wwPDB EM Validation Summary Report ⓘ

Apr 3, 2024 – 01:04 PM EDT

PDB ID	:	9B4H
EMDB ID	:	EMD-43892
Title	:	Chlamydomonas reinhardtii mastigoneme filament
Authors	:	Dai, J.; Ma, M.; Zhang, R.; Brown, A.
Deposited on	:	2024-03-20
Resolution	:	3.10 Å(reported)
Based on initial model	:	.

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

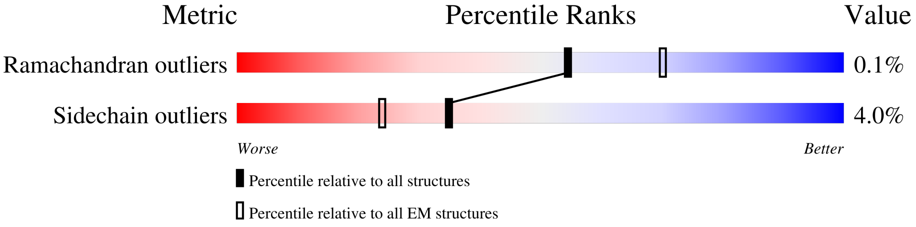
EMDB validation analysis	:	0.0.1.dev92
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.1

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

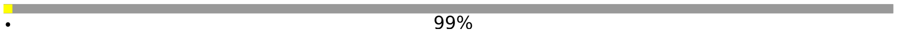
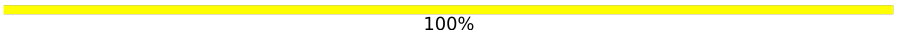
The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1987	
1	B	1987	
2	X	8572	
3	A1	2	
3	A2	2	
3	A3	2	
3	a1	2	
3	a2	2	
3	a3	2	

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Mol	Chain	Length	Quality of chain
4	A4	2	100%
4	A5	2	100%
4	A7	2	50% 50%
4	B0	2	50% 50%
4	B1	2	100%
4	B3	2	100%
4	B4	2	100%
4	B5	2	100%
4	B7	2	100%
4	B9	2	100%
4	C0	2	100%
4	C1	2	100%
4	C2	2	100%
4	C3	2	100%
4	C4	2	100%
4	C5	2	100%
4	C6	2	100%
4	C7	2	100%
4	C8	2	100%
4	C9	2	100%
4	D0	2	100%
4	D1	2	50% 50% 50%
4	D2	2	100%
4	D3	2	100%
4	D4	2	100%

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Mol	Chain	Length	Quality of chain
4	D5	2	🟩 100%
4	D6	2	🟩 100%
4	D7	2	🟩 100%
4	D8	2	🟩 100%
4	D9	2	🟩 100%
4	E0	2	🟩 100%
4	E1	2	🟩 100%
4	E2	2	🟩 100%
4	E3	2	🟩 100%
4	E4	2	🟨 100%
4	E5	2	🟩 100%
4	E7	2	🟩 100%
4	E8	2	🟩 100%
4	F0	2	🟩 100%
4	F2	2	🟩 100%
4	F3	2	🟩 100%
4	F5	2	🟩 100%
4	F8	2	🟩 100%
4	a5	2	🟩 50% 🟨 50%
4	a7	2	🟩 50% 🟨 50%
4	b0	2	🟨 100%
4	b1	2	🟨 100%
4	b3	2	🟨 100%
4	b4	2	🟨 100%
4	b5	2	🟨 100%

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Mol	Chain	Length	Quality of chain
4	b7	2	100%
4	b9	2	100%
4	c0	2	100%
4	c1	2	100%
4	c2	2	100%
4	c3	2	100%
4	c4	2	100%
4	c5	2	100%
4	c6	2	100%
4	c7	2	100%
4	c8	2	100%
4	c9	2	100%
4	d0	2	100%
4	d1	2	50% 50%
4	d2	2	100%
4	d3	2	100%
4	d4	2	100%
4	d5	2	100%
4	d6	2	100%
4	d7	2	100%
4	d8	2	50% 50%
4	d9	2	100%
4	e0	2	100%
4	e1	2	100%
4	e2	2	100%

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Mol	Chain	Length	Quality of chain
4	e3	2	🟩 50% 🟨 50%
4	e4	2	🟨 100%
4	e5	2	🟨 100%
4	e6	2	🟩 50% 🟨 50%
4	e7	2	🟩 50% 🟨 50%
4	e8	2	🟨 100%
4	f0	2	🟩 50% 🟨 50%
4	f2	2	🟩 50% 🟨 50%
4	f3	2	🟨 100%
4	f5	2	🟨 100%
4	f8	2	🟨 100%
5	A6	4	🟩 100%
5	A9	4	🟩 100%
5	B6	4	🟩 100%
5	F6	4	🟩 100%
5	F7	4	🟩 100%
5	a6	4	🟨 100%
5	a9	4	🟩 25% 🟨 75%
5	b6	4	🟨 100%
5	f6	4	🟨 100%
5	f7	4	🟨 100%
6	E6	8	🟩 100%
7	a4	2	🟨 100%
8	e9	6	🟨 100%

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
7	34V	a4	1	X	-	-	-
9	A1AIO	A	2004	X	-	-	-
9	A1AIO	A	2006	X	-	-	-
9	A1AIO	A	2009	X	-	-	-
9	A1AIO	A	2011	X	-	-	-
9	A1AIO	A	2012	X	-	-	-
9	A1AIO	A	2014	X	-	-	-
9	A1AIO	A	2016	X	-	-	-
9	A1AIO	A	2018	X	-	-	-
9	A1AIO	A	2025	X	-	-	-
9	A1AIO	A	2035	X	-	-	-
9	A1AIO	A	2037	X	-	-	-
9	A1AIO	A	2038	X	-	-	-
9	A1AIO	A	2040	X	-	-	-
9	A1AIO	A	2052	X	-	-	-
9	A1AIO	B	2004	X	-	-	-
9	A1AIO	B	2006	X	-	-	-
9	A1AIO	B	2009	X	-	-	-
9	A1AIO	B	2011	X	-	-	-
9	A1AIO	B	2012	X	-	-	-
9	A1AIO	B	2014	X	-	-	-
9	A1AIO	B	2016	X	-	-	-
9	A1AIO	B	2030	X	-	-	-
9	A1AIO	B	2031	X	-	-	-
9	A1AIO	B	2032	X	-	-	-
9	A1AIO	B	2033	X	-	-	-
9	A1AIO	B	2034	X	-	-	-
9	A1AIO	B	2046	X	-	-	-
9	A1AIO	B	2047	X	-	-	-
9	A1AIO	B	2053	X	-	-	-

2 Entry composition ⓘ

There are 10 unique types of molecules in this entry. The entry contains 32328 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 Tyrosine-protein kinase ephrin type A/B receptor-like domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1908	13867	8726	2262	2798	81	0	0
1	B	1908	13867	8726	2262	2798	81	0	0

- Molecule 2 is a protein called C-type lectin domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	X	109	834	509	116	208	1	0	0

- Molecule 3 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
3	A1	2	28	16	2	10	0	0
3	A2	2	28	16	2	10	0	0
3	A3	2	28	16	2	10	0	0
3	a1	2	28	16	2	10	0	0
3	a2	2	28	16	2	10	0	0
3	a3	2	28	16	2	10	0	0

- Molecule 4 is an oligosaccharide called beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose.

Mol	Chain	Residues	Atoms	AltConf	Trace
4	A4	2	Total C O 18 10 8	0	0
4	A5	2	Total C O 18 10 8	0	0
4	A7	2	Total C O 18 10 8	0	0
4	B0	2	Total C O 18 10 8	0	0
4	B1	2	Total C O 18 10 8	0	0
4	B3	2	Total C O 18 10 8	0	0
4	B4	2	Total C O 18 10 8	0	0
4	B5	2	Total C O 18 10 8	0	0
4	B7	2	Total C O 18 10 8	0	0
4	B9	2	Total C O 18 10 8	0	0
4	C0	2	Total C O 18 10 8	0	0
4	C1	2	Total C O 18 10 8	0	0
4	C2	2	Total C O 18 10 8	0	0
4	C3	2	Total C O 18 10 8	0	0
4	C4	2	Total C O 18 10 8	0	0
4	C5	2	Total C O 18 10 8	0	0
4	C6	2	Total C O 18 10 8	0	0
4	C7	2	Total C O 18 10 8	0	0
4	C8	2	Total C O 18 10 8	0	0
4	C9	2	Total C O 18 10 8	0	0
4	D0	2	Total C O 18 10 8	0	0
4	D1	2	Total C O 18 10 8	0	0

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Mol	Chain	Residues	Atoms	AltConf	Trace
4	D2	2	Total C O 18 10 8	0	0
4	D3	2	Total C O 18 10 8	0	0
4	D4	2	Total C O 18 10 8	0	0
4	D5	2	Total C O 18 10 8	0	0
4	D6	2	Total C O 18 10 8	0	0
4	D7	2	Total C O 18 10 8	0	0
4	D8	2	Total C O 18 10 8	0	0
4	D9	2	Total C O 18 10 8	0	0
4	E0	2	Total C O 18 10 8	0	0
4	E1	2	Total C O 18 10 8	0	0
4	E2	2	Total C O 18 10 8	0	0
4	E4	2	Total C O 18 10 8	0	0
4	E5	2	Total C O 18 10 8	0	0
4	E8	2	Total C O 18 10 8	0	0
4	F0	2	Total C O 18 10 8	0	0
4	F3	2	Total C O 18 10 8	0	0
4	F8	2	Total C O 18 10 8	0	0
4	a5	2	Total C O 18 10 8	0	0
4	a7	2	Total C O 18 10 8	0	0
4	b0	2	Total C O 18 10 8	0	0
4	b1	2	Total C O 18 10 8	0	0

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Mol	Chain	Residues	Atoms	AltConf	Trace
4	b3	2	Total C O 18 10 8	0	0
4	b4	2	Total C O 18 10 8	0	0
4	b5	2	Total C O 18 10 8	0	0
4	b7	2	Total C O 18 10 8	0	0
4	b9	2	Total C O 18 10 8	0	0
4	c0	2	Total C O 18 10 8	0	0
4	c1	2	Total C O 18 10 8	0	0
4	c2	2	Total C O 18 10 8	0	0
4	c3	2	Total C O 18 10 8	0	0
4	c4	2	Total C O 18 10 8	0	0
4	c5	2	Total C O 18 10 8	0	0
4	c6	2	Total C O 18 10 8	0	0
4	c7	2	Total C O 18 10 8	0	0
4	c8	2	Total C O 18 10 8	0	0
4	c9	2	Total C O 18 10 8	0	0
4	d1	2	Total C O 18 10 8	0	0
4	d2	2	Total C O 18 10 8	0	0
4	d3	2	Total C O 18 10 8	0	0
4	d4	2	Total C O 18 10 8	0	0
4	d5	2	Total C O 18 10 8	0	0
4	e0	2	Total C O 18 10 8	0	0

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Mol	Chain	Residues	Atoms	AltConf	Trace
4	e1	2	Total C O 18 10 8	0	0
4	e2	2	Total C O 18 10 8	0	0
4	e4	2	Total C O 18 10 8	0	0
4	e5	2	Total C O 18 10 8	0	0
4	e8	2	Total C O 18 10 8	0	0
4	f0	2	Total C O 18 10 8	0	0
4	f3	2	Total C O 18 10 8	0	0
4	f5	2	Total C O 18 10 8	0	0
4	f8	2	Total C O 18 10 8	0	0
4	E3	2	Total C O 18 10 8	0	0
4	f2	2	Total C O 18 10 8	0	0
4	e7	2	Total C O 18 10 8	0	0
4	e6	2	Total C O 18 10 8	0	0
4	e3	2	Total C O 18 10 8	0	0
4	d9	2	Total C O 18 10 8	0	0
4	d7	2	Total C O 18 10 8	0	0
4	d8	2	Total C O 18 10 8	0	0
4	d6	2	Total C O 18 10 8	0	0
4	d0	2	Total C O 18 10 8	0	0
4	F5	2	Total C O 18 10 8	0	0
4	F2	2	Total C O 18 10 8	0	0

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Mol	Chain	Residues	Atoms	AltConf	Trace
4	E7	2	Total C O 18 10 8	0	0

- Molecule 5 is an oligosaccharide called beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose.

Mol	Chain	Residues	Atoms	AltConf	Trace
5	A6	4	Total C O 36 20 16	0	0
5	A9	4	Total C O 36 20 16	0	0
5	B6	4	Total C O 36 20 16	0	0
5	F6	4	Total C O 36 20 16	0	0
5	F7	4	Total C O 36 20 16	0	0
5	a6	4	Total C O 36 20 16	0	0
5	a9	4	Total C O 36 20 16	0	0
5	b6	4	Total C O 36 20 16	0	0
5	f6	4	Total C O 36 20 16	0	0
5	f7	4	Total C O 36 20 16	0	0

- Molecule 6 is an oligosaccharide called beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose.

Mol	Chain	Residues	Atoms	AltConf	Trace
6	E6	8	Total C O 72 40 32	0	0

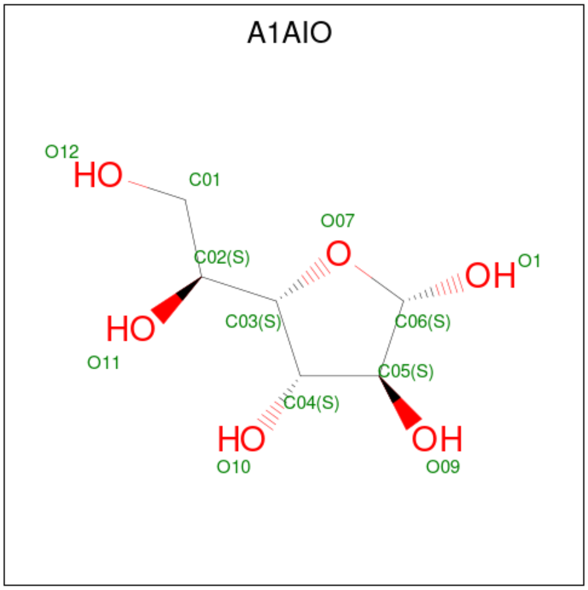
- Molecule 7 is an oligosaccharide called beta-L-arabinofuranose-(1-4)-beta-L-ribulofuranose.

Mol	Chain	Residues	Atoms	AltConf	Trace
7	a4	2	Total C O 18 10 8	0	0

- Molecule 8 is an oligosaccharide called beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose.

Mol	Chain	Residues	Atoms	AltConf	Trace
8	e9	6	Total C O 54 30 24	0	0

- Molecule 9 is beta-L-glucofuranose (three-letter code: A1AIO) (formula: $C_6H_{12}O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0

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Mol	Chain	Residues	Atoms	AltConf
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0

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Mol	Chain	Residues	Atoms	AltConf
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0

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Mol	Chain	Residues	Atoms	AltConf
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	A	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0

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Mol	Chain	Residues	Atoms	AltConf
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0

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Mol	Chain	Residues	Atoms	AltConf
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0
9	B	1	Total C O 11 6 5	0

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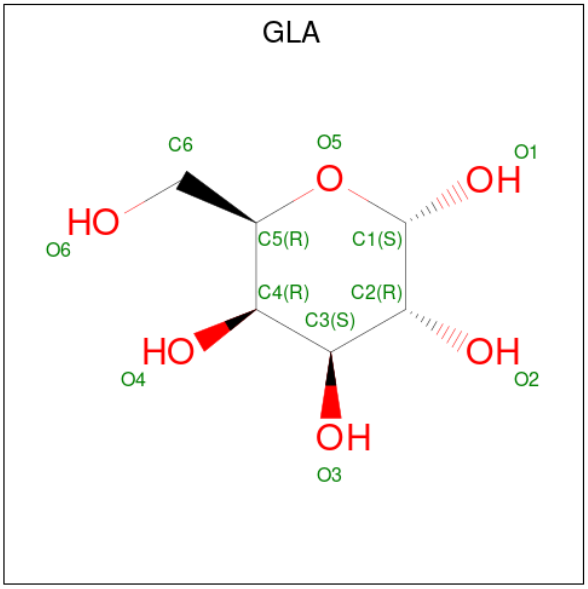
Mol	Chain	Residues	Atoms	AltConf
9	B	1	Total C O 11 6 5	0

- Molecule 10 is alpha-D-galactopyranose (three-letter code: GLA) (formula: $C_6H_{12}O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0

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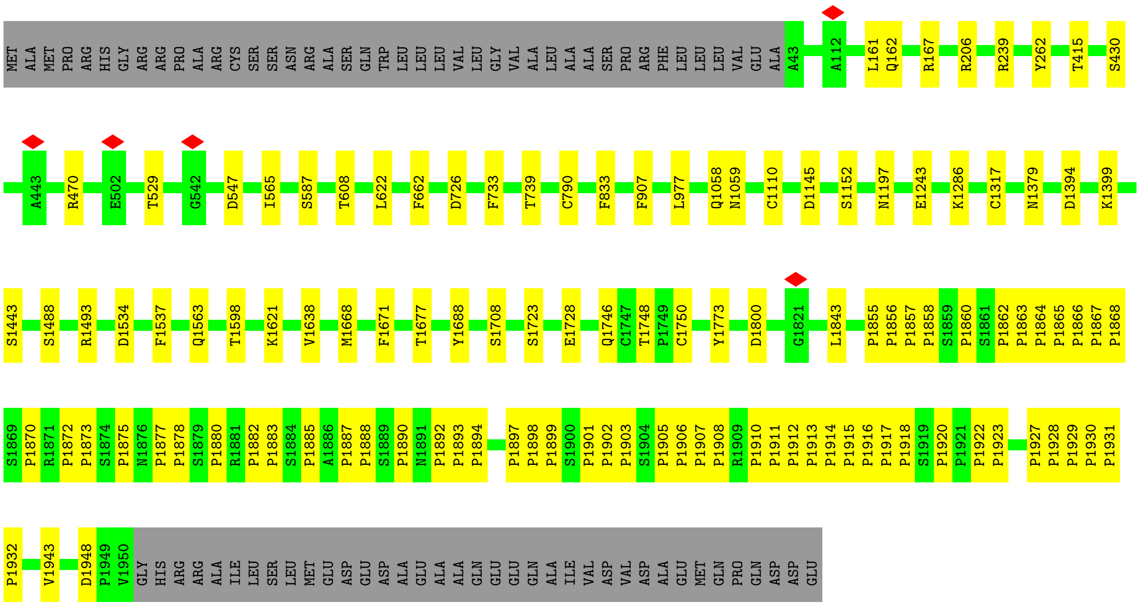
Mol	Chain	Residues	Atoms	AltConf
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	A	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0
10	B	1	Total C O 11 6 5	0

3 Residue-property plots

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

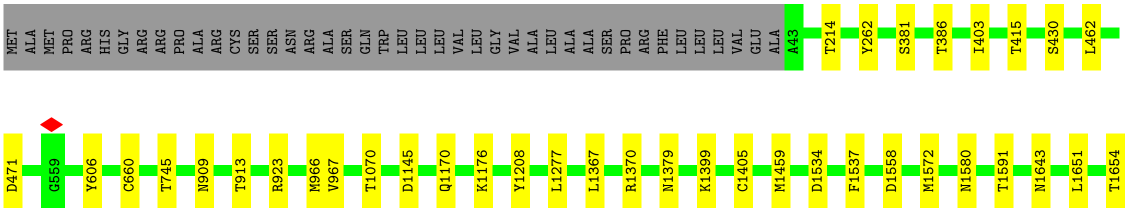
- Molecule 1: Tyrosine-protein kinase ephrin type A/B receptor-like domain-containing protein

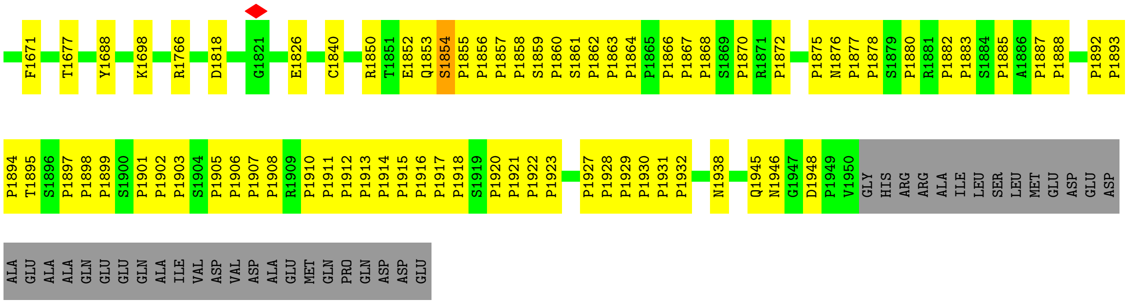
Chain A:



- Molecule 1: Tyrosine-protein kinase ephrin type A/B receptor-like domain-containing protein

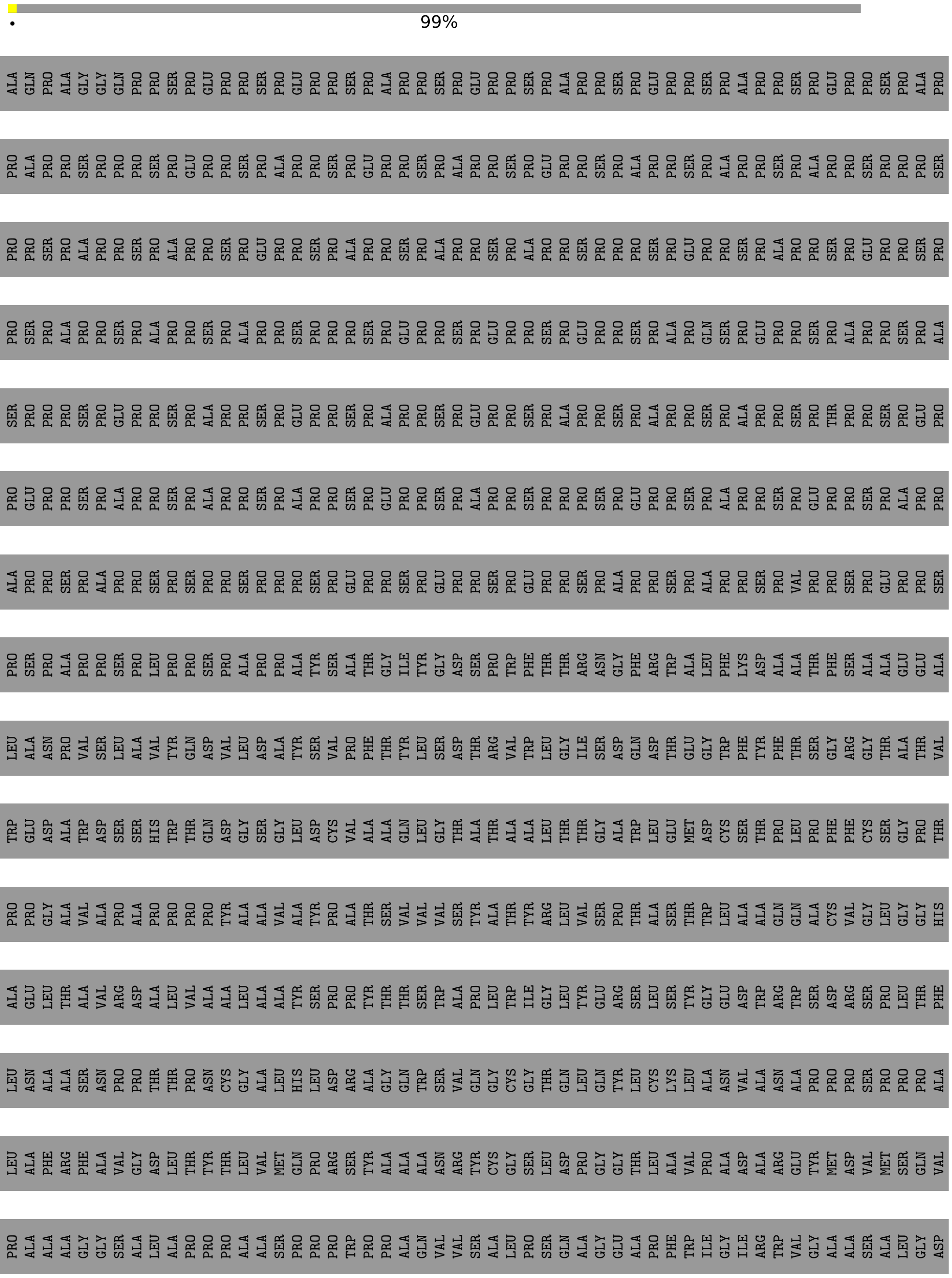
Chain B:

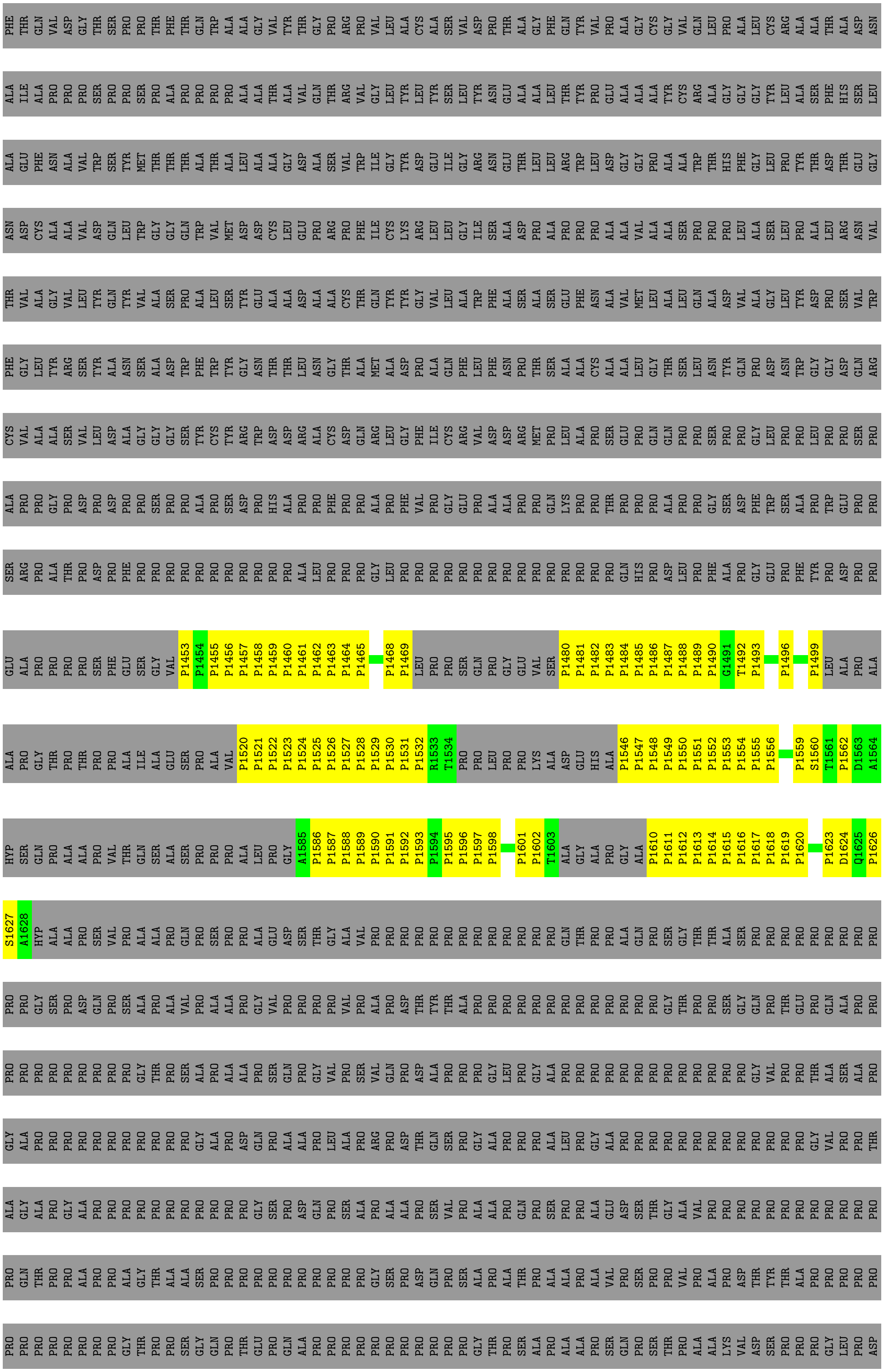




- Molecule 2: C-type lectin domain-containing protein

Chain X:





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ASN ASP CYS ALA ALA VAL ASP GLN LEU TRP GLY GLY GLN TRP VAL MET ASP ASP CYS LEU GLU PRO ARG PRO PHE ILE CYS LYS ARG LEU LEU GLY ILE SER ALA ASP PRO ALA PRO PRO PRO ALA ALA VAL ALA ALA SER PRO PRO PRO LEU ALA SER LEU PRO ALA LEU ARG ASN VAL

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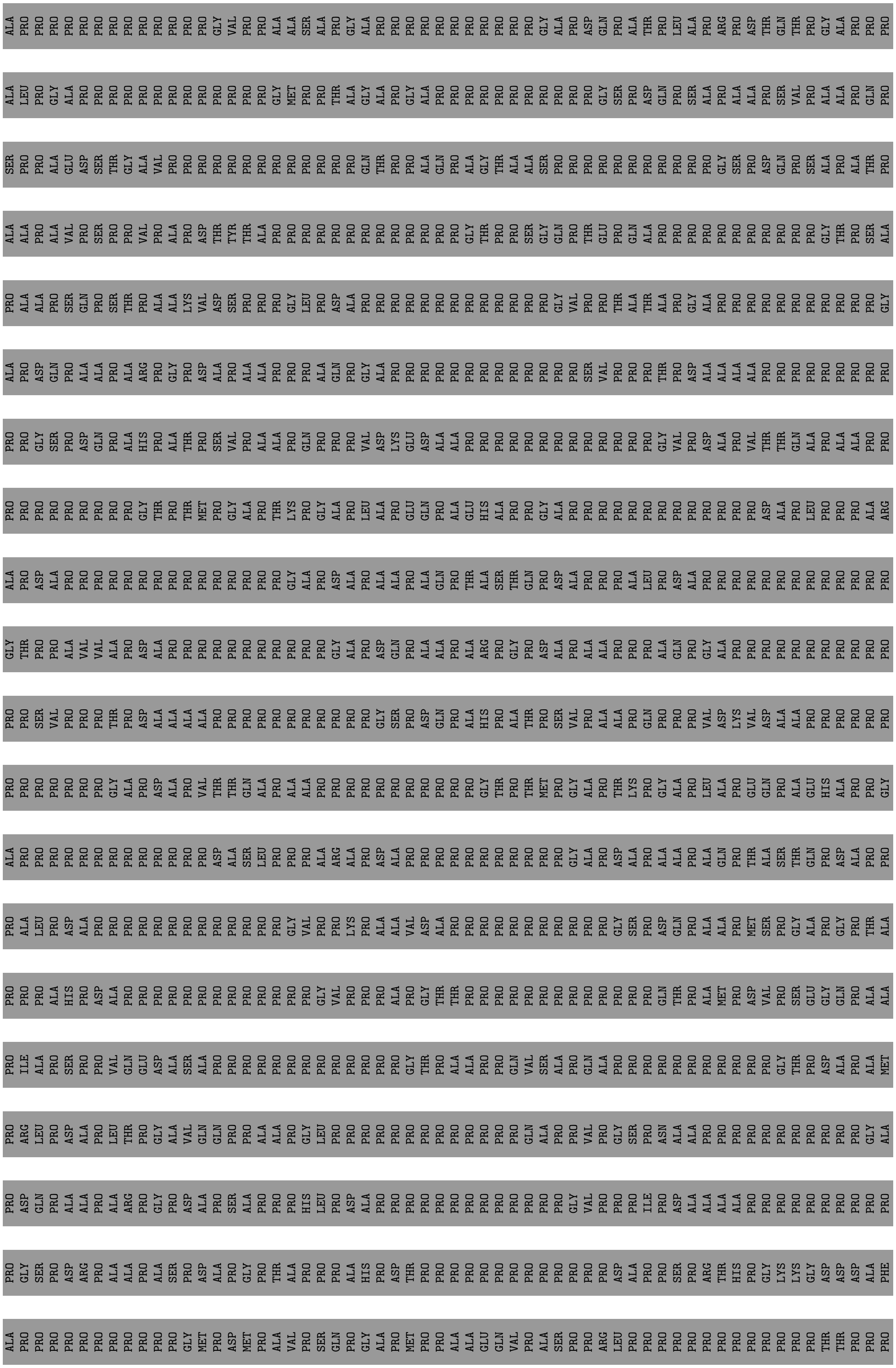
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VAL GLU ASP GLY ASP LEU THR SER PHE ILE ASN VAL VAL ASP ALA THR ASP CYS SER GLY LYS THR PRO ASN THR CYS LEU ARG CYS ARG PRO GLU GLN LEU SER LEU GLY LYS CYS LEU PRO GLY THR TYR ARG LEU ARG TYR PHE VAL GLU ASP ASN SER GLY GLY ILE SER GLU ALA

PHE TRP ASN PHE ILE VAL GLU SER VAL ALA VAL ASN ARG VAL TRP PHE LEU MET PRO PRO SER PHE ASN ILE SER ALA PRO ALA SER ASN SER THR ASN ALA THR ARG ARG PHE MET ASP GLN ILE GLN VAL ASN ALA THR ARG SER ARG GLY PHE LEU VAL GLY GLN LEU GLN ARG PHE

GLY VAL ASP LEU LYS ASP VAL ARG SER ALA ASN VAL SER SER LEU ALA LEU VAL ASN THR ASN THR ASP GLU GLY GLN TYR ALA ILE ASN ALA ASP PHE CYS ILE CYS MET ILE ASN VAL THR LEU GLU PHE THR THR GLY LEU GLN VAL ASN TYR THR VAL PRO GLU VAL PHE GLU ILE

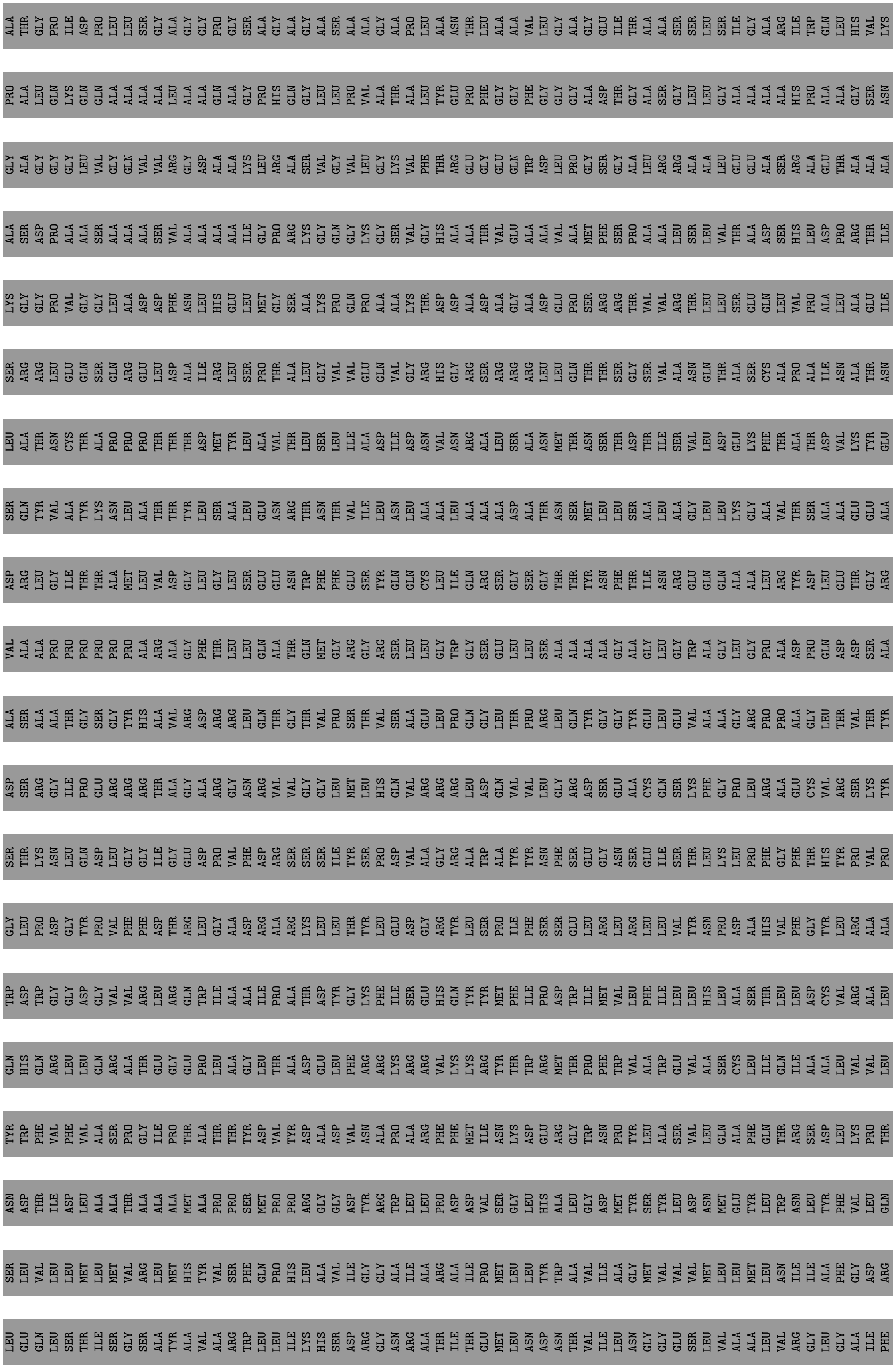
PHE GLU PRO ASP ASN PHE PRO PRO PRO PRO GLY ARG LEU ARG PRO PRO PRO VAL PRO PRO SER PRO PRO PRO SER PRO ALA PRO ARG PRO PRO SER PRO PRO ALA PRO PRO PRO PRO SER PRO GLY PRO SER PRO PRO PRO ALA PRO PRO ASP PRO PRO SER PRO PRO PRO THR PRO PRO

SER PRO PRO GLN PRO PRO SER PRO PRO PRO PRO PRO SER PRO ALA PRO THR PRO PRO SER PRO PRO ALA PRO PRO PRO VAL PRO PRO SER PRO ALA PRO PRO ARG PRO PRO ALA PRO PRO THR PRO PRO SER PRO PRO ALA PRO PRO SER PRO PRO LEU PRO PRO PRO SER PRO GLY PRO

PRO PRO GLY ASN GLY ASN ALA GLY ARG ARG LEU ILE ASP GLY THR PRO ALA VAL ALA PRO ALA ILE ALA PRO ALA ASN ARG VAL TRP SER TRP GLY ASP ASP TYR GLU MET GLY ALA VAL TRP SER PRO PRO PRO PRO LEU GLN ARG LEU PHE ASN GLN LEU ARG ARG SER MET SER GLU

PRO GLY ALA ALA ALA GLY ALA GLY ALA ASP VAL SER ASP TYR ASP ASP ASP GLY ASP GLY GLU ALA ASP TRP ALA PRO VAL PRO PRO ALA ASP TYR GLU GLU GLU ASP PRO GLU GLN ASP VAL MET VAL VAL SER ALA ALA GLY THR HIS GLY PRO GLY ASP SER ASP ASP ASN PRO LEU

PRO TRP GLY LEU SER ALA ALA ALA TRP GLY GLY PRO ALA VAL ALA GLY VAL ALA ARG LYS ALA SER GLY ALA ALA GLY GLY SER GLY GLY ALA GLN SER ALA PRO ALA PRO ALA PRO SER VAL PRO VAL PRO SER TYR LEU HIS THR ALA LEU MET HIS ALA SER ALA PRO SER GLU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PRO ALA LEU GLN LYS GLN GLN ALA ALA ALA ALA LEU ALA ALA GLN ALA GLY PRO HIS GLN GLY LEU LEU PRO VAL ALA THR ALA LEU TYR GLU PRO PHE GLY GLY PHE GLY GLY GLY ALA ASP THR GLY ALA SER GLY LEU LEU GLY ALA ALA ALA ALA HIS PRO ALA ALA GLY SER ASN
GLY ALA GLY GLY GLY LEU VAL GLY GLN VAL VAL ARG GLY ASP ALA ALA LYS LEU ARG ALA SER VAL GLY VAL LEU GLY LYS VAL PHE THR ARG GLU GLY GLU GLN TRP ASP LEU PRO GLY SER GLY ALA LEU ARG ARG ALA ALA LEU GLU GLU ALA SER ARG ALA GLU THR ALA ALA ALA
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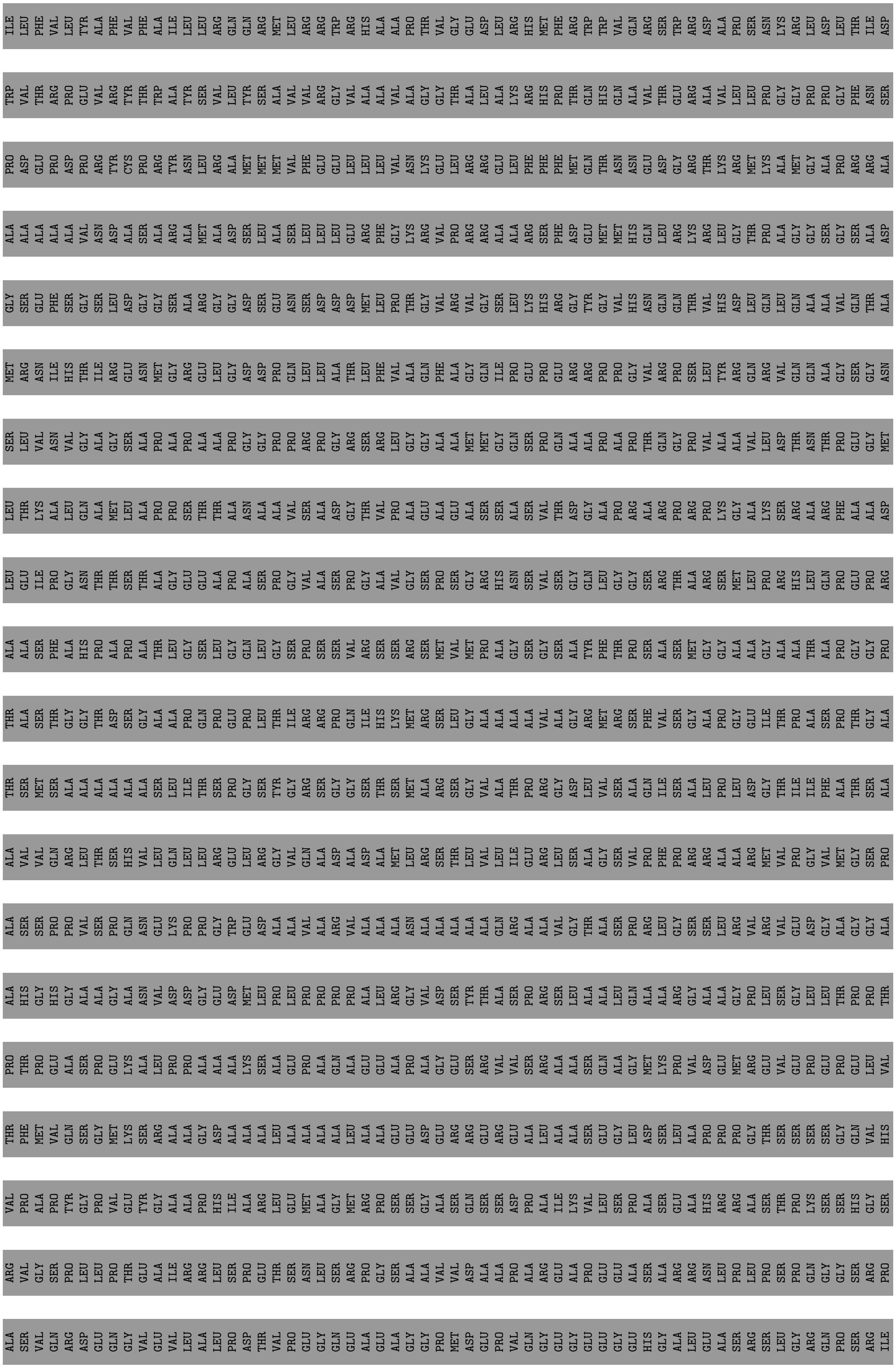
LYS GLY GLY PRO VAL GLY GLY LEU ALA ASP ASP PHE ASN LEU HIS GLU LEU MET GLY SER ALA LYS PRO GLN PRO ALA ALA LYS THR ASP ASP ALA ASP ALA GLY ALA ASP GLU PRO SER ARG ARG THR VAL VAL ARG THR LEU LEU SER GLU GLN LEU VAL PRO ALA LEU ALA GLU ILE
SER ARG ARG LEU GLU GLN SER GLN ARG GLU LEU ASP ALA ILE ARG LEU SER PRO THR ALA LEU GLY VAL VAL GLU GLN VAL GLY ARG HIS GLY ARG SER ARG ARG ARG LEU LEU GLN THR THR SER GLY SER VAL ALA ASN GLN THR ALA SER CYS ALA PRO ALA ILE ASN ALA THR ASN
LEU ALA THR ASN CYS THR ALA PRO PRO PRO THR THR THR ASP MET TYR LEU ALA VAL THR LEU SER LEU ILE ALA ASP ILE ASP ASN VAL ASN ARG ALA LEU SER ALA ASN MET THR ASN SER THR ASP THR ILE SER VAL LEU ASP GLU LYS PHE THR ALA THR ASP VAL LYS TYR GLU
SER GLN TYR VAL ALA TYR LYS ASN LEU ALA THR THR TYR LEU SER ALA LEU GLU ASN ARG THR ASN THR VAL ILE LEU ASN LEU ALA ALA LEU ALA ALA ALA ASP ALA THR ASN SER MET LEU LEU SER ALA LEU ALA GLY LEU LEU LYS GLY ALA VAL THR SER ALA ALA GLU GLU ALA
ASP ARG LEU GLY ILE THR THR ALA MET LEU VAL ASP GLY LEU GLY LEU SER GLU GLU ASN TRP PHE PHE GLU SER TYR GLN GLN CYS LEU ILE GLN ARG SER GLY SER GLY THR THR TYR ASN PHE THR ILE ASN ARG GLU GLN GLN ALA ALA LEU ARG TYR ASP LEU GLU THR GLY ARG
VAL ALA ALA PRO PRO PRO PRO PRO PRO ALA ARG ALA GLY PHE THR LEU LEU GLN ALA THR GLN MET GLY ARG GLY ARG SER LEU LEU GLY TRP GLY SER GLU LEU LEU SER ALA ALA ALA ALA GLY ALA GLY LEU GLY TRP ALA GLY LEU GLY PRO ALA ASP PRO GLN ASP ASP SER ALA
ALA SER ALA ALA THR GLY SER GLY TYR HIS ALA VAL ARG ASP ARG ARG LEU GLN THR GLY THR VAL PRO SER THR VAL SER ALA GLU LEU PRO GLN GLY LEU THR PRO ARG LEU GLN TYR GLY GLY TYR GLU LEU GLU VAL ALA ALA GLY ARG PRO PRO ALA GLY LEU THR VAL THR TYR
ASP SER ARG GLY ILE PRO GLU ARG ARG ARG THR ALA GLY ALA ARG GLY ASN ARG VAL VAL GLY GLY LEU MET LEU HIS GLN VAL ARG ARG ARG LEU ASP GLN VAL VAL LEU GLY ARG ASP SER GLU ALA CYS GLN SER LYS PHE GLY PRO LEU ARG ALA GLU CYS VAL ARG SER LYS TYR
SER THR LYS ASN LEU GLN ASP LEU GLY GLY ILE GLY GLU ASP PRO VAL PHE ASP ARG SER SER SER ILE TYR SER PRO ASP VAL ALA GLY ARG ALA TRP ALA TYR TYR ASN PHE SER GLU GLY ASN SER GLU ILE SER THR LEU LYS LEU PRO PHE GLY PHE THR HIS TYR PRO VAL PRO
GLY LEU PRO ASP GLY TYR PRO VAL PHE PHE ASP THR ARG LEU GLY ALA ASP ARG ALA ARG LYS LEU LEU THR TYR LEU GLU ASP GLY ARG TYR LEU SER PRO ILE PHE SER SER GLU LEU ARG LEU ARG LEU LEU VAL TYR ASN PRO ASP ALA HIS VAL PHE GLY TYR LEU ARG ALA ALA
TRP ASP TRP GLY GLY ASP GLY VAL VAL ARG LEU ARG GLN TRP ILE ALA ALA ILE PRO ALA THR ASP TYR GLY LYS PHE ILE SER GLU HIS GLN TYR TYR MET PHE ILE PRO ASP TRP ILE MET VAL LEU PHE ILE LEU LEU HIS LEU ALA SER THR LEU LEU ASP CYS VAL ARG ALA LEU
GLN HIS GLN ARG LEU LEU GLN ARG ALA THR GLU GLY GLU PRO LEU ALA GLY LEU THR ALA ASP GLU LEU PHE ARG ARG LYS ARG ARG VAL LYS LYS ARG TYR THR TRP ARG MET THR PRO PHE TRP VAL ALA TRP GLU VAL ALA SER CYS LEU ILE GLN ILE ALA ALA LEU VAL VAL LEU
TYR TRP PHE VAL PHE VAL ALA SER PRO GLY ILE PRO THR ALA THR THR TYR ASP VAL TYR ASP ALA ASP VAL ASN ALA PRO ALA ARG PHE PHE MET ILE ASN LYS ASP GLU ARG GLY TRP ASN PRO TYR LEU ALA SER VAL LEU GLN ALA PHE GLN THR ARG SER ASP LEU LYS PRO THR
ASN ASP THR ILE ASP LEU ALA ALA THR ALA ALA ALA MET ALA PRO PRO SER MET PRO PRO ARG GLY GLY ASP TYR ARG TRP LEU LEU PRO ASP ASP VAL SER GLY LEU HIS ALA LEU GLY ASP MET TYR SER TYR LEU ASP ASN MET GLU TYR LEU TRP ASN LEU TYR PHE VAL LEU GLN
SER LEU VAL LEU LEU MET LEU MET VAL ARG LEU MET HIS TYR VAL SER PHE GLN PRO HIS LEU ALA VAL ILE GLY GLY ALA ILE ALA ARG ALA ILE PRO MET LEU LEU TYR TRP ALA VAL ILE ALA GLY MET VAL VAL VAL MET LEU LEU MET LEU ASN ILE ILE ALA PHE GLY ASP ARG
LEU GLU GLN LEU SER THR ILE SER GLY SER ALA TYR ALA VAL ALA ARG TRP LEU LEU ILE LYS HIS SER ASP ARG GLY ASN ARG ALA THR ILE THR GLU MET LEU ASN ASP ASN THR VAL ILE LEU ASN GLY GLY GLU SER LEU VAL ALA ALA LEU VAL ARG GLY LEU GLY ALA ILE PHE


ILE LEU PHE VAL LEU TYR ALA PHE VAL PHE ALA ILE LEU LEU ARG GLN GLN ARG MET LEU ARG ARG TRP ARG HIS ALA ALA PRO THR VAL GLY GLU ASP LEU ARG HIS MET PHE ARG TRP TRP VAL GLN ARG SER TRP ARG ASP ALA PRO SER ASN LYS ARG LEU ASP LEU THR ILE ASP
TRP VAL THR ARG PRO GLU VAL ARG TYR THR TRP ALA TYR SER VAL LEU TYR SER ALA VAL VAL ARG GLY VAL ALA ALA VAL ALA GLY GLY THR ALA LEU ALA LYS ARG HIS PRO THR GLN HIS GLN ALA VAL THR GLU ARG ALA VAL LEU LEU PRO GLY GLY PRO PRO GLY PHE ASN SER
PRO ASP GLU PRO ASP PRO ARG TYR CYS PRO ARG TYR ASN LEU ARG ALA MET MET MET VAL PHE GLU GLU LEU LEU LEU VAL ASN LYS GLU LEU ARG ARG GLU LEU PHE PHE PHE MET GLN THR ASN ASN GLU ASP GLY ARG THR LYS ARG MET LYS ALA MET GLY ALA PRO ARG ARG ALA
ALA ALA ALA ALA ALA VAL ASN ASP ALA SER ALA ARG ALA MET ALA ASP SER LEU ALA SER LEU LEU LEU GLU ARG PHE GLY LYS ARG VAL PRO ARG ARG ALA ALA ARG SER PHE ASP GLU MET MET HIS GLN LEU ARG LYS ARG LEU GLY THR PRO ALA GLY GLY SER GLY SER ALA ASP
GLY SER GLU PHE SER GLY SER LEU ASP GLY GLY SER ALA ARG GLY GLY ASP SER GLU ASN SER ASP ASP ASP MET LEU PRO THR GLY VAL ARG VAL GLY SER LEU LYS HIS ARG GLY TYR GLY VAL HIS ASN GLN GLN THR VAL HIS ASP LEU GLN LEU GLN ALA ALA VAL GLN THR ALA
MET ARG ASN ILE HIS THR ILE ARG GLU ASN MET GLY ARG GLU LEU GLY ASP ASP PRO GLN LEU LEU ALA THR LEU PHE VAL ALA GLN PHE ALA GLY GLN ILE PRO GLU PRO GLU ARG ARG PRO PRO GLY VAL ARG PRO SER LEU TYR ARG GLN ARG VAL GLN GLN ALA GLY SER GLY ASN
SER LEU VAL ASN VAL GLY ALA GLY SER ALA PRO ALA PRO ALA ALA PRO GLY GLY PRO PRO ARG PRO GLY ARG SER ARG LEU GLY GLY ALA ALA MET MET GLY GLN SER PRO GLN ALA ALA PRO ALA PRO THR GLN GLY PRO VAL ALA ALA VAL LEU ASP THR ASN THR PRO GLU GLY MET
LEU THR LYS ALA LEU GLN ALA MET LEU ALA PRO PRO SER THR THR ALA ASN ALA ALA VAL SER ALA ASP GLY THR VAL PRO ALA GLU ALA GLU ALA SER SER ALA SER VAL THR ASP GLY ALA PRO ARG ALA ARG PRO ARG PRO LYS GLY ALA LYS SER ARG ALA ARG PHE ALA ALA ASP
LEU GLU ILE PRO GLY ASN THR THR SER THR ALA GLY GLU GLU ALA PRO ALA SER PRO GLY VAL ALA SER PRO GLY ALA VAL GLY SER PRO SER GLY ARG HIS ASN SER VAL SER GLY GLN LEU GLY GLY SER ARG THR ALA ARG SER MET LEU PRO ARG HIS LEU GLN PRO GLU PRO ARG
ALA ALA SER PHE ALA HIS PRO ALA PRO ALA THR LEU GLY SER LEU GLY GLN LEU GLY SER PRO SER SER VAL ARG SER SER ARG SER MET VAL MET PRO ALA GLY SER GLY SER ALA TYR PHE THR PRO SER ALA SER MET GLY GLY ALA ALA GLY ALA ALA THR ALA PRO GLY GLY PRO
THR ALA SER THR GLY GLY THR ASP SER GLY ALA ALA PRO GLN PRO GLU PRO LEU THR ILE ARG ARG PRO GLN ILE HIS LYS MET ARG SER LEU GLY ALA ALA ALA ALA VAL ALA GLY ARG MET ARG SER PHE VAL SER GLY ALA PRO GLY GLU ILE THR PRO ALA SER PRO THR GLY ALA
THR SER MET SER ALA ALA ALA ALA ALA ALA SER LEU ILE THR SER PRO GLY SER TYR GLY ARG SER GLY GLY SER THR SER MET ALA ARG SER GLY VAL ALA THR PRO ARG GLY ASP LEU VAL SER ALA GLN ILE SER ALA LEU PRO LEU ASP GLY THR ILE ILE PHE ALA THR SER ALA
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ALA SER SER PRO PRO VAL SER PRO GLN ASN GLU LYS PRO PRO GLY TRP GLU ASP ALA ALA VAL ALA ARG VAL ALA ALA ALA ASN ALA ALA ALA ALA ALA GLN ARG ALA ALA VAL GLY THR ALA SER PRO ARG LEU GLY SER SER LEU ARG VAL ARG VAL GLU ASP GLY ALA GLY GLY ALA
ALA HIS GLY HIS GLY ALA ALA GLY ALA ASN VAL ASP ASP GLY GLU ASP MET LEU PRO LEU PRO PRO PRO PRO ALA LEU ARG GLY VAL ASP SER TYR THR ALA SER PRO ARG SER LEU ALA ALA LEU GLN ALA ALA ARG GLY ALA ALA GLY PRO LEU SER GLY LEU LEU THR PRO PRO THR
PRO THR PRO GLU ALA SER PRO GLU LYS ALA LEU PRO PRO ALA ALA ALA LYS SER ALA GLU PRO ALA GLN ALA GLU GLU ALA PRO ALA GLY GLU SER ARG VAL VAL SER ARG ALA ALA SER GLN ALA GLY MET LYS PRO VAL ASP GLU MET ARG GLU VAL GLU PRO GLU PRO GLU LEU VAL
THR PHE MET VAL GLN SER GLY MET LYS SER ARG ALA ALA GLY ASP ALA ALA ALA LEU ALA ALA ALA LEU ALA ALA GLU GLU ASP GLU ARG ARG GLU ARG GLU ALA LEU ALA ALA SER GLU GLY LEU ASP SER LEU ALA PRO PRO PRO GLY THR SER SER SER SER GLY GLN VAL HIS
VAL PRO ALA PRO TYR GLY PRO VAL GLU TYR GLY ALA ALA PRO HIS ILE ALA ARG LEU GLU MET ALA GLY MET ARG PRO SER SER GLY ALA SER GLN SER SER ASP PRO ALA ILE LYS VAL LEU SER PRO ALA SER GLU ALA HIS ARG ARG ALA SER THR PRO LYS SER SER HIS GLY SER
ARG VAL GLY SER PRO LEU LEU PRO THR GLU ALA ILE ARG ARG LEU SER PRO GLU THR SER ASN LEU SER ARG PRO GLY SER ALA ALA VAL VAL ASP ALA ALA PRO ALA ARG GLU ALA PRO GLU GLU ALA SER ALA ARG ARG ASN LEU PRO LEU PRO SER PRO GLN GLY GLY SER ARG PRO
ALA SER VAL GLN ARG ASP GLU GLN GLY VAL GLU VAL LEU ALA LEU PRO ASP THR VAL PRO GLU GLY GLN GLU ALA GLU ALA GLY GLY PRO MET ASP GLU PRO VAL GLN GLY GLU GLY GLU GLU GLY GLU HIS GLY ALA LEU GLU ALA SER ARG SER LEU GLY ARG GLN PRO SER ARG ILE

ALA PHE SER GLU SER SER MET ARG VAL ARG ALA GLU ASP GLN GLU GLU ASP ASP GLU LEU ASP GLU PRO PRO SER ALA THR ALA ALA ALA GLY ALA GLY PRO ALA GLN ALA SER GLU PRO GLN ALA PRO PRO ARG ALA GLY TYR ILE PRO PRO PRO SER ARG GLU PRO ALA MET GLN SER

GLU PRO LEU GLU GLY THR ARG PRO MET ARG PRO SER ARG SER VAL ARG LEU VAL GLY VAL PRO PRO PRO PRO PRO PRO GLY GLY VAL PRO ALA PRO VAL ARG ARG ARG ALA LEU ALA SER GLN ALA SER LEU ALA GLY THR THR SER GLN ALA SER LEU GLY ALA GLU ALA SER THR GLY

GLU GLY LEU VAL ALA PRO PRO GLN VAL LEU THR PRO GLU GLU ALA LEU SER VAL ILE SER GLN ALA LEU GLY THR SER ALA PRO ARG PRO ILE GLY LYS PRO ALA THR ARG HIS VAL GLN LEU PRO PRO ASP VAL GLU ARG ARG GLN SER GLN LEU ALA LYS GLN GLN GLU LEU LEU ALA

ALA ALA GLN ALA ALA VAL ALA MET ARG ARG MET ALA SER ASN ALA ASN SER ARG VAL GLY SER ARG ALA THR SER PHE SER ALA ALA ALA ALA PRO GLY ALA ALA GLY LEU GLY LEU GLN SER MET ASP SER THR GLY SER GLY ALA ALA THR ASP ALA PRO GLY GLY GLY ALA GLY PRO

SER THR SER SER ALA ILE PRO PRO PRO PRO GLY ARG ALA ALA ALA SER PRO LEU ARG PRO GLY ARG ARG ALA LEU LEU ALA SER ALA GLN SER GLY ALA GLY PHE GLY LEU ASP ALA ALA PRO GLY GLU GLU PRO SER ASN ALA VAL GLN MET ALA ALA ALA ALA LEU GLU ARG LYS GLN

ALA GLU GLU ALA ALA SER LYS ALA TYR VAL ASP GLU LEU MET ASN ARG MET ARG SER GLY MET SER ALA THR GLY GLU ARG LEU ALA LEU SER GLY ARG LEU GLY SER ALA ALA GLY PRO SER GLY ALA ALA SER PRO ALA LEU GLY ALA ALA GLY GLY GLY SER ARG GLN ASP SER LEU

ALA GLY GLU VAL SER ARG GLY SER ALA GLY LEU LEU GLN GLN ASP SER LEU SER GLY THR MET GLN LEU ARG PRO SER GLY SER ILE VAL ALA PRO ARG GLY ALA PRO PRO MET ALA ALA PHE GLY SER LEU ARG LYS PRO GLY THR GLY ARG SER SER LEU ASN LEU PRO PRO MET SER

PRO LEU GLY ALA THR PRO ALA ALA THR GLY SER GLY GLU GLY ALA GLY SER GLY LEU GLY PRO ILE VAL PRO PRO PRO PRO LEU PHE THR ASN ALA PRO GLY ARG PRO GLN ARG VAL SER GLN LEU MET GLY GLN GLY SER GLN GLY SER PHE GLY ALA GLY SER PRO SER ALA ALA ARG

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- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain A1:

NAG1 NAG2

- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain A2:

NAG1 NAG2

- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain A3:

NAG1 NAG2

- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

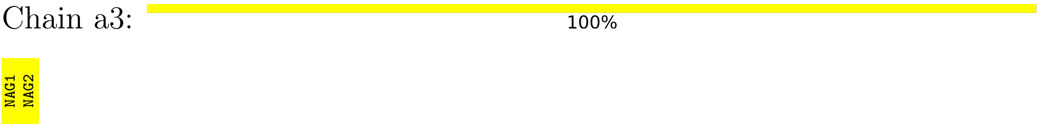
Chain a1:

- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain a2:

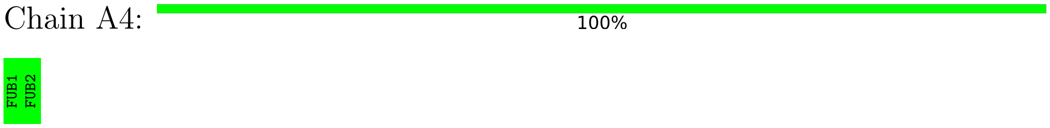
- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain a3:



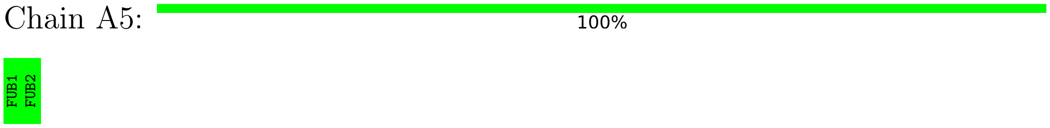
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain A4:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain A5:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

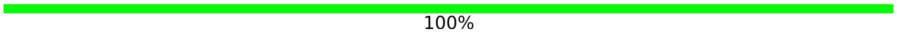
Chain A7:

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain B0:

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

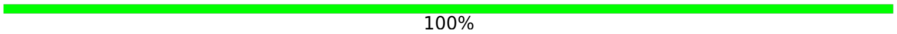
Chain B1:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

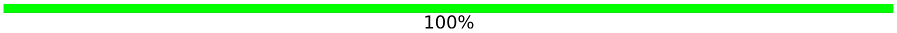
Chain B3:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain B4:



FUB1
FUB2

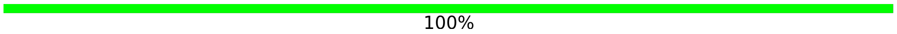
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain B5:

FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

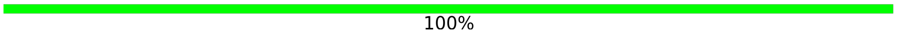
Chain B7:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

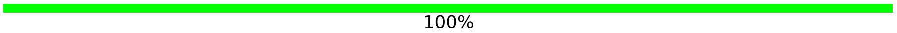
Chain B9:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

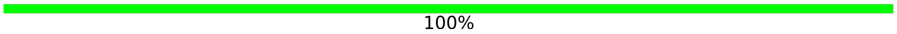
Chain C0:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

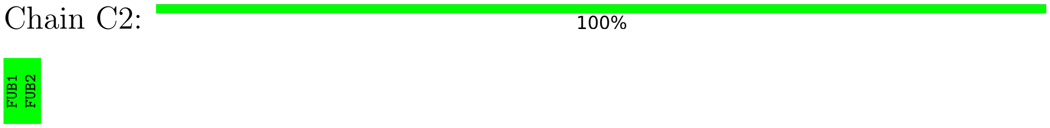
Chain C1:



FUB1
FUB2

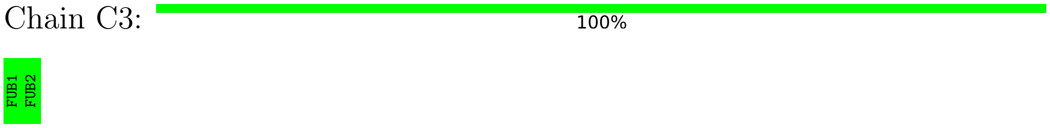
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain C2:



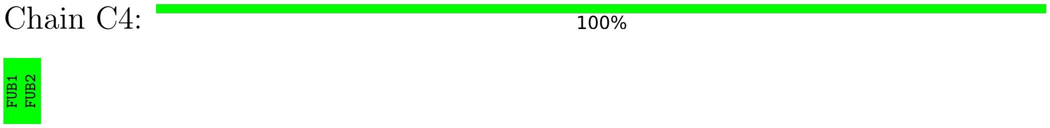
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain C3:



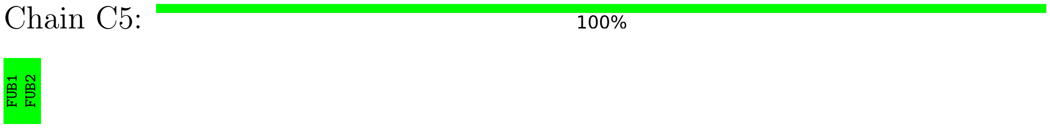
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain C4:



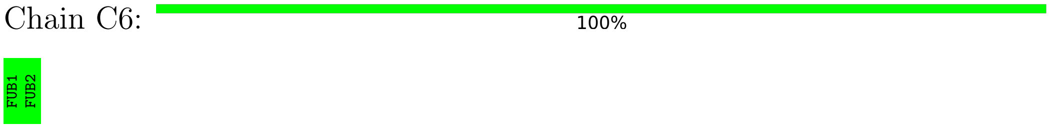
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain C5:



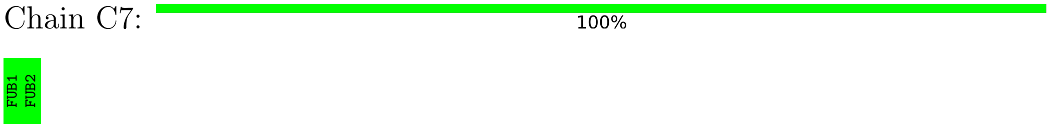
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain C6:



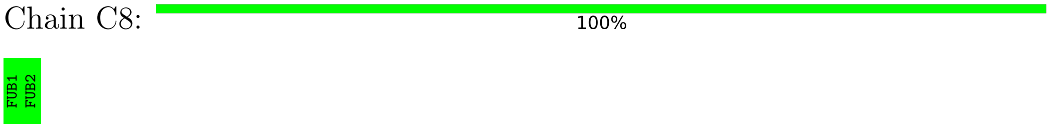
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain C7:



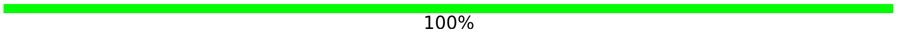
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain C8:



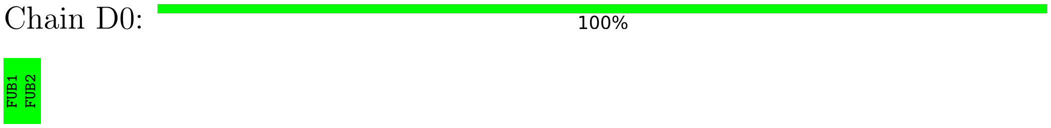
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain C9:



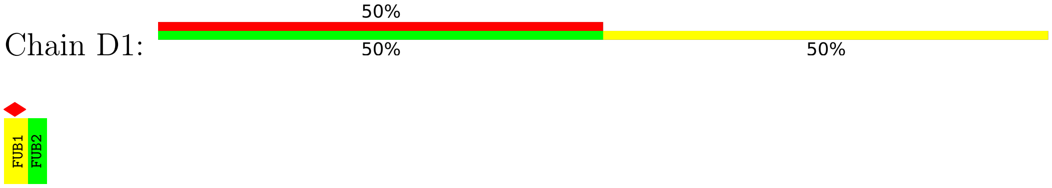
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D0:



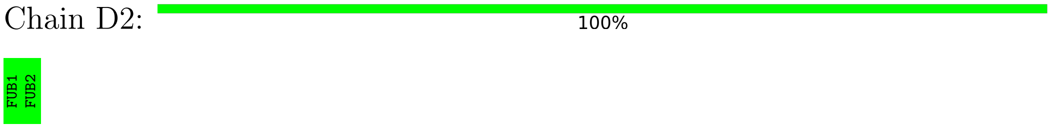
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D1:



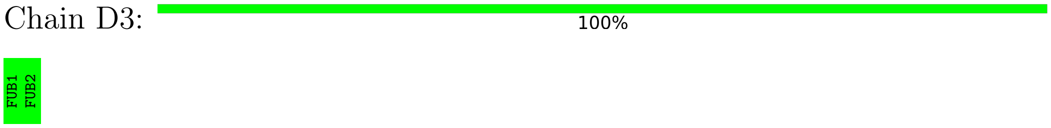
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D2:



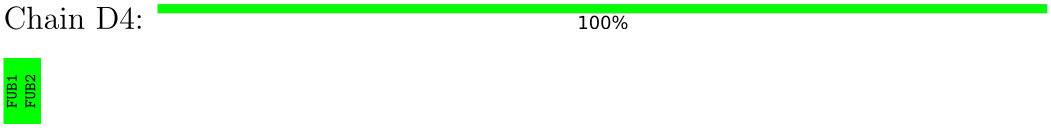
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D3:



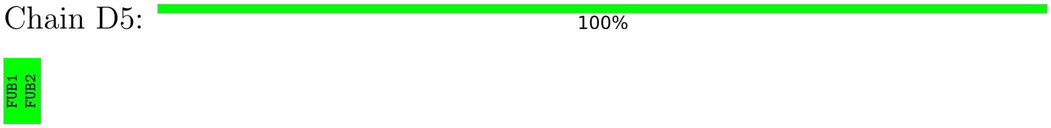
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D4:



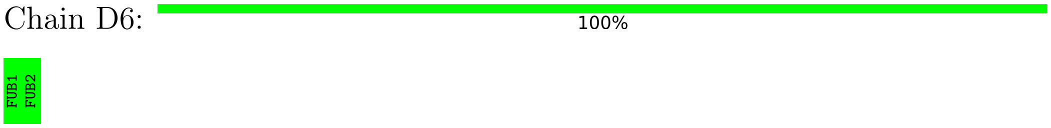
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D5:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D6:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D7: 100%

FUB1 FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D8: 100%

FUB1 FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain D9: 100%

FUB1 FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E0: 100%

FUB1 FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E1: 100%

FUB1 FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E2: 100%

FUB1 FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E4: 100%

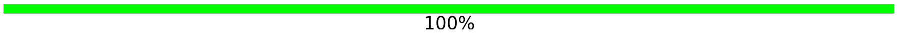
FUB1 FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E5: 100%

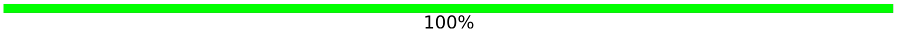
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E8:



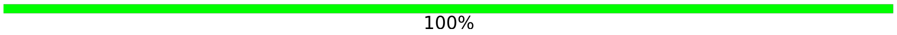
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain F0:



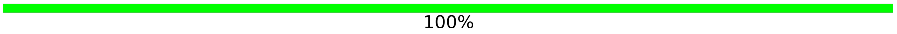
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain F3:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain F8:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

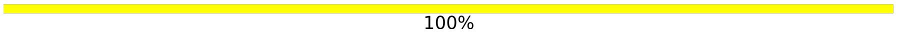
Chain a5:

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain a7:

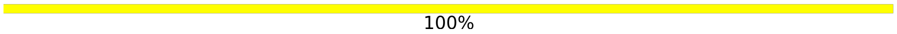
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain b0:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

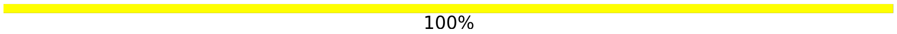
Chain b1:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

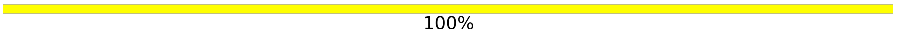
Chain b3:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

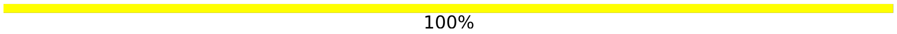
Chain b4:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

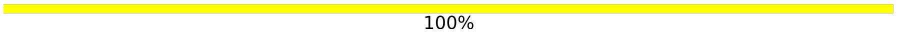
Chain b5:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

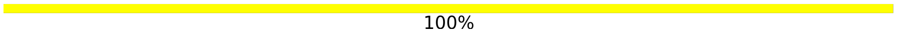
Chain b7:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

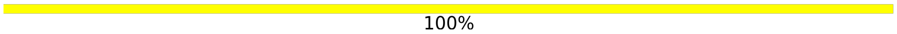
Chain b9:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

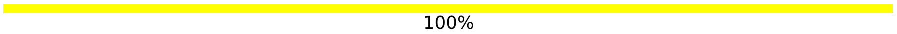
Chain c0:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c1:



FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c2: 100%

FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c3: 100%

FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c4: 100%

FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c5: 100%

FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c6: 100%

FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c7: 100%

FUB1
FUB2

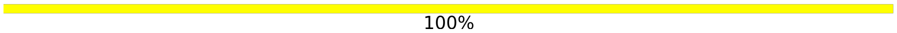
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c8: 100%

FUB1
FUB2

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain c9:

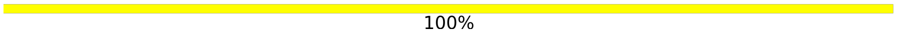


- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d1:

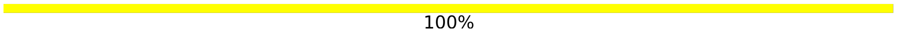
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d2:



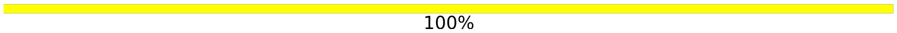
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d3:



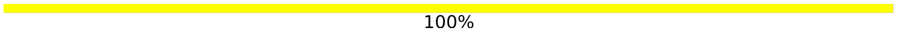
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d4:



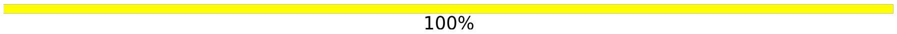
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d5:



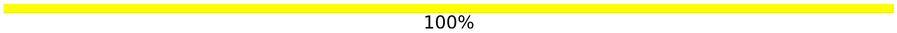
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e0:



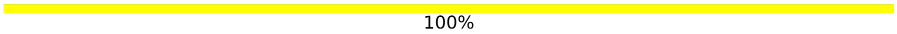
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e1:



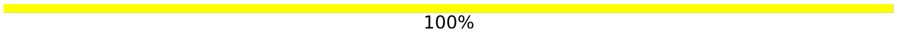
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e2:



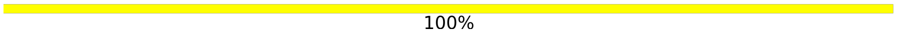
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e4:



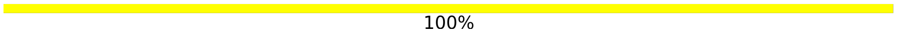
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e5:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e8:

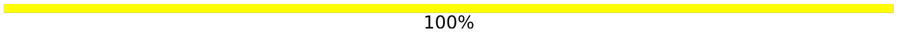


- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain f0:

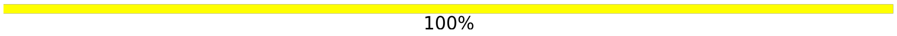
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain f3:



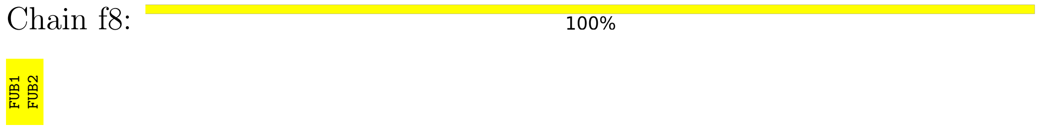
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain f5:



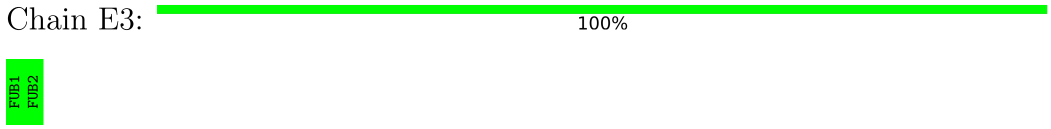
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain f8:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E3:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain f2:

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e7:

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

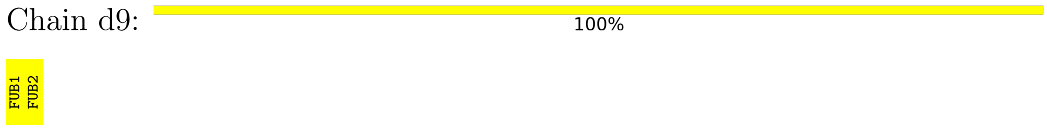
Chain e6:

- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e3:

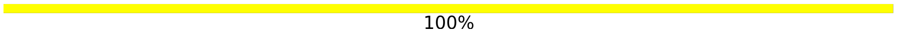
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d9:



- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d7:

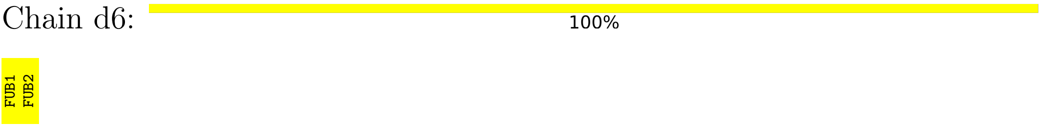


- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d8:

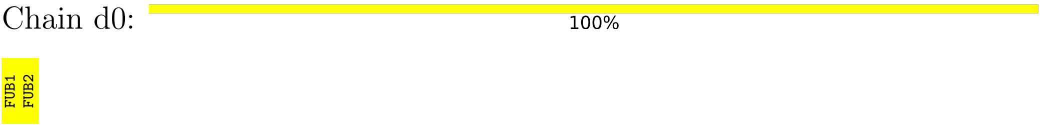
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d6:



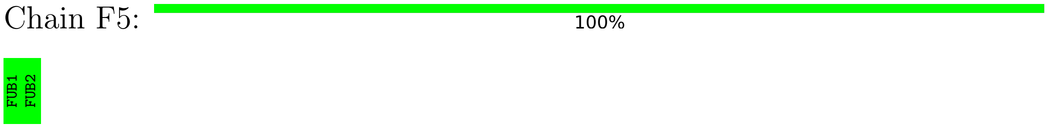
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain d0:



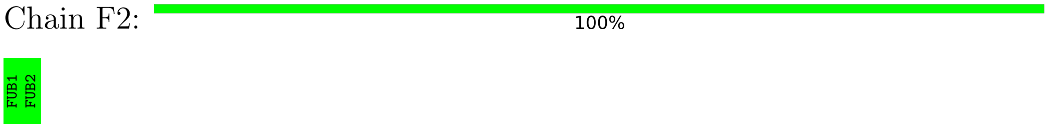
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain F5:



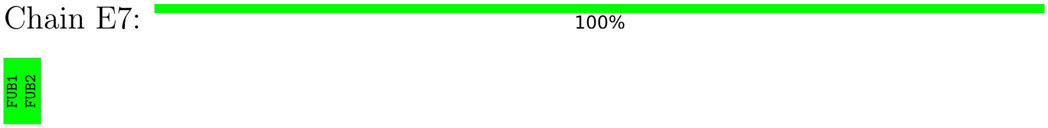
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain F2:



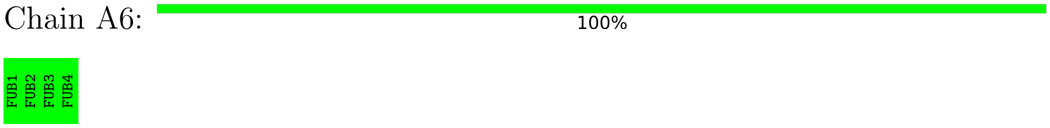
- Molecule 4: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E7:



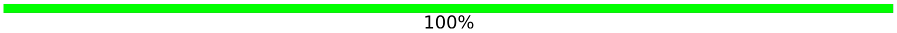
- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

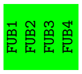
Chain A6:



- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

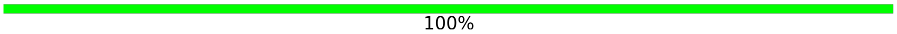
Chain A9:

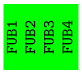




- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

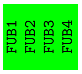
Chain B6:





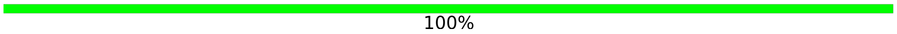
- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

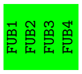
Chain F6:



- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

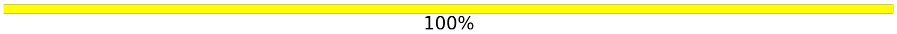
Chain F7:

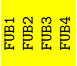




- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain a6:



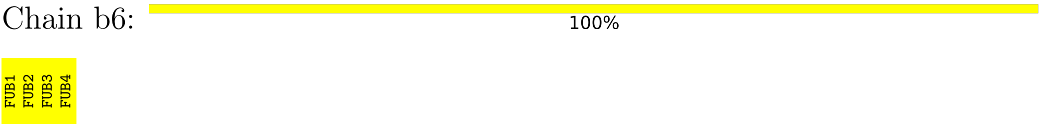


- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain a9:

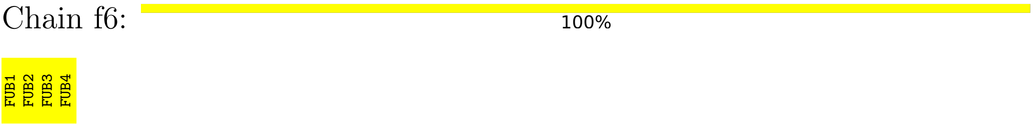
- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain b6:



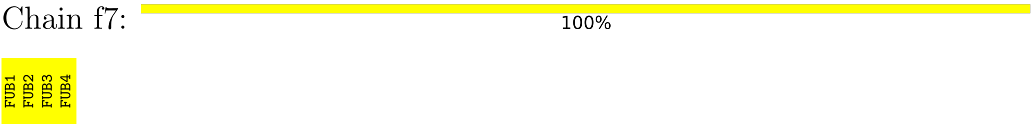
- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain f6:



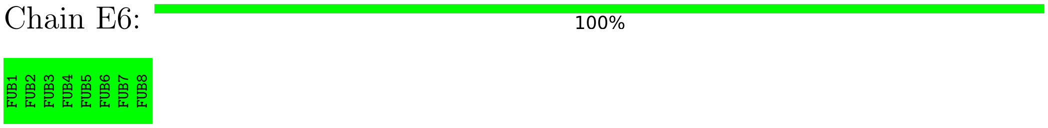
- Molecule 5: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain f7:



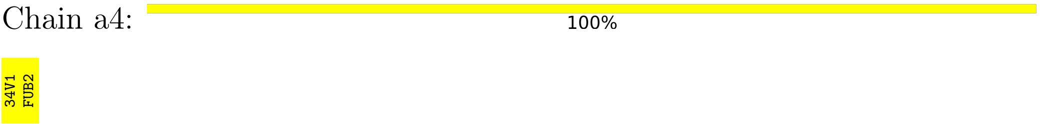
- Molecule 6: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain E6:



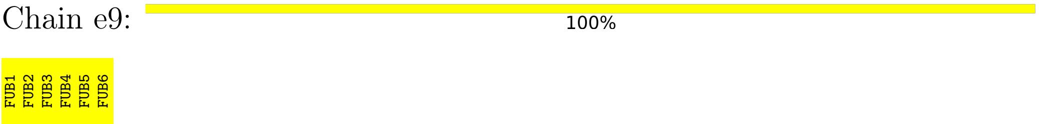
- Molecule 7: beta-L-arabinofuranose-(1-4)-beta-L-ribulofuranose

Chain a4:



- Molecule 8: beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose-(5-5)-beta-L-arabinofuranose-(1-2)-beta-L-arabinofuranose

Chain e9:



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	687452	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{Å}^2$)	39	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.771	Depositor
Minimum map value	0.000	Depositor
Average map value	0.005	Depositor
Map value standard deviation	0.054	Depositor
Recommended contour level	0.5	Depositor
Map size (Å)	711.68, 711.68, 711.68	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.39, 1.39, 1.39	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: HYP, GLA, FUB, 34V, A1AIO, NAG

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	0.27	0/13729	0.49	0/18855
1	B	0.27	0/13729	0.50	1/18855 (0.0%)
2	X	0.21	0/157	0.51	0/190
All	All	0.27	0/27615	0.49	1/37900 (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

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	1643	ASN	CB-CA-C	-5.12	100.17	110.40

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	1850	ARG	Sidechain

5.2 Too-close contacts ⓘ

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	1849/1987 (93%)	1792 (97%)	57 (3%)	0	100	100
1	B	1849/1987 (93%)	1783 (96%)	65 (4%)	1 (0%)	51	83
2	X	21/8572 (0%)	18 (86%)	1 (5%)	2 (10%)	0	3
All	All	3719/12546 (30%)	3593 (97%)	123 (3%)	3 (0%)	54	83

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	1854	SER
2	X	1627	SER
2	X	1560	SER

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	1451/1514 (96%)	1392 (96%)	59 (4%)	30	64
1	B	1451/1514 (96%)	1395 (96%)	56 (4%)	32	65
2	X	17/6717 (0%)	15 (88%)	2 (12%)	5	21
All	All	2919/9745 (30%)	2802 (96%)	117 (4%)	35	65

5 of 117 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1943	VAL
1	B	1861	SER
1	B	660	CYS
1	B	1859	SER
1	B	1677	THR

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

Mol	Chain	Res	Type
1	B	1853	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

197 non-standard protein/DNA/RNA residues 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	$\#\|Z\| > 2$
1	HYP	A	1918	1	6,8,9	0.49	0	5,10,12	2.08	1 (20%)
1	HYP	B	1911	1	6,8,9	0.45	0	5,10,12	1.94	1 (20%)
1	HYP	B	1923	1	6,8,9	0.48	0	5,10,12	1.81	1 (20%)
1	HYP	A	1920	1	6,8,9	0.46	0	5,10,12	2.13	2 (40%)
2	HYP	X	1592	2	6,8,9	0.43	0	5,10,12	1.94	1 (20%)
1	HYP	A	1927	1	6,8,9	0.48	0	5,10,12	1.98	1 (20%)
2	HYP	X	1457	2	6,8,9	0.43	0	5,10,12	1.95	1 (20%)
2	HYP	X	1626	2	6,8,9	0.53	0	5,10,12	1.68	1 (20%)
2	HYP	X	1602	2	6,8,9	0.46	0	5,10,12	1.73	1 (20%)
2	HYP	X	1587	2	6,8,9	0.45	0	5,10,12	1.91	2 (40%)
2	HYP	X	1591	2	6,8,9	0.42	0	5,10,12	1.82	1 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
2	HYP	X	1610	2	6,8,9	0.45	0	5,10,12	1.91	1 (20%)
2	HYP	X	1590	2	6,8,9	0.44	0	5,10,12	2.01	1 (20%)
1	HYP	A	1897	1	6,8,9	0.46	0	5,10,12	2.00	3 (60%)
2	HYP	X	1620	2	6,8,9	0.46	0	5,10,12	1.87	1 (20%)
2	HYP	X	1523	2	6,8,9	0.43	0	5,10,12	1.85	1 (20%)
2	HYP	X	1595	2	6,8,9	0.46	0	5,10,12	1.56	1 (20%)
1	HYP	B	1880	1	6,8,9	0.47	0	5,10,12	1.64	1 (20%)
1	HYP	A	1878	1	6,8,9	0.46	0	5,10,12	1.98	1 (20%)
1	HYP	B	1920	1	6,8,9	0.45	0	5,10,12	1.89	2 (40%)
1	HYP	B	1921	1	6,8,9	0.53	0	5,10,12	1.62	2 (40%)
2	HYP	X	1532	2	6,8,9	0.50	0	5,10,12	1.87	2 (40%)
1	HYP	A	1930	1	6,8,9	0.45	0	5,10,12	1.65	1 (20%)
2	HYP	X	1485	2	6,8,9	0.45	0	5,10,12	1.85	2 (40%)
1	HYP	B	1893	1	6,8,9	0.45	0	5,10,12	1.81	2 (40%)
2	HYP	X	1462	2	6,8,9	0.44	0	5,10,12	1.71	1 (20%)
1	HYP	A	1928	1	6,8,9	0.48	0	5,10,12	1.96	2 (40%)
1	HYP	A	1922	1	6,8,9	0.48	0	5,10,12	2.04	1 (20%)
1	HYP	B	1890	1	6,8,9	0.49	0	5,10,12	1.27	0
1	HYP	B	1915	1	6,8,9	0.44	0	5,10,12	1.74	1 (20%)
2	HYP	X	1520	2	6,8,9	0.45	0	5,10,12	1.84	1 (20%)
1	HYP	A	1911	1	6,8,9	0.45	0	5,10,12	1.83	3 (60%)
1	HYP	A	1857	1	6,8,9	0.45	0	5,10,12	1.65	2 (40%)
2	HYP	X	1522	2	6,8,9	0.44	0	5,10,12	1.75	1 (20%)
1	HYP	B	1901	1	6,8,9	0.45	0	5,10,12	1.64	2 (40%)
2	HYP	X	1459	2	6,8,9	0.43	0	5,10,12	1.90	2 (40%)
2	HYP	X	1521	2	6,8,9	0.44	0	5,10,12	1.95	2 (40%)
2	HYP	X	1551	2	6,8,9	0.45	0	5,10,12	2.00	1 (20%)
2	HYP	X	1589	2	6,8,9	0.43	0	5,10,12	1.89	1 (20%)
1	HYP	A	1917	1	6,8,9	0.46	0	5,10,12	1.86	3 (60%)
1	HYP	B	1875	1	6,8,9	0.47	0	5,10,12	1.73	1 (20%)
1	HYP	B	1899	1	6,8,9	0.45	0	5,10,12	1.76	1 (20%)
2	HYP	X	1469	2	6,8,9	0.49	0	5,10,12	1.70	1 (20%)
1	HYP	B	1865	1	6,8,9	0.57	0	5,10,12	1.49	0
1	HYP	B	1858	1	6,8,9	0.58	0	5,10,12	1.41	1 (20%)
1	HYP	B	1887	1	6,8,9	0.46	0	5,10,12	1.89	2 (40%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
1	HYP	A	1872	1	6,8,9	0.48	0	5,10,12	1.48	1 (20%)
2	HYP	X	1488	2	6,8,9	0.45	0	5,10,12	1.93	1 (20%)
2	HYP	X	1612	2	6,8,9	0.45	0	5,10,12	1.94	1 (20%)
1	HYP	A	1875	1	6,8,9	0.45	0	5,10,12	1.86	1 (20%)
2	HYP	X	1617	2	6,8,9	0.44	0	5,10,12	1.88	2 (40%)
1	HYP	B	1862	1	6,8,9	0.45	0	5,10,12	1.81	1 (20%)
1	HYP	A	1907	1	6,8,9	0.46	0	5,10,12	1.82	2 (40%)
1	HYP	B	1916	1	6,8,9	0.46	0	5,10,12	1.85	2 (40%)
2	HYP	X	1586	2	6,8,9	0.44	0	5,10,12	1.88	1 (20%)
2	HYP	X	1614	2	6,8,9	0.44	0	5,10,12	1.89	2 (40%)
1	HYP	A	1932	1	6,8,9	0.50	0	5,10,12	1.84	2 (40%)
1	HYP	B	1888	1	6,8,9	0.45	0	5,10,12	1.94	1 (20%)
1	HYP	A	1883	1	6,8,9	0.50	0	5,10,12	1.74	1 (20%)
2	HYP	X	1615	2	6,8,9	0.45	0	5,10,12	1.96	1 (20%)
1	HYP	B	1927	1	6,8,9	0.46	0	5,10,12	1.90	1 (20%)
2	HYP	X	1468	2	6,8,9	0.44	0	5,10,12	1.95	1 (20%)
2	HYP	X	1496	2	6,8,9	0.49	0	5,10,12	1.74	1 (20%)
2	HYP	X	1546	2	6,8,9	0.46	0	5,10,12	1.93	1 (20%)
1	HYP	A	1890	1	6,8,9	0.47	0	5,10,12	1.79	1 (20%)
1	HYP	A	1902	1	6,8,9	0.45	0	5,10,12	1.84	2 (40%)
1	HYP	A	1860	1	6,8,9	0.47	0	5,10,12	1.85	1 (20%)
1	HYP	A	1898	1	6,8,9	0.45	0	5,10,12	1.89	2 (40%)
2	HYP	X	1550	2	6,8,9	0.44	0	5,10,12	1.96	1 (20%)
1	HYP	B	1897	1	6,8,9	0.46	0	5,10,12	1.79	2 (40%)
2	HYP	X	1465	2	6,8,9	0.46	0	5,10,12	1.75	1 (20%)
1	HYP	B	1878	1	6,8,9	0.47	0	5,10,12	1.70	1 (20%)
1	HYP	B	1872	1	6,8,9	0.45	0	5,10,12	1.94	2 (40%)
2	HYP	X	1529	2	6,8,9	0.44	0	5,10,12	1.95	2 (40%)
2	HYP	X	1601	2	6,8,9	0.44	0	5,10,12	1.98	1 (20%)
1	HYP	A	1863	1	6,8,9	0.50	0	5,10,12	2.32	2 (40%)
1	HYP	B	1906	1	6,8,9	0.45	0	5,10,12	1.91	2 (40%)
1	HYP	A	1931	1	6,8,9	0.44	0	5,10,12	1.84	2 (40%)
2	HYP	X	1524	2	6,8,9	0.43	0	5,10,12	1.95	3 (60%)
1	HYP	A	1894	1	6,8,9	0.54	0	5,10,12	2.25	2 (40%)
1	HYP	A	1892	1	6,8,9	0.50	0	5,10,12	1.54	1 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
1	HYP	A	1865	1	6,8,9	0.48	0	5,10,12	1.89	2 (40%)
1	HYP	A	1908	1	6,8,9	0.46	0	5,10,12	1.86	1 (20%)
2	HYP	X	1453	2	6,8,9	0.47	0	5,10,12	1.77	2 (40%)
1	HYP	A	1913	1	6,8,9	0.45	0	5,10,12	1.85	1 (20%)
2	HYP	X	1526	2	6,8,9	0.43	0	5,10,12	2.03	1 (20%)
2	HYP	X	1531	2	6,8,9	0.43	0	5,10,12	1.99	1 (20%)
1	HYP	A	1916	1	6,8,9	0.46	0	5,10,12	1.68	2 (40%)
1	HYP	A	1888	1	6,8,9	0.45	0	5,10,12	1.86	1 (20%)
1	HYP	B	1929	1	6,8,9	0.46	0	5,10,12	1.83	2 (40%)
1	HYP	A	1864	1	6,8,9	0.52	0	5,10,12	2.35	2 (40%)
2	HYP	X	1464	2	6,8,9	0.44	0	5,10,12	1.82	1 (20%)
1	HYP	A	1877	1	6,8,9	0.51	0	5,10,12	2.12	2 (40%)
1	HYP	B	1913	1	6,8,9	0.48	0	5,10,12	1.80	1 (20%)
2	HYP	X	1554	2	6,8,9	0.44	0	5,10,12	1.89	2 (40%)
1	HYP	B	1932	1	6,8,9	0.47	0	5,10,12	2.07	2 (40%)
1	HYP	A	1910	1	6,8,9	0.46	0	5,10,12	1.90	1 (20%)
2	HYP	X	1553	2	6,8,9	0.44	0	5,10,12	1.89	2 (40%)
1	HYP	A	1866	1	6,8,9	0.49	0	5,10,12	1.63	1 (20%)
1	HYP	B	1902	1	6,8,9	0.45	0	5,10,12	1.99	2 (40%)
2	HYP	X	1588	2	6,8,9	0.45	0	5,10,12	1.87	1 (20%)
1	HYP	B	1922	1	6,8,9	0.47	0	5,10,12	1.97	2 (40%)
2	HYP	X	1613	2	6,8,9	0.45	0	5,10,12	1.94	1 (20%)
2	HYP	X	1461	2	6,8,9	0.44	0	5,10,12	1.88	1 (20%)
1	HYP	B	1864	1	6,8,9	0.50	0	5,10,12	2.21	3 (60%)
1	HYP	A	1885	1	6,8,9	0.51	0	5,10,12	2.45	2 (40%)
2	HYP	X	1455	2	6,8,9	0.44	0	5,10,12	1.86	1 (20%)
2	HYP	X	1456	2	6,8,9	0.43	0	5,10,12	1.89	2 (40%)
2	HYP	X	1484	2	6,8,9	0.43	0	5,10,12	1.93	2 (40%)
1	HYP	A	1873	1	6,8,9	0.47	0	5,10,12	1.79	1 (20%)
2	HYP	X	1458	2	6,8,9	0.43	0	5,10,12	1.87	1 (20%)
1	HYP	B	1868	1	6,8,9	0.49	0	5,10,12	2.10	1 (20%)
2	HYP	X	1483	2	6,8,9	0.46	0	5,10,12	1.93	1 (20%)
2	HYP	X	1454	2	6,8,9	0.47	0	5,10,12	1.36	0
1	HYP	A	1868	1	6,8,9	0.50	0	5,10,12	1.92	1 (20%)
2	HYP	X	1460	2	6,8,9	0.45	0	5,10,12	1.85	1 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
1	HYP	A	1929	1	6,8,9	0.47	0	5,10,12	1.90	3 (60%)
1	HYP	B	1894	1	6,8,9	0.47	0	5,10,12	1.91	1 (20%)
2	HYP	X	1555	2	6,8,9	0.43	0	5,10,12	1.98	3 (60%)
1	HYP	B	1910	1	6,8,9	0.45	0	5,10,12	2.15	1 (20%)
2	HYP	X	1596	2	6,8,9	0.46	0	5,10,12	1.92	1 (20%)
1	HYP	A	1867	1	6,8,9	0.45	0	5,10,12	1.91	2 (40%)
1	HYP	A	1893	1	6,8,9	0.45	0	5,10,12	1.82	2 (40%)
2	HYP	X	1619	2	6,8,9	0.43	0	5,10,12	1.94	1 (20%)
1	HYP	A	1882	1	6,8,9	0.45	0	5,10,12	1.92	2 (40%)
1	HYP	B	1856	1	6,8,9	0.51	0	5,10,12	2.06	2 (40%)
1	HYP	B	1873	1	6,8,9	0.48	0	5,10,12	1.46	0
2	HYP	X	1559	2	6,8,9	0.47	0	5,10,12	1.86	1 (20%)
1	HYP	A	1905	1	6,8,9	0.44	0	5,10,12	1.63	2 (40%)
1	HYP	B	1857	1	6,8,9	0.47	0	5,10,12	1.61	1 (20%)
2	HYP	X	1481	2	6,8,9	0.44	0	5,10,12	1.90	1 (20%)
2	HYP	X	1556	2	6,8,9	0.45	0	5,10,12	1.90	1 (20%)
2	HYP	X	1548	2	6,8,9	0.45	0	5,10,12	2.02	1 (20%)
1	HYP	B	1877	1	6,8,9	0.55	0	5,10,12	2.24	2 (40%)
1	HYP	B	1931	1	6,8,9	0.44	0	5,10,12	1.84	2 (40%)
1	HYP	A	1914	1	6,8,9	0.52	0	5,10,12	2.35	2 (40%)
1	HYP	B	1917	1	6,8,9	0.48	0	5,10,12	1.69	2 (40%)
2	HYP	X	1528	2	6,8,9	0.44	0	5,10,12	1.84	1 (20%)
2	HYP	X	1552	2	6,8,9	0.44	0	5,10,12	1.92	2 (40%)
2	HYP	X	1480	2	6,8,9	0.46	0	5,10,12	1.89	1 (20%)
1	HYP	B	1855	1	6,8,9	0.52	0	5,10,12	2.18	3 (60%)
1	HYP	A	1912	1	6,8,9	0.50	0	5,10,12	2.37	1 (20%)
2	HYP	X	1499	2	6,8,9	0.45	0	5,10,12	1.85	2 (40%)
1	HYP	A	1899	1	6,8,9	0.50	0	5,10,12	1.64	1 (20%)
1	HYP	A	1870	1	6,8,9	0.48	0	5,10,12	1.83	1 (20%)
2	HYP	X	1562	2	6,8,9	0.47	0	5,10,12	1.84	1 (20%)
2	HYP	X	1623	2	6,8,9	0.46	0	5,10,12	1.87	1 (20%)
2	HYP	X	1527	2	6,8,9	0.43	0	5,10,12	1.87	1 (20%)
2	HYP	X	1525	2	6,8,9	0.43	0	5,10,12	1.93	2 (40%)
1	HYP	B	1866	1	6,8,9	0.48	0	5,10,12	2.02	2 (40%)
2	HYP	X	1598	2	6,8,9	0.49	0	5,10,12	2.02	2 (40%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
1	HYP	A	1901	1	6,8,9	0.45	0	5,10,12	1.86	2 (40%)
2	HYP	X	1489	2	6,8,9	0.46	0	5,10,12	1.87	2 (40%)
1	HYP	A	1923	1	6,8,9	0.50	0	5,10,12	2.01	1 (20%)
1	HYP	B	1885	1	6,8,9	0.53	0	5,10,12	2.35	2 (40%)
2	HYP	X	1549	2	6,8,9	0.45	0	5,10,12	1.94	1 (20%)
1	HYP	B	1930	1	6,8,9	0.46	0	5,10,12	1.87	2 (40%)
2	HYP	X	1530	2	6,8,9	0.43	0	5,10,12	1.97	1 (20%)
2	HYP	X	1493	2	6,8,9	0.45	0	5,10,12	1.91	1 (20%)
1	HYP	B	1883	1	6,8,9	0.48	0	5,10,12	1.78	1 (20%)
1	HYP	B	1860	1	6,8,9	0.51	0	5,10,12	2.26	1 (20%)
1	HYP	A	1921	1	6,8,9	0.55	0	5,10,12	1.44	0
1	HYP	B	1898	1	6,8,9	0.43	0	5,10,12	1.91	3 (60%)
1	HYP	B	1870	1	6,8,9	0.47	0	5,10,12	1.86	1 (20%)
1	HYP	B	1928	1	6,8,9	0.52	0	5,10,12	1.57	1 (20%)
2	HYP	X	1547	2	6,8,9	0.44	0	5,10,12	1.92	1 (20%)
1	HYP	A	1858	1	6,8,9	0.52	0	5,10,12	1.63	1 (20%)
1	HYP	A	1903	1	6,8,9	0.47	0	5,10,12	1.89	1 (20%)
1	HYP	A	1862	1	6,8,9	0.46	0	5,10,12	1.84	1 (20%)
1	HYP	A	1855	1	6,8,9	0.44	0	5,10,12	1.84	1 (20%)
1	HYP	B	1882	1	6,8,9	0.46	0	5,10,12	1.81	2 (40%)
2	HYP	X	1593	2	6,8,9	0.44	0	5,10,12	1.93	1 (20%)
1	HYP	B	1908	1	6,8,9	0.48	0	5,10,12	1.93	1 (20%)
2	HYP	X	1618	2	6,8,9	0.43	0	5,10,12	1.94	2 (40%)
1	HYP	A	1915	1	6,8,9	0.45	0	5,10,12	1.81	2 (40%)
1	HYP	A	1906	1	6,8,9	0.44	0	5,10,12	1.77	2 (40%)
1	HYP	B	1905	1	6,8,9	0.49	0	5,10,12	1.62	2 (40%)
2	HYP	X	1463	2	6,8,9	0.43	0	5,10,12	1.89	2 (40%)
1	HYP	B	1892	1	6,8,9	0.50	0	5,10,12	1.41	1 (20%)
1	HYP	B	1914	1	6,8,9	0.54	0	5,10,12	2.36	2 (40%)
2	HYP	X	1487	2	6,8,9	0.44	0	5,10,12	1.86	1 (20%)
1	HYP	A	1856	1	6,8,9	0.49	0	5,10,12	2.01	3 (60%)
2	HYP	X	1597	2	6,8,9	0.45	0	5,10,12	2.07	2 (40%)
2	HYP	X	1594	2	6,8,9	0.49	0	5,10,12	1.41	0
2	HYP	X	1616	2	6,8,9	0.44	0	5,10,12	1.87	2 (40%)
2	HYP	X	1486	2	6,8,9	0.44	0	5,10,12	1.65	1 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
1	HYP	B	1907	1	6,8,9	0.45	0	5,10,12	1.89	2 (40%)
2	HYP	X	1482	2	6,8,9	0.45	0	5,10,12	1.93	2 (40%)
1	HYP	A	1880	1	6,8,9	0.48	0	5,10,12	1.81	1 (20%)
1	HYP	A	1887	1	6,8,9	0.46	0	5,10,12	2.01	3 (60%)
1	HYP	B	1903	1	6,8,9	0.45	0	5,10,12	1.85	1 (20%)
1	HYP	B	1912	1	6,8,9	0.51	0	5,10,12	2.06	2 (40%)
1	HYP	B	1863	1	6,8,9	0.49	0	5,10,12	2.06	1 (20%)
1	HYP	B	1918	1	6,8,9	0.51	0	5,10,12	1.69	1 (20%)
2	HYP	X	1611	2	6,8,9	0.45	0	5,10,12	1.92	1 (20%)
2	HYP	X	1490	2	6,8,9	0.48	0	5,10,12	1.92	1 (20%)
1	HYP	B	1867	1	6,8,9	0.46	0	5,10,12	1.98	2 (40%)

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
1	HYP	A	1918	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1911	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1923	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1920	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1592	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1927	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1457	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1626	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1602	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1587	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1591	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1610	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1590	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1897	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1620	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1523	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1595	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1880	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1878	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1920	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1921	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1532	2	-	0/0/11/13	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	HYP	A	1930	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1485	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1893	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1462	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1928	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1922	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1890	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1915	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1520	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1911	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1857	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1522	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1901	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1459	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1521	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1551	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1589	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1917	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1875	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1899	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1469	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1865	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1858	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1887	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1872	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1488	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1612	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1875	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1617	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1862	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1907	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1916	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1586	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1614	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1932	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1888	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1883	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1615	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1927	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1468	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1496	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1546	2	-	0/0/11/13	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	HYP	A	1890	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1902	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1860	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1898	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1550	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1897	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1465	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1878	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1872	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1529	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1601	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1863	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1906	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1931	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1524	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1894	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1892	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1865	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1908	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1453	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1913	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1526	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1531	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1916	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1888	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1929	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1864	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1464	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1877	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1913	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1554	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1932	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1910	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1553	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1866	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1902	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1588	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1922	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1613	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1461	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1864	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1885	1	-	0/0/11/13	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	HYP	X	1455	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1456	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1484	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1873	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1458	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1868	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1483	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1454	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1868	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1460	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1929	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1894	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1555	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1910	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1596	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1867	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1893	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1619	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1882	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1856	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1873	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1559	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1905	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1857	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1481	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1556	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1548	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1877	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1931	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1914	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1917	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1528	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1552	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1480	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1855	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1912	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1499	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1899	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1870	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1562	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1623	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1527	2	-	0/0/11/13	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	HYP	X	1525	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1866	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1598	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1901	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1489	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1923	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1885	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1549	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1930	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1530	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1493	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1883	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1860	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1921	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1898	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1870	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1928	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1547	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1858	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1903	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1862	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1855	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1882	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1593	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1908	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1618	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1915	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1906	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1905	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1463	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1892	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1914	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1487	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1856	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1597	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1594	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1616	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1486	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1907	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1482	2	-	0/0/11/13	0/1/1/1
1	HYP	A	1880	1	-	0/0/11/13	0/1/1/1
1	HYP	A	1887	1	-	0/0/11/13	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	HYP	B	1903	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1912	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1863	1	-	0/0/11/13	0/1/1/1
1	HYP	B	1918	1	-	0/0/11/13	0/1/1/1
2	HYP	X	1611	2	-	0/0/11/13	0/1/1/1
2	HYP	X	1490	2	-	0/0/11/13	0/1/1/1
1	HYP	B	1867	1	-	0/0/11/13	0/1/1/1

There are no bond length outliers.

