



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 15, 2023 – 09:35 PM EDT

PDB ID : 8F6M
Title : Complex of Rabbit muscle pyruvate kinase with ADP and the phosphonate analogue of PEP mimicking the Michaelis complex.
Authors : Holyoak, T.; Fenton, A.W.
Deposited on : 2022-11-16
Resolution : 2.15 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
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) : 2.36

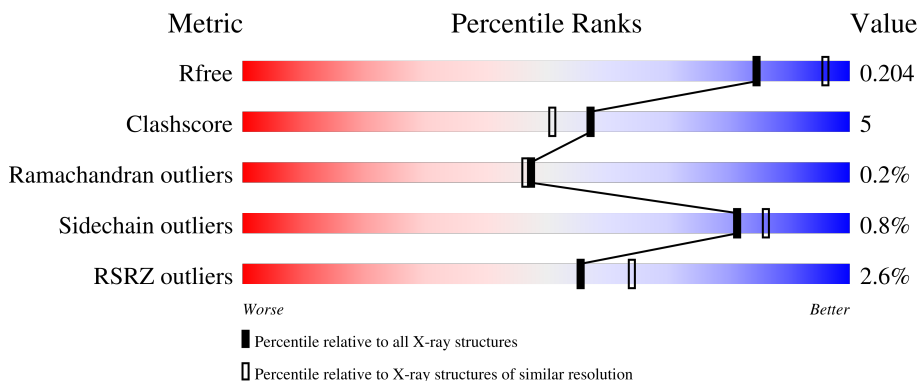
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.15 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	1479 (2.16-2.16)
Clashscore	141614	1585 (2.16-2.16)
Ramachandran outliers	138981	1560 (2.16-2.16)
Sidechain outliers	138945	1559 (2.16-2.16)
RSRZ outliers	127900	1456 (2.16-2.16)

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 $\leq 5\%$. 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	531	
1	B	531	
1	C	531	
1	D	531	
1	E	531	

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Mol	Chain	Length	Quality of chain
1	F	531	<p>%</p> <p>87% 10%</p>
1	G	531	<p>11%</p> <p>80% 14% 5%</p>
1	H	531	<p>89% 10%</p>

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
8	GZ3	G	601	-	-	X	-

2 Entry composition

There are 9 unique types of molecules in this entry. The entry contains 35355 atoms, of which 64 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 Pyruvate kinase PKM.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	519	Total 3999	C 2512	N 714	O 745	S 28	0	3	0
1	B	519	Total 4004	C 2516	N 715	O 745	S 28	0	4	0
1	C	519	Total 3989	C 2506	N 708	O 746	S 29	0	2	0
1	D	522	Total 4031	C 2534	N 716	O 752	S 29	0	5	0
1	E	519	Total 4011	C 2521	N 715	O 746	S 29	0	5	0
1	F	515	Total 3978	C 2501	N 709	O 740	S 28	0	3	0
1	G	506	Total 3889	C 2442	N 692	O 726	S 29	0	1	0
1	H	522	Total 4010	C 2520	N 712	O 749	S 29	0	2	0

There are 8 discrepancies between the modelled and reference sequences:

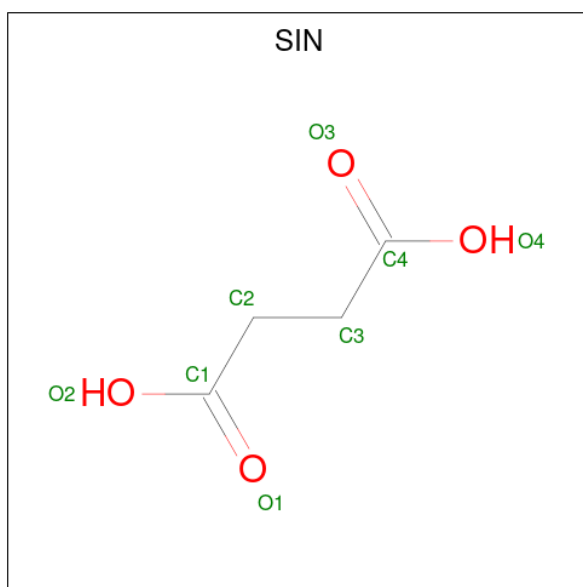
Chain	Residue	Modelled	Actual	Comment	Reference
A	400	ALA	SER	variant	UNP P11974
B	400	ALA	SER	variant	UNP P11974
C	400	ALA	SER	variant	UNP P11974
D	400	ALA	SER	variant	UNP P11974
E	400	ALA	SER	variant	UNP P11974
F	400	ALA	SER	variant	UNP P11974
G	400	ALA	SER	variant	UNP P11974
H	400	ALA	SER	variant	UNP P11974

- Molecule 2 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
2	A	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	B	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	C	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	D	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
2	F	1	Total	C	N	O	P	0	0
			27	10	5	10	2		

- Molecule 3 is SUCCINIC ACID (three-letter code: SIN) (formula: C₄H₆O₄) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C O 8 4 4	0	0
3	A	1	Total C H O 12 4 4 4	0	0
3	B	1	Total C O 8 4 4	0	0
3	B	1	Total C H O 12 4 4 4	0	0
3	C	1	Total C O 8 4 4	0	0
3	C	1	Total C H O 12 4 4 4	0	0
3	D	1	Total C O 8 4 4	0	0
3	D	1	Total C H O 12 4 4 4	0	0
3	E	1	Total C H O 12 4 4 4	0	0
3	F	1	Total C H O 12 4 4 4	0	0
3	G	1	Total C H O 12 4 4 4	0	0
3	H	1	Total C H O 12 4 4 4	0	0

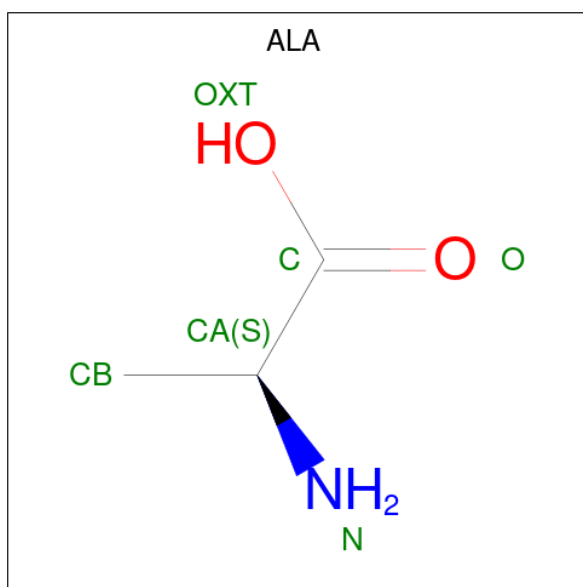
- Molecule 4 is MANGANESE (II) ION (three-letter code: MN) (formula: Mn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	2	Total Mn 2 2	0	0
4	B	2	Total Mn 2 2	0	0
4	C	2	Total Mn 2 2	0	0
4	D	2	Total Mn 2 2	0	0
4	E	2	Total Mn 2 2	0	0
4	F	2	Total Mn 2 2	0	0
4	G	1	Total Mn 1 1	0	0
4	H	2	Total Mn 2 2	0	0

- Molecule 5 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total K 1 1	0	0
5	B	1	Total K 1 1	0	0
5	C	1	Total K 1 1	0	0
5	D	1	Total K 1 1	0	0
5	E	1	Total K 1 1	0	0
5	F	1	Total K 1 1	0	0
5	G	1	Total K 1 1	0	0
5	H	1	Total K 1 1	0	0

- Molecule 6 is ALANINE (three-letter code: ALA) (formula: C₃H₇NO₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
6	A	1	Total	C	N	O	0	0
			6	3	1	2		
6	B	1	Total	C	N	O	0	0
			6	3	1	2		
6	C	1	Total	C	N	O	0	0
			6	3	1	2		
6	D	1	Total	C	N	O	0	0
			6	3	1	2		
6	E	1	Total	C	N	O	0	0
			6	3	1	2		
6	F	1	Total	C	N	O	0	0
			6	3	1	2		
6	G	1	Total	C	N	O	0	0
			6	3	1	2		
6	H	1	Total	C	N	O	0	0
			6	3	1	2		

- Molecule 7 is GLYCEROL (three-letter code: GOL) (formula: C₃H₈O₃).



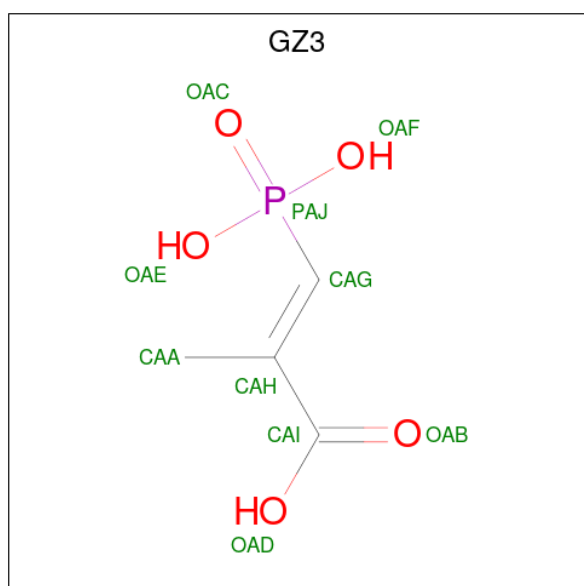
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	1	Total C O 6 3 3	0	0
7	A	1	Total C O 6 3 3	0	0
7	A	1	Total C O 6 3 3	0	0
7	A	1	Total C O 6 3 3	0	0
7	B	1	Total C O 6 3 3	0	0
7	B	1	Total C O 6 3 3	0	0
7	B	1	Total C H O 14 3 8 3	0	0
7	C	1	Total C O 6 3 3	0	0
7	C	1	Total C O 6 3 3	0	0
7	C	1	Total C O 6 3 3	0	0
7	C	1	Total C H O 14 3 8 3	0	0
7	C	1	Total C H O 14 3 8 3	0	0
7	D	1	Total C O 6 3 3	0	0
7	E	1	Total C O 6 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	E	1	Total C O 6 3 3	0	0
7	E	1	Total C O 6 3 3	0	0
7	E	1	Total C O 6 3 3	0	0
7	F	1	Total C O 6 3 3	0	0
7	F	1	Total C O 6 3 3	0	0
7	F	1	Total C O 6 3 3	0	0
7	F	1	Total C O 6 3 3	0	0
7	F	1	Total C H O 14 3 8 3	0	0
7	G	1	Total C O 6 3 3	0	0
7	G	1	Total C O 6 3 3	0	0
7	H	1	Total C O 6 3 3	0	0
7	H	1	Total C O 6 3 3	0	0

- Molecule 8 is (E)-2-METHYL-3-PHOSPHONOACRYLATE (three-letter code: GZ3) (formula: C₄H₇O₅P) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
8	E	1	Total	C	O	P	0	0
			10	4	5	1		
8	F	1	Total	C	O	P	0	0
			10	4	5	1		
8	G	1	Total	C	O	P	0	0
			10	4	5	1		
8	H	1	Total	C	O	P	0	0
			10	4	5	1		

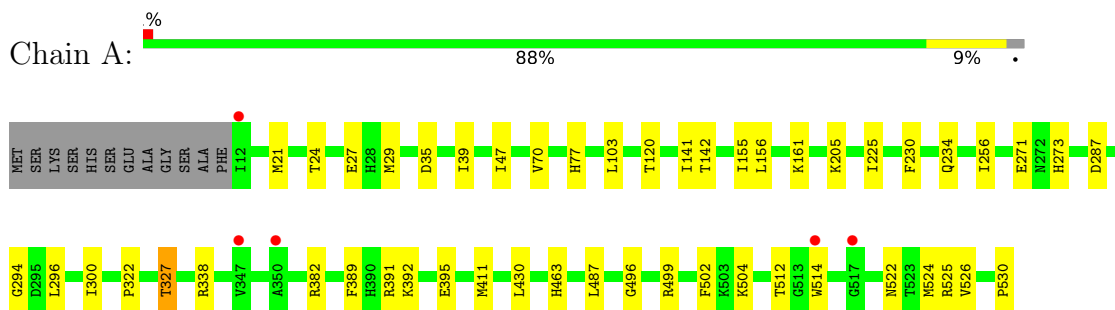
- Molecule 9 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	A	414	Total	O	0	0
			414	414		
9	B	402	Total	O	0	0
			402	402		
9	C	256	Total	O	0	0
			256	256		
9	D	344	Total	O	0	0
			344	344		
9	E	412	Total	O	0	0
			412	412		
9	F	358	Total	O	0	0
			358	358		
9	G	332	Total	O	0	0
			332	332		
9	H	364	Total	O	0	0
			364	364		

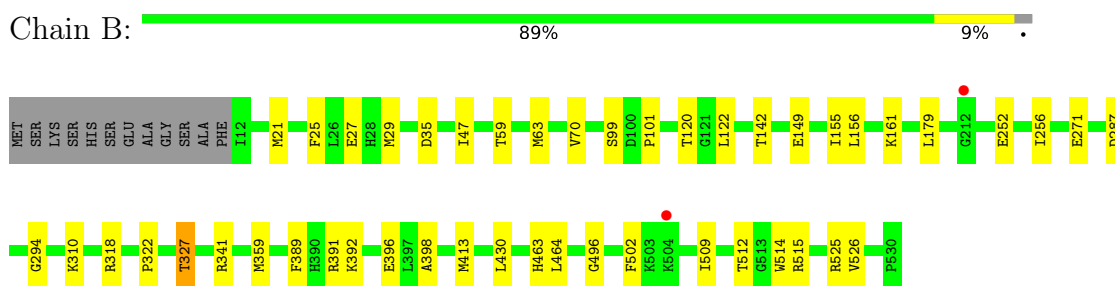
3 Residue-property plots [i](#)

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.

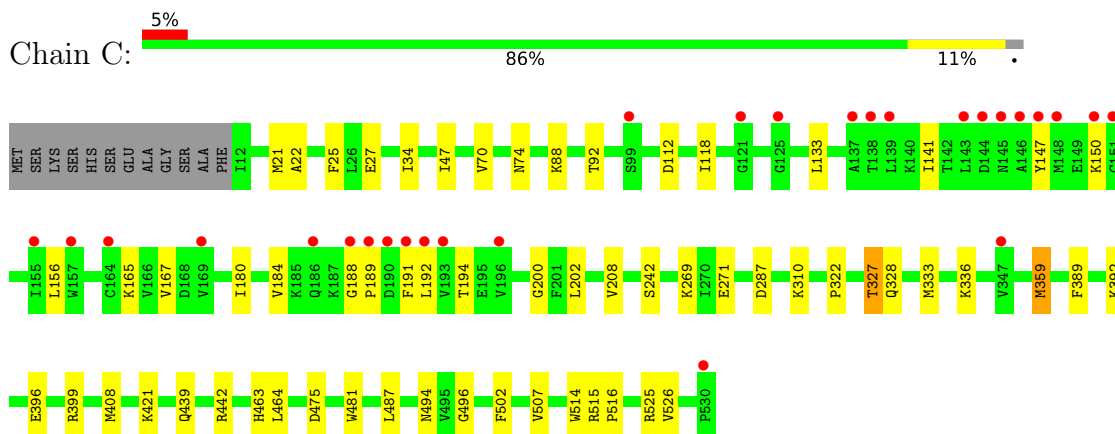
- Molecule 1: Pyruvate kinase PKM



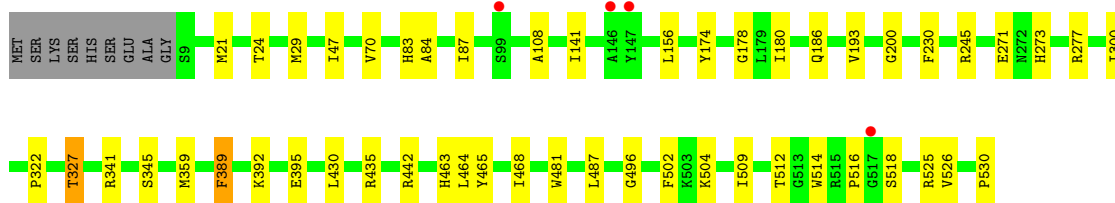
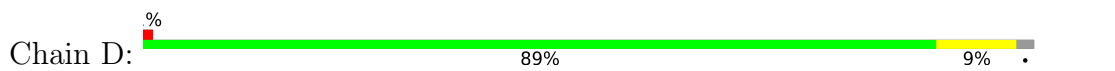
- Molecule 1: Pyruvate kinase PKM



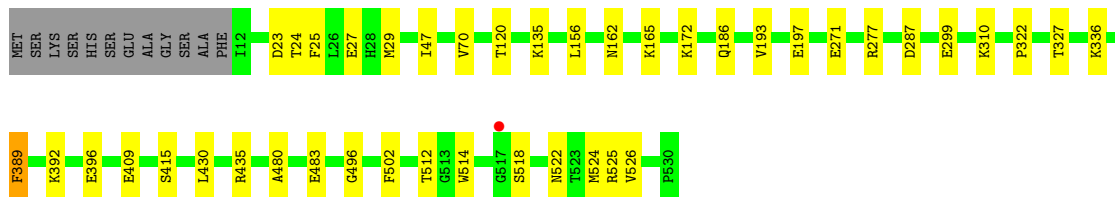
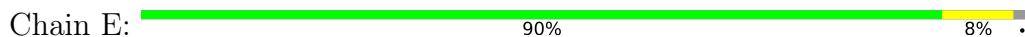
- Molecule 1: Pyruvate kinase PKM



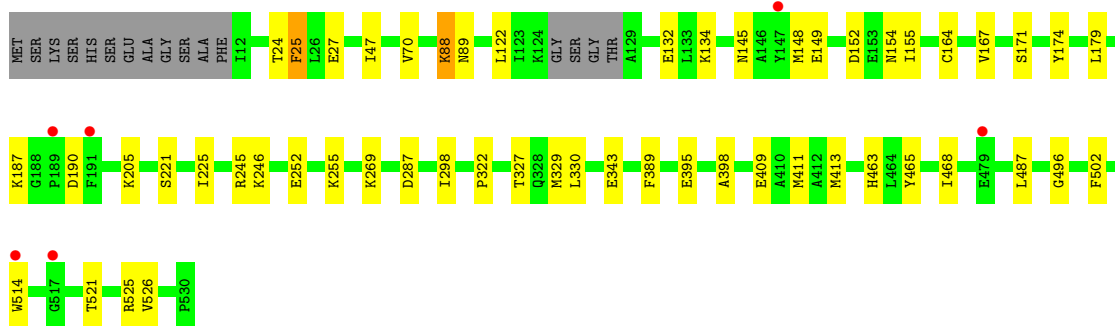
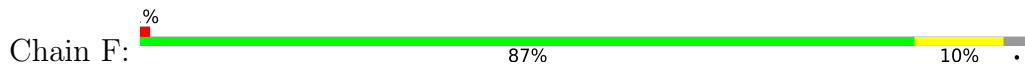
- Molecule 1: Pyruvate kinase PKM



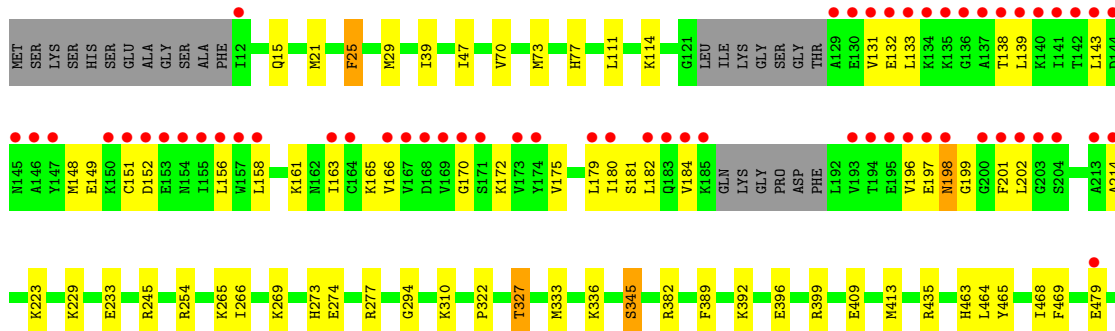
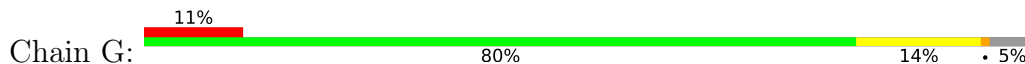
• Molecule 1: Pyruvate kinase PKM

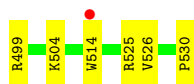


• Molecule 1: Pyruvate kinase PKM



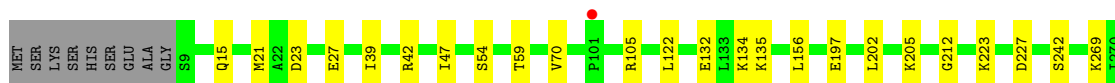
• Molecule 1: Pyruvate kinase PKM





- Molecule 1: Pyruvate kinase PKM

Chain H: 89% 10%



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	93.03Å 216.40Å 258.15Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	46.02 – 2.15 46.02 – 2.15	Depositor EDS
% Data completeness (in resolution range)	99.8 (46.02-2.15) 99.8 (46.02-2.15)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.23 (at 2.16Å)	Xtrriage
Refinement program	PHENIX 1.20.1_4487	Depositor
R, R_{free}	0.156 , 0.205 0.156 , 0.204	Depositor DCC
R_{free} test set	14172 reflections (5.05%)	wwPDB-VP
Wilson B-factor (Å ²)	22.7	Xtrriage
Anisotropy	0.007	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 44.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	35355	wwPDB-VP
Average B, all atoms (Å ²)	26.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.82% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: MN, ADP, GZ3, SIN, GOL, K

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	0.62	0/4072	0.70	1/5492 (0.0%)
1	B	0.60	0/4080	0.68	0/5503
1	C	0.55	0/4058	0.67	2/5473 (0.0%)
1	D	0.58	0/4111	0.67	0/5544
1	E	0.64	0/4091	0.71	0/5517
1	F	0.61	1/4050 (0.0%)	0.71	1/5461 (0.0%)
1	G	0.58	0/3951	0.67	1/5327 (0.0%)
1	H	0.64	0/4080	0.71	0/5503
All	All	0.60	1/32493 (0.0%)	0.69	5/43820 (0.0%)

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	B	0	1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	27	GLU	CG-CD	5.39	1.60	1.51

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	329	MET	CG-SD-CE	-5.91	90.75	100.20
1	G	21	MET	CG-SD-CE	5.56	109.10	100.20
1	A	524	MET	CG-SD-CE	-5.23	91.84	100.20
1	C	359	MET	CG-SD-CE	5.11	108.38	100.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	408	MET	CG-SD-CE	5.01	108.22	100.20

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	341	ARG	Sidechain

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	3999	0	4083	44	0
1	B	4004	0	4094	35	0
1	C	3989	0	4070	47	0
1	D	4031	0	4113	38	0
1	E	4011	0	4097	35	0
1	F	3978	0	4062	45	0
1	G	3889	0	3965	68	0
1	H	4010	0	4089	36	0
2	A	27	0	12	1	0
2	B	27	0	12	0	0
2	C	27	0	12	0	0
2	D	27	0	12	0	0
2	F	27	0	12	0	0
3	A	16	4	8	1	0
3	B	16	4	8	2	0
3	C	16	4	8	1	0
3	D	16	4	8	2	0
3	E	8	4	4	0	0
3	F	8	4	4	0	0
3	G	8	4	4	1	0
3	H	8	4	4	1	0
4	A	2	0	0	0	0
4	B	2	0	0	0	0
4	C	2	0	0	0	0
4	D	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	E	2	0	0	0	0
4	F	2	0	0	0	0
4	G	1	0	0	0	0
4	H	2	0	0	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
5	E	1	0	0	0	0
5	F	1	0	0	0	0
5	G	1	0	0	0	0
5	H	1	0	0	0	0
6	A	6	0	4	1	0
6	B	6	0	4	1	0
6	C	6	0	4	1	0
6	D	6	0	4	1	0
6	E	6	0	4	0	0
6	F	6	0	4	1	0
6	G	6	0	4	1	0
6	H	6	0	4	1	0
7	A	24	0	32	3	0
7	B	18	8	24	1	0
7	C	30	16	40	6	0
7	D	6	0	8	0	0
7	E	24	0	32	2	0
7	F	30	8	40	4	0
7	G	12	0	16	1	0
7	H	12	0	15	1	0
8	E	10	0	4	0	0
8	F	10	0	4	1	0
8	G	10	0	4	4	0
8	H	10	0	4	1	0
9	A	414	0	0	8	0
9	B	402	0	0	5	0
9	C	256	0	0	3	0
9	D	344	0	0	2	0
9	E	412	0	0	1	0
9	F	358	0	0	7	0
9	G	332	0	0	7	0
9	H	364	0	0	6	0
All	All	35291	64	32936	318	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including

hydrogen atoms). The all-atom clashscore for this structure is 5.

