



# Full wwPDB X-ray Structure Validation Report ⓘ

Mar 12, 2024 – 12:40 AM JST

PDB ID : 8H8S  
Title : Bovine Heart Cytochrome c Oxidase in the Calcium-bound Fully Reduced State  
Authors : Muramoto, K.; Shinzawa-Itoh, K.  
Deposited on : 2022-10-24  
Resolution : 1.70 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

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:

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

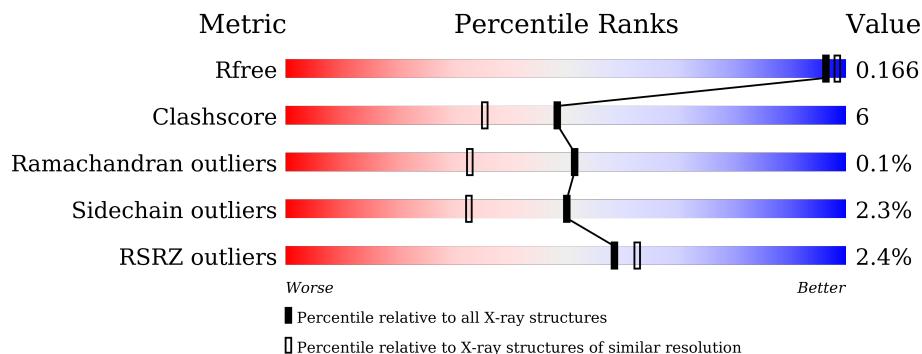
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 1.70 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)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	4298 (1.70-1.70)
Clashscore	141614	4695 (1.70-1.70)
Ramachandran outliers	138981	4610 (1.70-1.70)
Sidechain outliers	138945	4610 (1.70-1.70)
RSRZ outliers	127900	4222 (1.70-1.70)

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

Mol	Chain	Length	Quality of chain
1	A	514	
1	N	514	
2	B	227	
2	O	227	
3	C	261	
3	P	261	

*Continued on next page...*

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	D	147	
4	Q	147	
5	E	109	
5	R	109	
6	F	98	
6	S	98	
7	G	85	
7	T	85	
8	H	85	
8	U	85	
9	I	73	
9	V	73	
10	J	59	
10	W	59	
11	K	56	
11	X	56	
12	L	47	
12	Y	47	
13	M	46	
13	Z	46	

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
19	LFA	C	308	-	-	-	X
19	LFA	P	307	-	-	-	X
19	LFA	P	308	-	-	-	X

Continued on next page...

*Continued from previous page...*

<b>Mol</b>	<b>Type</b>	<b>Chain</b>	<b>Res</b>	<b>Chirality</b>	<b>Geometry</b>	<b>Clashes</b>	<b>Electron density</b>
20	DMU	P	316	-	-	-	X



## 2 Entry composition

There are 28 unique types of molecules in this entry. The entry contains 33023 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 Cytochrome c oxidase subunit 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	513	4130	2757	636	696	41	0	15	0
1	N	513	4130	2757	636	696	41	0	15	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	227	1870	1216	288	347	19	0	5	0
2	O	227	1870	1216	288	347	19	0	5	0

- Molecule 3 is a protein called Cytochrome c oxidase subunit 3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	258	2171	1449	342	364	16	0	9	0
3	P	258	2172	1449	343	364	16	0	9	0

- Molecule 4 is a protein called Cytochrome c oxidase subunit 4 isoform 1, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	D	143	1192	776	195	217	4	0	1	0
4	Q	137	1148	749	188	207	4	0	1	0

- Molecule 5 is a protein called Cytochrome c oxidase subunit 5A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	102	Total	C	N	O	S	0	0	0
			825	528	139	156	2			
5	R	102	Total	C	N	O	S	0	0	0
			825	528	139	156	2			

- Molecule 6 is a protein called Cytochrome c oxidase subunit 5B, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	91	Total	C	N	O	S	0	2	0
			709	441	124	138	6			
6	S	91	Total	C	N	O	S	0	2	0
			709	441	124	138	6			

- Molecule 7 is a protein called Cytochrome c oxidase subunit 6A2, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	72	Total	C	N	O	S	0	1	0
			606	396	114	95	1			
7	T	72	Total	C	N	O	S	0	1	0
			606	396	114	95	1			

- Molecule 8 is a protein called Cytochrome c oxidase subunit 6B1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	75	Total	C	N	O	S	0	0	0
			628	395	114	114	5			
8	U	75	Total	C	N	O	S	0	0	0
			628	395	114	114	5			

- Molecule 9 is a protein called Cytochrome c oxidase subunit 6C.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	70	Total	C	N	O	S	0	0	0
			575	375	103	93	4			
9	V	70	Total	C	N	O	S	0	0	0
			575	375	103	93	4			

- Molecule 10 is a protein called Cytochrome c oxidase subunit 7A1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	56	Total	C	N	O	S	0	0	0
			441	285	73	80	3			

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	W	56	Total	C	N	O	S	0	0	0
			441	285	73	80	3			

- Molecule 11 is a protein called Cytochrome c oxidase subunit 7B, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	49	Total	C	N	O	S	0	0	0
			384	250	65	67	2			
11	X	49	Total	C	N	O	S	0	0	0
			384	250	65	67	2			

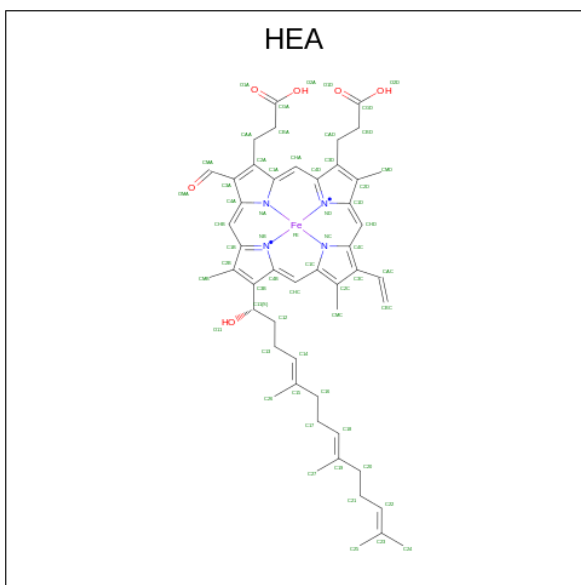
- Molecule 12 is a protein called Cytochrome c oxidase subunit 7C, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	44	Total	C	N	O	S	0	0	0
			360	242	59	57	2			
12	Y	44	Total	C	N	O	S	0	0	0
			360	242	59	57	2			

- Molecule 13 is a protein called Cytochrome c oxidase subunit 8B, mitochondrial.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
13	M	40	Total	C	N	O	0	0	0
			311	208	48	55			
13	Z	40	Total	C	N	O	0	0	0
			311	208	48	55			

- Molecule 14 is HEME-A (three-letter code: HEA) (formula: C<sub>49</sub>H<sub>56</sub>FeN<sub>4</sub>O<sub>6</sub>).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
14	A	1	Total	C	Fe	N	O	0	0
			60	49	1	4	6		
14	A	1	Total	C	Fe	N	O	0	0
			60	49	1	4	6		
14	N	1	Total	C	Fe	N	O	0	0
			60	49	1	4	6		
14	N	1	Total	C	Fe	N	O	0	0
			60	49	1	4	6		

- Molecule 15 is COPPER (II) ION (three-letter code: CU) (formula: Cu).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
15	A	1	Total	Cu	0	0
			1	1		
15	N	1	Total	Cu	0	0
			1	1		

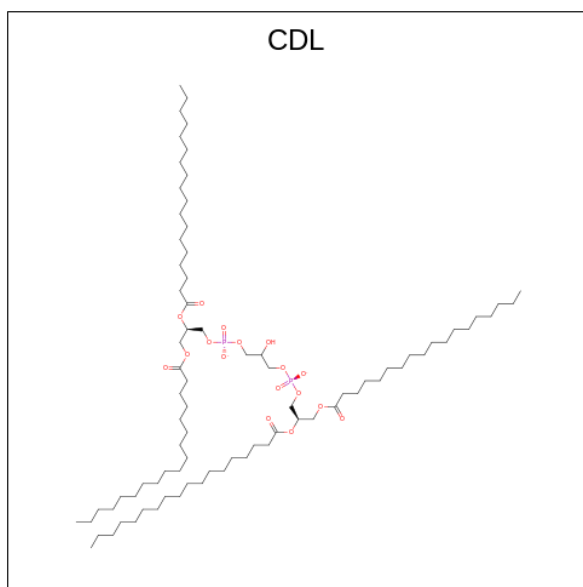
- Molecule 16 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
16	A	1	Total	Mg	0	0
			1	1		
16	N	1	Total	Mg	0	0
			1	1		

- Molecule 17 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

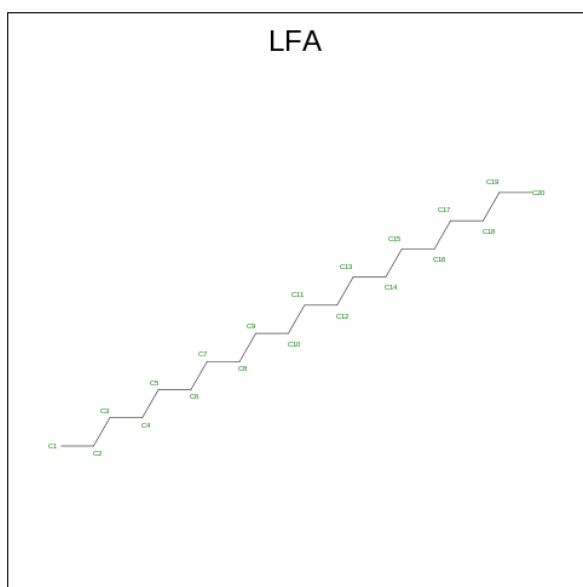
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
17	A	1	Total Ca 1 1	0	0
17	N	1	Total Ca 1 1	0	0

- Molecule 18 is CARDIOLIPIN (three-letter code: CDL) (formula:  $C_{81}H_{156}O_{17}P_2$ ).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
18	A	1	Total C O P 64 45 17 2	0	0
18	C	1	Total C O P 87 68 17 2	0	0
18	L	1	Total C O P 94 75 17 2	0	0
18	P	1	Total C O P 87 68 17 2	0	0
18	V	1	Total C O P 64 45 17 2	0	0
18	Y	1	Total C O P 94 75 17 2	0	0

- Molecule 19 is EICOSANE (three-letter code: LFA) (formula:  $C_{20}H_{42}$ ).



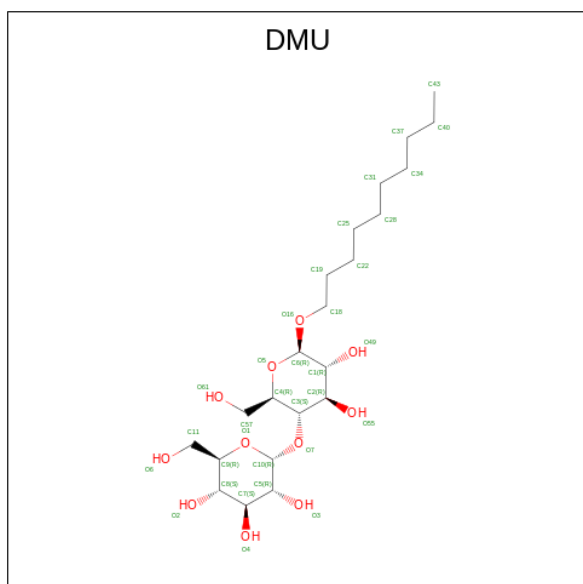
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
19	A	1	Total C 14 14	0	0
19	B	1	Total C 17 17	0	0
19	C	1	Total C 11 11	0	0
19	C	1	Total C 6 6	0	0
19	C	1	Total C 18 18	0	0
19	C	1	Total C 15 15	0	0
19	C	1	Total C 11 11	0	0
19	C	1	Total C 14 14	0	0
19	C	1	Total C 11 11	0	0
19	C	1	Total C 15 15	0	0
19	C	1	Total C 13 13	0	0
19	C	1	Total C 15 15	0	0
19	N	1	Total C 14 14	0	0
19	N	1	Total C 14 14	0	0

*Continued on next page...*

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
19	O	1	Total C 17 17	0	0
19	O	1	Total C 11 11	0	0
19	P	1	Total C 11 11	0	0
19	P	1	Total C 6 6	0	0
19	P	1	Total C 18 18	0	0
19	P	1	Total C 11 11	0	0
19	P	1	Total C 11 11	0	0
19	P	1	Total C 15 15	0	0
19	P	1	Total C 13 13	0	0
19	T	1	Total C 14 14	0	0
19	T	1	Total C 14 14	0	0
19	T	1	Total C 11 11	0	0

- Molecule 20 is DECYL-BETA-D-MALTOPYRANOSIDE (three-letter code: DMU) (formula:  $C_{22}H_{42}O_{11}$ ).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
20	A	1	Total C 7 7	0	0
20	A	1	Total C O 33 22 11	0	0
20	A	1	Total C O 11 10 1	0	0
20	B	1	Total C O 11 10 1	0	0
20	B	1	Total C O 11 10 1	0	0
20	B	1	Total C O 22 16 6	0	0
20	B	1	Total C O 22 16 6	0	0
20	C	1	Total C O 11 10 1	0	0
20	C	1	Total C O 33 22 11	0	0
20	C	1	Total C 7 7	0	0
20	C	1	Total C O 22 16 6	0	0
20	C	1	Total C O 33 22 11	0	0
20	C	1	Total C O 33 22 11	0	0
20	C	1	Total C O 33 22 11	0	0
20	D	1	Total C O 33 22 11	0	0
20	G	1	Total C O 11 10 1	0	0
20	G	1	Total C O 22 16 6	0	0
20	H	1	Total C O 33 22 11	0	0
20	J	1	Total C O 11 10 1	0	0
20	L	1	Total C O 22 16 6	0	0
20	M	1	Total C O 33 22 11	0	0
20	M	1	Total C 8 8	0	0

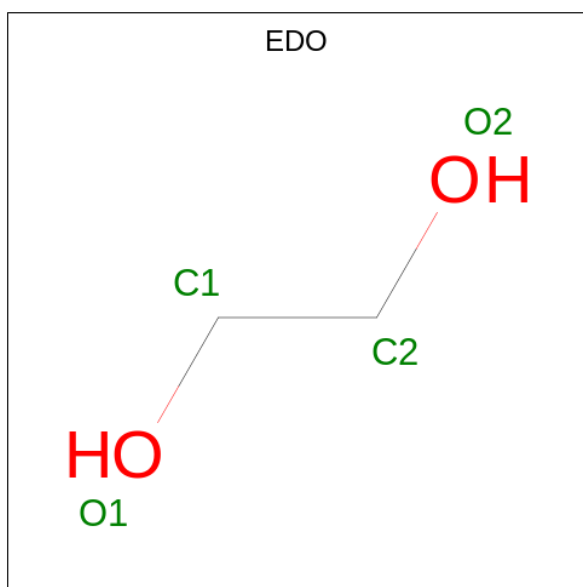
*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
20	N	1	Total C 7 7	0	0
20	N	1	Total C O 33 22 11	0	0
20	N	1	Total C O 33 22 11	0	0
20	O	1	Total C O 22 16 6	0	0
20	O	1	Total C O 11 10 1	0	0
20	O	1	Total C O 11 10 1	0	0
20	O	1	Total C O 22 16 6	0	0
20	P	1	Total C O 11 10 1	0	0
20	P	1	Total C O 33 22 11	0	0
20	P	1	Total C 7 7	0	0
20	P	1	Total C O 22 16 6	0	0
20	P	1	Total C O 33 22 11	0	0
20	P	1	Total C O 33 22 11	0	0
20	P	1	Total C O 33 22 11	0	0
20	Q	1	Total C O 33 22 11	0	0
20	T	1	Total C O 22 16 6	0	0
20	W	1	Total C O 11 10 1	0	0
20	Y	1	Total C O 22 16 6	0	0
20	Z	1	Total C O 33 22 11	0	0
20	Z	1	Total C 8 8	0	0

- Molecule 21 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: C<sub>2</sub>H<sub>6</sub>O<sub>2</sub>).



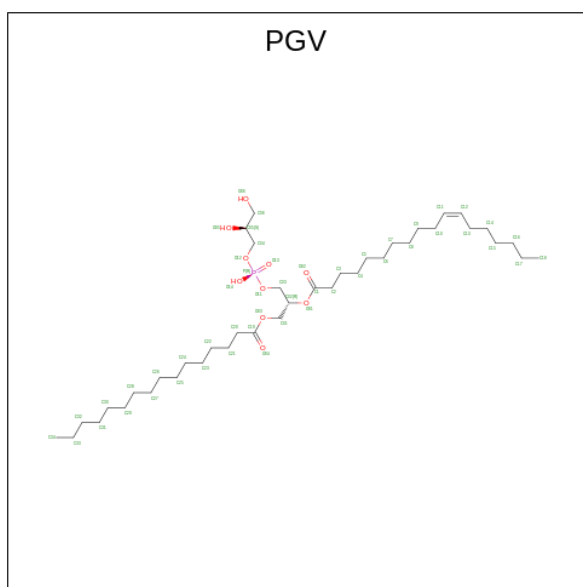
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
21	A	1	Total C O 4 2 2	0	0
21	A	1	Total C O 4 2 2	0	0
21	A	1	Total C O 4 2 2	0	0
21	A	1	Total C O 4 2 2	0	0
21	B	1	Total C O 4 2 2	0	0
21	C	1	Total C O 4 2 2	0	0
21	C	1	Total C O 4 2 2	0	0
21	C	1	Total C O 4 2 2	0	0
21	E	1	Total C O 4 2 2	0	0
21	E	1	Total C O 4 2 2	0	0
21	E	1	Total C O 4 2 2	0	0
21	F	1	Total C O 4 2 2	0	0
21	F	1	Total C O 4 2 2	0	0
21	G	1	Total C O 4 2 2	0	0

*Continued on next page...*

*Continued from previous page...*

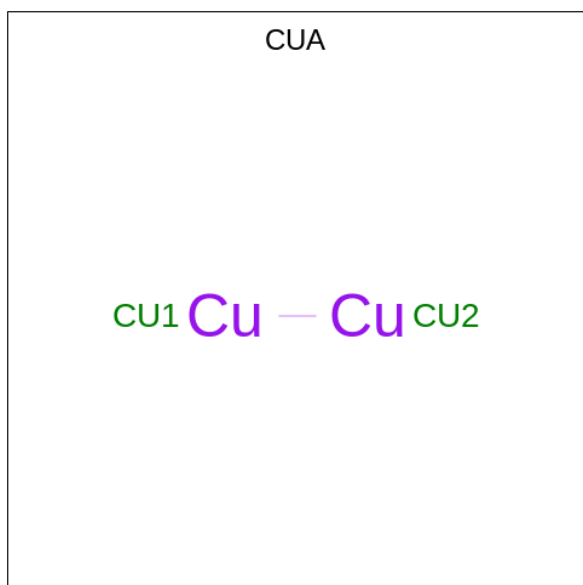
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
21	N	1	Total 4	C 2	O 2	0	0
21	N	1	Total 4	C 2	O 2	0	0
21	N	1	Total 4	C 2	O 2	0	0
21	N	1	Total 4	C 2	O 2	0	0
21	N	1	Total 4	C 2	O 2	0	0
21	O	1	Total 4	C 2	O 2	0	0
21	P	1	Total 4	C 2	O 2	0	0
21	P	1	Total 4	C 2	O 2	0	0
21	P	1	Total 4	C 2	O 2	0	0
21	R	1	Total 4	C 2	O 2	0	0
21	R	1	Total 4	C 2	O 2	0	0
21	R	1	Total 4	C 2	O 2	0	0
21	S	1	Total 4	C 2	O 2	0	0
21	S	1	Total 4	C 2	O 2	0	0
21	T	1	Total 4	C 2	O 2	0	0

- Molecule 22 is (1R)-2-{{{(2S)-2,3-DIHYDROXYPROPYL}OXY}(HYDROXY)PHOSPHORYL}OXY}-1-[(PALMITOYLOXY)METHYL]ETHYL (11E)-OCTADEC-11-ENOATE (three-letter code: PGV) (formula: C<sub>40</sub>H<sub>77</sub>O<sub>10</sub>P).



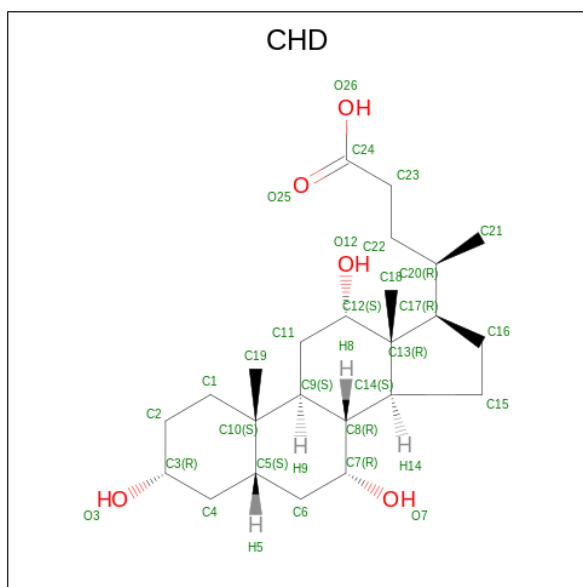
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	O	P		
22	A	1	51	40	10	1	0	0
22	C	1	51	40	10	1	0	0
22	N	1	51	40	10	1	0	0
22	P	1	51	40	10	1	0	0

- Molecule 23 is DINUCLEAR COPPER ION (three-letter code: CUA) (formula: Cu<sub>2</sub>).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
23	B	1	Total Cu 2 2	0	0
23	O	1	Total Cu 2 2	0	0

- Molecule 24 is CHOLIC ACID (three-letter code: CHD) (formula: C<sub>24</sub>H<sub>40</sub>O<sub>5</sub>).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
24	B	1	Total C O 29 24 5	0	0
24	C	1	Total C O 29 24 5	0	0
24	C	1	Total C O 29 24 5	0	0
24	O	1	Total C O 29 24 5	0	0
24	P	1	Total C O 29 24 5	0	0
24	P	1	Total C O 29 24 5	0	0

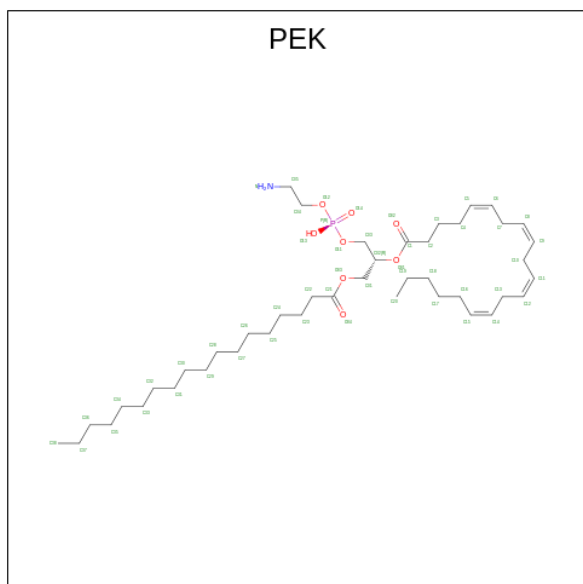
- Molecule 25 is UNKNOWN ATOM OR ION (three-letter code: UNX) (formula: X).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
25	C	1	Total X 1 1	0	0
25	P	1	Total X 1 1	0	0

- Molecule 26 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
26	F	1	Total Zn 1 1	0	0
26	S	1	Total Zn 1 1	0	0

- Molecule 27 is (1S)-2-[[[(2-AMINOETHOXY)(HYDROXY)PHOSPHORYL]OXY}-1-[(STEAROYLOXY)METHYL]ETHYL (5E,8E,11E,14E)-ICOSA-5,8,11,14-TETRAENOATE (three-letter code: PEK) (formula: C<sub>43</sub>H<sub>78</sub>NO<sub>8</sub>P).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
27	G	1	Total C N O P 53 43 1 8 1	0	0
27	T	1	Total C N O P 53 43 1 8 1	0	0

- Molecule 28 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
28	A	238	Total O 249 249	0	11
28	B	171	Total O 173 173	0	2
28	C	105	Total O 106 106	0	1
28	D	135	Total O 144 144	0	9

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
28	E	108	Total O 115 115	0	7
28	F	100	Total O 107 107	0	7
28	G	42	Total O 43 43	0	1
28	H	63	Total O 63 63	0	0
28	I	40	Total O 40 40	0	0
28	J	21	Total O 21 21	0	0
28	K	21	Total O 21 21	0	0
28	L	26	Total O 28 28	0	2
28	M	21	Total O 21 21	0	0
28	N	227	Total O 237 237	0	10
28	O	146	Total O 147 147	0	1
28	P	103	Total O 104 104	0	1
28	Q	79	Total O 84 84	0	5
28	R	87	Total O 94 94	0	7
28	S	89	Total O 95 95	0	6
28	T	37	Total O 38 38	0	1
28	U	47	Total O 47 47	0	0
28	V	24	Total O 24 24	0	0
28	W	15	Total O 15 15	0	0
28	X	18	Total O 18 18	0	0
28	Y	23	Total O 25 25	0	2

*Continued on next page...*

*Continued from previous page...*

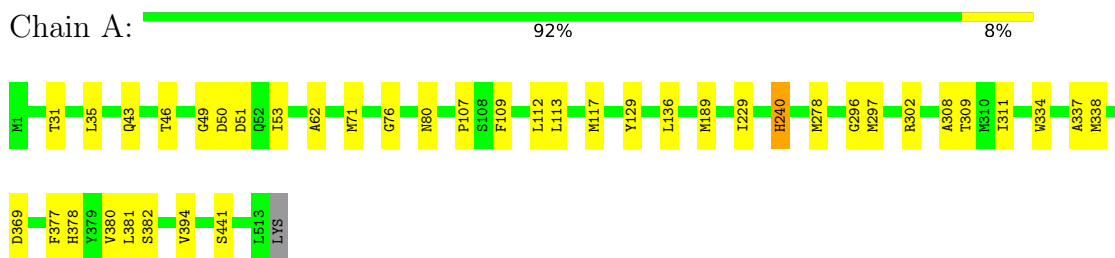
<b>Mol</b>	<b>Chain</b>	<b>Residues</b>	<b>Atoms</b>		<b>ZeroOcc</b>	<b>AltConf</b>
28	Z	17	Total	O	0	0
			17	17		



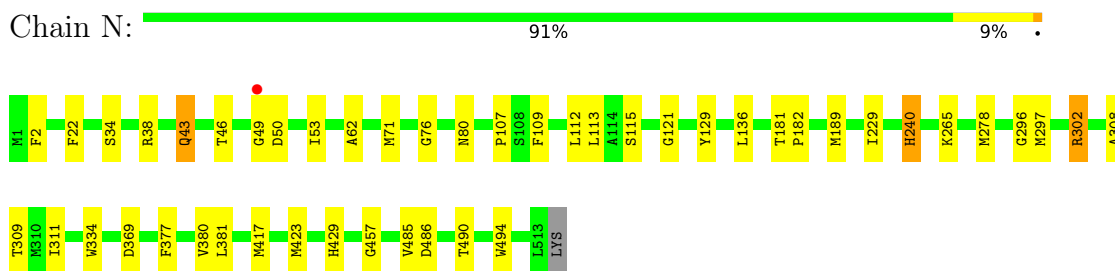
### 3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron 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 dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). 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.

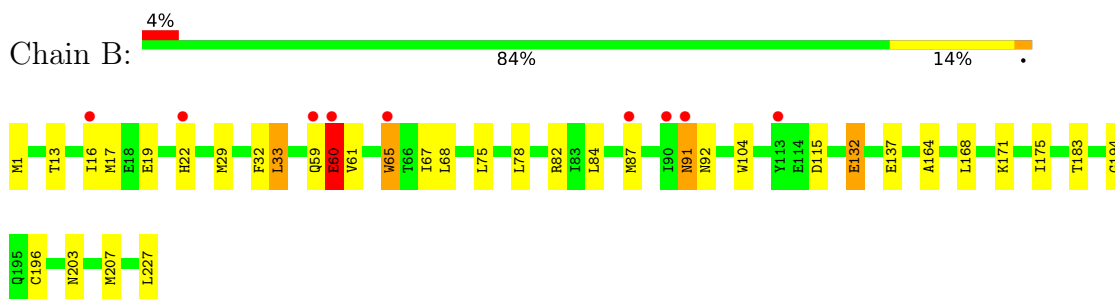
- Molecule 1: Cytochrome c oxidase subunit 1



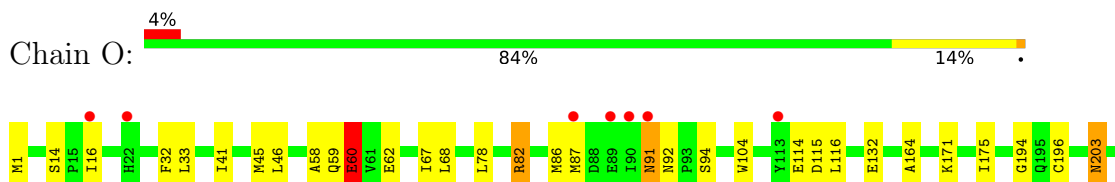
- Molecule 1: Cytochrome c oxidase subunit 1

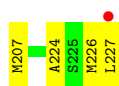


- Molecule 2: Cytochrome c oxidase subunit 2



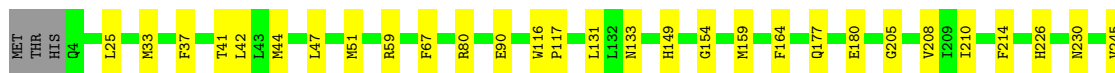
- Molecule 2: Cytochrome c oxidase subunit 2





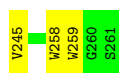
- Molecule 3: Cytochrome c oxidase subunit 3

Chain C: 87% 12%



- Molecule 3: Cytochrome c oxidase subunit 3

Chain P: 87% 11%



- Molecule 4: Cytochrome c oxidase subunit 4 isoform 1, mitochondrial

Chain D: 93%



- Molecule 4: Cytochrome c oxidase subunit 4 isoform 1, mitochondrial

Chain Q: 4% 87% 7%



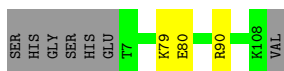
- Molecule 5: Cytochrome c oxidase subunit 5A

Chain E: 92% 6%



- Molecule 5: Cytochrome c oxidase subunit 5A

Chain R: 91% 6%



- Molecule 6: Cytochrome c oxidase subunit 5B, mitochondrial

Chain F: 83% 9% 7%



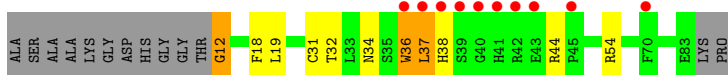
- Molecule 6: Cytochrome c oxidase subunit 5B, mitochondrial

Chain S: 2% 78% 13% 7%



- Molecule 7: Cytochrome c oxidase subunit 6A2, mitochondrial

Chain G: 12% 72% 9% 15%



- Molecule 7: Cytochrome c oxidase subunit 6A2, mitochondrial

Chain T: 11% 72% 13% 15%



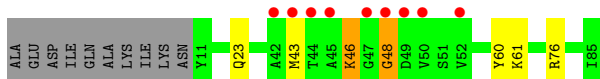
- Molecule 8: Cytochrome c oxidase subunit 6B1

Chain H: 7% 82% 6% 12%

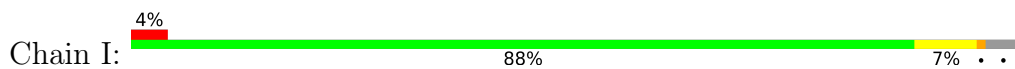


- Molecule 8: Cytochrome c oxidase subunit 6B1

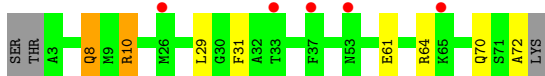
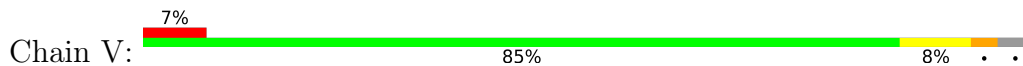
Chain U: 11% 80% 6% 12%



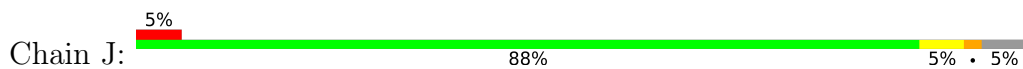
- Molecule 9: Cytochrome c oxidase subunit 6C



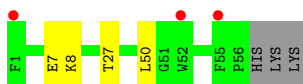
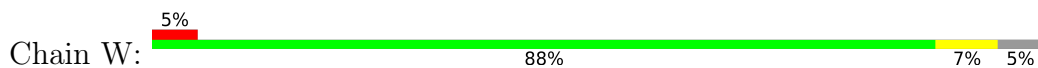
- Molecule 9: Cytochrome c oxidase subunit 6C



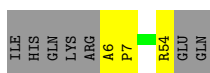
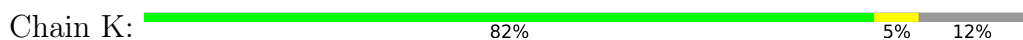
- Molecule 10: Cytochrome c oxidase subunit 7A1



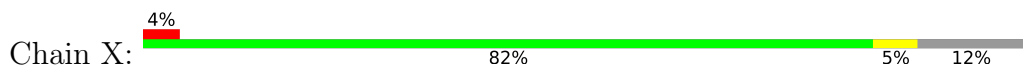
- Molecule 10: Cytochrome c oxidase subunit 7A1



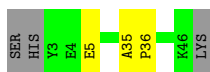
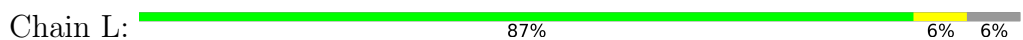
- Molecule 11: Cytochrome c oxidase subunit 7B, mitochondrial




- Molecule 11: Cytochrome c oxidase subunit 7B, mitochondrial

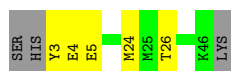


- Molecule 12: Cytochrome c oxidase subunit 7C, mitochondrial




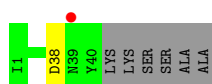
- Molecule 12: Cytochrome c oxidase subunit 7C, mitochondrial

Chain Y:  83% 11% 6%




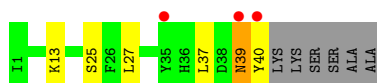
- Molecule 13: Cytochrome c oxidase subunit 8B, mitochondrial

Chain M:  85% 2% 13%



- Molecule 13: Cytochrome c oxidase subunit 8B, mitochondrial

Chain Z:  74% 7% 11% 13%



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	182.10Å 204.70Å 177.90Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 1.70 136.06 – 1.70	Depositor EDS
% Data completeness (in resolution range)	100.0 (40.00-1.70) 99.9 (136.06-1.70)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.06 (at 1.70Å)	Xtrriage
Refinement program	REFMAC 5.8.0253	Depositor
R, $R_{free}$	0.124 , 0.156 0.140 , 0.166	Depositor DCC
$R_{free}$ test set	36339 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	32.1	Xtrriage
Anisotropy	0.575	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.36 , 64.5	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.006 for l,-k,h	Xtrriage
$F_o, F_c$ correlation	0.97	EDS
Total number of atoms	33023	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	46.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.09% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 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: PEK, MG, PGV, ZN, EDO, CHD, CUA, DMU, CU, HEA, FME, UNX, CA, LFA, CDL

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.78	2/4259 (0.0%)	0.88	5/5816 (0.1%)
1	N	0.78	2/4259 (0.0%)	0.86	5/5816 (0.1%)
2	B	0.88	3/1908 (0.2%)	0.95	3/2598 (0.1%)
2	O	0.81	3/1908 (0.2%)	0.92	2/2598 (0.1%)
3	C	0.78	1/2258 (0.0%)	0.82	1/3084 (0.0%)
3	P	0.80	2/2258 (0.1%)	0.83	3/3084 (0.1%)
4	D	1.00	2/1226 (0.2%)	0.90	3/1657 (0.2%)
4	Q	0.80	1/1182 (0.1%)	1.00	4/1598 (0.3%)
5	E	0.80	0/843	0.83	0/1145
5	R	0.88	1/843 (0.1%)	0.85	0/1145
6	F	0.85	1/724 (0.1%)	0.89	0/983
6	S	0.85	1/724 (0.1%)	0.92	2/983 (0.2%)
7	G	0.83	1/633 (0.2%)	0.94	2/864 (0.2%)
7	T	0.81	1/633 (0.2%)	0.89	2/864 (0.2%)
8	H	0.76	0/648	0.85	0/877
8	U	0.79	0/648	0.88	1/877 (0.1%)
9	I	0.89	2/588 (0.3%)	1.05	3/781 (0.4%)
9	V	0.77	0/588	0.94	3/781 (0.4%)
10	J	0.71	0/451	0.84	1/610 (0.2%)
10	W	0.75	0/451	0.82	0/610
11	K	0.82	0/398	0.86	0/546
11	X	0.74	0/398	0.77	0/546
12	L	0.87	1/372 (0.3%)	0.90	0/500
12	Y	0.88	2/372 (0.5%)	0.83	0/500
13	M	0.80	0/321	0.75	0/440
13	Z	0.76	0/321	0.77	0/440
All	All	0.81	26/29214 (0.1%)	0.88	40/39743 (0.1%)

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

sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	N	0	1
6	S	0	1
All	All	0	4

All (26) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	58	GLU	CD-OE1	18.82	1.46	1.25
5	R	80	GLU	CD-OE1	11.13	1.37	1.25
1	A	189	MET	CG-SD	-7.08	1.62	1.81
9	I	72	ALA	C-O	7.04	1.36	1.23
12	L	5	GLU	CD-OE2	-6.85	1.18	1.25
2	O	60	GLU	CD-OE1	6.60	1.32	1.25
2	B	60	GLU	CD-OE1	6.59	1.32	1.25
3	P	236	GLU	CD-OE1	6.49	1.32	1.25
4	Q	142	LYS	C-O	6.36	1.35	1.23
3	P	90	GLU	CD-OE1	6.16	1.32	1.25
12	Y	4	GLU	CD-OE1	6.05	1.32	1.25
12	Y	5	GLU	CD-OE2	-6.00	1.19	1.25
2	B	132	GLU	CD-OE1	-5.99	1.19	1.25
4	D	58	GLU	CD-OE2	5.95	1.32	1.25
7	G	12	GLY	C-O	5.79	1.32	1.23
6	S	3	GLY	C-O	5.76	1.32	1.23
6	F	3	GLY	C-O	5.62	1.32	1.23
1	N	189	MET	CG-SD	-5.50	1.66	1.81
2	O	60	GLU	CD-OE2	5.47	1.31	1.25
9	I	61	GLU	CD-OE2	-5.39	1.19	1.25
2	O	132	GLU	CD-OE2	5.33	1.31	1.25
3	C	90	GLU	CD-OE2	5.30	1.31	1.25
1	A	189	MET	CB-CG	5.29	1.68	1.51
7	T	83	GLU	CD-OE1	5.28	1.31	1.25
2	B	19	GLU	CD-OE1	-5.06	1.20	1.25
1	N	189	MET	CB-CG	5.05	1.67	1.51

All (40) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	Q	20	ARG	NE-CZ-NH1	15.96	128.28	120.30
4	Q	20	ARG	NE-CZ-NH2	-14.01	113.29	120.30
1	A	71	MET	CG-SD-CE	-13.98	77.82	100.20

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	71	MET	CG-SD-CE	-12.50	80.20	100.20
2	B	82	ARG	NE-CZ-NH2	-10.10	115.25	120.30
4	D	20	ARG	NE-CZ-NH2	9.03	124.82	120.30
9	I	72	ALA	CA-C-O	-8.99	101.21	120.10
7	G	44	ARG	NE-CZ-NH1	8.81	124.70	120.30
2	O	82	ARG	NE-CZ-NH2	-8.76	115.92	120.30
9	I	15	ARG	NE-CZ-NH2	-8.72	115.94	120.30
9	V	10	ARG	NE-CZ-NH2	-8.09	116.25	120.30
3	C	80	ARG	CG-CD-NE	-7.48	96.10	111.80
4	Q	20	ARG	CG-CD-NE	-7.13	96.83	111.80
4	D	20	ARG	NE-CZ-NH1	-6.86	116.87	120.30
1	N	240	HIS	CA-CB-CG	-6.58	102.41	113.60
9	I	15	ARG	NE-CZ-NH1	6.50	123.55	120.30
6	S	93	PRO	N-CA-C	-6.46	95.31	112.10
2	B	82	ARG	CG-CD-NE	-6.37	98.42	111.80
2	B	65	TRP	CB-CA-C	6.33	123.06	110.40
7	G	44	ARG	NE-CZ-NH2	-6.20	117.20	120.30
3	P	102	TYR	CB-CG-CD2	6.11	124.66	121.00
9	V	10	ARG	NE-CZ-NH1	6.08	123.34	120.30
1	A	240	HIS	CA-CB-CG	-6.07	103.28	113.60
2	O	91	ASN	CB-CA-C	6.01	122.41	110.40
1	A	129	TYR	CB-CG-CD1	6.00	124.60	121.00
1	A	189	MET	CA-CB-CG	-5.89	103.29	113.30
9	V	72	ALA	CA-C-O	-5.87	107.77	120.10
7	T	44	ARG	NE-CZ-NH1	5.87	123.23	120.30
6	S	93	PRO	CB-CA-C	5.86	126.65	112.00
4	D	58	GLU	CB-CG-CD	5.80	129.85	114.20
1	N	129	TYR	CB-CG-CD1	5.63	124.38	121.00
10	J	7	GLU	CB-CA-C	5.45	121.31	110.40
1	A	129	TYR	CB-CG-CD2	-5.36	117.78	121.00
7	T	44	ARG	NE-CZ-NH2	-5.27	117.67	120.30
3	P	80	ARG	CG-CD-NE	-5.24	100.81	111.80
1	N	302	ARG	NE-CZ-NH2	-5.21	117.69	120.30
3	P	102	TYR	CB-CG-CD1	-5.18	117.89	121.00
4	Q	10	ASP	O-C-N	5.15	130.95	122.70
1	N	43	GLN	CB-CA-C	5.13	120.65	110.40
8	U	76	ARG	NE-CZ-NH1	5.03	122.81	120.30

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	240	HIS	Sidechain
1	A	296	GLY	Mainchain
1	N	296	GLY	Mainchain
6	S	92	VAL	Mainchain

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

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4130	0	4102	33	0
1	N	4130	0	4102	49	0
2	B	1870	0	1870	30	0
2	O	1870	0	1870	34	0
3	C	2171	0	2080	34	0
3	P	2172	0	2081	26	0
4	D	1192	0	1178	4	0
4	Q	1148	0	1131	7	0
5	E	825	0	823	1	0
5	R	825	0	823	1	0
6	F	709	0	691	8	0
6	S	709	0	691	8	0
7	G	606	0	577	7	0
7	T	606	0	577	4	0
8	H	628	0	580	6	0
8	U	628	0	580	7	0
9	I	575	0	584	4	0
9	V	575	0	584	3	0
10	J	441	0	439	5	0
10	W	441	0	439	4	0
11	K	384	0	366	1	0
11	X	384	0	366	2	0
12	L	360	0	360	1	0
12	Y	360	0	360	6	0
13	M	311	0	321	0	0
13	Z	311	0	321	6	0
14	A	120	0	108	3	0
14	N	120	0	108	5	0
15	A	1	0	0	0	0
15	N	1	0	0	0	0

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	A	1	0	0	0	0
16	N	1	0	0	0	0
17	A	1	0	0	0	0
17	N	1	0	0	0	0
18	A	64	0	72	0	0
18	C	87	0	124	18	0
18	L	94	0	141	2	0
18	P	87	0	124	13	0
18	V	64	0	72	2	0
18	Y	94	0	141	5	0
19	A	14	0	27	3	0
19	B	17	0	33	1	0
19	C	129	0	235	24	0
19	N	28	0	54	9	0
19	O	28	0	54	5	0
19	P	85	0	144	19	0
19	T	39	0	75	10	0
20	A	51	0	76	8	0
20	B	66	0	104	0	0
20	C	172	0	230	7	0
20	D	33	0	41	1	0
20	G	33	0	52	14	0
20	H	33	0	28	5	0
20	J	11	0	21	0	0
20	L	22	0	31	1	0
20	M	41	0	56	0	0
20	N	73	0	80	3	0
20	O	66	0	104	9	0
20	P	172	0	230	9	0
20	Q	33	0	41	1	0
20	T	22	0	31	5	0
20	W	11	0	21	0	0
20	Y	22	0	31	1	0
20	Z	41	0	56	1	0
21	A	16	0	24	0	0
21	B	4	0	6	0	0
21	C	12	0	17	2	0
21	E	12	0	18	0	0
21	F	8	0	12	1	0
21	G	4	0	6	0	0
21	N	20	0	30	4	0
21	O	4	0	6	0	0

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	P	12	0	18	1	0
21	R	12	0	18	0	0
21	S	8	0	12	1	0
21	T	4	0	6	0	0
22	A	51	0	76	0	0
22	C	51	0	76	1	0
22	N	51	0	76	1	0
22	P	51	0	76	0	0
23	B	2	0	0	0	0
23	O	2	0	0	0	0
24	B	29	0	39	0	0
24	C	58	0	78	2	0
24	O	29	0	39	1	0
24	P	58	0	78	2	0
25	C	1	0	0	1	0
25	P	1	0	0	1	0
26	F	1	0	0	0	0
26	S	1	0	0	0	0
27	G	53	0	77	3	0
27	T	53	0	77	5	0
28	A	249	0	0	5	0
28	B	173	0	0	4	0
28	C	106	0	0	9	0
28	D	144	0	0	2	0
28	E	115	0	0	0	0
28	F	107	0	0	2	0
28	G	43	0	0	1	0
28	H	63	0	0	7	0
28	I	40	0	0	1	0
28	J	21	0	0	0	0
28	K	21	0	0	0	0
28	L	28	0	0	0	0
28	M	21	0	0	0	0
28	N	237	0	0	13	0
28	O	147	0	0	2	0
28	P	104	0	0	8	0
28	Q	84	0	0	1	0
28	R	94	0	0	1	0
28	S	95	0	0	1	0
28	T	38	0	0	1	0
28	U	47	0	0	1	0
28	V	24	0	0	1	0

*Continued on next page...*

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	W	15	0	0	0	0
28	X	18	0	0	0	0
28	Y	25	0	0	2	0
28	Z	17	0	0	1	0
All	All	33023	0	31506	376	0

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

All (376) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:297[B]:MET:HB2	28:N:2883:HOH:O	1.21	1.30
20:P:317:DMU:O3	20:P:318:DMU:H29	1.38	1.22
1:A:112:LEU:HG	28:A:926:HOH:O	1.36	1.22
2:B:16[A]:ILE:HG21	2:B:87[A]:MET:CE	1.68	1.22
1:A:297[B]:MET:HB2	28:A:715:HOH:O	1.00	1.16
19:C:309:LFA:H12	28:H:217:HOH:O	1.41	1.15
3:C:33[A]:MET:HE1	3:C:42:LEU:H	1.03	1.12
1:A:31:THR:O	1:A:35:LEU:HD23	1.49	1.11
20:G:102:DMU:H21	20:G:103:DMU:H23	1.17	1.09
1:A:51:ASP:OD2	1:A:441:SER:OG	1.70	1.08
19:P:313:LFA:C1	28:P:427:HOH:O	2.00	1.08
2:B:16[A]:ILE:HG21	2:B:87[A]:MET:HE2	1.11	1.07
19:C:309:LFA:H11	28:H:255:HOH:O	1.50	1.07
6:S:76:LYS:HE2	6:S:93:PRO:HG2	1.40	1.03
1:N:297[B]:MET:CB	28:N:2883:HOH:O	1.87	1.03
20:G:102:DMU:H20	20:G:102:DMU:H12	1.38	1.01
1:N:112:LEU:HG	28:N:3015:HOH:O	1.58	1.01
20:P:318:DMU:O55	20:P:318:DMU:H36	1.60	0.97
8:H:52:VAL:HG12	8:U:46:LYS:HG2	1.41	0.97
20:G:103:DMU:O61	20:O:304:DMU:O49	1.81	0.97
3:P:4:GLN:N	28:P:403:HOH:O	1.96	0.97
4:Q:20:ARG:HG2	28:Q:342:HOH:O	1.66	0.96
3:P:67:PHE:CE2	18:P:304:CDL:O1	2.17	0.95
25:P:302:UNX:UNK	28:P:494:HOH:O	1.45	0.94
2:B:16[A]:ILE:CG2	2:B:87[A]:MET:CE	2.47	0.92
3:C:67:PHE:CE2	18:C:304:CDL:O1	2.22	0.92
20:P:317:DMU:H38	20:P:318:DMU:H29	1.25	0.92
19:C:309:LFA:H12	20:H:101:DMU:O16	1.68	0.91
2:B:16[A]:ILE:CG2	2:B:87[A]:MET:HE2	2.01	0.90

Continued on next page...

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:33[A]:MET:HE1	3:C:42:LEU:N	1.87	0.90
2:B:16[B]:ILE:HG23	28:B:516:HOH:O	1.70	0.89
1:A:297[B]:MET:CB	28:A:715:HOH:O	1.71	0.89
2:O:16[A]:ILE:HD12	2:O:87[A]:MET:CG	2.03	0.89
20:A:609:DMU:O6	28:A:706:HOH:O	1.90	0.88
1:N:417[B]:MET:CE	28:N:2948:HOH:O	2.20	0.88
19:P:313:LFA:H12	28:P:427:HOH:O	1.67	0.88
6:S:76:LYS:CE	6:S:93:PRO:HG2	2.01	0.87
20:P:317:DMU:O3	20:P:318:DMU:C57	2.24	0.86
20:H:101:DMU:H35	20:H:101:DMU:O61	1.76	0.86
1:A:112:LEU:C	1:A:112:LEU:HD23	1.97	0.85
3:C:245:VAL:C	3:C:246[B]:ASP:CA	2.44	0.85
19:P:313:LFA:H13	28:P:427:HOH:O	1.65	0.84
2:B:16[A]:ILE:HD12	2:B:87[A]:MET:HG3	1.57	0.84
2:O:16[A]:ILE:HG21	2:O:87[A]:MET:SD	2.18	0.83
19:C:325:LFA:H91	19:C:325:LFA:H132	1.58	0.83
3:P:67:PHE:HE2	18:P:304:CDL:O1	1.60	0.83
28:N:2935:HOH:O	19:P:309:LFA:H41	1.79	0.82
24:P:305:CHD:H231	24:P:305:CHD:H162	1.62	0.81
7:G:19:LEU:HD23	19:N:607:LFA:H61	1.62	0.81
19:C:310:LFA:H11	19:C:311:LFA:H12	1.63	0.81
25:C:302:UNX:UNK	28:C:496:HOH:O	1.62	0.80
14:A:601:HEA:HMC1	14:A:601:HEA:HBC1	1.63	0.80
2:B:16[A]:ILE:HD12	2:B:87[A]:MET:CG	2.12	0.80
20:G:103:DMU:O61	20:O:304:DMU:C1	2.30	0.79
2:O:16[A]:ILE:HD12	2:O:87[A]:MET:HG2	1.62	0.79
20:G:102:DMU:H20	20:G:102:DMU:C25	2.13	0.78
4:D:42:GLU:OE2	28:D:301:HOH:O	2.02	0.77
8:H:23:GLN:NE2	28:H:201:HOH:O	2.19	0.76
1:N:46:THR:HG22	1:N:49:GLY:H	1.52	0.75
2:O:16[A]:ILE:HD12	2:O:87[A]:MET:HG3	1.68	0.75
8:U:43:MET:O	8:U:48:GLY:N	2.20	0.75
2:O:16[B]:ILE:HG23	28:O:500:HOH:O	1.88	0.73
18:C:304:CDL:HB61	18:C:304:CDL:HB21	1.70	0.73
19:C:325:LFA:C1	19:P:310:LFA:H12	2.19	0.73
6:F:37:LYS:HG2	28:F:291:HOH:O	1.89	0.72
28:N:2935:HOH:O	19:P:309:LFA:C4	2.36	0.72
1:N:22:PHE:HA	18:Y:101:CDL:H802	1.71	0.72
1:N:112:LEU:HD23	1:N:112:LEU:C	2.11	0.71
2:O:114:GLU:HG3	28:O:535:HOH:O	1.90	0.71
1:A:112:LEU:HD23	1:A:112:LEU:O	1.91	0.71

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:O:224:ALA:O	2:O:227:LEU:HD12	1.90	0.71
20:P:318:DMU:O55	20:P:318:DMU:C10	2.39	0.70
3:P:149:HIS:NE2	19:P:311:LFA:H11	2.06	0.70
19:C:315:LFA:C1	28:C:450:HOH:O	2.38	0.70
14:N:601:HEA:HBC1	14:N:601:HEA:HMC1	1.73	0.70
1:A:46:THR:HG22	1:A:49:GLY:H	1.57	0.70
3:P:104:SER:OG	28:P:404:HOH:O	2.09	0.70
19:A:607:LFA:H12	19:T:101:LFA:H11	1.74	0.70
7:G:12:GLY:HA3	28:G:235:HOH:O	1.90	0.70
20:N:609:DMU:H41	28:Z:207:HOH:O	1.92	0.69
19:C:309:LFA:C1	20:H:101:DMU:O16	2.16	0.68
19:C:314:LFA:H21	19:C:315:LFA:H71	1.73	0.68
12:Y:24:MET:HG3	28:Y:212:HOH:O	1.93	0.68
1:N:297[B]:MET:SD	1:N:302:ARG:HG2	2.33	0.68
21:N:610:EDO:O1	28:N:2801[A]:HOH:O	0.68	0.67
19:C:325:LFA:H12	19:P:310:LFA:H12	1.76	0.67
21:C:322:EDO:O2	28:C:402:HOH:O	0.70	0.67
3:P:33[B]:MET:CE	3:P:42:LEU:HD12	2.24	0.67
28:N:2803:HOH:O	4:Q:11:TYR:HB3	1.94	0.67
1:A:136[B]:LEU:HD11	28:A:932:HOH:O	1.94	0.66
19:N:606:LFA:H12	19:N:607:LFA:H11	1.77	0.66
7:T:19:LEU:HD23	19:T:101:LFA:H61	1.78	0.66
27:T:102:PEK:H71	27:T:102:PEK:H32	1.78	0.66
1:A:278[B]:MET:SD	19:A:607:LFA:H52	2.35	0.66
1:A:278[A]:MET:CE	19:T:101:LFA:H51	2.26	0.65
8:H:23:GLN:CD	28:H:201:HOH:O	2.35	0.65
3:P:59:ARG:HG3	18:P:304:CDL:HA4	1.78	0.65
3:C:67:PHE:HE2	18:C:304:CDL:O1	1.72	0.65
6:F:41:GLY:HA3	6:F:87[B]:THR:HG22	1.78	0.65
20:A:615:DMU:H21	20:T:105:DMU:C37	2.27	0.65
18:P:304:CDL:OA3	18:P:304:CDL:H1	1.97	0.65
2:B:16[A]:ILE:CG2	2:B:87[A]:MET:HE3	2.25	0.64
8:H:23:GLN:NE2	28:H:202:HOH:O	2.29	0.64
22:N:615:PGV:H183	27:T:102:PEK:H331	1.79	0.64
2:O:14:SER:OG	2:O:16[B]:ILE:HG12	1.97	0.64
20:A:615:DMU:H21	20:T:105:DMU:H21	1.80	0.64
18:P:304:CDL:H752	10:W:27:THR:HG21	1.80	0.64
20:C:324:DMU:H20	10:J:50:LEU:HB2	1.80	0.64
2:O:16[A]:ILE:HG21	2:O:87[A]:MET:CG	2.30	0.62
18:C:304:CDL:OA3	18:C:304:CDL:H1	1.98	0.62
20:G:103:DMU:C57	20:O:304:DMU:O49	2.48	0.61

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:C:315:LFA:H13	28:C:450:HOH:O	1.98	0.61
2:B:227:LEU:HD21	28:B:484:HOH:O	1.99	0.61
1:N:334:TRP:CH2	2:O:46:LEU:HD13	2.36	0.60
18:C:304:CDL:HB61	18:C:304:CDL:CB2	2.30	0.60
19:C:325:LFA:H91	19:C:325:LFA:C13	2.26	0.60
2:O:16[A]:ILE:CG2	2:O:87[A]:MET:SD	2.88	0.60
21:F:103:EDO:O1	28:F:201[A]:HOH:O	0.60	0.60
18:C:304:CDL:CA3	18:C:304:CDL:OB9	2.50	0.60
19:C:315:LFA:H12	28:C:450:HOH:O	2.00	0.60
20:P:318:DMU:H13	21:P:319:EDO:O2	2.01	0.60
1:A:46:THR:CG2	1:A:49:GLY:H	2.15	0.60
18:P:304:CDL:HA62	18:P:304:CDL:H121	1.83	0.60
20:C:319:DMU:O3	20:C:320:DMU:H29	2.02	0.60
19:P:311:LFA:C11	19:T:103:LFA:H82	2.31	0.59
20:G:102:DMU:H21	20:G:103:DMU:C40	2.12	0.59
1:N:112:LEU:HD23	1:N:112:LEU:O	2.02	0.59
27:T:102:PEK:C15	27:T:102:PEK:C11	2.75	0.59
1:N:50:ASP:HB3	1:N:53:ILE:HD12	1.86	0.58
1:N:485:VAL:HG13	21:N:614:EDO:H21	1.85	0.58
3:C:33[B]:MET:HG3	3:C:37:PHE:HB2	1.85	0.58
1:A:112:LEU:C	1:A:112:LEU:CD2	2.70	0.58
20:H:101:DMU:O61	20:H:101:DMU:C9	2.49	0.57
1:N:46:THR:CG2	1:N:49:GLY:H	2.16	0.57
1:N:423[B]:MET:HE2	1:N:457:GLY:HA2	1.87	0.57
2:O:16[A]:ILE:HG21	2:O:87[A]:MET:HG2	1.86	0.57
27:T:102:PEK:H32	27:T:102:PEK:C7	2.33	0.57
6:F:64:GLU:O	6:F:65:ASP:HB2	2.05	0.57
1:N:278[A]:MET:CE	19:N:607:LFA:H51	2.35	0.57
1:A:31:THR:O	1:A:35:LEU:CD2	2.39	0.56
2:O:60:GLU:CD	2:O:60:GLU:H	2.08	0.56
9:V:8:GLN:OE1	9:V:10:ARG:O	2.24	0.56
2:B:13:THR:HB	2:B:168:LEU:HD23	1.87	0.56
1:A:334:TRP:CZ3	20:A:608:DMU:H19	2.40	0.56
20:G:102:DMU:H15	20:O:304:DMU:H17	1.88	0.56
1:N:136[B]:LEU:HD11	28:N:3025:HOH:O	2.04	0.56
24:C:305:CHD:H162	24:C:305:CHD:H231	1.88	0.55
18:C:304:CDL:HB22	10:J:8:LYS:HE3	1.89	0.55
4:D:17[A]:VAL:HG12	28:D:306:HOH:O	2.07	0.55
8:H:23:GLN:HG3	28:H:238:HOH:O	2.06	0.55
6:F:41:GLY:HA3	6:F:87[B]:THR:CG2	2.35	0.55
3:C:258:TRP:CD2	19:C:307:LFA:H32	2.42	0.55

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Y:26:THR:HG23	13:Z:25:SER:CB	2.36	0.55
8:U:46:LYS:CG	8:U:46:LYS:O	2.56	0.54
1:A:278[A]:MET:HE3	19:T:101:LFA:H51	1.89	0.54
2:B:16[A]:ILE:HD12	2:B:87[A]:MET:HG2	1.88	0.54
2:B:91:ASN:OD1	2:B:183:THR:HG21	2.07	0.54
18:C:304:CDL:HA62	18:C:304:CDL:H121	1.90	0.54
3:P:259:TRP:CD1	20:P:314:DMU:O61	2.61	0.54
3:C:226:HIS:HE1	18:C:304:CDL:H111	1.73	0.54
6:F:87[A]:THR:HG22	6:F:89:TYR:CE1	2.43	0.54
20:L:102:DMU:O7	20:L:102:DMU:O61	2.26	0.54
7:G:31:CYS:SG	20:G:103:DMU:H26	2.48	0.53
1:N:423[B]:MET:HE3	1:N:457:GLY:N	2.22	0.53
19:C:325:LFA:H82	19:P:309:LFA:H122	1.89	0.53
1:N:113[A]:LEU:HD12	18:Y:101:CDL:C87	2.38	0.53
3:C:149:HIS:NE2	19:C:313:LFA:H11	2.22	0.53
2:B:32[B]:PHE:CD2	9:I:31:PHE:CZ	2.97	0.53
1:N:417[B]:MET:HE1	28:N:2948:HOH:O	2.00	0.53
1:A:43:GLN:CG	4:D:107:ILE:HG22	2.39	0.53
7:T:12:GLY:HA3	28:T:231:HOH:O	2.07	0.53
28:C:481[B]:HOH:O	10:J:27:THR:HG22	2.08	0.53
3:P:67:PHE:HE2	18:P:304:CDL:H1O1	1.37	0.53
2:B:33:LEU:HD13	9:I:31:PHE:CD2	2.44	0.53
18:P:304:CDL:H121	18:P:304:CDL:CA6	2.39	0.53
8:U:46:LYS:O	8:U:46:LYS:HG3	2.09	0.53
8:U:23:GLN:NE2	28:U:102:HOH:O	2.41	0.52
20:G:103:DMU:H31	20:O:304:DMU:C1	2.08	0.52
1:N:297[B]:MET:SD	1:N:302:ARG:CG	2.97	0.52
2:B:67:ILE:HD11	19:B:307:LFA:H42	1.92	0.52
3:C:33[B]:MET:CE	20:C:324:DMU:H12	2.40	0.52
2:B:84:LEU:O	2:B:87[B]:MET:HB2	2.10	0.52
1:N:278[B]:MET:SD	19:N:606:LFA:C5	2.97	0.52
3:C:258:TRP:CE2	19:C:307:LFA:H32	2.45	0.52
2:O:82:ARG:O	2:O:86:MET:HG3	2.09	0.51
2:B:87[B]:MET:HB3	28:B:502:HOH:O	2.09	0.51
4:Q:48:TRP:O	4:Q:51:LEU:HB2	2.11	0.51
12:Y:26:THR:HG23	13:Z:25:SER:HB3	1.91	0.51
3:C:59:ARG:HB2	18:C:304:CDL:OA9	2.11	0.51
1:N:107:PRO:HB3	3:P:25:LEU:HB2	1.93	0.51
2:B:104:TRP:CG	2:B:203:ASN:HB2	2.46	0.51
1:A:46:THR:HG21	1:A:49:GLY:HA2	1.93	0.50
3:C:133:ASN:ND2	28:C:405:HOH:O	2.33	0.50

