wwPDB X-ray Structure Validation Summary Report (i)

Jun 22, 2024 – 10:15 AM EDT

PDB ID	:	4Z69
Title	:	Human serum albumin complexed with palmitic acid and diclofenac
Authors	:	Zhang, Y.; Yang, F.
Deposited on	:	2015-04-04
Resolution	:	2.19 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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:

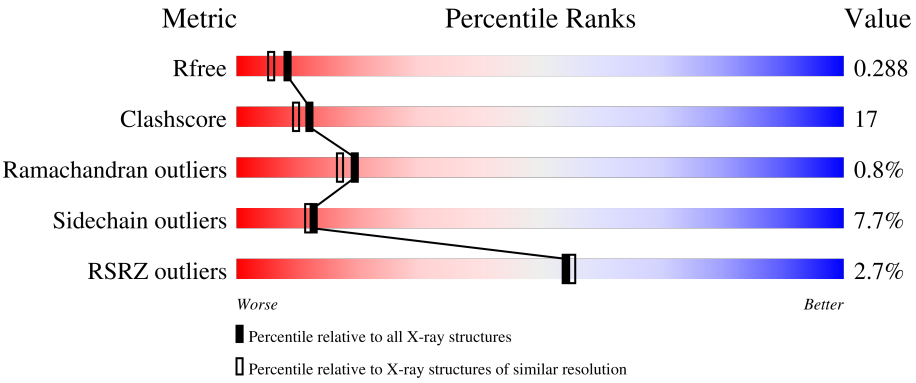
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 2.19 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	6864 (2.20-2.16)
Clashscore	141614	7689 (2.20-2.16)
Ramachandran outliers	138981	7564 (2.20-2.16)
Sidechain outliers	138945	7564 (2.20-2.16)
RSRZ outliers	127900	6738 (2.20-2.16)

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	585	3% 66% 29%
1	I	585	2% 68% 29%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	DIF	A	1006	-	-	X	-
4	DIF	A	1008	-	-	X	-

2 Entry composition

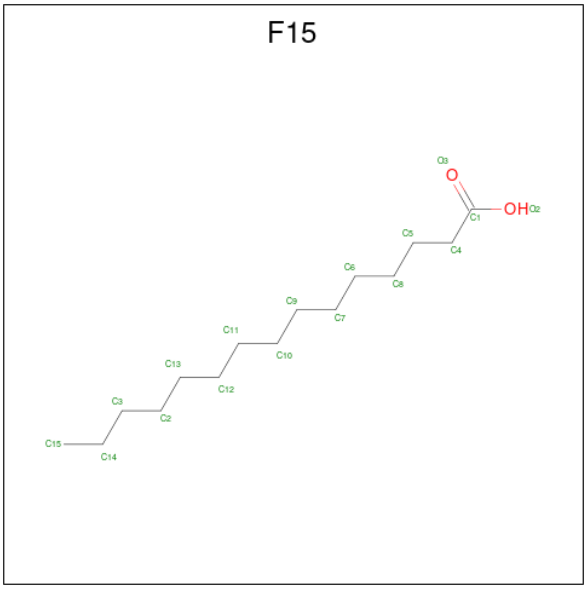
There are 5 unique types of molecules in this entry. The entry contains 9315 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Serum albumin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	581	Total	C	N	O	S	0	0	0
			4453	2823	744	845	41			
1	I	581	Total	C	N	O	S	0	0	0
			4443	2819	744	839	41			

- Molecule 2 is PENTADECANOIC ACID (three-letter code: F15) (formula: $C_{15}H_{30}O_2$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			13	11	2		
2	A	1	Total	C	O	0	0
			17	15	2		
2	A	1	Total	C	O	0	0
			17	15	2		
2	I	1	Total	C	O	0	0
			13	11	2		

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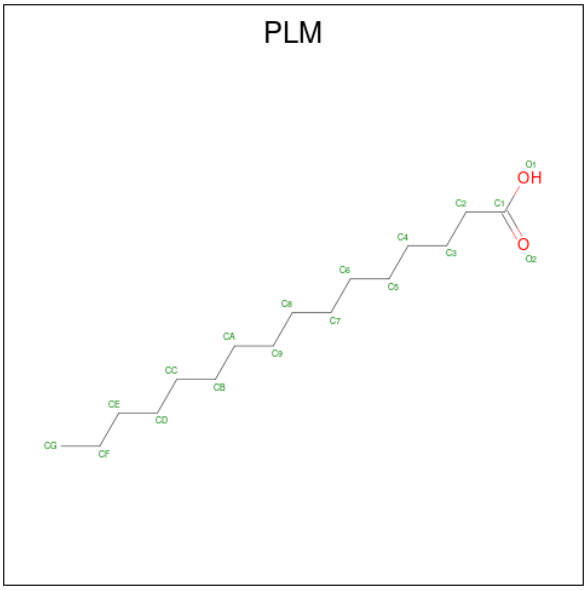
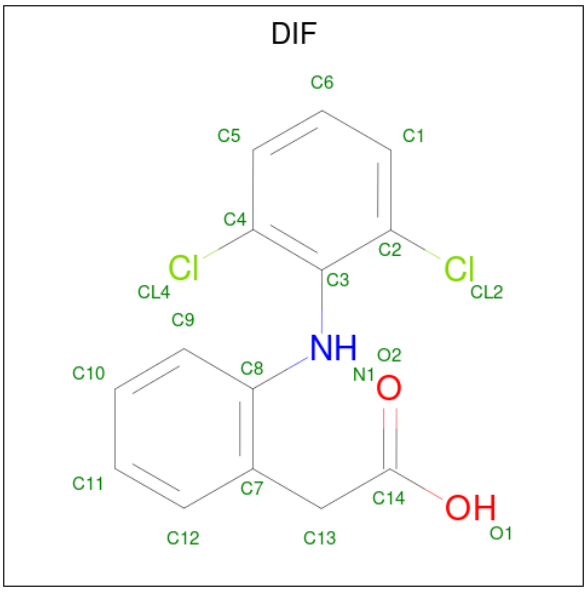
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	I	1	Total C O 17 15 2	0	0
2	I	1	Total C O 17 15 2	0	0

- Molecule 3 is PALMITIC ACID (three-letter code: PLM) (formula: $C_{16}H_{32}O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C O 18 16 2	0	0
3	A	1	Total C O 18 16 2	0	0
3	I	1	Total C O 18 16 2	0	0
3	I	1	Total C O 18 16 2	0	0

- Molecule 4 is 2-[2,6-DICHLOROPHENYL)AMINO]BENZENEACETIC ACID (three-letter code: DIF) (formula: $C_{14}H_{11}Cl_2NO_2$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	Cl	N	O	0	0
			19	14	2	1	2		
4	A	1	Total	C	Cl	N	O	0	0
			19	14	2	1	2		
4	A	1	Total	C	Cl	N	O	0	0
			19	14	2	1	2		
4	I	1	Total	C	Cl	N	O	0	0
			19	14	2	1	2		

- Molecule 5 is water.

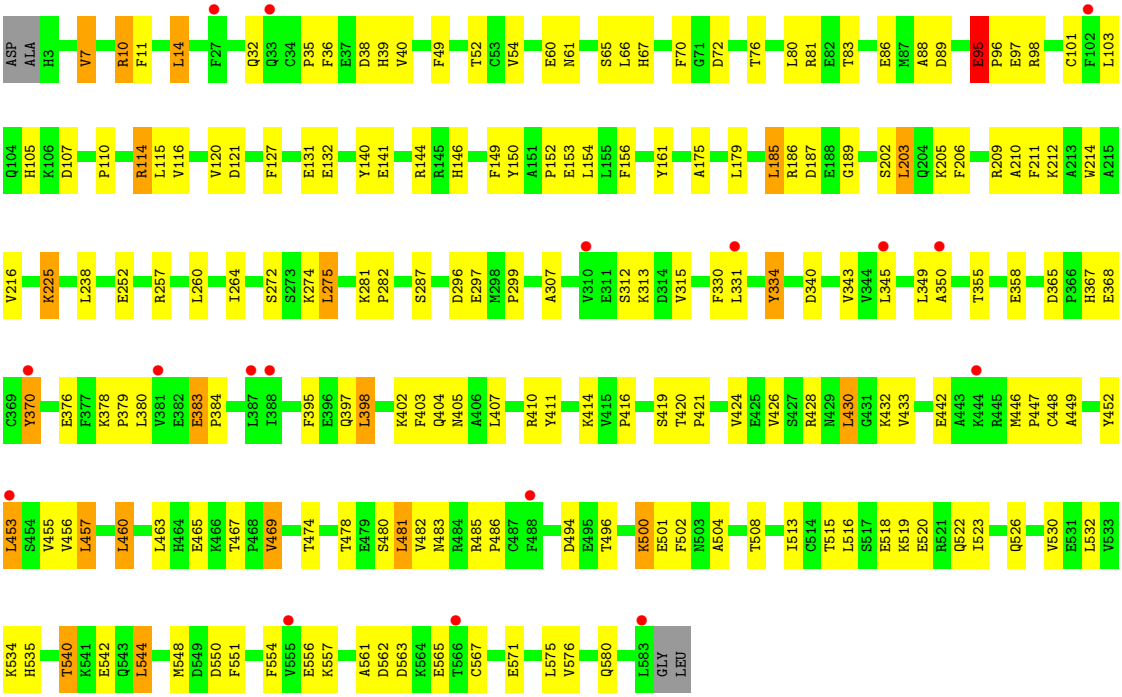
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	82	Total	O	0	0
			82	82		
5	I	95	Total	O	0	0
			95	95		

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.