All (318) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:29:MET:HG3	9:A:1377:HOH:O	1.53	1.06
1:G:175:VAL:HG22	1:G:180:ILE:HB	1.43	0.97
1:F:122:LEU:CD1	1:F:205:LYS:HE3	2.06	0.85
1:F:152:ASP:HB2	1:F:155:ILE:HG22	1.58	0.85
1:A:21:MET:HE1	9:A:1113:HOH:O	1.78	0.83
1:F:152:ASP:HB3	1:F:154:ASN:H	1.45	0.81
1:G:25:PHE:CE2	1:G:392:LYS:HD3	2.16	0.80
1:G:25:PHE:HE2	1:G:392:LYS:HD3	1.48	0.78
1:A:21:MET:HE3	1:A:21:MET:HA	1.68	0.76
1:C:442:ARG:NH1	7:C:1009:GOL:H32	2.01	0.76
1:G:131:VAL:HG11	1:G:152:ASP:HA	1.67	0.74
1:G:175:VAL:CG2	1:G:180:ILE:HB	2.16	0.74
1:A:514:TRP:CE3	1:F:525:ARG:HD3	2.23	0.73
1:F:252:GLU:HG2	9:F:1005:HOH:O	1.88	0.73
1:C:399:ARG:HH21	1:E:23:ASP:CG	1.92	0.72
1:C:88:LYS:HE2	1:C:92:THR:OG1	1.89	0.72
1:B:27:GLU:HG2	9:B:1403:HOH:O	1.90	0.71
1:D:481:TRP:CG	1:D:516:PRO:HD3	2.26	0.71
1:B:29:MET:HG3	9:B:1469:HOH:O	1.89	0.71
1:E:172:LYS:HE3	1:E:197:GLU:OE1	1.91	0.70
1:G:269:LYS:NZ	8:G:601:GZ3:HAG	2.06	0.70
1:G:525:ARG:HD3	1:H:514:TRP:CE3	2.26	0.70
1:G:392:LYS:HE3	9:G:711:HOH:O	1.92	0.70
1:G:399:ARG:HH21	1:H:23:ASP:CG	1.95	0.70
1:G:133:LEU:O	1:G:199:GLY:HA3	1.90	0.69
8:G:601:GZ3:HAA3	9:G:720:HOH:O	1.93	0.69
1:G:133:LEU:HD22	1:G:139:LEU:HD22	1.74	0.69
1:B:525:ARG:HD3	1:D:514:TRP:CE3	2.27	0.69
7:F:612:GOL:H12	9:H:845:HOH:O	1.92	0.69
1:E:435:ARG:HH21	7:E:608:GOL:H11	1.57	0.68
1:A:395:GLU:OE2	7:A:910:GOL:O1	2.12	0.68
1:C:463:HIS:HD1	6:C:1007:ALA:N	1.92	0.67
1:C:481:TRP:CG	1:C:516:PRO:HD3	2.30	0.67
1:C:442:ARG:HH12	7:C:1009:GOL:H32	1.61	0.66
1:H:435:ARG:HG2	1:H:435:ARG:HH11	1.58	0.66
1:A:525:ARG:HD3	1:F:514:TRP:CE3	2.30	0.66
1:F:145:ASN:HB3	1:F:148:MET:CE	2.26	0.66
1:A:338:ARG:HH21	1:G:179:LEU:HA	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:C:1012:GOL:HG3	1:D:341:ARG:HH12	1.62	0.65
1:E:389:PHE:CE2	1:E:392:LYS:HG3	2.32	0.65
1:H:27:GLU:HG2	9:H:927:HOH:O	1.97	0.65
1:A:338:ARG:NH2	1:G:179:LEU:O	2.30	0.65
1:D:504:LYS:HG3	1:D:530:PRO:O	1.97	0.65
1:G:165:LYS:O	1:G:165:LYS:HD3	1.97	0.65
1:A:391:ARG:HH21	1:A:392:LYS:NZ	1.95	0.64
1:C:47:ILE:HB	1:C:359:MET:HG3	1.80	0.64
1:C:188:GLY:HA3	1:C:191:PHE:CZ	2.32	0.64
9:A:1331:HOH:O	1:G:345:SER:HB2	1.98	0.64
3:H:604:SIN:O1	9:H:701:HOH:O	2.15	0.64
1:F:132:GLU:OE1	1:F:134:LYS:HD3	1.97	0.64
1:B:99:SER:O	1:B:101:PRO:HD3	1.98	0.63
1:F:167:VAL:CG1	1:F:171:SER:HB2	2.28	0.63
1:F:122:LEU:HD11	1:F:205:LYS:HE3	1.80	0.63
1:C:525:ARG:HD3	1:E:514:TRP:CE3	2.33	0.63
1:G:181:SER:HB3	1:G:198:ASN:OD1	1.99	0.62
1:H:15:GLN:CG	1:H:39:ILE:HG23	2.29	0.62
1:B:514:TRP:CE3	1:D:525:ARG:HD3	2.34	0.62
1:C:165:LYS:N	1:C:165:LYS:HD2	2.14	0.62
1:D:463:HIS:HD1	6:D:1007:ALA:N	1.97	0.62
1:G:526:VAL:HG23	1:H:411:MET:SD	2.39	0.62
1:G:469:PHE:CZ	1:G:499:ARG:HD2	2.34	0.61
1:A:504:LYS:HD2	1:A:530:PRO:O	2.01	0.61
1:G:151:CYS:SG	1:G:156:LEU:HD12	2.40	0.61
1:C:242:SER:HA	1:C:269:LYS:HD3	1.81	0.61
1:D:327:THR:OG1	3:D:1002:SIN:H22	2.01	0.61
1:G:133:LEU:HD12	1:G:202:LEU:HD13	1.81	0.60
1:H:435:ARG:HG2	1:H:435:ARG:NH1	2.16	0.60
1:B:514:TRP:O	1:B:515:ARG:HD2	2.02	0.60
1:H:463:HIS:HD1	6:H:605:ALA:N	1.99	0.60
1:G:179:LEU:O	1:G:180:ILE:HD13	2.02	0.60
1:F:179:LEU:HG	9:F:863:HOH:O	2.02	0.60
1:E:29:MET:HG3	9:E:1066:HOH:O	2.02	0.59
1:F:255:LYS:HE3	9:F:1005:HOH:O	2.01	0.59
1:C:514:TRP:CE3	1:E:525:ARG:HD3	2.37	0.59
1:E:435:ARG:HH21	7:E:608:GOL:C1	2.15	0.59
1:B:122:LEU:HD12	1:B:149:GLU:HG2	1.84	0.58
1:G:172:LYS:HE3	1:G:197:GLU:OE1	2.02	0.58
1:B:59:THR:O	1:B:63:MET:HG2	2.03	0.58
1:G:133:LEU:CD1	1:G:202:LEU:HD13	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:133:LEU:CD2	1:G:139:LEU:HD22	2.33	0.58
1:G:465:TYR:HB2	1:G:468:ILE:HD12	1.85	0.58
1:D:21:MET:CE	1:D:21:MET:HA	2.34	0.58
1:A:161:LYS:HE2	1:A:161:LYS:HA	1.86	0.58
1:A:338:ARG:NH2	1:G:179:LEU:HA	2.20	0.57
1:B:463:HIS:HD1	6:B:1007:ALA:N	2.03	0.57
1:F:167:VAL:HG12	1:F:171:SER:HB2	1.87	0.57
1:D:435:ARG:NH2	9:D:1103:HOH:O	2.35	0.57
1:H:430:LEU:HD22	1:H:512:THR:HG22	1.87	0.57
1:A:411:MET:SD	1:F:526:VAL:HG23	2.45	0.56
1:E:430:LEU:HD22	1:E:512:THR:HG22	1.87	0.56
1:G:269:LYS:HZ3	8:G:601:GZ3:HAG	1.69	0.56
1:B:327:THR:OG1	3:B:1002:SIN:H22	2.06	0.56
1:G:463:HIS:HD1	6:G:605:ALA:N	2.04	0.56
1:B:142:THR:HB	1:B:155:ILE:HD11	1.87	0.55
1:C:439:GLN:CD	7:C:1009:GOL:H12	2.27	0.55
1:H:336:LYS:NZ	9:H:704:HOH:O	2.28	0.55
1:D:481:TRP:CD1	1:D:516:PRO:HD3	2.41	0.55
1:F:88:LYS:HE3	1:F:89:ASN:OD1	2.06	0.55
1:D:509:ILE:HD13	1:D:526:VAL:HG12	1.88	0.55
1:G:514:TRP:CE3	1:H:525:ARG:HD3	2.41	0.55
1:A:463:HIS:HD1	6:A:907:ALA:N	2.04	0.55
1:C:184:VAL:HA	1:C:194:THR:HG22	1.89	0.55
1:B:35:ASP:OD2	1:E:277[A]:ARG:HD3	2.07	0.55
1:A:47:ILE:HG12	1:A:70:VAL:HB	1.89	0.54
1:D:21:MET:HA	1:D:21:MET:HE2	1.89	0.54
1:D:392:LYS:HE2	1:D:395:GLU:OE1	2.07	0.54
1:H:435:ARG:NH2	7:H:607:GOL:O3	2.40	0.54
1:G:25:PHE:CE2	1:G:392:LYS:CD	2.90	0.54
1:F:463:HIS:HD1	6:F:607:ALA:N	2.06	0.54
1:C:487:LEU:C	1:C:487:LEU:HD23	2.28	0.54
1:H:42:ARG:HB2	1:H:382:ARG:HG3	1.90	0.53
1:A:225:ILE:HG12	1:A:256:ILE:HD12	1.89	0.53
1:A:430:LEU:HD22	1:A:512:THR:HG22	1.90	0.53
1:G:435:ARG:NH2	7:G:607:GOL:O1	2.42	0.53
9:B:1251:HOH:O	1:E:27:GLU:HG2	2.08	0.53
1:D:273[B]:HIS:CE1	1:D:277[B]:ARG:NH2	2.77	0.53
1:A:487:LEU:C	1:A:487:LEU:HD23	2.29	0.53
9:A:1107:HOH:O	1:G:29:MET:CE	2.57	0.53
1:C:189:PRO:HD2	1:C:191:PHE:CE2	2.43	0.53
1:F:465:TYR:HB2	1:F:468:ILE:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:601:GZ3:HAA3	9:H:741:HOH:O	2.07	0.53
1:F:164:CYS:HB2	9:F:872:HOH:O	2.08	0.52
1:H:47:ILE:HG12	1:H:70:VAL:HB	1.91	0.52
1:G:229:LYS:O	1:G:233:GLU:HG3	2.09	0.52
1:A:273[A]:HIS:CE1	1:A:300:ILE:HG22	2.44	0.52
1:A:526:VAL:HG23	1:F:411:MET:SD	2.50	0.52
1:C:22:ALA:HB1	1:C:27[B]:GLU:HB3	1.92	0.52
1:A:21:MET:HE3	1:A:21:MET:CA	2.39	0.52
7:C:1011:GOL:H11	9:C:1152:HOH:O	2.10	0.52
1:B:21:MET:HG3	9:B:1348:HOH:O	2.08	0.51
1:F:145:ASN:HB3	1:F:148:MET:HE3	1.92	0.51
1:F:395:GLU:OE2	7:F:610:GOL:O2	2.27	0.51
1:B:509:ILE:CD1	1:B:526:VAL:HG22	2.40	0.51
1:E:162:ASN:OD1	1:E:165:LYS:HE2	2.11	0.51
1:G:504:LYS:HG3	1:G:530:PRO:OXT	2.10	0.51
1:C:34:ILE:HD11	1:D:273[B]:HIS:CD2	2.45	0.51
1:C:496:GLY:HA3	1:C:502:PHE:CZ	2.45	0.51
1:B:47:ILE:HG12	1:B:70:VAL:HB	1.93	0.51
1:G:435:ARG:HB3	3:G:604:SIN:H31	1.93	0.50
9:A:1107:HOH:O	1:G:29:MET:HE1	2.11	0.50
1:C:147:TYR:HA	1:C:150:LYS:HB2	1.94	0.50
1:C:494:ASN:ND2	9:C:1105:HOH:O	2.37	0.50
1:G:143:LEU:HD11	1:G:163:ILE:HG22	1.93	0.50
1:C:328:GLN:HE22	7:C:1012:GOL:H32	1.77	0.49
1:E:496:GLY:HA3	1:E:502:PHE:CZ	2.47	0.49
1:A:391:ARG:HH21	1:A:392:LYS:HZ1	1.57	0.49
1:G:143:LEU:HD22	1:G:161:LYS:HE2	1.94	0.49
1:G:435:ARG:NH1	9:G:704:HOH:O	2.29	0.49
7:A:909:GOL:H31	1:F:398:ALA:HB1	1.94	0.49
1:D:273[B]:HIS:CD2	1:D:277[B]:ARG:NE	2.81	0.49
1:F:269:LYS:NZ	8:F:602:GZ3:OAE	2.44	0.49
1:B:398:ALA:CB	1:B:413:MET:HE3	2.43	0.49
1:E:287:ASP:O	1:E:322:PRO:HD2	2.13	0.49
1:H:465:TYR:HB2	1:H:468:ILE:HD12	1.94	0.49
1:H:273:HIS:HD2	9:H:774:HOH:O	1.95	0.49
1:E:271:GLU:O	1:E:299:GLU:HG3	2.12	0.49
1:A:120:THR:HB	1:A:156:LEU:HD11	1.95	0.49
1:B:120:THR:HB	1:B:156:LEU:HD11	1.94	0.48
1:C:88:LYS:HD3	1:C:88:LYS:C	2.33	0.48
1:G:182:LEU:HD23	1:G:196:VAL:HA	1.95	0.48
1:A:294:GLY:CA	1:A:327:THR:HG21	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:469:PHE:HZ	1:G:499:ARG:HD2	1.76	0.48
1:H:408:MET:HG2	1:H:435:ARG:HH12	1.78	0.48
1:F:411:MET:HG3	1:F:521:THR:O	2.12	0.48
1:A:142:THR:CG2	1:A:155:ILE:HD11	2.42	0.48
1:C:141:ILE:HA	1:C:156:LEU:O	2.13	0.48
1:H:54:SER:HA	1:H:59:THR:HG21	1.95	0.48
1:D:273[A]:HIS:CE1	1:D:300:ILE:HG22	2.47	0.48
1:G:165:LYS:O	1:G:165:LYS:CD	2.62	0.48
1:D:518:SER:HA	9:D:1106:HOH:O	2.13	0.48
1:A:103:LEU:O	1:A:499:ARG:NH2	2.47	0.47
1:A:35:ASP:OD2	1:G:277:ARG:HD3	2.14	0.47
1:B:398:ALA:HB1	1:B:413:MET:HE3	1.95	0.47
1:A:35:ASP:OD1	1:G:273:HIS:HE1	1.97	0.47
1:B:322:PRO:HB3	1:B:464:LEU:O	2.13	0.47
1:C:327:THR:OG1	3:C:1002:SIN:H22	2.14	0.47
1:G:245:ARG:HD2	9:G:926:HOH:O	2.15	0.47
1:F:164:CYS:O	1:F:187:LYS:HE3	2.15	0.47
1:C:399:ARG:NH2	1:E:23:ASP:CG	2.63	0.47
1:H:122:LEU:HD21	1:H:205:LYS:HE2	1.95	0.47
1:C:481:TRP:CD2	1:C:516:PRO:HD3	2.49	0.47
1:D:47:ILE:HG12	1:D:70:VAL:HB	1.96	0.47
1:F:88:LYS:HD2	1:F:88:LYS:O	2.15	0.47
1:G:15:GLN:OE1	9:G:701:HOH:O	2.21	0.47
1:B:359:MET:HE1	3:B:1002:SIN:H32	1.96	0.47
1:F:190:ASP:N	1:F:190:ASP:OD1	2.47	0.47
1:A:24:THR:HB	1:G:396:GLU:CD	2.34	0.47
1:G:170:GLY:N	1:G:184:VAL:O	2.41	0.47
1:D:509:ILE:CD1	1:D:526:VAL:HG12	2.46	0.46
1:F:47:ILE:HG12	1:F:70:VAL:HB	1.97	0.46
1:C:322:PRO:HB3	1:C:464:LEU:O	2.15	0.46
1:H:132:GLU:CD	1:H:134:LYS:HE3	2.36	0.46
1:C:333:MET:HA	1:C:336:LYS:O	2.16	0.46
1:D:186:GLN:HB2	1:D:193:VAL:HB	1.97	0.46
1:E:480:ALA:HB3	1:E:483:GLU:OE2	2.15	0.46
1:B:287:ASP:O	1:B:322:PRO:HD2	2.15	0.46
1:B:496:GLY:HA3	1:B:502:PHE:CZ	2.50	0.46
1:C:310:LYS:HB3	1:D:29:MET:HG3	1.97	0.46
1:H:504:LYS:HG3	1:H:530:PRO:OXT	2.14	0.46
1:A:21:MET:CE	9:A:1113:HOH:O	2.48	0.46
1:B:294:GLY:CA	1:B:327:THR:HG21	2.46	0.46
1:E:186:GLN:HB2	1:E:193:VAL:HB	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:24:THR:HB	1:H:396:GLU:CD	2.36	0.46
1:E:526:VAL:HG13	1:E:526:VAL:O	2.16	0.46
1:F:167:VAL:CG1	1:F:171:SER:CB	2.93	0.46
1:D:496:GLY:HA3	1:D:502:PHE:CZ	2.51	0.45
1:E:392:LYS:O	1:E:396:GLU:HG3	2.16	0.45
1:B:391:ARG:HH11	1:B:391:ARG:HG2	1.81	0.45
1:A:27:GLU:HG2	9:A:1127:HOH:O	2.15	0.45
1:E:135:LYS:HB2	1:E:135:LYS:HE2	1.61	0.45
1:F:167:VAL:HG13	1:F:171:SER:CB	2.46	0.45
1:H:242:SER:HA	1:H:269:LYS:HD3	1.99	0.45
1:C:133:LEU:CD1	1:C:202:LEU:HB3	2.46	0.45
1:D:83:HIS:O	1:D:87:ILE:HG13	2.16	0.45
1:B:161:LYS:HA	1:B:161:LYS:HD3	1.63	0.45
1:D:465:TYR:HB2	1:D:468:ILE:HD12	1.98	0.45
1:E:389:PHE:CD2	1:E:392:LYS:HG3	2.51	0.45
1:F:122:LEU:HD13	1:F:205:LYS:HE3	1.93	0.45
1:G:47:ILE:HG12	1:G:70:VAL:HB	1.99	0.45
1:H:39:ILE:O	1:H:382:ARG:HD2	2.17	0.45
1:F:25:PHE:CE2	7:F:609:GOL:H31	2.52	0.44
1:D:84:ALA:HB2	1:D:230:PHE:HZ	1.82	0.44
1:F:179:LEU:HD21	9:F:960:HOH:O	2.16	0.44
1:F:221:SER:O	1:F:225:ILE:HG13	2.16	0.44
1:G:77:HIS:HB2	9:G:868:HOH:O	2.17	0.44
1:A:29:MET:HG2	1:G:310:LYS:HB3	1.99	0.44
1:C:287:ASP:O	1:C:322:PRO:HD2	2.18	0.44
1:D:70:VAL:HG22	1:D:108:ALA:HB3	1.98	0.44
1:F:330:LEU:HD23	1:F:343:GLU:HB3	1.98	0.44
1:C:525:ARG:HA	1:E:522:ASN:O	2.17	0.44
1:D:430:LEU:HD22	1:D:512:THR:HG22	2.00	0.44
1:D:487:LEU:C	1:D:487:LEU:HD23	2.37	0.44
1:G:133:LEU:HD11	1:G:202:LEU:HD22	2.00	0.44
7:B:1009:GOL:H11	9:B:1407:HOH:O	2.18	0.44
1:H:135:LYS:HE2	1:H:197:GLU:O	2.17	0.44
1:A:230:PHE:CE2	1:A:234:GLN:HG3	2.54	0.43
1:F:287:ASP:O	1:F:322:PRO:HD2	2.19	0.43
1:B:179:LEU:HD11	1:E:336:LYS:HE2	2.01	0.43
1:B:310:LYS:HB3	1:E:29:MET:CG	2.49	0.43
1:C:167:VAL:HG21	1:C:192:LEU:HD11	2.00	0.43
1:A:296:LEU:O	1:A:300:ILE:HG12	2.18	0.43
7:F:609:GOL:H11	7:F:612:GOL:H11	2.00	0.43
1:B:396:GLU:CD	1:E:24:THR:HB	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:475:ASP:OD2	9:C:1101:HOH:O	2.21	0.43
1:C:21:MET:HA	1:C:21:MET:CE	2.48	0.43
1:D:180:ILE:HD11	1:D:200:GLY:HA3	2.00	0.43
1:D:322:PRO:HB3	1:D:464:LEU:O	2.18	0.43
1:D:389:PHE:CE2	1:D:392:LYS:HG3	2.53	0.43
1:E:47:ILE:HG12	1:E:70:VAL:HB	2.00	0.43
1:F:496:GLY:HA3	1:F:502:PHE:CZ	2.53	0.43
1:B:179:LEU:CD1	1:E:336:LYS:HE2	2.49	0.43
1:C:165:LYS:HE3	1:C:165:LYS:HA	2.00	0.43
1:C:396:GLU:CD	1:D:24:THR:HB	2.40	0.43
1:H:496:GLY:HA3	1:H:502:PHE:CZ	2.53	0.43
1:A:496:GLY:HA3	1:A:502:PHE:CZ	2.53	0.42
1:G:269:LYS:NZ	8:G:601:GZ3:CAG	2.78	0.42
1:A:39:ILE:O	1:A:382:ARG:HD2	2.20	0.42
1:C:421:LYS:HE2	1:E:409:GLU:HB3	2.00	0.42
1:G:132:GLU:OE1	1:G:201:PHE:HE1	2.01	0.42
1:G:166:VAL:HG21	1:G:214:ALA:O	2.18	0.42
1:C:74:ASN:HA	1:C:112:ASP:HB3	2.02	0.42
1:C:507:VAL:CG2	1:C:526:VAL:CG2	2.98	0.42
1:F:487:LEU:C	1:F:487:LEU:HD23	2.39	0.42
1:A:327:THR:OG1	3:A:902:SIN:H22	2.18	0.42
7:A:909:GOL:H32	7:A:910:GOL:H12	2.02	0.42
1:D:481:TRP:CD2	1:D:516:PRO:HD3	2.54	0.42
1:E:120:THR:HB	1:E:156:LEU:HD11	2.00	0.42
1:H:156:LEU:HD13	1:H:202:LEU:HD21	2.02	0.42
1:C:525:ARG:HD3	1:E:514:TRP:CD2	2.55	0.42
1:G:114:LYS:CD	1:G:223:LYS:HE2	2.50	0.42
1:G:254:ARG:CZ	1:G:266:ILE:HD12	2.49	0.42
1:G:265:LYS:HD3	1:G:265:LYS:HA	1.83	0.42
1:H:273:HIS:CD2	1:H:300:ILE:HG22	2.55	0.42
1:C:47:ILE:HG12	1:C:70:VAL:HB	2.01	0.42
1:C:118:ILE:CG2	1:C:208:VAL:HB	2.50	0.42
1:F:409:GLU:O	1:F:413:MET:HG3	2.18	0.42
1:A:29:MET:CE	1:G:310:LYS:O	2.68	0.42
1:B:252:GLU:O	1:B:256:ILE:HG12	2.20	0.42
1:A:141:ILE:HA	1:A:156:LEU:O	2.20	0.41
1:G:409:GLU:O	1:G:413:MET:HG3	2.20	0.41
1:H:105:ARG:NH2	1:H:470:PRO:HD2	2.35	0.41
1:H:487:LEU:C	1:H:487:LEU:HD23	2.40	0.41
1:G:111:LEU:C	1:G:111:LEU:HD23	2.41	0.41
1:F:245[B]:ARG:CZ	9:F:774:HOH:O	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:322:PRO:HB3	1:G:464:LEU:O	2.20	0.41
1:B:25:PHE:CD1	1:E:25:PHE:CE1	3.08	0.41
1:G:333:MET:HA	1:G:336:LYS:O	2.20	0.41
1:B:430:LEU:HD22	1:B:512:THR:HG22	2.03	0.41
1:C:141:ILE:HB	1:C:192:LEU:HB2	2.02	0.41
1:E:415:SER:HA	1:E:524[A]:MET:SD	2.61	0.41
1:G:39:ILE:O	1:G:382:ARG:HD2	2.20	0.41
1:F:246:LYS:NZ	9:F:706:HOH:O	2.34	0.41
1:H:223:LYS:NZ	1:H:227:ASP:OD2	2.51	0.41
1:H:271:GLU:O	1:H:299:GLU:HG3	2.21	0.41
1:A:21:MET:HA	1:A:21:MET:CE	2.41	0.41
1:A:522:ASN:O	1:F:525:ARG:HA	2.21	0.41
1:D:174:TYR:HB3	1:D:178:GLY:HA2	2.02	0.41
1:F:174:TYR:CG	1:F:298:ILE:HD11	2.55	0.41
1:G:148:MET:HG2	1:G:149:GLU:HG3	2.02	0.41
1:H:287:ASP:O	1:H:322:PRO:HD2	2.20	0.41
1:A:77:HIS:CE1	2:A:901:ADP:H2'	2.56	0.41
1:A:205:LYS:HE3	9:A:1251:HOH:O	2.21	0.41
1:A:287:ASP:O	1:A:322:PRO:HD2	2.20	0.41
1:C:180:ILE:HD11	1:C:200:GLY:HA3	2.02	0.41
1:D:359:MET:HE1	3:D:1002:SIN:H32	2.03	0.41
1:D:141:ILE:HA	1:D:156:LEU:O	2.20	0.41
1:G:158:LEU:HD21	1:G:163:ILE:HD12	2.03	0.41
1:H:212:GLY:H	1:H:273:HIS:CD2	2.39	0.41
1:F:122:LEU:HB2	1:F:149:GLU:HA	2.02	0.40
9:G:733:HOH:O	1:H:21:MET:HE1	2.21	0.40
1:H:105:ARG:HH22	1:H:470:PRO:HD2	1.85	0.40
1:C:481:TRP:CD1	1:C:516:PRO:HD3	2.55	0.40
1:D:273[B]:HIS:CD2	1:D:277[B]:ARG:CZ	3.04	0.40
1:G:294:GLY:CA	1:G:327:THR:HG21	2.50	0.40
1:B:29:MET:HG2	1:E:310:LYS:HB3	2.03	0.40
1:B:318:ARG:NH1	1:E:27:GLU:OE1	2.55	0.40
1:B:392:LYS:HA	1:B:392:LYS:HD2	1.77	0.40
1:G:245:ARG:NH1	1:G:274:GLU:OE1	2.52	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	520/531 (98%)	508 (98%)	11 (2%)	1 (0%)	47	46
1	B	521/531 (98%)	509 (98%)	11 (2%)	1 (0%)	47	46
1	C	519/531 (98%)	505 (97%)	13 (2%)	1 (0%)	47	46
1	D	525/531 (99%)	514 (98%)	10 (2%)	1 (0%)	47	46
1	E	522/531 (98%)	513 (98%)	8 (2%)	1 (0%)	47	46
1	F	514/531 (97%)	503 (98%)	10 (2%)	1 (0%)	47	46
1	G	501/531 (94%)	493 (98%)	7 (1%)	1 (0%)	47	46
1	H	522/531 (98%)	513 (98%)	8 (2%)	1 (0%)	47	46
All	All	4144/4248 (98%)	4058 (98%)	78 (2%)	8 (0%)	47	46

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	327	THR
1	B	327	THR
1	D	327	THR
1	E	327	THR
1	G	327	THR
1	H	327	THR
1	F	327	THR
1	C	327	THR

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	428/434 (99%)	426 (100%)	2 (0%)	88	92
1	B	429/434 (99%)	427 (100%)	2 (0%)	88	92
1	C	427/434 (98%)	422 (99%)	5 (1%)	71	76
1	D	432/434 (100%)	427 (99%)	5 (1%)	71	76
1	E	430/434 (99%)	428 (100%)	2 (0%)	88	92
1	F	426/434 (98%)	423 (99%)	3 (1%)	84	89
1	G	416/434 (96%)	409 (98%)	7 (2%)	60	65
1	H	429/434 (99%)	427 (100%)	2 (0%)	88	92
All	All	3417/3472 (98%)	3389 (99%)	28 (1%)	81	86

All (28) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	271	GLU
1	A	389	PHE
1	B	271	GLU
1	B	389	PHE
1	C	25	PHE
1	C	271	GLU
1	C	389	PHE
1	C	392	LYS
1	C	515	ARG
1	D	245	ARG
1	D	271	GLU
1	D	345	SER
1	D	389	PHE
1	D	442	ARG
1	E	389	PHE
1	E	518	SER
1	F	25	PHE
1	F	88	LYS
1	F	389	PHE
1	G	25	PHE
1	G	73	MET
1	G	138	THR
1	G	198	ASN
1	G	345	SER
1	G	389	PHE
1	G	479	GLU
1	H	389	PHE

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Mol	Chain	Res	Type
1	H	515	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (6) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	478	GLN
1	C	186	GLN
1	C	490	ASN
1	D	403	HIS
1	G	273	HIS
1	H	273	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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 78 ligands modelled in this entry, 23 are monoatomic - leaving 55 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	$\# Z > 2$
3	SIN	G	604	-	7,7,7	1.05	0	8,8,8	1.72	1 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	ADP	F	601	4	24,29,29	1.12	2 (8%)	29,45,45	1.28	3 (10%)
6	ALA	H	605	-	5,5,5	1.08	0	6,6,6	1.66	2 (33%)
7	GOL	C	1010	-	5,5,5	1.11	0	5,5,5	0.88	0
7	GOL	C	1012	-	5,5,5	0.66	0	5,5,5	1.43	1 (20%)
3	SIN	C	1006	-	7,7,7	1.25	0	8,8,8	1.73	3 (37%)
7	GOL	G	606	-	5,5,5	1.12	0	5,5,5	0.88	0
7	GOL	H	607	-	5,5,5	1.69	2 (40%)	5,5,5	0.79	0
6	ALA	F	607	-	5,5,5	0.96	0	6,6,6	1.25	1 (16%)
6	ALA	G	605	-	5,5,5	1.17	1 (20%)	6,6,6	1.45	2 (33%)
7	GOL	F	609	-	5,5,5	0.79	0	5,5,5	1.39	0
7	GOL	A	911	-	5,5,5	1.30	0	5,5,5	0.80	0
7	GOL	G	607	-	5,5,5	1.13	1 (20%)	5,5,5	1.09	0
7	GOL	A	908	-	5,5,5	0.90	0	5,5,5	0.97	0
8	GZ3	G	601	4,5	8,9,9	3.45	3 (37%)	9,13,13	2.05	3 (33%)
7	GOL	C	1008	-	5,5,5	0.78	0	5,5,5	1.22	1 (20%)
8	GZ3	H	601	4	8,9,9	3.41	3 (37%)	9,13,13	1.68	2 (22%)
6	ALA	D	1007	-	5,5,5	1.29	1 (20%)	6,6,6	1.48	2 (33%)
3	SIN	A	902	4	7,7,7	1.18	0	8,8,8	1.80	3 (37%)
2	ADP	A	901	4	24,29,29	0.92	1 (4%)	29,45,45	1.25	4 (13%)
7	GOL	F	612	-	5,5,5	0.91	0	5,5,5	0.69	0
7	GOL	F	610	-	5,5,5	0.63	0	5,5,5	1.40	1 (20%)
6	ALA	E	606	-	5,5,5	1.13	0	6,6,6	1.16	1 (16%)
3	SIN	F	606	-	7,7,7	1.15	0	8,8,8	1.61	4 (50%)
7	GOL	F	608	-	5,5,5	1.43	1 (20%)	5,5,5	0.45	0
7	GOL	E	608	-	5,5,5	0.98	0	5,5,5	1.10	0
7	GOL	F	611	-	5,5,5	1.07	0	5,5,5	0.99	0
6	ALA	C	1007	-	5,5,5	1.23	1 (20%)	6,6,6	1.28	1 (16%)
8	GZ3	F	602	4,5	8,9,9	3.62	4 (50%)	9,13,13	1.75	1 (11%)
7	GOL	E	610	-	5,5,5	0.86	0	5,5,5	1.00	0
7	GOL	D	1008	-	5,5,5	0.87	0	5,5,5	0.84	0
8	GZ3	E	601	4	8,9,9	2.84	4 (50%)	9,13,13	2.60	5 (55%)
3	SIN	D	1006	-	7,7,7	0.99	0	8,8,8	1.38	0
3	SIN	B	1002	4	7,7,7	1.19	0	8,8,8	2.07	3 (37%)
6	ALA	B	1007	-	5,5,5	1.29	1 (20%)	6,6,6	0.80	0
2	ADP	C	1001	4	24,29,29	1.22	3 (12%)	29,45,45	1.11	2 (6%)
7	GOL	C	1011	-	5,5,5	1.07	0	5,5,5	0.92	0
7	GOL	C	1009	-	5,5,5	1.36	0	5,5,5	0.91	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
6	ALA	A	907	-	5,5,5	1.53	2 (40%)	6,6,6	1.24	1 (16%)
3	SIN	D	1002	4	7,7,7	1.18	0	8,8,8	2.06	2 (25%)
7	GOL	B	1009	-	5,5,5	0.86	0	5,5,5	1.04	0
7	GOL	H	606	-	5,5,5	1.29	0	5,5,5	0.81	0
7	GOL	B	1010	-	5,5,5	1.08	0	5,5,5	1.66	1 (20%)
3	SIN	E	605	-	7,7,7	1.18	0	8,8,8	1.48	2 (25%)
3	SIN	B	1006	-	7,7,7	1.33	0	8,8,8	1.62	2 (25%)
7	GOL	A	909	-	5,5,5	0.89	0	5,5,5	0.87	0
7	GOL	A	910	-	5,5,5	0.82	0	5,5,5	1.00	0
7	GOL	B	1008	-	5,5,5	0.60	0	5,5,5	1.55	1 (20%)
7	GOL	E	607	-	5,5,5	0.55	0	5,5,5	1.59	1 (20%)
3	SIN	C	1002	4	7,7,7	1.14	1 (14%)	8,8,8	1.68	2 (25%)
3	SIN	H	604	-	7,7,7	1.21	0	8,8,8	1.72	3 (37%)
2	ADP	B	1001	4	24,29,29	0.96	2 (8%)	29,45,45	1.14	1 (3%)
2	ADP	D	1001	4	24,29,29	1.28	3 (12%)	29,45,45	1.23	2 (6%)
7	GOL	E	609	-	5,5,5	1.58	1 (20%)	5,5,5	0.77	0
3	SIN	A	906	-	7,7,7	1.12	0	8,8,8	1.95	4 (50%)

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
3	SIN	G	604	-	-	3/5/5/5	-
2	ADP	F	601	4	-	0/12/32/32	0/3/3/3
6	ALA	H	605	-	-	2/4/4/4	-
7	GOL	C	1010	-	-	2/4/4/4	-
7	GOL	C	1012	-	-	0/4/4/4	-
3	SIN	C	1006	-	-	3/5/5/5	-
7	GOL	G	606	-	-	1/4/4/4	-
7	GOL	H	607	-	-	0/4/4/4	-
6	ALA	F	607	-	-	0/4/4/4	-
6	ALA	G	605	-	-	0/4/4/4	-
7	GOL	F	609	-	-	2/4/4/4	-
7	GOL	A	911	-	-	3/4/4/4	-
7	GOL	G	607	-	-	2/4/4/4	-
7	GOL	A	908	-	-	4/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
8	GZ3	G	601	4,5	-	2/6/9/9	-
7	GOL	C	1008	-	-	0/4/4/4	-
8	GZ3	H	601	4	-	5/6/9/9	-
6	ALA	D	1007	-	-	0/4/4/4	-
3	SIN	A	902	4	-	4/5/5/5	-
2	ADP	A	901	4	-	0/12/32/32	0/3/3/3
7	GOL	F	612	-	-	2/4/4/4	-
7	GOL	F	610	-	-	4/4/4/4	-
6	ALA	E	606	-	-	0/4/4/4	-
3	SIN	F	606	-	-	3/5/5/5	-
7	GOL	F	608	-	-	2/4/4/4	-
7	GOL	E	608	-	-	2/4/4/4	-
7	GOL	F	611	-	-	1/4/4/4	-
6	ALA	C	1007	-	-	3/4/4/4	-
8	GZ3	F	602	4,5	-	5/6/9/9	-
7	GOL	E	610	-	-	3/4/4/4	-
7	GOL	D	1008	-	-	3/4/4/4	-
8	GZ3	E	601	4	-	2/6/9/9	-
3	SIN	D	1006	-	-	1/5/5/5	-
3	SIN	B	1002	4	-	4/5/5/5	-
6	ALA	B	1007	-	-	3/4/4/4	-
2	ADP	C	1001	4	-	2/12/32/32	0/3/3/3
7	GOL	C	1011	-	-	2/4/4/4	-
7	GOL	C	1009	-	-	0/4/4/4	-
6	ALA	A	907	-	-	1/4/4/4	-
3	SIN	D	1002	4	-	4/5/5/5	-
7	GOL	B	1009	-	-	2/4/4/4	-
7	GOL	H	606	-	-	0/4/4/4	-
7	GOL	B	1010	-	-	2/4/4/4	-
3	SIN	E	605	-	-	3/5/5/5	-
3	SIN	B	1006	-	-	2/5/5/5	-
7	GOL	A	909	-	-	4/4/4/4	-
7	GOL	A	910	-	-	2/4/4/4	-
7	GOL	B	1008	-	-	0/4/4/4	-
7	GOL	E	607	-	-	3/4/4/4	-
3	SIN	C	1002	4	-	4/5/5/5	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	SIN	H	604	-	-	4/5/5/5	-
2	ADP	B	1001	4	-	0/12/32/32	0/3/3/3
2	ADP	D	1001	4	-	0/12/32/32	0/3/3/3
7	GOL	E	609	-	-	2/4/4/4	-
3	SIN	A	906	-	-	3/5/5/5	-

