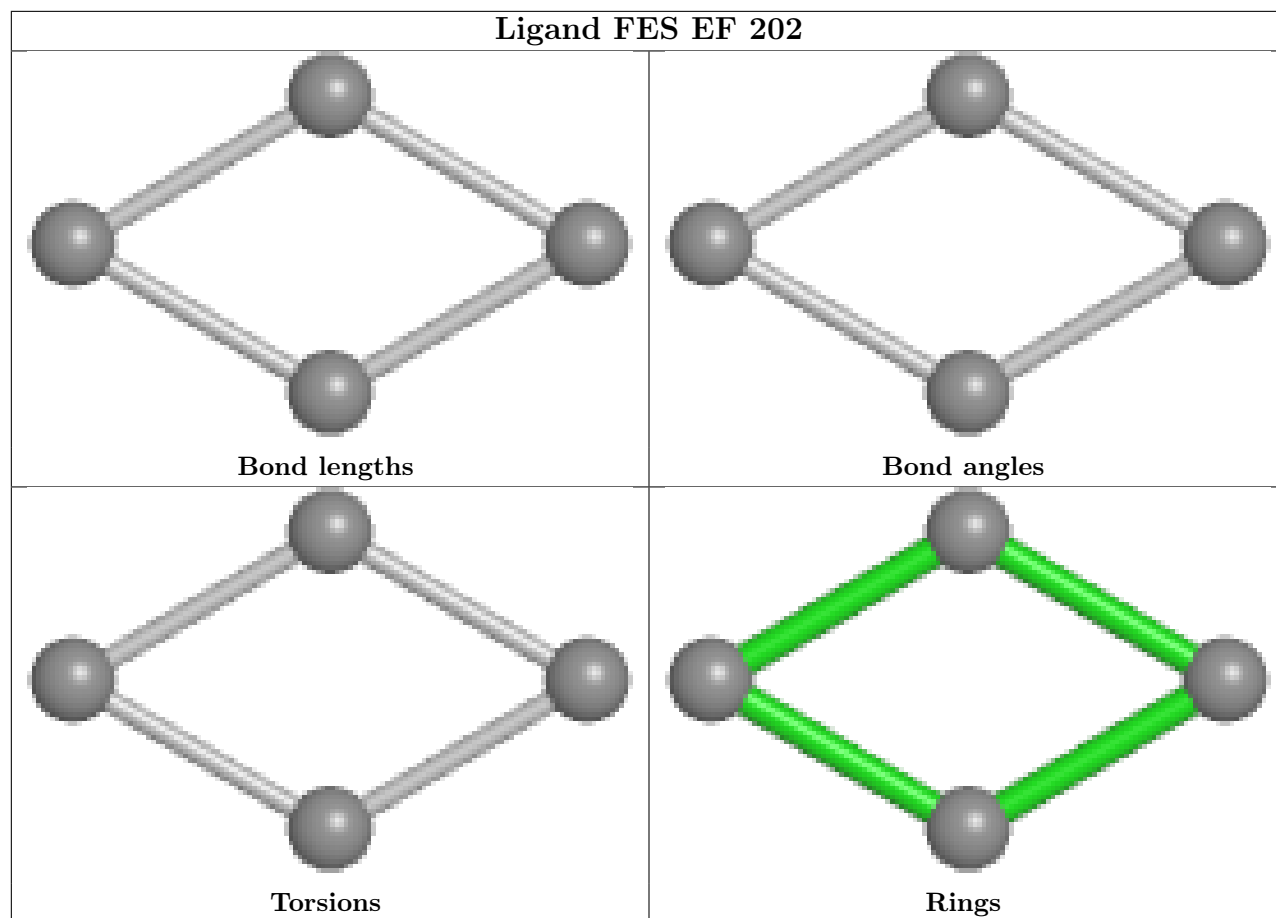


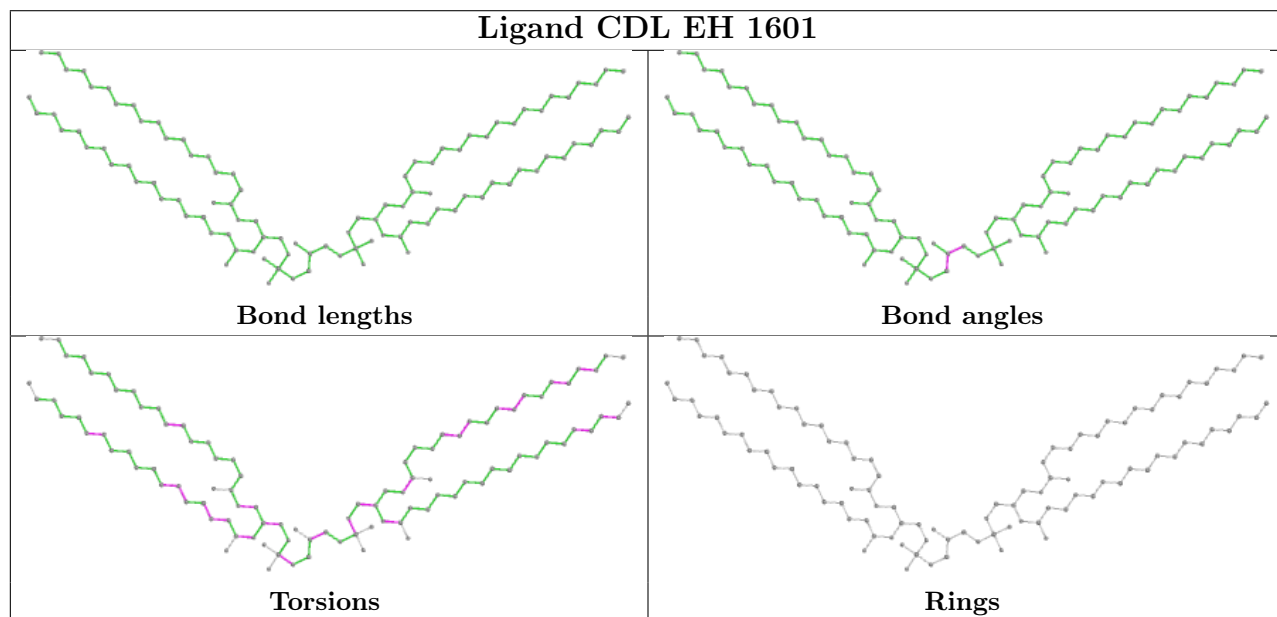
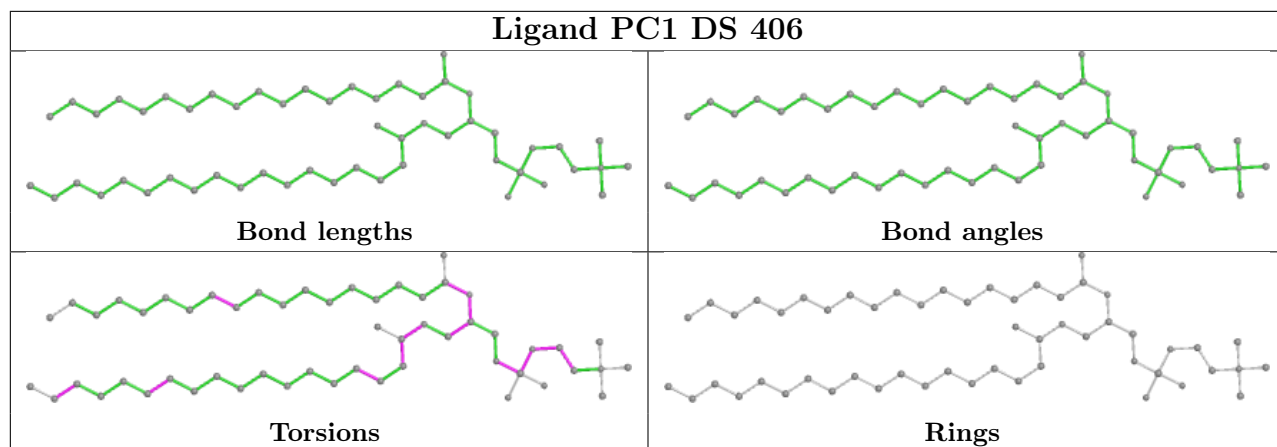


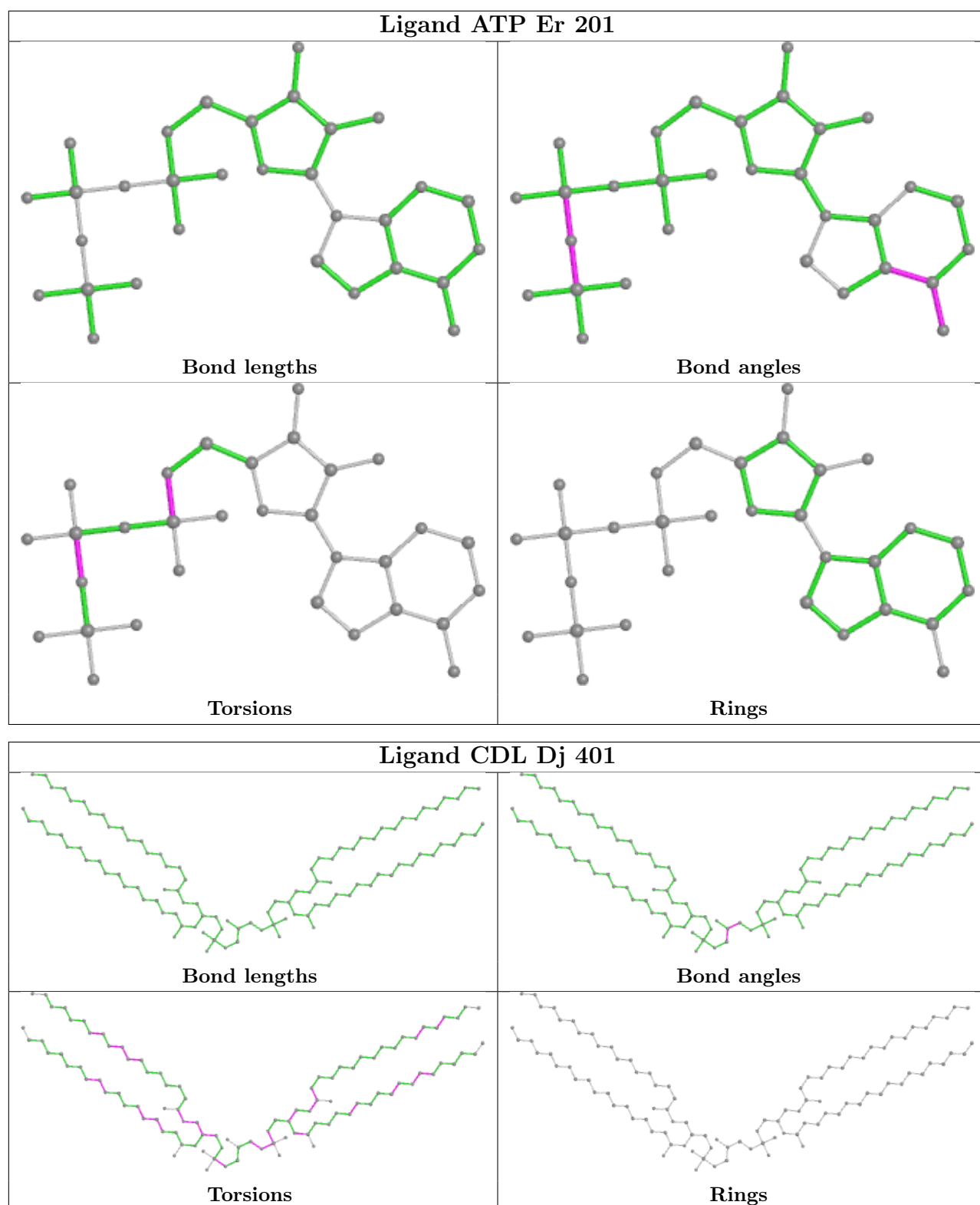


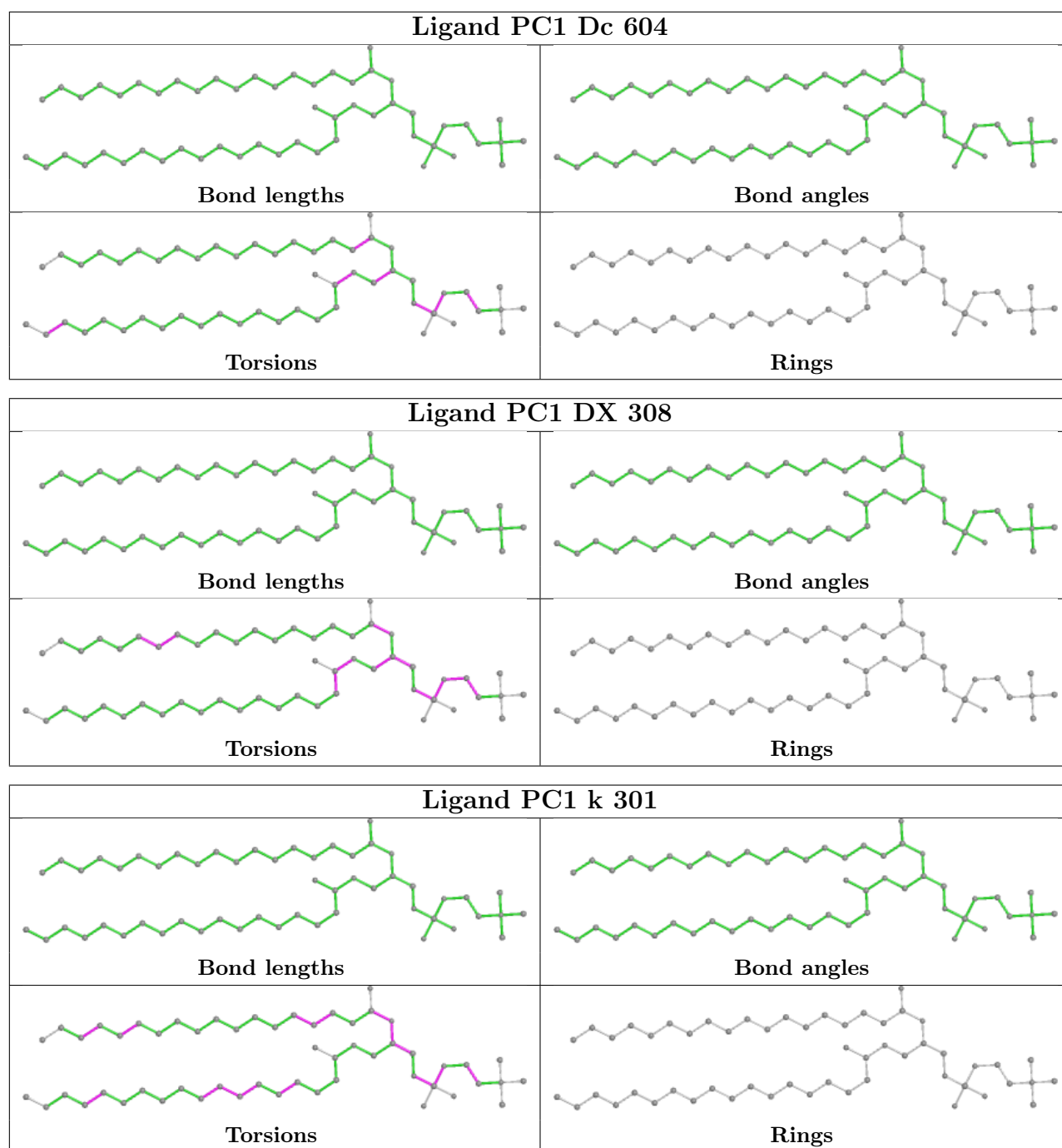


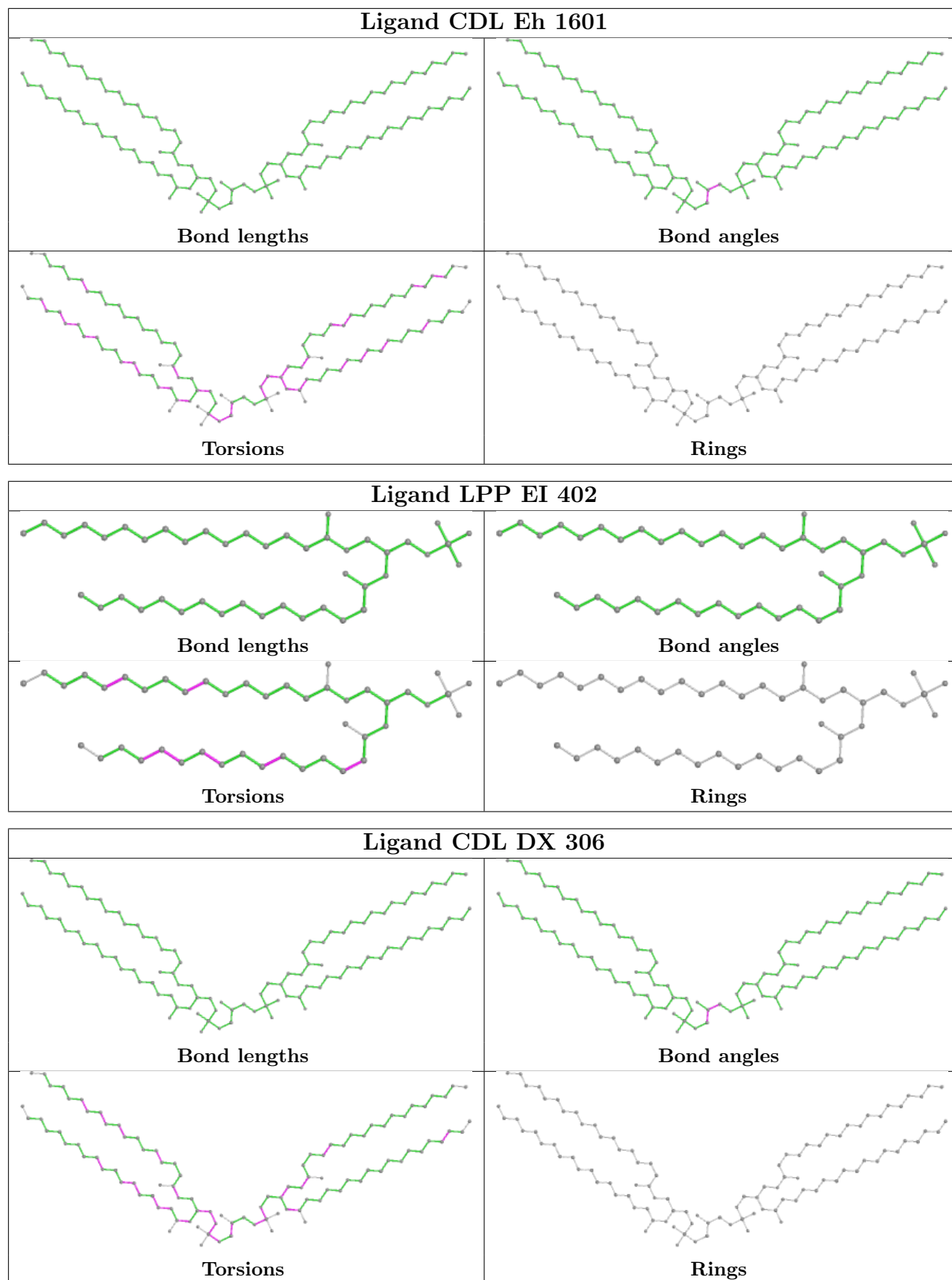


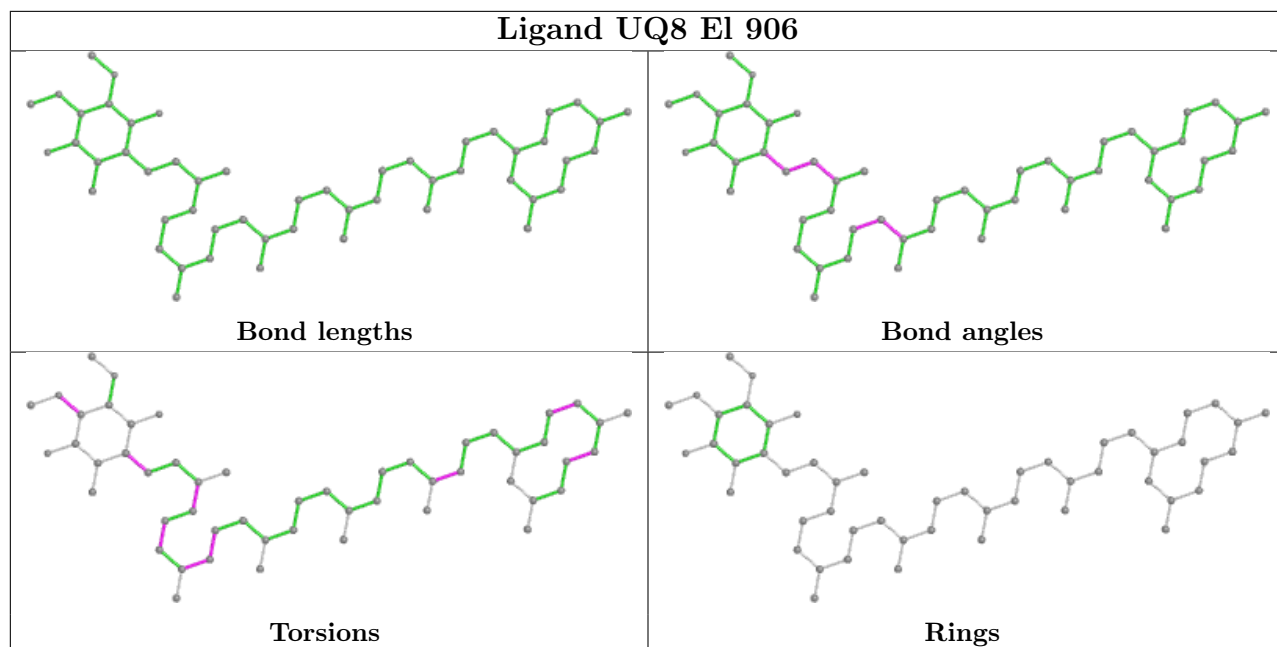


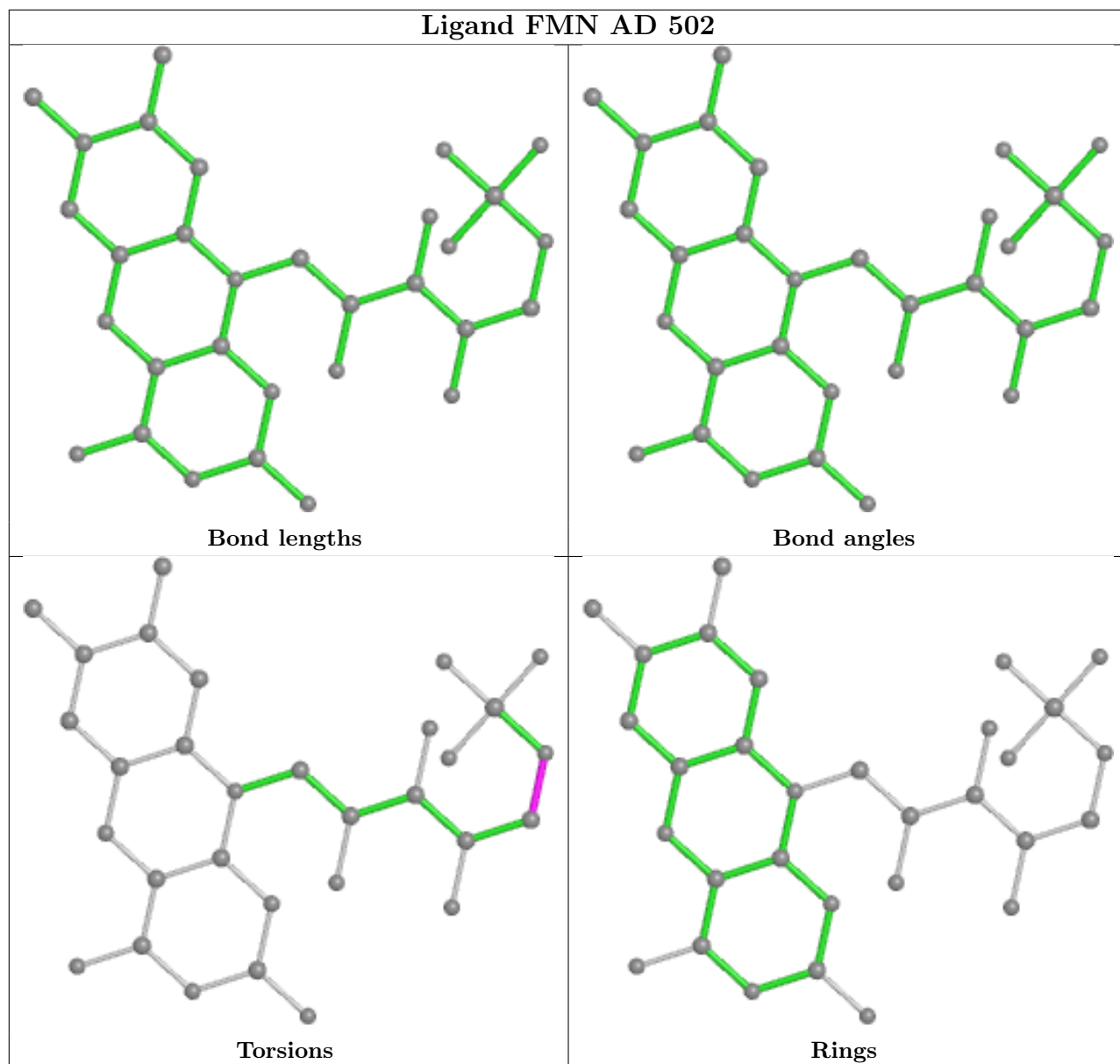


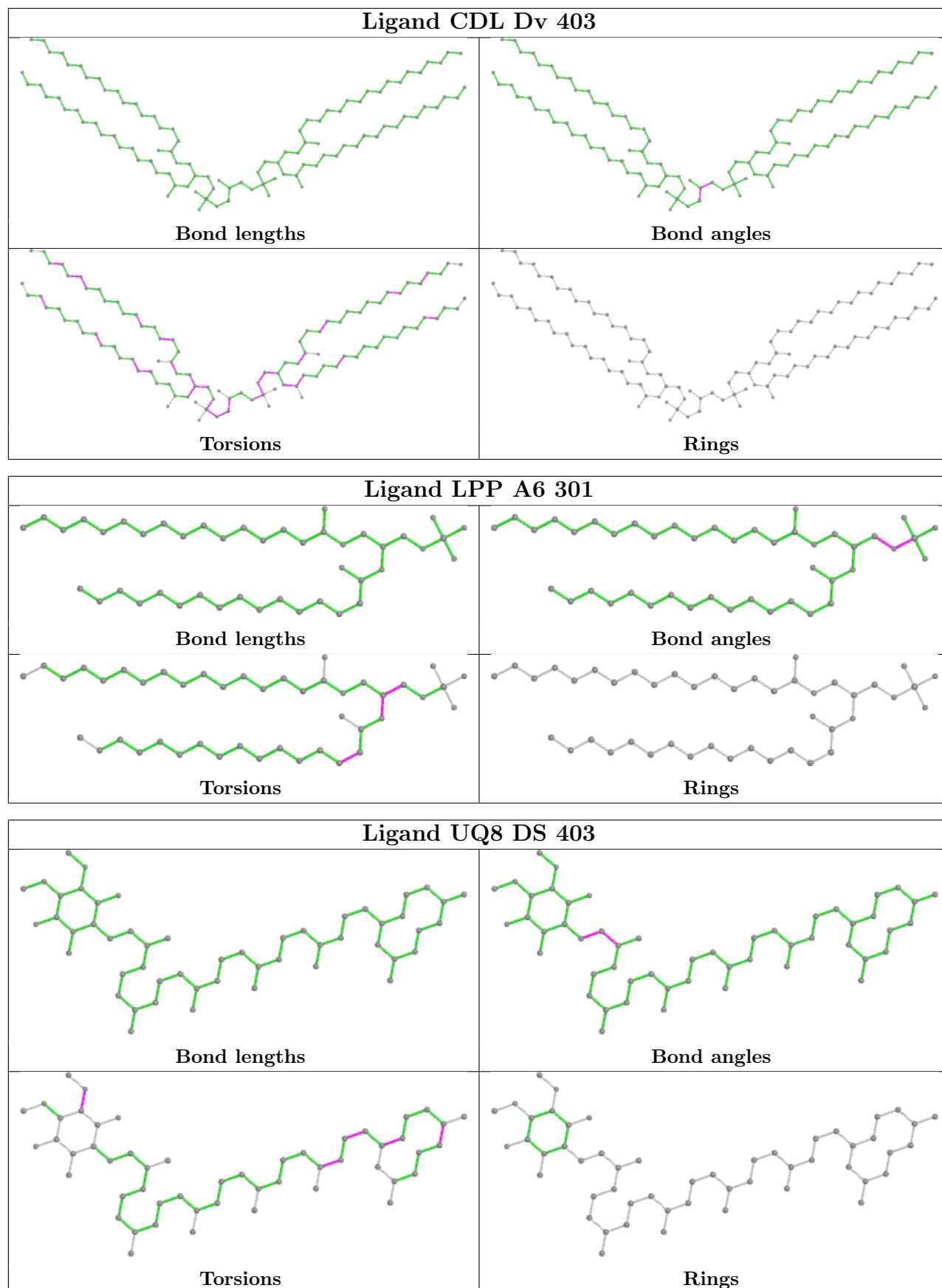


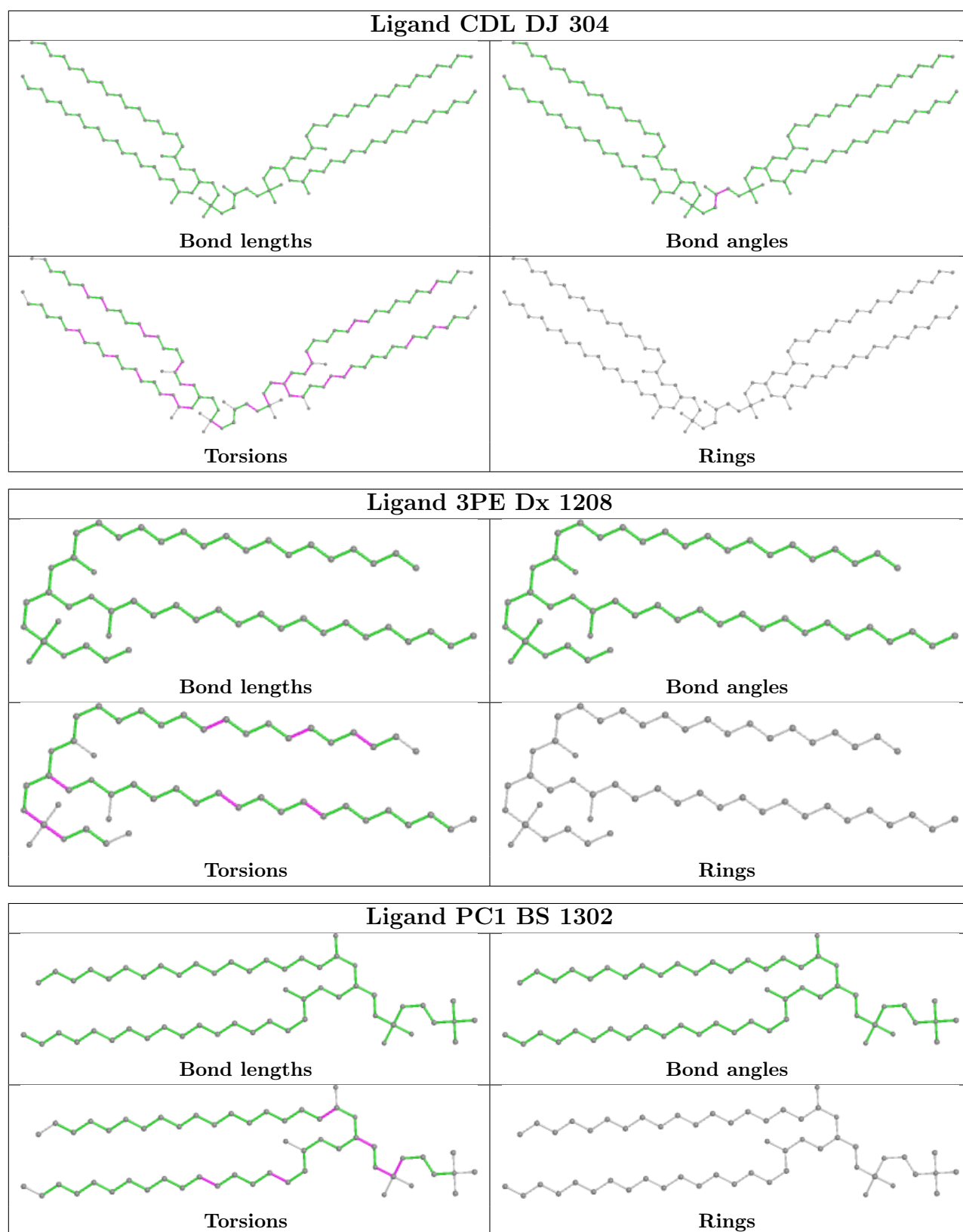


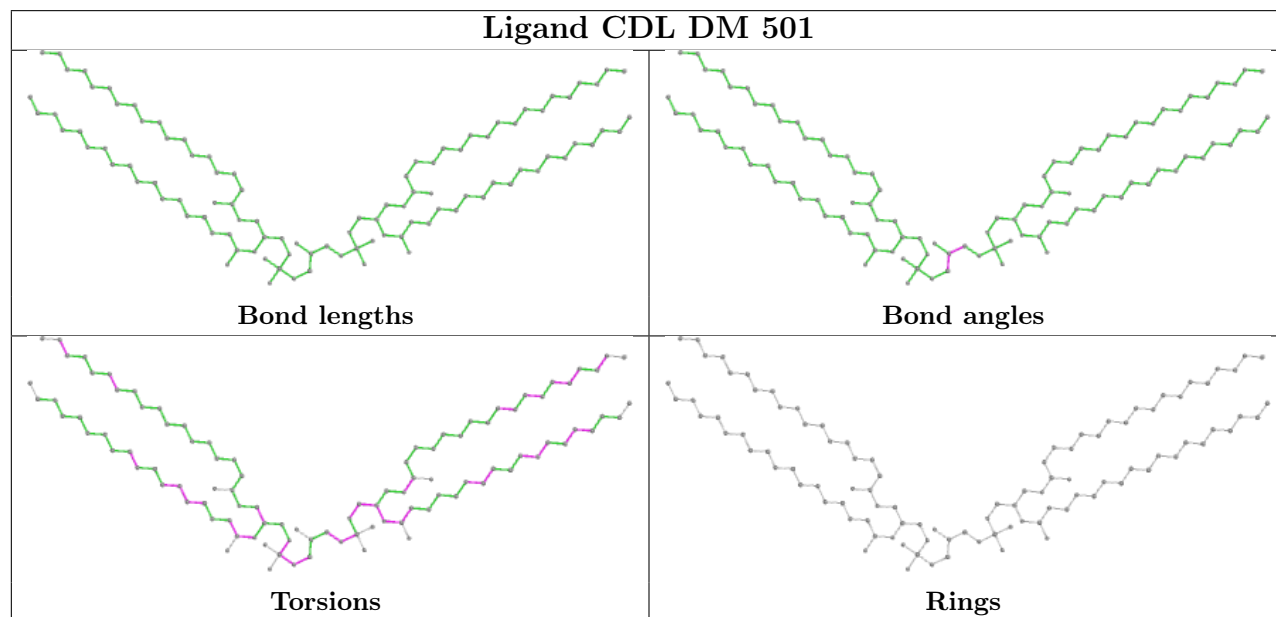
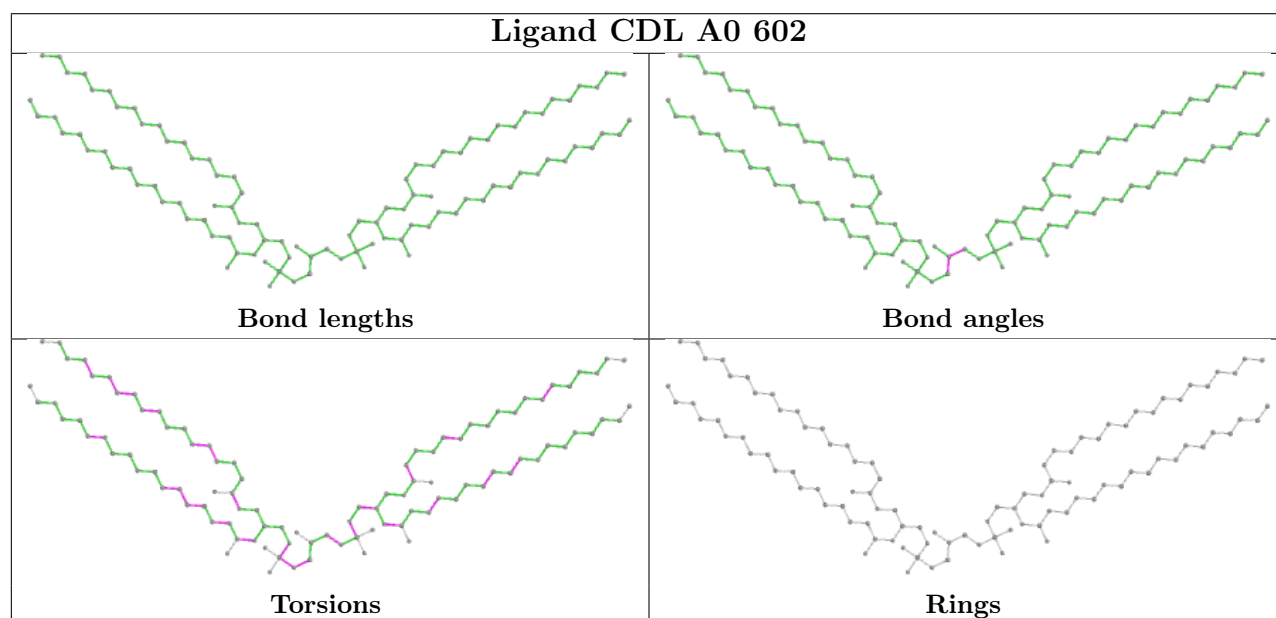
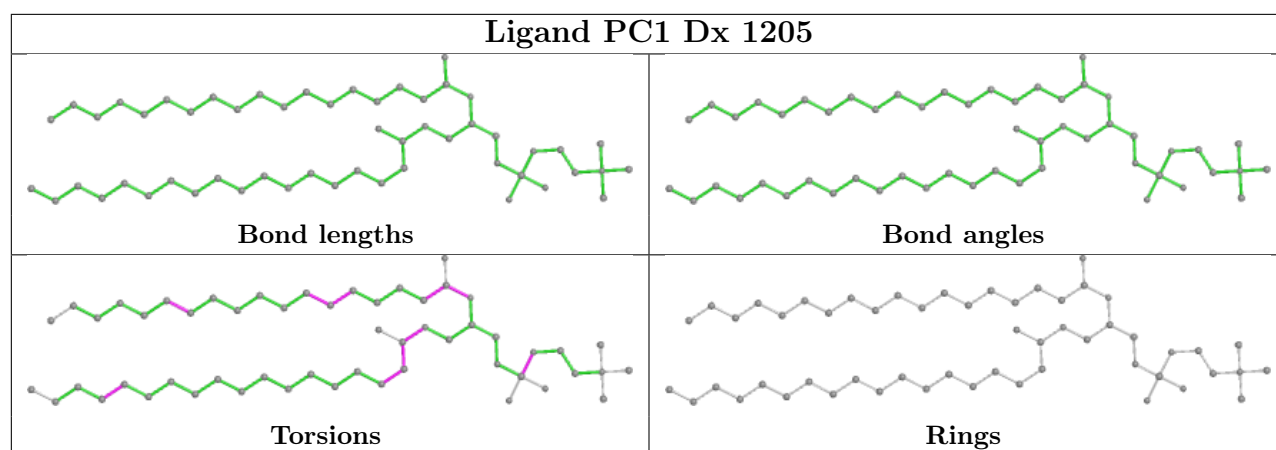


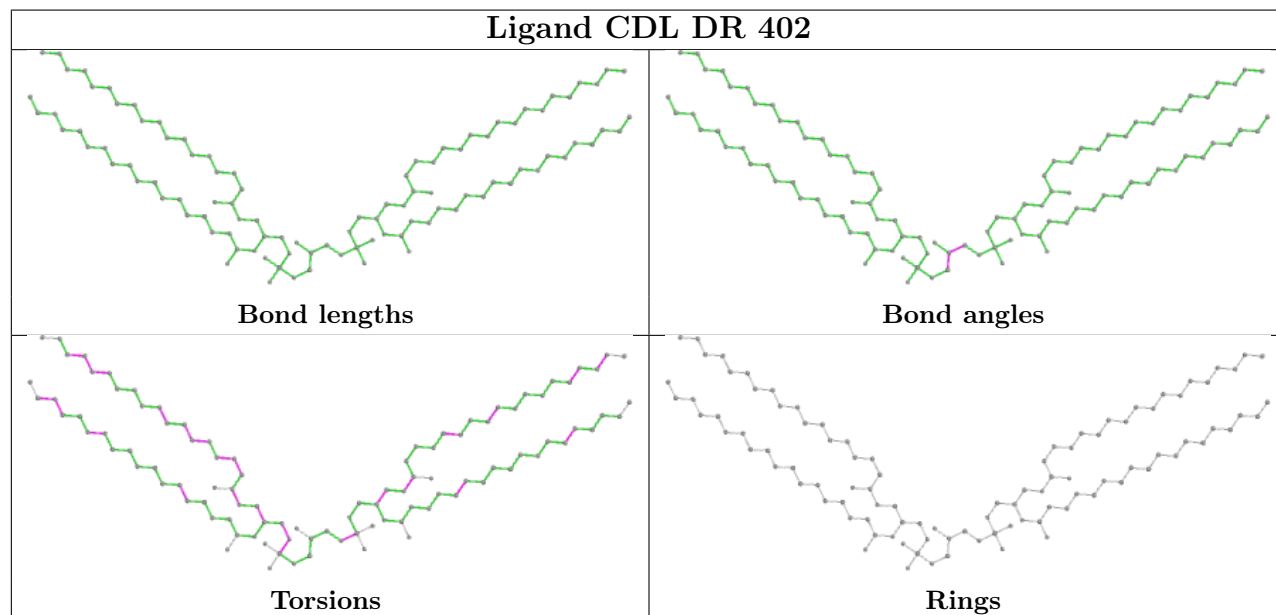
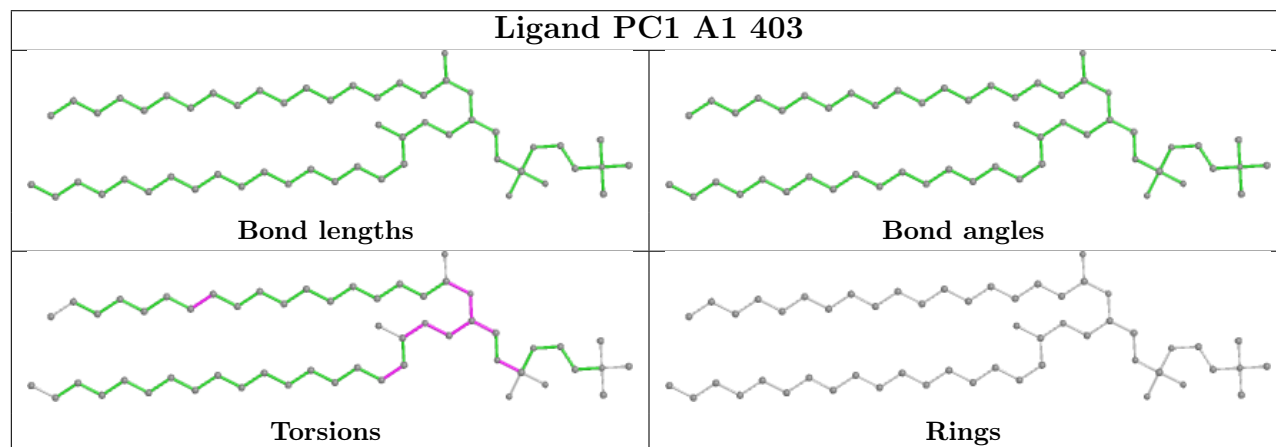
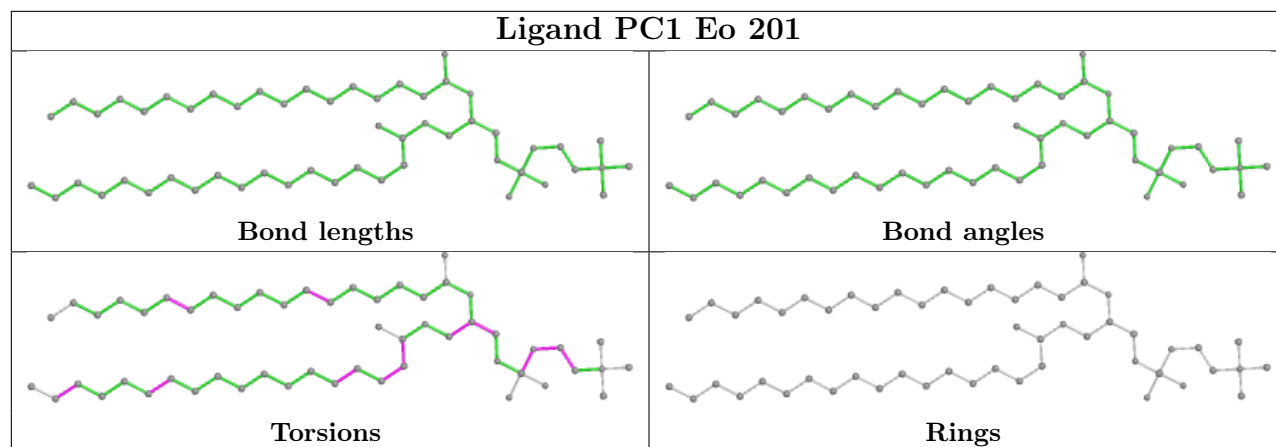


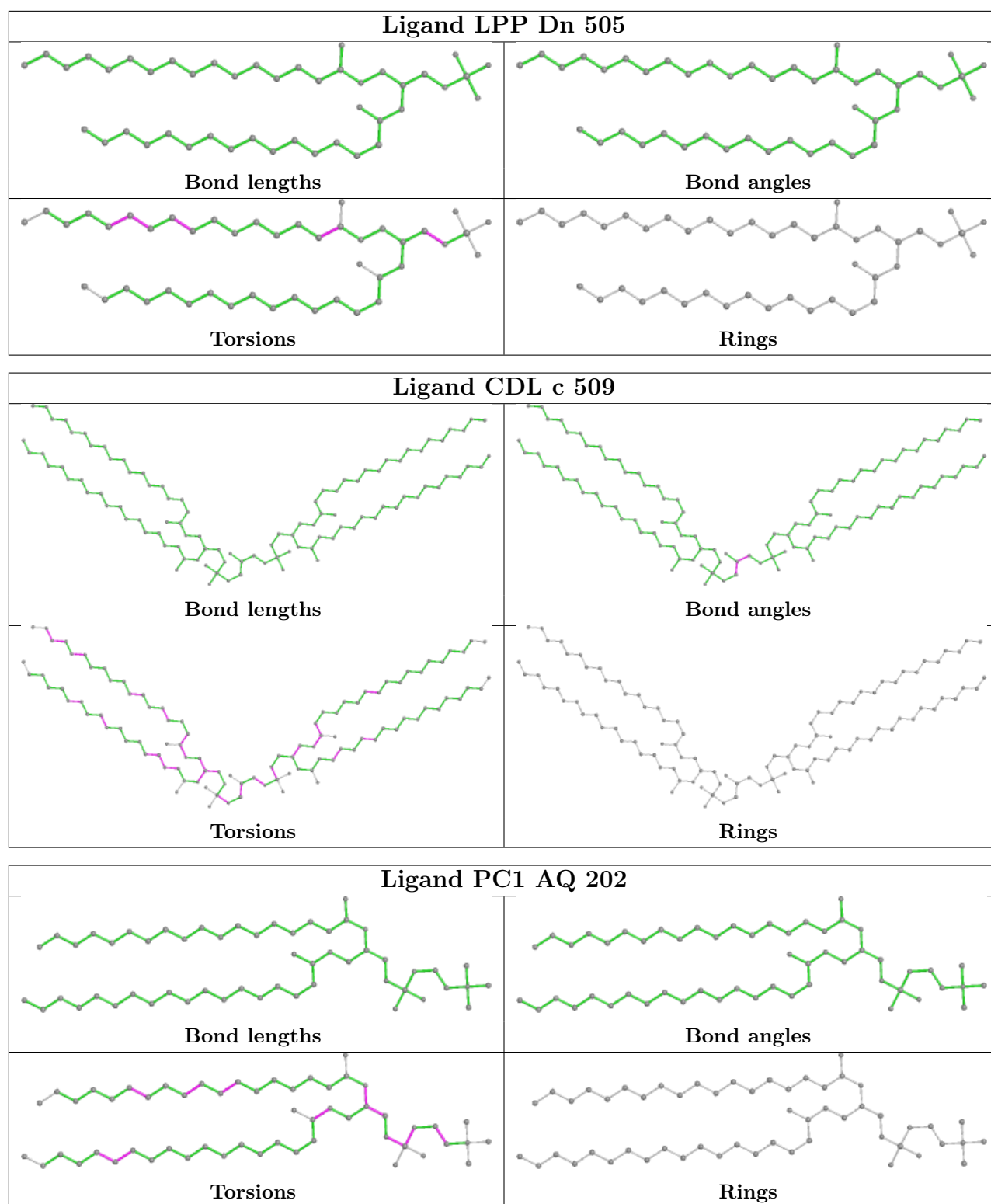


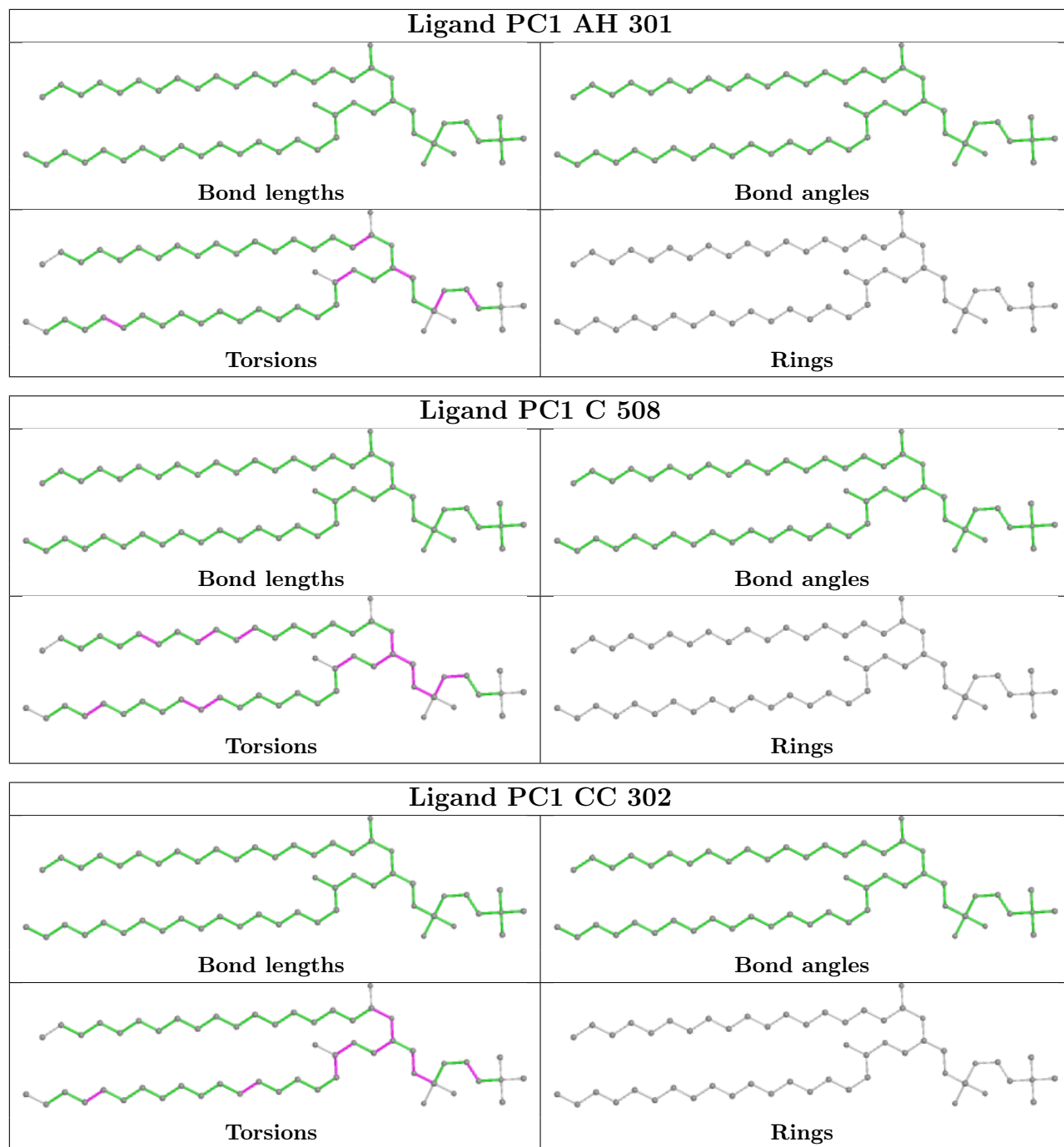


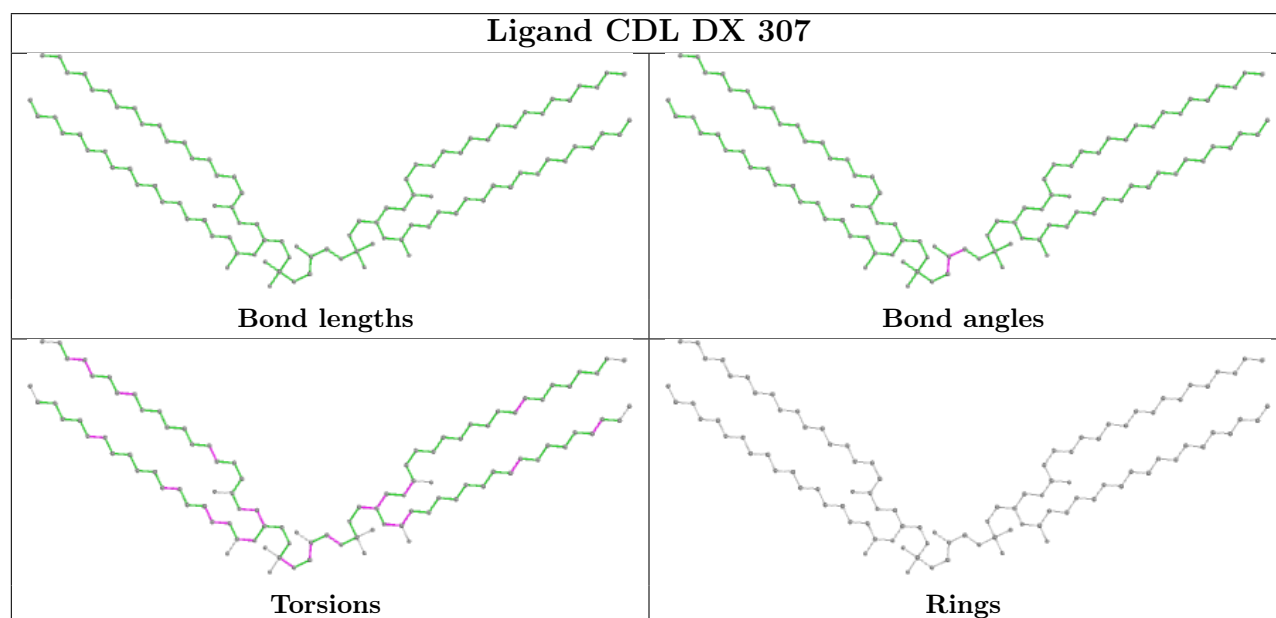
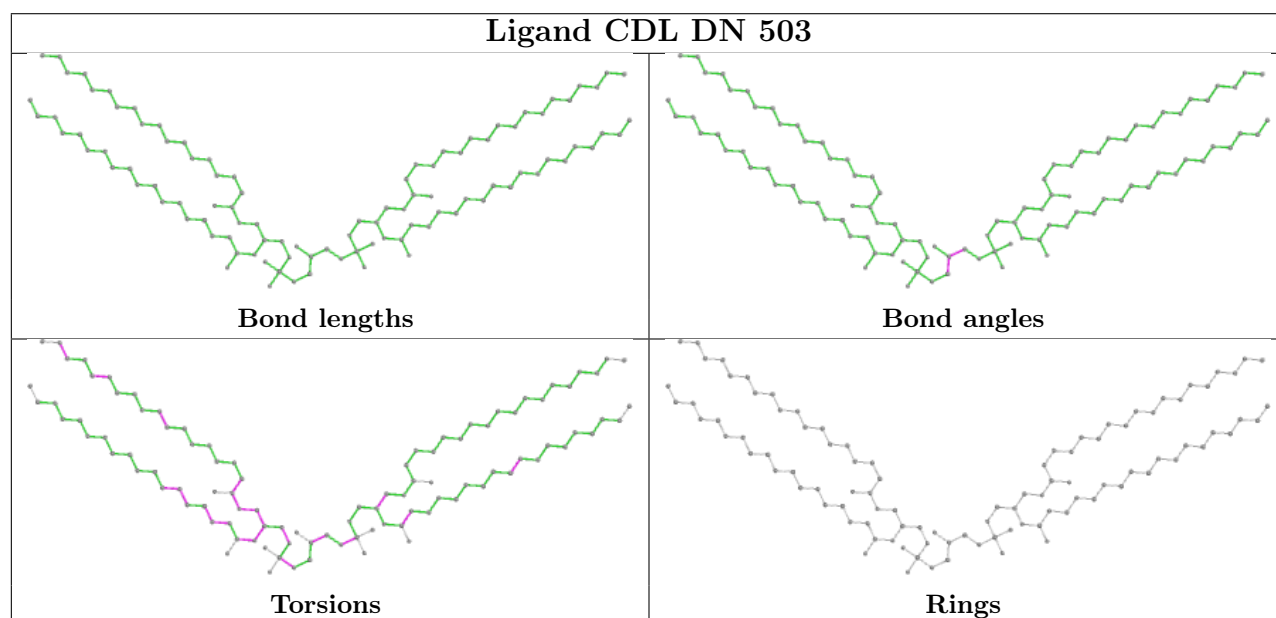
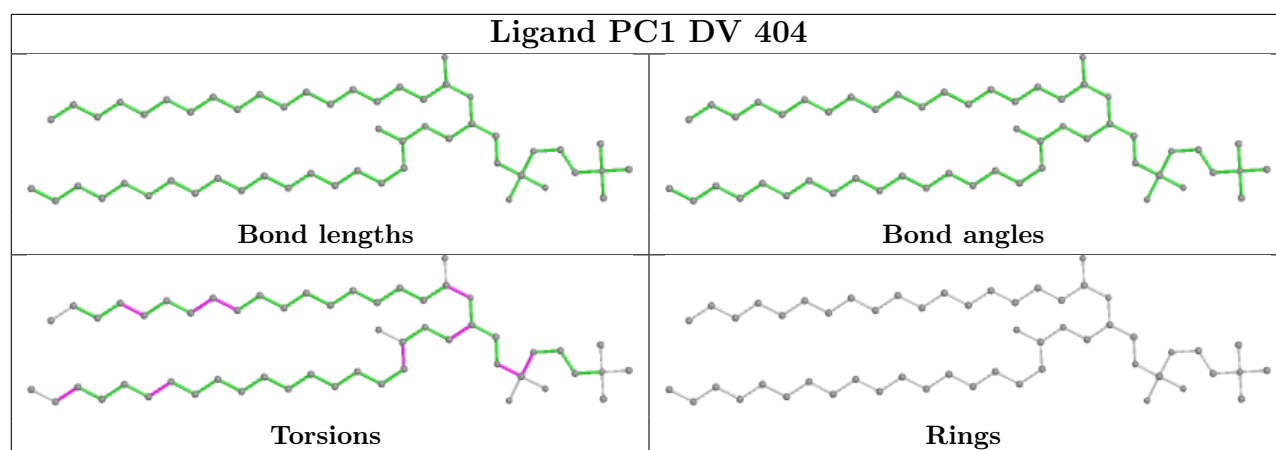


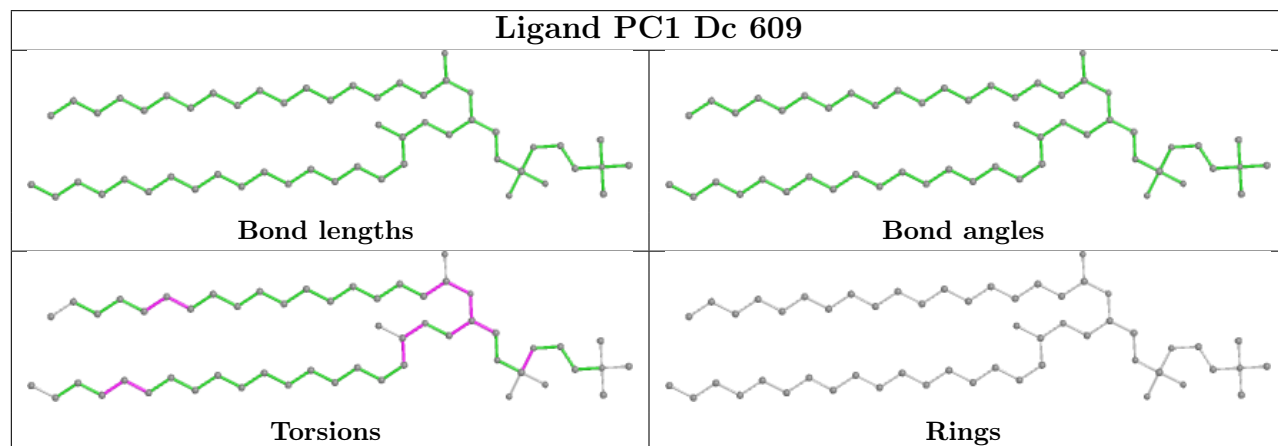
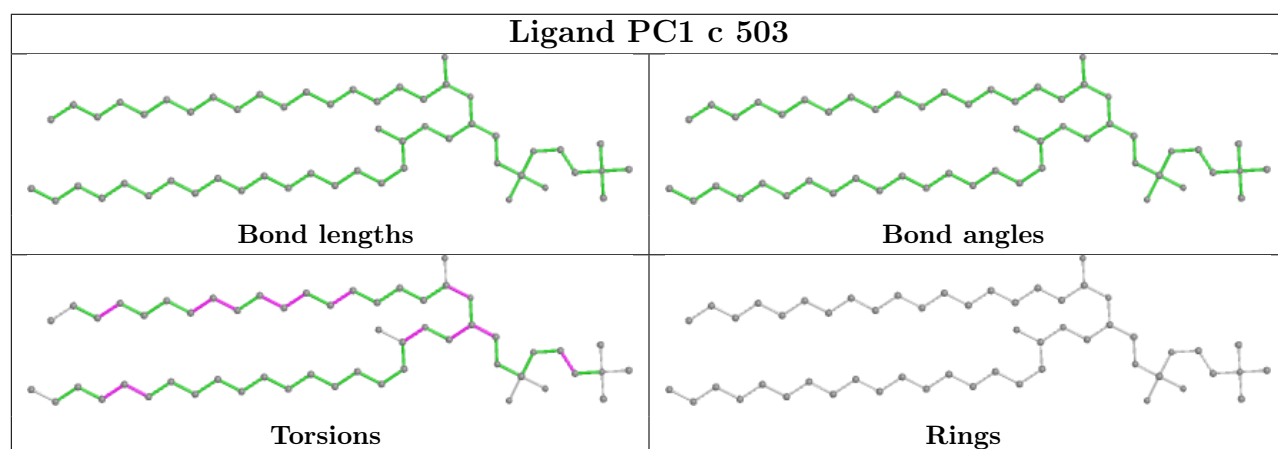
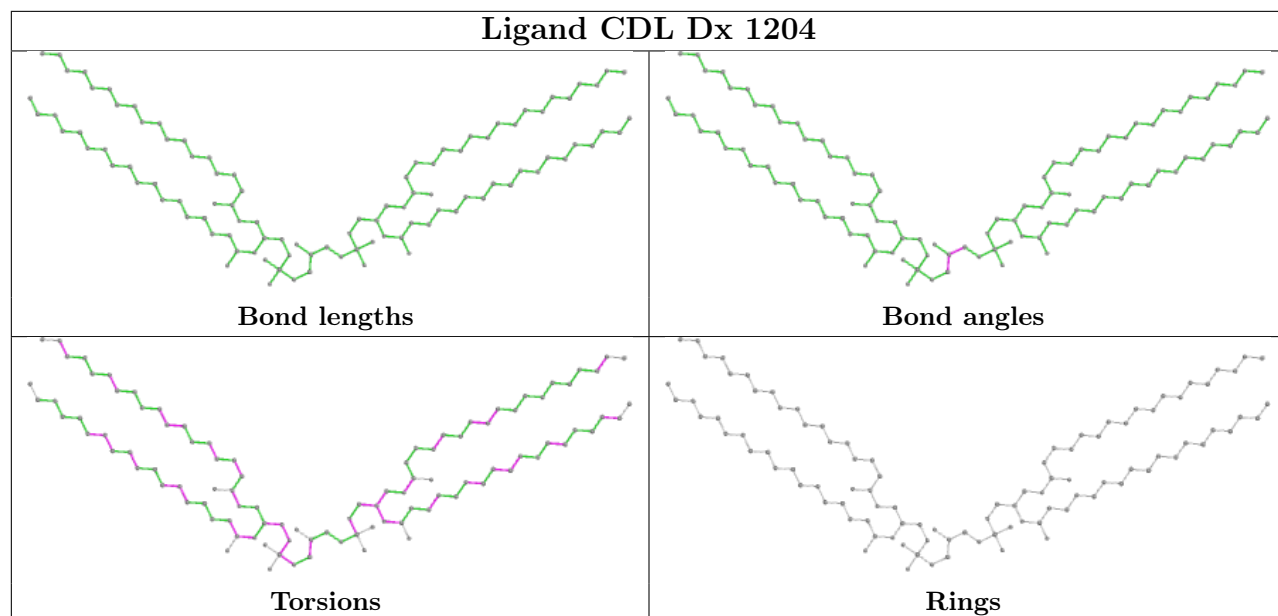


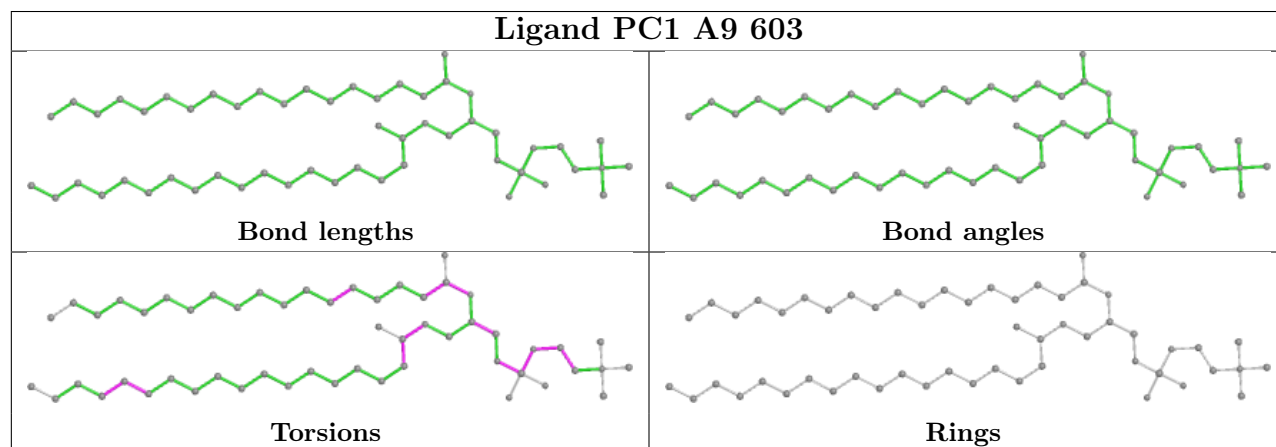
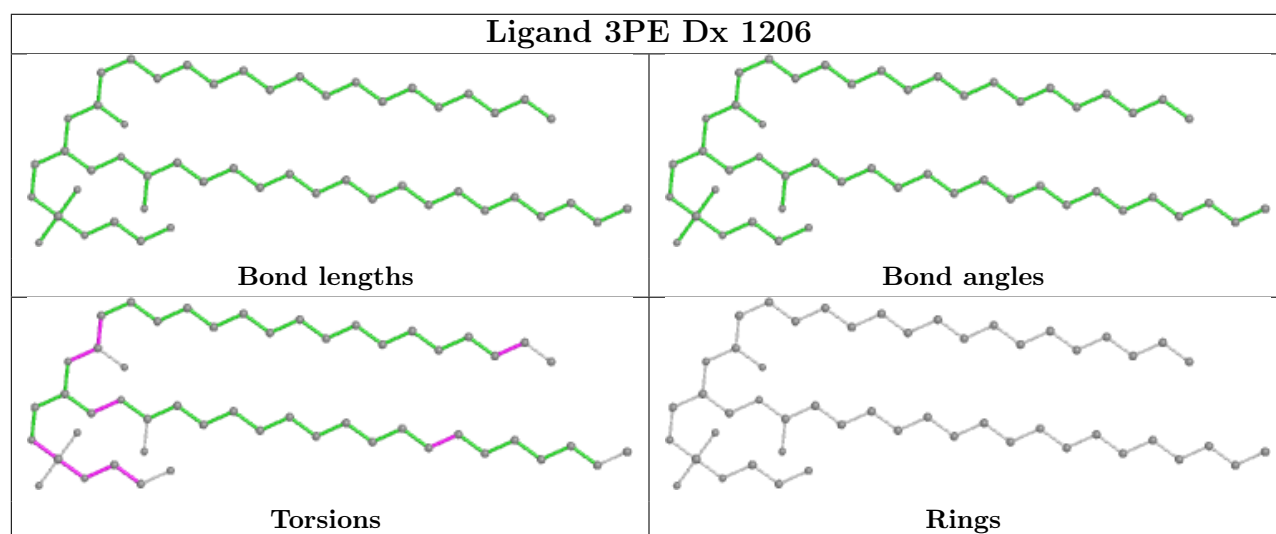
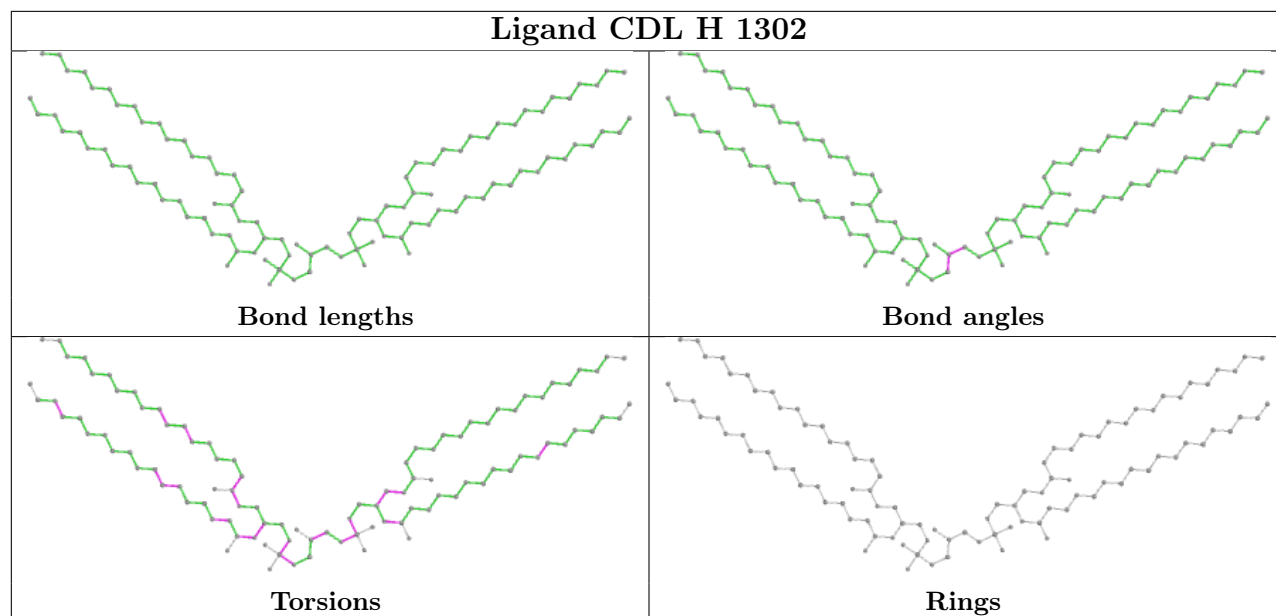


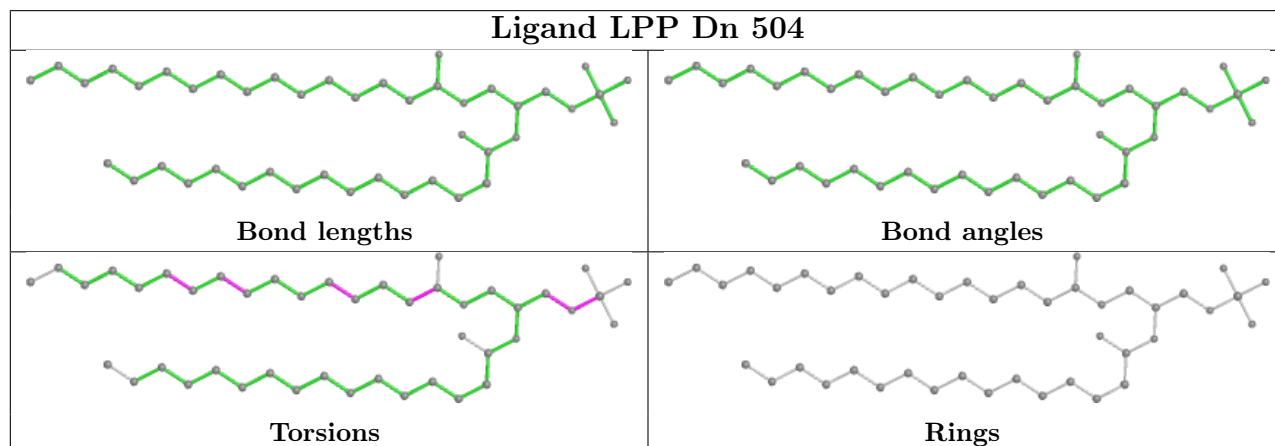
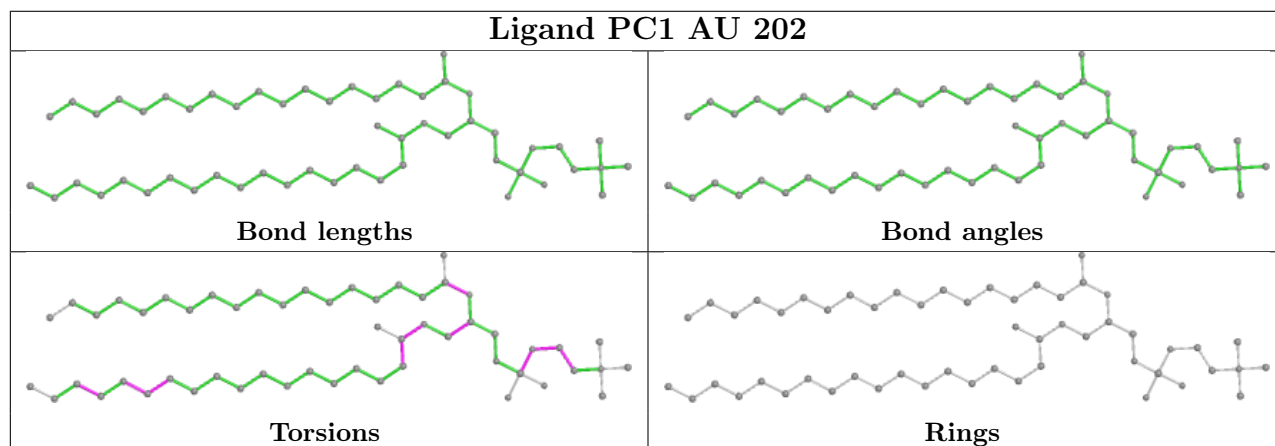
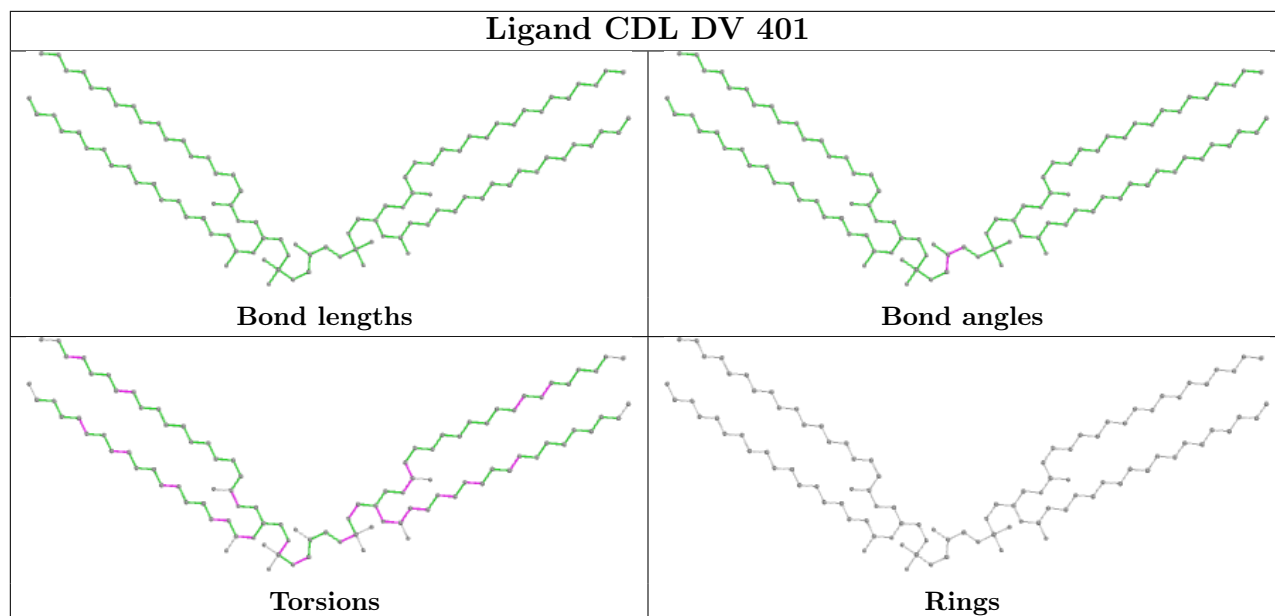