The worst 5 of 285 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1912	HYP	CB-CG-CD	-4.36	97.92	103.27
1	B	1914	HYP	CB-CG-CD	-4.24	98.07	103.27
1	B	1860	HYP	CB-CG-CD	-4.18	98.14	103.27
1	A	1914	HYP	CB-CG-CD	-4.08	98.27	103.27
1	A	1885	HYP	CB-CG-CD	-3.92	98.46	103.27

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates ⓘ

240 monosaccharides 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	$\#\|Z\| > 2$
3	NAG	A1	1	1,3	14,14,15	0.77	0	17,19,21	1.02	1 (5%)
3	NAG	A1	2	3	14,14,15	0.72	0	17,19,21	0.87	0
3	NAG	A2	1	1,3	14,14,15	0.72	0	17,19,21	1.23	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
3	NAG	A2	2	3	14,14,15	0.73	0	17,19,21	0.83	0
3	NAG	A3	1	1,3	14,14,15	0.81	0	17,19,21	0.98	1 (5%)
3	NAG	A3	2	3	14,14,15	0.76	0	17,19,21	0.93	0
4	FUB	A4	1	4	9,9,10	1.08	0	10,12,14	0.79	0
4	FUB	A4	2	9,4	9,9,10	1.03	0	10,12,14	0.82	0
4	FUB	A5	1	4	9,9,10	1.03	0	10,12,14	0.86	0
4	FUB	A5	2	9,4	9,9,10	1.03	0	10,12,14	0.81	0
5	FUB	A6	1	5	9,9,10	1.06	0	10,12,14	0.85	0
5	FUB	A6	2	5,9	9,9,10	1.08	0	10,12,14	0.81	0
5	FUB	A6	3	5	9,9,10	1.04	0	10,12,14	0.88	0
5	FUB	A6	4	5,9	9,9,10	1.05	0	10,12,14	0.84	0
4	FUB	A7	1	4	9,9,10	1.06	0	10,12,14	0.90	0
4	FUB	A7	2	9,4	9,9,10	1.11	0	10,12,14	0.93	1 (10%)
5	FUB	A9	1	5	9,9,10	1.05	0	10,12,14	0.80	0
5	FUB	A9	2	5,9	9,9,10	1.07	0	10,12,14	0.79	0
5	FUB	A9	3	5	9,9,10	1.04	0	10,12,14	0.90	0
5	FUB	A9	4	5,9	9,9,10	1.05	0	10,12,14	0.80	0
4	FUB	B0	1	4	9,9,10	1.10	0	10,12,14	0.99	1 (10%)
4	FUB	B0	2	9,4	9,9,10	1.02	0	10,12,14	0.83	0
4	FUB	B1	1	4	9,9,10	1.05	0	10,12,14	0.85	0
4	FUB	B1	2	9,4	9,9,10	1.05	0	10,12,14	0.78	0
4	FUB	B3	1	4	9,9,10	1.01	0	10,12,14	0.94	0
4	FUB	B3	2	9,4	9,9,10	1.08	0	10,12,14	0.91	0
4	FUB	B4	1	4	9,9,10	1.02	0	10,12,14	0.79	0
4	FUB	B4	2	9,4	9,9,10	1.03	0	10,12,14	0.90	0
4	FUB	B5	1	4	9,9,10	1.04	0	10,12,14	0.79	0
4	FUB	B5	2	9,4	9,9,10	1.05	0	10,12,14	0.79	0
5	FUB	B6	1	5	9,9,10	1.05	0	10,12,14	0.78	0
5	FUB	B6	2	5,9	9,9,10	1.04	0	10,12,14	0.79	0
5	FUB	B6	3	5	9,9,10	1.02	0	10,12,14	0.86	0
5	FUB	B6	4	5,9	9,9,10	1.05	0	10,12,14	0.88	0
4	FUB	B7	1	4	9,9,10	1.05	0	10,12,14	0.77	0
4	FUB	B7	2	9,4	9,9,10	1.05	0	10,12,14	0.88	0
4	FUB	B9	1	4	9,9,10	1.04	0	10,12,14	0.82	0
4	FUB	B9	2	9,4	9,9,10	1.04	0	10,12,14	0.86	0
4	FUB	C0	1	4	9,9,10	1.02	0	10,12,14	0.99	0
4	FUB	C0	2	9,4	9,9,10	1.04	0	10,12,14	0.80	0
4	FUB	C1	1	4	9,9,10	1.03	0	10,12,14	0.83	0
4	FUB	C1	2	9,4	9,9,10	1.02	0	10,12,14	0.88	0
4	FUB	C2	1	4	9,9,10	1.03	0	10,12,14	0.81	0
4	FUB	C2	2	9,4	9,9,10	1.03	0	10,12,14	0.86	0
4	FUB	C3	1	4	9,9,10	1.03	0	10,12,14	0.88	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
4	FUB	C3	2	9,4	9,9,10	1.04	0	10,12,14	0.91	0
4	FUB	C4	1	4	9,9,10	1.04	0	10,12,14	0.81	0
4	FUB	C4	2	9,4	9,9,10	1.02	0	10,12,14	0.89	0
4	FUB	C5	1	4	9,9,10	1.04	0	10,12,14	0.87	0
4	FUB	C5	2	9,4	9,9,10	1.04	0	10,12,14	0.91	0
4	FUB	C6	1	4	9,9,10	1.04	0	10,12,14	0.81	0
4	FUB	C6	2	9,4	9,9,10	1.02	0	10,12,14	0.88	0
4	FUB	C7	1	4	9,9,10	1.03	0	10,12,14	0.80	0
4	FUB	C7	2	9,4	9,9,10	1.03	0	10,12,14	0.92	0
4	FUB	C8	1	4	9,9,10	1.03	0	10,12,14	0.86	0
4	FUB	C8	2	9,4	9,9,10	1.02	0	10,12,14	0.88	0
4	FUB	C9	1	4	9,9,10	1.03	0	10,12,14	0.88	0
4	FUB	C9	2	9,4	9,9,10	1.03	0	10,12,14	0.87	0
4	FUB	D0	1	4	9,9,10	1.04	0	10,12,14	0.92	0
4	FUB	D0	2	9,4	9,9,10	1.03	0	10,12,14	0.90	0
4	FUB	D1	1	4	9,9,10	1.04	0	10,12,14	1.14	1 (10%)
4	FUB	D1	2	9,4	9,9,10	1.04	0	10,12,14	0.85	0
4	FUB	D2	1	4	9,9,10	1.07	0	10,12,14	0.93	0
4	FUB	D2	2	9,4	9,9,10	1.05	0	10,12,14	0.80	0
4	FUB	D3	1	4	9,9,10	1.04	0	10,12,14	0.77	0
4	FUB	D3	2	9,4	9,9,10	1.04	0	10,12,14	0.92	0
4	FUB	D4	1	4	9,9,10	1.05	0	10,12,14	0.74	0
4	FUB	D4	2	9,4	9,9,10	1.05	0	10,12,14	0.89	0
4	FUB	D5	1	4	9,9,10	1.06	0	10,12,14	0.89	0
4	FUB	D5	2	9,4	9,9,10	1.06	0	10,12,14	0.88	0
4	FUB	D6	1	4	9,9,10	1.04	0	10,12,14	0.80	0
4	FUB	D6	2	9,4	9,9,10	1.08	0	10,12,14	1.03	0
4	FUB	D7	1	4	9,9,10	1.06	0	10,12,14	0.97	0
4	FUB	D7	2	9,4	9,9,10	1.07	0	10,12,14	0.88	0
4	FUB	D8	1	4	9,9,10	1.05	0	10,12,14	0.79	0
4	FUB	D8	2	9,4	9,9,10	1.04	0	10,12,14	0.86	0
4	FUB	D9	1	4	9,9,10	1.06	0	10,12,14	0.90	0
4	FUB	D9	2	9,4	9,9,10	1.07	0	10,12,14	0.83	0
4	FUB	E0	1	4	9,9,10	1.05	0	10,12,14	0.80	0
4	FUB	E0	2	9,4	9,9,10	1.05	0	10,12,14	0.76	0
4	FUB	E1	1	4	9,9,10	1.05	0	10,12,14	0.83	0
4	FUB	E1	2	9,4	9,9,10	1.05	0	10,12,14	0.95	0
4	FUB	E2	1	4	9,9,10	1.03	0	10,12,14	0.85	0
4	FUB	E2	2	9,4	9,9,10	1.07	0	10,12,14	0.85	0
4	FUB	E3	1	4	9,9,10	1.06	0	10,12,14	0.86	0
4	FUB	E3	2	9,4	9,9,10	1.04	0	10,12,14	0.89	0
4	FUB	E4	1	4	9,9,10	1.02	0	10,12,14	1.07	1 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
4	FUB	E4	2	9,4	9,9,10	1.07	0	10,12,14	1.13	1 (10%)
4	FUB	E5	1	4	9,9,10	1.04	0	10,12,14	0.79	0
4	FUB	E5	2	9,4	9,9,10	1.04	0	10,12,14	0.84	0
6	FUB	E6	1	6	9,9,10	1.06	0	10,12,14	0.85	0
6	FUB	E6	2	9,6	9,9,10	1.04	0	10,12,14	0.74	0
6	FUB	E6	3	6	9,9,10	1.03	0	10,12,14	0.84	0
6	FUB	E6	4	9,6	9,9,10	1.06	0	10,12,14	0.75	0
6	FUB	E6	5	6	9,9,10	1.02	0	10,12,14	0.85	0
6	FUB	E6	6	9,6	9,9,10	1.06	0	10,12,14	0.75	0
6	FUB	E6	7	6	9,9,10	1.04	0	10,12,14	0.73	0
6	FUB	E6	8	9,6	9,9,10	1.05	0	10,12,14	0.83	0
4	FUB	E7	1	4	9,9,10	1.07	0	10,12,14	0.78	0
4	FUB	E7	2	9,4	9,9,10	1.07	0	10,12,14	0.90	0
4	FUB	E8	1	4	9,9,10	1.03	0	10,12,14	0.80	0
4	FUB	E8	2	9,4	9,9,10	1.03	0	10,12,14	0.85	0
4	FUB	F0	1	4	9,9,10	1.03	0	10,12,14	0.87	0
4	FUB	F0	2	9,4	9,9,10	1.05	0	10,12,14	0.84	0
4	FUB	F2	1	4	9,9,10	1.04	0	10,12,14	0.78	0
4	FUB	F2	2	9,4	9,9,10	1.08	0	10,12,14	0.90	0
4	FUB	F3	1	4	9,9,10	1.07	0	10,12,14	0.86	0
4	FUB	F3	2	9,4	9,9,10	1.06	0	10,12,14	0.90	0
4	FUB	F5	1	4	9,9,10	1.06	0	10,12,14	0.78	0
4	FUB	F5	2	9,4	9,9,10	1.07	0	10,12,14	0.89	0
5	FUB	F6	1	5	9,9,10	1.06	0	10,12,14	0.78	0
5	FUB	F6	2	5,9	9,9,10	1.07	0	10,12,14	0.84	0
5	FUB	F6	3	5	9,9,10	1.05	0	10,12,14	0.82	0
5	FUB	F6	4	5,9	9,9,10	1.07	0	10,12,14	0.86	0
5	FUB	F7	1	5	9,9,10	1.04	0	10,12,14	0.77	0
5	FUB	F7	2	5,9	9,9,10	1.07	0	10,12,14	0.77	0
5	FUB	F7	3	5	9,9,10	1.02	0	10,12,14	0.80	0
5	FUB	F7	4	5,9	9,9,10	1.04	0	10,12,14	0.81	0
4	FUB	F8	1	4	9,9,10	1.06	0	10,12,14	0.78	0
4	FUB	F8	2	9,4	9,9,10	1.07	0	10,12,14	0.90	0
3	NAG	a1	1	1,3	14,14,15	0.74	0	17,19,21	0.86	1 (5%)
3	NAG	a1	2	3	14,14,15	0.72	0	17,19,21	0.82	0
3	NAG	a2	1	1,3	14,14,15	0.73	0	17,19,21	1.17	1 (5%)
3	NAG	a2	2	3	14,14,15	0.74	0	17,19,21	0.83	0
3	NAG	a3	1	1,3	14,14,15	0.78	0	17,19,21	1.53	2 (11%)
3	NAG	a3	2	3	14,14,15	0.73	0	17,19,21	1.24	2 (11%)
7	34V	a4	1	7	9,9,10	1.27	0	10,12,15	0.91	1 (10%)
7	FUB	a4	2	7,9	9,9,10	1.33	2 (22%)	10,12,14	1.24	2 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	FUB	a5	1	4	9,9,10	1.08	0	10,12,14	0.93	0
4	FUB	a5	2	9,4	9,9,10	1.36	2 (22%)	10,12,14	1.09	1 (10%)
5	FUB	a6	1	5	9,9,10	1.10	1 (11%)	10,12,14	1.08	0
5	FUB	a6	2	5,9	9,9,10	1.33	0	10,12,14	1.26	1 (10%)
5	FUB	a6	3	5	9,9,10	1.17	1 (11%)	10,12,14	1.24	1 (10%)
5	FUB	a6	4	5,9	9,9,10	1.25	1 (11%)	10,12,14	1.12	1 (10%)
4	FUB	a7	1	4	9,9,10	1.13	0	10,12,14	0.98	0
4	FUB	a7	2	9,4	9,9,10	1.37	2 (22%)	10,12,14	0.99	1 (10%)
5	FUB	a9	1	5	9,9,10	1.32	1 (11%)	10,12,14	1.02	1 (10%)
5	FUB	a9	2	5,9	9,9,10	1.33	1 (11%)	10,12,14	0.91	0
5	FUB	a9	3	5	9,9,10	1.10	0	10,12,14	0.96	0
5	FUB	a9	4	5,9	9,9,10	1.33	1 (11%)	10,12,14	1.06	1 (10%)
4	FUB	b0	1	4	9,9,10	1.45	2 (22%)	10,12,14	1.29	2 (20%)
4	FUB	b0	2	9,4	9,9,10	1.36	1 (11%)	10,12,14	1.00	1 (10%)
4	FUB	b1	1	4	9,9,10	1.41	2 (22%)	10,12,14	1.28	2 (20%)
4	FUB	b1	2	9,4	9,9,10	1.30	0	10,12,14	1.02	1 (10%)
4	FUB	b3	1	4	9,9,10	1.07	0	10,12,14	1.01	1 (10%)
4	FUB	b3	2	9,4	9,9,10	1.36	1 (11%)	10,12,14	1.38	2 (20%)
4	FUB	b4	1	4	9,9,10	1.37	1 (11%)	10,12,14	0.97	1 (10%)
4	FUB	b4	2	9,4	9,9,10	1.43	2 (22%)	10,12,14	1.12	1 (10%)
4	FUB	b5	1	4	9,9,10	1.14	0	10,12,14	1.39	1 (10%)
4	FUB	b5	2	9,4	9,9,10	1.24	0	10,12,14	1.12	1 (10%)
5	FUB	b6	1	5	9,9,10	1.35	2 (22%)	10,12,14	1.08	1 (10%)
5	FUB	b6	2	5,9	9,9,10	1.39	2 (22%)	10,12,14	1.11	1 (10%)
5	FUB	b6	3	5	9,9,10	1.31	1 (11%)	10,12,14	1.04	1 (10%)
5	FUB	b6	4	5,9	9,9,10	1.34	1 (11%)	10,12,14	1.09	1 (10%)
4	FUB	b7	1	4	9,9,10	1.24	0	10,12,14	1.00	1 (10%)
4	FUB	b7	2	9,4	9,9,10	1.39	2 (22%)	10,12,14	1.06	1 (10%)
4	FUB	b9	1	4	9,9,10	1.27	0	10,12,14	0.95	1 (10%)
4	FUB	b9	2	9,4	9,9,10	1.28	0	10,12,14	0.97	1 (10%)
4	FUB	c0	1	4	9,9,10	1.32	1 (11%)	10,12,14	1.23	2 (20%)
4	FUB	c0	2	9,4	9,9,10	1.27	1 (11%)	10,12,14	1.20	2 (20%)
4	FUB	c1	1	4	9,9,10	1.38	2 (22%)	10,12,14	1.04	1 (10%)
4	FUB	c1	2	9,4	9,9,10	1.24	1 (11%)	10,12,14	1.05	1 (10%)
4	FUB	c2	1	4	9,9,10	1.35	1 (11%)	10,12,14	1.01	1 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
4	FUB	c2	2	9,4	9,9,10	1.26	0	10,12,14	1.02	1 (10%)
4	FUB	c3	1	4	9,9,10	1.30	1 (11%)	10,12,14	1.23	2 (20%)
4	FUB	c3	2	9,4	9,9,10	1.43	2 (22%)	10,12,14	1.01	1 (10%)
4	FUB	c4	1	4	9,9,10	1.31	0	10,12,14	1.01	1 (10%)
4	FUB	c4	2	9,4	9,9,10	1.37	2 (22%)	10,12,14	1.14	1 (10%)
4	FUB	c5	1	4	9,9,10	1.18	0	10,12,14	1.02	1 (10%)
4	FUB	c5	2	9,4	9,9,10	1.27	0	10,12,14	0.93	1 (10%)
4	FUB	c6	1	4	9,9,10	1.40	2 (22%)	10,12,14	1.11	1 (10%)
4	FUB	c6	2	9,4	9,9,10	1.29	1 (11%)	10,12,14	0.98	1 (10%)
4	FUB	c7	1	4	9,9,10	1.42	2 (22%)	10,12,14	1.31	2 (20%)
4	FUB	c7	2	9,4	9,9,10	1.28	0	10,12,14	1.15	1 (10%)
4	FUB	c8	1	4	9,9,10	1.15	0	10,12,14	0.97	1 (10%)
4	FUB	c8	2	9,4	9,9,10	1.44	2 (22%)	10,12,14	1.08	1 (10%)
4	FUB	c9	1	4	9,9,10	1.16	0	10,12,14	1.36	2 (20%)
4	FUB	c9	2	9,4	9,9,10	1.36	2 (22%)	10,12,14	1.35	2 (20%)
4	FUB	d0	1	4	9,9,10	1.16	0	10,12,14	0.97	1 (10%)
4	FUB	d0	2	9,4	9,9,10	1.44	2 (22%)	10,12,14	1.08	1 (10%)
4	FUB	d1	1	4	9,9,10	1.08	0	10,12,14	0.86	0
4	FUB	d1	2	9,4	9,9,10	1.10	0	10,12,14	1.57	4 (40%)
4	FUB	d2	1	4	9,9,10	1.09	0	10,12,14	1.15	1 (10%)
4	FUB	d2	2	9,4	9,9,10	1.29	0	10,12,14	1.00	1 (10%)
4	FUB	d3	1	4	9,9,10	1.27	0	10,12,14	0.96	1 (10%)
4	FUB	d3	2	9,4	9,9,10	1.33	1 (11%)	10,12,14	1.05	1 (10%)
4	FUB	d4	1	4	9,9,10	1.16	0	10,12,14	0.94	1 (10%)
4	FUB	d4	2	9,4	9,9,10	1.37	2 (22%)	10,12,14	0.96	1 (10%)
4	FUB	d5	1	4	9,9,10	1.23	0	10,12,14	1.03	1 (10%)
4	FUB	d5	2	9,4	9,9,10	1.41	2 (22%)	10,12,14	1.18	1 (10%)
4	FUB	d6	1	4	9,9,10	1.17	0	10,12,14	0.94	1 (10%)
4	FUB	d6	2	9,4	9,9,10	1.37	2 (22%)	10,12,14	0.96	1 (10%)
4	FUB	d7	1	4	9,9,10	1.46	2 (22%)	10,12,14	1.19	1 (10%)
4	FUB	d7	2	9,4	9,9,10	1.33	1 (11%)	10,12,14	0.99	1 (10%)
4	FUB	d8	1	4	9,9,10	1.09	0	10,12,14	1.00	0
4	FUB	d8	2	9,4	9,9,10	1.38	2 (22%)	10,12,14	1.00	1 (10%)
4	FUB	d9	1	4	9,9,10	1.27	0	10,12,14	0.90	1 (10%)
4	FUB	d9	2	9,4	9,9,10	1.44	2 (22%)	10,12,14	1.03	1 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	FUB	e0	1	4	9,9,10	1.27	0	10,12,14	0.99	1 (10%)
4	FUB	e0	2	9,4	9,9,10	1.31	1 (11%)	10,12,14	1.28	2 (20%)
4	FUB	e1	1	4	9,9,10	1.11	0	10,12,14	1.04	1 (10%)
4	FUB	e1	2	9,4	9,9,10	1.40	2 (22%)	10,12,14	1.08	1 (10%)
4	FUB	e2	1	4	9,9,10	1.24	0	10,12,14	1.04	1 (10%)
4	FUB	e2	2	9,4	9,9,10	1.34	1 (11%)	10,12,14	0.98	1 (10%)
4	FUB	e3	1	4	9,9,10	1.10	0	10,12,14	1.00	0
4	FUB	e3	2	9,4	9,9,10	1.39	2 (22%)	10,12,14	1.00	1 (10%)
4	FUB	e4	1	4	9,9,10	1.13	1 (11%)	10,12,14	1.26	1 (10%)
4	FUB	e4	2	9,4	9,9,10	1.37	2 (22%)	10,12,14	1.22	2 (20%)
4	FUB	e5	1	4	9,9,10	1.46	2 (22%)	10,12,14	1.19	1 (10%)
4	FUB	e5	2	9,4	9,9,10	1.32	1 (11%)	10,12,14	0.99	1 (10%)
4	FUB	e6	1	4	9,9,10	1.10	0	10,12,14	1.00	0
4	FUB	e6	2	9,4	9,9,10	1.37	1 (11%)	10,12,14	0.99	1 (10%)
4	FUB	e7	1	4	9,9,10	1.10	0	10,12,14	0.99	0
4	FUB	e7	2	9,4	9,9,10	1.37	2 (22%)	10,12,14	0.99	1 (10%)
4	FUB	e8	1	4	9,9,10	1.27	0	10,12,14	0.91	1 (10%)
4	FUB	e8	2	9,4	9,9,10	1.42	2 (22%)	10,12,14	1.03	1 (10%)
8	FUB	e9	1	8	9,9,10	1.21	0	10,12,14	1.03	1 (10%)
8	FUB	e9	2	8,9	9,9,10	1.26	0	10,12,14	1.51	1 (10%)
8	FUB	e9	3	8	9,9,10	1.14	0	10,12,14	1.06	1 (10%)
8	FUB	e9	4	8,9	9,9,10	1.23	0	10,12,14	1.42	1 (10%)
8	FUB	e9	5	8	9,9,10	1.25	0	10,12,14	1.02	1 (10%)
8	FUB	e9	6	8,9	9,9,10	1.32	0	10,12,14	1.20	2 (20%)
4	FUB	f0	1	4	9,9,10	1.10	0	10,12,14	0.99	0
4	FUB	f0	2	9,4	9,9,10	1.37	2 (22%)	10,12,14	0.99	1 (10%)
4	FUB	f2	1	4	9,9,10	1.09	0	10,12,14	1.00	0
4	FUB	f2	2	9,4	9,9,10	1.37	2 (22%)	10,12,14	0.99	1 (10%)
4	FUB	f3	1	4	9,9,10	1.17	0	10,12,14	1.01	1 (10%)
4	FUB	f3	2	9,4	9,9,10	1.46	2 (22%)	10,12,14	1.04	1 (10%)
4	FUB	f5	1	4	9,9,10	1.30	0	10,12,14	1.01	1 (10%)
4	FUB	f5	2	9,4	9,9,10	1.25	1 (11%)	10,12,14	1.40	2 (20%)
5	FUB	f6	1	5	9,9,10	1.16	0	10,12,14	1.06	1 (10%)
5	FUB	f6	2	5,9	9,9,10	1.34	1 (11%)	10,12,14	1.08	1 (10%)
5	FUB	f6	3	5	9,9,10	1.23	0	10,12,14	1.02	1 (10%)
5	FUB	f6	4	5,9	9,9,10	1.30	1 (11%)	10,12,14	1.49	2 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
5	FUB	f7	1	5	9,9,10	1.36	1 (11%)	10,12,14	1.03	1 (10%)
5	FUB	f7	2	5,9	9,9,10	1.30	0	10,12,14	1.24	1 (10%)
5	FUB	f7	3	5	9,9,10	1.34	2 (22%)	10,12,14	1.03	1 (10%)
5	FUB	f7	4	5,9	9,9,10	1.27	0	10,12,14	1.23	1 (10%)
4	FUB	f8	1	4	9,9,10	1.22	0	10,12,14	1.05	1 (10%)
4	FUB	f8	2	9,4	9,9,10	1.39	2 (22%)	10,12,14	1.31	2 (20%)

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	NAG	A1	1	1,3	-	0/6/23/26	0/1/1/1
3	NAG	A1	2	3	-	1/6/23/26	0/1/1/1
3	NAG	A2	1	1,3	-	1/6/23/26	0/1/1/1
3	NAG	A2	2	3	-	0/6/23/26	0/1/1/1
3	NAG	A3	1	1,3	-	0/6/23/26	0/1/1/1
3	NAG	A3	2	3	-	0/6/23/26	0/1/1/1
4	FUB	A4	1	4	-	0/2/15/18	0/1/1/1
4	FUB	A4	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	A5	1	4	-	0/2/15/18	0/1/1/1
4	FUB	A5	2	9,4	-	0/2/15/18	0/1/1/1
5	FUB	A6	1	5	-	0/2/15/18	0/1/1/1
5	FUB	A6	2	5,9	-	0/2/15/18	0/1/1/1
5	FUB	A6	3	5	-	0/2/15/18	0/1/1/1
5	FUB	A6	4	5,9	-	0/2/15/18	0/1/1/1
4	FUB	A7	1	4	-	0/2/15/18	0/1/1/1
4	FUB	A7	2	9,4	-	0/2/15/18	0/1/1/1
5	FUB	A9	1	5	-	0/2/15/18	0/1/1/1
5	FUB	A9	2	5,9	-	0/2/15/18	0/1/1/1
5	FUB	A9	3	5	-	0/2/15/18	0/1/1/1
5	FUB	A9	4	5,9	-	0/2/15/18	0/1/1/1
4	FUB	B0	1	4	-	0/2/15/18	0/1/1/1
4	FUB	B0	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	B1	1	4	-	0/2/15/18	0/1/1/1
4	FUB	B1	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	B3	1	4	-	0/2/15/18	0/1/1/1
4	FUB	B3	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	B4	1	4	-	0/2/15/18	0/1/1/1
4	FUB	B4	2	9,4	-	0/2/15/18	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	FUB	B5	1	4	-	0/2/15/18	0/1/1/1
4	FUB	B5	2	9,4	-	0/2/15/18	0/1/1/1
5	FUB	B6	1	5	-	0/2/15/18	0/1/1/1
5	FUB	B6	2	5,9	-	0/2/15/18	0/1/1/1
5	FUB	B6	3	5	-	0/2/15/18	0/1/1/1
5	FUB	B6	4	5,9	-	0/2/15/18	0/1/1/1
4	FUB	B7	1	4	-	0/2/15/18	0/1/1/1
4	FUB	B7	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	B9	1	4	-	0/2/15/18	0/1/1/1
4	FUB	B9	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C0	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C0	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C1	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C1	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C2	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C2	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C3	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C3	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C4	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C4	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C5	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C5	2	9,4	-	1/2/15/18	0/1/1/1
4	FUB	C6	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C6	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C7	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C7	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C8	1	4	-	0/2/15/18	0/1/1/1
4	FUB	C8	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	C9	1	4	-	2/2/15/18	0/1/1/1
4	FUB	C9	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	D0	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D0	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	D1	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D1	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	D2	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D2	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	D3	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D3	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	D4	1	4	-	2/2/15/18	0/1/1/1
4	FUB	D4	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	D5	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D5	2	9,4	-	0/2/15/18	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	FUB	D6	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D6	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	D7	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D7	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	D8	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D8	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	D9	1	4	-	0/2/15/18	0/1/1/1
4	FUB	D9	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	E0	1	4	-	2/2/15/18	0/1/1/1
4	FUB	E0	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	E1	1	4	-	0/2/15/18	0/1/1/1
4	FUB	E1	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	E2	1	4	-	0/2/15/18	0/1/1/1
4	FUB	E2	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	E3	1	4	-	0/2/15/18	0/1/1/1
4	FUB	E3	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	E4	1	4	-	2/2/15/18	0/1/1/1
4	FUB	E4	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	E5	1	4	-	0/2/15/18	0/1/1/1
4	FUB	E5	2	9,4	-	0/2/15/18	0/1/1/1
6	FUB	E6	1	6	-	0/2/15/18	0/1/1/1
6	FUB	E6	2	9,6	-	0/2/15/18	0/1/1/1
6	FUB	E6	3	6	-	0/2/15/18	0/1/1/1
6	FUB	E6	4	9,6	-	2/2/15/18	0/1/1/1
6	FUB	E6	5	6	-	2/2/15/18	0/1/1/1
6	FUB	E6	6	9,6	-	0/2/15/18	0/1/1/1
6	FUB	E6	7	6	-	0/2/15/18	0/1/1/1
6	FUB	E6	8	9,6	-	2/2/15/18	0/1/1/1
4	FUB	E7	1	4	-	0/2/15/18	0/1/1/1
4	FUB	E7	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	E8	1	4	-	0/2/15/18	0/1/1/1
4	FUB	E8	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	F0	1	4	-	0/2/15/18	0/1/1/1
4	FUB	F0	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	F2	1	4	-	0/2/15/18	0/1/1/1
4	FUB	F2	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	F3	1	4	-	0/2/15/18	0/1/1/1
4	FUB	F3	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	F5	1	4	-	0/2/15/18	0/1/1/1
4	FUB	F5	2	9,4	-	0/2/15/18	0/1/1/1
5	FUB	F6	1	5	-	0/2/15/18	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	FUB	F6	2	5,9	-	2/2/15/18	0/1/1/1
5	FUB	F6	3	5	-	0/2/15/18	0/1/1/1
5	FUB	F6	4	5,9	-	0/2/15/18	0/1/1/1
5	FUB	F7	1	5	-	0/2/15/18	0/1/1/1
5	FUB	F7	2	5,9	-	2/2/15/18	0/1/1/1
5	FUB	F7	3	5	-	0/2/15/18	0/1/1/1
5	FUB	F7	4	5,9	-	0/2/15/18	0/1/1/1
4	FUB	F8	1	4	-	0/2/15/18	0/1/1/1
4	FUB	F8	2	9,4	-	0/2/15/18	0/1/1/1
3	NAG	a1	1	1,3	-	0/6/23/26	0/1/1/1
3	NAG	a1	2	3	-	0/6/23/26	0/1/1/1
3	NAG	a2	1	1,3	-	1/6/23/26	0/1/1/1
3	NAG	a2	2	3	-	0/6/23/26	0/1/1/1
3	NAG	a3	1	1,3	-	2/6/23/26	0/1/1/1
3	NAG	a3	2	3	-	0/6/23/26	0/1/1/1
7	34V	a4	1	7	1/1/3/3	0/2/15/19	0/1/1/1
7	FUB	a4	2	7,9	-	0/2/15/18	0/1/1/1
4	FUB	a5	1	4	-	2/2/15/18	0/1/1/1
4	FUB	a5	2	9,4	-	1/2/15/18	0/1/1/1
5	FUB	a6	1	5	-	1/2/15/18	0/1/1/1
5	FUB	a6	2	5,9	-	2/2/15/18	0/1/1/1
5	FUB	a6	3	5	-	0/2/15/18	0/1/1/1
5	FUB	a6	4	5,9	-	0/2/15/18	0/1/1/1
4	FUB	a7	1	4	-	0/2/15/18	0/1/1/1
4	FUB	a7	2	9,4	-	2/2/15/18	0/1/1/1
5	FUB	a9	1	5	-	0/2/15/18	0/1/1/1
5	FUB	a9	2	5,9	-	2/2/15/18	0/1/1/1
5	FUB	a9	3	5	-	2/2/15/18	0/1/1/1
5	FUB	a9	4	5,9	-	2/2/15/18	0/1/1/1
4	FUB	b0	1	4	-	0/2/15/18	0/1/1/1
4	FUB	b0	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	b1	1	4	-	2/2/15/18	0/1/1/1
4	FUB	b1	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	b3	1	4	-	1/2/15/18	0/1/1/1
4	FUB	b3	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	b4	1	4	-	2/2/15/18	0/1/1/1
4	FUB	b4	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	b5	1	4	-	0/2/15/18	0/1/1/1
4	FUB	b5	2	9,4	-	0/2/15/18	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	FUB	b6	1	5	-	2/2/15/18	0/1/1/1
5	FUB	b6	2	5,9	-	2/2/15/18	0/1/1/1
5	FUB	b6	3	5	-	2/2/15/18	0/1/1/1
5	FUB	b6	4	5,9	-	2/2/15/18	0/1/1/1
4	FUB	b7	1	4	-	1/2/15/18	0/1/1/1
4	FUB	b7	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	b9	1	4	-	0/2/15/18	0/1/1/1
4	FUB	b9	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	c0	1	4	-	0/2/15/18	0/1/1/1
4	FUB	c0	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	c1	1	4	-	2/2/15/18	0/1/1/1
4	FUB	c1	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	c2	1	4	-	2/2/15/18	0/1/1/1
4	FUB	c2	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	c3	1	4	-	2/2/15/18	0/1/1/1
4	FUB	c3	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	c4	1	4	-	0/2/15/18	0/1/1/1
4	FUB	c4	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	c5	1	4	-	0/2/15/18	0/1/1/1
4	FUB	c5	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	c6	1	4	-	0/2/15/18	0/1/1/1
4	FUB	c6	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	c7	1	4	-	2/2/15/18	0/1/1/1
4	FUB	c7	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	c8	1	4	-	2/2/15/18	0/1/1/1
4	FUB	c8	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	c9	1	4	-	0/2/15/18	0/1/1/1
4	FUB	c9	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	d0	1	4	-	2/2/15/18	0/1/1/1
4	FUB	d0	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	d1	1	4	-	2/2/15/18	0/1/1/1
4	FUB	d1	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	d2	1	4	-	0/2/15/18	0/1/1/1
4	FUB	d2	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	d3	1	4	-	1/2/15/18	0/1/1/1
4	FUB	d3	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	d4	1	4	-	2/2/15/18	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	FUB	d4	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	d5	1	4	-	1/2/15/18	0/1/1/1
4	FUB	d5	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	d6	1	4	-	2/2/15/18	0/1/1/1
4	FUB	d6	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	d7	1	4	-	2/2/15/18	0/1/1/1
4	FUB	d7	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	d8	1	4	-	2/2/15/18	0/1/1/1
4	FUB	d8	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	d9	1	4	-	2/2/15/18	0/1/1/1
4	FUB	d9	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	e0	1	4	-	0/2/15/18	0/1/1/1
4	FUB	e0	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	e1	1	4	-	2/2/15/18	0/1/1/1
4	FUB	e1	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	e2	1	4	-	0/2/15/18	0/1/1/1
4	FUB	e2	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	e3	1	4	-	2/2/15/18	0/1/1/1
4	FUB	e3	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	e4	1	4	-	0/2/15/18	0/1/1/1
4	FUB	e4	2	9,4	-	0/2/15/18	0/1/1/1
4	FUB	e5	1	4	-	2/2/15/18	0/1/1/1
4	FUB	e5	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	e6	1	4	-	2/2/15/18	0/1/1/1
4	FUB	e6	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	e7	1	4	-	2/2/15/18	0/1/1/1
4	FUB	e7	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	e8	1	4	-	2/2/15/18	0/1/1/1
4	FUB	e8	2	9,4	-	0/2/15/18	0/1/1/1
8	FUB	e9	1	8	-	1/2/15/18	0/1/1/1
8	FUB	e9	2	8,9	-	1/2/15/18	0/1/1/1
8	FUB	e9	3	8	-	2/2/15/18	0/1/1/1
8	FUB	e9	4	8,9	-	2/2/15/18	0/1/1/1
8	FUB	e9	5	8	-	2/2/15/18	0/1/1/1
8	FUB	e9	6	8,9	-	2/2/15/18	0/1/1/1
4	FUB	f0	1	4	-	2/2/15/18	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	FUB	f0	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	f2	1	4	-	2/2/15/18	0/1/1/1
4	FUB	f2	2	9,4	-	2/2/15/18	0/1/1/1
4	FUB	f3	1	4	-	1/2/15/18	0/1/1/1
4	FUB	f3	2	9,4	-	1/2/15/18	0/1/1/1
4	FUB	f5	1	4	-	2/2/15/18	0/1/1/1
4	FUB	f5	2	9,4	-	0/2/15/18	0/1/1/1
5	FUB	f6	1	5	-	0/2/15/18	0/1/1/1
5	FUB	f6	2	5,9	-	1/2/15/18	0/1/1/1
5	FUB	f6	3	5	-	2/2/15/18	0/1/1/1
5	FUB	f6	4	5,9	-	2/2/15/18	0/1/1/1
5	FUB	f7	1	5	-	0/2/15/18	0/1/1/1
5	FUB	f7	2	5,9	-	2/2/15/18	0/1/1/1
5	FUB	f7	3	5	-	0/2/15/18	0/1/1/1
5	FUB	f7	4	5,9	-	2/2/15/18	0/1/1/1
4	FUB	f8	1	4	-	1/2/15/18	0/1/1/1
4	FUB	f8	2	9,4	-	0/2/15/18	0/1/1/1

The worst 5 of 96 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	f3	2	FUB	C2-C3	-2.49	1.49	1.53
4	c7	1	FUB	O4-C1	-2.48	1.38	1.43
4	d7	1	FUB	C2-C3	-2.46	1.49	1.53
4	e4	2	FUB	O4-C1	-2.45	1.38	1.43
4	e5	1	FUB	C2-C3	-2.44	1.49	1.53

The worst 5 of 136 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	a3	1	NAG	O5-C1-C2	-4.39	104.35	111.29
8	e9	2	FUB	O4-C4-C3	-4.21	100.98	104.70
8	e9	4	FUB	O4-C4-C3	-3.96	101.20	104.70
3	a3	2	NAG	C1-O5-C5	3.52	116.96	112.19
5	a6	2	FUB	O4-C4-C3	-3.27	101.81	104.70

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
7	a4	1	34V	C3

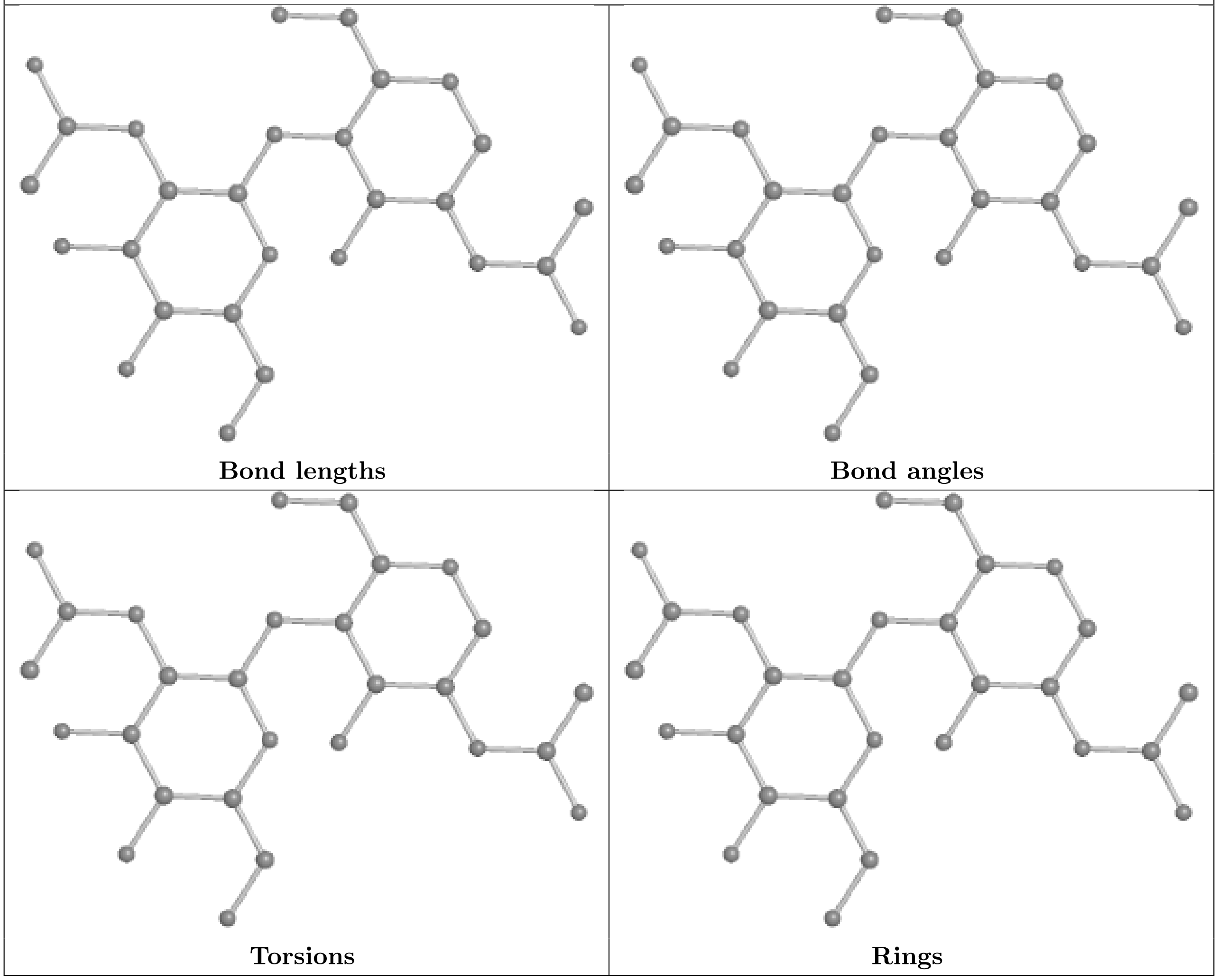
5 of 168 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	b4	1	FUB	O4-C4-C5-O5
4	b4	1	FUB	C3-C4-C5-O5
4	c3	1	FUB	C3-C4-C5-O5
4	c7	1	FUB	O4-C4-C5-O5
4	c7	1	FUB	C3-C4-C5-O5

There are no ring outliers.

No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.



Oligosaccharide Chain A1

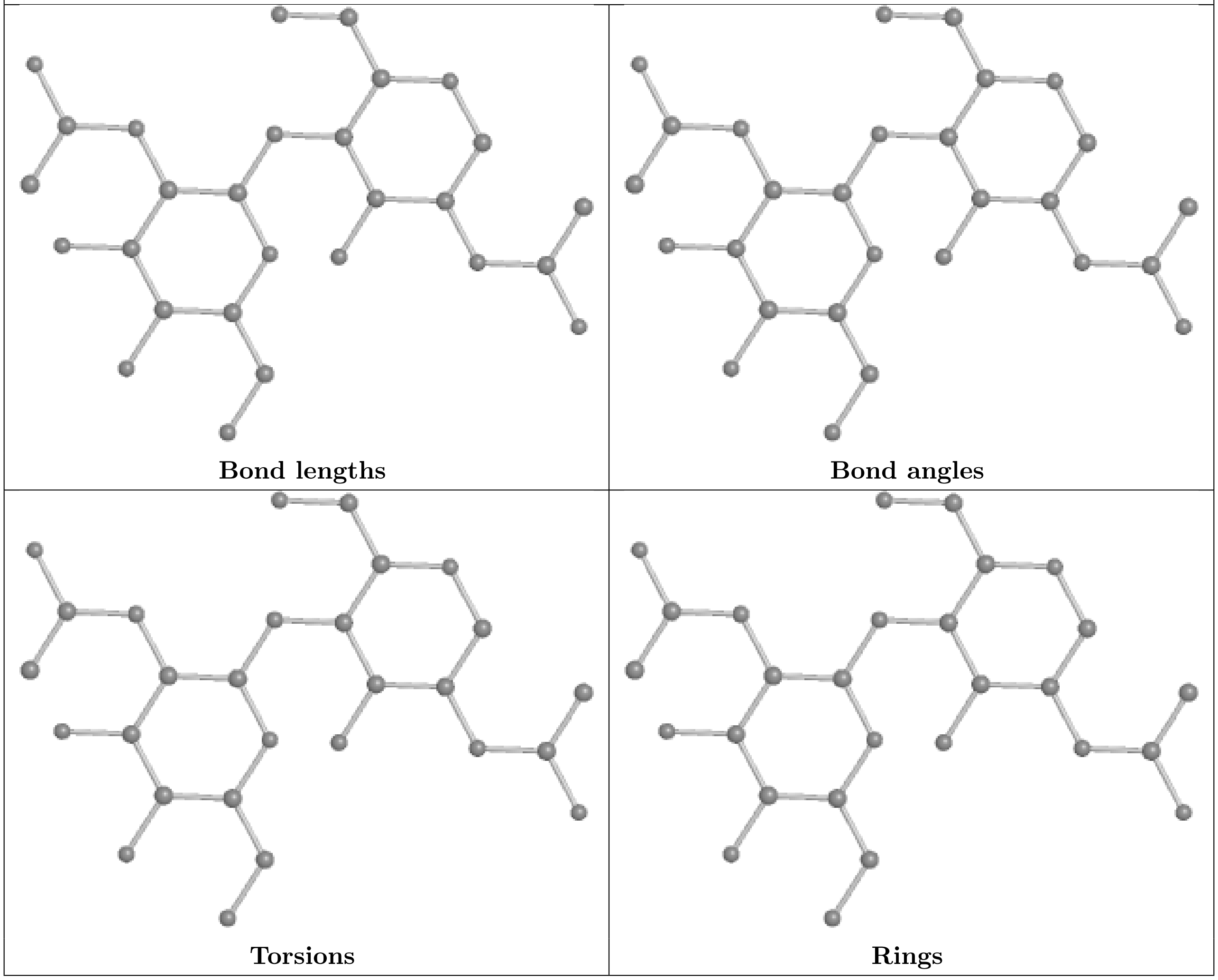
Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain A2



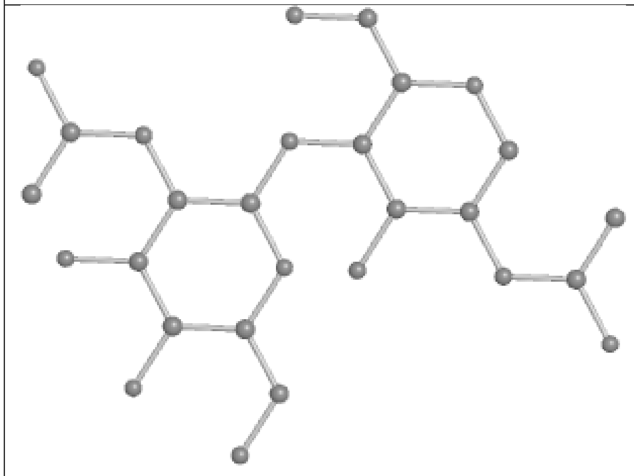
Bond lengths

Bond angles

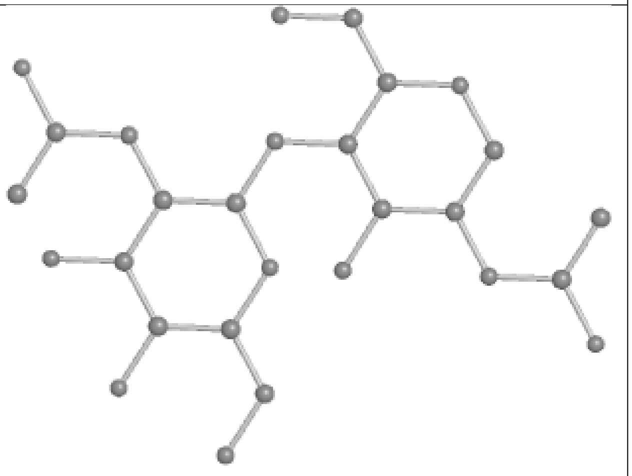
Torsions

Rings

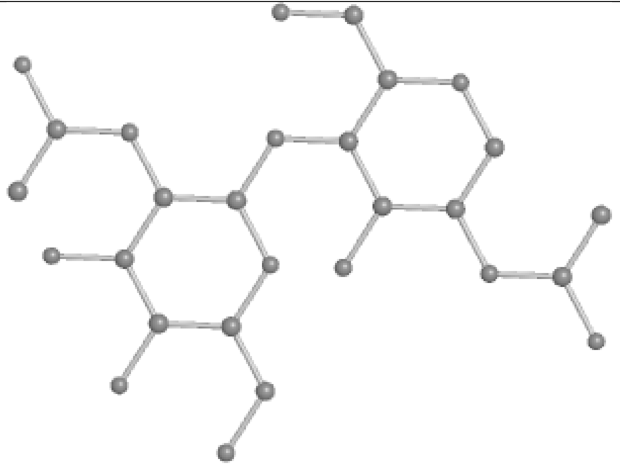
Oligosaccharide Chain A3



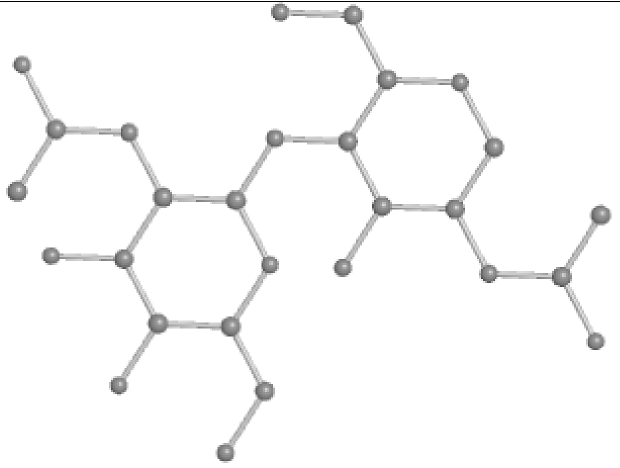
Bond lengths



Bond angles

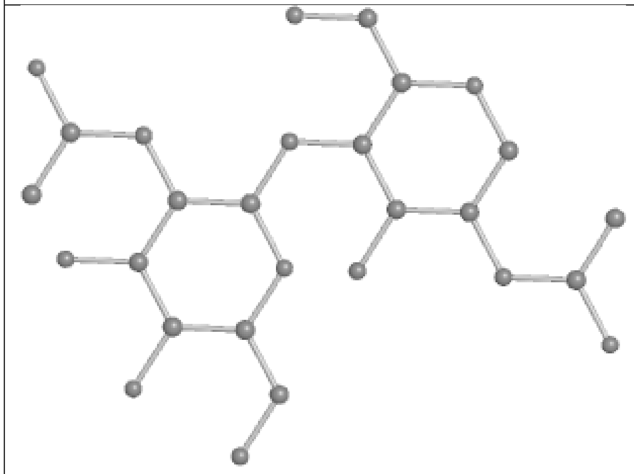


Torsions

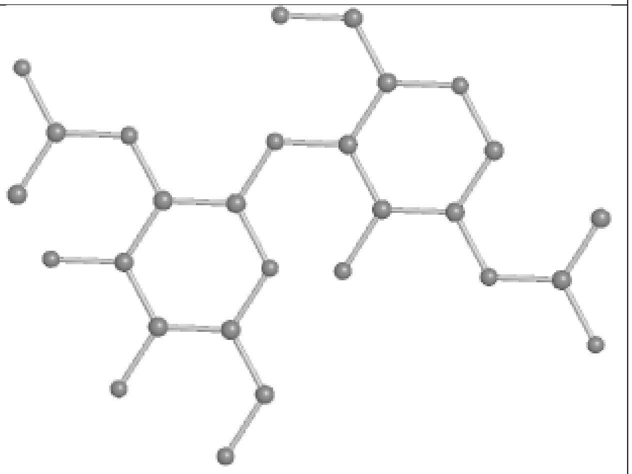


Rings

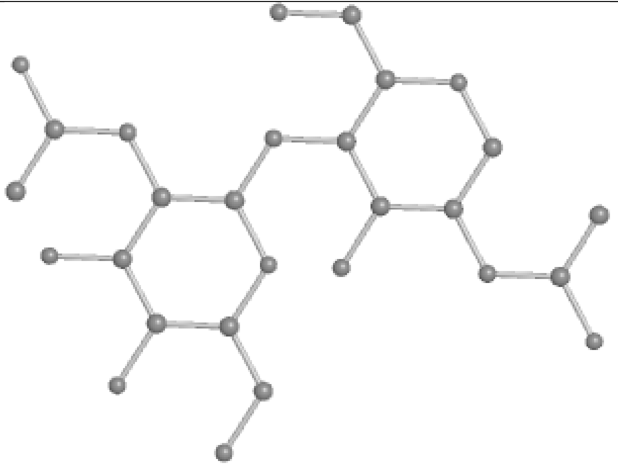
Oligosaccharide Chain a1



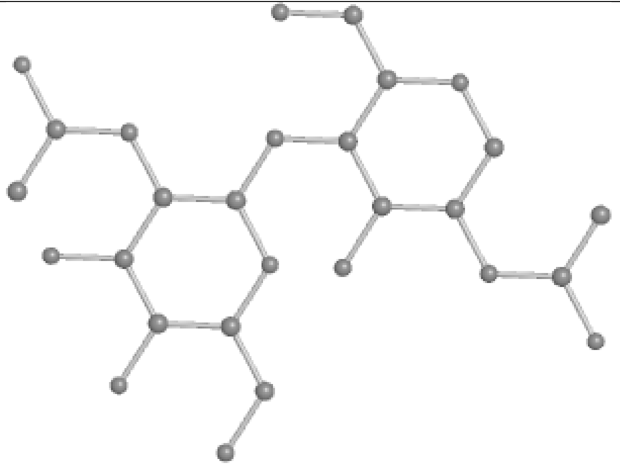
Bond lengths



Bond angles

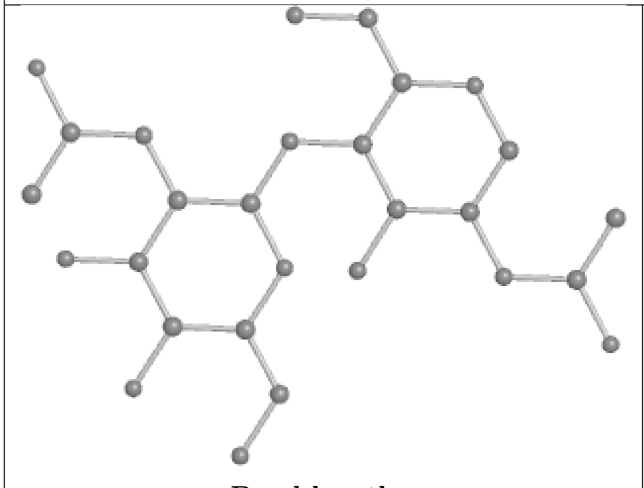


Torsions

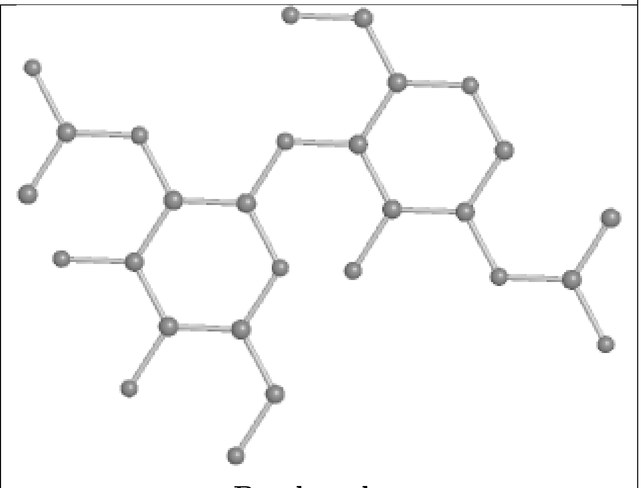


Rings

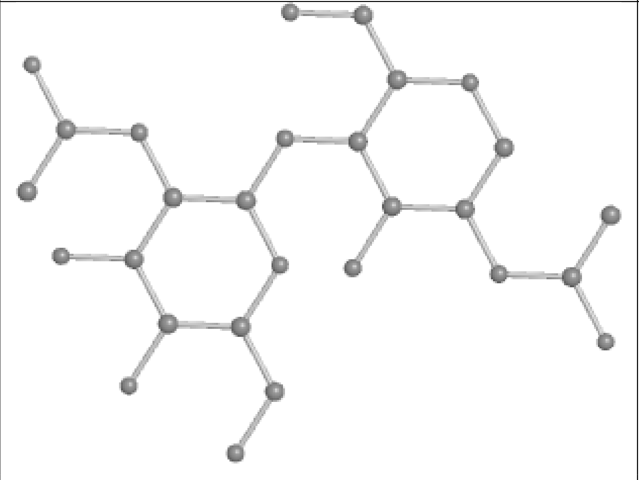
Oligosaccharide Chain a2



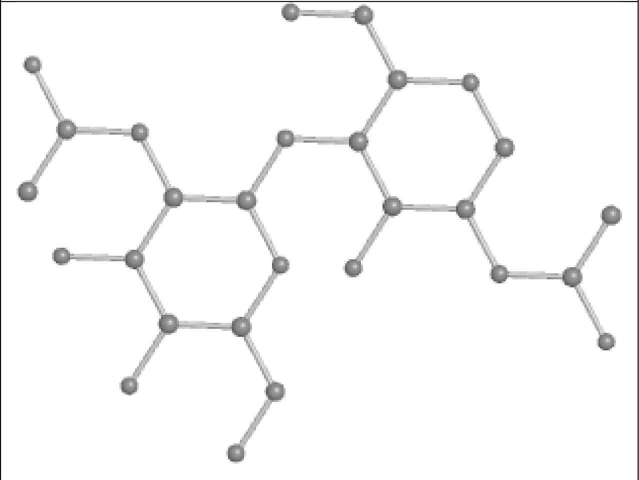
Bond lengths



Bond angles

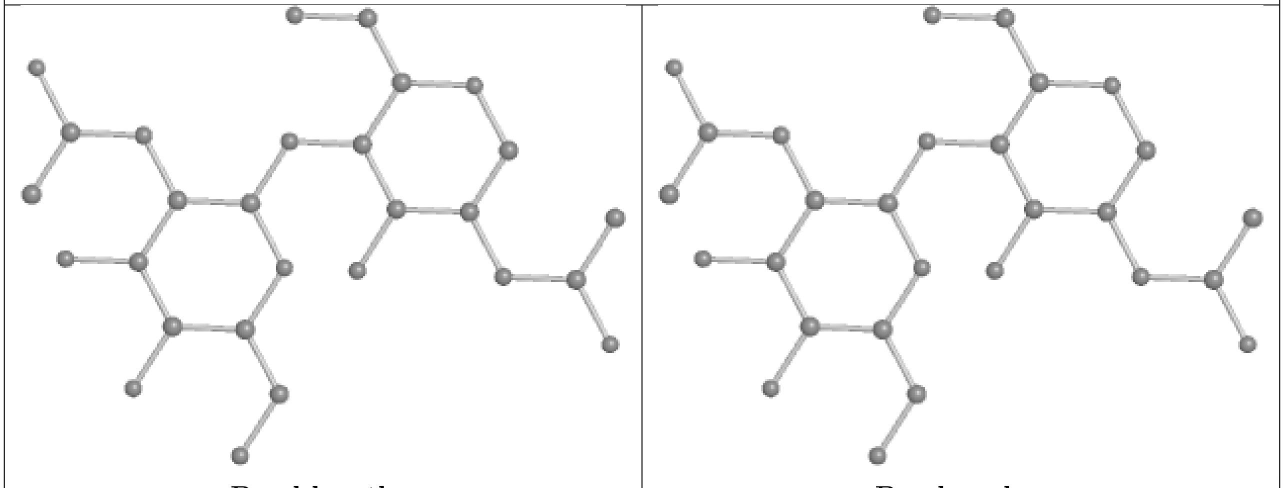


Torsions



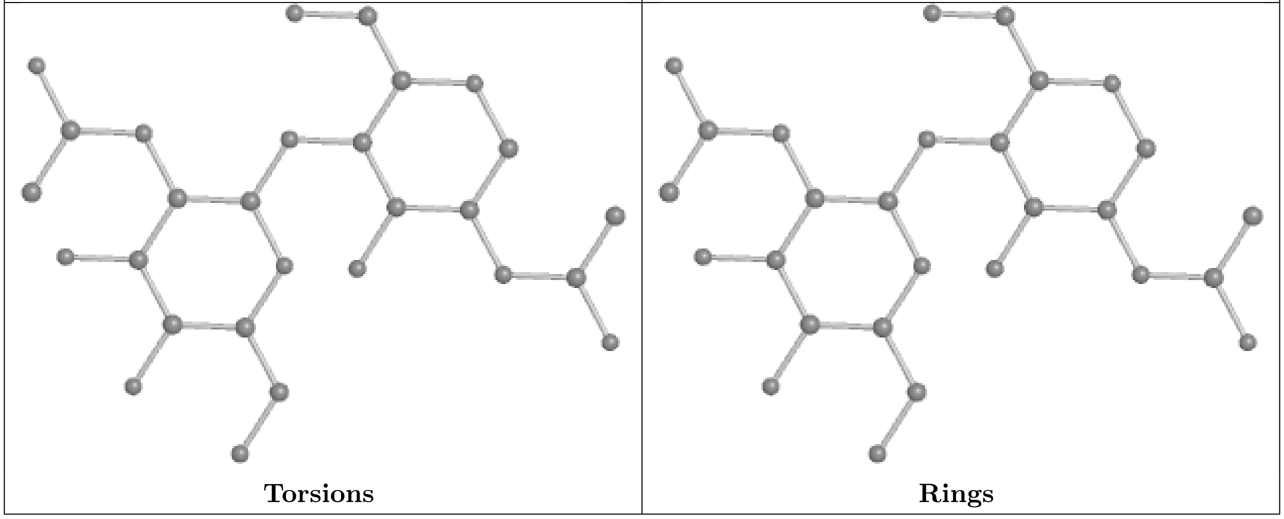
Rings

Oligosaccharide Chain a3



Bond lengths

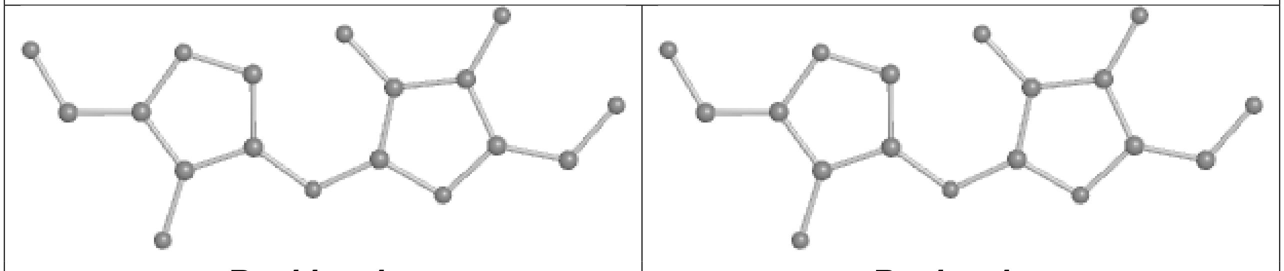
Bond angles



Torsions

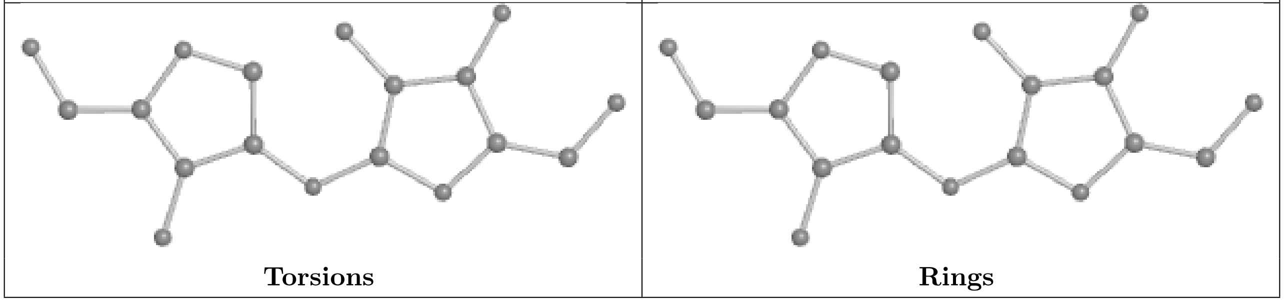
Rings

Oligosaccharide Chain A4



Bond lengths

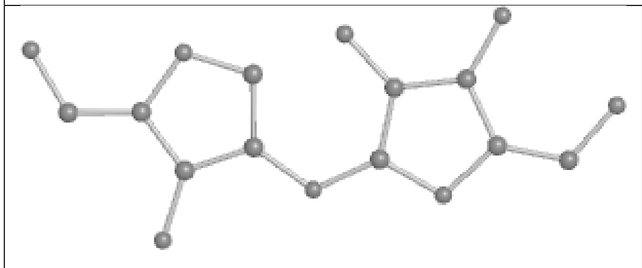
Bond angles

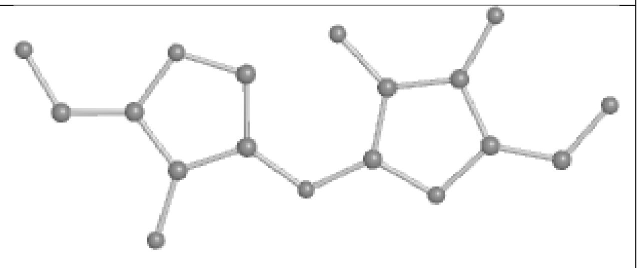


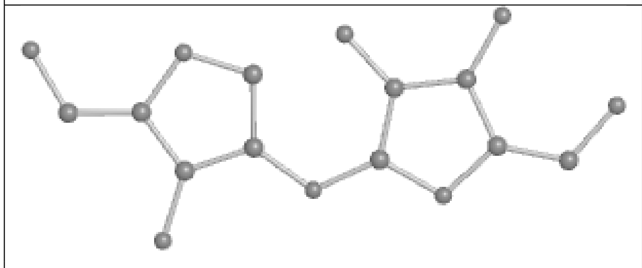
Torsions

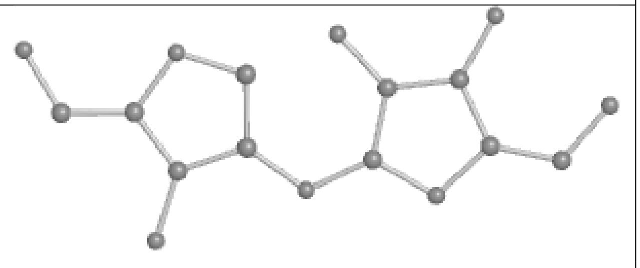
Rings

Oligosaccharide Chain A5

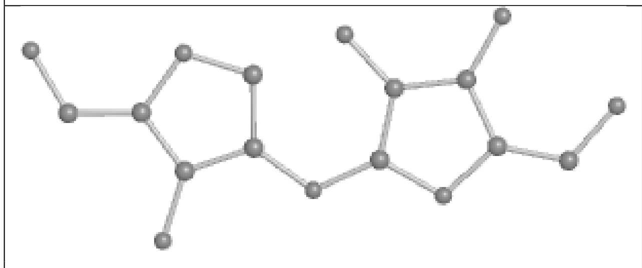

Bond lengths

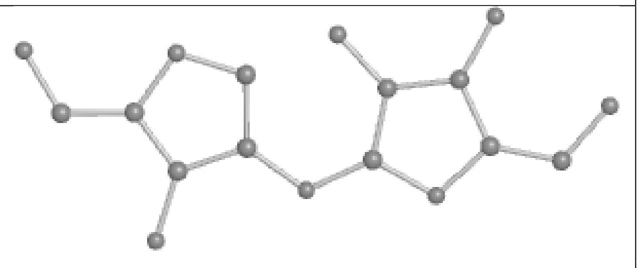

Bond angles

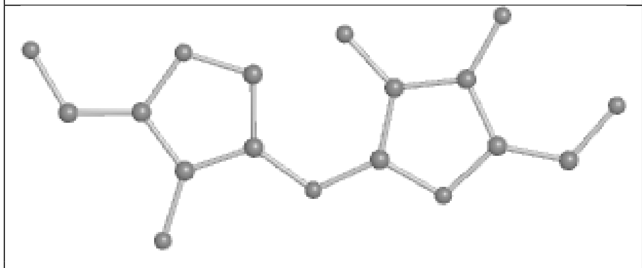

Torsions


Rings

Oligosaccharide Chain A7


Bond lengths


Bond angles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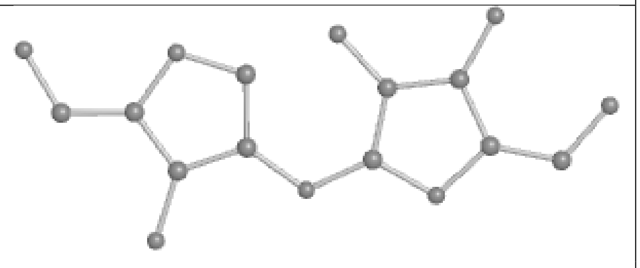
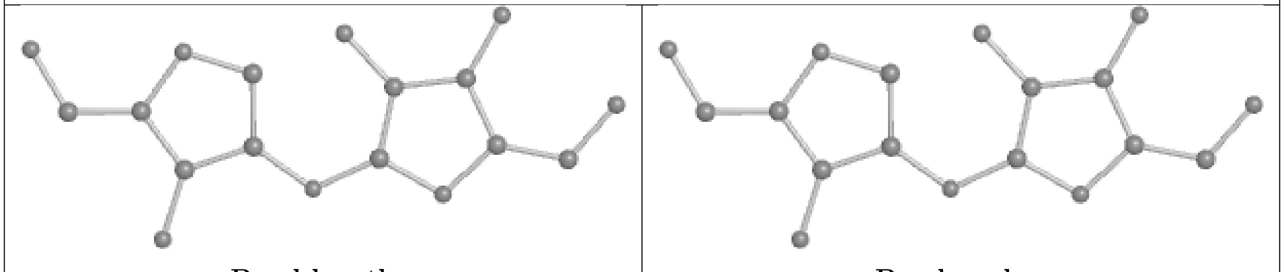
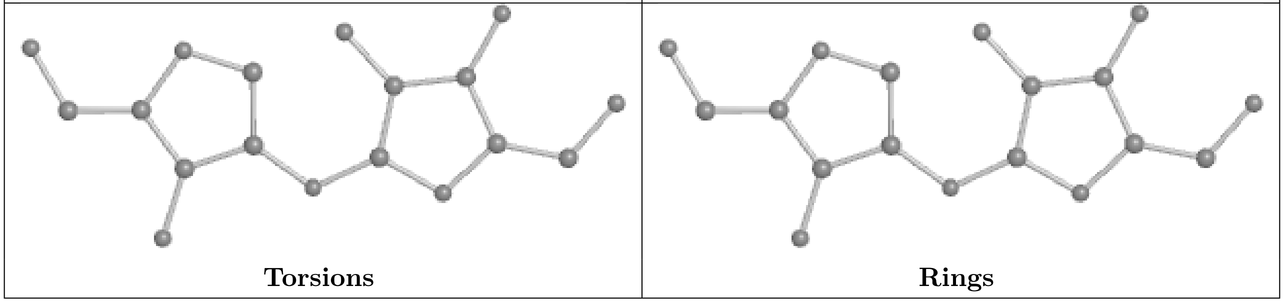

Rings

Oligosaccharide Chain B0



Bond lengths

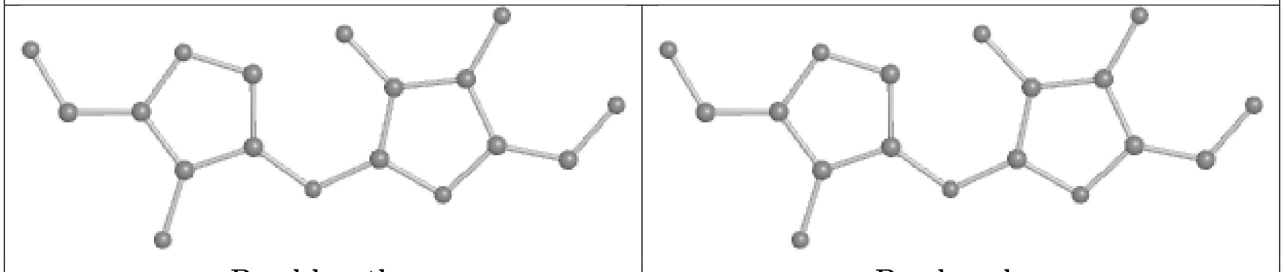
Bond angles



Torsions

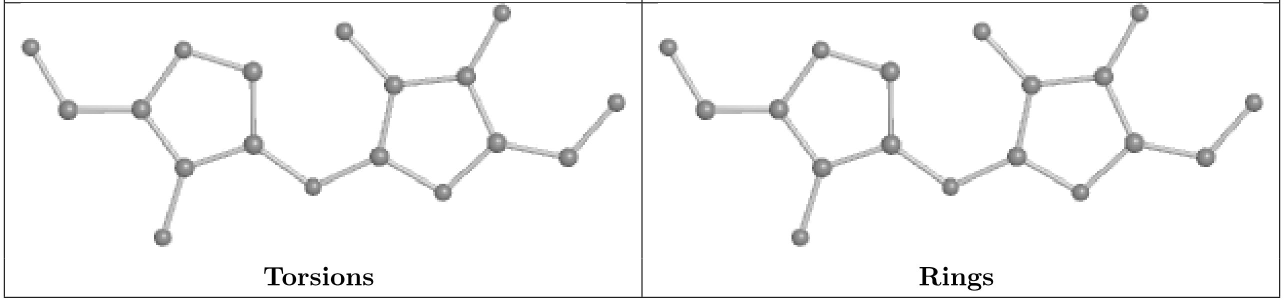
Rings

Oligosaccharide Chain B1



Bond lengths

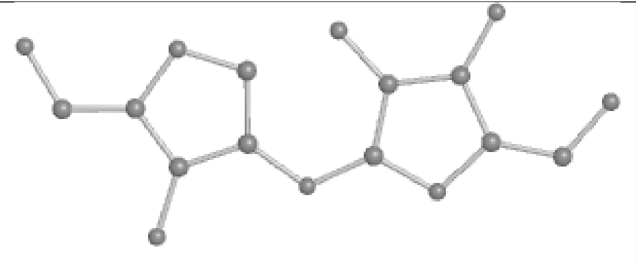
Bond angles



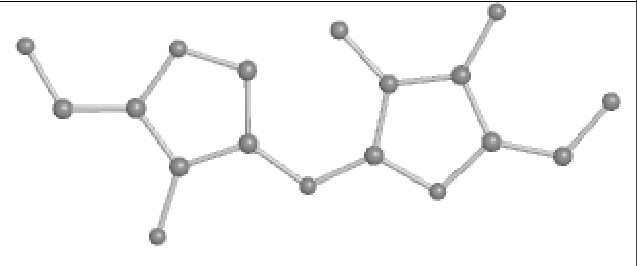
Torsions

Rings

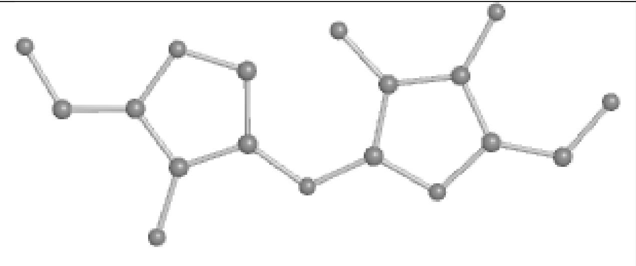
Oligosaccharide Chain B3



Bond lengths



Bond angles



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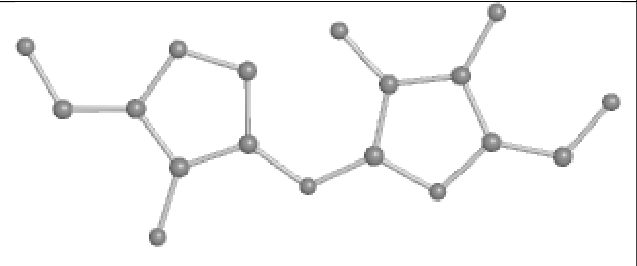
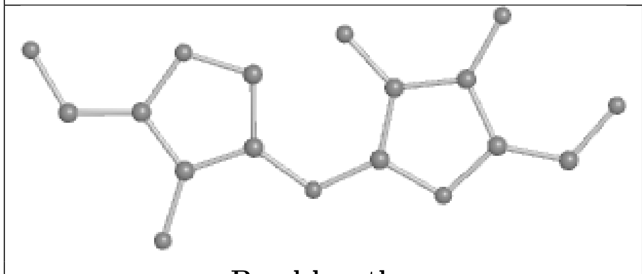


Rings

Oligosaccharide Chain B4



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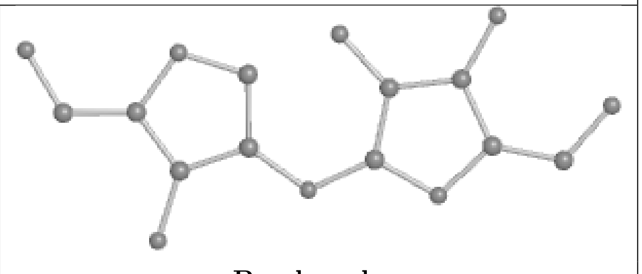
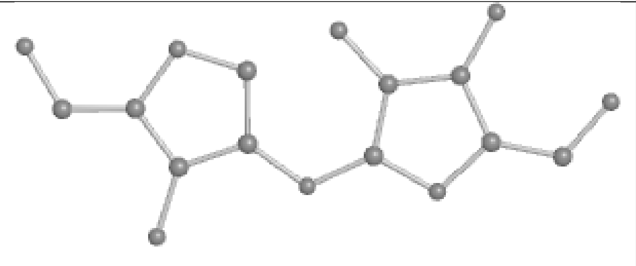


Bond angles



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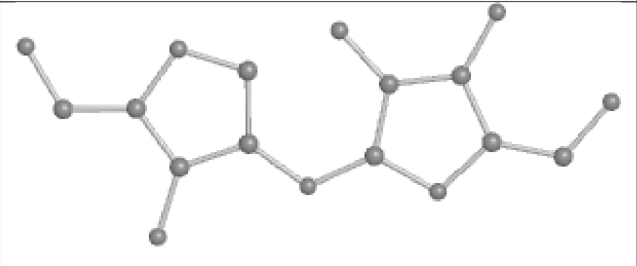
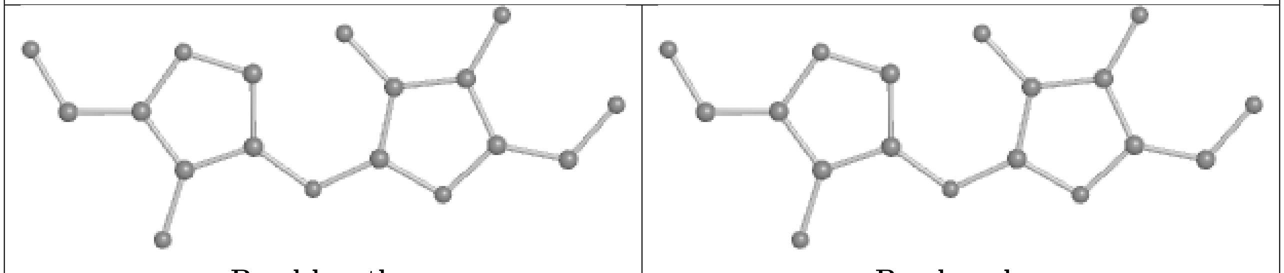


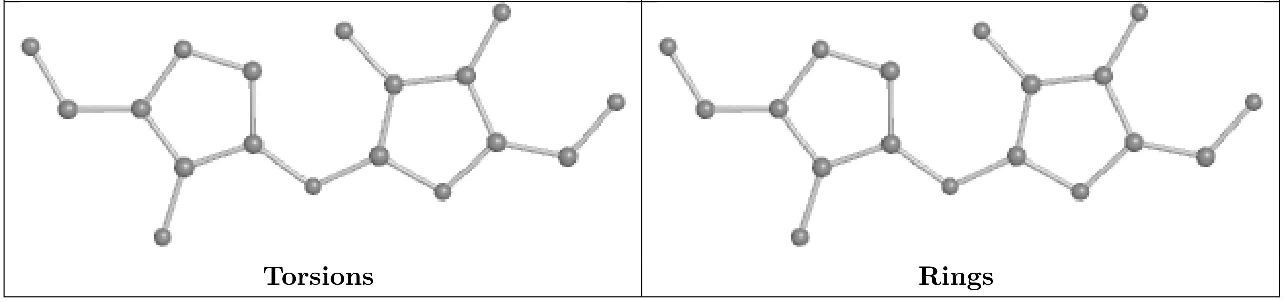
Rings

Oligosaccharide Chain B5



Bond lengths

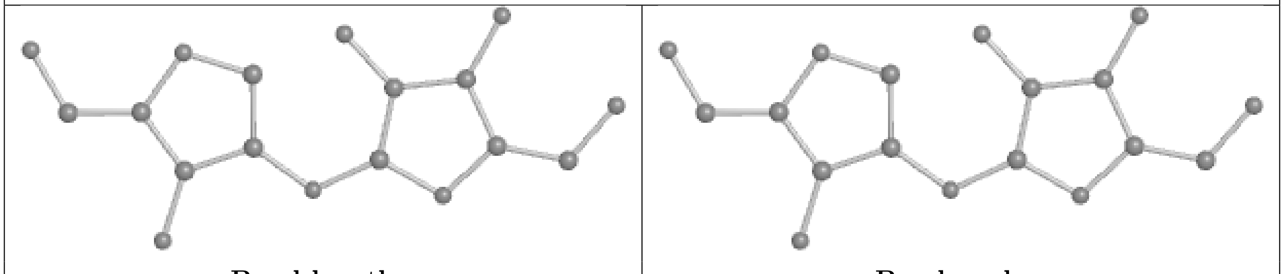
Bond angles



Torsions

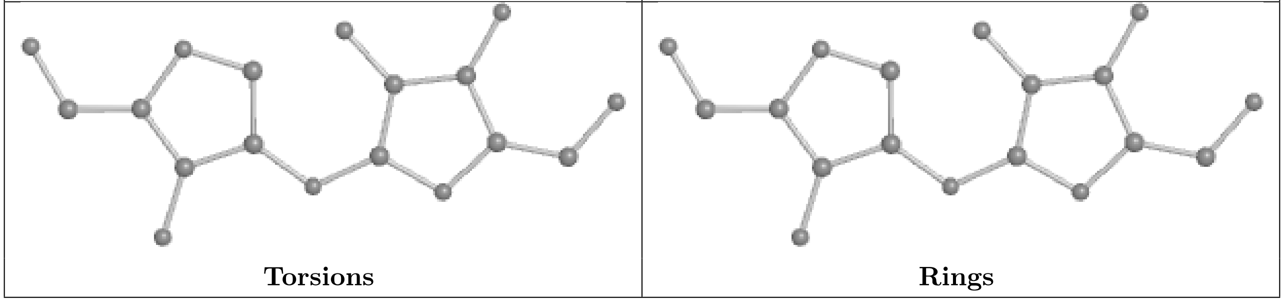
Rings

Oligosaccharide Chain B7



Bond lengths

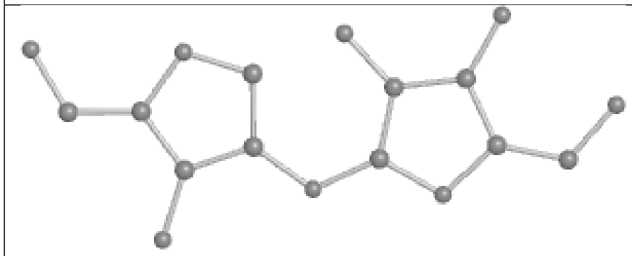
Bond angles



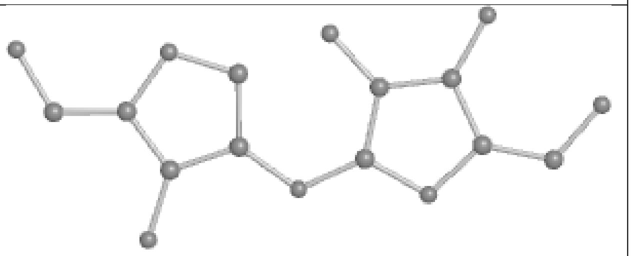
Torsions

Rings

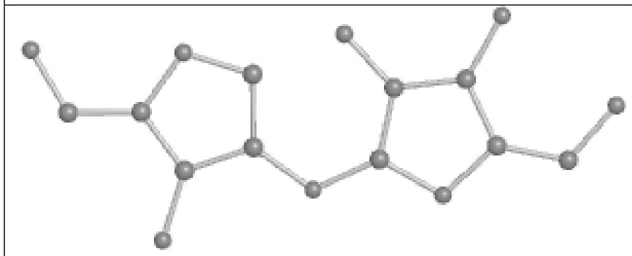
Oligosaccharide Chain B9



Bond lengths



Bond angles



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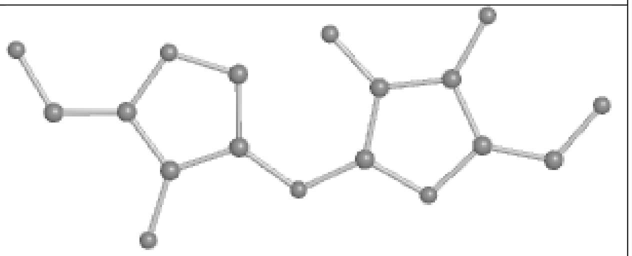
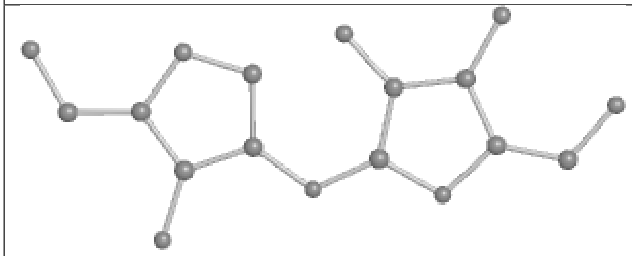


Rings

Oligosaccharide Chain C0



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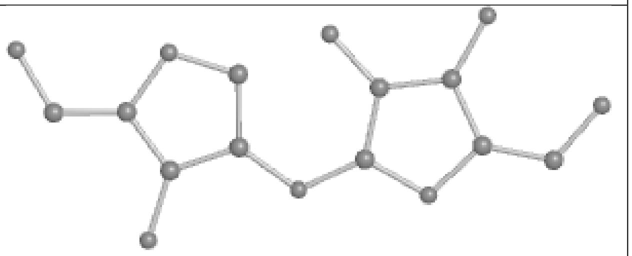
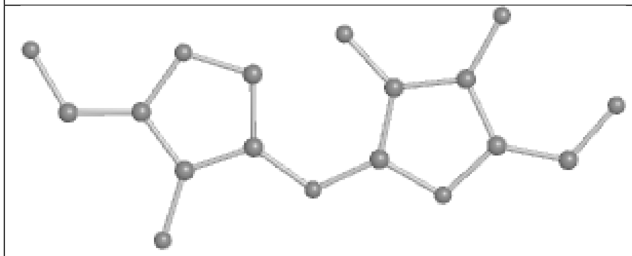


Bond angles



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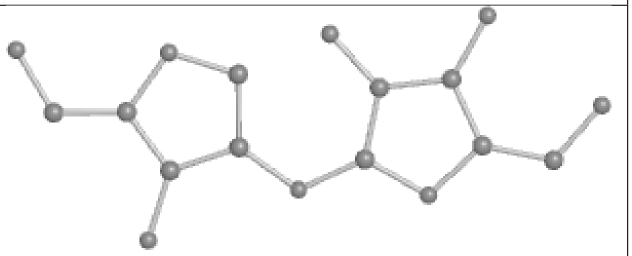
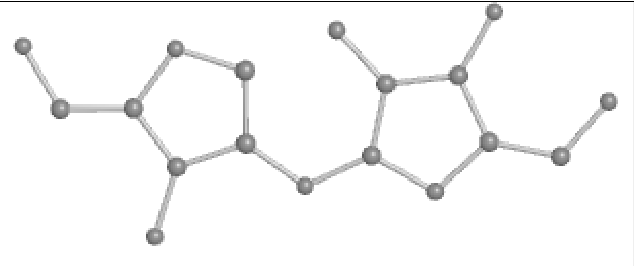


Rings

Oligosaccharide Chain C1



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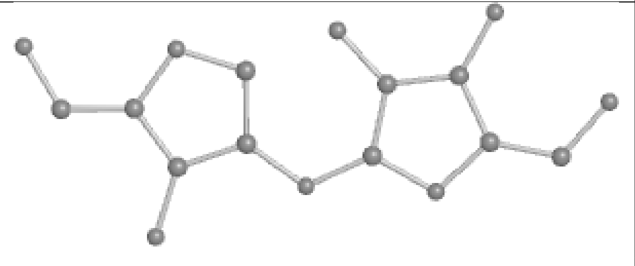
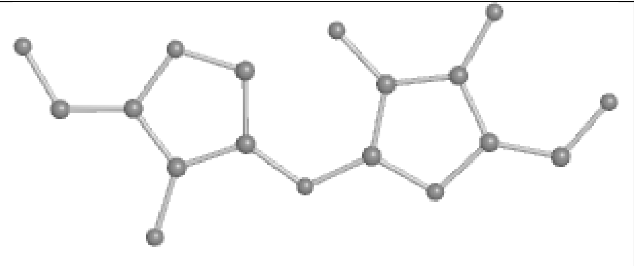


Bond angles



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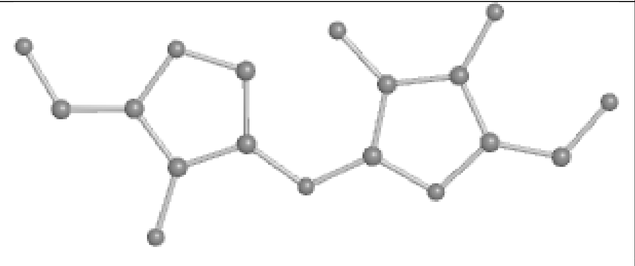
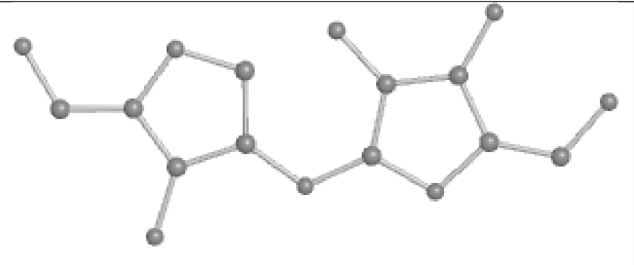


Rings

Oligosaccharide Chain C2



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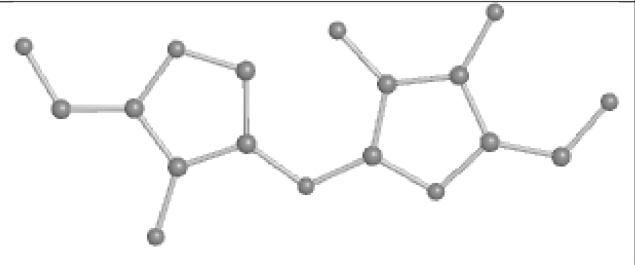
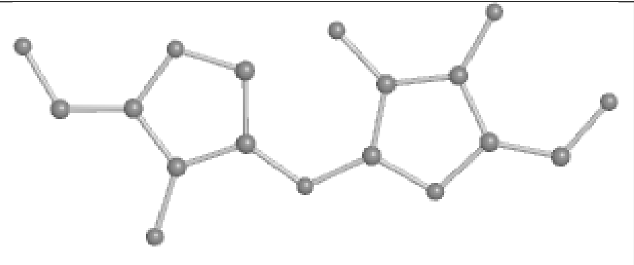


Bond angles



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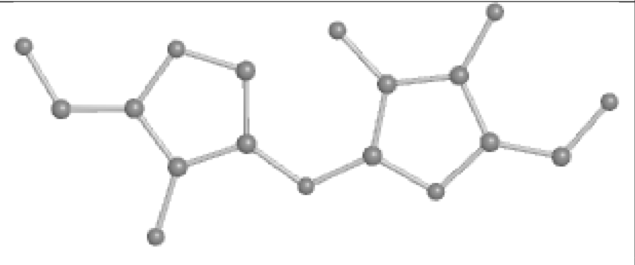
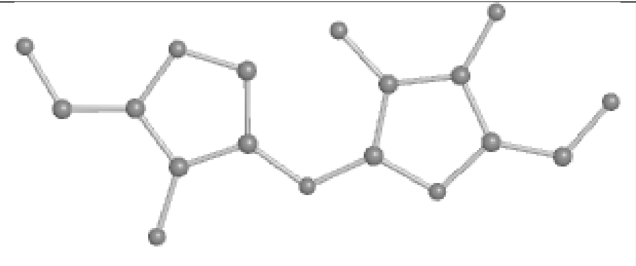


Rings

Oligosaccharide Chain C3



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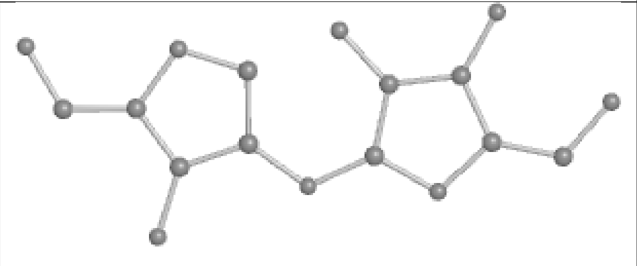
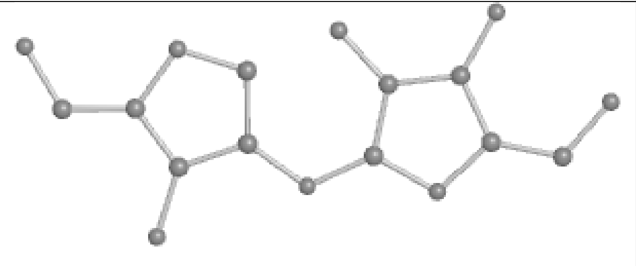


Bond angles



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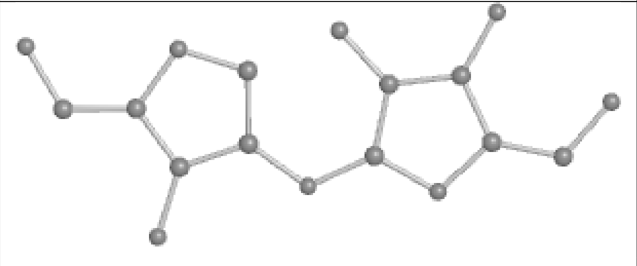
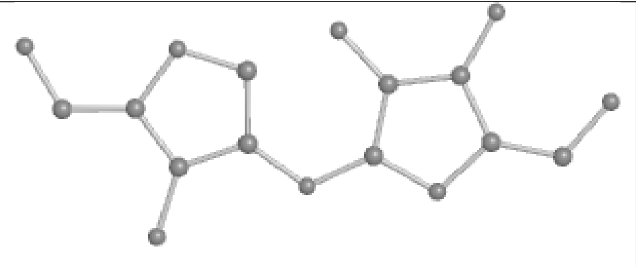


Rings

Oligosaccharide Chain C4



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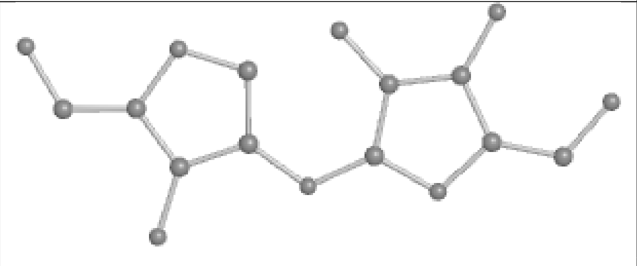

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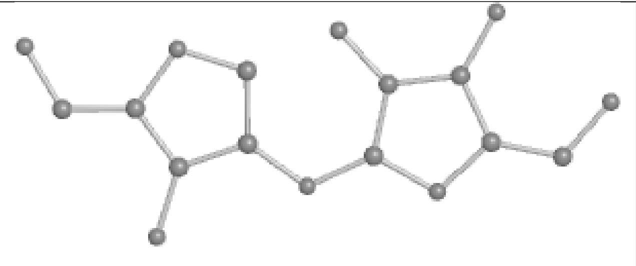

