Full wwPDB X-ray Structure Validation Report ⓘ

May 24, 2023 – 10:47 am BST

PDB ID	:	8CIC
Title	:	Crystal structure of stabilized A2A adenosine receptor A2AR-StaR2-bRIL in complex with clinical candidate Etrumadenant
Authors	:	Cheng, R.K.Y.; Markovic-Mueller, S.; Hennig, M.
Deposited on	:	2023-02-09
Resolution	:	2.10 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:

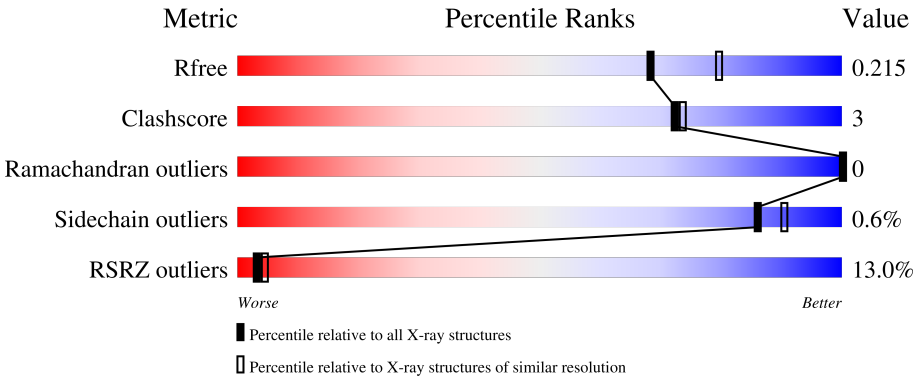
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.33
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.33

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 2.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	5197 (2.10-2.10)
Clashscore	141614	5710 (2.10-2.10)
Ramachandran outliers	138981	5647 (2.10-2.10)
Sidechain outliers	138945	5648 (2.10-2.10)
RSRZ outliers	127900	5083 (2.10-2.10)

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 <=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	433	12% 83% 6% 11%

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
4	CLR	A	1203	-	-	-	X

2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 3689 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 Adenosine receptor A2a,Soluble cytochrome b562.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	386	3054	1991	515	525	23	0	25	0

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-8	ASP	-	expression tag	UNP P29274
A	-7	TYR	-	expression tag	UNP P29274
A	-6	LYS	-	expression tag	UNP P29274
A	-5	ASP	-	expression tag	UNP P29274
A	-4	ASP	-	expression tag	UNP P29274
A	-3	ASP	-	expression tag	UNP P29274
A	-2	ASP	-	expression tag	UNP P29274
A	-1	GLY	-	expression tag	UNP P29274
A	0	ALA	-	expression tag	UNP P29274
A	1	PRO	-	expression tag	UNP P29274
A	54	LEU	ALA	engineered mutation	UNP P29274
A	88	ALA	THR	engineered mutation	UNP P29274
A	107	ALA	ARG	engineered mutation	UNP P29274
A	122	ALA	LYS	engineered mutation	UNP P29274
A	154	ALA	ASN	engineered mutation	UNP P29274
A	202	ALA	LEU	engineered mutation	UNP P29274
A	1007	TRP	MET	engineered mutation	UNP P0ABE7
A	1102	ILE	HIS	engineered mutation	UNP P0ABE7
A	1106	LEU	ARG	engineered mutation	UNP P0ABE7
A	235	ALA	LEU	engineered mutation	UNP P29274
A	239	ALA	VAL	engineered mutation	UNP P29274
A	318	ALA	-	expression tag	UNP P29274
A	319	HIS	-	expression tag	UNP P29274
A	320	HIS	-	expression tag	UNP P29274
A	321	HIS	-	expression tag	UNP P29274
A	322	HIS	-	expression tag	UNP P29274
A	323	HIS	-	expression tag	UNP P29274

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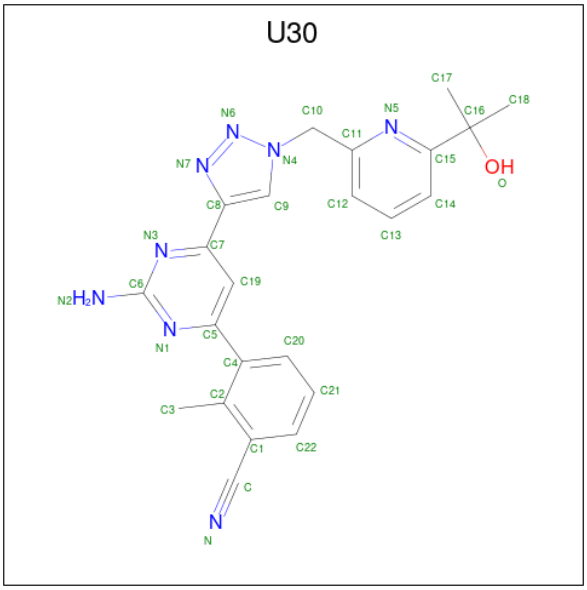
Chain	Residue	Modelled	Actual	Comment	Reference
A	324	HIS	-	expression tag	UNP P29274
A	325	HIS	-	expression tag	UNP P29274
A	326	HIS	-	expression tag	UNP P29274
A	327	HIS	-	expression tag	UNP P29274
A	328	HIS	-	expression tag	UNP P29274

- Molecule 2 is SODIUM ION (three-letter code: NA) (formula: Na).

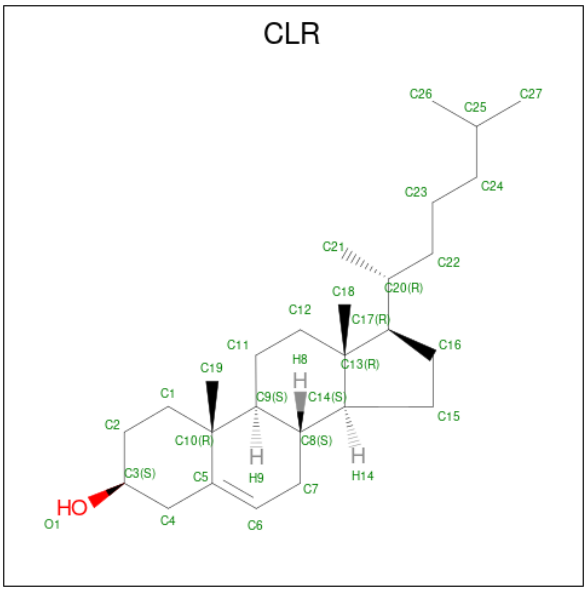
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total Na 1 1	0	0

- Molecule 3 is 3-[2-azanyl-6-[1-[[6-(2-oxidanylpropan-2-yl)pyridin-2-yl]methyl]-1,2,3-triazol-4-yl]pyrimidin-4-yl]-2-methyl-benzenecarbonitrile (three-letter code: U30) (formula: $C_{23}H_{22}N_8O$) (labeled as "Ligand of Interest" by depositor).



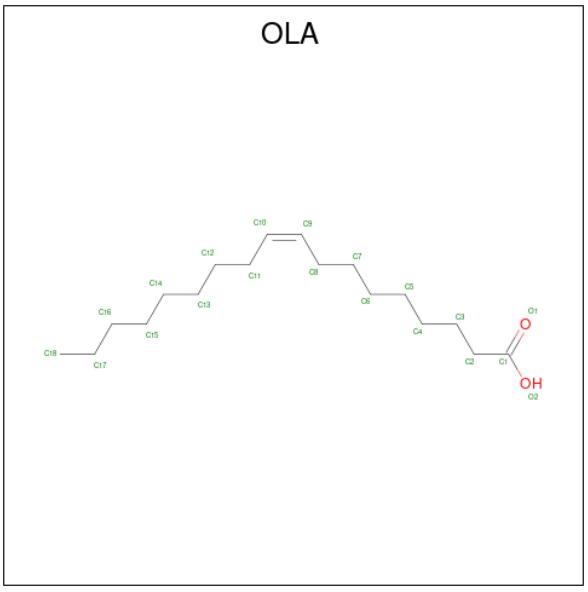
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C N O 32 23 8 1	0	0

- Molecule 4 is CHOLESTEROL (three-letter code: CLR) (formula: $C_{27}H_{46}O$).



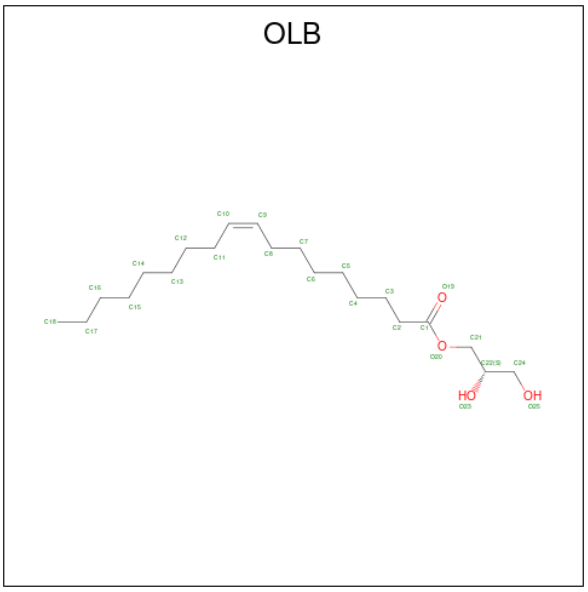
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C O 28 27 1	0	0
4	A	1	Total C O 28 27 1	0	0
4	A	1	Total C O 28 27 1	0	0
4	A	1	Total C O 28 27 1	0	0

- Molecule 5 is OLEIC ACID (three-letter code: OLA) (formula: $C_{18}H_{34}O_2$).



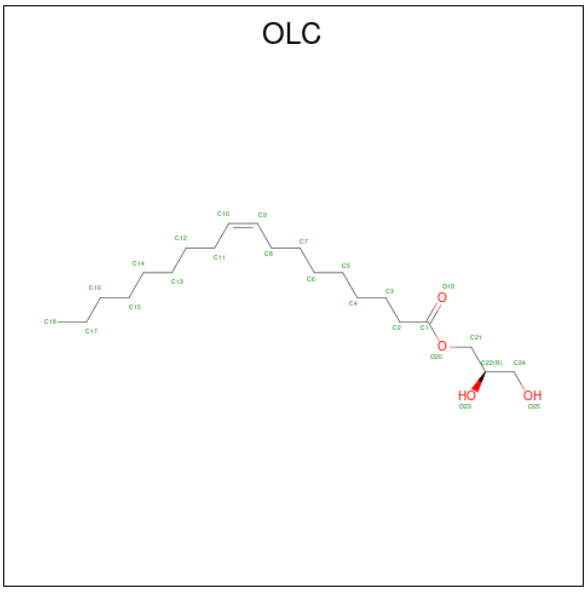
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O 20 18 2	0	0
5	A	1	Total C O 15 13 2	0	0
5	A	1	Total C O 9 7 2	0	0
5	A	1	Total C O 19 17 2	0	0
5	A	1	Total C 10 10	0	0
5	A	1	Total C O 17 15 2	0	0
5	A	1	Total C 8 8	0	0
5	A	1	Total C 7 7	0	0
5	A	1	Total C O 16 14 2	0	0
5	A	1	Total C 11 11	0	0
5	A	1	Total C 12 12	0	0
5	A	1	Total C O 8 6 2	0	0
5	A	1	Total C O 12 10 2	0	0
5	A	1	Total C O 20 18 2	0	0
5	A	1	Total C O 14 12 2	0	0

- Molecule 6 is (2S)-2,3-dihydroxypropyl (9Z)-octadec-9-enoate (three-letter code: OLB) (formula: $C_{21}H_{40}O_4$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total C O 22 18 4	0	0
6	A	1	Total C O 19 15 4	0	0
6	A	1	Total C O 18 14 4	0	0

- Molecule 7 is (2R)-2,3-dihydroxypropyl (9Z)-octadec-9-enoate (three-letter code: OLC) (formula: $C_{21}H_{40}O_4$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	1	Total C O 25 21 4	0	0
7	A	1	Total C O 19 15 4	0	0
7	A	1	Total C O 21 17 4	0	0
7	A	1	Total C O 17 13 4	0	0
7	A	1	Total C O 25 21 4	0	0

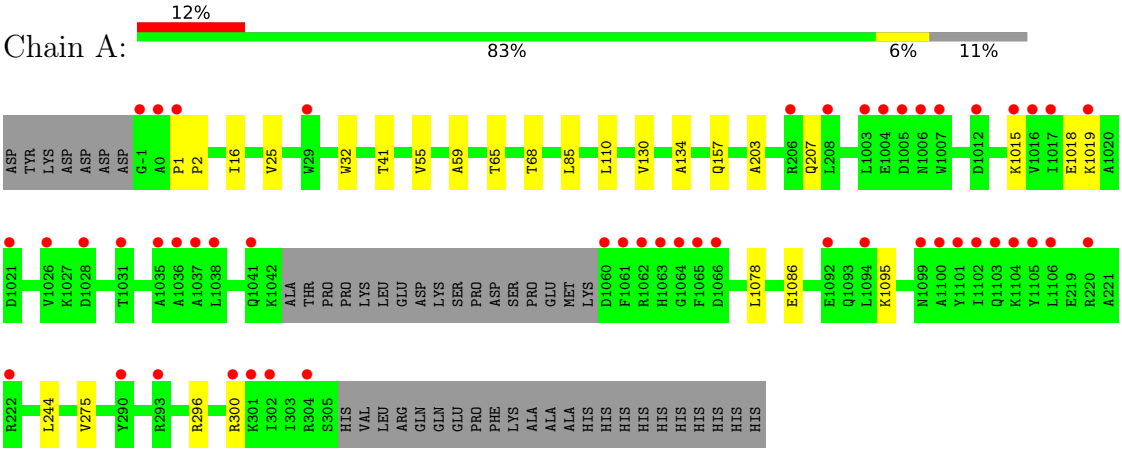
- Molecule 8 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
8	A	126	Total O 126 126	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: Adenosine receptor A2a,Soluble cytochrome b562



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	39.36Å 179.09Å 140.57Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	44.77 – 2.10 44.77 – 2.10	Depositor EDS
% Data completeness (in resolution range)	99.9 (44.77-2.10) 99.9 (44.77-2.10)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.00 (at 2.10Å)	Xtriage
Refinement program	PHENIX 1.14	Depositor
R, R_{free}	0.190 , 0.214 0.191 , 0.215	Depositor DCC
R_{free} test set	1507 reflections (5.09%)	wwPDB-VP
Wilson B-factor (Å^2)	37.2	Xtriage
Anisotropy	0.046	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 69.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	3689	wwPDB-VP
Average B, all atoms (Å^2)	52.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.99% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ 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: NA, OLB, OLC, CLR, OLA, U30

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	0.25	0/3120	0.39	0/4244

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

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	3054	0	3105	20	0
2	A	1	0	0	0	0
3	A	32	0	0	2	0
4	A	112	0	184	2	0
5	A	198	0	284	8	0
6	A	59	0	79	2	0
7	A	107	0	151	3	0
8	A	126	0	0	1	0
All	All	3689	0	3803	25	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 3.

All (25) 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:244[B]:LEU:HD11	5:A:1214:OLA:H41	1.69	0.75
5:A:1220:OLA:H10	5:A:1221:OLA:C12	2.26	0.66
5:A:1217:OLA:H62	7:A:1226:OLC:H6A	1.78	0.64
1:A:157[A]:GLN:NE2	8:A:1303:HOH:O	2.37	0.56
1:A:1078:LEU:HD13	1:A:1086:GLU:HG2	1.90	0.54
1:A:130:VAL:HG11	5:A:1221:OLA:H112	1.89	0.53
1:A:1018:GLU:OE2	1:A:1095:LYS:NZ	2.41	0.52
1:A:134:ALA:HB2	6:A:1222:OLB:H28	1.93	0.51
1:A:244[B]:LEU:HD21	5:A:1214:OLA:H61	1.93	0.51
1:A:32:TRP:CE3	5:A:1210:OLA:H71	2.47	0.50
1:A:55:VAL:HA	1:A:59:ALA:HB3	1.95	0.48
1:A:68:THR:HA	7:A:1229:OLC:H2	1.96	0.47
1:A:85:LEU:HD23	3:A:1202:U30:C	2.45	0.47
4:A:1206:CLR:H211	4:A:1206:CLR:H232	1.74	0.47
5:A:1212:OLA:C15	5:A:1212:OLA:H111	2.45	0.46
1:A:85:LEU:HD23	3:A:1202:U30:N	2.31	0.46
1:A:32:TRP:HE3	6:A:1224:OLB:H2A	1.83	0.43
4:A:1203:CLR:H263	4:A:1203:CLR:H231	1.84	0.43
1:A:25:VAL:HG22	5:A:1210:OLA:H132	2.00	0.43
1:A:203:ALA:O	1:A:207:GLN:HG3	2.20	0.42
1:A:65:THR:HG21	7:A:1225:OLC:H5	2.01	0.42
1:A:16:ILE:HD11	1:A:275[A]:VAL:HG13	2.03	0.41
1:A:1:PRO:HA	1:A:2:PRO:HD3	1.93	0.41
1:A:296:ARG:O	1:A:300[B]:ARG:HG3	2.21	0.41
1:A:1015:LYS:O	1:A:1019:LYS:HG2	2.21	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	390/433 (90%)	388 (100%)	2 (0%)	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	319/354 (90%)	317 (99%)	2 (1%)	86 90

All (2) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	41	THR
1	A	110	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 29 ligands modelled in this entry, 1 is monoatomic - leaving 28 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	OLA	A	1215	-	15,15,19	0.53	0	15,15,19	0.98	2 (13%)
5	OLA	A	1217	-	11,11,19	0.50	0	10,10,19	0.40	0
4	CLR	A	1204	-	31,31,31	0.65	0	48,48,48	1.09	3 (6%)
5	OLA	A	1212	-	16,16,19	0.53	0	16,16,19	0.92	2 (12%)
5	OLA	A	1220	-	19,19,19	0.66	0	19,19,19	0.76	1 (5%)
5	OLA	A	1209	-	8,8,19	0.86	0	8,8,19	1.14	1 (12%)
5	OLA	A	1218	-	7,7,19	0.63	0	7,7,19	1.35	2 (28%)
5	OLA	A	1207	-	19,19,19	0.67	0	19,19,19	0.77	1 (5%)
5	OLA	A	1211	-	9,9,19	0.59	0	8,8,19	0.25	0
7	OLC	A	1227	-	20,20,24	1.47	4 (20%)	21,21,25	1.21	2 (9%)
6	OLB	A	1224	-	17,17,24	1.20	1 (5%)	18,18,25	0.91	1 (5%)
5	OLA	A	1216	-	10,10,19	0.39	0	9,9,19	0.25	0
5	OLA	A	1221	-	13,13,19	0.57	0	12,13,19	1.06	2 (16%)
6	OLB	A	1222	-	21,21,24	1.20	1 (4%)	22,22,25	0.94	1 (4%)
5	OLA	A	1210	-	18,18,19	0.67	0	18,18,19	0.78	1 (5%)
5	OLA	A	1219	-	11,11,19	0.62	0	11,11,19	1.14	2 (18%)
7	OLC	A	1229	-	24,24,24	1.42	4 (16%)	25,25,25	1.11	2 (8%)
4	CLR	A	1205	-	31,31,31	0.71	0	48,48,48	0.94	1 (2%)
7	OLC	A	1225	-	24,24,24	1.37	4 (16%)	25,25,25	1.11	2 (8%)
5	OLA	A	1214	-	6,6,19	0.26	0	5,5,19	0.16	0
7	OLC	A	1226	-	18,18,24	1.55	4 (22%)	18,19,25	1.30	2 (11%)
5	OLA	A	1208	-	14,14,19	0.71	0	14,14,19	0.89	1 (7%)
3	U30	A	1202	-	33,35,35	1.99	8 (24%)	40,51,51	2.12	11 (27%)
5	OLA	A	1213	-	7,7,19	0.61	0	6,6,19	0.28	0
4	CLR	A	1203	-	31,31,31	0.66	0	48,48,48	1.29	6 (12%)
4	CLR	A	1206	-	31,31,31	0.72	0	48,48,48	0.87	1 (2%)
7	OLC	A	1228	-	16,16,24	1.64	4 (25%)	17,17,25	1.34	2 (11%)
6	OLB	A	1223	-	18,18,24	1.23	1 (5%)	18,19,25	0.97	1 (5%)

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	OLA	A	1215	-	-	5/13/13/17	-
5	OLA	A	1217	-	-	7/9/9/17	-
4	CLR	A	1204	-	-	0/10/68/68	0/4/4/4
5	OLA	A	1212	-	-	9/14/14/17	-
5	OLA	A	1220	-	-	6/17/17/17	-
5	OLA	A	1209	-	-	1/6/6/17	-
5	OLA	A	1218	-	-	1/5/5/17	-
5	OLA	A	1207	-	-	8/17/17/17	-
5	OLA	A	1211	-	-	5/7/7/17	-
7	OLC	A	1227	-	-	9/20/20/24	-
6	OLB	A	1224	-	-	7/17/17/24	-
5	OLA	A	1216	-	-	2/8/8/17	-
5	OLA	A	1221	-	-	5/11/11/17	-
6	OLB	A	1222	-	-	10/21/21/24	-
5	OLA	A	1210	-	-	5/16/16/17	-
5	OLA	A	1219	-	-	6/9/9/17	-
7	OLC	A	1229	-	-	12/24/24/24	-
4	CLR	A	1205	-	-	1/10/68/68	0/4/4/4
7	OLC	A	1225	-	-	14/24/24/24	-
5	OLA	A	1214	-	-	3/4/4/17	-
7	OLC	A	1226	-	-	10/18/18/24	-
5	OLA	A	1208	-	-	6/12/12/17	-
3	U30	A	1202	-	-	4/18/20/20	0/4/4/4
5	OLA	A	1213	-	-	1/5/5/17	-
4	CLR	A	1203	-	-	8/10/68/68	0/4/4/4
4	CLR	A	1206	-	-	2/10/68/68	0/4/4/4
7	OLC	A	1228	-	-	8/16/16/24	-
6	OLB	A	1223	-	-	10/18/18/24	-

