



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 15, 2026 – 10:41 AM UTC

PDB ID : 6A2W / pdb_00006a2w
Title : Crystal structure of fucoxanthin chlorophyll a/c complex from *Phaeodactylum tricornutum*
Authors : Wang, W.; Yu, L.J.; Kuang, T.Y.; Shen, J.R.
Deposited on : 2018-06-13
Resolution : 1.80 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

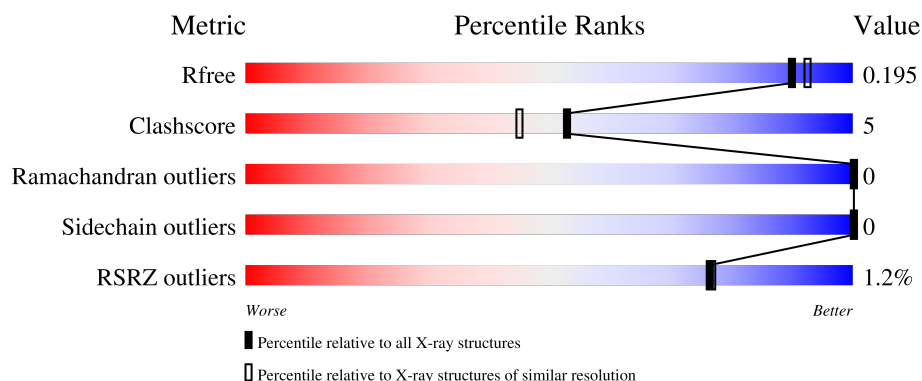
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.80 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	7662 (1.80-1.80)
Clashscore	190562	8479 (1.80-1.80)
Ramachandran outliers	187476	8391 (1.80-1.80)
Sidechain outliers	187428	8390 (1.80-1.80)
RSRZ outliers	180081	7663 (1.80-1.80)

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	167	 93% 6%

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
5	CLA	A	401	X	-	-	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	CLA	A	402	X	-	-	-
5	CLA	A	404	X	-	-	-
5	CLA	A	405	X	-	-	-
5	CLA	A	406	X	-	-	-
5	CLA	A	407	X	-	-	-
5	CLA	A	409	X	-	-	-

2 Entry composition [i](#)

There are 13 unique types of molecules in this entry. The entry contains 2518 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.

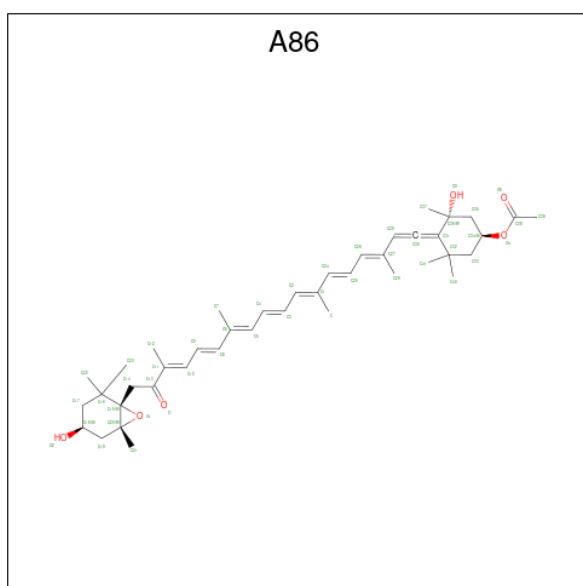
- Molecule 1 is a protein called Protein fucoxanthin chlorophyll a/c protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	166	Total	C	N	O	S	0	3	0
			1308	847	216	241	4			

- Molecule 2 is CALCIUM ION (CCD ID: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	2	Total	Ca	0	0
			2	2		

- Molecule 3 is (3S,3'S,5R,5'R,6S,6'R,8'R)-3,5'-dihydroxy-8-oxo-6',7'-didehydro-5,5',6,6',7,8-h exahydro-5,6-epoxy-beta,beta-caroten-3'- yl acetate (CCD ID: A86) (formula: C₄₂H₅₈O₆).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			48	42	6		
3	A	1	Total	C	O	0	0
			48	42	6		

Continued on next page...

Continued from previous page...

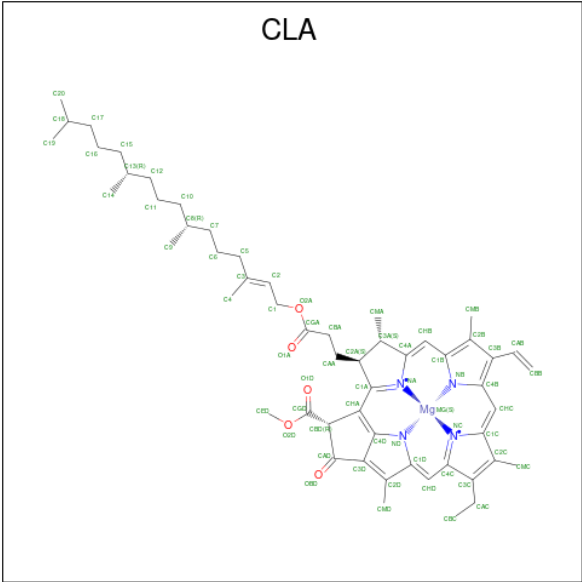
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			48	42	6		
3	A	1	Total	C	O	0	0
			48	42	6		
3	A	1	Total	C	O	0	0
			48	42	6		
3	A	1	Total	C	O	0	0
			48	42	6		
3	A	1	Total	C	O	0	0
			48	42	6		

- Molecule 4 is (3S,3'R,5R,6S,7cis)-7',8'-didehydro-5,6-dihydro-5,6-epoxy-beta,beta-carotene-3,3'-diol (CCD ID: DD6) (formula: C₄₀H₅₄O₃).



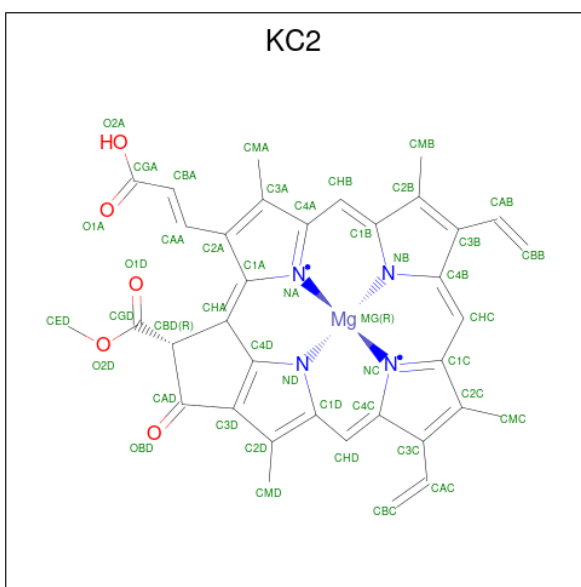
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	C	O	0	0
			43	40	3		

- Molecule 5 is CHLOROPHYLL A (CCD ID: CLA) (formula: C₅₅H₇₂MgN₄O₅).



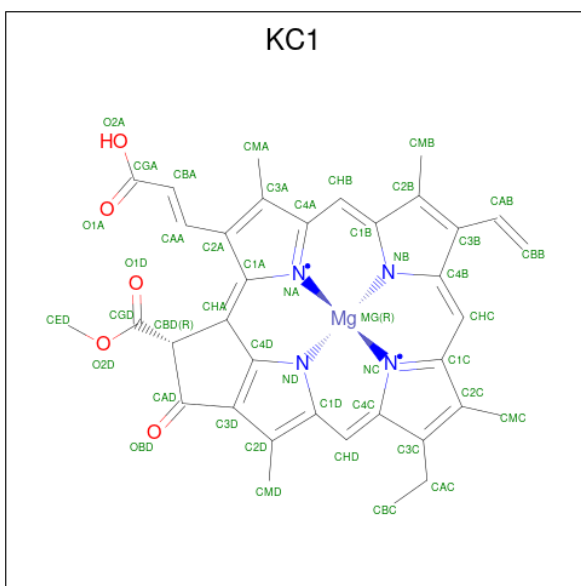
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
5	A	1	Total	C	Mg	N	O	0	0
			61	51	1	4	5		
5	A	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
5	A	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
5	A	1	Total	C	Mg	N	O	0	0
			46	36	1	4	5		
5	A	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
5	A	1	Total	C	Mg	N	O	0	0
			65	55	1	4	5		
5	A	1	Total	C	Mg	N	O	0	0
			41	33	1	4	3		

- Molecule 6 is Chlorophyll c2 (CCD ID: KC2) (formula: C₃₅H₂₈MgN₄O₅).



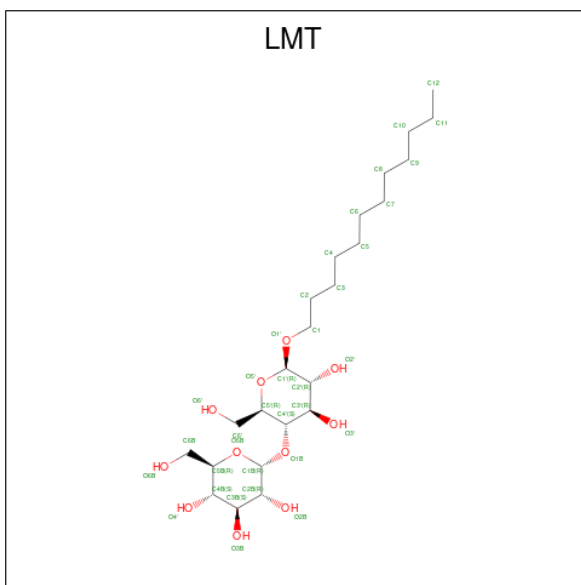
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	A	1	Total	C	Mg	N	O	0	0
			45	35	1	4	5		

- Molecule 7 is Chlorophyll c1 (CCD ID: KC1) (formula: $C_{35}H_{30}MgN_4O_5$).



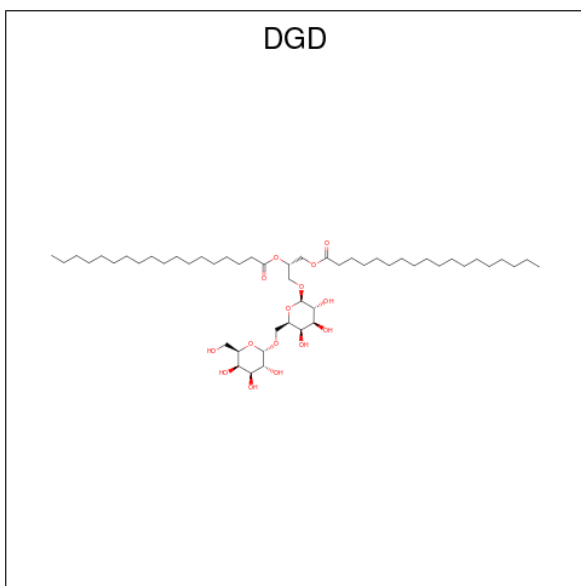
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
7	A	1	Total	C	Mg	N	O	0	0
			45	35	1	4	5		

- Molecule 8 is DODECYL-BETA-D-MALTOSIDE (CCD ID: LMT) (formula: $C_{24}H_{46}O_{11}$).



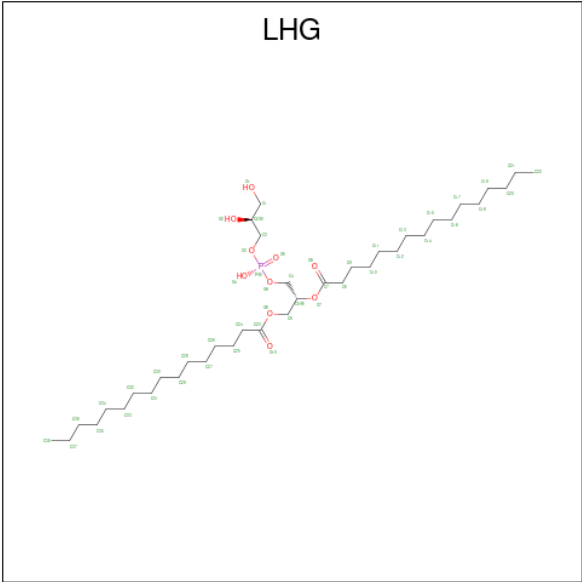
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
8	A	1	Total	C	O	0	0
			31	20	11		

- Molecule 9 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (CCD ID: DGD) (formula: $C_{51}H_{96}O_{15}$).



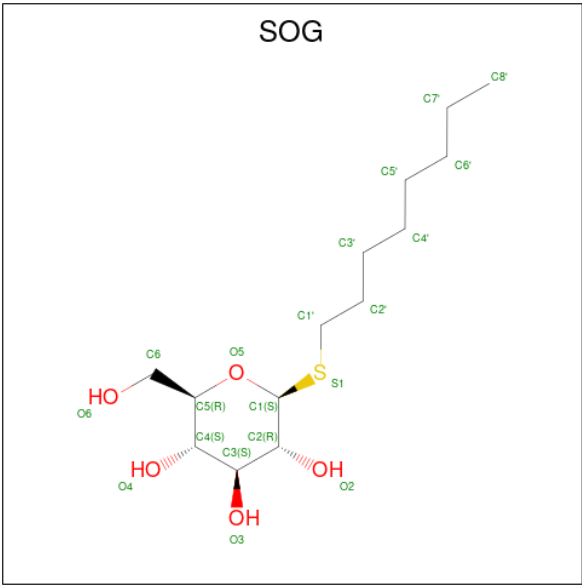
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
9	A	1	Total	C	O	0	0
			39	34	5		

- Molecule 10 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: $\text{C}_{38}\text{H}_{75}\text{O}_{10}\text{P}$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
10	A	1	Total	C	O	P	0	0
			33	24	8	1		

- Molecule 11 is octyl 1-thio-beta-D-glucopyranoside (CCD ID: SOG) (formula: C₁₄H₂₈O₅S).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
11	A	1	Total	C	O	S	0	0
			20	14	5	1		
11	A	1	Total	C	O	S	0	0
			20	14	5	1		
11	A	1	Total	C	O	S	0	0
			20	14	5	1		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
11	A	1	Total	C	O	S	0	0
			15	9	5	1		

- Molecule 12 is UNKNOWN LIGAND (CCD ID: UNL) (formula:).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
12	A	7	Total	C	0	0
			73	73		


- Molecule 13 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
13	A	80	Total	O	0	0
			80	80		

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: Protein fucoxanthin chlorophyl a/c protein

Chain A:  % 93% 6% •



4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	47.75Å 115.72Å 141.26Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	19.98 – 1.80 19.98 – 1.80	Depositor EDS
% Data completeness (in resolution range)	67.0 (19.98-1.80) 67.0 (19.98-1.80)	Depositor EDS
R_{merge}	0.02	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.11 (at 1.80Å)	Xtriage
Refinement program	PHENIX 1.14_3260	Depositor
R, R_{free}	0.175 , 0.197 0.173 , 0.195	Depositor DCC
R_{free} test set	2000 reflections (5.18%)	wwPDB-VP
Wilson B-factor (Å ²)	28.8	Xtriage
Anisotropy	0.091	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.40 , 83.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	2518	wwPDB-VP
Average B, all atoms (Å ²)	43.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.70% 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 [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: A86, LHG, SOG, CA, KC1, KC2, UNL, CLA, DGD, DD6, LMT

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.36	0/1342	0.50	0/1811

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1308	0	1297	9	0
2	A	2	0	0	0	0
3	A	336	0	0	0	0
4	A	43	0	0	0	0
5	A	408	0	411	13	0
6	A	45	0	0	0	0
7	A	45	0	0	0	0
8	A	31	0	35	0	0
9	A	39	0	62	4	0
10	A	33	0	42	1	0
11	A	75	0	99	4	0
12	A	73	0	0	0	0
13	A	80	0	0	1	0
All	All	2518	0	1946	22	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 5.

All (22) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:ASP:OD1	13:A:501:HOH:O	2.09	0.70
9:A:411:DGD:HBW2	9:A:411:DGD:HA92	1.76	0.68
1:A:91:LEU:HD23	5:A:405:CLA:HBC3	1.91	0.52
11:A:416:SOG:S1	11:A:416:SOG:O6	2.57	0.52
1:A:157:HIS:CE1	5:A:409:CLA:NA	2.78	0.52
9:A:411:DGD:HB61	9:A:411:DGD:HA51	1.92	0.51
5:A:406:CLA:H151	10:A:412:LHG:H132	1.92	0.50
5:A:409:CLA:HBD	11:A:413:SOG:H1	1.96	0.48
1:A:163:SER:O	11:A:414:SOG:H61	2.13	0.48
1:A:91:LEU:HD23	5:A:405:CLA:CBC	2.47	0.45
5:A:407:CLA:HMB3	5:A:407:CLA:HBB1	1.99	0.44
5:A:406:CLA:H202	5:A:406:CLA:H161	1.79	0.44
5:A:402:CLA:H192	5:A:402:CLA:H161	1.81	0.44
9:A:411:DGD:HA71	9:A:411:DGD:HBT2	1.98	0.44
1:A:162:VAL:HG21	5:A:409:CLA:HED3	2.01	0.42
9:A:411:DGD:HBE1	9:A:411:DGD:HBF1	1.40	0.42
5:A:404:CLA:H91	5:A:404:CLA:H111	1.67	0.42
5:A:409:CLA:CAA	11:A:413:SOG:H1'1	2.49	0.42
1:A:128:PHE:HB2	1:A:133:GLN:HG3	2.02	0.42
1:A:11:PRO:HD3	5:A:401:CLA:C4B	2.50	0.41
5:A:407:CLA:H111	5:A:407:CLA:H91	1.60	0.41
1:A:41:ARG:HA	1:A:44:MET:HE3	2.01	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	167/167 (100%)	165 (99%)	2 (1%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	134/132 (102%)	134 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	26	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 33 ligands modelled in this entry, 2 are monoatomic and 7 are unknown - leaving 24 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	$\# Z > 2$
5	CLA	A	406	1	69,73,73	1.13	4 (5%)	82,113,113	1.42	8 (9%)
3	A86	A	306	-	47,50,50	1.77	10 (21%)	51,76,76	2.19	15 (29%)
3	A86	A	307	-	47,50,50	1.28	4 (8%)	51,76,76	1.89	10 (19%)
8	LMT	A	410	-	32,32,36	1.01	2 (6%)	43,43,47	1.49	4 (9%)
3	A86	A	301	-	47,50,50	1.42	4 (8%)	51,76,76	2.38	17 (33%)
5	CLA	A	409	-	45,49,73	1.39	6 (13%)	54,84,113	1.47	6 (11%)
6	KC2	A	403	-	49,53,53	2.78	20 (40%)	60,89,89	3.68	33 (55%)
10	LHG	A	412	-	32,32,48	0.87	2 (6%)	35,37,54	1.67	4 (11%)
3	A86	A	304	-	47,50,50	1.29	5 (10%)	51,76,76	2.00	10 (19%)
5	CLA	A	404	1	69,73,73	1.08	4 (5%)	82,113,113	1.33	9 (10%)
11	SOG	A	416	-	15,15,20	1.02	1 (6%)	19,20,25	1.33	1 (5%)
5	CLA	A	401	13	65,69,73	1.13	6 (9%)	77,108,113	1.24	6 (7%)
3	A86	A	305	-	47,50,50	1.45	4 (8%)	51,76,76	2.29	10 (19%)
5	CLA	A	402	1	69,73,73	1.16	6 (8%)	82,113,113	1.42	10 (12%)
9	DGD	A	411	-	38,38,67	0.70	1 (2%)	40,40,81	1.36	3 (7%)
3	A86	A	302	-	47,50,50	1.41	5 (10%)	51,76,76	1.88	10 (19%)
4	DD6	A	308	-	40,45,45	1.84	4 (10%)	51,67,67	2.57	17 (33%)
3	A86	A	303	-	47,50,50	1.40	5 (10%)	51,76,76	2.10	10 (19%)
5	CLA	A	407	1	69,73,73	1.07	4 (5%)	82,113,113	1.42	14 (17%)
11	SOG	A	413	-	20,20,20	0.87	1 (5%)	24,25,25	0.98	1 (4%)
11	SOG	A	414	-	20,20,20	1.04	1 (5%)	24,25,25	1.26	2 (8%)
5	CLA	A	405	1	50,54,73	1.34	7 (14%)	59,90,113	1.62	13 (22%)
11	SOG	A	415	-	20,20,20	0.84	1 (5%)	24,25,25	0.90	1 (4%)
7	KC1	A	408	1	49,53,53	2.56	19 (38%)	61,89,89	3.87	33 (54%)