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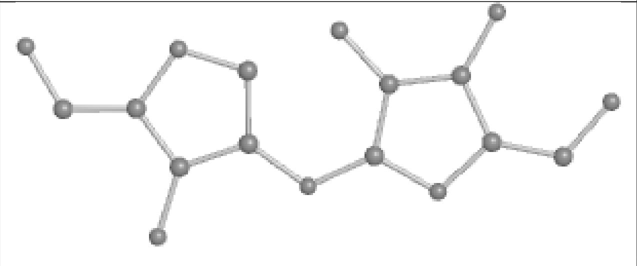
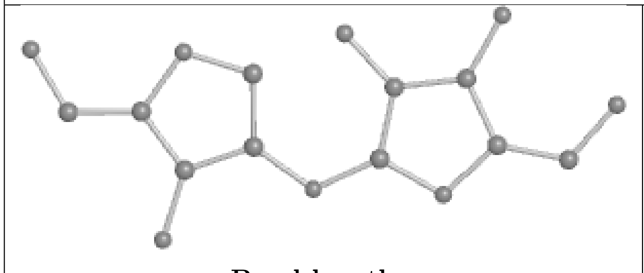


Rings

Oligosaccharide Chain C5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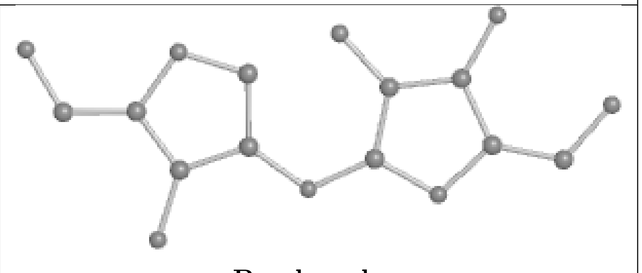
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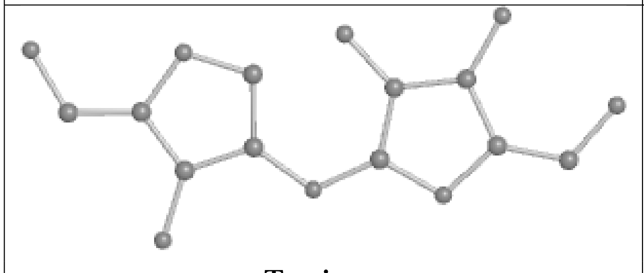
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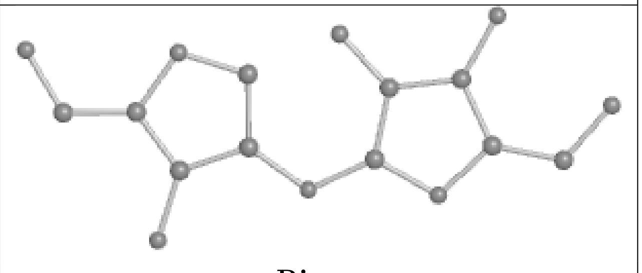
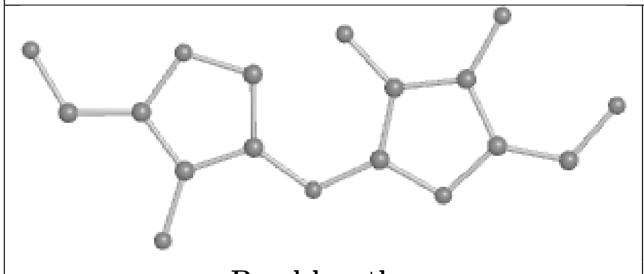

Rings

Oligosaccharide Chain C6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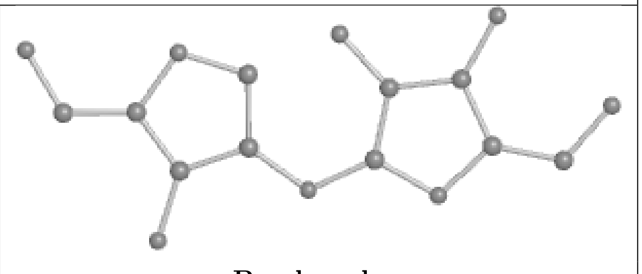
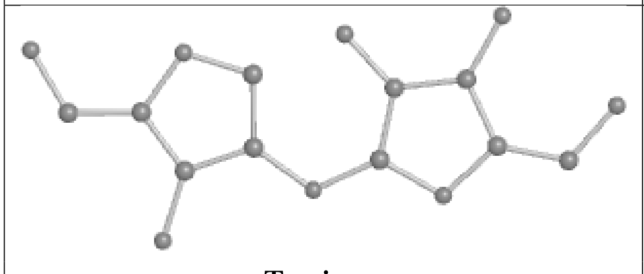

Bond angles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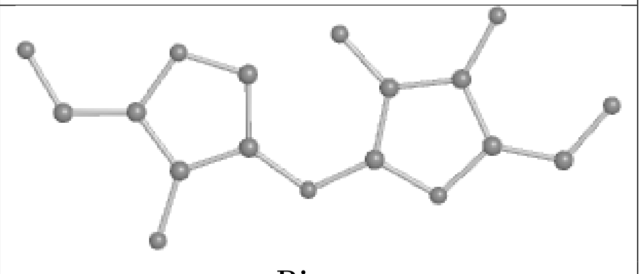
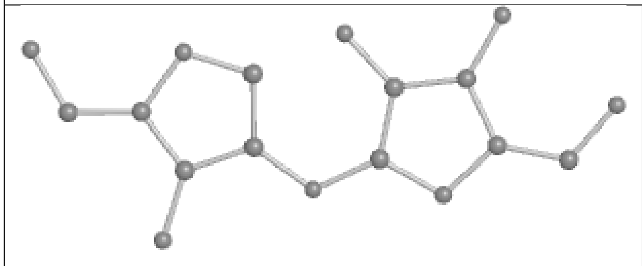

Rings

Oligosaccharide Chain C7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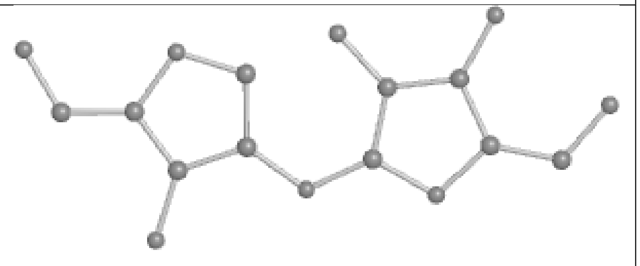
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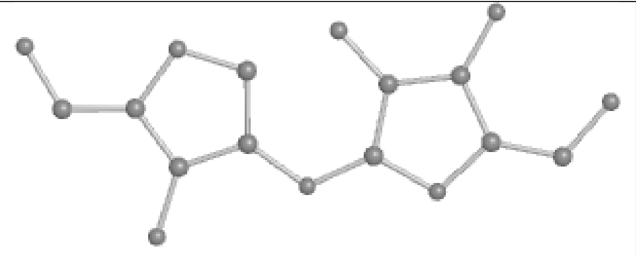
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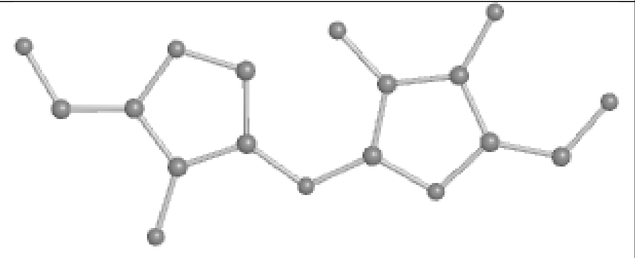
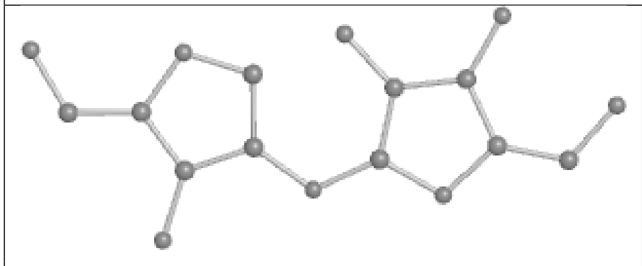

Rings

Oligosaccharide Chain C8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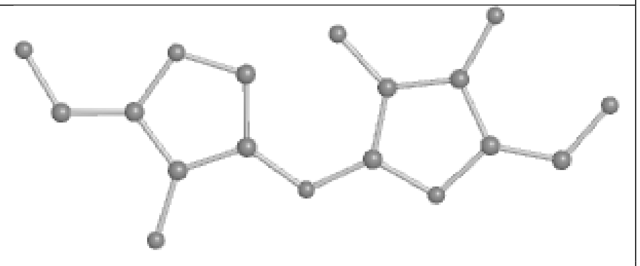
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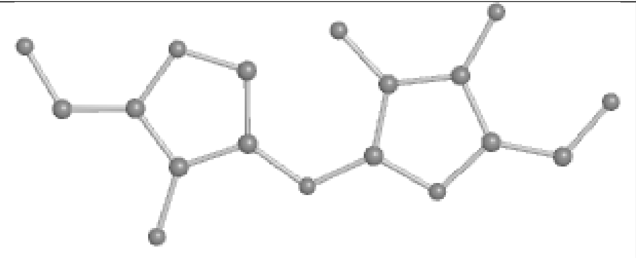
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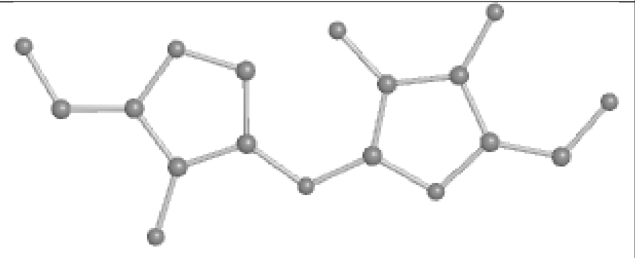
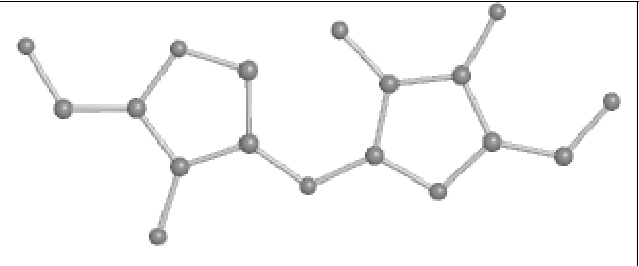

Rings

Oligosaccharide Chain C9



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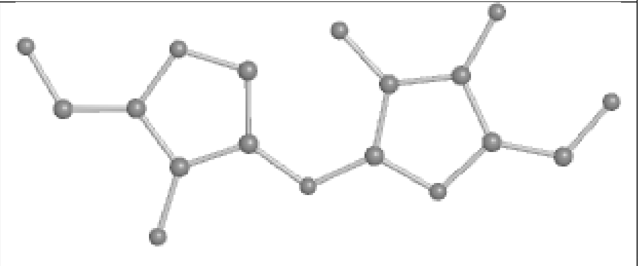
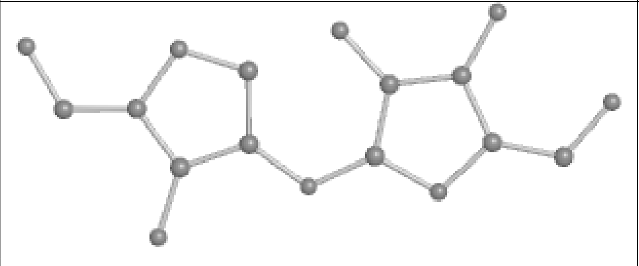


Bond angles



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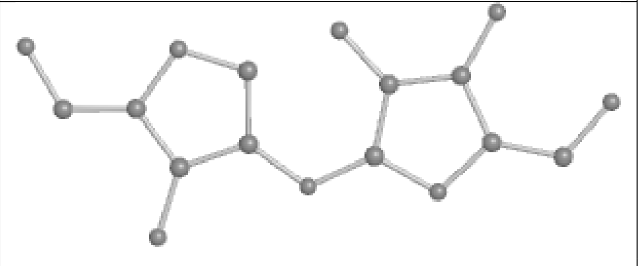
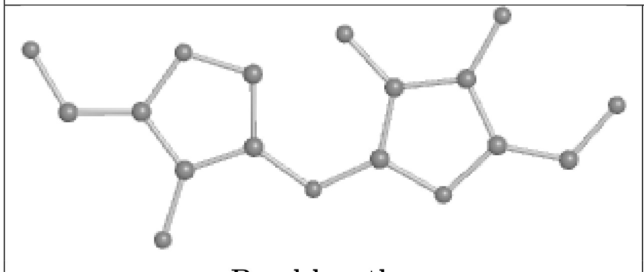


Rings

Oligosaccharide Chain D0



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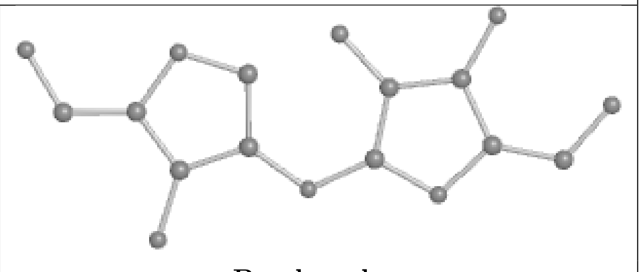
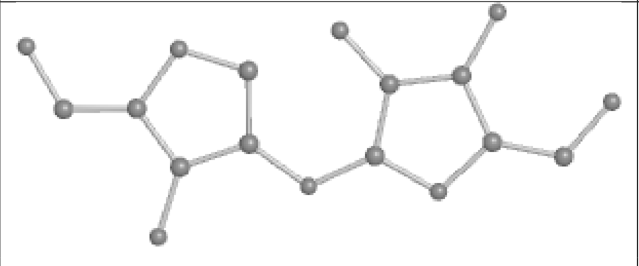


Bond angles



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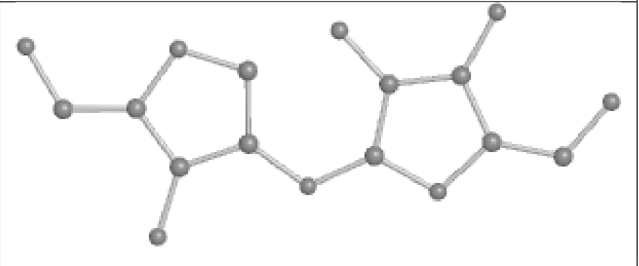
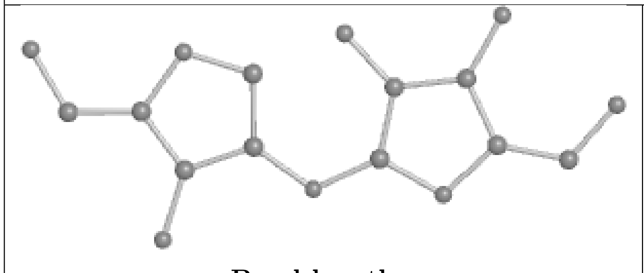


Rings

Oligosaccharide Chain D1



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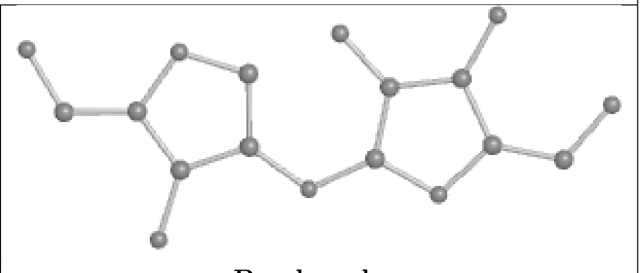
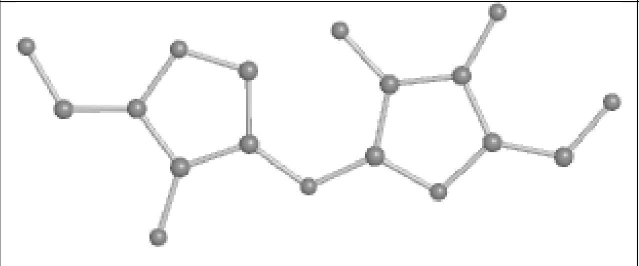
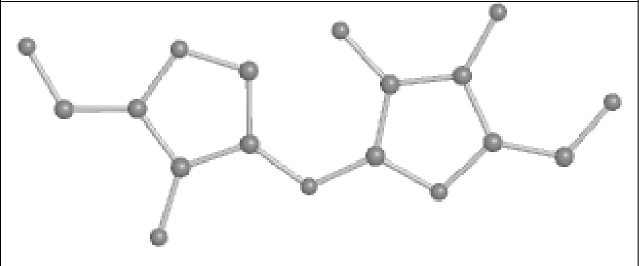


Bond angles

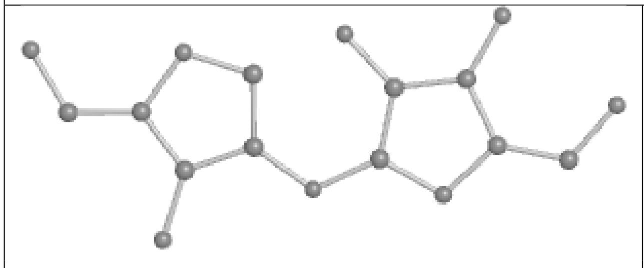


Torsions



Rings

Oligosaccharide Chain D2



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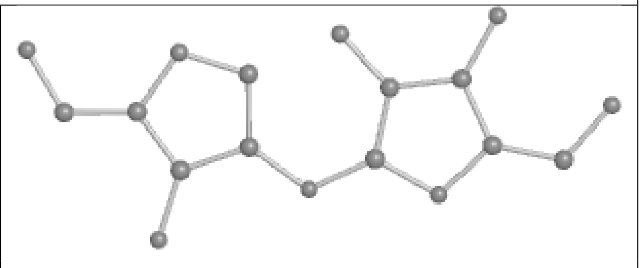

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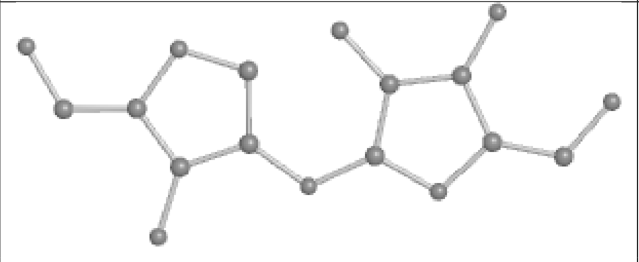

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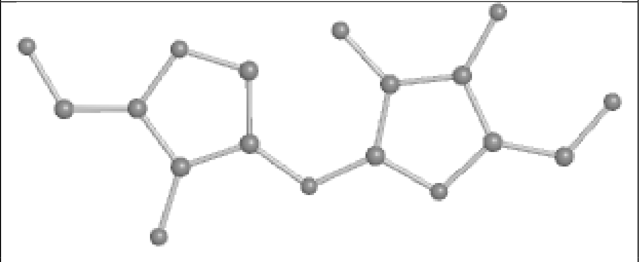

Rings

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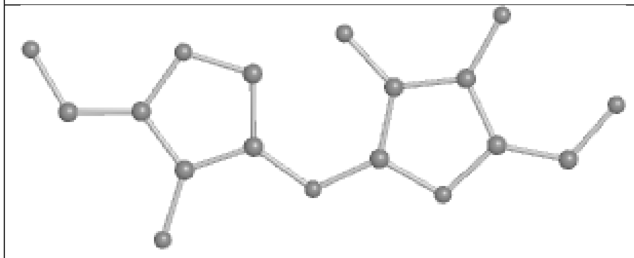

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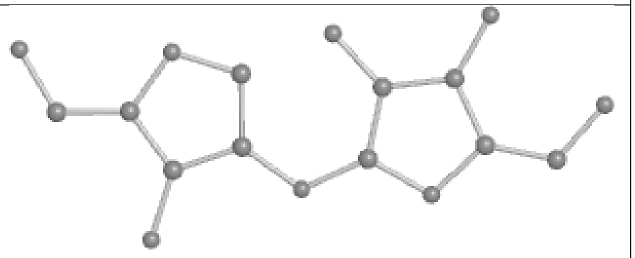

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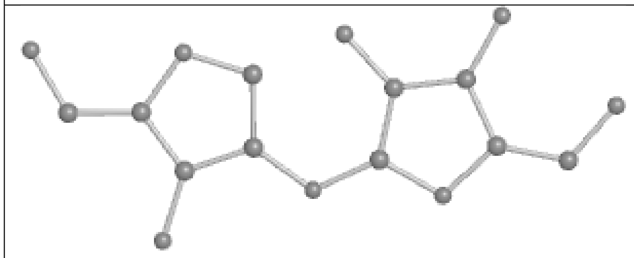

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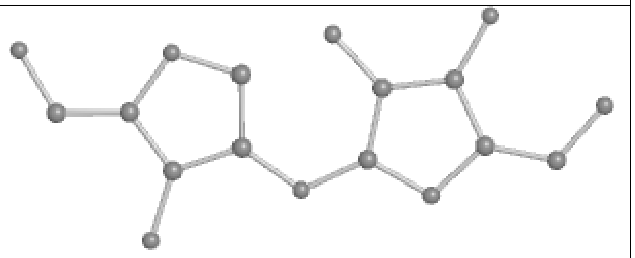

Rings

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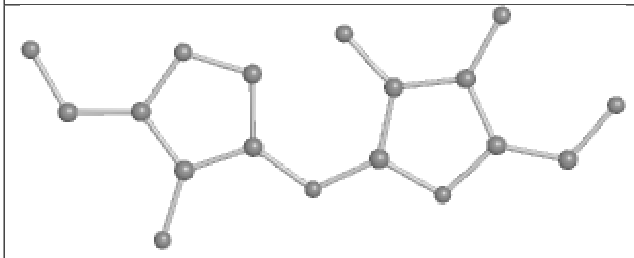

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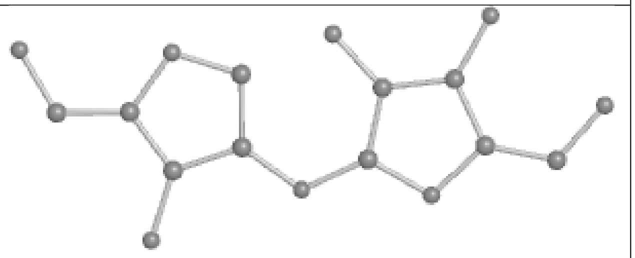

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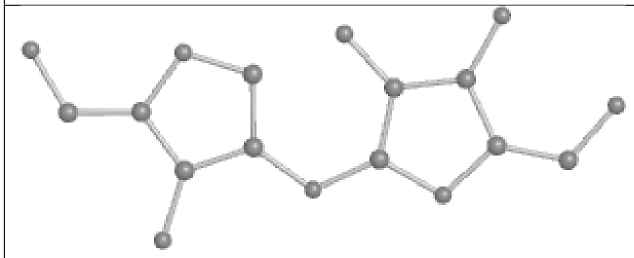

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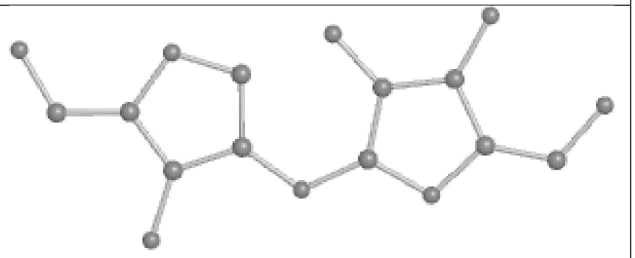

Rings

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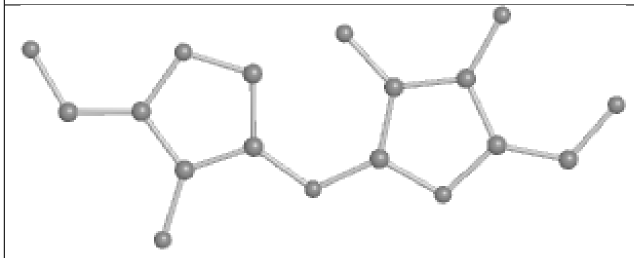

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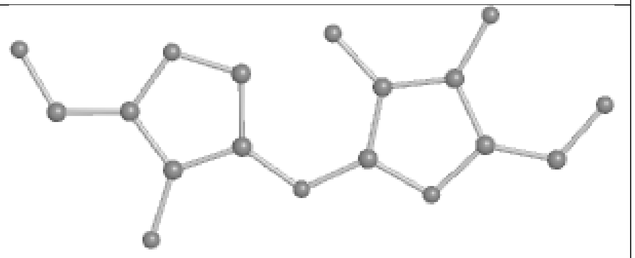

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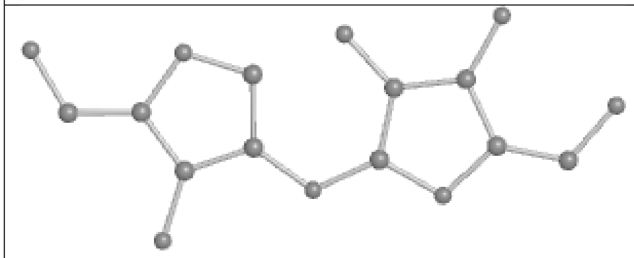

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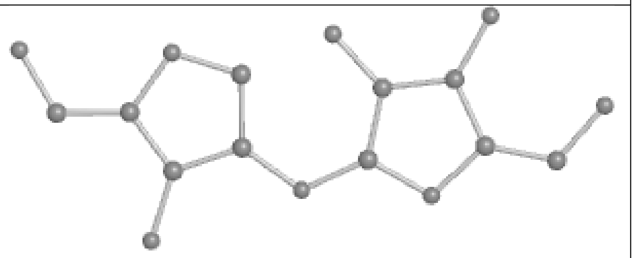

Rings

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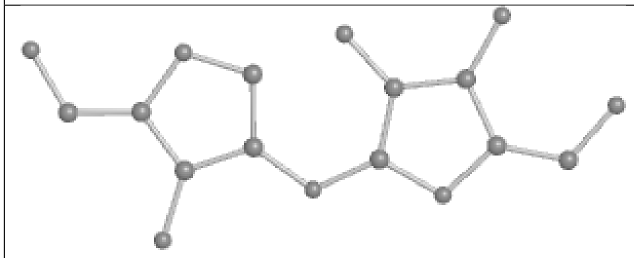

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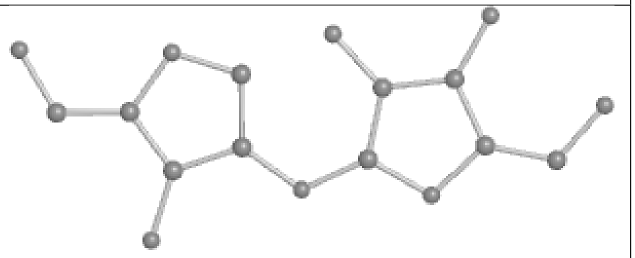

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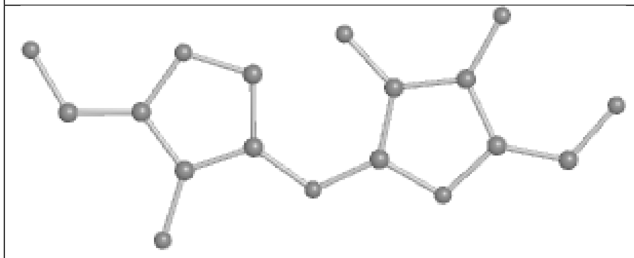

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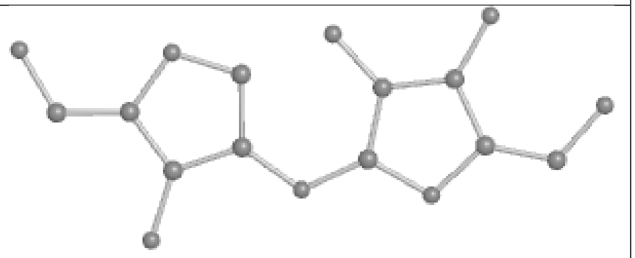

Rings

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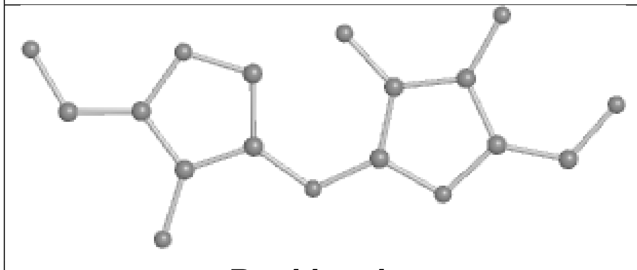
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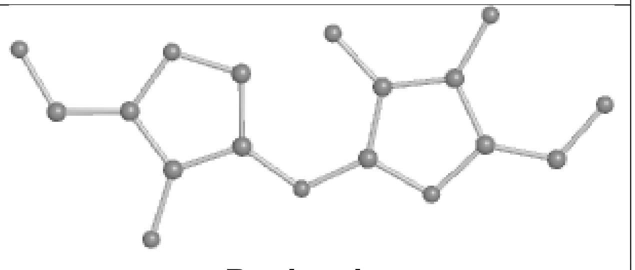
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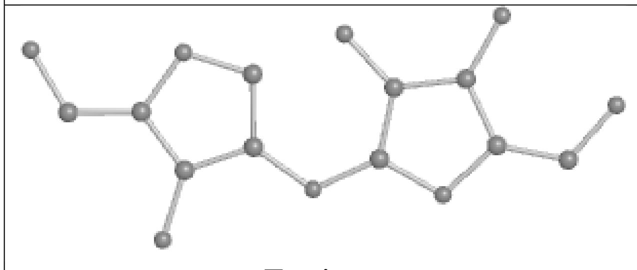
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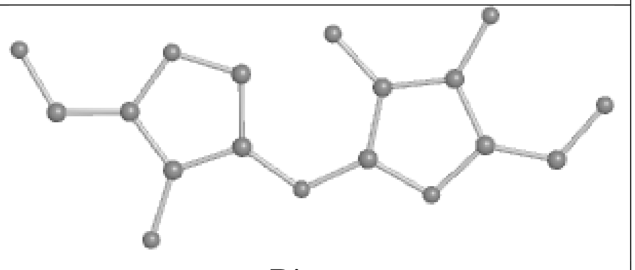
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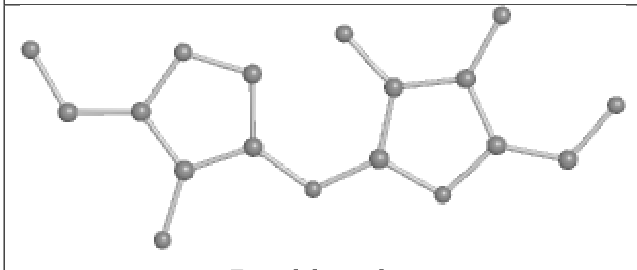
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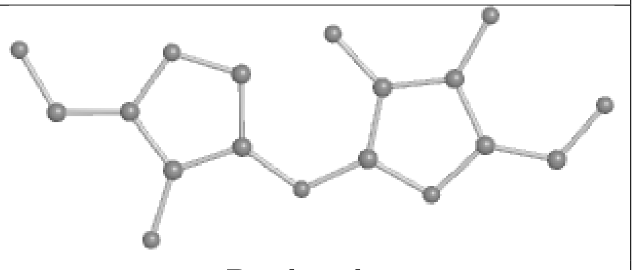
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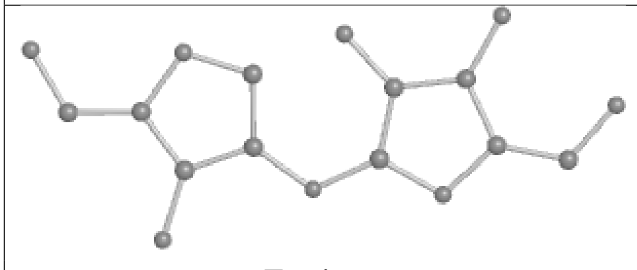
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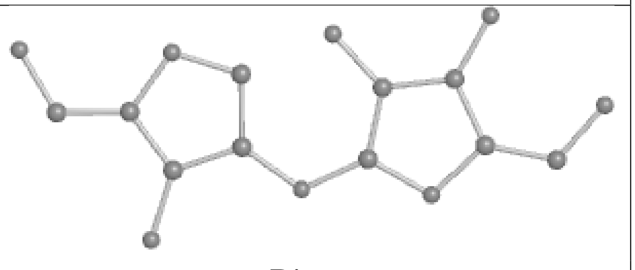
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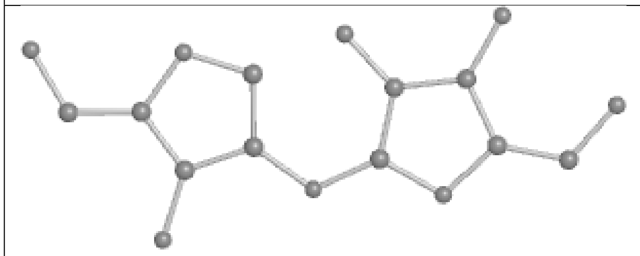
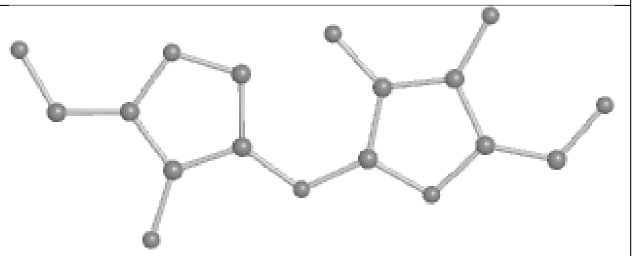
<tr><td>
Bond lengths</td><td>
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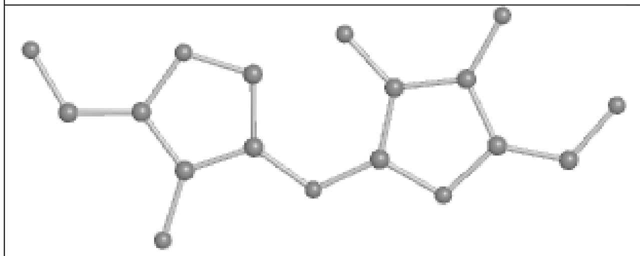
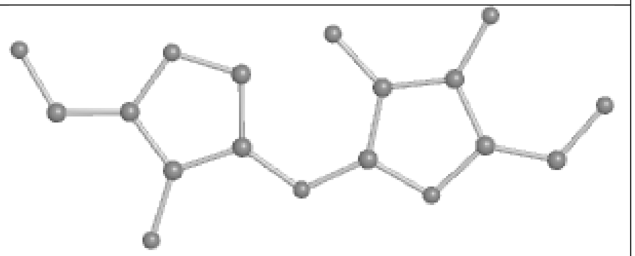
<tr><td>
Torsions</td><td>
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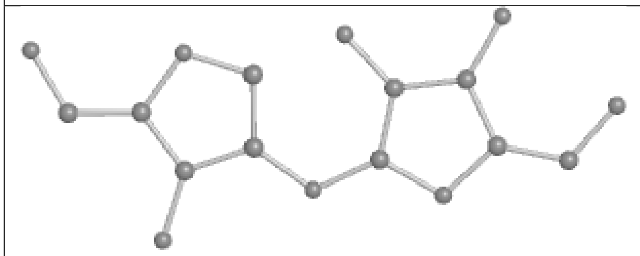
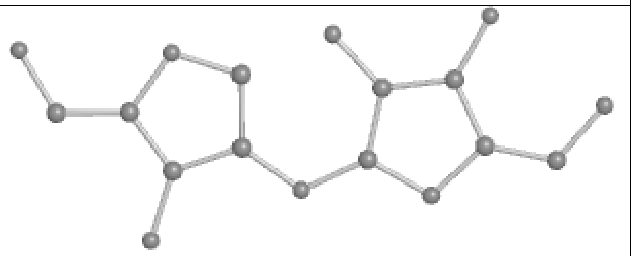
<tr><td>
Bond lengths</td><td>
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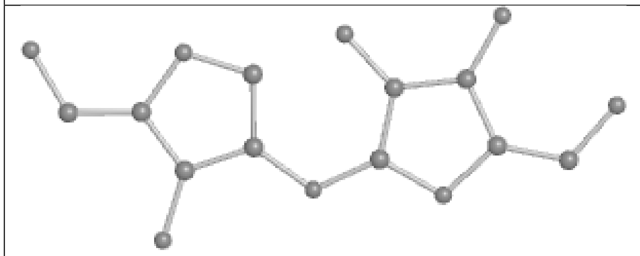
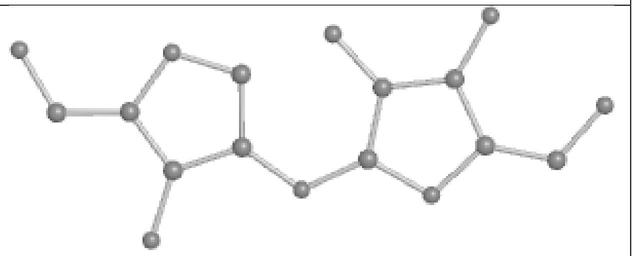
<tr><td>
Torsions</td><td>
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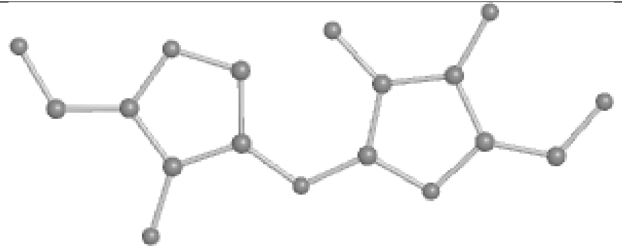

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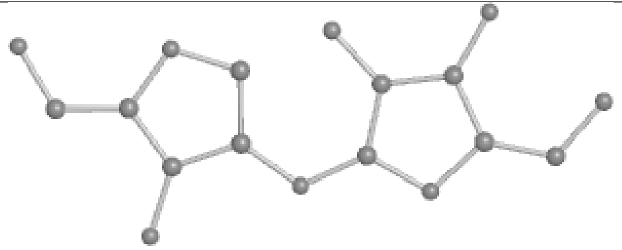
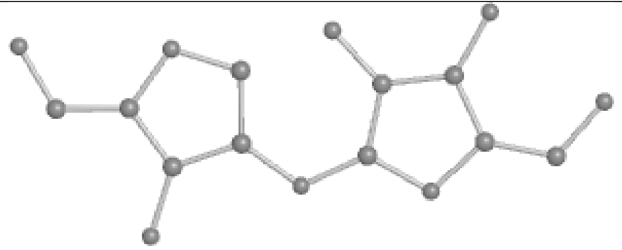


Bond angles



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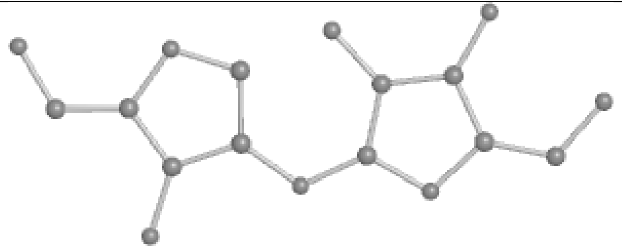

Rings

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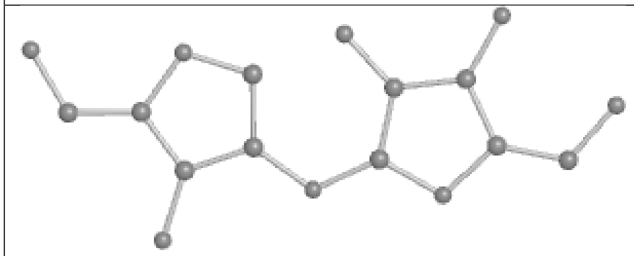

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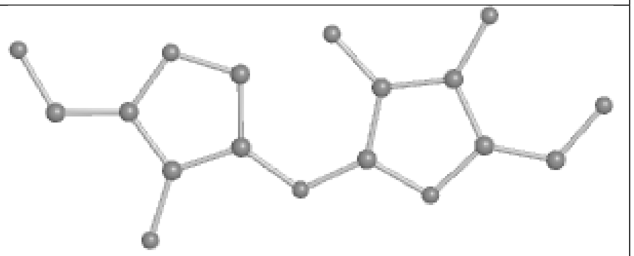

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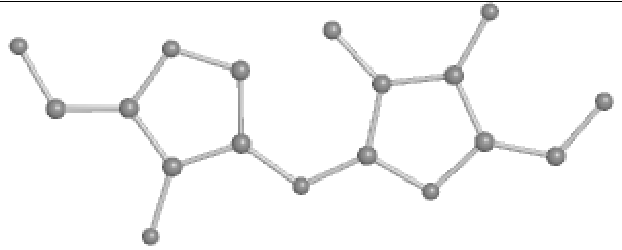

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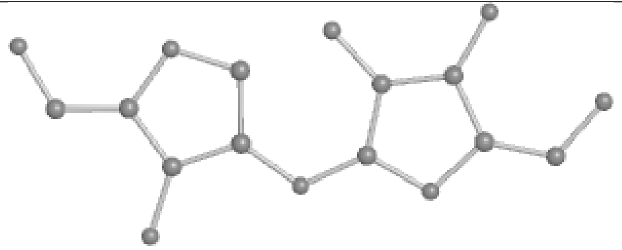

Rings

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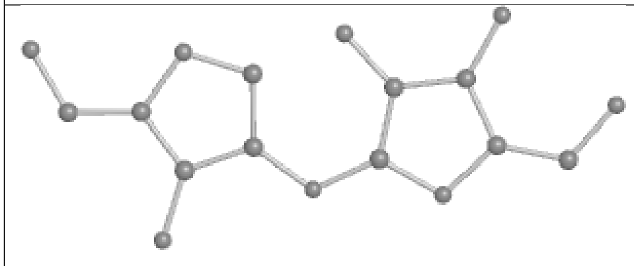
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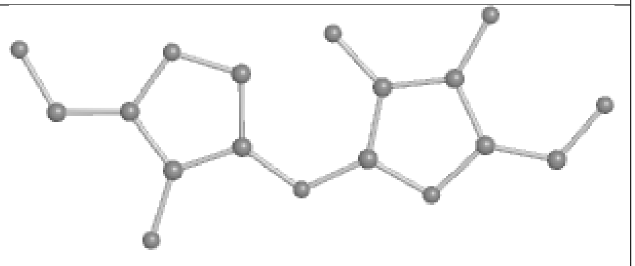
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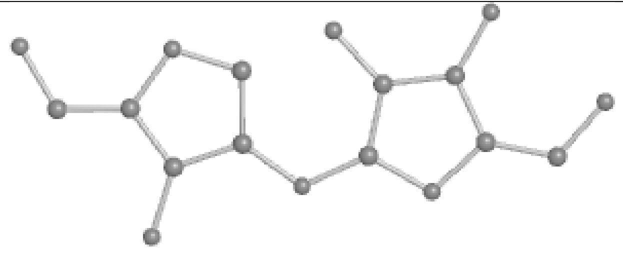
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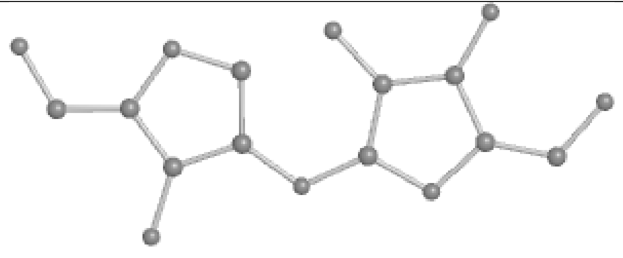
Rings

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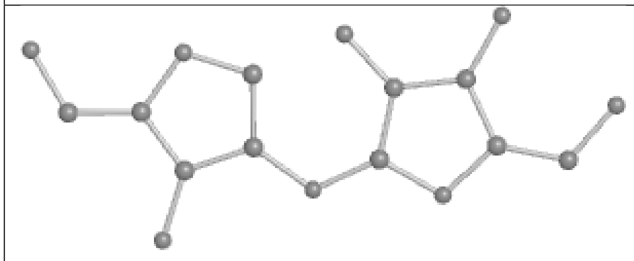
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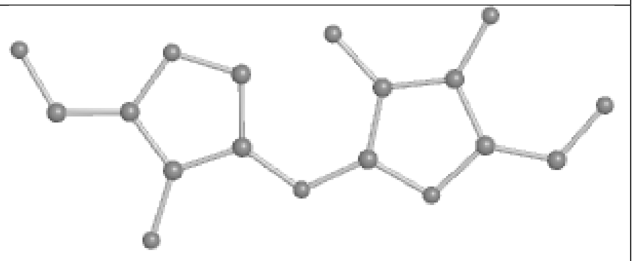
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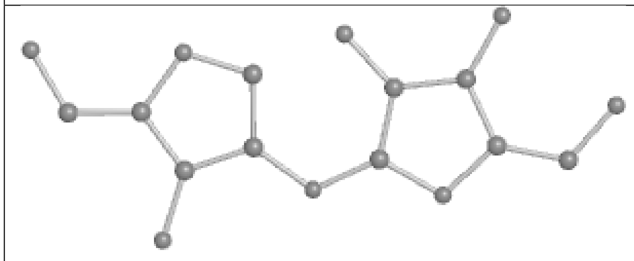
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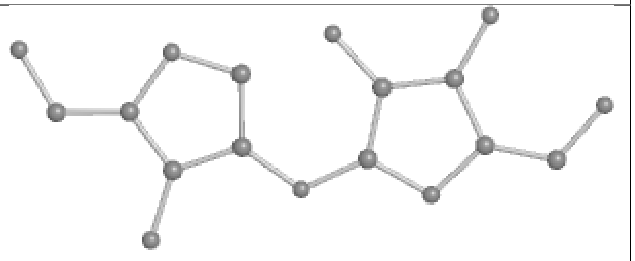
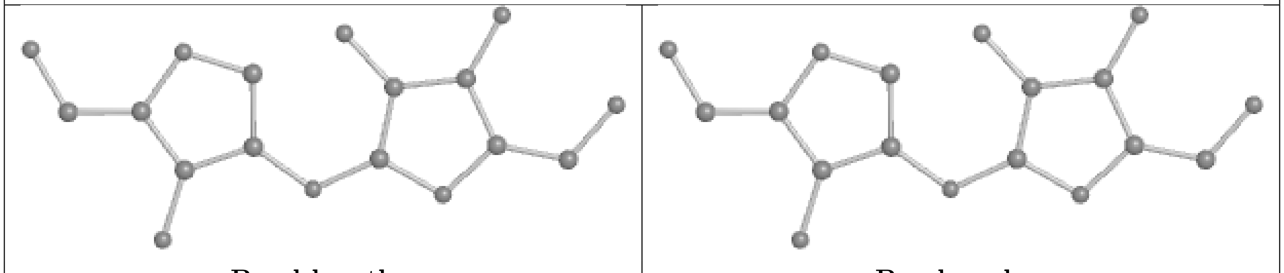
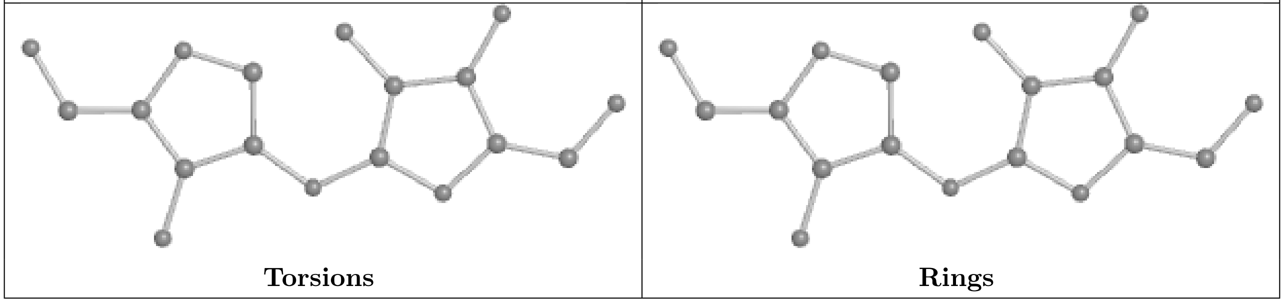

Rings

Oligosaccharide Chain E8

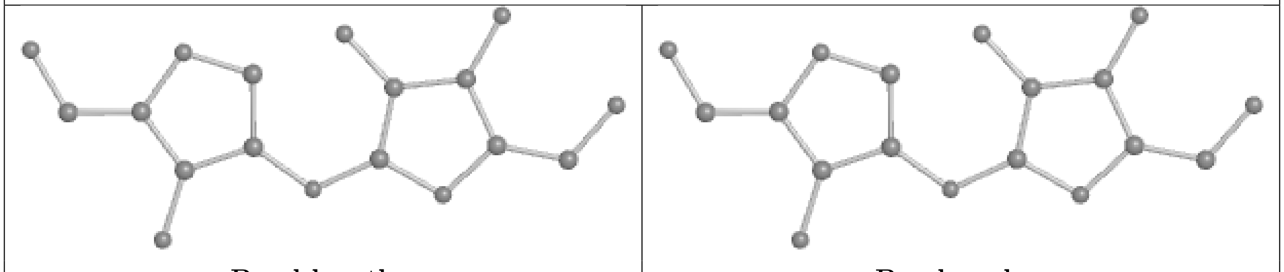


Bond lengths **Bond angles**

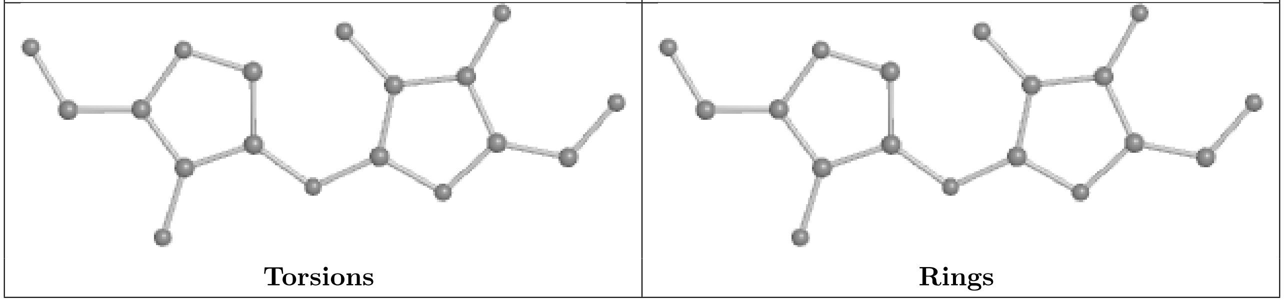


Torsions **Rings**

Oligosaccharide Chain F0

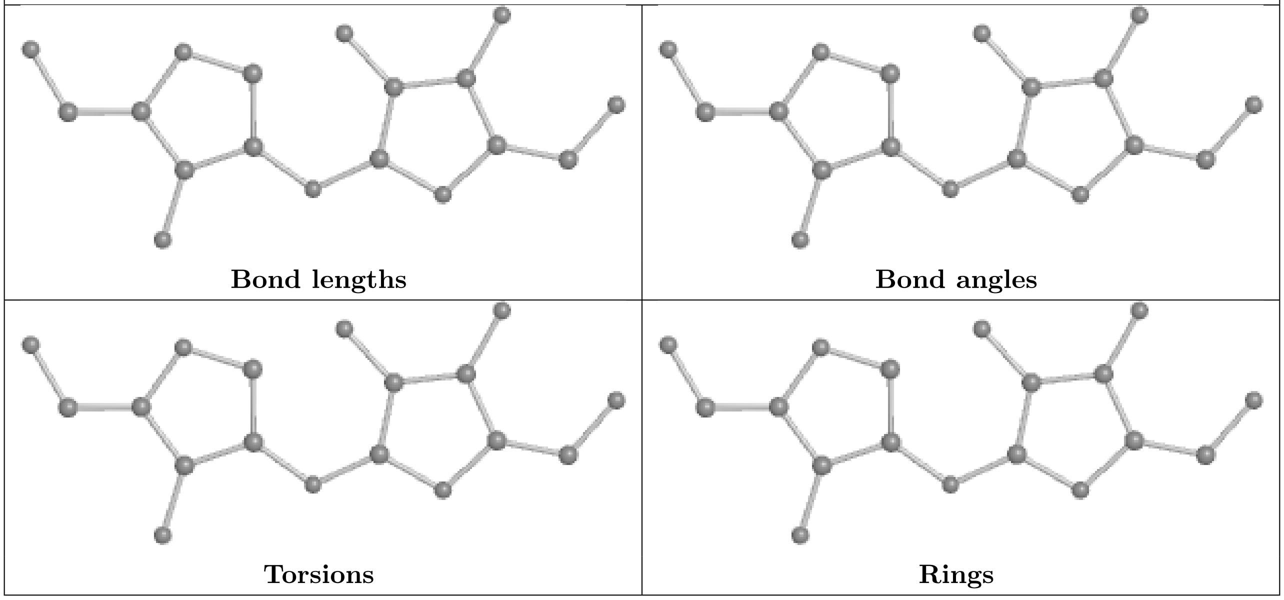


Bond lengths **Bond angles**



Torsions **Rings**

Oligosaccharide Chain F3



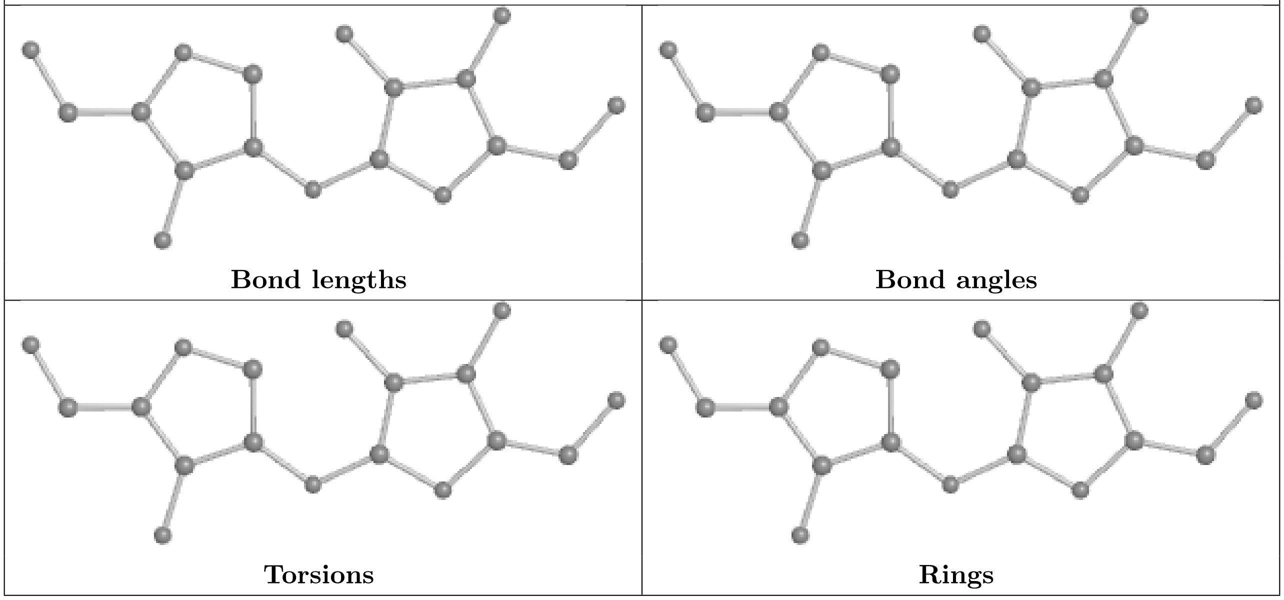
Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain F8



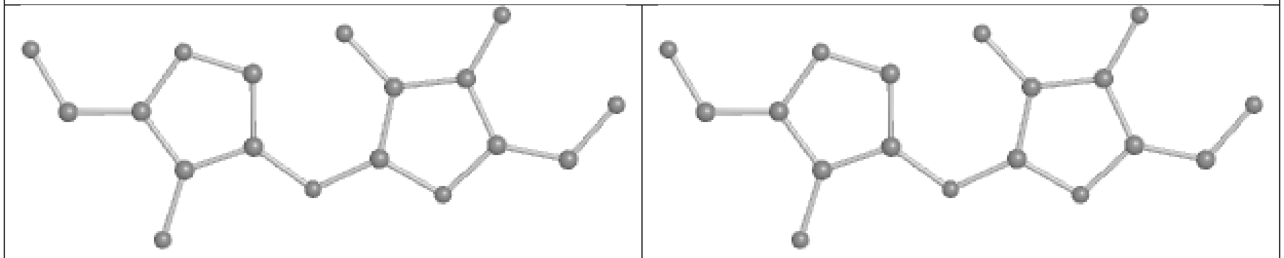
Bond lengths

Bond angles

Torsions

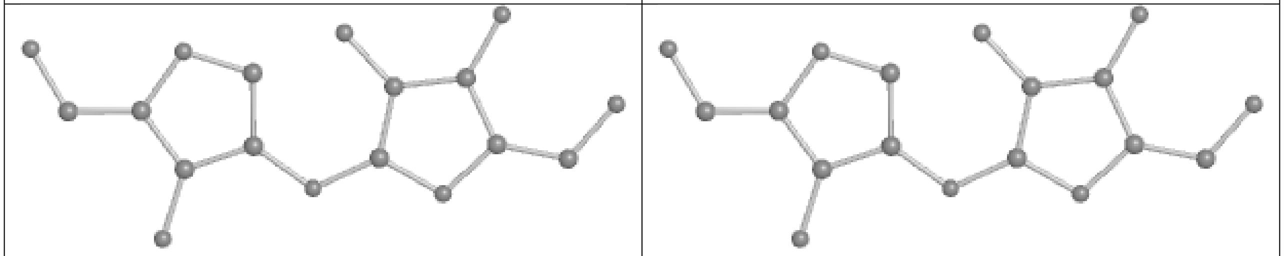
Rings

Oligosaccharide Chain a5



Bond lengths

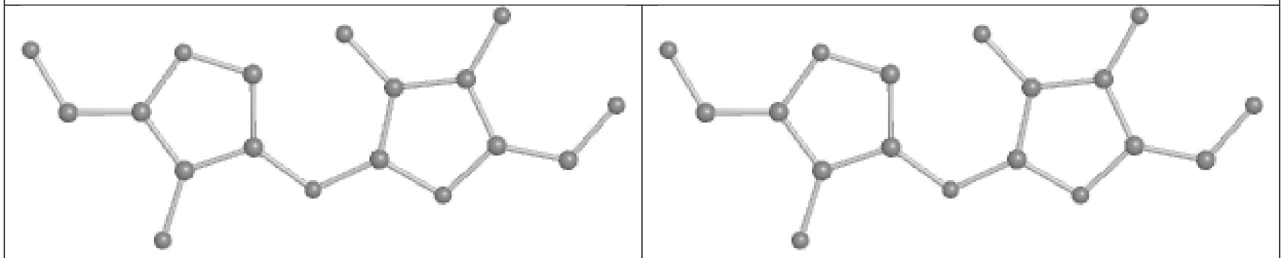
Bond angles



Torsions

Rings

Oligosaccharide Chain a7



Bond lengths

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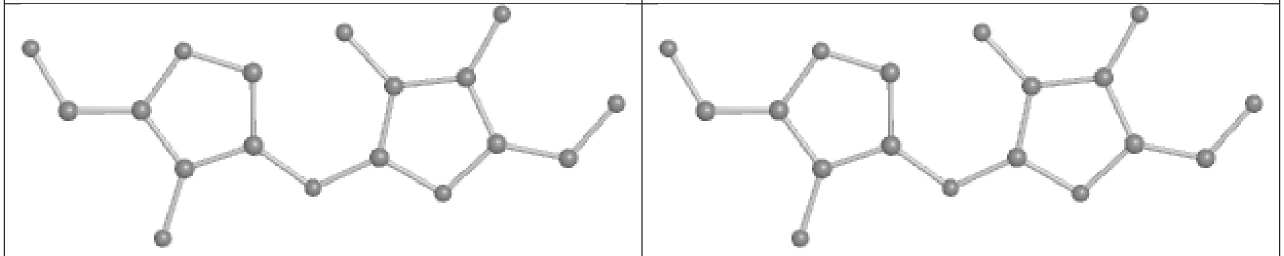
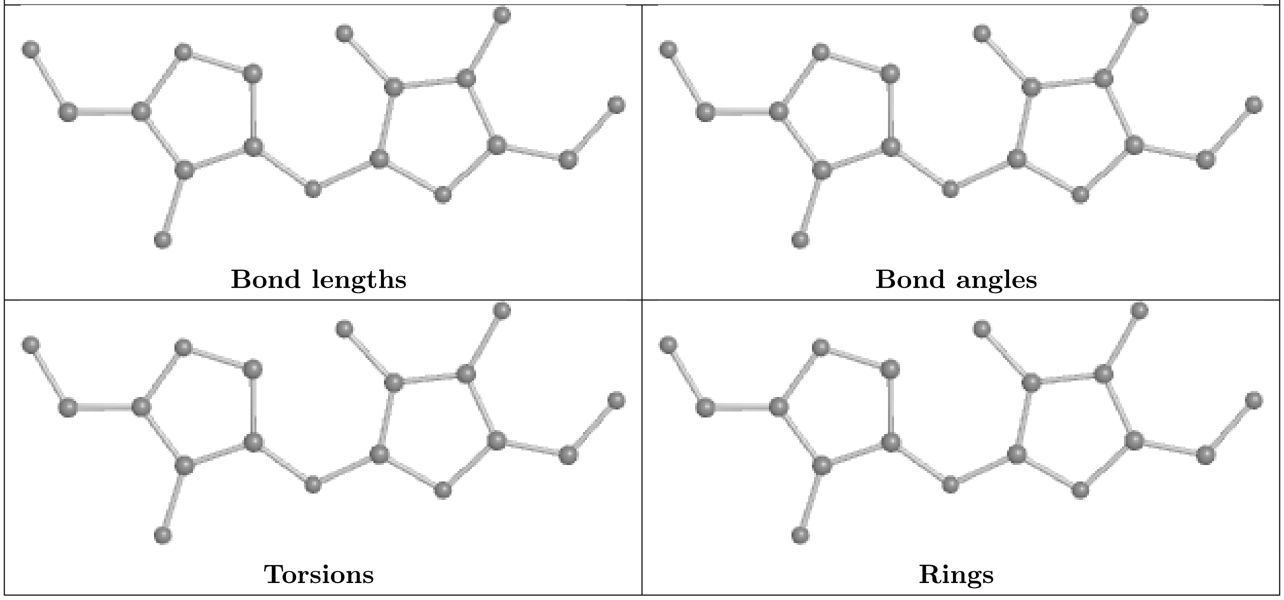


Torsions

Rings

Oligosaccharide Chain b0



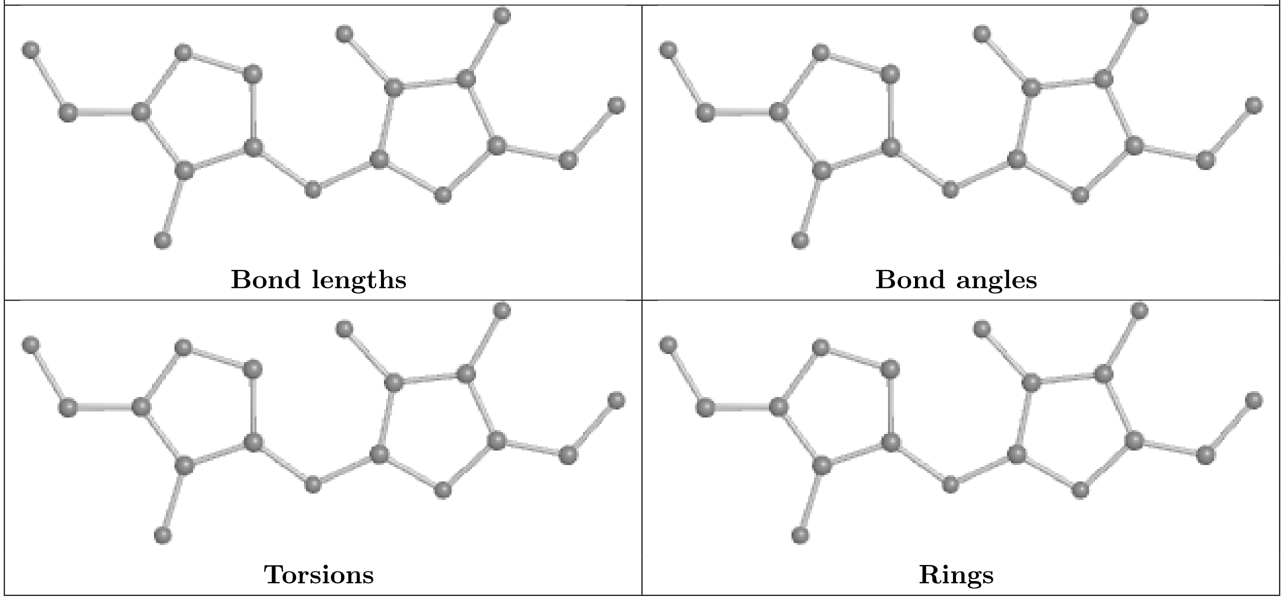
Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain b1



Bond lengths

Bond angles

Torsions

Rings

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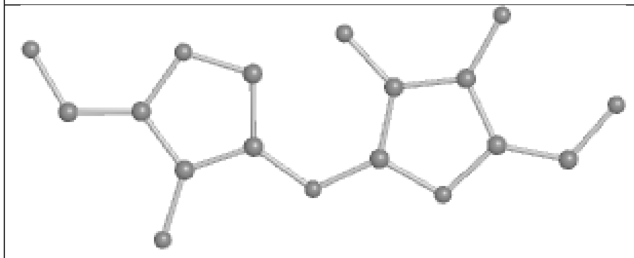

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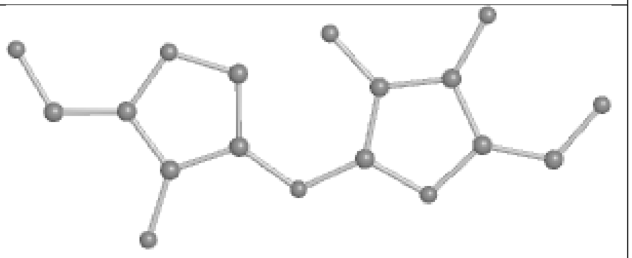

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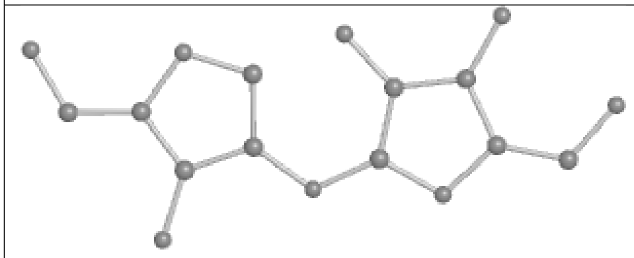
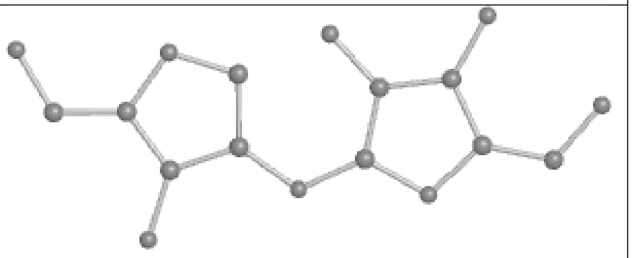
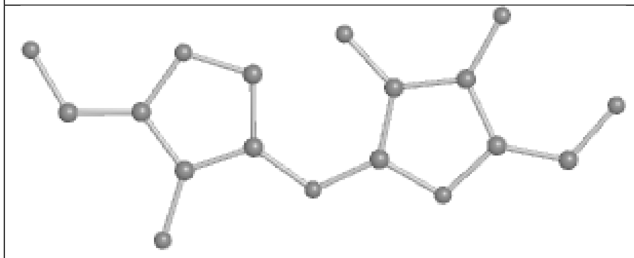


Torsions

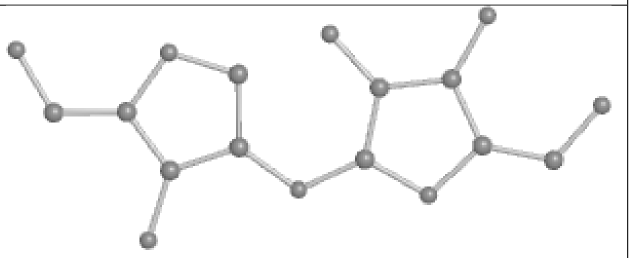


Rings

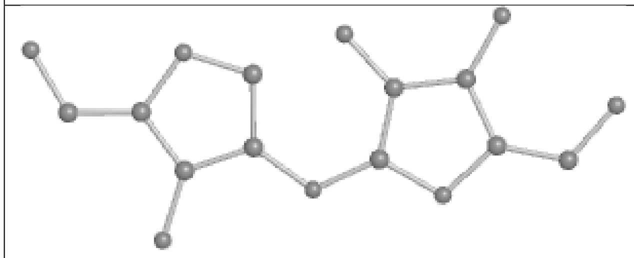
Oligosaccharide Chain b4



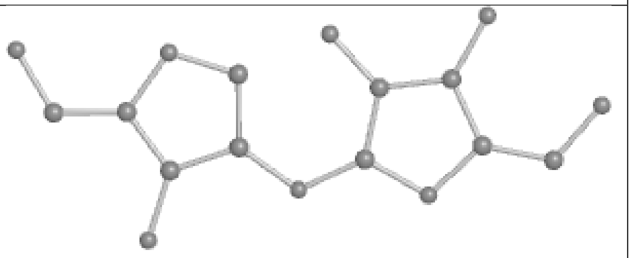
Bond lengths



Bond angles

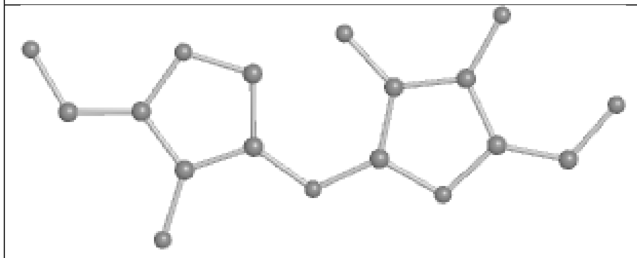


Torsions



Rings

Oligosaccharide Chain b5



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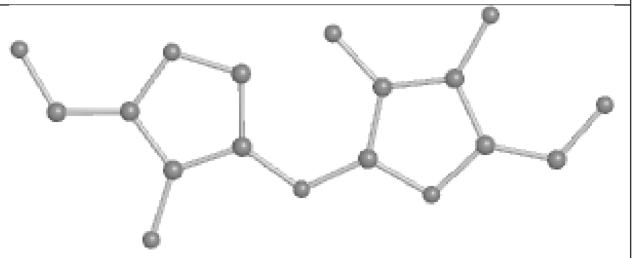
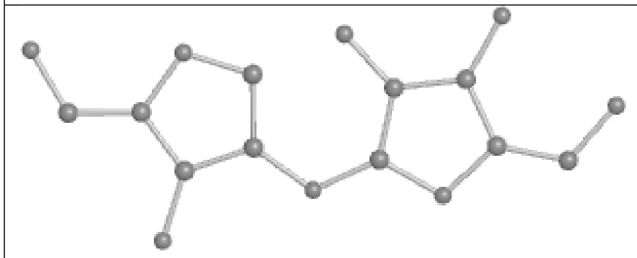


Bond angles



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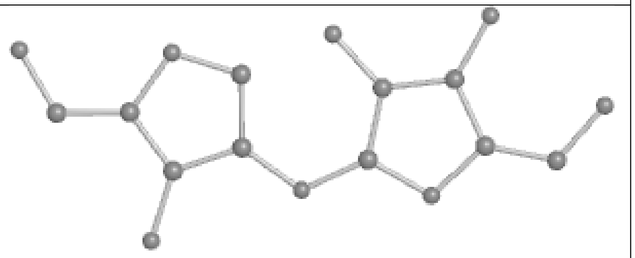
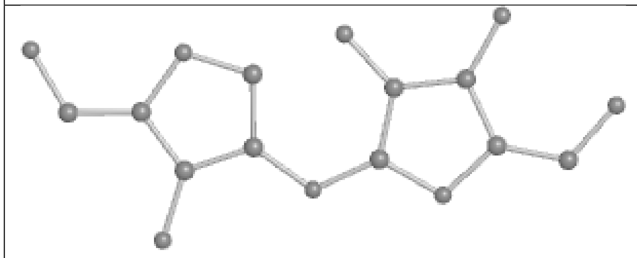


Rings

Oligosaccharide Chain b7



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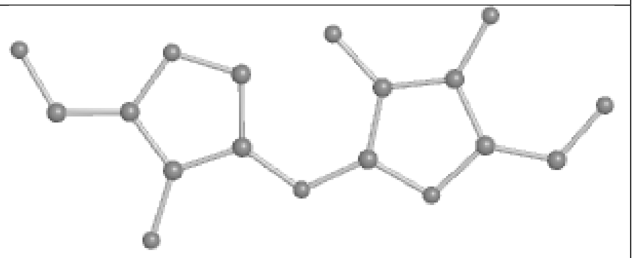
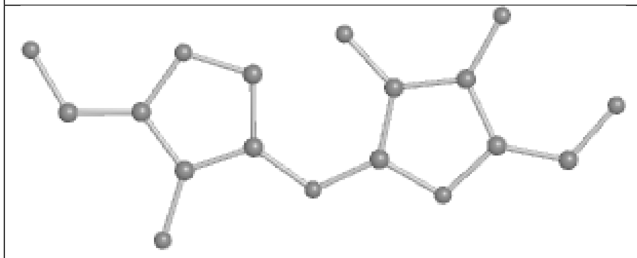


Bond angles



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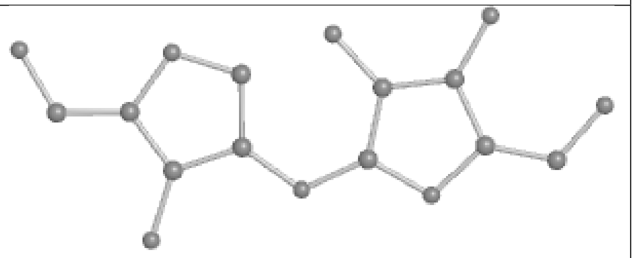
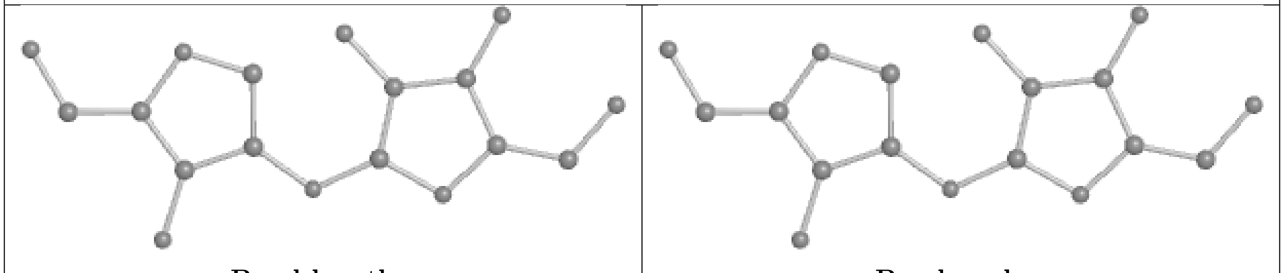


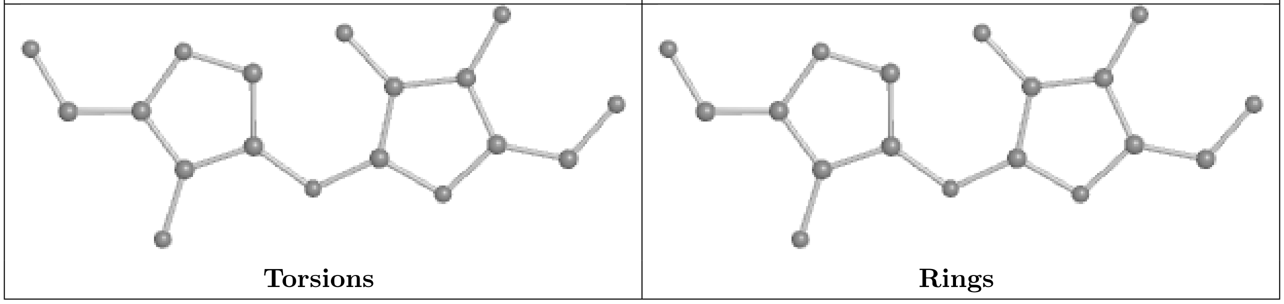
Rings

Oligosaccharide Chain b9



Bond lengths

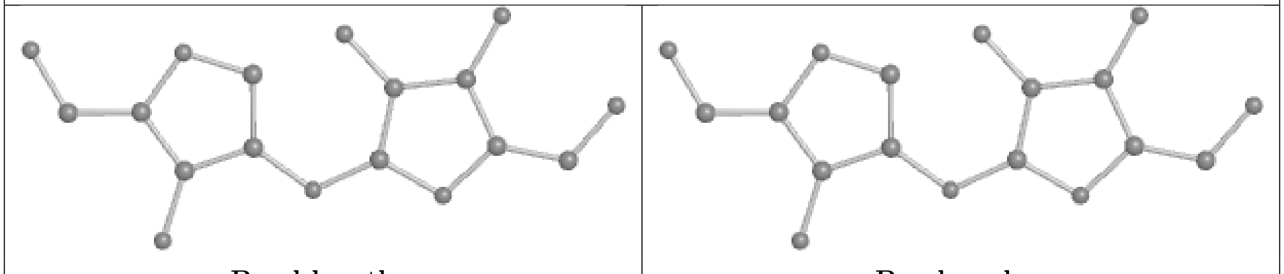
Bond angles



Torsions

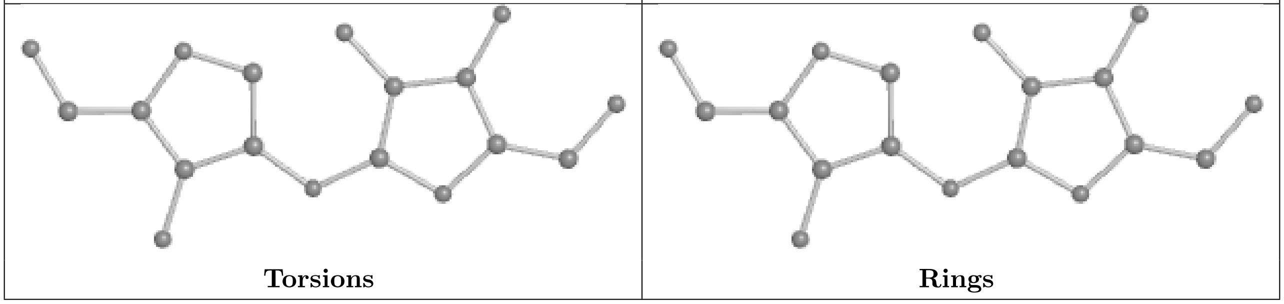
Rings

Oligosaccharide Chain c0



Bond lengths

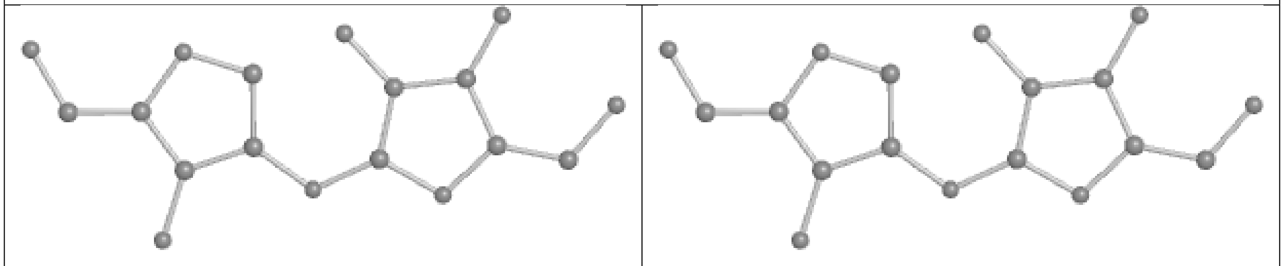
Bond angles



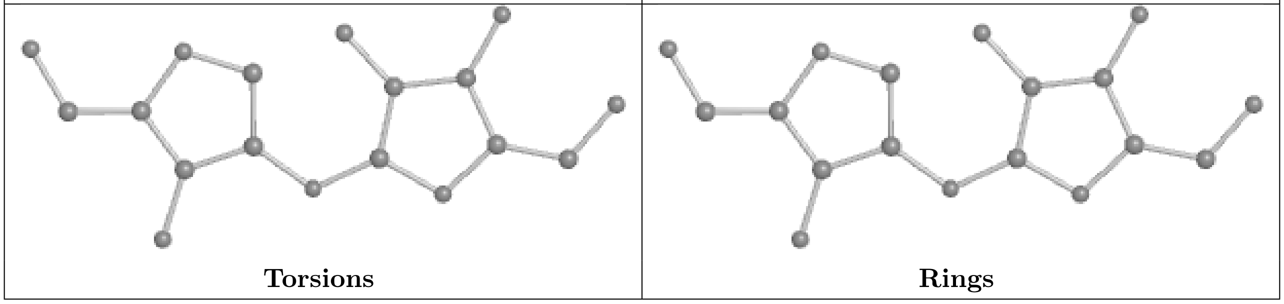
Torsions

Rings

Oligosaccharide Chain c1

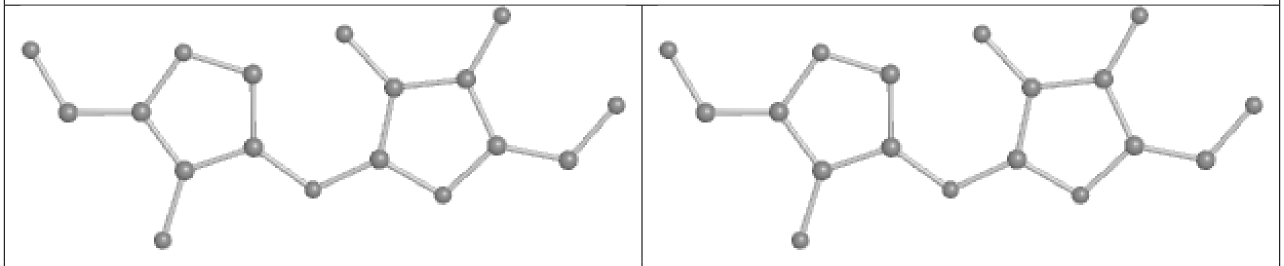


Bond lengths **Bond angles**

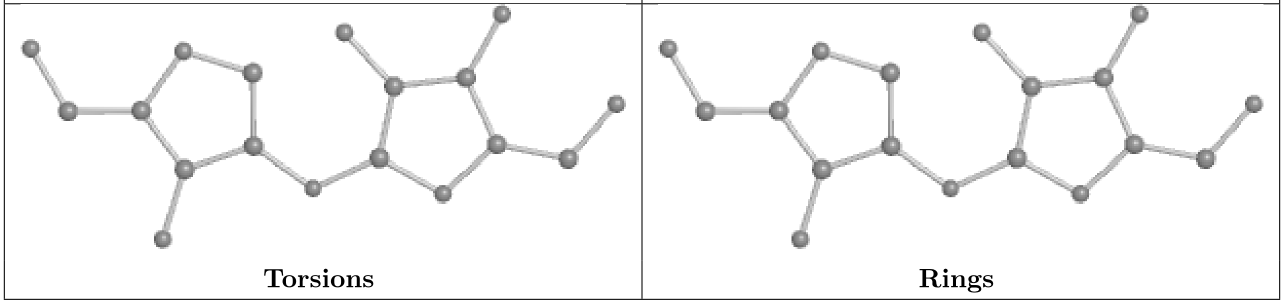


Torsions **Rings**

Oligosaccharide Chain c2

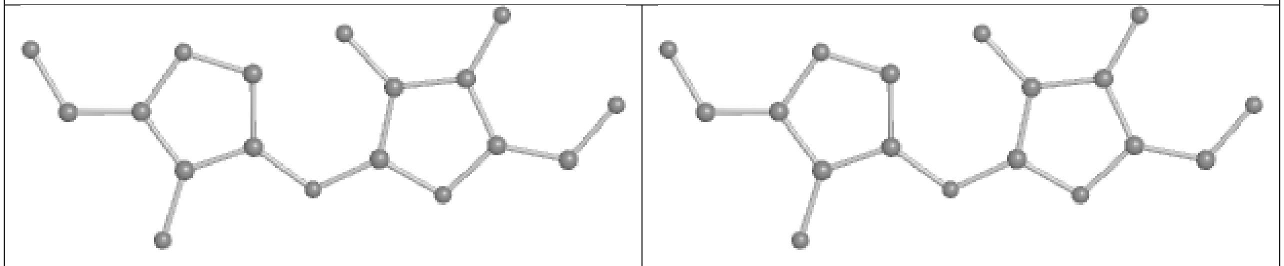


Bond lengths **Bond angles**



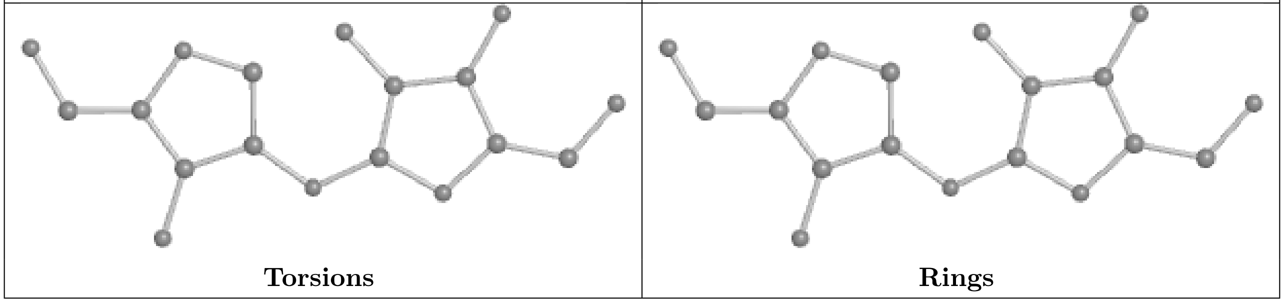
Torsions **Rings**

Oligosaccharide Chain c3



Bond lengths

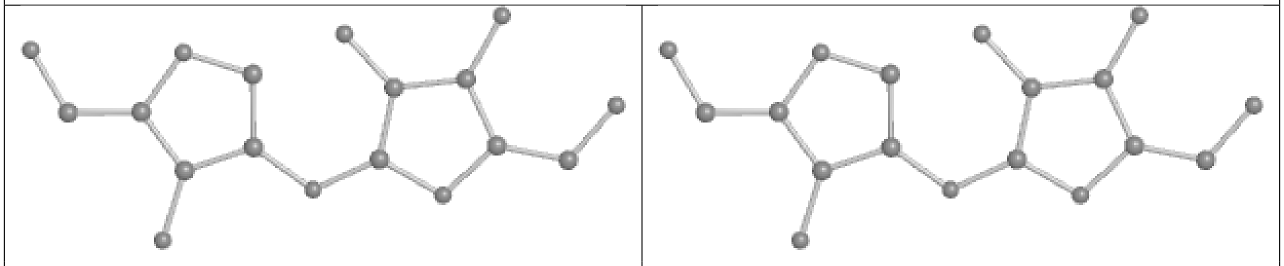
Bond angles



Torsions

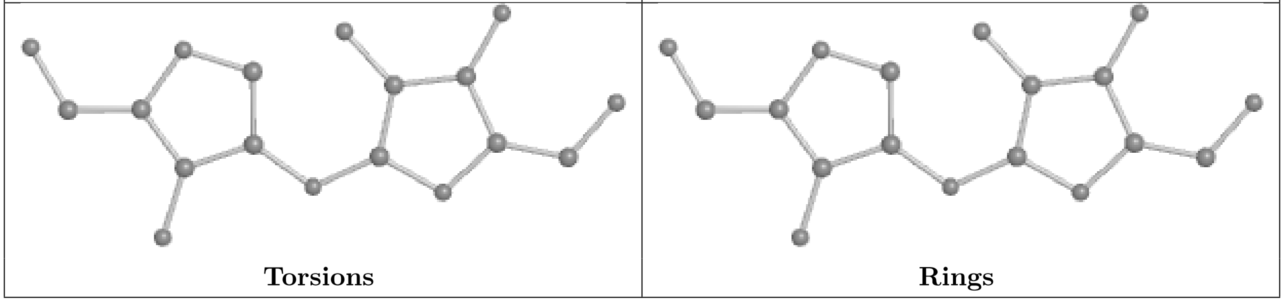
Rings

Oligosaccharide Chain c4



Bond lengths

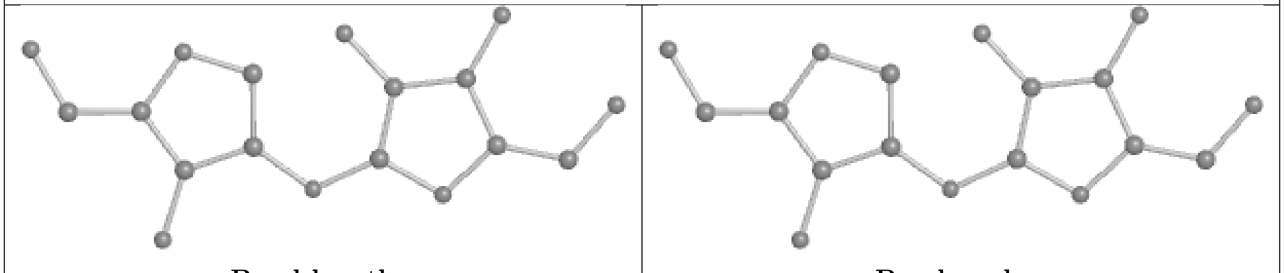
Bond angles



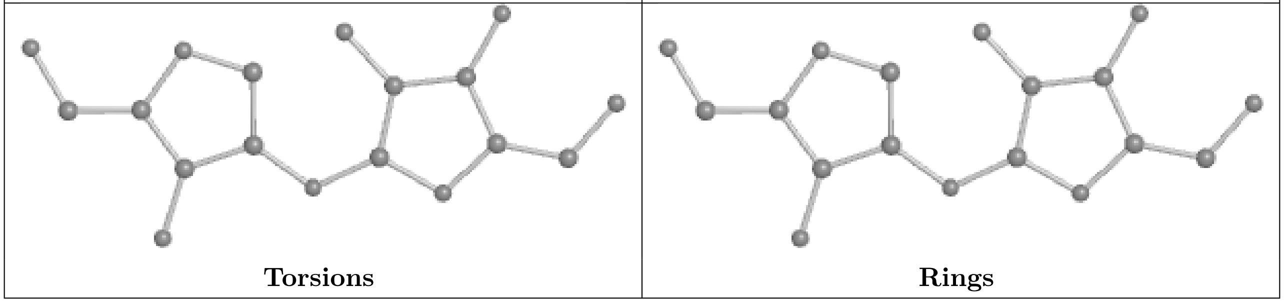
Torsions

Rings

Oligosaccharide Chain c5

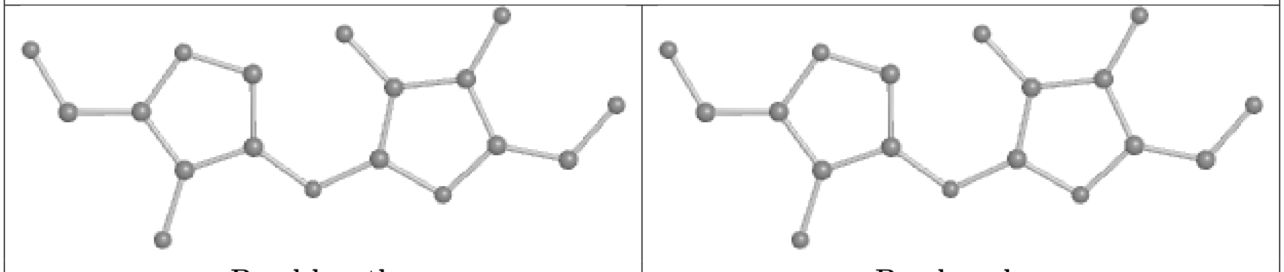

Bond lengths

Bond angles

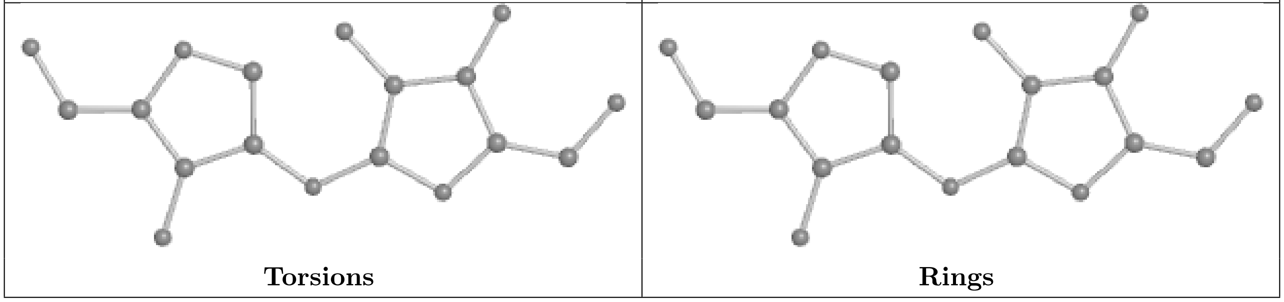

Torsions

Rings

Oligosaccharide Chain c6

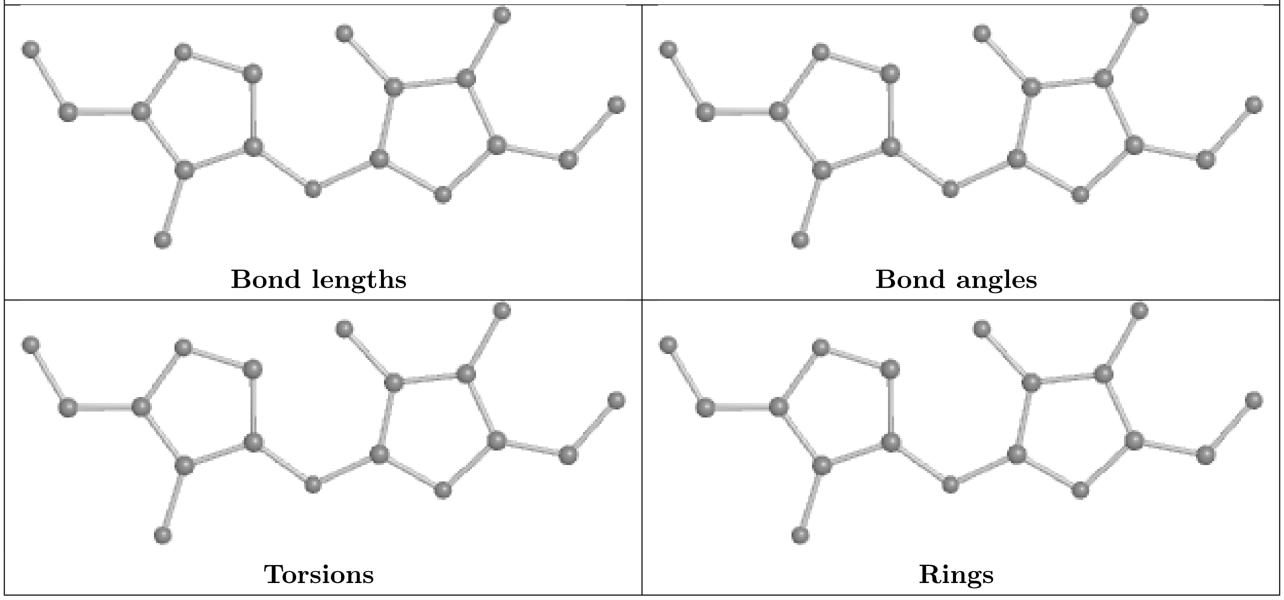

Bond lengths

Bond angles


Torsions

Rings

Oligosaccharide Chain c7



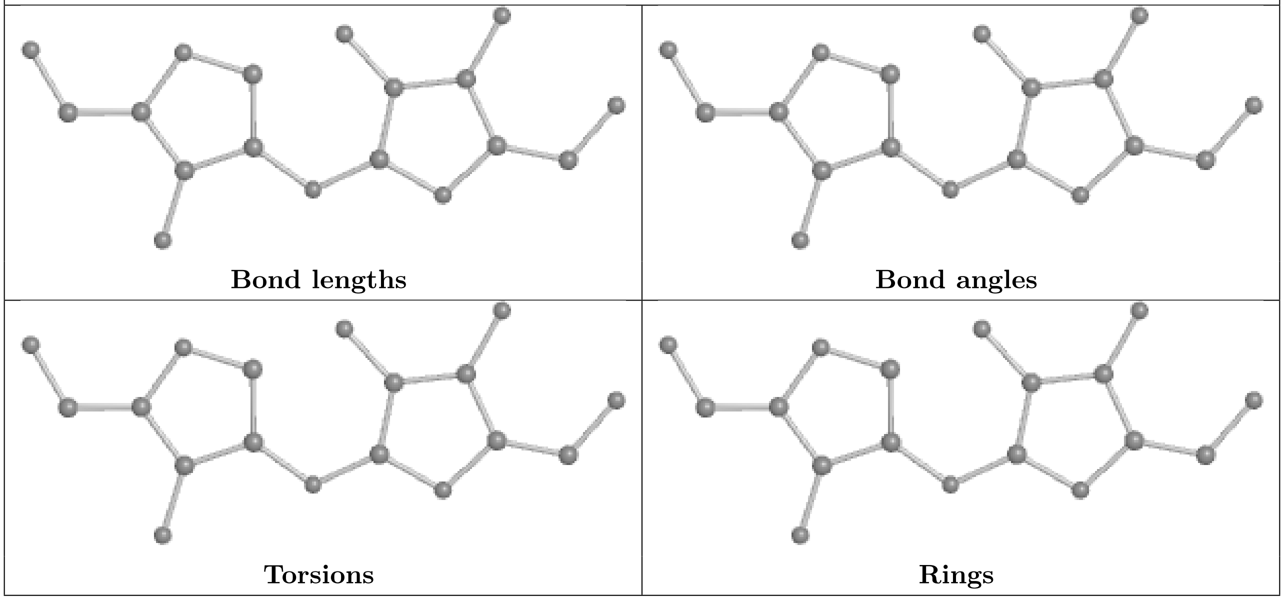
Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain c8