All (31) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	1202	U30	C9-N4	6.74	1.42	1.35
3	A	1202	U30	N7-N6	-3.70	1.27	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	A	1229	OLC	O20-C1	3.68	1.44	1.33
7	A	1228	OLC	O20-C1	3.67	1.44	1.33
7	A	1226	OLC	O20-C1	3.65	1.44	1.33
7	A	1227	OLC	O20-C1	3.65	1.44	1.33
7	A	1225	OLC	O20-C1	3.61	1.43	1.33
3	A	1202	U30	O-C16	-3.36	1.39	1.44
3	A	1202	U30	C6-N1	3.30	1.41	1.35
3	A	1202	U30	C6-N3	3.10	1.40	1.35
3	A	1202	U30	C8-N7	2.64	1.42	1.36
7	A	1227	OLC	C21-C22	2.60	1.60	1.51
7	A	1229	OLC	C21-C22	2.60	1.60	1.51
7	A	1228	OLC	C21-C22	2.55	1.60	1.51
7	A	1225	OLC	C21-C22	2.54	1.60	1.51
6	A	1222	OLB	O20-C1	2.49	1.40	1.33
3	A	1202	U30	C17-C16	2.48	1.55	1.52
7	A	1226	OLC	C21-C22	2.48	1.59	1.51
6	A	1224	OLB	O20-C1	2.46	1.40	1.33
6	A	1223	OLB	O20-C1	2.42	1.40	1.33
3	A	1202	U30	C6-N2	2.39	1.38	1.33
7	A	1225	OLC	C24-C22	2.37	1.61	1.51
7	A	1228	OLC	C24-C22	2.36	1.61	1.51
7	A	1229	OLC	C24-C22	2.34	1.61	1.51
7	A	1226	OLC	C24-C22	2.31	1.61	1.51
7	A	1227	OLC	C24-C22	2.29	1.61	1.51
7	A	1226	OLC	O23-C22	-2.27	1.36	1.43
7	A	1228	OLC	O23-C22	-2.25	1.36	1.43
7	A	1229	OLC	O23-C22	-2.24	1.36	1.43
7	A	1227	OLC	O23-C22	-2.23	1.36	1.43
7	A	1225	OLC	O23-C22	-2.22	1.36	1.43

All (50) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	1202	U30	C10-N4-C9	-5.19	122.58	129.19
3	A	1202	U30	C10-C11-N5	4.88	124.18	116.05
3	A	1202	U30	C10-C11-C12	-4.67	112.24	120.93
3	A	1202	U30	C2-C1-C	-4.22	116.31	120.01
7	A	1228	OLC	O20-C1-O19	-4.02	113.44	123.59
7	A	1229	OLC	O20-C1-O19	-4.01	113.48	123.59
7	A	1226	OLC	O20-C1-O19	-3.98	113.55	123.59
7	A	1227	OLC	O20-C1-O19	-3.98	113.56	123.59
7	A	1225	OLC	O20-C1-O19	-3.95	113.63	123.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	1202	U30	C11-C10-N4	3.67	117.42	112.13
3	A	1202	U30	C14-C15-C16	-3.45	117.01	122.19
3	A	1202	U30	C7-N3-C6	-3.38	114.41	116.34
3	A	1202	U30	C5-N1-C6	-2.92	114.67	116.34
4	A	1203	CLR	C1-C2-C3	2.75	114.00	110.47
4	A	1203	CLR	C11-C9-C8	-2.72	107.84	111.75
3	A	1202	U30	C3-C2-C4	2.68	125.59	120.93
6	A	1222	OLB	O20-C1-O19	-2.58	117.07	123.59
7	A	1226	OLC	O20-C1-C2	2.57	119.98	111.91
4	A	1204	CLR	C18-C13-C17	-2.53	106.99	111.71
3	A	1202	U30	N7-N6-N4	2.52	109.22	107.31
5	A	1221	OLA	O2-C1-C2	2.50	122.06	114.03
7	A	1225	OLC	O20-C1-C2	2.49	119.73	111.91
5	A	1215	OLA	O2-C1-C2	2.47	121.97	114.03
5	A	1219	OLA	O2-C1-C2	2.47	121.96	114.03
7	A	1228	OLC	O20-C1-C2	2.47	119.65	111.91
5	A	1218	OLA	O2-C1-C2	2.46	121.93	114.03
7	A	1227	OLC	O20-C1-C2	2.46	119.62	111.91
7	A	1229	OLC	O20-C1-C2	2.45	119.60	111.91
5	A	1212	OLA	O2-C1-C2	2.45	121.89	114.03
6	A	1223	OLB	O20-C1-O19	-2.42	117.48	123.59
6	A	1224	OLB	O20-C1-O19	-2.39	117.56	123.59
5	A	1209	OLA	O2-C1-O1	-2.30	117.56	123.30
5	A	1215	OLA	O2-C1-O1	-2.28	117.61	123.30
4	A	1203	CLR	C11-C12-C13	2.28	116.69	112.78
3	A	1202	U30	C20-C4-C2	-2.27	117.51	119.92
4	A	1203	CLR	C12-C13-C17	2.27	119.96	116.57
5	A	1207	OLA	O2-C1-O1	-2.26	117.67	123.30
5	A	1208	OLA	O2-C1-O1	-2.25	117.68	123.30
5	A	1218	OLA	O2-C1-O1	-2.25	117.70	123.30
5	A	1220	OLA	O2-C1-O1	-2.22	117.77	123.30
5	A	1219	OLA	O2-C1-O1	-2.22	117.78	123.30
5	A	1221	OLA	O2-C1-O1	-2.21	117.79	123.30
5	A	1212	OLA	O2-C1-O1	-2.21	117.80	123.30
5	A	1210	OLA	O2-C1-O1	-2.20	117.82	123.30
4	A	1204	CLR	C12-C13-C17	2.17	119.83	116.57
4	A	1203	CLR	C10-C9-C8	2.09	115.88	112.73
4	A	1205	CLR	C12-C13-C17	2.09	119.70	116.57
4	A	1204	CLR	C7-C8-C14	-2.09	107.88	110.91
4	A	1203	CLR	C7-C8-C14	-2.07	107.91	110.91
4	A	1206	CLR	C18-C13-C17	-2.03	107.92	111.71

There are no chirality outliers.

All (165) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	1202	U30	N3-C7-C8-C9
3	A	1202	U30	C19-C7-C8-C9
5	A	1216	OLA	C10-C11-C12-C13
6	A	1222	OLB	O20-C21-C22-O23
6	A	1222	OLB	O20-C21-C22-C24
6	A	1223	OLB	O20-C21-C22-O23
6	A	1223	OLB	C9-C10-C11-C12
7	A	1225	OLC	C21-C22-C24-O25
7	A	1225	OLC	O20-C21-C22-O23
7	A	1227	OLC	C21-C22-C24-O25
7	A	1227	OLC	O20-C21-C22-C24
7	A	1227	OLC	O20-C21-C22-O23
7	A	1229	OLC	O19-C1-O20-C21
7	A	1229	OLC	C2-C1-O20-C21
7	A	1228	OLC	O20-C21-C22-O23
5	A	1210	OLA	C3-C4-C5-C6
6	A	1224	OLB	C2-C1-O20-C21
7	A	1228	OLC	C2-C1-O20-C21
5	A	1212	OLA	C11-C12-C13-C14
6	A	1223	OLB	O20-C21-C22-C24
4	A	1203	CLR	C22-C23-C24-C25
5	A	1219	OLA	C1-C2-C3-C4
6	A	1223	OLB	C1-C2-C3-C4
6	A	1224	OLB	C1-C2-C3-C4
7	A	1226	OLC	C1-C2-C3-C4
7	A	1228	OLC	O19-C1-O20-C21
6	A	1223	OLB	O23-C22-C24-O25
7	A	1225	OLC	O23-C22-C24-O25
7	A	1227	OLC	O23-C22-C24-O25
5	A	1207	OLA	C1-C2-C3-C4
7	A	1225	OLC	C1-C2-C3-C4
7	A	1229	OLC	C12-C13-C14-C15
4	A	1203	CLR	C20-C22-C23-C24
6	A	1224	OLB	O19-C1-O20-C21
7	A	1225	OLC	C14-C15-C16-C17
5	A	1219	OLA	C4-C5-C6-C7
5	A	1221	OLA	C5-C6-C7-C8
7	A	1225	OLC	O20-C21-C22-C24
7	A	1228	OLC	C1-C2-C3-C4
5	A	1217	OLA	C12-C13-C14-C15
6	A	1222	OLB	C2-C3-C4-C5
5	A	1212	OLA	C3-C4-C5-C6

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Mol	Chain	Res	Type	Atoms
7	A	1229	OLC	C4-C5-C6-C7
7	A	1226	OLC	C4-C5-C6-C7
6	A	1223	OLB	C21-C22-C24-O25
7	A	1229	OLC	C21-C22-C24-O25
5	A	1212	OLA	C6-C7-C8-C9
6	A	1222	OLB	C10-C11-C12-C13
6	A	1223	OLB	C6-C7-C8-C9
5	A	1207	OLA	C3-C4-C5-C6
5	A	1207	OLA	C14-C15-C16-C17
6	A	1224	OLB	C2-C3-C4-C5
5	A	1209	OLA	C3-C4-C5-C6
7	A	1226	OLC	C2-C3-C4-C5
7	A	1226	OLC	C3-C4-C5-C6
5	A	1212	OLA	C4-C5-C6-C7
5	A	1218	OLA	C2-C3-C4-C5
7	A	1226	OLC	C2-C1-O20-C21
7	A	1226	OLC	C5-C6-C7-C8
5	A	1208	OLA	C6-C7-C8-C9
5	A	1217	OLA	C10-C11-C12-C13
5	A	1220	OLA	C6-C7-C8-C9
5	A	1220	OLA	C14-C15-C16-C17
7	A	1227	OLC	C5-C6-C7-C8
5	A	1217	OLA	C11-C12-C13-C14
5	A	1221	OLA	C4-C5-C6-C7
7	A	1229	OLC	C13-C14-C15-C16
7	A	1226	OLC	O19-C1-O20-C21
6	A	1222	OLB	C3-C4-C5-C6
5	A	1208	OLA	C1-C2-C3-C4
5	A	1220	OLA	C12-C13-C14-C15
4	A	1205	CLR	C21-C20-C22-C23
5	A	1207	OLA	C10-C11-C12-C13
5	A	1215	OLA	C10-C11-C12-C13
6	A	1222	OLB	C6-C7-C8-C9
7	A	1227	OLC	C10-C11-C12-C13
5	A	1219	OLA	C3-C4-C5-C6
4	A	1206	CLR	C20-C22-C23-C24
5	A	1221	OLA	C2-C3-C4-C5
7	A	1225	OLC	C10-C11-C12-C13
7	A	1225	OLC	C6-C7-C8-C9
7	A	1226	OLC	C6-C7-C8-C9
6	A	1222	OLB	C11-C12-C13-C14
5	A	1212	OLA	C2-C3-C4-C5

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Mol	Chain	Res	Type	Atoms
5	A	1207	OLA	C12-C13-C14-C15
7	A	1229	OLC	C3-C4-C5-C6
5	A	1220	OLA	C11-C12-C13-C14
7	A	1225	OLC	C4-C5-C6-C7
5	A	1217	OLA	C6-C7-C8-C9
4	A	1203	CLR	C13-C17-C20-C21
5	A	1208	OLA	C2-C3-C4-C5
6	A	1224	OLB	C5-C6-C7-C8
6	A	1223	OLB	C2-C1-O20-C21
4	A	1203	CLR	C16-C17-C20-C21
7	A	1225	OLC	C11-C12-C13-C14
5	A	1220	OLA	C9-C10-C11-C12
6	A	1223	OLB	O19-C1-O20-C21
5	A	1207	OLA	C4-C5-C6-C7
5	A	1211	OLA	C14-C15-C16-C17
6	A	1223	OLB	C2-C3-C4-C5
7	A	1227	OLC	C11-C12-C13-C14
4	A	1203	CLR	C13-C17-C20-C22
7	A	1228	OLC	O20-C21-C22-C24
7	A	1229	OLC	O23-C22-C24-O25
5	A	1220	OLA	C3-C4-C5-C6
4	A	1203	CLR	C16-C17-C20-C22
6	A	1222	OLB	C4-C5-C6-C7
5	A	1210	OLA	C6-C7-C8-C9
5	A	1217	OLA	C13-C14-C15-C16
7	A	1226	OLC	C9-C10-C11-C12
5	A	1212	OLA	C12-C13-C14-C15
5	A	1207	OLA	C13-C14-C15-C16
7	A	1229	OLC	C11-C12-C13-C14
4	A	1203	CLR	C23-C24-C25-C27
4	A	1203	CLR	C23-C24-C25-C26
5	A	1219	OLA	C2-C3-C4-C5
5	A	1210	OLA	C11-C12-C13-C14
5	A	1207	OLA	C2-C3-C4-C5
5	A	1212	OLA	C10-C11-C12-C13
3	A	1202	U30	N5-C15-C16-C17
3	A	1202	U30	N5-C15-C16-C18
5	A	1210	OLA	C5-C6-C7-C8
7	A	1225	OLC	C2-C1-O20-C21
5	A	1215	OLA	C11-C12-C13-C14
5	A	1212	OLA	C5-C6-C7-C8
7	A	1225	OLC	O19-C1-O20-C21

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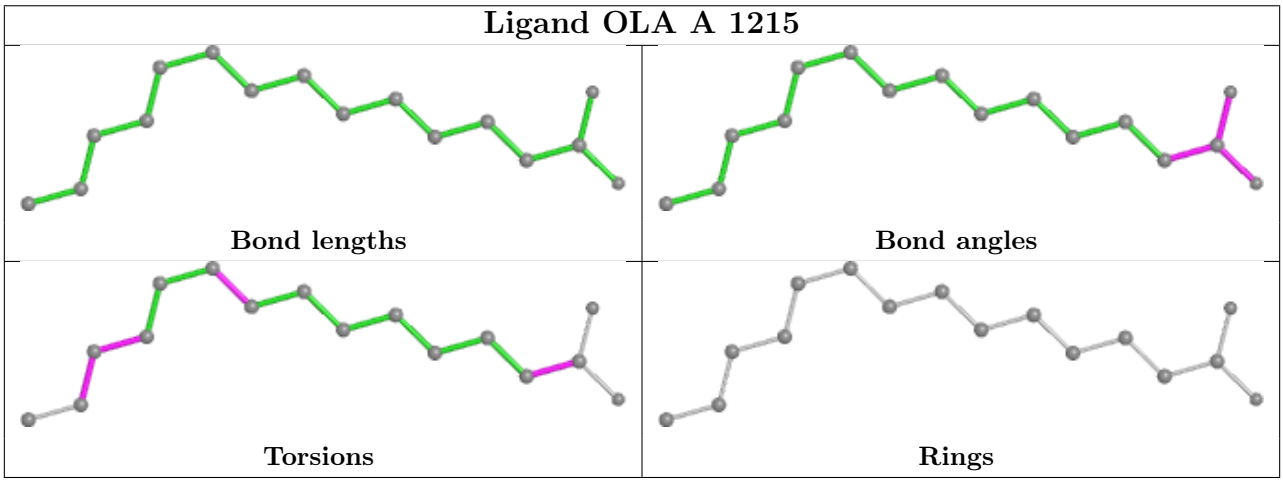
Mol	Chain	Res	Type	Atoms
5	A	1214	OLA	C4-C5-C6-C7
5	A	1215	OLA	C7-C8-C9-C10
5	A	1214	OLA	C2-C3-C4-C5
6	A	1224	OLB	C7-C8-C9-C10
5	A	1211	OLA	C15-C16-C17-C18
6	A	1222	OLB	C9-C10-C11-C12
5	A	1215	OLA	O2-C1-C2-C3
5	A	1215	OLA	O1-C1-C2-C3
5	A	1214	OLA	C1-C2-C3-C4
7	A	1228	OLC	C4-C5-C6-C7
4	A	1206	CLR	C22-C23-C24-C25
7	A	1228	OLC	C7-C8-C9-C10
5	A	1211	OLA	C10-C11-C12-C13
5	A	1211	OLA	C13-C14-C15-C16
7	A	1227	OLC	C4-C5-C6-C7
5	A	1213	OLA	C9-C10-C11-C12
5	A	1210	OLA	C7-C8-C9-C10
6	A	1222	OLB	C7-C8-C9-C10
7	A	1225	OLC	C9-C10-C11-C12
5	A	1212	OLA	C7-C8-C9-C10
7	A	1225	OLC	C7-C8-C9-C10
7	A	1227	OLC	C7-C8-C9-C10
5	A	1216	OLA	C6-C7-C8-C9
5	A	1208	OLA	O1-C1-C2-C3
5	A	1208	OLA	O2-C1-C2-C3
7	A	1229	OLC	C15-C16-C17-C18
5	A	1219	OLA	C7-C8-C9-C10
7	A	1226	OLC	C7-C8-C9-C10
7	A	1229	OLC	C9-C10-C11-C12
5	A	1211	OLA	C12-C13-C14-C15
7	A	1229	OLC	C2-C3-C4-C5
5	A	1217	OLA	C9-C10-C11-C12
5	A	1208	OLA	C5-C6-C7-C8
5	A	1221	OLA	O2-C1-C2-C3
6	A	1224	OLB	C6-C7-C8-C9
5	A	1221	OLA	O1-C1-C2-C3
7	A	1228	OLC	O20-C1-C2-C3
5	A	1219	OLA	O1-C1-C2-C3
5	A	1217	OLA	C7-C8-C9-C10

There are no ring outliers.

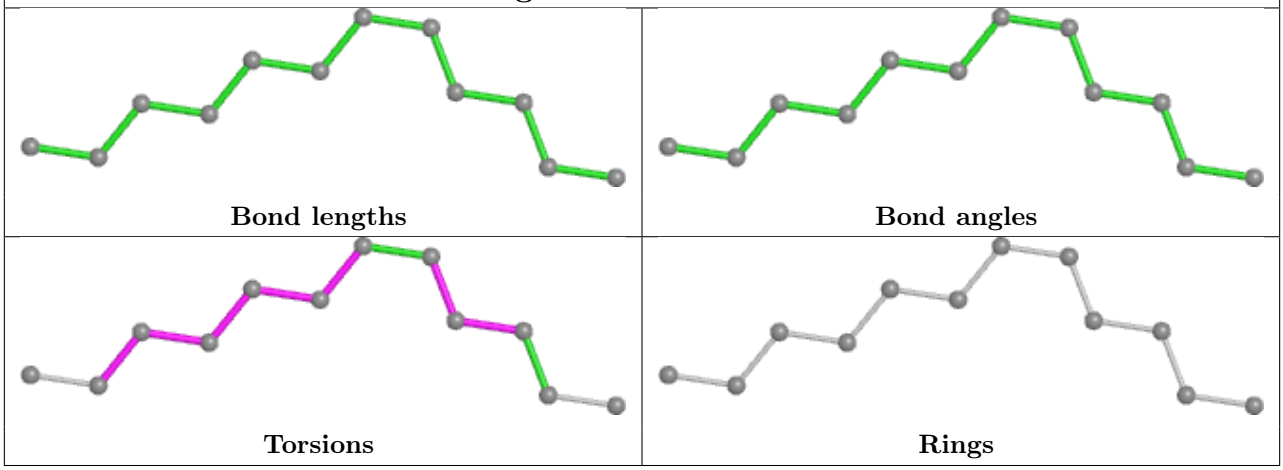
14 monomers are involved in 16 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	1217	OLA	1	0
5	A	1212	OLA	1	0
5	A	1220	OLA	1	0
6	A	1224	OLB	1	0
5	A	1221	OLA	2	0
6	A	1222	OLB	1	0
5	A	1210	OLA	2	0
7	A	1229	OLC	1	0
7	A	1225	OLC	1	0
5	A	1214	OLA	2	0
7	A	1226	OLC	1	0
3	A	1202	U30	2	0
4	A	1203	CLR	1	0
4	A	1206	CLR	1	0

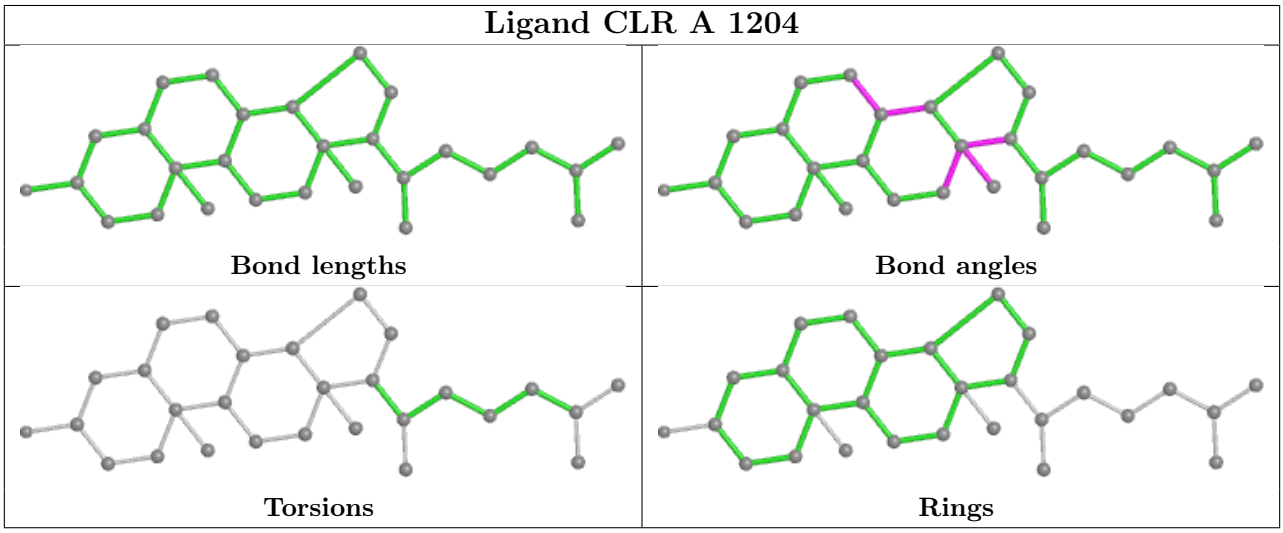
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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