All (37) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	G	601	GZ3	CAA-CAH	-7.54	1.32	1.50
8	H	601	GZ3	CAA-CAH	-7.01	1.33	1.50
8	F	602	GZ3	CAA-CAH	-6.82	1.33	1.50
8	E	601	GZ3	CAA-CAH	-6.44	1.34	1.50
8	F	602	GZ3	PAJ-CAG	6.23	1.85	1.76
8	G	601	GZ3	PAJ-CAG	5.33	1.84	1.76
8	H	601	GZ3	PAJ-CAG	5.08	1.83	1.76
8	F	602	GZ3	PAJ-OAC	3.33	1.54	1.48
2	D	1001	ADP	C2-N3	3.03	1.37	1.32
8	E	601	GZ3	PAJ-CAG	3.01	1.81	1.76
2	C	1001	ADP	O4'-C1'	2.89	1.45	1.41
2	C	1001	ADP	C5-C4	2.87	1.48	1.40
2	D	1001	ADP	O4'-C1'	2.84	1.45	1.41
2	D	1001	ADP	C5-C4	2.71	1.48	1.40
7	H	607	GOL	O2-C2	-2.65	1.35	1.43
6	A	907	ALA	CA-C	-2.64	1.51	1.54
2	F	601	ADP	C5-C4	2.64	1.47	1.40
7	H	607	GOL	C1-C2	2.57	1.62	1.51
2	F	601	ADP	O4'-C1'	2.53	1.44	1.41
8	H	601	GZ3	PAJ-OAC	2.48	1.52	1.48
6	C	1007	ALA	OXT-C	-2.45	1.22	1.30
8	G	601	GZ3	PAJ-OAC	2.35	1.52	1.48
7	E	609	GOL	C3-C2	2.32	1.61	1.51
2	C	1001	ADP	C2-N3	2.31	1.35	1.32
2	A	901	ADP	C5-C4	2.28	1.47	1.40
8	E	601	GZ3	PAJ-OAC	2.26	1.52	1.48
6	D	1007	ALA	OXT-C	-2.21	1.23	1.30
2	B	1001	ADP	O4'-C1'	2.18	1.44	1.41
2	B	1001	ADP	C5-C4	2.18	1.46	1.40
6	G	605	ALA	OXT-C	-2.17	1.23	1.30
8	F	602	GZ3	PAJ-OAE	-2.14	1.51	1.54
3	C	1002	SIN	O3-C4	2.12	1.29	1.22
6	B	1007	ALA	CA-C	-2.09	1.52	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	E	601	GZ3	CAI-CAH	-2.06	1.44	1.49
7	G	607	GOL	C1-C2	2.05	1.60	1.51
6	A	907	ALA	OXT-C	-2.04	1.23	1.30
7	F	608	GOL	O2-C2	-2.02	1.37	1.43

All (68) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	E	601	GZ3	CAA-CAH-CAI	4.58	122.81	115.69
8	F	602	GZ3	OAC-PAJ-CAG	-4.47	102.51	115.24
3	D	1002	SIN	C2-C3-C4	-4.26	104.44	113.60
8	E	601	GZ3	OAC-PAJ-CAG	-4.10	103.58	115.24
8	H	601	GZ3	OAC-PAJ-CAG	-3.98	103.93	115.24
3	B	1002	SIN	C3-C2-C1	-3.76	105.50	113.60
8	G	601	GZ3	OAC-PAJ-CAG	-3.62	104.93	115.24
3	A	902	SIN	C3-C2-C1	-3.56	105.94	113.60
2	F	601	ADP	N3-C2-N1	-3.47	123.25	128.68
2	B	1001	ADP	N3-C2-N1	-3.32	123.49	128.68
7	B	1010	GOL	C3-C2-C1	-3.30	98.89	111.70
2	D	1001	ADP	N3-C2-N1	-3.26	123.58	128.68
8	G	601	GZ3	CAA-CAH-CAI	3.16	120.61	115.69
8	G	601	GZ3	OAF-PAJ-OAE	3.16	118.80	107.82
3	B	1002	SIN	C2-C3-C4	-2.99	107.17	113.60
3	D	1002	SIN	C3-C2-C1	-2.95	107.25	113.60
7	B	1008	GOL	C3-C2-C1	-2.95	100.22	111.70
2	C	1001	ADP	N3-C2-N1	-2.92	124.11	128.68
2	A	901	ADP	N3-C2-N1	-2.90	124.15	128.68
7	E	607	GOL	C3-C2-C1	-2.89	100.47	111.70
2	D	1001	ADP	O2'-C2'-C1'	-2.82	100.43	110.85
3	C	1006	SIN	O2-C1-O1	-2.81	116.29	123.30
6	D	1007	ALA	OXT-C-O	-2.77	117.79	124.09
8	E	601	GZ3	OAD-CAI-CAH	2.77	123.34	115.81
3	A	906	SIN	C3-C2-C1	-2.76	107.66	113.60
8	E	601	GZ3	OAB-CAI-CAH	-2.76	114.84	122.11
3	B	1006	SIN	O2-C1-O1	-2.73	116.50	123.30
7	C	1012	GOL	C3-C2-C1	-2.67	101.31	111.70
2	A	901	ADP	O3B-PB-O2B	2.61	117.62	107.64
3	C	1002	SIN	C2-C3-C4	-2.61	107.99	113.60
3	H	604	SIN	O2-C1-C2	2.57	122.30	114.03
3	G	604	SIN	O2-C1-C2	2.57	122.29	114.03
3	A	906	SIN	O2-C1-C2	2.55	122.24	114.03
8	H	601	GZ3	CAA-CAH-CAI	2.54	119.64	115.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	G	605	ALA	OXT-C-O	-2.52	118.37	124.09
6	C	1007	ALA	OXT-C-O	-2.51	118.39	124.09
2	F	601	ADP	C3'-C2'-C1'	2.47	104.70	100.98
3	E	605	SIN	O2-C1-C2	2.47	121.96	114.03
3	F	606	SIN	O2-C1-O1	-2.47	117.15	123.30
6	H	605	ALA	OXT-C-CA	2.45	122.93	114.06
2	A	901	ADP	C1'-N9-C4	-2.45	122.33	126.64
3	H	604	SIN	O2-C1-O1	-2.45	117.20	123.30
3	C	1006	SIN	O4-C4-O3	-2.43	117.25	123.30
3	B	1002	SIN	O4-C4-C3	2.43	121.82	114.03
3	E	605	SIN	O2-C1-O1	-2.41	117.29	123.30
3	A	906	SIN	O2-C1-O1	-2.40	117.31	123.30
3	C	1002	SIN	C3-C2-C1	-2.40	108.44	113.60
7	C	1008	GOL	C3-C2-C1	-2.39	102.42	111.70
7	F	610	GOL	C3-C2-C1	-2.38	102.45	111.70
3	F	606	SIN	O4-C4-O3	-2.37	117.38	123.30
6	A	907	ALA	OXT-C-O	-2.37	118.70	124.09
3	A	906	SIN	O4-C4-C3	2.36	121.61	114.03
6	F	607	ALA	OXT-C-O	-2.36	118.74	124.09
6	H	605	ALA	OXT-C-O	-2.30	118.86	124.09
6	G	605	ALA	OXT-C-CA	2.29	122.33	114.06
2	C	1001	ADP	C4-C5-N7	-2.28	107.03	109.40
3	C	1006	SIN	O4-C4-C3	2.28	121.34	114.03
6	E	606	ALA	OXT-C-O	-2.26	118.95	124.09
3	A	902	SIN	O4-C4-C3	2.21	121.12	114.03
3	A	902	SIN	O4-C4-O3	-2.20	117.82	123.30
3	H	604	SIN	O4-C4-O3	-2.19	117.85	123.30
3	B	1006	SIN	O4-C4-O3	-2.17	117.88	123.30
2	F	601	ADP	C2-N1-C6	2.12	122.38	118.75
2	A	901	ADP	C2-N1-C6	2.12	122.38	118.75
3	F	606	SIN	O4-C4-C3	2.11	120.80	114.03
6	D	1007	ALA	OXT-C-CA	2.09	121.61	114.06
3	F	606	SIN	O2-C1-C2	2.05	120.62	114.03
8	E	601	GZ3	CAG-CAH-CAI	-2.01	111.53	119.95

There are no chirality outliers.

All (111) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	C	1006	SIN	C1-C2-C3-C4
7	A	908	GOL	O1-C1-C2-C3
7	A	909	GOL	O1-C1-C2-O2

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Mol	Chain	Res	Type	Atoms
7	A	909	GOL	O1-C1-C2-C3
7	A	909	GOL	C1-C2-C3-O3
7	A	911	GOL	C1-C2-C3-O3
7	B	1009	GOL	C1-C2-C3-O3
7	E	608	GOL	O1-C1-C2-C3
7	E	609	GOL	C1-C2-C3-O3
7	F	608	GOL	C1-C2-C3-O3
7	F	608	GOL	O2-C2-C3-O3
7	F	609	GOL	O1-C1-C2-C3
7	G	607	GOL	O1-C1-C2-C3
8	E	601	GZ3	PAJ-CAG-CAH-CAA
8	F	602	GZ3	PAJ-CAG-CAH-CAA
8	G	601	GZ3	PAJ-CAG-CAH-CAA
8	G	601	GZ3	CAH-CAG-PAJ-OAC
8	H	601	GZ3	PAJ-CAG-CAH-CAA
3	A	906	SIN	C1-C2-C3-C4
3	B	1006	SIN	C1-C2-C3-C4
3	F	606	SIN	C1-C2-C3-C4
3	H	604	SIN	C1-C2-C3-C4
7	A	909	GOL	O2-C2-C3-O3
7	F	609	GOL	O1-C1-C2-O2
7	G	607	GOL	O1-C1-C2-O2
3	D	1006	SIN	C1-C2-C3-C4
3	E	605	SIN	C1-C2-C3-C4
3	G	604	SIN	C1-C2-C3-C4
7	A	908	GOL	C1-C2-C3-O3
7	A	910	GOL	C1-C2-C3-O3
7	B	1010	GOL	O1-C1-C2-C3
7	C	1011	GOL	O1-C1-C2-C3
7	D	1008	GOL	C1-C2-C3-O3
7	E	607	GOL	C1-C2-C3-O3
7	E	610	GOL	C1-C2-C3-O3
7	F	610	GOL	O1-C1-C2-C3
7	F	610	GOL	C1-C2-C3-O3
7	F	612	GOL	O1-C1-C2-C3
8	F	602	GZ3	CAA-CAH-CAI-OAB
8	F	602	GZ3	CAG-CAH-CAI-OAB
8	F	602	GZ3	CAA-CAH-CAI-OAD
8	F	602	GZ3	CAG-CAH-CAI-OAD
8	H	601	GZ3	CAA-CAH-CAI-OAB
8	H	601	GZ3	CAG-CAH-CAI-OAB
8	H	601	GZ3	CAA-CAH-CAI-OAD

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Mol	Chain	Res	Type	Atoms
7	A	908	GOL	O1-C1-C2-O2
7	A	908	GOL	O2-C2-C3-O3
7	A	910	GOL	O2-C2-C3-O3
7	B	1009	GOL	O2-C2-C3-O3
7	E	607	GOL	O2-C2-C3-O3
7	E	610	GOL	O2-C2-C3-O3
7	F	610	GOL	O1-C1-C2-O2
7	F	610	GOL	O2-C2-C3-O3
7	A	911	GOL	O2-C2-C3-O3
7	E	608	GOL	O1-C1-C2-O2
7	F	612	GOL	O1-C1-C2-O2
8	H	601	GZ3	CAG-CAH-CAI-OAD
7	C	1010	GOL	O1-C1-C2-O2
7	C	1011	GOL	O1-C1-C2-O2
7	E	609	GOL	O2-C2-C3-O3
7	D	1008	GOL	O1-C1-C2-O2
7	E	607	GOL	O1-C1-C2-O2
7	G	606	GOL	O1-C1-C2-C3
6	B	1007	ALA	OXT-C-CA-CB
6	C	1007	ALA	O-C-CA-CB
6	C	1007	ALA	OXT-C-CA-CB
6	H	605	ALA	OXT-C-CA-CB
3	A	902	SIN	O1-C1-C2-C3
3	H	604	SIN	O1-C1-C2-C3
3	G	604	SIN	O1-C1-C2-C3
3	H	604	SIN	O2-C1-C2-C3
3	G	604	SIN	O2-C1-C2-C3
8	E	601	GZ3	CAG-CAH-CAI-OAD
3	A	902	SIN	O2-C1-C2-C3
3	D	1002	SIN	C2-C3-C4-O4
3	C	1002	SIN	O1-C1-C2-C3
3	D	1002	SIN	C2-C3-C4-O3
3	C	1002	SIN	C2-C3-C4-O4
3	B	1002	SIN	C2-C3-C4-O3
3	A	902	SIN	C2-C3-C4-O4
3	A	902	SIN	C2-C3-C4-O3
3	C	1002	SIN	C2-C3-C4-O3
7	E	610	GOL	O1-C1-C2-C3
3	B	1002	SIN	C2-C3-C4-O4
6	A	907	ALA	O-C-CA-CB
6	B	1007	ALA	O-C-CA-CB
6	H	605	ALA	O-C-CA-CB

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Mol	Chain	Res	Type	Atoms
3	F	606	SIN	O1-C1-C2-C3
7	B	1010	GOL	O1-C1-C2-O2
3	C	1006	SIN	O2-C1-C2-C3
3	F	606	SIN	O2-C1-C2-C3
3	B	1002	SIN	O1-C1-C2-C3
3	A	906	SIN	O2-C1-C2-C3
3	C	1006	SIN	O1-C1-C2-C3
3	A	906	SIN	O1-C1-C2-C3
3	C	1002	SIN	O2-C1-C2-C3
3	D	1002	SIN	O1-C1-C2-C3
3	B	1002	SIN	O2-C1-C2-C3
7	A	911	GOL	O1-C1-C2-O2
2	C	1001	ADP	PB-O3A-PA-O1A
2	C	1001	ADP	PB-O3A-PA-O2A
7	C	1010	GOL	O1-C1-C2-C3
7	D	1008	GOL	O1-C1-C2-C3
7	F	611	GOL	C1-C2-C3-O3
3	B	1006	SIN	C2-C3-C4-O4
3	E	605	SIN	O2-C1-C2-C3
3	D	1002	SIN	O2-C1-C2-C3
6	B	1007	ALA	OXT-C-CA-N
6	C	1007	ALA	OXT-C-CA-N
3	E	605	SIN	O1-C1-C2-C3
3	H	604	SIN	C2-C3-C4-O3

There are no ring outliers.

29 monomers are involved in 40 short contacts:

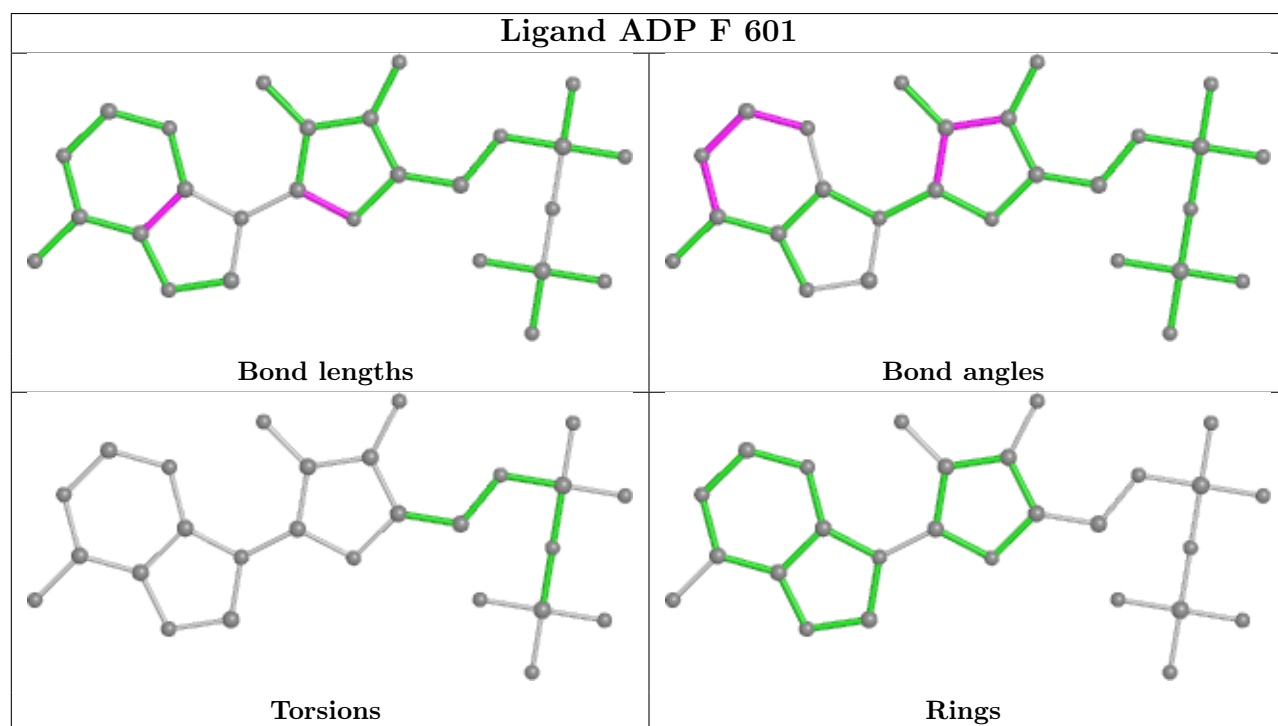
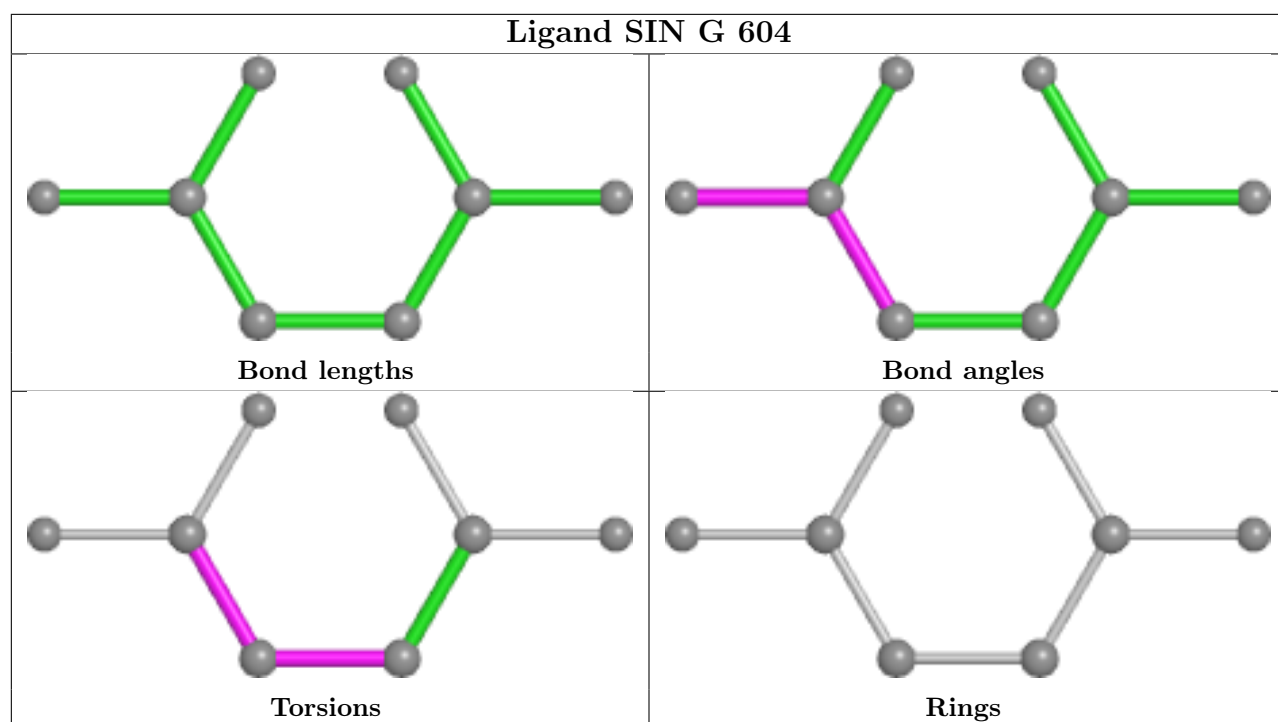
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	G	604	SIN	1	0
6	H	605	ALA	1	0
7	C	1012	GOL	2	0
7	H	607	GOL	1	0
6	F	607	ALA	1	0
6	G	605	ALA	1	0
7	F	609	GOL	2	0
7	G	607	GOL	1	0
8	G	601	GZ3	4	0
8	H	601	GZ3	1	0
6	D	1007	ALA	1	0
3	A	902	SIN	1	0
2	A	901	ADP	1	0

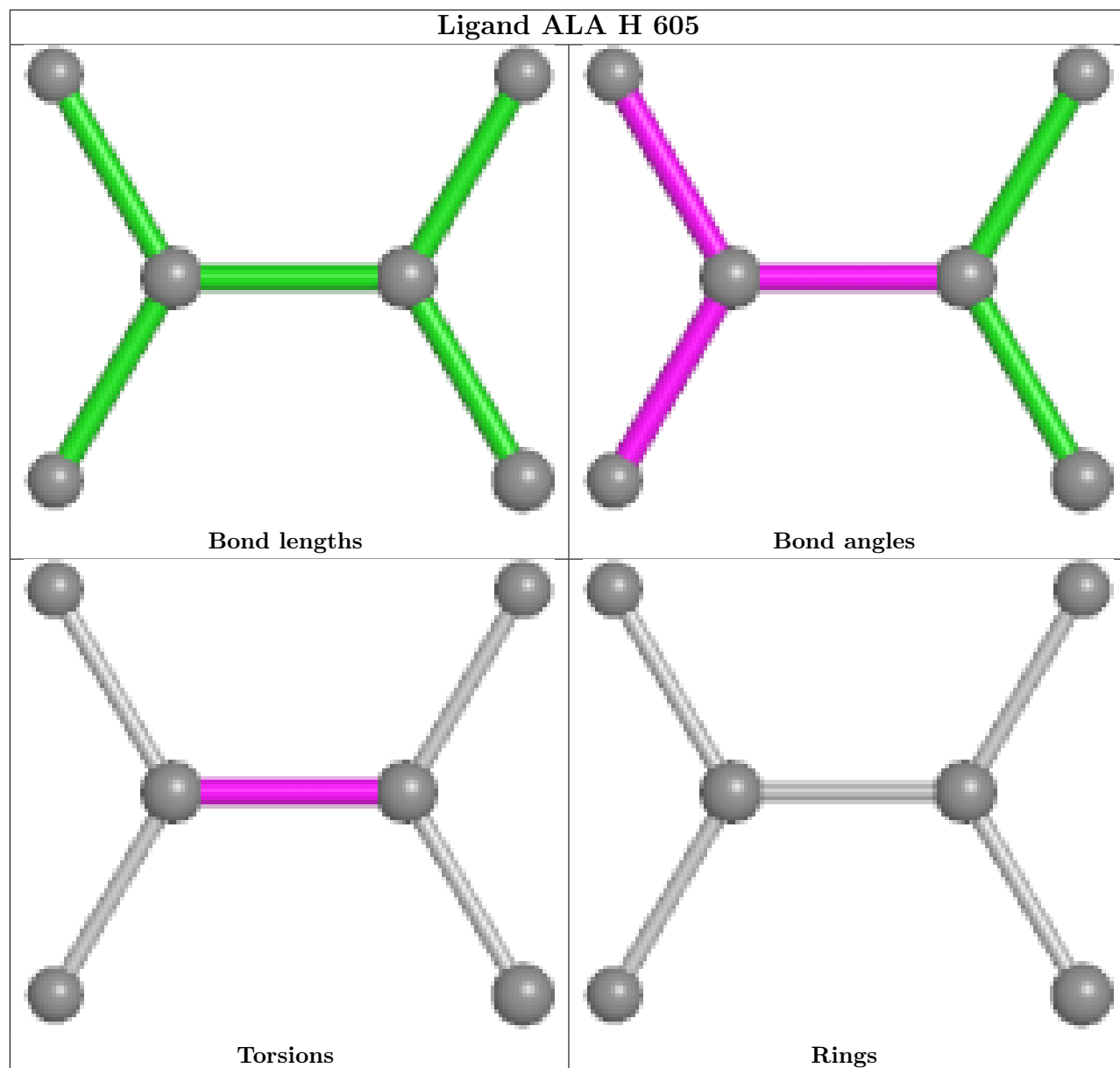
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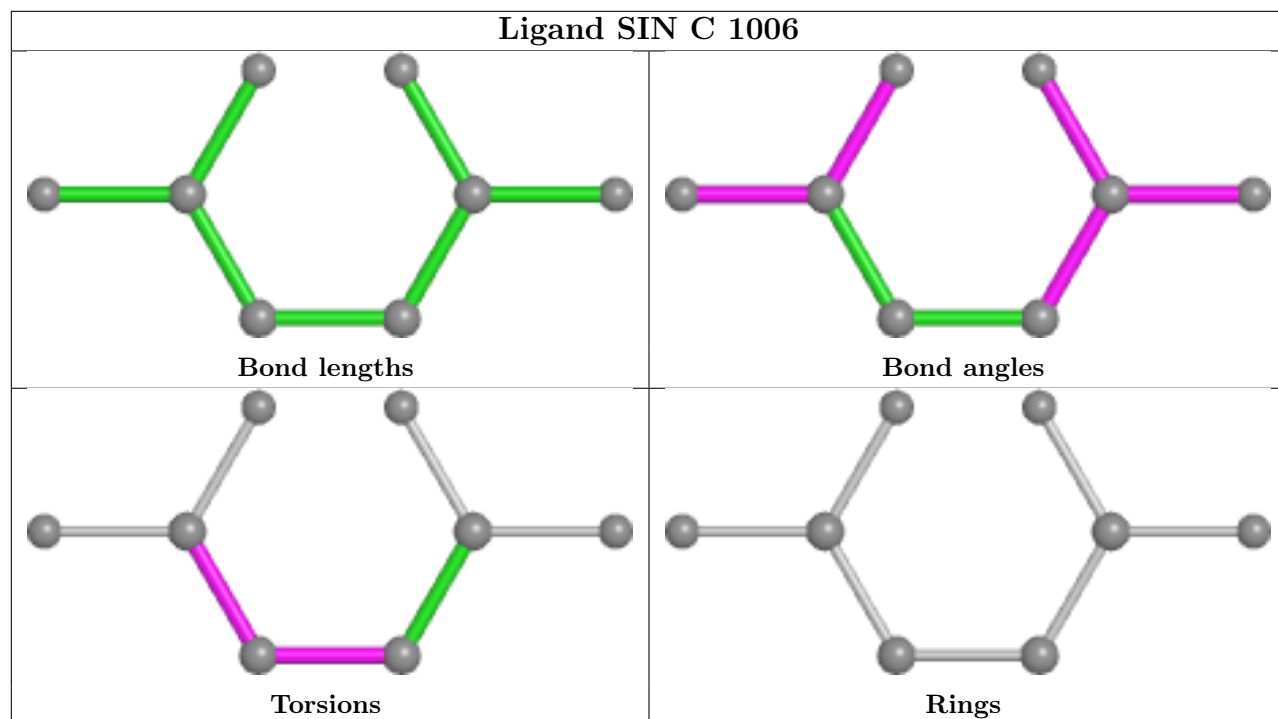
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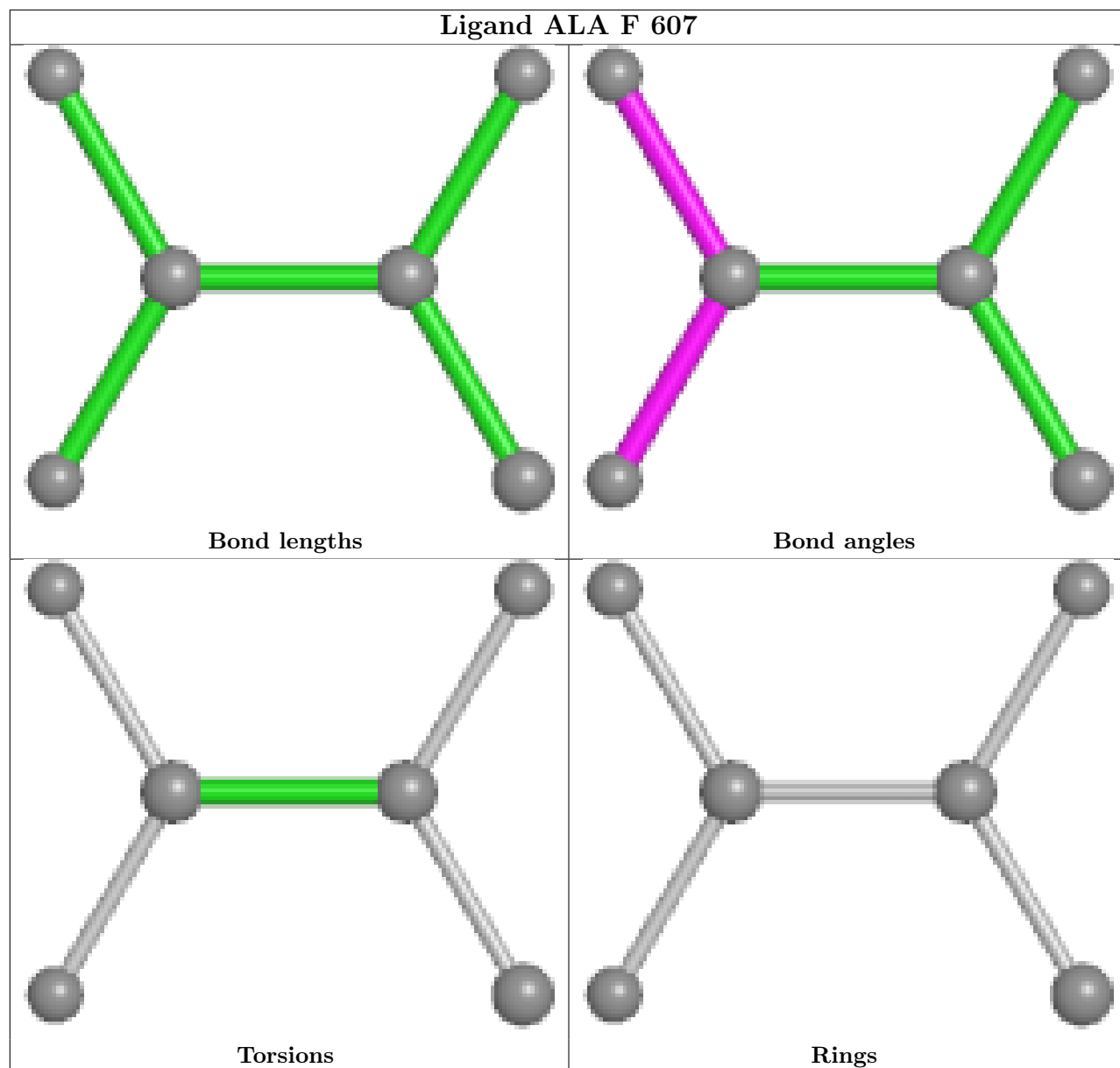
Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	F	612	GOL	2	0
7	F	610	GOL	1	0
7	E	608	GOL	2	0
6	C	1007	ALA	1	0
8	F	602	GZ3	1	0
3	B	1002	SIN	2	0
6	B	1007	ALA	1	0
7	C	1011	GOL	1	0
7	C	1009	GOL	3	0
6	A	907	ALA	1	0
3	D	1002	SIN	2	0
7	B	1009	GOL	1	0
7	A	909	GOL	2	0
7	A	910	GOL	2	0
3	C	1002	SIN	1	0
3	H	604	SIN	1	0

