



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 18, 2026 – 12:15 AM UTC

PDB ID : 9IKG / pdb_00009ikg
Title : Bovine Heart Cytochrome c Oxidase in the Carbon Dioxide-bound Fully Reduced State
Authors : Muramoto, K.; Shinzawa-Itoh, K.
Deposited on : 2024-06-27
Resolution : 1.85 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

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	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

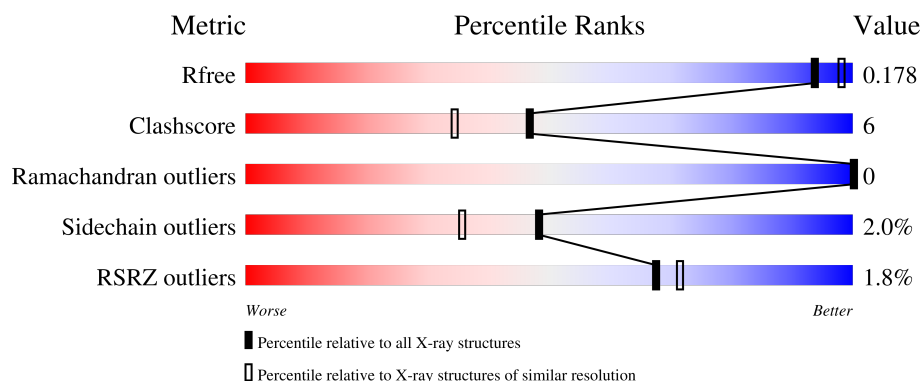
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.85 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.

















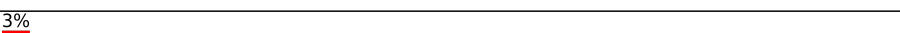
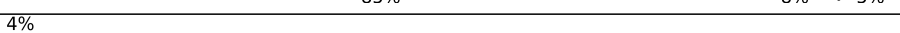





Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3428 (1.86-1.86)
Clashscore	190562	3579 (1.86-1.86)
Ramachandran outliers	187476	3553 (1.86-1.86)
Sidechain outliers	187428	3553 (1.86-1.86)
RSRZ outliers	180081	3429 (1.86-1.86)

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 ≥ 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	<div> <div>%</div> <div> <div></div> <div>91%</div> <div>8%</div> <div>.</div> </div> </div>
1	N	514	<div> <div></div> <div>89%</div> <div>9%</div> <div>.</div> </div>
2	B	227	<div> <div>4%</div> <div> <div></div> <div>81%</div> <div>15%</div> <div>.</div> </div> </div>
2	O	227	<div> <div>2%</div> <div> <div></div> <div>81%</div> <div>18%</div> <div>.</div> </div> </div>
3	C	261	<div> <div>%</div> <div> <div></div> <div>85%</div> <div>13%</div> <div>.</div> </div> </div>

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Mol	Chain	Length	Quality of chain
3	P	261	
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
26	CDL	C	304	-	-	X	-

2 Entry composition

There are 29 unique types of molecules in this entry. The entry contains 33027 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
1	A	513	Total	C	N	O	S	0	15	0
			4130	2757	636	696	41			
1	N	513	Total	C	N	O	S	0	15	0
			4130	2757	636	696	41			

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

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

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

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

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

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

- 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			

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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			

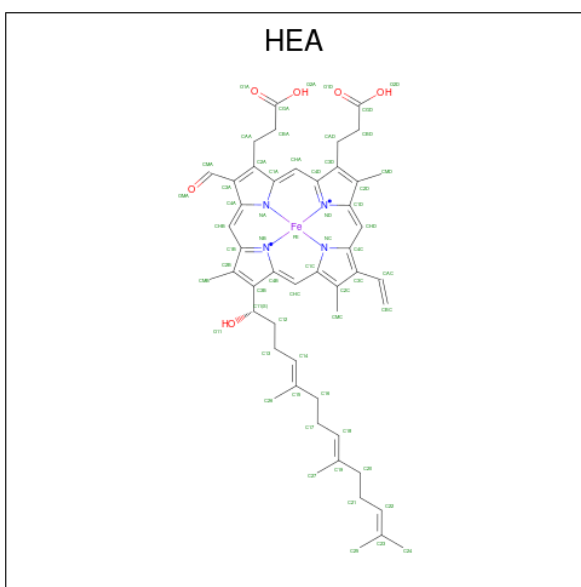
- Molecule 12 is a protein called Cytochrome c oxidase subunit 7C, mitochondrial.

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 (CCD ID: HEA) (formula: $C_{49}H_{56}FeN_4O_6$).



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

- Molecule 15 is COPPER (II) ION (CCD ID: 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		

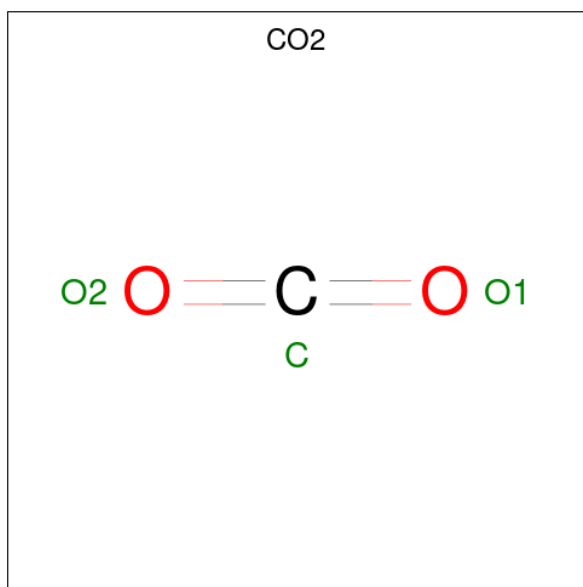
- Molecule 16 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

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 SODIUM ION (CCD ID: NA) (formula: Na).

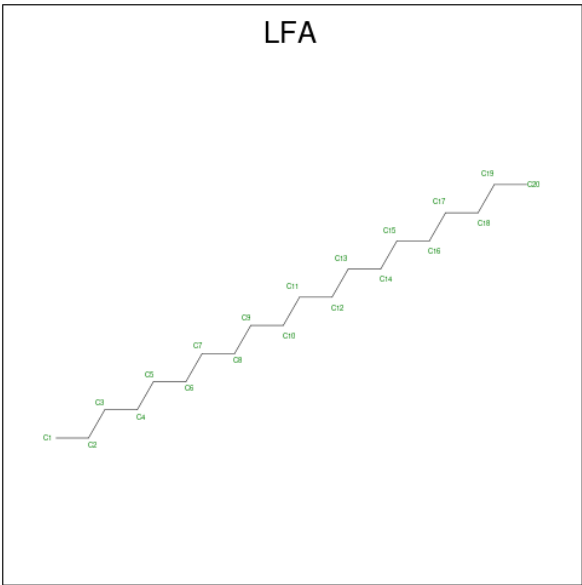
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
17	A	1	Total	Na	0	0
			1	1		
17	N	1	Total	Na	0	0
			1	1		

- Molecule 18 is CARBON DIOXIDE (CCD ID: CO2) (formula: CO₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
18	A	1	Total	C	O	0	0
			3	1	2		
18	N	1	Total	C	O	0	0
			3	1	2		

- Molecule 19 is EICOSANE (CCD ID: LFA) (formula: C₂₀H₄₂).



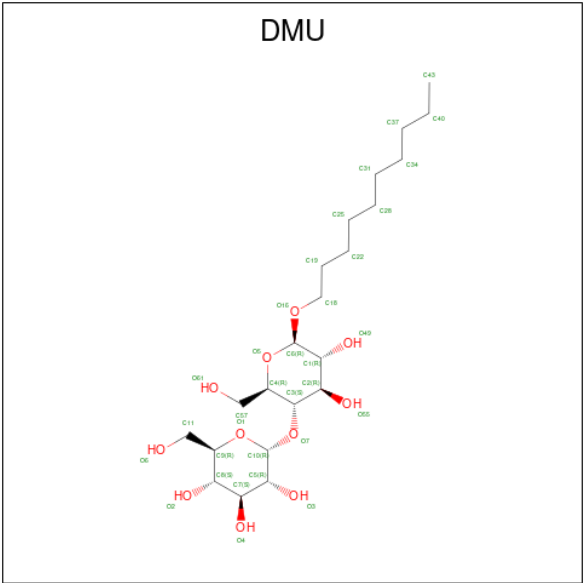
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
19	A	1	Total	C	0	0
			14	14		
19	B	1	Total	C	0	0
			17	17		
19	C	1	Total	C	0	0
			11	11		
19	C	1	Total	C	0	0
			6	6		
19	C	1	Total	C	0	0
			18	18		
19	C	1	Total	C	0	0
			15	15		
19	C	1	Total	C	0	0
			11	11		
19	C	1	Total	C	0	0
			14	14		
19	C	1	Total	C	0	0
	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

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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 14 14	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 11 11	0	0

- Molecule 20 is DECYL-BETA-D-MALTOPYRANOSIDE (CCD ID: DMU) (formula: C₂₂H₄₂O₁₁).



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 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	D	1	Total C O 33 22 11	0	0
20	G	1	Total C O 11 10 1	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

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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	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 22 16 6	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	U	1	Total C O 33 22 11	0	0
20	W	1	Total C O 11 10 1	0	0
20	Z	1	Total C O 33 22 11	0	0
20	Z	1	Total C O 22 16 6	0	0
20	Z	1	Total C 8 8	0	0

- Molecule 21 is 1,2-ETHANEDIOL (CCD ID: EDO) (formula: C₂H₆O₂).



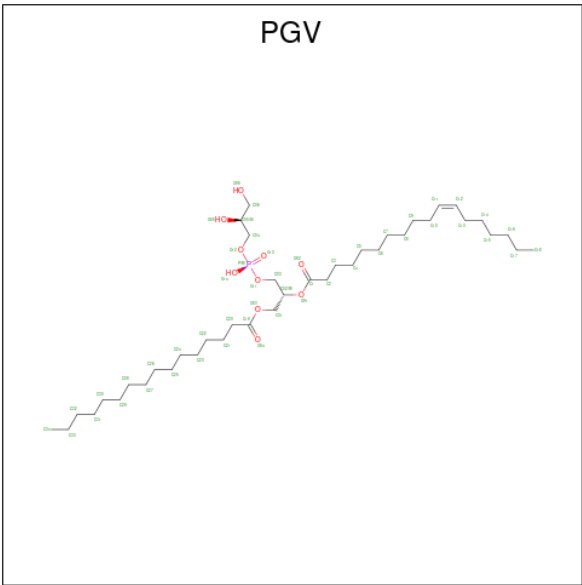
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
21	A	1	Total	C	O	0	0
			4	2	2		
21	A	1	Total	C	O	0	0
			4	2	2		
21	A	1	Total	C	O	0	0
			4	2	2		
21	A	1	Total	C	O	0	0
			4	2	2		
21	B	1	Total	C	O	0	0
			4	2	2		
21	C	1	Total	C	O	0	0
			4	2	2		
21	C	1	Total	C	O	0	0
			4	2	2		
21	C	1	Total	C	O	0	0
			4	2	2		
21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

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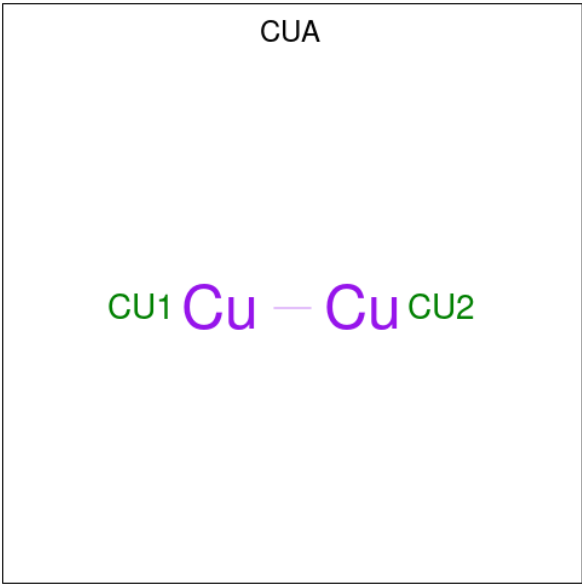
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
21	N	1	Total	C	O	0	0
			4	2	2		
21	N	1	Total	C	O	0	0
			4	2	2		
21	N	1	Total	C	O	0	0
			4	2	2		
21	N	1	Total	C	O	0	0
			4	2	2		
21	N	1	Total	C	O	0	0
			4	2	2		
21	O	1	Total	C	O	0	0
			4	2	2		
21	P	1	Total	C	O	0	0
			4	2	2		
21	P	1	Total	C	O	0	0
			4	2	2		
21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

- Molecule 22 is (1R)-2-{{[(2S)-2,3-DIHYDROXYPROPYL]OXY}(HYDROXY)PHOSPHORYL]OXY}-1-[(PALMITOYLOXY)METHYL]ETHYL (11E)-OCTADEC-11-ENOATE (CCD ID: PGV) (formula: C₄₀H₇₇O₁₀P).



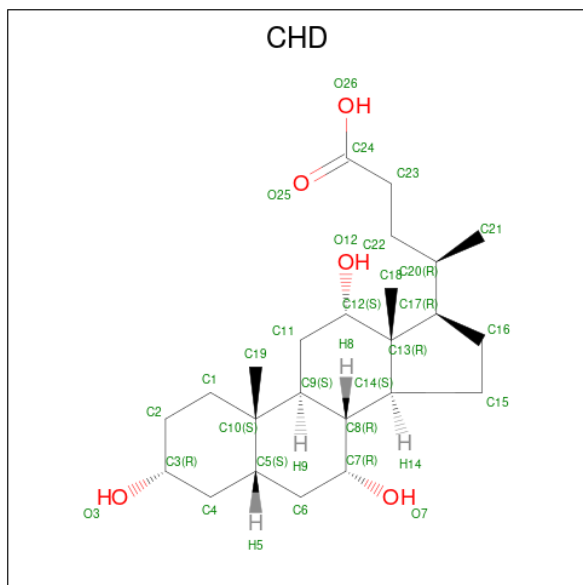
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
22	A	1	Total	C	O	P	0	0
			51	40	10	1		
22	C	1	Total	C	O	P	0	0
			51	40	10	1		
22	N	1	Total	C	O	P	0	0
			51	40	10	1		
22	P	1	Total	C	O	P	0	0
			51	40	10	1		

- Molecule 23 is DINUCLEAR COPPER ION (CCD ID: CUA) (formula: Cu₂).



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 (CCD ID: CHD) (formula: $C_{24}H_{40}O_5$).

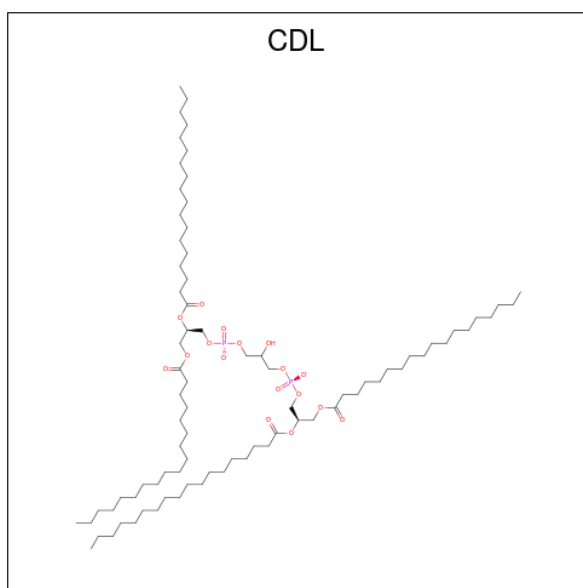


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
24	B	1	Total C O 29 24 5	0	0
24	C	1	Total C O 29 24 5	0	0
24	C	1	Total C O 29 24 5	0	0
24	O	1	Total C O 29 24 5	0	0
24	P	1	Total C O 29 24 5	0	0
24	P	1	Total C O 29 24 5	0	0

- Molecule 25 is UNKNOWN ATOM OR ION (CCD ID: 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 CARDIOLIPIN (CCD ID: CDL) (formula: $C_{81}H_{156}O_{17}P_2$).

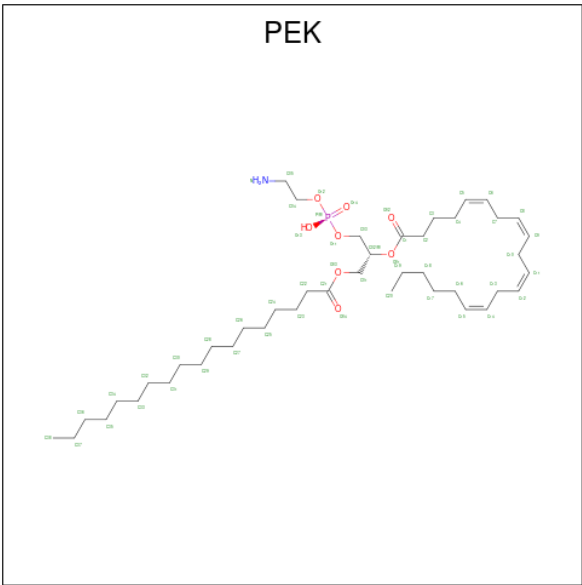


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
26	C	1	Total	C	O	P	0	0
			87	68	17	2		
26	I	1	Total	C	O	P	0	0
			64	45	17	2		
26	L	1	Total	C	O	P	0	0
			94	75	17	2		
26	P	1	Total	C	O	P	0	0
			87	68	17	2		
26	V	1	Total	C	O	P	0	0
			64	45	17	2		
26	Y	1	Total	C	O	P	0	0
			94	75	17	2		

- Molecule 27 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 28 is (1S)-2-{[(2-AMINOETHOXY)(HYDROXY)PHOSPHORYL]OXY}-1-[(STEAROYLOXY)METHYL]ETHYL (5E,8E,11E,14E)-ICOSA-5,8,11,14-TETRAENOATE (CCD ID: PEK) (formula: $C_{43}H_{78}NO_8P$).



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

- Molecule 29 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
29	A	237	Total	O	0	11
			248	248		
29	B	171	Total	O	0	2
			173	173		
29	C	105	Total	O	0	1
			106	106		
29	D	137	Total	O	0	8
			145	145		
29	E	108	Total	O	0	8
			116	116		
29	F	97	Total	O	0	7
			104	104		
29	G	41	Total	O	0	1
			42	42		
29	H	63	Total	O	0	0
			63	63		
29	I	41	Total	O	0	0
			41	41		
29	J	20	Total	O	0	0
			20	20		

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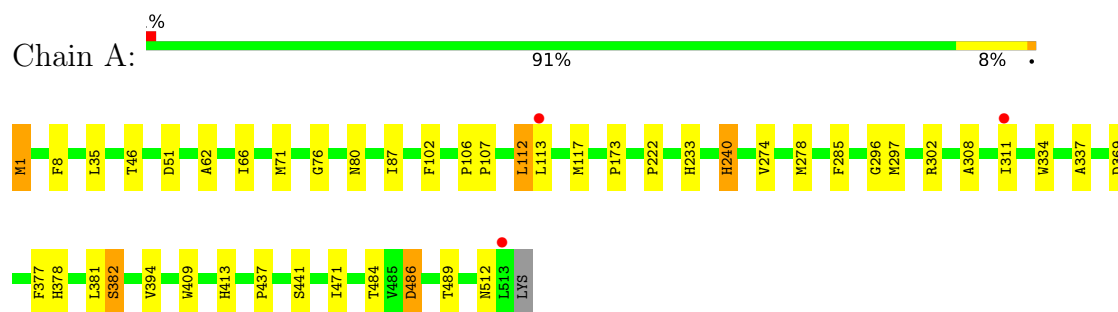
Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
29	K	21	Total 21	O 21	0	0
29	L	28	Total 30	O 30	0	2
29	M	21	Total 21	O 21	0	0
29	N	221	Total 231	O 231	0	10
29	O	147	Total 148	O 148	0	1
29	P	103	Total 104	O 104	0	1
29	Q	81	Total 86	O 86	0	5
29	R	87	Total 93	O 93	0	6
29	S	91	Total 98	O 98	0	7
29	T	37	Total 38	O 38	0	1
29	U	49	Total 49	O 49	0	0
29	V	23	Total 23	O 23	0	0
29	W	15	Total 15	O 15	0	0
29	X	17	Total 17	O 17	0	0
29	Y	23	Total 25	O 25	0	2
29	Z	17	Total 17	O 17	0	0

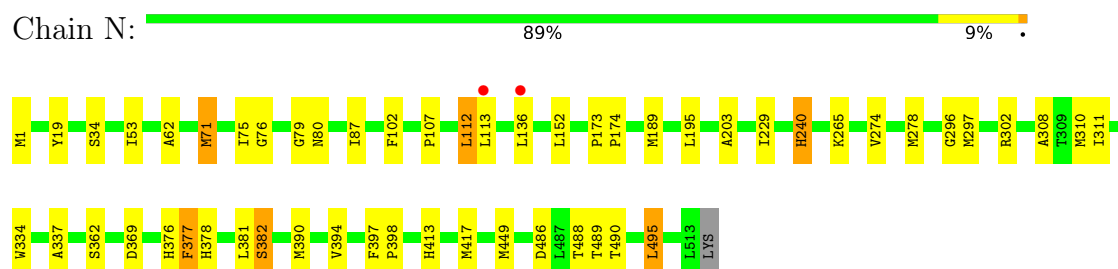
3 Residue-property plots [i](#)

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

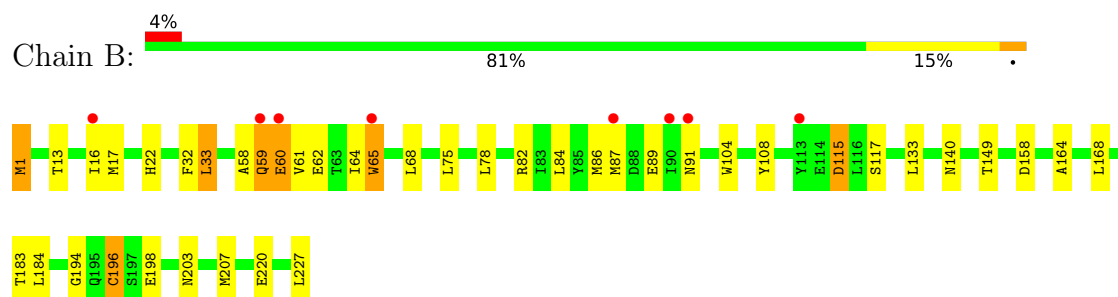
• Molecule 1: Cytochrome c oxidase subunit 1



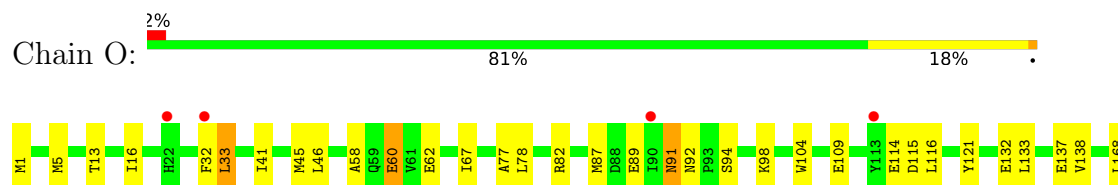
• Molecule 1: Cytochrome c oxidase subunit 1



• Molecule 2: Cytochrome c oxidase subunit 2

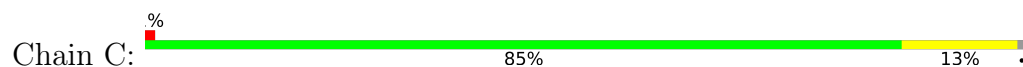


• Molecule 2: Cytochrome c oxidase subunit 2

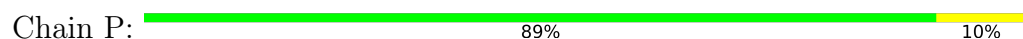




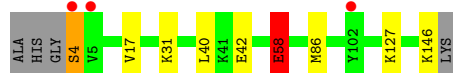
• Molecule 3: Cytochrome c oxidase subunit 3



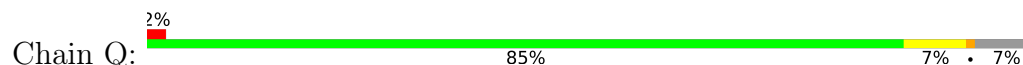
• Molecule 3: Cytochrome c oxidase subunit 3



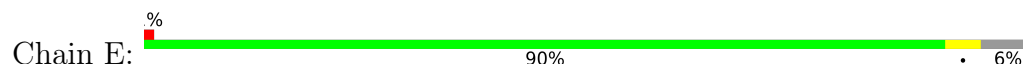
• Molecule 4: Cytochrome c oxidase subunit 4 isoform 1, mitochondrial



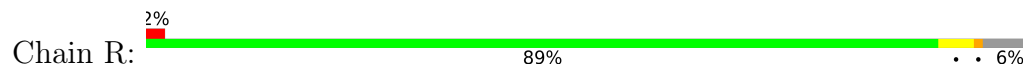
• Molecule 4: Cytochrome c oxidase subunit 4 isoform 1, mitochondrial



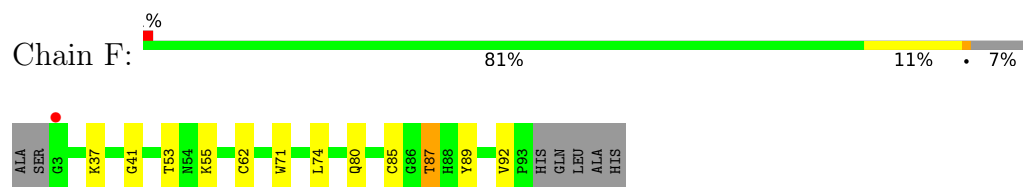
• Molecule 5: Cytochrome c oxidase subunit 5A



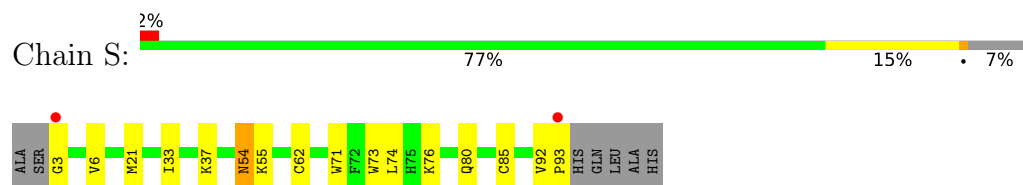
• Molecule 5: Cytochrome c oxidase subunit 5A



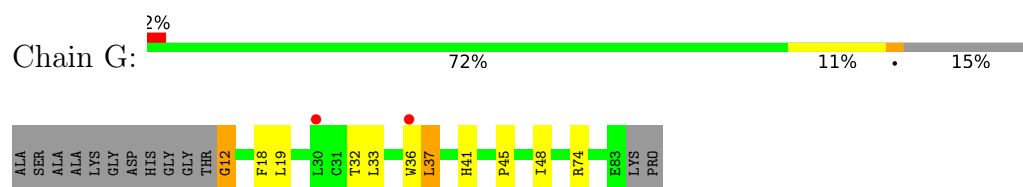
- Molecule 6: Cytochrome c oxidase subunit 5B, mitochondrial



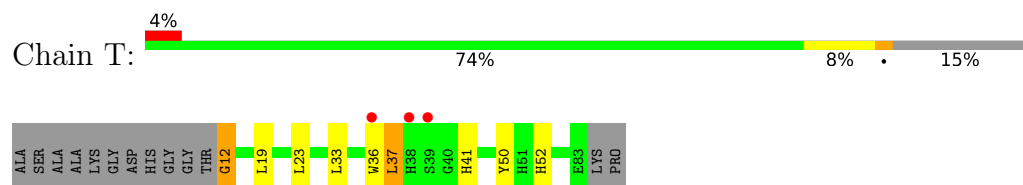
- Molecule 6: Cytochrome c oxidase subunit 5B, mitochondrial



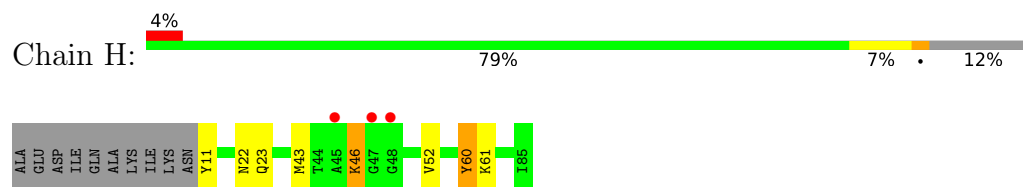
- Molecule 7: Cytochrome c oxidase subunit 6A2, mitochondrial



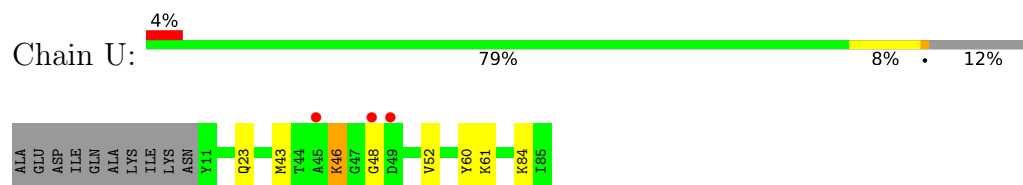
- Molecule 7: Cytochrome c oxidase subunit 6A2, mitochondrial



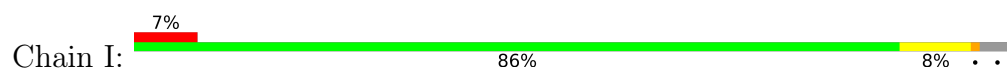
- Molecule 8: Cytochrome c oxidase subunit 6B1



- Molecule 8: Cytochrome c oxidase subunit 6B1

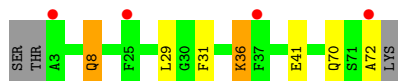
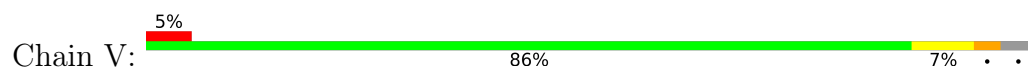


- Molecule 9: Cytochrome c oxidase subunit 6C

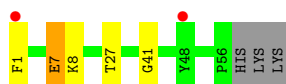
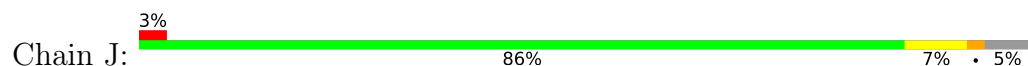




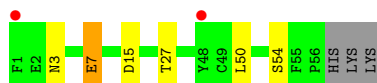
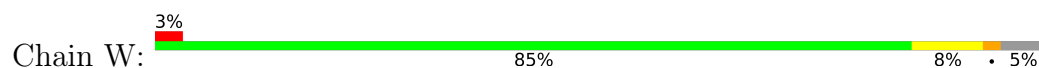
- Molecule 9: Cytochrome c oxidase subunit 6C



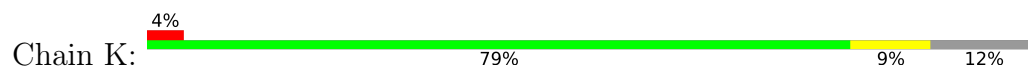
- Molecule 10: Cytochrome c oxidase subunit 7A1



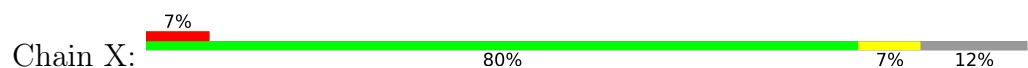
- Molecule 10: Cytochrome c oxidase subunit 7A1



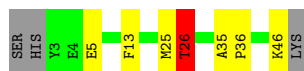
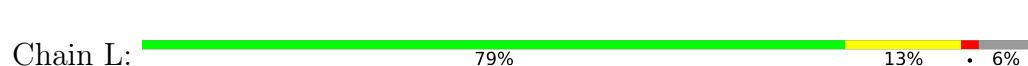
- Molecule 11: Cytochrome c oxidase subunit 7B, mitochondrial



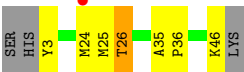
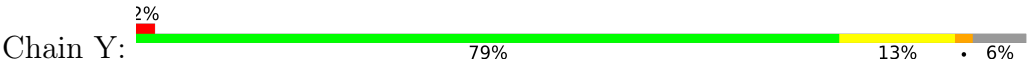
- Molecule 11: Cytochrome c oxidase subunit 7B, mitochondrial



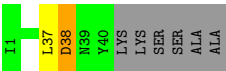
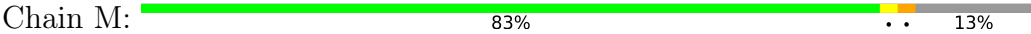
- Molecule 12: Cytochrome c oxidase subunit 7C, mitochondrial



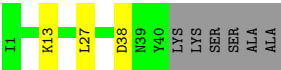
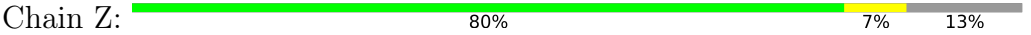
- Molecule 12: Cytochrome c oxidase subunit 7C, mitochondrial



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



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



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	182.70Å 205.10Å 177.60Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 1.85 40.00 – 1.85	Depositor EDS
% Data completeness (in resolution range)	100.0 (40.00-1.85) 100.0 (40.00-1.85)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.90 (at 1.84Å)	Xtriage
Refinement program	REFMAC 5.8.0253	Depositor
R, R_{free}	0.133 , 0.170 0.147 , 0.178	Depositor DCC
R_{free} test set	27952 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å ²)	33.3	Xtriage
Anisotropy	0.673	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 61.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	0.000 for l,-k,h	Xtriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	33027	wwPDB-VP
Average B, all atoms (Å ²)	46.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.31% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CU, CO2, ZN, PGV, MG, LFA, CDL, CHD, FME, NA, DMU, CUA, EDO, UNX, HEA, PEK

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	1.10	4/4259 (0.1%)	1.21	10/5816 (0.2%)
1	N	1.08	4/4259 (0.1%)	1.23	6/5816 (0.1%)
2	B	1.15	2/1908 (0.1%)	1.31	11/2598 (0.4%)
2	O	1.10	1/1908 (0.1%)	1.25	1/2598 (0.0%)
3	C	1.05	1/2258 (0.0%)	1.19	4/3084 (0.1%)
3	P	1.05	1/2258 (0.0%)	1.21	5/3084 (0.2%)
4	D	1.10	0/1226	1.25	2/1657 (0.1%)
4	Q	1.09	0/1182	1.34	1/1598 (0.1%)
5	E	1.09	0/843	1.24	2/1145 (0.2%)
5	R	1.08	0/843	1.33	3/1145 (0.3%)
6	F	1.09	0/724	1.23	0/983
6	S	1.16	0/724	1.26	0/983
7	G	1.18	2/633 (0.3%)	1.23	0/864
7	T	1.19	2/633 (0.3%)	1.29	0/864
8	H	1.04	1/648 (0.2%)	1.32	0/877
8	U	1.06	0/648	1.31	0/877
9	I	1.15	2/588 (0.3%)	1.49	3/781 (0.4%)
9	V	1.08	0/588	1.48	2/781 (0.3%)
10	J	1.09	0/451	1.30	1/610 (0.2%)
10	W	1.11	0/451	1.31	2/610 (0.3%)
11	K	1.19	1/398 (0.3%)	1.32	0/546
11	X	1.09	0/398	1.28	0/546
12	L	1.14	1/372 (0.3%)	1.39	4/500 (0.8%)
12	Y	1.08	0/372	1.31	2/500 (0.4%)
13	M	1.08	0/321	1.24	1/440 (0.2%)
13	Z	1.00	0/321	1.27	0/440
All	All	1.09	22/29214 (0.1%)	1.26	60/39743 (0.2%)

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
6	S	0	1

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	12	GLY	N-CA	-9.71	1.30	1.45
7	T	12	GLY	N-CA	-9.22	1.30	1.45
2	O	198	GLU	C-O	9.18	1.34	1.23
2	B	198	GLU	C-O	8.13	1.33	1.23
3	C	243	HIS	CE1-NE2	6.89	1.39	1.32
1	N	240	HIS	CE1-NE2	6.87	1.39	1.32
1	A	233	HIS	CE1-NE2	6.55	1.39	1.32
9	I	31	PHE	C-O	6.28	1.31	1.24
2	B	196	CYS	C-O	6.19	1.31	1.23
11	K	10	HIS	CE1-NE2	6.09	1.38	1.32
7	T	41	HIS	CE1-NE2	5.97	1.38	1.32
8	H	11	TYR	N-CA	5.75	1.57	1.46
1	N	376	HIS	CE1-NE2	5.42	1.38	1.32
1	A	413	HIS	CG-ND1	-5.38	1.32	1.38
1	A	66	ILE	C-O	5.35	1.29	1.24
1	A	437	PRO	C-O	-5.31	1.17	1.23
3	P	71	HIS	CE1-NE2	5.30	1.37	1.32
9	I	72	ALA	C-O	5.27	1.34	1.23
7	G	48	ILE	N-CA	5.15	1.49	1.45
12	L	5	GLU	CD-OE2	-5.13	1.15	1.25
1	N	203	ALA	C-O	5.13	1.30	1.24
1	N	174	PRO	C-O	-5.09	1.17	1.24

All (60) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	I	72	ALA	CA-C-O	-11.91	100.56	120.80
1	A	240	HIS	CA-CB-CG	-10.04	103.76	113.80
1	N	240	HIS	CA-CB-CG	-9.06	104.73	113.80
1	A	71	MET	CG-SD-CE	-8.55	82.10	100.90
3	P	122	HIS	CB-CA-C	8.43	119.42	110.65
3	C	80	ARG	CG-CD-NE	-8.21	93.93	112.00
1	N	71	MET	CG-SD-CE	-7.63	84.10	100.90
1	N	382	SER	CA-C-O	-7.35	113.29	121.00
12	L	25	MET	CA-C-N	7.18	130.77	120.79
12	L	25	MET	C-N-CA	7.18	130.77	120.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	65	TRP	CB-CA-C	7.06	122.49	110.56
3	P	41	THR	CA-CB-OG1	-6.99	99.11	109.60
2	B	115	ASP	CB-CA-C	6.94	123.34	111.68
4	D	146	LYS	CA-C-O	-6.87	109.11	120.80
1	N	102	PHE	CA-CB-CG	-6.60	107.20	113.80
3	P	230	ASN	CA-CB-CG	-6.57	106.03	112.60
5	R	78	HIS	CA-C-N	6.35	129.42	120.28
5	R	78	HIS	C-N-CA	6.35	129.42	120.28
12	L	26	THR	CA-CB-OG1	-6.28	100.19	109.60
2	B	59	GLN	CB-CG-CD	6.22	123.18	112.60
10	J	7	GLU	CB-CA-C	6.22	121.42	110.85
2	B	184	LEU	N-CA-CB	-6.16	100.14	110.80
1	A	102	PHE	CA-CB-CG	-6.12	107.68	113.80
9	V	72	ALA	CA-C-O	-6.10	110.43	120.80
1	A	484	THR	CA-CB-OG1	-5.99	100.62	109.60
9	V	8	GLN	N-CA-CB	5.96	118.80	109.69
5	E	108	LYS	CA-C-O	-5.87	110.83	120.80
3	P	80	ARG	CG-CD-NE	-5.83	99.19	112.00
2	B	183	THR	CA-CB-OG1	-5.82	100.87	109.60
2	B	158	ASP	CA-CB-CG	5.63	118.23	112.60
10	W	15	ASP	CA-CB-CG	5.57	118.17	112.60
2	B	82	ARG	CG-CD-NE	-5.57	99.74	112.00
12	Y	25	MET	CA-C-N	5.53	127.63	120.44
12	Y	25	MET	C-N-CA	5.53	127.63	120.44
1	N	240	HIS	N-CA-CB	5.52	116.93	110.42
2	B	64	ILE	N-CA-C	-5.48	105.03	110.62
1	A	240	HIS	N-CA-CB	5.47	116.88	110.42
4	D	58	GLU	CB-CG-CD	5.47	121.90	112.60
5	R	80	GLU	CB-CG-CD	5.47	121.90	112.60
3	C	233	PHE	CA-CB-CG	-5.42	108.38	113.80
10	W	7	GLU	CB-CA-C	5.42	120.06	110.85
12	L	46	LYS	CA-C-O	-5.41	111.61	120.80
1	A	8	PHE	CA-CB-CG	5.36	119.16	113.80
3	P	233	PHE	CA-CB-CG	-5.33	108.47	113.80
4	Q	58	GLU	CB-CG-CD	5.30	121.61	112.60
2	B	89	GLU	CA-C-N	5.29	129.11	121.18
2	B	89	GLU	C-N-CA	5.29	129.11	121.18
1	A	382	SER	CA-C-O	-5.27	115.46	121.00
2	B	149	THR	CA-CB-OG1	-5.25	101.73	109.60
3	C	122	HIS	CB-CA-C	5.25	116.11	110.65
3	C	76	GLN	CG-CD-NE2	-5.21	108.58	116.40
1	N	377	PHE	CA-CB-CG	5.16	118.96	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	46	THR	CA-CB-OG1	-5.16	101.86	109.60
1	A	486	ASP	CA-CB-CG	5.13	117.73	112.60
5	E	17	THR	CA-CB-OG1	-5.09	101.96	109.60
1	A	512	ASN	CB-CA-C	5.07	119.22	110.45
13	M	38	ASP	CA-CB-CG	5.04	117.64	112.60
2	O	199	ILE	N-CA-CB	5.02	116.27	110.49
9	I	35	TYR	CA-C-N	5.01	127.30	120.54
9	I	35	TYR	C-N-CA	5.01	127.30	120.54

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
6	S	92	VAL	Mainchain

5.2 Too-close contacts

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	35	0
1	N	4130	0	4102	48	0
2	B	1870	0	1870	28	0
2	O	1870	0	1870	33	0
3	C	2171	0	2080	38	0
3	P	2172	0	2081	26	0
4	D	1192	0	1178	9	0
4	Q	1148	0	1131	11	0
5	E	825	0	823	1	0
5	R	825	0	823	1	0
6	F	709	0	691	12	0
6	S	709	0	691	11	0
7	G	606	0	577	9	0
7	T	606	0	577	7	0
8	H	628	0	580	13	0
8	U	628	0	580	10	0
9	I	575	0	584	5	0
9	V	575	0	584	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	J	441	0	439	6	0
10	W	441	0	439	3	0
11	K	384	0	366	3	0
11	X	384	0	366	4	0
12	L	360	0	360	7	0
12	Y	360	0	360	6	0
13	M	311	0	321	1	0
13	Z	311	0	321	1	0
14	A	120	0	108	2	0
14	N	120	0	108	4	0
15	A	1	0	0	0	0
15	N	1	0	0	0	0
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	3	0	0	0	0
18	N	3	0	0	0	0
19	A	14	0	27	5	0
19	B	17	0	33	0	0
19	C	129	0	234	8	0
19	N	28	0	54	9	0
19	O	28	0	54	1	0
19	P	99	0	172	4	0
19	T	25	0	48	6	0
20	A	51	0	76	2	0
20	B	66	0	104	0	0
20	C	194	0	262	4	0
20	D	33	0	42	2	0
20	G	11	0	21	0	0
20	H	33	0	30	1	0
20	J	11	0	21	0	0
20	L	22	0	31	5	0
20	M	41	0	57	0	0
20	N	40	0	55	1	0
20	O	66	0	104	1	0
20	P	194	0	262	2	0
20	Q	33	0	41	2	0
20	U	33	0	25	0	0
20	W	11	0	21	0	0
20	Z	63	0	87	3	0
21	A	16	0	24	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	B	4	0	6	0	0
21	C	12	0	17	1	0
21	E	12	0	18	0	0
21	F	8	0	12	0	0
21	G	4	0	6	0	0
21	N	20	0	30	0	0
21	O	4	0	6	0	0
21	P	12	0	18	0	0
21	R	12	0	18	0	0
21	S	8	0	12	0	0
21	T	4	0	6	0	0
22	A	51	0	76	0	0
22	C	51	0	76	3	0
22	N	51	0	76	1	0
22	P	51	0	76	2	0
23	B	2	0	0	0	0
23	O	2	0	0	0	0
24	B	29	0	39	1	0
24	C	58	0	78	3	0
24	O	29	0	39	1	0
24	P	58	0	78	3	0
25	C	1	0	0	1	0
25	P	1	0	0	1	0
26	C	87	0	124	21	0
26	I	64	0	72	1	0
26	L	94	0	141	3	0
26	P	87	0	124	15	0
26	V	64	0	72	1	0
26	Y	94	0	141	10	0
27	F	1	0	0	0	0
27	S	1	0	0	0	0
28	G	53	0	77	1	0
28	T	53	0	77	4	0
29	A	248	0	0	5	0
29	B	173	0	0	5	0
29	C	106	0	0	6	0
29	D	145	0	0	5	0
29	E	116	0	0	0	0
29	F	104	0	0	1	0
29	G	42	0	0	2	0
29	H	63	0	0	3	0
29	I	41	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	J	20	0	0	0	0
29	K	21	0	0	0	0
29	L	30	0	0	1	0
29	M	21	0	0	0	0
29	N	231	0	0	6	0
29	O	148	0	0	3	0
29	P	104	0	0	7	0
29	Q	86	0	0	3	0
29	R	93	0	0	0	0
29	S	98	0	0	0	0
29	T	38	0	0	2	0
29	U	49	0	0	2	0
29	V	23	0	0	0	0
29	W	15	0	0	0	0
29	X	17	0	0	0	0
29	Y	25	0	0	4	0
29	Z	17	0	0	0	0
All	All	33027	0	31512	356	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 (356) 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)
19:C:309:LFA:H12	29:H:245:HOH:O	1.23	1.33
1:N:112:LEU:HG	29:N:3017:HOH:O	1.02	1.17
1:A:112:LEU:HG	29:A:927:HOH:O	0.98	1.15
8:H:43:MET:HE1	8:U:52:VAL:HG11	1.37	1.07
3:P:4:GLN:N	29:P:403:HOH:O	1.85	1.06
2:B:16[A]:ILE:HG21	2:B:87[A]:MET:HE3	1.39	1.01
2:B:16[A]:ILE:CG2	2:B:87[A]:MET:HE3	1.91	0.99
8:H:52:VAL:HG12	8:U:46:LYS:HG2	1.48	0.96
7:G:12:GLY:HA3	29:G:234:HOH:O	1.71	0.91
3:C:245:VAL:C	3:C:246[B]:ASP:CA	2.43	0.91
4:Q:112:GLU:OE2	29:Q:301:HOH:O	1.89	0.90
8:H:43:MET:CE	8:U:52:VAL:HG11	2.02	0.87
1:A:112:LEU:O	1:A:112:LEU:HD23	1.76	0.85
2:B:16[B]:ILE:HG23	29:B:536:HOH:O	1.77	0.84
1:N:297[B]:MET:SD	1:N:302:ARG:HG2	2.18	0.84
1:A:278[A]:MET:HE1	19:T:101:LFA:H51	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:A:609:DMU:O6	29:A:706:HOH:O	1.95	0.83
24:C:301:CHD:O25	19:C:309:LFA:H13	1.83	0.79
25:C:302:UNX:UNK	29:C:496:HOH:O	1.62	0.79
19:N:607:LFA:H12	19:N:608:LFA:H11	1.64	0.78
29:A:736:HOH:O	3:C:77:LYS:HE3	1.82	0.78
1:N:112:LEU:HD23	1:N:112:LEU:O	1.83	0.78
2:B:16[A]:ILE:HG21	2:B:87[A]:MET:CE	2.14	0.77
26:L:101:CDL:O1	29:L:222[B]:HOH:O	2.01	0.77
6:S:76:LYS:HE3	6:S:93:PRO:HG2	1.67	0.77
3:P:33[B]:MET:CE	3:P:42:LEU:HD12	2.15	0.76
19:A:607:LFA:H12	19:T:101:LFA:H11	1.66	0.76
3:C:180[A]:GLU:OE2	29:C:404:HOH:O	2.04	0.74
24:P:305:CHD:H231	24:P:305:CHD:H162	1.69	0.74
3:C:33[A]:MET:HE3	3:C:39:SER:OG	1.87	0.74
6:F:37:LYS:HG2	29:F:292:HOH:O	1.87	0.73
28:T:102:PEK:H71	28:T:102:PEK:H32	1.71	0.73
26:Y:101:CDL:O1	29:Y:219[B]:HOH:O	2.06	0.73
1:N:417[B]:MET:HE1	29:N:2973:HOH:O	1.90	0.71
3:P:50:ASN:HD22	3:P:51[A]:MET:HE2	1.56	0.71
8:H:52:VAL:CG1	8:U:46:LYS:HG2	2.20	0.71
2:O:91:ASN:OD1	2:O:91:ASN:N	2.23	0.71
1:N:417[B]:MET:CE	29:N:2973:HOH:O	2.37	0.70
1:A:113[B]:LEU:HD11	1:A:117[B]:MET:SD	2.32	0.70
25:P:302:UNX:UNK	29:P:497:HOH:O	1.73	0.70
3:C:104:SER:OG	29:C:405:HOH:O	2.10	0.69
3:P:51[B]:MET:HE3	26:P:304:CDL:H873	1.72	0.69
1:N:274:VAL:HG12	1:N:278[A]:MET:HE2	1.75	0.67
4:D:86:MET:HE1	11:K:22:ALA:HB2	1.76	0.67
1:A:112:LEU:HD23	1:A:112:LEU:C	2.20	0.67
3:C:33[A]:MET:CE	3:C:42:LEU:H	2.08	0.67
12:L:26:THR:HG21	20:L:102:DMU:H26	1.76	0.66
2:B:220:GLU:OE1	29:B:402:HOH:O	2.12	0.66
4:D:42:GLU:OE2	29:D:301:HOH:O	2.14	0.65
1:N:112:LEU:HD23	1:N:112:LEU:C	2.22	0.65
1:A:297[B]:MET:SD	1:A:302:ARG:HG2	2.37	0.65
8:H:46:LYS:HE2	8:H:46:LYS:O	1.97	0.65
6:S:76:LYS:CE	6:S:93:PRO:HG2	2.27	0.64
3:P:149:HIS:NE2	19:P:312:LFA:H11	2.12	0.64
29:P:455[B]:HOH:O	10:W:27:THR:HG22	1.96	0.64
4:D:17[A]:VAL:CG1	29:D:406:HOH:O	2.47	0.63
1:A:278[A]:MET:CE	19:T:101:LFA:H51	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:4:SER:HA	29:D:302:HOH:O	1.98	0.63
3:C:33[A]:MET:HE2	3:C:42:LEU:H	1.64	0.63
1:N:297[B]:MET:SD	1:N:302:ARG:CG	2.87	0.62
6:F:41:GLY:HA3	6:F:87[B]:THR:HG22	1.81	0.62
1:A:112:LEU:C	1:A:112:LEU:CD2	2.72	0.62
3:C:33[B]:MET:CA	3:C:33[B]:MET:HE2	2.19	0.62
3:C:180[B]:GLU:HG2	29:C:432:HOH:O	1.98	0.62
3:C:258:TRP:CE2	19:C:307:LFA:H32	2.35	0.62
26:C:304:CDL:HA62	26:C:304:CDL:H121	1.81	0.62
3:C:33[B]:MET:HE1	20:C:325:DMU:H12	1.81	0.61
3:C:33[A]:MET:HE1	3:C:41:THR:HB	1.81	0.61
7:T:19:LEU:HD23	19:T:101:LFA:H61	1.82	0.60
22:C:303:PGV:H12	22:C:303:PGV:C16	2.32	0.60
4:D:31:LYS:NZ	29:D:303:HOH:O	2.31	0.60
1:N:310:MET:HE1	2:O:77:ALA:HB2	1.84	0.60
2:B:84:LEU:O	2:B:87[B]:MET:HB2	2.02	0.59
7:T:12:GLY:HA3	29:T:225:HOH:O	2.02	0.59
2:B:104:TRP:CG	2:B:203:ASN:HB2	2.38	0.59
3:C:33[B]:MET:CE	20:C:325:DMU:H12	2.32	0.59
26:C:304:CDL:HB21	26:C:304:CDL:HB32	1.82	0.59
26:Y:101:CDL:H711	26:Y:101:CDL:C36	2.33	0.59
26:C:304:CDL:HB22	10:J:8:LYS:HE3	1.84	0.59
3:P:33[B]:MET:HE3	3:P:42:LEU:HD12	1.85	0.59
26:Y:101:CDL:H142	26:Y:101:CDL:OB9	2.03	0.59
1:A:337:ALA:HB2	1:A:394[A]:VAL:HG23	1.83	0.59
26:C:304:CDL:CB2	10:J:8:LYS:HE3	2.32	0.59
1:N:112:LEU:C	1:N:112:LEU:CD2	2.76	0.58
26:C:304:CDL:H752	10:J:27:THR:HG21	1.85	0.58
4:Q:86:MET:HE2	11:X:22:ALA:HA	1.85	0.58
26:Y:101:CDL:OB9	26:Y:101:CDL:H122	2.03	0.58
12:L:26:THR:CG2	20:L:102:DMU:H26	2.33	0.58
2:O:89:GLU:O	2:O:91:ASN:OD1	2.22	0.58
26:C:304:CDL:HB21	26:C:304:CDL:HB61	1.84	0.58
3:P:50:ASN:ND2	3:P:54[A]:MET:HE2	2.19	0.58
3:C:51[B]:MET:HE2	26:C:304:CDL:H872	1.84	0.58
2:B:22[B]:HIS:CE1	9:I:44:LYS:HE2	2.39	0.57
3:P:59:ARG:HG3	26:P:304:CDL:HA4	1.85	0.57
3:P:164:PHE:CD1	24:P:305:CHD:H192	2.39	0.57
20:C:319:DMU:H22	10:J:41:GLY:HA3	1.86	0.57
7:G:19:LEU:HD23	19:N:608:LFA:H61	1.86	0.57
3:P:51[B]:MET:HE3	26:P:304:CDL:C87	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Y:26:THR:CG2	20:Z:102:DMU:H26	2.35	0.56
29:N:2948:HOH:O	4:Q:20:ARG:HG2	2.06	0.56
2:O:16[B]:ILE:HG12	29:O:515:HOH:O	2.05	0.56
1:A:51:ASP:OD2	1:A:441:SER:OG	2.20	0.56
2:O:58:ALA:O	2:O:62:GLU:HG3	2.06	0.56
26:C:304:CDL:H531	26:C:304:CDL:HB4	1.87	0.56
1:A:297[B]:MET:SD	1:A:302:ARG:CG	2.95	0.55
26:C:304:CDL:HB21	26:C:304:CDL:CB3	2.36	0.55
2:B:227:LEU:HD21	29:B:532:HOH:O	2.05	0.55
2:O:16[A]:ILE:HD12	2:O:87[A]:MET:HG2	1.88	0.55
3:C:226:HIS:HE1	26:C:304:CDL:H111	1.72	0.55
2:O:196:CYS:HB2	2:O:207:MET:HG3	1.89	0.55
8:H:22:ASN:ND2	20:H:101:DMU:O3	2.40	0.55
12:Y:3:TYR:N	29:Y:202:HOH:O	2.39	0.55
3:P:220:PHE:HB3	26:P:304:CDL:H141	1.89	0.54
1:N:362[A]:SER:HA	2:O:87[A]:MET:HE1	1.89	0.54
1:A:274:VAL:HG12	1:A:278[A]:MET:HE2	1.89	0.54
3:C:67:PHE:CE2	26:C:304:CDL:O1	2.59	0.53
3:P:4:GLN:CA	29:P:403:HOH:O	2.49	0.53
12:L:13:PHE:HA	26:L:101:CDL:HB31	1.89	0.53
2:O:92:ASN:ND2	29:O:403:HOH:O	2.40	0.53
2:O:16[A]:ILE:HG21	2:O:87[A]:MET:HG2	1.91	0.53
2:B:60:GLU:H	2:B:60:GLU:CD	2.16	0.52
6:S:54:ASN:HD22	6:S:54:ASN:C	2.18	0.52
14:N:601:HEA:HBC1	14:N:601:HEA:HMC1	1.90	0.52
1:A:1:FME:HE2	1:A:1:FME:HA	1.90	0.52
1:N:278[B]:MET:SD	19:N:607:LFA:H52	2.50	0.52
2:O:16[A]:ILE:HD12	2:O:87[A]:MET:CG	2.40	0.52
26:Y:101:CDL:H711	26:Y:101:CDL:H362	1.91	0.52
26:C:304:CDL:HB4	26:C:304:CDL:C53	2.40	0.52
28:T:102:PEK:H32	28:T:102:PEK:C7	2.39	0.52
1:N:377:PHE:O	1:N:381:LEU:HB3	2.09	0.52
12:Y:26:THR:HG21	20:Z:102:DMU:H26	1.91	0.51
6:F:92:VAL:HG23	6:F:92:VAL:O	2.10	0.51
1:N:337:ALA:HB2	1:N:394[A]:VAL:HG23	1.93	0.51
20:D:201:DMU:H36	20:D:201:DMU:O55	2.10	0.51
8:H:23:GLN:CD	29:H:207:HOH:O	2.53	0.51
29:P:410:HOH:O	6:S:3:GLY:HA3	2.09	0.51
2:B:32[B]:PHE:CD2	9:I:31:PHE:CZ	2.99	0.51
3:C:164:PHE:CD1	24:C:305:CHD:H192	2.45	0.51
6:F:85:CYS:SG	6:F:87[B]:THR:OG1	2.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:I:101:CDL:C1	26:I:101:CDL:OA3	2.58	0.51
26:C:304:CDL:CB2	26:C:304:CDL:HB61	2.40	0.51
19:N:607:LFA:H12	19:N:608:LFA:C1	2.39	0.51
2:O:220:GLU:OE1	29:O:402:HOH:O	2.19	0.51
2:O:60:GLU:CD	2:O:60:GLU:H	2.17	0.51
1:A:308:ALA:O	1:A:311[B]:ILE:HG12	2.11	0.51
28:G:101:PEK:C12	28:G:101:PEK:H161	2.41	0.51
2:B:140:ASN:HB3	29:B:514:HOH:O	2.11	0.51
2:B:16[B]:ILE:HG13	2:B:17:MET:N	2.26	0.50
2:B:58:ALA:O	2:B:62:GLU:HG3	2.10	0.50
3:P:258:TRP:CZ2	19:P:307:LFA:H32	2.47	0.50
20:Q:201:DMU:O55	20:Q:201:DMU:H36	2.10	0.50
1:A:87:ILE:O	1:A:173:PRO:HD3	2.11	0.50
14:A:601:HEA:HMC1	14:A:601:HEA:HBC1	1.93	0.50
1:N:278[A]:MET:HE1	19:N:608:LFA:H51	1.92	0.50
2:B:16[A]:ILE:HD12	2:B:87[A]:MET:HG3	1.94	0.49
1:N:308:ALA:O	1:N:311[B]:ILE:HG12	2.12	0.49
26:P:304:CDL:H122	26:P:304:CDL:HA62	1.92	0.49
2:B:33:LEU:HD13	9:I:31:PHE:CD2	2.46	0.49
21:A:611:EDO:H12	2:B:58:ALA:HB3	1.94	0.49
3:C:50:ASN:ND2	3:C:54[A]:MET:HE2	2.28	0.49
1:N:107:PRO:HB3	3:P:25:LEU:HB2	1.94	0.49
3:C:51[B]:MET:CE	26:C:304:CDL:H872	2.42	0.49
3:P:116:TRP:HA	3:P:117:PRO:C	2.38	0.49
2:O:104:TRP:CG	2:O:203:ASN:HB2	2.47	0.49
1:N:334:TRP:CH2	2:O:46:LEU:HD13	2.48	0.49
3:C:59:ARG:HB2	26:C:304:CDL:OA9	2.13	0.49
6:F:87[A]:THR:HG22	6:F:89:TYR:CE1	2.48	0.49
1:N:113[A]:LEU:HD12	26:Y:101:CDL:C87	2.42	0.49
11:X:24:PHE:O	11:X:28:VAL:HG12	2.12	0.49
4:D:40:LEU:CD2	4:D:58:GLU:HG2	2.43	0.48
1:A:107:PRO:HB3	3:C:25:LEU:HB2	1.94	0.48
29:B:481:HOH:O	8:H:61:LYS:HE3	2.12	0.48
2:B:61:VAL:HG22	2:B:65:TRP:CE3	2.48	0.48
2:O:82:ARG:HA	20:O:304:DMU:H30	1.95	0.48
12:Y:24:MET:HG3	29:Y:211:HOH:O	2.12	0.48
1:N:136[B]:LEU:HD11	29:N:3019:HOH:O	2.13	0.48
26:Y:101:CDL:H711	26:Y:101:CDL:H361	1.96	0.48
5:R:77:PRO:O	5:R:79:LYS:HD2	2.14	0.48
2:O:33:LEU:HD13	9:V:31:PHE:CD2	2.48	0.48
2:O:114:GLU:HG3	2:O:227:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:131:LEU:HD21	20:P:323:DMU:H18	1.96	0.47
4:Q:48:TRP:O	4:Q:51:LEU:HB2	2.14	0.47
1:N:334:TRP:HB2	20:Q:201:DMU:C57	2.45	0.47
1:N:297[B]:MET:HG2	1:N:302:ARG:HG3	1.96	0.47
2:B:196:CYS:HB2	2:B:207:MET:HG3	1.95	0.47
2:B:16[A]:ILE:HG22	2:B:87[A]:MET:HE3	1.87	0.47
3:C:258:TRP:CZ2	19:C:307:LFA:H32	2.49	0.47
2:O:1:FME:HE1	2:O:133:LEU:HD22	1.96	0.47
3:P:33[A]:MET:HG2	3:P:39:SER:O	2.15	0.47
3:P:220:PHE:CB	26:P:304:CDL:H141	2.45	0.47
7:G:18:PHE:CZ	1:N:278[A]:MET:HE1	2.50	0.47
26:L:101:CDL:OB9	26:L:101:CDL:H122	2.14	0.47
1:N:34:SER:HB2	14:N:601:HEA:C2B	2.45	0.47
4:Q:118:LYS:HE3	11:X:51:LYS:HE3	1.97	0.47
26:Y:101:CDL:C1	29:Y:219[B]:HOH:O	2.62	0.47
1:N:71:MET:HE1	1:N:195:LEU:HD21	1.97	0.46
8:U:43:MET:O	8:U:48:GLY:N	2.48	0.46
1:N:486:ASP:OD2	4:Q:19:ARG:NE	2.48	0.46
1:A:486:ASP:HB3	29:A:919[B]:HOH:O	2.15	0.46
2:B:60:GLU:CD	2:B:60:GLU:N	2.73	0.46
1:N:296:GLY:HA2	8:U:23:GLN:OE1	2.15	0.46
1:A:278[B]:MET:HB3	1:A:278[B]:MET:HE3	1.82	0.46
19:P:309:LFA:C4	29:U:205:HOH:O	2.63	0.46
7:T:50:TYR:HB3	7:T:52:HIS:CE1	2.50	0.46
26:V:101:CDL:C52	26:V:101:CDL:H312	2.46	0.46
26:Y:101:CDL:HB22	26:Y:101:CDL:HA32	1.98	0.46
19:C:307:LFA:H31	24:P:301:CHD:H61	1.98	0.46
1:N:189:MET:HE3	19:N:607:LFA:H31	1.96	0.46
26:P:304:CDL:HB32	26:P:304:CDL:HB21	1.97	0.46
3:C:33[B]:MET:HG3	3:C:37:PHE:HB2	1.98	0.46
3:C:59:ARG:HG3	26:C:304:CDL:HA4	1.97	0.46
1:N:229:ILE:HD11	2:O:175:ILE:HD13	1.98	0.46
11:K:24:PHE:O	11:K:28:VAL:HG12	2.15	0.46
7:T:12:GLY:CA	29:T:225:HOH:O	2.62	0.46
6:F:53:THR:HG23	6:F:55:LYS:H	1.80	0.46
2:O:41:ILE:O	2:O:45:MET:HG2	2.16	0.46
7:G:41:HIS:HB3	7:G:74:ARG:CZ	2.46	0.46
24:O:301:CHD:H212	24:O:301:CHD:H12	1.96	0.46
26:C:304:CDL:CA5	26:C:304:CDL:OB4	2.64	0.45
4:D:17[A]:VAL:HG12	29:D:406:HOH:O	2.13	0.45
2:O:132:GLU:HB3	2:O:137:GLU:HG3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:P:304:CDL:CA2	29:P:448:HOH:O	2.64	0.45
12:Y:35:ALA:HB3	12:Y:36:PRO:HD3	1.98	0.45
5:E:82:TYR:HB3	5:E:83:PRO:HD3	1.98	0.45
7:T:23:LEU:HB2	19:T:101:LFA:C9	2.46	0.45
7:G:32:THR:O	7:G:36:TRP:HB2	2.16	0.45
8:H:60:TYR:CD1	8:H:60:TYR:C	2.94	0.45
2:B:164:ALA:O	2:B:194:GLY:HA3	2.17	0.45
7:G:19:LEU:CD2	19:N:608:LFA:H61	2.47	0.45
2:O:91:ASN:HD22	2:O:183:THR:HG21	1.81	0.45
2:B:13:THR:HB	2:B:168:LEU:HD23	1.99	0.45
1:N:297[B]:MET:CG	1:N:302:ARG:HG3	2.46	0.45
7:T:23:LEU:HB2	19:T:101:LFA:H92	1.99	0.45
26:P:304:CDL:C12	26:P:304:CDL:CA6	2.95	0.45
26:P:304:CDL:HA62	26:P:304:CDL:C12	2.46	0.45
4:Q:86:MET:CE	11:X:22:ALA:HA	2.45	0.45
1:A:334:TRP:HB2	20:D:201:DMU:C57	2.47	0.45
26:C:304:CDL:OA3	26:C:304:CDL:H1	2.09	0.45
1:N:378:HIS:HA	1:N:382:SER:HB2	1.99	0.45
22:N:616:PGV:H183	28:T:102:PEK:H331	1.98	0.45
3:P:33[B]:MET:HB2	3:P:33[B]:MET:HE2	1.62	0.45
3:C:47:LEU:O	3:C:51[A]:MET:HG2	2.17	0.45
3:C:258:TRP:NE1	19:C:307:LFA:H12	2.31	0.44
1:N:19:TYR:CD1	1:N:76:GLY:HA3	2.52	0.44
1:A:278[B]:MET:SD	19:A:607:LFA:H51	2.57	0.44
3:C:33[A]:MET:HG2	3:C:39:SER:O	2.17	0.44
1:N:488:THR:HB	1:N:495:LEU:HD13	1.98	0.44
1:A:76:GLY:O	1:A:80:ASN:HB2	2.18	0.44
3:C:177:GLN:HA	3:C:177:GLN:OE1	2.18	0.44
8:H:52:VAL:HG21	8:U:43:MET:HE1	1.99	0.44
12:L:26:THR:HG21	20:L:102:DMU:C37	2.47	0.44
3:P:33[B]:MET:HE2	3:P:42:LEU:HD12	1.95	0.44
29:C:471[B]:HOH:O	10:J:27:THR:HG22	2.17	0.44
1:N:265:LYS:HB2	1:N:490:THR:HG21	2.00	0.44
2:O:121:TYR:O	2:O:138:VAL:HA	2.16	0.44
3:C:51[A]:MET:HE1	22:C:303:PGV:C16	2.48	0.44
1:N:53:ILE:HG12	29:N:2984:HOH:O	2.18	0.44
2:B:16[A]:ILE:HD11	2:B:86:MET:HG2	1.99	0.44
12:L:26:THR:HG21	20:L:102:DMU:C40	2.48	0.44
20:P:324:DMU:O3	20:P:324:DMU:C2	2.66	0.44
2:B:108:TYR:O	2:B:117:SER:HA	2.18	0.44
6:F:55:LYS:HA	6:F:74:LEU:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:26:THR:HG21	20:L:102:DMU:C43	2.45	0.44
2:O:116:LEU:CD1	2:O:226:MET:HG2	2.48	0.43
3:P:67:PHE:CE2	26:P:304:CDL:O1	2.71	0.43
26:Y:101:CDL:C41	26:Y:101:CDL:H801	2.47	0.43
1:A:378:HIS:HA	1:A:382:SER:HB2	2.01	0.43
3:C:133:ASN:ND2	29:C:408:HOH:O	2.46	0.43
3:P:51[B]:MET:HE3	26:P:304:CDL:C86	2.48	0.43
1:A:377:PHE:O	1:A:381:LEU:HB3	2.18	0.43
2:B:104:TRP:CD2	2:B:203:ASN:HB2	2.53	0.43
24:B:306:CHD:H212	24:B:306:CHD:H12	2.00	0.43
1:A:240:HIS:CD2	1:A:240:HIS:C	2.96	0.43
9:I:23:GLY:O	9:I:27:VAL:HG23	2.18	0.43
1:A:409:TRP:HB3	1:A:471:ILE:HG12	1.98	0.43
1:A:278[B]:MET:HE1	19:A:607:LFA:H52	2.01	0.43
4:D:86:MET:CE	11:K:22:ALA:HB2	2.46	0.43
9:V:36:LYS:HE3	9:V:41:GLU:HG3	2.00	0.43
1:N:76:GLY:O	1:N:80:ASN:HB2	2.18	0.43
2:O:104:TRP:CD2	2:O:203:ASN:HB2	2.54	0.43
1:A:297[B]:MET:O	1:A:302:ARG:NH2	2.49	0.43
6:F:41:GLY:HA3	6:F:87[B]:THR:CG2	2.48	0.43
12:L:35:ALA:HB3	12:L:36:PRO:HD3	2.00	0.43
1:A:285:PHE:CD2	19:A:607:LFA:H122	2.54	0.43
1:N:390:MET:HE2	1:N:413:HIS:HE1	1.83	0.43
1:N:278[B]:MET:SD	19:N:607:LFA:C5	3.07	0.43
3:P:63:ARG:HH21	26:P:304:CDL:PA1	2.42	0.43
1:A:296:GLY:HA2	8:H:23:GLN:OE1	2.18	0.42
3:P:258:TRP:CE2	19:P:307:LFA:H32	2.54	0.42
3:C:149:HIS:NE2	19:C:313:LFA:H21	2.34	0.42
19:C:314:LFA:H21	19:C:315:LFA:H71	2.00	0.42
4:Q:31:LYS:HG3	29:Q:344:HOH:O	2.19	0.42
26:C:304:CDL:HB4	26:C:304:CDL:C52	2.49	0.42
7:G:18:PHE:CZ	1:N:278[A]:MET:CE	3.02	0.42
13:M:37:LEU:HA	13:M:37:LEU:HD23	1.86	0.42
24:C:305:CHD:O25	10:J:1:PHE:N	2.44	0.42
4:D:127:LYS:HD2	29:I:238:HOH:O	2.20	0.42
8:U:43:MET:HE2	8:U:43:MET:HA	2.01	0.42
1:A:278[B]:MET:SD	19:A:607:LFA:C5	3.08	0.42
6:F:62:CYS:HB3	6:F:85:CYS:HB3	2.01	0.42
1:N:417[B]:MET:HE2	1:N:417[B]:MET:HB2	1.92	0.42
26:C:304:CDL:H121	26:C:304:CDL:CA6	2.48	0.42
1:N:87:ILE:O	1:N:173:PRO:HD3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:278[B]:MET:HE1	19:N:607:LFA:H52	2.00	0.42
6:S:21[B]:MET:HE2	6:S:21[B]:MET:HB2	1.83	0.42
13:Z:27:LEU:HD22	20:Z:101:DMU:H14	2.01	0.42
2:B:1:FME:HE1	2:B:133:LEU:HD22	2.01	0.42
2:B:22[B]:HIS:CE1	9:I:44:LYS:CE	3.02	0.42
2:O:60:GLU:CD	2:O:60:GLU:N	2.77	0.42
1:A:62:ALA:HB2	14:A:601:HEA:HBD1	2.01	0.42
3:C:144[A]:ILE:HD13	3:C:239:ALA:HA	2.01	0.42
26:P:304:CDL:OA8	26:P:304:CDL:H121	2.20	0.42
4:Q:12:ALA:HA	6:S:73:TRP:CD1	2.55	0.42
3:C:33[B]:MET:HE2	3:C:33[B]:MET:HB2	1.09	0.42
3:C:33[B]:MET:HE3	3:C:42:LEU:HD12	2.02	0.41
20:N:610:DMU:H21	4:Q:84:ALA:HB2	2.02	0.41
1:A:489:THR:HA	6:F:71:TRP:O	2.20	0.41
3:P:154:GLY:HA2	6:S:6:VAL:HB	2.01	0.41
3:P:210:ILE:HD13	22:P:303:PGV:H312	2.02	0.41
10:W:54:SER:O	12:Y:46:LYS:HE2	2.20	0.41
1:A:334:TRP:CZ3	20:A:608:DMU:H19	2.56	0.41
3:C:116:TRP:HA	3:C:117:PRO:C	2.44	0.41
6:F:92:VAL:O	6:F:92:VAL:CG2	2.69	0.41
8:H:43:MET:HE2	8:U:52:VAL:HG11	1.98	0.41
1:N:240:HIS:CD2	1:N:240:HIS:C	2.98	0.41
1:N:449:MET:SD	2:O:5:MET:HG2	2.61	0.41
2:O:67:ILE:HD11	19:O:302:LFA:H42	2.03	0.41
2:O:116:LEU:HD13	2:O:226:MET:HG2	2.03	0.41
29:A:888:HOH:O	6:F:37:LYS:HE3	2.20	0.41
3:C:41:THR:HA	3:C:44[B]:MET:HE2	2.03	0.41
1:N:62:ALA:HB2	14:N:601:HEA:HBD1	2.03	0.41
1:N:397:PHE:N	1:N:398:PRO:CD	2.84	0.41
2:O:13:THR:HB	2:O:168:LEU:HD23	2.03	0.41
1:A:106:PRO:HB2	1:A:107:PRO:HD3	2.02	0.41
1:A:222:PRO:HB2	21:C:322:EDO:H22	2.03	0.41
3:C:33[B]:MET:HE2	3:C:33[B]:MET:N	2.36	0.41
22:C:303:PGV:H12	22:C:303:PGV:H161	1.99	0.41
7:G:45:PRO:HD2	29:G:223:HOH:O	2.21	0.41
6:S:55:LYS:HA	6:S:74:LEU:O	2.21	0.41
26:C:304:CDL:OA5	26:C:304:CDL:OB9	2.39	0.41
6:S:62:CYS:HB3	6:S:85:CYS:HB3	2.03	0.41
3:C:37:PHE:CE2	20:C:325:DMU:H13	2.56	0.40
1:N:489:THR:HA	6:S:71:TRP:O	2.21	0.40
4:Q:73:ARG:NH1	29:Q:305:HOH:O	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:U:84:LYS:HE3	29:U:247:HOH:O	2.21	0.40
7:G:37:LEU:HD12	7:G:37:LEU:HA	1.93	0.40
28:T:102:PEK:C15	28:T:102:PEK:C11	2.99	0.40
14:N:601:HEA:HBC1	14:N:601:HEA:CMC	2.51	0.40
2:O:32[B]:PHE:CD2	9:V:31:PHE:CZ	3.09	0.40
29:P:503:HOH:O	6:S:33:ILE:HD13	2.20	0.40
8:H:23:GLN:NE2	29:H:206:HOH:O	2.54	0.40
2:O:98:LYS:HB2	2:O:109:GLU:HB2	2.03	0.40
7:T:37:LEU:HD12	7:T:37:LEU:HA	1.90	0.40
10:W:3:ASN:OD1	10:W:3:ASN:C	2.63	0.40
1:N:75:ILE:O	1:N:79:GLY:HA3	2.21	0.40
22:P:303:PGV:H181	26:P:304:CDL:H241	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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%)	512 (97%)	14 (3%)	0	100	100
1	N	526/514 (102%)	515 (98%)	11 (2%)	0	100	100
2	B	230/227 (101%)	223 (97%)	7 (3%)	0	100	100
2	O	230/227 (101%)	222 (96%)	8 (4%)	0	100	100
3	C	265/261 (102%)	261 (98%)	4 (2%)	0	100	100
3	P	265/261 (102%)	260 (98%)	5 (2%)	0	100	100
4	D	142/147 (97%)	138 (97%)	4 (3%)	0	100	100
4	Q	136/147 (92%)	133 (98%)	3 (2%)	0	100	100
5	E	100/109 (92%)	100 (100%)	0	0	100	100
5	R	100/109 (92%)	100 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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%)	69 (97%)	2 (3%)	0	100	100
7	T	71/85 (84%)	69 (97%)	2 (3%)	0	100	100
8	H	73/85 (86%)	72 (99%)	1 (1%)	0	100	100
8	U	73/85 (86%)	71 (97%)	2 (3%)	0	100	100
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%)	47 (100%)	0	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%)	37 (97%)	1 (3%)	0	100	100
All	All	3488/3614 (96%)	3417 (98%)	71 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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%)	76	70
1	N	440/426 (103%)	436 (99%)	4 (1%)	70	64
2	B	215/210 (102%)	207 (96%)	8 (4%)	30	15
2	O	215/210 (102%)	209 (97%)	6 (3%)	38	23
3	C	232/226 (103%)	230 (99%)	2 (1%)	70	64