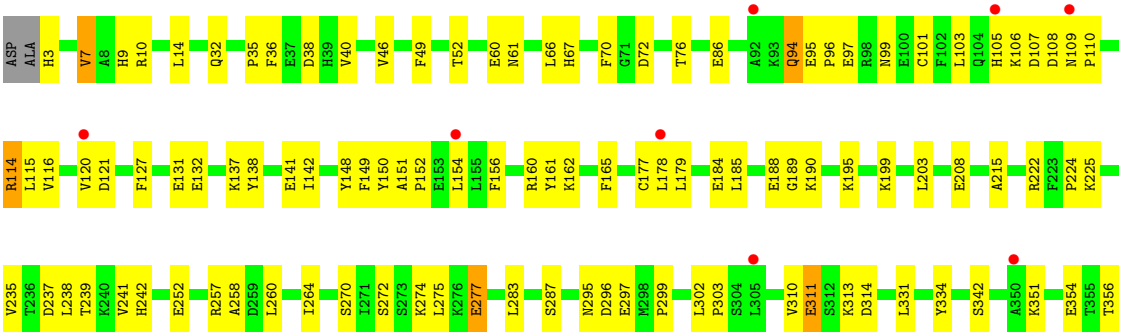
• Molecule 1: Serum albumin

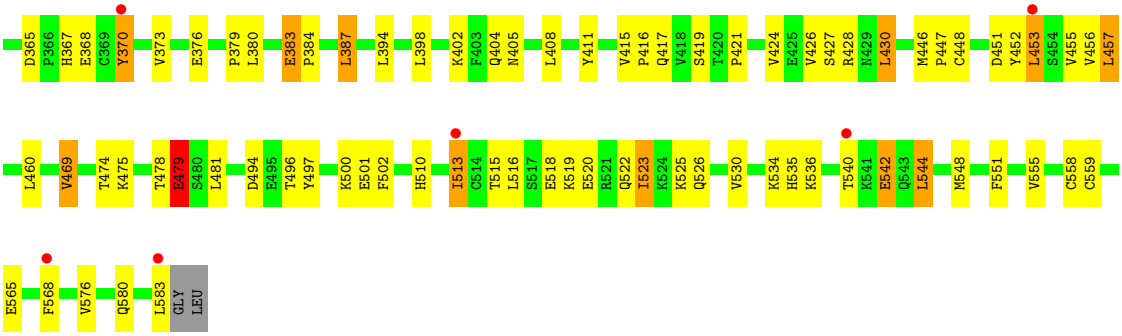
Chain A:



• Molecule 1: Serum albumin

Chain I:




D365 P366 H367 E368 C369 Y370 V373 E376 P379 L380 E383 P384 L387 L394 L398 K402 F403 Q404 N405 L408 Y411 V415 P416 Q417 V418 S419 T420 P421 V424 E425 V426 S427 R428 N429 L430 M446 P447 C448 D451 Y452 L453 S454 V455 V456 L457
L460 V469 T474 K475 T478 E479 S480 L481 D494 E495 T496 Y497 K500 E501 F502 H510 I513 C514 T515 L516 S517 E518 K519 E520 R521 Q522 I523 K524 K525 Q526 V530 K534 H535 K536 T540 K541 E542 Q543 L544 M548 F551 V555 C558 C559
E565 F568 V576 Q580 L583 GLY LEU

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	38.40Å 95.00Å 96.34Å 105.00° 101.45° 89.97°	Depositor
Resolution (Å)	45.82 – 2.19 46.11 – 2.19	Depositor EDS
% Data completeness (in resolution range)	93.2 (45.82-2.19) 93.1 (46.11-2.19)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.49 (at 2.18Å)	Xtriage
Refinement program	PHENIX 1.6_289	Depositor
R, R_{free}	0.225 , 0.293 0.219 , 0.288	Depositor DCC
R_{free} test set	3160 reflections (5.10%)	wwPDB-VP
Wilson B-factor (Å^2)	47.1	Xtriage
Anisotropy	0.190	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 42.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.51$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	0.457 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	9315	wwPDB-VP
Average B, all atoms (Å^2)	56.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.27% 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: F15, DIF, PLM

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	0.42	0/4542	0.57	0/6161
1	I	0.42	0/4532	0.59	0/6148
All	All	0.42	0/9074	0.58	0/12309

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	I	0	1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	I	94	GLN	Peptide

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	4453	0	4201	162	0
1	I	4443	0	4193	132	0
2	A	47	0	76	3	0
2	I	47	0	76	7	0
3	A	36	0	62	5	0
3	I	36	0	62	5	0
4	A	57	0	30	34	0
4	I	19	0	10	4	0
5	A	82	0	0	5	0
5	I	95	0	0	6	0
All	All	9315	0	8710	307	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 17.

The worst 5 of 307 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:1008:DIF:CL2	4:A:1008:DIF:H9	1.81	1.16
1:A:161:TYR:OH	4:A:1006:DIF:H10	1.59	1.03
4:A:1008:DIF:CL2	4:A:1008:DIF:C9	2.55	0.92
1:I:540:THR:HG22	1:I:542:GLU:H	1.32	0.90
1:I:32:GLN:HE22	1:I:107:ASP:H	1.23	0.87

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	579/585 (99%)	545 (94%)	31 (5%)	3 (0%)	29 28
1	I	579/585 (99%)	549 (95%)	24 (4%)	6 (1%)	15 12
All	All	1158/1170 (99%)	1094 (94%)	55 (5%)	9 (1%)	19 17

5 of 9 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	95	GLU
1	A	469	VAL
1	I	190	LYS
1	I	469	VAL
1	I	110	PRO

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	458/511 (90%)	421 (92%)	37 (8%)	11	10
1	I	455/511 (89%)	422 (93%)	33 (7%)	14	13
All	All	913/1022 (89%)	843 (92%)	70 (8%)	13	12

5 of 70 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	I	415	VAL
1	I	451	ASP
1	I	513	ILE
1	A	442	GLU
1	A	430	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 17 such sidechains are listed below:

Mol	Chain	Res	Type
1	I	242	HIS
1	I	580	GLN
1	A	459	GLN
1	A	580	GLN
1	I	9	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