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:O:116:LEU:CD1	2:O:226:MET:HG2	2.42	0.50
3:C:164:PHE:CD1	24:C:305:CHD:H192	2.46	0.50
12:Y:3:TYR:N	28:Y:202:HOH:O	2.44	0.50
18:L:101:CDL:OB9	18:L:101:CDL:H122	2.11	0.50
3:C:33[B]:MET:HE2	20:C:324:DMU:H12	1.92	0.50
3:P:164:PHE:CD1	24:P:305:CHD:H192	2.46	0.50
12:L:35:ALA:HB3	12:L:36:PRO:HD3	1.92	0.50
2:O:32[B]:PHE:CD2	9:V:31:PHE:CZ	3.00	0.50
3:P:149:HIS:NE2	19:P:311:LFA:C1	2.75	0.50
1:A:113[B]:LEU:HD11	1:A:117[B]:MET:SD	2.52	0.50
1:A:62:ALA:HB2	14:A:601:HEA:HBD1	1.94	0.50
2:O:58:ALA:O	2:O:62:GLU:HG3	2.12	0.50
7:G:32:THR:O	7:G:36:TRP:HB2	2.12	0.49
7:G:34:ASN:O	7:G:38:HIS:HD2	1.95	0.49
11:X:24:PHE:O	11:X:28:VAL:HG12	2.13	0.49
20:D:201:DMU:H36	20:D:201:DMU:O55	2.13	0.49
3:C:47:LEU:O	3:C:51[A]:MET:HG2	2.13	0.49
5:E:82:TYR:HB3	5:E:83:PRO:HD3	1.95	0.49
1:N:485:VAL:CG1	21:N:614:EDO:H21	2.43	0.49
3:C:180[B]:GLU:HG2	28:C:419:HOH:O	2.12	0.49
1:N:377:PHE:O	1:N:381:LEU:HB3	2.13	0.49
20:N:609:DMU:H29	20:N:609:DMU:O1	2.13	0.49
4:Q:127:LYS:HD2	28:V:221:HOH:O	2.13	0.49
1:N:494:TRP:O	21:N:614:EDO:H22	2.13	0.48
20:Q:201:DMU:O55	20:Q:201:DMU:H36	2.13	0.48
20:A:615:DMU:H21	20:T:105:DMU:H20	1.95	0.48
6:S:54:ASN:HD22	6:S:54:ASN:C	2.17	0.48
8:U:46:LYS:NZ	8:U:48:GLY:HA2	2.28	0.48
3:C:33[A]:MET:HE3	3:C:41:THR:HB	1.96	0.48
28:N:2935:HOH:O	19:P:309:LFA:C5	2.60	0.48
18:P:304:CDL:HB32	18:P:304:CDL:HB21	1.96	0.48
19:P:311:LFA:C11	19:T:103:LFA:H101	2.44	0.48
1:A:309:THR:HG22	14:A:602:HEA:HMB2	1.96	0.48
1:N:278[B]:MET:SD	19:N:606:LFA:H52	2.53	0.48
2:B:91:ASN:HD22	2:B:92:ASN:N	2.12	0.47
7:G:19:LEU:CD2	19:N:607:LFA:H61	2.40	0.47
20:G:103:DMU:O61	20:O:304:DMU:C2	2.61	0.47
2:B:22[B]:HIS:HD2	28:B:505:HOH:O	1.98	0.47
1:N:417[B]:MET:HE2	28:N:2948:HOH:O	2.01	0.47
4:Q:48:TRP:HA	4:Q:51:LEU:HD22	1.95	0.47
3:C:131:LEU:HD21	20:G:103:DMU:H21	1.95	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:278[B]:MET:SD	19:N:606:LFA:H51	2.54	0.47
21:C:322:EDO:C2	28:C:402:HOH:O	1.71	0.47
2:O:67:ILE:HD11	19:O:302:LFA:H42	1.95	0.47
2:B:196:CYS:HB2	2:B:207:MET:HG3	1.96	0.47
1:A:337:ALA:HB2	1:A:394[A]:VAL:HG23	1.97	0.47
3:C:210:ILE:HD13	22:C:303:PGV:H312	1.96	0.47
2:O:59:GLN:NE2	19:O:303:LFA:H31	2.30	0.46
21:S:102:EDO:O1	28:S:227[B]:HOH:O	0.46	0.46
19:C:325:LFA:C8	19:P:309:LFA:H122	2.44	0.46
1:N:265:LYS:HB2	1:N:490:THR:HG21	1.98	0.46
2:B:132:GLU:HB3	2:B:137:GLU:HG3	1.98	0.46
1:N:112:LEU:C	1:N:112:LEU:CD2	2.82	0.46
1:A:76:GLY:O	1:A:80:ASN:HB2	2.16	0.46
4:D:127:LYS:HD2	28:I:138:HOH:O	2.16	0.46
20:G:102:DMU:C28	20:O:304:DMU:H17	2.46	0.46
1:N:309:THR:HG22	14:N:602:HEA:HMB2	1.96	0.46
1:A:278[B]:MET:CE	19:A:607:LFA:H52	2.46	0.46
2:B:164:ALA:O	2:B:194:GLY:HA3	2.16	0.46
1:N:76:GLY:O	1:N:80:ASN:HB2	2.16	0.46
3:P:33[B]:MET:HB2	3:P:33[B]:MET:HE2	1.60	0.46
6:S:64:GLU:O	6:S:65:ASP:HB2	2.15	0.46
18:C:304:CDL:H531	18:C:304:CDL:HB4	1.98	0.46
1:A:377:PHE:O	1:A:381:LEU:HB3	2.15	0.46
3:C:33[B]:MET:HB2	3:C:33[B]:MET:HE3	0.90	0.46
2:O:116:LEU:CD2	2:O:226:MET:HG2	2.45	0.45
1:N:62:ALA:HB2	14:N:601:HEA:HBD1	1.97	0.45
2:B:104:TRP:CD2	2:B:203:ASN:HB2	2.52	0.45
19:C:309:LFA:C1	28:H:217:HOH:O	2.20	0.45
2:O:196:CYS:HB2	2:O:207:MET:HG3	1.99	0.45
18:V:101:CDL:C52	18:V:101:CDL:H312	2.47	0.45
20:C:319:DMU:H36	20:C:319:DMU:O55	2.16	0.45
5:R:90:ARG:NH1	28:R:304:HOH:O	2.41	0.45
3:P:116:TRP:HA	3:P:117:PRO:C	2.38	0.44
4:Q:86:MET:CE	11:X:22:ALA:HA	2.47	0.44
1:A:378:HIS:HA	1:A:382:SER:HB2	2.00	0.44
2:B:16[A]:ILE:HG21	2:B:87[A]:MET:SD	2.57	0.44
1:N:278[A]:MET:HE3	19:N:607:LFA:H51	1.99	0.44
3:P:208:VAL:HG22	3:P:245:VAL:CG1	2.48	0.44
7:T:23:LEU:HB2	19:T:101:LFA:C9	2.47	0.44
6:S:19:GLU:OE1	6:S:31:TYR:OH	2.21	0.44
14:N:602:HEA:HBC1	14:N:602:HEA:HMC1	2.00	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:149:HIS:NE2	19:C:313:LFA:C1	2.80	0.44
18:C:304:CDL:H752	10:J:27:THR:HG21	2.00	0.44
3:P:40:MET:O	3:P:44[B]:MET:HG3	2.17	0.44
1:N:46:THR:HG21	1:N:49:GLY:HA2	2.00	0.44
24:O:301:CHD:H212	24:O:301:CHD:H12	1.98	0.44
3:C:247:VAL:CG1	19:C:314:LFA:H71	2.48	0.43
3:C:247:VAL:HG11	19:C:314:LFA:H71	2.00	0.43
1:N:34:SER:HB2	14:N:601:HEA:C2B	2.48	0.43
2:B:16[A]:ILE:HG22	2:B:87[A]:MET:HE3	2.00	0.43
1:A:297[B]:MET:SD	1:A:302:ARG:HG2	2.59	0.43
18:P:304:CDL:HB22	10:W:8:LYS:HE3	2.00	0.43
18:C:304:CDL:H121	18:C:304:CDL:CA6	2.48	0.43
19:C:309:LFA:C1	20:H:101:DMU:O5	2.61	0.43
3:P:51[A]:MET:SD	18:P:304:CDL:C39	3.07	0.43
3:P:258:TRP:CE2	19:P:307:LFA:H32	2.54	0.43
27:T:102:PEK:H242	27:T:102:PEK:H12	1.99	0.43
18:C:304:CDL:HB4	18:C:304:CDL:C52	2.49	0.43
1:N:486:ASP:OD2	4:Q:19:ARG:NE	2.52	0.43
2:B:60:GLU:HG2	2:B:61:VAL:N	2.33	0.43
3:P:47:LEU:O	3:P:51[A]:MET:HG2	2.19	0.43
3:C:177:GLN:HA	3:C:177:GLN:OE1	2.18	0.43
1:N:297[B]:MET:HB3	28:N:2883:HOH:O	1.84	0.43
1:A:107:PRO:HB3	3:C:25:LEU:HB2	1.99	0.43
1:A:311[A]:ILE:CD1	20:A:615:DMU:H23	2.49	0.43
1:N:278[B]:MET:CE	19:N:606:LFA:H52	2.48	0.43
20:C:317:DMU:H25	20:C:317:DMU:H19	1.91	0.43
2:O:59:GLN:HE22	19:O:303:LFA:H32	1.84	0.43
1:N:229:ILE:HD11	2:O:175:ILE:HD13	2.01	0.42
18:P:304:CDL:OA3	18:P:304:CDL:C1	2.65	0.42
20:P:314:DMU:H35	20:P:314:DMU:H30	2.00	0.42
1:A:50:ASP:HB3	1:A:53:ILE:HD12	2.01	0.42
2:O:82:ARG:HA	20:O:304:DMU:H30	2.01	0.42
18:P:304:CDL:C75	10:W:27:THR:HG21	2.49	0.42
7:G:37:LEU:HD12	7:G:37:LEU:HA	1.83	0.42
27:G:101:PEK:C12	27:G:101:PEK:H161	2.50	0.42
1:A:308:ALA:O	1:A:311[B]:ILE:HG12	2.20	0.42
20:C:306:DMU:H16	27:G:101:PEK:H252	2.00	0.42
19:P:311:LFA:C11	19:T:103:LFA:C9	2.97	0.42
2:B:16[B]:ILE:HG13	2:B:17:MET:N	2.34	0.42
3:C:59:ARG:HG3	18:C:304:CDL:HA4	2.02	0.42
3:C:154:GLY:HA2	6:F:6:VAL:HB	2.02	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:51[B]:MET:HE2	18:C:304:CDL:H861	2.02	0.42
18:L:101:CDL:H522	18:L:101:CDL:H552	1.91	0.42
3:P:4:GLN:CA	28:P:403:HOH:O	2.54	0.42
3:P:80:ARG:NH2	3:P:236:GLU:OE1	2.48	0.42
13:Z:39:ASN:OD1	13:Z:39:ASN:N	2.52	0.42
20:A:615:DMU:H17	20:T:105:DMU:H20	2.01	0.42
20:A:615:DMU:C34	20:T:105:DMU:H20	2.50	0.42
11:K:6:ALA:HA	11:K:7:PRO:HD3	1.91	0.42
3:P:106:LEU:HD22	19:P:310:LFA:H21	2.02	0.42
20:N:616:DMU:H29	3:P:107:ALA:HB1	2.02	0.42
3:P:38:ASN:HD21	20:P:318:DMU:H41	1.85	0.42
6:F:92:VAL:HG23	6:F:92:VAL:O	2.19	0.41
1:N:115[B]:SER:O	1:N:121:GLY:HA2	2.20	0.41
1:N:334:TRP:HH2	2:O:46:LEU:HD13	1.85	0.41
2:O:59:GLN:NE2	19:O:303:LFA:C3	2.84	0.41
2:O:104:TRP:CD2	2:O:203:ASN:HB2	2.55	0.41
12:Y:26:THR:HG23	13:Z:25:SER:HB2	2.00	0.41
13:Z:27:LEU:HD22	20:Z:101:DMU:H14	2.02	0.41
18:Y:101:CDL:OA8	18:Y:101:CDL:OA5	2.38	0.41
13:Z:37:LEU:HD23	13:Z:37:LEU:HA	1.89	0.41
6:S:55:LYS:HA	6:S:74:LEU:O	2.21	0.41
1:A:229:ILE:HD11	2:B:175:ILE:HD13	2.02	0.41
1:N:377:PHE:HA	1:N:380:VAL:HG12	2.01	0.41
3:P:144[A]:ILE:HD13	3:P:239:ALA:HA	2.03	0.41
19:P:307:LFA:H71	19:P:307:LFA:H101	1.80	0.41
18:C:304:CDL:HB22	10:J:8:LYS:CE	2.50	0.41
18:Y:101:CDL:H362	18:Y:101:CDL:H711	2.02	0.41
2:B:29:MET:HB2	9:I:35:TYR:CE1	2.56	0.41
3:C:205:GLY:HA3	27:G:101:PEK:H192	2.03	0.41
8:H:52:VAL:HG21	8:U:43:MET:CE	2.51	0.41
1:N:429:HIS:HB3	18:V:101:CDL:H122	2.03	0.41
28:P:448[B]:HOH:O	10:W:27:THR:HG22	2.21	0.41
9:V:61:GLU:OE1	9:V:64:ARG:NH2	2.43	0.41
3:C:33[A]:MET:CE	3:C:41:THR:HB	2.50	0.41
18:C:304:CDL:HB21	18:C:304:CDL:CB3	2.51	0.41
3:C:116:TRP:HA	3:C:117:PRO:C	2.40	0.41
1:N:308:ALA:O	1:N:311[B]:ILE:HG12	2.21	0.41
2:O:16[A]:ILE:CD1	2:O:87[A]:MET:HG2	2.43	0.41
6:F:85:CYS:SG	6:F:87[B]:THR:OG1	2.77	0.40
2:O:104:TRP:CG	2:O:203:ASN:HB2	2.56	0.40
2:O:164:ALA:O	2:O:194:GLY:HA3	2.21	0.40

*Continued on next page...*

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:177:GLN:OE1	3:P:177:GLN:HA	2.20	0.40
7:T:23:LEU:HB2	19:T:101:LFA:H91	2.03	0.40
12:Y:26:THR:CG2	20:Y:102:DMU:H26	2.51	0.40
1:A:377:PHE:HA	1:A:380:VAL:HG12	2.03	0.40
1:N:181:THR:HA	1:N:182:PRO:HD3	1.95	0.40
1:N:240:HIS:CD2	1:N:240:HIS:C	2.94	0.40
1:N:334:TRP:CZ2	2:O:46:LEU:HB3	2.56	0.40
2:O:41:ILE:O	2:O:45:MET:HG2	2.21	0.40
2:O:59:GLN:HE22	19:O:303:LFA:C3	2.35	0.40
19:P:311:LFA:C11	19:T:103:LFA:C10	2.99	0.40
6:S:10:GLU:OE2	6:S:25:ARG:NH1	2.51	0.40
3:C:41:THR:HA	3:C:44[B]:MET:HE2	2.03	0.40
19:C:310:LFA:H102	19:C:310:LFA:H72	1.88	0.40
9:I:36:LYS:HE3	9:I:36:LYS:HA	2.04	0.40
6:S:21[B]:MET:HE3	6:S:21[B]:MET:HB3	1.81	0.40
3:C:208:VAL:HG22	3:C:245:VAL:CG1	2.51	0.40
1:N:2:PHE:HZ	18:Y:101:CDL:H721	1.85	0.40
20:G:102:DMU:H6	20:O:304:DMU:H8	2.02	0.40
2:O:116:LEU:HD13	2:O:226:MET:CG	2.51	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

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

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	526/514 (102%)	513 (98%)	13 (2%)	0	100	100
1	N	526/514 (102%)	513 (98%)	13 (2%)	0	100	100
2	B	230/227 (101%)	224 (97%)	6 (3%)	0	100	100
2	O	230/227 (101%)	226 (98%)	4 (2%)	0	100	100
3	C	265/261 (102%)	261 (98%)	4 (2%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	P	265/261 (102%)	261 (98%)	4 (2%)	0	100	100
4	D	142/147 (97%)	139 (98%)	3 (2%)	0	100	100
4	Q	136/147 (92%)	131 (96%)	4 (3%)	1 (1%)	22	8
5	E	100/109 (92%)	100 (100%)	0	0	100	100
5	R	100/109 (92%)	100 (100%)	0	0	100	100
6	F	91/98 (93%)	91 (100%)	0	0	100	100
6	S	91/98 (93%)	90 (99%)	1 (1%)	0	100	100
7	G	71/85 (84%)	64 (90%)	7 (10%)	0	100	100
7	T	71/85 (84%)	68 (96%)	3 (4%)	0	100	100
8	H	73/85 (86%)	72 (99%)	1 (1%)	0	100	100
8	U	73/85 (86%)	71 (97%)	1 (1%)	1 (1%)	11	2
9	I	68/73 (93%)	67 (98%)	1 (2%)	0	100	100
9	V	68/73 (93%)	67 (98%)	1 (2%)	0	100	100
10	J	54/59 (92%)	54 (100%)	0	0	100	100
10	W	54/59 (92%)	54 (100%)	0	0	100	100
11	K	47/56 (84%)	46 (98%)	1 (2%)	0	100	100
11	X	47/56 (84%)	46 (98%)	1 (2%)	0	100	100
12	L	42/47 (89%)	41 (98%)	1 (2%)	0	100	100
12	Y	42/47 (89%)	41 (98%)	1 (2%)	0	100	100
13	M	38/46 (83%)	37 (97%)	1 (3%)	0	100	100
13	Z	38/46 (83%)	38 (100%)	0	0	100	100
All	All	3488/3614 (96%)	3415 (98%)	71 (2%)	2 (0%)	51	33

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	Q	11	TYR
8	U	48	GLY

### 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 X-ray entries followed by that with respect to entries of similar resolution.



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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	440/426 (103%)	437 (99%)	3 (1%)	84	77
1	N	440/426 (103%)	436 (99%)	4 (1%)	78	70
2	B	215/210 (102%)	205 (95%)	10 (5%)	26	10
2	O	215/210 (102%)	205 (95%)	10 (5%)	26	10
3	C	232/226 (103%)	229 (99%)	3 (1%)	69	56
3	P	232/226 (103%)	229 (99%)	3 (1%)	69	56
4	D	128/129 (99%)	128 (100%)	0	100	100
4	Q	122/129 (95%)	120 (98%)	2 (2%)	62	48
5	E	89/95 (94%)	89 (100%)	0	100	100
5	R	89/95 (94%)	88 (99%)	1 (1%)	73	63
6	F	78/81 (96%)	77 (99%)	1 (1%)	69	56
6	S	78/81 (96%)	76 (97%)	2 (3%)	46	28
7	G	63/69 (91%)	59 (94%)	4 (6%)	18	5
7	T	63/69 (91%)	57 (90%)	6 (10%)	8	1
8	H	67/75 (89%)	64 (96%)	3 (4%)	27	10
8	U	67/75 (89%)	64 (96%)	3 (4%)	27	10
9	I	55/58 (95%)	54 (98%)	1 (2%)	59	43
9	V	55/58 (95%)	52 (94%)	3 (6%)	21	7
10	J	47/50 (94%)	46 (98%)	1 (2%)	53	36
10	W	47/50 (94%)	45 (96%)	2 (4%)	29	11
11	K	39/46 (85%)	38 (97%)	1 (3%)	46	28
11	X	39/46 (85%)	39 (100%)	0	100	100
12	L	37/40 (92%)	37 (100%)	0	100	100
12	Y	37/40 (92%)	37 (100%)	0	100	100
13	M	34/38 (90%)	33 (97%)	1 (3%)	42	23
13	Z	34/38 (90%)	31 (91%)	3 (9%)	10	2
All	All	3042/3086 (99%)	2975 (98%)	67 (2%)	50	34

All (67) residues with a non-rotameric sidechain are listed below:



Mol	Chain	Res	Type
1	A	109	PHE
1	A	338	MET
1	A	369	ASP
2	B	33	LEU
2	B	59	GLN
2	B	60	GLU
2	B	65	TRP
2	B	68	LEU
2	B	75	LEU
2	B	78	LEU
2	B	91	ASN
2	B	115	ASP
2	B	171	LYS
3	C	159	MET
3	C	214	PHE
3	C	230	ASN
6	F	37	LYS
7	G	18	PHE
7	G	36	TRP
7	G	37	LEU
7	G	54	ARG
8	H	46	LYS
8	H	60	TYR
8	H	84	LYS
9	I	36	LYS
10	J	7	GLU
11	K	54	ARG
13	M	38	ASP
1	N	38	ARG
1	N	43	GLN
1	N	109	PHE
1	N	369	ASP
2	O	33	LEU
2	O	60	GLU
2	O	68	LEU
2	O	78	LEU
2	O	91	ASN
2	O	92	ASN
2	O	94	SER
2	O	115	ASP
2	O	171	LYS
2	O	203	ASN
3	P	159	MET

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
3	P	214	PHE
3	P	230	ASN
4	Q	20	ARG
4	Q	51	LEU
5	R	79	LYS
6	S	37	LYS
6	S	54	ASN
7	T	18	PHE
7	T	33	LEU
7	T	36	TRP
7	T	37	LEU
7	T	42	ARG
7	T	54	ARG
8	U	46	LYS
8	U	60	TYR
8	U	61	LYS
9	V	8	GLN
9	V	29	LEU
9	V	70	GLN
10	W	7	GLU
10	W	50	LEU
13	Z	13	LYS
13	Z	39	ASN
13	Z	40	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (24) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	10	GLN
2	B	59	GLN
2	B	195	GLN
3	C	50	ASN
3	C	76	GLN
5	E	94	ASN
6	F	54	ASN
7	G	38	HIS
8	H	37	HIS
10	J	29	ASN
2	O	10	GLN
2	O	59	GLN
2	O	195	GLN
2	O	203	ASN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
3	P	38	ASN
3	P	50	ASN
4	Q	101	HIS
4	Q	109	HIS
5	R	94	ASN
6	S	54	ASN
7	T	34	ASN
8	U	37	HIS
9	V	8	GLN
10	W	29	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

4 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
2	FME	B	1	2	8,9,10	1.12	1 (12%)	7,9,11	1.29	1 (14%)
2	FME	O	1	2	8,9,10	0.64	0	7,9,11	1.31	2 (28%)
1	FME	N	1	1	8,9,10	0.69	0	7,9,11	0.75	0
1	FME	A	1	1	8,9,10	0.47	0	7,9,11	0.96	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
2	FME	B	1	2	-	0/7/9/11	-

*Continued on next page...*

*Continued from previous page...*

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	FME	O	1	2	-	0/7/9/11	-
1	FME	N	1	1	-	3/7/9/11	-
1	FME	A	1	1	-	2/7/9/11	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1	FME	CG-SD	-2.38	1.68	1.81

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1	FME	CG-CB-CA	-2.74	105.33	112.95
2	O	1	FME	CA-N-CN	2.45	126.59	122.82
2	O	1	FME	O-C-CA	-2.05	119.41	124.78

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	1	FME	N-CA-CB-CG
1	N	1	FME	N-CA-CB-CG
1	N	1	FME	C-CA-CB-CG
1	N	1	FME	CA-CB-CG-SD
1	A	1	FME	C-CA-CB-CG

There are no ring outliers.

No monomer is involved in short contacts.

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 131 ligands modelled in this entry, 8 are monoatomic and 2 are unknown - leaving 121 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	$\# Z  > 2$
24	CHD	P	305	-	32,32,32	0.75	0	51,51,51	1.48	5 (9%)
20	DMU	P	322	-	34,34,34	0.74	0	45,45,45	1.62	6 (13%)
21	EDO	A	610	-	3,3,3	0.57	0	2,2,2	0.31	0
21	EDO	E	202	-	3,3,3	0.23	0	2,2,2	0.24	0
20	DMU	C	319	-	34,34,34	0.91	3 (8%)	45,45,45	1.32	4 (8%)
27	PEK	G	101	-	52,52,52	0.59	1 (1%)	55,57,57	0.67	1 (1%)
21	EDO	B	305	-	3,3,3	0.21	0	2,2,2	0.43	0
19	LFA	C	312	-	13,13,19	0.33	0	12,12,18	0.11	0
21	EDO	N	613	-	3,3,3	0.19	0	2,2,2	0.21	0
19	LFA	P	309	20	17,17,19	0.22	0	16,16,18	0.23	0
20	DMU	A	609	-	34,34,34	1.13	5 (14%)	45,45,45	1.24	4 (8%)
20	DMU	B	302	-	10,10,34	0.19	0	9,9,45	0.60	0
20	DMU	O	306	-	10,10,34	0.21	0	9,9,45	0.61	0
19	LFA	C	313	-	10,10,19	0.19	0	9,9,18	0.13	0
20	DMU	C	320	-	34,34,34	0.83	0	45,45,45	1.27	6 (13%)
19	LFA	P	312	-	14,14,19	0.38	0	13,13,18	0.19	0
20	DMU	C	318	-	22,22,34	0.80	1 (4%)	27,27,45	1.26	3 (11%)
19	LFA	T	101	-	13,13,19	0.66	0	12,12,18	0.36	0
18	CDL	A	606	-	63,63,99	0.48	0	69,75,111	1.05	4 (5%)
19	LFA	C	309	20	17,17,19	0.27	0	16,16,18	0.29	0
14	HEA	N	602	1	57,67,67	1.60	12 (21%)	61,103,103	2.40	25 (40%)
20	DMU	L	102	-	22,22,34	0.47	0	27,27,45	1.09	3 (11%)
21	EDO	R	203	-	3,3,3	0.36	0	2,2,2	0.54	0
19	LFA	C	311	-	10,10,19	0.22	0	9,9,18	0.11	0
21	EDO	A	613	-	3,3,3	0.38	0	2,2,2	0.22	0
20	DMU	B	308	-	22,22,34	0.58	0	27,27,45	1.34	5 (18%)
20	DMU	C	324	-	34,34,34	0.71	0	45,45,45	1.22	5 (11%)
20	DMU	O	304	-	22,22,34	0.83	1 (4%)	27,27,45	1.51	4 (14%)
19	LFA	C	315	-	12,12,19	0.21	0	11,11,18	0.17	0
21	EDO	O	309	-	3,3,3	0.22	0	2,2,2	0.27	0
20	DMU	O	308	-	22,22,34	0.66	0	27,27,45	1.12	3 (11%)
20	DMU	N	616	19	34,34,34	1.03	2 (5%)	45,45,45	1.67	9 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
21	EDO	R	201	-	3,3,3	0.28	0	2,2,2	0.44	0
19	LFA	T	103	-	13,13,19	0.21	0	12,12,18	0.11	0
20	DMU	D	201	-	34,34,34	1.55	9 (26%)	45,45,45	1.54	6 (13%)
20	DMU	P	306	-	10,10,34	0.32	0	9,9,45	0.55	0
20	DMU	N	609	-	34,34,34	1.36	5 (14%)	45,45,45	1.11	2 (4%)
21	EDO	F	103	-	3,3,3	0.26	0	2,2,2	0.36	0
21	EDO	C	323	-	3,3,3	0.85	0	2,2,2	0.89	0
19	LFA	T	104	-	10,10,19	0.18	0	9,9,18	0.16	0
23	CUA	O	305	2	0,1,1	-	-	-	-	-
19	LFA	B	307	-	16,16,19	0.27	0	15,15,18	0.17	0
20	DMU	P	316	-	22,22,34	0.78	1 (4%)	27,27,45	1.42	3 (11%)
21	EDO	C	322	-	3,3,3	0.13	0	2,2,2	0.06	0
20	DMU	M	101	-	34,34,34	0.98	2 (5%)	45,45,45	0.98	3 (6%)
24	CHD	O	301	-	32,32,32	0.76	0	51,51,51	0.90	1 (1%)
21	EDO	S	103	-	3,3,3	0.20	0	2,2,2	0.17	0
20	DMU	H	101	19	34,34,34	1.26	5 (14%)	45,45,45	1.44	6 (13%)
20	DMU	P	315	-	6,6,34	0.32	0	5,5,45	0.47	0
19	LFA	P	310	-	10,10,19	0.13	0	9,9,18	0.12	0
20	DMU	W	101	-	10,10,34	0.20	0	9,9,45	0.62	0
20	DMU	T	105	-	22,22,34	0.78	0	27,27,45	1.53	4 (14%)
20	DMU	J	101	-	10,10,34	0.27	0	9,9,45	0.58	0
21	EDO	P	321	-	3,3,3	0.54	0	2,2,2	1.06	0
20	DMU	P	318	-	34,34,34	0.71	0	45,45,45	1.18	3 (6%)
22	PGV	N	615	-	50,50,50	0.81	2 (4%)	53,56,56	1.19	3 (5%)
19	LFA	C	308	-	5,5,19	0.23	0	4,4,18	0.08	0
19	LFA	C	310	-	14,14,19	0.19	0	13,13,18	0.13	0
23	CUA	B	301	2	0,1,1	-	-	-	-	-
24	CHD	B	306	-	32,32,32	0.75	0	51,51,51	0.82	0
21	EDO	E	201	-	3,3,3	0.37	0	2,2,2	0.54	0
20	DMU	C	306	-	10,10,34	0.33	0	9,9,45	0.49	0
19	LFA	C	307	-	10,10,19	0.14	0	9,9,18	0.14	0
20	DMU	C	316	-	34,34,34	1.05	3 (8%)	45,45,45	1.66	12 (26%)
19	LFA	O	303	-	10,10,19	0.21	0	9,9,18	0.14	0
21	EDO	N	610	-	3,3,3	0.35	0	2,2,2	0.08	0
20	DMU	G	102	-	10,10,34	0.43	0	9,9,45	0.48	0
20	DMU	Z	102	-	7,7,34	0.27	0	6,6,45	0.61	0
19	LFA	C	325	-	14,14,19	0.22	0	13,13,18	0.15	0
21	EDO	A	611	-	3,3,3	0.19	0	2,2,2	0.41	0
19	LFA	N	606	-	13,13,19	0.34	0	12,12,18	0.31	0
21	EDO	T	106	-	3,3,3	0.08	0	2,2,2	0.22	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
20	DMU	Y	102	-	22,22,34	0.59	0	27,27,45	1.13	2 (7%)
19	LFA	A	607	-	13,13,19	0.34	0	12,12,18	0.25	0
21	EDO	E	203	-	3,3,3	0.23	0	2,2,2	0.25	0
20	DMU	A	608	-	6,6,34	0.70	0	5,5,45	0.28	0
20	DMU	P	317	-	34,34,34	0.90	3 (8%)	45,45,45	1.15	4 (8%)
20	DMU	Q	201	-	34,34,34	1.27	7 (20%)	45,45,45	1.65	6 (13%)
21	EDO	N	614	-	3,3,3	0.65	0	2,2,2	1.48	0
21	EDO	R	202	-	3,3,3	0.42	0	2,2,2	0.16	0
20	DMU	B	303	-	10,10,34	0.30	0	9,9,45	0.64	0
22	PGV	C	303	-	50,50,50	0.69	0	53,56,56	0.96	3 (5%)
14	HEA	A	601	1	57,67,67	2.04	15 (26%)	61,103,103	2.78	22 (36%)
19	LFA	P	308	-	5,5,19	0.19	0	4,4,18	0.09	0
14	HEA	N	601	1	57,67,67	1.79	14 (24%)	61,103,103	2.60	23 (37%)
21	EDO	A	612	-	3,3,3	0.72	0	2,2,2	0.26	0
27	PEK	T	102	-	52,52,52	0.70	2 (3%)	55,57,57	1.08	3 (5%)
21	EDO	F	102	-	3,3,3	0.49	0	2,2,2	0.22	0
20	DMU	G	103	-	22,22,34	0.67	1 (4%)	27,27,45	0.88	2 (7%)
22	PGV	A	614	-	50,50,50	0.81	1 (2%)	53,56,56	1.07	3 (5%)
24	CHD	C	301	-	32,32,32	0.99	2 (6%)	51,51,51	0.71	0
24	CHD	C	305	-	32,32,32	0.70	0	51,51,51	1.53	6 (11%)
21	EDO	S	102	-	3,3,3	0.34	0	2,2,2	0.23	0
19	LFA	O	302	-	16,16,19	0.26	0	15,15,18	0.26	0
20	DMU	B	304	-	22,22,34	0.95	1 (4%)	27,27,45	1.04	1 (3%)
19	LFA	P	307	-	10,10,19	0.23	0	9,9,18	0.26	0
21	EDO	P	319	-	3,3,3	0.26	0	2,2,2	0.04	0
18	CDL	V	101	-	63,63,99	0.41	0	69,75,111	0.70	2 (2%)
20	DMU	C	317	-	6,6,34	0.25	0	5,5,45	0.44	0
21	EDO	P	320	-	3,3,3	0.33	0	2,2,2	0.19	0
21	EDO	N	611	-	3,3,3	0.25	0	2,2,2	0.35	0
21	EDO	N	612	-	3,3,3	0.44	0	2,2,2	0.14	0
20	DMU	O	307	-	10,10,34	0.34	0	9,9,45	0.56	0
18	CDL	L	101	-	93,93,99	0.41	0	99,105,111	0.58	2 (2%)
22	PGV	P	303	-	50,50,50	0.76	1 (2%)	53,56,56	0.95	2 (3%)
18	CDL	Y	101	-	93,93,99	0.34	0	99,105,111	0.46	1 (1%)
20	DMU	Z	101	-	34,34,34	1.01	3 (8%)	45,45,45	1.08	3 (6%)
19	LFA	N	607	-	13,13,19	0.42	0	12,12,18	0.34	0
19	LFA	C	314	-	14,14,19	0.29	0	13,13,18	0.43	0
18	CDL	P	304	-	86,86,99	0.53	1 (1%)	92,98,111	0.86	4 (4%)
21	EDO	C	321	-	3,3,3	0.04	0	2,2,2	0.21	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
21	EDO	G	104	-	3,3,3	0.26	0	2,2,2	0.15	0
20	DMU	A	615	-	10,10,34	0.34	0	9,9,45	0.52	0
19	LFA	P	313	-	12,12,19	0.33	0	11,11,18	0.20	0
20	DMU	P	314	-	34,34,34	0.90	2 (5%)	45,45,45	1.81	8 (17%)
14	HEA	A	602	1	57,67,67	1.60	10 (17%)	61,103,103	2.36	22 (36%)
20	DMU	N	608	-	6,6,34	0.50	0	5,5,45	0.28	0
18	CDL	C	304	-	86,86,99	0.55	1 (1%)	92,98,111	1.14	8 (8%)
20	DMU	M	102	-	7,7,34	0.28	0	6,6,45	0.37	0
19	LFA	P	311	-	10,10,19	0.30	0	9,9,18	0.22	0
24	CHD	P	301	-	32,32,32	0.85	2 (6%)	51,51,51	0.79	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
24	CHD	P	305	-	-	7/9/74/74	0/4/4/4
20	DMU	P	322	-	-	7/19/59/59	0/2/2/2
21	EDO	A	610	-	-	0/1/1/1	-
21	EDO	E	202	-	-	0/1/1/1	-
20	DMU	C	319	-	-	16/19/59/59	0/2/2/2
27	PEK	G	101	-	-	14/56/56/56	-
21	EDO	B	305	-	-	0/1/1/1	-
19	LFA	C	312	-	-	5/11/11/17	-
21	EDO	N	613	-	-	1/1/1/1	-
19	LFA	P	309	20	-	9/15/15/17	-
20	DMU	A	609	-	-	7/19/59/59	0/2/2/2
20	DMU	B	302	-	-	5/8/8/59	-
20	DMU	O	306	-	-	6/8/8/59	-
19	LFA	C	313	-	-	3/8/8/17	-
20	DMU	C	320	-	-	11/19/59/59	0/2/2/2
19	LFA	P	312	-	-	4/12/12/17	-
20	DMU	C	318	-	-	9/13/33/59	0/1/1/2
19	LFA	T	101	-	-	2/11/11/17	-
18	CDL	A	606	-	-	41/74/74/110	-
19	LFA	C	309	20	-	9/15/15/17	-
14	HEA	N	602	1	-	4/32/76/76	-

Continued on next page...



*Continued from previous page...*

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	DMU	L	102	-	-	10/13/33/59	0/1/1/2
21	EDO	R	203	-	-	1/1/1/1	-
19	LFA	C	311	-	-	7/8/8/17	-
21	EDO	A	613	-	-	0/1/1/1	-
20	DMU	B	308	-	-	9/13/33/59	0/1/1/2
20	DMU	C	324	-	-	3/19/59/59	0/2/2/2
20	DMU	O	304	-	-	4/13/33/59	0/1/1/2
19	LFA	C	315	-	-	2/10/10/17	-
21	EDO	O	309	-	-	0/1/1/1	-
20	DMU	O	308	-	-	5/13/33/59	0/1/1/2
20	DMU	N	616	19	-	7/19/59/59	0/2/2/2
21	EDO	R	201	-	-	1/1/1/1	-
19	LFA	T	103	-	-	6/11/11/17	-
20	DMU	D	201	-	-	8/19/59/59	0/2/2/2
20	DMU	P	306	-	-	2/8/8/59	-
20	DMU	N	609	-	-	5/19/59/59	0/2/2/2
21	EDO	F	103	-	-	1/1/1/1	-
21	EDO	C	323	-	-	0/1/1/1	-
19	LFA	T	104	-	-	5/8/8/17	-
19	LFA	B	307	-	-	10/14/14/17	-
20	DMU	P	316	-	-	8/13/33/59	0/1/1/2
21	EDO	C	322	-	-	0/1/1/1	-
20	DMU	M	101	-	-	3/19/59/59	0/2/2/2
24	CHD	O	301	-	-	2/9/74/74	0/4/4/4
21	EDO	S	103	-	-	0/1/1/1	-
20	DMU	H	101	19	-	9/19/59/59	0/2/2/2
20	DMU	P	315	-	-	2/4/4/59	-
19	LFA	P	310	-	-	6/8/8/17	-
20	DMU	W	101	-	-	3/8/8/59	-
20	DMU	T	105	-	-	7/13/33/59	0/1/1/2
20	DMU	J	101	-	-	3/8/8/59	-
21	EDO	P	321	-	-	0/1/1/1	-
20	DMU	P	318	-	-	9/19/59/59	0/2/2/2
22	PGV	N	615	-	-	10/55/55/55	-
19	LFA	C	308	-	-	0/3/3/17	-
19	LFA	C	310	-	-	7/12/12/17	-

*Continued on next page...*

*Continued from previous page...*

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	CHD	B	306	-	-	2/9/74/74	0/4/4/4
21	EDO	E	201	-	-	0/1/1/1	-
20	DMU	C	306	-	-	2/8/8/59	-
19	LFA	C	307	-	-	6/8/8/17	-
20	DMU	C	316	-	-	11/19/59/59	0/2/2/2
19	LFA	O	303	-	-	4/8/8/17	-
21	EDO	N	610	-	-	0/1/1/1	-
20	DMU	G	102	-	-	3/8/8/59	-
20	DMU	Z	102	-	-	2/5/5/59	-
19	LFA	C	325	-	-	6/12/12/17	-
21	EDO	A	611	-	-	1/1/1/1	-
19	LFA	N	606	-	-	3/11/11/17	-
21	EDO	T	106	-	-	0/1/1/1	-
20	DMU	Y	102	-	-	11/13/33/59	0/1/1/2
19	LFA	A	607	-	-	4/11/11/17	-
21	EDO	E	203	-	-	0/1/1/1	-
20	DMU	A	608	-	-	2/4/4/59	-
20	DMU	P	317	-	-	16/19/59/59	0/2/2/2
20	DMU	Q	201	-	-	5/19/59/59	0/2/2/2
21	EDO	N	614	-	-	0/1/1/1	-
21	EDO	R	202	-	-	0/1/1/1	-
20	DMU	B	303	-	-	5/8/8/59	-
22	PGV	C	303	-	-	15/55/55/55	-
14	HEA	A	601	1	-	4/32/76/76	-
19	LFA	P	308	-	-	0/3/3/17	-
14	HEA	N	601	1	-	4/32/76/76	-
21	EDO	A	612	-	-	0/1/1/1	-
27	PEK	T	102	-	-	18/56/56/56	-
21	EDO	F	102	-	-	0/1/1/1	-
20	DMU	G	103	-	-	8/13/33/59	0/1/1/2
22	PGV	A	614	-	-	9/55/55/55	-
24	CHD	C	301	-	-	2/9/74/74	0/4/4/4
24	CHD	C	305	-	-	8/9/74/74	0/4/4/4
21	EDO	S	102	-	-	0/1/1/1	-
19	LFA	O	302	-	-	7/14/14/17	-
20	DMU	B	304	-	-	7/13/33/59	0/1/1/2

*Continued on next page...*

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	LFA	P	307	-	-	4/8/8/17	-
21	EDO	P	319	-	-	1/1/1/1	-
18	CDL	V	101	-	-	42/74/74/110	-
20	DMU	C	317	-	-	2/4/4/59	-
21	EDO	P	320	-	-	0/1/1/1	-
21	EDO	N	611	-	-	1/1/1/1	-
21	EDO	N	612	-	-	0/1/1/1	-
20	DMU	O	307	-	-	5/8/8/59	-
18	CDL	L	101	-	-	49/104/104/110	-
22	PGV	P	303	-	-	9/55/55/55	-
18	CDL	Y	101	-	-	52/104/104/110	-
20	DMU	Z	101	-	-	7/19/59/59	0/2/2/2
19	LFA	N	607	-	-	6/11/11/17	-
19	LFA	C	314	-	-	4/12/12/17	-
18	CDL	P	304	-	-	51/97/97/110	-
21	EDO	C	321	-	-	0/1/1/1	-
21	EDO	G	104	-	-	0/1/1/1	-
20	DMU	A	615	-	-	5/8/8/59	-
19	LFA	P	313	-	-	2/10/10/17	-
20	DMU	P	314	-	-	7/19/59/59	0/2/2/2
14	HEA	A	602	1	-	6/32/76/76	-
20	DMU	N	608	-	-	2/4/4/59	-
18	CDL	C	304	-	-	51/97/97/110	-
20	DMU	M	102	-	-	4/5/5/59	-
19	LFA	P	311	-	-	5/8/8/17	-
24	CHD	P	301	-	-	2/9/74/74	0/4/4/4

All (118) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	A	601	HEA	CHD-C1D	5.60	1.49	1.35
14	N	601	HEA	C3B-C2B	5.18	1.46	1.34
14	A	601	HEA	C3A-C2A	4.92	1.47	1.40
14	A	601	HEA	C1D-ND	-4.86	1.31	1.40
14	A	601	HEA	C3B-C2B	4.72	1.45	1.34
14	N	602	HEA	C3B-C2B	4.72	1.45	1.34
20	N	609	DMU	O16-C6	-4.67	1.32	1.40
14	A	601	HEA	C3D-C2D	4.62	1.46	1.36

Continued on next page...

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	N	601	HEA	C1D-ND	-4.52	1.32	1.40
14	N	601	HEA	CHD-C1D	4.45	1.46	1.35
14	N	601	HEA	C3D-C2D	4.15	1.45	1.36
14	A	602	HEA	C3B-C2B	3.81	1.43	1.34
14	N	602	HEA	CHC-C4B	3.65	1.44	1.35
20	D	201	DMU	O5-C6	-3.59	1.32	1.41
20	D	201	DMU	O61-C57	3.54	1.57	1.42
14	A	602	HEA	CHC-C4B	3.54	1.44	1.35
14	N	602	HEA	CHD-C1D	3.52	1.44	1.35
20	H	101	DMU	O49-C1	3.52	1.51	1.43
14	N	601	HEA	CHC-C4B	3.44	1.43	1.35
14	A	602	HEA	CHD-C1D	3.40	1.43	1.35
14	A	601	HEA	C16-C17	-3.39	1.42	1.53
14	A	602	HEA	C3D-C2D	3.35	1.43	1.36
14	A	602	HEA	C1B-NB	-3.33	1.31	1.38
20	B	304	DMU	O16-C6	3.30	1.45	1.40
14	A	601	HEA	C12-C11	-3.25	1.47	1.52
20	C	316	DMU	O3-C5	-3.25	1.35	1.43
14	N	602	HEA	C3A-C2A	3.22	1.44	1.40
14	A	602	HEA	C1D-ND	-3.21	1.34	1.40
14	A	602	HEA	CBD-CAD	-3.19	1.41	1.52
14	A	602	HEA	C3A-C2A	3.16	1.44	1.40
27	G	101	PEK	C23-C22	-3.09	1.40	1.52
22	A	614	PGV	O01-C1	3.09	1.43	1.34
24	C	301	CHD	O26-C24	-3.08	1.20	1.30
27	T	102	PEK	C23-C22	-3.02	1.41	1.52
20	C	316	DMU	C7-C5	-3.02	1.44	1.52
14	N	601	HEA	C4D-ND	-3.01	1.32	1.38
20	Q	201	DMU	O3-C5	-3.00	1.35	1.43
14	A	601	HEA	CHC-C4B	3.00	1.42	1.35
14	N	602	HEA	C4B-NB	-3.00	1.35	1.40
20	P	316	DMU	O16-C6	2.97	1.45	1.40
14	N	602	HEA	C3D-C2D	2.96	1.43	1.36
20	M	101	DMU	O3-C5	-2.86	1.36	1.43
20	Z	101	DMU	O3-C5	-2.86	1.36	1.43
24	P	301	CHD	O26-C24	-2.82	1.21	1.30
14	N	601	HEA	C4B-NB	-2.78	1.35	1.40
20	D	201	DMU	O49-C1	-2.74	1.36	1.43
20	N	609	DMU	C10-C5	-2.73	1.44	1.52
24	C	301	CHD	C22-C23	-2.73	1.44	1.52
14	A	601	HEA	CMD-C2D	-2.73	1.45	1.50
20	P	314	DMU	O3-C5	-2.68	1.36	1.43

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	N	615	PGV	O03-C19	2.67	1.41	1.33
20	C	318	DMU	O16-C6	2.67	1.44	1.40
20	C	319	DMU	C7-C5	-2.66	1.45	1.52
14	N	601	HEA	C3A-C2A	2.65	1.44	1.40
20	P	317	DMU	O3-C5	2.65	1.49	1.43
22	P	303	PGV	O03-C19	2.62	1.41	1.33
20	H	101	DMU	O16-C6	-2.62	1.35	1.40
14	N	602	HEA	C1B-NB	-2.60	1.33	1.38
20	Q	201	DMU	O16-C18	2.57	1.50	1.43
24	P	301	CHD	C22-C23	-2.57	1.44	1.52
14	N	602	HEA	C4D-ND	-2.56	1.33	1.38
14	A	602	HEA	C2A-C1A	2.55	1.48	1.42
14	N	601	HEA	C3C-C2C	2.54	1.43	1.40
20	G	103	DMU	C6-C1	-2.53	1.45	1.52
20	N	616	DMU	O1-C10	2.53	1.48	1.41
14	N	602	HEA	C1D-ND	-2.52	1.36	1.40
20	D	201	DMU	C3-C4	2.51	1.59	1.52
20	A	609	DMU	O4-C7	-2.50	1.37	1.43
20	D	201	DMU	O3-C5	-2.49	1.37	1.43
27	T	102	PEK	C2-C1	2.47	1.57	1.50
20	A	609	DMU	O7-C10	2.47	1.48	1.41
20	P	314	DMU	C7-C5	-2.46	1.46	1.52
20	C	319	DMU	O5-C6	-2.46	1.35	1.41
14	N	602	HEA	C2A-C1A	2.44	1.48	1.42
14	N	601	HEA	C1B-NB	-2.43	1.33	1.38
14	A	602	HEA	C4D-ND	-2.42	1.33	1.38
20	D	201	DMU	C2-C1	2.40	1.58	1.52
20	M	101	DMU	C7-C5	-2.40	1.46	1.52
20	Q	201	DMU	C10-C5	-2.38	1.45	1.52
14	N	602	HEA	C20-C21	-2.35	1.45	1.53
20	N	609	DMU	O5-C6	-2.34	1.35	1.41
14	A	601	HEA	C1B-NB	-2.33	1.34	1.38
20	A	609	DMU	C10-C5	-2.33	1.45	1.52
18	C	304	CDL	C31-CA7	-2.32	1.43	1.50
20	H	101	DMU	C10-C5	-2.32	1.45	1.52
14	A	601	HEA	C1B-C2B	2.30	1.49	1.44
20	Z	101	DMU	O5-C6	-2.29	1.36	1.41
14	N	602	HEA	O1A-CGA	2.29	1.29	1.22
20	D	201	DMU	O55-C2	2.28	1.48	1.43
14	A	601	HEA	C26-C15	-2.26	1.44	1.50
20	Z	101	DMU	C10-C5	-2.25	1.46	1.52
20	Q	201	DMU	O61-C57	2.23	1.51	1.42

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	Q	201	DMU	O5-C6	-2.23	1.36	1.41
14	A	601	HEA	C4D-ND	-2.23	1.34	1.38
20	Q	201	DMU	O49-C1	-2.23	1.37	1.43
20	N	609	DMU	C7-C5	-2.23	1.46	1.52
20	D	201	DMU	O1-C10	2.22	1.47	1.41
20	H	101	DMU	O5-C6	-2.21	1.36	1.41
20	H	101	DMU	O1-C10	2.21	1.47	1.41
20	Q	201	DMU	C7-C5	-2.21	1.46	1.52
14	A	601	HEA	C2A-C1A	2.20	1.47	1.42
20	P	317	DMU	C7-C5	-2.20	1.46	1.52
20	P	317	DMU	O5-C6	-2.18	1.36	1.41
22	N	615	PGV	O01-C1	2.18	1.40	1.34
14	N	601	HEA	O2D-CGD	-2.16	1.23	1.30
14	N	601	HEA	C26-C15	-2.15	1.45	1.50
20	N	616	DMU	O4-C7	2.14	1.48	1.43
14	N	601	HEA	CBA-CGA	2.13	1.55	1.50
20	A	609	DMU	O55-C2	2.12	1.48	1.43
18	P	304	CDL	C31-CA7	-2.11	1.44	1.50
20	N	609	DMU	O1-C10	2.10	1.47	1.41
20	A	609	DMU	O5-C6	-2.09	1.36	1.41
14	N	601	HEA	O1A-CGA	2.09	1.29	1.22
20	D	201	DMU	C10-C5	-2.08	1.46	1.52
14	A	601	HEA	CBA-CGA	2.07	1.55	1.50
20	C	319	DMU	O3-C5	2.05	1.47	1.43
20	O	304	DMU	C3-C4	-2.02	1.48	1.53
20	C	316	DMU	C6-C1	-2.01	1.46	1.52

All (257) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	N	601	HEA	C3D-C4D-ND	8.44	118.53	110.36
14	A	601	HEA	C3D-C4D-ND	7.68	117.79	110.36
14	A	601	HEA	C2B-C1B-NB	7.36	118.70	109.88
20	P	314	DMU	O16-C6-C1	7.29	119.68	108.30
14	A	602	HEA	C2B-C1B-NB	7.18	118.48	109.88
14	A	601	HEA	C13-C12-C11	-6.98	103.86	114.35
20	Q	201	DMU	O16-C6-C1	6.38	118.26	108.30
14	N	602	HEA	C2B-C1B-NB	6.26	117.38	109.88
20	D	201	DMU	O16-C6-C1	6.21	118.00	108.30
14	N	601	HEA	C2B-C1B-NB	5.90	116.95	109.88
14	A	601	HEA	C1B-C2B-C3B	-5.77	99.91	106.80
14	N	601	HEA	C13-C12-C11	-5.72	105.76	114.35

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	A	602	HEA	C3D-C4D-ND	5.67	115.85	110.36
20	T	105	DMU	O16-C6-C1	5.61	117.07	108.30
14	N	602	HEA	C2D-C1D-ND	5.60	116.47	109.84
14	A	601	HEA	C3B-C4B-NB	5.25	116.06	109.84
14	N	601	HEA	C2D-C1D-ND	5.18	115.98	109.84
14	A	601	HEA	CHB-C1B-C2B	-5.13	116.96	124.98
20	C	324	DMU	O16-C6-C1	5.12	116.30	108.30
18	A	606	CDL	CA4-OA6-CA5	5.10	130.34	117.79
24	C	305	CHD	C16-C17-C20	5.09	120.02	112.15
14	N	602	HEA	C3D-C4D-ND	5.07	115.27	110.36
20	P	316	DMU	O5-C6-C1	5.00	120.94	110.35
14	N	602	HEA	C1B-C2B-C3B	-4.96	100.88	106.80
20	P	322	DMU	C10-C5-C7	4.95	120.30	110.00
14	A	601	HEA	C3C-C4C-NC	4.93	115.59	109.21
14	N	602	HEA	C3B-C4B-NB	4.91	115.66	109.84
24	C	305	CHD	C17-C13-C14	-4.90	95.15	100.09
14	A	602	HEA	C3B-C4B-NB	4.80	115.53	109.84
20	C	316	DMU	O16-C6-C1	4.80	115.79	108.30
14	A	601	HEA	C2D-C1D-ND	4.78	115.51	109.84
14	N	601	HEA	C3B-C4B-NB	4.72	115.44	109.84
14	N	601	HEA	C4D-C3D-C2D	-4.67	100.09	106.90
20	P	322	DMU	O16-C6-C1	4.64	115.55	108.30
20	H	101	DMU	O16-C6-C1	4.61	115.49	108.30
14	N	602	HEA	CMB-C2B-C1B	4.61	132.05	125.04
20	C	319	DMU	O16-C6-C1	4.60	115.49	108.30
20	P	314	DMU	C18-O16-C6	-4.57	106.26	113.84
24	P	305	CHD	C16-C17-C20	4.57	119.21	112.15
14	N	601	HEA	C3C-C4C-NC	4.54	115.07	109.21
14	A	601	HEA	C4B-NB-C1B	-4.53	100.39	105.07
20	P	322	DMU	C10-O1-C9	-4.53	104.79	113.69
20	O	304	DMU	O5-C6-C1	4.52	119.92	110.35
14	N	601	HEA	C4D-CHA-C1A	4.45	128.43	122.56
14	A	602	HEA	C4B-NB-C1B	-4.44	100.48	105.07
20	N	616	DMU	O16-C6-C1	4.38	115.14	108.30
14	A	601	HEA	CHA-C4D-C3D	-4.36	118.43	124.84
20	C	316	DMU	C6-O5-C4	4.31	122.15	113.69
27	T	102	PEK	O01-C1-O02	-4.25	113.44	123.70
20	N	616	DMU	C10-C5-C7	4.24	118.82	110.00
22	N	615	PGV	O03-C19-O04	-4.22	112.94	123.59
14	N	602	HEA	C1D-C2D-C3D	-4.22	102.52	106.96
20	P	318	DMU	O16-C6-C1	4.21	114.87	108.30
14	A	601	HEA	C4D-C3D-C2D	-4.19	100.80	106.90

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	C	304	CDL	OA4-PA1-OA5	-4.11	88.65	107.75
18	C	304	CDL	OA6-CA5-C11	-4.09	102.68	111.50
20	Z	101	DMU	O16-C6-C1	4.07	114.66	108.30
14	N	601	HEA	C1B-C2B-C3B	-4.04	101.97	106.80
20	N	616	DMU	C18-O16-C6	-4.02	107.17	113.84
20	O	304	DMU	O16-C6-C1	3.97	114.50	108.30
18	C	304	CDL	OA5-PA1-OA3	3.93	124.40	109.07
22	A	614	PGV	O03-C19-O04	-3.87	113.84	123.59
14	A	602	HEA	CHB-C1B-C2B	-3.82	119.02	124.98
20	C	319	DMU	C10-C5-C7	3.81	117.94	110.00
24	C	305	CHD	C14-C13-C12	3.80	110.94	107.40
20	C	318	DMU	O5-C6-C1	3.80	118.39	110.35
20	C	320	DMU	C10-C5-C7	3.77	117.84	110.00
14	N	601	HEA	CHB-C1B-C2B	-3.76	119.10	124.98
18	A	606	CDL	OA6-CA4-CA3	3.73	121.91	108.40
20	P	317	DMU	O16-C6-C1	3.72	114.11	108.30
14	A	602	HEA	C2D-C1D-ND	3.72	114.24	109.84
20	H	101	DMU	C18-O16-C6	-3.70	107.71	113.84
14	A	601	HEA	CAD-C3D-C4D	3.68	131.09	124.66
20	M	101	DMU	O16-C6-C1	3.66	114.02	108.30
20	B	308	DMU	O16-C6-C1	3.64	113.98	108.30
14	N	601	HEA	CAD-C3D-C4D	3.62	130.98	124.66
14	N	602	HEA	CHA-C4D-C3D	-3.61	119.53	124.84
14	A	602	HEA	CHA-C4D-C3D	-3.56	119.61	124.84
18	P	304	CDL	O1-C1-CB2	3.54	121.97	109.56
20	P	317	DMU	C10-C5-C7	3.53	117.34	110.00
14	A	601	HEA	C26-C15-C16	3.53	121.20	115.27
24	P	305	CHD	C17-C13-C14	-3.51	96.55	100.09
27	T	102	PEK	C2-C3-C4	3.50	119.47	113.23
14	A	602	HEA	C27-C19-C20	3.50	121.16	115.27
14	A	602	HEA	C1B-C2B-C3B	-3.45	102.68	106.80
14	N	602	HEA	CHB-C1B-C2B	-3.39	119.68	124.98
14	A	602	HEA	CMB-C2B-C1B	3.38	130.19	125.04
20	N	616	DMU	O5-C6-O16	3.36	117.93	109.97
14	A	601	HEA	C1D-C2D-C3D	-3.31	103.47	106.96
14	N	601	HEA	C1D-C2D-C3D	-3.30	103.49	106.96
20	P	314	DMU	C10-C5-C7	3.28	116.84	110.00
20	N	609	DMU	C10-O1-C9	3.26	120.09	113.69
14	N	602	HEA	C4B-NB-C1B	-3.25	101.71	105.07
20	H	101	DMU	C10-C5-C7	3.24	116.75	110.00
20	Z	101	DMU	O3-C5-C7	3.24	117.84	110.35
14	A	602	HEA	CMD-C2D-C1D	3.18	129.89	125.04

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	P	318	DMU	C10-C5-C7	3.18	116.62	110.00
22	N	615	PGV	O03-C19-C20	3.18	121.88	111.91
14	A	602	HEA	C1D-C2D-C3D	-3.18	103.62	106.96
14	N	601	HEA	CHA-C4D-C3D	-3.17	120.17	124.84
24	P	305	CHD	C14-C13-C12	3.14	110.33	107.40
18	C	304	CDL	OA4-PA1-OA3	3.12	127.66	112.24
22	P	303	PGV	C27-C26-C25	-3.10	98.69	114.42
14	N	601	HEA	C1D-ND-C4D	-3.10	101.87	105.07
14	N	602	HEA	C1D-ND-C4D	-3.10	101.87	105.07
20	Q	201	DMU	C2-C3-C4	-3.08	103.87	110.93
20	H	101	DMU	O5-C6-C1	3.07	116.86	110.35
14	N	602	HEA	CAD-CBD-CGD	-3.07	107.00	113.60
20	Y	102	DMU	O5-C6-O16	3.03	117.15	109.97
20	C	316	DMU	C10-C5-C7	3.03	116.30	110.00
14	A	602	HEA	CMC-C2C-C3C	3.02	130.32	124.68
14	A	602	HEA	C13-C12-C11	-3.00	109.84	114.35
27	T	102	PEK	O02-C1-C2	3.00	135.44	123.73
20	D	201	DMU	C57-C4-C3	2.98	122.00	113.33
24	P	305	CHD	C22-C23-C24	-2.98	104.60	112.51
20	N	616	DMU	C6-O5-C4	-2.96	107.88	113.69
20	N	616	DMU	O3-C5-C10	2.96	117.23	110.05
14	N	602	HEA	CMD-C2D-C1D	2.94	129.52	125.04
14	N	601	HEA	CHA-C4D-ND	-2.93	121.25	124.43
22	C	303	PGV	O03-C19-O04	-2.91	116.25	123.59
20	P	314	DMU	C6-O5-C4	2.88	119.34	113.69
24	P	305	CHD	C17-C13-C12	-2.85	115.06	117.67
14	A	602	HEA	C4D-C3D-C2D	-2.84	102.75	106.90
20	L	102	DMU	O5-C6-O16	2.84	116.70	109.97
20	Q	201	DMU	C6-O5-C4	-2.82	108.14	113.69
14	N	601	HEA	CBA-CAA-C2A	-2.79	107.90	112.60
20	C	316	DMU	C18-O16-C6	-2.79	109.22	113.84
20	C	320	DMU	O16-C6-C1	2.76	112.61	108.30
20	C	316	DMU	C7-C8-C9	2.74	115.13	110.24
20	N	616	DMU	C10-O1-C9	2.74	119.06	113.69
20	B	308	DMU	O5-C6-C1	2.73	116.12	110.35
18	C	304	CDL	O1-C1-CB2	2.72	119.09	109.56
20	C	318	DMU	C18-O16-C6	-2.71	109.34	113.84
20	P	314	DMU	O3-C5-C10	2.70	116.61	110.05
14	A	602	HEA	C4B-C3B-C2B	-2.70	102.80	107.41
20	Q	201	DMU	C18-O16-C6	2.70	118.31	113.84
24	C	305	CHD	C16-C17-C13	-2.68	100.92	103.55
14	N	602	HEA	C3C-C4C-NC	2.66	112.65	109.21

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	N	601	HEA	C26-C15-C16	2.65	119.74	115.27
20	P	314	DMU	C2-C3-C4	-2.65	104.86	110.93
20	P	316	DMU	C18-O16-C6	-2.65	109.45	113.84
20	N	616	DMU	O5-C4-C57	2.65	113.01	106.44
14	A	601	HEA	C1D-ND-C4D	-2.64	102.34	105.07
14	N	601	HEA	CMC-C2C-C3C	2.64	129.61	124.68
20	D	201	DMU	C2-C3-C4	-2.62	104.91	110.93
24	C	305	CHD	C17-C13-C12	-2.62	115.27	117.67
20	H	101	DMU	C10-O1-C9	2.62	118.83	113.69
18	C	304	CDL	OA7-CA5-C11	2.61	133.90	123.73
20	O	304	DMU	C6-C1-C2	2.60	115.42	110.00
20	T	105	DMU	C57-C4-C3	-2.58	106.97	113.00
20	C	324	DMU	C10-C5-C7	2.57	115.34	110.00
14	A	602	HEA	C3C-C4C-NC	2.57	112.53	109.21
14	N	602	HEA	C27-C19-C20	2.56	119.58	115.27
20	P	322	DMU	O1-C9-C8	-2.56	105.05	109.69
20	M	101	DMU	O3-C5-C7	2.54	116.22	110.35
20	B	308	DMU	C3-C2-C1	-2.54	106.39	110.82
14	N	602	HEA	CBD-CAD-C3D	2.53	119.66	112.63
14	A	601	HEA	C4D-CHA-C1A	2.53	125.90	122.56
20	P	314	DMU	O5-C6-O16	-2.52	104.01	109.97
18	C	304	CDL	OB5-PB2-OB3	2.51	118.88	109.07
22	A	614	PGV	O03-C19-C20	2.51	119.78	111.91
14	A	601	HEA	O11-C11-C12	2.50	116.41	109.42
20	P	316	DMU	C6-C1-C2	2.50	115.20	110.00
14	N	601	HEA	C4B-C3B-C2B	-2.50	103.14	107.41
18	P	304	CDL	OB5-PB2-OB3	2.50	118.83	109.07
14	A	601	HEA	CMB-C2B-C1B	2.49	128.84	125.04
14	N	601	HEA	C4B-NB-C1B	-2.49	102.50	105.07
20	B	308	DMU	O5-C6-O16	2.49	115.87	109.97
18	A	606	CDL	OA6-CA5-OA7	2.49	129.72	123.70
18	V	101	CDL	OA6-CA4-CA6	-2.48	99.42	108.40
14	N	602	HEA	C20-C19-C18	-2.48	116.10	121.12
20	O	308	DMU	C57-C4-C3	-2.48	107.20	113.00
14	N	602	HEA	CAD-C3D-C4D	2.47	128.98	124.66
20	C	316	DMU	O5-C6-C1	2.47	115.58	110.35
20	A	609	DMU	C18-O16-C6	2.47	117.94	113.84
20	A	609	DMU	O16-C6-C1	2.46	112.14	108.30
22	N	615	PGV	O01-C1-O02	-2.46	117.77	123.70
22	P	303	PGV	C22-C21-C20	-2.45	104.37	113.19
14	N	602	HEA	C25-C23-C22	-2.45	115.57	122.65
20	C	316	DMU	O1-C9-C8	2.44	114.13	109.69

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	P	304	CDL	OA5-PA1-OA3	2.44	118.59	109.07
22	C	303	PGV	C24-C23-C22	2.42	126.69	114.42
20	C	316	DMU	O7-C3-C2	2.40	113.68	107.28
20	Y	102	DMU	O5-C6-C1	2.40	115.44	110.35
20	D	201	DMU	C10-C5-C7	2.39	114.98	110.00
22	C	303	PGV	C23-C22-C21	2.39	126.57	114.42
20	A	609	DMU	O3-C5-C7	2.38	115.85	110.35
20	P	322	DMU	O7-C10-O1	-2.38	104.03	110.67
20	B	308	DMU	C6-O5-C4	2.36	118.33	113.69
20	O	308	DMU	O5-C6-C1	2.35	115.32	110.35
14	A	601	HEA	CHD-C1D-C2D	-2.34	120.26	126.72
20	N	609	DMU	O5-C6-C1	2.34	115.29	110.35
14	A	602	HEA	CBD-CAD-C3D	2.34	119.12	112.63
24	C	305	CHD	C18-C13-C17	2.33	114.86	111.21
14	A	601	HEA	C13-C14-C15	-2.32	122.07	127.66
20	G	103	DMU	O5-C6-O16	2.32	115.47	109.97
20	A	609	DMU	C10-C5-C7	2.29	114.78	110.00
20	C	318	DMU	C6-C1-C2	2.29	114.76	110.00
14	A	601	HEA	CMD-C2D-C1D	2.29	128.52	125.04
14	N	601	HEA	CHC-C4B-C3B	-2.29	119.91	125.80
18	V	101	CDL	OA6-CA5-C11	2.28	116.41	111.50
18	L	101	CDL	OB4-PB2-OB2	2.27	118.29	107.75
20	P	314	DMU	O5-C6-C1	2.27	115.15	110.35
14	A	602	HEA	C20-C19-C18	-2.26	116.54	121.12
14	N	602	HEA	CHD-C1D-C2D	-2.26	120.47	126.72
20	C	316	DMU	O4-C7-C8	-2.25	105.14	110.35
20	H	101	DMU	O3-C5-C7	2.25	115.56	110.35
20	P	317	DMU	O3-C5-C10	2.25	115.50	110.05
24	O	301	CHD	C11-C9-C10	-2.24	111.42	113.73
18	L	101	CDL	OA6-CA5-C11	2.24	116.32	111.50
14	N	602	HEA	C13-C12-C11	-2.24	110.99	114.35
20	B	304	DMU	O5-C6-C1	2.24	115.08	110.35
20	Q	201	DMU	C10-C5-C7	2.23	114.65	110.00
20	C	319	DMU	C6-O5-C4	2.23	118.06	113.69
14	A	601	HEA	CHC-C4B-NB	-2.22	121.63	124.38
14	N	601	HEA	CMD-C2D-C1D	2.22	128.42	125.04
20	C	320	DMU	O3-C5-C7	2.22	115.49	110.35
20	T	105	DMU	C2-C3-C4	2.22	114.20	110.24
27	G	101	PEK	O04-C21-C22	2.22	132.39	123.73
20	P	318	DMU	C10-O1-C9	-2.22	109.34	113.69
20	O	304	DMU	C6-O5-C4	2.21	118.03	113.69
20	D	201	DMU	O5-C4-C3	-2.21	105.09	109.75

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	A	614	PGV	C15-C14-C13	-2.21	104.16	113.79
20	D	201	DMU	C11-C9-C8	-2.21	107.84	113.00
20	P	322	DMU	C7-C8-C9	-2.20	106.32	110.24
14	A	602	HEA	CHD-C1D-C2D	-2.19	120.66	126.72
20	C	320	DMU	O3-C5-C10	2.19	115.36	110.05
20	C	319	DMU	C10-O1-C9	-2.15	109.47	113.69
20	G	103	DMU	O16-C6-C1	2.15	111.66	108.30
20	Z	101	DMU	O5-C6-C1	2.15	114.90	110.35
20	Q	201	DMU	O7-C3-C2	2.15	113.00	107.28
14	N	602	HEA	C4D-C3D-C2D	-2.14	103.78	106.90
20	C	320	DMU	O5-C6-O16	2.14	115.03	109.97
20	O	308	DMU	O5-C6-O16	2.13	115.02	109.97
20	C	316	DMU	C10-O1-C9	2.13	117.87	113.69
20	C	320	DMU	O5-C6-C1	2.13	114.85	110.35
20	M	101	DMU	C10-C5-C7	2.13	114.42	110.00
18	A	606	CDL	OA6-CA4-CA6	2.12	116.09	108.40
18	Y	101	CDL	OA6-CA5-C11	2.12	116.07	111.50
14	A	602	HEA	C4D-CHA-C1A	2.11	125.35	122.56
20	C	324	DMU	O5-C6-C1	2.10	114.80	110.35
14	N	602	HEA	C4D-CHA-C1A	2.10	125.33	122.56
20	L	102	DMU	O5-C6-C1	2.08	114.76	110.35
14	A	602	HEA	C1D-ND-C4D	-2.08	102.92	105.07
14	N	602	HEA	O11-C11-C12	2.08	115.23	109.42
20	N	616	DMU	C10-O7-C3	-2.07	112.83	117.96
20	L	102	DMU	C3-C2-C1	-2.07	107.20	110.82
18	P	304	CDL	OA4-PA1-OA3	2.07	122.47	112.24
20	C	324	DMU	O3-C5-C10	2.07	115.07	110.05
20	C	316	DMU	O3-C5-C10	2.06	115.05	110.05
14	N	602	HEA	CBA-CAA-C2A	-2.05	109.15	112.60
14	N	601	HEA	CHD-C1D-C2D	-2.04	121.08	126.72
18	C	304	CDL	OB6-CB5-C51	2.03	115.88	111.50
20	C	324	DMU	O3-C5-C7	2.03	115.05	110.35
20	P	317	DMU	C6-C1-C2	2.03	114.22	110.00
20	T	105	DMU	O5-C6-O16	2.03	114.78	109.97
20	C	316	DMU	O5-C4-C3	2.00	113.97	109.75

There are no chirality outliers.

