



# Full wwPDB X-ray Structure Validation Report ⓘ

Aug 7, 2023 – 10:09 PM JST

PDB ID : 8JWZ  
Title : Crystal structure of A2AR-T4L in complex with AB928  
Authors : Weng, Y.; Chen, Y.; Xu, Y.; Song, G.  
Deposited on : 2023-06-29  
Resolution : 2.37 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.35  
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) : 2.35

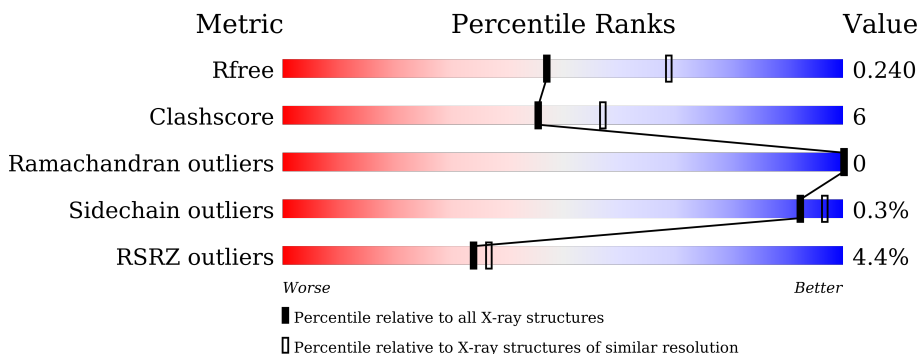
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.37 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	5509 (2.40-2.36)
Clashscore	141614	6082 (2.40-2.36)
Ramachandran outliers	138981	5973 (2.40-2.36)
Sidechain outliers	138945	5975 (2.40-2.36)
RSRZ outliers	127900	5397 (2.40-2.36)

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

Mol	Chain	Length	Quality of chain
1	A	481	

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
2	OLA	A	519	-	-	-	X
7	CLR	A	524	X	-	-	-

## 2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 4191 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.

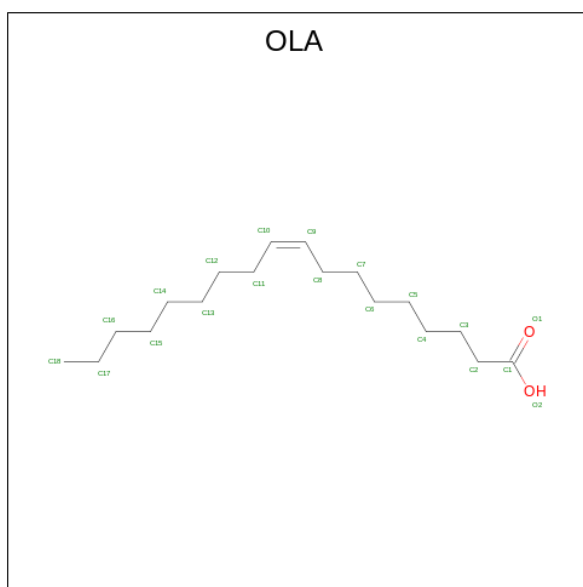
- Molecule 1 is a protein called Adenosine receptor A2a,Endolysin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	450	3518	2287	603	604	24	0	0	0

There are 21 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-7	ASP	-	expression tag	UNP P29274
A	-6	TYR	-	expression tag	UNP P29274
A	-5	LYS	-	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	ASP	-	expression tag	UNP P29274
A	0	GLY	-	expression tag	UNP P29274
A	1	ALA	-	expression tag	UNP P29274
A	261	THR	CYS	engineered mutation	UNP D9IEF7
A	304	ALA	CYS	engineered mutation	UNP D9IEF7
A	464	HIS	-	expression tag	UNP P29274
A	465	HIS	-	expression tag	UNP P29274
A	466	HIS	-	expression tag	UNP P29274
A	467	HIS	-	expression tag	UNP P29274
A	468	HIS	-	expression tag	UNP P29274
A	469	HIS	-	expression tag	UNP P29274
A	470	HIS	-	expression tag	UNP P29274
A	471	HIS	-	expression tag	UNP P29274
A	472	HIS	-	expression tag	UNP P29274
A	473	HIS	-	expression tag	UNP P29274

- Molecule 2 is OLEIC ACID (three-letter code: OLA) (formula: C<sub>18</sub>H<sub>34</sub>O<sub>2</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			11	9	2		
2	A	1	Total	C	O	0	0
			15	13	2		
2	A	1	Total	C	O	0	0
			15	13	2		
2	A	1	Total	C	O	0	0
			20	18	2		
2	A	1	Total	C	O	0	0
			20	18	2		
2	A	1	Total	C	O	0	0
			11	9	2		
2	A	1	Total	C	O	0	0
			15	13	2		
2	A	1	Total	C	O	0	0
			20	18	2		
2	A	1	Total	C	O	0	0
			14	12	2		
2	A	1	Total	C	O	0	0
			20	18	2		
2	A	1	Total	C	O	0	0
			15	13	2		
2	A	1	Total	C	O	0	0
			20	18	2		
2	A	1	Total	C	O	0	0
			20	18	2		
2	A	1	Total	C	O	0	0
			20	18	2		

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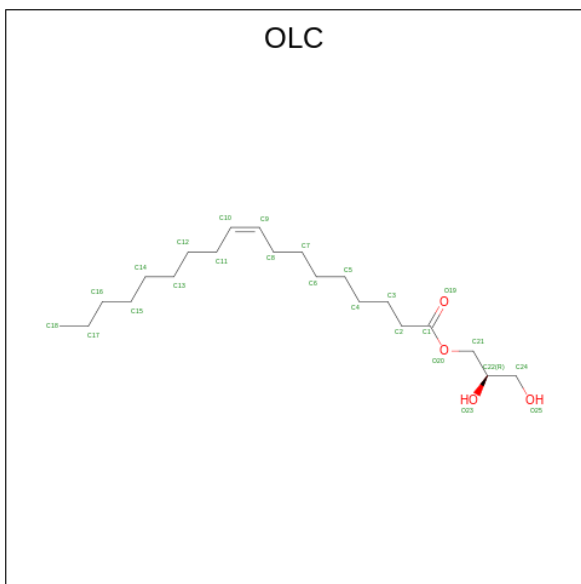
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total C O 20 18 2	0	0
2	A	1	Total C O 20 18 2	0	0
2	A	1	Total C O 14 12 2	0	0
2	A	1	Total C 13 13	0	0

- Molecule 3 is SODIUM ION (three-letter code: NA) (formula: Na).

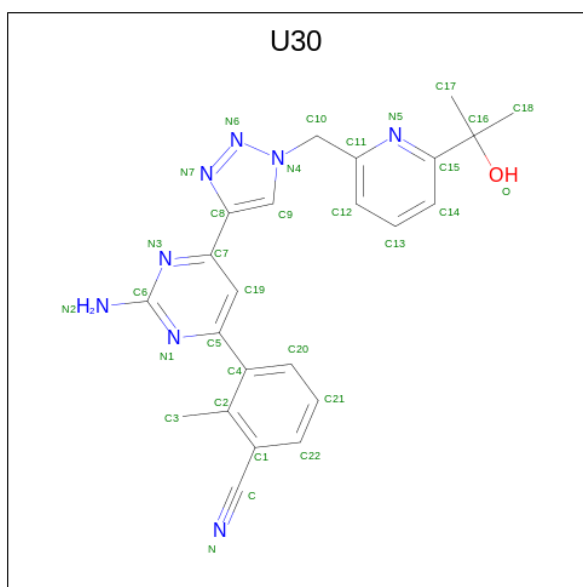
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total Na 1 1	0	0

- Molecule 4 is (2R)-2,3-dihydroxypropyl (9Z)-octadec-9-enoate (three-letter code: OLC) (formula: C<sub>21</sub>H<sub>40</sub>O<sub>4</sub>).



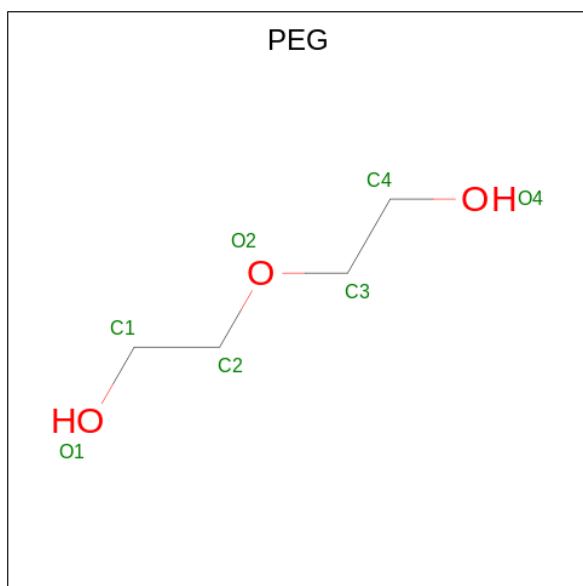
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C O 25 21 4	0	0
4	A	1	Total C O 25 21 4	0	0

- Molecule 5 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<sub>23</sub>H<sub>22</sub>N<sub>8</sub>O) (labeled as "Ligand of Interest" by depositor).



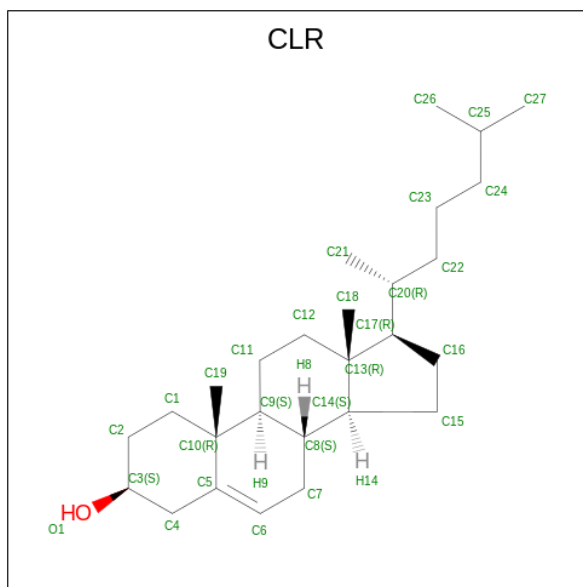
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
5	A	1	32	23	8	1	0	0

- Molecule 6 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula:  $C_4H_{10}O_3$ ).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	C	O		
6	A	1	7	4	3	0	0

- Molecule 7 is CHOLESTEROL (three-letter code: CLR) (formula:  $C_{27}H_{46}O$ ).



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

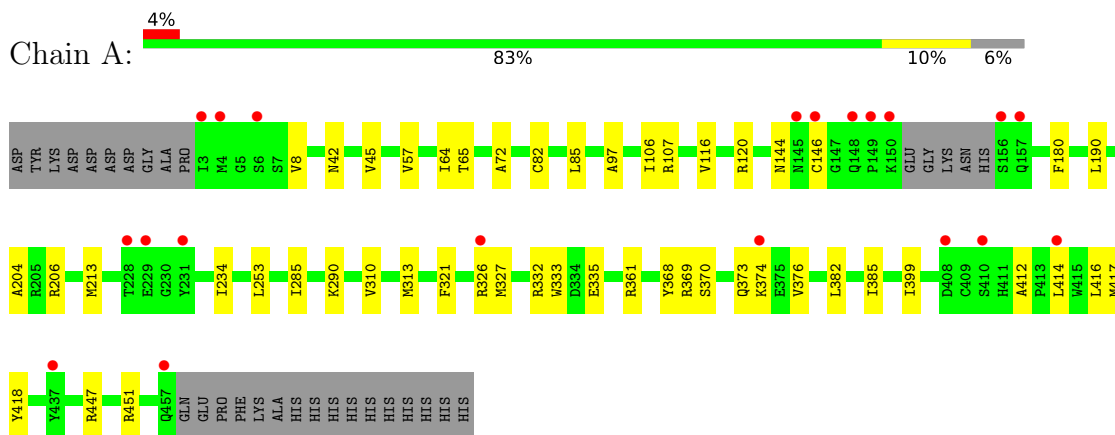
- Molecule 8 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
8	A	252	Total	O	0	0
			252	252		

### 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,Endolysin





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	46.87Å 76.20Å 85.66Å 90.00° 101.63° 90.00°	Depositor
Resolution (Å)	20.00 – 2.37 20.00 – 2.37	Depositor EDS
% Data completeness (in resolution range)	99.9 (20.00-2.37) 99.9 (20.00-2.37)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.48 (at 2.38Å)	Xtrriage
Refinement program	PHENIX 1.20.1_4487	Depositor
R, $R_{free}$	0.189 , 0.240 0.189 , 0.240	Depositor DCC
$R_{free}$ test set	2001 reflections (8.32%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	28.2	Xtrriage
Anisotropy	0.427	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.35 , 72.1	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.50$ , $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	4191	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	35.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.56% of the height of the origin peak. No significant pseudotranslation is detected.*

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

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

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: OLC, U30, OLA, NA, CLR, PEG

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	0.24	0/3594	0.44	0/4887

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

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

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3518	0	3586	37	0
2	A	303	0	464	19	1
3	A	1	0	0	0	0
4	A	50	0	80	3	0
5	A	32	0	0	0	0
6	A	7	0	10	0	0
7	A	28	0	34	5	1
8	A	252	0	0	3	0
All	All	4191	0	4174	52	1

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

All (52) 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)
7:A:524:CLR:O1	7:A:524:CLR:C3	1.70	1.38
1:A:418:TYR:HB3	4:A:516:OLC:H4	1.71	0.72
1:A:313:MET:HE1	1:A:321:PHE:HE2	1.55	0.72
7:A:524:CLR:O1	7:A:524:CLR:C2	2.36	0.69
1:A:290:LYS:NZ	8:A:603:HOH:O	2.27	0.66
1:A:144:ASN:HD22	1:A:146:CYS:H	1.44	0.65
7:A:524:CLR:O1	7:A:524:CLR:C4	2.42	0.61
1:A:65:THR:HG21	2:A:504:OLA:H10	1.85	0.59
1:A:399:ILE:HG21	1:A:417:MET:HE3	1.85	0.58
1:A:180:PHE:HD1	2:A:505:OLA:H82	1.68	0.58
1:A:326:ARG:NH1	8:A:605:HOH:O	2.36	0.57
1:A:97:ALA:HA	2:A:517:OLA:H10	1.87	0.56
1:A:64:ILE:HG21	2:A:511:OLA:H81	1.88	0.54
7:A:524:CLR:C3	7:A:524:CLR:H1	2.14	0.52
1:A:204:ALA:HB2	1:A:376:VAL:HG11	1.90	0.52
1:A:399:ILE:HG21	1:A:417:MET:CE	2.39	0.52
2:A:518:OLA:H183	2:A:519:OLA:H9	1.91	0.51
1:A:72:ALA:HB1	2:A:504:OLA:H22	1.91	0.51
1:A:64:ILE:HG22	2:A:511:OLA:H52	1.94	0.48
1:A:412:ALA:HB1	1:A:416:LEU:HD23	1.96	0.48
2:A:511:OLA:H62	2:A:511:OLA:H9	1.44	0.47
1:A:120:ARG:HD3	2:A:517:OLA:H21	1.97	0.46
1:A:333:TRP:HB3	1:A:361:ARG:HA	1.97	0.46
1:A:116:VAL:HG13	2:A:517:OLA:H62	1.97	0.46
1:A:285:ILE:HD11	1:A:310:VAL:HG21	1.98	0.46
1:A:332:ARG:NE	1:A:335:GLU:OE2	2.47	0.45
1:A:369:ARG:O	1:A:373:GLN:HG3	2.16	0.45
1:A:106:ILE:HG21	1:A:376:VAL:HG12	1.98	0.45
2:A:517:OLA:H151	2:A:517:OLA:H122	1.56	0.45
1:A:327:MET:HE3	1:A:327:MET:HB2	1.75	0.45
1:A:374:LYS:HA	1:A:374:LYS:HD2	1.83	0.44
7:A:524:CLR:H111	7:A:524:CLR:H182	1.73	0.44
1:A:447:ARG:HG2	1:A:451:ARG:HD2	1.98	0.44
1:A:213:MET:HG3	1:A:368:TYR:CZ	2.53	0.44
2:A:513:OLA:H41	2:A:513:OLA:H71	1.58	0.43
1:A:82:CYS:HA	1:A:85:LEU:HD12	2.00	0.43
1:A:107:ARG:HG3	1:A:107:ARG:HH11	1.84	0.43
2:A:502:OLA:H81	2:A:510:OLA:H72	2.00	0.43
1:A:57:VAL:HG21	2:A:509:OLA:H181	2.01	0.42
1:A:206:ARG:NH1	8:A:620:HOH:O	2.52	0.42
1:A:8:VAL:HG23	4:A:516:OLC:H2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:190:LEU:HB3	2:A:515:OLA:H162	2.02	0.42
1:A:382:LEU:HA	1:A:385:ILE:HD12	2.02	0.42
4:A:516:OLC:H5	4:A:516:OLC:H2A	1.73	0.42
2:A:505:OLA:H72	2:A:505:OLA:H41	1.59	0.41
2:A:509:OLA:H122	2:A:509:OLA:H151	1.81	0.41
2:A:511:OLA:H112	2:A:511:OLA:H82	1.84	0.41
1:A:107:ARG:HG3	1:A:107:ARG:NH1	2.35	0.41
1:A:234:ILE:HG21	1:A:253:LEU:HD13	2.02	0.41
1:A:42:ASN:HA	1:A:45:VAL:HB	2.03	0.41
1:A:414:LEU:HD23	1:A:414:LEU:HA	1.83	0.41
2:A:512:OLA:H62	2:A:512:OLA:H9	1.84	0.41