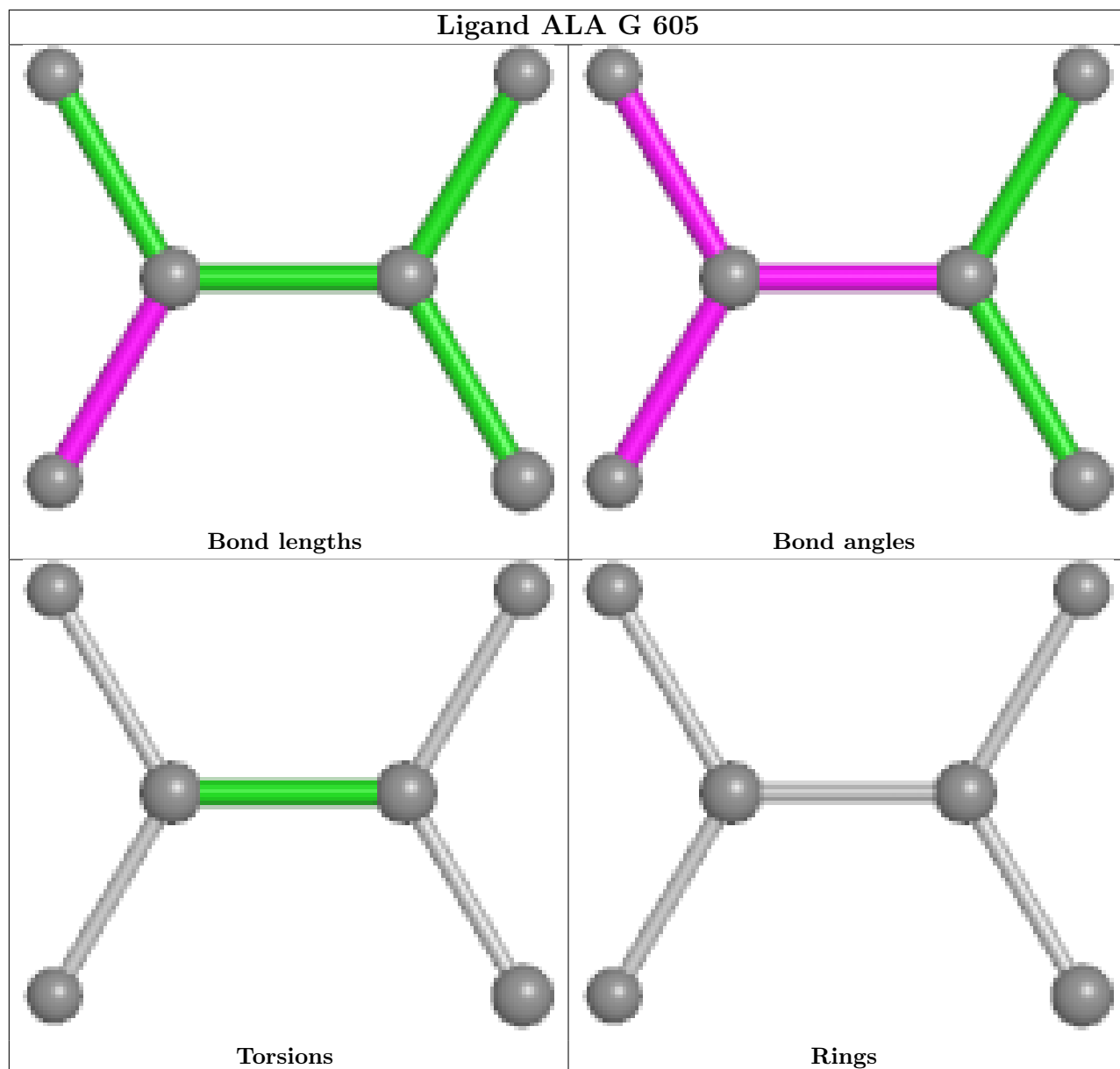
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

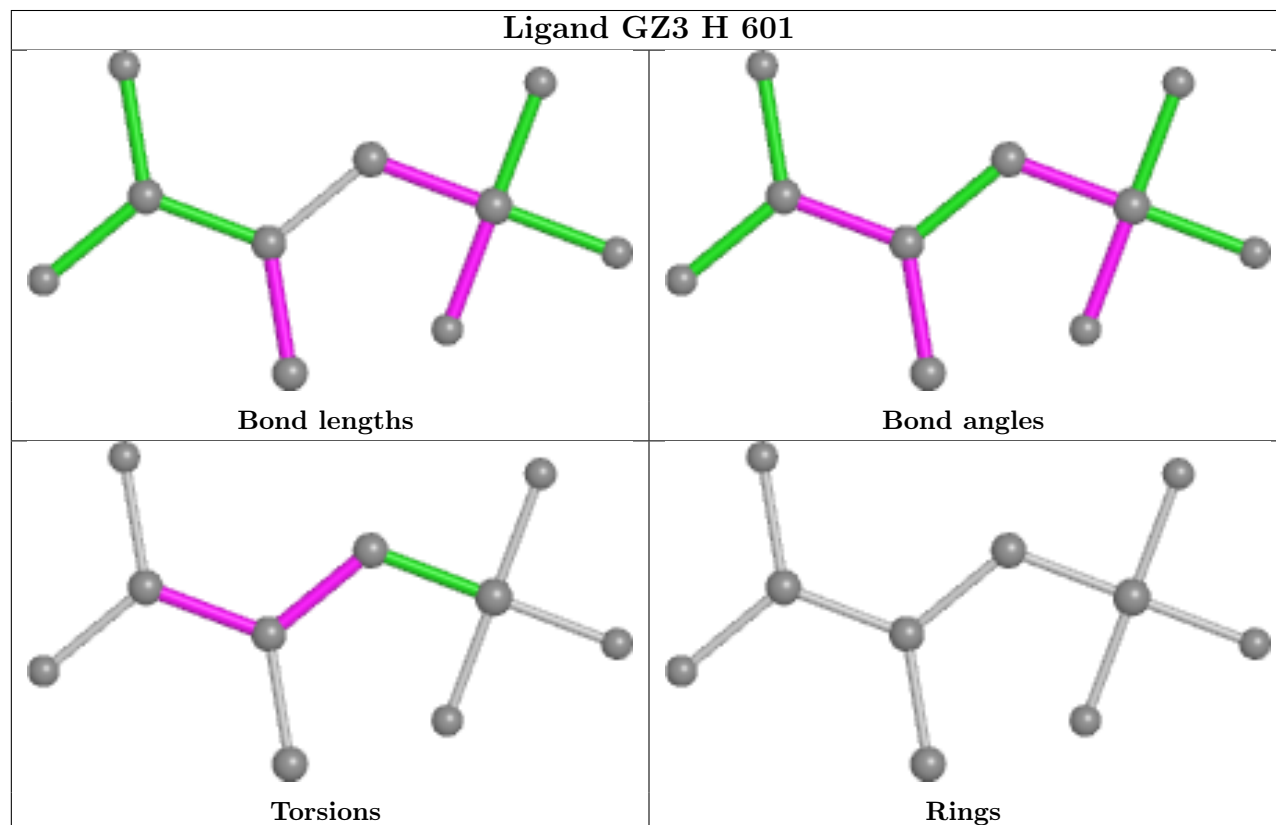
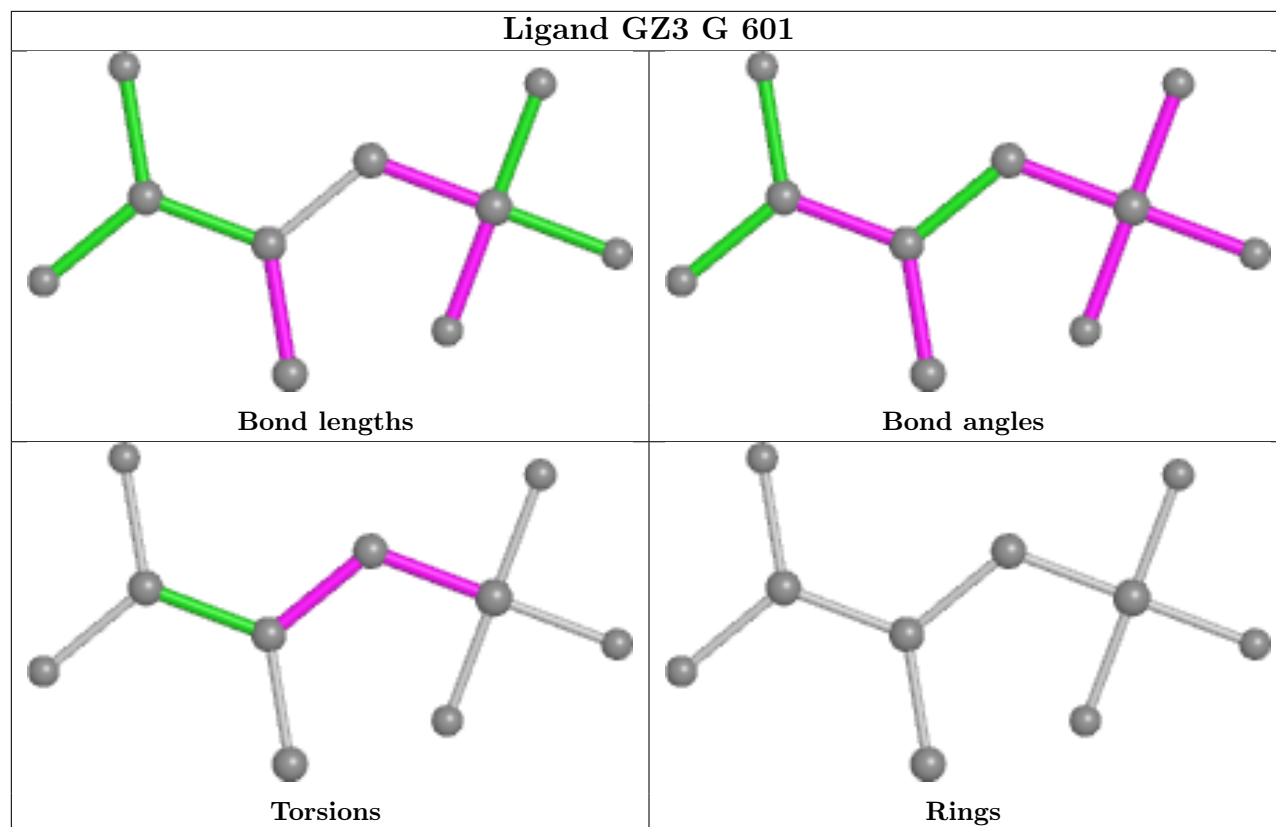


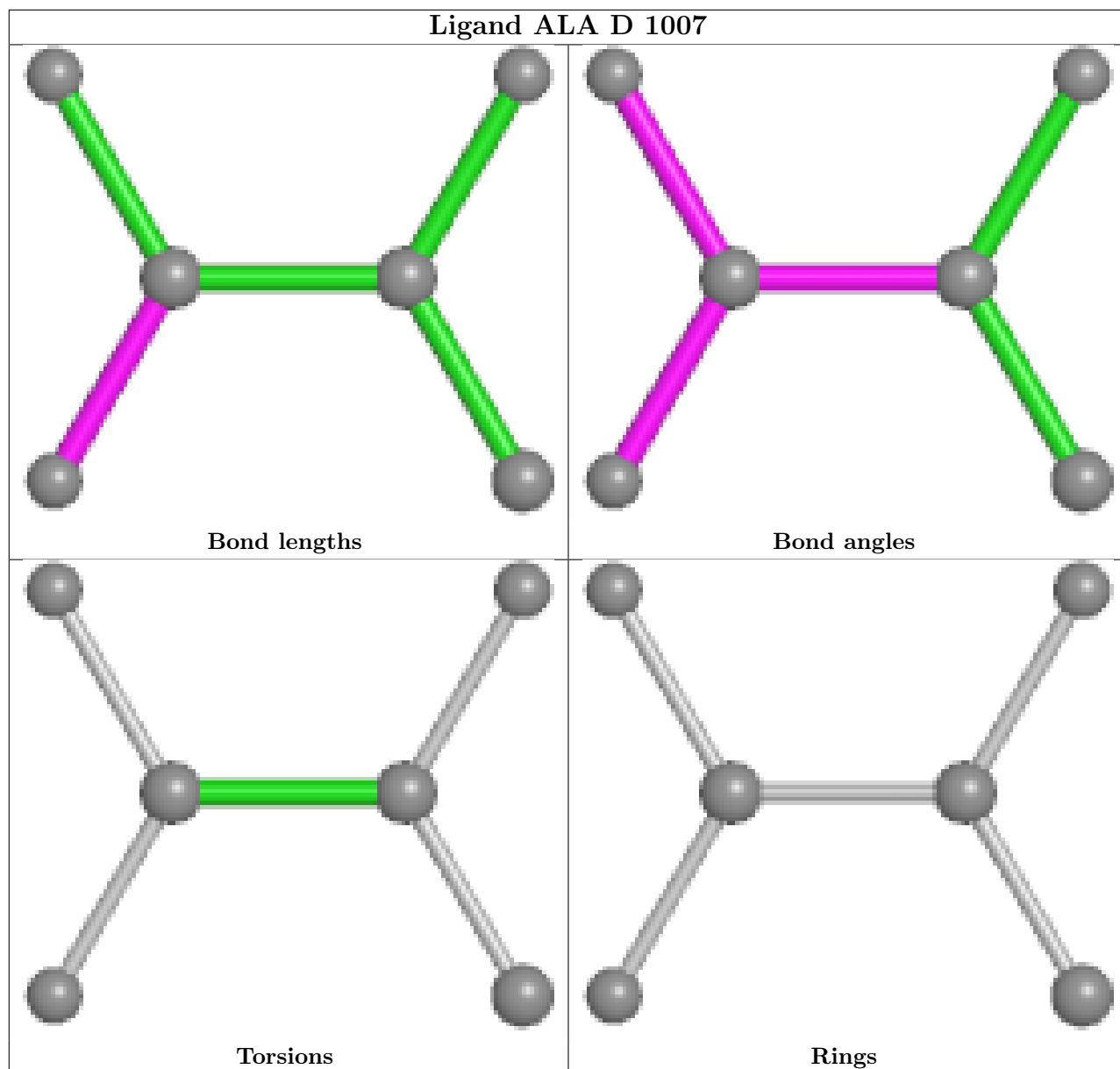


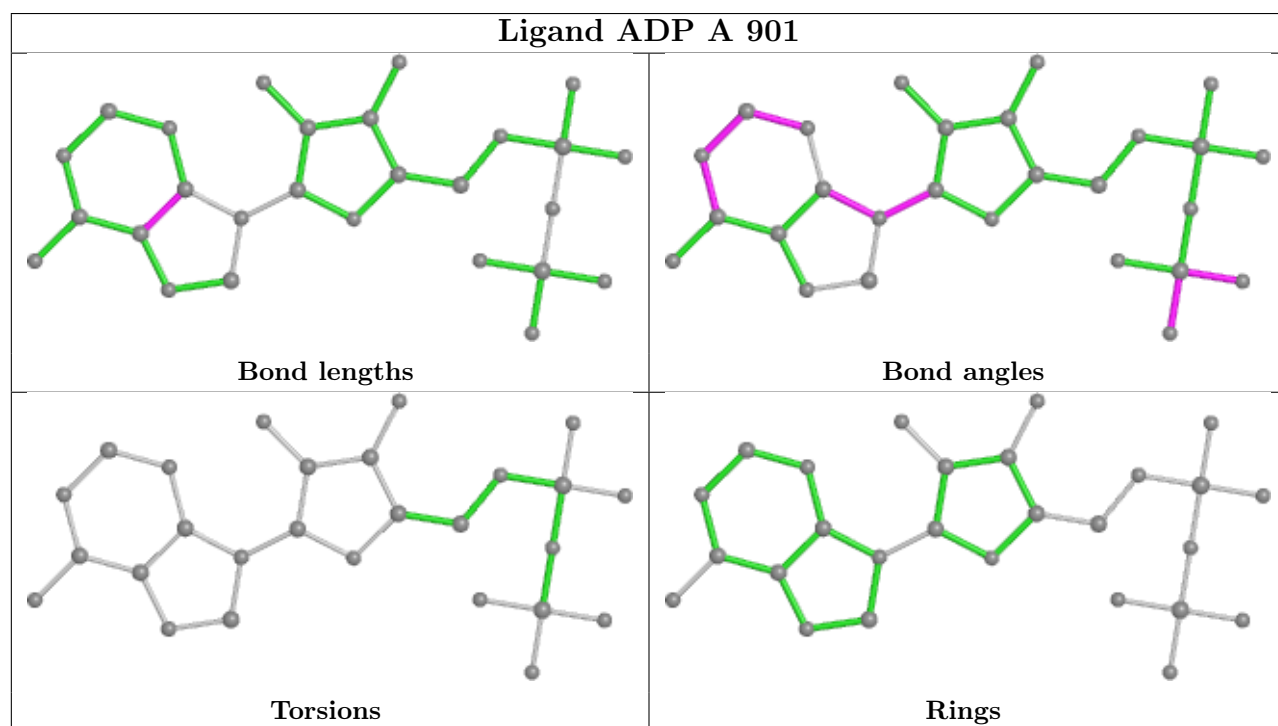
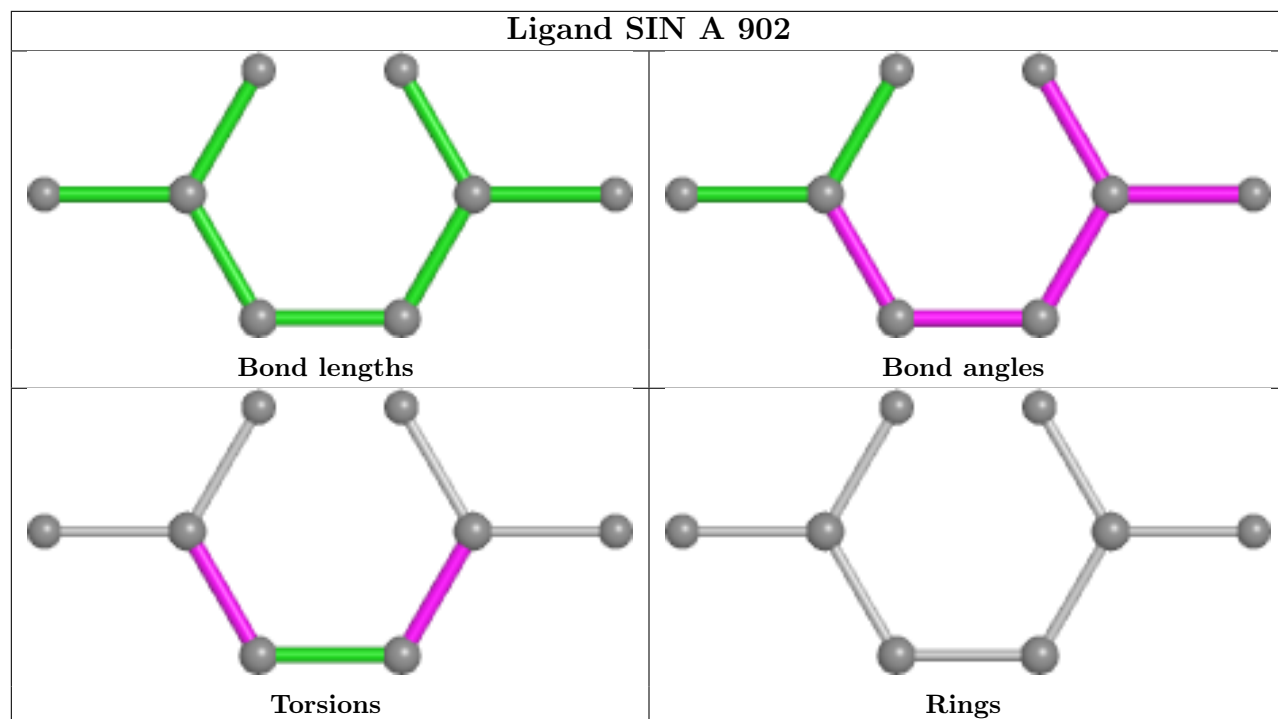