14 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	F15	A	1001	-	12,12,16	0.75	0	12,12,16	1.04	2 (16%)
4	DIF	A	1008	-	20,20,20	0.80	0	27,27,27	1.43	4 (14%)
2	F15	A	1005	-	16,16,16	0.55	0	16,16,16	1.15	2 (12%)
2	F15	I	1005	-	16,16,16	0.54	0	16,16,16	0.99	0
4	DIF	I	1006	-	20,20,20	0.86	0	27,27,27	2.14	7 (25%)
2	F15	A	1003	-	16,16,16	0.56	0	16,16,16	1.03	1 (6%)
3	PLM	A	1002	-	17,17,17	0.48	0	17,17,17	1.14	2 (11%)
3	PLM	A	1004	-	17,17,17	0.50	0	17,17,17	1.08	1 (5%)
3	PLM	I	1004	-	17,17,17	0.51	0	17,17,17	1.05	2 (11%)
4	DIF	A	1006	-	20,20,20	0.91	0	27,27,27	1.84	5 (18%)
2	F15	I	1003	-	16,16,16	0.48	0	16,16,16	1.16	2 (12%)
4	DIF	A	1007	-	20,20,20	0.87	1 (5%)	27,27,27	2.76	8 (29%)
2	F15	I	1001	-	12,12,16	0.71	0	12,12,16	1.03	2 (16%)
3	PLM	I	1002	-	17,17,17	0.55	0	17,17,17	1.11	1 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	F15	A	1001	-	-	7/10/10/14	-
4	DIF	A	1008	-	-	4/8/8/8	0/2/2/2
2	F15	A	1005	-	-	9/14/14/14	-
2	F15	I	1005	-	-	9/14/14/14	-
4	DIF	I	1006	-	-	2/8/8/8	0/2/2/2
2	F15	A	1003	-	-	11/14/14/14	-
3	PLM	A	1002	-	-	4/15/15/15	-
3	PLM	A	1004	-	-	9/15/15/15	-
3	PLM	I	1004	-	-	10/15/15/15	-
4	DIF	A	1006	-	-	4/8/8/8	0/2/2/2
2	F15	I	1003	-	-	10/14/14/14	-
4	DIF	A	1007	-	-	4/8/8/8	0/2/2/2
2	F15	I	1001	-	-	6/10/10/14	-
3	PLM	I	1002	-	-	9/15/15/15	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	1007	DIF	C8-C7	-2.25	1.37	1.40

The worst 5 of 39 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	1007	DIF	C7-C8-N1	-8.14	112.15	118.60
4	I	1006	DIF	C7-C13-C14	6.87	128.15	112.99
4	A	1006	DIF	C3-N1-C8	-6.67	109.09	123.01
4	A	1007	DIF	C13-C7-C8	-5.71	113.25	121.41
4	A	1007	DIF	C7-C13-C14	5.68	125.53	112.99

There are no chirality outliers.

5 of 98 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	1007	DIF	C14-C13-C7-C8
3	I	1002	PLM	CC-CD-CE-CF

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Mol	Chain	Res	Type	Atoms
3	A	1002	PLM	CC-CD-CE-CF
4	A	1007	DIF	C14-C13-C7-C12
2	A	1003	F15	C1-C4-C5-C8

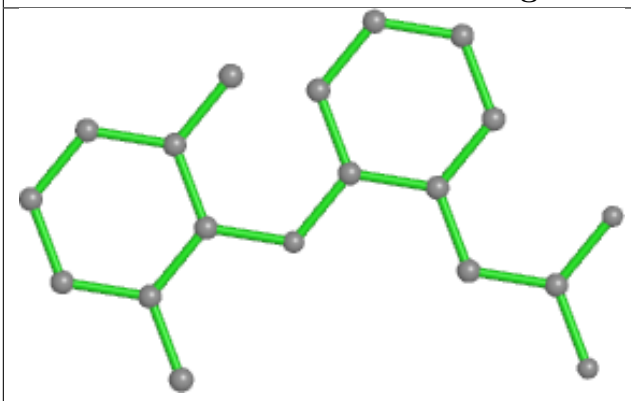
There are no ring outliers.

14 monomers are involved in 57 short contacts:

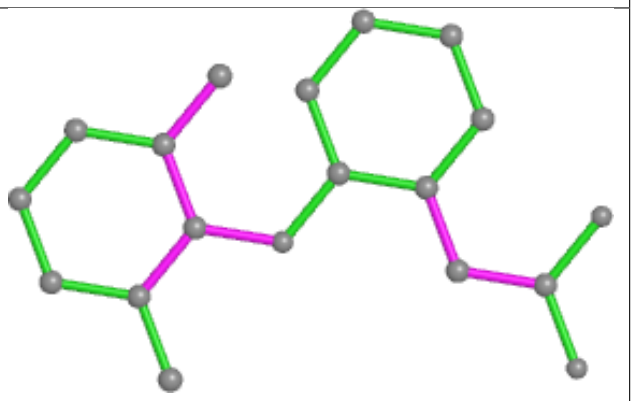
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	1001	F15	1	0
4	A	1008	DIF	16	0
2	A	1005	F15	1	0
2	I	1005	F15	3	0
4	I	1006	DIF	4	0
2	A	1003	F15	1	0
3	A	1002	PLM	3	0
3	A	1004	PLM	2	0
3	I	1004	PLM	1	0
4	A	1006	DIF	17	0
2	I	1003	F15	2	0
4	A	1007	DIF	1	0
2	I	1001	F15	2	0
3	I	1002	PLM	4	0

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.