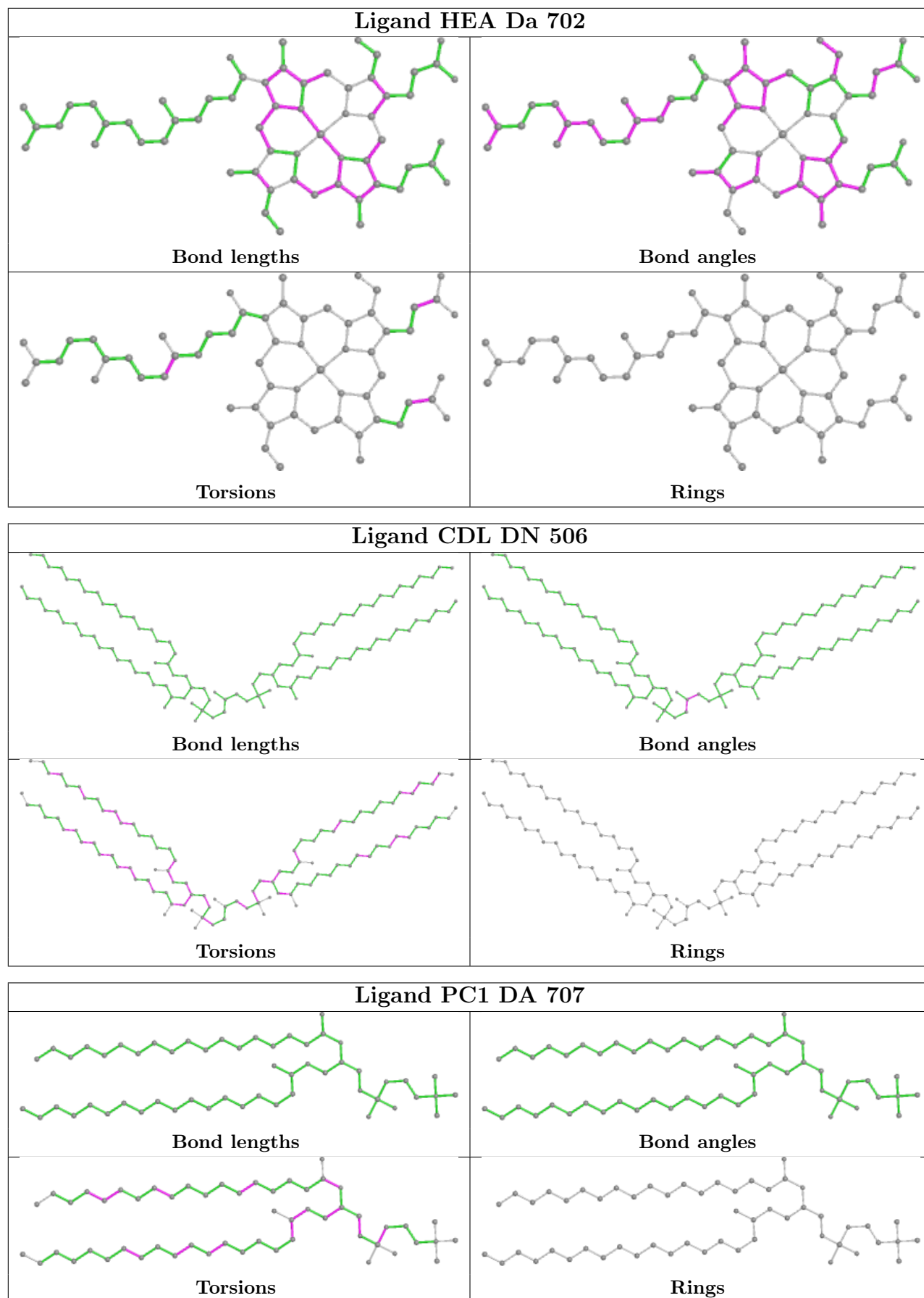


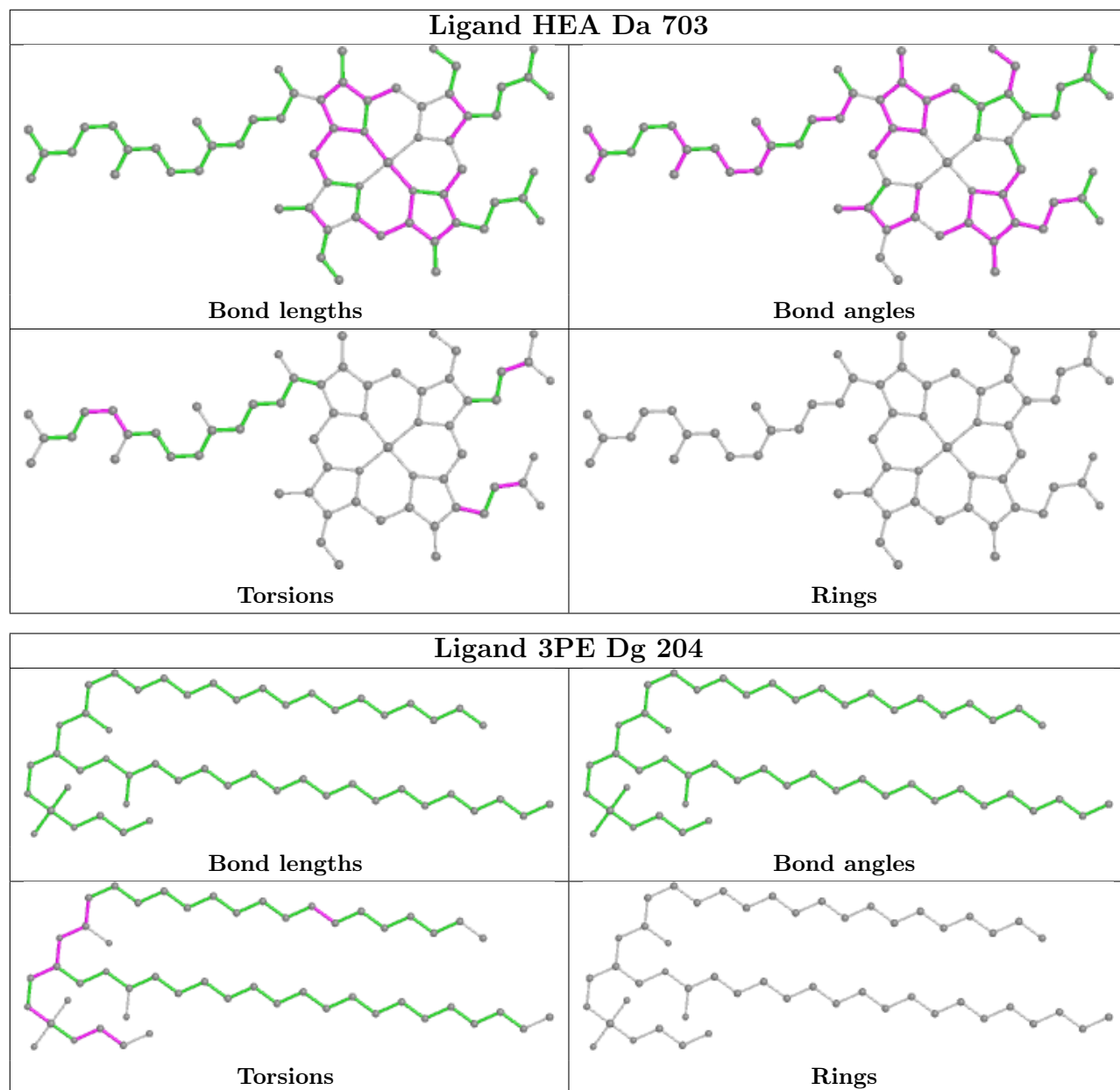


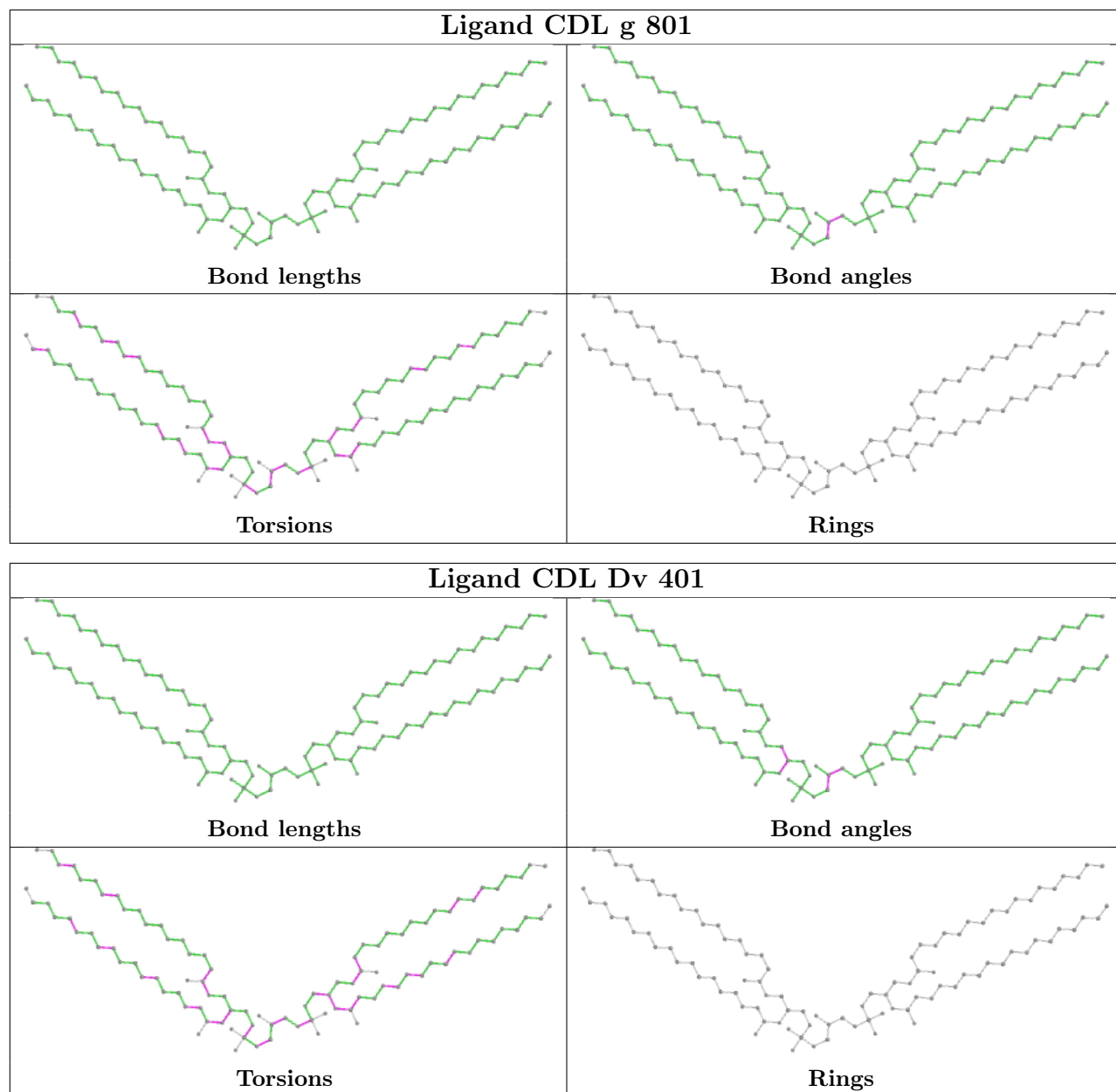


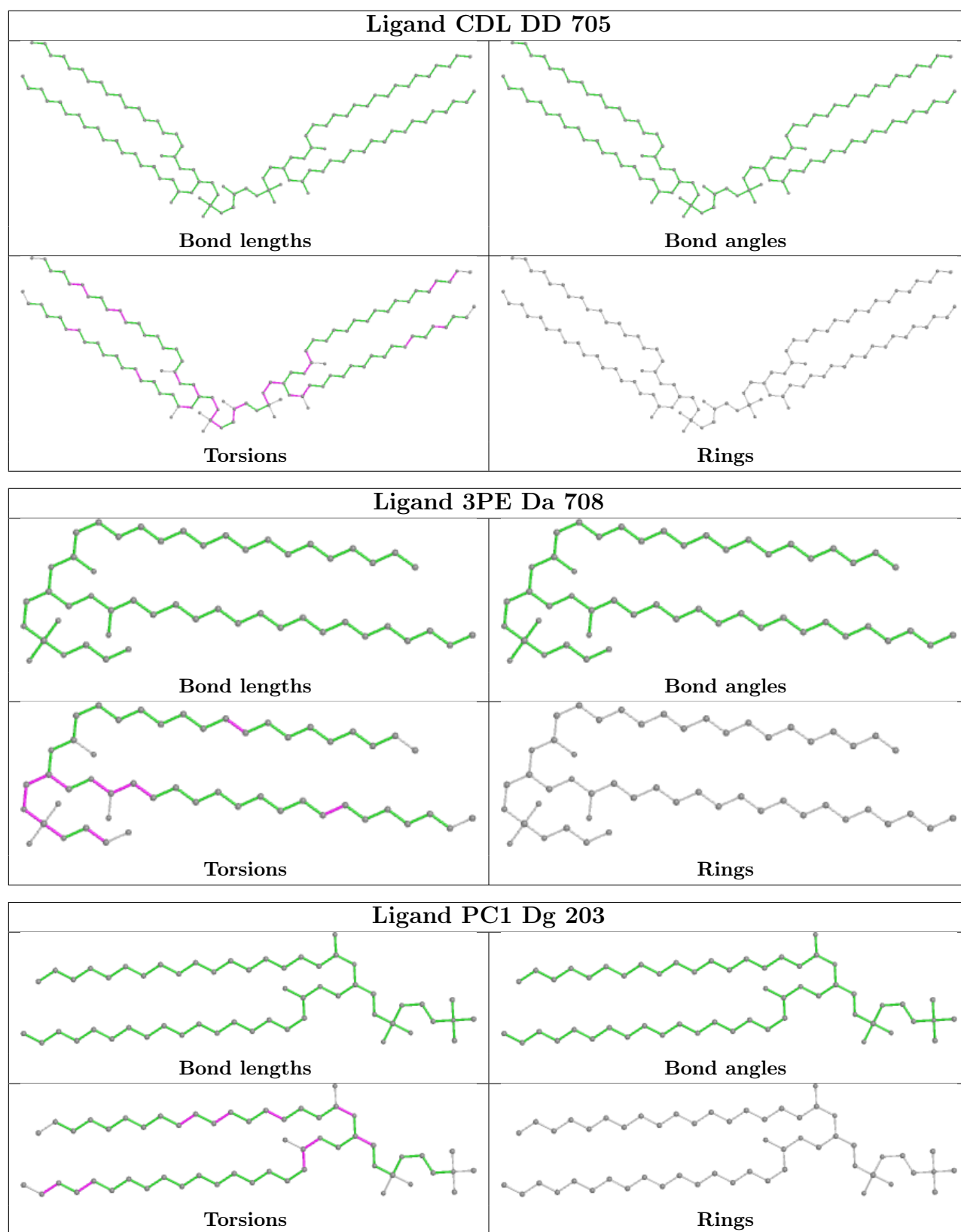


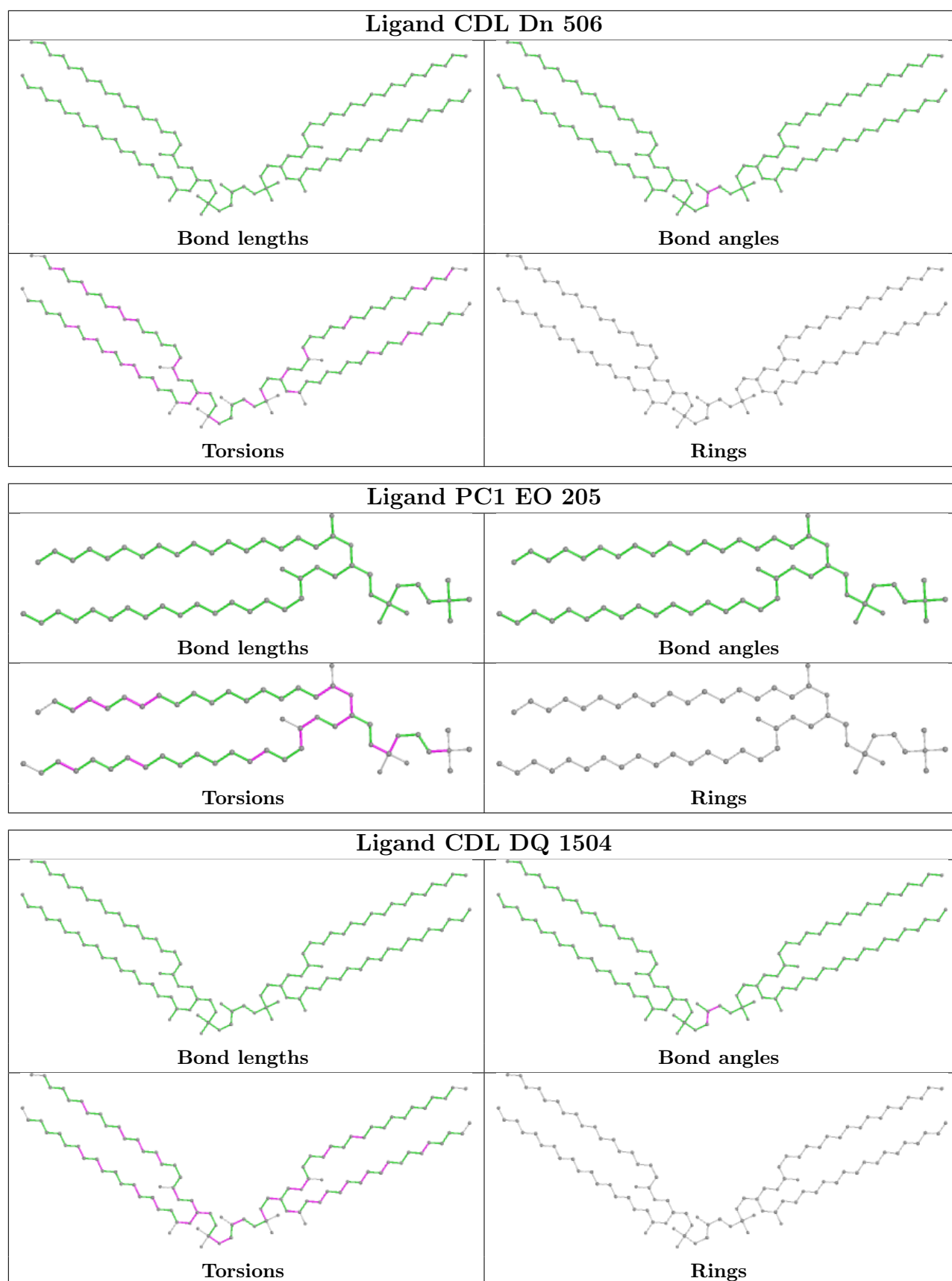


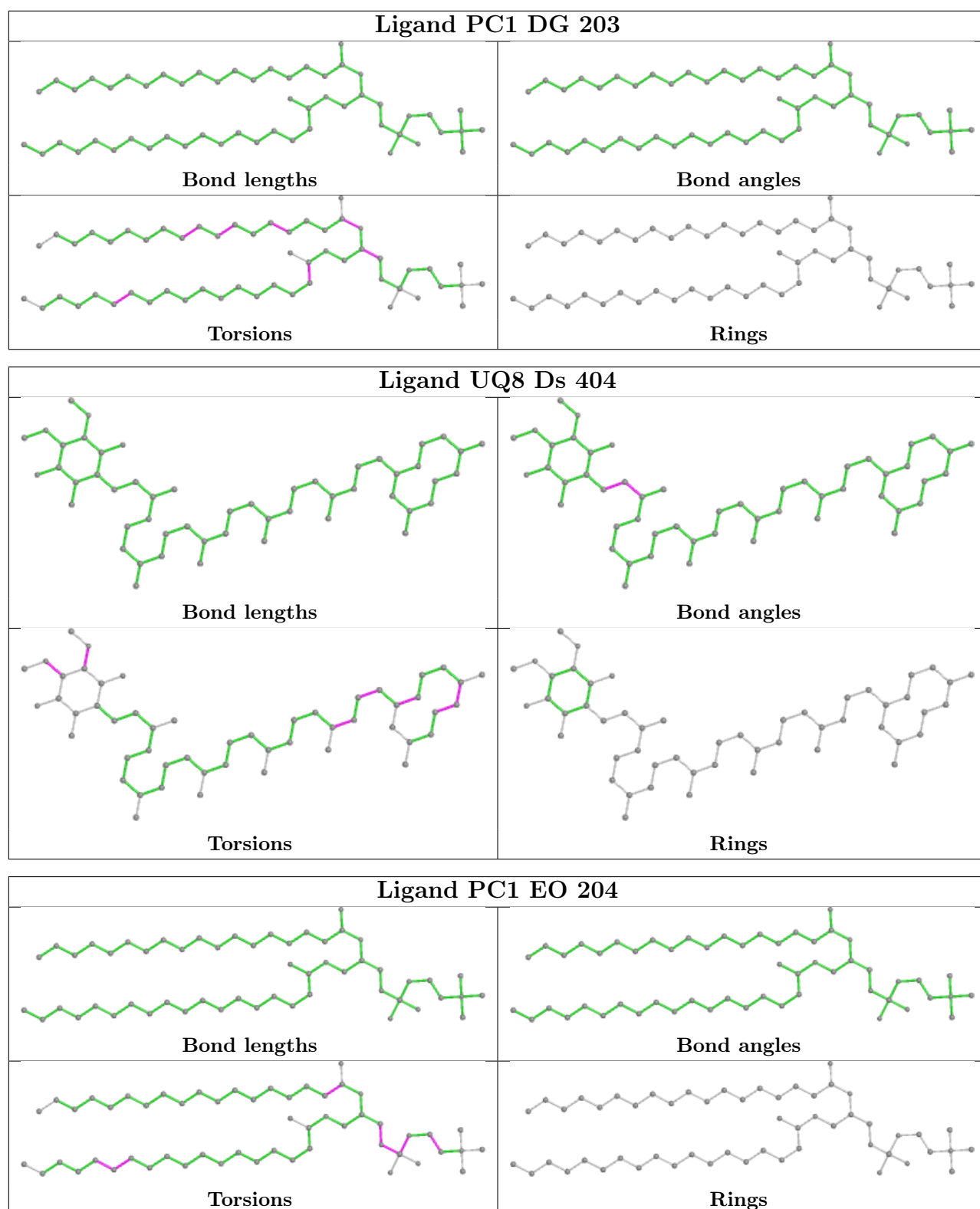


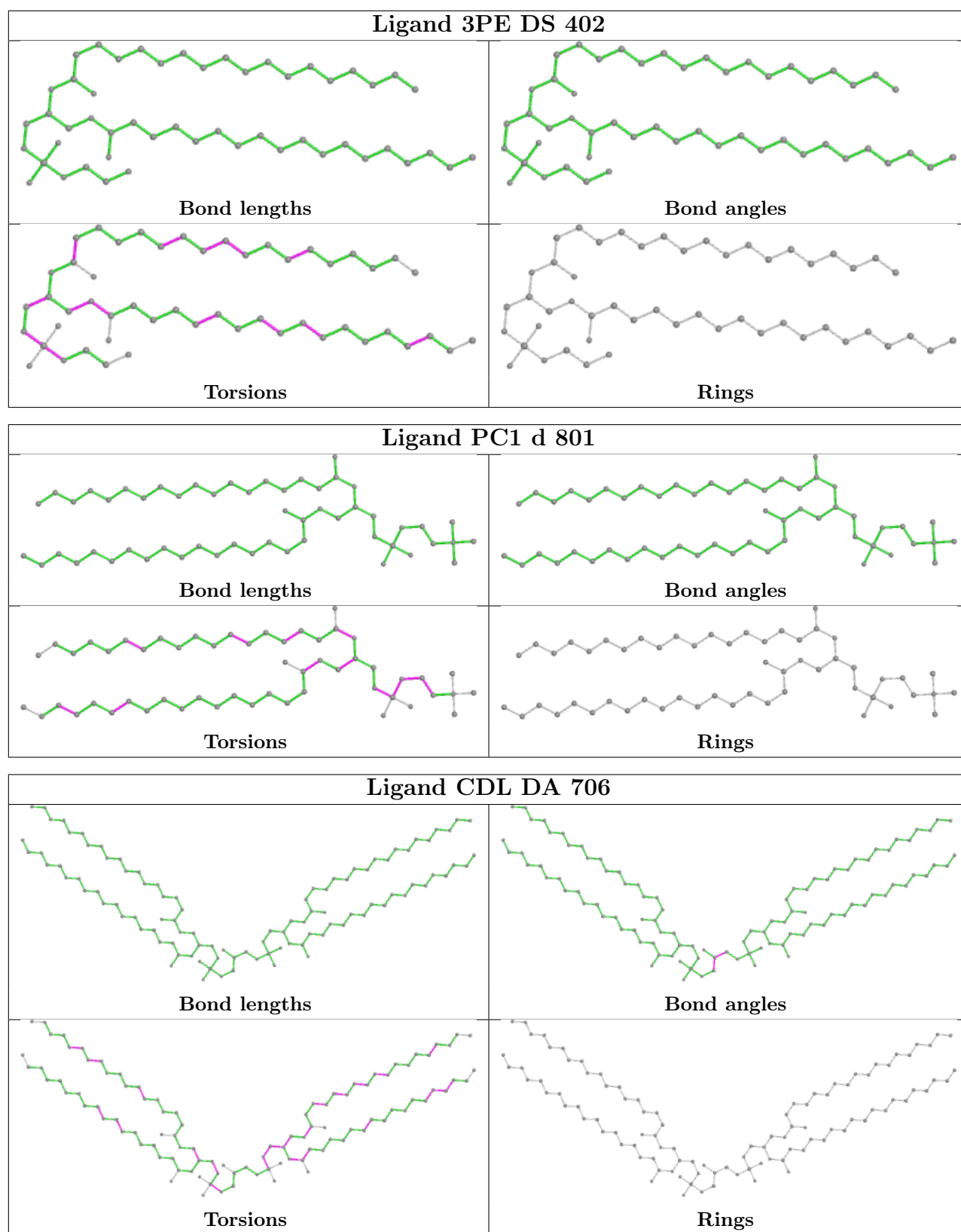


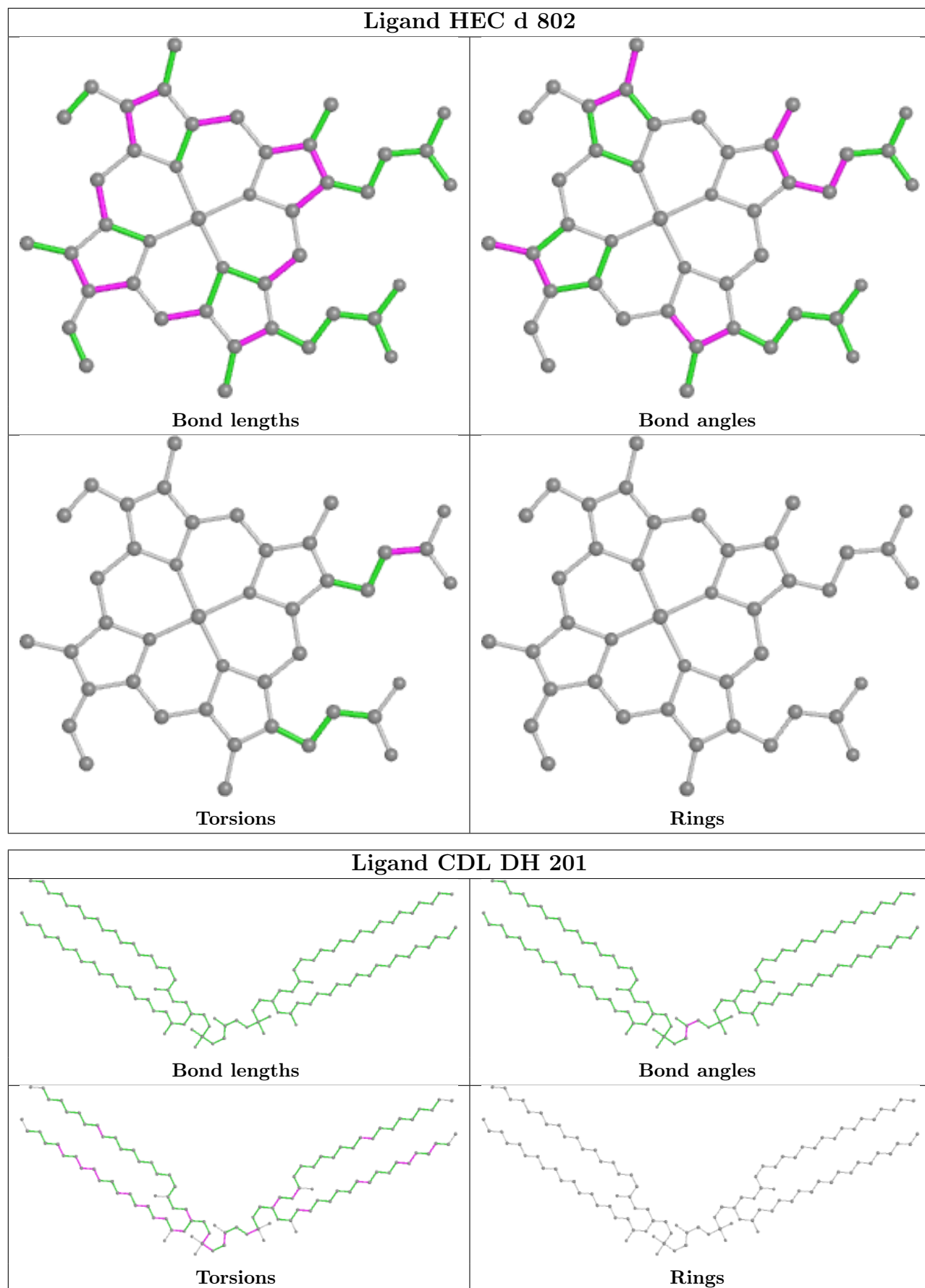


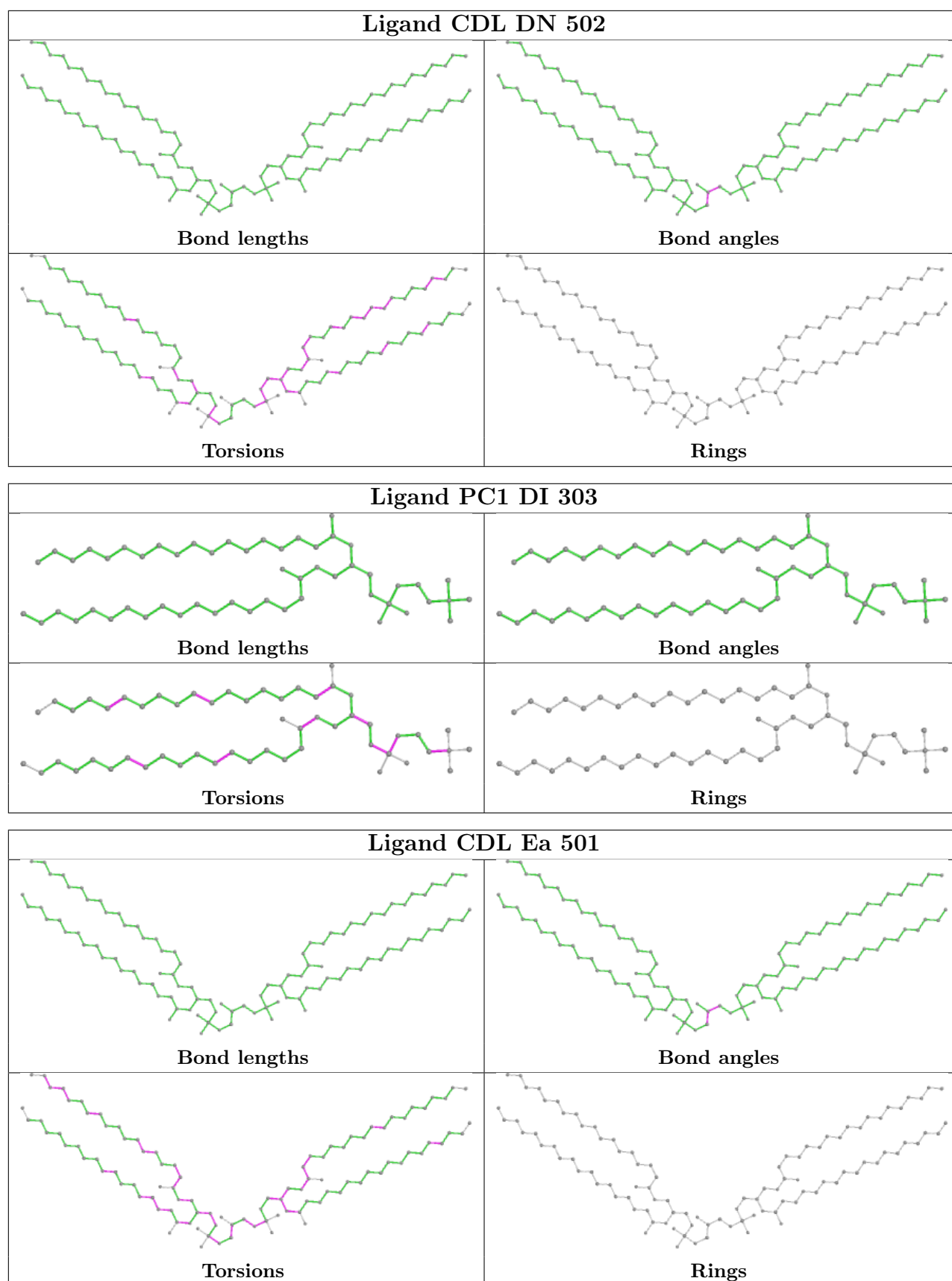


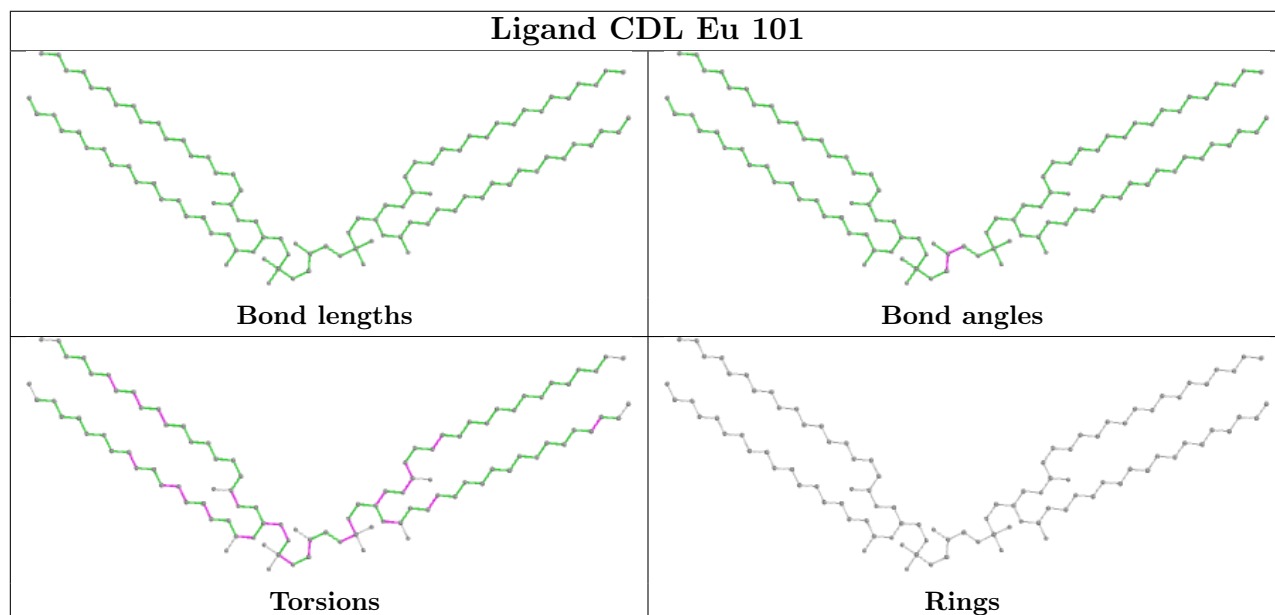
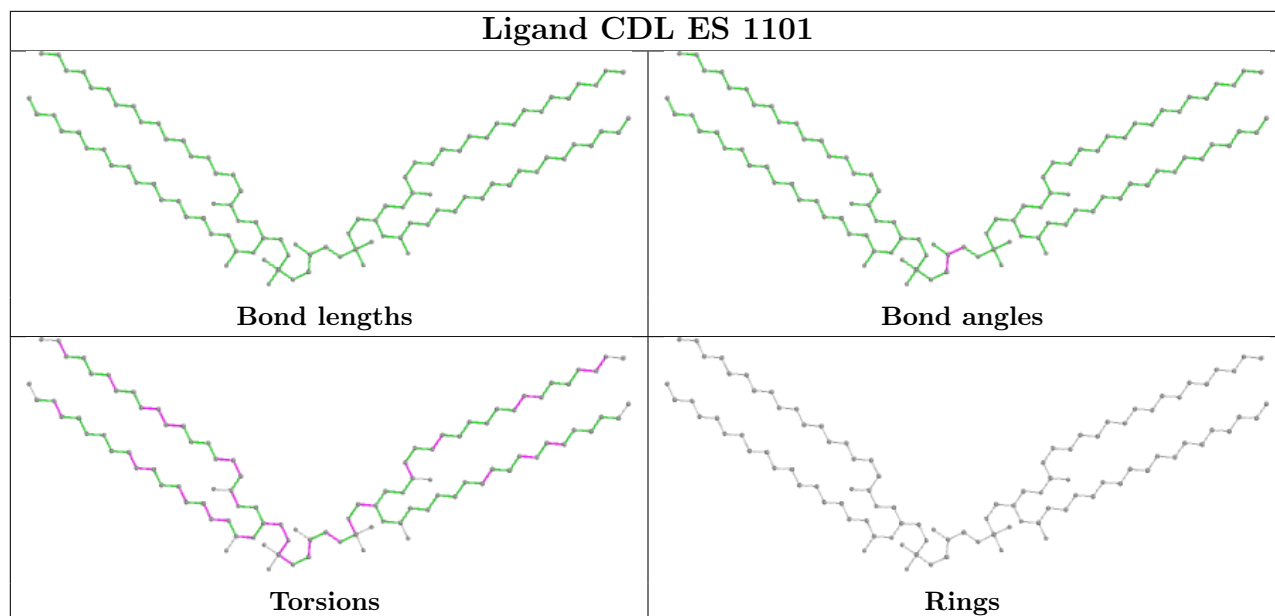


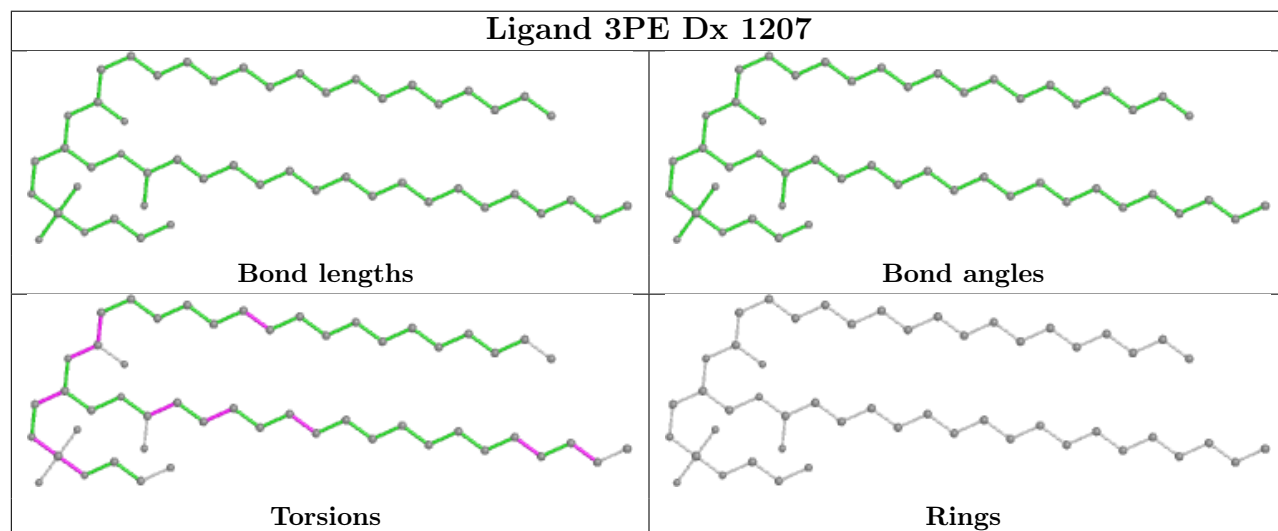
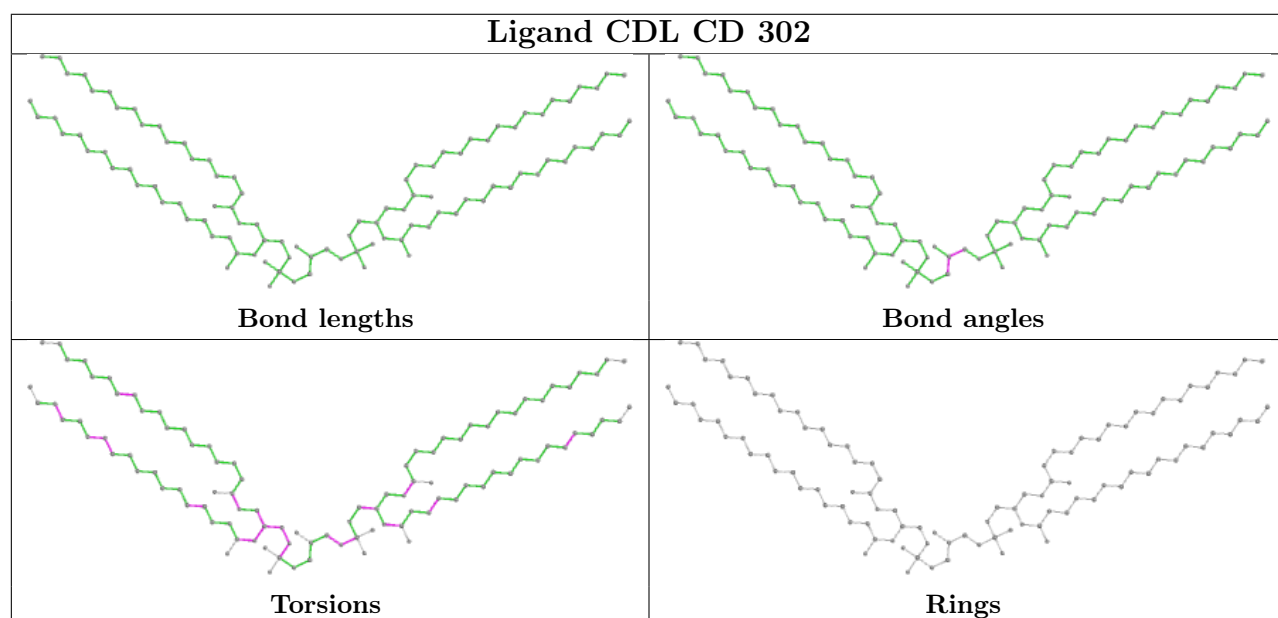
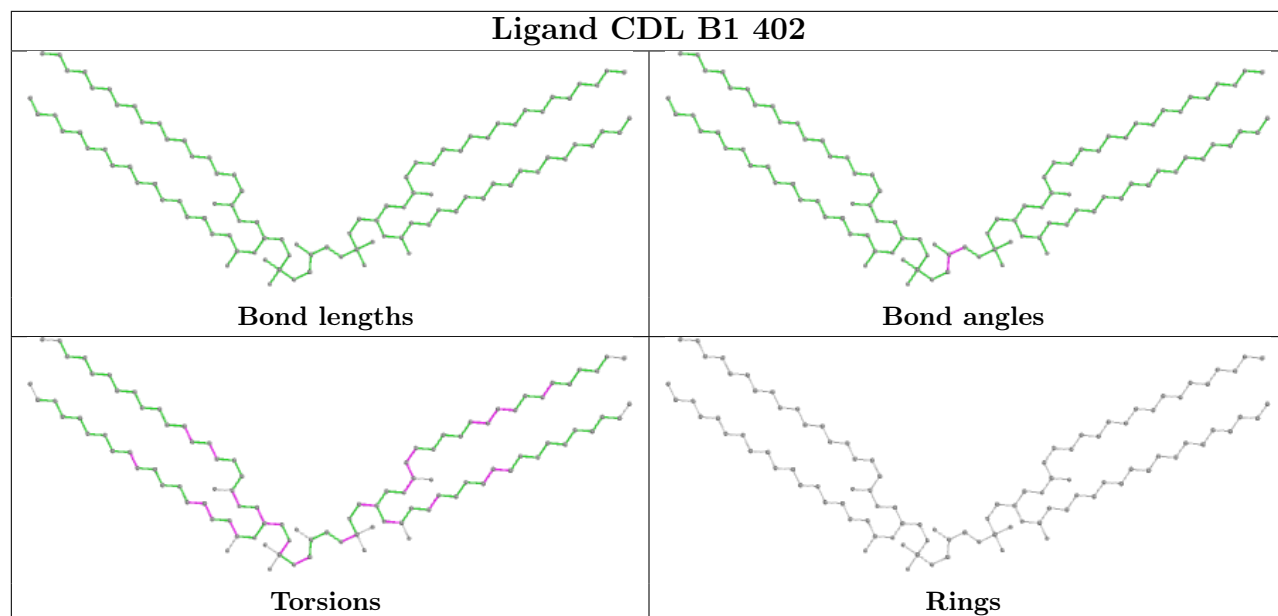


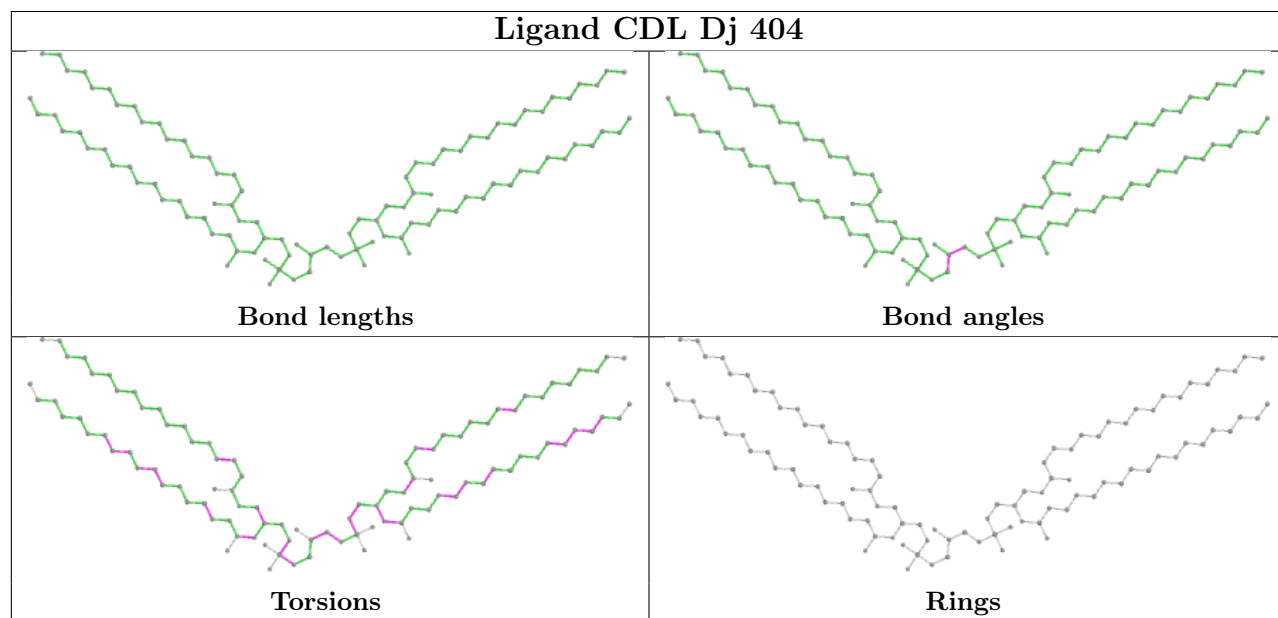
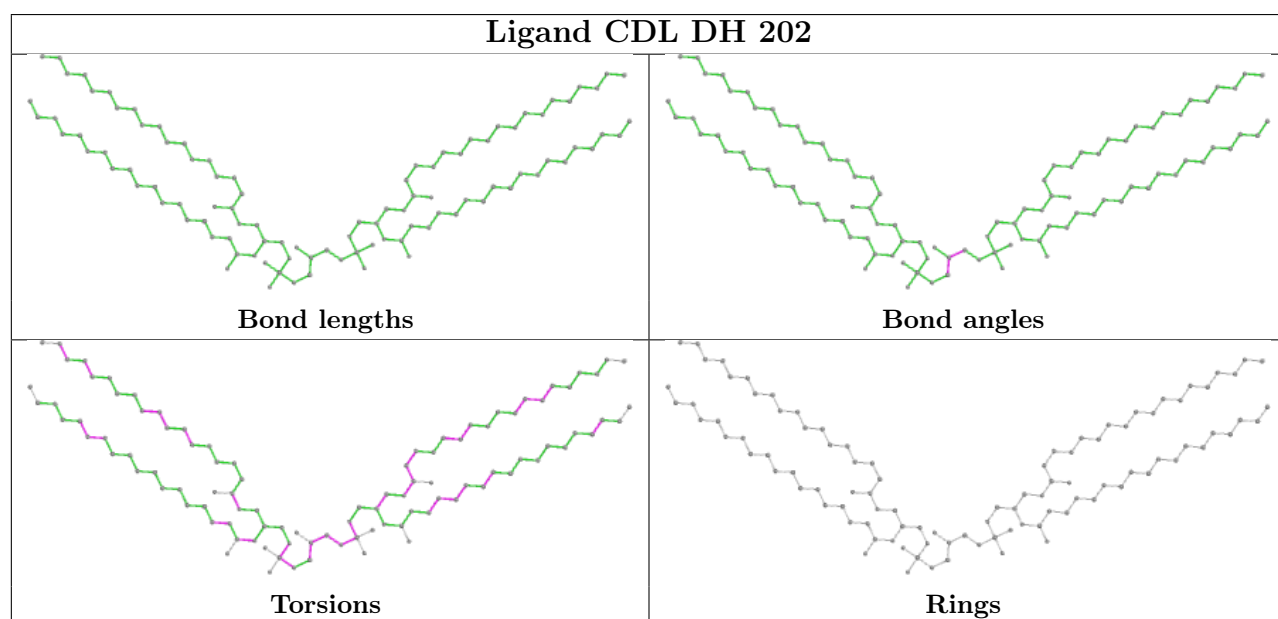
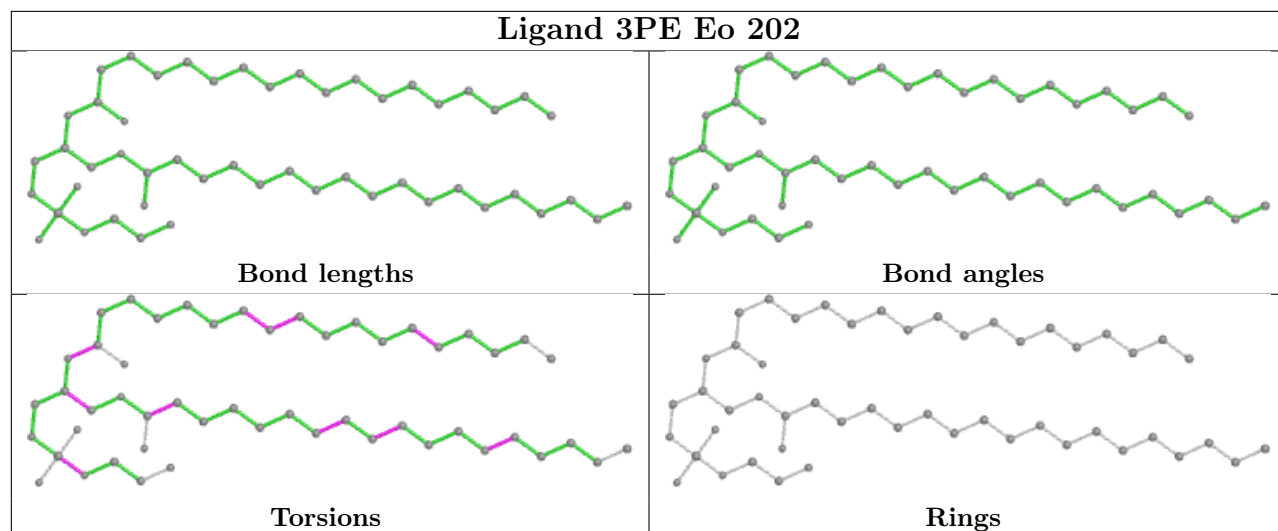


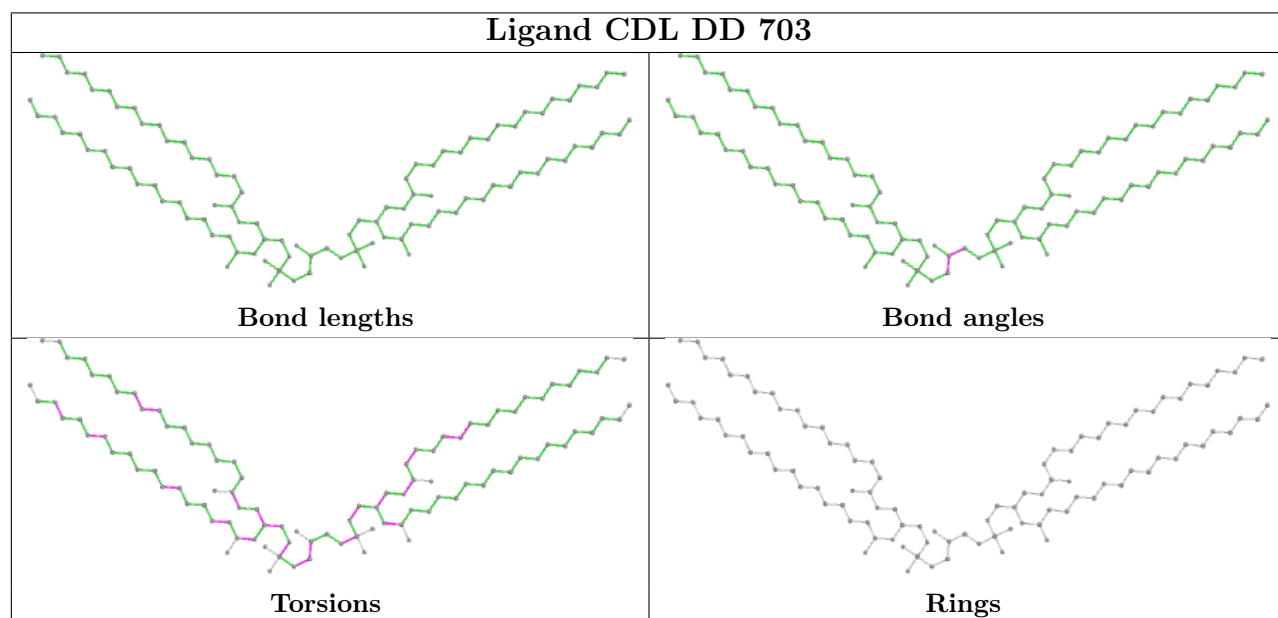
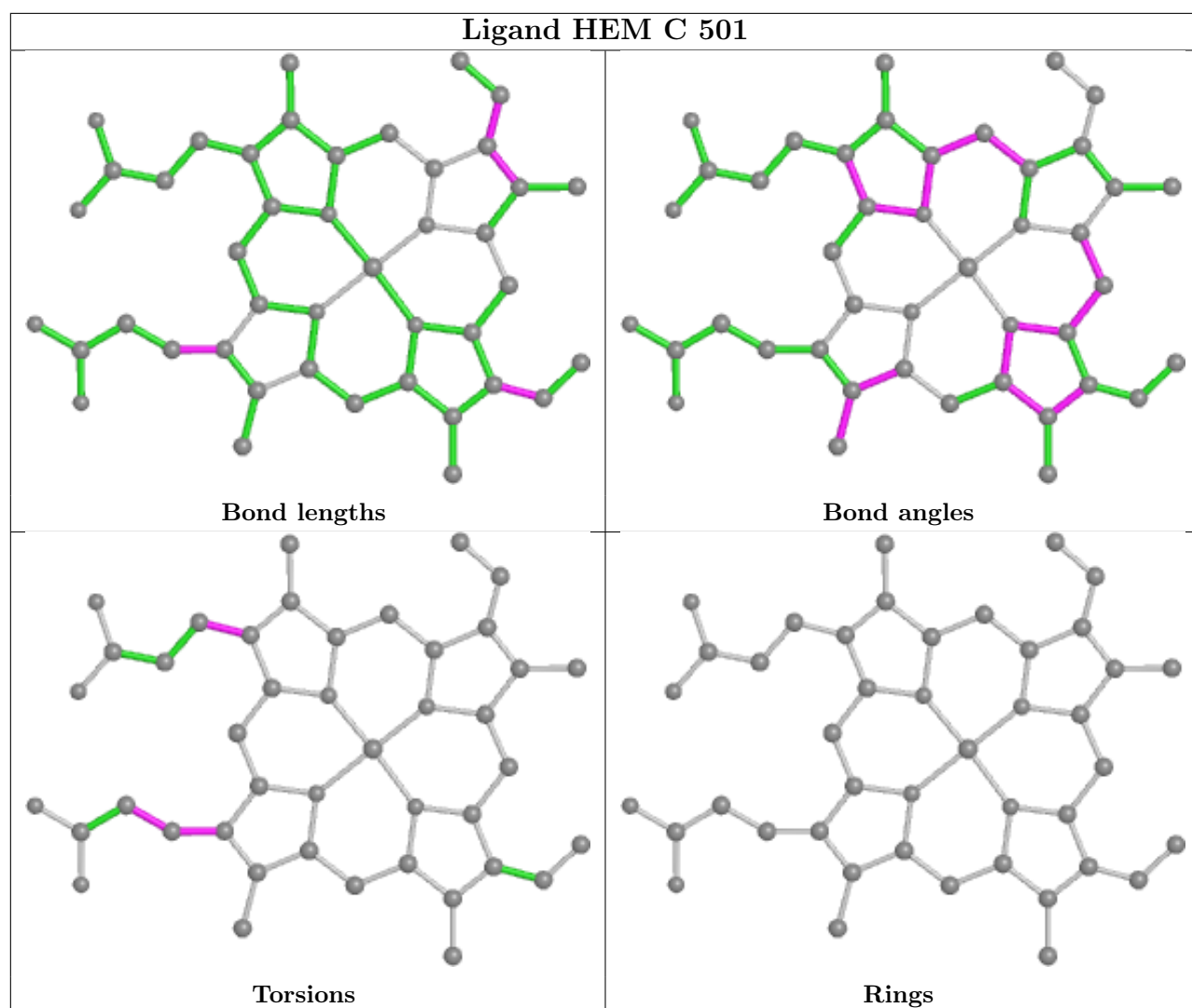


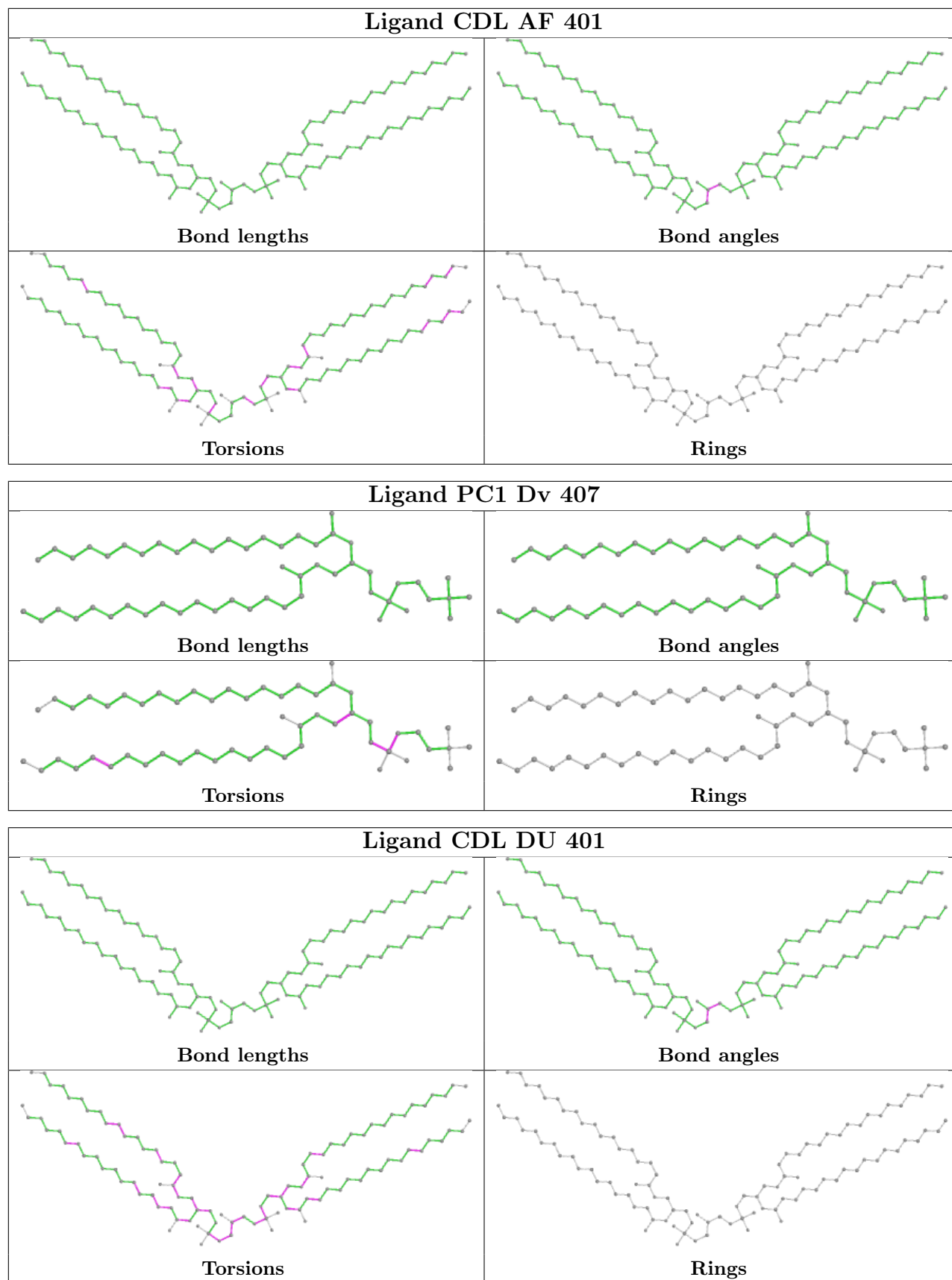


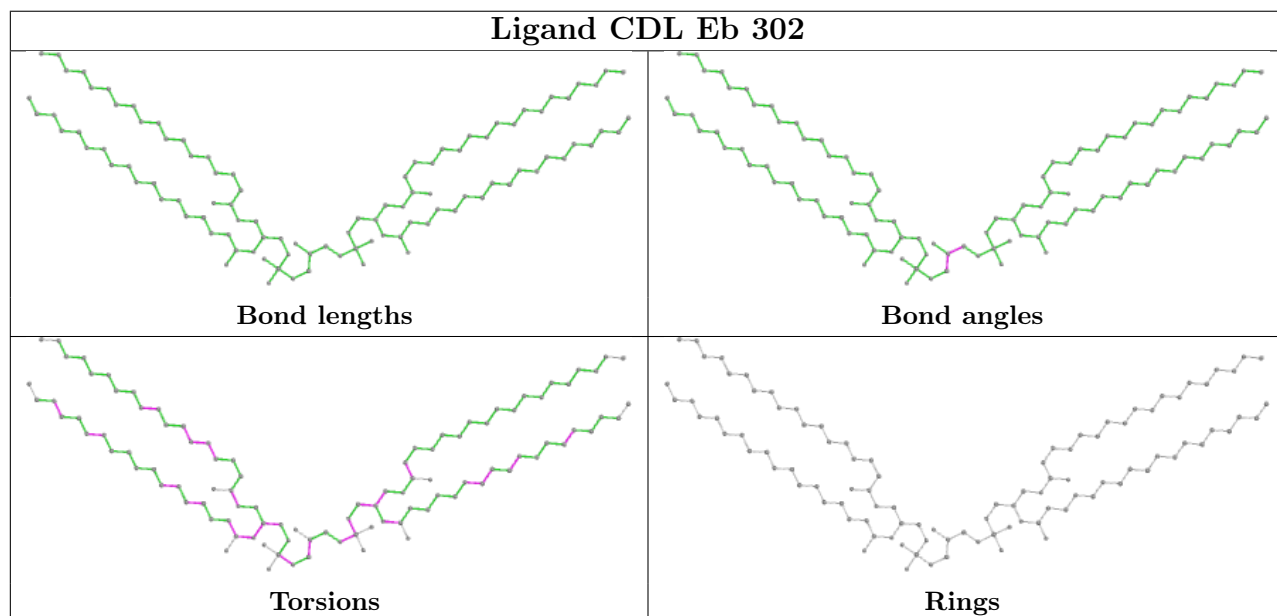
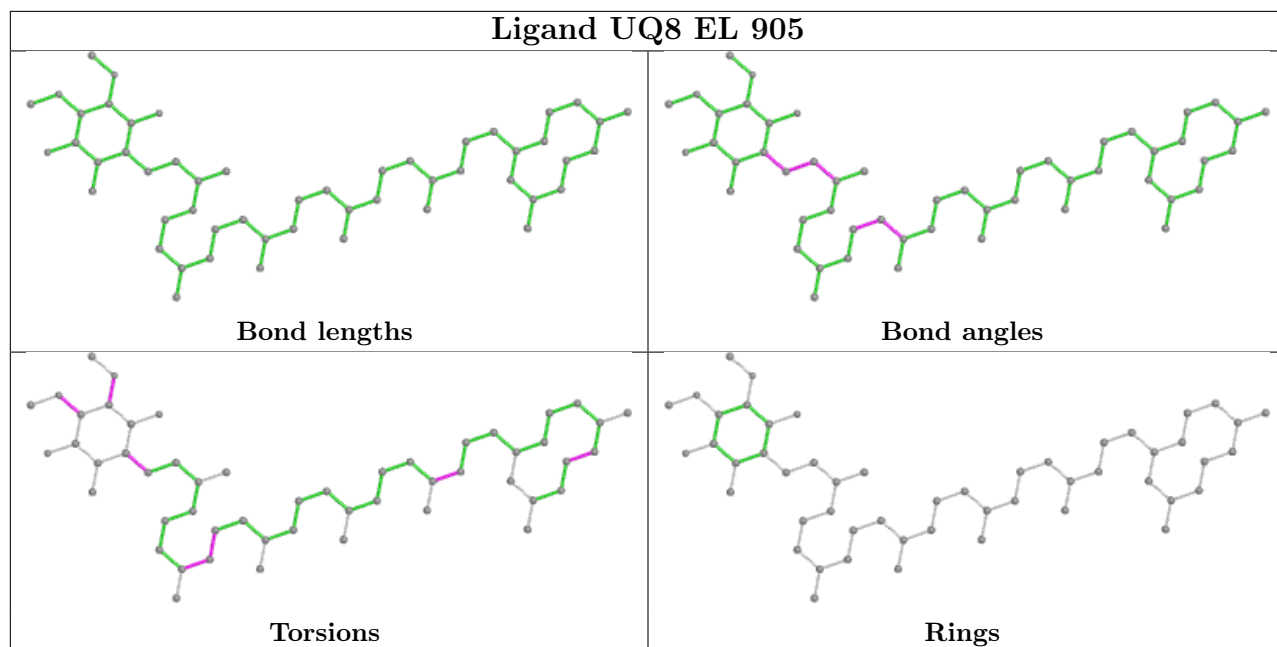


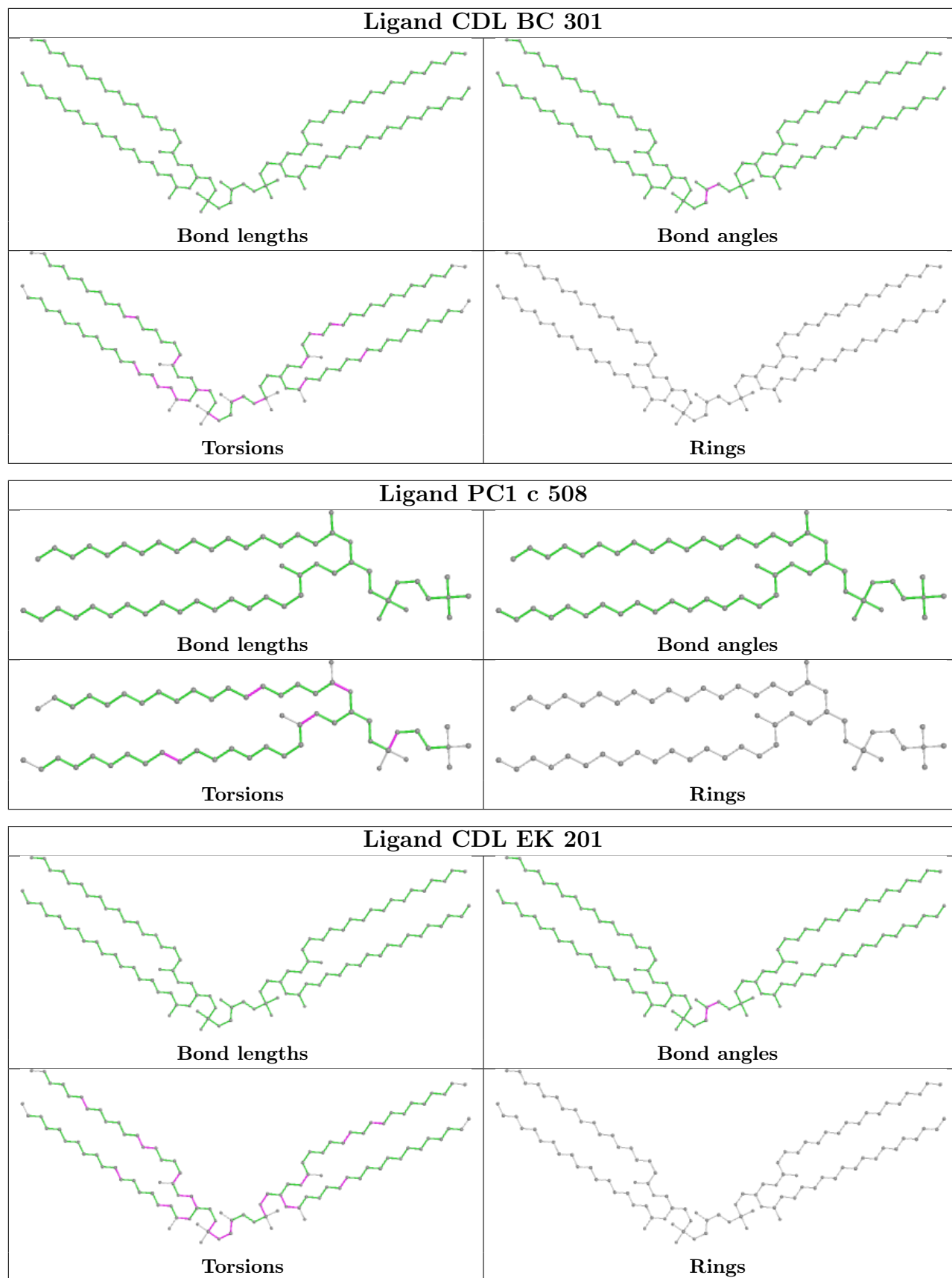


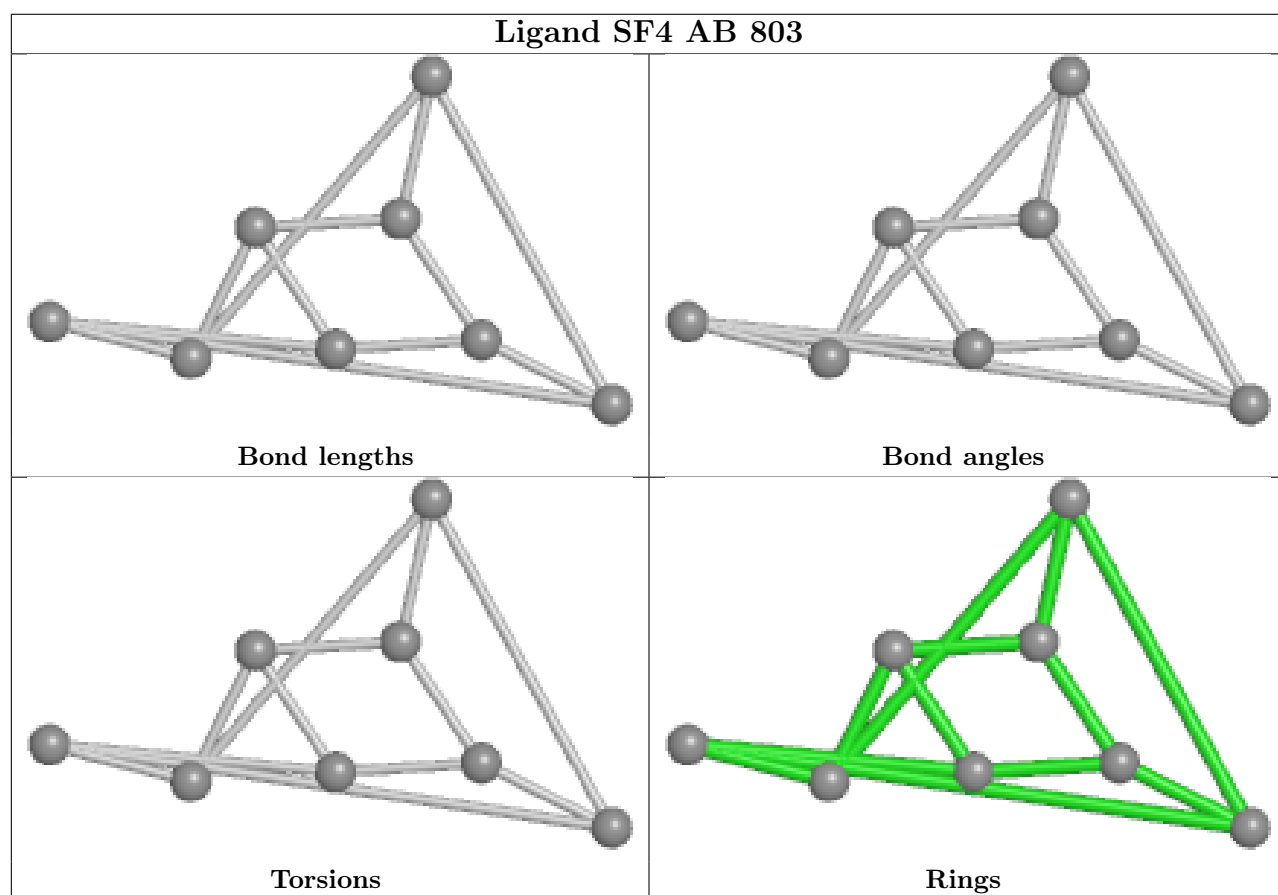
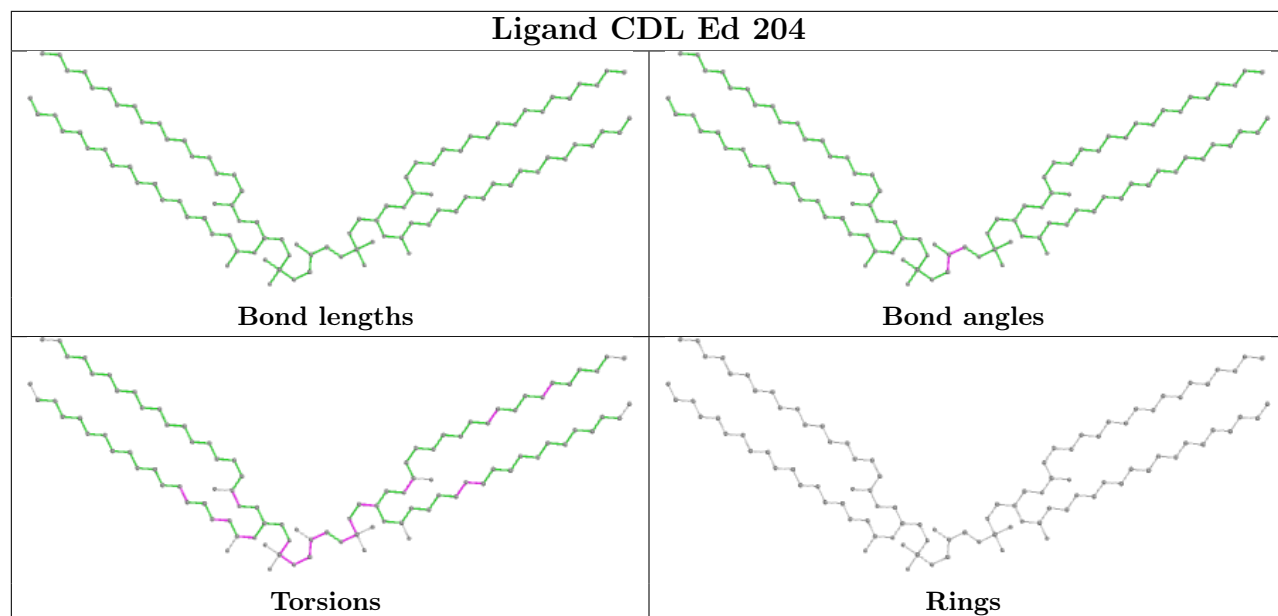


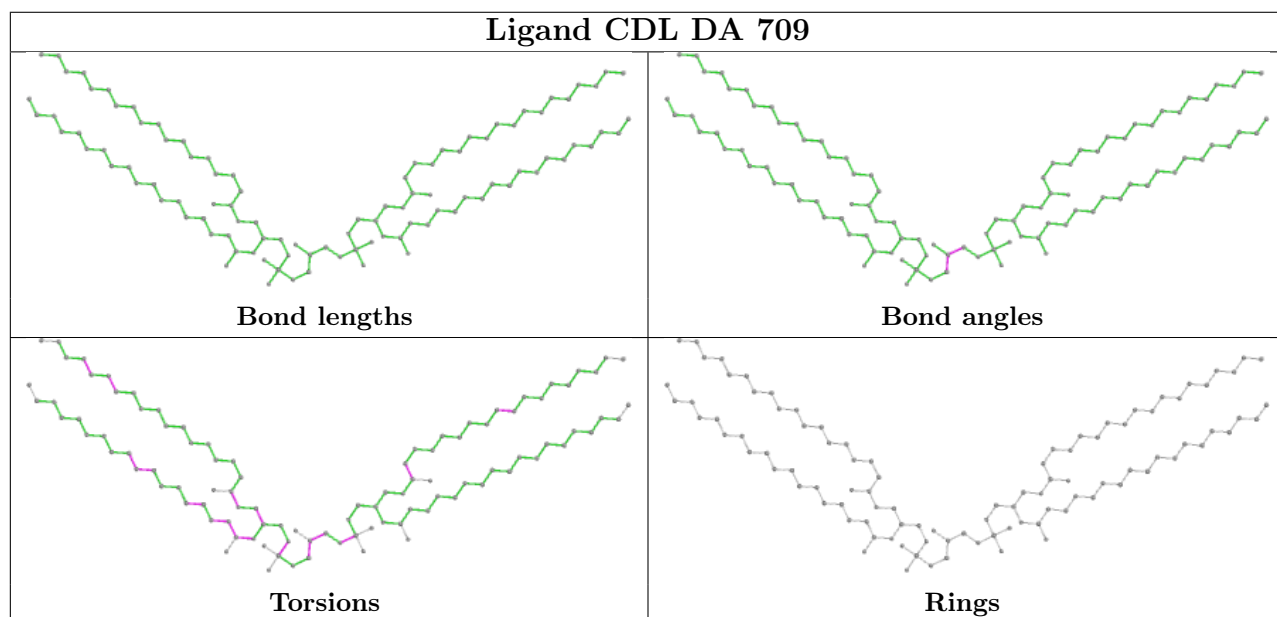
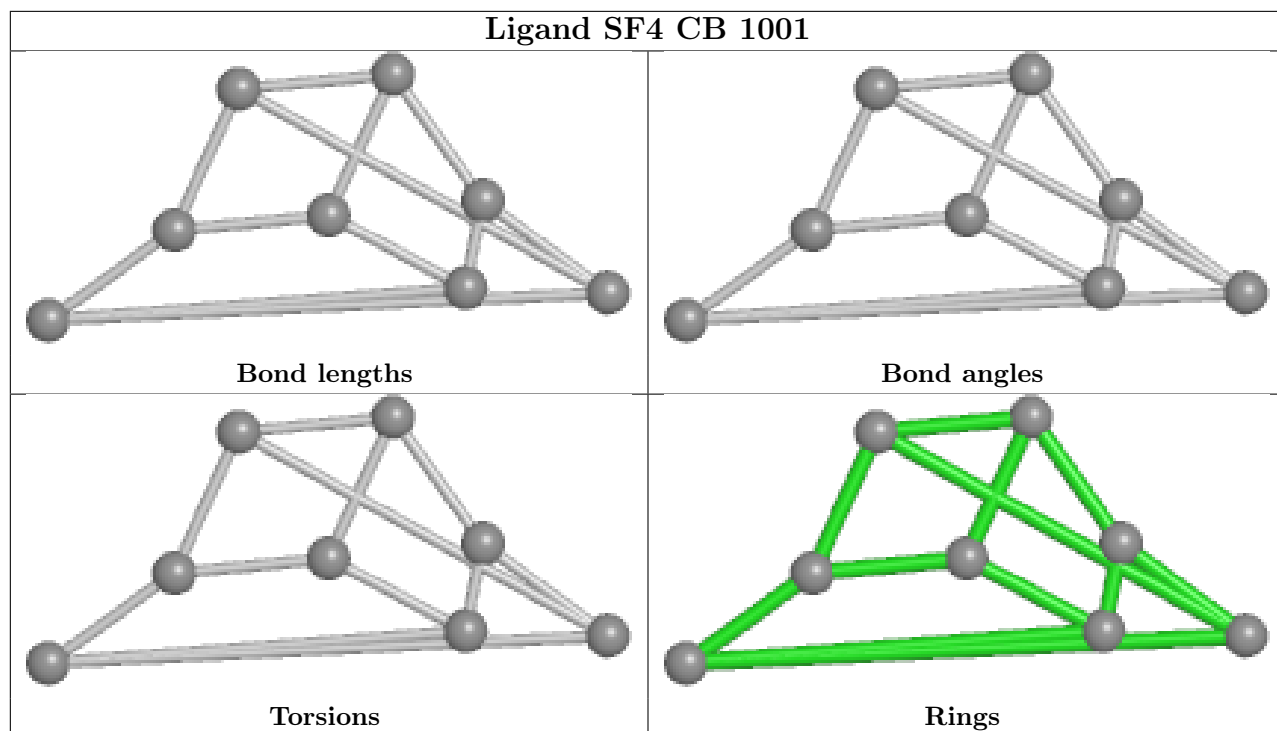


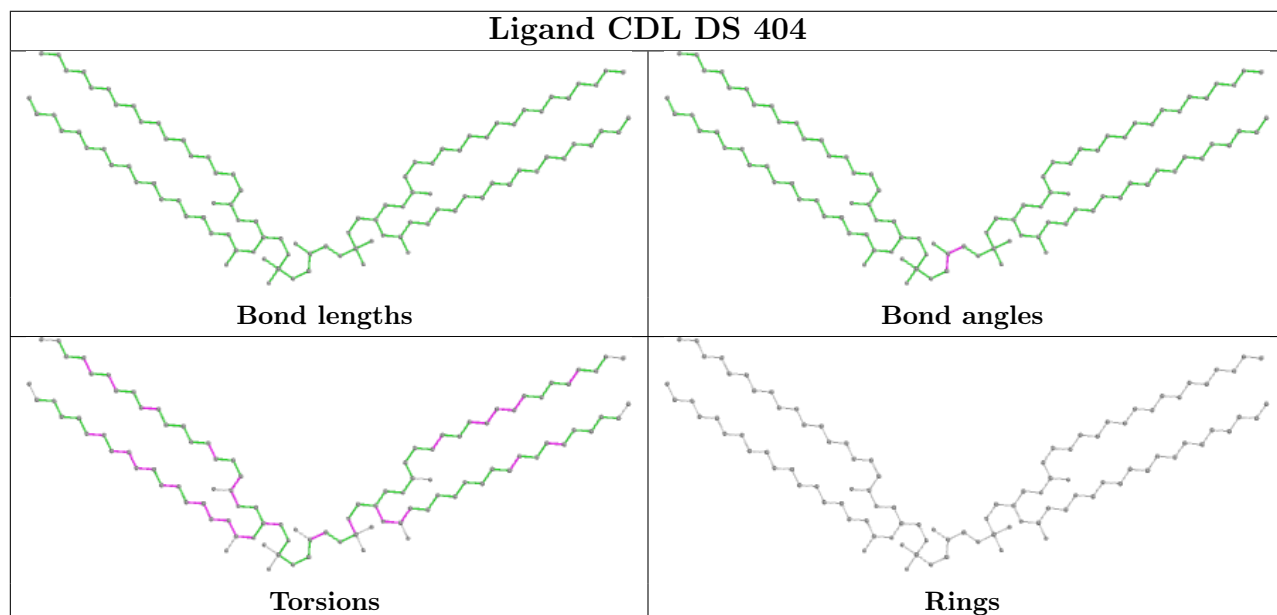
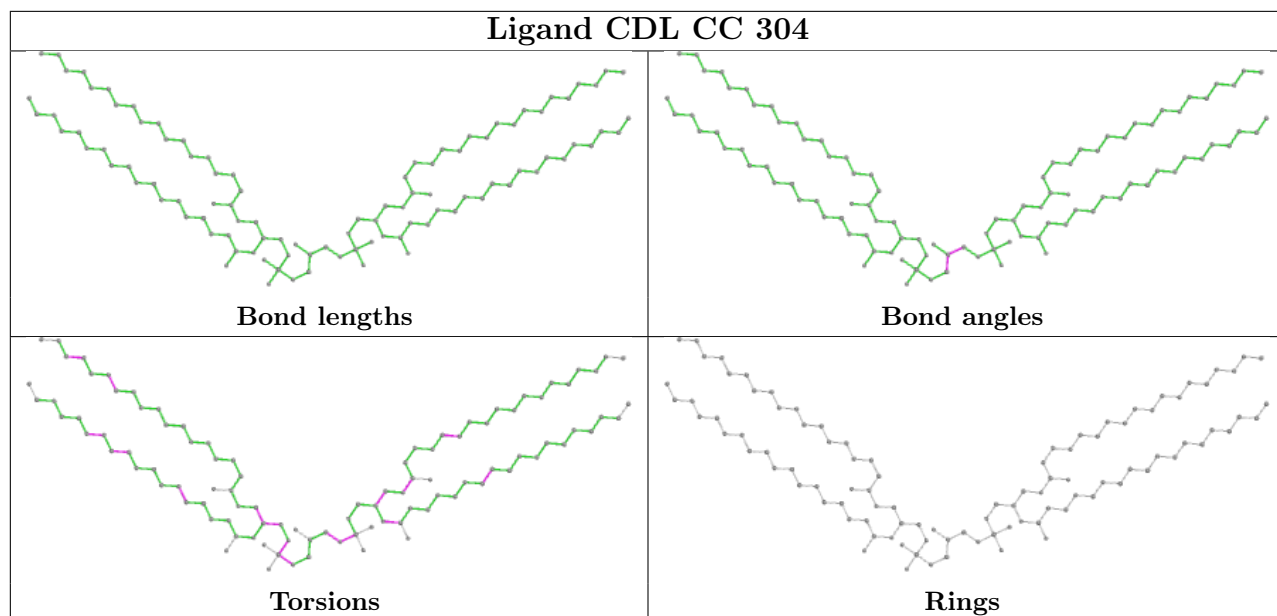


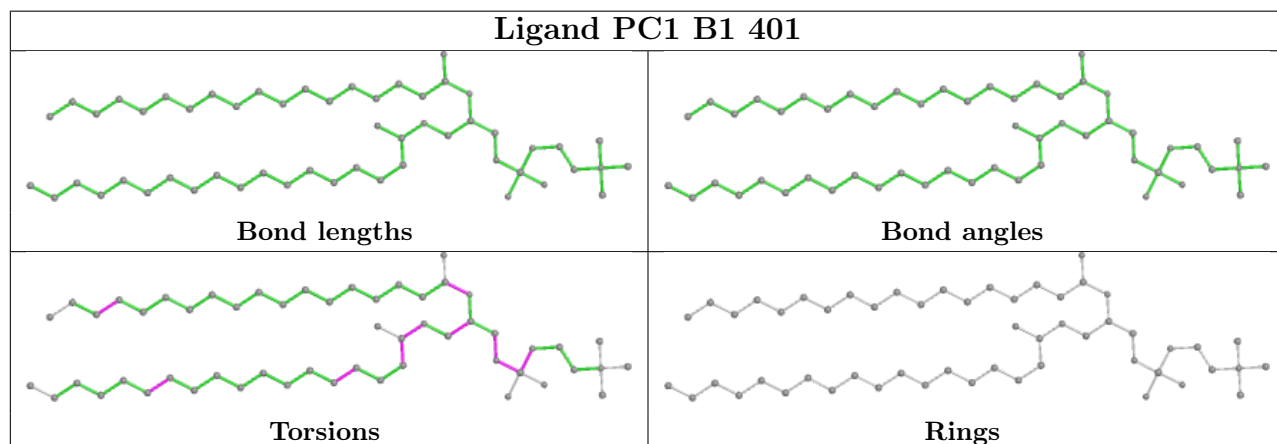
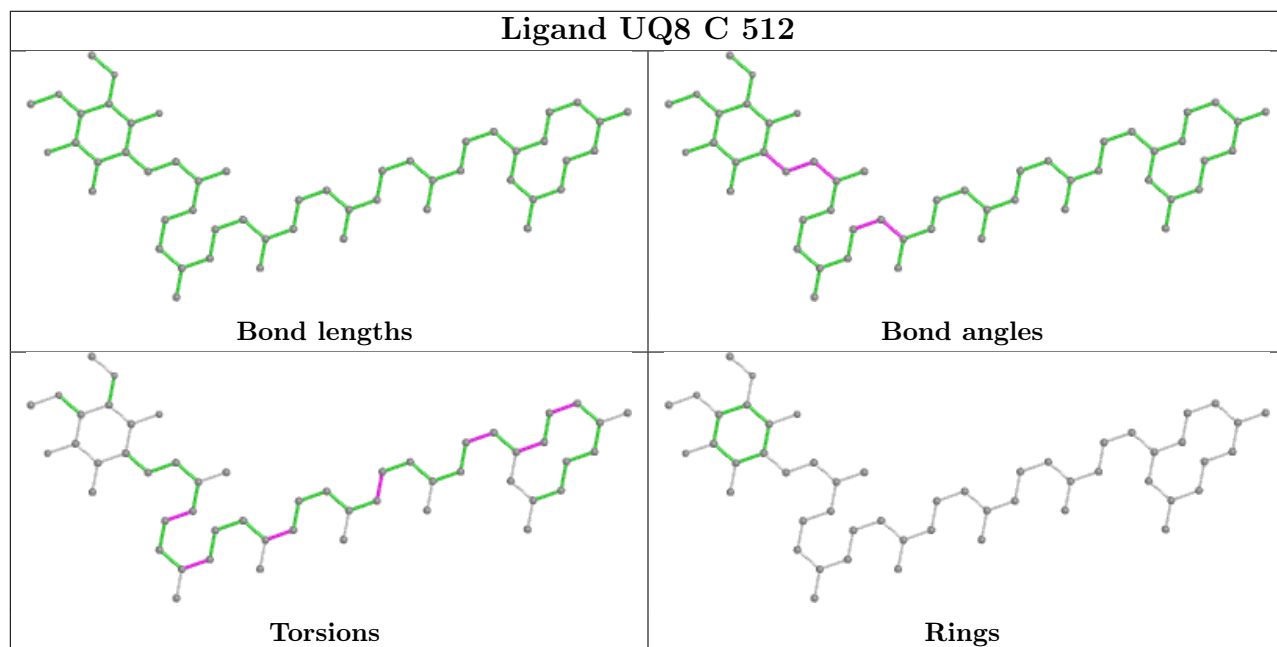
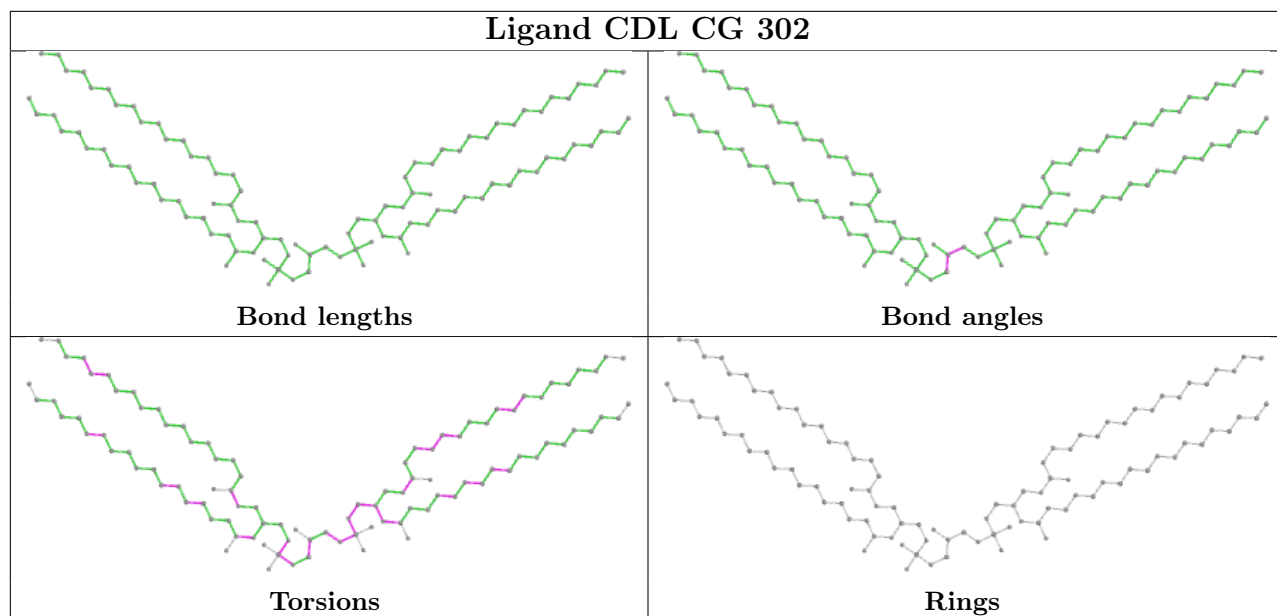


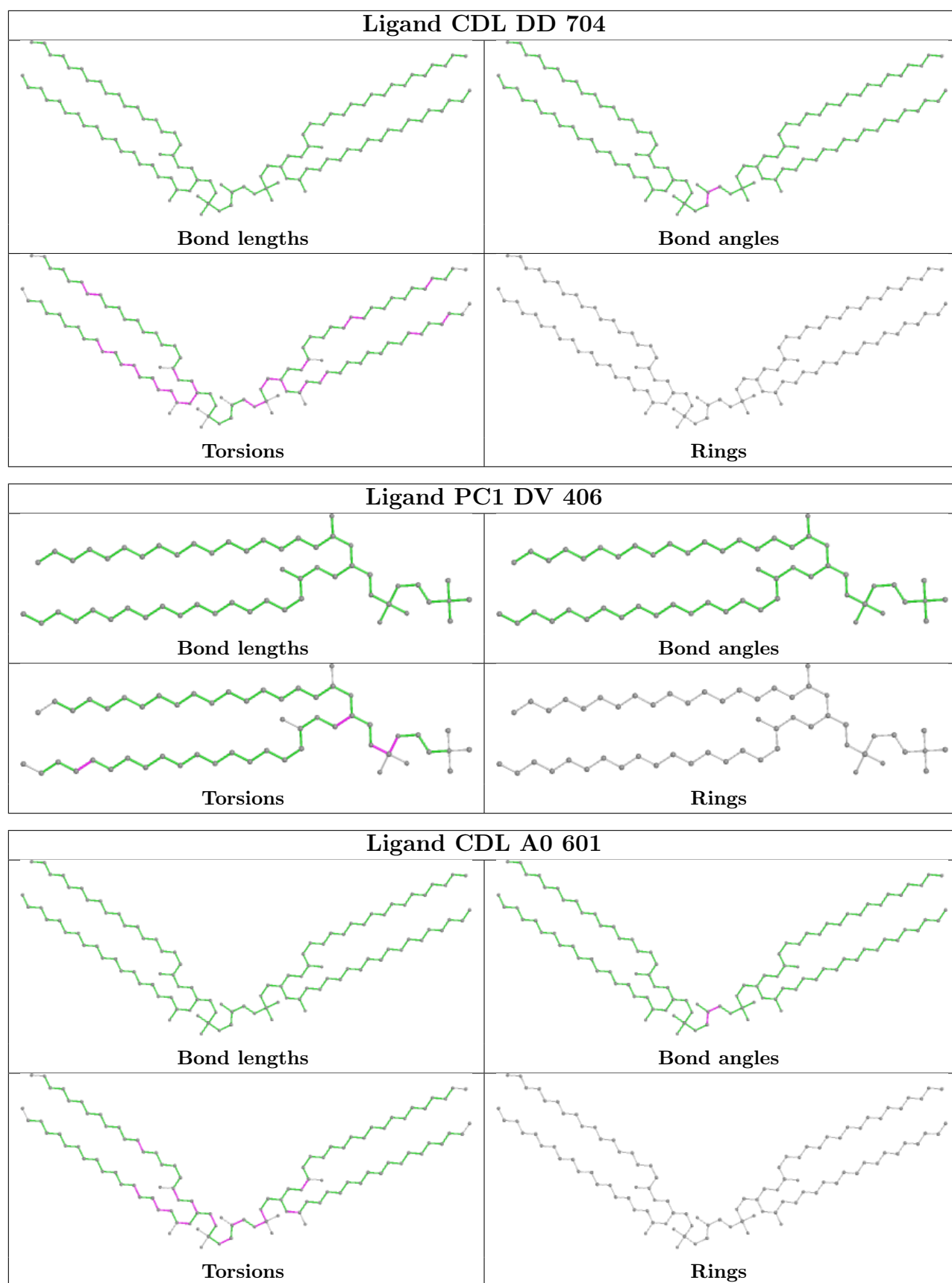


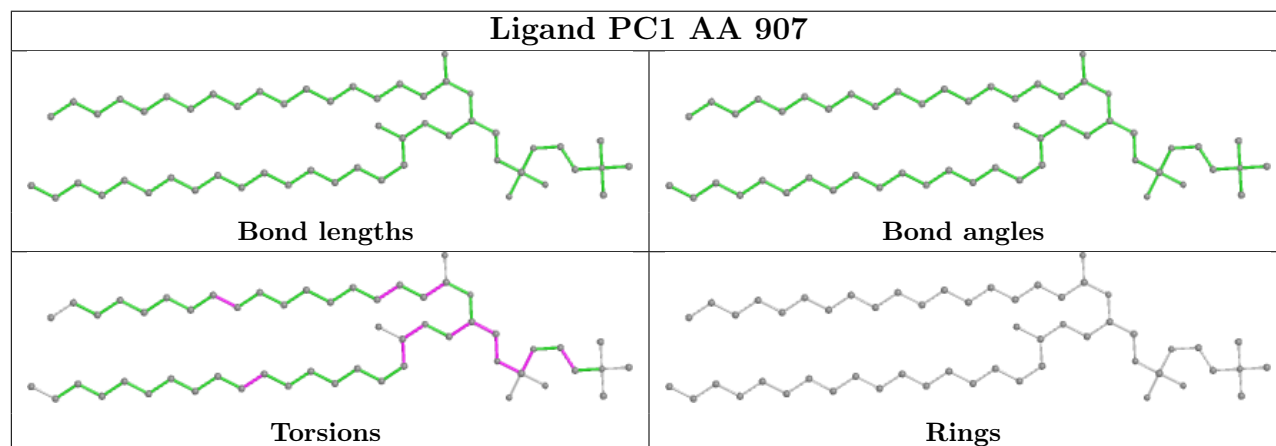
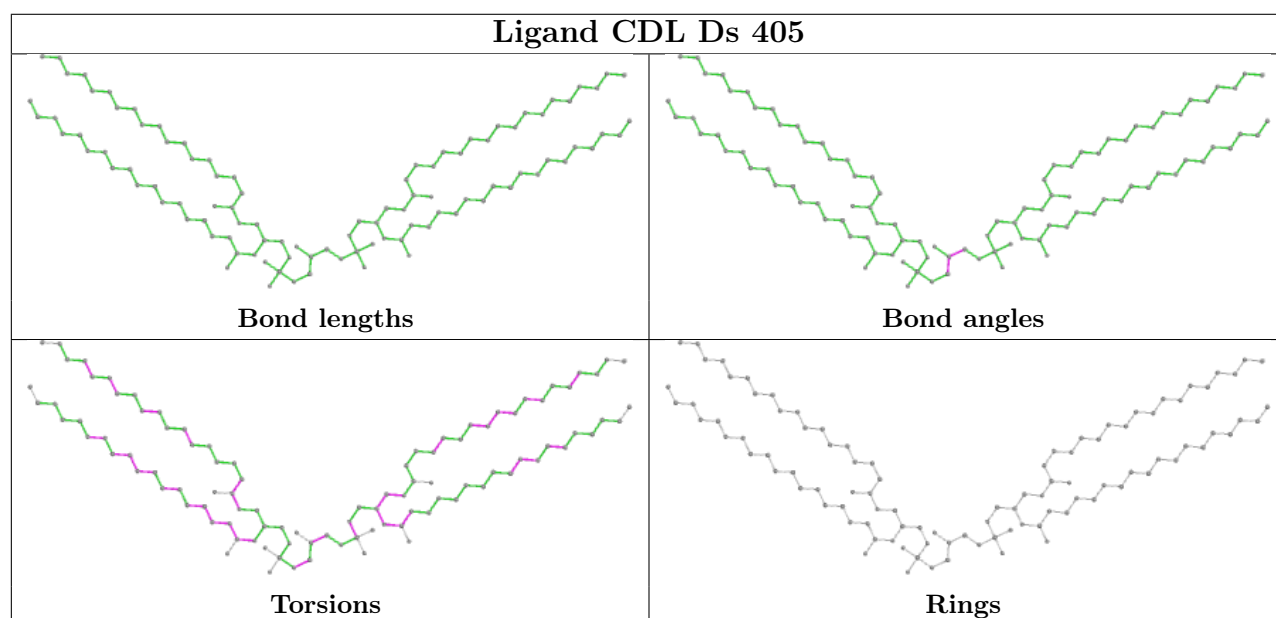
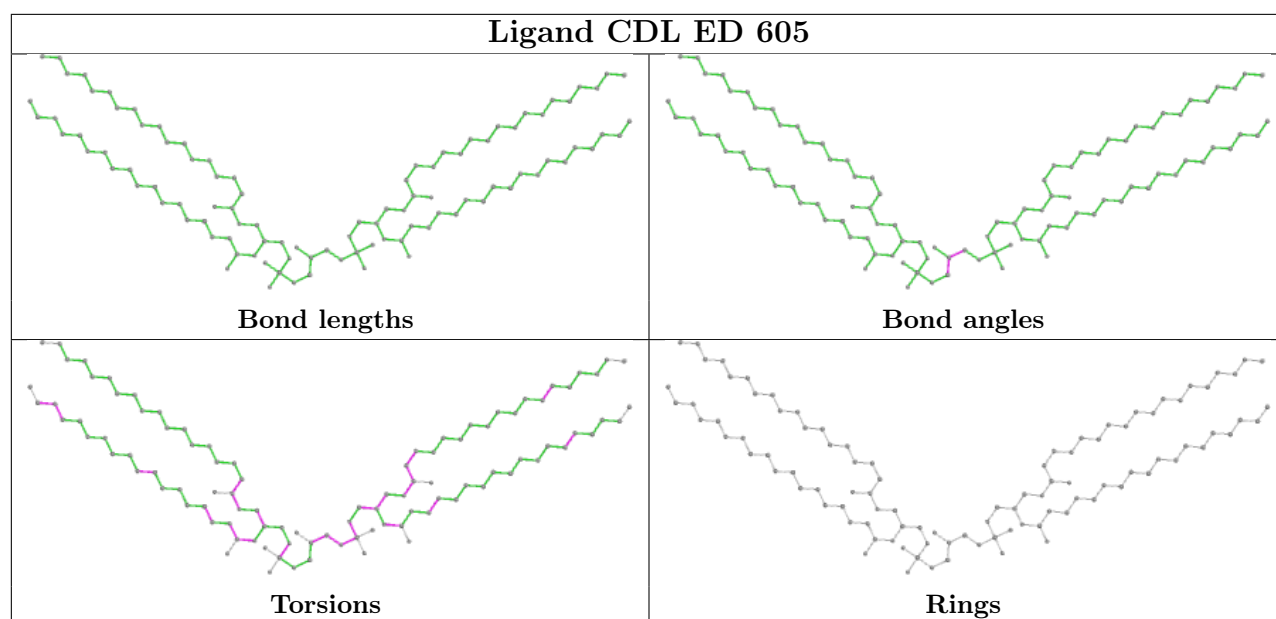