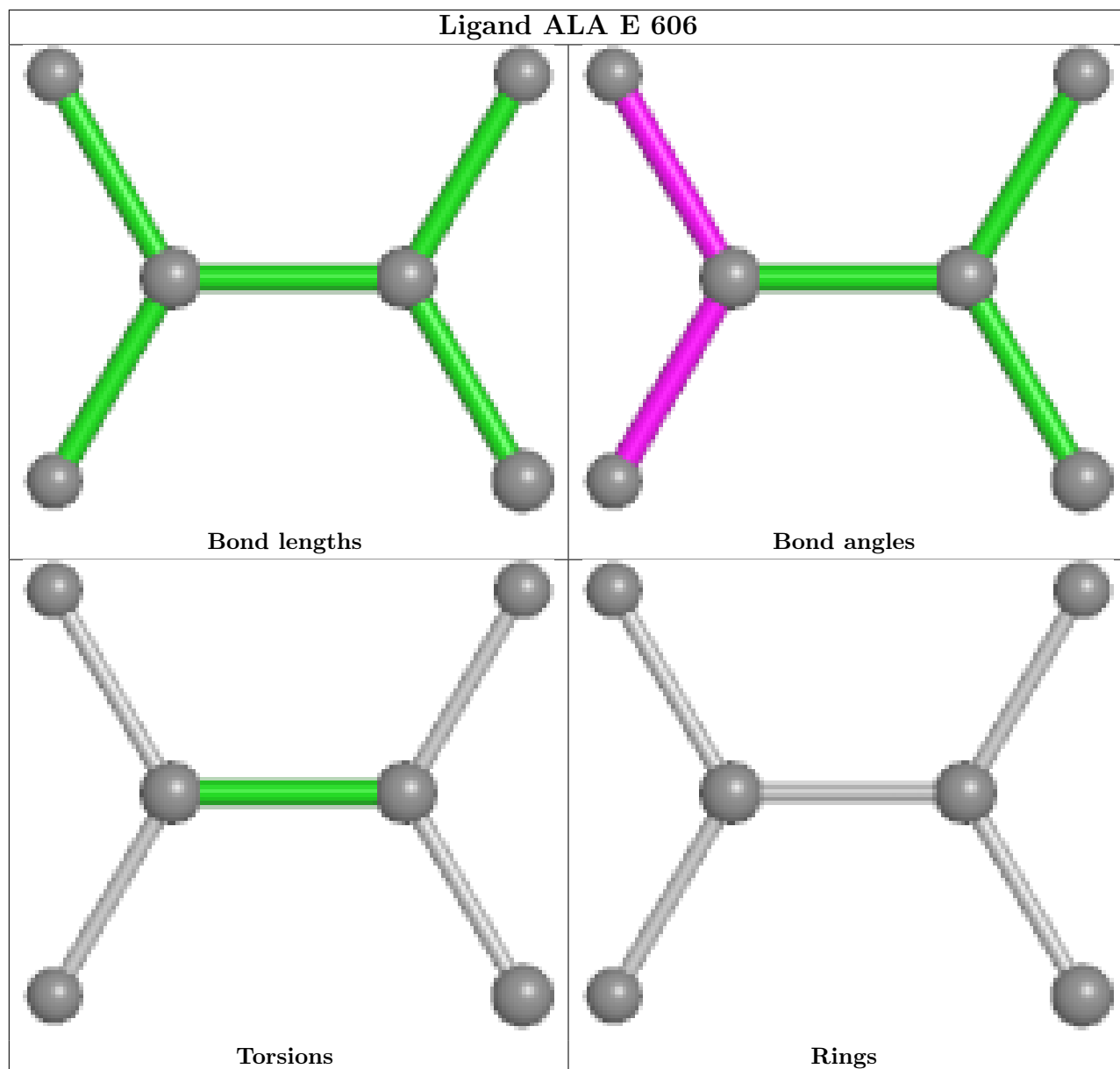


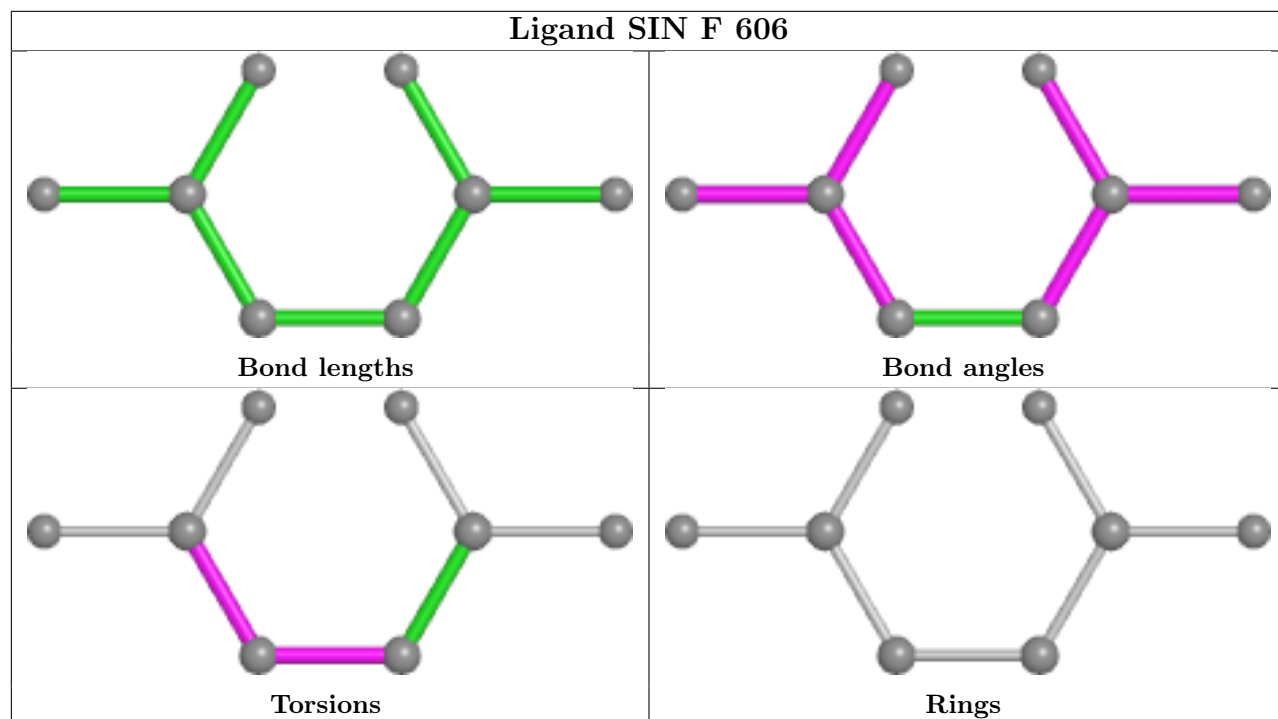


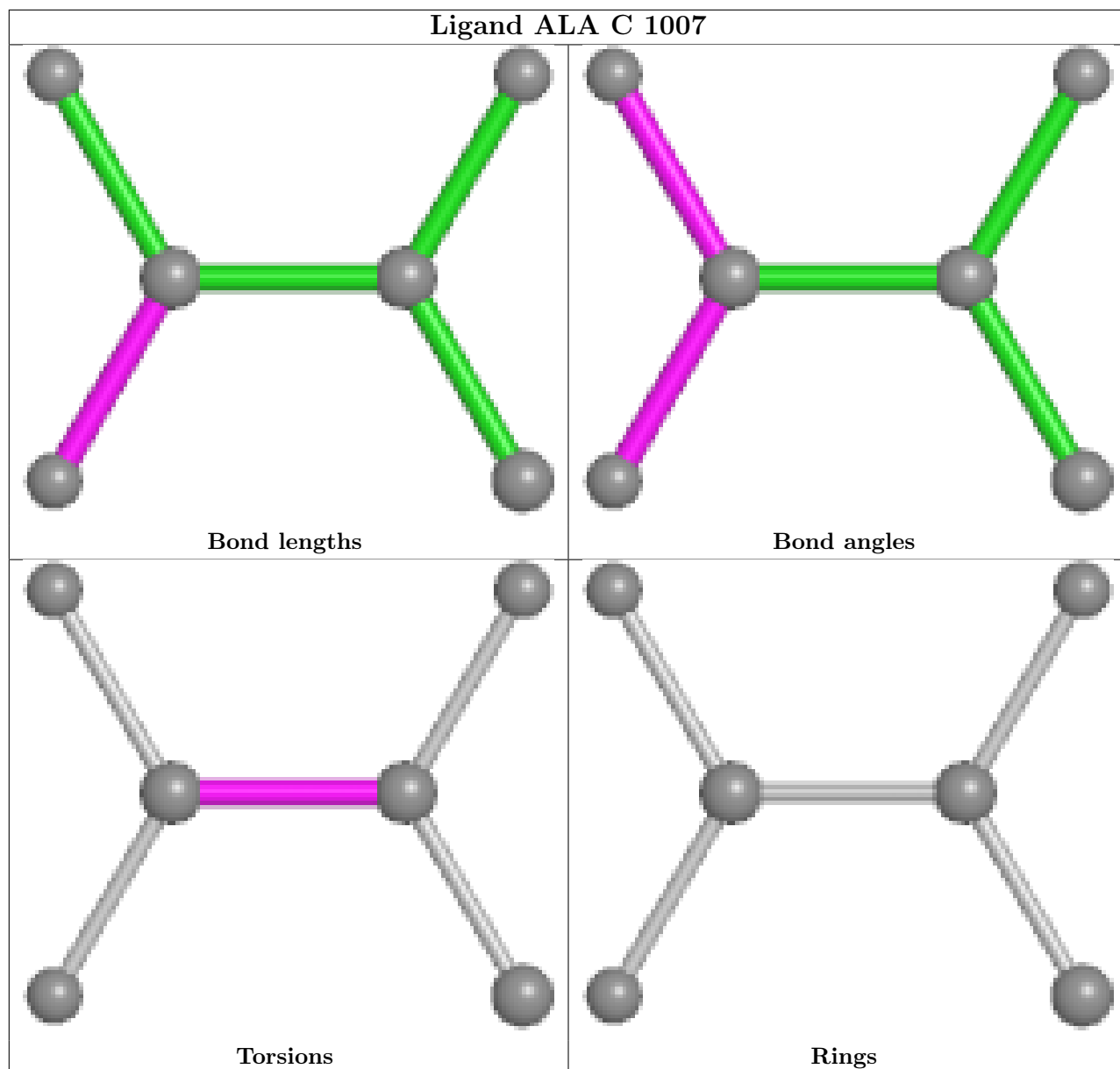


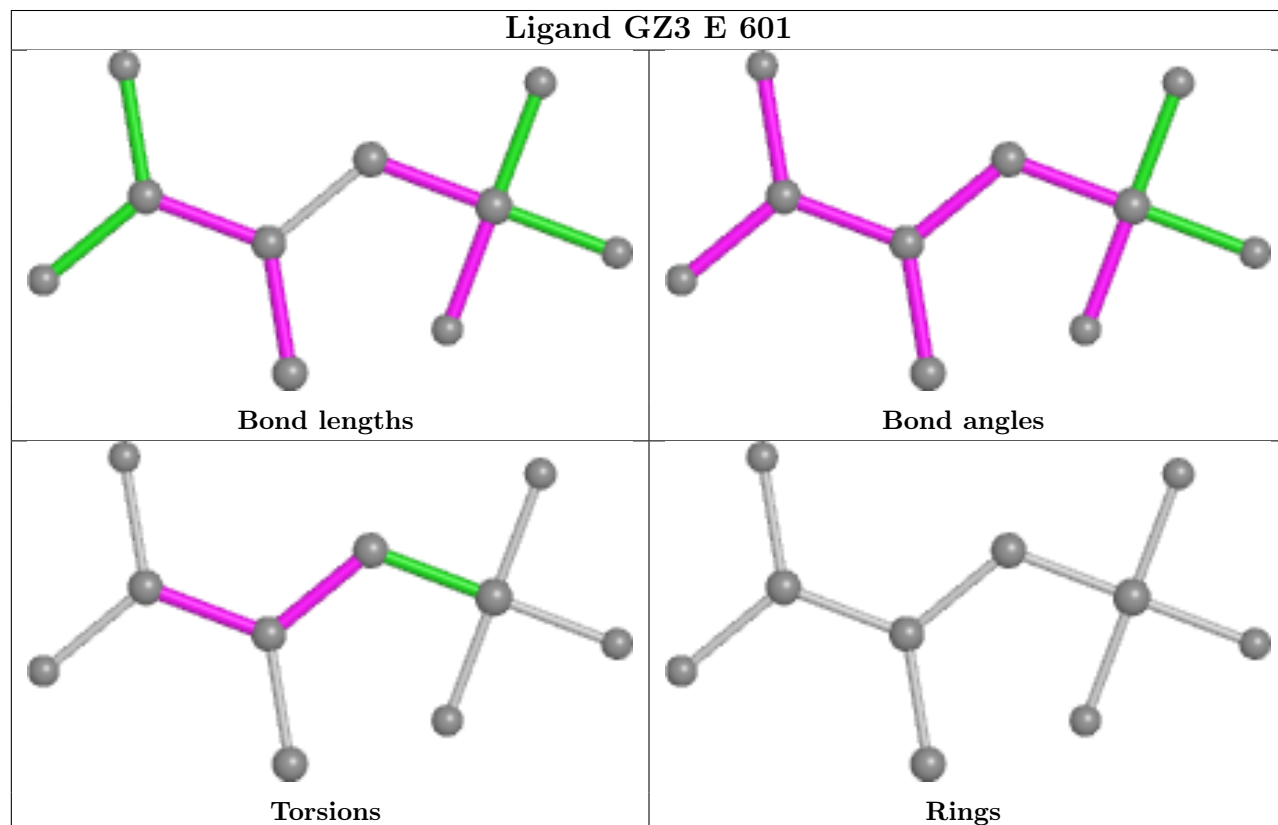
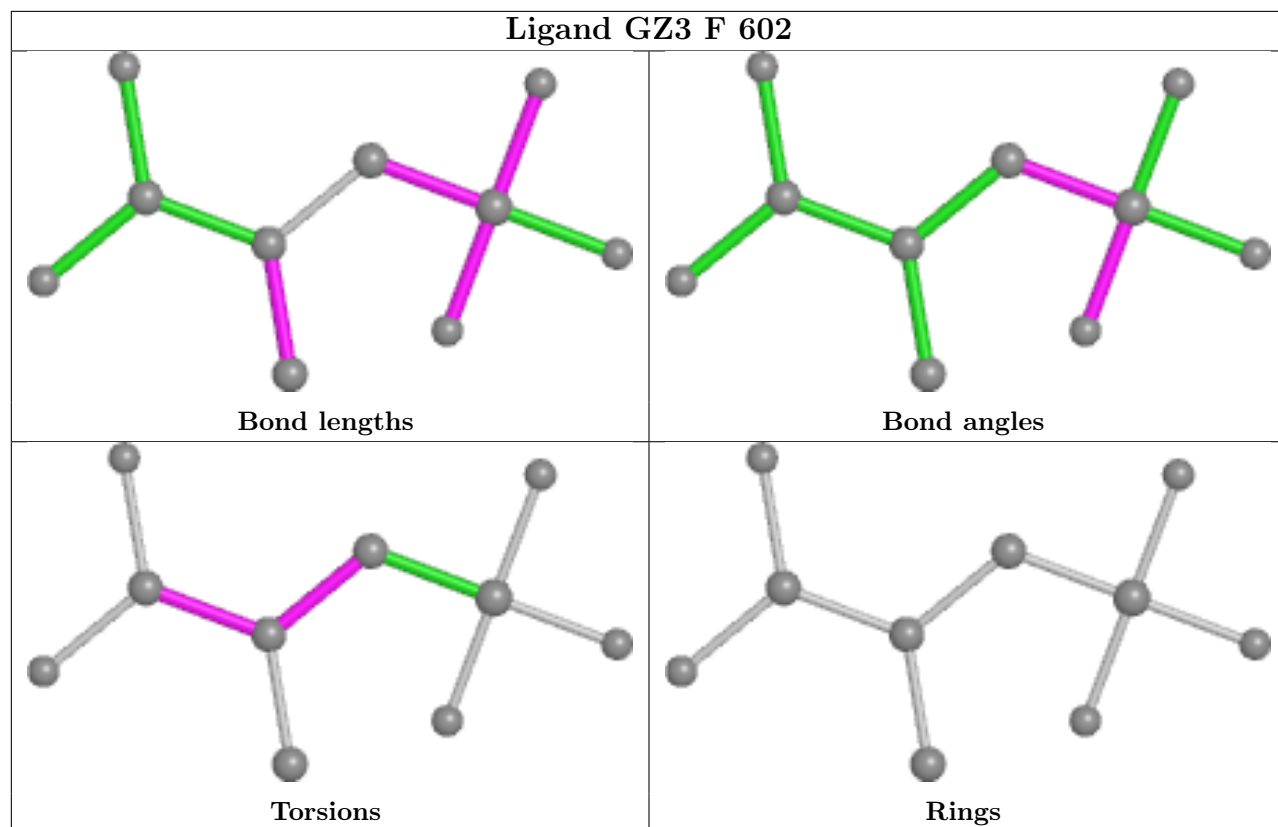


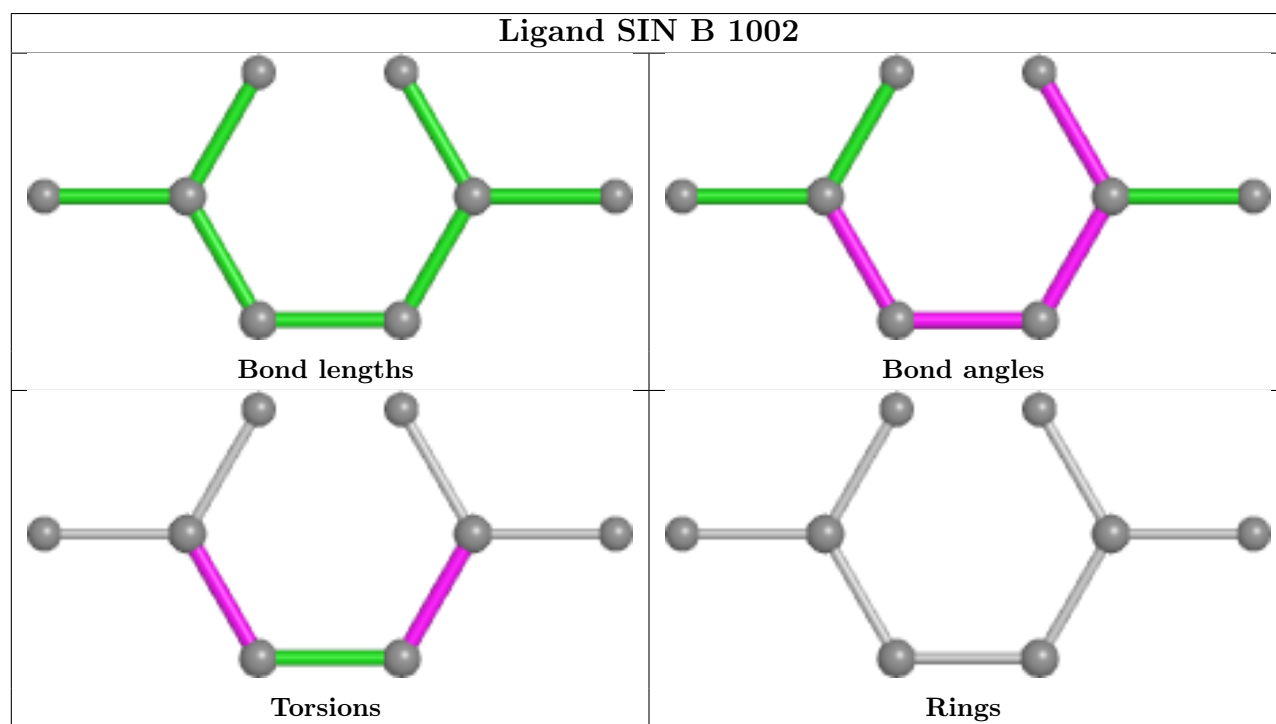
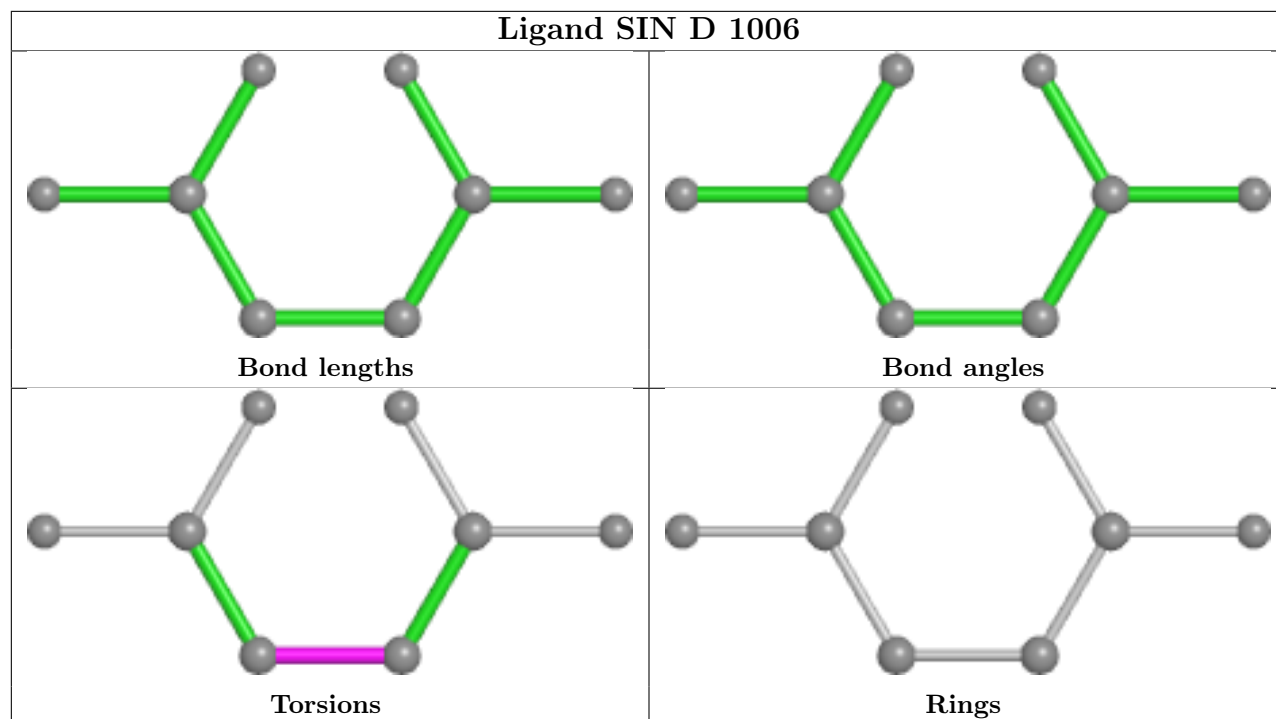


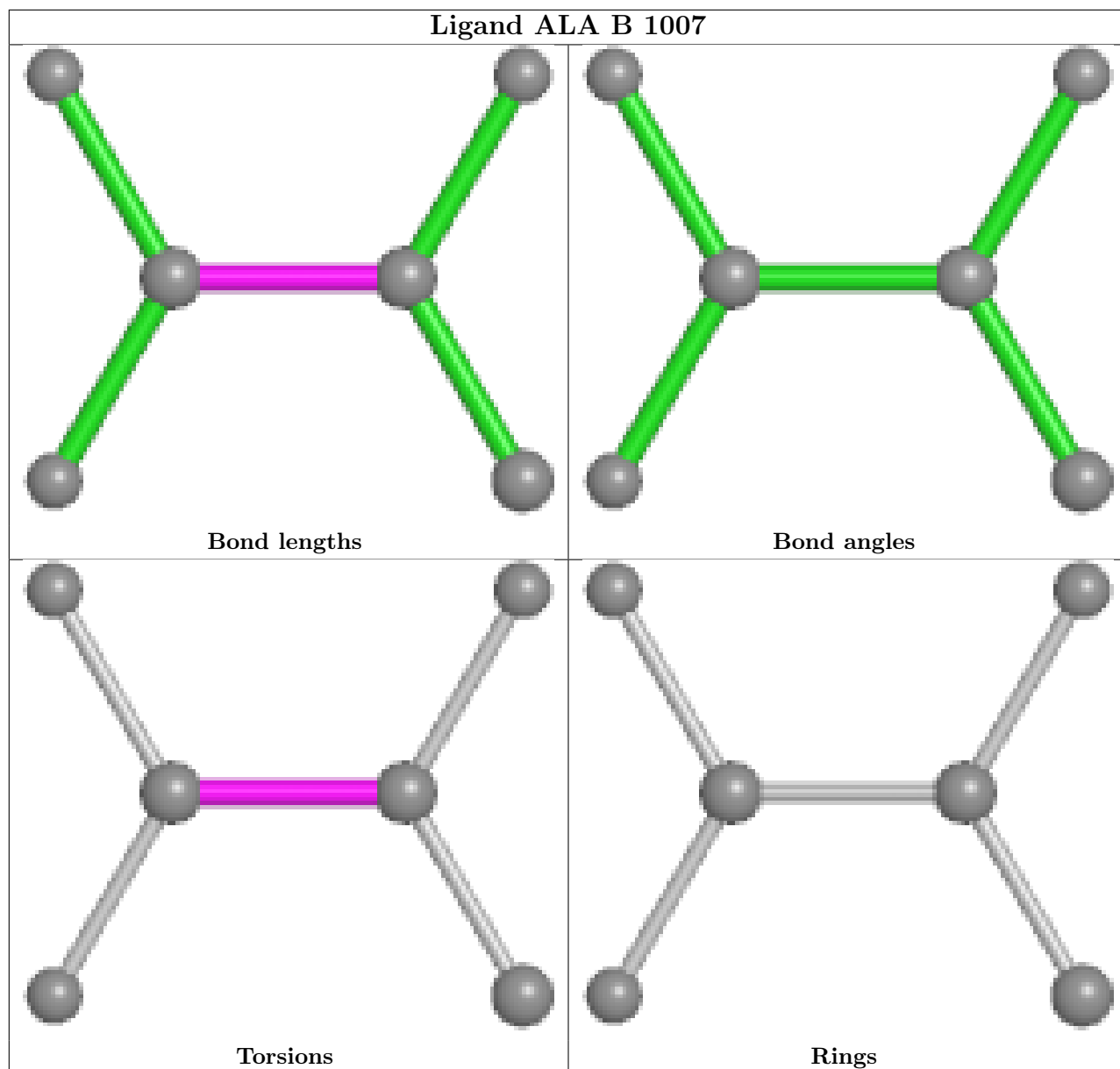


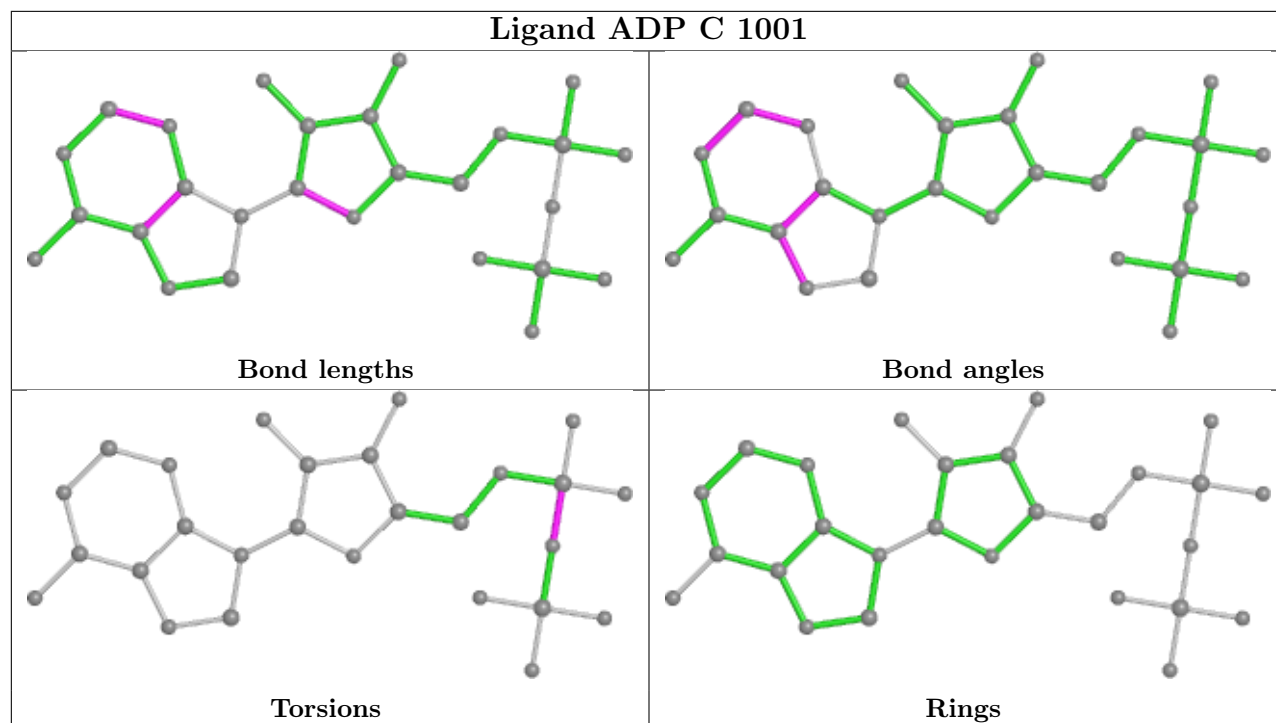


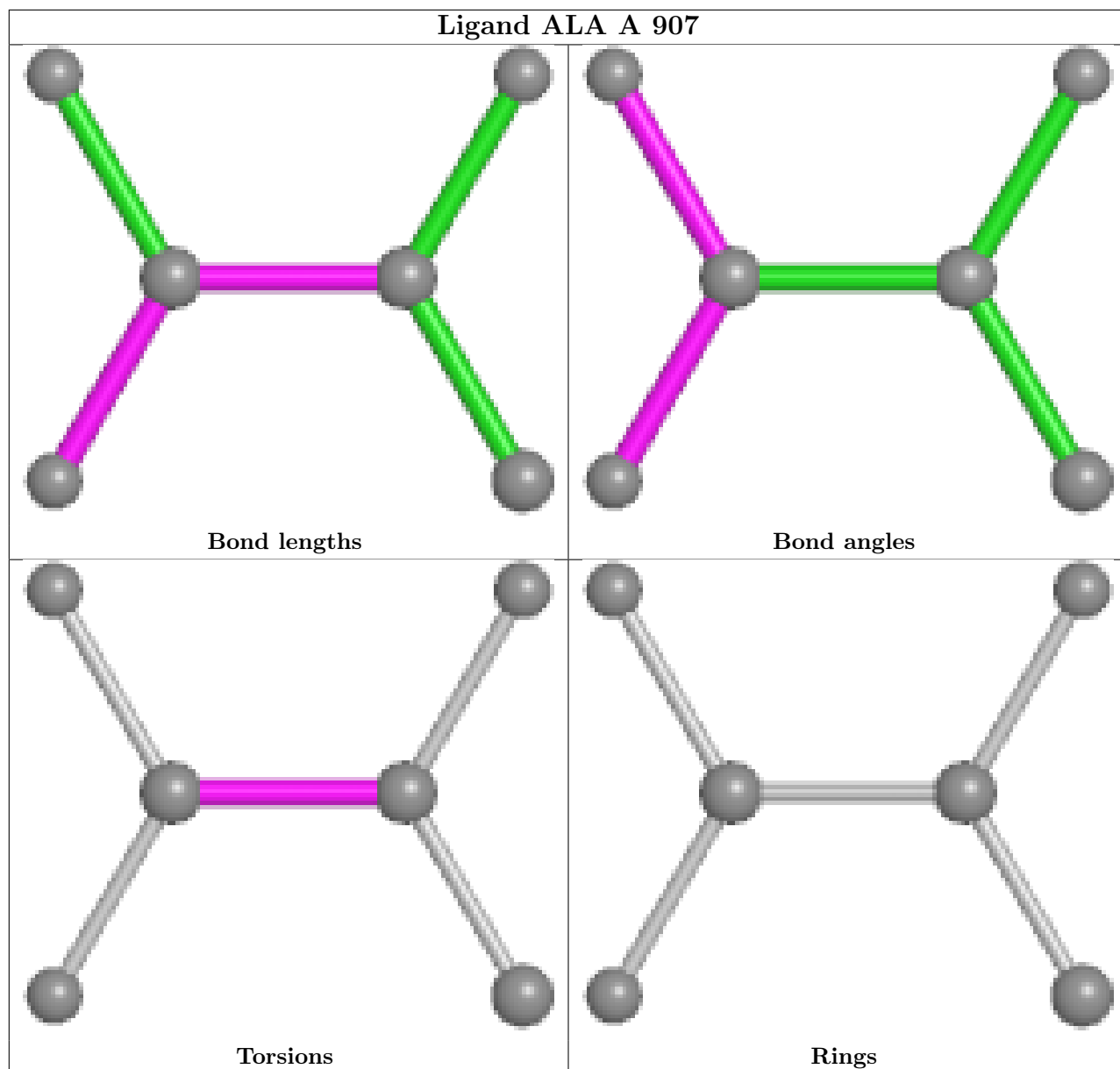


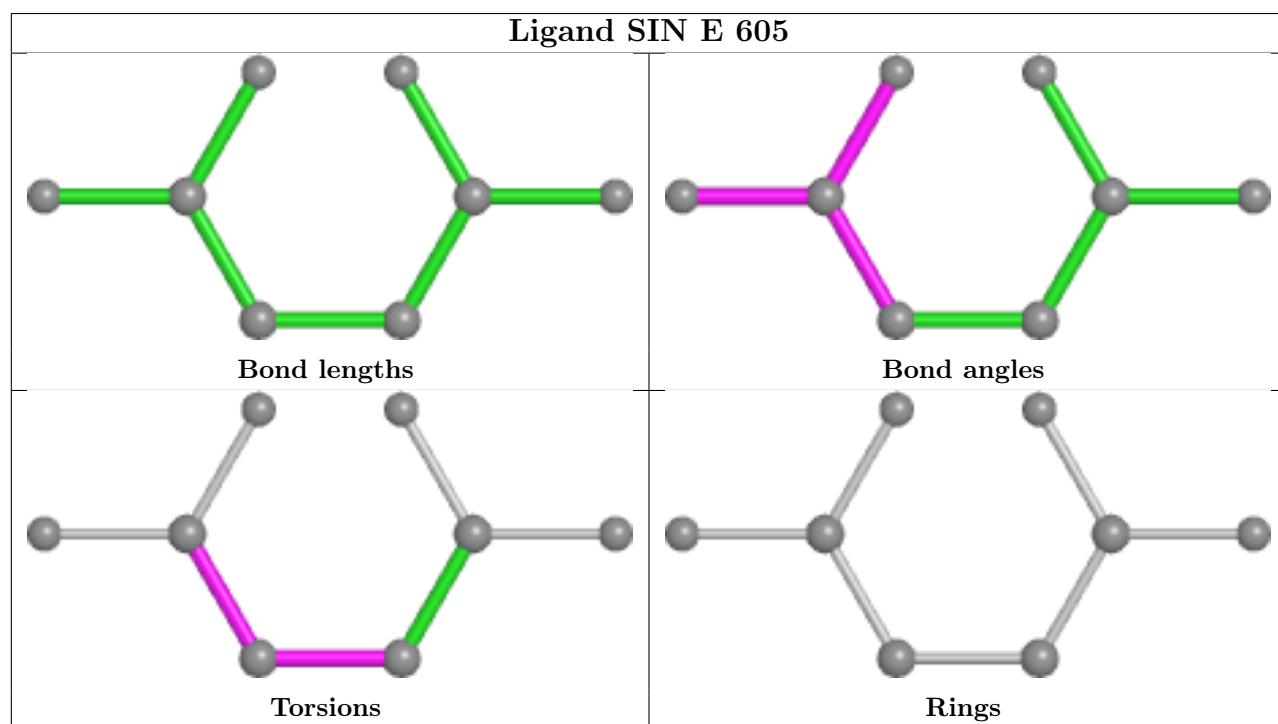
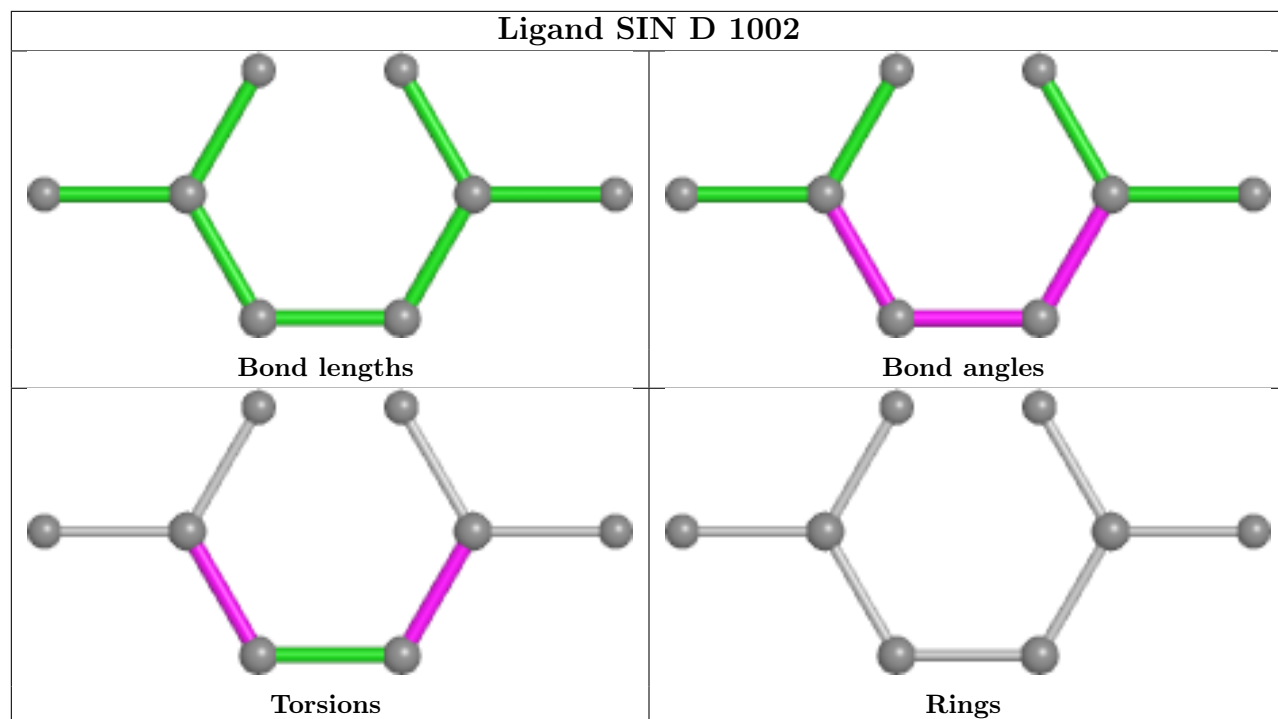