All (797) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
18	A	606	CDL	C1-CA2-OA2-PA1
18	A	606	CDL	CA3-OA5-PA1-OA2

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
18	A	606	CDL	CA3-OA5-PA1-OA3
18	A	606	CDL	CA3-OA5-PA1-OA4
18	A	606	CDL	OA6-CA4-CA6-OA8
18	A	606	CDL	CB2-OB2-PB2-OB3
18	A	606	CDL	CB3-OB5-PB2-OB3
18	A	606	CDL	CB3-OB5-PB2-OB4
18	A	606	CDL	C51-CB5-OB6-CB4
18	C	304	CDL	O1-C1-CB2-OB2
18	C	304	CDL	C1-CA2-OA2-PA1
18	C	304	CDL	CA3-OA5-PA1-OA2
18	C	304	CDL	CA3-OA5-PA1-OA3
18	C	304	CDL	C11-CA5-OA6-CA4
18	C	304	CDL	CB3-OB5-PB2-OB4
18	C	304	CDL	OB7-CB5-OB6-CB4
18	C	304	CDL	C51-CB5-OB6-CB4
18	L	101	CDL	CB2-C1-CA2-OA2
18	L	101	CDL	CA2-OA2-PA1-OA3
18	L	101	CDL	CA3-OA5-PA1-OA2
18	L	101	CDL	CA3-OA5-PA1-OA3
18	L	101	CDL	CA3-OA5-PA1-OA4
18	L	101	CDL	C11-CA5-OA6-CA4
18	L	101	CDL	CB2-OB2-PB2-OB3
18	L	101	CDL	C51-CB5-OB6-CB4
18	P	304	CDL	C1-CA2-OA2-PA1
18	P	304	CDL	CA2-OA2-PA1-OA3
18	P	304	CDL	CA3-OA5-PA1-OA3
18	P	304	CDL	CB3-OB5-PB2-OB4
18	P	304	CDL	C51-CB5-OB6-CB4
18	V	101	CDL	CA3-OA5-PA1-OA4
18	V	101	CDL	C11-CA5-OA6-CA4
18	V	101	CDL	CB2-OB2-PB2-OB3
18	V	101	CDL	CB3-OB5-PB2-OB2
18	V	101	CDL	CB3-OB5-PB2-OB3
18	V	101	CDL	CB3-OB5-PB2-OB4
18	V	101	CDL	C51-CB5-OB6-CB4
18	Y	101	CDL	CA2-OA2-PA1-OA3
18	Y	101	CDL	CB2-OB2-PB2-OB3
18	Y	101	CDL	CB2-OB2-PB2-OB4
18	Y	101	CDL	CB2-OB2-PB2-OB5
18	Y	101	CDL	CB3-OB5-PB2-OB3
18	Y	101	CDL	CB3-OB5-PB2-OB4
18	Y	101	CDL	C51-CB5-OB6-CB4

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
20	B	304	DMU	C1-C6-O16-C18
20	B	304	DMU	O5-C6-O16-C18
20	B	308	DMU	O5-C6-O16-C18
20	B	308	DMU	C19-C18-O16-C6
20	C	319	DMU	C19-C18-O16-C6
20	D	201	DMU	C19-C18-O16-C6
20	L	102	DMU	C1-C6-O16-C18
20	L	102	DMU	C19-C18-O16-C6
20	N	616	DMU	C1-C6-O16-C18
20	O	308	DMU	C19-C18-O16-C6
20	Q	201	DMU	O5-C6-O16-C18
20	Q	201	DMU	C19-C18-O16-C6
20	T	105	DMU	C1-C6-O16-C18
20	Y	102	DMU	C1-C6-O16-C18
20	Y	102	DMU	O5-C6-O16-C18
20	Y	102	DMU	C19-C18-O16-C6
24	C	305	CHD	C13-C17-C20-C21
24	C	305	CHD	C13-C17-C20-C22
24	C	305	CHD	C16-C17-C20-C21
24	P	305	CHD	C13-C17-C20-C21
24	P	305	CHD	C13-C17-C20-C22
24	P	305	CHD	C16-C17-C20-C22
27	G	101	PEK	C12-C13-C14-C15
27	T	102	PEK	C12-C13-C14-C15
24	P	305	CHD	C16-C17-C20-C21
24	C	305	CHD	C16-C17-C20-C22
18	A	606	CDL	OB7-CB5-OB6-CB4
18	C	304	CDL	OA7-CA5-OA6-CA4
18	L	101	CDL	OA7-CA5-OA6-CA4
18	L	101	CDL	OB7-CB5-OB6-CB4
18	P	304	CDL	OA7-CA5-OA6-CA4
18	P	304	CDL	OB7-CB5-OB6-CB4
18	V	101	CDL	OA7-CA5-OA6-CA4
18	V	101	CDL	OB7-CB5-OB6-CB4
18	Y	101	CDL	OB7-CB5-OB6-CB4
18	P	304	CDL	C11-CA5-OA6-CA4
20	O	304	DMU	O5-C4-C57-O61
20	L	102	DMU	C3-C4-C57-O61
20	C	316	DMU	O6-C11-C9-O1
20	C	318	DMU	O5-C4-C57-O61
22	C	303	PGV	C28-C29-C30-C31
20	B	308	DMU	C3-C4-C57-O61

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
18	V	101	CDL	OA9-CA7-OA8-CA6
20	P	316	DMU	O5-C4-C57-O61
18	A	606	CDL	O1-C1-CB2-OB2
18	P	304	CDL	O1-C1-CB2-OB2
18	V	101	CDL	C31-CA7-OA8-CA6
20	A	609	DMU	O6-C11-C9-C8
18	Y	101	CDL	C11-CA5-OA6-CA4
20	A	609	DMU	O6-C11-C9-O1
20	N	609	DMU	O6-C11-C9-O1
20	C	318	DMU	C3-C4-C57-O61
20	N	609	DMU	O6-C11-C9-C8
19	C	325	LFA	C9-C10-C11-C12
19	C	309	LFA	C12-C13-C14-C15
19	P	307	LFA	C7-C8-C9-C10
20	D	201	DMU	O6-C11-C9-O1
20	P	318	DMU	O6-C11-C9-O1
20	Y	102	DMU	O5-C4-C57-O61
20	Z	101	DMU	O6-C11-C9-O1
19	C	309	LFA	C11-C10-C9-C8
20	C	319	DMU	O6-C11-C9-O1
20	C	320	DMU	O6-C11-C9-O1
20	L	102	DMU	O5-C4-C57-O61
20	O	304	DMU	C3-C4-C57-O61
22	A	614	PGV	C26-C27-C28-C29
20	B	308	DMU	O5-C4-C57-O61
18	Y	101	CDL	C31-CA7-OA8-CA6
20	P	316	DMU	C3-C4-C57-O61
18	Y	101	CDL	OA9-CA7-OA8-CA6
18	A	606	CDL	CA2-C1-CB2-OB2
18	P	304	CDL	CA2-C1-CB2-OB2
18	Y	101	CDL	OA7-CA5-OA6-CA4
20	C	316	DMU	O6-C11-C9-C8
20	C	319	DMU	C3-C4-C57-O61
18	C	304	CDL	C31-CA7-OA8-CA6
19	T	101	LFA	C9-C10-C11-C12
22	N	615	PGV	C26-C27-C28-C29
20	C	320	DMU	O5-C4-C57-O61
20	D	201	DMU	O6-C11-C9-C8
20	Z	101	DMU	O6-C11-C9-C8
18	C	304	CDL	O1-C1-CA2-OA2
18	L	101	CDL	O1-C1-CA2-OA2
20	C	319	DMU	C1-C6-O16-C18

*Continued on next page...*



*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
18	A	606	CDL	CA5-C11-C12-C13
18	C	304	CDL	OA9-CA7-OA8-CA6
19	O	302	LFA	C5-C6-C7-C8
19	O	302	LFA	C7-C8-C9-C10
20	C	324	DMU	O6-C11-C9-O1
20	G	103	DMU	O5-C4-C57-O61
20	P	317	DMU	O5-C4-C57-O61
18	P	304	CDL	C31-CA7-OA8-CA6
18	C	304	CDL	CA7-C31-C32-C33
18	C	304	CDL	CB5-C51-C52-C53
18	C	304	CDL	CB7-C71-C72-C73
18	L	101	CDL	CB7-C71-C72-C73
18	Y	101	CDL	CA5-C11-C12-C13
18	V	101	CDL	CA5-C11-C12-C13
18	A	606	CDL	C13-C14-C15-C16
20	D	201	DMU	O16-C18-C19-C22
20	P	318	DMU	C4-C3-O7-C10
20	C	320	DMU	O6-C11-C9-C8
20	G	103	DMU	C3-C4-C57-O61
20	C	318	DMU	O16-C18-C19-C22
20	Y	102	DMU	O16-C18-C19-C22
18	P	304	CDL	CB5-C51-C52-C53
18	V	101	CDL	CA7-C31-C32-C33
20	P	318	DMU	C2-C3-O7-C10
20	P	317	DMU	C3-C4-C57-O61
20	C	320	DMU	O16-C18-C19-C22
20	L	102	DMU	O16-C18-C19-C22
20	T	105	DMU	O5-C6-O16-C18
20	G	103	DMU	O16-C18-C19-C22
20	P	317	DMU	O16-C18-C19-C22
18	P	304	CDL	O1-C1-CA2-OA2
18	V	101	CDL	O1-C1-CB2-OB2
18	Y	101	CDL	O1-C1-CA2-OA2
20	P	322	DMU	C4-C3-O7-C10
18	P	304	CDL	CB7-C71-C72-C73
27	T	102	PEK	C7-C8-C9-C10
18	A	606	CDL	CB3-OB5-PB2-OB2
18	L	101	CDL	CB2-OB2-PB2-OB5
18	P	304	CDL	CA2-OA2-PA1-OA5
18	P	304	CDL	CA3-OA5-PA1-OA2
18	V	101	CDL	CA3-OA5-PA1-OA2
18	V	101	CDL	CB2-OB2-PB2-OB5

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
18	Y	101	CDL	CA2-OA2-PA1-OA5
18	Y	101	CDL	CB3-OB5-PB2-OB2
18	C	304	CDL	C71-CB7-OB8-CB6
18	L	101	CDL	C72-C73-C74-C75
18	V	101	CDL	CA2-C1-CB2-OB2
18	Y	101	CDL	CB2-C1-CA2-OA2
18	A	606	CDL	C19-C20-C21-C22
20	N	609	DMU	C31-C34-C37-C40
18	A	606	CDL	C78-C79-C80-C81
18	P	304	CDL	C11-C12-C13-C14
18	Y	101	CDL	C63-C64-C65-C66
19	N	607	LFA	C5-C6-C7-C8
20	C	318	DMU	C31-C34-C37-C40
20	C	319	DMU	C31-C34-C37-C40
20	G	103	DMU	C25-C28-C31-C34
18	V	101	CDL	C78-C79-C80-C81
18	Y	101	CDL	C13-C14-C15-C16
19	B	307	LFA	C13-C14-C15-C16
20	Z	101	DMU	C22-C25-C28-C31
22	A	614	PGV	C14-C15-C16-C17
22	C	303	PGV	C22-C23-C24-C25
20	C	320	DMU	C3-C4-C57-O61
19	N	607	LFA	C11-C10-C9-C8
20	A	615	DMU	C19-C22-C25-C28
20	L	102	DMU	C22-C25-C28-C31
18	V	101	CDL	C1-CA2-OA2-PA1
18	C	304	CDL	C35-C36-C37-C38
18	V	101	CDL	C74-C75-C76-C77
19	O	302	LFA	C13-C14-C15-C16
20	J	101	DMU	C25-C28-C31-C34
18	V	101	CDL	C31-C32-C33-C34
19	C	325	LFA	C7-C8-C9-C10
19	P	309	LFA	C4-C5-C6-C7
20	C	320	DMU	C1-C6-O16-C18
20	P	317	DMU	C1-C6-O16-C18
18	L	101	CDL	OB6-CB4-CB6-OB8
18	P	304	CDL	C52-C53-C54-C55
19	P	309	LFA	C13-C14-C15-C16
20	C	316	DMU	C28-C31-C34-C37
22	C	303	PGV	C30-C31-C32-C33
27	T	102	PEK	C26-C27-C28-C29
18	P	304	CDL	OA9-CA7-OA8-CA6

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
19	C	309	LFA	C5-C6-C7-C8
19	T	101	LFA	C5-C6-C7-C8
20	M	101	DMU	C22-C25-C28-C31
20	P	314	DMU	C28-C31-C34-C37
22	C	303	PGV	C7-C8-C9-C10
18	L	101	CDL	C14-C15-C16-C17
18	P	304	CDL	C35-C36-C37-C38
20	C	320	DMU	C19-C22-C25-C28
20	C	319	DMU	O5-C4-C57-O61
20	P	317	DMU	O6-C11-C9-O1
20	C	319	DMU	O6-C11-C9-C8
18	C	304	CDL	OB9-CB7-OB8-CB6
19	C	310	LFA	C6-C7-C8-C9
19	P	309	LFA	C5-C6-C7-C8
19	P	310	LFA	C6-C7-C8-C9
20	C	316	DMU	C19-C22-C25-C28
22	C	303	PGV	C14-C15-C16-C17
18	A	606	CDL	OA7-CA5-OA6-CA4
18	C	304	CDL	C72-C73-C74-C75
18	V	101	CDL	C17-C18-C19-C20
19	C	307	LFA	C4-C5-C6-C7
20	P	318	DMU	C22-C25-C28-C31
19	T	103	LFA	C10-C11-C12-C13
20	P	317	DMU	C28-C31-C34-C37
22	A	614	PGV	C29-C30-C31-C32
22	C	303	PGV	C25-C26-C27-C28
20	C	319	DMU	O5-C6-O16-C18
20	L	102	DMU	O5-C6-O16-C18
18	L	101	CDL	C37-C38-C39-C40
19	B	307	LFA	C9-C10-C11-C12
19	C	310	LFA	C10-C11-C12-C13
19	C	312	LFA	C4-C5-C6-C7
19	P	310	LFA	C7-C8-C9-C10
22	N	615	PGV	C14-C15-C16-C17
18	L	101	CDL	C13-C14-C15-C16
20	C	317	DMU	C28-C31-C34-C37
20	P	316	DMU	C31-C34-C37-C40
19	C	312	LFA	C10-C11-C12-C13
22	N	615	PGV	C27-C28-C29-C30
18	A	606	CDL	C17-C18-C19-C20
18	P	304	CDL	C56-C57-C58-C59
18	Y	101	CDL	C71-C72-C73-C74

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
20	P	315	DMU	C28-C31-C34-C37
20	B	304	DMU	C19-C18-O16-C6
20	C	318	DMU	C19-C18-O16-C6
20	G	103	DMU	C19-C18-O16-C6
20	O	304	DMU	C19-C18-O16-C6
18	L	101	CDL	C34-C35-C36-C37
18	L	101	CDL	C80-C81-C82-C83
18	V	101	CDL	C73-C74-C75-C76
19	C	309	LFA	C3-C4-C5-C6
19	O	303	LFA	C5-C6-C7-C8
19	T	104	LFA	C6-C7-C8-C9
18	C	304	CDL	C22-C23-C24-C25
19	P	309	LFA	C3-C4-C5-C6
19	P	312	LFA	C2-C3-C4-C5
20	M	102	DMU	C31-C34-C37-C40
18	C	304	CDL	C75-C76-C77-C78
20	A	608	DMU	C28-C31-C34-C37
20	P	318	DMU	O6-C11-C9-C8
19	C	325	LFA	C6-C7-C8-C9
20	Q	201	DMU	O5-C4-C57-O61
20	G	103	DMU	C28-C31-C34-C37
20	T	105	DMU	O16-C18-C19-C22
22	A	614	PGV	C30-C31-C32-C33
27	G	101	PEK	C28-C29-C30-C31
22	A	614	PGV	C11-C10-C9-C8
22	P	303	PGV	C12-C13-C14-C15
20	Y	102	DMU	C18-C19-C22-C25
20	B	302	DMU	C19-C22-C25-C28
20	A	609	DMU	C31-C34-C37-C40
22	P	303	PGV	C7-C8-C9-C10
20	B	303	DMU	C18-C19-C22-C25
18	L	101	CDL	C17-C18-C19-C20
19	C	311	LFA	C7-C8-C9-C10
20	C	319	DMU	C19-C22-C25-C28
27	G	101	PEK	C26-C27-C28-C29
20	O	307	DMU	C18-C19-C22-C25
18	P	304	CDL	C73-C74-C75-C76
19	B	307	LFA	C4-C5-C6-C7
19	O	303	LFA	C2-C3-C4-C5
20	B	303	DMU	C19-C22-C25-C28
20	P	322	DMU	C2-C3-O7-C10
22	C	303	PGV	C13-C14-C15-C16

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
27	G	101	PEK	C16-C17-C18-C19
21	P	319	EDO	O1-C1-C2-O2
20	C	318	DMU	C28-C31-C34-C37
27	T	102	PEK	C1-C2-C3-C4
18	A	606	CDL	C75-C76-C77-C78
20	Y	102	DMU	C31-C34-C37-C40
18	V	101	CDL	C77-C78-C79-C80
19	C	313	LFA	C1-C2-C3-C4
19	N	606	LFA	C10-C11-C12-C13
19	P	311	LFA	C1-C2-C3-C4
20	H	101	DMU	C19-C22-C25-C28
20	O	308	DMU	C34-C37-C40-C43
19	T	104	LFA	C3-C4-C5-C6
20	C	319	DMU	O16-C18-C19-C22
20	Z	101	DMU	C25-C28-C31-C34
27	T	102	PEK	C32-C33-C34-C35
18	Y	101	CDL	C21-C22-C23-C24
18	Y	101	CDL	C61-C62-C63-C64
27	T	102	PEK	C17-C18-C19-C20
24	C	305	CHD	C21-C20-C22-C23
19	T	103	LFA	C3-C4-C5-C6
20	L	102	DMU	C31-C34-C37-C40
20	N	616	DMU	C18-C19-C22-C25
20	D	201	DMU	C19-C22-C25-C28
20	C	324	DMU	O6-C11-C9-C8
20	N	616	DMU	O5-C6-O16-C18
19	P	312	LFA	C5-C6-C7-C8
20	P	318	DMU	C25-C28-C31-C34
18	A	606	CDL	C11-CA5-OA6-CA4
18	C	304	CDL	C71-C72-C73-C74
19	P	309	LFA	C11-C10-C9-C8
20	B	304	DMU	C31-C34-C37-C40
18	C	304	CDL	C55-C56-C57-C58
22	A	614	PGV	C28-C29-C30-C31
18	Y	101	CDL	OB6-CB4-CB6-OB8
20	C	318	DMU	C25-C28-C31-C34
20	H	101	DMU	C28-C31-C34-C37
20	P	315	DMU	C31-C34-C37-C40
18	P	304	CDL	C72-C73-C74-C75
19	B	307	LFA	C7-C8-C9-C10
20	P	316	DMU	C22-C25-C28-C31
18	V	101	CDL	C72-C73-C74-C75

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
19	C	309	LFA	C11-C12-C13-C14
20	O	306	DMU	C18-C19-C22-C25
20	P	316	DMU	C18-C19-C22-C25
19	C	310	LFA	C9-C10-C11-C12
20	Y	102	DMU	C25-C28-C31-C34
20	B	302	DMU	C18-C19-C22-C25
20	B	304	DMU	C18-C19-C22-C25
22	P	303	PGV	C11-C12-C13-C14
20	A	609	DMU	C3-C4-C57-O61
18	A	606	CDL	CB2-OB2-PB2-OB5
18	Y	101	CDL	CB5-C51-C52-C53
20	Q	201	DMU	C4-C3-O7-C10
18	L	101	CDL	CB5-C51-C52-C53
20	D	201	DMU	C4-C3-O7-C10
20	Y	102	DMU	C3-C4-C57-O61
18	Y	101	CDL	C19-C20-C21-C22
20	N	616	DMU	C19-C22-C25-C28
27	G	101	PEK	C25-C26-C27-C28
20	P	314	DMU	O6-C11-C9-O1
18	P	304	CDL	C57-C58-C59-C60
19	C	311	LFA	C3-C4-C5-C6
27	T	102	PEK	C2-C3-C4-C5
18	Y	101	CDL	C14-C15-C16-C17
19	P	311	LFA	C3-C4-C5-C6
20	O	307	DMU	C19-C22-C25-C28
19	C	325	LFA	C4-C5-C6-C7
18	L	101	CDL	C76-C77-C78-C79
18	Y	101	CDL	C32-C33-C34-C35
18	Y	101	CDL	C57-C58-C59-C60
19	C	307	LFA	C2-C3-C4-C5
19	C	313	LFA	C5-C6-C7-C8
19	N	606	LFA	C6-C7-C8-C9
20	M	101	DMU	C19-C22-C25-C28
20	P	322	DMU	C25-C28-C31-C34
18	A	606	CDL	CA3-CA4-CA6-OA8
18	L	101	CDL	CB3-CB4-CB6-OB8
18	L	101	CDL	C58-C59-C60-C61
18	P	304	CDL	CB3-CB4-CB6-OB8
20	P	316	DMU	C28-C31-C34-C37
18	C	304	CDL	C74-C75-C76-C77
18	Y	101	CDL	C84-C85-C86-C87
19	C	309	LFA	C2-C3-C4-C5

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
20	A	615	DMU	O16-C18-C19-C22
19	A	607	LFA	C9-C10-C11-C12
19	B	307	LFA	C1-C2-C3-C4
19	O	302	LFA	C14-C15-C16-C17
20	C	317	DMU	C31-C34-C37-C40
18	Y	101	CDL	C64-C65-C66-C67
19	P	307	LFA	C11-C10-C9-C8
20	B	308	DMU	C34-C37-C40-C43
20	P	317	DMU	C34-C37-C40-C43
18	V	101	CDL	C20-C21-C22-C23
18	L	101	CDL	C15-C16-C17-C18
20	C	318	DMU	C19-C22-C25-C28
22	N	615	PGV	C30-C31-C32-C33
27	G	101	PEK	C15-C16-C17-C18
20	A	608	DMU	C25-C28-C31-C34
18	C	304	CDL	C23-C24-C25-C26
19	O	302	LFA	C9-C10-C11-C12
20	C	316	DMU	C34-C37-C40-C43
20	H	101	DMU	O5-C4-C57-O61
20	N	616	DMU	O5-C4-C57-O61
20	C	320	DMU	C34-C37-C40-C43
20	L	102	DMU	C34-C37-C40-C43
20	C	319	DMU	C34-C37-C40-C43
20	B	303	DMU	O16-C18-C19-C22
20	O	307	DMU	O16-C18-C19-C22
20	W	101	DMU	O16-C18-C19-C22
19	C	311	LFA	C11-C10-C9-C8
19	O	302	LFA	C11-C12-C13-C14
20	C	316	DMU	O5-C4-C57-O61
18	P	304	CDL	C75-C76-C77-C78
18	V	101	CDL	C13-C14-C15-C16
18	C	304	CDL	CA4-CA3-OA5-PA1
18	P	304	CDL	C53-C54-C55-C56
20	B	304	DMU	C34-C37-C40-C43
20	N	616	DMU	C22-C25-C28-C31
20	T	105	DMU	C34-C37-C40-C43
18	L	101	CDL	C31-CA7-OA8-CA6
20	P	314	DMU	C19-C22-C25-C28
20	H	101	DMU	C1-C6-O16-C18
18	P	304	CDL	C13-C14-C15-C16
19	C	310	LFA	C4-C5-C6-C7
20	N	609	DMU	O16-C18-C19-C22

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
20	Z	101	DMU	C34-C37-C40-C43
19	P	309	LFA	C14-C15-C16-C17
20	Z	101	DMU	C28-C31-C34-C37
27	G	101	PEK	C29-C30-C31-C32
27	T	102	PEK	C30-C31-C32-C33
18	P	304	CDL	C54-C55-C56-C57
20	P	306	DMU	O16-C18-C19-C22
22	N	615	PGV	C29-C30-C31-C32
18	C	304	CDL	C20-C21-C22-C23
20	M	102	DMU	C34-C37-C40-C43
20	L	102	DMU	C25-C28-C31-C34
19	B	307	LFA	C14-C15-C16-C17
20	C	318	DMU	C22-C25-C28-C31
19	C	325	LFA	C12-C13-C14-C15
20	M	102	DMU	C22-C25-C28-C31
20	Y	102	DMU	C34-C37-C40-C43
20	B	308	DMU	C18-C19-C22-C25
20	C	320	DMU	C18-C19-C22-C25
18	Y	101	CDL	C79-C80-C81-C82
20	O	306	DMU	C25-C28-C31-C34
22	N	615	PGV	C12-C13-C14-C15
27	G	101	PEK	C13-C14-C15-C16
18	Y	101	CDL	C59-C60-C61-C62
19	N	606	LFA	C7-C8-C9-C10
14	A	602	HEA	C4D-C3D-CAD-CBD
20	G	102	DMU	O16-C18-C19-C22
19	P	307	LFA	C3-C4-C5-C6
18	P	304	CDL	C17-C18-C19-C20
20	P	317	DMU	C4-C3-O7-C10
18	P	304	CDL	C21-C22-C23-C24
20	D	201	DMU	C2-C3-O7-C10
18	Y	101	CDL	C51-C52-C53-C54
19	C	314	LFA	C9-C10-C11-C12
19	T	104	LFA	C7-C8-C9-C10
20	P	317	DMU	C2-C3-O7-C10
18	C	304	CDL	C12-C11-CA5-OA6
18	L	101	CDL	C51-C52-C53-C54
19	T	103	LFA	C4-C5-C6-C7
20	P	316	DMU	C19-C18-O16-C6
19	C	313	LFA	C11-C10-C9-C8
19	P	310	LFA	C11-C10-C9-C8
19	T	103	LFA	C5-C6-C7-C8

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
18	A	606	CDL	C31-CA7-OA8-CA6
18	C	304	CDL	CB3-CB4-CB6-OB8
18	Y	101	CDL	CB3-CB4-CB6-OB8
27	T	102	PEK	C4-C5-C6-C7
18	C	304	CDL	C16-C17-C18-C19
22	P	303	PGV	C30-C31-C32-C33
20	P	314	DMU	C18-C19-C22-C25
20	M	102	DMU	C25-C28-C31-C34
20	W	101	DMU	C34-C37-C40-C43
18	V	101	CDL	C12-C13-C14-C15
18	C	304	CDL	C58-C59-C60-C61
20	G	102	DMU	C34-C37-C40-C43
20	Q	201	DMU	C2-C3-O7-C10
27	G	101	PEK	C9-C10-C11-C12
27	T	102	PEK	C11-C10-C9-C8
27	T	102	PEK	C11-C12-C13-C14
18	L	101	CDL	OA9-CA7-OA8-CA6
20	O	306	DMU	C19-C22-C25-C28
20	Z	101	DMU	O16-C18-C19-C22
20	P	317	DMU	O1-C10-O7-C3
20	A	615	DMU	C25-C28-C31-C34
20	P	316	DMU	C19-C22-C25-C28
18	Y	101	CDL	OA5-CA3-CA4-OA6
20	B	308	DMU	C31-C34-C37-C40
22	N	615	PGV	C11-C10-C9-C8
18	A	606	CDL	C32-C33-C34-C35
18	V	101	CDL	C79-C80-C81-C82
18	Y	101	CDL	C74-C75-C76-C77
19	P	312	LFA	C6-C7-C8-C9
18	Y	101	CDL	C58-C59-C60-C61
20	P	322	DMU	O16-C18-C19-C22
19	C	311	LFA	C6-C7-C8-C9
20	N	608	DMU	C34-C37-C40-C43
18	L	101	CDL	C84-C85-C86-C87
20	C	306	DMU	C28-C31-C34-C37
18	L	101	CDL	C59-C60-C61-C62
18	L	101	CDL	C74-C75-C76-C77
19	P	309	LFA	C1-C2-C3-C4
20	P	317	DMU	C18-C19-C22-C25
18	L	101	CDL	C57-C58-C59-C60
20	M	101	DMU	C25-C28-C31-C34
21	A	611	EDO	O1-C1-C2-O2

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
21	N	611	EDO	O1-C1-C2-O2
19	C	311	LFA	C4-C5-C6-C7
20	B	308	DMU	C25-C28-C31-C34
20	P	306	DMU	C31-C34-C37-C40
19	P	310	LFA	C2-C3-C4-C5
19	P	312	LFA	C9-C10-C11-C12
18	C	304	CDL	C33-C34-C35-C36
18	C	304	CDL	C59-C60-C61-C62
14	A	602	HEA	C2D-C3D-CAD-CBD
18	V	101	CDL	OA5-CA3-CA4-CA6
19	P	313	LFA	C6-C7-C8-C9
19	B	307	LFA	C11-C12-C13-C14
22	P	303	PGV	C24-C25-C26-C27
22	P	303	PGV	C27-C28-C29-C30
24	P	305	CHD	C21-C20-C22-C23
19	C	315	LFA	C6-C7-C8-C9
20	H	101	DMU	C18-C19-C22-C25
18	P	304	CDL	C19-C20-C21-C22
19	C	314	LFA	C4-C5-C6-C7
18	Y	101	CDL	C22-C23-C24-C25
18	Y	101	CDL	C73-C74-C75-C76
20	P	317	DMU	C25-C28-C31-C34
18	A	606	CDL	C18-C19-C20-C21
19	C	311	LFA	C5-C6-C7-C8
20	O	306	DMU	C31-C34-C37-C40
22	C	303	PGV	C29-C30-C31-C32
20	H	101	DMU	O6-C11-C9-O1
18	P	304	CDL	C71-C72-C73-C74
20	C	316	DMU	O5-C6-O16-C18
22	C	303	PGV	C02-C03-O11-P
19	C	307	LFA	C3-C4-C5-C6
18	V	101	CDL	OA5-CA3-CA4-OA6
20	B	302	DMU	C25-C28-C31-C34
18	C	304	CDL	C13-C14-C15-C16
20	O	307	DMU	C28-C31-C34-C37
22	A	614	PGV	C15-C16-C17-C18
20	T	105	DMU	C18-C19-C22-C25
20	C	319	DMU	C2-C3-O7-C10
20	C	316	DMU	C4-C3-O7-C10
18	A	606	CDL	C71-C72-C73-C74
20	A	615	DMU	C28-C31-C34-C37
22	N	615	PGV	C15-C16-C17-C18

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
19	T	103	LFA	C11-C10-C9-C8
19	C	325	LFA	C3-C4-C5-C6
20	G	103	DMU	C31-C34-C37-C40
18	L	101	CDL	C21-C22-C23-C24
19	C	314	LFA	C2-C3-C4-C5
18	C	304	CDL	CA2-OA2-PA1-OA5
18	L	101	CDL	CA2-OA2-PA1-OA5
18	A	606	CDL	CB4-CB3-OB5-PB2
18	P	304	CDL	CA4-CA3-OA5-PA1
22	P	303	PGV	C02-C03-O11-P
18	A	606	CDL	OA9-CA7-OA8-CA6
18	A	606	CDL	CB2-OB2-PB2-OB4
18	P	304	CDL	CA2-OA2-PA1-OA4
18	V	101	CDL	CA3-OA5-PA1-OA3
18	V	101	CDL	CB2-OB2-PB2-OB4
18	Y	101	CDL	CA2-OA2-PA1-OA4
18	A	606	CDL	CA7-C31-C32-C33
18	C	304	CDL	C52-C53-C54-C55
18	Y	101	CDL	OA5-CA3-CA4-CA6
18	P	304	CDL	C55-C56-C57-C58
19	C	309	LFA	C13-C14-C15-C16
20	C	316	DMU	C2-C3-O7-C10
20	Z	102	DMU	C34-C37-C40-C43
27	G	101	PEK	C17-C18-C19-C20
20	C	319	DMU	C4-C3-O7-C10
22	C	303	PGV	C21-C22-C23-C24
27	T	102	PEK	C10-C11-C12-C13
18	A	606	CDL	C77-C78-C79-C80
18	P	304	CDL	CA7-C31-C32-C33
19	B	307	LFA	C6-C7-C8-C9
18	P	304	CDL	OB5-CB3-CB4-OB6
19	N	607	LFA	C9-C10-C11-C12
19	C	307	LFA	C6-C7-C8-C9
18	L	101	CDL	C36-C37-C38-C39
20	B	308	DMU	O16-C18-C19-C22
18	L	101	CDL	C73-C74-C75-C76
19	C	307	LFA	C7-C8-C9-C10
19	N	607	LFA	C1-C2-C3-C4
19	P	309	LFA	C11-C12-C13-C14
18	C	304	CDL	OB6-CB4-CB6-OB8
18	P	304	CDL	OB6-CB4-CB6-OB8
18	P	304	CDL	C33-C34-C35-C36

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
22	C	303	PGV	C24-C25-C26-C27
22	P	303	PGV	C14-C15-C16-C17
18	L	101	CDL	C72-C71-CB7-OB8
18	A	606	CDL	C31-C32-C33-C34
18	P	304	CDL	C18-C19-C20-C21
19	C	312	LFA	C11-C10-C9-C8
20	B	304	DMU	O16-C18-C19-C22
20	W	101	DMU	C25-C28-C31-C34
19	B	307	LFA	C10-C11-C12-C13
18	L	101	CDL	C22-C23-C24-C25
18	V	101	CDL	C15-C16-C17-C18
27	G	101	PEK	C4-C5-C6-C7
20	A	609	DMU	O5-C4-C57-O61
20	O	308	DMU	C22-C25-C28-C31
19	P	309	LFA	C15-C16-C17-C18
19	C	311	LFA	C1-C2-C3-C4
19	T	104	LFA	C11-C10-C9-C8
20	O	307	DMU	C22-C25-C28-C31
19	A	607	LFA	C6-C7-C8-C9
19	C	307	LFA	C11-C10-C9-C8
19	C	309	LFA	C15-C16-C17-C18
18	A	606	CDL	CA3-CA4-OA6-CA5
18	V	101	CDL	C16-C17-C18-C19
20	P	322	DMU	O1-C10-O7-C3
27	T	102	PEK	C13-C14-C15-C16
20	C	320	DMU	C28-C31-C34-C37
18	C	304	CDL	C12-C13-C14-C15
20	P	317	DMU	O5-C6-O16-C18
27	T	102	PEK	C14-C15-C16-C17
20	O	308	DMU	C1-C6-O16-C18
18	P	304	CDL	C12-C11-CA5-OA6
19	T	104	LFA	C4-C5-C6-C7
20	P	317	DMU	C19-C22-C25-C28
18	C	304	CDL	CB3-OB5-PB2-OB2
18	Y	101	CDL	C23-C24-C25-C26
20	T	105	DMU	C22-C25-C28-C31
20	O	306	DMU	C22-C25-C28-C31
20	P	322	DMU	O6-C11-C9-C8
20	C	319	DMU	C25-C28-C31-C34
18	A	606	CDL	C16-C17-C18-C19
19	C	314	LFA	C7-C8-C9-C10
18	Y	101	CDL	OB9-CB7-OB8-CB6

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
18	L	101	CDL	C75-C76-C77-C78
19	O	303	LFA	C1-C2-C3-C4
14	N	602	HEA	CAA-CBA-CGA-O1A
19	C	315	LFA	C11-C10-C9-C8
14	A	602	HEA	CAA-CBA-CGA-O1A
20	B	302	DMU	C31-C34-C37-C40
20	O	308	DMU	C18-C19-C22-C25
27	G	101	PEK	C27-C28-C29-C30
18	P	304	CDL	OA5-CA3-CA4-OA6
24	P	305	CHD	C22-C23-C24-O26
18	Y	101	CDL	C15-C16-C17-C18
20	P	317	DMU	C22-C25-C28-C31
19	P	311	LFA	C11-C10-C9-C8
20	G	103	DMU	C18-C19-C22-C25
19	N	607	LFA	C2-C3-C4-C5
14	N	601	HEA	CAD-CBD-CGD-O1D
20	G	102	DMU	C19-C22-C25-C28
20	D	201	DMU	C28-C31-C34-C37
14	A	601	HEA	CAD-CBD-CGD-O1D
18	P	304	CDL	C74-C75-C76-C77
21	N	613	EDO	O1-C1-C2-O2
18	Y	101	CDL	C80-C81-C82-C83
19	C	312	LFA	C6-C7-C8-C9
20	P	314	DMU	C4-C3-O7-C10
24	O	301	CHD	C22-C23-C24-O25
20	J	101	DMU	C18-C19-C22-C25
14	A	602	HEA	CAD-CBD-CGD-O2D
24	B	306	CHD	C22-C23-C24-O25
24	O	301	CHD	C22-C23-C24-O26
24	P	305	CHD	C22-C23-C24-O25
20	P	314	DMU	C34-C37-C40-C43
18	A	606	CDL	C73-C74-C75-C76
19	C	312	LFA	C5-C6-C7-C8
24	C	305	CHD	C22-C23-C24-O25
18	L	101	CDL	C32-C33-C34-C35
19	T	103	LFA	C1-C2-C3-C4
20	B	302	DMU	O16-C18-C19-C22
20	O	306	DMU	O16-C18-C19-C22
18	C	304	CDL	C53-C54-C55-C56
20	C	324	DMU	O16-C18-C19-C22
27	T	102	PEK	C6-C7-C8-C9
20	Y	102	DMU	C19-C22-C25-C28

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
14	A	601	HEA	CAD-CBD-CGD-O2D
14	A	602	HEA	CAD-CBD-CGD-O1D
20	T	105	DMU	C28-C31-C34-C37
20	N	616	DMU	C28-C31-C34-C37
19	O	303	LFA	C6-C7-C8-C9
14	A	602	HEA	CAA-CBA-CGA-O2A
24	B	306	CHD	C22-C23-C24-O26
18	P	304	CDL	C51-C52-C53-C54
14	N	601	HEA	CAD-CBD-CGD-O2D
14	N	602	HEA	CAD-CBD-CGD-O1D
20	H	101	DMU	C22-C25-C28-C31
20	N	608	DMU	C31-C34-C37-C40
20	B	303	DMU	C22-C25-C28-C31
18	V	101	CDL	OA6-CA4-CA6-OA8
18	Y	101	CDL	OA6-CA4-CA6-OA8
27	G	101	PEK	C10-C11-C12-C13
14	N	602	HEA	CAA-CBA-CGA-O2A
14	N	602	HEA	CAD-CBD-CGD-O2D
24	C	305	CHD	C22-C23-C24-O26
18	V	101	CDL	C32-C33-C34-C35
20	H	101	DMU	C25-C28-C31-C34
20	C	316	DMU	C18-C19-C22-C25
19	A	607	LFA	C7-C8-C9-C10
20	B	303	DMU	C25-C28-C31-C34
18	P	304	CDL	C23-C24-C25-C26
18	C	304	CDL	C12-C11-CA5-OA7
19	O	302	LFA	C2-C3-C4-C5
27	G	101	PEK	C34-C35-C36-C37
19	P	313	LFA	C1-C2-C3-C4
18	C	304	CDL	C18-C19-C20-C21
20	A	609	DMU	C4-C3-O7-C10
24	C	301	CHD	C22-C23-C24-O26
22	C	303	PGV	C23-C24-C25-C26
18	Y	101	CDL	C12-C13-C14-C15
18	Y	101	CDL	C71-CB7-OB8-CB6
18	P	304	CDL	C80-C81-C82-C83
19	C	310	LFA	C1-C2-C3-C4
19	C	310	LFA	C7-C8-C9-C10
18	V	101	CDL	C72-C71-CB7-OB8
20	P	317	DMU	C5-C10-O7-C3
22	C	303	PGV	C05-C04-O12-P
20	O	304	DMU	C18-C19-C22-C25

*Continued on next page...*

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Atoms</b>
19	B	307	LFA	C12-C13-C14-C15
20	C	316	DMU	O16-C18-C19-C22
22	A	614	PGV	C12-C13-C14-C15
18	Y	101	CDL	C38-C39-C40-C41
18	C	304	CDL	C73-C74-C75-C76
18	L	101	CDL	O1-C1-CB2-OB2
22	P	303	PGV	C28-C29-C30-C31
24	P	301	CHD	C22-C23-C24-O26
18	L	101	CDL	C32-C31-CA7-OA8
20	C	319	DMU	C5-C10-O7-C3
22	A	614	PGV	O03-C19-C20-C21
19	P	311	LFA	C4-C5-C6-C7
27	T	102	PEK	C15-C16-C17-C18
18	V	101	CDL	CB4-CB3-OB5-PB2
19	N	607	LFA	C6-C7-C8-C9
18	C	304	CDL	C52-C51-CB5-OB6
18	P	304	CDL	C52-C51-CB5-OB6
18	L	101	CDL	C16-C17-C18-C19
19	C	309	LFA	C6-C7-C8-C9
18	A	606	CDL	C72-C71-CB7-OB8
21	R	201	EDO	O1-C1-C2-O2
21	R	203	EDO	O1-C1-C2-O2
24	P	301	CHD	C22-C23-C24-O25
20	C	306	DMU	C31-C34-C37-C40
24	C	301	CHD	C22-C23-C24-O25
20	A	615	DMU	C18-C19-C22-C25
18	L	101	CDL	C18-C19-C20-C21
20	P	318	DMU	C19-C22-C25-C28
18	A	606	CDL	C32-C31-CA7-OA8
18	V	101	CDL	C52-C51-CB5-OB6
22	C	303	PGV	C1-C2-C3-C4
18	Y	101	CDL	C83-C84-C85-C86
19	P	310	LFA	C3-C4-C5-C6
18	L	101	CDL	C32-C31-CA7-OA9
18	P	304	CDL	C82-C83-C84-C85
18	C	304	CDL	C57-C58-C59-C60
20	P	318	DMU	C28-C31-C34-C37
19	P	310	LFA	C1-C2-C3-C4
20	Z	102	DMU	C25-C28-C31-C34
18	P	304	CDL	C52-C51-CB5-OB7
19	P	311	LFA	C5-C6-C7-C8
18	P	304	CDL	C12-C13-C14-C15

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
18	C	304	CDL	CA2-C1-CB2-OB2
22	N	615	PGV	O03-C19-C20-C21
18	A	606	CDL	C72-C71-CB7-OB9
18	V	101	CDL	C72-C71-CB7-OB9
18	Y	101	CDL	C32-C31-CA7-OA8
18	C	304	CDL	C52-C51-CB5-OB7
14	A	601	HEA	CAA-CBA-CGA-O2A
20	A	609	DMU	C2-C3-O7-C10
18	A	606	CDL	CA2-OA2-PA1-OA3
18	C	304	CDL	CA3-OA5-PA1-OA4
18	C	304	CDL	CB3-OB5-PB2-OB3
18	L	101	CDL	CA2-OA2-PA1-OA4
20	N	609	DMU	O5-C6-O16-C18
20	J	101	DMU	C31-C34-C37-C40
21	F	103	EDO	O1-C1-C2-O2
14	N	601	HEA	CAA-CBA-CGA-O2A
18	L	101	CDL	C56-C57-C58-C59
18	V	101	CDL	O1-C1-CA2-OA2
19	C	310	LFA	C2-C3-C4-C5
14	N	601	HEA	CAA-CBA-CGA-O1A
18	C	304	CDL	C11-C12-C13-C14
22	C	303	PGV	C9-C10-C11-C12
22	N	615	PGV	C31-C32-C33-C34
24	C	305	CHD	C17-C20-C22-C23
18	A	606	CDL	C32-C31-CA7-OA9
19	A	607	LFA	C4-C5-C6-C7
18	Y	101	CDL	C32-C31-CA7-OA9
14	A	601	HEA	CAA-CBA-CGA-O1A
18	C	304	CDL	C72-C71-CB7-OB8
27	T	102	PEK	O01-C1-C2-C3
18	L	101	CDL	C61-C62-C63-C64
20	P	314	DMU	C31-C34-C37-C40
20	H	101	DMU	C19-C18-O16-C6
20	P	318	DMU	C19-C18-O16-C6
20	C	320	DMU	O5-C6-O16-C18
27	T	102	PEK	O02-C1-C2-C3
20	P	322	DMU	C5-C10-O7-C3
20	C	319	DMU	O1-C10-O7-C3
19	P	307	LFA	C2-C3-C4-C5

There are no ring outliers.

66 monomers are involved in 180 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	P	305	CHD	2	0
20	C	319	DMU	2	0
27	G	101	PEK	3	0
19	P	309	LFA	5	0
20	A	609	DMU	1	0
19	C	313	LFA	2	0
20	C	320	DMU	1	0
19	T	101	LFA	6	0
19	C	309	LFA	6	0
14	N	602	HEA	2	0
20	L	102	DMU	1	0
19	C	311	LFA	1	0
20	C	324	DMU	3	0
20	O	304	DMU	9	0
19	C	315	LFA	4	0
20	N	616	DMU	1	0
19	T	103	LFA	4	0
20	D	201	DMU	1	0
20	N	609	DMU	2	0
21	F	103	EDO	1	0
19	B	307	LFA	1	0
21	C	322	EDO	2	0
24	O	301	CHD	1	0
20	H	101	DMU	5	0
19	P	310	LFA	3	0
20	T	105	DMU	5	0
20	P	318	DMU	7	0
22	N	615	PGV	1	0
19	C	310	LFA	2	0
20	C	306	DMU	1	0
19	C	307	LFA	2	0
19	O	303	LFA	4	0
21	N	610	EDO	1	0
20	G	102	DMU	7	0
19	C	325	LFA	6	0
19	N	606	LFA	5	0
20	Y	102	DMU	1	0
19	A	607	LFA	3	0
20	A	608	DMU	1	0
20	P	317	DMU	3	0
20	Q	201	DMU	1	0
21	N	614	EDO	3	0
22	C	303	PGV	1	0

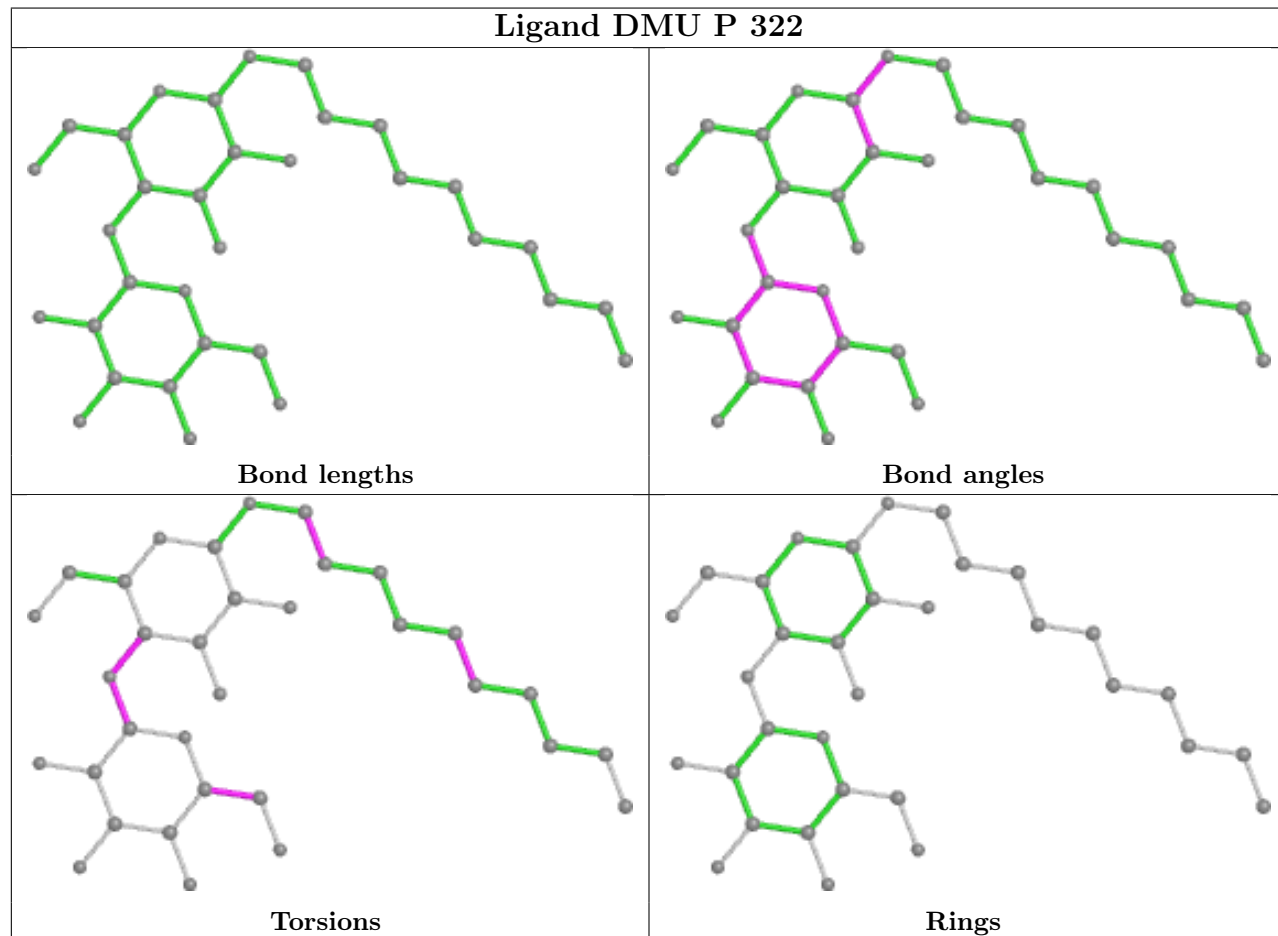
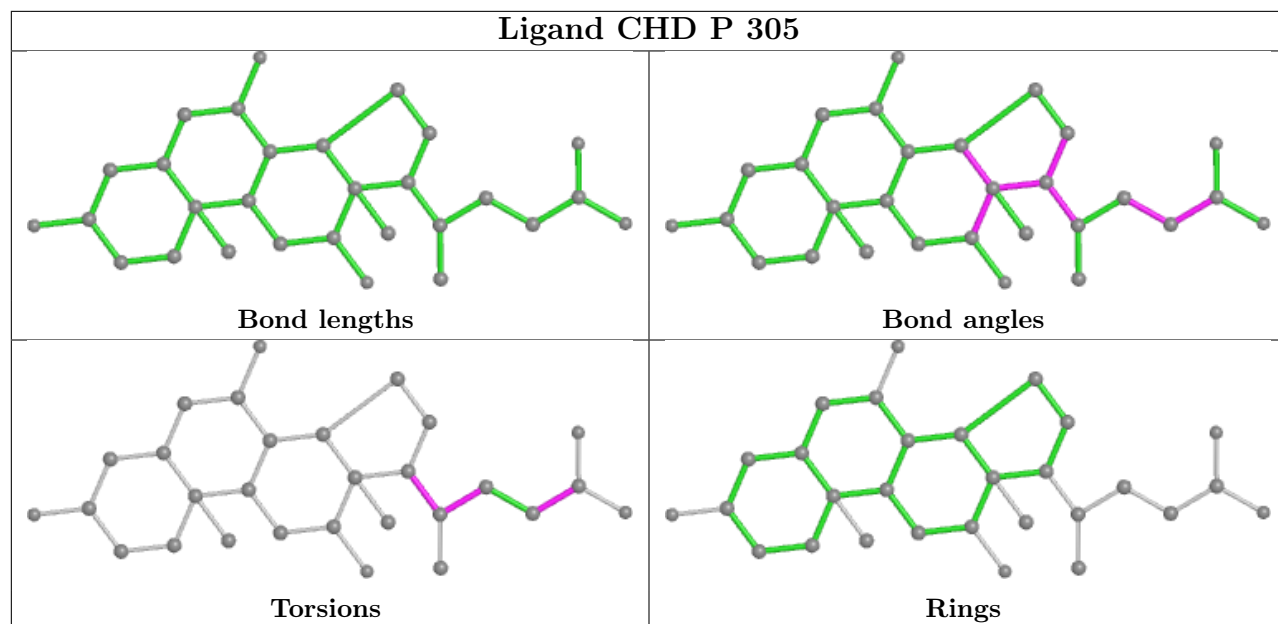
*Continued on next page...*

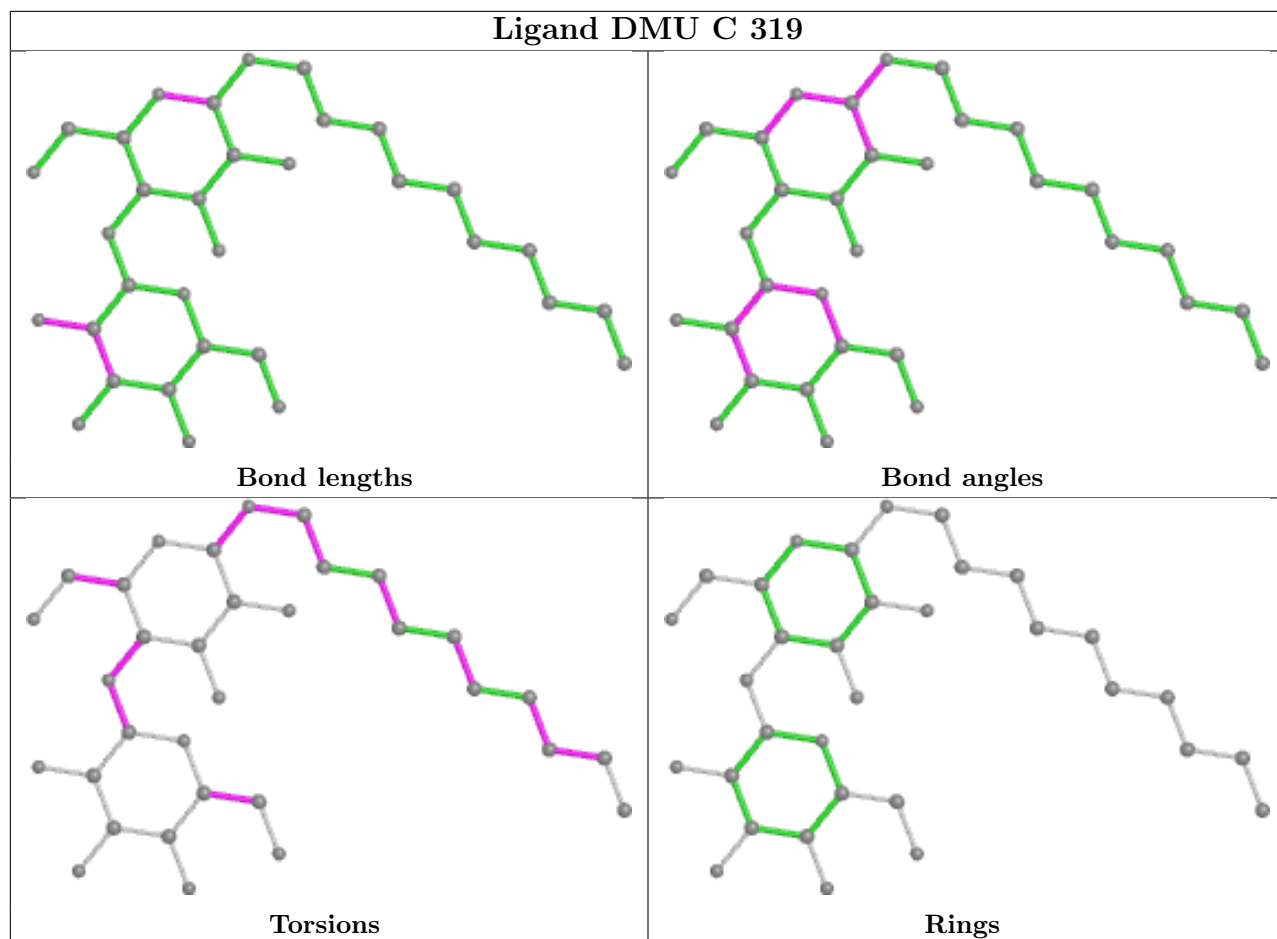


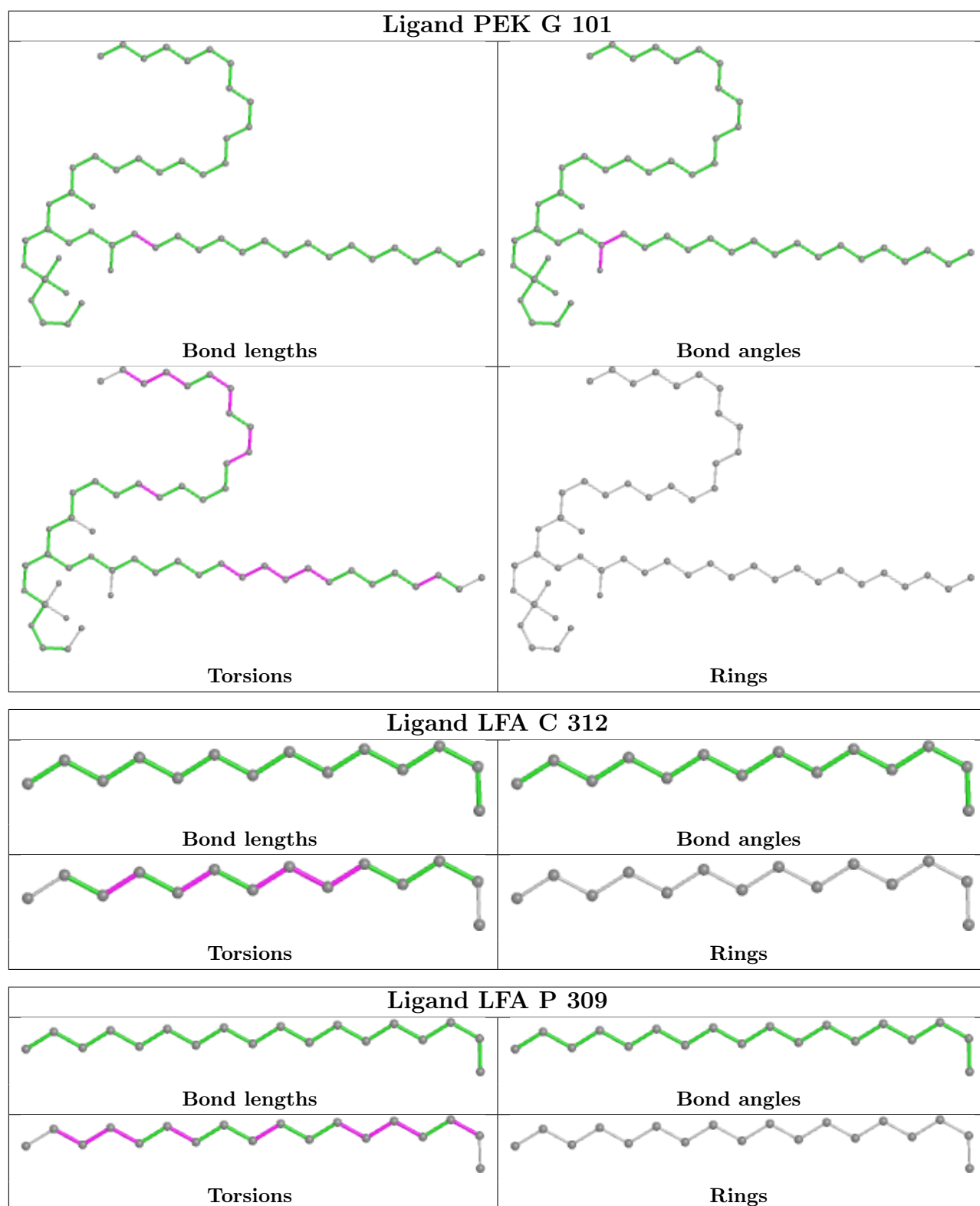
*Continued from previous page...*

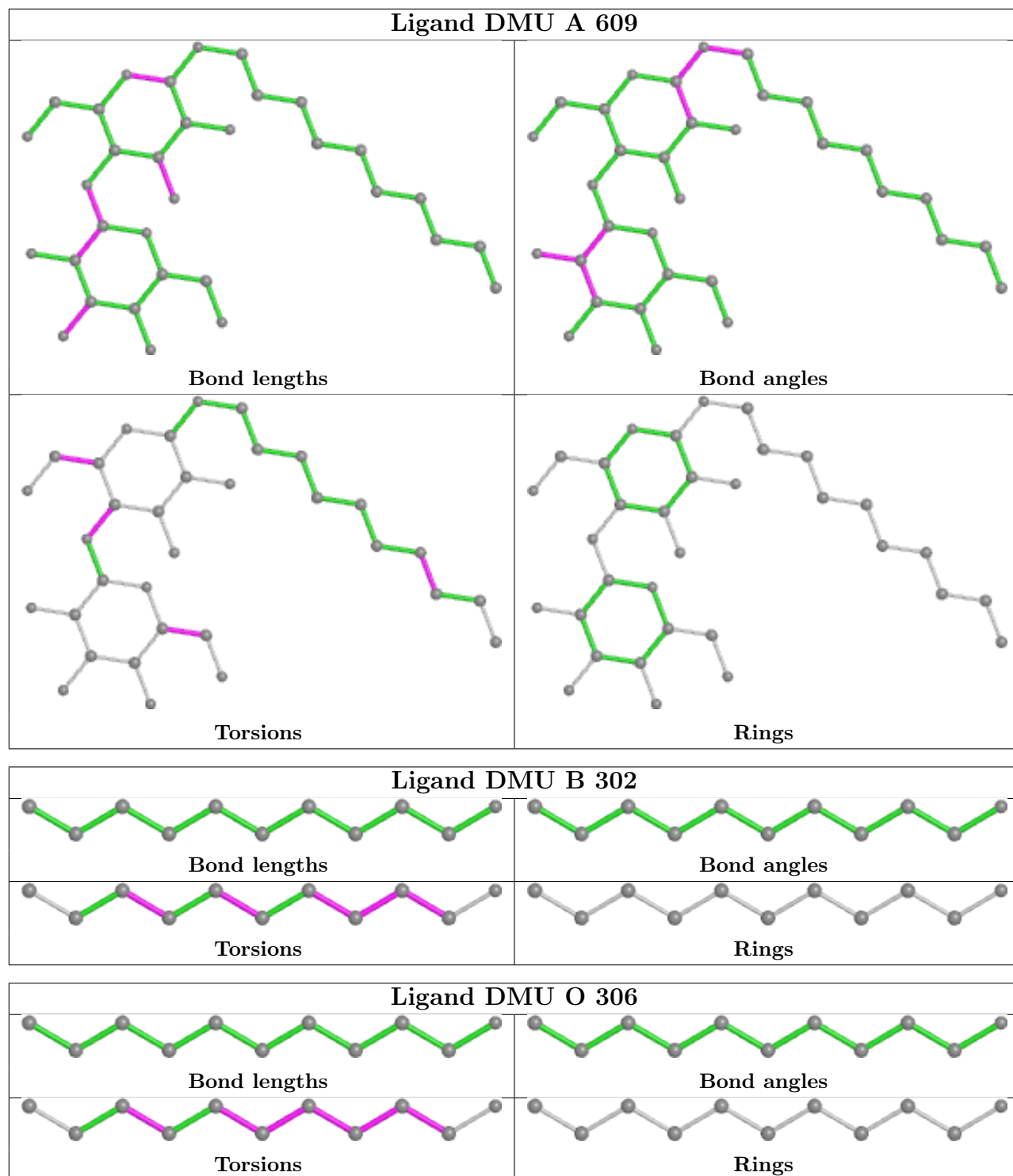
Mol	Chain	Res	Type	Clashes	Symm-Clashes
14	A	601	HEA	2	0
14	N	601	HEA	3	0
27	T	102	PEK	5	0
20	G	103	DMU	9	0
24	C	305	CHD	2	0
21	S	102	EDO	1	0
19	O	302	LFA	1	0
19	P	307	LFA	2	0
21	P	319	EDO	1	0
18	V	101	CDL	2	0
20	C	317	DMU	1	0
18	L	101	CDL	2	0
18	Y	101	CDL	5	0
20	Z	101	DMU	1	0
19	N	607	LFA	5	0
19	C	314	LFA	3	0
18	P	304	CDL	13	0
20	A	615	DMU	6	0
19	P	313	LFA	3	0
20	P	314	DMU	2	0
14	A	602	HEA	1	0
18	C	304	CDL	18	0
19	P	311	LFA	6	0