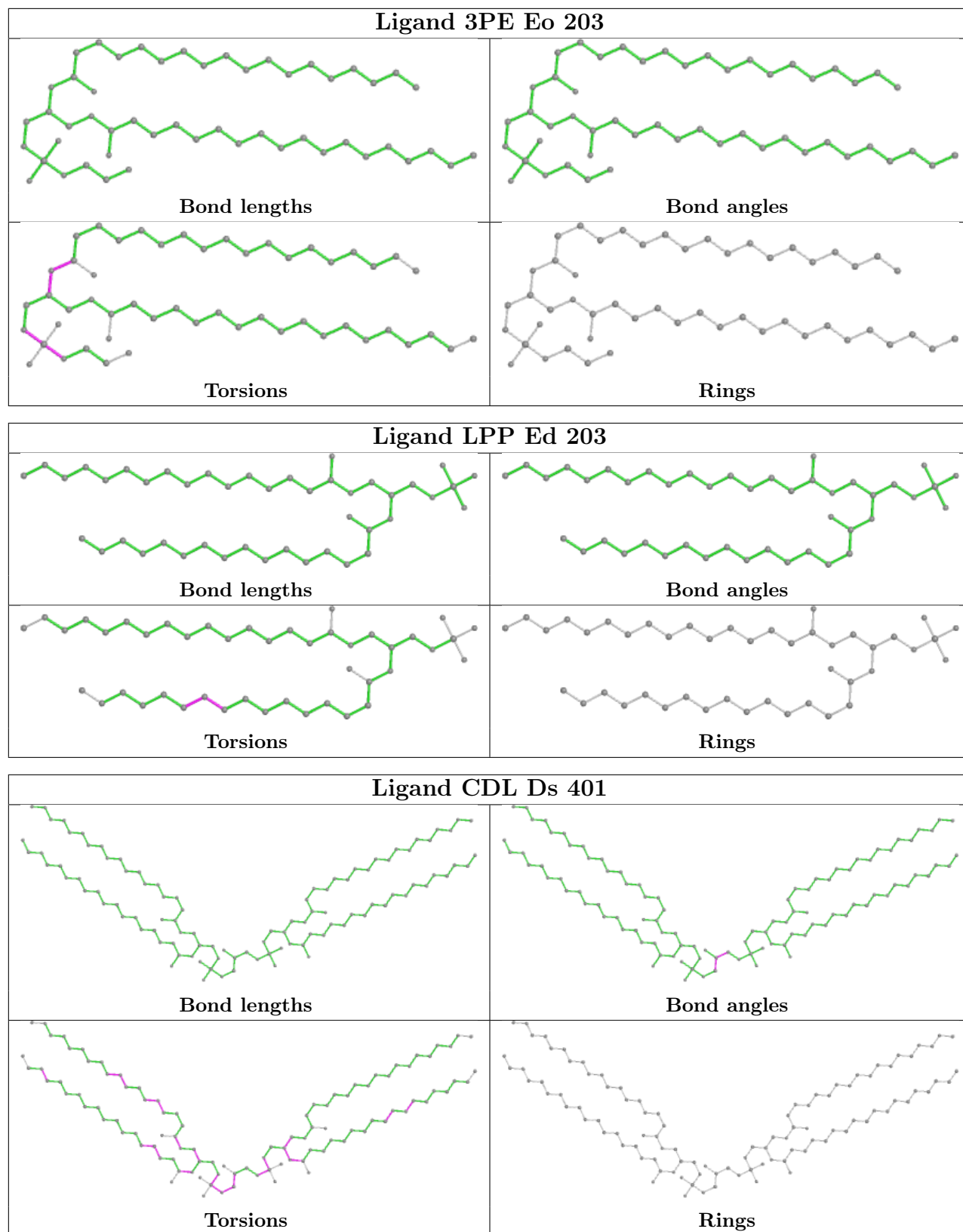


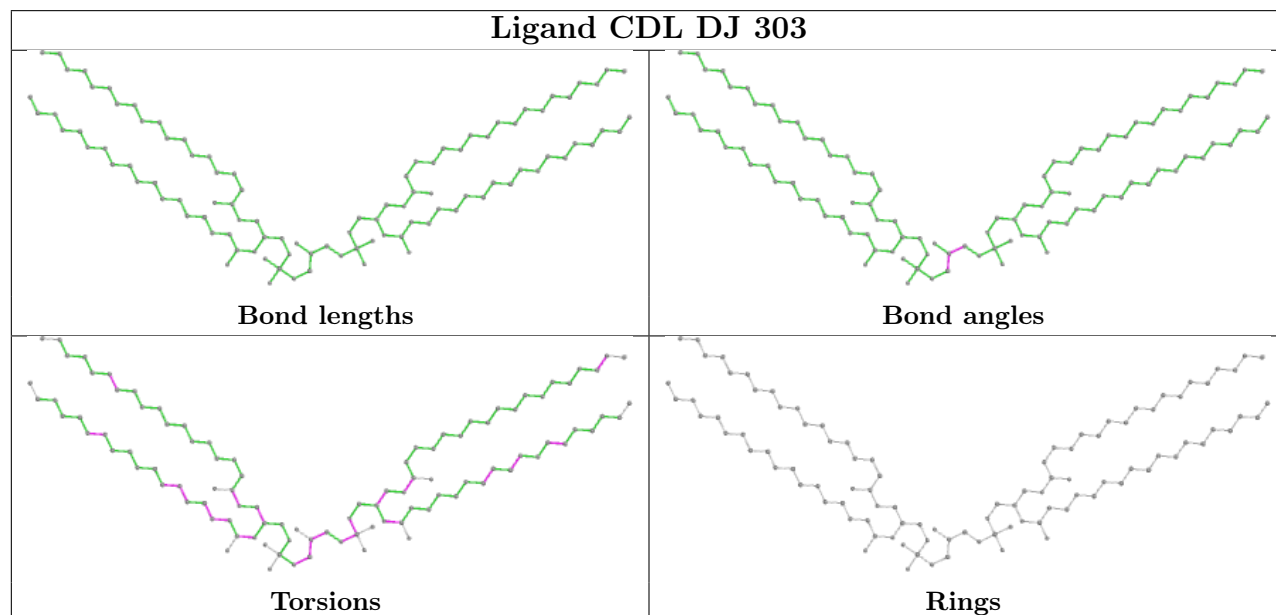
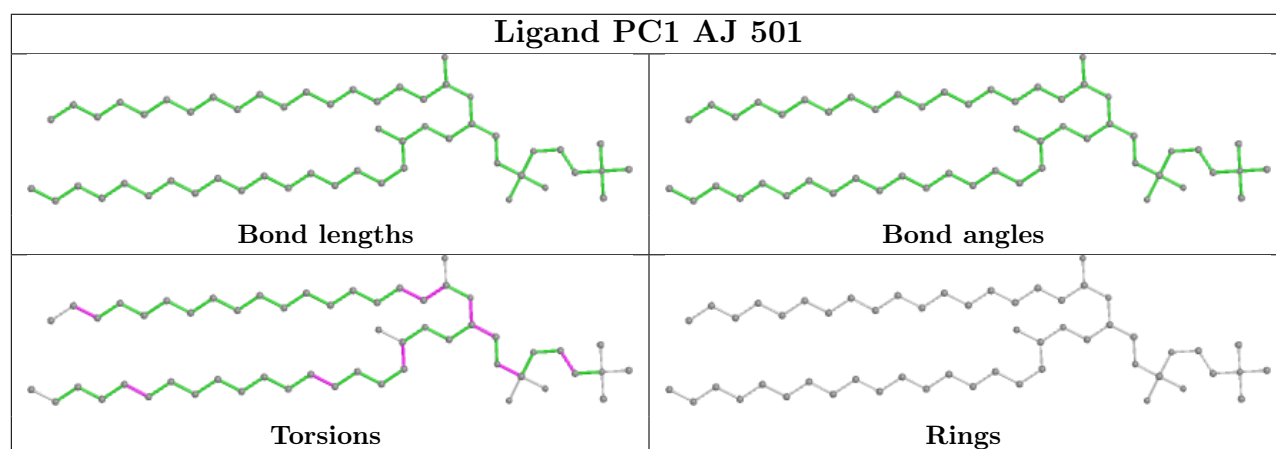
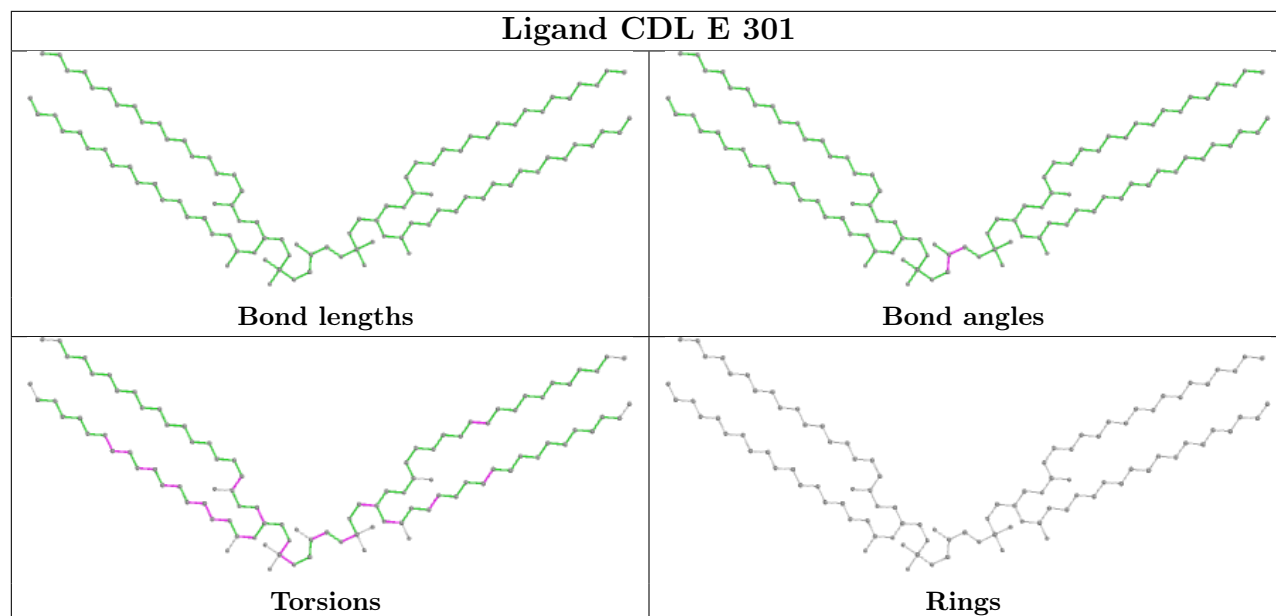


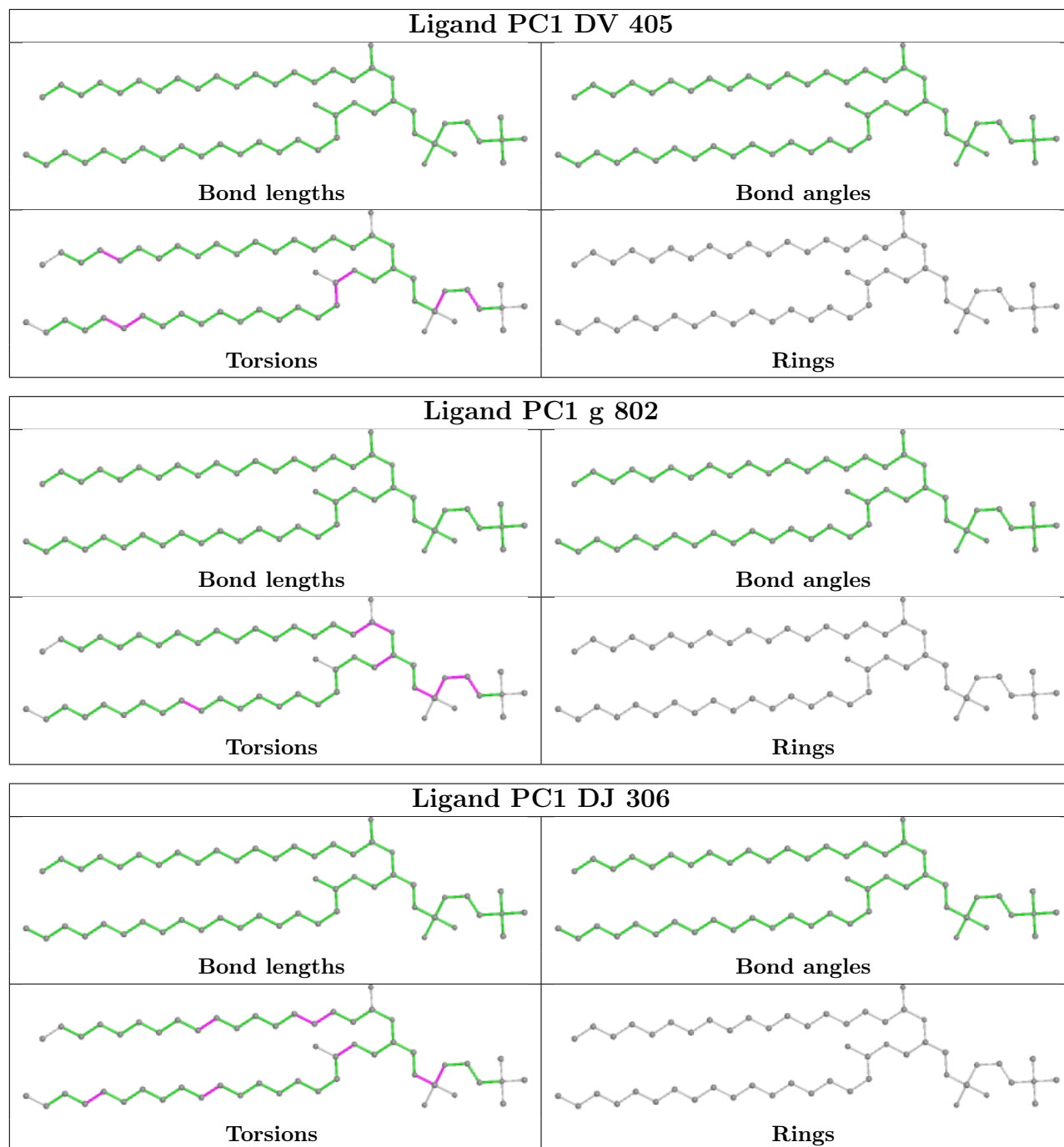


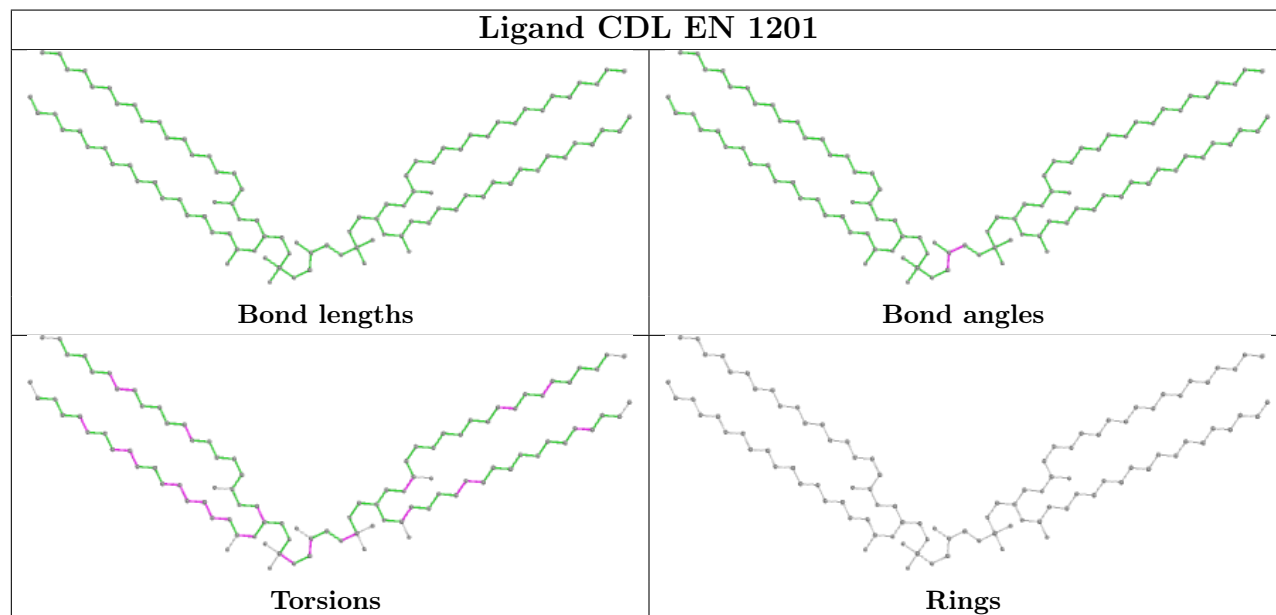
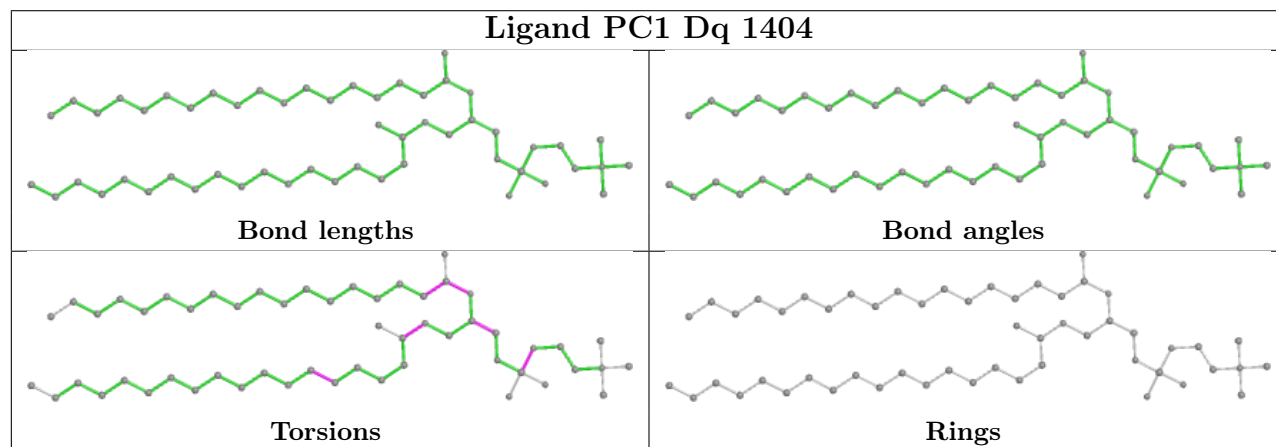
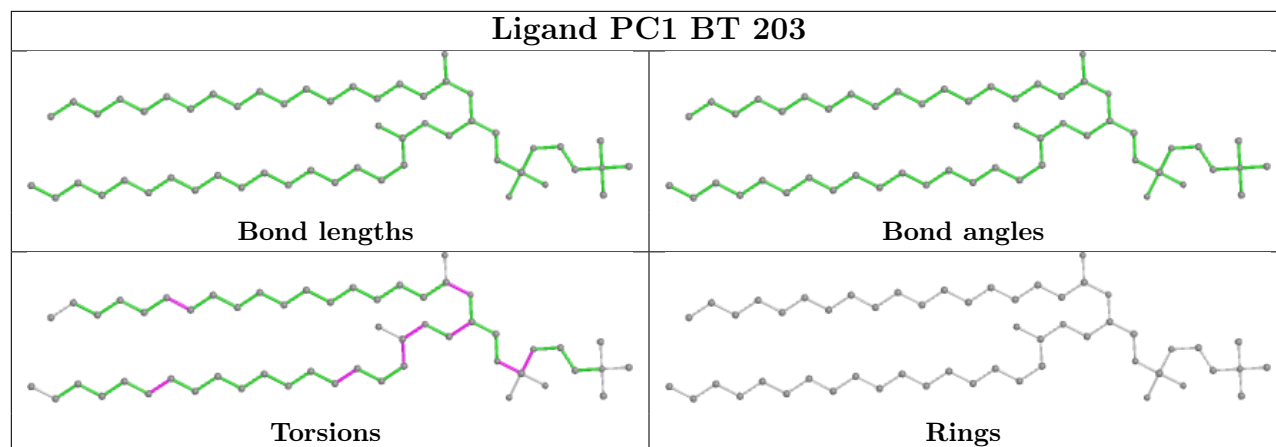


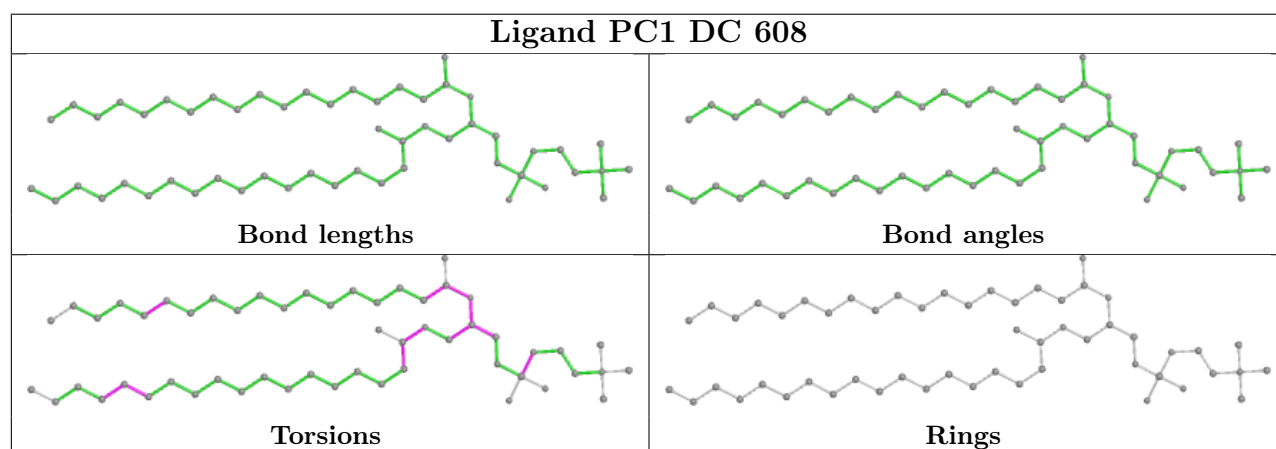
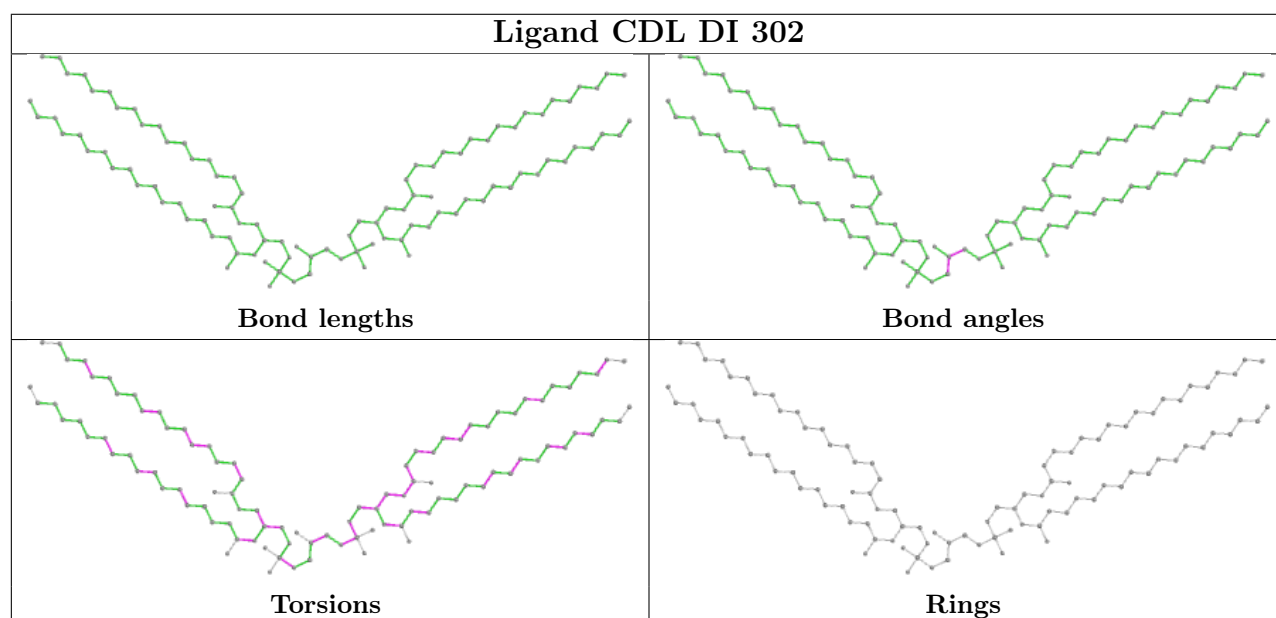
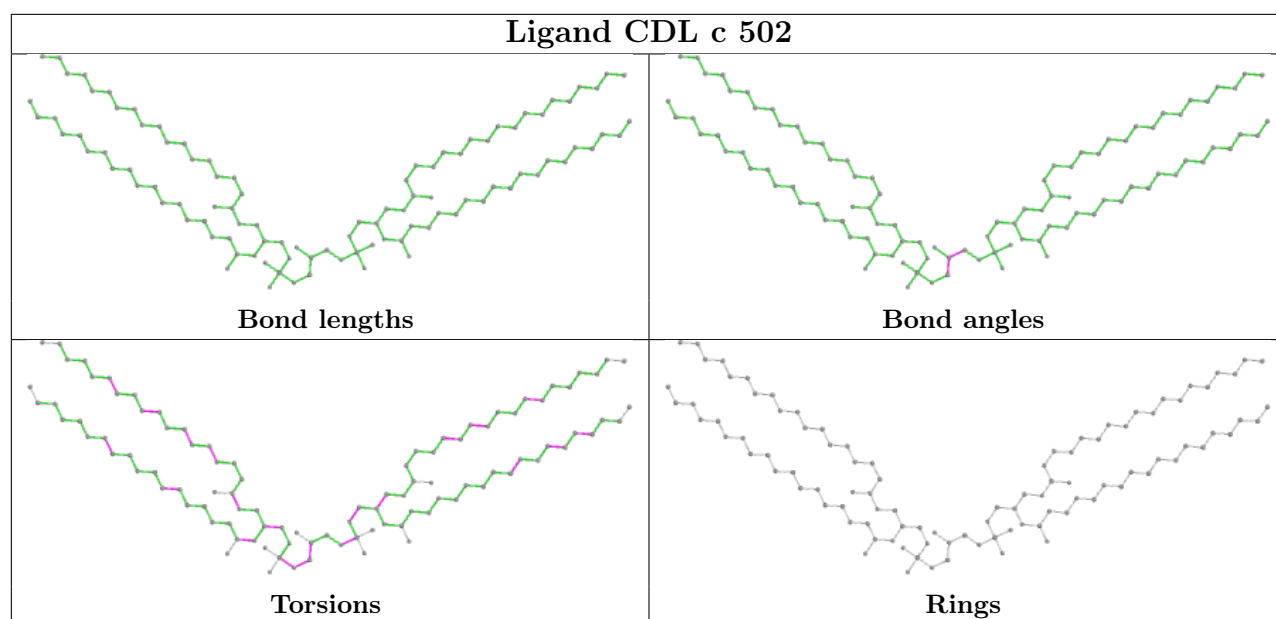


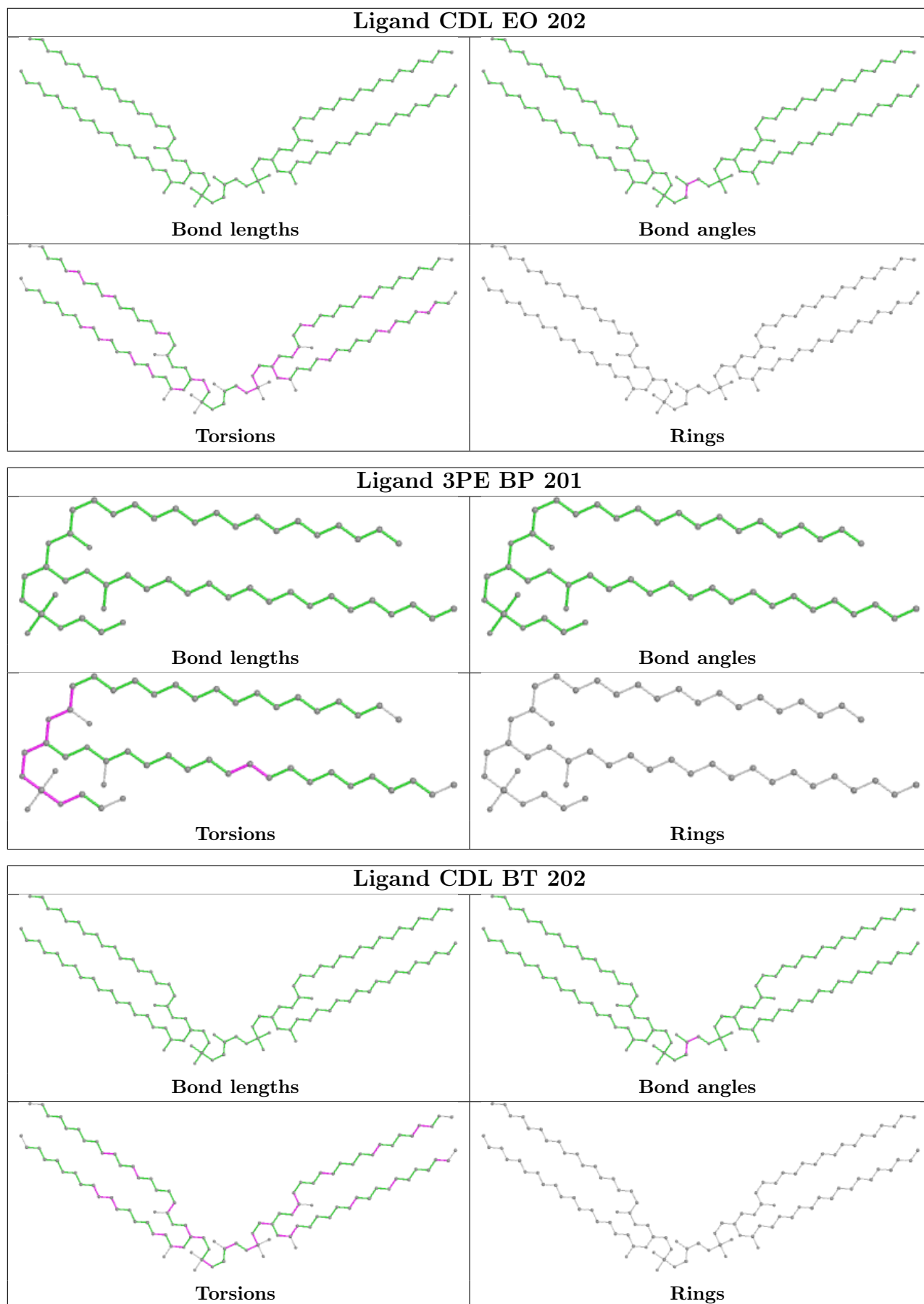


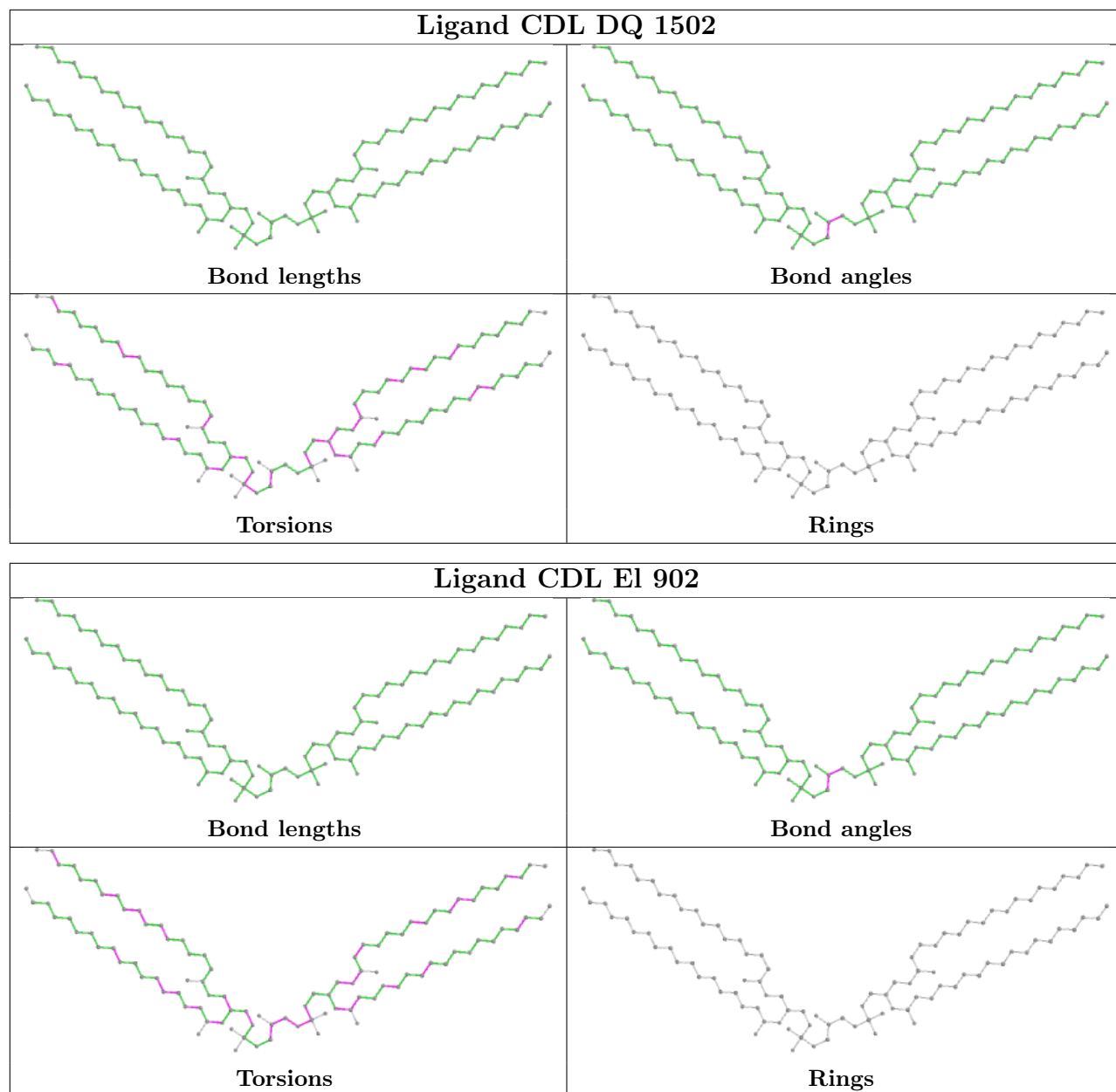


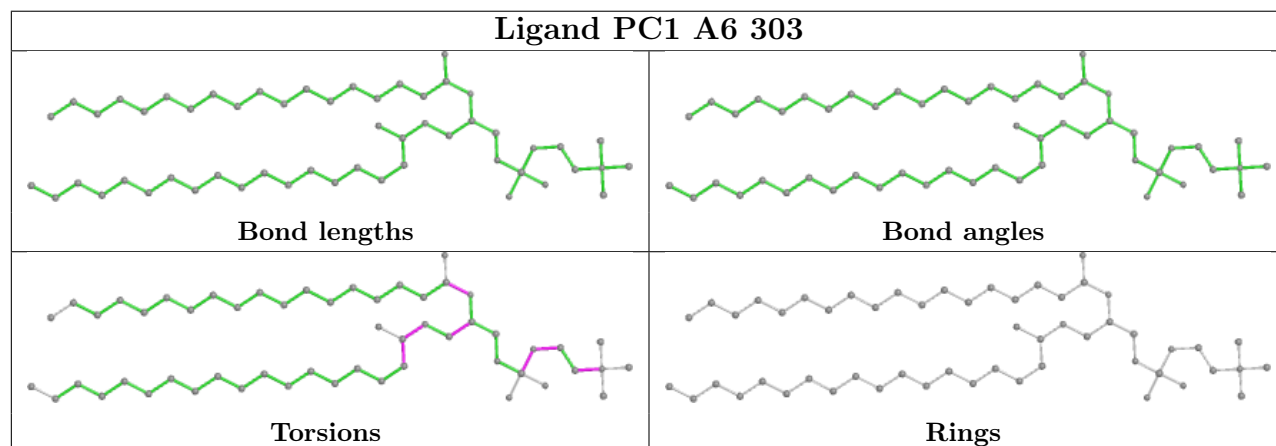
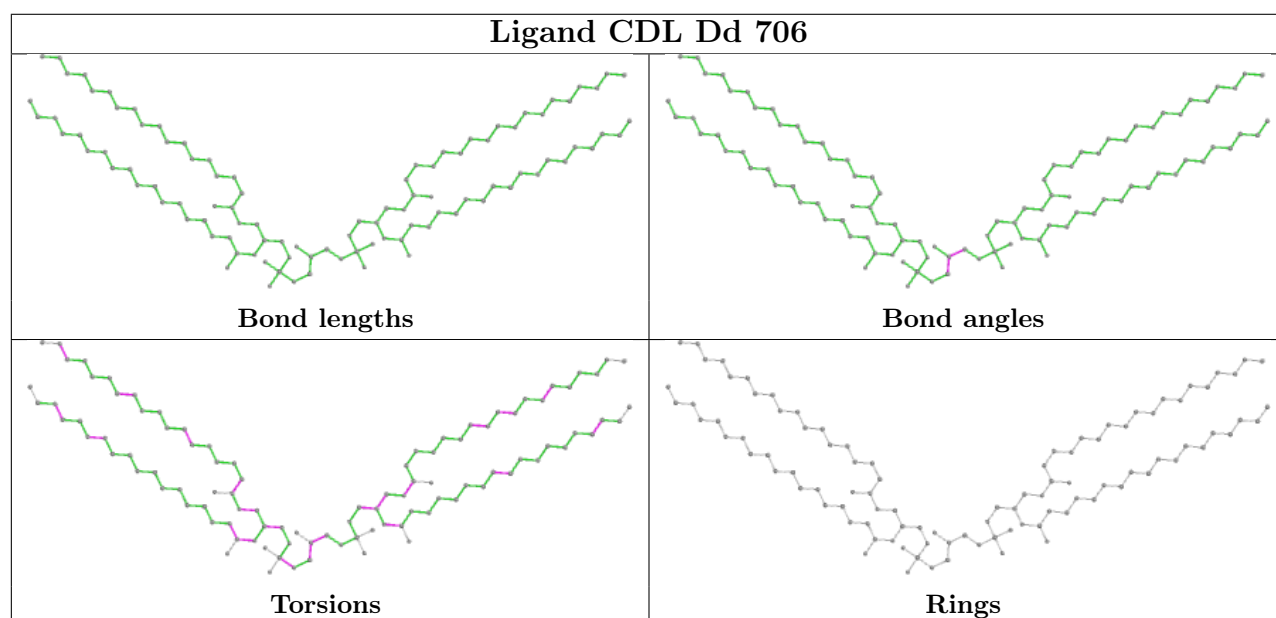
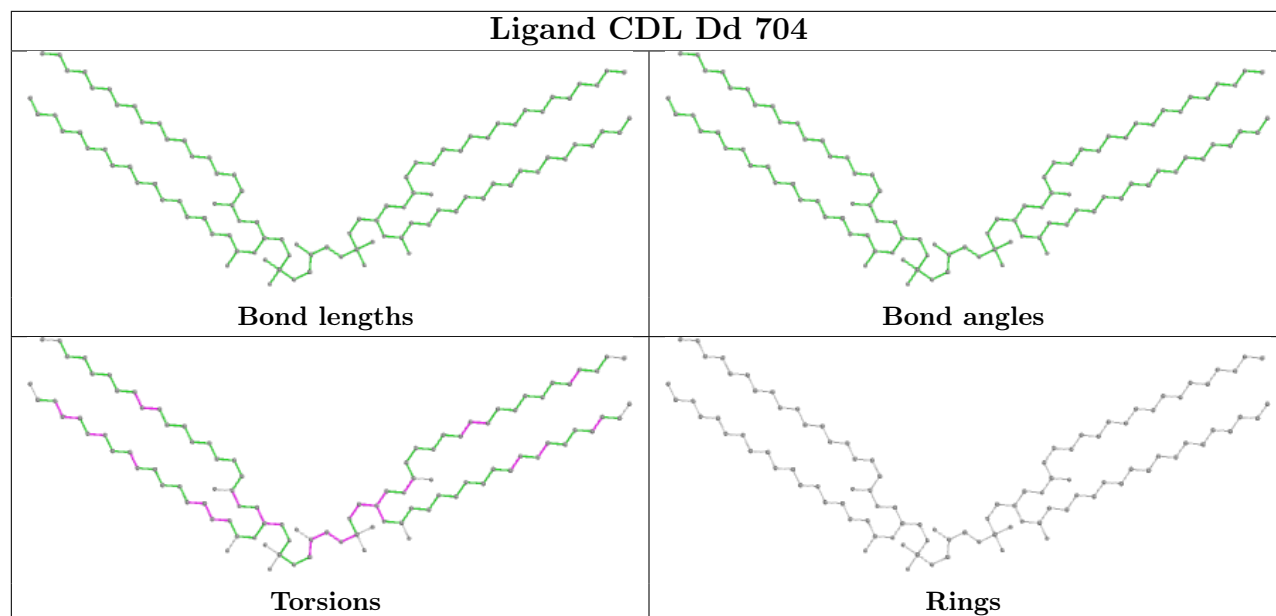


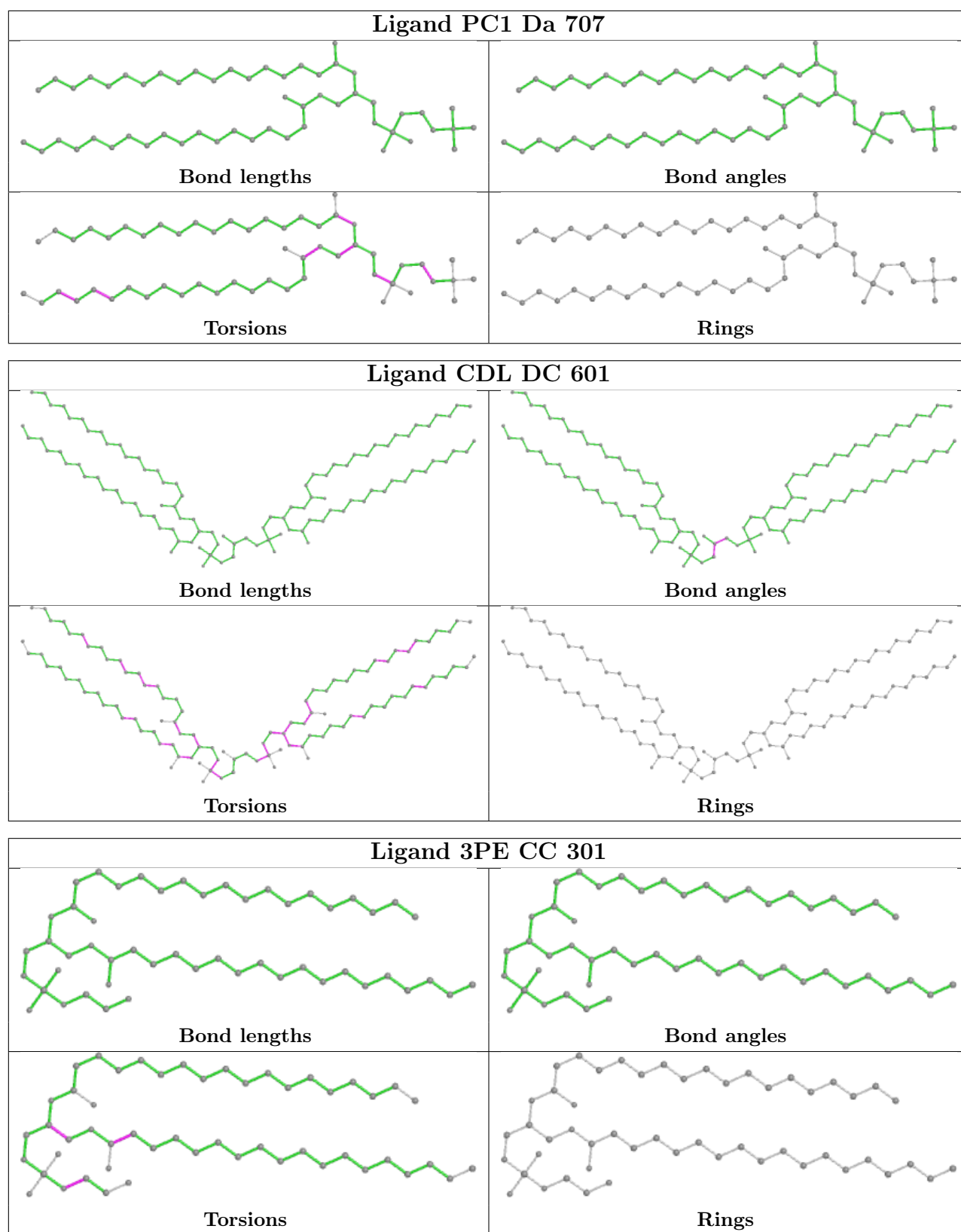


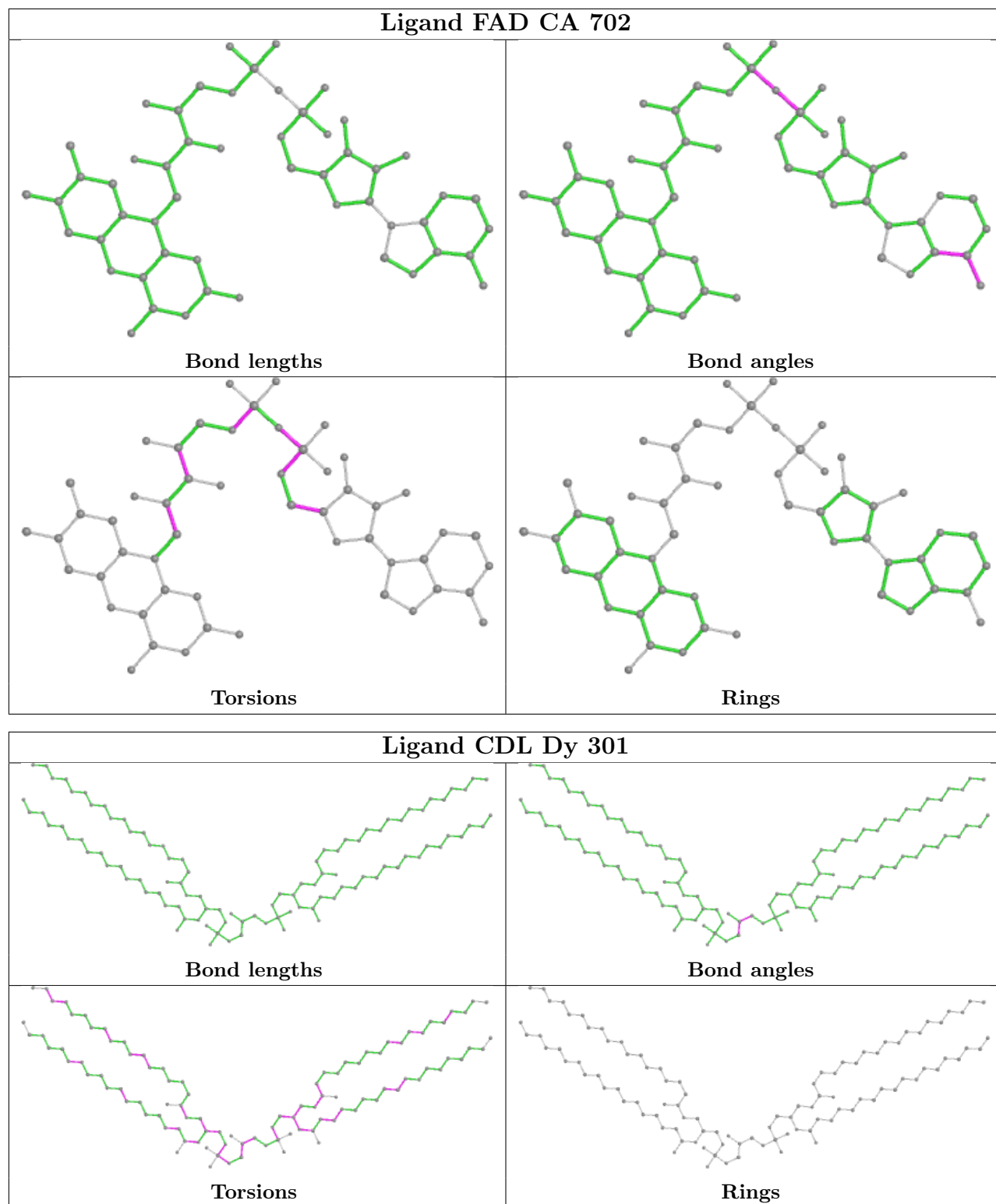


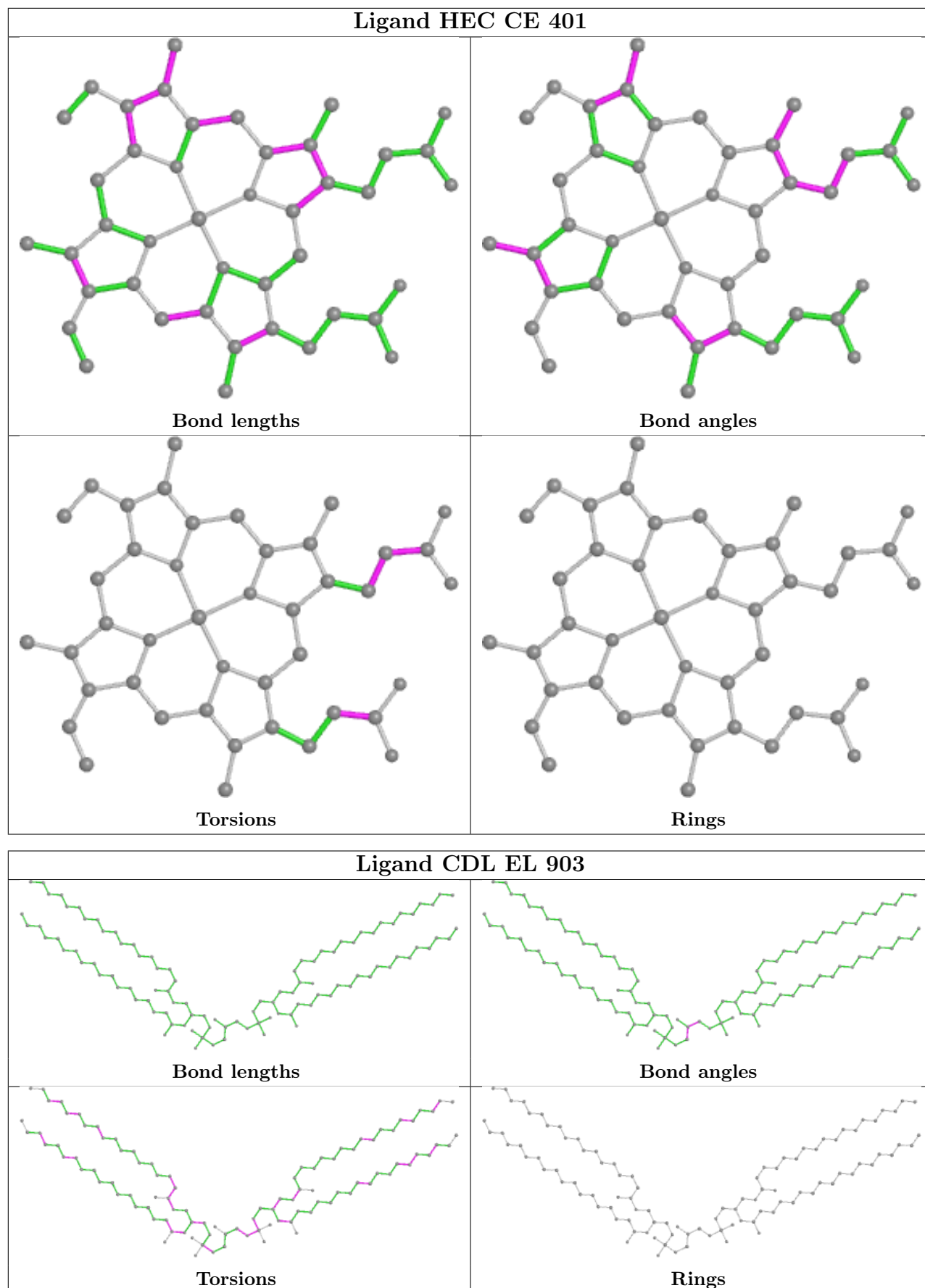




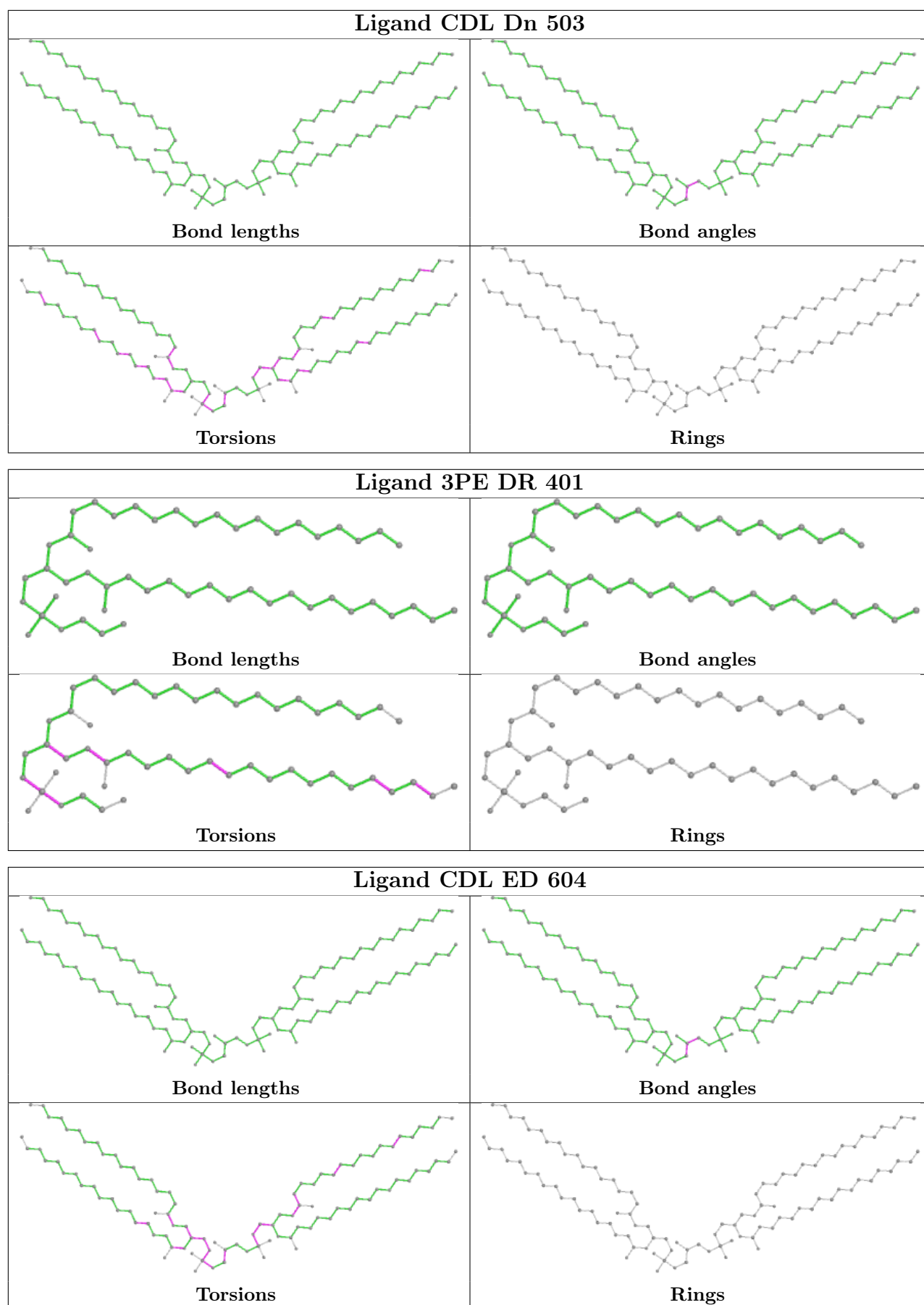


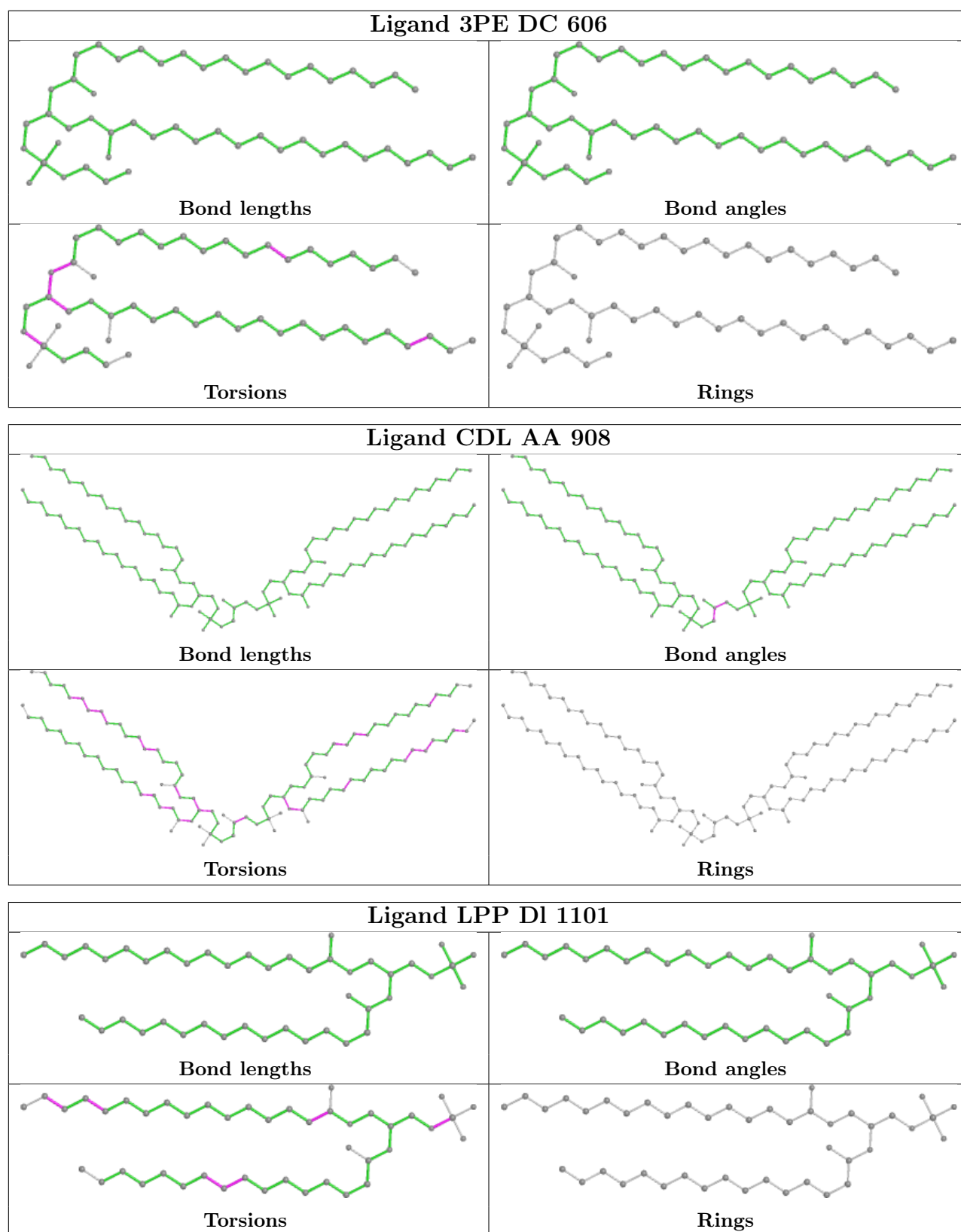


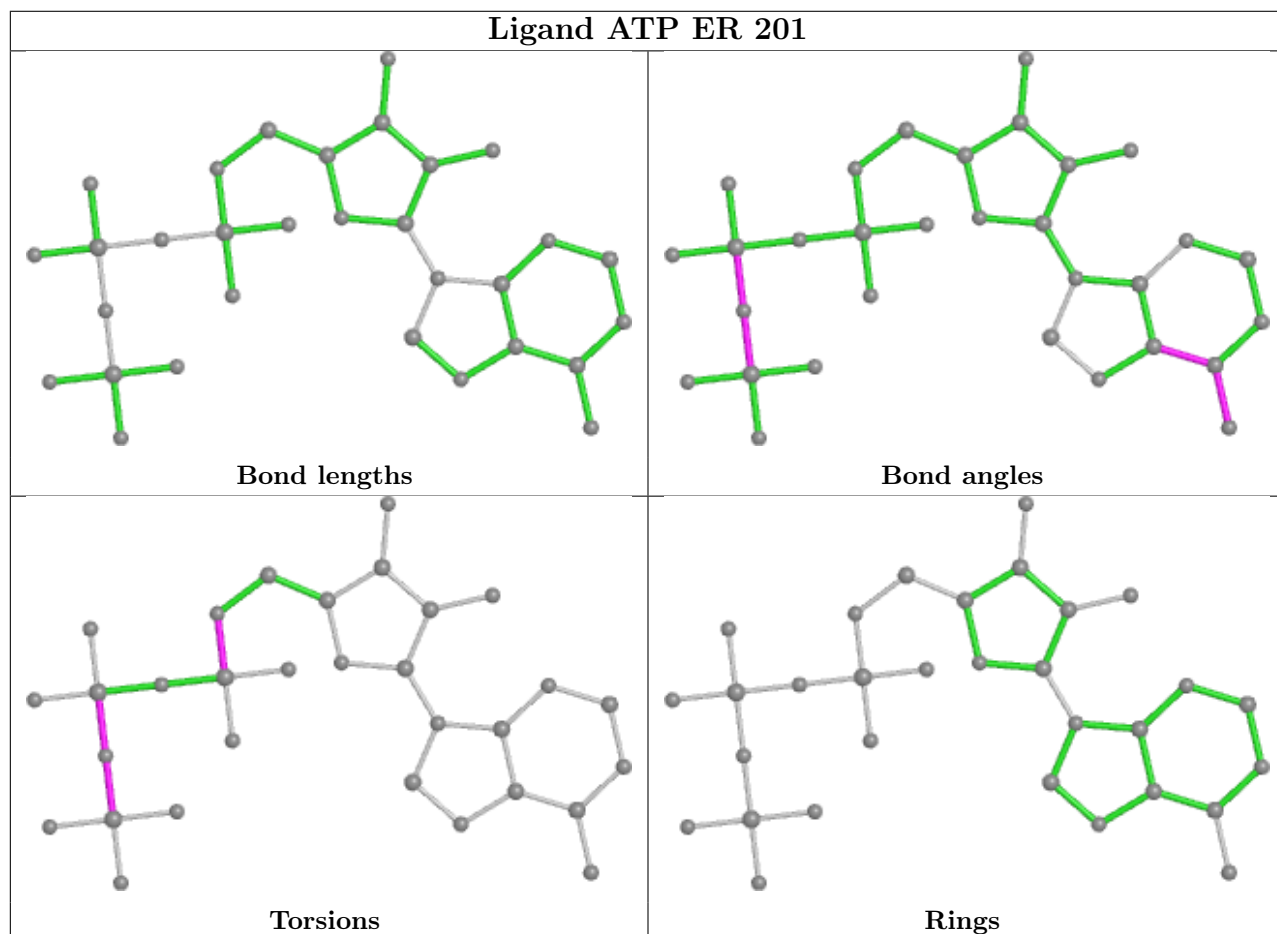
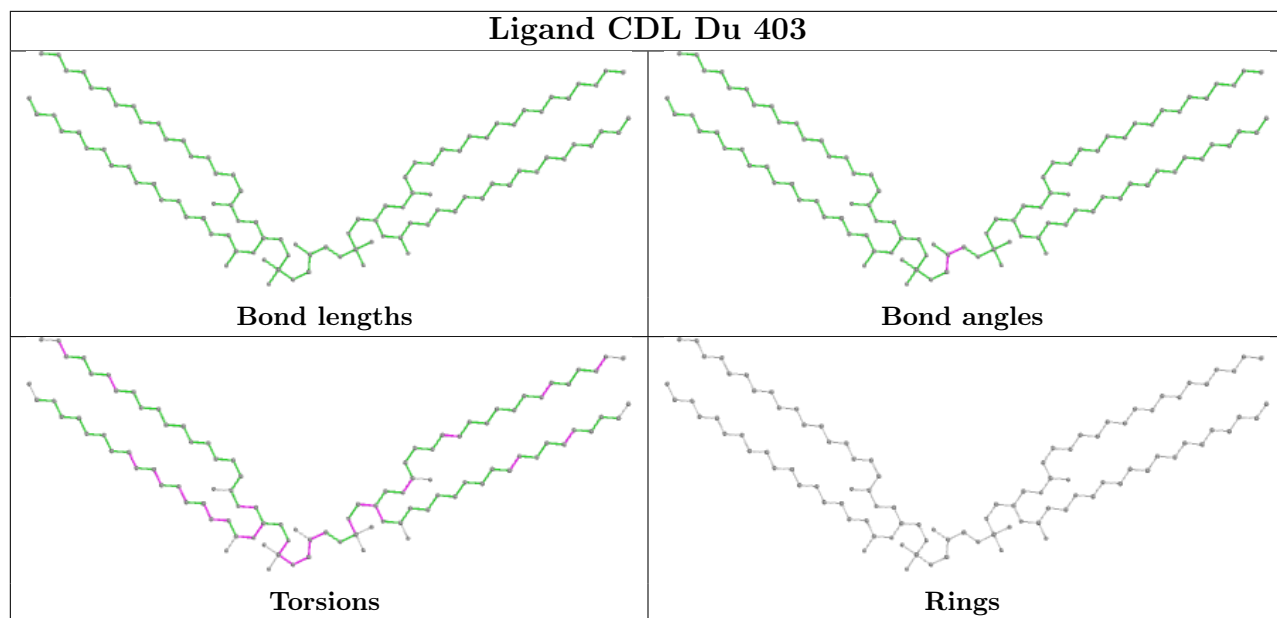


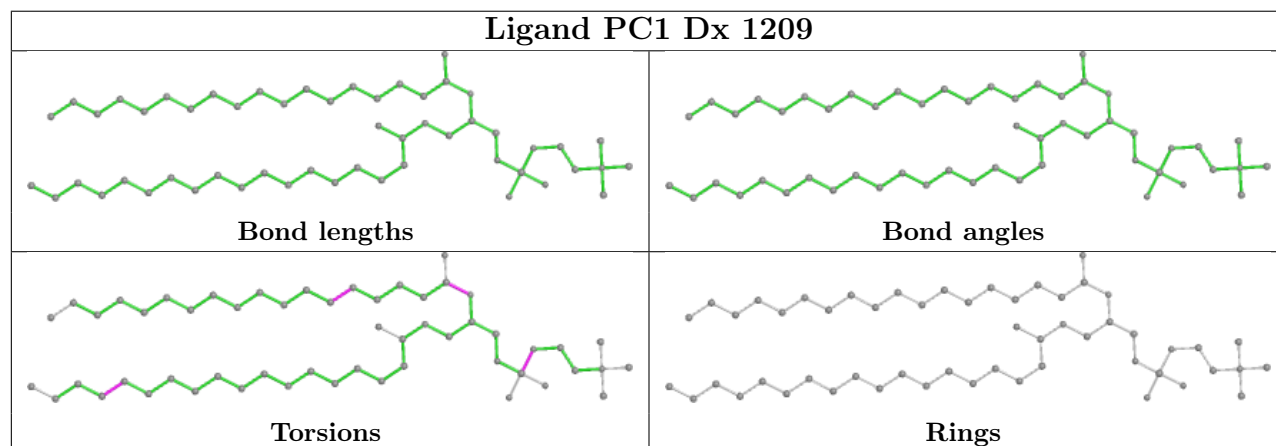
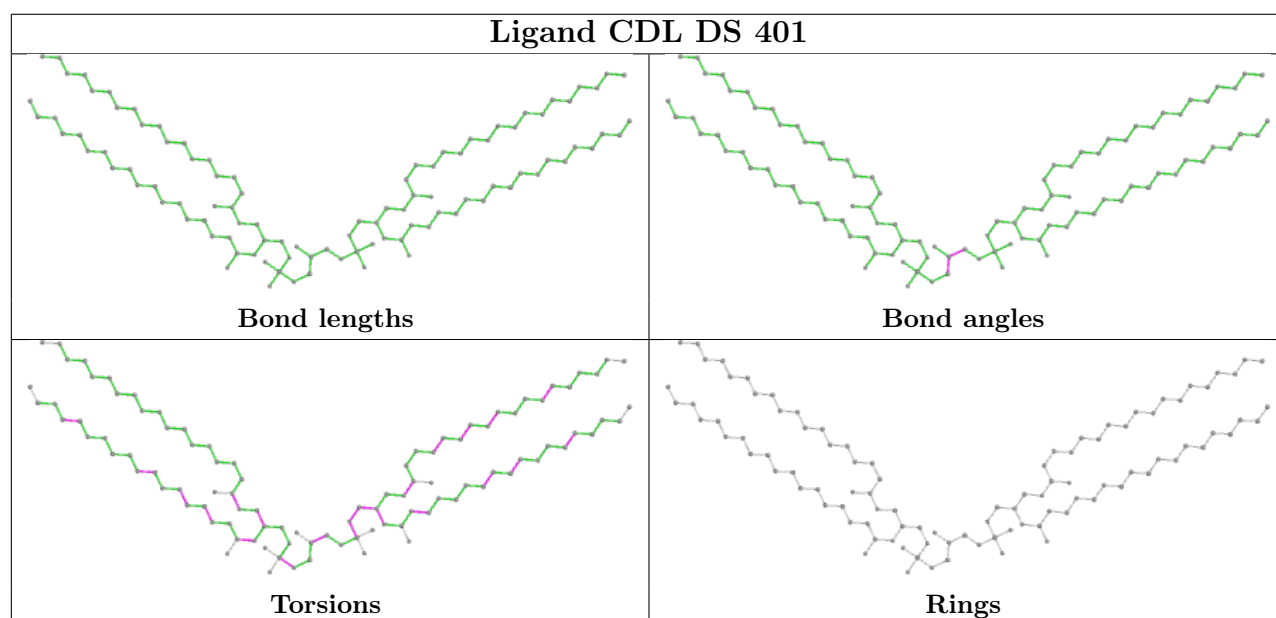
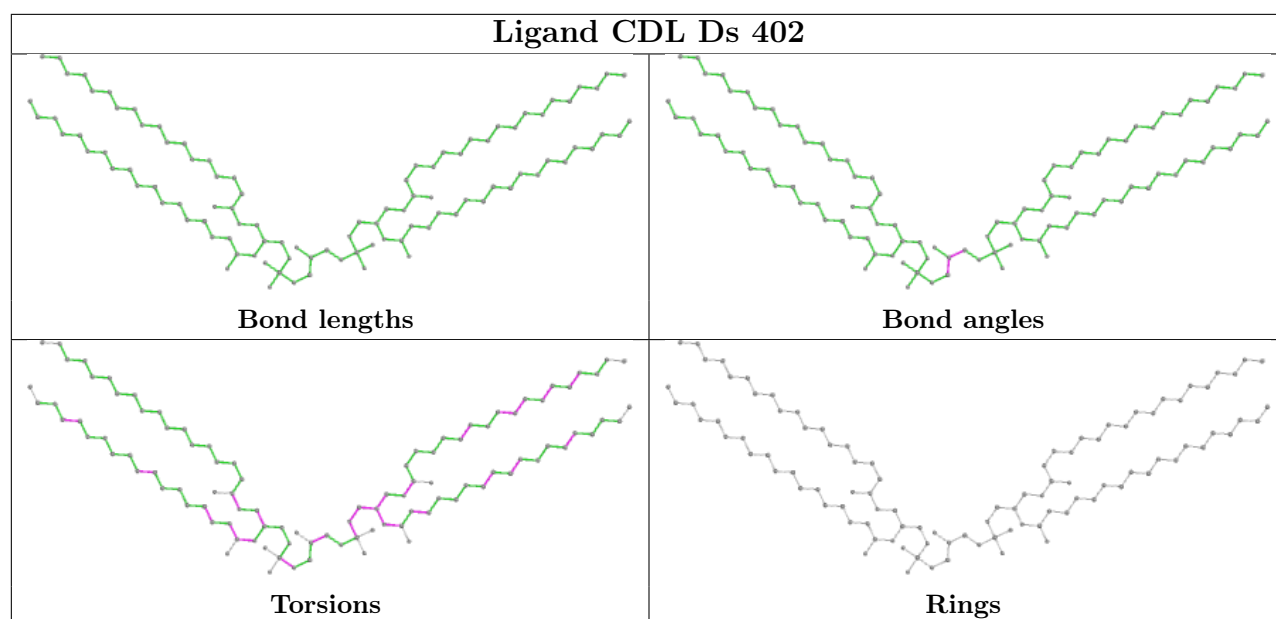


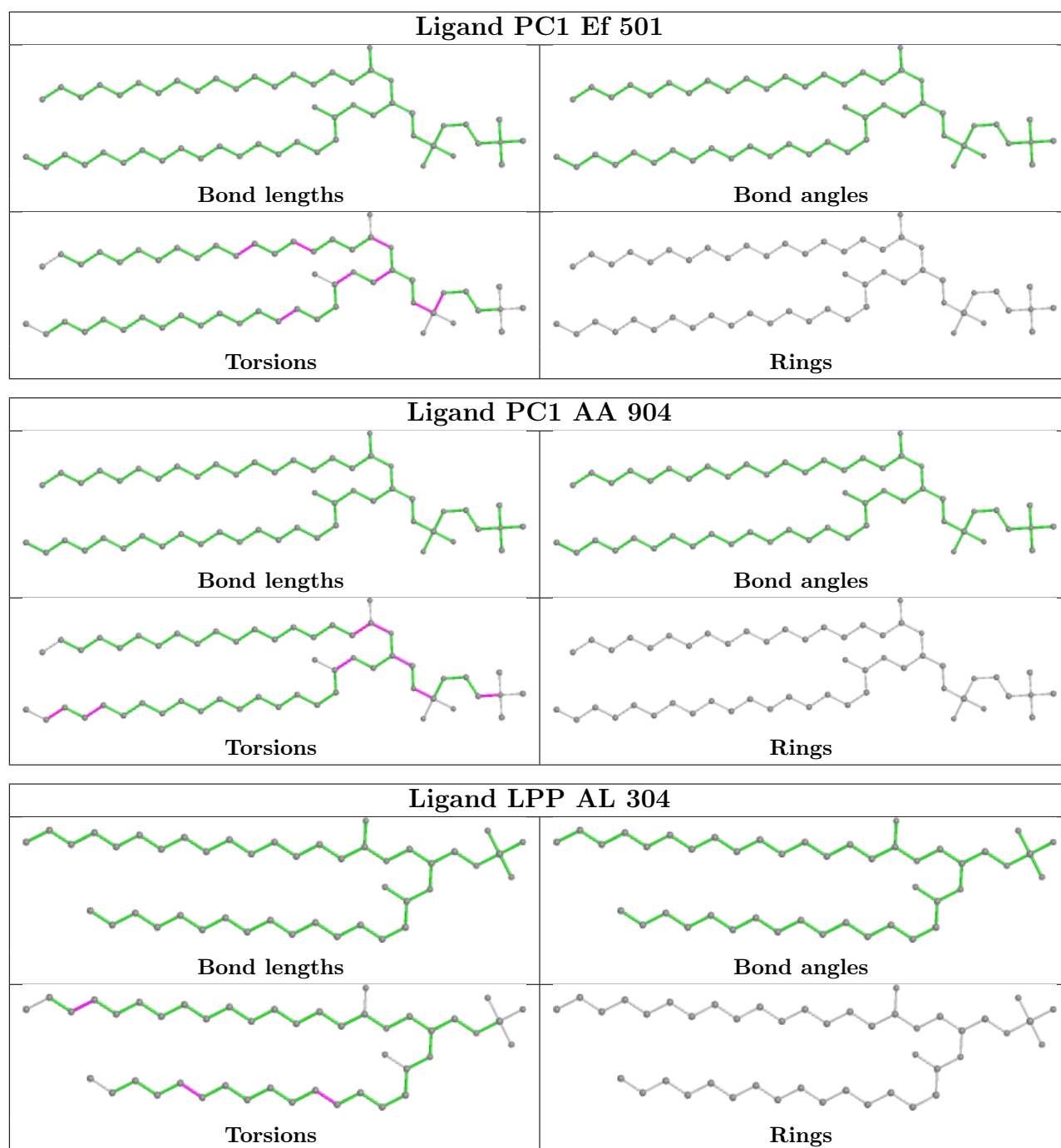


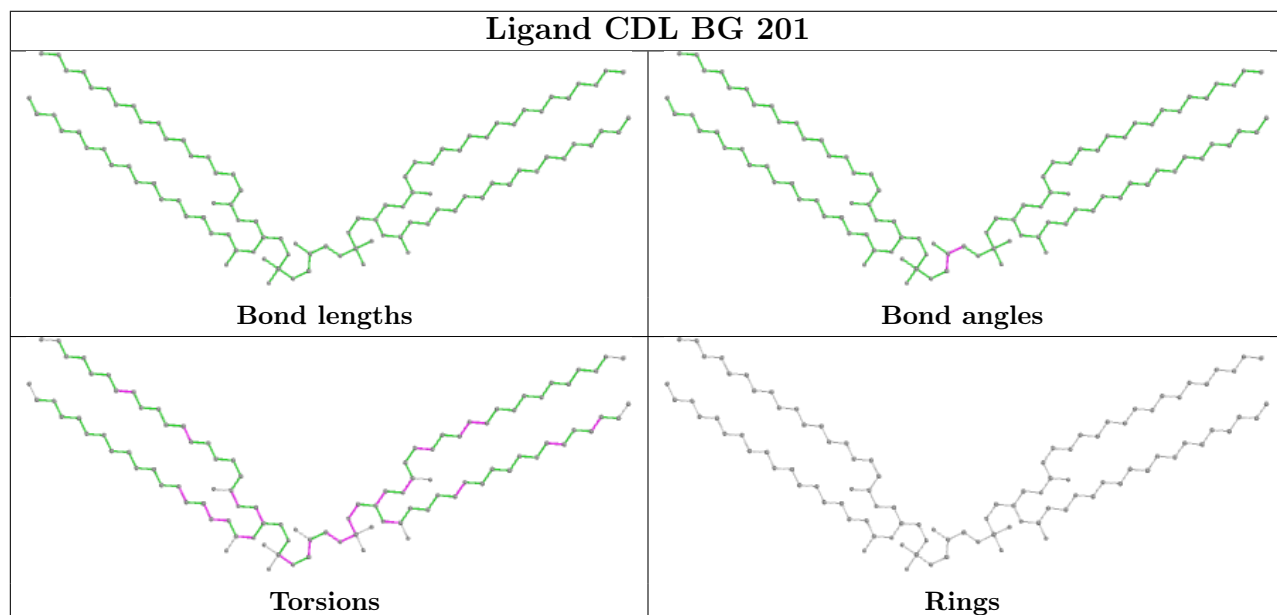
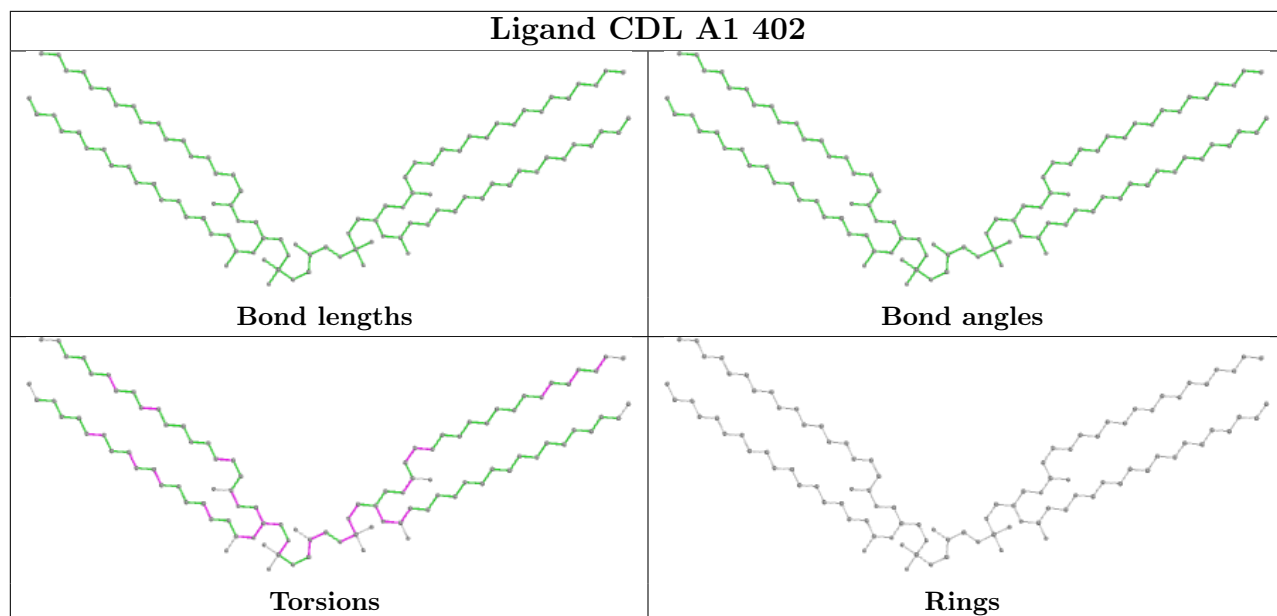


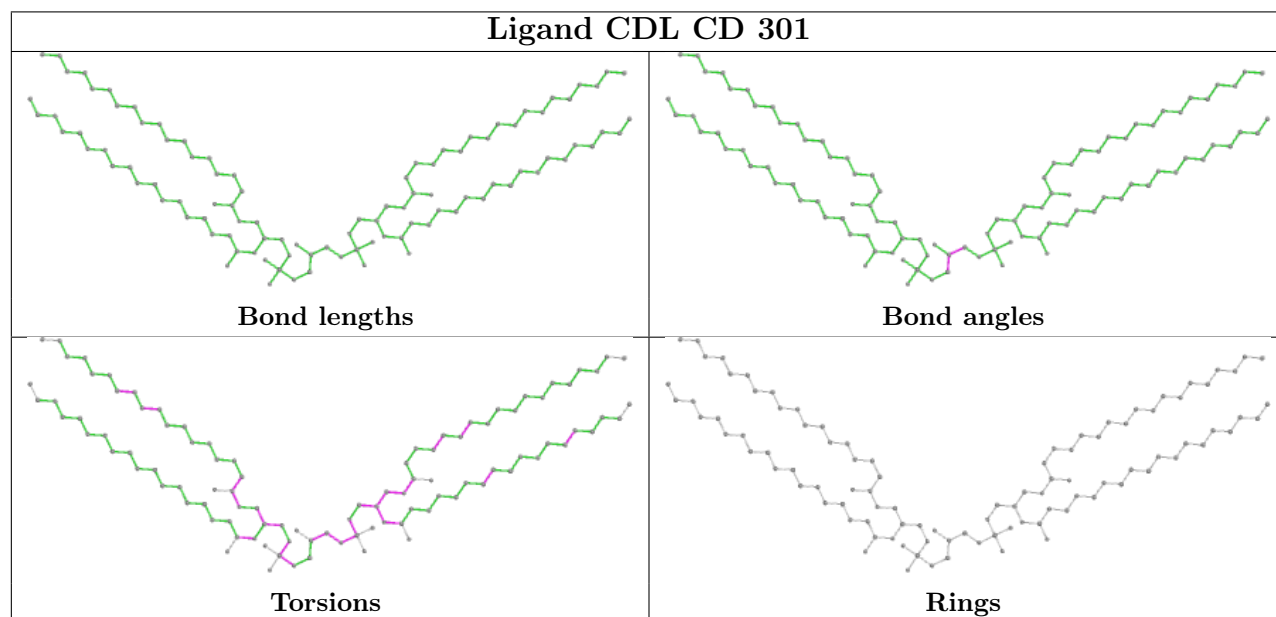
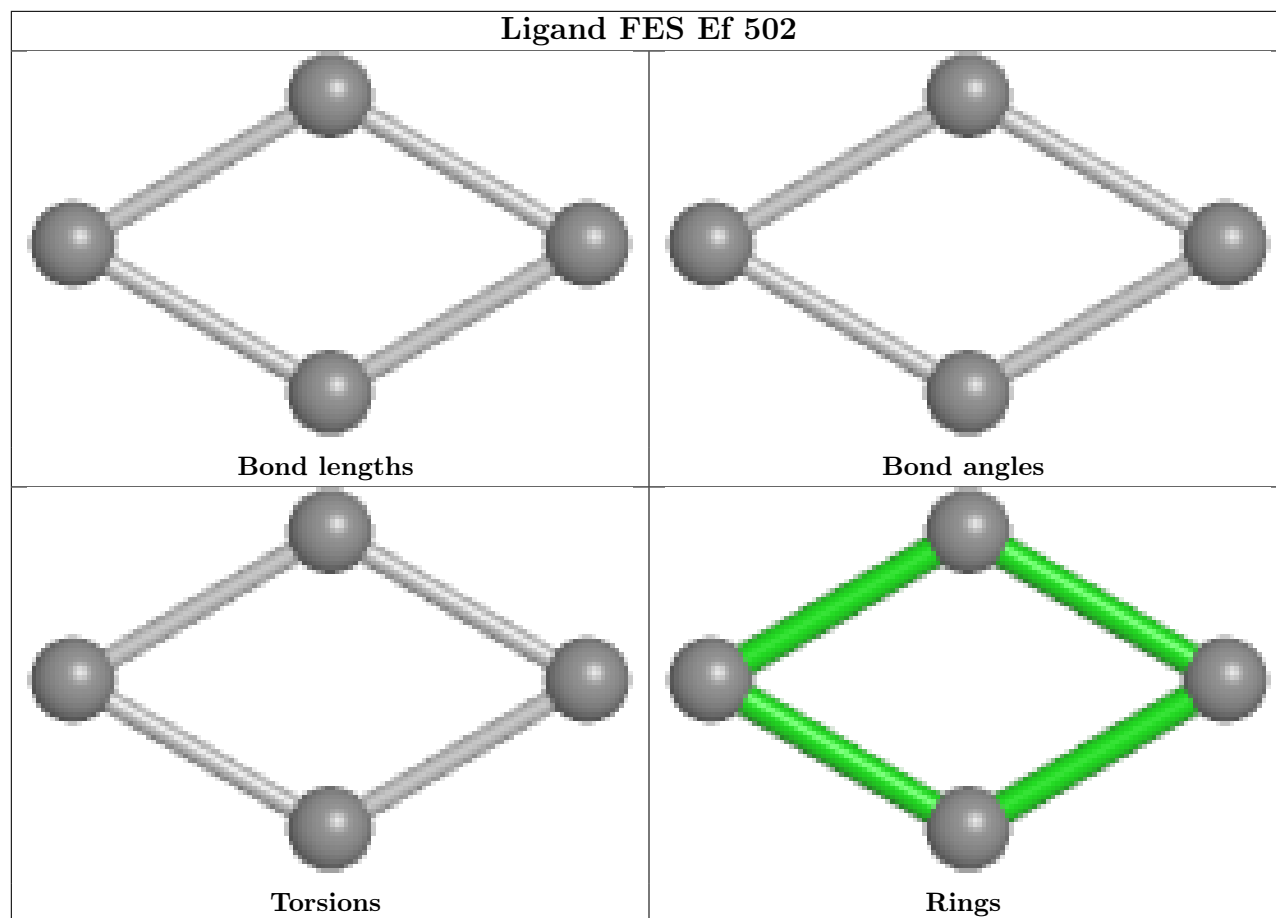