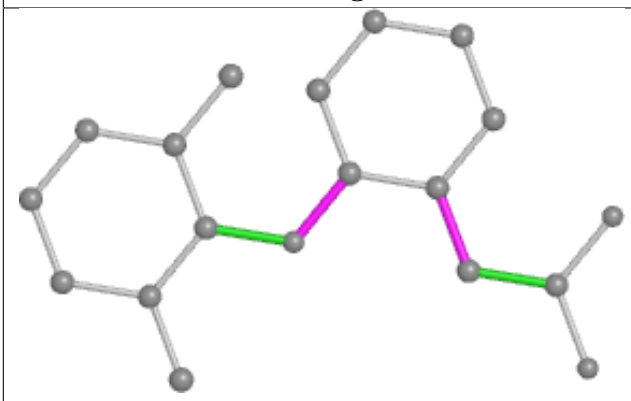
Ligand DIF A 1008



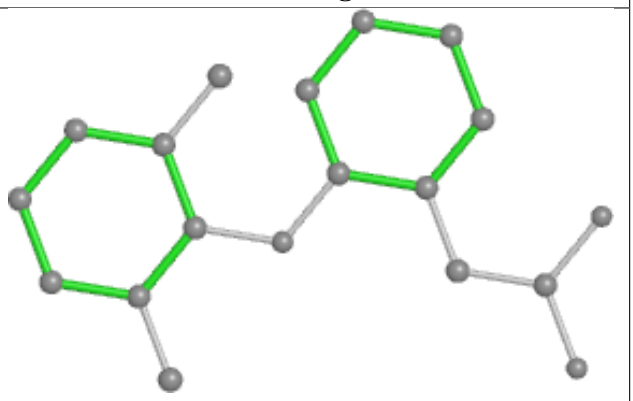
Bond lengths



Bond angles

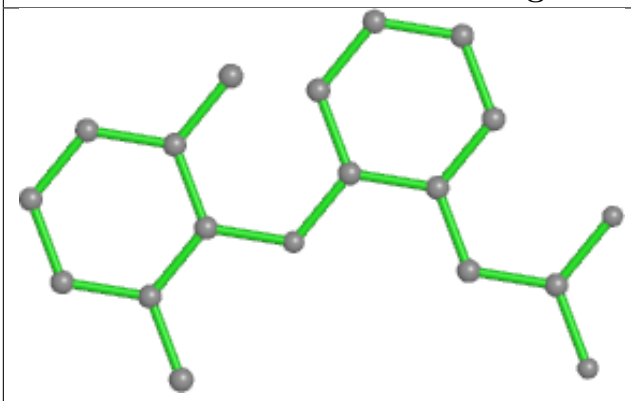


Torsions

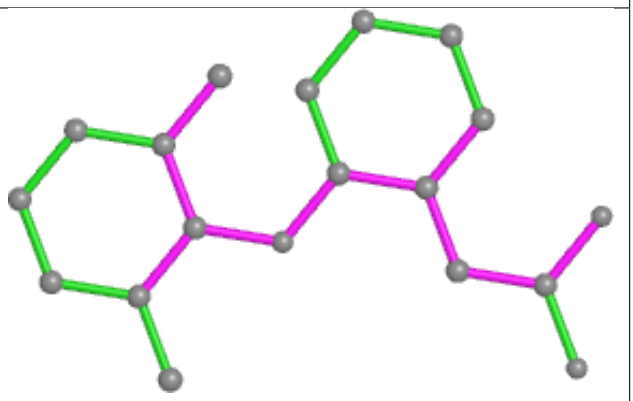


Rings

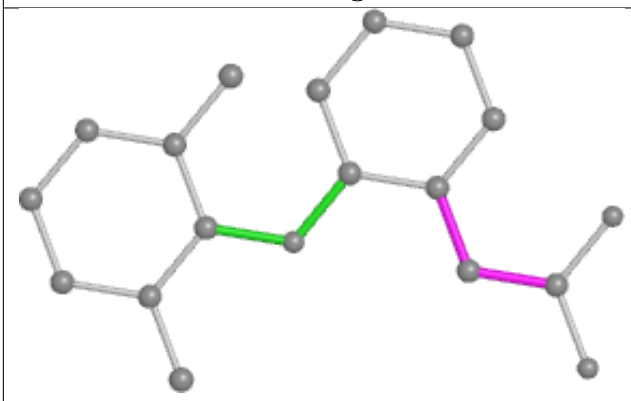
Ligand DIF I 1006



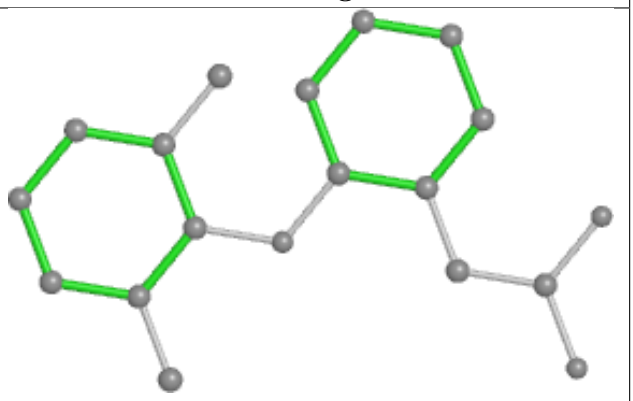
Bond lengths



Bond angles

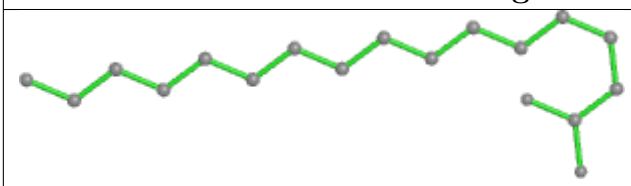


Torsions

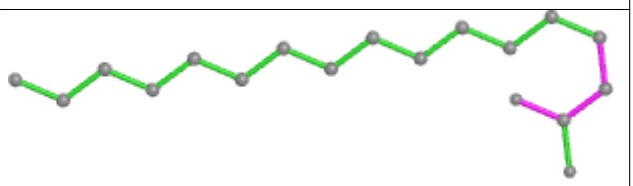


Rings

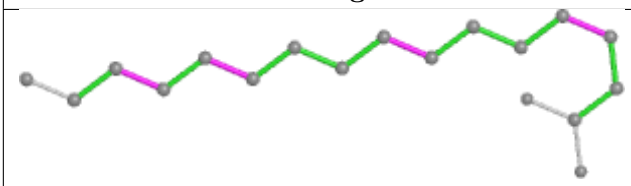
Ligand PLM A 1002



Bond lengths



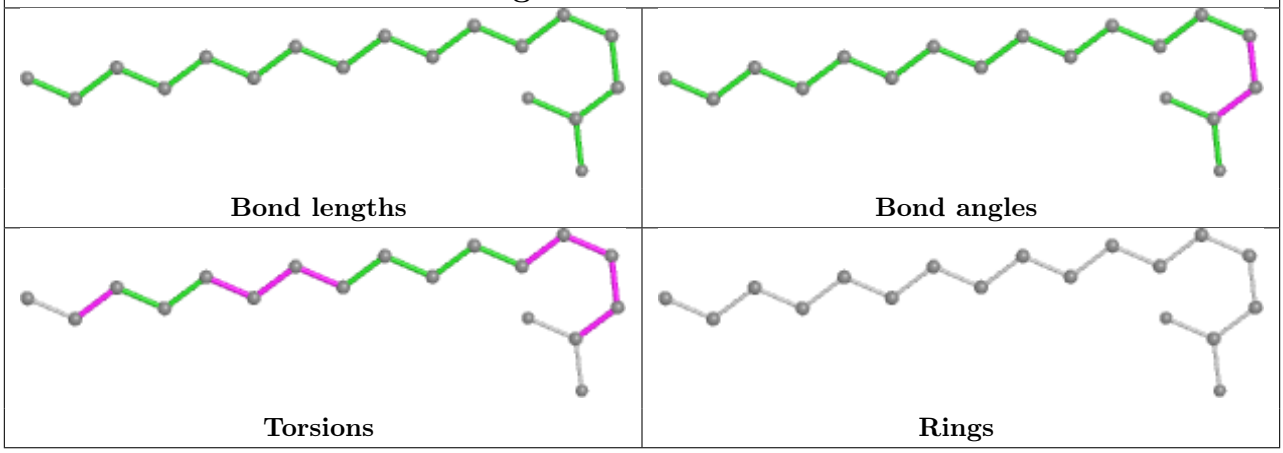
Bond angles



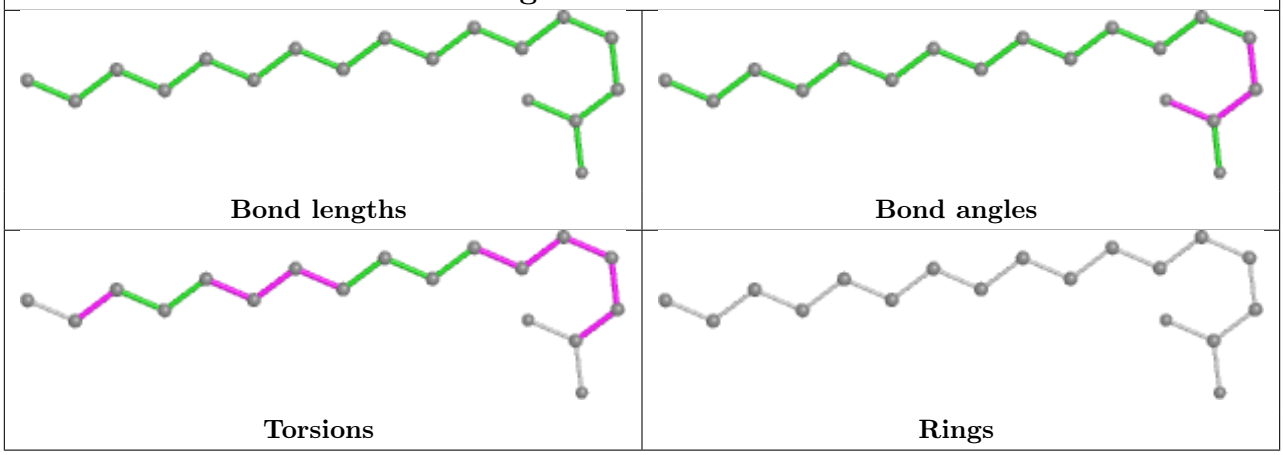
Torsions

Rings

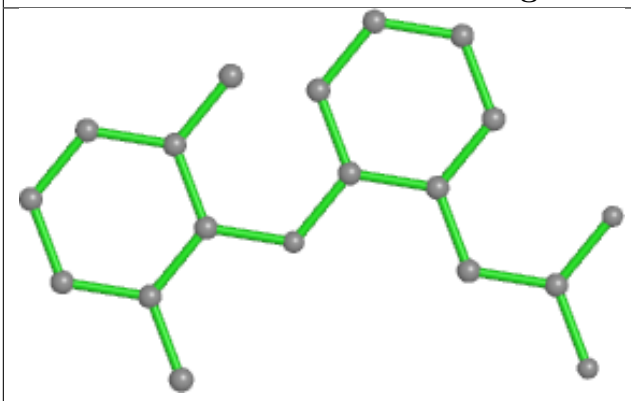
Ligand PLM A 1004



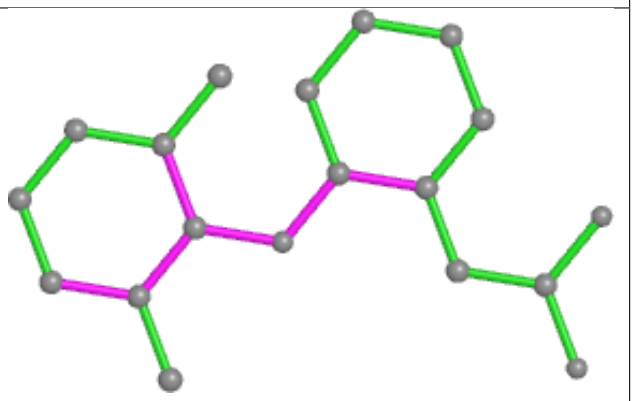