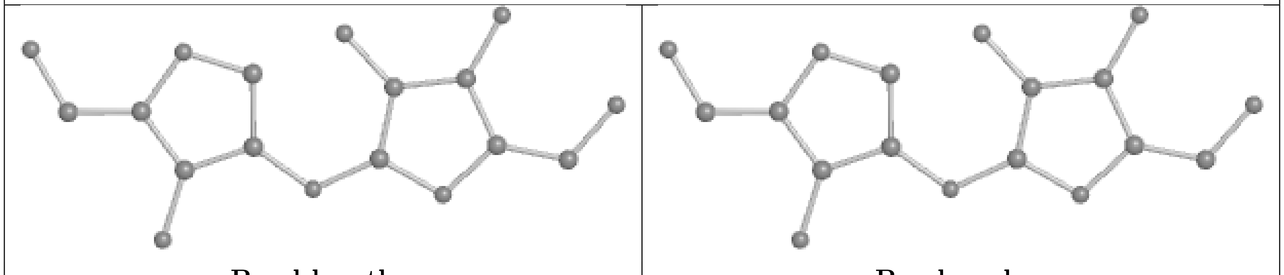
Bond lengths

Bond angles

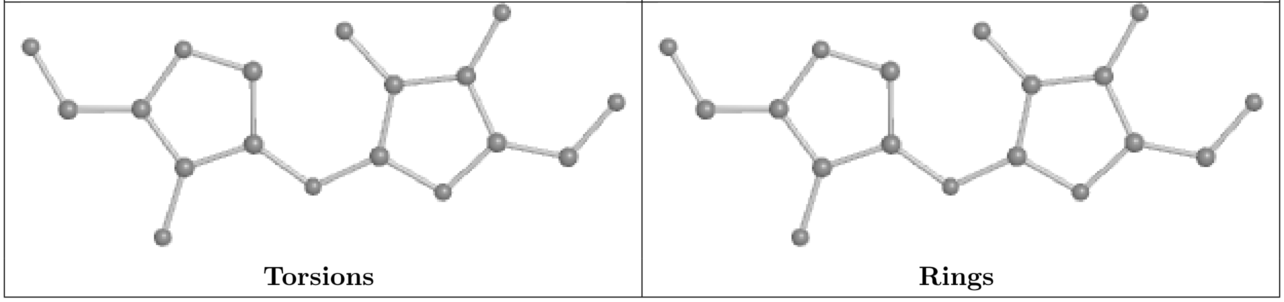
Torsions

Rings

Oligosaccharide Chain c9

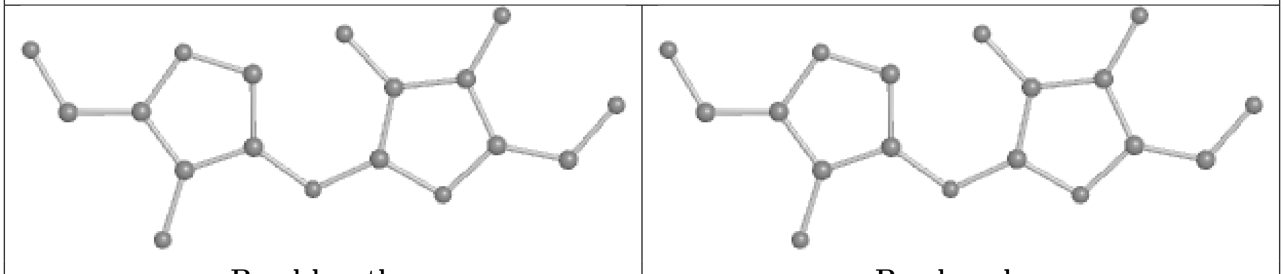


Bond lengths **Bond angles**

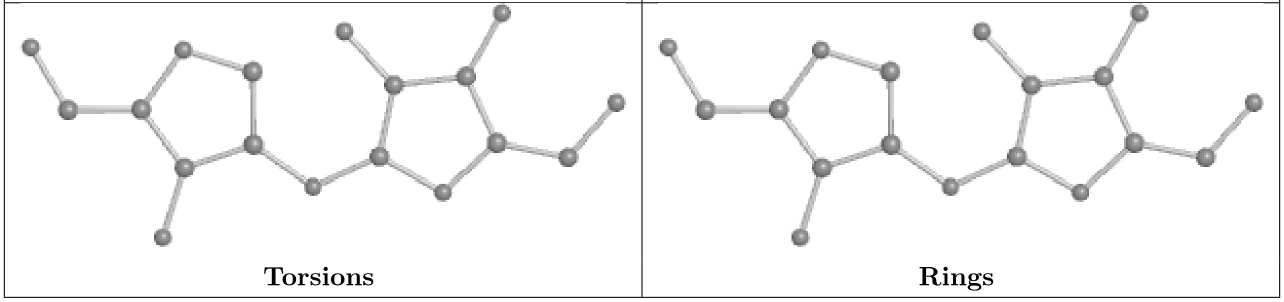


Torsions **Rings**

Oligosaccharide Chain d1

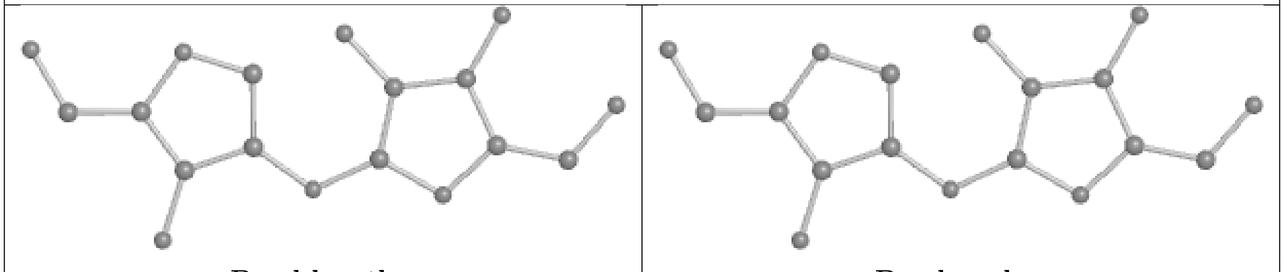


Bond lengths **Bond angles**

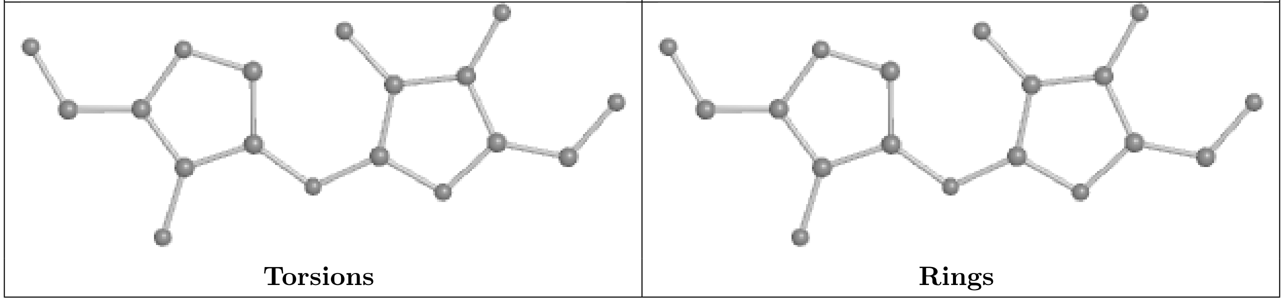


Torsions **Rings**

Oligosaccharide Chain d2

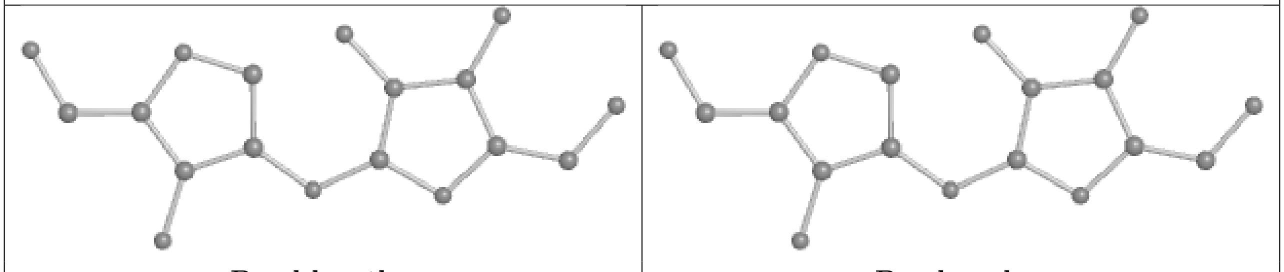


Bond lengths **Bond angles**

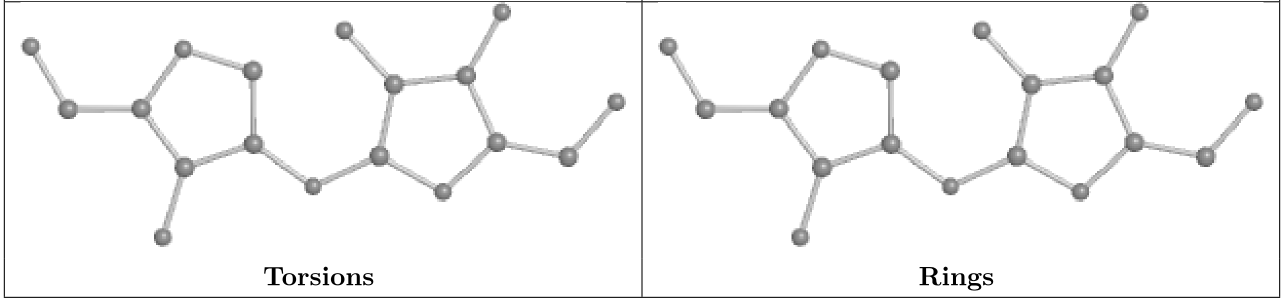


Torsions **Rings**

Oligosaccharide Chain d3

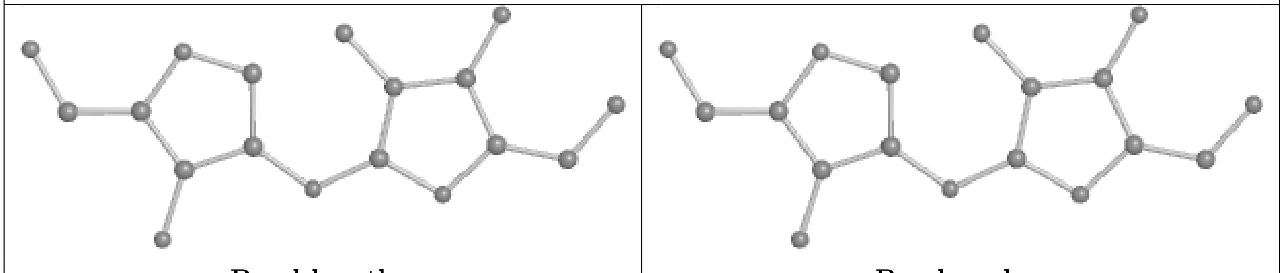


Bond lengths **Bond angles**

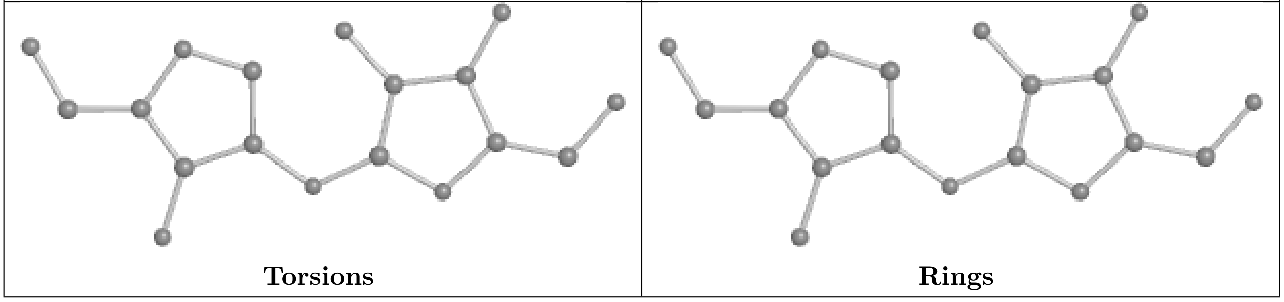


Torsions **Rings**

Oligosaccharide Chain d4

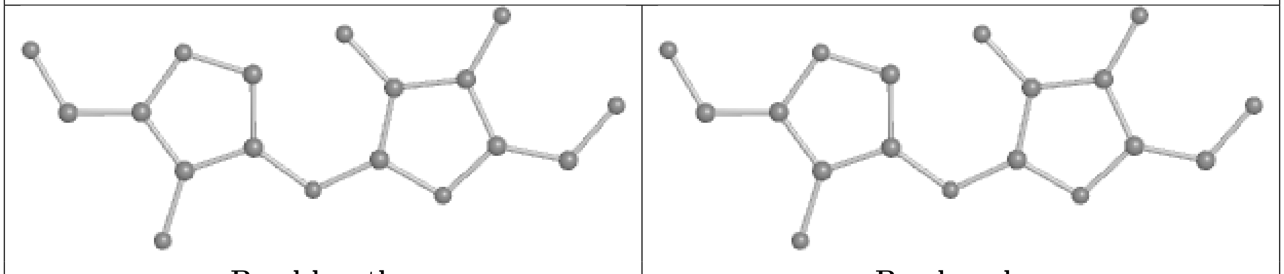


Bond lengths **Bond angles**

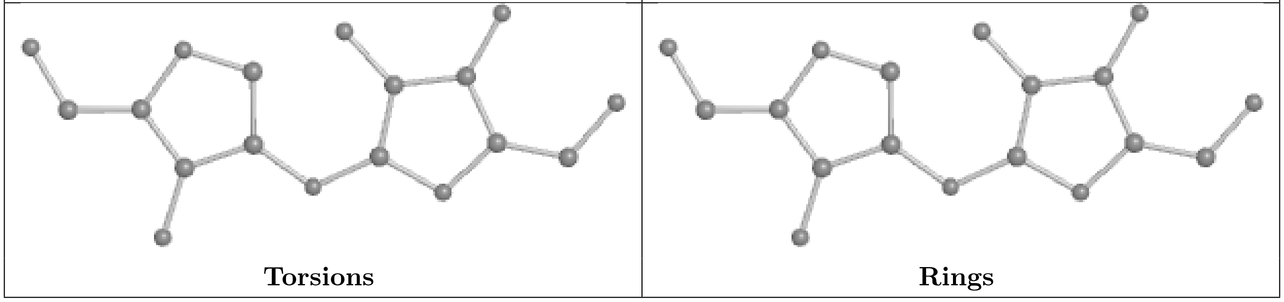


Torsions **Rings**

Oligosaccharide Chain d5

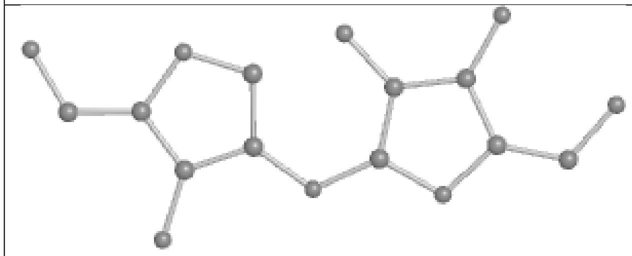


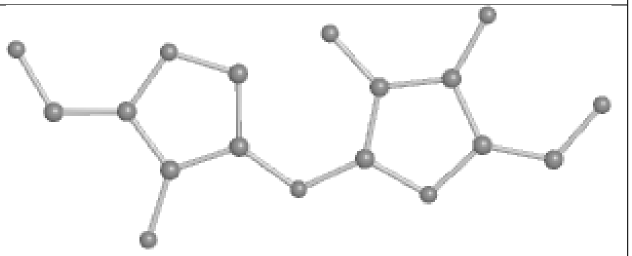
Bond lengths **Bond angles**

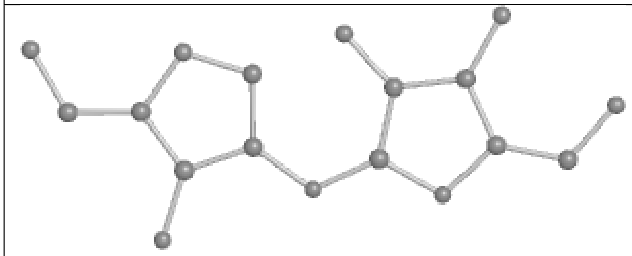


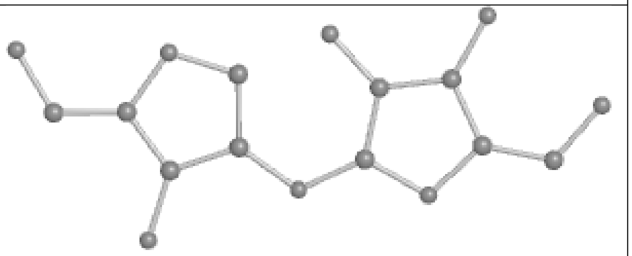
Torsions **Rings**

Oligosaccharide Chain e0

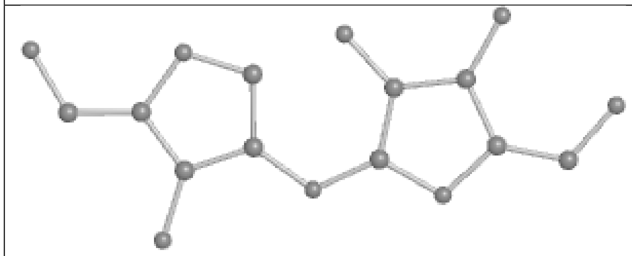

Bond lengths

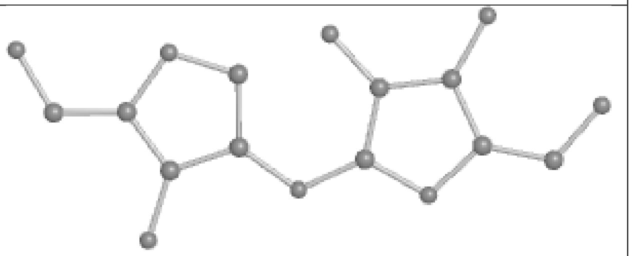

Bond angles

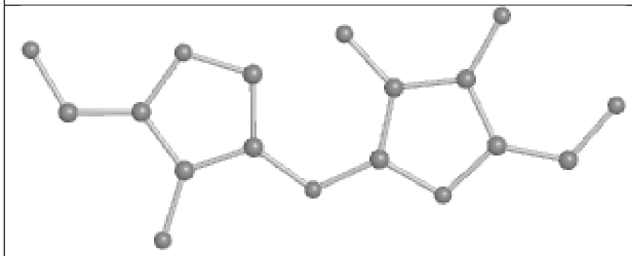

Torsions

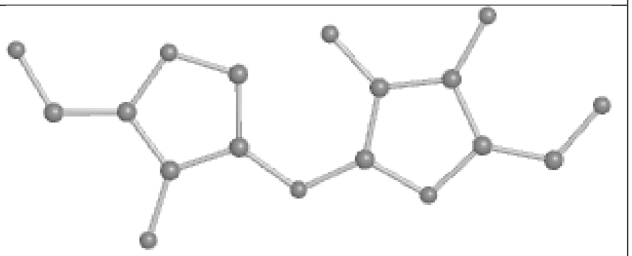

Rings

Oligosaccharide Chain e1

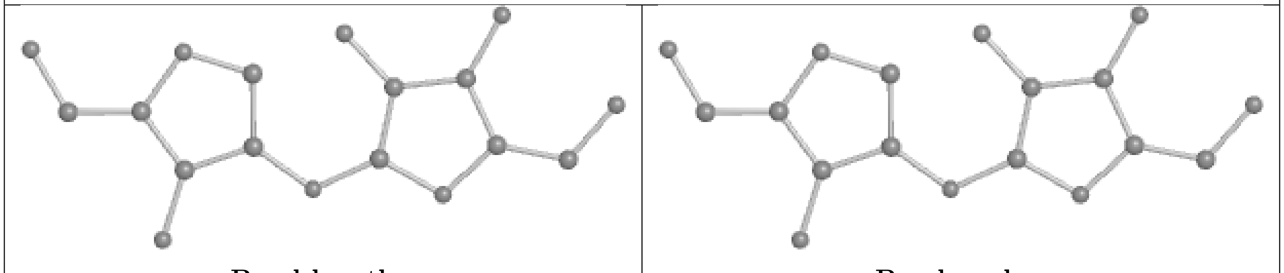

Bond lengths


Bond angles

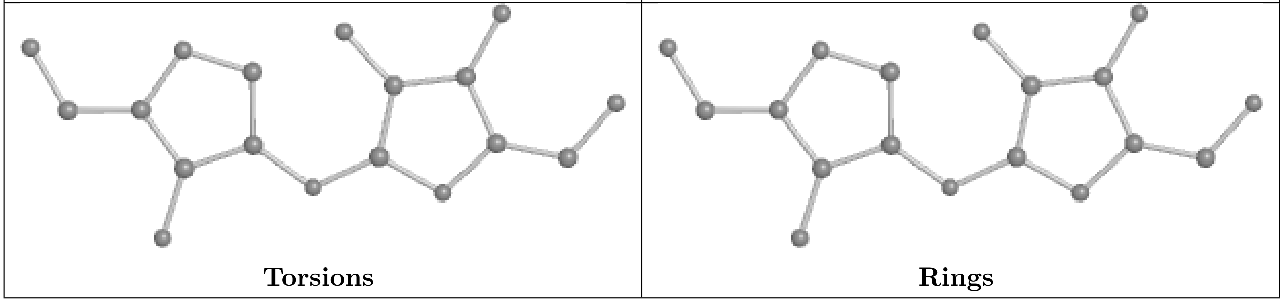

Torsions


Rings

Oligosaccharide Chain e2

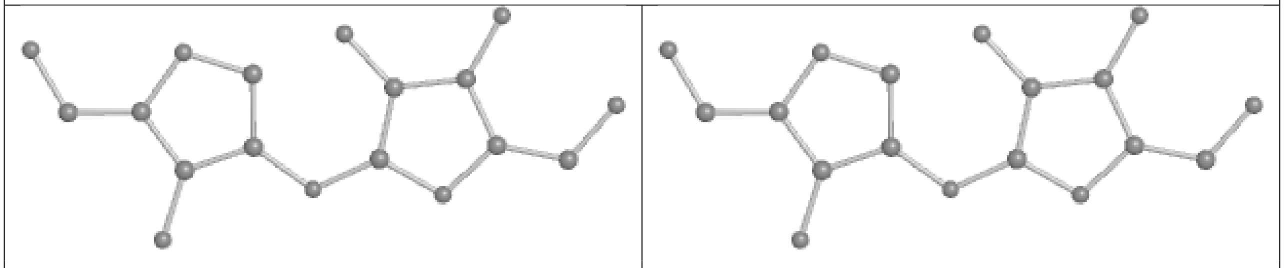


Bond lengths Bond angles

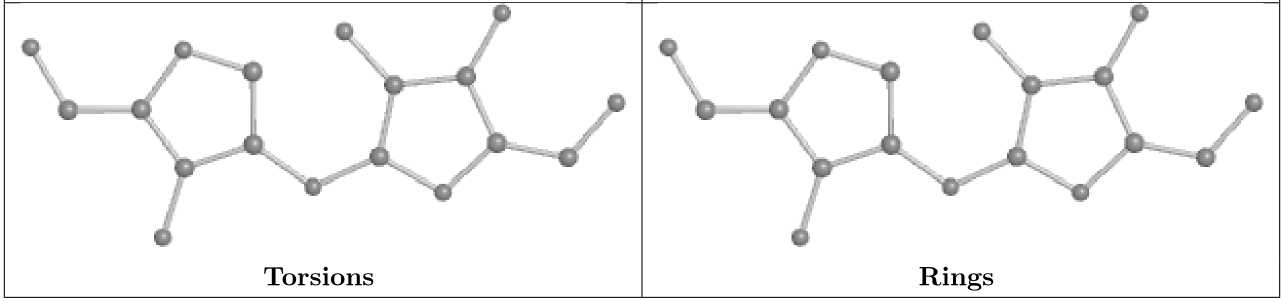


Torsions Rings

Oligosaccharide Chain e4

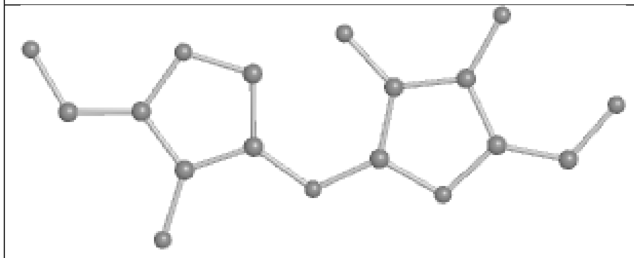


Bond lengths Bond angles

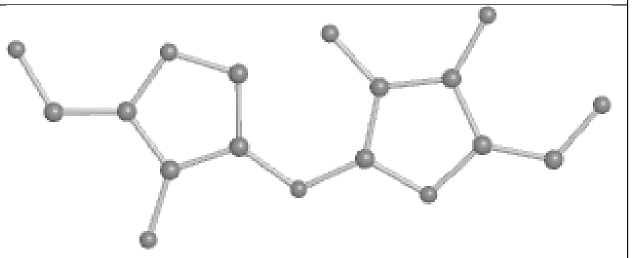


Torsions Rings

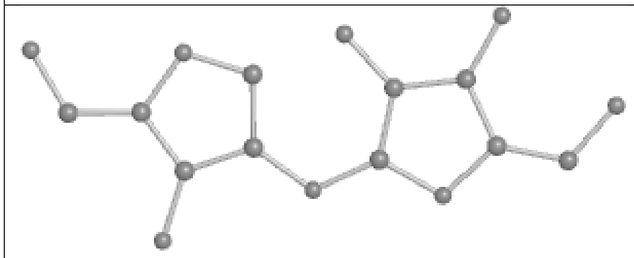
Oligosaccharide Chain e5



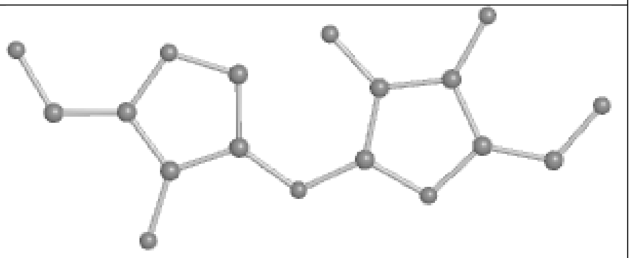
Bond lengths



Bond angles

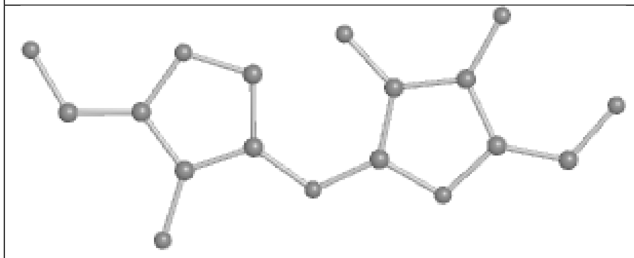


Torsions

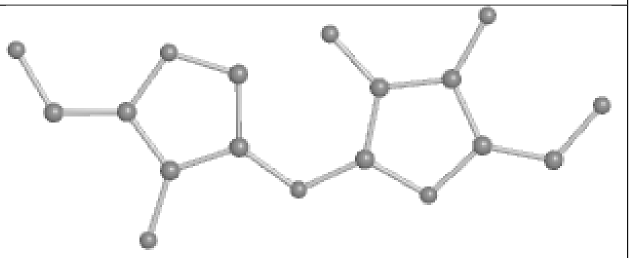


Rings

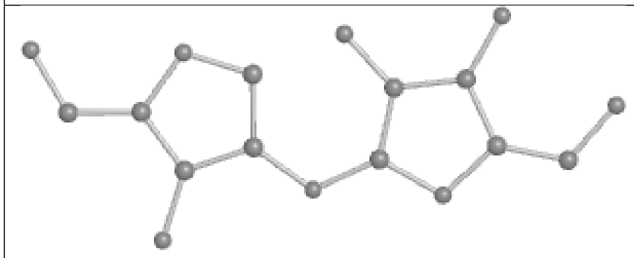
Oligosaccharide Chain e8



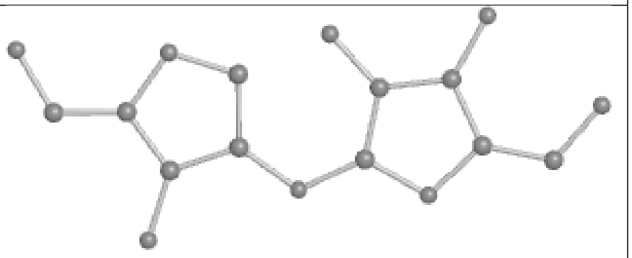
Bond lengths



Bond angles

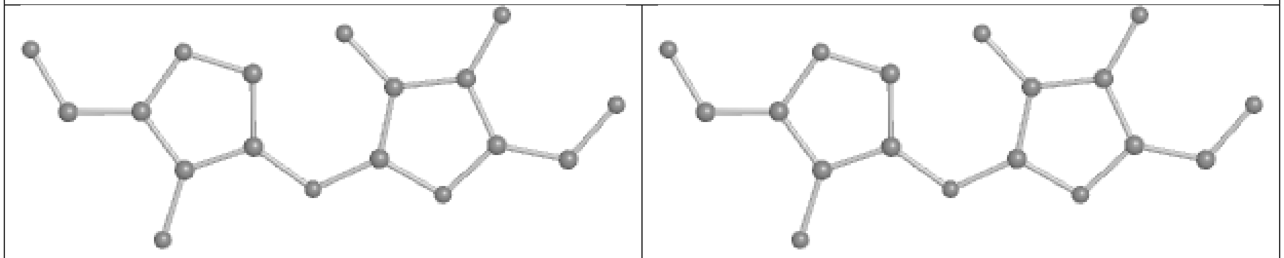


Torsions



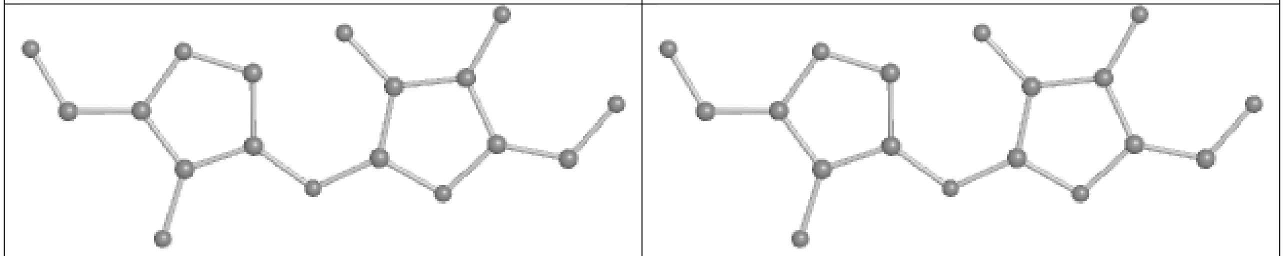
Rings

Oligosaccharide Chain f0



Bond lengths

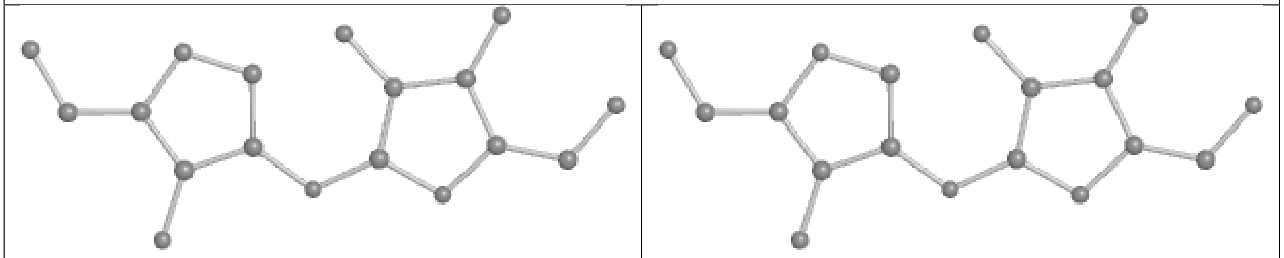
Bond angles



Torsions

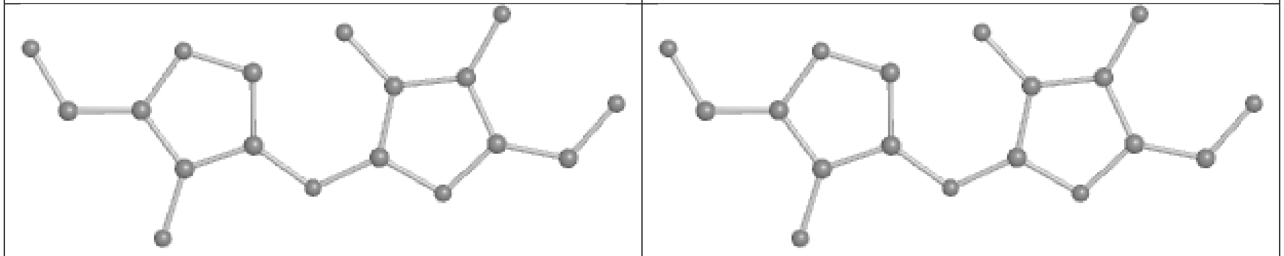
Rings

Oligosaccharide Chain f3



Bond lengths

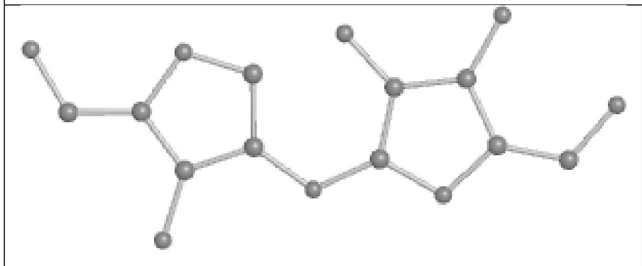
Bond angles

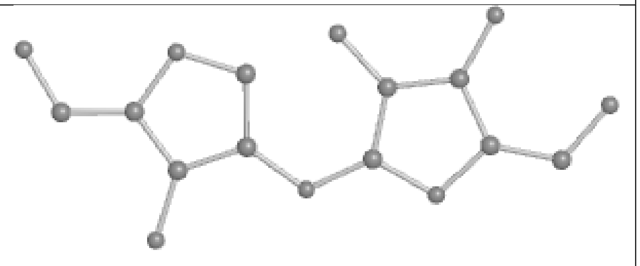


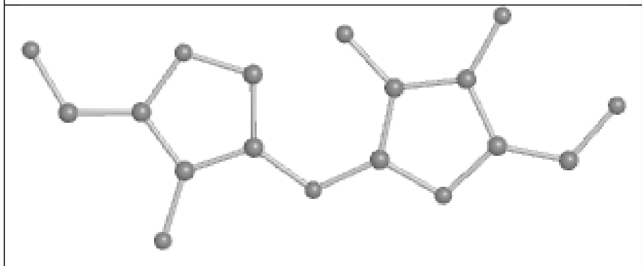
Torsions

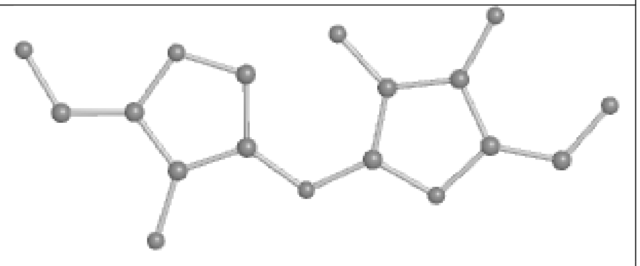
Rings

Oligosaccharide Chain f5

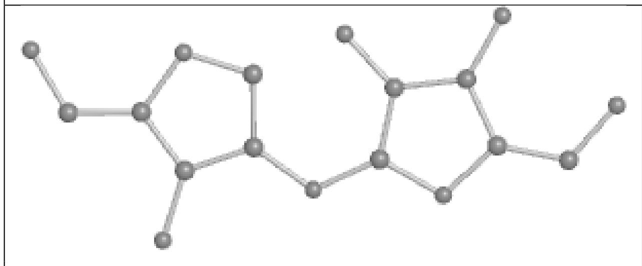

Bond lengths

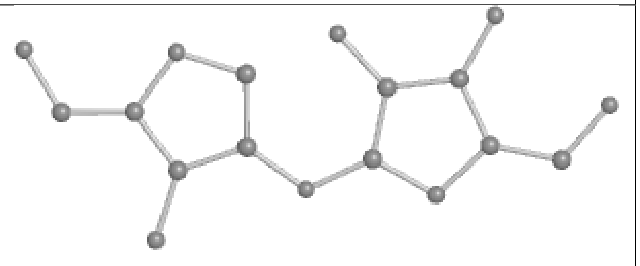

Bond angles


Torsions


Rings

Oligosaccharide Chain f8


Bond lengths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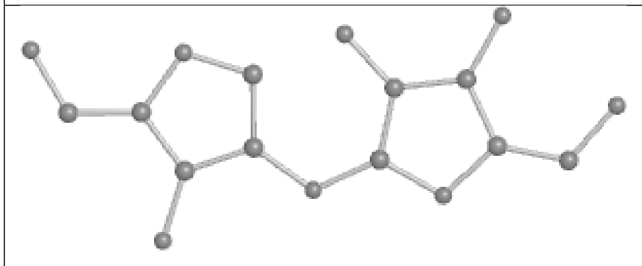
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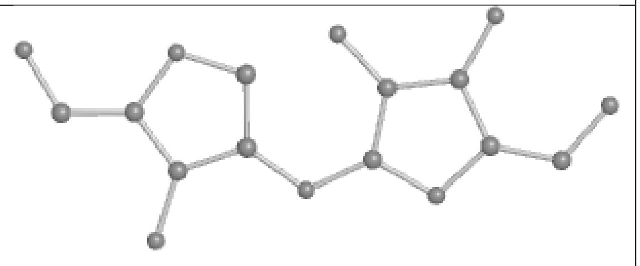
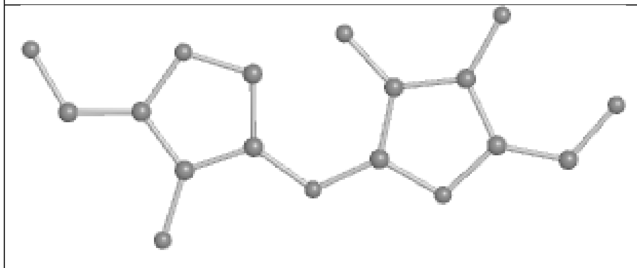

Rings

Oligosaccharide Chain E3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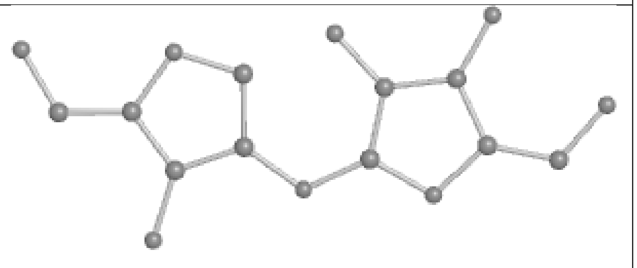
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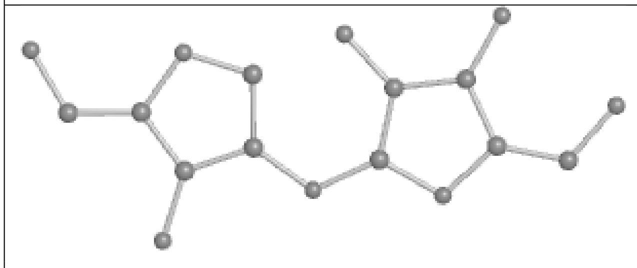
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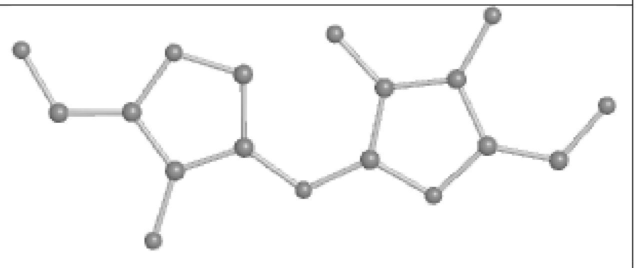
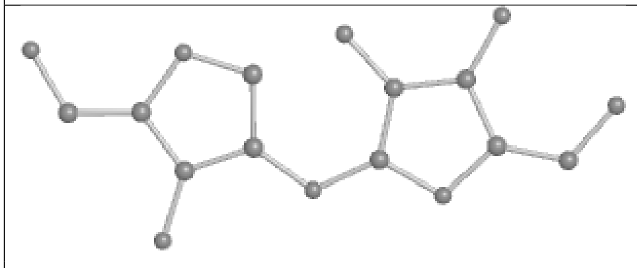
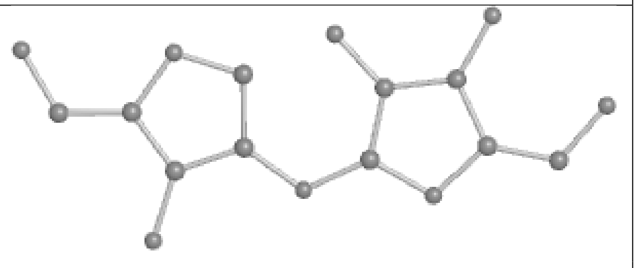
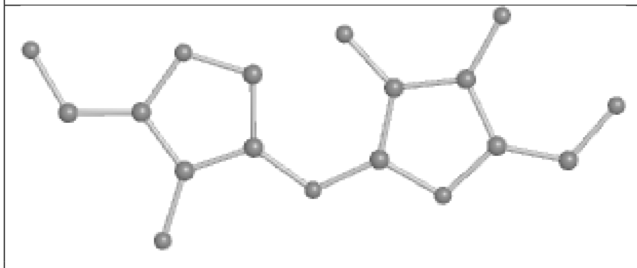

Rings

Oligosaccharide Chain f2


Bond lengths


Bond angles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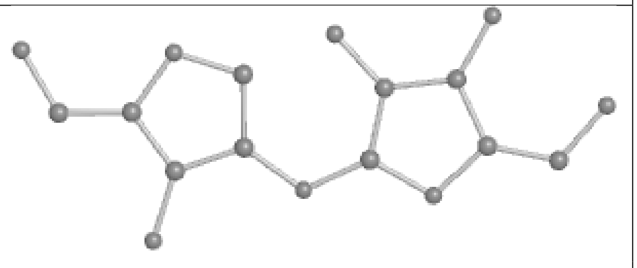
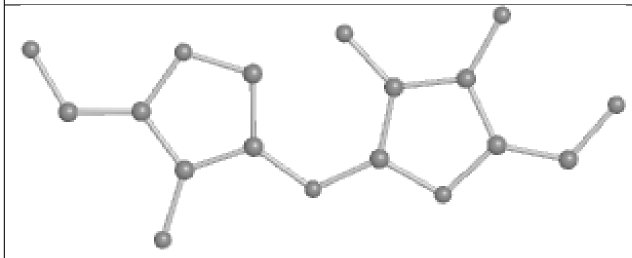
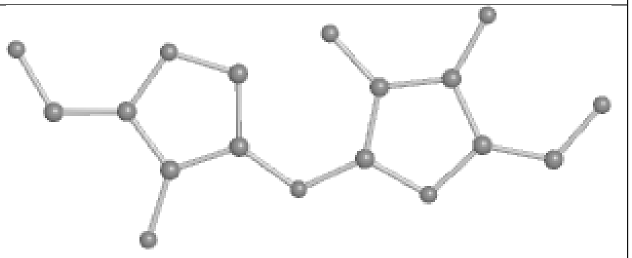
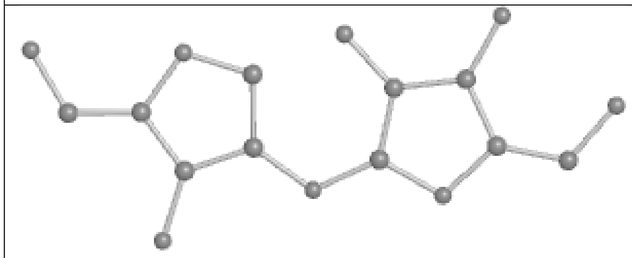
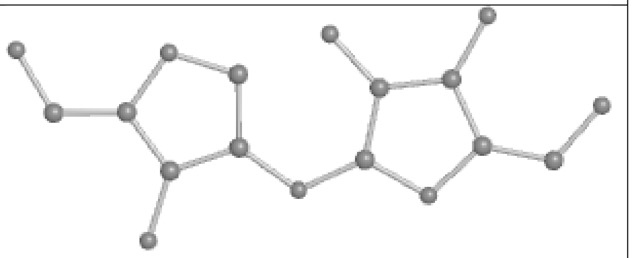

Rings

Oligosaccharide Chain e7	
 Bond lengths	 Bond angles
 Torsions	 Rings

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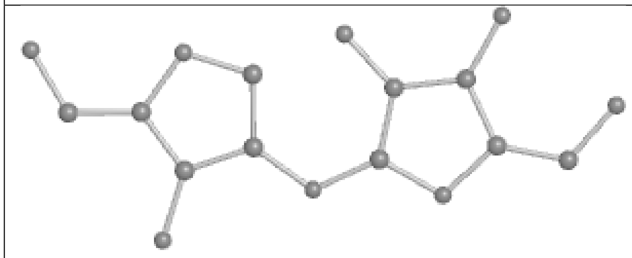
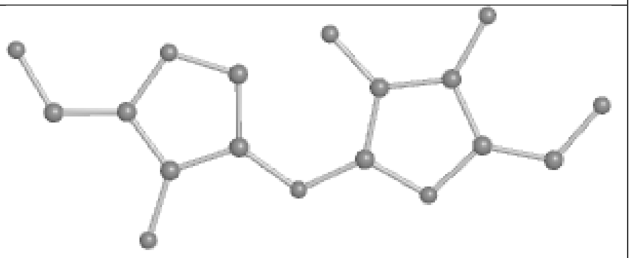
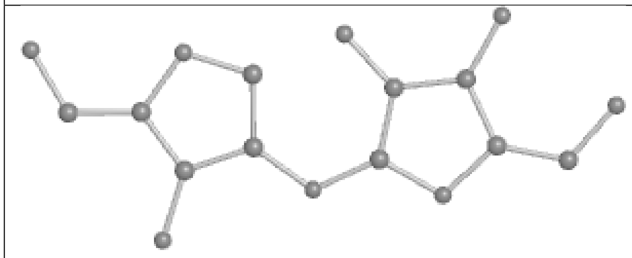
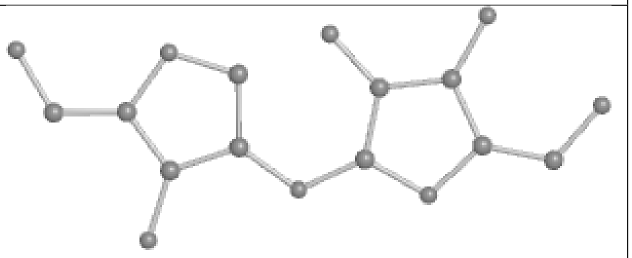
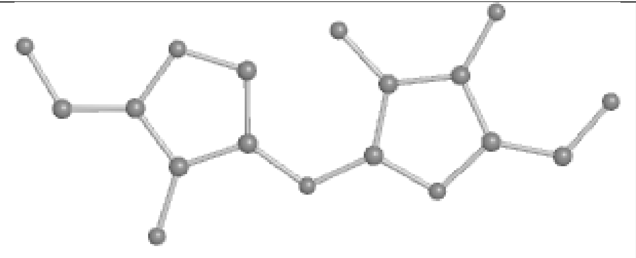
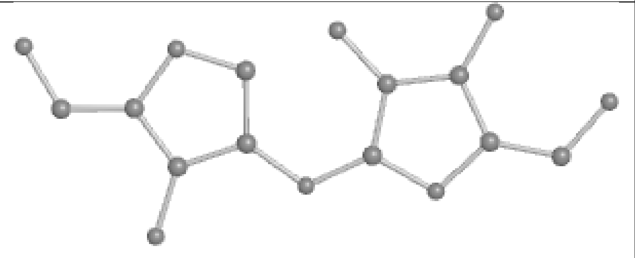
 Bond lengths	 Bond angles
 Torsions	 Rings

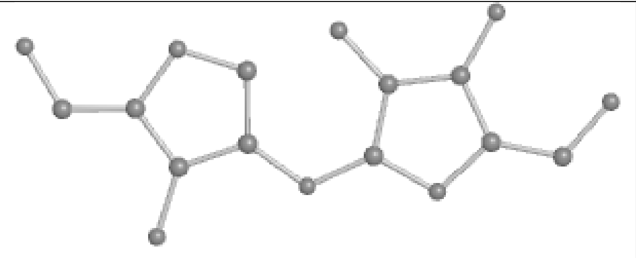
Oligosaccharide Chain e3



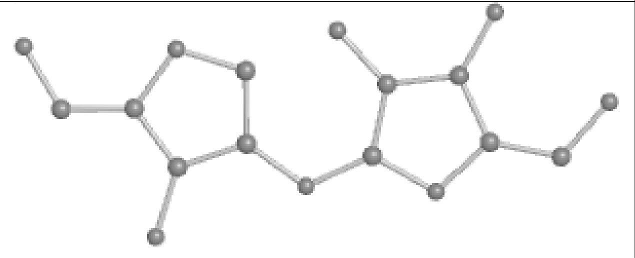
Bond lengths



Bond angles

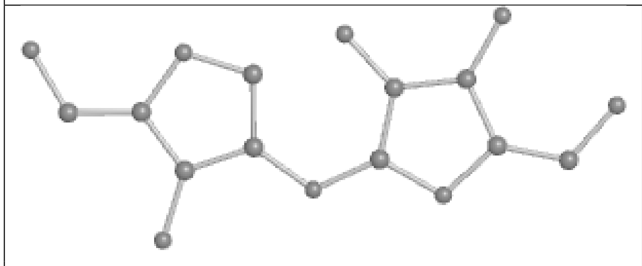


Torsions



Rings

Oligosaccharide Chain d9



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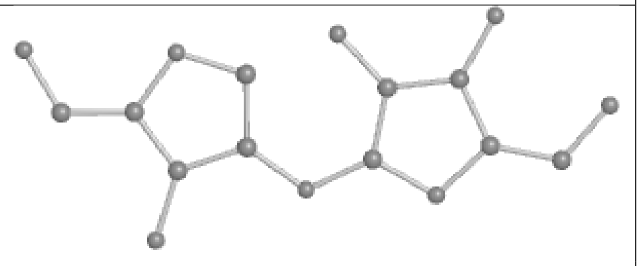
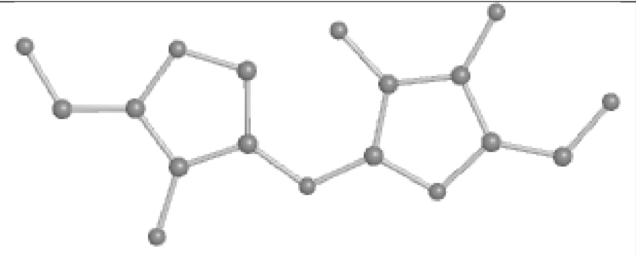
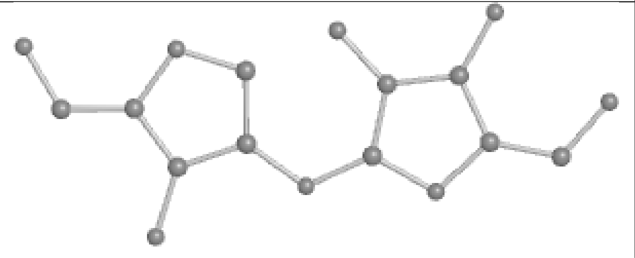


Bond angles

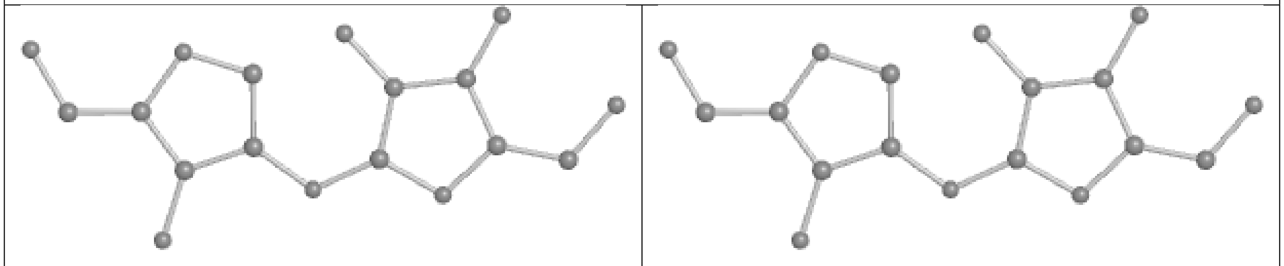


Torsions



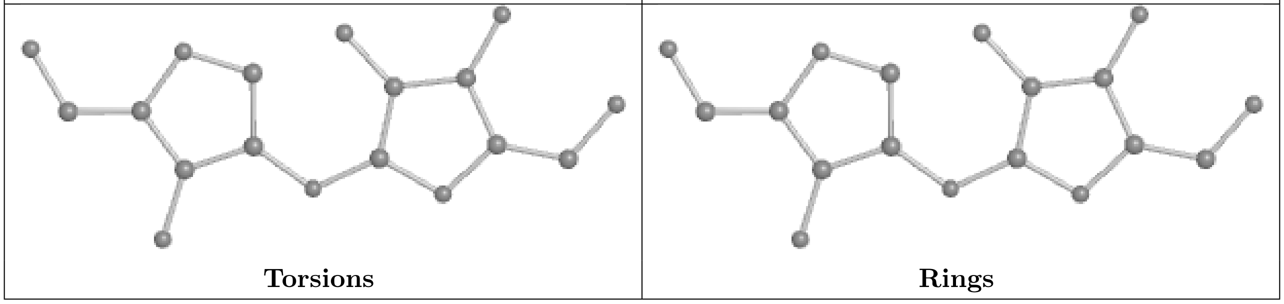
Rings

Oligosaccharide Chain d7



Bond lengths

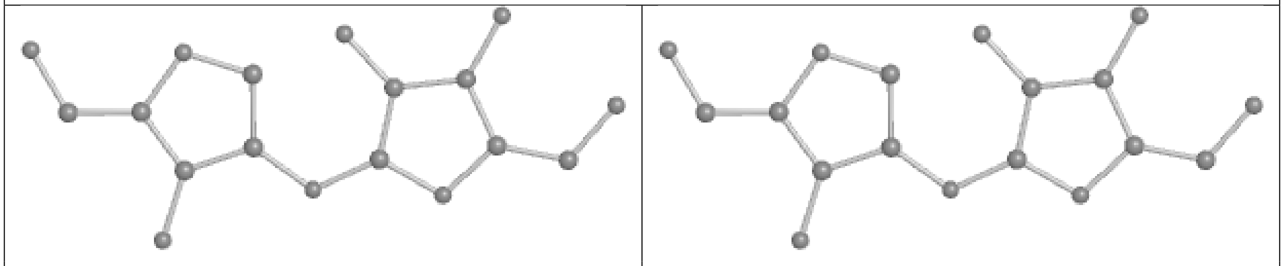
Bond angles



Torsions

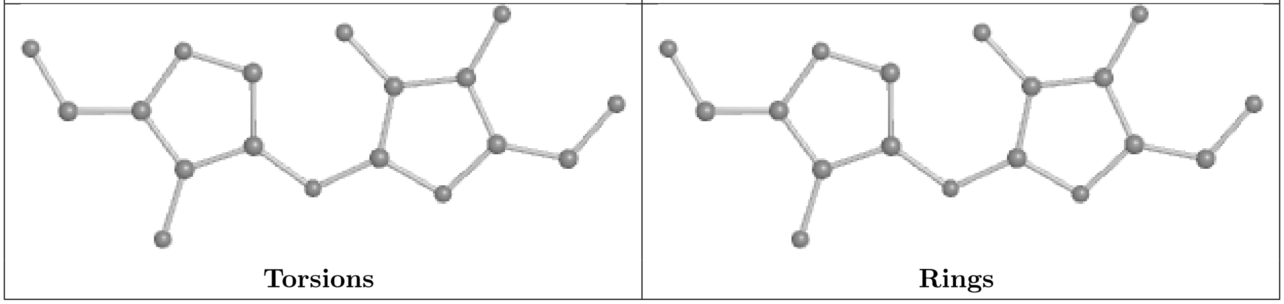
Rings

Oligosaccharide Chain d8



Bond lengths

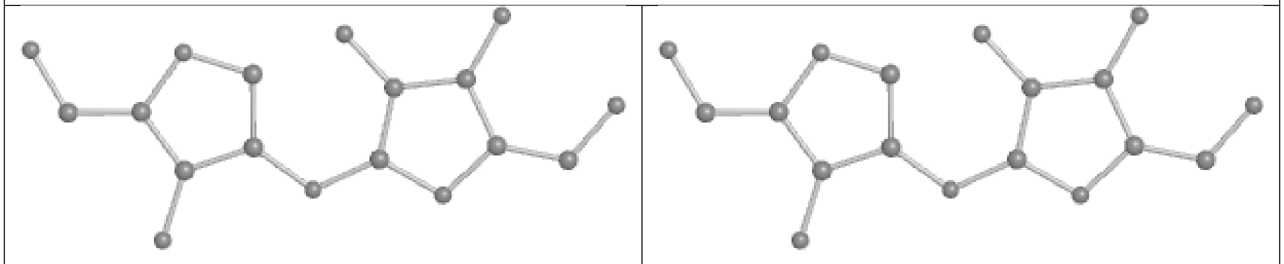
Bond angles



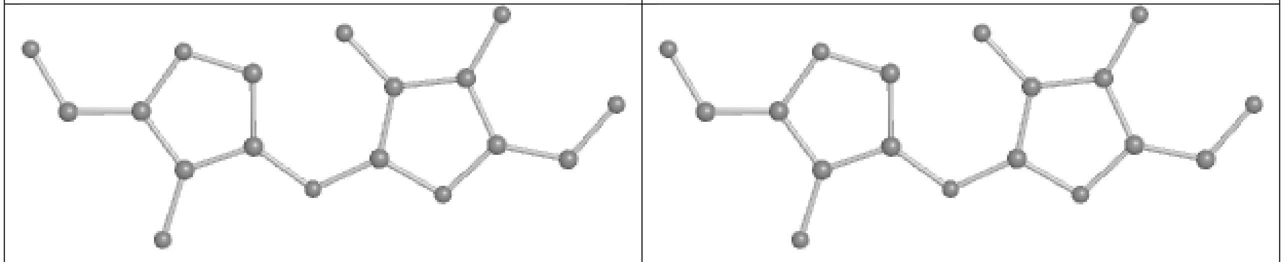
Torsions

Rings

Oligosaccharide Chain d6

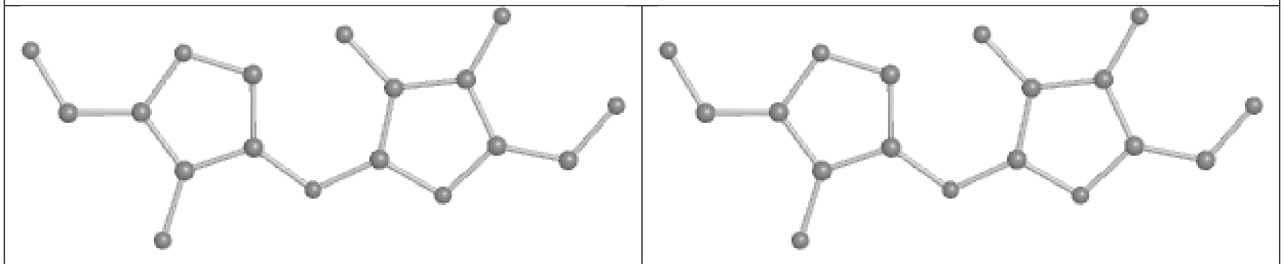


Bond lengths **Bond angles**

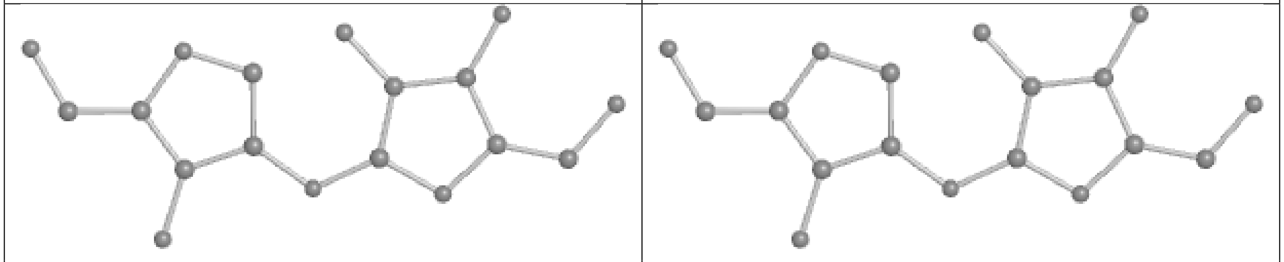


Torsions **Rings**

Oligosaccharide Chain d0

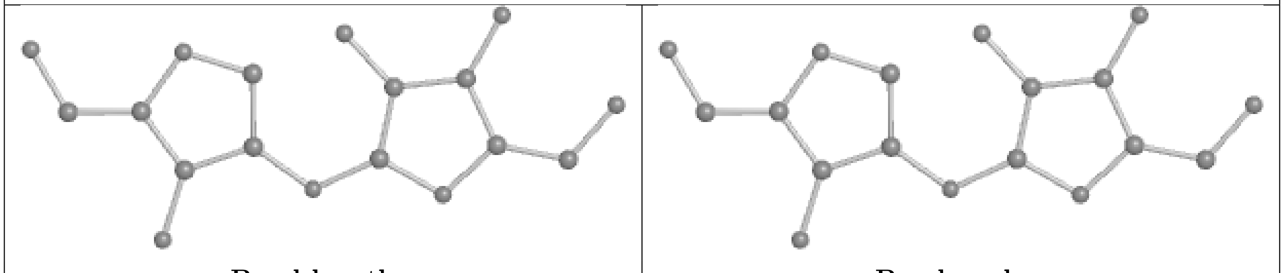


Bond lengths **Bond angles**



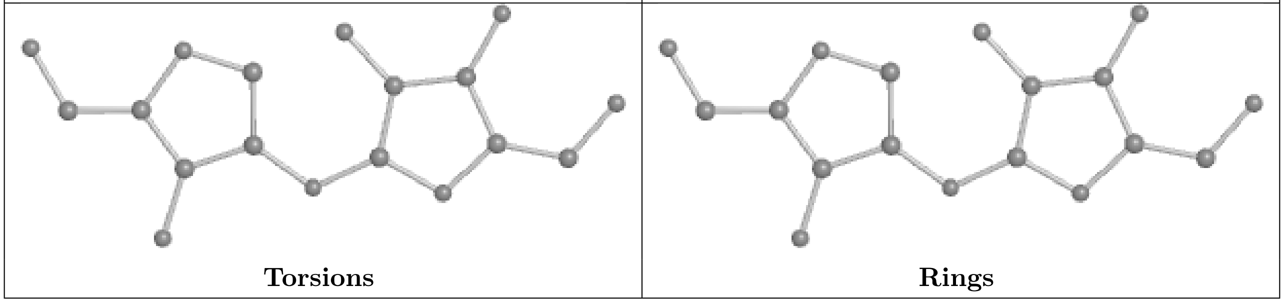
Torsions **Rings**

Oligosaccharide Chain F5



Bond lengths

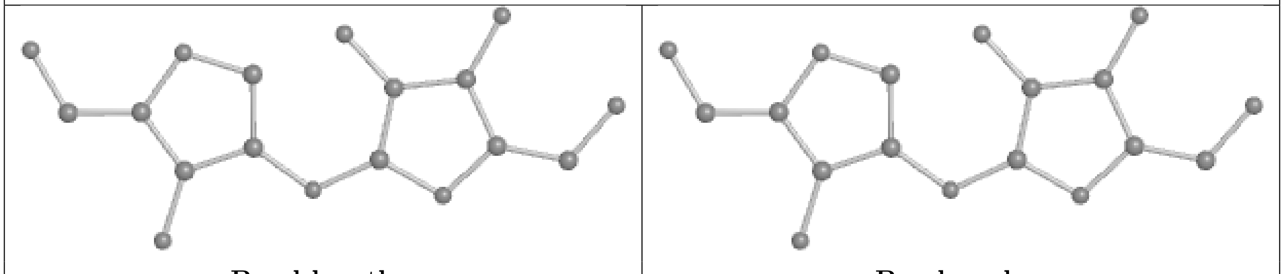
Bond angles



Torsions

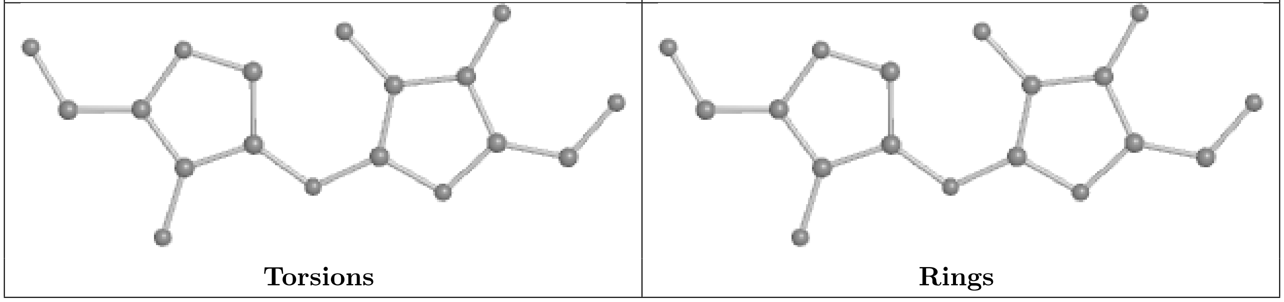
Rings

Oligosaccharide Chain F2



Bond lengths

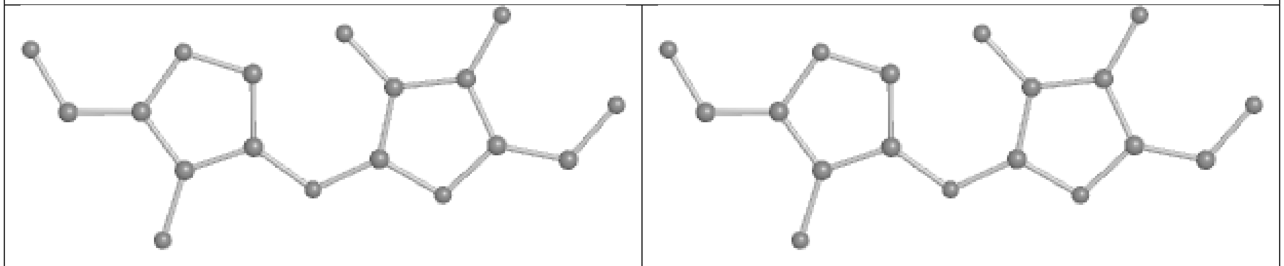
Bond angles



Torsions

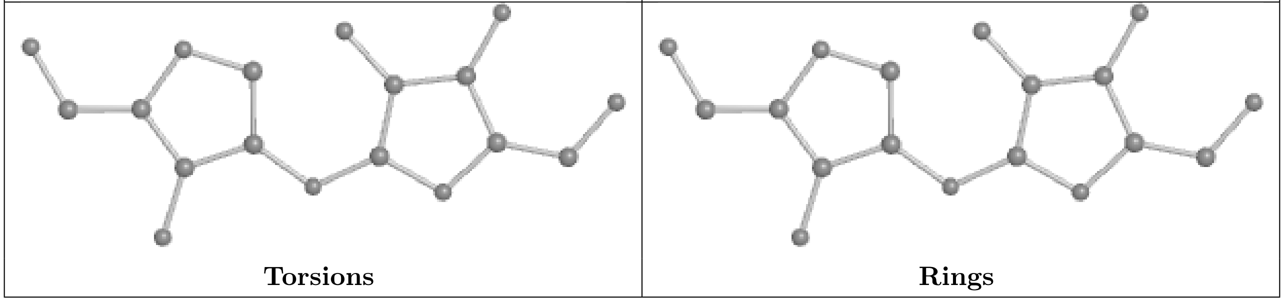
Rings

Oligosaccharide Chain E7



Bond lengths

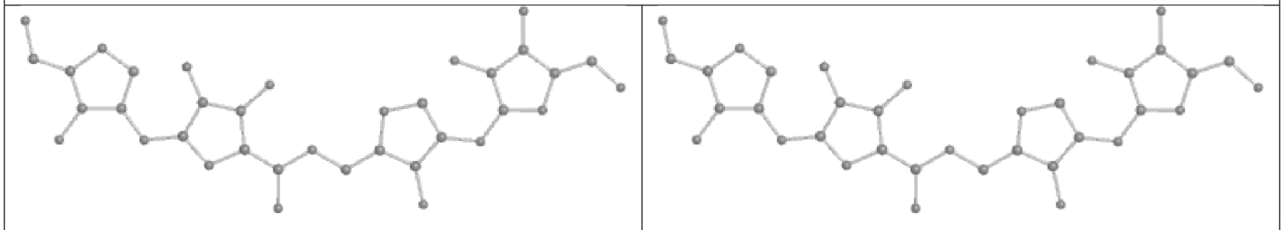
Bond angles



Torsions

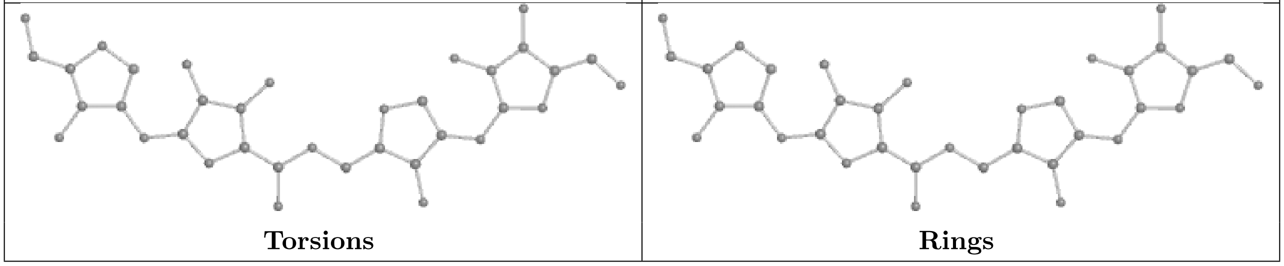
Rings

Oligosaccharide Chain A6



Bond lengths

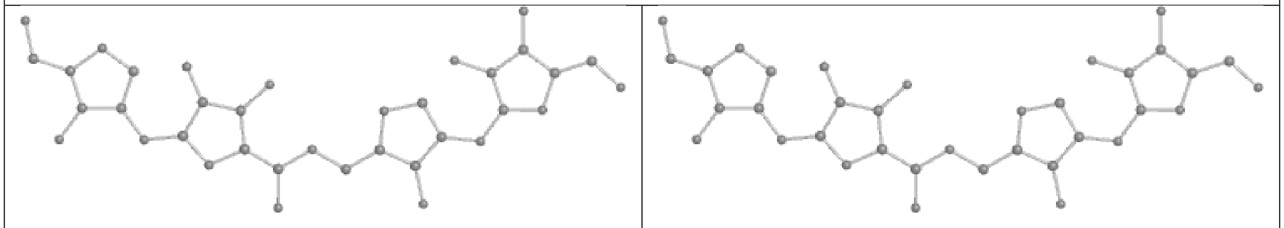
Bond angles



Torsions

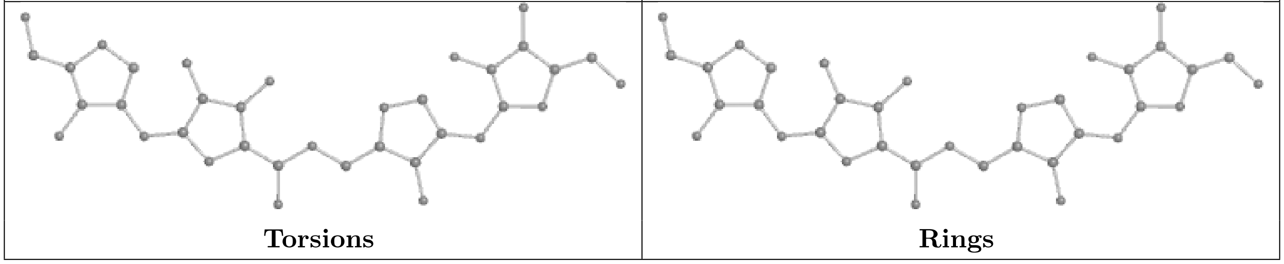
Rings

Oligosaccharide Chain A9



Bond lengths

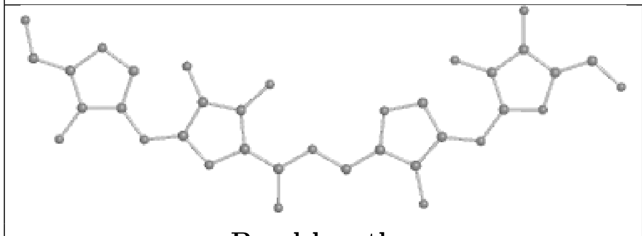
Bond angles

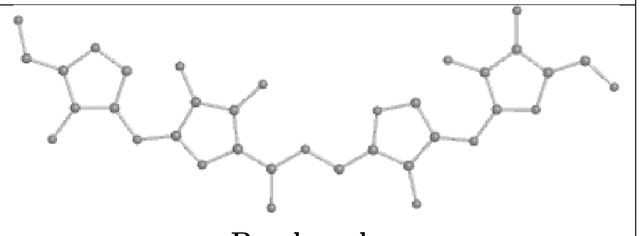


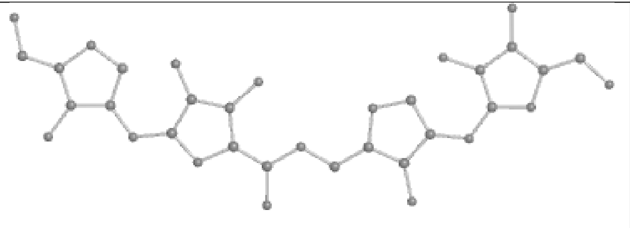
Torsions

Rings

Oligosaccharide Chain B6


Bond lengths


Bond angles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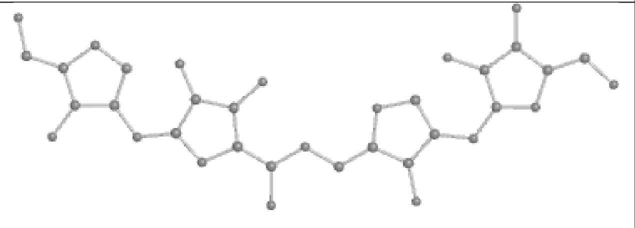
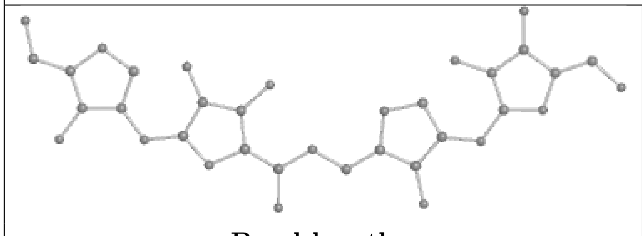
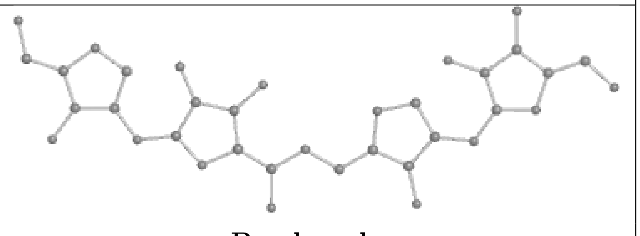
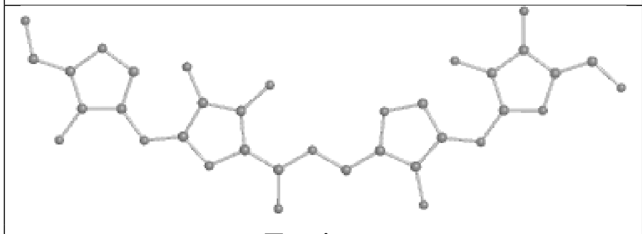

Rings

Oligosaccharide Chain F6


Bond lengths


Bond angles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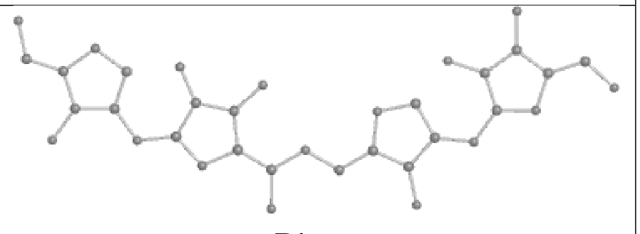
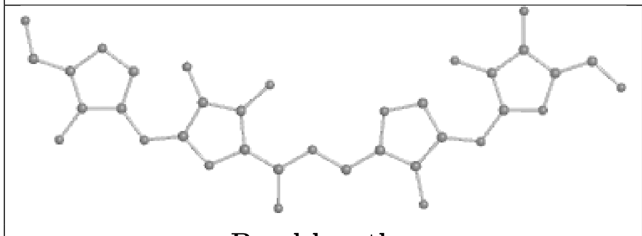

Rings

Oligosaccharide Chain F7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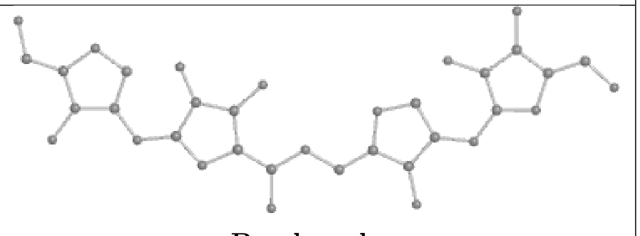
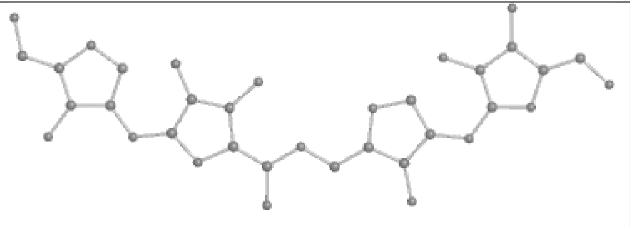
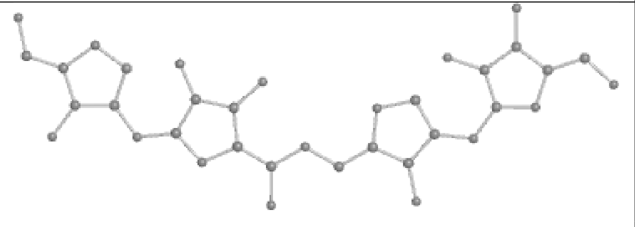
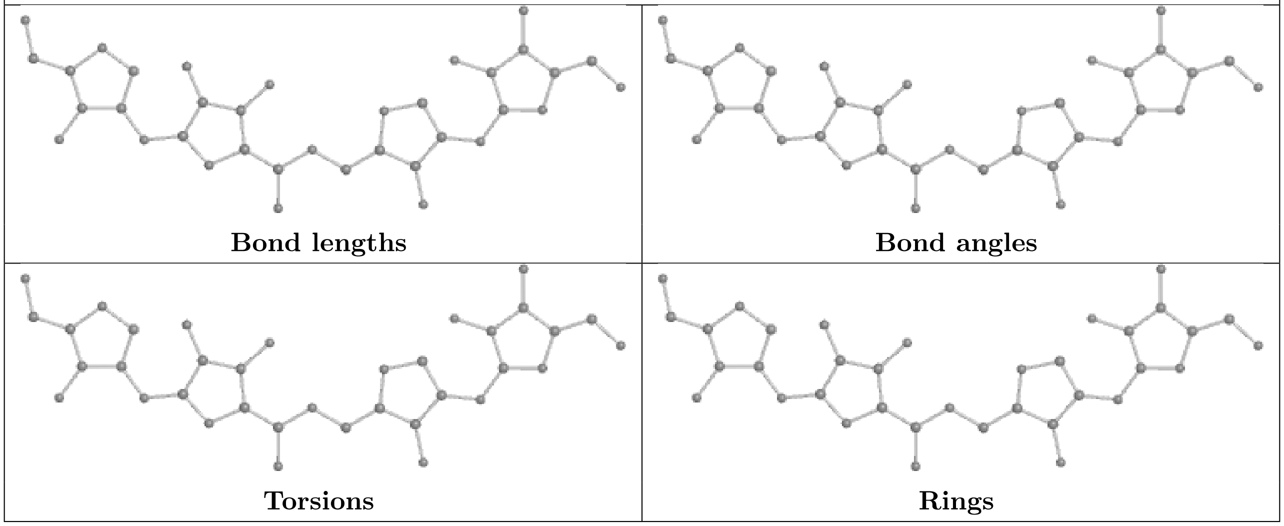

Bond angles


Torsions


Rings

Oligosaccharide Chain a6



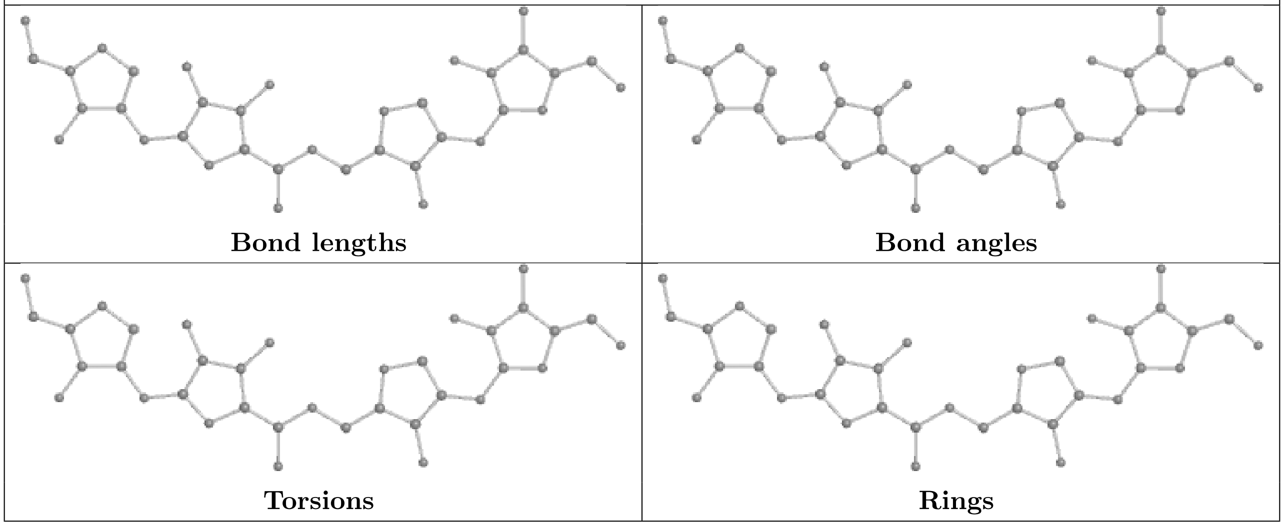
Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain a9



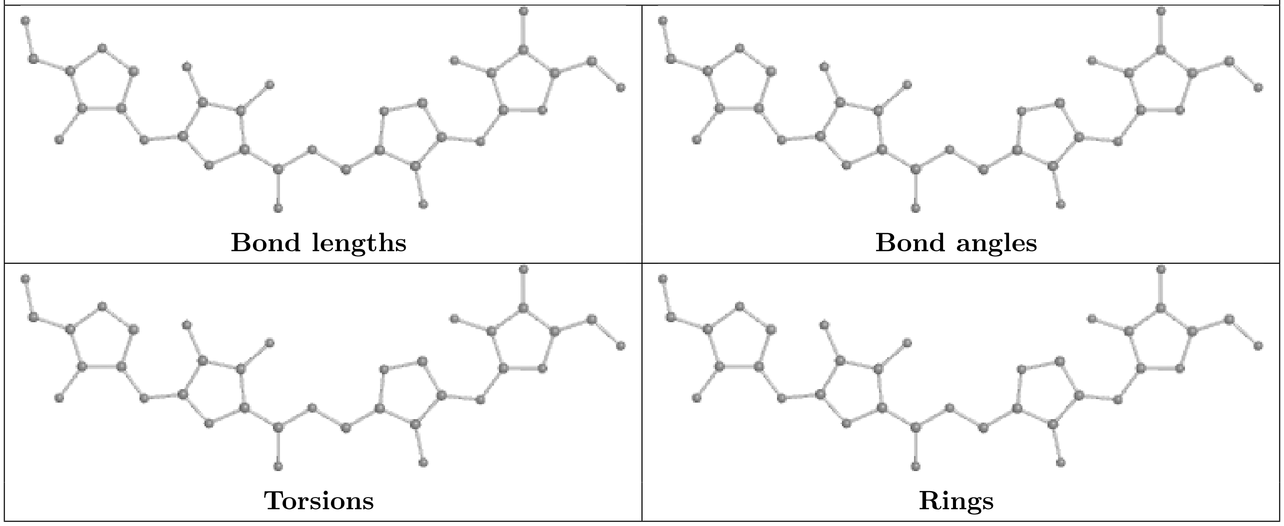
Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain b6



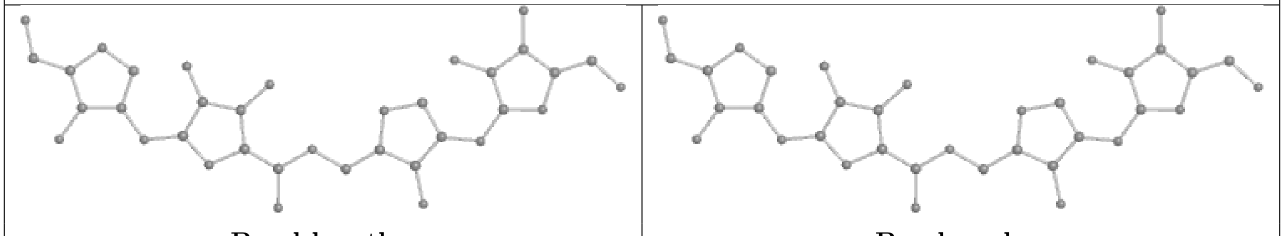
Bond lengths

Bond angles

Torsions

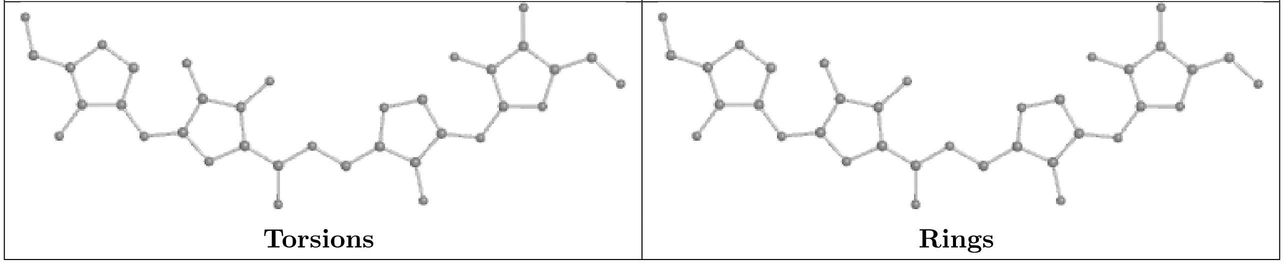
Rings

Oligosaccharide Chain f6



Bond lengths

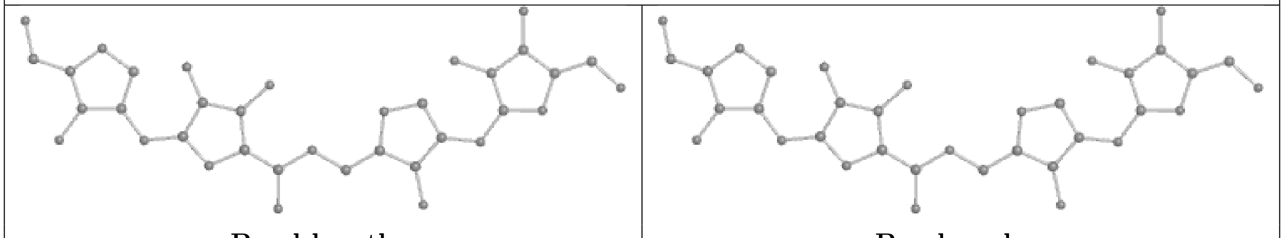
Bond angles



Torsions

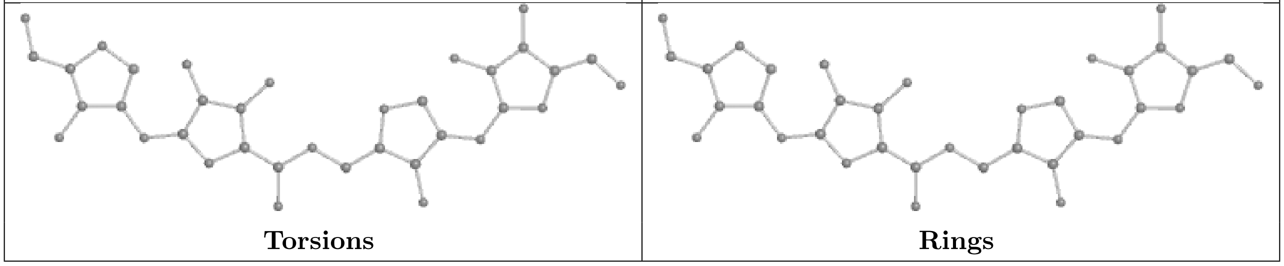
Rings

Oligosaccharide Chain f7



Bond lengths

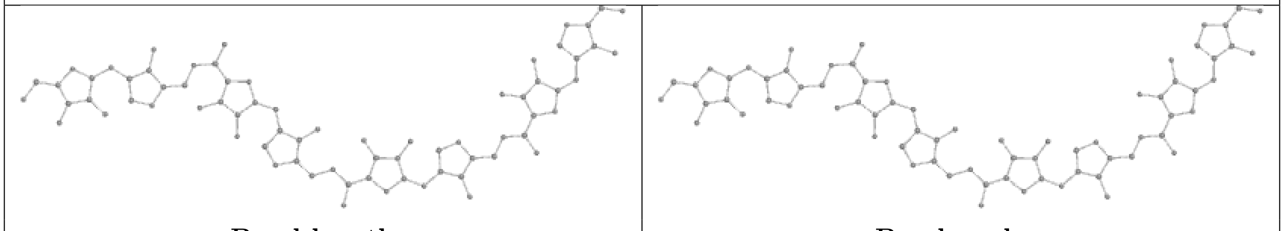
Bond angles



Torsions

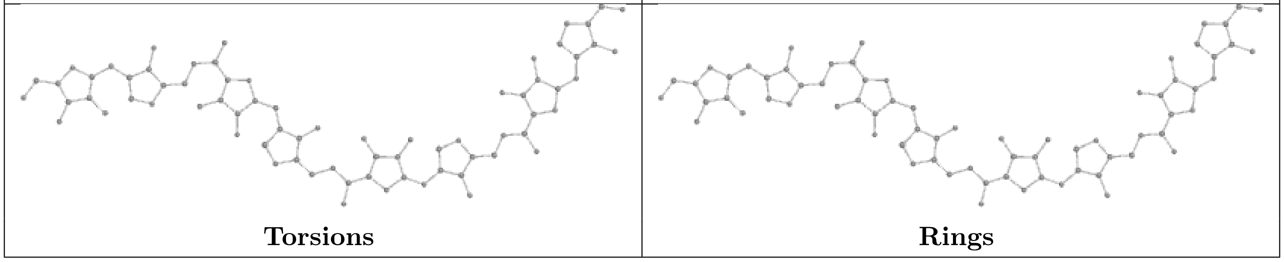
Rings

Oligosaccharide Chain E6



Bond lengths

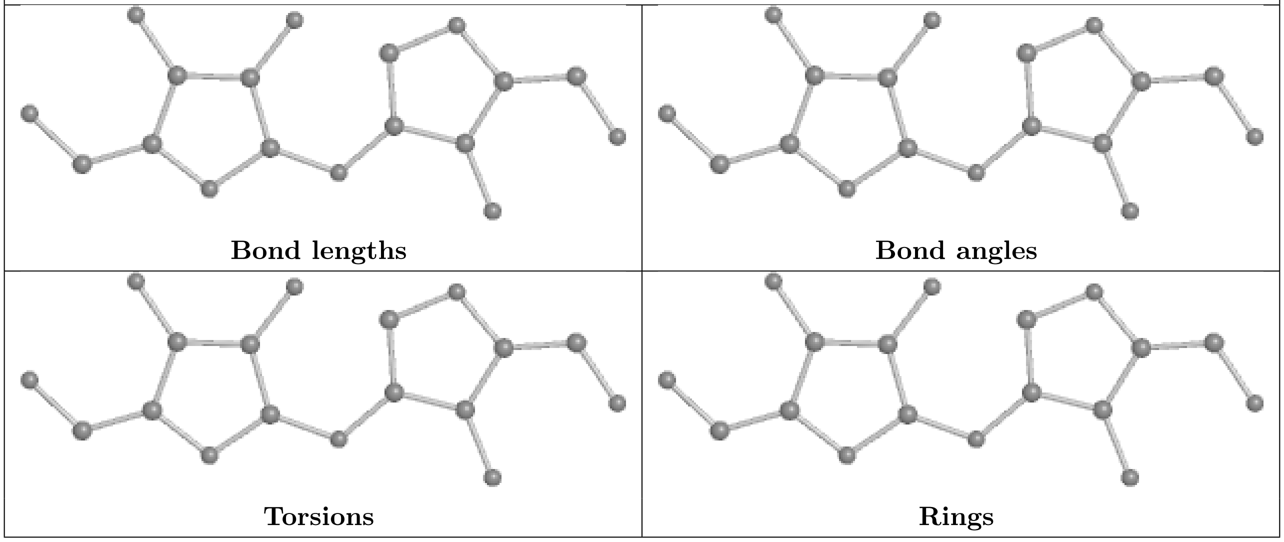
Bond angles



Torsions

Rings

Oligosaccharide Chain a4



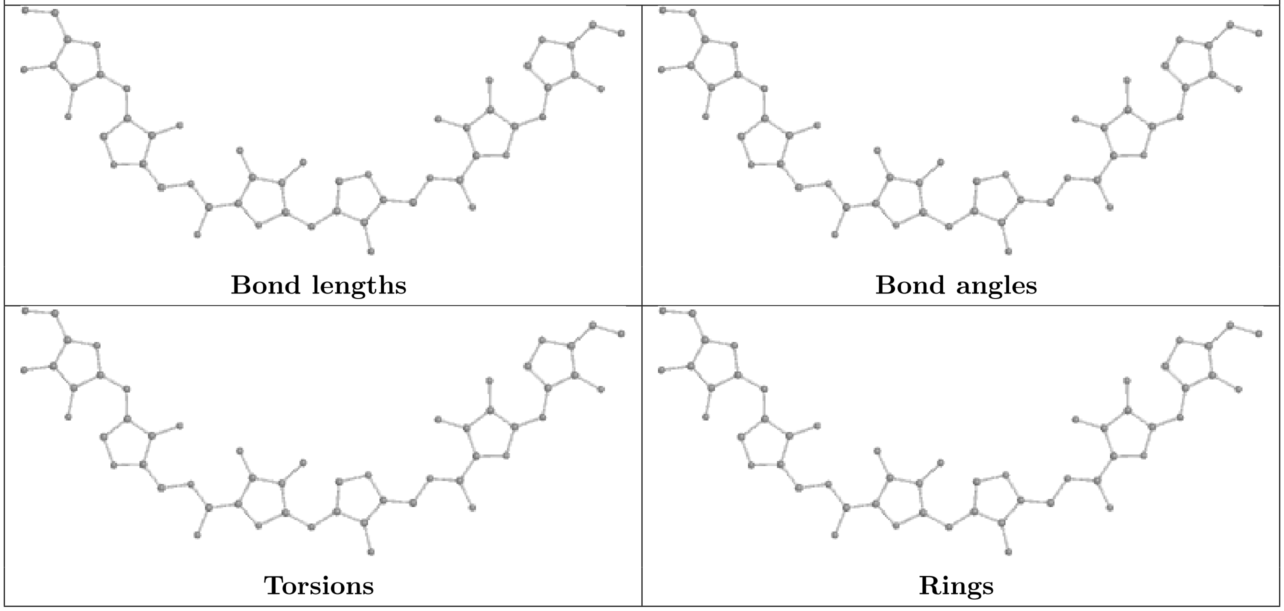
Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain e9



Bond lengths

Bond angles

Torsions

Rings

5.6 Ligand geometry ⓘ

140 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
9	A1AIO	B	2030	4	11,11,12	5.66	6 (54%)	14,15,17	1.55	2 (14%)
10	GLA	A	2063	1	11,11,12	1.74	3 (27%)	15,15,17	1.00	1 (6%)
9	A1AIO	A	2028	4	11,11,12	5.71	6 (54%)	14,15,17	1.46	2 (14%)
10	GLA	A	2058	1	11,11,12	1.71	3 (27%)	15,15,17	0.98	1 (6%)
9	A1AIO	B	2051	5	11,11,12	5.69	6 (54%)	14,15,17	1.43	2 (14%)
9	A1AIO	A	2039	6	11,11,12	5.70	6 (54%)	14,15,17	1.62	3 (21%)
9	A1AIO	A	2040	4	11,11,12	5.66	6 (54%)	14,15,17	1.57	2 (14%)
9	A1AIO	A	2027	4	11,11,12	5.69	6 (54%)	14,15,17	1.55	2 (14%)
9	A1AIO	A	2046	4	11,11,12	5.70	6 (54%)	14,15,17	1.54	2 (14%)
9	A1AIO	B	2003	5	11,11,12	5.70	6 (54%)	14,15,17	1.47	1 (7%)
9	A1AIO	B	2049	4	11,11,12	5.70	6 (54%)	14,15,17	1.51	2 (14%)
10	GLA	A	2069	1	11,11,12	1.73	3 (27%)	15,15,17	0.93	1 (6%)
9	A1AIO	B	2028	4	11,11,12	5.71	6 (54%)	14,15,17	1.35	2 (14%)
9	A1AIO	B	2056	5	11,11,12	5.72	6 (54%)	14,15,17	1.46	2 (14%)
10	GLA	B	2060	-	11,11,12	1.73	3 (27%)	15,15,17	1.02	1 (6%)
10	GLA	A	2059	1	11,11,12	0.40	0	15,15,17	0.77	1 (6%)
9	A1AIO	A	2009	4	11,11,12	5.69	6 (54%)	14,15,17	1.62	2 (14%)
9	A1AIO	B	2021	4	11,11,12	5.71	6 (54%)	14,15,17	1.34	2 (14%)
10	GLA	B	2065	1	11,11,12	1.69	3 (27%)	15,15,17	1.01	1 (6%)
9	A1AIO	B	2016	4	11,11,12	5.64	6 (54%)	14,15,17	1.51	3 (21%)
9	A1AIO	A	2038	4	11,11,12	5.66	6 (54%)	14,15,17	1.56	2 (14%)
9	A1AIO	A	2021	4	11,11,12	5.71	6 (54%)	14,15,17	1.40	2 (14%)
9	A1AIO	B	2020	4	11,11,12	5.67	6 (54%)	14,15,17	1.33	2 (14%)
9	A1AIO	A	2042	4	11,11,12	5.71	6 (54%)	14,15,17	1.52	2 (14%)
9	A1AIO	B	2045	4	11,11,12	5.71	6 (54%)	14,15,17	1.45	2 (14%)
9	A1AIO	B	2050	4	11,11,12	5.67	6 (54%)	14,15,17	1.50	2 (14%)
9	A1AIO	A	2048	4	11,11,12	5.70	6 (54%)	14,15,17	1.55	2 (14%)
9	A1AIO	A	2037	4	11,11,12	5.70	6 (54%)	14,15,17	1.48	2 (14%)
10	GLA	A	2064	1	11,11,12	1.72	3 (27%)	15,15,17	1.02	1 (6%)
9	A1AIO	B	2035	8	11,11,12	5.72	6 (54%)	14,15,17	1.54	2 (14%)
9	A1AIO	A	2054	6	11,11,12	5.73	6 (54%)	14,15,17	1.44	2 (14%)
9	A1AIO	B	2032	4	11,11,12	5.70	6 (54%)	14,15,17	1.62	2 (14%)
9	A1AIO	B	2037	4	11,11,12	5.69	6 (54%)	14,15,17	1.58	2 (14%)
9	A1AIO	B	2054	8	11,11,12	5.69	6 (54%)	14,15,17	1.26	2 (14%)
9	A1AIO	A	2041	4	11,11,12	5.72	6 (54%)	14,15,17	1.35	2 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#$\|Z\| > 2$	Counts	RMSZ	#$\|Z\| > 2$
9	A1AIO	A	2002	4	11,11,12	5.71	6 (54%)	14,15,17	1.49	2 (14%)
9	A1AIO	B	2052	5	11,11,12	5.66	6 (54%)	14,15,17	1.65	3 (21%)
9	A1AIO	A	2049	4	11,11,12	5.68	6 (54%)	14,15,17	1.55	2 (14%)
10	GLA	B	2068	1	11,11,12	1.74	3 (27%)	15,15,17	0.88	0
10	GLA	A	2070	1	11,11,12	1.73	3 (27%)	15,15,17	0.96	1 (6%)
9	A1AIO	B	2008	4	11,11,12	5.70	6 (54%)	14,15,17	1.67	3 (21%)
9	A1AIO	A	2018	4	11,11,12	5.68	6 (54%)	14,15,17	1.53	2 (14%)
9	A1AIO	B	2011	5	11,11,12	5.65	6 (54%)	14,15,17	1.64	2 (14%)
9	A1AIO	B	2048	4	11,11,12	5.70	6 (54%)	14,15,17	1.45	2 (14%)
9	A1AIO	B	2039	5	11,11,12	5.73	6 (54%)	14,15,17	1.48	1 (7%)
9	A1AIO	B	2055	8	11,11,12	5.67	6 (54%)	14,15,17	1.57	2 (14%)
9	A1AIO	B	2040	5	11,11,12	5.67	6 (54%)	14,15,17	1.60	2 (14%)
9	A1AIO	B	2027	4	11,11,12	5.71	6 (54%)	14,15,17	1.51	2 (14%)
10	GLA	B	2069	1	11,11,12	1.72	3 (27%)	15,15,17	0.91	0
9	A1AIO	A	2005	5	11,11,12	5.74	6 (54%)	14,15,17	1.45	2 (14%)
9	A1AIO	B	2023	4	11,11,12	5.66	6 (54%)	14,15,17	1.52	3 (21%)
9	A1AIO	B	2001	7	11,11,12	5.69	6 (54%)	14,15,17	1.65	2 (14%)
9	A1AIO	A	2051	5	11,11,12	5.72	6 (54%)	14,15,17	1.50	2 (14%)
10	GLA	B	2059	1	11,11,12	0.41	0	15,15,17	0.77	1 (6%)
9	A1AIO	B	2009	4	11,11,12	5.65	6 (54%)	14,15,17	1.79	2 (14%)
10	GLA	B	2066	-	11,11,12	1.74	3 (27%)	15,15,17	0.99	1 (6%)
9	A1AIO	B	2038	4	11,11,12	5.72	6 (54%)	14,15,17	1.51	2 (14%)
9	A1AIO	B	2010	4	11,11,12	5.70	6 (54%)	14,15,17	1.46	2 (14%)
9	A1AIO	A	2017	4	11,11,12	5.71	6 (54%)	14,15,17	1.40	1 (7%)
9	A1AIO	B	2053	5	11,11,12	5.68	6 (54%)	14,15,17	1.52	2 (14%)
9	A1AIO	A	2045	4	11,11,12	5.69	6 (54%)	14,15,17	1.55	2 (14%)
9	A1AIO	B	2004	4	11,11,12	5.70	6 (54%)	14,15,17	1.61	2 (14%)
9	A1AIO	B	2006	4	11,11,12	5.72	6 (54%)	14,15,17	1.61	2 (14%)
9	A1AIO	B	2024	4	11,11,12	5.70	6 (54%)	14,15,17	1.42	2 (14%)
9	A1AIO	B	2019	4	11,11,12	5.67	6 (54%)	14,15,17	1.59	2 (14%)
9	A1AIO	A	2053	6	11,11,12	5.70	6 (54%)	14,15,17	1.60	2 (14%)
9	A1AIO	B	2029	4	11,11,12	5.72	6 (54%)	14,15,17	1.47	2 (14%)
10	GLA	A	2068	1	11,11,12	1.74	3 (27%)	15,15,17	0.91	0
9	A1AIO	B	2017	4	11,11,12	5.68	6 (54%)	14,15,17	1.55	2 (14%)
9	A1AIO	A	2022	4	11,11,12	5.70	6 (54%)	14,15,17	1.48	2 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
9	A1AIO	A	2006	4	11,11,12	5.67	6 (54%)	14,15,17	1.71	2 (14%)
9	A1AIO	A	2026	4	11,11,12	5.70	6 (54%)	14,15,17	1.53	2 (14%)
9	A1AIO	A	2013	4	11,11,12	5.68	6 (54%)	14,15,17	1.46	2 (14%)
9	A1AIO	B	2033	4	11,11,12	5.66	6 (54%)	14,15,17	1.74	3 (21%)
9	A1AIO	A	2047	4	11,11,12	5.69	6 (54%)	14,15,17	1.55	2 (14%)
9	A1AIO	B	2036	4	11,11,12	5.71	6 (54%)	14,15,17	1.45	2 (14%)
10	GLA	A	2066	1	11,11,12	1.72	3 (27%)	15,15,17	0.92	0
9	A1AIO	A	2012	4	11,11,12	5.67	6 (54%)	14,15,17	1.58	2 (14%)
9	A1AIO	A	2033	4	11,11,12	5.72	6 (54%)	14,15,17	1.39	1 (7%)
9	A1AIO	A	2010	4	11,11,12	5.70	6 (54%)	14,15,17	1.43	2 (14%)
9	A1AIO	A	2031	4	11,11,12	5.70	6 (54%)	14,15,17	1.51	2 (14%)
10	GLA	A	2060	1	11,11,12	0.41	0	15,15,17	0.77	1 (6%)
10	GLA	B	2063	-	11,11,12	1.74	3 (27%)	15,15,17	1.22	1 (6%)
10	GLA	B	2067	1	11,11,12	1.73	3 (27%)	15,15,17	0.95	1 (6%)
9	A1AIO	A	2008	4	11,11,12	5.70	6 (54%)	14,15,17	1.49	2 (14%)
9	A1AIO	B	2046	4	11,11,12	5.64	6 (54%)	14,15,17	1.74	2 (14%)
9	A1AIO	B	2005	5	11,11,12	5.68	6 (54%)	14,15,17	1.46	3 (21%)
9	A1AIO	A	2025	4	11,11,12	5.70	6 (54%)	14,15,17	1.46	2 (14%)
9	A1AIO	A	2057	5	11,11,12	5.71	6 (54%)	14,15,17	1.41	2 (14%)
9	A1AIO	A	2055	6	11,11,12	5.71	6 (54%)	14,15,17	1.39	2 (14%)
9	A1AIO	B	2007	4	11,11,12	5.70	6 (54%)	14,15,17	1.52	2 (14%)
9	A1AIO	A	2023	4	11,11,12	5.70	6 (54%)	14,15,17	1.48	2 (14%)
9	A1AIO	A	2001	4	11,11,12	5.72	6 (54%)	14,15,17	1.49	2 (14%)
9	A1AIO	B	2013	4	11,11,12	5.69	6 (54%)	14,15,17	1.40	2 (14%)
9	A1AIO	B	2014	4	11,11,12	5.67	6 (54%)	14,15,17	1.46	2 (14%)
9	A1AIO	A	2003	5	11,11,12	5.70	6 (54%)	14,15,17	1.50	2 (14%)
9	A1AIO	B	2044	4	11,11,12	5.72	6 (54%)	14,15,17	1.45	2 (14%)
9	A1AIO	B	2026	4	11,11,12	5.69	6 (54%)	14,15,17	1.67	3 (21%)
9	A1AIO	A	2056	5	11,11,12	5.69	6 (54%)	14,15,17	1.59	2 (14%)
9	A1AIO	B	2047	4	11,11,12	5.67	6 (54%)	14,15,17	1.74	3 (21%)
9	A1AIO	A	2011	5	11,11,12	5.68	6 (54%)	14,15,17	1.56	2 (14%)
9	A1AIO	A	2044	5	11,11,12	5.71	6 (54%)	14,15,17	1.74	3 (21%)
10	GLA	A	2065	1	11,11,12	1.74	3 (27%)	15,15,17	0.93	1 (6%)
10	GLA	A	2067	1	11,11,12	1.75	3 (27%)	15,15,17	1.00	1 (6%)
9	A1AIO	A	2024	4	11,11,12	5.71	6 (54%)	14,15,17	1.52	2 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
9	A1AIO	B	2034	4	11,11,12	5.63	6 (54%)	14,15,17	1.74	2 (14%)
9	A1AIO	A	2019	4	11,11,12	5.70	6 (54%)	14,15,17	1.41	2 (14%)
9	A1AIO	B	2043	4	11,11,12	5.71	6 (54%)	14,15,17	1.45	2 (14%)
9	A1AIO	A	2007	4	11,11,12	5.71	6 (54%)	14,15,17	1.53	2 (14%)
10	GLA	B	2058	-	11,11,12	1.72	3 (27%)	15,15,17	1.02	1 (6%)
9	A1AIO	B	2041	4	11,11,12	5.68	6 (54%)	14,15,17	1.65	3 (21%)
9	A1AIO	A	2036	4	11,11,12	5.69	6 (54%)	14,15,17	1.47	2 (14%)
10	GLA	A	2061	1	11,11,12	1.75	3 (27%)	15,15,17	0.98	1 (6%)
10	GLA	A	2062	1	11,11,12	1.72	3 (27%)	15,15,17	0.98	1 (6%)
9	A1AIO	A	2020	4	11,11,12	5.70	6 (54%)	14,15,17	1.42	2 (14%)
9	A1AIO	A	2050	5	11,11,12	5.71	6 (54%)	14,15,17	1.31	2 (14%)
9	A1AIO	B	2057	5	11,11,12	5.68	6 (54%)	14,15,17	1.54	2 (14%)
9	A1AIO	A	2035	4	11,11,12	5.72	6 (54%)	14,15,17	1.36	2 (14%)
10	GLA	B	2070	-	11,11,12	1.73	3 (27%)	15,15,17	0.98	1 (6%)
9	A1AIO	B	2042	4	11,11,12	5.72	6 (54%)	14,15,17	1.44	2 (14%)
9	A1AIO	A	2034	4	11,11,12	5.70	6 (54%)	14,15,17	1.59	2 (14%)
9	A1AIO	B	2012	4	11,11,12	5.71	6 (54%)	14,15,17	1.47	2 (14%)
9	A1AIO	B	2015	4	11,11,12	5.68	6 (54%)	14,15,17	1.64	3 (21%)
9	A1AIO	A	2016	4	11,11,12	5.67	6 (54%)	14,15,17	1.59	2 (14%)
9	A1AIO	B	2031	4	11,11,12	5.65	6 (54%)	14,15,17	1.67	3 (21%)
9	A1AIO	A	2029	4	11,11,12	5.72	6 (54%)	14,15,17	1.36	2 (14%)
9	A1AIO	A	2014	4	11,11,12	5.70	6 (54%)	14,15,17	1.49	2 (14%)
10	GLA	B	2064	1	11,11,12	1.72	3 (27%)	15,15,17	0.97	1 (6%)
9	A1AIO	A	2004	4	11,11,12	5.69	6 (54%)	14,15,17	1.52	2 (14%)
9	A1AIO	B	2025	4	11,11,12	5.71	6 (54%)	14,15,17	1.53	2 (14%)
9	A1AIO	B	2022	4	11,11,12	5.66	6 (54%)	14,15,17	1.49	2 (14%)
9	A1AIO	B	2018	4	11,11,12	5.71	6 (54%)	14,15,17	1.37	2 (14%)
9	A1AIO	B	2002	4	11,11,12	5.68	6 (54%)	14,15,17	1.57	2 (14%)
9	A1AIO	A	2032	4	11,11,12	5.67	6 (54%)	14,15,17	1.53	2 (14%)
9	A1AIO	A	2043	5	11,11,12	5.73	6 (54%)	14,15,17	1.52	2 (14%)
9	A1AIO	A	2030	4	11,11,12	5.70	6 (54%)	14,15,17	1.38	2 (14%)
9	A1AIO	A	2052	5	11,11,12	5.69	6 (54%)	14,15,17	1.50	2 (14%)
9	A1AIO	A	2015	4	11,11,12	5.70	6 (54%)	14,15,17	1.39	2 (14%)
10	GLA	B	2061	1	11,11,12	1.74	3 (27%)	15,15,17	0.91	0
10	GLA	B	2062	1	11,11,12	1.73	3 (27%)	15,15,17	0.96	1 (6%)