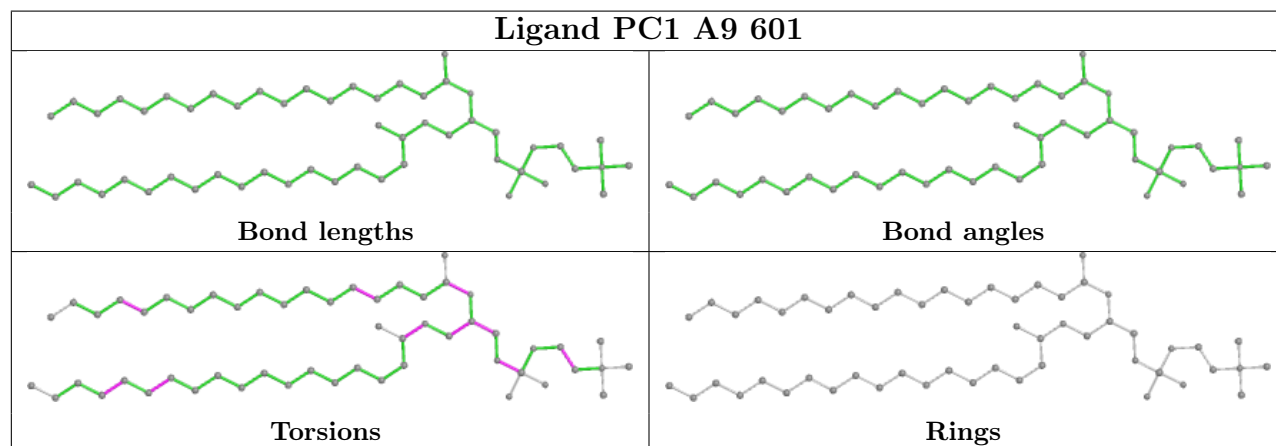
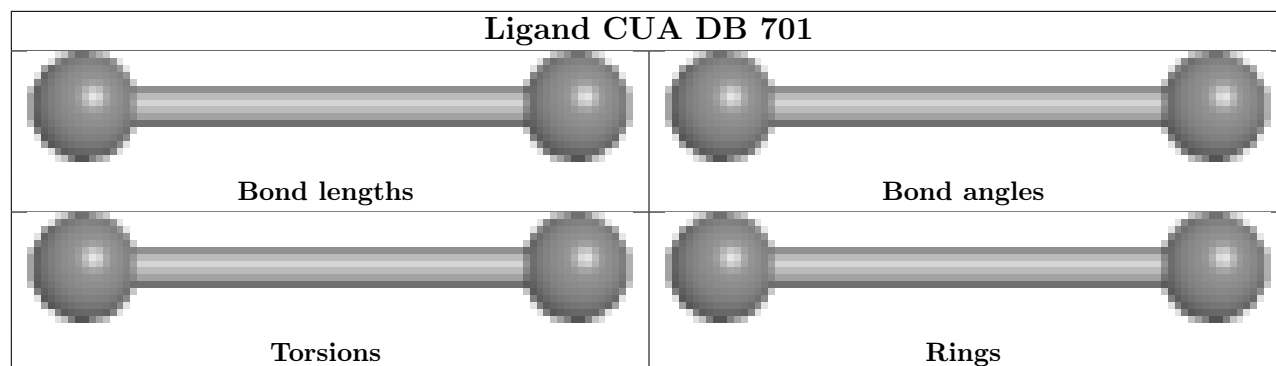


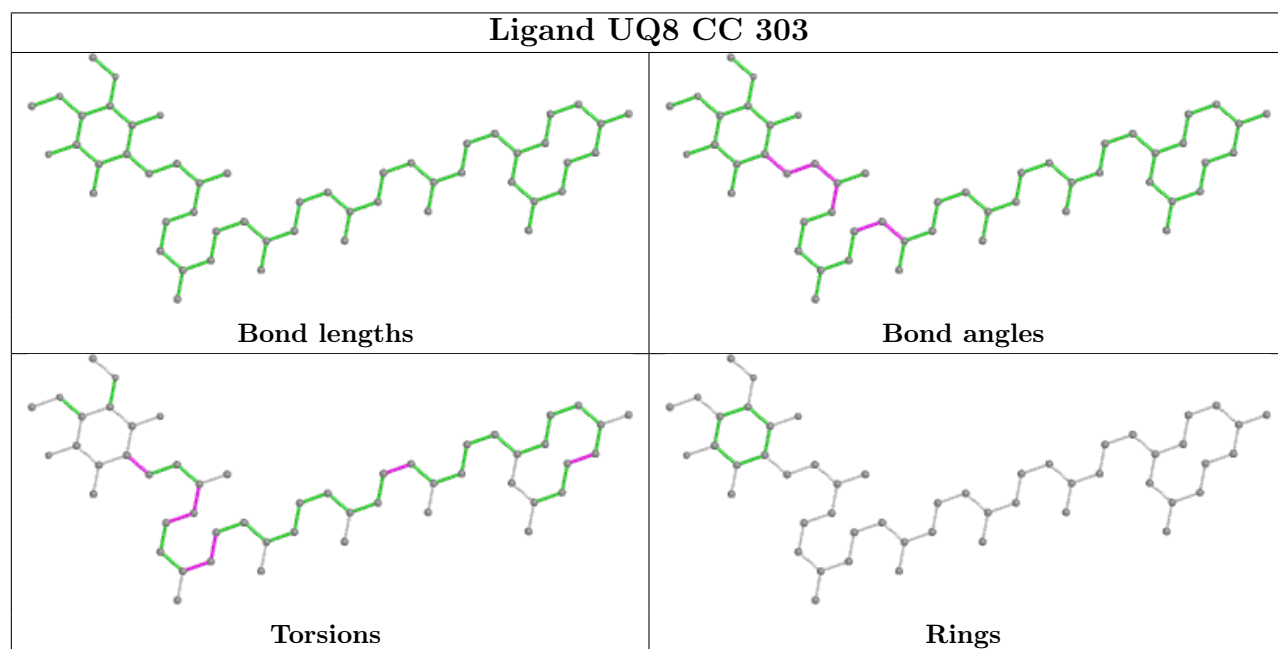
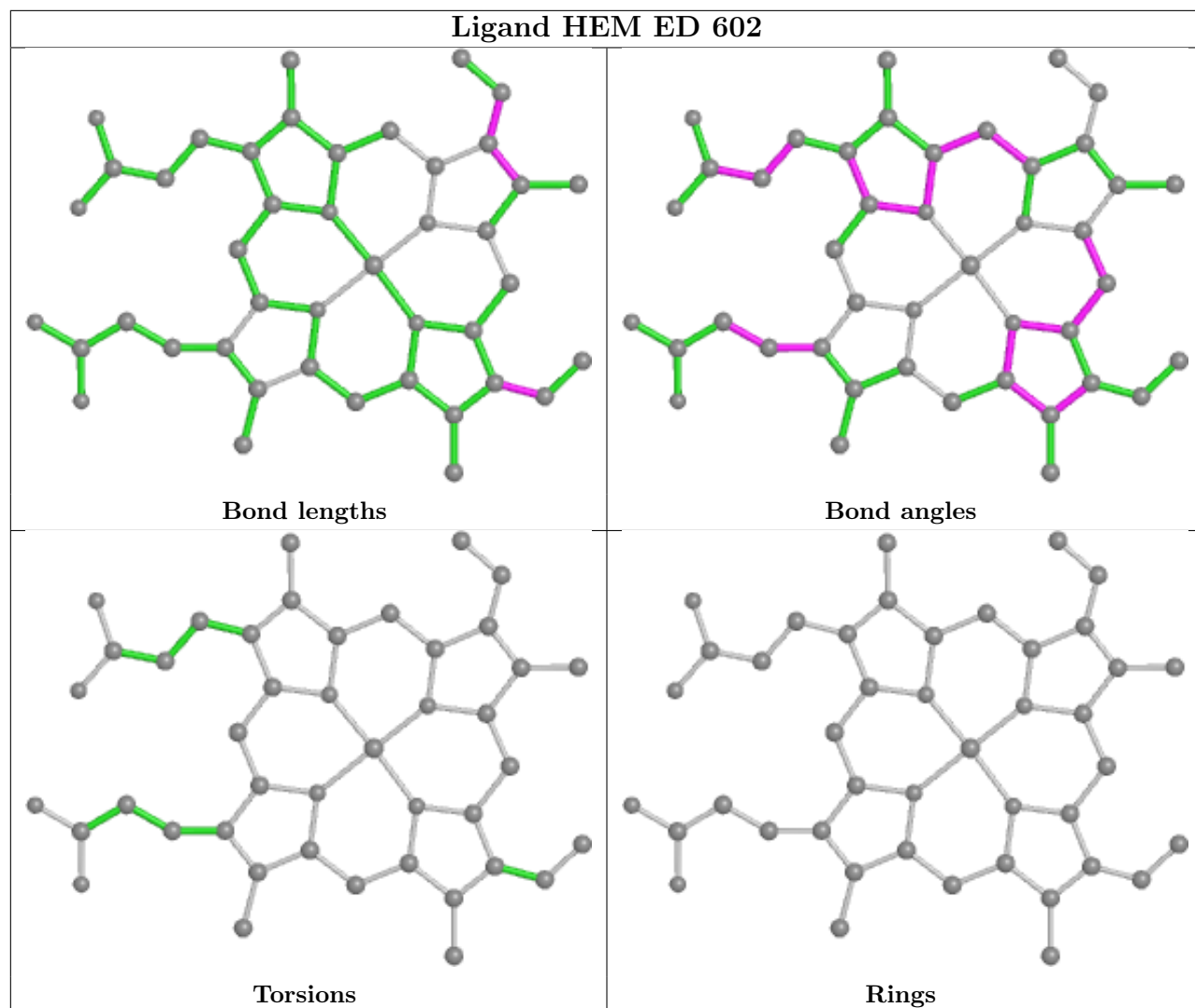


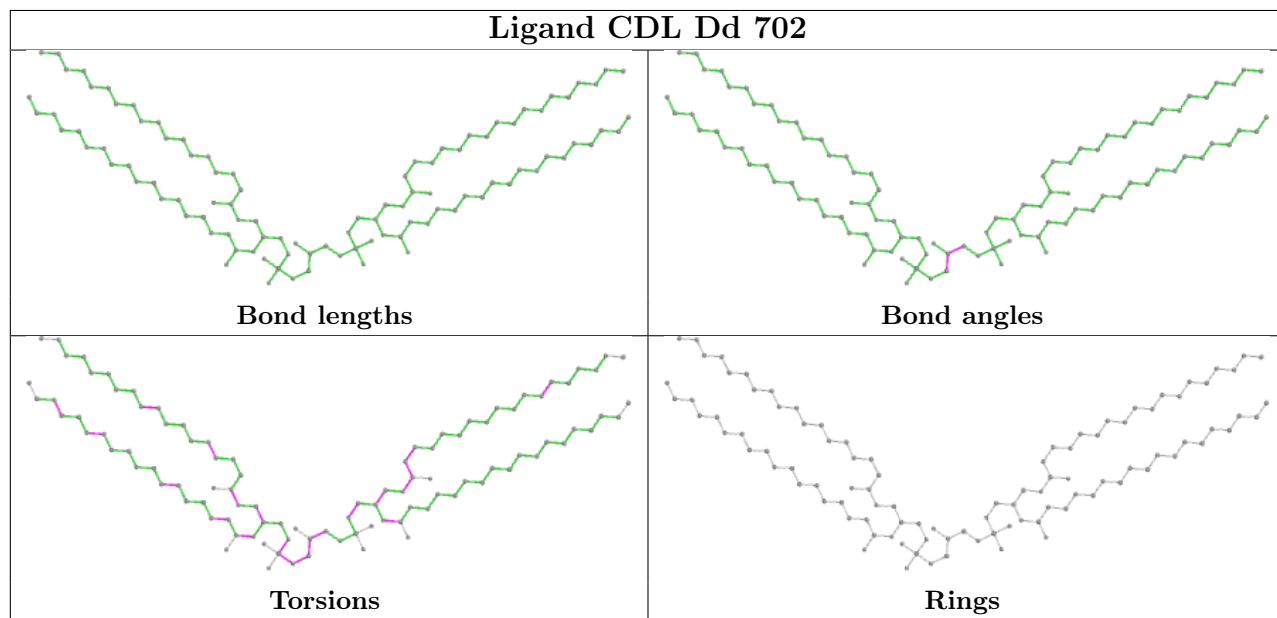
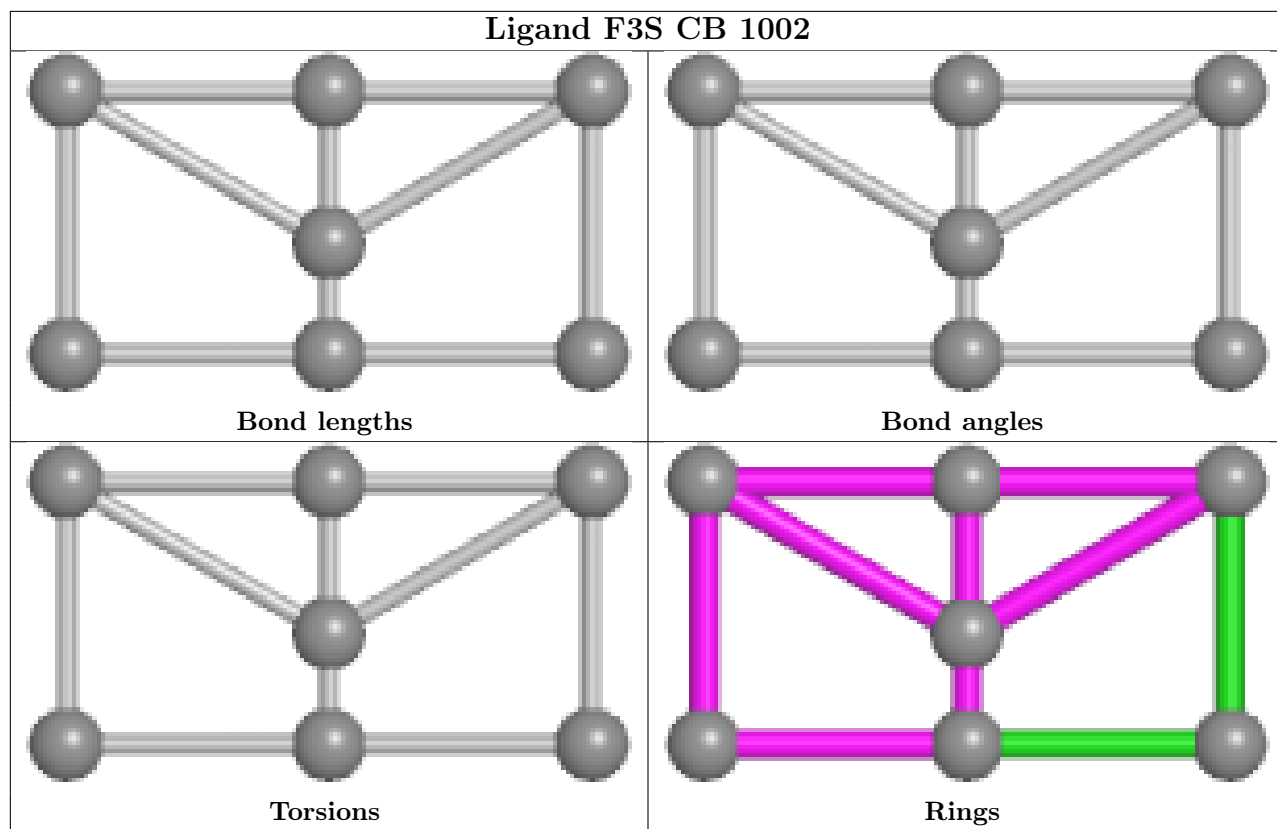


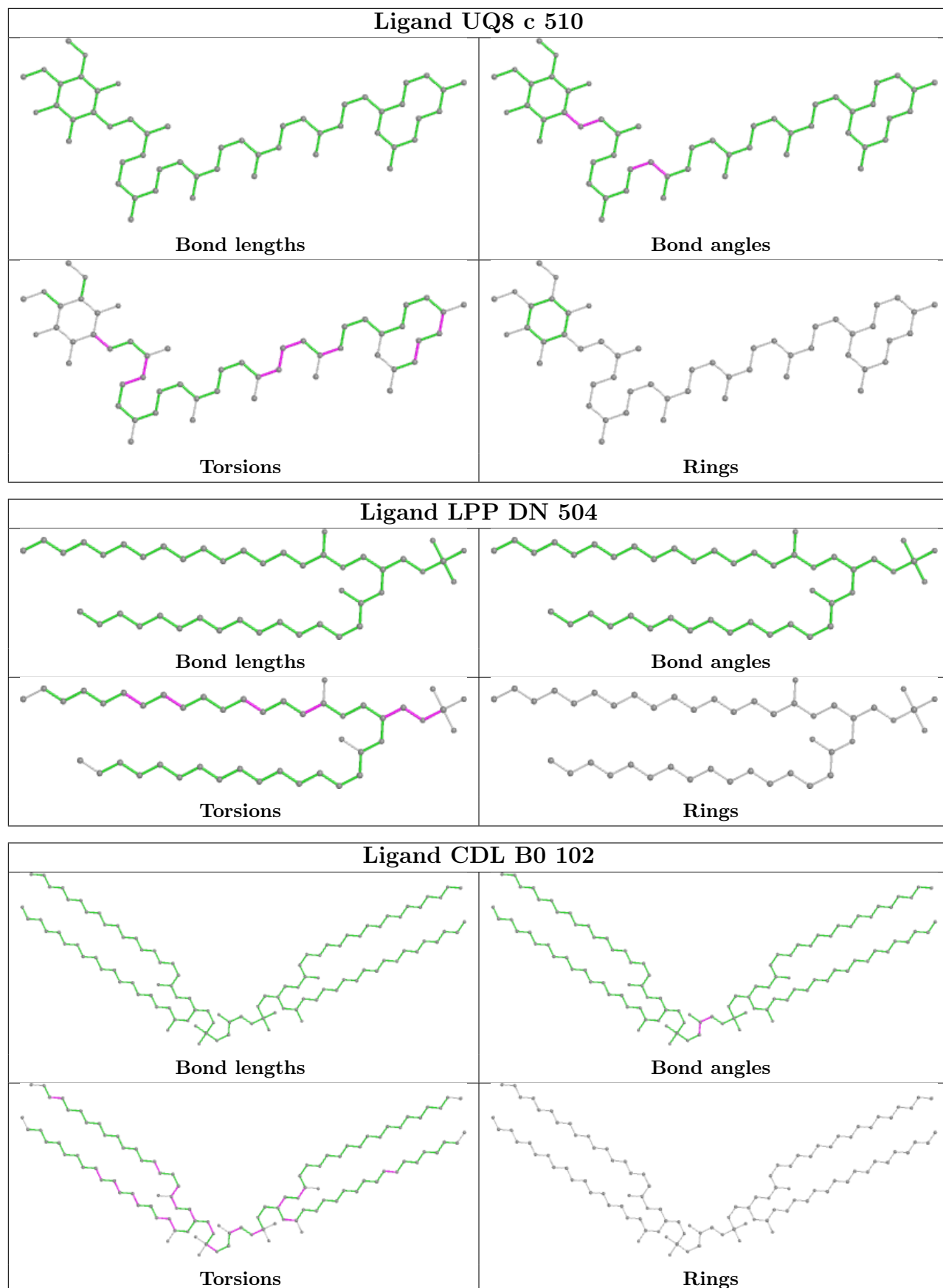


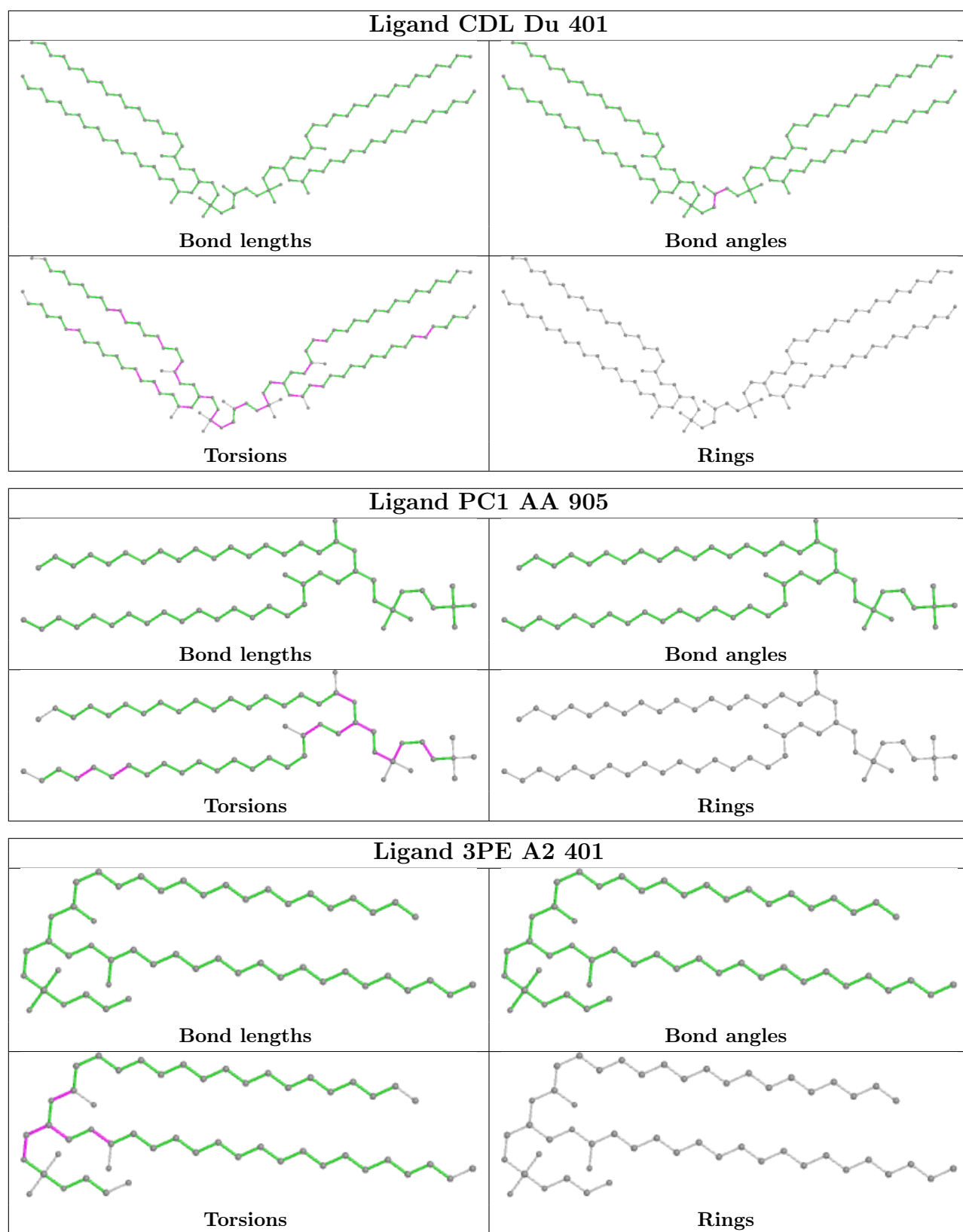


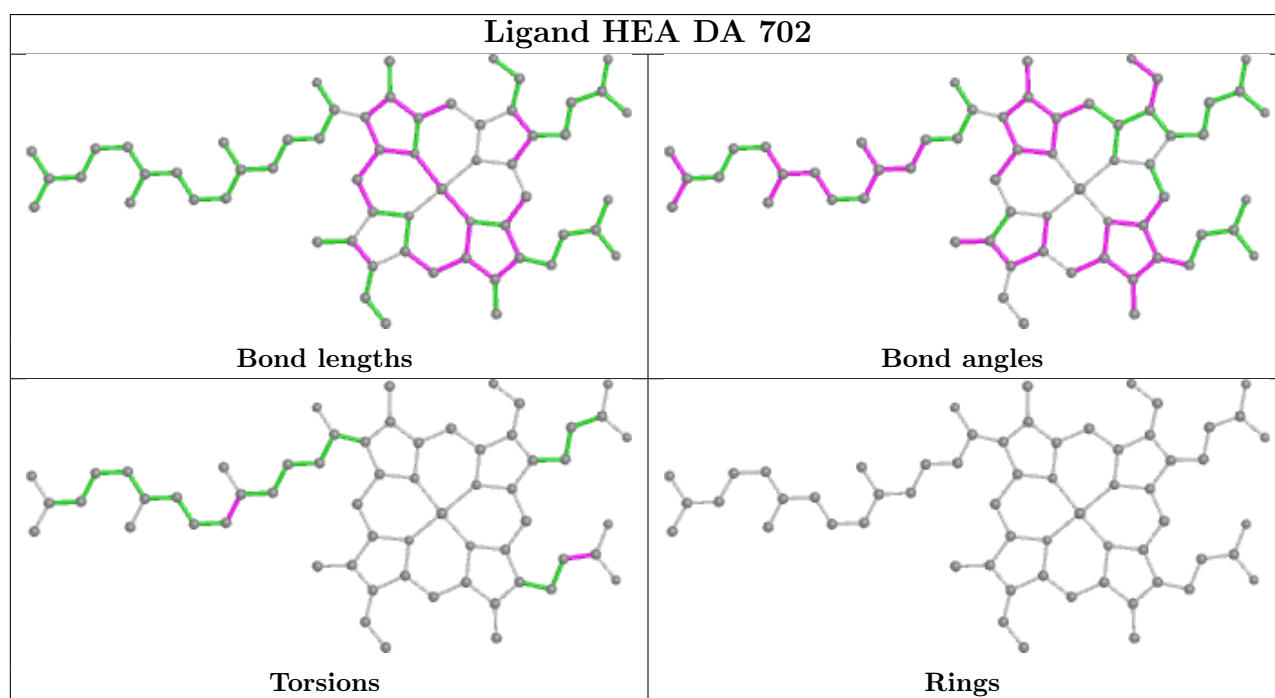
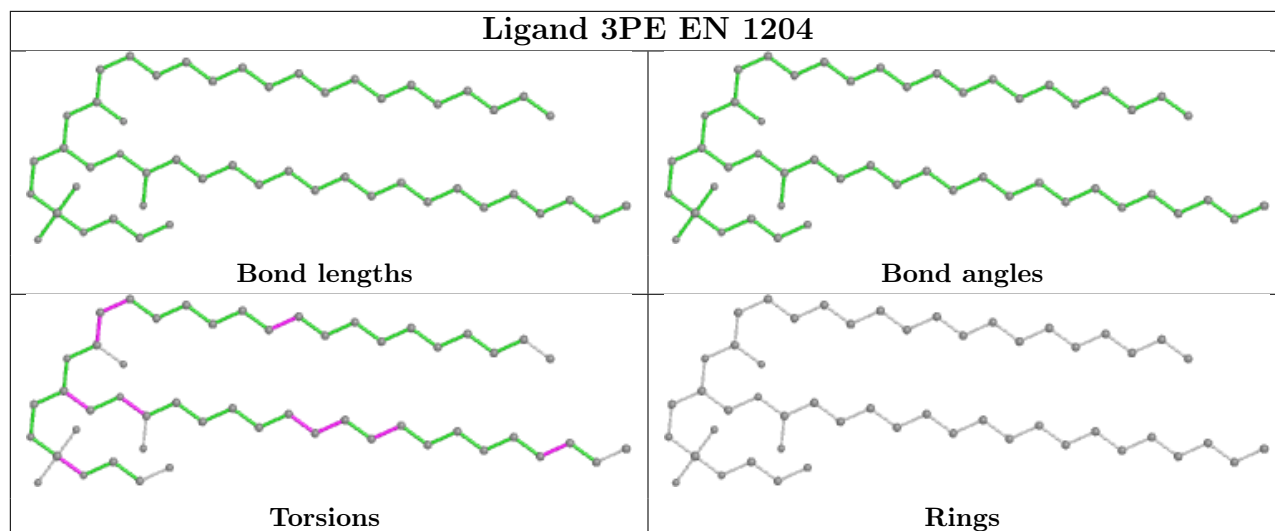


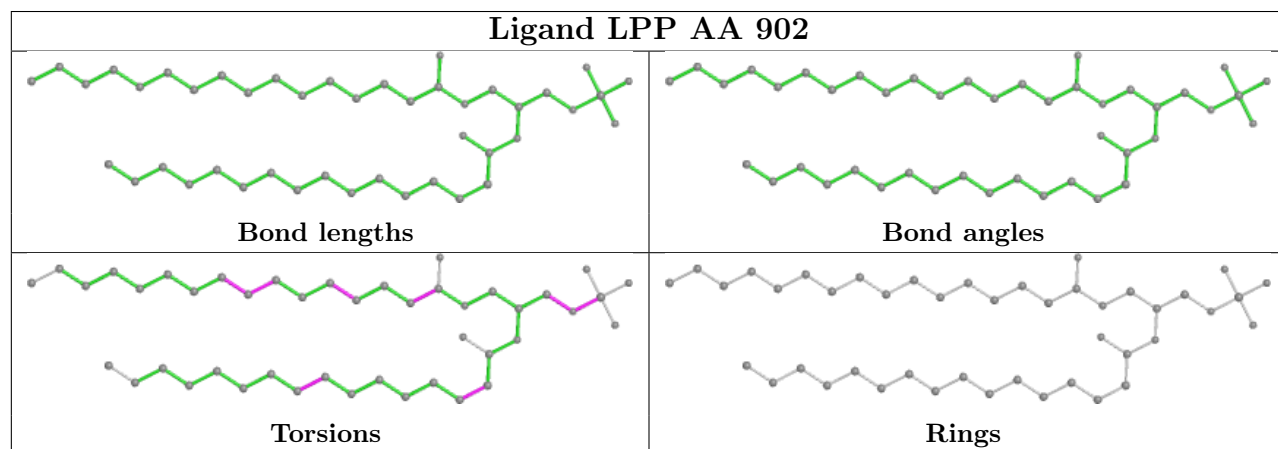
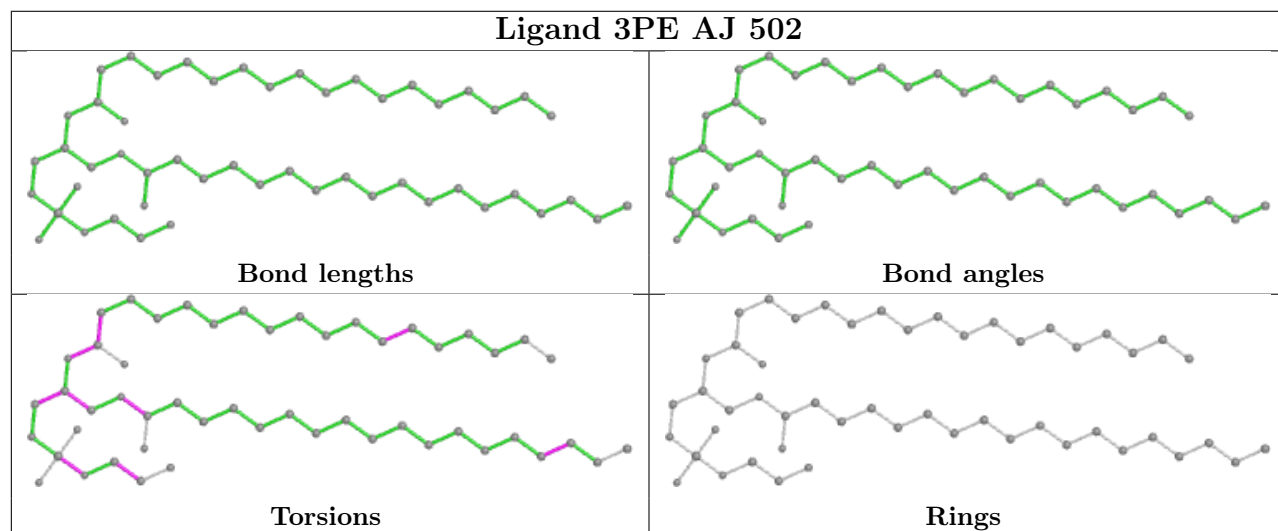
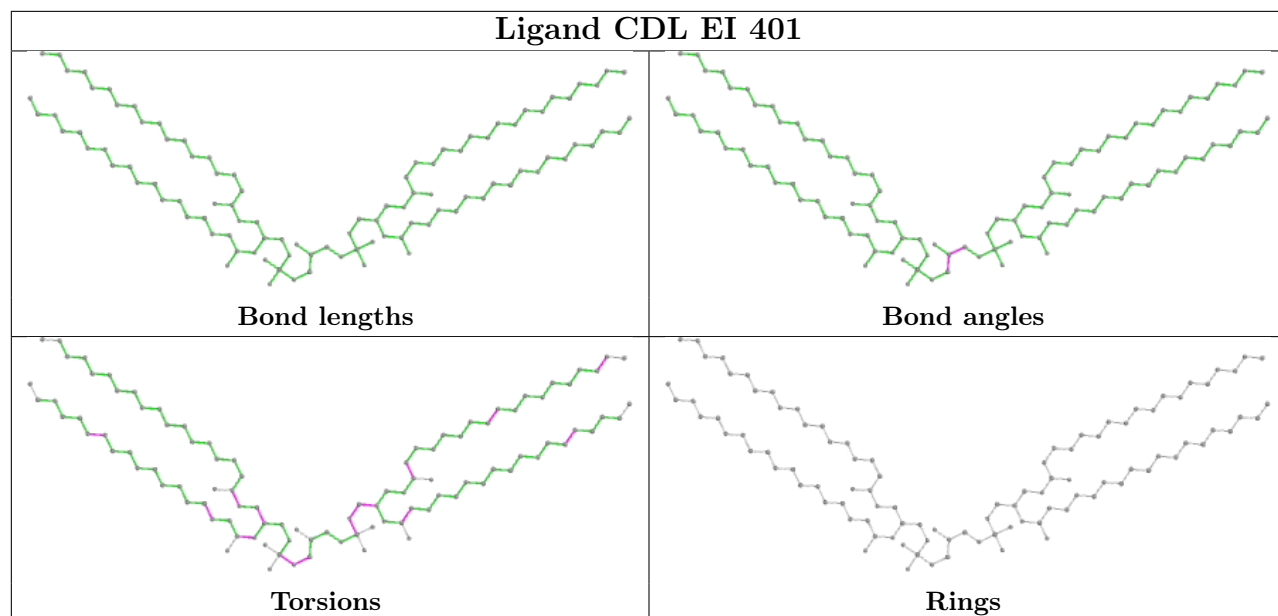


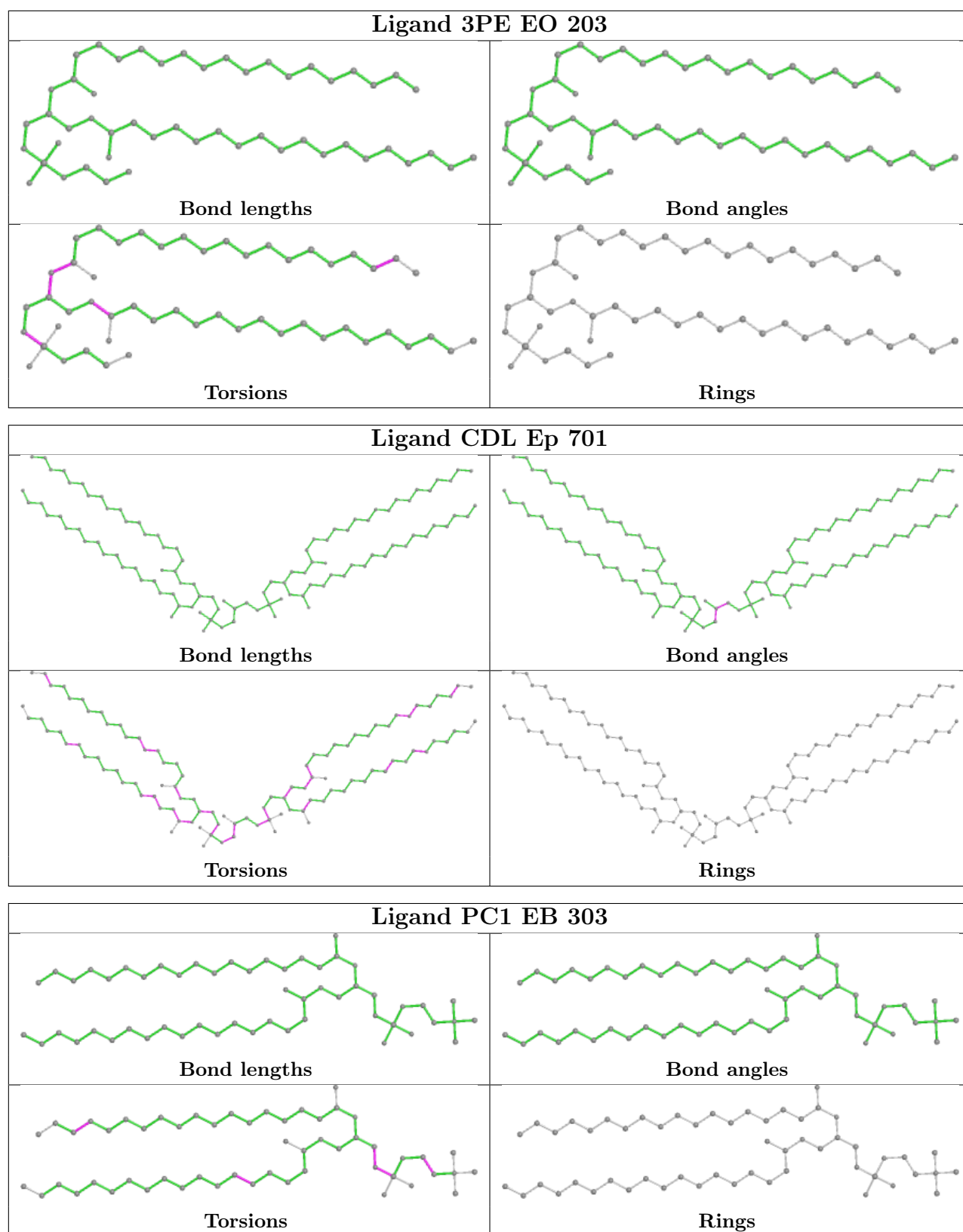


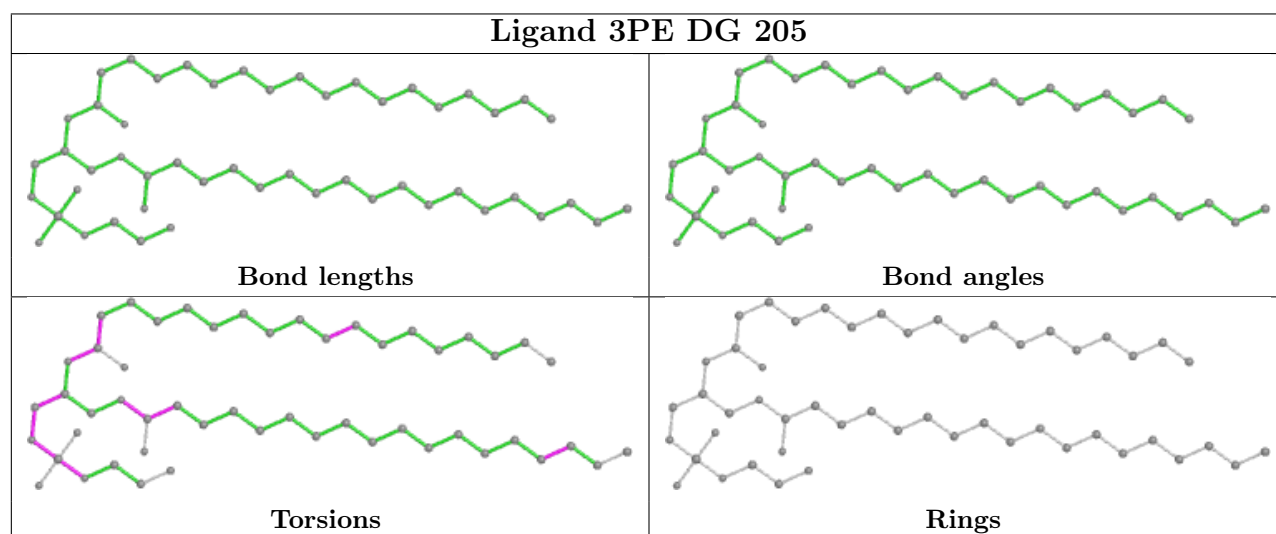
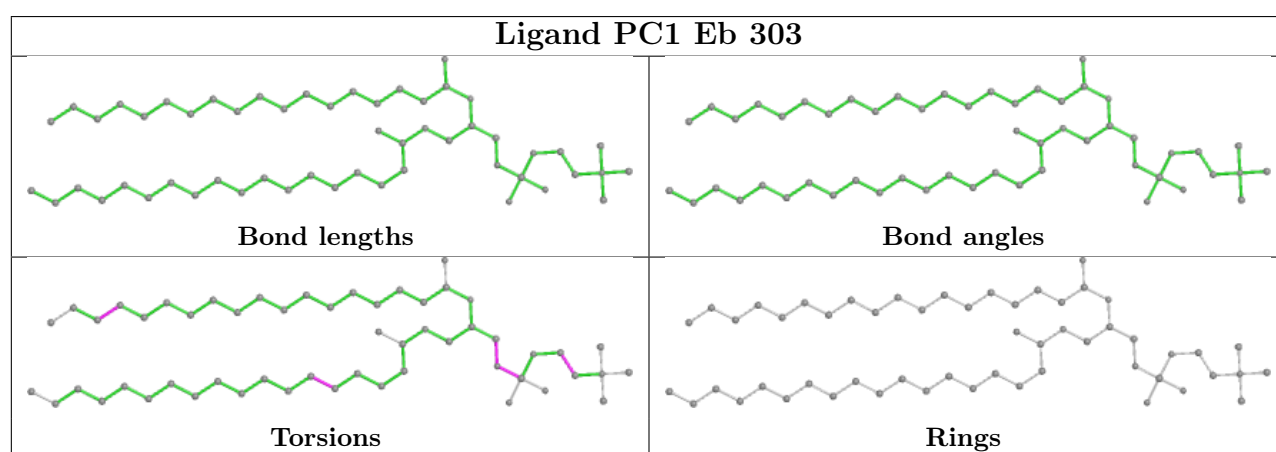
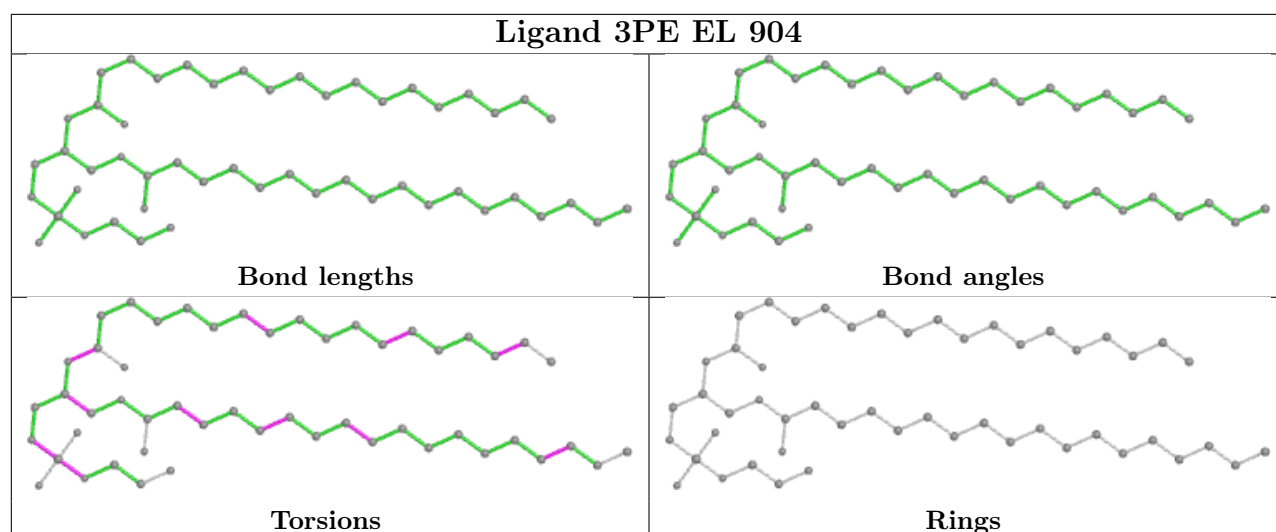


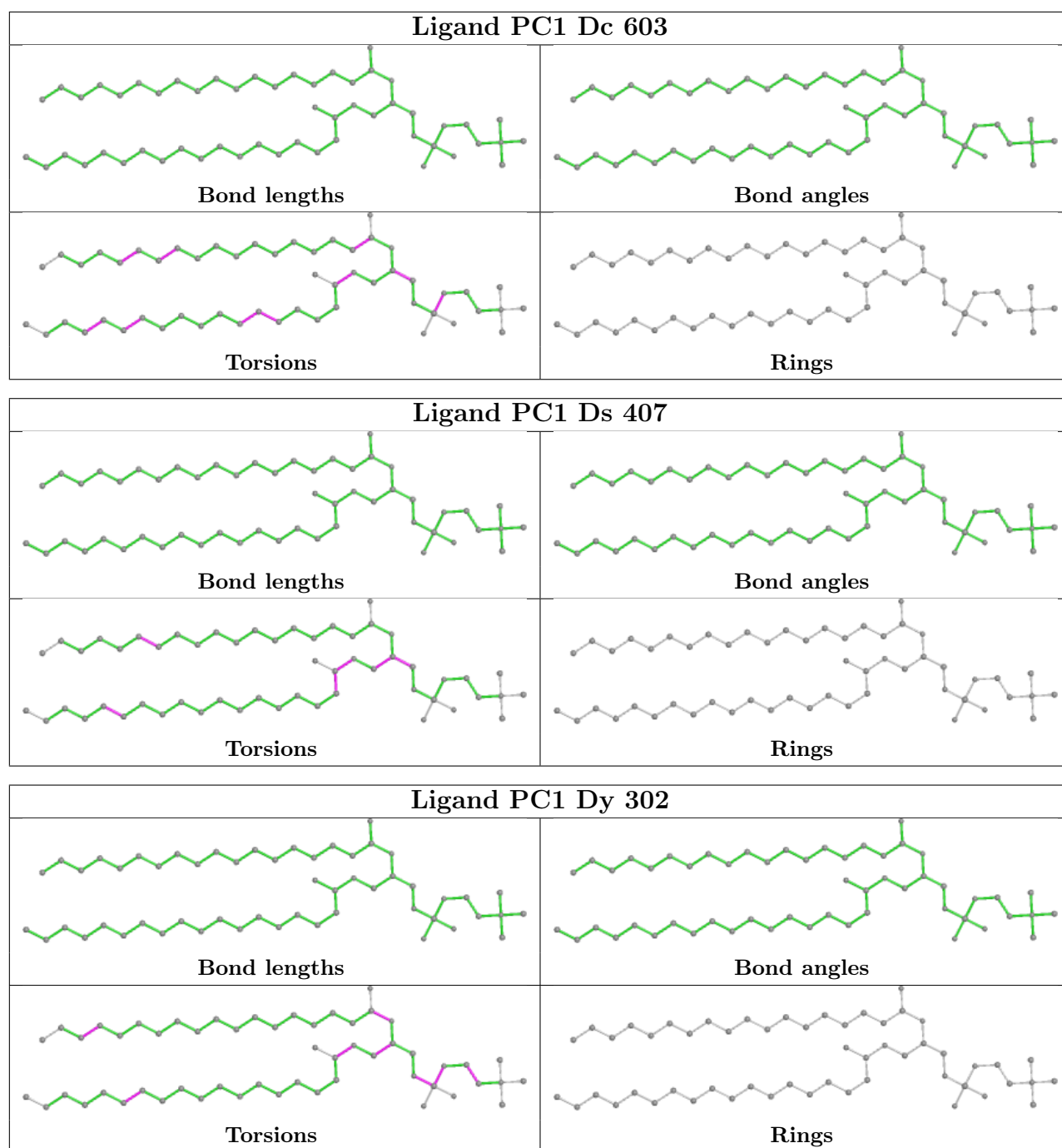


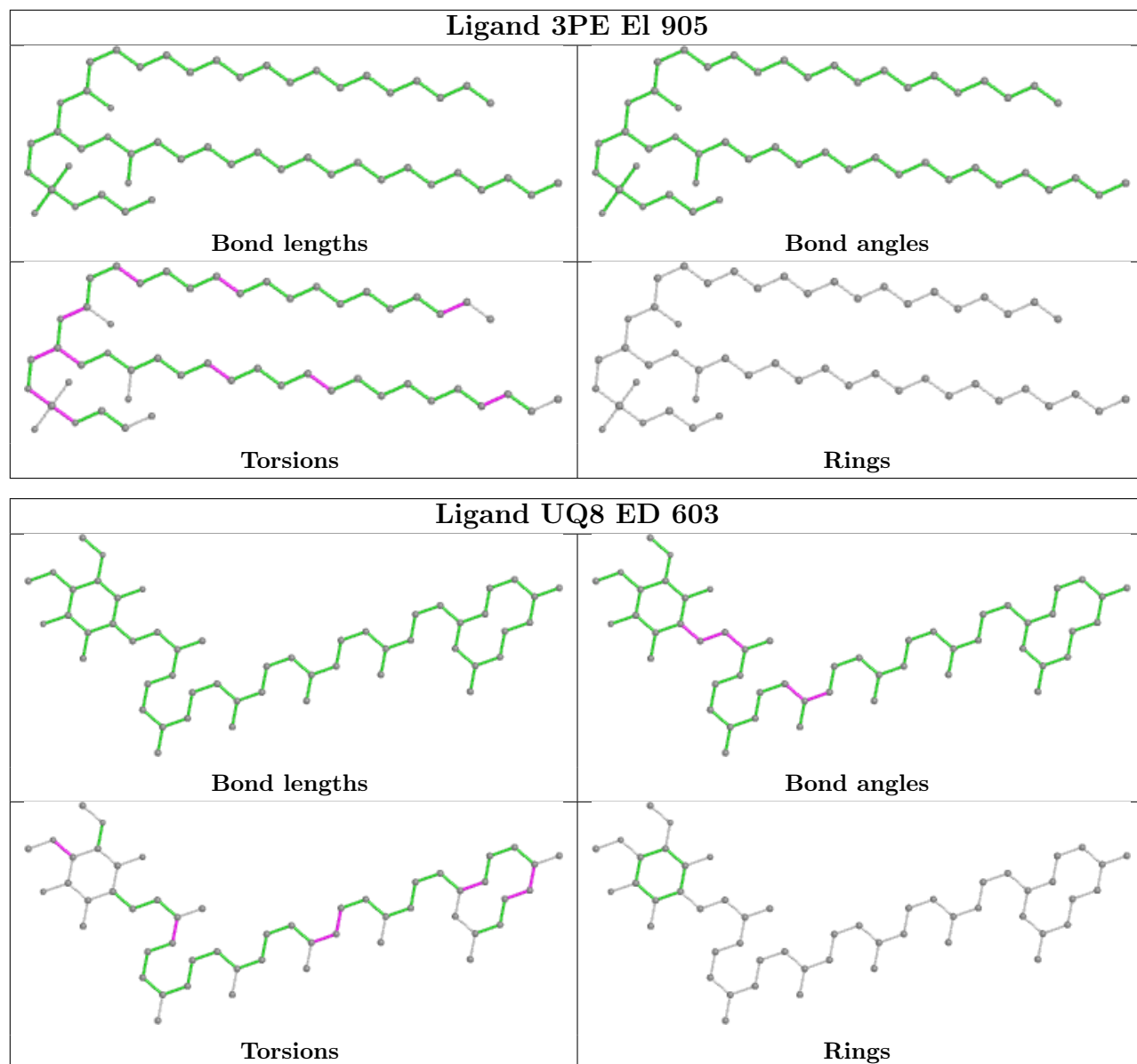


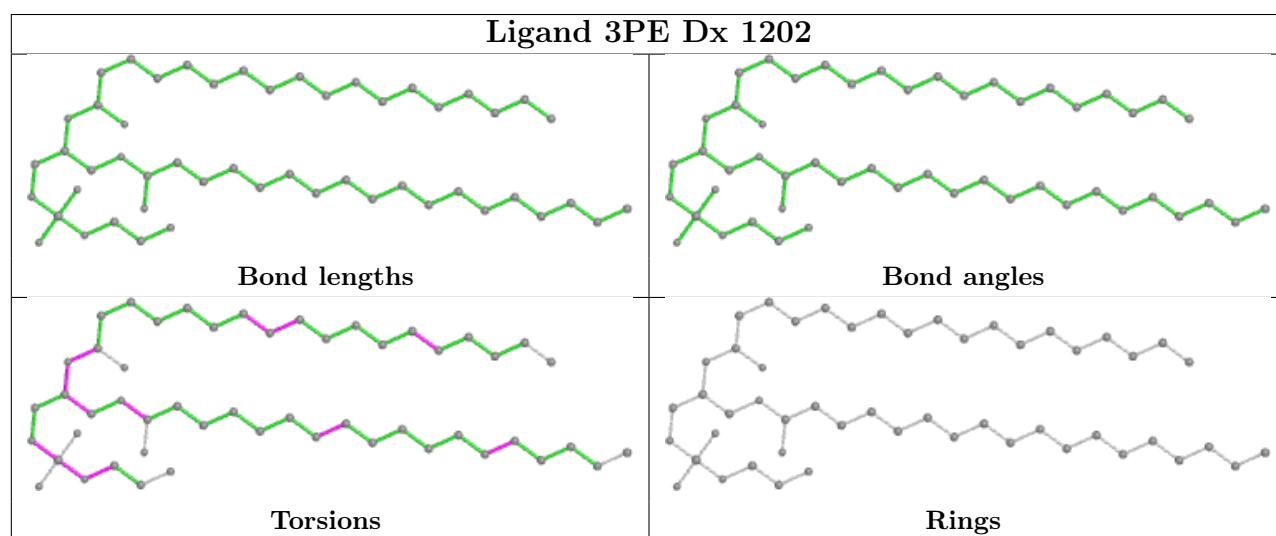
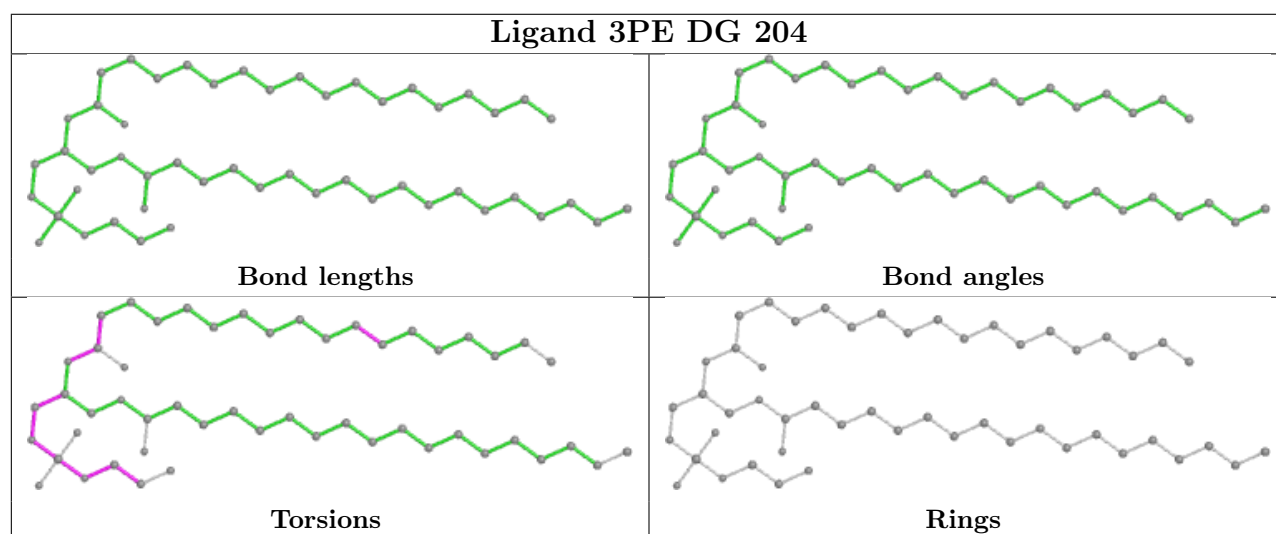
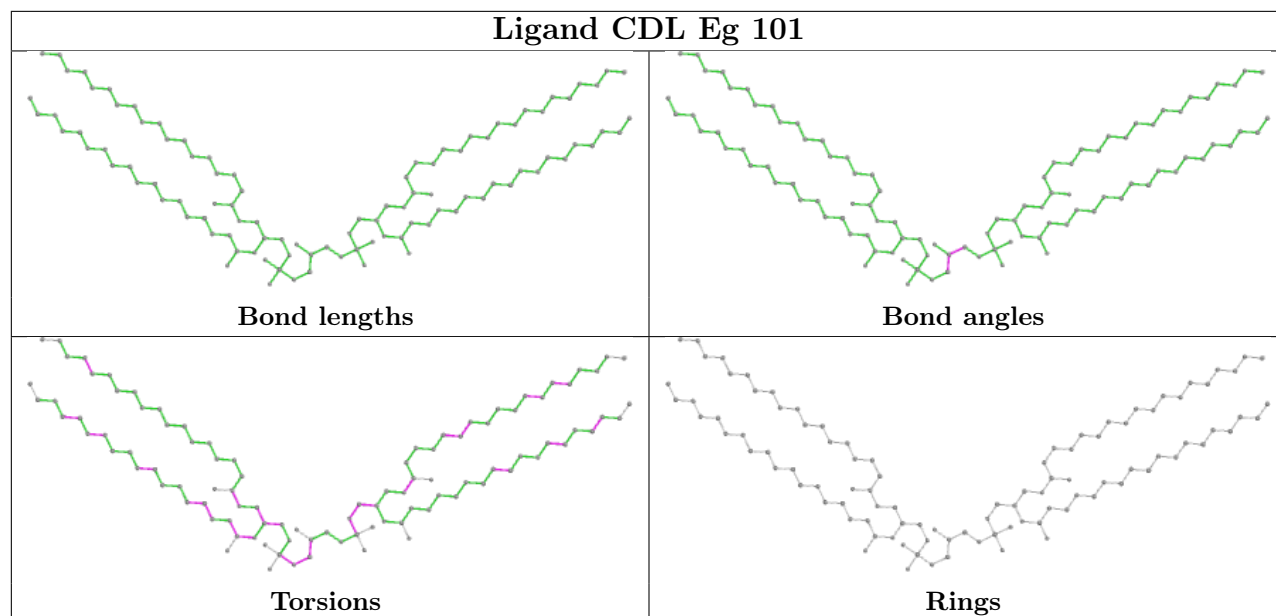


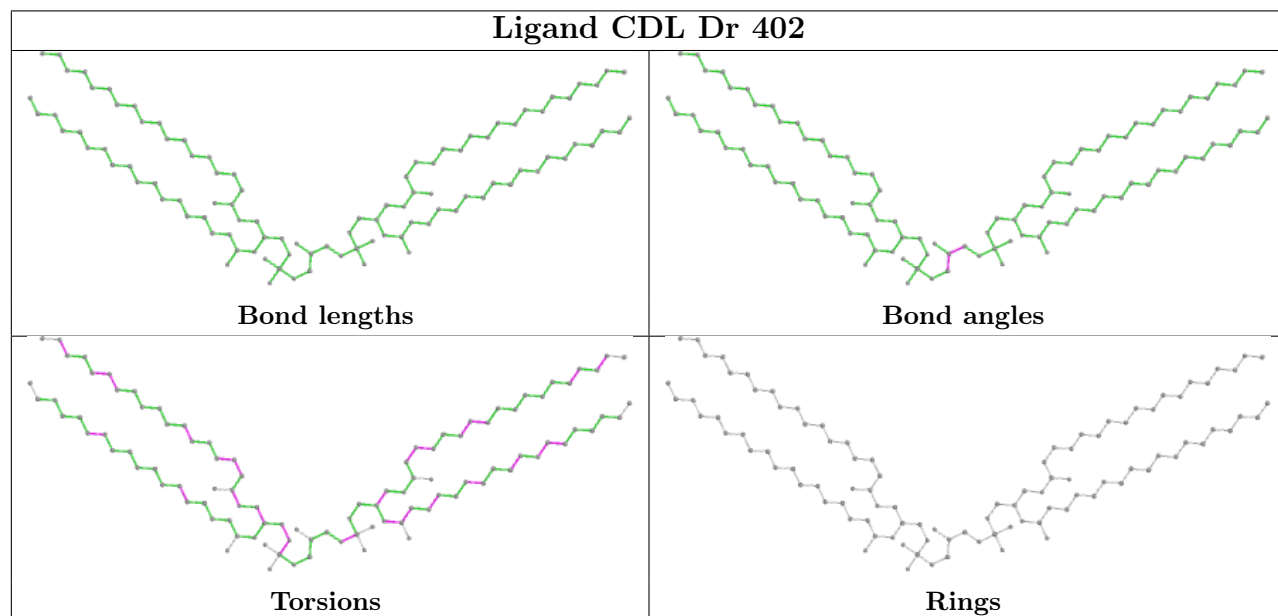
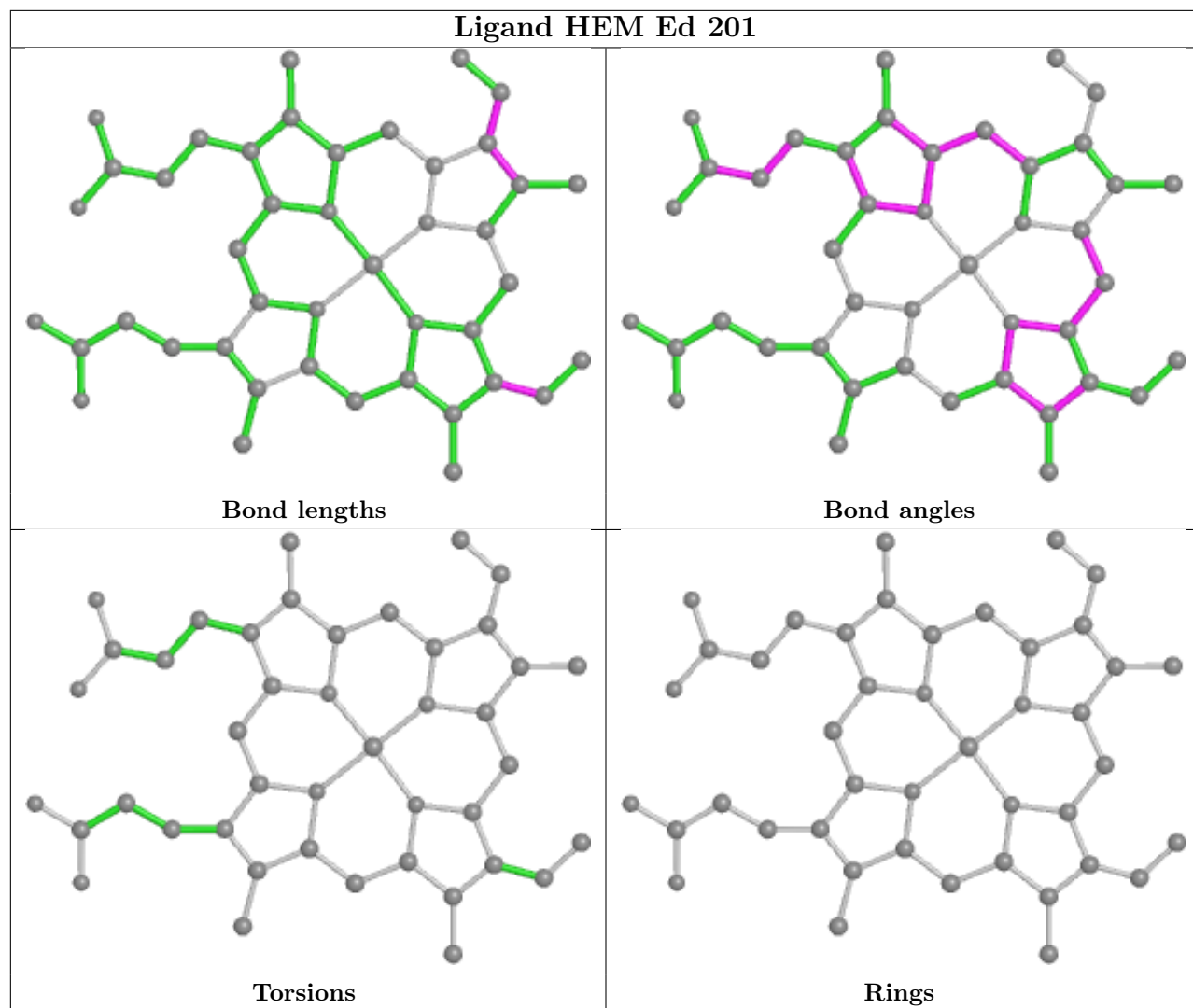


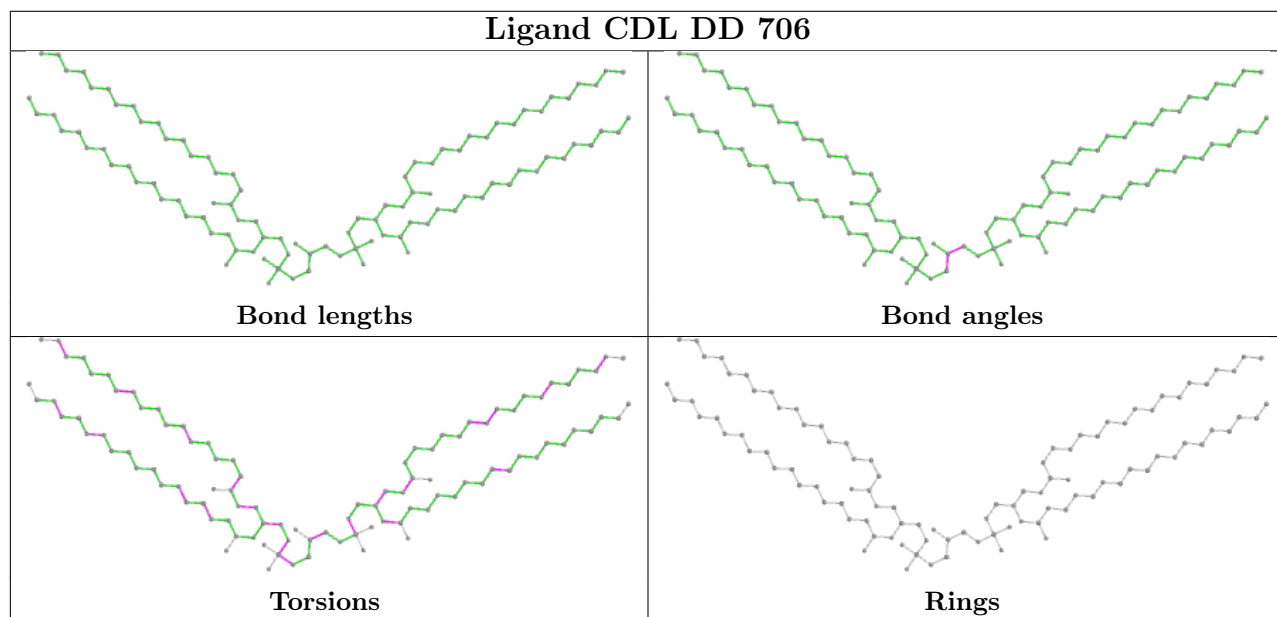
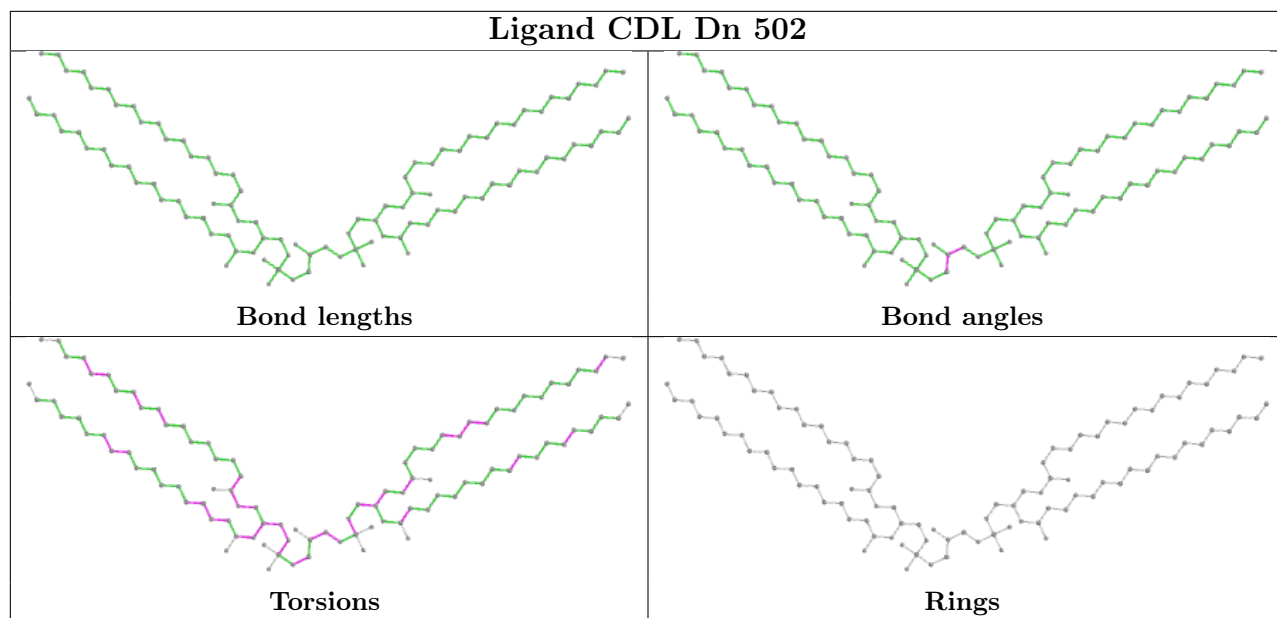


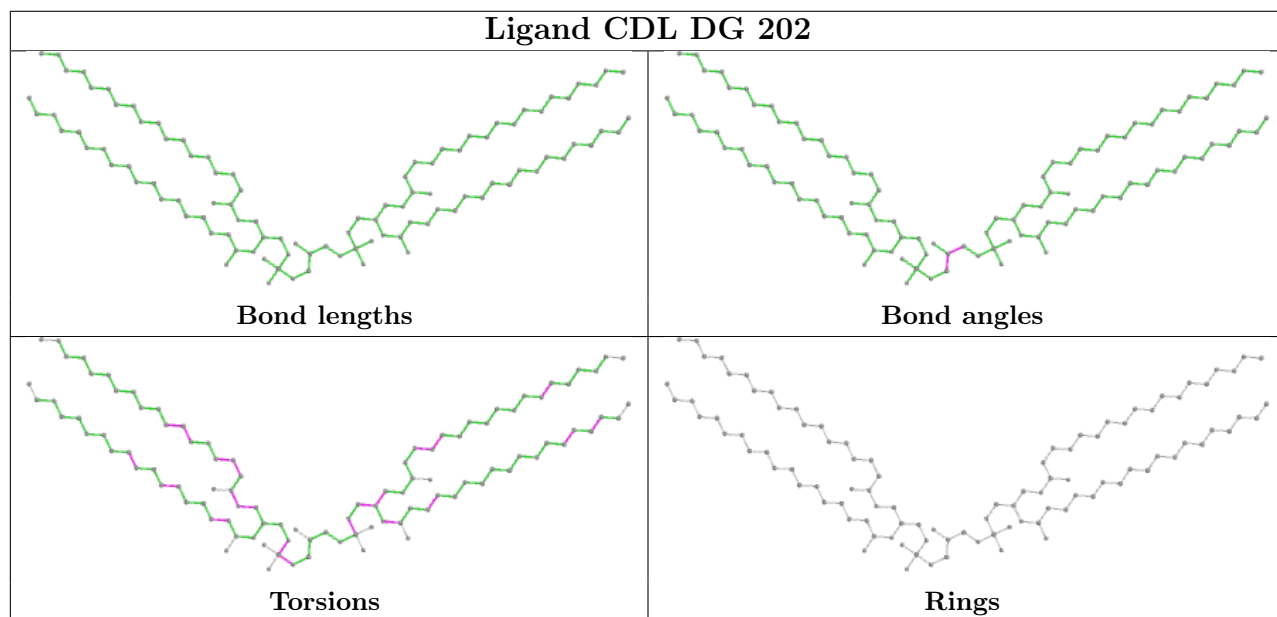
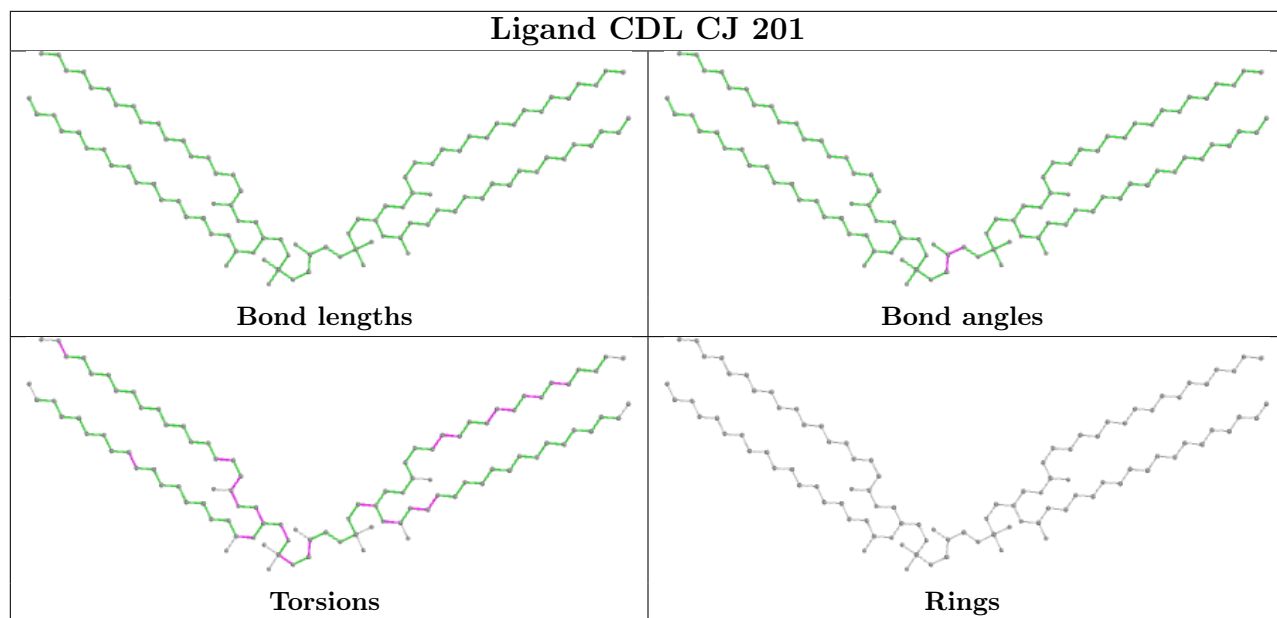


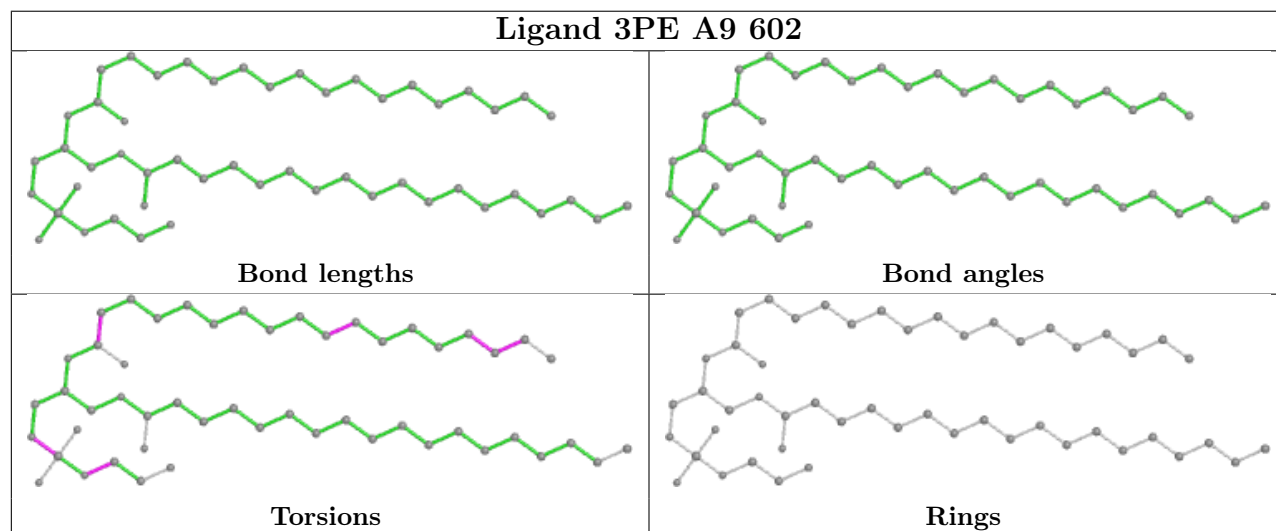
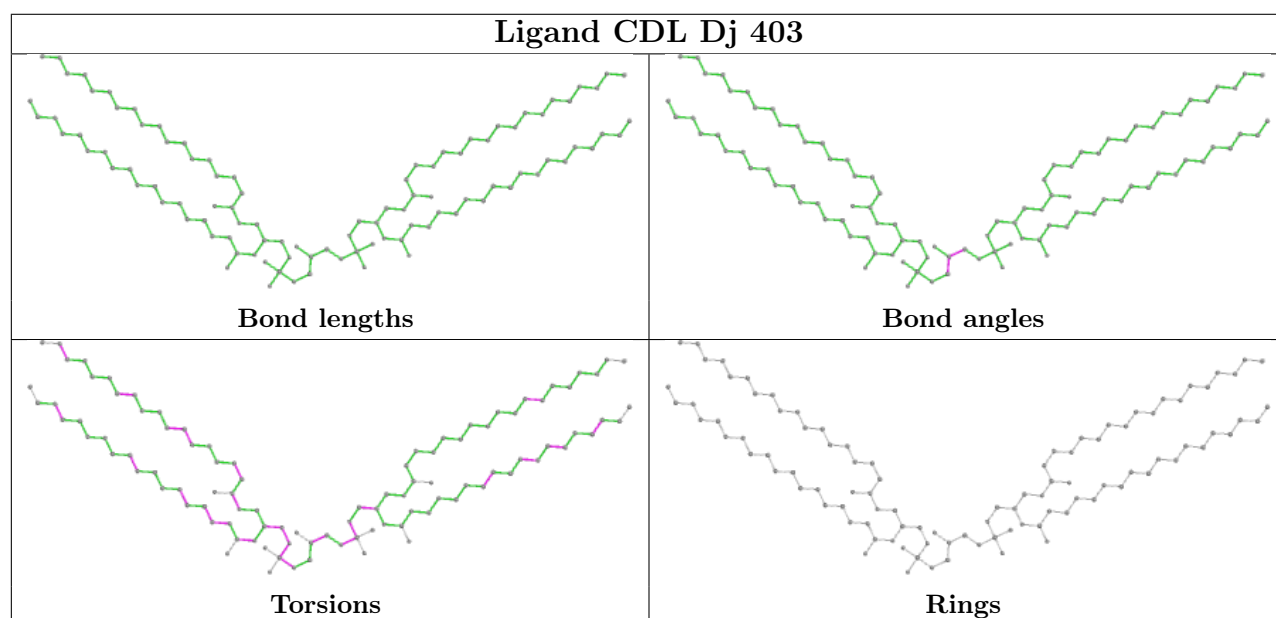
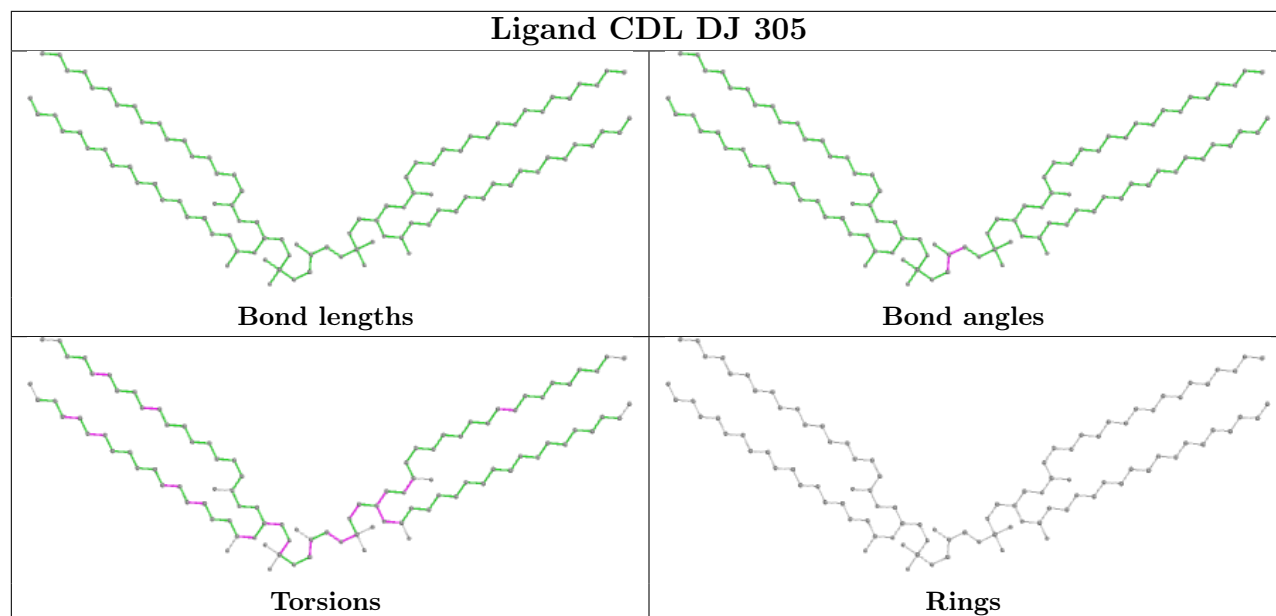


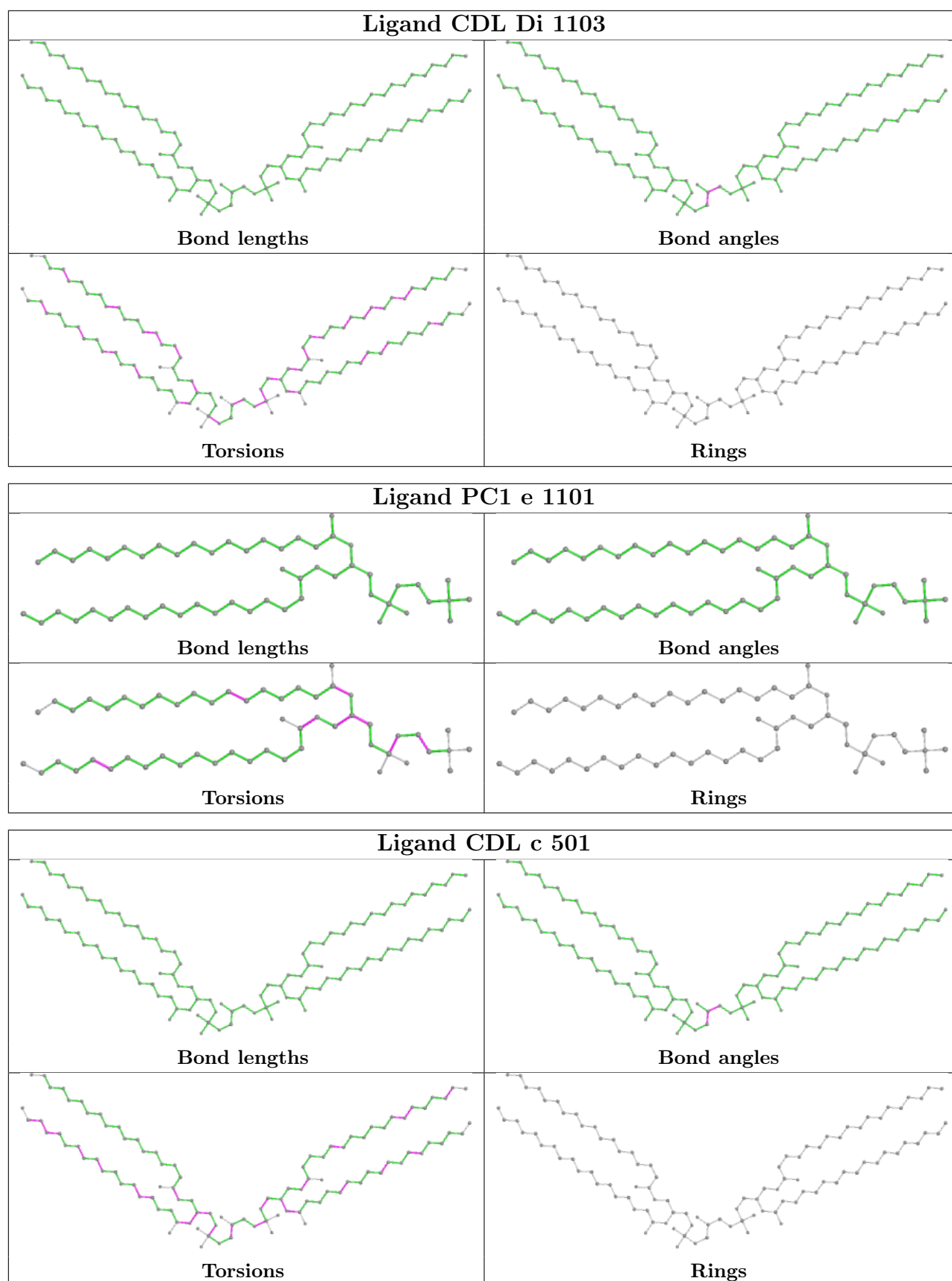


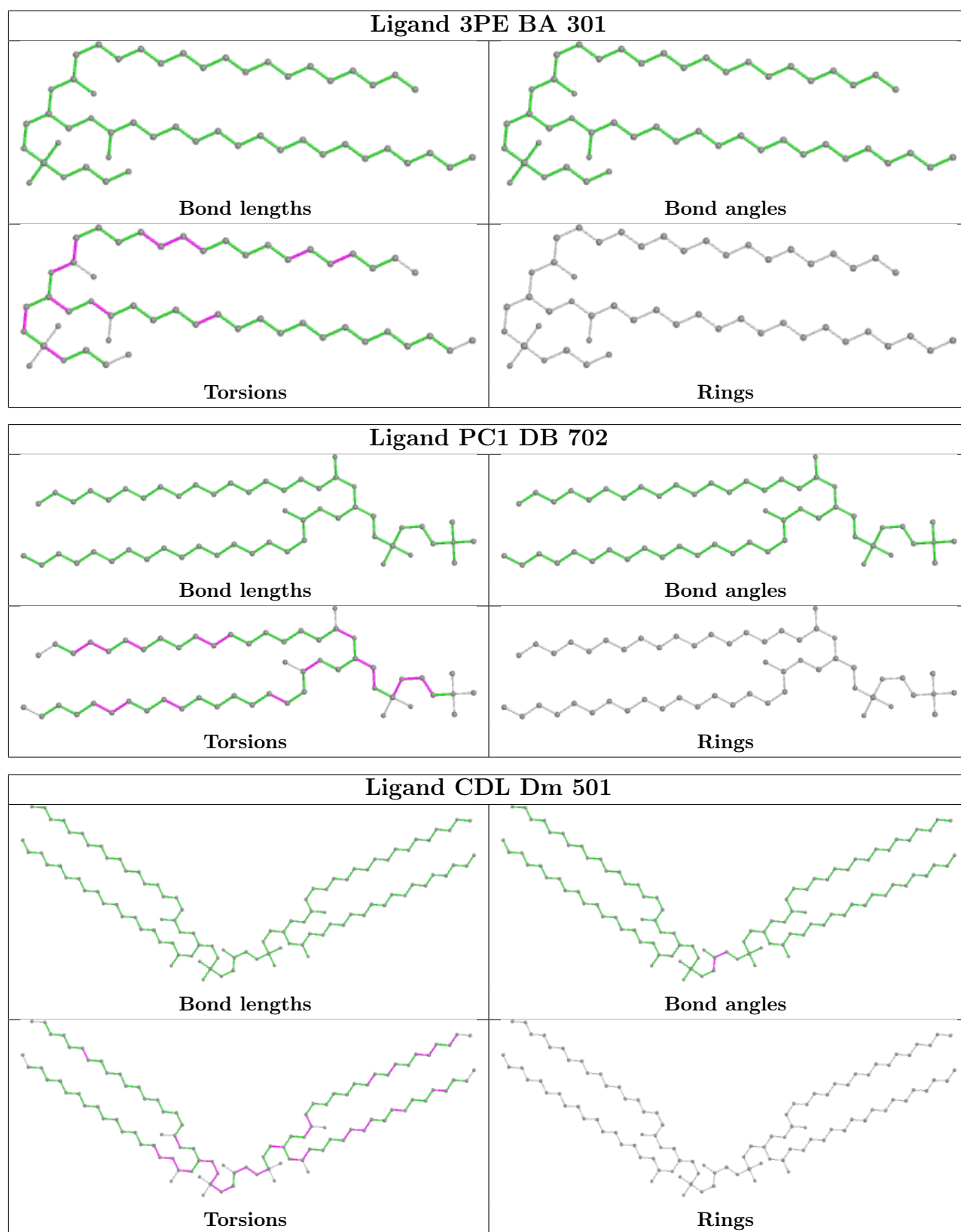


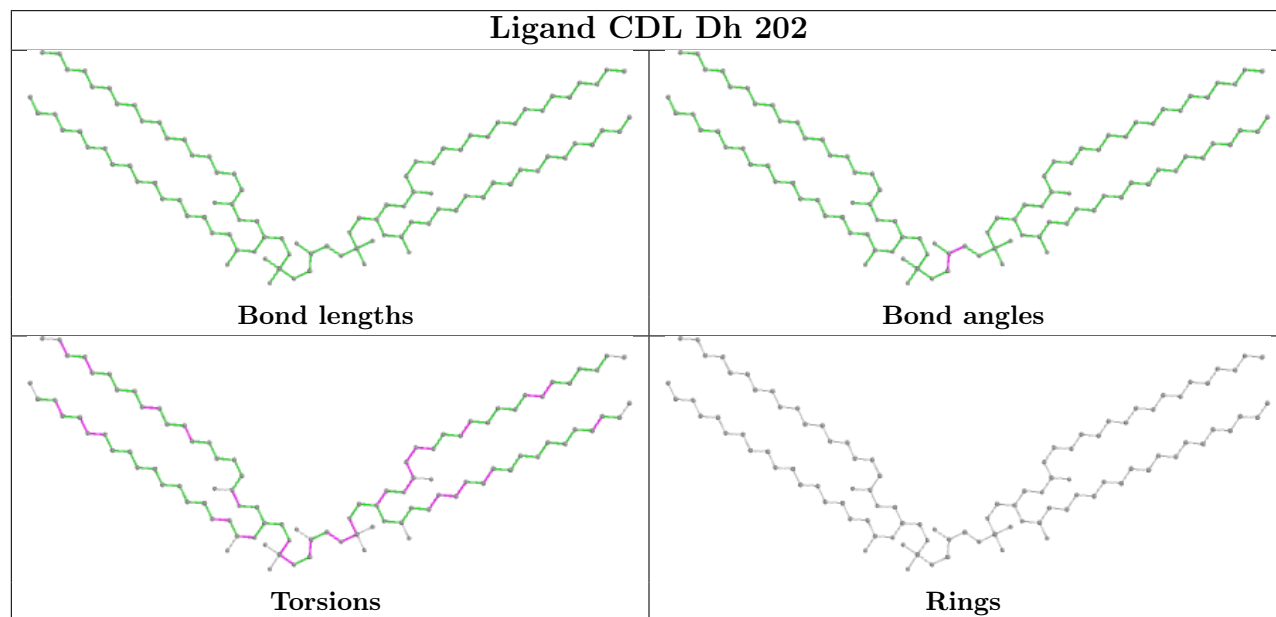
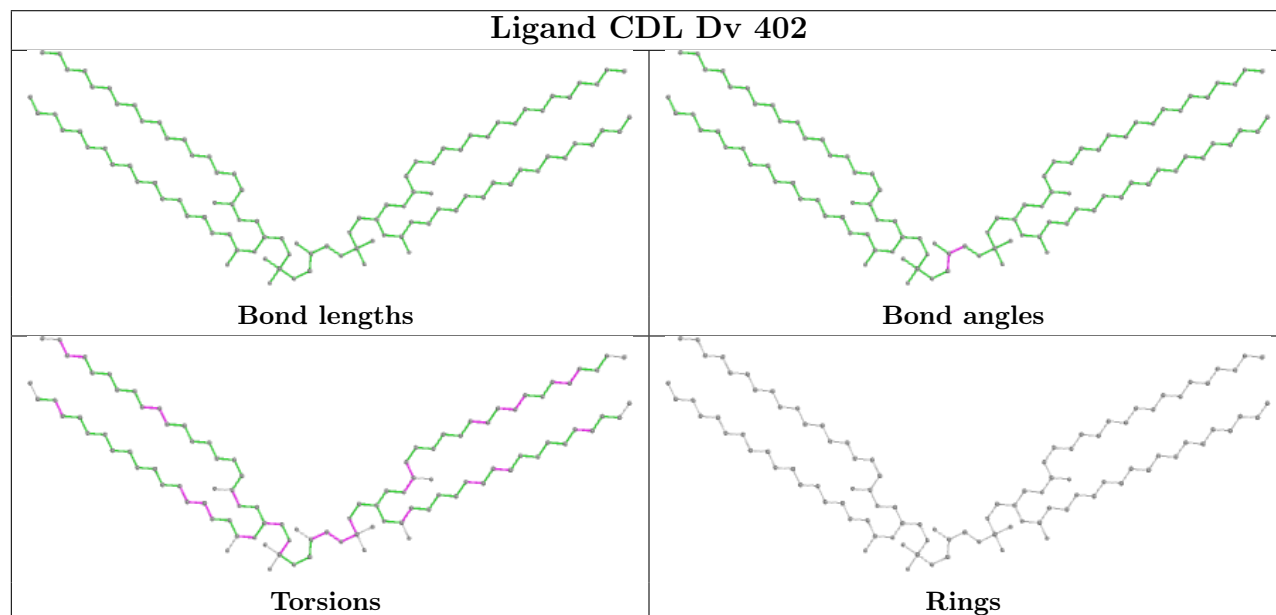
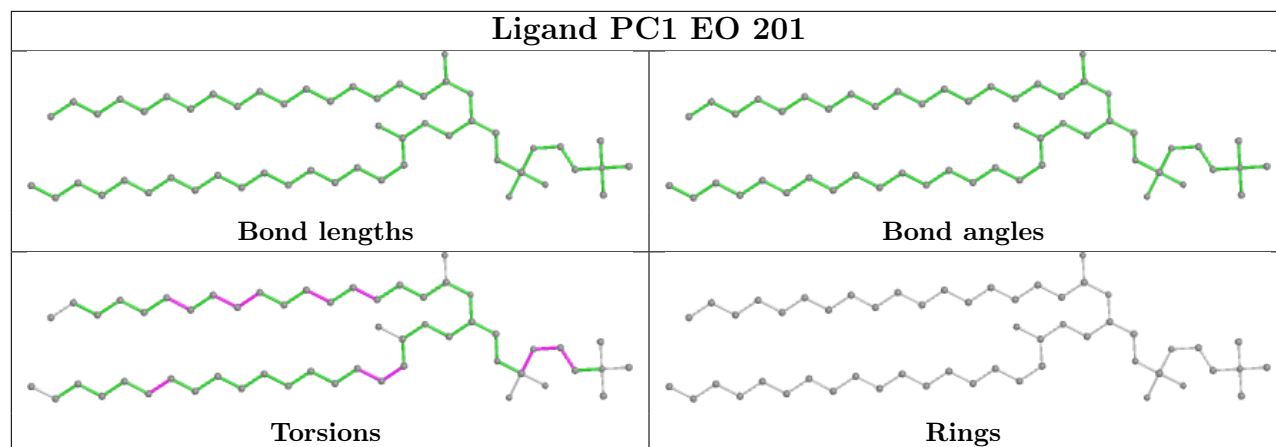