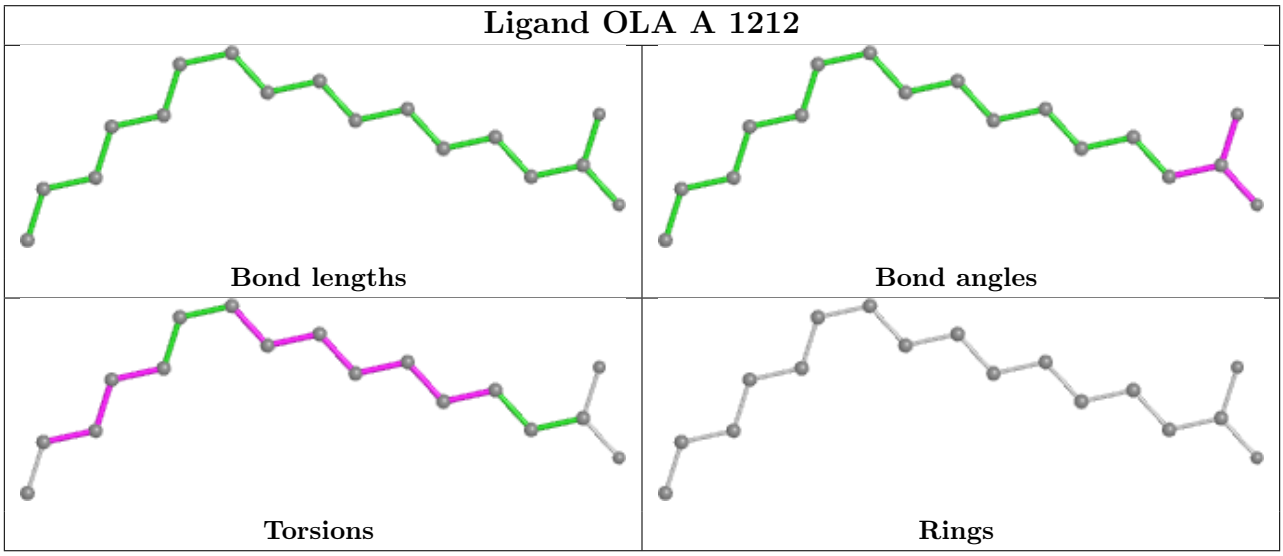
Ligand OLA A 1217



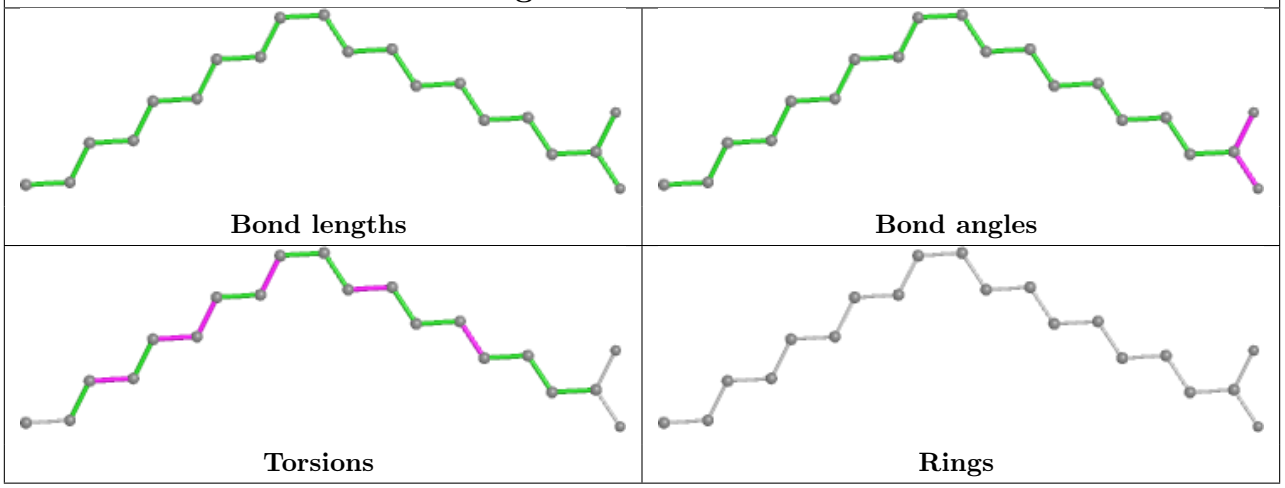
Ligand CLR A 1204



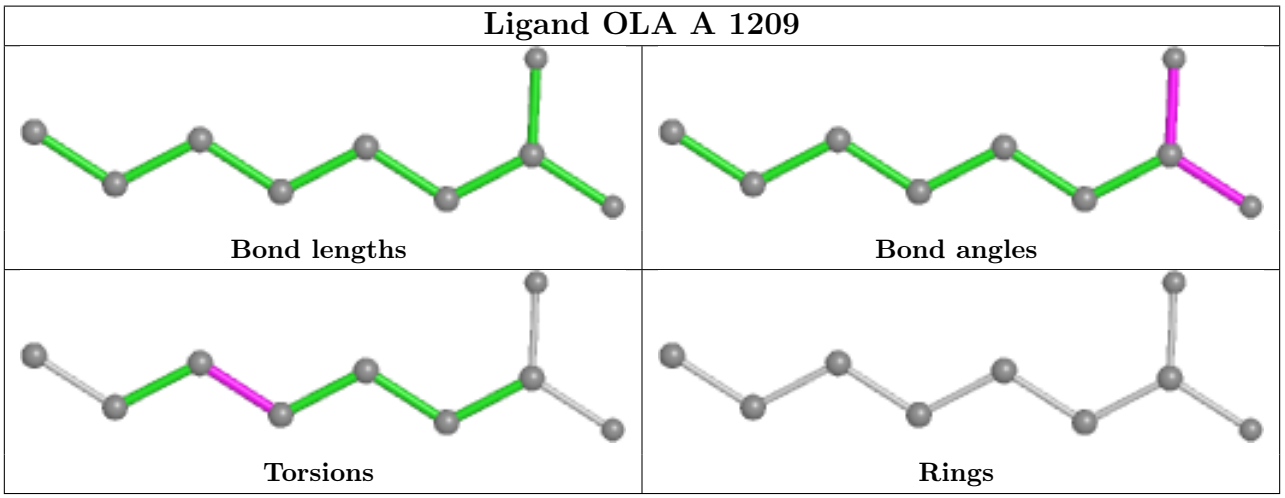
Ligand OLA A 1212



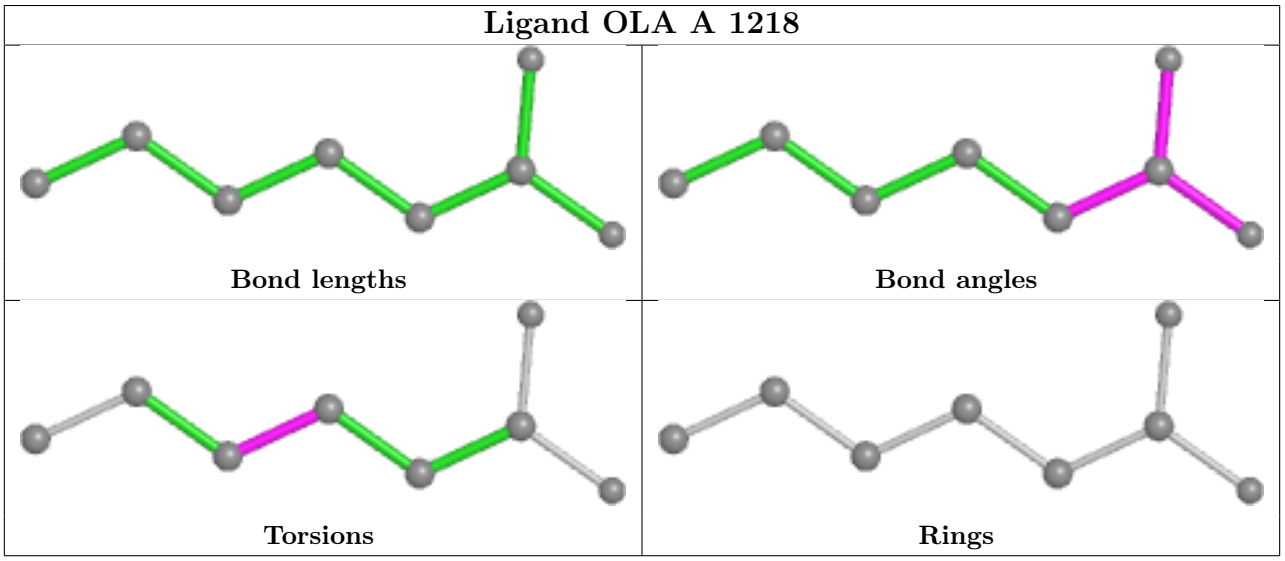
Ligand OLA A 1220



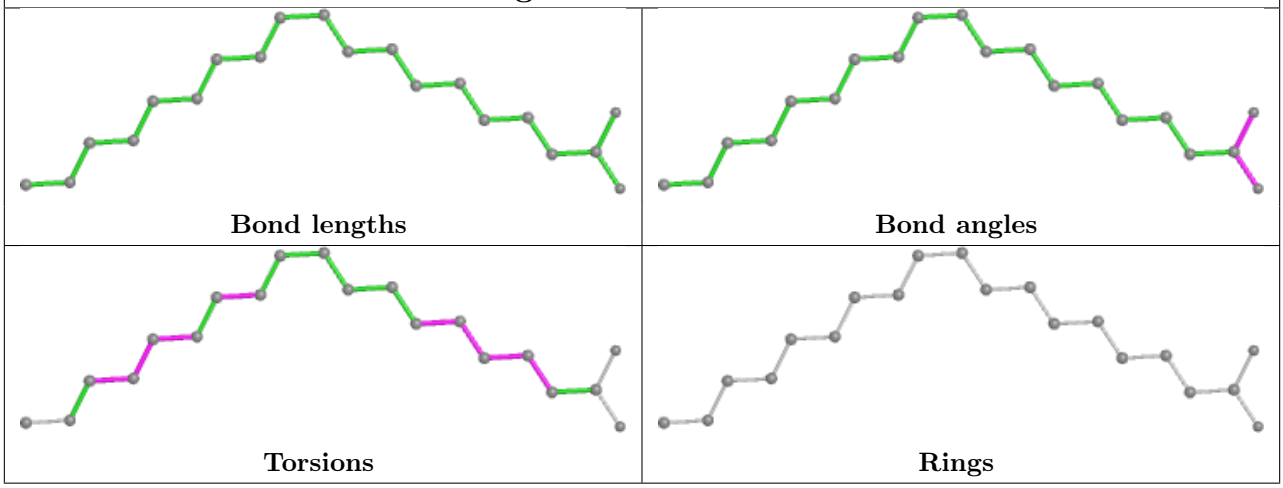
Ligand OLA A 1209



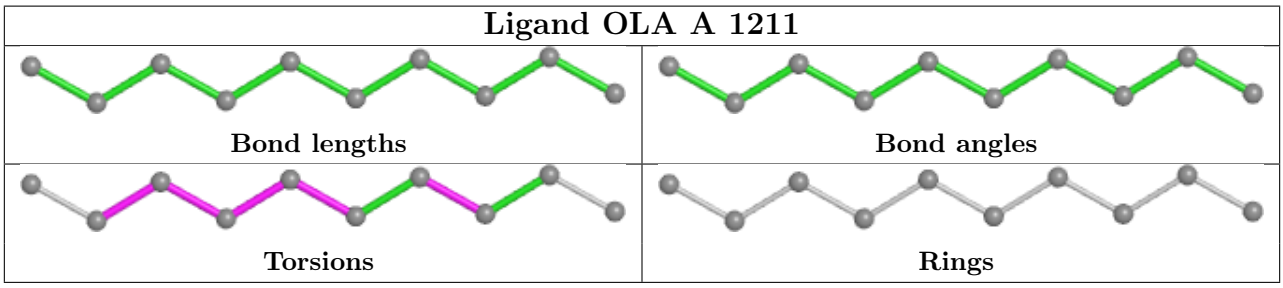
Ligand OLA A 1218



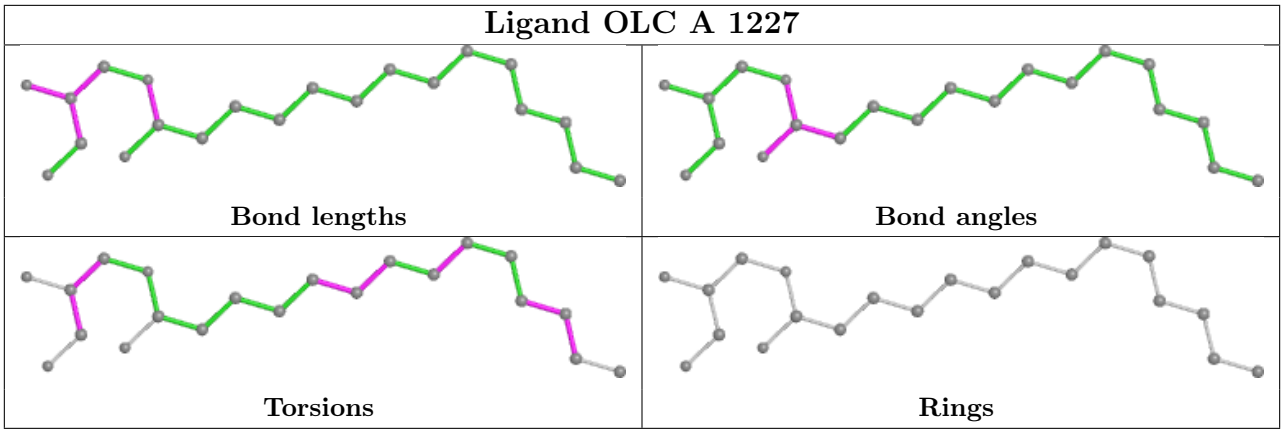
Ligand OLA A 1207



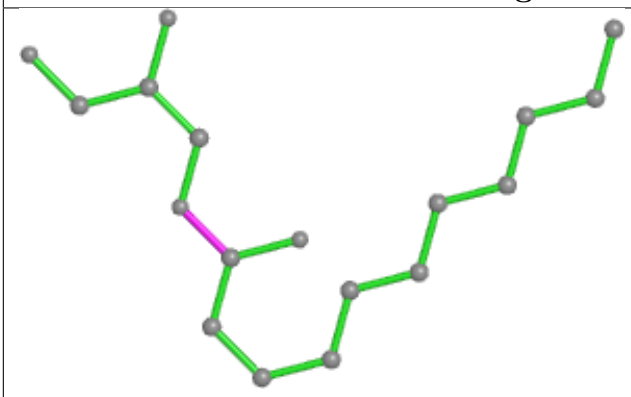
Ligand OLA A 1211



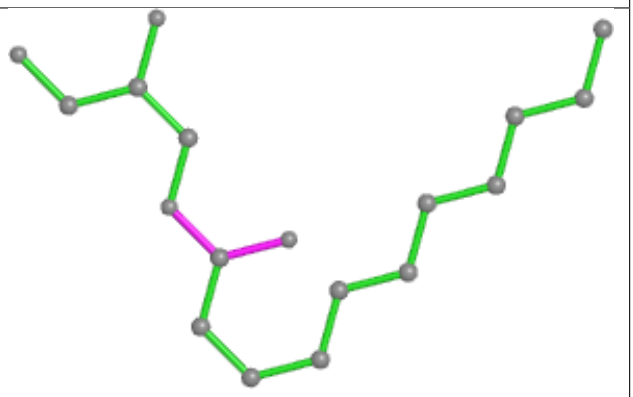
Ligand OLC A 1227



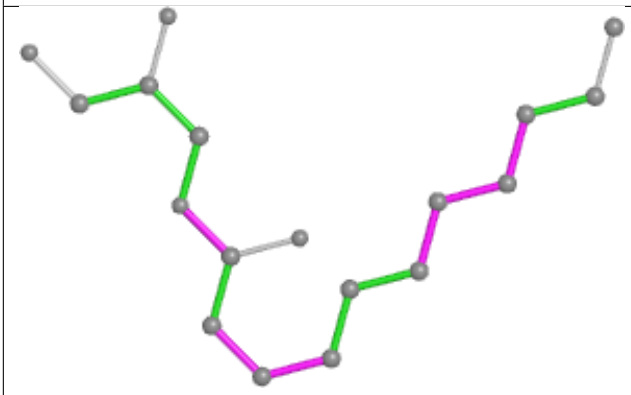
Ligand OLB A 1224



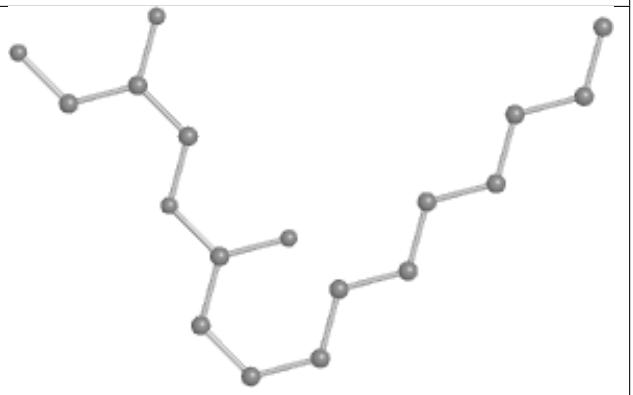
Bond lengths



Bond angles

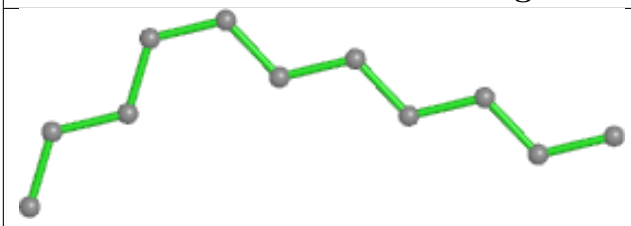


Torsions

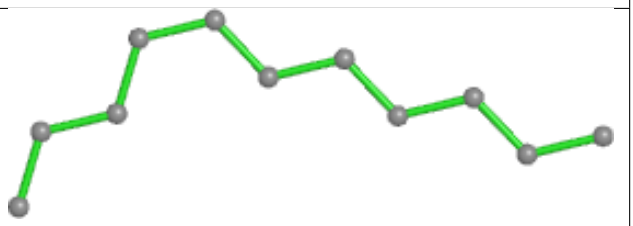


Rings

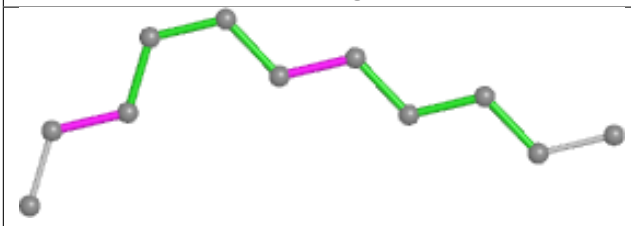
Ligand OLA A 1216



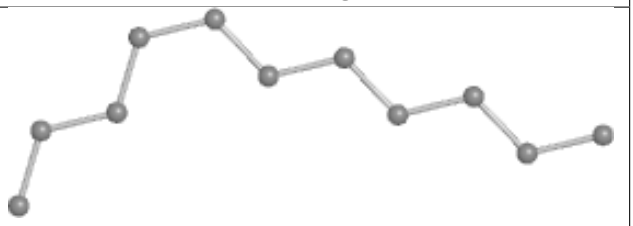
Bond lengths



Bond angles

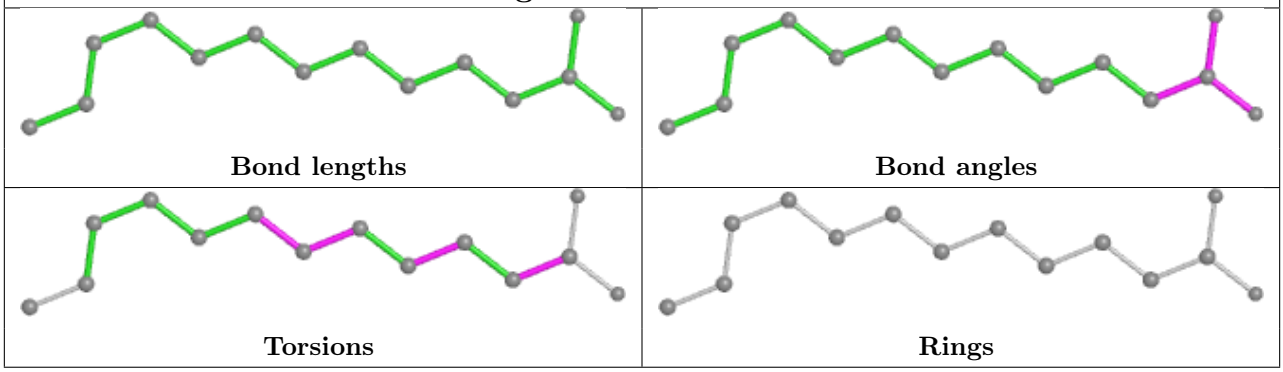


Torsions

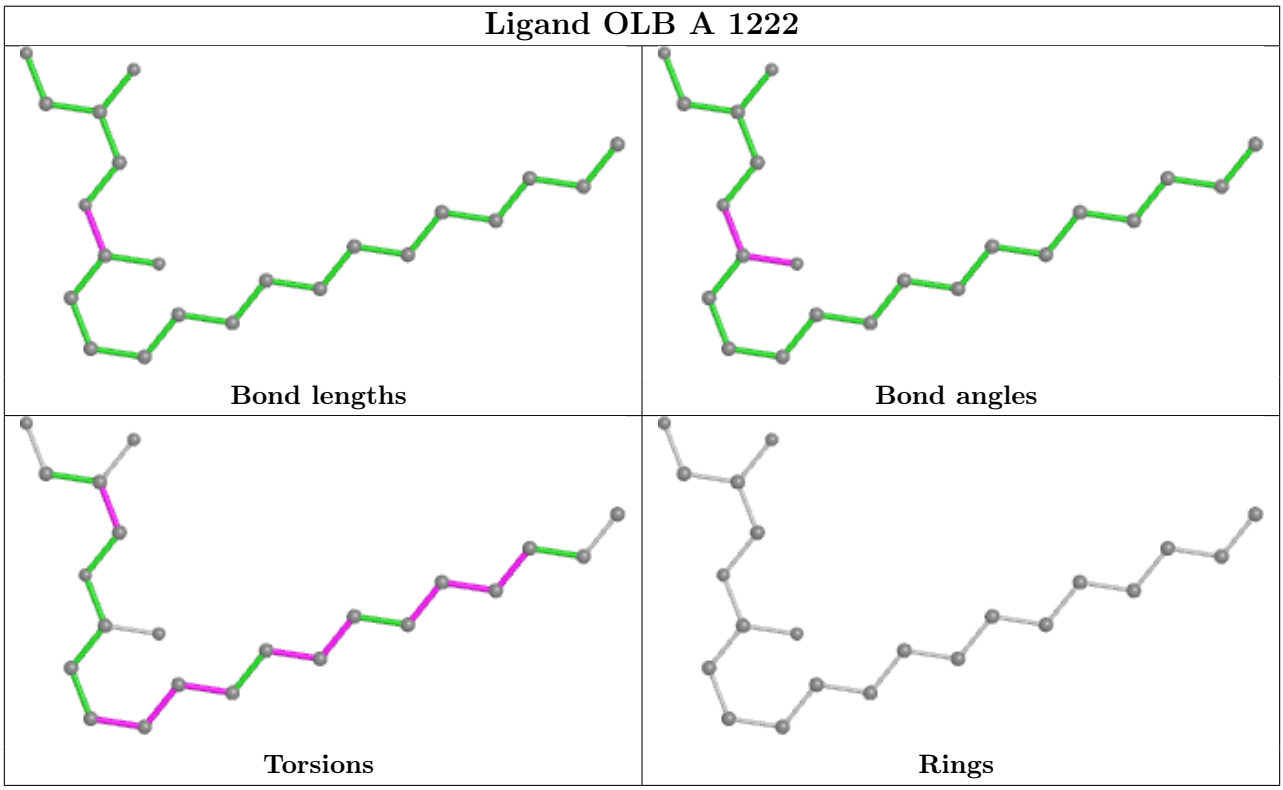


Rings

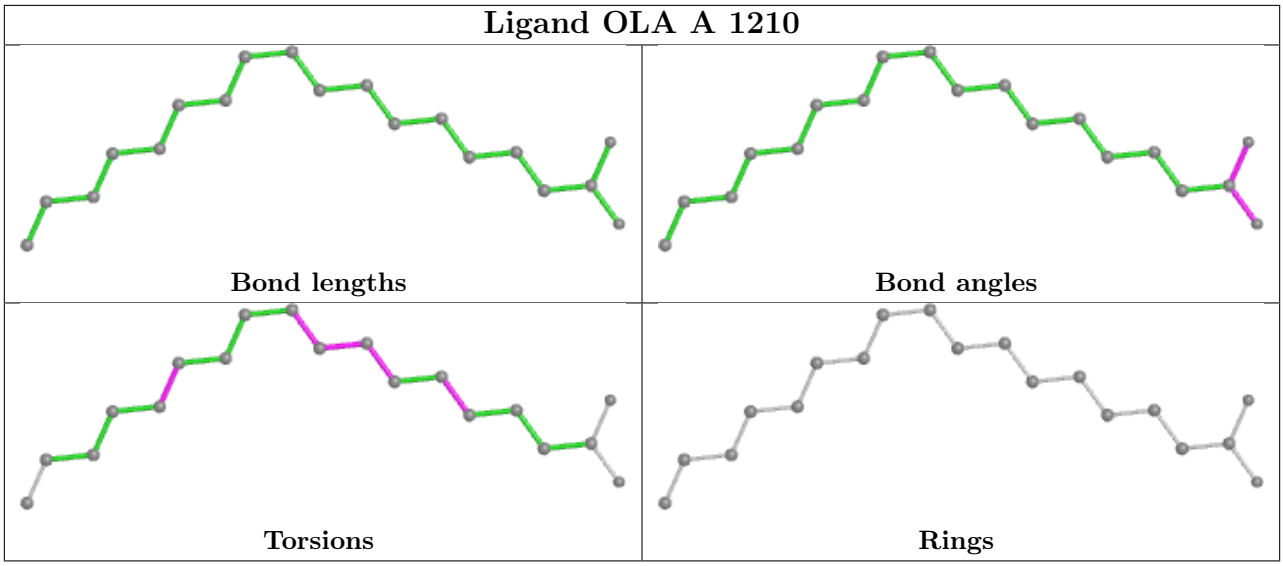
Ligand OLA A 1221



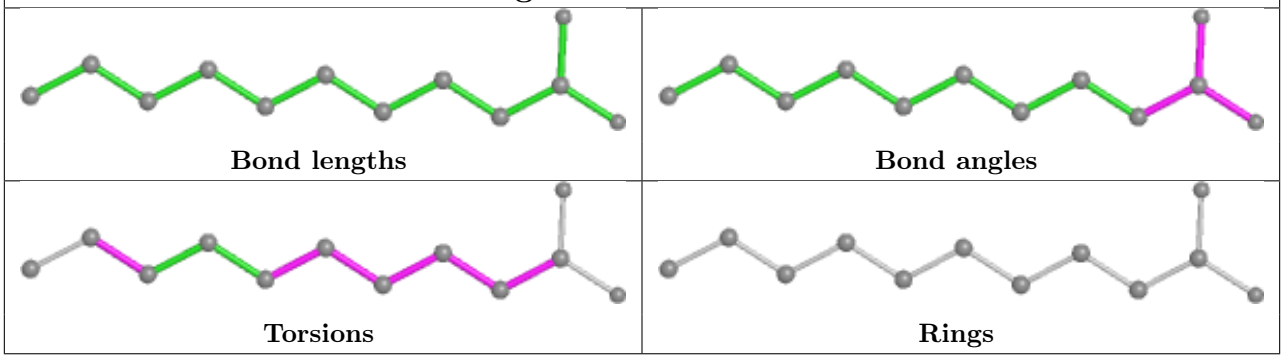
Ligand OLB A 1222



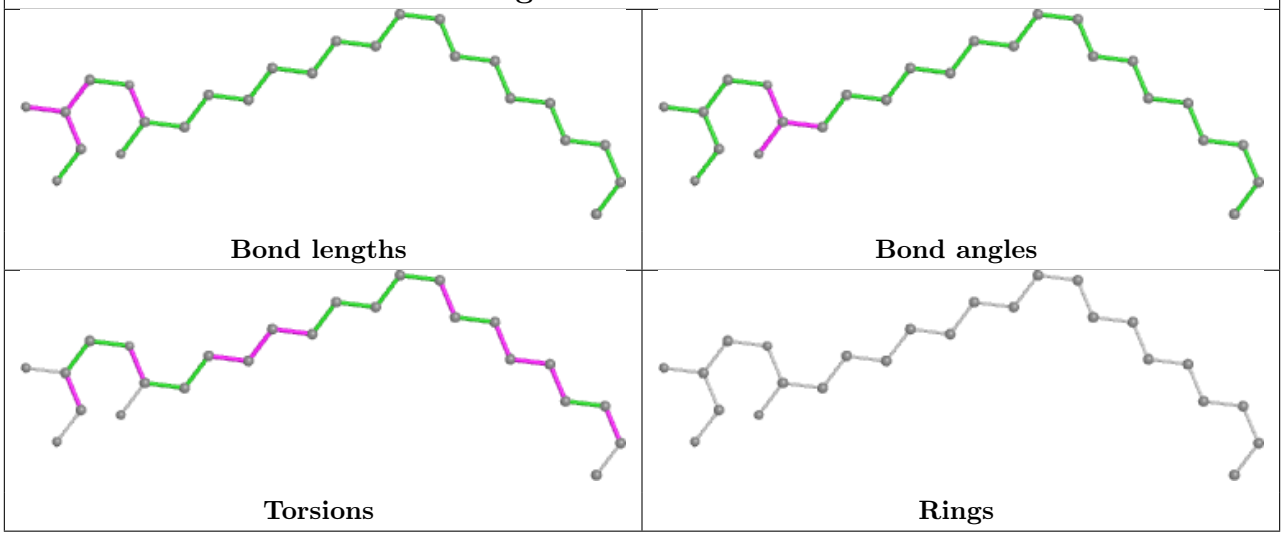
Ligand OLA A 1210



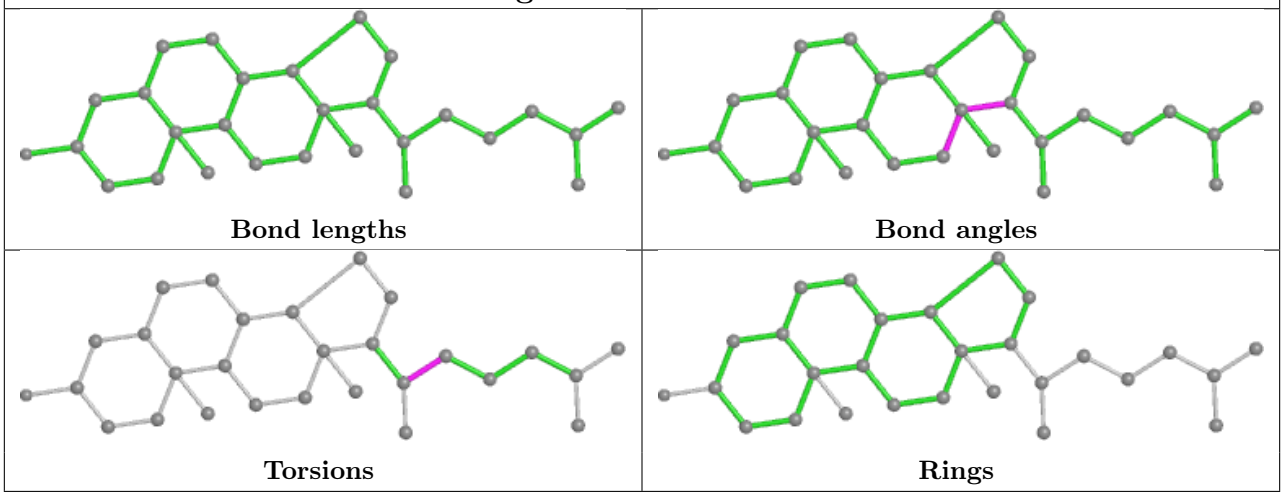
Ligand OLA A 1219



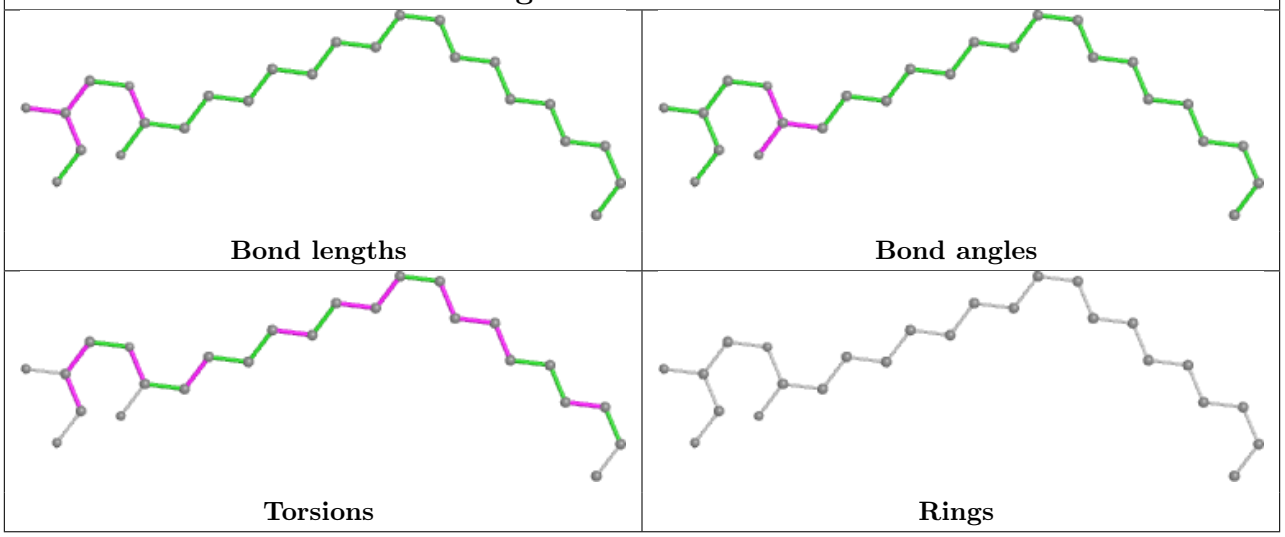
Ligand OLC A 1229



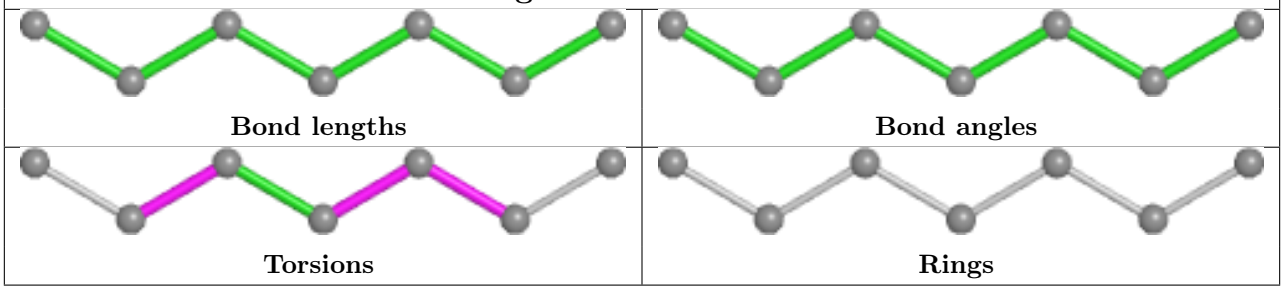
Ligand CLR A 1205



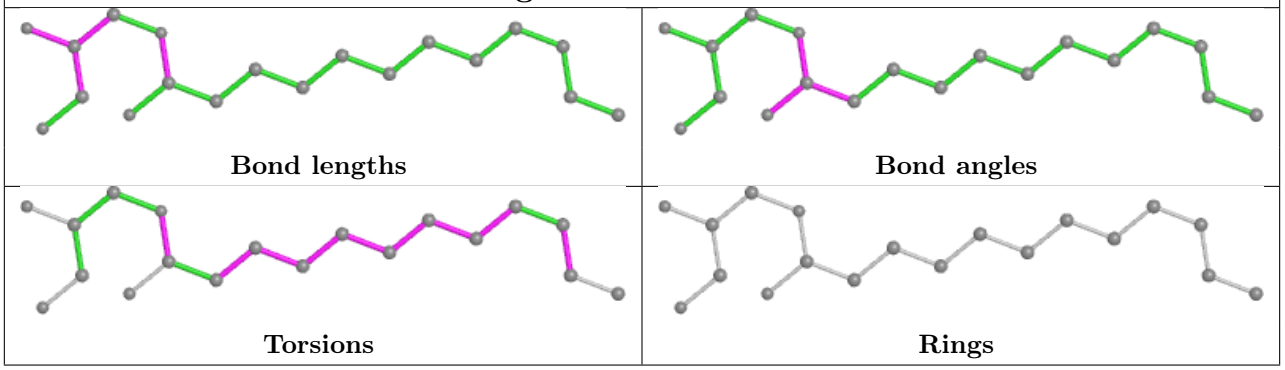
Ligand OLC A 1225



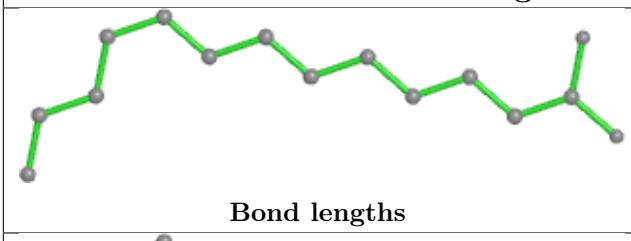
Ligand OLA A 1214



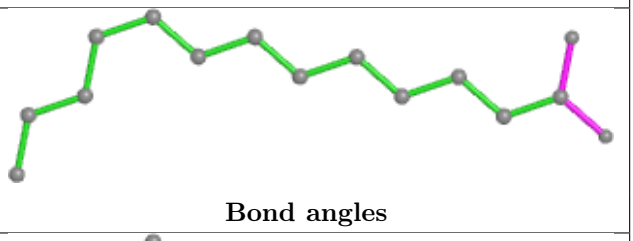
Ligand OLC A 1226



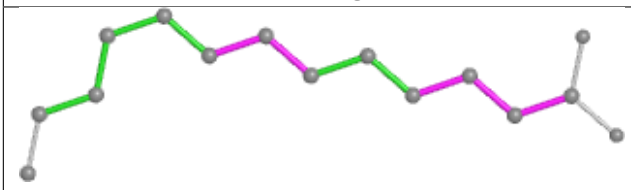
Ligand OLA A 1208



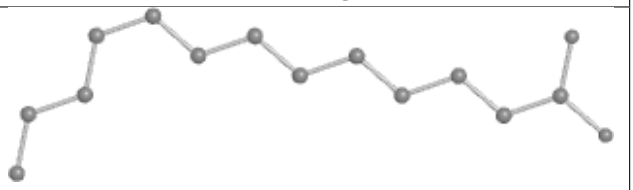
Bond lengths



Bond angles

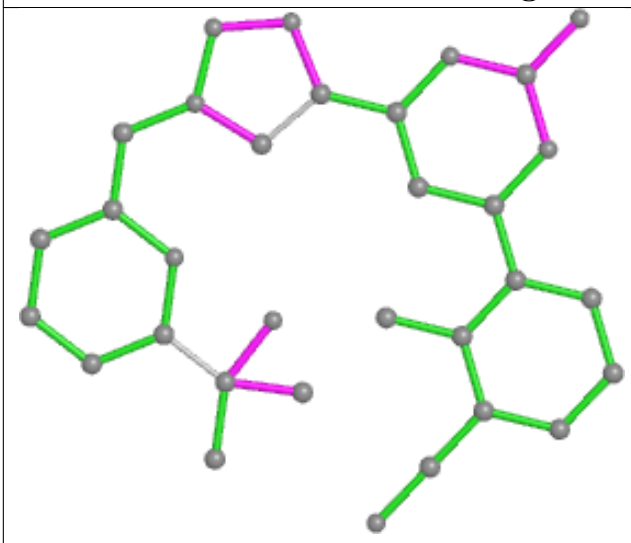


Torsions

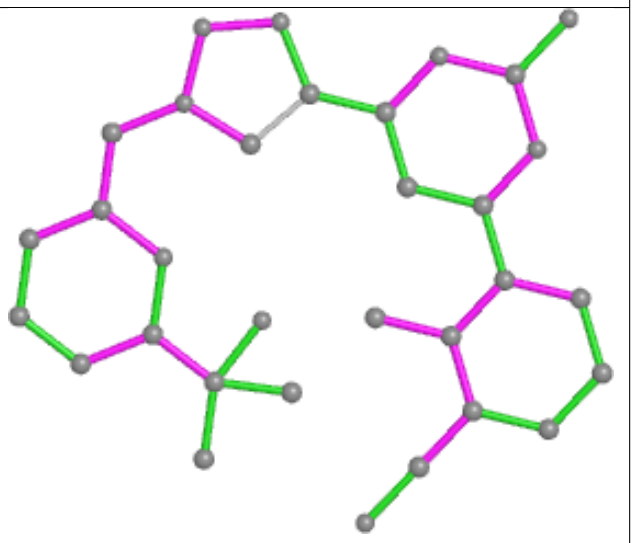


Rings

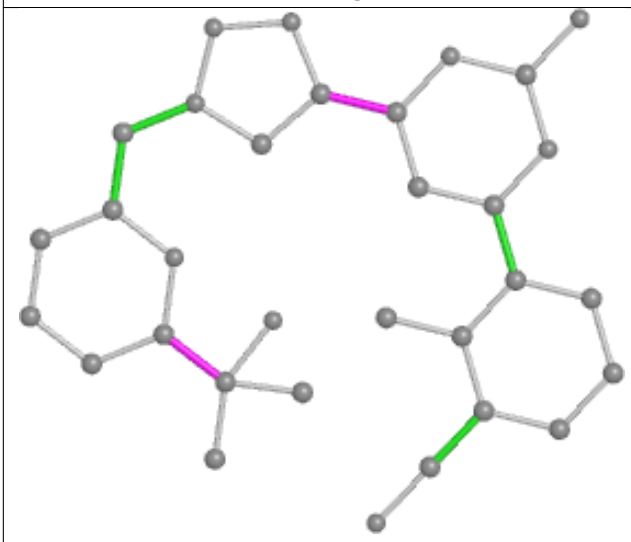
Ligand U30 A 1202



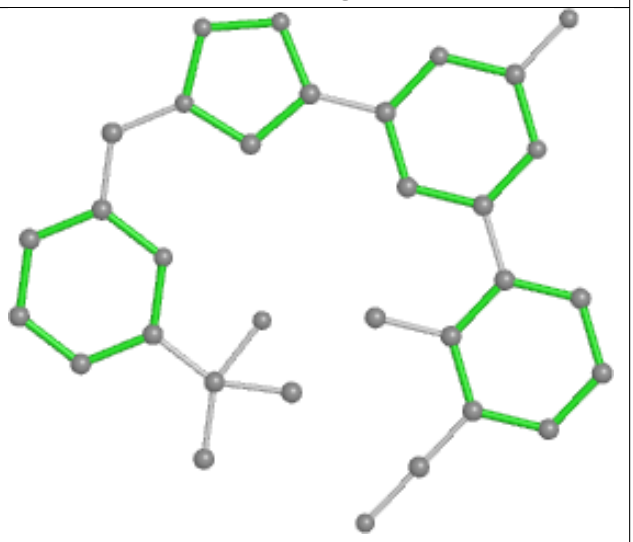
Bond lengths



Bond angles