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	P	232/226 (103%)	230 (99%)	2 (1%)	70	64
4	D	128/129 (99%)	126 (98%)	2 (2%)	55	44
4	Q	122/129 (95%)	120 (98%)	2 (2%)	55	44
5	E	89/95 (94%)	89 (100%)	0	100	100
5	R	89/95 (94%)	87 (98%)	2 (2%)	45	32
6	F	78/81 (96%)	75 (96%)	3 (4%)	29	14
6	S	78/81 (96%)	75 (96%)	3 (4%)	29	14
7	G	63/69 (91%)	61 (97%)	2 (3%)	34	19
7	T	63/69 (91%)	60 (95%)	3 (5%)	23	8
8	H	67/75 (89%)	65 (97%)	2 (3%)	36	21
8	U	67/75 (89%)	64 (96%)	3 (4%)	24	10
9	I	55/58 (95%)	54 (98%)	1 (2%)	51	40
9	V	55/58 (95%)	51 (93%)	4 (7%)	13	3
10	J	47/50 (94%)	46 (98%)	1 (2%)	47	33
10	W	47/50 (94%)	45 (96%)	2 (4%)	26	11
11	K	39/46 (85%)	38 (97%)	1 (3%)	40	25
11	X	39/46 (85%)	39 (100%)	0	100	100
12	L	37/40 (92%)	36 (97%)	1 (3%)	39	24
12	Y	37/40 (92%)	36 (97%)	1 (3%)	39	24
13	M	34/38 (90%)	33 (97%)	1 (3%)	37	22
13	Z	34/38 (90%)	32 (94%)	2 (6%)	18	5
All	All	3042/3086 (99%)	2981 (98%)	61 (2%)	48	36

All (61) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	35	LEU
1	A	112	LEU
1	A	369	ASP
2	B	33	LEU
2	B	59	GLN
2	B	60	GLU
2	B	68	LEU
2	B	75	LEU
2	B	78	LEU

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Mol	Chain	Res	Type
2	B	91	ASN
2	B	115	ASP
3	C	159	MET
3	C	230	ASN
4	D	4	SER
4	D	58	GLU
6	F	80	GLN
6	F	87[A]	THR
6	F	87[B]	THR
7	G	33	LEU
7	G	37	LEU
8	H	46	LYS
8	H	60	TYR
9	I	36	LYS
10	J	7	GLU
11	K	54	ARG
12	L	26	THR
13	M	38	ASP
1	N	112	LEU
1	N	152	LEU
1	N	369	ASP
1	N	495	LEU
2	O	33	LEU
2	O	60	GLU
2	O	78	LEU
2	O	91	ASN
2	O	94	SER
2	O	115	ASP
3	P	159	MET
3	P	230	ASN
4	Q	31	LYS
4	Q	51	LEU
5	R	79	LYS
5	R	108	LYS
6	S	37	LYS
6	S	54	ASN
6	S	80	GLN
7	T	33	LEU
7	T	36	TRP
7	T	37	LEU
8	U	46	LYS
8	U	60	TYR

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Mol	Chain	Res	Type
8	U	61	LYS
9	V	8	GLN
9	V	29	LEU
9	V	36	LYS
9	V	70	GLN
10	W	7	GLU
10	W	50	LEU
12	Y	26	THR
13	Z	13	LYS
13	Z	38	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	52	HIS
2	B	203	ASN
3	C	50	ASN
4	D	29	HIS
4	D	109	HIS
4	D	119	GLN
5	E	94	ASN
6	F	54	ASN
7	G	38	HIS
8	H	22	ASN
8	H	28	ASN
8	H	32	ASN
8	H	37	HIS
10	J	29	ASN
11	K	35	GLN
1	N	170	ASN
2	O	59	GLN
2	O	92	ASN
3	P	50	ASN
3	P	56	GLN
4	Q	109	HIS
4	Q	119	GLN
5	R	94	ASN
6	S	54	ASN
7	T	34	ASN
8	U	22	ASN
8	U	32	ASN
8	U	37	HIS

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Mol	Chain	Res	Type
9	V	8	GLN
11	X	35	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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	0.87	1 (12%)	8,9,11	1.05	0
1	FME	N	1	1	8,9,10	0.63	0	8,9,11	1.13	1 (12%)
2	FME	O	1	2	8,9,10	0.71	0	8,9,11	0.81	0
1	FME	A	1	1	8,9,10	0.51	0	8,9,11	1.04	1 (12%)

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	-
1	FME	N	1	1	-	3/7/9/11	-
2	FME	O	1	2	-	0/7/9/11	-
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	-2.09	1.70	1.81

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1	FME	O-C-CA	-2.50	118.34	124.77
1	A	1	FME	C-CA-N	2.11	113.58	109.50

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	A	1	FME	C-CA-CB-CG
1	N	1	FME	CA-CB-CG-SD

There are no ring outliers.

3 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	1	FME	1	0
2	O	1	FME	1	0
1	A	1	FME	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 133 ligands modelled in this entry, 8 are monoatomic and 2 are unknown - leaving 123 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
19	LFA	C	309	-	17,17,19	0.32	0	16,16,18	0.15	0
14	HEA	N	601	1	67,67,67	2.06	25 (37%)	81,103,103	2.59	30 (37%)
20	DMU	C	306	-	10,10,34	0.32	0	9,9,45	0.55	0
21	EDO	N	611	-	3,3,3	0.27	0	2,2,2	0.06	0
20	DMU	C	316	-	34,34,34	0.89	4 (11%)	45,45,45	1.68	7 (15%)
20	DMU	P	319	-	34,34,34	0.89	2 (5%)	45,45,45	1.28	4 (8%)
14	HEA	N	602	1	67,67,67	2.07	22 (32%)	81,103,103	2.62	33 (40%)
24	CHD	O	301	-	32,32,32	0.70	0	51,51,51	0.78	0
19	LFA	P	314	-	12,12,19	0.35	0	11,11,18	0.28	0
20	DMU	A	608	-	6,6,34	0.70	0	5,5,45	0.20	0
20	DMU	J	101	-	10,10,34	0.18	0	9,9,45	0.68	0
20	DMU	O	307	-	10,10,34	0.32	0	9,9,45	0.56	0
21	EDO	S	103	-	3,3,3	0.15	0	2,2,2	0.05	0
19	LFA	C	310	-	14,14,19	0.17	0	13,13,18	0.11	0
21	EDO	R	201	-	3,3,3	0.30	0	2,2,2	0.23	0
14	HEA	A	601	1	67,67,67	2.15	24 (35%)	81,103,103	2.30	27 (33%)
26	CDL	P	304	-	86,86,99	0.57	0	92,98,111	0.82	5 (5%)
21	EDO	N	614	-	3,3,3	0.16	0	2,2,2	0.15	0
20	DMU	C	317	-	6,6,34	0.42	0	5,5,45	0.42	0
28	PEK	G	101	-	52,52,52	0.60	1 (1%)	55,57,57	0.66	0
19	LFA	B	307	-	16,16,19	0.34	0	15,15,18	0.26	0
21	EDO	P	321	-	3,3,3	0.27	0	2,2,2	0.34	0
24	CHD	P	305	-	32,32,32	0.87	0	51,51,51	1.55	6 (11%)
20	DMU	P	324	-	34,34,34	0.54	0	45,45,45	1.53	6 (13%)
19	LFA	C	312	-	13,13,19	0.24	0	12,12,18	0.20	0
26	CDL	L	101	-	93,93,99	0.43	0	99,105,111	0.70	4 (4%)
19	LFA	P	309	-	17,17,19	0.24	0	16,16,18	0.18	0
19	LFA	C	307	-	10,10,19	0.23	0	9,9,18	0.10	0
22	PGV	C	303	-	50,50,50	0.84	2 (4%)	53,56,56	0.93	3 (5%)
24	CHD	C	301	-	32,32,32	0.85	2 (6%)	51,51,51	0.84	1 (1%)
20	DMU	B	302	-	10,10,34	0.15	0	9,9,45	0.65	0
19	LFA	C	308	-	5,5,19	0.22	0	4,4,18	0.11	0
20	DMU	O	308	-	22,22,34	0.69	1 (4%)	27,27,45	1.23	3 (11%)
19	LFA	C	314	-	14,14,19	0.25	0	13,13,18	0.45	0
22	PGV	P	303	-	50,50,50	0.82	2 (4%)	53,56,56	0.91	3 (5%)
21	EDO	N	613	-	3,3,3	0.23	0	2,2,2	0.12	0
24	CHD	B	306	-	32,32,32	0.79	1 (3%)	51,51,51	0.74	0
20	DMU	B	304	-	22,22,34	0.86	1 (4%)	27,27,45	1.01	2 (7%)
26	CDL	Y	101	-	93,93,99	0.47	0	99,105,111	0.60	2 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
20	DMU	Q	201	-	34,34,34	1.39	5 (14%)	45,45,45	1.70	7 (15%)
23	CUA	O	305	2	0,1,1	-	-	-		
19	LFA	N	608	-	13,13,19	0.60	0	12,12,18	0.34	0
21	EDO	A	613	-	3,3,3	0.61	0	2,2,2	0.55	0
22	PGV	A	614	-	50,50,50	0.75	2 (4%)	53,56,56	1.07	2 (3%)
21	EDO	N	612	-	3,3,3	0.23	0	2,2,2	0.14	0
20	DMU	P	323	-	22,22,34	0.72	0	27,27,45	1.47	2 (7%)
20	DMU	M	101	-	34,34,34	1.00	2 (5%)	45,45,45	1.01	3 (6%)
20	DMU	A	615	-	10,10,34	0.38	0	9,9,45	0.51	0
20	DMU	G	102	-	10,10,34	0.41	0	9,9,45	0.50	0
20	DMU	N	610	-	34,34,34	1.36	5 (14%)	45,45,45	1.21	4 (8%)
21	EDO	O	309	-	3,3,3	0.05	0	2,2,2	0.07	0
21	EDO	A	612	-	3,3,3	0.46	0	2,2,2	0.13	0
18	CO2	N	606	-	2,2,2	0.44	0	1,1,1	0.23	0
21	EDO	C	321	-	3,3,3	0.08	0	2,2,2	0.14	0
21	EDO	T	104	-	3,3,3	0.24	0	2,2,2	0.13	0
21	EDO	R	202	-	3,3,3	0.24	0	2,2,2	0.26	0
26	CDL	C	304	-	86,86,99	0.60	0	92,98,111	1.09	8 (8%)
20	DMU	M	102	-	7,7,34	0.38	0	6,6,45	0.33	0
21	EDO	C	323	-	3,3,3	0.82	0	2,2,2	0.68	0
19	LFA	T	103	-	10,10,19	0.25	0	9,9,18	0.16	0
26	CDL	V	101	-	63,63,99	0.60	0	69,75,111	1.11	5 (7%)
20	DMU	A	609	-	34,34,34	1.13	4 (11%)	45,45,45	1.37	7 (15%)
19	LFA	T	101	-	13,13,19	0.59	0	12,12,18	0.33	0
19	LFA	P	311	-	13,13,19	0.28	0	12,12,18	0.16	0
21	EDO	E	202	-	3,3,3	0.33	0	2,2,2	0.11	0
26	CDL	I	101	-	63,63,99	0.59	0	69,75,111	1.00	5 (7%)
21	EDO	A	611	-	3,3,3	0.33	0	2,2,2	0.47	0
21	EDO	A	610	-	3,3,3	0.13	0	2,2,2	0.16	0
19	LFA	P	313	-	14,14,19	0.32	0	13,13,18	0.23	0
20	DMU	N	609	-	6,6,34	0.41	0	5,5,45	0.35	0
20	DMU	P	317	-	22,22,34	1.11	1 (4%)	27,27,45	1.30	3 (11%)
23	CUA	B	301	2	0,1,1	-	-	-		
24	CHD	C	305	-	32,32,32	0.82	0	51,51,51	1.59	9 (17%)
20	DMU	D	201	-	34,34,34	1.39	5 (14%)	45,45,45	1.51	8 (17%)
21	EDO	S	102	-	3,3,3	0.28	0	2,2,2	0.17	0
19	LFA	C	313	-	10,10,19	0.22	0	9,9,18	0.24	0
20	DMU	B	303	-	10,10,34	0.31	0	9,9,45	0.60	0
20	DMU	B	308	-	22,22,34	0.63	0	27,27,45	1.47	4 (14%)
20	DMU	C	325	-	34,34,34	0.83	2 (5%)	45,45,45	1.13	2 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
20	DMU	Z	102	-	22,22,34	0.66	0	27,27,45	1.22	5 (18%)
28	PEK	T	102	-	52,52,52	0.65	2 (3%)	55,57,57	0.92	4 (7%)
20	DMU	P	318	-	34,34,34	0.89	3 (8%)	45,45,45	1.24	3 (6%)
20	DMU	P	306	-	10,10,34	0.34	0	9,9,45	0.69	0
21	EDO	E	203	-	3,3,3	0.14	0	2,2,2	0.08	0
19	LFA	P	312	-	10,10,19	0.17	0	9,9,18	0.27	0
21	EDO	B	305	-	3,3,3	0.12	0	2,2,2	0.19	0
21	EDO	R	203	-	3,3,3	0.18	0	2,2,2	0.05	0
21	EDO	F	103	-	3,3,3	0.09	0	2,2,2	0.14	0
21	EDO	N	615	-	3,3,3	0.16	0	2,2,2	0.19	0
20	DMU	Z	101	-	34,34,34	1.07	3 (8%)	45,45,45	1.05	4 (8%)
20	DMU	O	306	-	10,10,34	0.22	0	9,9,45	0.62	0
21	EDO	C	322	-	3,3,3	0.43	0	2,2,2	0.06	0
19	LFA	C	315	-	12,12,19	0.21	0	11,11,18	0.21	0
19	LFA	C	326	-	14,14,19	0.20	0	13,13,18	0.12	0
20	DMU	P	316	-	6,6,34	0.44	0	5,5,45	0.38	0
19	LFA	A	607	-	13,13,19	0.34	0	12,12,18	0.21	0
20	DMU	H	101	-	34,34,34	1.12	4 (11%)	45,45,45	1.41	6 (13%)
20	DMU	Z	103	-	7,7,34	0.27	0	6,6,45	0.41	0
19	LFA	C	311	-	10,10,19	0.19	0	9,9,18	0.19	0
20	DMU	C	319	-	34,34,34	0.87	2 (5%)	45,45,45	1.20	3 (6%)
21	EDO	P	320	-	3,3,3	0.14	0	2,2,2	0.18	0
19	LFA	P	310	-	10,10,19	0.13	0	9,9,18	0.08	0
21	EDO	F	102	-	3,3,3	0.28	0	2,2,2	0.26	0
20	DMU	P	315	-	34,34,34	0.69	1 (2%)	45,45,45	1.61	6 (13%)
19	LFA	P	308	-	5,5,19	0.21	0	4,4,18	0.16	0
20	DMU	C	320	-	34,34,34	0.76	0	45,45,45	1.50	8 (17%)
20	DMU	L	102	-	22,22,34	0.61	0	27,27,45	1.00	1 (3%)
20	DMU	U	101	-	34,34,34	0.88	2 (5%)	45,45,45	1.41	5 (11%)
21	EDO	E	201	-	3,3,3	0.13	0	2,2,2	0.08	0
21	EDO	P	322	-	3,3,3	0.63	0	2,2,2	1.11	0
21	EDO	G	103	-	3,3,3	0.13	0	2,2,2	0.08	0
20	DMU	C	318	-	22,22,34	0.75	1 (4%)	27,27,45	1.19	2 (7%)
19	LFA	O	303	-	10,10,19	0.36	0	9,9,18	0.19	0
19	LFA	O	302	-	16,16,19	0.21	0	15,15,18	0.13	0
20	DMU	W	101	-	10,10,34	0.25	0	9,9,45	0.56	0
14	HEA	A	602	1	67,67,67	2.02	20 (29%)	81,103,103	2.42	35 (43%)
19	LFA	P	307	-	10,10,19	0.31	0	9,9,18	0.28	0
24	CHD	P	301	-	32,32,32	0.86	2 (6%)	51,51,51	0.78	1 (1%)
20	DMU	O	304	-	22,22,34	0.85	1 (4%)	27,27,45	1.54	4 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
18	CO2	A	606	-	2,2,2	0.15	0	1,1,1	0.33	0
22	PGV	N	616	-	50,50,50	0.86	2 (4%)	53,56,56	1.25	3 (5%)
20	DMU	C	324	-	22,22,34	0.80	1 (4%)	27,27,45	1.06	1 (3%)
19	LFA	N	607	-	13,13,19	0.40	0	12,12,18	0.26	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	LFA	C	309	-	-	11/15/15/17	-
14	HEA	N	601	1	-	5/36/76/76	-
20	DMU	C	306	-	-	2/8/8/59	-
21	EDO	N	611	-	-	0/1/1/1	-
20	DMU	C	316	-	-	12/19/59/59	0/2/2/2
20	DMU	P	319	-	-	16/19/59/59	0/2/2/2
14	HEA	N	602	1	-	6/36/76/76	-
24	CHD	O	301	-	-	2/9/74/74	0/4/4/4
19	LFA	P	314	-	-	3/10/10/17	-
20	DMU	A	608	-	-	3/4/4/59	-
20	DMU	J	101	-	-	3/8/8/59	-
20	DMU	O	307	-	-	6/8/8/59	-
21	EDO	S	103	-	-	0/1/1/1	-
19	LFA	C	310	-	-	7/12/12/17	-
21	EDO	R	201	-	-	1/1/1/1	-
14	HEA	A	601	1	-	6/36/76/76	-
26	CDL	P	304	-	-	49/97/97/110	-
21	EDO	N	614	-	-	1/1/1/1	-
20	DMU	C	317	-	-	2/4/4/59	-
28	PEK	G	101	-	-	17/56/56/56	-
19	LFA	B	307	-	-	7/14/14/17	-
21	EDO	P	321	-	-	0/1/1/1	-
24	CHD	P	305	-	-	7/9/74/74	0/4/4/4
20	DMU	P	324	-	-	6/19/59/59	0/2/2/2
19	LFA	C	312	-	-	5/11/11/17	-
26	CDL	L	101	-	-	56/104/104/110	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	LFA	P	309	-	-	10/15/15/17	-
19	LFA	C	307	-	-	4/8/8/17	-
22	PGV	C	303	-	-	15/55/55/55	-
24	CHD	C	301	-	-	2/9/74/74	0/4/4/4
20	DMU	B	302	-	-	5/8/8/59	-
19	LFA	C	308	-	-	1/3/3/17	-
20	DMU	O	308	-	-	2/13/33/59	0/1/1/2
19	LFA	C	314	-	-	3/12/12/17	-
22	PGV	P	303	-	-	12/55/55/55	-
21	EDO	N	613	-	-	1/1/1/1	-
24	CHD	B	306	-	-	2/9/74/74	0/4/4/4
20	DMU	B	304	-	-	7/13/33/59	0/1/1/2
26	CDL	Y	101	-	-	51/104/104/110	-
20	DMU	Q	201	-	-	5/19/59/59	0/2/2/2
19	LFA	N	608	-	-	7/11/11/17	-
21	EDO	A	613	-	-	1/1/1/1	-
22	PGV	A	614	-	-	7/55/55/55	-
21	EDO	N	612	-	-	0/1/1/1	-
20	DMU	P	323	-	-	5/13/33/59	0/1/1/2
20	DMU	M	101	-	-	4/19/59/59	0/2/2/2
20	DMU	A	615	-	-	6/8/8/59	-
20	DMU	G	102	-	-	4/8/8/59	-
20	DMU	N	610	-	-	6/19/59/59	0/2/2/2
21	EDO	O	309	-	-	0/1/1/1	-
21	EDO	A	612	-	-	0/1/1/1	-
21	EDO	C	321	-	-	0/1/1/1	-
21	EDO	T	104	-	-	0/1/1/1	-
21	EDO	R	202	-	-	0/1/1/1	-
26	CDL	C	304	-	-	47/97/97/110	-
20	DMU	M	102	-	-	3/5/5/59	-
21	EDO	C	323	-	-	1/1/1/1	-
19	LFA	T	103	-	-	3/8/8/17	-
26	CDL	V	101	-	-	47/74/74/110	-
20	DMU	A	609	-	-	9/19/59/59	0/2/2/2
19	LFA	T	101	-	-	3/11/11/17	-
19	LFA	P	311	-	-	6/11/11/17	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
21	EDO	E	202	-	-	0/1/1/1	-
26	CDL	I	101	-	-	36/74/74/110	-
21	EDO	A	611	-	-	1/1/1/1	-
21	EDO	A	610	-	-	0/1/1/1	-
19	LFA	P	313	-	-	6/12/12/17	-
20	DMU	N	609	-	-	3/4/4/59	-
20	DMU	P	317	-	-	9/13/33/59	0/1/1/2
24	CHD	C	305	-	-	8/9/74/74	0/4/4/4
20	DMU	D	201	-	-	8/19/59/59	0/2/2/2
21	EDO	S	102	-	-	0/1/1/1	-
19	LFA	C	313	-	-	6/8/8/17	-
20	DMU	B	303	-	-	4/8/8/59	-
20	DMU	B	308	-	-	8/13/33/59	0/1/1/2
20	DMU	C	325	-	-	3/19/59/59	0/2/2/2
20	DMU	Z	102	-	-	8/13/33/59	0/1/1/2
28	PEK	T	102	-	-	17/56/56/56	-
20	DMU	P	318	-	-	12/19/59/59	0/2/2/2
20	DMU	P	306	-	-	1/8/8/59	-
21	EDO	E	203	-	-	0/1/1/1	-
19	LFA	P	312	-	-	5/8/8/17	-
21	EDO	B	305	-	-	0/1/1/1	-
21	EDO	R	203	-	-	1/1/1/1	-
21	EDO	F	103	-	-	0/1/1/1	-
21	EDO	N	615	-	-	0/1/1/1	-
20	DMU	Z	101	-	-	7/19/59/59	0/2/2/2
20	DMU	O	306	-	-	6/8/8/59	-
21	EDO	C	322	-	-	0/1/1/1	-
19	LFA	C	315	-	-	3/10/10/17	-
19	LFA	C	326	-	-	9/12/12/17	-
20	DMU	P	316	-	-	2/4/4/59	-
19	LFA	A	607	-	-	2/11/11/17	-
20	DMU	H	101	-	-	5/19/59/59	0/2/2/2
20	DMU	Z	103	-	-	3/5/5/59	-
19	LFA	C	311	-	-	6/8/8/17	-
20	DMU	C	319	-	-	13/19/59/59	0/2/2/2
21	EDO	P	320	-	-	1/1/1/1	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	LFA	P	310	-	-	4/8/8/17	-
21	EDO	F	102	-	-	0/1/1/1	-
20	DMU	P	315	-	-	9/19/59/59	0/2/2/2
19	LFA	P	308	-	-	0/3/3/17	-
20	DMU	C	320	-	-	14/19/59/59	0/2/2/2
20	DMU	L	102	-	-	9/13/33/59	0/1/1/2
20	DMU	U	101	-	-	8/19/59/59	0/2/2/2
21	EDO	E	201	-	-	0/1/1/1	-
21	EDO	P	322	-	-	0/1/1/1	-
21	EDO	G	103	-	-	0/1/1/1	-
20	DMU	C	318	-	-	10/13/33/59	0/1/1/2
19	LFA	O	303	-	-	2/8/8/17	-
19	LFA	O	302	-	-	7/14/14/17	-
20	DMU	W	101	-	-	4/8/8/59	-
14	HEA	A	602	1	-	7/36/76/76	-
19	LFA	P	307	-	-	3/8/8/17	-
24	CHD	P	301	-	-	2/9/74/74	0/4/4/4
20	DMU	O	304	-	-	5/13/33/59	0/1/1/2
22	PGV	N	616	-	-	10/55/55/55	-
20	DMU	C	324	-	-	10/13/33/59	0/1/1/2
19	LFA	N	607	-	-	4/11/11/17	-

All (157) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	N	602	HEA	C1D-ND	-5.23	1.31	1.40
14	A	601	HEA	C1D-ND	-5.17	1.31	1.40
14	A	601	HEA	C4B-NB	-5.01	1.31	1.40
20	N	610	DMU	O16-C6	-4.63	1.32	1.40
14	N	601	HEA	C4B-NB	-4.62	1.32	1.40
14	A	601	HEA	C3A-C2A	4.59	1.47	1.37
14	N	602	HEA	CHB-C4A	4.58	1.47	1.38
14	A	602	HEA	C1B-NB	-4.44	1.30	1.38
14	A	602	HEA	C4D-ND	-4.35	1.30	1.38
20	P	317	DMU	O16-C6	4.33	1.47	1.40
14	A	601	HEA	C3B-C2B	4.31	1.44	1.34
14	N	601	HEA	C1D-ND	-4.23	1.32	1.40
14	N	601	HEA	C3B-C2B	4.14	1.44	1.34
14	A	602	HEA	C3B-C2B	4.01	1.43	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	N	601	HEA	C11-C3B	-4.00	1.46	1.51
14	A	602	HEA	C4B-NB	-3.87	1.33	1.40
14	N	602	HEA	C3A-C2A	3.85	1.45	1.37
14	N	601	HEA	C4D-ND	-3.80	1.31	1.38
14	N	601	HEA	C3A-C2A	3.79	1.45	1.37
14	A	602	HEA	C1D-ND	-3.73	1.33	1.40
14	A	601	HEA	C11-C3B	-3.72	1.46	1.51
14	N	602	HEA	C3B-C2B	3.71	1.43	1.34
14	A	602	HEA	FE-NC	3.71	2.07	1.95
14	A	602	HEA	C3A-C2A	3.70	1.45	1.37
14	N	602	HEA	C4C-NC	-3.64	1.32	1.39
22	N	616	PGV	O03-C19	3.59	1.43	1.33
14	A	602	HEA	FE-ND	3.58	2.05	1.94
14	N	602	HEA	FE-ND	3.56	2.05	1.94
14	N	601	HEA	FE-NC	3.56	2.06	1.95
14	A	601	HEA	C3D-C2D	3.53	1.44	1.36
14	A	602	HEA	FE-NB	3.52	2.05	1.94
14	A	602	HEA	C1C-NC	-3.50	1.33	1.39
14	N	602	HEA	C1B-NB	-3.48	1.32	1.38
14	N	602	HEA	C4D-ND	-3.46	1.32	1.38
20	Z	101	DMU	O3-C5	-3.44	1.34	1.43
14	A	601	HEA	C12-C11	-3.37	1.47	1.53
14	N	601	HEA	C4C-NC	-3.35	1.33	1.39
14	N	602	HEA	FE-NB	3.33	2.05	1.94
14	A	601	HEA	C4C-NC	-3.32	1.33	1.39
14	N	601	HEA	CHB-C4A	3.31	1.44	1.38
14	N	602	HEA	C4B-NB	-3.29	1.34	1.40
14	A	601	HEA	FE-ND	3.29	2.05	1.94
14	N	602	HEA	C3D-C2D	3.23	1.43	1.36
14	A	602	HEA	CHB-C4A	3.23	1.44	1.38
20	D	201	DMU	O55-C2	3.18	1.50	1.43
14	A	602	HEA	CHD-C1D	3.17	1.44	1.38
14	A	601	HEA	FE-NB	3.16	2.04	1.94
14	N	602	HEA	C1C-NC	-3.15	1.33	1.39
14	A	601	HEA	CHD-C1D	3.08	1.44	1.38
14	A	601	HEA	C1B-NB	-3.06	1.32	1.38
14	A	602	HEA	CHA-C1A	2.99	1.44	1.38
14	N	602	HEA	FE-NC	2.98	2.05	1.95
14	N	601	HEA	C1C-NC	-2.93	1.34	1.39
22	A	614	PGV	O03-C19	2.87	1.41	1.33
14	N	601	HEA	C4D-C3D	2.86	1.49	1.45
20	C	319	DMU	C7-C5	-2.85	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	N	601	HEA	FE-ND	2.84	2.03	1.94
14	N	601	HEA	C1C-C2C	2.83	1.49	1.43
14	A	602	HEA	C1C-C2C	2.82	1.49	1.43
20	D	201	DMU	O5-C6	-2.81	1.34	1.41
14	A	602	HEA	C3D-C2D	2.81	1.42	1.36
20	D	201	DMU	O61-C57	2.81	1.54	1.42
22	A	614	PGV	O01-C1	2.81	1.42	1.34
24	P	301	CHD	O26-C24	-2.79	1.21	1.30
20	Q	201	DMU	O3-C5	-2.79	1.36	1.43
20	M	101	DMU	C7-C5	-2.79	1.45	1.52
28	G	101	PEK	C23-C22	-2.79	1.42	1.52
14	A	601	HEA	C4A-NA	2.77	1.44	1.39
22	N	616	PGV	O01-C1	2.72	1.41	1.34
14	N	601	HEA	CHC-C4B	2.71	1.43	1.38
20	C	316	DMU	C7-C5	-2.71	1.45	1.52
14	N	601	HEA	FE-NB	2.70	2.03	1.94
20	H	101	DMU	C7-C5	-2.70	1.45	1.52
14	N	601	HEA	C1B-NB	-2.69	1.33	1.38
20	D	201	DMU	O16-C6	-2.69	1.35	1.40
22	P	303	PGV	O01-C1	2.68	1.41	1.34
14	N	602	HEA	C1A-C2A	2.68	1.49	1.45
20	H	101	DMU	O16-C6	-2.66	1.35	1.40
14	N	601	HEA	C3D-C2D	2.66	1.42	1.36
20	P	318	DMU	C7-C5	-2.65	1.45	1.52
14	A	601	HEA	C16-C17	-2.65	1.45	1.53
14	N	602	HEA	CHC-C1C	2.64	1.45	1.39
20	A	609	DMU	O7-C10	2.64	1.49	1.41
20	U	101	DMU	C7-C5	-2.63	1.45	1.52
20	A	609	DMU	C7-C5	-2.61	1.45	1.52
14	N	601	HEA	C4B-C3B	2.61	1.49	1.44
14	A	602	HEA	C4C-NC	-2.61	1.34	1.39
20	D	201	DMU	O1-C10	2.59	1.48	1.41
20	C	318	DMU	O16-C6	2.59	1.44	1.40
14	N	602	HEA	C11-C3B	-2.57	1.48	1.51
14	N	602	HEA	C1A-NA	2.57	1.44	1.39
20	N	610	DMU	C7-C5	-2.57	1.45	1.52
20	A	609	DMU	O16-C6	-2.56	1.35	1.40
24	C	301	CHD	C22-C23	-2.56	1.45	1.52
14	A	601	HEA	CHB-C4A	2.55	1.43	1.38
22	C	303	PGV	O03-C19	2.55	1.40	1.33
20	N	610	DMU	C10-C5	-2.54	1.45	1.52
14	N	601	HEA	C1D-C2D	2.52	1.49	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	A	601	HEA	FE-NC	2.51	2.03	1.95
20	C	324	DMU	C6-C1	-2.51	1.45	1.52
20	Q	201	DMU	C10-C5	-2.50	1.45	1.52
20	P	319	DMU	C10-C5	-2.50	1.45	1.52
14	N	601	HEA	C16-C17	-2.49	1.45	1.53
28	T	102	PEK	C23-C22	-2.49	1.43	1.52
20	B	304	DMU	O16-C6	2.48	1.44	1.40
14	A	602	HEA	CBD-CAD	-2.48	1.43	1.51
20	Z	101	DMU	O16-C6	-2.47	1.36	1.40
14	A	601	HEA	CHA-C1A	2.46	1.43	1.38
14	N	601	HEA	CHA-C1A	2.45	1.43	1.38
14	N	601	HEA	CHD-C1D	2.42	1.43	1.38
14	N	602	HEA	CHD-C4C	2.42	1.44	1.39
14	A	601	HEA	C1C-NC	-2.42	1.35	1.39
20	O	304	DMU	C3-C4	-2.40	1.47	1.53
22	C	303	PGV	O01-C1	2.39	1.41	1.34
20	M	101	DMU	O3-C5	-2.38	1.37	1.43
20	O	308	DMU	C6-C1	-2.38	1.45	1.52
20	P	319	DMU	C7-C5	-2.36	1.46	1.52
20	Q	201	DMU	C7-C5	-2.36	1.46	1.52
14	N	602	HEA	CHA-C1A	2.33	1.42	1.38
14	N	602	HEA	C1B-C2B	2.31	1.49	1.44
20	Q	201	DMU	O5-C6	-2.30	1.35	1.41
14	A	602	HEA	C3A-C4A	2.30	1.50	1.46
24	C	301	CHD	O26-C24	-2.29	1.23	1.30
14	A	601	HEA	O11-C11	2.29	1.47	1.42
14	A	601	HEA	C4D-ND	-2.27	1.34	1.38
28	T	102	PEK	C2-C1	2.27	1.57	1.50
14	A	601	HEA	C1C-C2C	2.27	1.48	1.43
14	A	601	HEA	C26-C15	-2.26	1.45	1.50
20	C	316	DMU	C10-C5	-2.26	1.45	1.52
14	N	601	HEA	CBA-CGA	2.19	1.55	1.50
20	C	319	DMU	O5-C6	-2.19	1.36	1.41
24	P	301	CHD	C22-C23	-2.18	1.46	1.52
20	P	318	DMU	O3-C5	2.18	1.48	1.43
20	C	325	DMU	C7-C5	-2.17	1.46	1.52
20	Q	201	DMU	O55-C2	2.17	1.48	1.43
14	A	601	HEA	O1A-CGA	2.16	1.29	1.22
20	Z	101	DMU	C6-C1	-2.15	1.46	1.52
14	N	602	HEA	CHD-C1D	2.14	1.42	1.38
14	N	601	HEA	CHC-C1C	2.13	1.44	1.39
14	N	602	HEA	CHB-C1B	2.11	1.44	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	N	610	DMU	O5-C6	-2.11	1.36	1.41
20	C	316	DMU	O3-C5	-2.10	1.37	1.43
14	A	601	HEA	O1D-CGD	2.10	1.29	1.22
14	N	601	HEA	CHD-C4C	2.09	1.44	1.39
20	P	315	DMU	O1-C10	2.09	1.47	1.41
20	U	101	DMU	O1-C10	2.08	1.47	1.41
20	P	318	DMU	O5-C6	-2.08	1.36	1.41
22	P	303	PGV	O03-C19	2.08	1.39	1.33
20	A	609	DMU	O3-C5	-2.08	1.37	1.43
20	N	610	DMU	C6-C1	-2.05	1.46	1.52
20	C	316	DMU	C6-C1	-2.05	1.46	1.52
20	H	101	DMU	O7-C10	2.04	1.47	1.41
20	H	101	DMU	O5-C6	-2.03	1.36	1.41
14	A	602	HEA	CHC-C1C	2.03	1.44	1.39
24	B	306	CHD	C13-C14	-2.02	1.52	1.55
20	C	325	DMU	C10-C5	-2.02	1.46	1.52
14	A	602	HEA	CHD-C4C	2.01	1.43	1.39