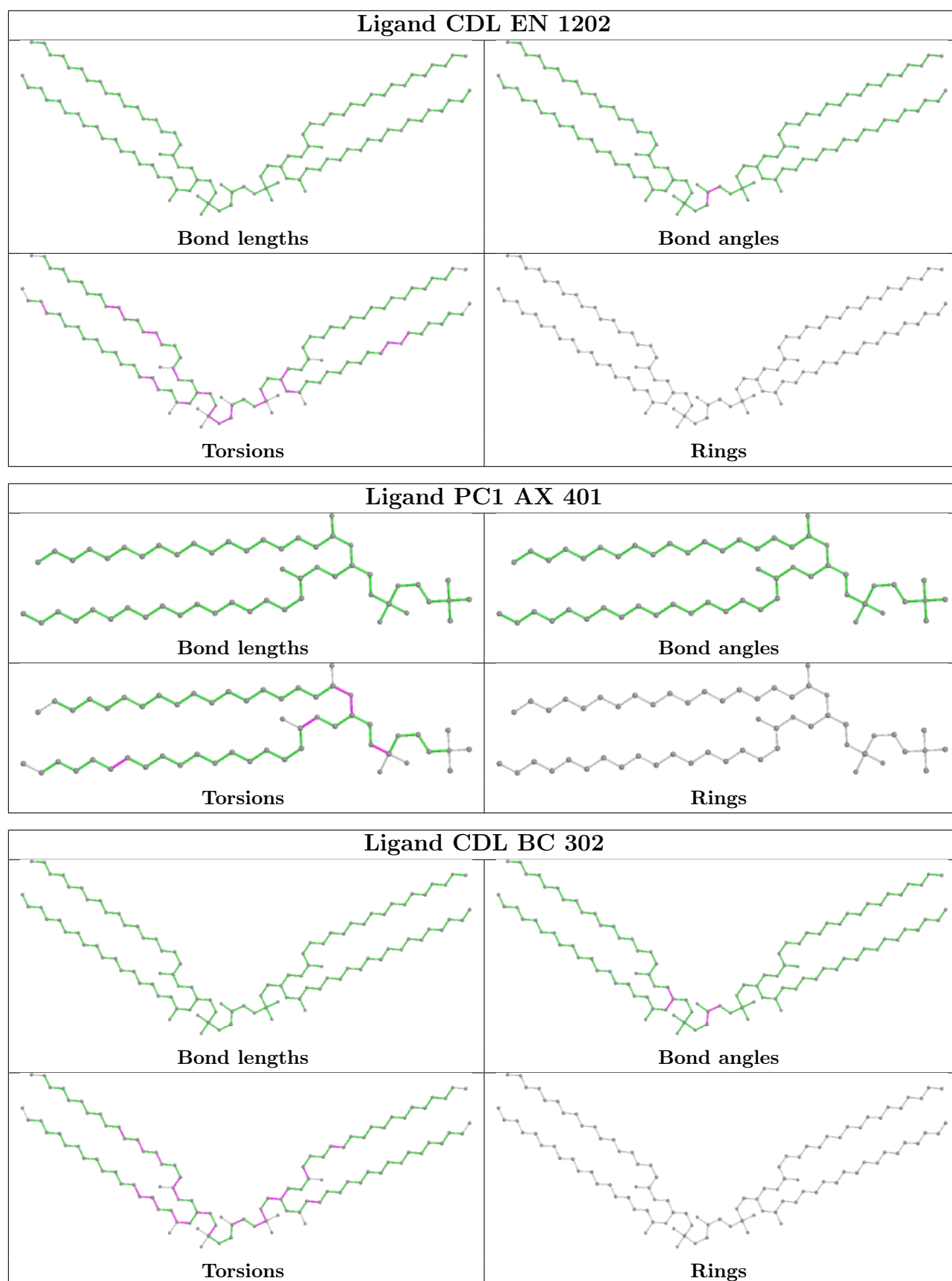


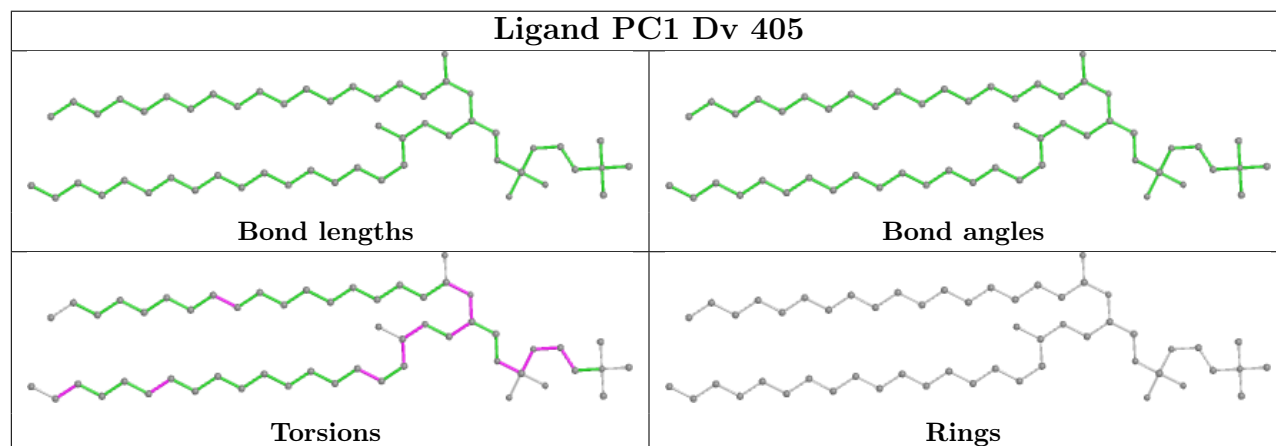
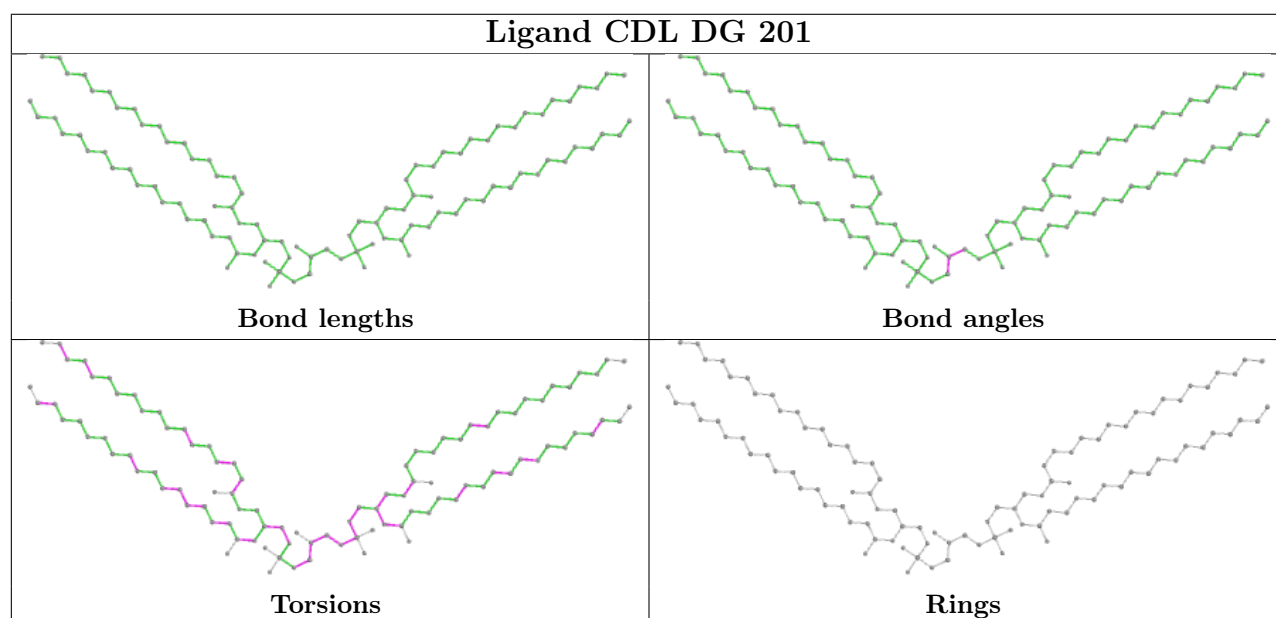
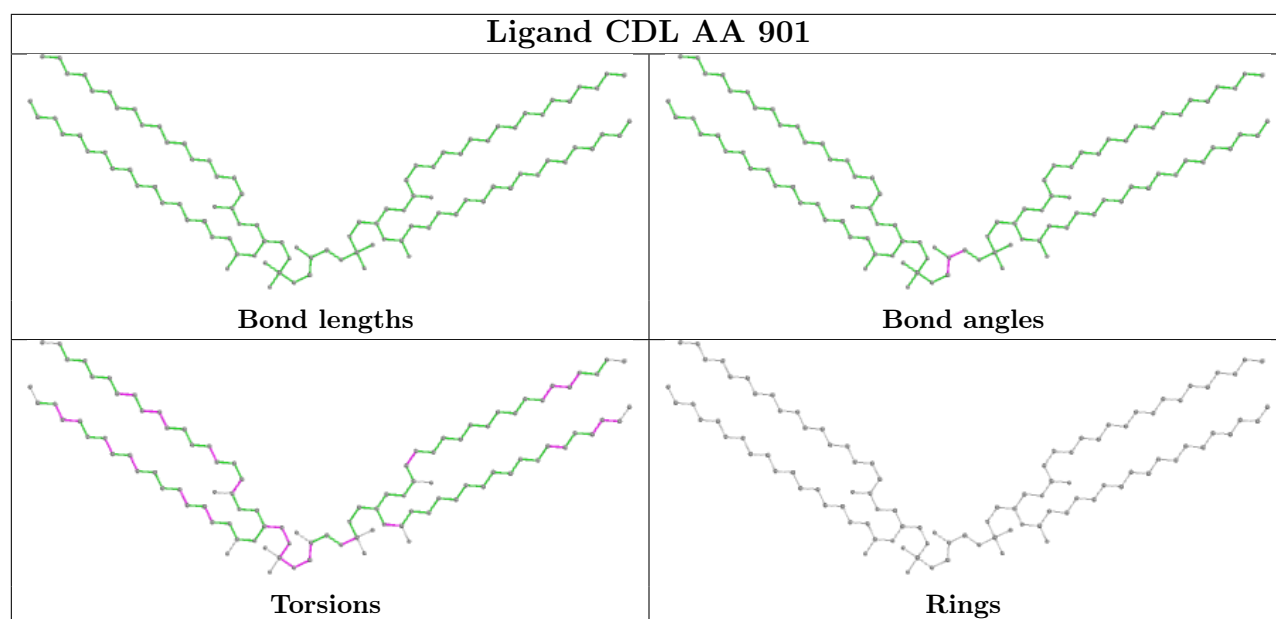


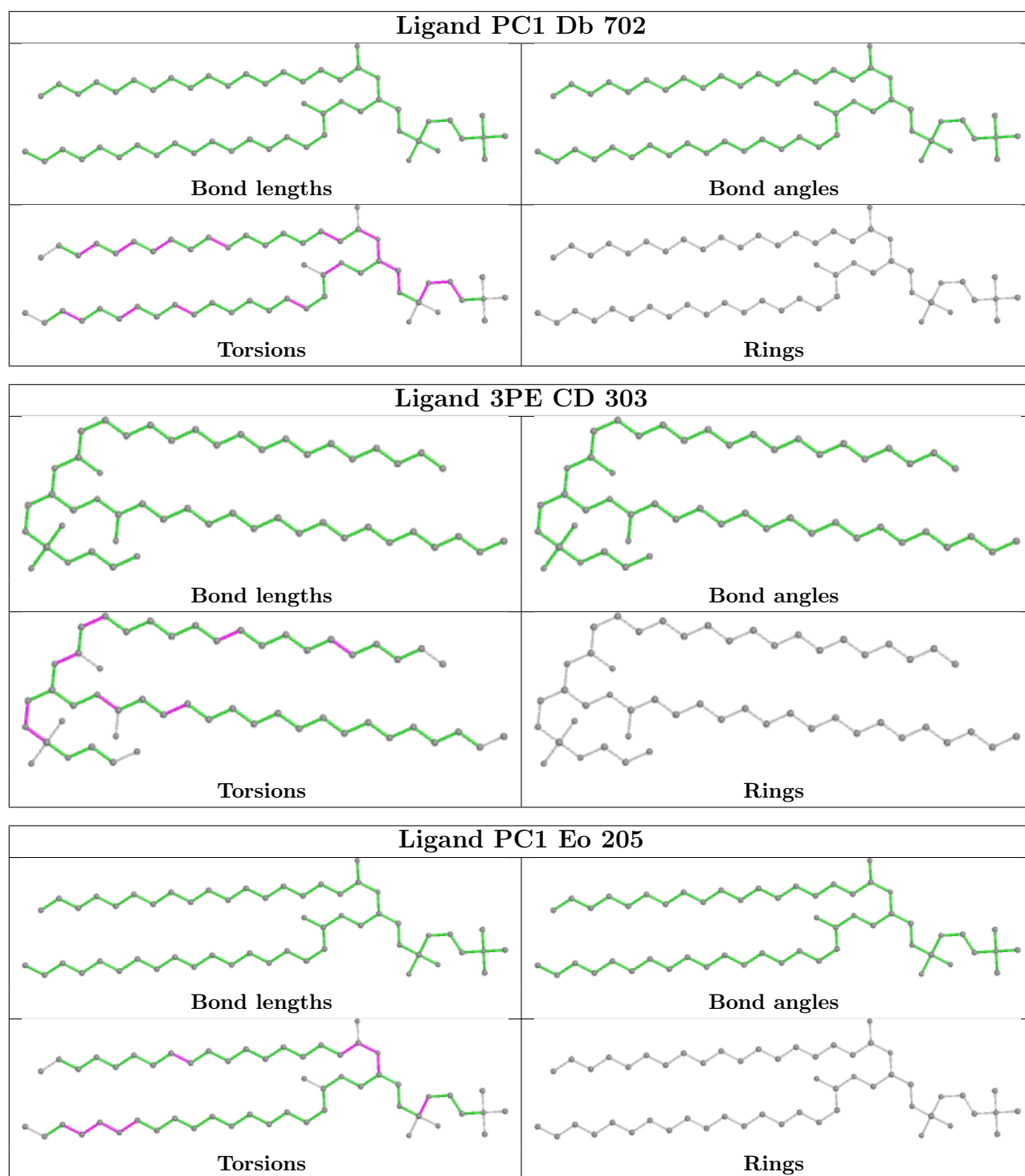


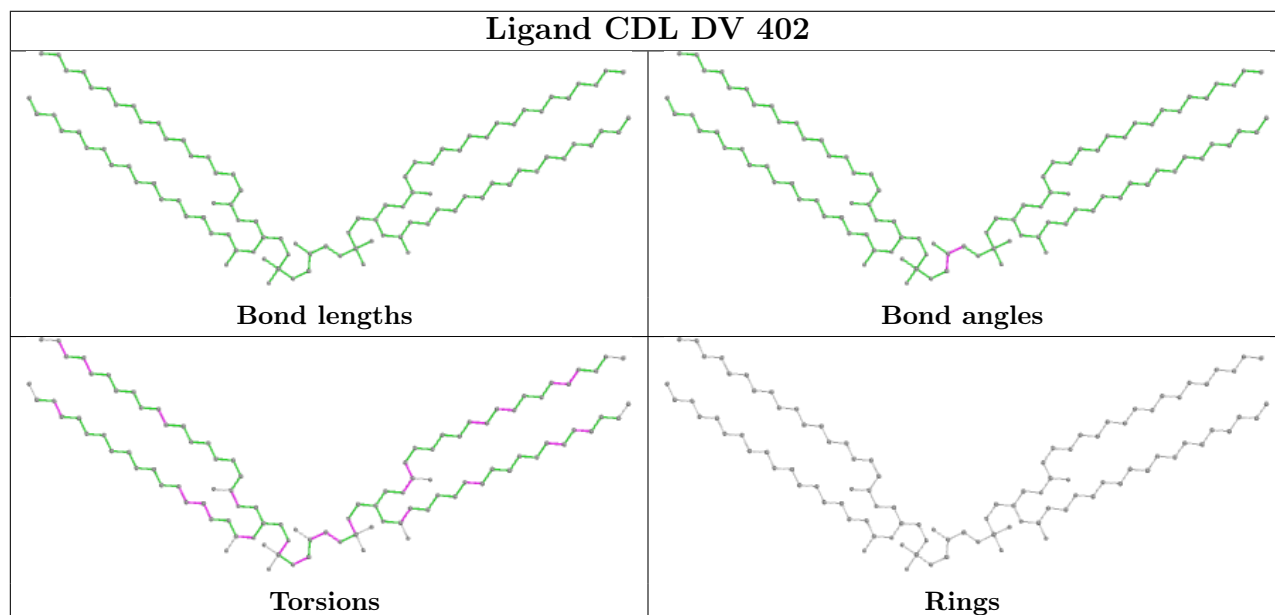
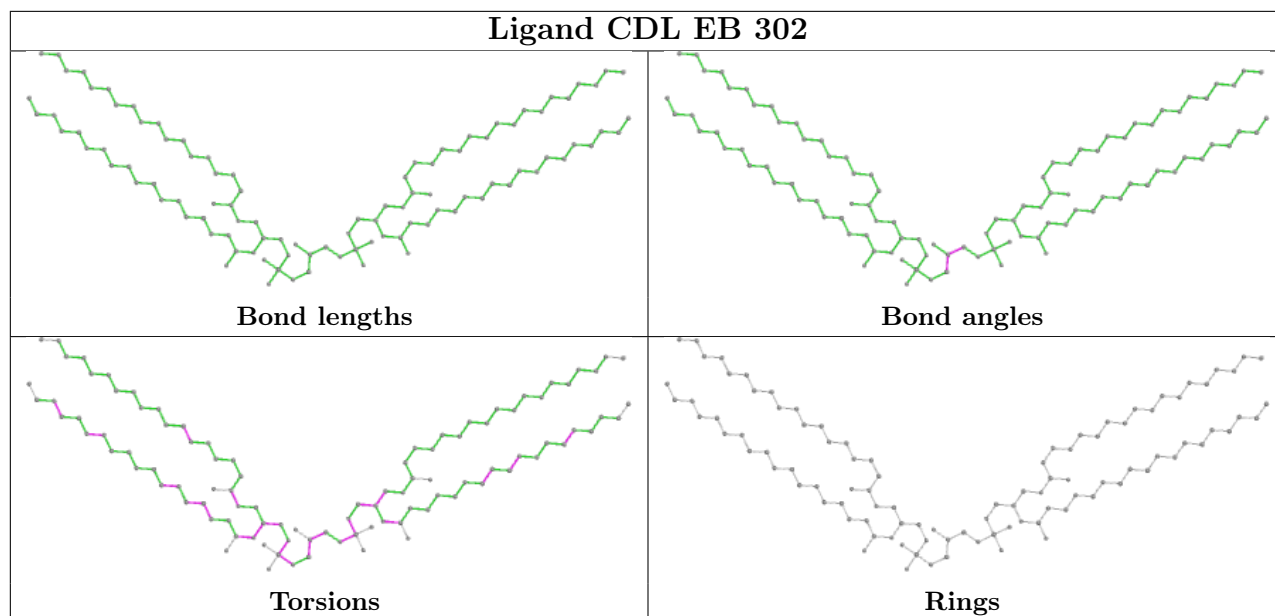


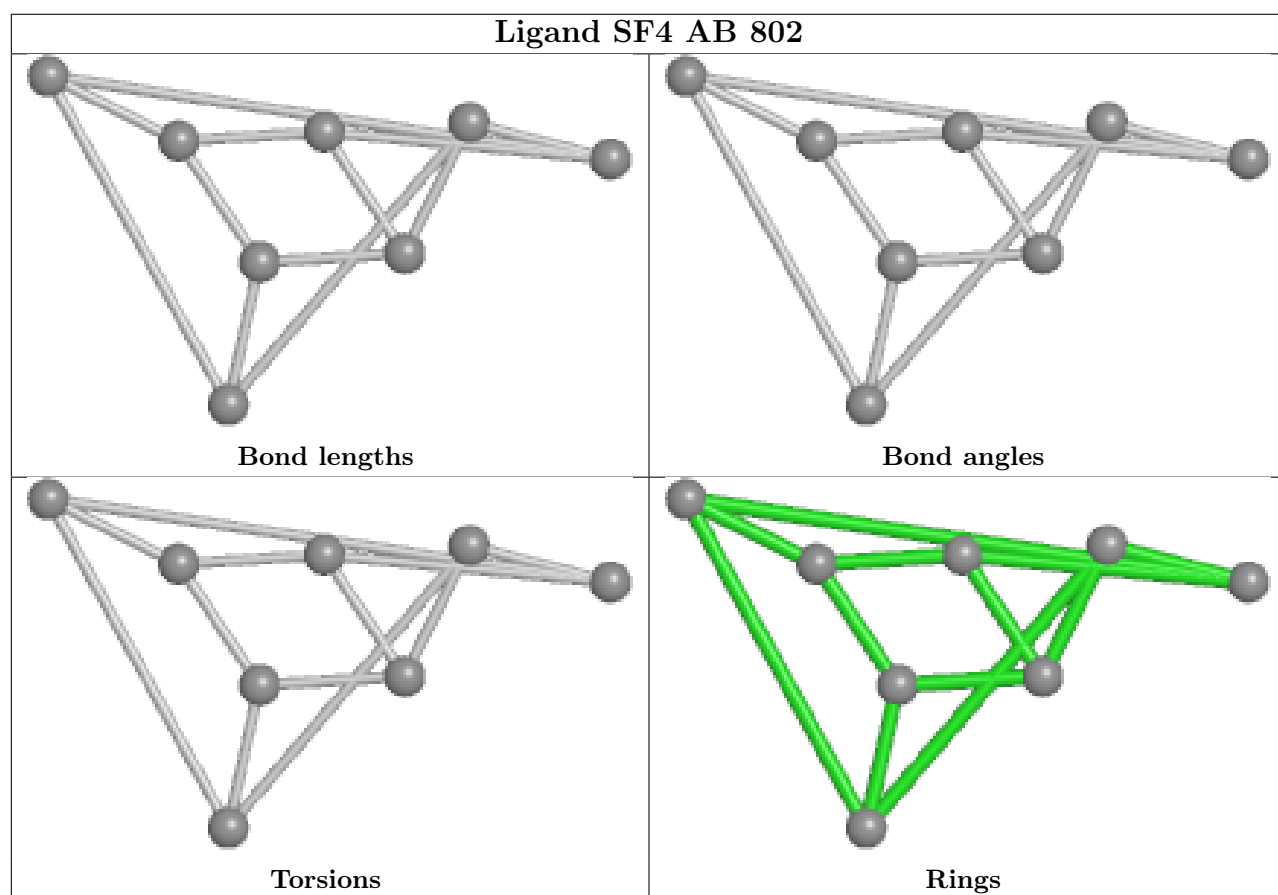
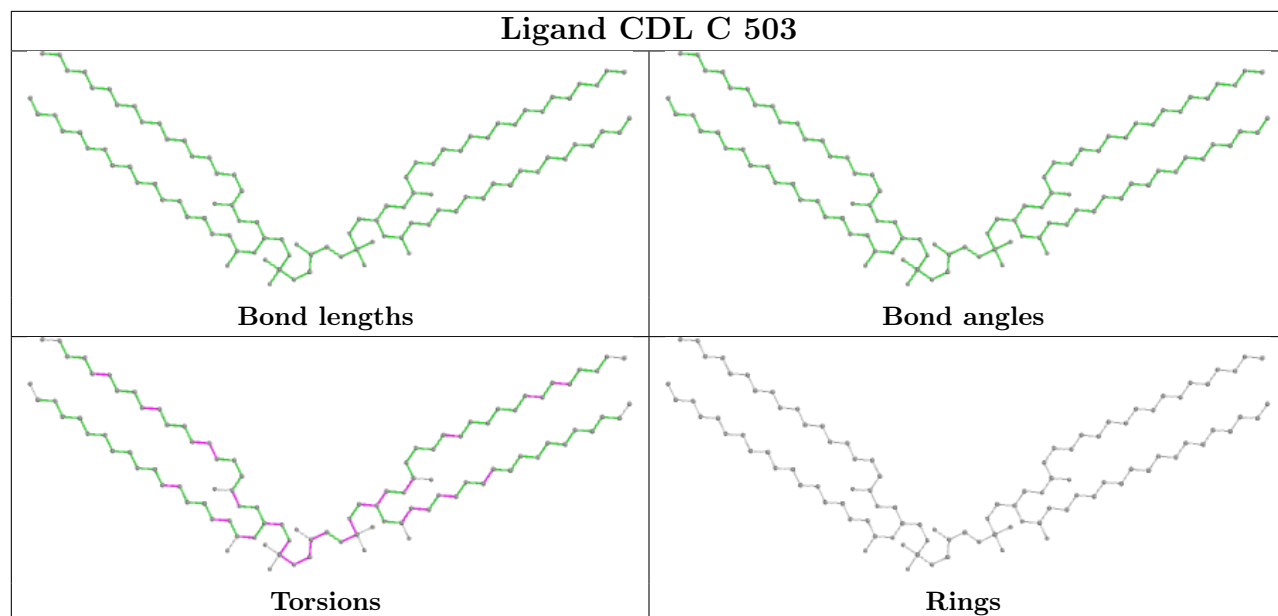


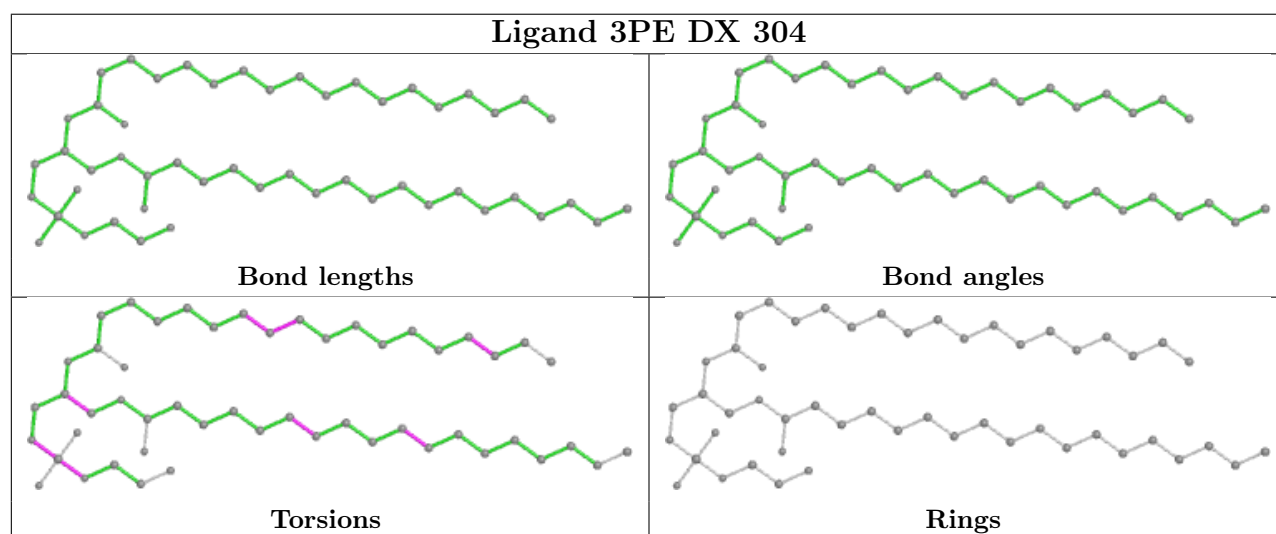
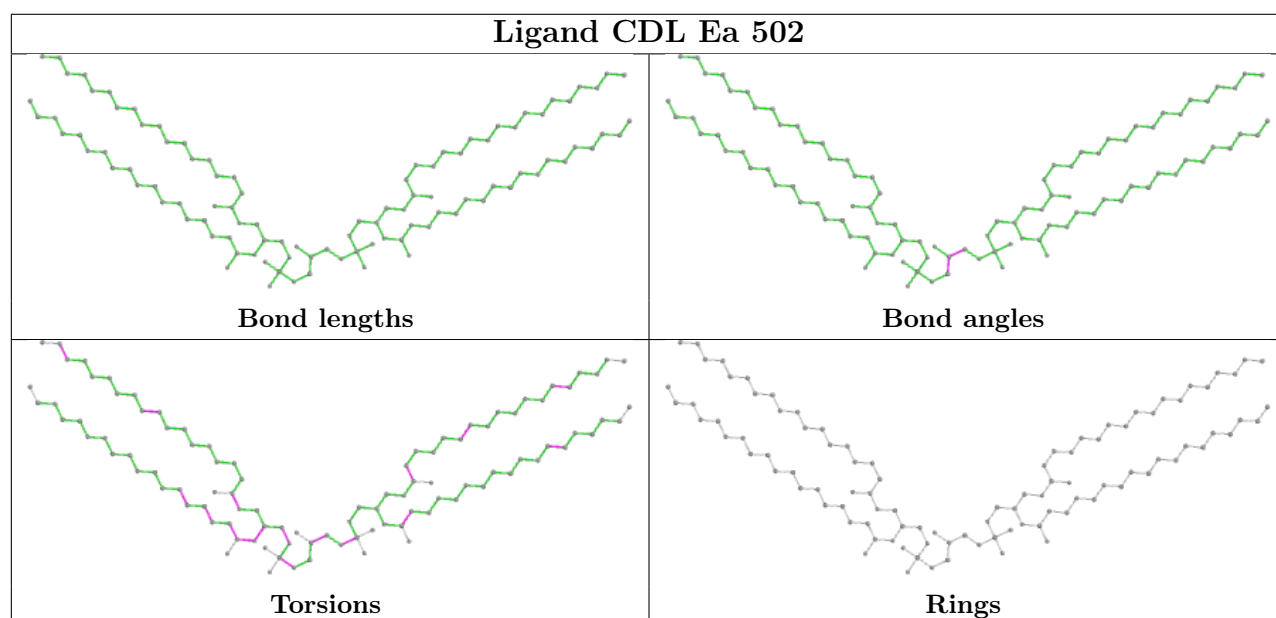
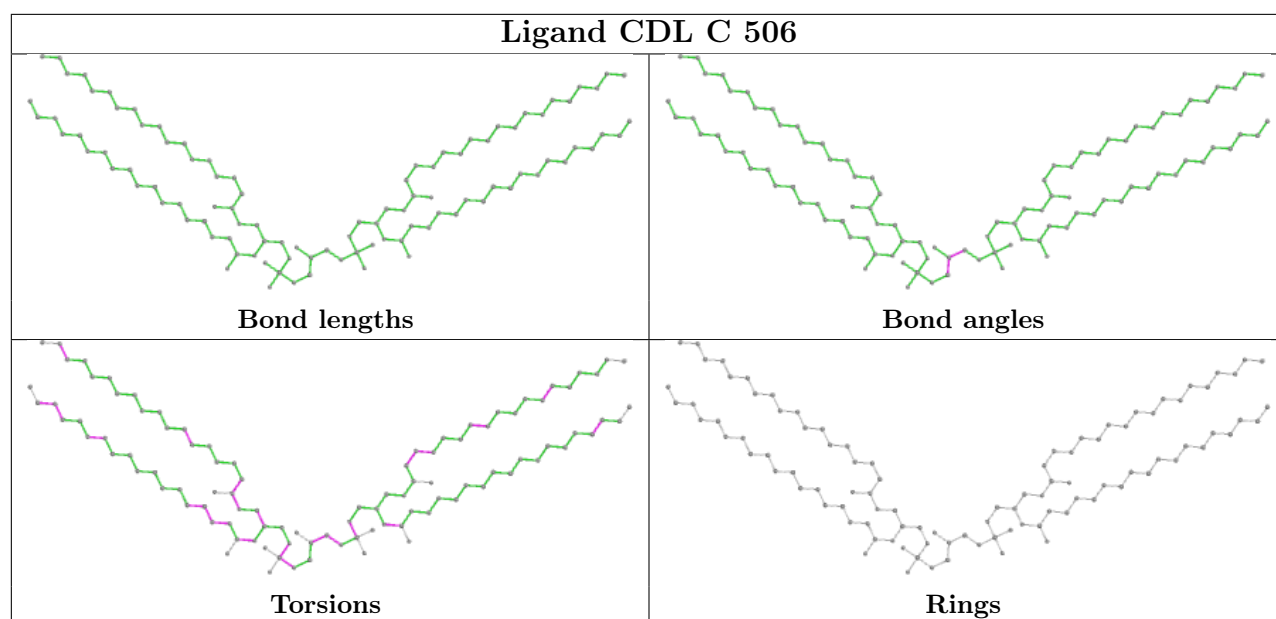


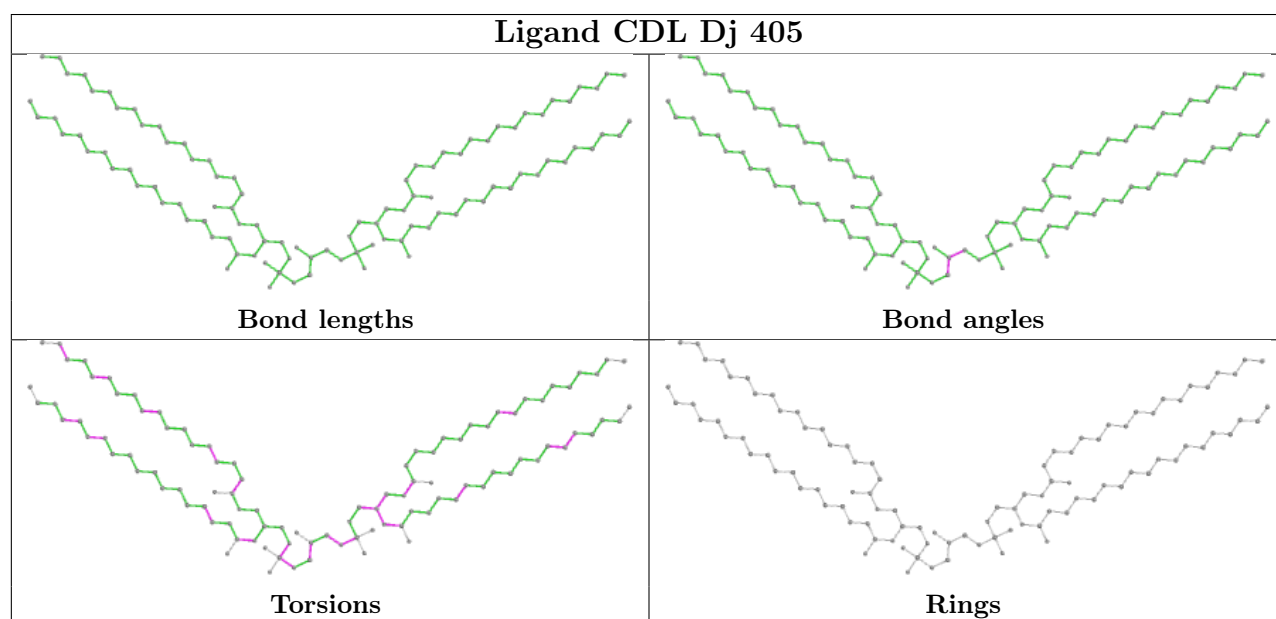
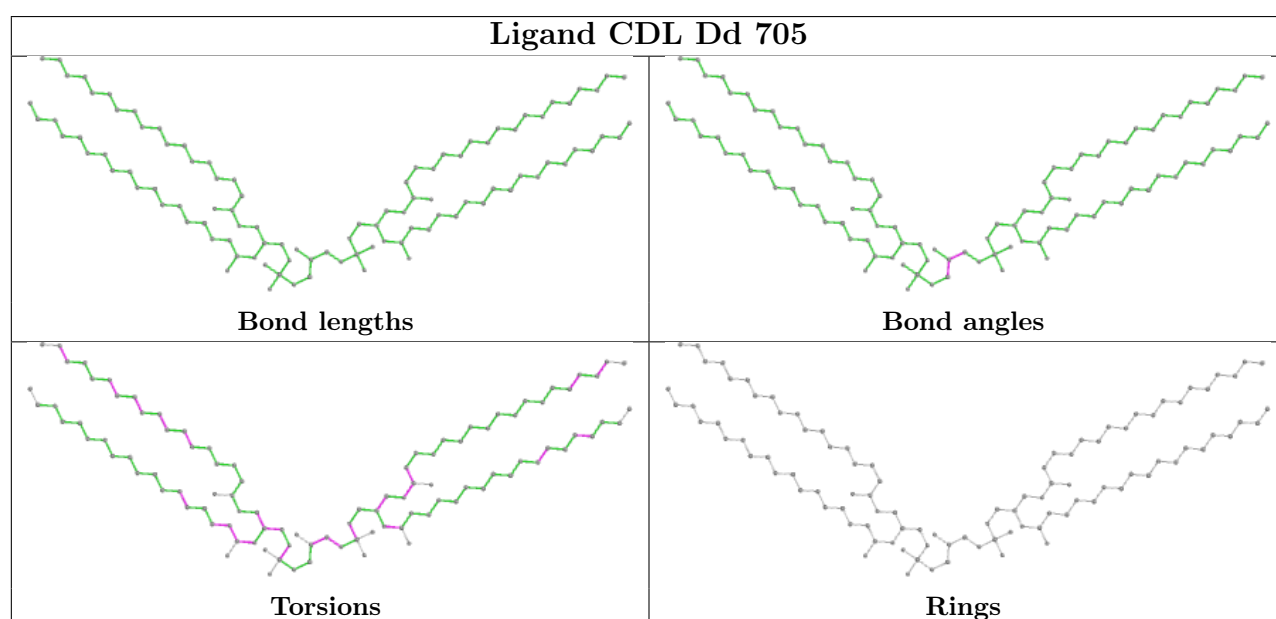
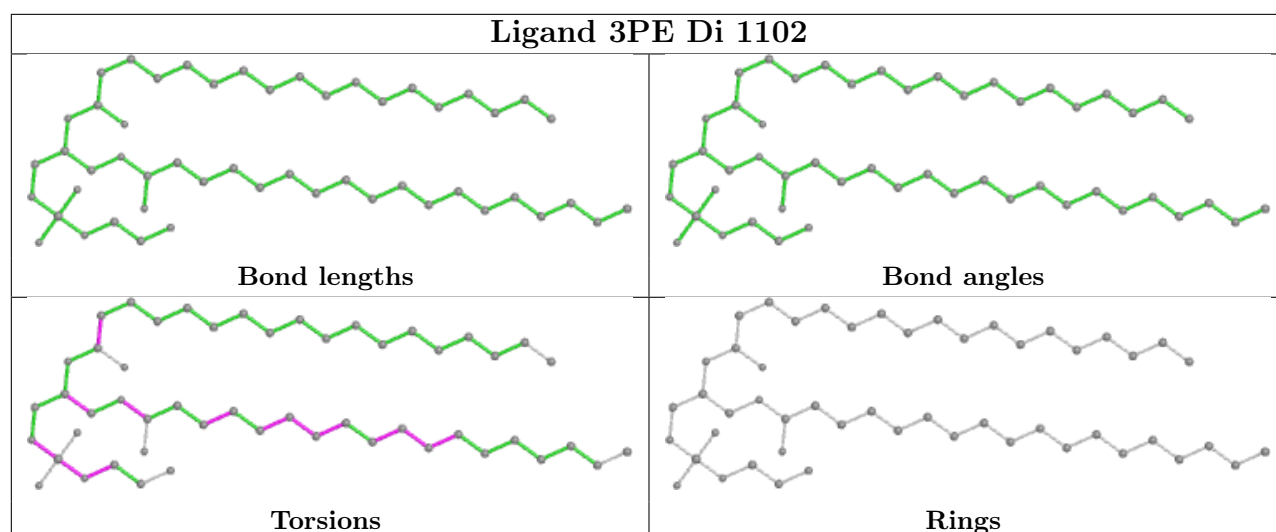


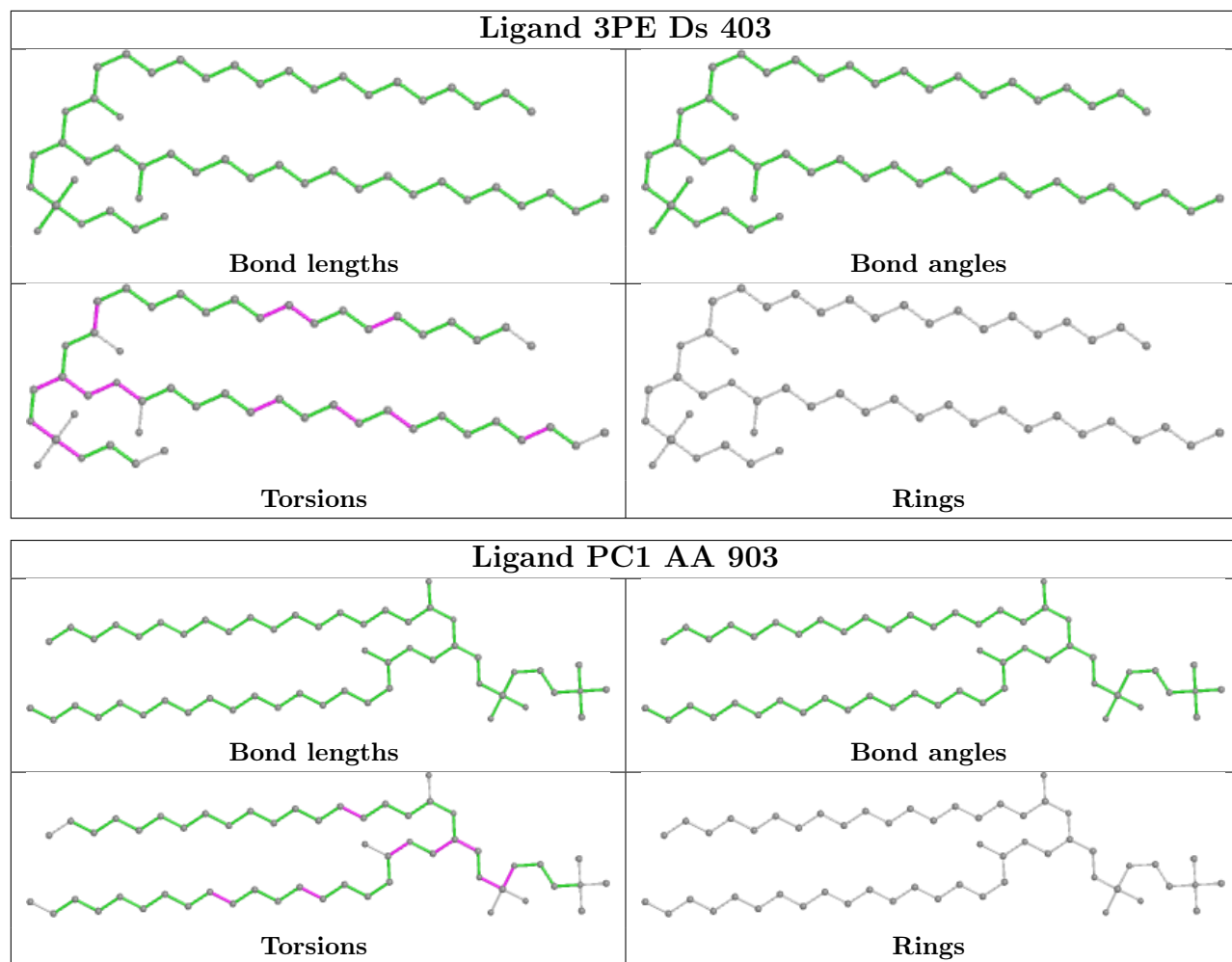


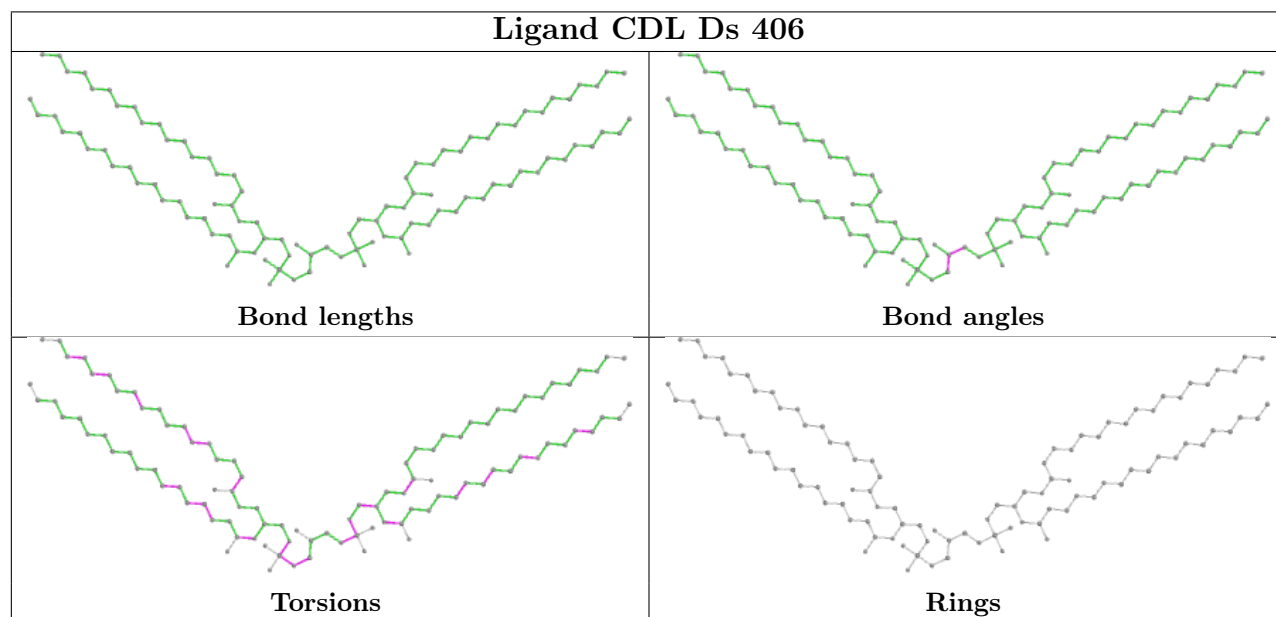
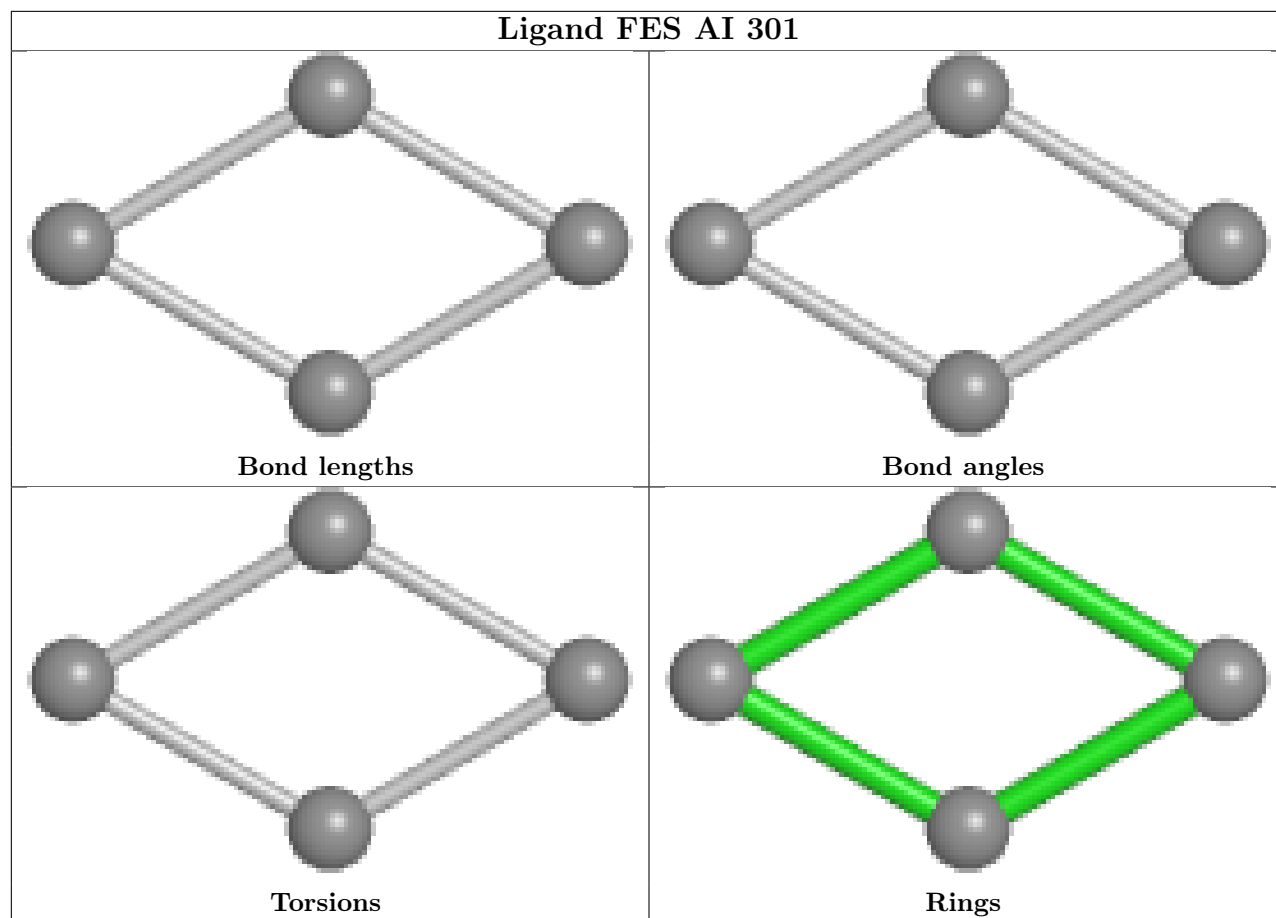


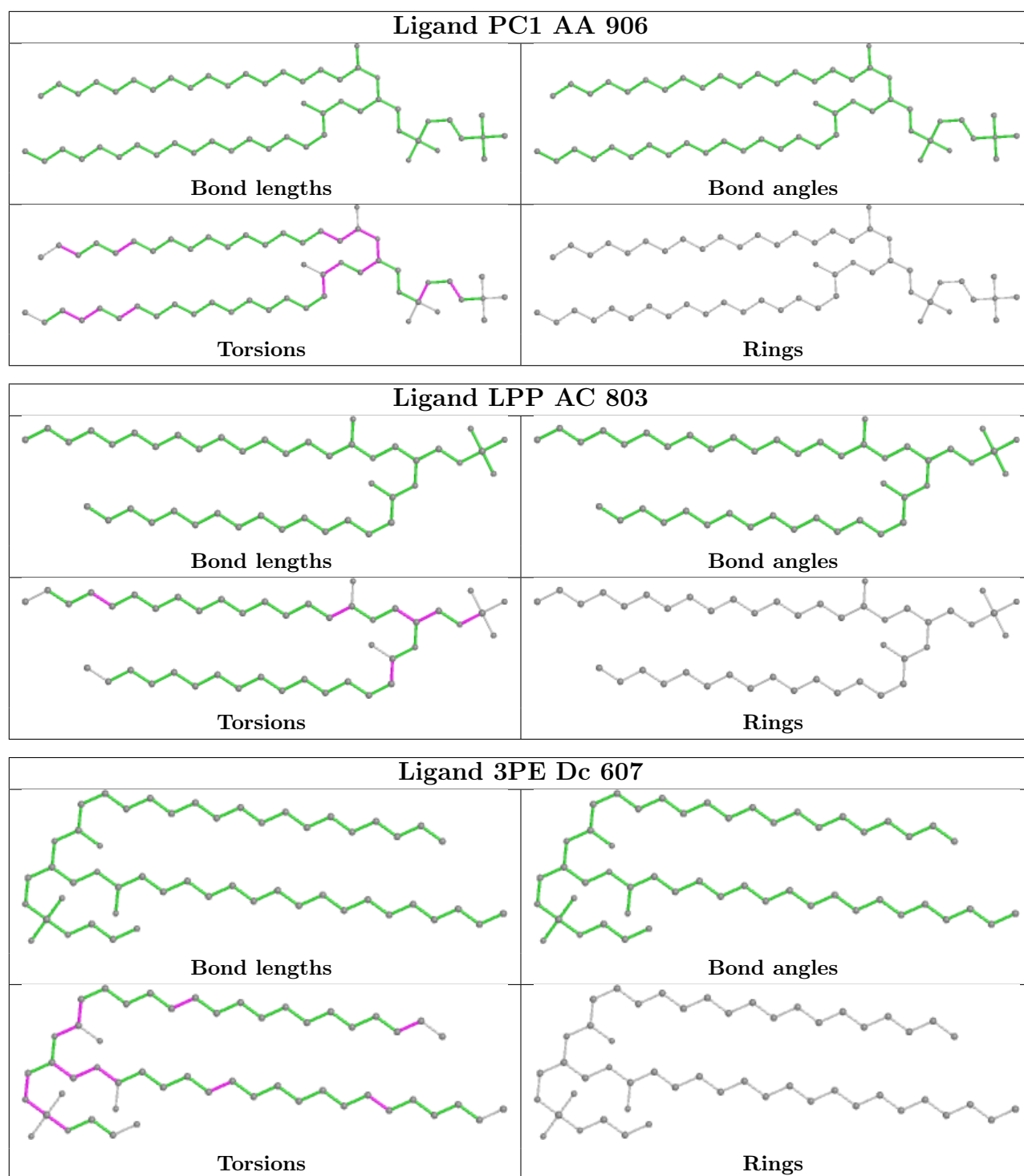


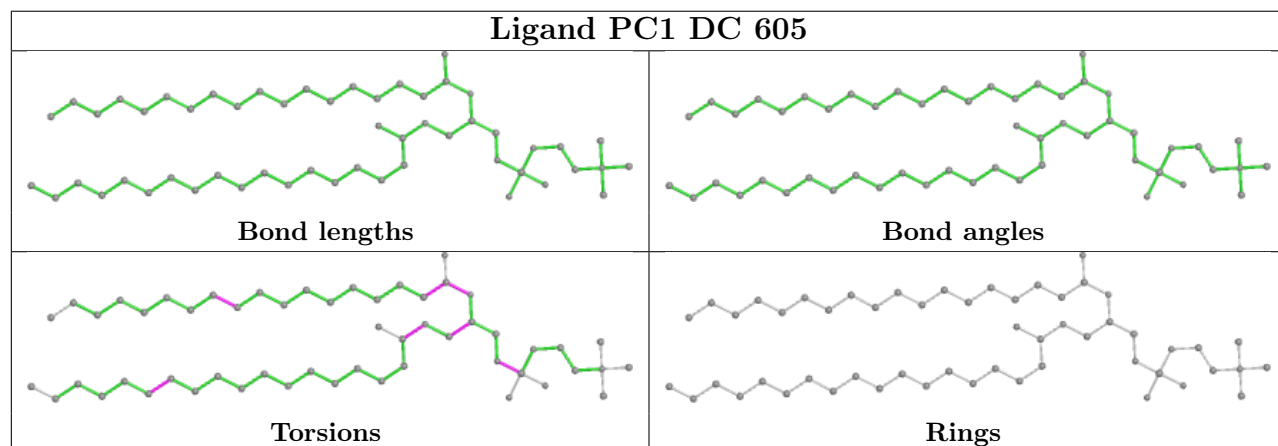
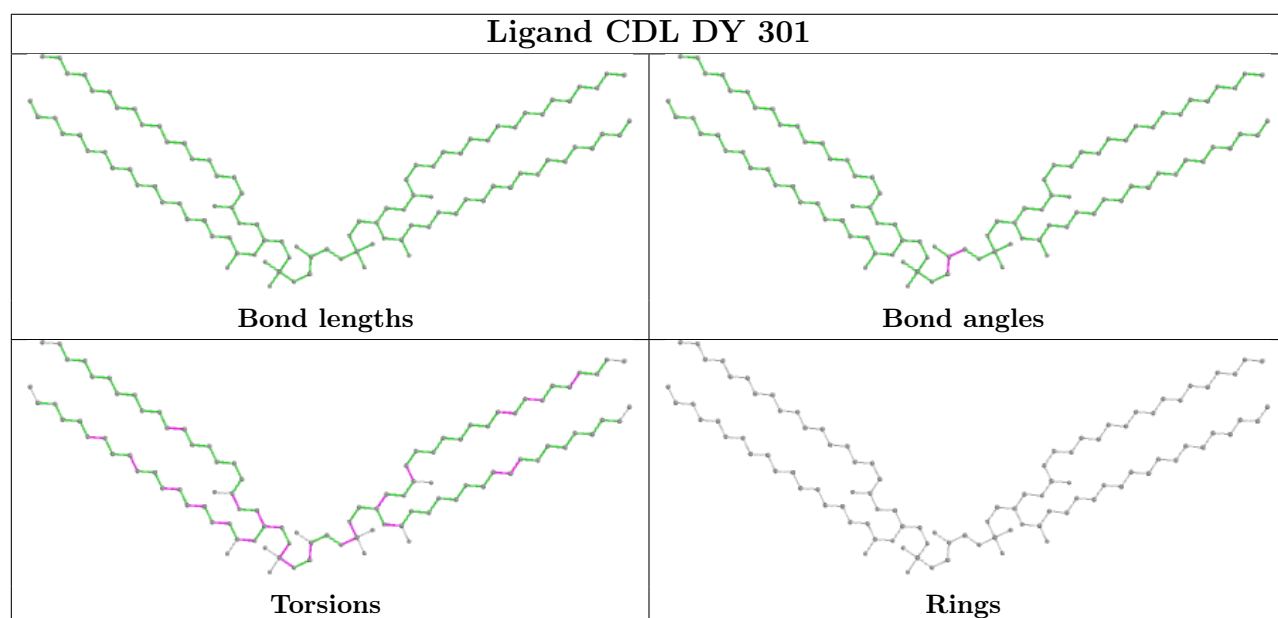
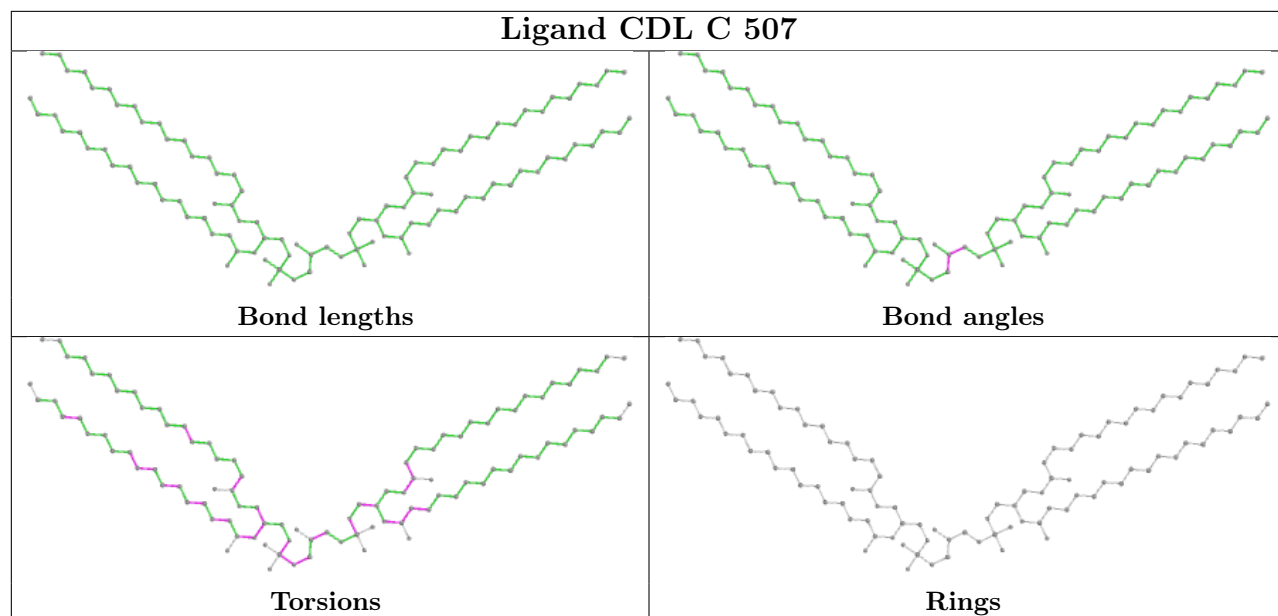


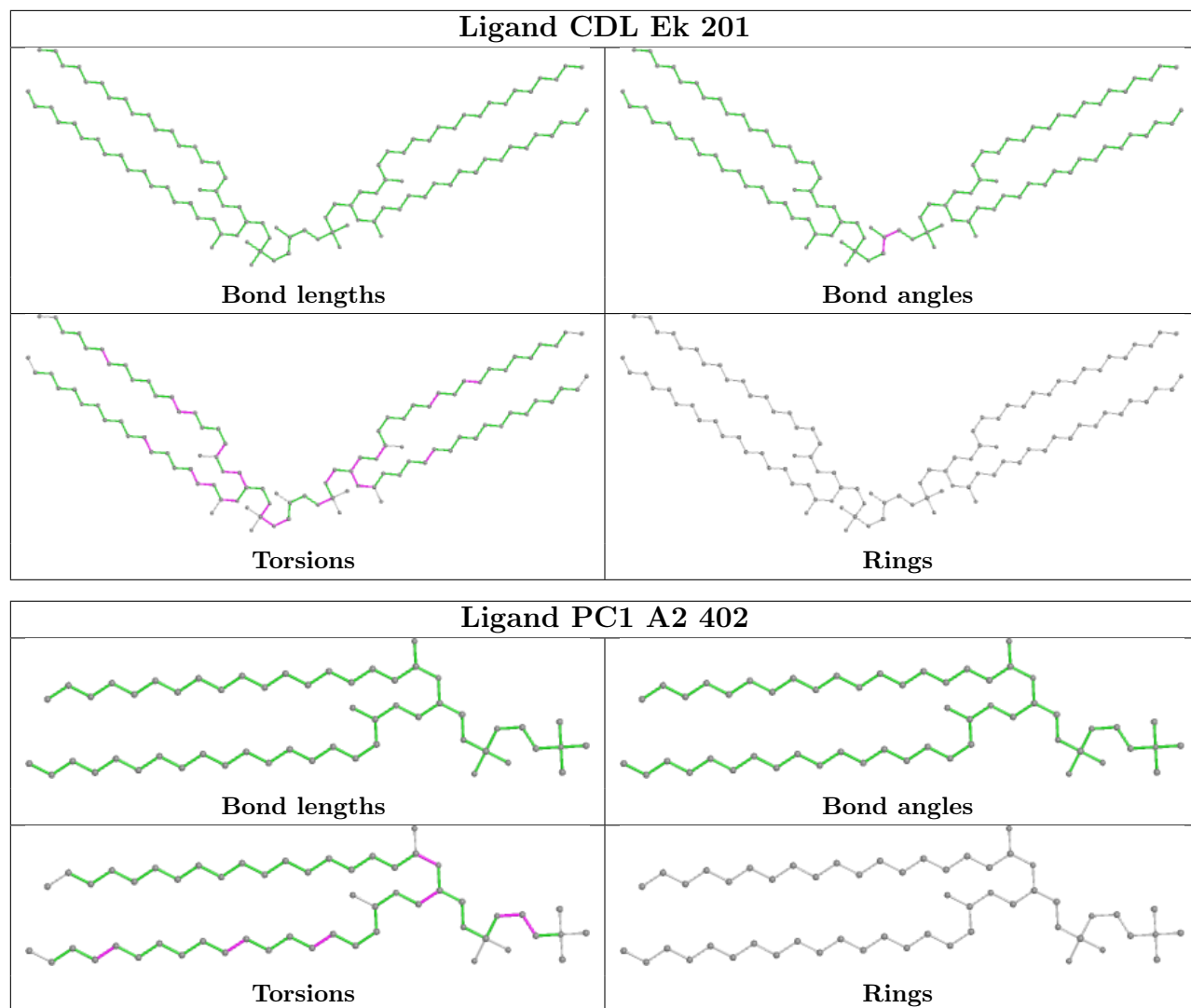


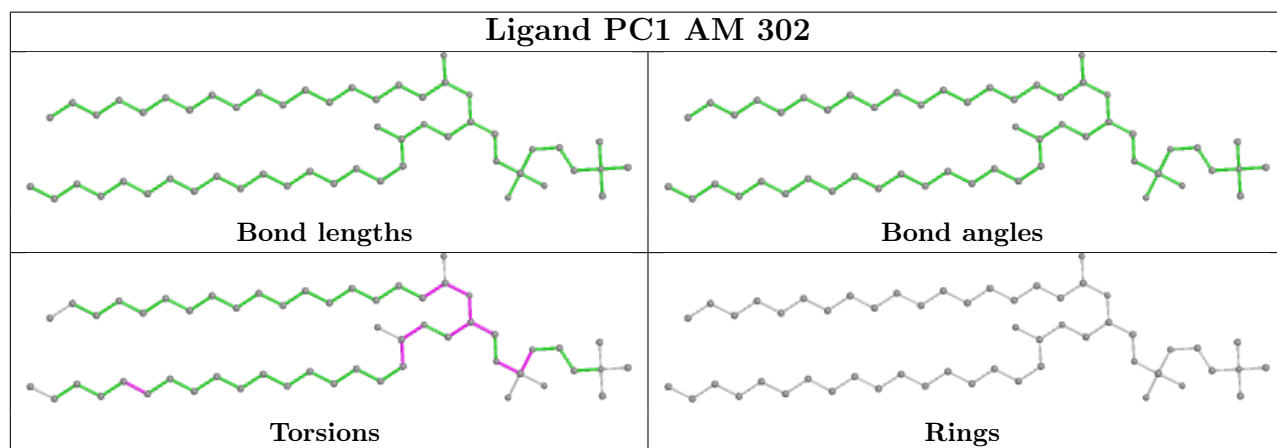
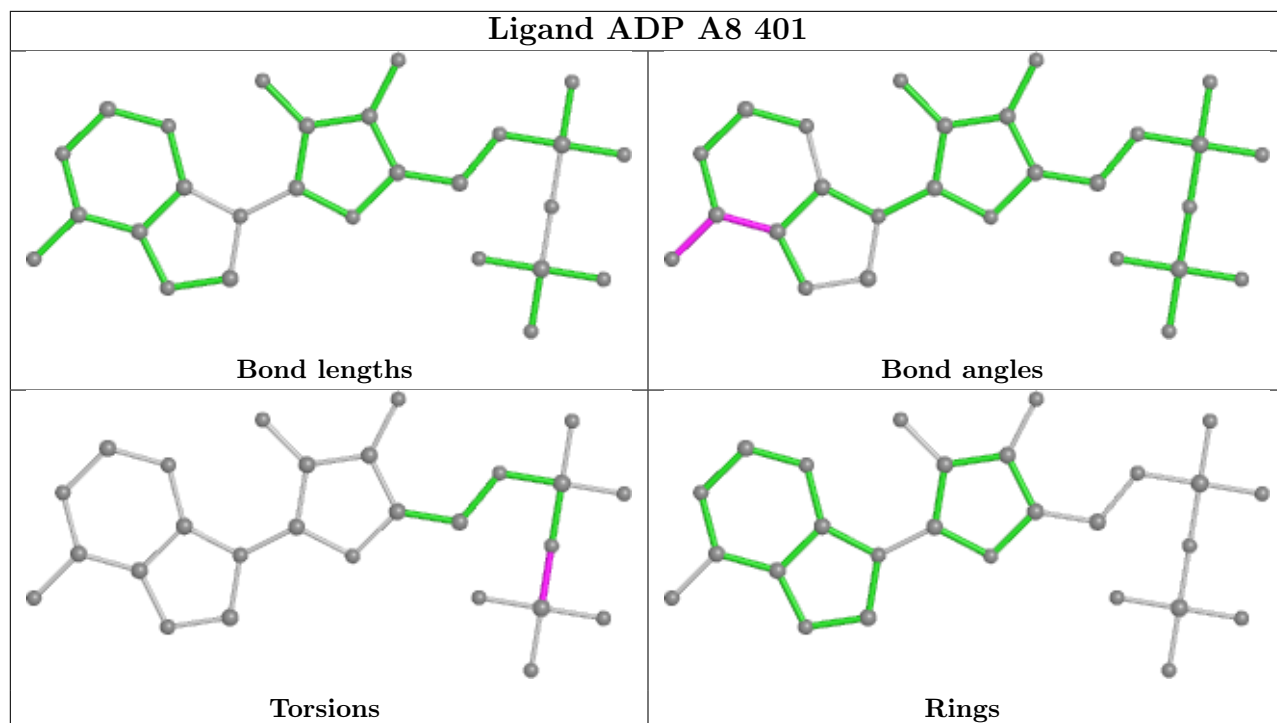


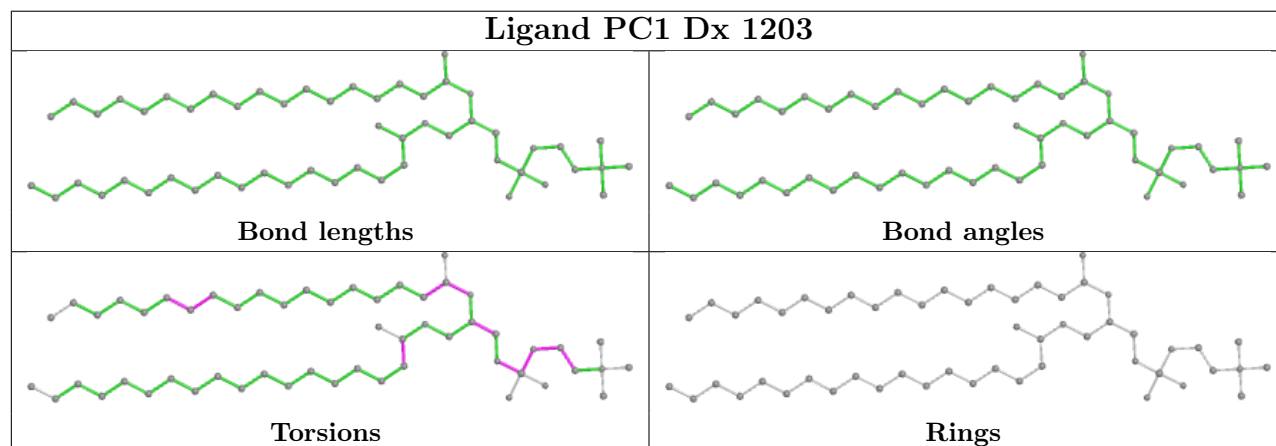
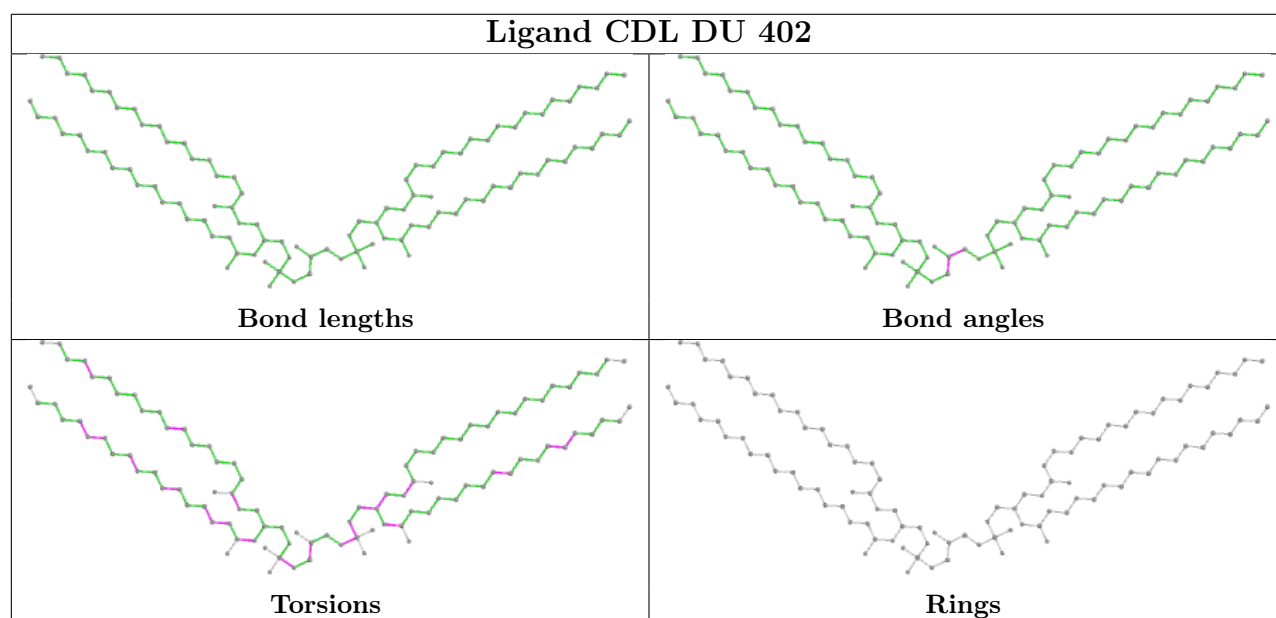
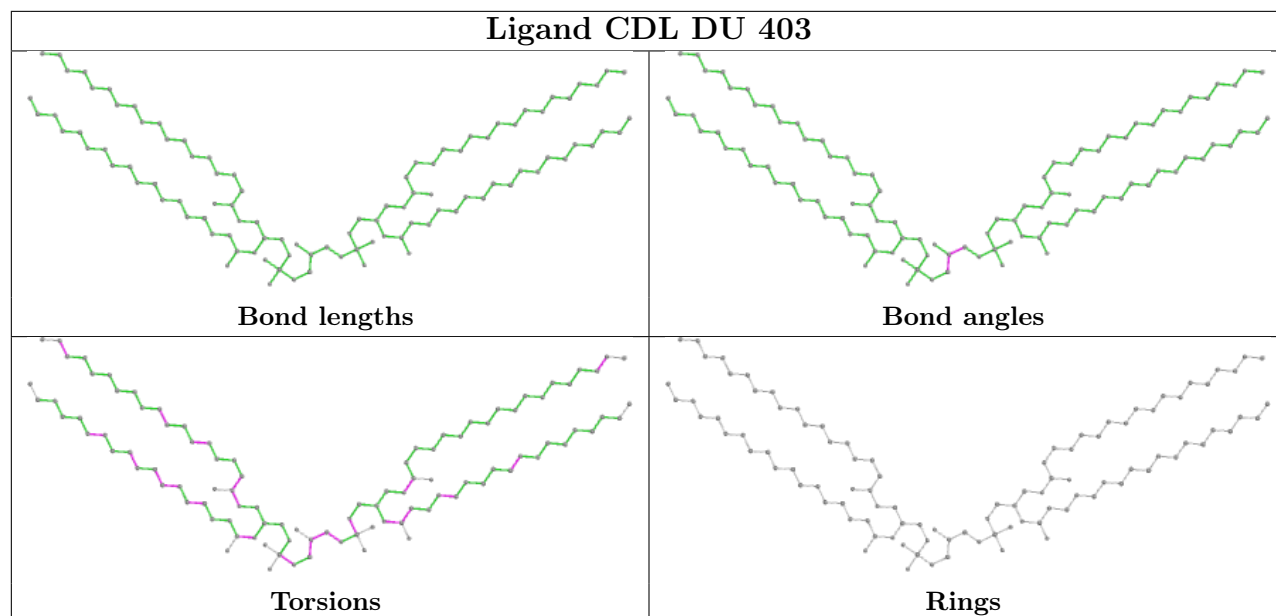


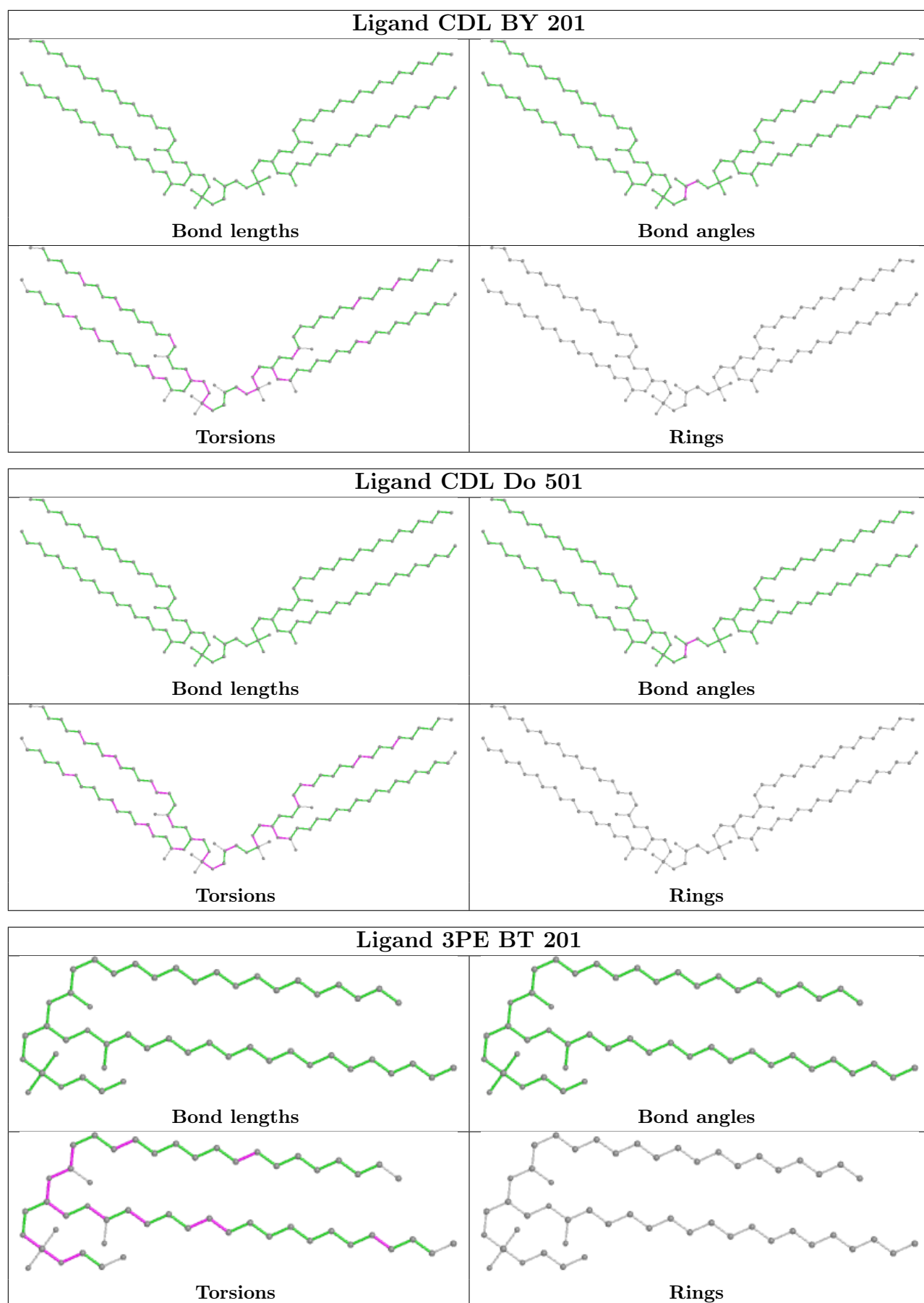


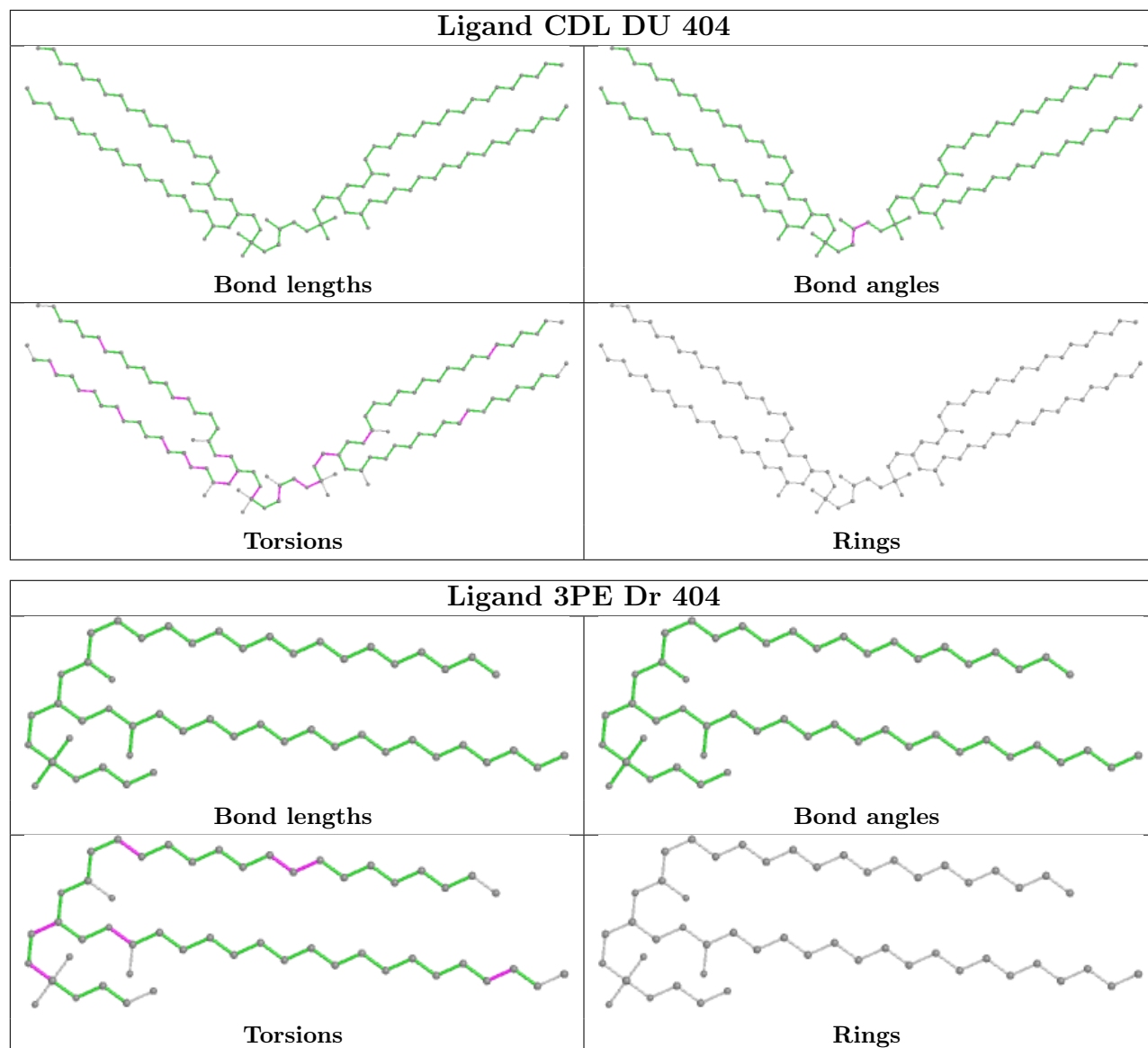


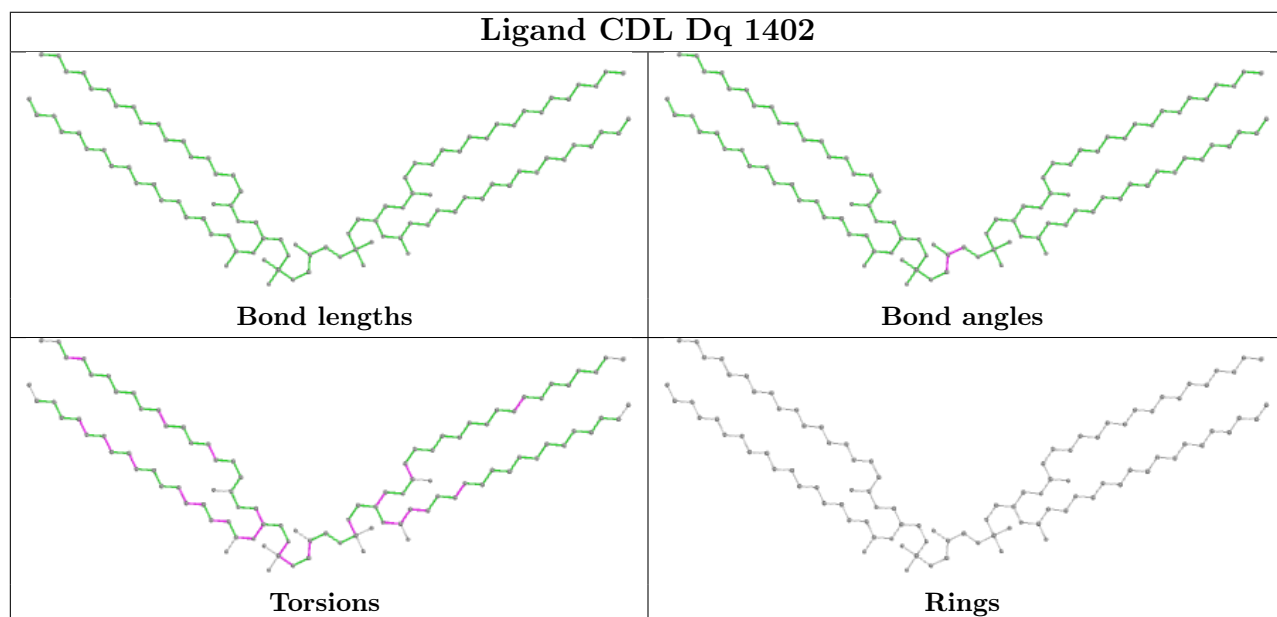
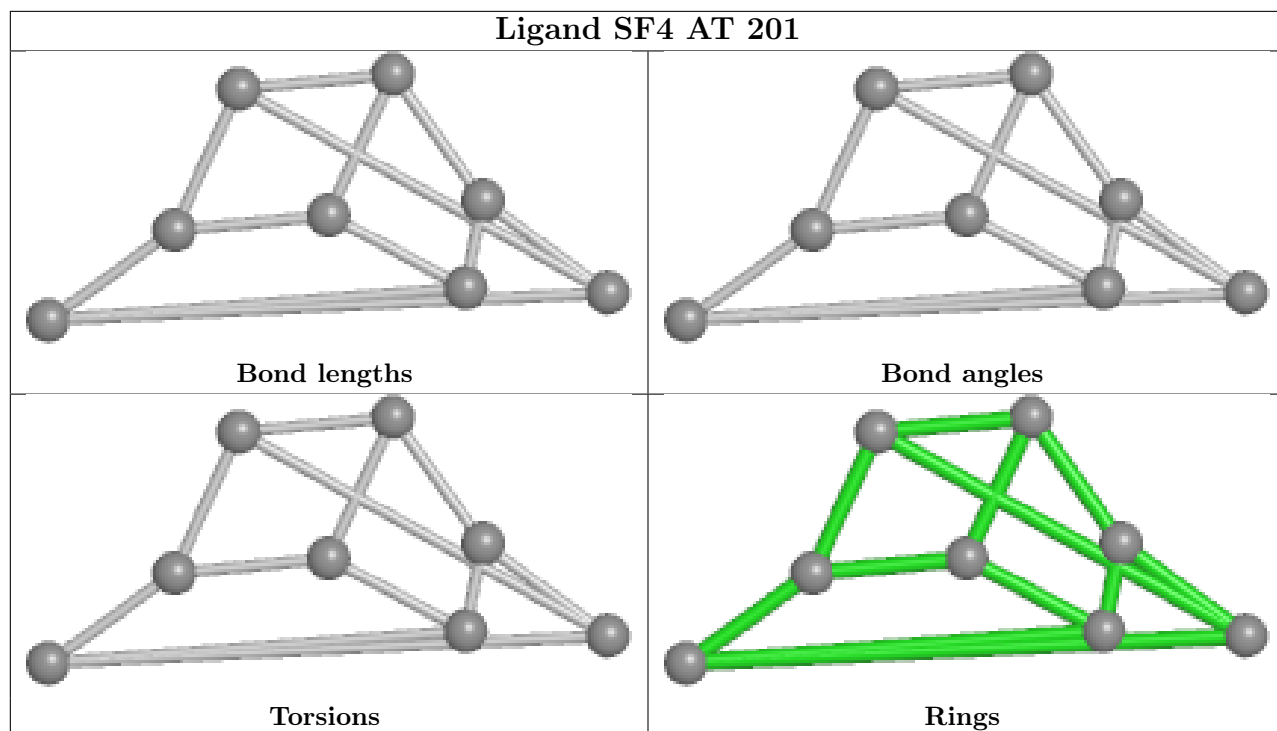