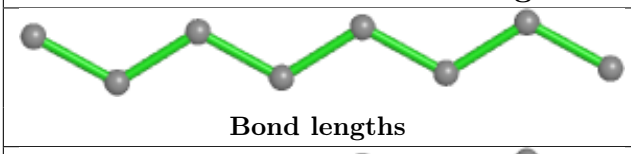


Torsions

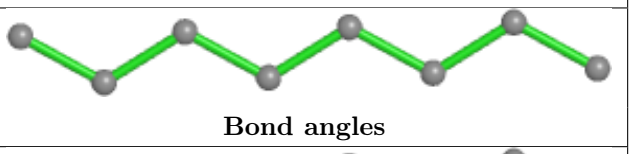


Rings

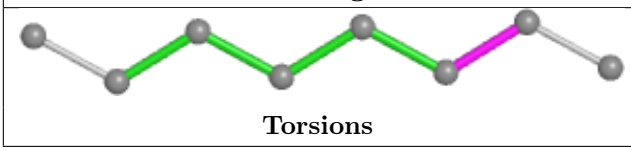
Ligand OLA A 1213



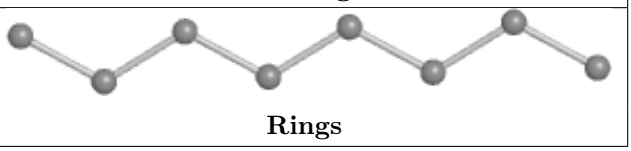
Bond lengths



Bond angles

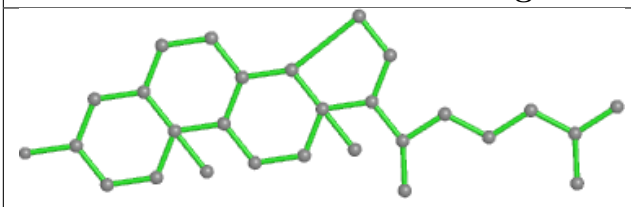


Torsions

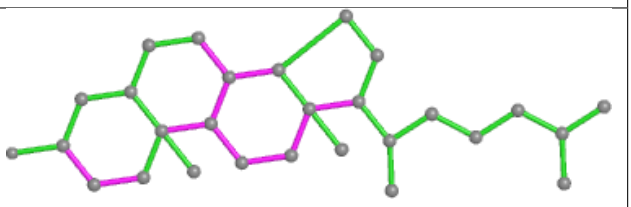


Rings

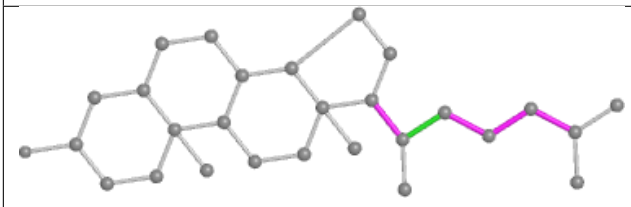
Ligand CLR A 1203



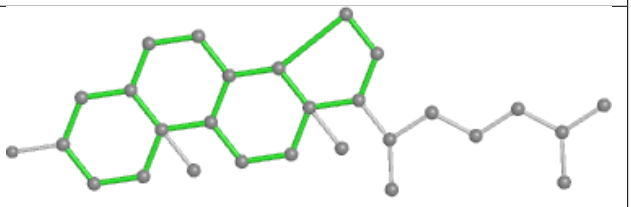
Bond lengths



Bond angles

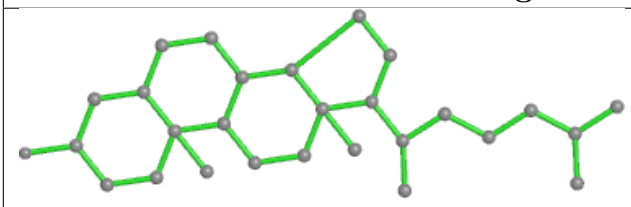


Torsions

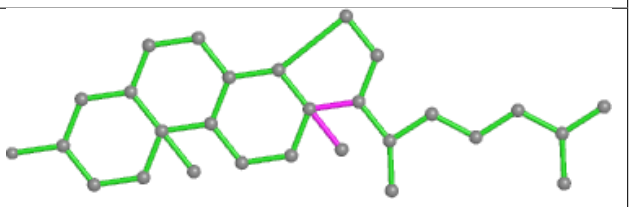


Rings

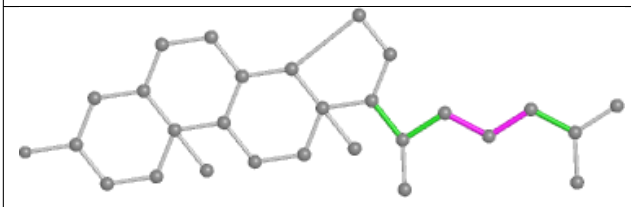
Ligand CLR A 1206



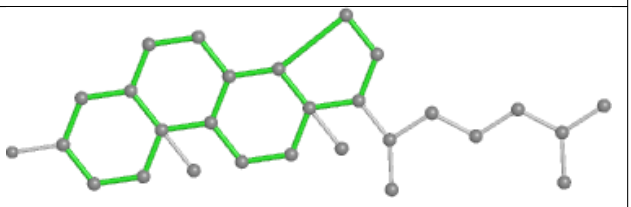
Bond lengths



Bond angles

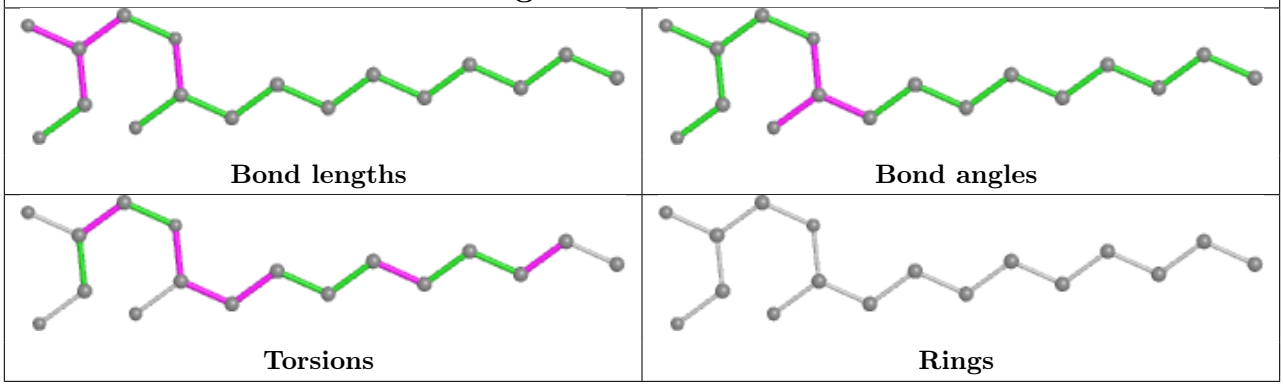


Torsions

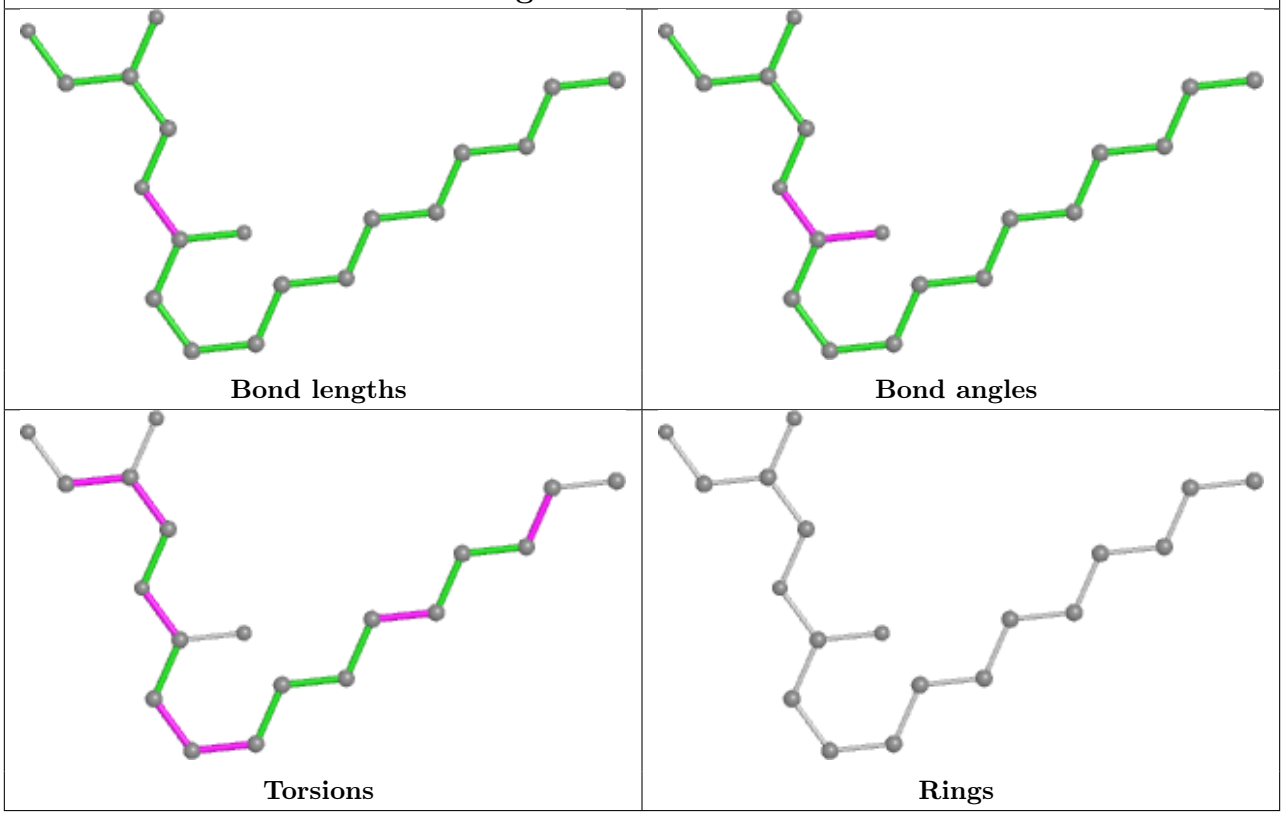


Rings

Ligand OLC A 1228



Ligand OLB A 1223



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, 95^{th} 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	386/433 (89%)	0.63	50 (12%) 3 4	24, 42, 90, 128	0

All (50) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	1061	PHE	8.3
1	A	1062	ARG	5.0
1	A	1101	TYR	5.0
1	A	1063	HIS	4.9
1	A	1105	TYR	4.9
1	A	290	TYR	4.8
1	A	1060	ASP	4.6
1	A	0	ALA	4.5
1	A	-1	GLY	4.2
1	A	1106	LEU	3.9
1	A	1100	ALA	3.9
1	A	1102	ILE	3.5
1	A	1099	ASN	3.5
1	A	29[A]	TRP	3.5
1	A	1003	LEU	3.4
1	A	1037	ALA	3.3
1	A	1066	ASP	3.2
1	A	1065	PHE	3.1
1	A	1021	ASP	3.0
1	A	208	LEU	3.0
1	A	304	ARG	2.9
1	A	220	ARG	2.9
1	A	1064	GLY	2.8
1	A	1007	TRP	2.8
1	A	300[A]	ARG	2.7
1	A	1092	GLU	2.7
1	A	1094	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	1038	LEU	2.6
1	A	1	PRO	2.6
1	A	1016	VAL	2.6
1	A	1028	ASP	2.6
1	A	1041	GLN	2.6
1	A	206	ARG	2.5
1	A	1012	ASP	2.5
1	A	1036	ALA	2.5
1	A	1017	ILE	2.4
1	A	1005	ASP	2.4
1	A	1019	LYS	2.3
1	A	1104	LYS	2.3
1	A	1026	VAL	2.3
1	A	1031[A]	THR	2.2
1	A	302	ILE	2.2
1	A	293	ARG	2.2
1	A	301	LYS	2.2
1	A	1035	ALA	2.1
1	A	1004	GLU	2.1
1	A	222	ARG	2.1
1	A	1006	ASN	2.1
1	A	1103	GLN	2.0
1	A	1015	LYS	2.0