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
9	A1AIO	B	2030	4	1/1/4/5	4/6/19/22	0/1/1/1
10	GLA	A	2063	1	-	2/2/19/22	0/1/1/1
9	A1AIO	A	2028	4	-	0/6/19/22	0/1/1/1
10	GLA	A	2058	1	-	1/2/19/22	0/1/1/1
9	A1AIO	B	2051	5	-	1/6/19/22	0/1/1/1
9	A1AIO	A	2039	6	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2040	4	1/1/4/5	3/6/19/22	0/1/1/1
9	A1AIO	A	2027	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2046	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2003	5	-	3/6/19/22	0/1/1/1
9	A1AIO	B	2049	4	-	0/6/19/22	0/1/1/1
10	GLA	A	2069	1	-	1/2/19/22	0/1/1/1
9	A1AIO	B	2028	4	-	4/6/19/22	0/1/1/1
9	A1AIO	B	2056	5	-	0/6/19/22	0/1/1/1
10	GLA	B	2060	-	-	2/2/19/22	0/1/1/1
10	GLA	A	2059	1	-	0/2/19/22	0/1/1/1
9	A1AIO	A	2009	4	1/1/4/5	0/6/19/22	0/1/1/1
9	A1AIO	B	2021	4	-	3/6/19/22	0/1/1/1
10	GLA	B	2065	1	-	2/2/19/22	0/1/1/1
9	A1AIO	B	2016	4	1/1/4/5	6/6/19/22	0/1/1/1
9	A1AIO	A	2038	4	1/1/4/5	3/6/19/22	0/1/1/1
9	A1AIO	A	2021	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2020	4	-	4/6/19/22	0/1/1/1
9	A1AIO	A	2042	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2045	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2050	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2048	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2037	4	1/1/4/5	0/6/19/22	0/1/1/1
10	GLA	A	2064	1	-	2/2/19/22	0/1/1/1
9	A1AIO	B	2035	8	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2054	6	-	1/6/19/22	0/1/1/1
9	A1AIO	B	2032	4	1/1/4/5	2/6/19/22	0/1/1/1
9	A1AIO	B	2037	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2054	8	-	6/6/19/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	A1AIO	A	2041	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2002	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2052	5	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2049	4	-	2/6/19/22	0/1/1/1
10	GLA	B	2068	1	-	2/2/19/22	0/1/1/1
10	GLA	A	2070	1	-	0/2/19/22	0/1/1/1
9	A1AIO	B	2008	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2018	4	1/1/4/5	0/6/19/22	0/1/1/1
9	A1AIO	B	2011	5	1/1/4/5	2/6/19/22	0/1/1/1
9	A1AIO	B	2048	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2039	5	-	1/6/19/22	0/1/1/1
9	A1AIO	B	2055	8	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2040	5	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2027	4	-	0/6/19/22	0/1/1/1
10	GLA	B	2069	1	-	2/2/19/22	0/1/1/1
9	A1AIO	A	2005	5	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2023	4	-	4/6/19/22	0/1/1/1
9	A1AIO	B	2001	7	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2051	5	-	0/6/19/22	0/1/1/1
10	GLA	B	2059	1	-	0/2/19/22	0/1/1/1
9	A1AIO	B	2009	4	1/1/4/5	0/6/19/22	0/1/1/1
10	GLA	B	2066	-	-	1/2/19/22	0/1/1/1
9	A1AIO	B	2038	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2010	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2017	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2053	5	1/1/4/5	2/6/19/22	0/1/1/1
9	A1AIO	A	2045	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2004	4	1/1/4/5	2/6/19/22	0/1/1/1
9	A1AIO	B	2006	4	1/1/4/5	2/6/19/22	0/1/1/1
9	A1AIO	B	2024	4	-	1/6/19/22	0/1/1/1
9	A1AIO	B	2019	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2053	6	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2029	4	-	0/6/19/22	0/1/1/1
10	GLA	A	2068	1	-	0/2/19/22	0/1/1/1
9	A1AIO	B	2017	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2022	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2006	4	1/1/4/5	1/6/19/22	0/1/1/1
9	A1AIO	A	2026	4	-	0/6/19/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	A1AIO	A	2013	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2033	4	1/1/4/5	0/6/19/22	0/1/1/1
9	A1AIO	A	2047	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2036	4	-	2/6/19/22	0/1/1/1
10	GLA	A	2066	1	-	0/2/19/22	0/1/1/1
9	A1AIO	A	2012	4	1/1/4/5	0/6/19/22	0/1/1/1
9	A1AIO	A	2033	4	-	1/6/19/22	0/1/1/1
9	A1AIO	A	2010	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2031	4	-	0/6/19/22	0/1/1/1
10	GLA	A	2060	1	-	0/2/19/22	0/1/1/1
10	GLA	B	2063	-	-	2/2/19/22	0/1/1/1
10	GLA	B	2067	1	-	2/2/19/22	0/1/1/1
9	A1AIO	A	2008	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2046	4	1/1/4/5	2/6/19/22	0/1/1/1
9	A1AIO	B	2005	5	-	6/6/19/22	0/1/1/1
9	A1AIO	A	2025	4	1/1/4/5	0/6/19/22	0/1/1/1
9	A1AIO	A	2057	5	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2055	6	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2007	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2023	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2001	4	-	1/6/19/22	0/1/1/1
9	A1AIO	B	2013	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2014	4	1/1/4/5	3/6/19/22	0/1/1/1
9	A1AIO	A	2003	5	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2044	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2026	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2056	5	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2047	4	1/1/4/5	0/6/19/22	0/1/1/1
9	A1AIO	A	2011	5	1/1/4/5	0/6/19/22	0/1/1/1
9	A1AIO	A	2044	5	-	2/6/19/22	0/1/1/1
10	GLA	A	2065	1	-	2/2/19/22	0/1/1/1
10	GLA	A	2067	1	-	0/2/19/22	0/1/1/1
9	A1AIO	A	2024	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2034	4	1/1/4/5	2/6/19/22	0/1/1/1
9	A1AIO	A	2019	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2043	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2007	4	-	0/6/19/22	0/1/1/1
10	GLA	B	2058	-	-	2/2/19/22	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	A1AIO	B	2041	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2036	4	-	0/6/19/22	0/1/1/1
10	GLA	A	2061	1	-	0/2/19/22	0/1/1/1
10	GLA	A	2062	1	-	0/2/19/22	0/1/1/1
9	A1AIO	A	2020	4	-	1/6/19/22	0/1/1/1
9	A1AIO	A	2050	5	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2057	5	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2035	4	1/1/4/5	5/6/19/22	0/1/1/1
10	GLA	B	2070	-	-	0/2/19/22	0/1/1/1
9	A1AIO	B	2042	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2034	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2012	4	1/1/4/5	0/6/19/22	0/1/1/1
9	A1AIO	B	2015	4	-	1/6/19/22	0/1/1/1
9	A1AIO	A	2016	4	1/1/4/5	1/6/19/22	0/1/1/1
9	A1AIO	B	2031	4	1/1/4/5	1/6/19/22	0/1/1/1
9	A1AIO	A	2029	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2014	4	1/1/4/5	0/6/19/22	0/1/1/1
10	GLA	B	2064	1	-	0/2/19/22	0/1/1/1
9	A1AIO	A	2004	4	1/1/4/5	2/6/19/22	0/1/1/1
9	A1AIO	B	2025	4	-	2/6/19/22	0/1/1/1
9	A1AIO	B	2022	4	-	0/6/19/22	0/1/1/1
9	A1AIO	B	2018	4	-	4/6/19/22	0/1/1/1
9	A1AIO	B	2002	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2032	4	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2043	5	-	0/6/19/22	0/1/1/1
9	A1AIO	A	2030	4	-	2/6/19/22	0/1/1/1
9	A1AIO	A	2052	5	1/1/4/5	1/6/19/22	0/1/1/1
9	A1AIO	A	2015	4	-	0/6/19/22	0/1/1/1
10	GLA	B	2061	1	-	2/2/19/22	0/1/1/1
10	GLA	B	2062	1	-	1/2/19/22	0/1/1/1

The worst 5 of 753 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	2043	A1AIO	C05-C04	-15.64	1.28	1.53
9	B	2039	A1AIO	C05-C04	-15.61	1.28	1.53
9	A	2005	A1AIO	C05-C04	-15.61	1.28	1.53
9	A	2029	A1AIO	C05-C04	-15.59	1.28	1.53
9	A	2033	A1AIO	C05-C04	-15.58	1.28	1.53

The worst 5 of 258 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	B	2026	A1AIO	C02-C03-C04	-4.96	109.23	115.86
9	A	2044	A1AIO	C02-C03-C04	-4.83	109.40	115.86
9	B	2033	A1AIO	C02-C03-C04	-4.81	109.42	115.86
9	B	2047	A1AIO	C02-C03-C04	-4.80	109.44	115.86
9	B	2006	A1AIO	C02-C03-C04	-4.73	109.54	115.86

5 of 29 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
9	A	2004	A1AIO	C06
9	A	2006	A1AIO	C06
9	A	2009	A1AIO	C06
9	A	2011	A1AIO	C06
9	A	2012	A1AIO	C06

5 of 166 torsion outliers are listed below:

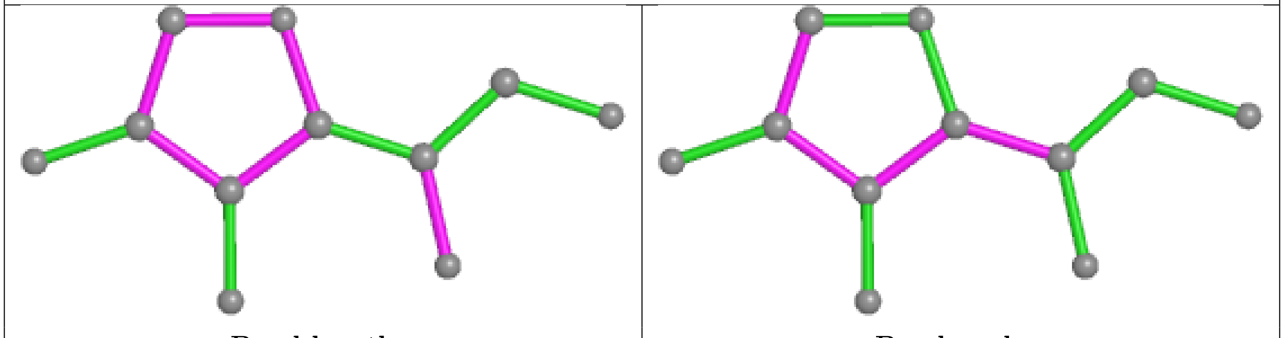
Mol	Chain	Res	Type	Atoms
9	A	2002	A1AIO	O12-C01-C02-O11
9	A	2005	A1AIO	O12-C01-C02-O11
9	A	2030	A1AIO	C01-C02-C03-O07
9	A	2033	A1AIO	C01-C02-C03-O07
9	A	2035	A1AIO	O12-C01-C02-C03

There are no ring outliers.

No monomer is involved in short contacts.

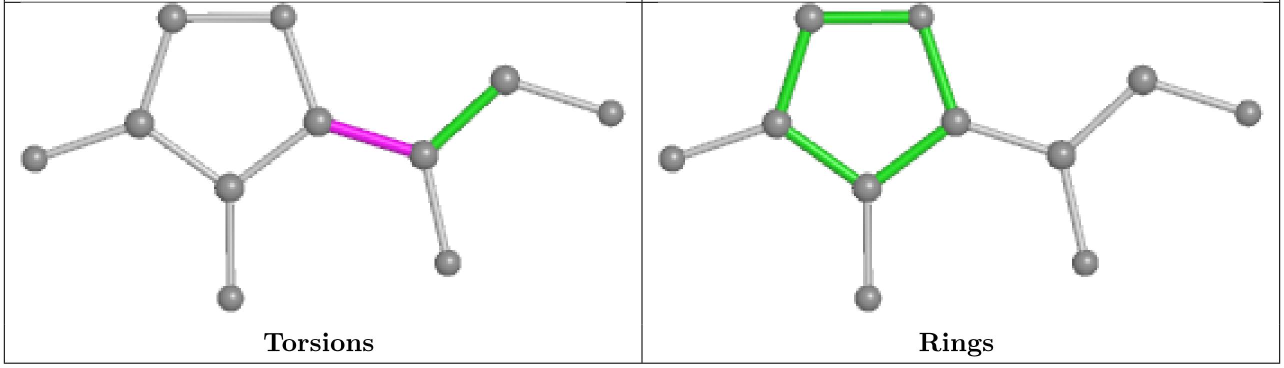
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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 A1AIO B 2030



Bond lengths

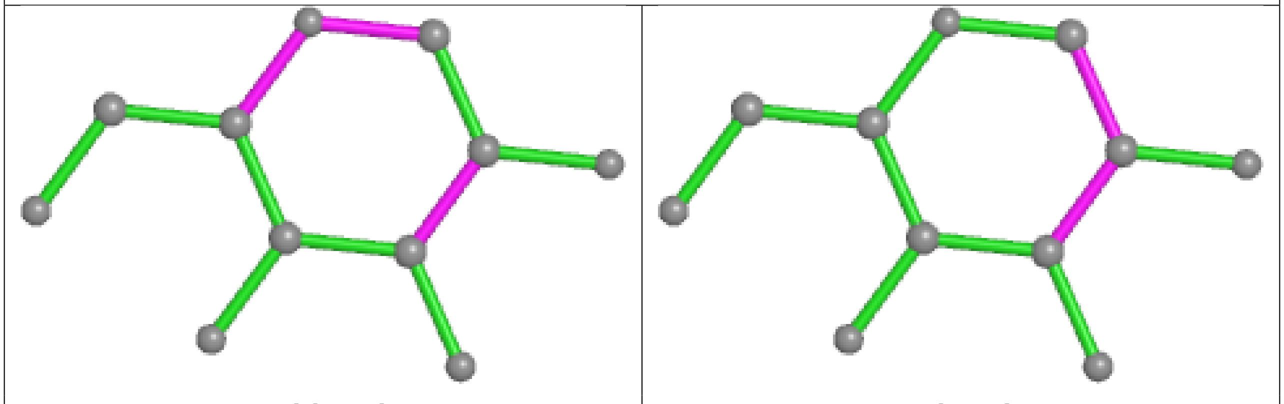
Bond angles



Torsions

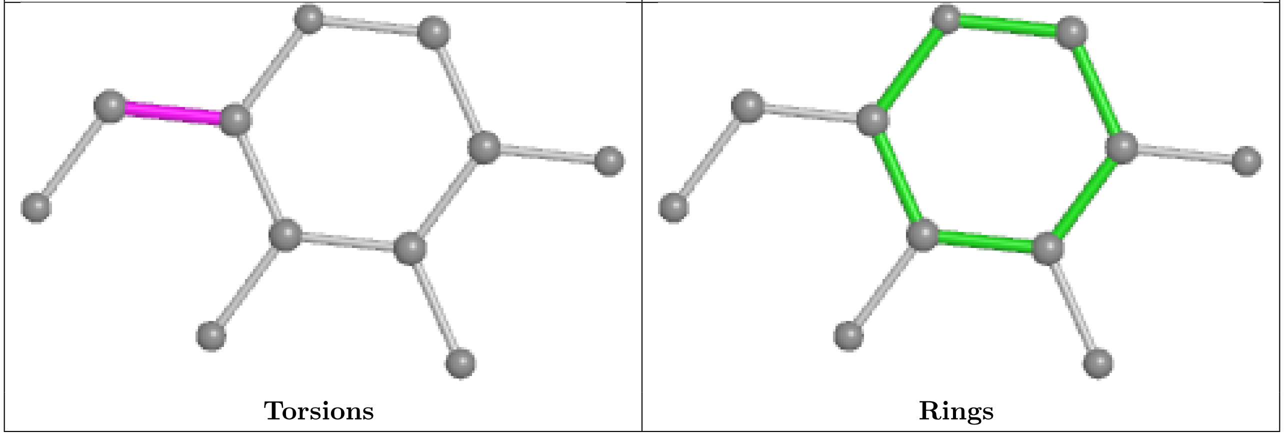
Rings

Ligand GLA A 2063



Bond lengths

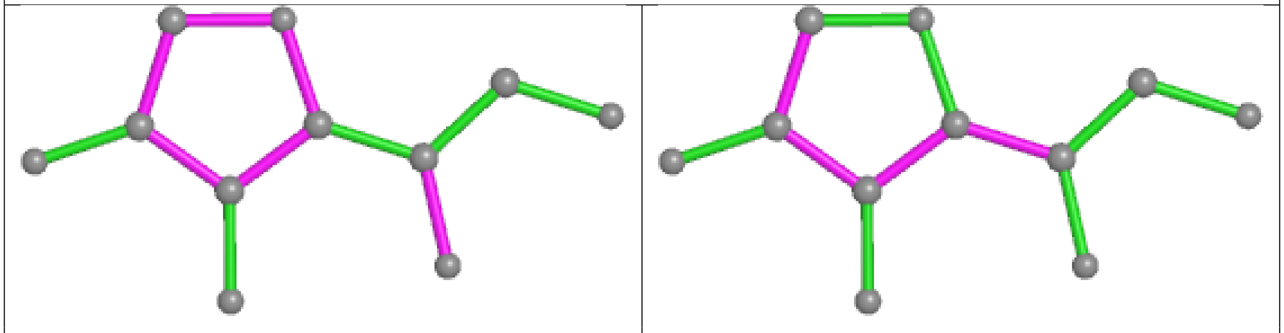
Bond angles



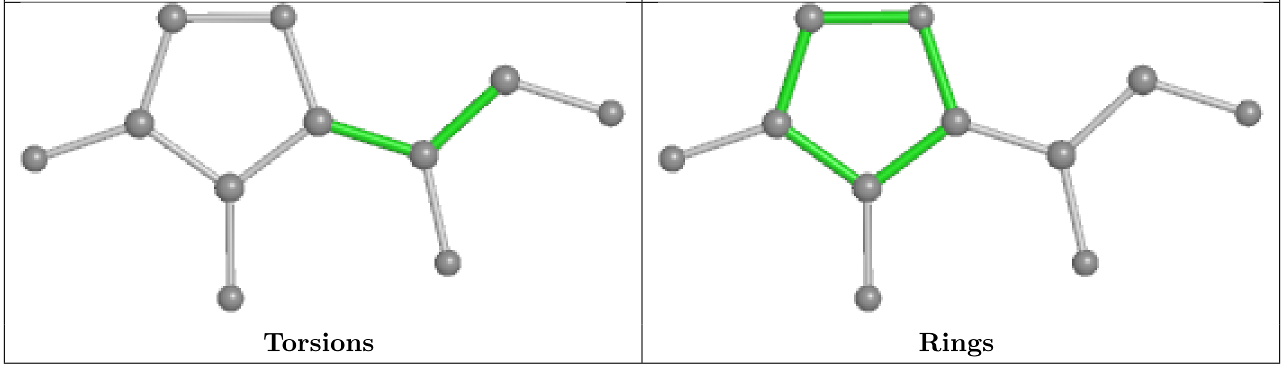
Torsions

Rings

Ligand A1AIO A 2028

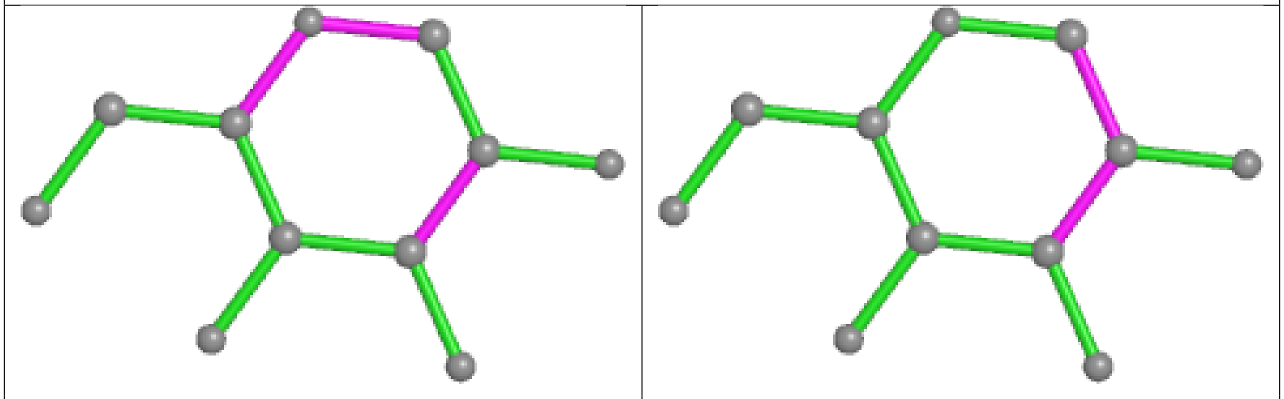


Bond lengths Bond angles

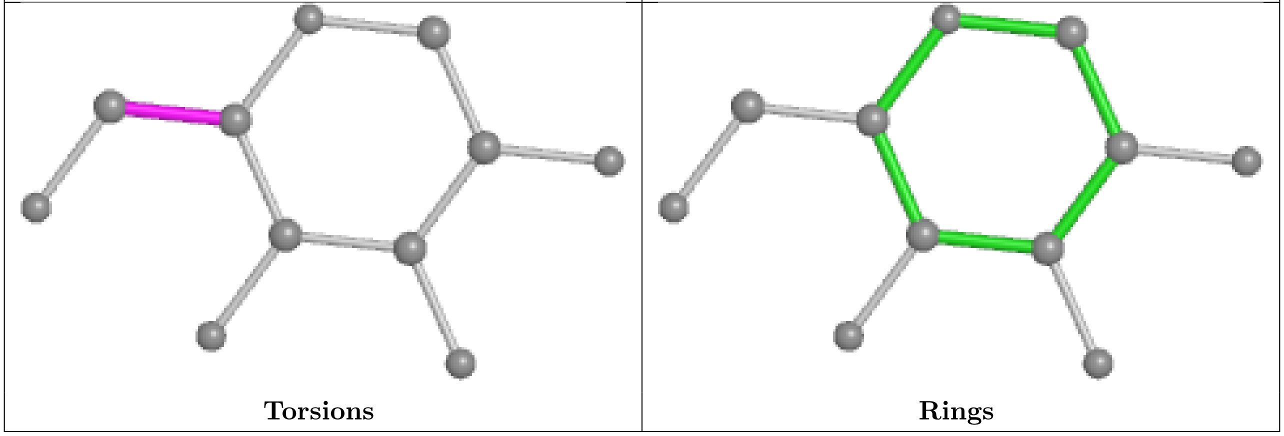


Torsions Rings

Ligand GLA A 2058

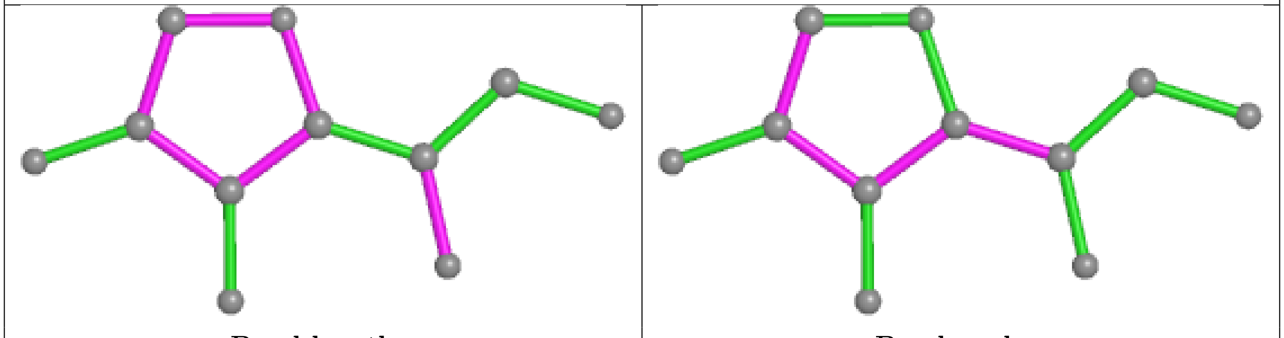


Bond lengths Bond angles

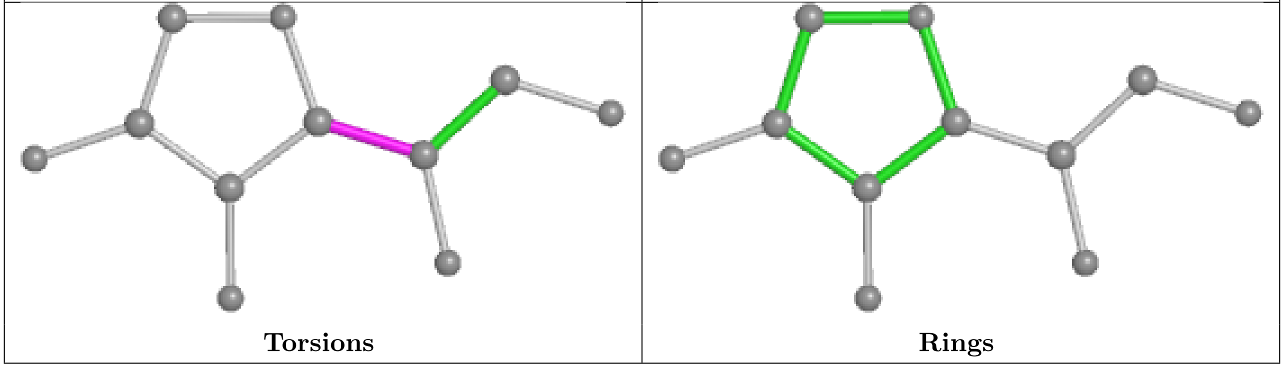


Torsions Rings

Ligand A1AIO B 2051

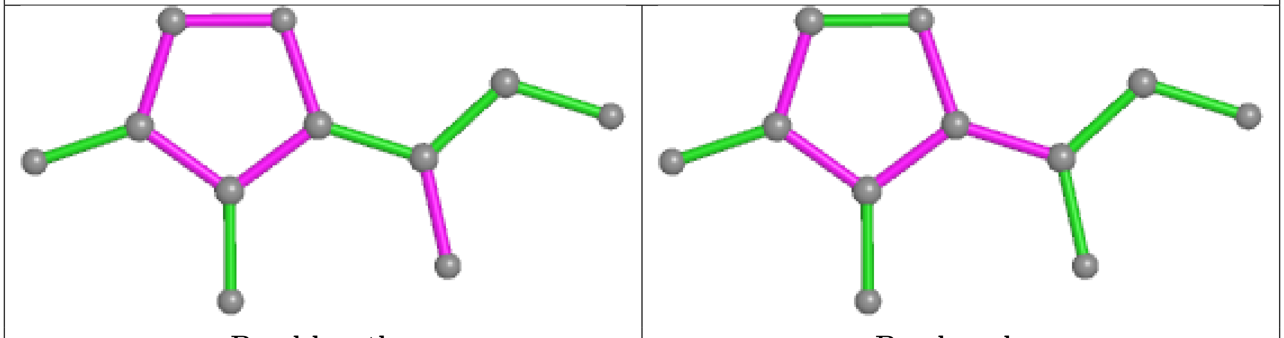


Bond lengths Bond angles

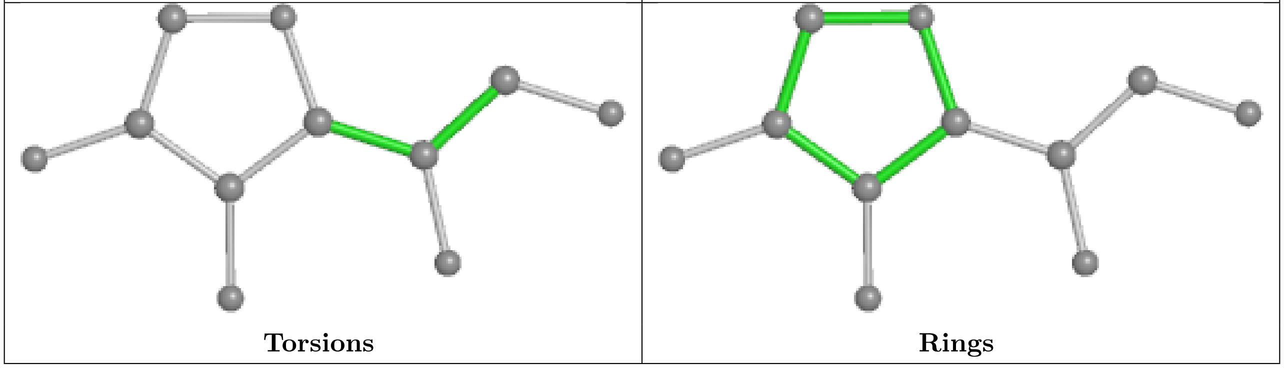


Torsions Rings

Ligand A1AIO A 2039

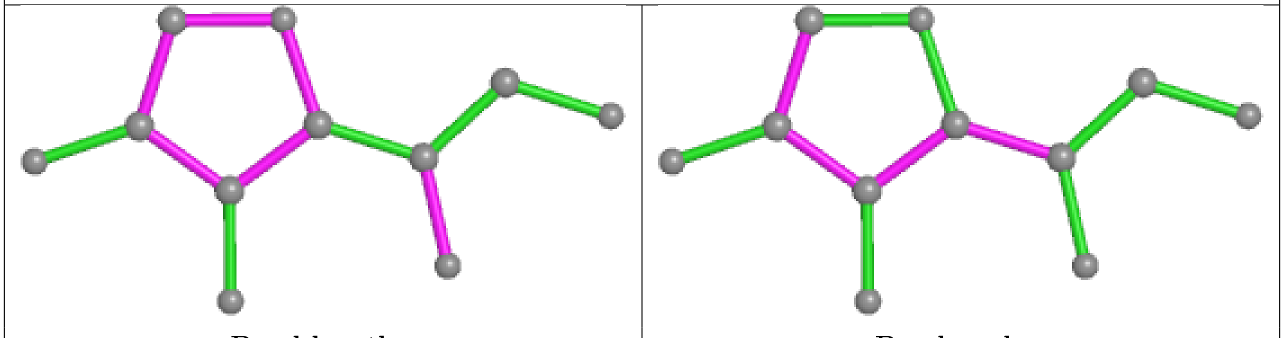


Bond lengths Bond angles



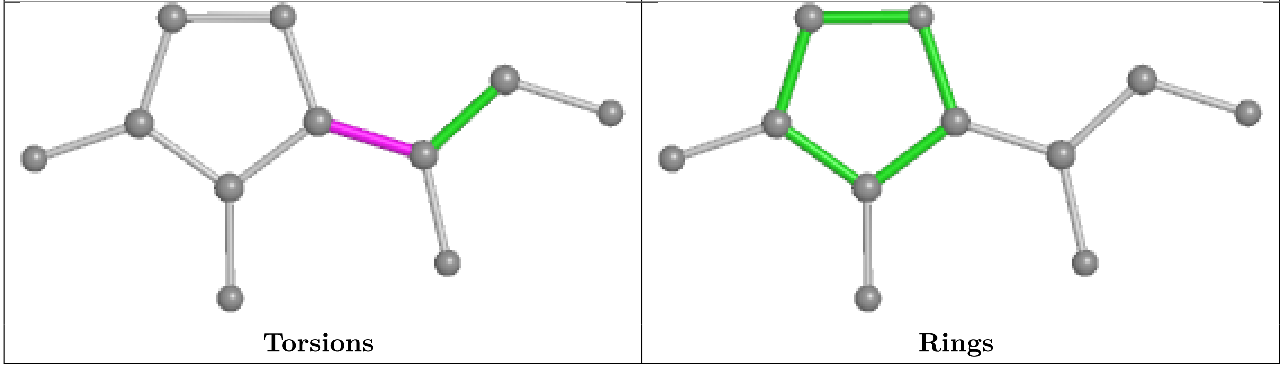
Torsions Rings

Ligand A1AIO A 2040



Bond lengths

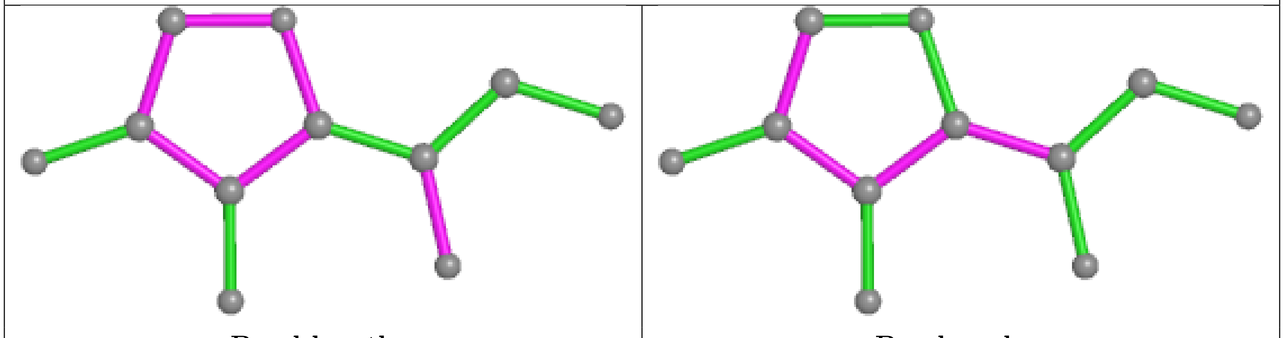
Bond angles



Torsions

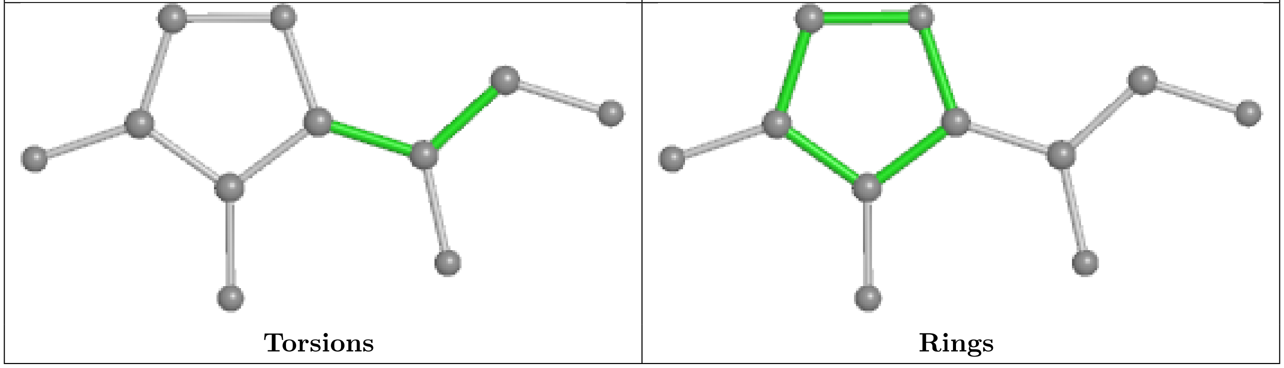
Rings

Ligand A1AIO A 2027



Bond lengths

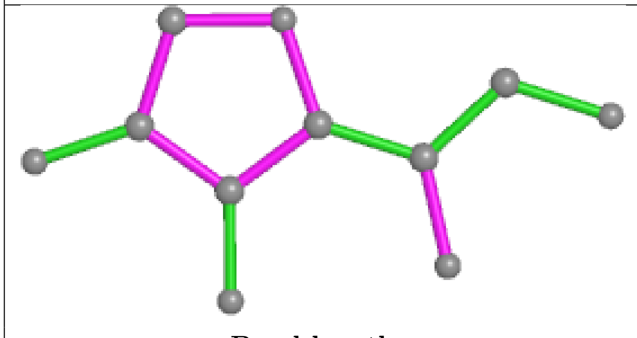
Bond angles



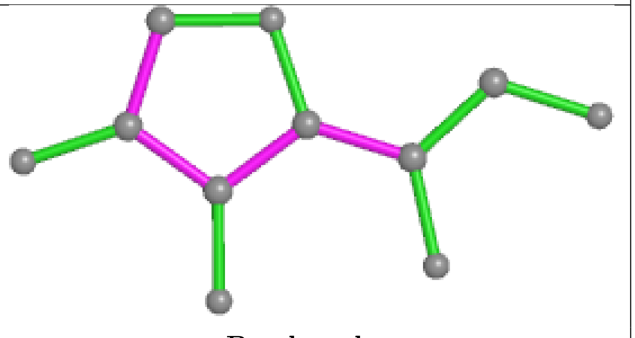
Torsions

Rings

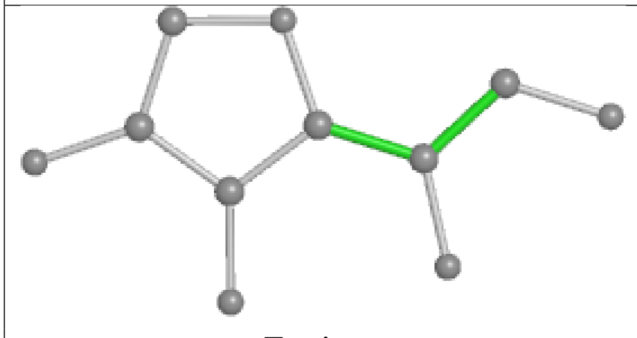
Ligand A1AIO A 2046



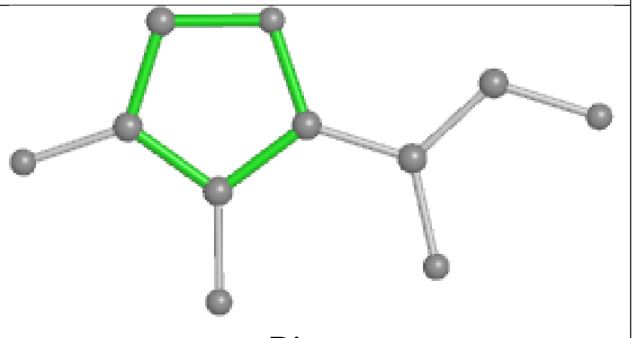
Bond lengths



Bond angles

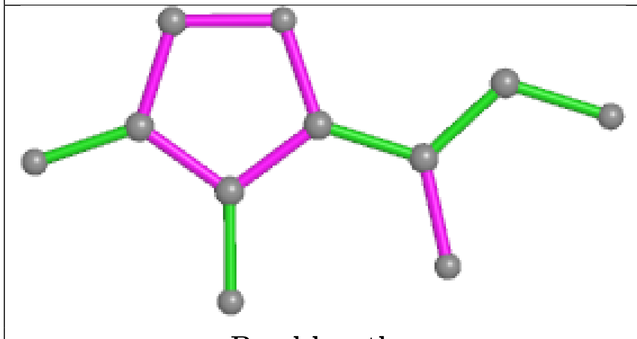


Torsions



Rings

Ligand A1AIO B 2003



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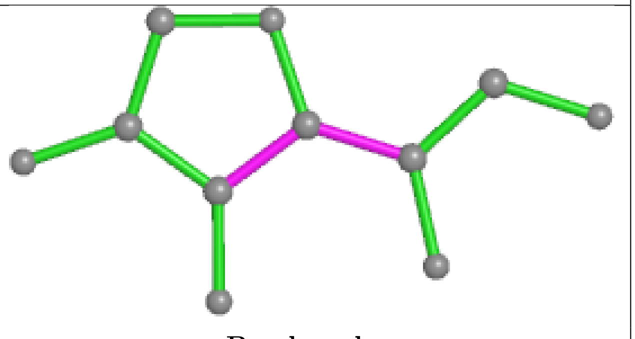
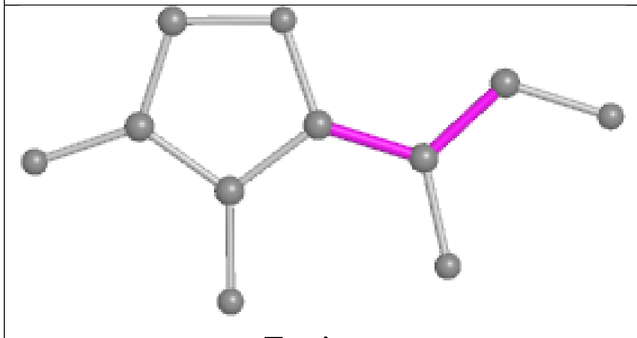
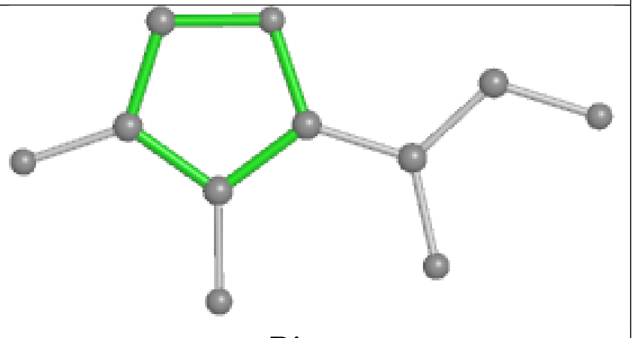


Bond angles

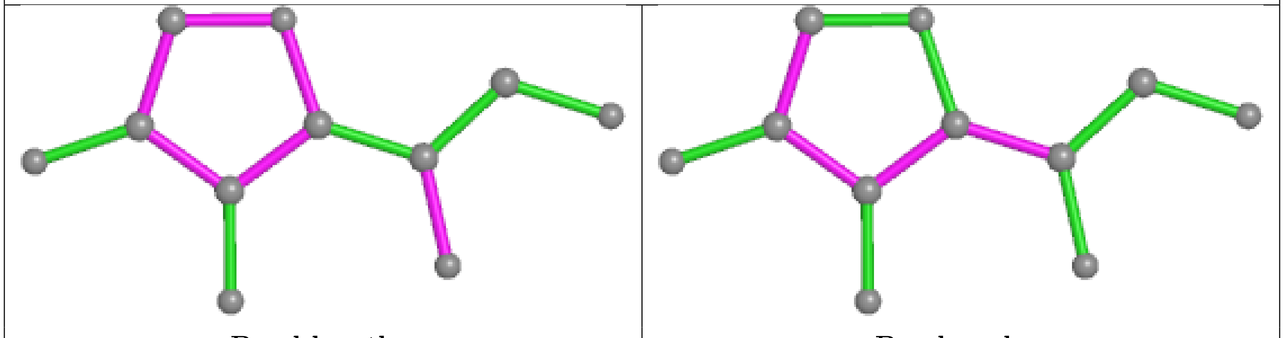


Torsions



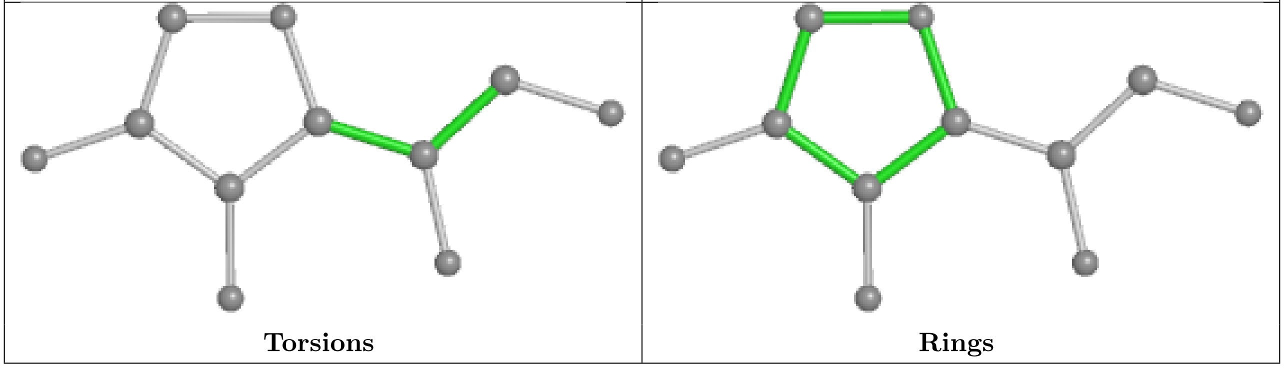
Rings

Ligand A1AIO B 2049



Bond lengths

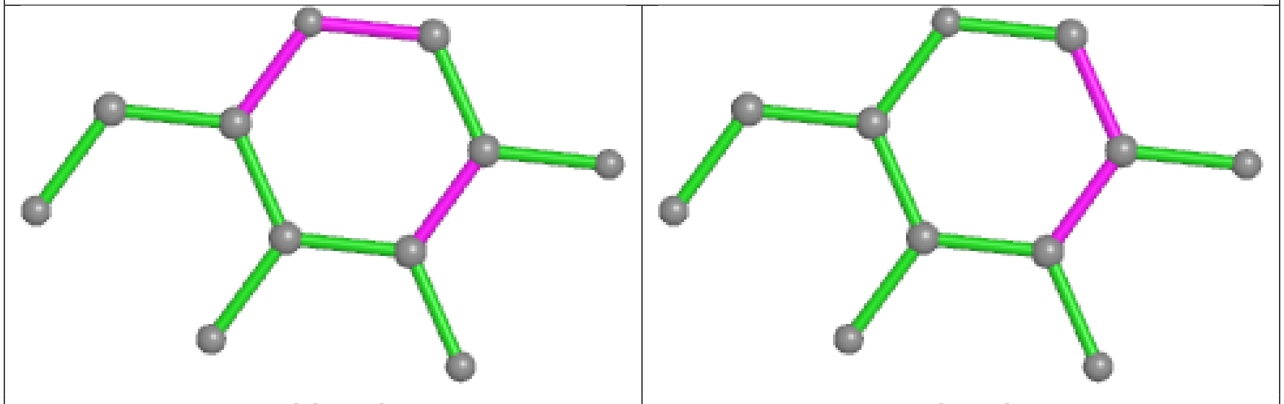
Bond angles



Torsions

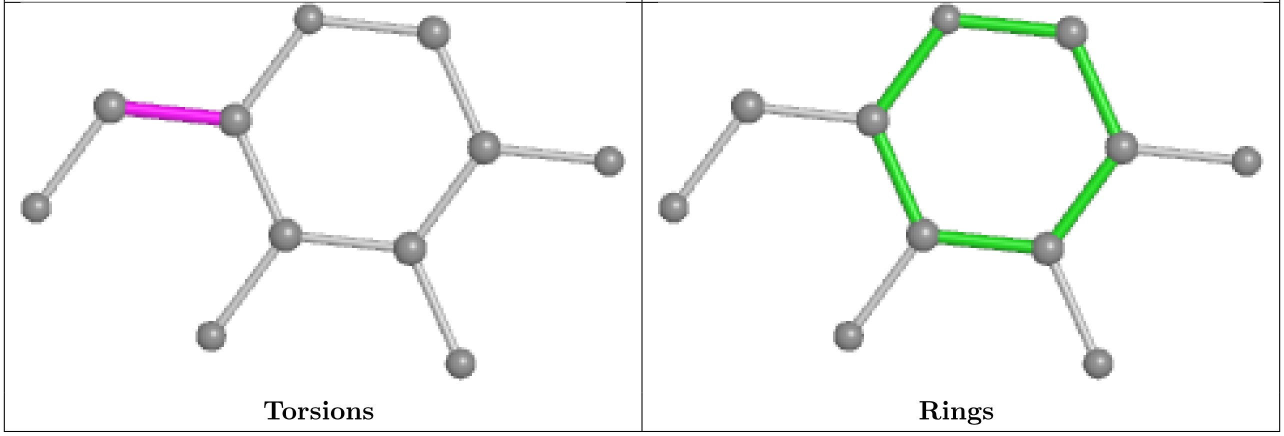
Rings

Ligand GLA A 2069



Bond lengths

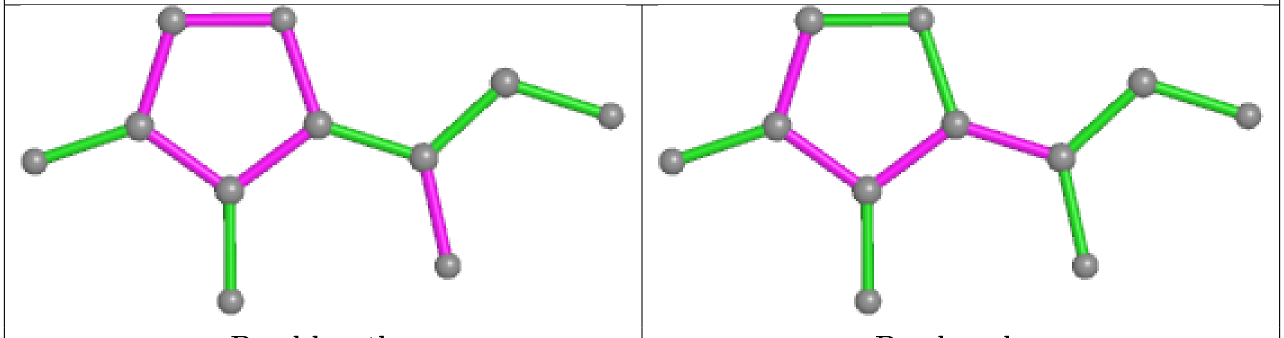
Bond angles



Torsions

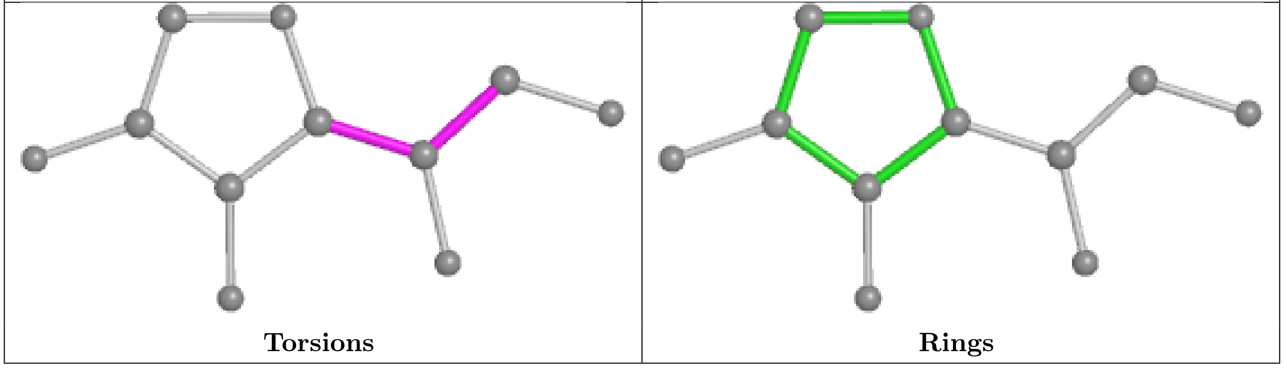
Rings

Ligand A1AIO B 2028



Bond lengths

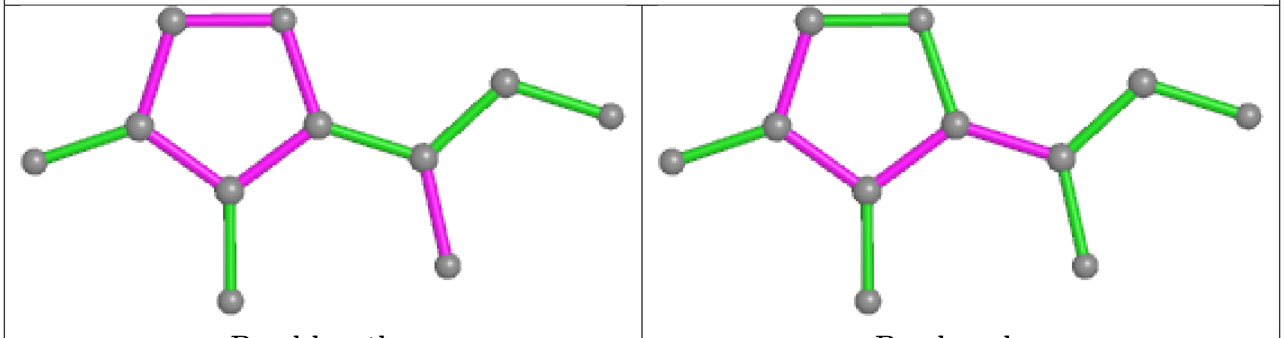
Bond angles



Torsions

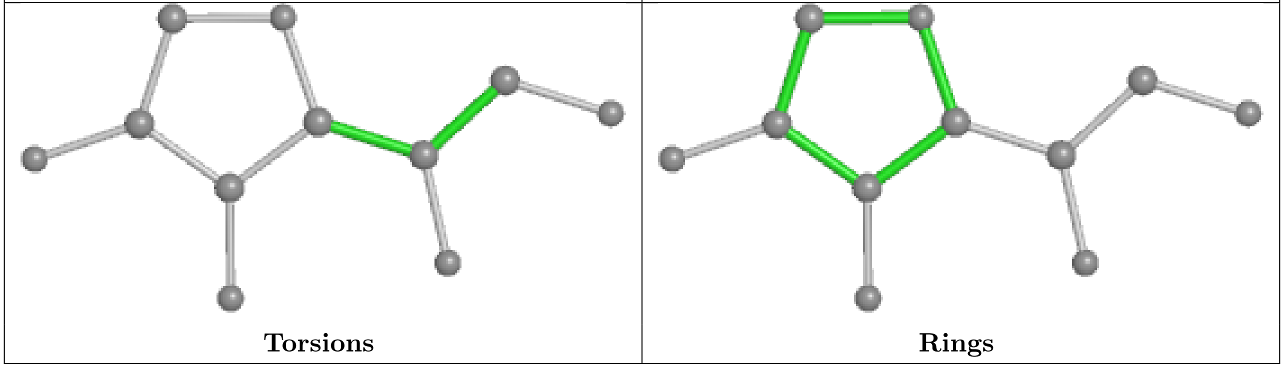
Rings

Ligand A1AIO B 2056



Bond lengths

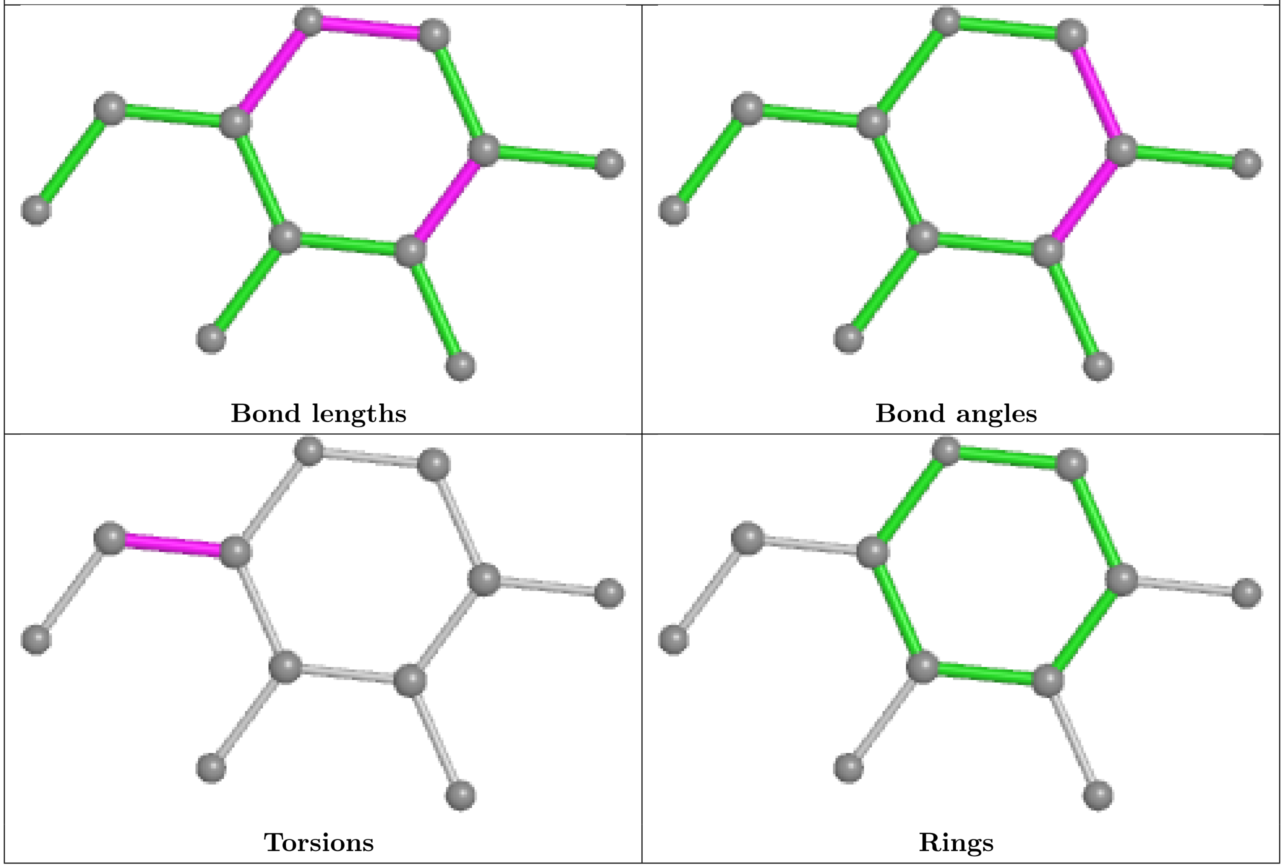
Bond angles



Torsions

Rings

Ligand GLA B 2060



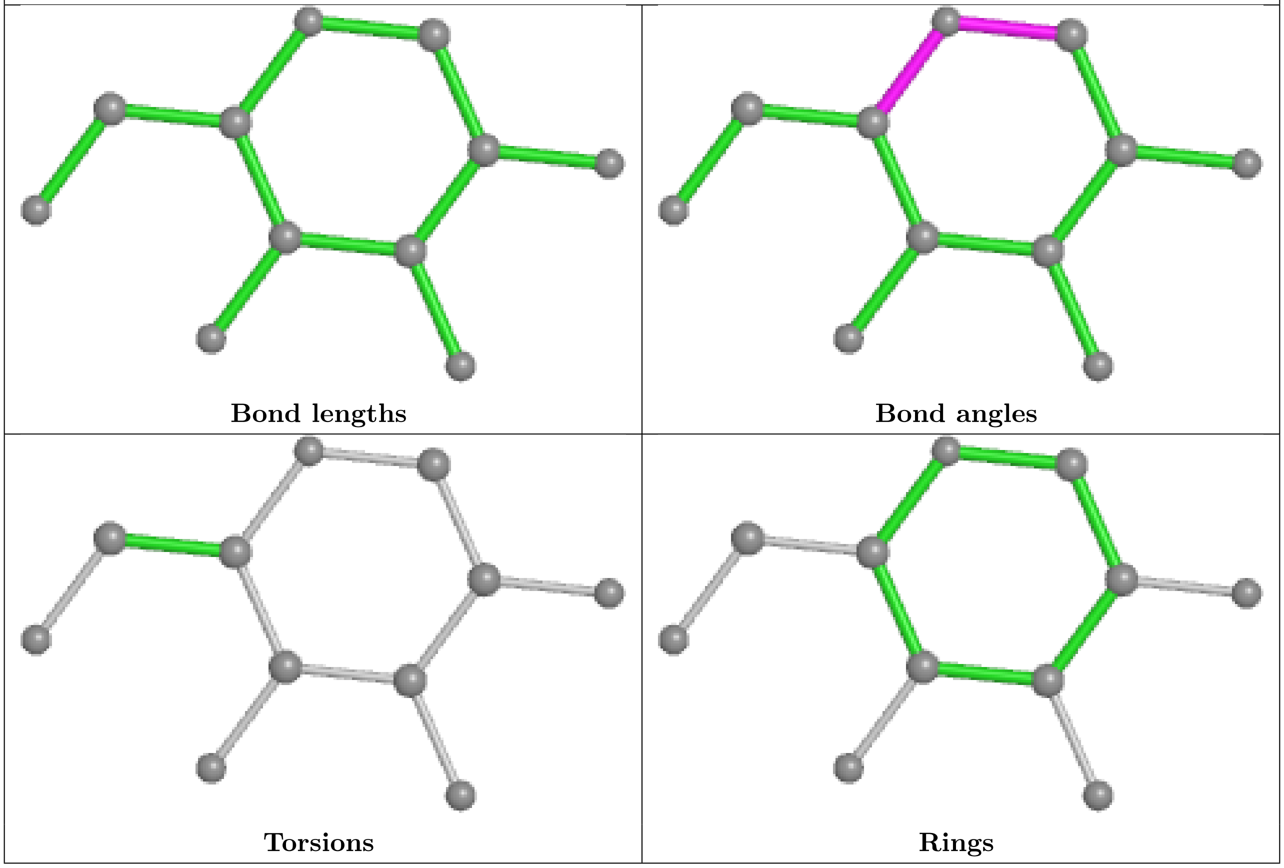
Bond lengths

Bond angles

Torsions

Rings

Ligand GLA A 2059



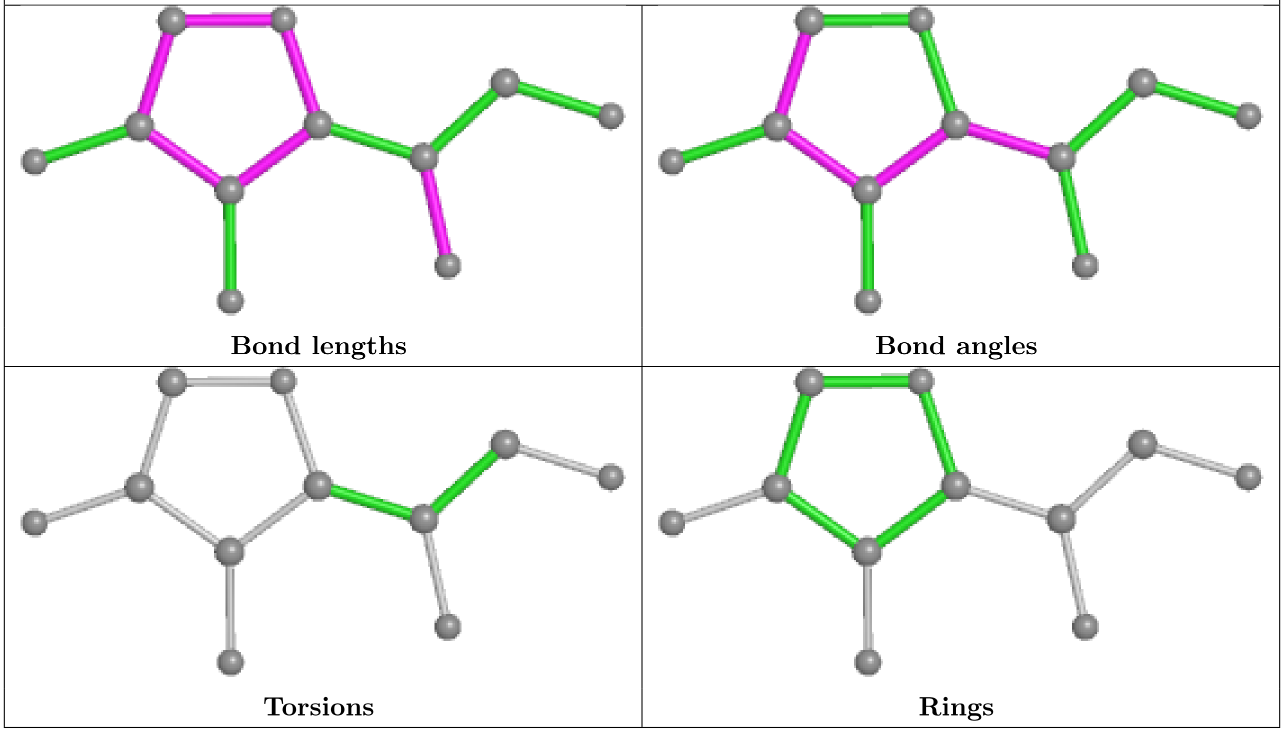
Bond lengths

Bond angles

Torsions

Rings

Ligand A1AIO A 2009



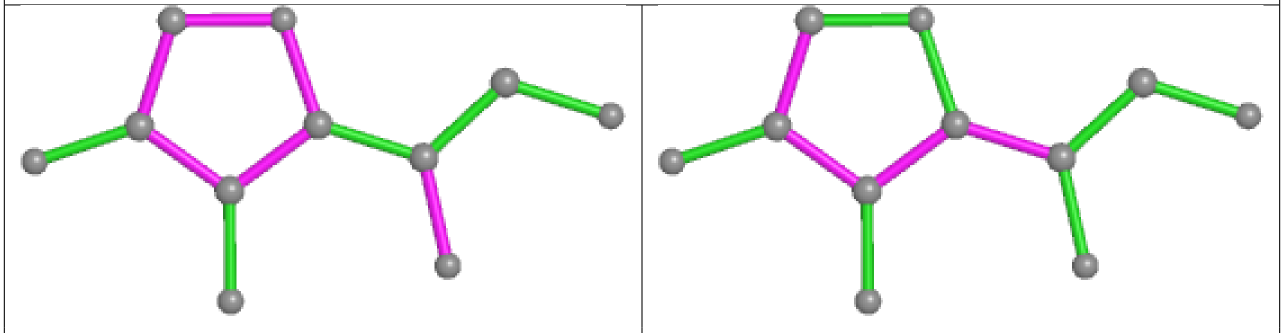
Bond lengths

Bond angles

Torsions

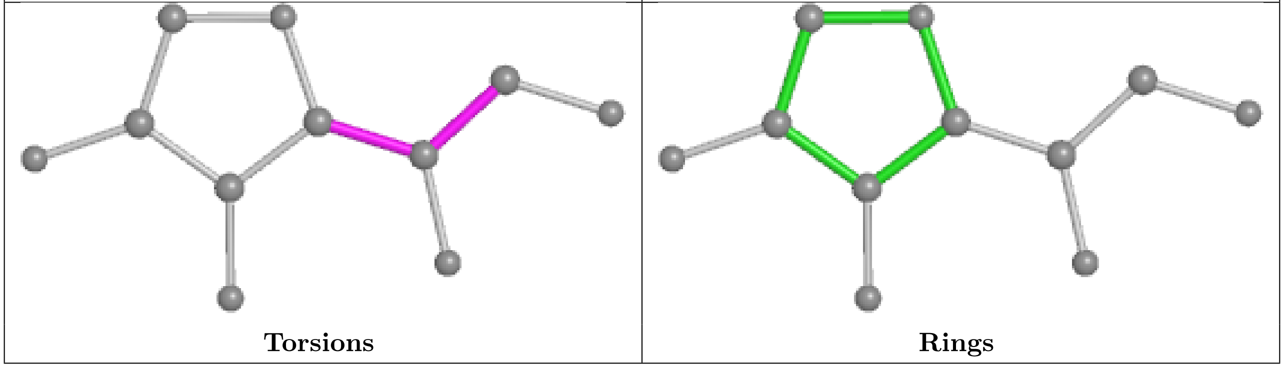
Rings

Ligand A1AIO B 2021



Bond lengths

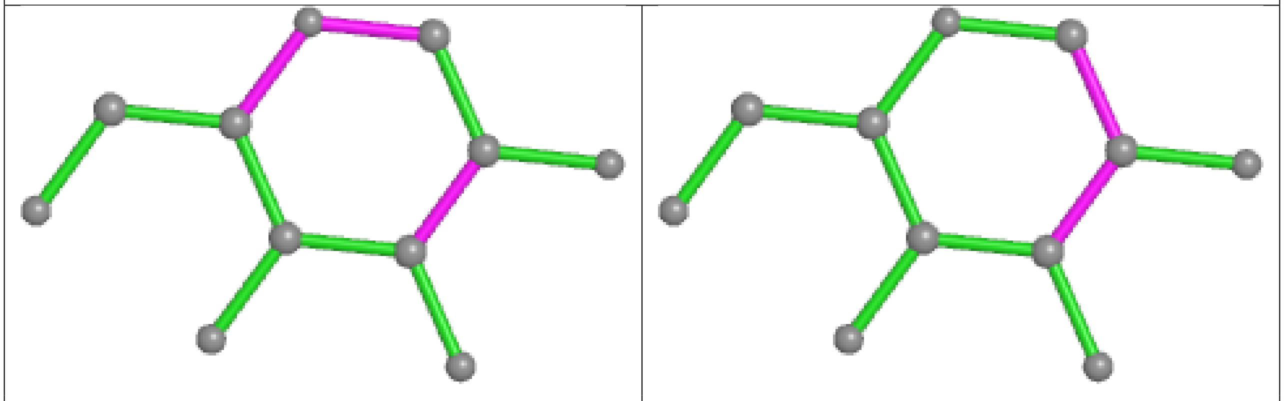
Bond angles



Torsions

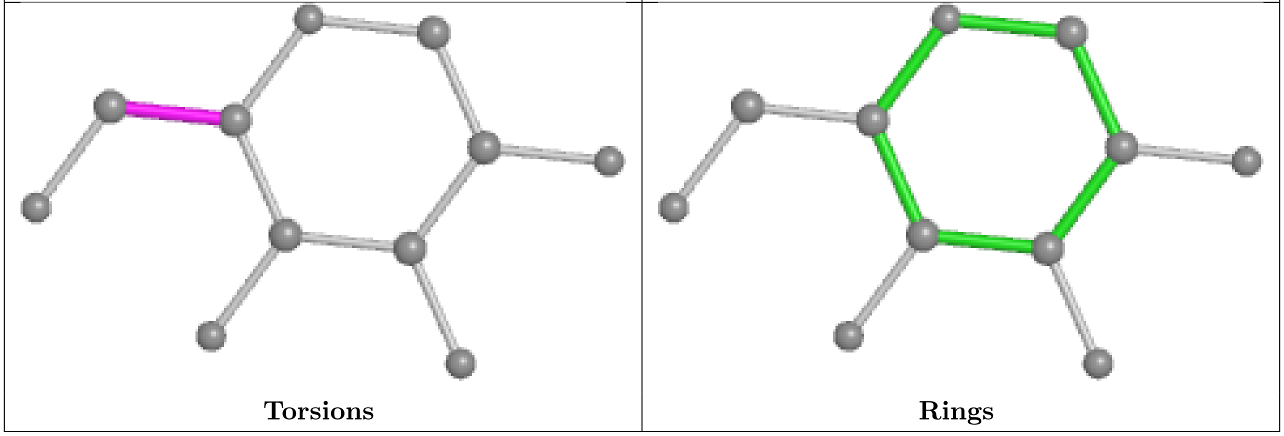
Rings

Ligand GLA B 2065



Bond lengths

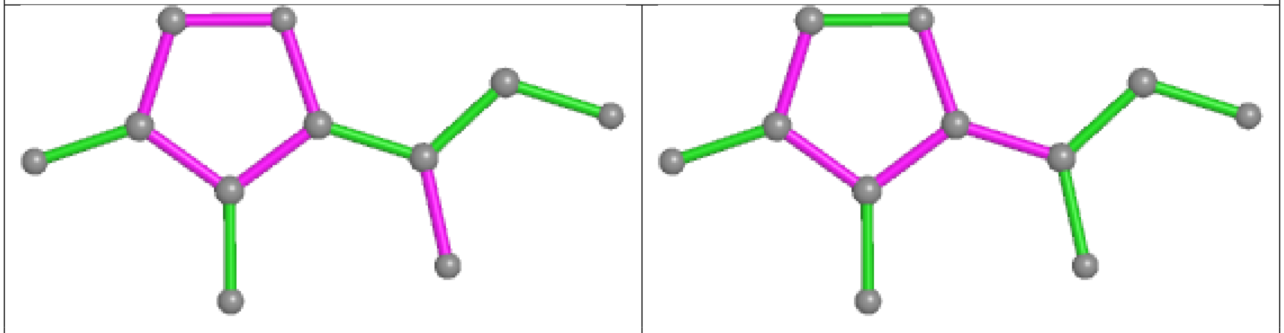
Bond angles



Torsions

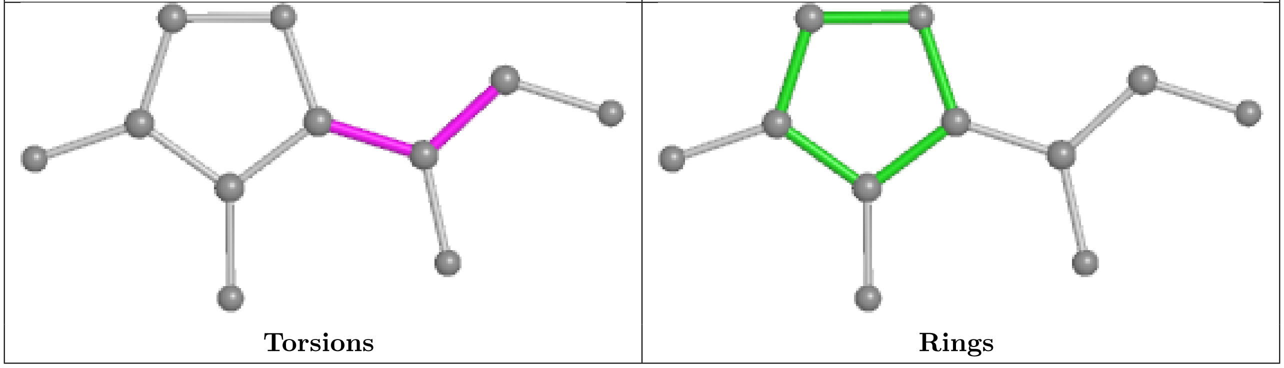
Rings

Ligand A1AIO B 2016



Bond lengths

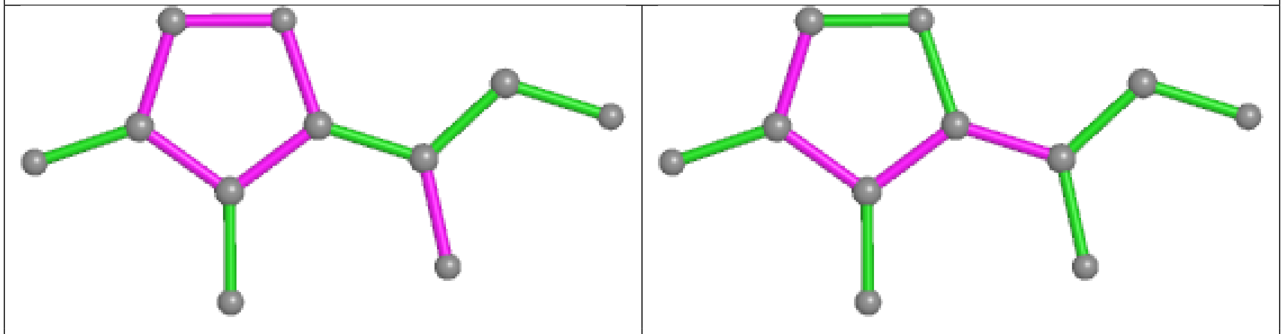
Bond angles



Torsions

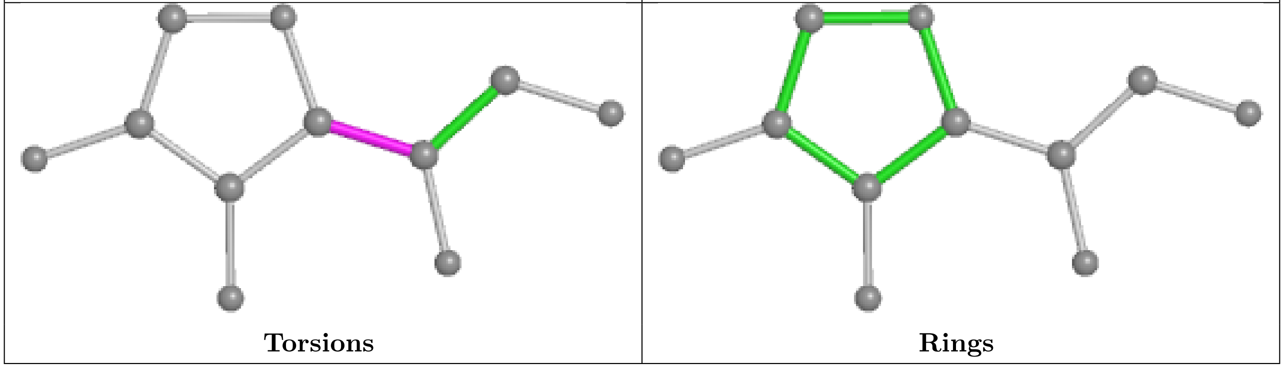
Rings

Ligand A1AIO A 2038



Bond lengths

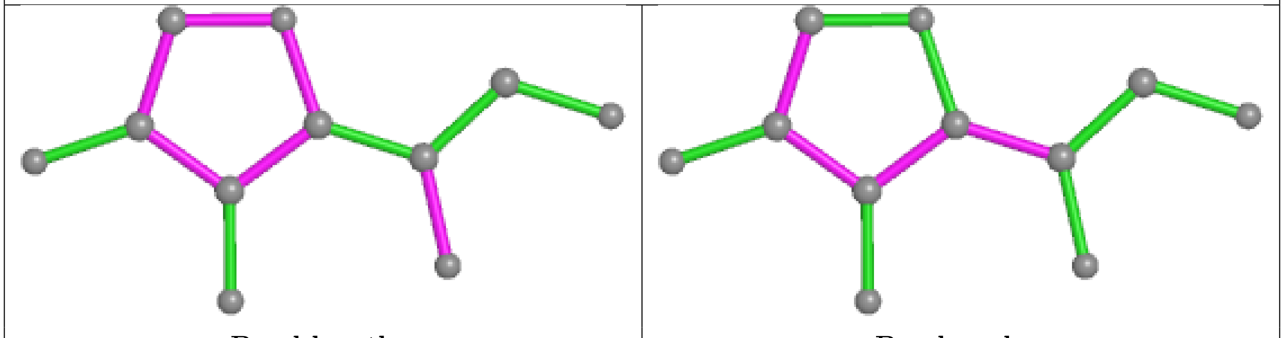
Bond angles



Torsions

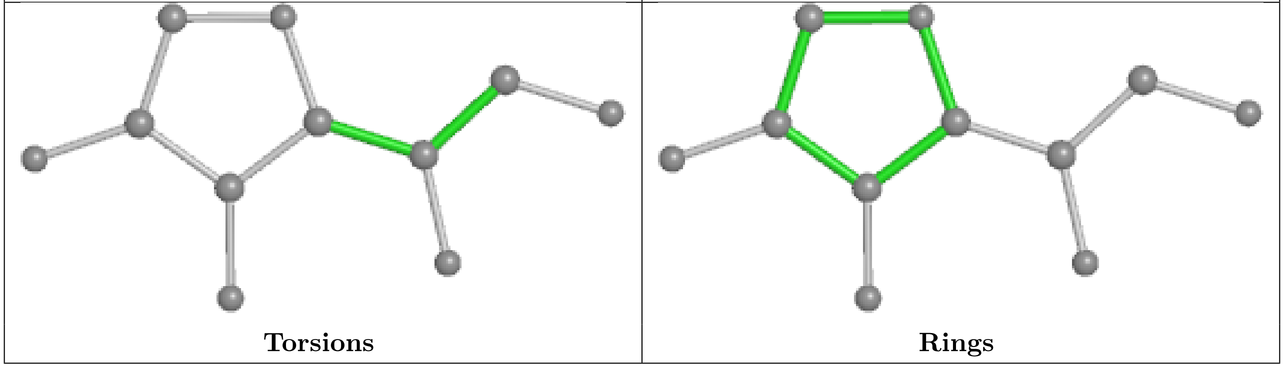
Rings

Ligand A1AIO A 2021



Bond lengths

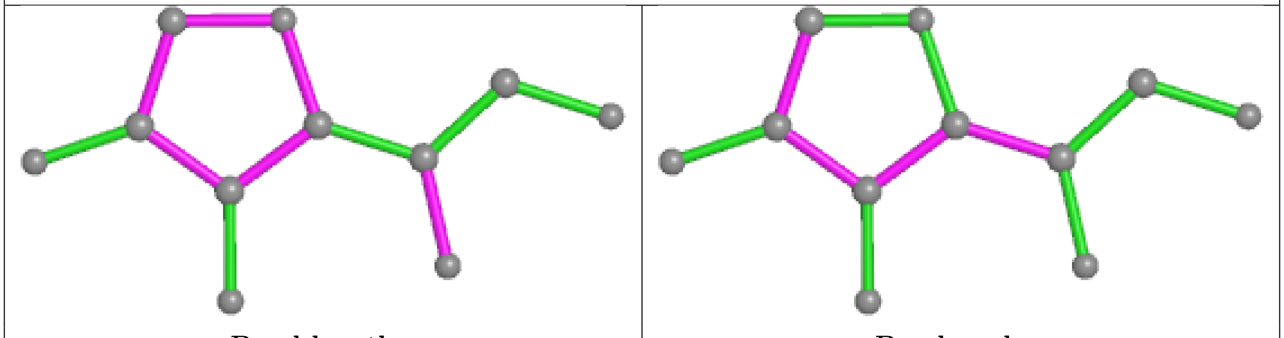
Bond angles



Torsions

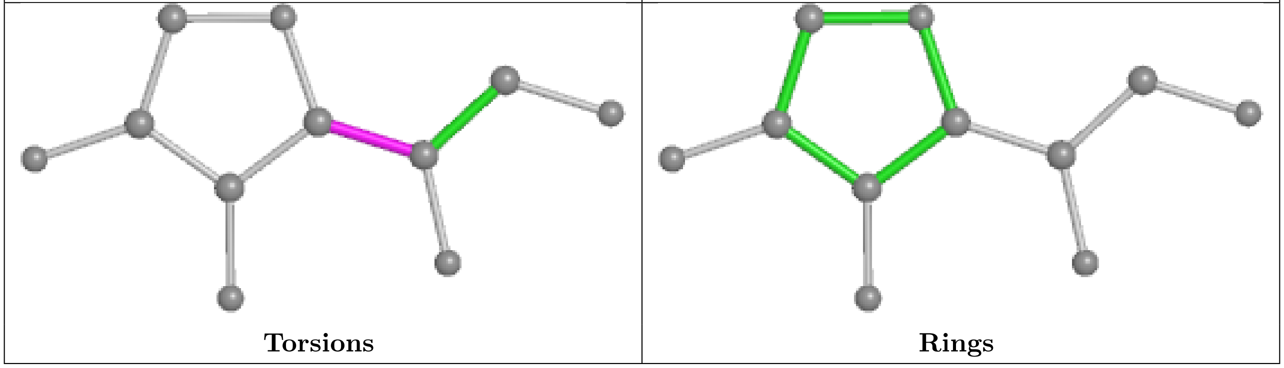
Rings

Ligand A1AIO B 2020



Bond lengths

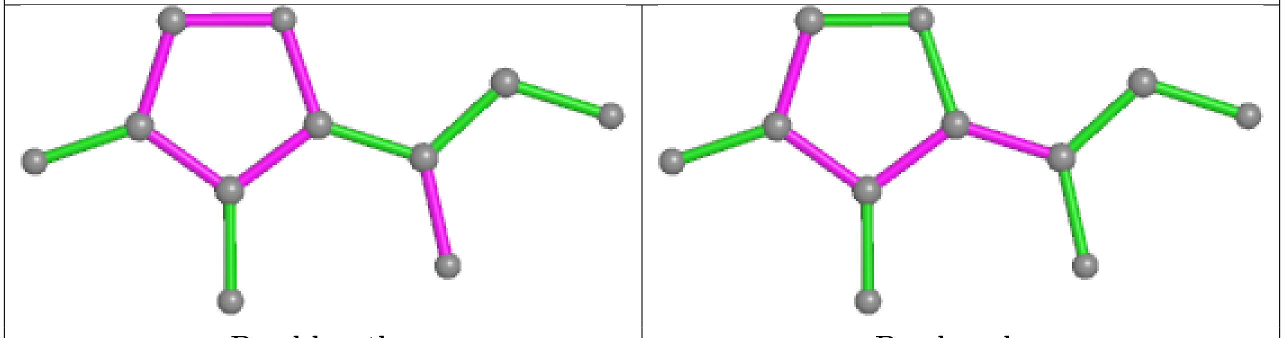
Bond angles



Torsions

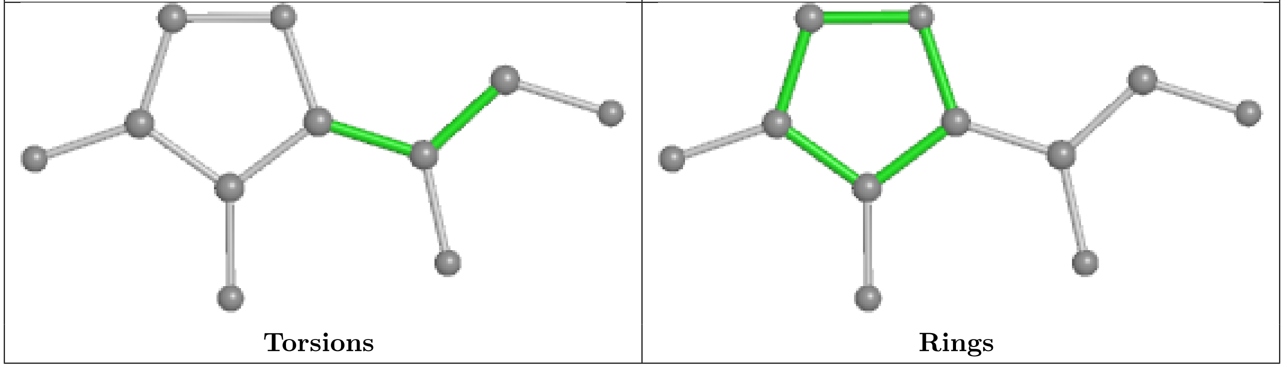
Rings

Ligand A1AIO A 2042



Bond lengths

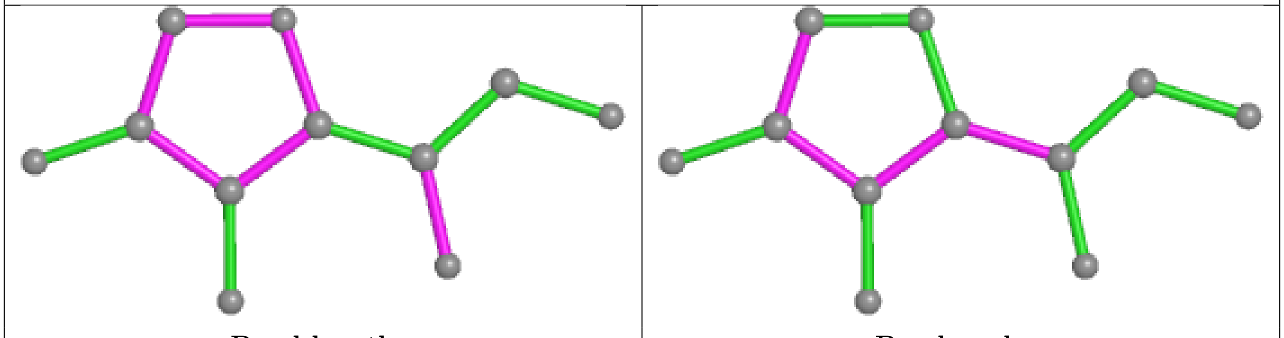
Bond angles



Torsions

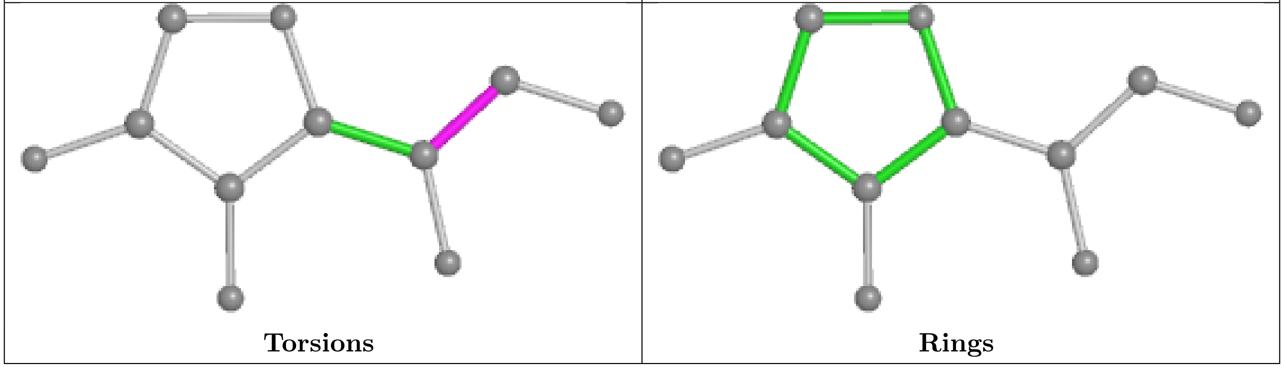
Rings

Ligand A1AIO B 2045



Bond lengths

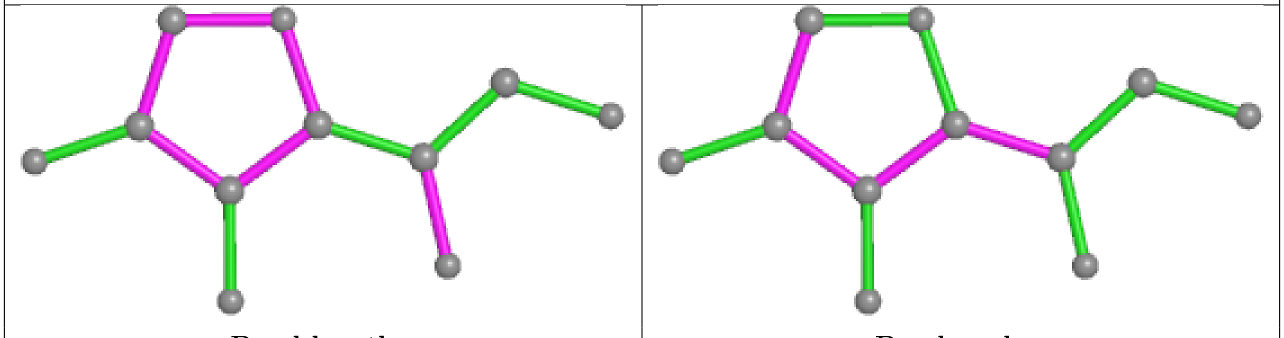
Bond angles



Torsions

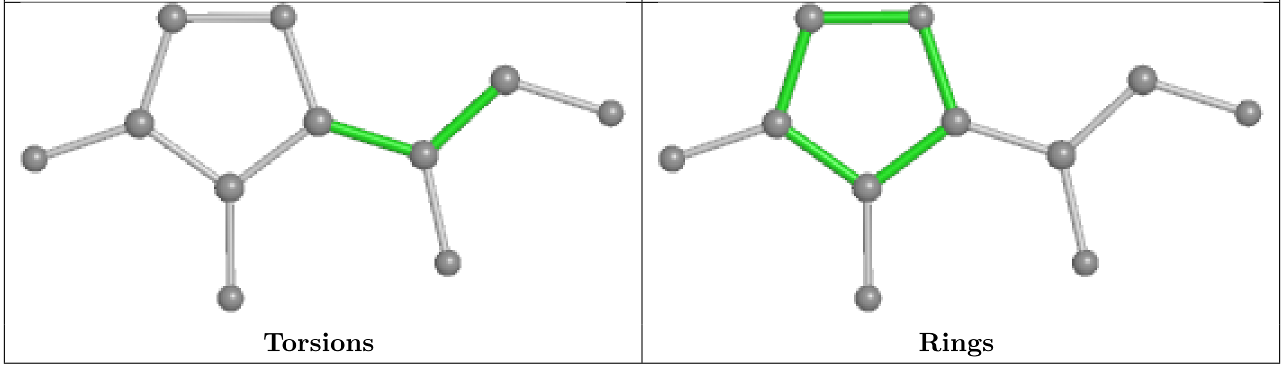
Rings

Ligand A1AIO B 2050



Bond lengths

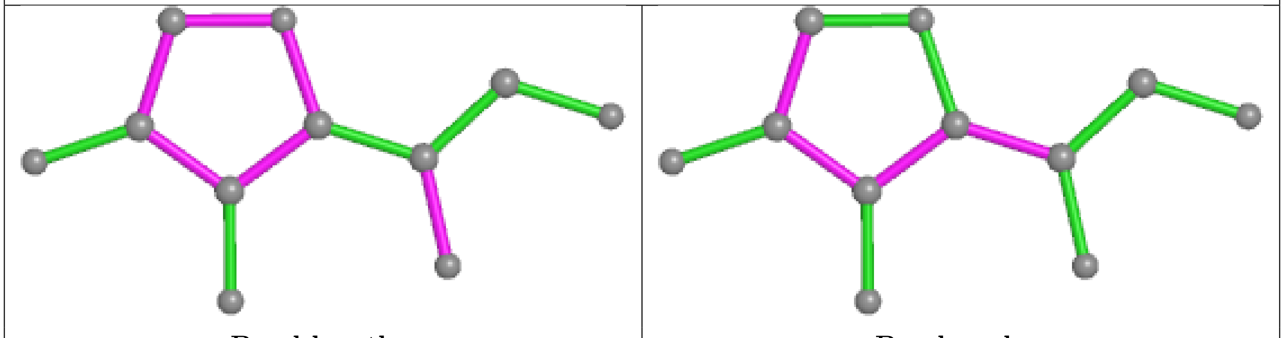
Bond angles



Torsions

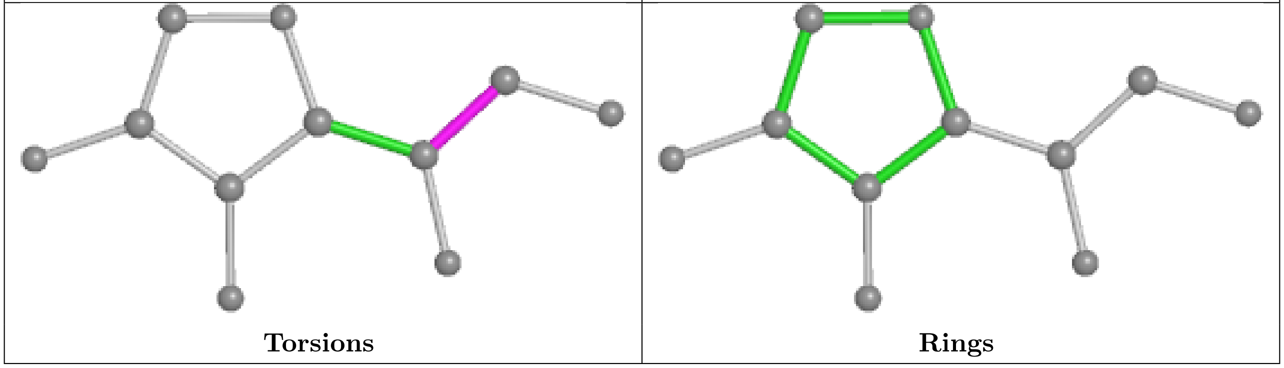
Rings

Ligand A1AIO A 2048



Bond lengths

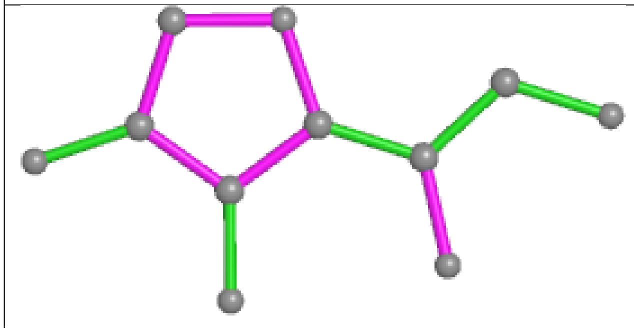
Bond angles



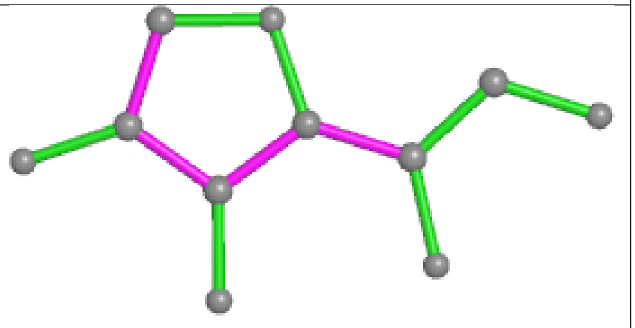
Torsions

Rings

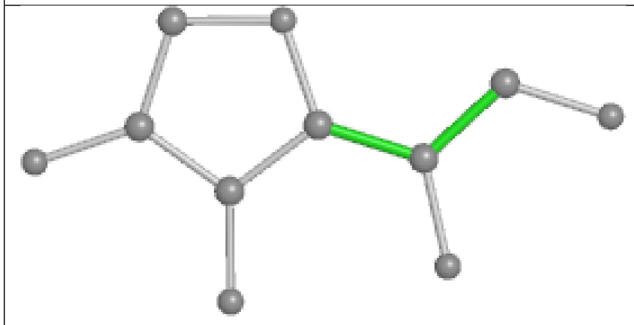
Ligand A1AIO A 2037



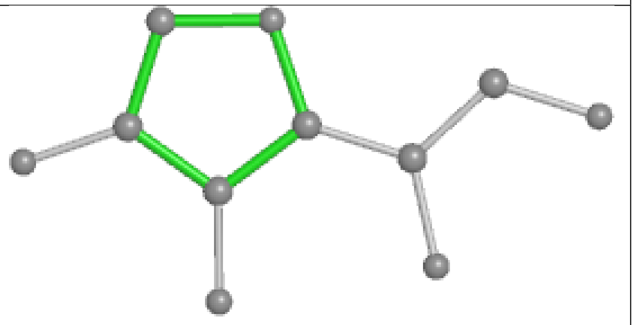
Bond lengths



Bond angles

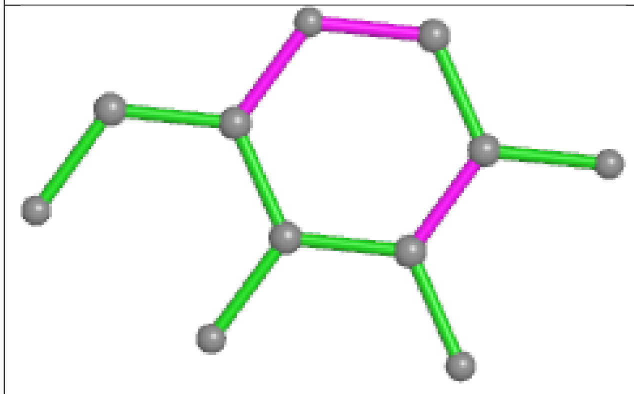


Torsions



Rings

Ligand GLA A 2064



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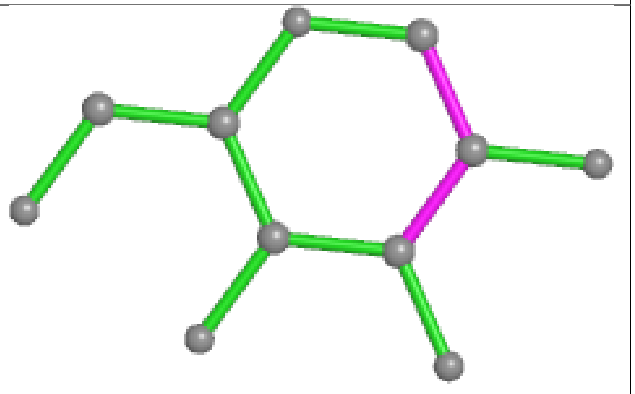
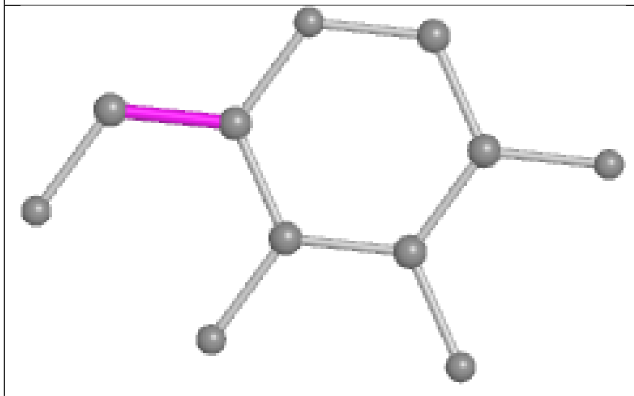