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:509:OLA:C18	7:A:524:CLR:C27[2_546]	1.49	0.71

## 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	446/481 (93%)	441 (99%)	5 (1%)	0	<b>100</b> <b>100</b>

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	372/404 (92%)	371 (100%)	1 (0%)	92 97

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	370	SER

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

Mol	Chain	Res	Type
1	A	144	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 24 ligands modelled in this entry, 1 is monoatomic - leaving 23 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
2	OLA	A	518	-	19,19,19	0.78	1 (5%)	19,19,19	0.99	2 (10%)
2	OLA	A	501	-	10,10,19	0.63	0	10,10,19	1.19	2 (20%)
2	OLA	A	517	-	19,19,19	0.78	1 (5%)	19,19,19	0.95	0
2	OLA	A	505	-	19,19,19	0.79	1 (5%)	19,19,19	0.91	2 (10%)
6	PEG	A	523	-	6,6,6	0.10	0	5,5,5	0.11	0
2	OLA	A	519	-	13,13,19	0.95	1 (7%)	12,13,19	1.05	0
2	OLA	A	510	-	13,13,19	0.95	1 (7%)	12,13,19	1.11	1 (8%)
2	OLA	A	522	-	12,12,19	0.81	1 (8%)	11,11,19	0.58	0
2	OLA	A	502	-	14,14,19	0.90	1 (7%)	14,14,19	1.05	1 (7%)
2	OLA	A	514	-	19,19,19	0.78	1 (5%)	19,19,19	0.94	1 (5%)
2	OLA	A	509	-	19,19,19	0.78	1 (5%)	19,19,19	0.96	1 (5%)
4	OLC	A	516	-	24,24,24	0.81	2 (8%)	25,25,25	0.96	1 (4%)
7	CLR	A	524	-	31,31,31	10.03	24 (77%)	48,48,48	3.34	21 (43%)
2	OLA	A	511	-	19,19,19	0.78	1 (5%)	19,19,19	0.97	2 (10%)
4	OLC	A	521	-	24,24,24	0.80	2 (8%)	25,25,25	0.97	1 (4%)
2	OLA	A	513	-	19,19,19	0.79	1 (5%)	19,19,19	0.90	1 (5%)
2	OLA	A	506	-	10,10,19	0.62	0	10,10,19	1.19	2 (20%)
2	OLA	A	507	-	14,14,19	0.91	1 (7%)	14,14,19	1.04	1 (7%)
2	OLA	A	504	-	19,19,19	0.78	1 (5%)	19,19,19	1.05	2 (10%)
2	OLA	A	512	-	14,14,19	0.90	1 (7%)	14,14,19	1.00	0
2	OLA	A	503	-	14,14,19	0.90	1 (7%)	14,14,19	1.03	1 (7%)
2	OLA	A	515	-	19,19,19	0.78	1 (5%)	19,19,19	0.99	2 (10%)
5	U30	A	520	-	33,35,35	1.90	5 (15%)	40,51,51	2.53	11 (27%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	OLA	A	518	-	-	12/17/17/17	-
2	OLA	A	501	-	-	3/8/8/17	-
2	OLA	A	517	-	-	13/17/17/17	-
2	OLA	A	505	-	-	11/17/17/17	-
6	PEG	A	523	-	-	2/4/4/4	-
2	OLA	A	519	-	-	9/11/11/17	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	OLA	A	510	-	-	8/11/11/17	-
2	OLA	A	522	-	-	3/10/10/17	-
2	OLA	A	502	-	-	5/12/12/17	-
2	OLA	A	514	-	-	10/17/17/17	-
2	OLA	A	509	-	-	6/17/17/17	-
4	OLC	A	516	-	-	11/24/24/24	-
7	CLR	A	524	-	1/1/10/11	8/10/68/68	0/4/4/4
2	OLA	A	511	-	-	12/17/17/17	-
4	OLC	A	521	-	-	8/24/24/24	-
2	OLA	A	513	-	-	9/17/17/17	-
2	OLA	A	506	-	-	4/8/8/17	-
2	OLA	A	507	-	-	7/12/12/17	-
2	OLA	A	504	-	-	7/17/17/17	-
2	OLA	A	512	-	-	6/12/12/17	-
2	OLA	A	503	-	-	7/12/12/17	-
2	OLA	A	515	-	-	10/17/17/17	-
5	U30	A	520	-	-	4/18/20/20	0/4/4/4

All (49) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	A	524	CLR	C12-C13	-22.86	1.13	1.54
7	A	524	CLR	C1-C10	-22.32	1.11	1.54
7	A	524	CLR	C7-C6	-18.77	1.09	1.50
7	A	524	CLR	C13-C17	-17.68	1.21	1.55
7	A	524	CLR	C2-C3	-12.83	1.21	1.51
7	A	524	CLR	C10-C5	-12.75	1.27	1.52
7	A	524	CLR	C4-C3	-12.68	1.30	1.52
7	A	524	CLR	C6-C5	11.23	1.57	1.33
7	A	524	CLR	C8-C9	-10.87	1.32	1.53
7	A	524	CLR	C10-C9	-10.76	1.38	1.56
7	A	524	CLR	C12-C11	9.49	1.73	1.53
7	A	524	CLR	O1-C3	9.19	1.70	1.43
7	A	524	CLR	C16-C15	-9.07	1.29	1.54
7	A	524	CLR	C11-C9	-8.94	1.38	1.53
7	A	524	CLR	C20-C17	8.26	1.68	1.54
7	A	524	CLR	C4-C5	-6.84	1.36	1.51
5	A	520	U30	C6-N2	5.83	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	520	U30	C1-C	5.78	1.53	1.44
7	A	524	CLR	C13-C14	-5.59	1.44	1.55
7	A	524	CLR	C22-C20	-4.98	1.41	1.54
7	A	524	CLR	C8-C14	4.72	1.62	1.53
7	A	524	CLR	C1-C2	-4.51	1.43	1.53
5	A	520	U30	C9-N4	-3.22	1.32	1.35
7	A	524	CLR	C16-C17	3.06	1.60	1.54
2	A	505	OLA	C10-C9	2.72	1.47	1.31
2	A	513	OLA	C10-C9	2.72	1.47	1.31
2	A	507	OLA	C10-C9	2.71	1.47	1.31
2	A	510	OLA	C10-C9	2.71	1.47	1.31
2	A	519	OLA	C10-C9	2.71	1.47	1.31
2	A	502	OLA	C10-C9	2.71	1.47	1.31
2	A	503	OLA	C10-C9	2.71	1.47	1.31
2	A	518	OLA	C10-C9	2.70	1.47	1.31
2	A	514	OLA	C10-C9	2.70	1.47	1.31
2	A	522	OLA	C10-C9	2.70	1.47	1.31
2	A	517	OLA	C10-C9	2.69	1.47	1.31
5	A	520	U30	O-C16	-2.69	1.40	1.44
2	A	511	OLA	C10-C9	2.69	1.47	1.31
2	A	515	OLA	C10-C9	2.69	1.47	1.31
2	A	512	OLA	C10-C9	2.68	1.47	1.31
2	A	504	OLA	C10-C9	2.68	1.47	1.31
2	A	509	OLA	C10-C9	2.68	1.47	1.31
4	A	516	OLC	O20-C1	2.41	1.40	1.33
4	A	521	OLC	O20-C1	2.39	1.40	1.33
7	A	524	CLR	C7-C8	2.36	1.57	1.53
7	A	524	CLR	C15-C14	-2.32	1.49	1.54
4	A	521	OLC	O20-C21	-2.13	1.40	1.45
4	A	516	OLC	O20-C21	-2.10	1.40	1.45
7	A	524	CLR	C18-C13	-2.04	1.50	1.54
5	A	520	U30	C4-C5	2.02	1.54	1.48

All (55) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	520	U30	C5-N1-C6	9.03	121.49	116.34
7	A	524	CLR	C19-C10-C1	-7.99	96.81	109.43
7	A	524	CLR	C1-C2-C3	7.89	120.59	110.47
7	A	524	CLR	C1-C10-C5	7.78	123.00	108.75
7	A	524	CLR	C19-C10-C5	-7.53	96.16	108.34
5	A	520	U30	C7-N3-C6	7.24	120.47	116.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	A	524	CLR	C19-C10-C9	-6.26	104.22	111.68
7	A	524	CLR	C9-C10-C5	5.86	118.83	109.65
5	A	520	U30	C8-C7-N3	5.76	123.20	116.28
7	A	524	CLR	C12-C13-C17	5.33	124.55	116.57
7	A	524	CLR	C7-C6-C5	-4.91	116.01	125.06
7	A	524	CLR	C18-C13-C12	-4.74	103.11	110.59
7	A	524	CLR	C7-C8-C9	4.27	114.89	109.71
7	A	524	CLR	C14-C8-C9	4.16	114.66	109.09
5	A	520	U30	C19-C5-N1	-3.90	117.72	122.35
7	A	524	CLR	C13-C14-C8	3.68	119.83	114.38
7	A	524	CLR	C18-C13-C17	-3.51	105.18	111.71
7	A	524	CLR	C12-C13-C14	2.90	111.76	107.27
5	A	520	U30	C19-C7-N3	-2.86	118.95	122.35
7	A	524	CLR	C16-C17-C20	-2.64	108.06	112.15
4	A	516	OLC	O20-C1-C2	2.61	120.10	111.91
7	A	524	CLR	C17-C13-C14	2.59	103.14	100.07
4	A	521	OLC	O20-C1-C2	2.58	120.01	111.91
7	A	524	CLR	C4-C5-C6	-2.56	116.92	120.61
5	A	520	U30	C10-N4-C9	-2.55	125.94	129.19
2	A	504	OLA	C3-C2-C1	-2.41	108.39	114.47
5	A	520	U30	C19-C7-C8	-2.40	117.85	120.98
5	A	520	U30	N3-C6-N1	-2.38	121.68	125.42
7	A	524	CLR	C2-C1-C10	2.38	117.89	112.74
7	A	524	CLR	C11-C9-C10	2.31	116.12	113.08
5	A	520	U30	C11-C10-N4	-2.30	108.82	112.13
5	A	520	U30	C11-N5-C15	2.24	122.34	118.64
5	A	520	U30	C3-C2-C4	2.21	124.78	120.93
2	A	515	OLA	C3-C2-C1	-2.18	108.99	114.47
2	A	503	OLA	C3-C2-C1	-2.15	109.05	114.47
7	A	524	CLR	C10-C5-C6	-2.15	119.62	122.90
2	A	504	OLA	O2-C1-C2	2.13	120.87	114.03
2	A	518	OLA	C3-C2-C1	-2.11	109.15	114.47
2	A	506	OLA	C3-C2-C1	-2.09	109.20	114.47
2	A	511	OLA	C3-C2-C1	-2.08	109.23	114.47
2	A	507	OLA	O2-C1-C2	2.05	120.61	114.03
2	A	513	OLA	O2-C1-C2	2.04	120.59	114.03
2	A	501	OLA	O2-C1-C2	2.04	120.59	114.03
2	A	510	OLA	C3-C2-C1	-2.04	109.33	114.47
7	A	524	CLR	C13-C17-C20	-2.04	116.30	119.49
2	A	509	OLA	C3-C2-C1	-2.04	109.34	114.47
2	A	501	OLA	C3-C2-C1	-2.03	109.35	114.47
2	A	514	OLA	O2-C1-C2	2.03	120.55	114.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	506	OLA	O2-C1-C2	2.03	120.55	114.03
2	A	505	OLA	O2-C1-C2	2.03	120.54	114.03
2	A	515	OLA	O2-C1-C2	2.02	120.50	114.03
2	A	518	OLA	O2-C1-C2	2.01	120.49	114.03
2	A	505	OLA	C3-C2-C1	-2.01	109.40	114.47
2	A	502	OLA	O2-C1-C2	2.01	120.49	114.03
2	A	511	OLA	O2-C1-C2	2.00	120.47	114.03

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
7	A	524	CLR	C8

All (175) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	520	U30	N3-C7-C8-C9
5	A	520	U30	C19-C7-C8-C9
7	A	524	CLR	C13-C17-C20-C21
7	A	524	CLR	C13-C17-C20-C22
2	A	517	OLA	C11-C10-C9-C8
7	A	524	CLR	C16-C17-C20-C21
2	A	513	OLA	C4-C5-C6-C7
7	A	524	CLR	C21-C20-C22-C23
2	A	505	OLA	C4-C5-C6-C7
7	A	524	CLR	C17-C20-C22-C23
2	A	512	OLA	C1-C2-C3-C4
2	A	514	OLA	C1-C2-C3-C4
2	A	518	OLA	C1-C2-C3-C4
7	A	524	CLR	C20-C22-C23-C24
2	A	507	OLA	C1-C2-C3-C4
2	A	509	OLA	C1-C2-C3-C4
2	A	510	OLA	C1-C2-C3-C4
2	A	513	OLA	C1-C2-C3-C4
2	A	517	OLA	C1-C2-C3-C4
2	A	503	OLA	C1-C2-C3-C4
2	A	505	OLA	C1-C2-C3-C4
2	A	506	OLA	C1-C2-C3-C4
7	A	524	CLR	C22-C23-C24-C25
2	A	505	OLA	C11-C10-C9-C8
6	A	523	PEG	O2-C3-C4-O4
2	A	511	OLA	C12-C13-C14-C15