Ligand PLM I 1004



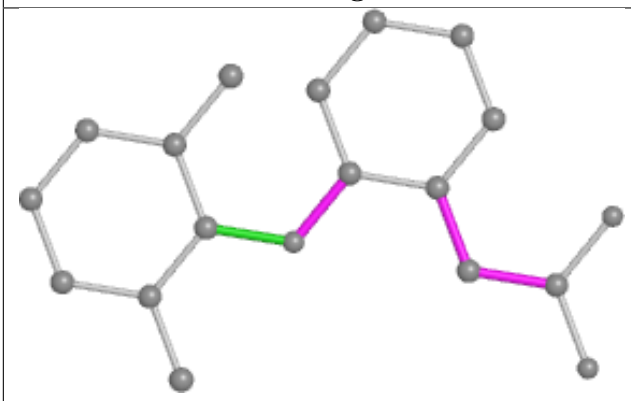
Ligand DIF A 1006



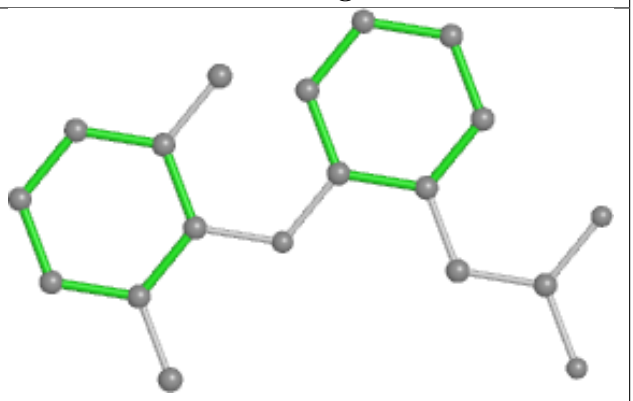
Bond lengths



Bond angles

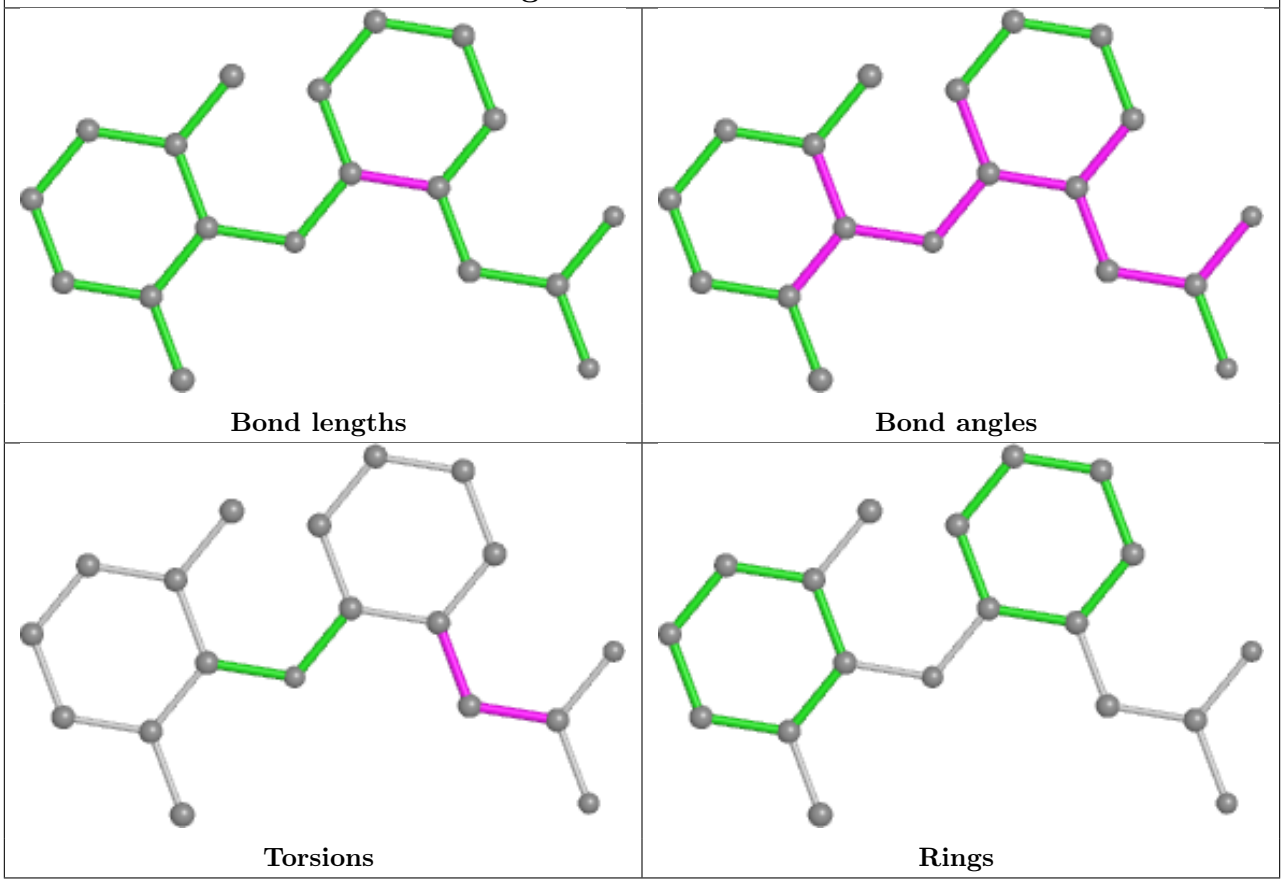


Torsions

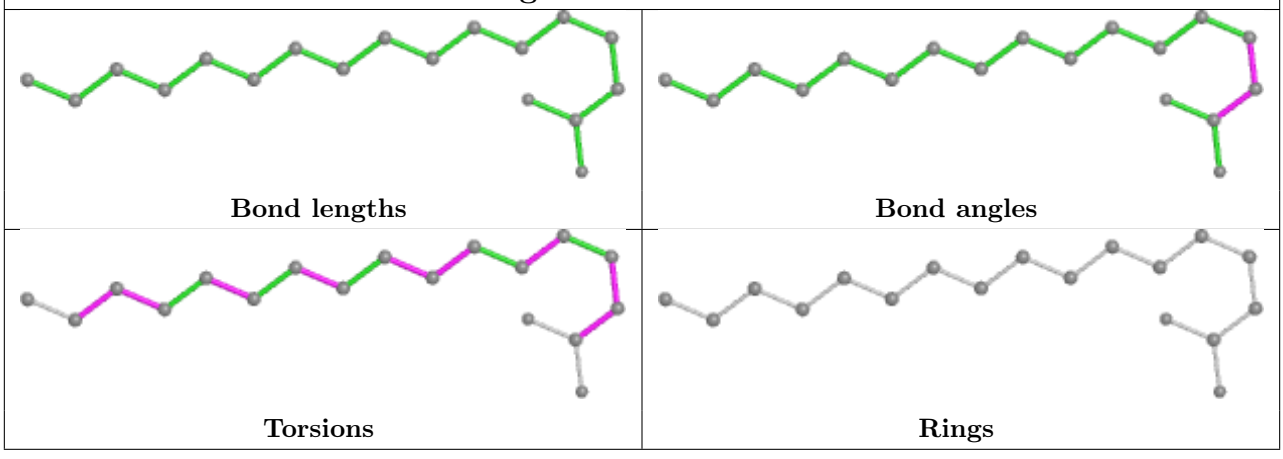


Rings

Ligand DIF A 1007



Ligand PLM I 1002



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	581/585 (99%)	0.33	17 (2%)	51	52	33, 55, 78, 98	0
1	I	581/585 (99%)	0.35	14 (2%)	59	59	31, 55, 77, 104	0
All	All	1162/1170 (99%)	0.34	31 (2%)	54	55	31, 55, 77, 104	0

The worst 5 of 31 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	I	109	ASN	4.2
1	A	388	ILE	3.7
1	A	310	VAL	3.7
1	A	381	VAL	3.1
1	A	555	VAL	3.0

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

There are no monosaccharides in this entry.

