Full wwPDB X-ray Structure Validation Report (i)

May 14, 2026 – 06:00 PM EDT

PDB ID	:	7IN9 / pdb_00007in9
Title	:	Crystal structure of A2A in complex with Fi16
Authors	:	Huang, C.-Y.; Cheng, R.Y.K.; Metz, A.
Deposited on	:	2025-08-21
Resolution	:	2.54 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 (i) 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 (i)) were used in the production of this report:

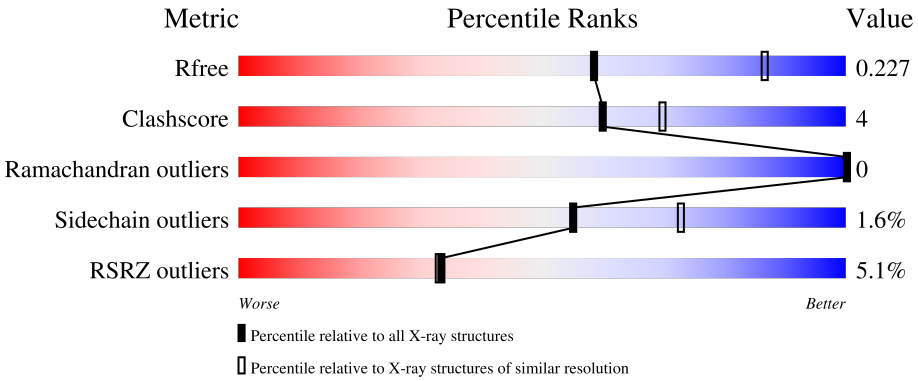
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal 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 (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.54 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	1091 (2.54-2.54)
Clashscore	190562	1120 (2.54-2.54)
Ramachandran outliers	187476	1106 (2.54-2.54)
Sidechain outliers	187428	1106 (2.54-2.54)
RSRZ outliers	180081	1091 (2.54-2.54)

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	5% 80% 9% 10%

2 Entry composition (i)

There are 7 unique types of molecules in this entry. The entry contains 3678 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/Adenosine receptor A2a chimera.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	390	3126	2035	532	536	23	0	13	0

There are 35 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	conflict	UNP P0ABE7
A	1102	ILE	-	linker	UNP P0ABE7
A	1103	GLN	-	linker	UNP P0ABE7
A	1104	LYS	-	linker	UNP P0ABE7
A	1105	TYR	-	linker	UNP P0ABE7
A	1106	LEU	-	linker	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

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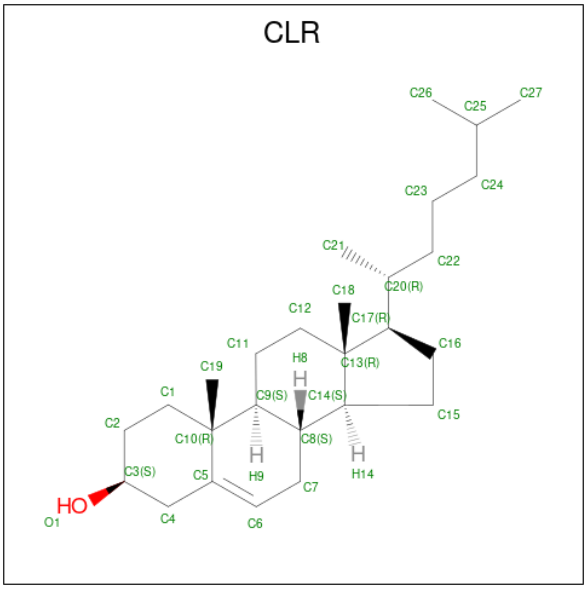
Chain	Residue	Modelled	Actual	Comment	Reference
A	320	HIS	-	expression tag	UNP P29274
A	321	HIS	-	expression tag	UNP P29274
A	322	HIS	-	expression tag	UNP P29274
A	323	HIS	-	expression tag	UNP P29274
A	324	HIS	-	expression tag	UNP P29274
A	325	HIS	-	expression tag	UNP P29274
A	326	HIS	-	expression tag	UNP P29274
A	327	HIS	-	expression tag	UNP P29274
A	328	HIS	-	expression tag	UNP P29274

- Molecule 2 is SODIUM ION (CCD ID: NA) (formula: Na).

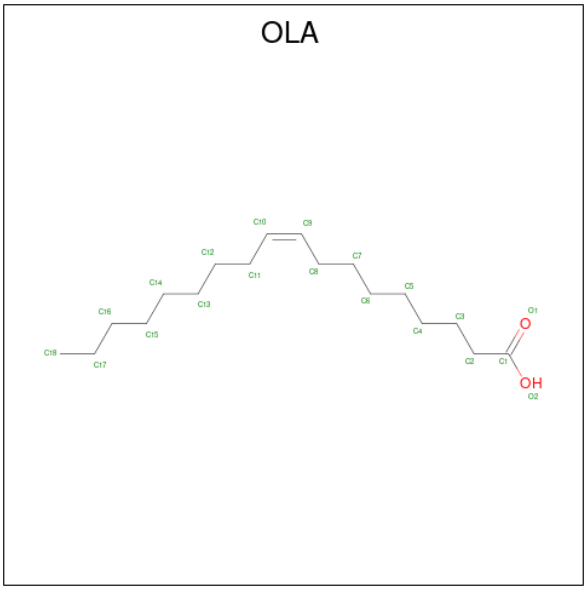
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total Na 1 1	0	0

- Molecule 3 is CHOLESTEROL (CCD ID: CLR) (formula: $C_{27}H_{46}O$).



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

- Molecule 4 is OLEIC ACID (CCD ID: OLA) (formula: $C_{18}H_{34}O_2$).



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

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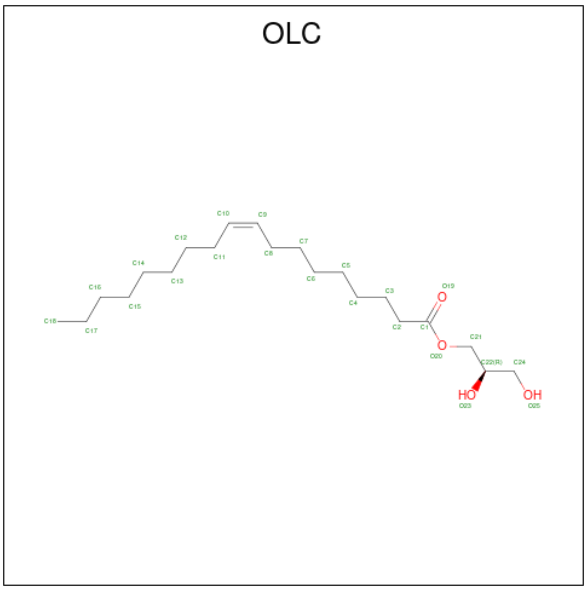
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C 10 10	0	0
4	A	1	Total C 11 11	0	0
4	A	1	Total C 12 12	0	0
4	A	1	Total C 9 9	0	0
4	A	1	Total C 8 8	0	0
4	A	1	Total C O 15 13 2	0	0
4	A	1	Total C 15 15	0	0
4	A	1	Total C O 13 11 2	0	0
4	A	1	Total C O 20 18 2	0	0

- Molecule 5 is (2R)-2,3-dihydroxypropyl (9Z)-octadec-9-enoate (CCD ID: OLC) (formula: $C_{21}H_{40}O_4$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O 16 12 4	0	0
5	A	1	Total C O 17 13 4	0	0

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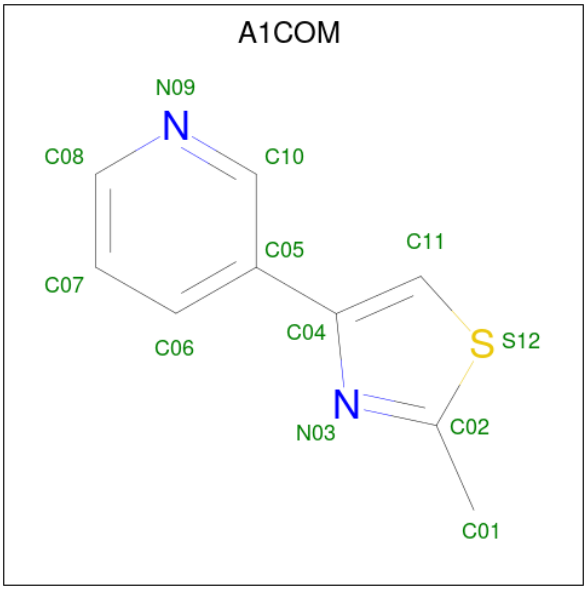
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O 23 19 4	0	0
5	A	1	Total C O 23 19 4	0	0
5	A	1	Total C O 23 19 4	0	0
5	A	1	Total C O 18 14 4	0	0
5	A	1	Total C O 16 12 4	0	0

- Molecule 6 is (3M)-3-(2-methyl-1,3-thiazol-4-yl)pyridine (CCD ID: A1COM) (formula: $C_9H_8N_2S$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total C N S 12 9 2 1	0	0

- Molecule 7 is water.

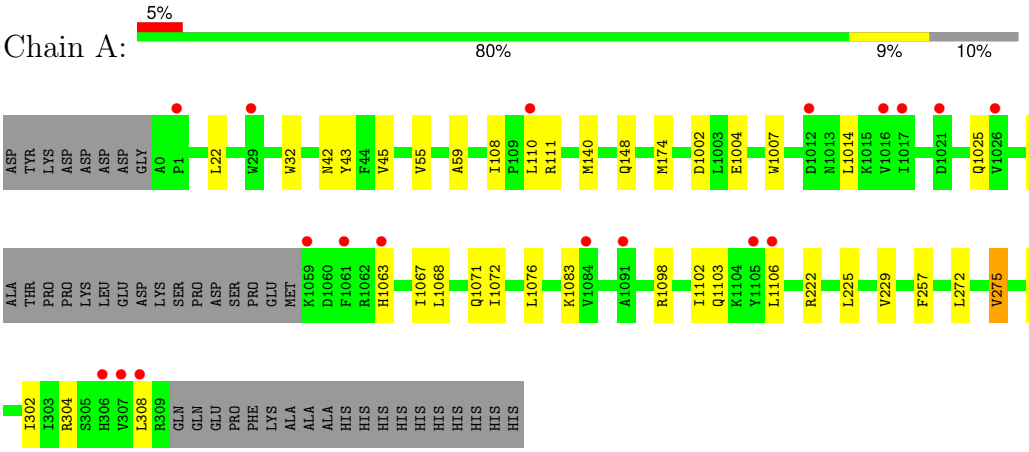
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	12	Total O 12 12	0	0

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/Adenosine receptor A2a chimera

Chain A:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	39.17Å 179.38Å 139.77Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	55.13 – 2.54 55.13 – 2.54	Depositor EDS
% Data completeness (in resolution range)	70.5 (55.13-2.54) 70.5 (55.13-2.54)	Depositor EDS
R_{merge}	0.34	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.90 (at 2.55Å)	Xtriage
Refinement program	PHENIX 1.20_4459	Depositor
R, R_{free}	0.203 , 0.227 0.203 , 0.227	Depositor DCC
R_{free} test set	621 reflections (3.71%)	wwPDB-VP
Wilson B-factor (Å^2)	53.2	Xtriage
Anisotropy	0.054	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 55.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	3678	wwPDB-VP
Average B, all atoms (Å^2)	57.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.97% 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: OLC, OLA, A1COM, CLR, NA

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	0.14	0/3191	0.27	0/4338

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	3126	0	3207	25	0
2	A	1	0	0	0	0
3	A	84	0	138	0	0
4	A	307	0	459	10	0
5	A	136	0	186	4	0
6	A	12	0	0	0	0
7	A	12	0	0	0	0
All	All	3678	0	3990	33	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 4.

All (33) 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)
4:A:1222:OLA:H51	4:A:1226:OLA:H131	1.78	0.65
5:A:1229:OLC:H4A	5:A:1230:OLC:H2	1.79	0.65
1:A:1007:TRP:CH2	1:A:1103:GLN:HG3	2.34	0.63
1:A:1098:ARG:HA	1:A:1102:ILE:HB	1.83	0.61
1:A:1063:HIS:O	1:A:1067:ILE:HG13	2.04	0.58
1:A:1067:ILE:O	1:A:1071:GLN:HG3	2.06	0.55
1:A:225:LEU:O	1:A:229:VAL:HG23	2.07	0.54
4:A:1210:OLA:H183	4:A:1221:OLA:H121	1.91	0.53
1:A:108:ILE:HD12	1:A:111:ARG:HB2	1.90	0.52
4:A:1209:OLA:H21	4:A:1216:OLA:H32	1.94	0.50
1:A:55:VAL:HA	1:A:59:ALA:HB3	1.95	0.48
1:A:1068:LEU:O	1:A:1072:ILE:HG13	2.14	0.47
1:A:110:LEU:HD23	1:A:110:LEU:H	1.80	0.47
4:A:1225:OLA:H62	5:A:1233:OLC:H3A	1.96	0.47
1:A:22:LEU:HB3	4:A:1211:OLA:H71	1.98	0.46
4:A:1209:OLA:H122	4:A:1216:OLA:H151	1.98	0.46
1:A:275[B]:VAL:O	1:A:279[B]:THR:HG23	2.17	0.44
4:A:1226:OLA:H82	4:A:1226:OLA:H112	1.84	0.44
1:A:1014:LEU:HD23	1:A:1033:MET:HE1	1.99	0.44
1:A:294:GLU:O	1:A:298:THR:OG1	2.25	0.43
1:A:298:THR:O	1:A:302:ILE:HG13	2.18	0.43
5:A:1229:OLC:H15	5:A:1230:OLC:H14	2.01	0.43
1:A:32:TRP:CE3	4:A:1215:OLA:H71	2.54	0.42
1:A:1106:LEU:HD11	1:A:222:ARG:NH2	2.33	0.42
1:A:43:TYR:HE2	5:A:1232:OLC:H24	1.85	0.42
1:A:1076:LEU:HD23	1:A:1076:LEU:HA	1.89	0.42
1:A:140[B]:MET:HE3	4:A:1225:OLA:H71	2.00	0.42
1:A:174[A]:MET:HG3	1:A:257:PHE:HB2	2.02	0.41
1:A:225:LEU:HA	1:A:225:LEU:HD23	1.76	0.41
1:A:272:LEU:HD21	4:A:1210:OLA:H141	2.03	0.41
1:A:1004:GLU:OE1	1:A:222:ARG:NH2	2.54	0.40
1:A:42:ASN:HA	1:A:45:VAL:HB	2.02	0.40
1:A:304:ARG:O	1:A:308:LEU:HB2	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	399/433 (92%)	397 (100%)	2 (0%)	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	329/354 (93%)	323 (98%)	6 (2%)	51 70

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	148	GLN
1	A	1002	ASP
1	A	1025	GLN
1	A	1083	LYS
1	A	275[A]	VAL
1	A	275[B]	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	34	ASN
1	A	155	HIS