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
5	CLA	A	406	1	1/1/15/20	5/39/115/115	-
3	A86	A	306	-	-	2/34/90/90	0/3/3/3
3	A86	A	307	-	-	3/34/90/90	0/3/3/3
8	LMT	A	410	-	-	8/17/57/61	0/2/2/2
3	A86	A	301	-	-	3/34/90/90	0/3/3/3
5	CLA	A	409	-	1/1/10/20	2/10/86/115	-
6	KC2	A	403	-	-	4/15/71/71	-
10	LHG	A	412	-	-	16/34/34/53	-
3	A86	A	304	-	-	0/34/90/90	0/3/3/3
5	CLA	A	404	1	1/1/15/20	4/39/115/115	-
11	SOG	A	416	-	-	3/6/26/31	0/1/1/1
5	CLA	A	401	13	1/1/14/20	6/35/111/115	-
3	A86	A	305	-	-	3/34/90/90	0/3/3/3
5	CLA	A	402	1	1/1/15/20	12/39/115/115	-
9	DGD	A	411	-	-	24/40/40/95	-
3	A86	A	302	-	-	4/34/90/90	0/3/3/3
4	DD6	A	308	-	-	9/26/80/80	0/3/3/3
5	CLA	A	407	1	1/1/15/20	13/39/115/115	-
3	A86	A	303	-	-	2/34/90/90	0/3/3/3
11	SOG	A	413	-	-	2/11/31/31	0/1/1/1
11	SOG	A	414	-	-	5/11/31/31	0/1/1/1
5	CLA	A	405	1	1/1/11/20	8/17/93/115	-
11	SOG	A	415	-	-	3/11/31/31	0/1/1/1
7	KC1	A	408	1	-	1/15/71/71	-

All (126) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	308	DD6	C30-C31	-8.62	1.25	1.42
6	A	403	KC2	C4C-NC	7.25	1.49	1.37
7	A	408	KC1	C4C-NC	6.61	1.48	1.37
6	A	403	KC2	C2A-C3A	5.63	1.48	1.37
6	A	403	KC2	CHD-C4C	5.38	1.49	1.38
7	A	408	KC1	CHD-C4C	5.36	1.49	1.38
6	A	403	KC2	C3C-C2C	5.26	1.47	1.37
7	A	408	KC1	C2A-C3A	5.22	1.47	1.37
7	A	408	KC1	C3B-C2B	5.20	1.47	1.37
3	A	305	A86	O4-C38	5.20	1.46	1.35

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	301	A86	O4-C38	5.07	1.46	1.35
3	A	302	A86	O4-C38	4.95	1.46	1.35
7	A	408	KC1	CHB-C1B	4.91	1.48	1.38
6	A	403	KC2	C1A-NA	4.82	1.48	1.38
6	A	403	KC2	C3B-C2B	4.81	1.46	1.37
3	A	306	A86	O1-C20	-4.78	1.40	1.46
3	A	306	A86	O4-C38	4.69	1.45	1.35
6	A	403	KC2	O2D-CGD	4.57	1.44	1.33
3	A	303	A86	O4-C38	4.52	1.45	1.35
3	A	302	A86	C20-C15	4.52	1.54	1.48
7	A	408	KC1	C3C-C2C	4.46	1.46	1.36
3	A	307	A86	O4-C38	4.36	1.44	1.35
3	A	304	A86	O4-C38	4.30	1.44	1.35
6	A	403	KC2	OBD-CAD	4.29	1.29	1.22
6	A	403	KC2	CBC-CAC	4.23	1.50	1.30
7	A	408	KC1	O2D-CGD	4.09	1.43	1.33
6	A	403	KC2	CHD-C1D	4.08	1.48	1.39
6	A	403	KC2	CHB-C1B	4.05	1.46	1.38
3	A	305	A86	C20-C15	4.05	1.53	1.48
3	A	303	A86	C20-C15	4.01	1.53	1.48
3	A	301	A86	C20-C15	3.97	1.53	1.48
3	A	304	A86	C20-C15	3.93	1.53	1.48
11	A	414	SOG	C1'-S1	-3.91	1.75	1.81
6	A	403	KC2	CHC-C4B	3.89	1.46	1.38
7	A	408	KC1	C1A-NA	3.84	1.46	1.38
5	A	402	CLA	C1D-ND	3.77	1.42	1.37
3	A	307	A86	C20-C15	3.72	1.52	1.48
3	A	306	A86	C30-C29	-3.71	1.25	1.31
3	A	301	A86	C30-C31	-3.63	1.26	1.30
7	A	408	KC1	CHD-C1D	3.59	1.47	1.39
3	A	305	A86	C30-C31	-3.50	1.26	1.30
3	A	301	A86	C30-C29	-3.48	1.26	1.31
5	A	409	CLA	C1D-ND	3.45	1.42	1.37
4	A	308	DD6	C28-C27	-3.44	1.48	1.50
11	A	413	SOG	C1'-S1	-3.40	1.76	1.81
4	A	308	DD6	O1-C20	-3.40	1.41	1.46
7	A	408	KC1	CHB-C4A	3.39	1.46	1.39
7	A	408	KC1	OBD-CAD	3.38	1.28	1.22
3	A	306	A86	C30-C31	-3.33	1.26	1.30
3	A	305	A86	C30-C29	-3.28	1.26	1.31
5	A	401	CLA	C1D-ND	3.25	1.42	1.37
5	A	406	CLA	C1D-ND	3.25	1.42	1.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	A	403	KC2	CHB-C4A	3.24	1.46	1.39
7	A	408	KC1	CHC-C4B	3.24	1.44	1.38
6	A	403	KC2	CHC-C1C	3.24	1.46	1.39
3	A	303	A86	C30-C31	-3.23	1.26	1.30
5	A	406	CLA	MG-ND	-3.22	1.99	2.05
5	A	405	CLA	C1D-ND	3.22	1.42	1.37
3	A	306	A86	O1-C15	-3.20	1.40	1.45
5	A	404	CLA	C1D-ND	3.20	1.42	1.37
11	A	416	SOG	C1'-S1	-3.18	1.77	1.81
5	A	406	CLA	C4B-NB	3.14	1.42	1.37
5	A	404	CLA	MG-ND	-3.11	1.99	2.05
7	A	408	KC1	C4C-C3C	3.02	1.50	1.45
11	A	415	SOG	C1'-S1	-3.02	1.77	1.81
5	A	402	CLA	C1B-C2B	2.95	1.50	1.43
5	A	404	CLA	C1B-C2B	2.93	1.50	1.43
3	A	302	A86	C15-C16	-2.93	1.50	1.55
5	A	401	CLA	C1B-C2B	2.91	1.49	1.43
5	A	407	CLA	C1B-C2B	2.87	1.49	1.43
5	A	409	CLA	C4B-NB	2.87	1.41	1.37
5	A	402	CLA	C4B-NB	2.84	1.41	1.37
7	A	408	KC1	CHC-C1C	2.82	1.45	1.39
5	A	407	CLA	C1D-ND	2.80	1.41	1.37
3	A	303	A86	C30-C29	-2.80	1.27	1.31
5	A	409	CLA	C1B-C2B	2.74	1.49	1.43
3	A	306	A86	C15-C16	-2.74	1.51	1.55
7	A	408	KC1	CBD-CAD	-2.72	1.44	1.56
3	A	307	A86	C30-C29	-2.72	1.27	1.31
7	A	408	KC1	C4A-C3A	2.69	1.50	1.44
5	A	401	CLA	C4B-NB	2.68	1.41	1.37
3	A	306	A86	C13-C11	-2.66	1.44	1.49
5	A	406	CLA	C1B-C2B	2.64	1.49	1.43
6	A	403	KC2	C3C-C4C	2.61	1.50	1.44
3	A	302	A86	C30-C29	-2.58	1.27	1.31
3	A	302	A86	C30-C31	-2.54	1.27	1.30
6	A	403	KC2	C4A-C3A	2.53	1.49	1.44
5	A	404	CLA	C4B-NB	2.53	1.41	1.37
7	A	408	KC1	C1A-CHA	2.44	1.46	1.40
3	A	307	A86	C30-C31	-2.40	1.27	1.30
6	A	403	KC2	C1B-NB	-2.40	1.34	1.37
5	A	405	CLA	C4B-NB	2.39	1.41	1.37
5	A	405	CLA	C1B-C2B	2.38	1.48	1.43
3	A	303	A86	C13-C11	-2.36	1.45	1.49

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	405	CLA	C3B-C4B	2.34	1.49	1.42
5	A	405	CLA	CMD-C2D	-2.34	1.46	1.50
4	A	308	DD6	C26-C27	-2.34	1.32	1.37
6	A	403	KC2	C1D-C2D	2.33	1.48	1.43
6	A	403	KC2	C1A-CHA	2.29	1.46	1.40
5	A	402	CLA	C3B-C4B	2.28	1.49	1.42
5	A	405	CLA	MG-NB	-2.27	2.01	2.05
5	A	409	CLA	CHC-C1C	2.26	1.43	1.38
3	A	306	A86	C17-C18	-2.25	1.49	1.52
3	A	306	A86	C17-C16	-2.25	1.51	1.54
9	A	411	DGD	O2G-C2G	-2.22	1.41	1.46
3	A	304	A86	C30-C29	-2.21	1.28	1.31
5	A	407	CLA	CHC-C1C	2.18	1.42	1.38
6	A	403	KC2	CBD-CAD	-2.17	1.46	1.56
5	A	407	CLA	MG-ND	-2.16	2.01	2.05
10	A	412	LHG	P-O3	2.15	1.62	1.54
7	A	408	KC1	C4B-NB	-2.14	1.35	1.37
5	A	402	CLA	MG-ND	-2.13	2.01	2.05
5	A	405	CLA	CMB-C2B	-2.13	1.46	1.50
3	A	304	A86	C13-C11	-2.10	1.45	1.49
5	A	401	CLA	MG-ND	-2.09	2.01	2.05
5	A	402	CLA	CHC-C1C	2.08	1.42	1.38
5	A	409	CLA	MG-NB	-2.07	2.01	2.05
8	A	410	LMT	O3'-C3'	-2.07	1.37	1.43
7	A	408	KC1	C1D-C2D	2.04	1.47	1.43
5	A	401	CLA	C3B-C4B	2.04	1.48	1.42
10	A	412	LHG	P-O6	2.04	1.66	1.60
8	A	410	LMT	O2'-C2'	-2.03	1.37	1.43
3	A	304	A86	C15-C16	-2.03	1.52	1.55
5	A	409	CLA	CMD-C2D	-2.02	1.46	1.50
3	A	306	A86	C20-C15	2.01	1.50	1.48
5	A	401	CLA	MG-NB	-2.00	2.01	2.05

All (247) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	A	403	KC2	C1A-NA-C4A	-10.42	101.92	106.68
7	A	408	KC1	CHD-C4C-C3C	-10.18	106.46	125.23
7	A	408	KC1	CHD-C4C-NC	9.84	139.13	124.31
3	A	306	A86	C20-O1-C15	9.27	65.01	61.03
6	A	403	KC2	CHD-C4C-NC	8.53	137.16	124.31
7	A	408	KC1	CAB-C3B-C4B	8.41	144.91	124.82

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	303	A86	C20-O1-C15	8.32	64.60	61.03
3	A	304	A86	C20-O1-C15	8.16	64.53	61.03
3	A	305	A86	O1-C20-C19	-7.90	106.09	113.49
3	A	302	A86	C20-O1-C15	7.84	64.40	61.03
3	A	307	A86	C20-O1-C15	7.76	64.36	61.03
3	A	305	A86	C20-O1-C15	7.62	64.30	61.03
7	A	408	KC1	CAC-C3C-C4C	7.58	134.65	124.79
3	A	301	A86	C20-O1-C15	7.38	64.20	61.03
7	A	408	KC1	CHC-C4B-NB	7.36	135.16	124.80
7	A	408	KC1	CHC-C4B-C3B	-7.31	112.89	125.21
6	A	403	KC2	CHC-C4B-C3B	-6.88	113.61	125.21
3	A	305	A86	O4-C38-C39	6.61	122.87	111.09
5	A	402	CLA	C4A-NA-C1A	6.60	109.69	106.68
7	A	408	KC1	C2C-C1C-NC	6.57	118.58	110.45
4	A	308	DD6	C21-C20-C19	6.43	121.47	114.24
6	A	403	KC2	CHC-C4B-NB	6.39	133.80	124.80
6	A	403	KC2	CHB-C4A-C3A	-6.38	114.96	125.03
5	A	406	CLA	C4A-NA-C1A	6.34	109.57	106.68
6	A	403	KC2	C2C-C1C-NC	6.18	118.10	110.45
4	A	308	DD6	C21-C20-C15	-5.85	112.68	122.30
6	A	403	KC2	C4C-C3C-C2C	-5.77	101.98	107.28
10	A	412	LHG	O4-P-O5	5.76	133.30	110.83
5	A	409	CLA	C4A-NA-C1A	5.76	109.31	106.68
5	A	404	CLA	C4A-NA-C1A	5.75	109.30	106.68
3	A	303	A86	O4-C38-C39	5.67	121.21	111.09
6	A	403	KC2	OBD-CAD-C3D	-5.64	115.23	128.42
3	A	306	A86	O4-C38-C39	5.57	121.02	111.09
8	A	410	LMT	O5B-C5B-C4B	5.52	119.65	109.70
6	A	403	KC2	C1A-C2A-C3A	-5.48	102.24	107.28
7	A	408	KC1	CHC-C1C-NC	-5.45	115.78	124.23
3	A	301	A86	C36-C31-C32	5.45	125.10	119.70
7	A	408	KC1	C1B-CHB-C4A	-5.44	114.47	126.02
4	A	308	DD6	O1-C20-C19	5.39	118.54	113.49
7	A	408	KC1	C1A-C2A-C3A	-5.37	102.35	107.28
7	A	408	KC1	CAB-C3B-C2B	-5.36	111.02	128.43
4	A	308	DD6	C4-C5-C6	-5.31	119.83	127.28
6	A	403	KC2	CHB-C1B-NB	5.27	132.22	124.80
5	A	401	CLA	C4A-NA-C1A	5.19	109.05	106.68
6	A	403	KC2	CHD-C4C-C3C	-5.17	108.51	125.91
3	A	301	A86	O4-C38-C39	5.17	120.31	111.09
7	A	408	KC1	OBD-CAD-C3D	-5.10	116.49	128.42
6	A	403	KC2	CHC-C1C-NC	-5.10	116.32	124.23

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	A	408	KC1	CHB-C1B-NB	5.07	131.95	124.80
3	A	303	A86	O1-C20-C19	-5.02	108.79	113.49
4	A	308	DD6	C29-C30-C31	-4.88	164.12	175.48
5	A	405	CLA	C4A-NA-C1A	4.86	108.89	106.68
7	A	408	KC1	CHB-C4A-C3A	-4.80	117.45	125.03
6	A	403	KC2	CMD-C2D-C1D	-4.77	118.16	125.42
6	A	403	KC2	C4B-CHC-C1C	-4.72	115.98	126.02
7	A	408	KC1	CHD-C1D-ND	-4.66	117.05	124.05
3	A	304	A86	O4-C38-C39	4.65	119.38	111.09
6	A	403	KC2	CHB-C1B-C2B	-4.65	115.83	125.49
3	A	301	A86	O1-C20-C19	-4.64	109.14	113.49
4	A	308	DD6	C8-C6-C5	4.60	126.24	119.01
10	A	412	LHG	O3-P-O6	-4.56	94.77	106.67
6	A	403	KC2	CHD-C1D-ND	-4.56	117.21	124.05
6	A	403	KC2	C1B-CHB-C4A	-4.50	116.45	126.02
3	A	307	A86	O4-C38-C39	4.49	119.09	111.09
3	A	302	A86	O4-C38-C39	4.46	119.04	111.09
7	A	408	KC1	C4B-CHC-C1C	-4.45	116.57	126.02
4	A	308	DD6	C30-C29-C27	-4.42	161.22	176.23
3	A	303	A86	O1-C20-C15	-4.40	57.46	59.23
3	A	306	A86	C34-O4-C38	-4.27	110.30	117.85
6	A	403	KC2	C3A-C4A-NA	4.19	115.64	110.45
7	A	408	KC1	C3C-C4C-NC	4.19	114.39	109.90
3	A	305	A86	C25-C26-C27	-4.15	121.46	127.28
3	A	304	A86	O1-C20-C15	-4.13	57.57	59.23
7	A	408	KC1	CHB-C1B-C2B	-4.12	116.91	125.49
4	A	308	DD6	C3-C2-C1	-4.12	121.50	127.28
11	A	416	SOG	C1-O5-C5	4.12	119.95	112.56
9	A	411	DGD	O3G-C3G-C2G	-4.11	101.21	111.77
6	A	403	KC2	C1D-ND-C4D	4.09	109.18	106.31
5	A	405	CLA	CAC-C3C-C4C	4.00	130.00	124.79
5	A	402	CLA	O2D-CGD-O1D	-3.94	116.17	123.85
7	A	408	KC1	CHB-C4A-NA	3.92	130.31	124.23
3	A	306	A86	O1-C20-C15	-3.89	57.67	59.23
3	A	301	A86	C33-C32-C31	3.85	112.96	109.21
6	A	403	KC2	C4B-C3B-C2B	-3.83	103.49	106.81
3	A	301	A86	C3-C2-C1	-3.81	121.93	127.28
11	A	414	SOG	C1-O5-C5	3.79	119.36	112.56
7	A	408	KC1	C4C-C3C-C2C	-3.77	101.41	106.89
3	A	307	A86	O1-C20-C15	-3.75	57.72	59.23
3	A	301	A86	O1-C20-C21	-3.65	110.97	115.05
4	A	308	DD6	C10-C9-C8	-3.64	112.65	123.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	302	A86	O1-C20-C19	-3.59	110.13	113.49
6	A	403	KC2	O2D-CGD-CBD	3.52	117.39	111.23
3	A	305	A86	O4-C38-O5	-3.48	116.27	122.99
5	A	406	CLA	CAC-C3C-C4C	3.48	129.31	124.79
6	A	403	KC2	CBC-CAC-C3C	-3.47	110.21	127.53
3	A	302	A86	O1-C20-C21	-3.46	111.18	115.05
5	A	406	CLA	O2D-CGD-O1D	-3.46	117.12	123.85
4	A	308	DD6	O1-C15-C14	-3.40	107.13	116.88
6	A	403	KC2	CMD-C2D-C3D	3.37	136.30	125.67
4	A	308	DD6	C25-C26-C27	-3.35	117.23	126.61
7	A	408	KC1	O2D-CGD-CBD	3.35	117.09	111.23
3	A	301	A86	O1-C20-C15	-3.34	57.88	59.23
7	A	408	KC1	O2D-CGD-O1D	-3.34	117.36	123.85
6	A	403	KC2	CHB-C4A-NA	3.33	129.40	124.23
7	A	408	KC1	CMD-C2D-C1D	-3.31	120.38	125.42
4	A	308	DD6	C28-C27-C26	-3.30	117.78	124.18
6	A	403	KC2	C2A-C1A-NA	3.28	114.60	109.34
3	A	304	A86	O1-C20-C19	-3.28	110.42	113.49
5	A	407	CLA	CAA-C2A-C3A	-3.26	104.20	113.00
8	A	410	LMT	C1B-O5B-C5B	3.24	120.05	113.72
5	A	409	CLA	O2D-CGD-O1D	-3.23	117.56	123.85
8	A	410	LMT	O5'-C5'-C4'	3.21	116.35	109.72
4	A	308	DD6	C14-C13-C11	-3.21	120.56	125.53
7	A	408	KC1	C4B-C3B-C2B	-3.19	104.05	106.81
7	A	408	KC1	CMD-C2D-C3D	3.16	135.63	125.67
3	A	303	A86	O4-C38-O5	-3.15	116.90	122.99
4	A	308	DD6	C33-C32-C31	-3.11	103.35	109.49
3	A	304	A86	C25-C26-C27	-3.09	122.94	127.28
5	A	402	CLA	O2D-CGD-CBD	3.07	116.60	111.23
5	A	405	CLA	C2A-C1A-CHA	3.05	129.16	123.87
5	A	405	CLA	CAA-C2A-C1A	3.04	121.95	111.97
7	A	408	KC1	C3B-C2B-C1B	-3.04	104.17	107.05
5	A	407	CLA	O2A-CGA-O1A	-3.02	116.07	123.63
5	A	402	CLA	C1-C2-C3	3.02	131.14	126.20
3	A	304	A86	O1-C20-C21	-3.01	111.68	115.05
3	A	302	A86	O1-C20-C15	-3.00	58.02	59.23
5	A	401	CLA	O2D-CGD-O1D	-2.99	118.04	123.85
6	A	403	KC2	C3B-C2B-C1B	-2.97	104.23	107.05
7	A	408	KC1	C1D-CHD-C4C	-2.95	119.31	126.25
5	A	407	CLA	CHD-C1D-ND	-2.94	120.66	124.80
3	A	304	A86	C3-C4-C5	-2.94	117.50	123.52
5	A	407	CLA	C4A-NA-C1A	2.94	108.02	106.68