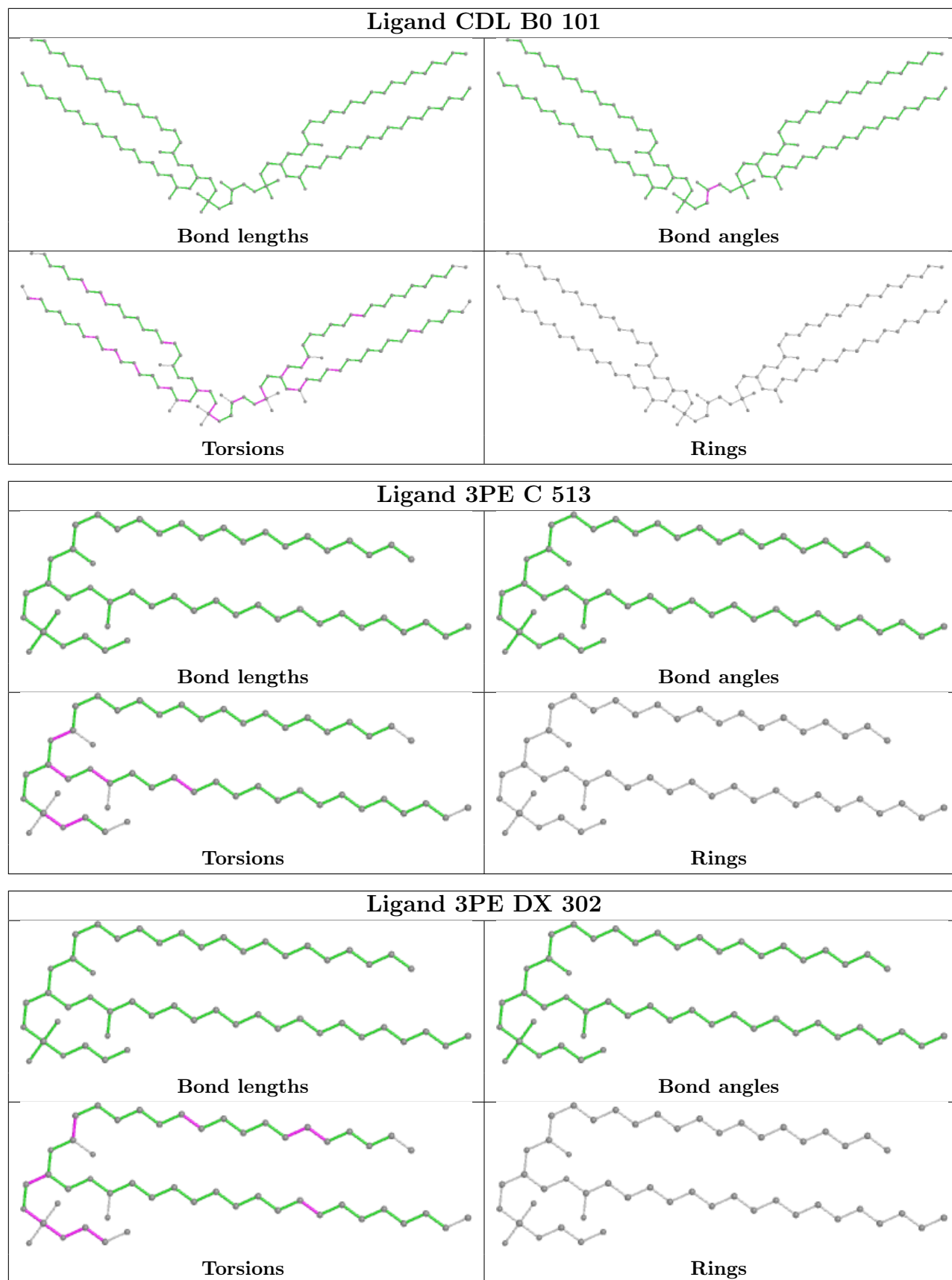


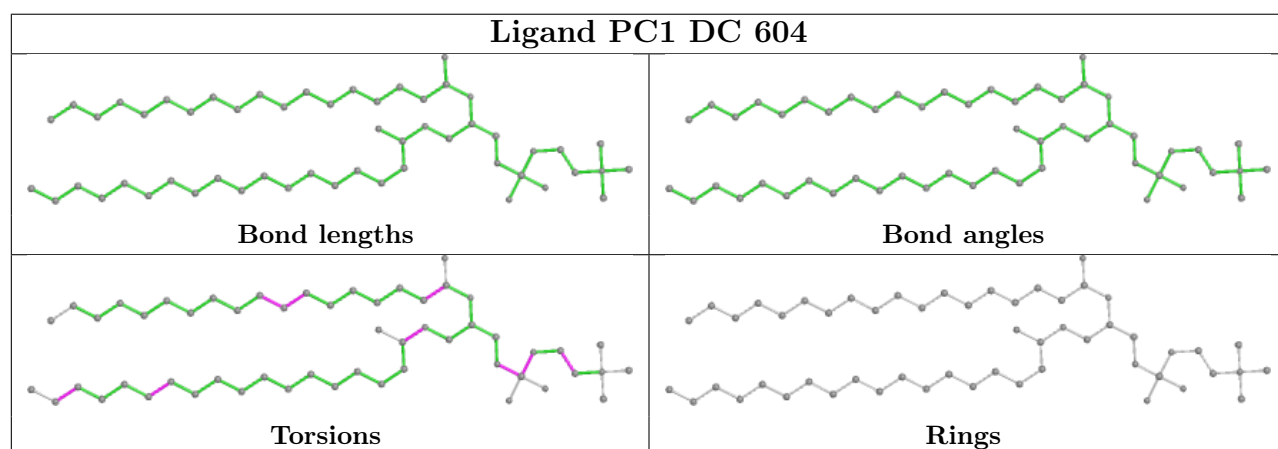
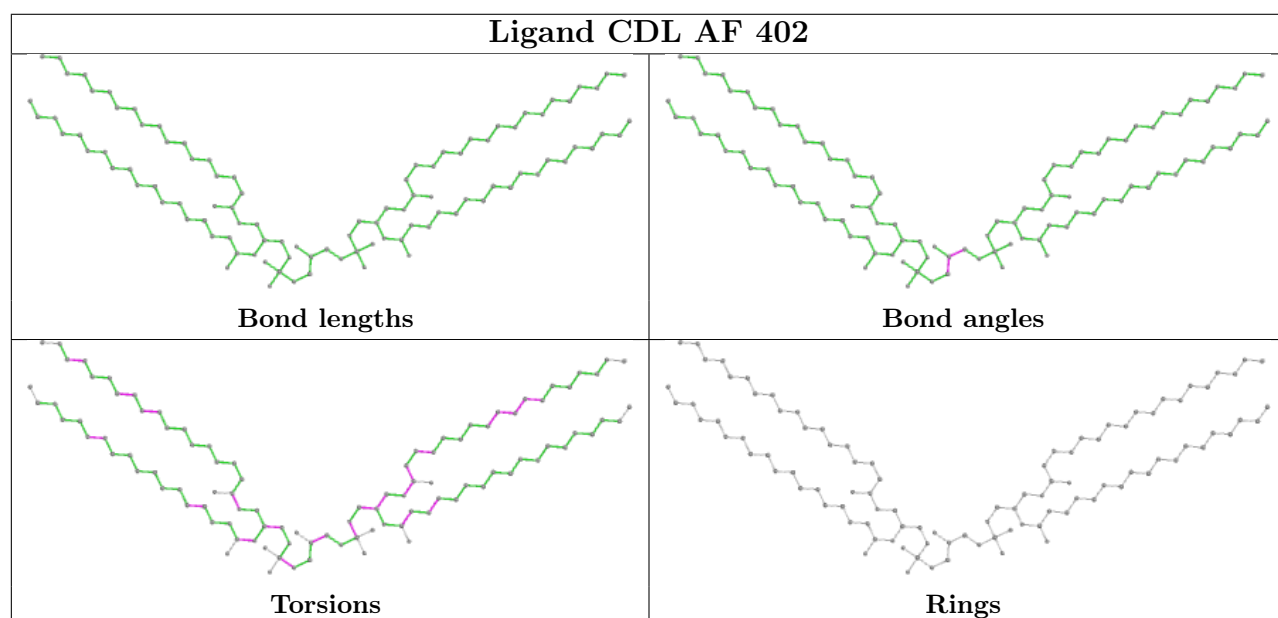
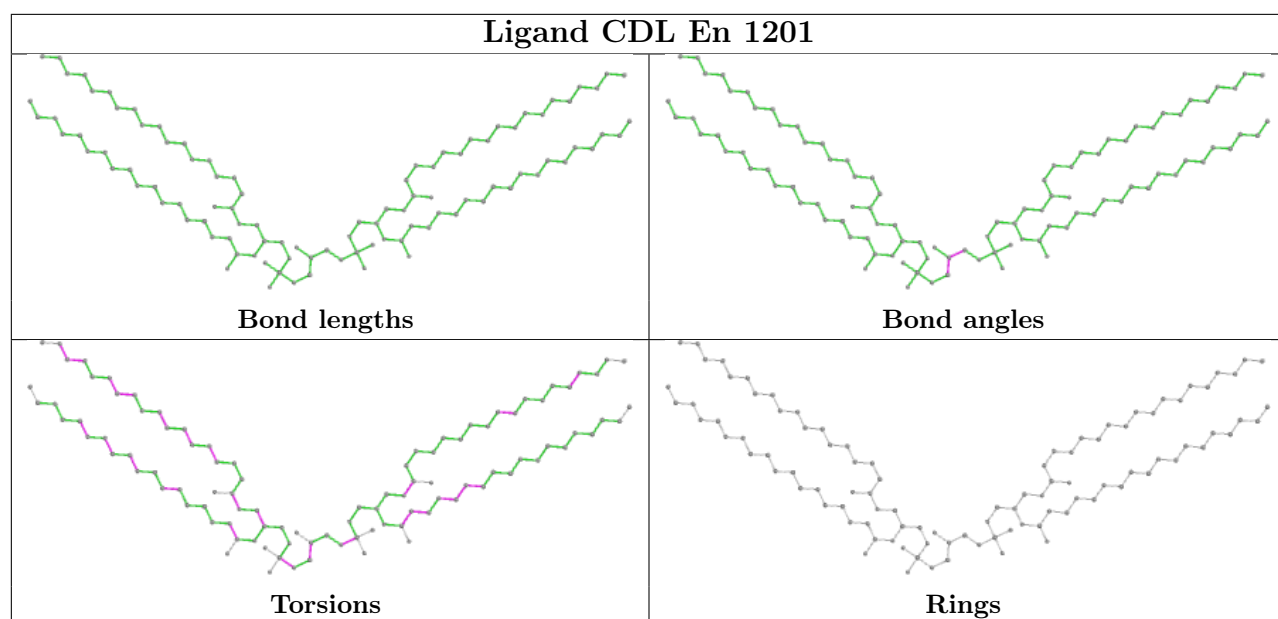


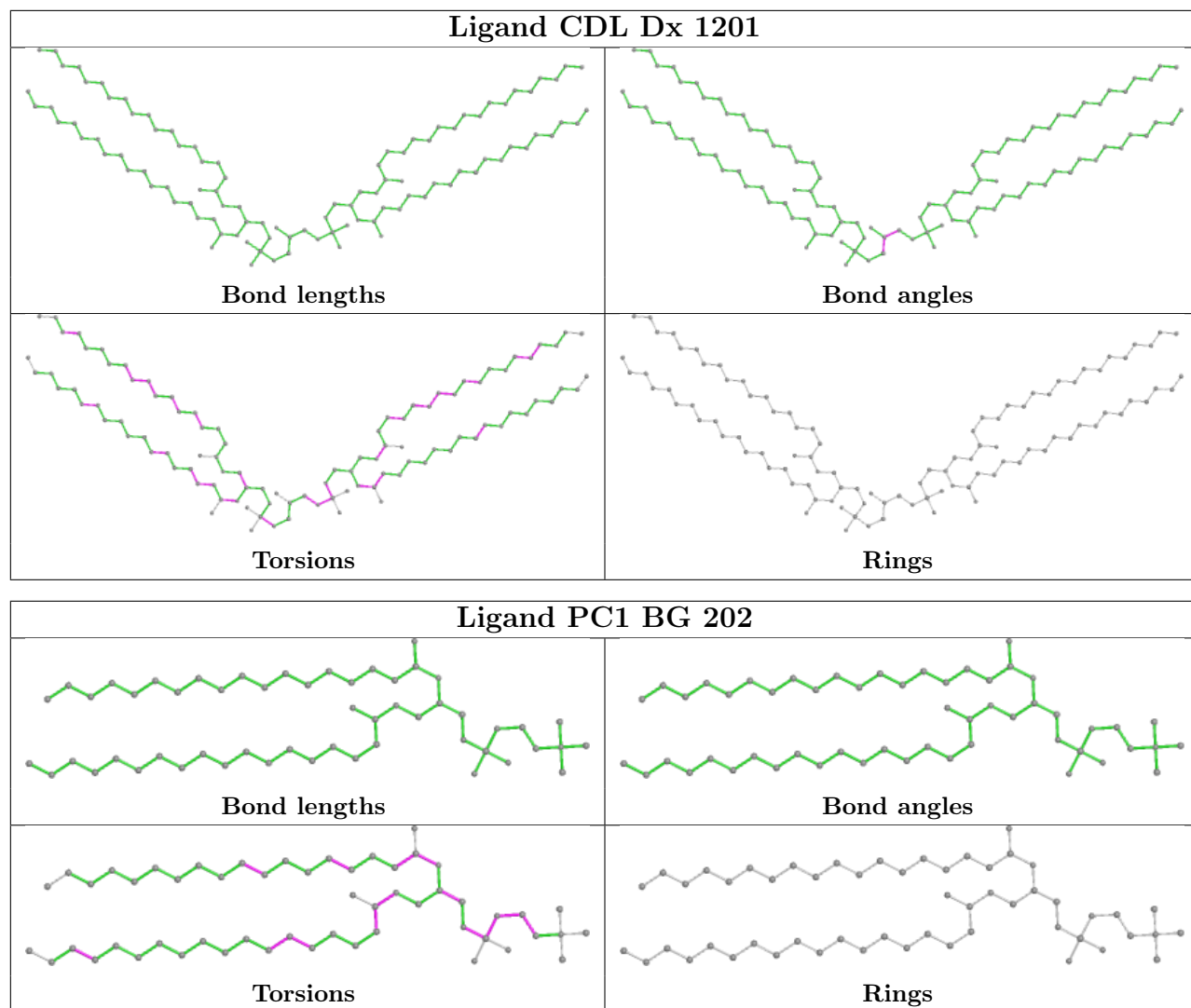


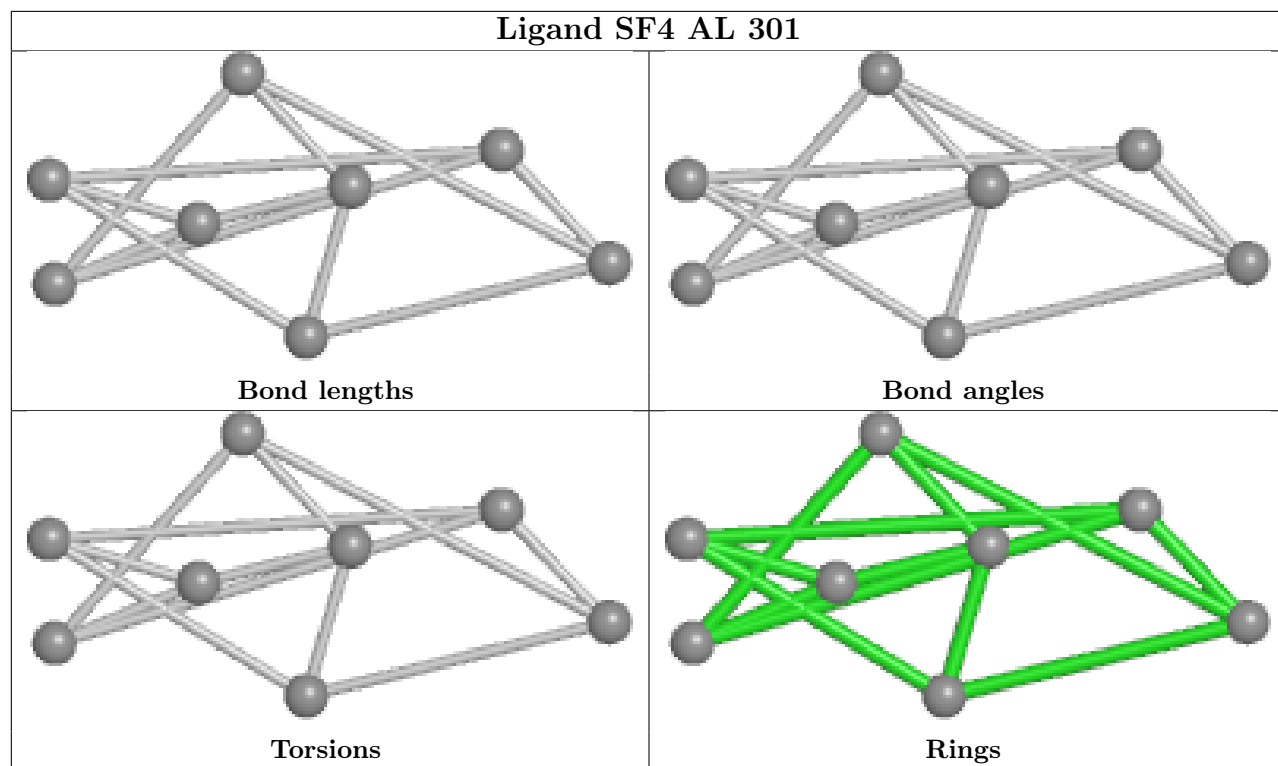


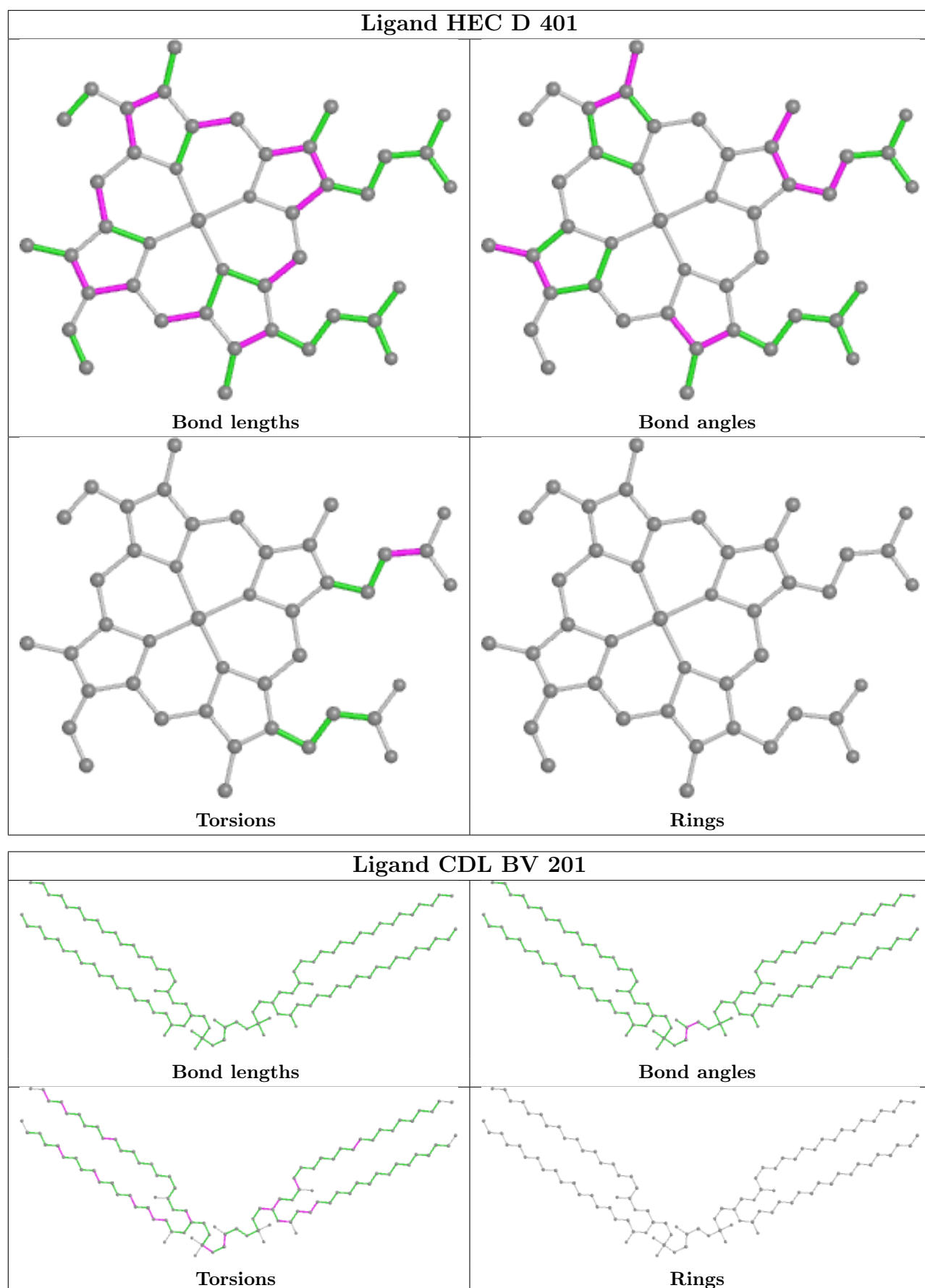


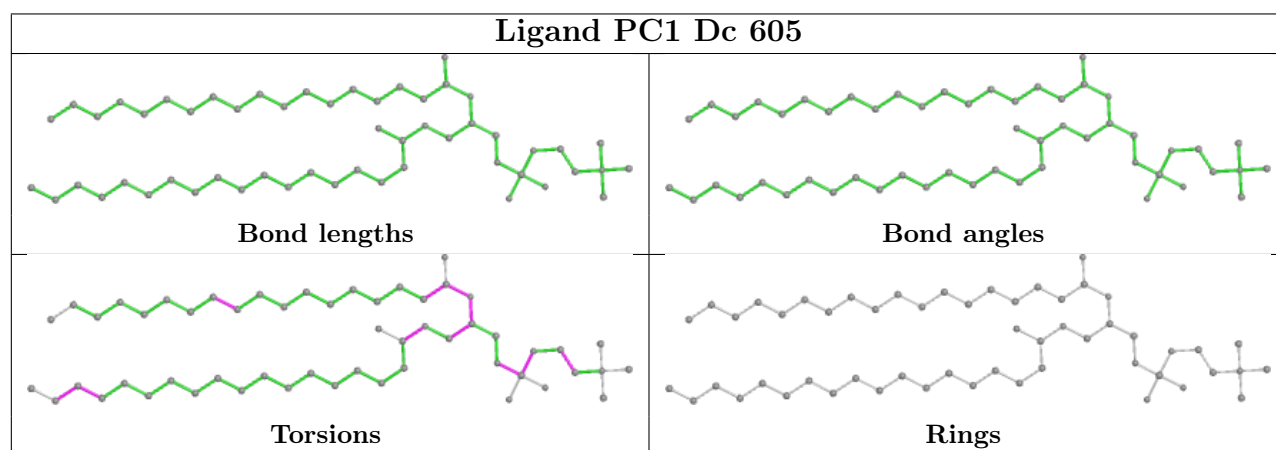
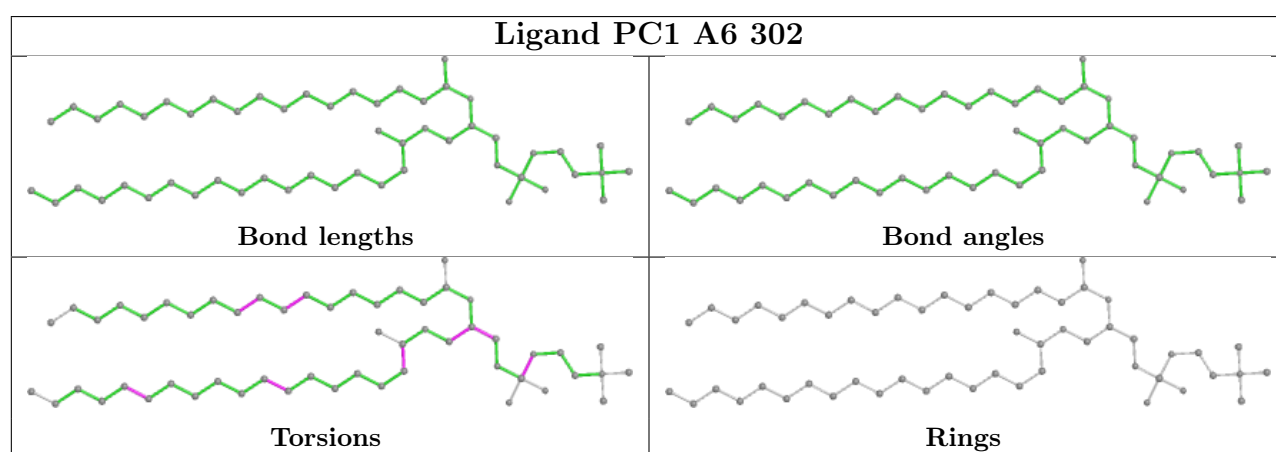
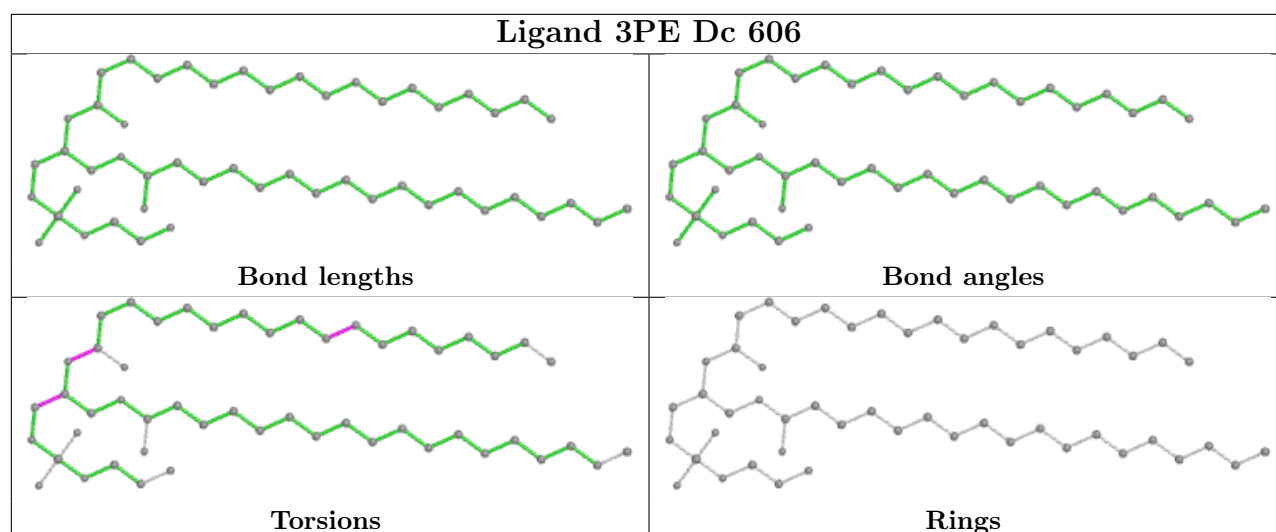


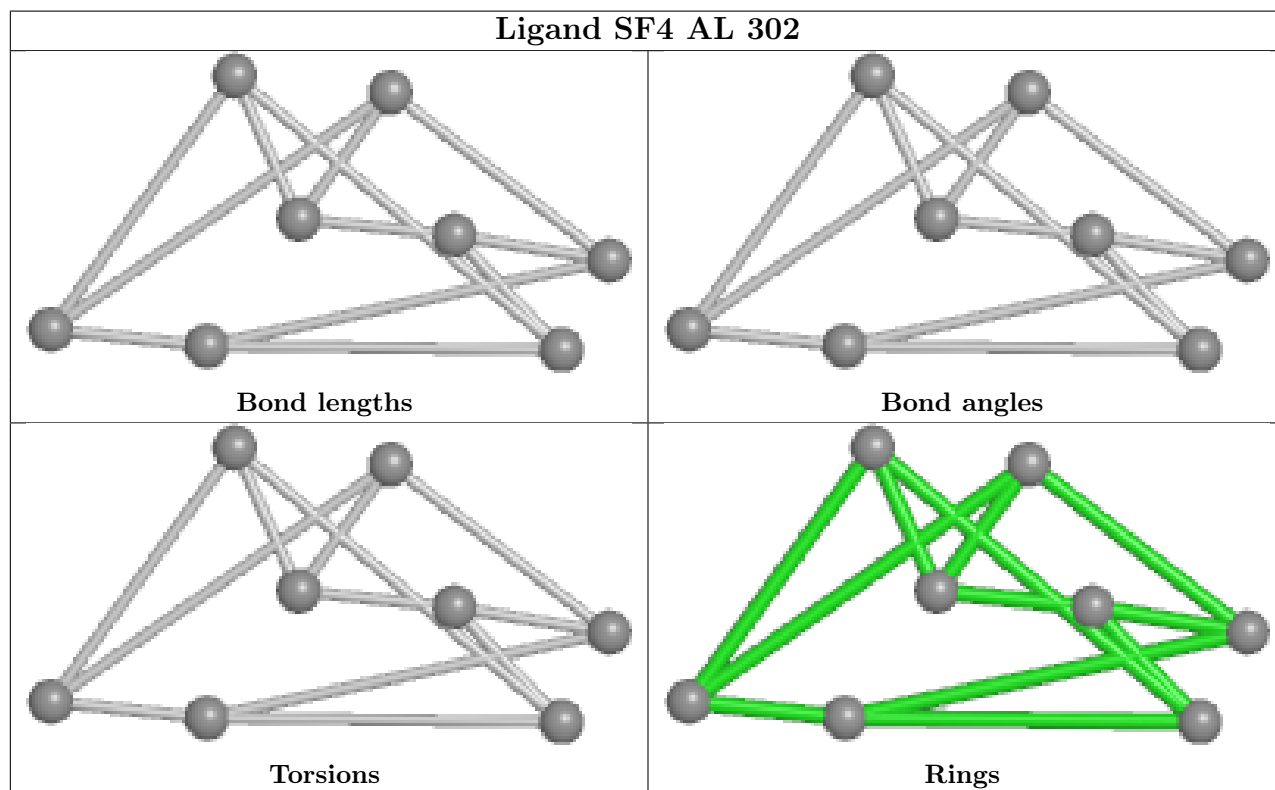
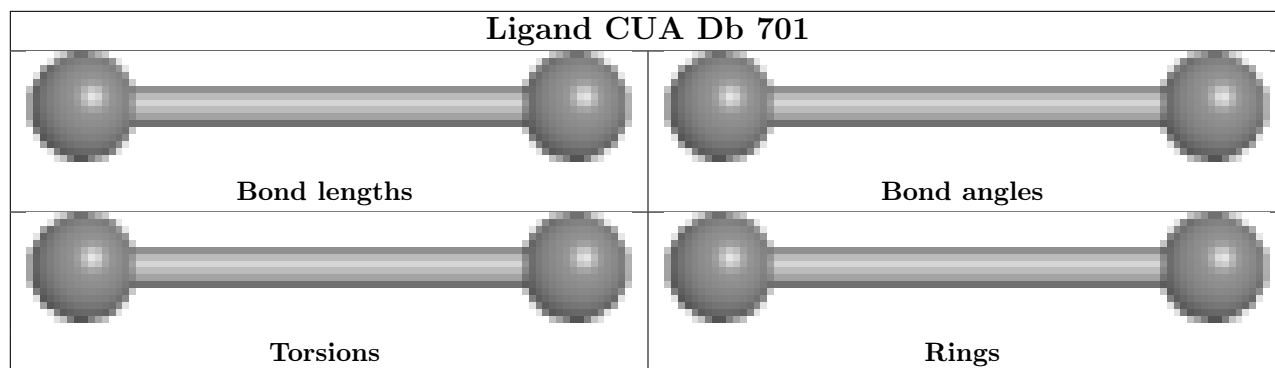


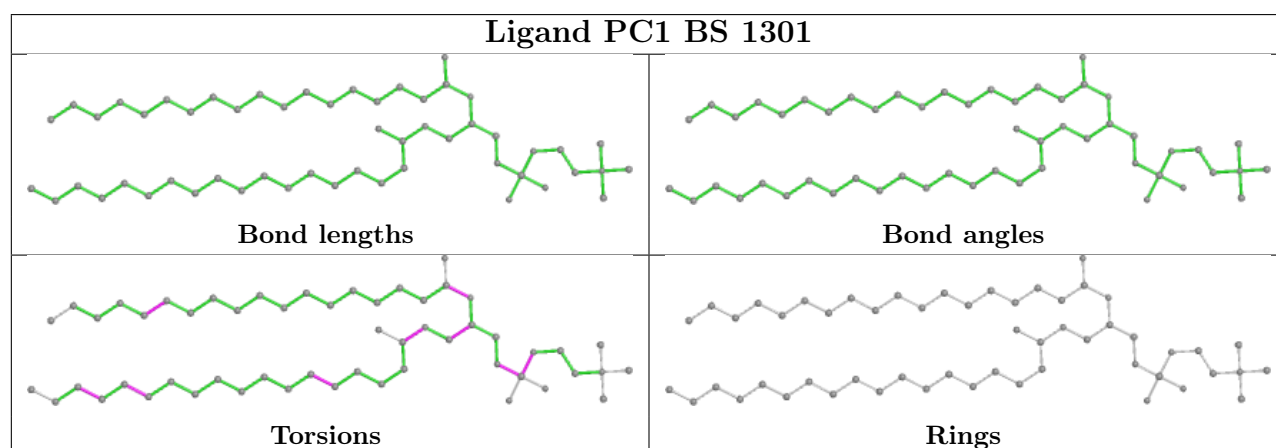
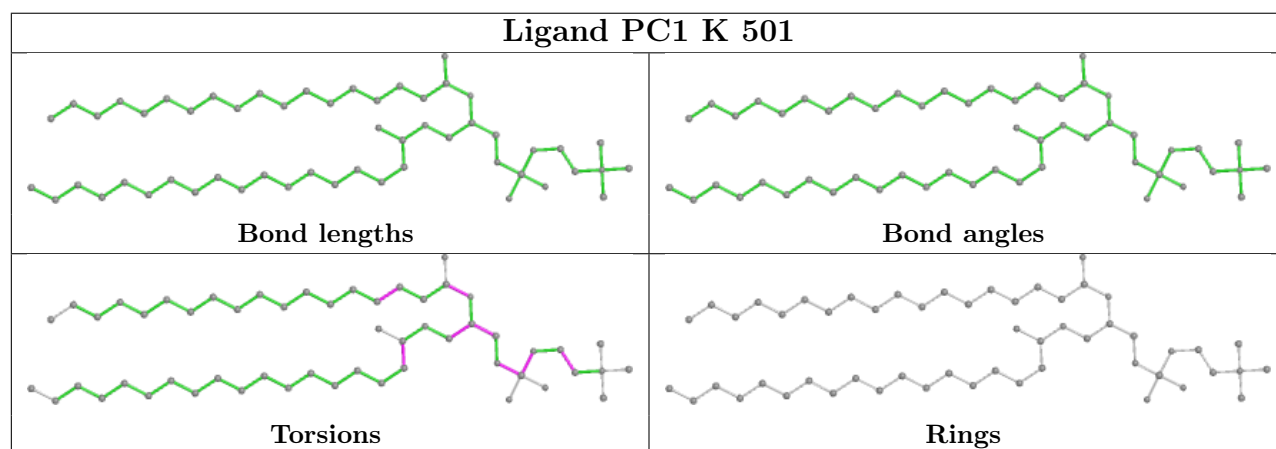
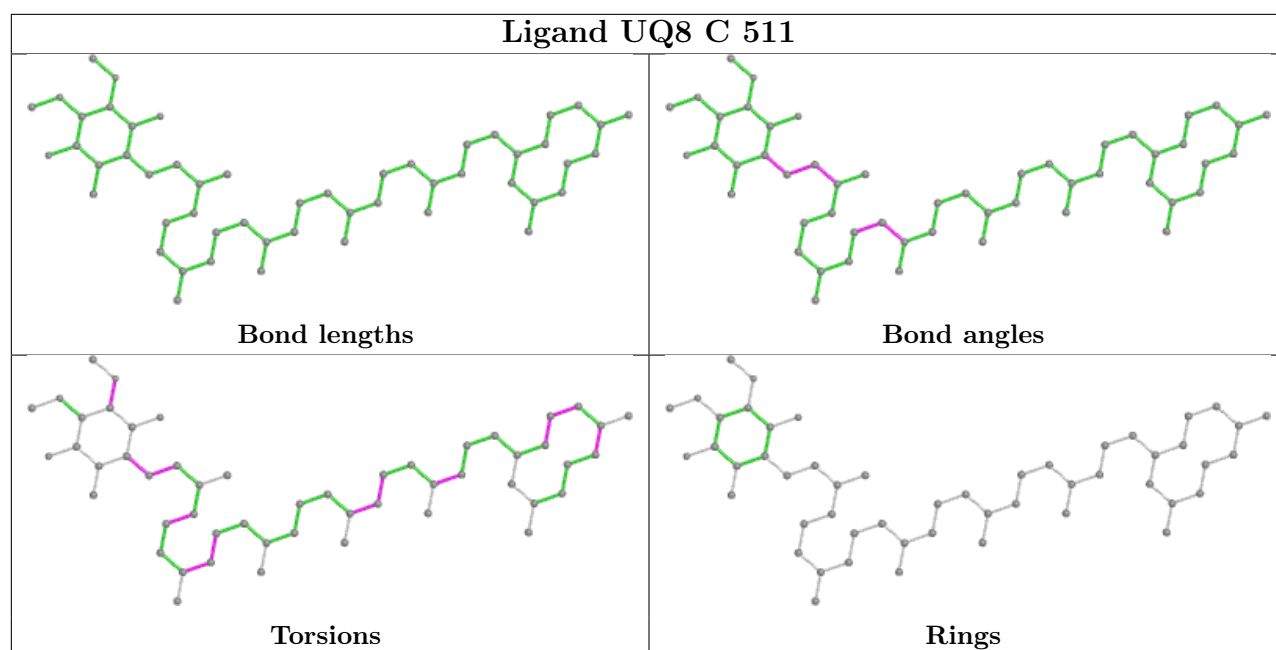


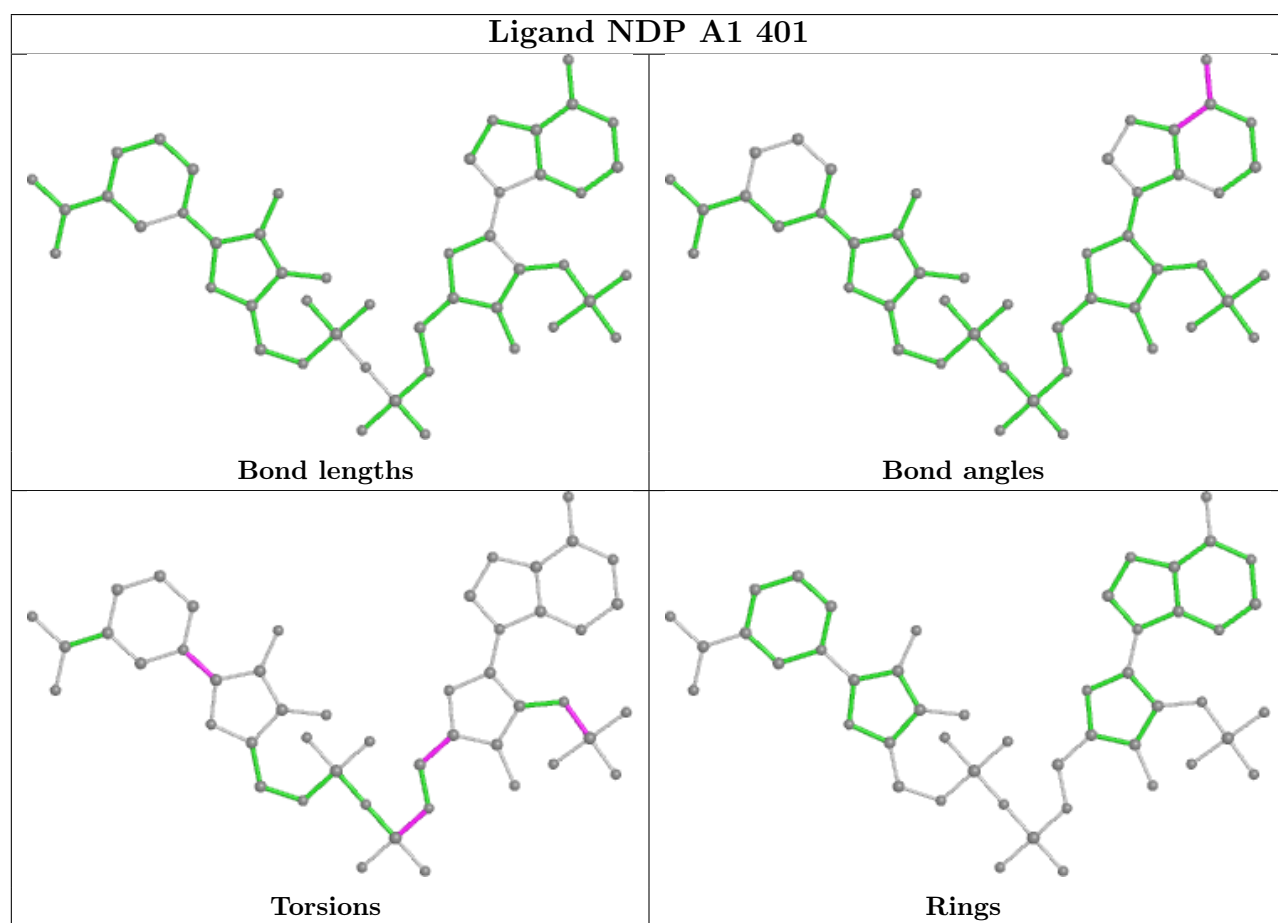
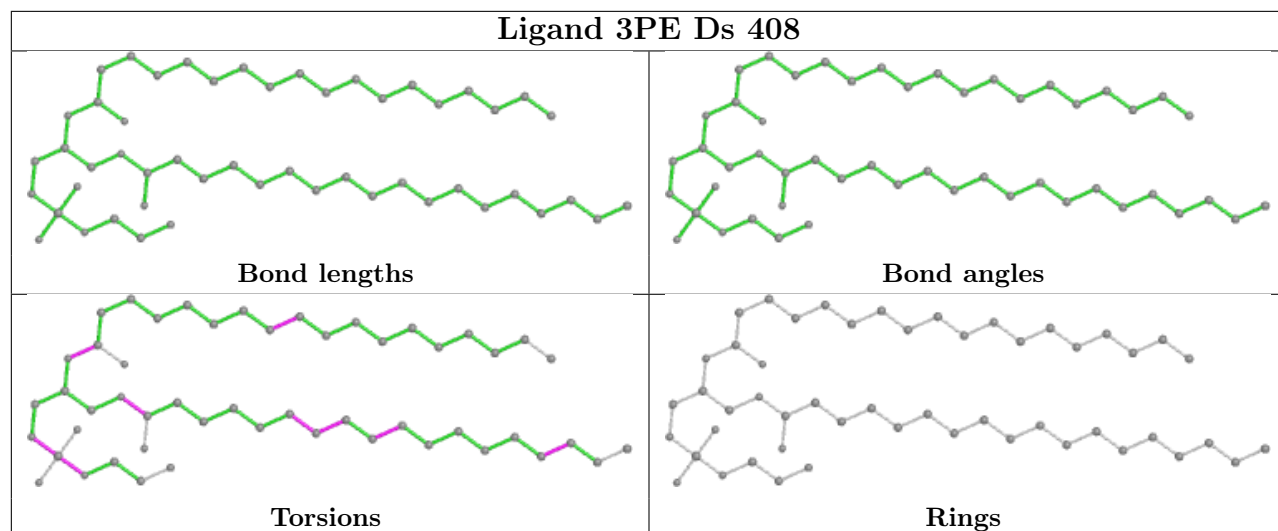


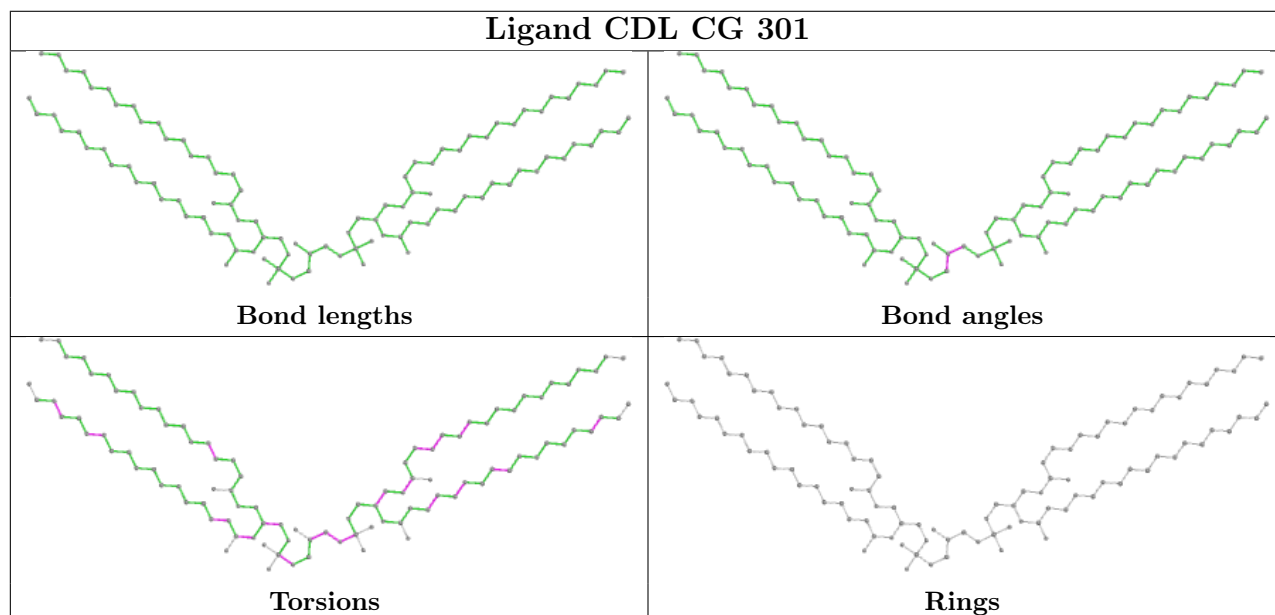
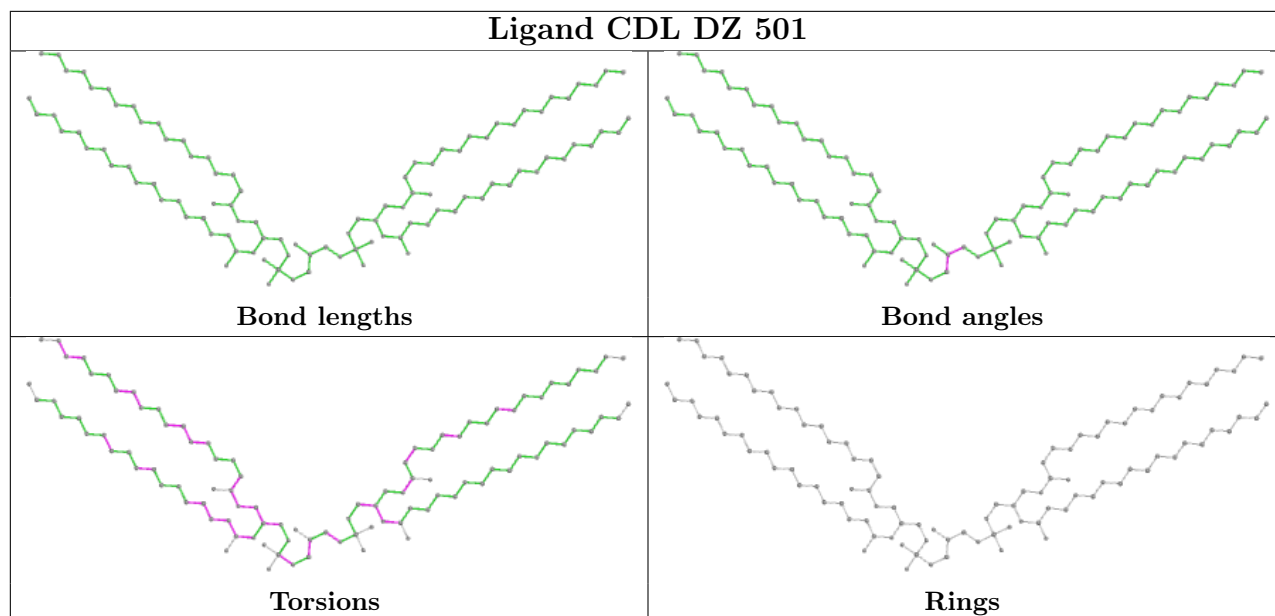


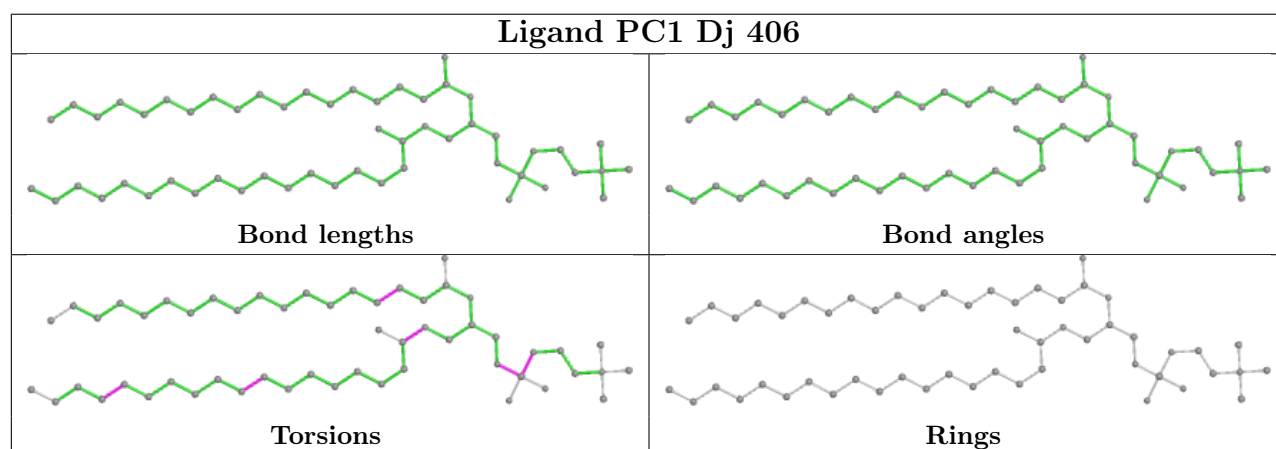
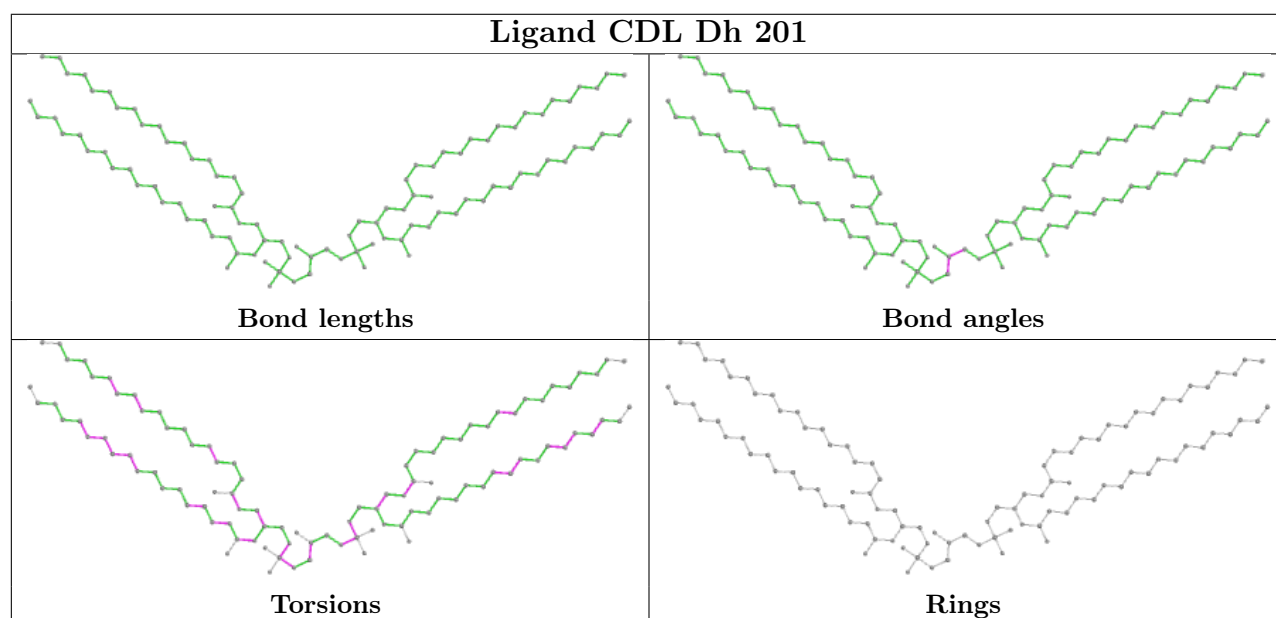
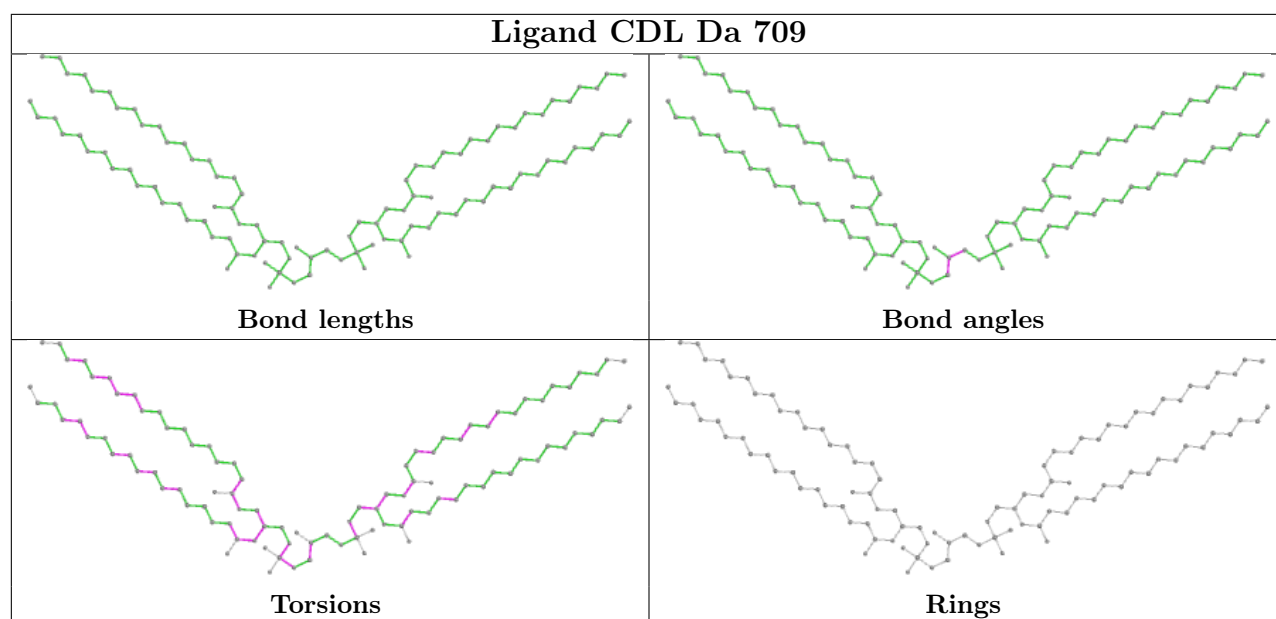


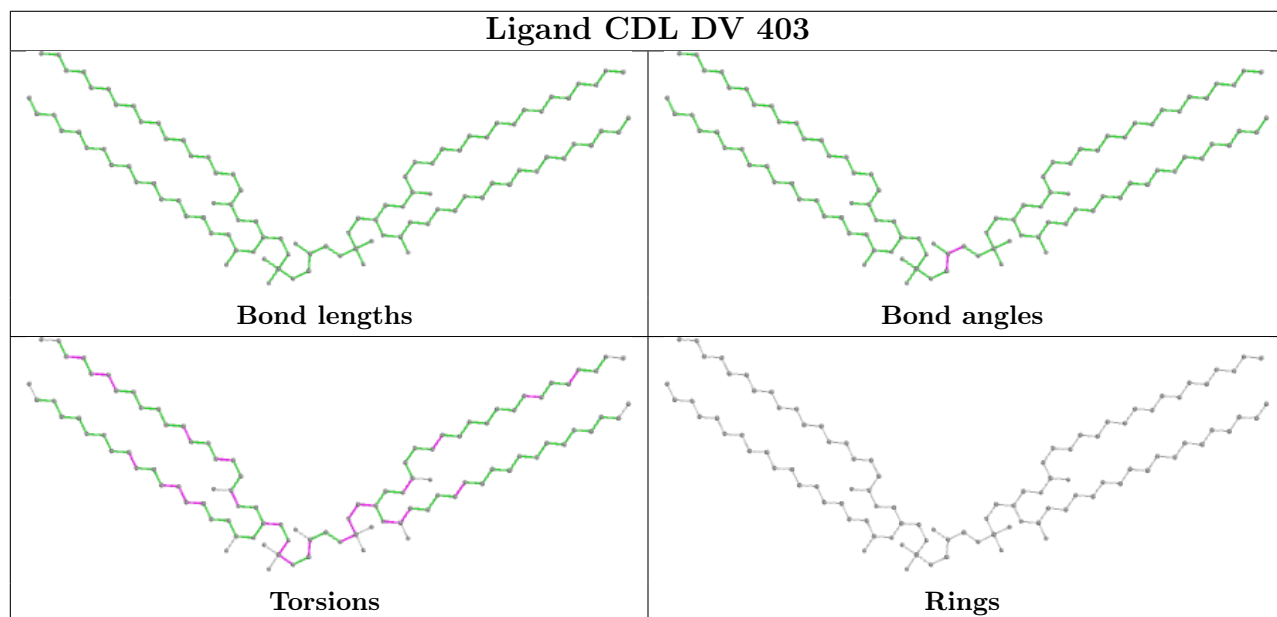
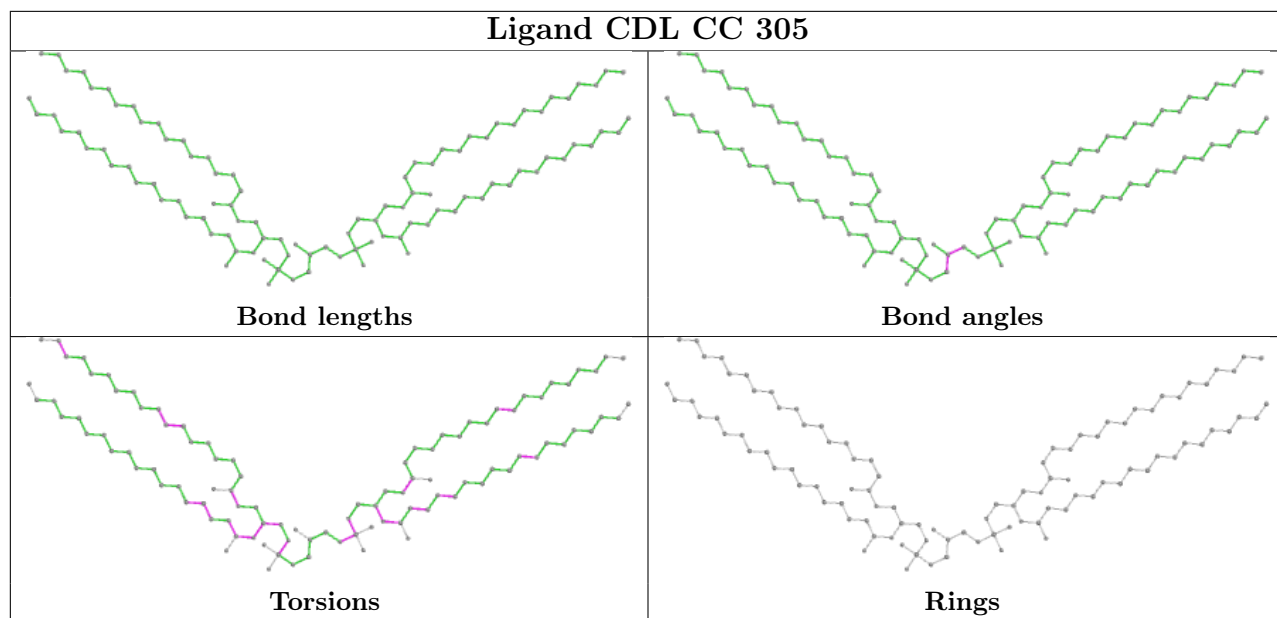


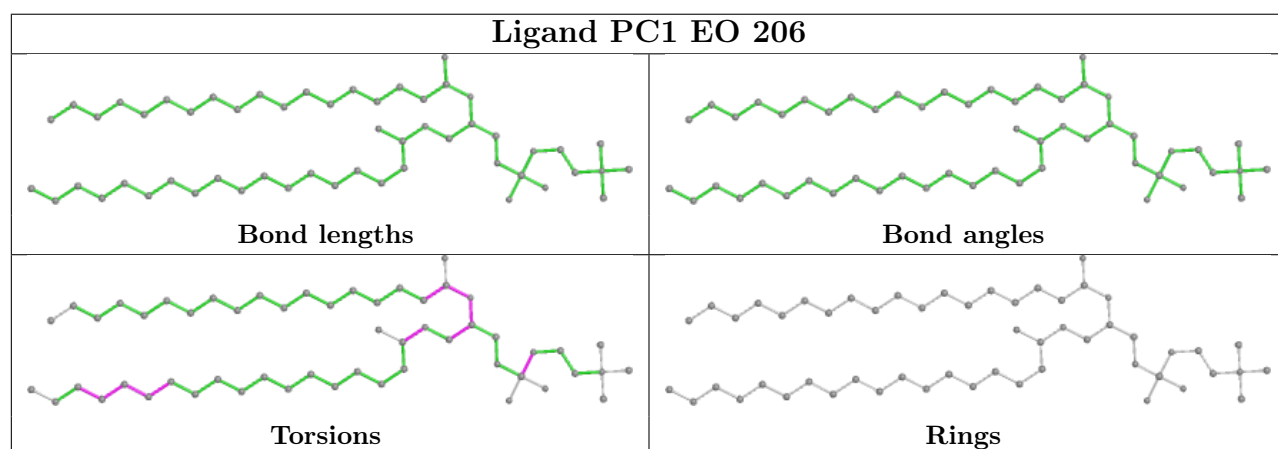
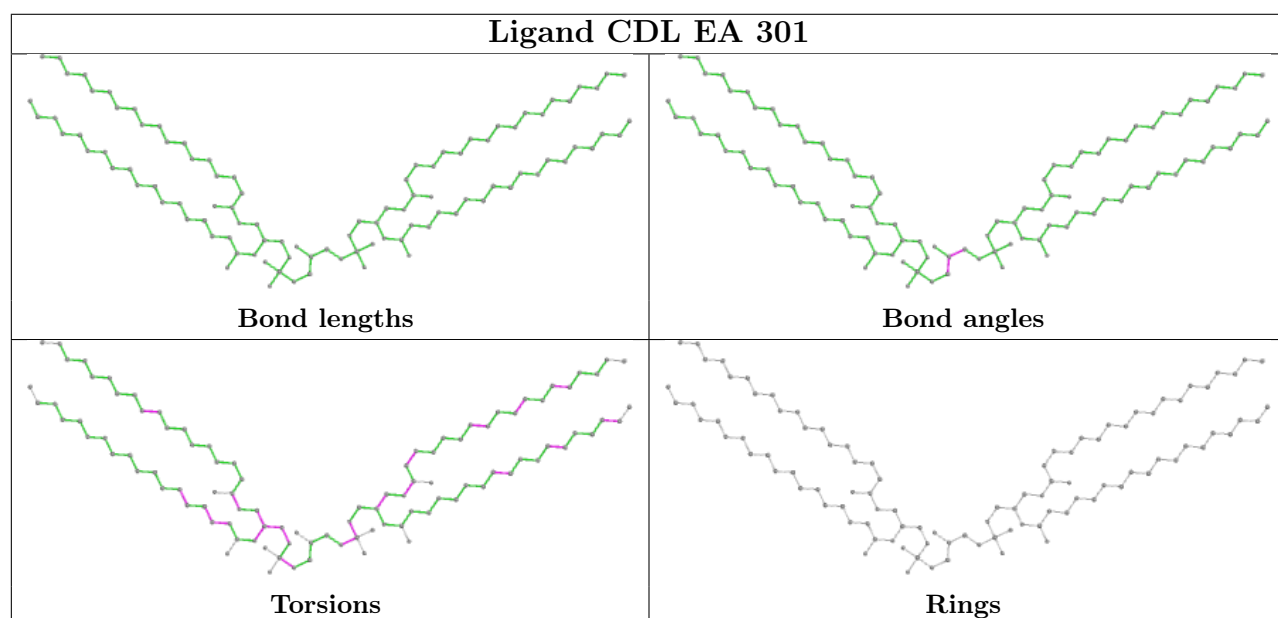
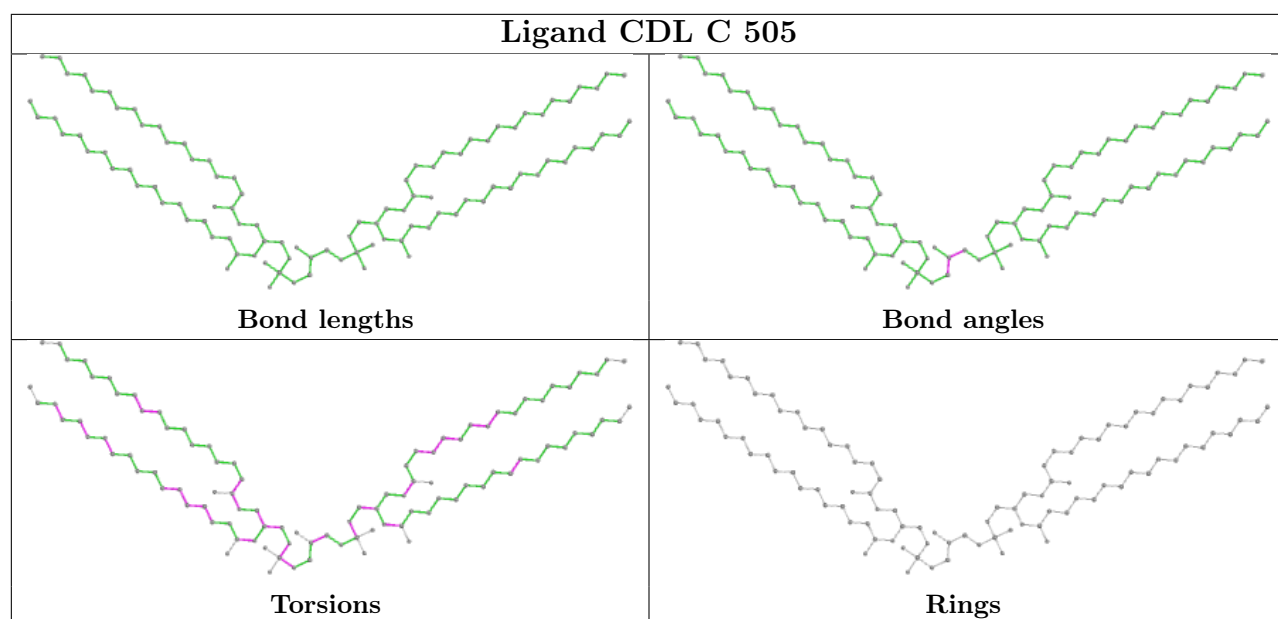


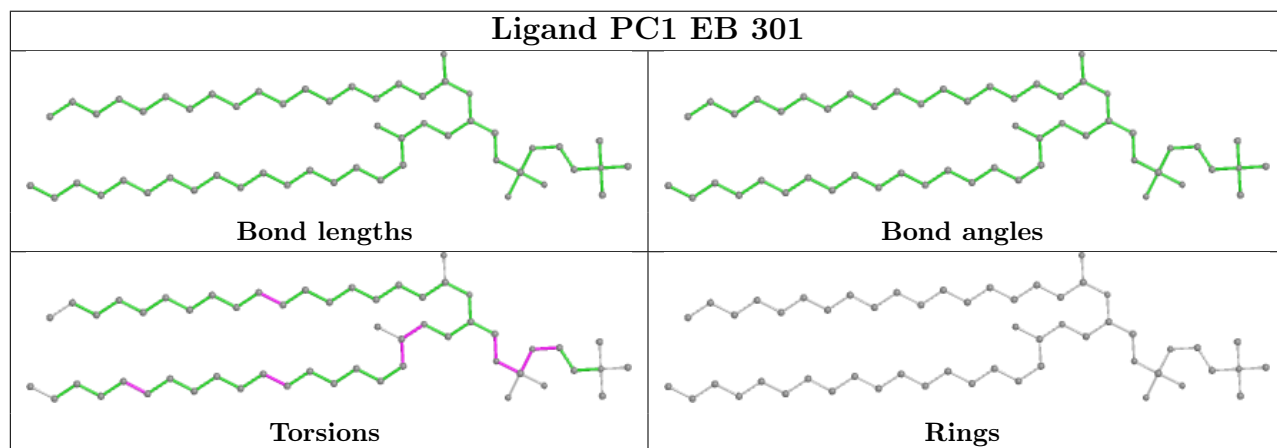
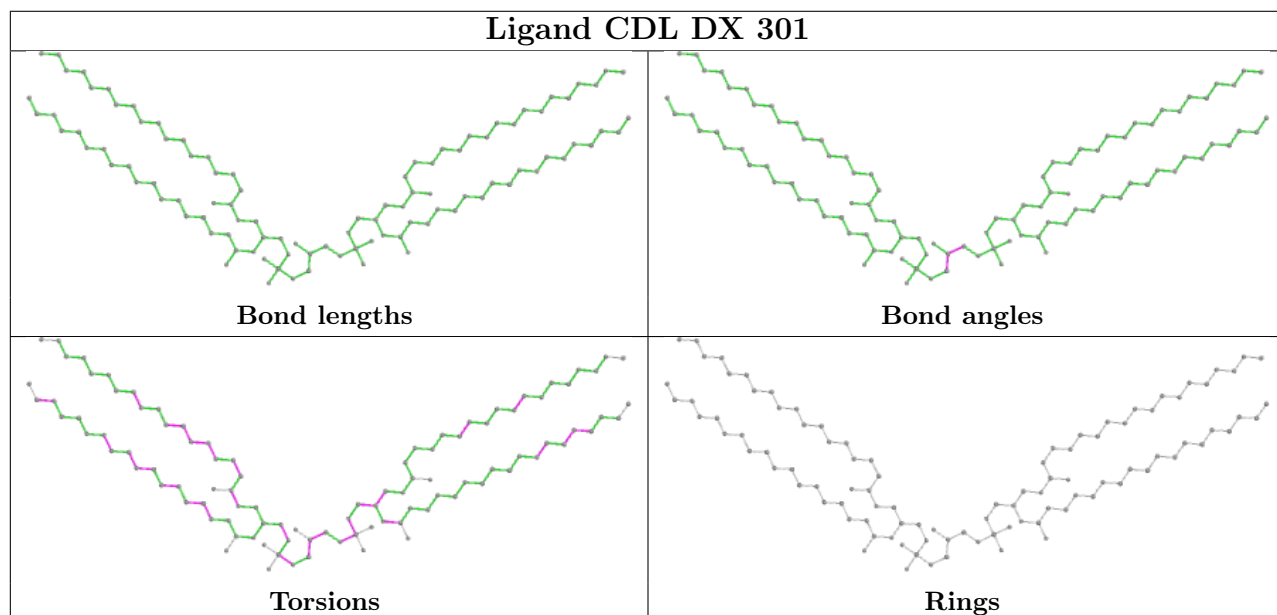
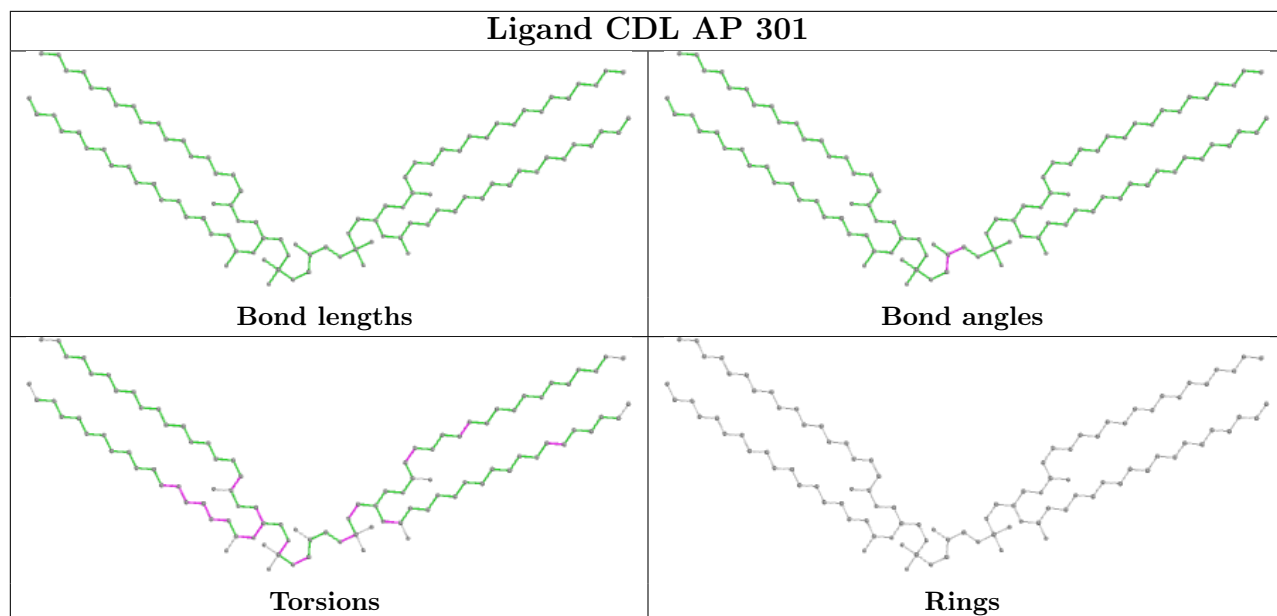


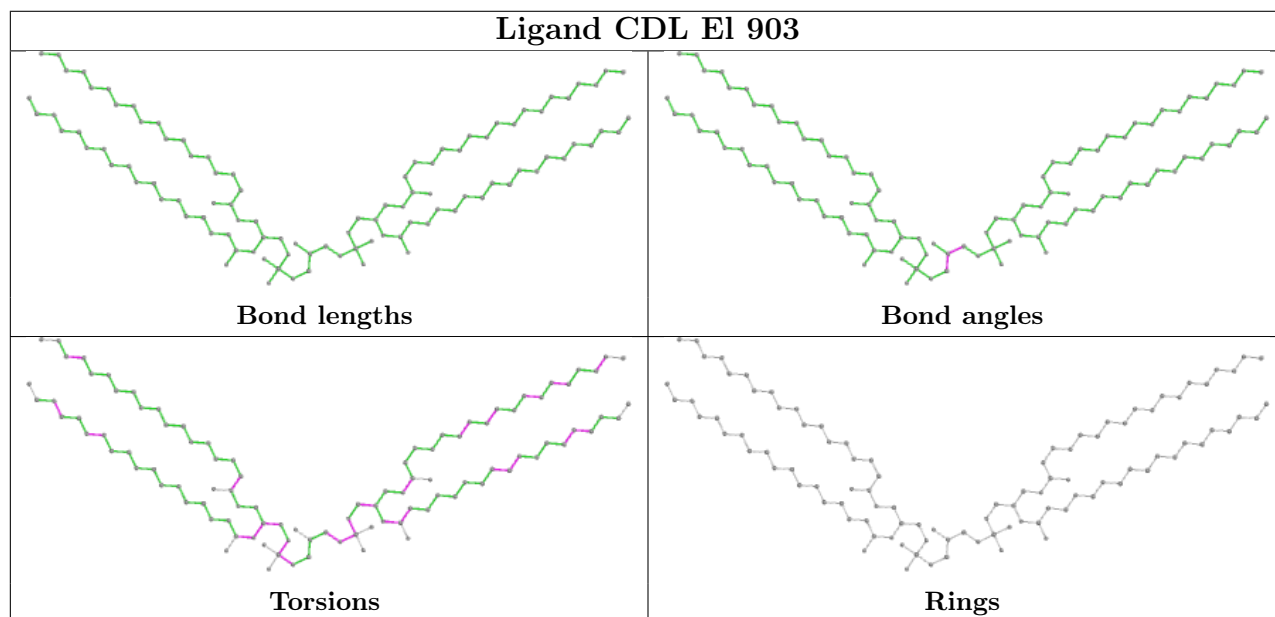
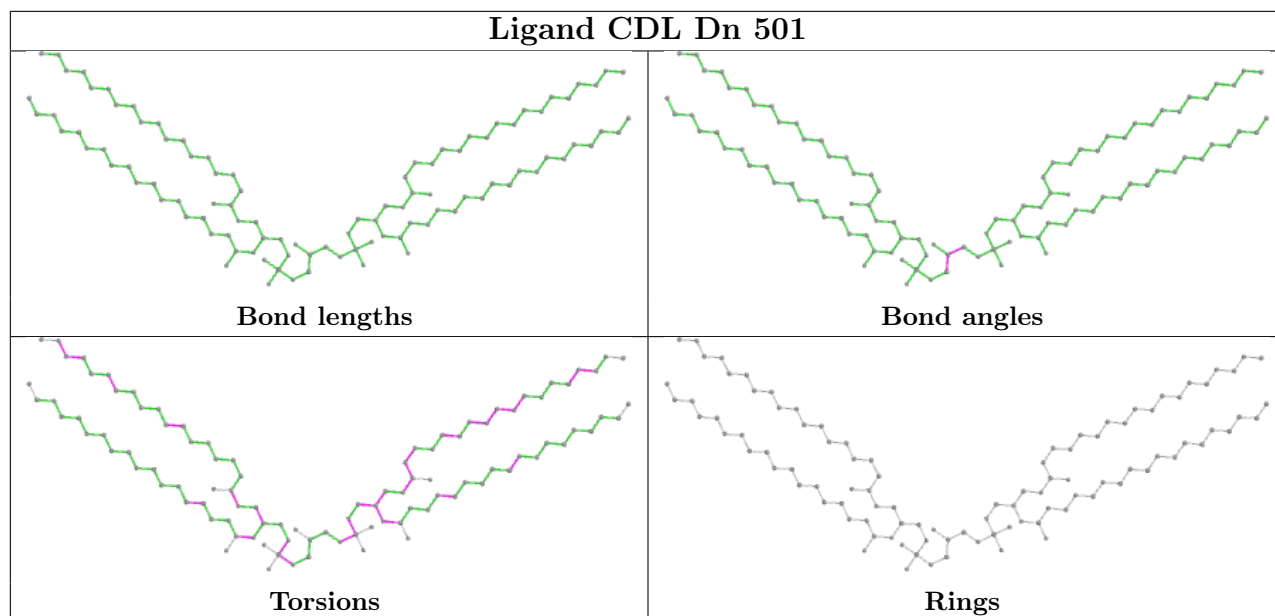


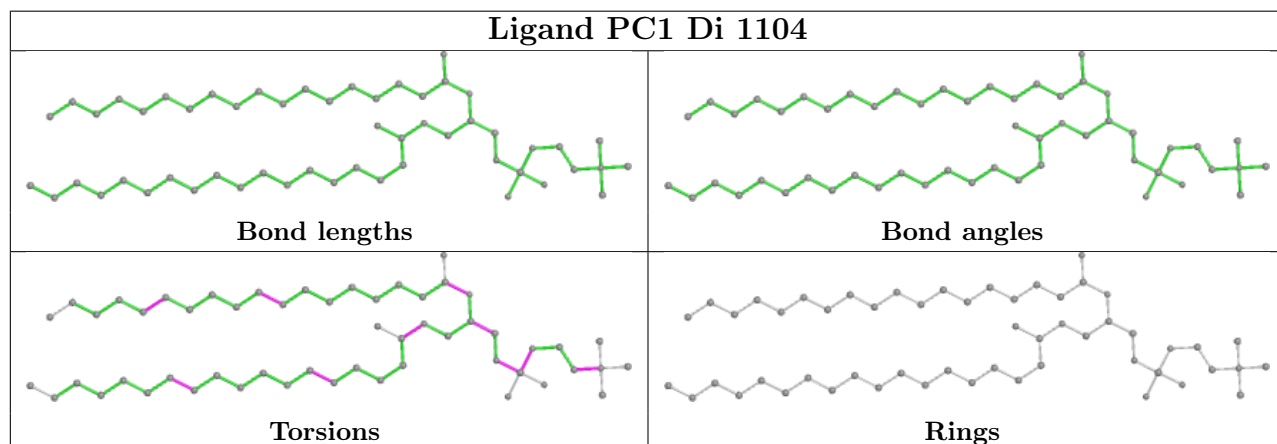
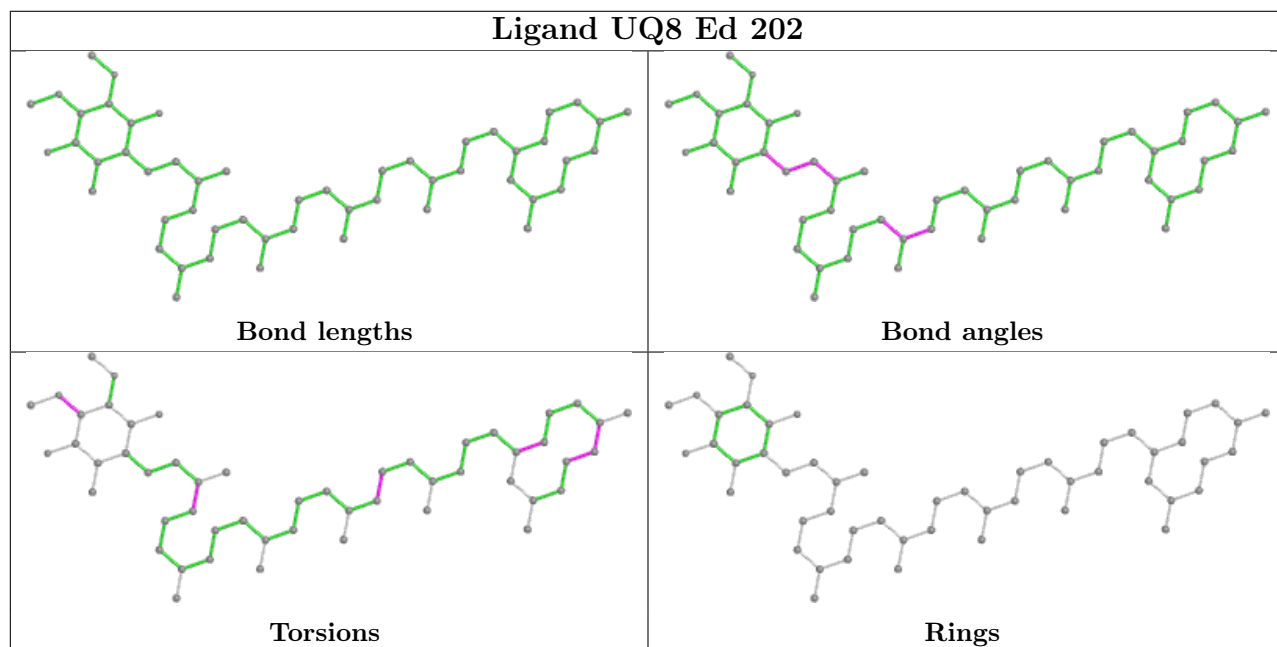
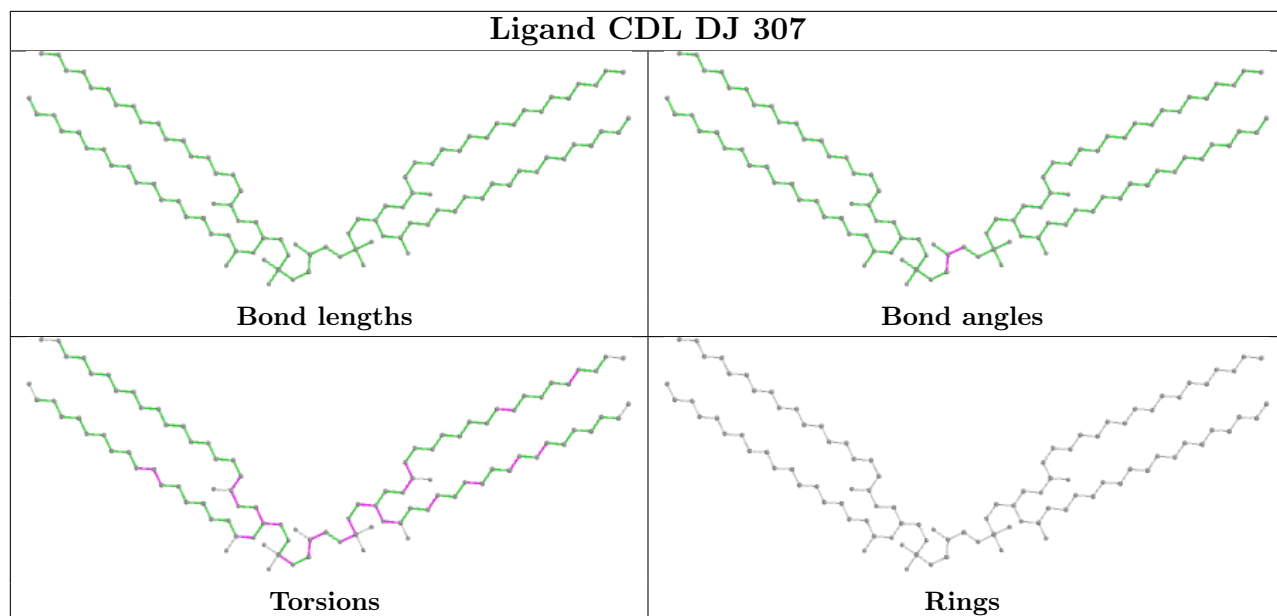