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 34 ligands modelled in this entry, 1 is monoatomic - leaving 33 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	$\#\|Z\| > 2$
4	OLA	A	1205	-	19,19,19	0.62	0	19,19,19	1.00	0
4	OLA	A	1223	-	14,14,19	0.68	0	14,14,19	1.03	1 (7%)
4	OLA	A	1224	-	14,14,19	0.34	0	13,13,19	0.76	0
4	OLA	A	1208	-	17,17,19	0.60	0	17,17,19	1.08	1 (5%)
4	OLA	A	1220	-	11,11,19	0.41	0	10,10,19	0.72	0
5	OLC	A	1230	-	22,22,24	1.01	1 (4%)	23,23,25	1.19	3 (13%)
4	OLA	A	1212	-	7,7,19	0.89	0	7,7,19	1.28	1 (14%)
5	OLC	A	1229	-	22,22,24	0.96	1 (4%)	23,23,25	1.23	1 (4%)
3	CLR	A	1204	-	31,31,31	0.29	0	48,48,48	0.40	0
4	OLA	A	1209	-	19,19,19	0.65	0	19,19,19	0.93	1 (5%)
4	OLA	A	1214	-	10,10,19	0.71	0	10,10,19	1.31	1 (10%)
5	OLC	A	1227	-	15,15,24	1.27	1 (6%)	16,16,25	1.26	1 (6%)
4	OLA	A	1225	-	12,12,19	0.75	0	12,12,19	1.18	1 (8%)
4	OLA	A	1217	-	11,11,19	0.36	0	10,10,19	0.74	0
4	OLA	A	1211	-	11,11,19	0.76	0	11,11,19	1.22	0
3	CLR	A	1203	-	31,31,31	0.28	0	48,48,48	0.45	0
4	OLA	A	1219	-	10,10,19	0.41	0	9,9,19	0.86	0
4	OLA	A	1226	-	19,19,19	0.59	0	19,19,19	1.06	0
4	OLA	A	1215	-	18,18,19	0.58	0	18,18,19	1.10	1 (5%)
3	CLR	A	1202	-	31,31,31	0.31	0	48,48,48	0.48	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	OLA	A	1222	-	7,7,19	0.32	0	6,6,19	0.75	0
5	OLC	A	1233	-	15,15,24	1.26	1 (6%)	16,16,25	1.09	1 (6%)
5	OLC	A	1231	-	22,22,24	1.06	1 (4%)	23,23,25	1.20	2 (8%)
4	OLA	A	1207	-	8,8,19	0.80	0	8,8,19	1.28	1 (12%)
4	OLA	A	1210	-	19,19,19	0.58	0	19,19,19	1.04	1 (5%)
4	OLA	A	1213	-	14,14,19	0.65	0	14,14,19	1.14	1 (7%)
5	OLC	A	1228	-	16,16,24	1.29	1 (6%)	17,17,25	1.29	2 (11%)
6	A1COM	A	1234	-	13,13,13	2.13	3 (23%)	17,17,17	3.60	8 (47%)
4	OLA	A	1206	-	9,9,19	0.81	0	9,9,19	1.15	0
5	OLC	A	1232	-	17,17,24	1.14	1 (5%)	18,18,25	1.18	2 (11%)
4	OLA	A	1221	-	8,8,19	0.31	0	7,7,19	0.81	0
4	OLA	A	1218	-	9,9,19	0.40	0	8,8,19	0.78	0
4	OLA	A	1216	-	19,19,19	0.66	0	19,19,19	0.83	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	OLA	A	1205	-	-	10/17/17/17	-
4	OLA	A	1223	-	-	5/12/12/17	-
4	OLA	A	1224	-	-	1/12/12/17	-
4	OLA	A	1208	-	-	9/15/15/17	-
4	OLA	A	1220	-	-	3/9/9/17	-
5	OLC	A	1230	-	-	10/22/22/24	-
4	OLA	A	1212	-	-	2/5/5/17	-
5	OLC	A	1229	-	-	12/22/22/24	-
3	CLR	A	1204	-	-	3/10/68/68	0/4/4/4
4	OLA	A	1209	-	-	12/17/17/17	-
4	OLA	A	1214	-	-	3/8/8/17	-
5	OLC	A	1227	-	-	7/15/15/24	-
4	OLA	A	1225	-	-	8/10/10/17	-
4	OLA	A	1217	-	-	3/9/9/17	-
4	OLA	A	1211	-	-	5/9/9/17	-
3	CLR	A	1203	-	-	1/10/68/68	0/4/4/4
4	OLA	A	1219	-	-	6/8/8/17	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	OLA	A	1226	-	-	10/17/17/17	-
4	OLA	A	1215	-	-	4/16/16/17	-
3	CLR	A	1202	-	-	0/10/68/68	0/4/4/4
4	OLA	A	1222	-	-	0/5/5/17	-
5	OLC	A	1233	-	-	7/15/15/24	-
5	OLC	A	1231	-	-	11/22/22/24	-
4	OLA	A	1207	-	-	3/6/6/17	-
4	OLA	A	1210	-	-	7/17/17/17	-
4	OLA	A	1213	-	-	5/12/12/17	-
5	OLC	A	1228	-	-	8/16/16/24	-
6	A1COM	A	1234	-	-	0/4/4/4	0/2/2/2
4	OLA	A	1206	-	-	2/7/7/17	-
5	OLC	A	1232	-	-	7/17/17/24	-
4	OLA	A	1221	-	-	2/6/6/17	-
4	OLA	A	1218	-	-	1/7/7/17	-
4	OLA	A	1216	-	-	7/17/17/17	-

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	A	1234	A1COM	C05-C04	-5.80	1.39	1.47
6	A	1234	A1COM	C04-N03	-3.66	1.32	1.39
5	A	1233	OLC	O20-C1	3.15	1.42	1.33
5	A	1227	OLC	O20-C1	3.01	1.42	1.33
5	A	1228	OLC	O20-C1	2.98	1.42	1.33
6	A	1234	A1COM	C11-C04	2.93	1.39	1.36
5	A	1231	OLC	O20-C1	2.74	1.41	1.33
5	A	1232	OLC	O20-C1	2.54	1.40	1.33
5	A	1230	OLC	O20-C1	2.44	1.40	1.33
5	A	1229	OLC	O20-C1	2.38	1.40	1.33

All (30) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	A	1234	A1COM	C04-N03-C02	11.10	117.74	111.11
6	A	1234	A1COM	C04-C11-S12	-5.81	104.13	111.16
6	A	1234	A1COM	C10-C05-C04	-3.90	117.94	121.02
5	A	1228	OLC	C8-C9-C10	3.41	151.51	126.65
5	A	1231	OLC	C8-C9-C10	3.23	149.05	124.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	A	1227	OLC	O20-C1-C2	3.23	121.68	111.83
6	A	1234	A1COM	C11-S12-C02	3.09	95.50	89.73
5	A	1230	OLC	C8-C9-C10	3.05	147.66	124.83
5	A	1229	OLC	C8-C9-C10	3.03	147.53	124.83
5	A	1232	OLC	C8-C9-C10	2.76	151.40	130.48
4	A	1215	OLA	C3-C2-C1	-2.66	107.56	114.51
5	A	1233	OLC	O20-C1-C2	2.57	119.68	111.83
4	A	1214	OLA	C3-C2-C1	-2.54	107.89	114.51
6	A	1234	A1COM	C05-C04-C11	-2.53	123.54	126.54
5	A	1231	OLC	O20-C1-C2	2.51	119.48	111.83
6	A	1234	A1COM	S12-C02-N03	-2.44	106.32	114.12
5	A	1228	OLC	O20-C1-C2	2.41	119.20	111.83
6	A	1234	A1COM	C07-C06-C05	-2.34	118.07	120.36
6	A	1234	A1COM	C08-N09-C10	2.27	120.83	116.85
5	A	1230	OLC	O20-C1-C2	2.24	118.65	111.83
4	A	1212	OLA	O2-C1-C2	2.14	120.76	114.00
4	A	1209	OLA	O2-C1-C2	2.09	120.60	114.00
4	A	1223	OLA	O2-C1-C2	2.09	120.59	114.00
4	A	1213	OLA	C3-C2-C1	-2.09	109.06	114.51
4	A	1208	OLA	O2-C1-C2	2.07	120.55	114.00
5	A	1232	OLC	O20-C1-C2	2.07	118.14	111.83
4	A	1225	OLA	O2-C1-C2	2.06	120.52	114.00
4	A	1210	OLA	C3-C2-C1	-2.05	109.15	114.51
4	A	1207	OLA	O2-C1-C2	2.04	120.46	114.00
5	A	1230	OLC	C11-C10-C9	-2.02	109.69	124.83

There are no chirality outliers.

All (174) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	1213	OLA	C10-C11-C12-C13
4	A	1217	OLA	C6-C7-C8-C9
5	A	1229	OLC	C21-C22-C24-O25
5	A	1230	OLC	O20-C21-C22-O23
5	A	1231	OLC	O20-C21-C22-C24
5	A	1231	OLC	O20-C21-C22-O23
5	A	1232	OLC	O19-C1-O20-C21
5	A	1232	OLC	C2-C1-O20-C21
5	A	1231	OLC	C2-C1-O20-C21
5	A	1231	OLC	O19-C1-O20-C21
5	A	1230	OLC	O20-C21-C22-C24
5	A	1230	OLC	C1-C2-C3-C4

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Mol	Chain	Res	Type	Atoms
4	A	1225	OLA	C1-C2-C3-C4
4	A	1223	OLA	C1-C2-C3-C4
5	A	1231	OLC	C1-C2-C3-C4
5	A	1233	OLC	C1-C2-C3-C4
3	A	1204	CLR	C20-C22-C23-C24
4	A	1210	OLA	C6-C7-C8-C9
5	A	1227	OLC	O20-C21-C22-O23
5	A	1232	OLC	O20-C21-C22-O23
4	A	1226	OLA	C15-C16-C17-C18
5	A	1231	OLC	C10-C11-C12-C13
5	A	1227	OLC	O20-C21-C22-C24
5	A	1228	OLC	O20-C21-C22-O23
5	A	1230	OLC	C2-C1-O20-C21
5	A	1228	OLC	C1-C2-C3-C4
4	A	1223	OLA	C5-C6-C7-C8
5	A	1229	OLC	O23-C22-C24-O25
4	A	1215	OLA	C5-C6-C7-C8
4	A	1226	OLA	C11-C12-C13-C14
4	A	1219	OLA	C11-C12-C13-C14
5	A	1230	OLC	C12-C13-C14-C15
5	A	1232	OLC	C5-C6-C7-C8
4	A	1205	OLA	C4-C5-C6-C7
4	A	1217	OLA	C12-C13-C14-C15
4	A	1216	OLA	C5-C6-C7-C8
4	A	1205	OLA	C14-C15-C16-C17
5	A	1231	OLC	C6-C7-C8-C9
5	A	1230	OLC	O19-C1-O20-C21
5	A	1230	OLC	C3-C4-C5-C6
5	A	1229	OLC	C3-C4-C5-C6
4	A	1214	OLA	C4-C5-C6-C7
4	A	1207	OLA	C3-C4-C5-C6
4	A	1218	OLA	C9-C10-C11-C12
4	A	1216	OLA	C11-C12-C13-C14
5	A	1232	OLC	C3-C4-C5-C6
5	A	1229	OLC	C10-C11-C12-C13
4	A	1223	OLA	C3-C4-C5-C6
5	A	1233	OLC	C2-C3-C4-C5
4	A	1219	OLA	C10-C11-C12-C13
4	A	1224	OLA	C6-C7-C8-C9
4	A	1226	OLA	C6-C7-C8-C9
5	A	1232	OLC	C6-C7-C8-C9
5	A	1227	OLC	C2-C1-O20-C21

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Mol	Chain	Res	Type	Atoms
5	A	1232	OLC	C4-C5-C6-C7
4	A	1210	OLA	C5-C6-C7-C8
4	A	1216	OLA	C3-C4-C5-C6
5	A	1228	OLC	C3-C4-C5-C6
4	A	1226	OLA	C1-C2-C3-C4
4	A	1226	OLA	C4-C5-C6-C7
4	A	1205	OLA	C12-C13-C14-C15
4	A	1221	OLA	C12-C13-C14-C15
4	A	1206	OLA	C3-C4-C5-C6
4	A	1208	OLA	C6-C7-C8-C9
4	A	1216	OLA	C6-C7-C8-C9
4	A	1225	OLA	C6-C7-C8-C9
4	A	1205	OLA	C2-C3-C4-C5
4	A	1208	OLA	C4-C5-C6-C7
4	A	1210	OLA	C15-C16-C17-C18
4	A	1211	OLA	C4-C5-C6-C7
4	A	1209	OLA	C13-C14-C15-C16
4	A	1220	OLA	C4-C5-C6-C7
4	A	1210	OLA	C10-C11-C12-C13
5	A	1229	OLC	C2-C1-O20-C21
5	A	1229	OLC	C2-C3-C4-C5
5	A	1227	OLC	O19-C1-O20-C21
5	A	1230	OLC	C10-C11-C12-C13
4	A	1210	OLA	C1-C2-C3-C4
5	A	1228	OLC	C4-C5-C6-C7
5	A	1231	OLC	C3-C4-C5-C6
4	A	1226	OLA	C12-C13-C14-C15
4	A	1225	OLA	C5-C6-C7-C8
4	A	1205	OLA	C11-C12-C13-C14
5	A	1233	OLC	C6-C7-C8-C9
5	A	1228	OLC	C7-C8-C9-C10
5	A	1230	OLC	C4-C5-C6-C7
4	A	1205	OLA	C15-C16-C17-C18
4	A	1209	OLA	C4-C5-C6-C7
4	A	1223	OLA	C4-C5-C6-C7
4	A	1226	OLA	C14-C15-C16-C17
5	A	1231	OLC	C4-C5-C6-C7
4	A	1225	OLA	C4-C5-C6-C7
5	A	1229	OLC	O19-C1-O20-C21
4	A	1217	OLA	C11-C12-C13-C14
5	A	1227	OLC	C6-C7-C8-C9
4	A	1209	OLA	C14-C15-C16-C17

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Mol	Chain	Res	Type	Atoms
4	A	1208	OLA	C12-C13-C14-C15
5	A	1229	OLC	C12-C13-C14-C15
4	A	1208	OLA	C1-C2-C3-C4
4	A	1205	OLA	C6-C7-C8-C9
4	A	1219	OLA	C15-C16-C17-C18
5	A	1228	OLC	C2-C3-C4-C5
5	A	1228	OLC	C2-C1-O20-C21
4	A	1223	OLA	C2-C3-C4-C5
4	A	1214	OLA	C1-C2-C3-C4
4	A	1221	OLA	C15-C16-C17-C18
4	A	1209	OLA	C3-C4-C5-C6
5	A	1229	OLC	C5-C6-C7-C8
4	A	1219	OLA	C12-C13-C14-C15
4	A	1226	OLA	C3-C4-C5-C6
4	A	1209	OLA	C10-C11-C12-C13
5	A	1228	OLC	O19-C1-O20-C21
3	A	1203	CLR	C21-C20-C22-C23
4	A	1211	OLA	C1-C2-C3-C4
5	A	1229	OLC	C4-C5-C6-C7
5	A	1231	OLC	C5-C6-C7-C8
5	A	1229	OLC	C9-C10-C11-C12
4	A	1208	OLA	C10-C11-C12-C13
4	A	1216	OLA	C4-C5-C6-C7
4	A	1220	OLA	C9-C10-C11-C12
4	A	1210	OLA	C12-C13-C14-C15
4	A	1212	OLA	C1-C2-C3-C4
4	A	1205	OLA	C3-C4-C5-C6
4	A	1205	OLA	C10-C11-C12-C13
5	A	1233	OLC	C4-C5-C6-C7
4	A	1213	OLA	C7-C8-C9-C10
5	A	1227	OLC	C3-C4-C5-C6
4	A	1220	OLA	C7-C8-C9-C10
4	A	1209	OLA	C11-C12-C13-C14
5	A	1230	OLC	C6-C7-C8-C9
4	A	1219	OLA	C13-C14-C15-C16
5	A	1233	OLC	C2-C1-O20-C21
4	A	1208	OLA	C3-C4-C5-C6
4	A	1214	OLA	C5-C6-C7-C8
5	A	1229	OLC	C6-C7-C8-C9
4	A	1211	OLA	C2-C3-C4-C5
5	A	1233	OLC	O19-C1-O20-C21
4	A	1208	OLA	O2-C1-C2-C3

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Mol	Chain	Res	Type	Atoms
4	A	1207	OLA	O2-C1-C2-C3
4	A	1209	OLA	C7-C8-C9-C10
4	A	1210	OLA	C7-C8-C9-C10
4	A	1205	OLA	C5-C6-C7-C8
4	A	1209	OLA	C12-C13-C14-C15
4	A	1209	OLA	C9-C10-C11-C12
4	A	1226	OLA	C7-C8-C9-C10
4	A	1216	OLA	C7-C8-C9-C10
4	A	1219	OLA	C9-C10-C11-C12
4	A	1225	OLA	C7-C8-C9-C10
4	A	1208	OLA	O1-C1-C2-C3
4	A	1215	OLA	C3-C4-C5-C6
4	A	1207	OLA	O1-C1-C2-C3
4	A	1208	OLA	C7-C8-C9-C10
5	A	1231	OLC	C9-C10-C11-C12
4	A	1209	OLA	O1-C1-C2-C3
5	A	1227	OLC	C5-C6-C7-C8
4	A	1213	OLA	C4-C5-C6-C7
4	A	1213	OLA	C9-C10-C11-C12
4	A	1215	OLA	C7-C8-C9-C10
4	A	1213	OLA	C2-C3-C4-C5
3	A	1204	CLR	C16-C17-C20-C22
4	A	1215	OLA	C11-C12-C13-C14
4	A	1211	OLA	C3-C4-C5-C6
4	A	1209	OLA	C6-C7-C8-C9
4	A	1209	OLA	O2-C1-C2-C3
4	A	1225	OLA	O2-C1-C2-C3
4	A	1225	OLA	C2-C3-C4-C5
4	A	1211	OLA	C7-C8-C9-C10
5	A	1233	OLC	C3-C4-C5-C6
4	A	1212	OLA	C2-C3-C4-C5
4	A	1216	OLA	C9-C10-C11-C12
3	A	1204	CLR	C22-C23-C24-C25
4	A	1225	OLA	O1-C1-C2-C3
4	A	1226	OLA	C5-C6-C7-C8
4	A	1206	OLA	O2-C1-C2-C3

There are no ring outliers.