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	305	A86	O1-C20-C15	-2.92	58.05	59.23
5	A	404	CLA	O2D-CGD-O1D	-2.92	118.16	123.85
3	A	301	A86	C4-C5-C6	-2.92	123.18	127.28
3	A	307	A86	O4-C38-O5	-2.90	117.38	122.99
5	A	401	CLA	O2A-CGA-O1A	-2.90	116.36	123.63
5	A	402	CLA	O2A-CGA-O1A	-2.89	116.39	123.63
11	A	414	SOG	O5-C5-C6	2.89	113.59	106.44
5	A	407	CLA	C1-O2A-CGA	-2.88	109.67	116.65
5	A	405	CLA	CHB-C4A-NA	2.85	128.51	124.40
3	A	301	A86	C41-C32-C31	-2.84	107.93	110.47
5	A	407	CLA	C4-C3-C2	-2.84	116.32	123.63
3	A	307	A86	C25-C26-C27	-2.82	123.32	127.28
5	A	402	CLA	C1-O2A-CGA	2.82	123.47	116.65
10	A	412	LHG	O8-C23-C24	2.81	120.41	111.83
3	A	301	A86	C25-C26-C27	-2.78	123.38	127.28
7	A	408	KC1	C1A-NA-C4A	-2.77	105.41	106.68
5	A	407	CLA	O2D-CGD-O1D	-2.77	118.46	123.85
5	A	406	CLA	O2A-CGA-O1A	-2.75	116.75	123.63
5	A	404	CLA	CHB-C4A-NA	2.75	128.37	124.40
3	A	301	A86	O4-C38-O5	-2.72	117.74	122.99
3	A	303	A86	C10-C9-C8	-2.71	115.34	123.20
5	A	407	CLA	C3B-C4B-NB	-2.69	108.13	110.53
3	A	307	A86	O1-C20-C21	-2.69	112.04	115.05
5	A	407	CLA	CHC-C4B-NB	2.69	128.09	124.05
5	A	409	CLA	C3B-C4B-NB	-2.68	108.14	110.53
5	A	405	CLA	O2D-CGD-O1D	-2.66	118.67	123.85
5	A	405	CLA	CBA-CAA-C2A	-2.64	105.95	113.79
5	A	405	CLA	C3B-C4B-NB	-2.58	108.22	110.53
4	A	308	DD6	C7-C6-C5	-2.58	118.64	122.82
5	A	407	CLA	C5-C3-C2	2.57	126.94	121.17
3	A	306	A86	O4-C38-O5	-2.57	118.02	122.99
5	A	407	CLA	CHD-C1D-C2D	2.56	130.81	125.49
3	A	301	A86	C34-O4-C38	-2.52	113.39	117.85
6	A	403	KC2	CMB-C2B-C1B	2.52	129.17	124.73
3	A	306	A86	O1-C15-C20	-2.51	57.32	59.45
3	A	306	A86	C3-C2-C1	-2.50	123.77	127.28
3	A	301	A86	C26-C25-C24	-2.49	115.98	123.20
5	A	409	CLA	CHB-C4A-NA	2.49	127.99	124.40
3	A	306	A86	C23-C16-C17	-2.48	104.62	108.97
3	A	303	A86	C3-C2-C1	-2.46	123.83	127.28
3	A	305	A86	C10-C9-C8	-2.46	116.08	123.20
5	A	402	CLA	C3B-C4B-NB	-2.46	108.34	110.53

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	306	A86	O4-C34-C33	2.44	113.87	107.64
5	A	402	CLA	CHB-C4A-NA	2.43	127.91	124.40
5	A	406	CLA	C1D-ND-C4D	2.43	108.02	106.31
3	A	307	A86	C19-C18-C17	-2.42	106.27	110.79
11	A	413	SOG	O5-C1-C2	-2.40	107.00	110.32
3	A	302	A86	C4-C5-C6	-2.40	123.91	127.28
5	A	406	CLA	O1D-CGD-CBD	2.38	129.22	124.52
5	A	406	CLA	CHC-C4B-NB	2.38	127.62	124.05
5	A	401	CLA	O1D-CGD-CBD	2.38	129.21	124.52
3	A	301	A86	C40-C32-C31	-2.37	108.35	110.47
3	A	306	A86	C41-C32-C31	-2.37	108.35	110.47
7	A	408	KC1	CAA-C2A-C1A	2.36	135.00	124.64
3	A	304	A86	C4-C5-C6	-2.36	123.97	127.28
5	A	404	CLA	C1-C2-C3	-2.36	122.33	126.20
3	A	307	A86	C10-C9-C8	-2.33	116.44	123.20
6	A	403	KC2	C1D-CHD-C4C	-2.33	120.77	126.25
3	A	306	A86	C-C1-C2	-2.33	119.04	122.82
5	A	404	CLA	O1D-CGD-CBD	2.33	129.11	124.52
3	A	304	A86	C10-C9-C8	-2.32	116.47	123.20
4	A	308	DD6	C12-C11-C10	-2.31	119.08	122.82
3	A	306	A86	O1-C20-C21	-2.30	112.48	115.05
6	A	403	KC2	O2D-CGD-O1D	-2.30	119.38	123.85
6	A	403	KC2	CAB-C3B-C2B	2.29	135.88	128.43
7	A	408	KC1	C2A-C1A-NA	2.28	113.00	109.34
3	A	302	A86	O4-C38-O5	-2.28	118.60	122.99
7	A	408	KC1	C1D-ND-C4D	2.27	107.90	106.31
6	A	403	KC2	CAC-C3C-C4C	2.26	134.38	124.39
6	A	403	KC2	CHD-C1D-C2D	2.26	133.99	127.43
3	A	302	A86	C10-C9-C8	-2.26	116.66	123.20
5	A	405	CLA	CAC-C3C-C2C	-2.26	123.41	127.56
3	A	304	A86	O4-C38-O5	-2.25	118.64	122.99
3	A	307	A86	C4-C5-C6	-2.24	124.13	127.28
3	A	303	A86	C25-C26-C27	-2.24	124.14	127.28
5	A	407	CLA	CHA-C1A-NA	-2.24	121.33	126.39
5	A	409	CLA	CAA-C2A-C3A	-2.22	111.14	116.23
5	A	402	CLA	CMB-C2B-C3B	2.22	131.76	126.55
6	A	403	KC2	CAA-CBA-CGA	-2.21	115.79	127.05
5	A	407	CLA	CHB-C4A-NA	2.21	127.59	124.40
3	A	302	A86	O1-C15-C20	-2.21	57.58	59.45
3	A	306	A86	C28-C27-C26	-2.20	119.25	122.82
11	A	415	SOG	O5-C1-C2	-2.19	107.29	110.32
5	A	401	CLA	CMB-C2B-C1B	-2.18	122.09	125.42

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	301	A86	C21-C20-C19	-2.18	111.79	114.24
5	A	404	CLA	CHC-C4B-NB	2.18	127.31	124.05
8	A	410	LMT	C1-O1'-C1'	2.17	117.39	113.68
3	A	306	A86	C25-C26-C27	-2.17	124.24	127.28
5	A	402	CLA	CMB-C2B-C1B	-2.16	122.14	125.42
5	A	407	CLA	CMB-C2B-C3B	2.14	131.58	126.55
3	A	305	A86	O1-C15-C20	-2.13	57.65	59.45
5	A	406	CLA	CHB-C4A-NA	2.13	127.47	124.40
3	A	305	A86	C3-C4-C5	-2.12	119.19	123.52
5	A	405	CLA	C1D-ND-C4D	2.12	107.80	106.31
3	A	303	A86	C26-C25-C24	-2.11	117.08	123.20
10	A	412	LHG	C11-C10-C9	-2.11	103.71	114.37
5	A	404	CLA	O2A-CGA-O1A	-2.10	118.38	123.63
5	A	401	CLA	CMB-C2B-C3B	2.10	131.48	126.55
5	A	404	CLA	CAA-CBA-CGA	-2.10	107.26	113.21
5	A	405	CLA	CHA-C1A-NA	-2.09	121.66	126.39
5	A	404	CLA	C1D-ND-C4D	2.09	107.78	106.31
3	A	303	A86	C34-O4-C38	-2.08	114.17	117.85
3	A	301	A86	C3-C4-C5	-2.08	119.27	123.52
9	A	411	DGD	C1G-C2G-C3G	-2.08	107.00	111.80
3	A	305	A86	C26-C25-C24	-2.07	117.20	123.20
5	A	405	CLA	CHA-C4D-ND	2.07	136.81	132.55
3	A	306	A86	C10-C9-C8	-2.06	117.23	123.20
3	A	307	A86	C21-C20-C15	2.04	129.94	123.35
3	A	302	A86	C25-C26-C27	-2.03	124.43	127.28
7	A	408	KC1	CAA-CBA-CGA	-2.03	116.72	127.05
7	A	408	KC1	CMB-C2B-C1B	2.02	128.29	124.73
9	A	411	DGD	CDB-CCB-CBB	-2.02	104.18	114.37
5	A	409	CLA	CMB-C2B-C3B	2.01	131.28	126.55
4	A	308	DD6	C7-C6-C8	-2.00	115.03	118.09
5	A	405	CLA	CMB-C2B-C1B	-2.00	122.37	125.42

All (7) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
5	A	401	CLA	ND
5	A	402	CLA	ND
5	A	404	CLA	ND
5	A	405	CLA	ND
5	A	406	CLA	ND
5	A	407	CLA	ND
5	A	409	CLA	ND

All (142) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	301	A86	O5-C38-O4-C34
3	A	302	A86	C39-C38-O4-C34
3	A	306	A86	C39-C38-O4-C34
3	A	307	A86	C39-C38-O4-C34
4	A	308	DD6	C2-C1-C24-C25
4	A	308	DD6	C10-C11-C13-C14
4	A	308	DD6	C12-C11-C13-C14
4	A	308	DD6	C5-C6-C8-C9
4	A	308	DD6	C7-C6-C8-C9
5	A	401	CLA	C4-C3-C5-C6
5	A	405	CLA	C1A-C2A-CAA-CBA
5	A	407	CLA	C1A-C2A-CAA-CBA
6	A	403	KC2	C2C-C3C-CAC-CBC
6	A	403	KC2	C4C-C3C-CAC-CBC
10	A	412	LHG	C4-O6-P-O3
10	A	412	LHG	C4-O6-P-O5
11	A	414	SOG	O5-C1-S1-C1'
11	A	415	SOG	O5-C1-S1-C1'
11	A	416	SOG	O5-C1-S1-C1'
3	A	301	A86	C39-C38-O4-C34
3	A	306	A86	O5-C38-O4-C34
3	A	305	A86	C39-C38-O4-C34
3	A	305	A86	O5-C38-O4-C34
3	A	307	A86	O5-C38-O4-C34
3	A	303	A86	C39-C38-O4-C34
3	A	302	A86	O5-C38-O4-C34
3	A	303	A86	O5-C38-O4-C34
5	A	402	CLA	O1A-CGA-O2A-C1
5	A	406	CLA	O1A-CGA-O2A-C1
10	A	412	LHG	O10-C23-O8-C6
5	A	405	CLA	CBA-CGA-O2A-C1
5	A	405	CLA	O1A-CGA-O2A-C1
10	A	412	LHG	C24-C23-O8-C6
5	A	401	CLA	C2-C3-C5-C6
5	A	402	CLA	C3-C5-C6-C7
5	A	402	CLA	CBA-CGA-O2A-C1
5	A	406	CLA	CBA-CGA-O2A-C1
8	A	410	LMT	O5'-C1'-O1'-C1
5	A	402	CLA	C6-C7-C8-C9
5	A	407	CLA	C11-C10-C8-C9
8	A	410	LMT	C2'-C1'-O1'-C1
5	A	407	CLA	CBA-CGA-O2A-C1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
3	A	302	A86	C-C1-C24-C25
4	A	308	DD6	C-C1-C24-C25
8	A	410	LMT	C4B-C5B-C6B-O6B
5	A	404	CLA	C8-C10-C11-C12
5	A	405	CLA	C2C-C3C-CAC-CBC
8	A	410	LMT	O5'-C5'-C6'-O6'
5	A	409	CLA	CBD-CGD-O2D-CED
5	A	407	CLA	C8-C10-C11-C12
5	A	402	CLA	C5-C6-C7-C8
11	A	416	SOG	C4-C5-C6-O6
9	A	411	DGD	C1B-C2B-C3B-C4B
5	A	407	CLA	O1A-CGA-O2A-C1
5	A	407	CLA	C5-C6-C7-C8
5	A	406	CLA	C15-C16-C17-C18
11	A	414	SOG	C1'-C2'-C3'-C4'
5	A	402	CLA	O2A-C1-C2-C3
5	A	402	CLA	C15-C16-C17-C18
9	A	411	DGD	CDB-CEB-CFB-CGB
10	A	412	LHG	C15-C16-C17-C18
9	A	411	DGD	C7B-C8B-C9B-CAB
10	A	412	LHG	C17-C18-C19-C20
9	A	411	DGD	C8B-C9B-CAB-CBB
9	A	411	DGD	C6A-C7A-C8A-C9A
9	A	411	DGD	C4B-C5B-C6B-C7B
9	A	411	DGD	C9B-CAB-CBB-CCB
9	A	411	DGD	C2B-C1B-O2G-C2G
10	A	412	LHG	C8-C7-O7-C5
8	A	410	LMT	C2-C3-C4-C5
9	A	411	DGD	C9A-CAA-CBA-CCA
9	A	411	DGD	C3B-C4B-C5B-C6B
9	A	411	DGD	C5A-C6A-C7A-C8A
11	A	416	SOG	O5-C5-C6-O6
10	A	412	LHG	C11-C10-C9-C8
5	A	402	CLA	C13-C15-C16-C17
5	A	402	CLA	C1A-C2A-CAA-CBA
5	A	407	CLA	C10-C11-C12-C13
5	A	401	CLA	C11-C12-C13-C15
9	A	411	DGD	C4A-C5A-C6A-C7A
5	A	405	CLA	C4C-C3C-CAC-CBC
10	A	412	LHG	C24-C25-C26-C27
10	A	412	LHG	C11-C12-C13-C14
5	A	407	CLA	C11-C12-C13-C14

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
8	A	410	LMT	O5B-C5B-C6B-O6B
5	A	409	CLA	O1D-CGD-O2D-CED
5	A	407	CLA	C11-C12-C13-C15
9	A	411	DGD	C1A-C2A-C3A-C4A
8	A	410	LMT	C2B-C1B-O1B-C4'
9	A	411	DGD	CBB-CCB-CDB-CEB
11	A	414	SOG	C4'-C5'-C6'-C7'
11	A	413	SOG	C5'-C6'-C7'-C8'
5	A	401	CLA	C11-C12-C13-C14
9	A	411	DGD	O2G-C2G-C3G-O3G
11	A	415	SOG	S1-C1'-C2'-C3'
4	A	308	DD6	C24-C25-C26-C27
9	A	411	DGD	C6B-C7B-C8B-C9B
5	A	402	CLA	C6-C7-C8-C10
3	A	302	A86	C2-C1-C24-C25
11	A	414	SOG	C3'-C4'-C5'-C6'
5	A	406	CLA	C13-C15-C16-C17
11	A	415	SOG	C2-C1-S1-C1'
9	A	411	DGD	O1G-C1G-C2G-O2G
5	A	404	CLA	C11-C10-C8-C9
3	A	301	A86	O-C13-C14-C15
3	A	305	A86	O-C13-C14-C15
9	A	411	DGD	O1G-C1G-C2G-C3G
9	A	411	DGD	CEB-CFB-CGB-CHB
9	A	411	DGD	CCB-CDB-CEB-CFB
10	A	412	LHG	C23-C24-C25-C26
9	A	411	DGD	C3A-C4A-C5A-C6A
10	A	412	LHG	C13-C14-C15-C16
5	A	402	CLA	C16-C17-C18-C19
3	A	307	A86	C33-C34-O4-C38
4	A	308	DD6	C11-C10-C9-C8
4	A	308	DD6	C3-C4-C5-C6
5	A	401	CLA	C11-C10-C8-C7
5	A	401	CLA	O1D-CGD-O2D-CED
11	A	413	SOG	C4'-C5'-C6'-C7'
6	A	403	KC2	CAA-CBA-CGA-O2A
5	A	404	CLA	C11-C12-C13-C14
5	A	406	CLA	C6-C7-C8-C9
9	A	411	DGD	C1G-C2G-C3G-O3G
5	A	405	CLA	C2B-C3B-CAB-CBB
5	A	407	CLA	C15-C16-C17-C18
5	A	404	CLA	C11-C12-C13-C15

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
5	A	407	CLA	C4-C3-C5-C6
11	A	414	SOG	C5'-C6'-C7'-C8'
5	A	405	CLA	C4B-C3B-CAB-CBB
6	A	403	KC2	CAA-CBA-CGA-O1A
10	A	412	LHG	C12-C13-C14-C15
9	A	411	DGD	C5B-C6B-C7B-C8B
5	A	407	CLA	C11-C10-C8-C7
10	A	412	LHG	C16-C17-C18-C19
10	A	412	LHG	O7-C7-C8-C9
9	A	411	DGD	C8A-C9A-CAA-CBA
5	A	405	CLA	C3A-C2A-CAA-CBA
8	A	410	LMT	O5B-C1B-O1B-C4'
10	A	412	LHG	O9-C7-C8-C9
7	A	408	KC1	CAD-CBD-CGD-O2D
5	A	407	CLA	C16-C17-C18-C20
5	A	402	CLA	CAA-CBA-CGA-O2A