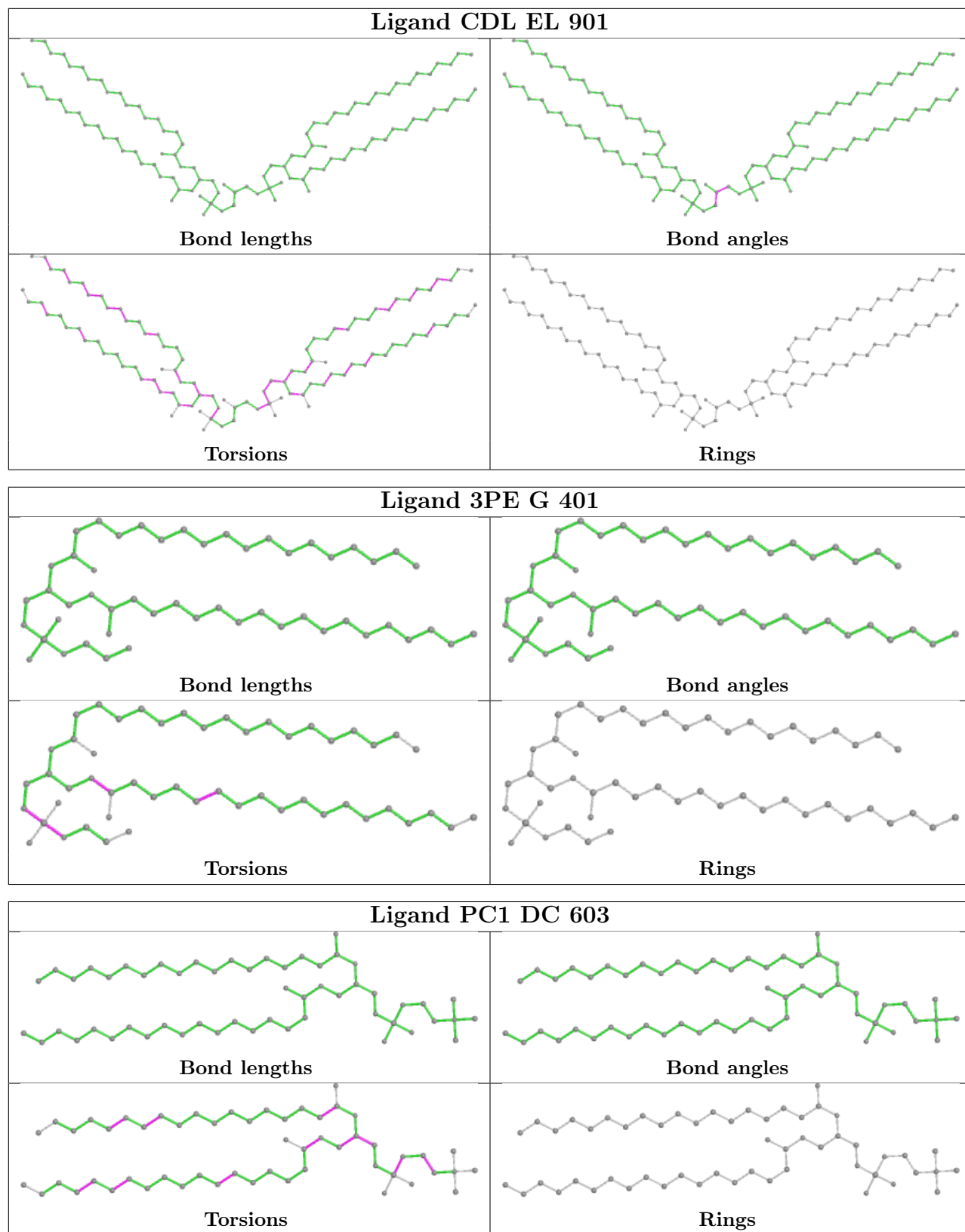


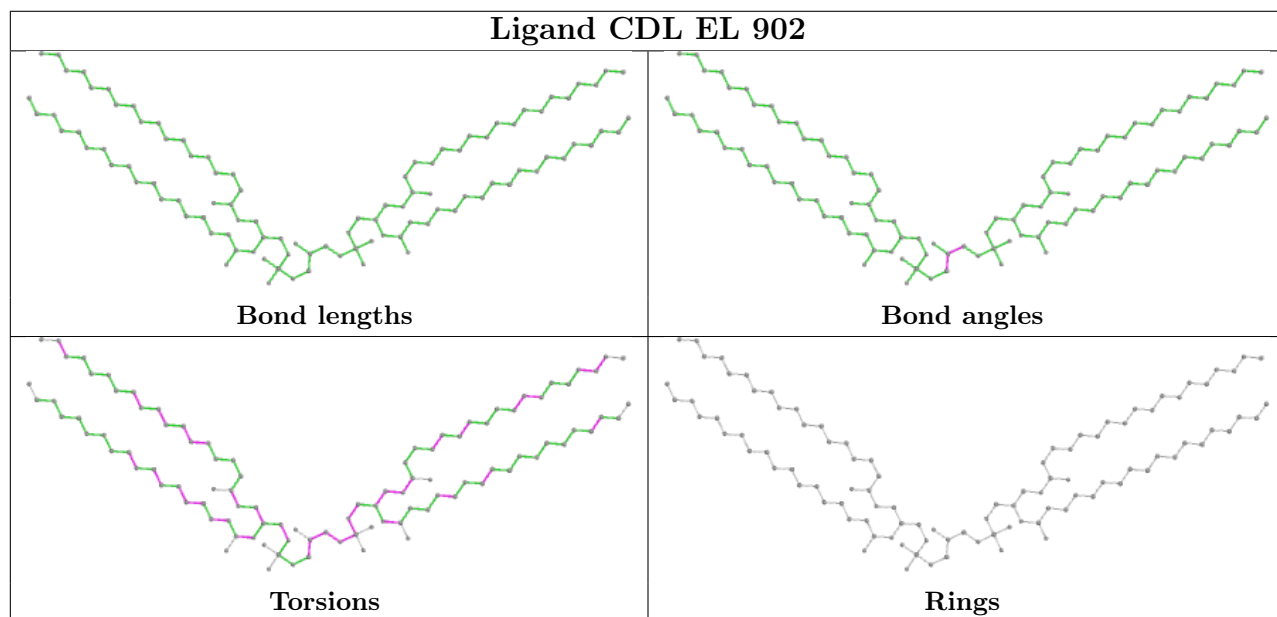
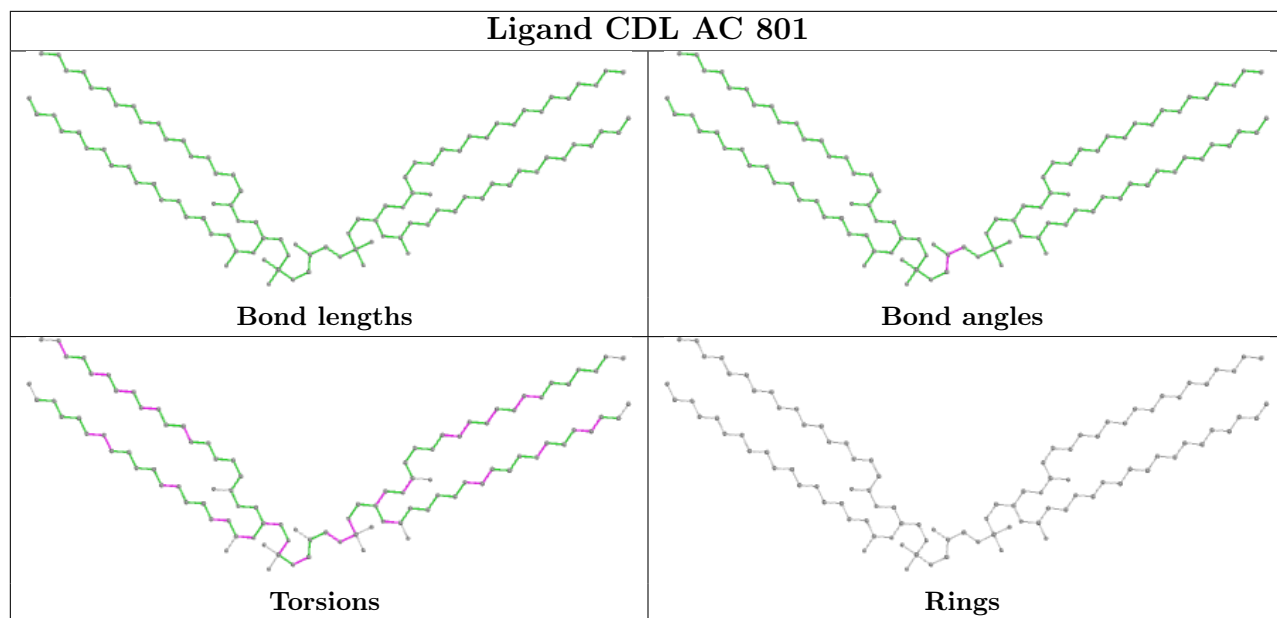


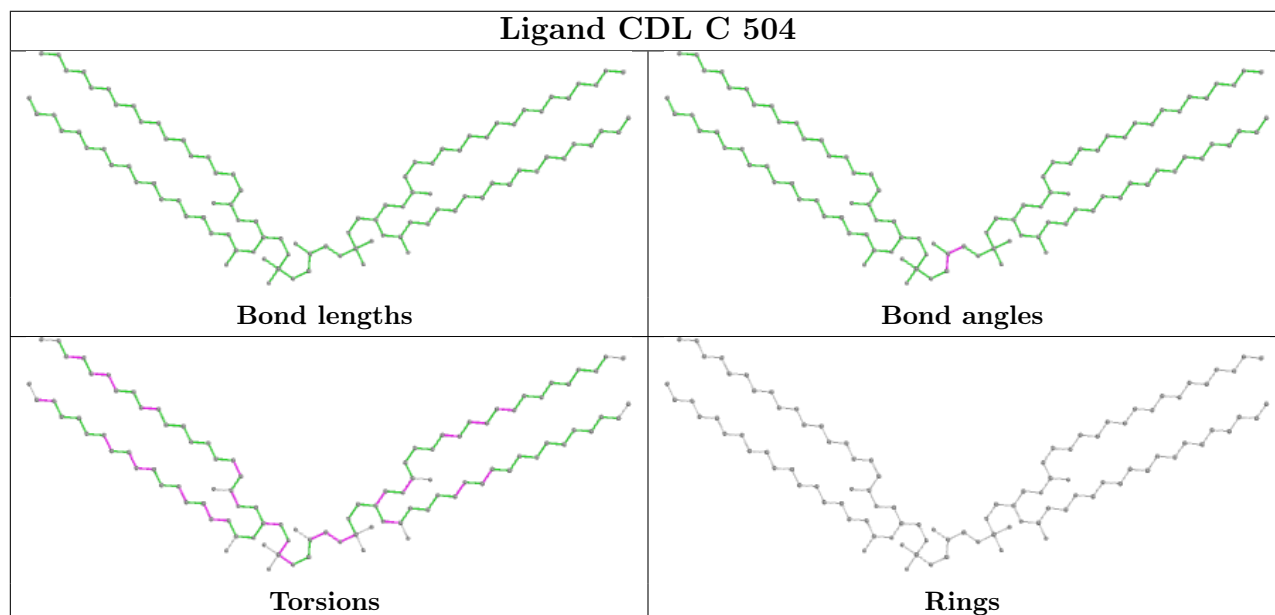
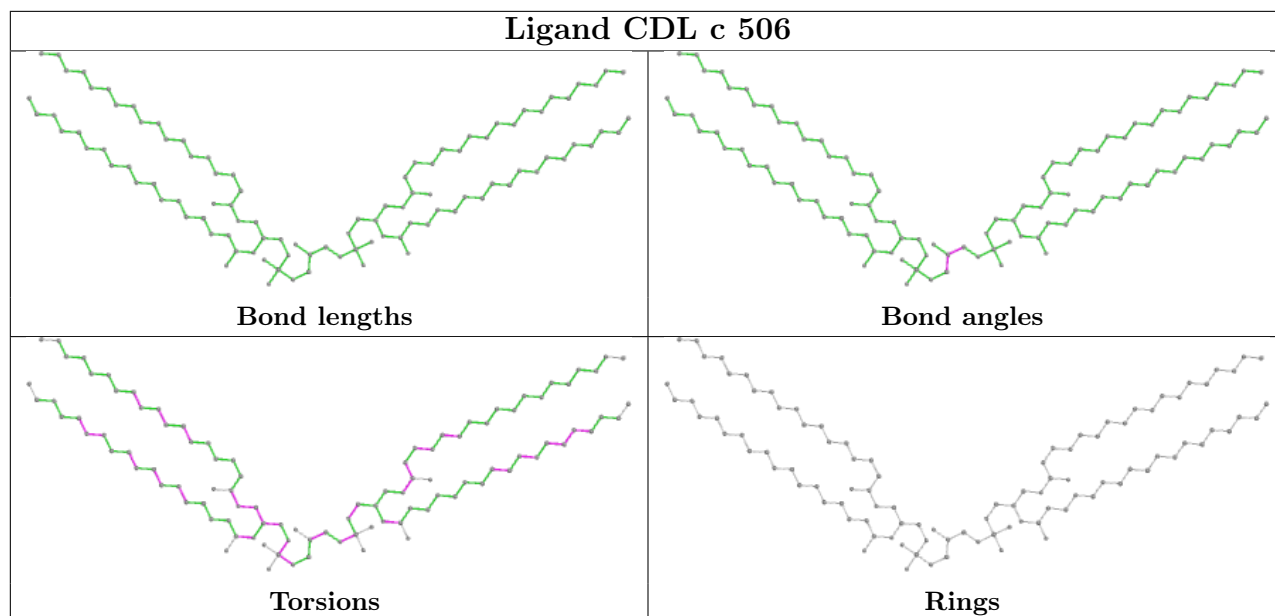


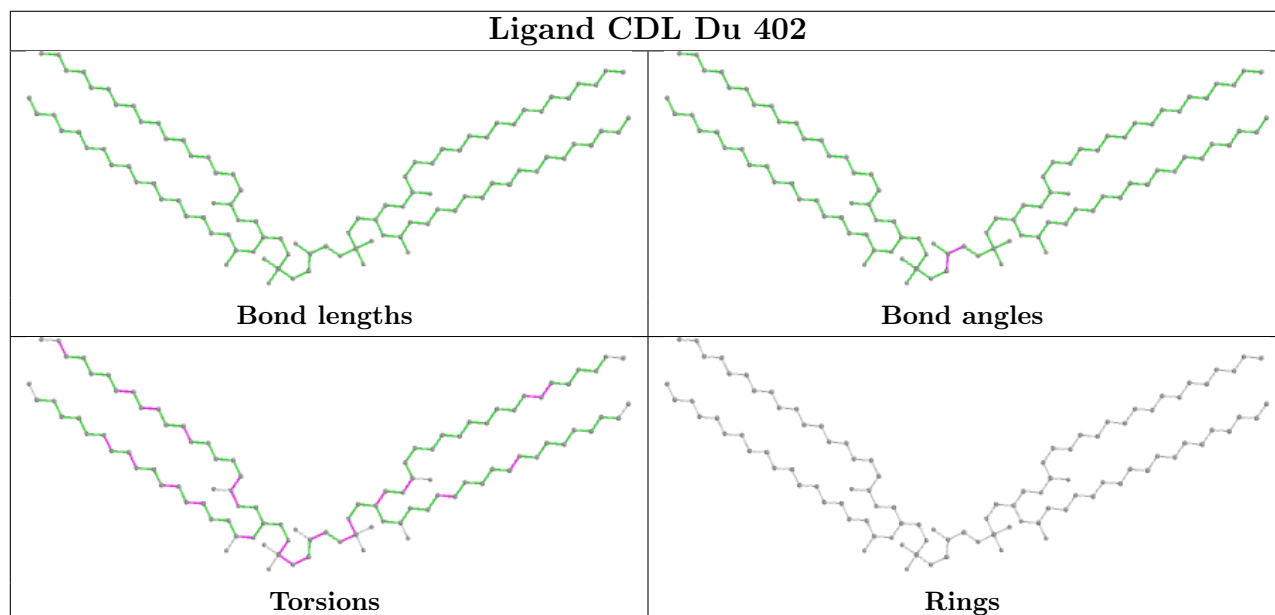
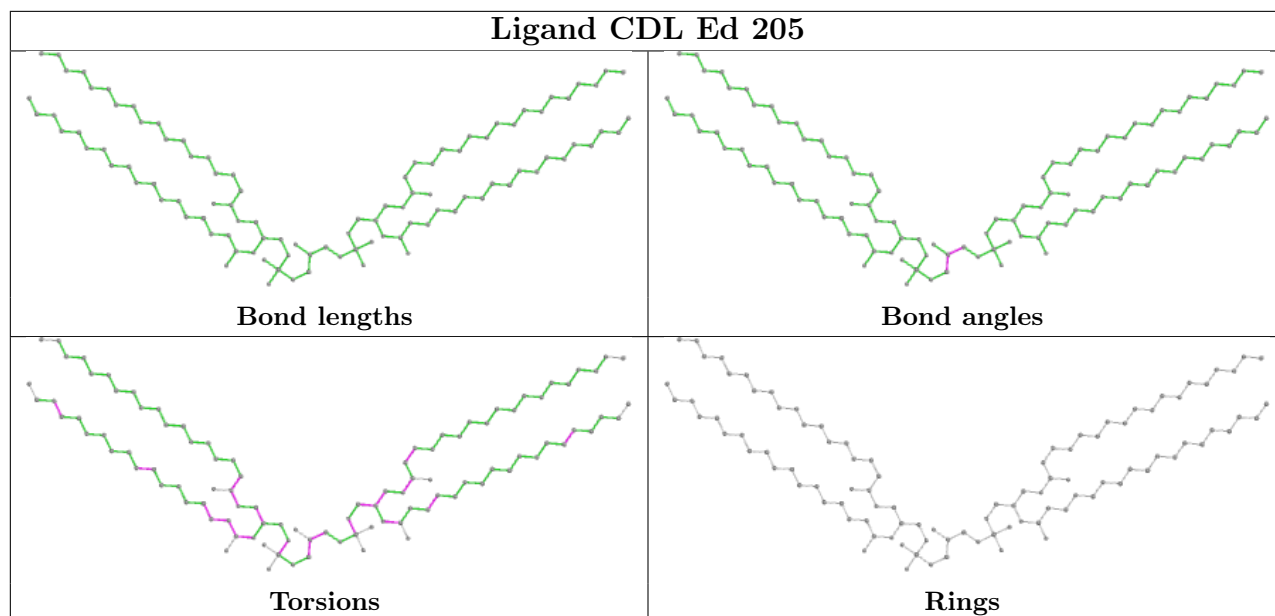


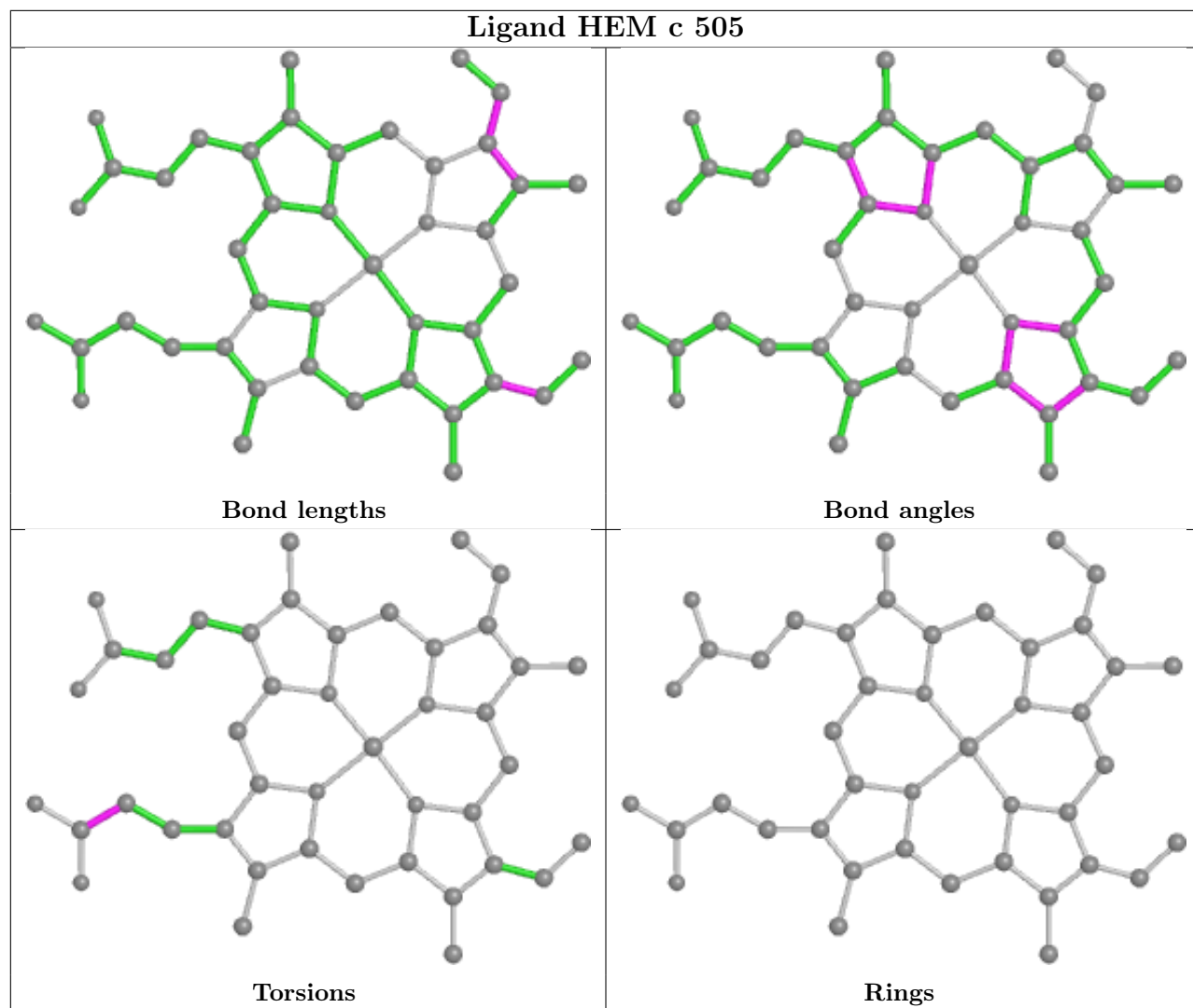


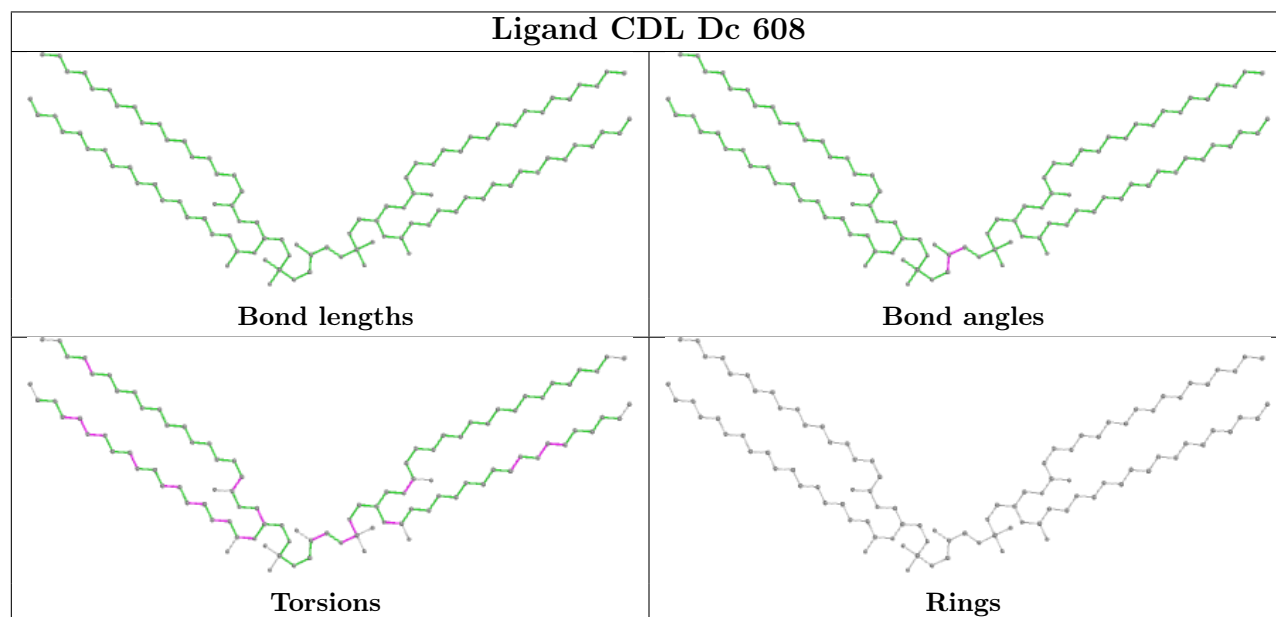
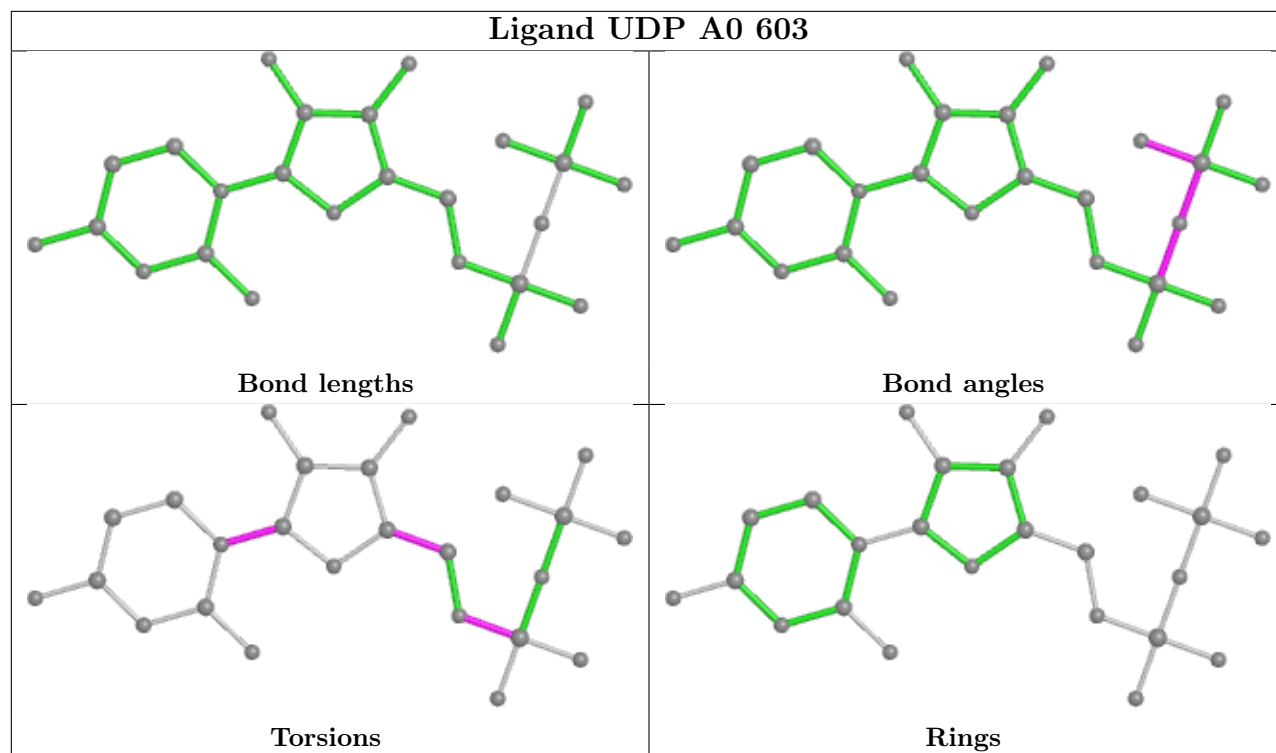


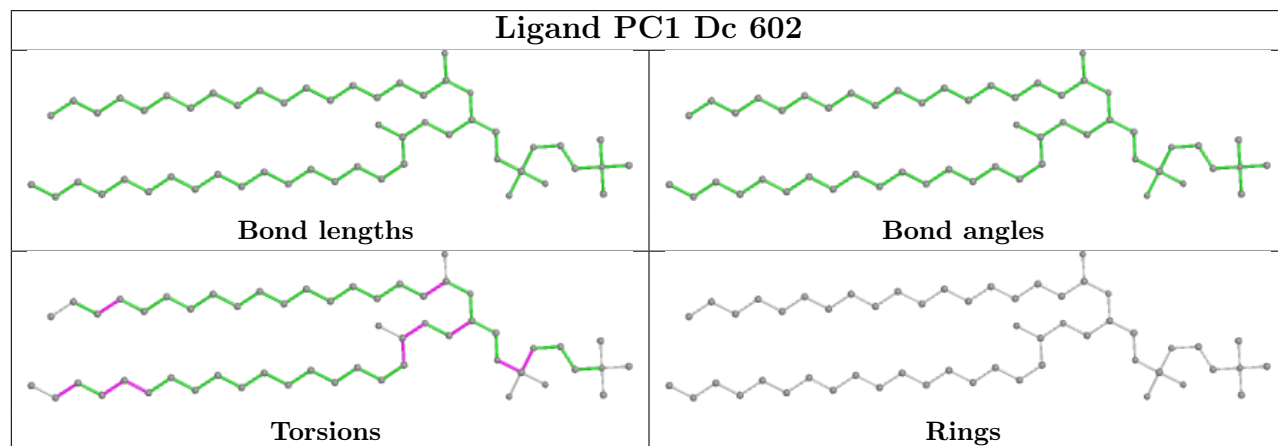
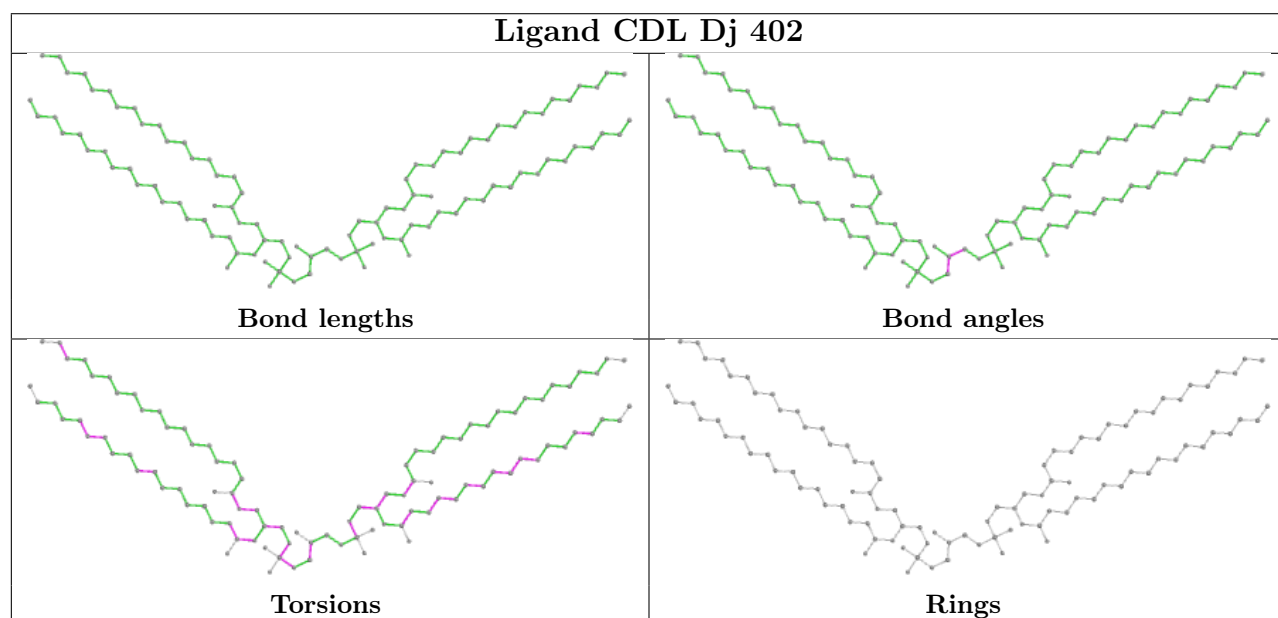
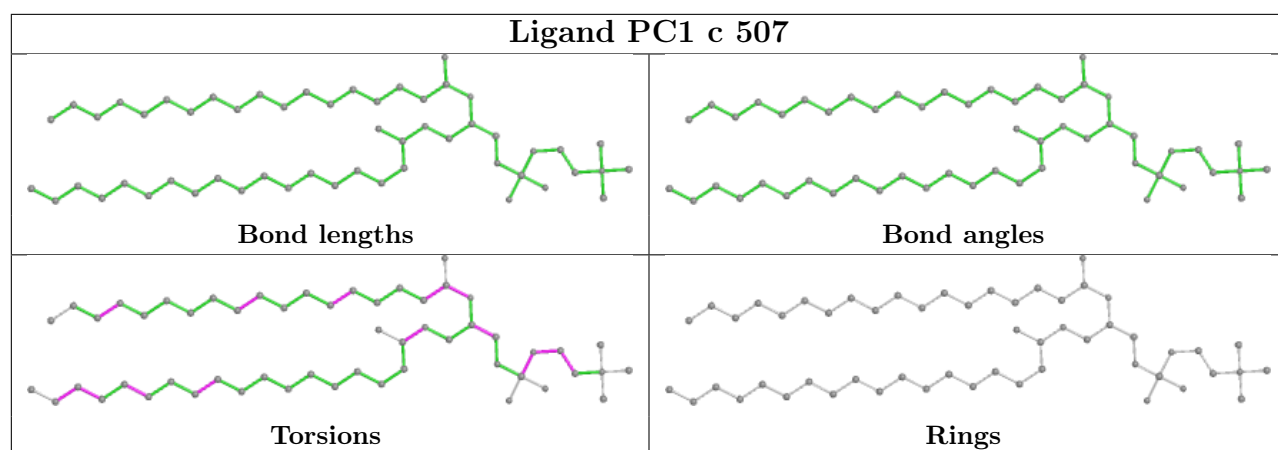


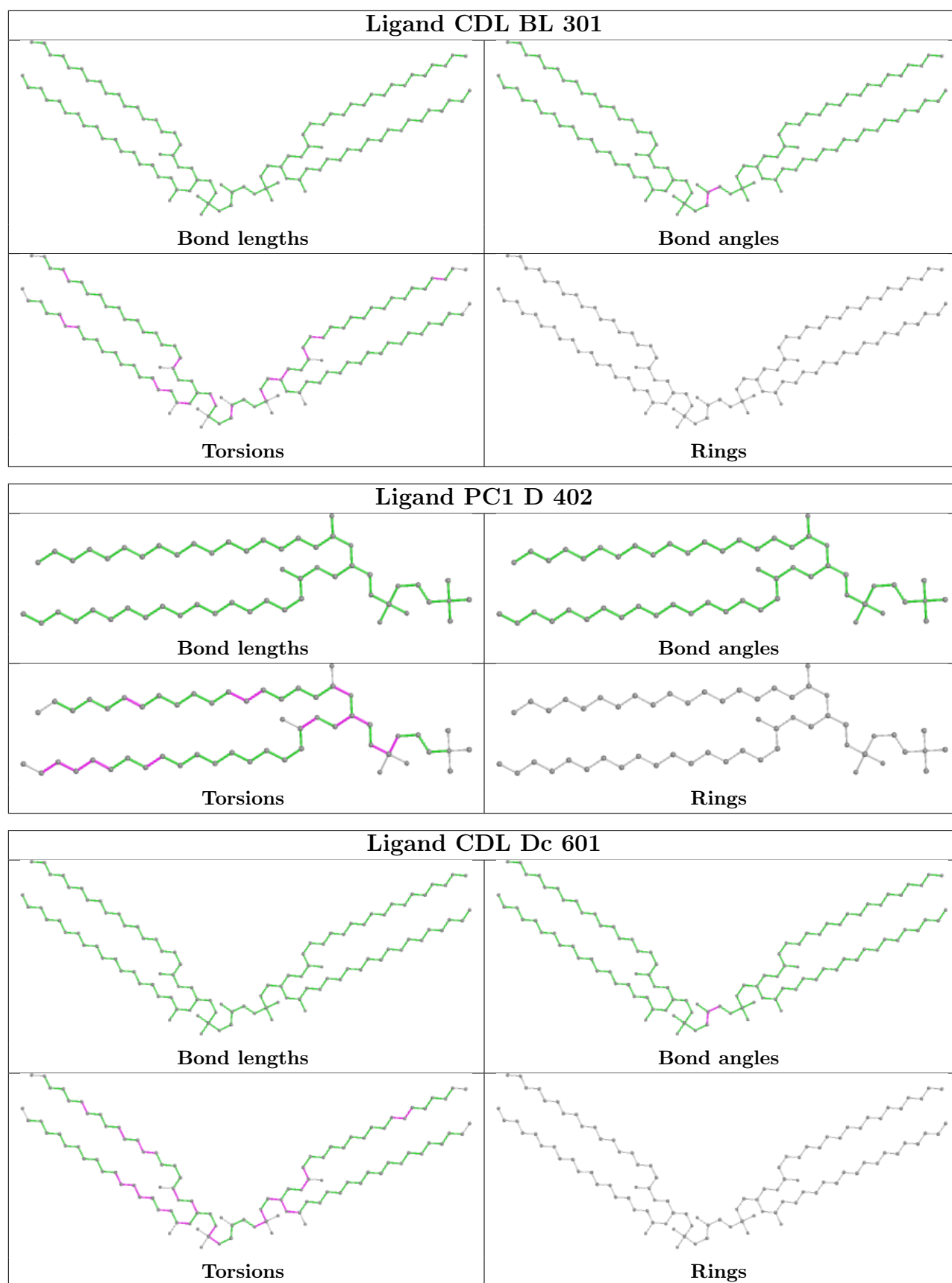


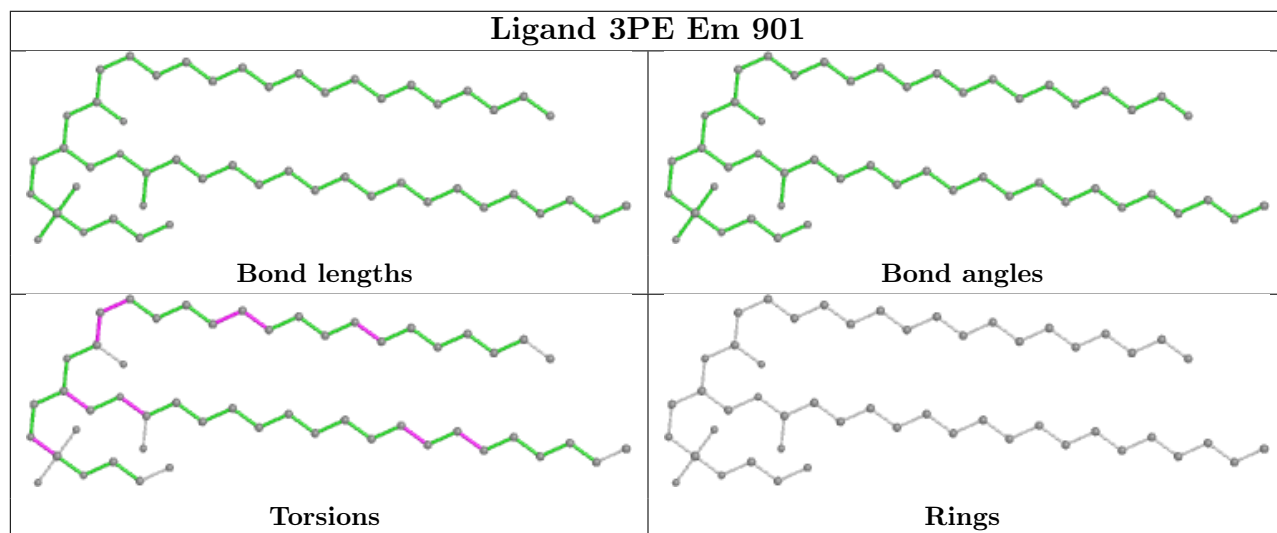
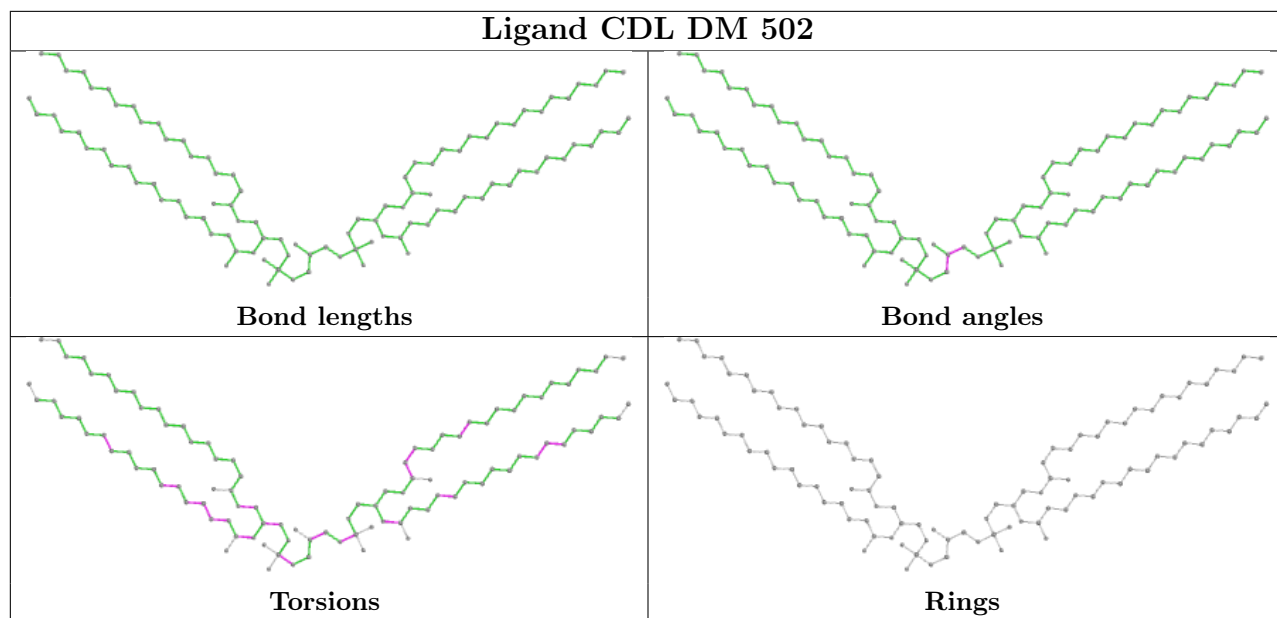


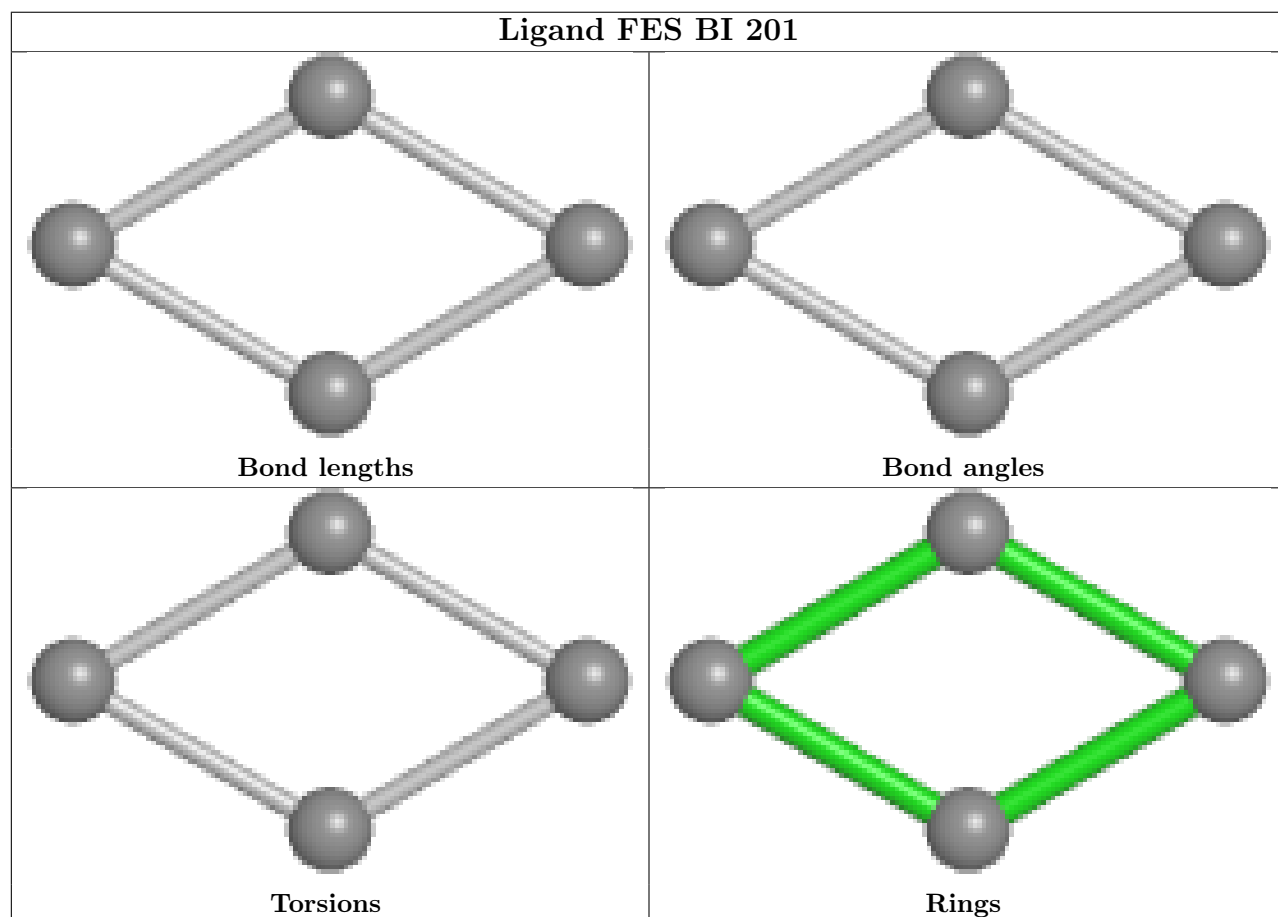
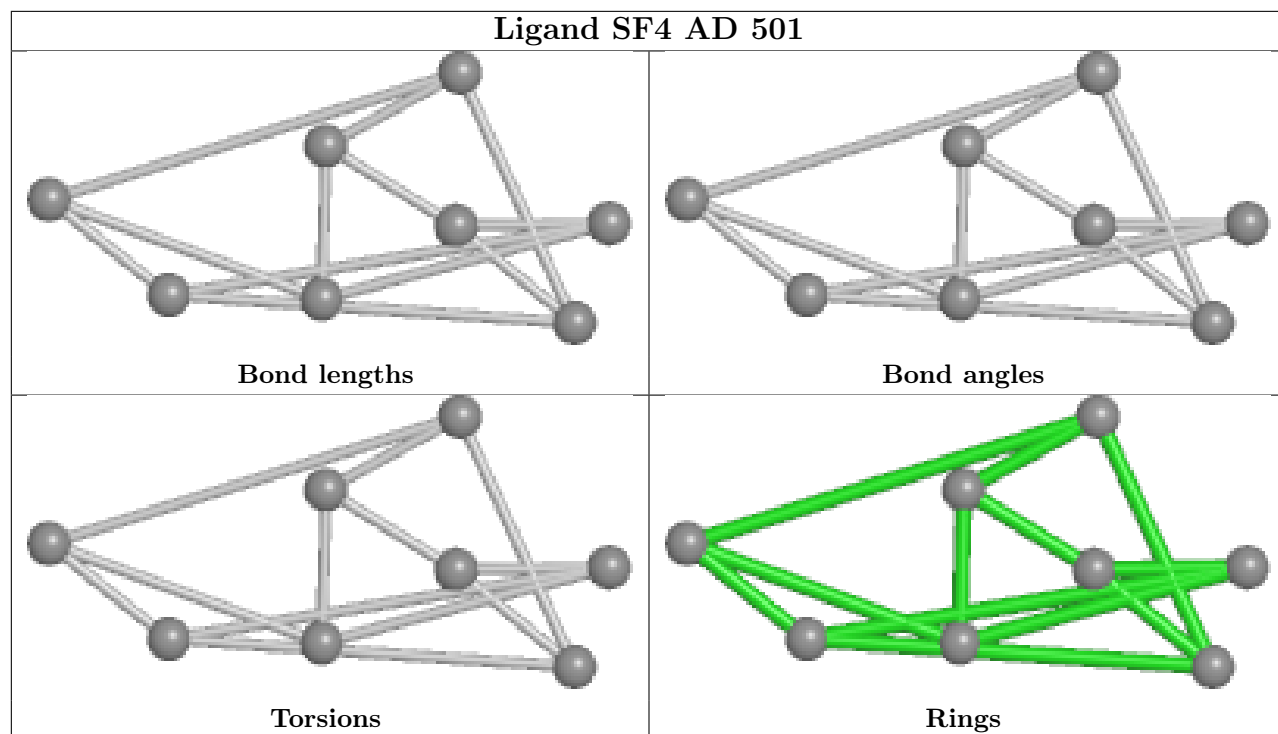


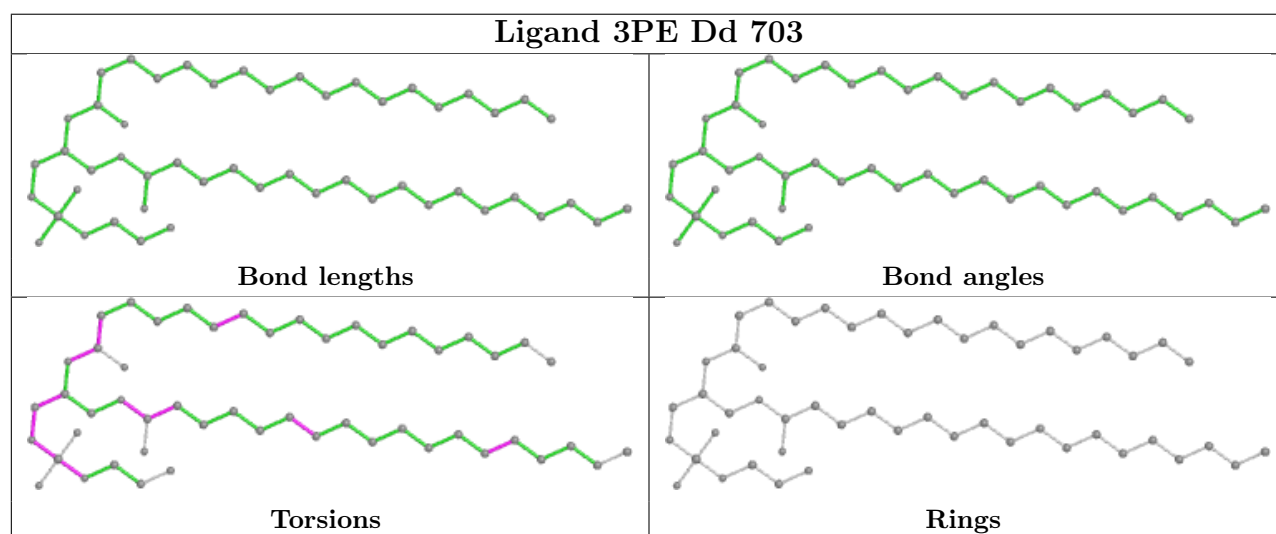
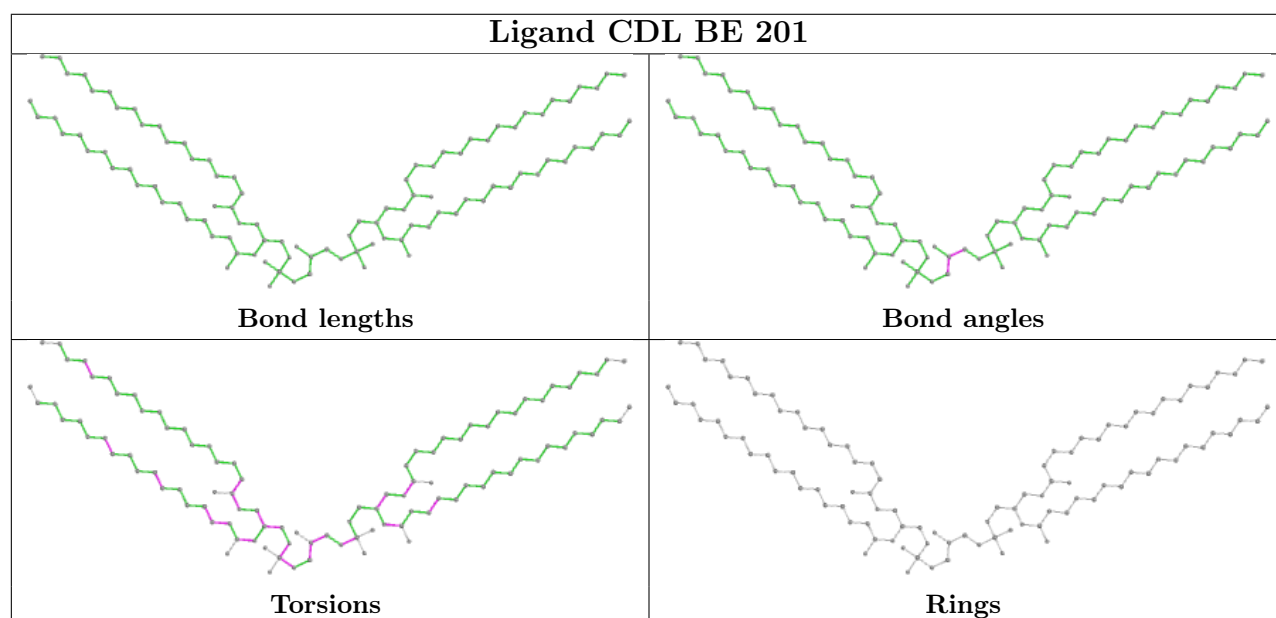
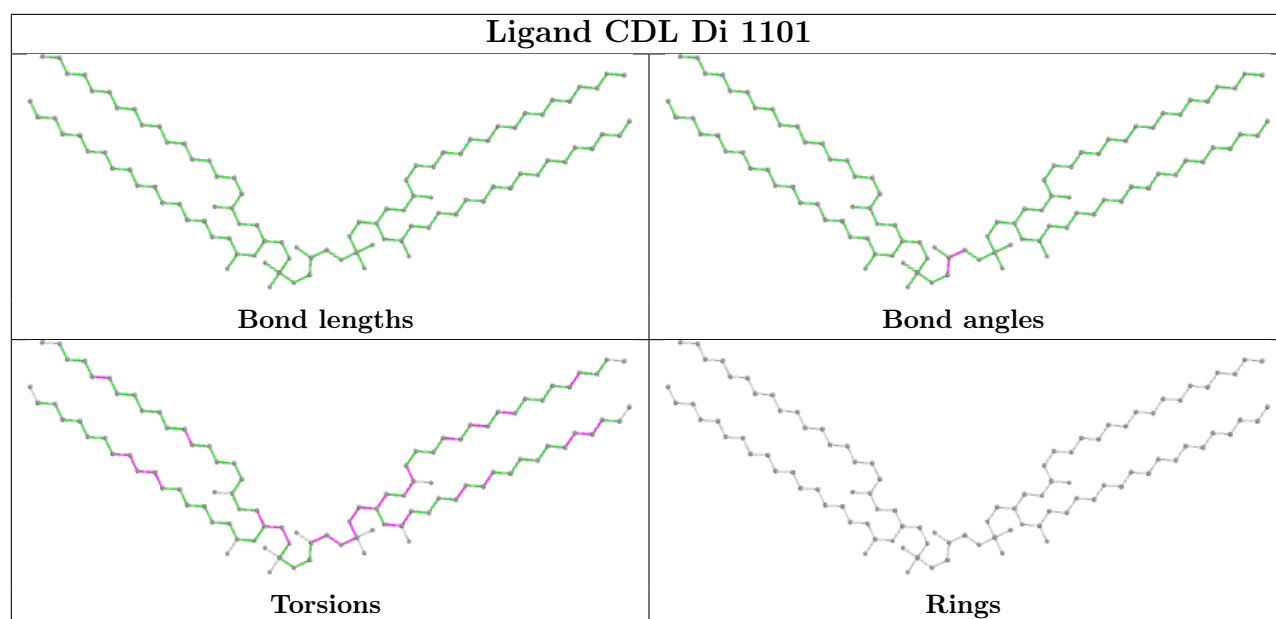


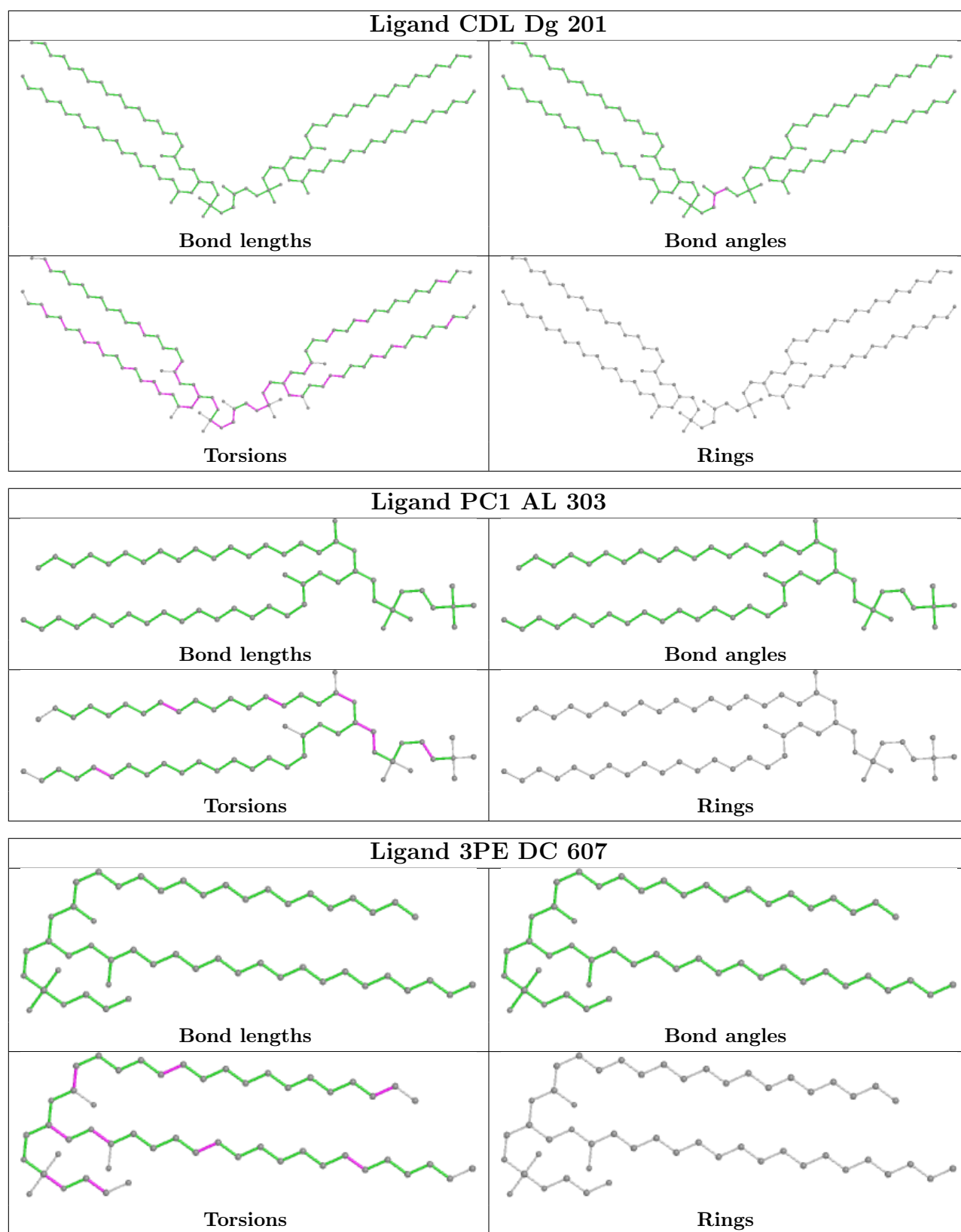


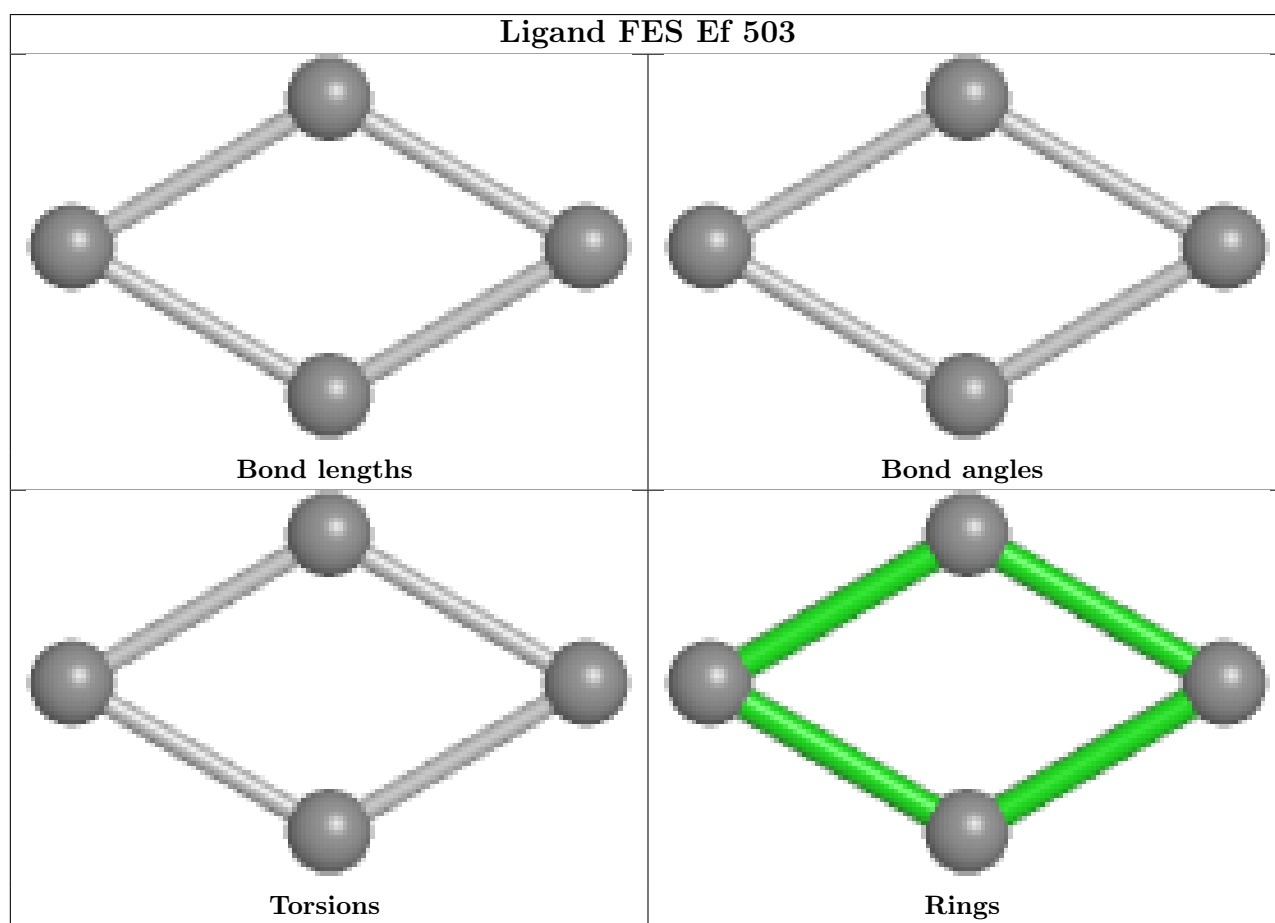
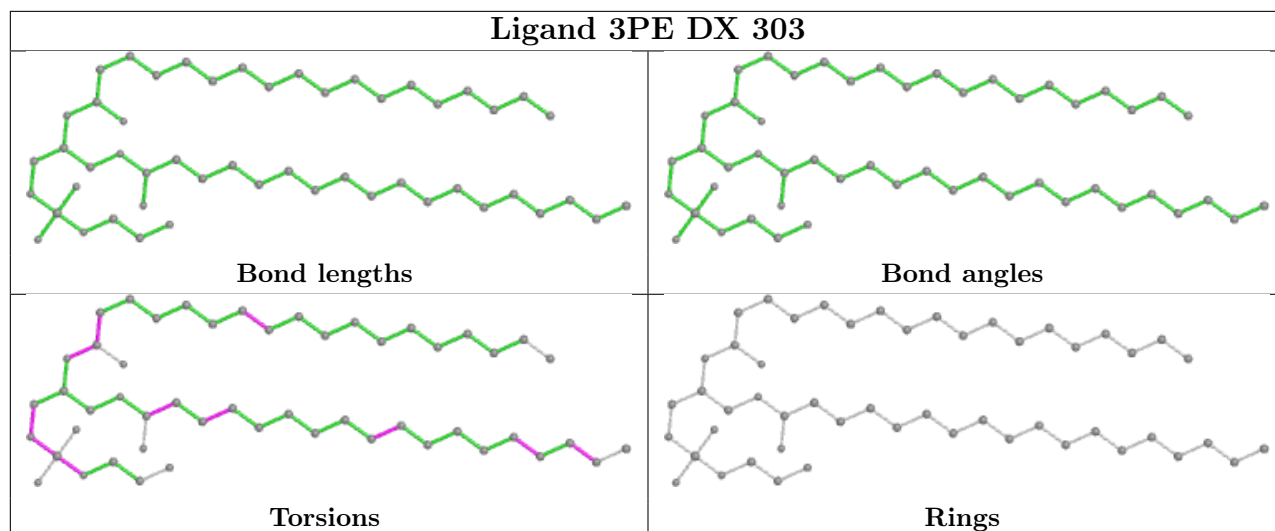


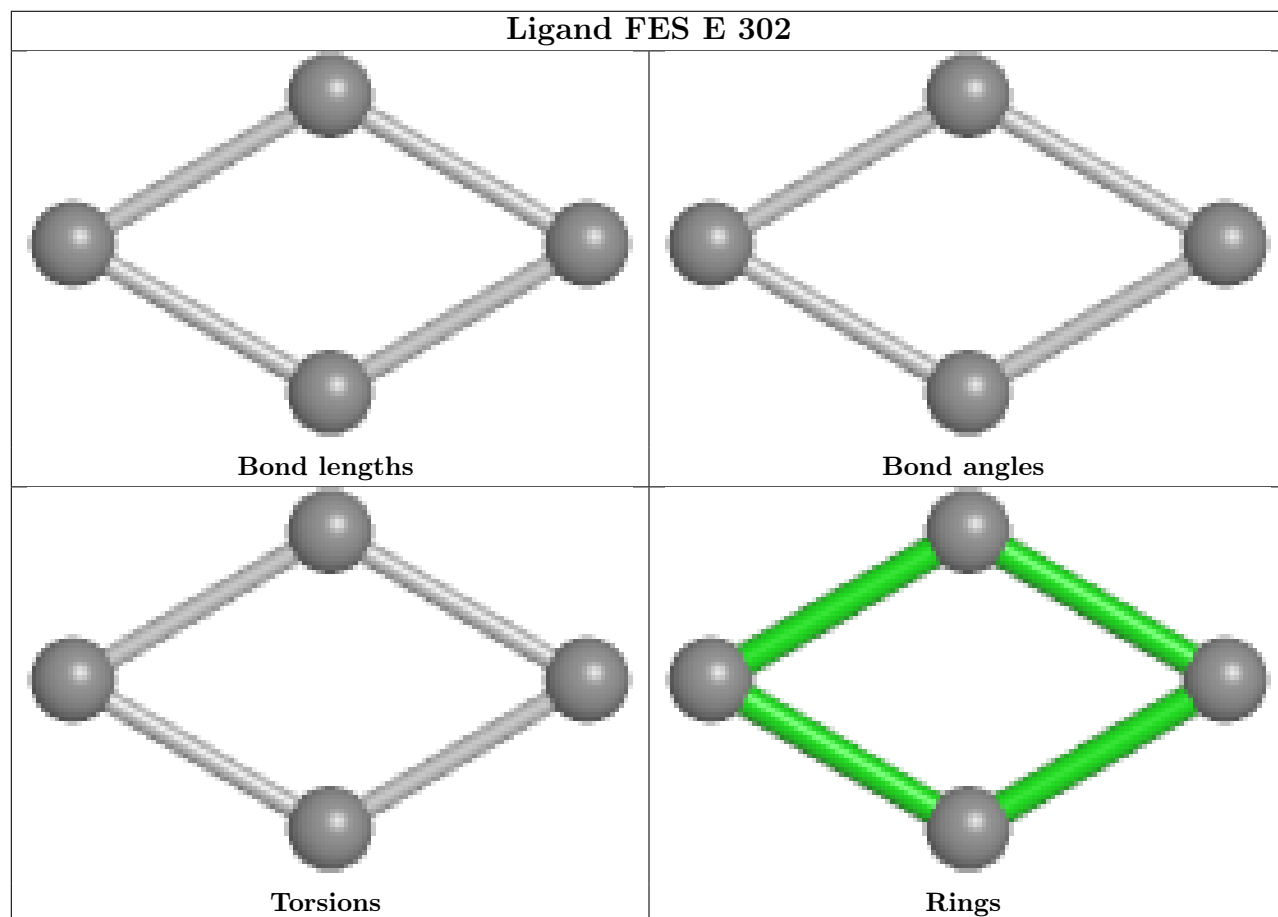
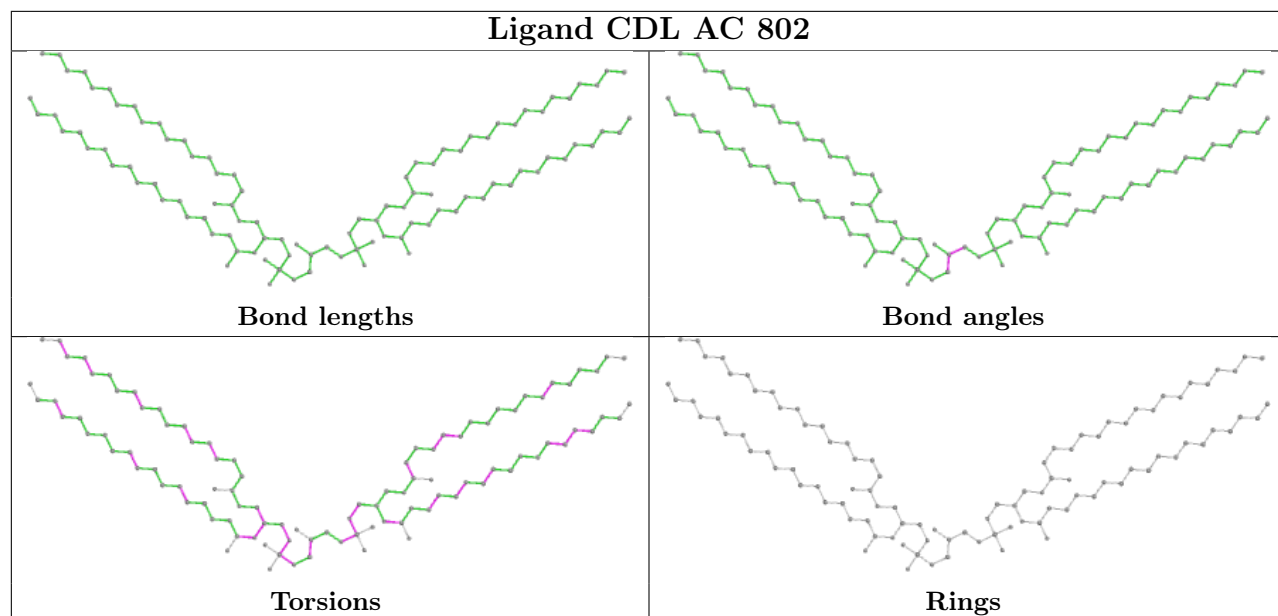


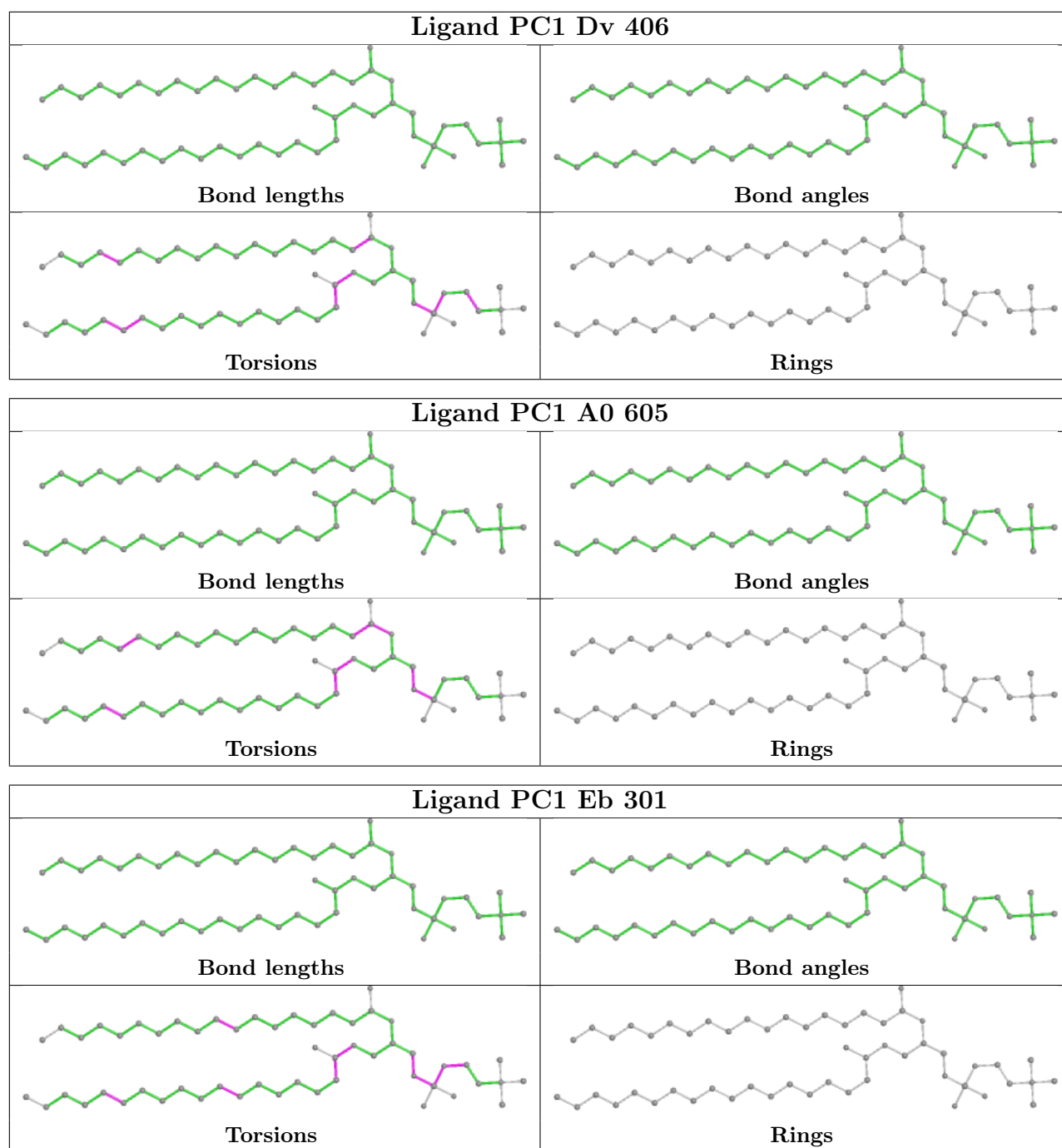


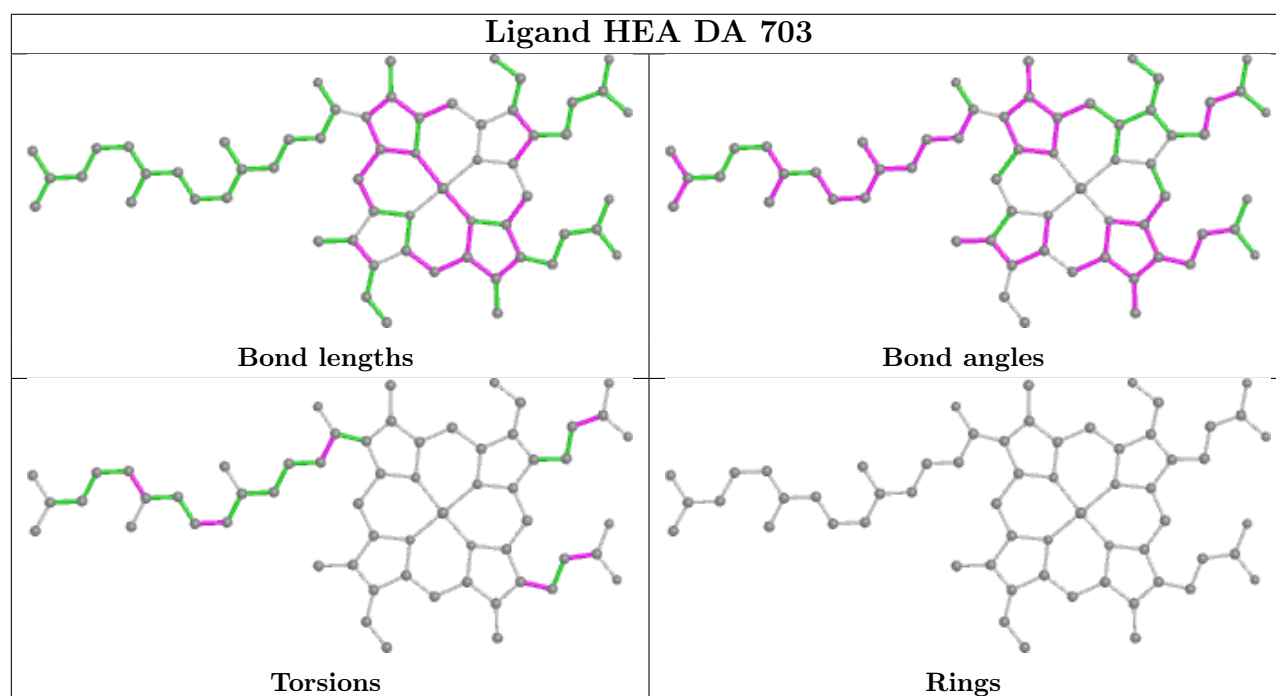
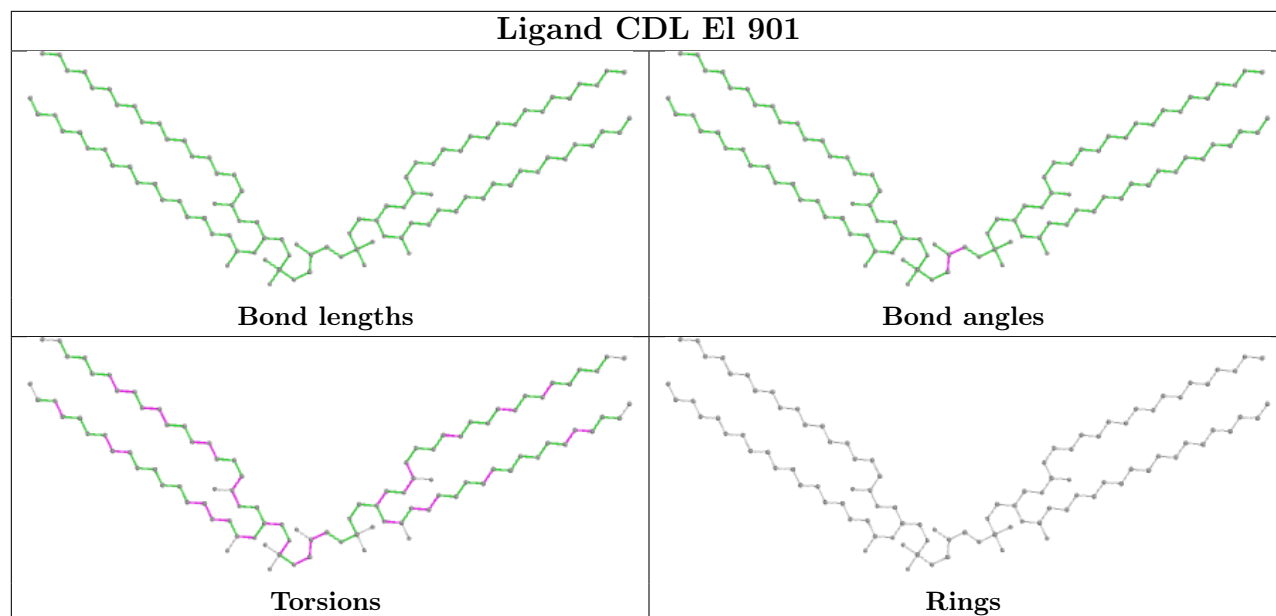


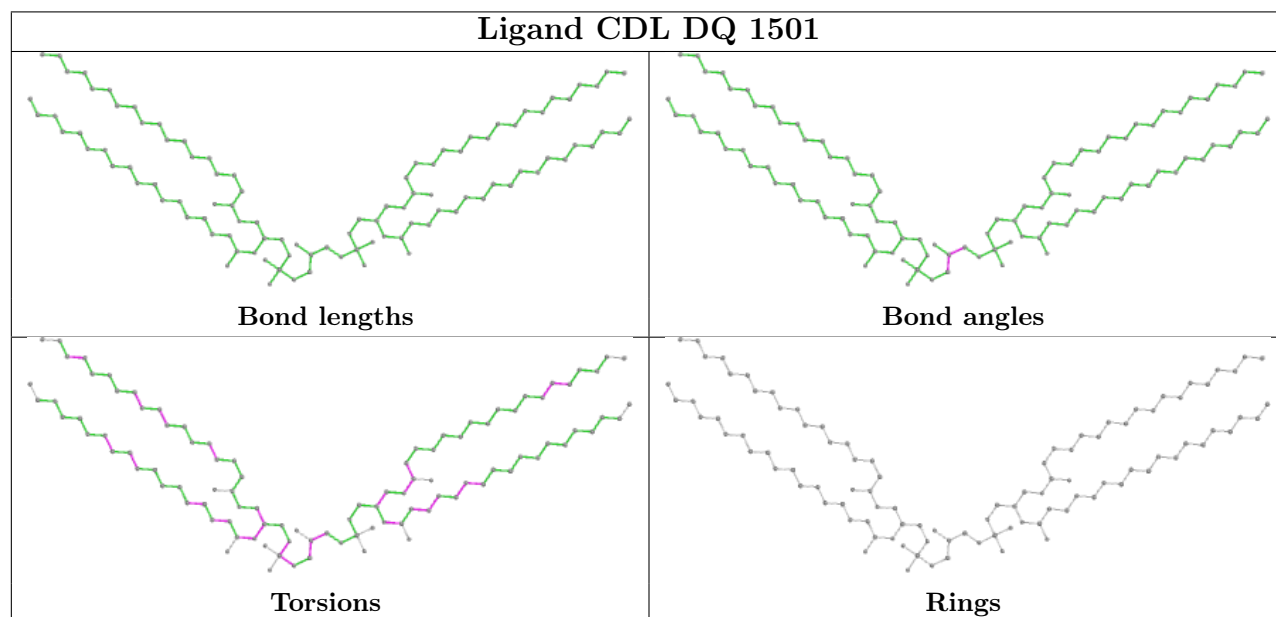
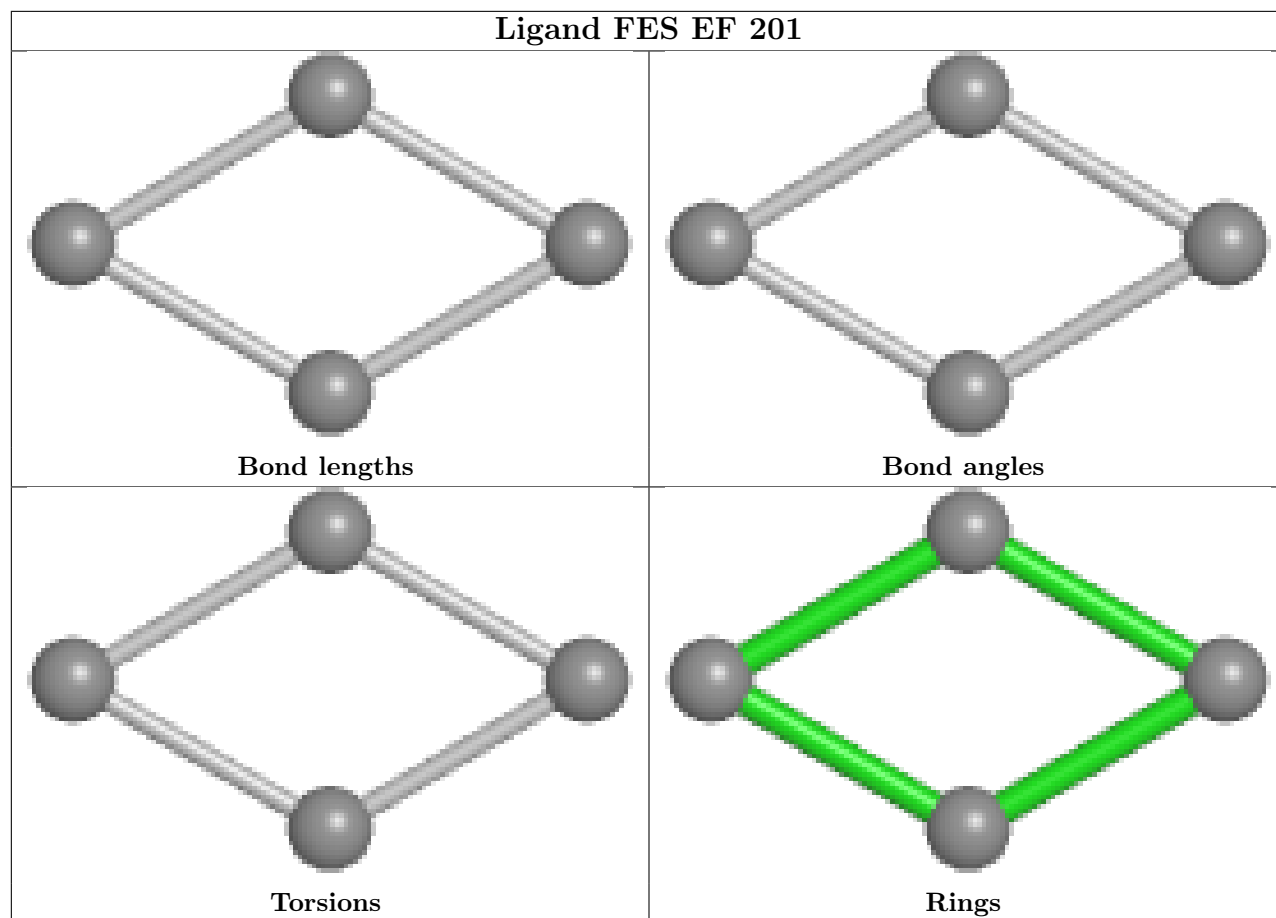