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Mol	Chain	Res	Type	Atoms
2	A	501	OLA	C4-C5-C6-C7
2	A	518	OLA	C12-C13-C14-C15
2	A	503	OLA	C4-C5-C6-C7
2	A	504	OLA	C2-C3-C4-C5
2	A	517	OLA	C12-C13-C14-C15
2	A	513	OLA	C11-C10-C9-C8
2	A	503	OLA	C3-C4-C5-C6
2	A	517	OLA	C2-C3-C4-C5
2	A	513	OLA	C5-C6-C7-C8
2	A	517	OLA	C14-C15-C16-C17
2	A	518	OLA	C2-C3-C4-C5
2	A	514	OLA	C13-C14-C15-C16
2	A	518	OLA	C11-C12-C13-C14
2	A	519	OLA	C4-C5-C6-C7
2	A	511	OLA	C11-C12-C13-C14
2	A	519	OLA	C3-C4-C5-C6
4	A	516	OLC	C3-C4-C5-C6
2	A	511	OLA	C5-C6-C7-C8
2	A	518	OLA	C3-C4-C5-C6
2	A	502	OLA	C5-C6-C7-C8
2	A	504	OLA	C3-C4-C5-C6
2	A	501	OLA	C1-C2-C3-C4
2	A	515	OLA	C3-C4-C5-C6
2	A	511	OLA	C14-C15-C16-C17
2	A	511	OLA	C6-C7-C8-C9
2	A	515	OLA	C1-C2-C3-C4
2	A	505	OLA	C11-C12-C13-C14
2	A	511	OLA	C11-C10-C9-C8
7	A	524	CLR	C16-C17-C20-C22
2	A	517	OLA	C6-C7-C8-C9
4	A	516	OLC	C13-C14-C15-C16
2	A	506	OLA	C4-C5-C6-C7
2	A	513	OLA	C14-C15-C16-C17
2	A	518	OLA	C5-C6-C7-C8
2	A	505	OLA	C3-C4-C5-C6
2	A	514	OLA	C11-C12-C13-C14
2	A	502	OLA	C1-C2-C3-C4
2	A	515	OLA	C4-C5-C6-C7
4	A	516	OLC	C14-C15-C16-C17
2	A	509	OLA	C4-C5-C6-C7
2	A	518	OLA	C6-C7-C8-C9
2	A	517	OLA	C3-C4-C5-C6

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Mol	Chain	Res	Type	Atoms
2	A	510	OLA	C5-C6-C7-C8
4	A	521	OLC	C6-C7-C8-C9
2	A	519	OLA	C1-C2-C3-C4
2	A	502	OLA	C11-C10-C9-C8
2	A	512	OLA	C11-C10-C9-C8
2	A	514	OLA	C11-C10-C9-C8
2	A	519	OLA	C11-C10-C9-C8
2	A	513	OLA	C11-C12-C13-C14
2	A	519	OLA	C2-C3-C4-C5
4	A	521	OLC	C11-C12-C13-C14
4	A	521	OLC	C2-C1-O20-C21
2	A	504	OLA	C11-C10-C9-C8
2	A	507	OLA	C11-C10-C9-C8
2	A	509	OLA	C11-C10-C9-C8
2	A	515	OLA	C11-C10-C9-C8
4	A	516	OLC	C2-C3-C4-C5
2	A	515	OLA	C11-C12-C13-C14
4	A	516	OLC	C5-C6-C7-C8
2	A	503	OLA	C11-C10-C9-C8
2	A	510	OLA	C11-C10-C9-C8
4	A	516	OLC	O20-C21-C22-C24
2	A	510	OLA	C3-C4-C5-C6
2	A	512	OLA	C4-C5-C6-C7
2	A	515	OLA	C2-C3-C4-C5
2	A	509	OLA	C11-C12-C13-C14
2	A	510	OLA	C9-C10-C11-C12
2	A	519	OLA	C9-C10-C11-C12
4	A	521	OLC	O19-C1-O20-C21
2	A	517	OLA	C11-C12-C13-C14
2	A	518	OLA	C4-C5-C6-C7
2	A	511	OLA	C13-C14-C15-C16
4	A	516	OLC	O20-C21-C22-O23
2	A	514	OLA	C4-C5-C6-C7
2	A	511	OLA	C1-C2-C3-C4
2	A	514	OLA	C12-C13-C14-C15
2	A	511	OLA	C2-C3-C4-C5
2	A	504	OLA	C1-C2-C3-C4
2	A	511	OLA	C10-C11-C12-C13
2	A	517	OLA	C4-C5-C6-C7
2	A	512	OLA	C2-C3-C4-C5
2	A	504	OLA	C11-C12-C13-C14
6	A	523	PEG	C1-C2-O2-C3

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Mol	Chain	Res	Type	Atoms
2	A	507	OLA	C9-C10-C11-C12
2	A	502	OLA	C4-C5-C6-C7
2	A	513	OLA	C9-C10-C11-C12
2	A	502	OLA	C9-C10-C11-C12
2	A	512	OLA	C9-C10-C11-C12
2	A	517	OLA	C7-C8-C9-C10
2	A	515	OLA	C13-C14-C15-C16
4	A	521	OLC	C2-C3-C4-C5
2	A	510	OLA	O2-C1-C2-C3
2	A	517	OLA	O2-C1-C2-C3
2	A	501	OLA	C5-C6-C7-C8
2	A	522	OLA	C11-C12-C13-C14
2	A	515	OLA	O1-C1-C2-C3
2	A	505	OLA	C9-C10-C11-C12
2	A	518	OLA	C7-C8-C9-C10
2	A	506	OLA	O2-C1-C2-C3
2	A	517	OLA	O1-C1-C2-C3
2	A	505	OLA	O1-C1-C2-C3
2	A	510	OLA	O1-C1-C2-C3
2	A	506	OLA	O1-C1-C2-C3
2	A	505	OLA	C12-C13-C14-C15
2	A	505	OLA	O2-C1-C2-C3
2	A	515	OLA	O2-C1-C2-C3
2	A	505	OLA	C2-C3-C4-C5
2	A	503	OLA	C9-C10-C11-C12
2	A	513	OLA	C7-C8-C9-C10
2	A	512	OLA	C3-C4-C5-C6
2	A	507	OLA	C4-C5-C6-C7
2	A	522	OLA	C11-C10-C9-C8
4	A	521	OLC	C9-C10-C11-C12
2	A	504	OLA	C7-C8-C9-C10
2	A	510	OLA	C7-C8-C9-C10
2	A	514	OLA	C9-C10-C11-C12
2	A	517	OLA	C9-C10-C11-C12
2	A	519	OLA	C7-C8-C9-C10
4	A	521	OLC	C14-C15-C16-C17
4	A	516	OLC	O20-C1-C2-C3
2	A	519	OLA	O1-C1-C2-C3
2	A	519	OLA	O2-C1-C2-C3
2	A	503	OLA	C7-C8-C9-C10
2	A	518	OLA	O1-C1-C2-C3
2	A	518	OLA	O2-C1-C2-C3

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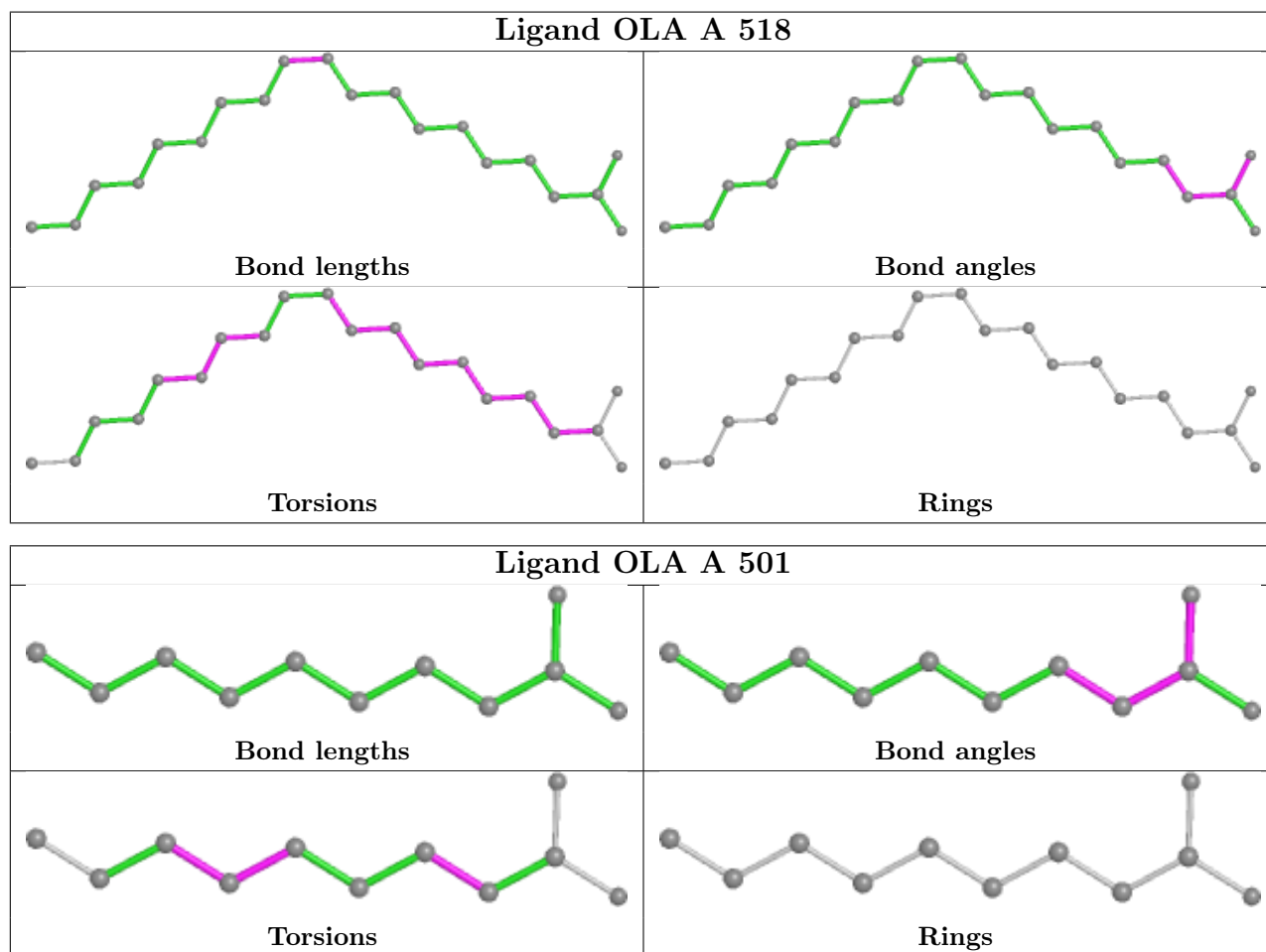
Mol	Chain	Res	Type	Atoms
2	A	511	OLA	O2-C1-C2-C3
2	A	518	OLA	C10-C11-C12-C13
2	A	507	OLA	C7-C8-C9-C10
2	A	515	OLA	C9-C10-C11-C12
2	A	522	OLA	C7-C8-C9-C10
2	A	514	OLA	C10-C11-C12-C13
2	A	514	OLA	C7-C8-C9-C10
2	A	507	OLA	O2-C1-C2-C3
2	A	514	OLA	C15-C16-C17-C18
2	A	504	OLA	C9-C10-C11-C12
2	A	505	OLA	C7-C8-C9-C10
2	A	513	OLA	O2-C1-C2-C3
5	A	520	U30	N4-C10-C11-C12
5	A	520	U30	N4-C10-C11-N5
2	A	509	OLA	O2-C1-C2-C3
2	A	511	OLA	O1-C1-C2-C3
4	A	516	OLC	O19-C1-C2-C3
4	A	521	OLC	O23-C22-C24-O25
2	A	507	OLA	O1-C1-C2-C3
2	A	509	OLA	O1-C1-C2-C3
4	A	516	OLC	C4-C5-C6-C7
4	A	516	OLC	O19-C1-O20-C21
2	A	503	OLA	O2-C1-C2-C3

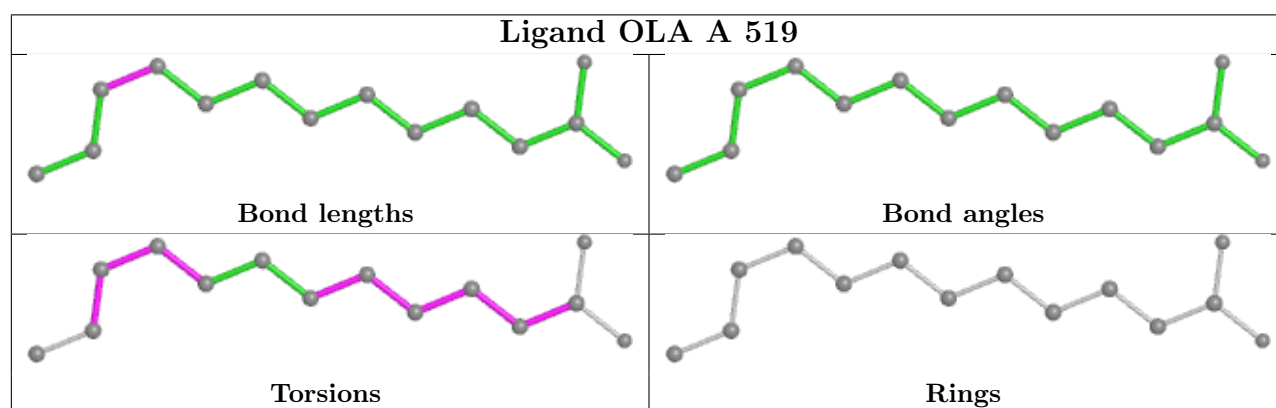
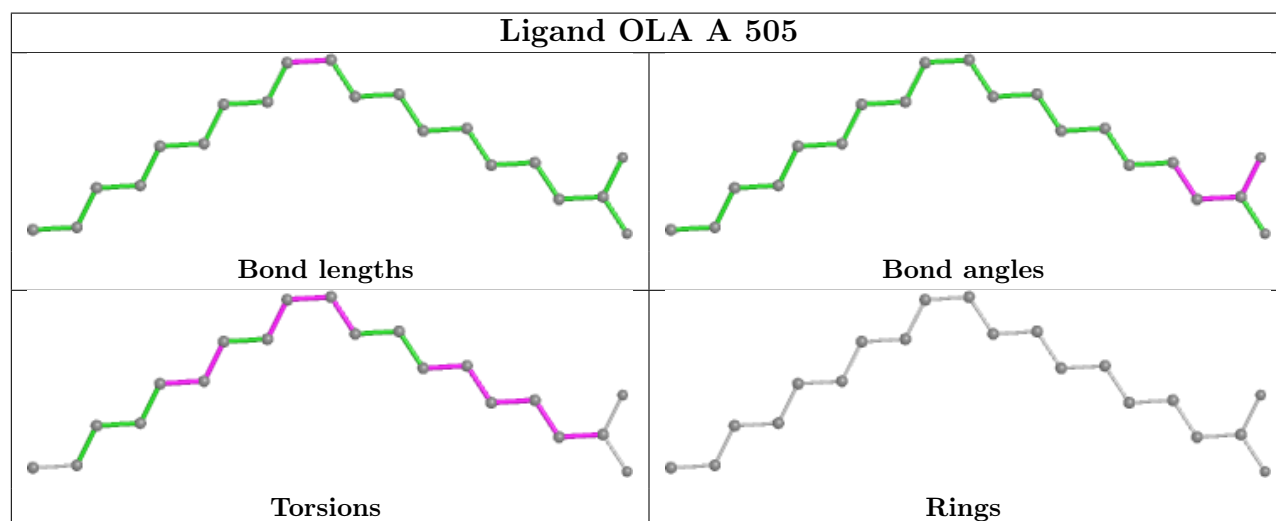
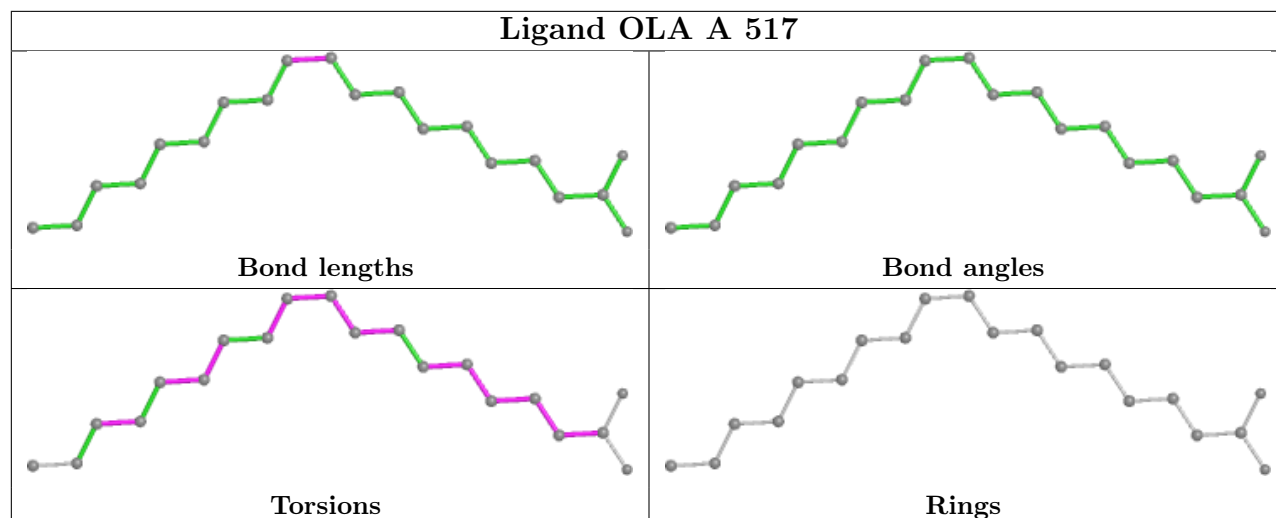
There are no ring outliers.