All (296) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	N	602	HEA	C3D-C4D-ND	7.30	117.41	110.35
20	Q	201	DMU	O16-C6-C1	7.13	119.10	108.27
14	N	601	HEA	C3D-C4D-ND	7.12	117.23	110.35
20	P	315	DMU	O16-C6-C1	6.89	118.74	108.27
14	N	602	HEA	C3C-C4C-NC	6.75	115.48	109.80
14	A	601	HEA	C3D-C4D-ND	6.28	116.42	110.35
14	N	602	HEA	C3B-C4B-NB	6.19	116.96	109.84
14	N	601	HEA	C3C-C4C-NC	6.08	114.92	109.80
14	A	601	HEA	C13-C12-C11	-6.06	104.72	114.39
14	A	602	HEA	C3B-C4B-NB	5.99	116.73	109.84
14	N	601	HEA	C3C-C2C-C1C	-5.94	100.16	107.17
14	A	602	HEA	C3C-C4C-NC	5.79	114.68	109.80
14	A	602	HEA	C2B-C1B-NB	5.72	116.51	109.90
14	N	601	HEA	C13-C12-C11	-5.70	105.29	114.39
14	N	602	HEA	C2D-C1D-ND	5.58	116.25	109.84
20	C	316	DMU	C6-O5-C4	5.58	124.61	113.72
14	A	601	HEA	C3C-C4C-NC	5.51	114.44	109.80
14	N	601	HEA	C2B-C1B-NB	5.50	116.26	109.90
20	P	323	DMU	O16-C6-C1	5.48	116.59	108.27
20	P	324	DMU	C10-C5-C7	5.44	121.46	110.01
14	A	601	HEA	C3C-C2C-C1C	-5.44	100.76	107.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	A	602	HEA	C3D-C4D-ND	5.40	115.57	110.35
20	H	101	DMU	O16-C6-C1	5.39	116.45	108.27
14	N	601	HEA	C2D-C1D-ND	5.36	116.00	109.84
20	P	319	DMU	O16-C6-C1	5.35	116.39	108.27
14	N	602	HEA	C2B-C1B-NB	5.31	116.04	109.90
14	N	601	HEA	C26-C15-C16	5.27	124.37	115.23
26	V	101	CDL	OA6-CA4-CA3	5.17	126.88	108.34
20	B	308	DMU	O16-C6-C1	5.10	116.02	108.27
24	C	305	CHD	C14-C13-C12	5.07	112.05	107.42
14	A	601	HEA	C3B-C4B-NB	5.00	115.58	109.84
14	N	601	HEA	C2A-C1A-NA	4.96	115.11	110.32
20	O	304	DMU	O5-C6-C1	4.91	120.47	110.37
20	D	201	DMU	O16-C6-C1	4.81	115.58	108.27
14	A	602	HEA	C3C-C2C-C1C	-4.81	101.50	107.17
20	C	316	DMU	O16-C6-C1	4.64	115.32	108.27
20	U	101	DMU	O16-C6-C1	4.61	115.27	108.27
22	N	616	PGV	O03-C19-O04	-4.54	112.28	123.63
20	C	316	DMU	O5-C6-C1	4.54	119.69	110.37
24	P	305	CHD	C17-C13-C14	-4.52	95.58	100.11
24	P	305	CHD	C16-C17-C20	4.52	119.02	112.18
14	A	601	HEA	C2B-C1B-NB	4.48	115.08	109.90
14	N	602	HEA	C3A-C2A-C1A	-4.48	102.81	107.05
26	C	304	CDL	OA4-PA1-OA5	-4.47	87.30	107.57
14	A	601	HEA	C2D-C1D-ND	4.41	114.91	109.84
14	N	602	HEA	C3C-C2C-C1C	-4.38	102.01	107.17
14	N	602	HEA	CHB-C4A-NA	-4.36	119.70	124.45
20	C	325	DMU	O16-C6-C1	4.36	114.89	108.27
14	A	602	HEA	CHA-C4D-C3D	-4.35	118.43	124.77
14	N	602	HEA	C1D-C2D-C3D	-4.34	102.42	106.98
20	C	319	DMU	O16-C6-C1	4.29	114.79	108.27
24	C	305	CHD	C17-C13-C14	-4.28	95.82	100.11
20	P	324	DMU	O16-C6-C1	4.27	114.76	108.27
14	A	602	HEA	C2A-C1A-NA	4.22	114.39	110.32
14	N	602	HEA	CHA-C4D-C3D	-4.21	118.64	124.77
24	C	305	CHD	C16-C17-C20	4.16	118.47	112.18
14	A	602	HEA	C2D-C1D-ND	4.11	114.56	109.84
14	A	602	HEA	CHB-C4A-NA	-4.08	120.01	124.45
14	A	601	HEA	C4D-C3D-C2D	-4.07	100.97	106.89
14	N	601	HEA	C3B-C4B-NB	4.05	114.50	109.84
14	N	602	HEA	C2C-C1C-NC	4.04	116.62	110.14
20	U	101	DMU	C10-C5-C7	4.03	118.49	110.01
14	N	601	HEA	C2C-C1C-NC	4.03	116.60	110.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	N	602	HEA	C2A-C1A-NA	4.02	114.20	110.32
22	A	614	PGV	O03-C19-O04	-4.02	113.58	123.63
14	N	602	HEA	CHB-C1B-C2B	-4.00	118.71	125.03
14	N	601	HEA	C1D-C2D-C3D	-3.98	102.80	106.98
26	C	304	CDL	OA5-PA1-OA3	3.94	124.56	108.94
14	N	601	HEA	C1B-C2B-C3B	-3.94	102.23	106.80
20	P	318	DMU	C10-C5-C7	3.91	118.23	110.01
20	P	318	DMU	O16-C6-C1	3.89	114.19	108.27
14	A	601	HEA	C2C-C1C-NC	3.87	116.34	110.14
14	A	601	HEA	CHB-C4A-NA	-3.86	120.25	124.45
14	N	601	HEA	CHA-C4D-C3D	-3.84	119.17	124.77
20	U	101	DMU	O3-C5-C10	3.81	119.16	110.08
24	P	305	CHD	C14-C13-C12	3.80	110.89	107.42
20	C	324	DMU	O16-C6-C1	3.79	114.03	108.27
20	P	317	DMU	O5-C6-C1	3.77	118.11	110.37
14	A	601	HEA	CHA-C4D-C3D	-3.72	119.35	124.77
26	I	101	CDL	CA4-OA6-CA5	3.70	126.65	117.80
14	N	602	HEA	C4D-C3D-C2D	-3.67	101.56	106.89
14	A	602	HEA	CHB-C1B-C2B	-3.66	119.25	125.03
14	A	602	HEA	C1B-C2B-C3B	-3.64	102.58	106.80
14	N	601	HEA	C4D-C3D-C2D	-3.64	101.60	106.89
14	N	602	HEA	C27-C19-C20	3.63	121.53	115.23
22	N	616	PGV	O03-C19-C20	3.61	122.85	111.83
20	N	610	DMU	C10-O1-C9	3.61	120.78	113.72
20	C	320	DMU	O3-C5-C10	3.60	118.66	110.08
14	N	602	HEA	C1B-C2B-C3B	-3.59	102.63	106.80
20	C	318	DMU	O5-C6-C1	3.59	117.75	110.37
14	A	602	HEA	C1D-C2D-C3D	-3.57	103.22	106.98
20	Z	101	DMU	O16-C6-C1	3.56	113.69	108.27
14	N	601	HEA	CHB-C1B-C2B	-3.55	119.43	125.03
14	A	602	HEA	C4B-C3B-C2B	-3.52	101.52	107.44
14	A	602	HEA	C2C-C1C-NC	3.51	115.76	110.14
14	N	601	HEA	C3A-C2A-C1A	-3.50	103.74	107.05
26	V	101	CDL	OA2-PA1-OA3	-3.47	95.18	108.94
14	A	601	HEA	CAD-C3D-C4D	3.46	130.73	124.70
20	Z	102	DMU	O5-C6-O16	3.44	118.17	110.04
28	T	102	PEK	O01-C1-O02	-3.39	115.78	123.70
26	V	101	CDL	CA4-OA6-CA5	3.39	125.90	117.80
20	M	101	DMU	O16-C6-C1	3.37	113.39	108.27
14	A	602	HEA	CMD-C2D-C1D	3.35	130.28	125.03
20	C	320	DMU	O16-C6-C1	3.35	113.35	108.27
20	C	320	DMU	C10-C5-C7	3.34	117.03	110.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	N	602	HEA	C4C-C3C-C2C	-3.33	103.16	107.30
14	N	601	HEA	O11-C11-C12	3.30	117.88	109.14
26	C	304	CDL	OB5-PB2-OB3	3.29	121.98	108.94
14	A	601	HEA	C1B-C2B-C3B	-3.27	103.00	106.80
26	C	304	CDL	OA4-PA1-OA3	3.27	127.64	112.44
14	A	602	HEA	C3A-C2A-C1A	-3.20	104.01	107.05
26	I	101	CDL	OA2-PA1-OA3	-3.20	96.27	108.94
14	A	601	HEA	C2A-C1A-NA	3.19	113.40	110.32
14	A	601	HEA	C4B-C3B-C2B	-3.17	102.10	107.44
20	P	319	DMU	C10-C5-C7	3.17	116.68	110.01
14	N	602	HEA	CAD-CBD-CGD	-3.17	105.27	113.67
14	A	601	HEA	CHB-C1B-C2B	-3.16	120.03	125.03
20	C	320	DMU	O7-C10-C5	3.14	115.81	108.09
20	D	201	DMU	O1-C9-C8	3.13	115.34	109.70
20	L	102	DMU	O5-C6-O16	3.07	117.31	110.04
14	A	602	HEA	C13-C12-C11	-3.07	109.49	114.39
14	A	602	HEA	C4D-C3D-C2D	-3.07	102.43	106.89
24	P	305	CHD	C6-C7-C8	3.05	114.83	111.50
14	N	602	HEA	C4B-C3B-C2B	-3.05	102.31	107.44
20	P	315	DMU	C18-O16-C6	-3.01	108.54	113.68
20	A	609	DMU	C10-O7-C3	-3.00	110.86	117.98
22	C	303	PGV	O03-C19-O04	-2.99	116.14	123.63
20	D	201	DMU	C7-C8-C9	2.97	115.62	110.23
14	A	601	HEA	C17-C18-C19	-2.97	120.83	127.62
26	L	101	CDL	OB4-PB2-OB2	2.96	120.98	107.57
28	T	102	PEK	O02-C1-C2	2.96	135.34	123.78
20	O	304	DMU	O16-C6-C1	2.95	112.76	108.27
20	Q	201	DMU	C6-O5-C4	-2.95	107.96	113.72
14	N	602	HEA	CAA-C2A-C1A	2.95	130.85	124.85
14	N	602	HEA	CMD-C2D-C1D	2.94	129.62	125.03
20	C	316	DMU	C18-O16-C6	-2.93	108.67	113.68
14	N	601	HEA	CMD-C2D-C1D	2.92	129.60	125.03
14	N	602	HEA	C4A-NA-C1A	-2.90	101.09	105.82
14	A	602	HEA	CMB-C2B-C1B	2.87	129.53	125.03
26	C	304	CDL	OA6-CA5-C11	-2.87	105.28	111.48
20	N	610	DMU	O5-C6-C1	2.86	116.25	110.37
14	N	602	HEA	C20-C19-C18	-2.83	114.81	121.17
20	P	315	DMU	C10-C5-C7	2.82	115.94	110.01
20	H	101	DMU	O3-C5-C10	2.81	116.77	110.08
14	N	601	HEA	CHA-C1A-NA	-2.81	121.40	124.45
26	I	101	CDL	OA6-CA4-CA6	2.79	118.35	108.34
14	N	601	HEA	C27-C19-C20	2.79	120.07	115.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	Q	201	DMU	C11-C9-C8	-2.78	106.20	113.02
26	P	304	CDL	OA6-CA5-C11	-2.77	105.48	111.48
20	A	609	DMU	C11-C9-C8	-2.77	106.23	113.02
20	N	610	DMU	C7-C8-C9	2.74	115.19	110.23
14	N	602	HEA	CHC-C1C-C2C	-2.73	119.50	127.43
14	N	602	HEA	C4B-NB-C1B	-2.73	101.98	105.21
14	A	601	HEA	C26-C15-C16	2.72	119.95	115.23
24	C	305	CHD	C6-C7-C8	2.72	114.47	111.50
20	O	304	DMU	C6-C1-C2	2.71	115.72	110.01
20	Q	201	DMU	O1-C9-C8	2.71	114.58	109.70
26	V	101	CDL	OA6-CA4-CA6	-2.69	98.68	108.34
22	A	614	PGV	O03-C19-C20	2.68	120.02	111.83
14	A	602	HEA	C4A-NA-C1A	-2.68	101.46	105.82
14	N	601	HEA	O11-C11-C3B	-2.67	106.35	111.26
14	N	602	HEA	CHC-C4B-C3B	-2.67	119.06	125.80
14	A	602	HEA	C4A-C3A-C2A	-2.67	104.50	106.81
14	A	602	HEA	CAA-C2A-C1A	2.66	130.25	124.85
20	D	201	DMU	C10-C5-C7	2.65	115.59	110.01
20	D	201	DMU	C10-O1-C9	2.65	118.90	113.72
14	N	602	HEA	CMC-C2C-C1C	2.64	129.45	125.42
14	A	601	HEA	O11-C11-C12	2.64	116.14	109.14
20	M	101	DMU	O5-C6-C1	2.62	115.76	110.37
20	P	315	DMU	O5-C6-C1	2.62	115.75	110.37
14	N	601	HEA	C17-C18-C19	-2.61	121.66	127.62
20	C	320	DMU	O3-C5-C7	2.60	116.52	110.38
20	A	609	DMU	C10-C5-C7	2.59	115.46	110.01
14	A	601	HEA	C1D-C2D-C3D	-2.59	104.26	106.98
14	N	602	HEA	O11-C11-C12	2.58	115.97	109.14
14	N	602	HEA	CAD-C3D-C4D	2.57	129.18	124.70
20	C	318	DMU	C18-O16-C6	-2.57	109.29	113.68
14	A	602	HEA	CMC-C2C-C1C	2.56	129.31	125.42
20	B	304	DMU	O5-C6-C1	2.56	115.62	110.37
14	N	601	HEA	C4B-C3B-C2B	-2.55	103.15	107.44
20	N	610	DMU	O1-C9-C8	2.54	114.28	109.70
20	P	317	DMU	O16-C6-C1	2.54	112.13	108.27
20	P	323	DMU	C18-O16-C6	-2.52	109.38	113.68
14	A	602	HEA	O11-C11-C12	2.52	115.82	109.14
26	P	304	CDL	OA4-PA1-OA3	2.52	124.15	112.44
24	P	305	CHD	C16-C17-C13	-2.51	101.11	103.54
20	P	315	DMU	O5-C6-O16	-2.51	104.12	110.04
24	P	305	CHD	O25-C24-C23	-2.49	115.20	123.09
20	Q	201	DMU	C2-C3-C4	-2.48	105.42	110.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	A	609	DMU	O5-C6-O16	2.48	115.91	110.04
22	P	303	PGV	C27-C26-C25	-2.48	101.84	114.37
26	L	101	CDL	OB2-PB2-OB3	-2.47	99.16	108.94
14	N	601	HEA	CMC-C2C-C1C	2.46	129.17	125.42
14	N	602	HEA	C1D-ND-C4D	-2.46	102.29	105.21
20	Z	101	DMU	O5-C6-C1	2.45	115.41	110.37
20	O	308	DMU	O5-C6-O16	2.44	115.81	110.04
20	C	316	DMU	O5-C4-C3	2.43	114.74	109.72
14	N	601	HEA	C1D-ND-C4D	-2.43	102.33	105.21
20	Z	102	DMU	C3-C2-C1	-2.43	106.57	110.83
24	C	305	CHD	C16-C17-C13	-2.42	101.19	103.54
20	D	201	DMU	C11-C9-C8	-2.42	107.08	113.02
20	C	320	DMU	O7-C3-C4	2.41	115.80	109.48
20	O	308	DMU	C57-C4-C3	-2.40	107.11	113.02
26	L	101	CDL	OA6-CA5-C11	2.40	116.66	111.48
22	C	303	PGV	C29-C28-C27	-2.39	102.27	114.37
24	C	305	CHD	C18-C13-C12	-2.39	106.67	109.06
20	Z	102	DMU	O5-C4-C57	2.38	112.33	106.44
14	A	602	HEA	CHC-C1C-C2C	-2.38	120.53	127.43
22	N	616	PGV	O01-C1-O02	-2.36	118.18	123.70
20	C	316	DMU	C10-O1-C9	2.36	118.33	113.72
14	N	601	HEA	OMA-CMA-C3A	-2.36	120.29	125.62
26	Y	101	CDL	OB5-PB2-OB3	-2.35	99.62	108.94
20	P	324	DMU	O7-C10-O1	-2.35	104.51	110.69
14	A	601	HEA	OMA-CMA-C3A	-2.35	120.32	125.62
20	P	317	DMU	C6-C1-C2	2.35	114.95	110.01
14	A	602	HEA	C4B-NB-C1B	-2.34	102.43	105.21
20	A	609	DMU	O3-C5-C10	2.34	115.66	110.08
14	N	601	HEA	CHC-C4B-C3B	-2.33	119.93	125.80
20	H	101	DMU	C10-C5-C7	2.32	114.90	110.01
26	P	304	CDL	OA4-PA1-OA2	-2.31	97.08	107.57
20	P	324	DMU	O5-C6-O16	2.31	115.50	110.04
20	H	101	DMU	O7-C3-C2	2.31	113.09	107.23
20	Q	201	DMU	C10-O1-C9	2.30	118.22	113.72
20	O	308	DMU	O5-C6-C1	2.30	115.10	110.37
20	P	324	DMU	C10-O1-C9	-2.30	109.23	113.72
14	A	601	HEA	CHC-C1C-C2C	-2.28	120.79	127.43
14	N	602	HEA	CHD-C1D-C2D	-2.28	120.46	126.95
20	C	316	DMU	C10-C5-C7	2.28	114.80	110.01
14	A	601	HEA	C4A-NA-C1A	-2.28	102.11	105.82
24	C	305	CHD	C5-C6-C7	2.27	117.10	114.40
14	A	602	HEA	C4C-C3C-C2C	-2.27	104.48	107.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	A	609	DMU	C7-C8-C9	2.26	114.34	110.23
14	N	602	HEA	C13-C12-C11	-2.26	110.78	114.39
26	P	304	CDL	O1-C1-CB2	2.26	117.49	109.70
20	P	315	DMU	O1-C9-C11	2.25	112.02	106.44
20	Z	101	DMU	C10-C5-C7	2.25	114.75	110.01
28	T	102	PEK	O13-P-O14	2.24	122.87	112.44
20	B	308	DMU	C3-C2-C1	-2.22	106.94	110.83
14	N	602	HEA	CHA-C1A-NA	-2.21	122.05	124.45
20	U	101	DMU	O5-C6-O16	2.20	115.25	110.04
20	U	101	DMU	C10-O7-C3	-2.20	112.77	117.98
26	Y	101	CDL	OB4-PB2-OB3	2.20	122.67	112.44
14	A	602	HEA	C12-C11-C3B	-2.20	108.69	112.12
14	A	602	HEA	OMA-CMA-C3A	-2.20	120.67	125.62
20	C	319	DMU	O3-C5-C10	2.19	115.30	110.08
20	C	320	DMU	C10-O1-C9	-2.19	109.45	113.72
14	A	602	HEA	C26-C15-C16	2.18	119.01	115.23
14	A	601	HEA	C4A-C3A-C2A	-2.17	104.93	106.81
14	N	601	HEA	CAD-C3D-C4D	2.17	128.47	124.70
20	P	318	DMU	C10-O1-C9	-2.16	109.49	113.72
20	D	201	DMU	C2-C3-C4	-2.16	106.14	110.93
20	Z	102	DMU	O5-C6-C1	2.16	114.80	110.37
14	A	601	HEA	O11-C11-C3B	-2.15	107.31	111.26
20	P	319	DMU	C8-C7-C5	-2.15	107.05	110.83
28	T	102	PEK	C2-C3-C4	2.15	118.05	113.35
14	A	602	HEA	O11-C11-C3B	-2.15	107.32	111.26
22	P	303	PGV	C03-C02-C01	-2.14	106.78	111.78
26	I	101	CDL	OA5-PA1-OA3	2.14	117.42	108.94
20	H	101	DMU	C6-O5-C4	-2.13	109.56	113.72
14	A	602	HEA	CAD-CBD-CGD	-2.13	108.01	113.67
14	A	602	HEA	CHD-C1D-C2D	-2.13	120.90	126.95
20	B	308	DMU	O5-C6-C1	2.13	114.74	110.37
26	P	304	CDL	OB4-PB2-OB3	2.12	122.33	112.44
20	B	304	DMU	C6-O5-C4	2.12	117.87	113.72
20	D	201	DMU	O7-C3-C2	2.11	112.60	107.23
26	C	304	CDL	OB6-CB5-C51	2.11	116.05	111.48
20	A	609	DMU	O5-C6-C1	2.11	114.70	110.37
20	B	308	DMU	O5-C6-O16	2.10	115.02	110.04
14	A	602	HEA	C27-C19-C20	2.10	118.87	115.23
24	C	305	CHD	C15-C14-C8	2.10	121.24	118.36
14	A	601	HEA	CHA-C1A-NA	-2.10	122.17	124.45
14	N	601	HEA	C4A-NA-C1A	-2.09	102.41	105.82
20	O	304	DMU	C6-O5-C4	2.09	117.80	113.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	P	301	CHD	C18-C13-C14	2.09	114.47	111.20
20	C	319	DMU	C10-O7-C3	-2.09	113.03	117.98
20	P	324	DMU	O1-C9-C8	-2.08	105.95	109.70
26	C	304	CDL	OA4-PA1-OA2	-2.08	98.15	107.57
22	C	303	PGV	O03-C19-C20	2.08	118.17	111.83
20	C	320	DMU	O5-C6-C1	2.07	114.63	110.37
26	L	101	CDL	OA2-PA1-OA3	-2.07	100.72	108.94
22	P	303	PGV	O14-P-O13	2.07	122.07	112.44
20	M	101	DMU	O3-C5-C7	2.06	115.22	110.38
26	I	101	CDL	OA6-CA5-C11	2.05	115.93	111.48
14	N	601	HEA	C16-C15-C14	-2.05	116.56	121.17
24	C	305	CHD	C19-C10-C9	-2.05	108.42	111.18
20	H	101	DMU	C11-C9-C8	-2.05	108.00	113.02
20	Z	102	DMU	C57-C4-C3	-2.04	108.00	113.02
20	Q	201	DMU	C57-C4-C3	2.03	119.10	113.38
14	A	601	HEA	CHD-C1D-C2D	-2.03	121.17	126.95
26	V	101	CDL	OA5-PA1-OA3	2.03	116.99	108.94
14	A	602	HEA	O1A-CGA-CBA	-2.03	116.66	123.09
20	Z	101	DMU	O3-C5-C7	2.01	115.12	110.38
20	P	319	DMU	O7-C3-C2	2.01	112.34	107.23
26	C	304	CDL	O1-C1-CB2	2.01	116.63	109.70
24	C	301	CHD	C17-C13-C12	-2.01	115.86	117.67
20	C	325	DMU	O3-C5-C7	2.00	115.10	110.38

There are no chirality outliers.

All (813) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
20	B	304	DMU	C1-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	L	102	DMU	C19-C18-O16-C6
20	O	308	DMU	C19-C18-O16-C6
20	P	318	DMU	C1-C6-O16-C18
20	Q	201	DMU	O5-C6-O16-C18
20	U	101	DMU	C1-C6-O16-C18
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

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Mol	Chain	Res	Type	Atoms
24	P	305	CHD	C16-C17-C20-C21
26	C	304	CDL	O1-C1-CB2-OB2
26	C	304	CDL	C1-CA2-OA2-PA1
26	C	304	CDL	CA3-OA5-PA1-OA2
26	C	304	CDL	C11-CA5-OA6-CA4
26	C	304	CDL	CB3-OB5-PB2-OB4
26	C	304	CDL	OB7-CB5-OB6-CB4
26	C	304	CDL	C51-CB5-OB6-CB4
26	I	101	CDL	C1-CA2-OA2-PA1
26	I	101	CDL	CA3-OA5-PA1-OA2
26	I	101	CDL	OA7-CA5-OA6-CA4
26	I	101	CDL	CB2-OB2-PB2-OB3
26	I	101	CDL	CB3-OB5-PB2-OB2
26	I	101	CDL	CB3-OB5-PB2-OB4
26	I	101	CDL	C51-CB5-OB6-CB4
26	L	101	CDL	CB2-C1-CA2-OA2
26	L	101	CDL	CA2-OA2-PA1-OA3
26	L	101	CDL	CA2-OA2-PA1-OA4
26	L	101	CDL	CA2-OA2-PA1-OA5
26	L	101	CDL	CA3-OA5-PA1-OA2
26	L	101	CDL	C11-CA5-OA6-CA4
26	L	101	CDL	CB2-OB2-PB2-OB3
26	L	101	CDL	CB2-OB2-PB2-OB4
26	L	101	CDL	CB2-OB2-PB2-OB5
26	L	101	CDL	OB7-CB5-OB6-CB4
26	L	101	CDL	C51-CB5-OB6-CB4
26	P	304	CDL	C1-CA2-OA2-PA1
26	P	304	CDL	CA3-OA5-PA1-OA2
26	P	304	CDL	CB3-OB5-PB2-OB4
26	P	304	CDL	OB7-CB5-OB6-CB4
26	V	101	CDL	CA3-OA5-PA1-OA2
26	V	101	CDL	OA6-CA4-CA6-OA8
26	V	101	CDL	CB2-OB2-PB2-OB3
26	V	101	CDL	CB2-OB2-PB2-OB5
26	V	101	CDL	CB3-OB5-PB2-OB2
26	V	101	CDL	CB3-OB5-PB2-OB3
26	V	101	CDL	CB3-OB5-PB2-OB4
26	V	101	CDL	C51-CB5-OB6-CB4
26	Y	101	CDL	CA2-OA2-PA1-OA4
26	Y	101	CDL	CA2-OA2-PA1-OA5
26	Y	101	CDL	C11-CA5-OA6-CA4
26	Y	101	CDL	CB2-OB2-PB2-OB3

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Mol	Chain	Res	Type	Atoms
26	Y	101	CDL	CB2-OB2-PB2-OB5
26	Y	101	CDL	CB3-OB5-PB2-OB2
26	Y	101	CDL	CB3-OB5-PB2-OB4
26	Y	101	CDL	C51-CB5-OB6-CB4
28	G	101	PEK	C9-C10-C11-C12
28	G	101	PEK	C12-C13-C14-C15
28	T	102	PEK	C11-C12-C13-C14
28	T	102	PEK	C12-C13-C14-C15
24	C	305	CHD	C16-C17-C20-C22
24	P	305	CHD	C16-C17-C20-C22
20	L	102	DMU	C3-C4-C57-O61
26	C	304	CDL	OA7-CA5-OA6-CA4
26	I	101	CDL	OB7-CB5-OB6-CB4
26	L	101	CDL	OA7-CA5-OA6-CA4
26	Y	101	CDL	OA7-CA5-OA6-CA4
26	Y	101	CDL	OB7-CB5-OB6-CB4
20	C	320	DMU	O5-C4-C57-O61
26	P	304	CDL	C51-CB5-OB6-CB4
14	N	601	HEA	C26-C15-C16-C17
14	N	601	HEA	C14-C15-C16-C17
20	P	315	DMU	O5-C4-C57-O61
20	P	319	DMU	O6-C11-C9-O1
26	Y	101	CDL	OA9-CA7-OA8-CA6
26	L	101	CDL	C31-CA7-OA8-CA6
26	Y	101	CDL	C31-CA7-OA8-CA6
26	V	101	CDL	OB7-CB5-OB6-CB4
20	D	201	DMU	O6-C11-C9-O1
26	L	101	CDL	O1-C1-CA2-OA2
26	P	304	CDL	O1-C1-CB2-OB2
20	O	304	DMU	O5-C4-C57-O61
20	P	318	DMU	O5-C4-C57-O61
20	Z	101	DMU	O6-C11-C9-O1
20	C	320	DMU	O6-C11-C9-C8
20	H	101	DMU	C3-C4-C57-O61
20	C	316	DMU	O5-C4-C57-O61
20	C	320	DMU	C3-C4-C57-O61
26	P	304	CDL	C11-CA5-OA6-CA4
24	C	305	CHD	C21-C20-C22-C23
20	D	201	DMU	O6-C11-C9-C8
26	L	101	CDL	OA9-CA7-OA8-CA6
20	C	319	DMU	O6-C11-C9-O1
20	C	324	DMU	O5-C4-C57-O61

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Mol	Chain	Res	Type	Atoms
20	L	102	DMU	O5-C4-C57-O61
19	B	307	LFA	C9-C10-C11-C12
19	P	307	LFA	C7-C8-C9-C10
20	U	101	DMU	O5-C4-C57-O61
20	B	304	DMU	O5-C6-O16-C18
20	P	323	DMU	O5-C6-O16-C18
20	U	101	DMU	O5-C6-O16-C18
20	P	319	DMU	O6-C11-C9-C8
26	C	304	CDL	C71-CB7-OB8-CB6
20	C	316	DMU	O6-C11-C9-O1
20	C	320	DMU	O6-C11-C9-O1
26	I	101	CDL	C11-CA5-OA6-CA4
20	C	324	DMU	C3-C4-C57-O61
20	P	315	DMU	C3-C4-C57-O61
19	C	309	LFA	C11-C10-C9-C8
14	A	602	HEA	C4D-C3D-CAD-CBD
26	P	304	CDL	OA7-CA5-OA6-CA4
26	C	304	CDL	CB2-C1-CA2-OA2
26	C	304	CDL	C31-CA7-OA8-CA6
20	A	609	DMU	O6-C11-C9-C8
22	C	303	PGV	C28-C29-C30-C31
24	C	305	CHD	C17-C20-C22-C23
20	N	610	DMU	O6-C11-C9-C8
20	G	102	DMU	C19-C22-C25-C28
20	O	304	DMU	C3-C4-C57-O61
20	P	318	DMU	C3-C4-C57-O61
20	L	102	DMU	C1-C6-O16-C18
20	P	323	DMU	C1-C6-O16-C18
20	Z	102	DMU	C1-C6-O16-C18
20	P	319	DMU	C19-C22-C25-C28
26	L	101	CDL	CB7-C71-C72-C73
20	Z	102	DMU	O5-C4-C57-O61
20	Z	101	DMU	O6-C11-C9-C8
20	C	316	DMU	O6-C11-C9-C8
26	Y	101	CDL	CA5-C11-C12-C13
26	C	304	CDL	OA9-CA7-OA8-CA6
26	Y	101	CDL	OB6-CB4-CB6-OB8
26	C	304	CDL	CB5-C51-C52-C53
20	P	319	DMU	C2-C3-O7-C10
20	H	101	DMU	O5-C4-C57-O61
26	V	101	CDL	C31-CA7-OA8-CA6
20	C	319	DMU	O16-C18-C19-C22

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Mol	Chain	Res	Type	Atoms
20	C	320	DMU	O16-C18-C19-C22
20	A	609	DMU	O6-C11-C9-O1
20	P	317	DMU	O5-C4-C57-O61
19	C	326	LFA	C9-C10-C11-C12
20	C	324	DMU	O16-C18-C19-C22
20	L	102	DMU	O16-C18-C19-C22
20	C	318	DMU	O5-C4-C57-O61
19	C	309	LFA	C12-C13-C14-C15
26	P	304	CDL	CB5-C51-C52-C53
26	V	101	CDL	CA7-C31-C32-C33
26	C	304	CDL	OB9-CB7-OB8-CB6
20	Z	102	DMU	O16-C18-C19-C22
26	C	304	CDL	CA7-C31-C32-C33
26	C	304	CDL	CB7-C71-C72-C73
20	L	102	DMU	O5-C6-O16-C18
20	P	319	DMU	C4-C3-O7-C10
26	C	304	CDL	O1-C1-CA2-OA2
26	P	304	CDL	O1-C1-CA2-OA2
20	P	317	DMU	C3-C4-C57-O61
20	A	609	DMU	C3-C4-C57-O61
20	C	316	DMU	C3-C4-C57-O61
20	D	201	DMU	O16-C18-C19-C22
20	A	609	DMU	O5-C4-C57-O61
26	P	304	CDL	C12-C13-C14-C15
26	P	304	CDL	CB2-C1-CA2-OA2
26	L	101	CDL	C72-C73-C74-C75
20	G	102	DMU	C25-C28-C31-C34
19	C	313	LFA	C1-C2-C3-C4
20	C	319	DMU	C1-C6-O16-C18
20	C	320	DMU	C1-C6-O16-C18
20	P	319	DMU	C1-C6-O16-C18
26	V	101	CDL	O1-C1-CB2-OB2
26	C	304	CDL	CA4-CA3-OA5-PA1
20	C	316	DMU	C31-C34-C37-C40
20	P	318	DMU	O16-C18-C19-C22
20	C	319	DMU	O5-C6-O16-C18
20	N	610	DMU	O5-C6-O16-C18
20	P	318	DMU	O5-C6-O16-C18
26	C	304	CDL	C51-C52-C53-C54
20	U	101	DMU	C3-C4-C57-O61
20	Z	101	DMU	O16-C18-C19-C22
26	V	101	CDL	OA9-CA7-OA8-CA6

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Mol	Chain	Res	Type	Atoms
26	Y	101	CDL	C63-C64-C65-C66
28	G	101	PEK	C28-C29-C30-C31
20	B	303	DMU	C18-C19-C22-C25
19	C	310	LFA	C4-C5-C6-C7
19	C	311	LFA	C3-C4-C5-C6
19	P	310	LFA	C6-C7-C8-C9
19	P	311	LFA	C5-C6-C7-C8
28	T	102	PEK	C7-C8-C9-C10
20	Z	101	DMU	C22-C25-C28-C31
26	P	304	CDL	C31-CA7-OA8-CA6
19	P	311	LFA	C3-C4-C5-C6
20	A	608	DMU	C28-C31-C34-C37
20	Z	101	DMU	C28-C31-C34-C37
26	V	101	CDL	C17-C18-C19-C20
19	P	310	LFA	C2-C3-C4-C5
19	T	101	LFA	C5-C6-C7-C8
19	B	307	LFA	C7-C8-C9-C10
19	P	309	LFA	C13-C14-C15-C16
19	B	307	LFA	C13-C14-C15-C16
20	O	307	DMU	C18-C19-C22-C25
19	P	309	LFA	C5-C6-C7-C8
20	C	318	DMU	C31-C34-C37-C40
20	C	318	DMU	C28-C31-C34-C37
20	N	610	DMU	C31-C34-C37-C40
20	C	318	DMU	O16-C18-C19-C22
20	B	302	DMU	C18-C19-C22-C25
20	L	102	DMU	C22-C25-C28-C31
26	P	304	CDL	C35-C36-C37-C38
26	P	304	CDL	C54-C55-C56-C57
26	P	304	CDL	CB7-C71-C72-C73
20	P	319	DMU	O5-C4-C57-O61
26	P	304	CDL	C53-C54-C55-C56
20	C	319	DMU	C31-C34-C37-C40
26	V	101	CDL	C73-C74-C75-C76
26	V	101	CDL	CA2-C1-CB2-OB2
26	C	304	CDL	C22-C23-C24-C25
26	I	101	CDL	C19-C20-C21-C22
19	C	307	LFA	C4-C5-C6-C7
20	A	615	DMU	C19-C22-C25-C28
22	P	303	PGV	C7-C8-C9-C10
26	I	101	CDL	C17-C18-C19-C20
20	H	101	DMU	C25-C28-C31-C34

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Mol	Chain	Res	Type	Atoms
26	C	304	CDL	C75-C76-C77-C78
20	N	610	DMU	O6-C11-C9-O1
22	N	616	PGV	C29-C30-C31-C32
26	C	304	CDL	C35-C36-C37-C38
26	P	304	CDL	C72-C73-C74-C75
28	T	102	PEK	C1-C2-C3-C4
19	O	302	LFA	C13-C14-C15-C16
22	C	303	PGV	C22-C23-C24-C25
26	L	101	CDL	C14-C15-C16-C17
20	C	319	DMU	C19-C22-C25-C28
19	P	312	LFA	C1-C2-C3-C4
19	C	326	LFA	C5-C6-C7-C8
26	Y	101	CDL	C76-C77-C78-C79
28	G	101	PEK	C34-C35-C36-C37
28	T	102	PEK	C26-C27-C28-C29
22	P	303	PGV	C14-C15-C16-C17
19	C	310	LFA	C9-C10-C11-C12
19	N	608	LFA	C11-C10-C9-C8
20	C	318	DMU	C25-C28-C31-C34
22	C	303	PGV	C7-C8-C9-C10
26	L	101	CDL	C36-C37-C38-C39
20	J	101	DMU	C25-C28-C31-C34
26	V	101	CDL	C12-C13-C14-C15
19	A	607	LFA	C6-C7-C8-C9
19	C	310	LFA	C11-C12-C13-C14
19	O	302	LFA	C5-C6-C7-C8
19	T	103	LFA	C4-C5-C6-C7
22	P	303	PGV	C24-C25-C26-C27
26	Y	101	CDL	C71-C72-C73-C74
19	C	310	LFA	C6-C7-C8-C9
20	A	609	DMU	C31-C34-C37-C40
20	M	102	DMU	C31-C34-C37-C40
20	Z	102	DMU	O5-C6-O16-C18
19	C	326	LFA	C10-C11-C12-C13
20	P	316	DMU	C28-C31-C34-C37
19	C	310	LFA	C7-C8-C9-C10
19	T	103	LFA	C3-C4-C5-C6
20	P	319	DMU	C22-C25-C28-C31
26	V	101	CDL	C31-C32-C33-C34
26	Y	101	CDL	C79-C80-C81-C82
20	C	324	DMU	C28-C31-C34-C37
22	C	303	PGV	C14-C15-C16-C17

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Mol	Chain	Res	Type	Atoms
22	N	616	PGV	C14-C15-C16-C17
26	L	101	CDL	C58-C59-C60-C61
26	V	101	CDL	C72-C73-C74-C75
28	T	102	PEK	C17-C18-C19-C20
26	V	101	CDL	C11-CA5-OA6-CA4
20	C	325	DMU	O16-C18-C19-C22
26	V	101	CDL	OA7-CA5-OA6-CA4
19	C	313	LFA	C4-C5-C6-C7
28	T	102	PEK	C22-C23-C24-C25
19	P	310	LFA	C7-C8-C9-C10
19	P	309	LFA	C4-C5-C6-C7
19	P	309	LFA	C14-C15-C16-C17
19	C	309	LFA	C11-C12-C13-C14
20	Q	201	DMU	C4-C3-O7-C10
20	Z	101	DMU	C25-C28-C31-C34
20	P	315	DMU	O6-C11-C9-O1
26	L	101	CDL	C37-C38-C39-C40
20	Z	102	DMU	C18-C19-C22-C25
20	C	318	DMU	C19-C22-C25-C28
26	L	101	CDL	CA5-C11-C12-C13
22	A	614	PGV	C11-C10-C9-C8
26	L	101	CDL	OB6-CB4-CB6-OB8
20	D	201	DMU	C4-C3-O7-C10
20	A	615	DMU	C28-C31-C34-C37
26	I	101	CDL	C12-C13-C14-C15
19	P	311	LFA	C10-C11-C12-C13
20	P	317	DMU	C22-C25-C28-C31
22	A	614	PGV	C14-C15-C16-C17
26	I	101	CDL	C75-C76-C77-C78
26	P	304	CDL	C11-C12-C13-C14
20	A	615	DMU	C18-C19-C22-C25
20	B	302	DMU	O16-C18-C19-C22
20	G	102	DMU	O16-C18-C19-C22
20	O	306	DMU	O16-C18-C19-C22
20	P	319	DMU	C25-C28-C31-C34
20	C	320	DMU	C28-C31-C34-C37
20	B	308	DMU	C31-C34-C37-C40
20	B	308	DMU	O5-C4-C57-O61
20	P	315	DMU	C19-C22-C25-C28
20	A	615	DMU	C25-C28-C31-C34
20	C	320	DMU	C25-C28-C31-C34
26	Y	101	CDL	C13-C14-C15-C16

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Mol	Chain	Res	Type	Atoms
26	C	304	CDL	C71-C72-C73-C74
20	D	201	DMU	C19-C22-C25-C28
22	C	303	PGV	C24-C25-C26-C27
20	P	319	DMU	O16-C18-C19-C22
20	P	319	DMU	O1-C10-O7-C3
19	C	312	LFA	C4-C5-C6-C7
19	O	303	LFA	C5-C6-C7-C8
19	B	307	LFA	C4-C5-C6-C7
20	P	324	DMU	O16-C18-C19-C22
20	A	615	DMU	O16-C18-C19-C22
20	O	307	DMU	O16-C18-C19-C22
26	L	101	CDL	C59-C60-C61-C62
26	L	101	CDL	C34-C35-C36-C37
19	P	312	LFA	C3-C4-C5-C6
19	C	311	LFA	C6-C7-C8-C9
19	P	313	LFA	C4-C5-C6-C7
26	V	101	CDL	C78-C79-C80-C81
20	P	318	DMU	O6-C11-C9-O1
20	B	303	DMU	C19-C22-C25-C28
19	C	309	LFA	C1-C2-C3-C4
26	C	304	CDL	CB3-CB4-CB6-OB8
20	M	101	DMU	C25-C28-C31-C34
22	P	303	PGV	C12-C13-C14-C15
28	T	102	PEK	C2-C3-C4-C5
19	N	608	LFA	C7-C8-C9-C10
20	P	317	DMU	C31-C34-C37-C40
26	Y	101	CDL	C73-C74-C75-C76
26	P	304	CDL	C52-C53-C54-C55
20	P	318	DMU	C4-C3-O7-C10
19	C	307	LFA	C6-C7-C8-C9
28	G	101	PEK	C26-C27-C28-C29
19	C	309	LFA	C5-C6-C7-C8
20	M	101	DMU	C22-C25-C28-C31
20	C	324	DMU	C25-C28-C31-C34
26	L	101	CDL	C17-C18-C19-C20
26	P	304	CDL	OA9-CA7-OA8-CA6
20	O	306	DMU	C25-C28-C31-C34
26	Y	101	CDL	C19-C20-C21-C22
20	N	610	DMU	O16-C18-C19-C22
26	L	101	CDL	C74-C75-C76-C77
22	C	303	PGV	C25-C26-C27-C28
26	P	304	CDL	C56-C57-C58-C59

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Mol	Chain	Res	Type	Atoms
22	N	616	PGV	C11-C10-C9-C8
28	G	101	PEK	C15-C16-C17-C18
19	C	314	LFA	C4-C5-C6-C7
19	C	326	LFA	C4-C5-C6-C7
19	N	608	LFA	C3-C4-C5-C6
19	P	313	LFA	C5-C6-C7-C8
20	O	307	DMU	C19-C22-C25-C28
28	T	102	PEK	C4-C5-C6-C7
28	T	102	PEK	C13-C14-C15-C16
20	C	319	DMU	C2-C3-O7-C10
20	P	318	DMU	C2-C3-O7-C10
19	C	311	LFA	C7-C8-C9-C10
20	M	101	DMU	C19-C22-C25-C28
20	B	304	DMU	O16-C18-C19-C22
19	P	309	LFA	C3-C4-C5-C6
26	Y	101	CDL	C51-C52-C53-C54
20	B	308	DMU	C18-C19-C22-C25
26	L	101	CDL	OB5-CB3-CB4-OB6
19	O	302	LFA	C9-C10-C11-C12
20	D	201	DMU	C2-C3-O7-C10
26	C	304	CDL	C12-C13-C14-C15
19	C	326	LFA	C6-C7-C8-C9
20	C	316	DMU	C19-C22-C25-C28
26	C	304	CDL	C52-C53-C54-C55
26	Y	101	CDL	C64-C65-C66-C67
19	C	312	LFA	C10-C11-C12-C13
19	N	607	LFA	C7-C8-C9-C10
19	P	309	LFA	C11-C12-C13-C14
19	P	312	LFA	C4-C5-C6-C7
20	C	320	DMU	C19-C22-C25-C28
20	P	317	DMU	C28-C31-C34-C37
20	C	319	DMU	C4-C3-O7-C10
28	G	101	PEK	C29-C30-C31-C32
20	B	304	DMU	C34-C37-C40-C43
20	P	318	DMU	C28-C31-C34-C37
22	P	303	PGV	C30-C31-C32-C33
20	C	320	DMU	C34-C37-C40-C43
20	Z	103	DMU	C34-C37-C40-C43
19	C	312	LFA	C5-C6-C7-C8
26	P	304	CDL	C80-C81-C82-C83
19	C	313	LFA	C11-C10-C9-C8
20	B	303	DMU	O16-C18-C19-C22

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Mol	Chain	Res	Type	Atoms
19	C	307	LFA	C3-C4-C5-C6
20	C	324	DMU	C31-C34-C37-C40
26	C	304	CDL	C58-C59-C60-C61
28	G	101	PEK	C16-C17-C18-C19
19	C	315	LFA	C1-C2-C3-C4
20	O	304	DMU	C34-C37-C40-C43
26	Y	101	CDL	C84-C85-C86-C87
20	C	319	DMU	O6-C11-C9-C8
19	B	307	LFA	C14-C15-C16-C17
19	P	307	LFA	C11-C10-C9-C8
26	Y	101	CDL	C12-C13-C14-C15
26	Y	101	CDL	C71-CB7-OB8-CB6
20	C	324	DMU	C34-C37-C40-C43
26	L	101	CDL	C84-C85-C86-C87
20	P	324	DMU	C25-C28-C31-C34
26	P	304	CDL	C77-C78-C79-C80
19	P	310	LFA	C11-C10-C9-C8
20	A	608	DMU	C25-C28-C31-C34
26	V	101	CDL	C18-C19-C20-C21
28	G	101	PEK	C23-C24-C25-C26
26	V	101	CDL	CA5-C11-C12-C13
19	B	307	LFA	C1-C2-C3-C4
19	C	311	LFA	C11-C10-C9-C8
20	B	308	DMU	C34-C37-C40-C43
26	L	101	CDL	C38-C39-C40-C41
20	Q	201	DMU	C2-C3-O7-C10
19	P	311	LFA	C4-C5-C6-C7
20	C	317	DMU	C28-C31-C34-C37
22	N	616	PGV	C27-C28-C29-C30
20	D	201	DMU	C19-C18-O16-C6
20	O	304	DMU	C19-C18-O16-C6
20	P	319	DMU	C19-C18-O16-C6
20	Q	201	DMU	C19-C18-O16-C6
22	P	303	PGV	C11-C12-C13-C14
20	H	101	DMU	C19-C22-C25-C28
19	P	309	LFA	C11-C10-C9-C8
20	O	306	DMU	C18-C19-C22-C25
19	O	302	LFA	C14-C15-C16-C17
20	M	102	DMU	C22-C25-C28-C31
26	L	101	CDL	C76-C77-C78-C79
26	C	304	CDL	C18-C19-C20-C21
19	P	309	LFA	C1-C2-C3-C4

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Mol	Chain	Res	Type	Atoms
20	L	102	DMU	C34-C37-C40-C43
20	B	304	DMU	C31-C34-C37-C40
19	P	312	LFA	C11-C10-C9-C8
20	G	102	DMU	C34-C37-C40-C43
20	C	316	DMU	C28-C31-C34-C37
24	P	305	CHD	C21-C20-C22-C23
26	I	101	CDL	O1-C1-CA2-OA2
19	C	309	LFA	C13-C14-C15-C16
26	C	304	CDL	C73-C74-C75-C76
19	C	310	LFA	C1-C2-C3-C4
26	V	101	CDL	C32-C33-C34-C35
20	C	318	DMU	O5-C6-O16-C18
20	P	324	DMU	C4-C3-O7-C10
20	P	323	DMU	C34-C37-C40-C43
19	C	326	LFA	C11-C10-C9-C8
26	Y	101	CDL	OB9-CB7-OB8-CB6
19	O	303	LFA	C2-C3-C4-C5
26	Y	101	CDL	C57-C58-C59-C60
26	C	304	CDL	C59-C60-C61-C62
26	L	101	CDL	C80-C81-C82-C83
22	N	616	PGV	C31-C32-C33-C34
19	P	314	LFA	C6-C7-C8-C9
26	L	101	CDL	CB3-CB4-CB6-OB8
26	P	304	CDL	CB3-CB4-CB6-OB8
26	V	101	CDL	CA3-CA4-CA6-OA8
26	Y	101	CDL	CB3-CB4-CB6-OB8
19	C	326	LFA	C12-C13-C14-C15
19	C	326	LFA	C7-C8-C9-C10
20	W	101	DMU	C18-C19-C22-C25
26	I	101	CDL	CA5-C11-C12-C13
20	B	302	DMU	C34-C37-C40-C43
26	V	101	CDL	OA5-CA3-CA4-OA6
20	C	320	DMU	C31-C34-C37-C40
20	P	324	DMU	C2-C3-O7-C10
19	N	607	LFA	C6-C7-C8-C9
28	T	102	PEK	C15-C16-C17-C18
26	P	304	CDL	CA4-CA3-OA5-PA1
22	A	614	PGV	C31-C32-C33-C34
19	C	307	LFA	C11-C10-C9-C8
26	C	304	CDL	C55-C56-C57-C58
26	L	101	CDL	C22-C23-C24-C25
20	B	308	DMU	C25-C28-C31-C34

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Mol	Chain	Res	Type	Atoms
26	P	304	CDL	C21-C22-C23-C24
20	B	308	DMU	O16-C18-C19-C22
28	T	102	PEK	C11-C10-C9-C8
20	C	319	DMU	C34-C37-C40-C43
20	C	320	DMU	C18-C19-C22-C25
26	L	101	CDL	CB5-C51-C52-C53
20	O	306	DMU	C31-C34-C37-C40
26	P	304	CDL	C33-C34-C35-C36
26	Y	101	CDL	C58-C59-C60-C61
20	Z	103	DMU	C31-C34-C37-C40
28	T	102	PEK	C14-C15-C16-C17
20	P	317	DMU	C25-C28-C31-C34
20	Z	102	DMU	C22-C25-C28-C31
20	Z	102	DMU	C3-C4-C57-O61
20	B	302	DMU	C31-C34-C37-C40
20	O	306	DMU	C19-C22-C25-C28
26	V	101	CDL	C77-C78-C79-C80
26	Y	101	CDL	C59-C60-C61-C62
14	A	602	HEA	C2D-C3D-CAD-CBD
20	P	319	DMU	C5-C10-O7-C3
20	P	316	DMU	C31-C34-C37-C40
20	C	306	DMU	C28-C31-C34-C37
26	C	304	CDL	C12-C11-CA5-OA6
26	I	101	CDL	C18-C19-C20-C21
26	P	304	CDL	CA2-C1-CB2-OB2
20	C	318	DMU	C22-C25-C28-C31
26	C	304	CDL	C23-C24-C25-C26
26	P	304	CDL	C84-C85-C86-C87
26	L	101	CDL	C72-C71-CB7-OB8
19	C	309	LFA	C2-C3-C4-C5
20	B	303	DMU	C28-C31-C34-C37
26	V	101	CDL	C19-C20-C21-C22
26	I	101	CDL	C71-CB7-OB8-CB6
20	W	101	DMU	C22-C25-C28-C31
20	P	317	DMU	C19-C22-C25-C28
20	U	101	DMU	C19-C22-C25-C28
19	T	101	LFA	C11-C12-C13-C14
20	O	307	DMU	C25-C28-C31-C34
26	I	101	CDL	CA6-CA4-OA6-CA5
20	W	101	DMU	O16-C18-C19-C22
20	P	323	DMU	C25-C28-C31-C34
20	M	101	DMU	C34-C37-C40-C43

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Mol	Chain	Res	Type	Atoms
19	O	302	LFA	C1-C2-C3-C4
26	P	304	CDL	C82-C83-C84-C85
26	P	304	CDL	OB5-CB3-CB4-OB6
22	N	616	PGV	C23-C24-C25-C26
26	V	101	CDL	C79-C80-C81-C82
28	G	101	PEK	C25-C26-C27-C28
28	T	102	PEK	C10-C11-C12-C13
20	P	317	DMU	C18-C19-C22-C25
26	C	304	CDL	OB6-CB4-CB6-OB8
26	Y	101	CDL	OA6-CA4-CA6-OA8
19	O	302	LFA	C11-C12-C13-C14
19	N	608	LFA	C5-C6-C7-C8
19	P	313	LFA	C11-C10-C9-C8
26	C	304	CDL	C13-C14-C15-C16
19	C	326	LFA	C3-C4-C5-C6
20	C	317	DMU	C31-C34-C37-C40
26	Y	101	CDL	C18-C19-C20-C21
26	P	304	CDL	C71-C72-C73-C74
22	N	616	PGV	C15-C16-C17-C18
28	T	102	PEK	C30-C31-C32-C33
20	C	318	DMU	C19-C18-O16-C6
20	P	315	DMU	C28-C31-C34-C37
19	C	315	LFA	C11-C10-C9-C8
20	O	306	DMU	C22-C25-C28-C31
26	L	101	CDL	OB5-CB3-CB4-CB6
26	P	304	CDL	OB5-CB3-CB4-CB6
26	V	101	CDL	OA5-CA3-CA4-CA6
19	C	313	LFA	C5-C6-C7-C8
19	A	607	LFA	C7-C8-C9-C10
28	T	102	PEK	C32-C33-C34-C35
20	C	316	DMU	O1-C10-O7-C3
26	L	101	CDL	C31-C32-C33-C34
20	P	323	DMU	C28-C31-C34-C37
26	Y	101	CDL	C61-C62-C63-C64
19	C	309	LFA	C3-C4-C5-C6
26	L	101	CDL	C15-C16-C17-C18
19	C	313	LFA	C3-C4-C5-C6
22	A	614	PGV	C29-C30-C31-C32
26	I	101	CDL	OB9-CB7-OB8-CB6
26	L	101	CDL	OA6-CA4-CA6-OA8
26	P	304	CDL	OB6-CB4-CB6-OB8
26	C	304	CDL	CA2-C1-CB2-OB2

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Mol	Chain	Res	Type	Atoms
20	C	319	DMU	O1-C10-O7-C3
22	P	303	PGV	C27-C28-C29-C30
26	L	101	CDL	C21-C22-C23-C24
26	L	101	CDL	CA3-CA4-CA6-OA8
26	Y	101	CDL	CA3-CA4-CA6-OA8
19	P	312	LFA	C6-C7-C8-C9
20	P	324	DMU	O1-C10-O7-C3
19	C	312	LFA	C3-C4-C5-C6
20	P	318	DMU	O1-C10-O7-C3
19	O	302	LFA	C11-C10-C9-C8
26	Y	101	CDL	C15-C16-C17-C18
26	C	304	CDL	CA3-OA5-PA1-OA3
26	I	101	CDL	CA3-OA5-PA1-OA3
26	I	101	CDL	CB2-OB2-PB2-OB4
26	I	101	CDL	CB2-OB2-PB2-OB5
26	I	101	CDL	CB3-OB5-PB2-OB3
26	L	101	CDL	CA3-OA5-PA1-OA3
26	P	304	CDL	CA3-OA5-PA1-OA3
26	V	101	CDL	CA3-OA5-PA1-OA3
26	V	101	CDL	CB2-OB2-PB2-OB4
26	Y	101	CDL	CA3-OA5-PA1-OA3
26	Y	101	CDL	CB2-OB2-PB2-OB4
26	Y	101	CDL	CB3-OB5-PB2-OB3
28	G	101	PEK	O12-C04-C05-N
20	Z	101	DMU	C34-C37-C40-C43
19	C	309	LFA	C6-C7-C8-C9
26	C	304	CDL	C79-C80-C81-C82
20	C	319	DMU	C5-C10-O7-C3
22	C	303	PGV	C02-C03-O11-P
22	P	303	PGV	C02-C03-O11-P
26	I	101	CDL	C20-C21-C22-C23
26	C	304	CDL	C20-C21-C22-C23
20	M	102	DMU	C34-C37-C40-C43
20	N	609	DMU	C25-C28-C31-C34
19	N	607	LFA	C9-C10-C11-C12
20	Q	201	DMU	C25-C28-C31-C34
26	C	304	CDL	C33-C34-C35-C36
26	P	304	CDL	C18-C19-C20-C21
26	I	101	CDL	C77-C78-C79-C80
22	C	303	PGV	C1-C2-C3-C4
19	P	314	LFA	C1-C2-C3-C4
20	P	315	DMU	C31-C34-C37-C40

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Mol	Chain	Res	Type	Atoms
22	N	616	PGV	C26-C27-C28-C29
26	P	304	CDL	CA7-C31-C32-C33
20	B	302	DMU	C22-C25-C28-C31
26	L	101	CDL	C77-C78-C79-C80
20	P	324	DMU	C5-C10-O7-C3
28	G	101	PEK	C17-C18-C19-C20
19	C	313	LFA	C6-C7-C8-C9
20	C	316	DMU	C5-C10-O7-C3
20	P	318	DMU	C5-C10-O7-C3
19	P	309	LFA	C7-C8-C9-C10
26	I	101	CDL	C78-C79-C80-C81
26	Y	101	CDL	C72-C73-C74-C75
26	Y	101	CDL	C60-C61-C62-C63
20	J	101	DMU	C18-C19-C22-C25
19	N	608	LFA	C1-C2-C3-C4
22	C	303	PGV	C31-C32-C33-C34
26	Y	101	CDL	C22-C23-C24-C25
20	C	318	DMU	C3-C4-C57-O61
21	A	611	EDO	O1-C1-C2-O2
21	C	323	EDO	O1-C1-C2-O2
26	P	304	CDL	C79-C80-C81-C82
22	P	303	PGV	C1-C2-C3-C4
19	P	313	LFA	C9-C10-C11-C12
19	P	311	LFA	C11-C10-C9-C8
26	Y	101	CDL	C74-C75-C76-C77
20	B	304	DMU	C19-C18-O16-C6
20	C	324	DMU	C19-C18-O16-C6
20	P	317	DMU	C19-C18-O16-C6
26	V	101	CDL	C52-C51-CB5-OB6
19	T	103	LFA	C7-C8-C9-C10
28	G	101	PEK	C24-C25-C26-C27
20	C	324	DMU	C19-C22-C25-C28
19	C	311	LFA	C1-C2-C3-C4
26	P	304	CDL	C57-C58-C59-C60
20	P	315	DMU	C18-C19-C22-C25
26	L	101	CDL	C56-C57-C58-C59
26	L	101	CDL	C19-C20-C21-C22
26	I	101	CDL	OA6-CA4-CA6-OA8
26	P	304	CDL	C20-C21-C22-C23
20	J	101	DMU	C22-C25-C28-C31
20	O	304	DMU	C18-C19-C22-C25
20	C	316	DMU	C2-C3-O7-C10

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Mol	Chain	Res	Type	Atoms
20	L	102	DMU	C31-C34-C37-C40
20	Z	102	DMU	C25-C28-C31-C34
26	I	101	CDL	C16-C17-C18-C19
20	C	316	DMU	C4-C3-O7-C10
20	P	315	DMU	O1-C10-O7-C3
20	U	101	DMU	O16-C18-C19-C22
24	O	301	CHD	C22-C23-C24-O25
19	P	313	LFA	C2-C3-C4-C5
26	C	304	CDL	C12-C11-CA5-OA7
28	G	101	PEK	C4-C5-C6-C7
20	W	101	DMU	C34-C37-C40-C43
20	P	319	DMU	C28-C31-C34-C37
26	I	101	CDL	C15-C16-C17-C18
20	N	610	DMU	C19-C22-C25-C28
14	N	602	HEA	CAD-CBD-CGD-O1D
26	V	101	CDL	CA3-CA4-OA6-CA5
26	V	101	CDL	CA6-CA4-OA6-CA5
26	P	304	CDL	C76-C77-C78-C79
24	B	306	CHD	C22-C23-C24-O25
24	C	305	CHD	C22-C23-C24-O25
26	I	101	CDL	C52-C51-CB5-OB6
24	O	301	CHD	C22-C23-C24-O26
28	G	101	PEK	C10-C11-C12-C13
20	P	319	DMU	C34-C37-C40-C43
24	P	305	CHD	C22-C23-C24-O25
14	A	602	HEA	CAD-CBD-CGD-O2D
20	P	318	DMU	C19-C22-C25-C28
14	A	601	HEA	CAD-CBD-CGD-O1D
14	N	601	HEA	CAD-CBD-CGD-O1D
14	N	602	HEA	CAA-CBA-CGA-O1A
24	B	306	CHD	C22-C23-C24-O26
26	V	101	CDL	C75-C76-C77-C78
28	G	101	PEK	C11-C12-C13-C14
22	P	303	PGV	C22-C23-C24-C25
14	A	602	HEA	CAA-CBA-CGA-O1A
14	N	602	HEA	CAD-CBD-CGD-O2D
14	A	601	HEA	C26-C15-C16-C17
14	A	602	HEA	C26-C15-C16-C17
14	A	601	HEA	C14-C15-C16-C17
19	C	310	LFA	C5-C6-C7-C8
20	N	609	DMU	C28-C31-C34-C37
19	C	314	LFA	C5-C6-C7-C8

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Mol	Chain	Res	Type	Atoms
14	N	602	HEA	C26-C15-C16-C17
24	P	305	CHD	C22-C23-C24-O26
26	Y	101	CDL	C17-C18-C19-C20
14	A	601	HEA	CAD-CBD-CGD-O2D
26	I	101	CDL	C71-C72-C73-C74
26	P	304	CDL	C81-C82-C83-C84
14	A	602	HEA	CAA-CBA-CGA-O2A
20	C	316	DMU	C19-C18-O16-C6
20	P	306	DMU	O16-C18-C19-C22
20	A	608	DMU	C31-C34-C37-C40
21	P	320	EDO	O1-C1-C2-O2
21	R	201	EDO	O1-C1-C2-O2
14	N	601	HEA	CAD-CBD-CGD-O2D
19	B	307	LFA	C3-C4-C5-C6
24	C	305	CHD	C22-C23-C24-O26
26	L	101	CDL	C73-C74-C75-C76
14	A	602	HEA	CAD-CBD-CGD-O1D
14	N	602	HEA	CAA-CBA-CGA-O2A
26	P	304	CDL	C75-C76-C77-C78
26	Y	101	CDL	C55-C56-C57-C58
20	B	304	DMU	C3-C4-C57-O61
26	C	304	CDL	C72-C71-CB7-OB8
26	I	101	CDL	C52-C51-CB5-OB7
22	C	303	PGV	C11-C12-C13-C14
19	P	314	LFA	C2-C3-C4-C5
26	C	304	CDL	C77-C78-C79-C80
26	L	101	CDL	C51-C52-C53-C54
20	C	324	DMU	C18-C19-C22-C25
26	C	304	CDL	C82-C83-C84-C85
22	N	616	PGV	O03-C19-C20-C21
22	C	303	PGV	C30-C31-C32-C33
26	L	101	CDL	C75-C76-C77-C78
20	D	201	DMU	C22-C25-C28-C31
22	A	614	PGV	O03-C19-C20-C21
24	P	301	CHD	C22-C23-C24-O25
22	N	616	PGV	C30-C31-C32-C33
24	C	301	CHD	C22-C23-C24-O26
19	N	607	LFA	C2-C3-C4-C5
22	C	303	PGV	C05-C04-O12-P
22	P	303	PGV	C05-C04-O12-P
26	V	101	CDL	C1-CA2-OA2-PA1
26	V	101	CDL	C74-C75-C76-C77

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Mol	Chain	Res	Type	Atoms
24	P	301	CHD	C22-C23-C24-O26
20	Z	103	DMU	C22-C25-C28-C31
26	C	304	CDL	C52-C51-CB5-OB6
26	V	101	CDL	C52-C51-CB5-OB7
20	N	609	DMU	C34-C37-C40-C43
21	N	614	EDO	O1-C1-C2-O2
21	R	203	EDO	O1-C1-C2-O2
26	V	101	CDL	C76-C77-C78-C79
24	C	301	CHD	C22-C23-C24-O25
14	N	602	HEA	C4D-C3D-CAD-CBD
20	C	320	DMU	C22-C25-C28-C31
26	L	101	CDL	C60-C61-C62-C63
26	L	101	CDL	C72-C71-CB7-OB9
22	C	303	PGV	C13-C14-C15-C16
26	I	101	CDL	C32-C31-CA7-OA8
22	C	303	PGV	C9-C10-C11-C12
26	Y	101	CDL	C21-C22-C23-C24
28	G	101	PEK	C30-C31-C32-C33
19	P	313	LFA	C6-C7-C8-C9
28	T	102	PEK	C2-C1-O01-C02
22	P	303	PGV	C15-C16-C17-C18
26	P	304	CDL	C72-C71-CB7-OB8
20	P	315	DMU	C5-C10-O7-C3
26	L	101	CDL	C18-C19-C20-C21
26	Y	101	CDL	C75-C76-C77-C78
26	V	101	CDL	C72-C71-CB7-OB8
19	T	101	LFA	C9-C10-C11-C12
26	Y	101	CDL	C52-C53-C54-C55
22	A	614	PGV	C26-C27-C28-C29
20	O	307	DMU	C28-C31-C34-C37
22	C	303	PGV	C12-C13-C14-C15
19	N	608	LFA	C6-C7-C8-C9
20	O	307	DMU	C22-C25-C28-C31
26	V	101	CDL	CB4-CB3-OB5-PB2
26	Y	101	CDL	C80-C81-C82-C83
19	P	309	LFA	C12-C13-C14-C15
20	C	325	DMU	O6-C11-C9-C8
26	L	101	CDL	C78-C79-C80-C81
26	P	304	CDL	C52-C51-CB5-OB6
20	A	609	DMU	C2-C3-O7-C10
20	P	319	DMU	C3-C4-C57-O61
19	C	308	LFA	C2-C3-C4-C5

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Mol	Chain	Res	Type	Atoms
20	H	101	DMU	C18-C19-C22-C25
26	Y	101	CDL	CB7-C71-C72-C73
21	A	613	EDO	O1-C1-C2-O2
21	N	613	EDO	O1-C1-C2-O2
26	I	101	CDL	C72-C71-CB7-OB8
20	A	609	DMU	O16-C18-C19-C22
19	C	311	LFA	C4-C5-C6-C7
26	L	101	CDL	C16-C17-C18-C19
19	C	309	LFA	C4-C5-C6-C7
19	C	309	LFA	C9-C10-C11-C12
26	P	304	CDL	C12-C11-CA5-OA6
19	C	314	LFA	C11-C10-C9-C8
26	V	101	CDL	C20-C21-C22-C23
26	C	304	CDL	C11-C12-C13-C14
26	V	101	CDL	C13-C14-C15-C16
20	U	101	DMU	C34-C37-C40-C43
20	A	609	DMU	C19-C22-C25-C28
26	P	304	CDL	C72-C71-CB7-OB9
20	C	325	DMU	O1-C10-O7-C3
26	V	101	CDL	C72-C71-CB7-OB9
19	N	608	LFA	C9-C10-C11-C12
20	A	615	DMU	C34-C37-C40-C43
26	C	304	CDL	C52-C51-CB5-OB7
20	O	308	DMU	O16-C18-C19-C22
20	U	101	DMU	C25-C28-C31-C34
14	N	601	HEA	CAA-CBA-CGA-O2A
22	A	614	PGV	C15-C16-C17-C18
26	L	101	CDL	C33-C34-C35-C36
19	P	307	LFA	C2-C3-C4-C5
14	A	601	HEA	CAA-CBA-CGA-O2A
20	C	306	DMU	C22-C25-C28-C31
26	I	101	CDL	C32-C31-CA7-OA9
26	L	101	CDL	C13-C14-C15-C16
26	P	304	CDL	C52-C51-CB5-OB7
26	I	101	CDL	C72-C71-CB7-OB9
19	C	315	LFA	C6-C7-C8-C9
20	C	320	DMU	O5-C6-O16-C18
26	Y	101	CDL	C32-C31-CA7-OA8
19	C	312	LFA	C11-C10-C9-C8
19	P	311	LFA	C7-C8-C9-C10
26	V	101	CDL	C11-C12-C13-C14
14	A	601	HEA	CAA-CBA-CGA-O1A

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Mol	Chain	Res	Type	Atoms
20	A	609	DMU	C4-C3-O7-C10

There are no ring outliers.