Bond angles



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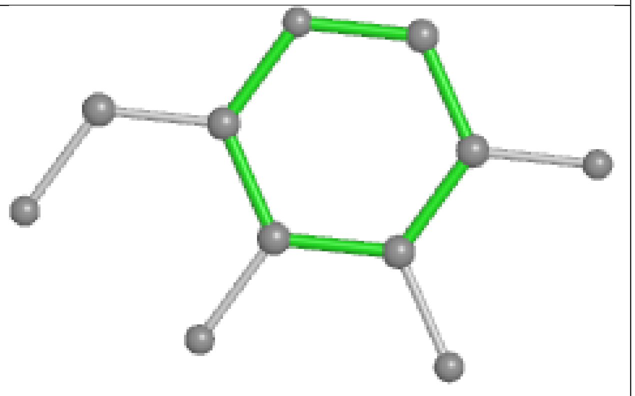
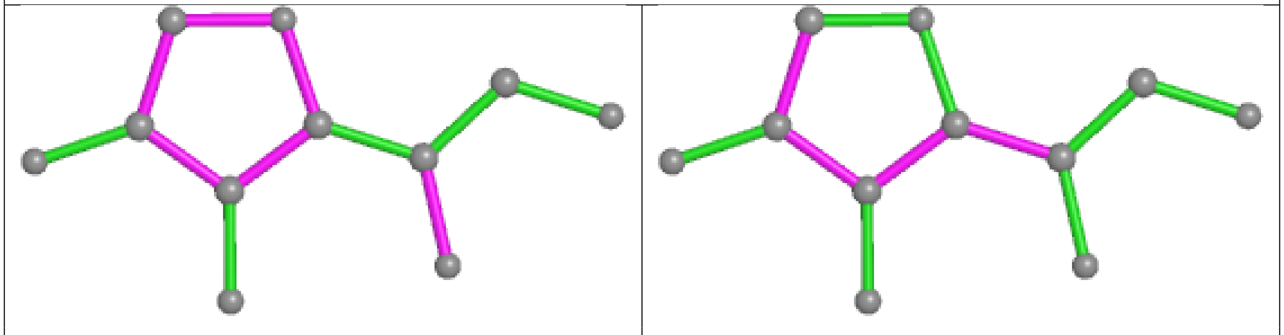


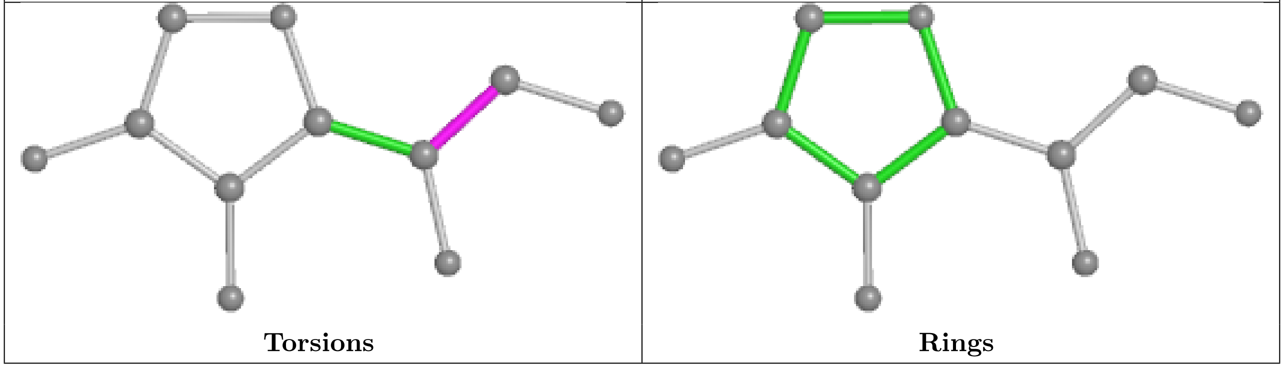
Rings

Ligand A1AIO B 2035



Bond lengths

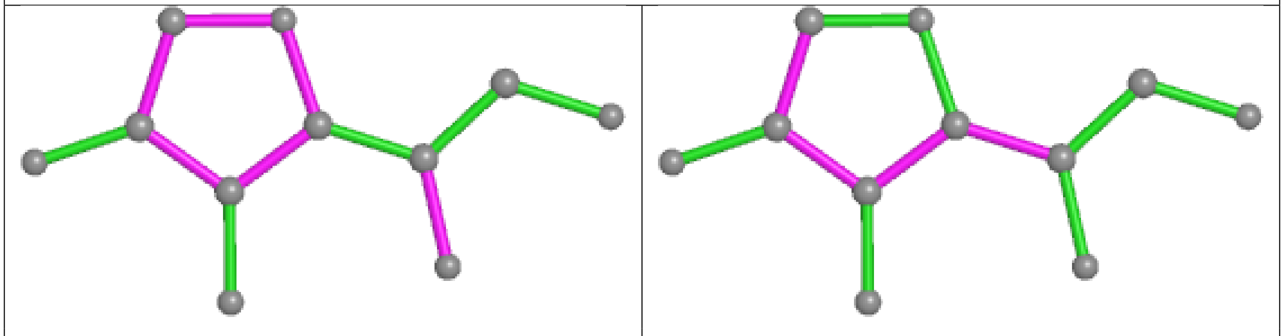
Bond angles



Torsions

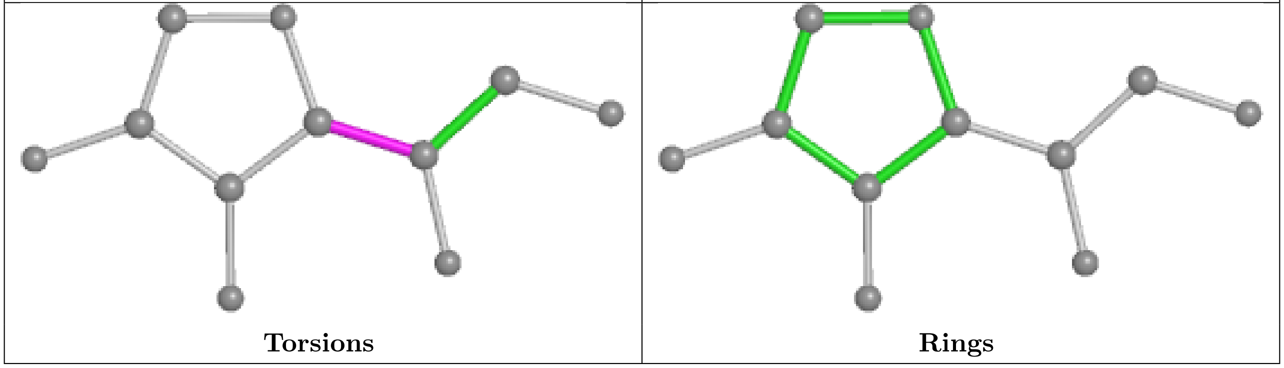
Rings

Ligand A1AIO A 2054



Bond lengths

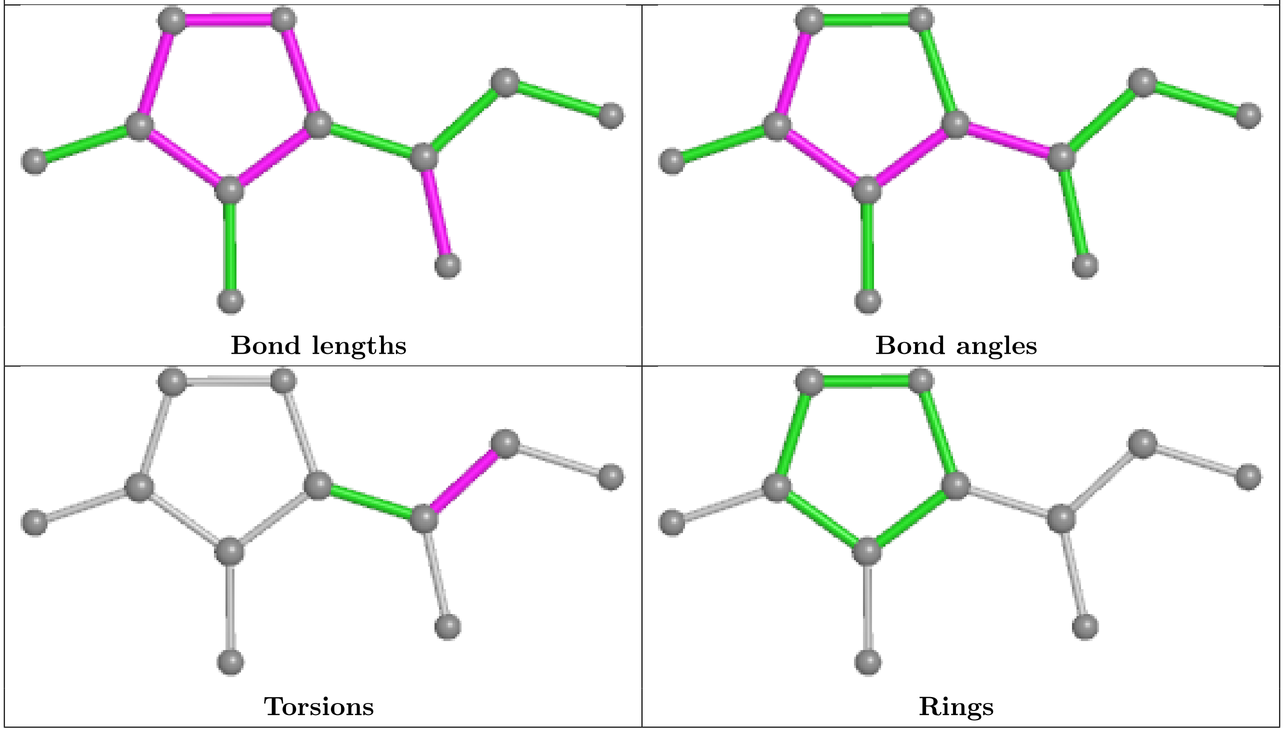
Bond angles



Torsions

Rings

Ligand A1AIO B 2032



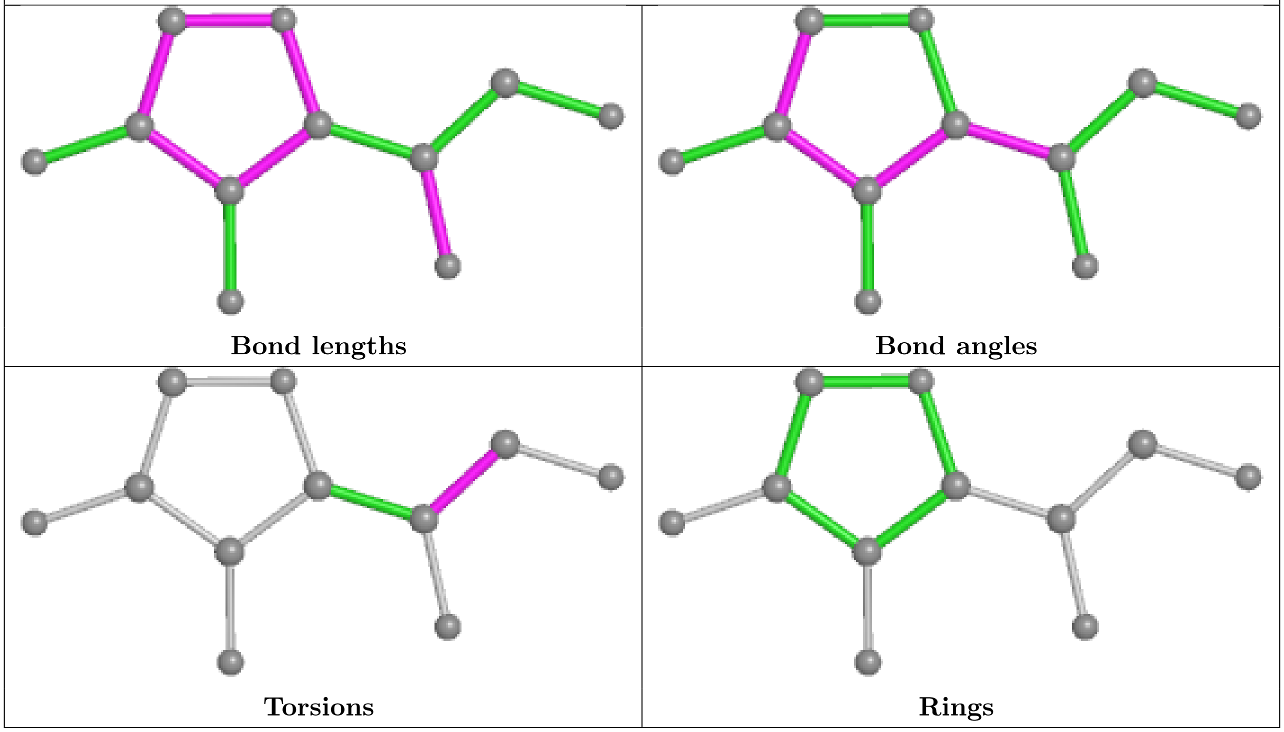
Bond lengths

Bond angles

Torsions

Rings

Ligand A1AIO B 2037



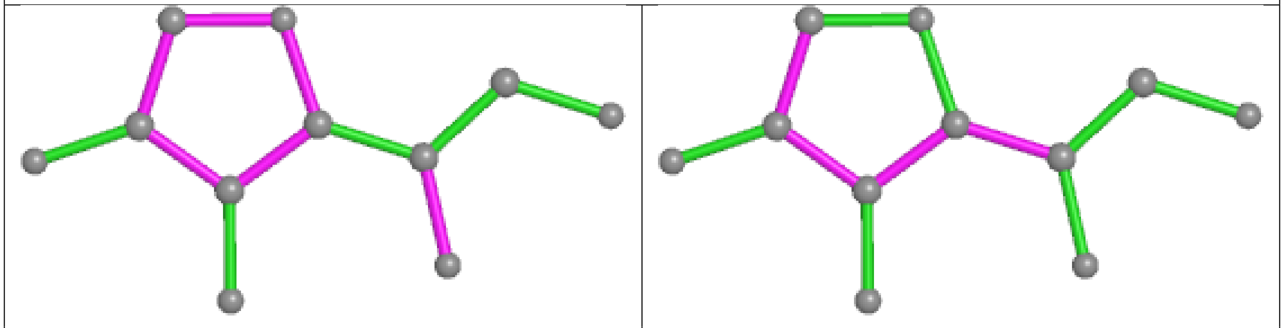
Bond lengths

Bond angles

Torsions

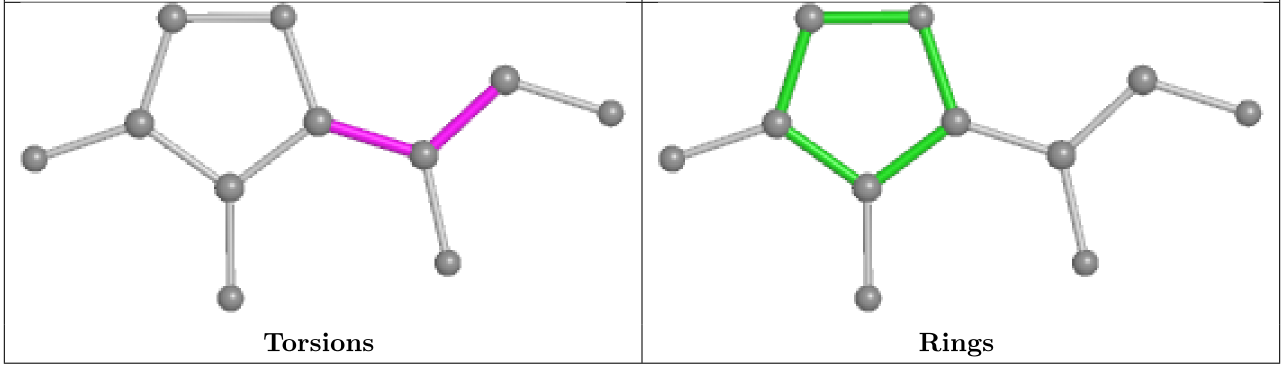
Rings

Ligand A1AIO B 2054



Bond lengths

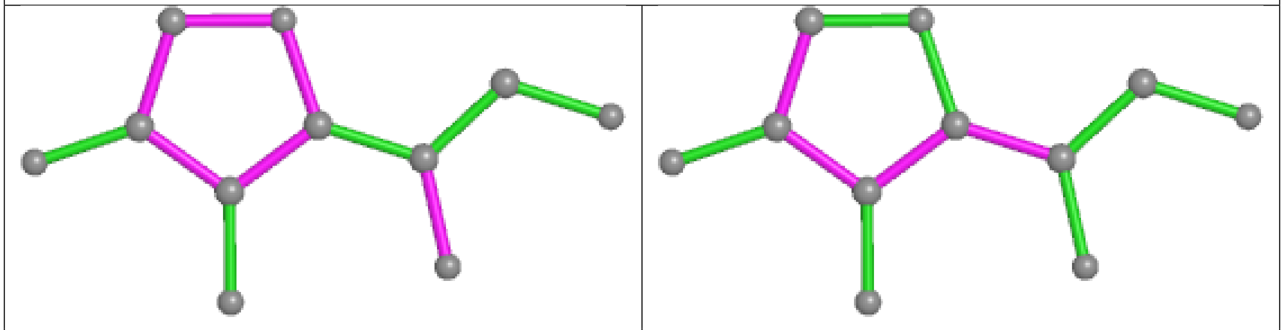
Bond angles



Torsions

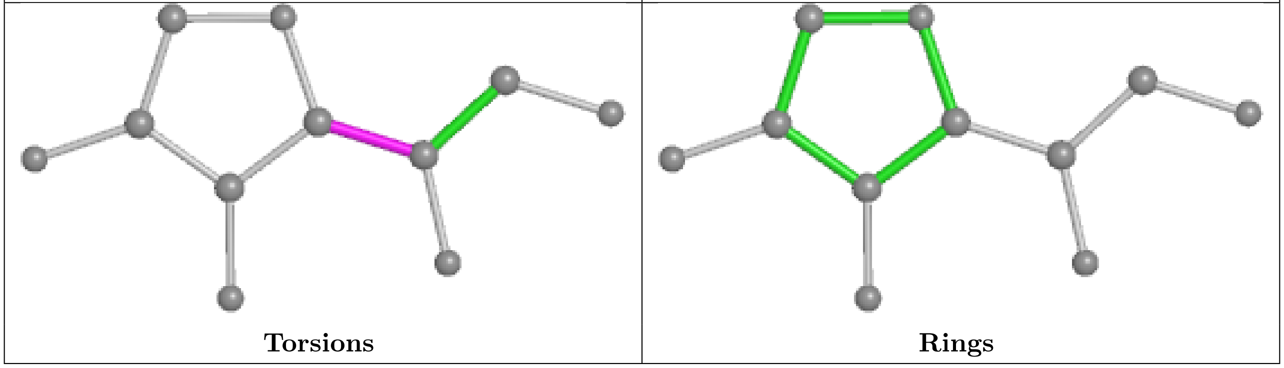
Rings

Ligand A1AIO A 2041



Bond lengths

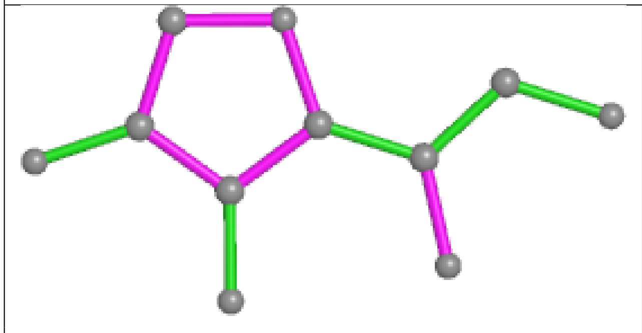
Bond angles



Torsions

Rings

Ligand A1AIO A 2002



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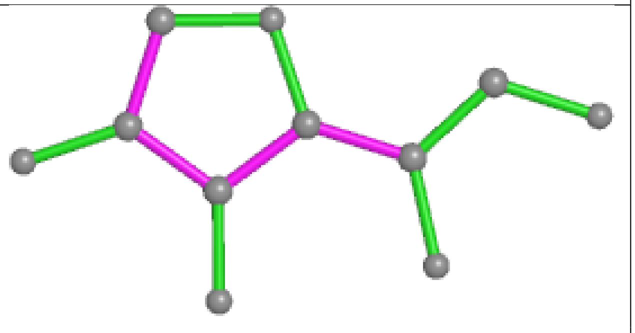
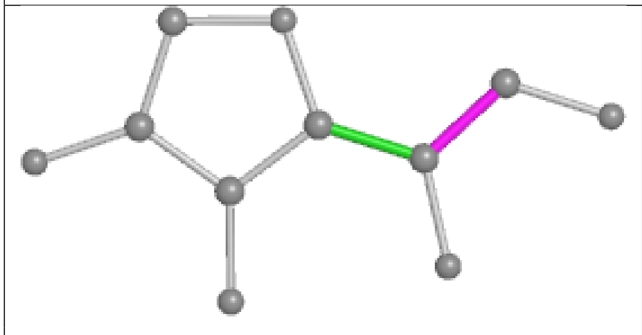


Bond angles



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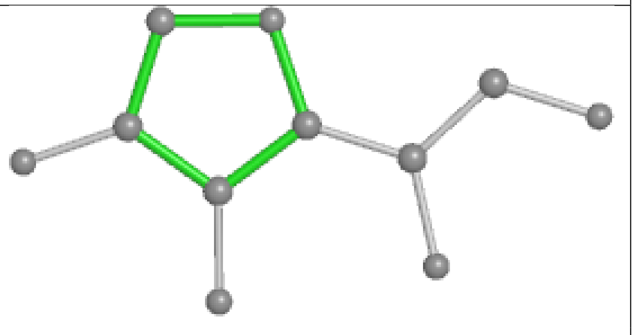
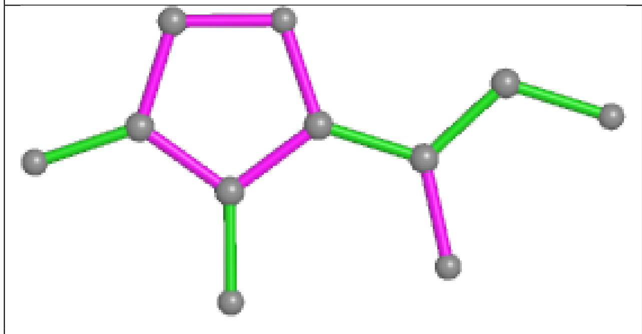


Rings

Ligand A1AIO B 2052



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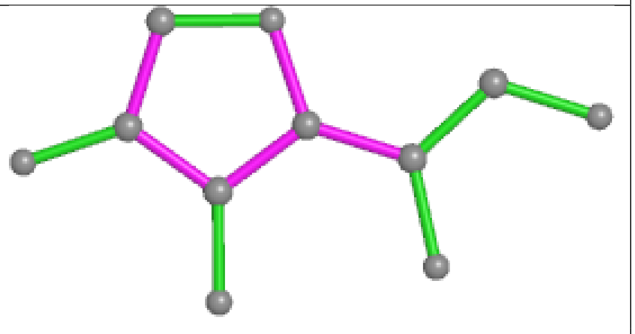
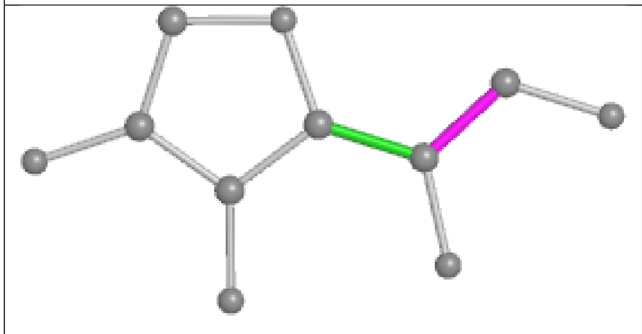


Bond angles



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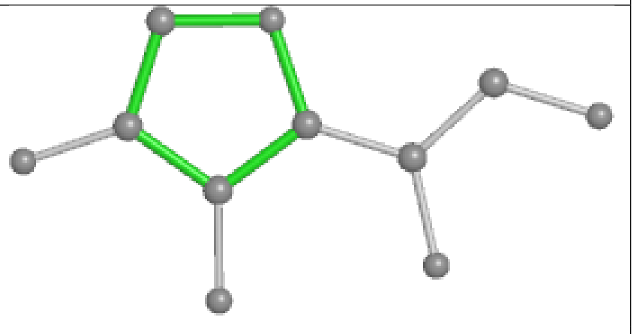
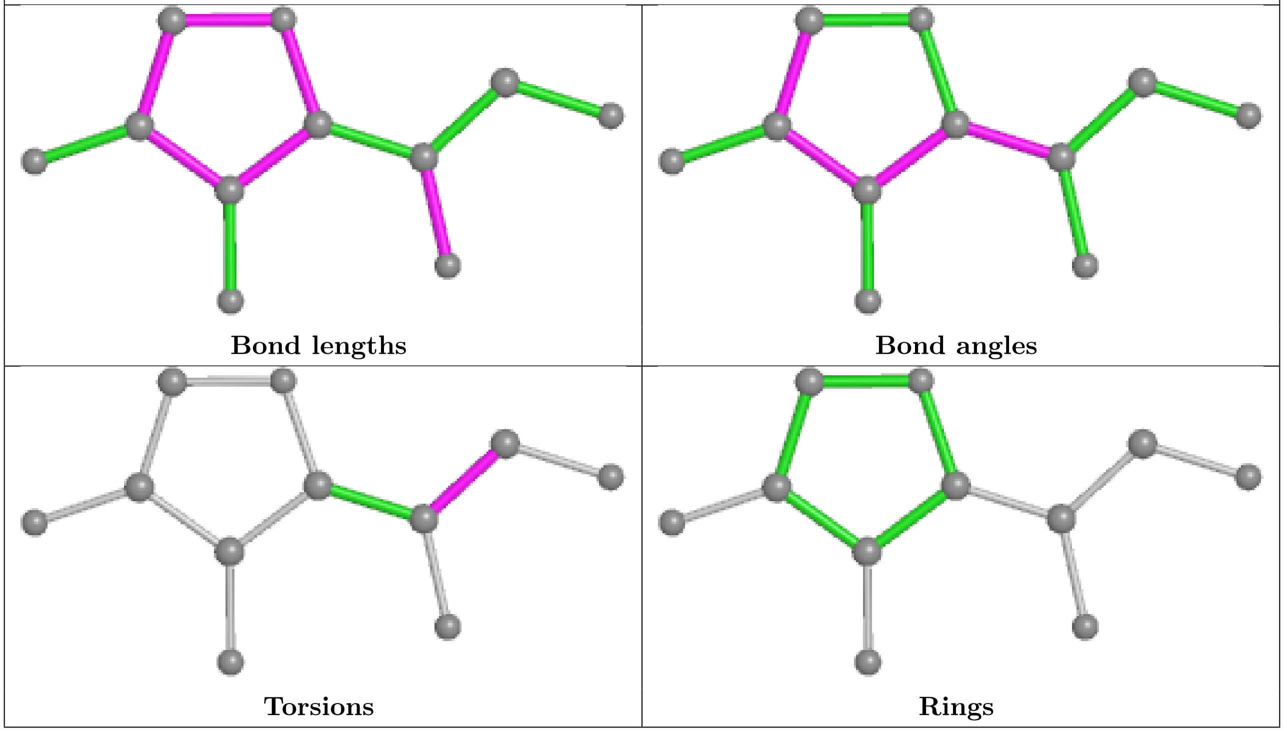
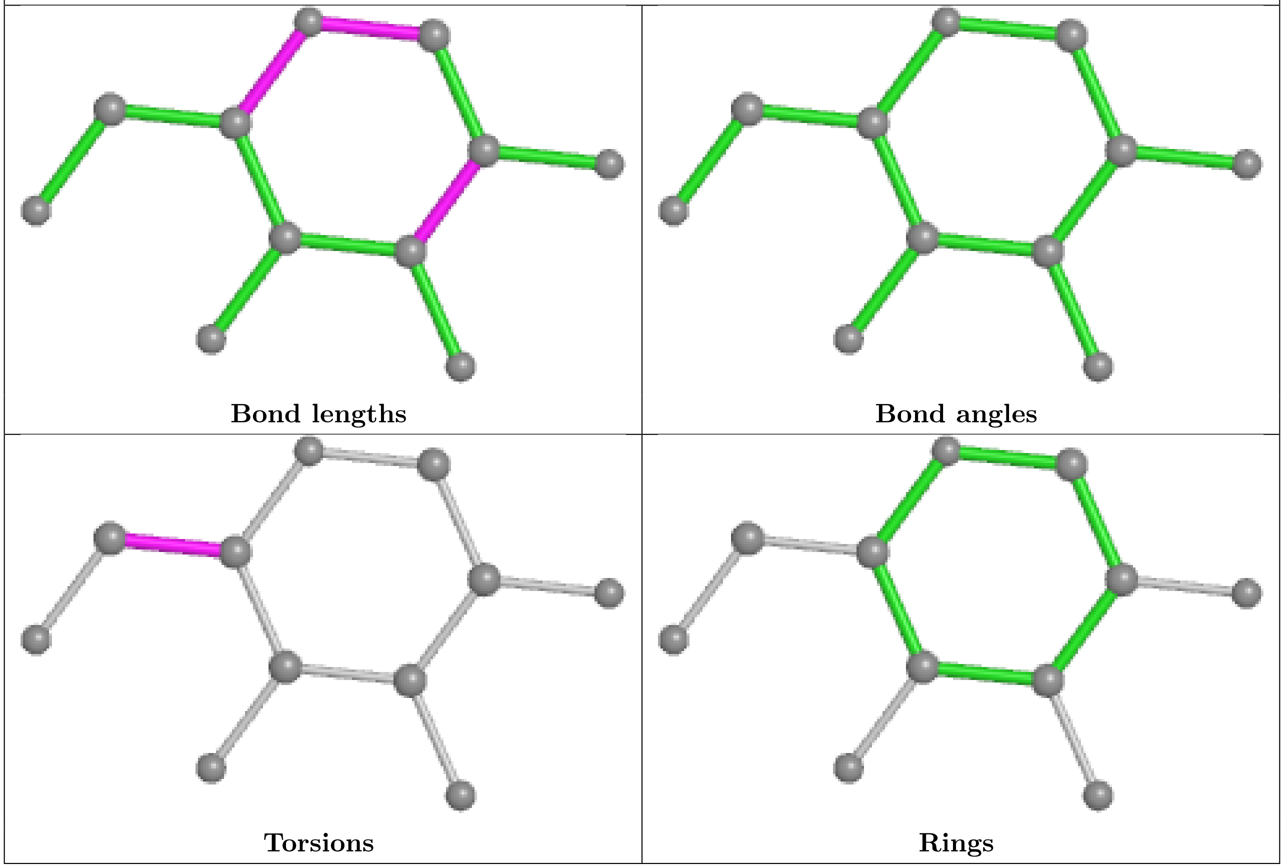


Rings

Ligand A1AIO A 2049


Bond lengths
Bond angles
Torsions
Rings

Ligand GLA B 2068


Bond lengths
Bond angles
Torsions
Rings

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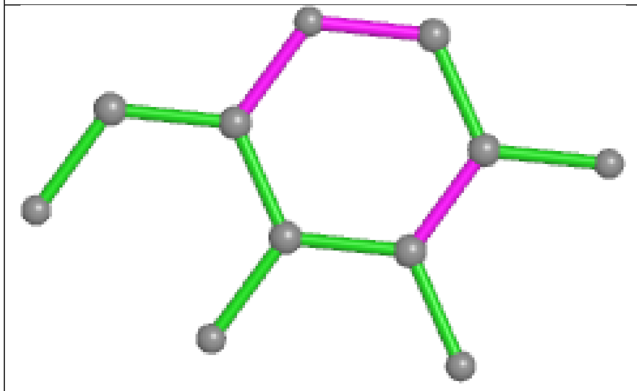

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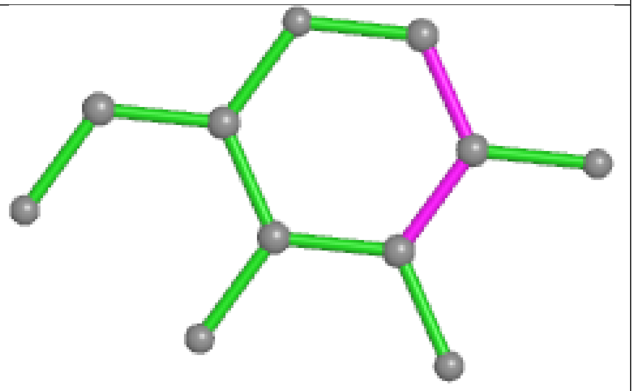
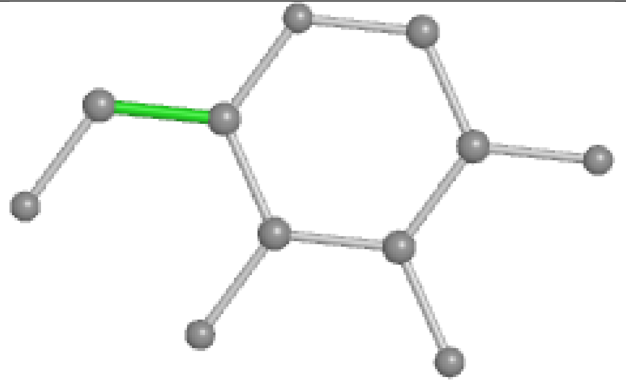


Bond angles



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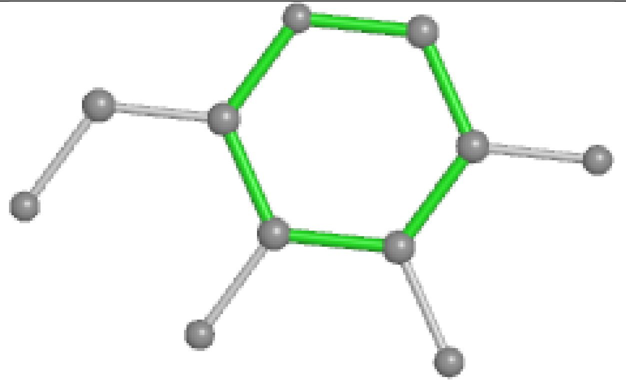
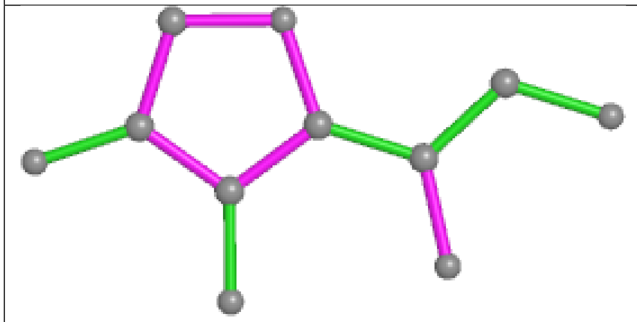


Rings

Ligand A1AIO B 2008



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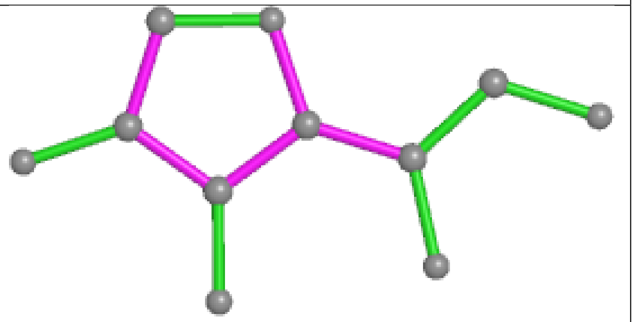
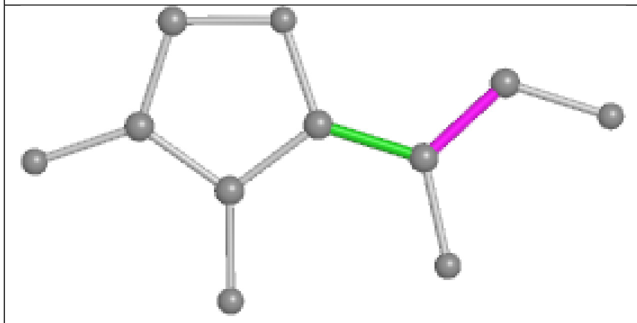


Bond angles



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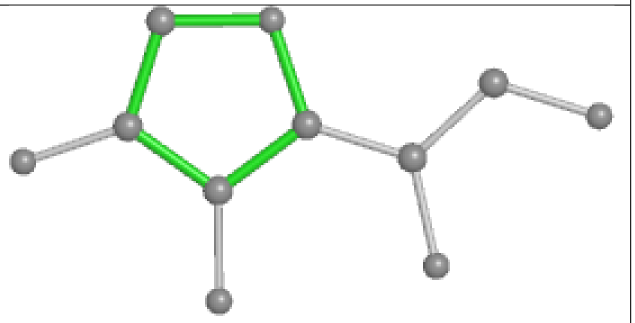
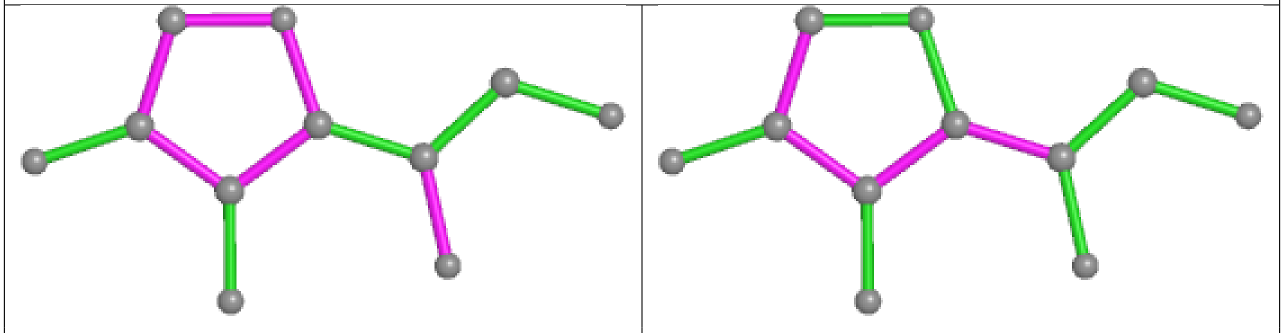
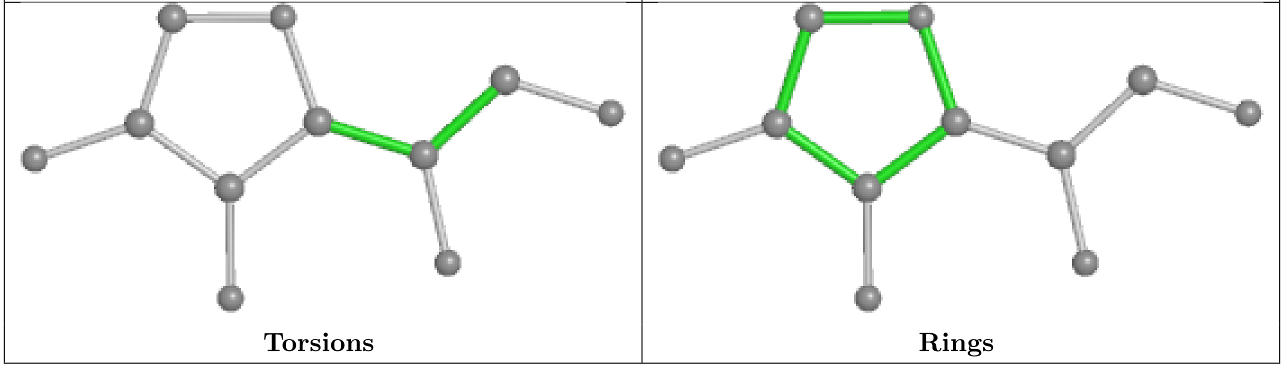


Rings

Ligand A1AIO A 2018

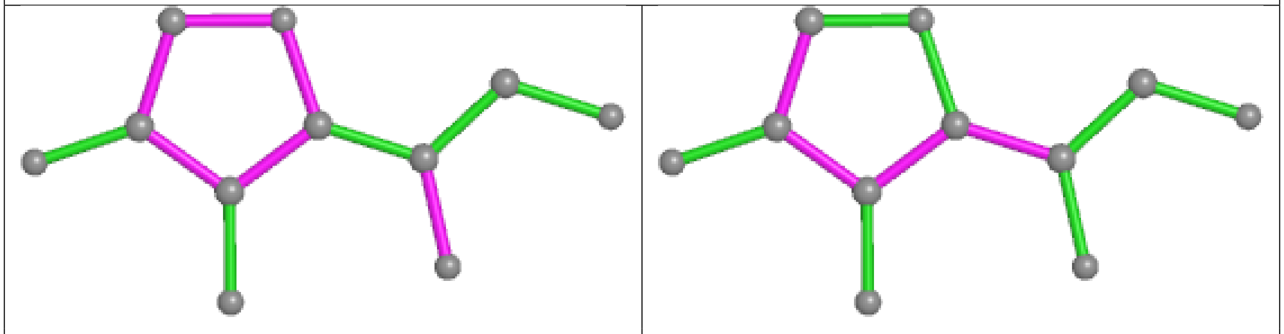


Bond lengths Bond angles

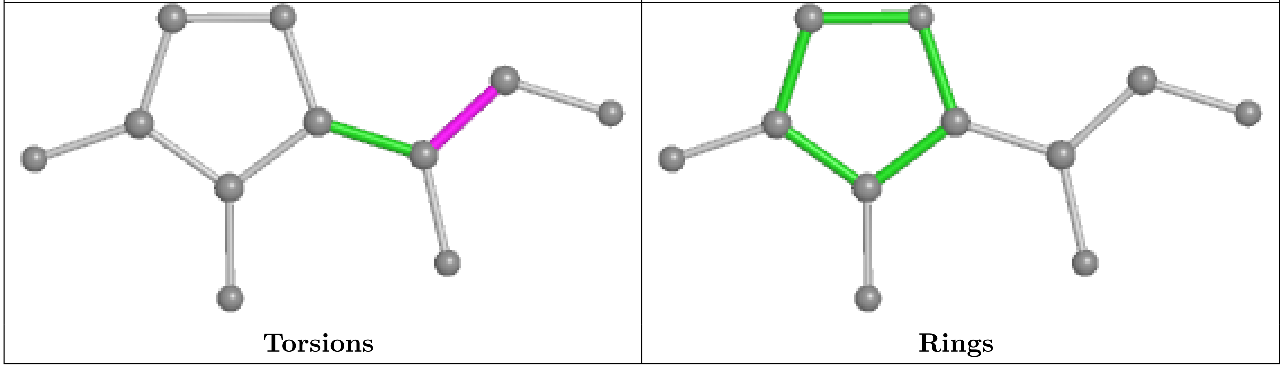


Torsions Rings

Ligand A1AIO B 2011

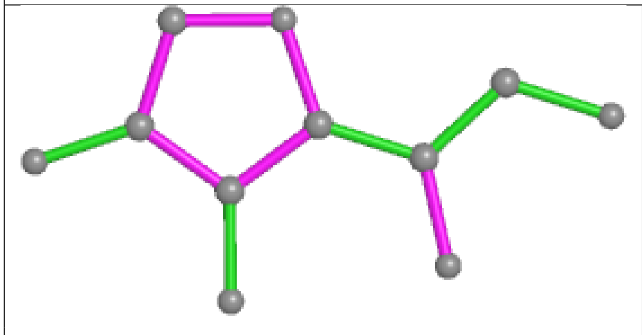


Bond lengths Bond angles



Torsions Rings

Ligand A1AIO B 2048



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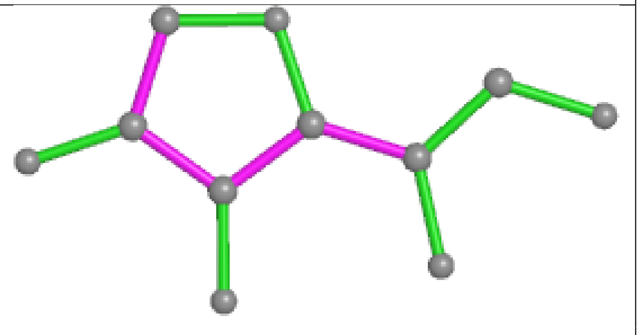
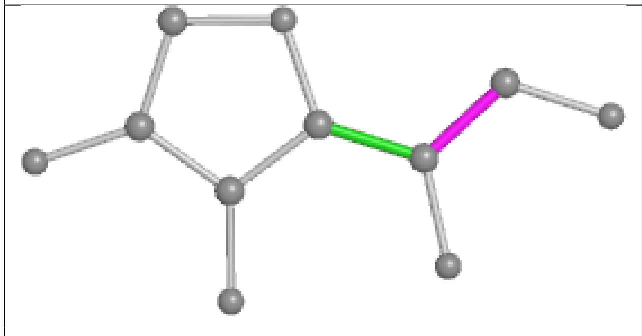
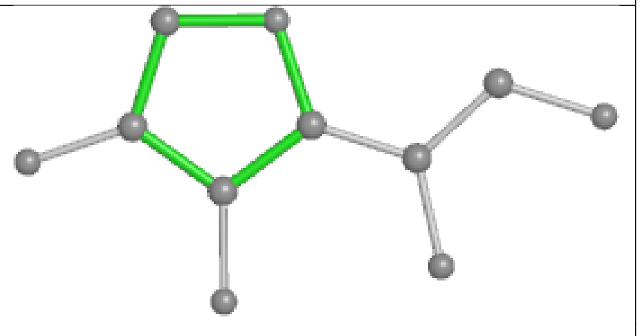


Bond angles

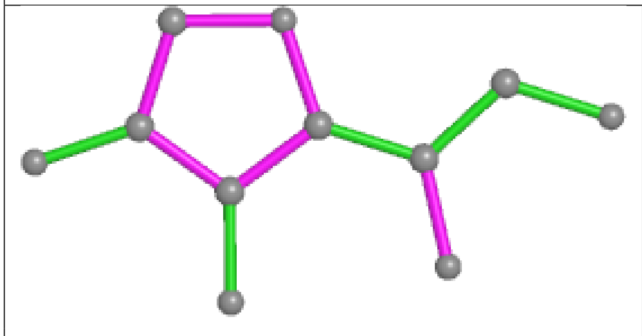


Torsions

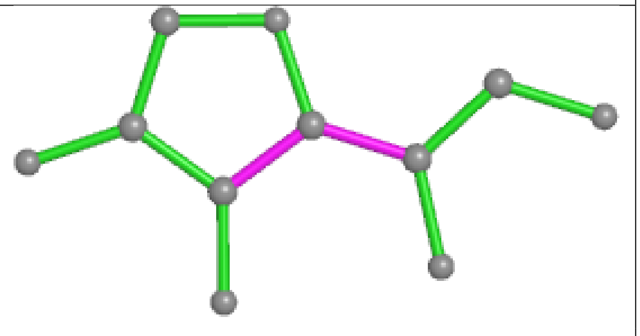


Rings

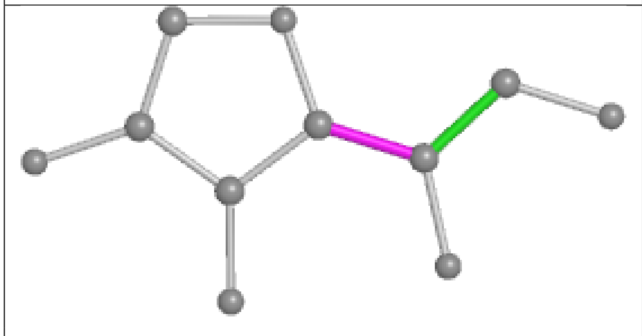
Ligand A1AIO B 2039



Bond lengths



Bond angles



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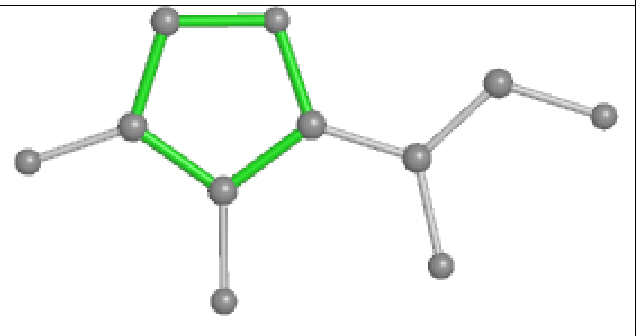
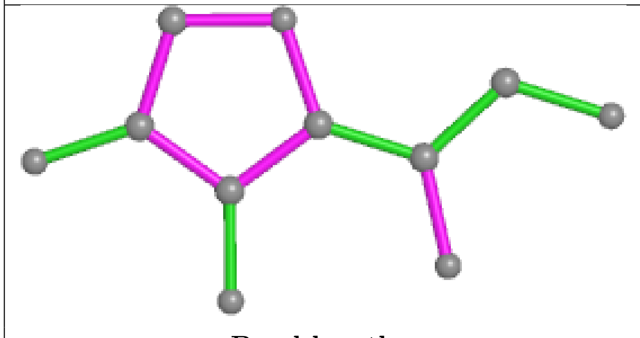


Rings

Ligand A1AIO B 2055



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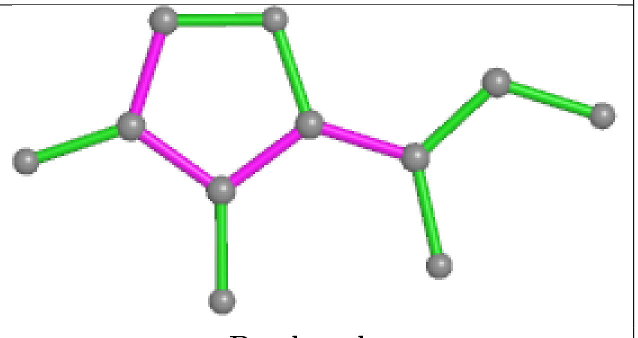

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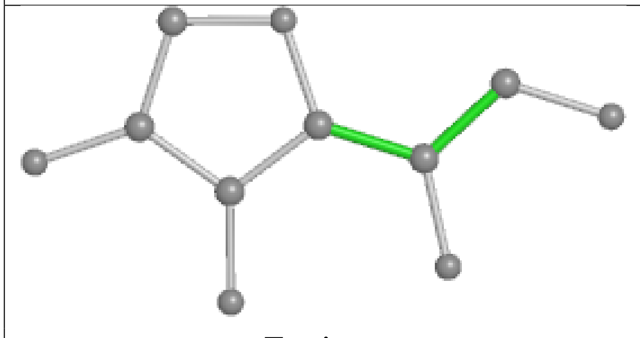

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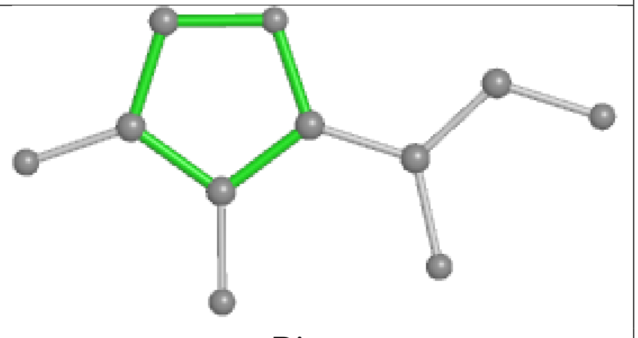
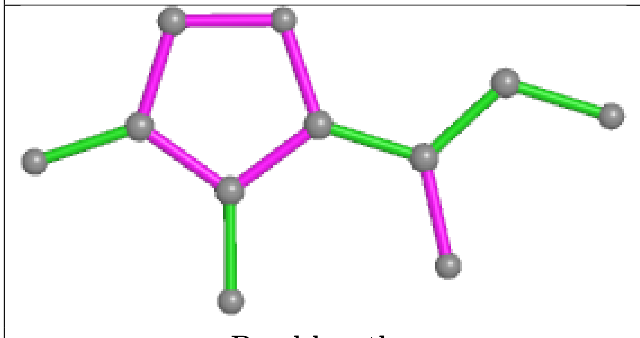


Rings

Ligand A1AIO B 2040



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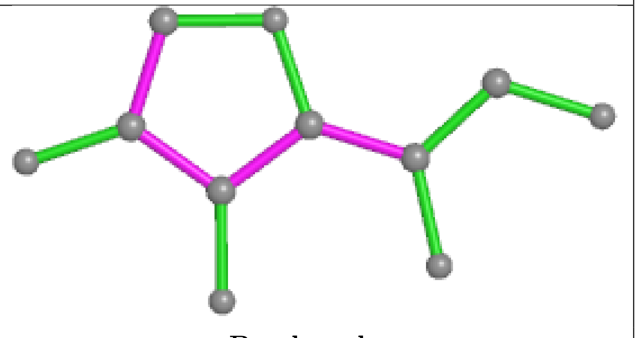
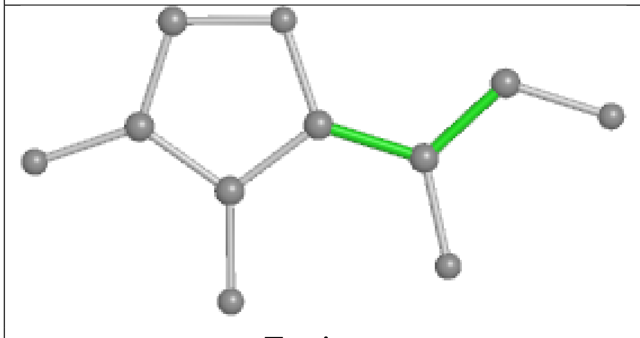


Bond angles



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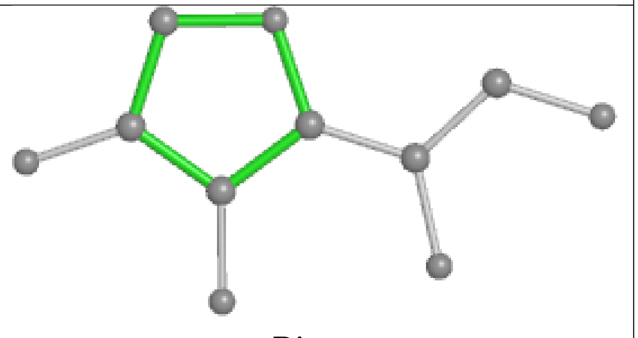
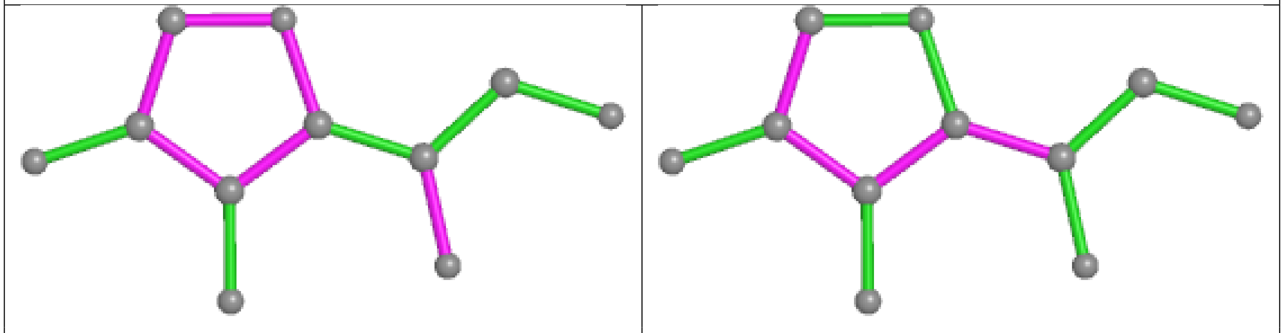
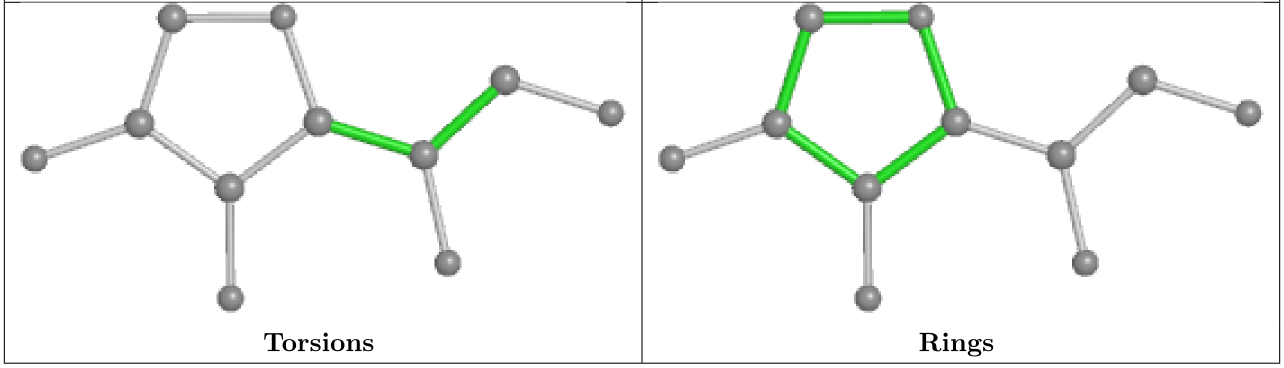


Rings

Ligand A1AIO B 2027

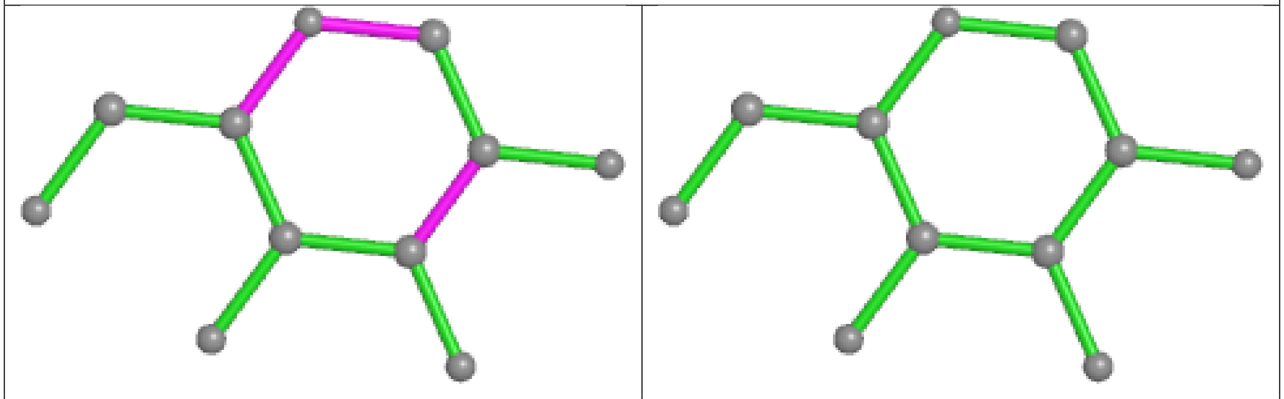


Bond lengths **Bond angles**

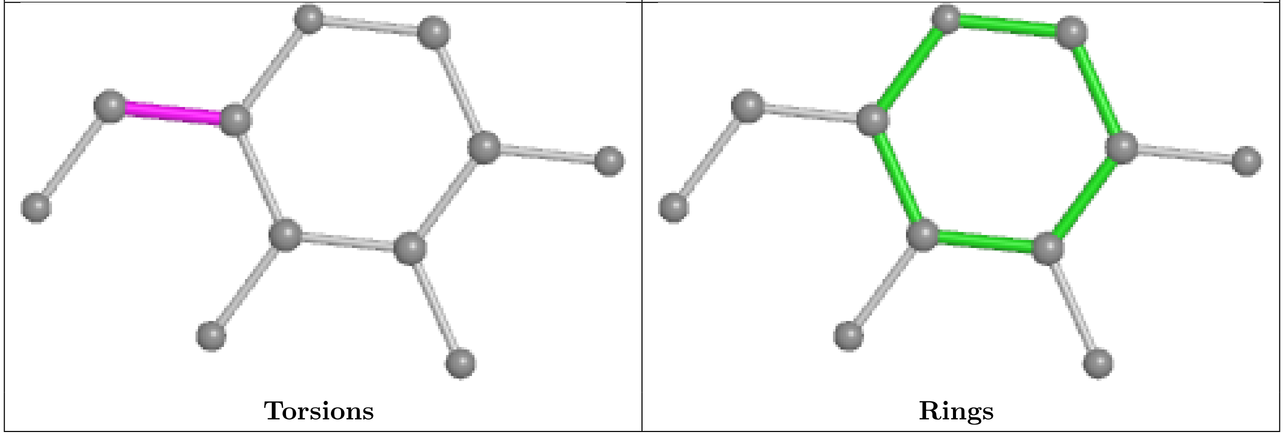


Torsions **Rings**

Ligand GLA B 2069

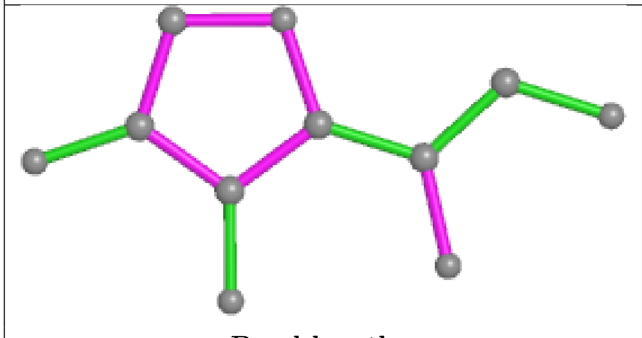


Bond lengths **Bond angles**



Torsions **Rings**

Ligand A1AIO A 2005



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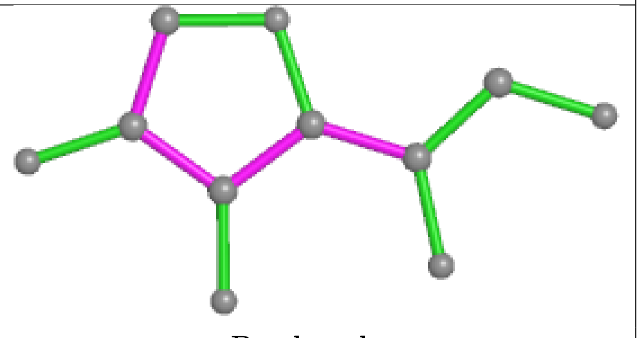
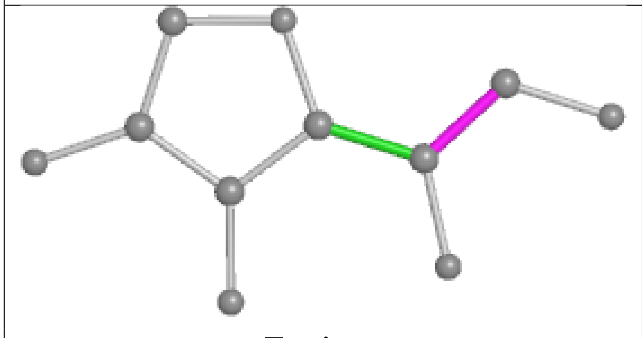


Bond angles



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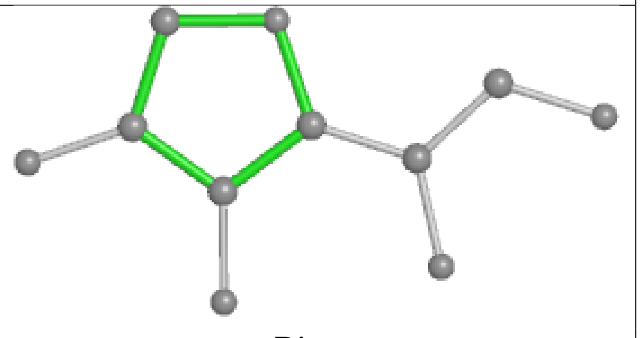
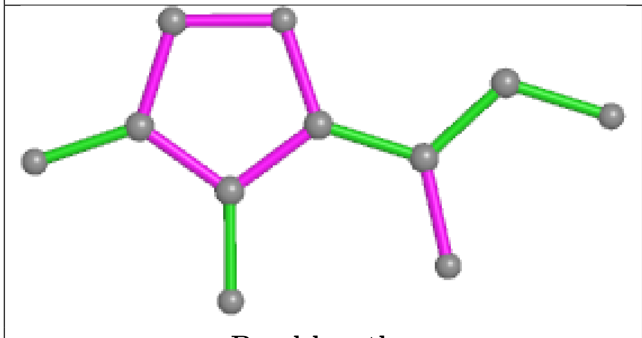


Rings

Ligand A1AIO B 2023



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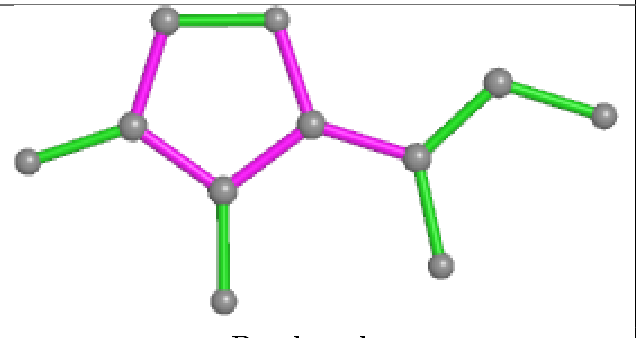
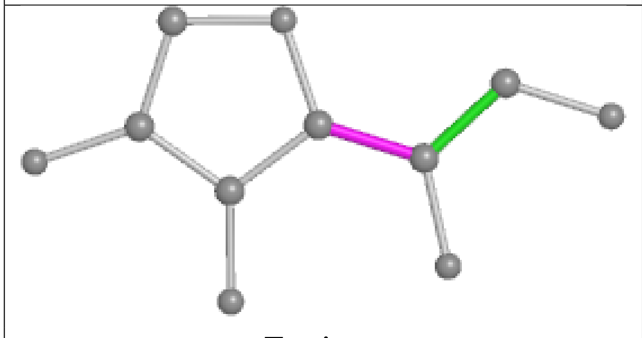


Bond angles



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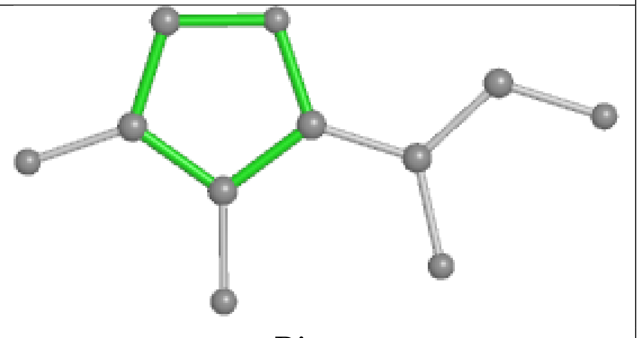
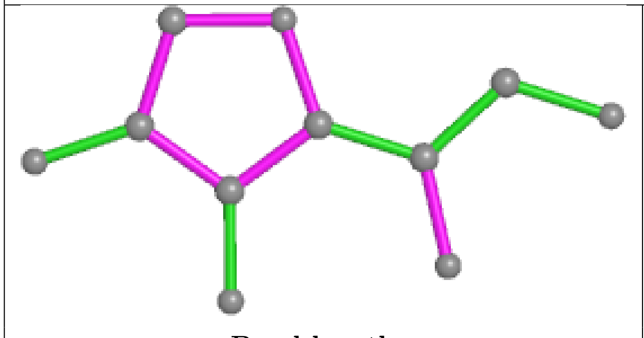


Rings

Ligand A1AIO B 2001



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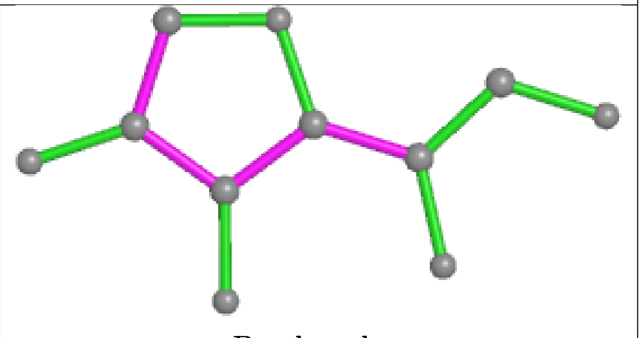

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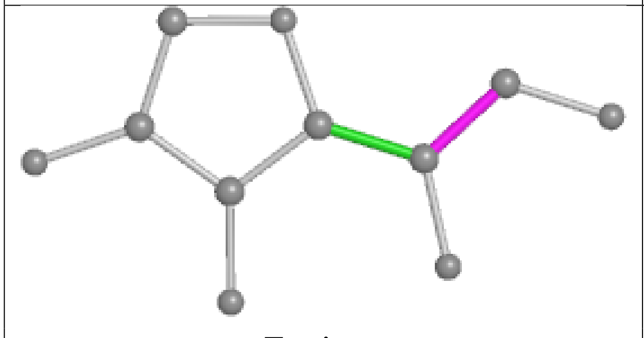

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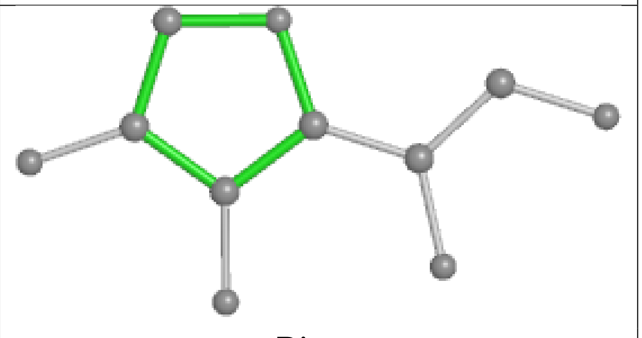
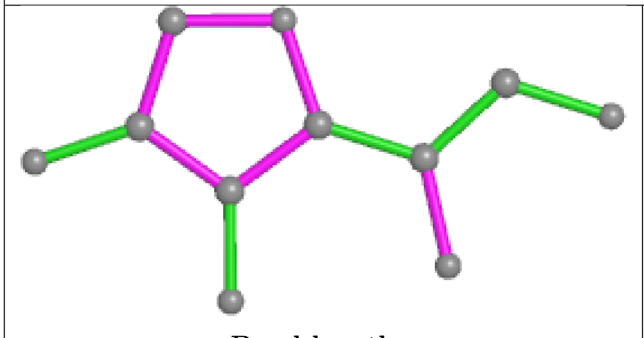


Rings

Ligand A1AIO A 2051



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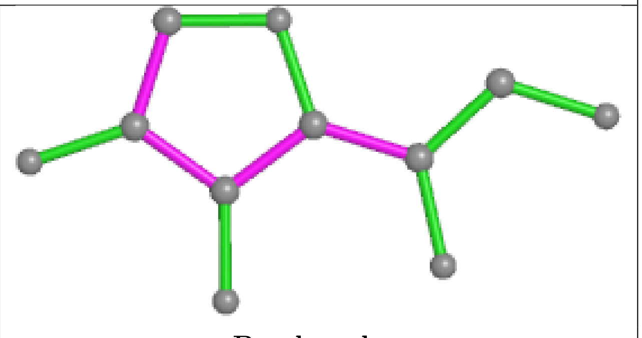
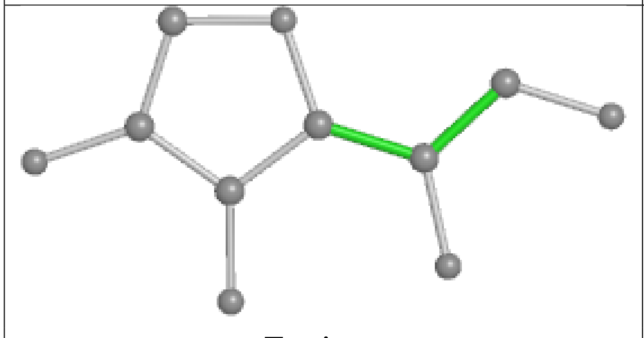


Bond angles



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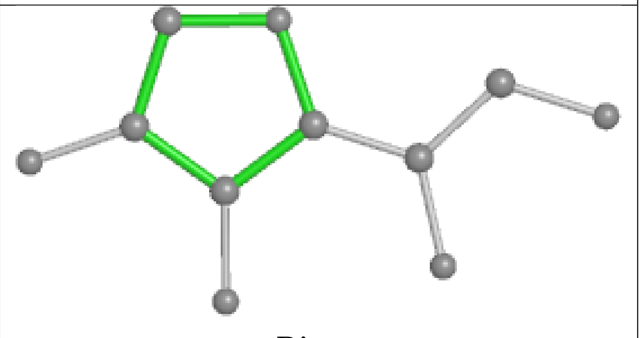
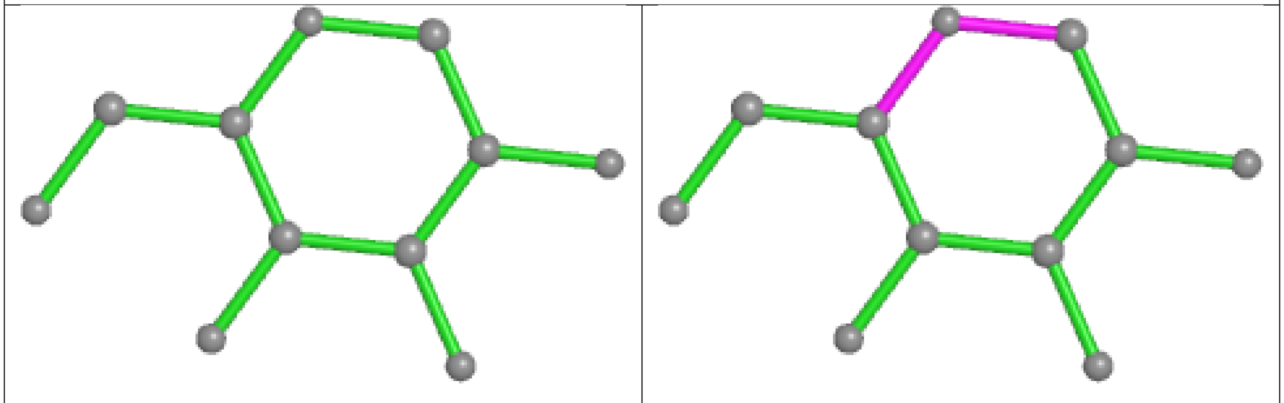
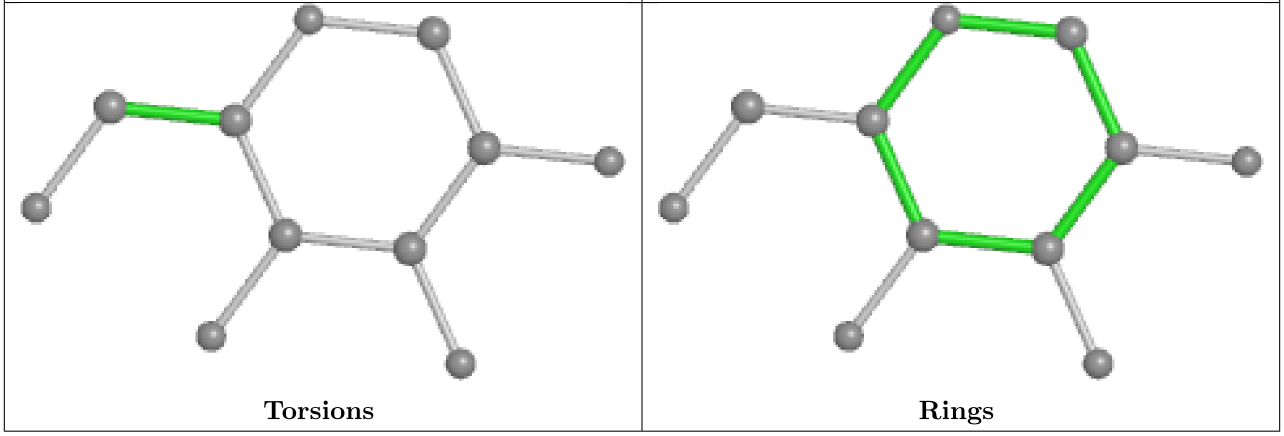


Rings

Ligand GLA B 2059

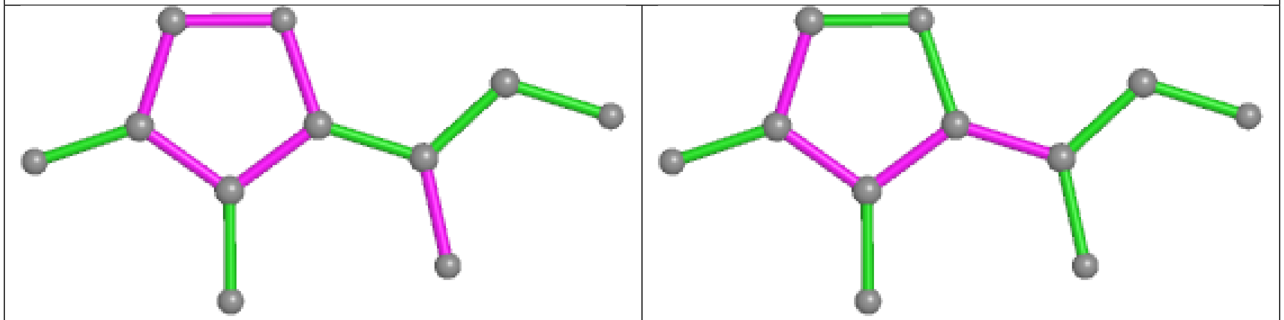


Bond lengths Bond angles

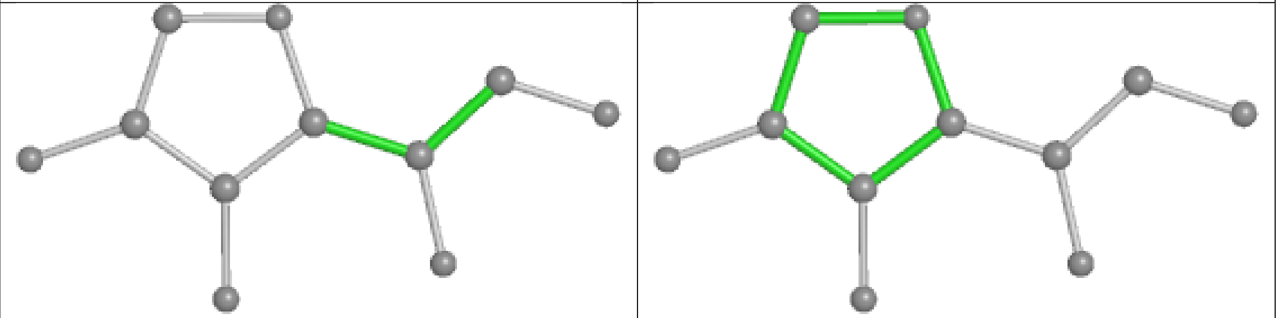


Torsions Rings

Ligand A1AIO B 2009



Bond lengths Bond angles



Torsions Rings

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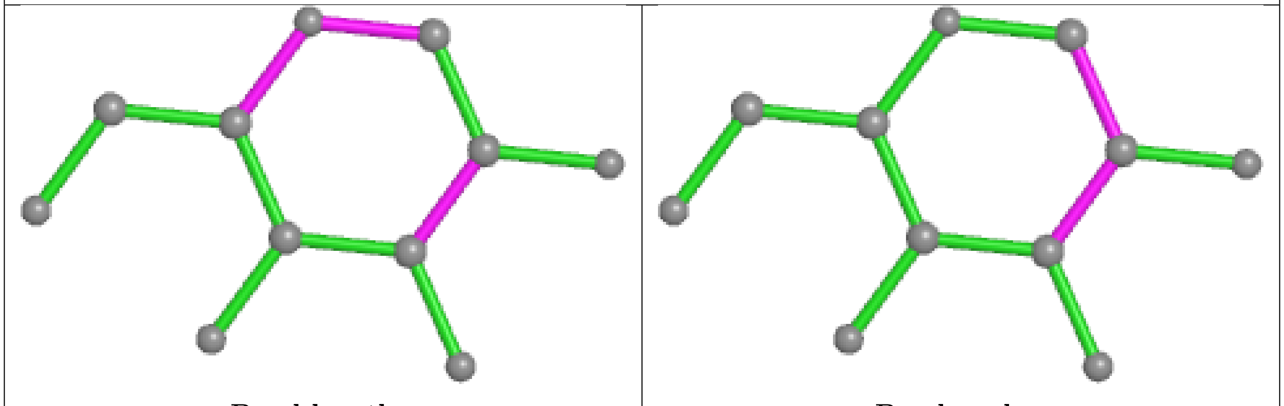
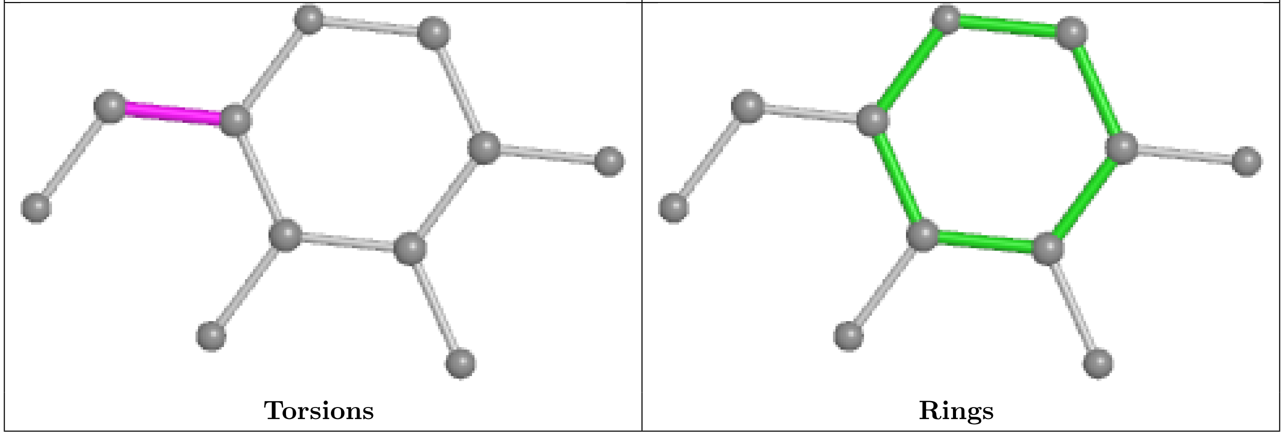


Bond lengths

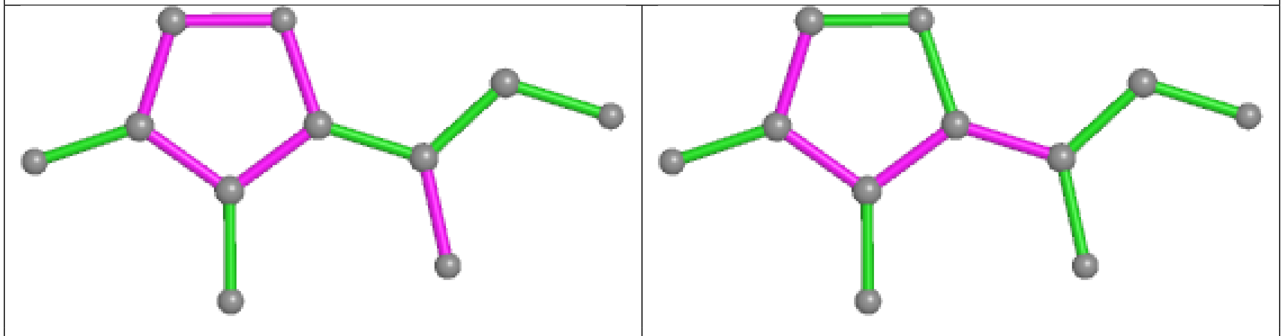
Bond angles



Torsions

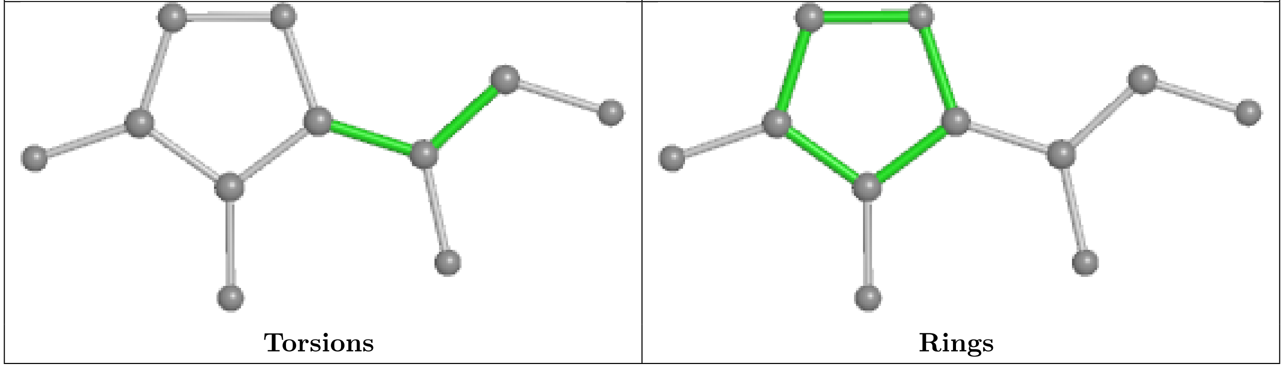
Rings

Ligand A1AIO B 2038



Bond lengths

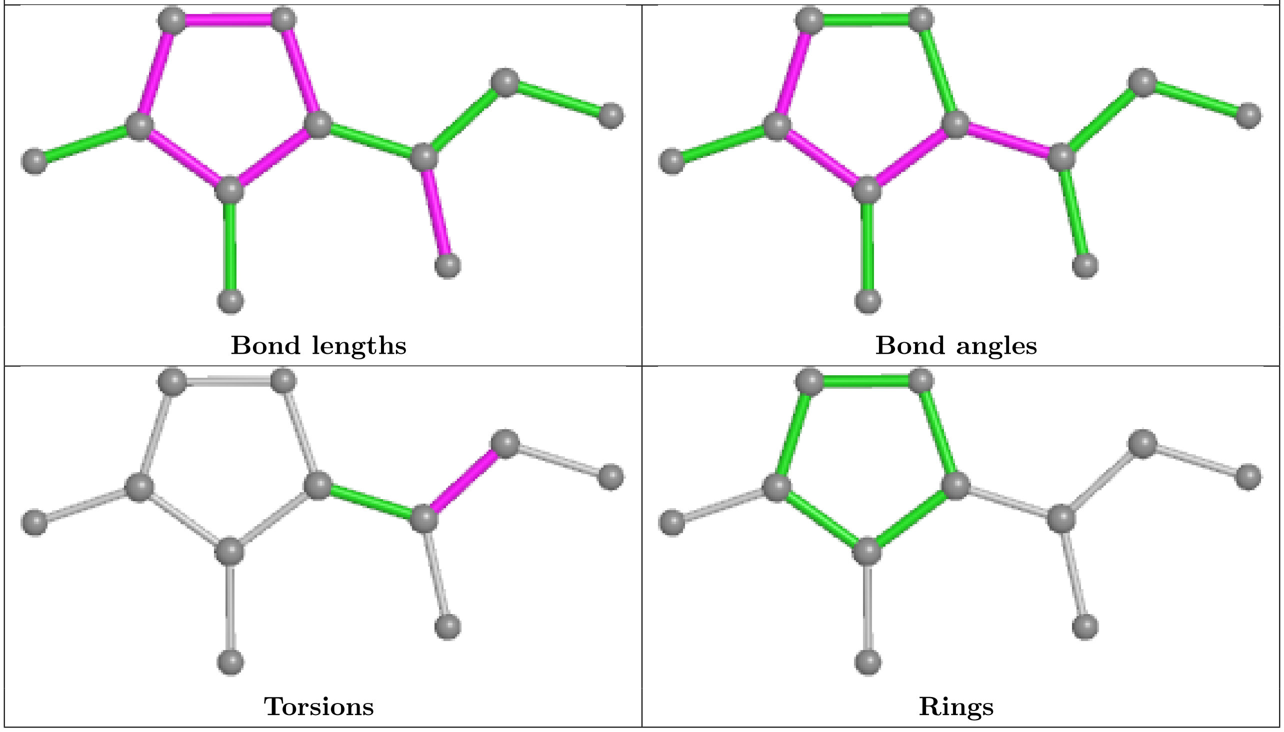
Bond angles



Torsions

Rings

Ligand A1AIO B 2010



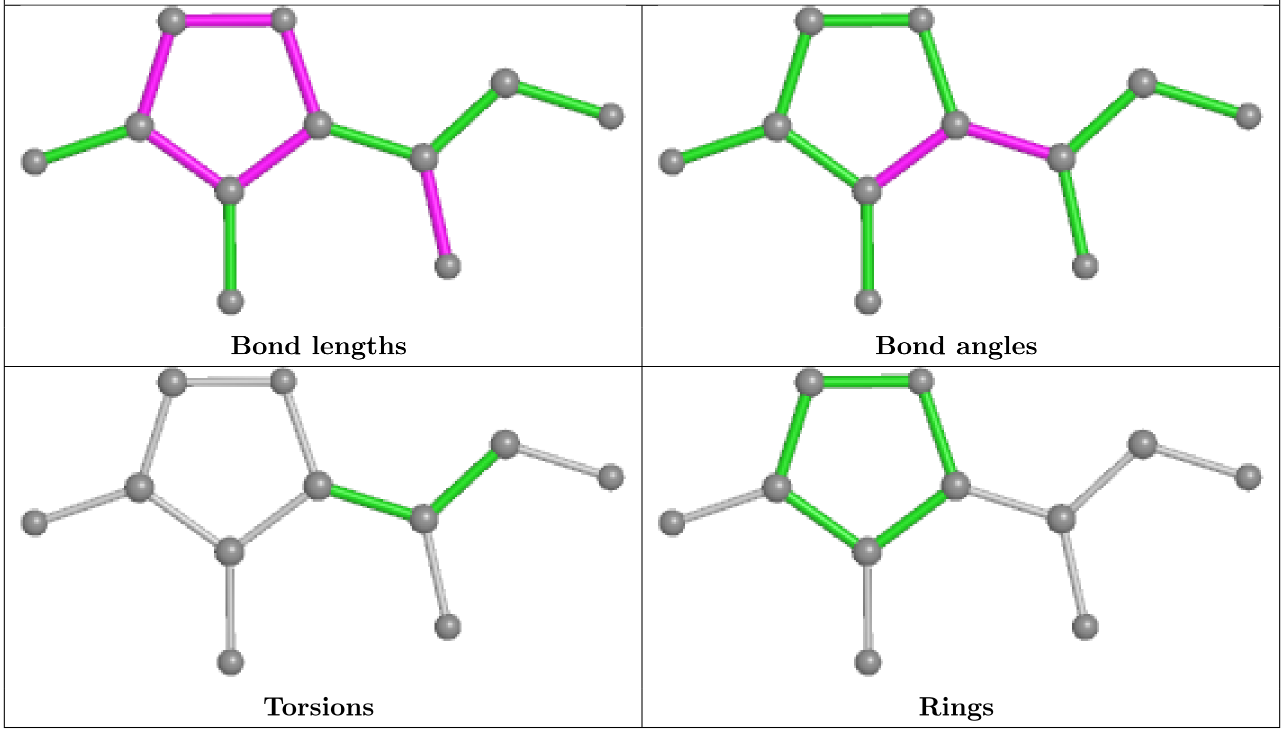
Bond lengths

Bond angles

Torsions

Rings

Ligand A1AIO A 2017



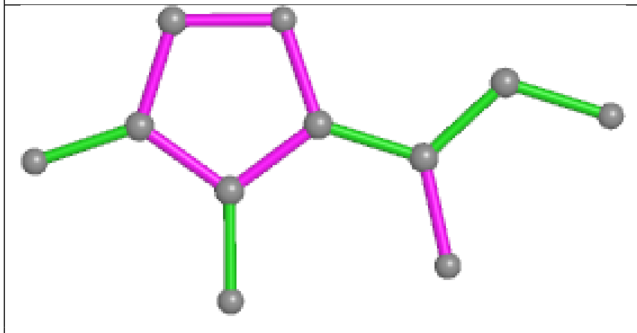
Bond lengths

Bond angles

Torsions

Rings

Ligand A1AIO B 2053



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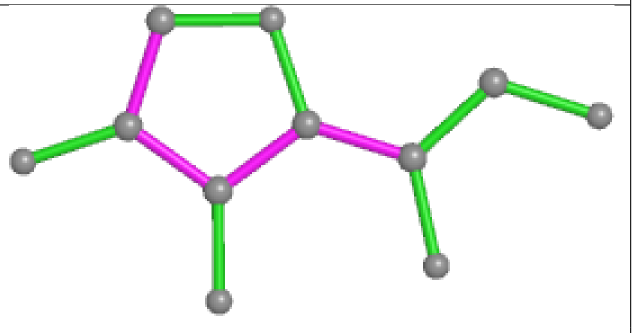
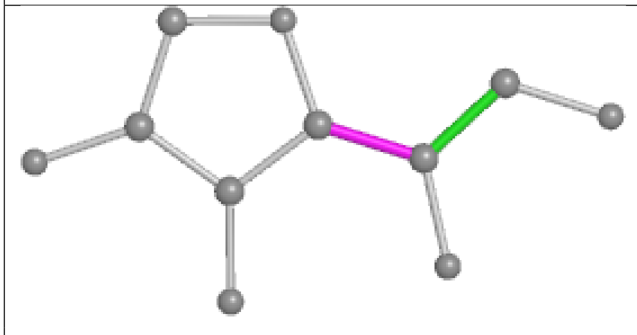


Bond angles



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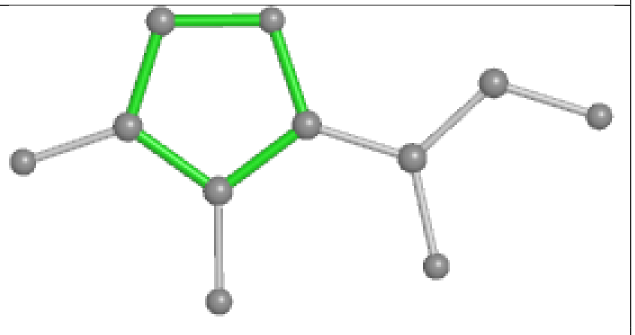
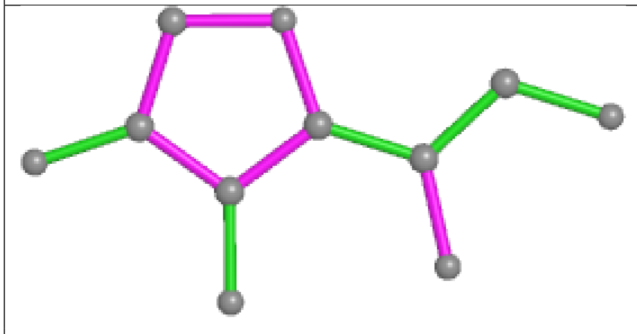


Rings

Ligand A1AIO A 2045



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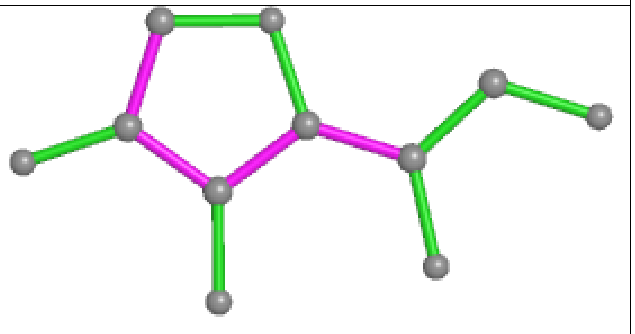
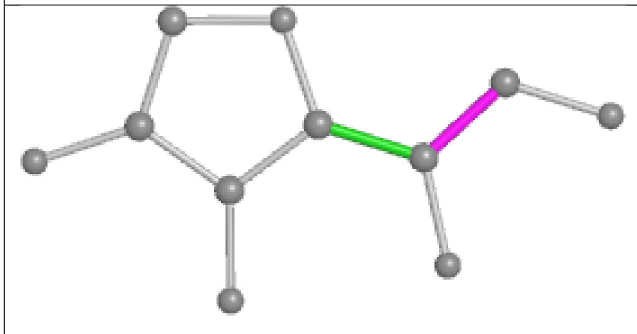


Bond angles



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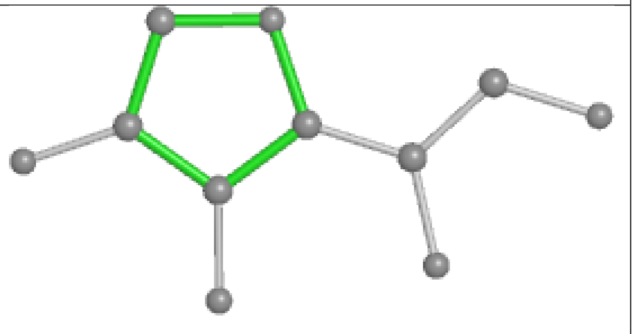
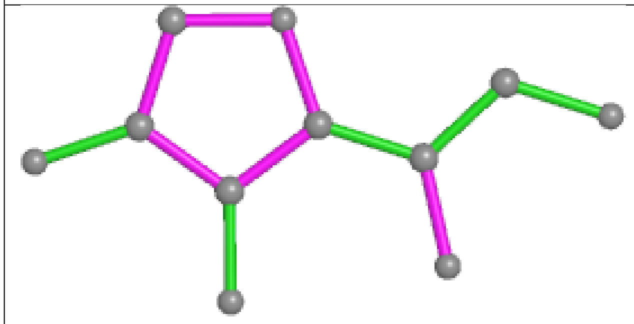


Rings

Ligand A1AIO B 2004



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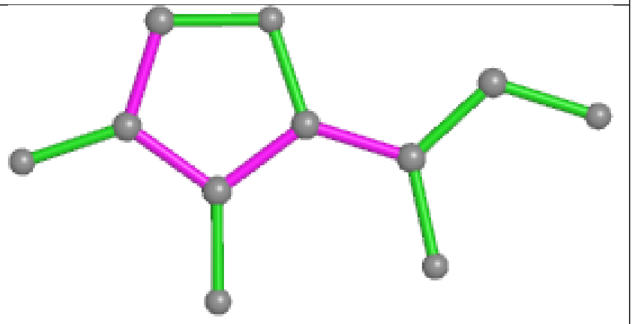
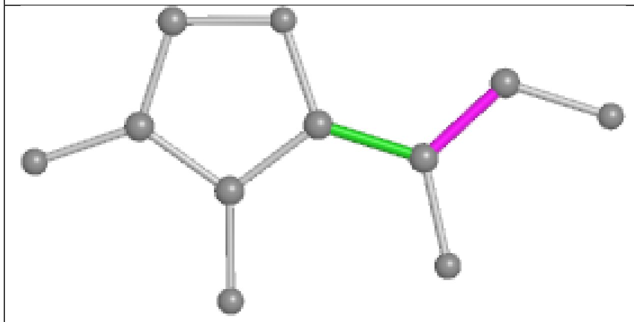


Bond angles



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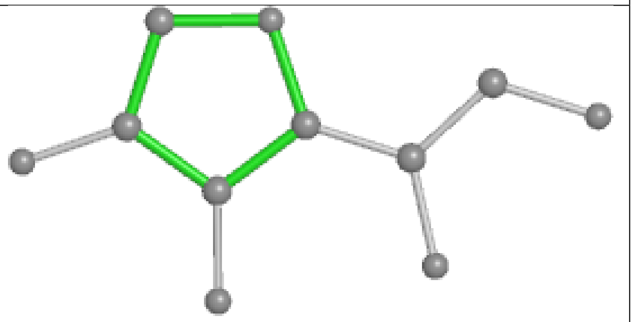
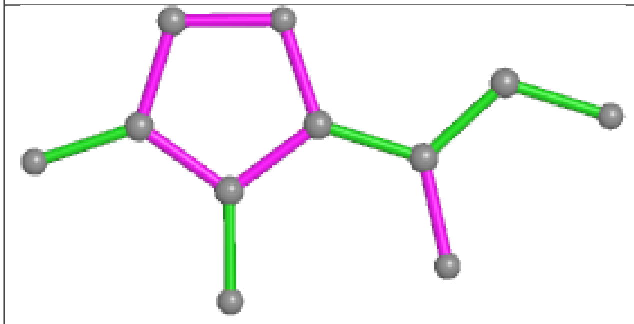