14 monomers are involved in 28 short contacts:

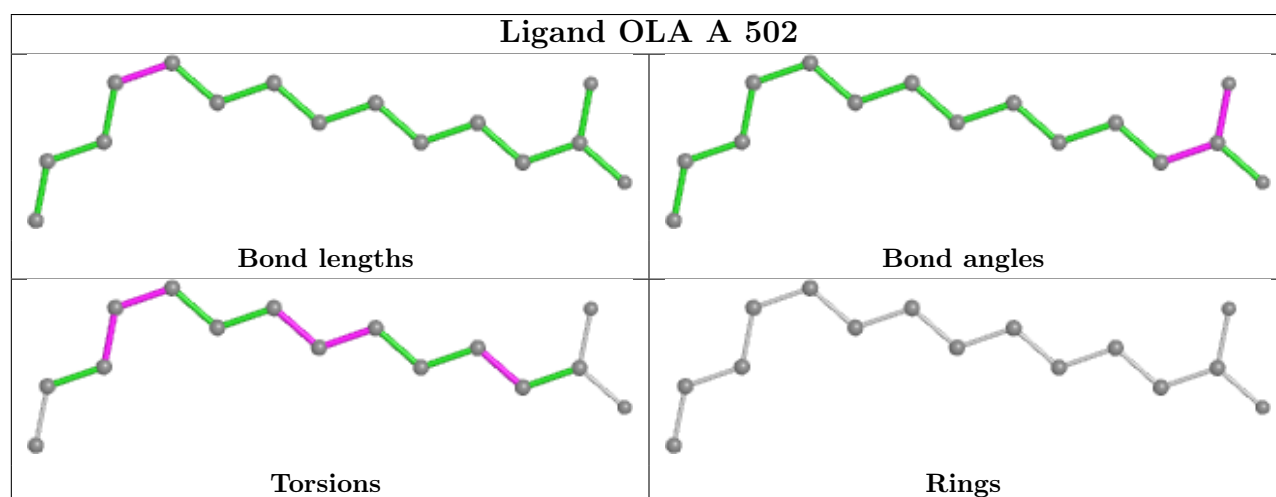
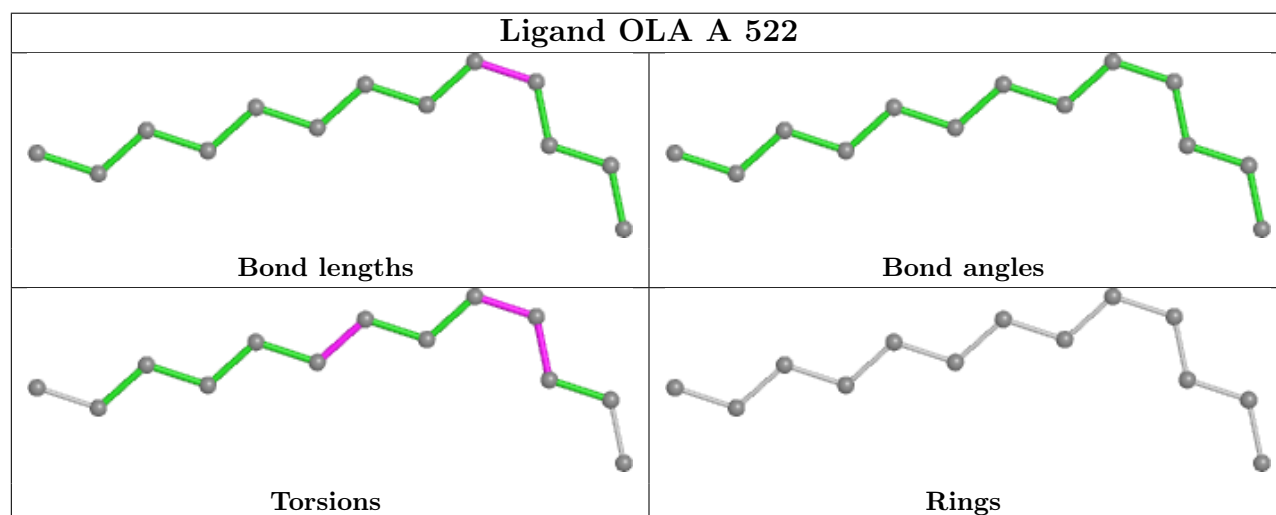
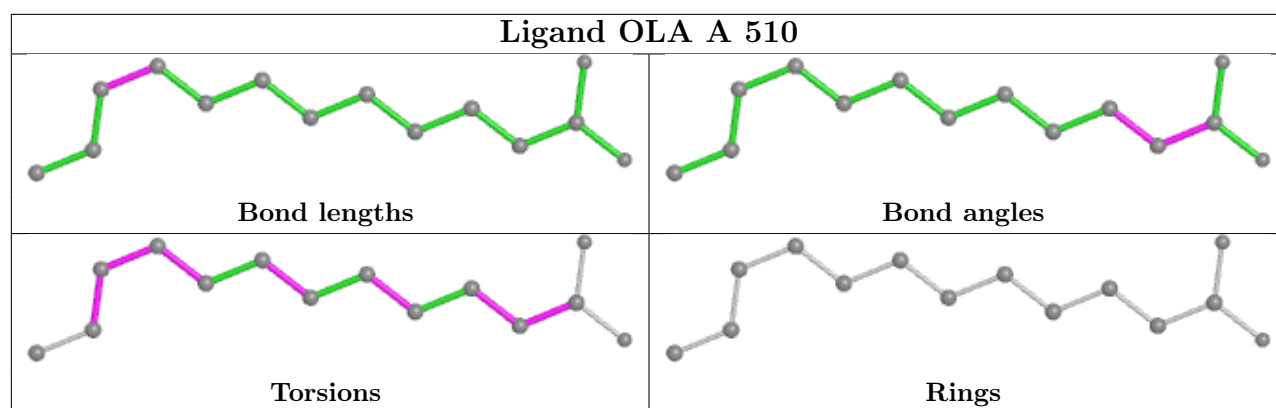
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	518	OLA	1	0
2	A	517	OLA	4	0
2	A	505	OLA	2	0
2	A	519	OLA	1	0
2	A	510	OLA	1	0
2	A	502	OLA	1	0
2	A	509	OLA	2	1
4	A	516	OLC	3	0
7	A	524	CLR	5	1
2	A	511	OLA	4	0
2	A	513	OLA	1	0
2	A	504	OLA	2	0
2	A	512	OLA	1	0
2	A	515	OLA	1	0

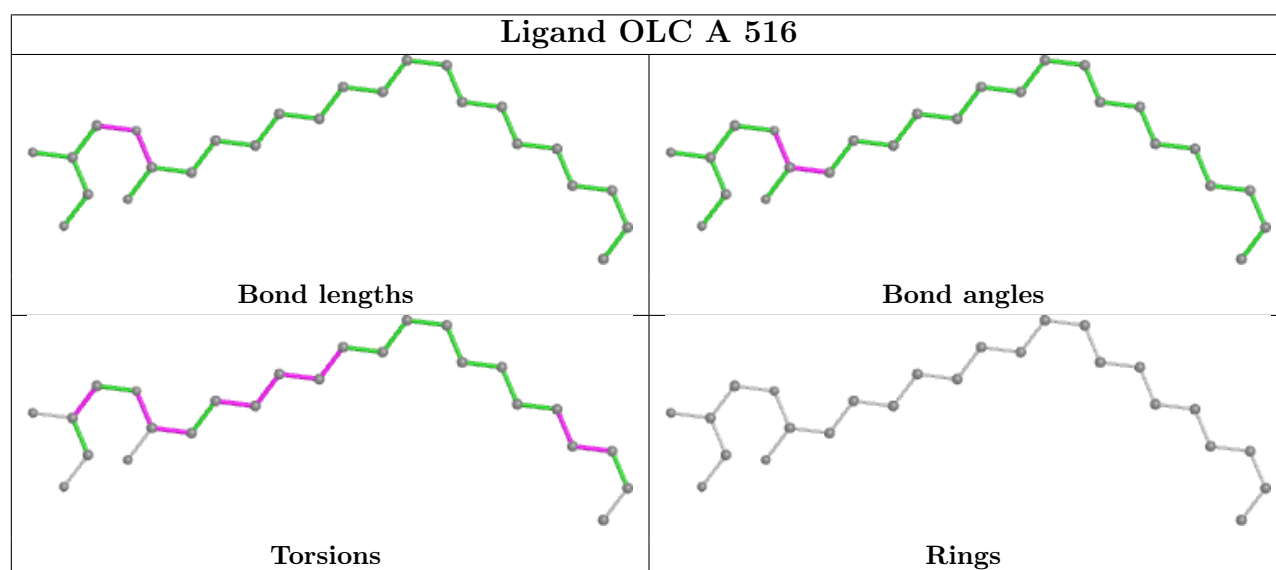
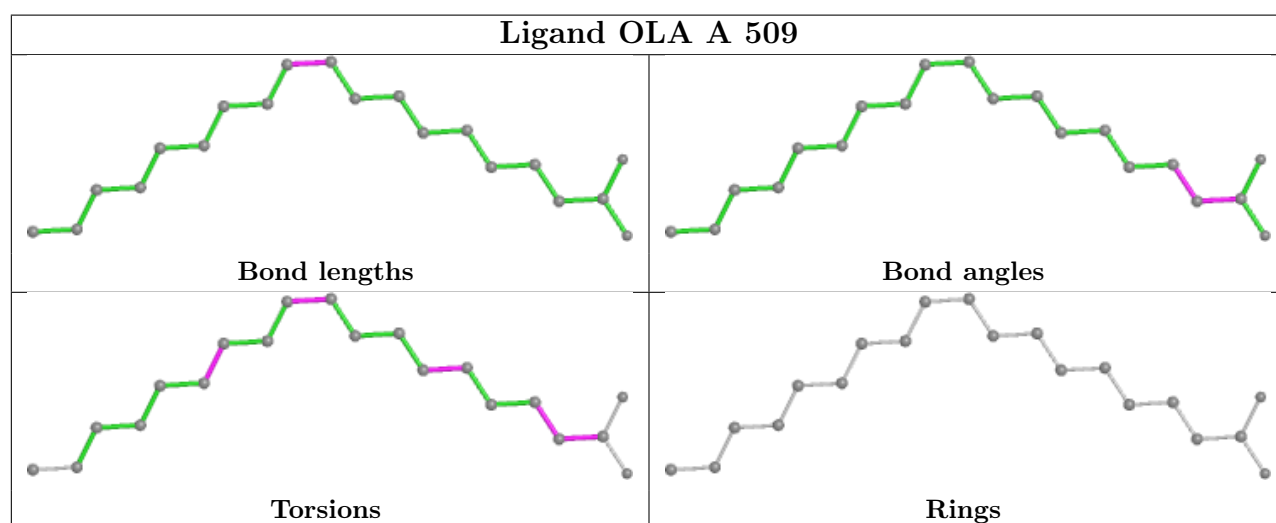
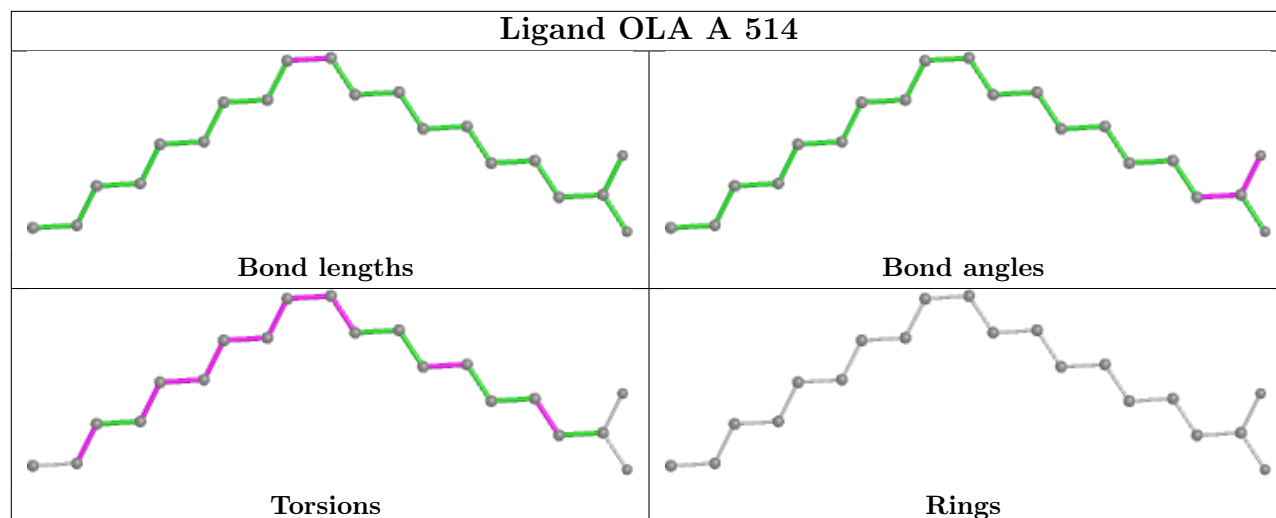
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