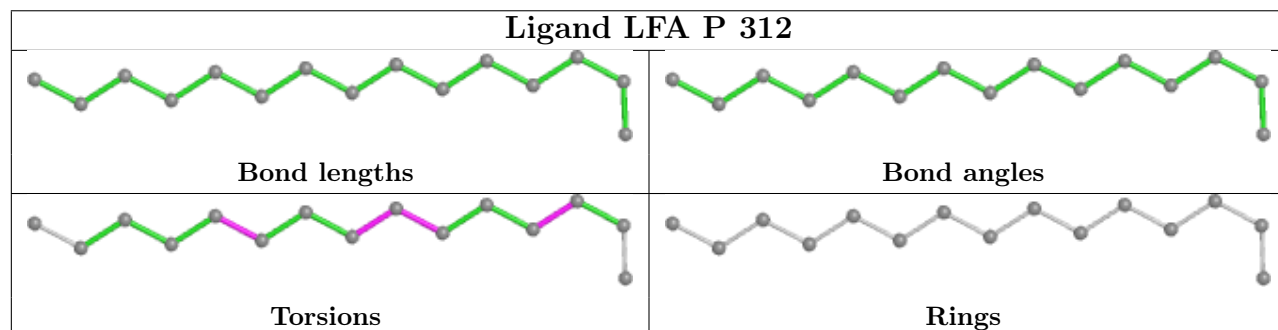
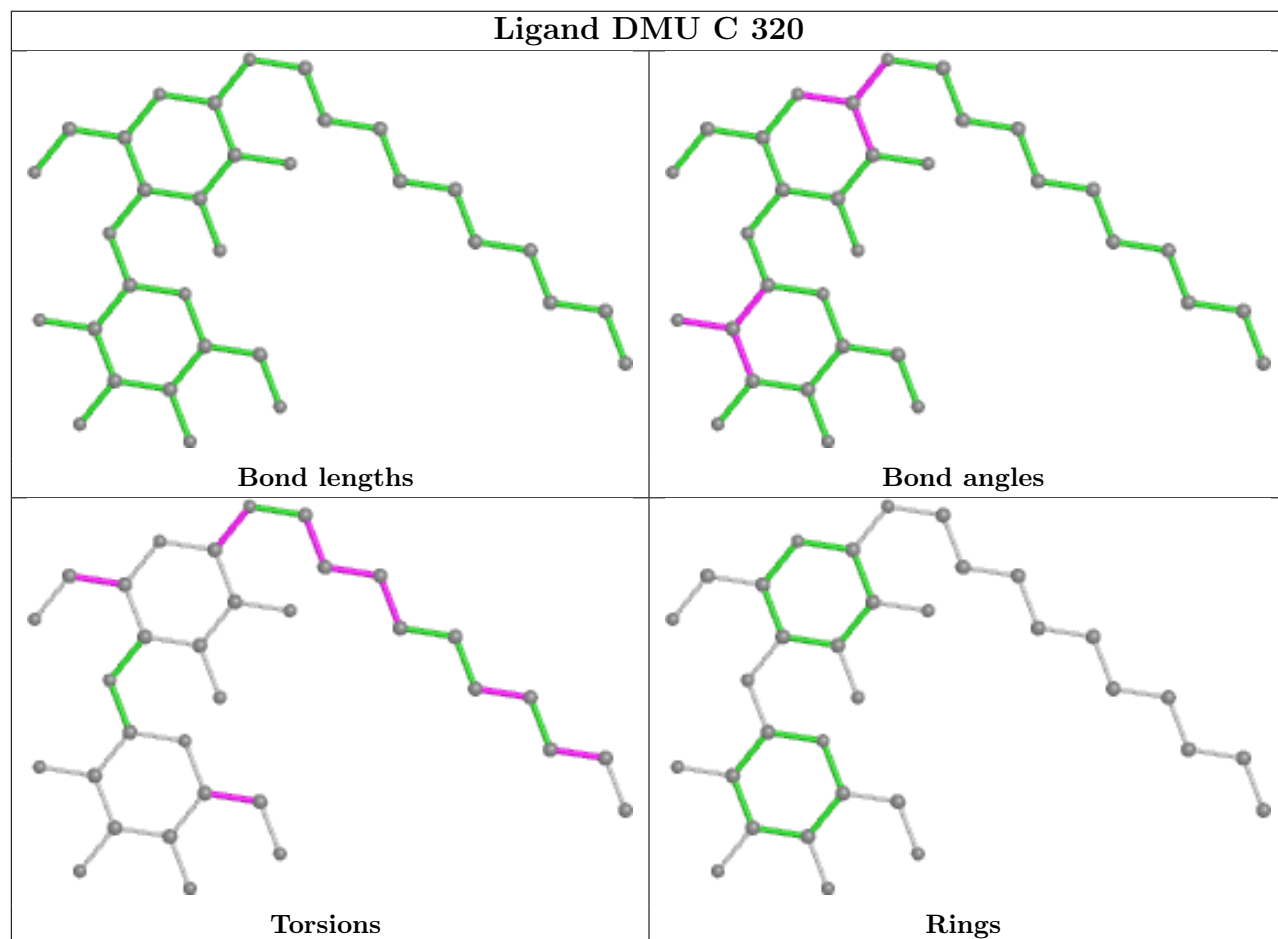
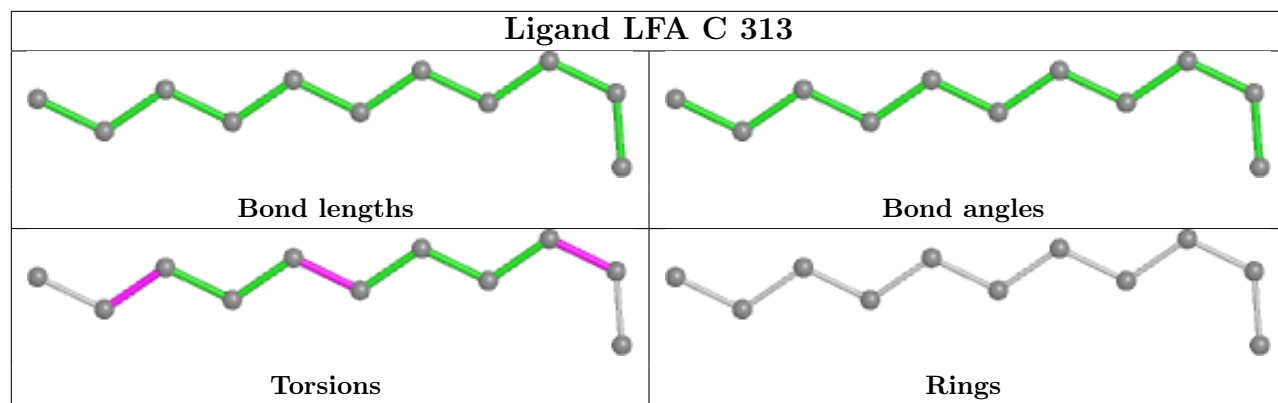
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

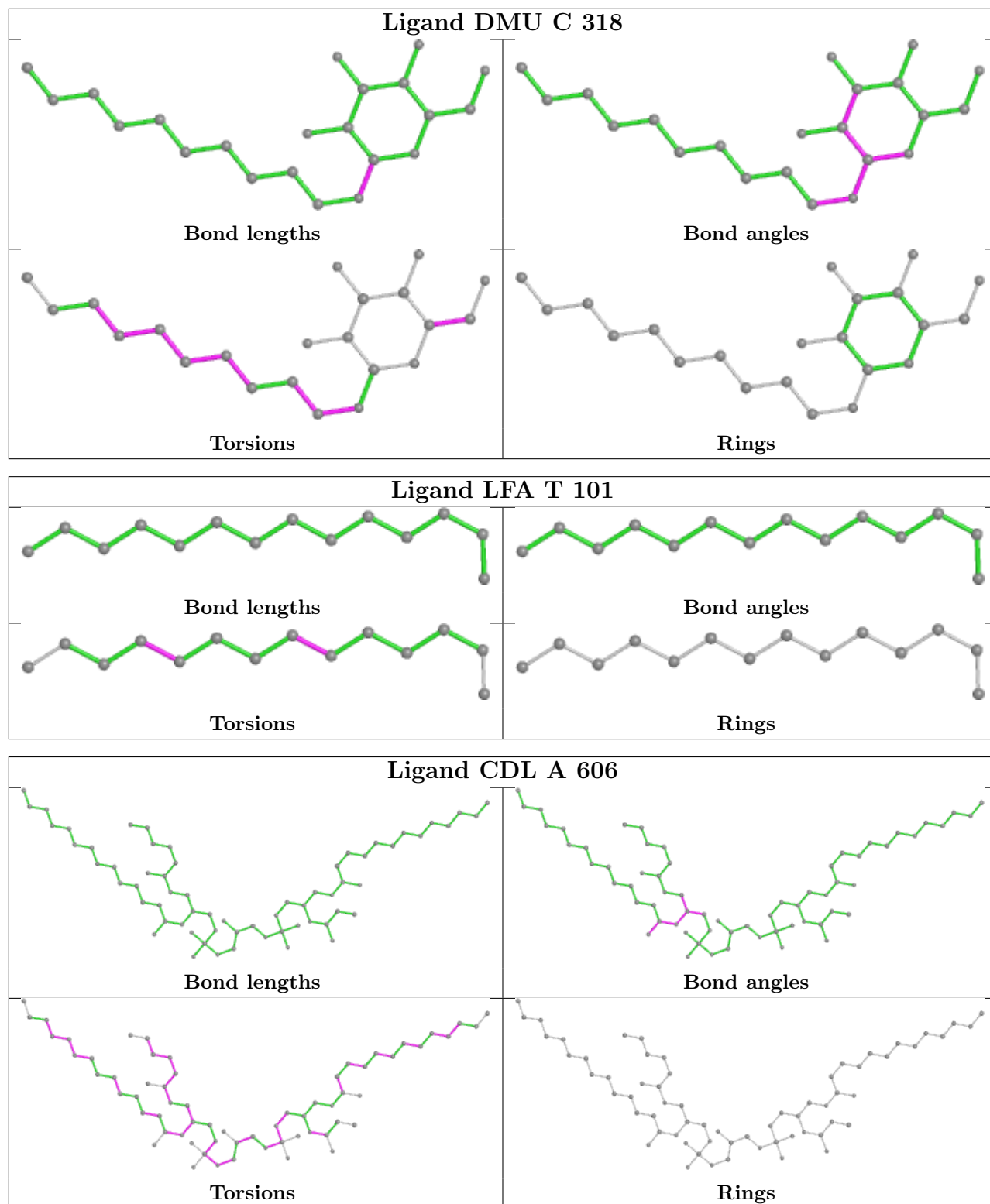


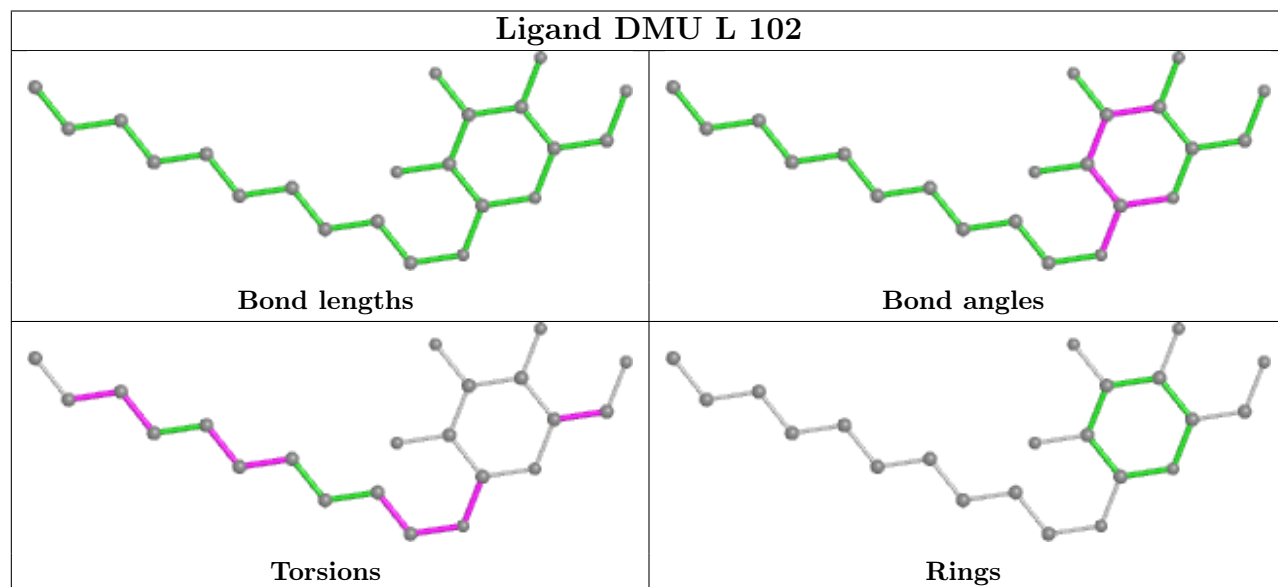
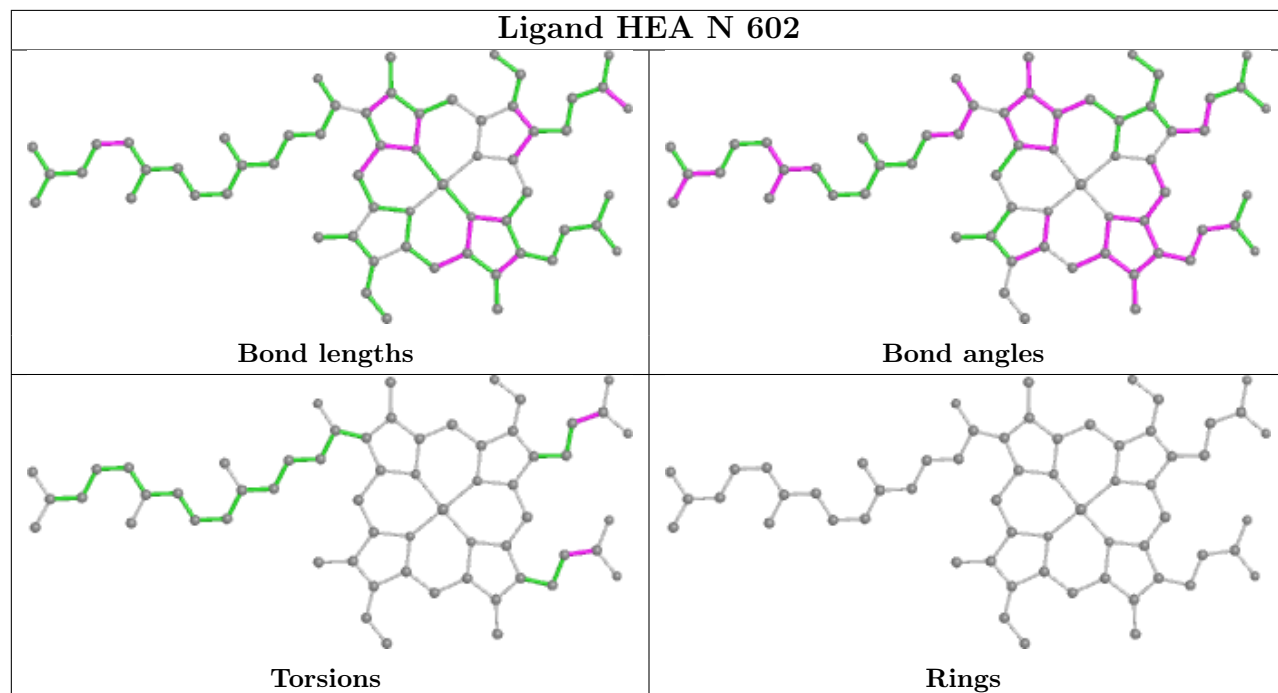
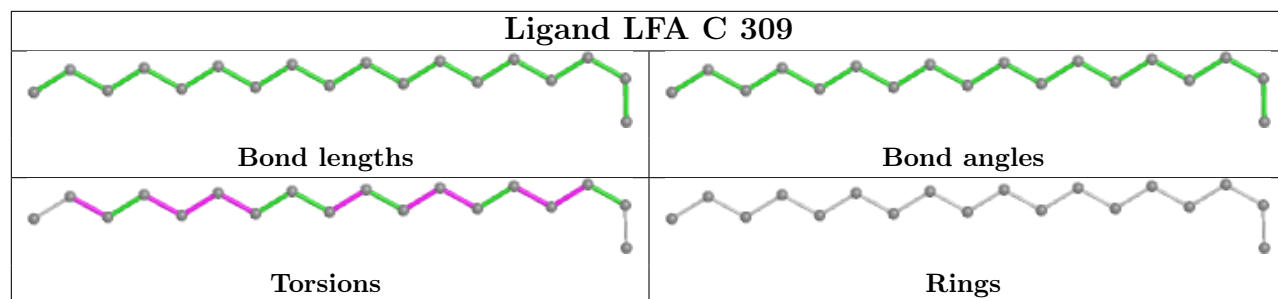




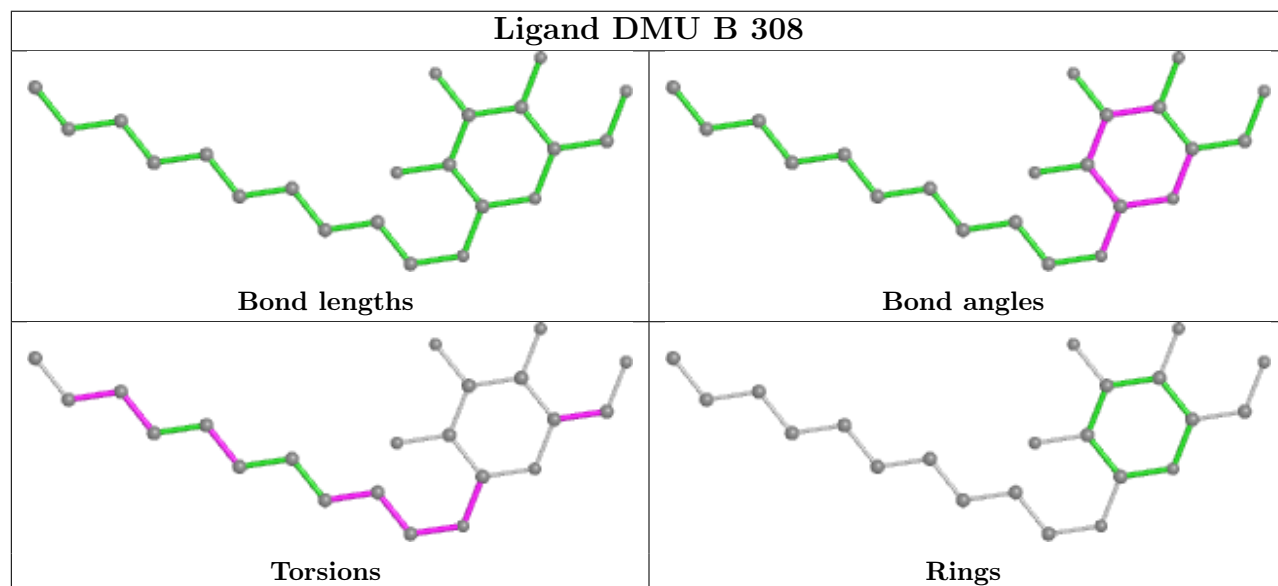
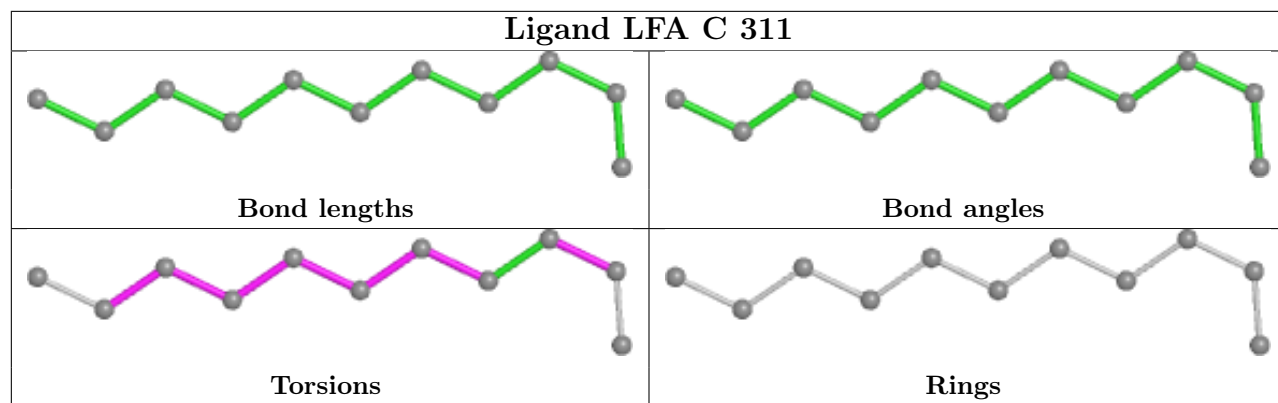


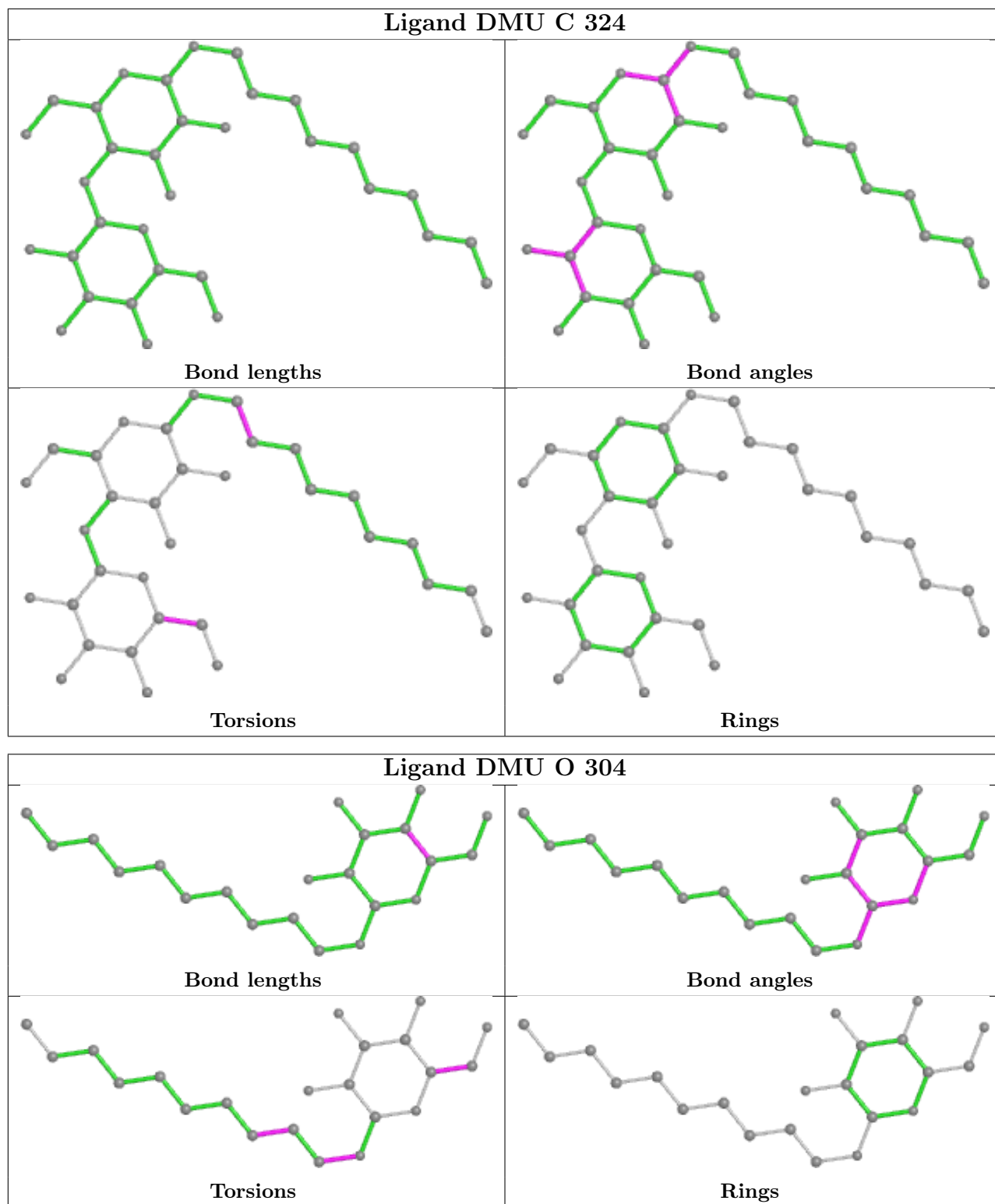


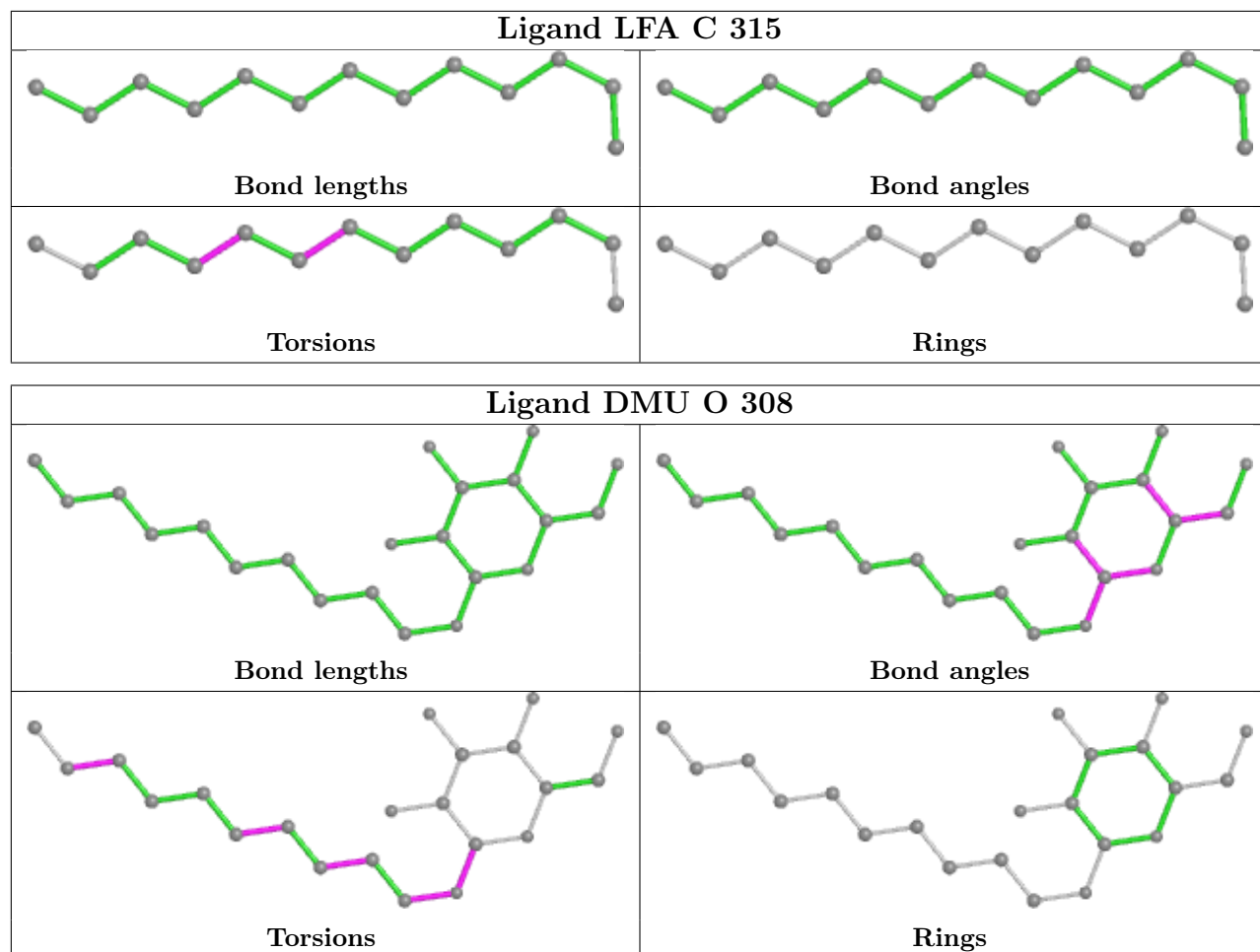


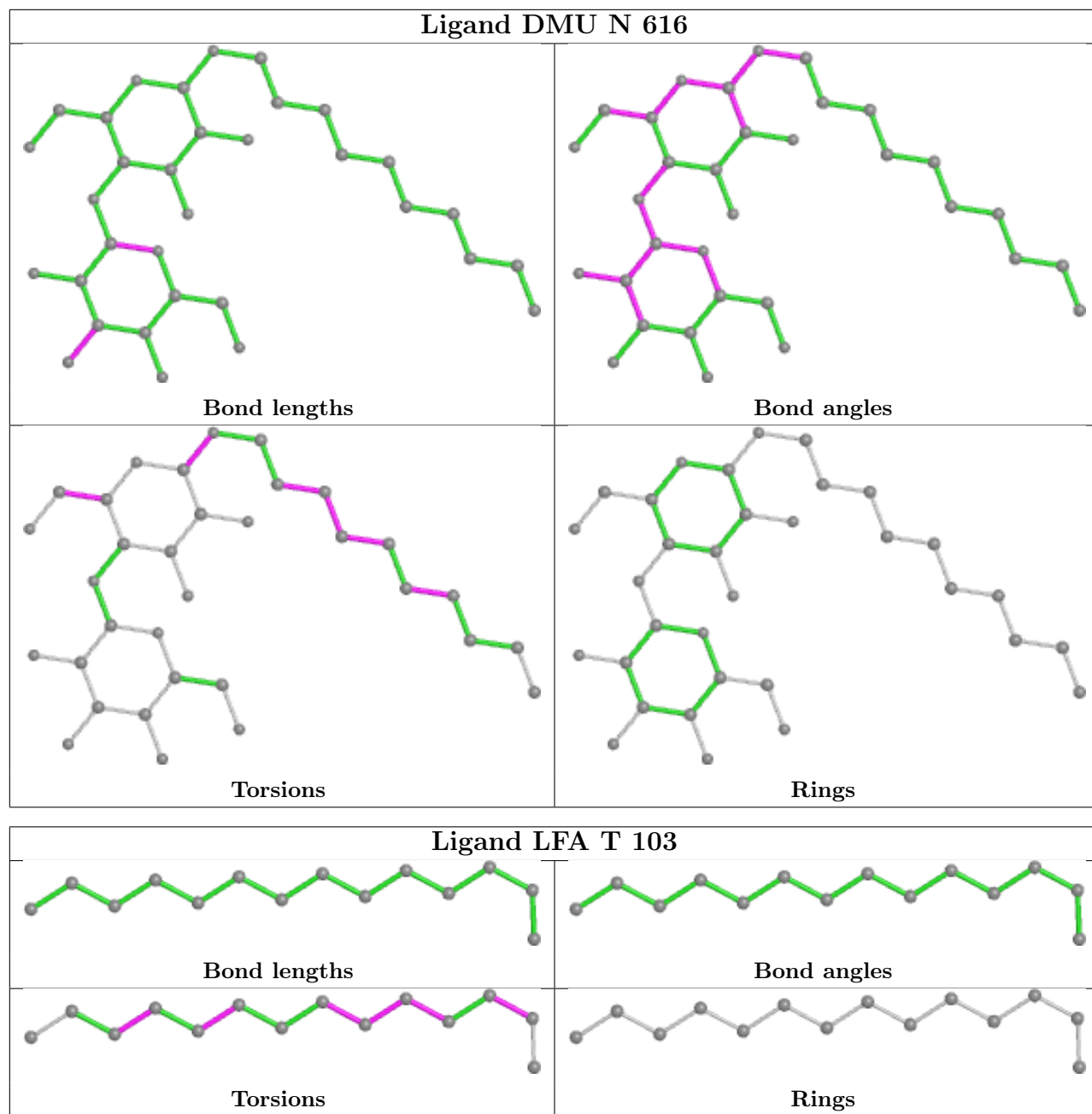


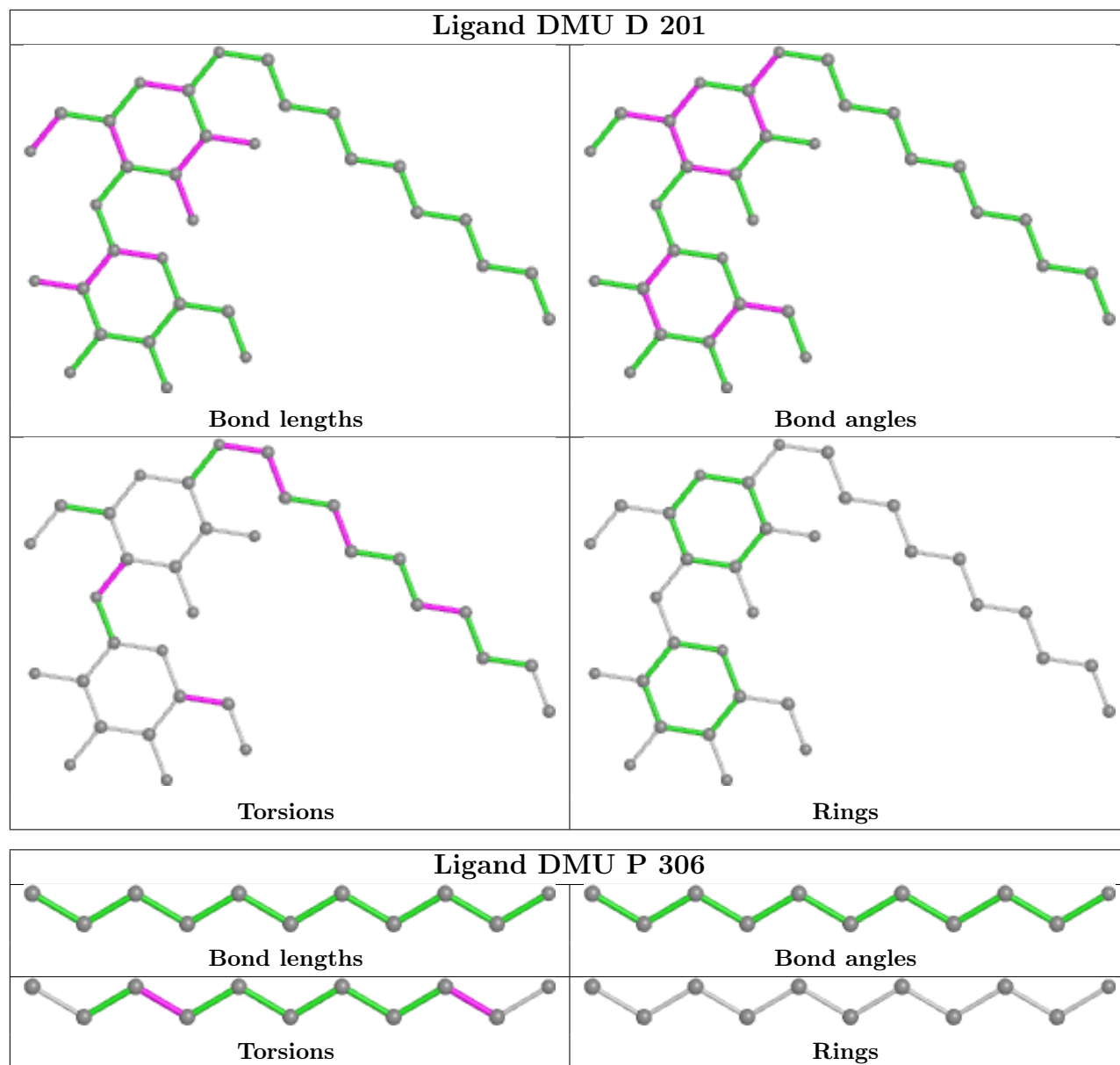


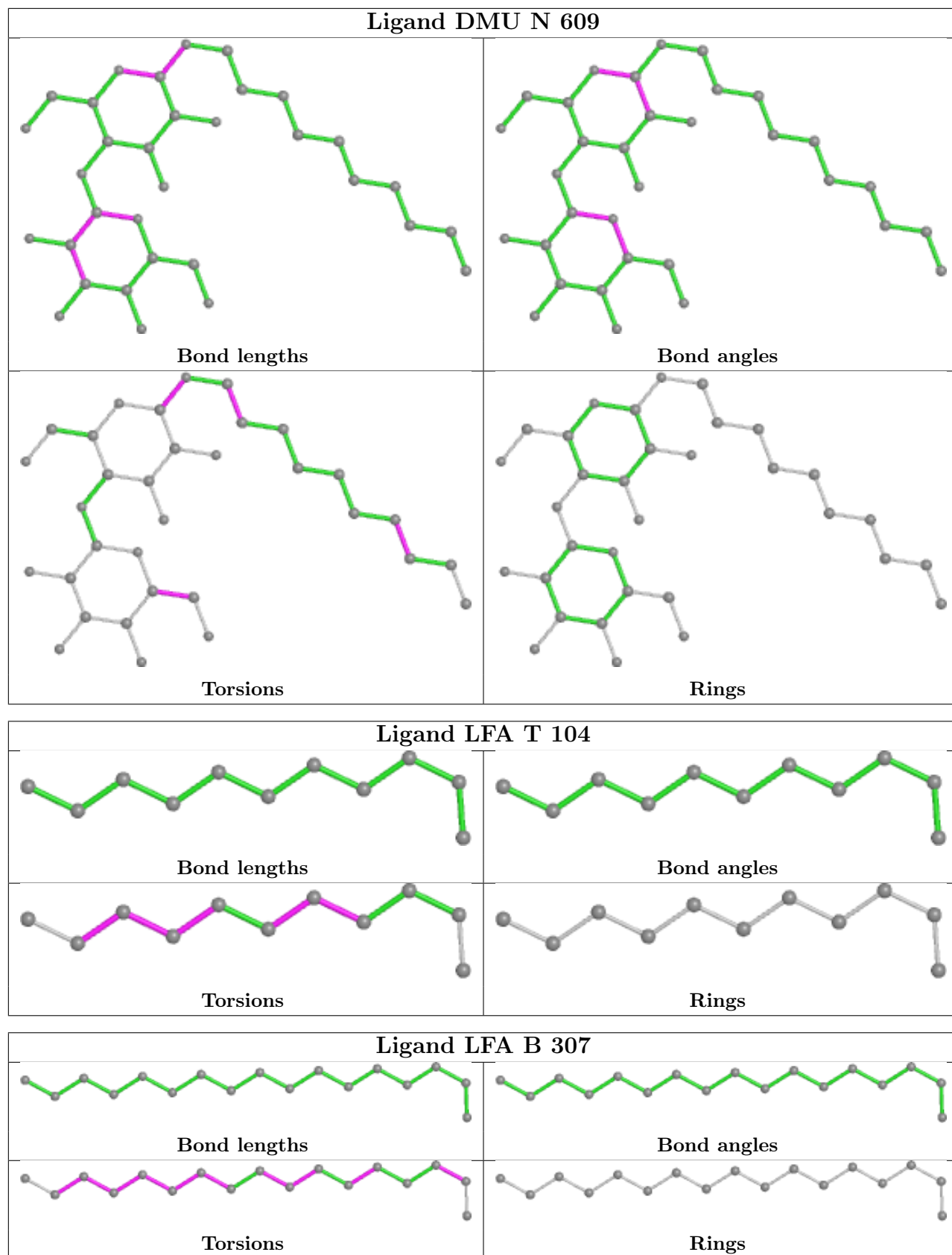


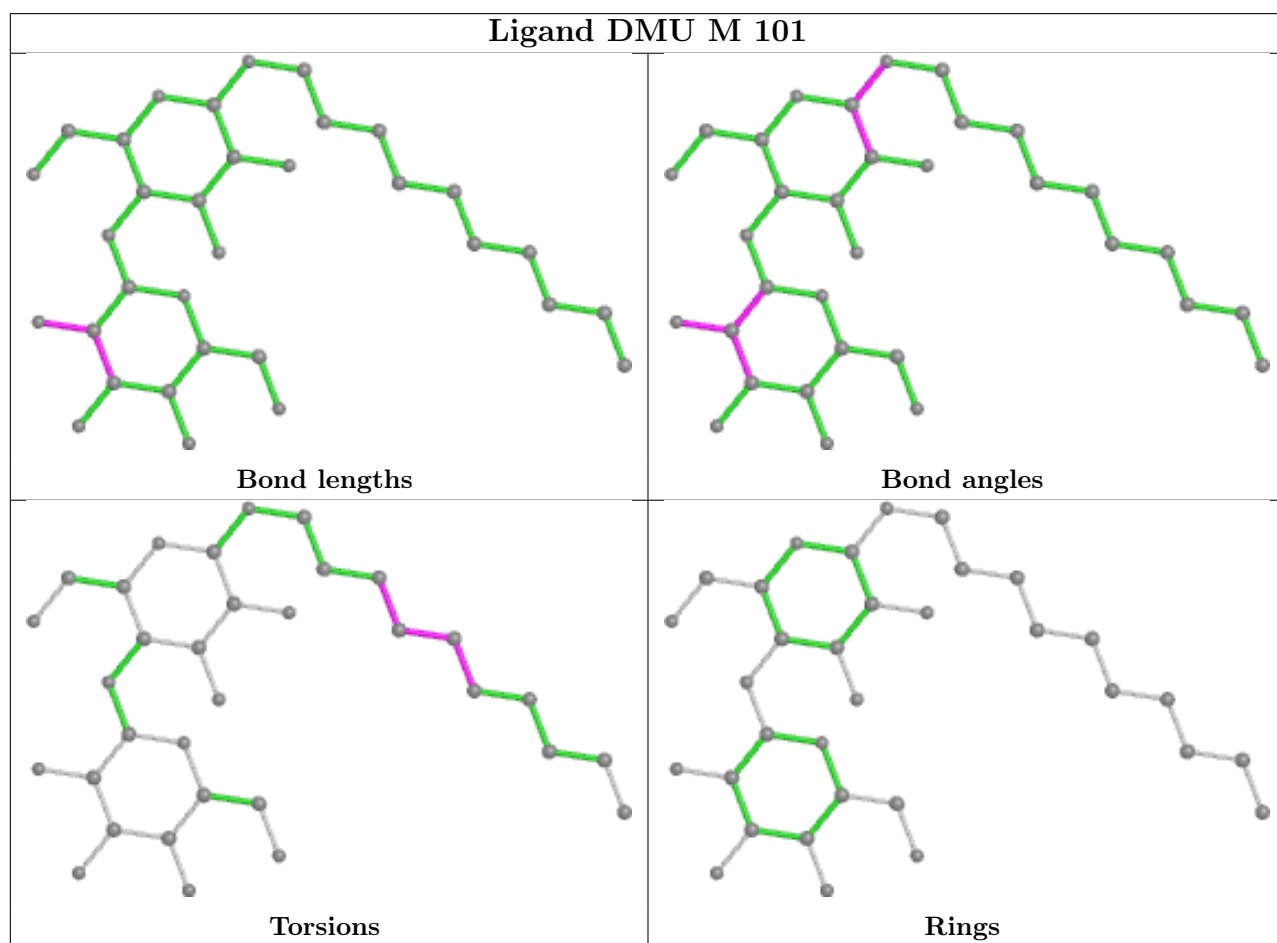
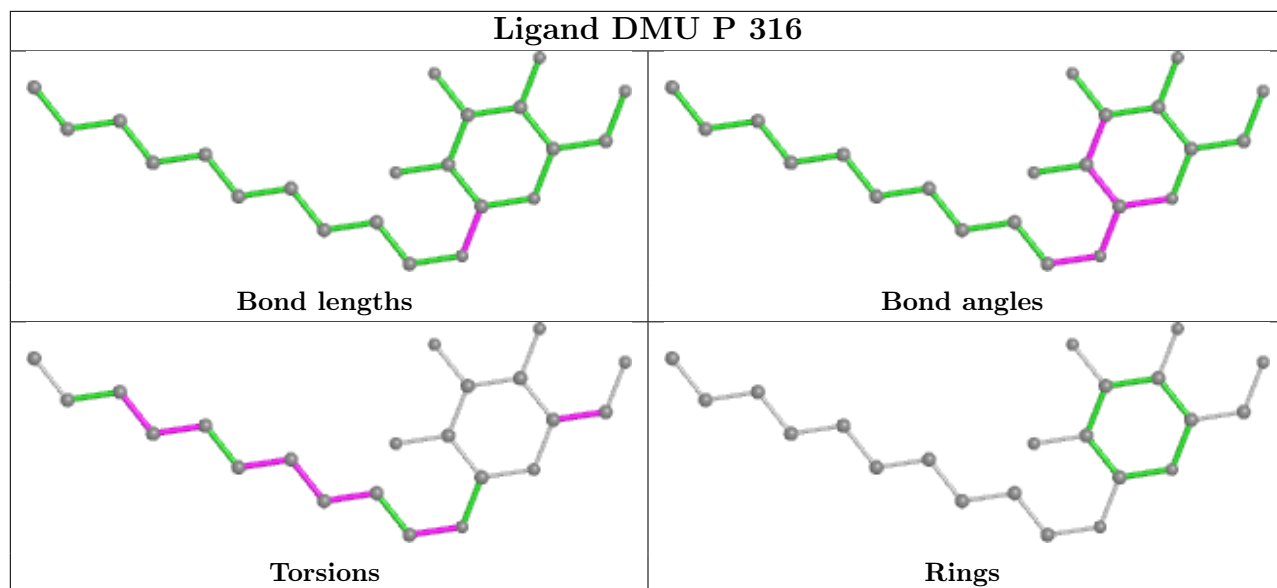


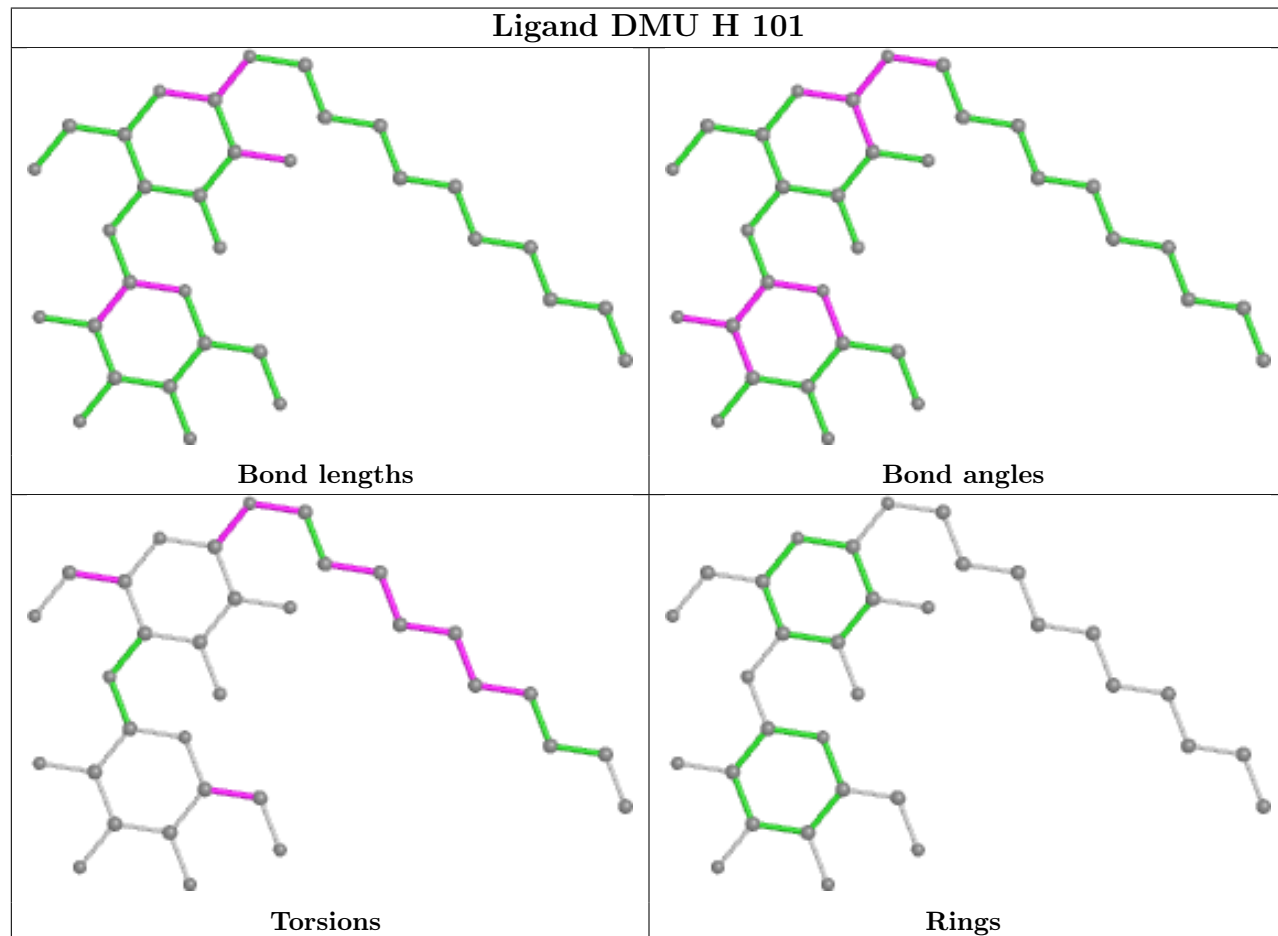
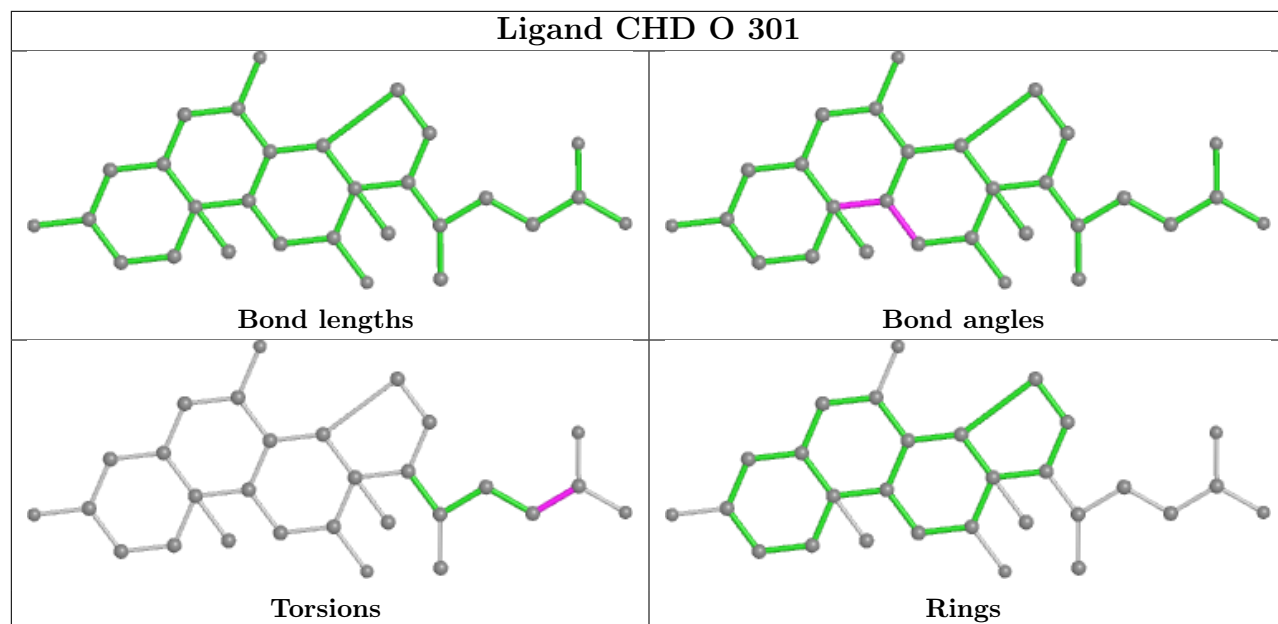




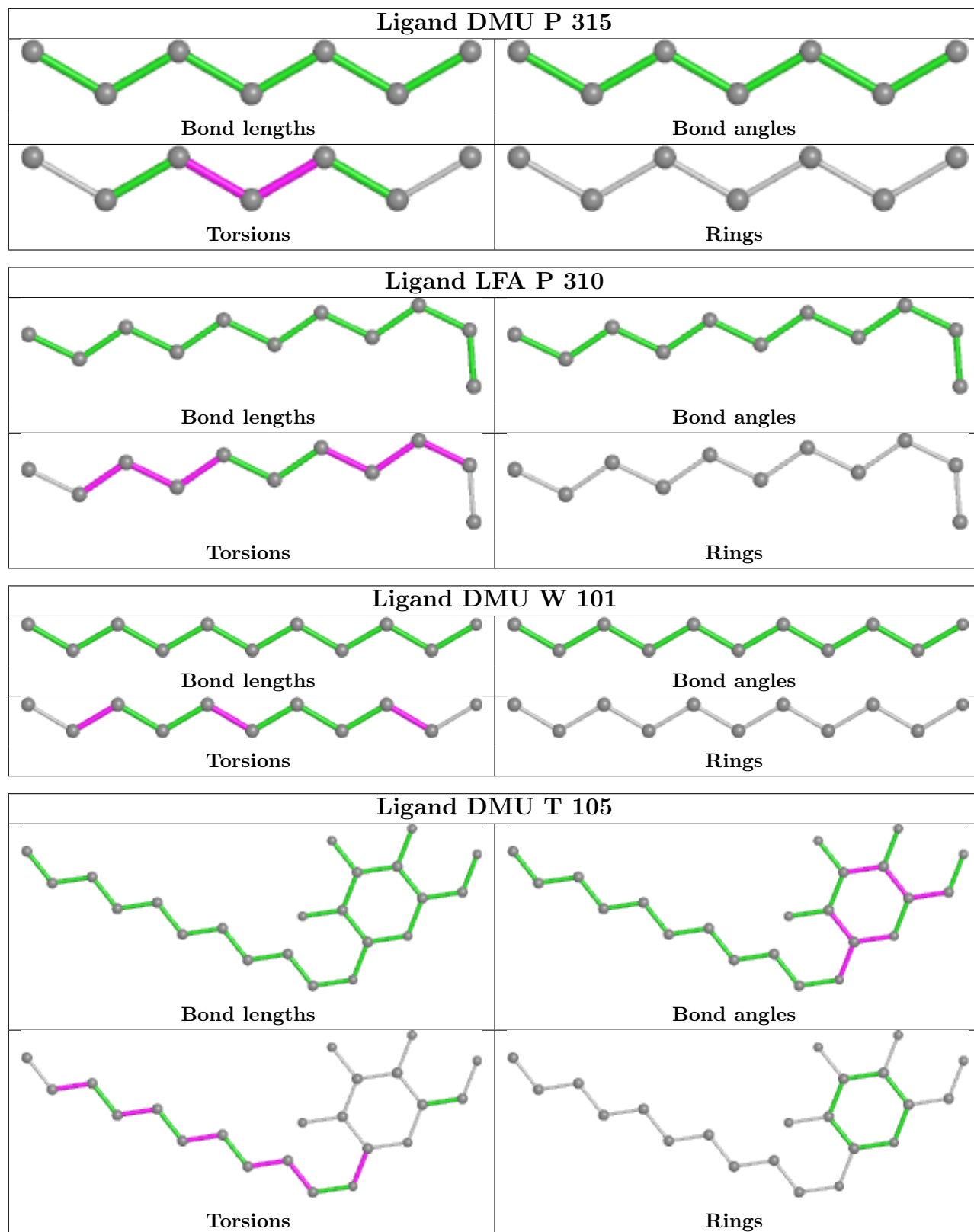


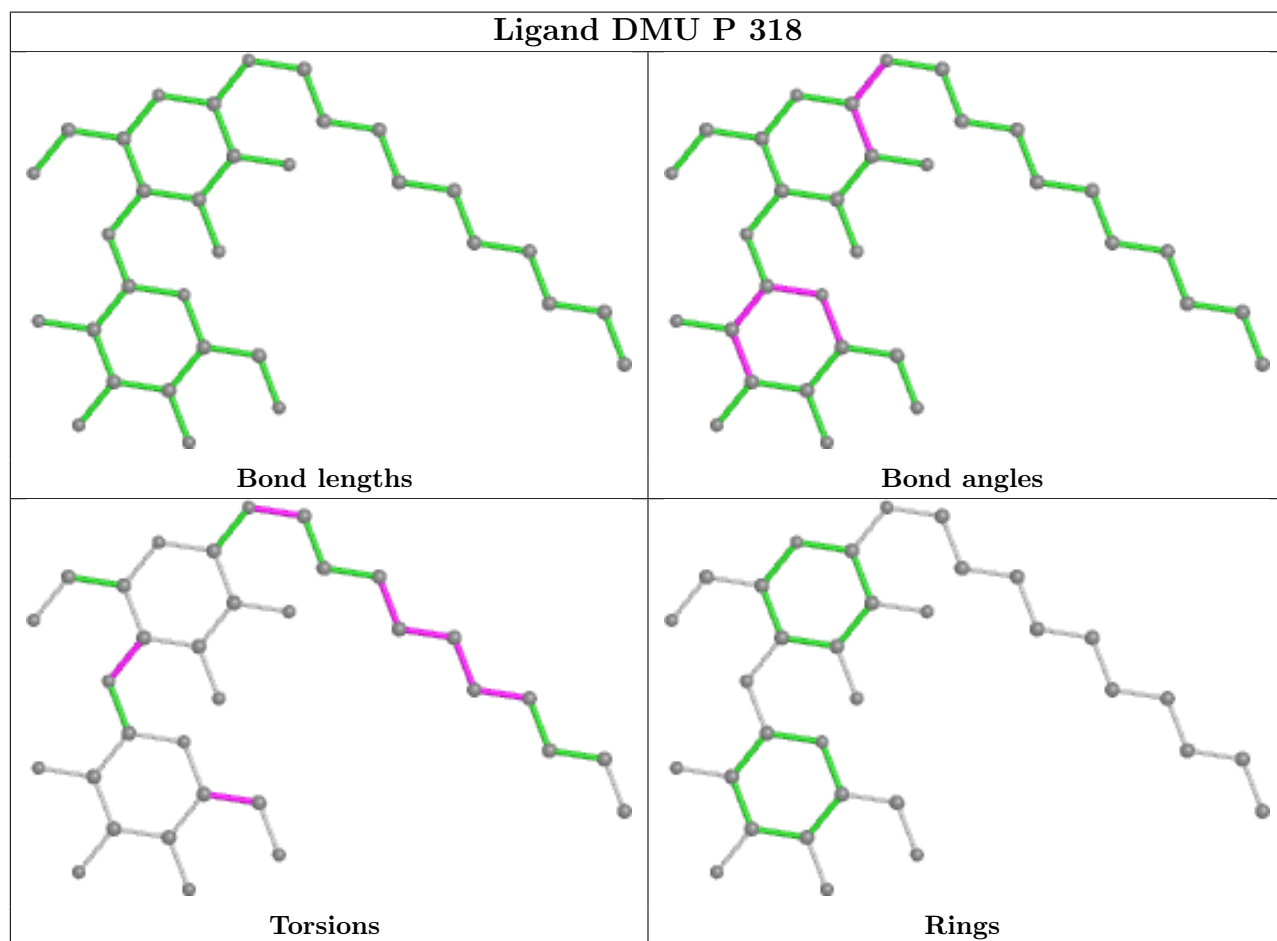
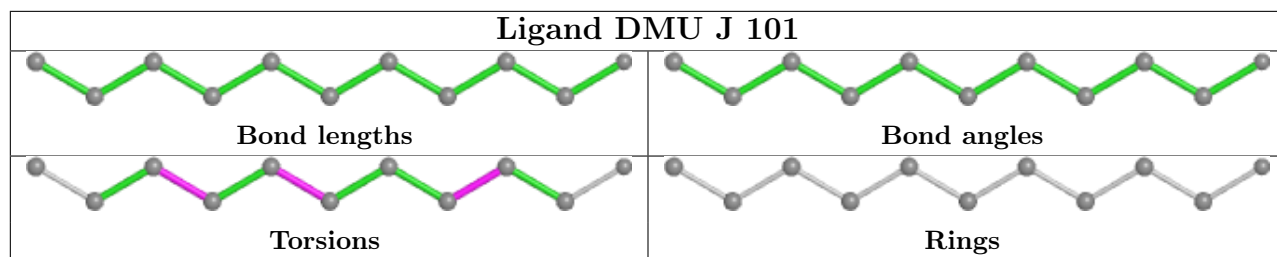


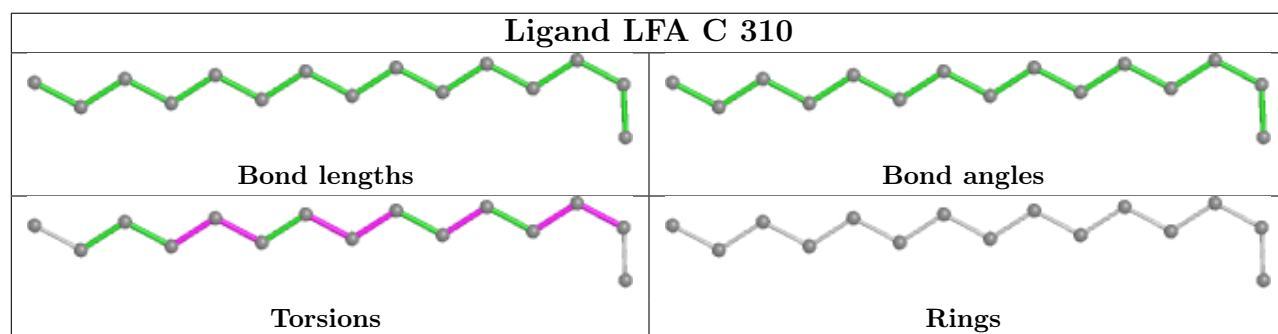
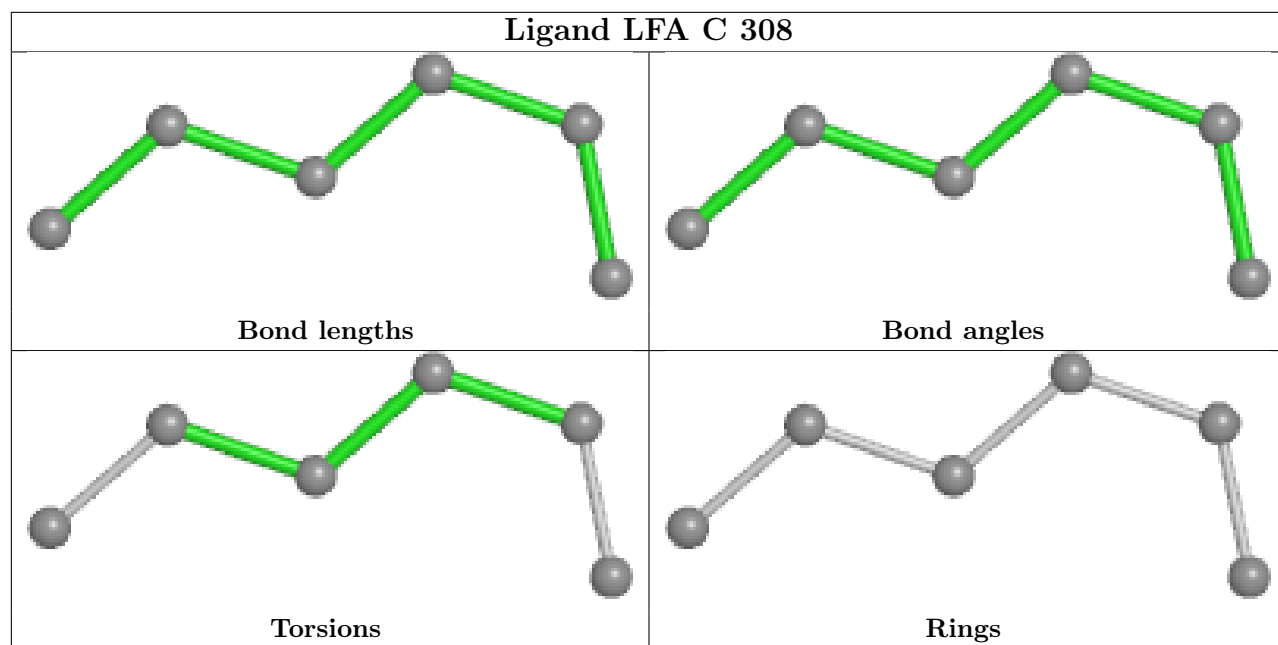
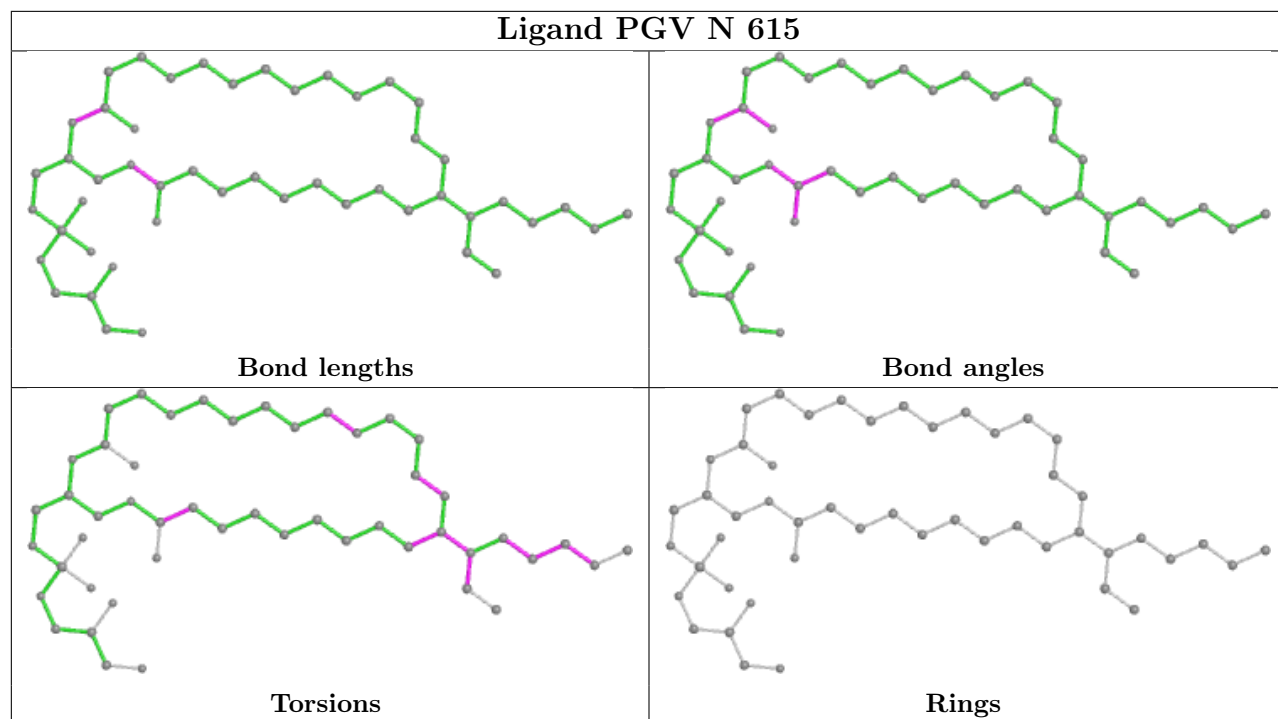