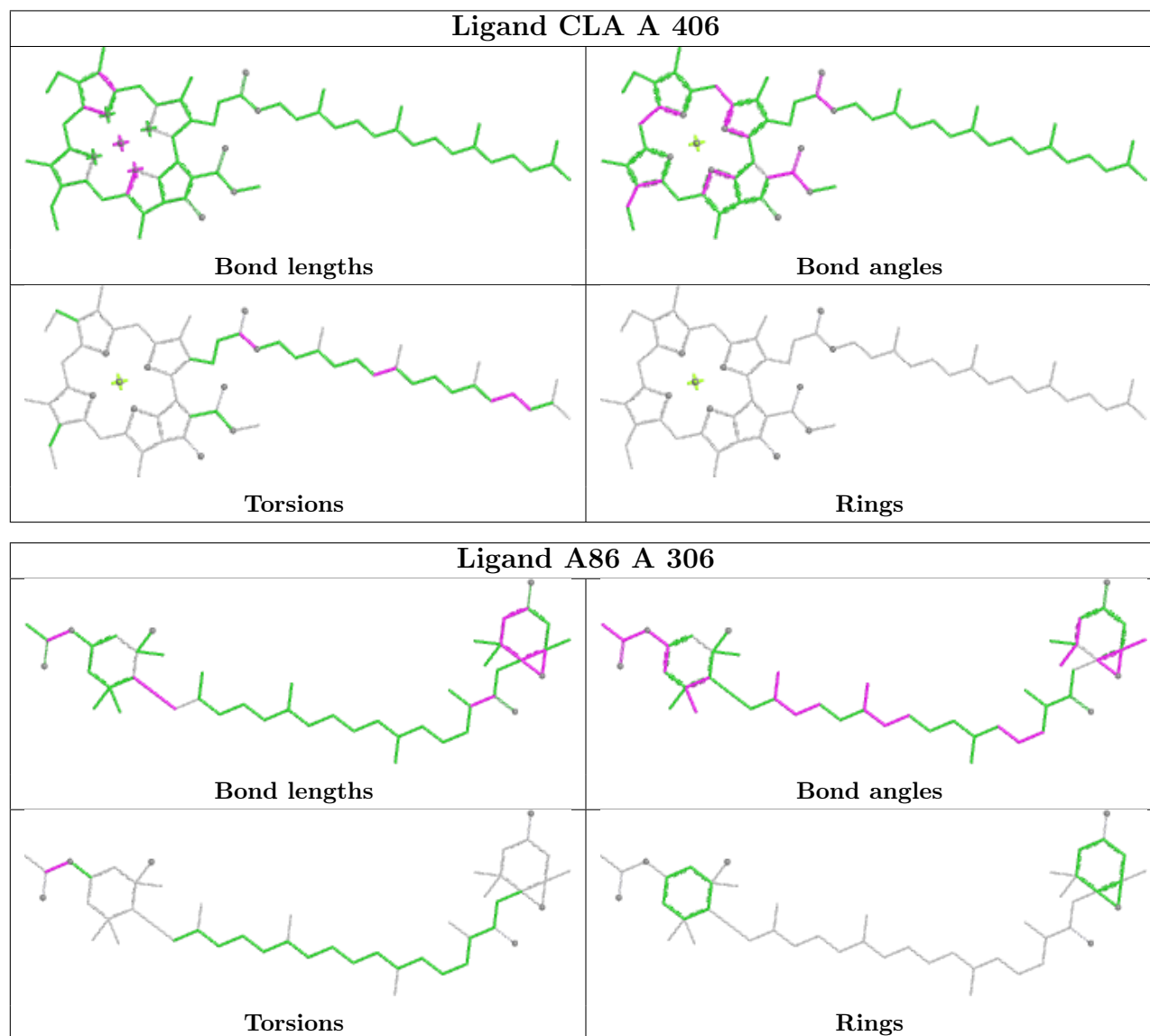
There are no ring outliers.

12 monomers are involved in 19 short contacts:

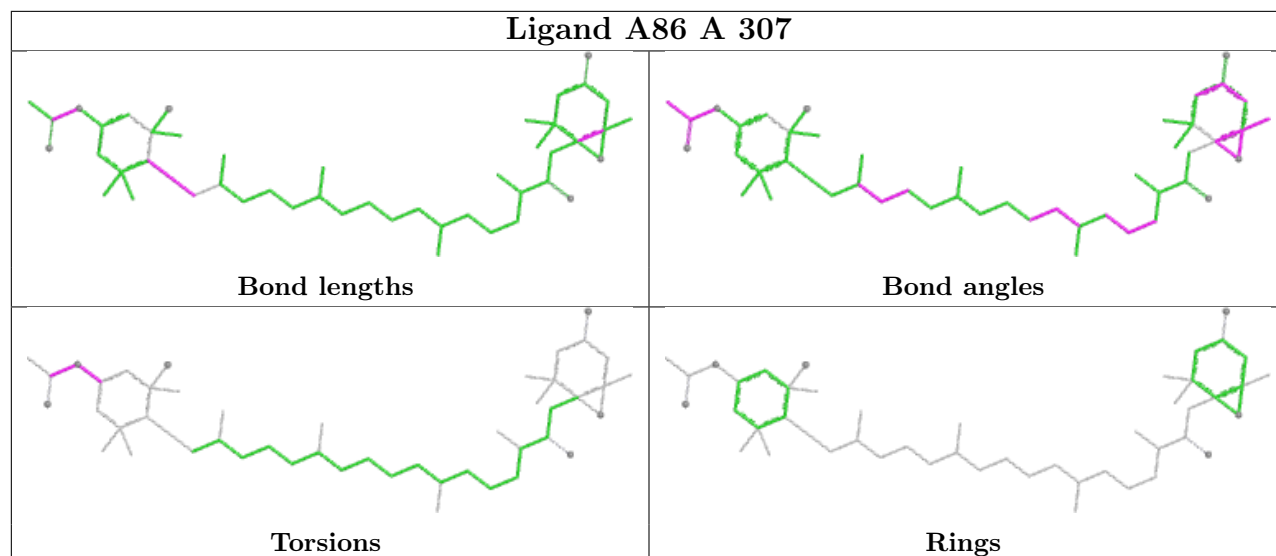
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	406	CLA	2	0
5	A	409	CLA	4	0
10	A	412	LHG	1	0
5	A	404	CLA	1	0
11	A	416	SOG	1	0
5	A	401	CLA	1	0
5	A	402	CLA	1	0
9	A	411	DGD	4	0
5	A	407	CLA	2	0
11	A	413	SOG	2	0
11	A	414	SOG	1	0
5	A	405	CLA	2	0

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

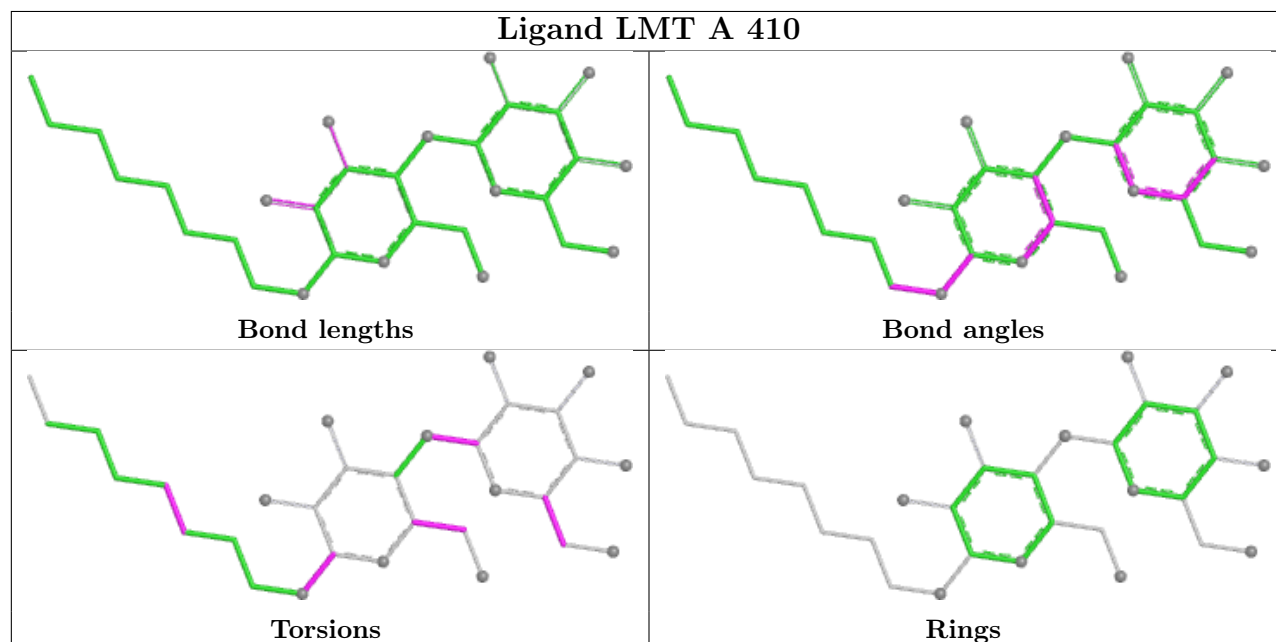
average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