48 monomers are involved in 129 short contacts:

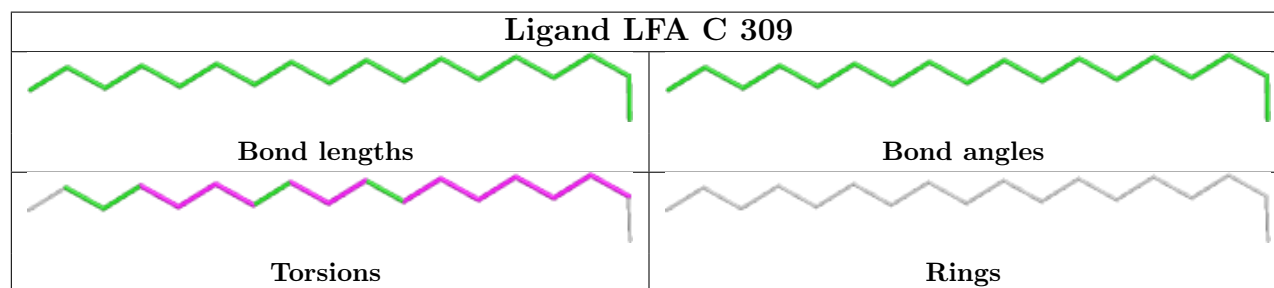
Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	C	309	LFA	2	0
14	N	601	HEA	4	0
24	O	301	CHD	1	0
20	A	608	DMU	1	0
14	A	601	HEA	2	0
26	P	304	CDL	15	0
28	G	101	PEK	1	0
24	P	305	CHD	2	0
20	P	324	DMU	1	0
26	L	101	CDL	3	0
19	P	309	LFA	1	0
19	C	307	LFA	4	0
22	C	303	PGV	3	0
24	C	301	CHD	1	0
19	C	314	LFA	1	0
22	P	303	PGV	2	0
24	B	306	CHD	1	0
26	Y	101	CDL	10	0
20	Q	201	DMU	2	0
19	N	608	LFA	5	0
20	P	323	DMU	1	0
20	N	610	DMU	1	0
26	C	304	CDL	21	0
26	V	101	CDL	1	0
20	A	609	DMU	1	0
19	T	101	LFA	6	0
26	I	101	CDL	1	0
21	A	611	EDO	1	0
24	C	305	CHD	2	0
20	D	201	DMU	2	0
19	C	313	LFA	1	0
20	C	325	DMU	3	0
20	Z	102	DMU	2	0
28	T	102	PEK	4	0
19	P	312	LFA	1	0
20	Z	101	DMU	1	0

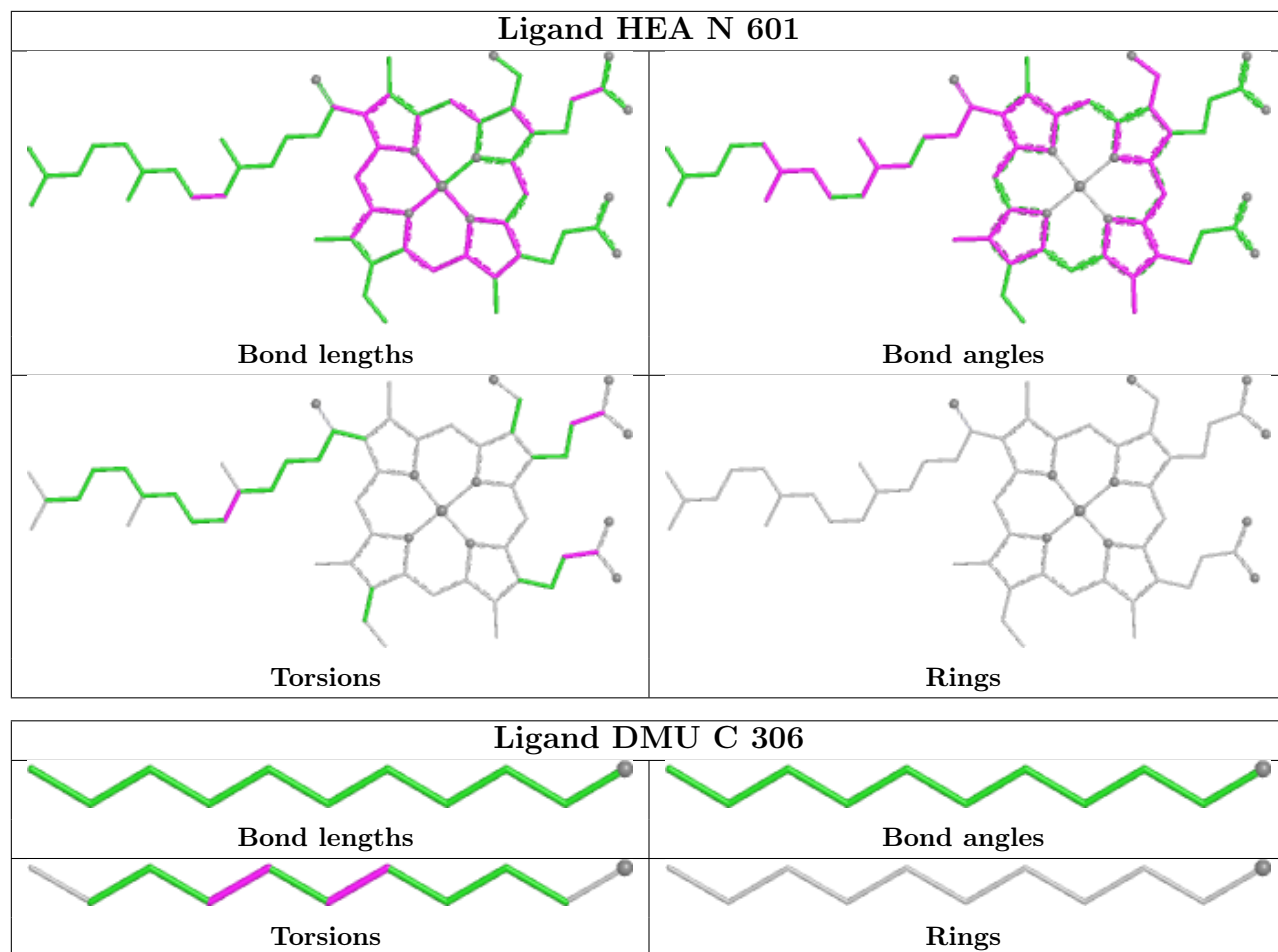
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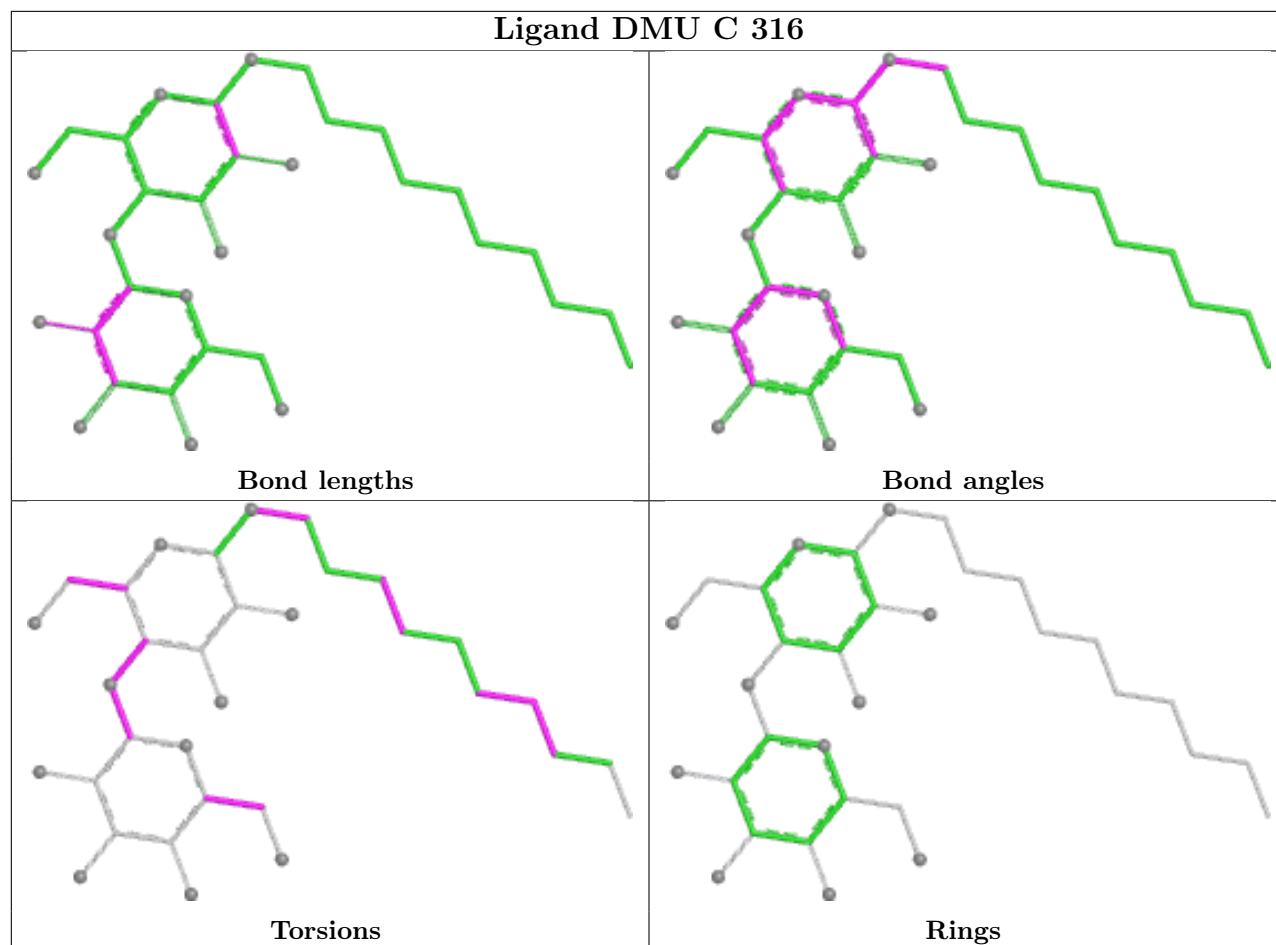
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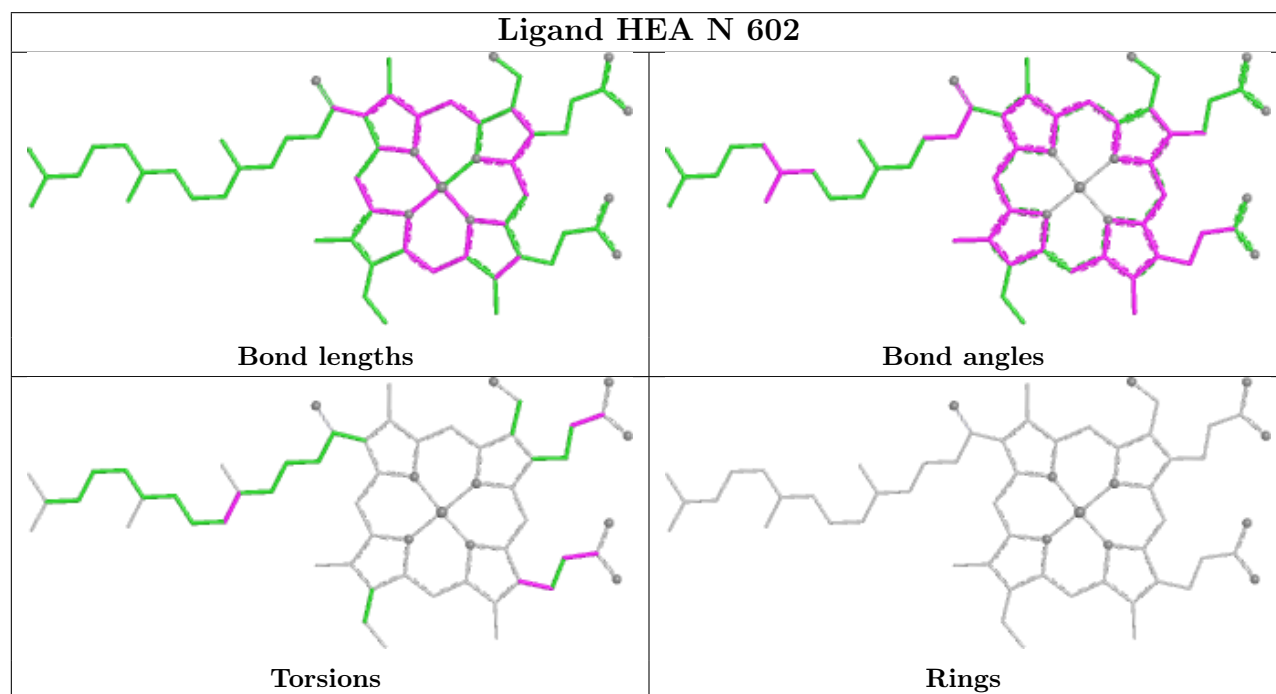
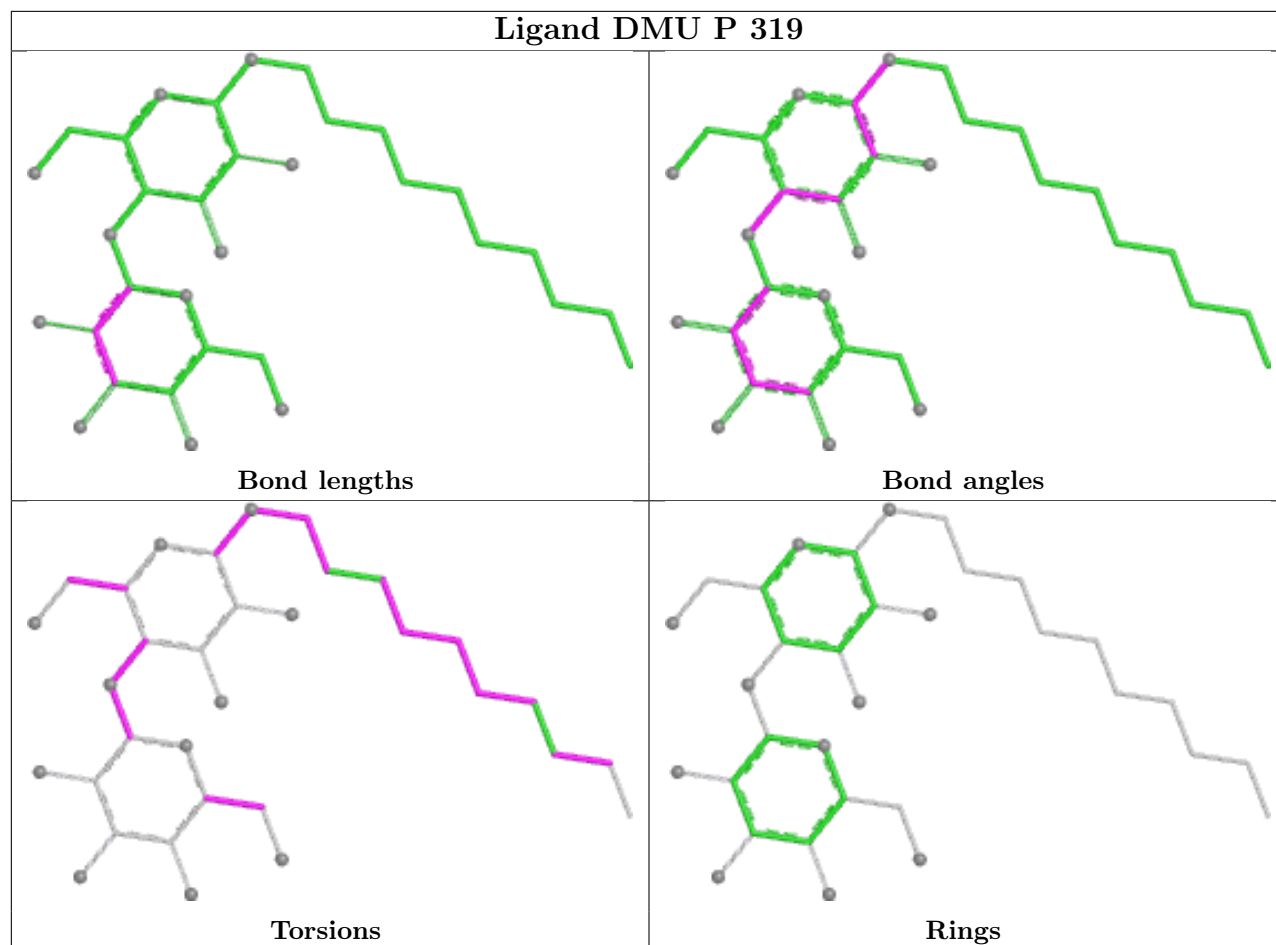
Mol	Chain	Res	Type	Clashes	Symm-Clashes
21	C	322	EDO	1	0
19	C	315	LFA	1	0
19	A	607	LFA	5	0
20	H	101	DMU	1	0
20	C	319	DMU	1	0
20	L	102	DMU	5	0
19	O	302	LFA	1	0
19	P	307	LFA	2	0
24	P	301	CHD	1	0
20	O	304	DMU	1	0
22	N	616	PGV	1	0
19	N	607	LFA	6	0

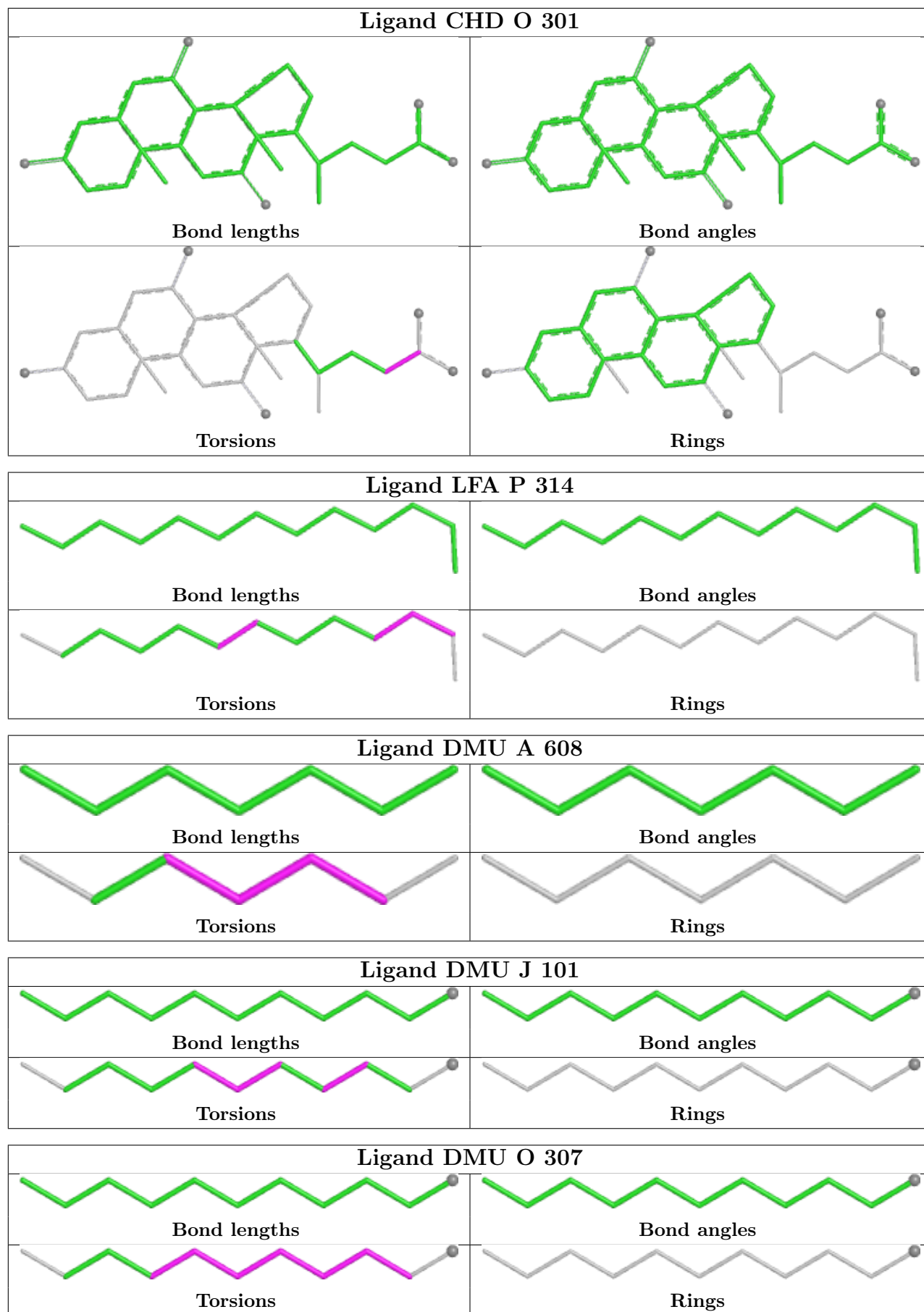
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

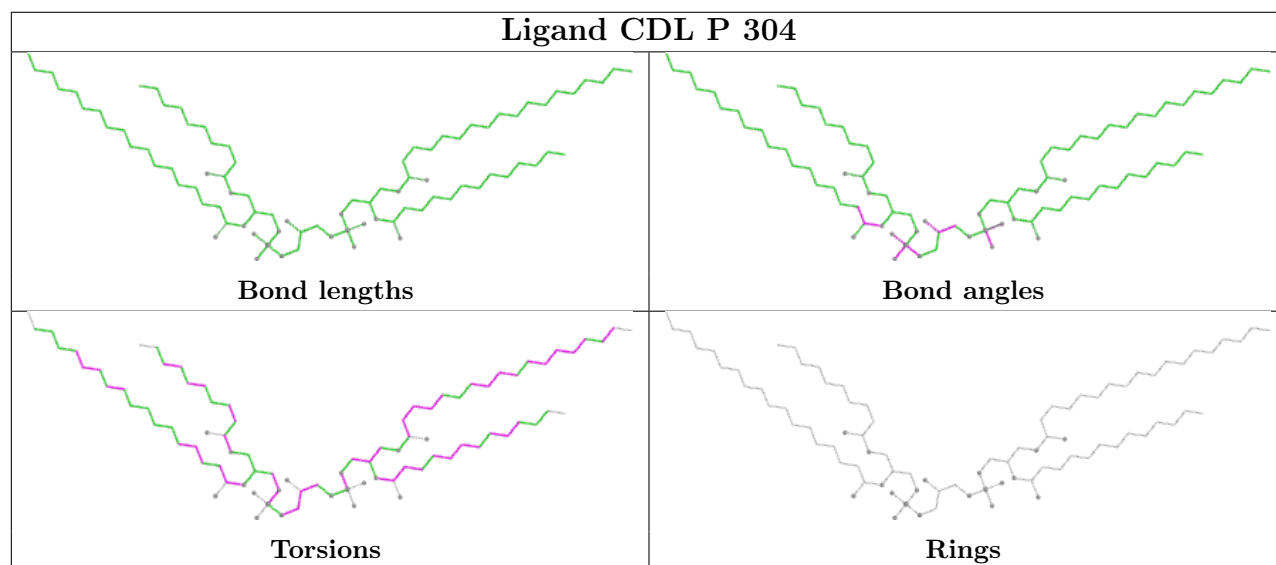
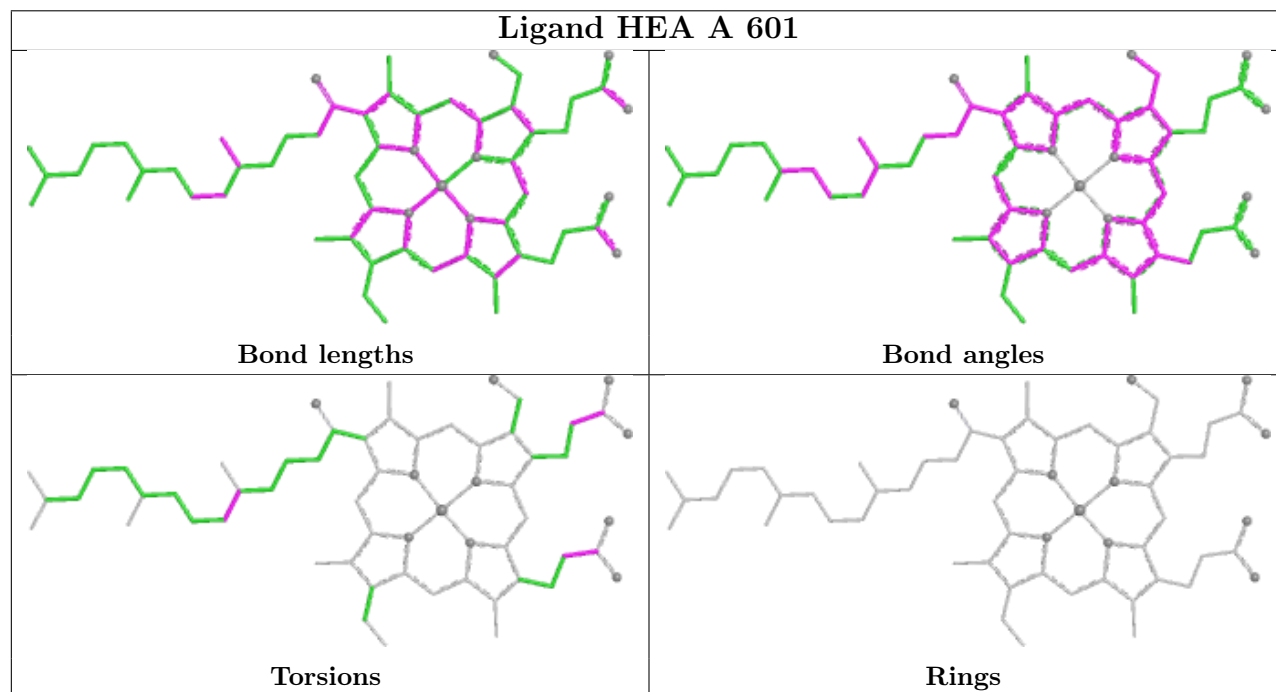
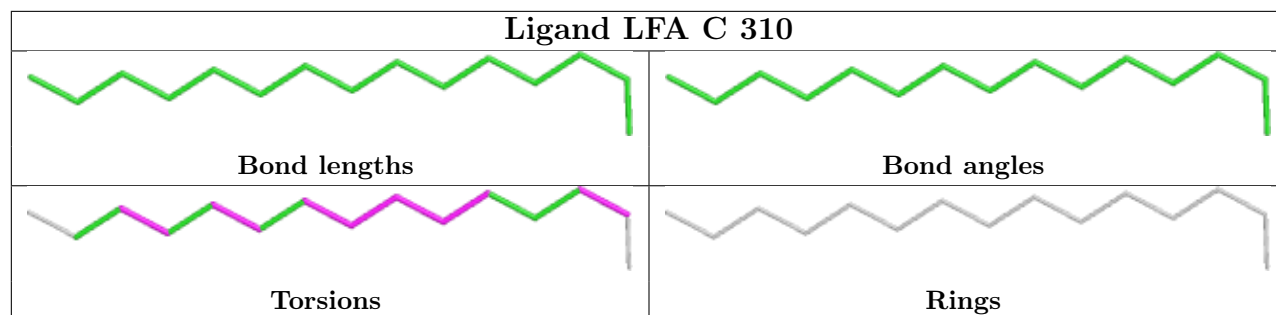


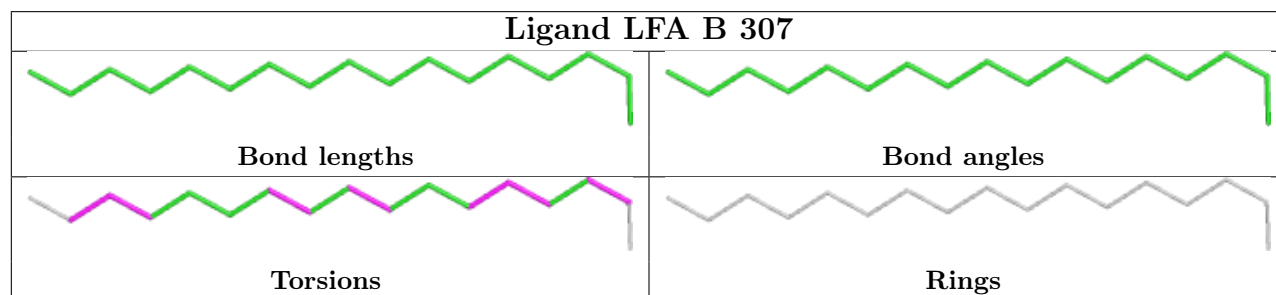
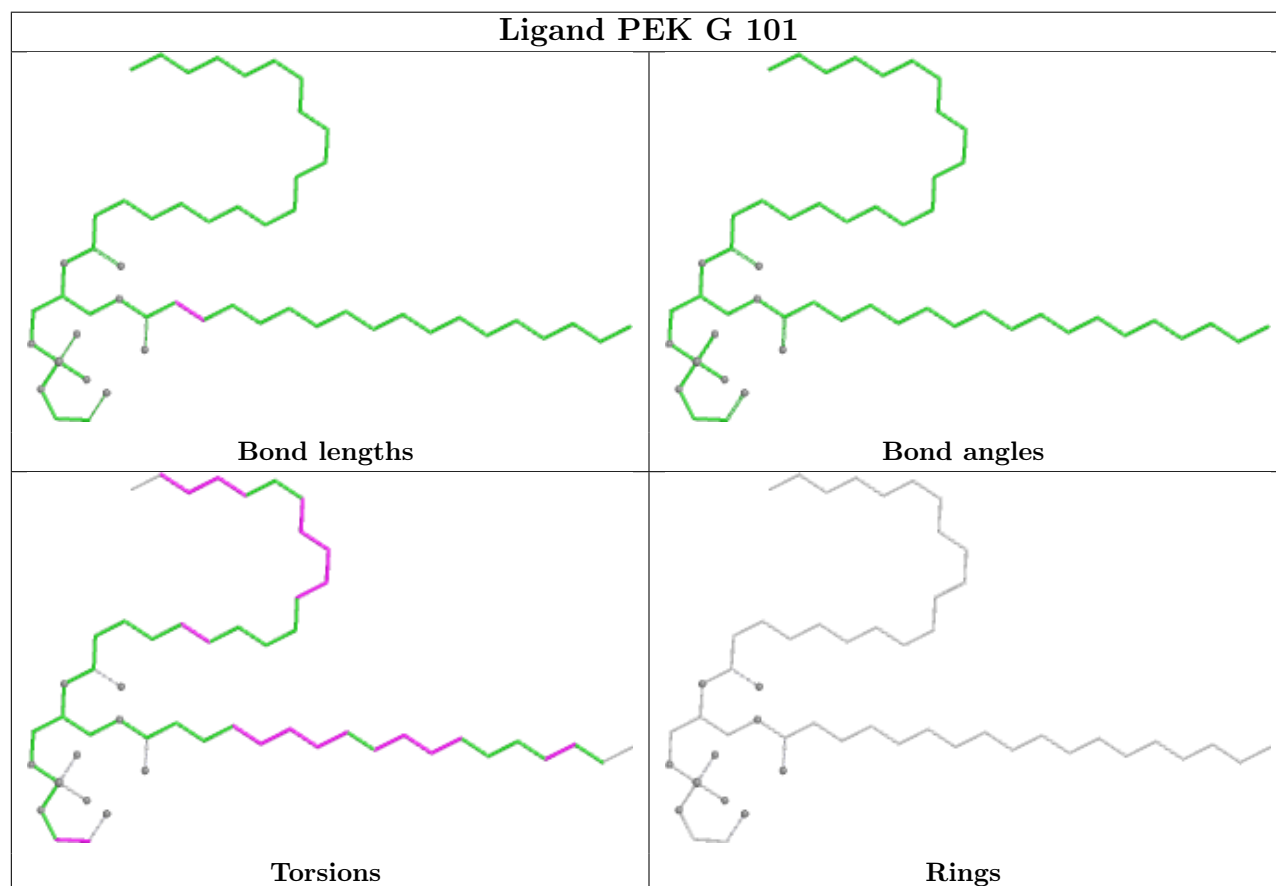
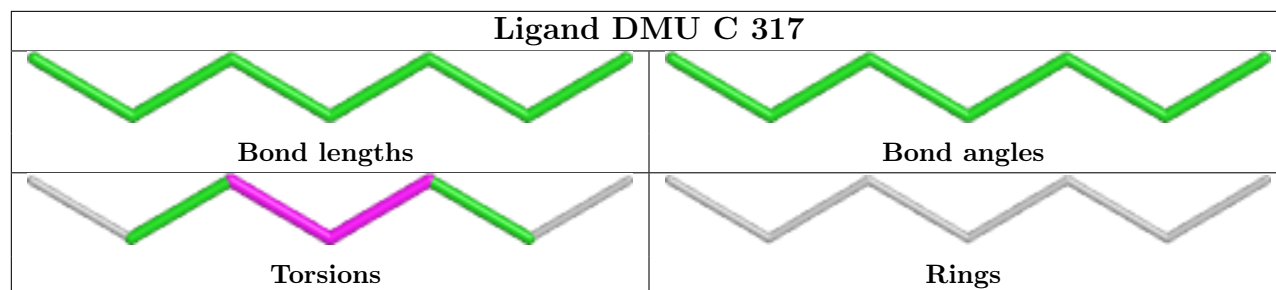


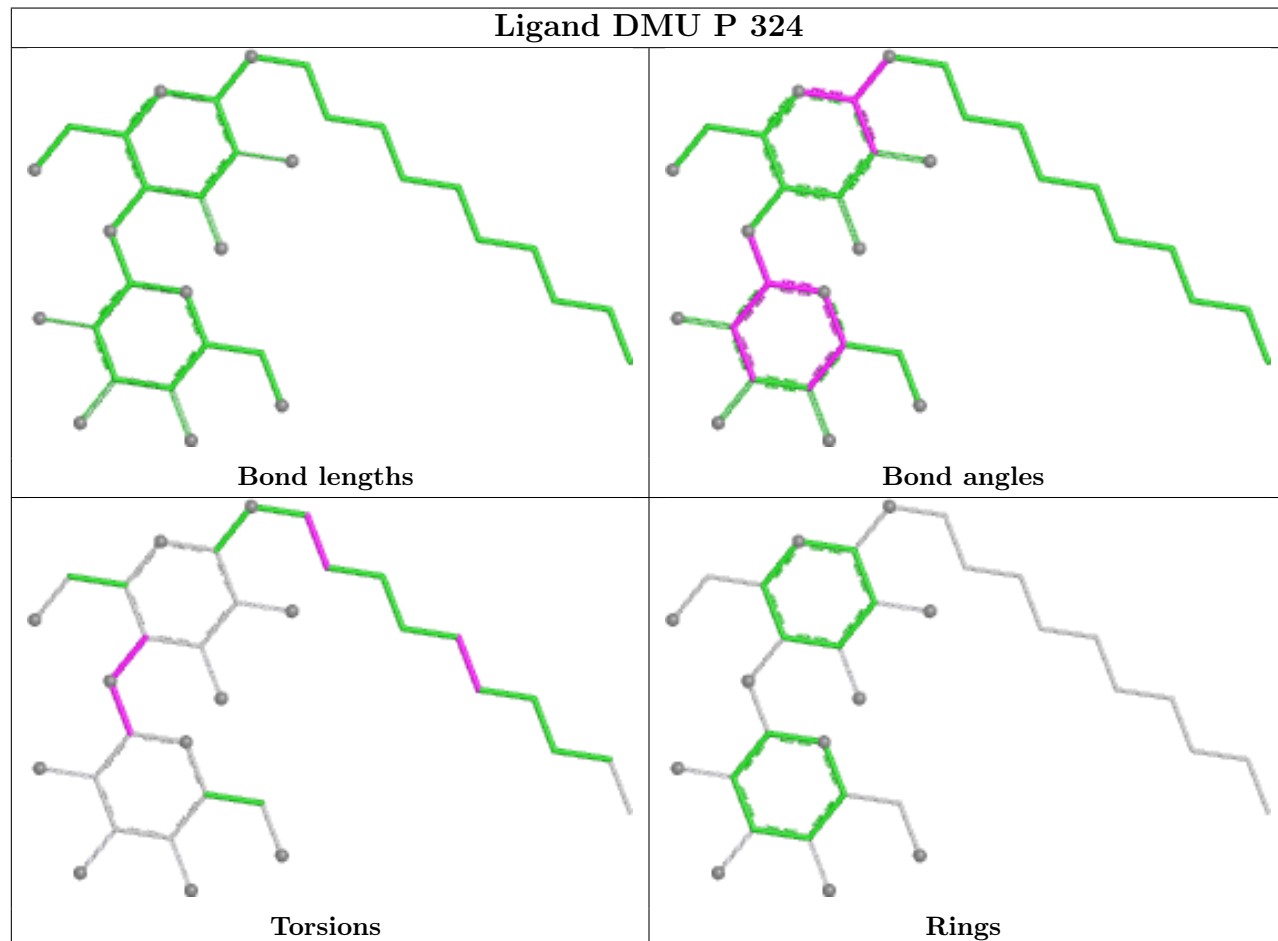
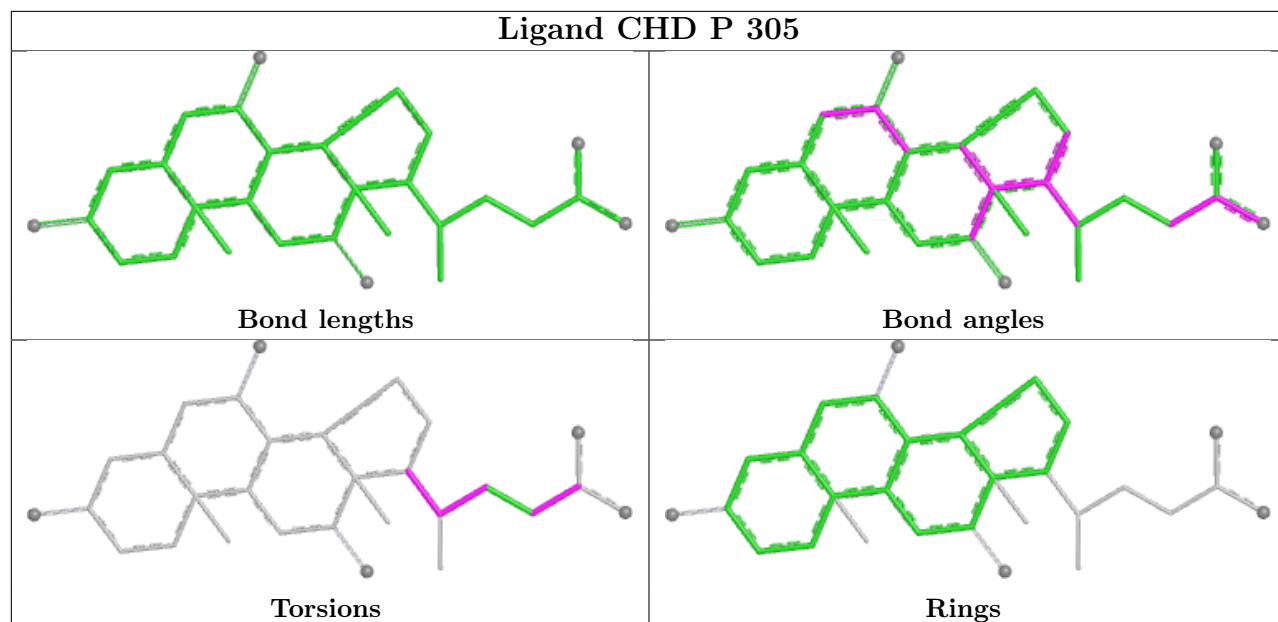


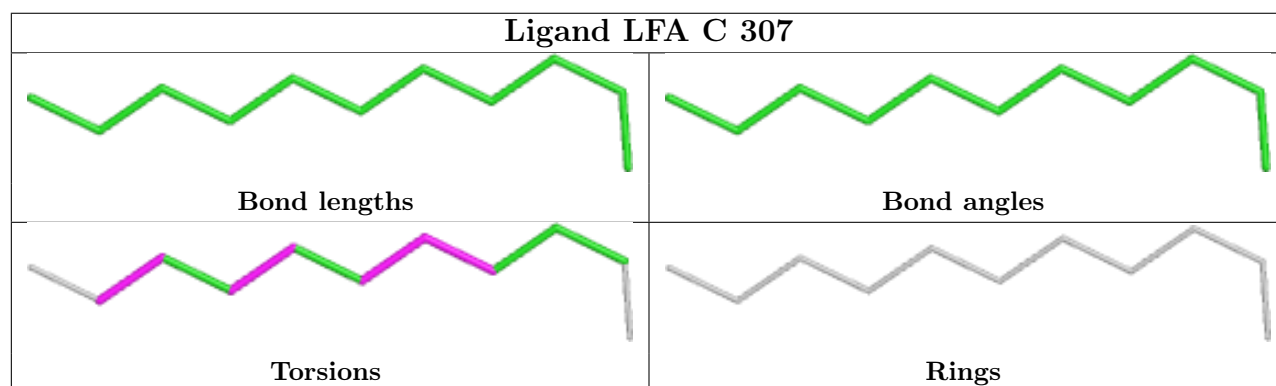
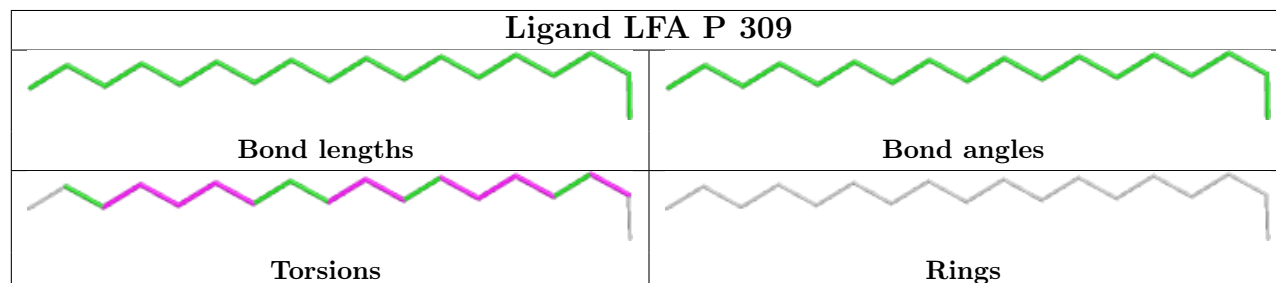
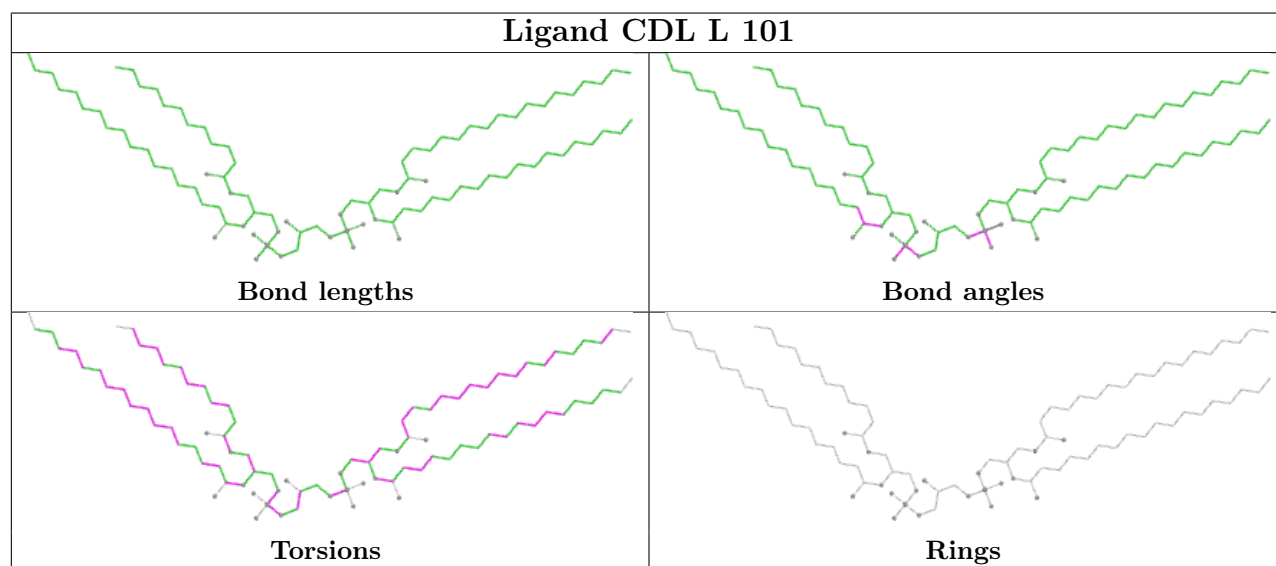
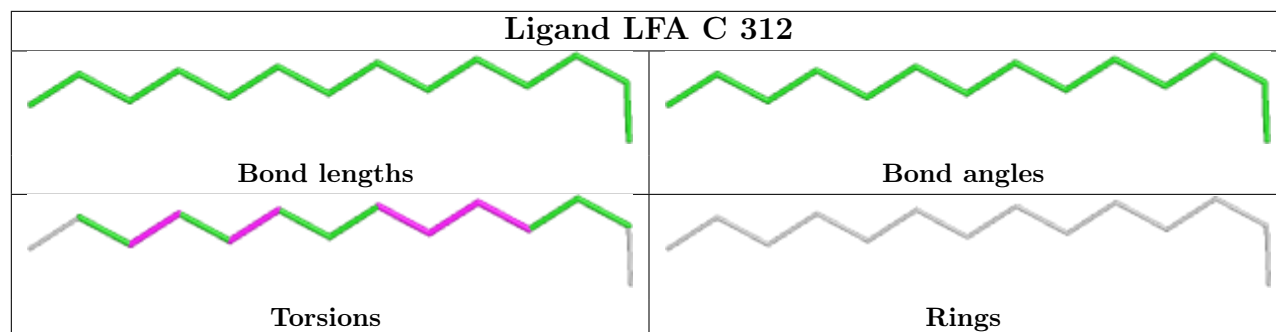


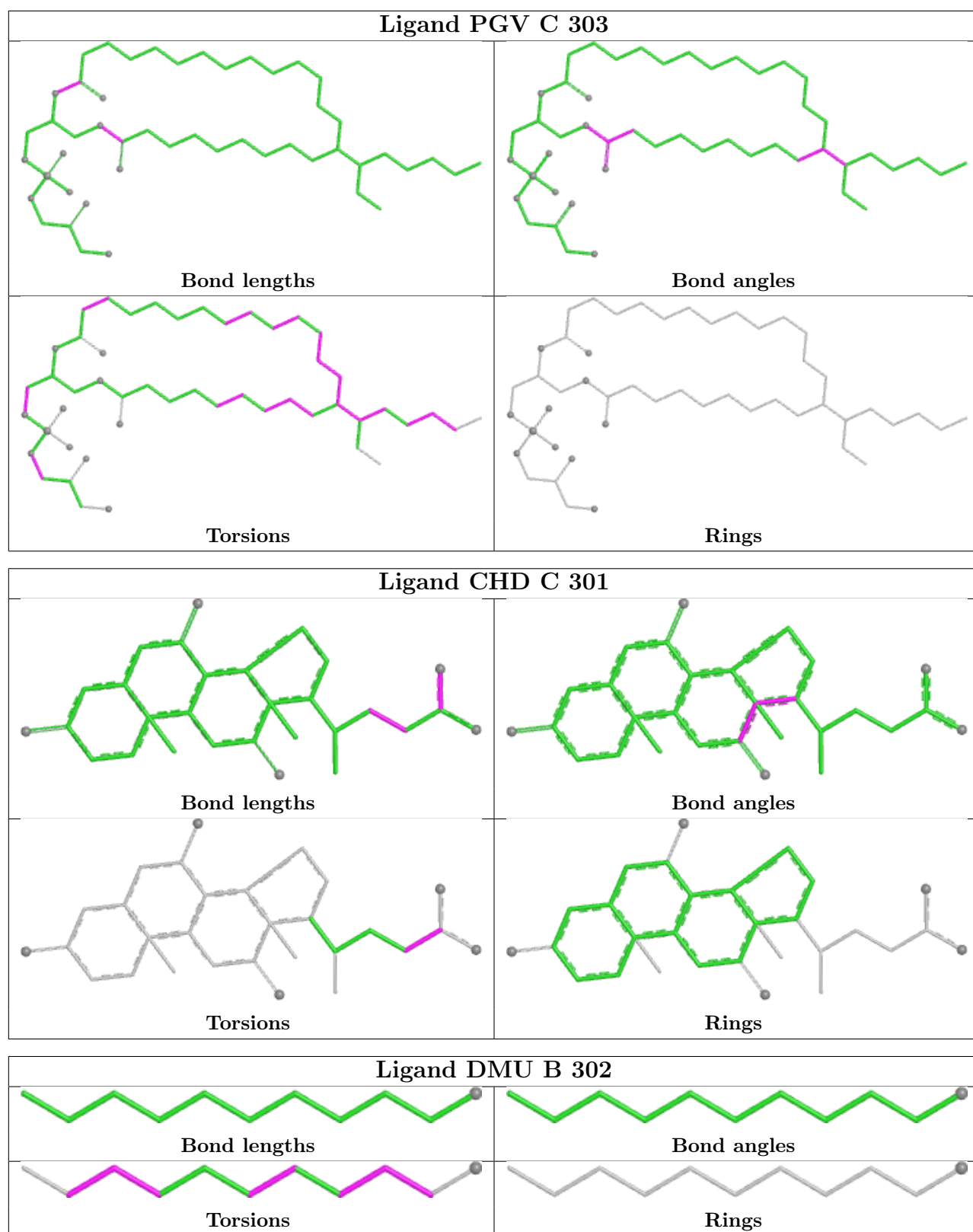


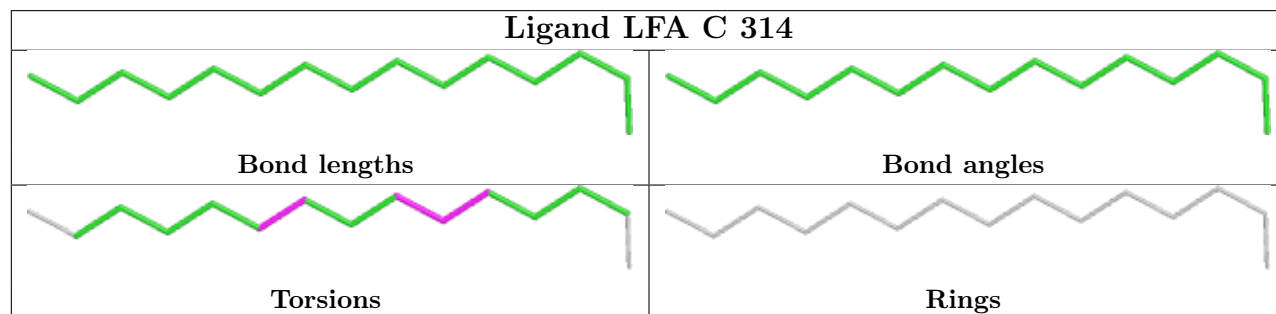
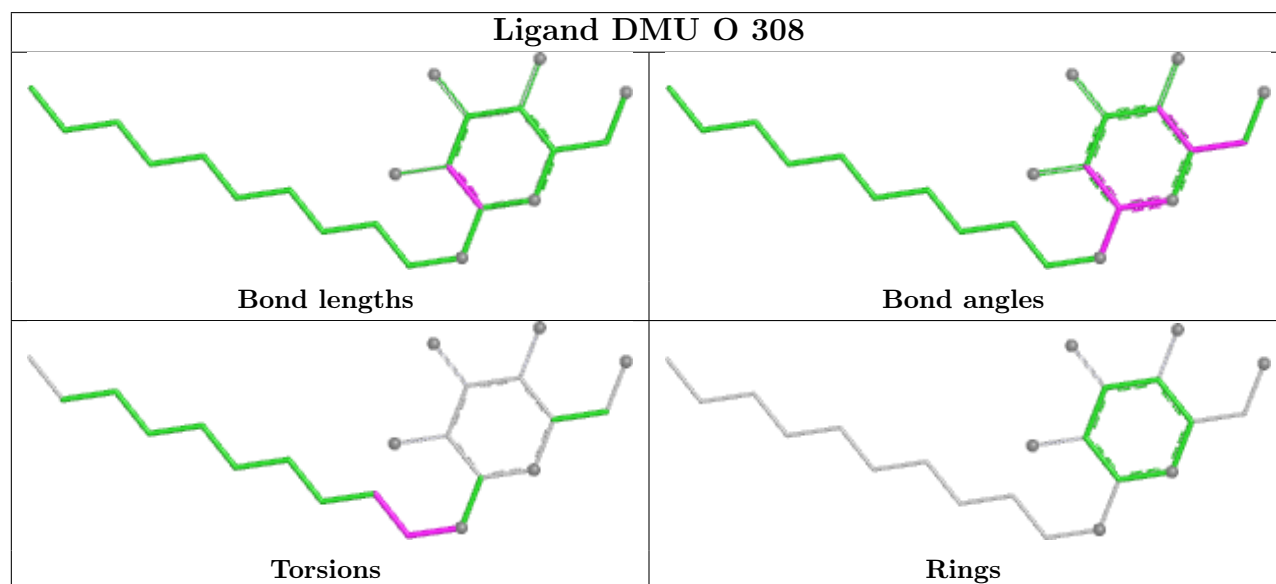
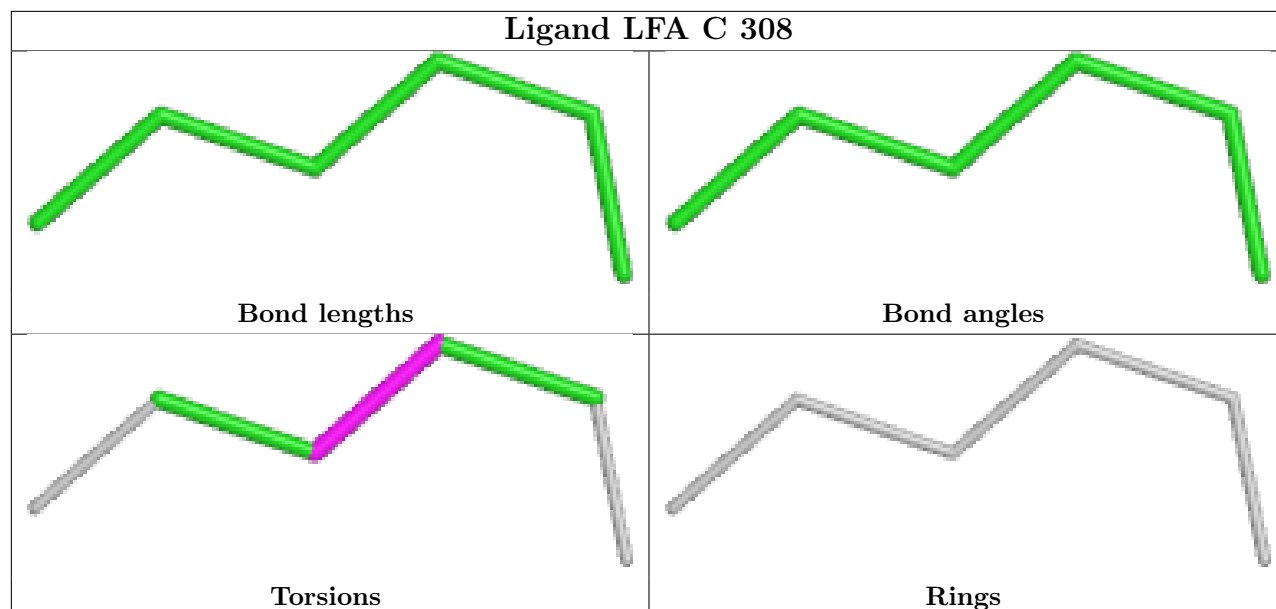




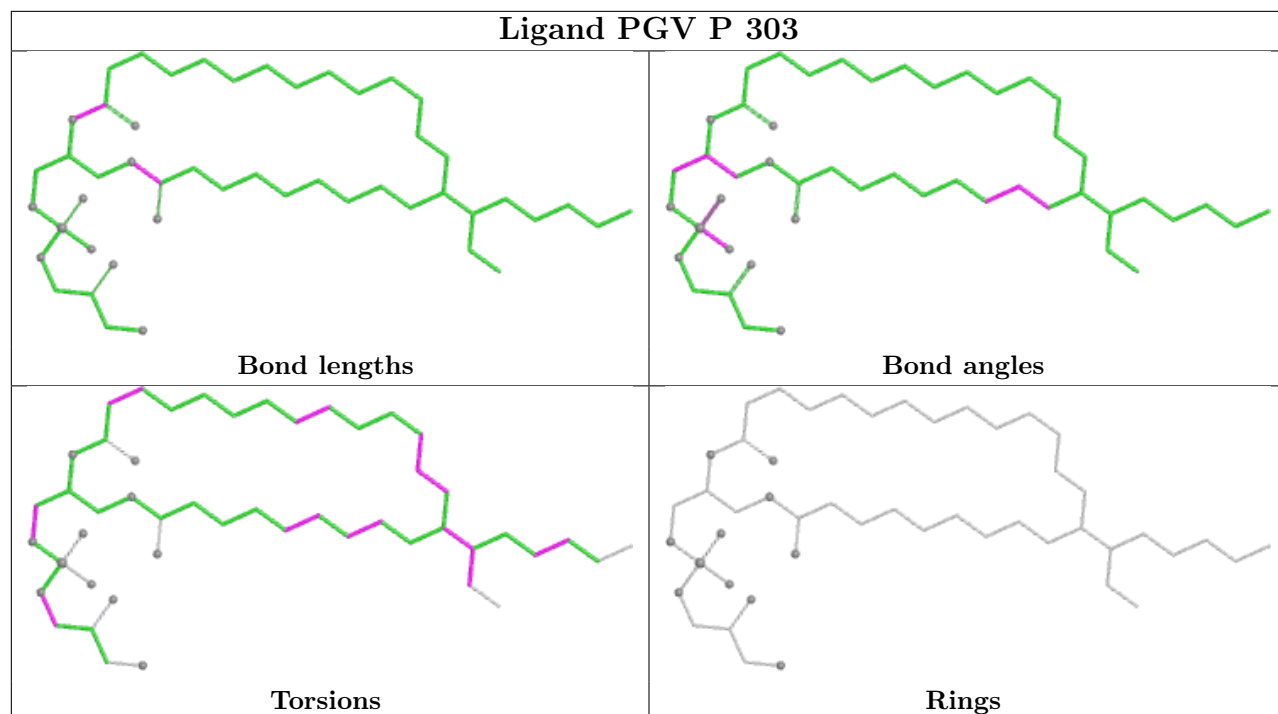




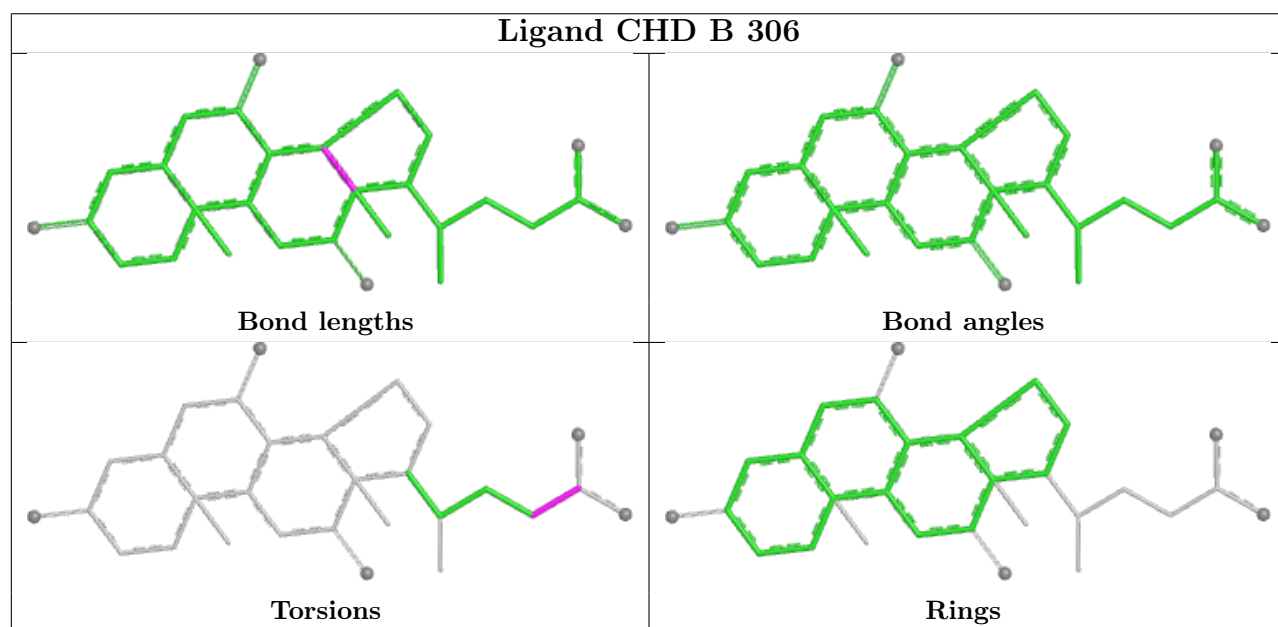


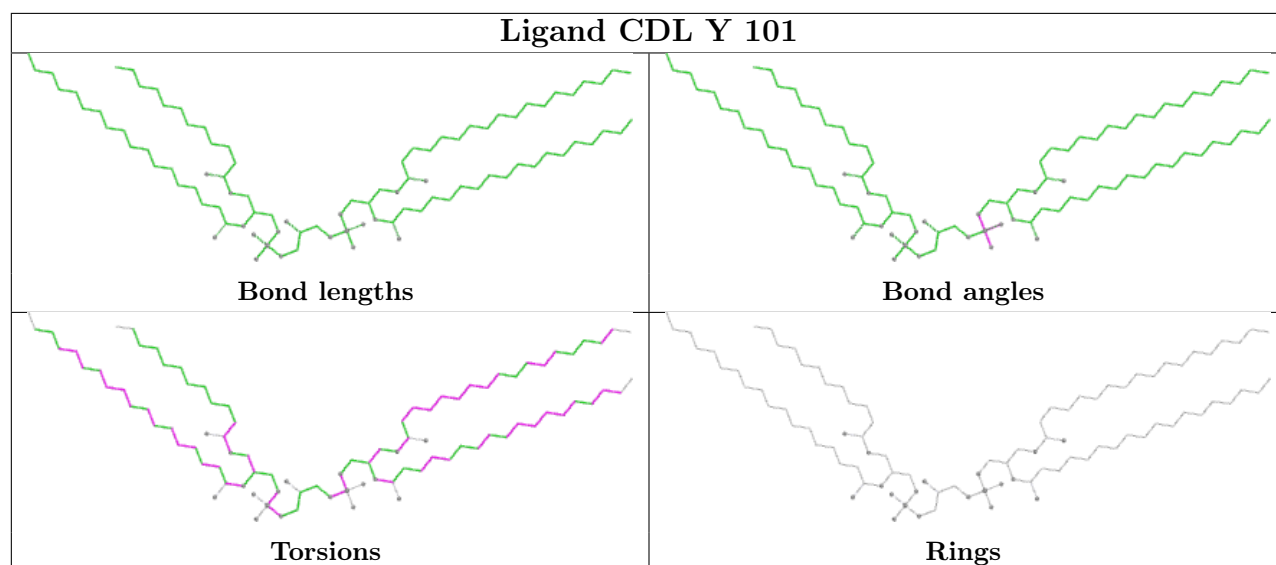
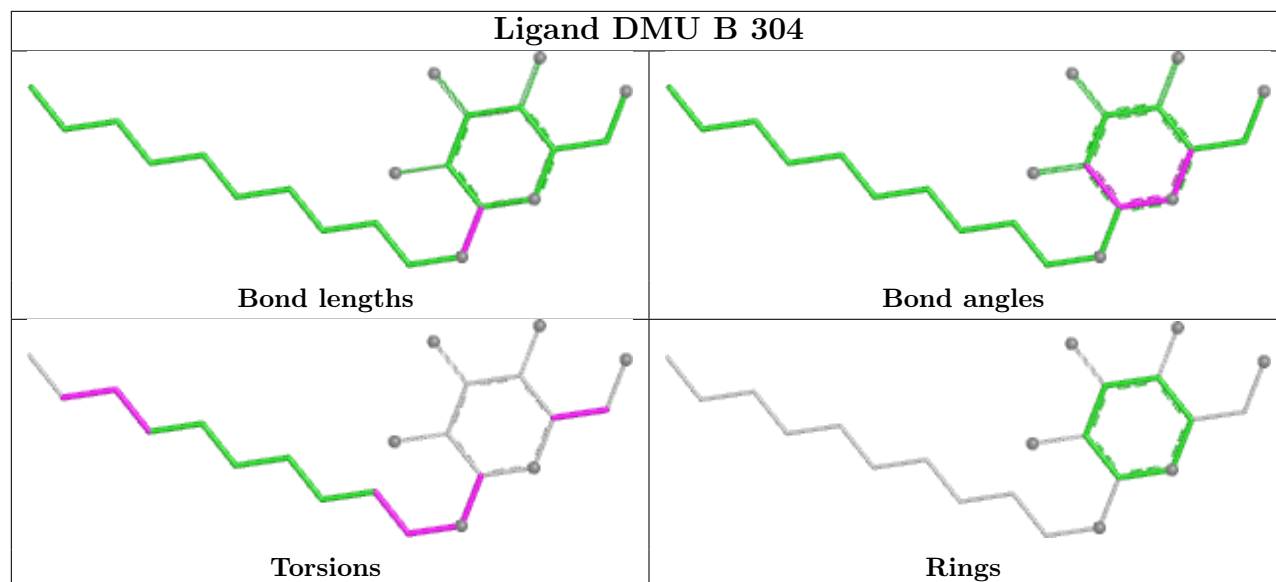