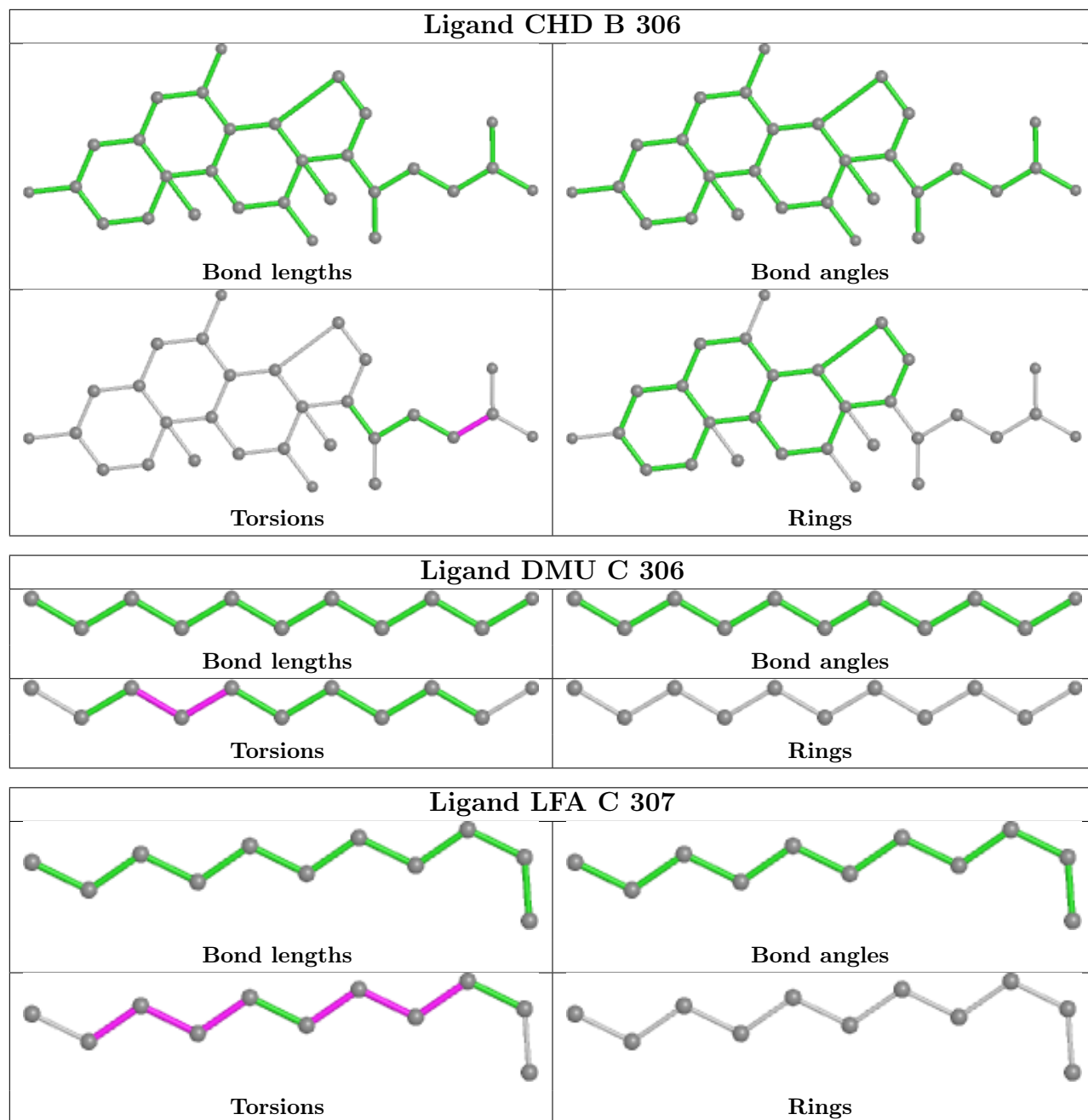


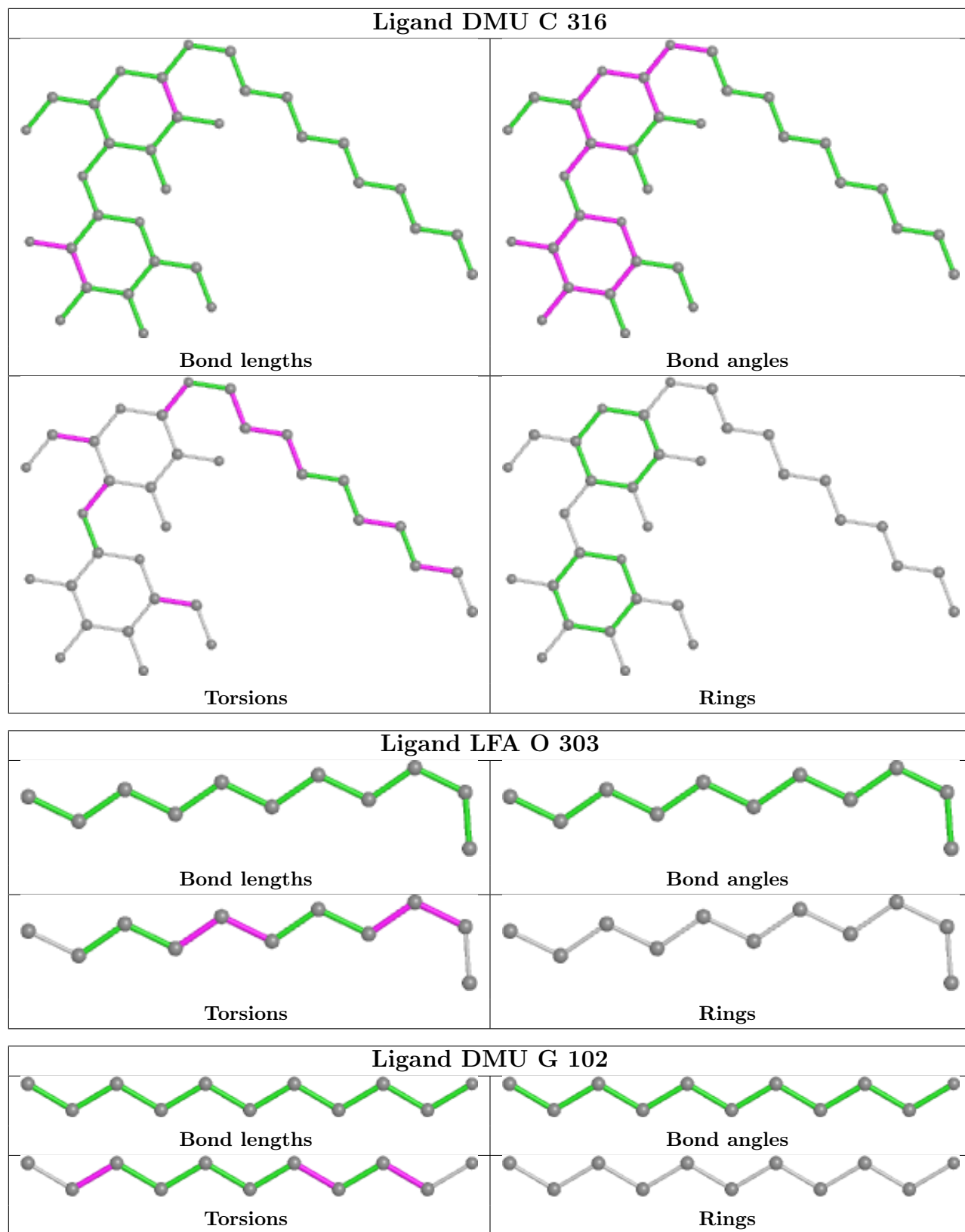


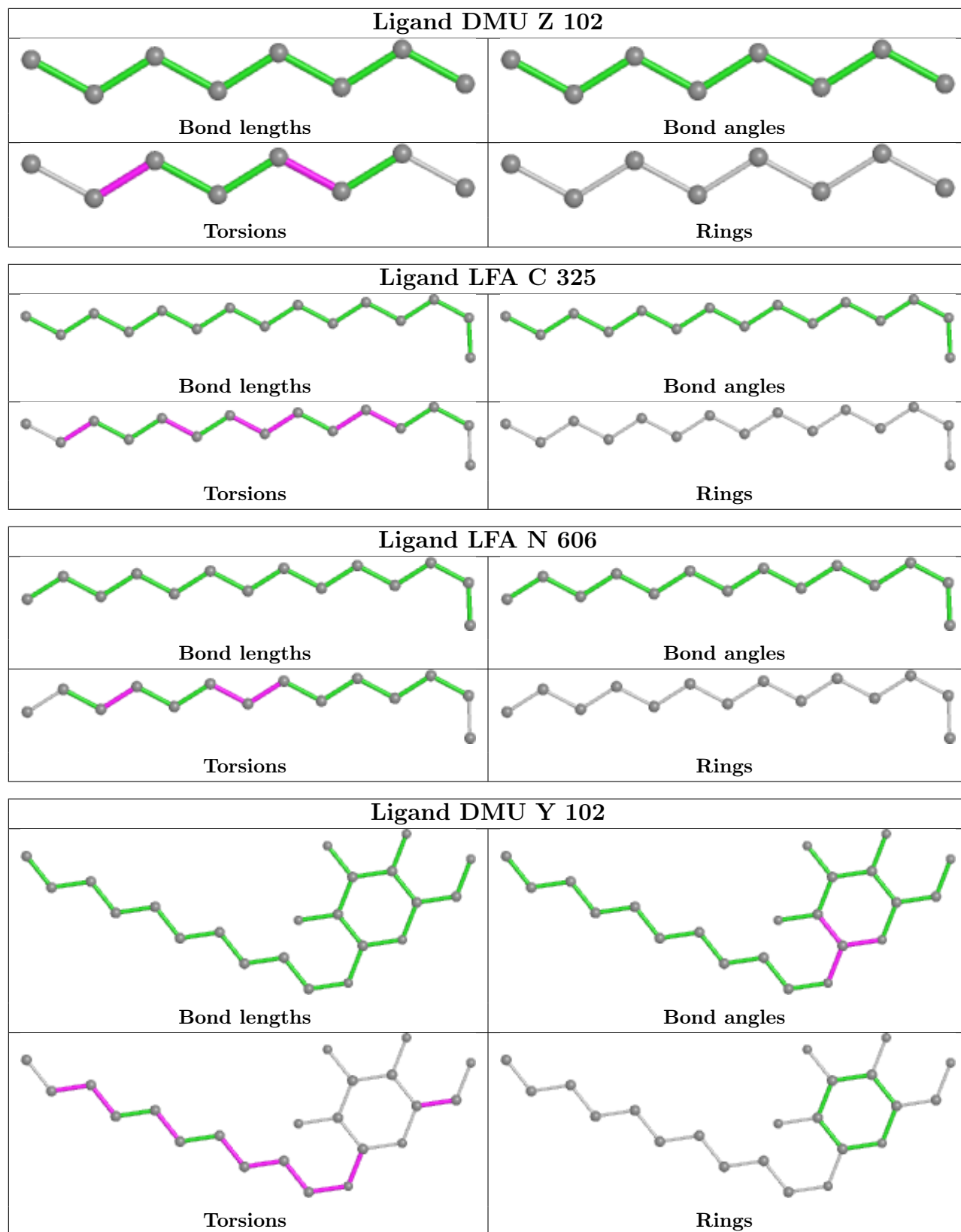


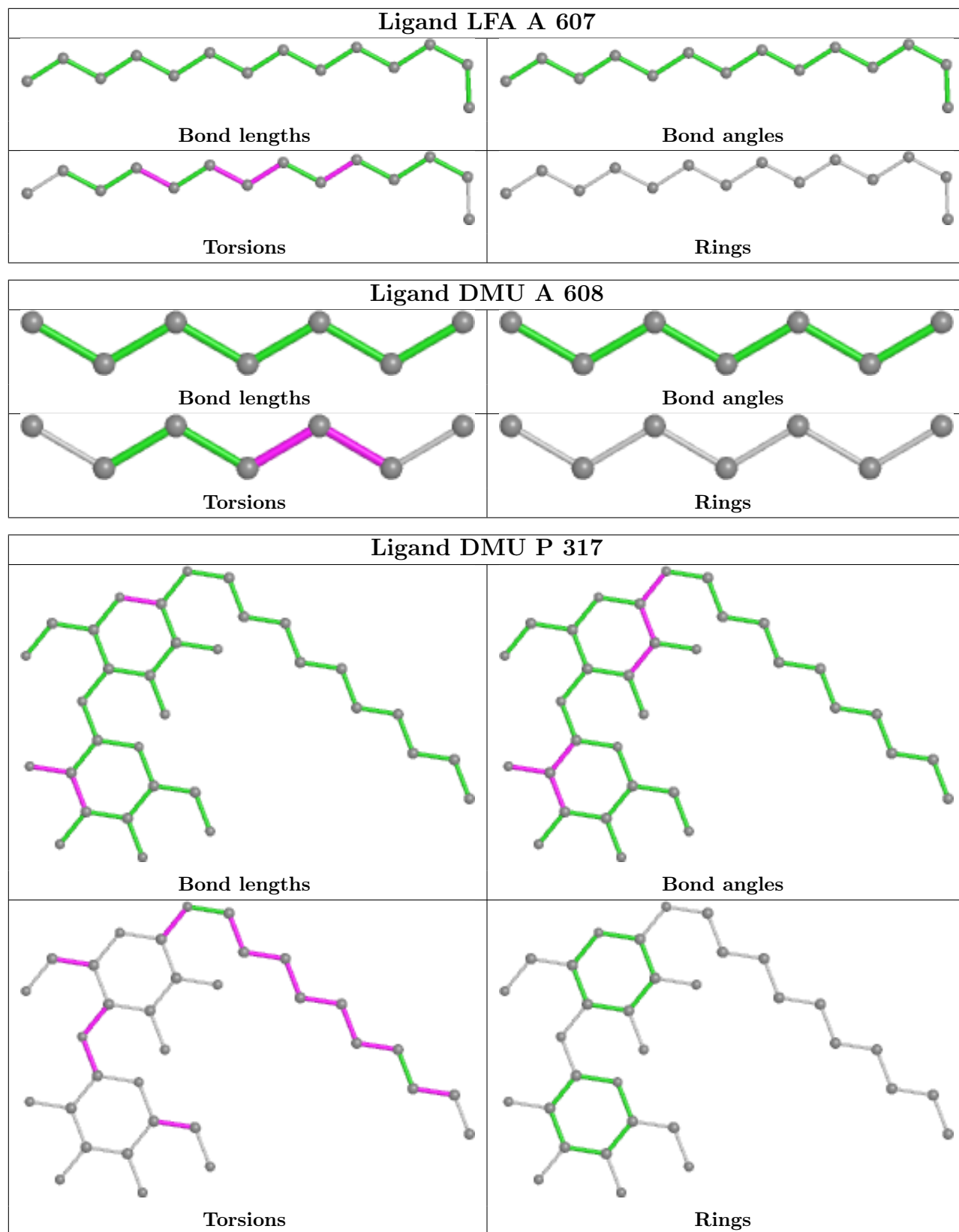


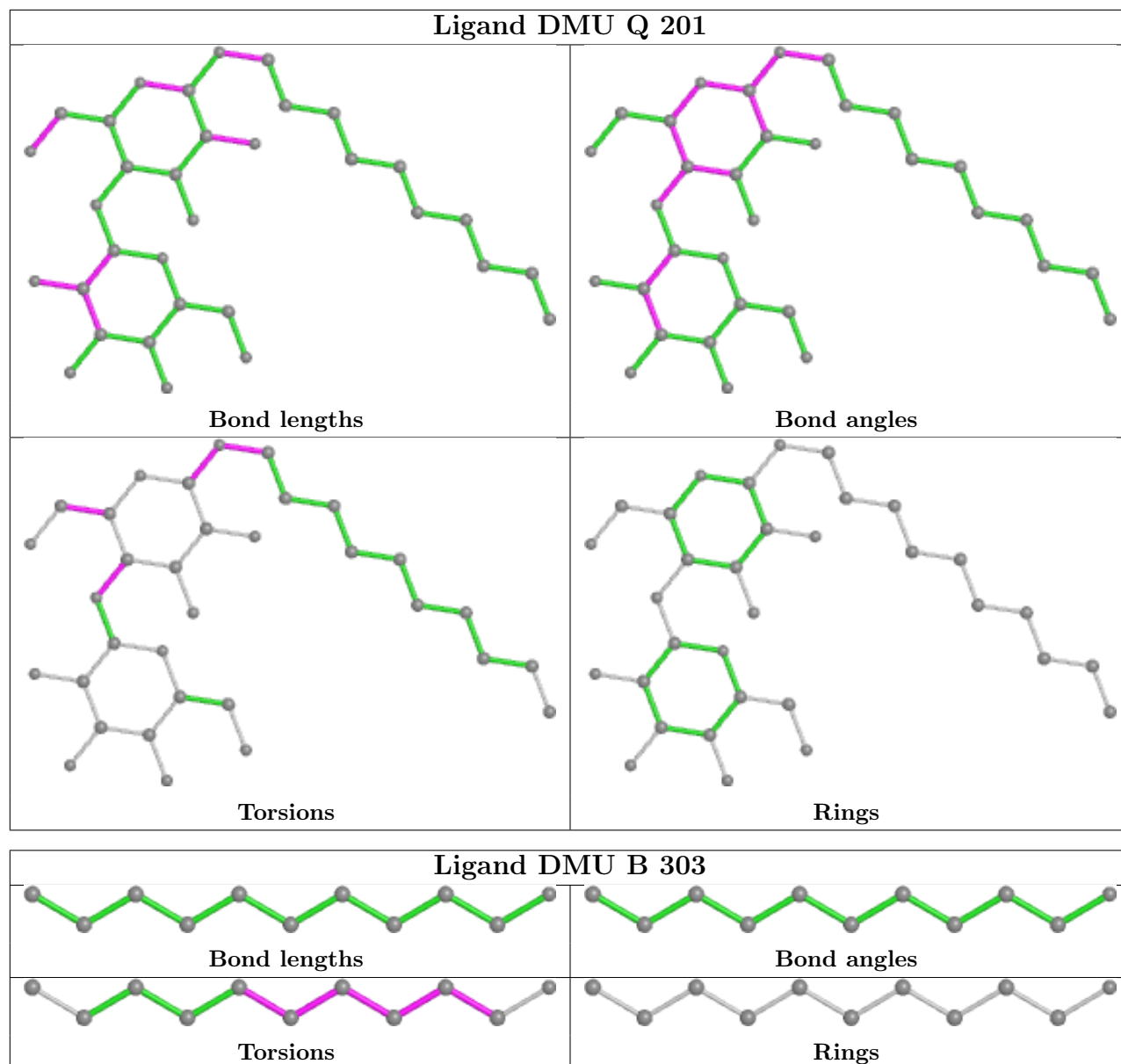




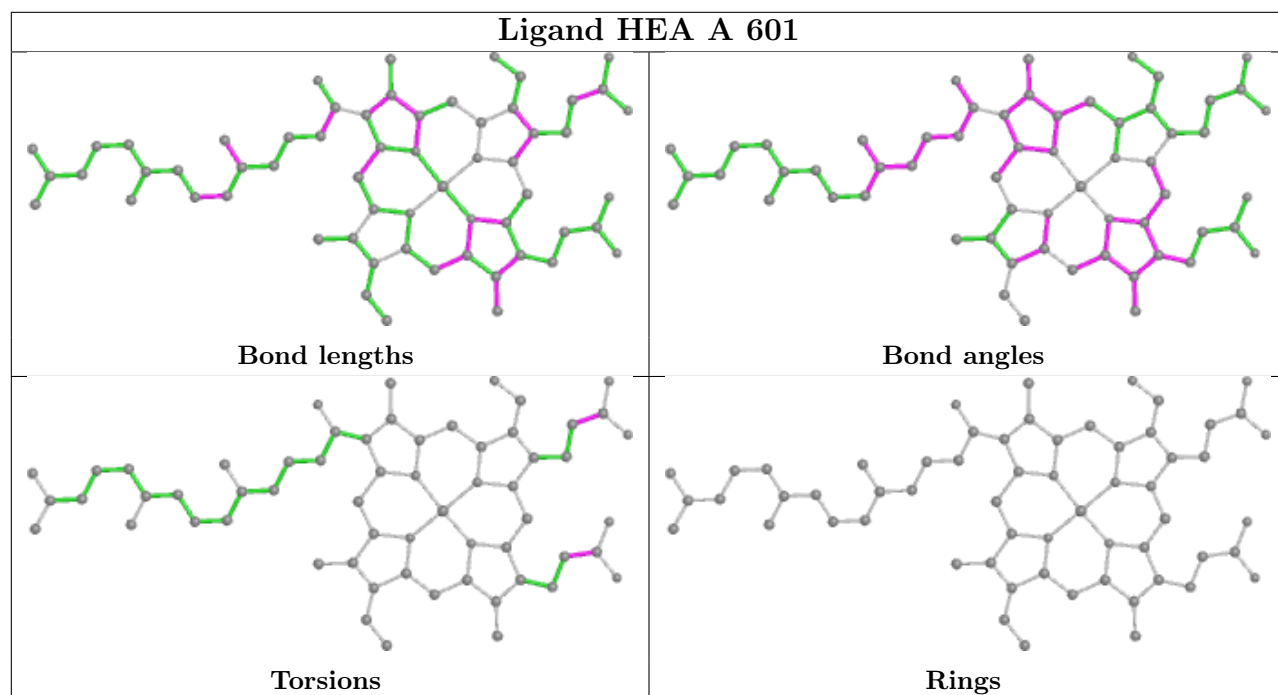
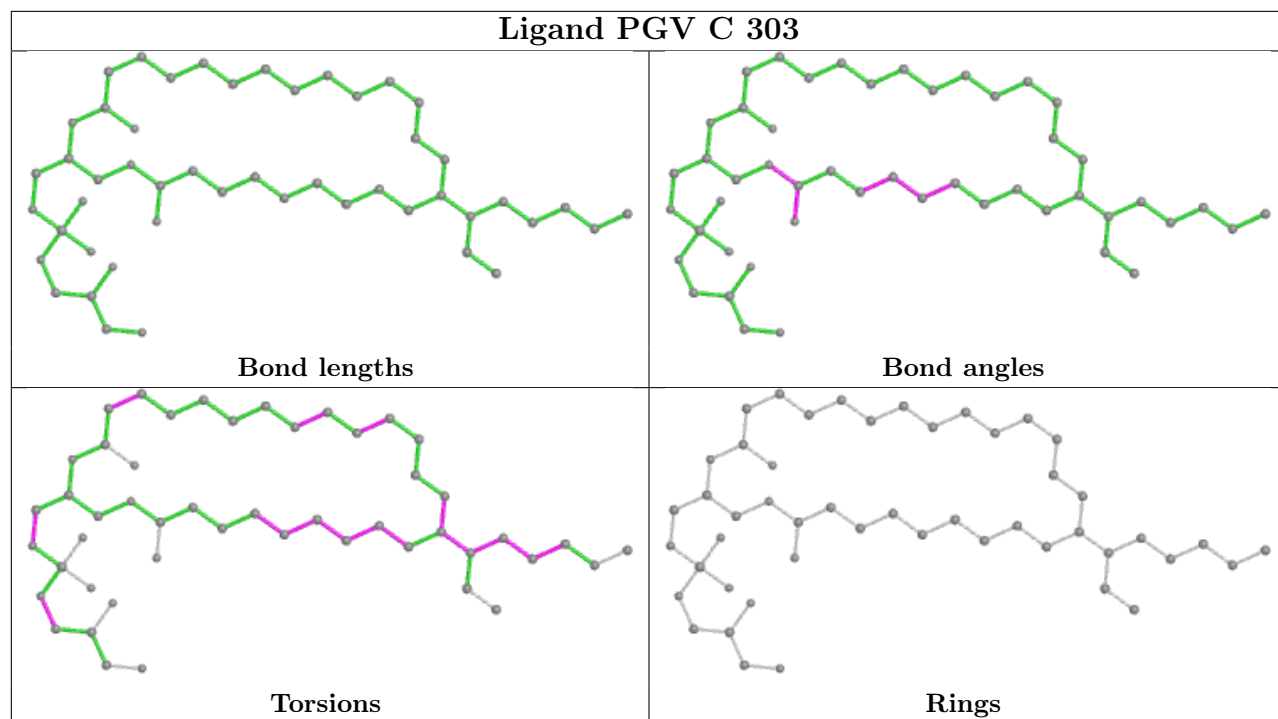


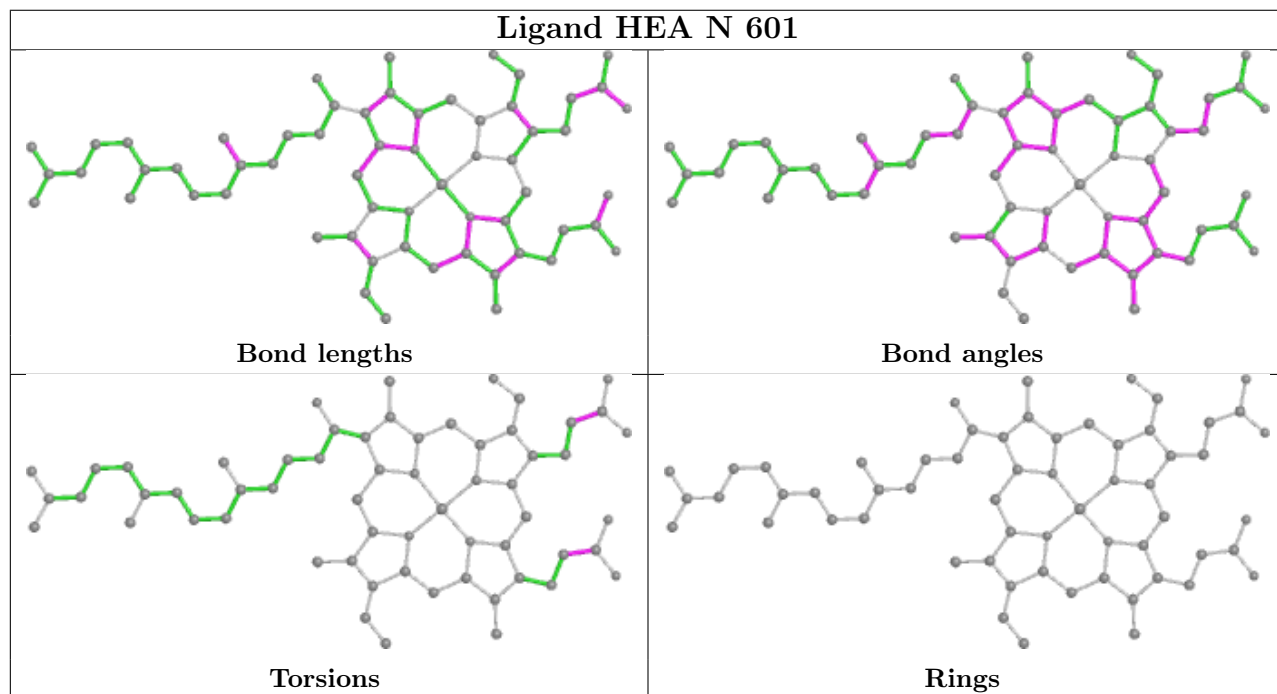
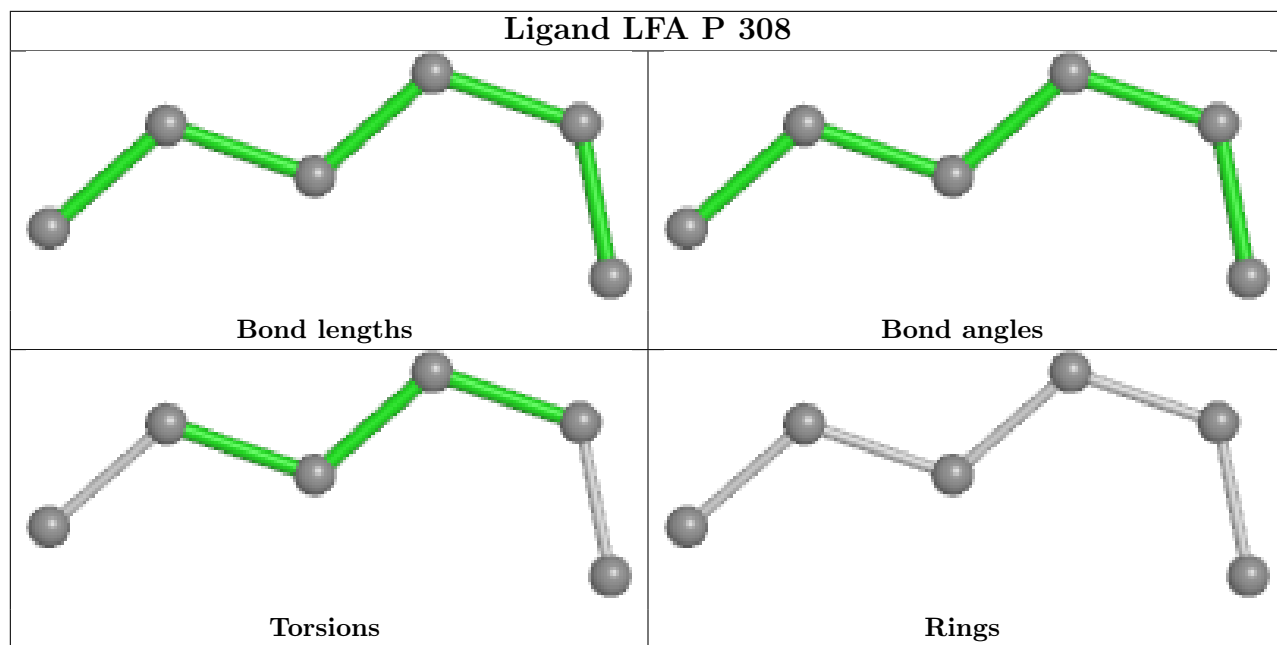


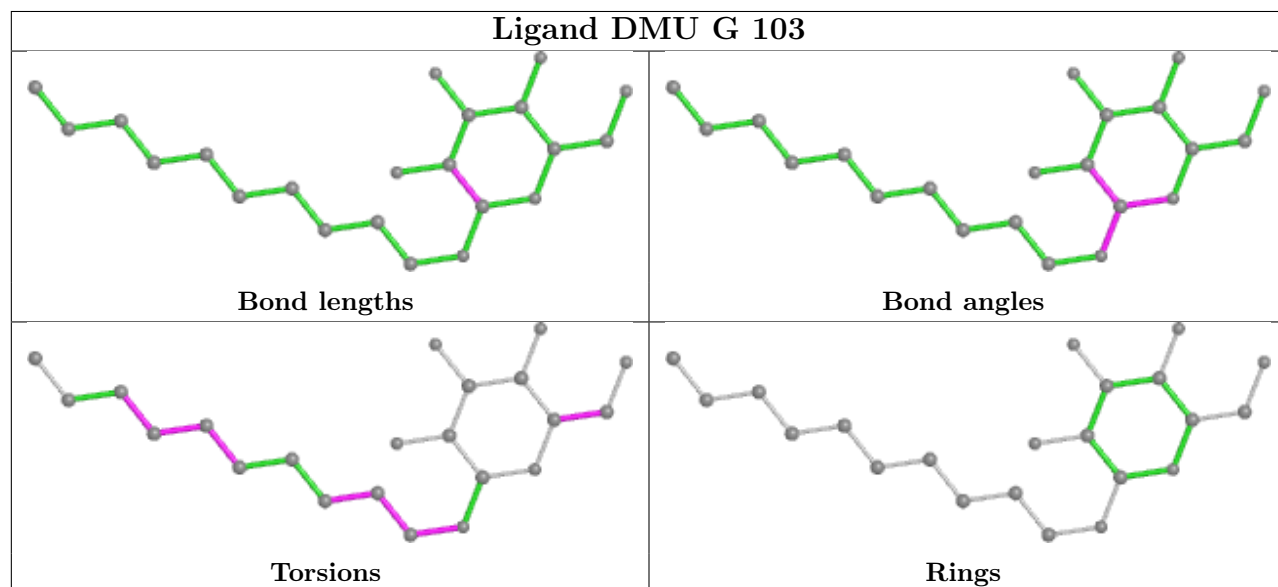
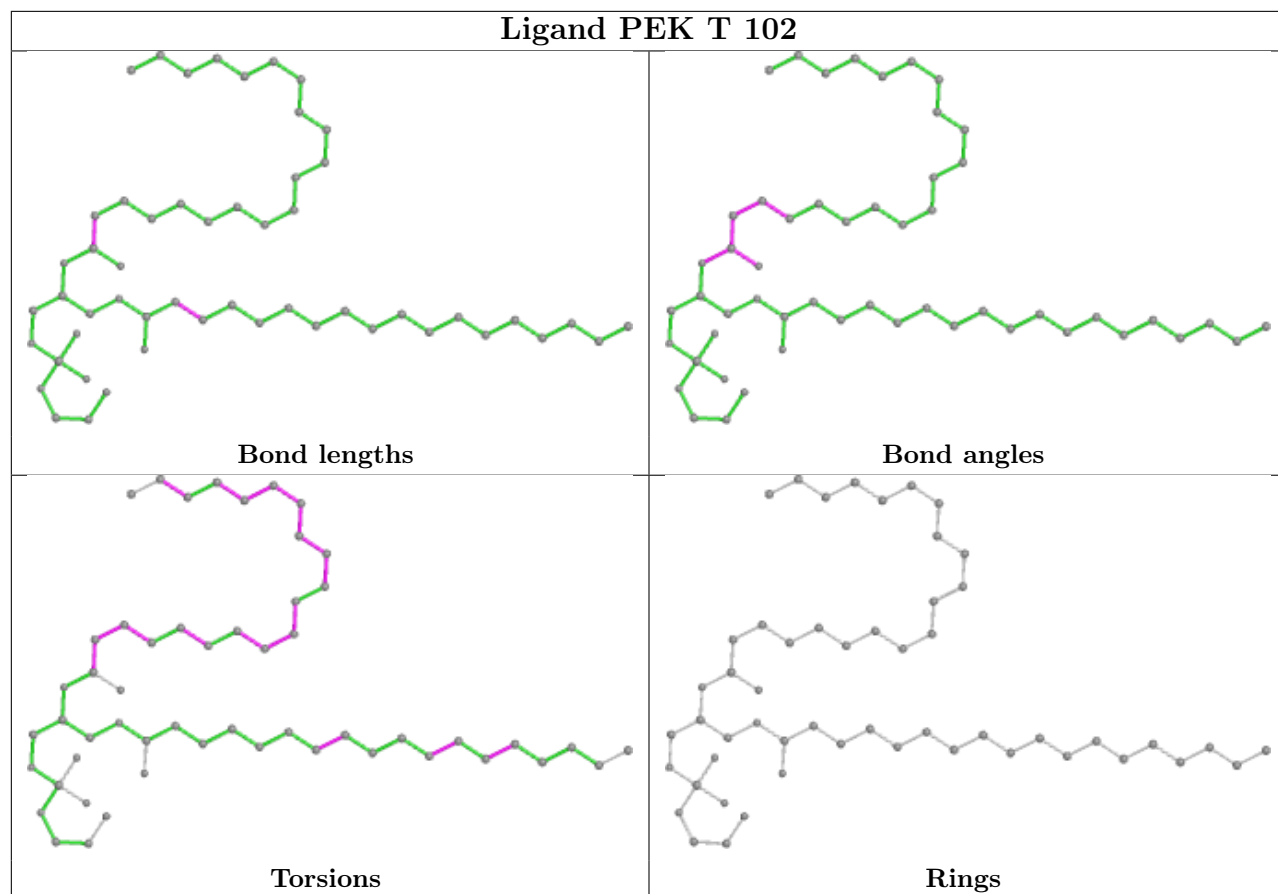


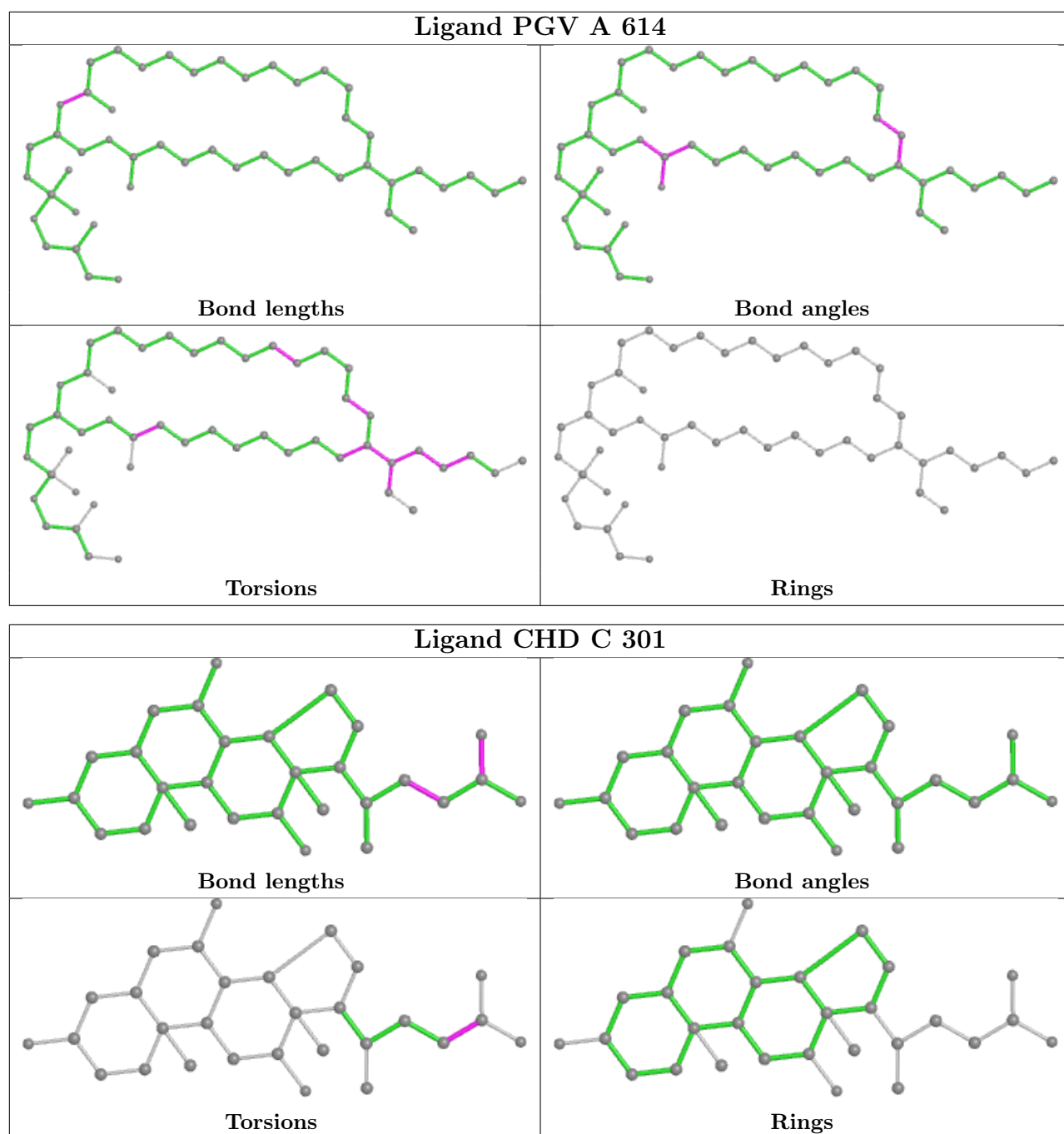


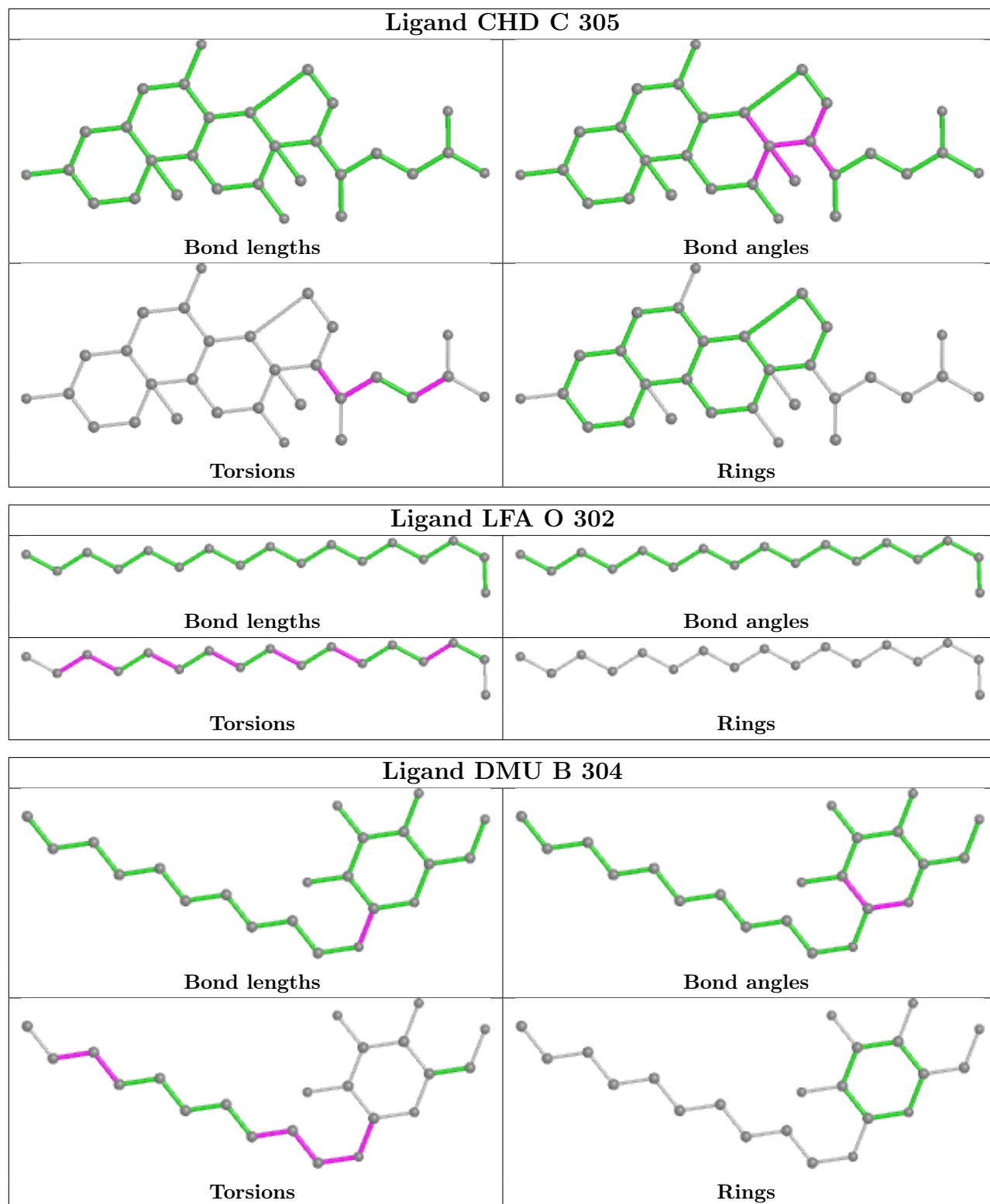


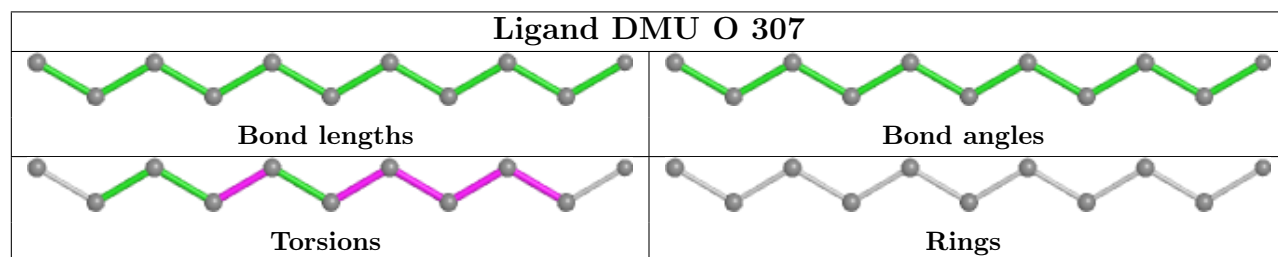
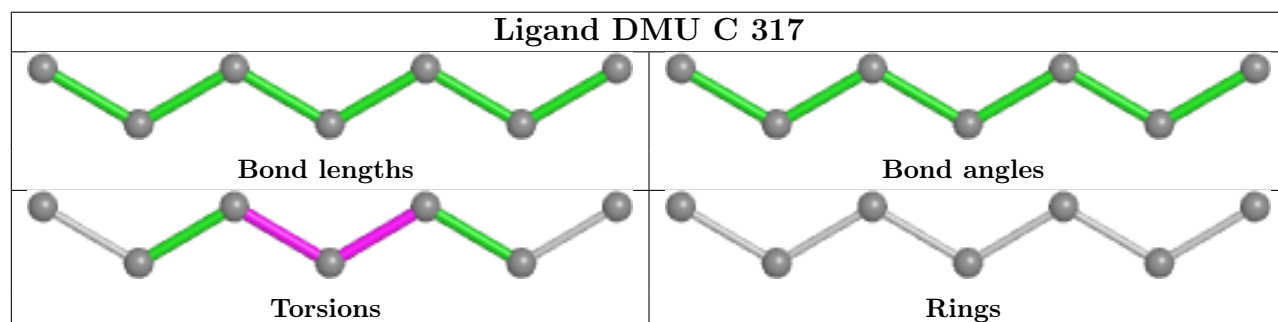
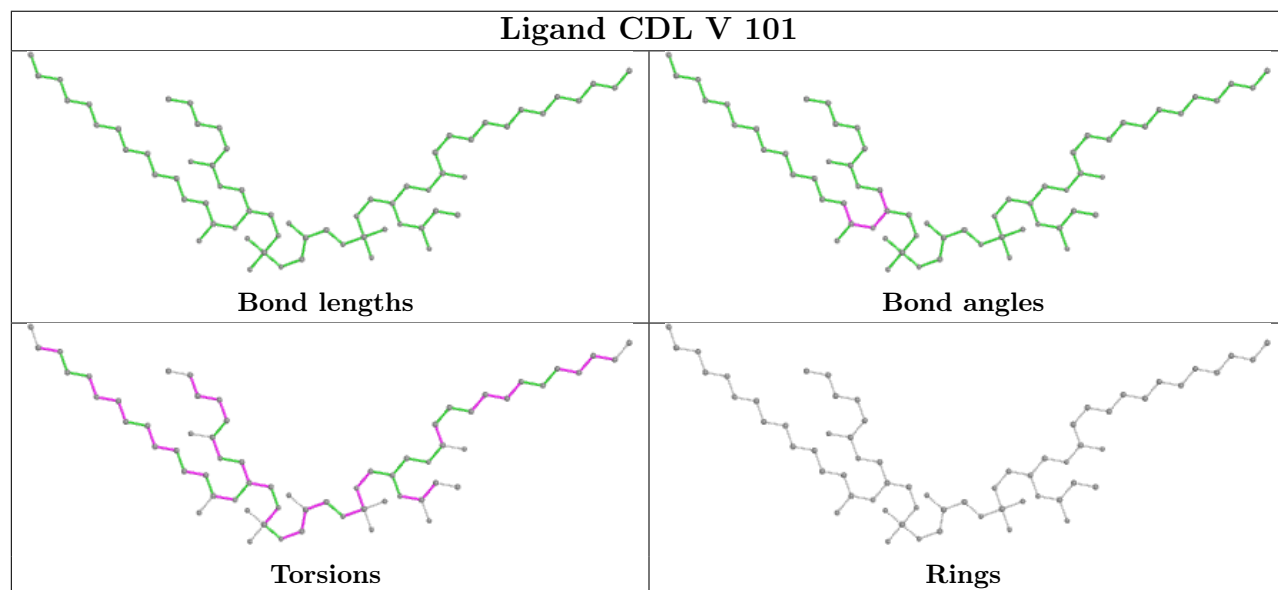
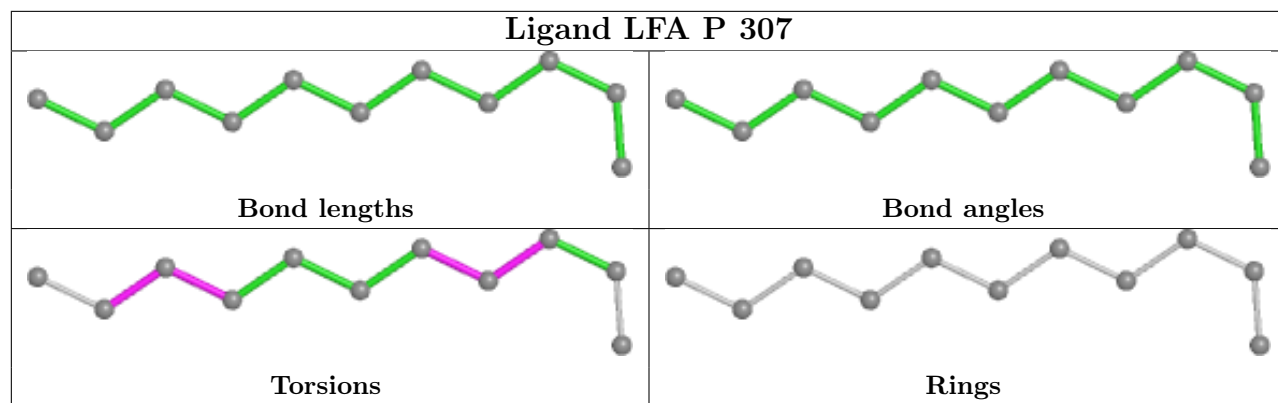


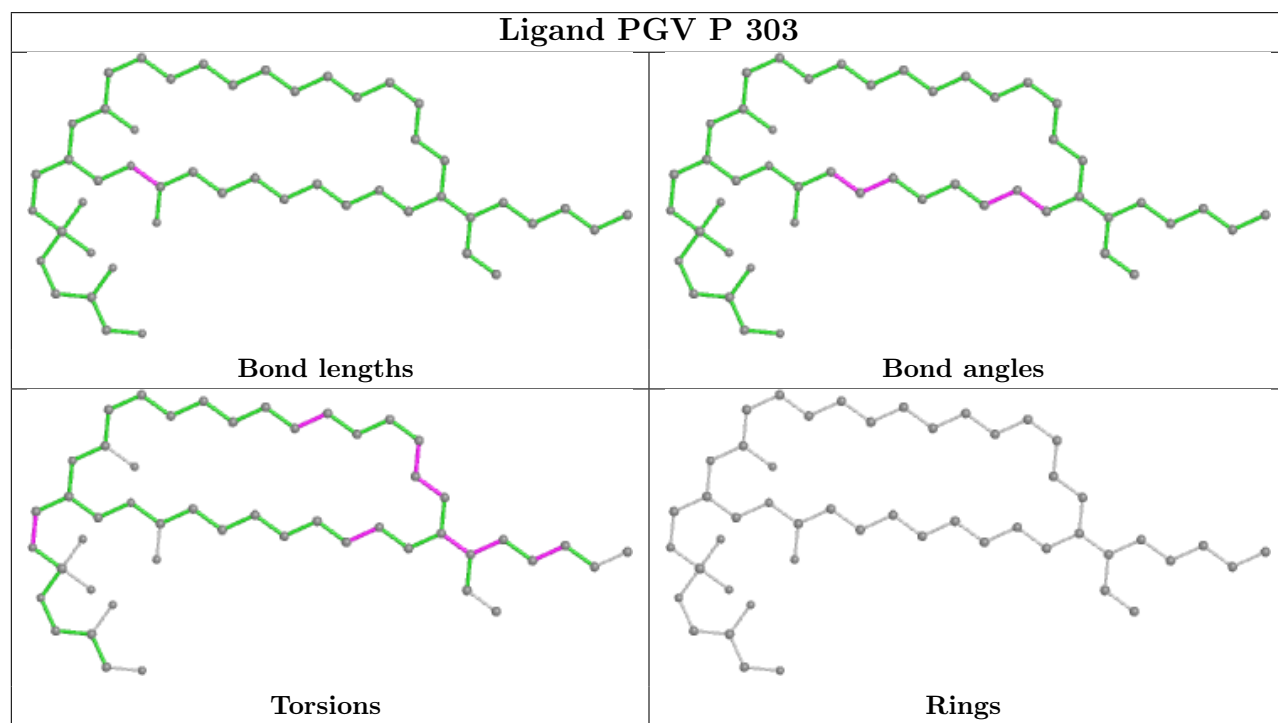
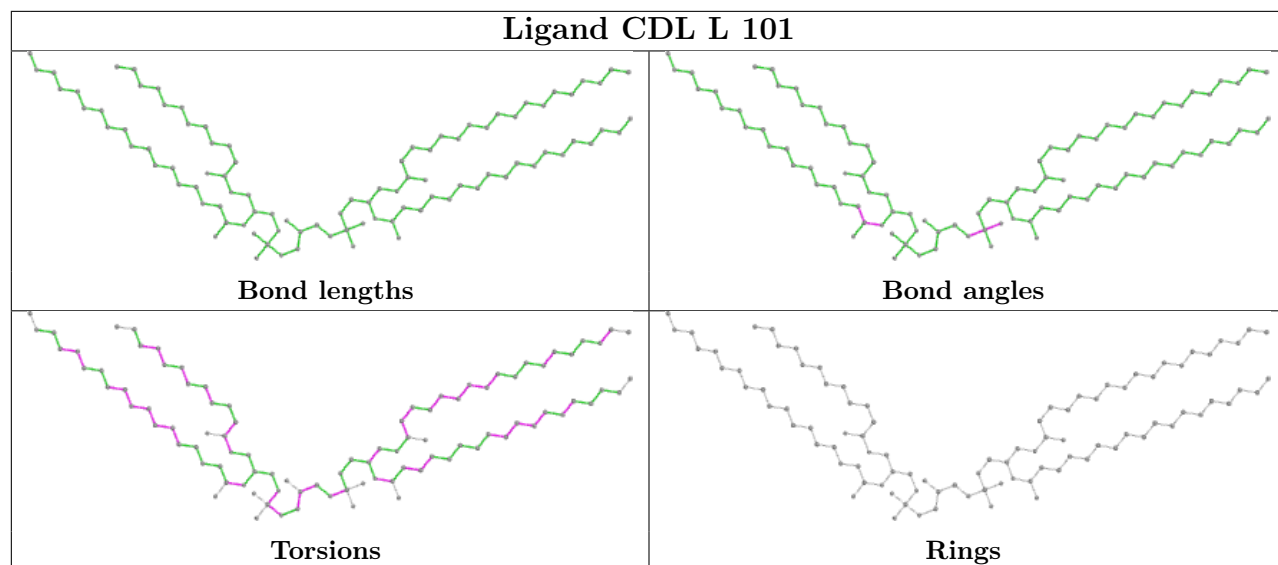


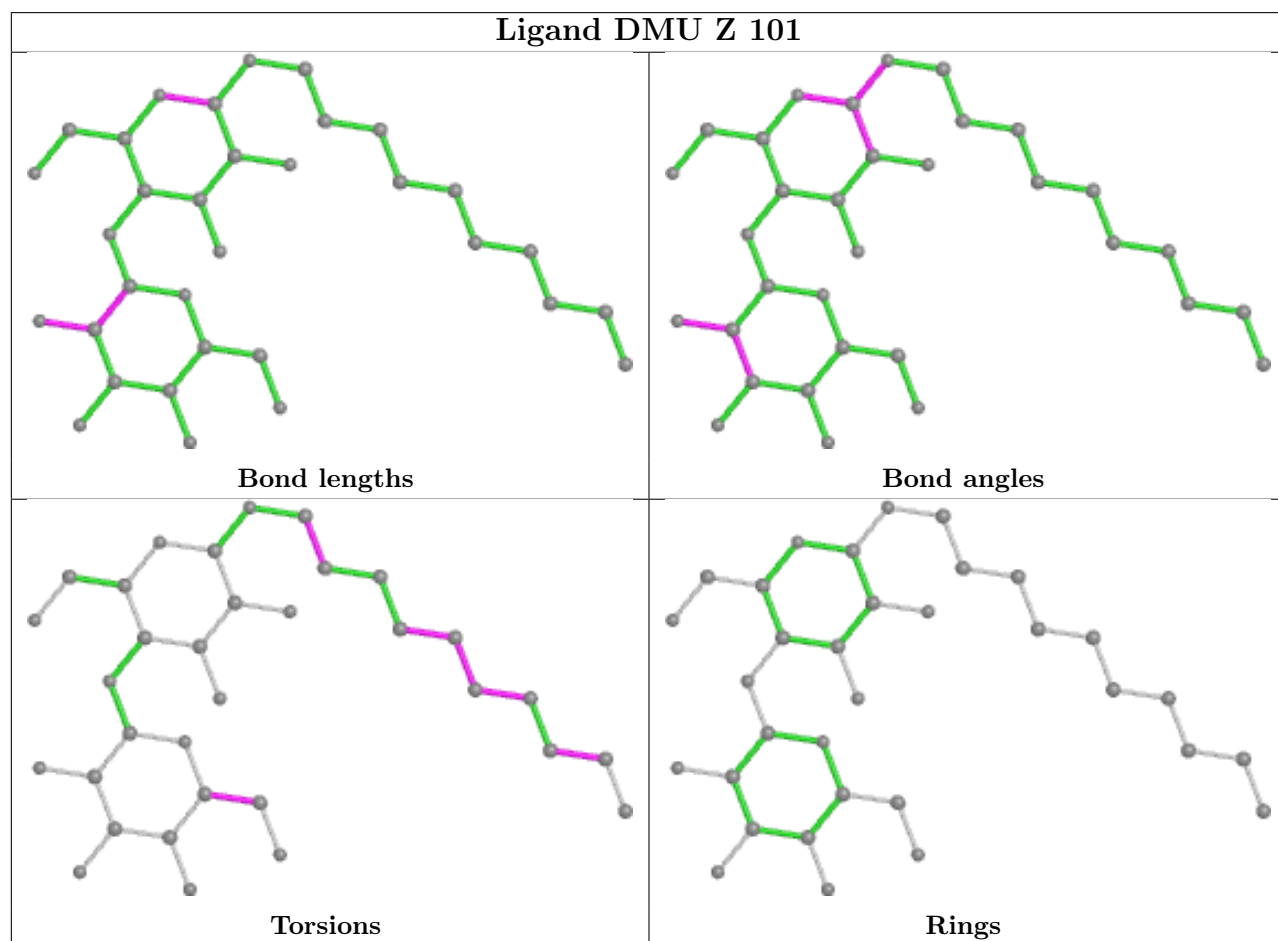
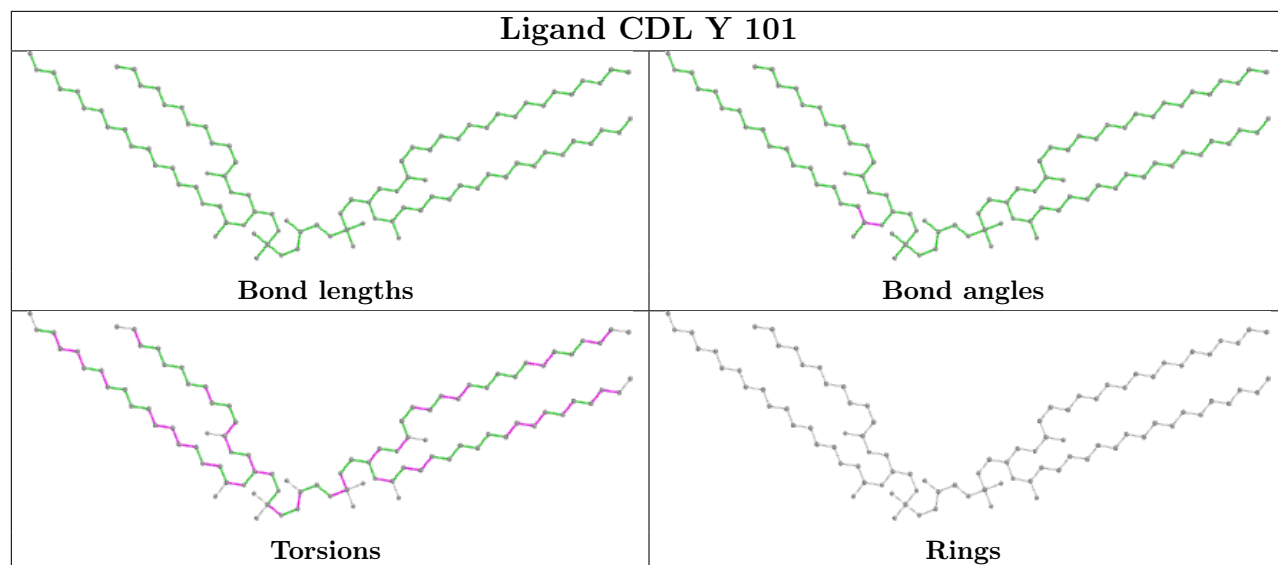




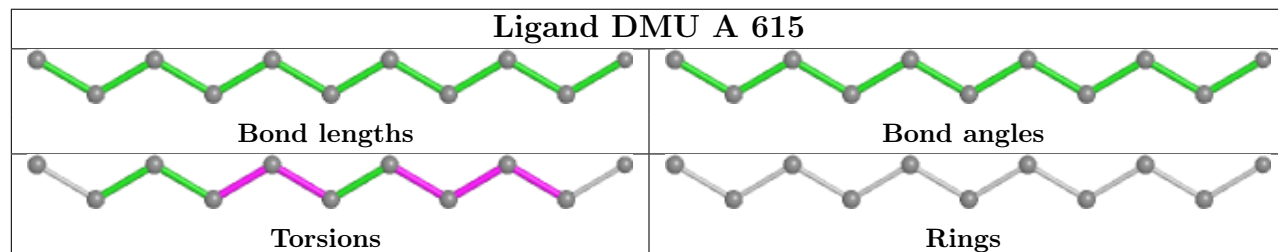
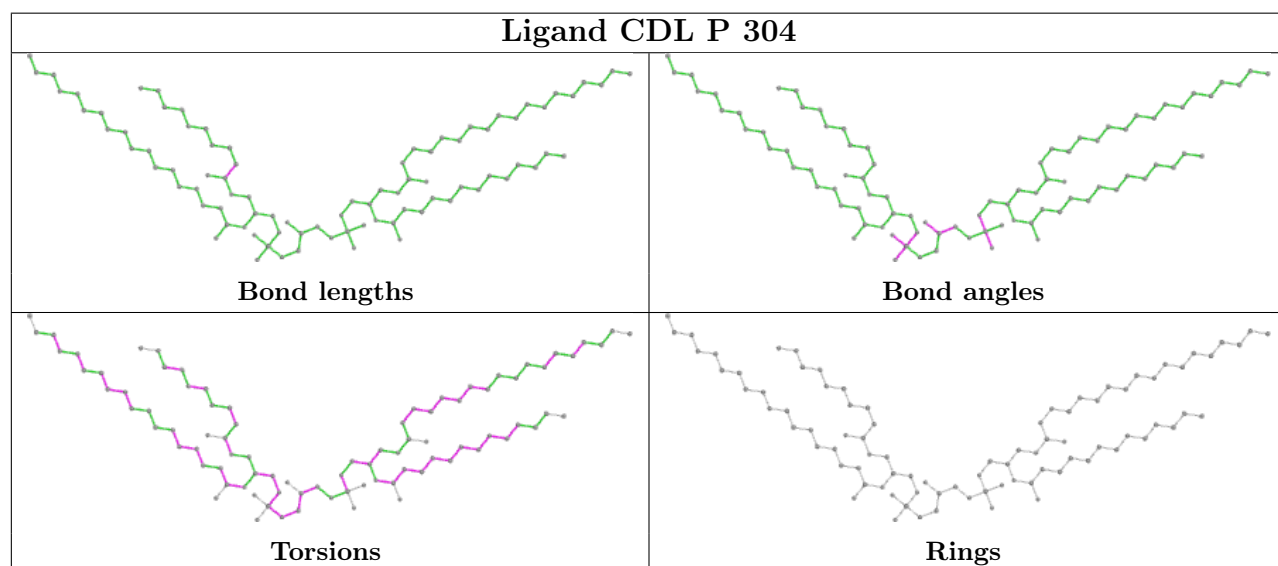
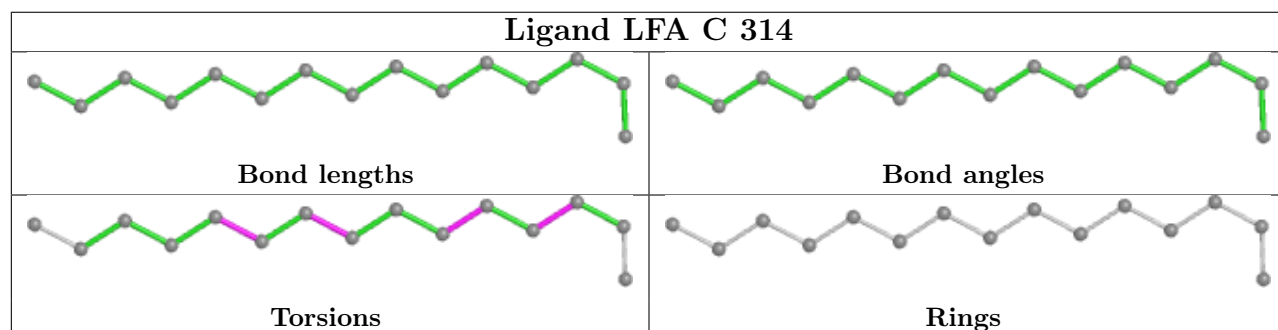
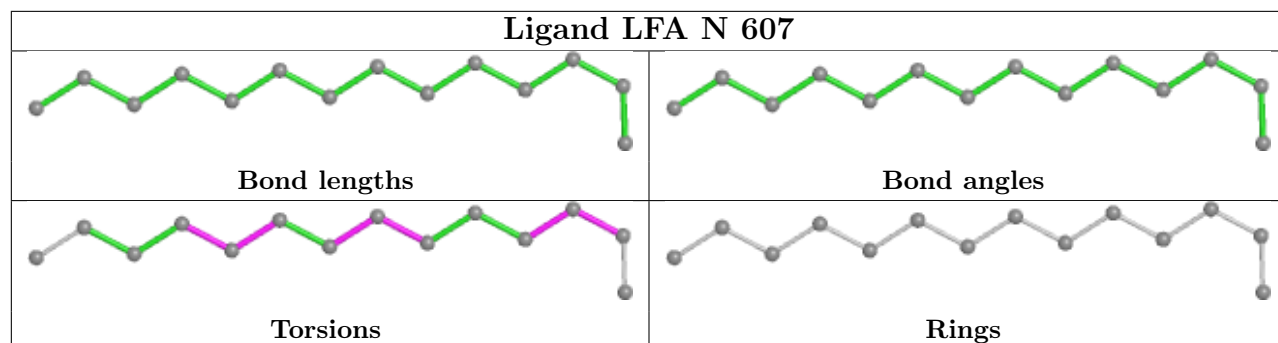