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 monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} 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.

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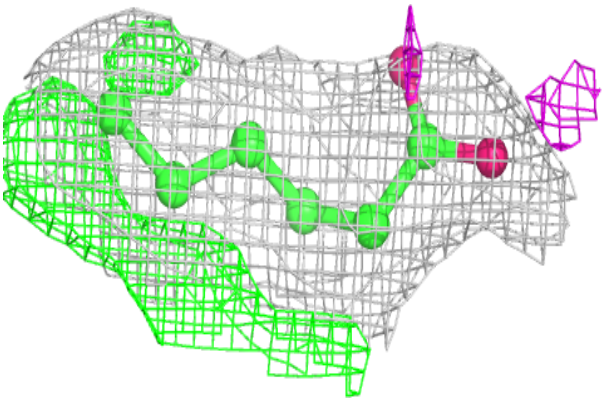
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9

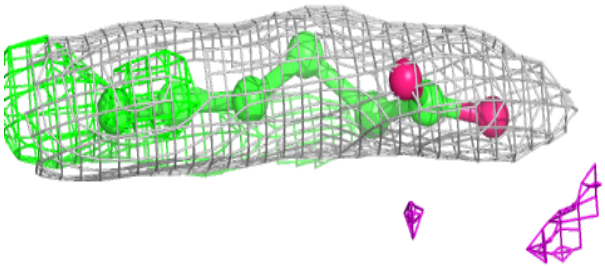
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
5	OLA	A	1218	8/20	0.42	0.28	62,72,76,77	0
4	CLR	A	1203	28/28	0.59	0.47	102,118,125,125	0
5	OLA	A	1220	20/20	0.59	0.32	60,75,86,86	0
7	OLC	A	1229	25/25	0.59	0.24	62,82,94,96	0
5	OLA	A	1212	17/20	0.63	0.25	62,71,87,88	0
7	OLC	A	1226	19/25	0.67	0.26	47,53,85,88	0
5	OLA	A	1221	14/20	0.68	0.27	69,79,83,83	0
5	OLA	A	1210	19/20	0.68	0.23	67,72,75,76	0
5	OLA	A	1208	15/20	0.68	0.26	62,69,86,87	0
7	OLC	A	1228	17/25	0.70	0.30	70,74,87,87	0
5	OLA	A	1217	12/20	0.70	0.29	57,63,65,66	0
6	OLB	A	1224	18/25	0.72	0.26	58,64,90,90	0
5	OLA	A	1216	11/20	0.73	0.19	64,67,72,72	0
6	OLB	A	1223	19/25	0.74	0.31	38,59,79,80	0
7	OLC	A	1227	21/25	0.77	0.24	61,65,83,84	0
5	OLA	A	1215	16/20	0.78	0.28	54,65,96,96	0
5	OLA	A	1219	12/20	0.78	0.34	56,68,82,83	0
6	OLB	A	1222	22/25	0.78	0.32	56,68,83,89	0
5	OLA	A	1211	10/20	0.79	0.27	50,53,62,63	0
5	OLA	A	1214	7/20	0.80	0.25	64,65,66,66	0
7	OLC	A	1225	25/25	0.80	0.25	47,61,81,82	0
5	OLA	A	1207	20/20	0.81	0.22	49,68,85,86	0
5	OLA	A	1209	9/20	0.86	0.24	49,53,72,74	0
5	OLA	A	1213	8/20	0.89	0.20	47,52,55,56	0
2	NA	A	1201	1/1	0.92	0.13	51,51,51,51	0
4	CLR	A	1206	28/28	0.94	0.13	27,34,62,62	0
4	CLR	A	1204	28/28	0.94	0.14	34,37,64,70	0
4	CLR	A	1205	28/28	0.95	0.12	37,43,55,62	0
3	U30	A	1202	32/32	0.96	0.14	24,31,41,47	0

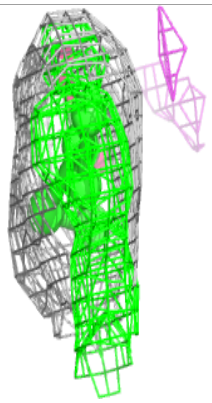
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around OLA A 1218:

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

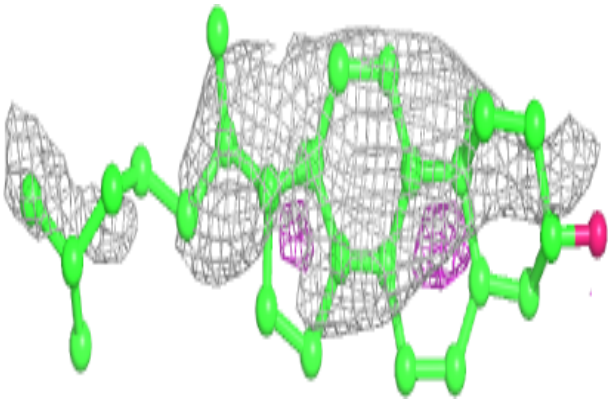


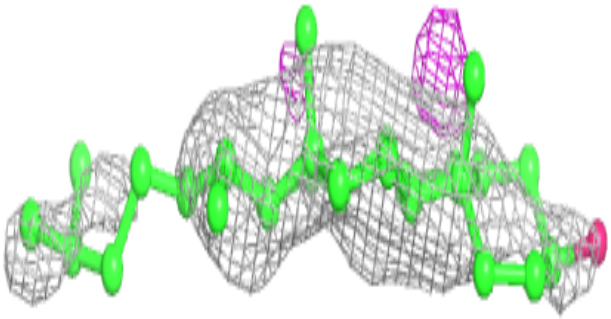


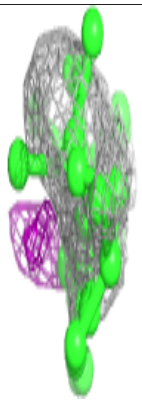


Electron density around CLR A 1203:

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

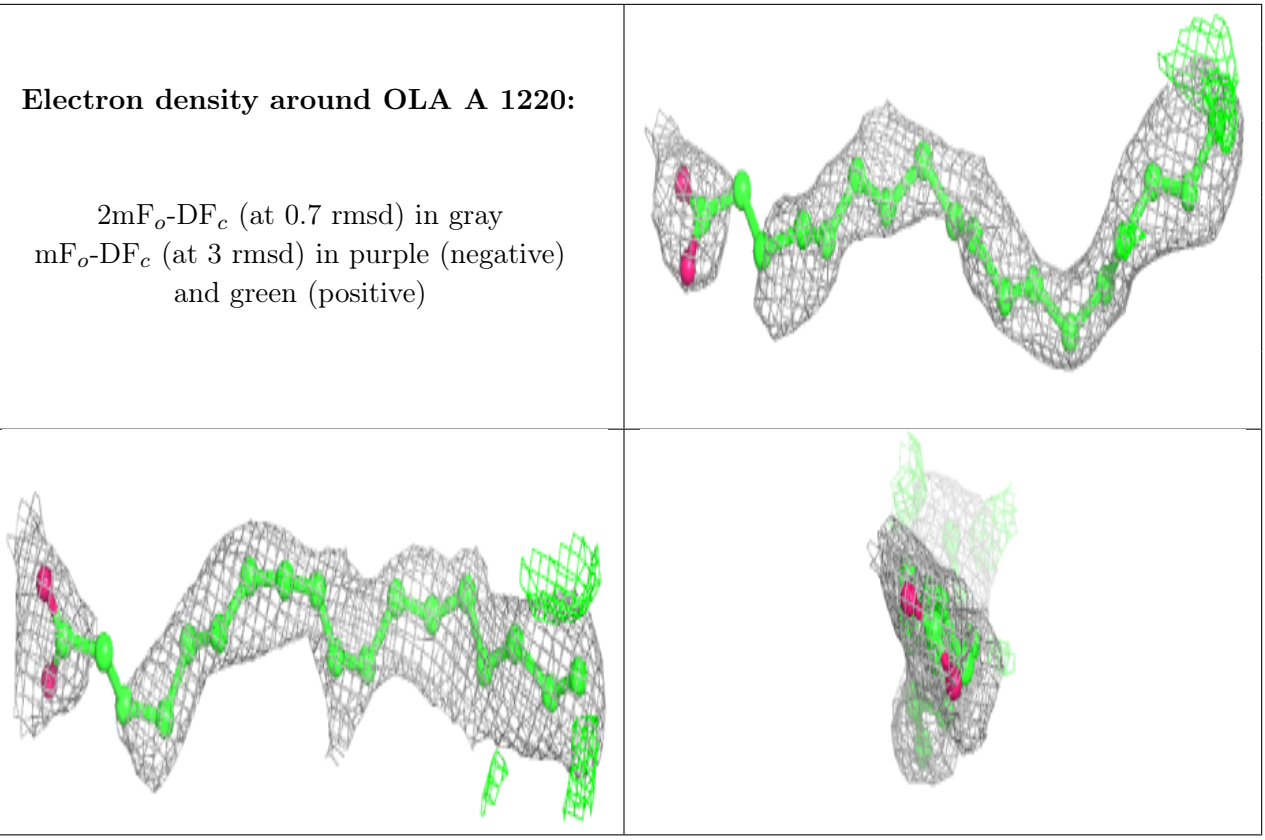






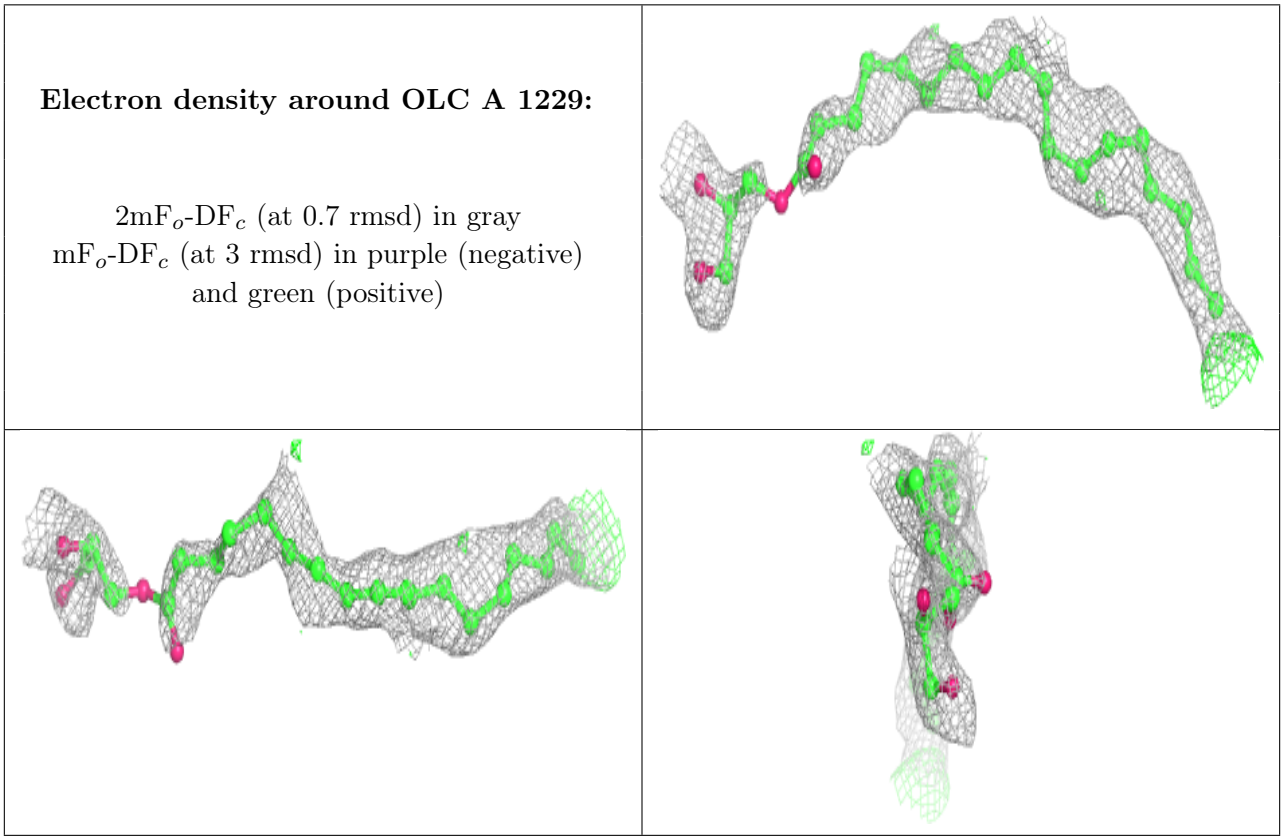
Electron density around OLA A 1220:

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



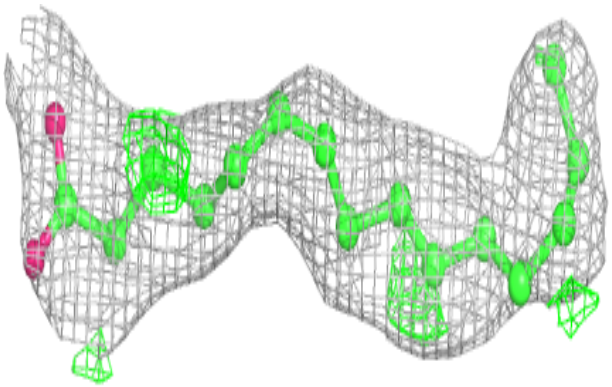
Electron density around OLC A 1229:

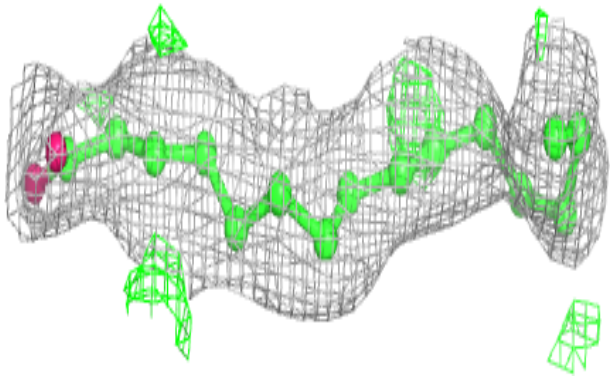
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

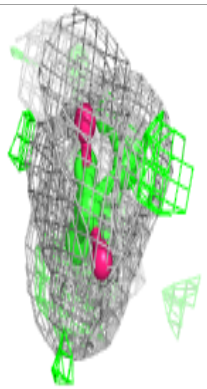


Electron density around OLA A 1212:

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

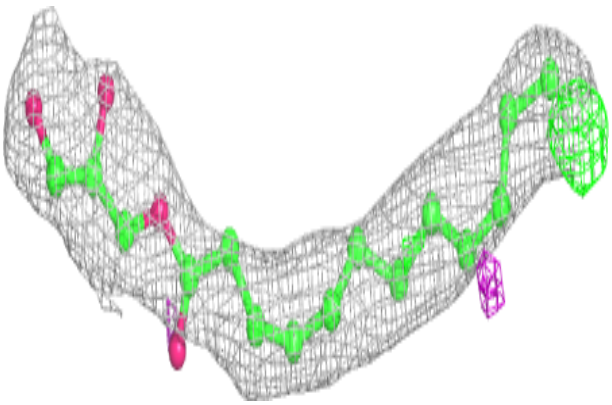


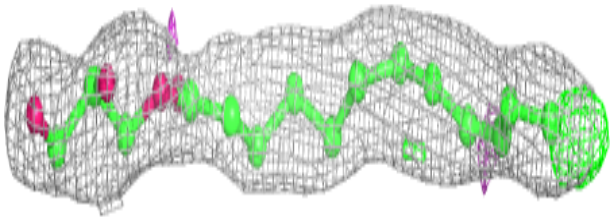


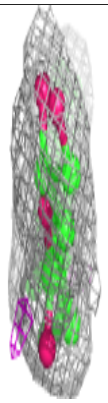


Electron density around OLC A 1226:

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

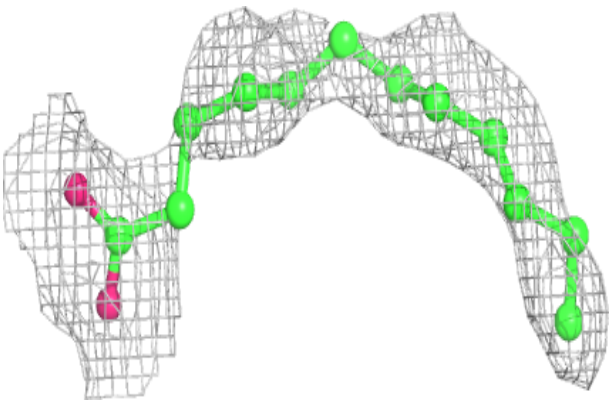


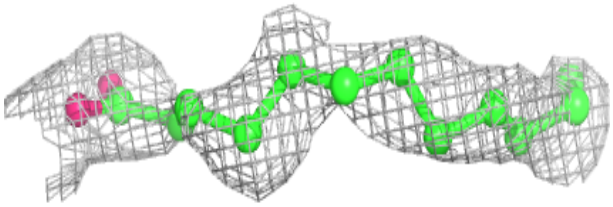


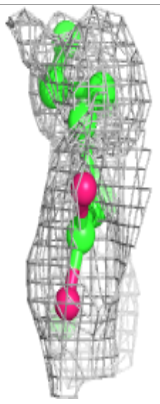


Electron density around OLA A 1221:

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

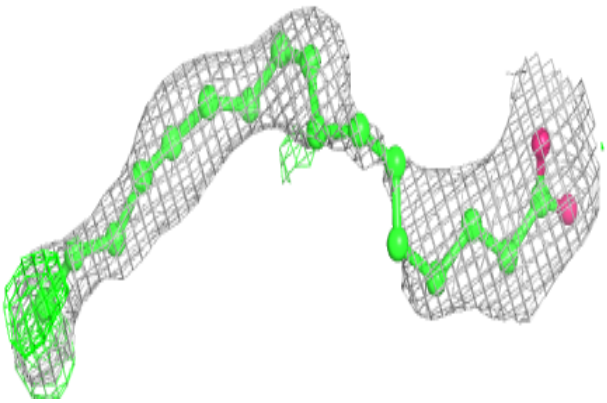


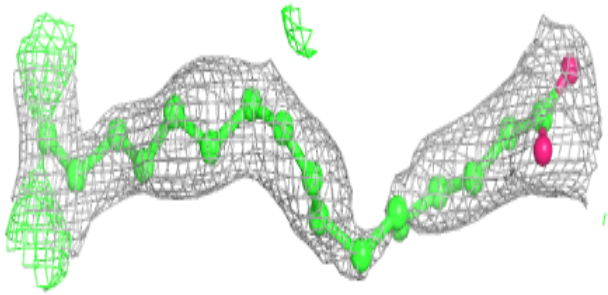


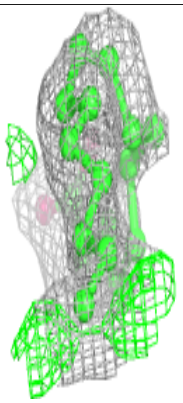


Electron density around OLA A 1210:

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

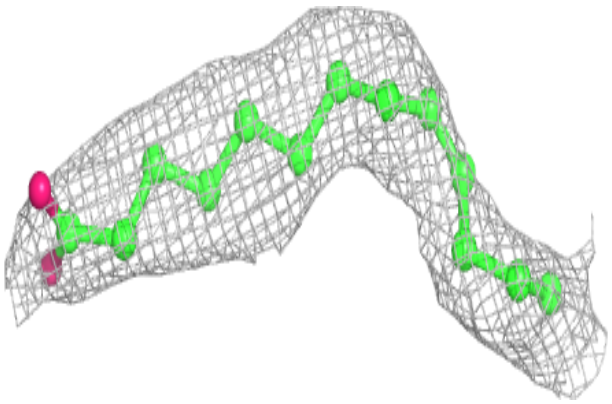


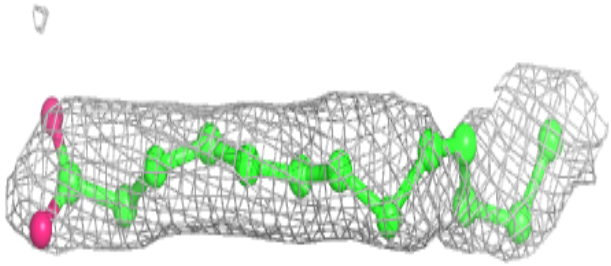


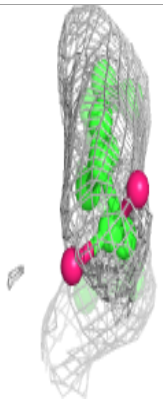


Electron density around OLA A 1208:

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

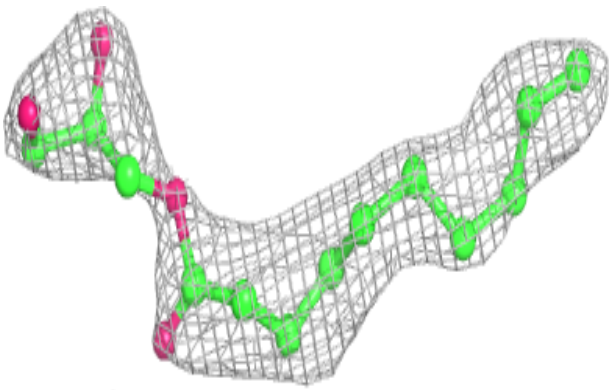


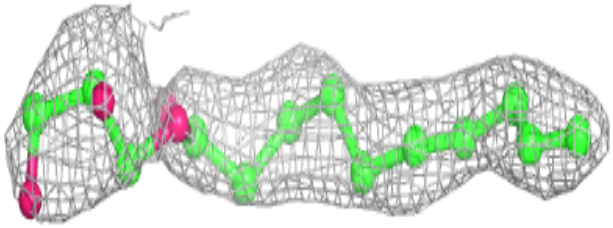


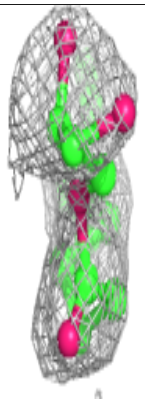


Electron density around OLC A 1228:

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

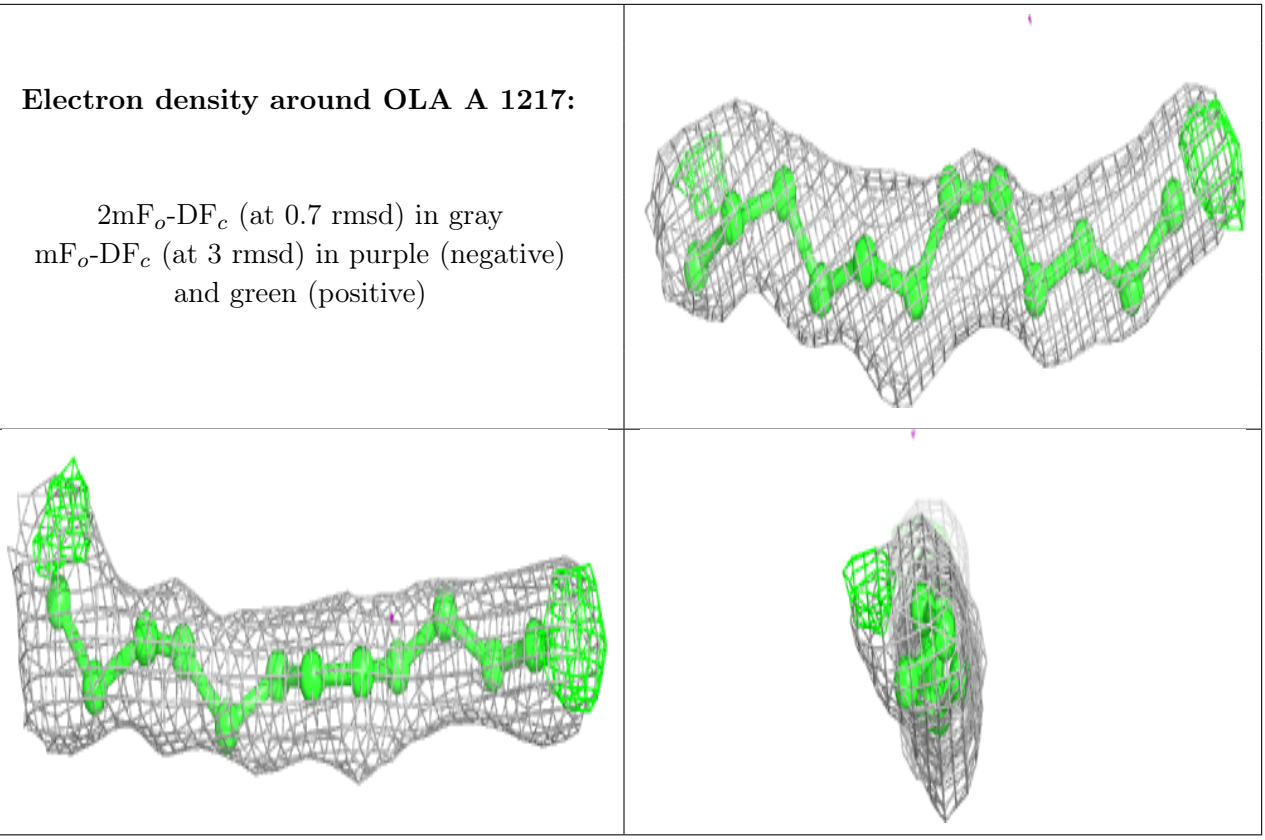






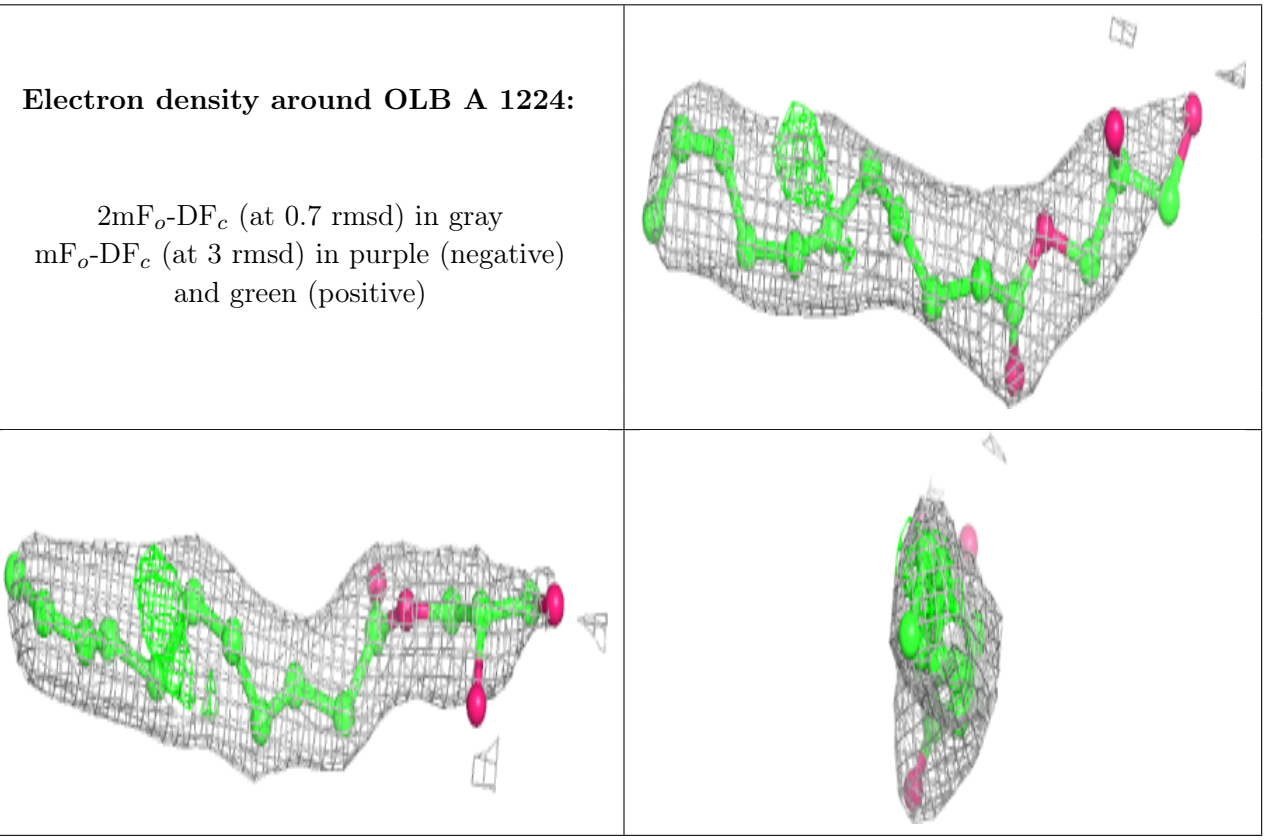
Electron density around OLA A 1217:

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



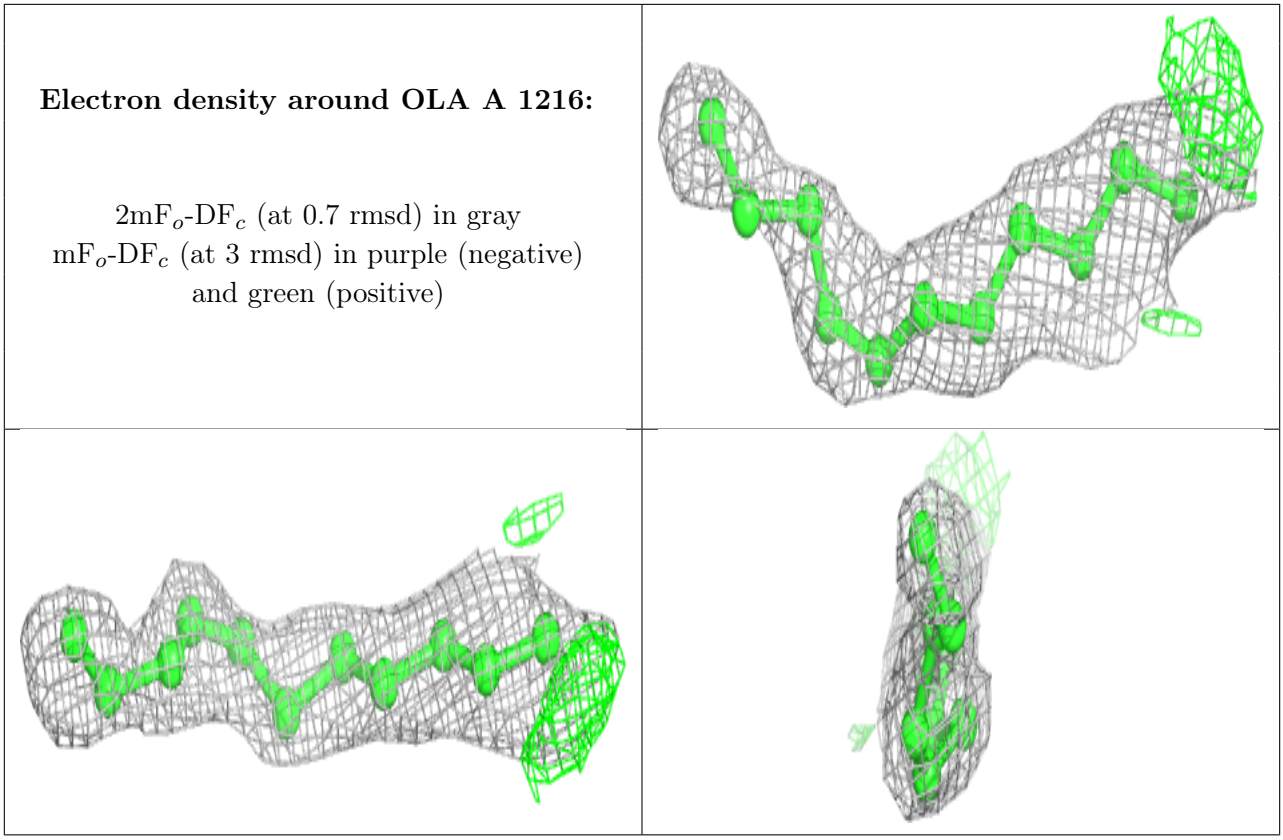
Electron density around OLB A 1224:

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



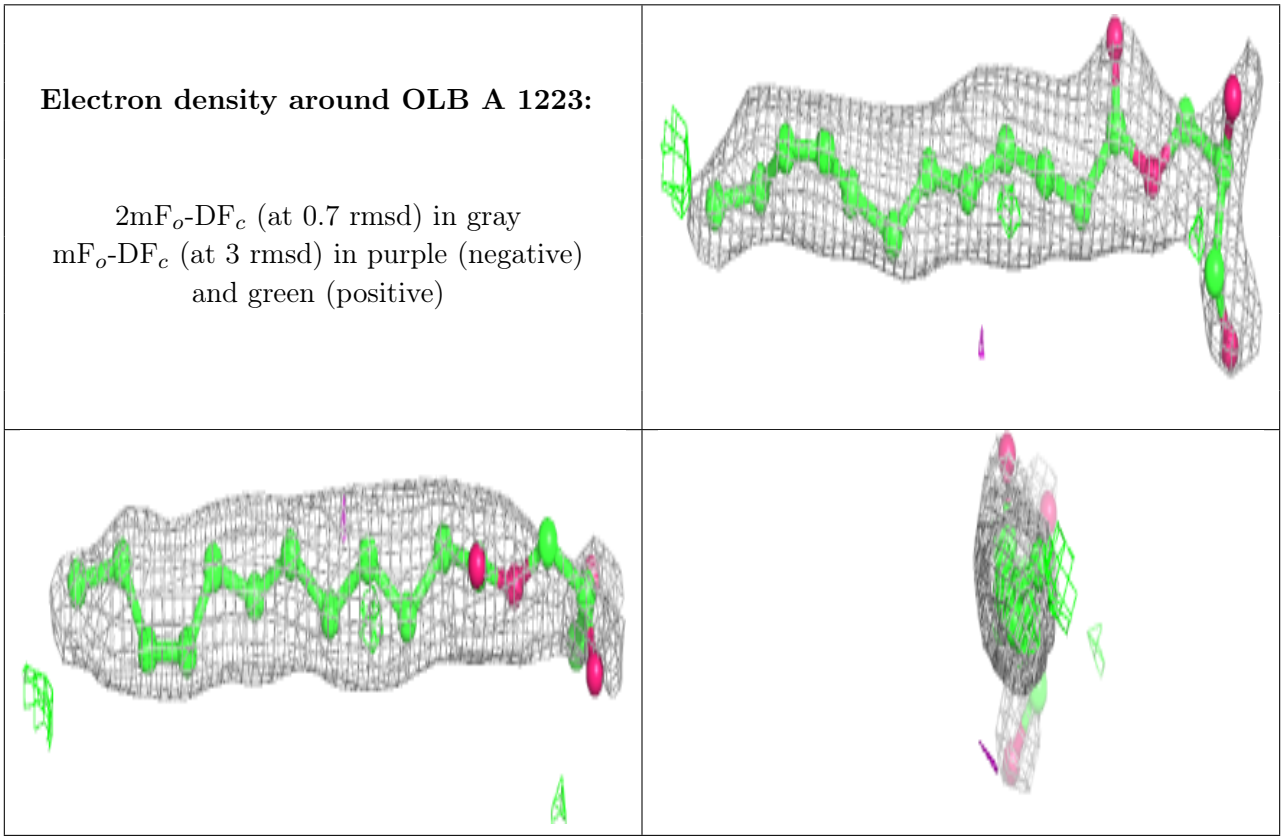
Electron density around OLA A 1216:

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



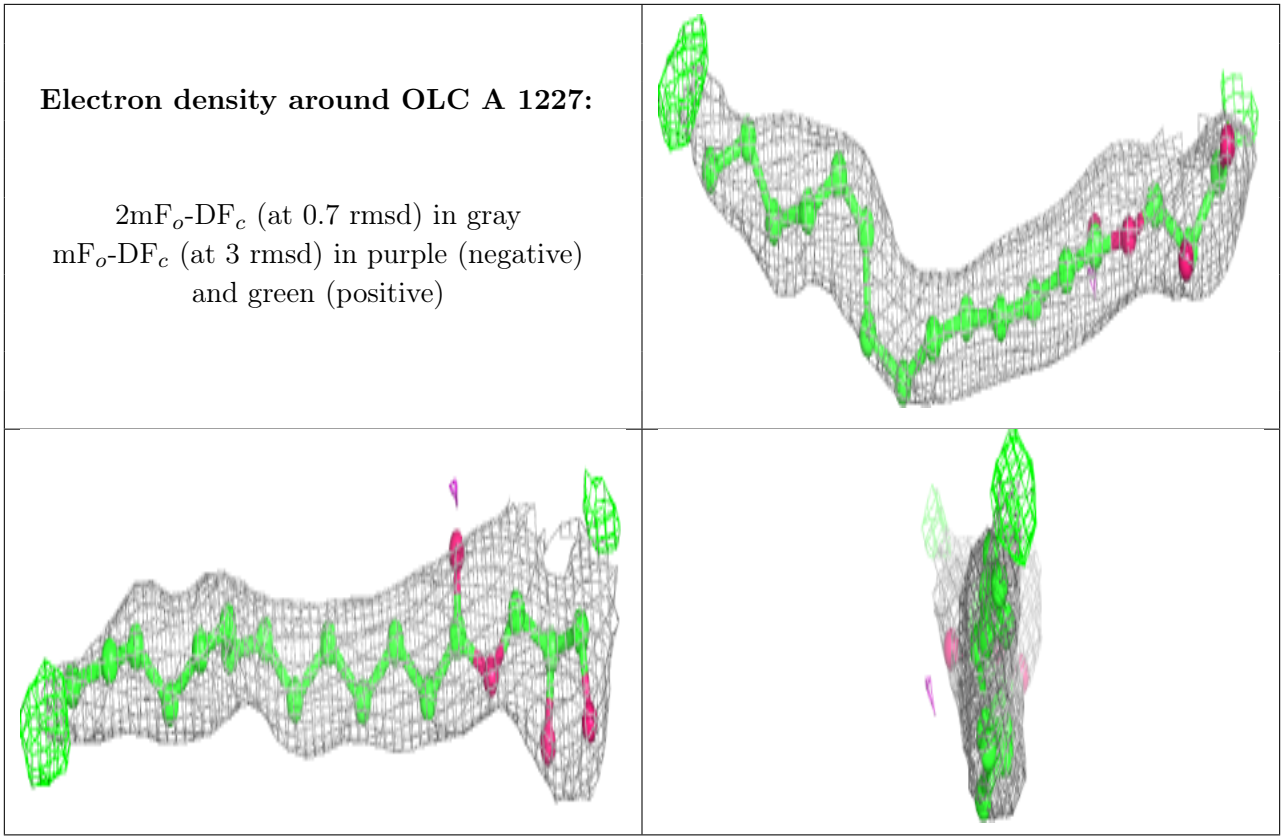
Electron density around OLB A 1223:

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



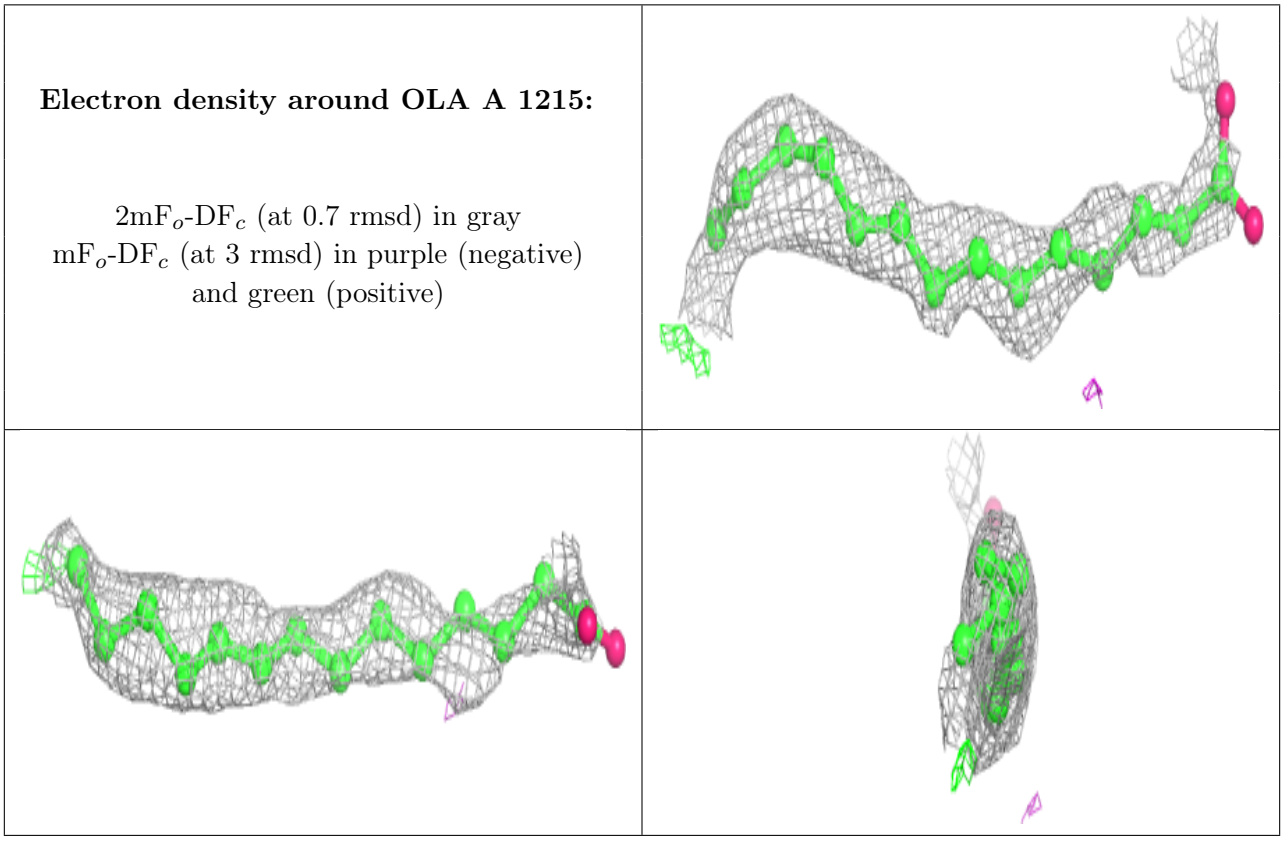
Electron density around OLC A 1227:

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



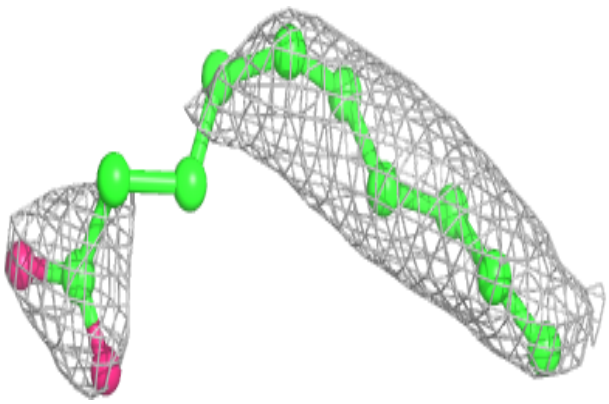
Electron density around OLA A 1215:

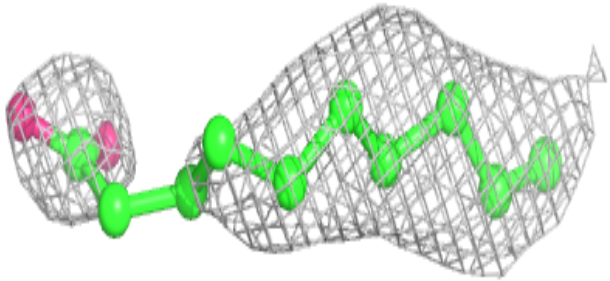
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

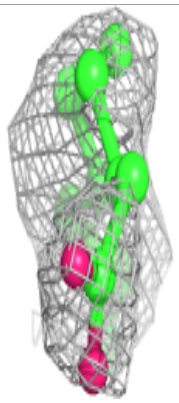


Electron density around OLA A 1219:

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

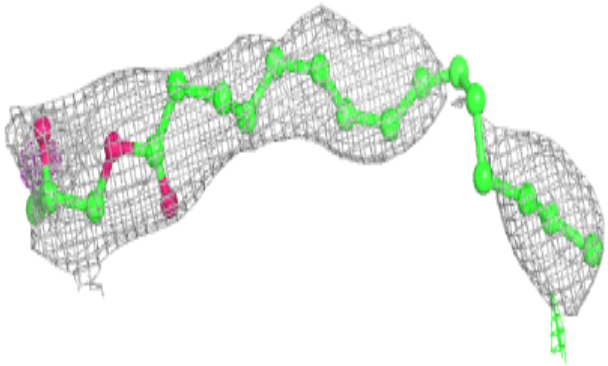


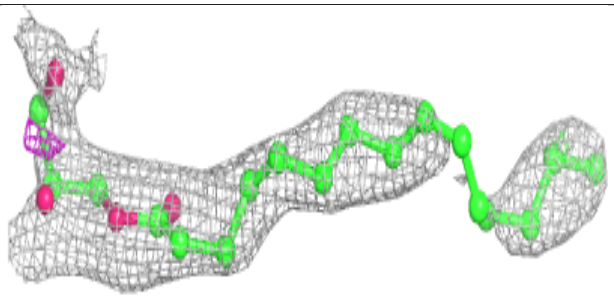


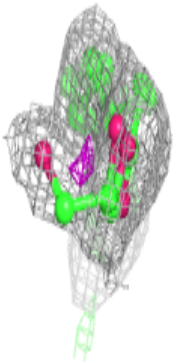


Electron density around OLB A 1222:

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

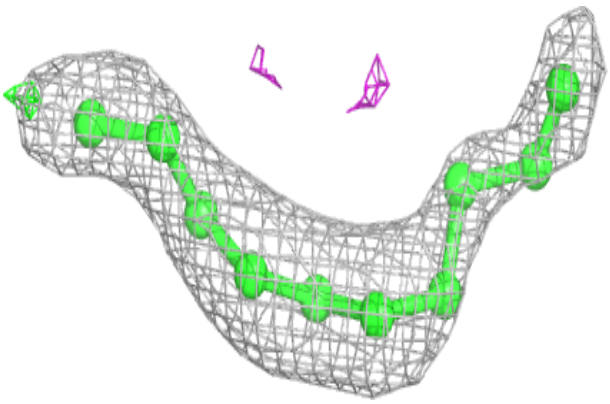


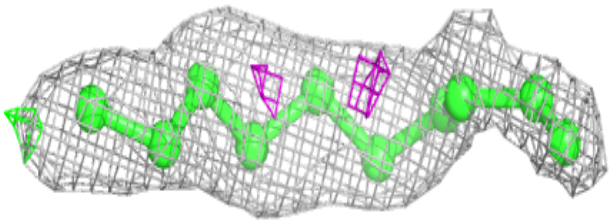


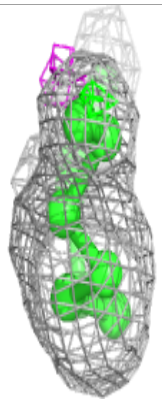


Electron density around OLA A 1211:

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

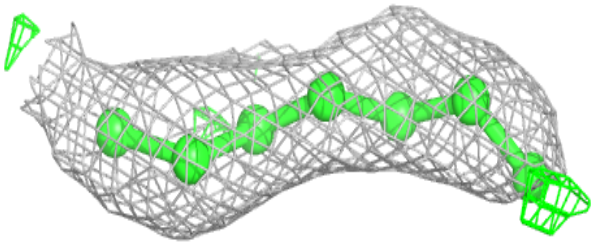


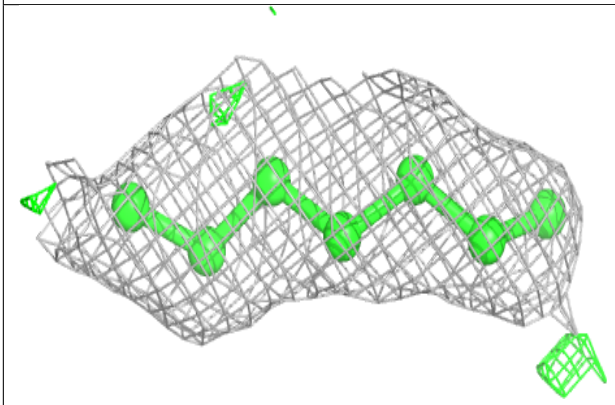


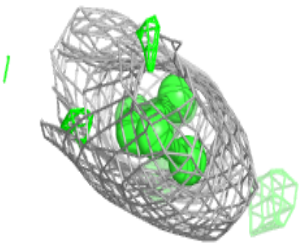


Electron density around OLA A 1214:

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

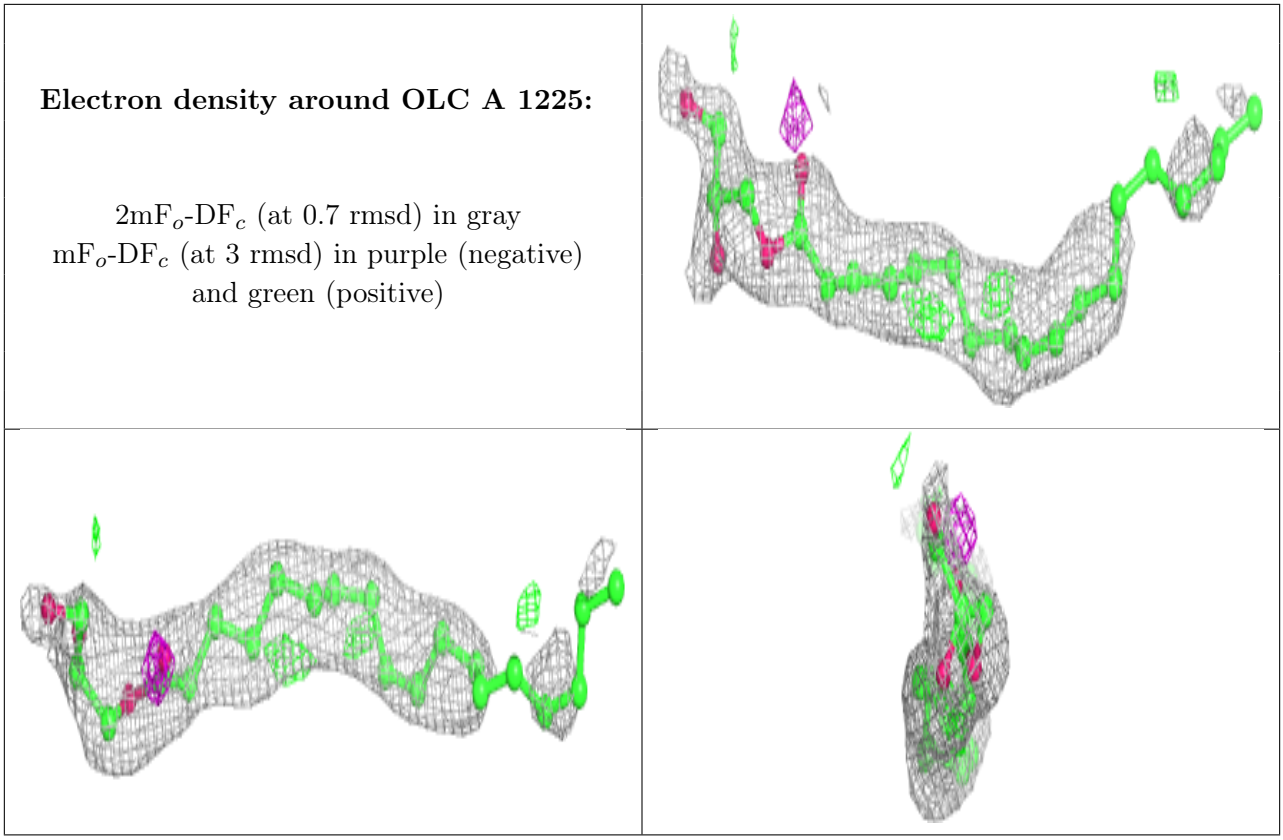






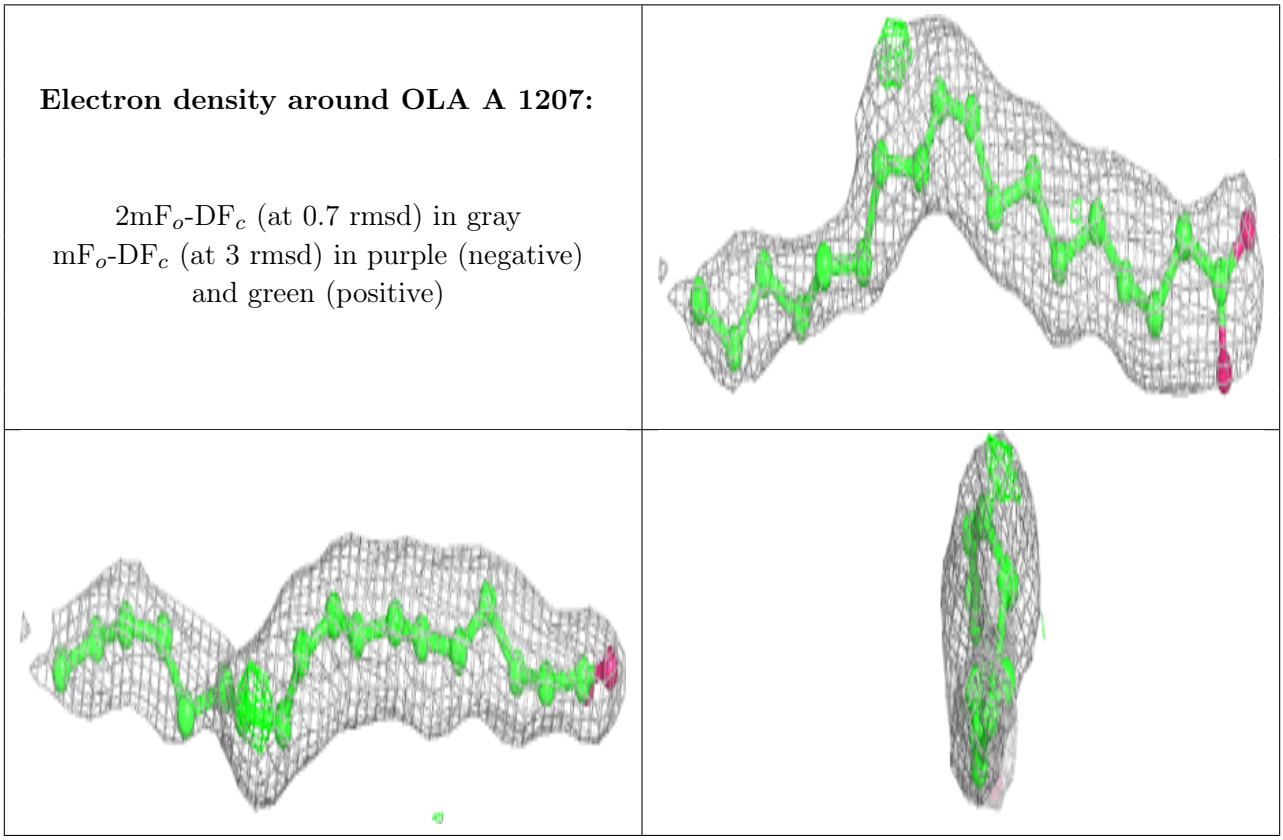
Electron density around OLC A 1225:

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



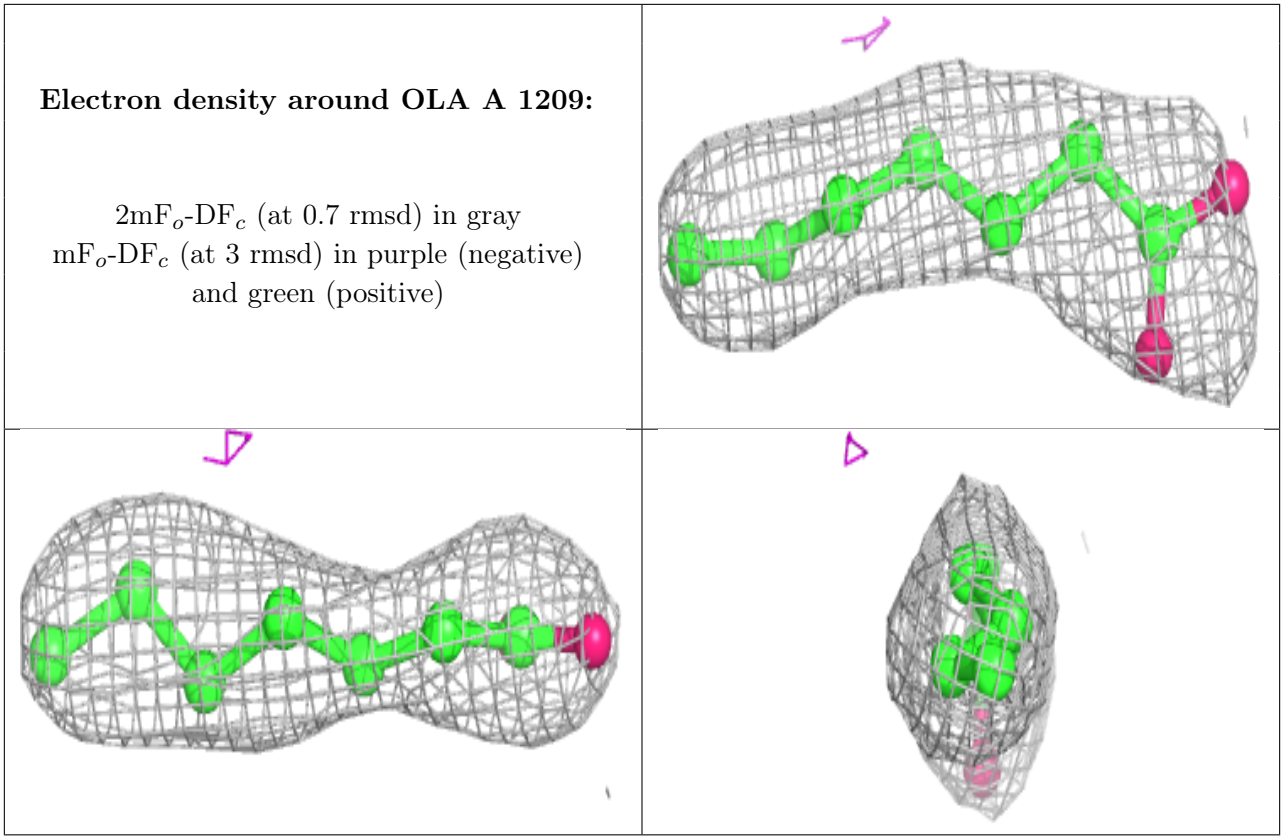
Electron density around OLA A 1207:

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



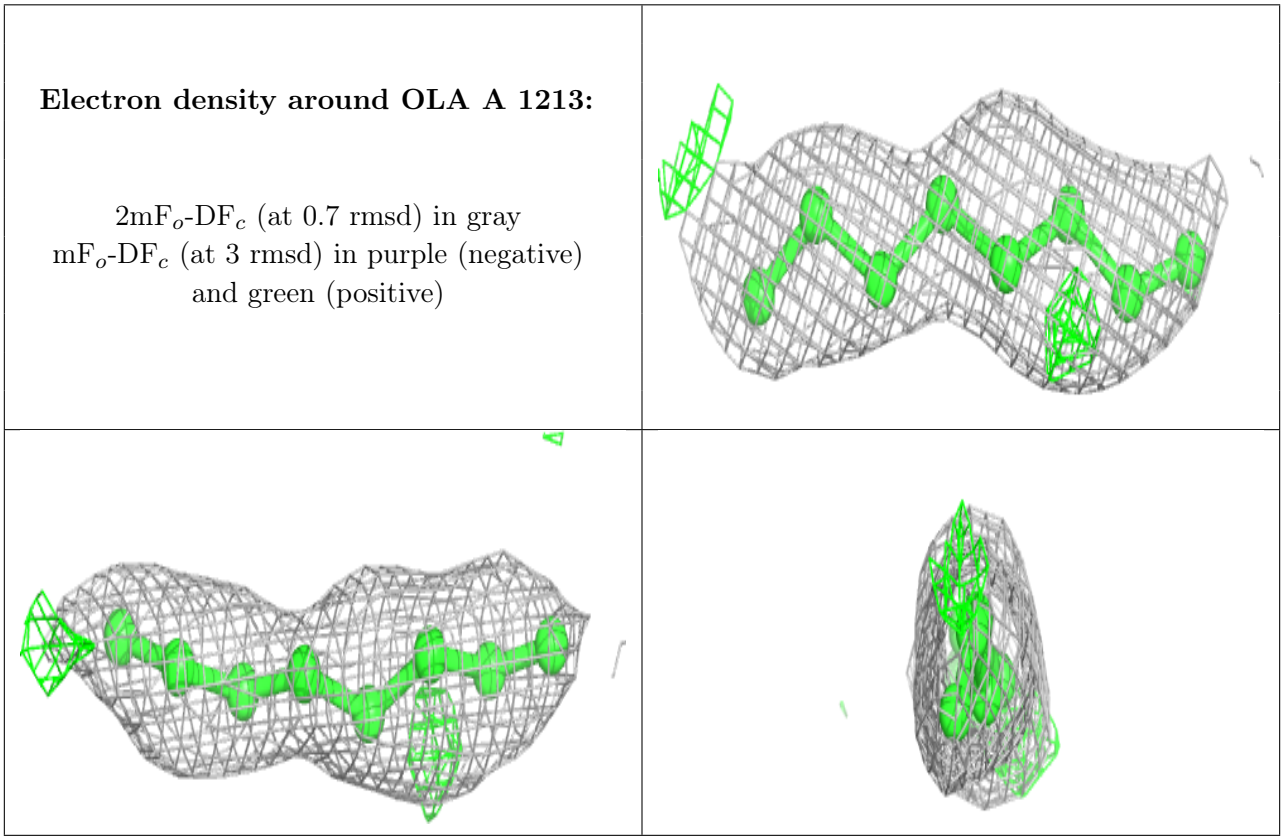
Electron density around OLA A 1209:

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



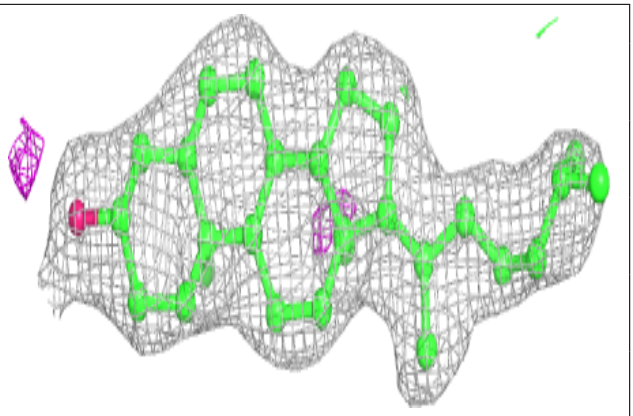
Electron density around OLA A 1213:

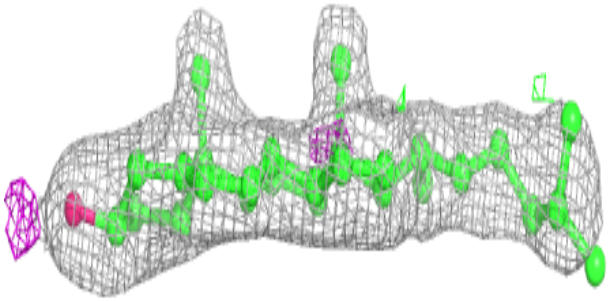
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

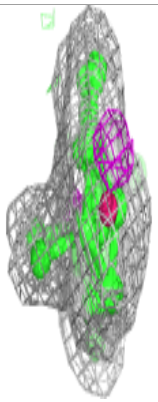


Electron density around CLR A 1206:

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

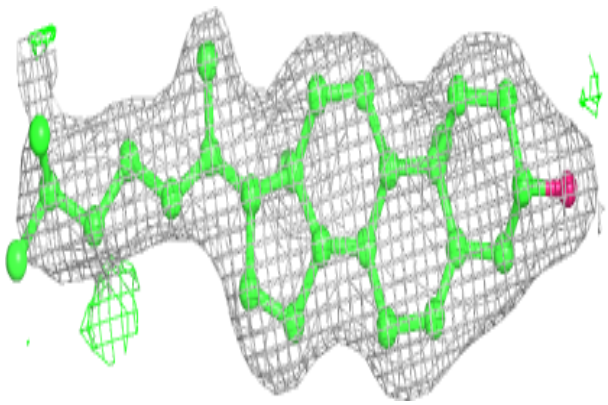


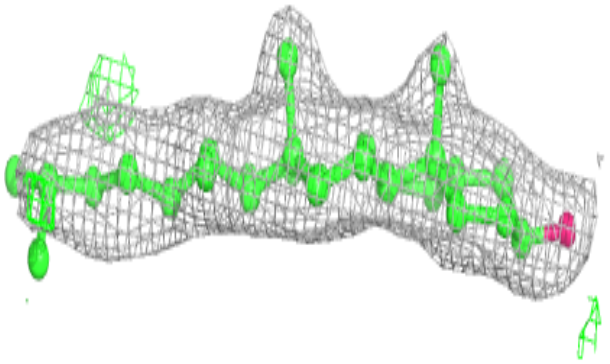


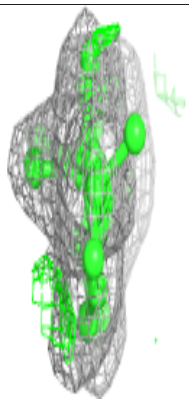


Electron density around CLR A 1204:

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

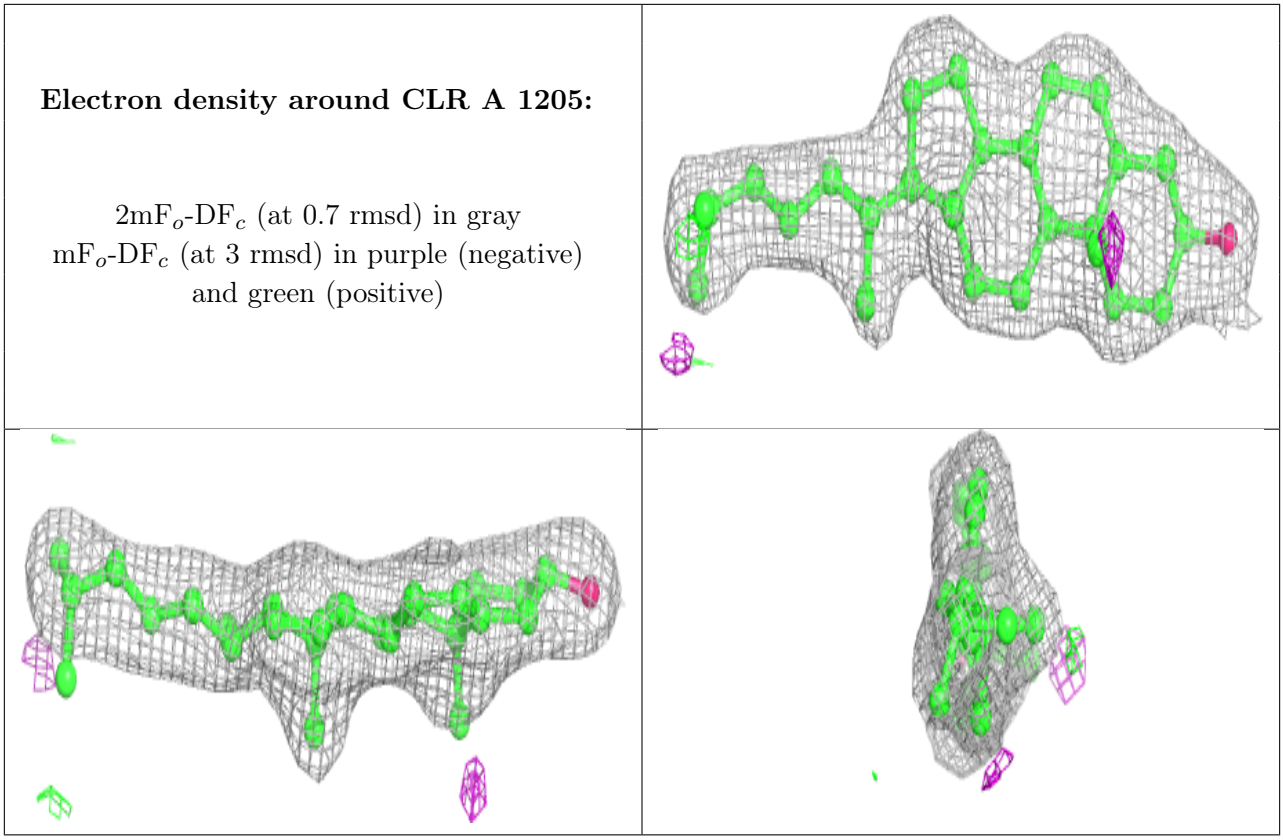






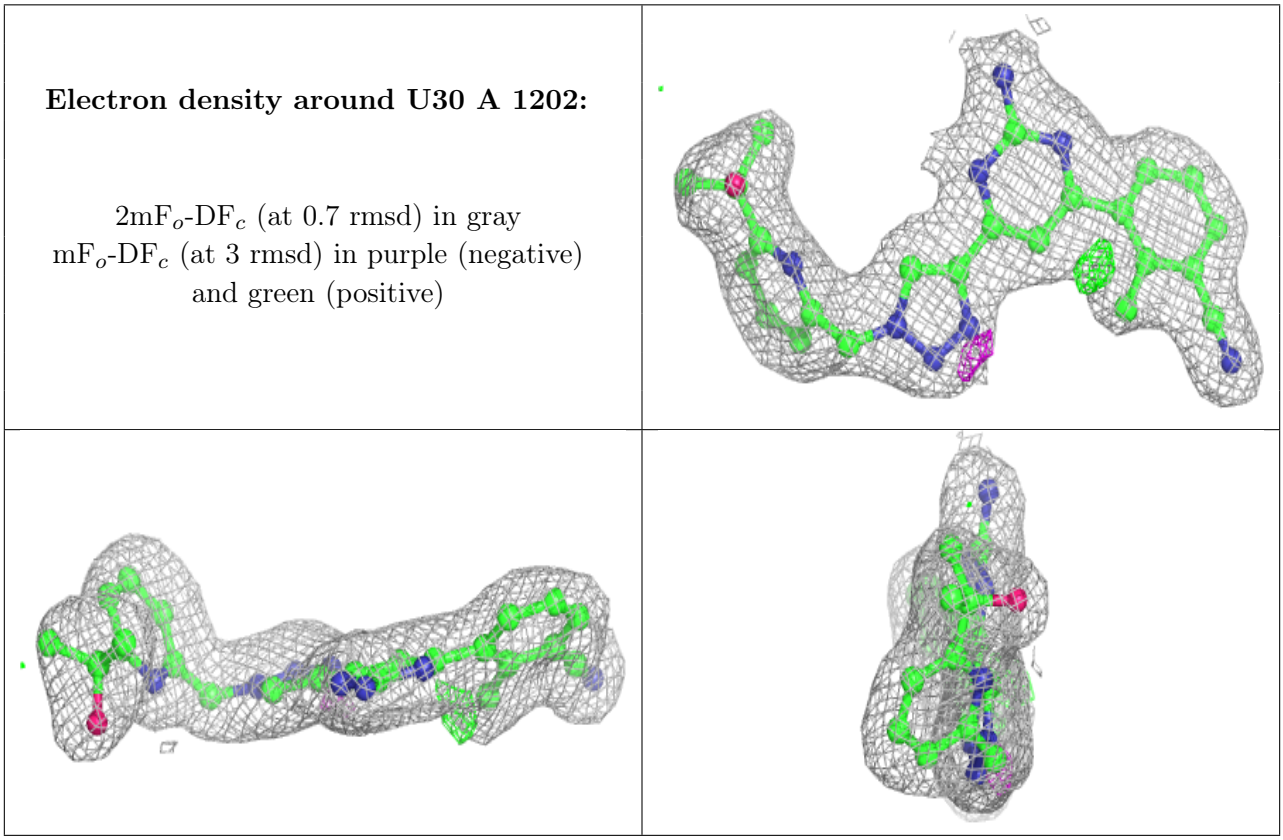
Electron density around CLR A 1205:

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



Electron density around U30 A 1202:

$2mF_o$-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.