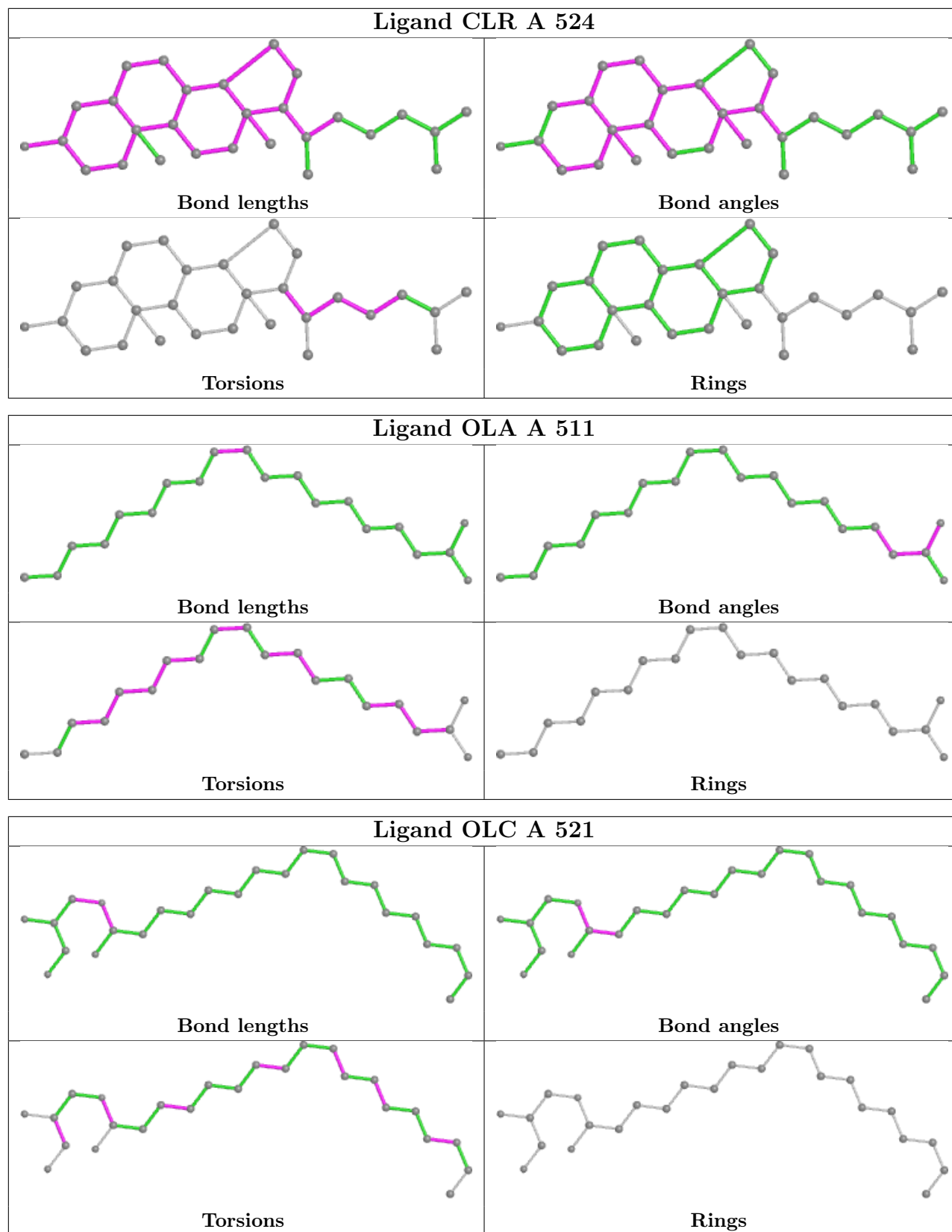


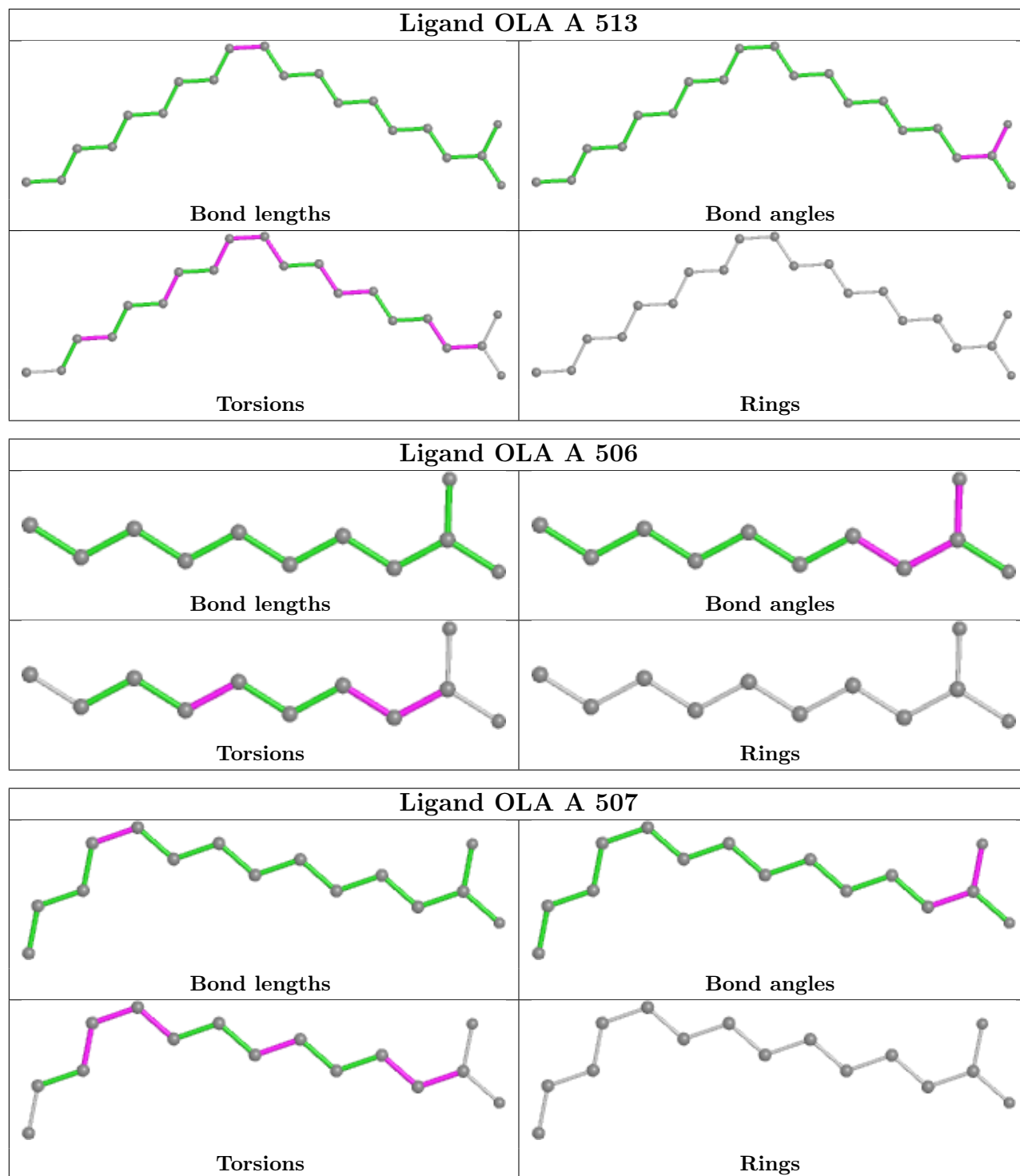


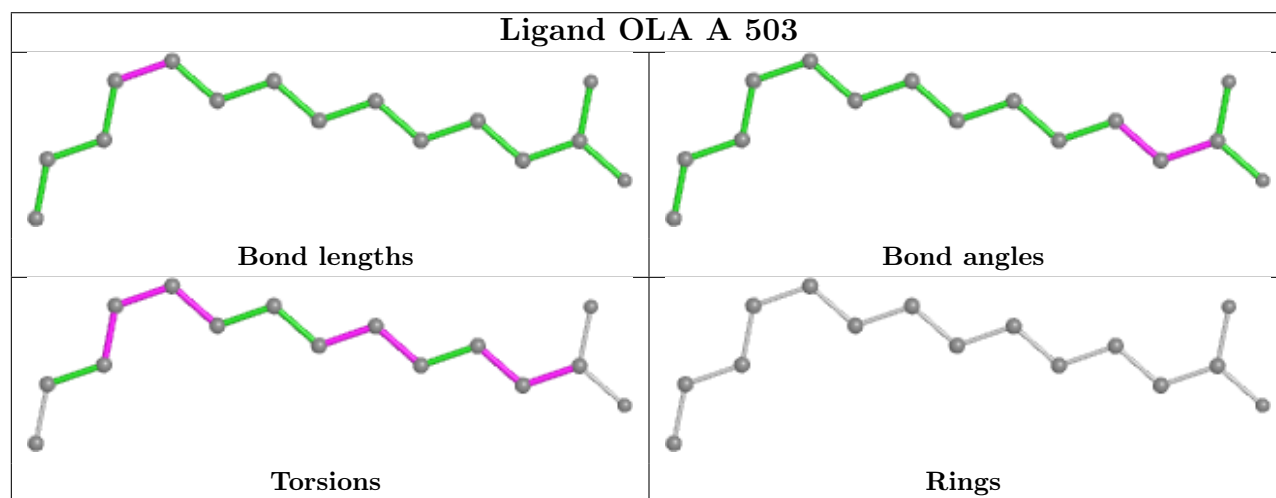
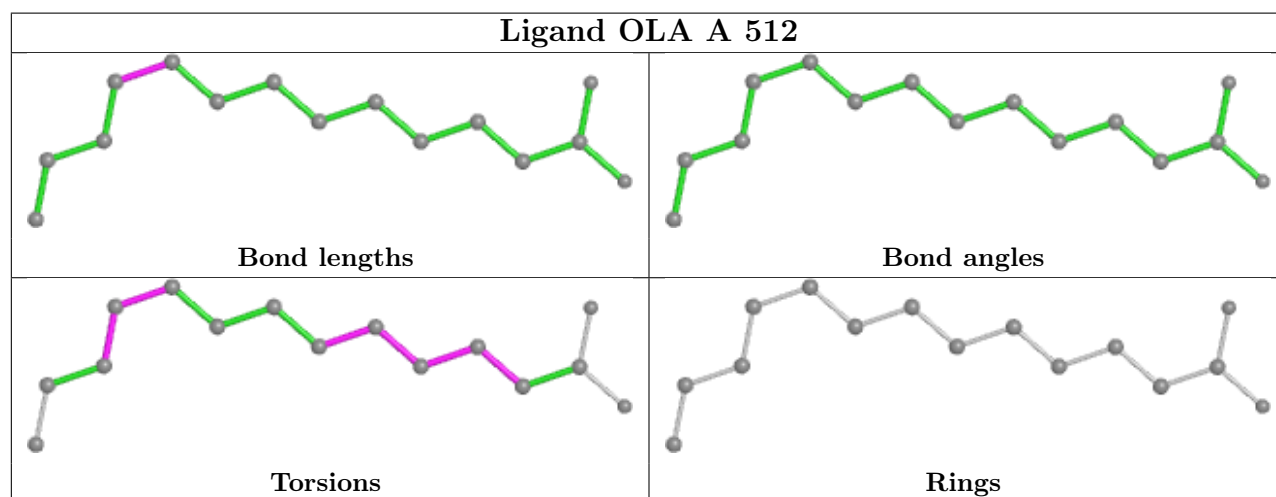
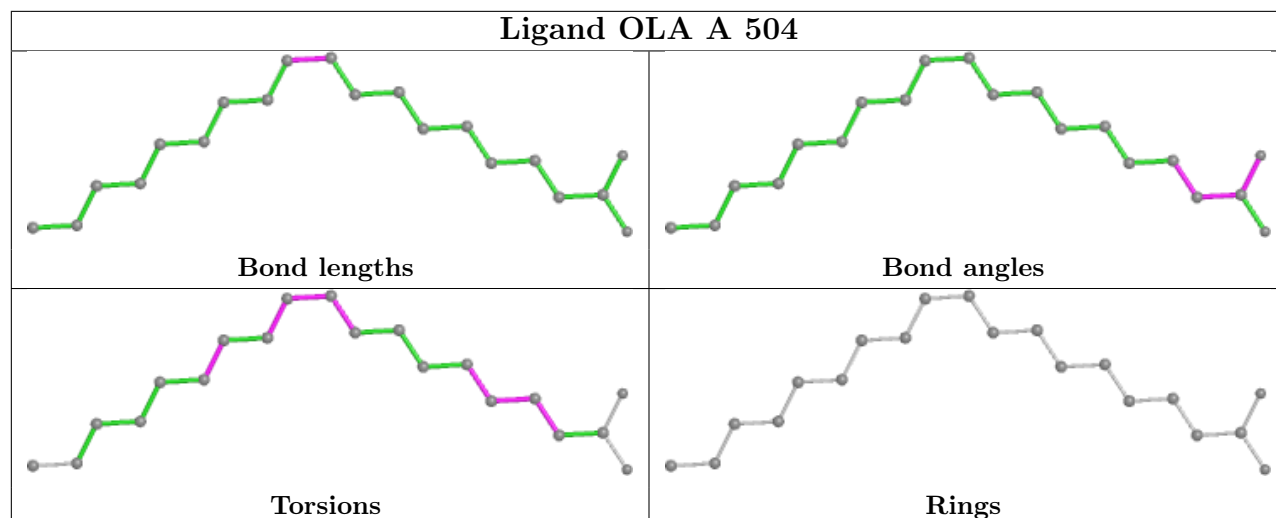


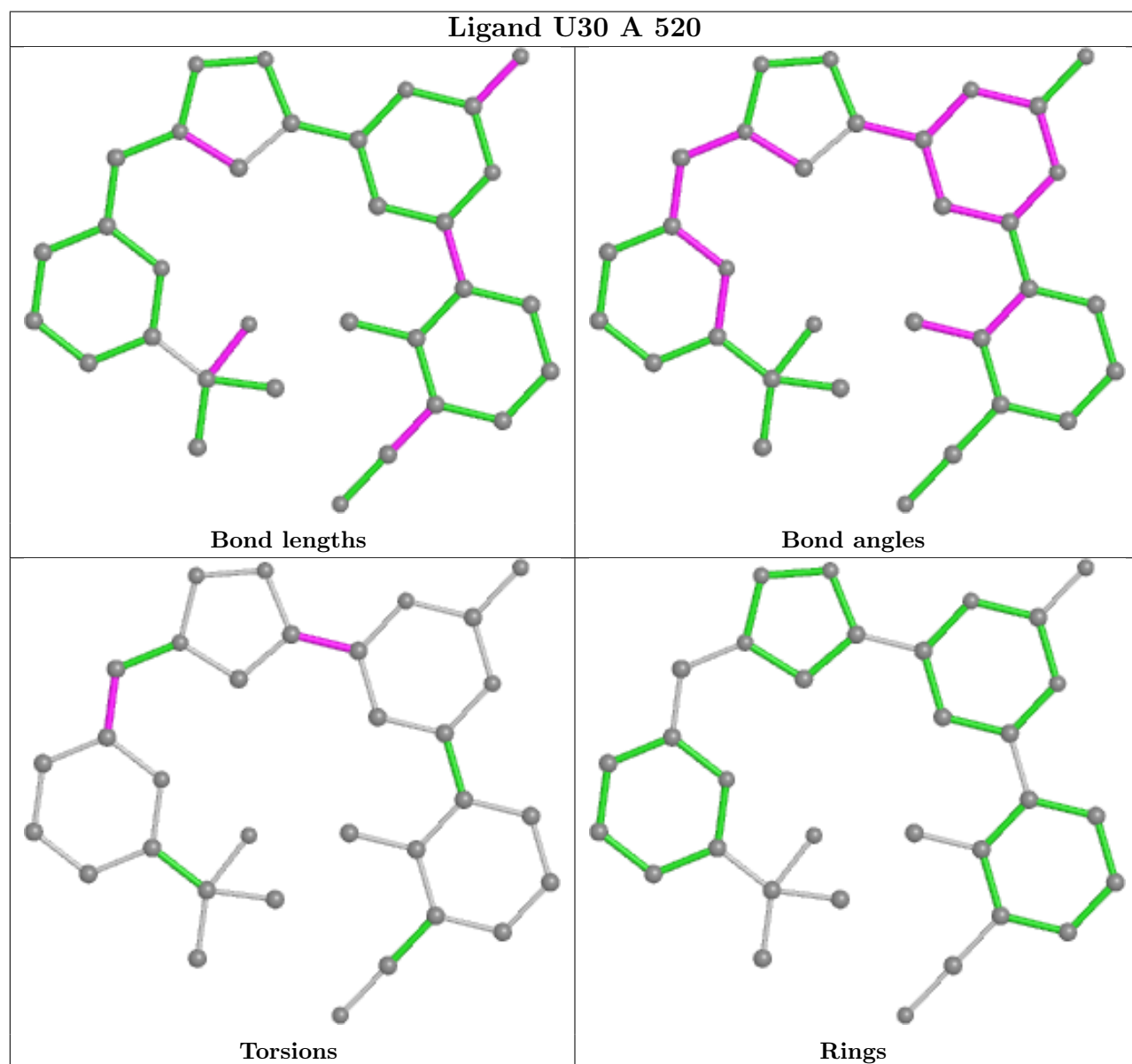
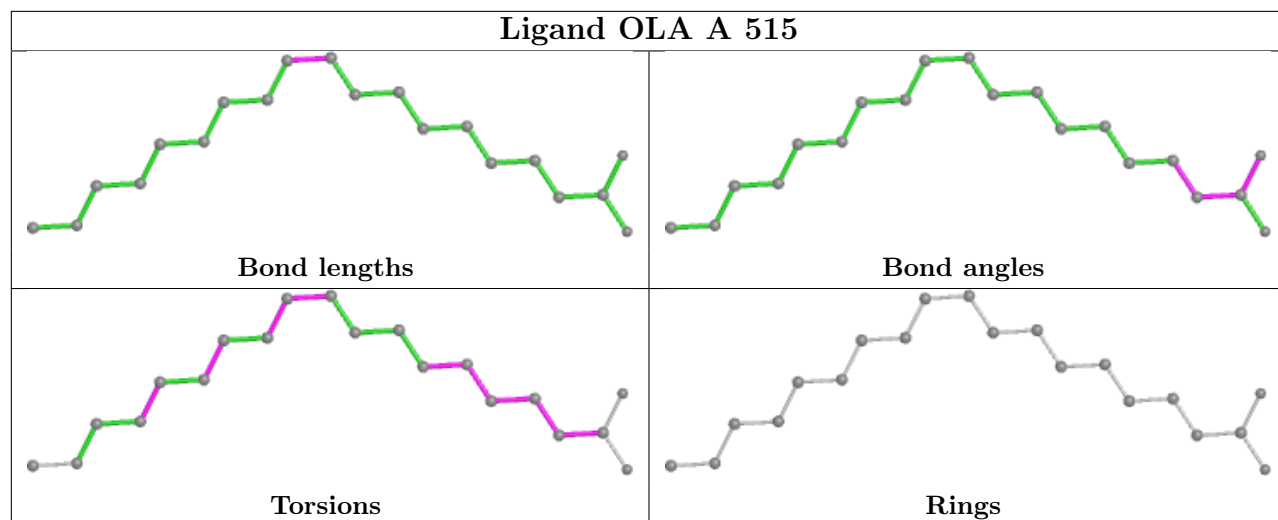












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.