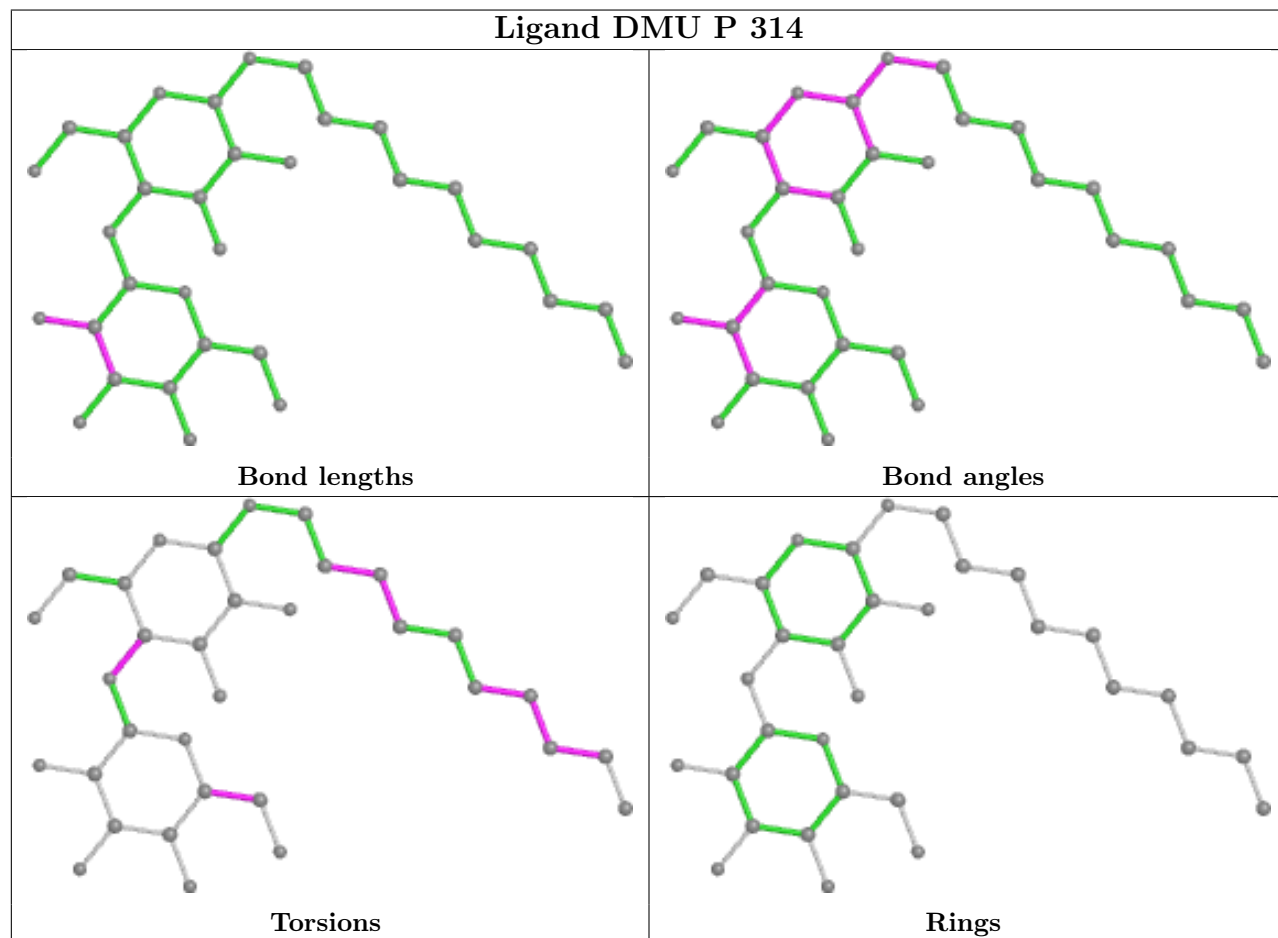
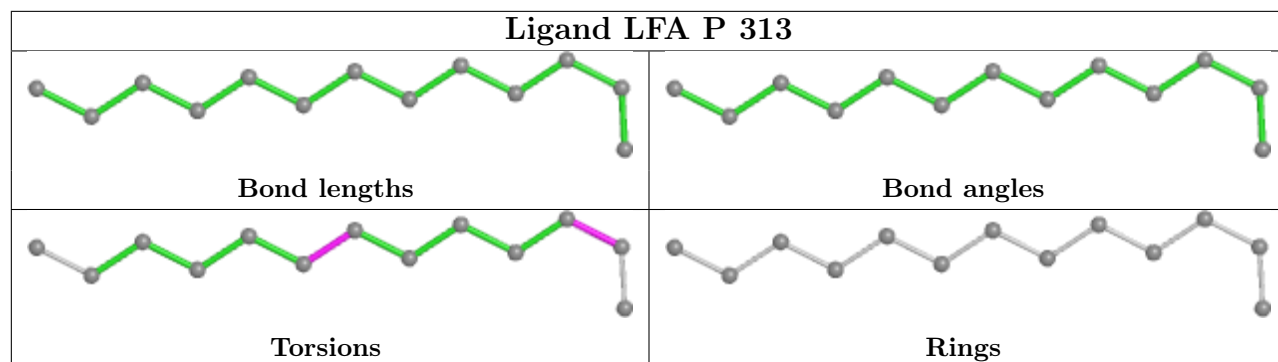


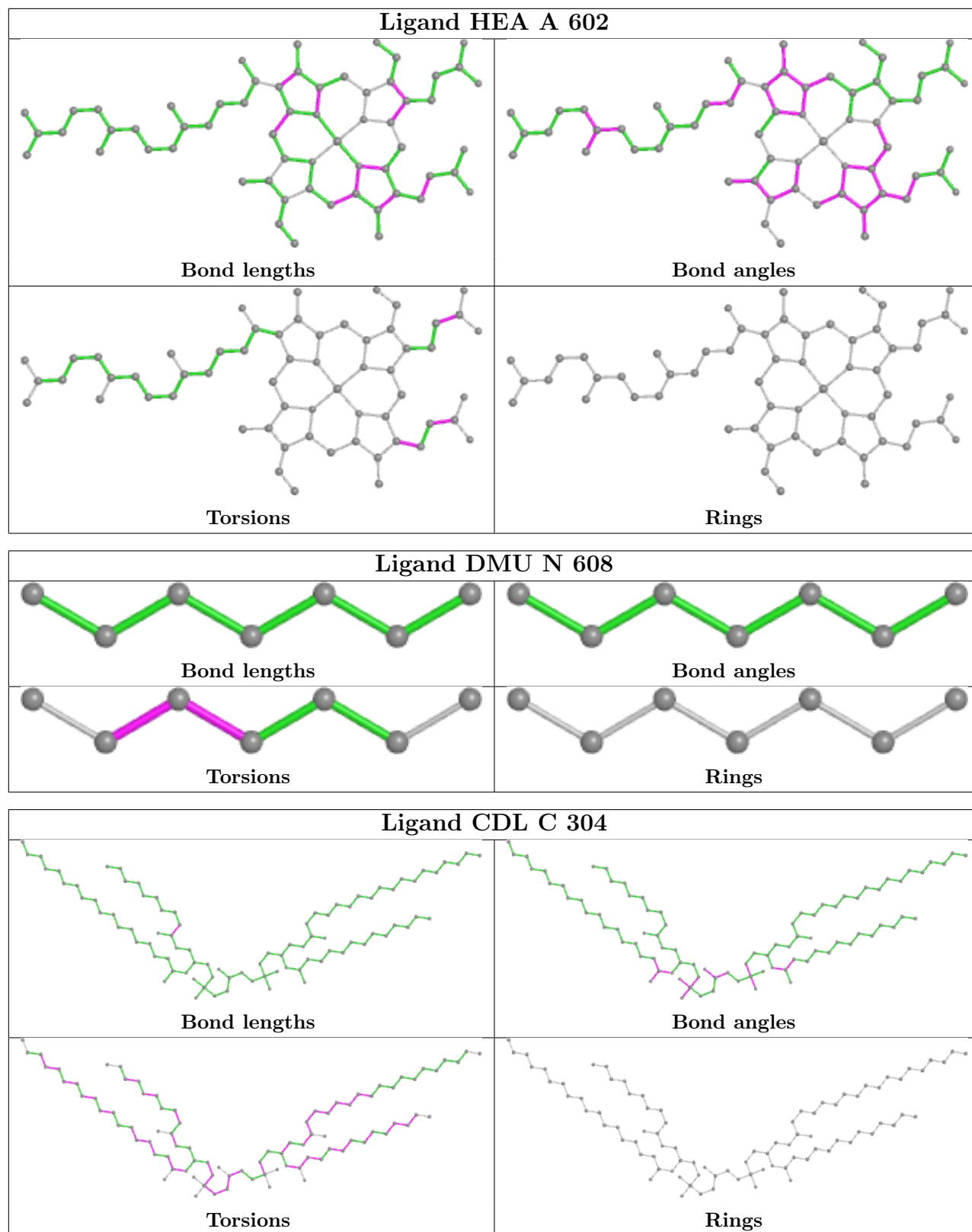


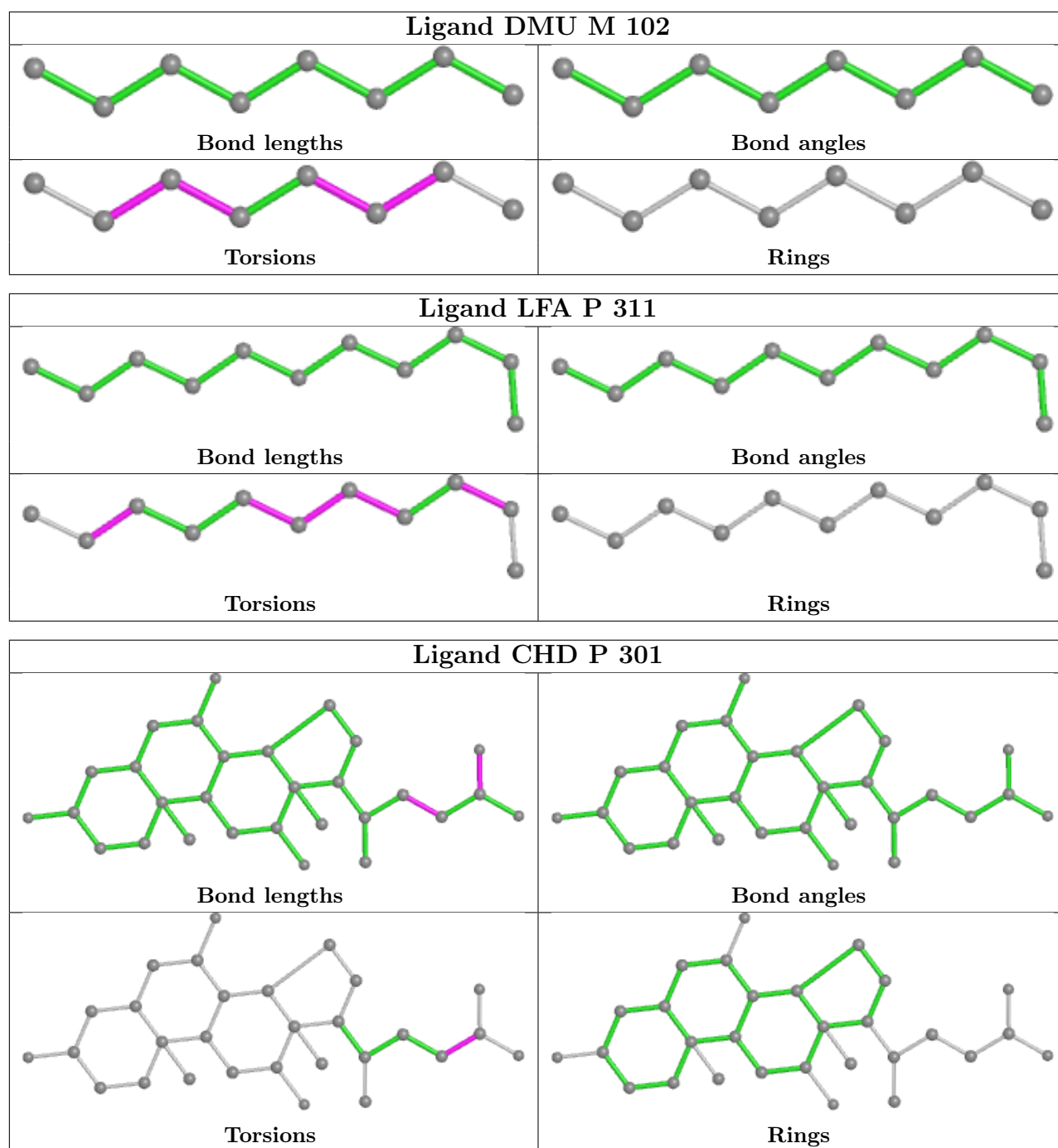












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.

## 6 Fit of model and data i

### 6.1 Protein, DNA and RNA chains i

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	512/514 (99%)	0.01	0 <span style="border: 1px solid blue; padding: 2px;">100</span> <span style="border: 1px solid blue; padding: 2px;">100</span>	28, 32, 41, 57	0
1	N	512/514 (99%)	-0.15	1 (0%) <span style="border: 1px solid blue; padding: 2px;">95</span> <span style="border: 1px solid blue; padding: 2px;">95</span>	30, 37, 46, 64	0
2	B	226/227 (99%)	-0.04	9 (3%) <span style="border: 1px solid red; padding: 2px;">38</span> <span style="border: 1px solid red; padding: 2px;">42</span>	30, 40, 63, 80	0
2	O	226/227 (99%)	-0.02	8 (3%) <span style="border: 1px solid red; padding: 2px;">44</span> <span style="border: 1px solid red; padding: 2px;">49</span>	36, 46, 72, 93	0
3	C	258/261 (98%)	-0.10	0 <span style="border: 1px solid blue; padding: 2px;">100</span> <span style="border: 1px solid blue; padding: 2px;">100</span>	30, 36, 48, 67	0
3	P	258/261 (98%)	-0.11	2 (0%) <span style="border: 1px solid blue; padding: 2px;">86</span> <span style="border: 1px solid blue; padding: 2px;">88</span>	31, 37, 51, 74	0
4	D	143/147 (97%)	-0.22	2 (1%) <span style="border: 1px solid blue; padding: 2px;">75</span> <span style="border: 1px solid blue; padding: 2px;">79</span>	35, 42, 56, 74	0
4	Q	137/147 (93%)	0.24	6 (4%) <span style="border: 1px solid red; padding: 2px;">34</span> <span style="border: 1px solid red; padding: 2px;">38</span>	42, 56, 80, 107	0
5	E	102/109 (93%)	-0.24	0 <span style="border: 1px solid blue; padding: 2px;">100</span> <span style="border: 1px solid blue; padding: 2px;">100</span>	35, 42, 56, 73	0
5	R	102/109 (93%)	-0.21	0 <span style="border: 1px solid blue; padding: 2px;">100</span> <span style="border: 1px solid blue; padding: 2px;">100</span>	38, 49, 66, 85	0
6	F	91/98 (92%)	-0.06	0 <span style="border: 1px solid blue; padding: 2px;">100</span> <span style="border: 1px solid blue; padding: 2px;">100</span>	32, 42, 67, 76	0
6	S	91/98 (92%)	-0.13	2 (2%) <span style="border: 1px solid blue; padding: 2px;">62</span> <span style="border: 1px solid blue; padding: 2px;">66</span>	34, 42, 65, 75	0
7	G	72/85 (84%)	0.40	10 (13%) <span style="border: 1px solid red; padding: 2px;">2</span> <span style="border: 1px solid red; padding: 2px;">3</span>	34, 43, 88, 110	0
7	T	72/85 (84%)	0.43	9 (12%) <span style="border: 1px solid red; padding: 2px;">3</span> <span style="border: 1px solid red; padding: 2px;">4</span>	34, 45, 93, 104	0
8	H	75/85 (88%)	0.24	6 (8%) <span style="border: 1px solid red; padding: 2px;">12</span> <span style="border: 1px solid red; padding: 2px;">14</span>	36, 46, 104, 113	0
8	U	75/85 (88%)	0.49	9 (12%) <span style="border: 1px solid red; padding: 2px;">4</span> <span style="border: 1px solid red; padding: 2px;">5</span>	42, 50, 95, 128	0
9	I	70/73 (95%)	0.16	3 (4%) <span style="border: 1px solid red; padding: 2px;">35</span> <span style="border: 1px solid red; padding: 2px;">39</span>	38, 50, 74, 92	0
9	V	70/73 (95%)	0.41	5 (7%) <span style="border: 1px solid red; padding: 2px;">16</span> <span style="border: 1px solid red; padding: 2px;">18</span>	38, 59, 76, 100	0
10	J	56/59 (94%)	0.07	3 (5%) <span style="border: 1px solid red; padding: 2px;">25</span> <span style="border: 1px solid red; padding: 2px;">28</span>	37, 46, 69, 79	0
10	W	56/59 (94%)	0.09	3 (5%) <span style="border: 1px solid red; padding: 2px;">25</span> <span style="border: 1px solid red; padding: 2px;">28</span>	40, 50, 74, 82	0
11	K	49/56 (87%)	-0.14	0 <span style="border: 1px solid blue; padding: 2px;">100</span> <span style="border: 1px solid blue; padding: 2px;">100</span>	39, 47, 66, 80	0
11	X	49/56 (87%)	0.30	2 (4%) <span style="border: 1px solid red; padding: 2px;">37</span> <span style="border: 1px solid red; padding: 2px;">41</span>	49, 60, 76, 104	0
12	L	44/47 (93%)	-0.20	0 <span style="border: 1px solid blue; padding: 2px;">100</span> <span style="border: 1px solid blue; padding: 2px;">100</span>	33, 38, 50, 59	0
12	Y	44/47 (93%)	-0.23	0 <span style="border: 1px solid blue; padding: 2px;">100</span> <span style="border: 1px solid blue; padding: 2px;">100</span>	41, 48, 64, 71	0

*Continued on next page...*

Continued from previous page...

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	M	40/46 (86%)	0.02	1 (2%) 57 61	36, 39, 62, 76	0
13	Z	40/46 (86%)	0.00	3 (7%) 14 16	46, 52, 83, 92	0
All	All	3470/3614 (96%)	-0.01	84 (2%) 59 63	28, 41, 68, 128	0

All (84) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
8	U	48	GLY	7.9
8	H	45	ALA	7.9
2	O	90	ILE	7.3
8	U	45	ALA	6.8
7	G	40	GLY	6.6
7	G	36	TRP	6.1
9	V	37	PHE	5.9
8	U	47	GLY	5.5
7	G	42	ARG	5.5
7	T	36	TRP	5.4
7	T	38	HIS	5.1
7	T	40	GLY	4.6
8	U	50	VAL	4.6
8	U	49	ASP	4.5
10	W	1	PHE	4.5
4	D	4	SER	4.4
2	O	113	TYR	4.3
10	J	1	PHE	4.1
6	S	93	PRO	4.1
7	T	42	ARG	4.0
8	H	48	GLY	4.0
9	I	37	PHE	4.0
7	T	39	SER	3.9
7	T	43	GLU	3.8
8	H	44	THR	3.8
7	G	39	SER	3.6
2	O	227	LEU	3.6
4	Q	39	ALA	3.5
10	W	52	TRP	3.5
3	P	37	PHE	3.5
9	V	33	THR	3.4
4	Q	10	ASP	3.3
11	X	13	TYR	3.3
7	G	37	LEU	3.3

Continued on next page...

*Continued from previous page...*

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	O	87[A]	MET	3.3
9	I	19	PHE	3.3
7	T	41	HIS	3.3
2	O	91	ASN	3.2
13	Z	39	ASN	3.2
10	J	52	TRP	3.1
8	H	43	MET	3.1
11	X	6	ALA	3.1
7	G	41	HIS	3.0
2	O	16[A]	ILE	3.0
2	B	60	GLU	3.0
13	Z	40	TYR	3.0
9	V	26	MET	2.9
2	B	65	TRP	2.9
6	S	3	GLY	2.9
8	H	49	ASP	2.9
8	U	42	ALA	2.8
4	Q	106	PRO	2.8
2	B	59	GLN	2.8
4	Q	51	LEU	2.7
8	U	43	MET	2.7
4	D	11	TYR	2.6
2	B	91	ASN	2.6
8	U	52	VAL	2.6
9	I	25	PHE	2.6
2	B	90	ILE	2.6
4	Q	11	TYR	2.6
2	B	16[A]	ILE	2.5
8	H	46	LYS	2.4
9	V	53	ASN	2.4
13	M	39	ASN	2.3
10	W	55	PHE	2.3
7	G	38	HIS	2.3
2	O	22[A]	HIS	2.3
8	U	44	THR	2.3
10	J	2	GLU	2.3
2	O	89	GLU	2.3
2	B	113	TYR	2.3
9	V	65	LYS	2.3
2	B	22[A]	HIS	2.2
7	G	43	GLU	2.2
7	T	37	LEU	2.2

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
7	T	70[A]	PHE	2.1
4	Q	33	LEU	2.1
2	B	87[A]	MET	2.1
7	G	70[A]	PHE	2.1
7	G	45	PRO	2.1
3	P	38	ASN	2.0
13	Z	35	TYR	2.0
1	N	49	GLY	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
1	FME	A	1	10/11	0.96	0.14	43,51,90,112	0
2	FME	B	1	10/11	0.98	0.11	35,38,48,89	0
1	FME	N	1	10/11	0.98	0.11	48,55,93,98	0
2	FME	O	1	10/11	0.98	0.10	42,47,56,72	0

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
20	DMU	P	316	22/33	0.48	0.40	43,68,80,89	22
20	DMU	N	608	7/33	0.56	0.35	65,70,75,79	7
19	LFA	P	307	11/20	0.57	0.43	39,53,63,70	11
20	DMU	O	304	22/33	0.61	0.26	50,68,93,101	22
20	DMU	P	318	33/33	0.63	0.27	52,79,92,119	33
20	DMU	P	314	33/33	0.64	0.30	45,56,69,70	33

*Continued on next page...*



Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
20	DMU	B	304	22/33	0.67	0.26	49,62,69,77	22
20	DMU	C	318	22/33	0.68	0.31	42,69,83,94	22
20	DMU	P	317	33/33	0.68	0.30	51,61,77,95	33
19	LFA	T	101	14/20	0.68	0.30	44,52,64,64	14
20	DMU	Y	102	22/33	0.69	0.32	59,69,77,82	22
20	DMU	B	308	22/33	0.70	0.24	58,69,83,83	22
20	DMU	Q	201	33/33	0.70	0.19	42,61,74,101	33
20	DMU	C	316	33/33	0.70	0.32	45,55,70,77	33
20	DMU	C	320	33/33	0.71	0.22	41,75,84,87	33
19	LFA	N	607	14/20	0.71	0.28	44,54,75,75	14
20	DMU	A	608	7/33	0.71	0.38	56,60,67,70	7
18	CDL	V	101	64/100	0.72	0.22	60,96,128,162	0
20	DMU	P	322	33/33	0.72	0.24	49,60,94,102	33
20	DMU	C	324	33/33	0.74	0.24	43,57,83,92	33
20	DMU	P	315	7/33	0.74	0.39	54,62,69,70	7
20	DMU	C	319	33/33	0.74	0.31	45,58,74,94	33
20	DMU	A	615	11/33	0.74	0.37	52,61,72,72	11
18	CDL	P	304	87/100	0.75	0.25	46,94,131,157	0
20	DMU	G	102	11/33	0.75	0.36	51,58,65,65	11
19	LFA	P	308	6/20	0.76	0.57	43,51,54,58	6
20	DMU	A	609	33/33	0.76	0.22	35,46,61,84	33
18	CDL	C	304	87/100	0.76	0.24	47,86,125,131	0
18	CDL	Y	101	94/100	0.77	0.25	53,95,142,162	0
20	DMU	L	102	22/33	0.77	0.35	48,66,72,77	22
19	LFA	C	308	6/20	0.77	0.55	43,51,53,55	6
19	LFA	O	303	11/20	0.78	0.28	51,58,64,69	11
19	LFA	C	311	11/20	0.78	0.36	60,70,83,84	11
18	CDL	A	606	64/100	0.78	0.20	53,91,124,151	0
20	DMU	T	105	22/33	0.78	0.20	47,59,71,82	22
20	DMU	O	308	22/33	0.78	0.20	38,52,59,62	22
20	DMU	D	201	33/33	0.79	0.16	30,50,58,74	33
19	LFA	C	312	14/20	0.79	0.32	43,69,75,78	14
19	LFA	T	103	14/20	0.79	0.33	42,67,74,74	14
19	LFA	C	325	15/20	0.80	0.45	51,56,68,69	15
19	LFA	C	314	15/20	0.80	0.28	44,52,64,74	15
20	DMU	N	609	33/33	0.81	0.21	42,60,79,91	33
19	LFA	C	313	11/20	0.81	0.39	46,57,69,74	11
19	LFA	P	310	11/20	0.81	0.33	57,63,70,74	11
21	EDO	E	201	4/4	0.81	0.25	40,41,41,49	4
20	DMU	B	303	11/33	0.82	0.37	45,58,66,66	11
20	DMU	W	101	11/33	0.83	0.26	65,69,75,75	11
20	DMU	G	103	22/33	0.83	0.20	47,63,72,73	22

Continued on next page...

*Continued from previous page...*

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
18	CDL	L	101	94/100	0.83	0.22	44,87,132,145	0
19	LFA	C	315	13/20	0.84	0.21	55,58,73,77	13
19	LFA	B	307	17/20	0.84	0.30	41,66,83,84	17
20	DMU	Z	101	33/33	0.84	0.16	55,64,80,90	0
19	LFA	C	309	18/20	0.84	0.21	34,42,64,70	18
19	LFA	C	307	11/20	0.85	0.42	53,59,67,69	11
19	LFA	P	311	11/20	0.85	0.39	48,57,67,69	11
19	LFA	T	104	11/20	0.85	0.23	58,63,71,75	11
20	DMU	M	102	8/33	0.85	0.23	45,53,59,60	8
21	EDO	N	614	4/4	0.85	0.33	26,41,41,49	4
19	LFA	P	309	18/20	0.86	0.21	38,50,62,64	18
19	LFA	C	310	15/20	0.87	0.40	51,57,70,73	15
19	LFA	O	302	17/20	0.87	0.25	43,58,72,73	17
24	CHD	P	305	29/29	0.87	0.25	59,72,91,113	0
20	DMU	H	101	33/33	0.88	0.24	32,48,57,68	33
20	DMU	J	101	11/33	0.88	0.27	59,65,71,82	11
20	DMU	O	307	11/33	0.88	0.41	49,57,64,69	11
21	EDO	A	610	4/4	0.88	0.17	27,28,30,34	4
20	DMU	C	306	11/33	0.88	0.27	53,57,70,71	11
19	LFA	P	313	13/20	0.88	0.26	46,60,74,76	13
24	CHD	C	305	29/29	0.88	0.21	61,73,97,119	0
19	LFA	P	312	15/20	0.88	0.26	43,54,67,67	15
20	DMU	N	616	33/33	0.89	0.23	33,49,66,73	33
20	DMU	P	306	11/33	0.89	0.40	52,55,62,68	11
20	DMU	B	302	11/33	0.90	0.35	48,57,65,70	11
21	EDO	P	321	4/4	0.90	0.23	33,34,39,44	4
20	DMU	C	317	7/33	0.91	0.32	52,54,66,68	7
24	CHD	C	301	29/29	0.91	0.09	33,36,40,45	0
21	EDO	A	611	4/4	0.92	0.19	36,41,48,49	4
21	EDO	C	323	4/4	0.92	0.23	36,37,37,42	4
20	DMU	Z	102	8/33	0.92	0.31	53,55,60,61	8
19	LFA	A	607	14/20	0.92	0.28	35,46,69,79	14
21	EDO	R	202	4/4	0.93	0.16	39,39,39,40	4
19	LFA	N	606	14/20	0.93	0.24	40,52,61,65	14
21	EDO	P	319	4/4	0.93	0.21	50,63,64,80	4
24	CHD	P	301	29/29	0.93	0.08	35,38,42,47	0
21	EDO	N	611	4/4	0.93	0.12	40,42,50,52	4
21	EDO	R	201	4/4	0.94	0.20	60,62,63,63	4
20	DMU	M	101	33/33	0.94	0.10	44,52,77,80	0
21	EDO	C	321	4/4	0.94	0.34	56,57,59,83	4
21	EDO	O	309	4/4	0.94	0.14	38,39,39,40	4
21	EDO	E	202	4/4	0.94	0.19	33,34,37,39	4

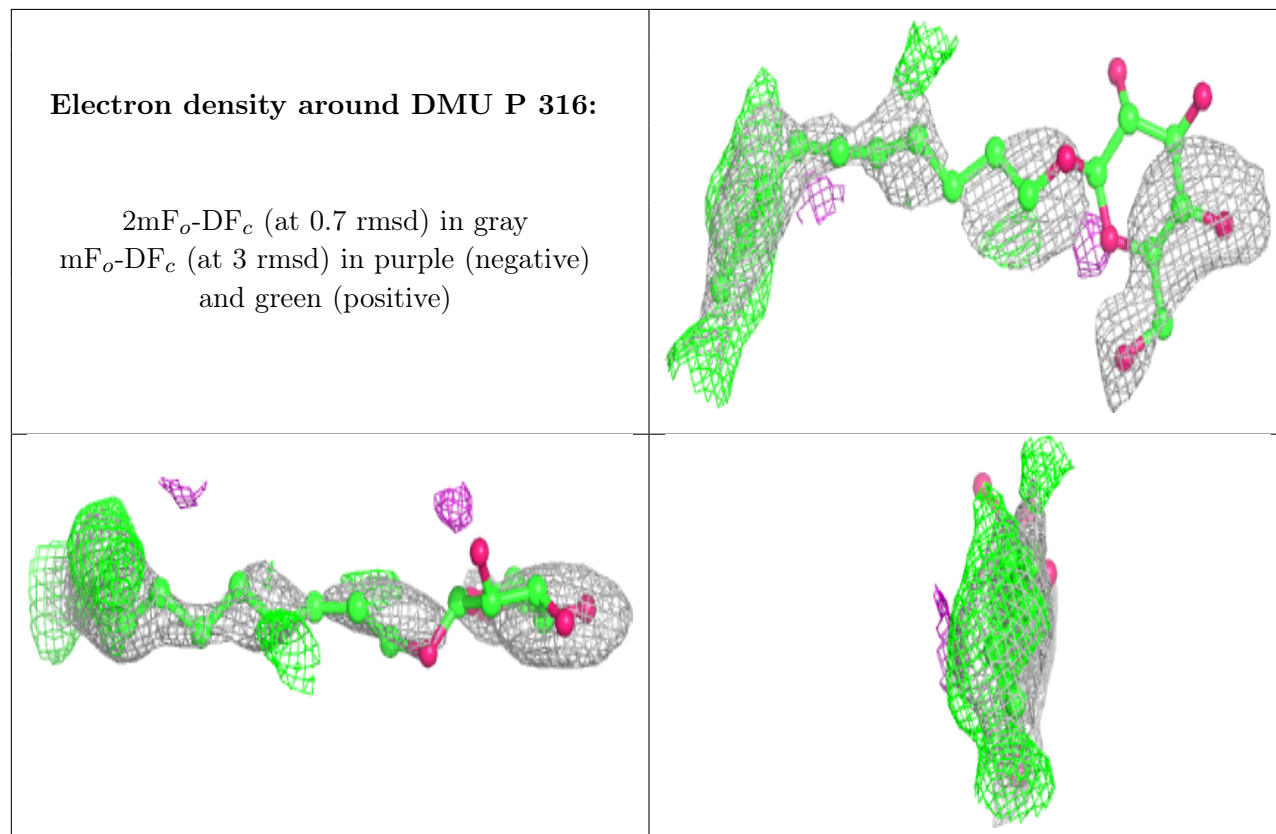
*Continued on next page...*

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
21	EDO	G	104	4/4	0.94	0.15	35,35,36,39	4
21	EDO	N	610	4/4	0.95	0.13	30,32,34,35	4
21	EDO	F	102	4/4	0.95	0.16	24,24,31,32	4
21	EDO	C	322	4/4	0.95	0.10	36,36,40,41	4
25	UNX	P	302	1/1	0.95	0.19	48,48,48,48	0
27	PEK	T	102	53/53	0.95	0.13	36,59,107,115	0
21	EDO	E	203	4/4	0.96	0.20	37,40,44,48	4
21	EDO	N	612	4/4	0.96	0.20	31,31,32,33	4
21	EDO	R	203	4/4	0.96	0.15	44,48,52,58	4
24	CHD	B	306	29/29	0.96	0.08	30,35,40,44	0
20	DMU	O	306	11/33	0.96	0.43	44,47,65,70	11
22	PGV	A	614	51/51	0.97	0.10	31,39,82,96	0
22	PGV	N	615	51/51	0.97	0.10	33,43,76,89	0
22	PGV	P	303	51/51	0.97	0.10	34,43,98,112	0
14	HEA	N	601	60/60	0.97	0.09	30,35,48,60	0
21	EDO	P	320	4/4	0.97	0.14	40,40,42,47	4
21	EDO	A	612	4/4	0.97	0.20	27,28,28,29	4
24	CHD	O	301	29/29	0.97	0.08	32,35,38,46	0
21	EDO	N	613	4/4	0.97	0.17	41,42,43,46	4
21	EDO	A	613	4/4	0.97	0.11	38,41,41,43	4
25	UNX	C	302	1/1	0.97	0.24	48,48,48,48	0
14	HEA	A	601	60/60	0.97	0.10	25,29,43,53	0
27	PEK	G	101	53/53	0.97	0.12	33,56,100,125	0
21	EDO	T	106	4/4	0.97	0.12	39,40,41,42	4
21	EDO	S	102	4/4	0.98	0.14	23,25,31,32	4
14	HEA	A	602	60/60	0.98	0.09	26,29,36,43	0
14	HEA	N	602	60/60	0.98	0.09	29,33,39,43	0
22	PGV	C	303	51/51	0.98	0.10	32,42,107,117	0
17	CA	A	605	1/1	0.99	0.08	41,41,41,41	0
17	CA	N	605	1/1	0.99	0.05	47,47,47,47	0
21	EDO	F	103	4/4	0.99	0.10	33,36,37,38	4
16	MG	A	604	1/1	0.99	0.09	30,30,30,30	0
16	MG	N	604	1/1	0.99	0.06	35,35,35,35	0
21	EDO	S	103	4/4	0.99	0.12	31,36,36,38	4
21	EDO	B	305	4/4	0.99	0.12	27,30,31,33	4
23	CUA	B	301	2/2	1.00	0.15	31,31,31,31	0
23	CUA	O	305	2/2	1.00	0.12	38,38,38,38	0
26	ZN	F	101	1/1	1.00	0.14	37,37,37,37	0
26	ZN	S	101	1/1	1.00	0.14	39,39,39,39	0
15	CU	N	603	1/1	1.00	0.18	32,32,32,32	0
15	CU	A	603	1/1	1.00	0.17	28,28,28,28	0

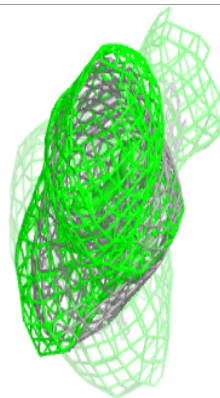
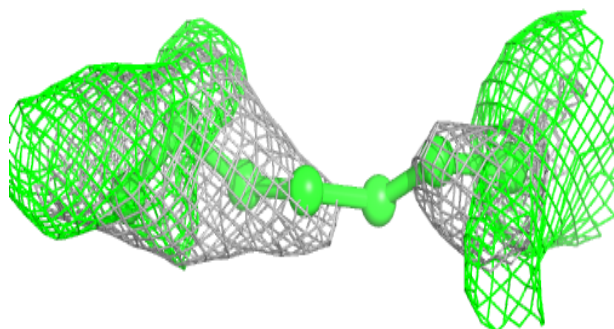
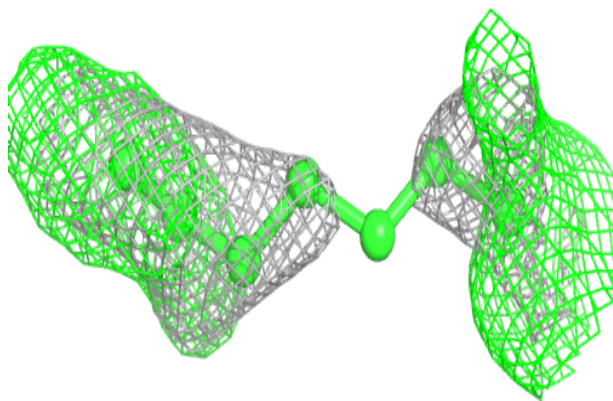
The following is a graphical depiction of the model fit to experimental electron density of all

instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

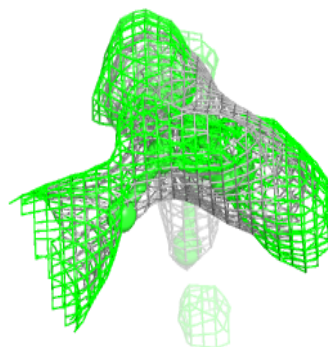
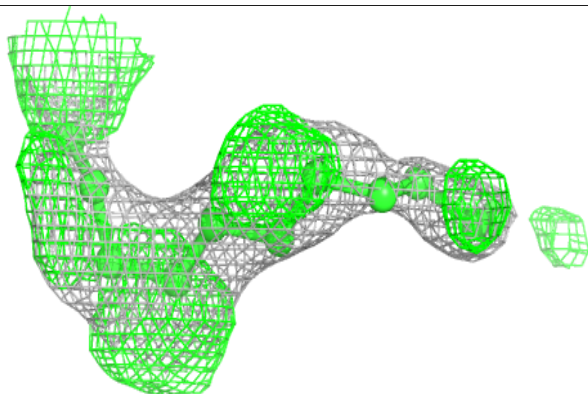
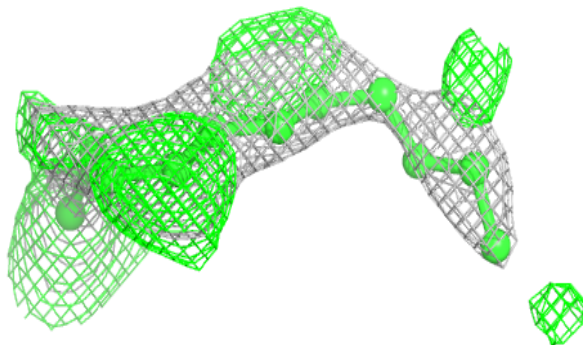


**Electron density around DMU N 608:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LFA P 307:**

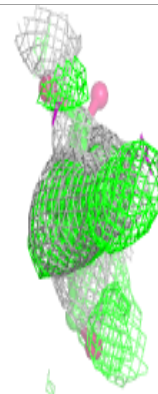
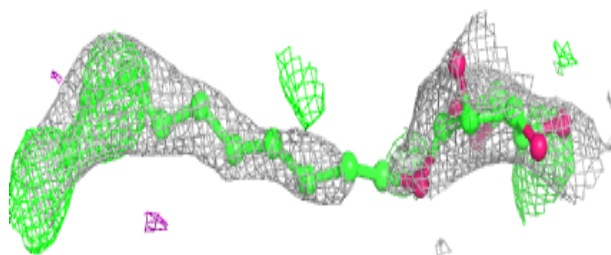
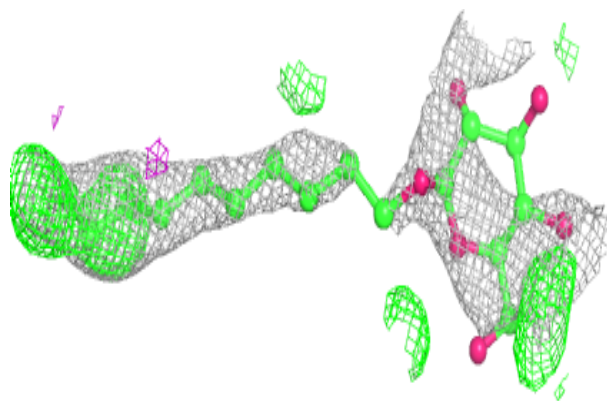
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



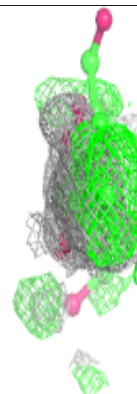
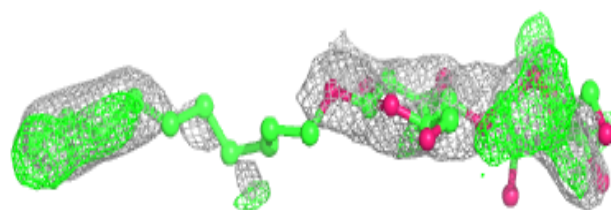
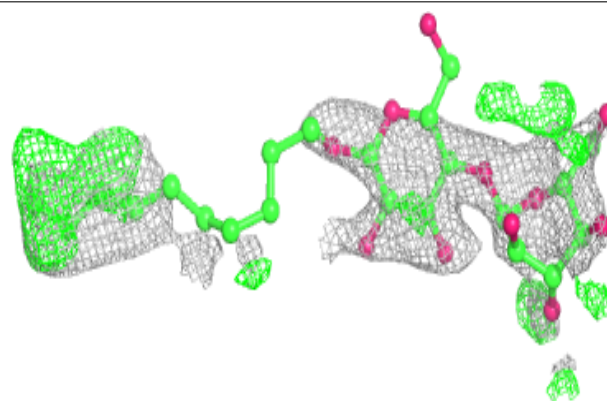


**Electron density around DMU O 304:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

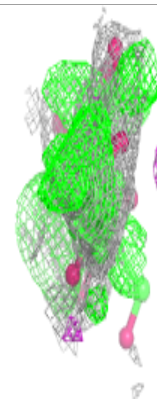
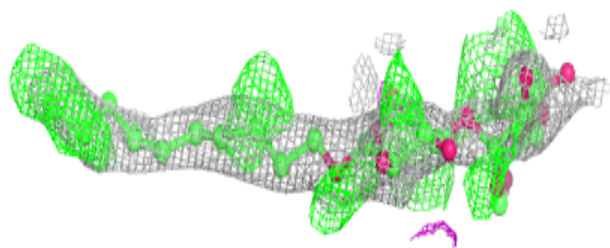
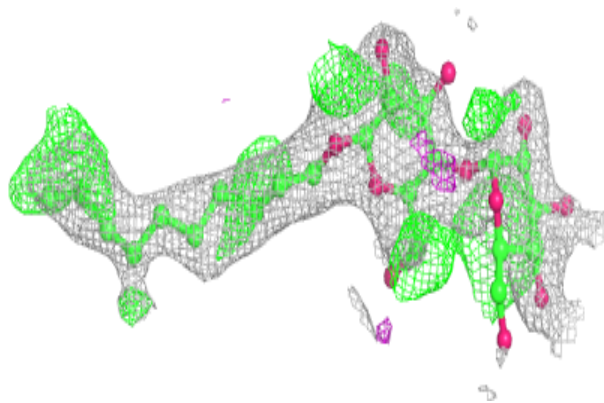
**Electron density around DMU P 318:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

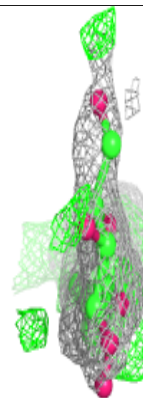
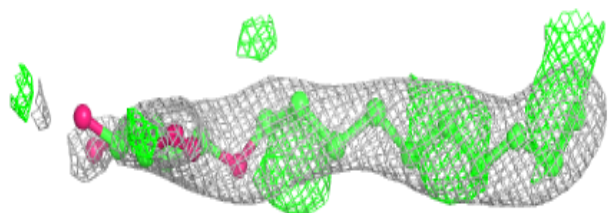
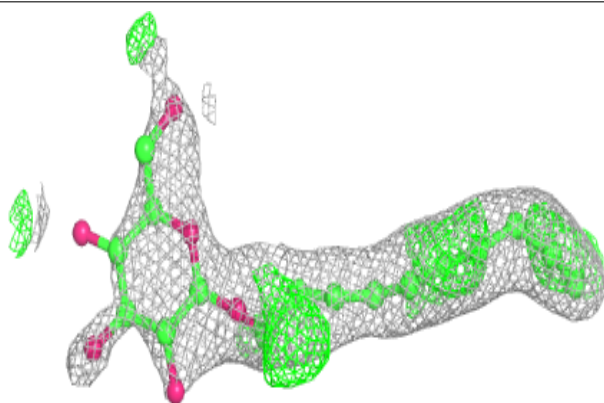


**Electron density around DMU P 314:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

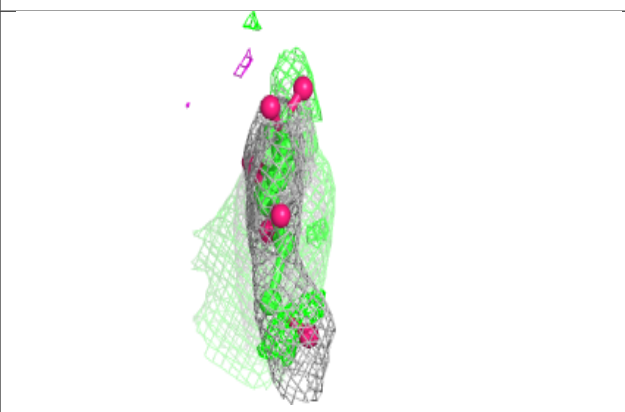
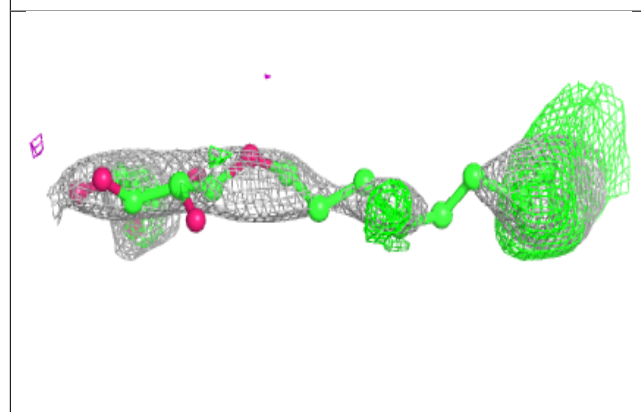
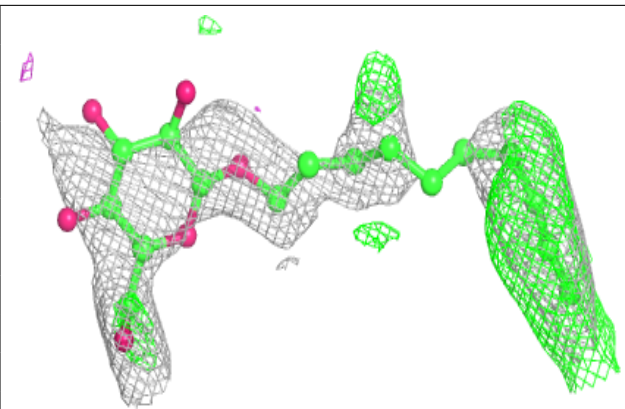
**Electron density around DMU B 304:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

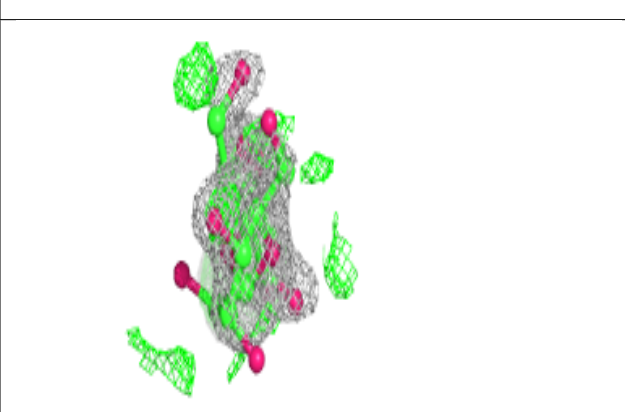
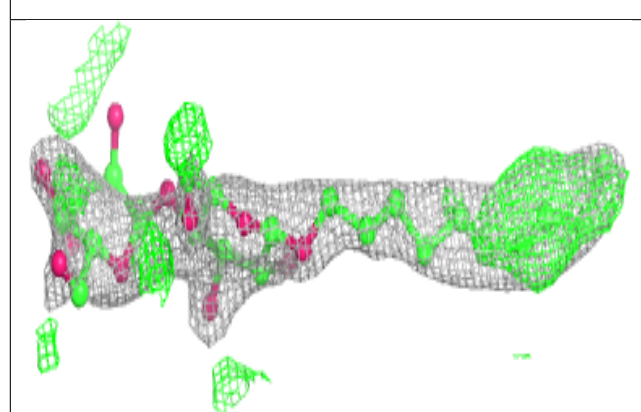
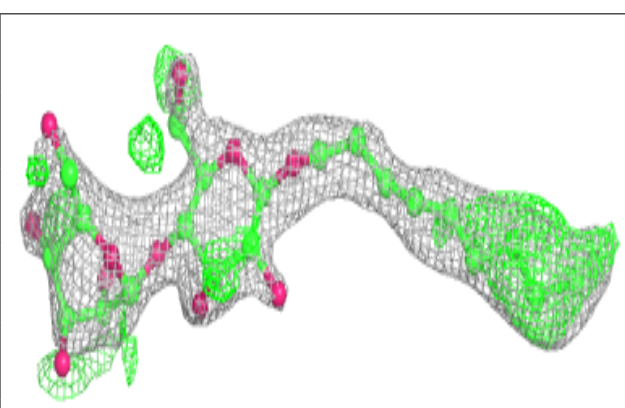


**Electron density around DMU C 318:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DMU P 317:**

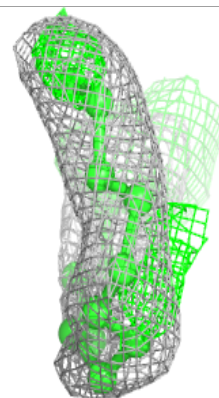
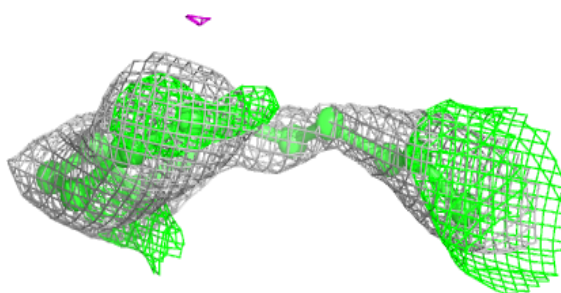
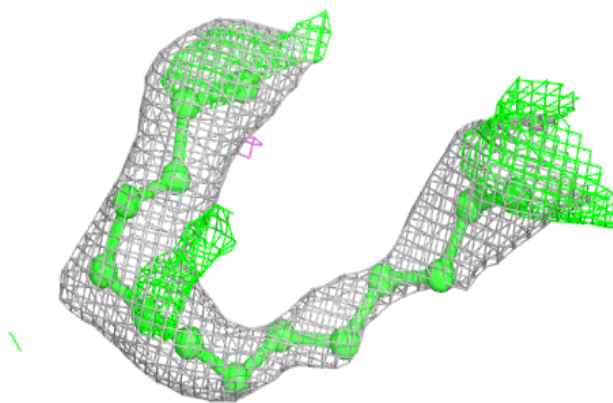
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



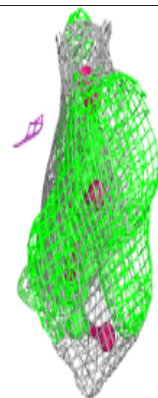
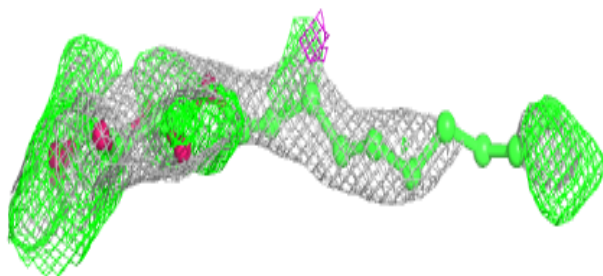
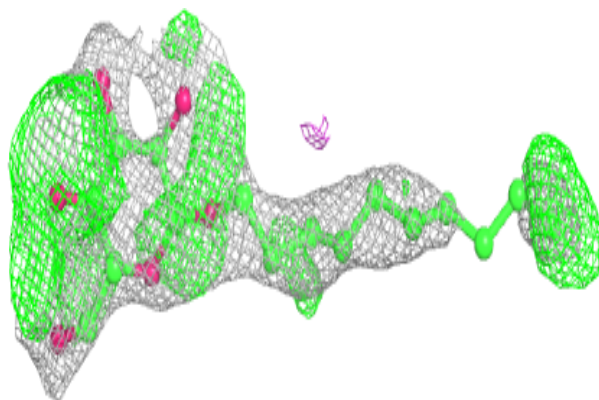


**Electron density around LFA T 101:**

$2mF_o-DF_c$  (at 0.7 rnsd) in gray  
 $mF_o-DF_c$  (at 3 rnsd) in purple (negative)  
and green (positive)

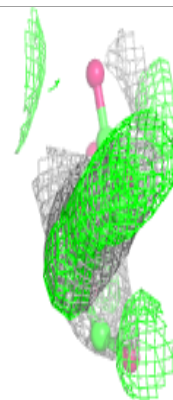
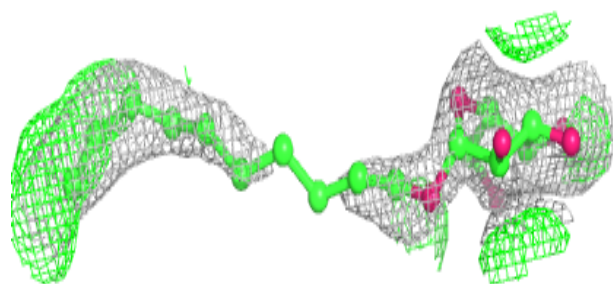
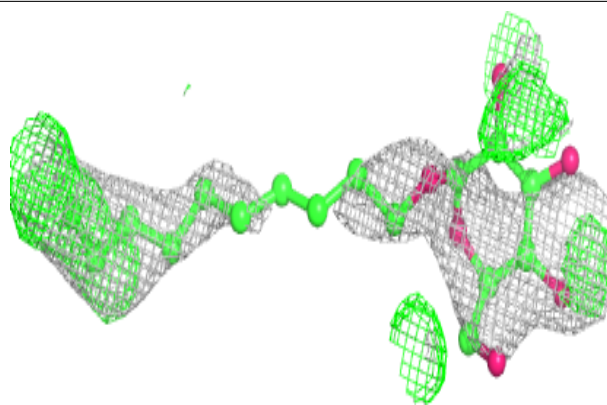
**Electron density around DMU Y 102:**

$2mF_o-DF_c$  (at 0.7 rnsd) in gray  
 $mF_o-DF_c$  (at 3 rnsd) in purple (negative)  
and green (positive)

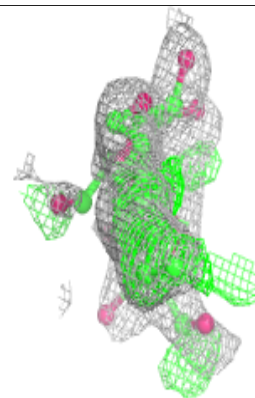
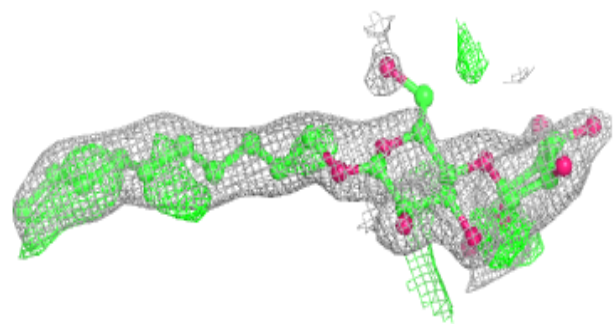
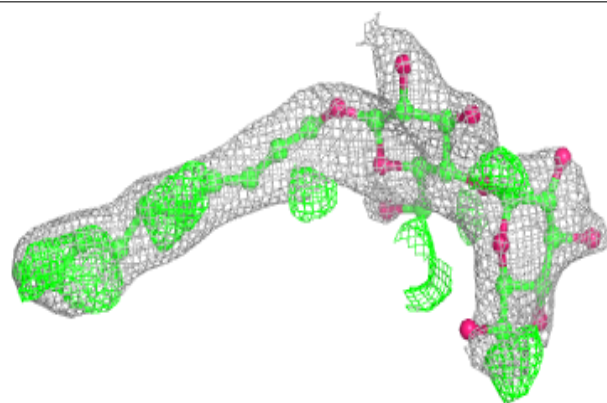


**Electron density around DMU B 308:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

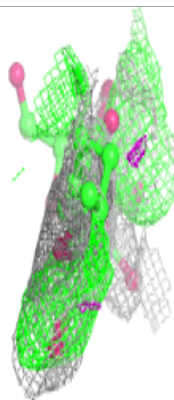
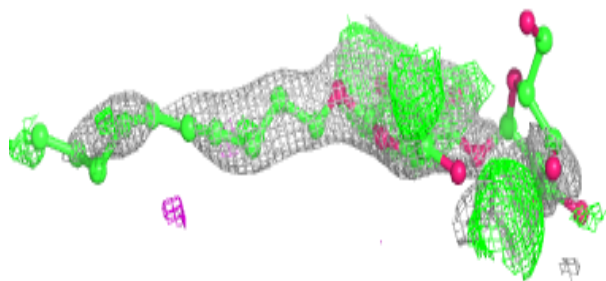
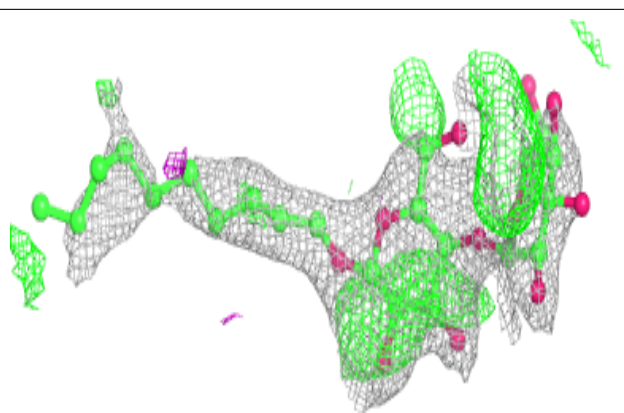
**Electron density around DMU Q 201:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

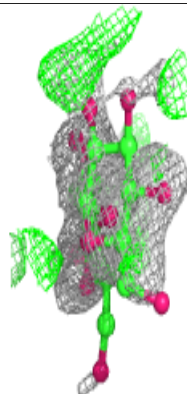
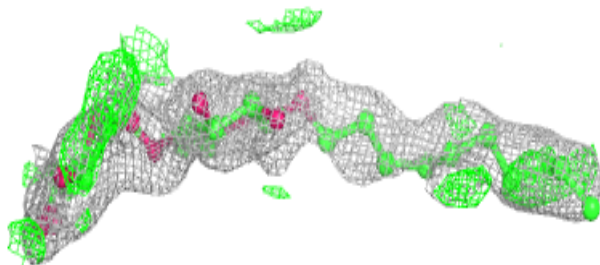
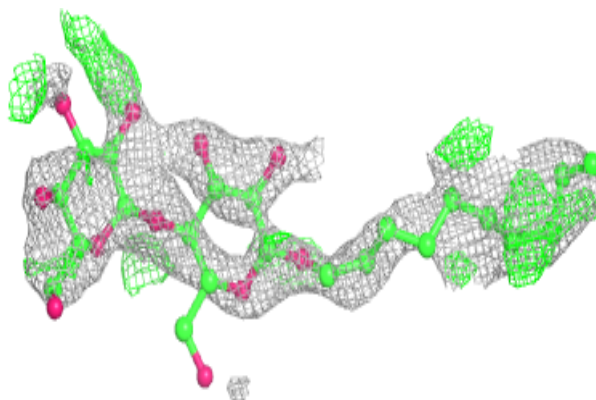


**Electron density around DMU C 316:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

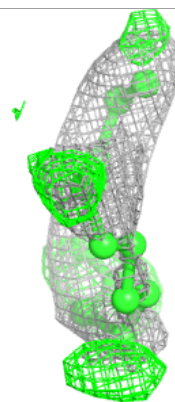
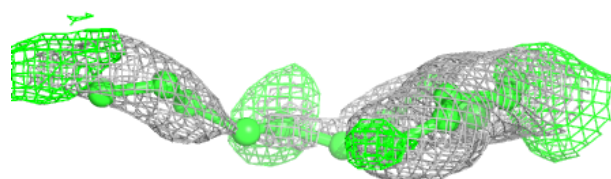
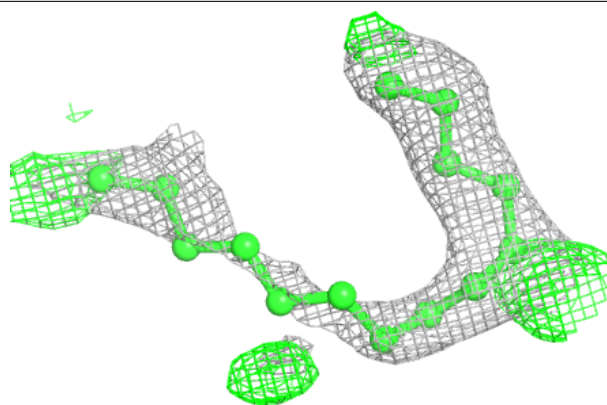
**Electron density around DMU C 320:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

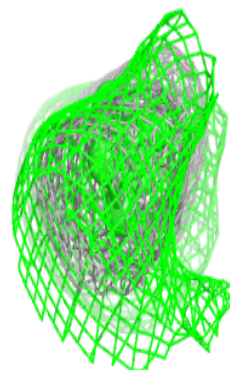
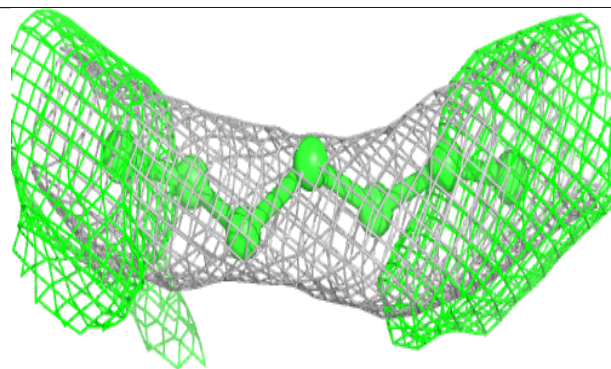
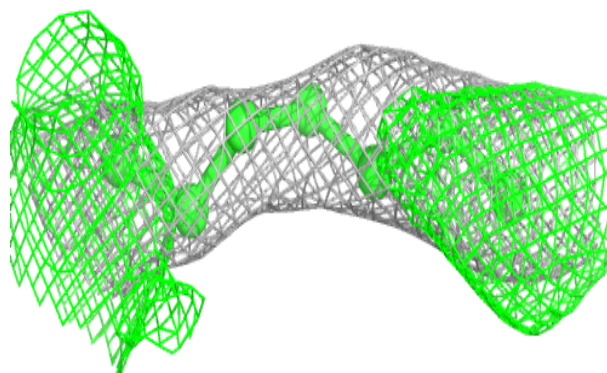


**Electron density around LFA N 607:**

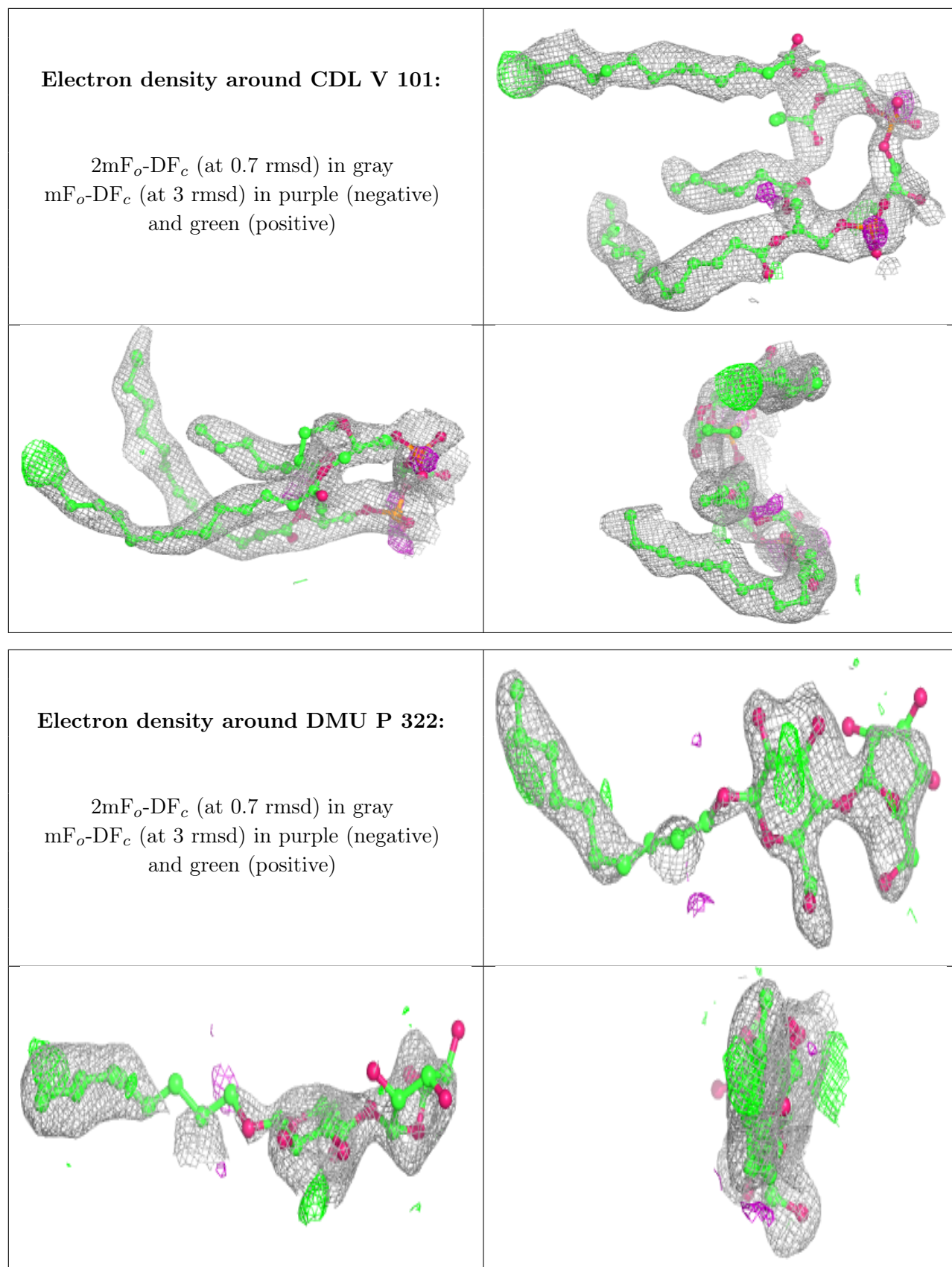
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DMU A 608:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

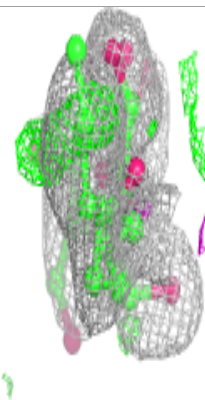
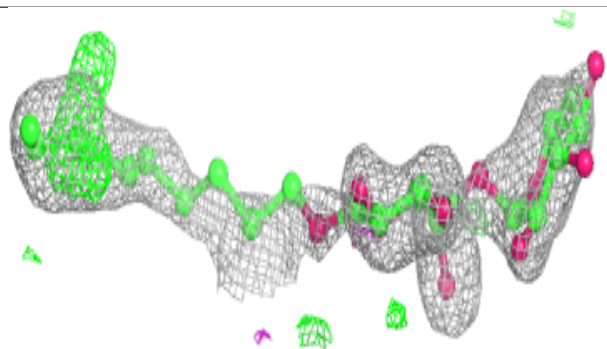
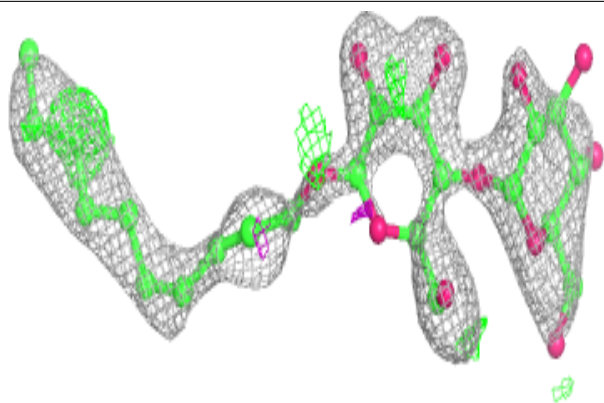