Rings

Ligand A1AIO B 2006



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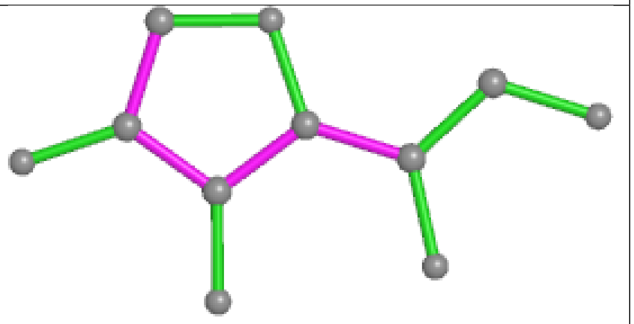
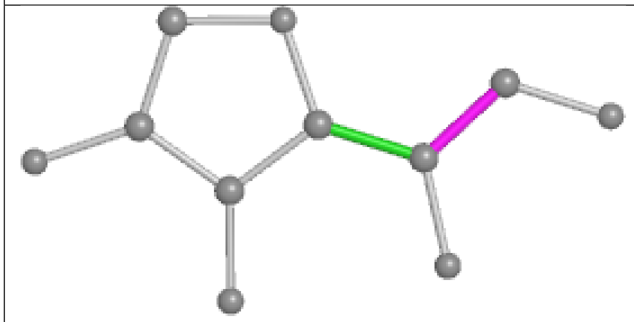


Bond angles



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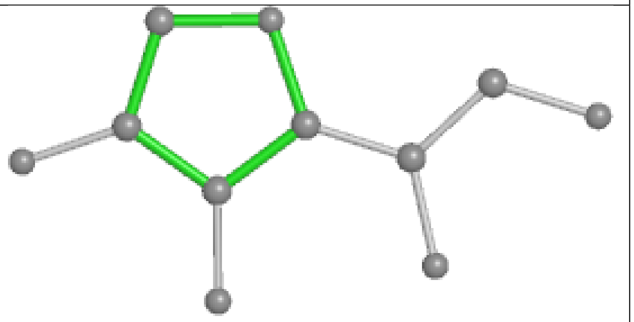
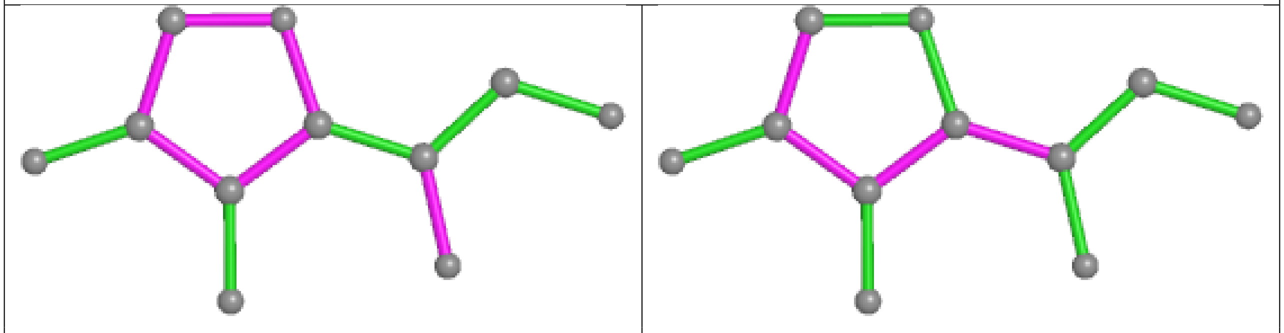


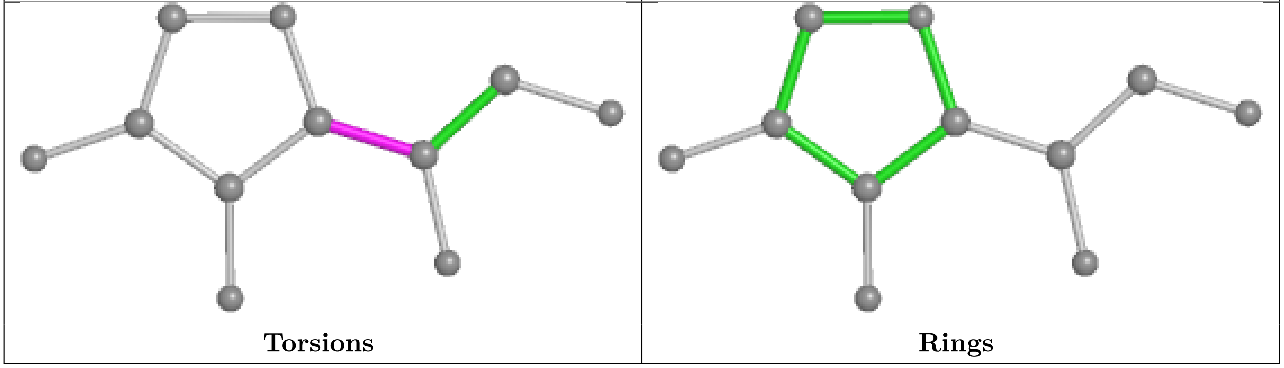
Rings

Ligand A1AIO B 2024



Bond lengths

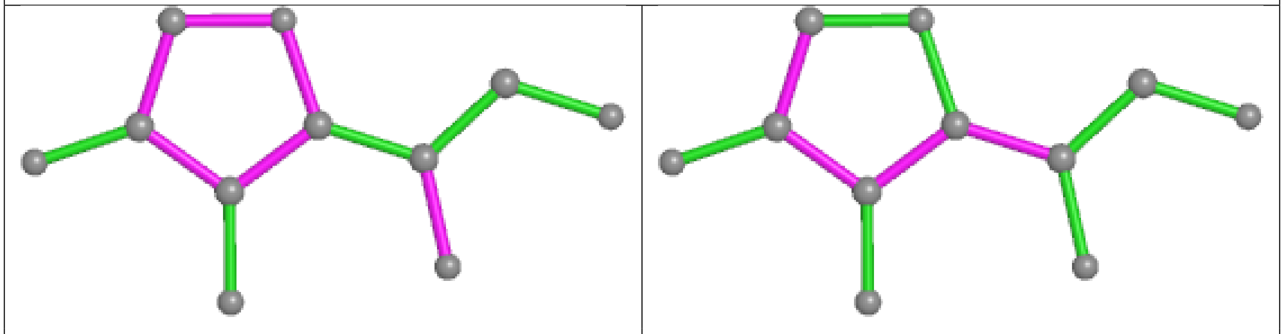
Bond angles



Torsions

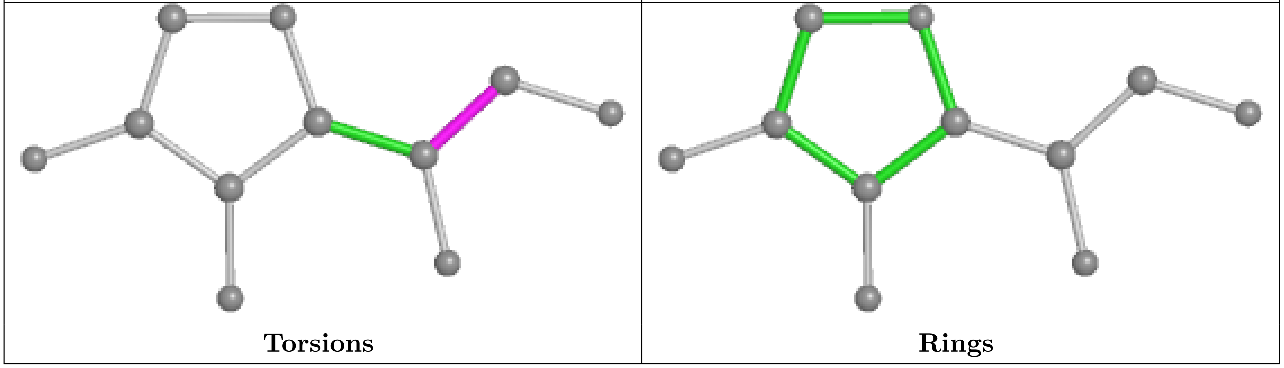
Rings

Ligand A1AIO B 2019



Bond lengths

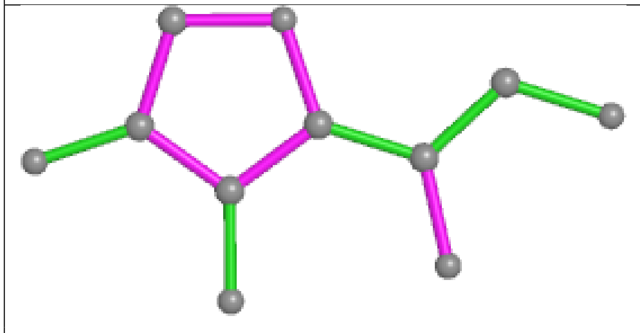
Bond angles



Torsions

Rings

Ligand A1AIO A 2053



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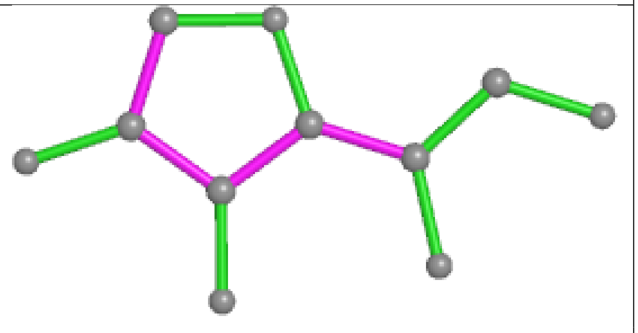
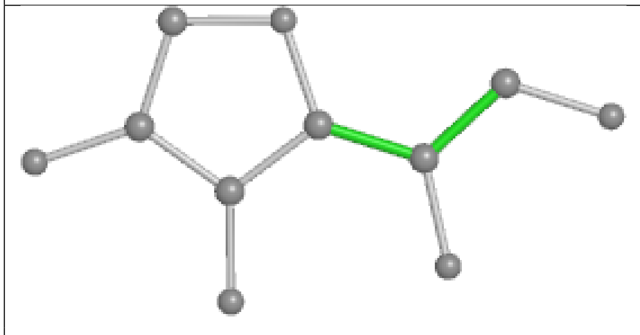


Bond angles



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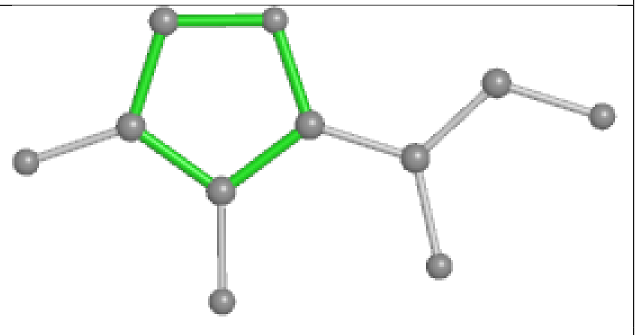
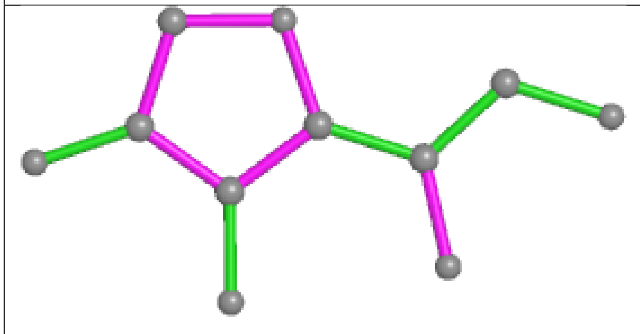


Rings

Ligand A1AIO B 2029



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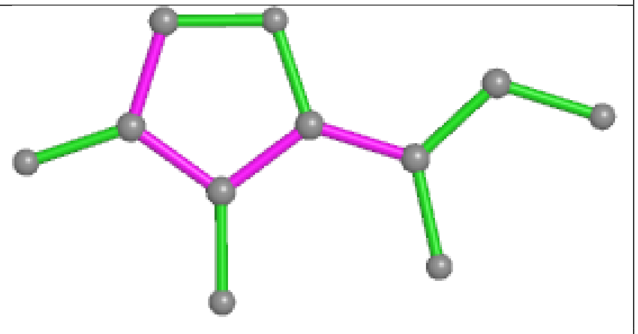
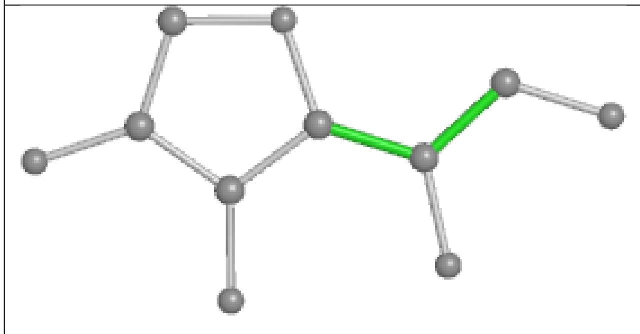
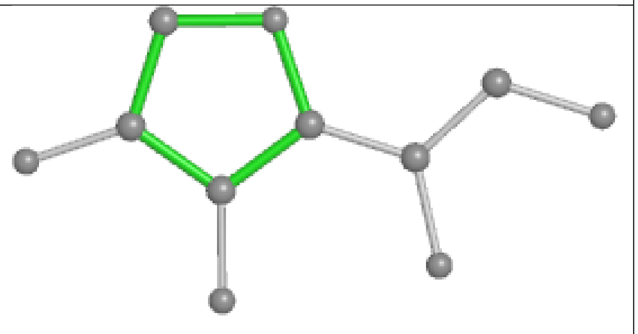


Bond angles

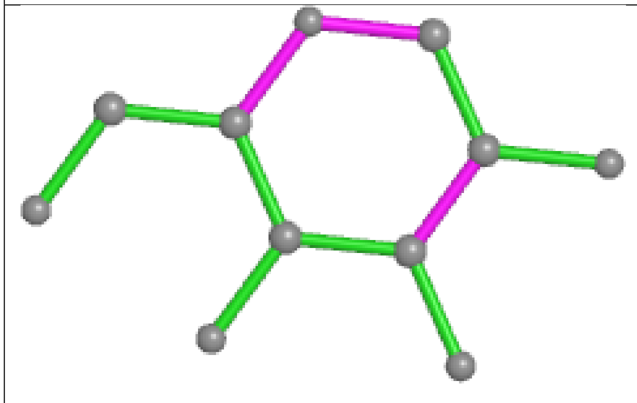


Torsions

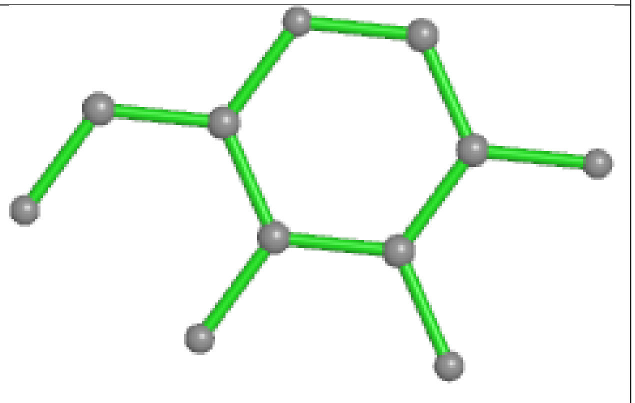


Rings

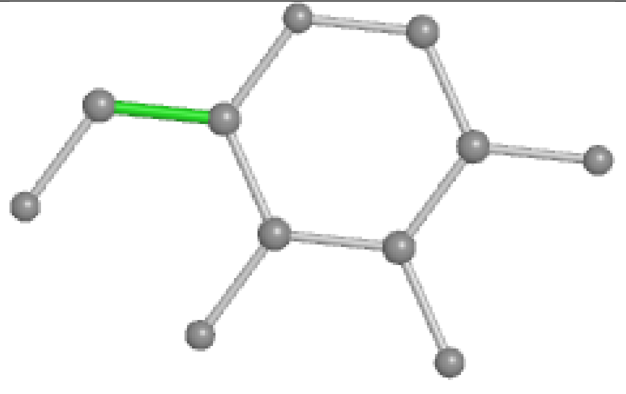
Ligand GLA A 2068



Bond lengths



Bond angles



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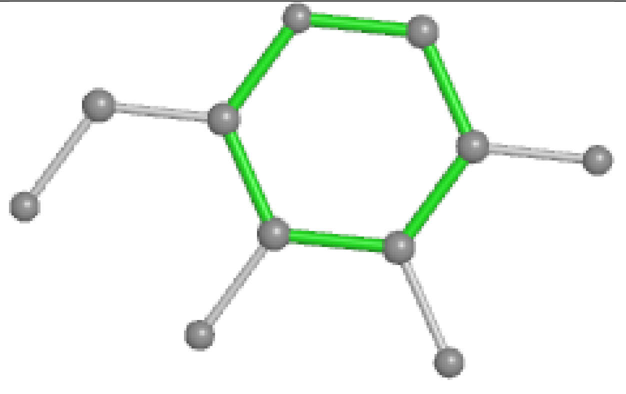
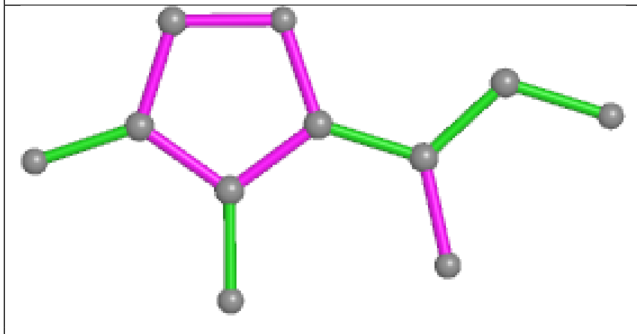


Rings

Ligand A1AIO B 2017



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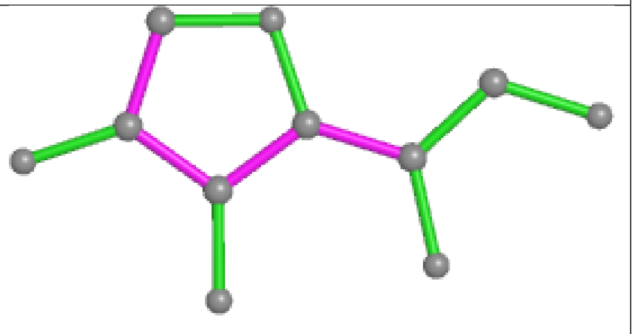
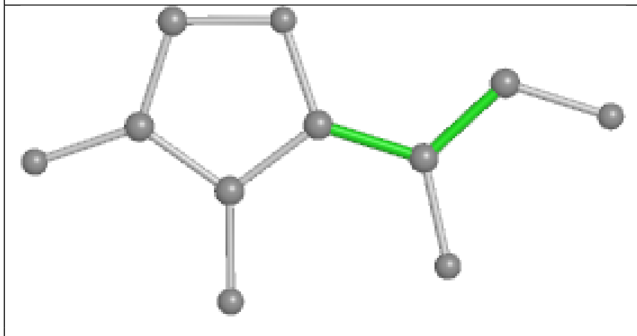


Bond angles



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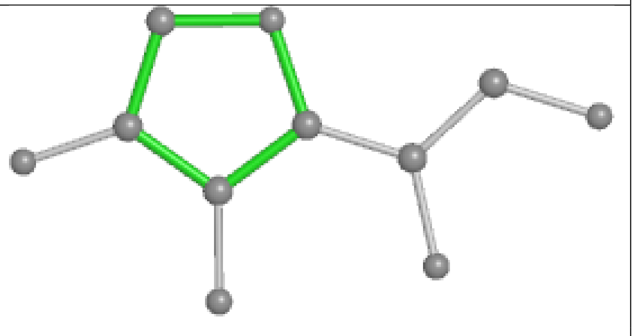
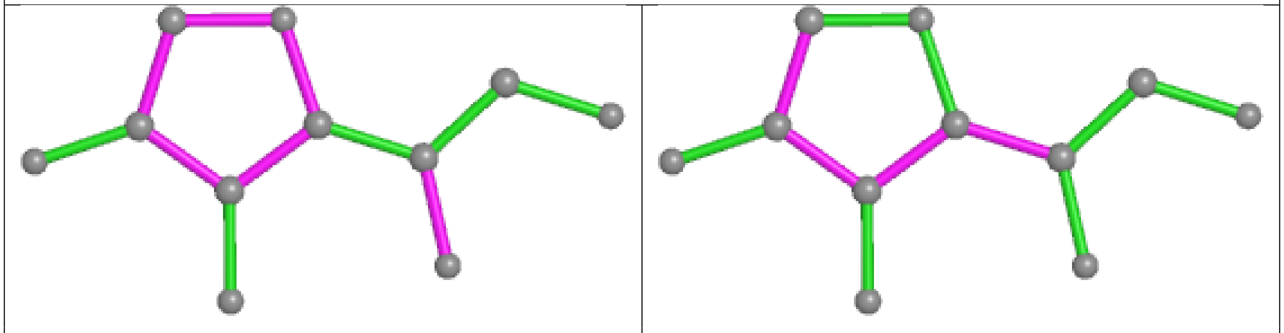


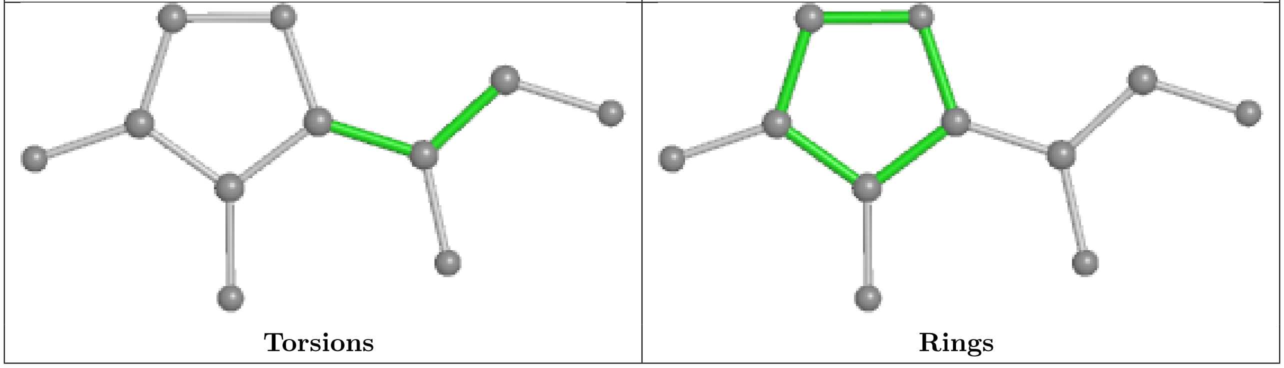
Rings

Ligand A1AIO A 2022



Bond lengths

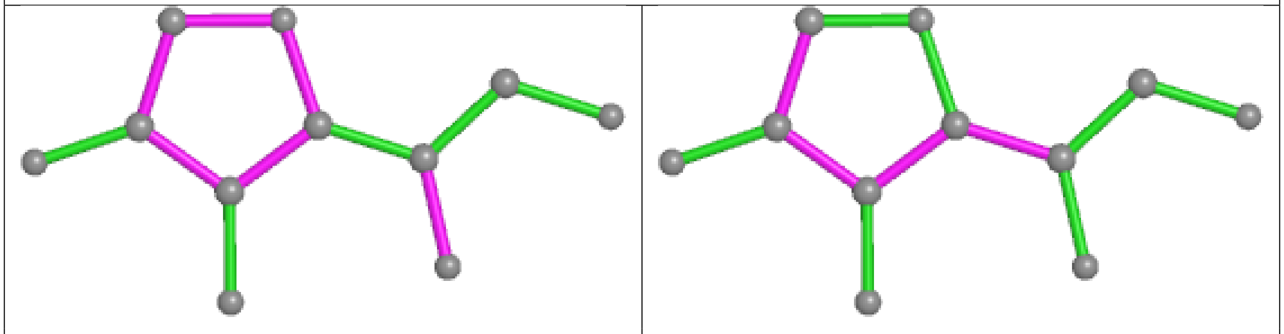
Bond angles



Torsions

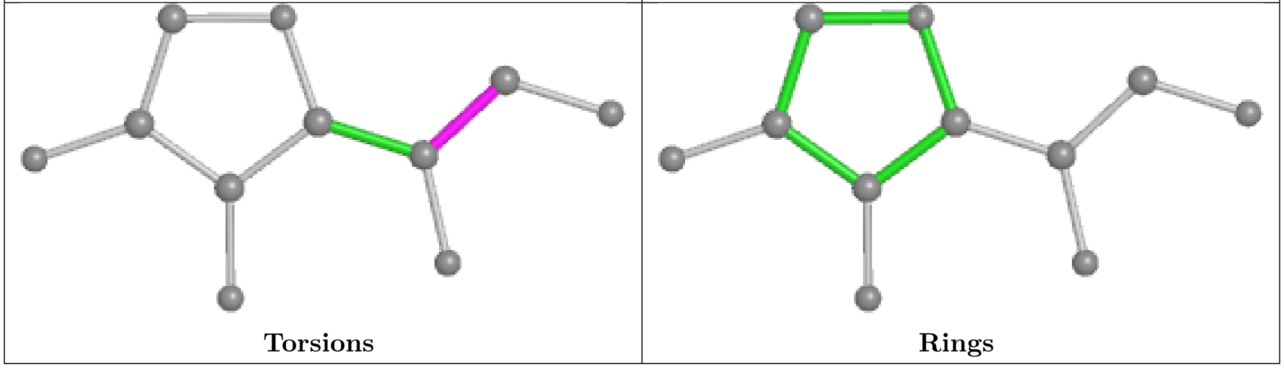
Rings

Ligand A1AIO A 2006



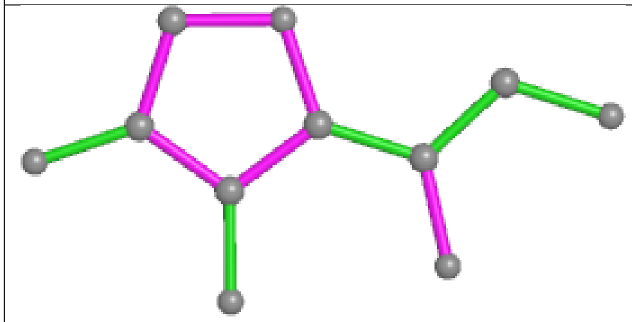
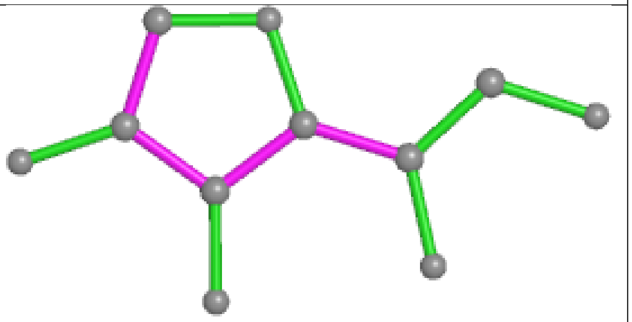
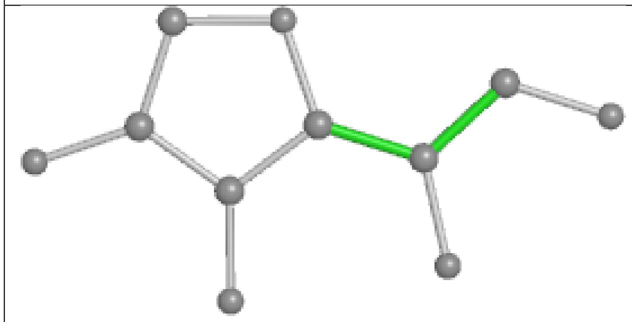
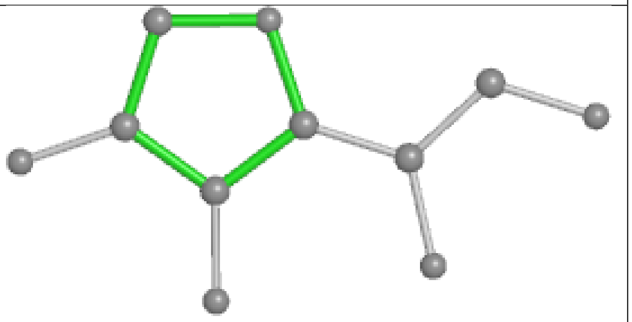
Bond lengths

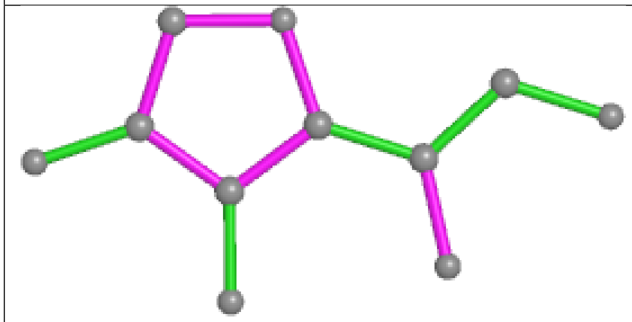
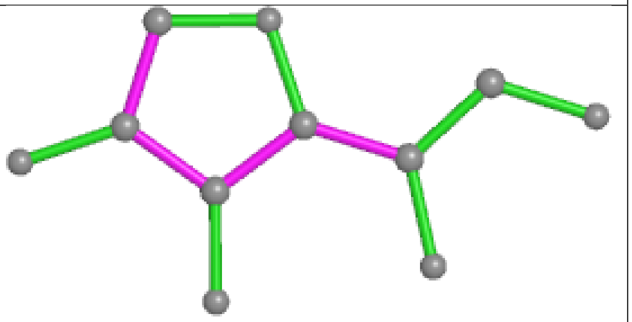
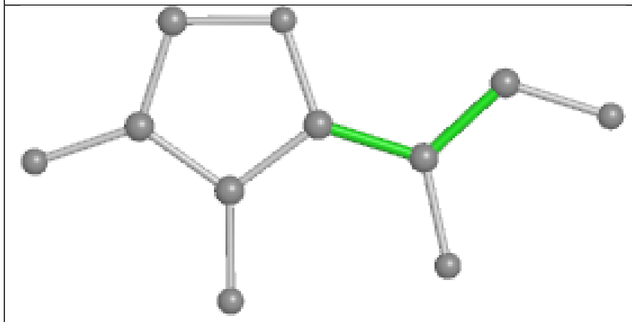
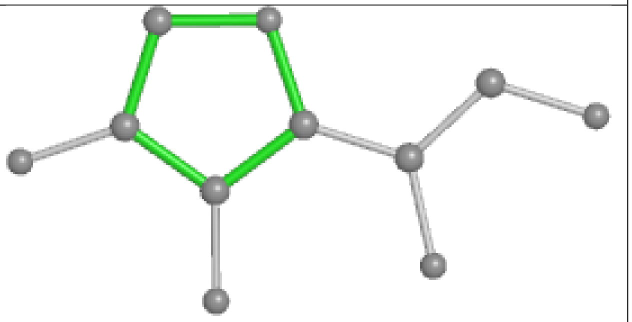
Bond angles



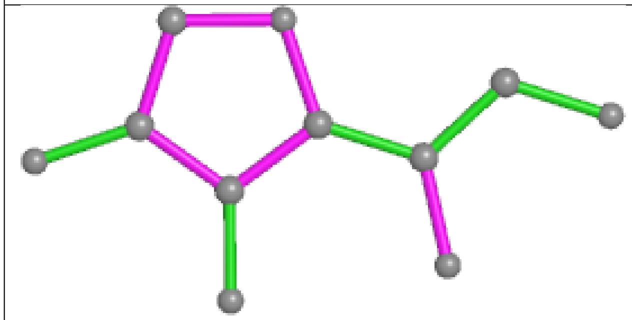
Torsions

Rings

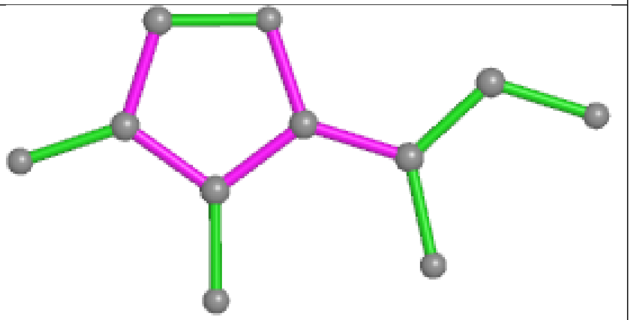
Ligand A1AIO A 2026	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand A1AIO A 2013	
 Bond lengths	 Bond angles
 Torsions	 Rings

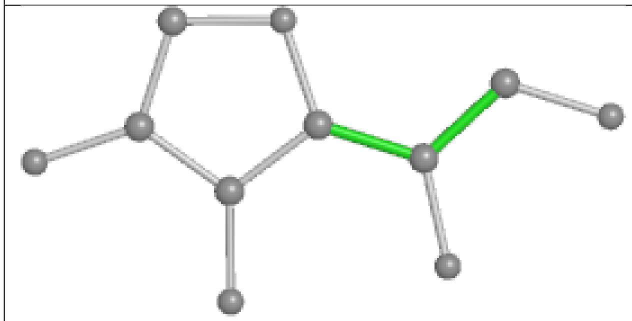
Ligand A1AIO B 2033



Bond lengths



Bond angles



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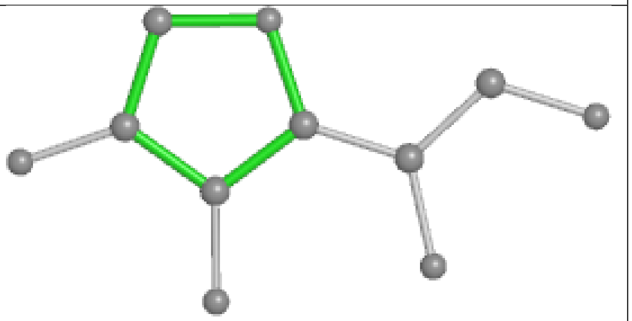
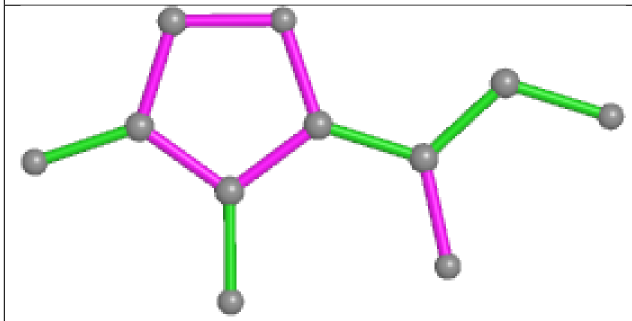


Rings

Ligand A1AIO A 2047



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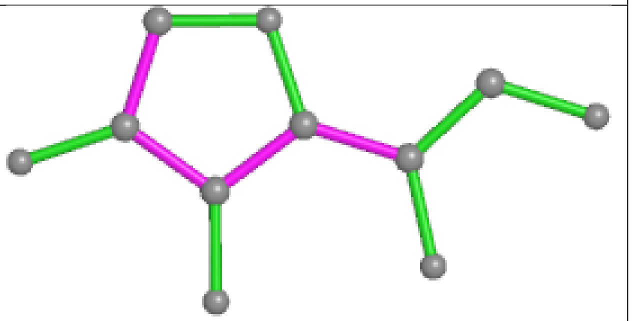
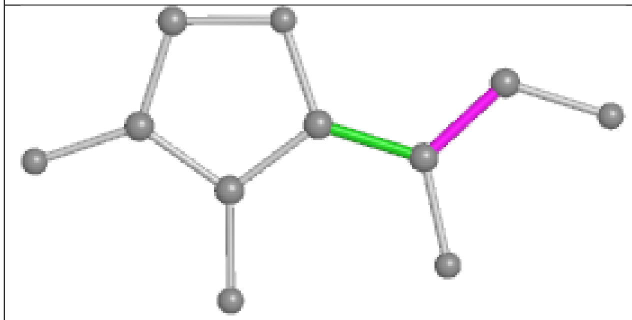


Bond angles



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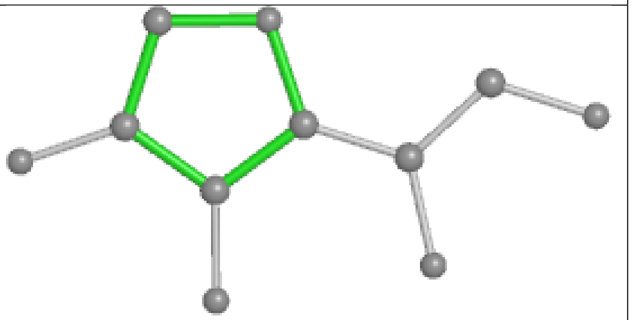
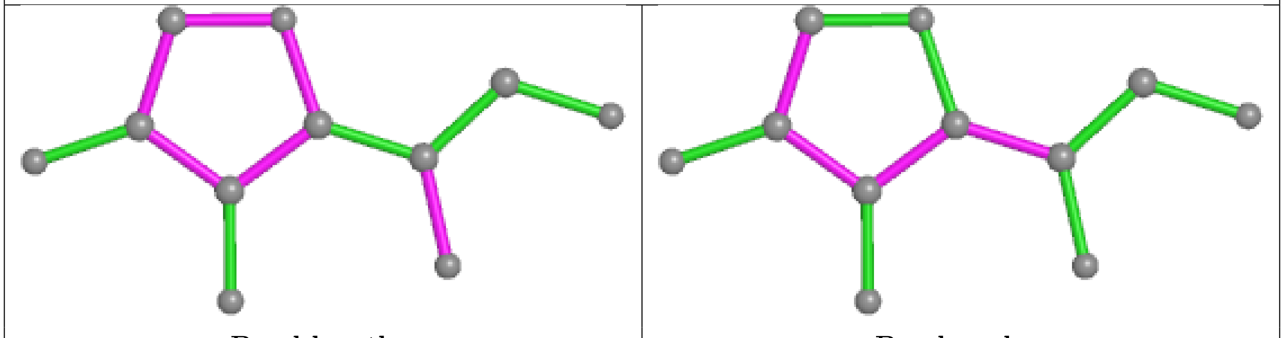


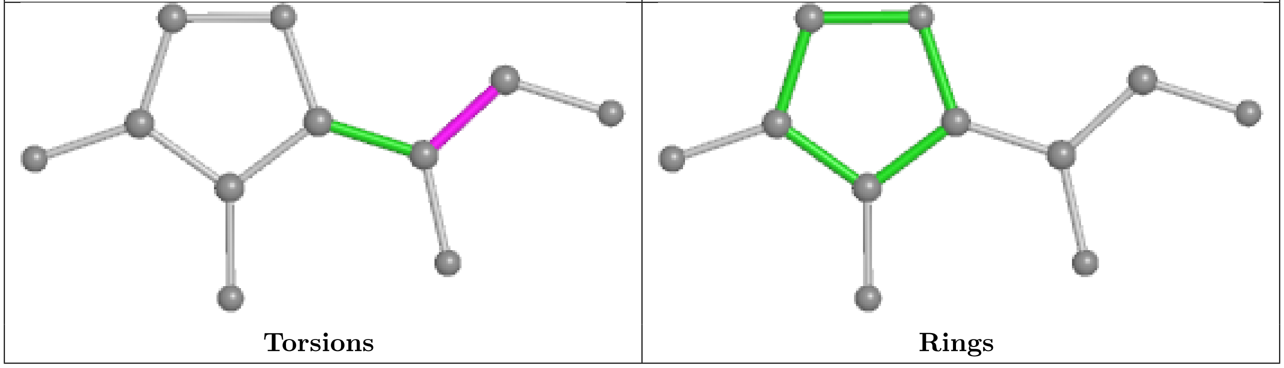
Rings

Ligand A1AIO B 2036



Bond lengths

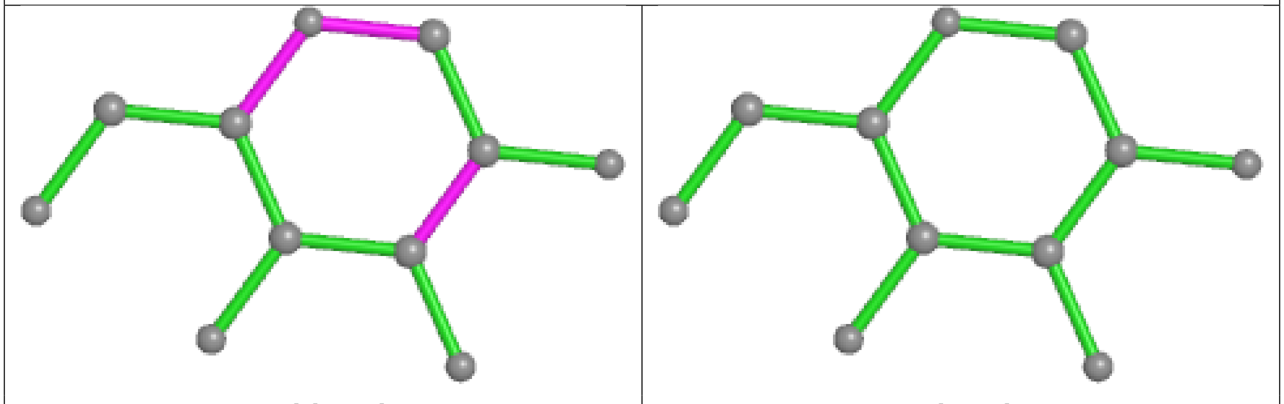
Bond angles



Torsions

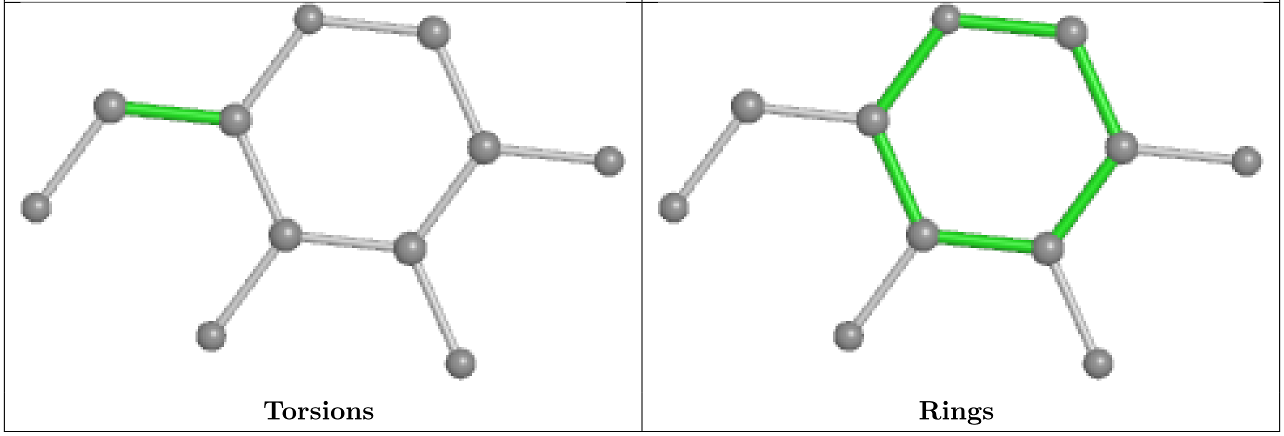
Rings

Ligand GLA A 2066



Bond lengths

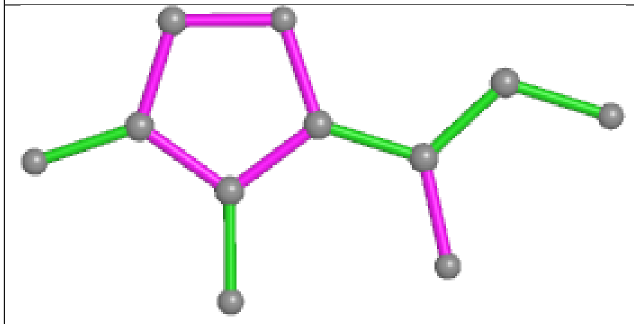
Bond angles



Torsions

Rings

Ligand A1AIO A 2012



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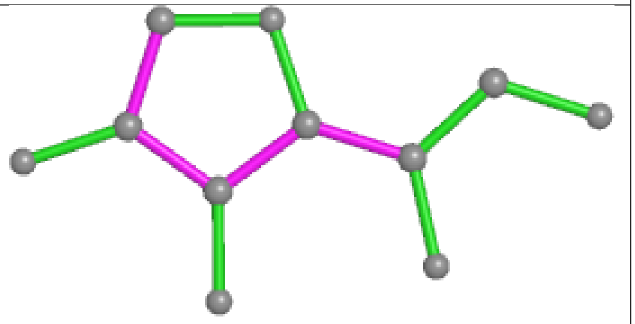
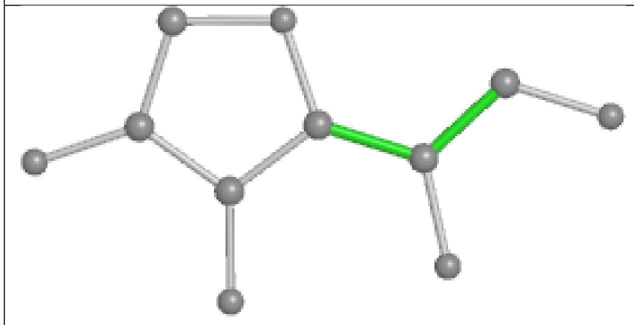


Bond angles



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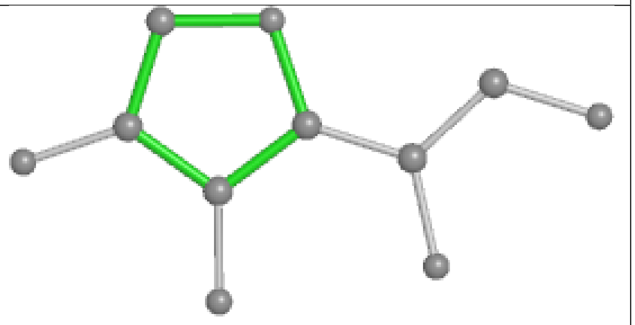
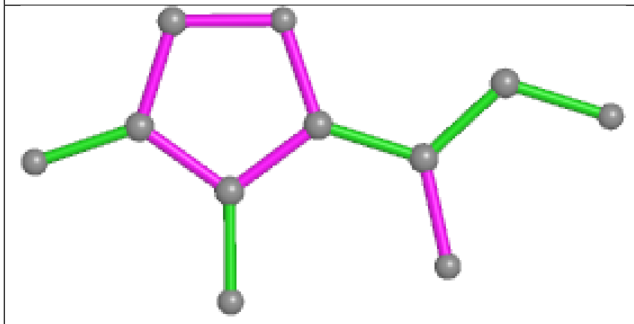


Rings

Ligand A1AIO A 2033



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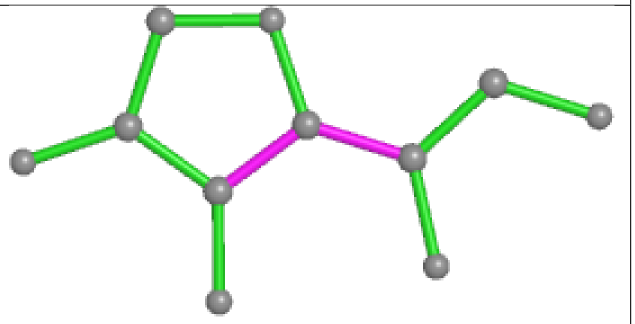
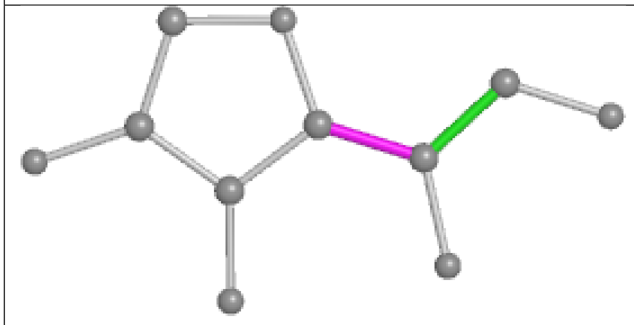


Bond angles



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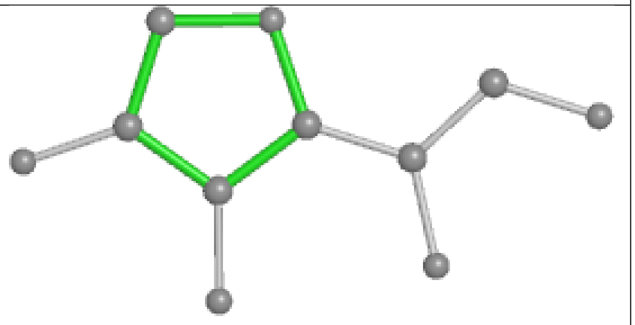
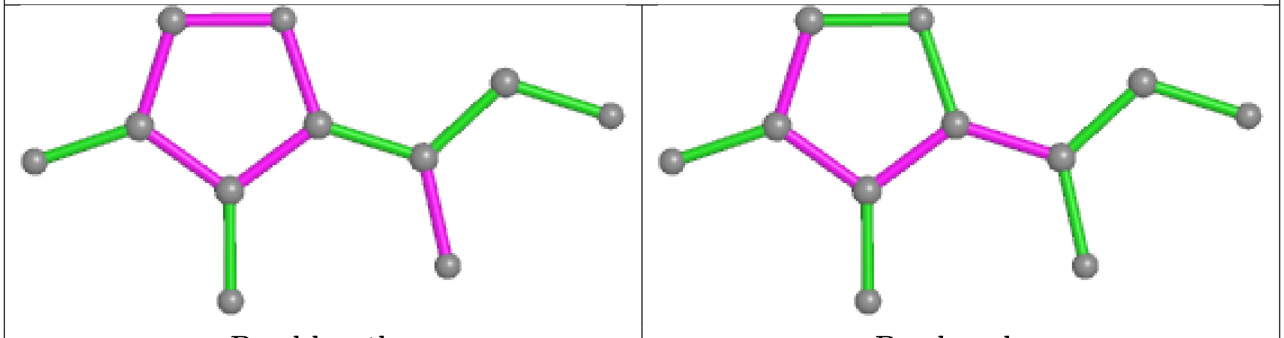


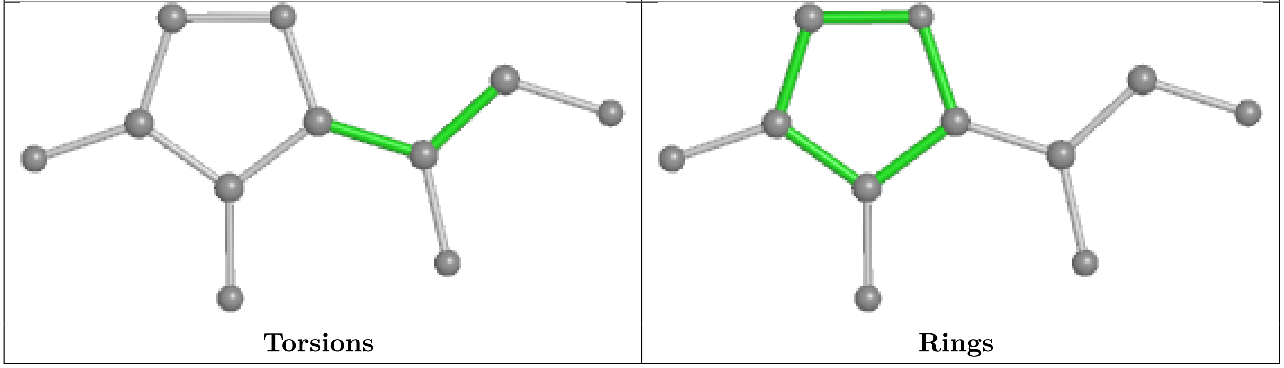
Rings

Ligand A1AIO A 2010



Bond lengths

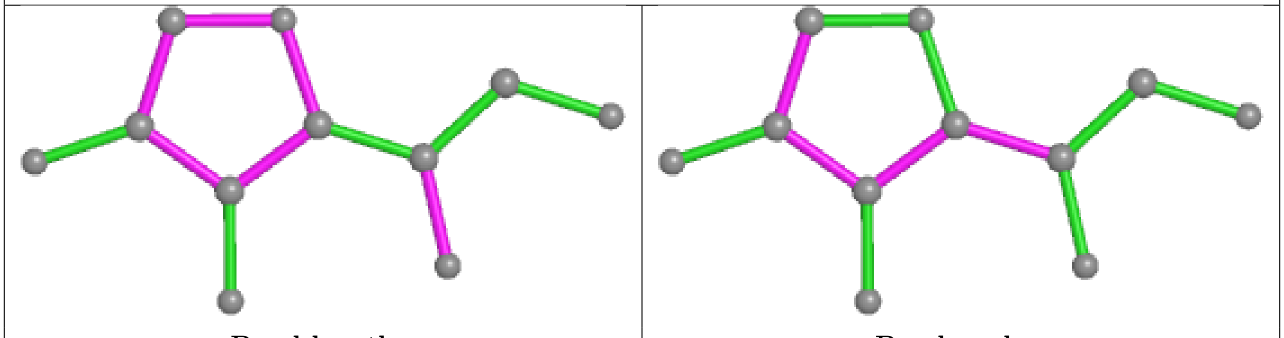
Bond angles



Torsions

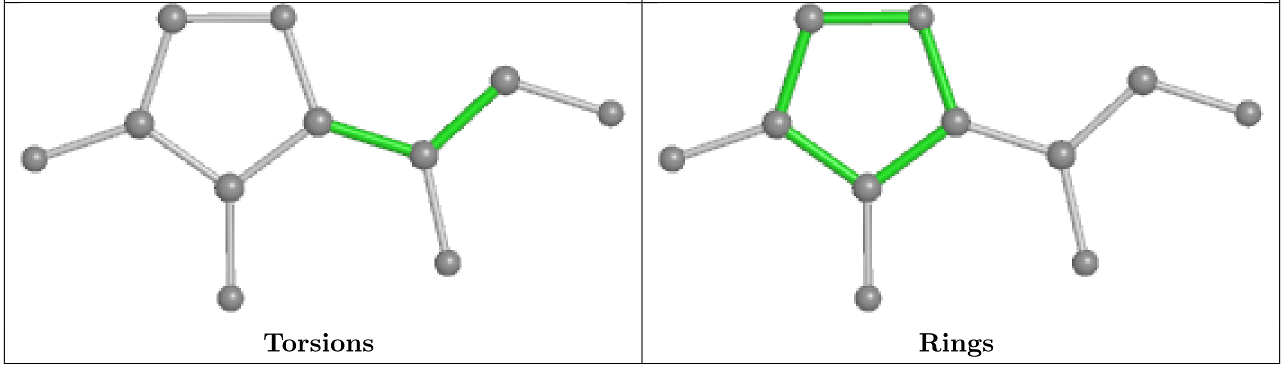
Rings

Ligand A1AIO A 2031



Bond lengths

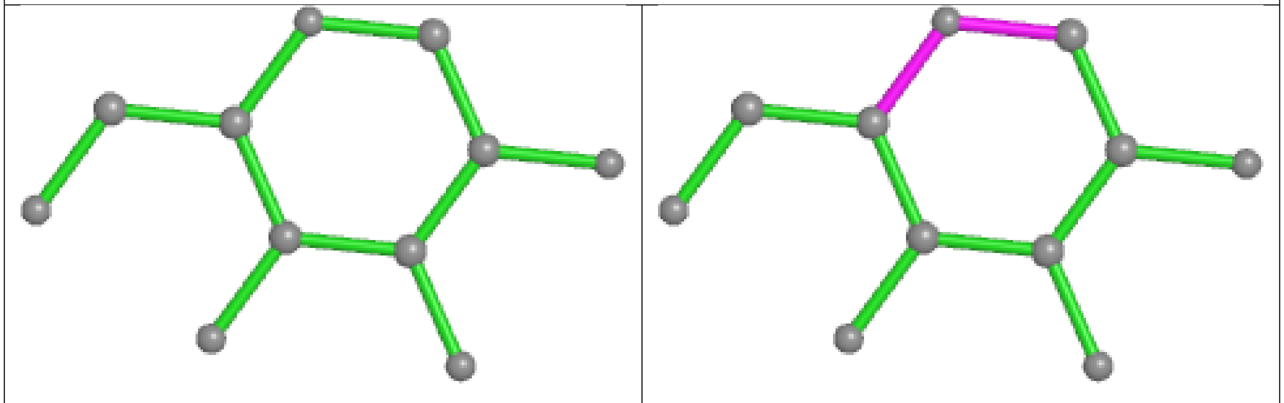
Bond angles



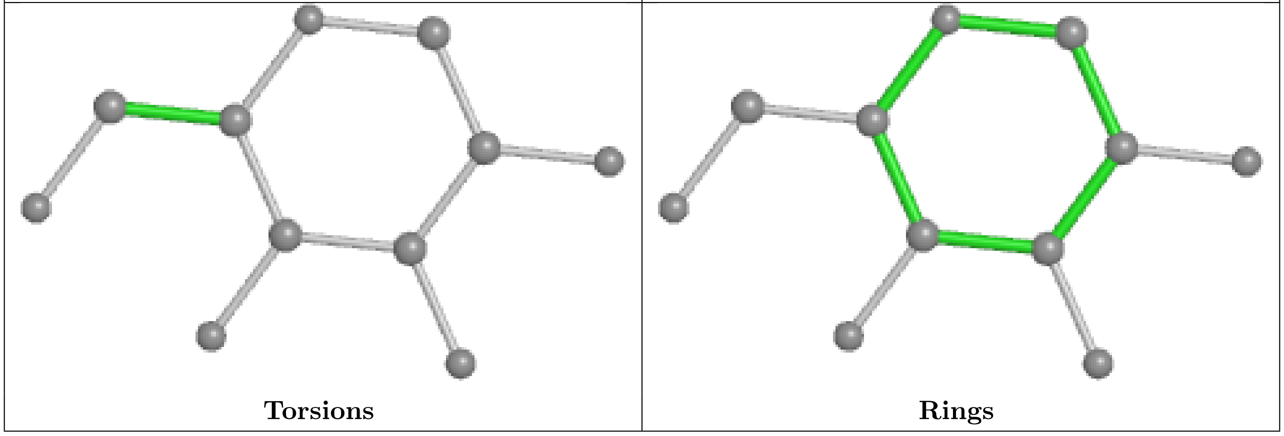
Torsions

Rings

Ligand GLA A 2060

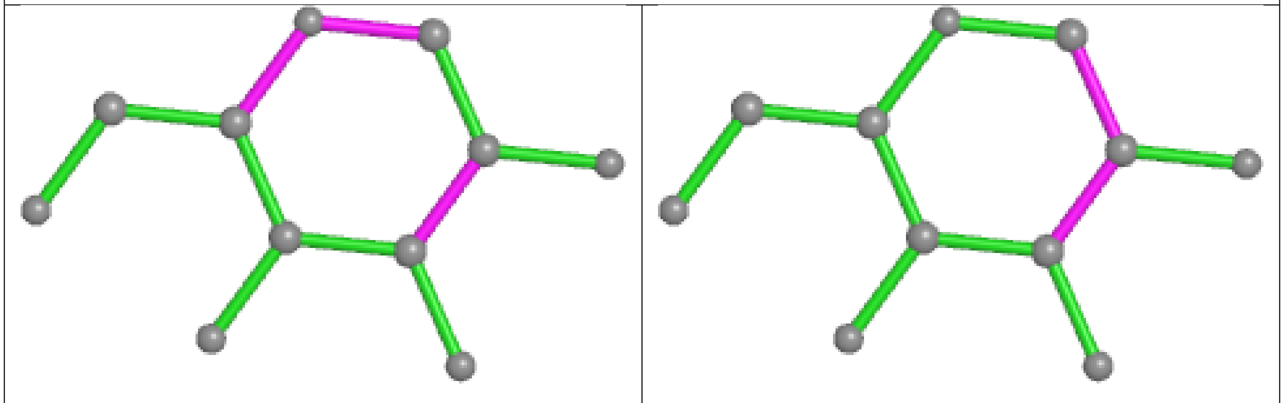


Bond lengths **Bond angles**

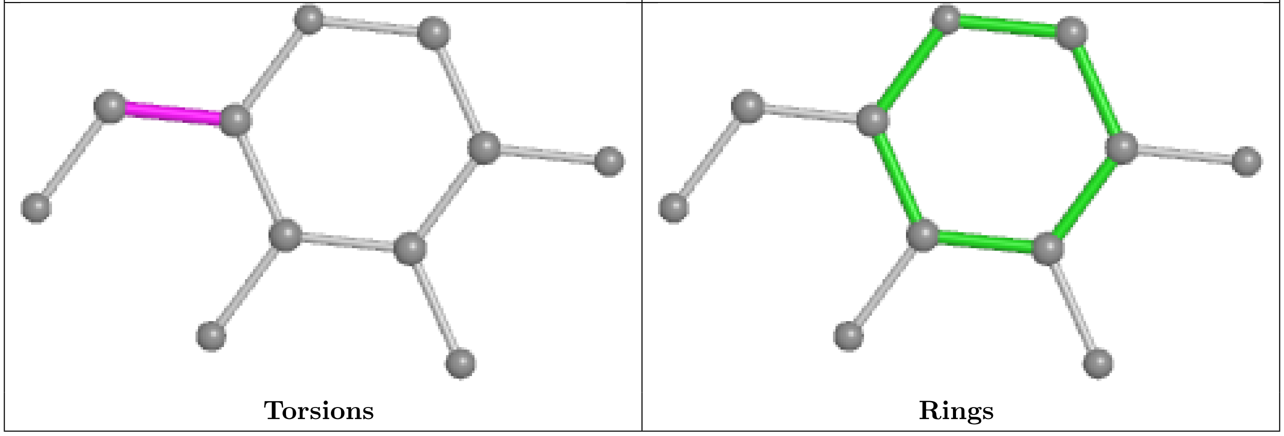


Torsions **Rings**

Ligand GLA B 2063

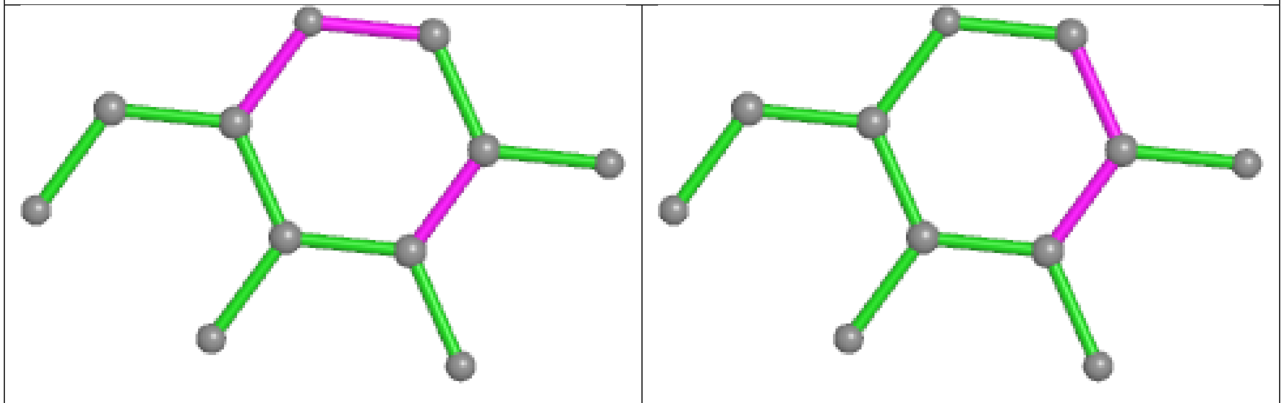


Bond lengths **Bond angles**

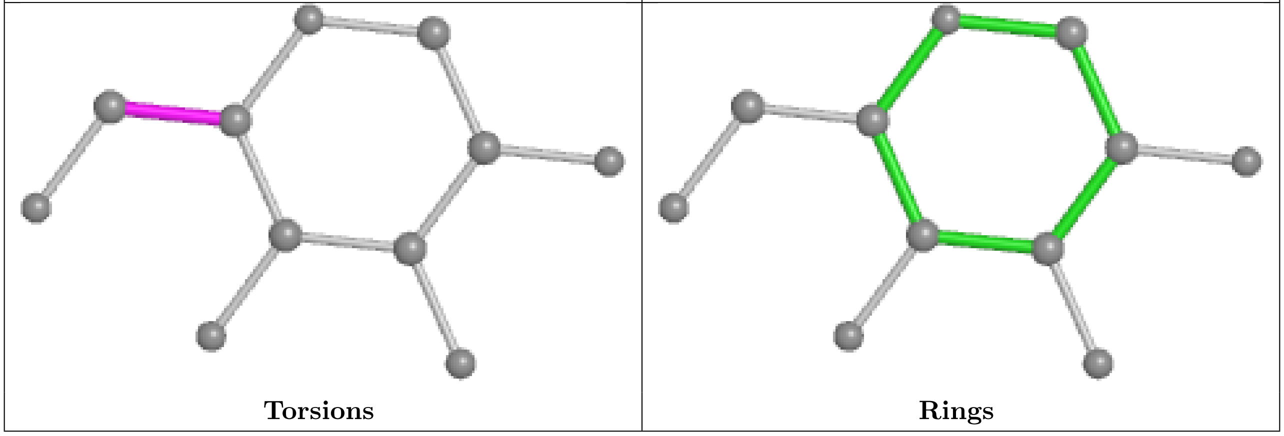


Torsions **Rings**

Ligand GLA B 2067

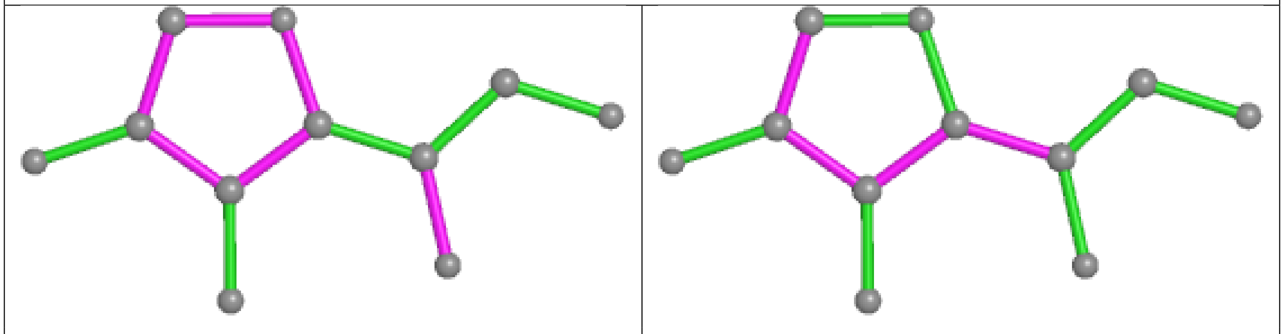


Bond lengths Bond angles

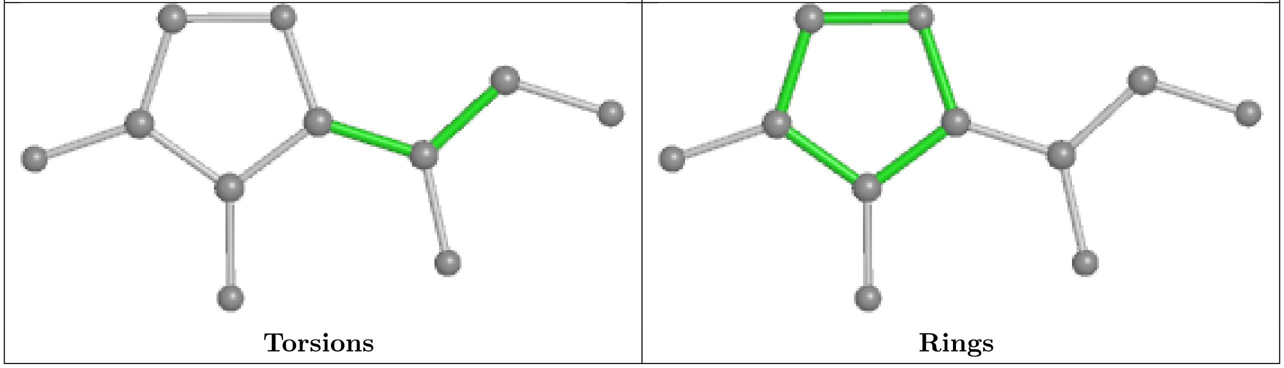


Torsions Rings

Ligand A1AIO A 2008



Bond lengths Bond angles



Torsions Rings

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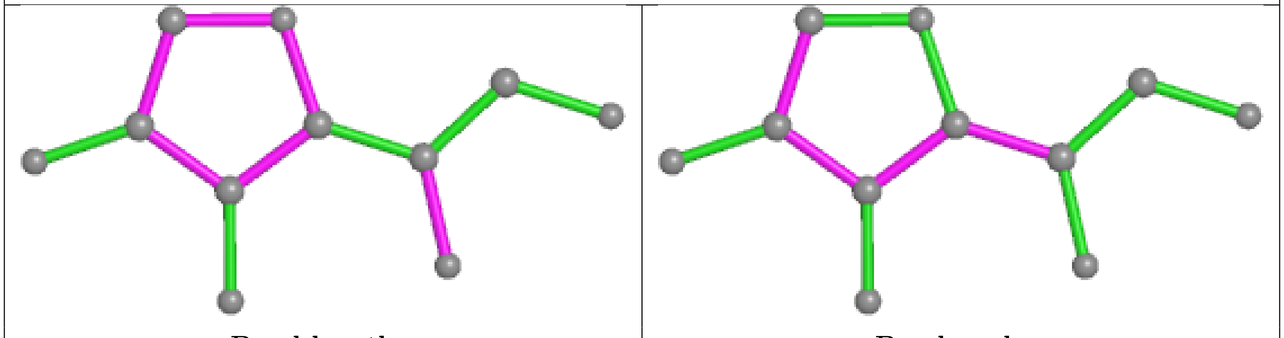
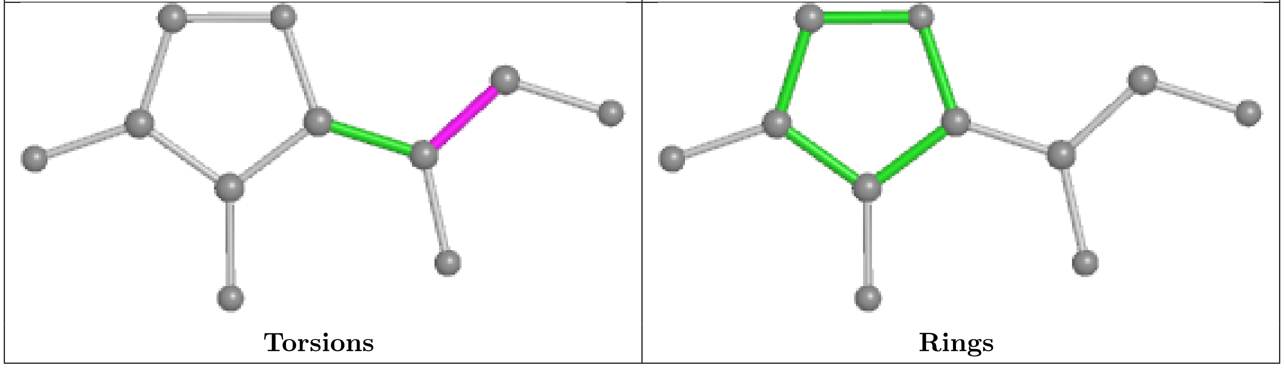
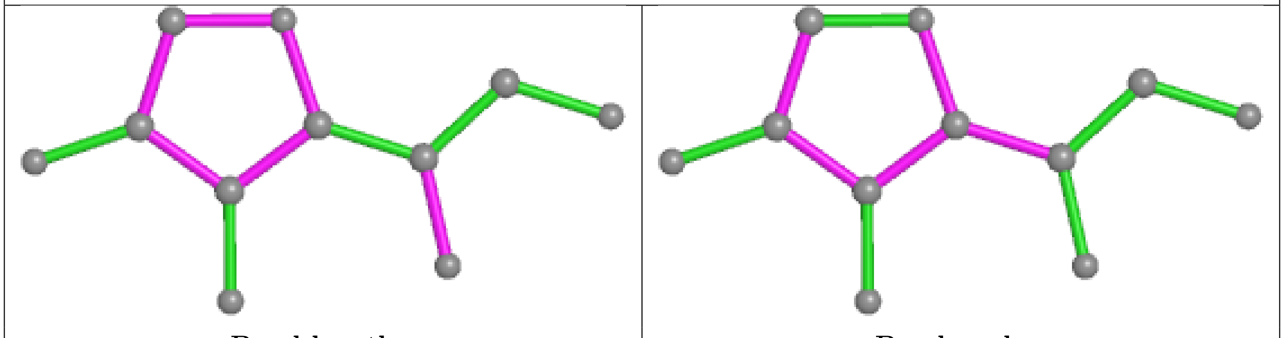


Bond lengths Bond angles

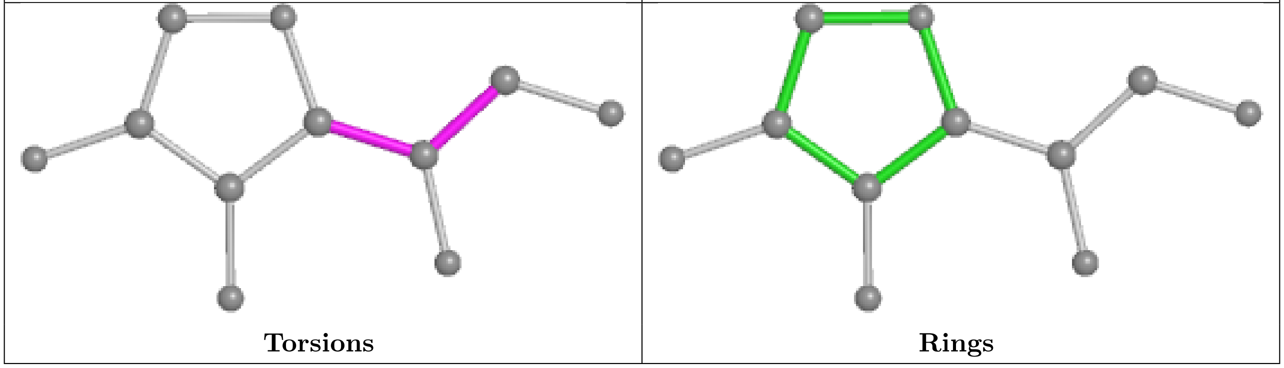


Torsions Rings

Ligand A1AIO B 2005

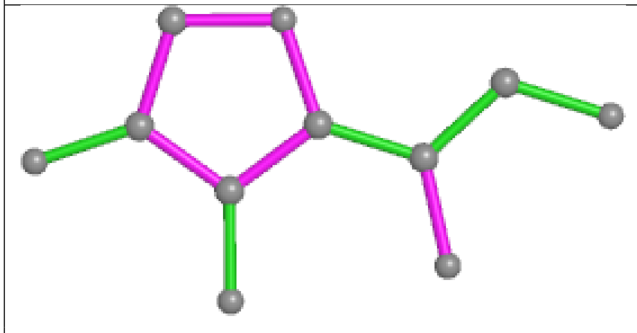


Bond lengths Bond angles

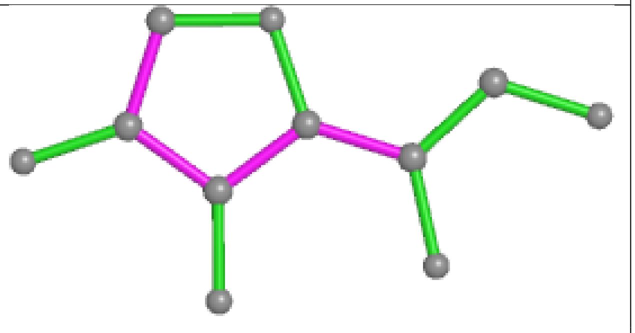


Torsions Rings

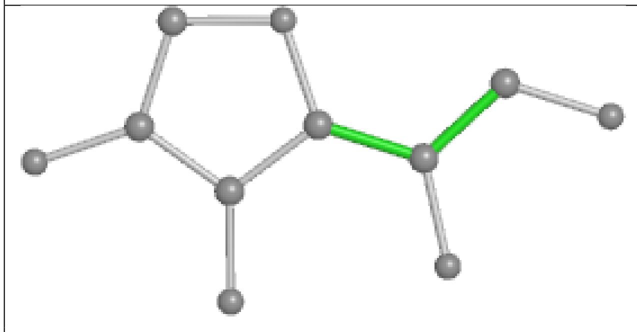
Ligand A1AIO A 2025



Bond lengths



Bond angles



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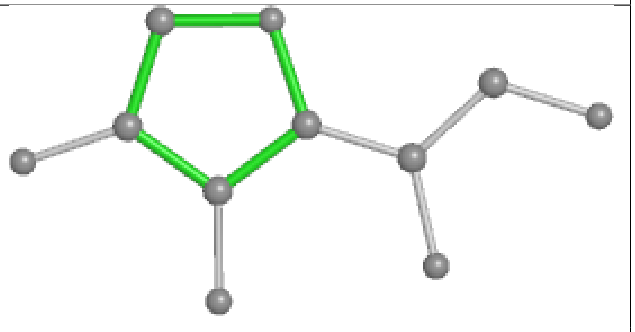
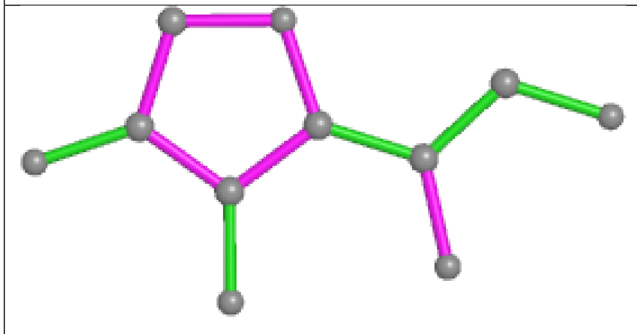


Rings

Ligand A1AIO A 2057



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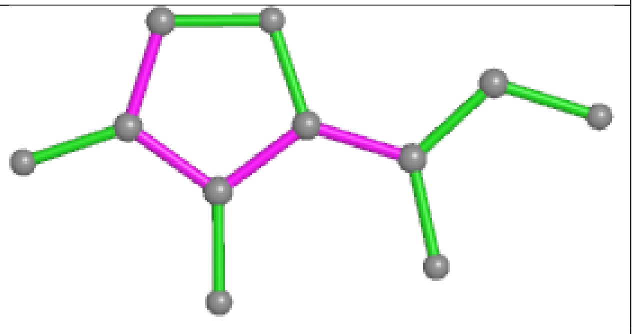
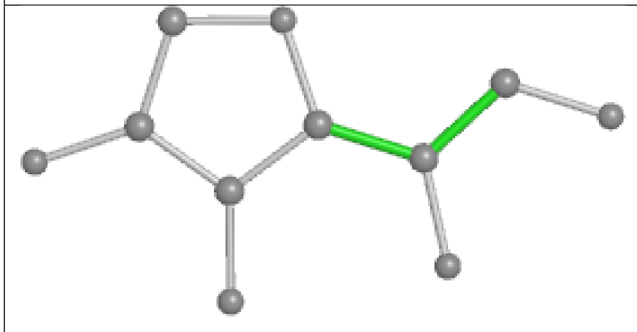


Bond angles



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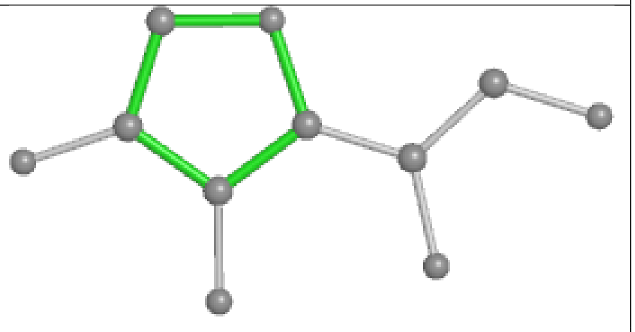
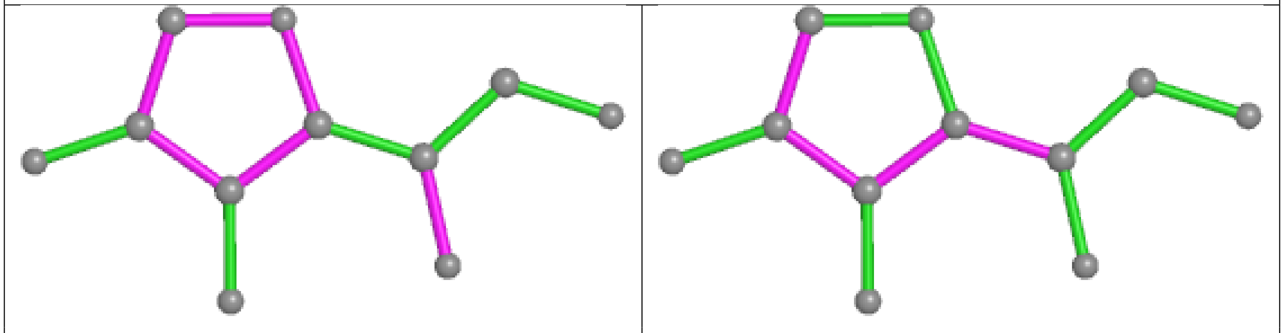
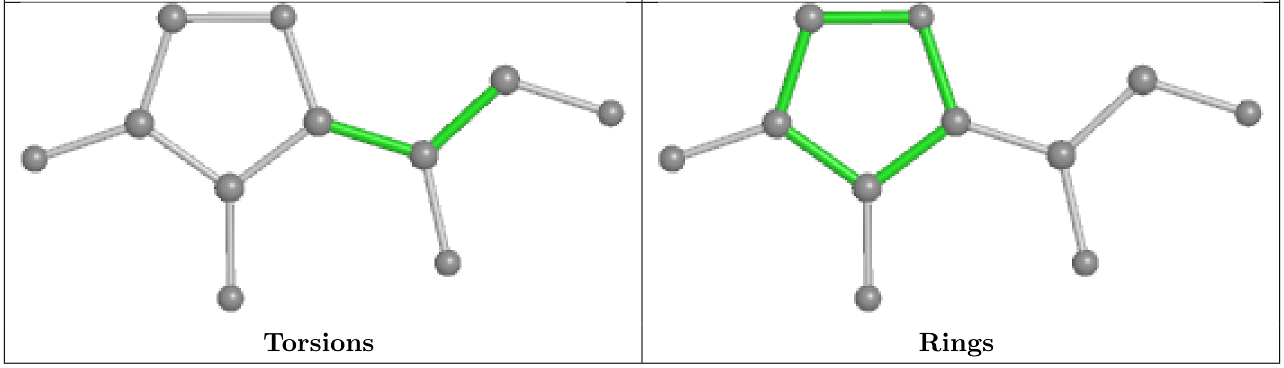


Rings

Ligand A1AIO A 2055

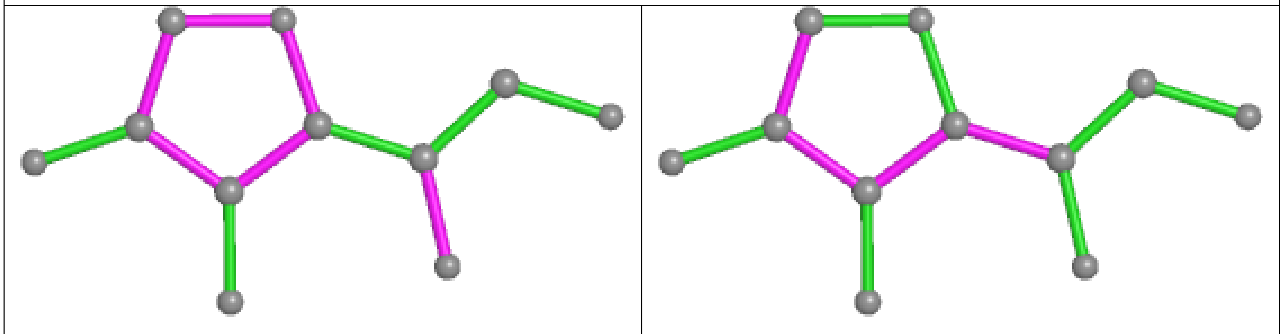


Bond lengths Bond angles

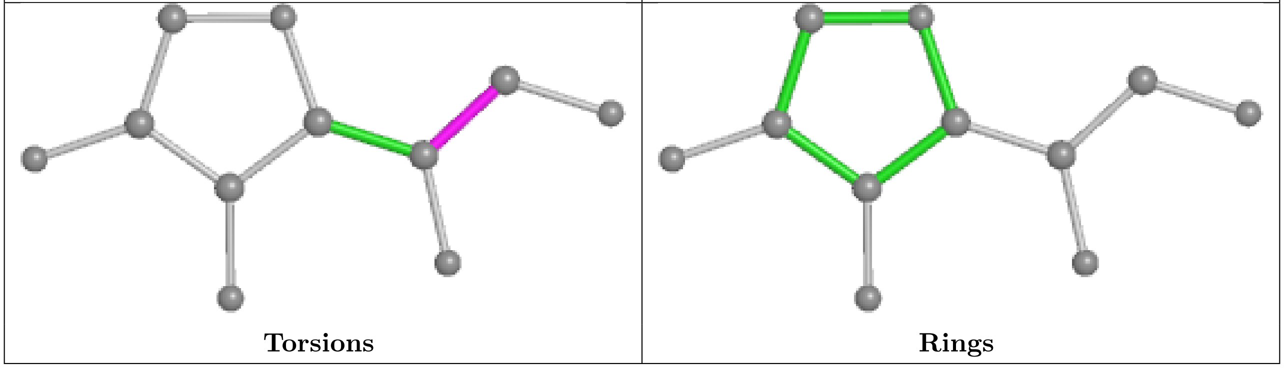


Torsions Rings

Ligand A1AIO B 2007

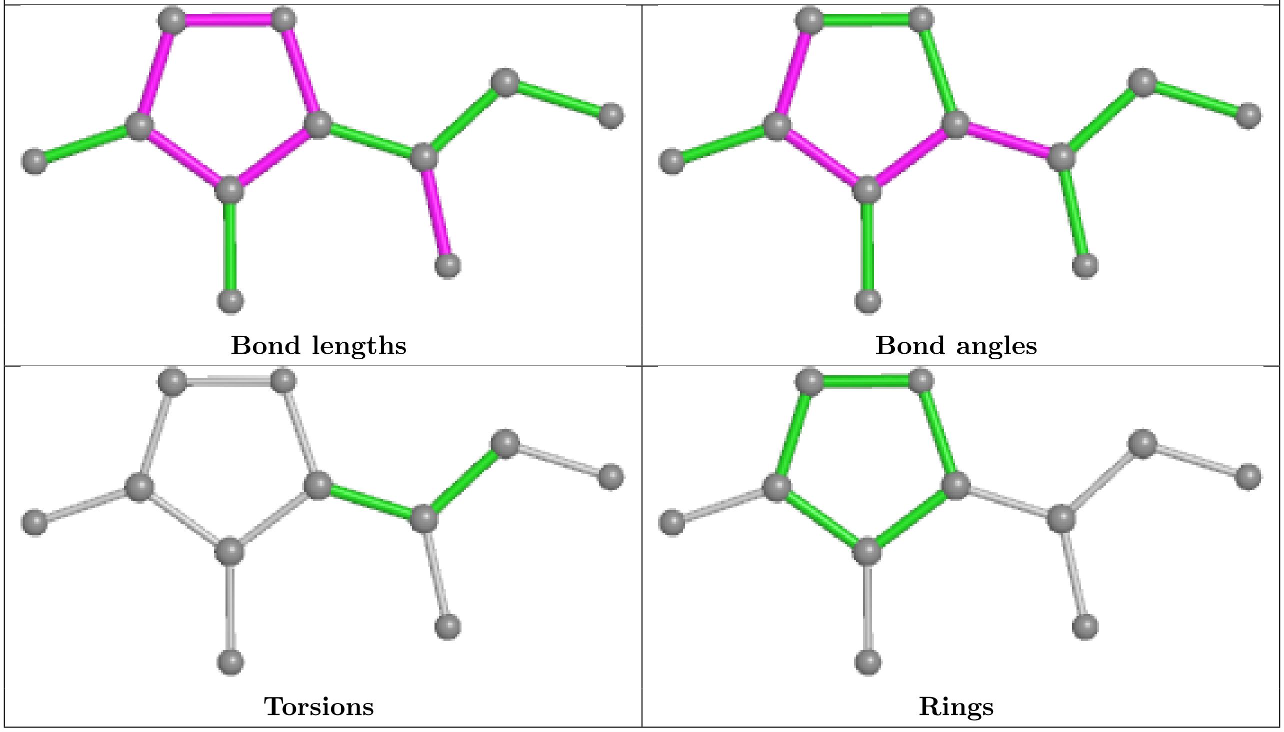


Bond lengths Bond angles



Torsions Rings

Ligand A1AIO A 2023



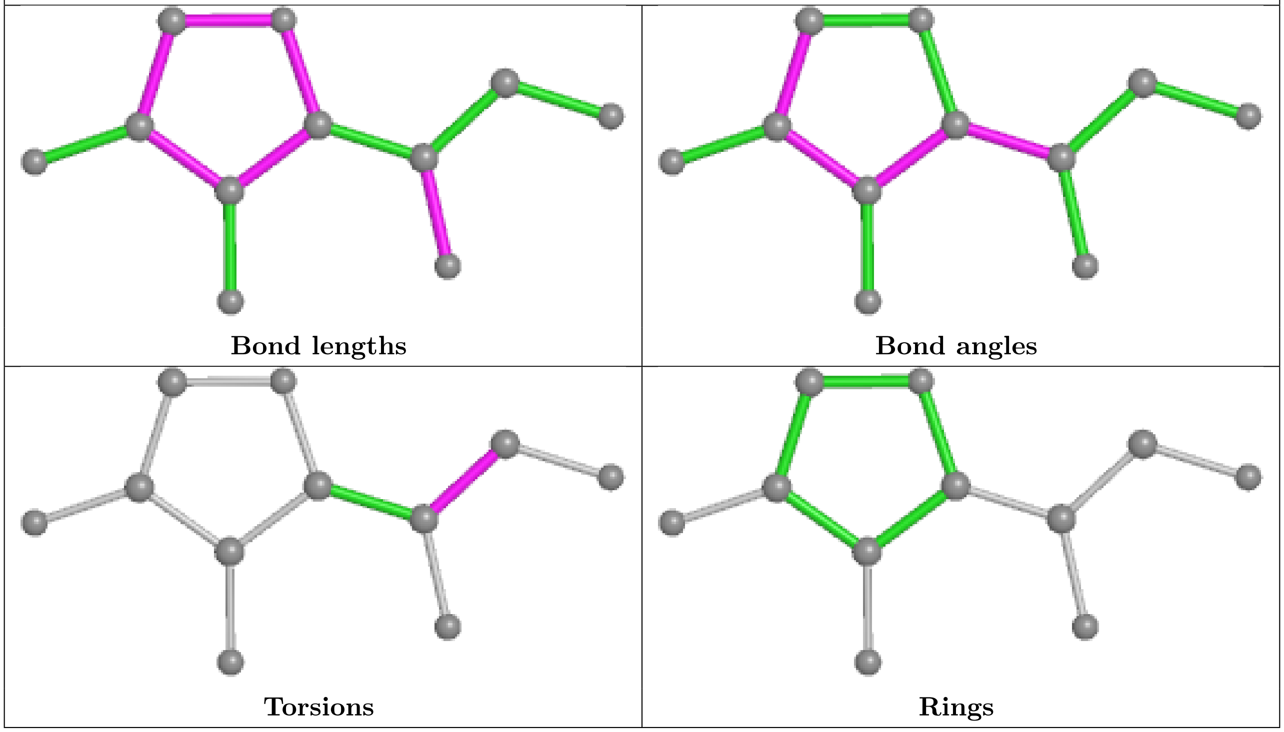
Bond lengths

Bond angles

Torsions

Rings

Ligand A1AIO A 2001



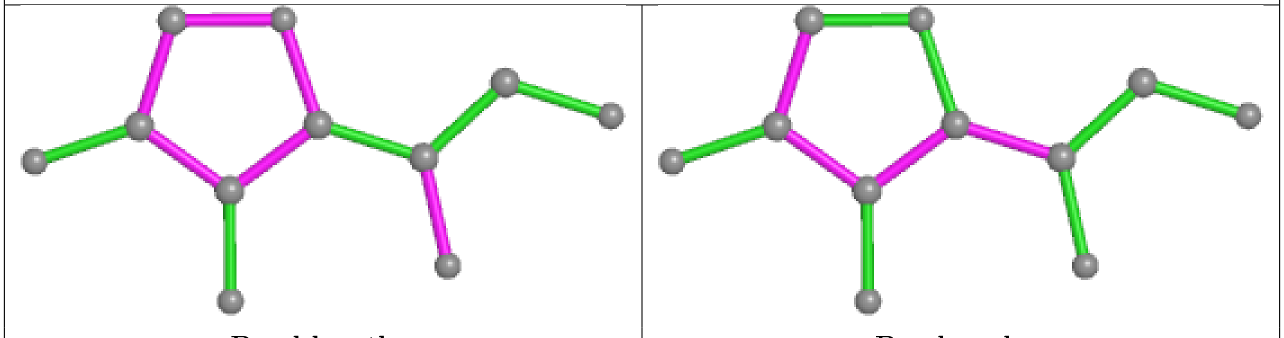
Bond lengths

Bond angles

Torsions

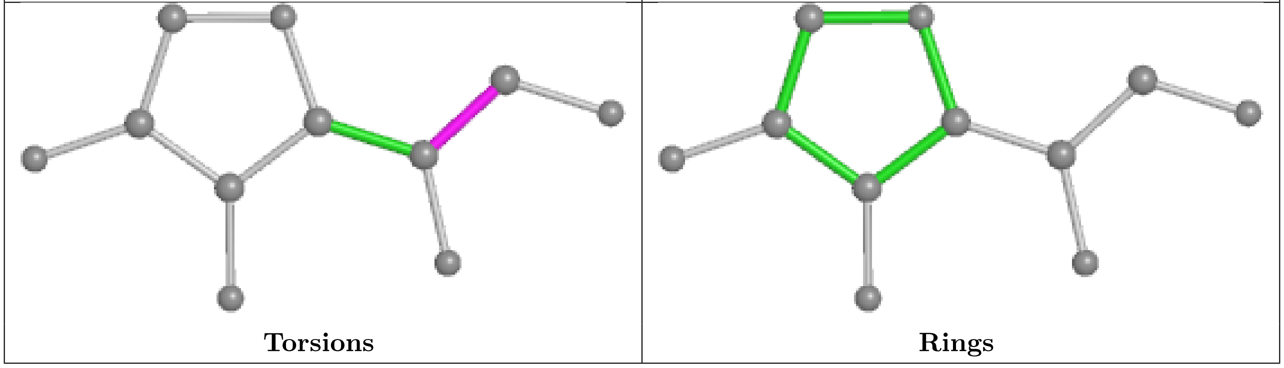
Rings

Ligand A1AIO B 2013



Bond lengths

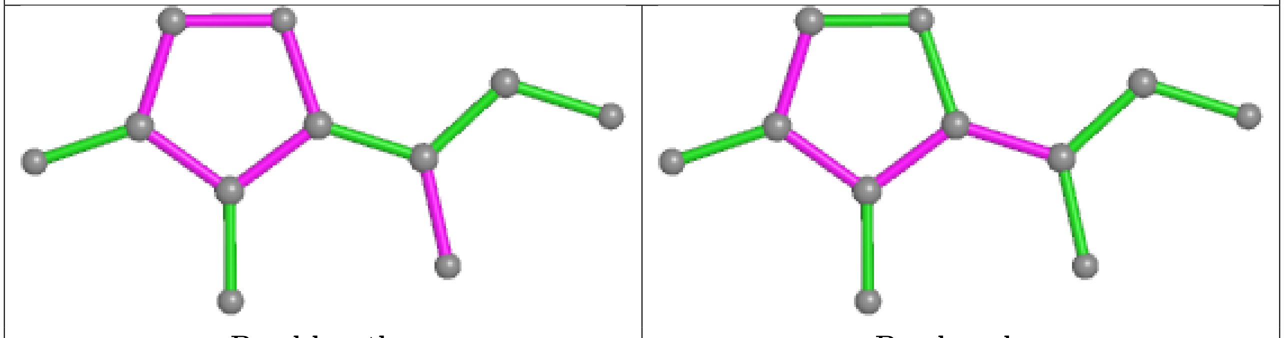
Bond angles



Torsions

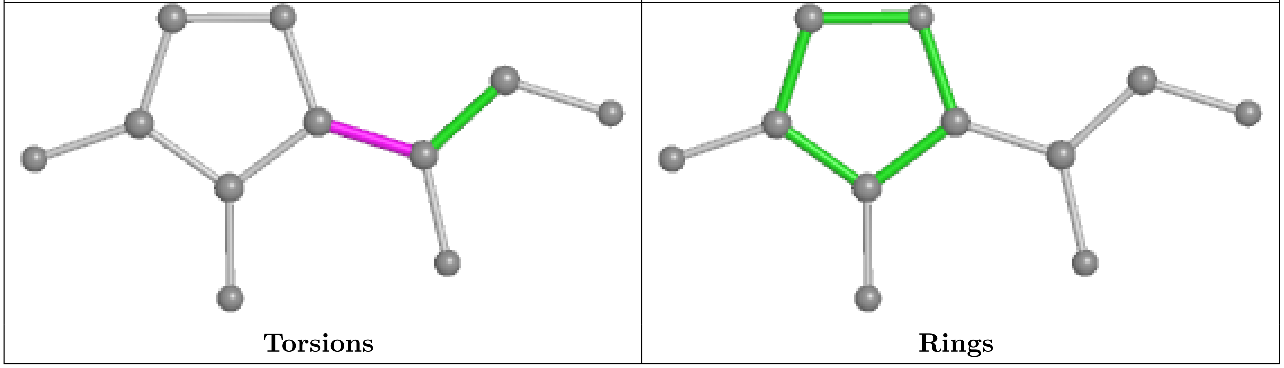
Rings

Ligand A1AIO B 2014



Bond lengths

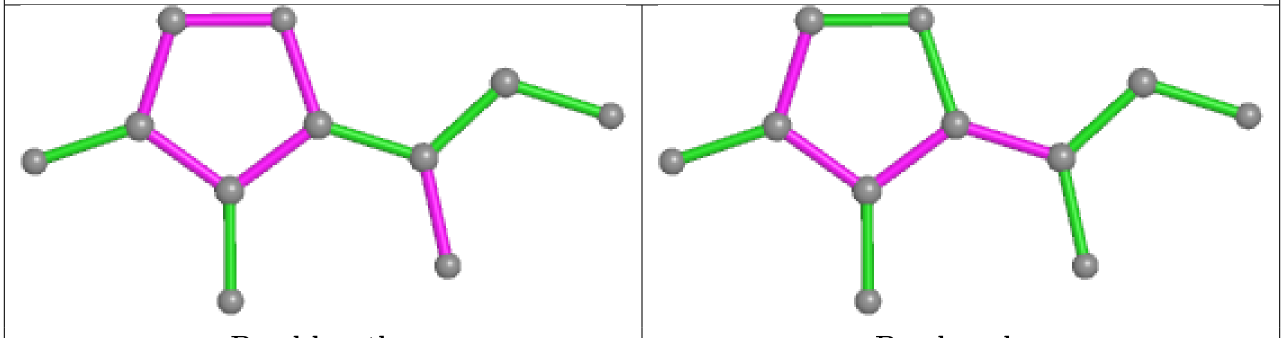
Bond angles



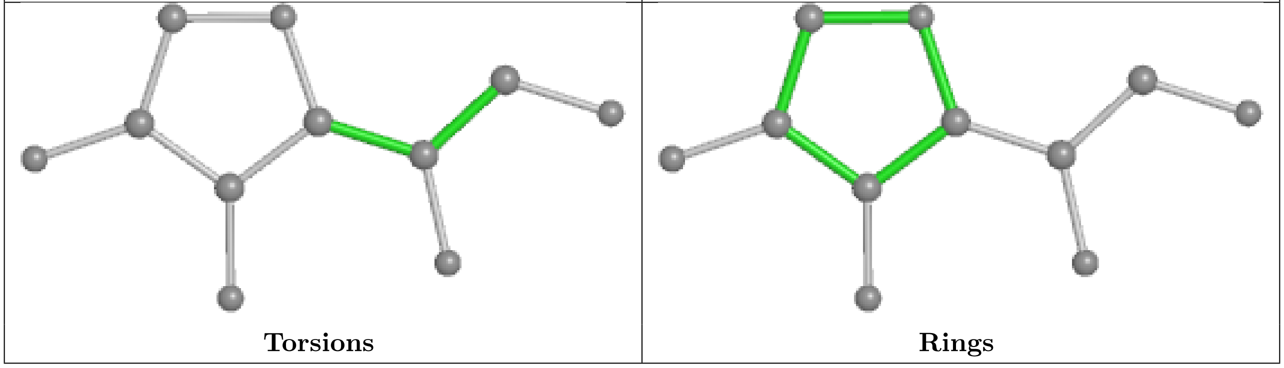
Torsions

Rings

Ligand A1AIO A 2003

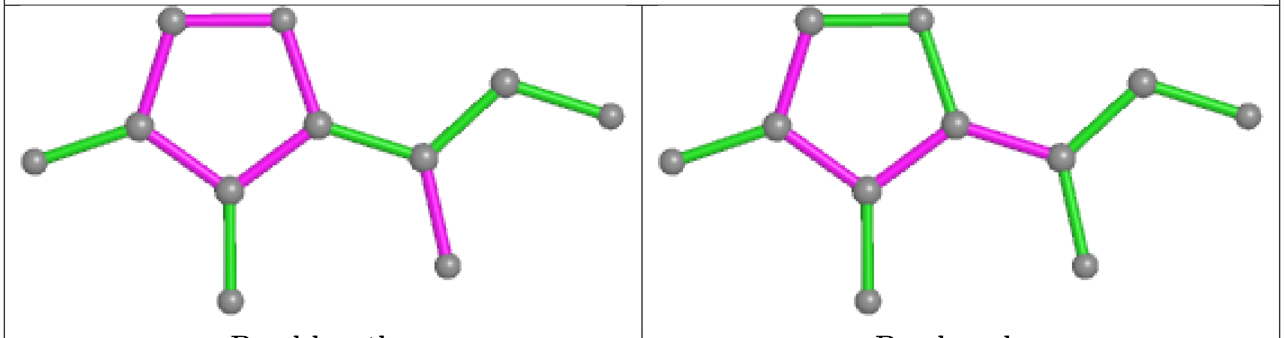


Bond lengths **Bond angles**

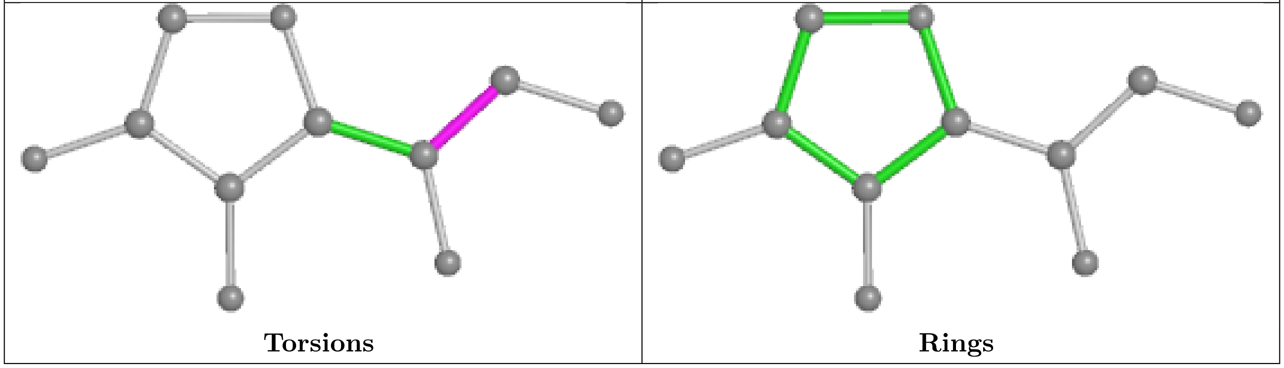


Torsions **Rings**

Ligand A1AIO B 2044

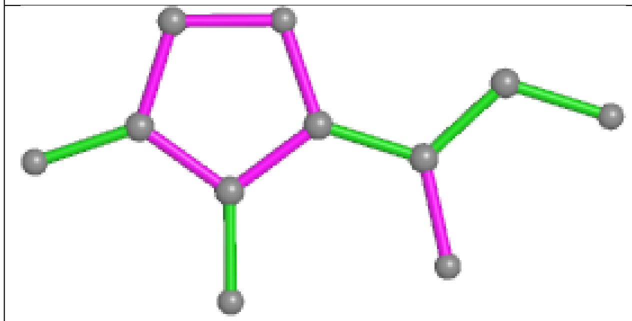


Bond lengths **Bond angles**

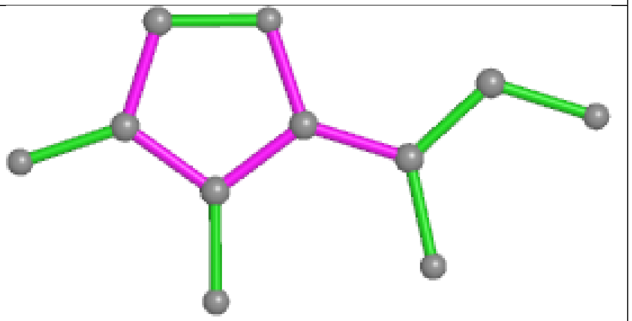


Torsions **Rings**

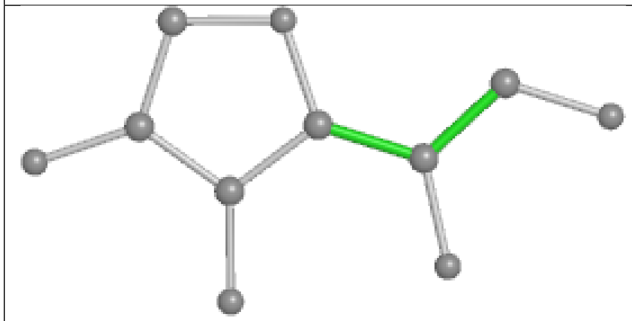
Ligand A1AIO B 2026



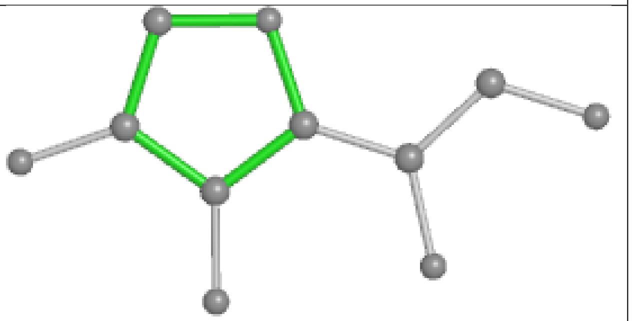
Bond lengths



Bond angles

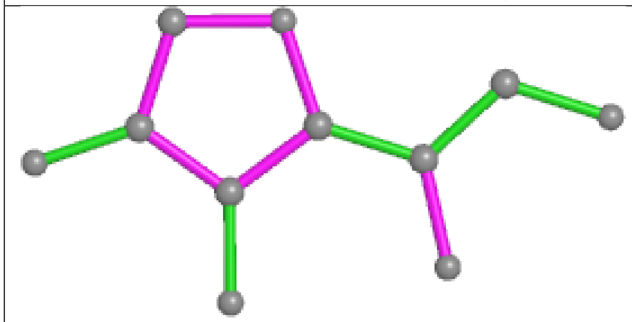


Torsions



Rings

Ligand A1AIO A 2056



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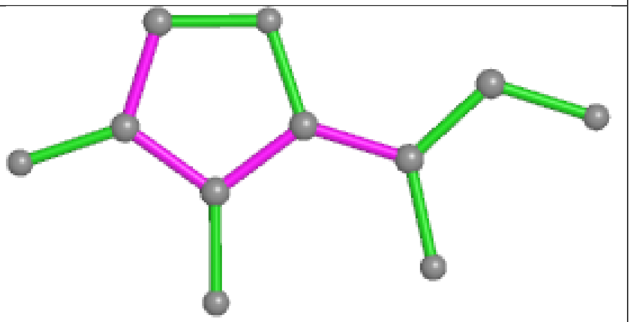
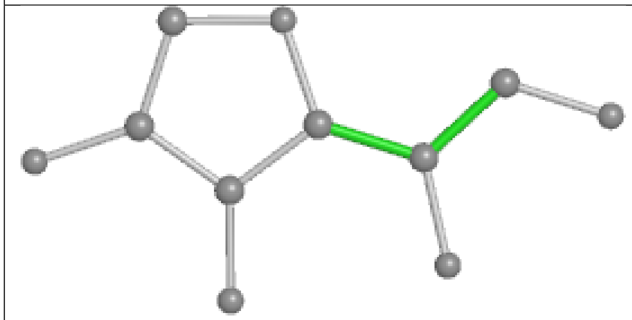