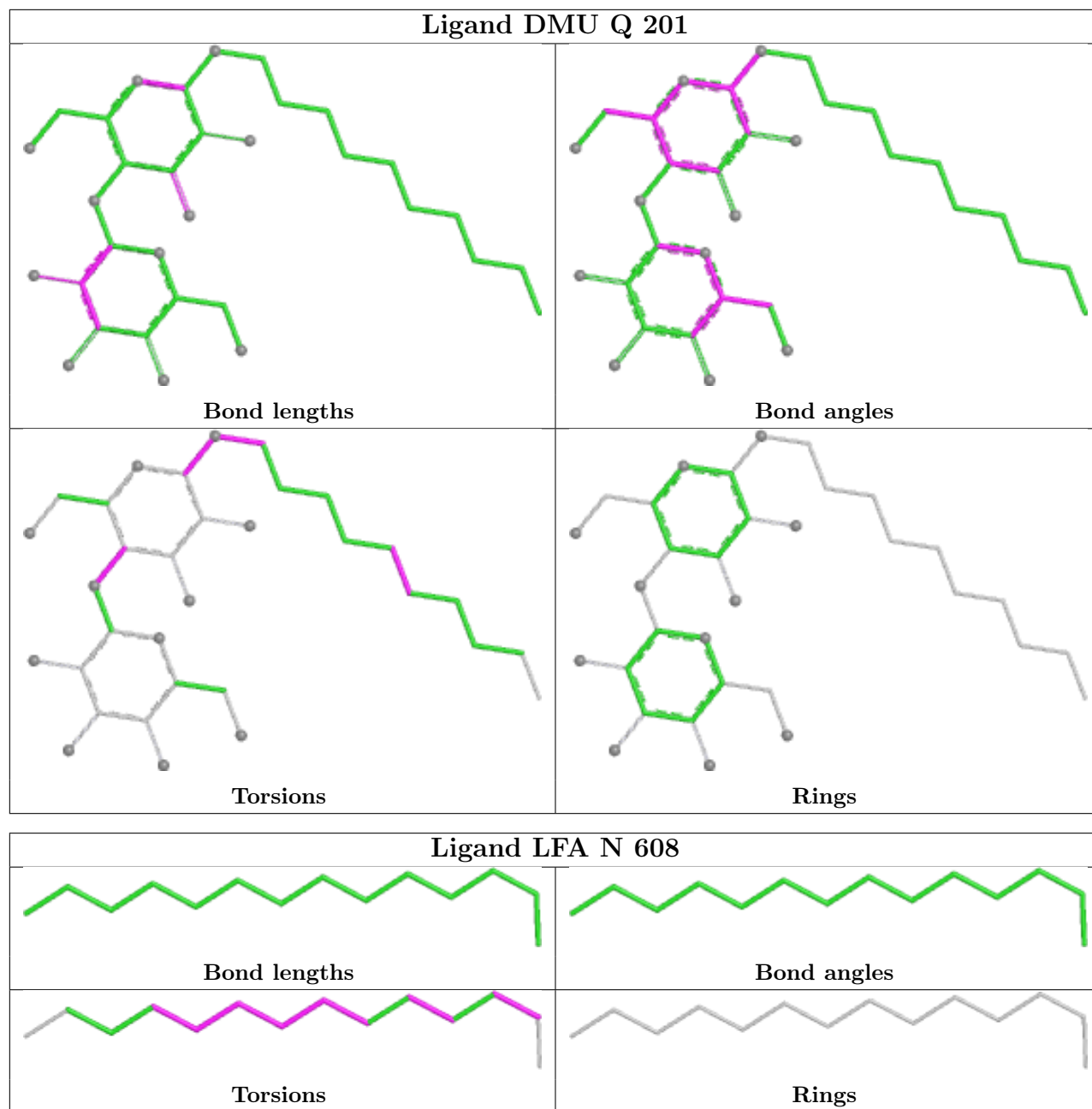
Ligand PGV P 303

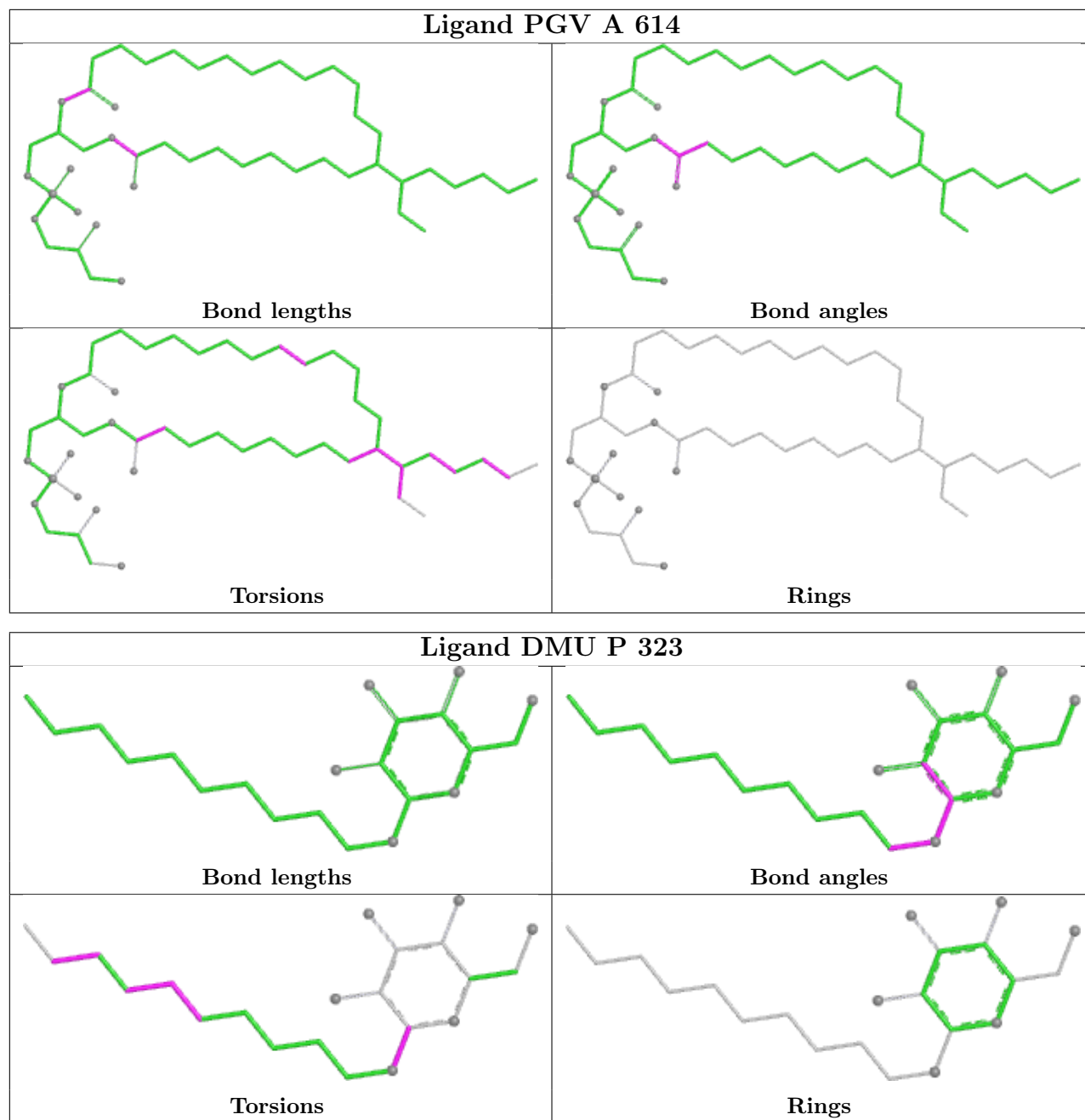


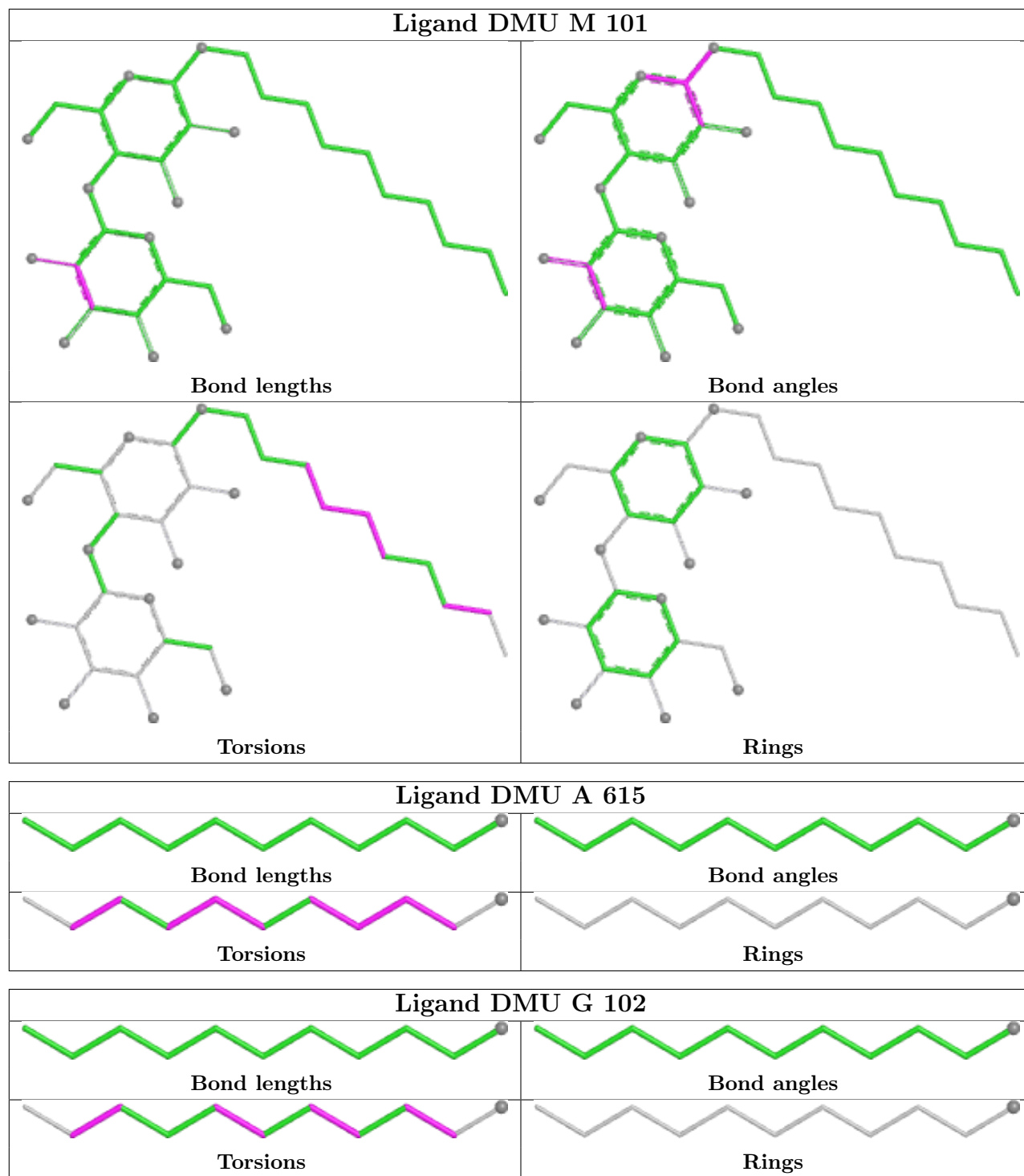
Ligand CHD B 306

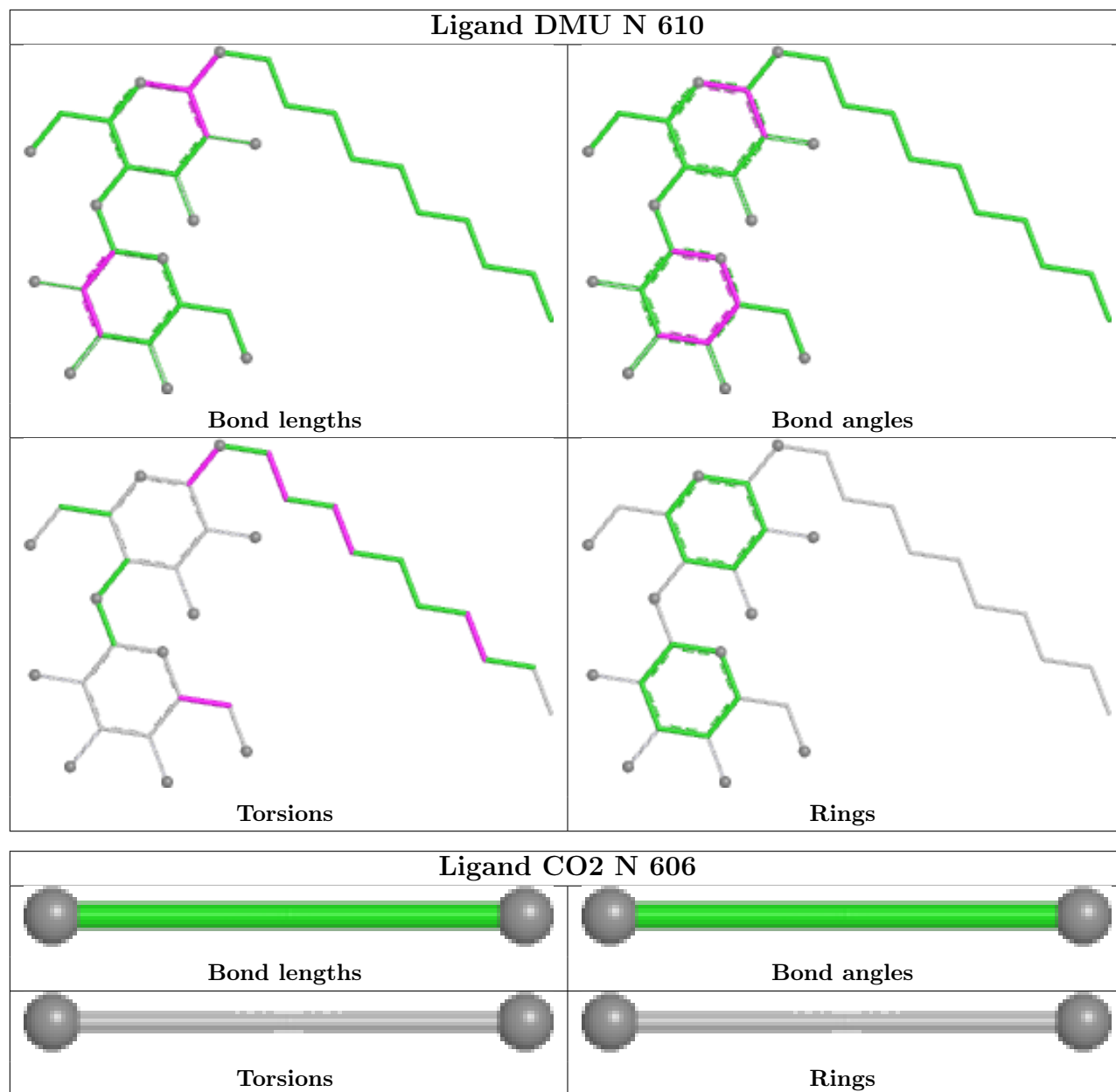


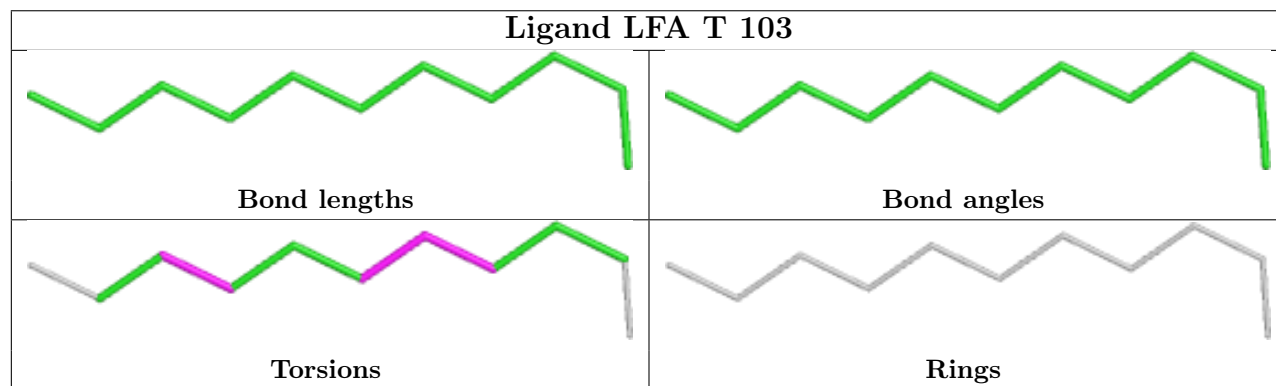
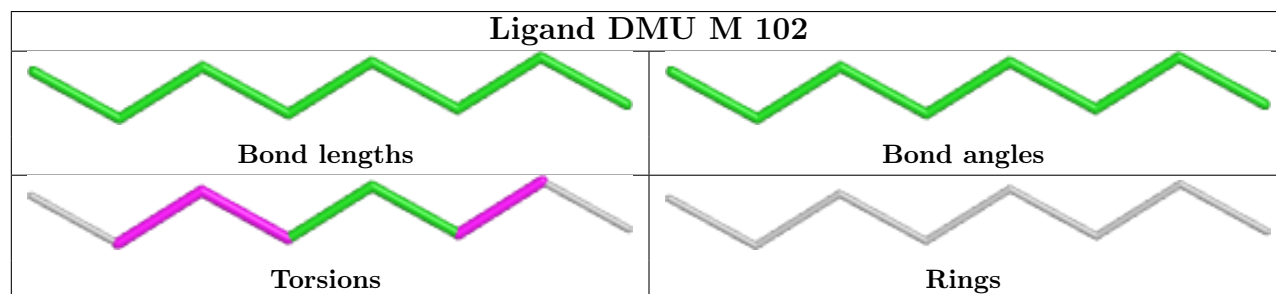
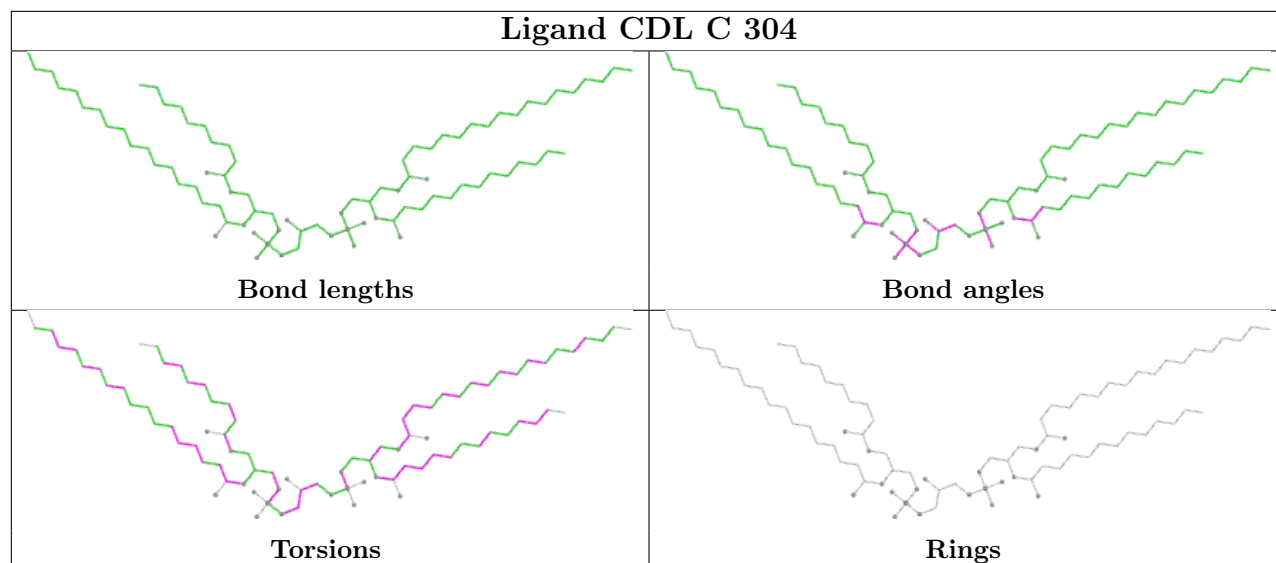


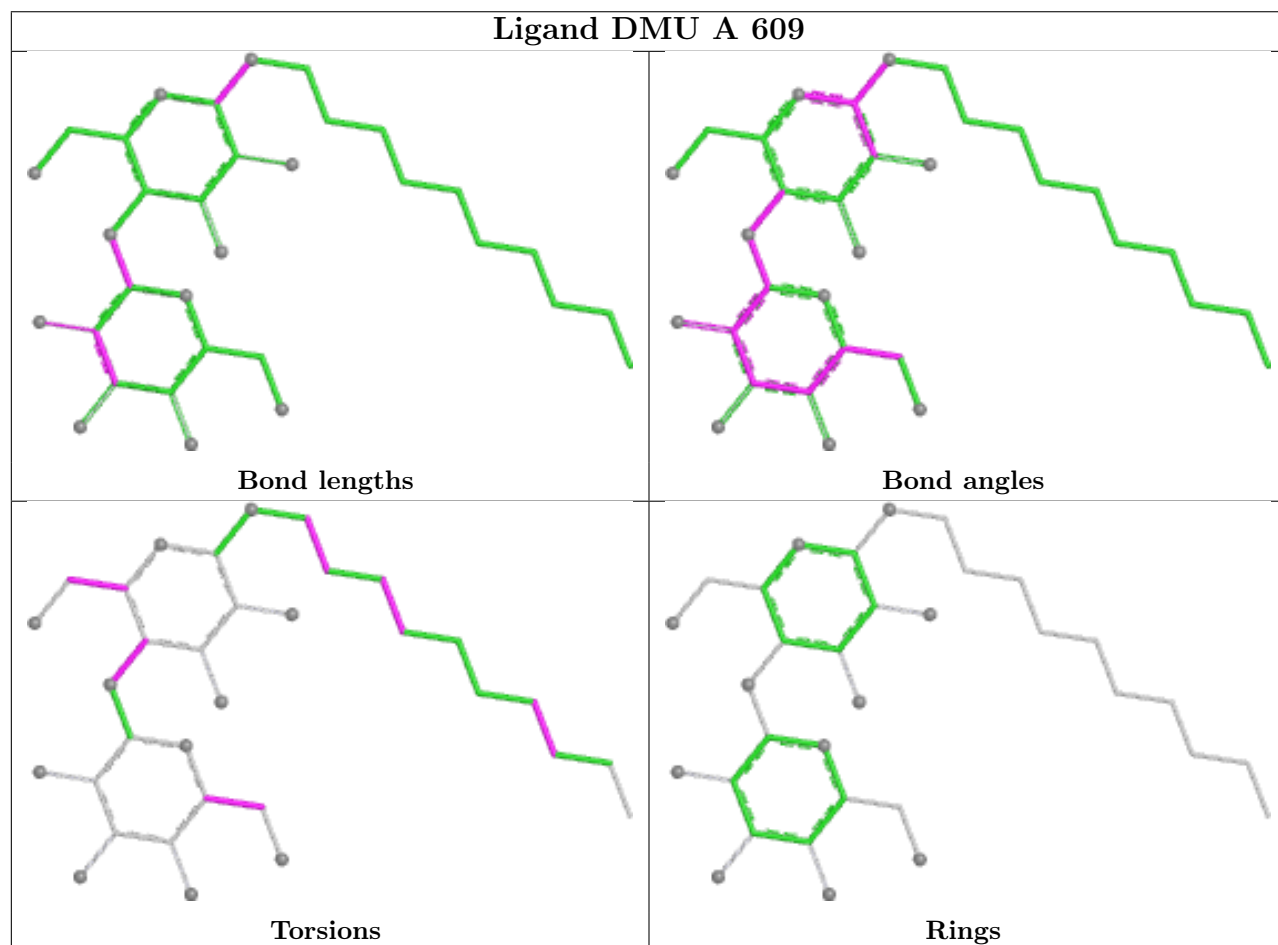
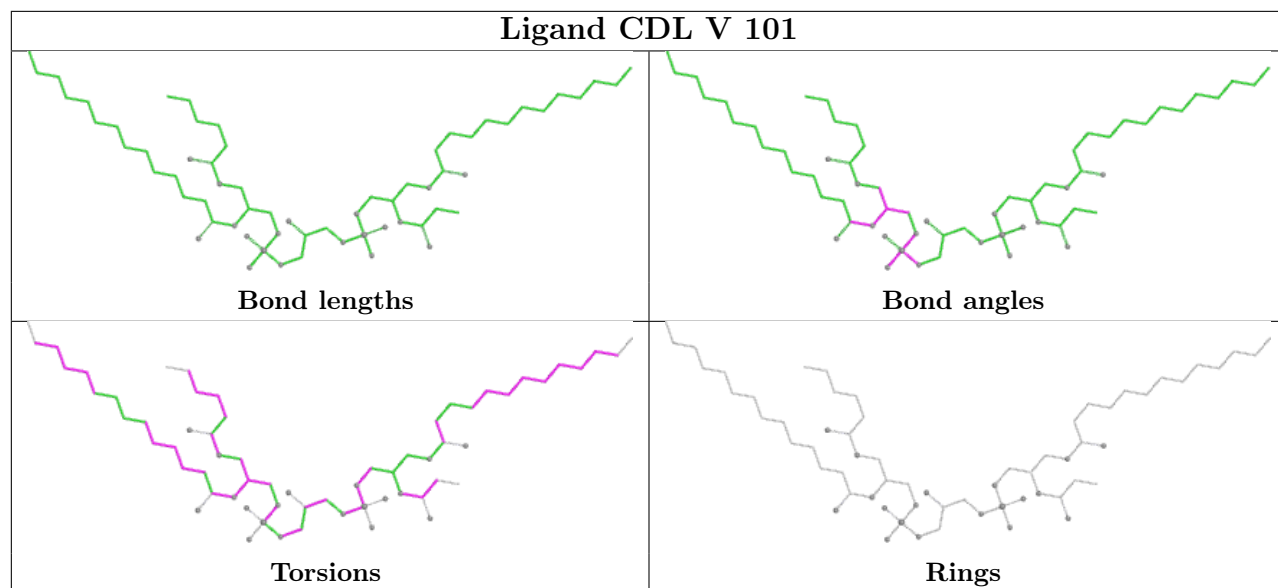


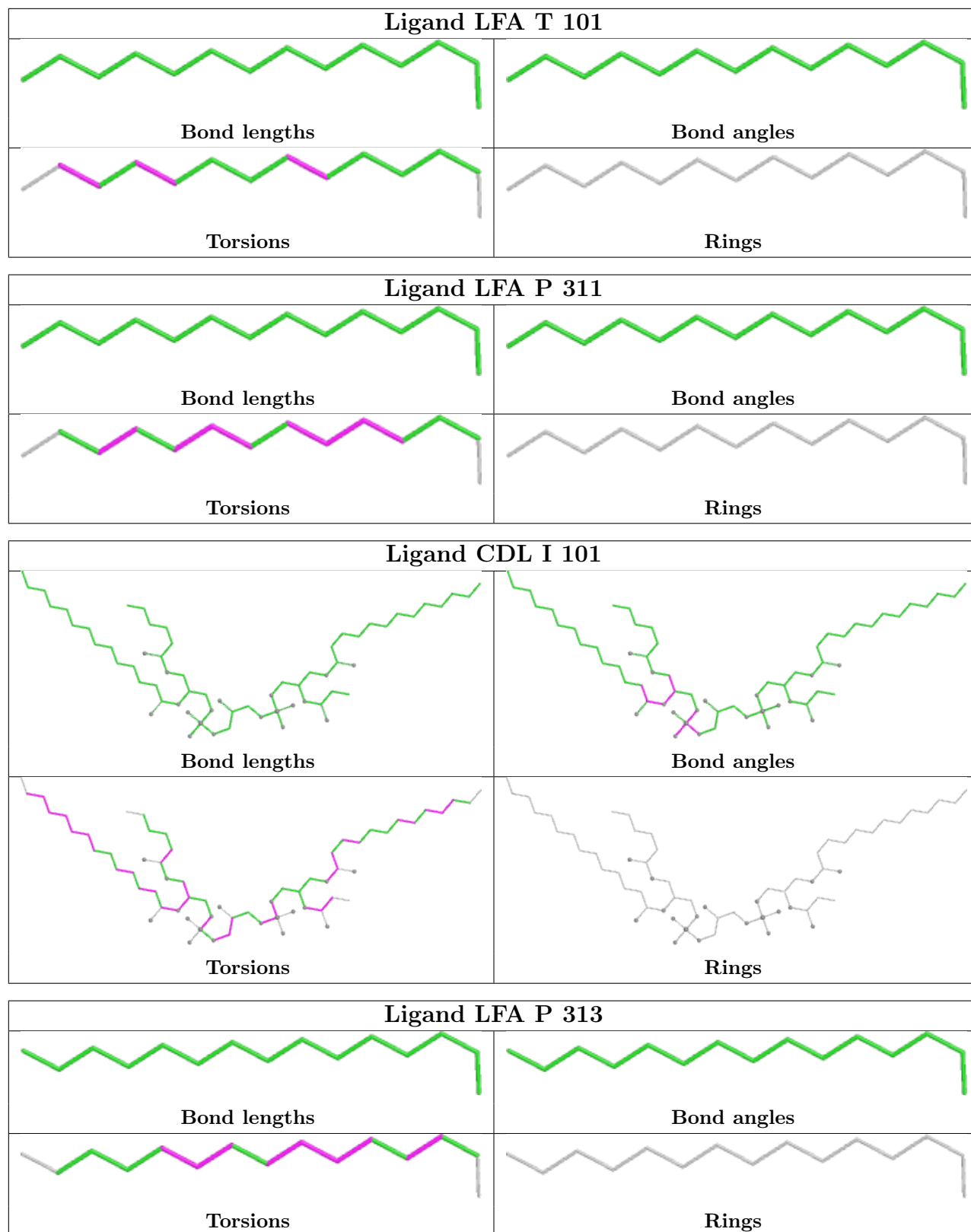


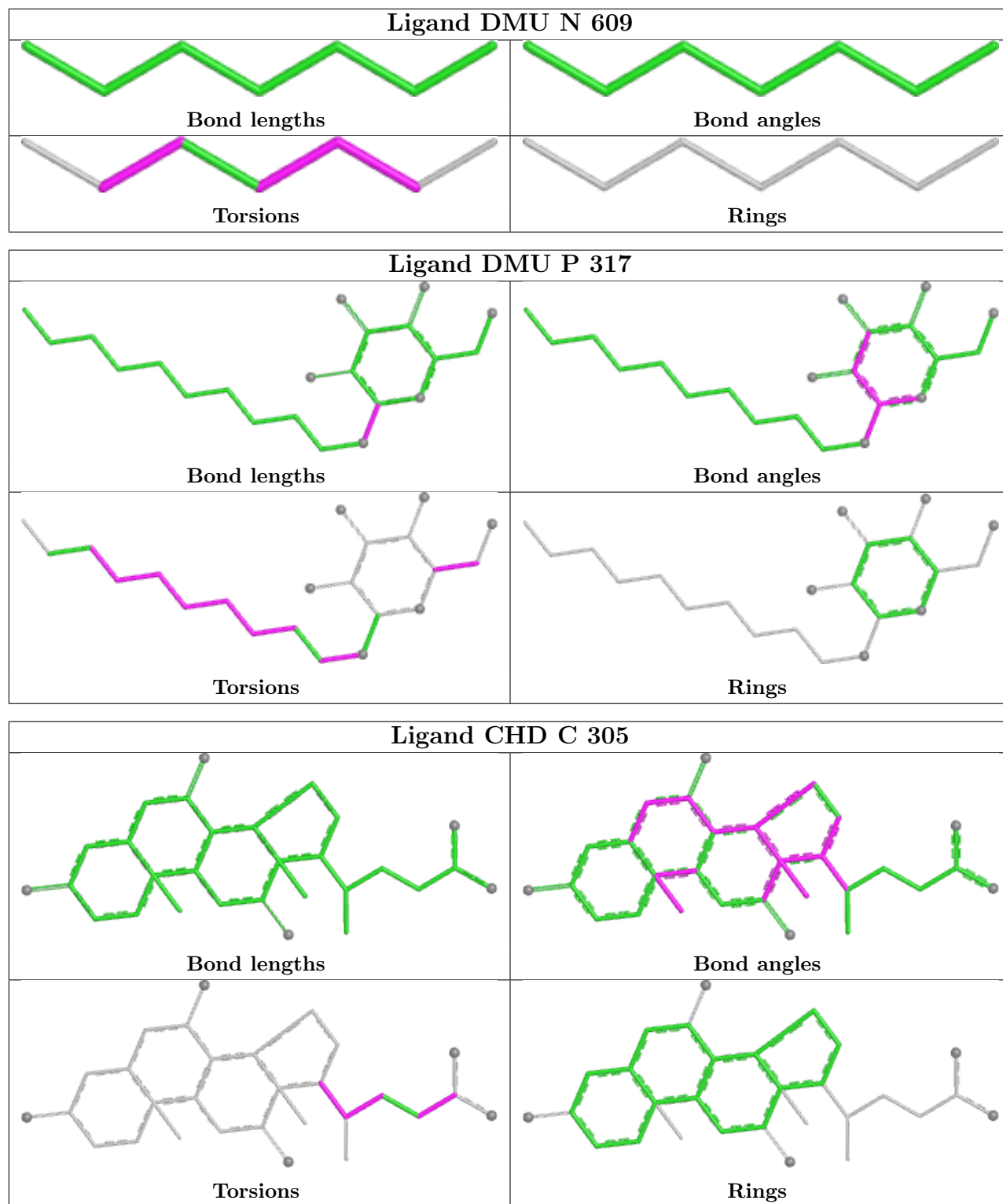


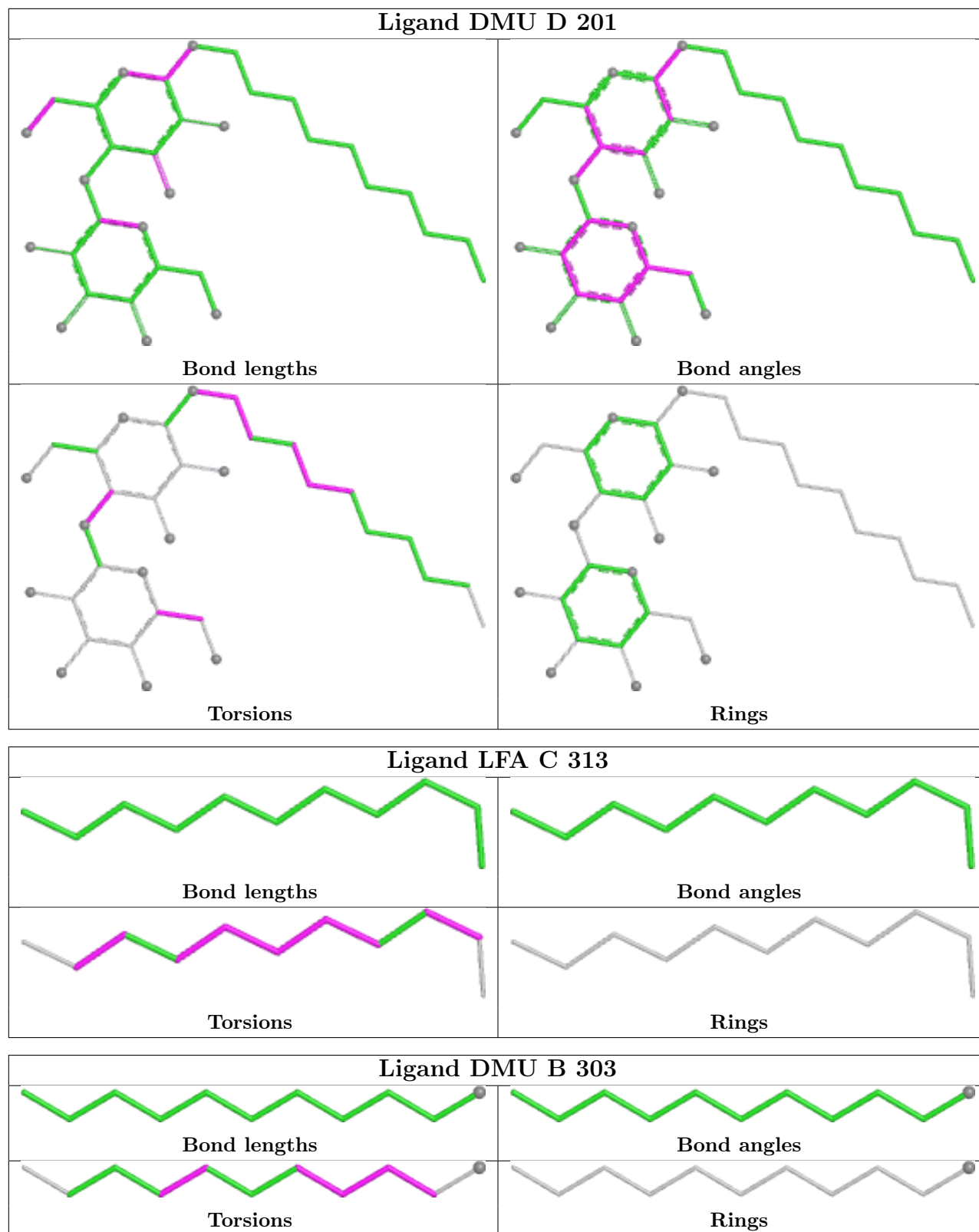


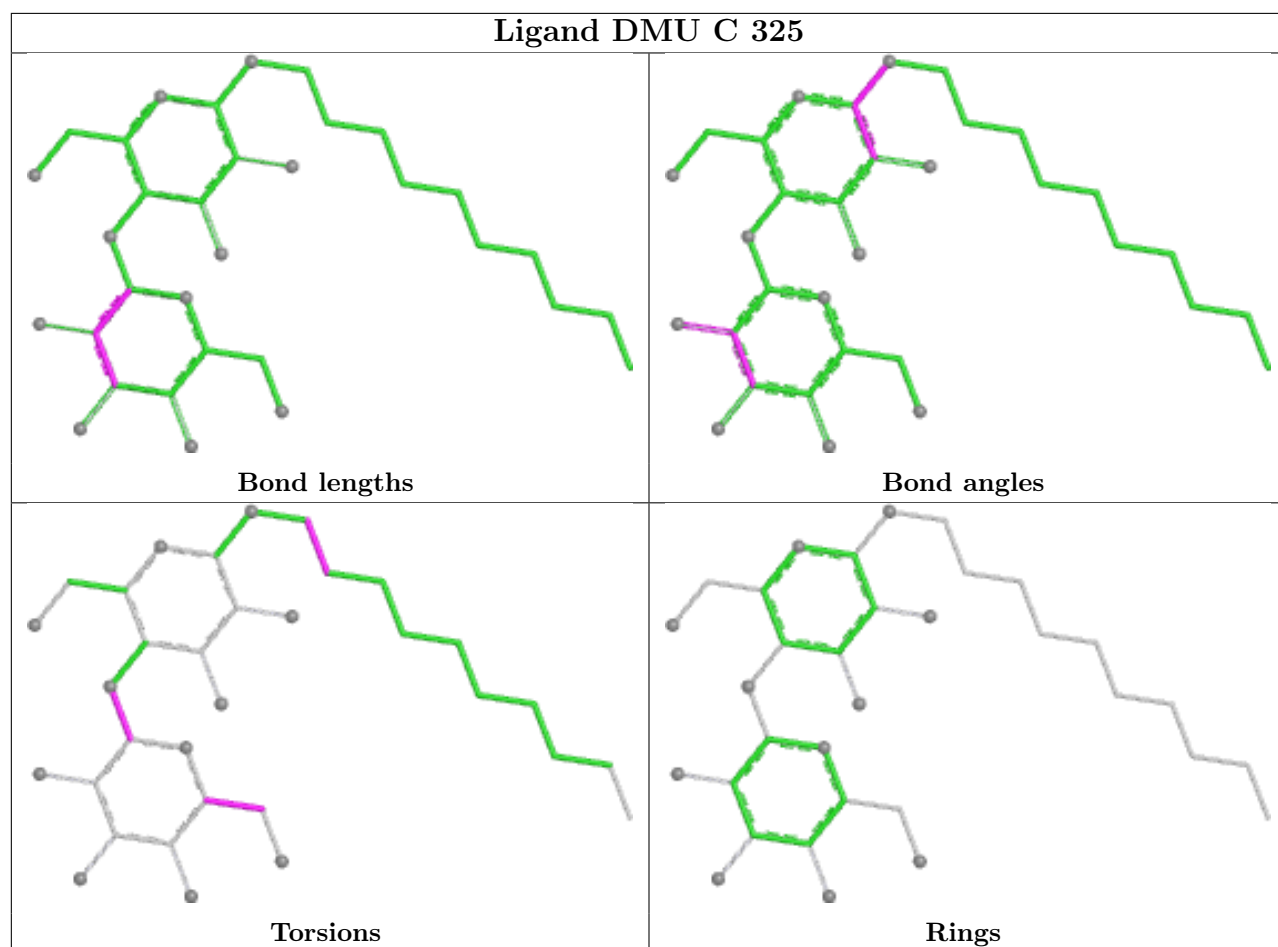
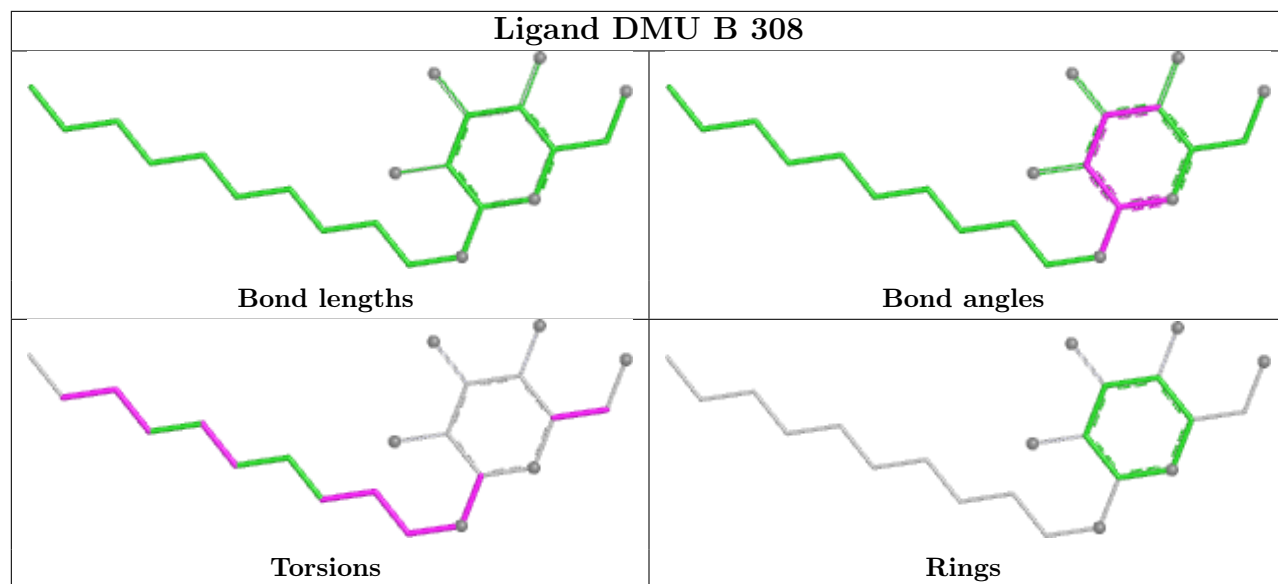


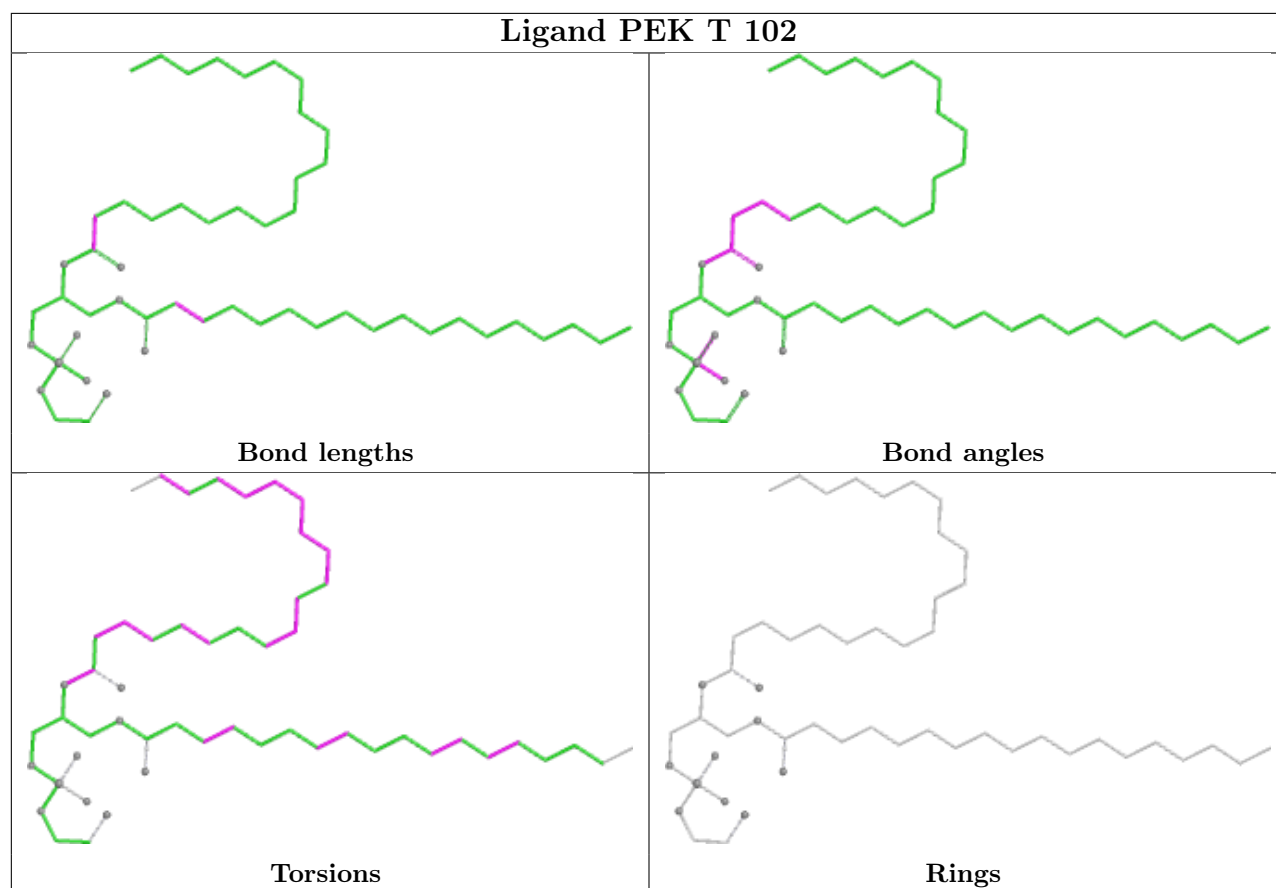
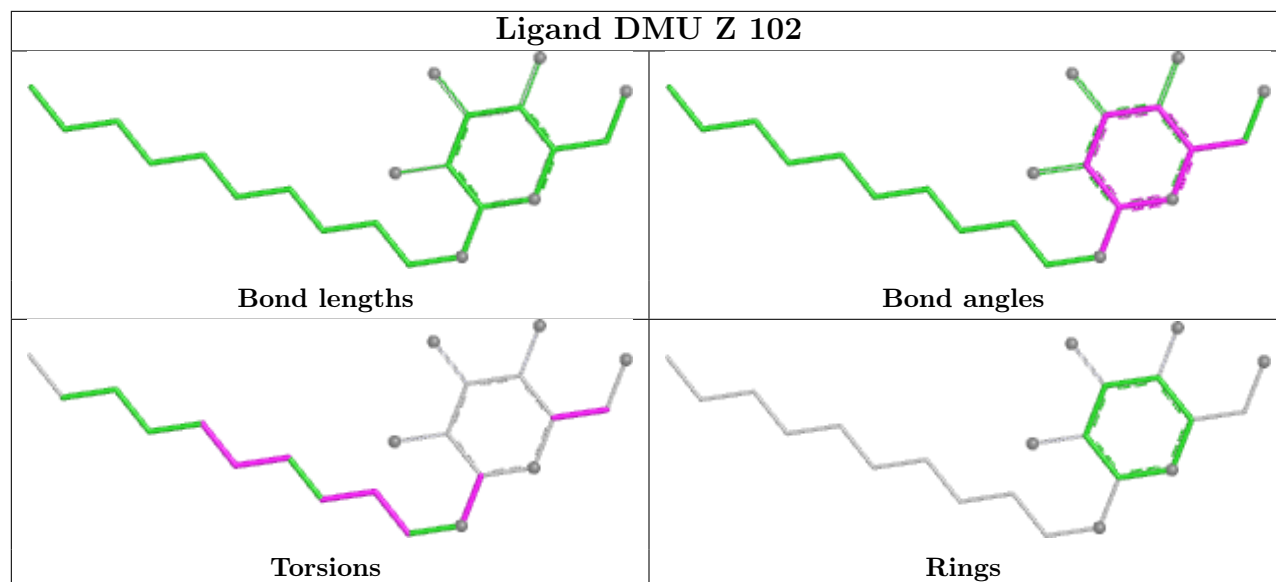