13 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	1230	OLC	2	0

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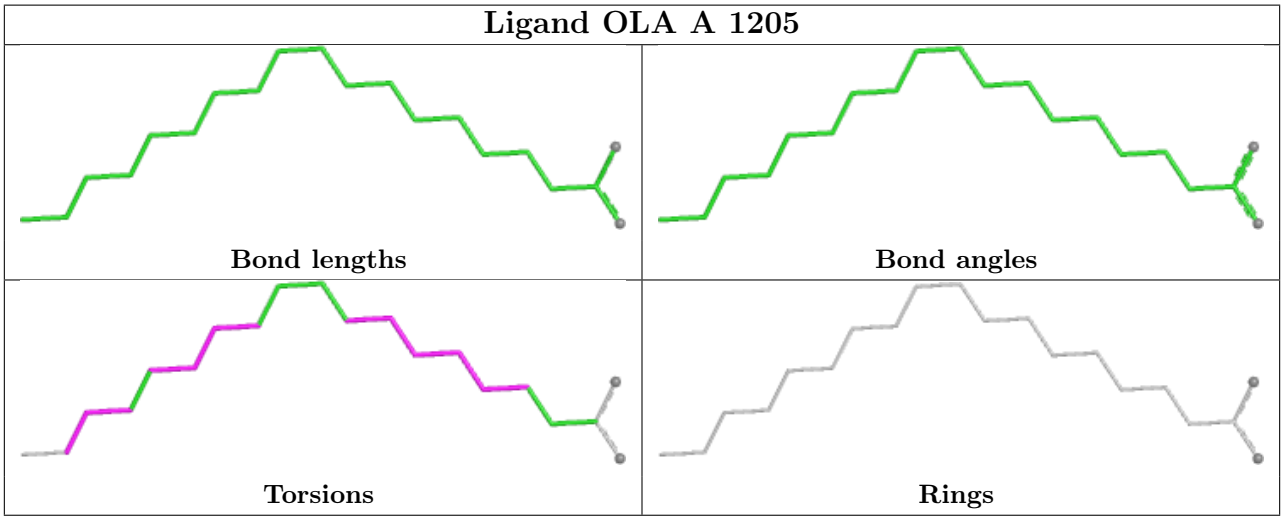
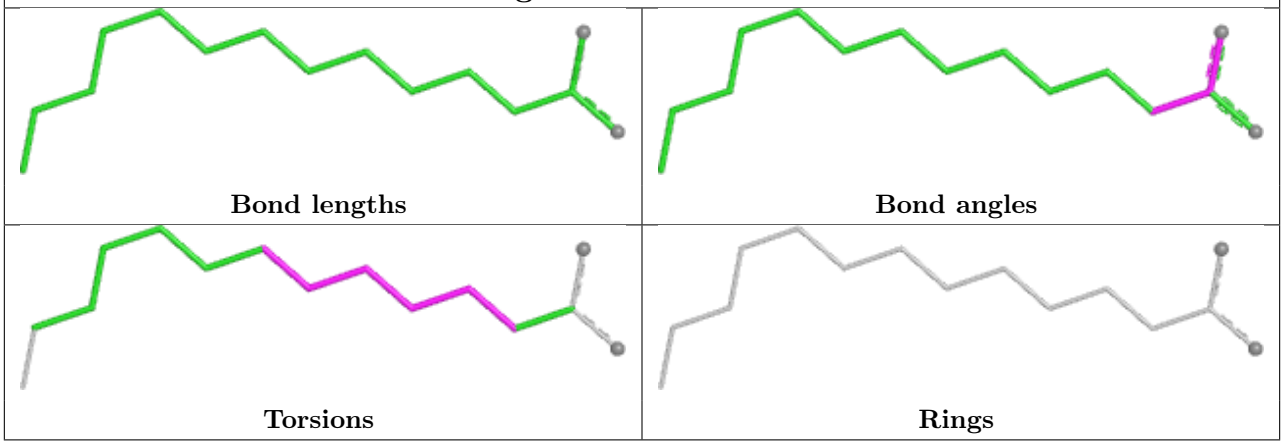
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	1229	OLC	2	0
4	A	1209	OLA	2	0
4	A	1225	OLA	2	0
4	A	1211	OLA	1	0
4	A	1226	OLA	2	0
4	A	1215	OLA	1	0
4	A	1222	OLA	1	0
5	A	1233	OLC	1	0
4	A	1210	OLA	2	0
5	A	1232	OLC	1	0
4	A	1221	OLA	1	0
4	A	1216	OLA	2	0

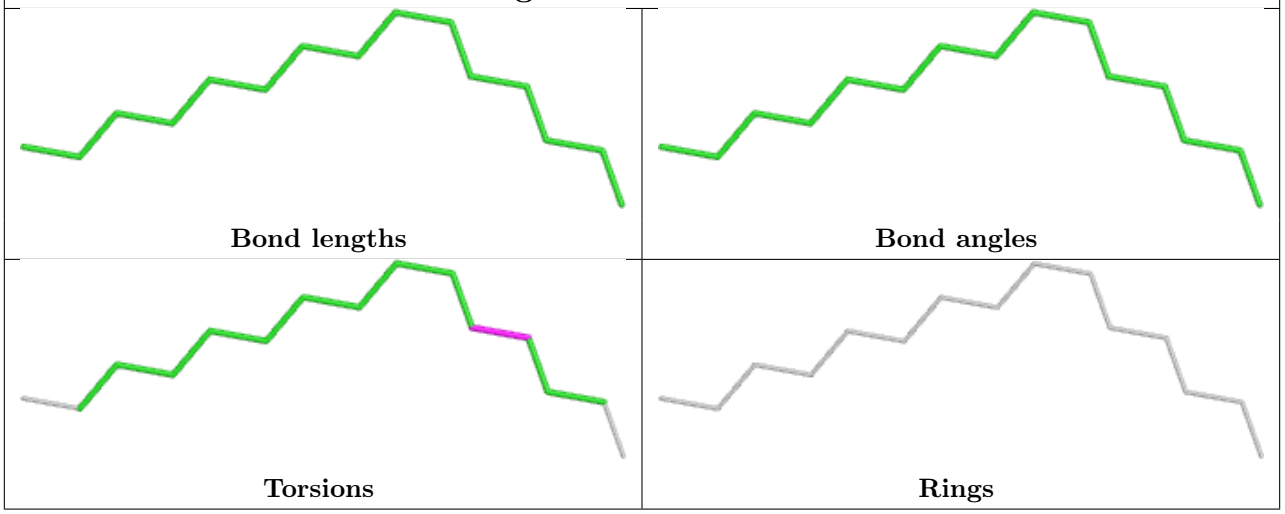
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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



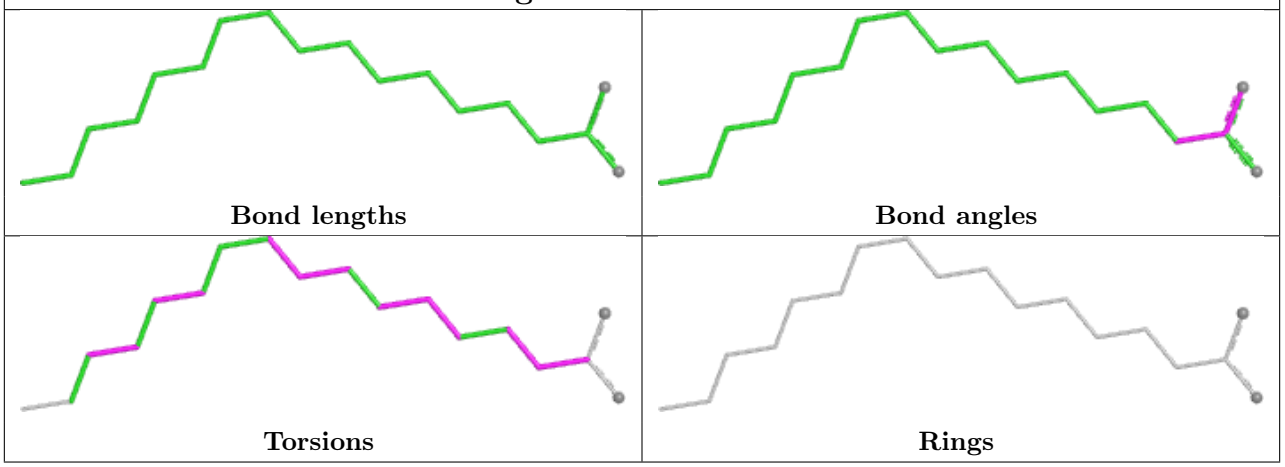
Ligand OLA A 1223



Ligand OLA A 1224



Ligand OLA A 1208



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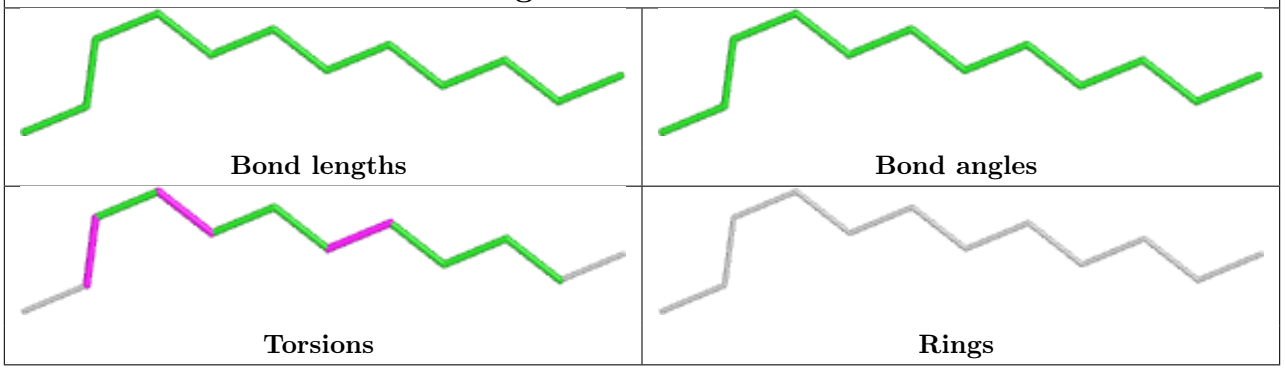

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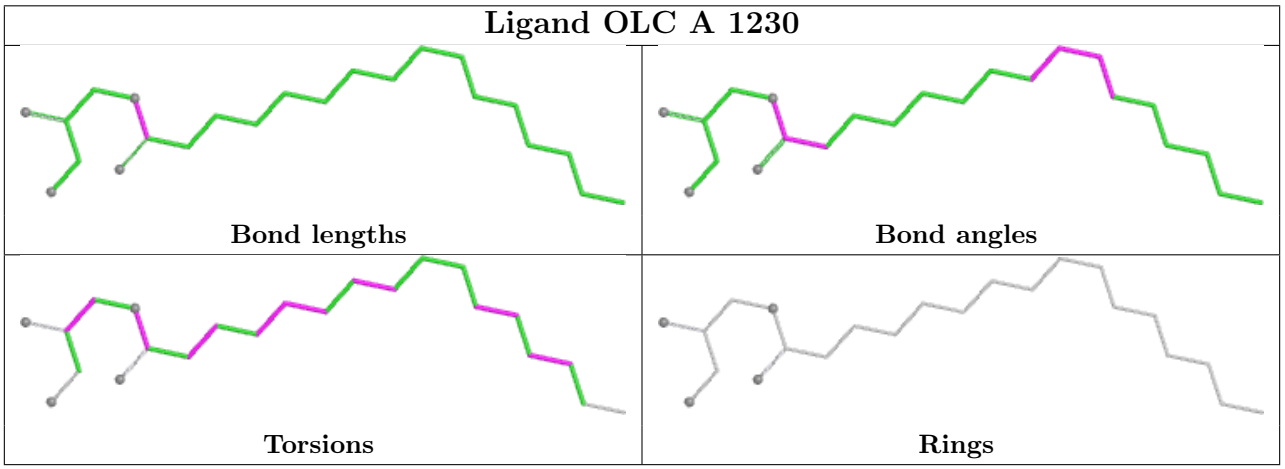