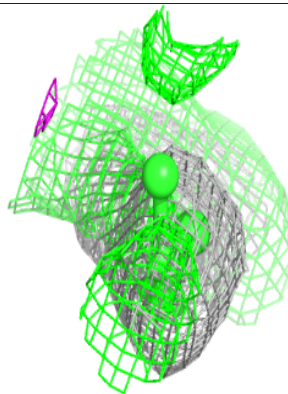
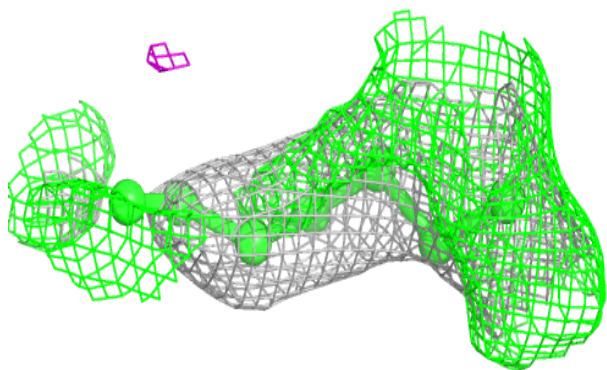
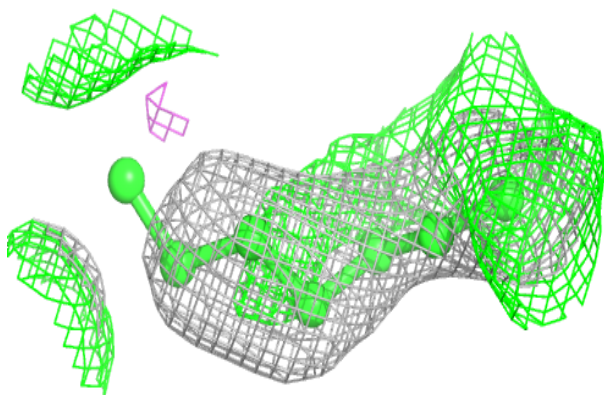


**Electron density around DMU C 324:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

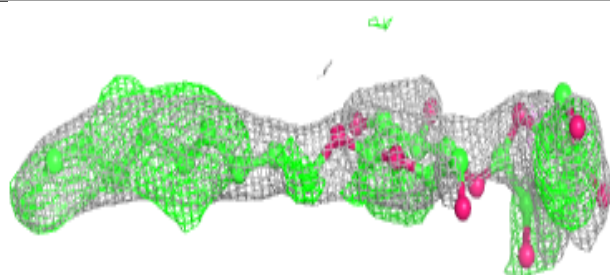
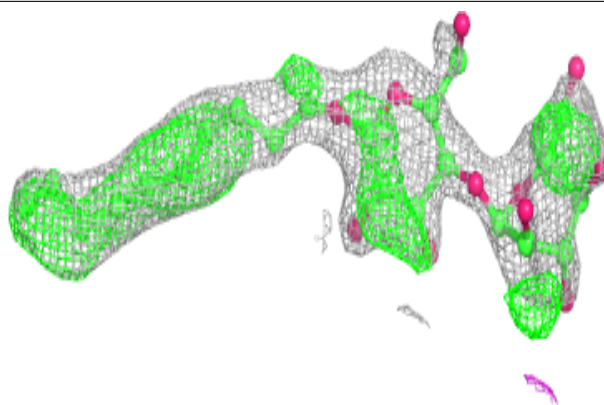
**Electron density around DMU P 315:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

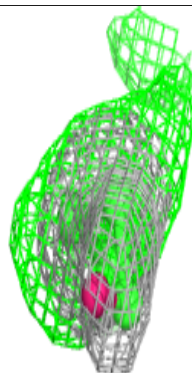
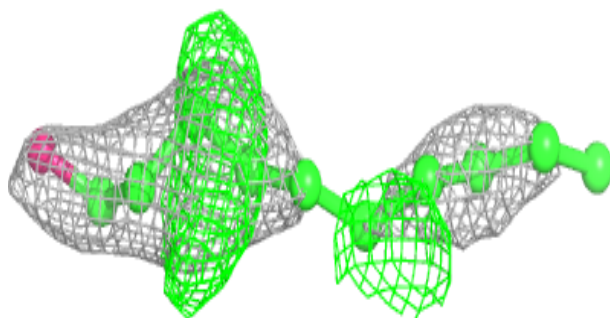
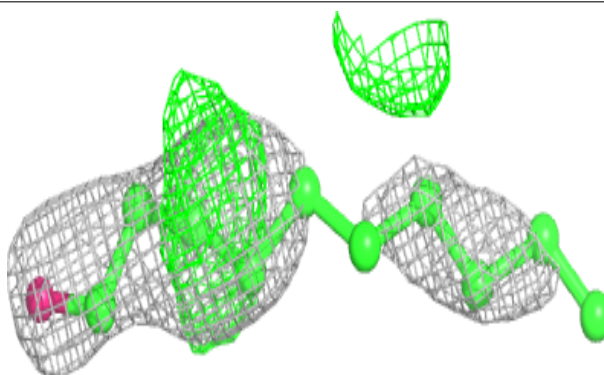


**Electron density around DMU C 319:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DMU A 615:**

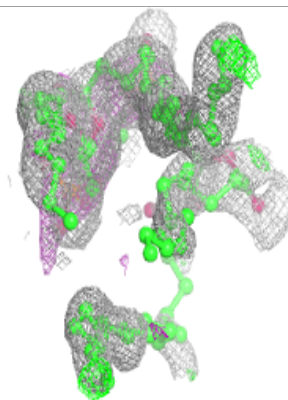
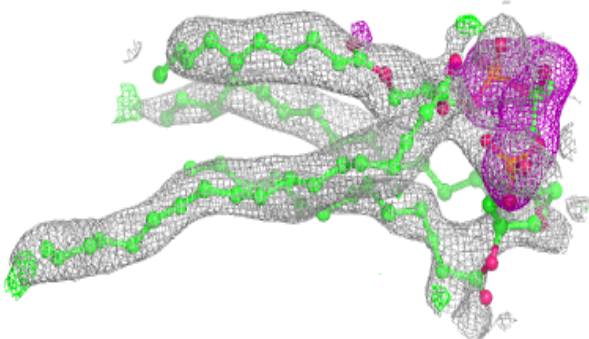
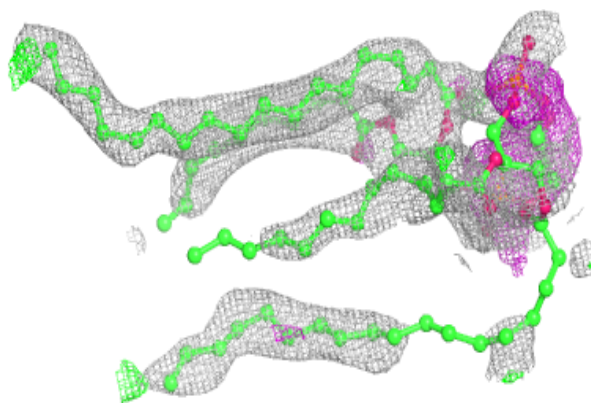
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



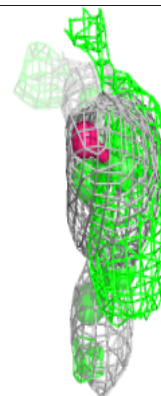
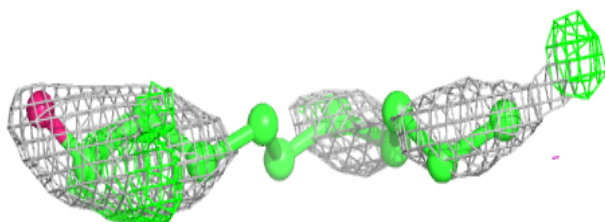
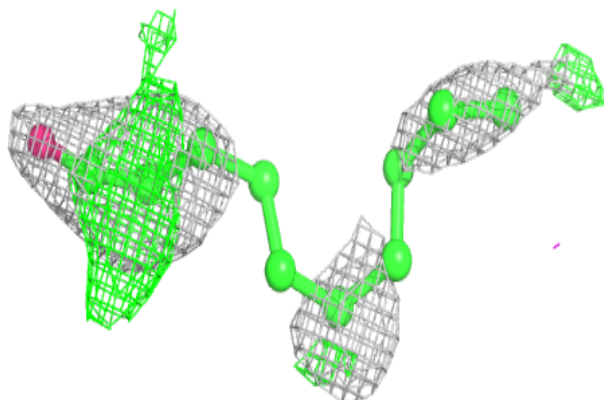


**Electron density around CDL P 304:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DMU G 102:**

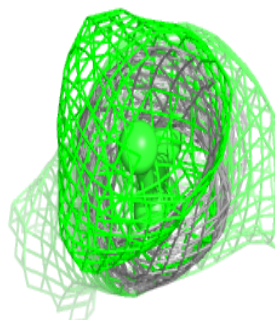
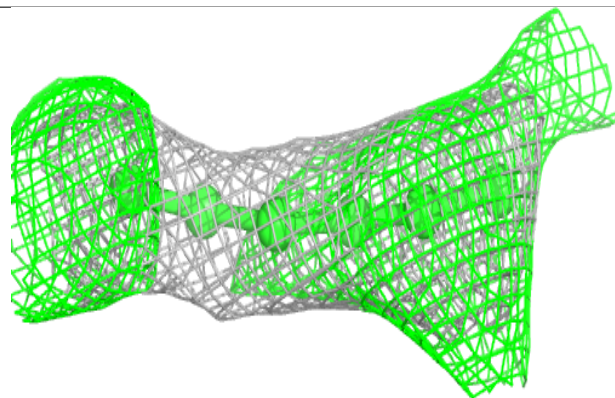
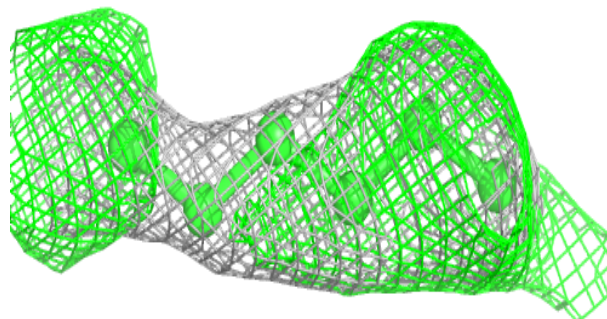
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



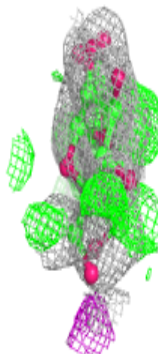
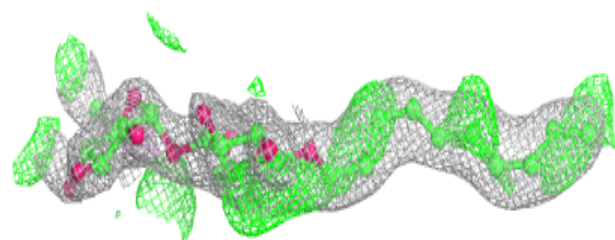
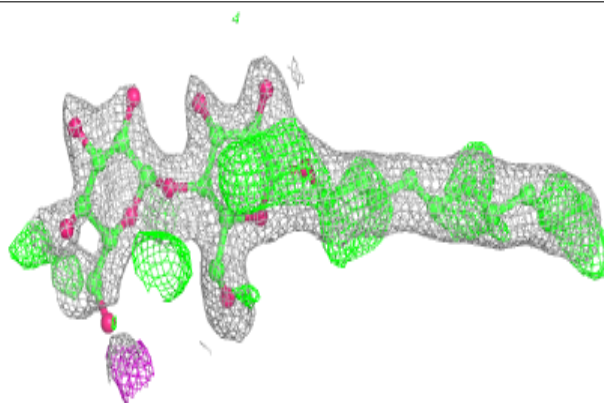


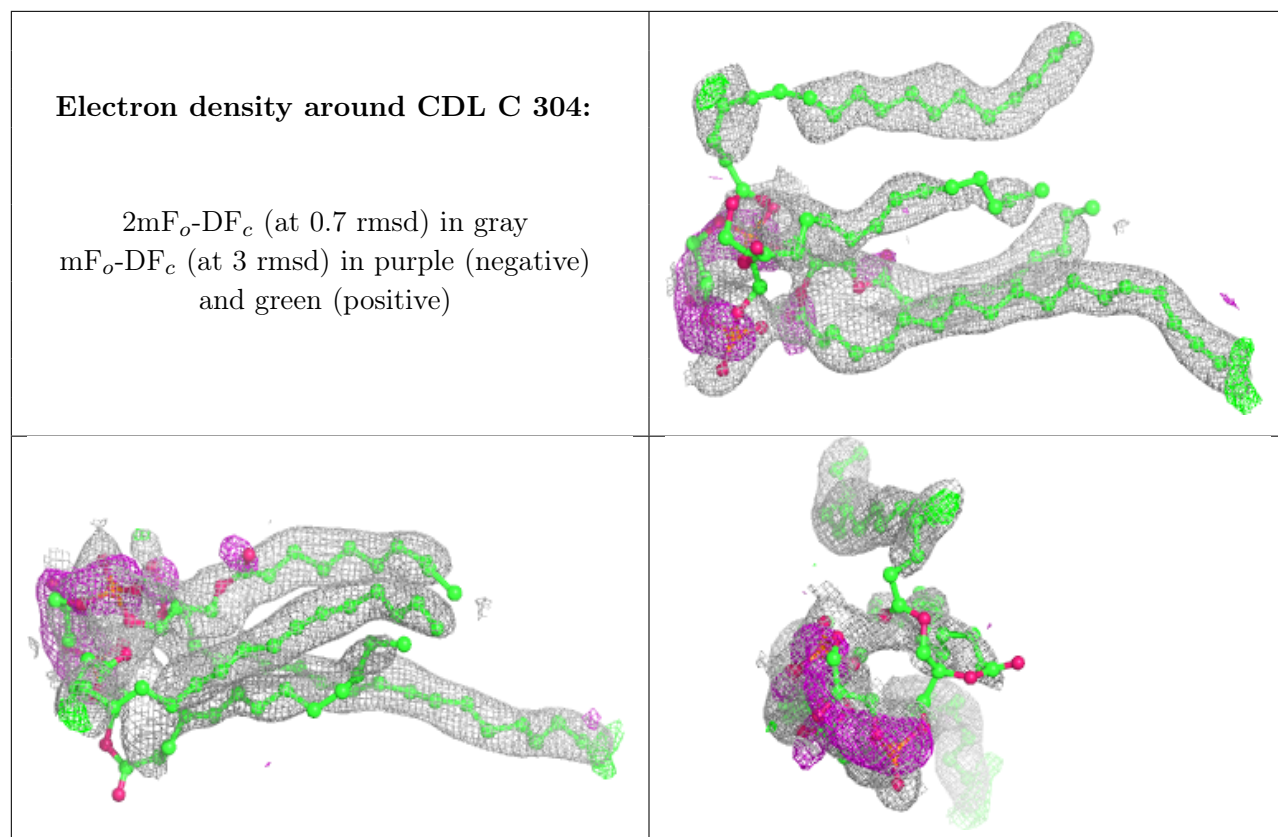
**Electron density around LFA P 308:**

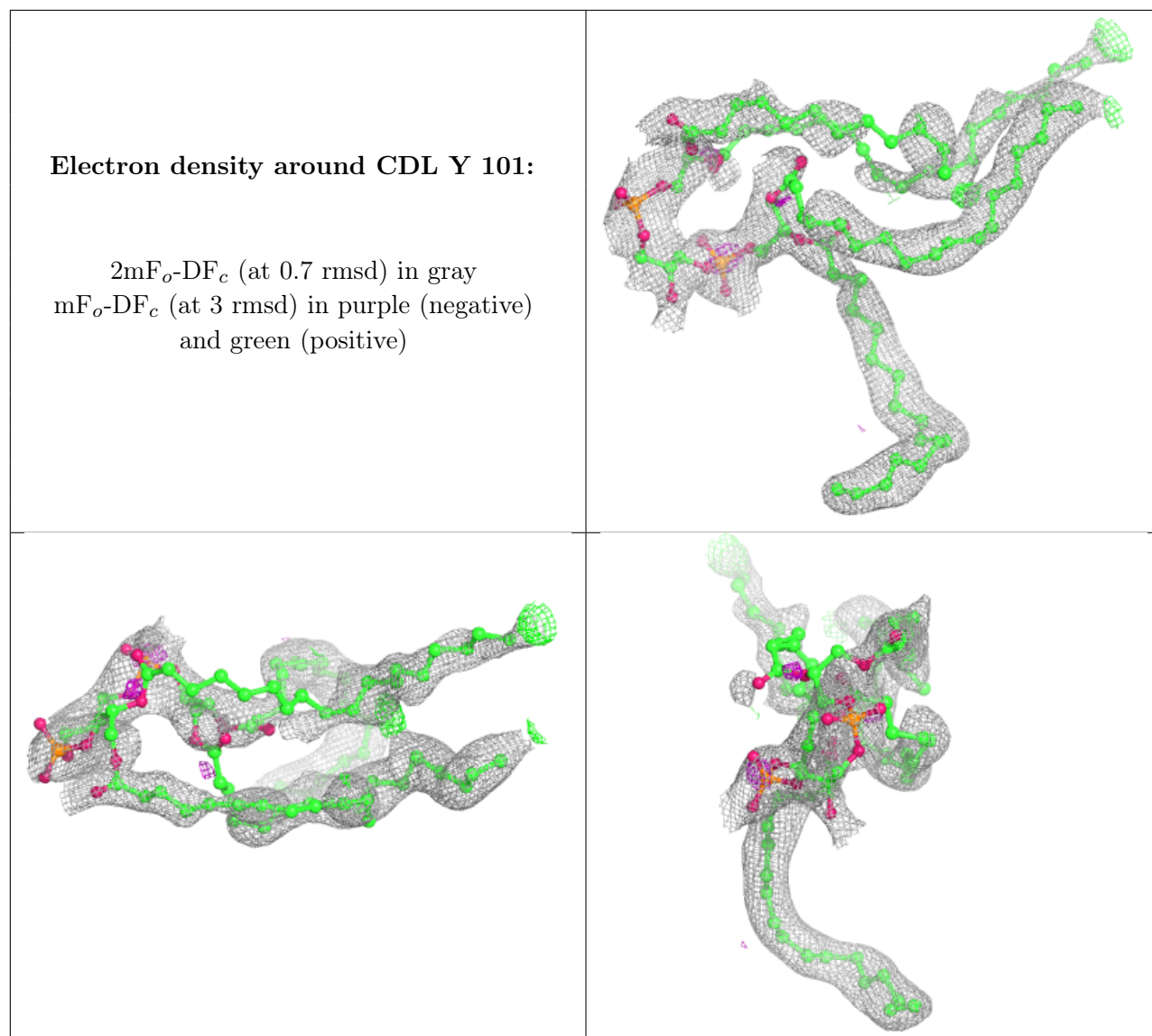
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DMU A 609:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

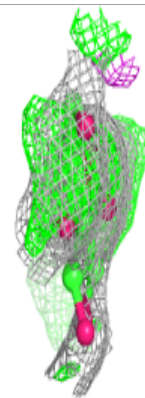
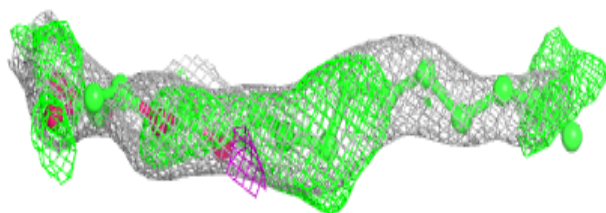
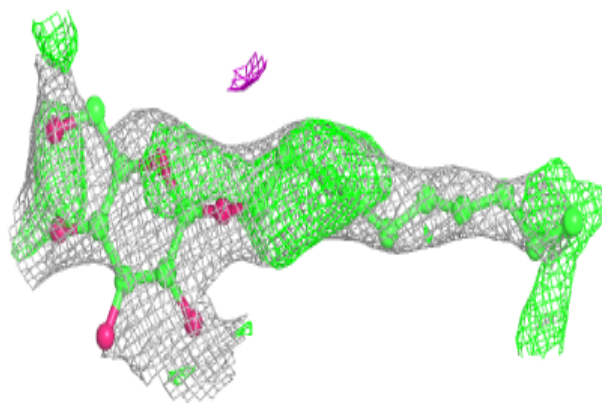




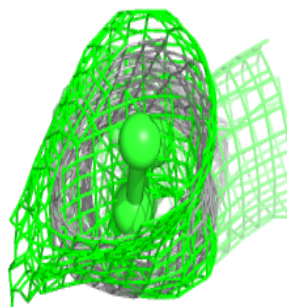
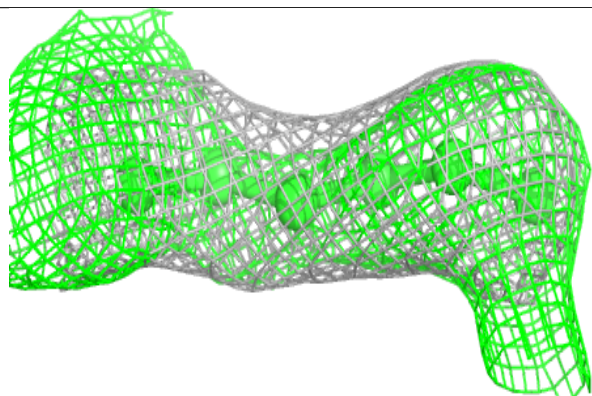
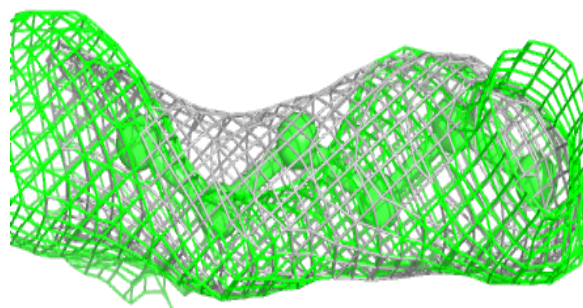


**Electron density around DMU L 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LFA C 308:**

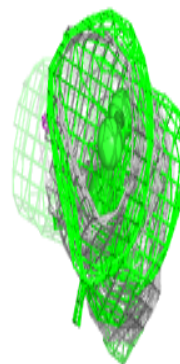
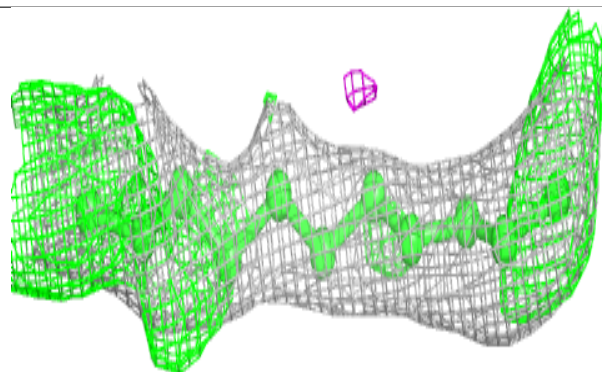
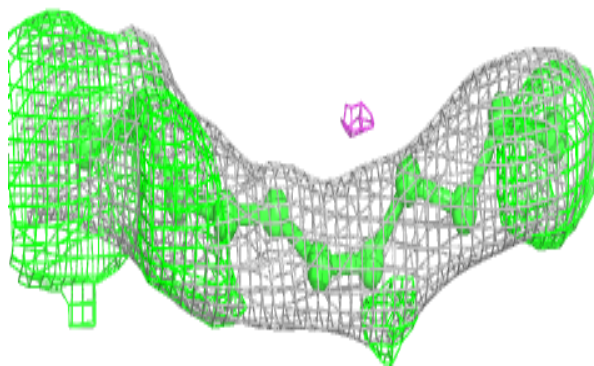
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



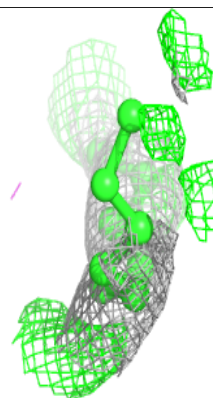
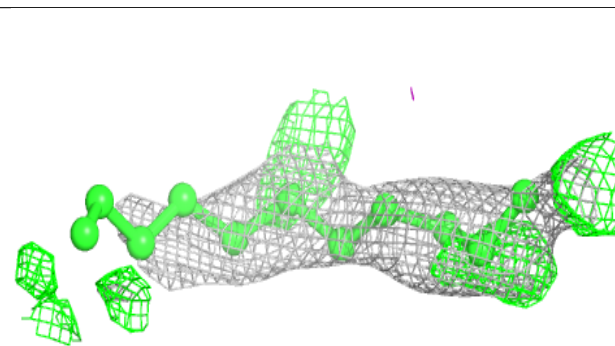
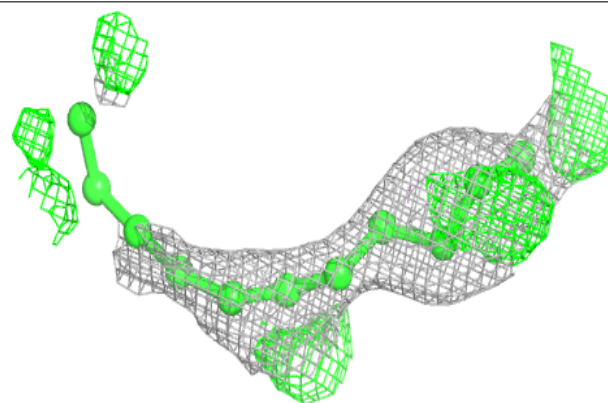


**Electron density around LFA O 303:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

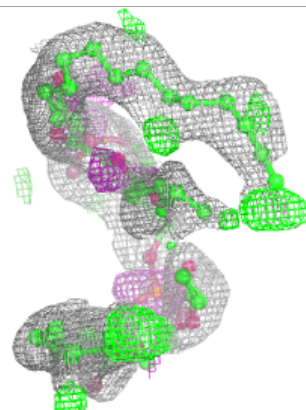
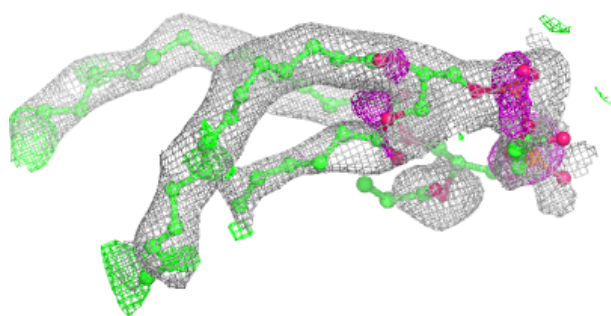
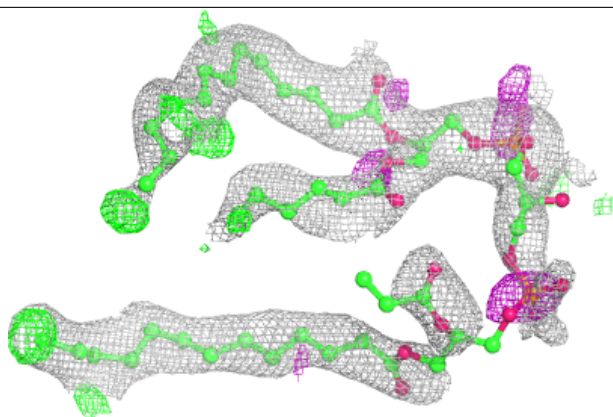
**Electron density around LFA C 311:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

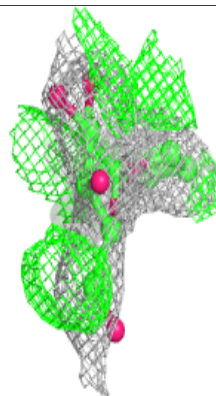
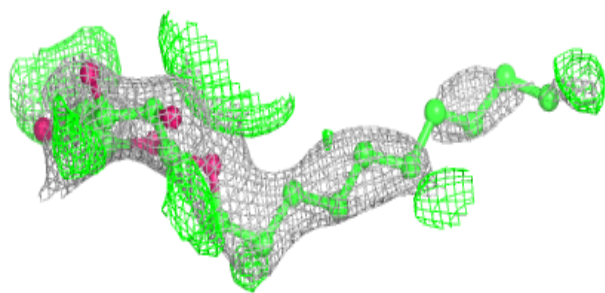
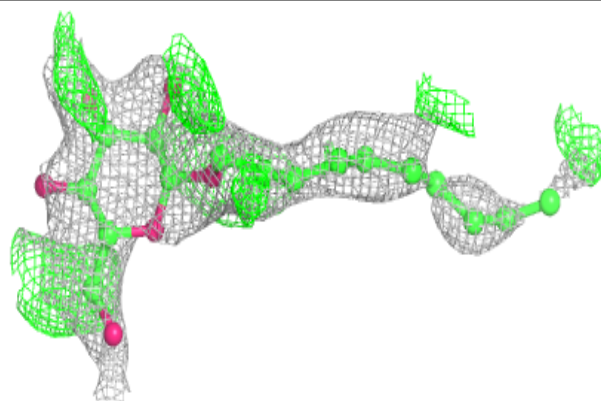


**Electron density around CDL A 606:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

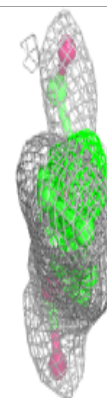
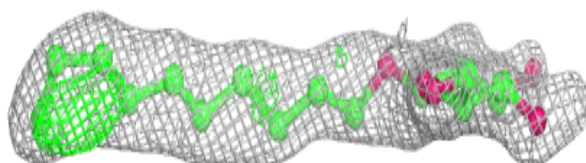
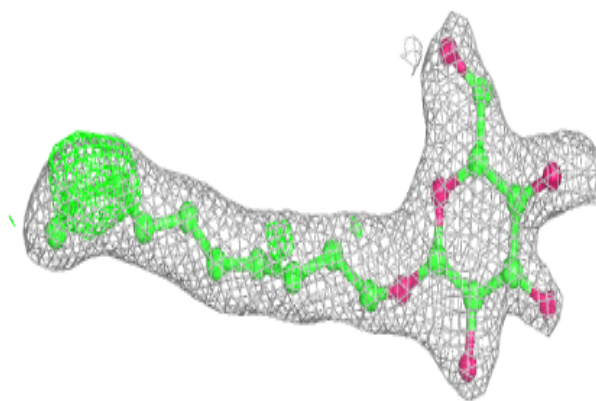
**Electron density around DMU T 105:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

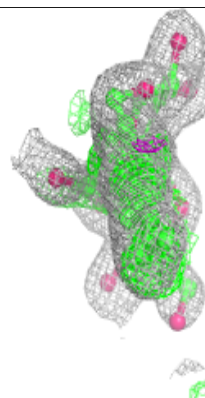
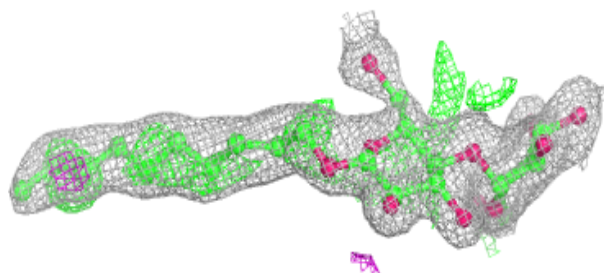
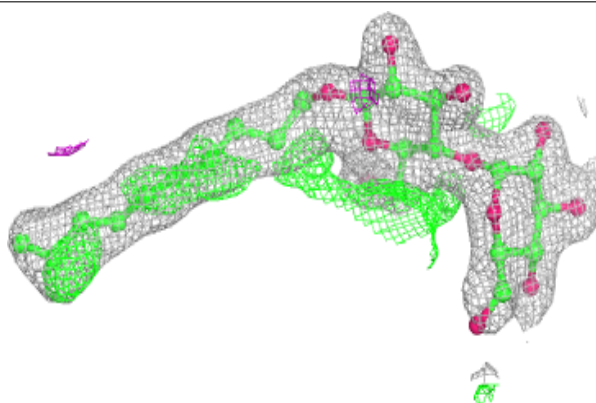


**Electron density around DMU O 308:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DMU D 201:**

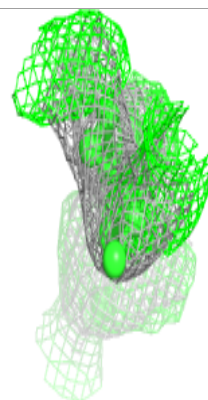
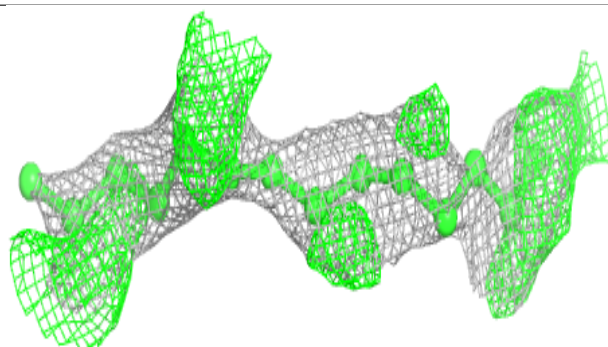
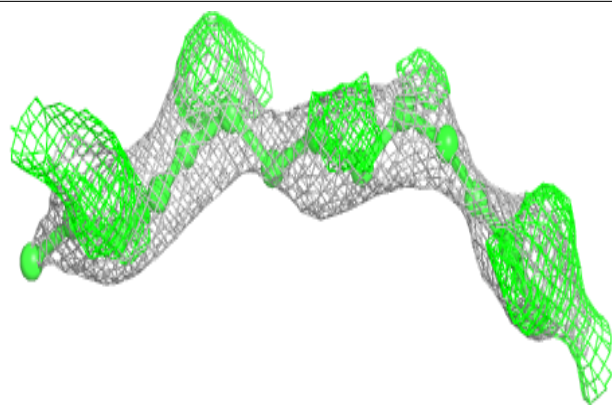
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



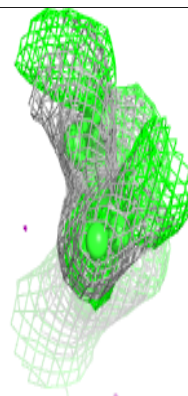
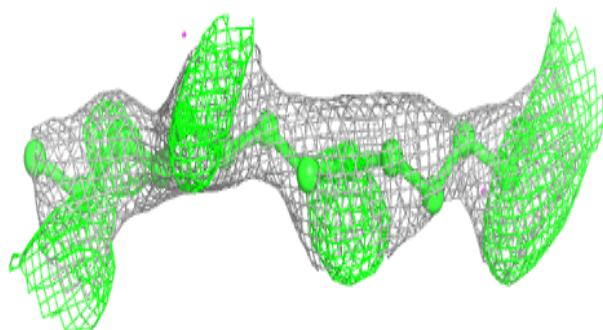
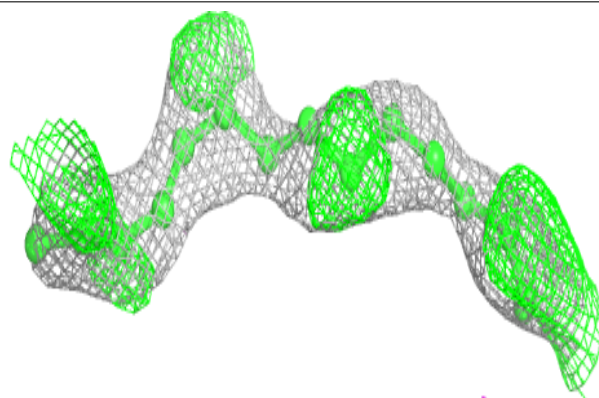


**Electron density around LFA C 312:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LFA T 103:**

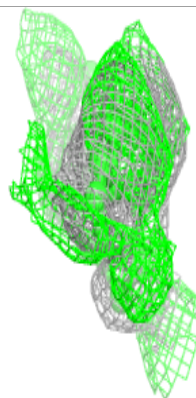
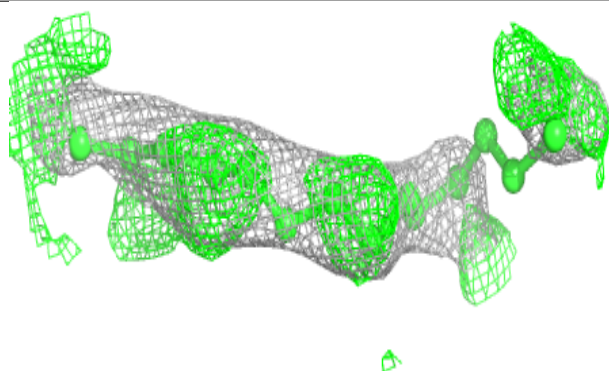
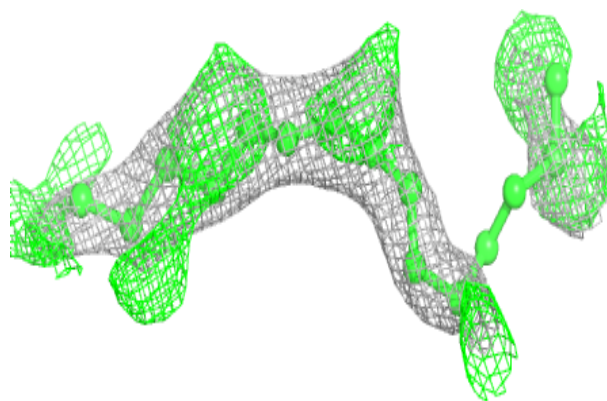
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



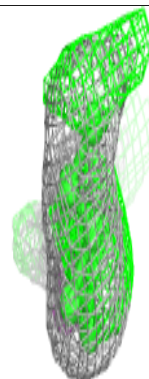
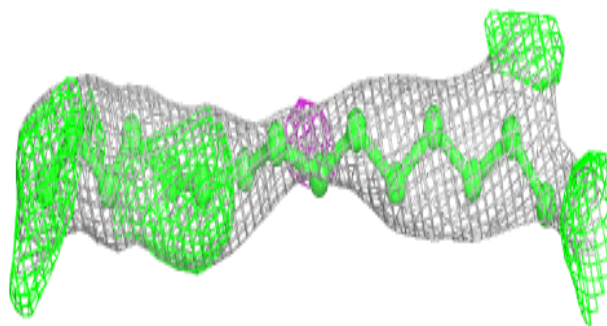
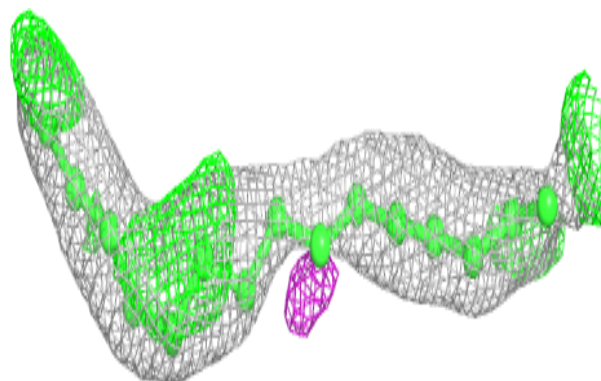


**Electron density around LFA C 325:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

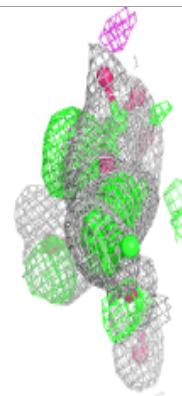
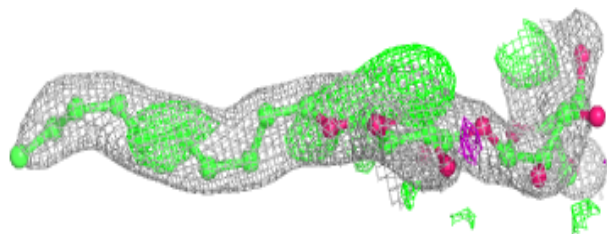
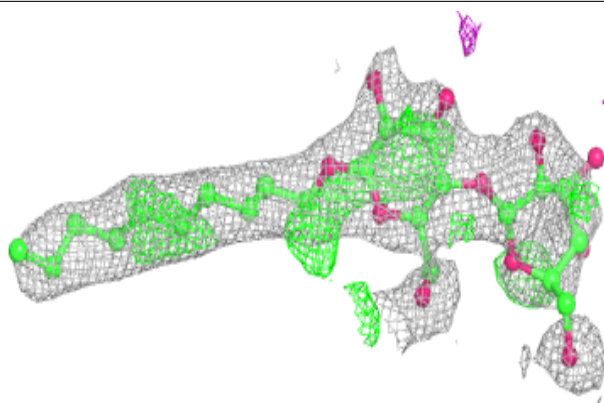
**Electron density around LFA C 314:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

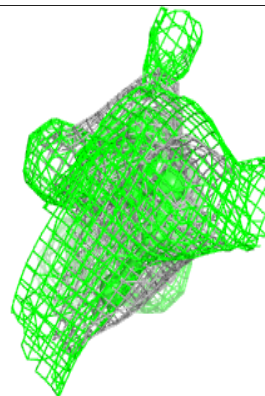
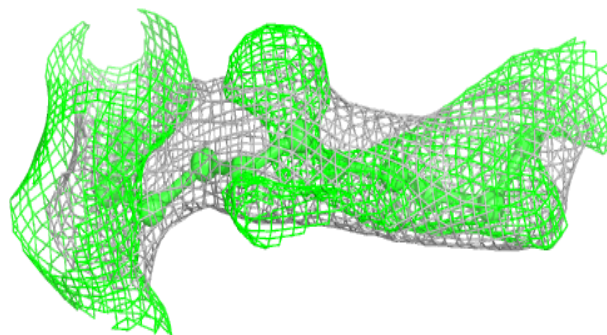
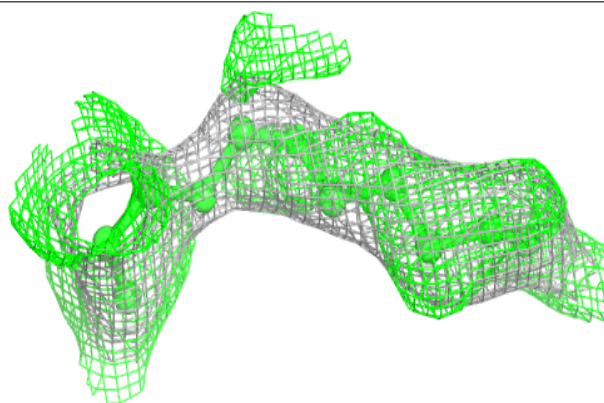


**Electron density around DMU N 609:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

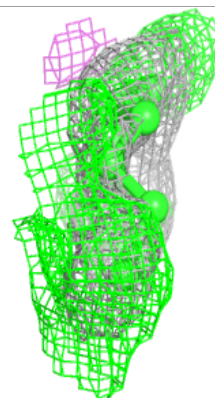
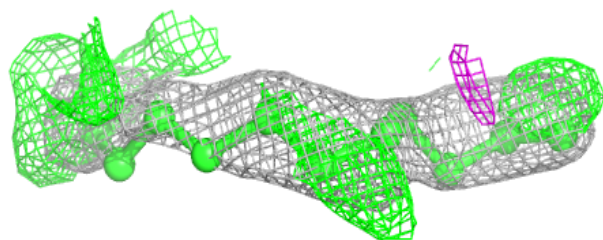
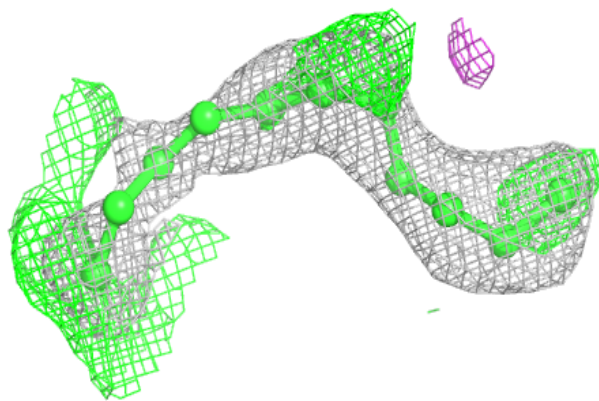
**Electron density around LFA C 313:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

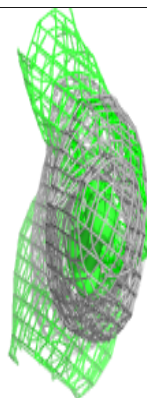
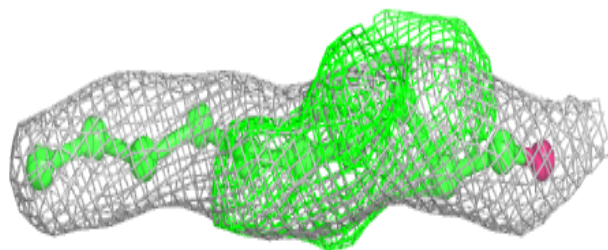
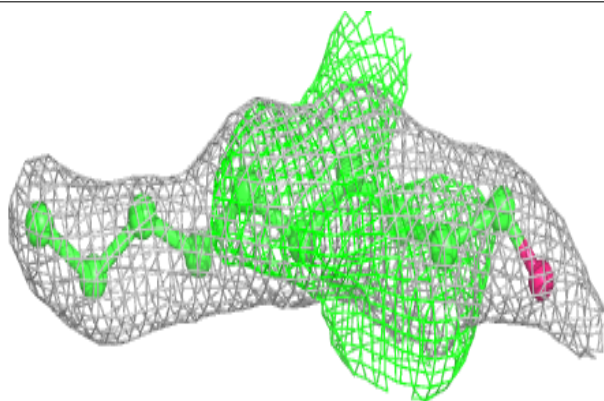


**Electron density around LFA P 310:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DMU B 303:**

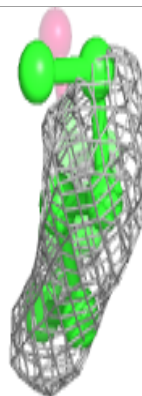
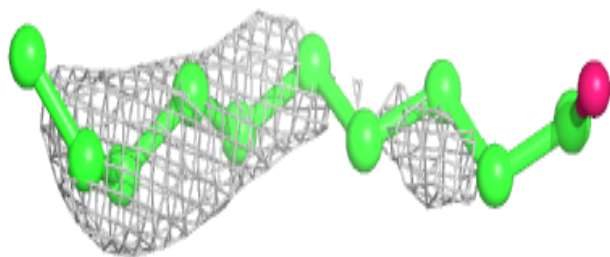
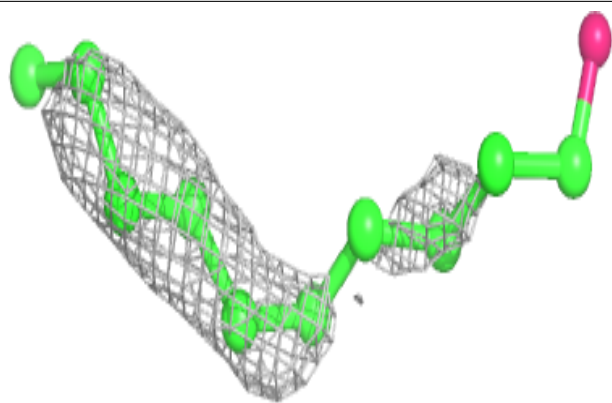
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



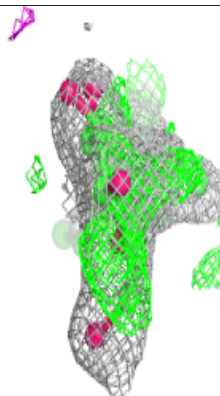
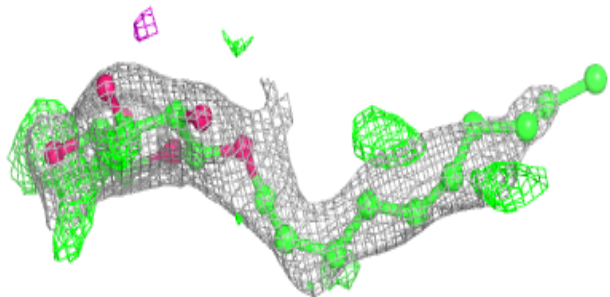
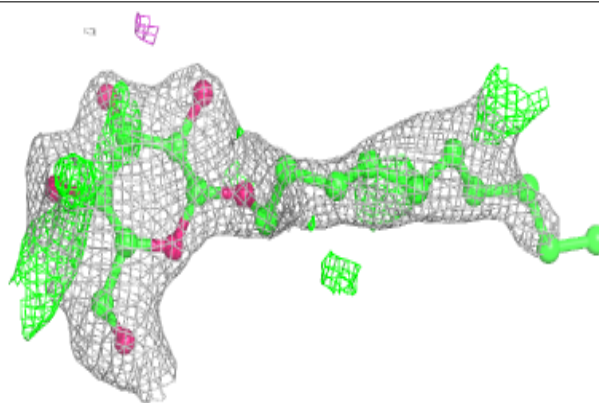


**Electron density around DMU W 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

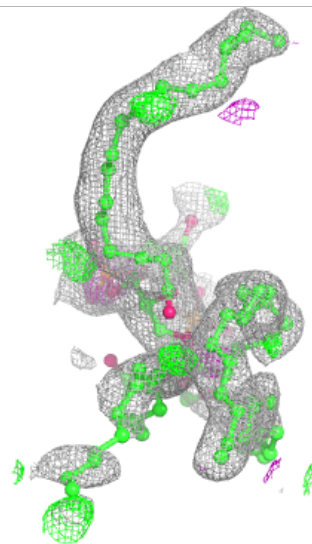
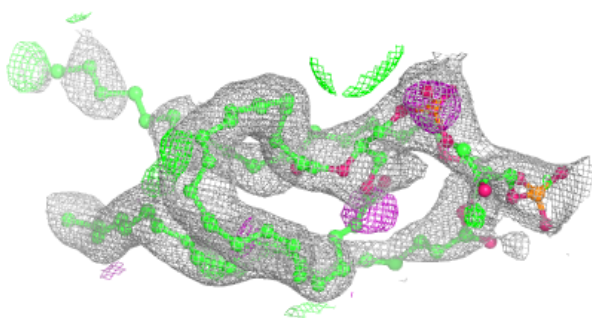
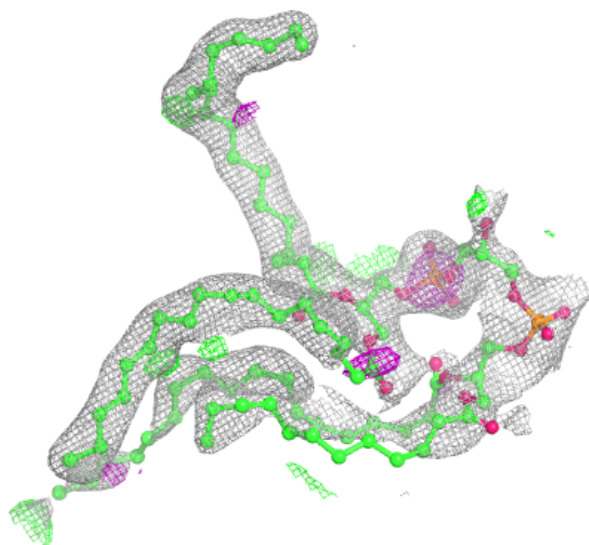
**Electron density around DMU G 103:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



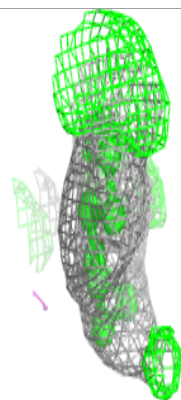
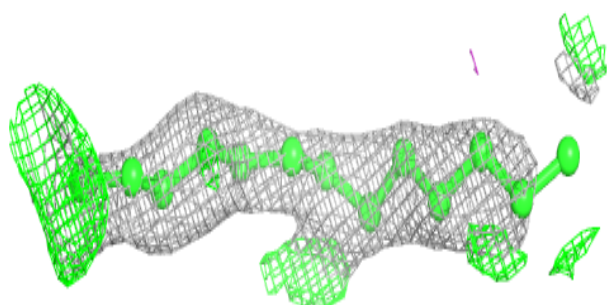
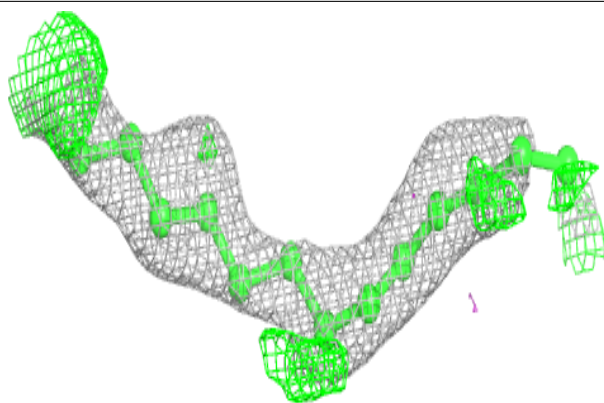
**Electron density around CDL L 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

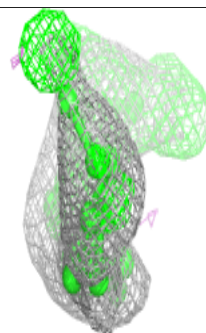
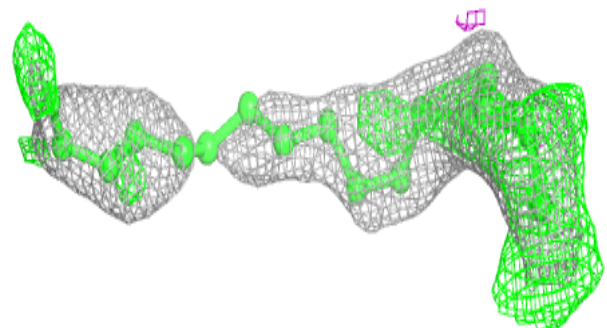
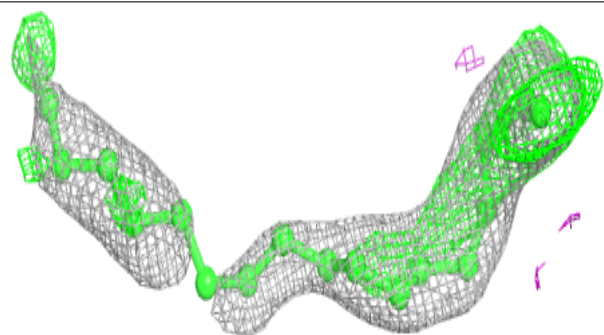


**Electron density around LFA C 315:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

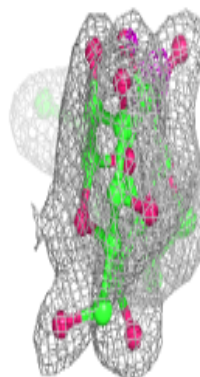
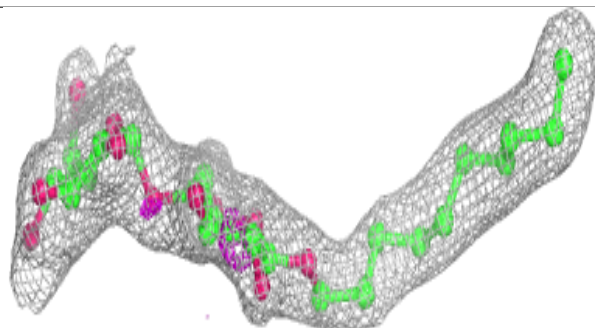
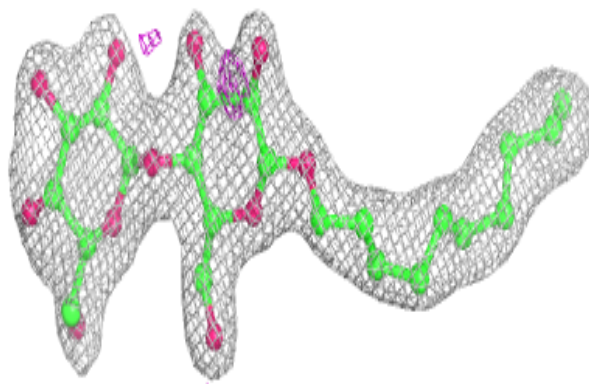
**Electron density around LFA B 307:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

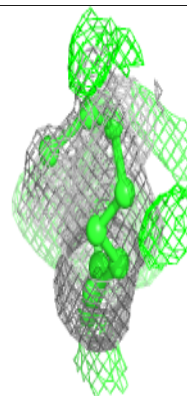
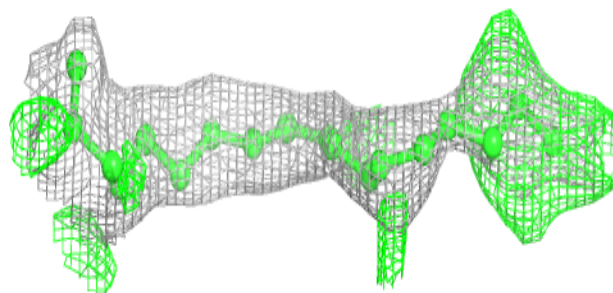
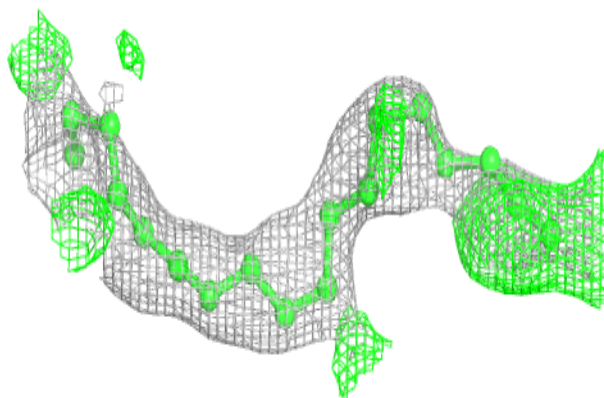


**Electron density around DMU Z 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LFA C 309:**

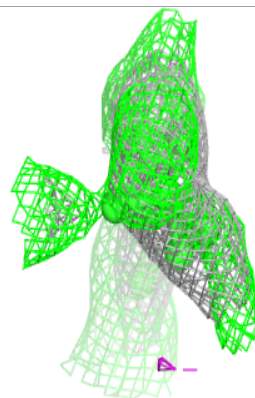
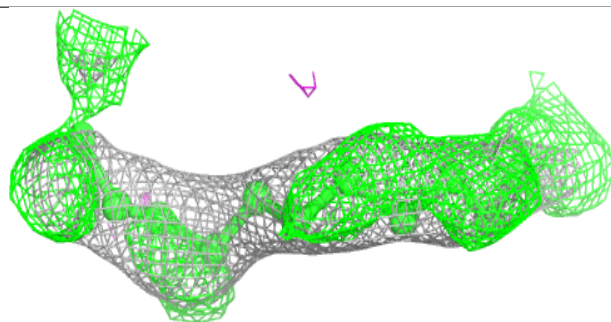
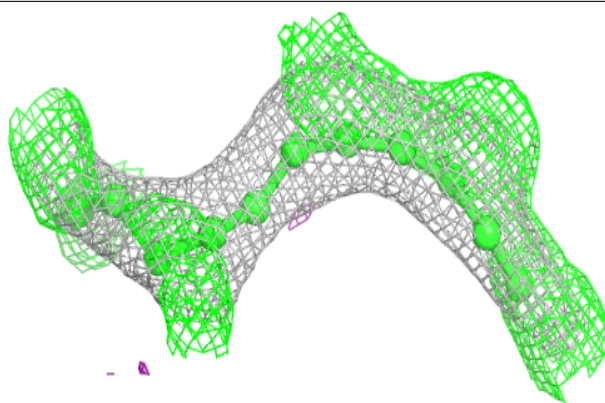
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



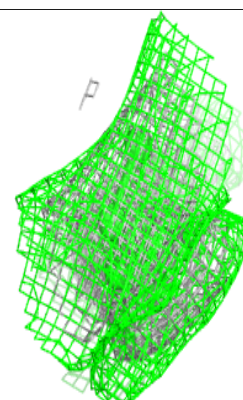
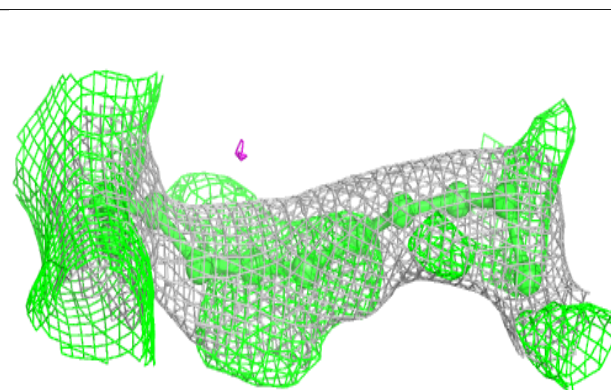
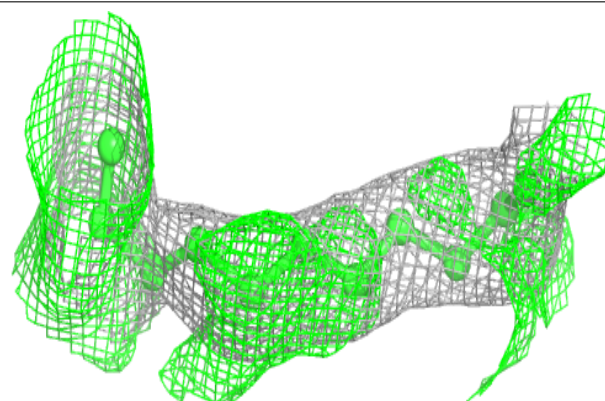


**Electron density around LFA C 307:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around LFA P 311:**

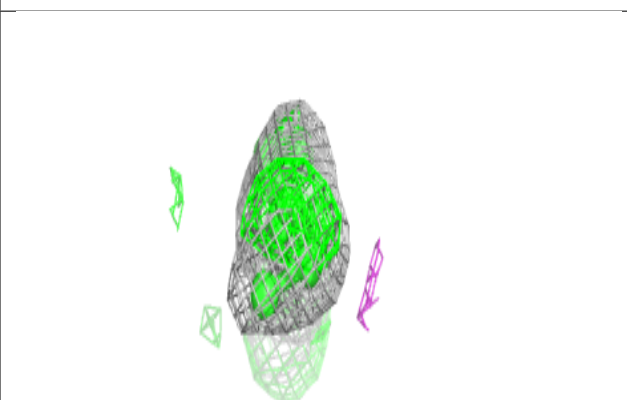
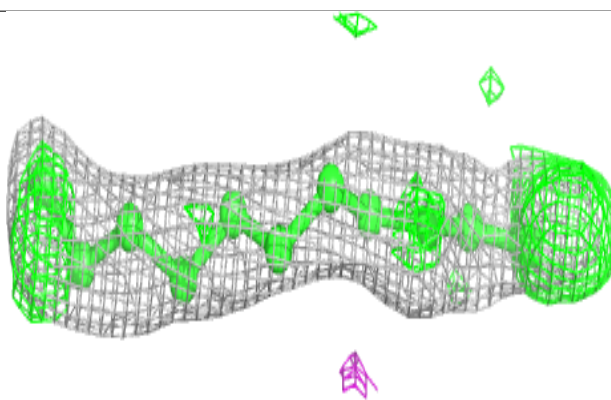
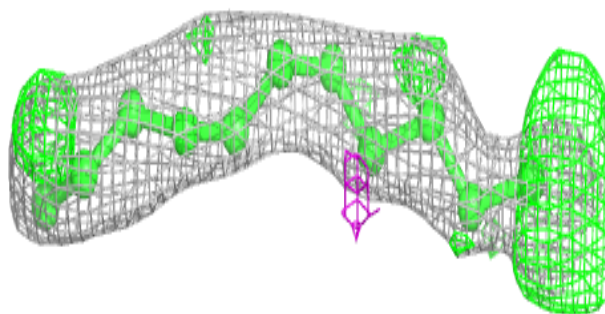
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



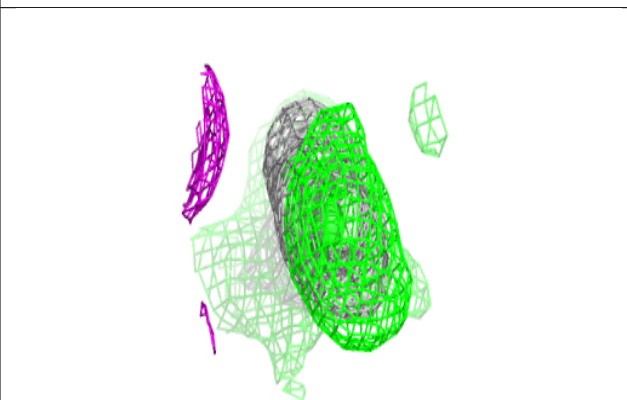
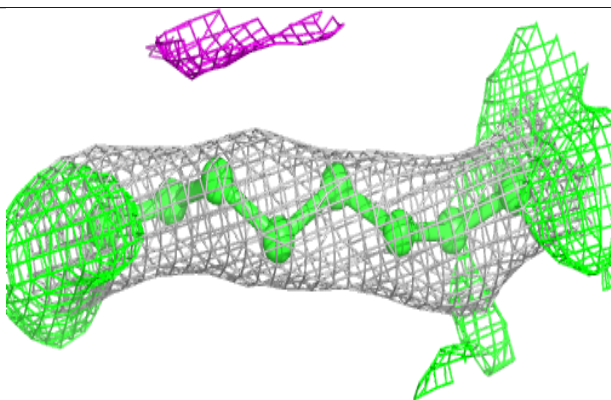
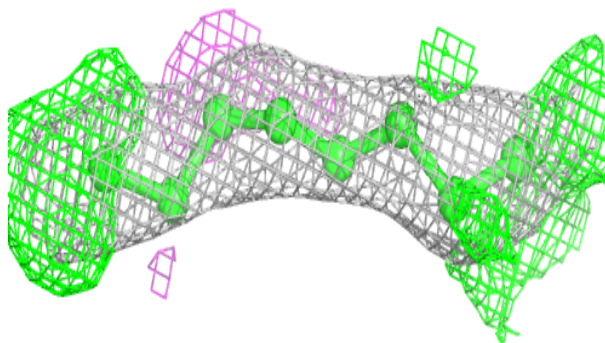


**Electron density around LFA T 104:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

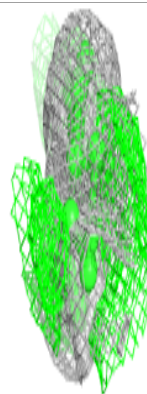
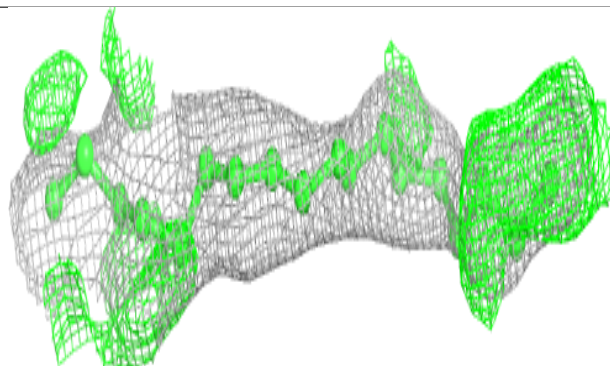
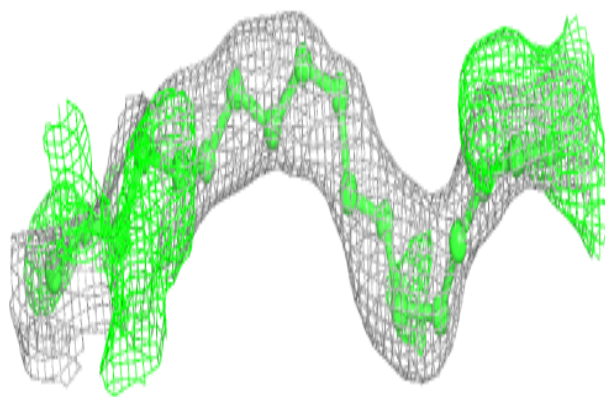
**Electron density around DMU M 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