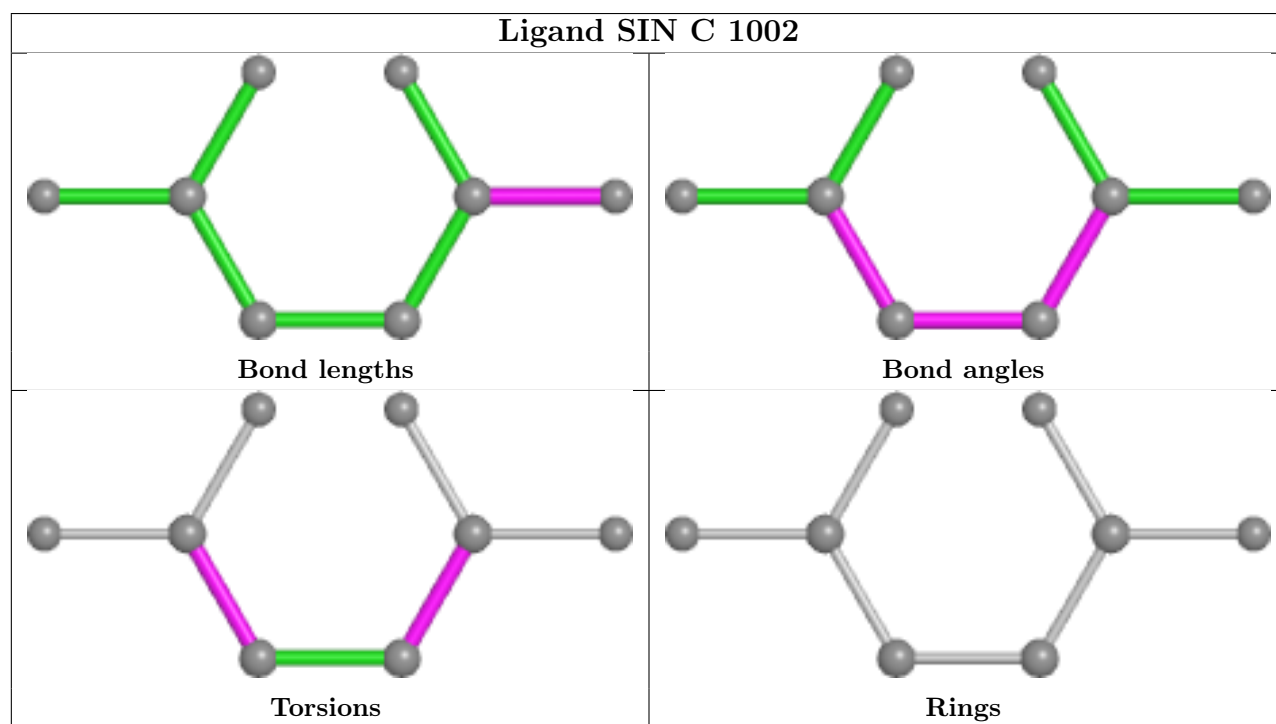
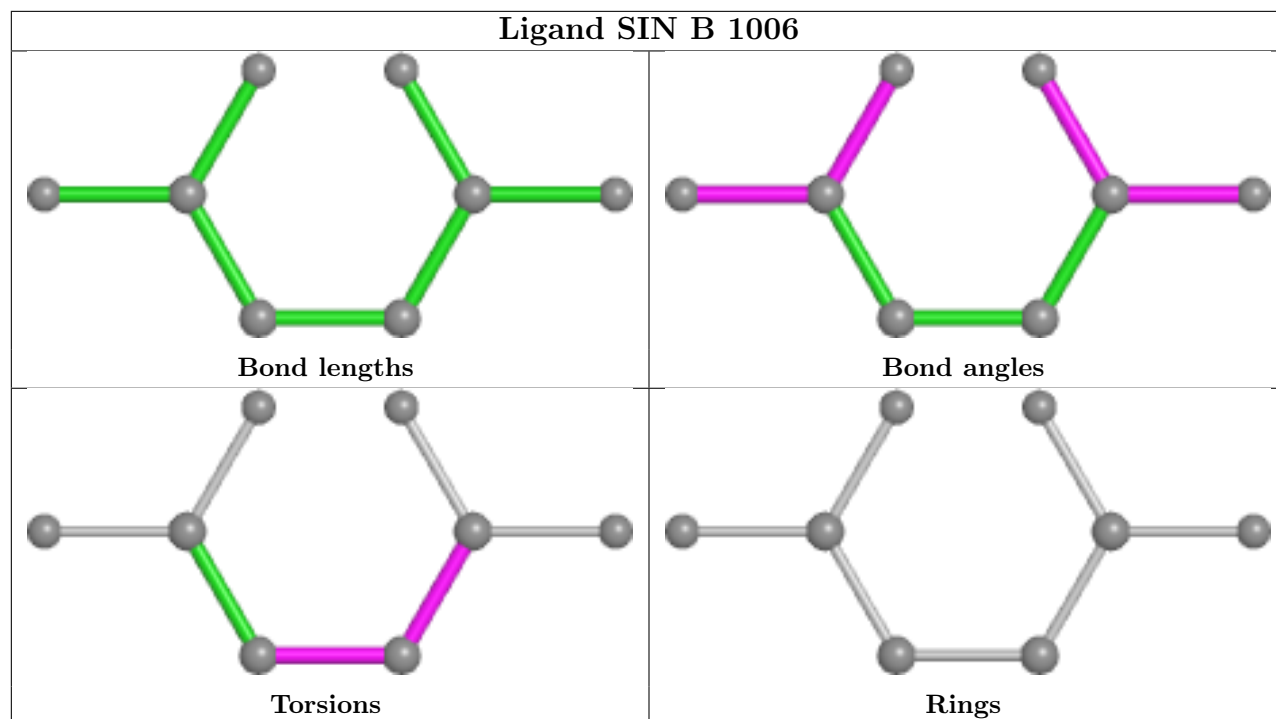


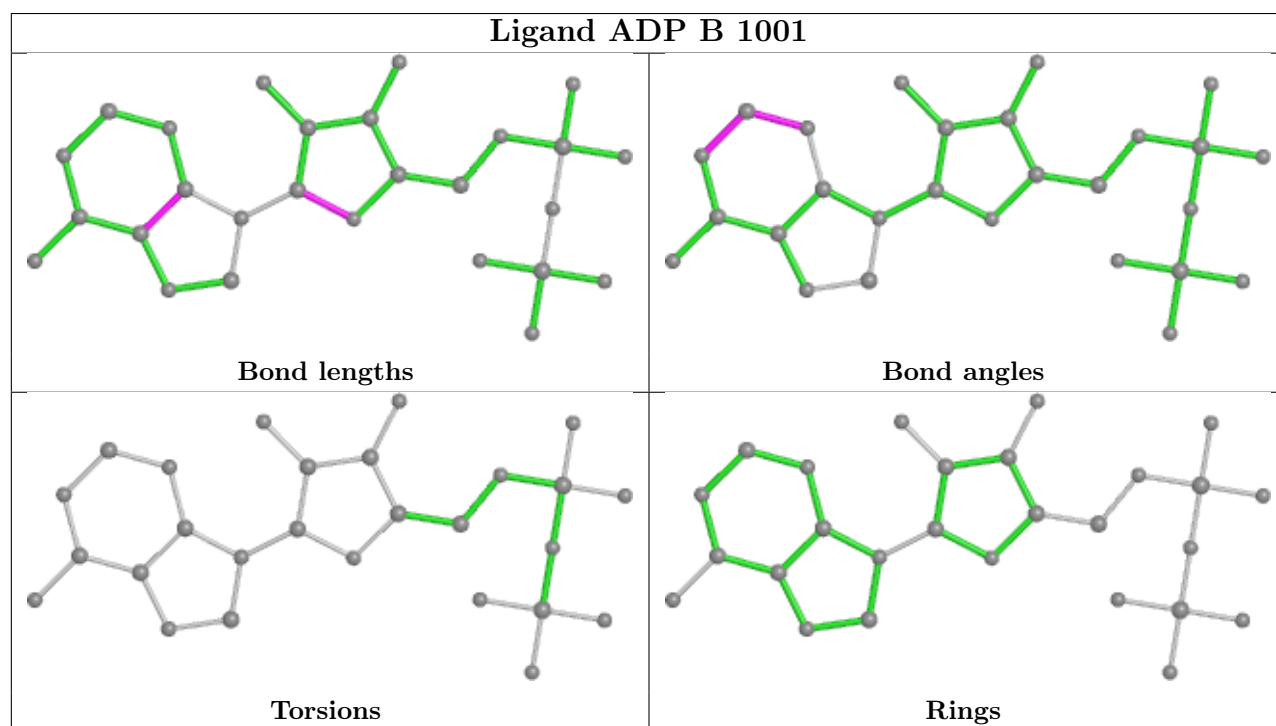
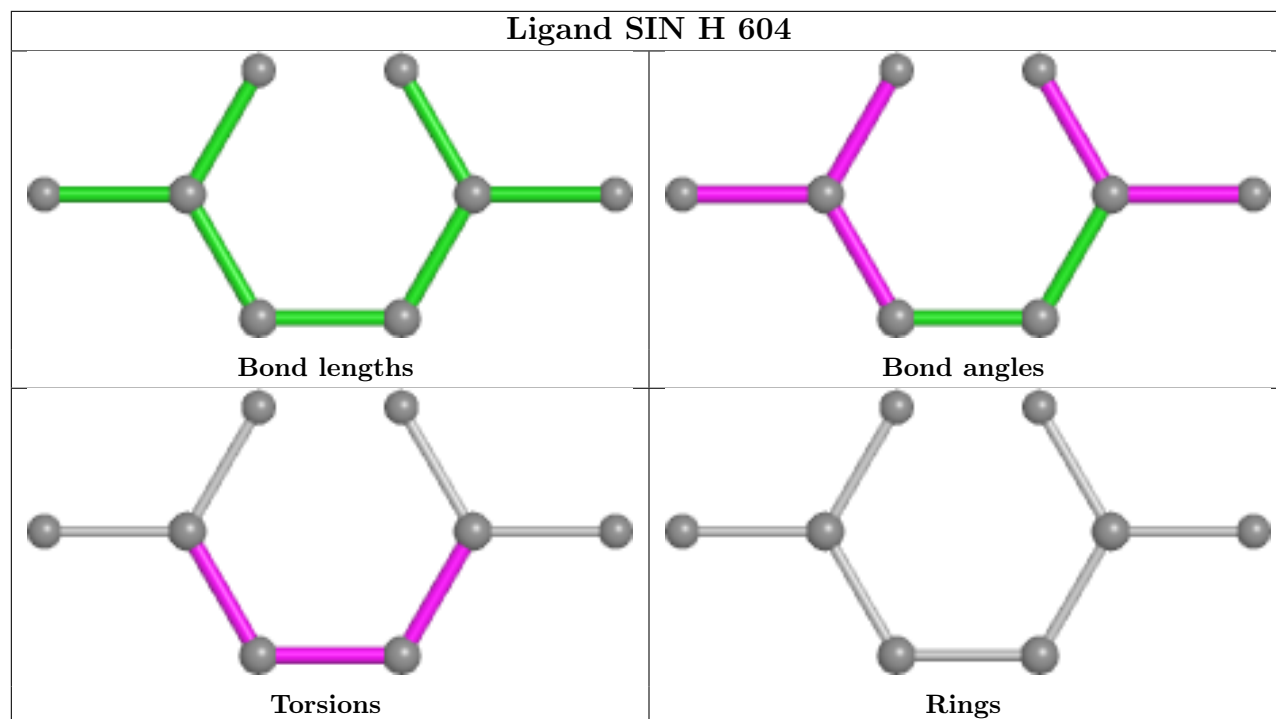


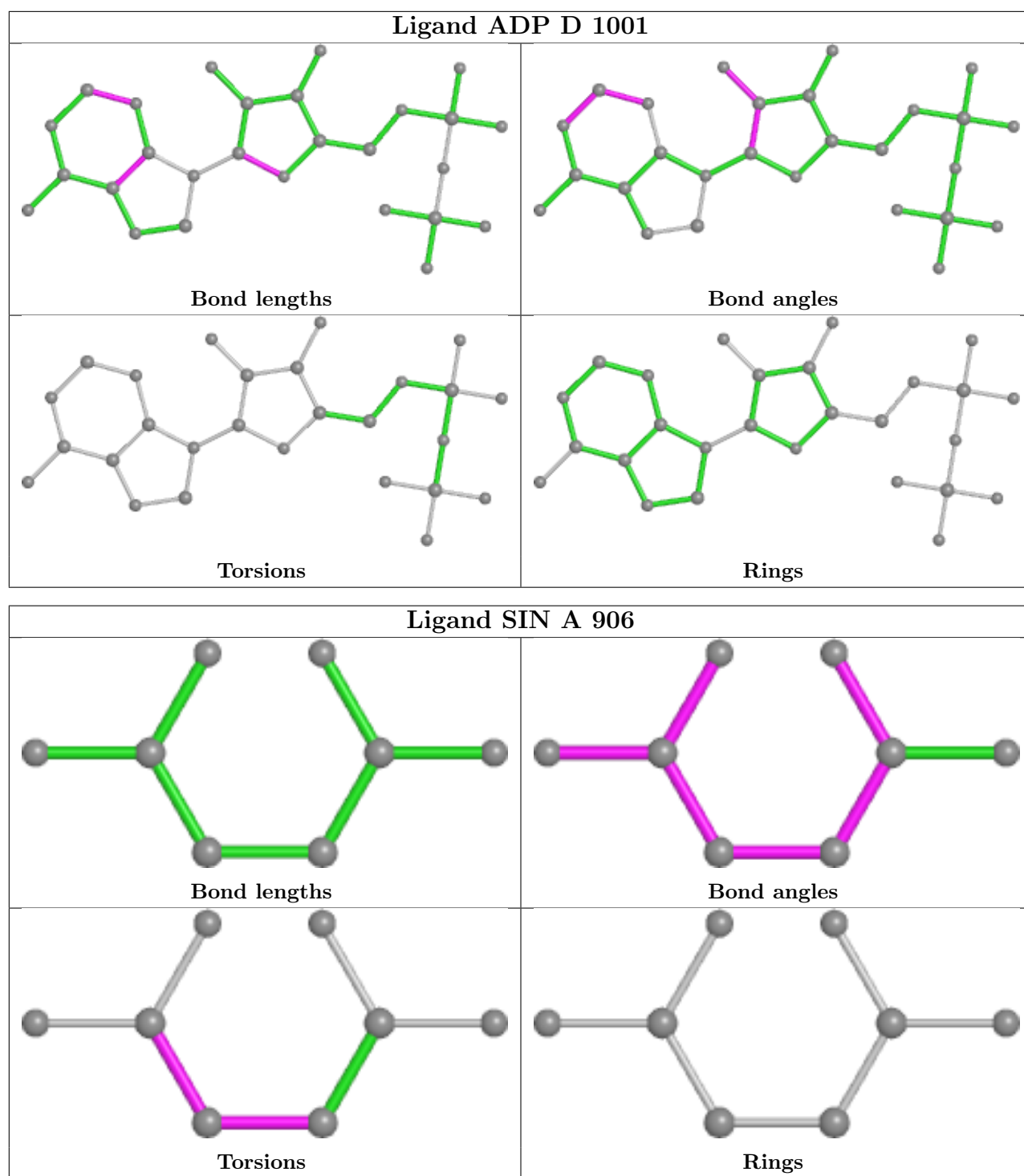












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	519/531 (97%)	-0.37	5 (0%) 82 86	15, 21, 36, 54	0
1	B	519/531 (97%)	-0.48	2 (0%) 92 94	14, 21, 38, 58	0
1	C	519/531 (97%)	-0.10	28 (5%) 25 34	15, 27, 53, 82	0
1	D	522/531 (98%)	-0.39	4 (0%) 86 89	16, 26, 42, 60	0
1	E	519/531 (97%)	-0.62	1 (0%) 95 96	14, 19, 34, 61	0
1	F	515/531 (96%)	-0.33	6 (1%) 79 83	15, 23, 45, 65	0
1	G	506/531 (95%)	0.11	60 (11%) 4 6	15, 23, 76, 98	0
1	H	522/531 (98%)	-0.45	2 (0%) 92 94	15, 20, 37, 59	0
All	All	4141/4248 (97%)	-0.33	108 (2%) 56 64	14, 22, 46, 98	0

All (108) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	G	202	LEU	9.3
1	G	139	LEU	9.0
1	G	201	PHE	7.1
1	G	151	CYS	5.8
1	G	214	ALA	5.3
1	G	137	ALA	5.2
1	C	189	PRO	5.1
1	G	183	GLN	5.0
1	G	171	SER	5.0
1	G	167	VAL	5.0
1	G	184	VAL	4.9
1	G	204	SER	4.9
1	G	138	THR	4.9
1	G	133	LEU	4.6
1	G	156	LEU	4.5
1	G	154	ASN	4.5

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Mol	Chain	Res	Type	RSRZ
1	C	191	PHE	4.4
1	G	196	VAL	4.3
1	G	152	ASP	4.2
1	G	166	VAL	4.2
1	G	131	VAL	4.2
1	G	164	CYS	4.2
1	G	150	LYS	4.1
1	F	514	TRP	4.0
1	G	147	TYR	4.0
1	G	153	GLU	3.9
1	F	517	GLY	3.9
1	G	213	ALA	3.9
1	C	155	ILE	3.9
1	G	180	ILE	3.8
1	D	99	SER	3.7
1	C	146	ALA	3.7
1	G	157	TRP	3.7
1	G	185	LYS	3.6
1	G	155	ILE	3.6
1	G	141	ILE	3.6
1	G	194	THR	3.6
1	C	125	GLY	3.5
1	C	137	ALA	3.5
1	G	130	GLU	3.5
1	G	193	VAL	3.4
1	E	517	GLY	3.4
1	G	182	LEU	3.4
1	G	203	GLY	3.4
1	G	163	ILE	3.3
1	G	134	LYS	3.3
1	C	143	LEU	3.3
1	G	146	ALA	3.3
1	C	190	ASP	3.2
1	G	195	GLU	3.2
1	G	168	ASP	3.2
1	G	136	GLY	3.1
1	F	189	PRO	3.1
1	C	139	LEU	3.0
1	G	129	ALA	3.0
1	G	197	GLU	3.0
1	F	479	GLU	3.0
1	C	186	GLN	2.9

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Mol	Chain	Res	Type	RSRZ
1	G	143	LEU	2.8
1	G	169	VAL	2.8
1	D	146	ALA	2.8
1	C	164	CYS	2.8
1	G	198	ASN	2.7
1	G	179	LEU	2.7
1	A	12	ILE	2.7
1	G	132	GLU	2.7
1	C	138	THR	2.7
1	G	158	LEU	2.7
1	C	121	GLY	2.7
1	C	145	ASN	2.7
1	C	147	TYR	2.6
1	B	212	GLY	2.6
1	G	170	GLY	2.6
1	H	479	GLU	2.6
1	G	144	ASP	2.6
1	G	514	TRP	2.6
1	G	145	ASN	2.6
1	C	530	PRO	2.6
1	G	173	VAL	2.5
1	A	347	VAL	2.4
1	F	147	TYR	2.4
1	C	151	CYS	2.4
1	C	144	ASP	2.4
1	C	196	VAL	2.3
1	G	12	ILE	2.3
1	C	193	VAL	2.3
1	C	347	VAL	2.3
1	G	200	GLY	2.3
1	C	150	LYS	2.3
1	H	101	PRO	2.3
1	G	142	THR	2.3
1	B	504	LYS	2.2
1	A	350	ALA	2.2
1	F	191	PHE	2.2
1	D	517	GLY	2.2
1	C	169	VAL	2.2
1	C	148	MET	2.2
1	C	157	TRP	2.1
1	G	479	GLU	2.1
1	G	174	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
1	C	188	GLY	2.1
1	C	99	SER	2.1
1	A	514	TRP	2.1
1	A	517	GLY	2.1
1	G	135	LYS	2.1
1	G	140	LYS	2.1
1	D	147	TYR	2.1
1	C	192	LEU	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
7	GOL	E	607	6/6	0.88	0.18	30,35,42,44	0
8	GZ3	G	601	10/10	0.89	0.14	24,29,48,82	0
3	SIN	C	1006	8/8	0.90	0.16	21,43,51,60	0
7	GOL	E	609	6/6	0.90	0.13	21,27,31,33	0
7	GOL	F	612	6/6	0.90	0.17	25,36,44,47	0
7	GOL	C	1011	6/6	0.90	0.12	33,45,55,55	0
7	GOL	F	610	6/6	0.91	0.12	31,33,35,43	0
3	SIN	D	1006	8/8	0.91	0.14	25,47,57,61	0
8	GZ3	F	602	10/10	0.91	0.13	20,28,38,48	0
7	GOL	C	1012	6/6	0.91	0.14	38,46,53,64	0
7	GOL	C	1010	6/6	0.92	0.12	35,41,45,45	0
7	GOL	F	609	6/6	0.92	0.17	30,35,36,38	0
3	SIN	A	906	8/8	0.93	0.12	19,36,41,46	0
3	SIN	B	1006	8/8	0.93	0.10	18,34,43,43	0
3	SIN	E	605	8/8	0.93	0.13	20,31,52,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	SIN	F	606	8/8	0.93	0.12	23,44,59,62	0
3	SIN	G	604	8/8	0.93	0.12	22,43,53,53	0
3	SIN	H	604	8/8	0.94	0.10	21,32,46,49	0
7	GOL	A	910	6/6	0.94	0.10	35,39,40,47	0
7	GOL	F	611	6/6	0.94	0.11	29,32,34,35	0
7	GOL	A	911	6/6	0.94	0.10	30,34,35,36	0
7	GOL	G	606	6/6	0.94	0.10	27,32,39,40	0
7	GOL	E	608	6/6	0.94	0.12	27,30,39,40	0
3	SIN	C	1002	8/8	0.94	0.09	29,34,40,44	0
7	GOL	E	610	6/6	0.95	0.20	25,28,33,40	0
7	GOL	B	1009	6/6	0.95	0.17	28,34,37,37	0
7	GOL	G	607	6/6	0.95	0.16	25,35,40,43	0
7	GOL	B	1010	6/6	0.95	0.12	30,39,49,49	0
7	GOL	C	1008	6/6	0.95	0.09	30,33,43,47	0
8	GZ3	H	601	10/10	0.95	0.12	24,27,40,45	0
7	GOL	F	608	6/6	0.96	0.07	25,27,32,35	0
7	GOL	C	1009	6/6	0.96	0.15	28,36,39,42	0
7	GOL	A	908	6/6	0.96	0.13	22,27,29,33	0
7	GOL	A	909	6/6	0.96	0.07	30,36,40,40	0
3	SIN	B	1002	8/8	0.96	0.12	18,20,25,25	0
7	GOL	D	1008	6/6	0.96	0.14	26,28,39,43	0
2	ADP	F	601	27/27	0.96	0.18	30,41,47,54	0
8	GZ3	E	601	10/10	0.96	0.08	16,25,34,36	0
3	SIN	A	902	8/8	0.96	0.11	18,22,29,29	0
2	ADP	C	1001	27/27	0.96	0.08	26,36,44,46	0
3	SIN	D	1002	8/8	0.96	0.10	22,28,31,31	0
6	ALA	B	1007	6/6	0.97	0.09	17,20,21,22	0
7	GOL	H	606	6/6	0.97	0.09	21,29,31,33	0
7	GOL	H	607	6/6	0.97	0.11	25,29,37,40	0
6	ALA	F	607	6/6	0.97	0.10	16,18,20,20	0
6	ALA	G	605	6/6	0.97	0.10	17,19,22,23	0
4	MN	H	608	1/1	0.97	0.10	59,59,59,59	0
6	ALA	A	907	6/6	0.97	0.12	16,17,20,21	0
6	ALA	D	1007	6/6	0.98	0.06	19,21,22,22	0
6	ALA	E	606	6/6	0.98	0.10	14,15,17,19	0
2	ADP	D	1001	27/27	0.98	0.07	21,26,31,31	0
6	ALA	C	1007	6/6	0.98	0.10	19,21,21,22	0
7	GOL	B	1008	6/6	0.98	0.09	19,23,24,30	0
4	MN	G	602	1/1	0.99	0.05	30,30,30,30	0
4	MN	H	602	1/1	0.99	0.06	25,25,25,25	0
2	ADP	B	1001	27/27	0.99	0.09	15,17,20,23	0
5	K	A	905	1/1	0.99	0.09	18,18,18,18	0

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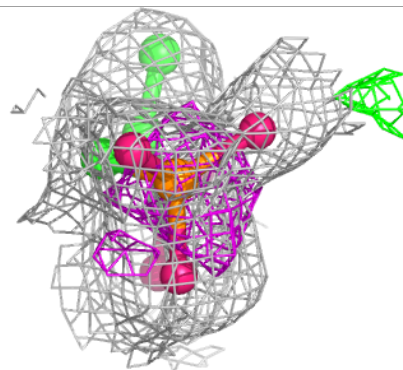
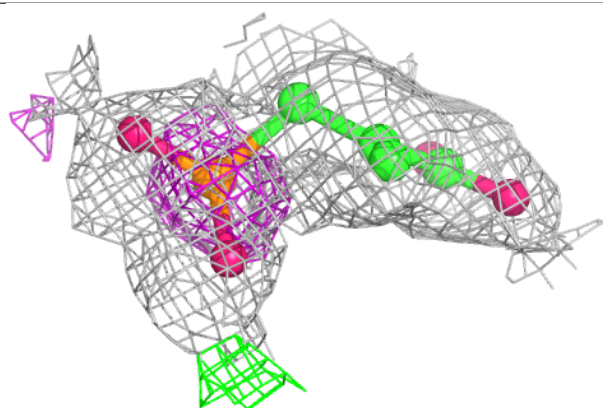
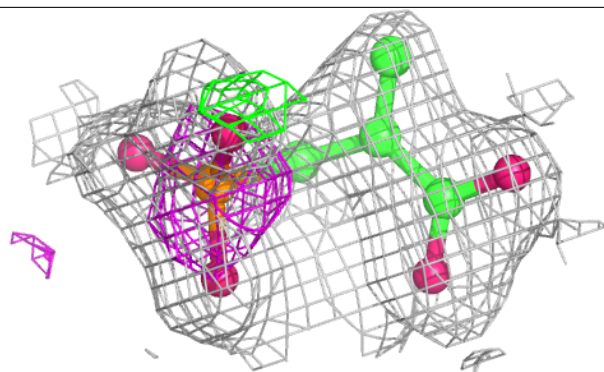
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
5	K	B	1004	1/1	0.99	0.08	18,18,18,18	0
5	K	C	1005	1/1	0.99	0.08	30,30,30,30	0
5	K	D	1005	1/1	0.99	0.08	26,26,26,26	0
2	ADP	A	901	27/27	0.99	0.10	16,19,22,25	0
4	MN	A	904	1/1	0.99	0.07	21,21,21,21	0
4	MN	B	1005	1/1	0.99	0.08	20,20,20,20	0
4	MN	D	1003	1/1	0.99	0.09	27,27,27,27	0
4	MN	E	603	1/1	0.99	0.03	47,47,47,47	0
4	MN	F	603	1/1	0.99	0.05	53,53,53,53	0
4	MN	F	604	1/1	0.99	0.07	22,22,22,22	0
6	ALA	H	605	6/6	0.99	0.07	15,17,18,19	0
5	K	G	603	1/1	1.00	0.05	22,22,22,22	0
5	K	H	603	1/1	1.00	0.05	22,22,22,22	0
4	MN	D	1004	1/1	1.00	0.07	22,22,22,22	0
4	MN	E	602	1/1	1.00	0.05	25,25,25,25	0
4	MN	A	903	1/1	1.00	0.10	21,21,21,21	0
4	MN	C	1003	1/1	1.00	0.04	33,33,33,33	0
4	MN	C	1004	1/1	1.00	0.07	30,30,30,30	0
4	MN	B	1003	1/1	1.00	0.08	21,21,21,21	0
5	K	E	604	1/1	1.00	0.05	24,24,24,24	0
5	K	F	605	1/1	1.00	0.05	23,23,23,23	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.

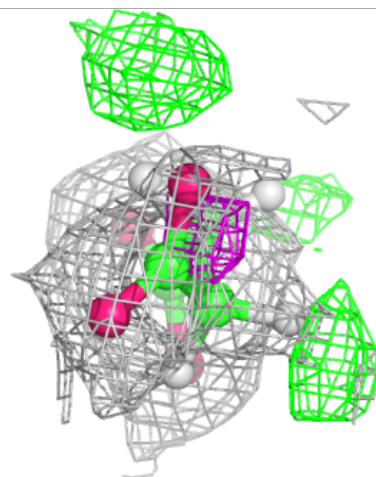
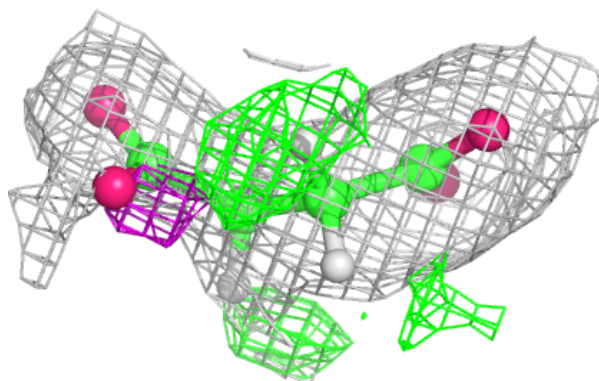
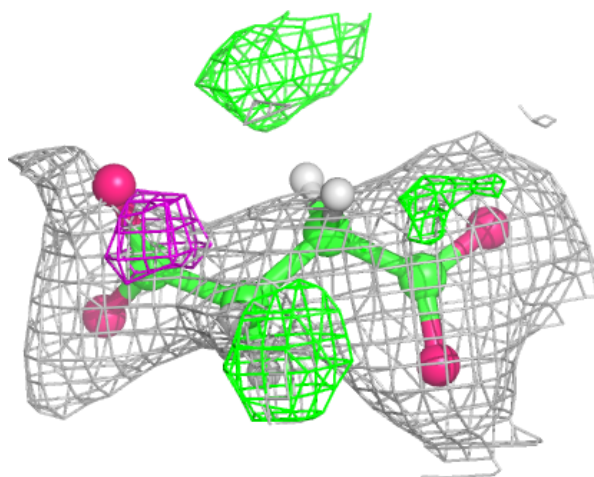
Electron density around GZ3 G 601:

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



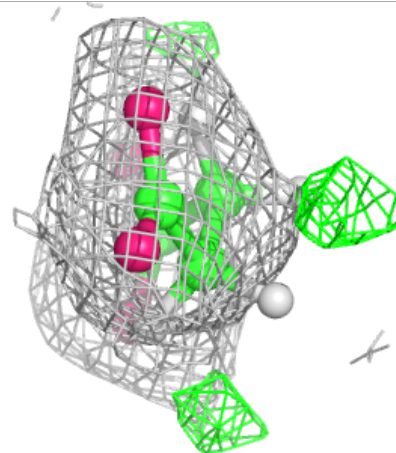
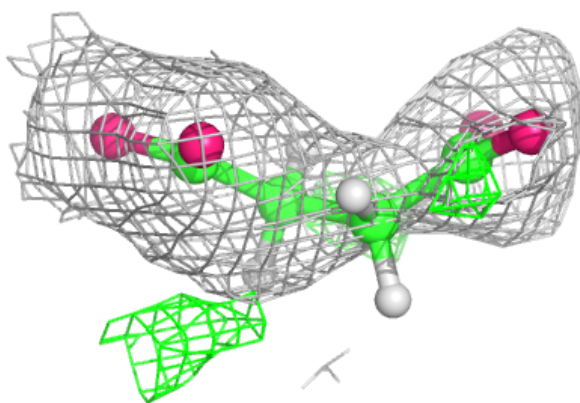
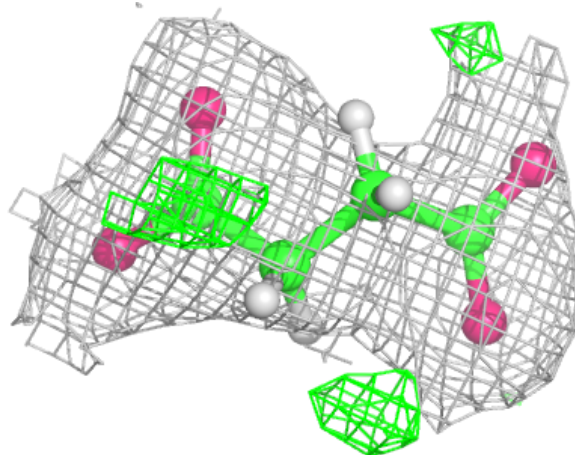
Electron density around SIN C 1006:

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



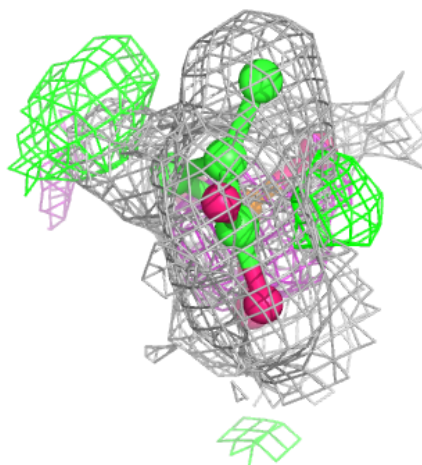
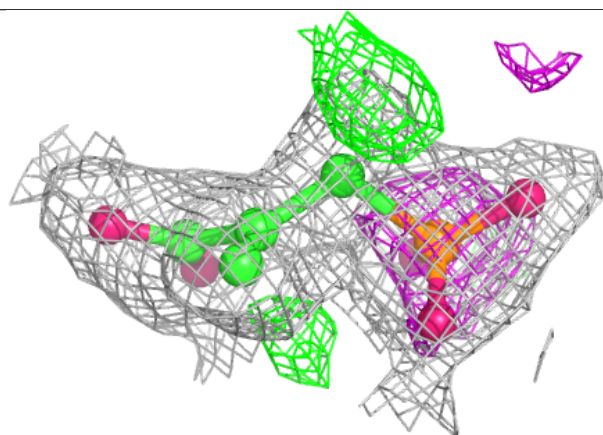
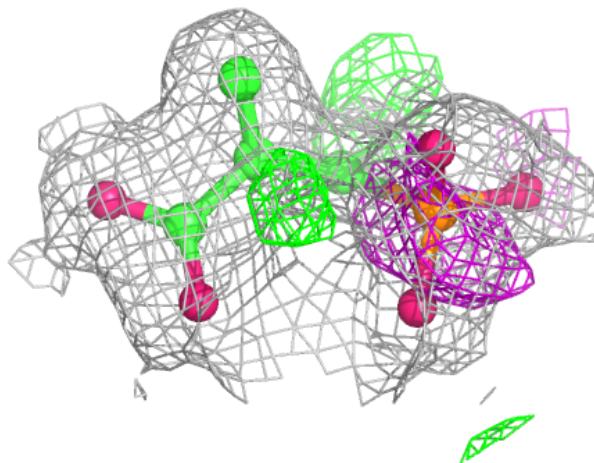
Electron density around SIN D 1006:

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



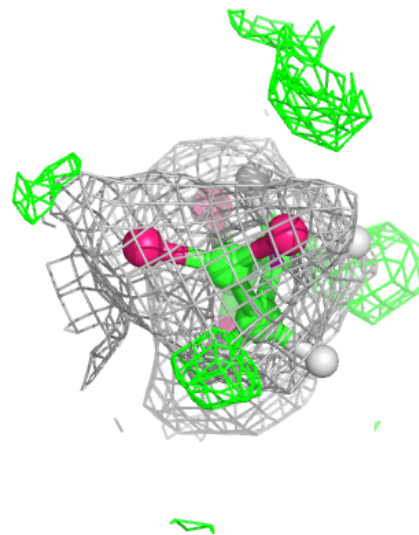
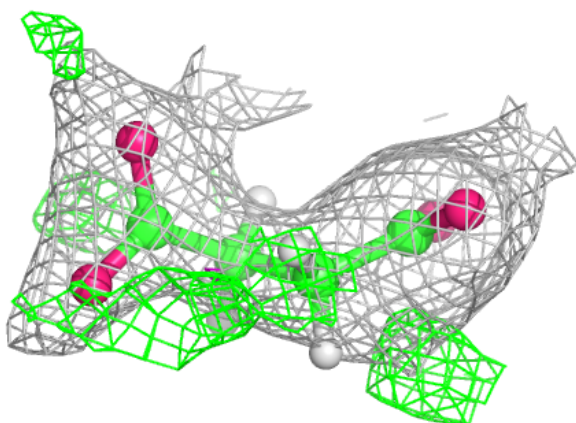
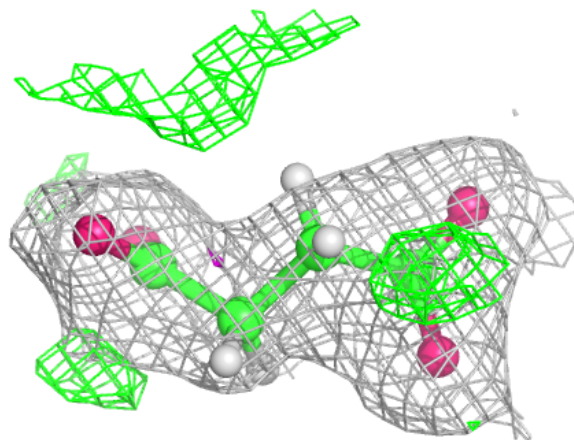
Electron density around GZ3 F 602:

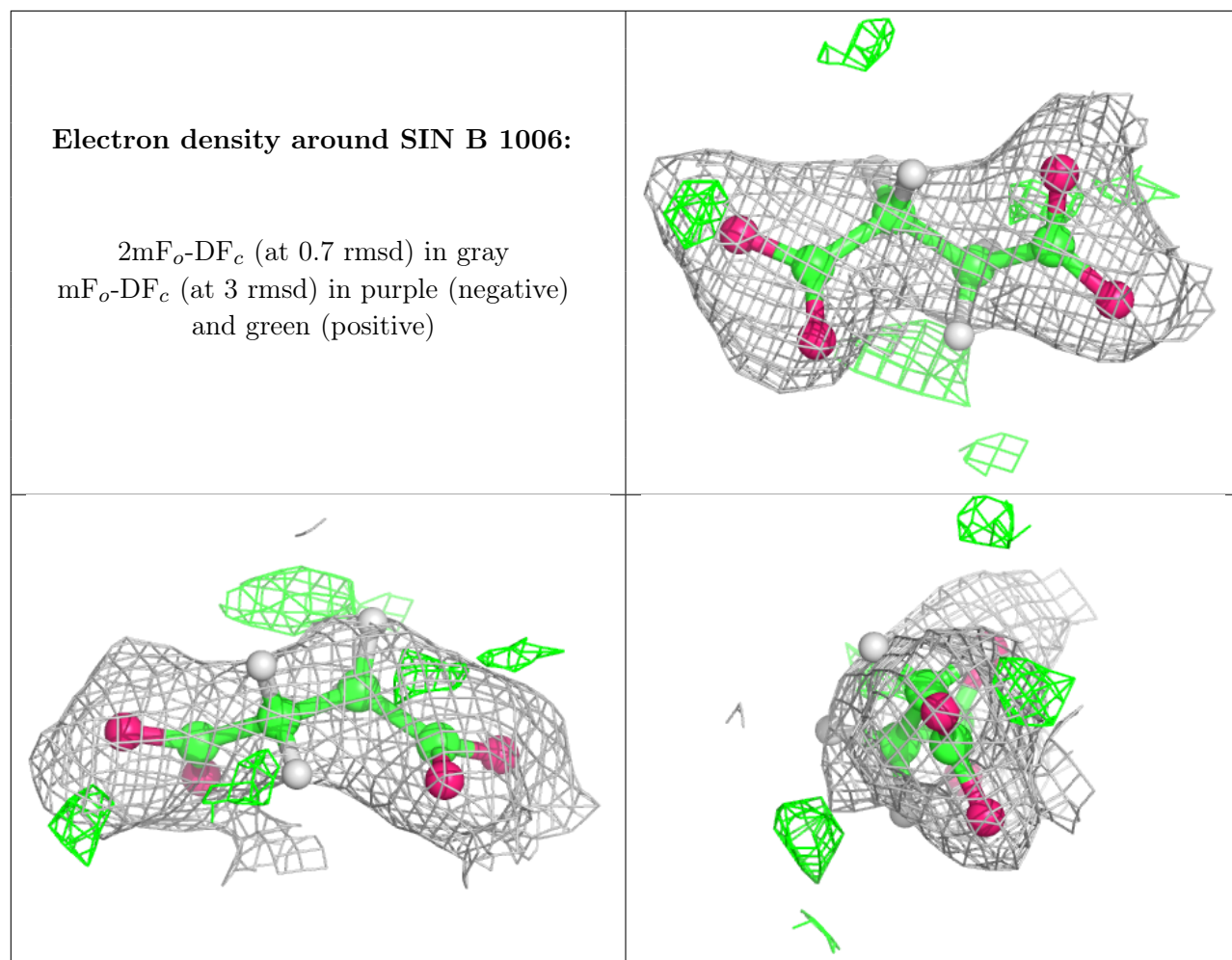
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around SIN A 906:

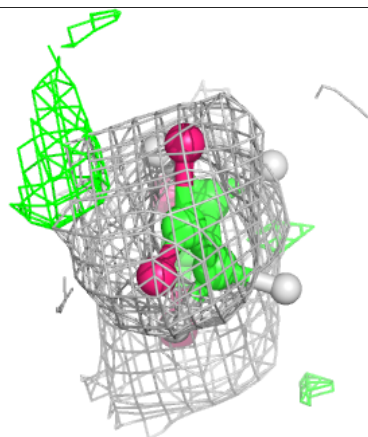
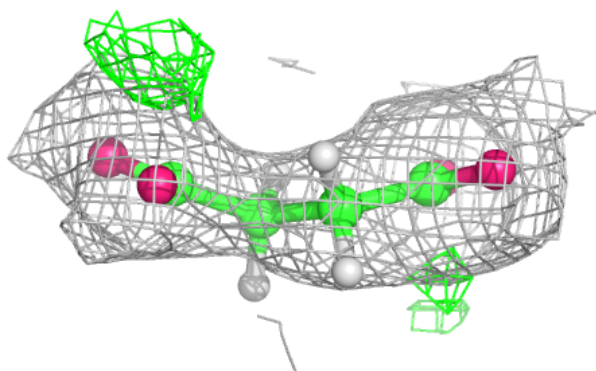
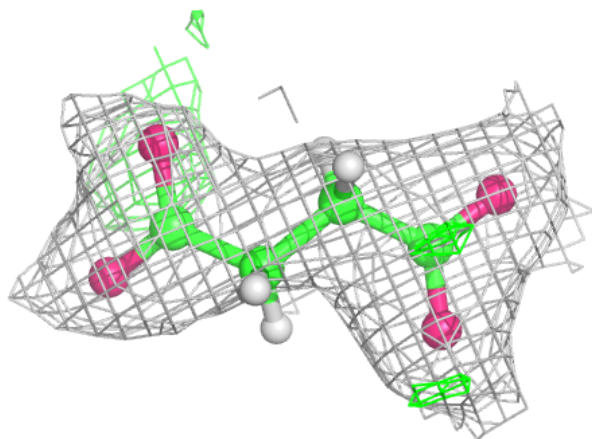
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





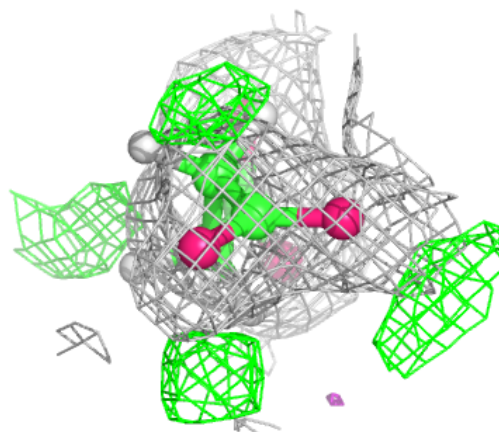
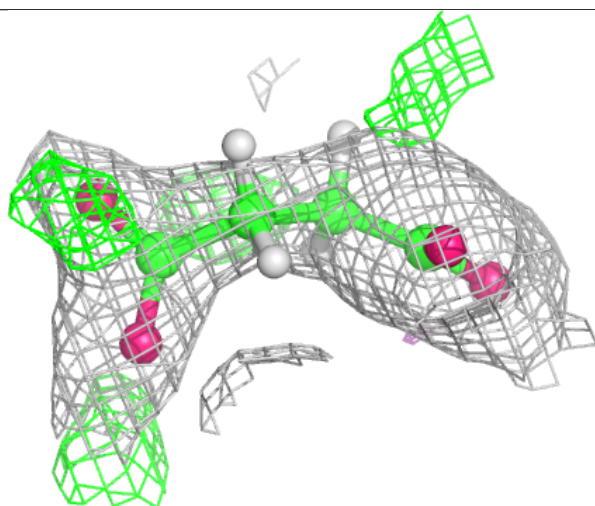
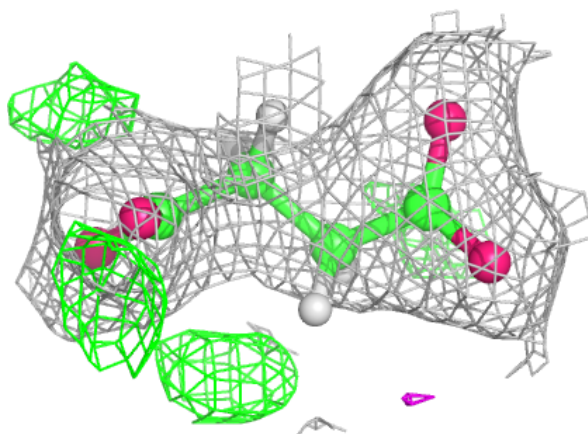
Electron density around SIN E 605:

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



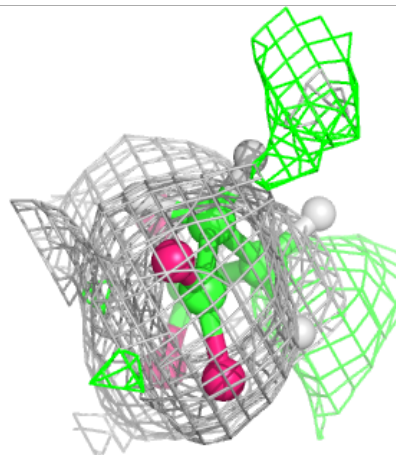
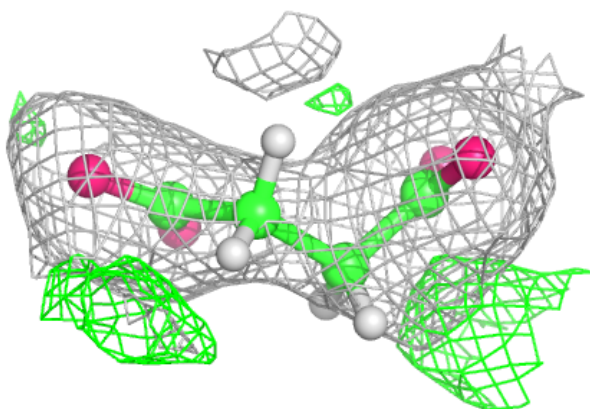
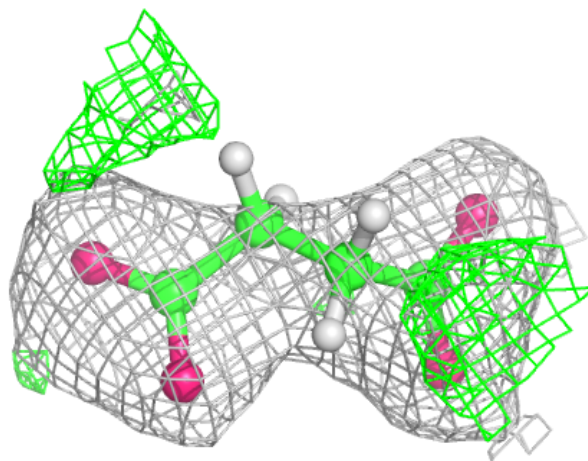
Electron density around SIN F 606:

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



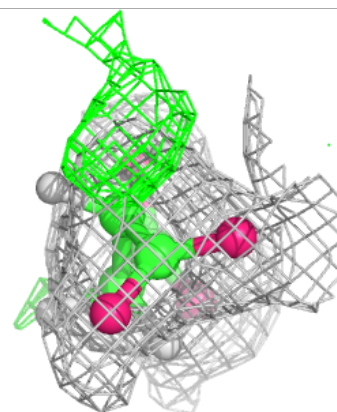
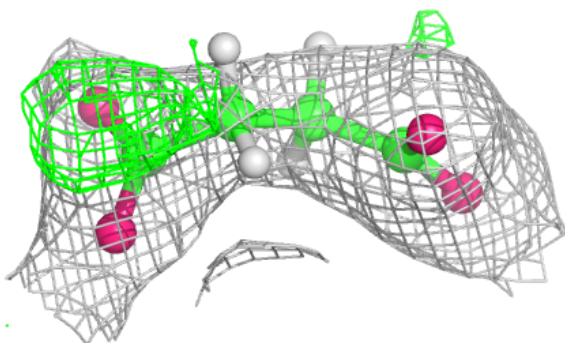
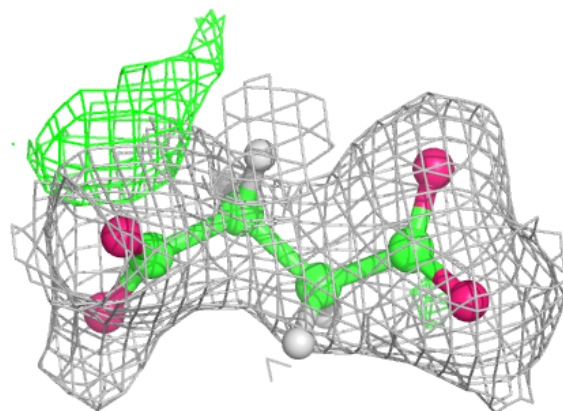
Electron density around SIN G 604:

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



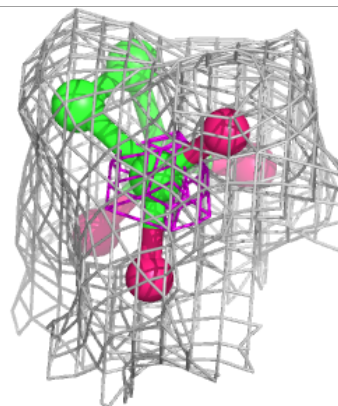
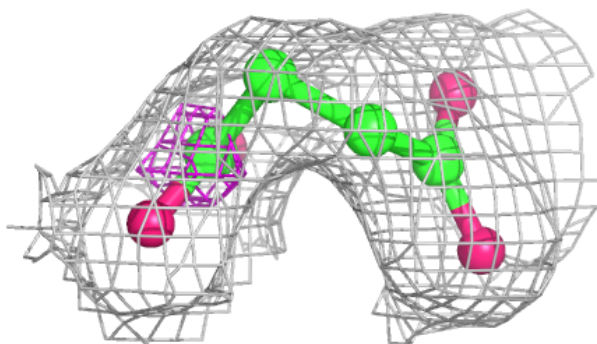
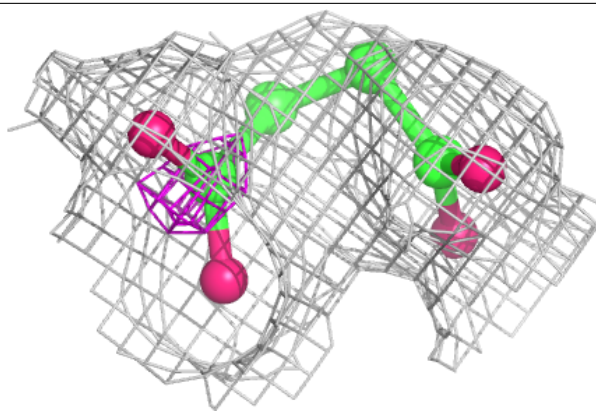
Electron density around SIN H 604:

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

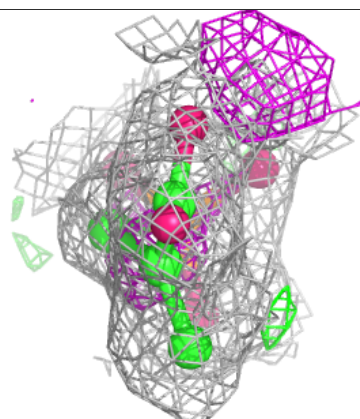
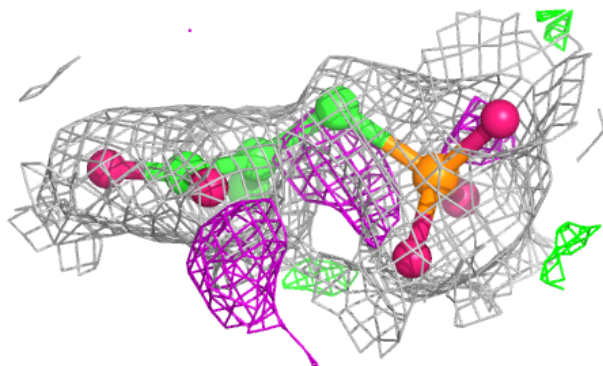
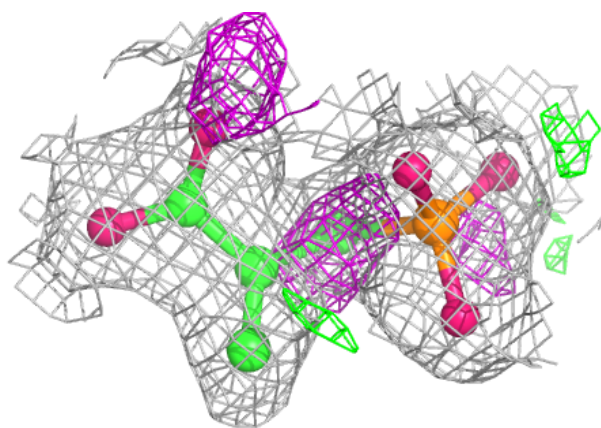


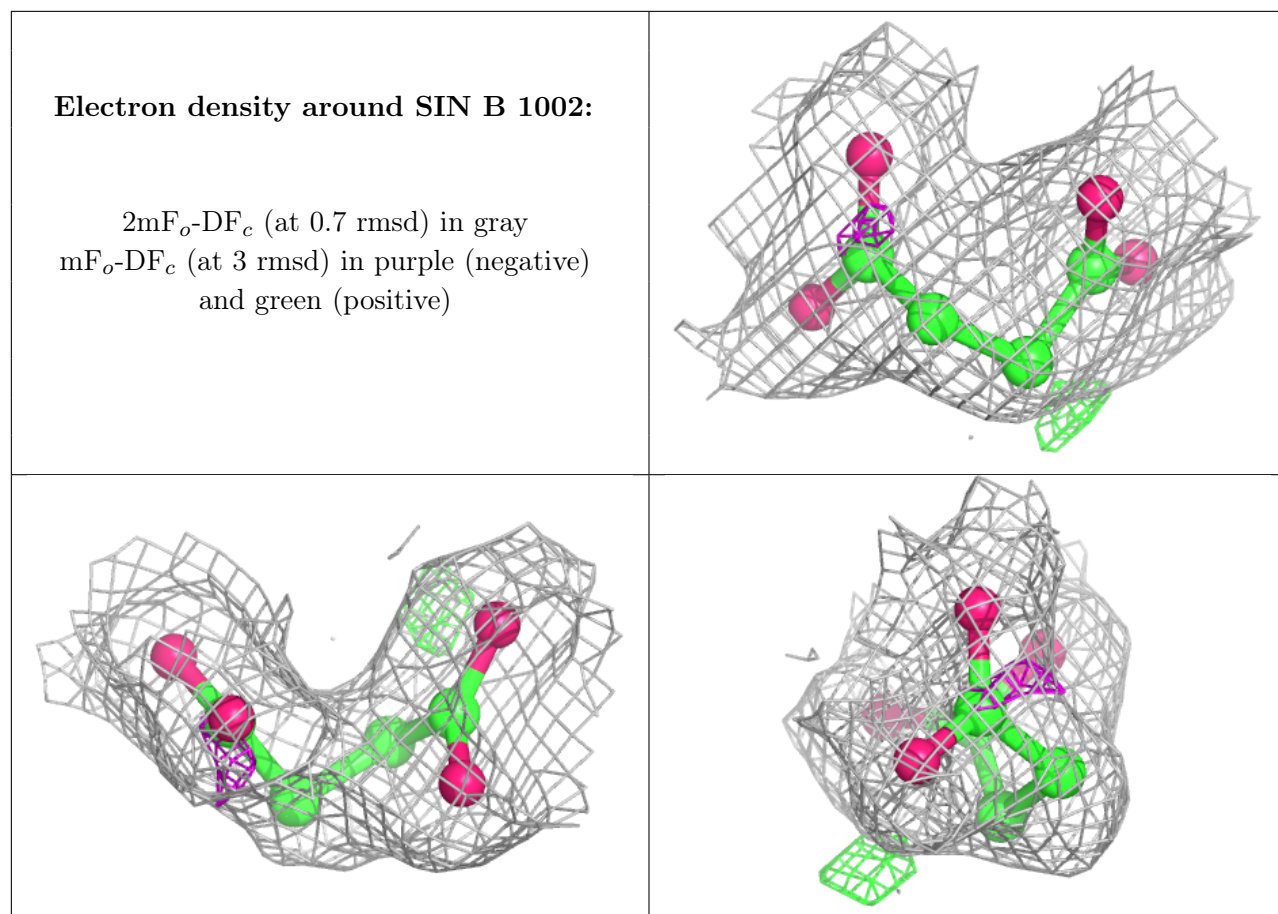
Electron density around SIN C 1002:

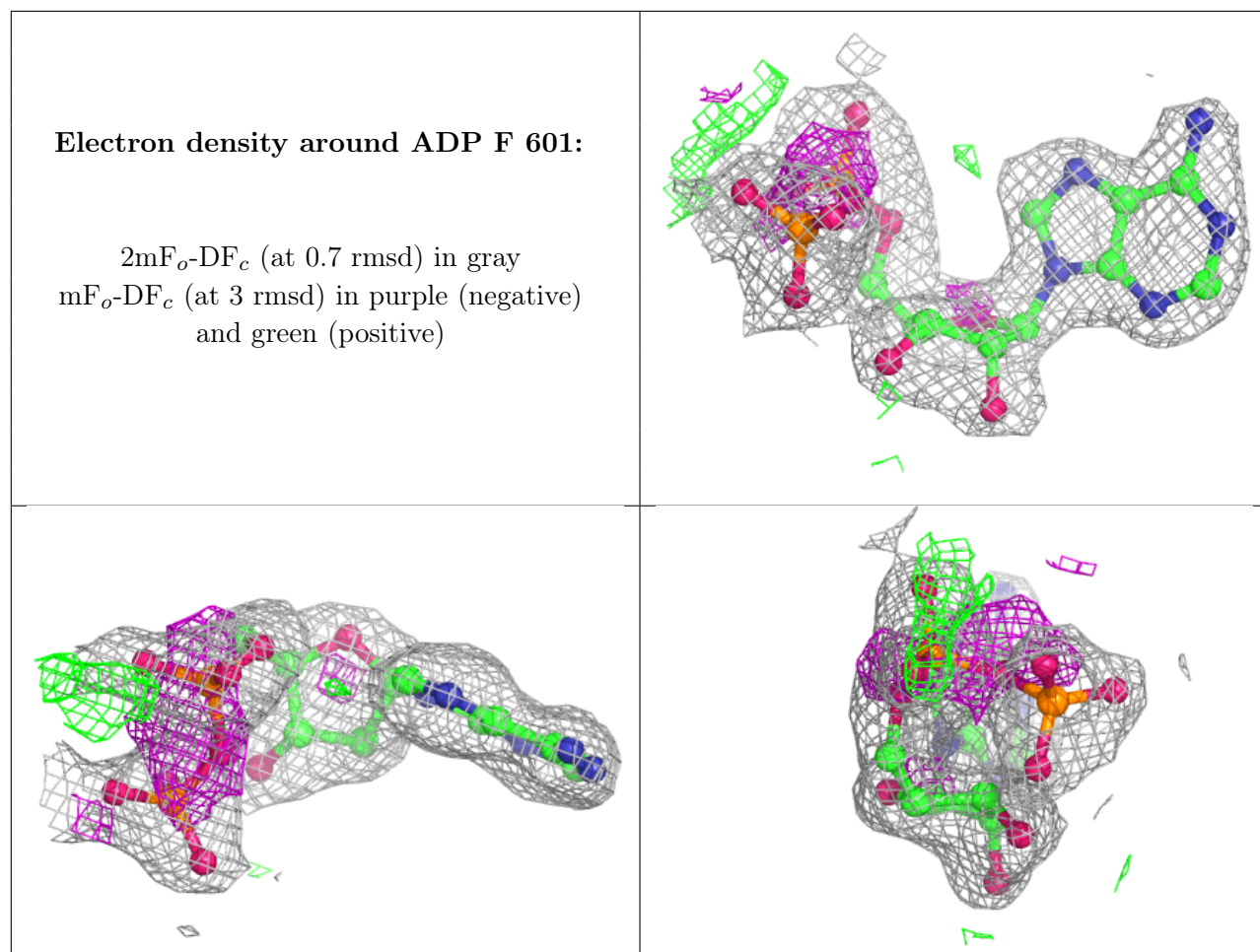
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around GZ3 H 601:**

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

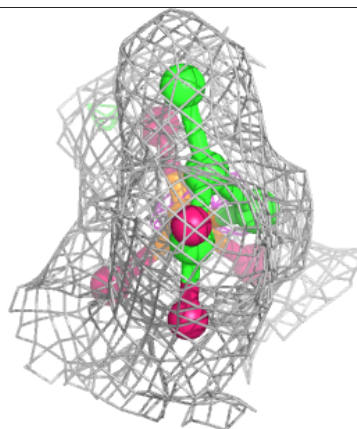
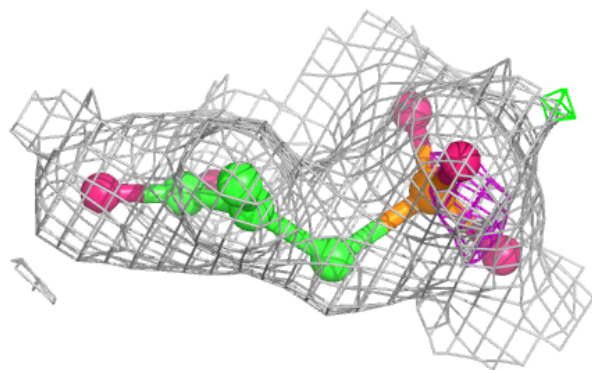
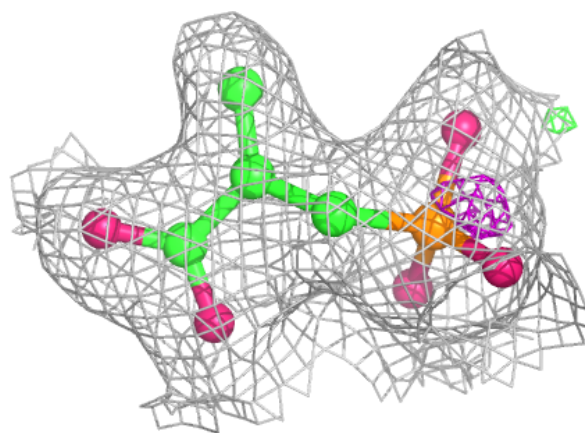






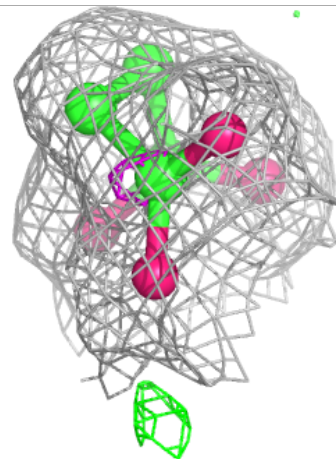
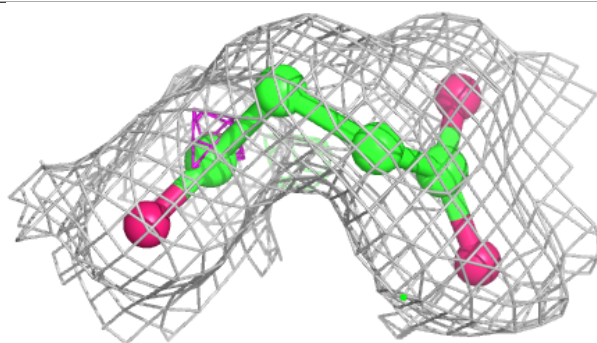
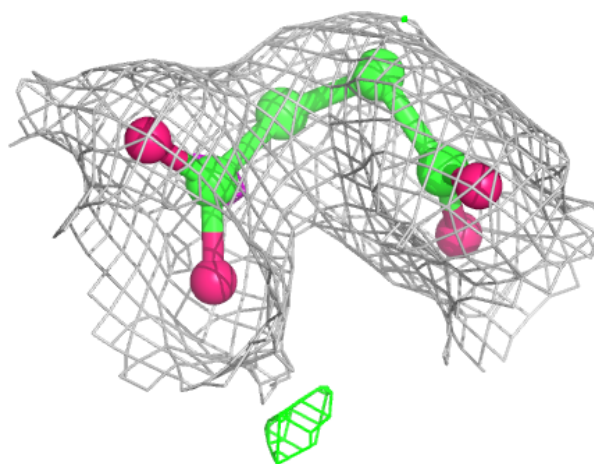
Electron density around GZ3 E 601:

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



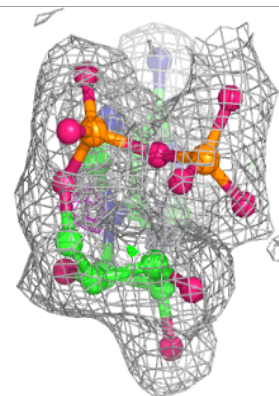
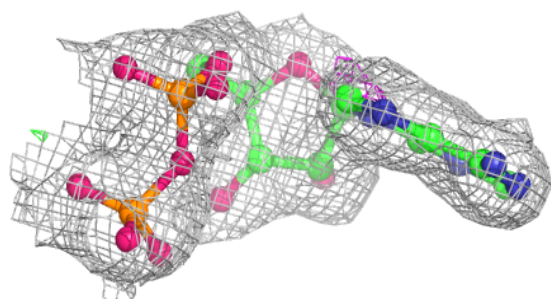
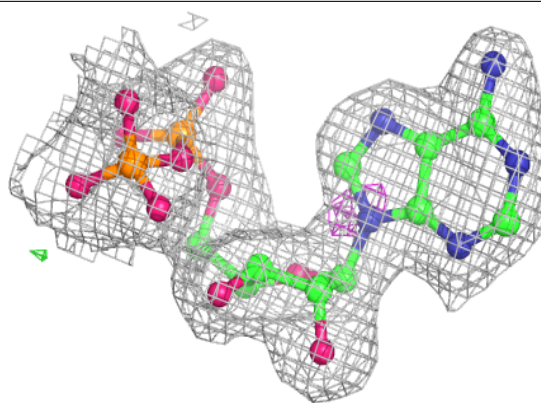
Electron density around SIN A 902:

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

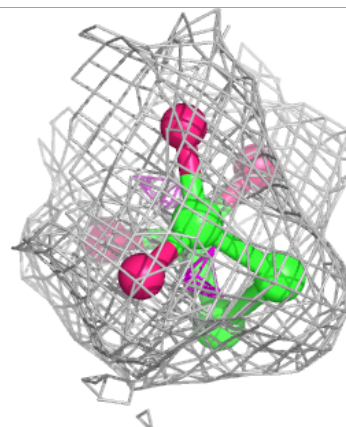
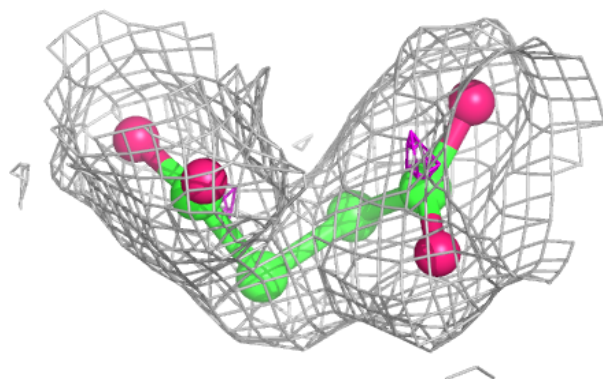
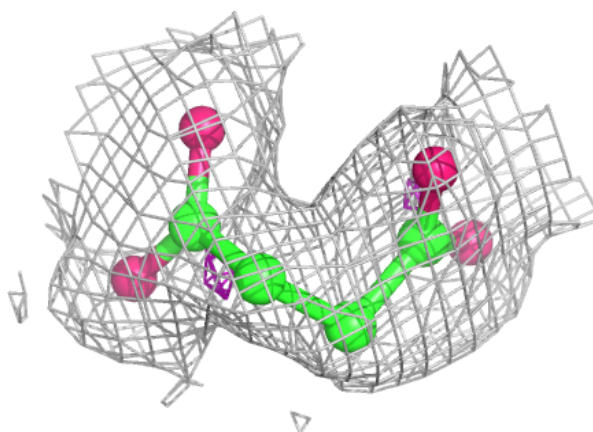


Electron density around ADP C 1001:

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

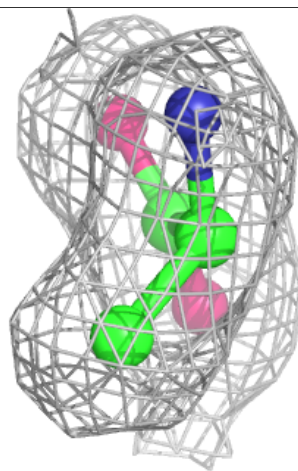
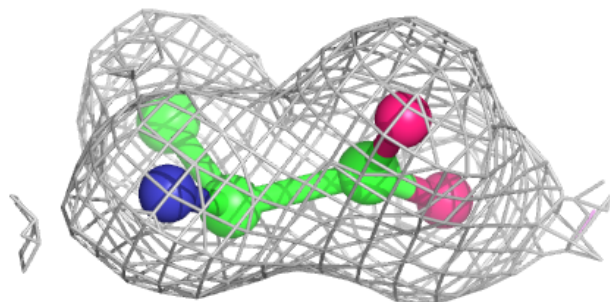
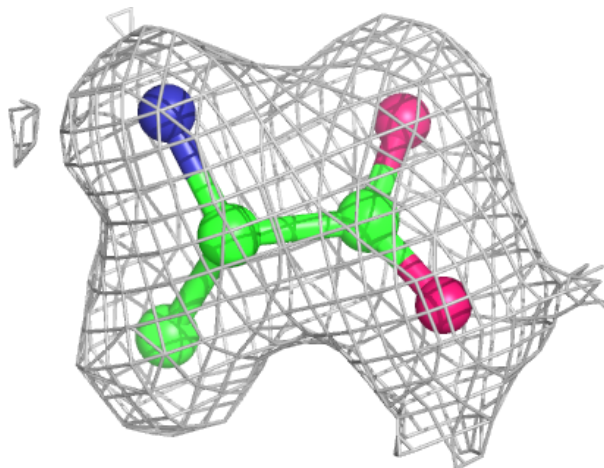
**Electron density around SIN D 1002:**

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



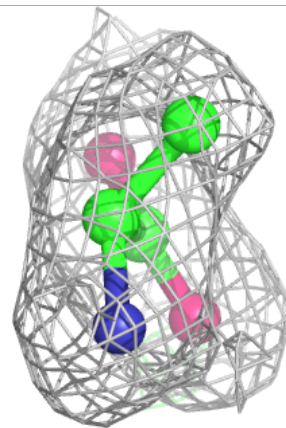
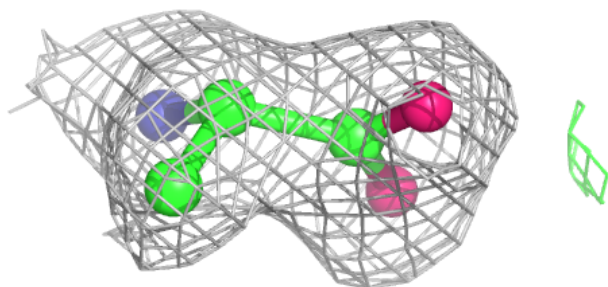
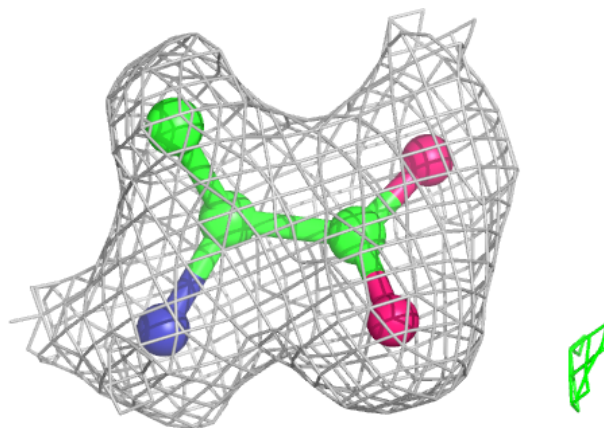
Electron density around ALA B 1007:

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



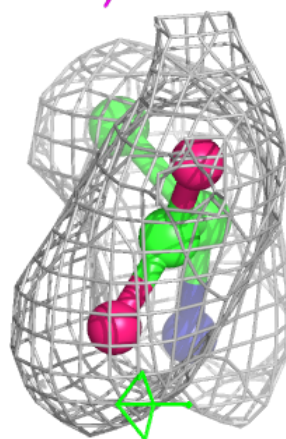
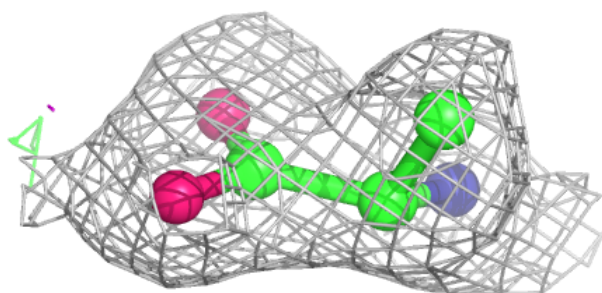
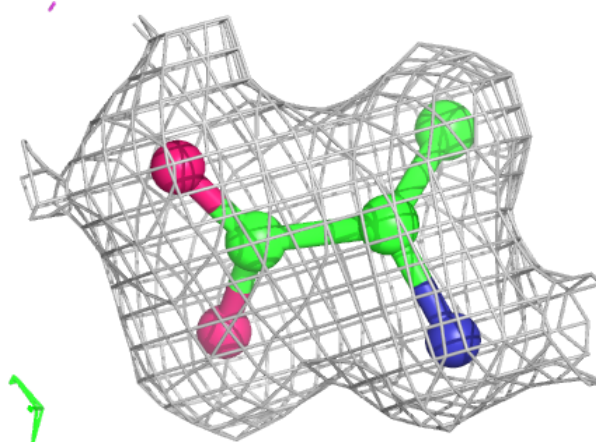
Electron density around ALA F 607:

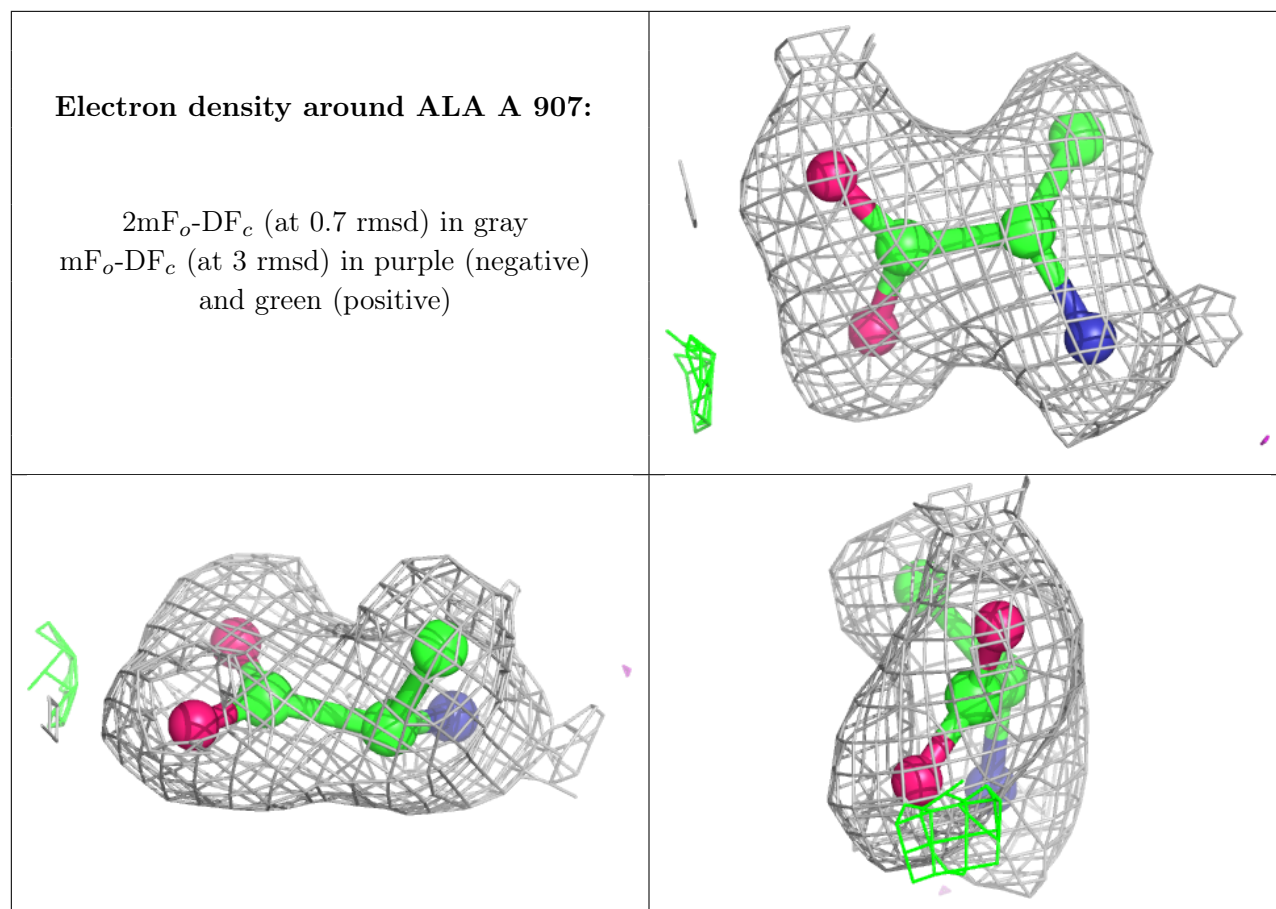
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

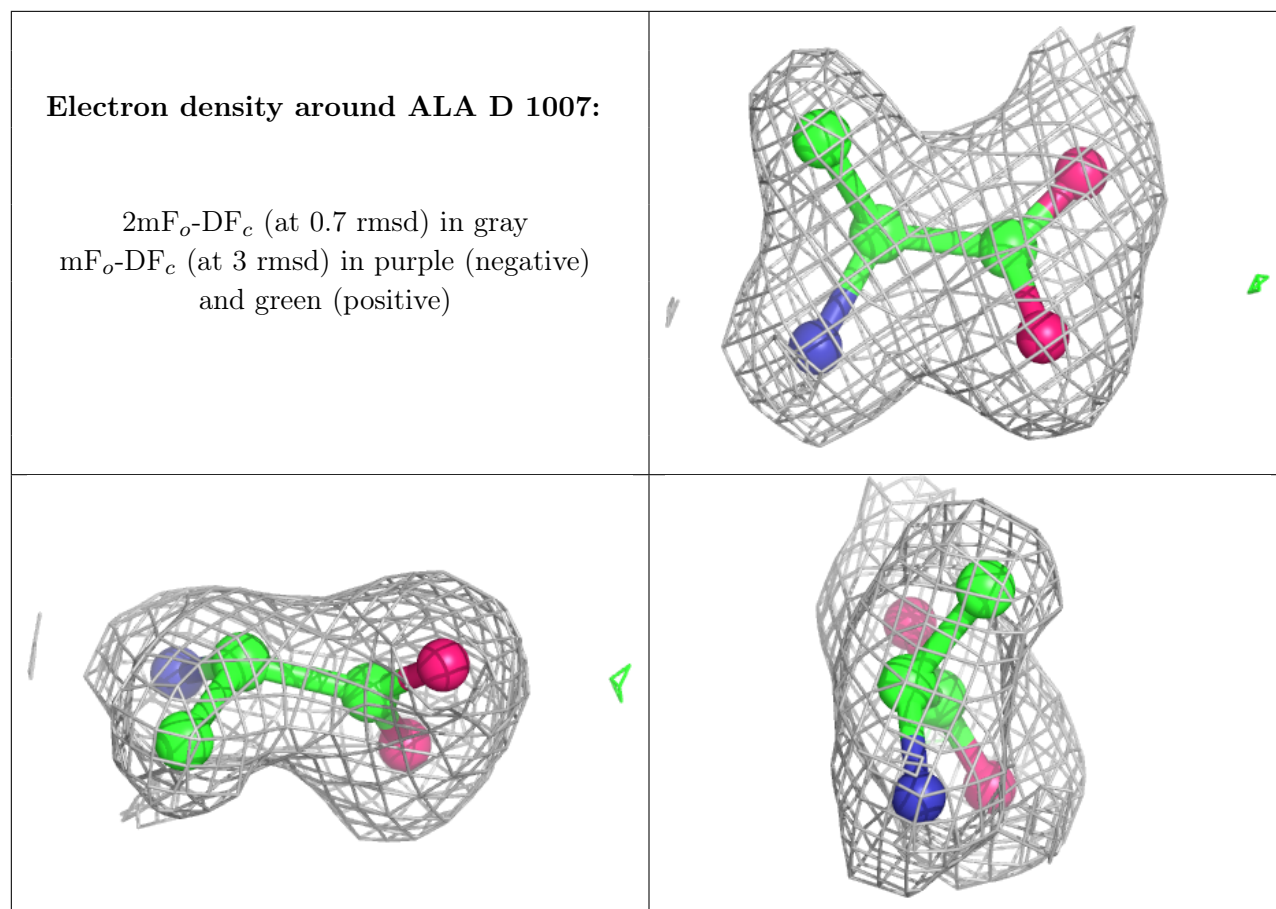


Electron density around ALA G 605:

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

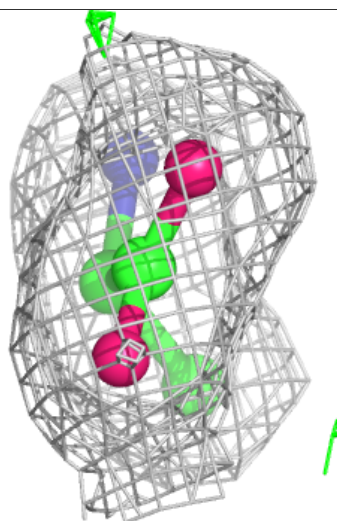
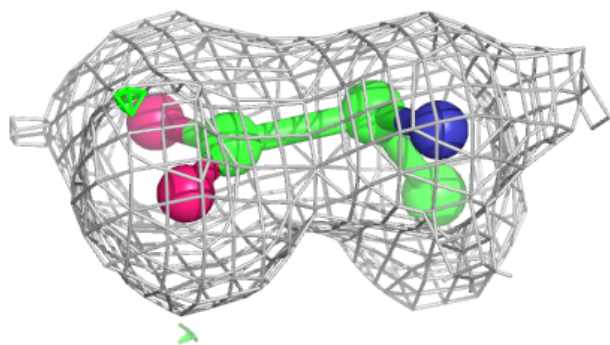
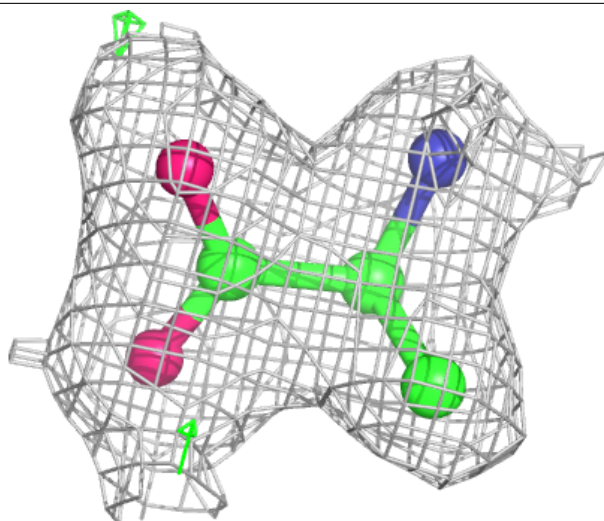






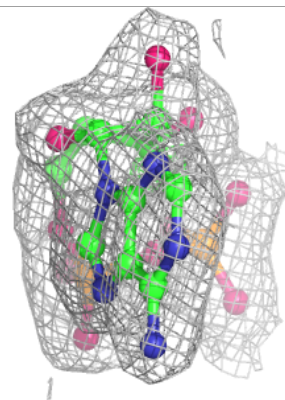
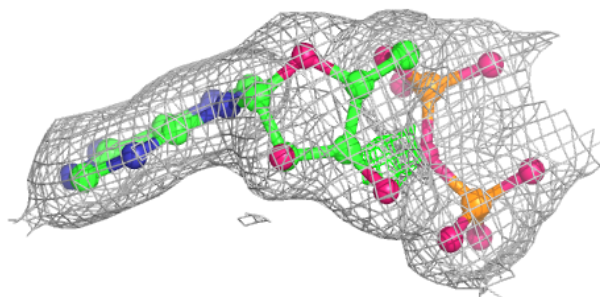
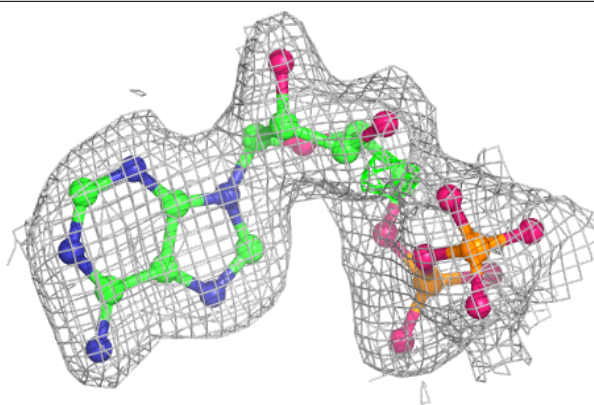
Electron density around ALA E 606:

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

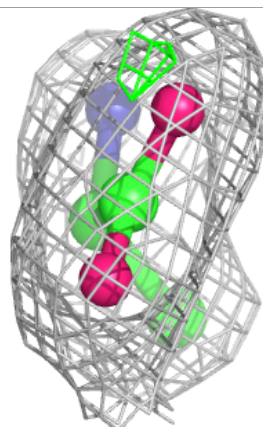
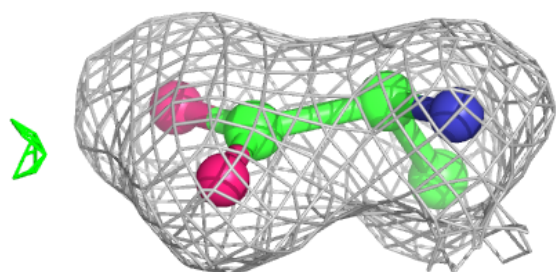
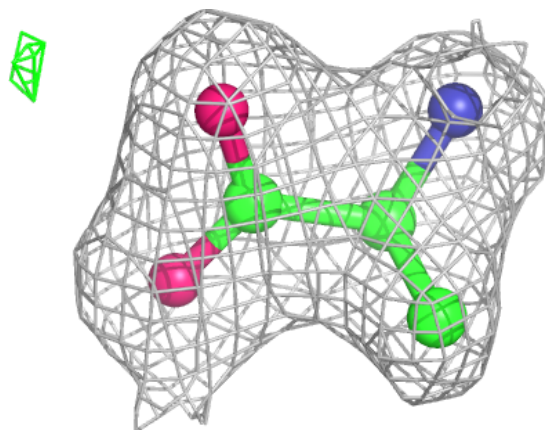


Electron density around ADP D 1001:

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

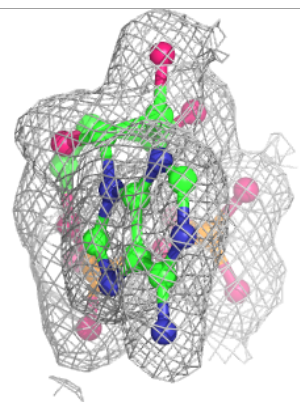
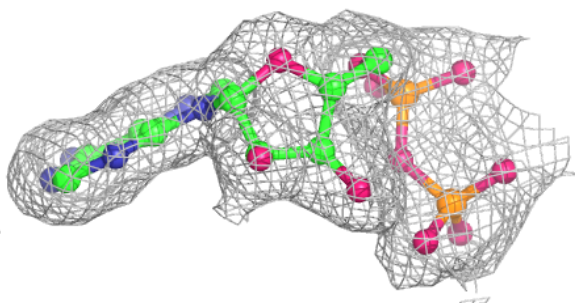
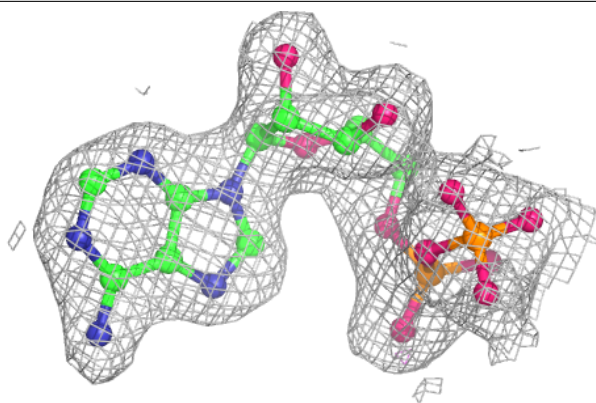
**Electron density around ALA C 1007:**

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

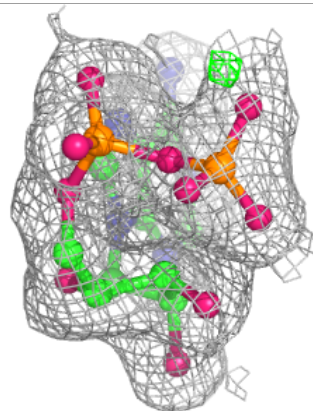
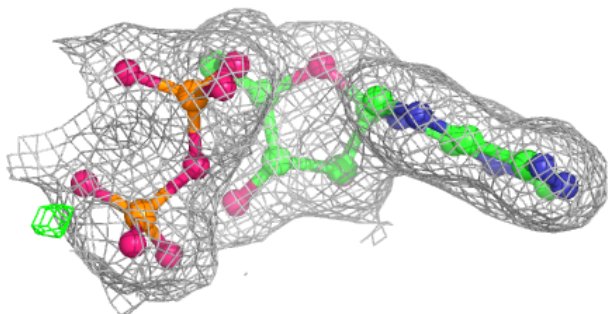
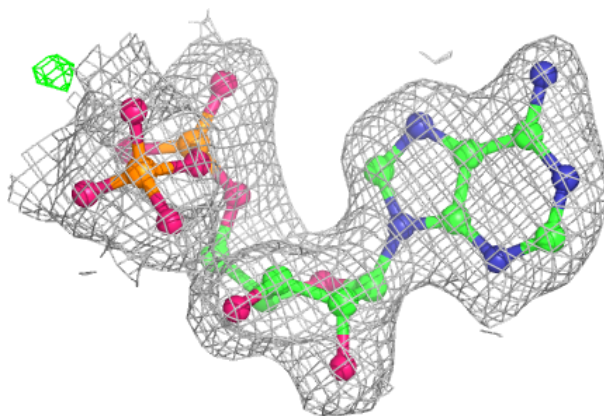


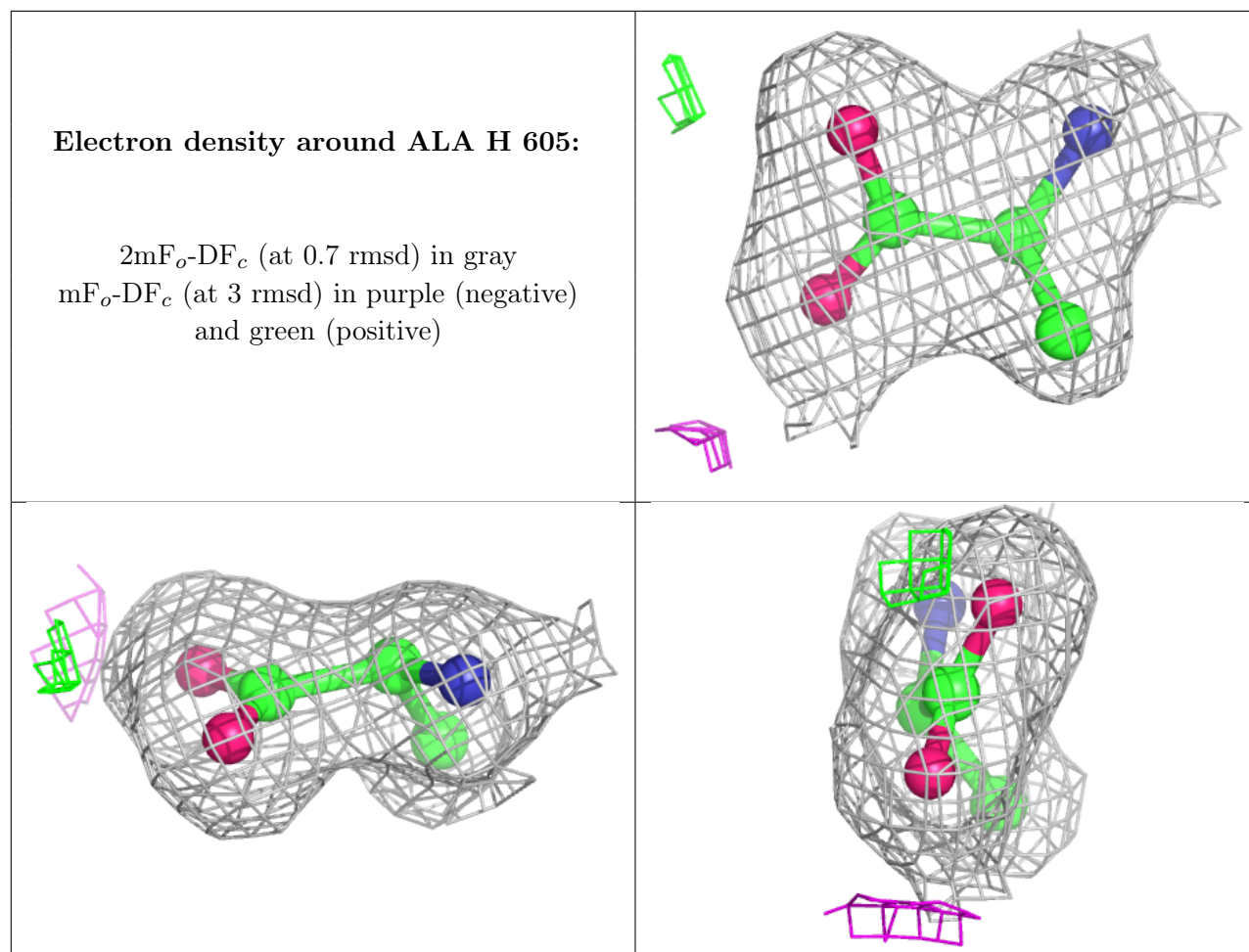
Electron density around ADP B 1001:

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

**Electron density around ADP A 901:**

$2mF_o-DF_c$ (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.