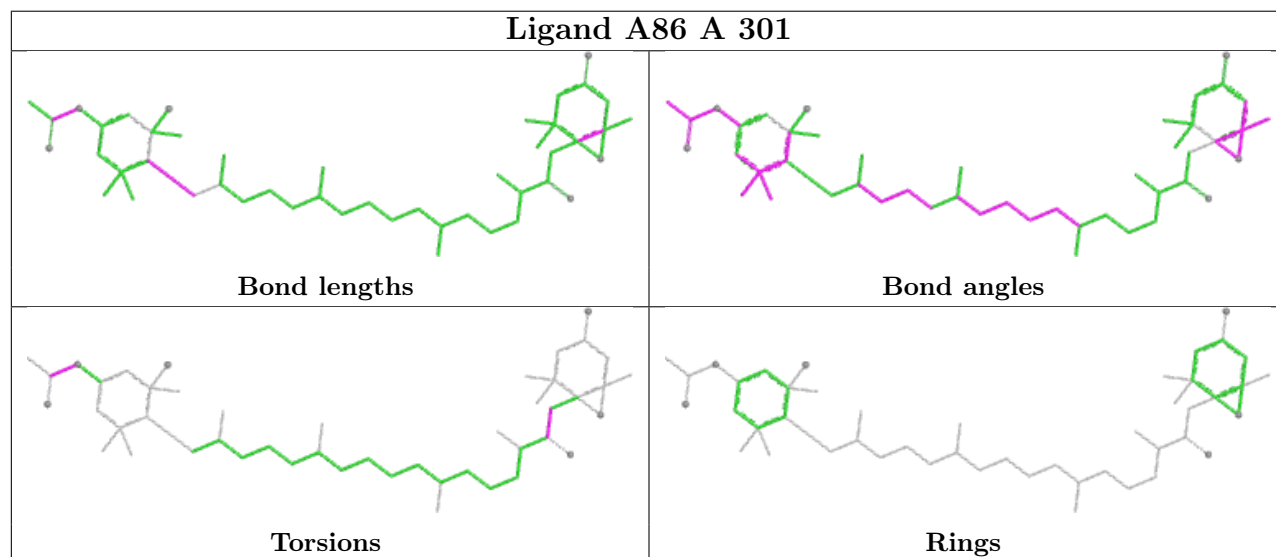
Ligand A86 A 307



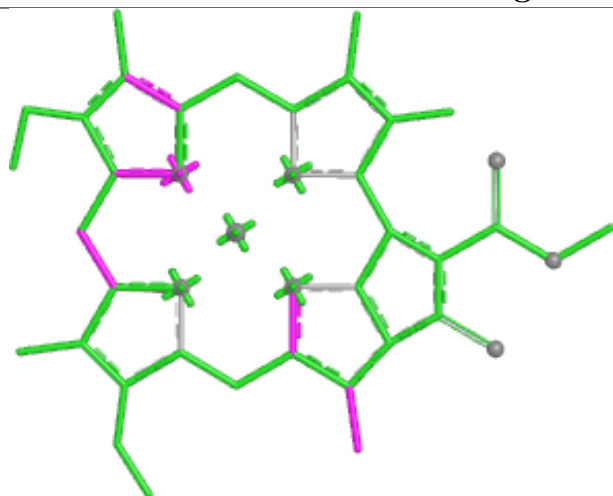
Ligand LMT A 410



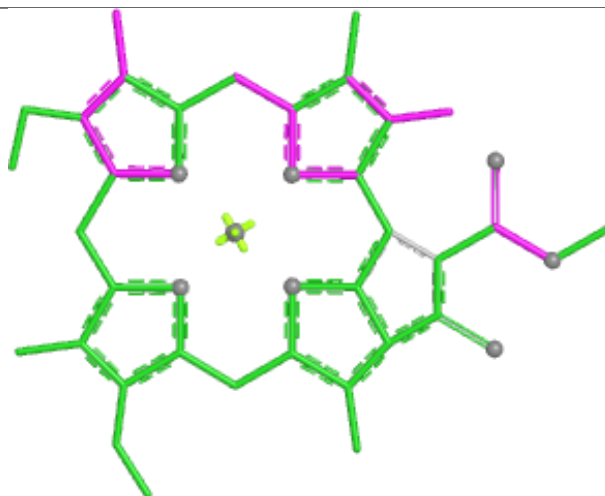
Ligand A86 A 301



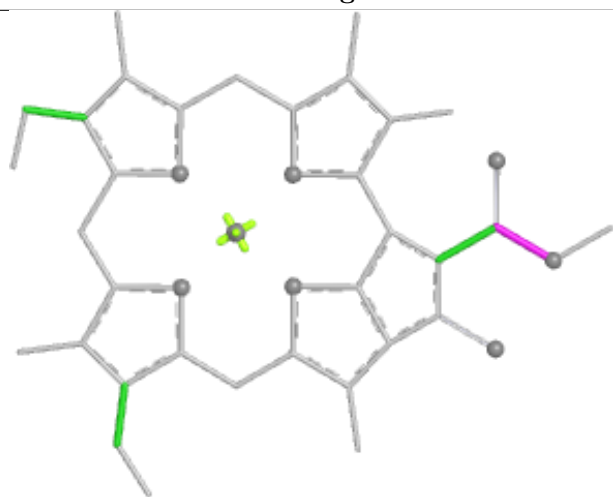
Ligand CLA A 409



Bond lengths



Bond angles

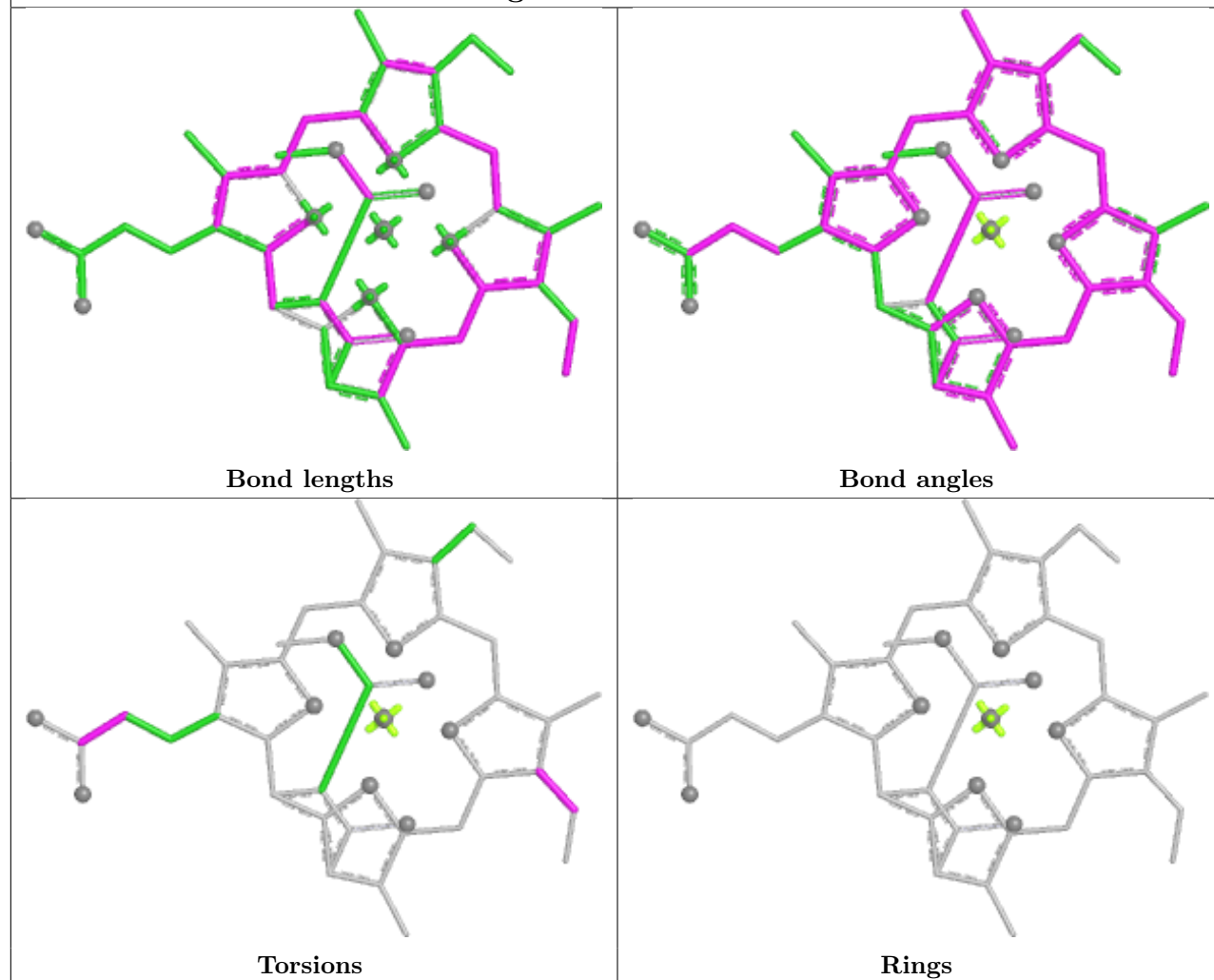


Torsions

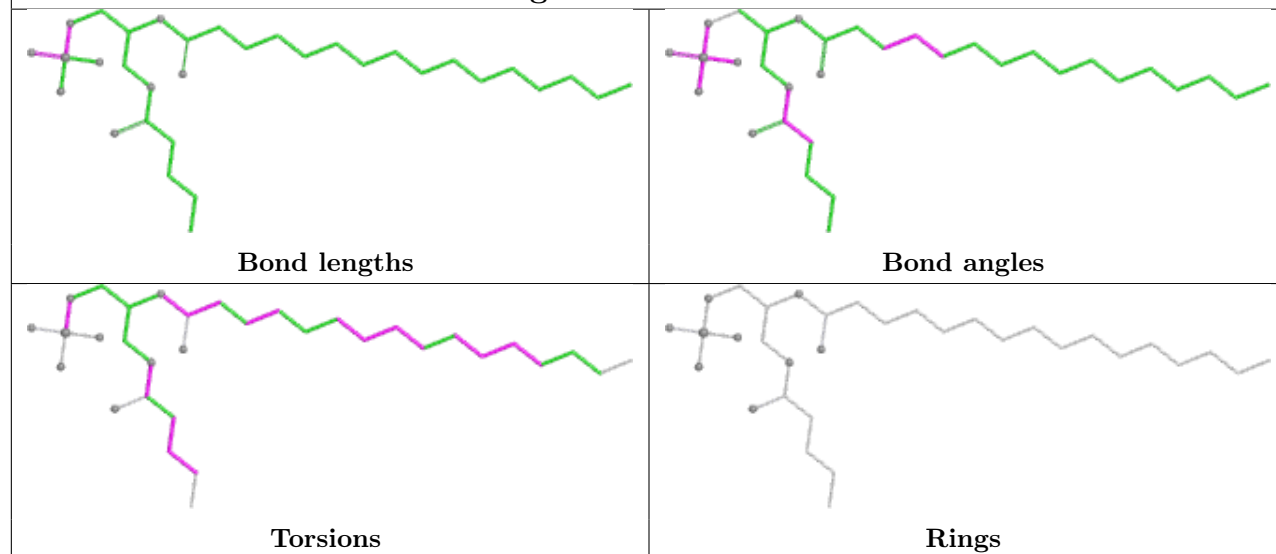


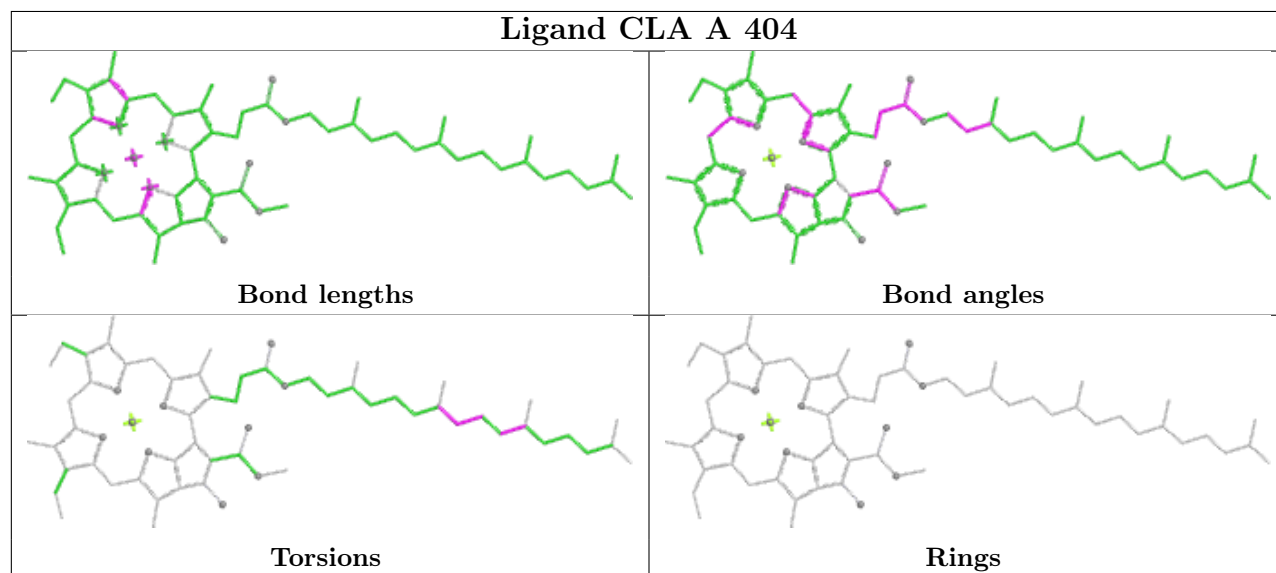
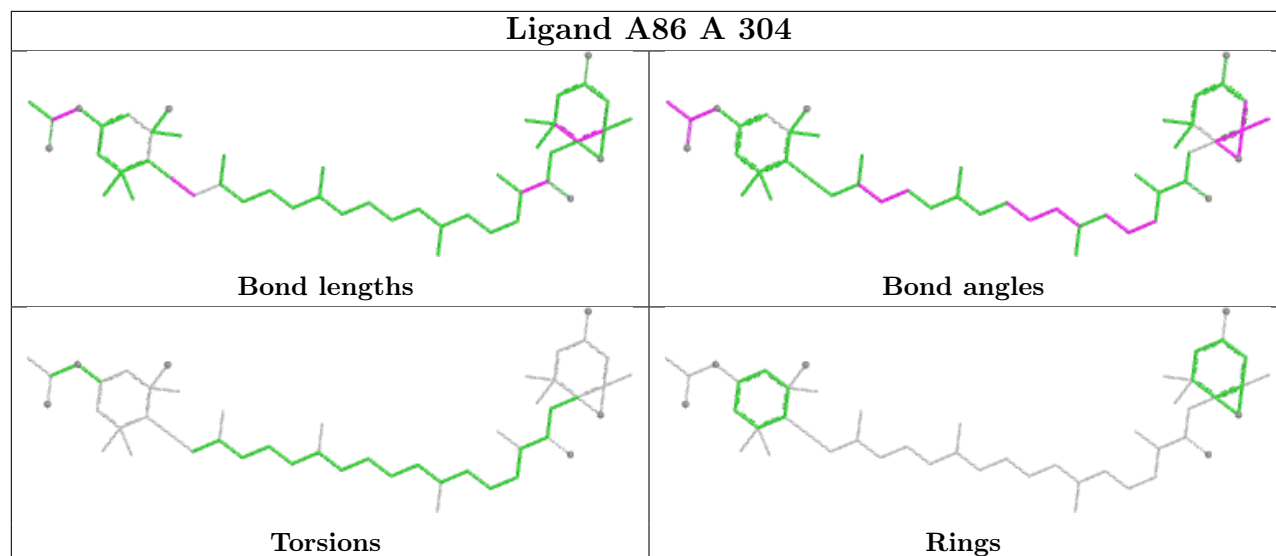
Rings