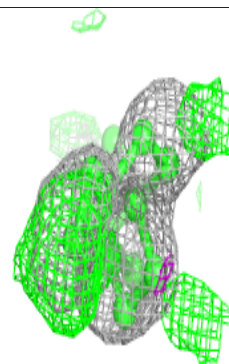
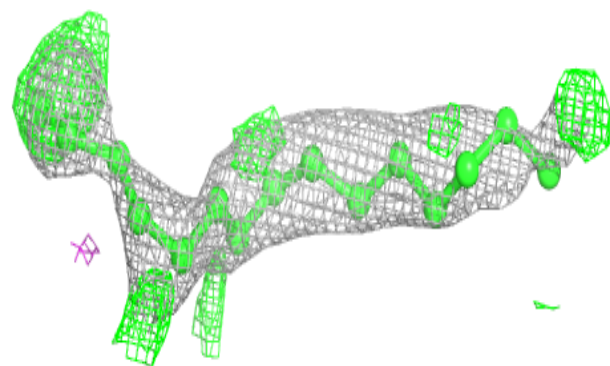
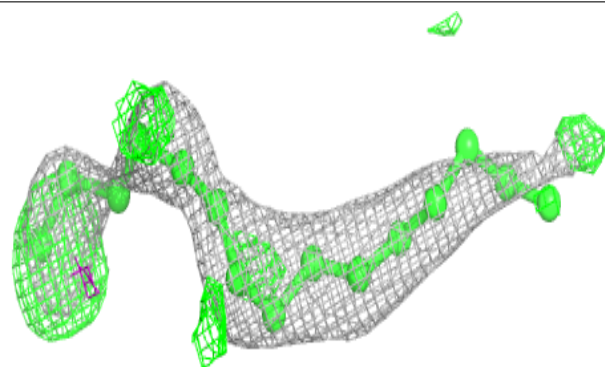


**Electron density around LFA P 309:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

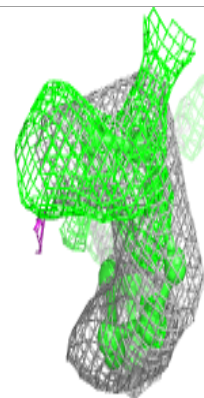
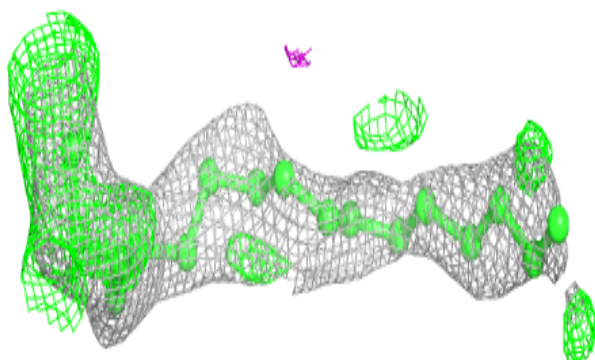
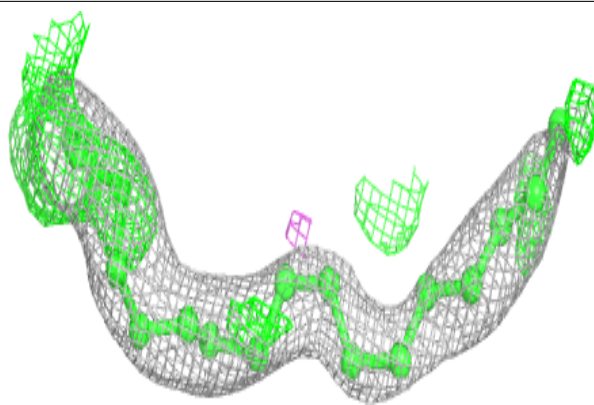
**Electron density around LFA C 310:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

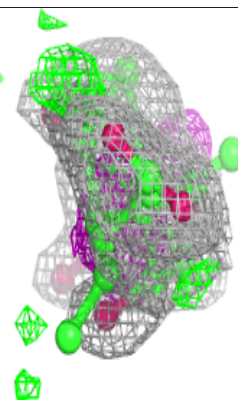
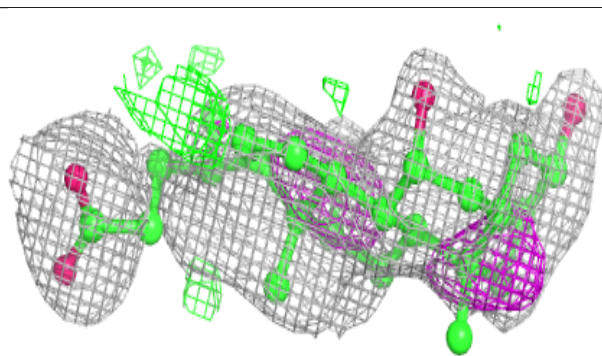
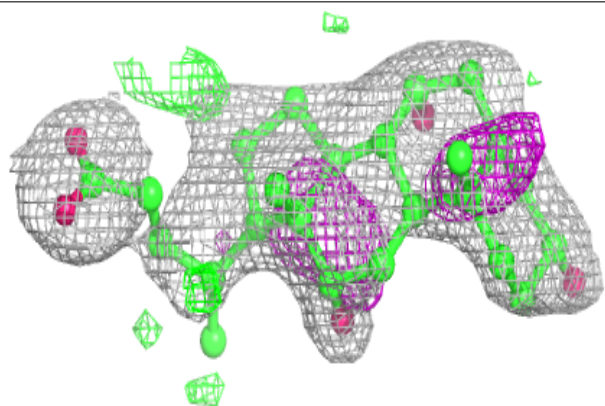


**Electron density around LFA O 302:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CHD P 305:**

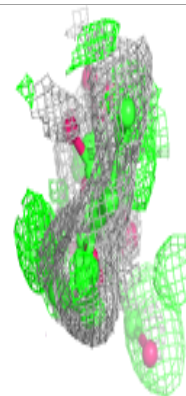
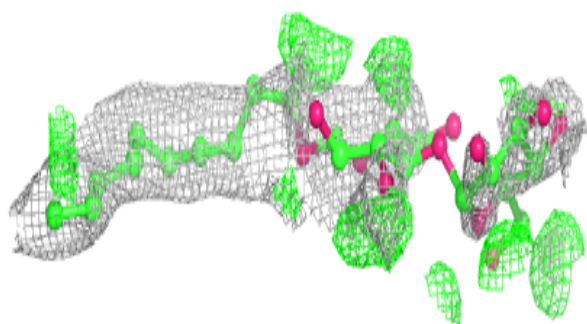
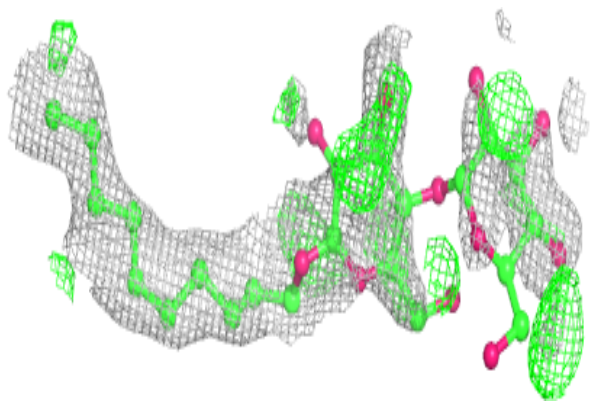
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



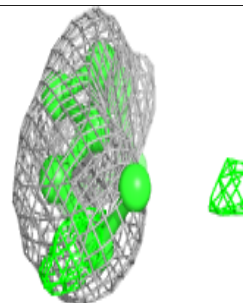
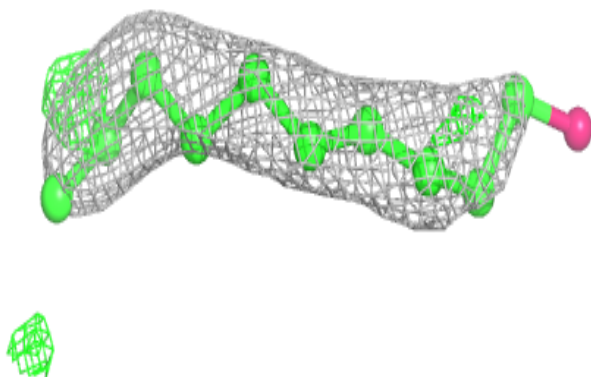
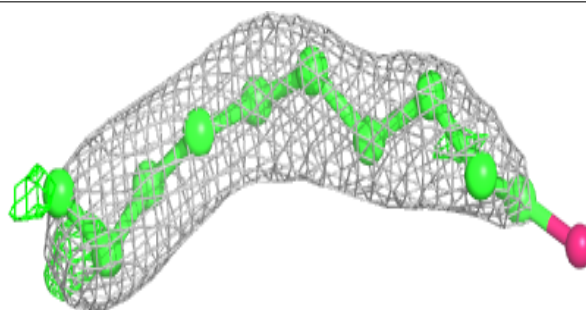


**Electron density around DMU H 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

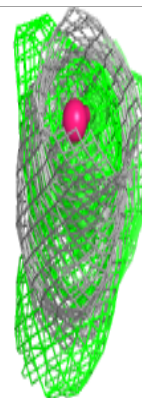
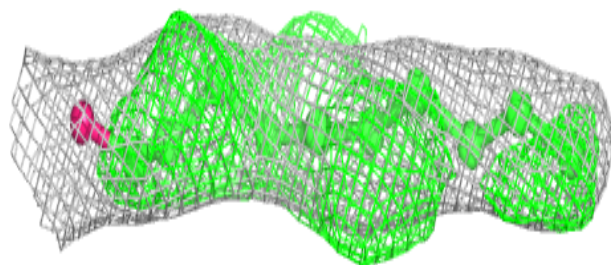
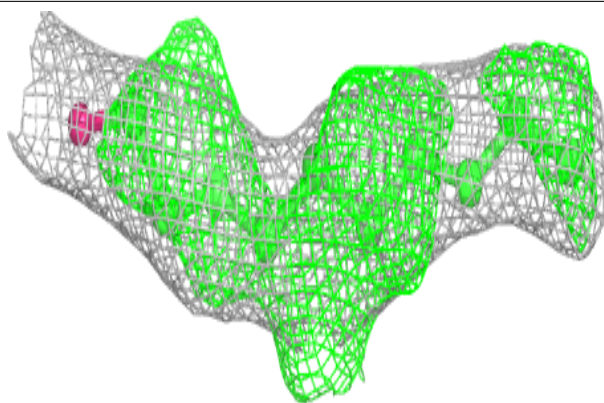
**Electron density around DMU J 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

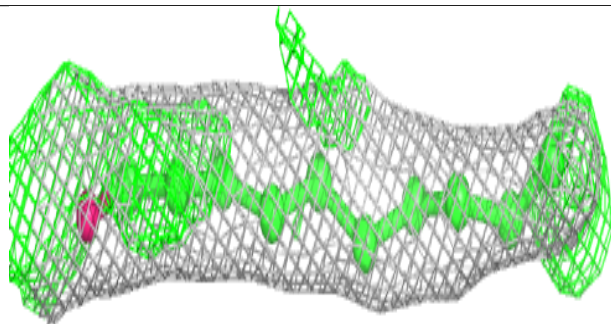
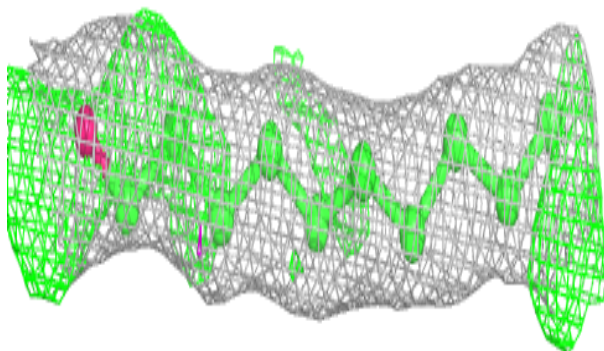


**Electron density around DMU O 307:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

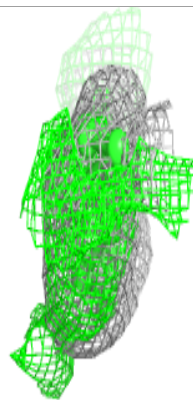
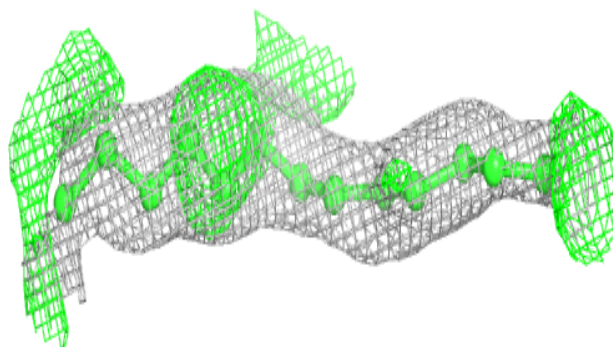
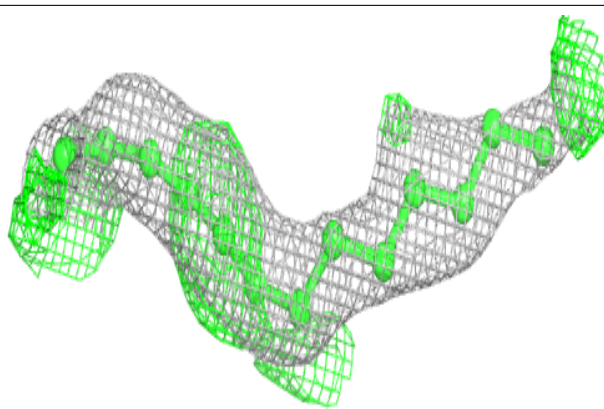
**Electron density around DMU C 306:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

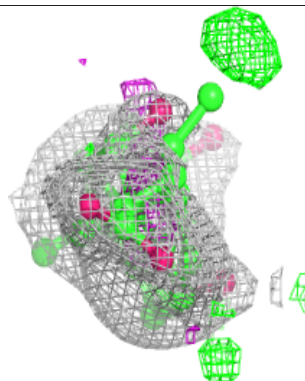
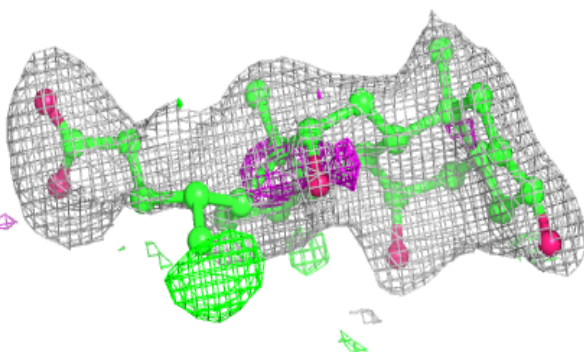
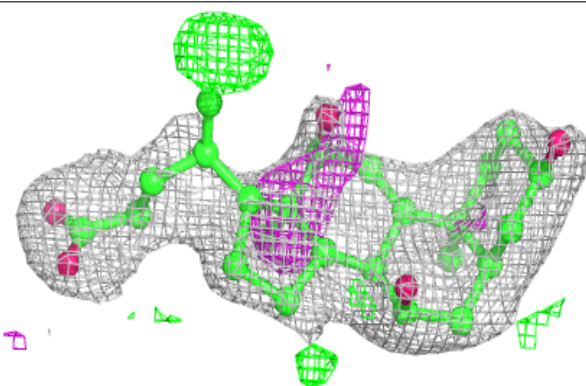


**Electron density around LFA P 313:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CHD C 305:**

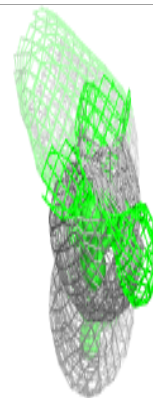
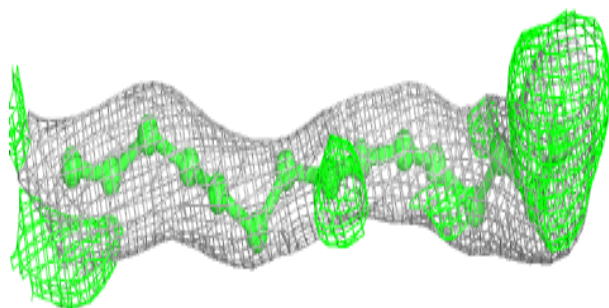
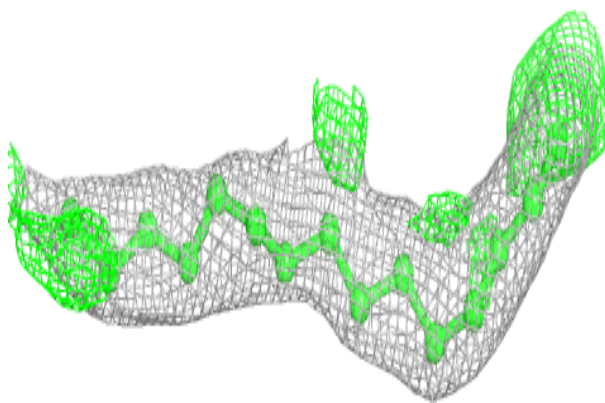
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



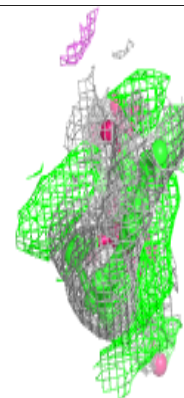
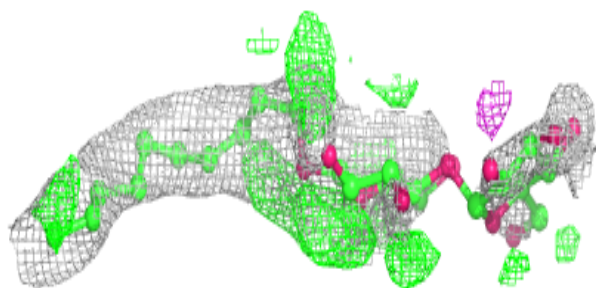
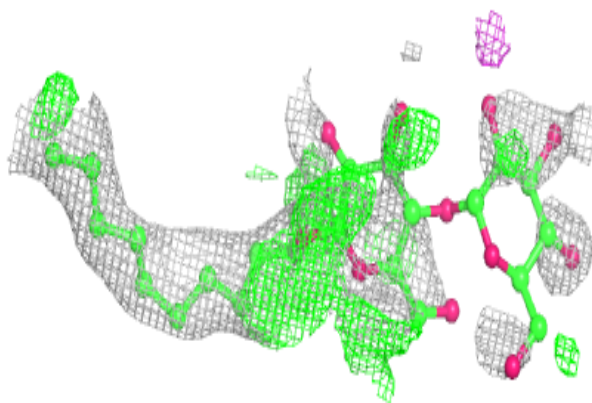


**Electron density around LFA P 312:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

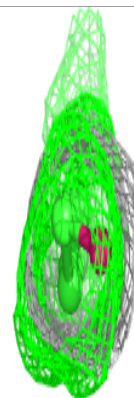
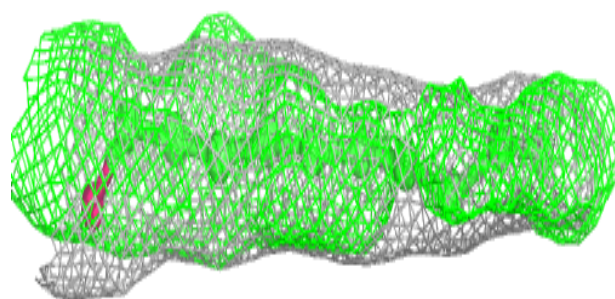
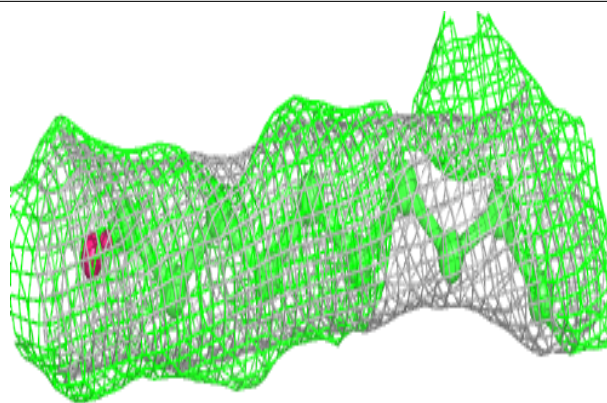
**Electron density around DMU N 616:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

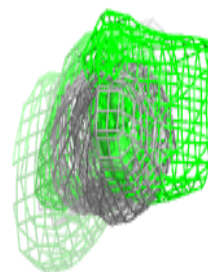
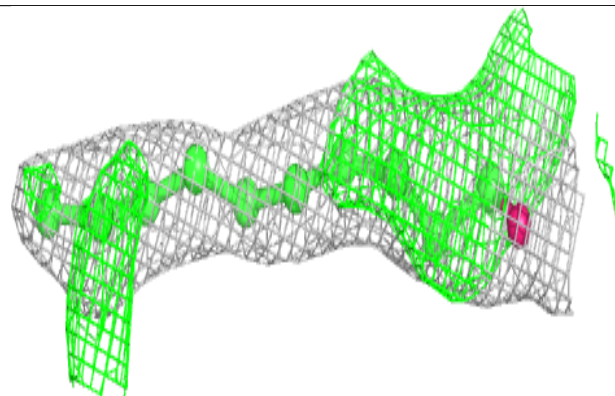
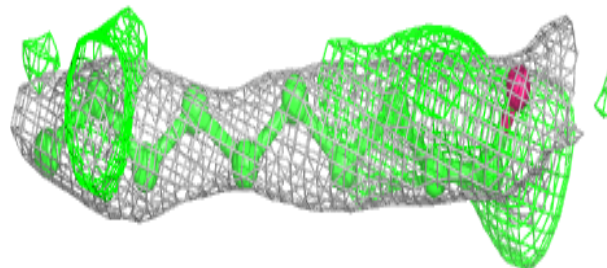


**Electron density around DMU P 306:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around DMU B 302:**

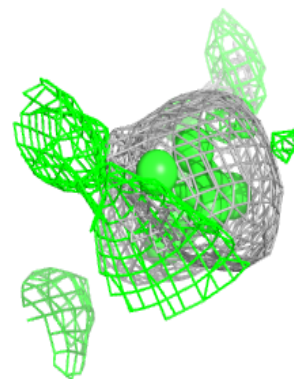
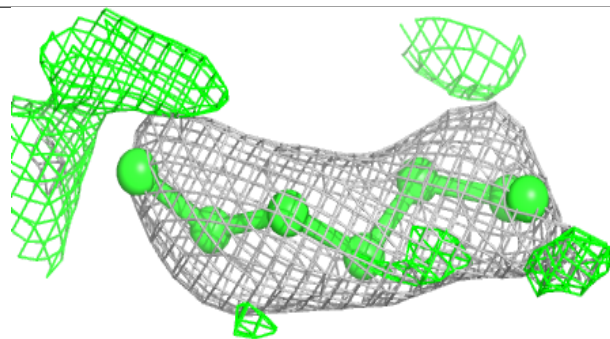
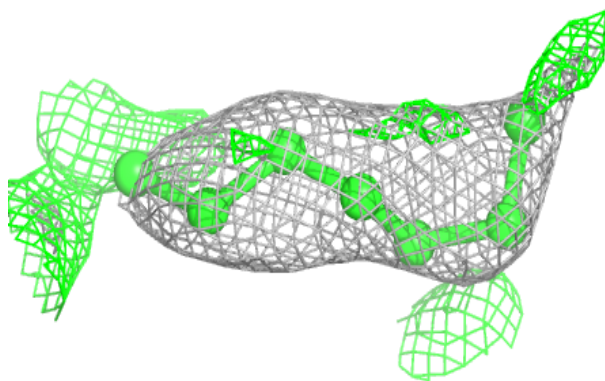
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



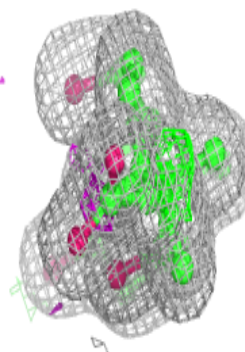
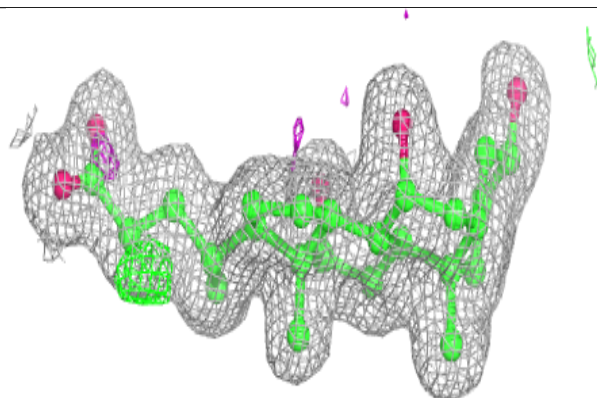
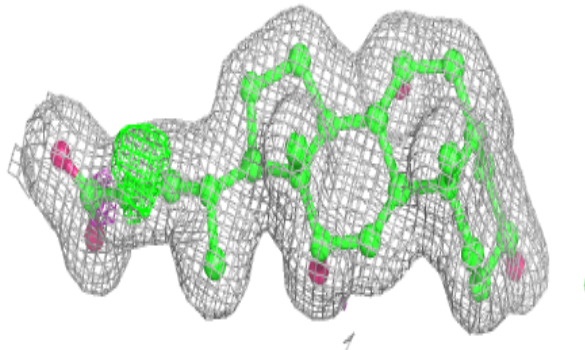


**Electron density around DMU C 317:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

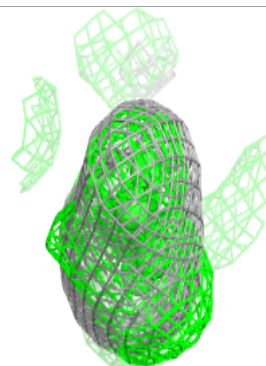
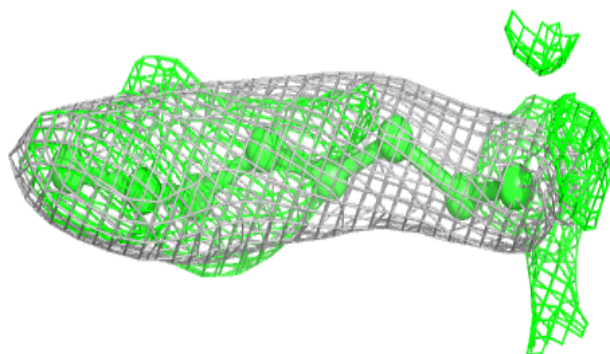
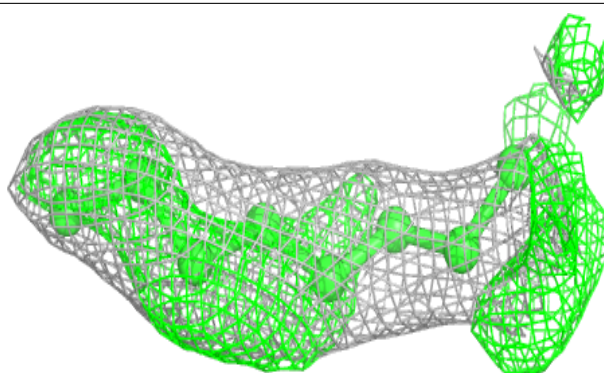
**Electron density around CHD C 301:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

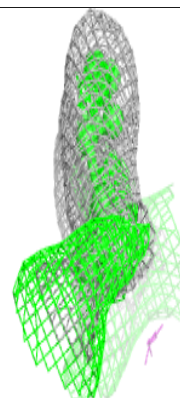
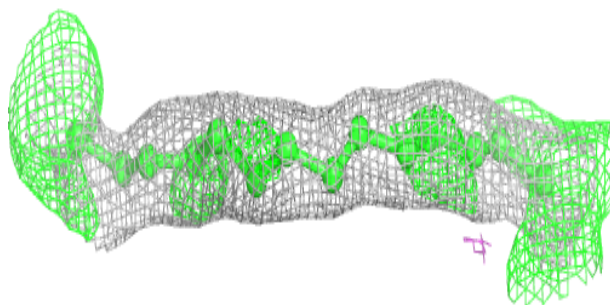
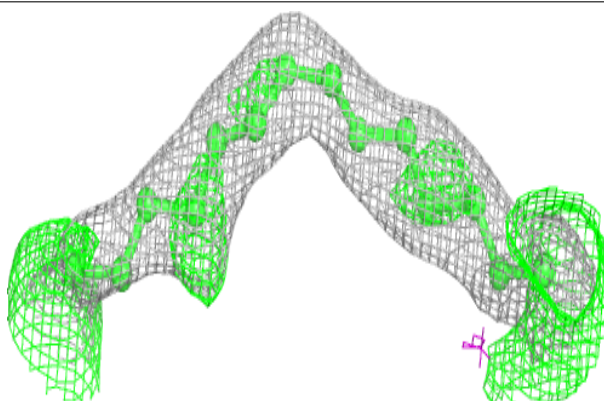


**Electron density around DMU Z 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

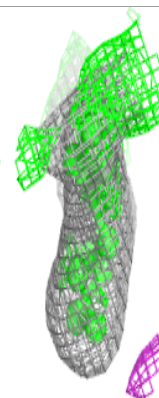
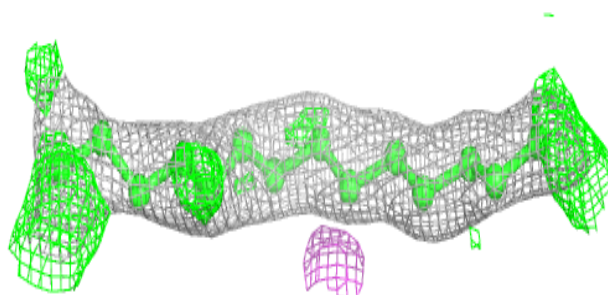
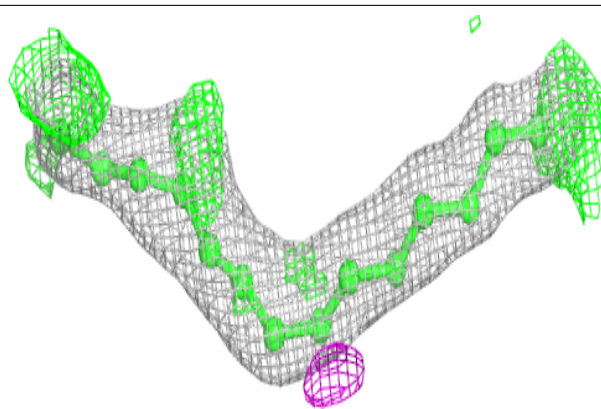
**Electron density around LFA A 607:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

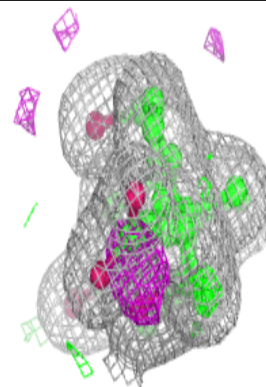
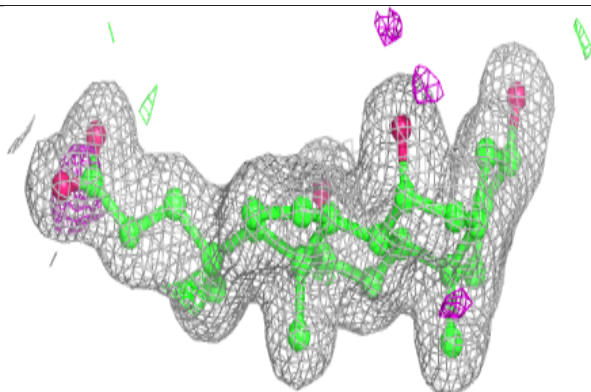
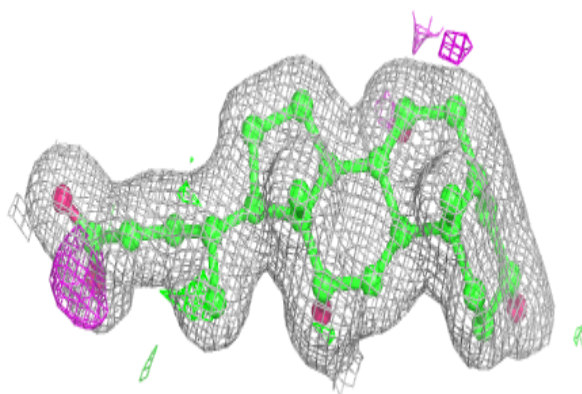


**Electron density around LFA N 606:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around CHD P 301:**

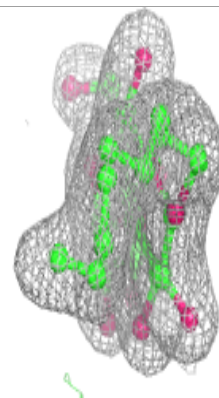
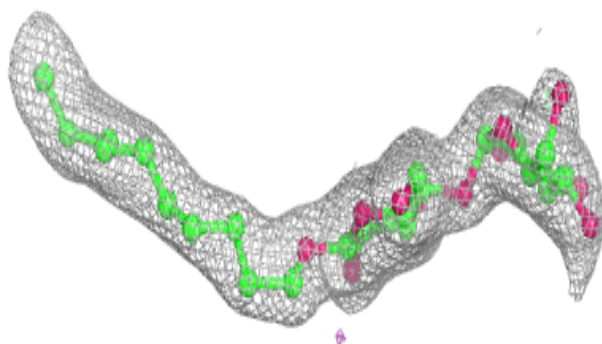
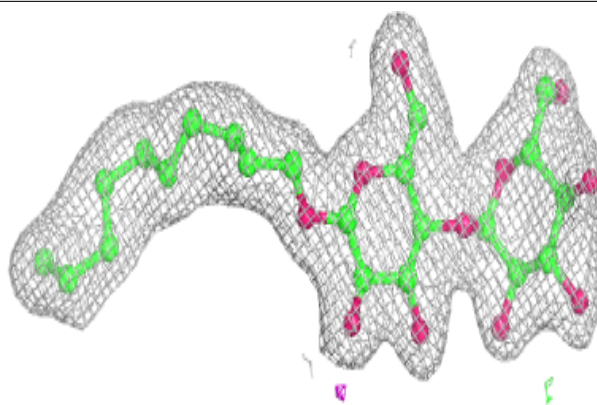
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



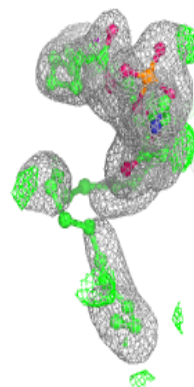
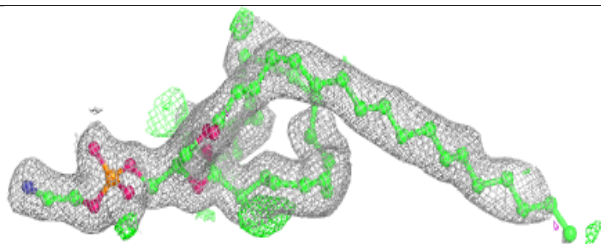
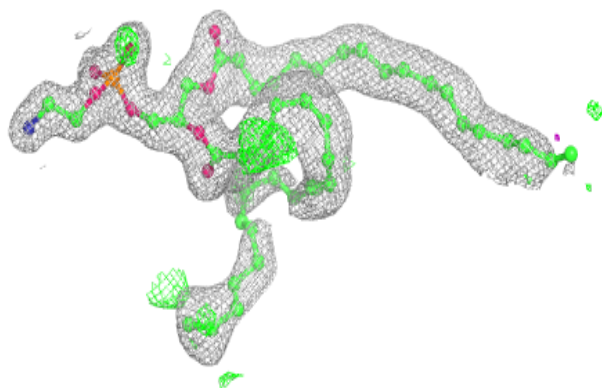


**Electron density around DMU M 101:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

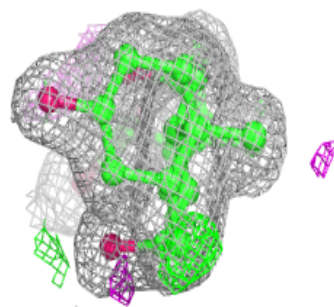
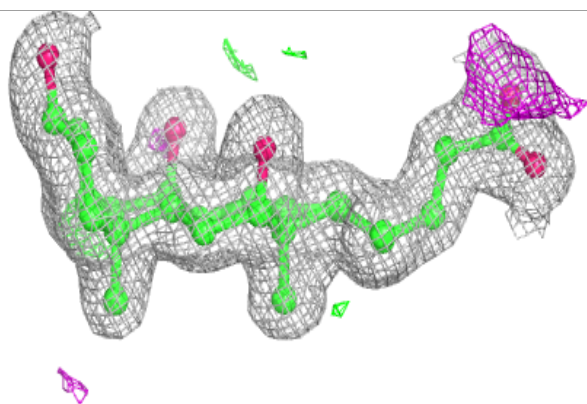
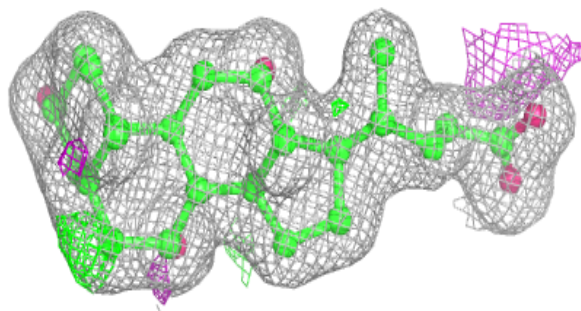
**Electron density around PEK T 102:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

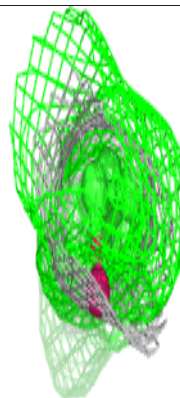
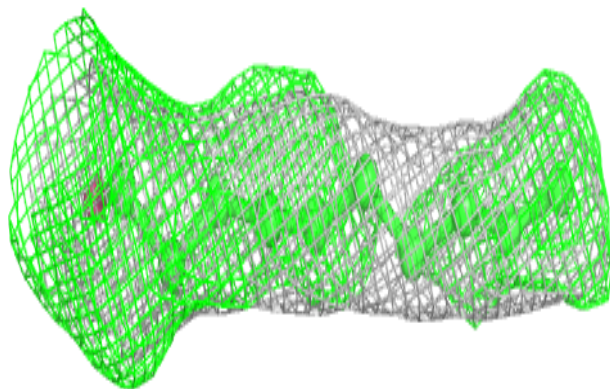
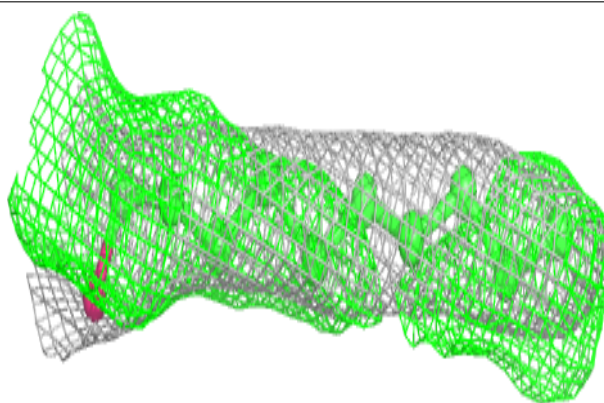


**Electron density around CHD B 306:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

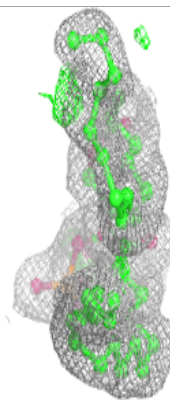
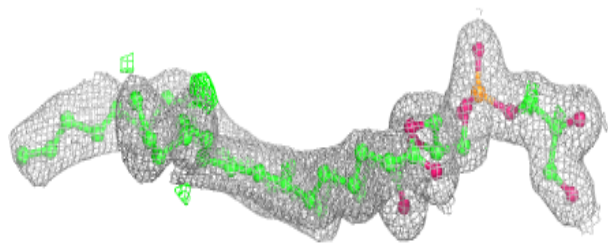
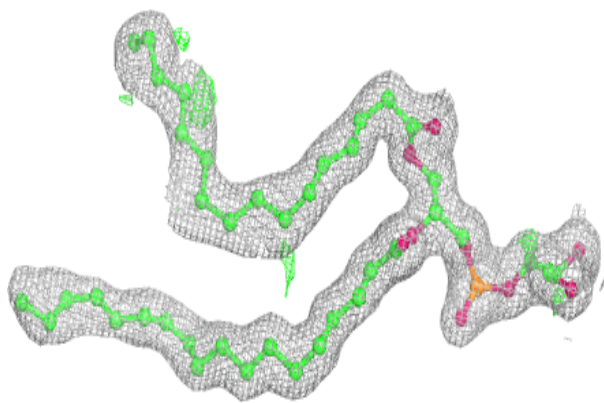
**Electron density around DMU O 306:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

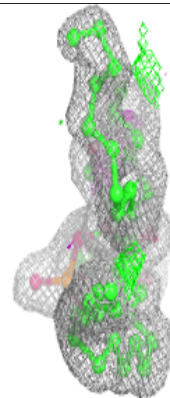
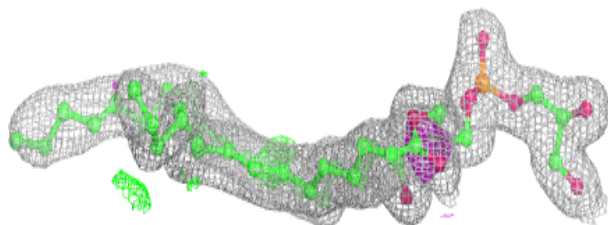
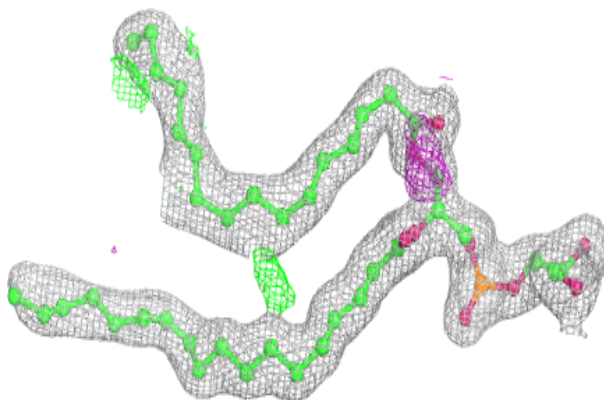


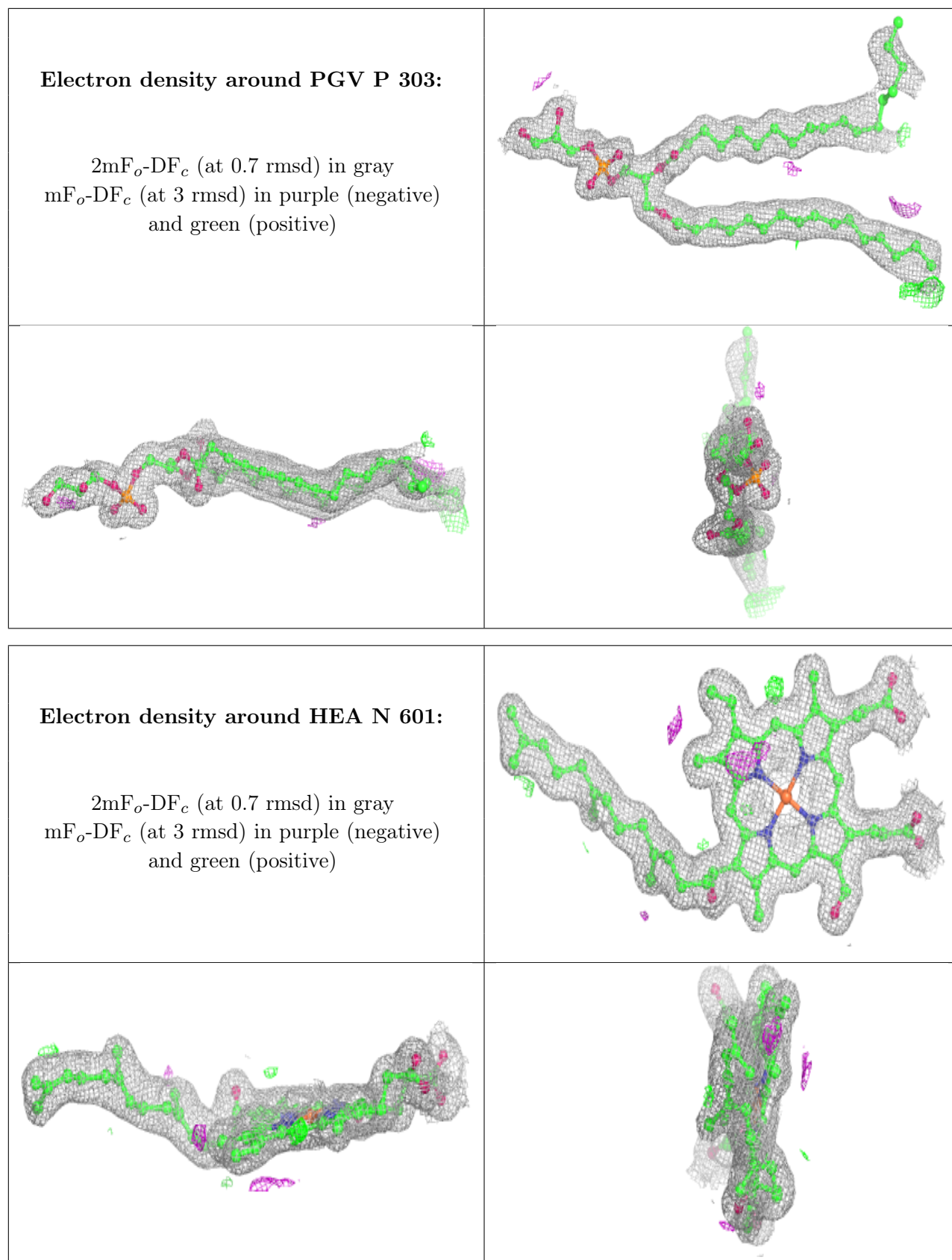
**Electron density around PGV A 614:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around PGV N 615:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

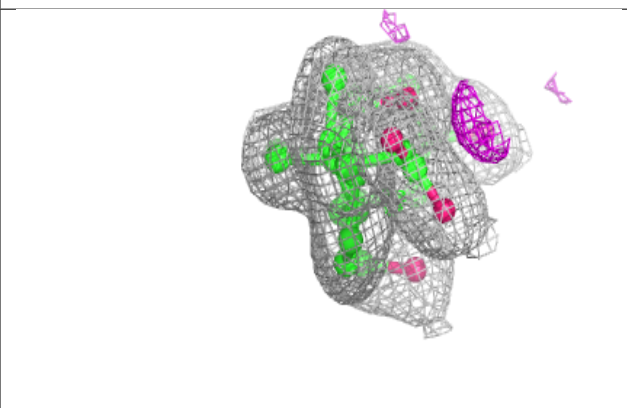
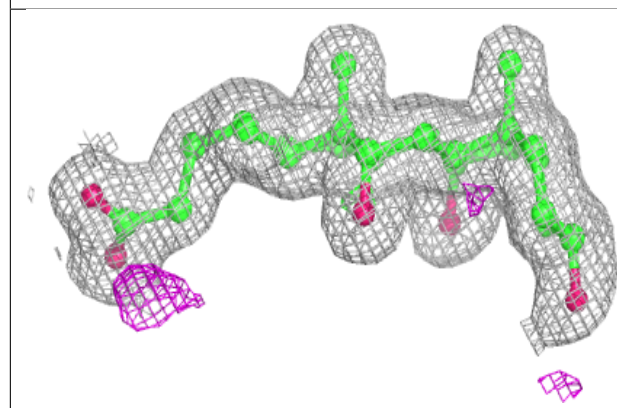
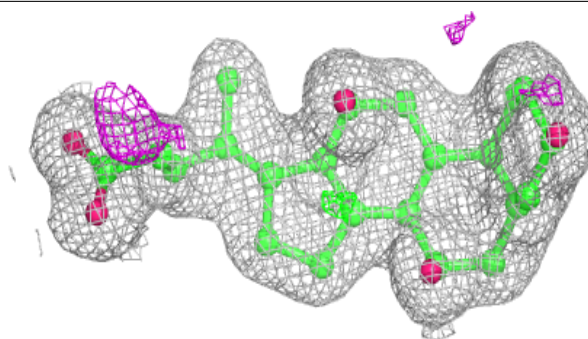




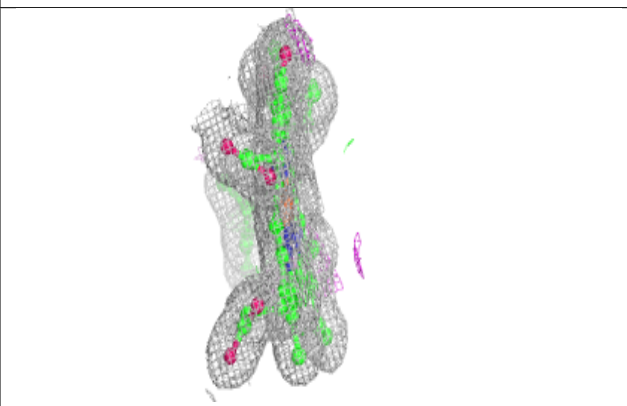
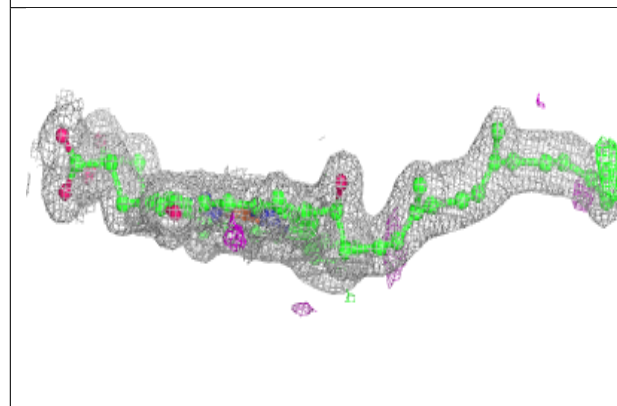
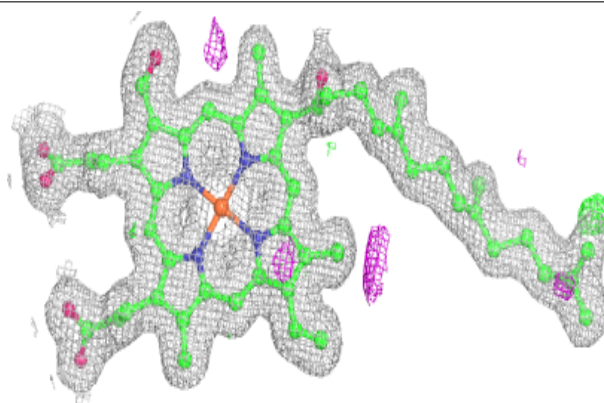


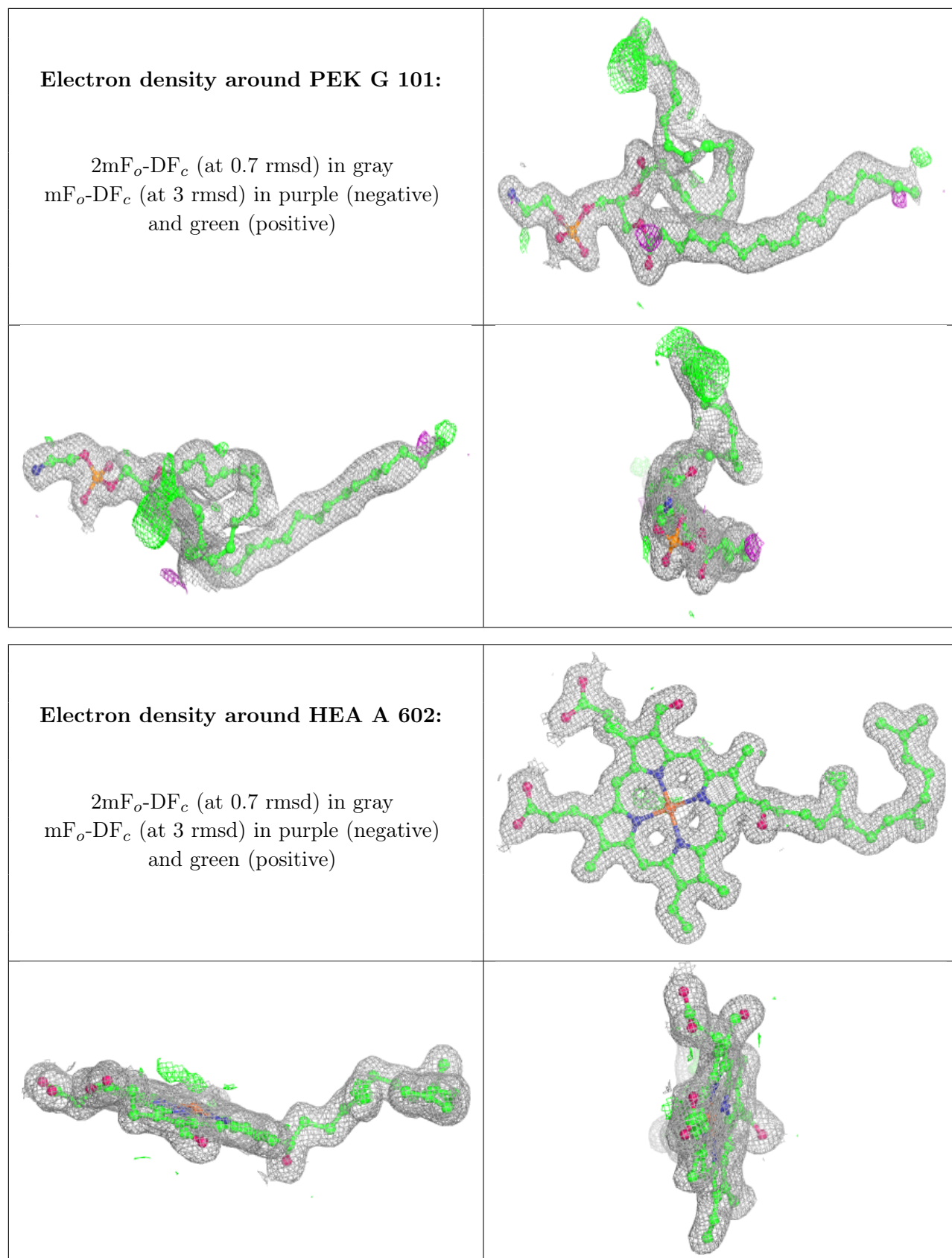
**Electron density around CHD O 301:**

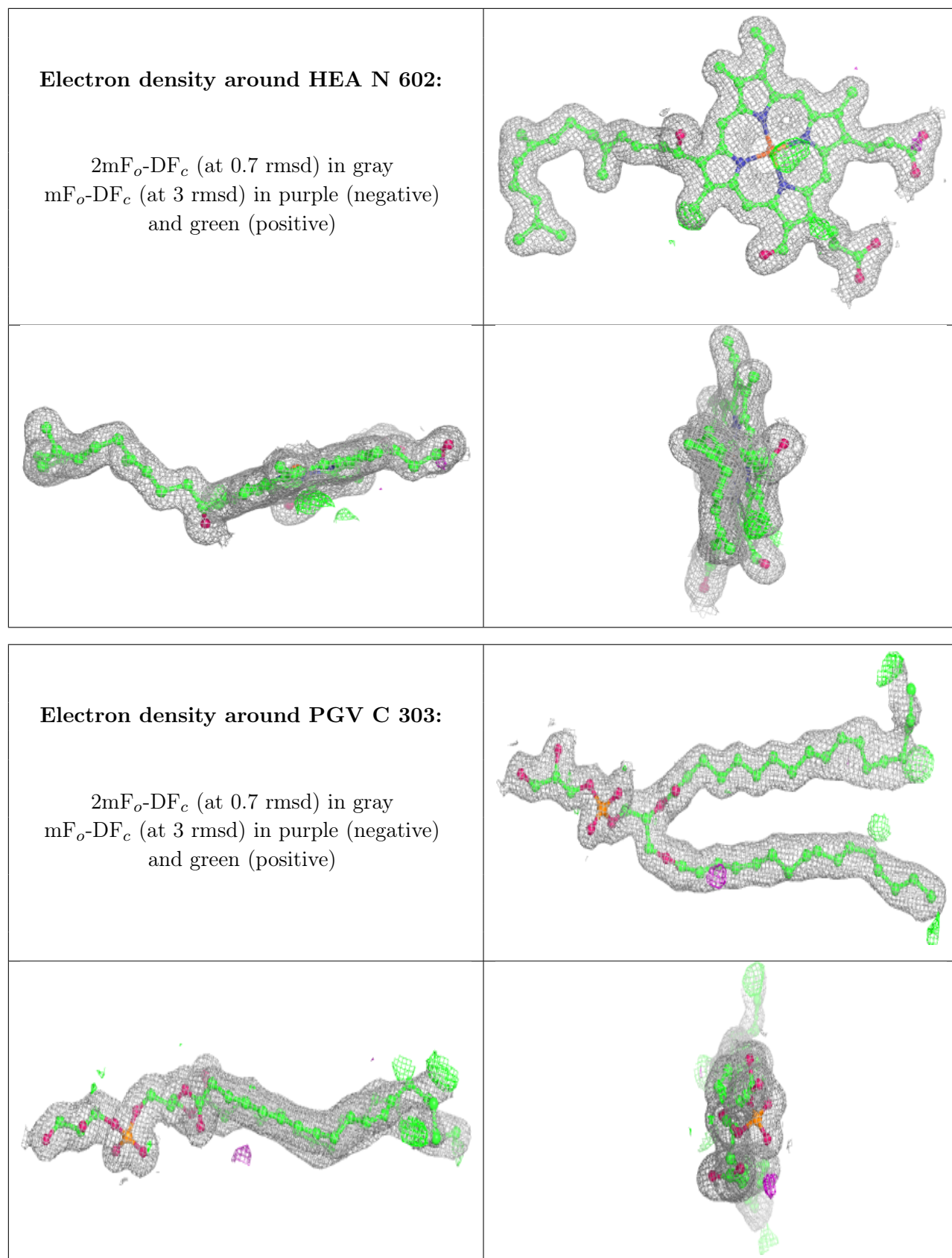
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around HEA A 601:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

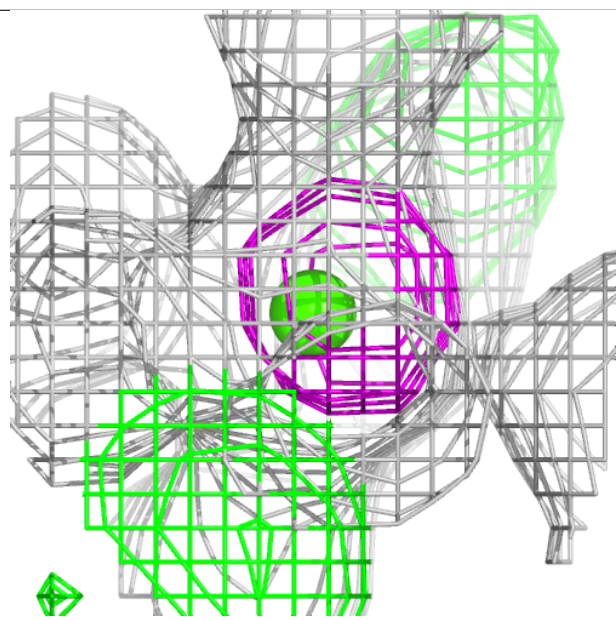
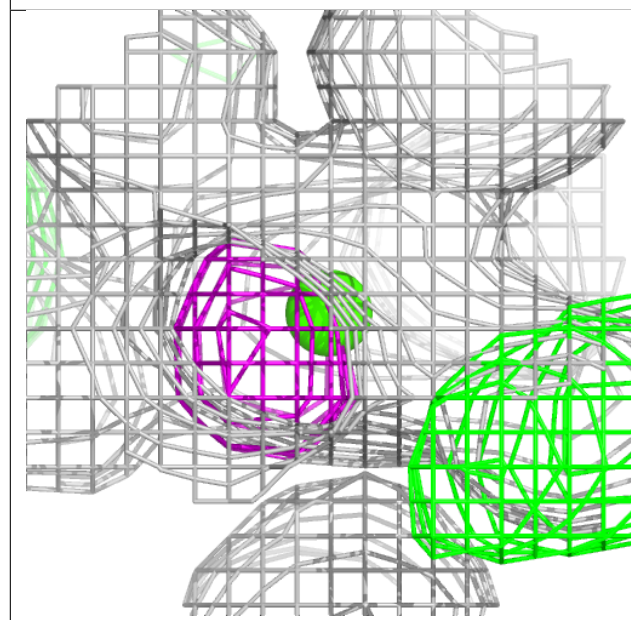
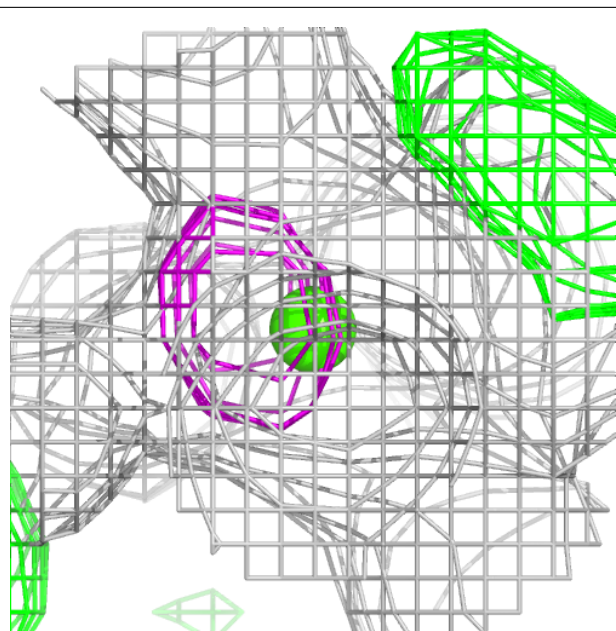




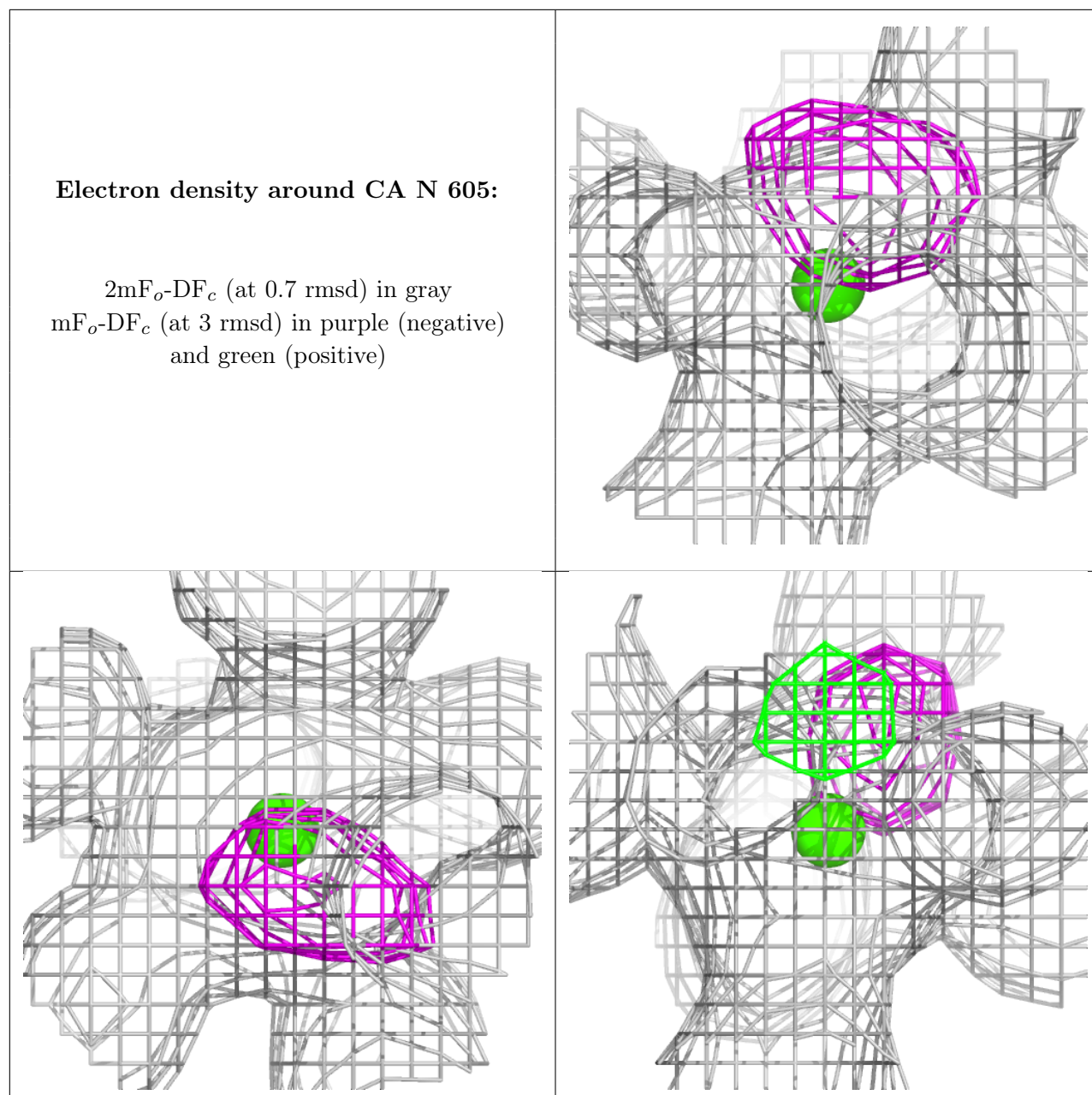


**Electron density around CA A 605:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)







## 6.5 Other polymers [i](#)

There are no such residues in this entry.