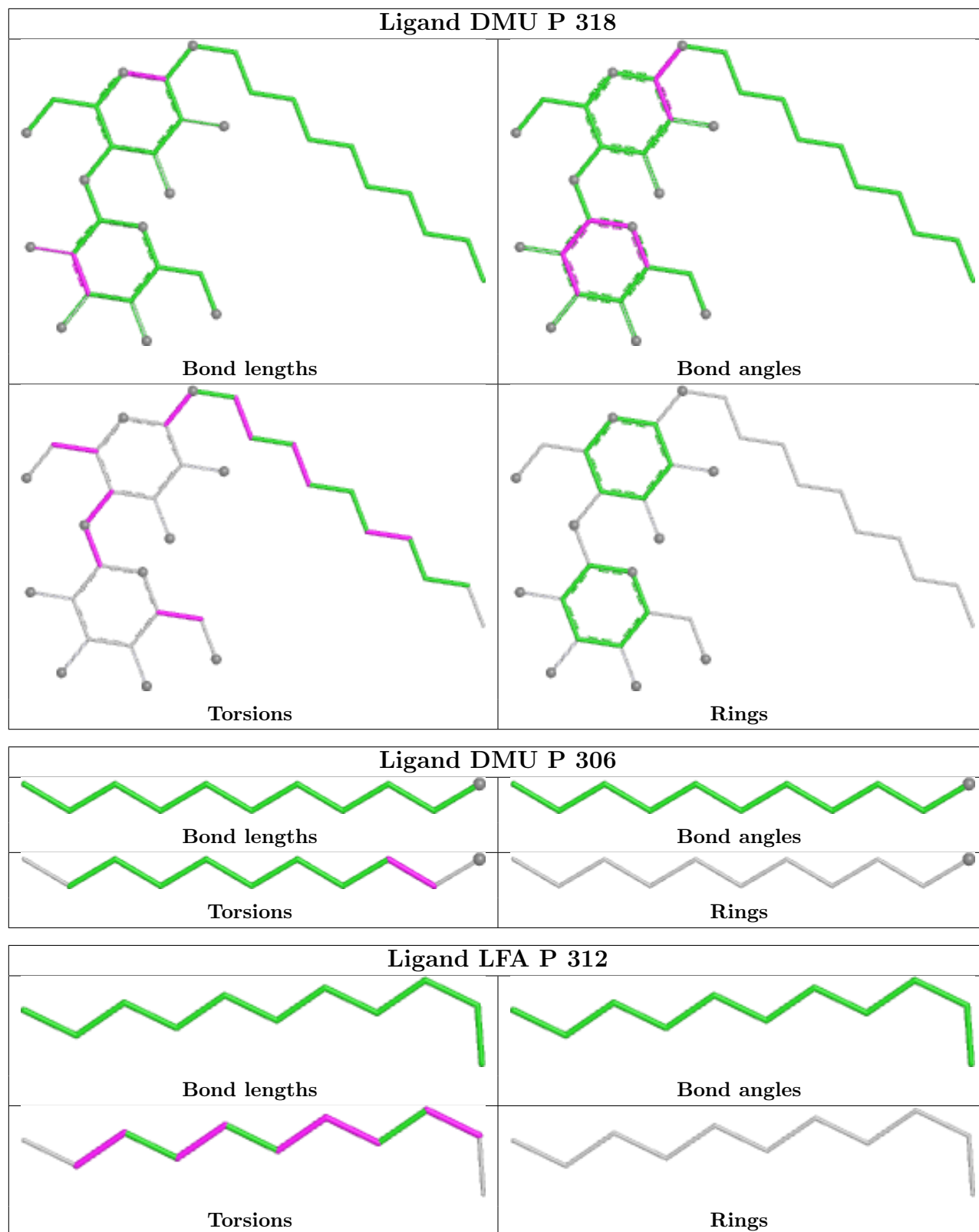


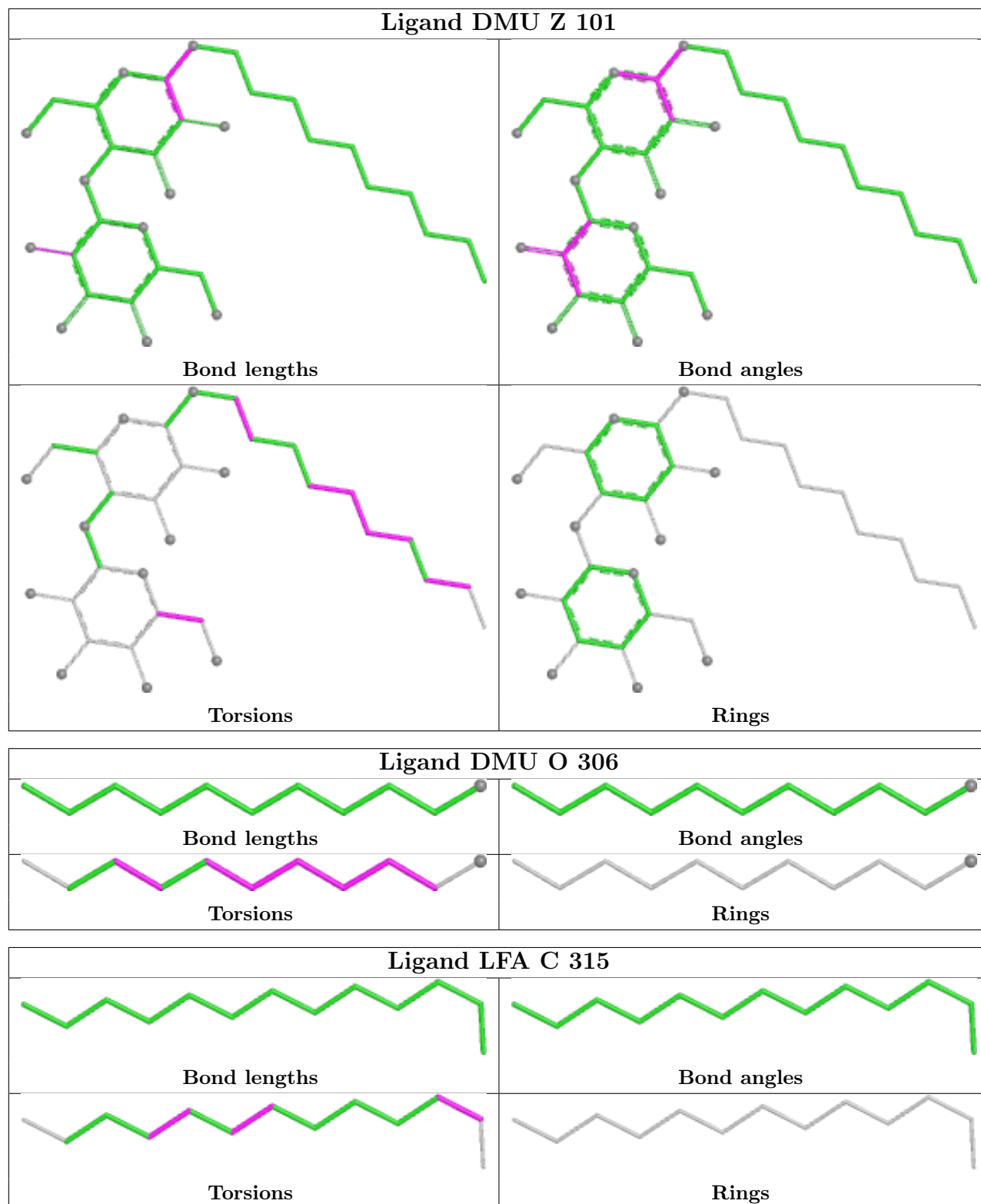


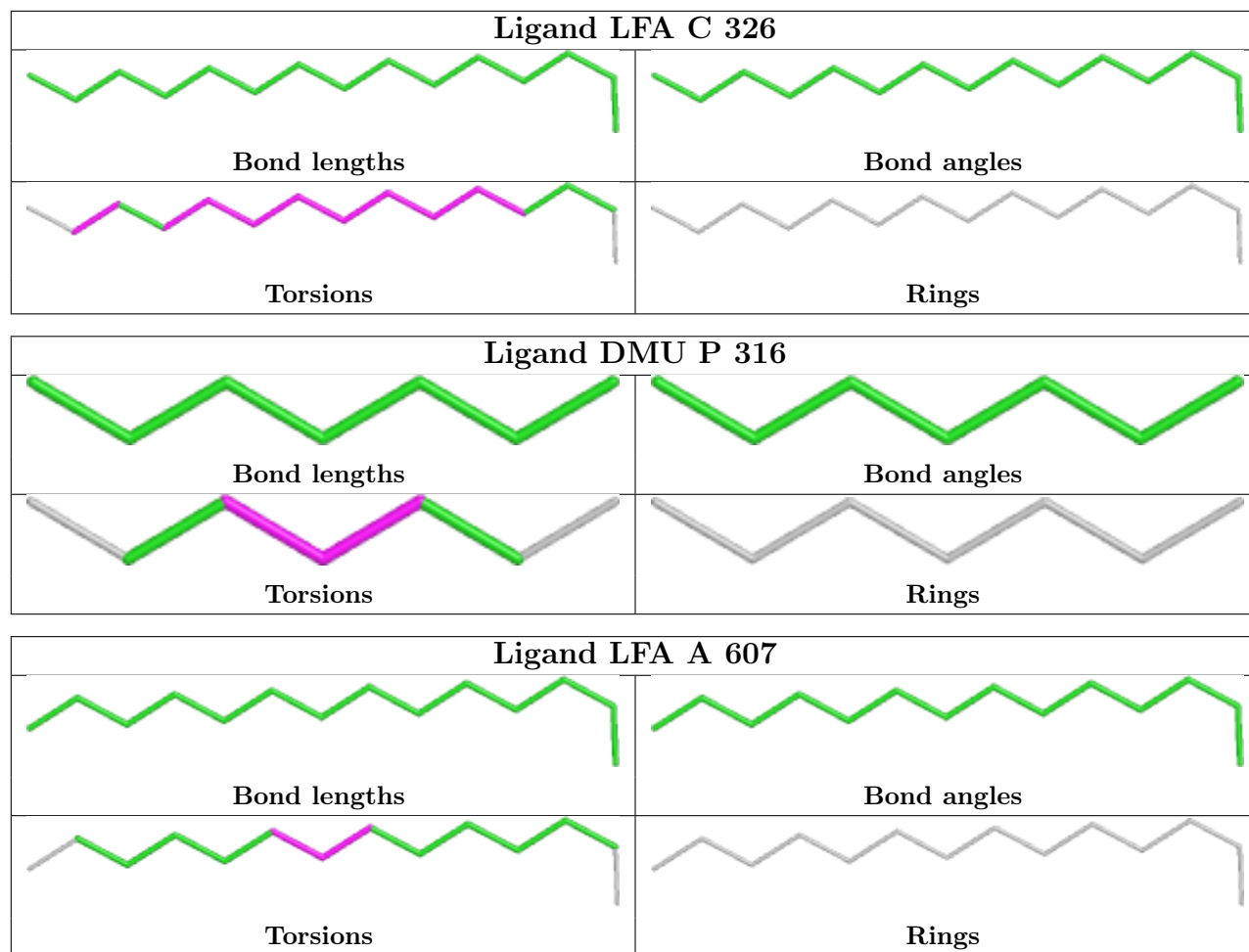


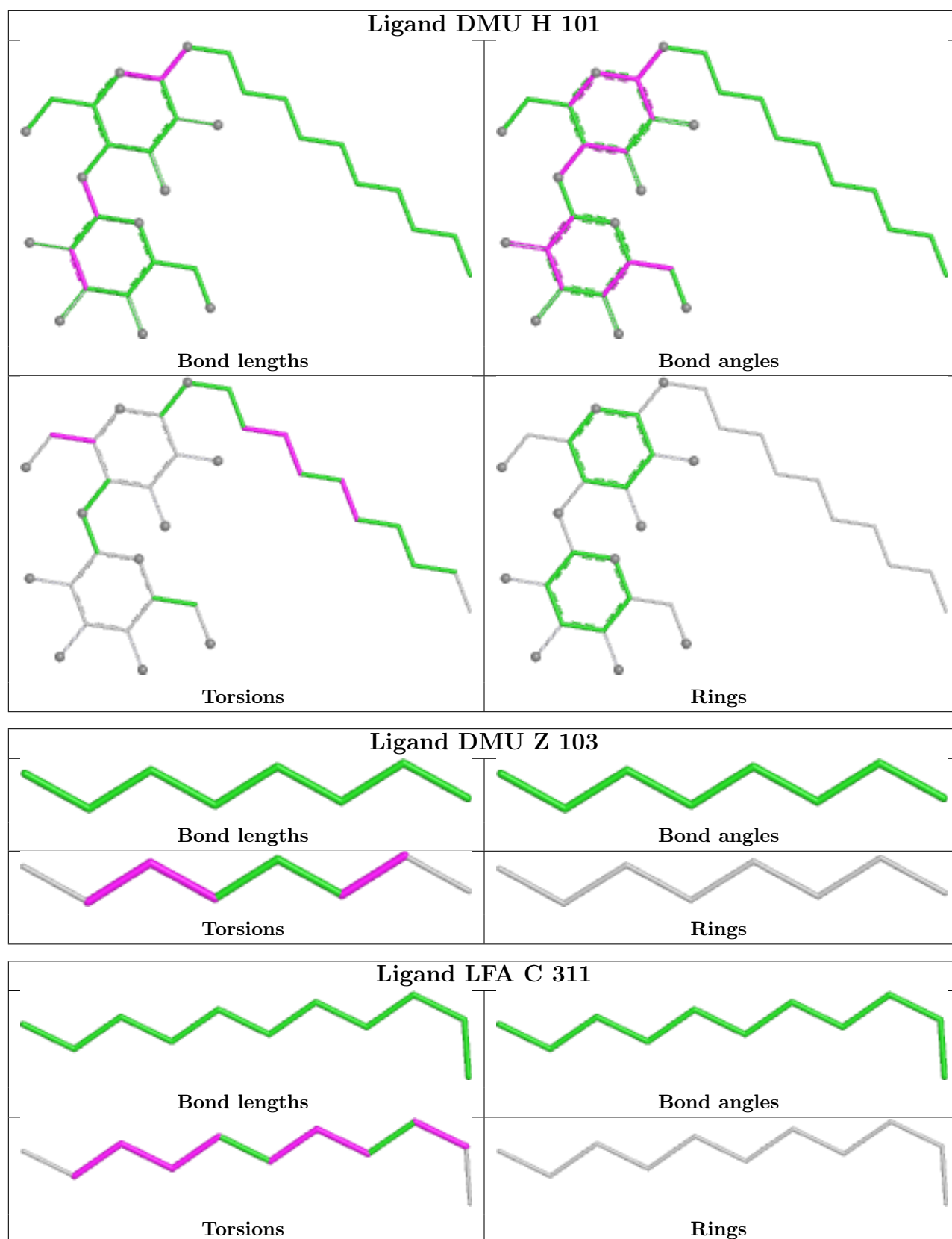


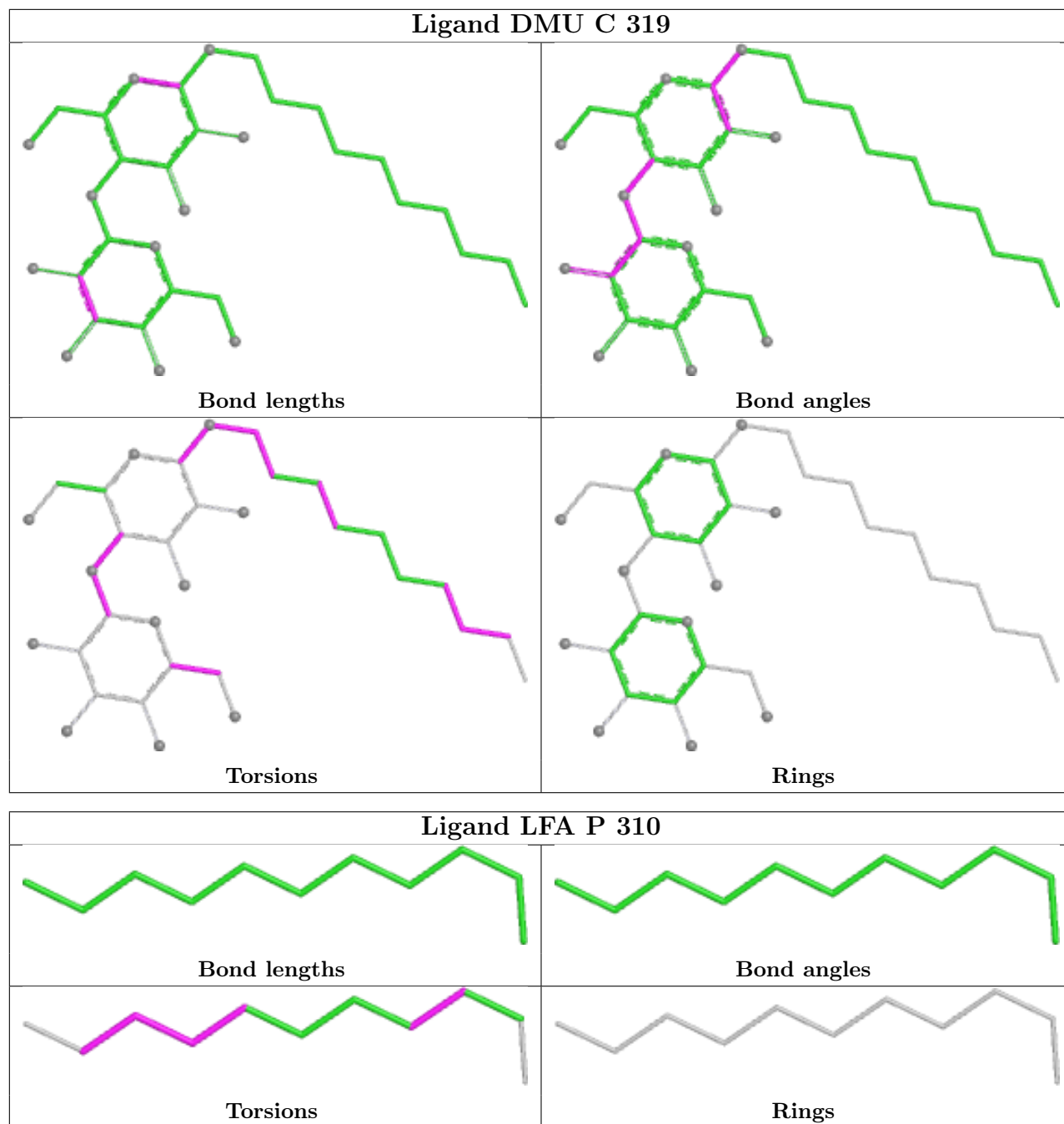


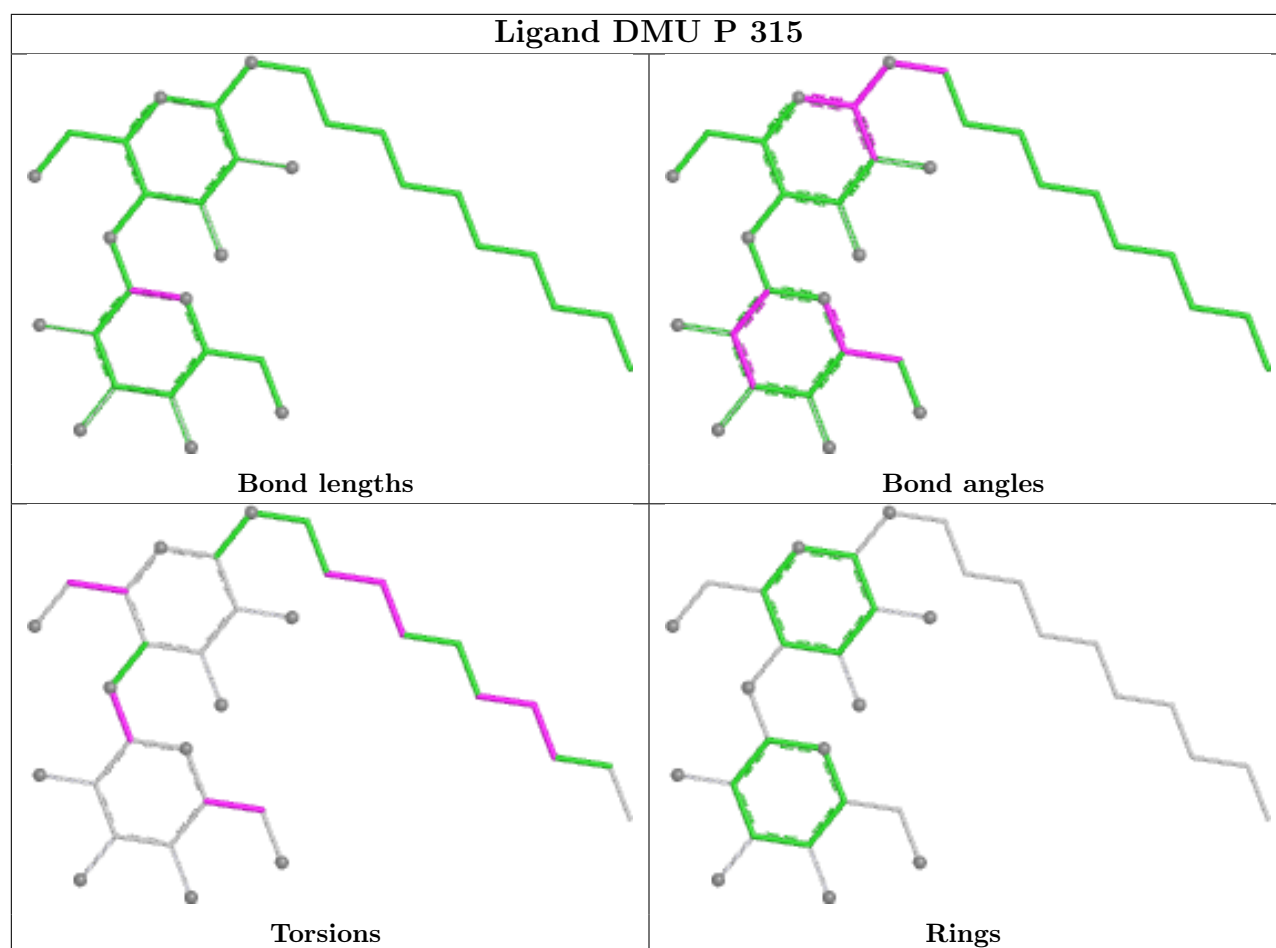


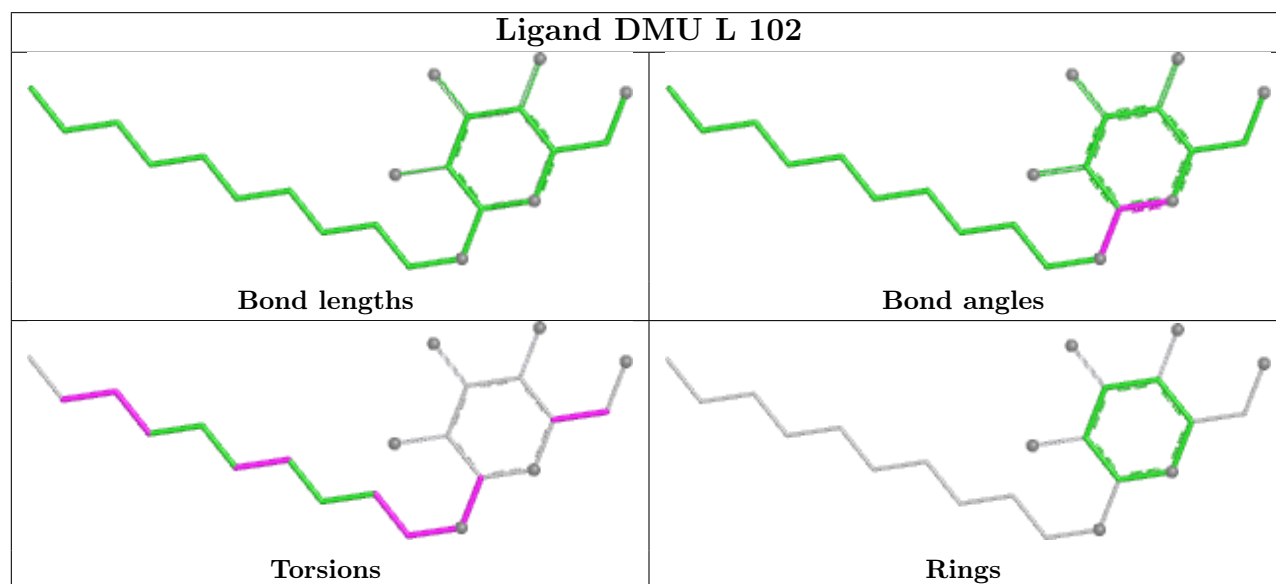
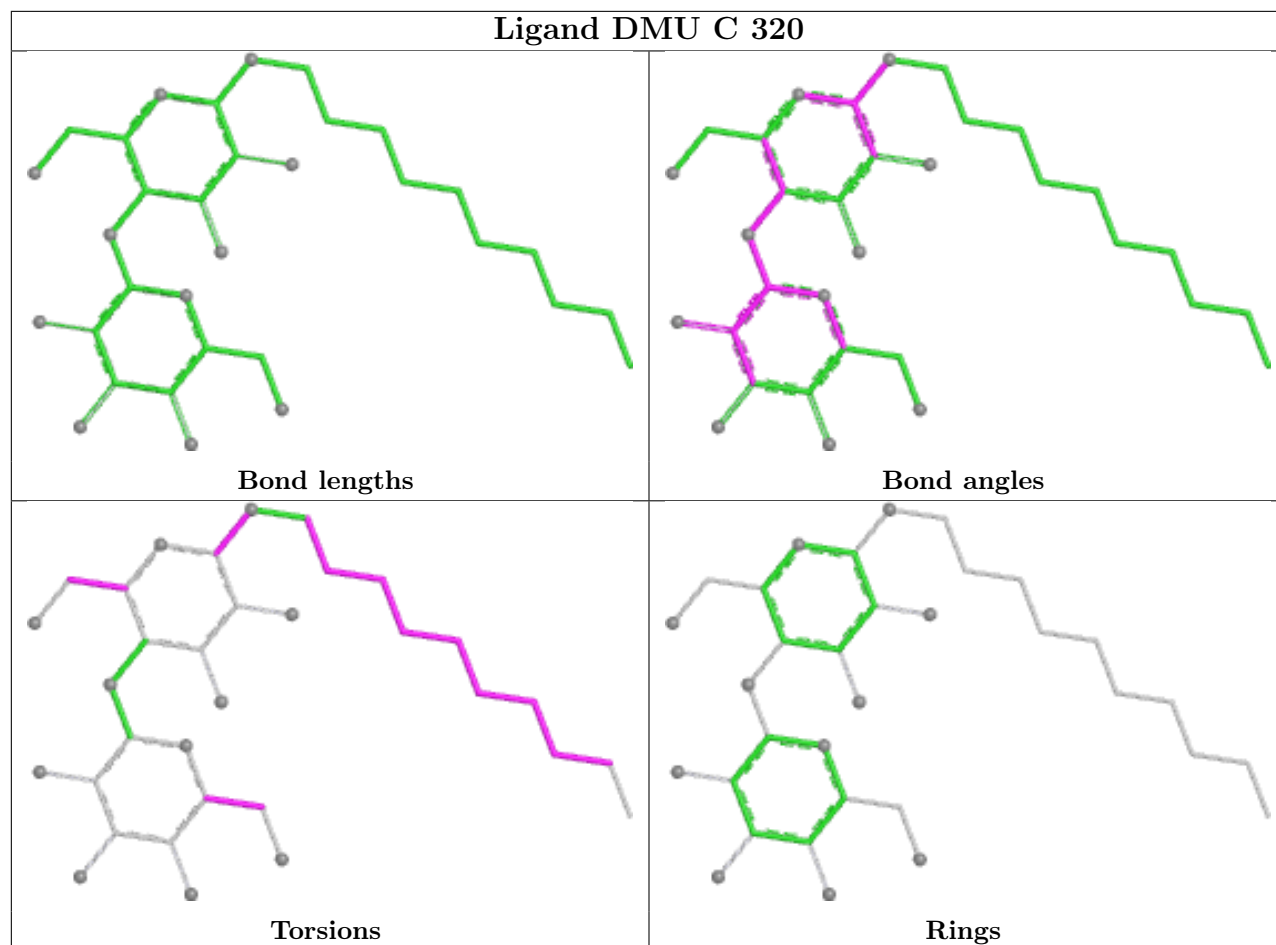


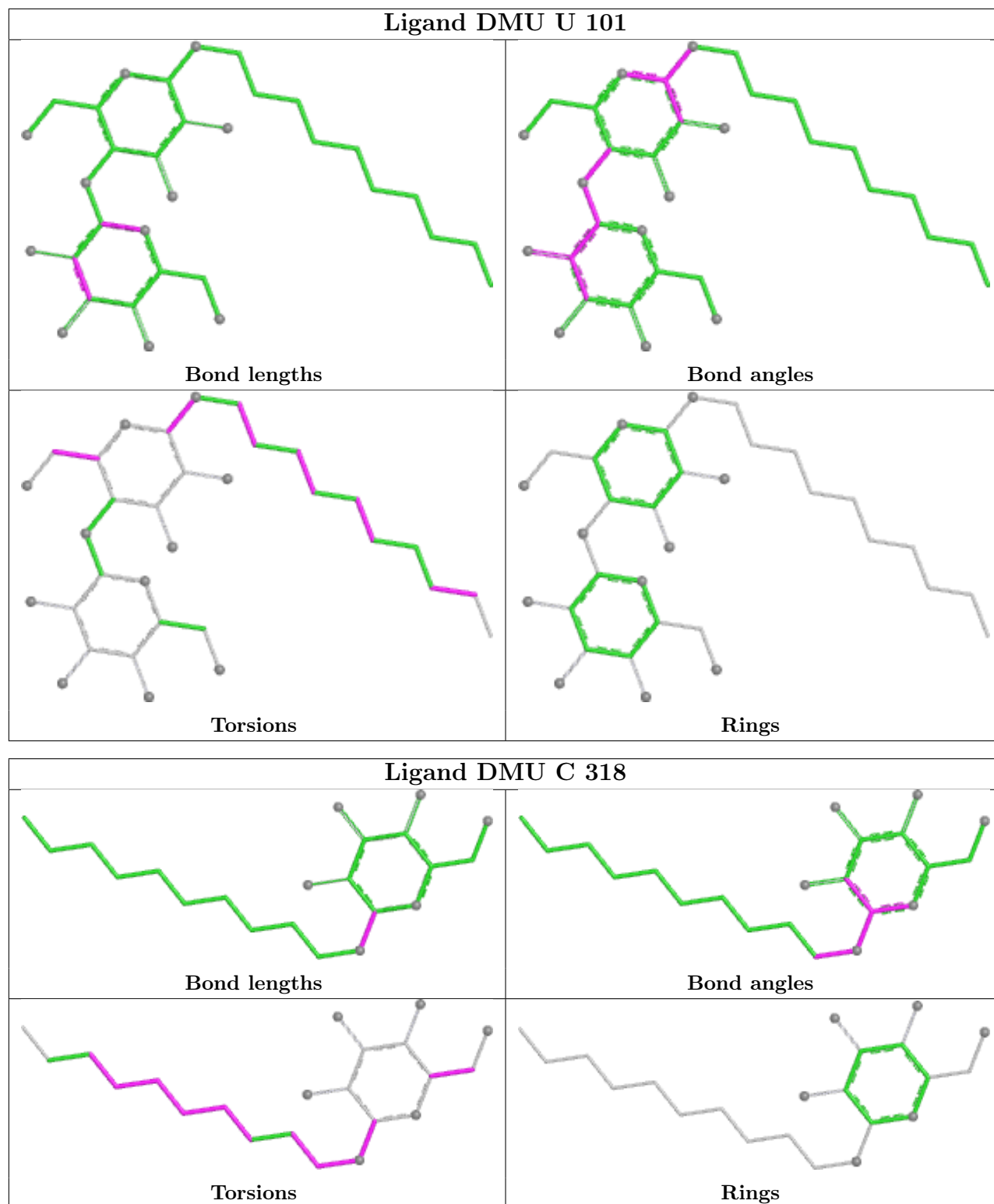


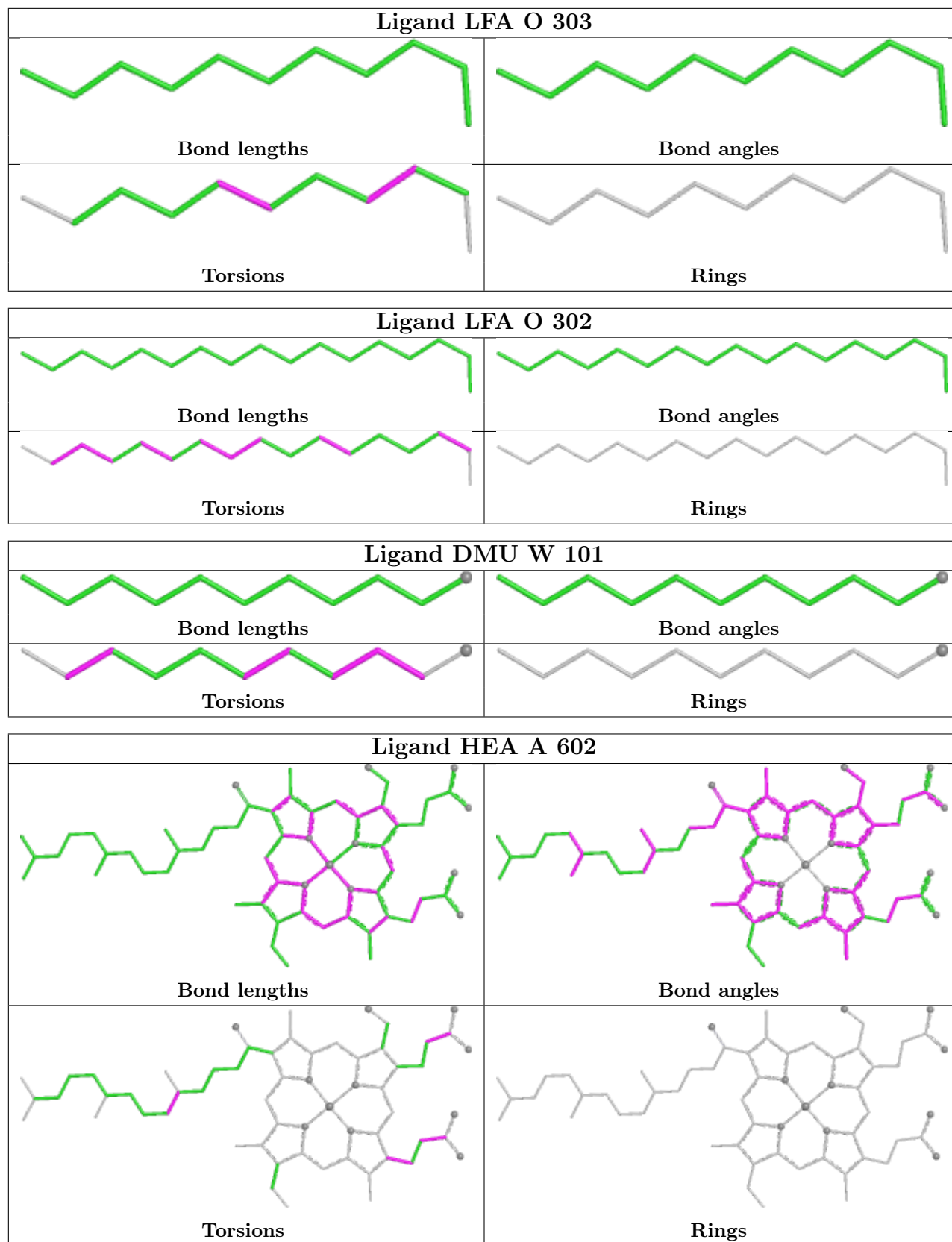


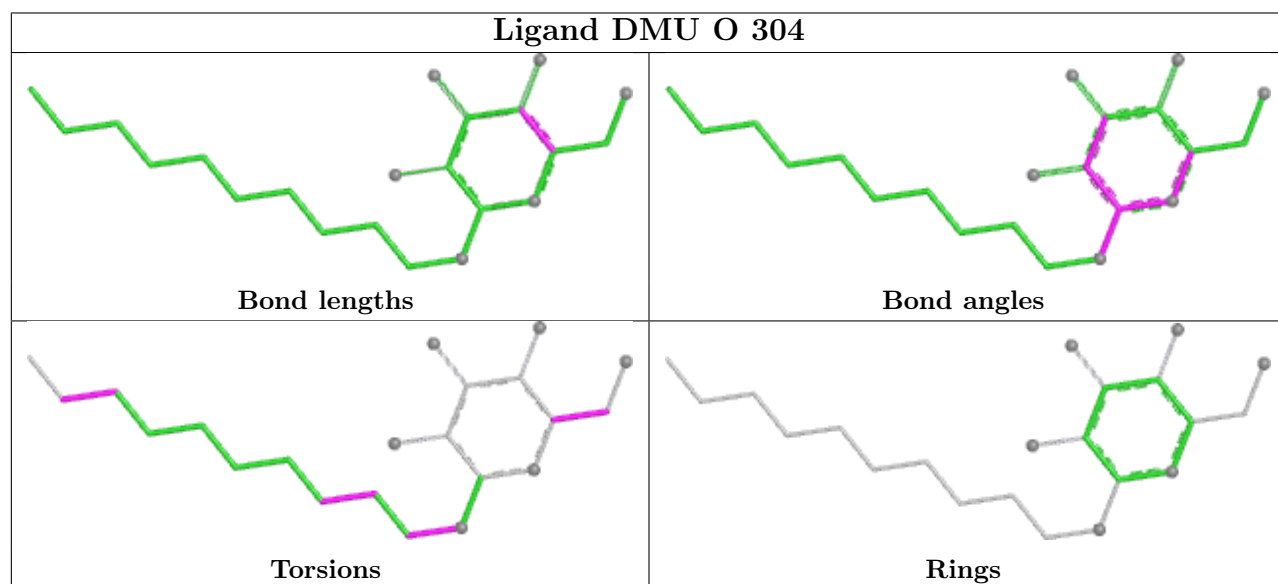
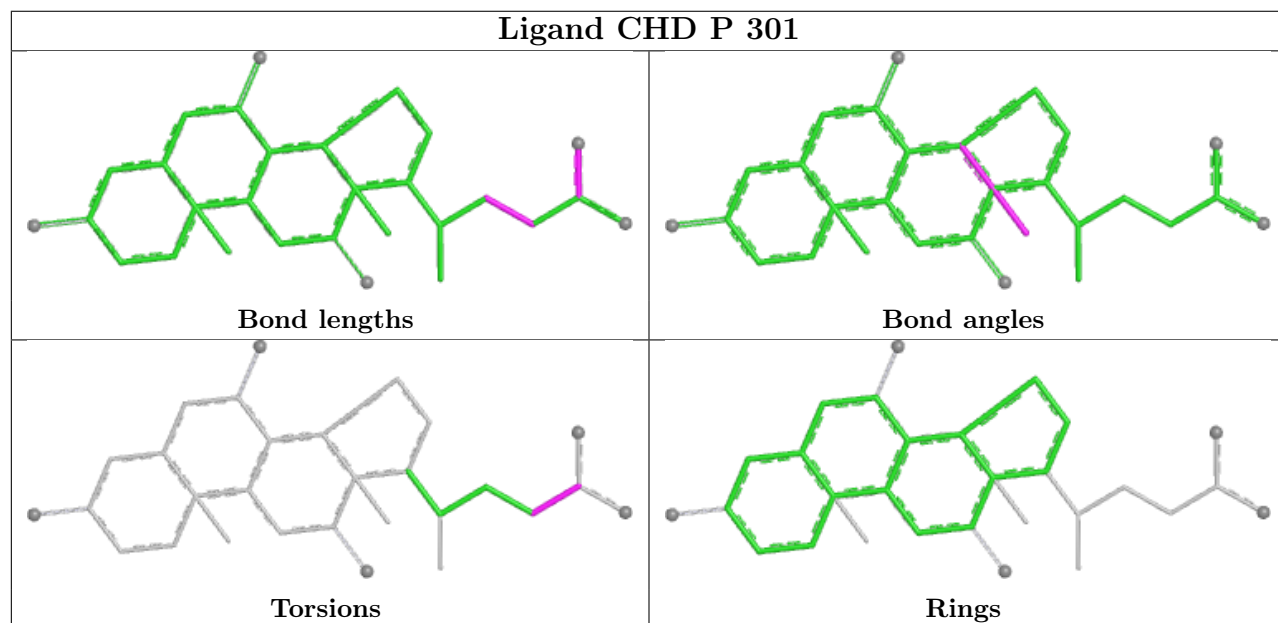
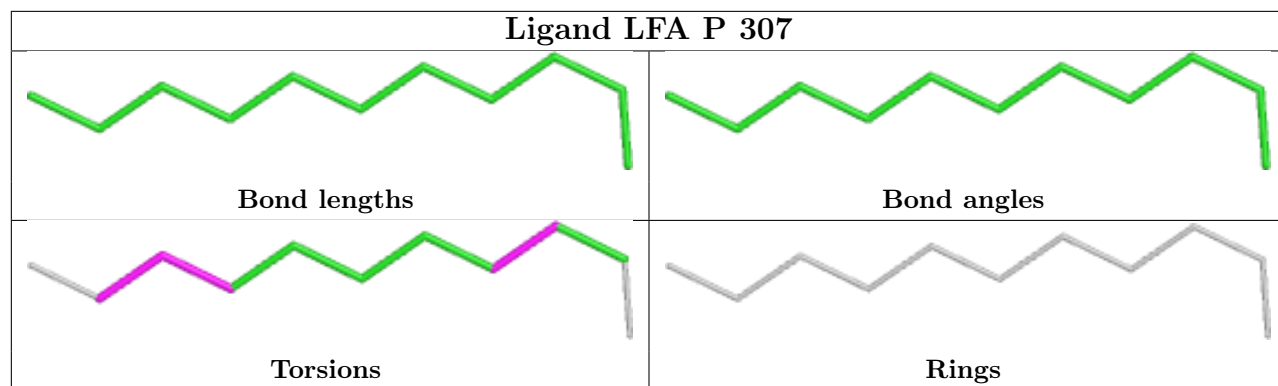


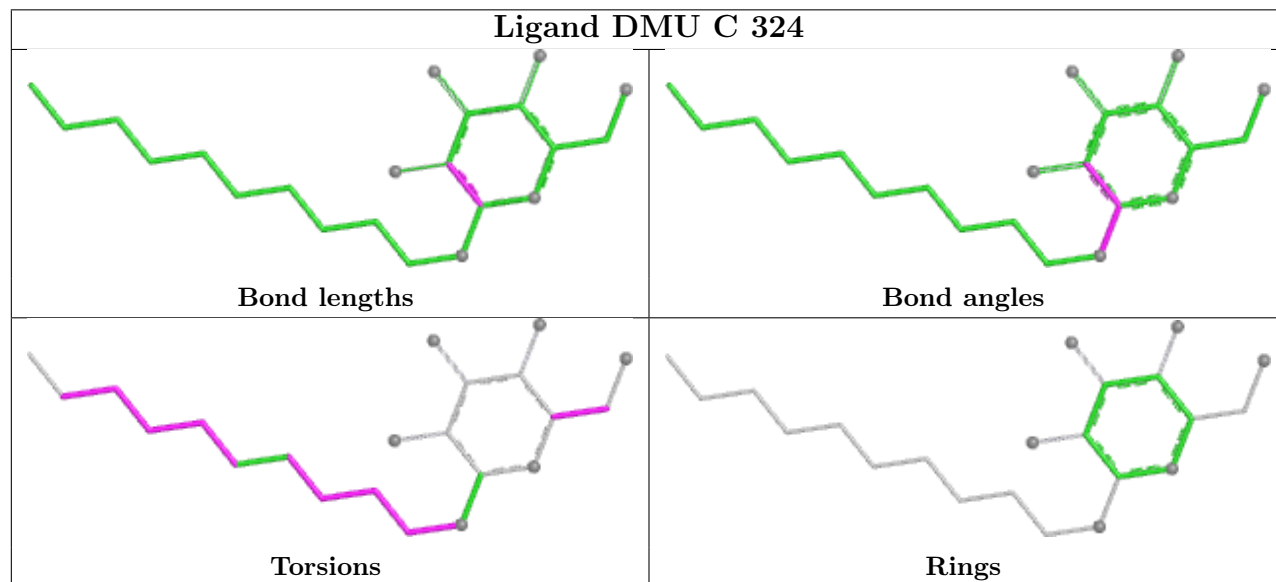
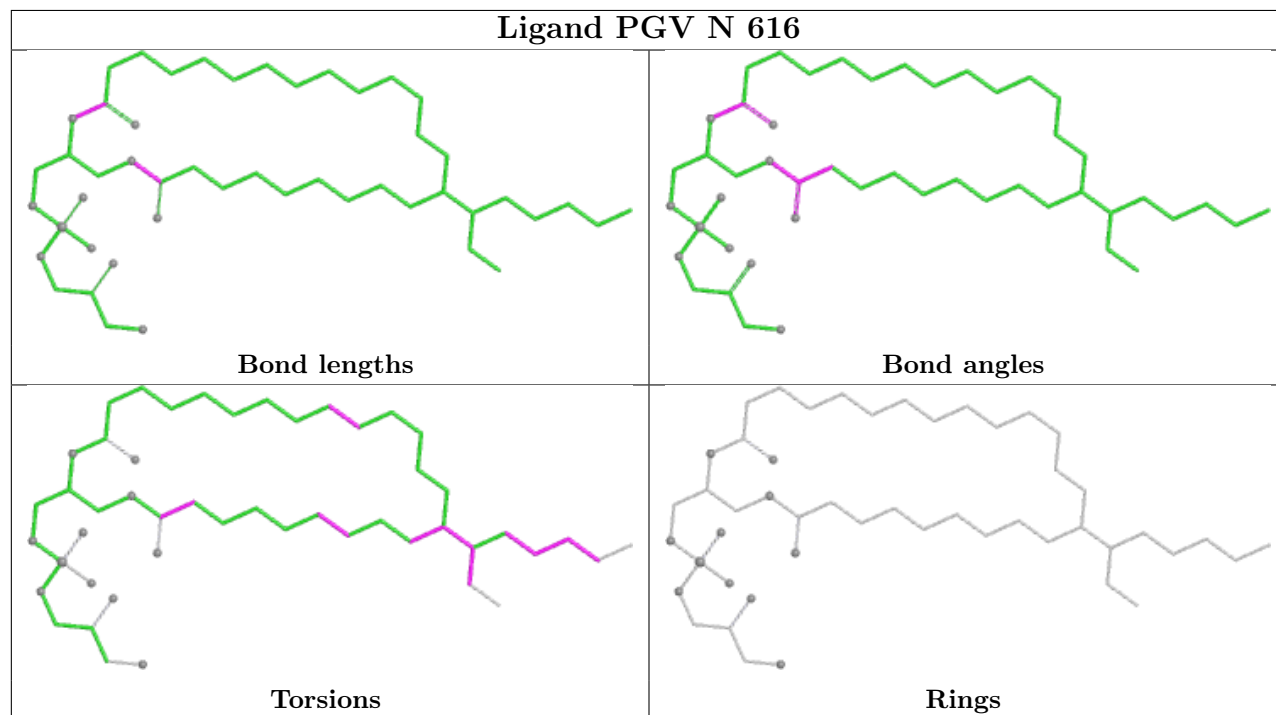
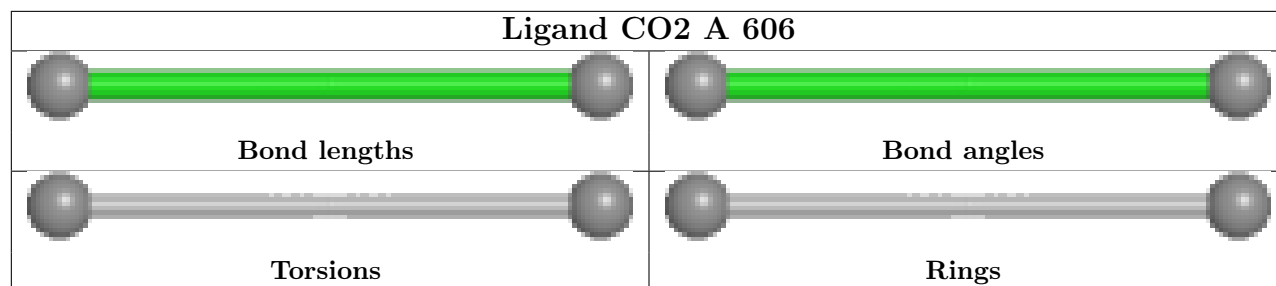


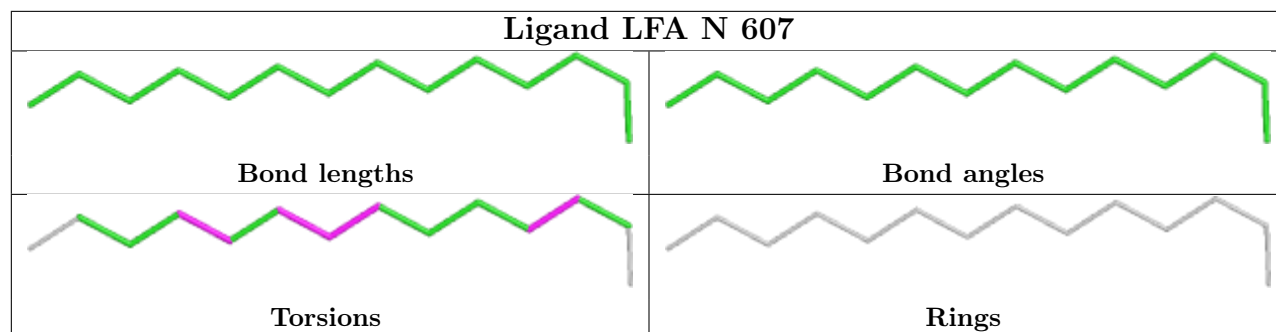












5.7 Other polymers [i](#)

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 ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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, 95th 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 ²)	Q<0.9
1	A	512/514 (99%)	-0.36	3 (0%) 85 88	16, 35, 43, 58	15 (2%)
1	N	512/514 (99%)	-0.23	2 (0%) 88 91	17, 37, 46, 60	15 (2%)
2	B	226/227 (99%)	-0.03	8 (3%) 47 51	21, 42, 59, 84	5 (2%)
2	O	226/227 (99%)	0.04	4 (1%) 67 71	23, 45, 69, 88	5 (2%)
3	C	258/261 (98%)	-0.25	2 (0%) 82 86	17, 38, 48, 67	9 (3%)
3	P	258/261 (98%)	-0.30	1 (0%) 88 91	17, 38, 48, 68	9 (3%)
4	D	143/147 (97%)	-0.06	3 (2%) 63 67	19, 44, 60, 75	1 (0%)
4	Q	137/147 (93%)	0.26	3 (2%) 62 66	25, 53, 75, 85	1 (0%)
5	E	102/109 (93%)	-0.23	1 (0%) 79 83	36, 43, 55, 74	0
5	R	102/109 (93%)	-0.15	2 (1%) 65 68	40, 50, 63, 79	0
6	F	91/98 (92%)	-0.12	1 (1%) 78 81	20, 43, 63, 73	2 (2%)
6	S	91/98 (92%)	0.01	2 (2%) 62 66	20, 42, 63, 70	2 (2%)
7	G	72/85 (84%)	0.22	2 (2%) 55 58	22, 45, 84, 97	1 (1%)
7	T	72/85 (84%)	0.18	3 (4%) 40 44	22, 46, 78, 99	1 (1%)
8	H	75/85 (88%)	0.13	3 (4%) 42 46	39, 47, 88, 115	0
8	U	75/85 (88%)	0.22	3 (4%) 42 46	42, 49, 87, 110	0
9	I	70/73 (95%)	0.35	5 (7%) 22 24	39, 51, 74, 92	0
9	V	70/73 (95%)	0.32	4 (5%) 29 32	40, 57, 74, 103	0
10	J	56/59 (94%)	0.00	2 (3%) 46 50	38, 48, 69, 83	0
10	W	56/59 (94%)	0.29	2 (3%) 46 50	40, 50, 68, 85	0
11	K	49/56 (87%)	0.18	2 (4%) 41 45	42, 48, 62, 73	0
11	X	49/56 (87%)	0.68	4 (8%) 17 18	47, 56, 74, 93	0
12	L	44/47 (93%)	-0.24	0 100 100	36, 40, 51, 59	0
12	Y	44/47 (93%)	0.05	1 (2%) 61 64	40, 46, 59, 62	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	M	40/46 (86%)	-0.13	0 100 100	38, 41, 59, 70	0
13	Z	40/46 (86%)	0.28	0 100 100	45, 50, 72, 77	0
All	All	3470/3614 (96%)	-0.09	63 (1%) 67 71	16, 42, 65, 115	66 (1%)

All (63) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
7	T	36	TRP	5.9
1	N	113[A]	LEU	4.9
11	X	6	ALA	4.8
2	O	90	ILE	4.6
4	D	4	SER	4.6
6	S	93	PRO	4.3
6	S	3	GLY	4.1
4	D	5	VAL	4.0
6	F	3	GLY	3.9
8	U	48	GLY	3.9
2	O	113	TYR	3.8
10	J	1	PHE	3.7
8	H	45	ALA	3.6
2	O	32[A]	PHE	3.5
2	B	59	GLN	3.3
1	A	113[A]	LEU	3.3
9	V	37	PHE	3.3
9	I	72	ALA	3.2
10	W	48	TYR	3.2
1	N	136[A]	LEU	3.2
9	V	72	ALA	3.1
4	Q	39	ALA	3.1
11	X	13	TYR	3.0
7	G	30	LEU	3.0
2	B	87[A]	MET	2.9
2	B	65	TRP	2.9
9	I	3	ALA	2.8
11	K	6	ALA	2.8
2	B	16[A]	ILE	2.8
3	P	37	PHE	2.7
8	U	45	ALA	2.6
9	V	3	ALA	2.6
9	I	19	PHE	2.5
9	I	21	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
2	O	22[A]	HIS	2.5
5	R	108	LYS	2.4
7	G	36	TRP	2.4
2	B	60	GLU	2.4
8	U	49	ASP	2.4
8	H	48	GLY	2.4
2	B	90	ILE	2.4
5	E	39	TYR	2.3
10	W	1	PHE	2.3
3	C	38	ASN	2.3
2	B	91	ASN	2.3
11	X	48	VAL	2.3
2	B	113	TYR	2.2
7	T	38	HIS	2.2
9	I	37	PHE	2.2
3	C	188	ILE	2.2
12	Y	24	MET	2.2
5	R	7	THR	2.2
11	K	47	ARG	2.2
4	Q	72	ASN	2.1
1	A	513	LEU	2.1
10	J	48	TYR	2.1
7	T	39	SER	2.1
11	X	7	PRO	2.1
4	Q	35	ALA	2.1
9	V	25	PHE	2.1
1	A	311[A]	ILE	2.1
4	D	102	TYR	2.1
8	H	47	GLY	2.0

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

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, 95th 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 ²)	Q<0.9
1	FME	A	1	10/11	0.92	0.15	43,51,82,93	0
1	FME	N	1	10/11	0.95	0.14	45,54,80,90	0
2	FME	B	1	10/11	0.98	0.07	39,41,50,82	0
2	FME	O	1	10/11	0.98	0.08	43,46,55,70	0

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

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, 95th 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 ²)	Q<0.9
20	DMU	C	318	22/33	0.70	0.30	44,56,66,81	22
20	DMU	P	317	22/33	0.77	0.32	40,61,79,85	22
20	DMU	A	608	7/33	0.79	0.37	49,54,59,62	7
19	LFA	C	313	11/20	0.80	0.33	45,51,68,70	11
20	DMU	C	316	33/33	0.80	0.36	43,56,62,67	33
24	CHD	P	305	29/29	0.80	0.19	62,79,104,121	0
19	LFA	P	310	11/20	0.81	0.41	48,57,66,72	11
21	EDO	P	322	4/4	0.81	0.29	33,33,35,40	4
19	LFA	N	608	14/20	0.81	0.32	38,52,60,63	14
20	DMU	M	102	8/33	0.83	0.27	43,46,49,56	8
19	LFA	O	303	11/20	0.83	0.35	47,55,70,73	11
20	DMU	C	319	33/33	0.84	0.30	42,52,68,80	33
19	LFA	P	312	11/20	0.84	0.29	42,53,57,61	11
19	LFA	C	314	15/20	0.84	0.26	42,50,67,69	15
21	EDO	C	323	4/4	0.84	0.34	35,36,39,40	4
19	LFA	P	307	11/20	0.84	0.34	48,53,57,62	11
24	CHD	C	305	29/29	0.84	0.16	67,81,104,111	0
19	LFA	C	308	6/20	0.84	0.42	39,46,55,56	6
19	LFA	C	312	14/20	0.85	0.34	40,58,65,65	14
20	DMU	N	609	7/33	0.86	0.38	51,58,65,66	7
20	DMU	C	317	7/33	0.86	0.27	46,48,57,65	7
20	DMU	P	318	33/33	0.86	0.30	46,58,69,88	33
19	LFA	C	326	15/20	0.86	0.41	50,55,66,70	15
21	EDO	E	201	4/4	0.86	0.37	38,43,45,50	4
21	EDO	E	203	4/4	0.86	0.27	36,41,42,43	4
20	DMU	A	615	11/33	0.86	0.39	50,56,70,71	11
20	DMU	G	102	11/33	0.86	0.35	50,59,64,65	11
19	LFA	T	101	14/20	0.86	0.27	44,50,59,63	14
20	DMU	P	319	33/33	0.87	0.23	49,66,81,85	33
20	DMU	P	324	33/33	0.87	0.17	45,58,85,96	33
20	DMU	Q	201	33/33	0.87	0.21	39,55,69,71	33
19	LFA	T	103	11/20	0.87	0.29	48,55,67,70	11

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
19	LFA	O	302	17/20	0.87	0.28	44,60,72,74	17
19	LFA	P	311	14/20	0.87	0.32	40,57,66,71	14
21	EDO	N	612	4/4	0.87	0.29	43,43,48,49	4
19	LFA	C	311	11/20	0.87	0.34	53,68,79,82	11
19	LFA	P	314	13/20	0.87	0.28	46,53,61,65	13
19	LFA	C	315	13/20	0.87	0.28	53,58,62,68	13
20	DMU	W	101	11/33	0.88	0.30	60,65,70,70	11
21	EDO	C	321	4/4	0.88	0.29	49,51,55,73	4
20	DMU	N	610	33/33	0.88	0.21	41,55,76,83	33
20	DMU	P	316	7/33	0.88	0.26	53,54,74,75	7
20	DMU	C	320	33/33	0.88	0.22	38,66,73,82	33
19	LFA	A	607	14/20	0.88	0.24	36,44,64,67	14
20	DMU	H	101	33/33	0.88	0.24	37,49,57,72	33
19	LFA	C	310	15/20	0.88	0.33	42,53,62,68	15
19	LFA	P	308	6/20	0.88	0.35	44,46,52,52	6
26	CDL	I	101	64/100	0.88	0.17	49,78,106,123	0
26	CDL	P	304	87/100	0.88	0.20	48,83,129,150	0
26	CDL	V	101	64/100	0.88	0.17	54,83,119,147	0
20	DMU	P	315	33/33	0.89	0.27	45,53,63,65	33
19	LFA	B	307	17/20	0.89	0.28	44,58,70,70	17
19	LFA	C	309	18/20	0.89	0.21	37,45,54,54	18
21	EDO	A	610	4/4	0.89	0.18	31,32,34,34	4
21	EDO	A	611	4/4	0.89	0.31	37,44,45,47	4
26	CDL	C	304	87/100	0.89	0.18	48,80,116,124	0
20	DMU	C	325	33/33	0.89	0.17	42,56,74,82	33
20	DMU	B	308	22/33	0.89	0.28	51,66,77,81	22
20	DMU	P	323	22/33	0.89	0.24	48,59,71,80	22
26	CDL	Y	101	94/100	0.89	0.17	54,80,124,150	0
20	DMU	Z	102	22/33	0.90	0.34	54,61,71,77	22
20	DMU	C	324	22/33	0.90	0.26	42,59,66,70	22
20	DMU	A	609	33/33	0.91	0.18	33,48,60,61	33
21	EDO	R	202	4/4	0.91	0.20	35,38,43,44	4
20	DMU	O	304	22/33	0.91	0.25	51,68,76,82	22
19	LFA	C	307	11/20	0.91	0.27	48,54,60,61	11
20	DMU	B	302	11/33	0.91	0.29	40,48,59,68	11
19	LFA	P	313	15/20	0.91	0.19	44,47,55,66	15
19	LFA	P	309	18/20	0.91	0.22	35,49,56,56	18
21	EDO	N	611	4/4	0.91	0.17	29,34,36,36	4
20	DMU	Z	103	8/33	0.91	0.26	48,53,58,59	8
26	CDL	L	101	94/100	0.92	0.15	44,78,116,136	0
20	DMU	B	303	11/33	0.92	0.20	48,51,62,63	11
20	DMU	D	201	33/33	0.92	0.14	30,45,58,60	33

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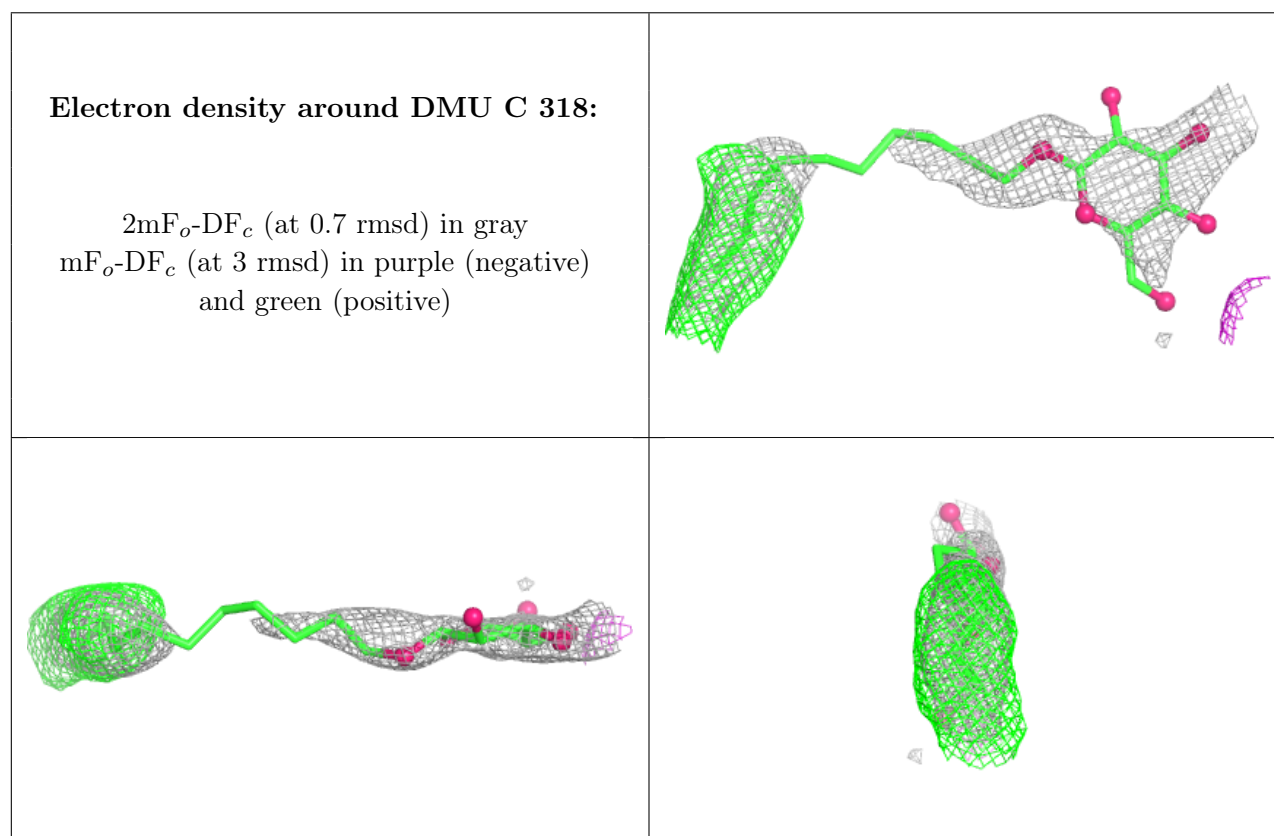
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
19	LFA	N	607	14/20	0.92	0.21	38,45,60,62	14
20	DMU	O	308	22/33	0.93	0.17	35,52,58,59	22
20	DMU	U	101	33/33	0.93	0.21	35,47,65,65	33
20	DMU	J	101	11/33	0.93	0.28	54,58,67,85	11
20	DMU	Z	101	33/33	0.93	0.09	53,60,75,81	0
20	DMU	L	102	22/33	0.93	0.26	47,52,61,68	22
20	DMU	B	304	22/33	0.93	0.17	41,63,71,82	22
21	EDO	E	202	4/4	0.94	0.23	34,34,37,38	4
21	EDO	C	322	4/4	0.94	0.21	39,41,43,44	4
21	EDO	F	102	4/4	0.94	0.13	26,26,31,32	4
20	DMU	O	306	11/33	0.94	0.25	42,46,54,60	11
20	DMU	P	306	11/33	0.94	0.24	44,49,55,61	11
21	EDO	P	320	4/4	0.95	0.18	52,56,66,71	4
25	UNX	C	302	1/1	0.95	0.20	43,43,43,43	0
25	UNX	P	302	1/1	0.95	0.25	42,42,42,42	0
20	DMU	O	307	11/33	0.95	0.21	47,51,58,58	11
21	EDO	R	201	4/4	0.95	0.23	55,58,60,63	4
20	DMU	C	306	11/33	0.95	0.20	51,54,59,71	11
21	EDO	R	203	4/4	0.95	0.23	42,45,50,53	4
24	CHD	C	301	29/29	0.95	0.07	34,39,44,47	0
21	EDO	A	612	4/4	0.95	0.21	30,31,31,32	4
21	EDO	P	321	4/4	0.96	0.20	37,37,38,40	4
21	EDO	A	613	4/4	0.96	0.14	38,43,44,48	4
20	DMU	M	101	33/33	0.96	0.07	45,54,70,76	0
21	EDO	N	613	4/4	0.96	0.18	32,32,34,35	4
21	EDO	N	614	4/4	0.96	0.15	40,41,41,42	4
21	EDO	S	102	4/4	0.96	0.09	27,28,31,33	4
21	EDO	N	615	4/4	0.96	0.18	34,34,34,39	4
21	EDO	G	103	4/4	0.96	0.16	35,37,38,41	4
24	CHD	P	301	29/29	0.96	0.07	35,39,45,51	0
28	PEK	G	101	53/53	0.96	0.11	37,51,91,114	0
28	PEK	T	102	53/53	0.96	0.11	40,55,100,112	0
21	EDO	F	103	4/4	0.97	0.13	34,36,37,37	4
21	EDO	T	104	4/4	0.97	0.10	39,40,40,45	4
24	CHD	O	301	29/29	0.97	0.06	34,37,40,49	0
22	PGV	C	303	51/51	0.97	0.09	35,43,95,120	0
24	CHD	B	306	29/29	0.97	0.06	36,38,42,49	0
21	EDO	B	305	4/4	0.98	0.08	29,33,34,35	4
22	PGV	A	614	51/51	0.98	0.07	32,40,71,77	0
21	EDO	O	309	4/4	0.98	0.09	38,39,40,41	4
22	PGV	N	616	51/51	0.98	0.08	34,43,66,77	0
22	PGV	P	303	51/51	0.98	0.08	34,43,77,101	0

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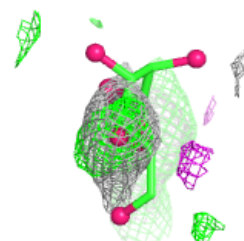
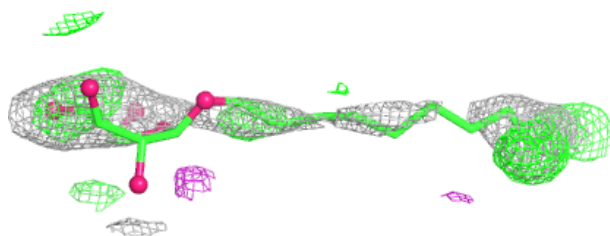
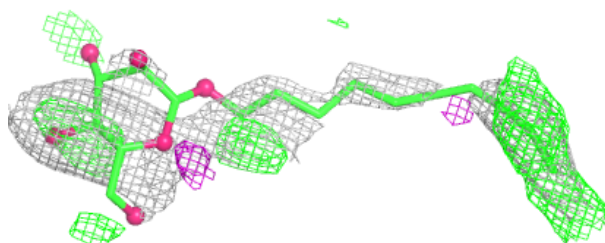
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
18	CO2	N	606	3/3	0.98	0.20	41,41,44,45	0
21	EDO	S	103	4/4	0.98	0.08	31,37,38,38	4
18	CO2	A	606	3/3	0.99	0.12	37,37,40,44	0
14	HEA	A	601	60/60	0.99	0.05	28,32,46,52	0
14	HEA	A	602	60/60	0.99	0.05	28,32,38,46	0
14	HEA	N	601	60/60	0.99	0.05	31,35,50,60	0
14	HEA	N	602	60/60	0.99	0.06	32,34,40,49	0
17	NA	A	605	1/1	0.99	0.05	38,38,38,38	0
17	NA	N	605	1/1	0.99	0.06	43,43,43,43	0
23	CUA	B	301	2/2	1.00	0.03	34,34,34,34	0
23	CUA	O	305	2/2	1.00	0.02	37,37,37,38	0
15	CU	N	603	1/1	1.00	0.01	33,33,33,33	0
16	MG	A	604	1/1	1.00	0.04	33,33,33,33	0
27	ZN	F	101	1/1	1.00	0.01	38,38,38,38	0
27	ZN	S	101	1/1	1.00	0.01	38,38,38,38	0
16	MG	N	604	1/1	1.00	0.03	36,36,36,36	0
15	CU	A	603	1/1	1.00	0.01	31,31,31,31	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.