6.4 Ligands

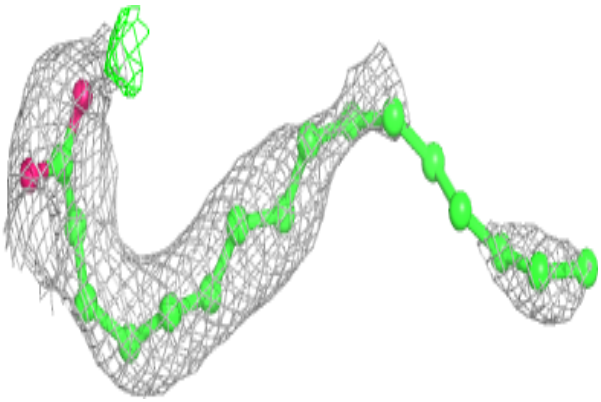
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

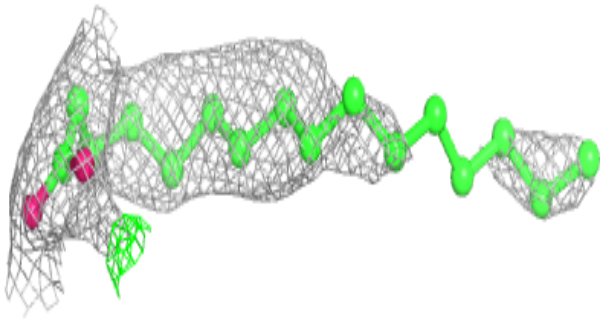
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	F15	I	1001	13/17	0.57	0.40	36,74,91,91	0
2	F15	A	1001	13/17	0.76	0.27	44,67,85,86	0
3	PLM	I	1004	18/18	0.81	0.28	45,66,84,85	0
4	DIF	A	1008	19/19	0.81	0.26	67,85,101,153	0
3	PLM	A	1004	18/18	0.85	0.35	48,66,83,91	0
4	DIF	I	1006	19/19	0.86	0.19	45,56,78,84	0
2	F15	I	1005	17/17	0.87	0.18	35,50,63,64	0
4	DIF	A	1007	19/19	0.87	0.17	42,59,92,100	0
2	F15	A	1003	17/17	0.88	0.33	52,68,83,83	0
2	F15	A	1005	17/17	0.90	0.30	43,52,61,61	0
4	DIF	A	1006	19/19	0.91	0.20	39,76,97,218	0
3	PLM	A	1002	18/18	0.91	0.34	36,46,102,105	0
2	F15	I	1003	17/17	0.92	0.23	56,73,83,86	0
3	PLM	I	1002	18/18	0.93	0.17	38,56,81,82	0

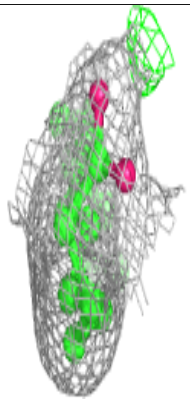
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around PLM I 1004:

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

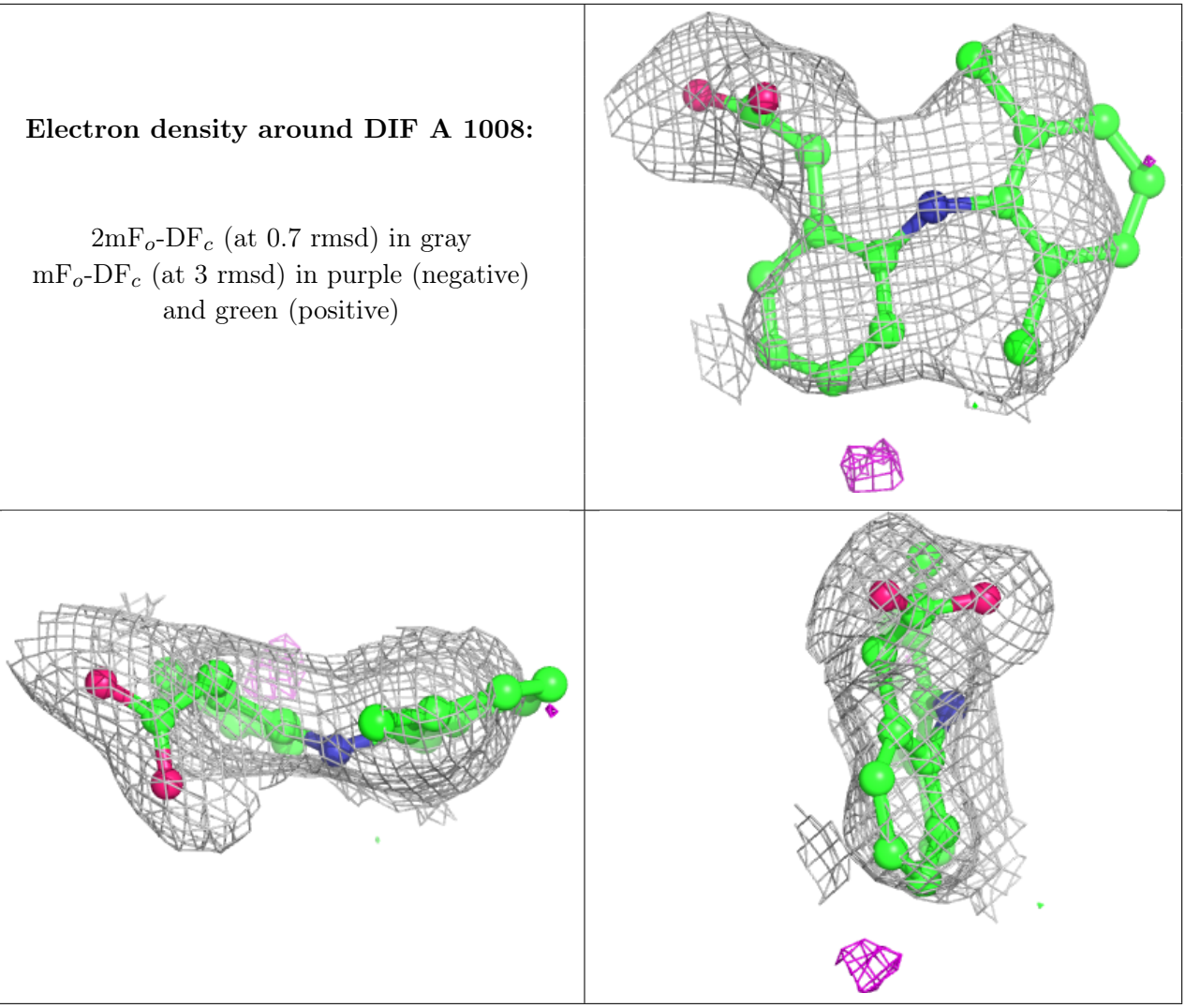






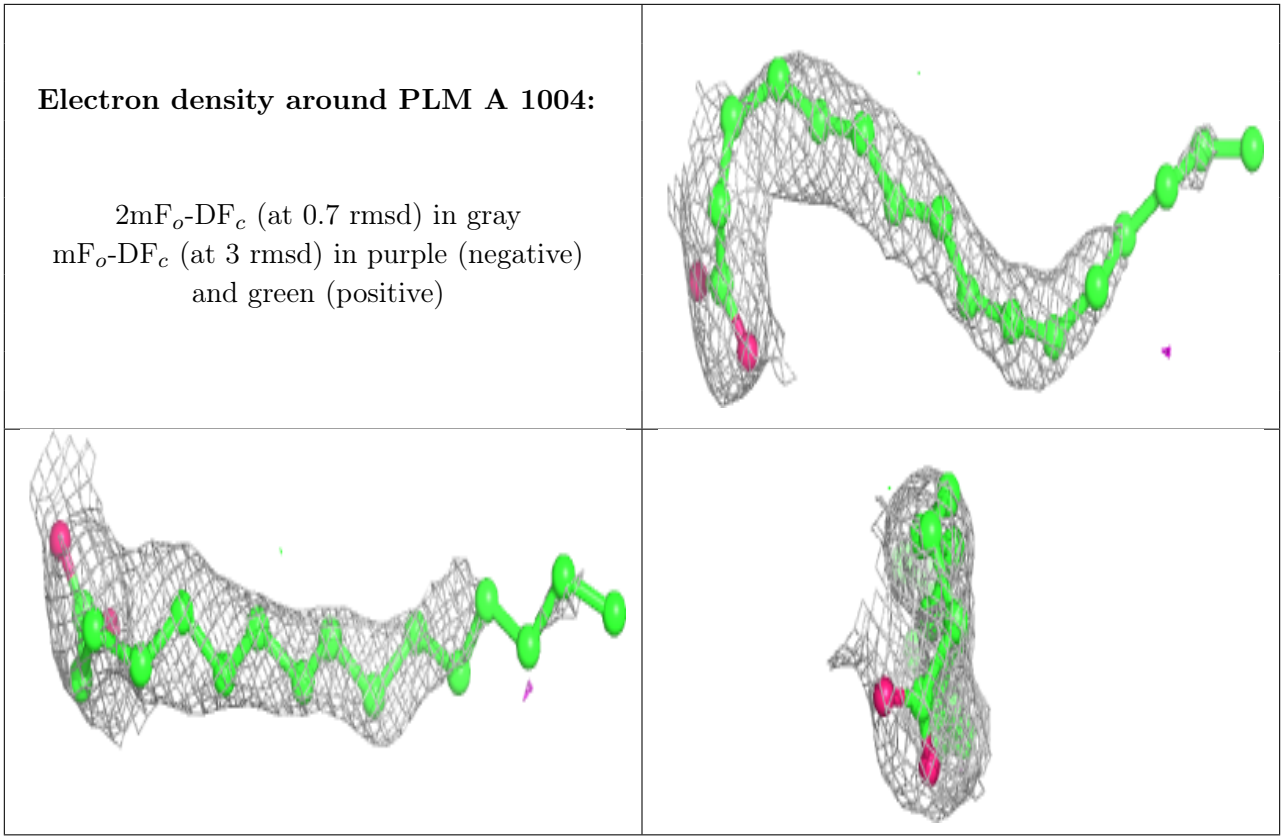
Electron density around DIF A 1008:

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



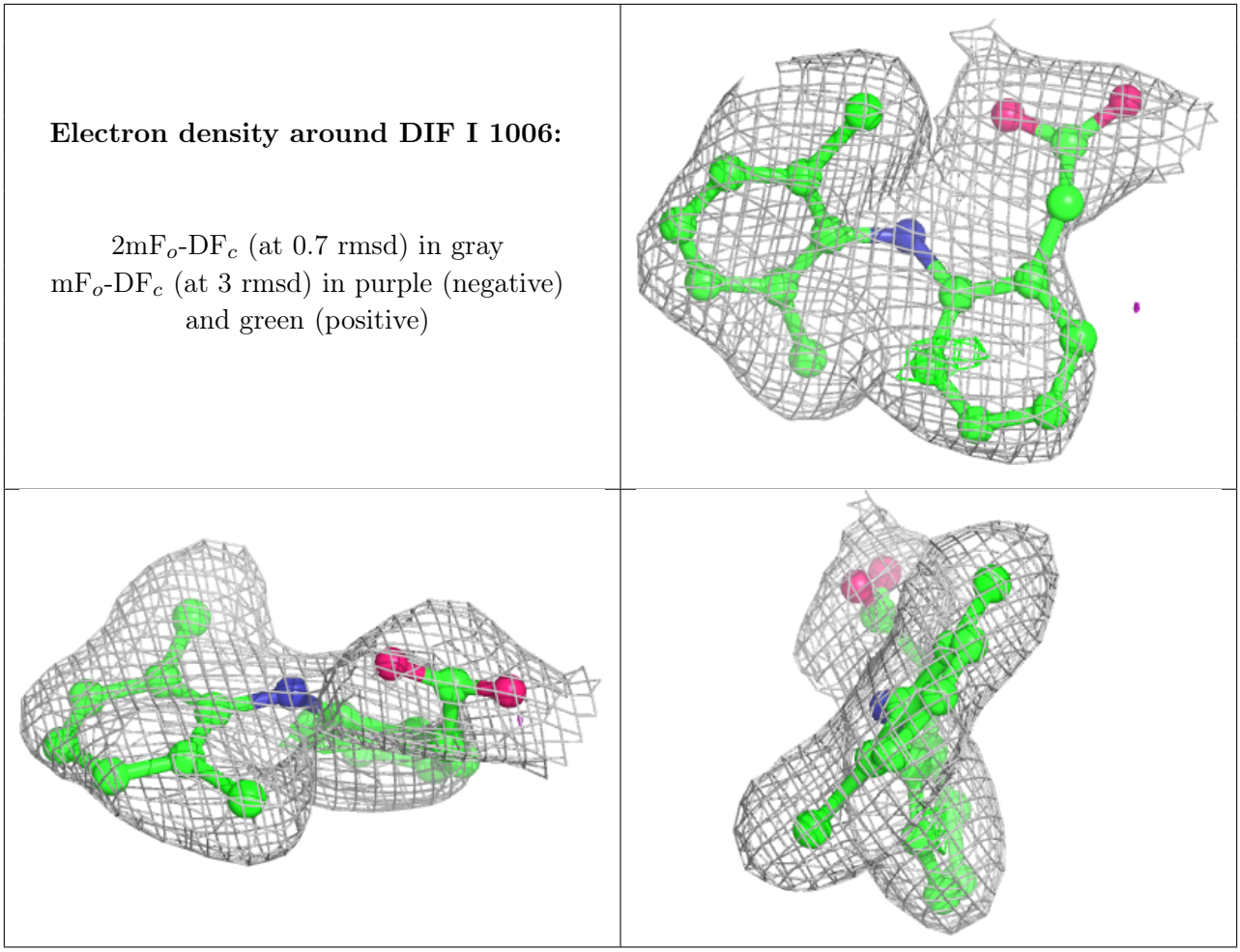
Electron density around PLM A 1004:

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



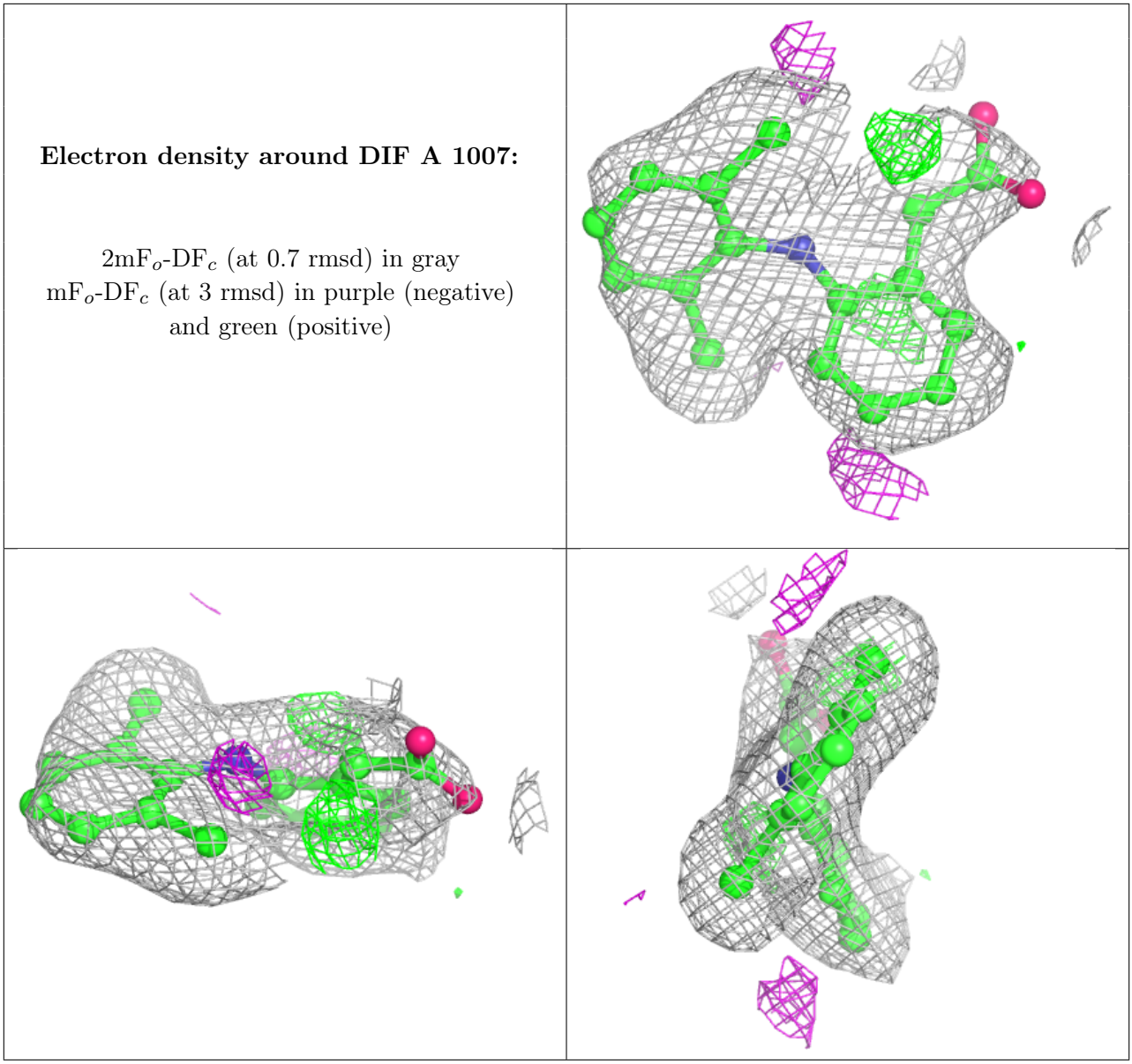
Electron density around DIF I 1006:

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



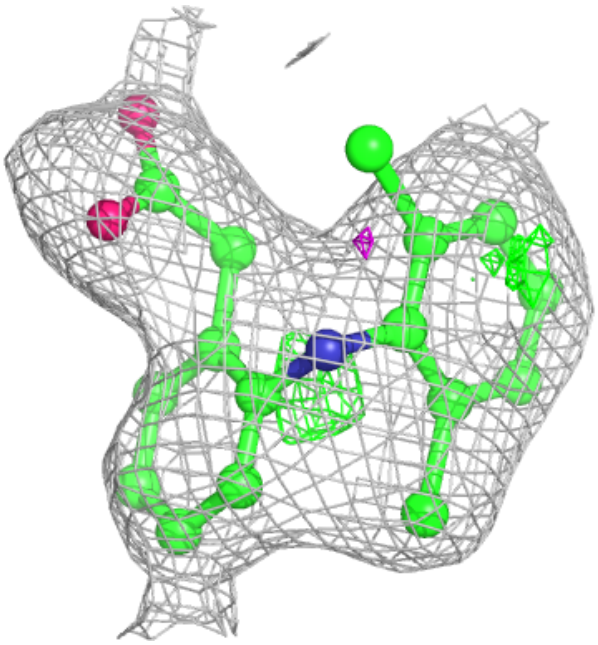
Electron density around DIF A 1007:

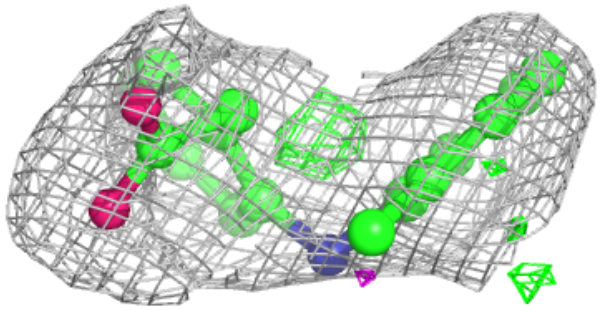
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

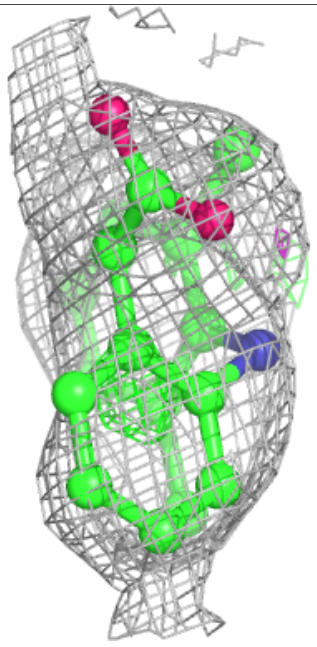


Electron density around DIF A 1006:

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

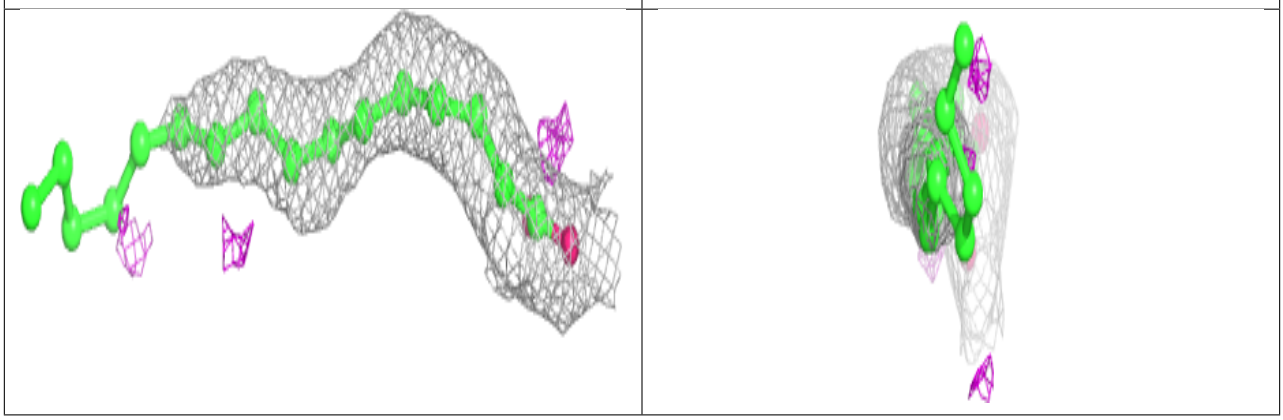






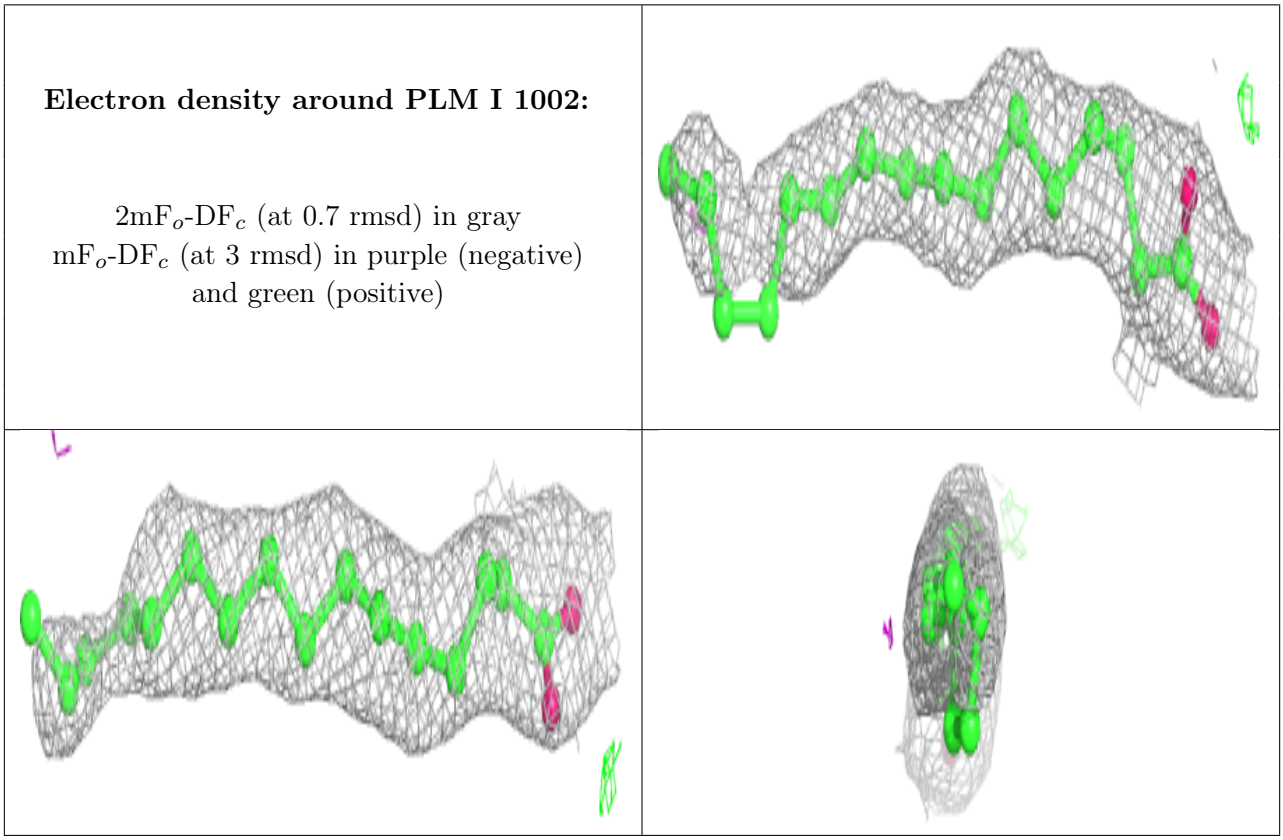
Electron density around PLM A 1002:

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



Electron density around PLM I 1002:

$2mF_o$-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.