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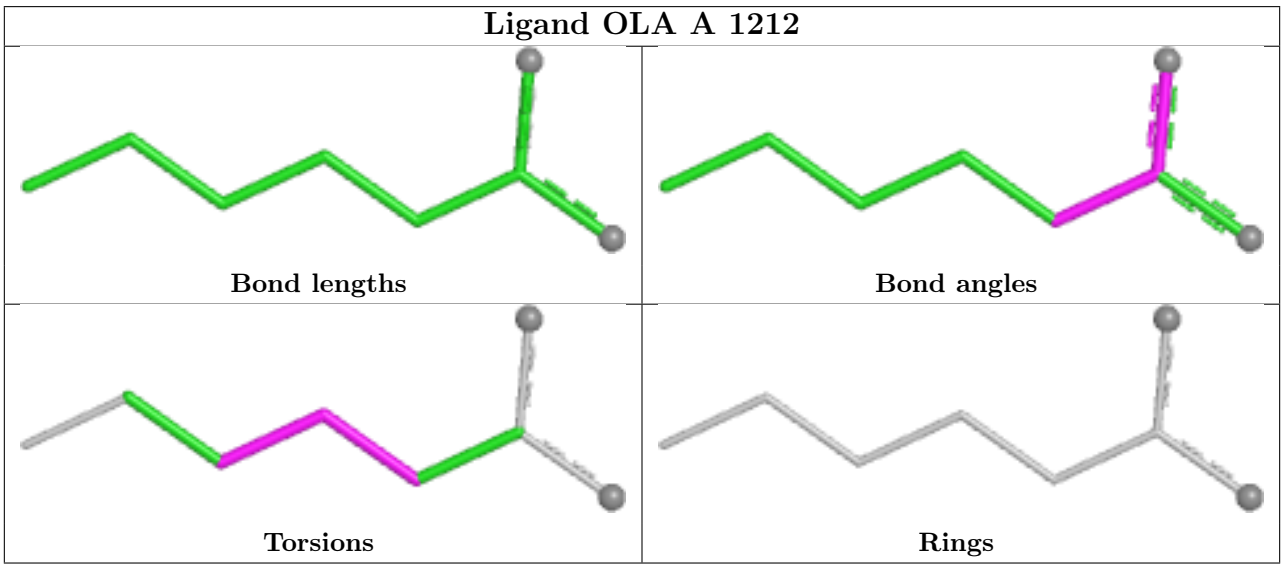
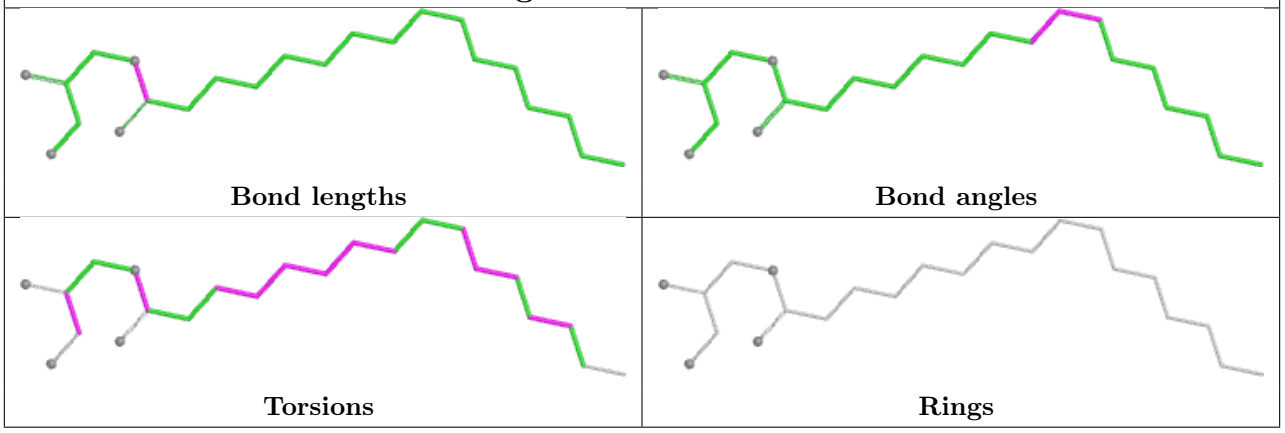
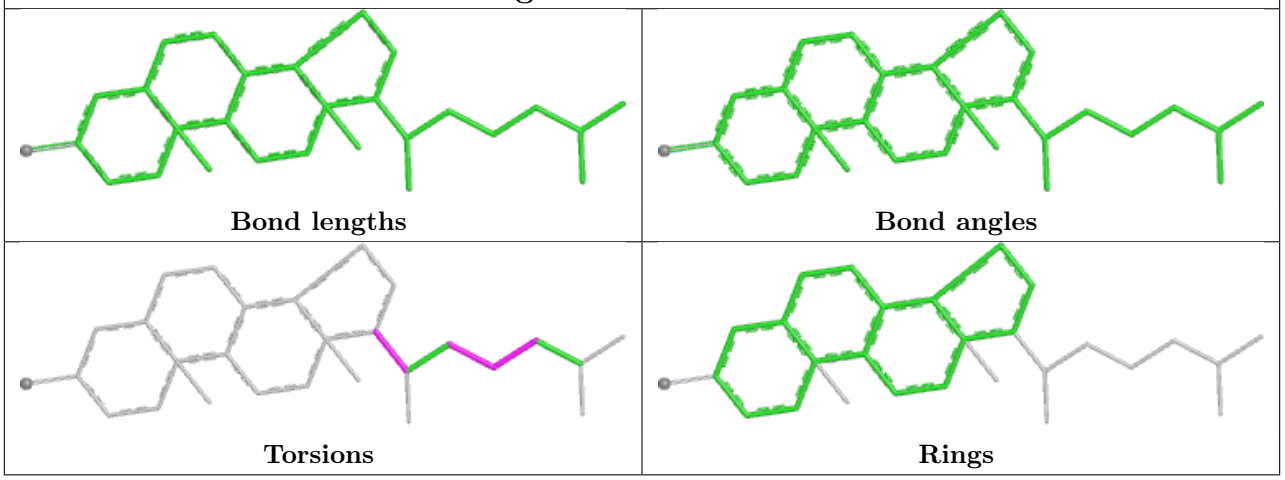