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

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

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	450/481 (93%)	-0.05	20 (4%) 34 37	17, 29, 54, 110	0

All (20) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	457	GLN	7.6
1	A	149	PRO	7.3
1	A	148	GLN	5.0
1	A	150	LYS	5.0
1	A	4	MET	4.5
1	A	228	THR	4.3
1	A	231	TYR	3.8
1	A	156	SER	3.6
1	A	3	ILE	3.2
1	A	157	GLN	2.5
1	A	437	TYR	2.5
1	A	408	ASP	2.4
1	A	6	SER	2.3
1	A	414	LEU	2.2
1	A	146	CYS	2.2
1	A	229	GLU	2.2
1	A	145	ASN	2.2
1	A	410	SER	2.2
1	A	374	LYS	2.1
1	A	326	ARG	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](#)

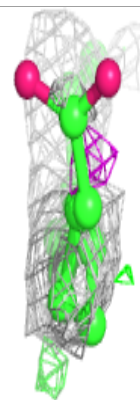
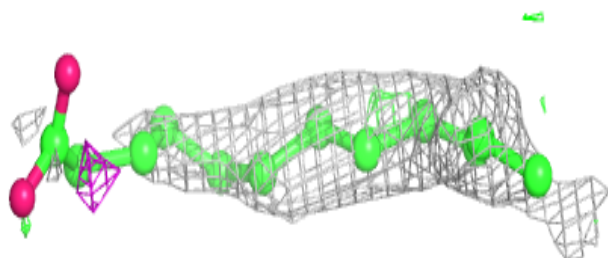
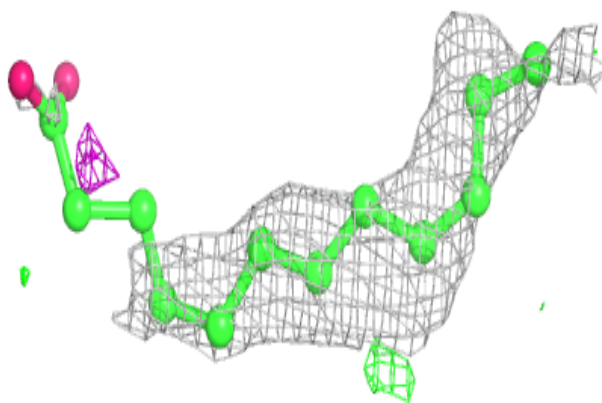
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
2	OLA	A	519	14/20	0.71	0.47	57,67,90,101	0
2	OLA	A	514	20/20	0.72	0.36	44,59,73,74	0
2	OLA	A	512	15/20	0.74	0.27	42,50,71,85	0
2	OLA	A	510	14/20	0.76	0.33	59,71,85,87	0
2	OLA	A	513	20/20	0.76	0.30	37,60,96,104	0
7	CLR	A	524	28/28	0.78	0.26	49,59,71,77	0
4	OLC	A	516	25/25	0.79	0.37	39,63,77,89	0
2	OLA	A	515	20/20	0.79	0.23	27,50,104,105	0
4	OLC	A	521	25/25	0.81	0.21	31,53,75,84	0
2	OLA	A	522	13/20	0.81	0.35	35,49,59,61	0
2	OLA	A	518	20/20	0.82	0.27	41,56,61,74	0
2	OLA	A	502	15/20	0.83	0.22	34,49,54,56	0
2	OLA	A	517	20/20	0.83	0.25	26,45,76,77	0
2	OLA	A	506	11/20	0.86	0.16	28,37,59,67	0
2	OLA	A	509	20/20	0.86	0.23	41,56,72,74	0
2	OLA	A	511	20/20	0.87	0.20	32,43,68,70	0
6	PEG	A	523	7/7	0.87	0.19	32,38,40,51	0
2	OLA	A	505	20/20	0.87	0.26	33,51,77,80	0
3	NA	A	508	1/1	0.88	0.48	57,57,57,57	0
2	OLA	A	503	15/20	0.89	0.18	32,39,62,64	0
2	OLA	A	504	20/20	0.90	0.15	21,41,58,58	0
2	OLA	A	507	15/20	0.92	0.17	40,44,52,61	0
2	OLA	A	501	11/20	0.94	0.17	35,45,55,63	0
5	U30	A	520	32/32	0.96	0.13	17,25,38,40	0

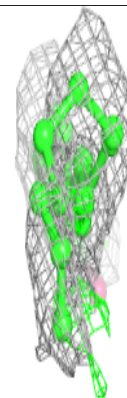
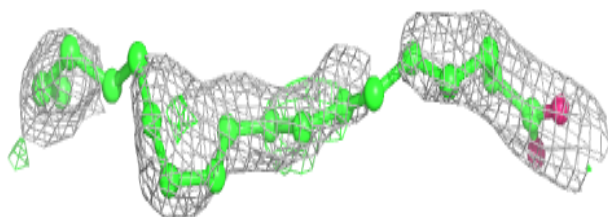
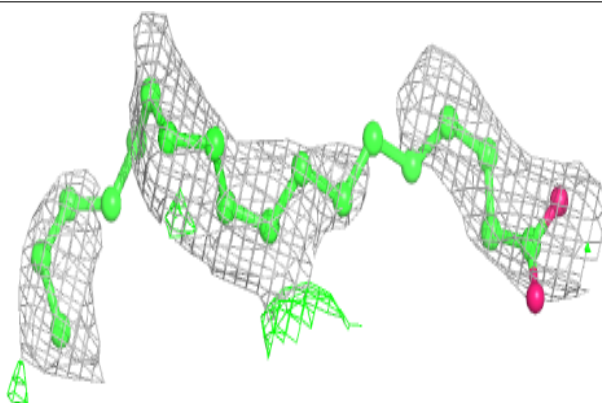
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

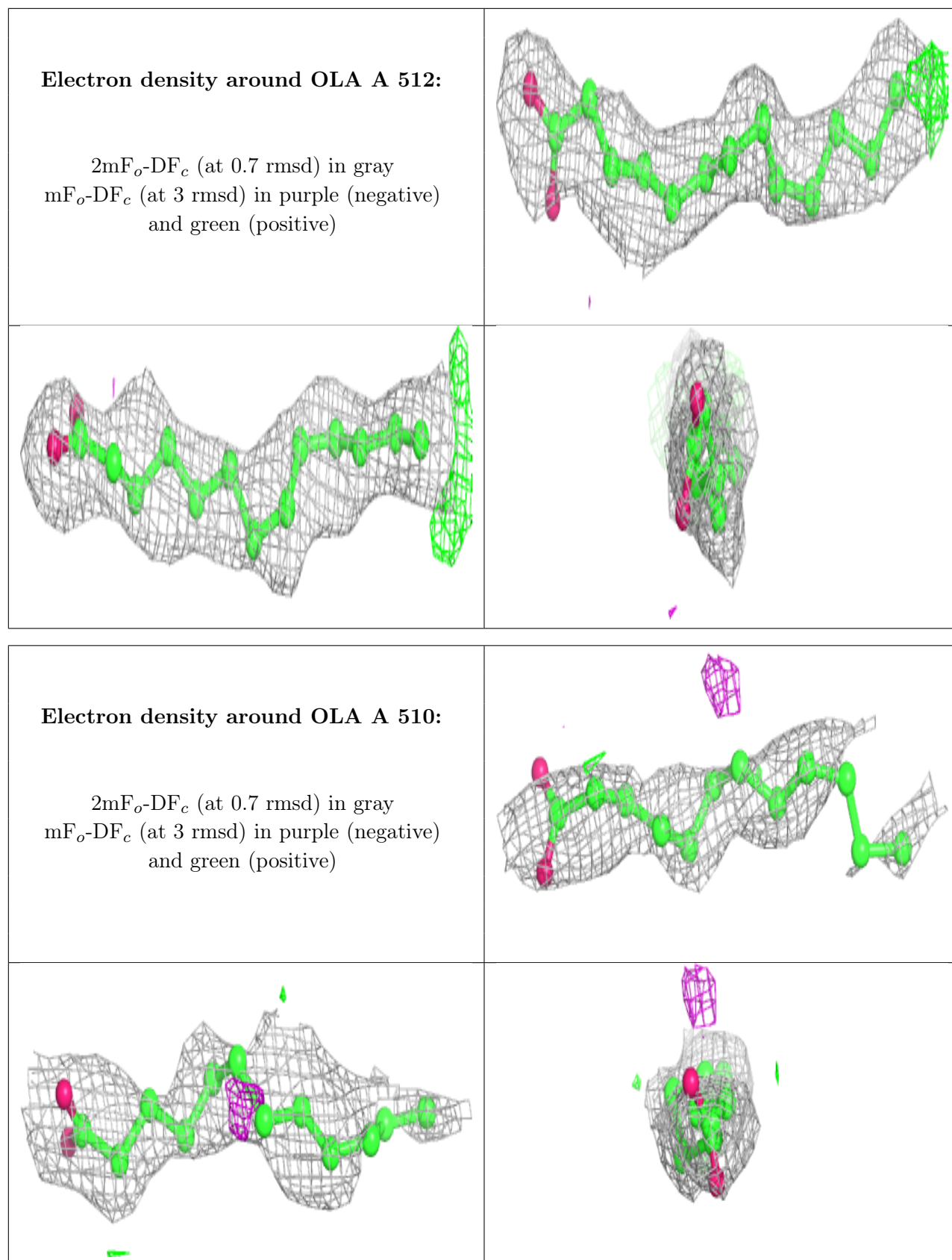
**Electron density around OLA A 519:**

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

**Electron density around OLA A 514:**

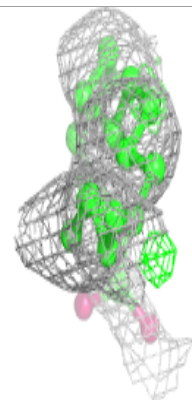
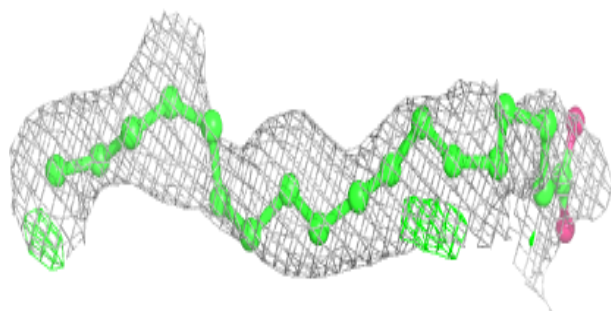
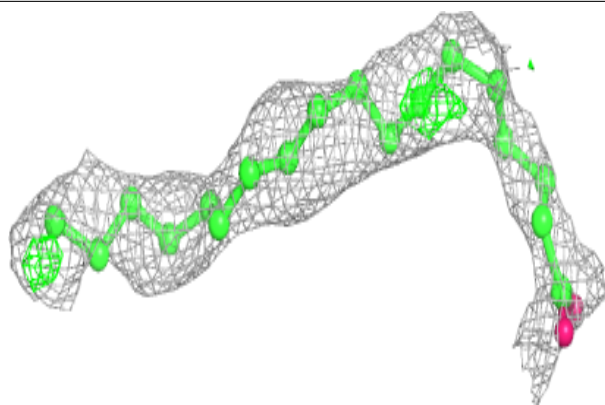
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



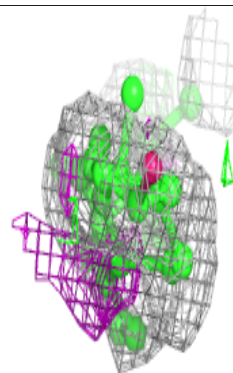
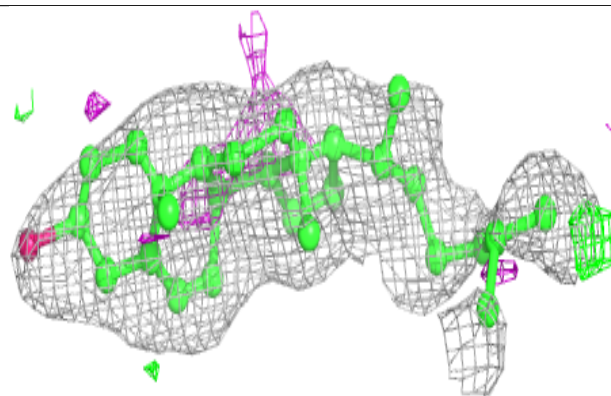
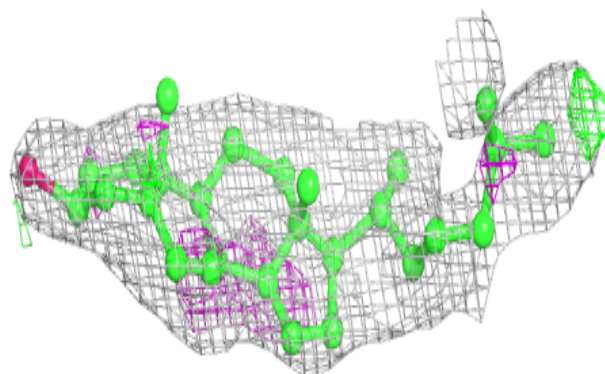