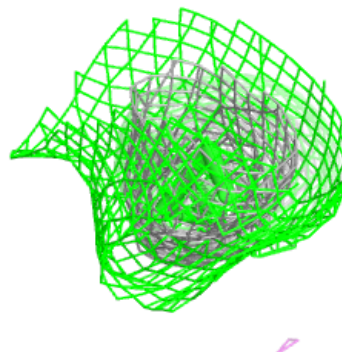
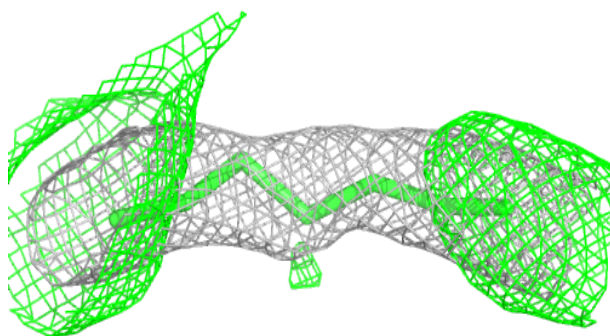
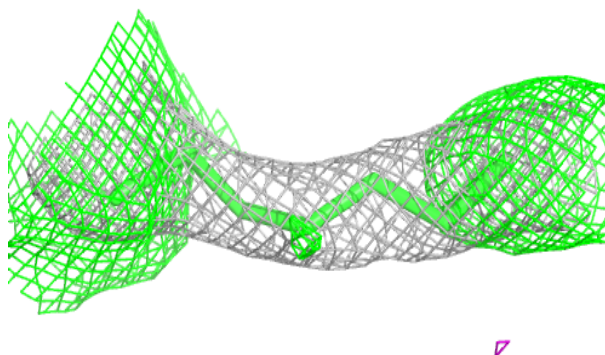


Electron density around DMU P 317:

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

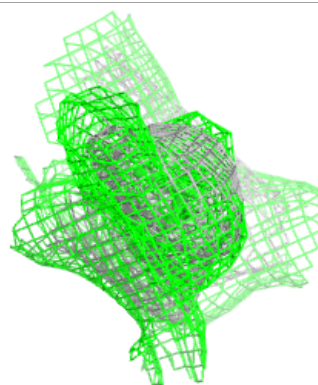
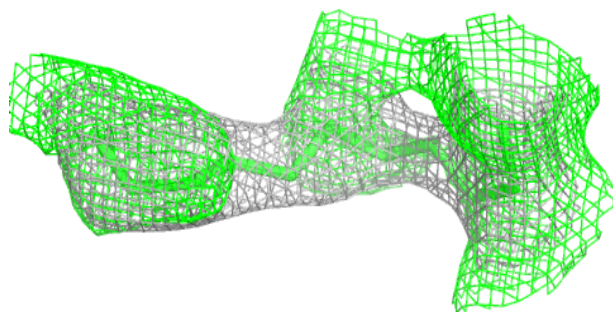
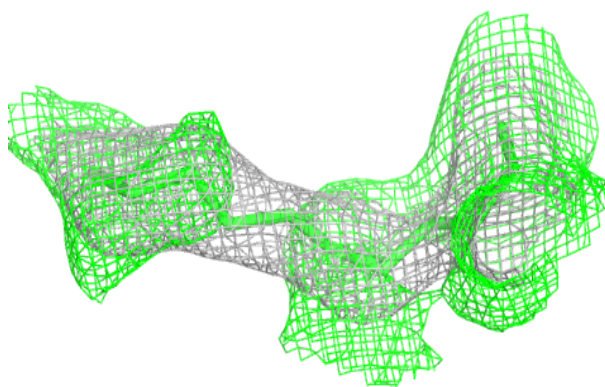
**Electron density around DMU A 608:**

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

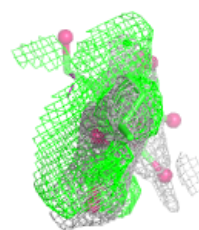
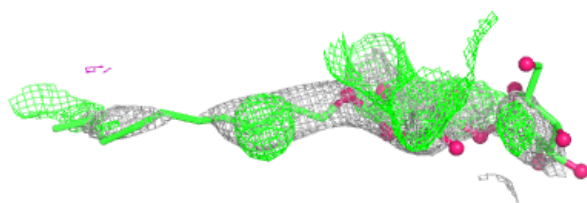
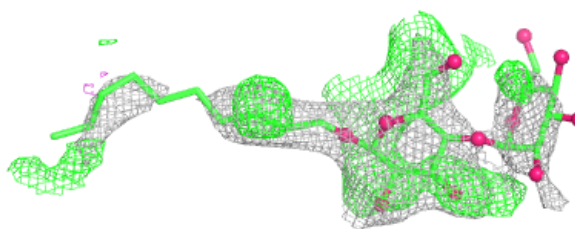


Electron density around LFA C 313:

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

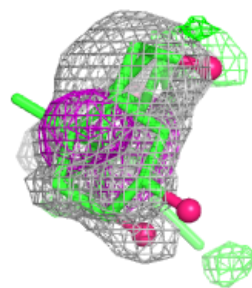
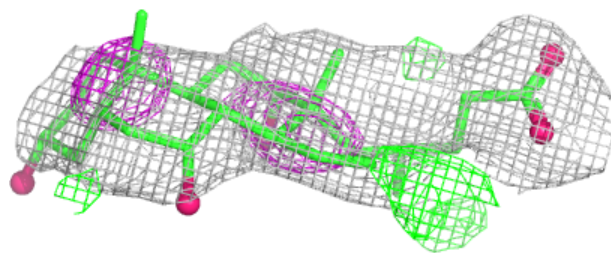
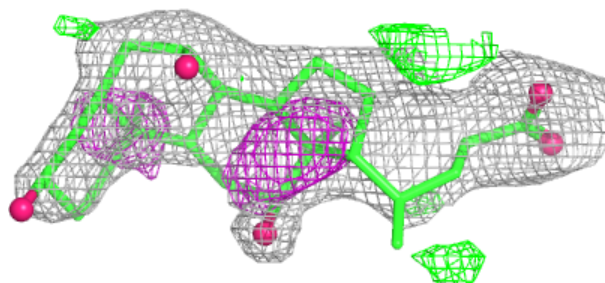
**Electron density around DMU C 316:**

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

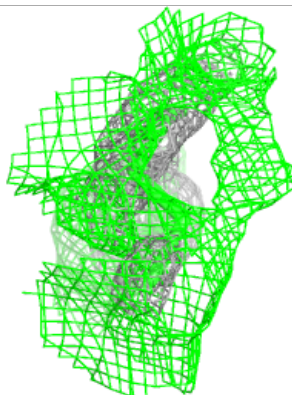
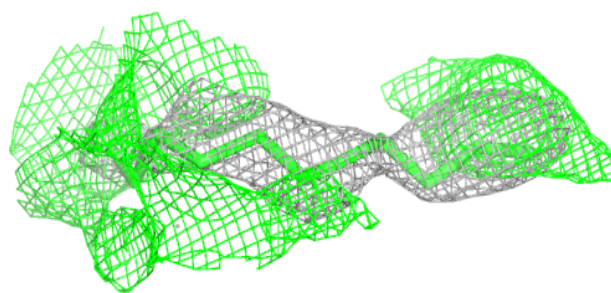
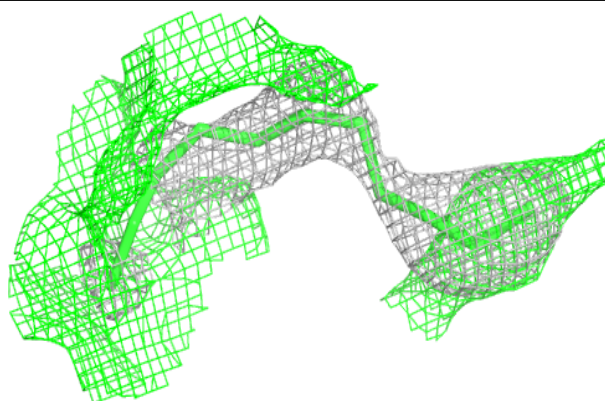


Electron density around CHD P 305:

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

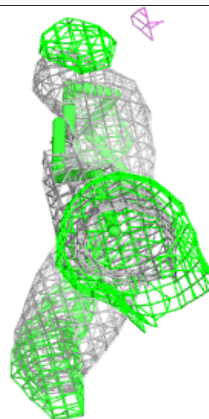
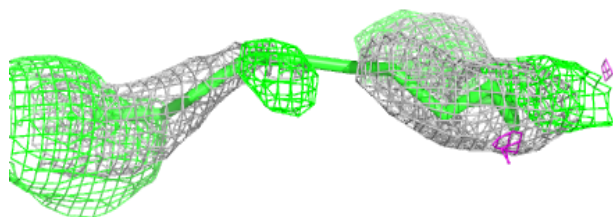
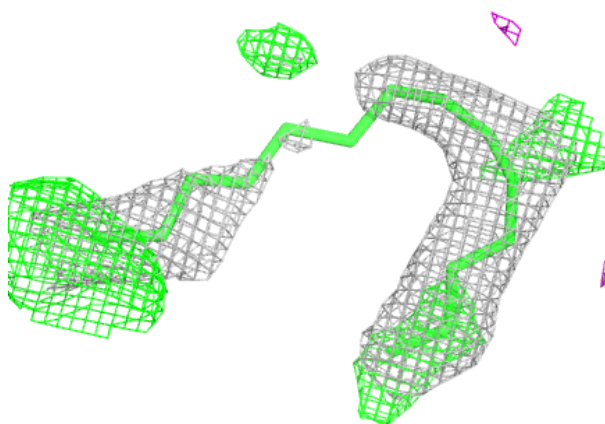
**Electron density around LFA P 310:**

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

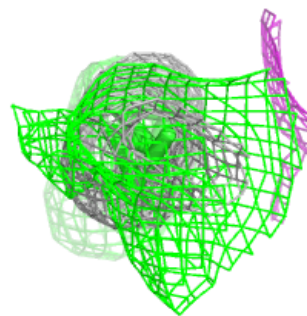
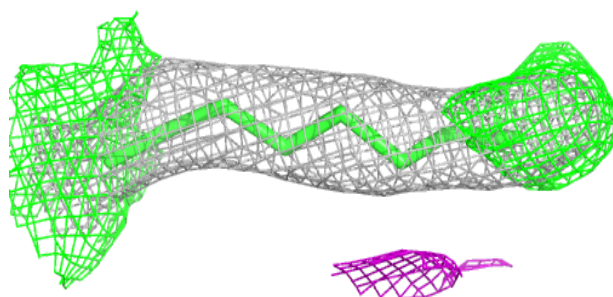
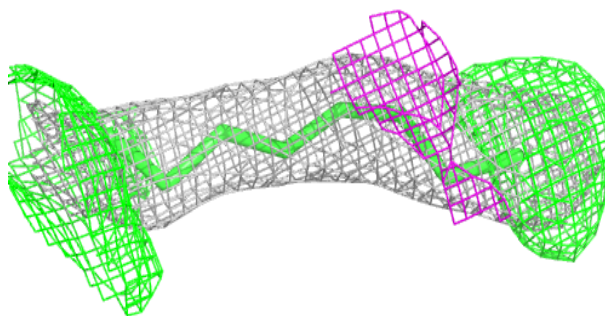


Electron density around LFA N 608:

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

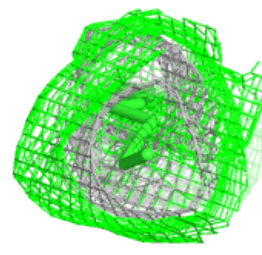
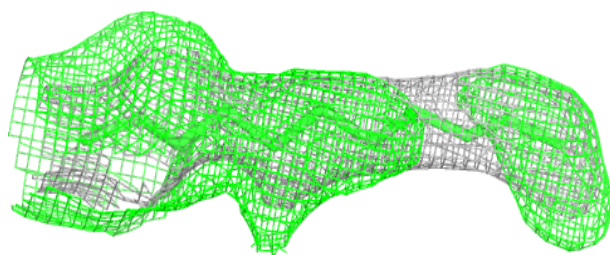
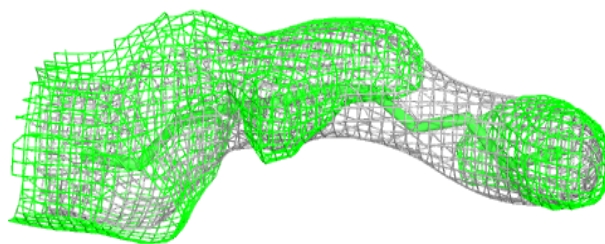
**Electron density around DMU M 102:**

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

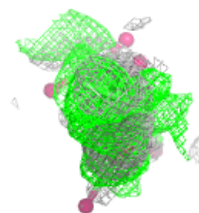
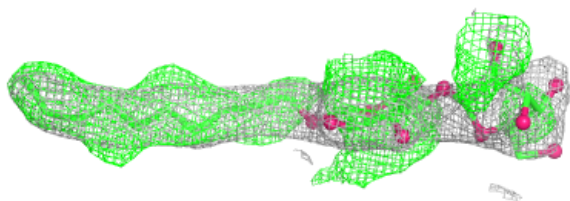
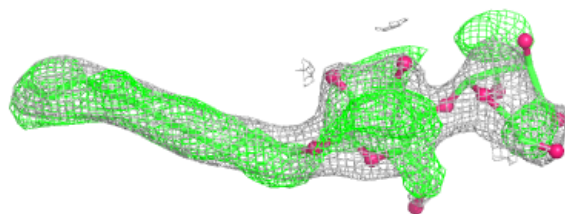


Electron density around LFA O 303:

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

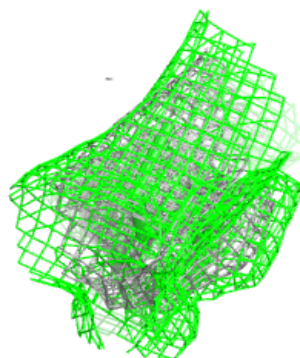
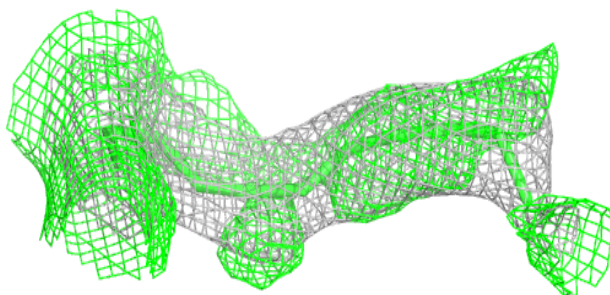
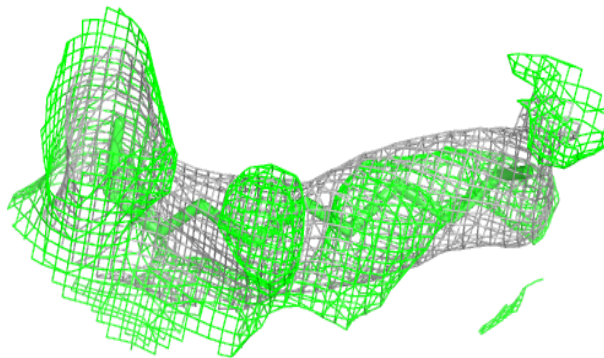
**Electron density around DMU C 319:**

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

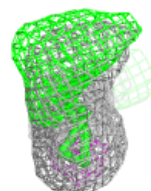
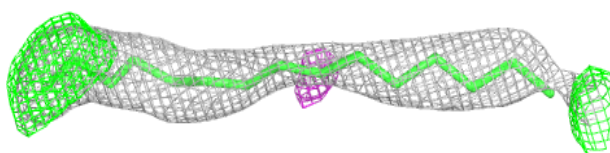
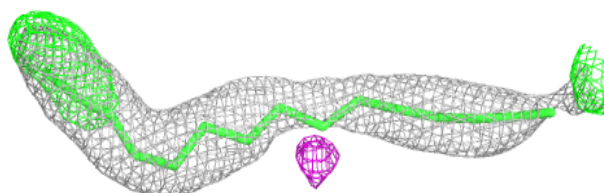


Electron density around LFA P 312:

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

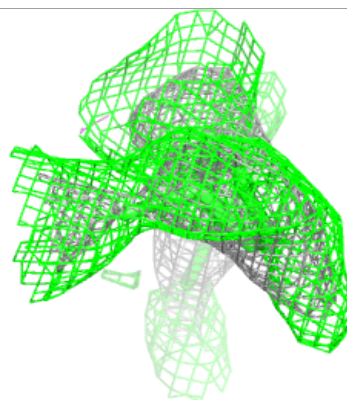
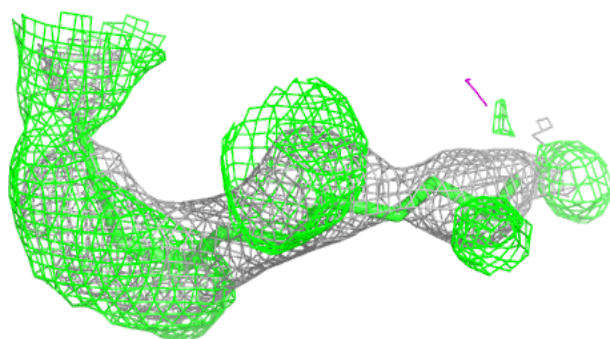
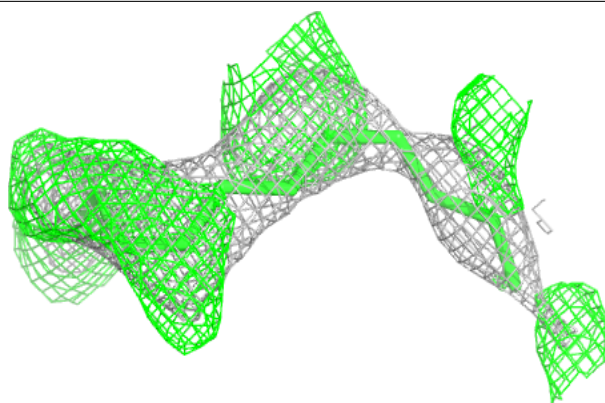
**Electron density around LFA C 314:**

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

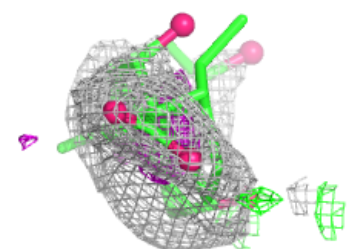
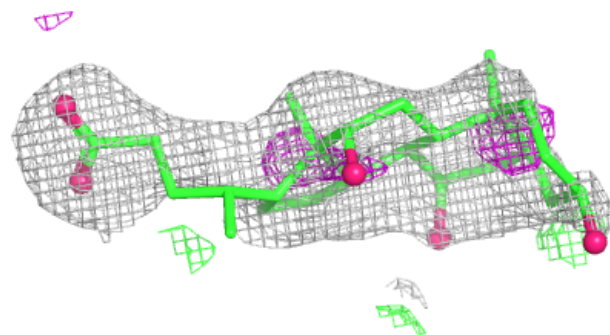
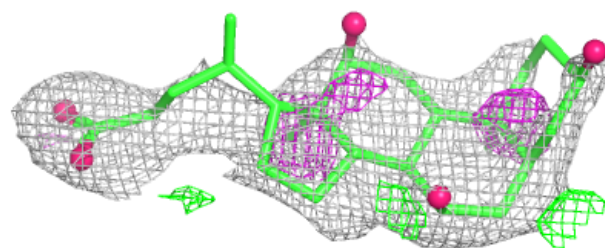


Electron density around LFA P 307:

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

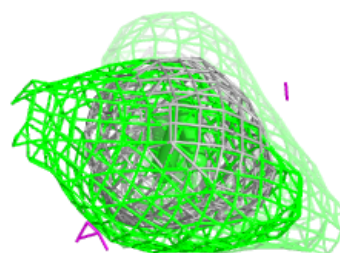
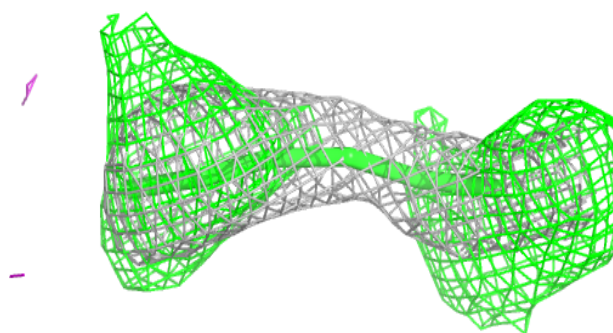
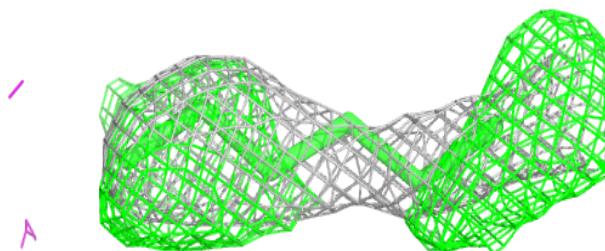
**Electron density around CHD C 305:**

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

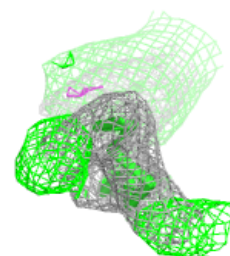
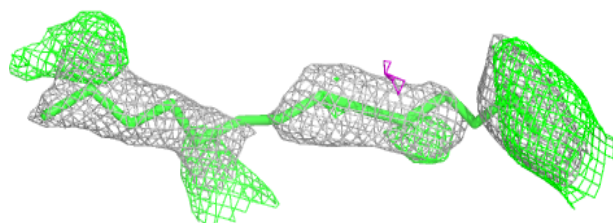
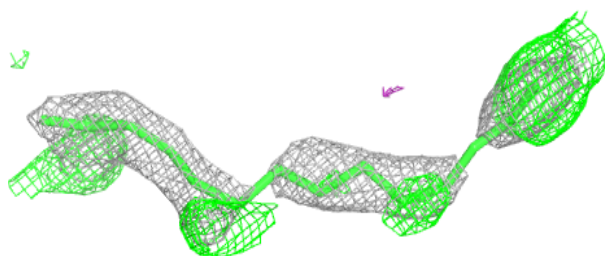


Electron density around LFA C 308:

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

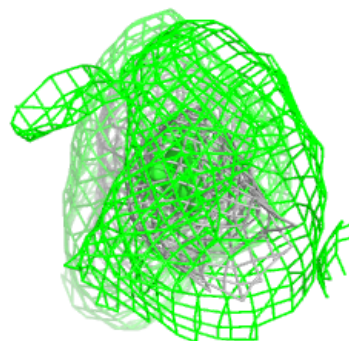
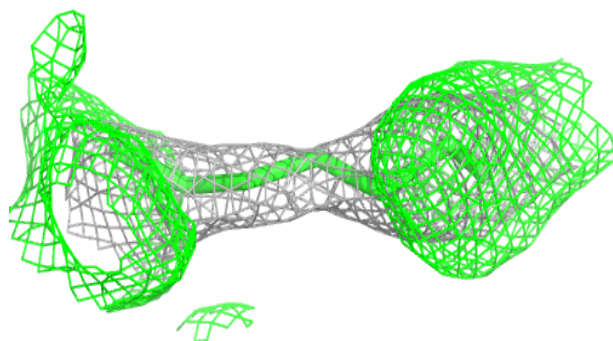
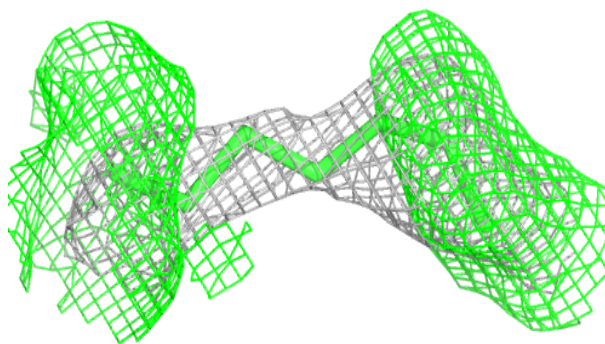
**Electron density around LFA C 312:**

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

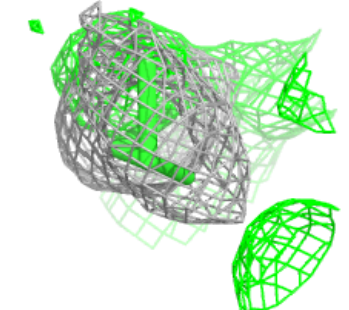
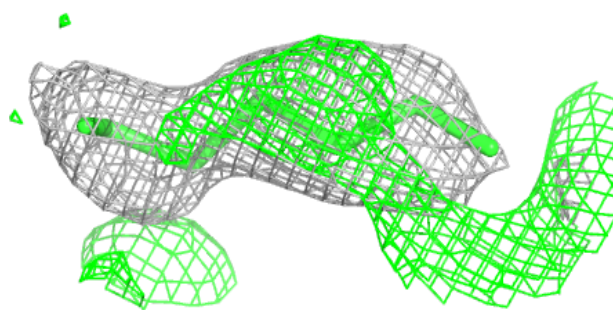
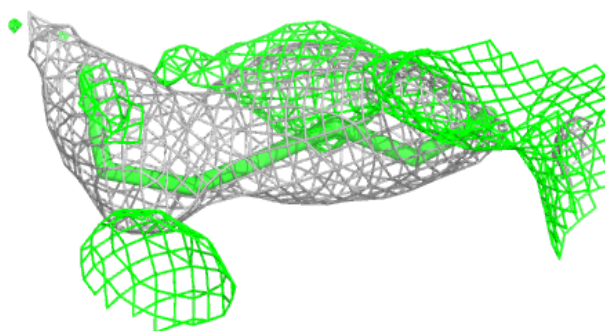


Electron density around DMU N 609:

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

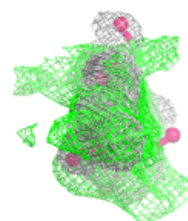
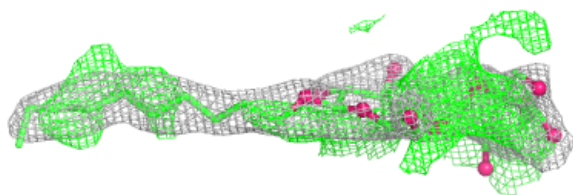
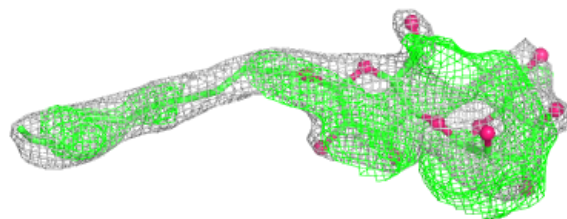
**Electron density around DMU C 317:**

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

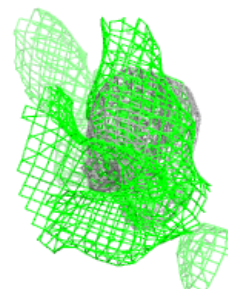
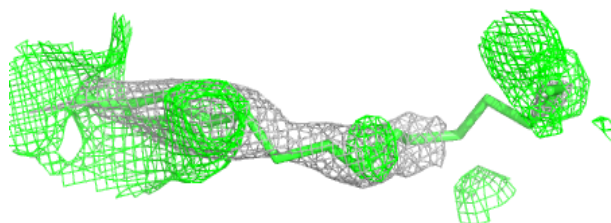
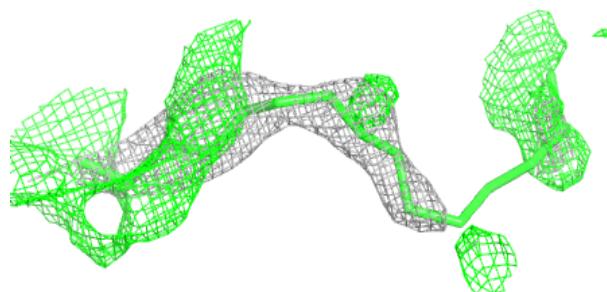


Electron density around DMU P 318:

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

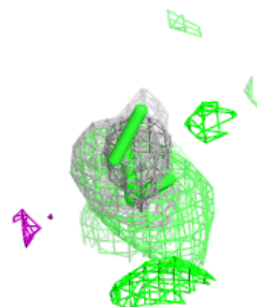
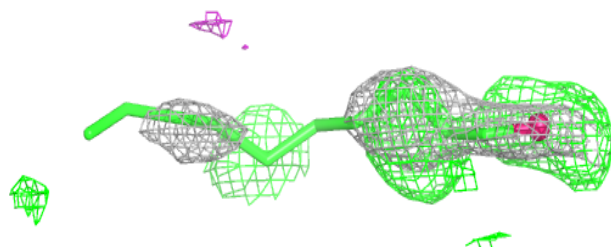
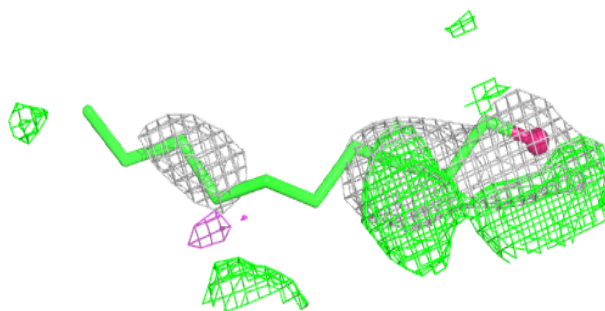
**Electron density around LFA C 326:**

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

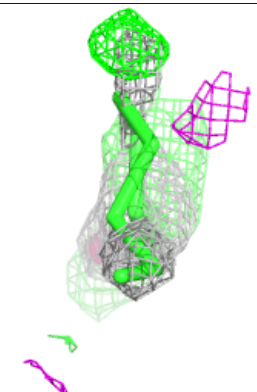
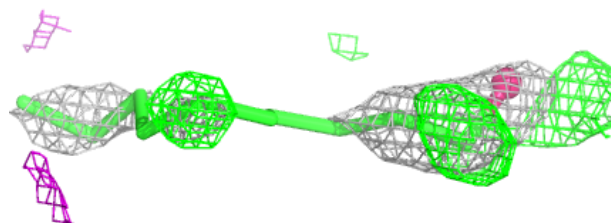
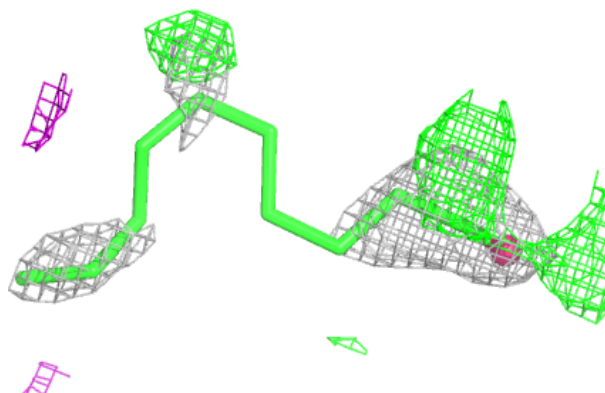


Electron density around DMU A 615:

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

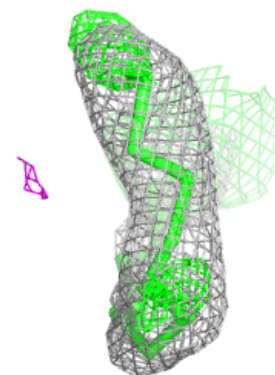
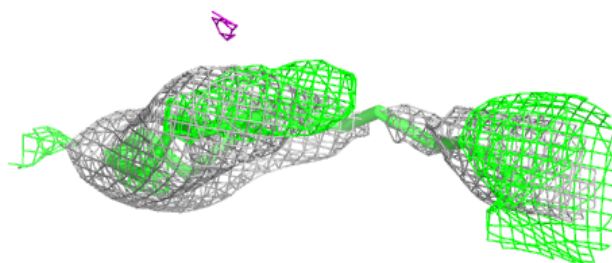
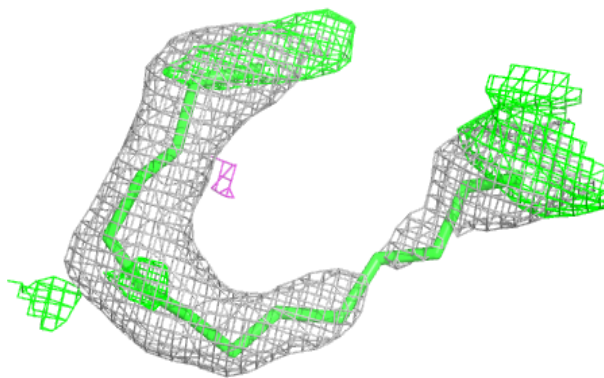
**Electron density around DMU G 102:**

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

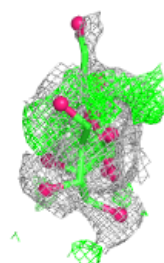
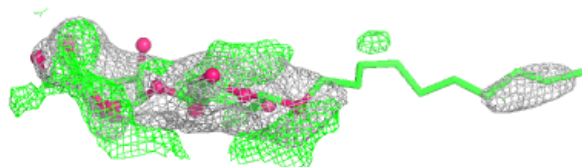
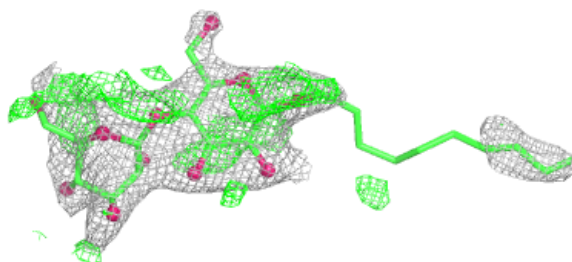


Electron density around LFA T 101:

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

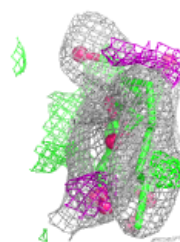
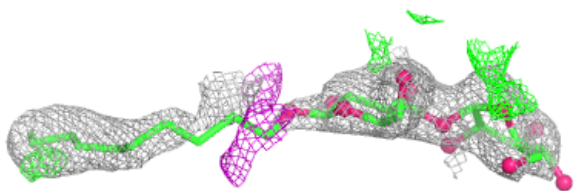
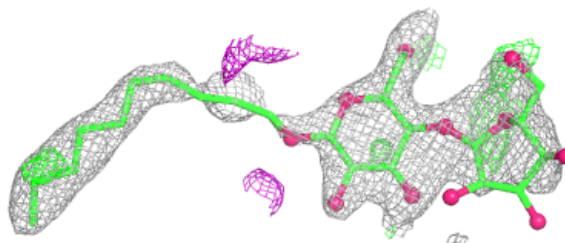
**Electron density around DMU P 319:**

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

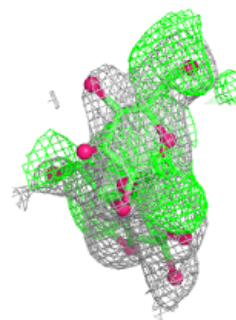
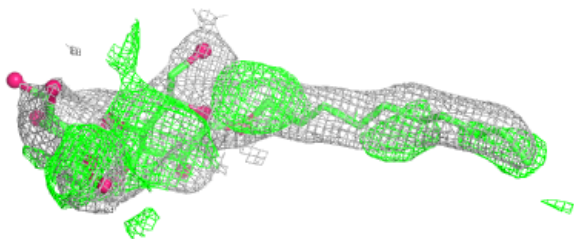
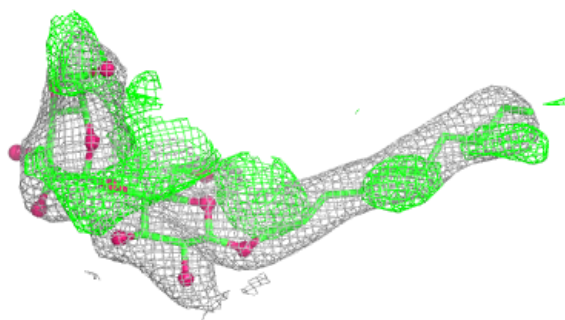


Electron density around DMU P 324:

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

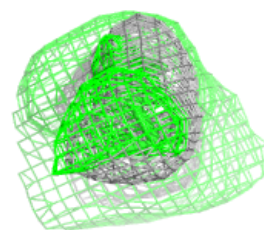
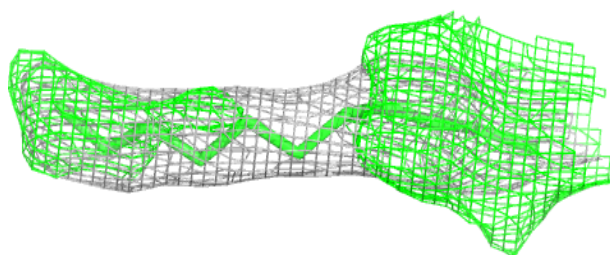
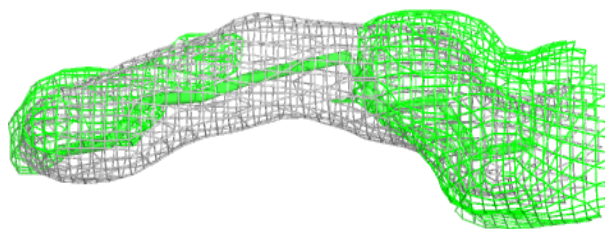
**Electron density around DMU Q 201:**

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

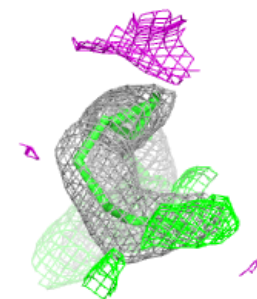
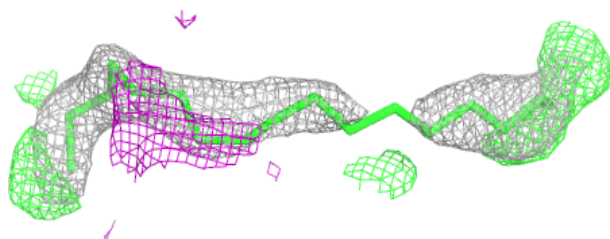
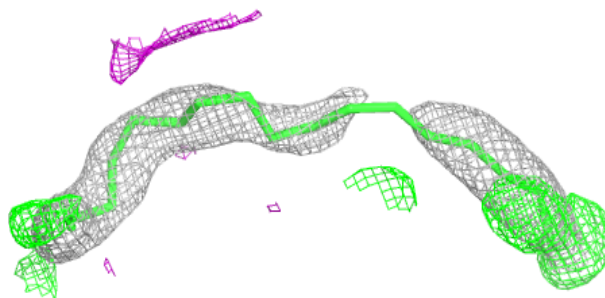


Electron density around LFA T 103:

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

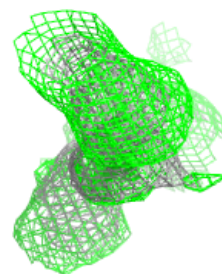
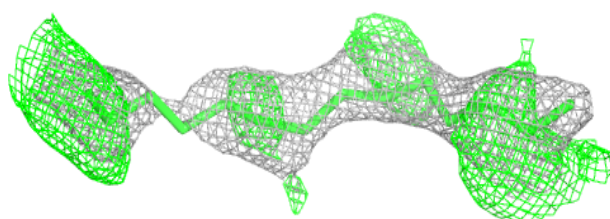
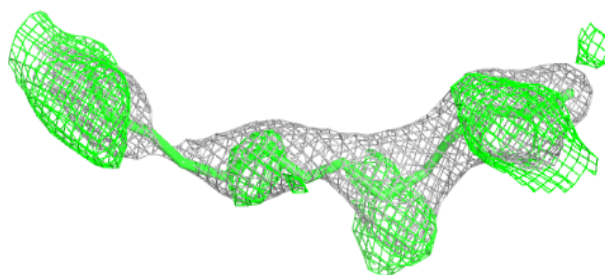
**Electron density around LFA O 302:**

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

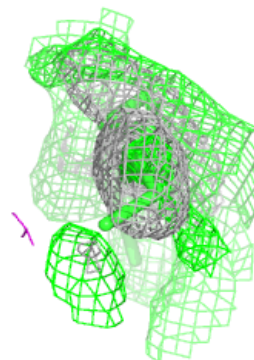
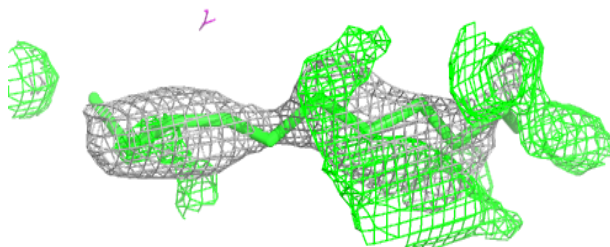
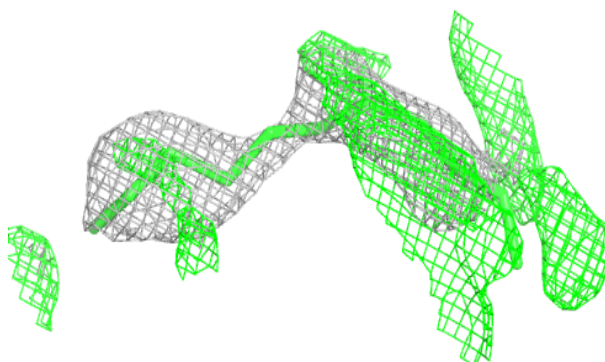


Electron density around LFA P 311:

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

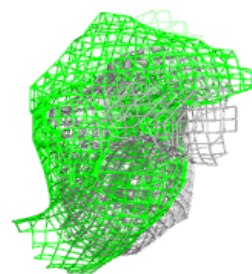
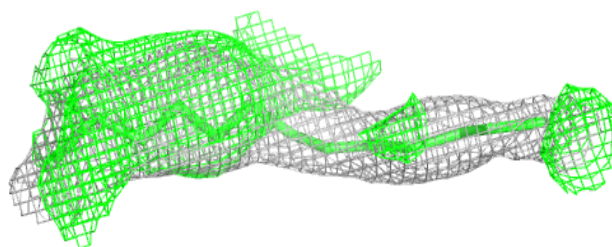
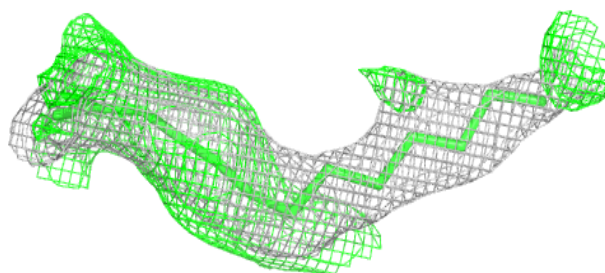
**Electron density around LFA C 311:**

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

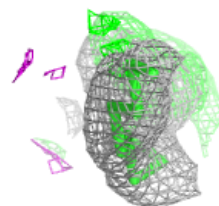
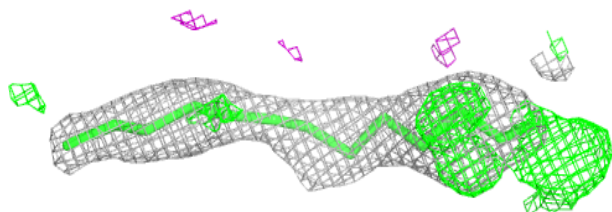
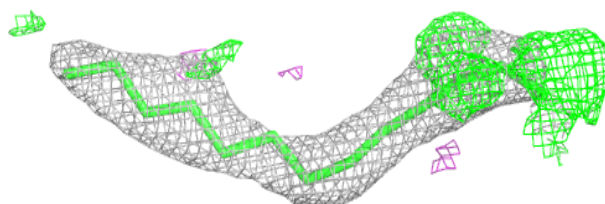


Electron density around LFA P 314:

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

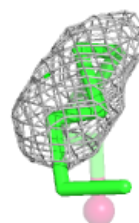
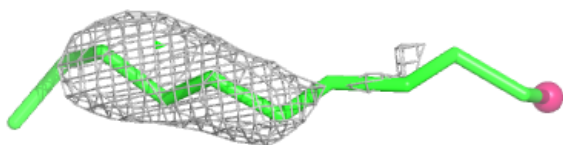
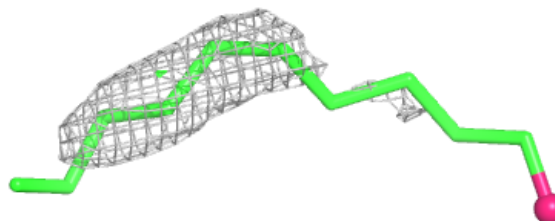
**Electron density around LFA C 315:**

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

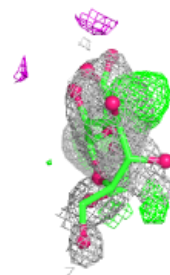
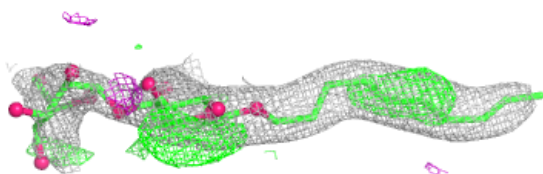
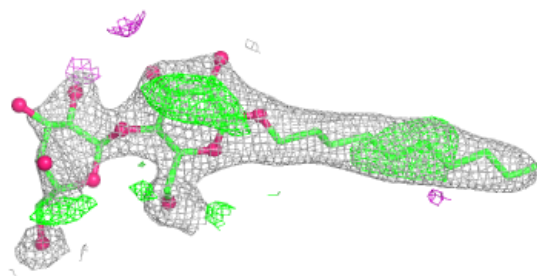


Electron density around DMU W 101:

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

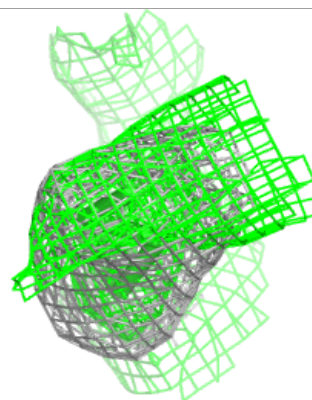
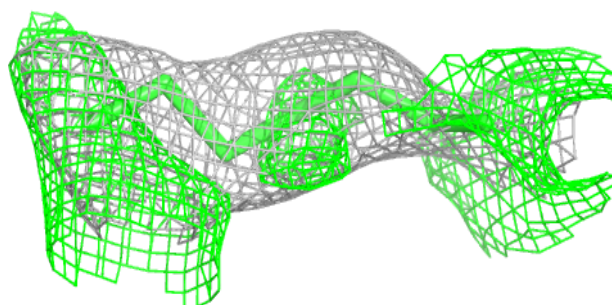
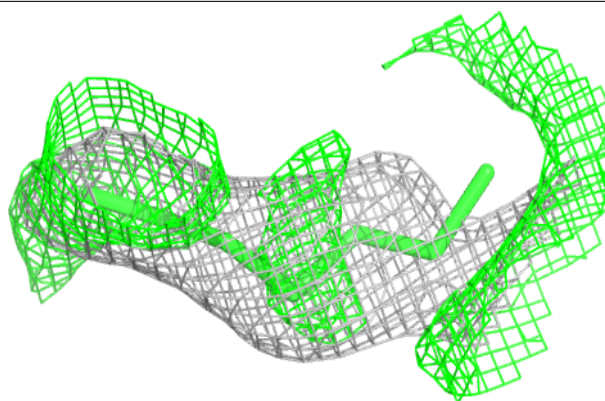
**Electron density around DMU N 610:**

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

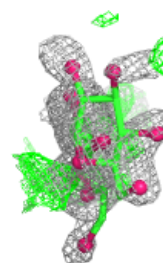
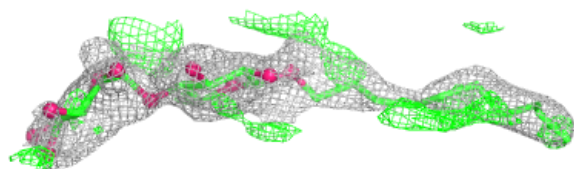
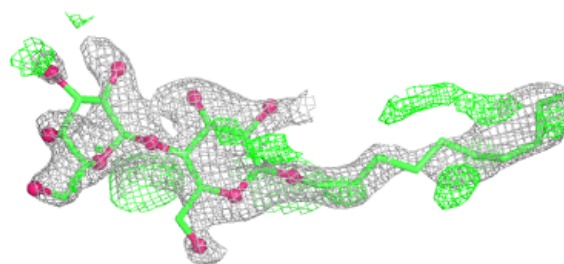


Electron density around DMU P 316:

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

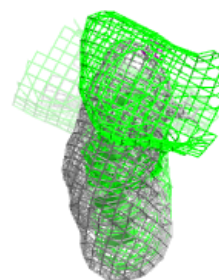
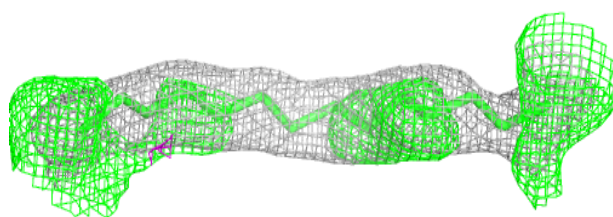
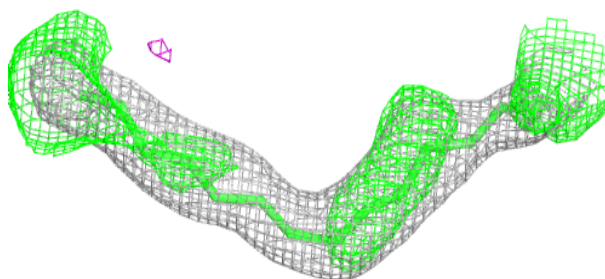
**Electron density around DMU C 320:**

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

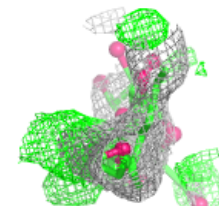
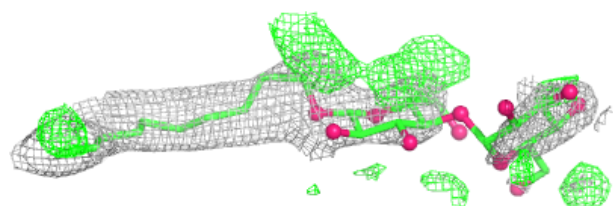
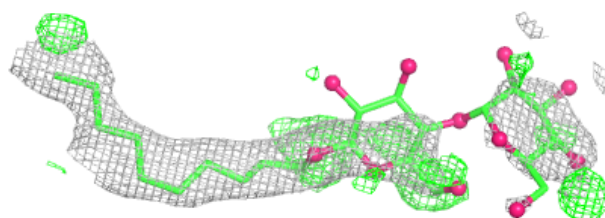


Electron density around LFA A 607:

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

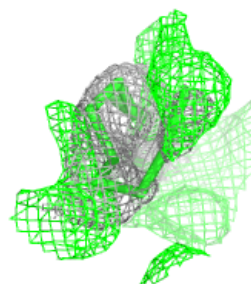
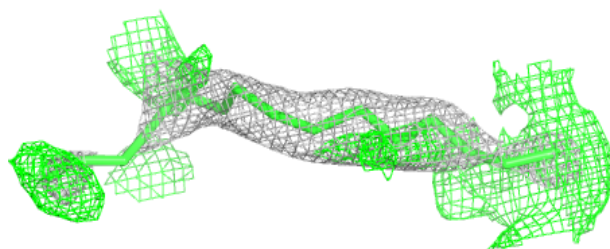
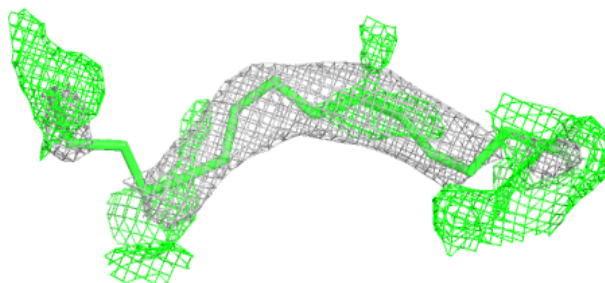
**Electron density around DMU H 101:**

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

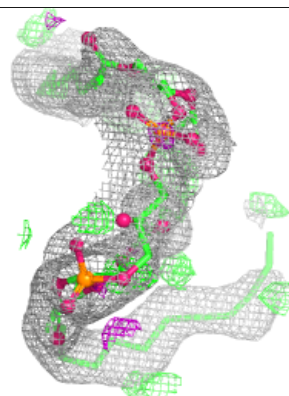
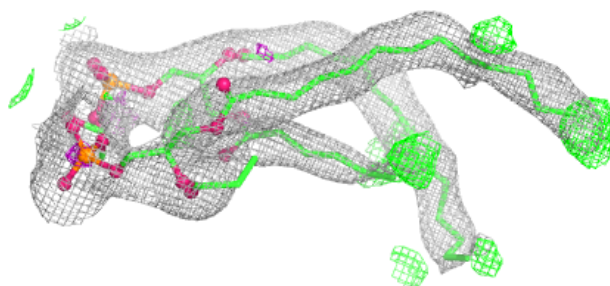
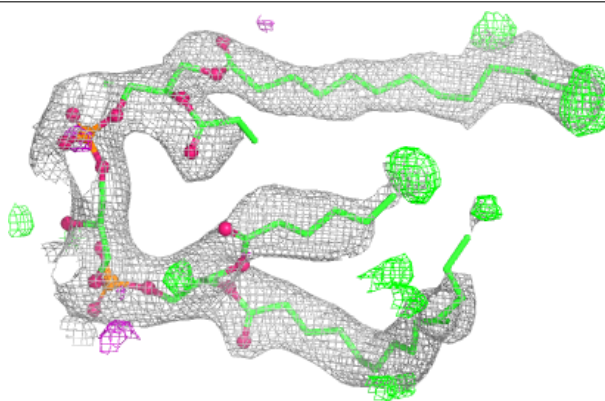


Electron density around LFA C 310:

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

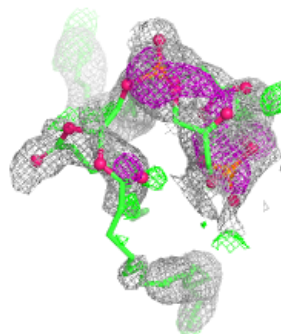
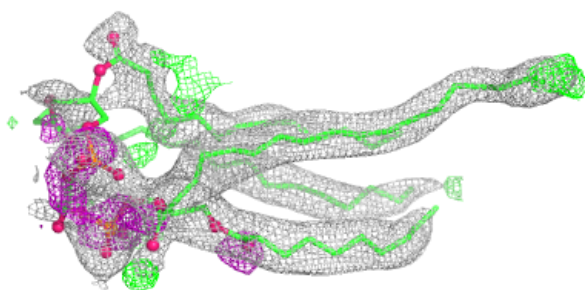
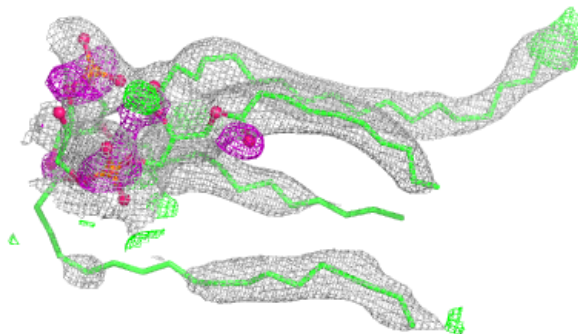
**Electron density around CDL I 101:**

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

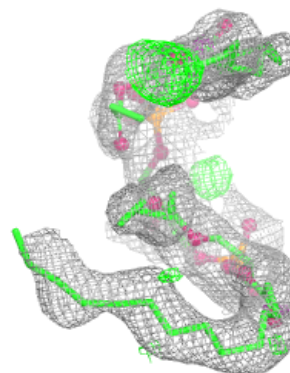
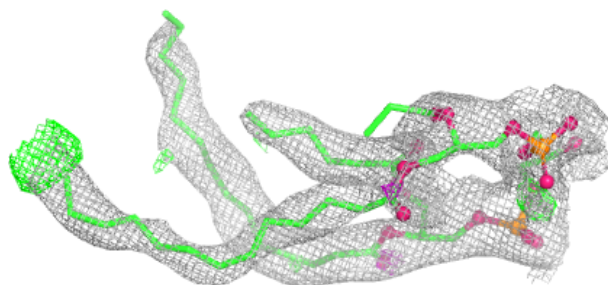
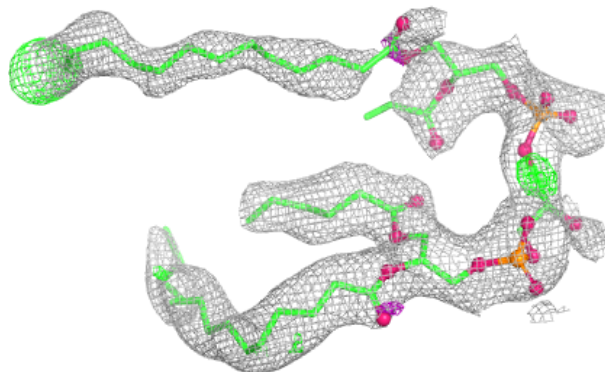


Electron density around CDL P 304:

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

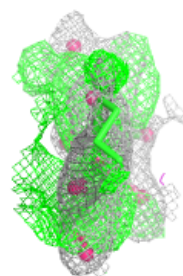
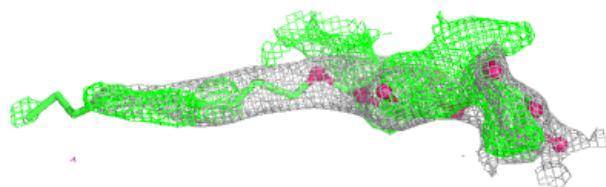
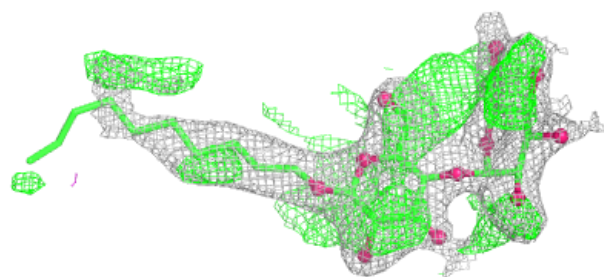
**Electron density around CDL V 101:**

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

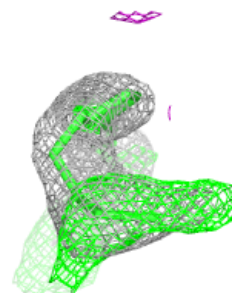
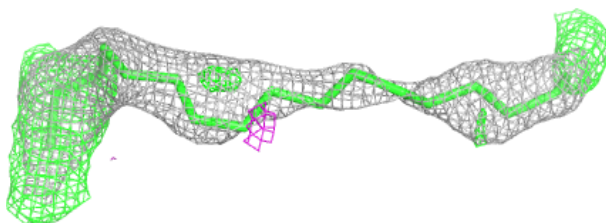
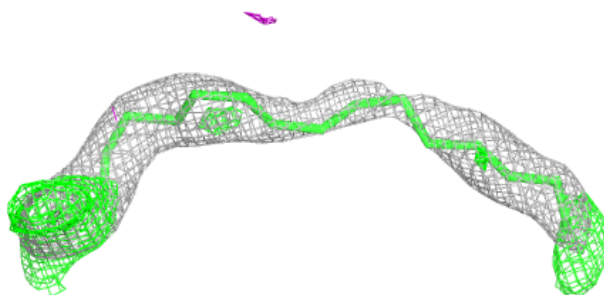


Electron density around DMU P 315:

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

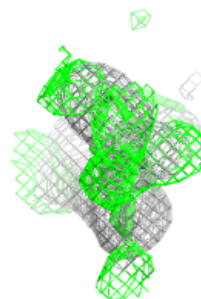
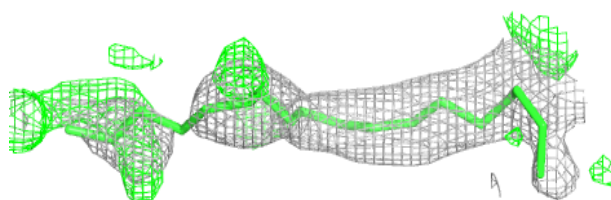
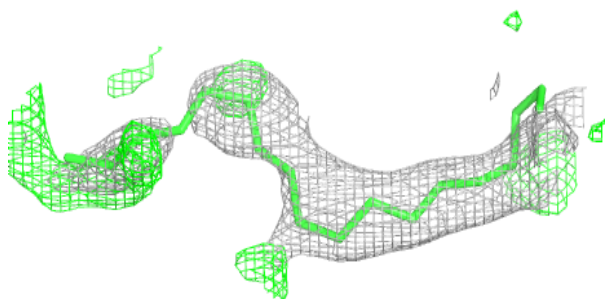
**Electron density around LFA B 307:**

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

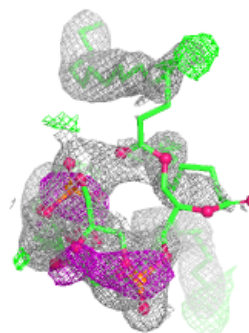
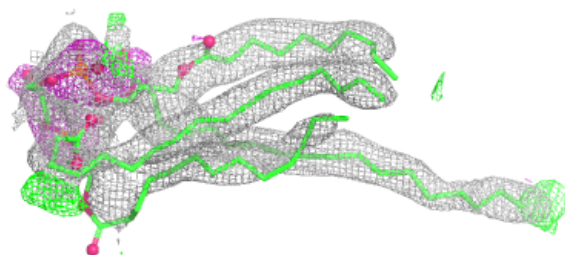
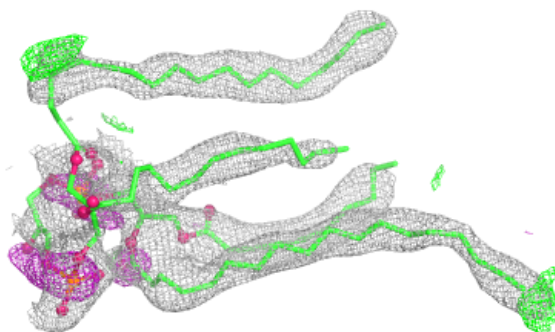


Electron density around LFA C 309:

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

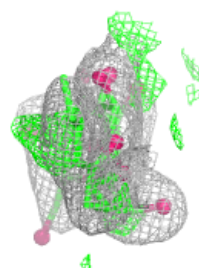
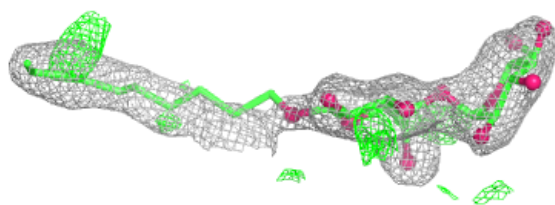
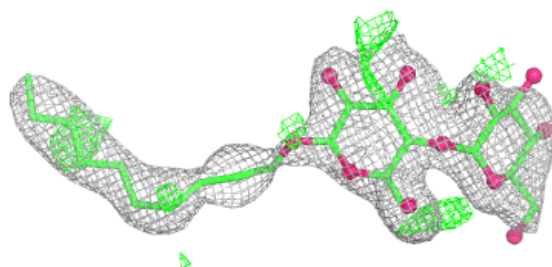
**Electron density around CDL C 304:**

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

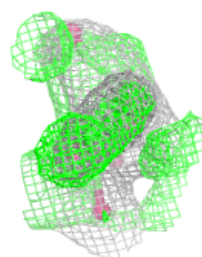
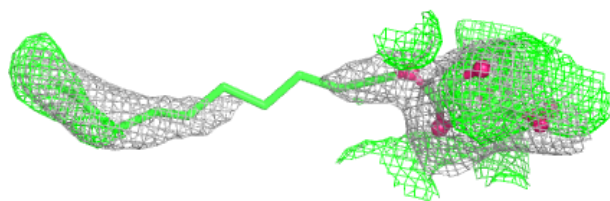
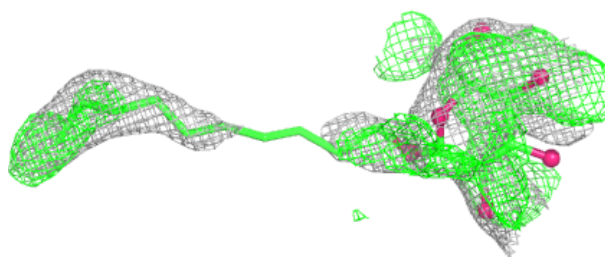


Electron density around DMU C 325:

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

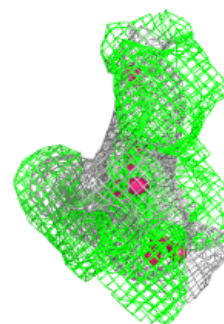
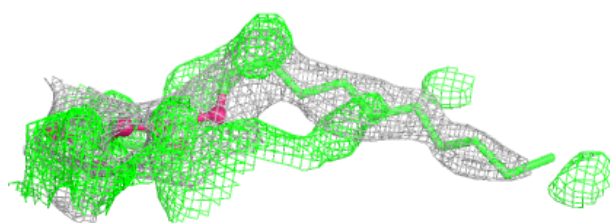
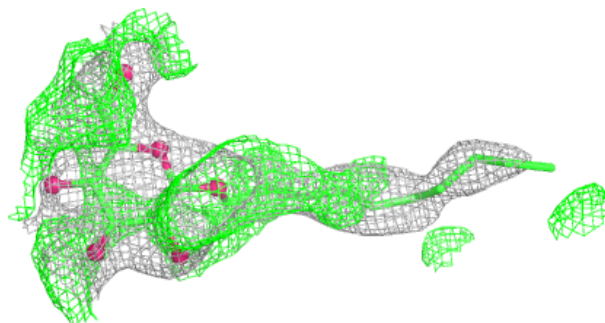
**Electron density around DMU B 308:**

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



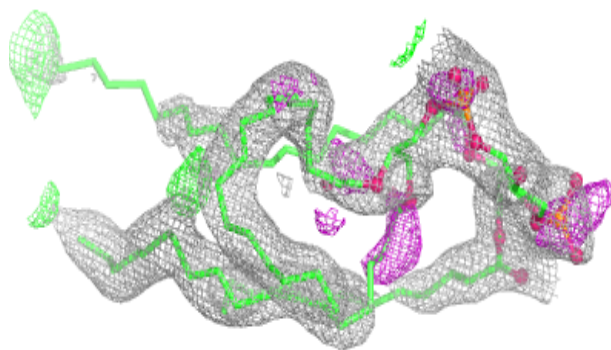
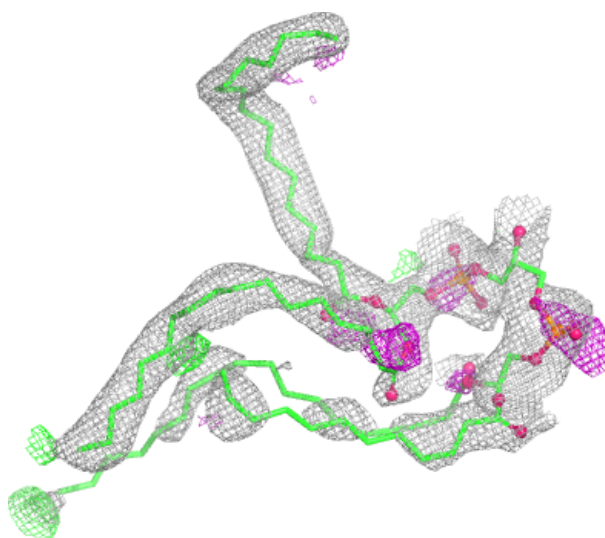
Electron density around DMU P 323:

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



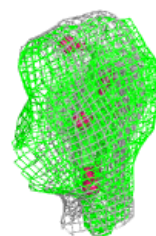
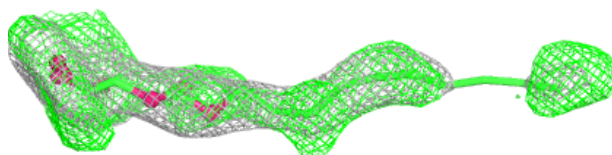
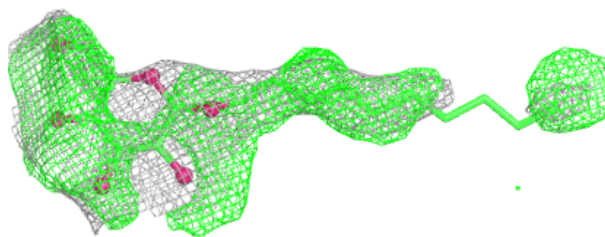
Electron density around CDL Y 101:

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

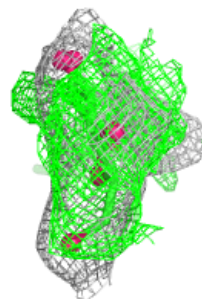
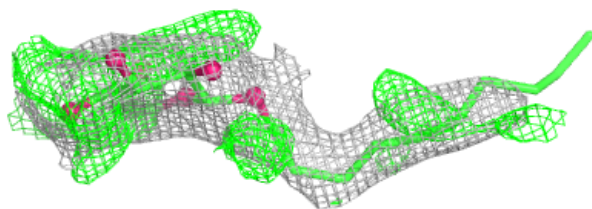
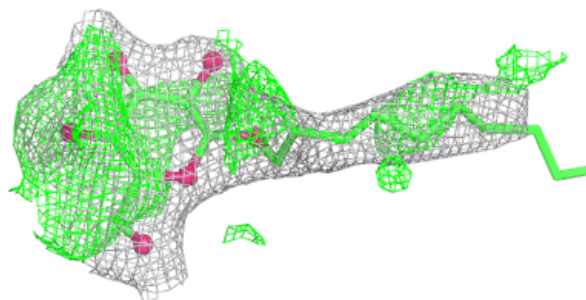


Electron density around DMU Z 102:

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

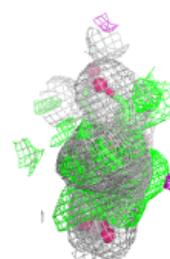
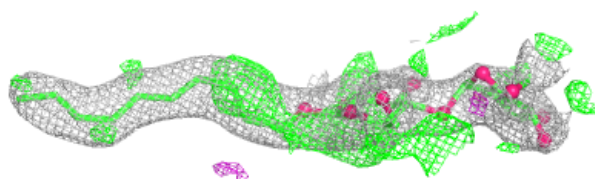
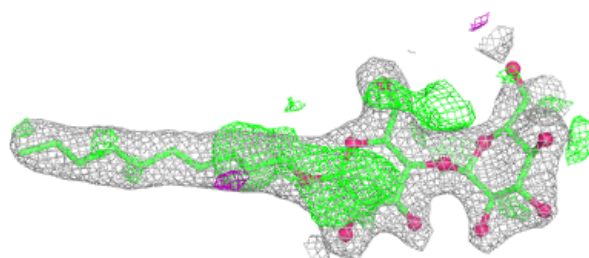
**Electron density around DMU C 324:**

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

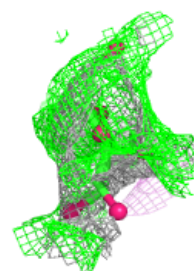
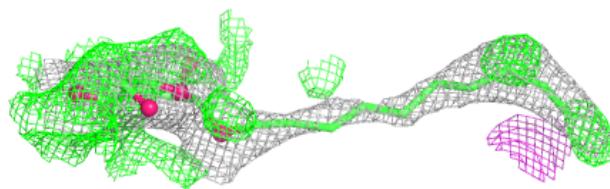
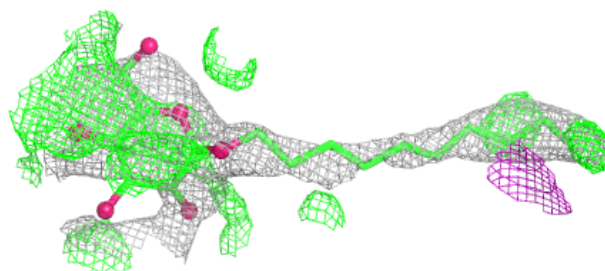


Electron density around DMU A 609:

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

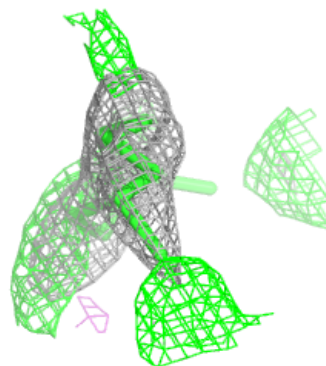
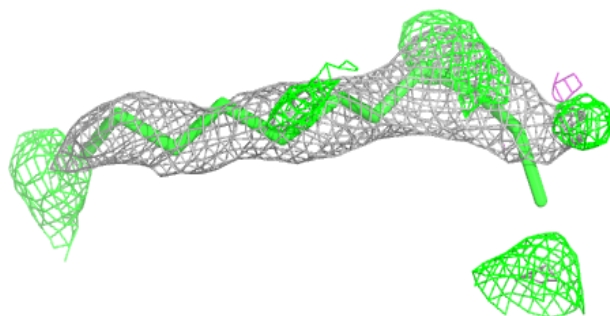
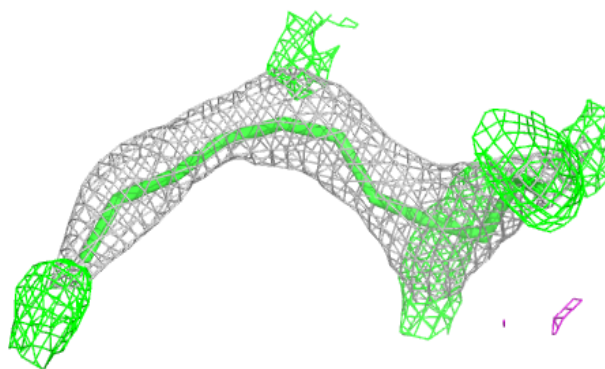
**Electron density around DMU O 304:**

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

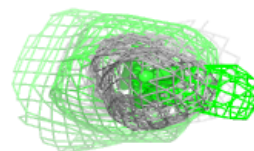
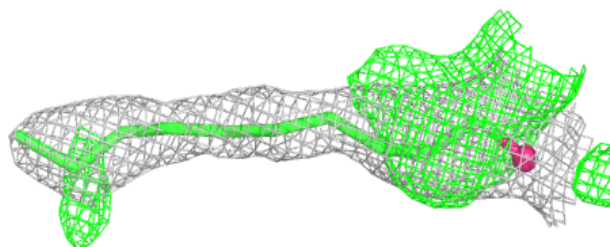
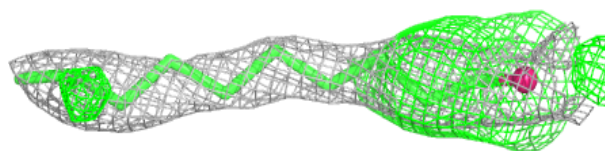


Electron density around LFA C 307:

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

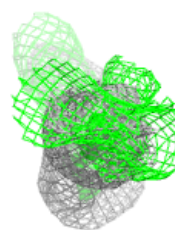
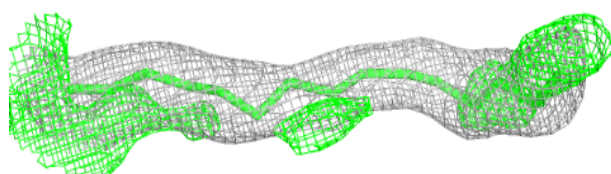
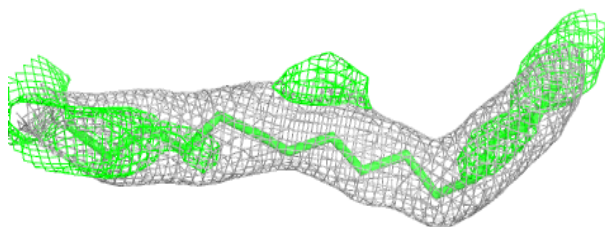
**Electron density around DMU B 302:**

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

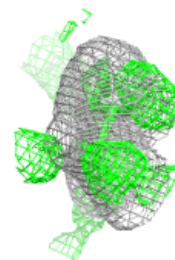
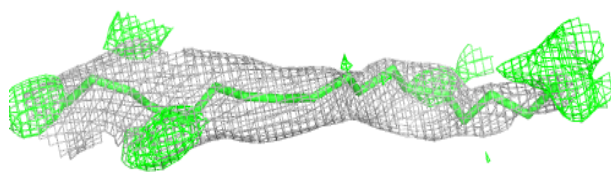
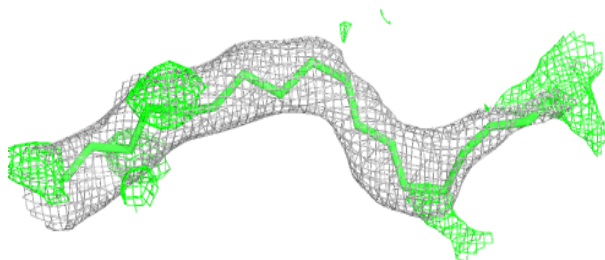


Electron density around LFA P 313:

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

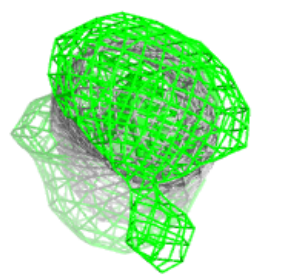
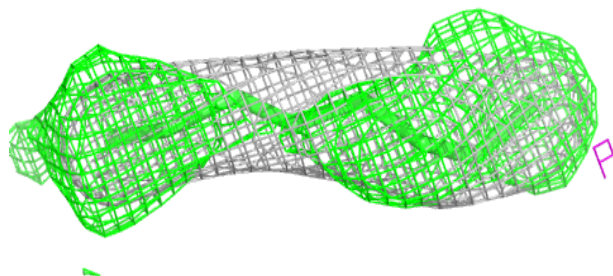
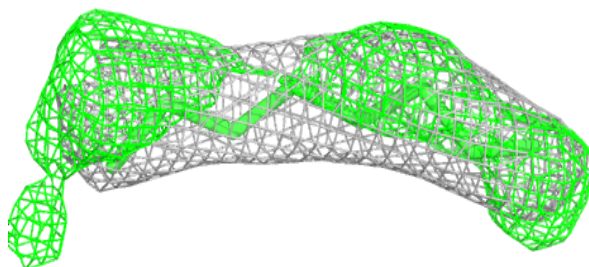
**Electron density around LFA P 309:**

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



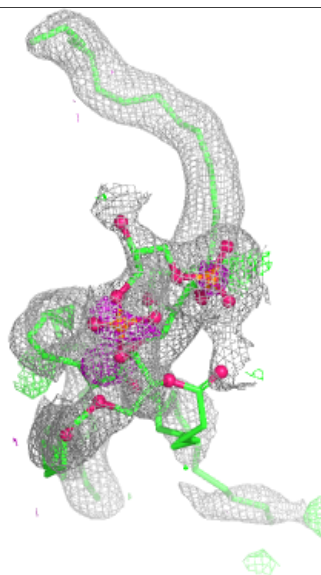
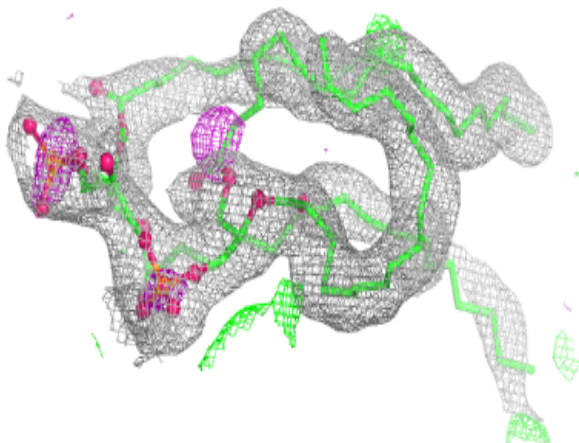
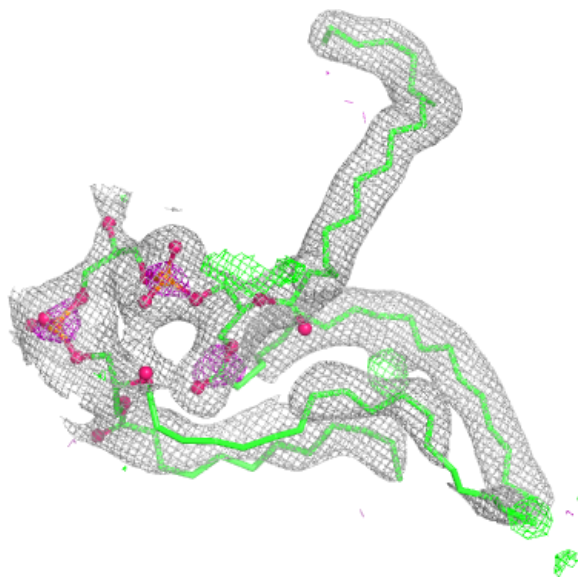
Electron density around DMU Z 103:

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



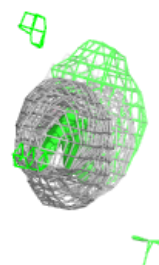
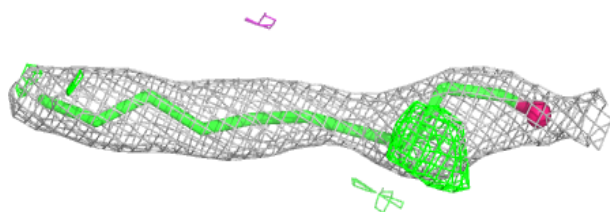
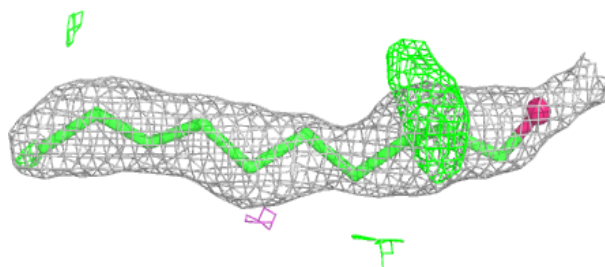
Electron density around CDL L 101:

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

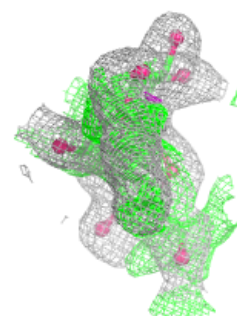
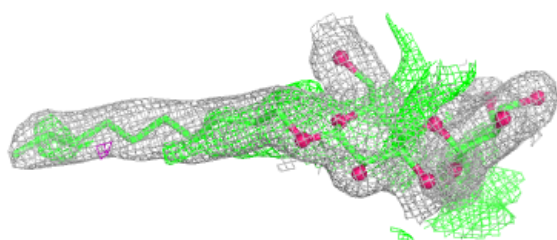
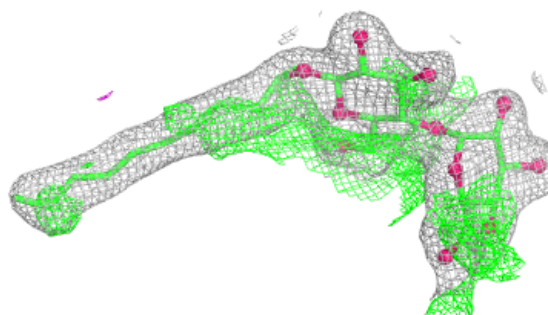


Electron density around DMU B 303:

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

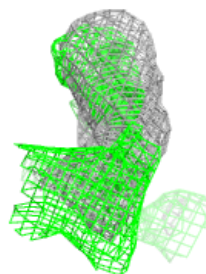
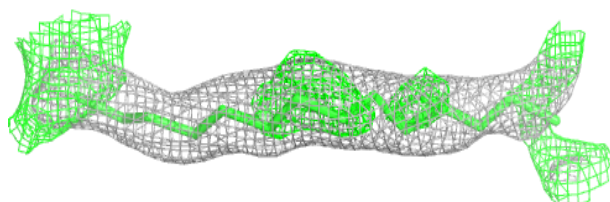
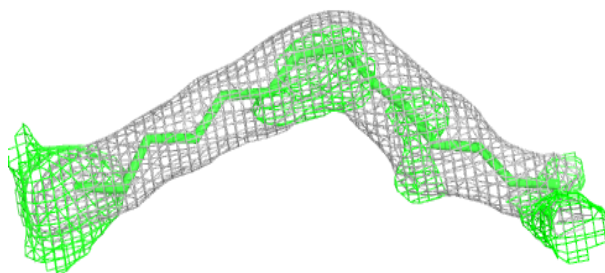
**Electron density around DMU D 201:**

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

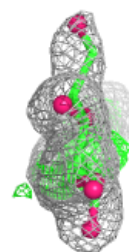
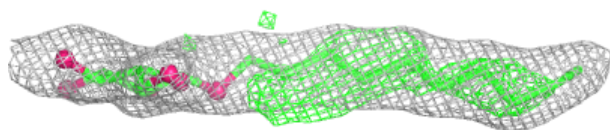
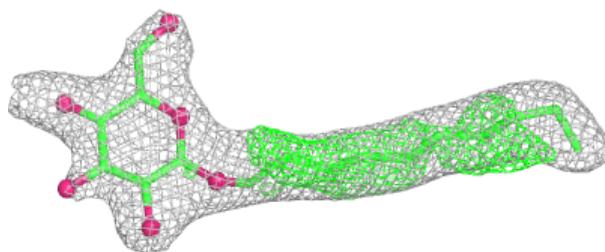


Electron density around LFA N 607:

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

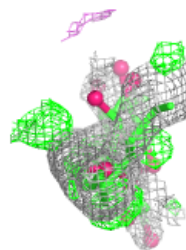
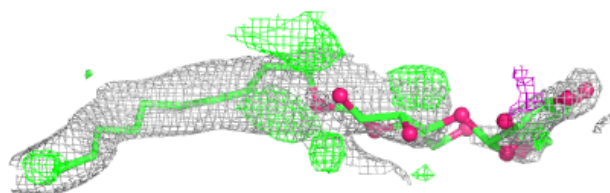
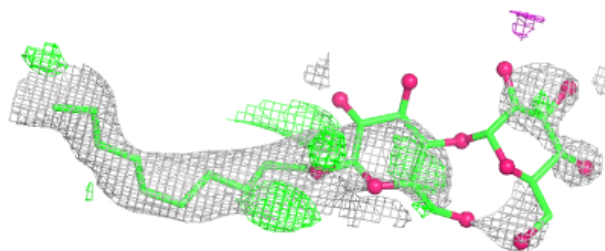
**Electron density around DMU O 308:**

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

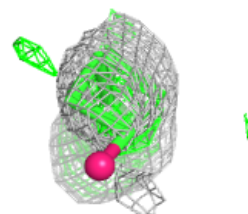
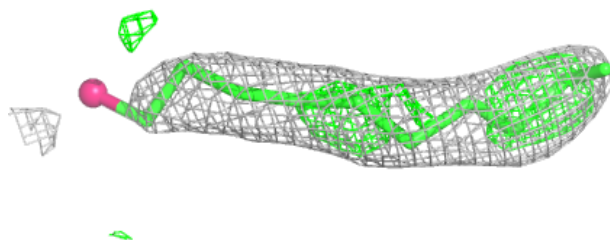
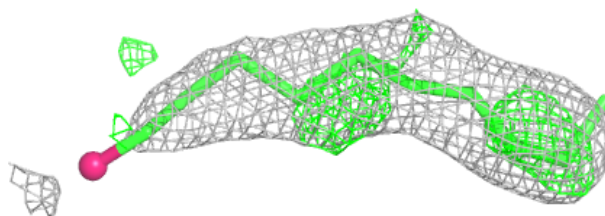


Electron density around DMU U 101:

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

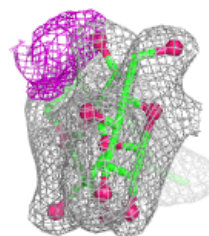
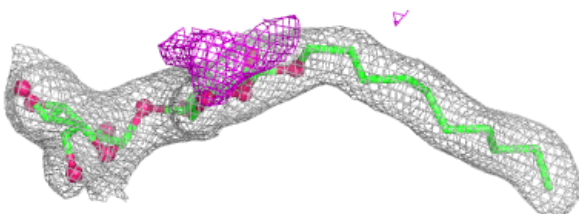
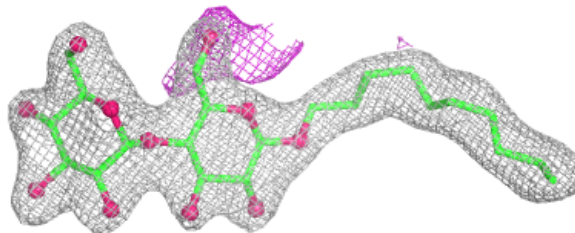
**Electron density around DMU J 101:**

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

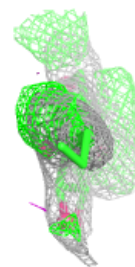
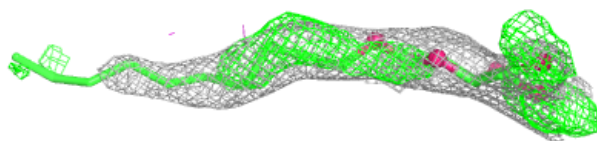
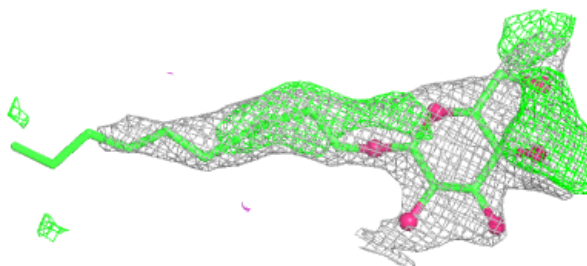


Electron density around DMU Z 101:

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

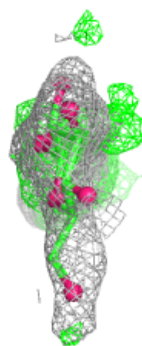
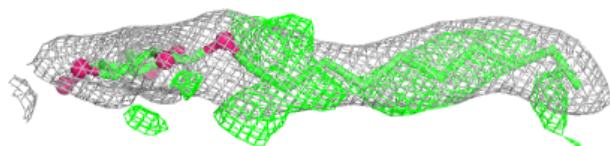
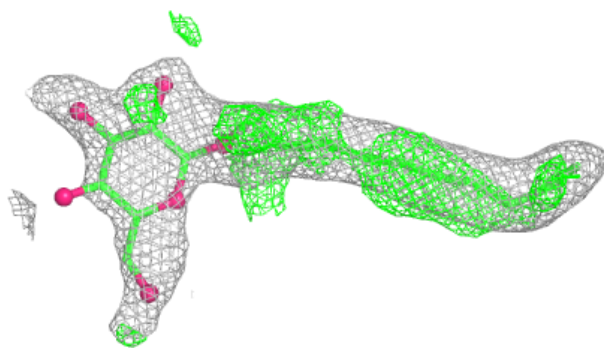
**Electron density around DMU L 102:**

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

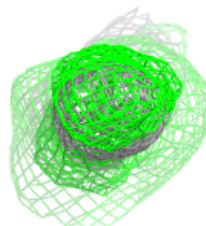
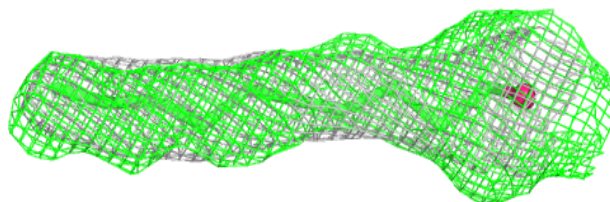
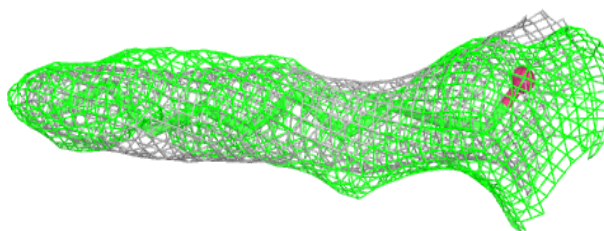


Electron density around DMU B 304:

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

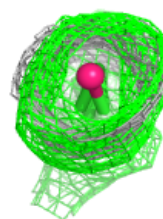
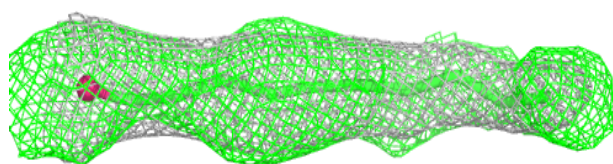
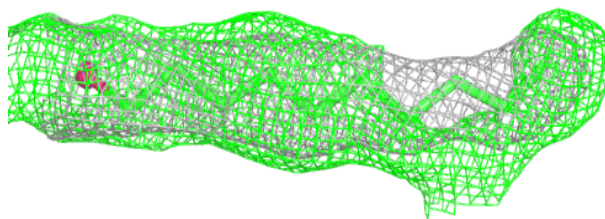
**Electron density around DMU O 306:**

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

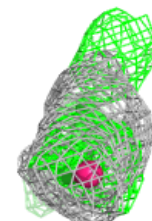
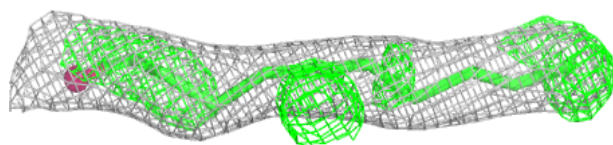
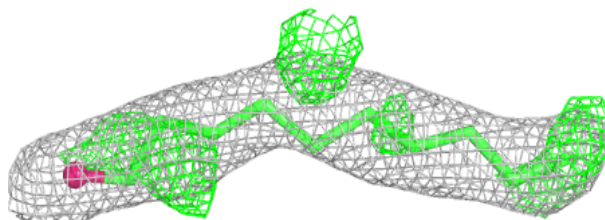


Electron density around DMU P 306:

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

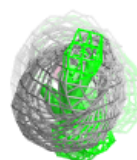
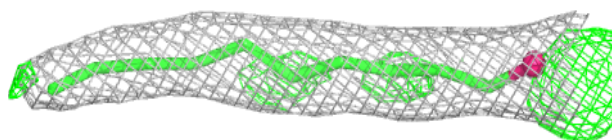
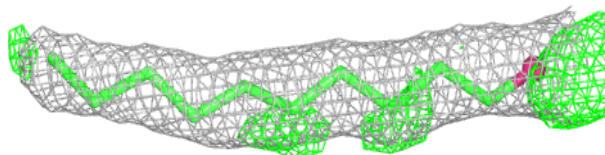
**Electron density around DMU O 307:**

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

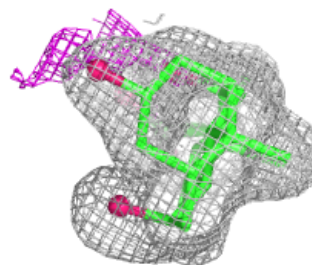
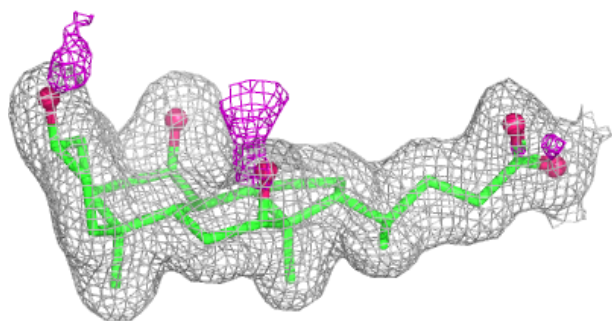
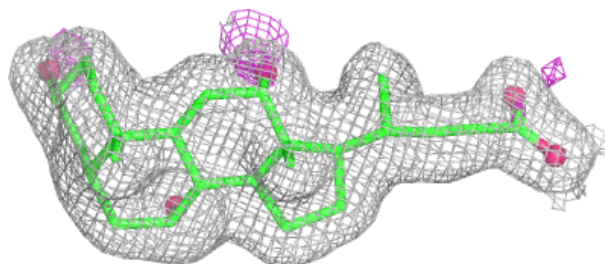


Electron density around DMU C 306:

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

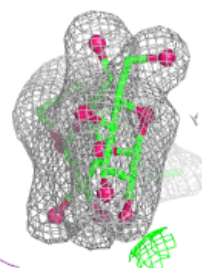
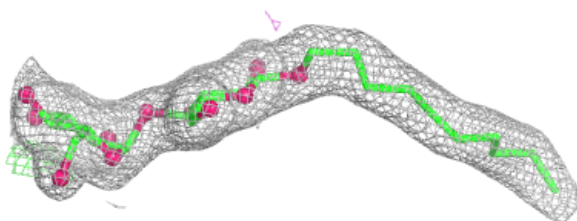
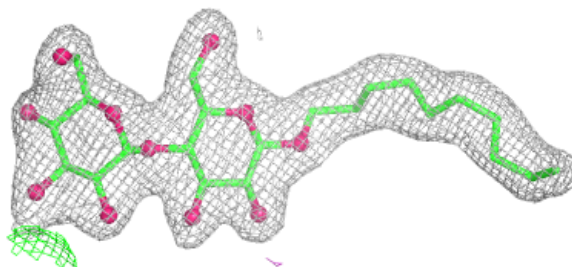
**Electron density around CHD C 301:**

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

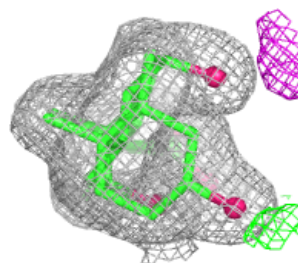
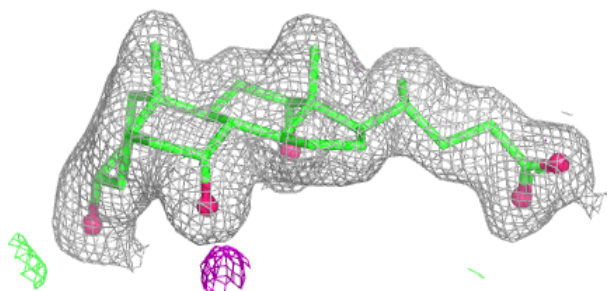
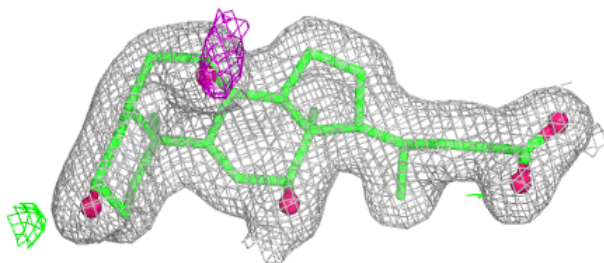


Electron density around DMU M 101:

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

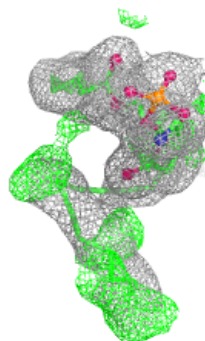
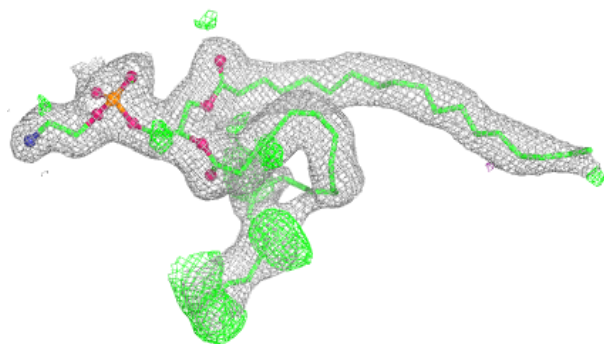
**Electron density around CHD P 301:**

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

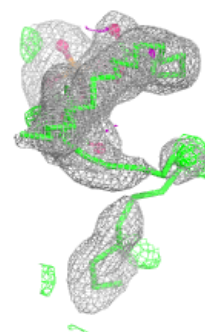
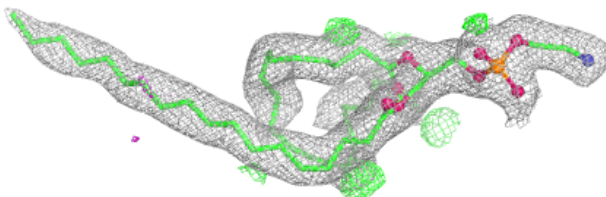
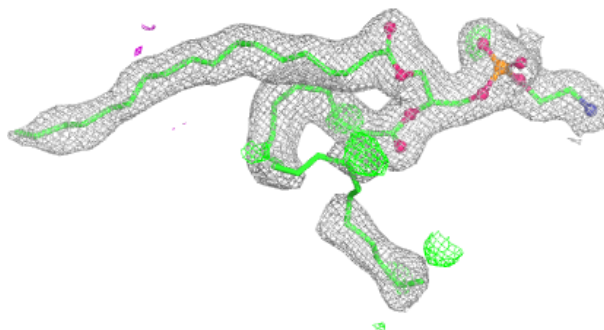


Electron density around PEK G 101:

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

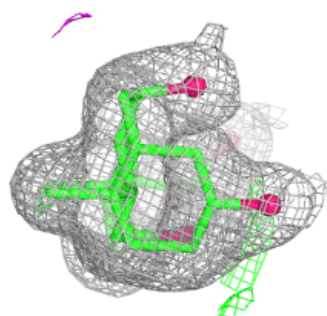
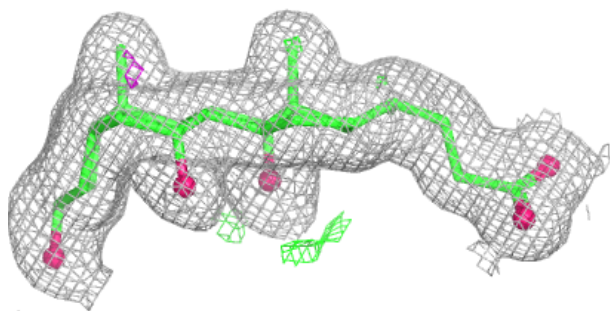
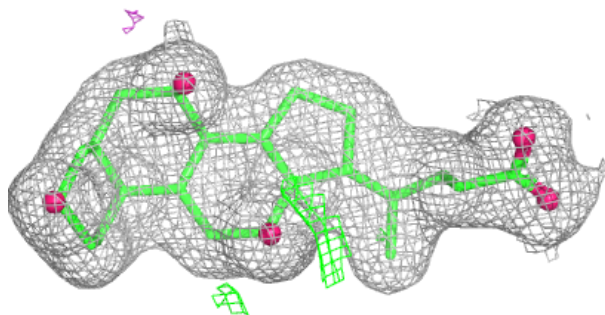
**Electron density around PEK T 102:**

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

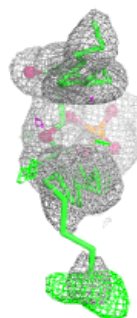
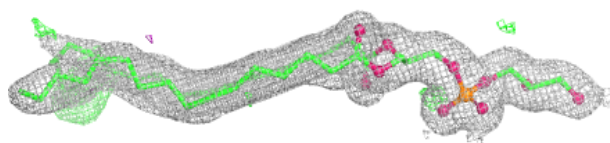
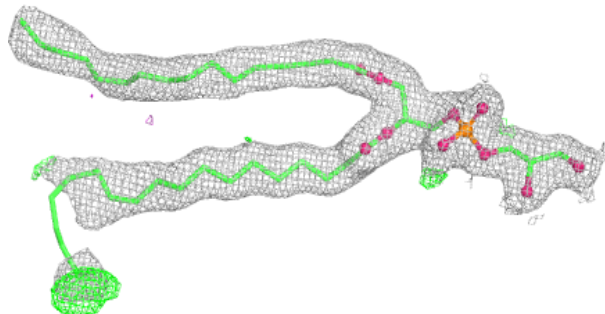


Electron density around CHD O 301:

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

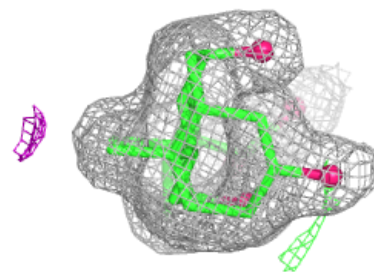
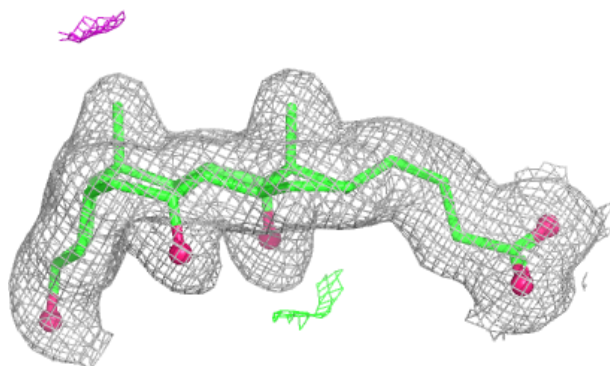
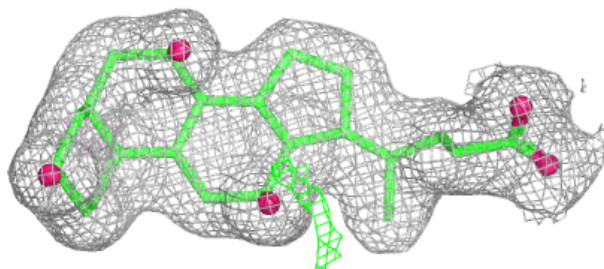
**Electron density around PGV C 303:**

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

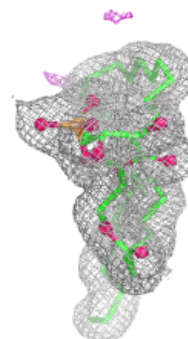
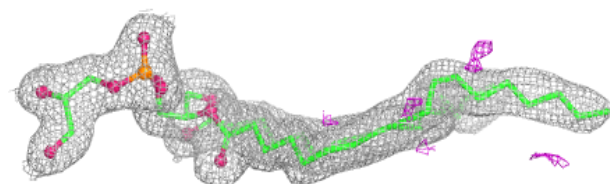
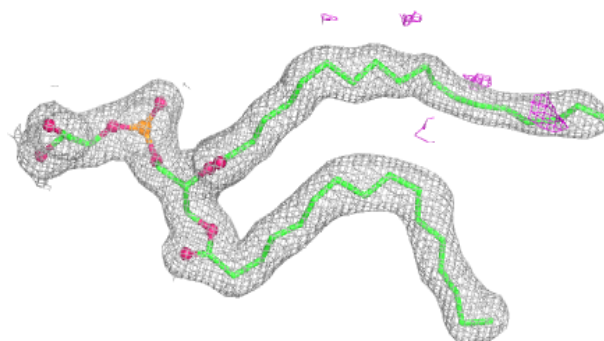


Electron density around CHD B 306:

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

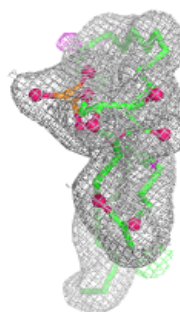
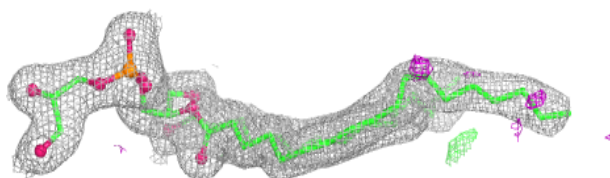
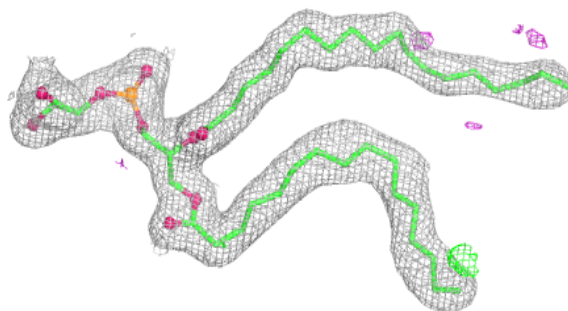
**Electron density around PGV A 614:**

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

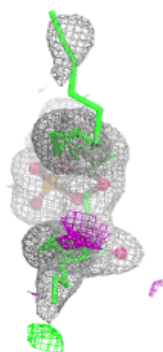
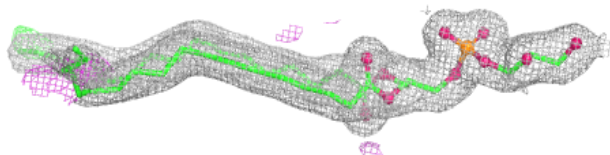
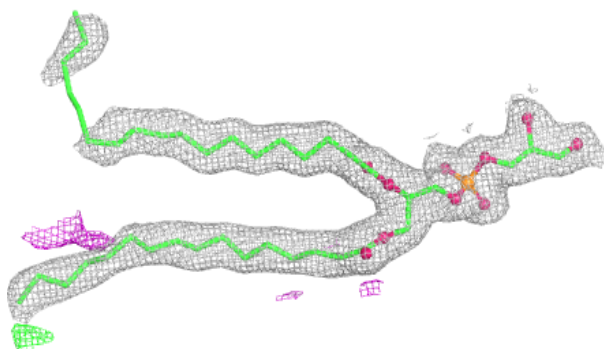


Electron density around PGV N 616:

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

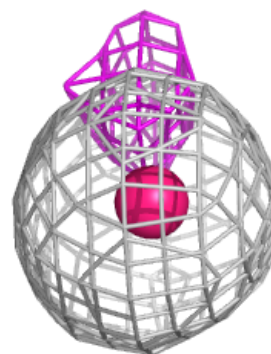
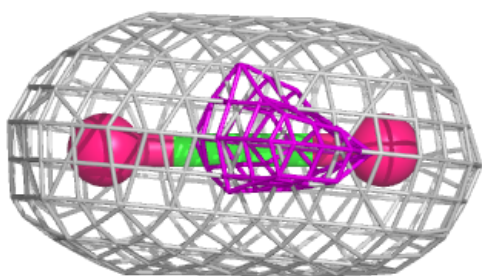
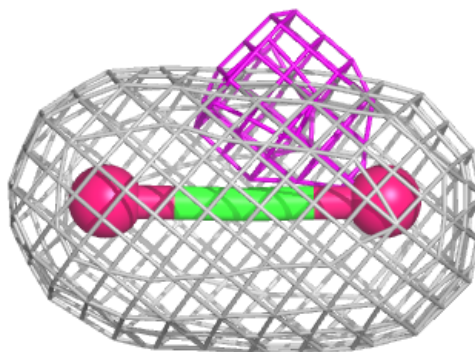
**Electron density around PGV P 303:**

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

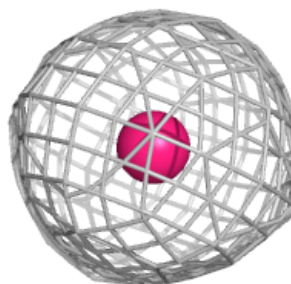
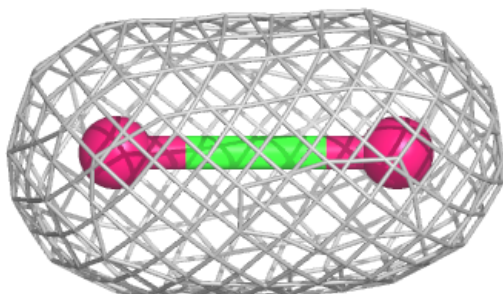
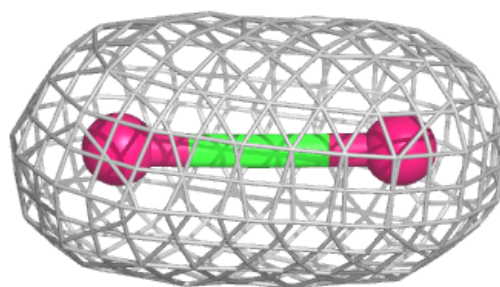


Electron density around CO2 N 606:

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

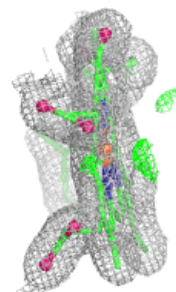
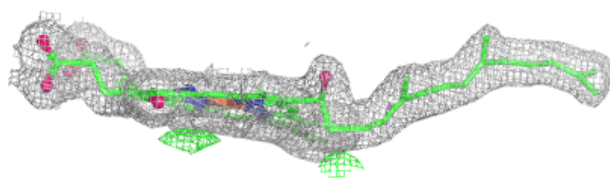
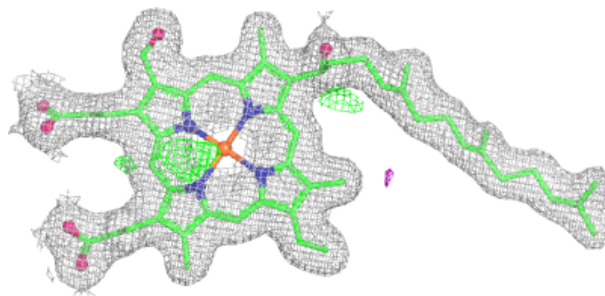
**Electron density around CO2 A 606:**

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

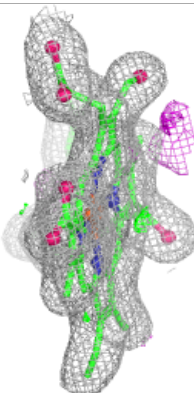
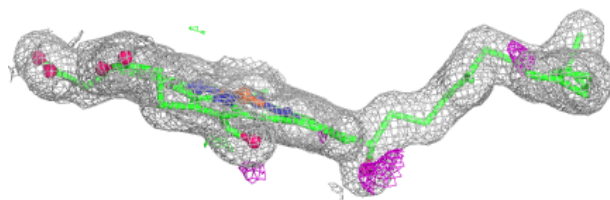
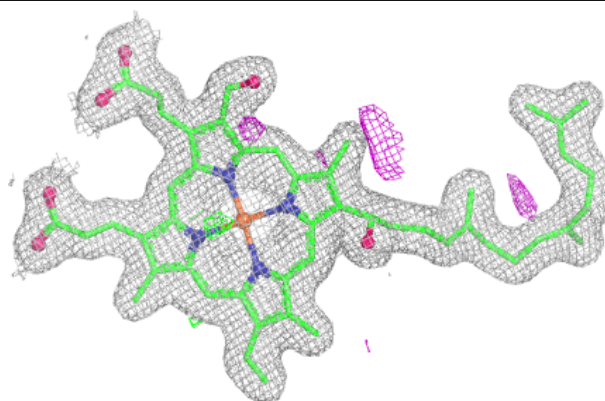


Electron density around HEA A 601:

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

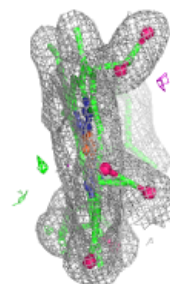
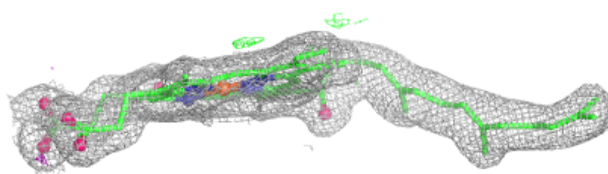
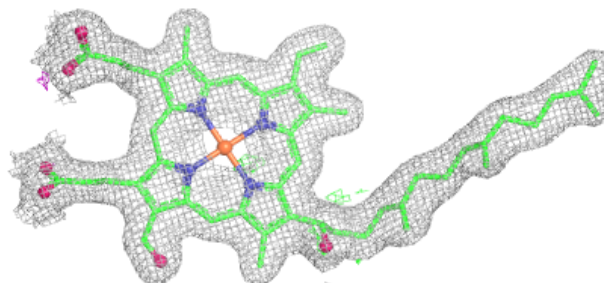
**Electron density around HEA A 602:**

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

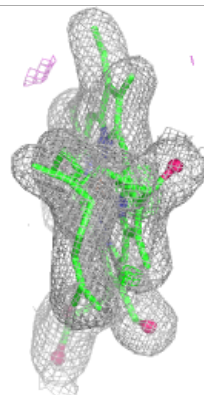
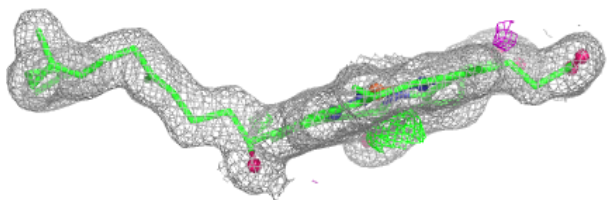
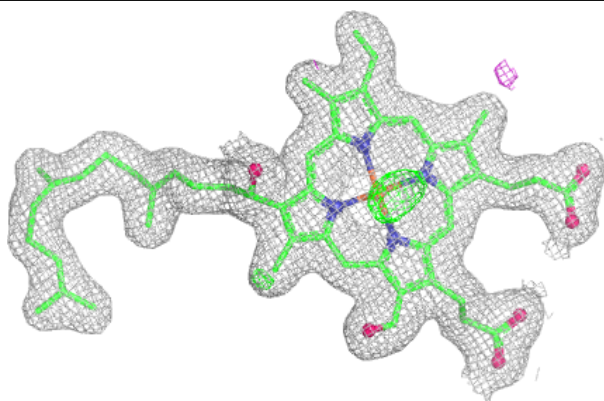


Electron density around HEA N 601:

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

**Electron density around HEA N 602:**

$2mF_o-DF_c$ (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.