Ligand KC2 A 403

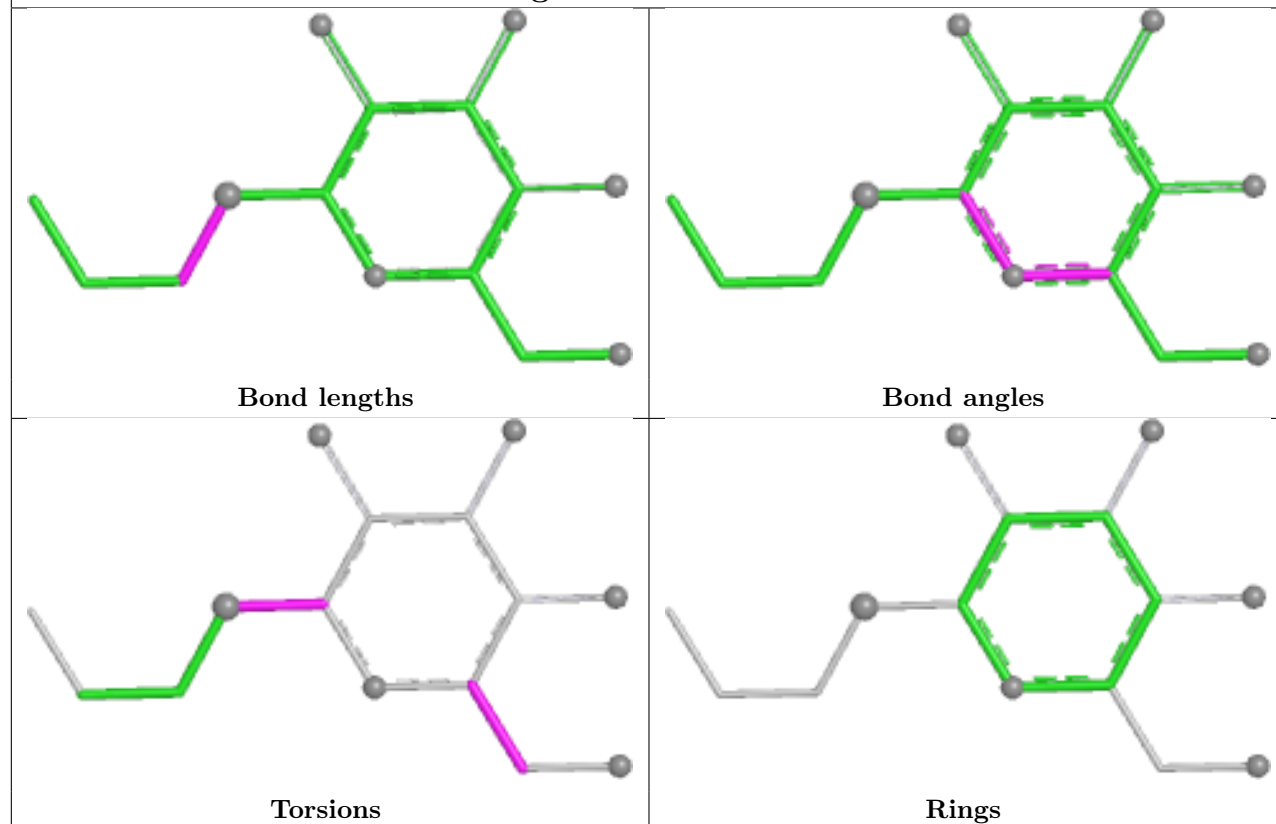


Ligand LHG A 412

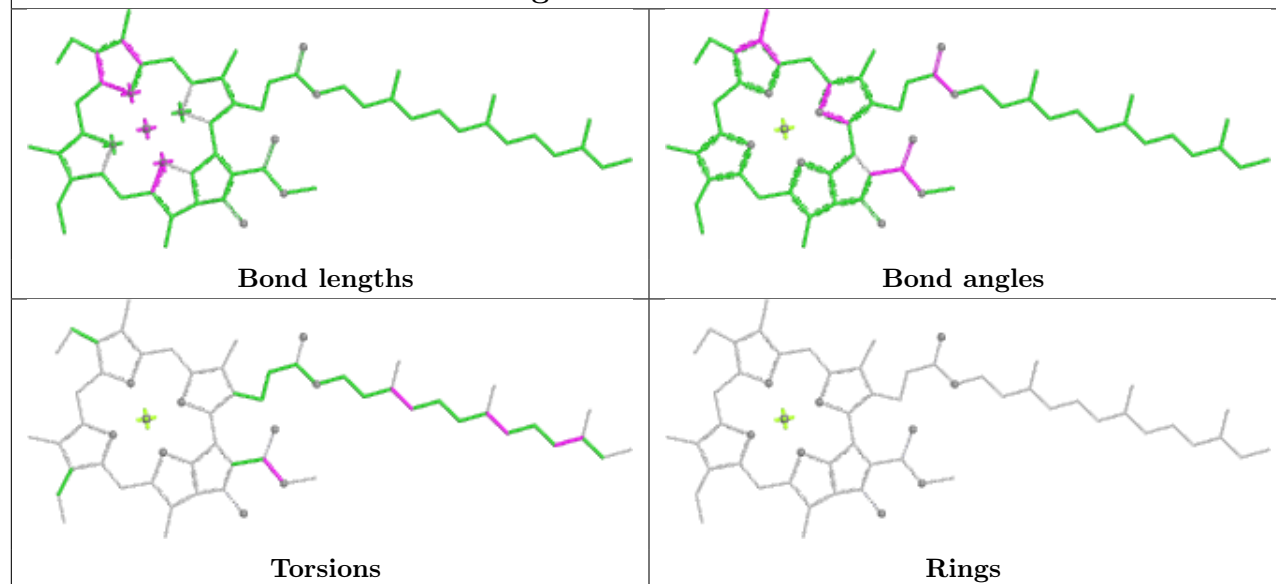




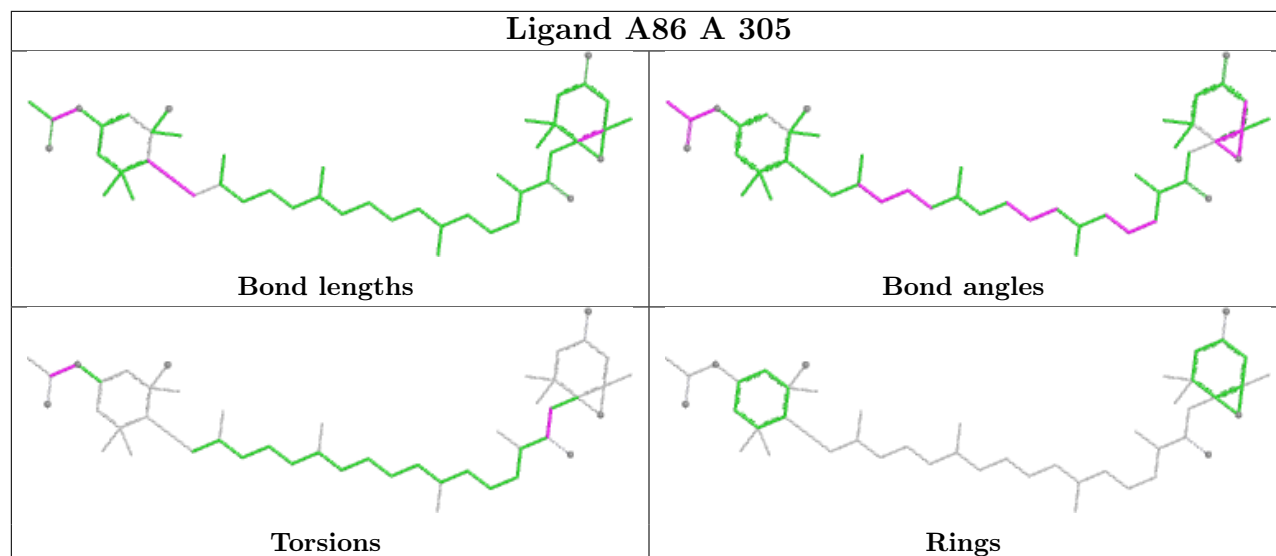
Ligand SOG A 416



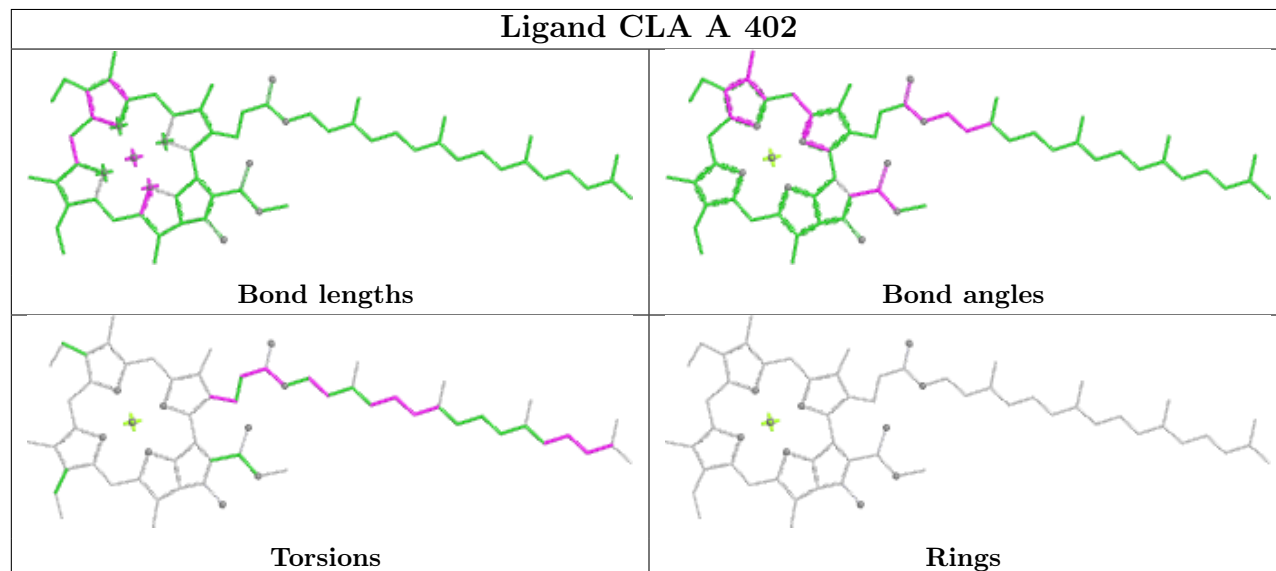
Ligand CLA A 401



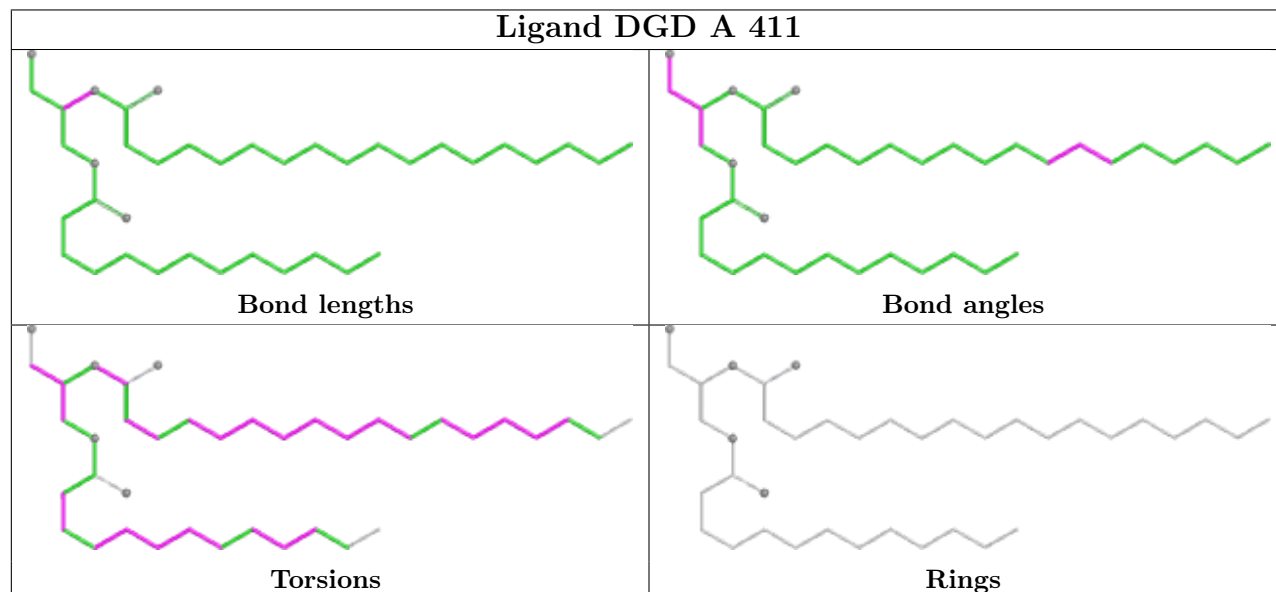
Ligand A86 A 305



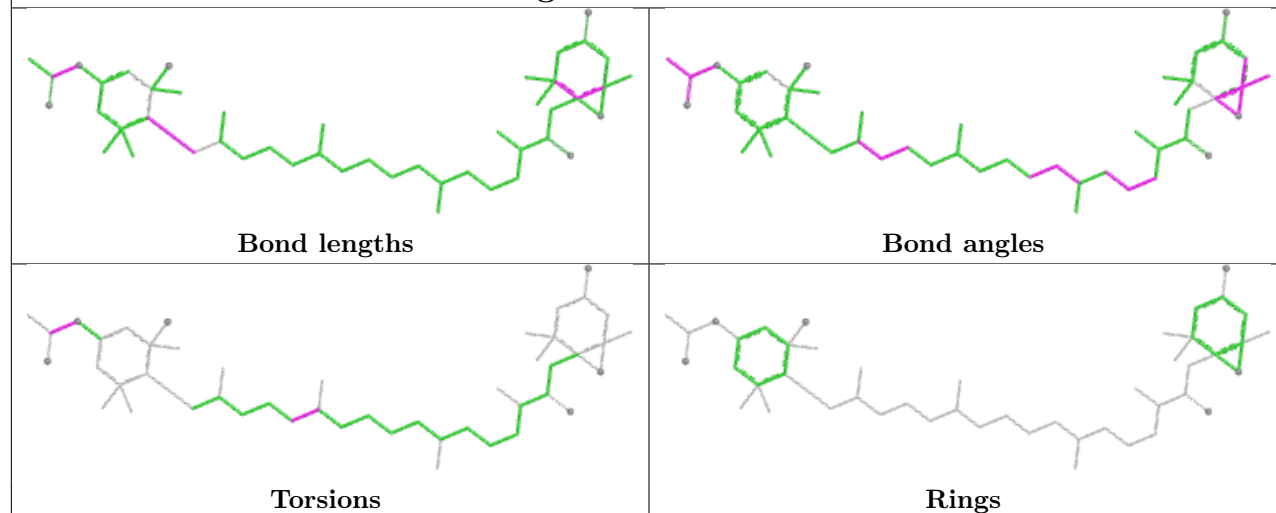
Ligand CLA A 402



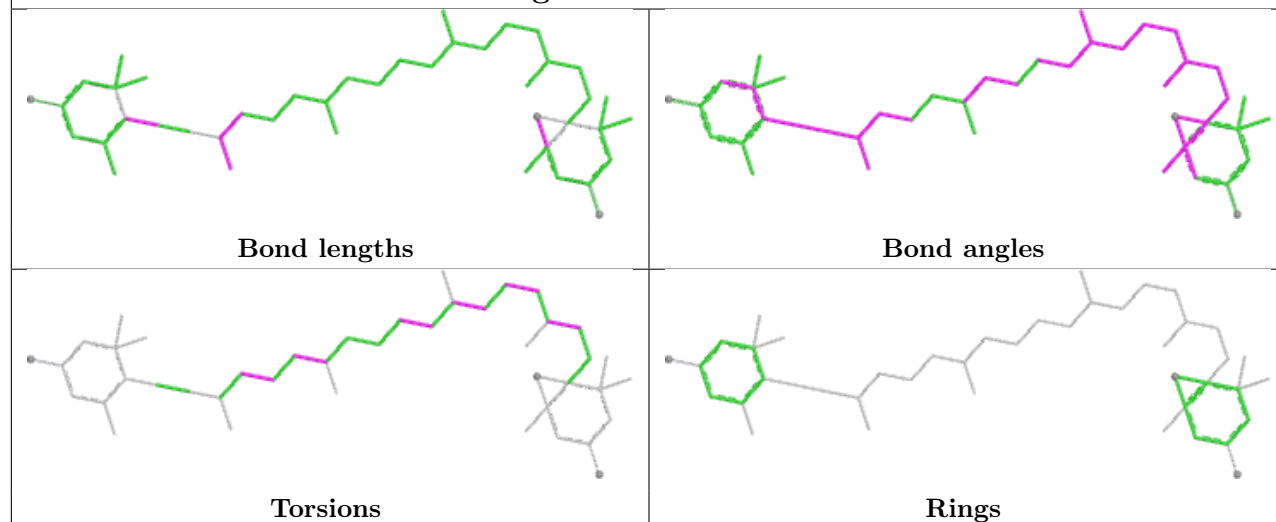
Ligand DGD A 411



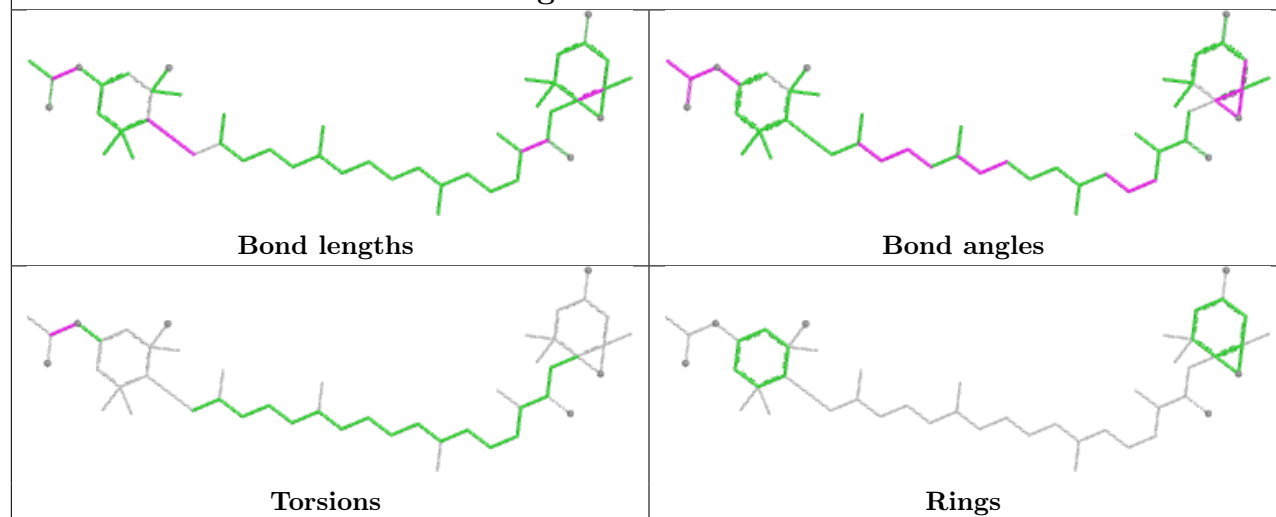
Ligand A86 A 302

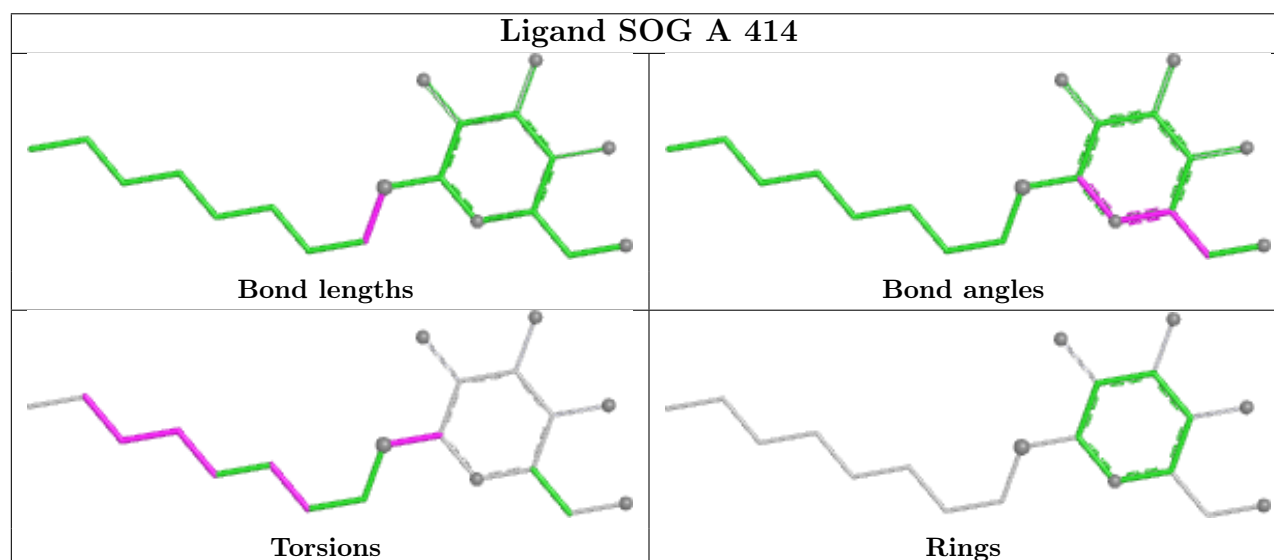
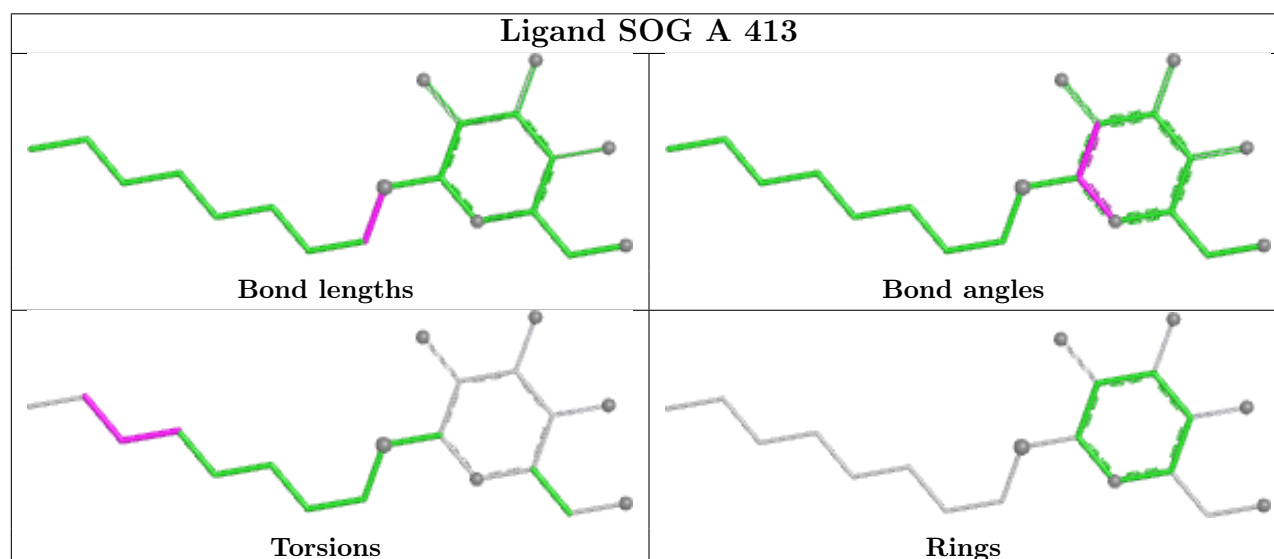
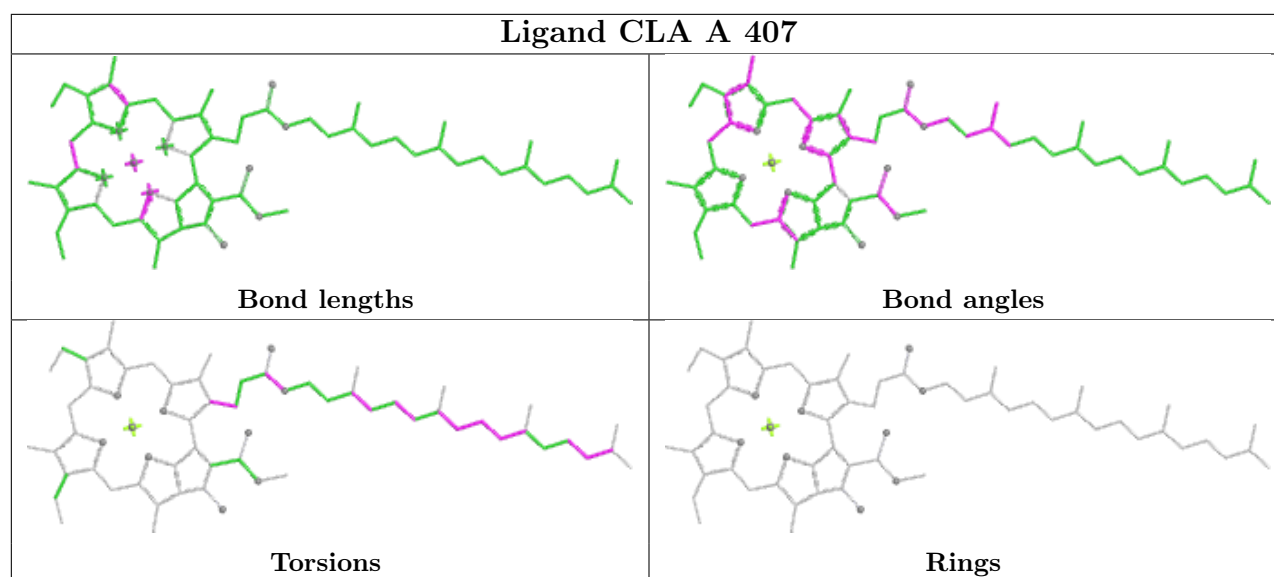


Ligand DD6 A 308

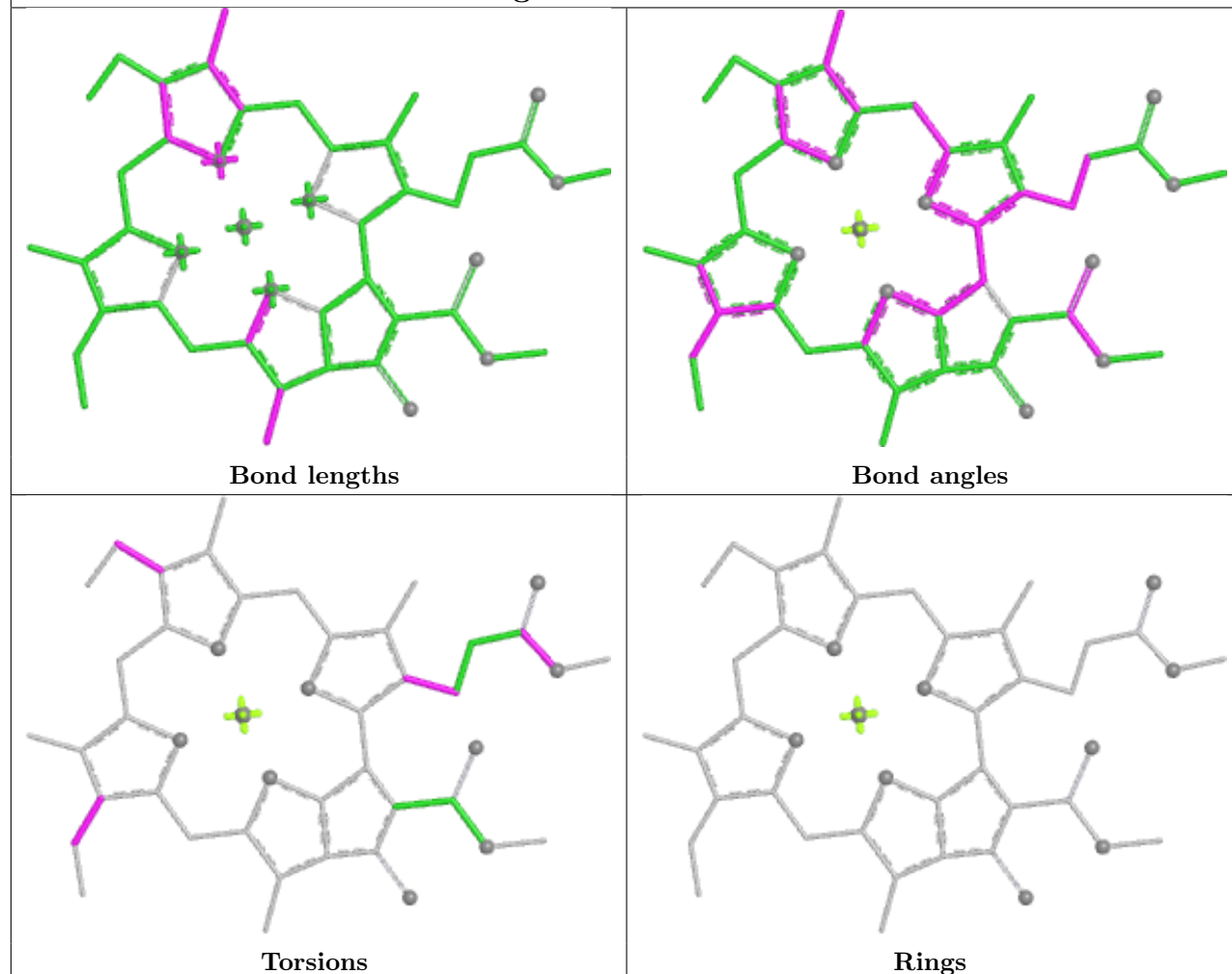


Ligand A86 A 303

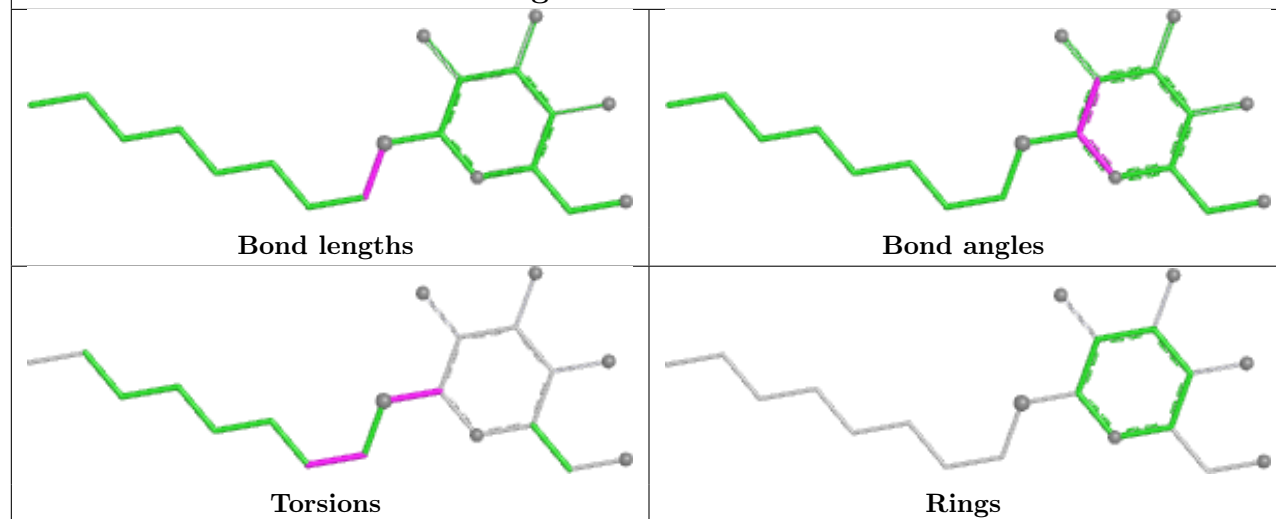


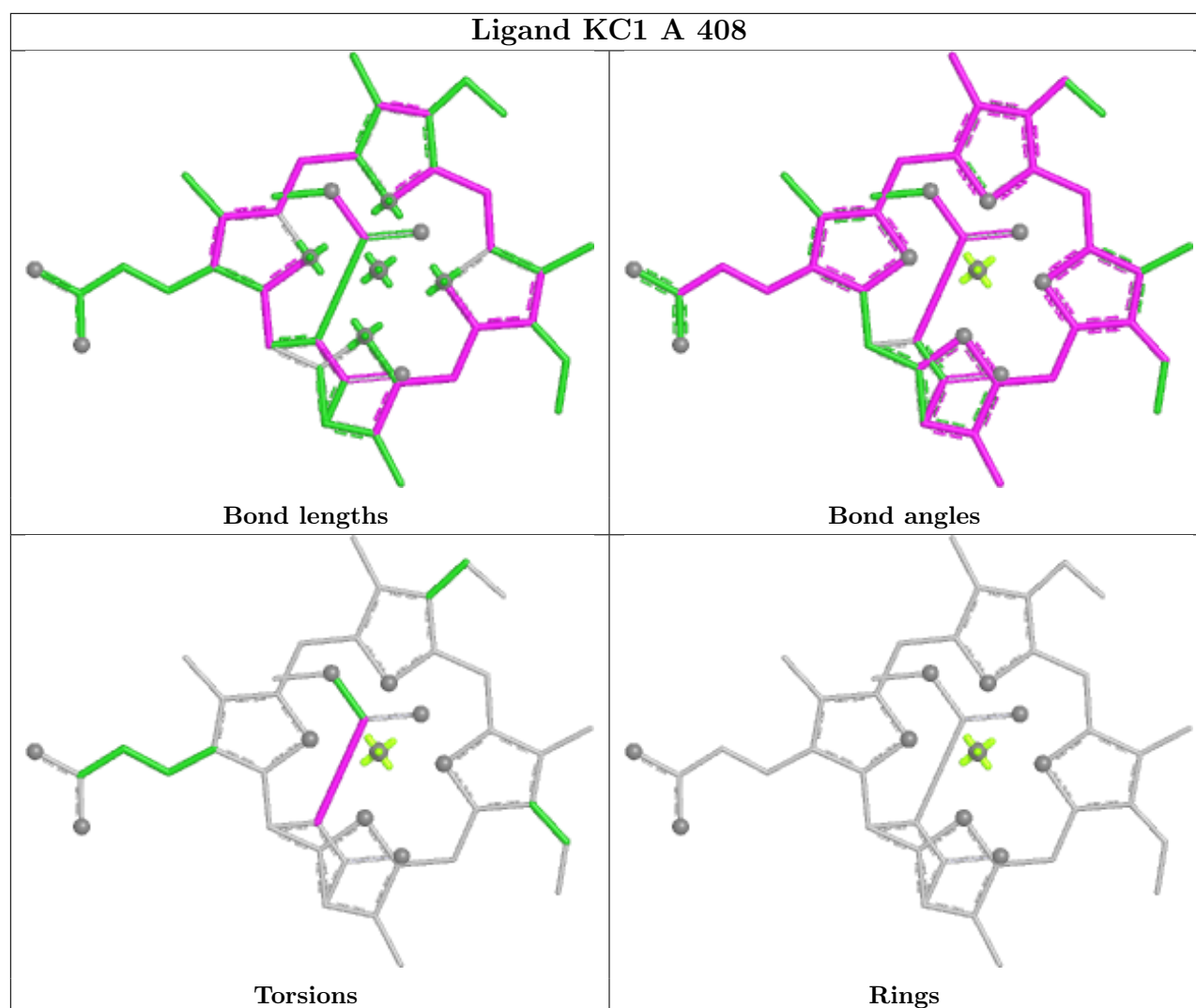


Ligand CLA A 405



Ligand SOG A 415





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	166/167 (99%)	-0.14	2 (1%) 76 77	13, 35, 63, 79	3 (1%)

All (2) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	1	ALA	3.3
1	A	166	PRO	2.5

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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
8	LMT	A	410	31/35	0.66	0.15	49,110,124,127	0
4	DD6	A	308	43/43	0.67	0.20	70,84,104,109	0
12	UNL	A	423	10/-	0.68	0.17	62,64,65,65	0
12	UNL	A	420	12/-	0.69	0.19	56,60,64,64	0
9	DGD	A	411	39/66	0.74	0.18	68,86,99,105	0

Continued on next page...