**Electron density around OLA A 513:**

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

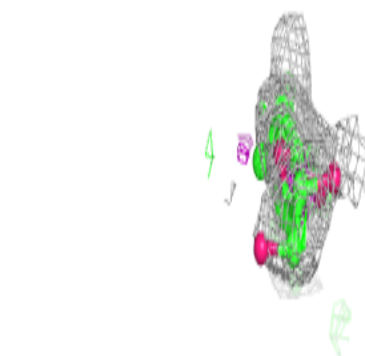
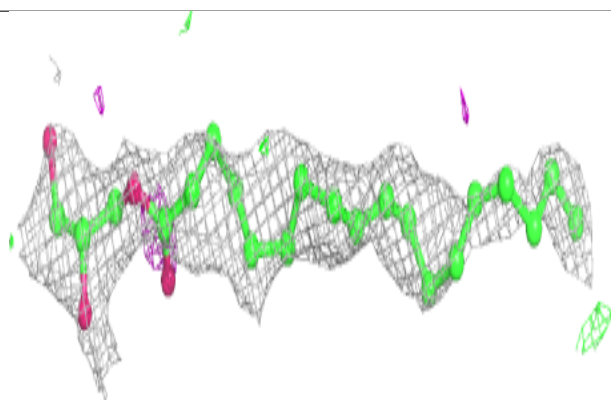
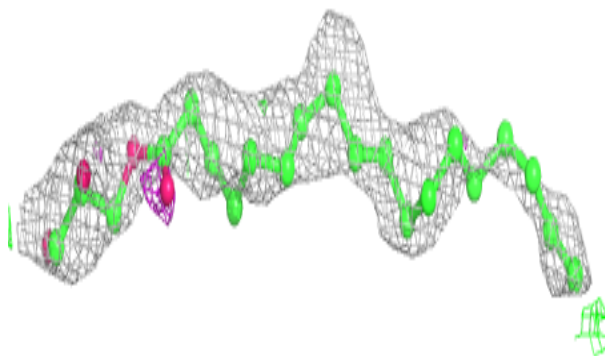
**Electron density around CLR A 524:**

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

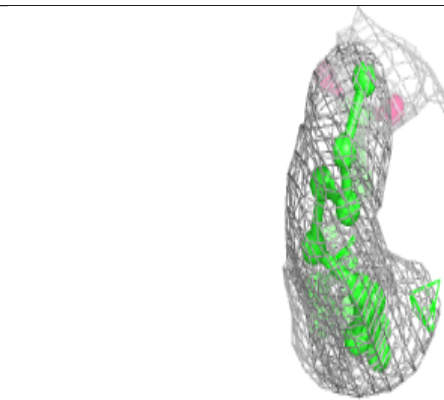
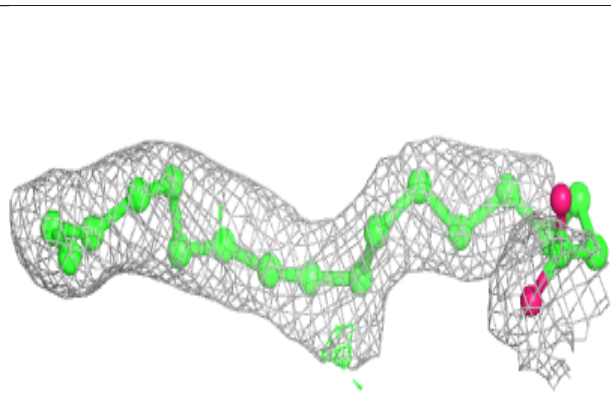
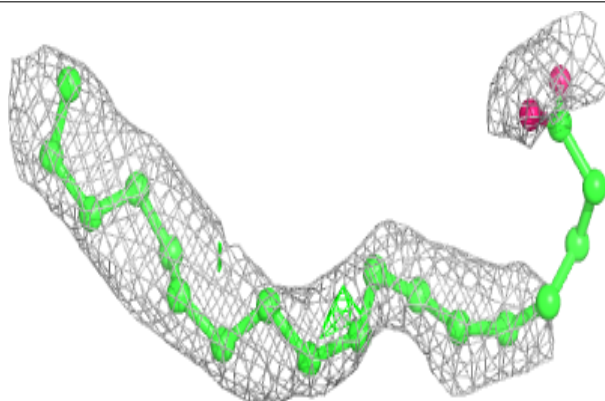


**Electron density around OLC A 516:**

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

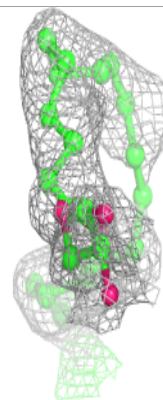
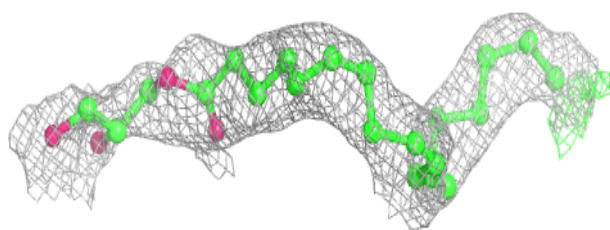
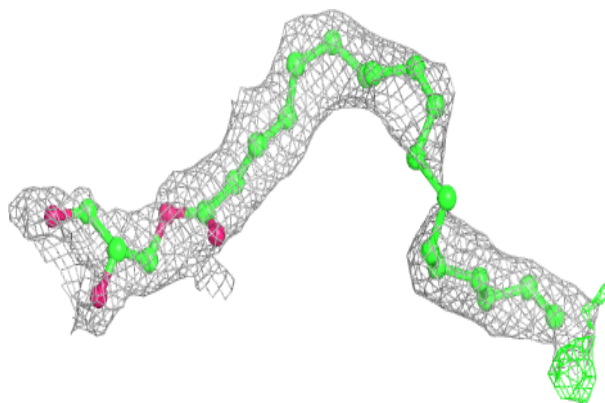
**Electron density around OLA A 515:**

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

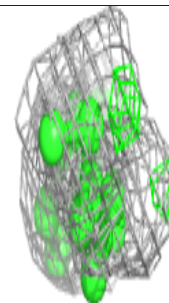
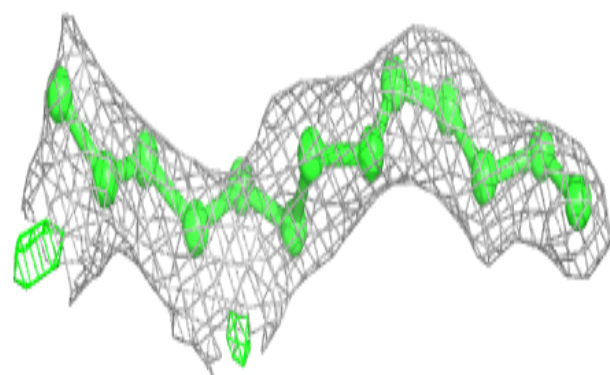
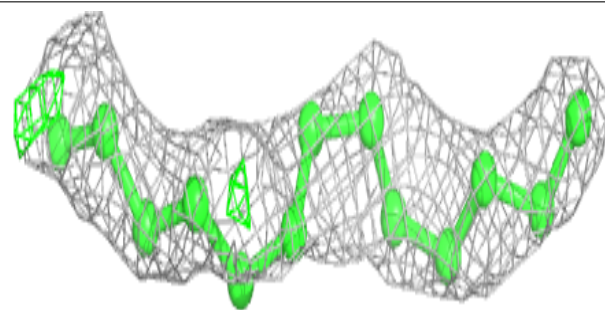


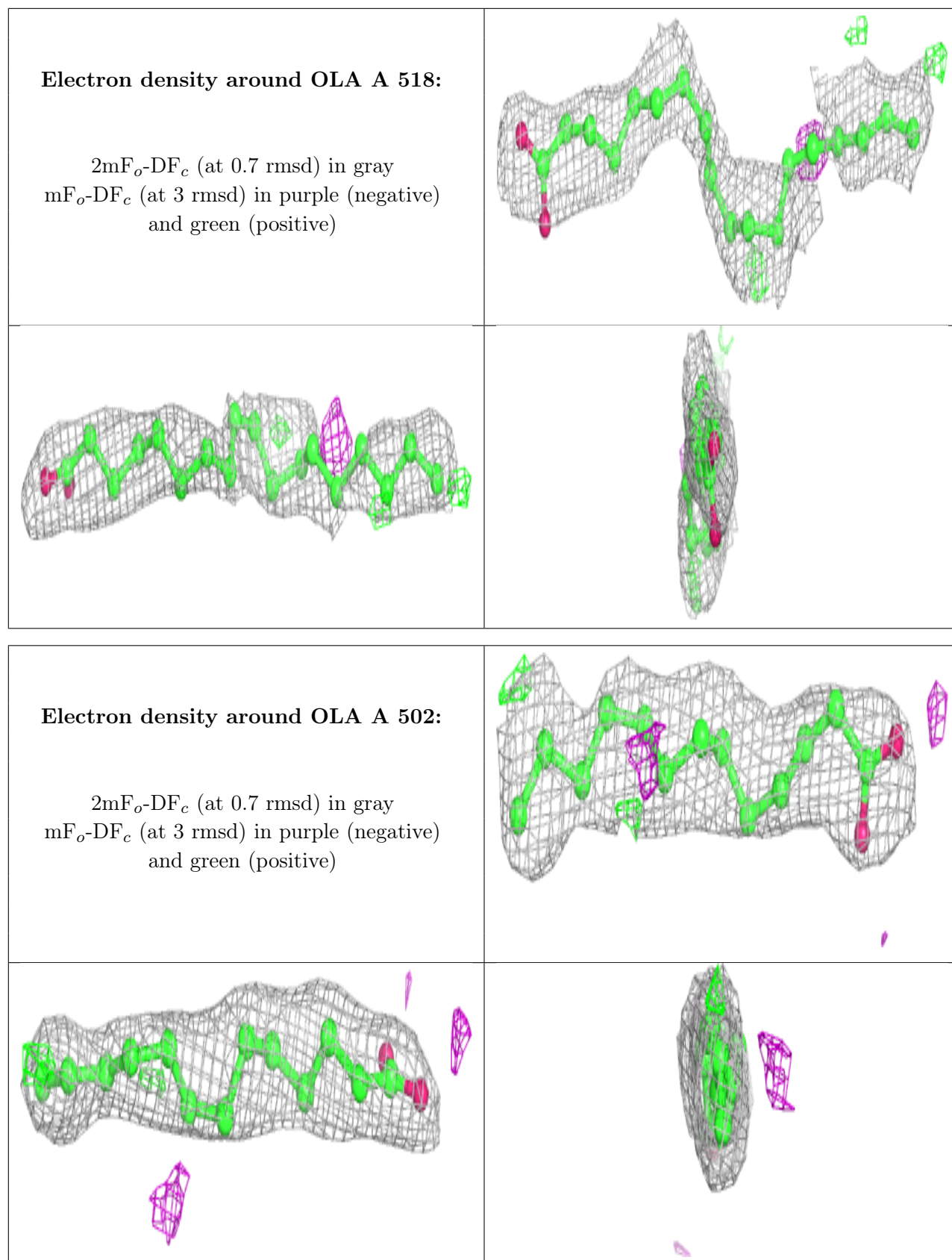
**Electron density around OLC A 521:**

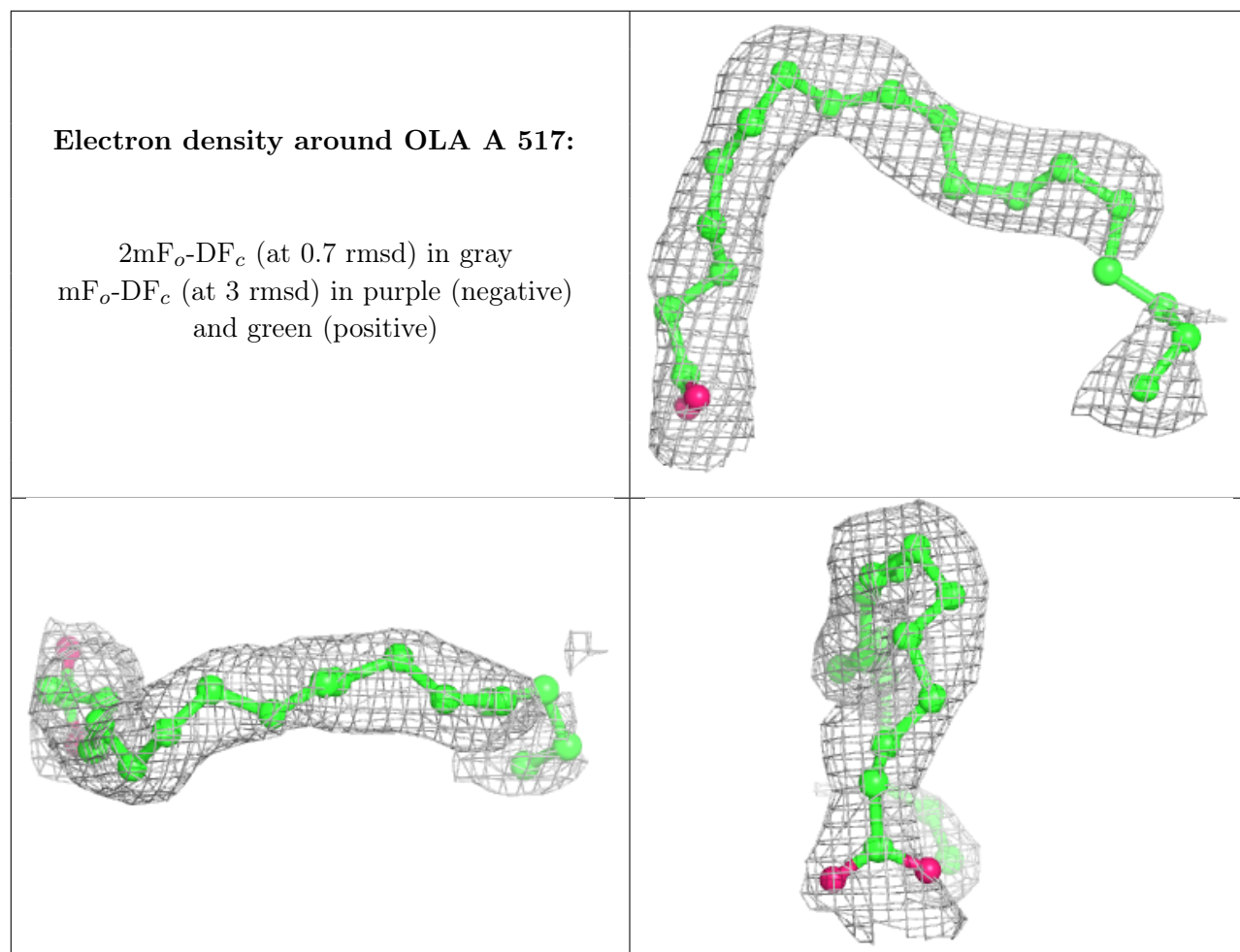
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around OLA A 522:**

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



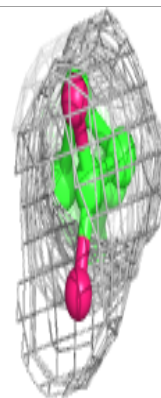
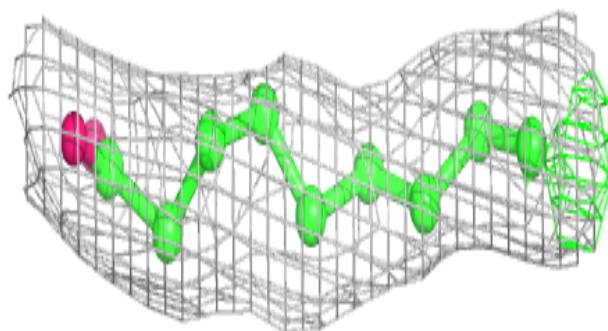
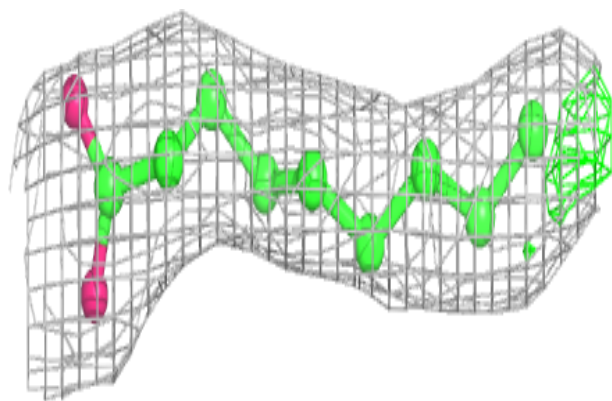