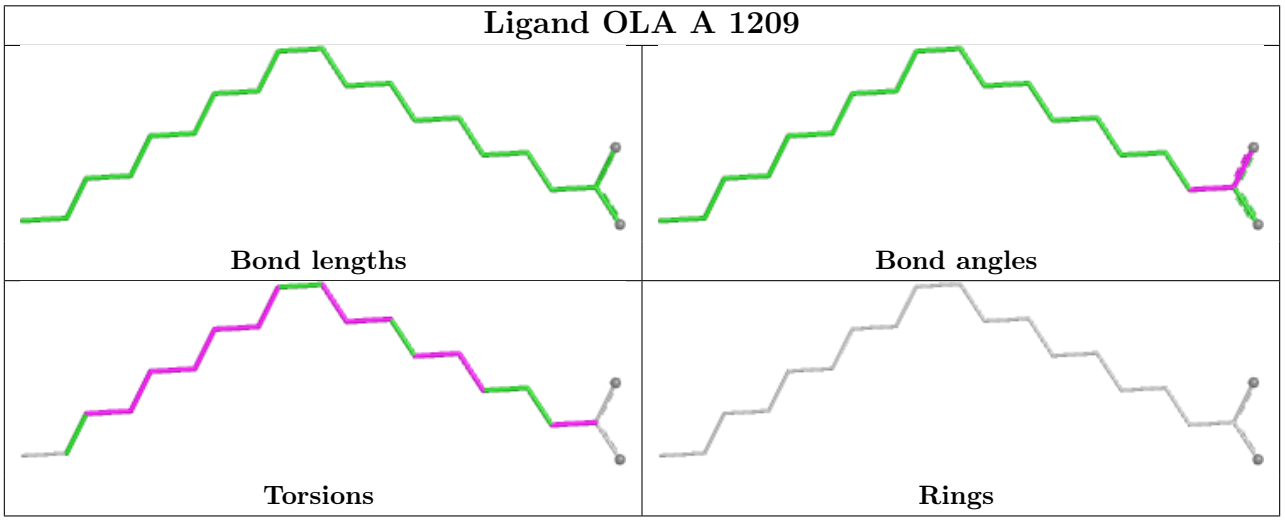
Ligand OLC A 1229



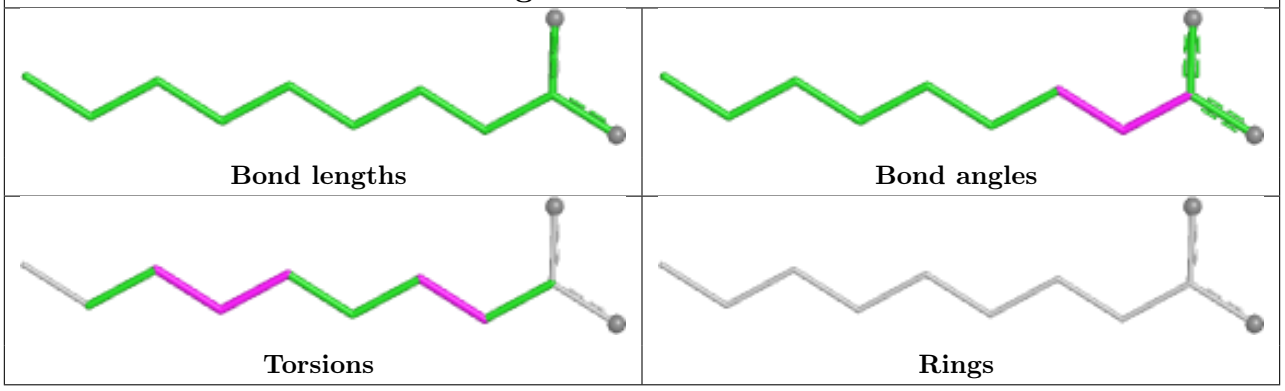
Ligand CLR A 1204



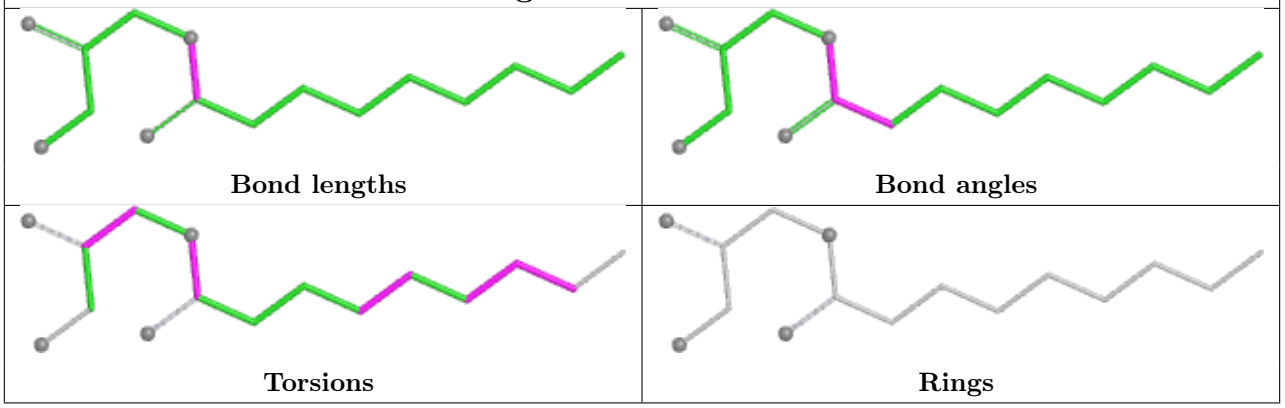
Ligand OLA A 1209



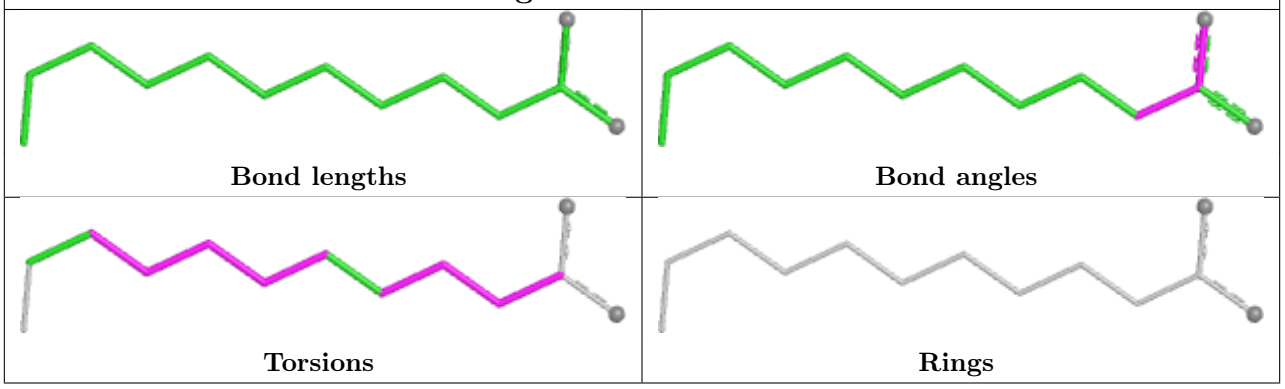
Ligand OLA A 1214



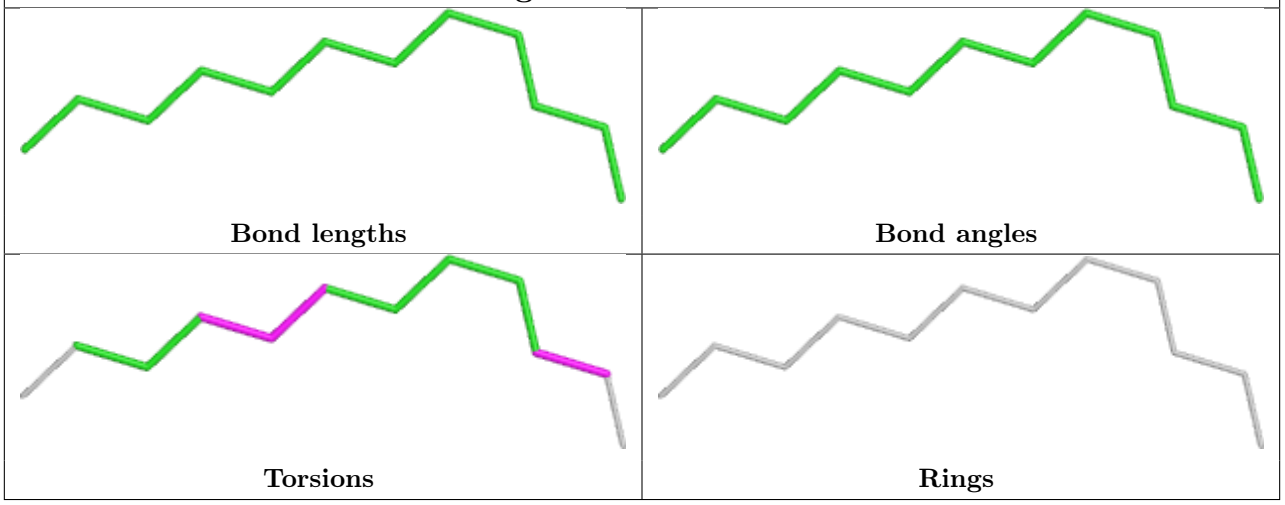
Ligand OLC A 1227



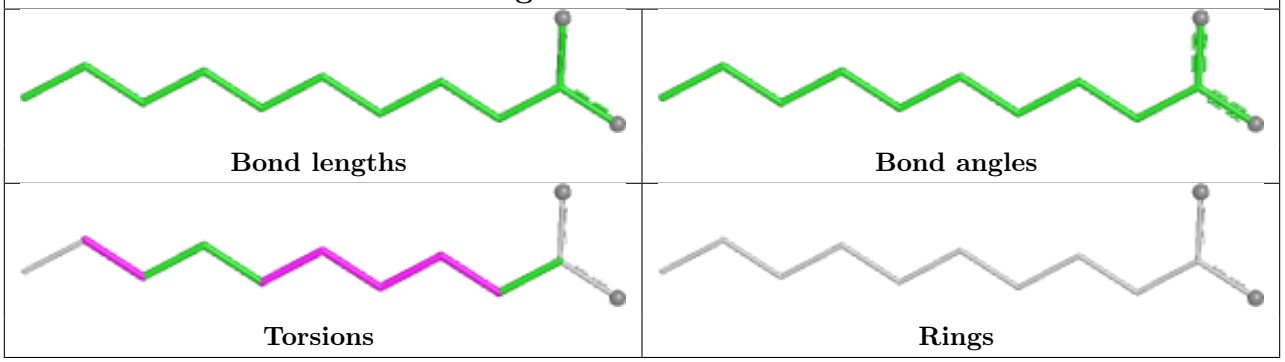
Ligand OLA A 1225



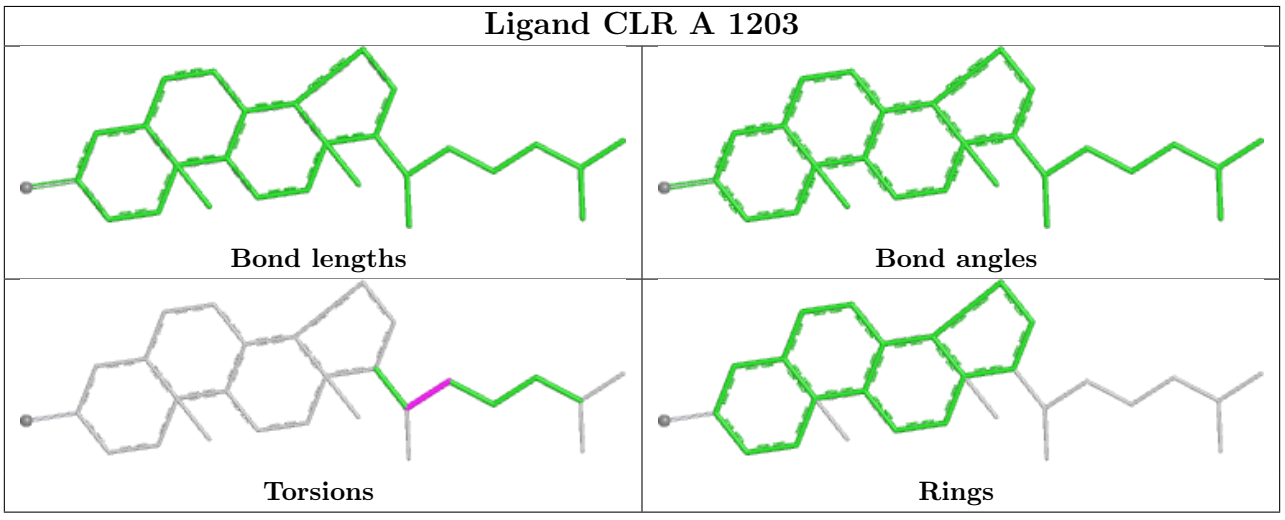
Ligand OLA A 1217



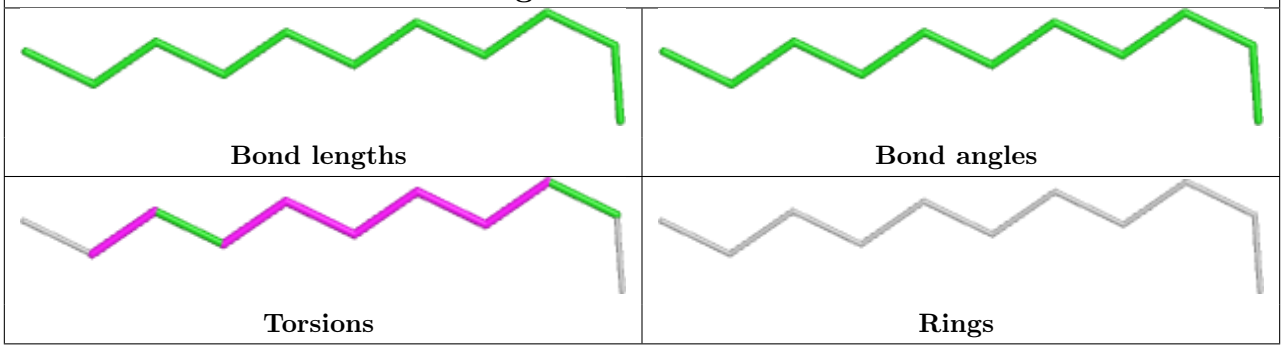
Ligand OLA A 1211



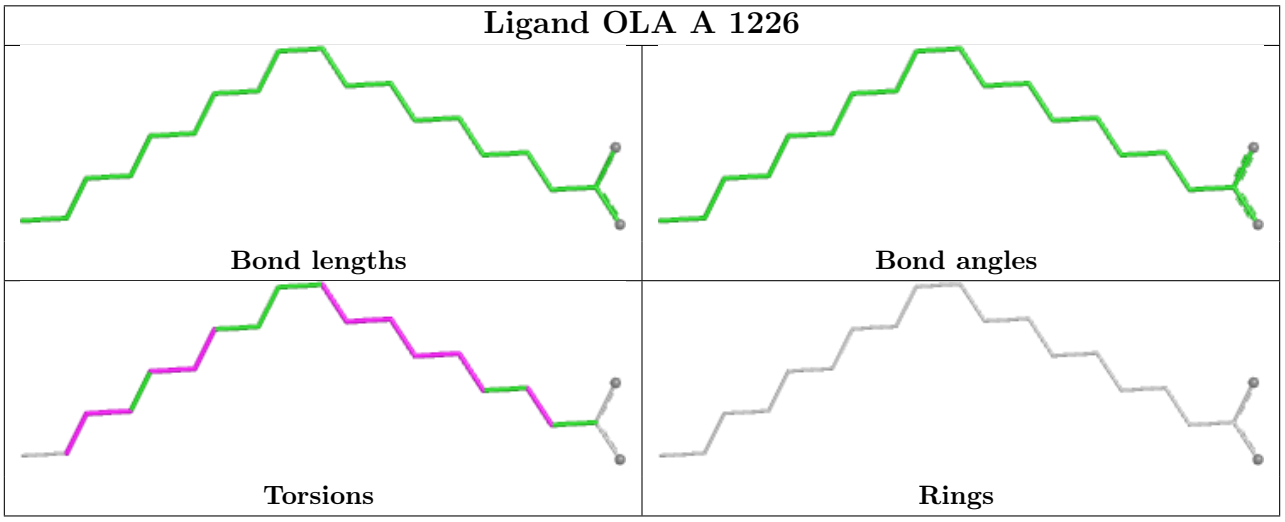
Ligand CLR A 1203



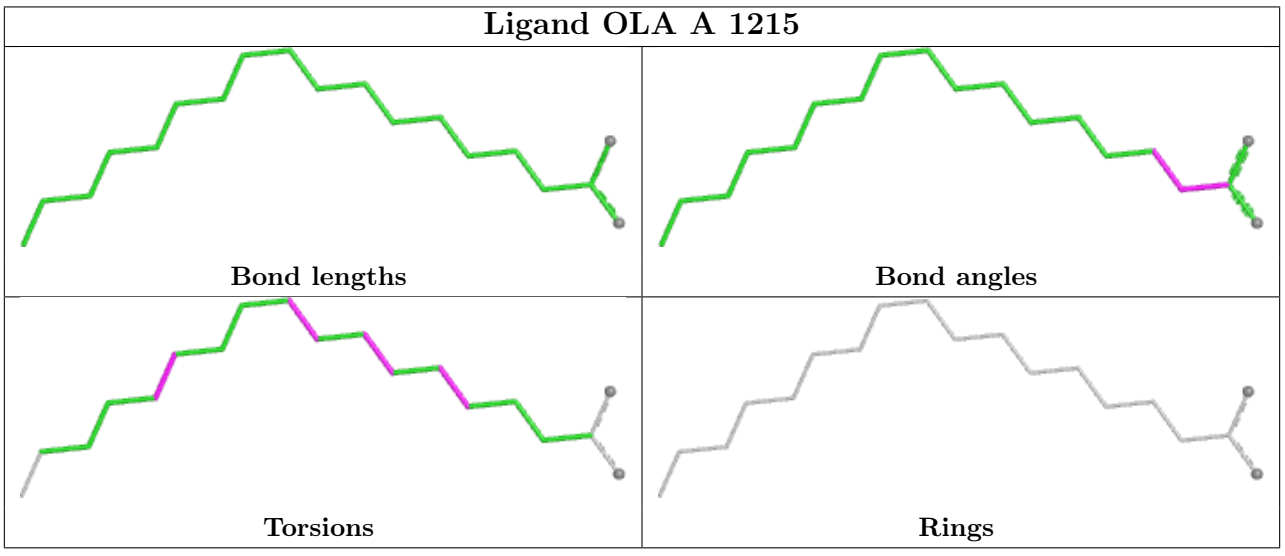
Ligand OLA A 1219



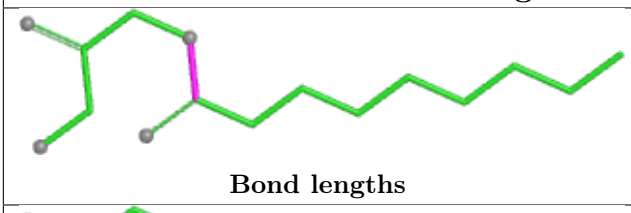
Ligand OLA A 1226

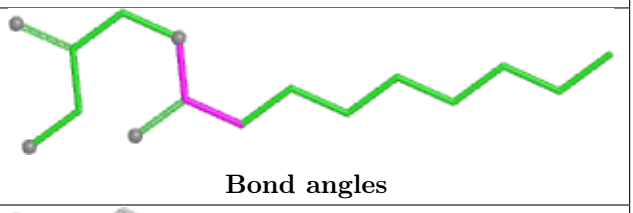


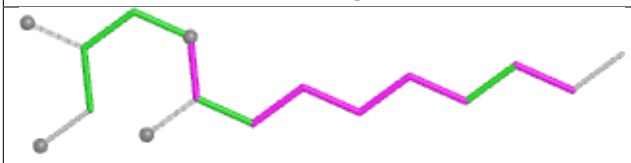
Ligand OLA A 1215

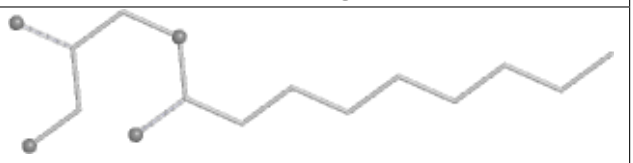


Ligand OLC A 1233


Bond lengths

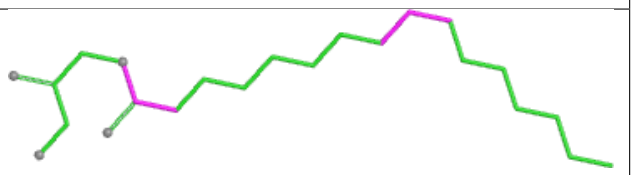

Bond angles

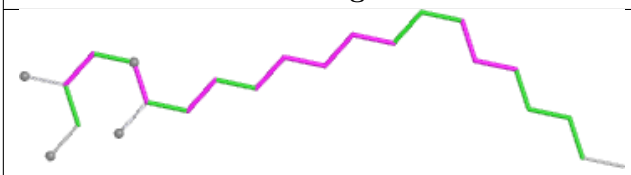

Torsions

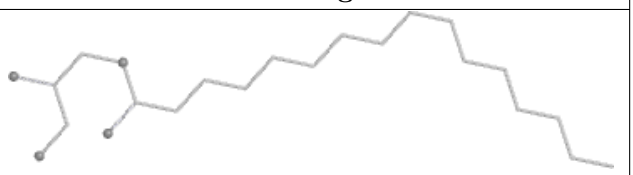

Rings

Ligand OLC A 1231

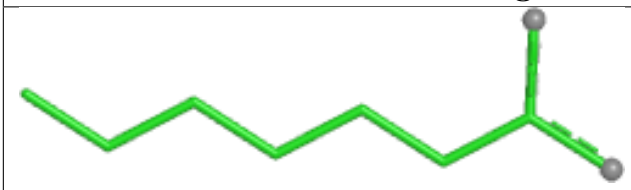

Bond lengths

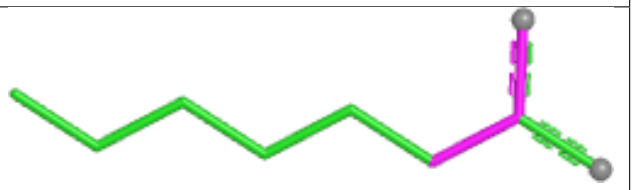

Bond angles

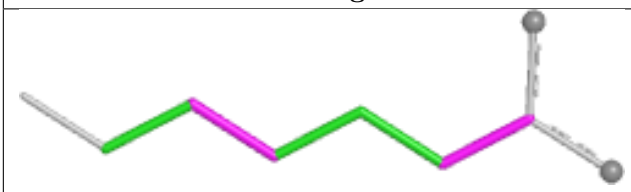

Torsions

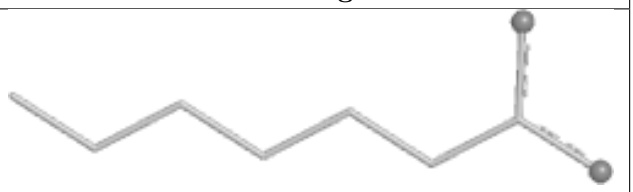

Rings

Ligand OLA A 1207

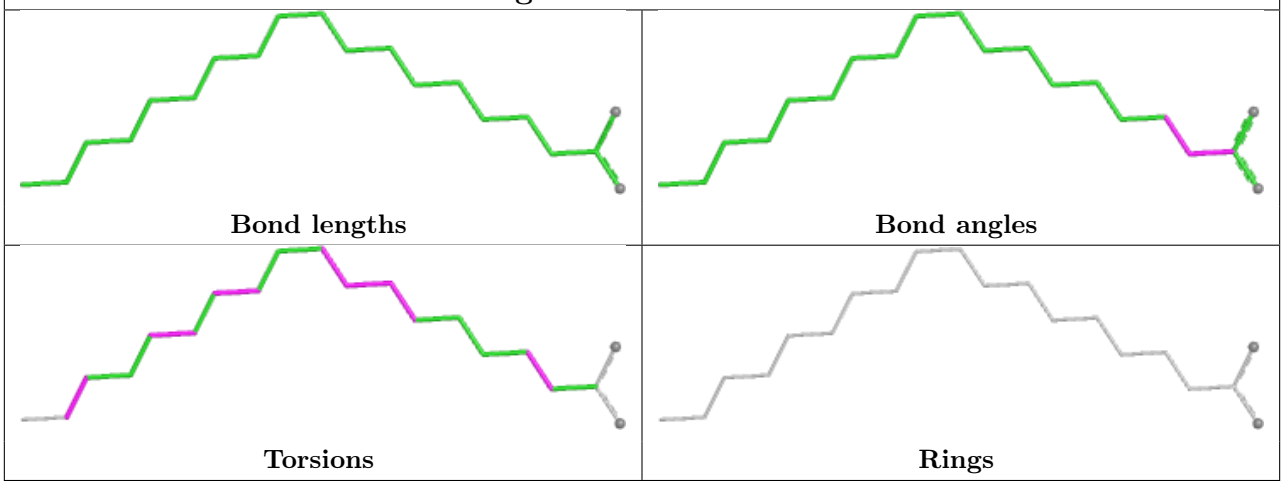

Bond lengths


Bond angles

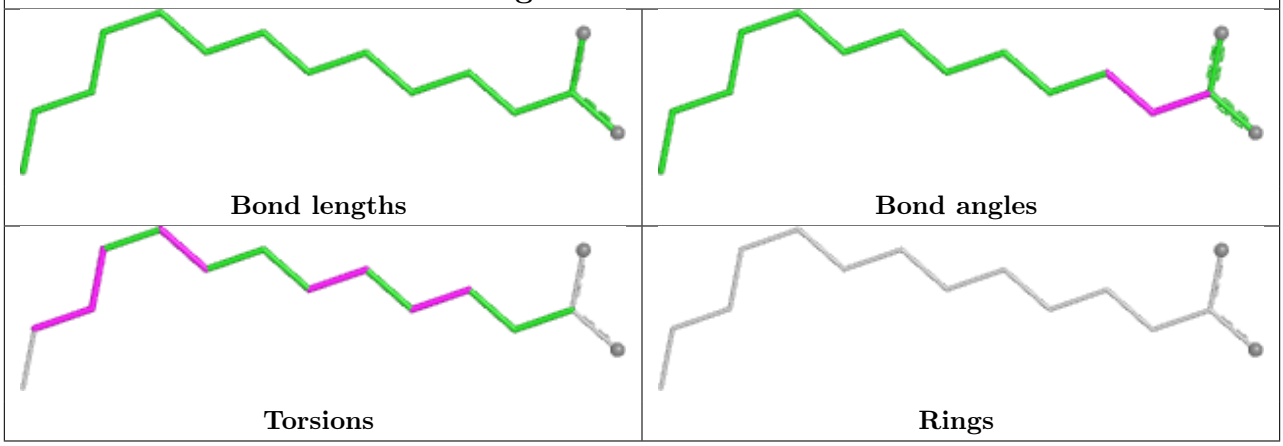

Torsions


Rings

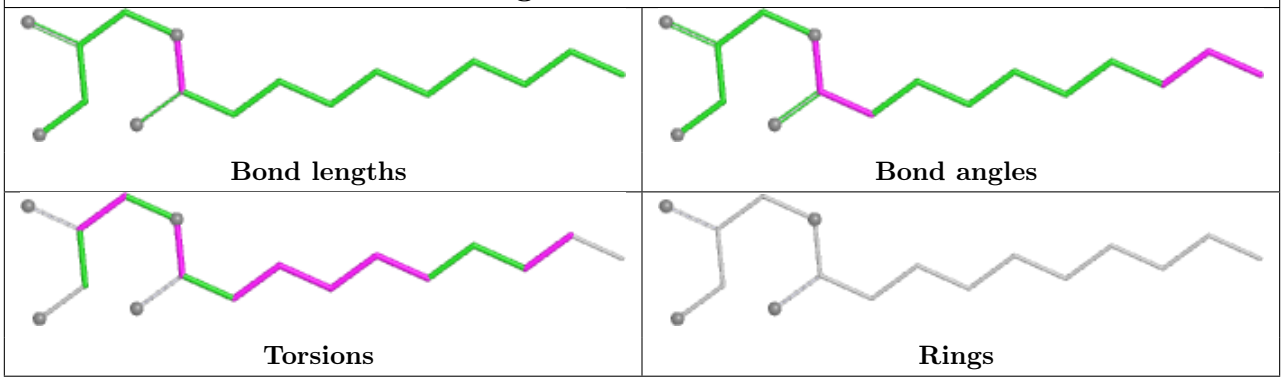
Ligand OLA A 1210



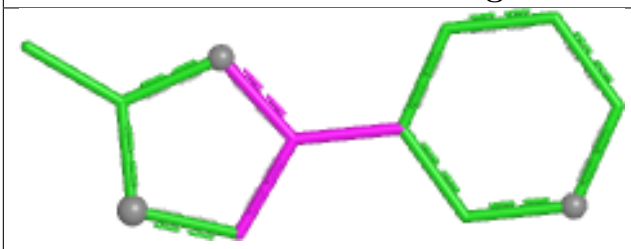
Ligand OLA A 1213

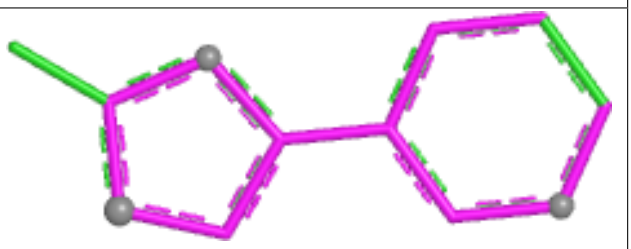


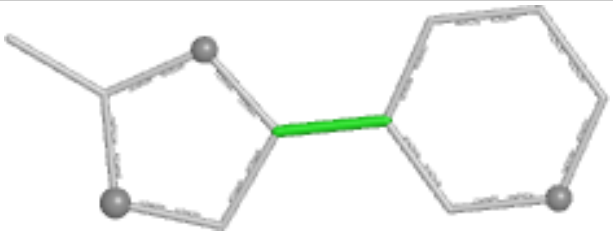
Ligand OLC A 1228

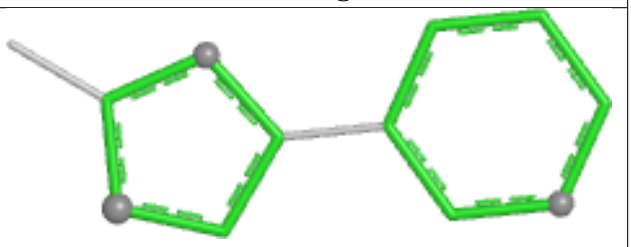


Ligand A1COM A 1234


Bond lengths


Bond angles

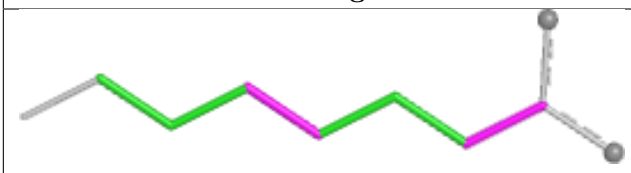

Torsions

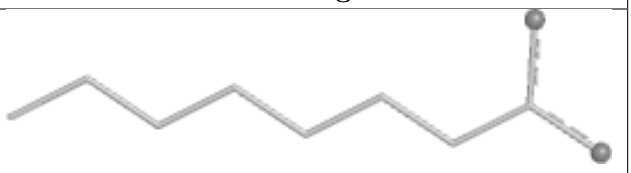

Rings

Ligand OLA A 1206


Bond lengths


Bond angles

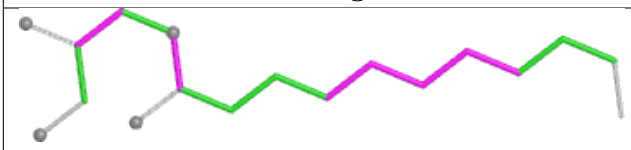

Torsions

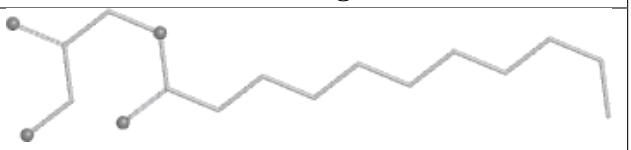

Rings

Ligand OLC A 1232


Bond lengths


Bond angles


Torsions

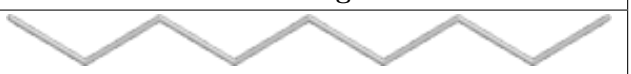

Rings

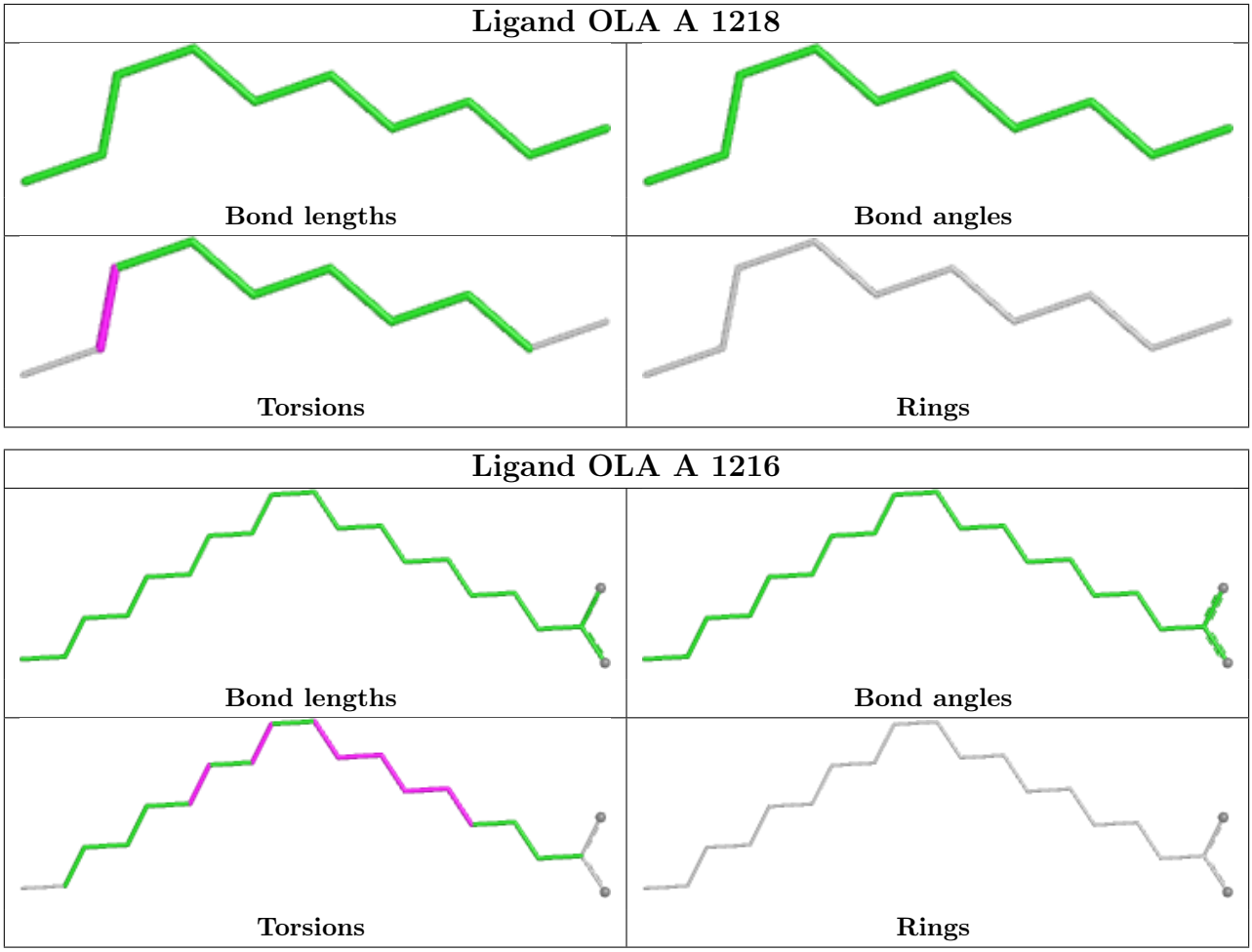
Ligand OLA A 1221


Bond lengths


Bond angles


Torsions


Rings



5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

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	390/433 (90%)	0.18	20 (5%) 33 33	17, 50, 95, 132	13 (3%)

All (20) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	1061	PHE	5.3
1	A	1106	LEU	3.1
1	A	1021	ASP	3.0
1	A	1017	ILE	2.9
1	A	1059	LYS	2.8
1	A	306	HIS	2.7
1	A	1026	VAL	2.6
1	A	1012	ASP	2.4
1	A	307	VAL	2.4
1	A	1084	VAL	2.3