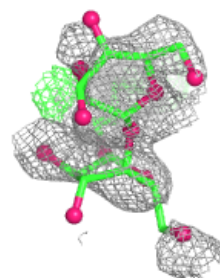
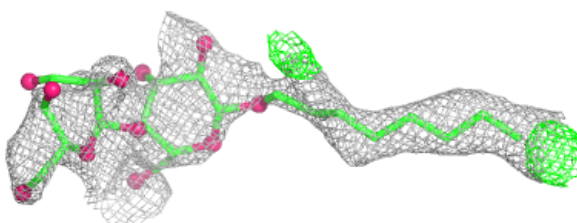
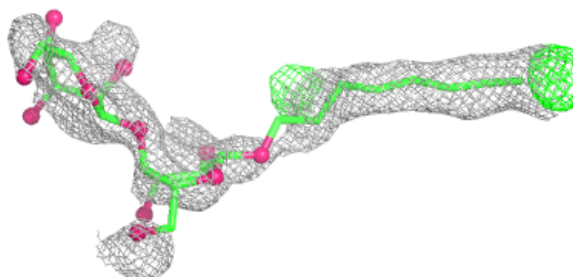
Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
12	UNL	A	422	7/-	0.76	0.19	43,54,60,61	0
11	SOG	A	416	15/20	0.76	0.18	90,96,104,105	0
11	SOG	A	413	20/20	0.77	0.16	48,105,119,120	0
12	UNL	A	421	12/-	0.78	0.14	52,55,67,69	0
10	LHG	A	412	33/49	0.80	0.15	45,66,123,127	0
12	UNL	A	418	12/-	0.80	0.12	58,61,68,69	0
12	UNL	A	417	12/-	0.84	0.14	47,52,59,60	0
11	SOG	A	415	20/20	0.85	0.13	55,100,105,110	0
11	SOG	A	414	20/20	0.87	0.13	43,93,104,109	0
12	UNL	A	419	8/-	0.87	0.10	49,54,56,59	0
3	A86	A	306	48/48	0.91	0.09	35,49,72,85	0
2	CA	A	202	1/1	0.92	0.10	76,76,76,76	0
5	CLA	A	402	65/65	0.94	0.09	25,37,74,79	0
5	CLA	A	405	46/65	0.94	0.08	31,43,60,75	0
3	A86	A	301	48/48	0.95	0.09	26,43,93,105	0
5	CLA	A	406	65/65	0.95	0.09	19,28,70,78	0
5	CLA	A	401	61/65	0.95	0.07	21,35,66,71	0
3	A86	A	307	48/48	0.95	0.07	23,31,55,58	0
3	A86	A	305	48/48	0.96	0.06	17,28,50,63	0
3	A86	A	303	48/48	0.96	0.06	20,27,51,58	0
5	CLA	A	407	65/65	0.96	0.08	15,25,75,83	0
5	CLA	A	409	41/65	0.96	0.07	31,44,61,67	0
3	A86	A	304	48/48	0.96	0.07	21,28,59,76	0
5	CLA	A	404	65/65	0.96	0.06	18,25,51,59	0
7	KC1	A	408	45/45	0.97	0.05	19,24,31,56	0
3	A86	A	302	48/48	0.97	0.06	18,28,66,73	0
6	KC2	A	403	45/45	0.97	0.05	24,30,43,57	0
2	CA	A	201	1/1	0.99	0.04	39,39,39,39	0

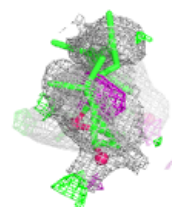
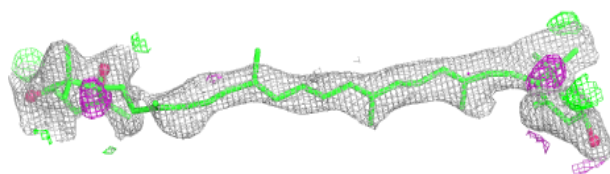
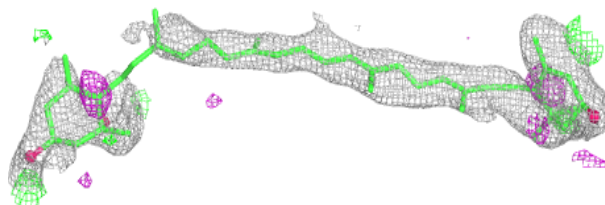
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around LMT A 410:

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

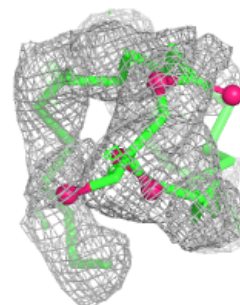
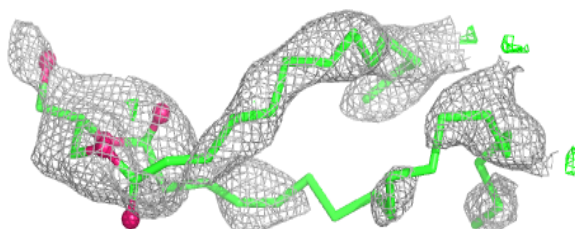
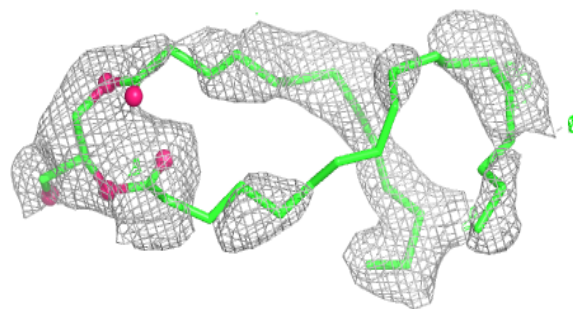
**Electron density around DD6 A 308:**

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

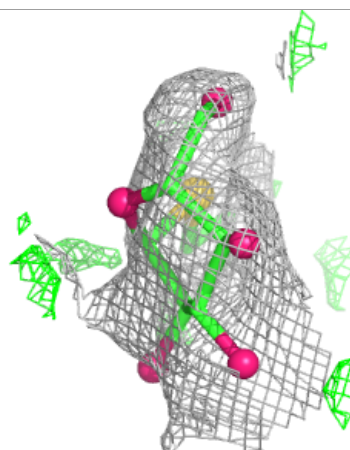
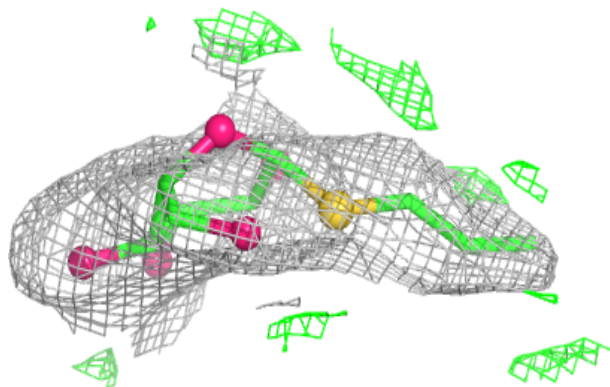
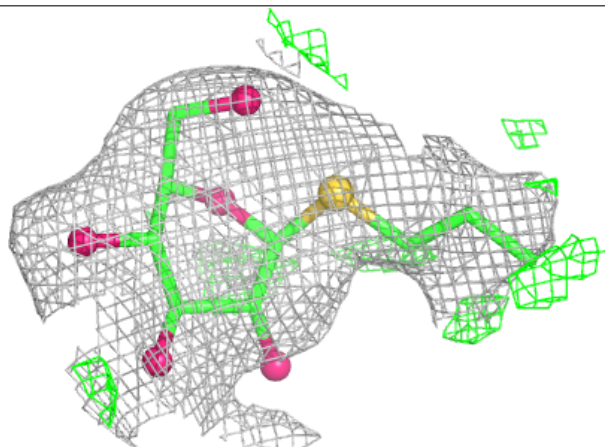


Electron density around DGD A 411:

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

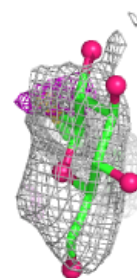
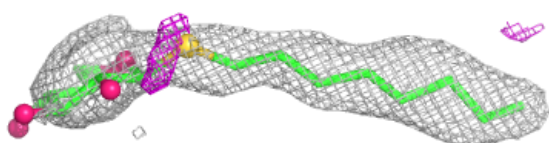
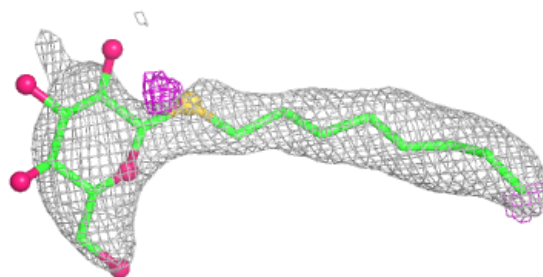
**Electron density around SOG A 416:**

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

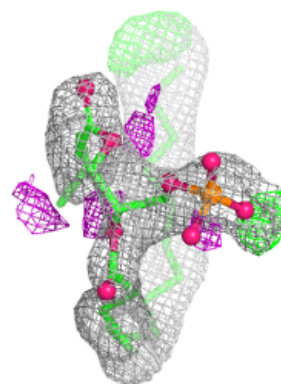
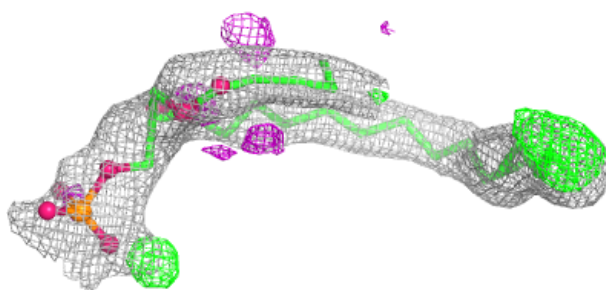
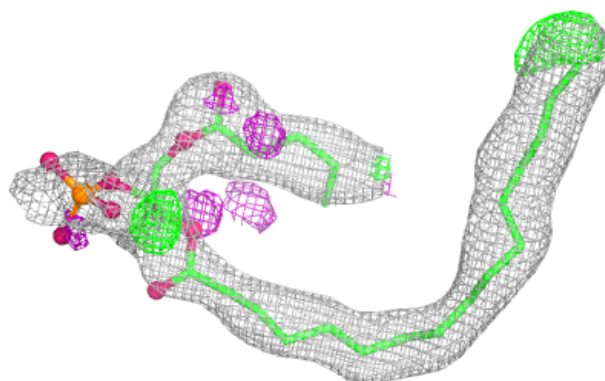


Electron density around SOG A 413:

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

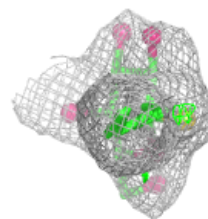
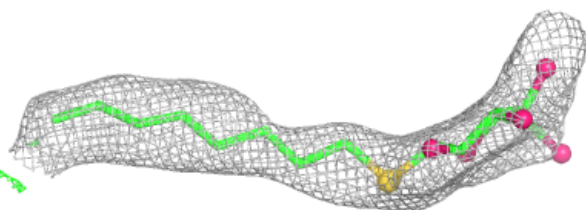
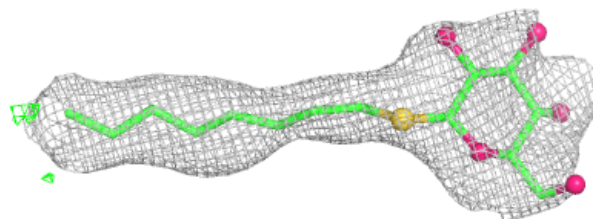
**Electron density around LHG A 412:**

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

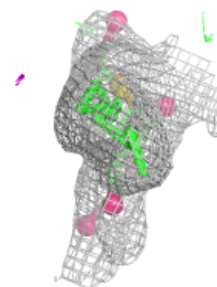
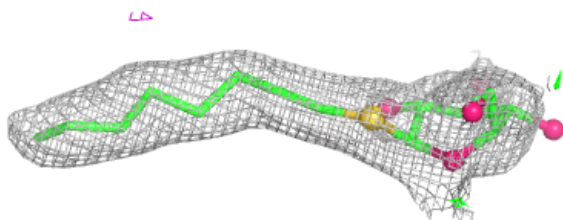
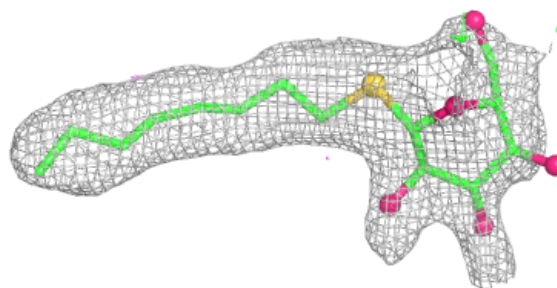


Electron density around SOG A 415:

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

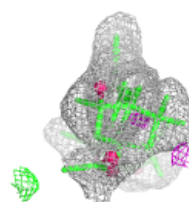
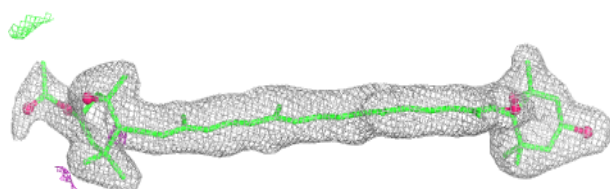
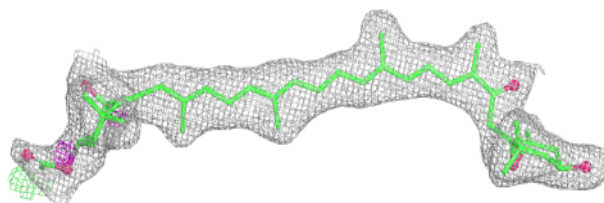
**Electron density around SOG A 414:**

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

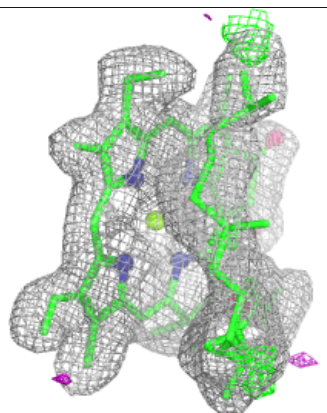
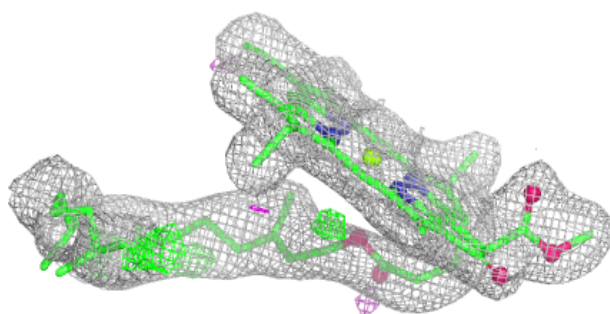
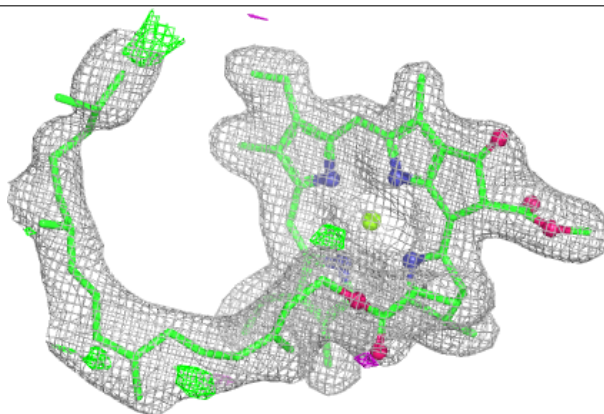


Electron density around A86 A 306:

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

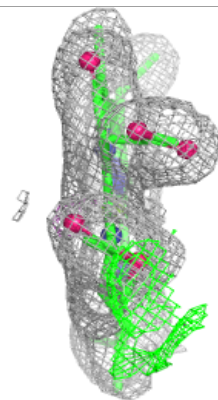
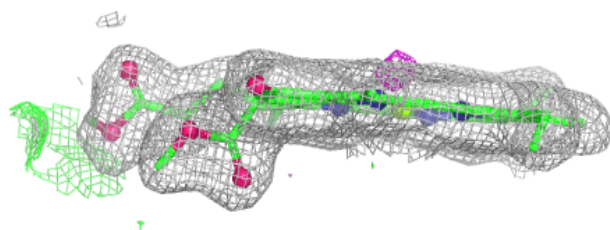
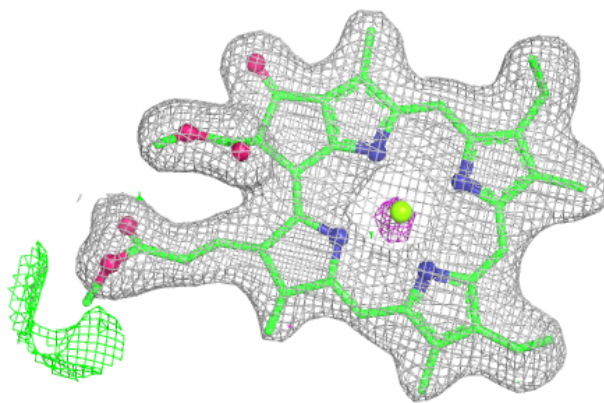
**Electron density around CLA A 402:**