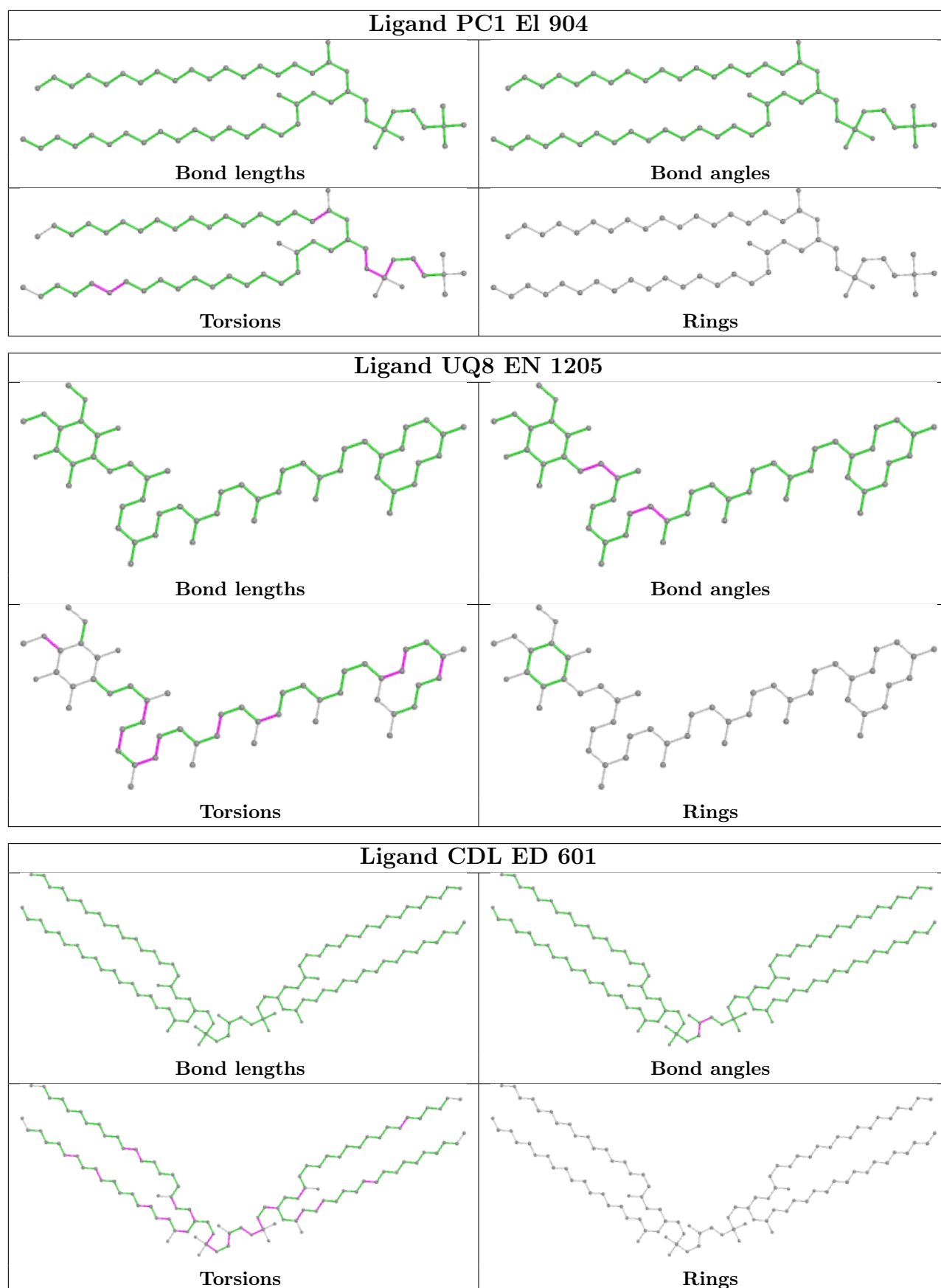


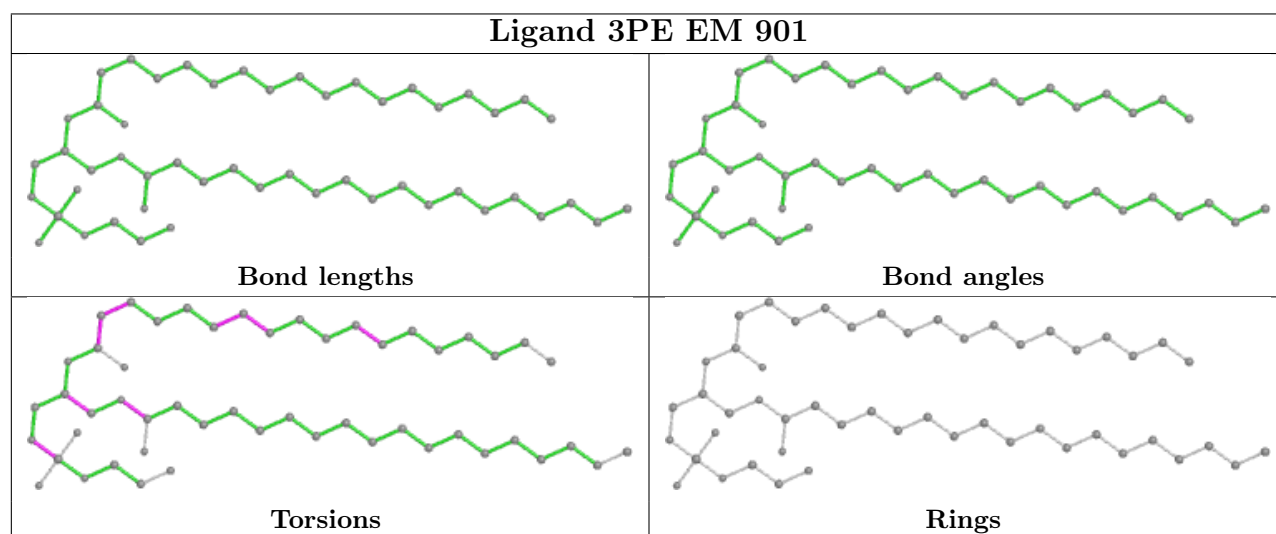
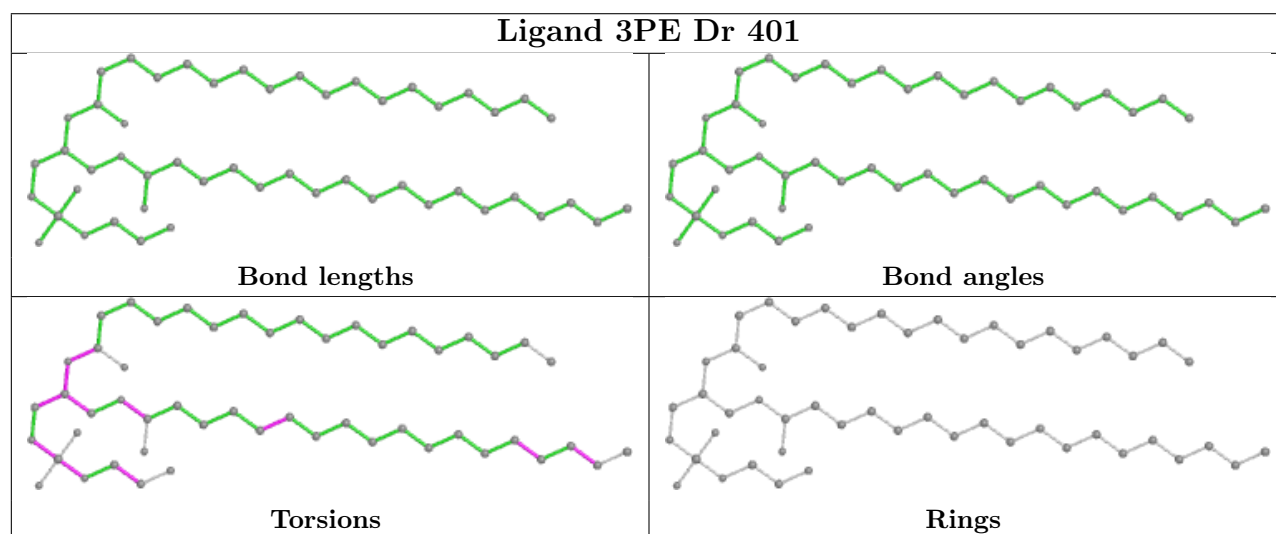
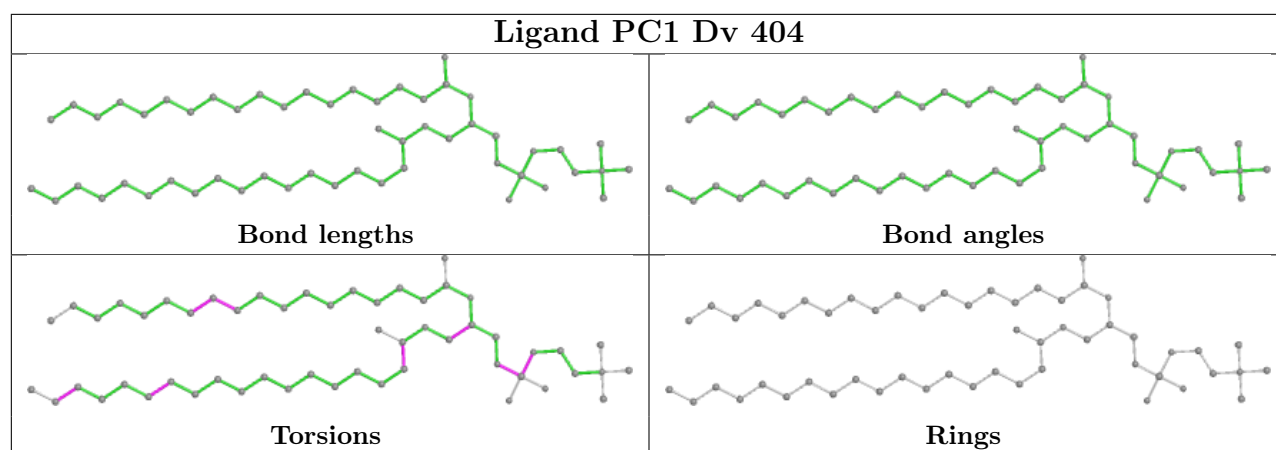


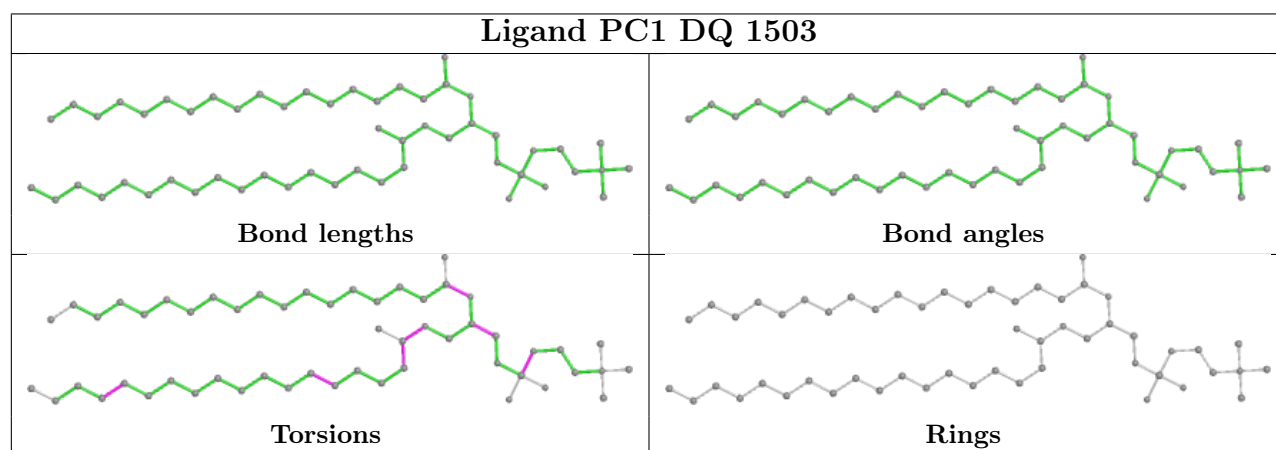
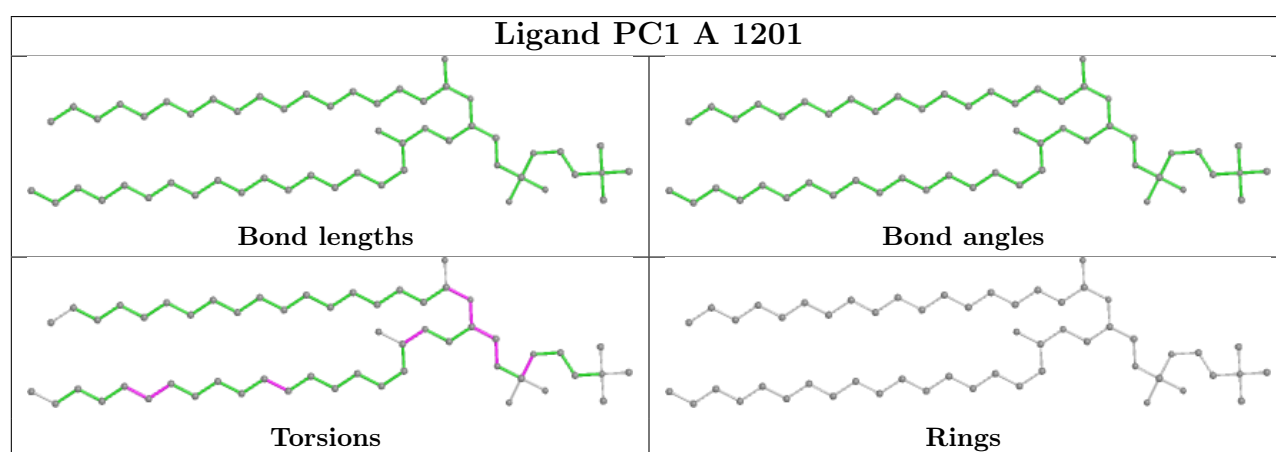
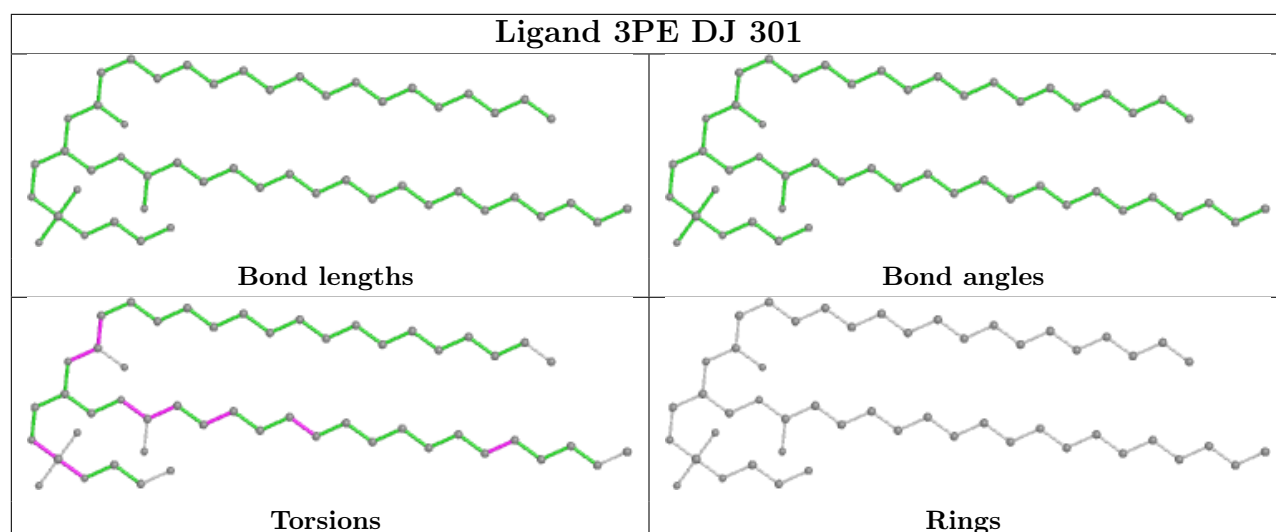


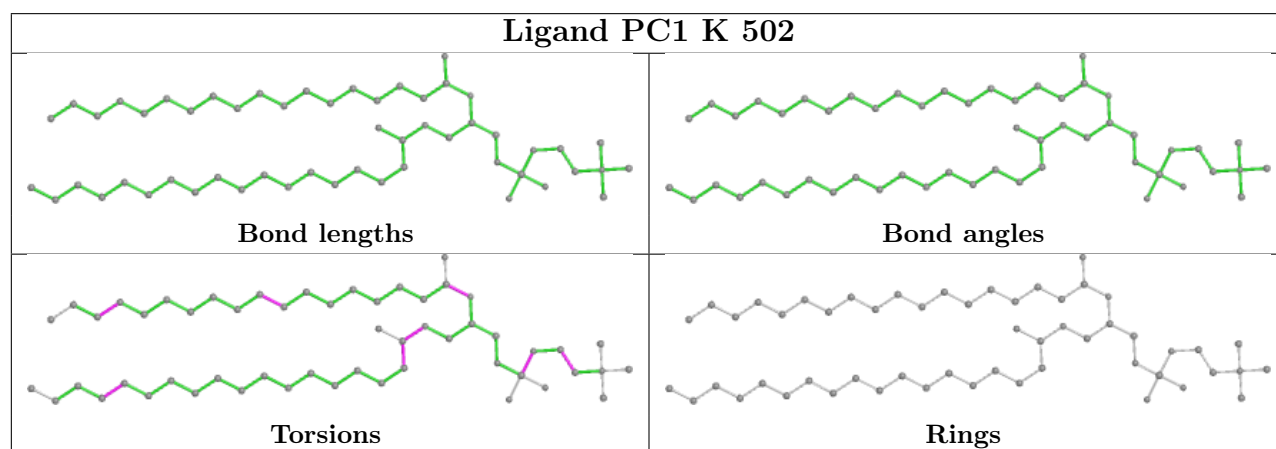
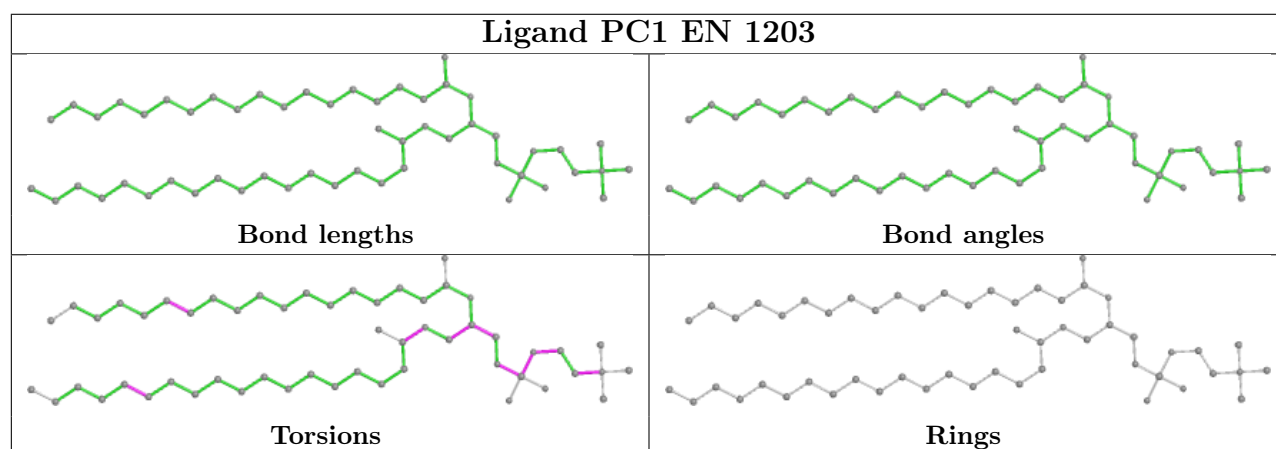
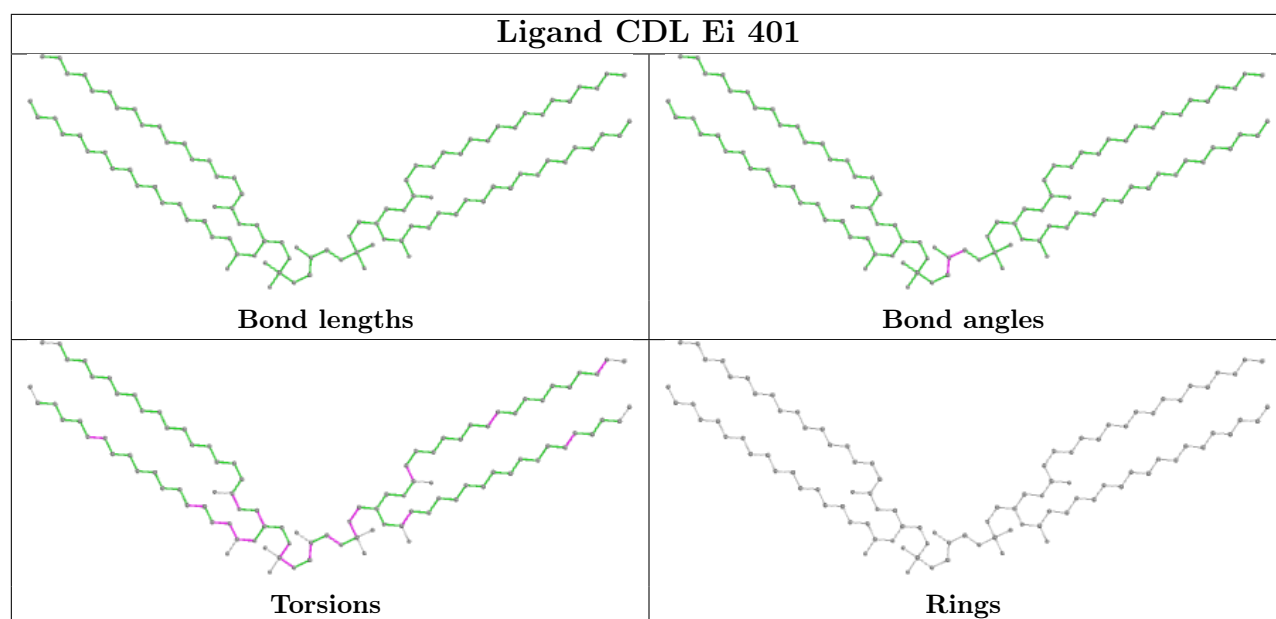


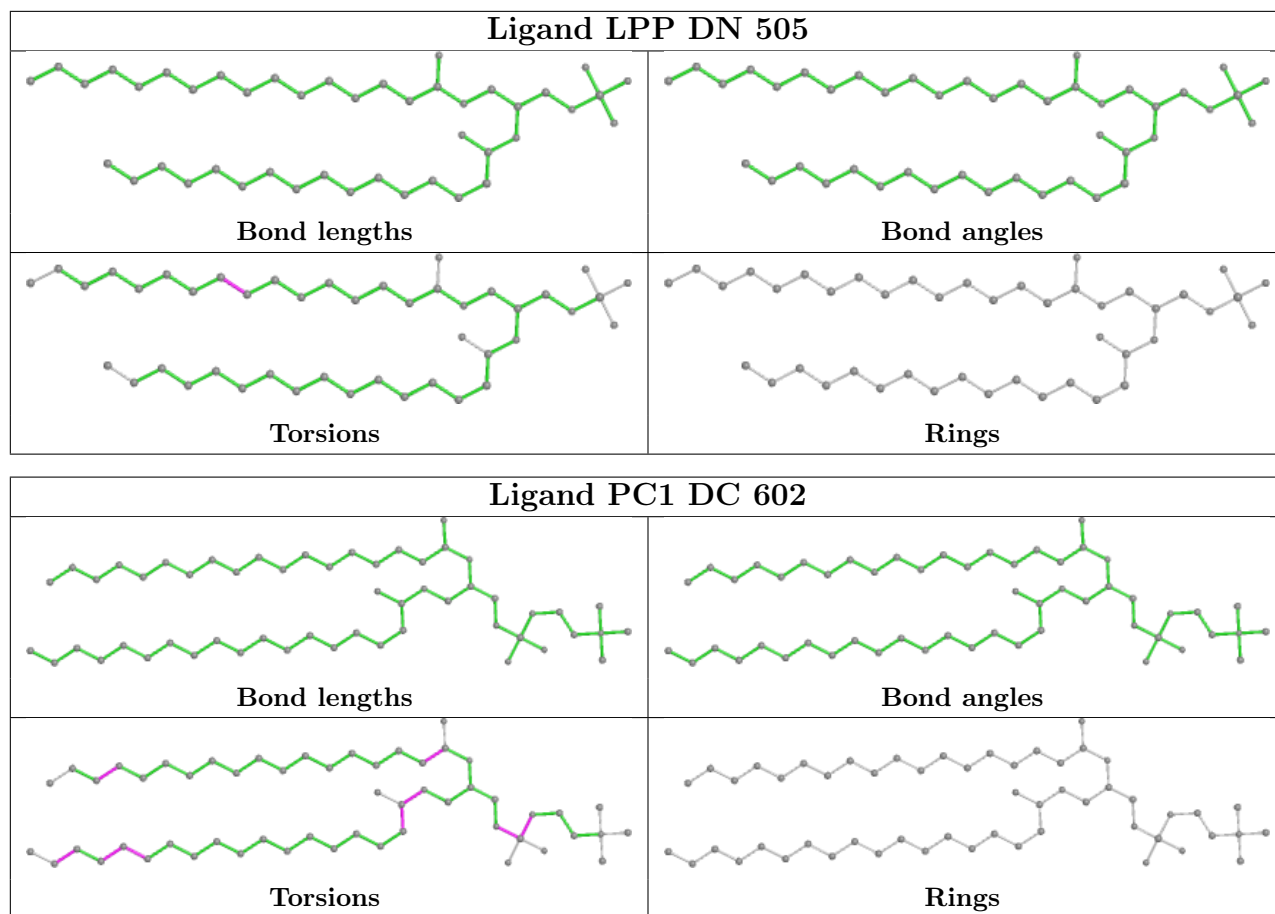


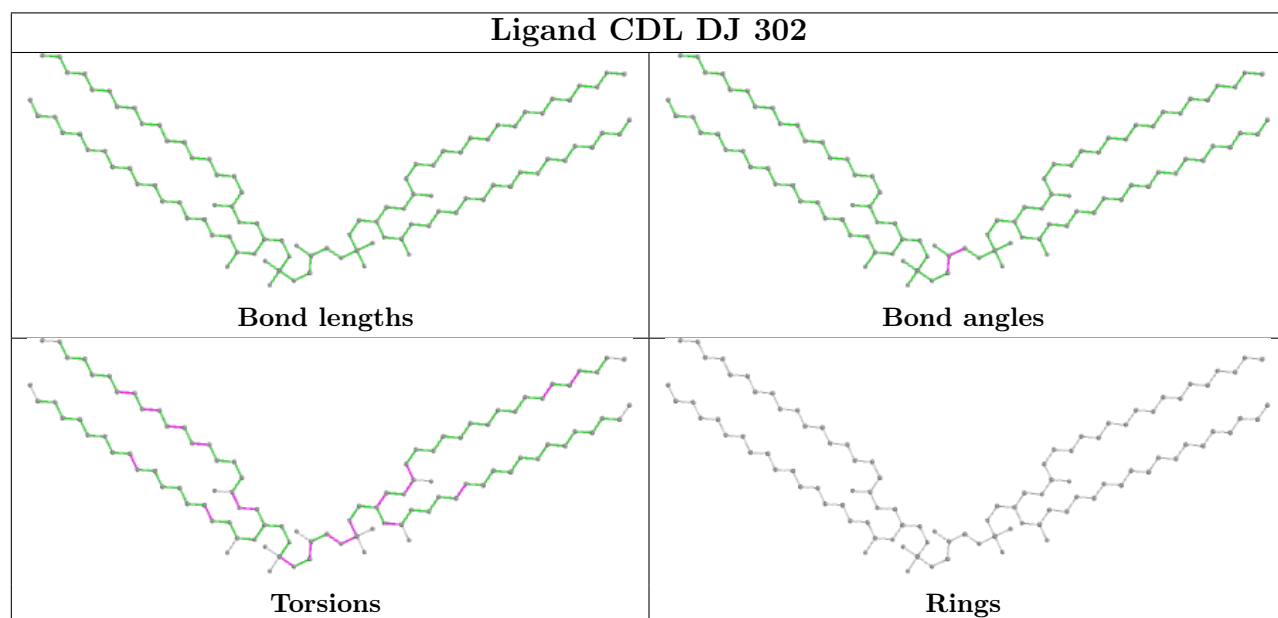
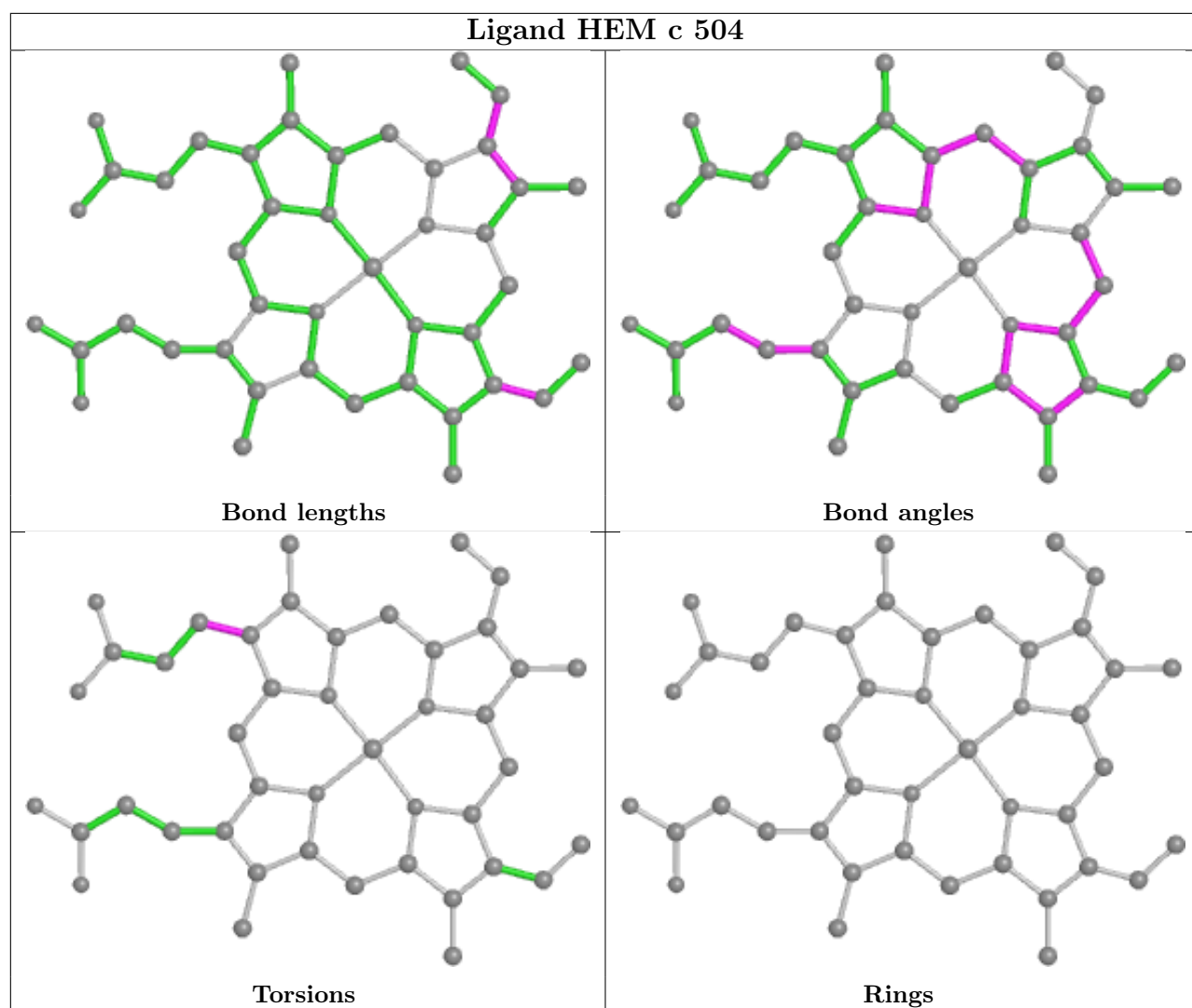


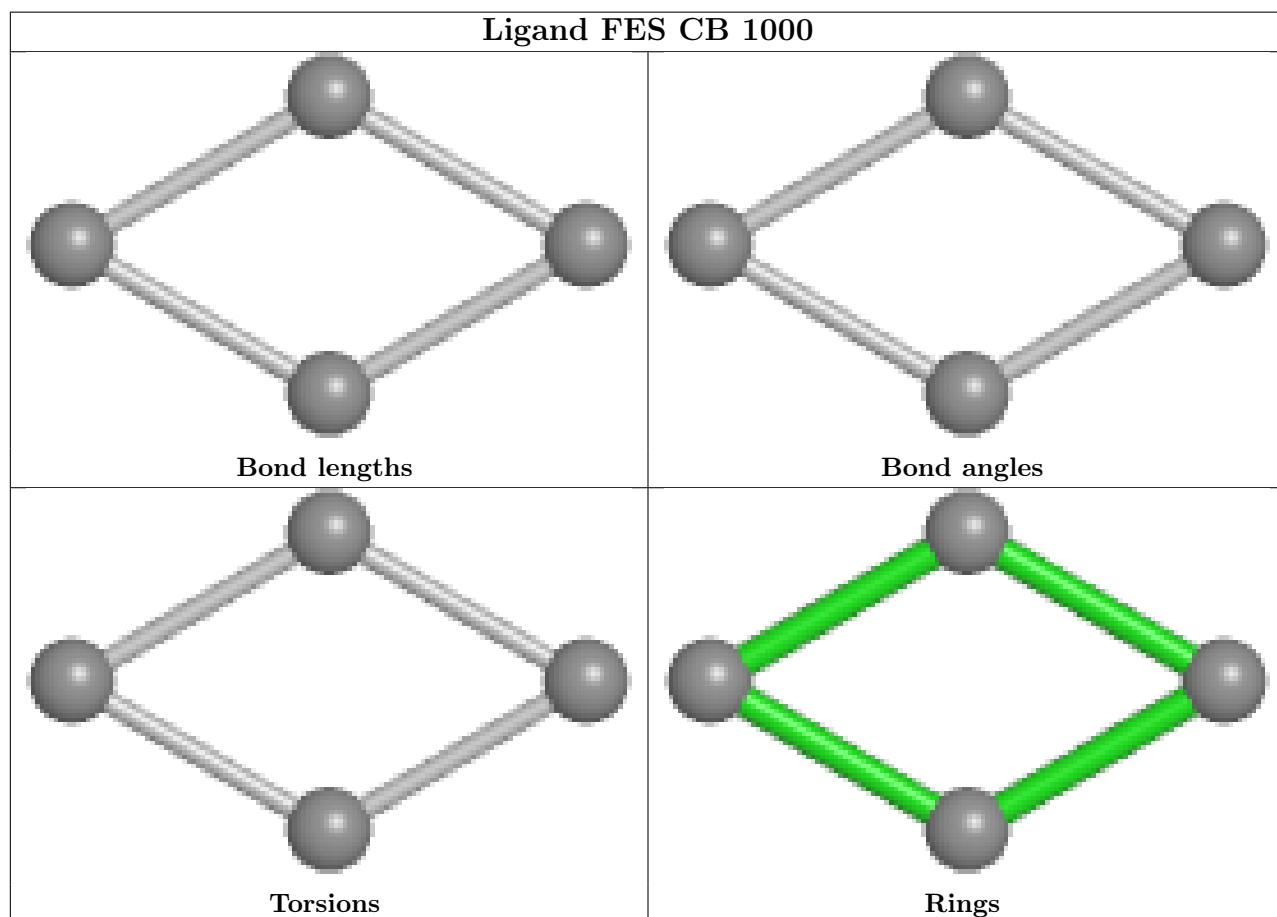
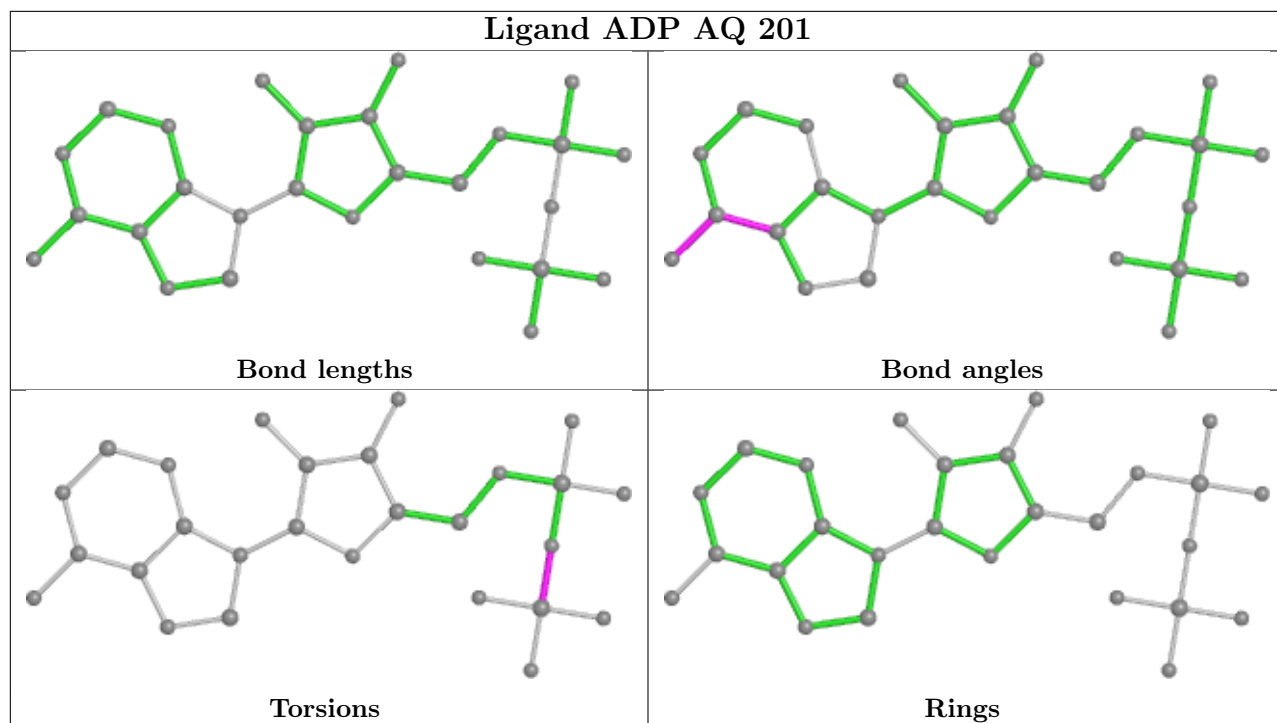


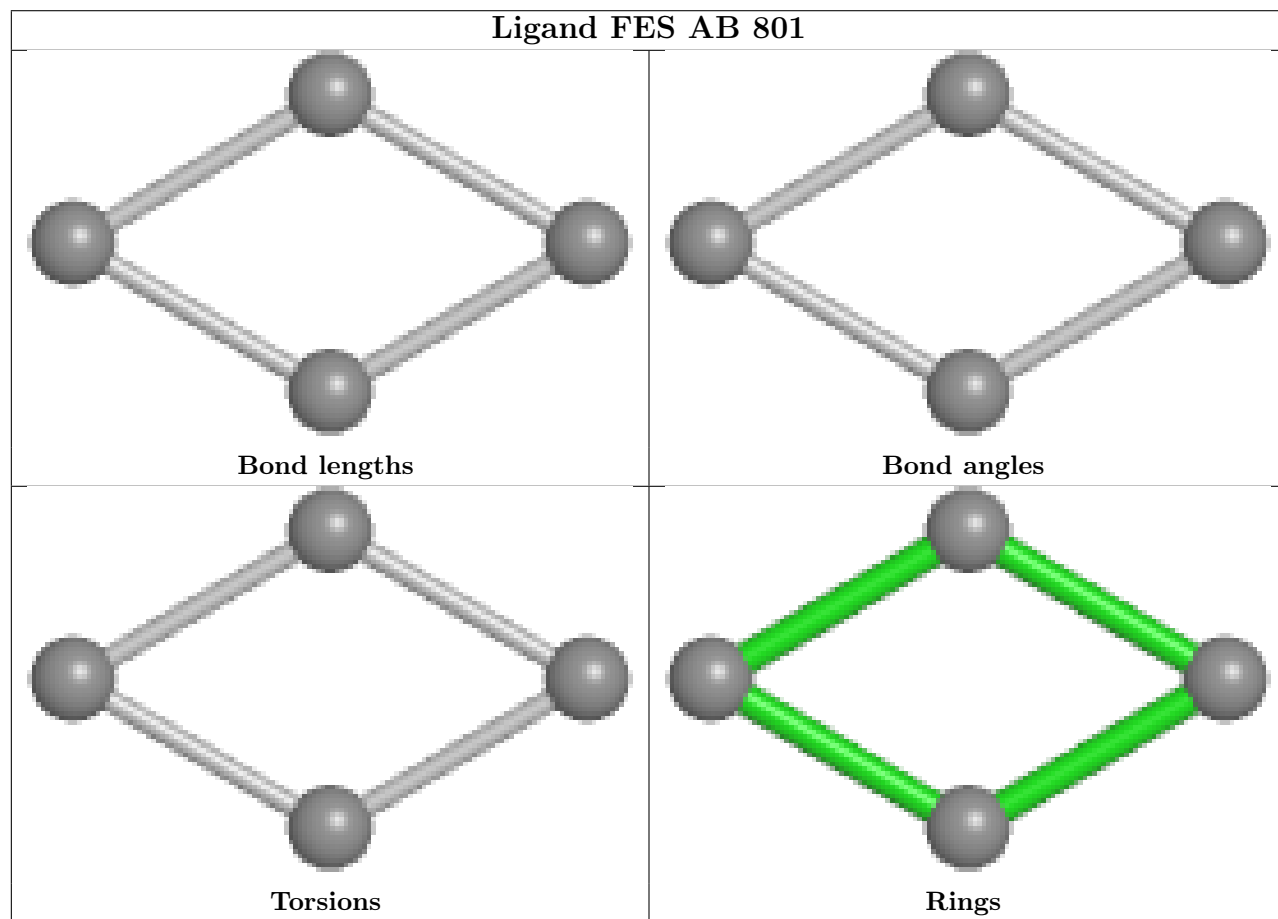
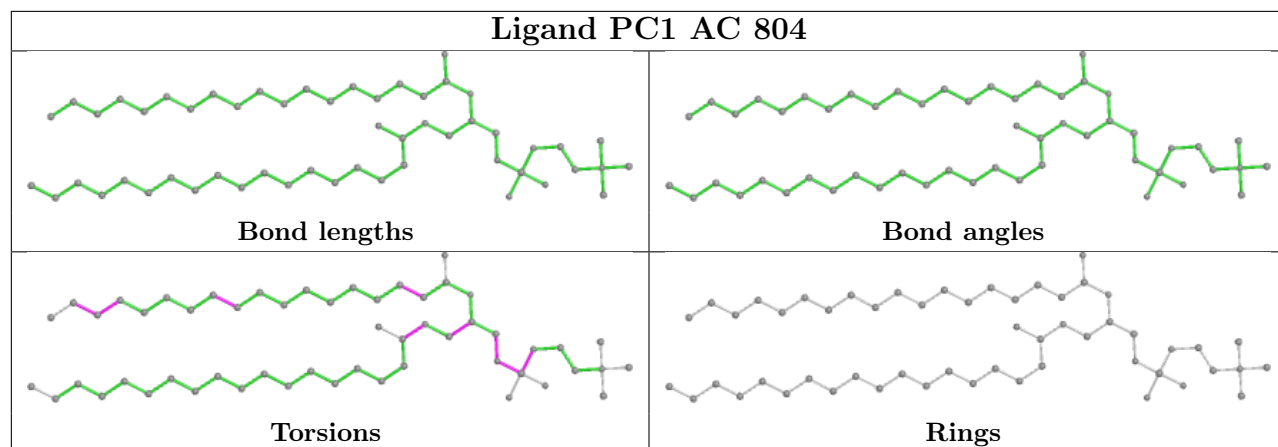


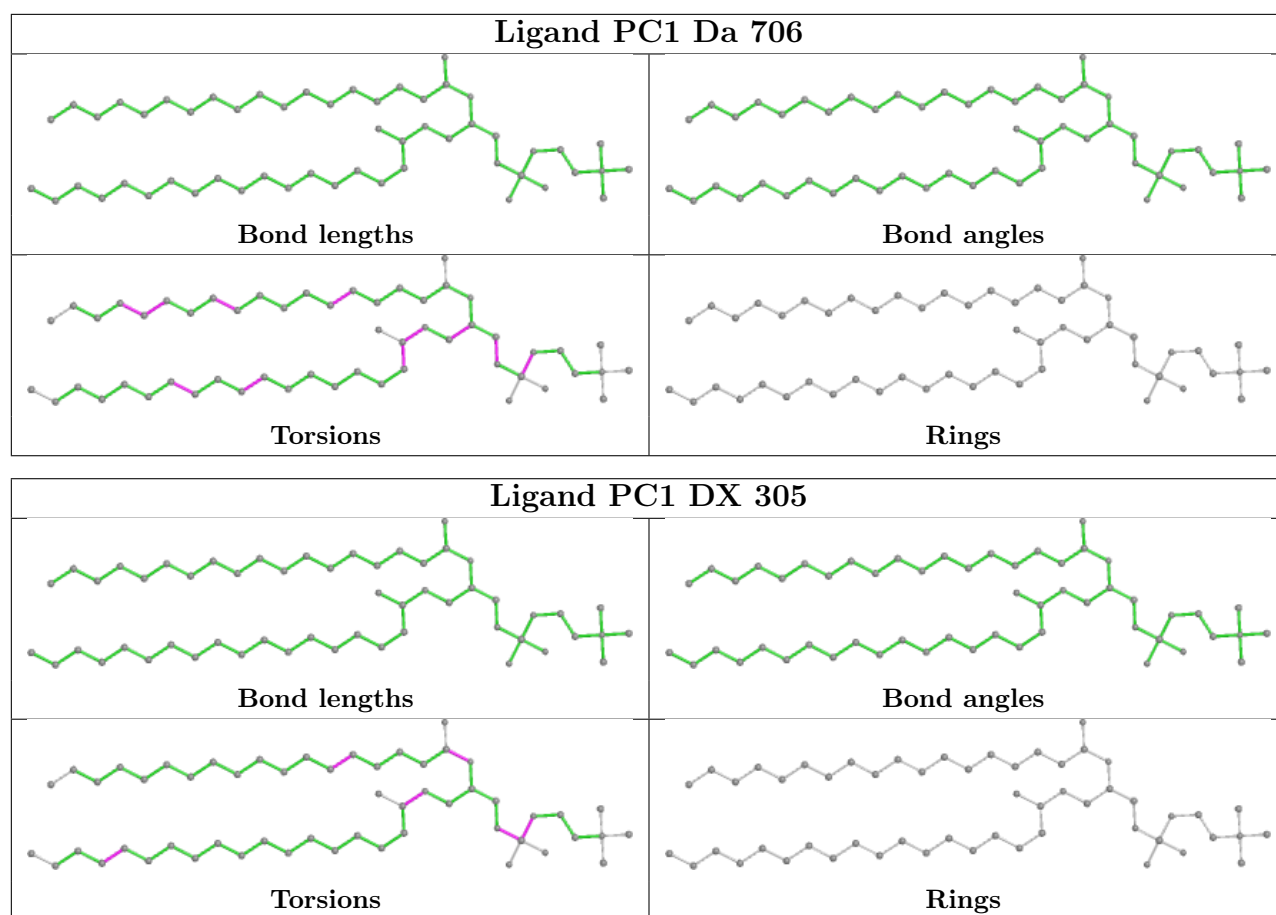












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

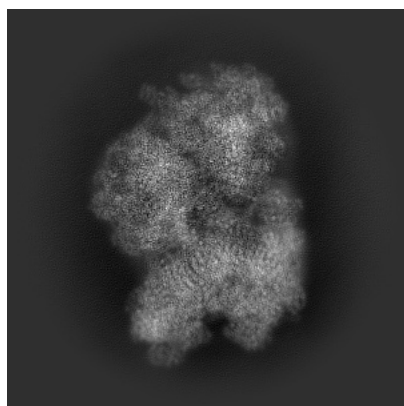
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-16184. These allow visual inspection of the internal detail of the map and identification of artifacts.

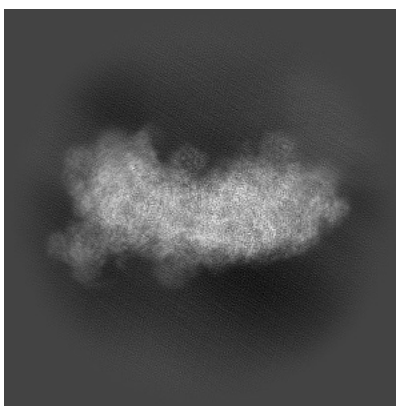
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

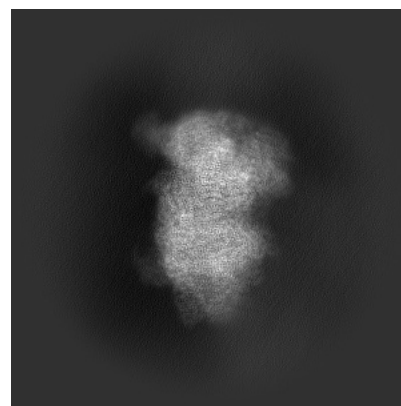
6.1.1 Primary map



X

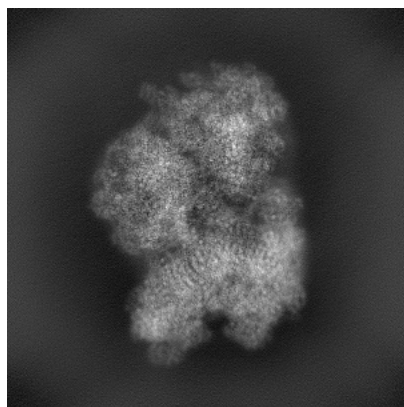


Y

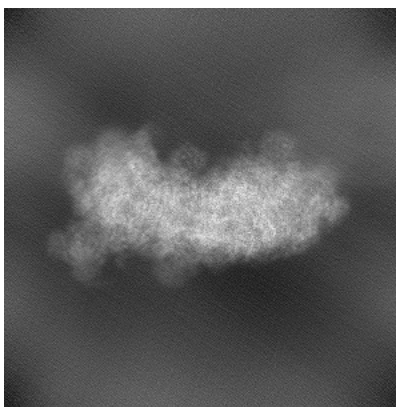


Z

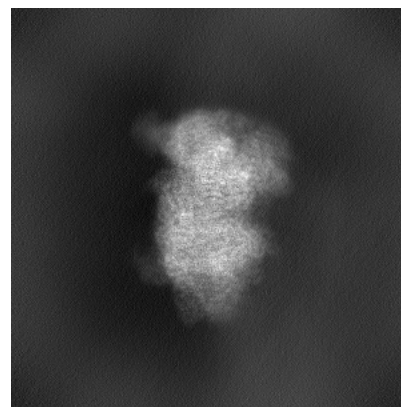
6.1.2 Raw map



X



Y

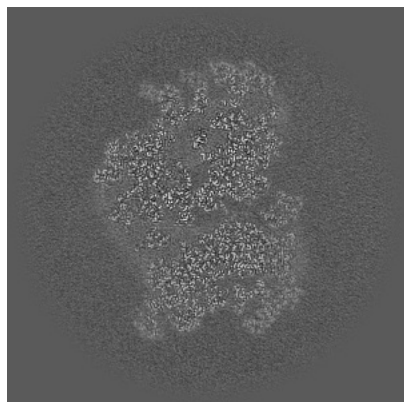


Z

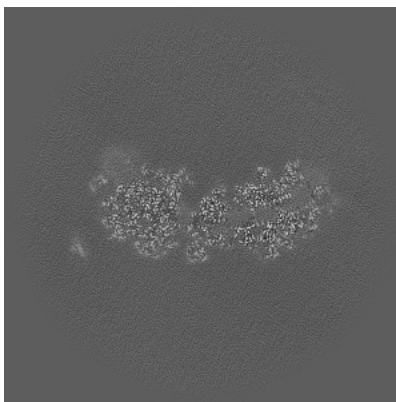
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

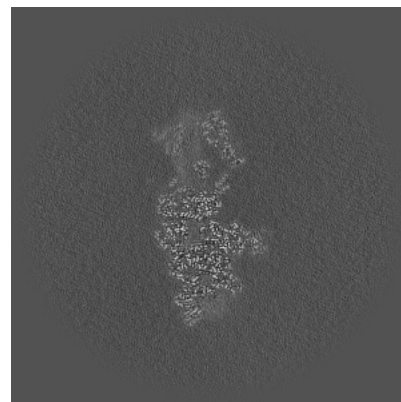
6.2.1 Primary map



X Index: 240

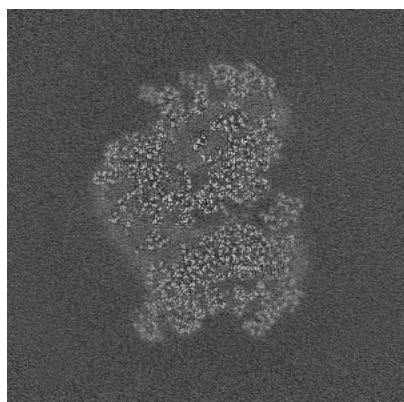


Y Index: 240

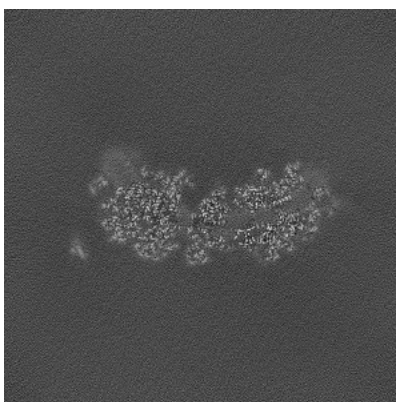


Z Index: 240

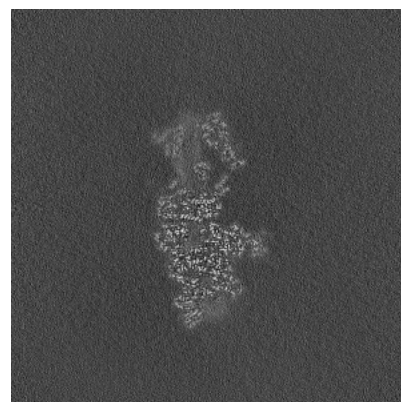
6.2.2 Raw map



X Index: 240



Y Index: 240

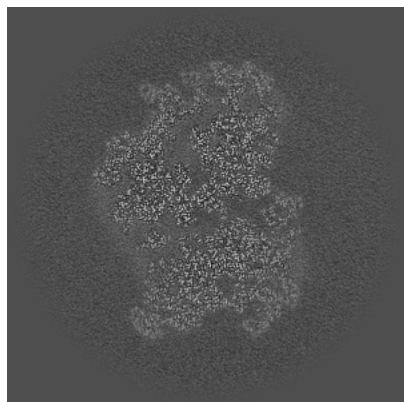


Z Index: 240

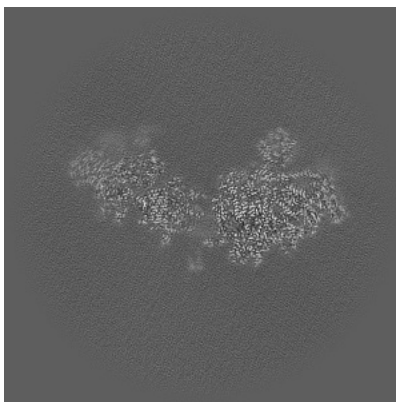
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

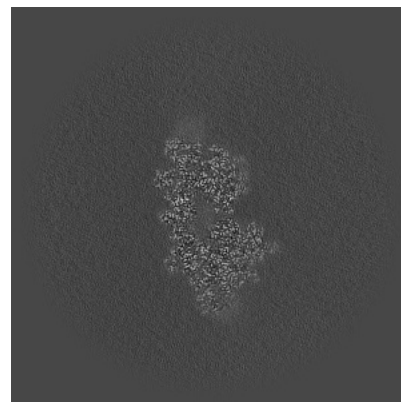
6.3.1 Primary map



X Index: 243

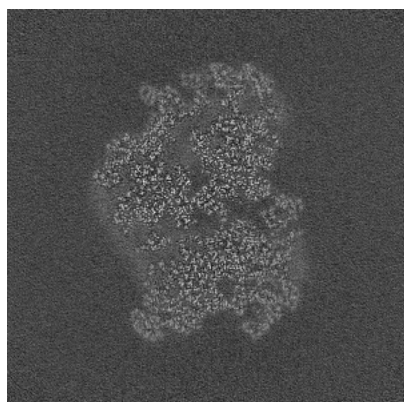


Y Index: 272

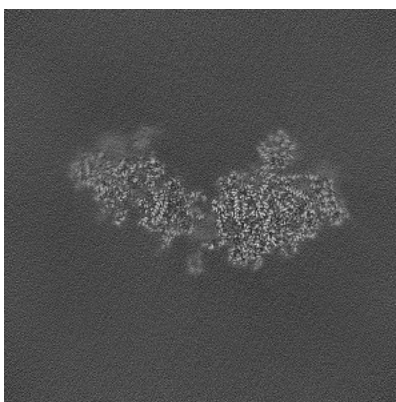


Z Index: 287

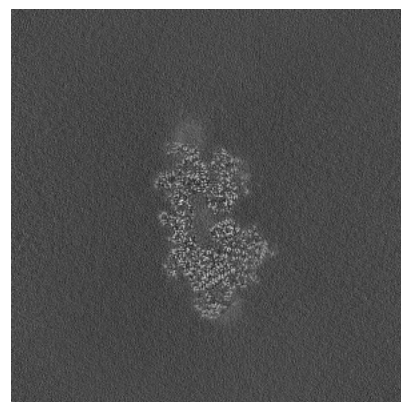
6.3.2 Raw map



X Index: 243



Y Index: 271

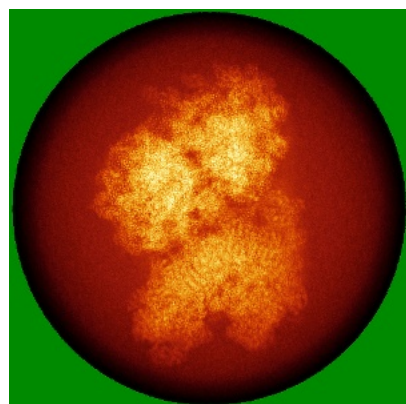


Z Index: 284

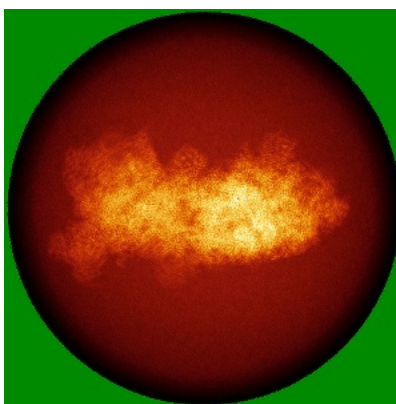
The images above show the largest variance slices of the map in three orthogonal directions.

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

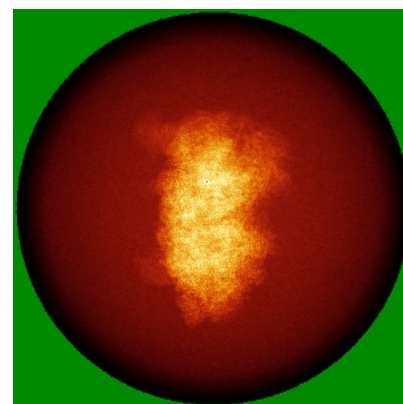
6.4.1 Primary map



X

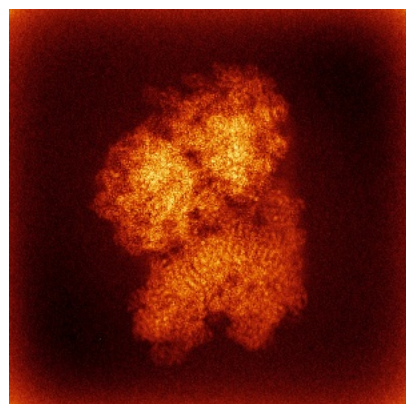


Y

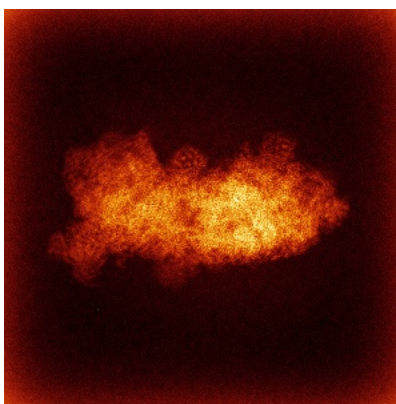


Z

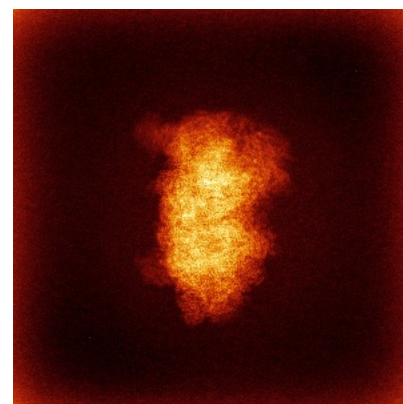
6.4.2 Raw map



X



Y

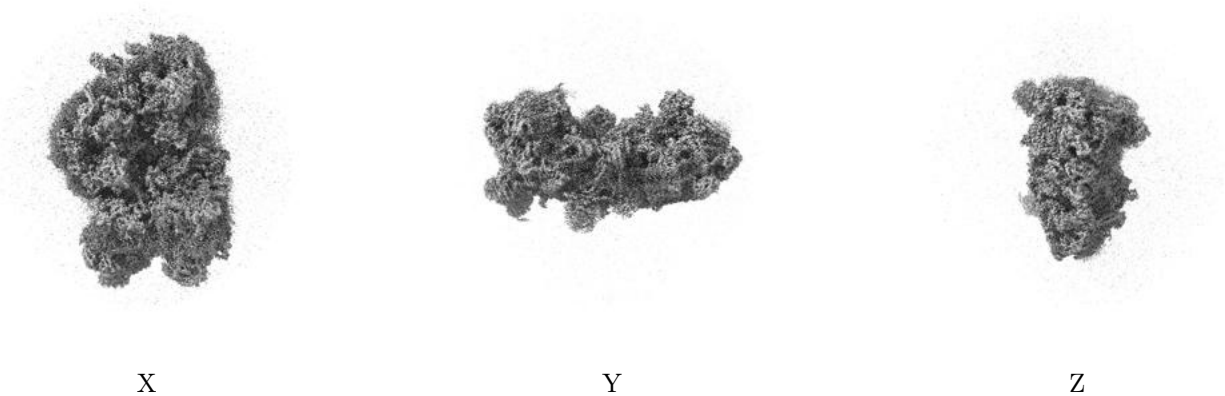


Z

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

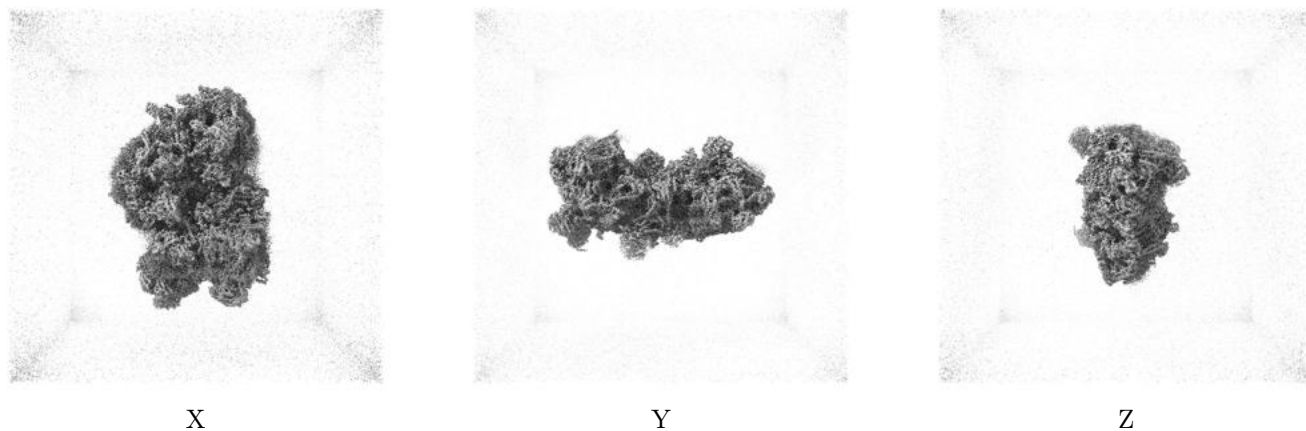
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.8. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

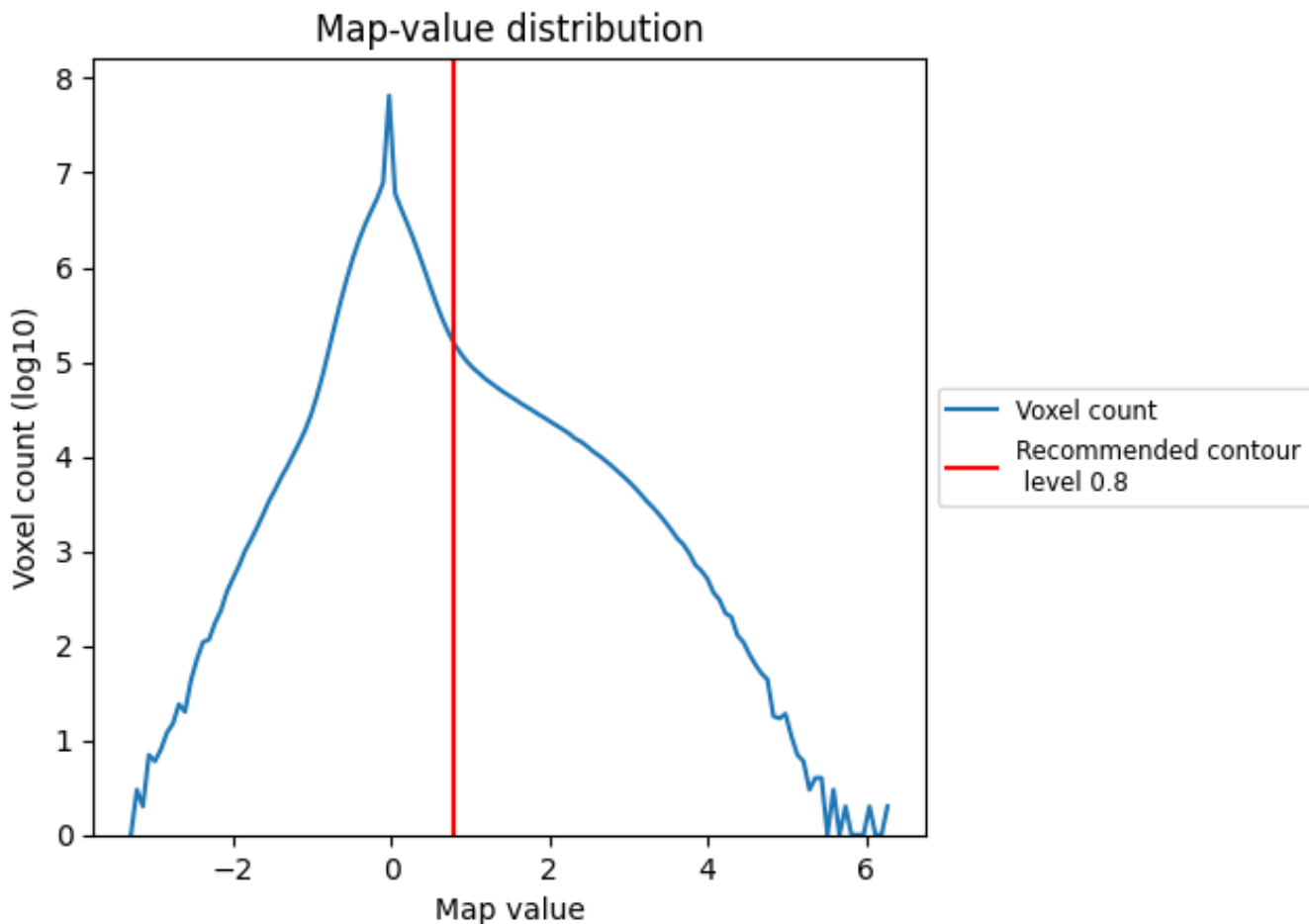
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

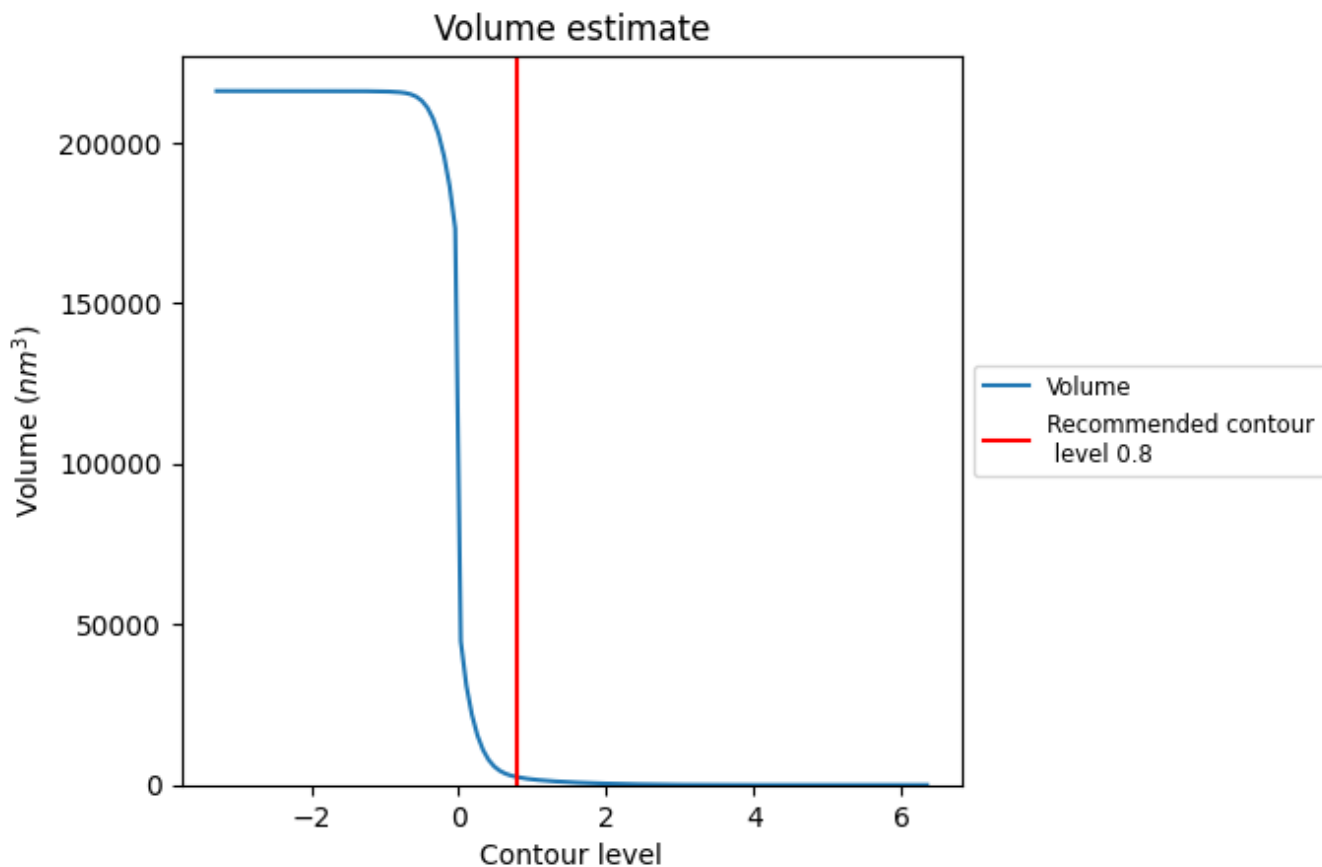
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

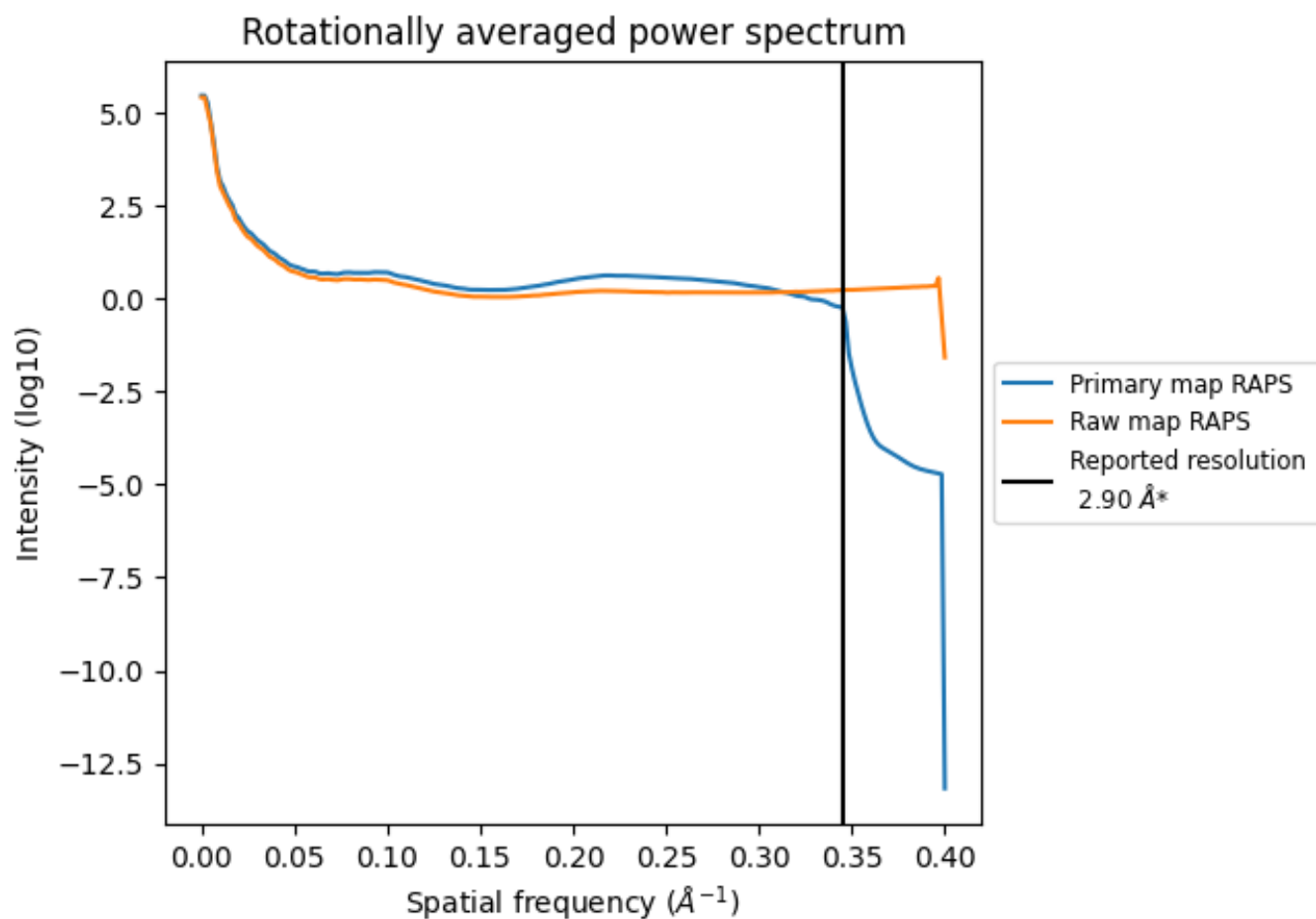
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2424 nm^3 ; this corresponds to an approximate mass of 2189 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](#)

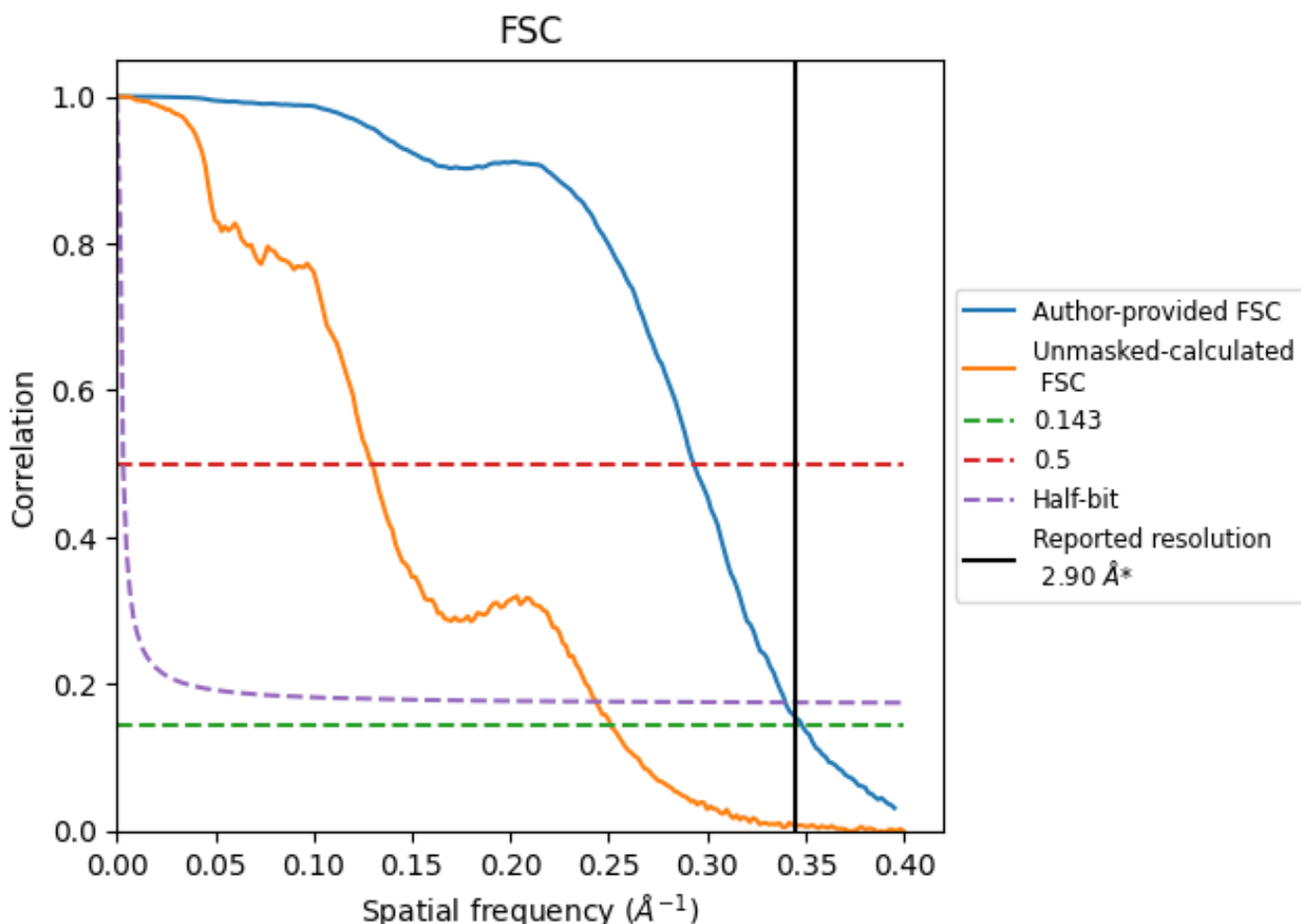


*Reported resolution corresponds to spatial frequency of 0.345 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.345\AA^{-1}

8.2 Resolution estimates [i](#)

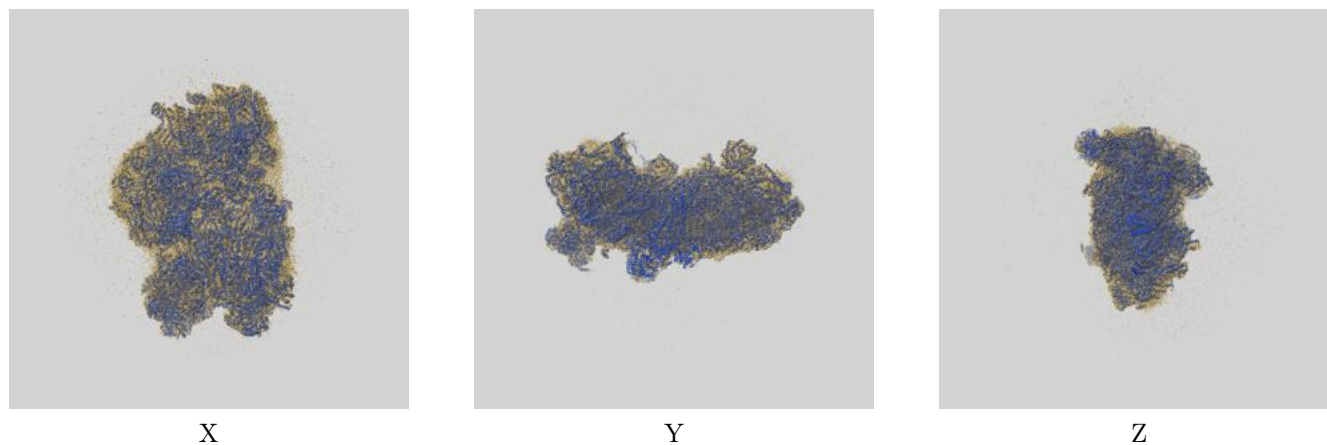
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.90	-	-
Author-provided FSC curve	2.87	3.41	2.94
Unmasked-calculated*	3.98	7.70	4.11

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.98 differs from the reported value 2.9 by more than 10 %

9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-16184 and PDB model 8BQS. Per-residue inclusion information can be found in section 3 on page 66.

9.1 Map-model overlay [i](#)

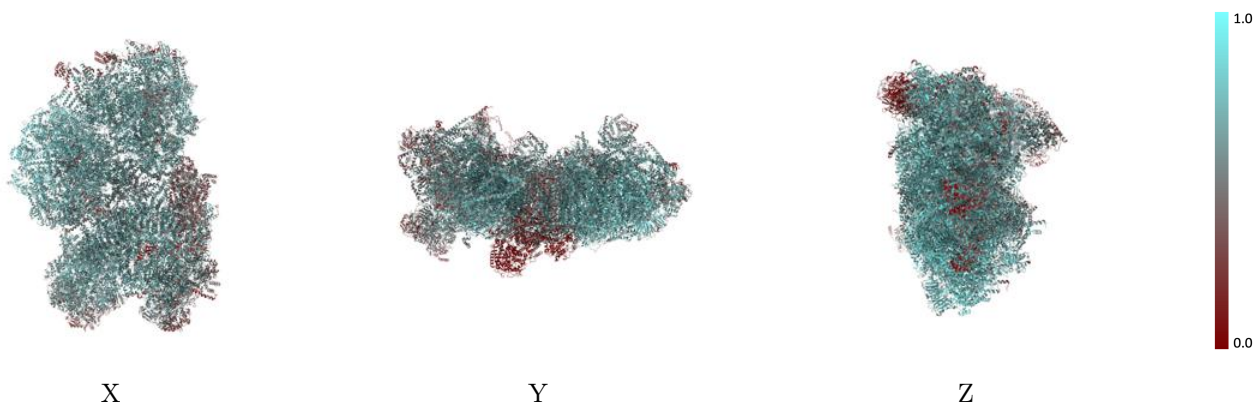


The images above show the 3D surface view of the map at the recommended contour level 0.8 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

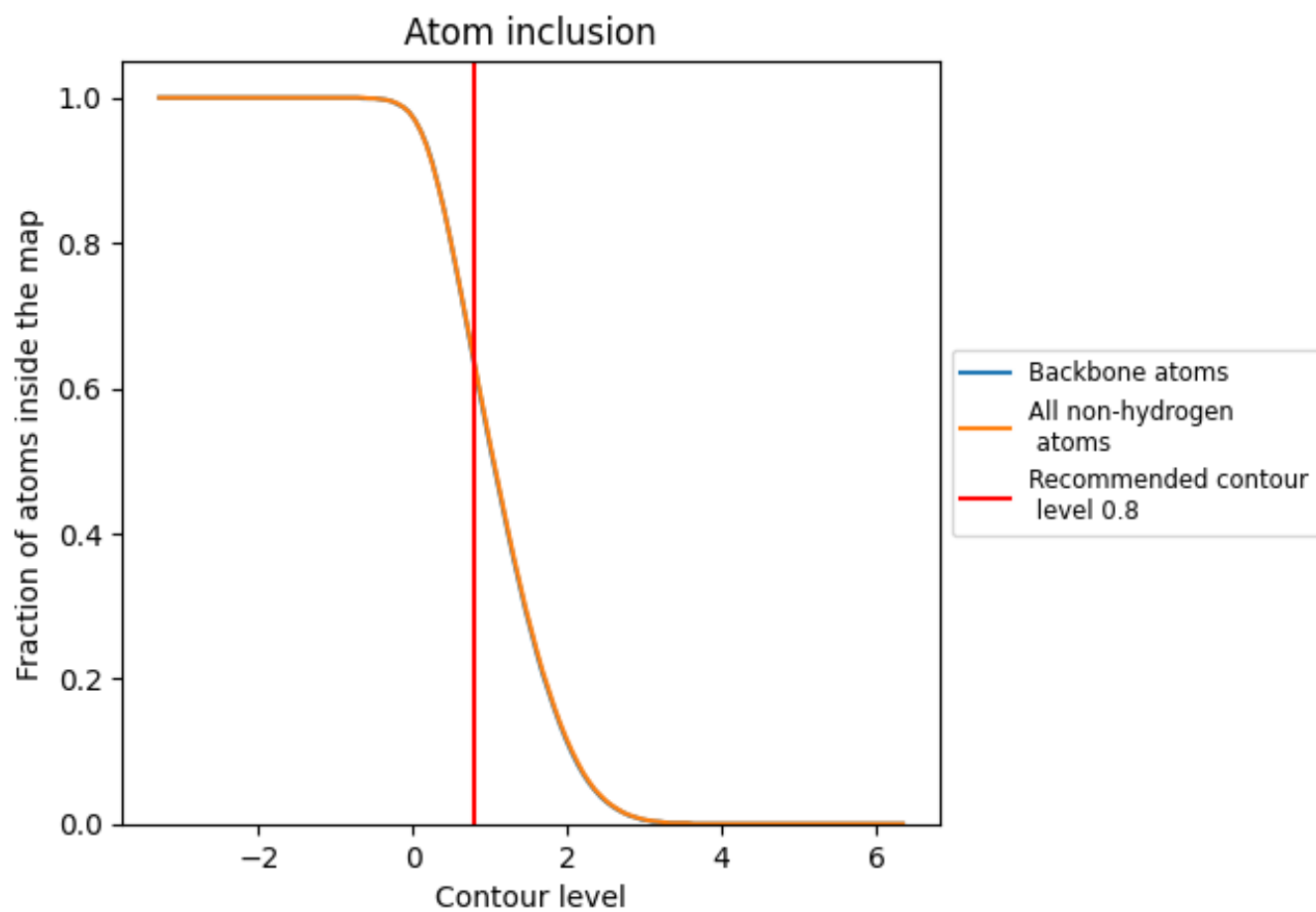
This section was not generated.

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.8).

9.4 Atom inclusion [i](#)



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

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











































The table lists the average atom inclusion at the recommended contour level (0.8) and Q-score for the entire model and for each chain.

Chain	Atom inclusion
All	0.6340
A	0.6900
A0	0.5580
A1	0.7020
A2	0.6870
A3	0.3210
A4	0.4820
A5	0.6710
A6	0.6190
A7	0.6260
A8	0.6270
A9	0.6910
AA	0.6900
AB	0.5450
AC	0.7630
AD	0.4530
AE	0.7470
AF	0.7650
AG	0.7390
AH	0.7210
AI	0.4290
AJ	0.7330
AK	0.7970
AL	0.7440
AM	0.7170
AN	0.6640
AO	0.7280
AP	0.6560
AQ	0.7170
AR	0.6200
AS	0.7760
AT	0.7660
AU	0.6920
AV	0.7320
AW	0.7000













































Continued on next page...

Continued from previous page...

Chain	Atom inclusion
AX	 0.7350
AY	 0.7720
AZ	 0.4770
B	 0.5680
B0	 0.6460
B1	 0.6240
B2	 0.6540
B3	 0.6780
B4	 0.5530
B5	 0.6580
B6	 0.8040
BA	 0.5800
BB	 0.6660
BC	 0.6700
BD	 0.6770
BE	 0.5990
BF	 0.7270
BG	 0.6600
BH	 0.7940
BI	 0.7970
BJ	 0.7320
BK	 0.6760
BL	 0.6280
BM	 0.7640
BN	 0.7100
BO	 0.6560
BP	 0.7250
BQ	 0.6750
BR	 0.6530
BS	 0.6550
BT	 0.6870
BU	 0.6240
BV	 0.6690
BW	 0.6940
BX	 0.7270
BY	 0.7240
BZ	 0.7560
C	 0.5340
CA	 0.0900
CB	 0.2010
CC	 0.2300
CD	 0.2130











































Continued on next page...

Continued from previous page...

Chain	Atom inclusion
CE	 0.1450
CF	 0.4250
CG	 0.2040
CH	 0.3990
CI	 0.4700
CJ	 0.2820
CK	 0.3240
CL	 0.4740
CM	 0.4110
CN	 0.2580
CO	 0.3660
D	 0.7510
DA	 0.7960
DB	 0.7030
DC	 0.7190
DD	 0.7360
DE	 0.7810
DF	 0.7410
DG	 0.6970
DH	 0.7450
DI	 0.7430
DJ	 0.6900
DK	 0.6650
DL	 0.7430
DM	 0.7690
DN	 0.6450
DO	 0.5870
DP	 0.6520
DQ	 0.7510
DR	 0.7590
DS	 0.7360
DT	 0.8250
DU	 0.6570
DV	 0.7340
DW	 0.6420
DX	 0.6340
DY	 0.7110
DZ	 0.7190
Da	 0.7620
Db	 0.6650
Dc	 0.6630
Dd	 0.7010

Continued on next page...

Continued from previous page...

Chain	Atom inclusion
De	 0.7560
Df	 0.7050
Dg	 0.6730
Dh	 0.7200
Di	 0.6850
Dj	 0.6590
Dk	 0.6730
Dl	 0.6650
Dm	 0.7170
Dn	 0.5970
Do	 0.4320
Dp	 0.5860
Dq	 0.7400
Dr	 0.6920
Ds	 0.6680
Dt	 0.7780
Du	 0.6080
Dv	 0.6530
Dw	 0.6450
Dx	 0.6430
Dy	 0.6540
Dz	 0.6690
E	 0.5140
EA	 0.6640
EB	 0.7100
EC	 0.4860
ED	 0.6160
EE	 0.7020
EF	 0.8180
EG	 0.7370
EH	 0.7540
EI	 0.6930
EJ	 0.6870
EK	 0.6680
EL	 0.6940
EM	 0.7180
EN	 0.7070
EO	 0.6360
EP	 0.8090
EQ	 0.7660
ER	 0.7790
ES	 0.7710













Continued on next page...

Continued from previous page...

Chain	Atom inclusion
ET	0.5080
EU	0.6900
EV	0.6310
EW	0.5360
EX	0.5960
EY	0.5790
EZ	0.6110
Ea	0.6200
Eb	0.6740
Ec	0.4020
Ed	0.5810
Ee	0.6410
Ef	0.7580
Eg	0.6830
Eh	0.7250
Ei	0.6840
Ej	0.6250
Ek	0.6970
El	0.6710
Em	0.7140
En	0.6810
Eo	0.6640
Ep	0.7390
Eq	0.7470
Er	0.7920
Es	0.8220
Et	0.4450
Eu	0.6080
Ev	0.6280
Ew	0.4570
Ex	0.5400
Ey	0.5610
Ez	0.5880
F	0.6180
FA	0.6260
Fa	0.6000
G	0.5030
H	0.5110
I	0.7290
J	0.2640
K	0.6340
L	0.5490

Continued on next page...

Continued from previous page...

Chain	Atom inclusion
a	 0.4730
b	 0.5200
c	 0.6660
d	 0.5600
e	 0.3240
f	 0.3590
g	 0.6290
h	 0.7170
i	 0.4860
j	 0.2180
k	 0.5070
l	 0.6160