1	A	308	LEU	2.3
1	A	1105	TYR	2.3
1	A	1042	LYS	2.2
1	A	1091	ALA	2.2
1	A	1016	VAL	2.2
1	A	1036	ALA	2.1
1	A	1063	HIS	2.1
1	A	110	LEU	2.1
1	A	29	TRP	2.1
1	A	1	PRO	2.1

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

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, 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.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	OLA	A	1226	20/20	0.73	0.21	55,72,91,103	0
4	OLA	A	1218	10/20	0.74	0.21	56,62,75,78	0
4	OLA	A	1216	20/20	0.76	0.20	37,68,80,85	0
4	OLA	A	1220	12/20	0.77	0.18	34,54,65,67	0
4	OLA	A	1206	10/20	0.78	0.15	49,70,86,92	0
4	OLA	A	1215	19/20	0.79	0.18	45,63,87,89	0
4	OLA	A	1210	20/20	0.80	0.18	44,60,80,85	0
4	OLA	A	1209	20/20	0.80	0.17	32,68,79,83	0
4	OLA	A	1213	15/20	0.81	0.15	55,63,88,96	0
4	OLA	A	1214	11/20	0.81	0.14	38,56,63,76	0
4	OLA	A	1225	13/20	0.81	0.15	36,63,89,105	0
4	OLA	A	1217	12/20	0.81	0.18	44,58,71,82	0
4	OLA	A	1223	15/20	0.82	0.18	42,56,83,85	0
4	OLA	A	1222	8/20	0.83	0.19	54,58,65,69	0
4	OLA	A	1207	9/20	0.83	0.17	33,58,77,81	0
5	OLC	A	1228	17/25	0.83	0.14	51,70,91,92	0
4	OLA	A	1221	9/20	0.84	0.21	39,62,84,86	0
5	OLC	A	1231	23/25	0.84	0.13	32,54,86,97	0
4	OLA	A	1208	18/20	0.85	0.16	35,56,77,79	0
4	OLA	A	1219	11/20	0.86	0.16	33,40,61,67	0
4	OLA	A	1211	12/20	0.86	0.15	47,68,76,77	0
4	OLA	A	1212	8/20	0.86	0.12	42,60,76,83	0
5	OLC	A	1229	23/25	0.87	0.14	45,60,76,78	0
4	OLA	A	1224	15/20	0.87	0.14	36,52,65,65	0
5	OLC	A	1233	16/25	0.88	0.12	33,56,71,83	0
5	OLC	A	1232	18/25	0.89	0.13	36,64,87,88	0
6	A1COM	A	1234	12/12	0.91	0.10	26,35,47,54	0
3	CLR	A	1202	28/28	0.92	0.10	35,41,58,72	0
5	OLC	A	1230	23/25	0.92	0.12	29,51,74,82	0
4	OLA	A	1205	20/20	0.92	0.12	33,51,74,81	0
5	OLC	A	1227	16/25	0.93	0.12	34,48,68,69	0
2	NA	A	1201	1/1	0.94	0.06	44,44,44,44	0

Continued on next page...

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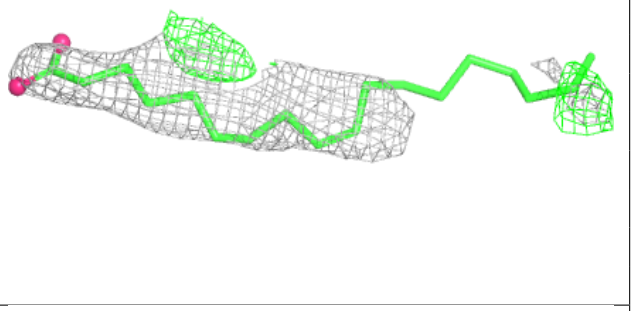
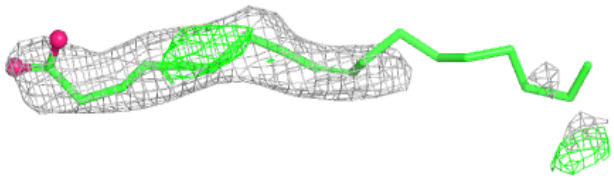
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	CLR	A	1203	28/28	0.94	0.11	32,48,58,62	0
3	CLR	A	1204	28/28	0.94	0.08	30,40,53,57	0

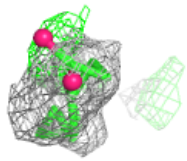
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around OLA A 1226:

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

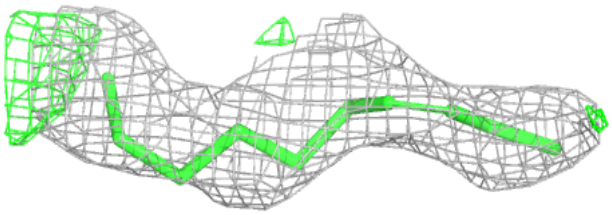


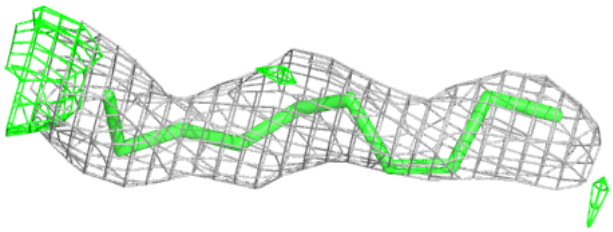


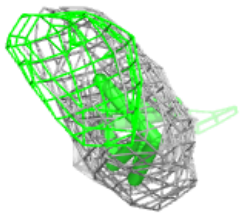


Electron density around OLA A 1218:

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

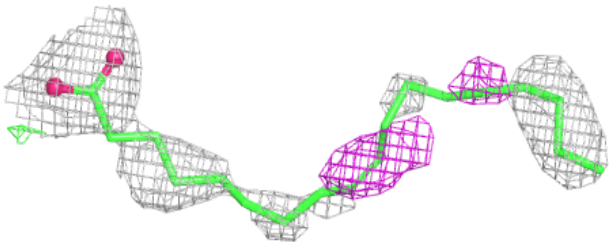


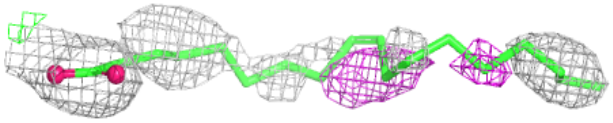




Electron density around OLA A 1216:

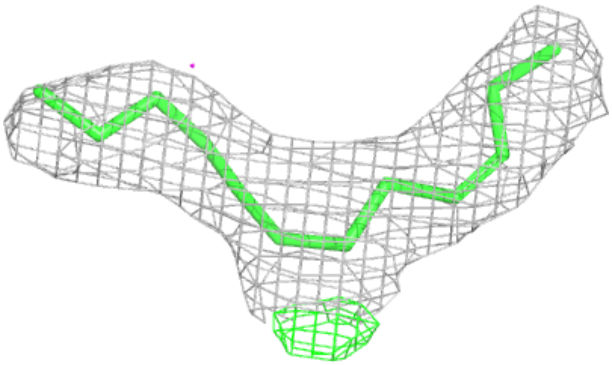
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

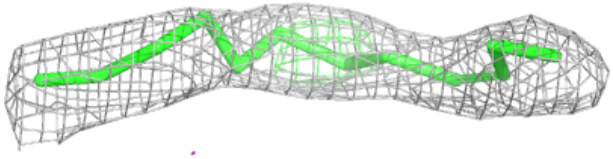


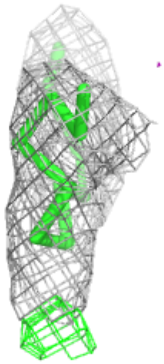


Electron density around OLA A 1220:

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

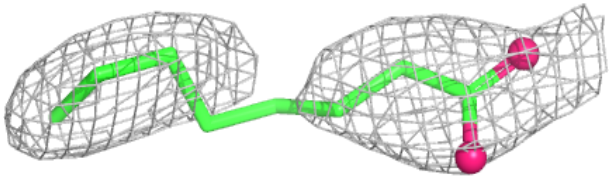


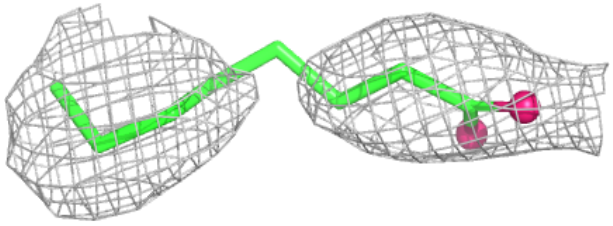


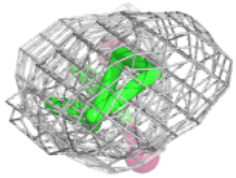


Electron density around OLA A 1206:

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

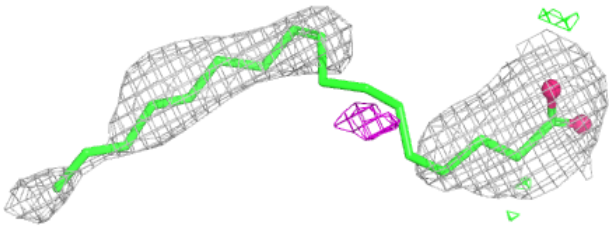


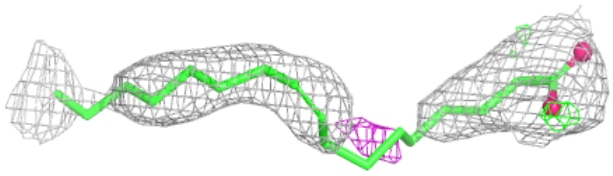


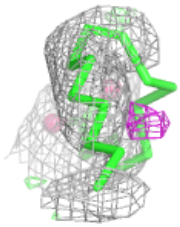


Electron density around OLA A 1215:

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

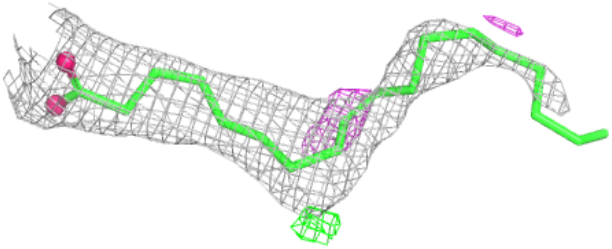


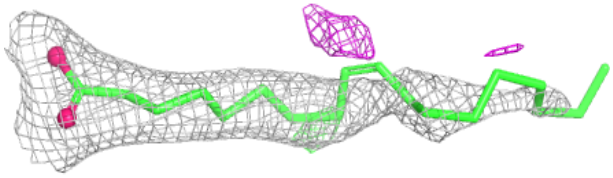


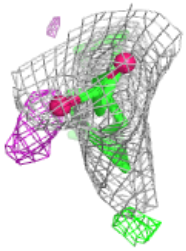


Electron density around OLA A 1210:

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

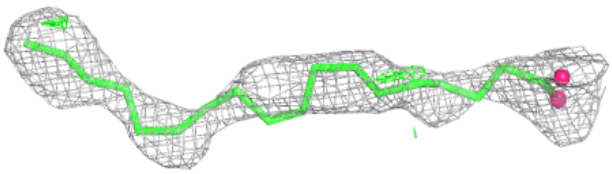


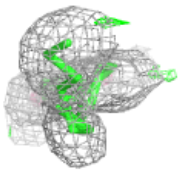




Electron density around OLA A 1209:

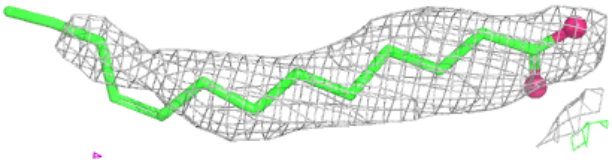
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

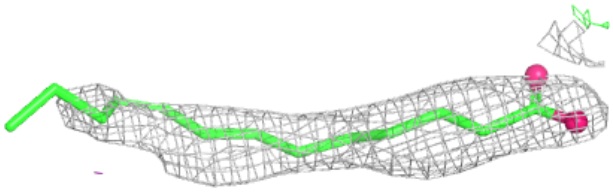


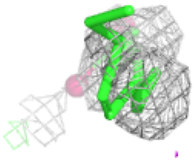


Electron density around OLA A 1213:

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

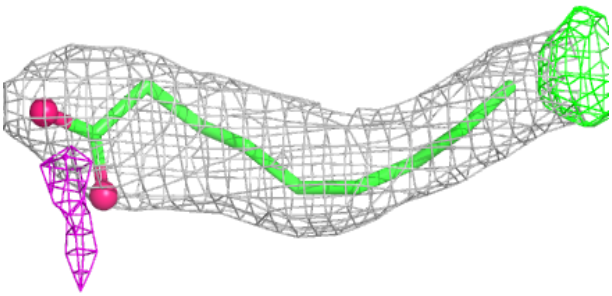


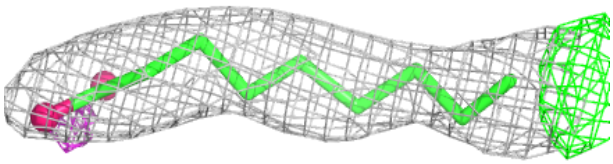


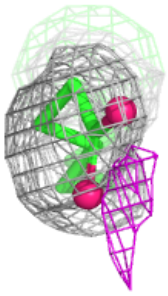


Electron density around OLA A 1214:

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

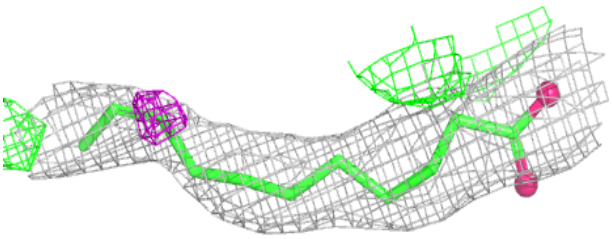


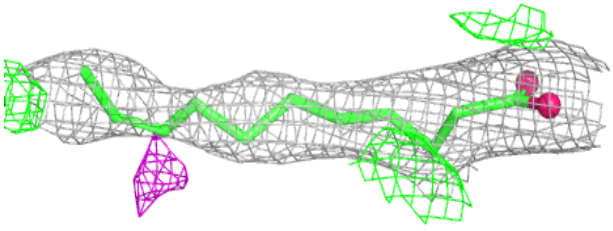


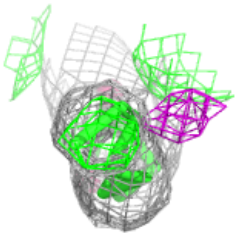


Electron density around OLA A 1225:

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

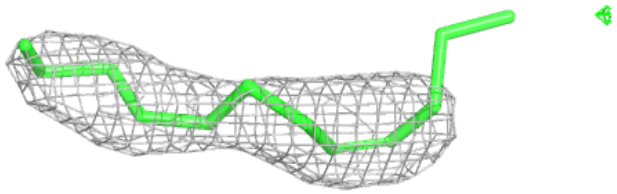


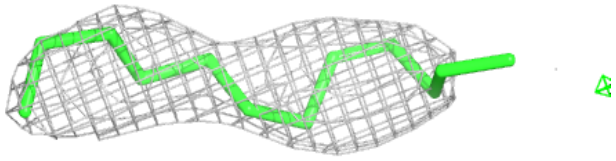


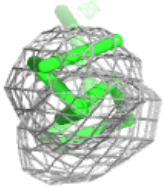


Electron density around OLA A 1217:

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

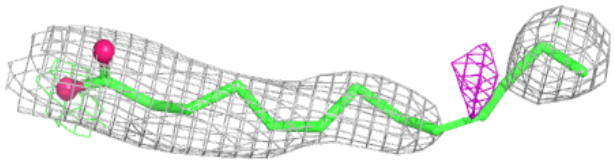


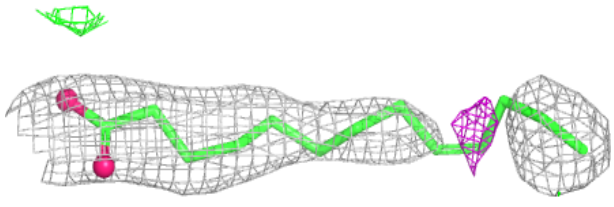


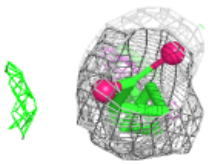


Electron density around OLA A 1223:

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

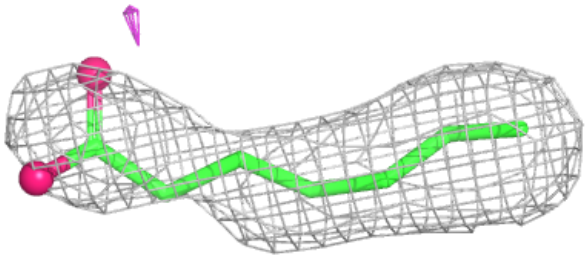


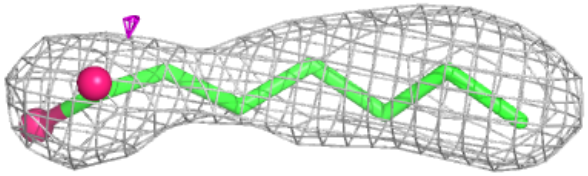


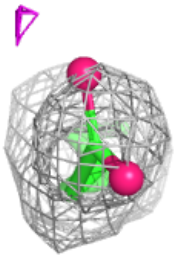


Electron density around OLA A 1207:

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

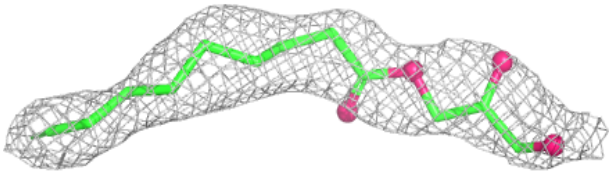


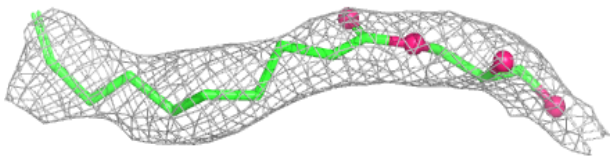


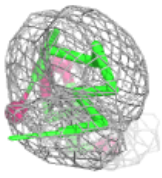


Electron density around OLC A 1228:

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

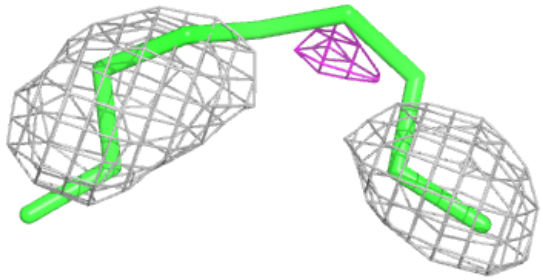


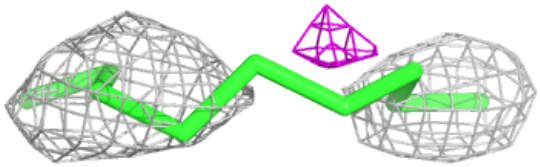


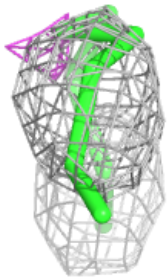


Electron density around OLA A 1221:

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

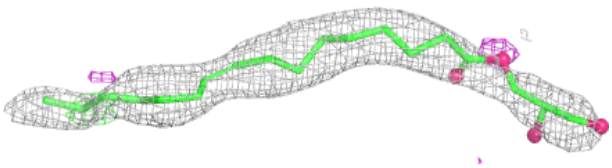


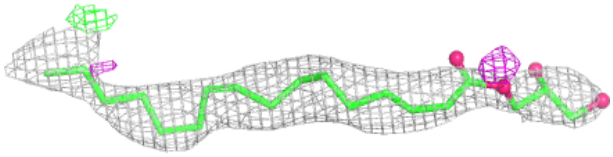


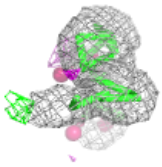


Electron density around OLC A 1231:

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

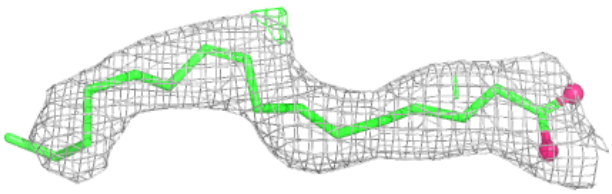


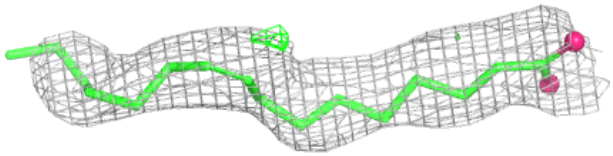


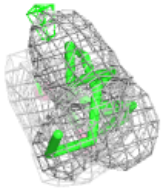


Electron density around OLA A 1208:

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

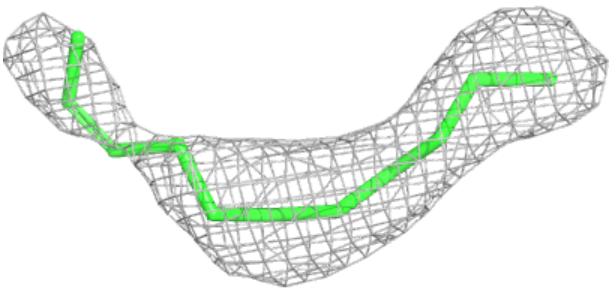


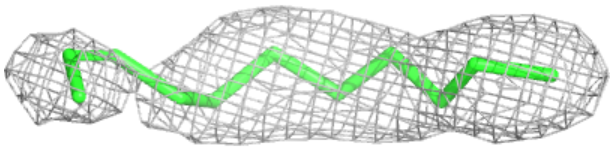


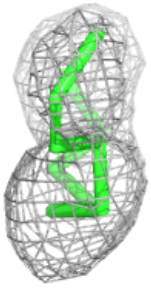


Electron density around OLA A 1219:

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

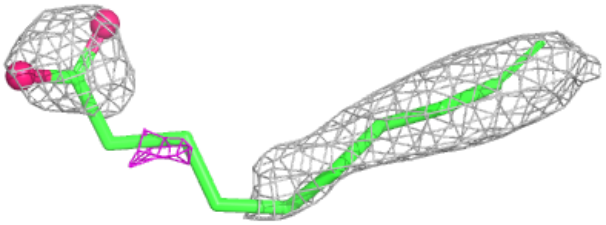


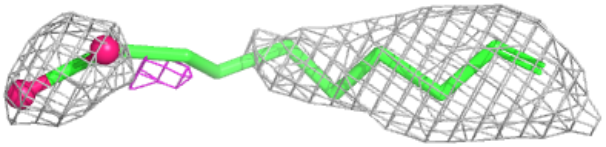


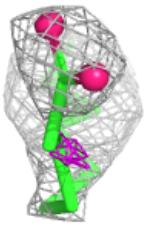


Electron density around OLA A 1211:

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

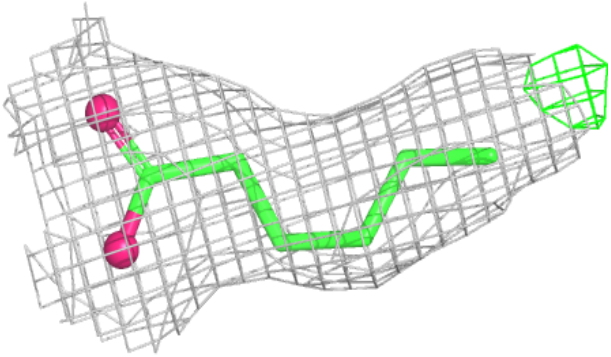


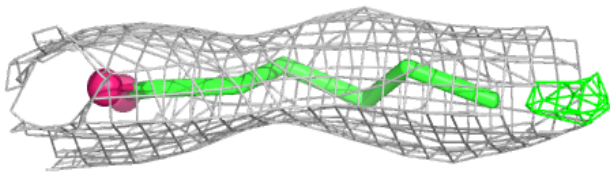


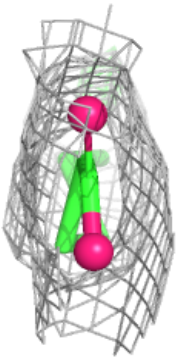


Electron density around OLA A 1212:

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

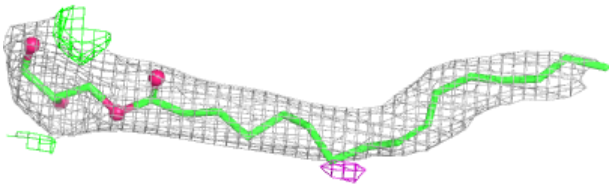


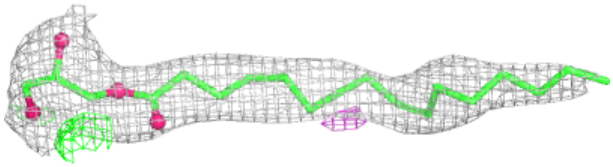


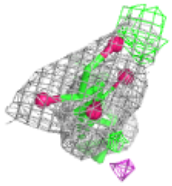


Electron density around OLC A 1229:

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

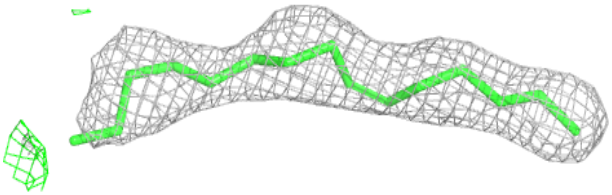


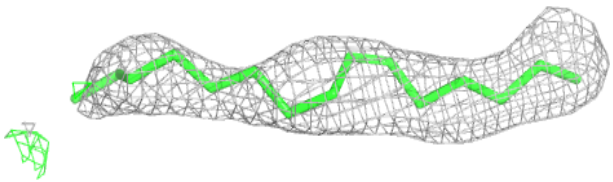


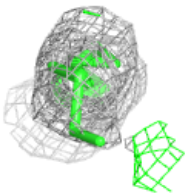


Electron density around OLA A 1224:

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

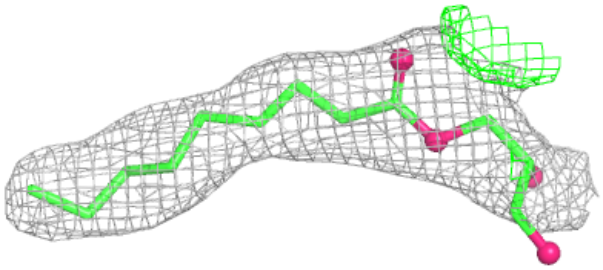


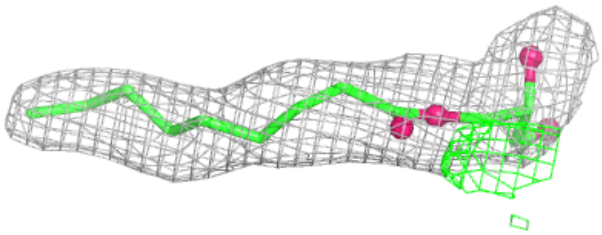


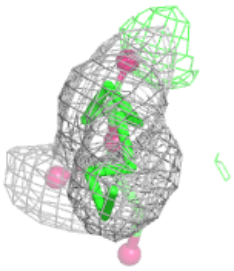


Electron density around OLC A 1233:

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

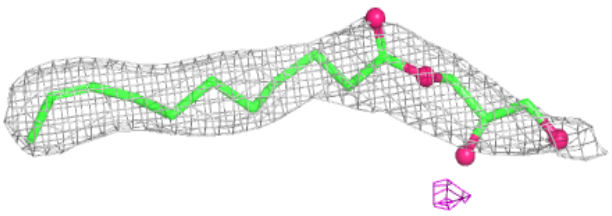


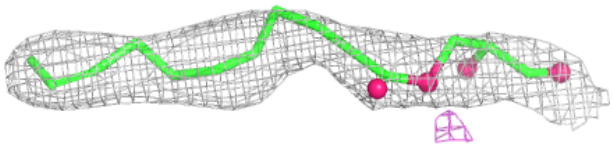


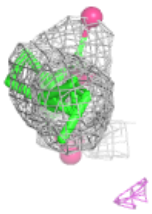


Electron density around OLC A 1232:

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

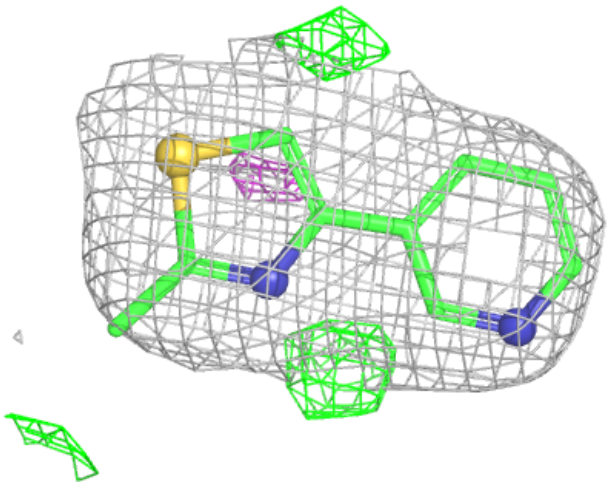


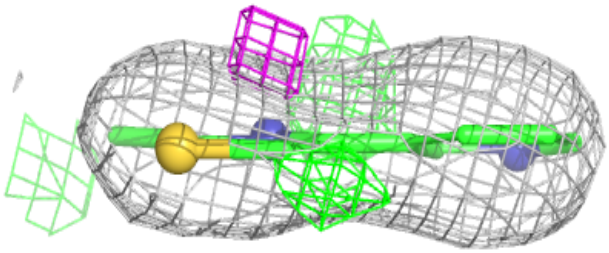


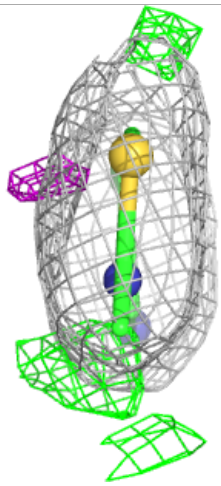


Electron density around A1COM A 1234:

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

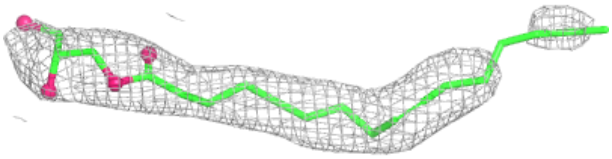


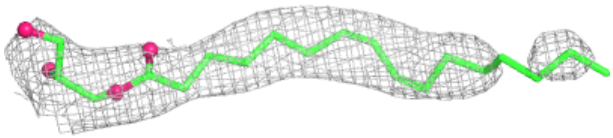


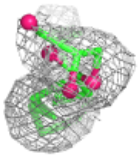


Electron density around OLC A 1230:

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

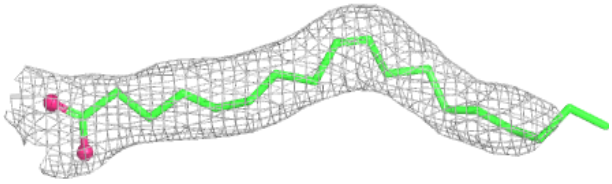


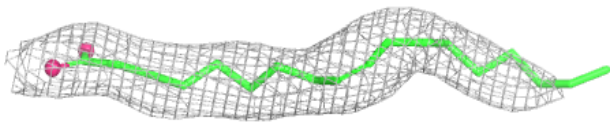


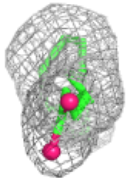


Electron density around OLA A 1205:

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

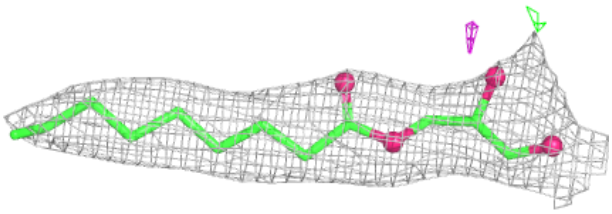


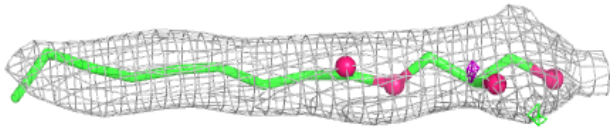


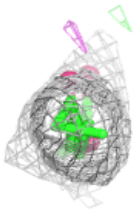


Electron density around OLC A 1227:

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

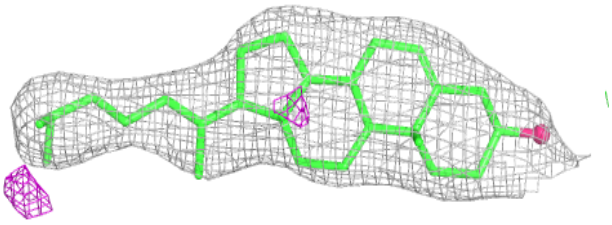


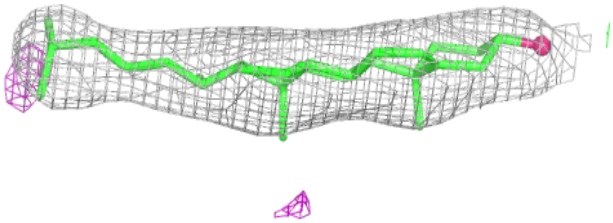


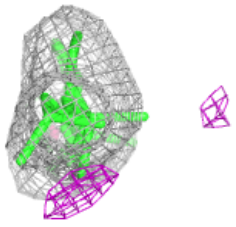


Electron density around CLR A 1203:

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

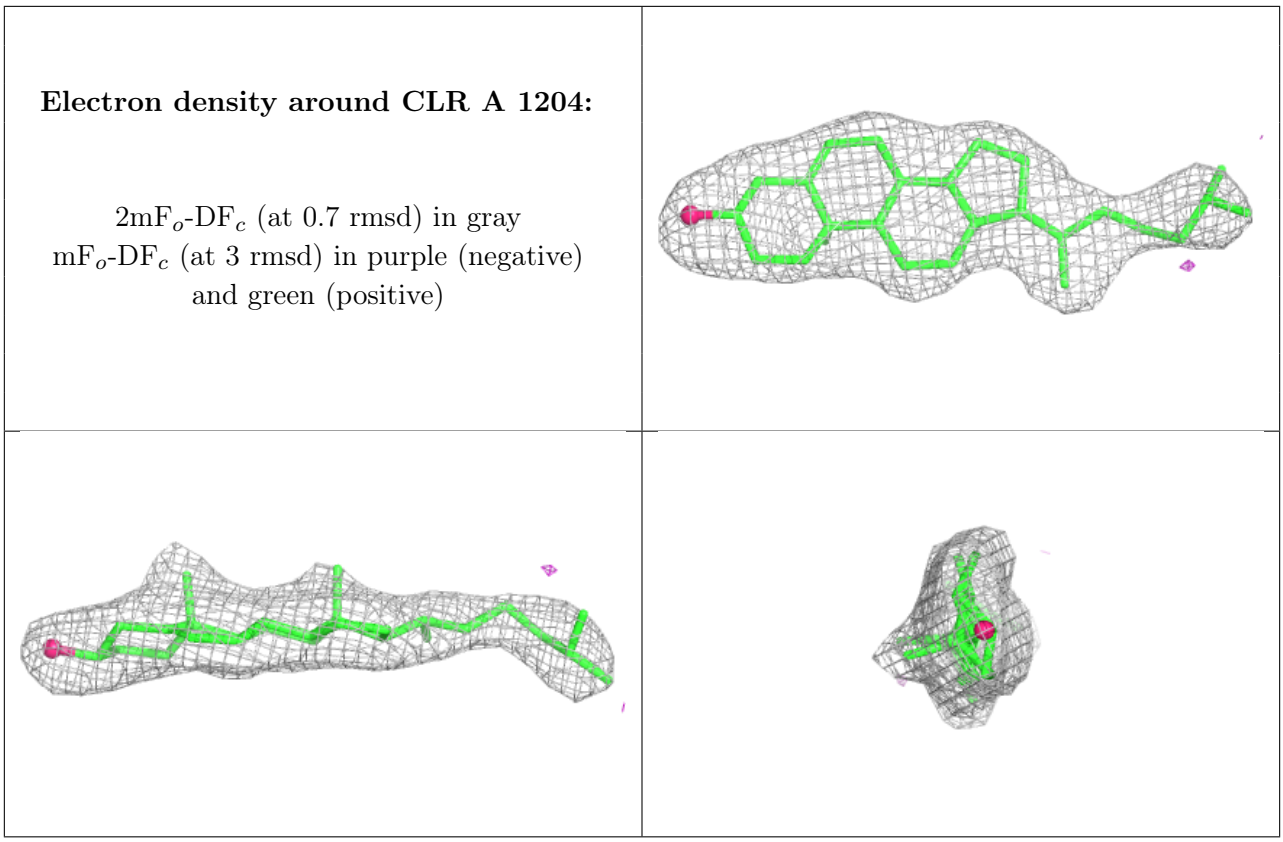






Electron density around CLR A 1204:

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



6.5 Other polymers (i)

There are no such residues in this entry.