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

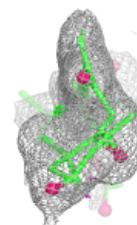
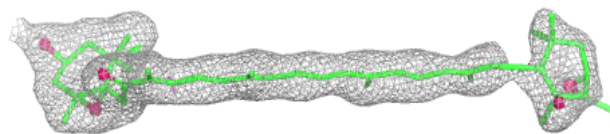
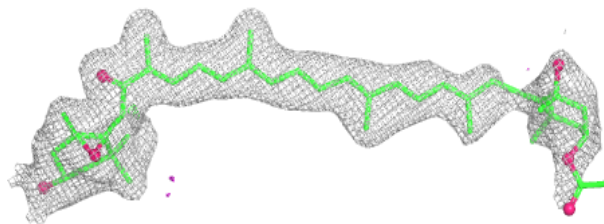


Electron density around CLA A 405:

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

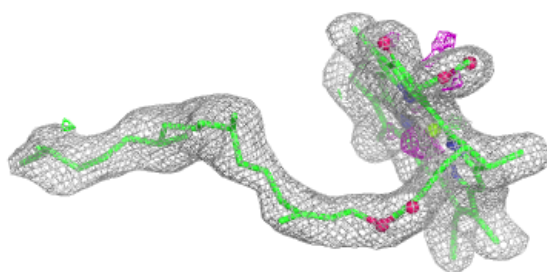
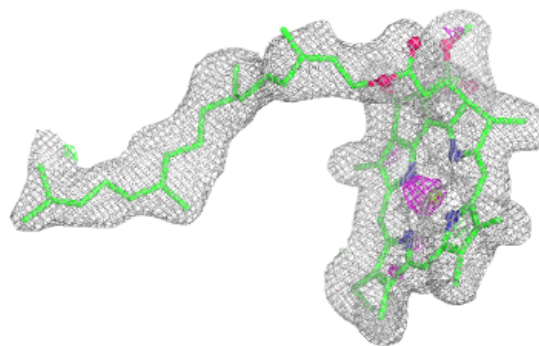
**Electron density around A86 A 301:**

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



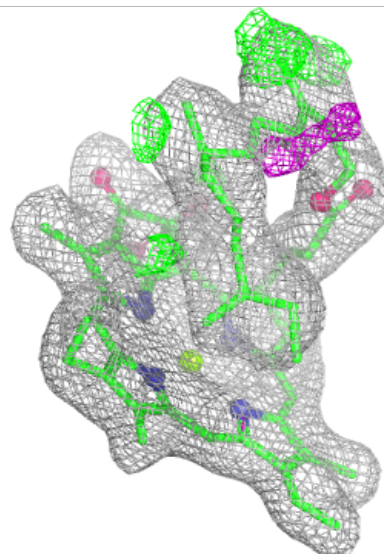
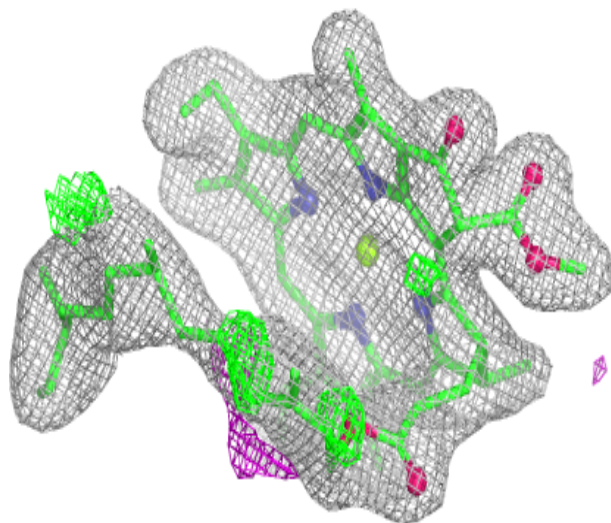
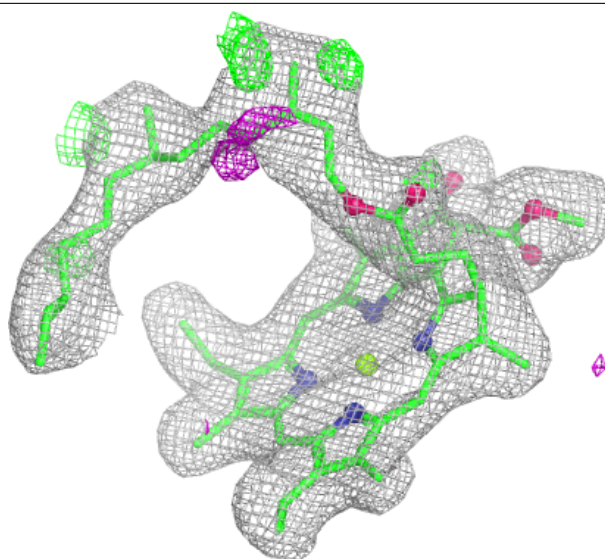
Electron density around CLA A 406:

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



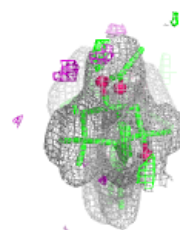
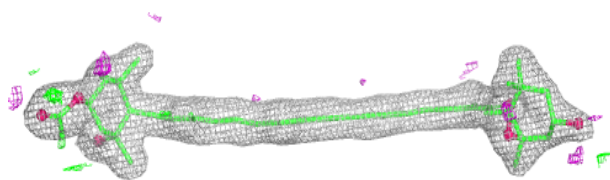
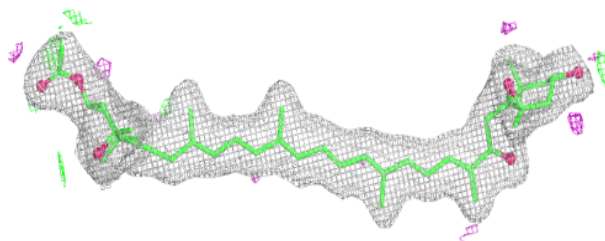
Electron density around CLA A 401:

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

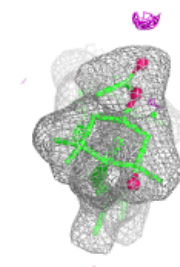
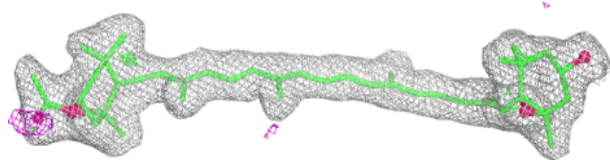
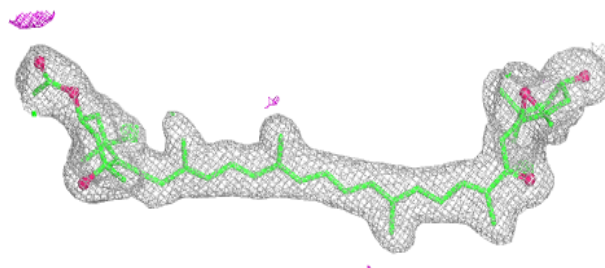


Electron density around A86 A 307:

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

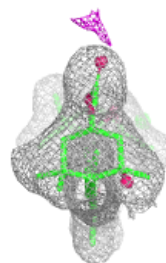
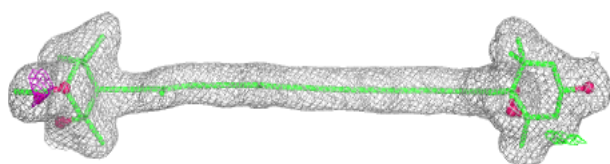
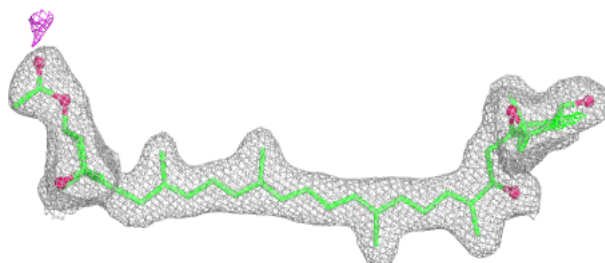
**Electron density around A86 A 305:**

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

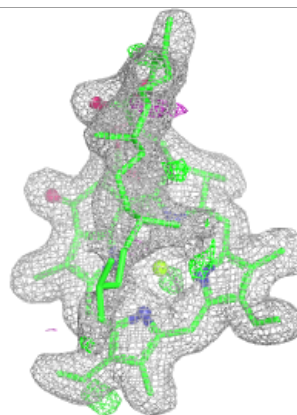
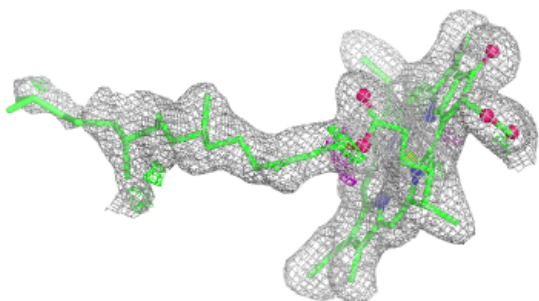
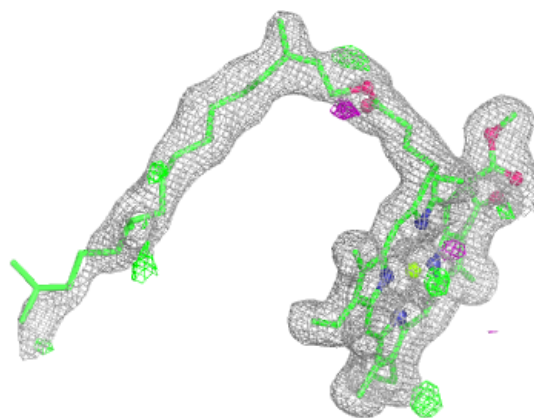


Electron density around A86 A 303:

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

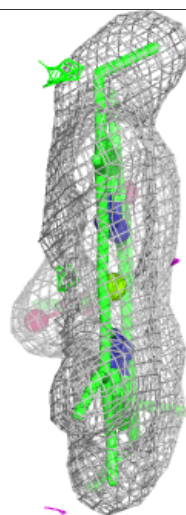
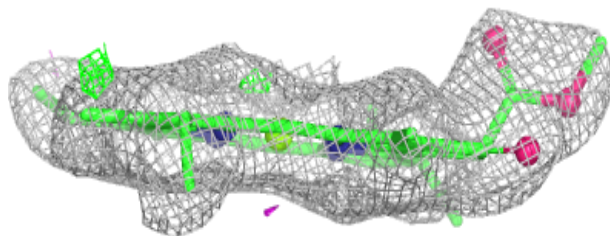
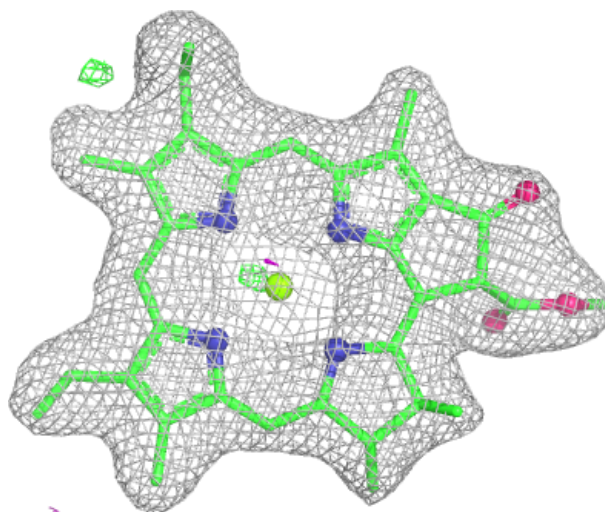
**Electron density around CLA A 407:**

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



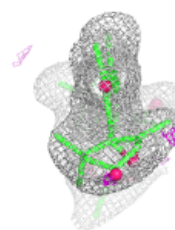
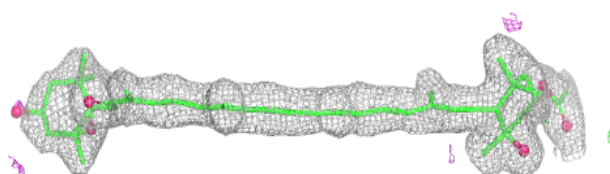
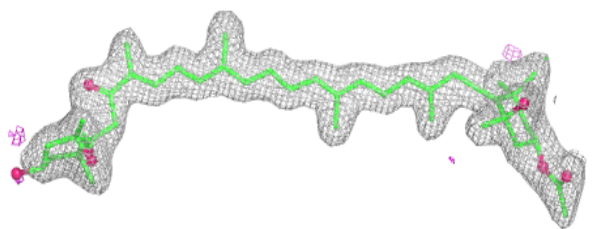
Electron density around CLA A 409:

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

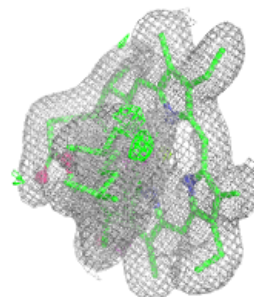
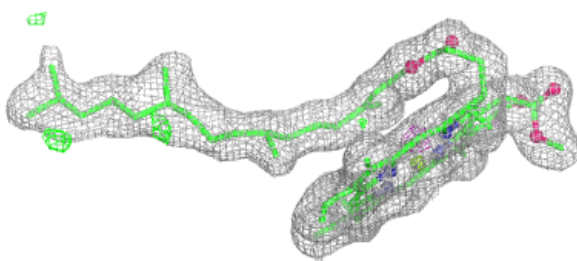
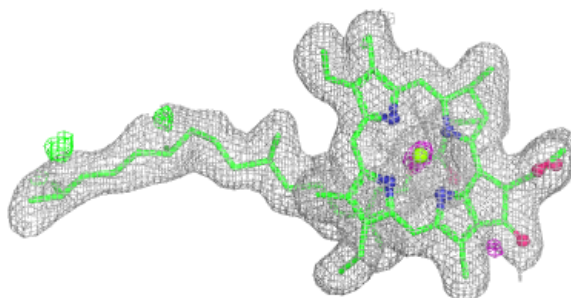


Electron density around A86 A 304:

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

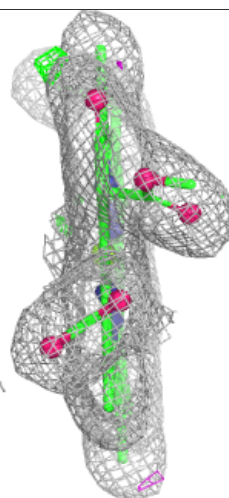
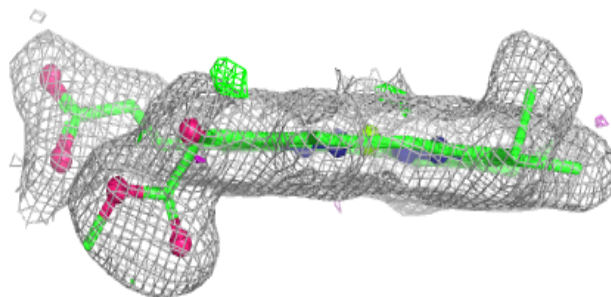
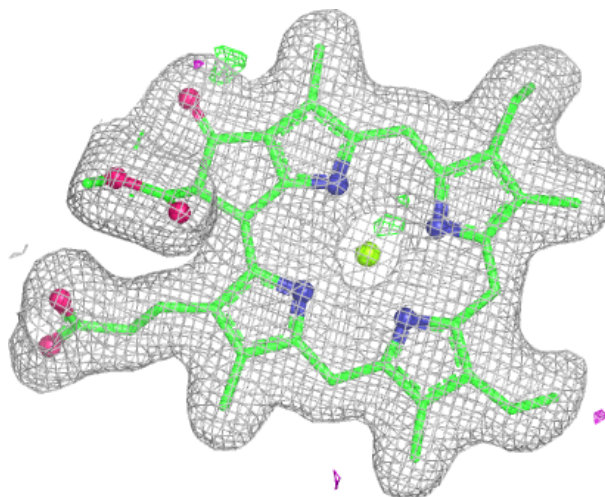
**Electron density around CLA A 404:**

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



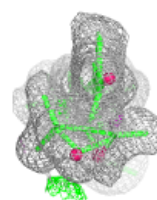
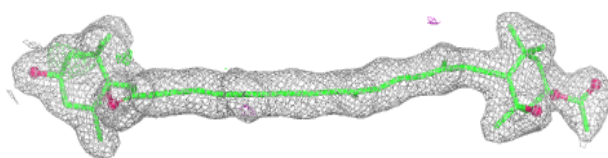
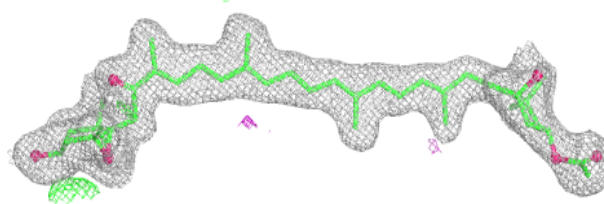
Electron density around KC1 A 408:

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



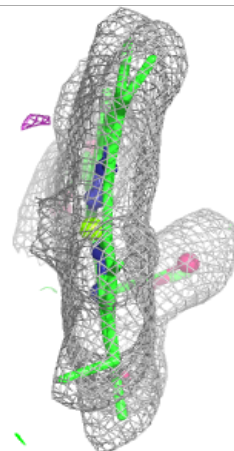
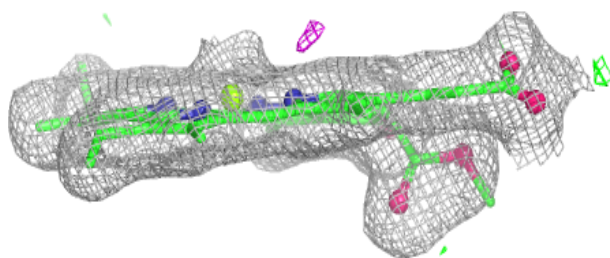
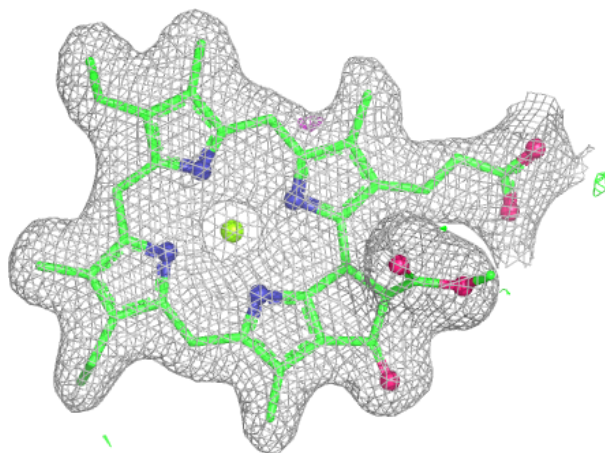
Electron density around A86 A 302:

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



Electron density around KC2 A 403:

$2mF_o-DF_c$ (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.