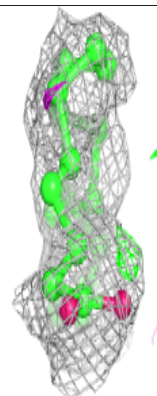
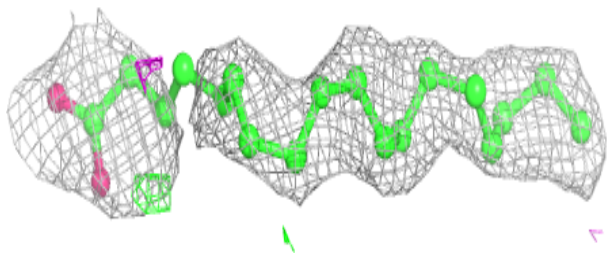
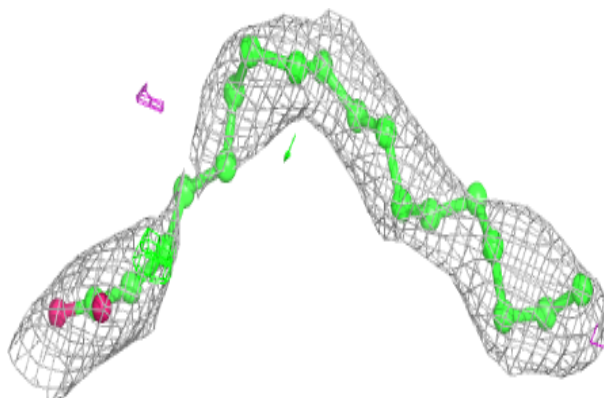


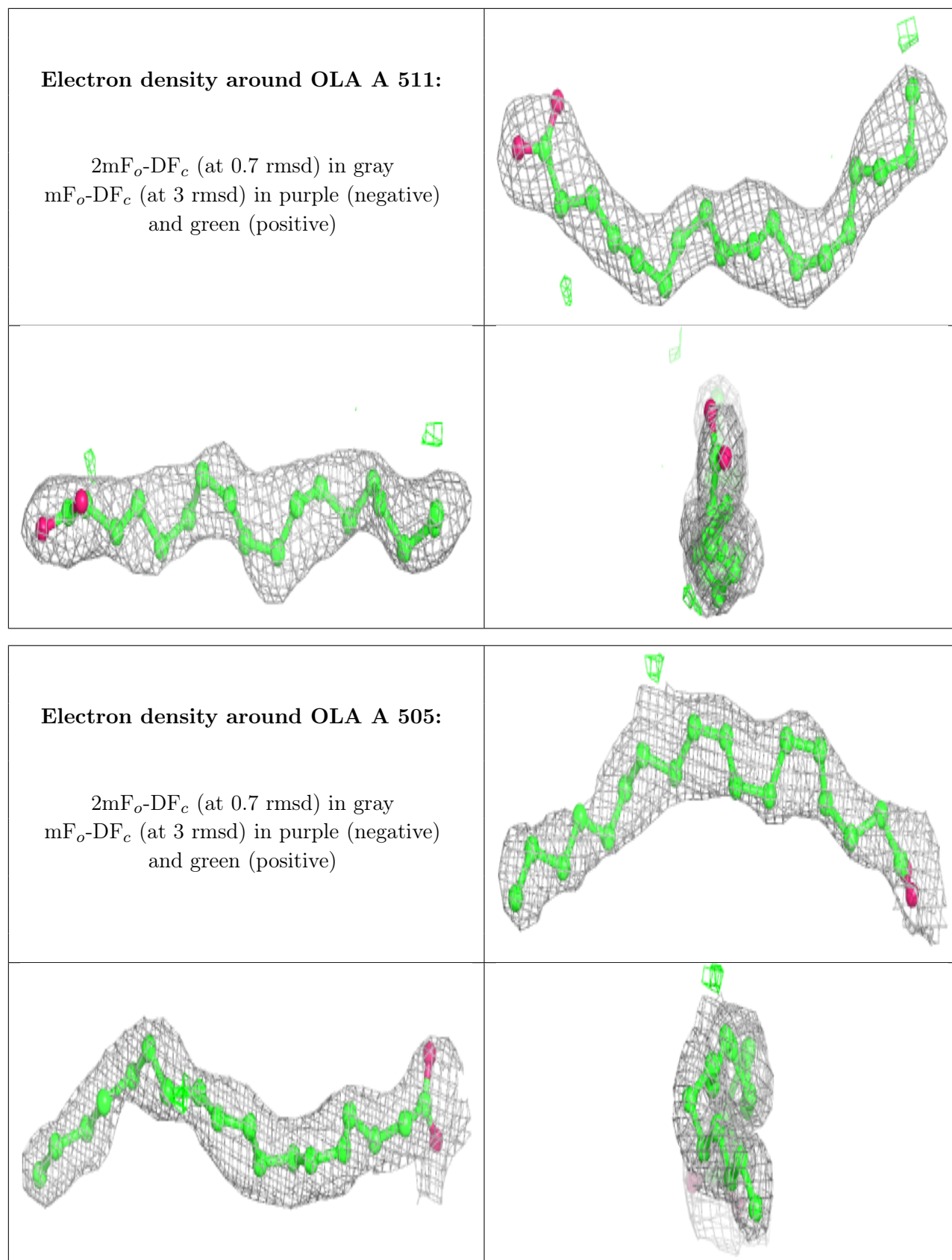
**Electron density around OLA A 506:**

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

**Electron density around OLA A 509:**

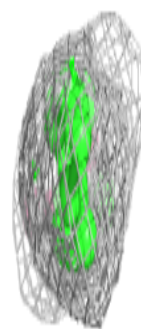
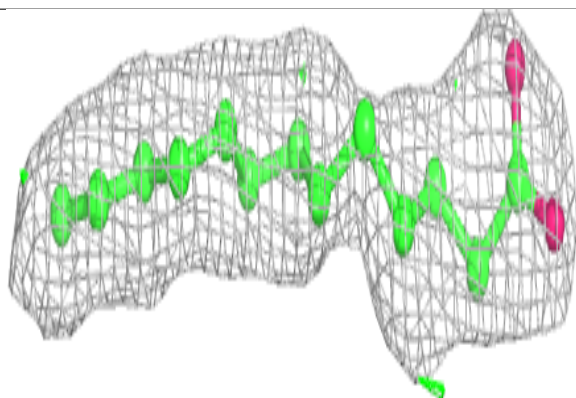
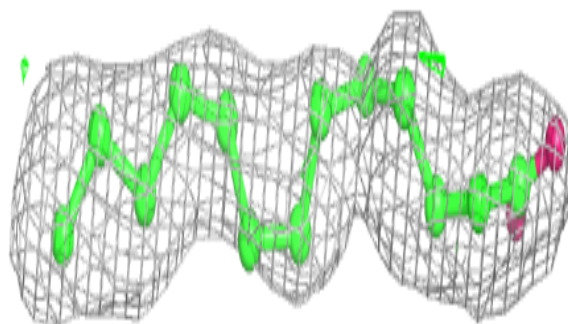
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



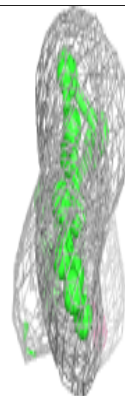
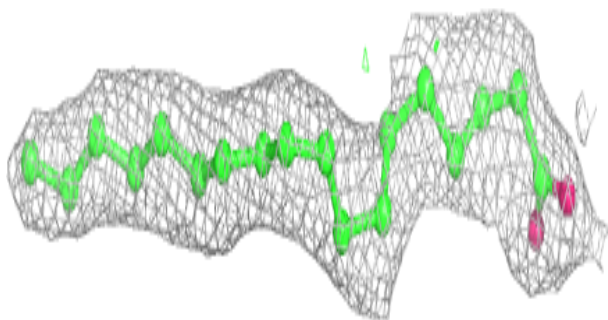
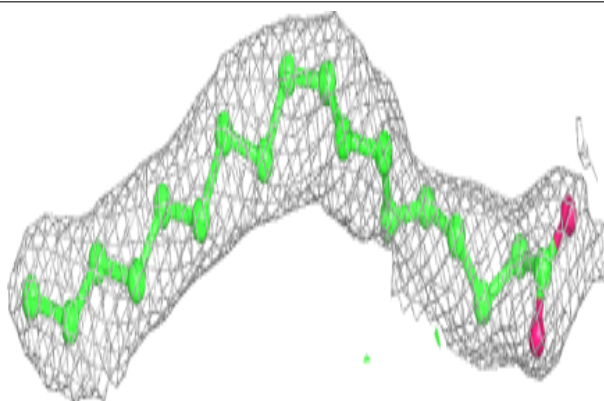


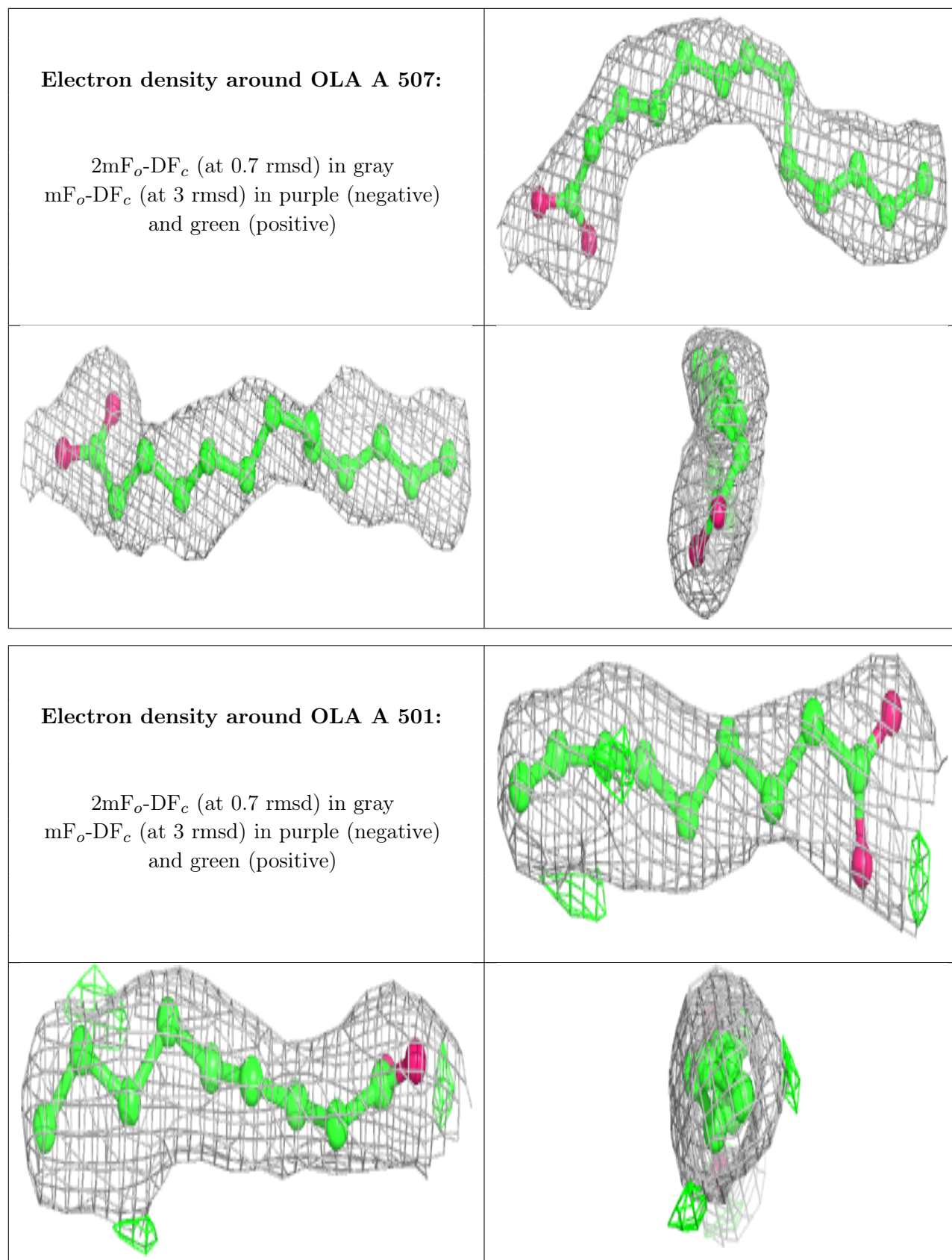
**Electron density around OLA A 503:**

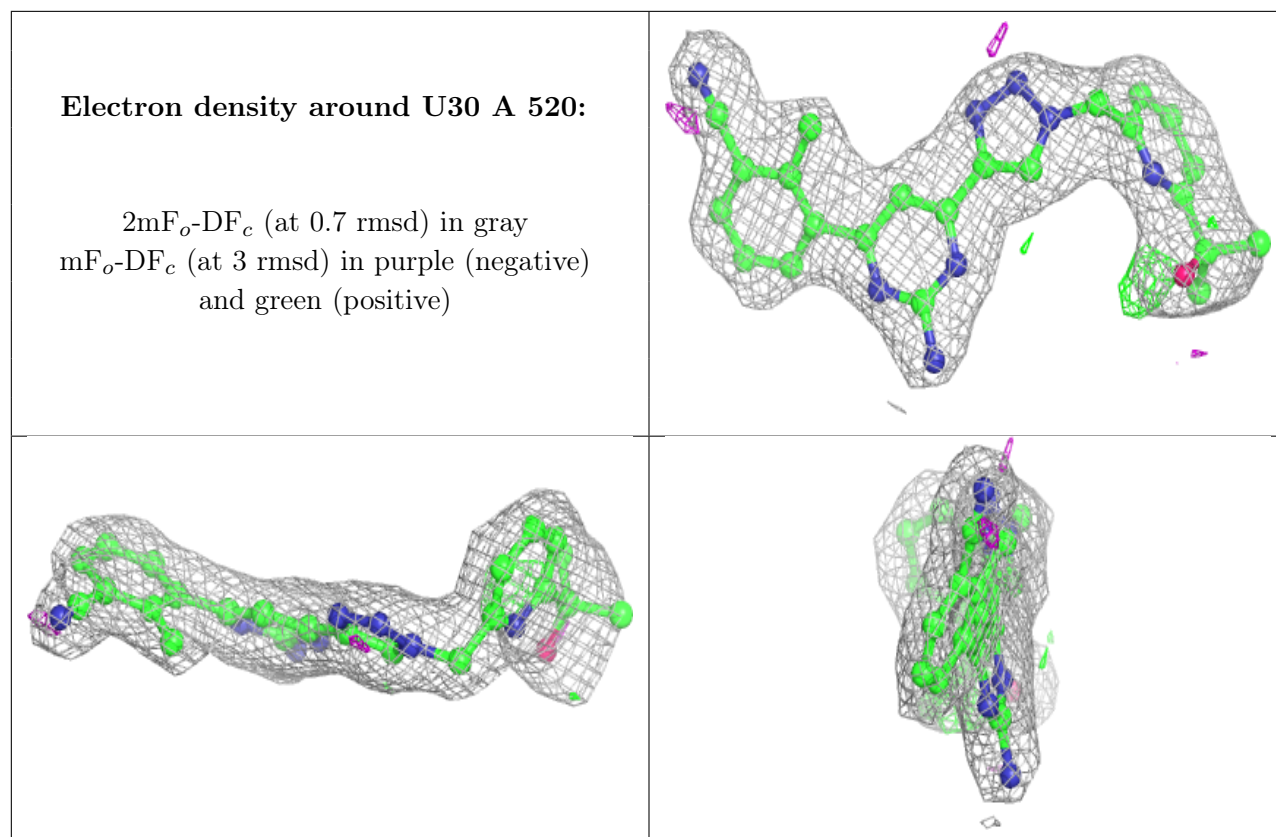
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around OLA A 504:**

$2mF_o-DF_c$  (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.