Bond angles



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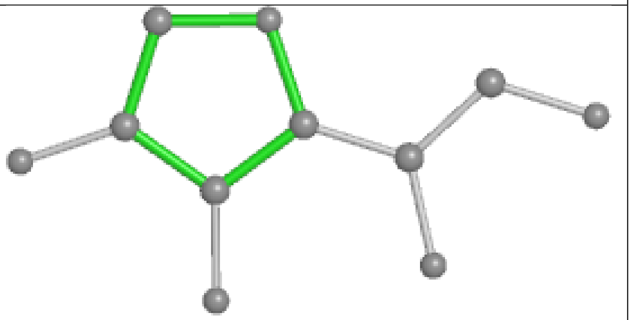
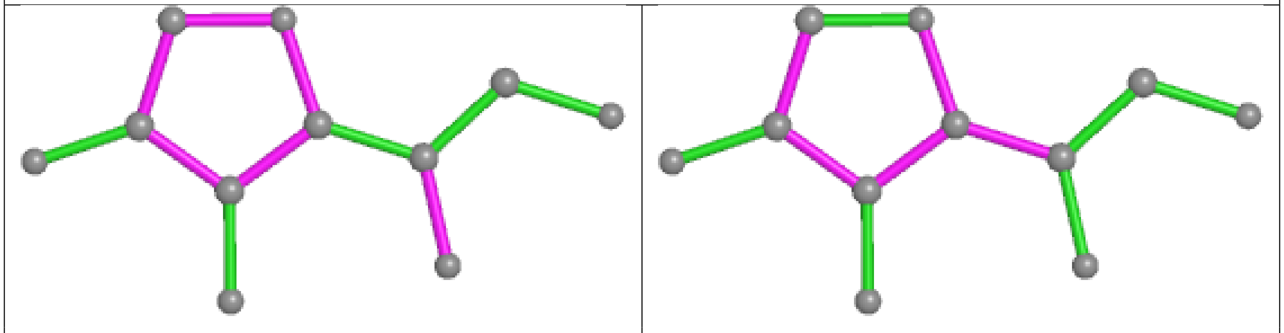


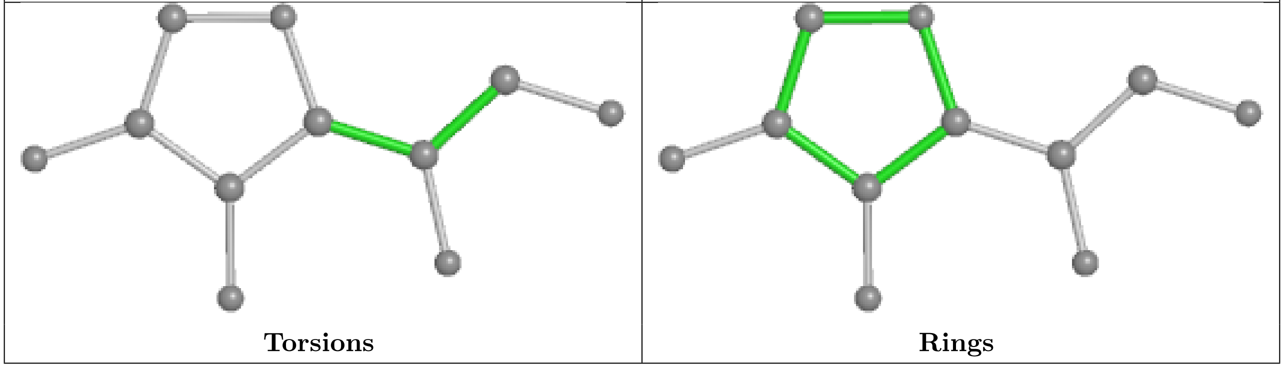
Rings

Ligand A1AIO B 2047



Bond lengths

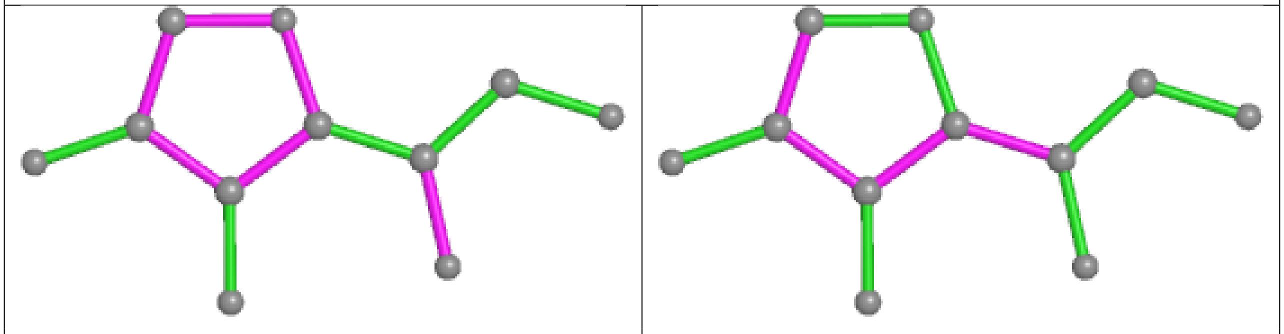
Bond angles



Torsions

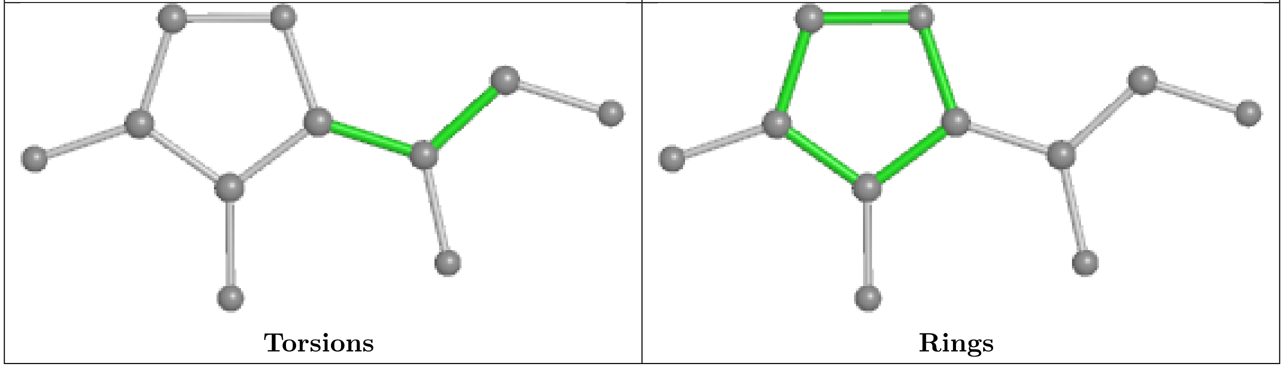
Rings

Ligand A1AIO A 2011



Bond lengths

Bond angles



Torsions

Rings

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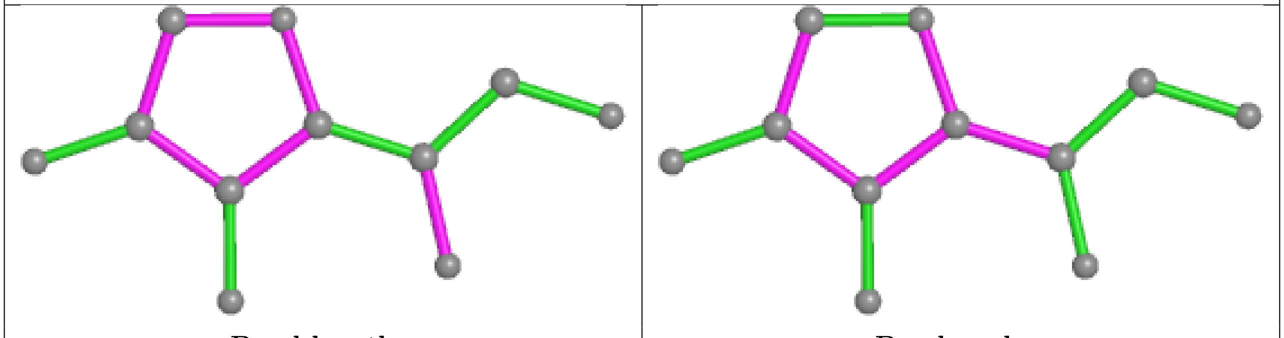
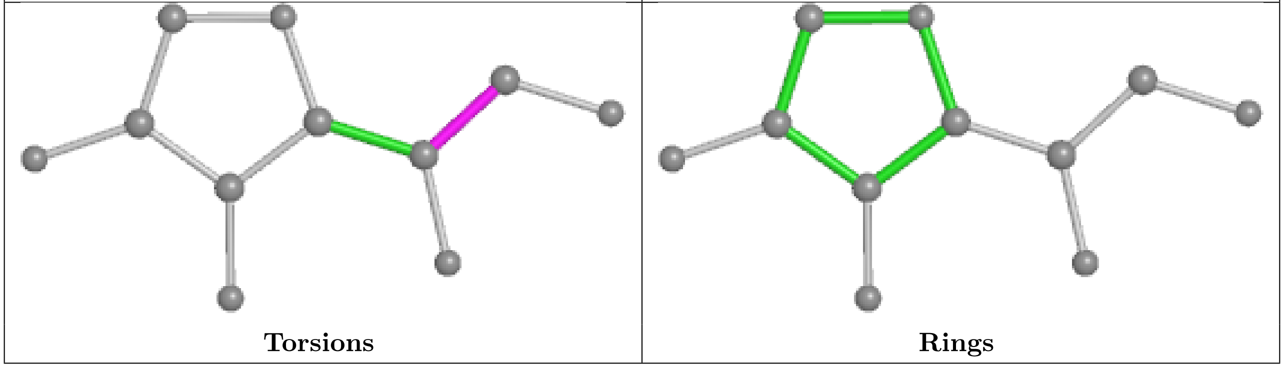


Bond lengths

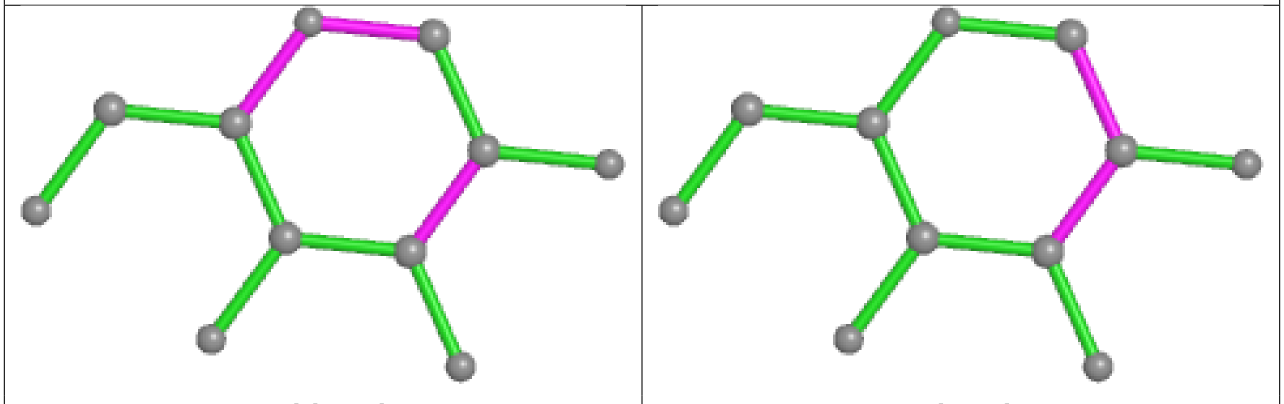
Bond angles



Torsions

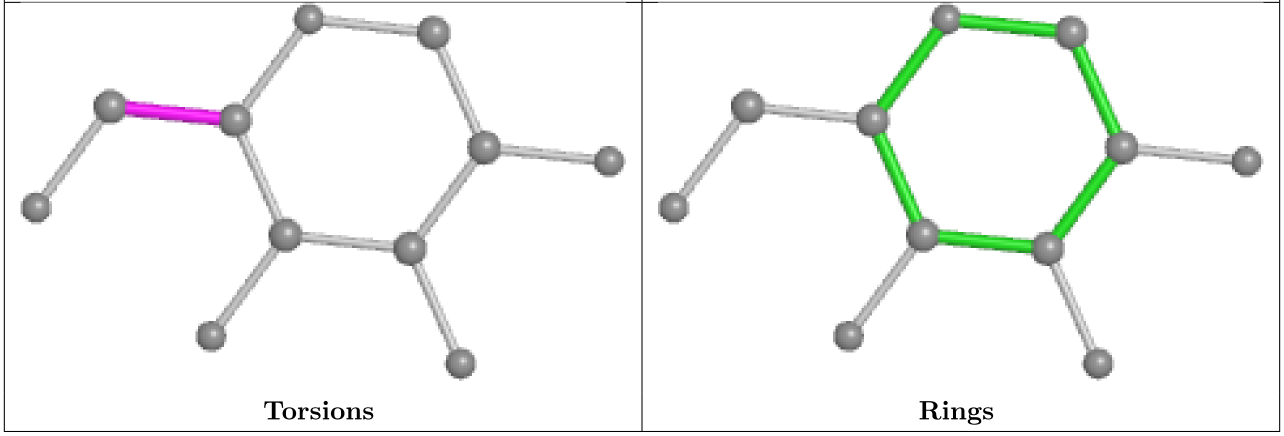
Rings

Ligand GLA A 2065



Bond lengths

Bond angles



Torsions

Rings

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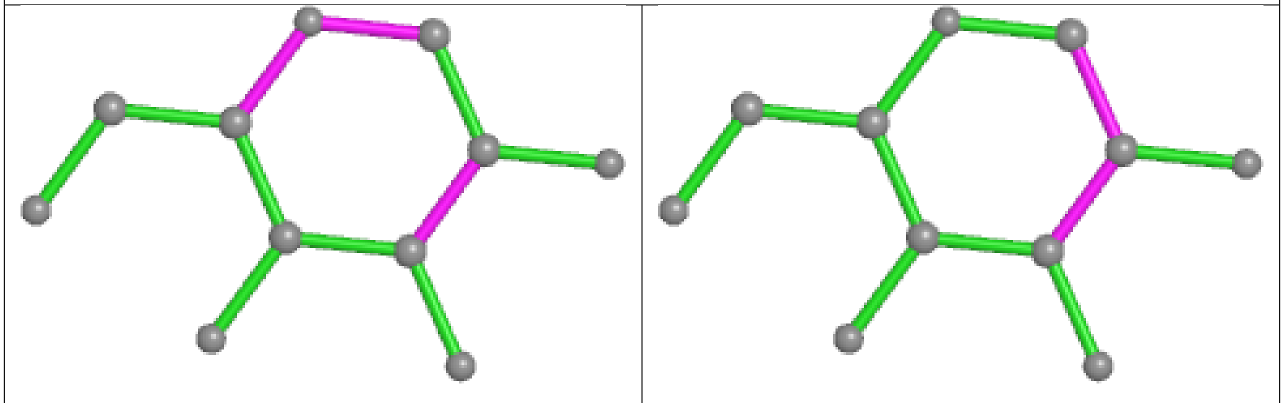
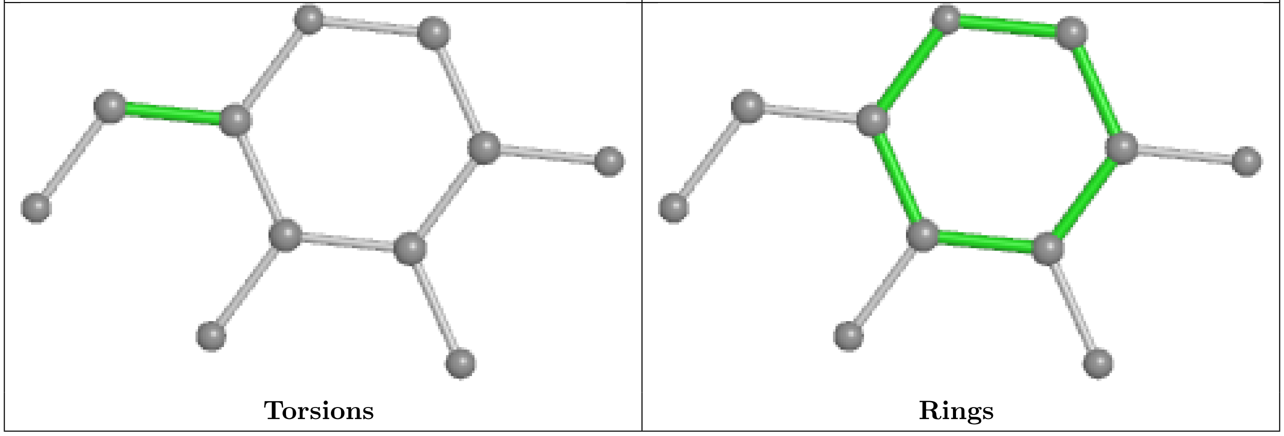


Bond lengths

Bond angles



Torsions

Rings

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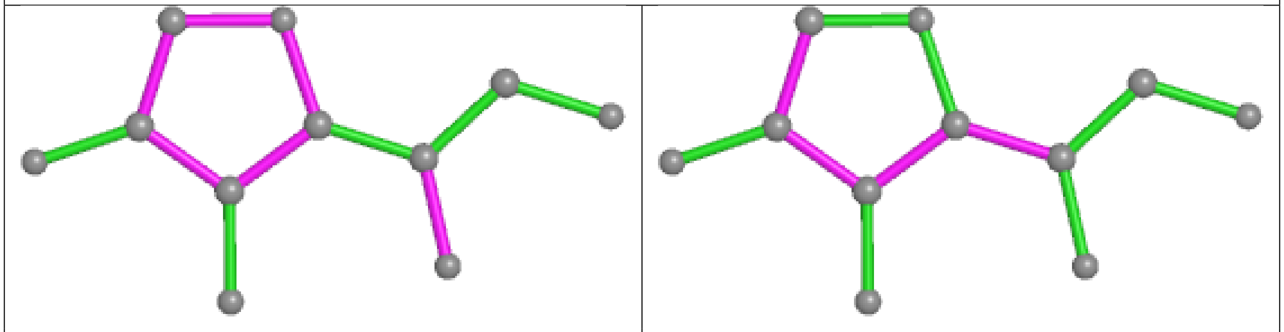
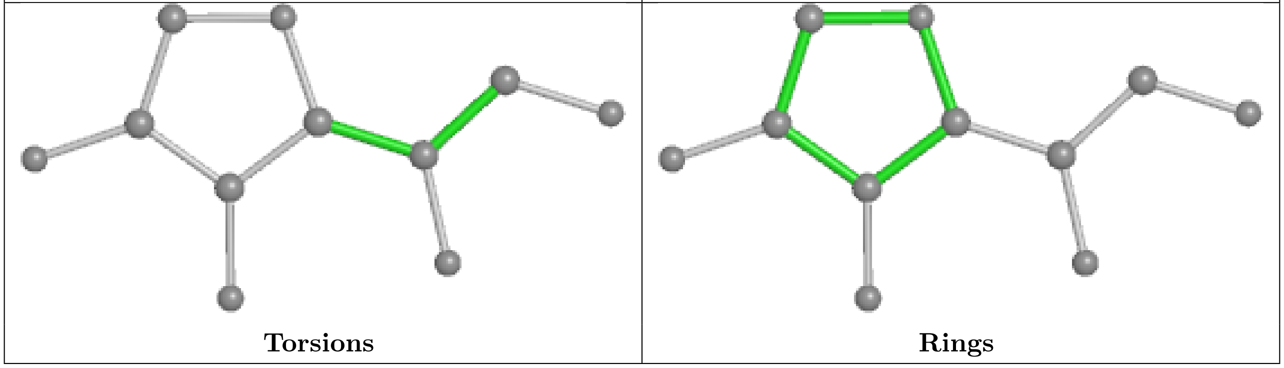


Bond lengths

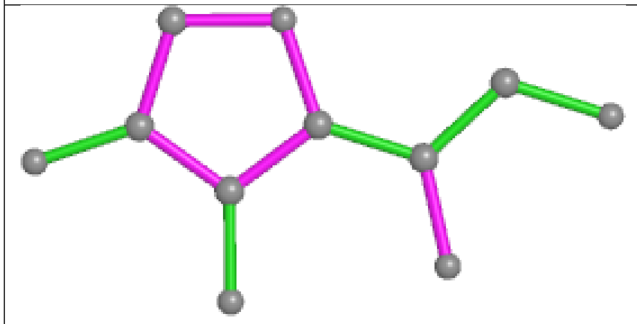
Bond angles



Torsions

Rings

Ligand A1AIO B 2034



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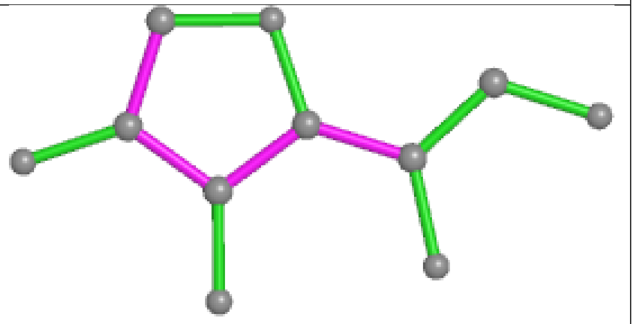
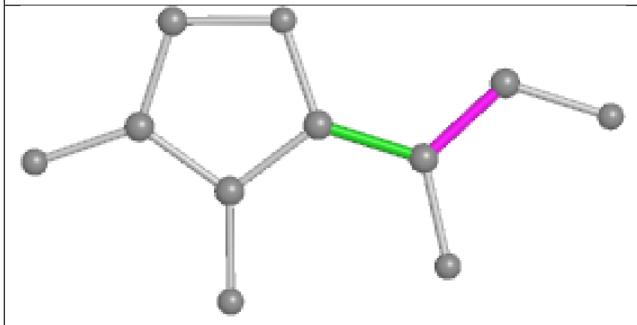


Bond angles



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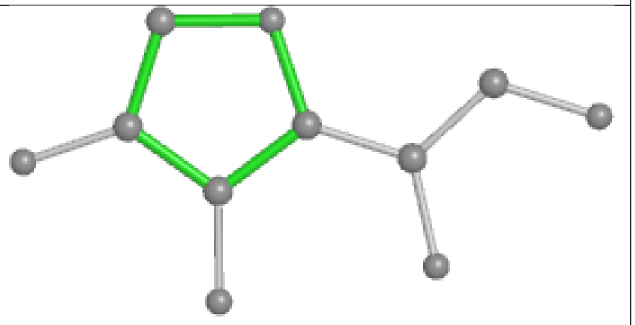
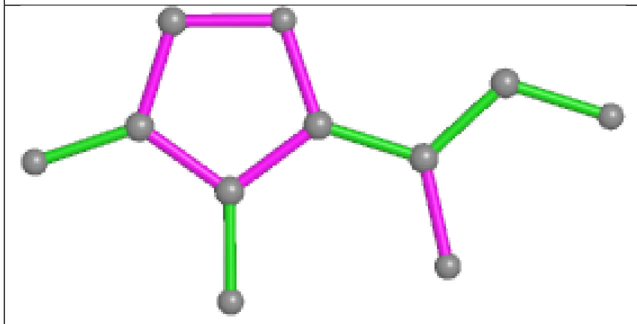


Rings

Ligand A1AIO A 2019



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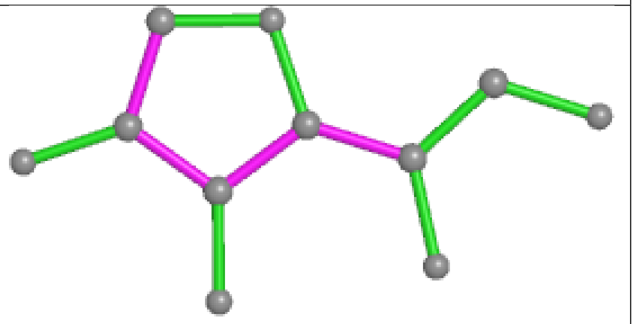
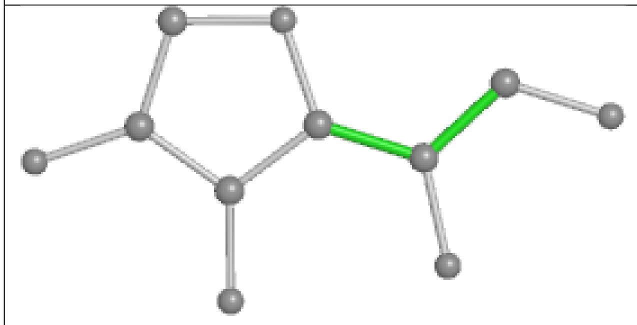


Bond angles



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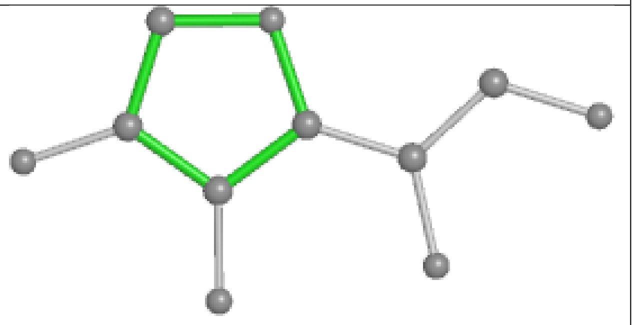
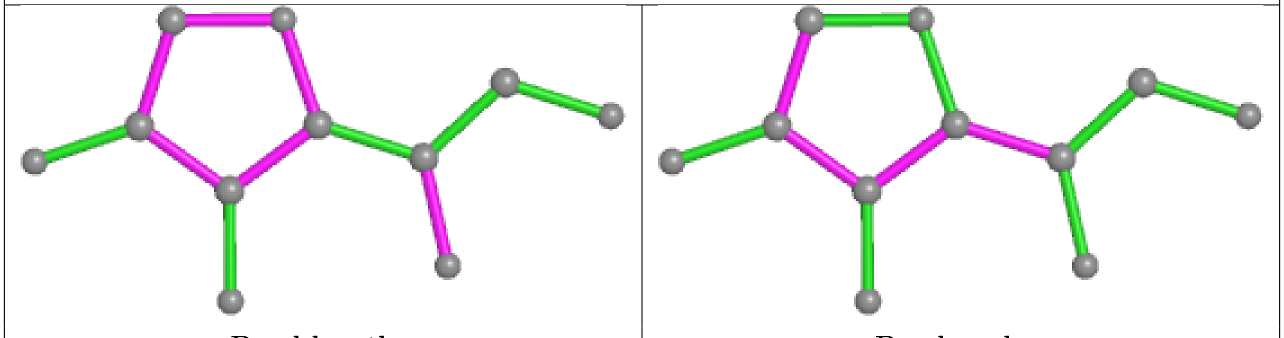


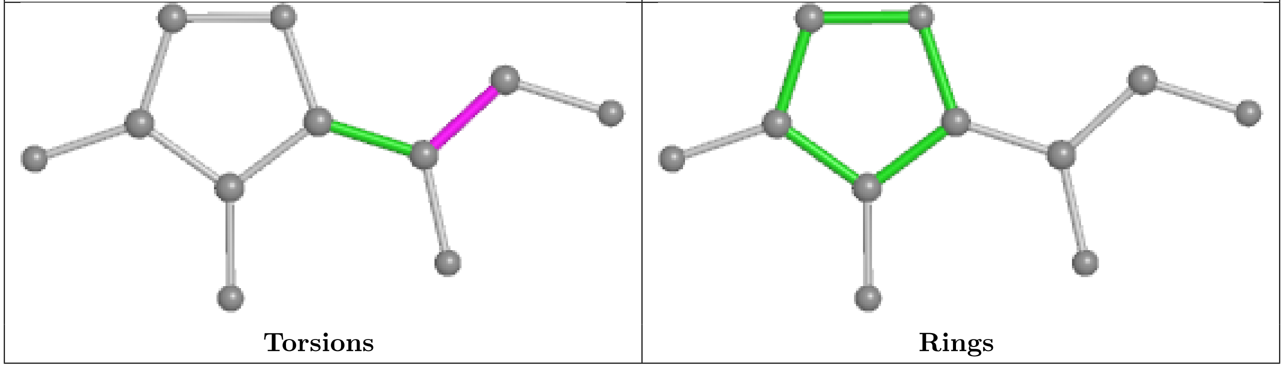
Rings

Ligand A1AIO B 2043



Bond lengths

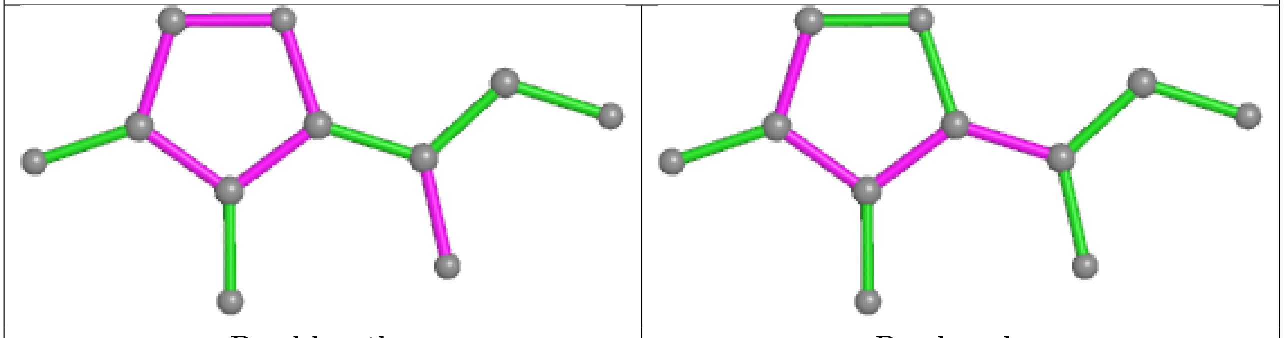
Bond angles



Torsions

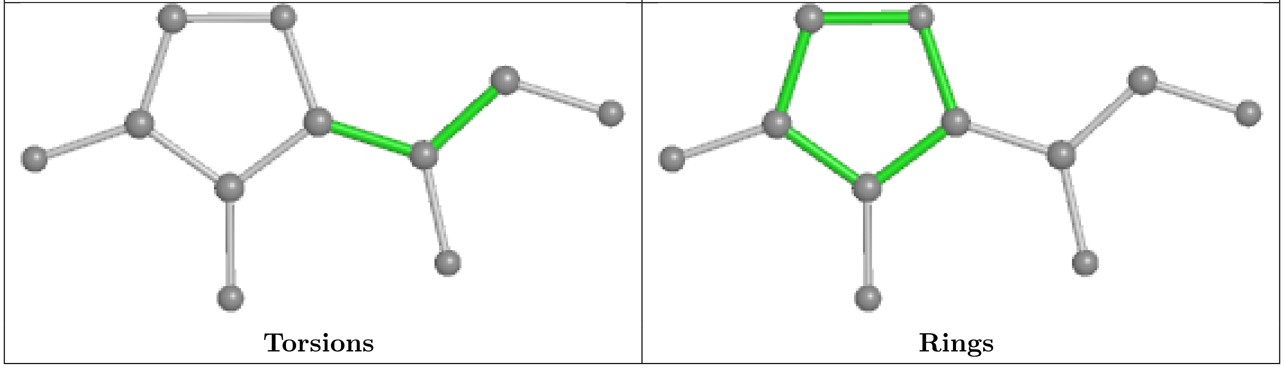
Rings

Ligand A1AIO A 2007



Bond lengths

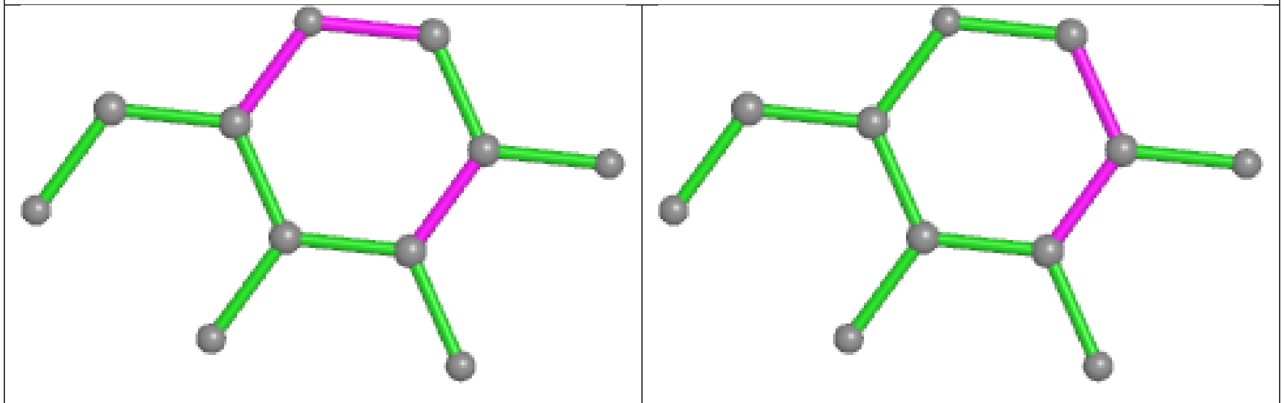
Bond angles



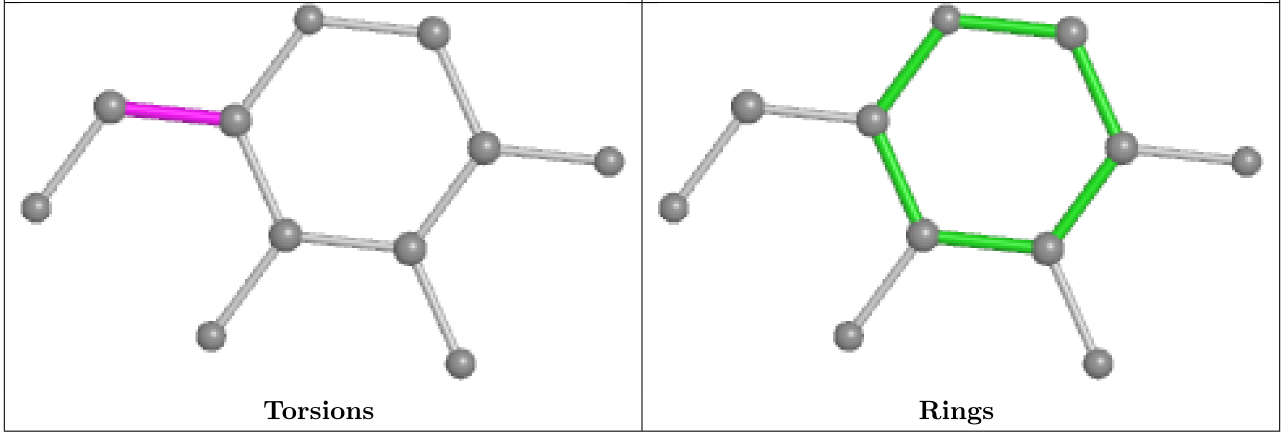
Torsions

Rings

Ligand GLA B 2058



Bond lengths **Bond angles**



Torsions **Rings**

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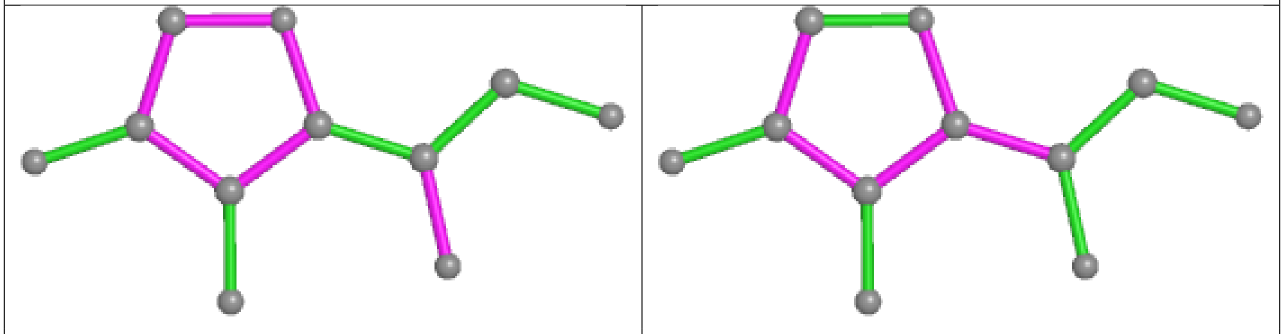
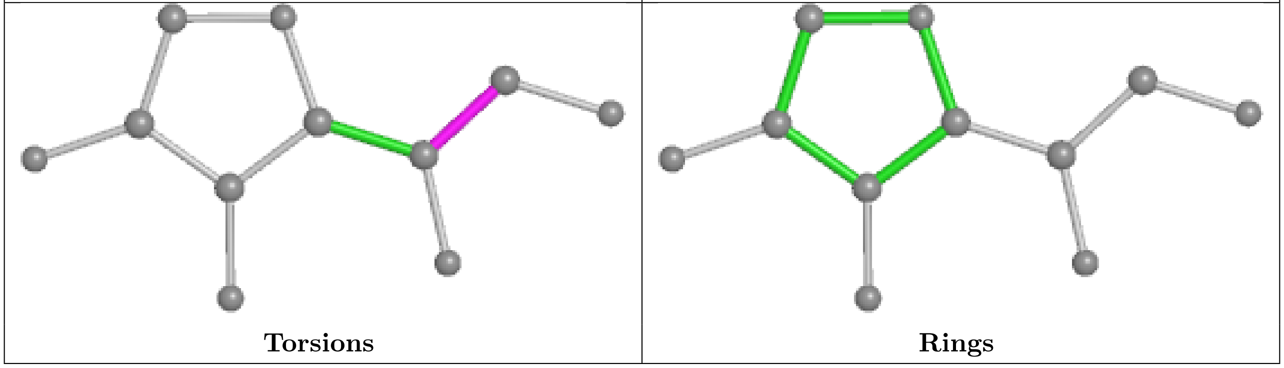
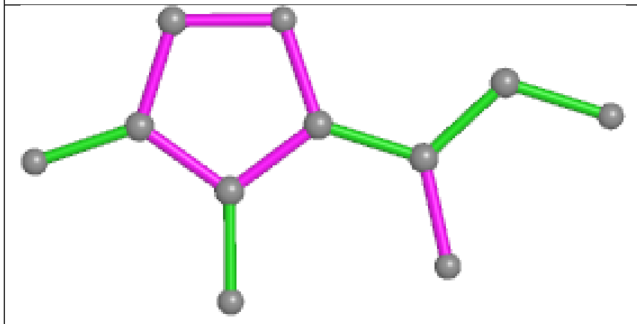


Bond lengths **Bond angles**



Torsions **Rings**

Ligand A1AIO A 2036



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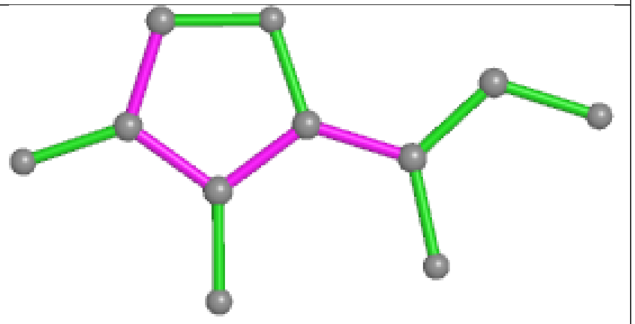
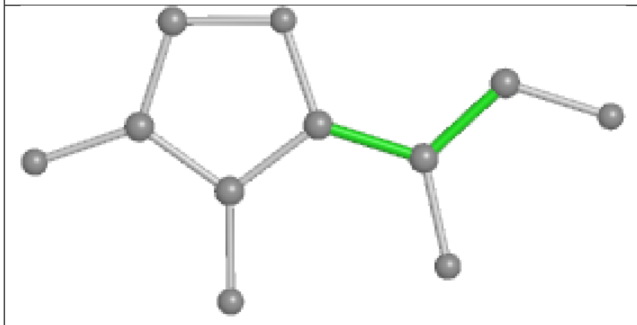


Bond angles



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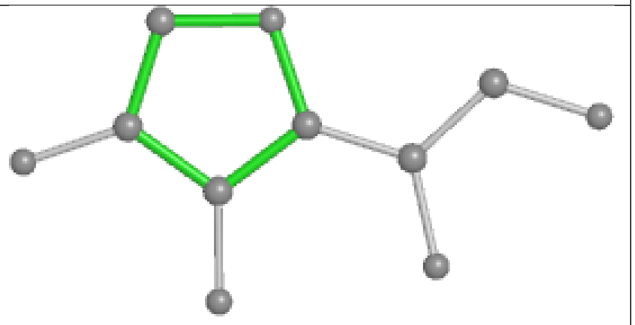
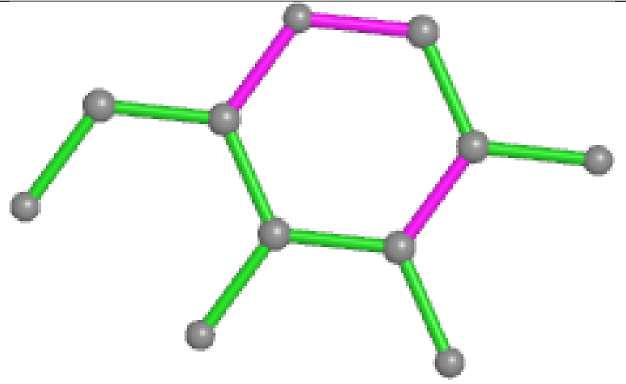


Rings

Ligand GLA A 2061



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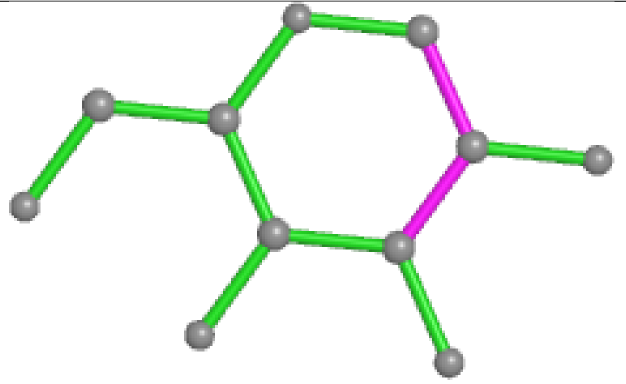
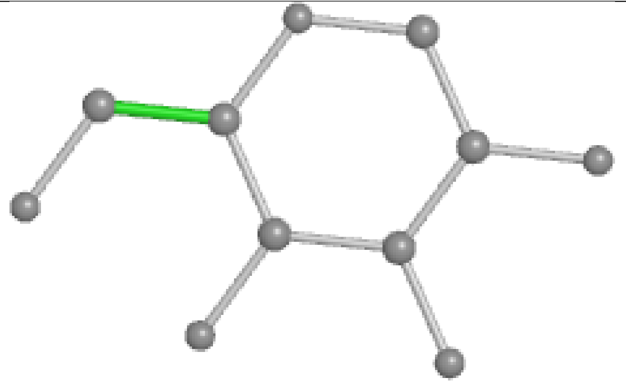


Bond angles



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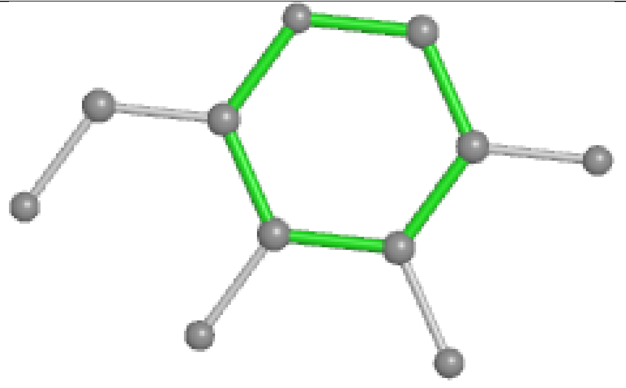
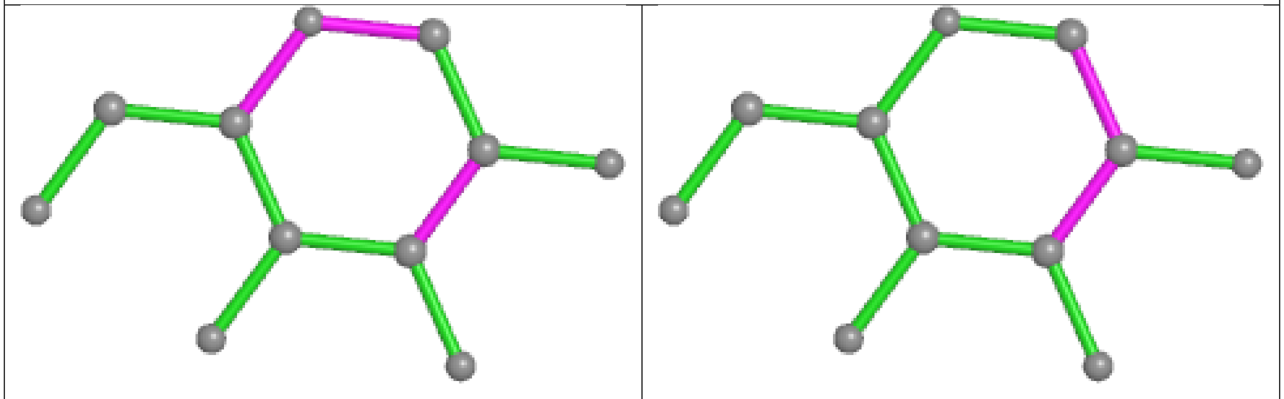


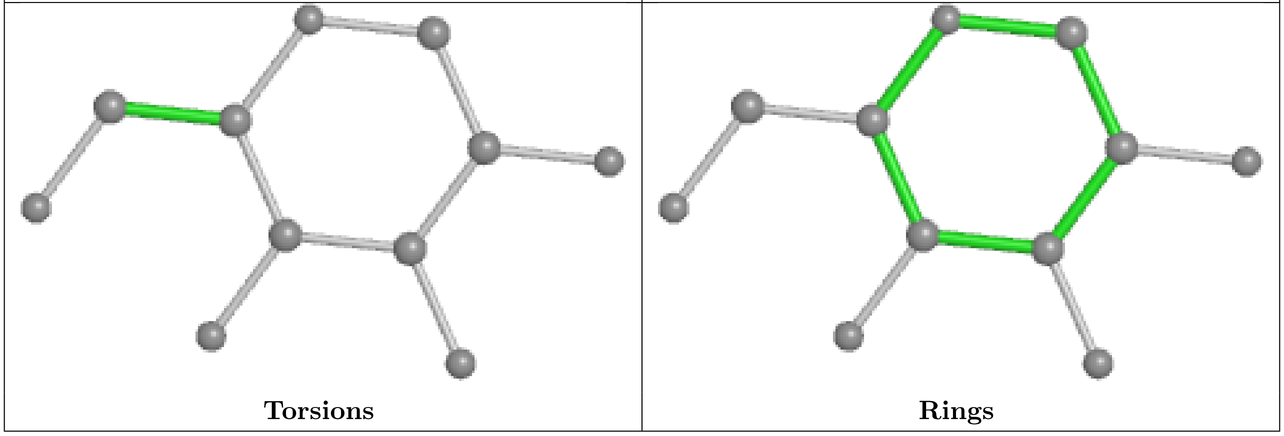
Rings

Ligand GLA A 2062



Bond lengths

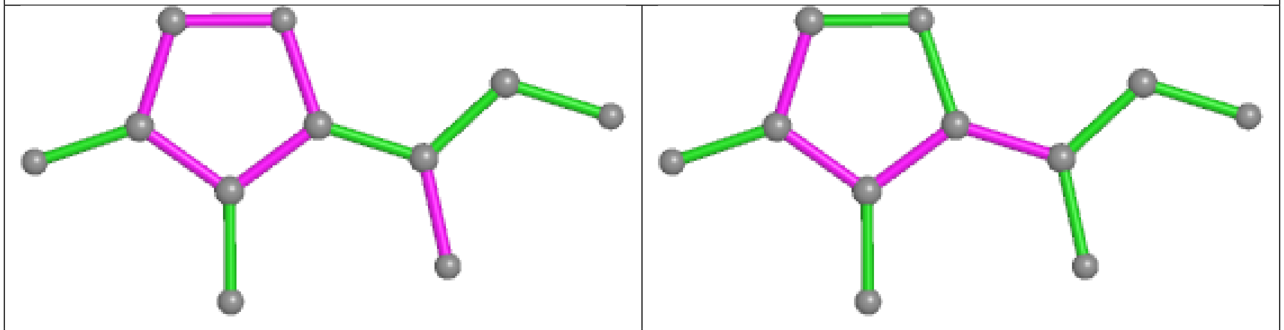
Bond angles



Torsions

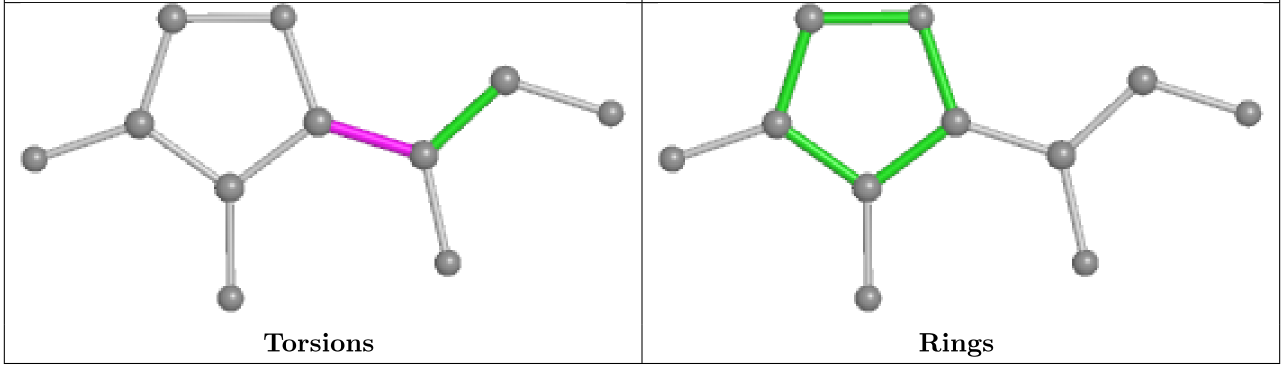
Rings

Ligand A1AIO A 2020



Bond lengths

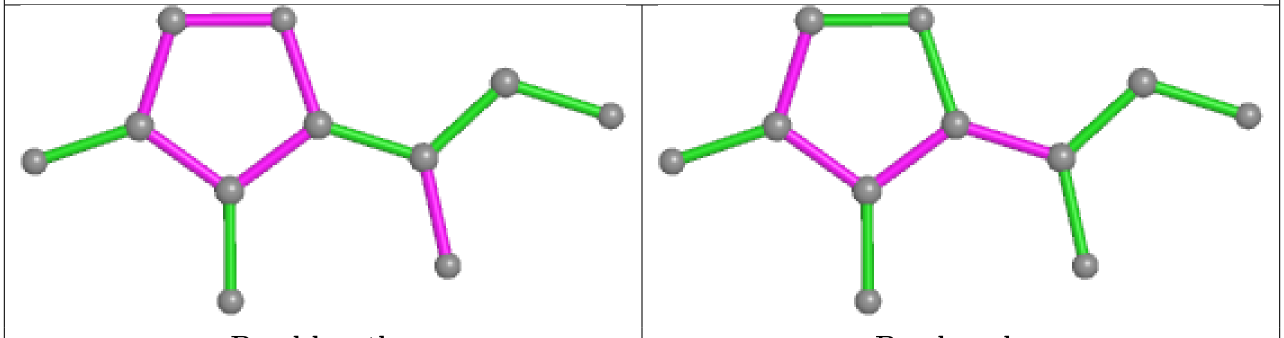
Bond angles



Torsions

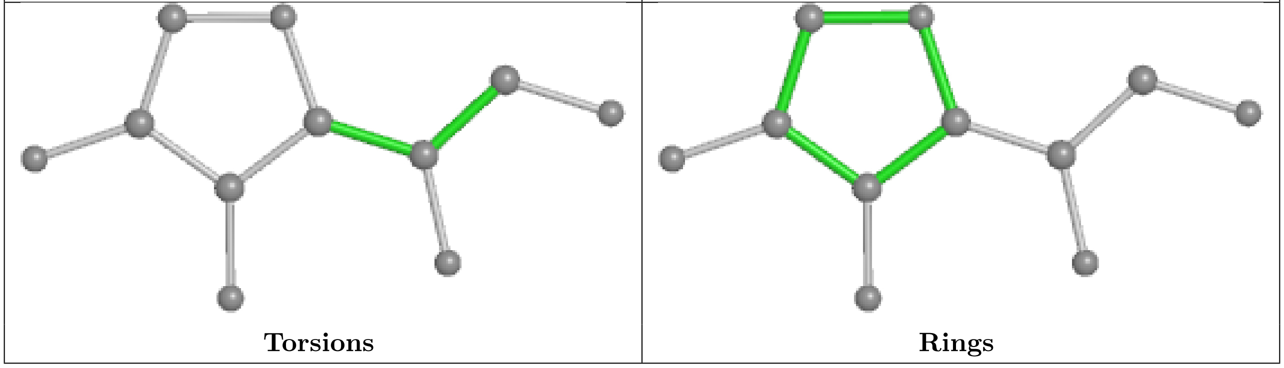
Rings

Ligand A1AIO A 2050



Bond lengths

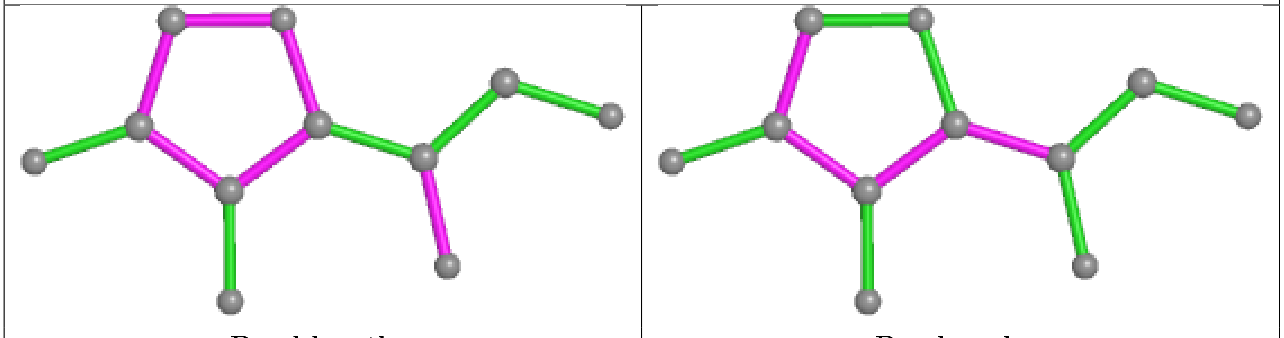
Bond angles



Torsions

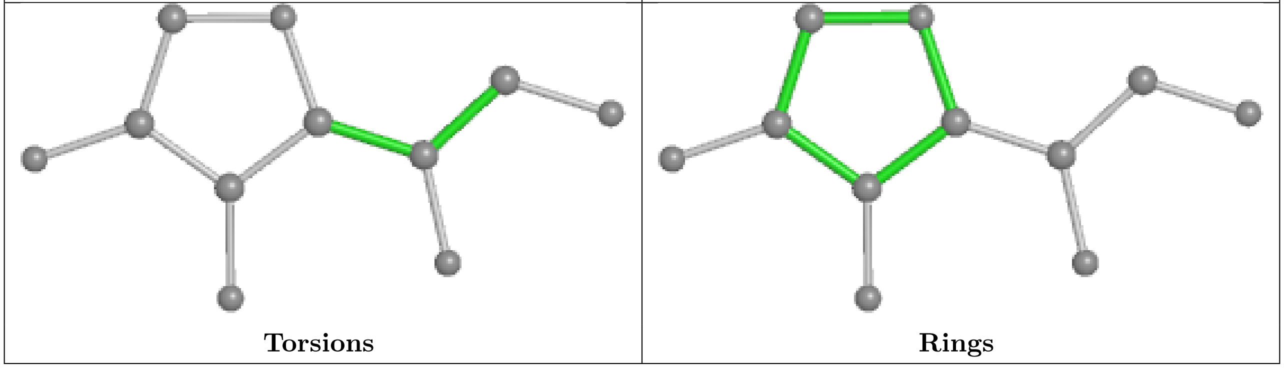
Rings

Ligand A1AIO B 2057



Bond lengths

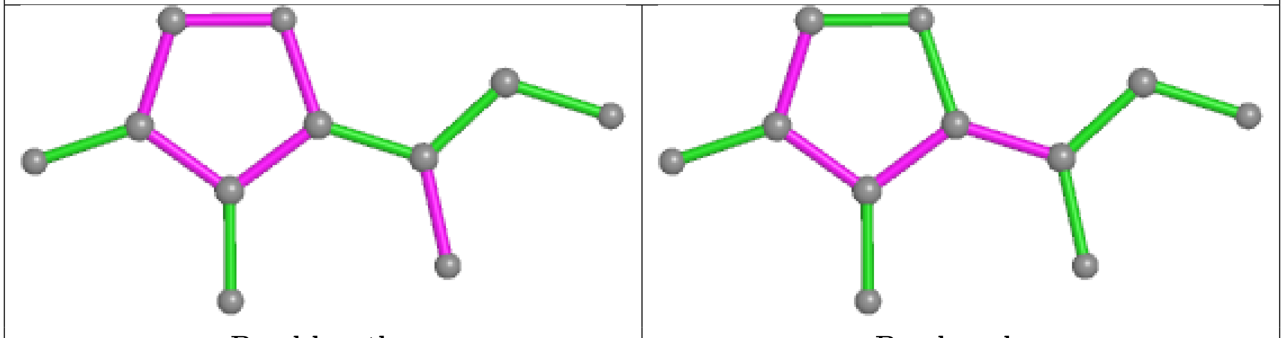
Bond angles



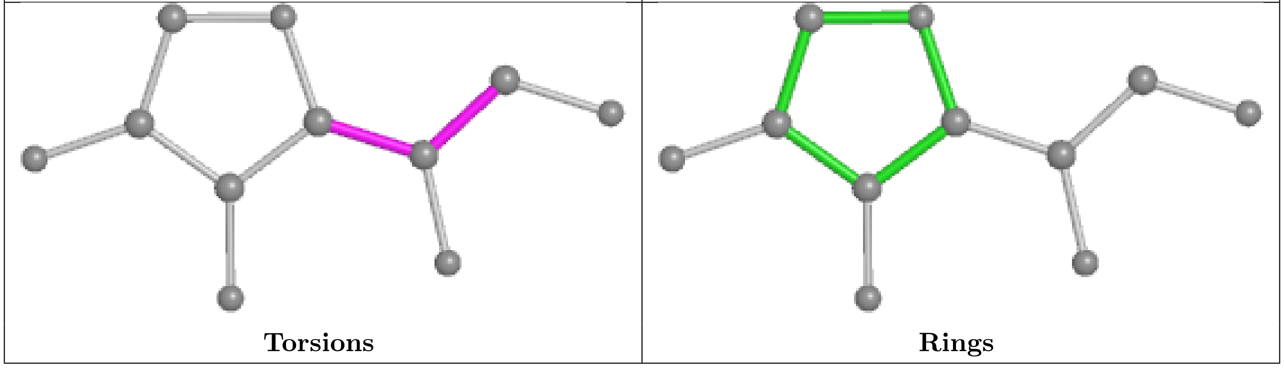
Torsions

Rings

Ligand A1AIO A 2035

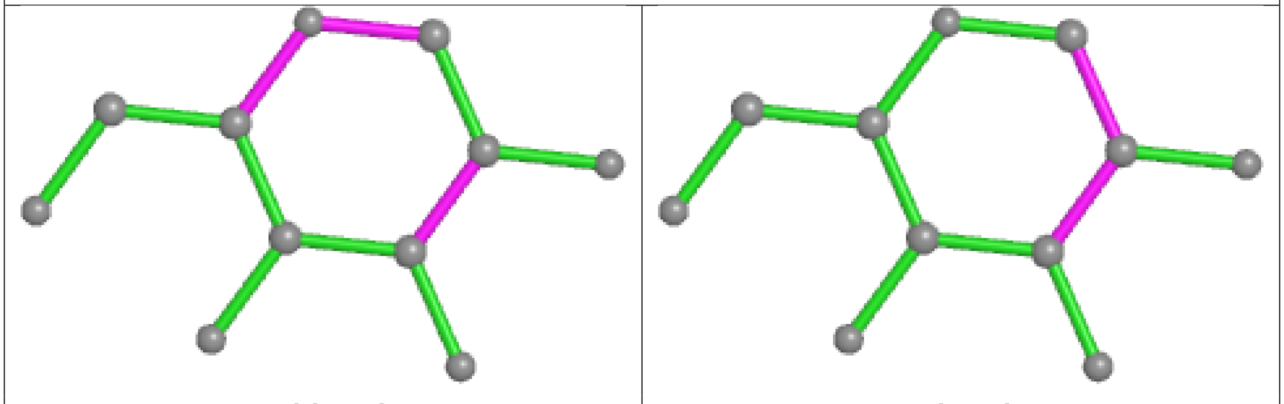


Bond lengths **Bond angles**

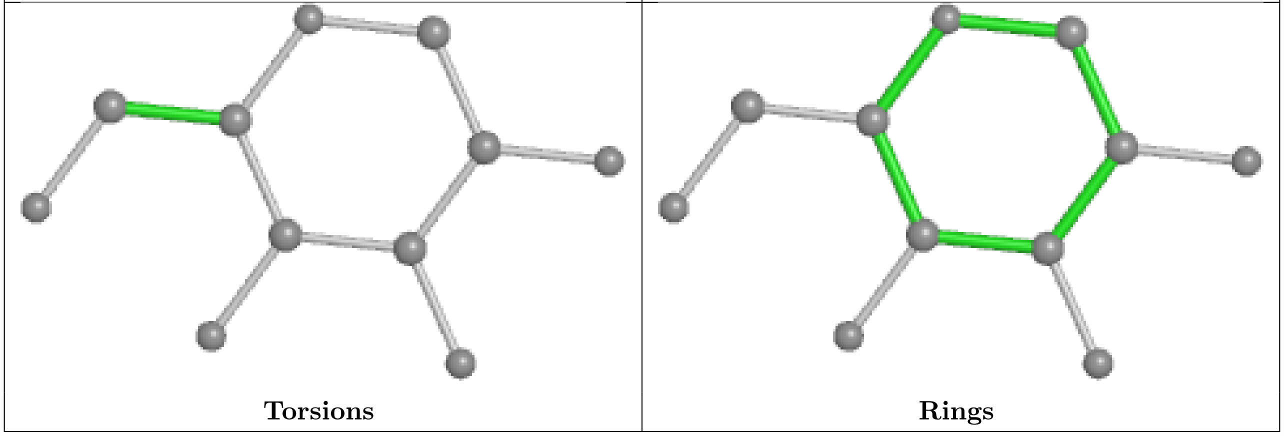


Torsions **Rings**

Ligand GLA B 2070

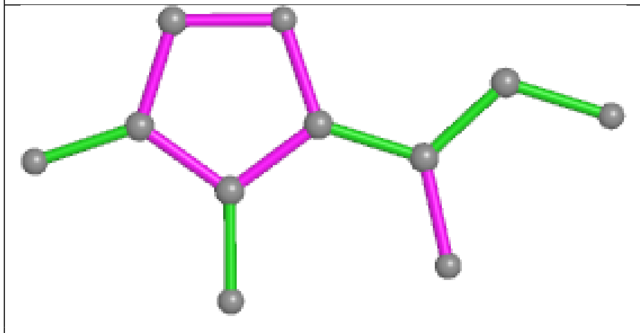


Bond lengths **Bond angles**

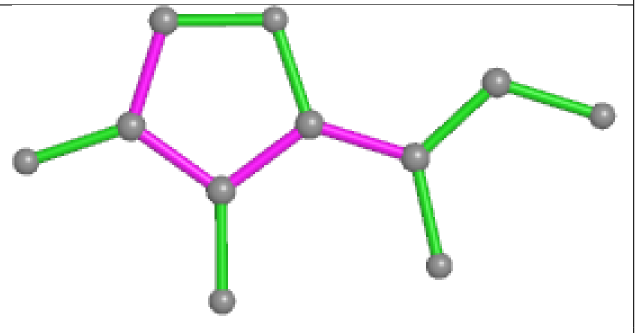


Torsions **Rings**

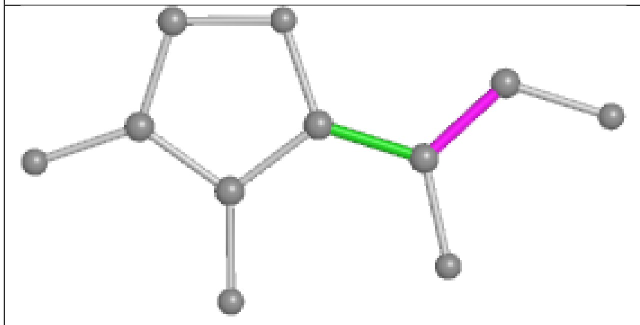
Ligand A1AIO B 2042



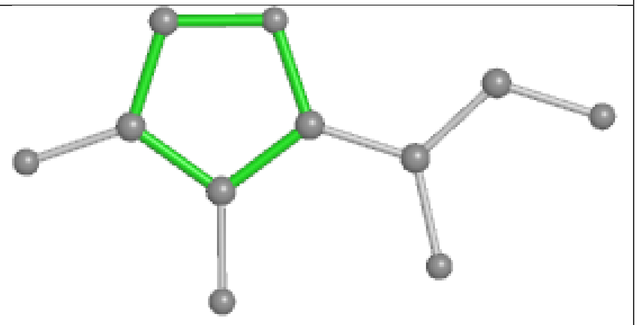
Bond lengths



Bond angles

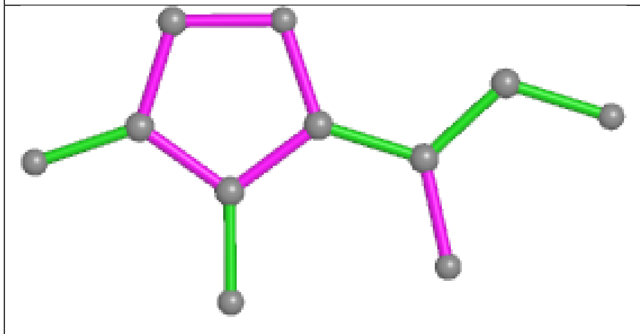


Torsions

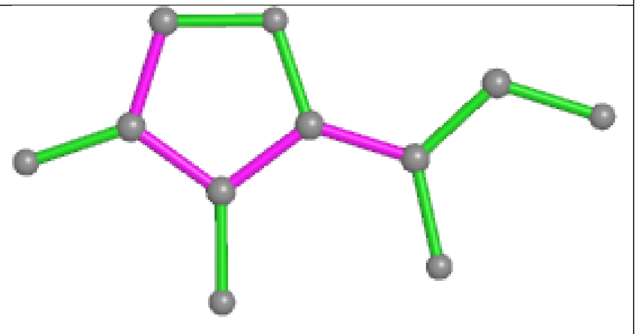


Rings

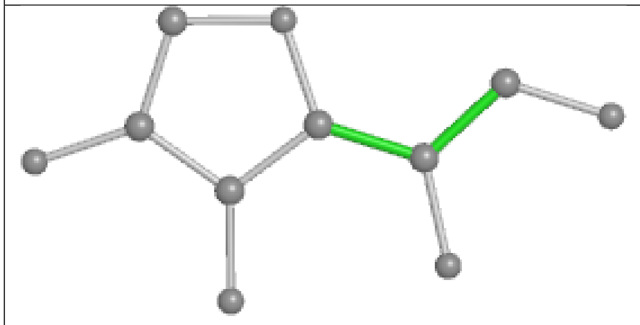
Ligand A1AIO A 2034



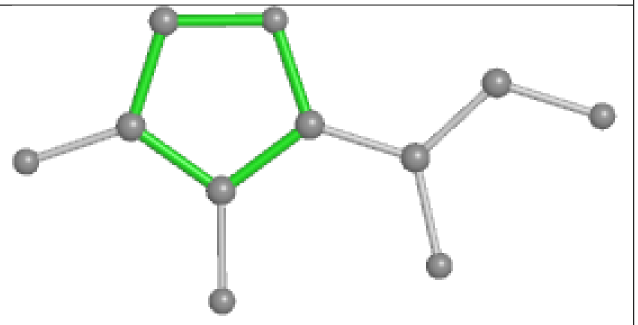
Bond lengths



Bond angles

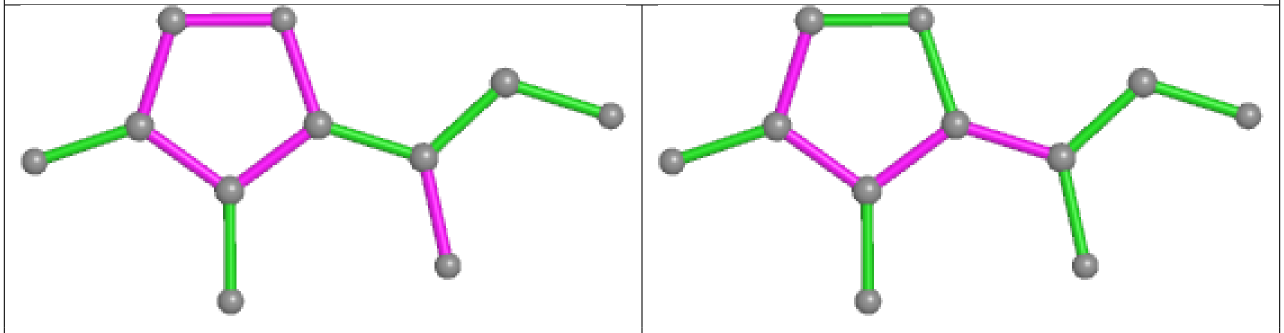


Torsions



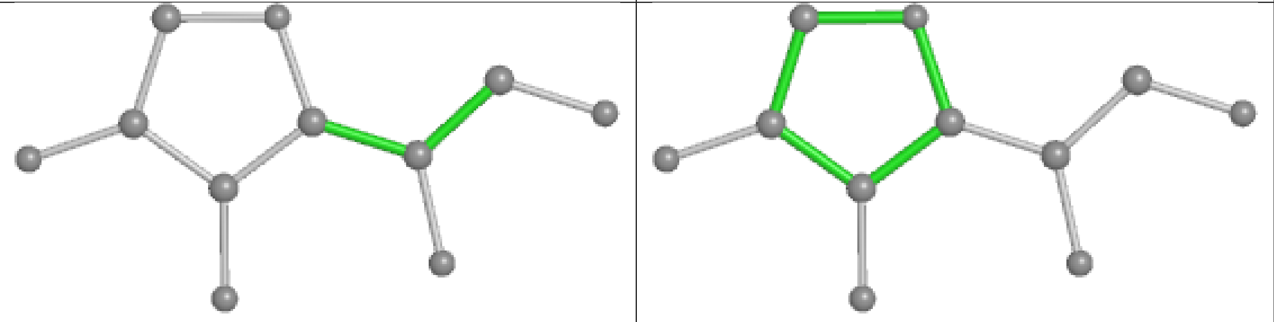
Rings

Ligand A1AIO B 2012



Bond lengths

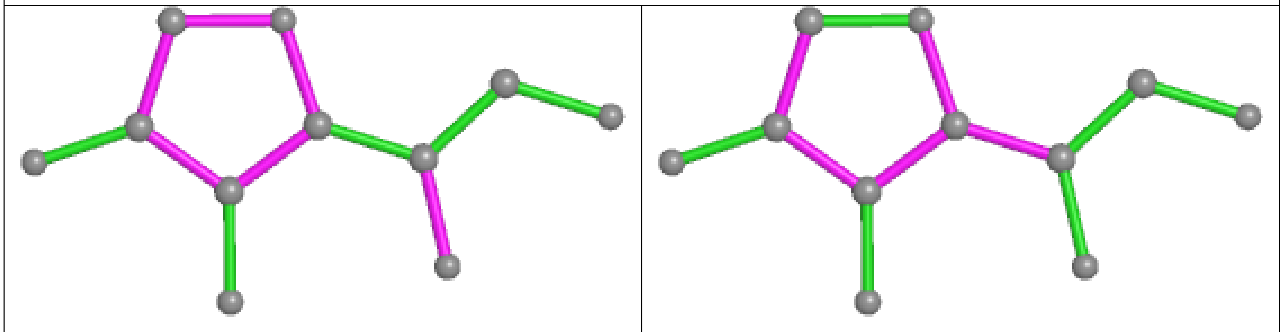
Bond angles



Torsions

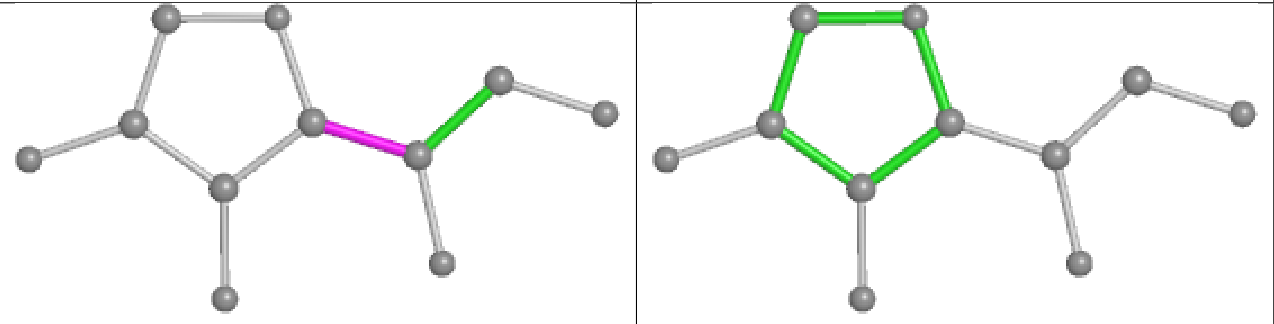
Rings

Ligand A1AIO B 2015



Bond lengths

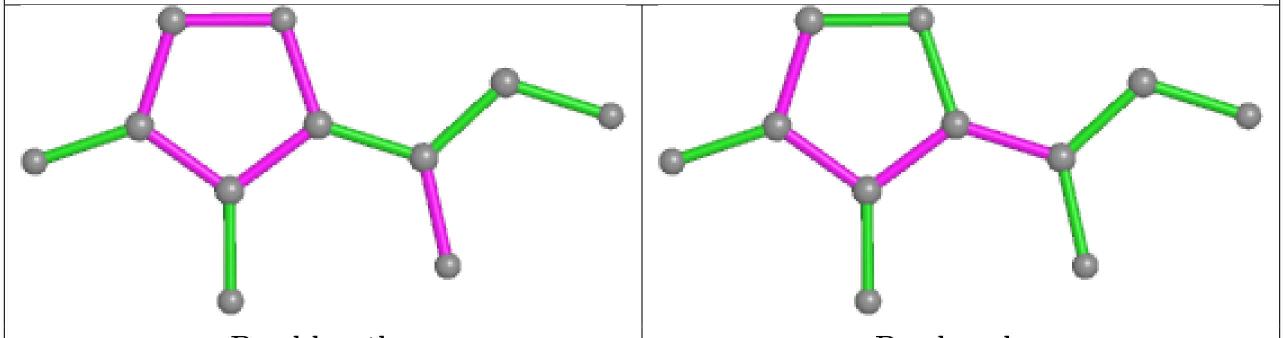
Bond angles



Torsions

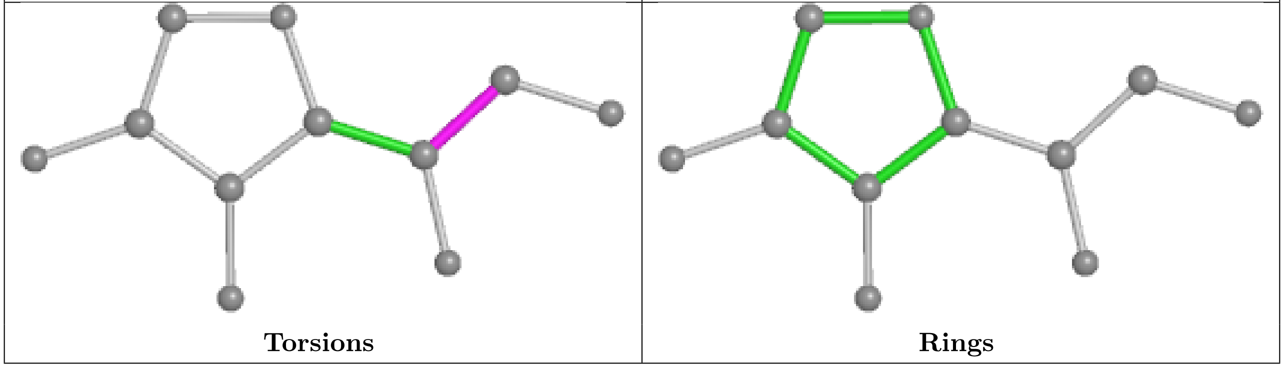
Rings

Ligand A1AIO A 2016



Bond lengths

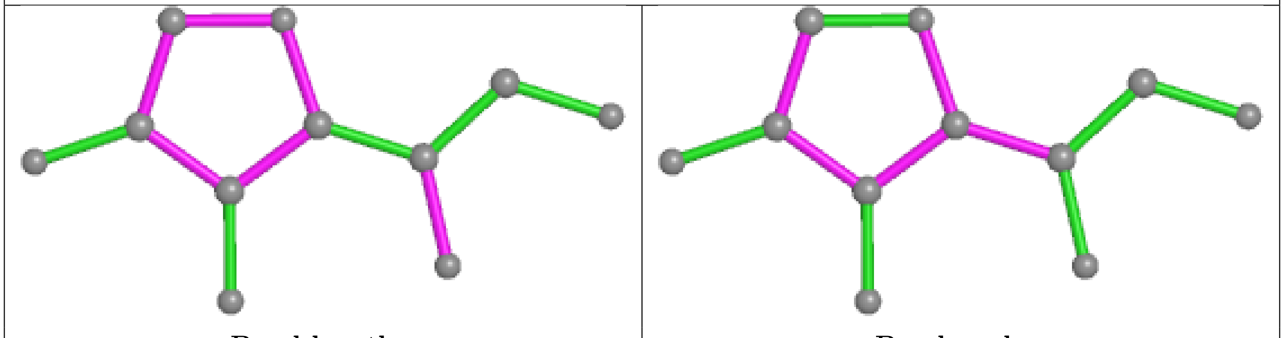
Bond angles



Torsions

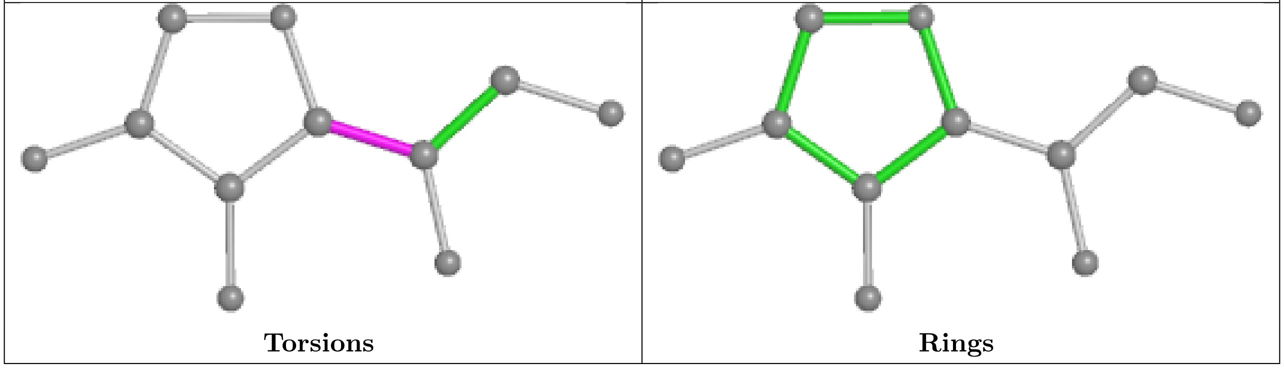
Rings

Ligand A1AIO B 2031



Bond lengths

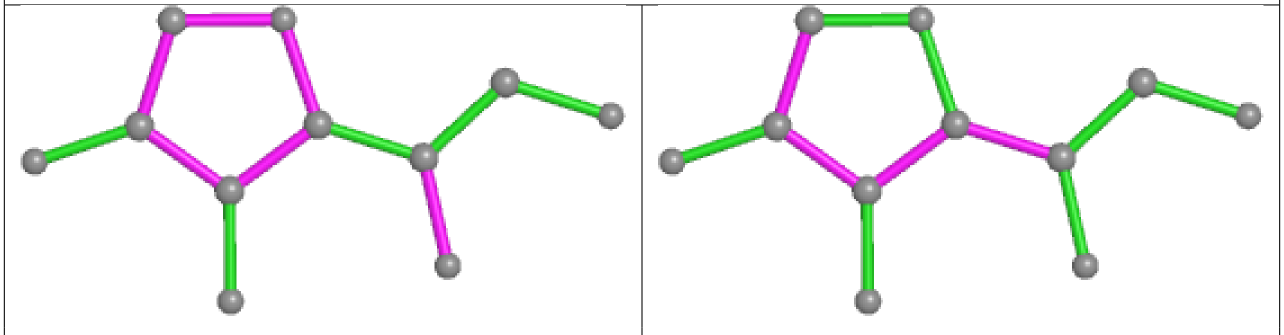
Bond angles



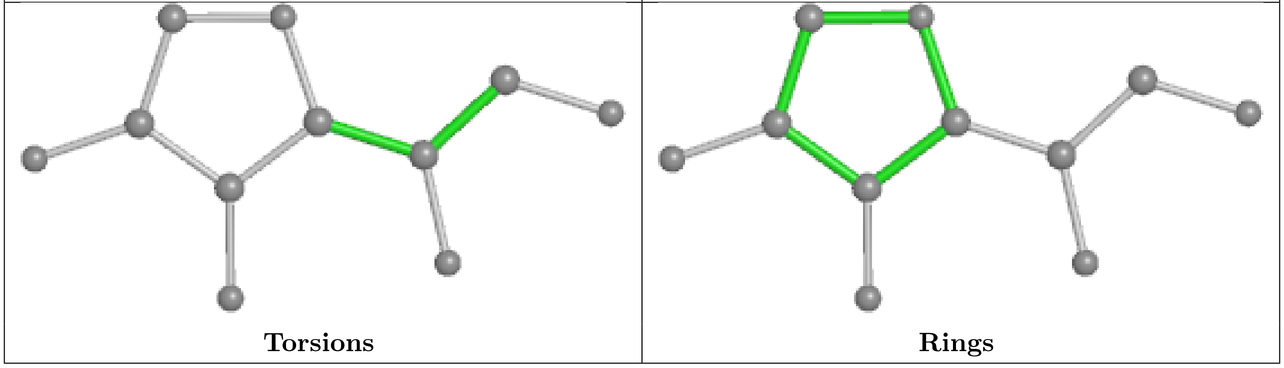
Torsions

Rings

Ligand A1AIO A 2029

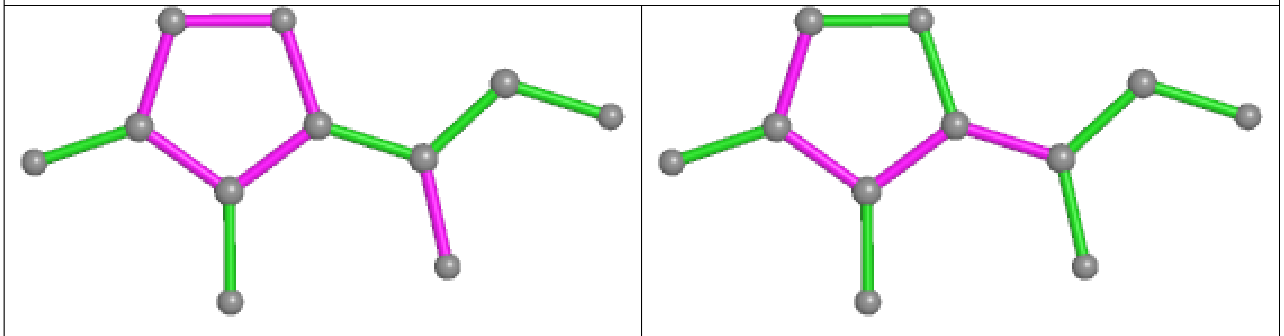


Bond lengths Bond angles

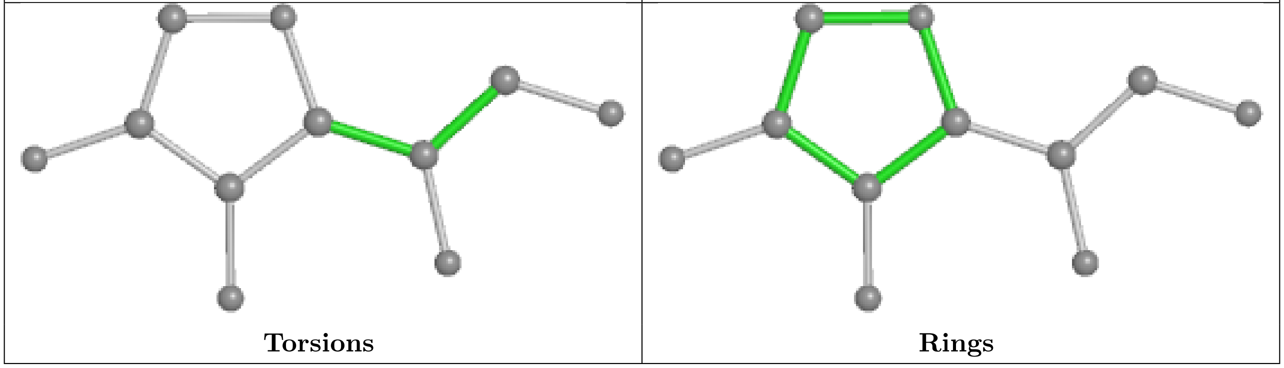


Torsions Rings

Ligand A1AIO A 2014

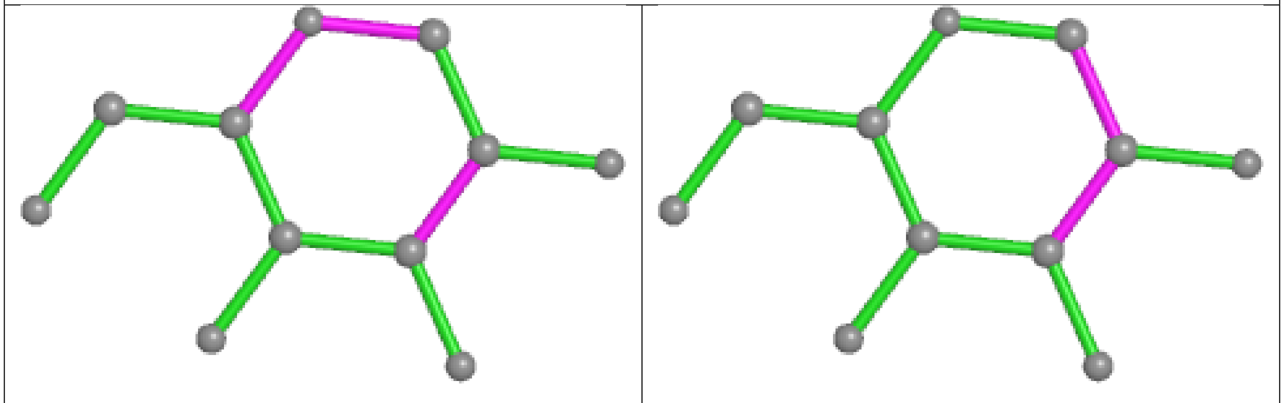


Bond lengths Bond angles

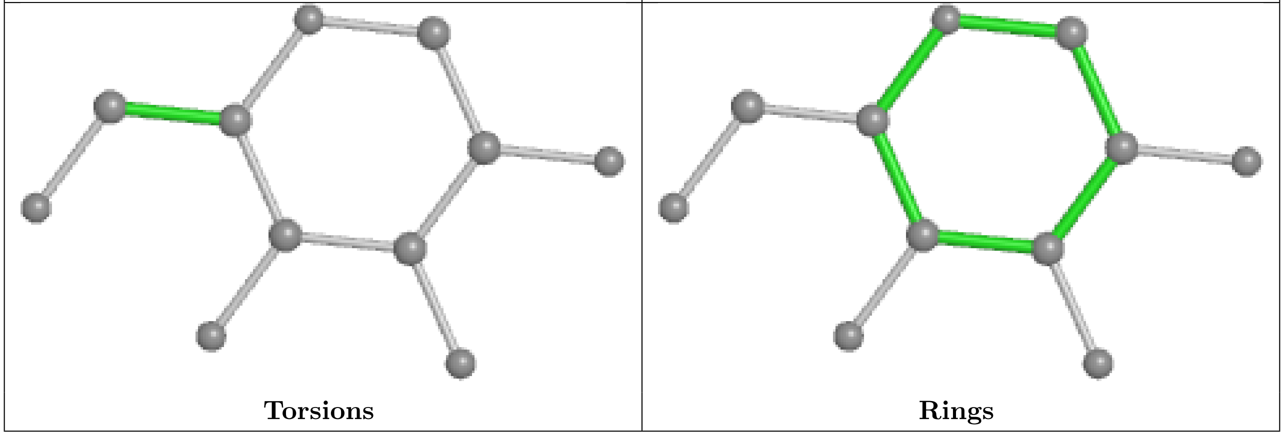


Torsions Rings

Ligand GLA B 2064

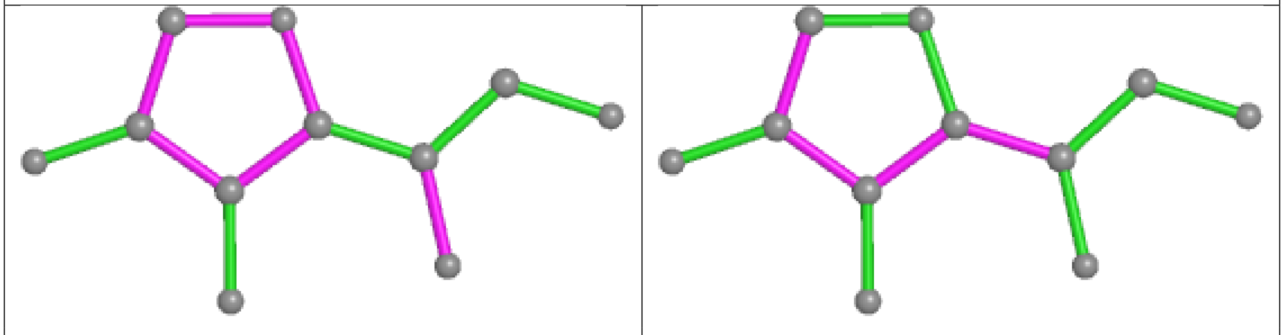


Bond lengths Bond angles

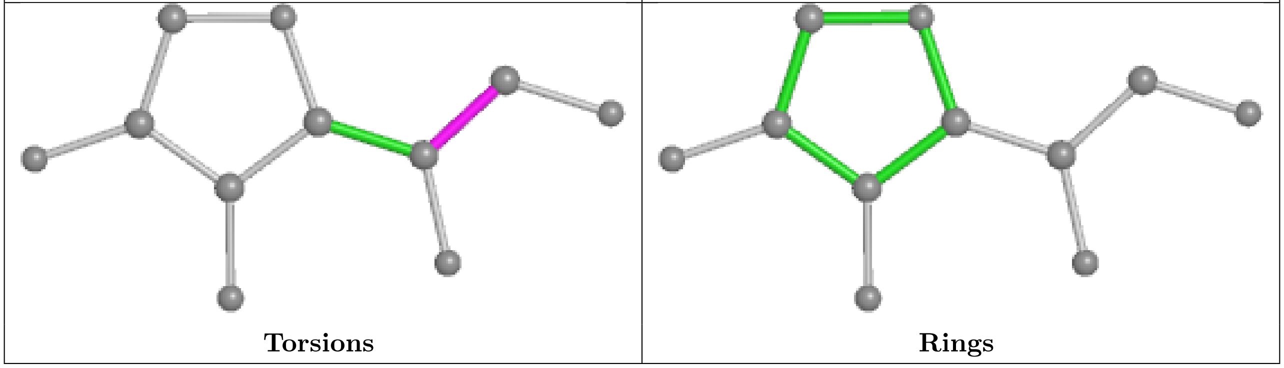


Torsions Rings

Ligand A1AIO A 2004

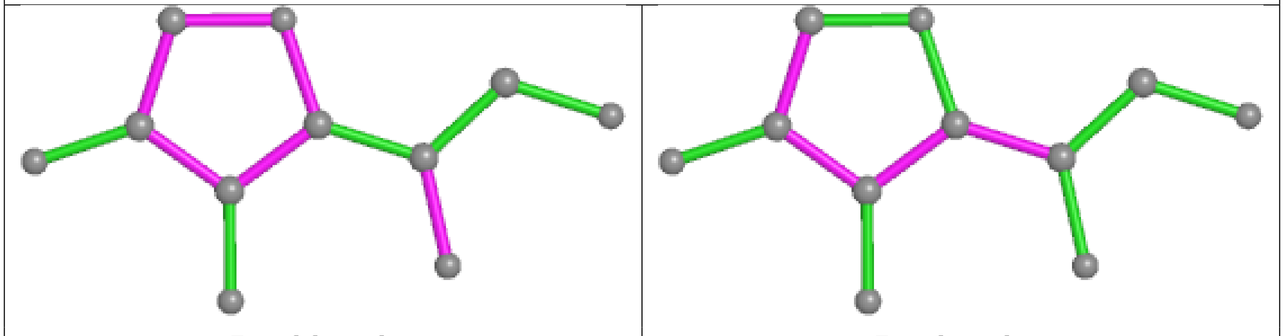


Bond lengths Bond angles

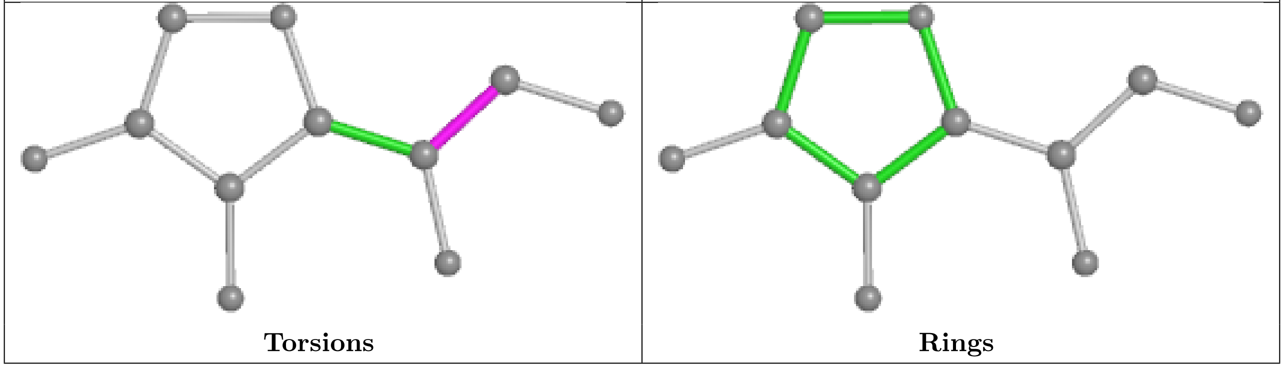


Torsions Rings

Ligand A1AIO B 2025

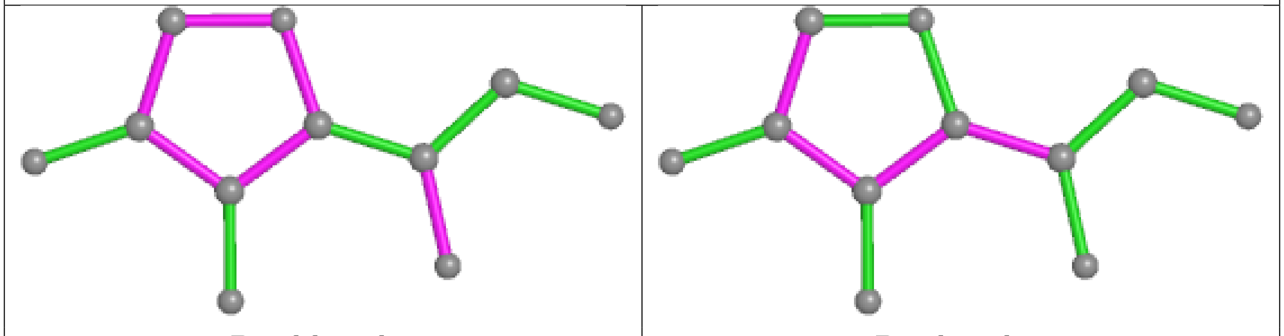


Bond lengths **Bond angles**

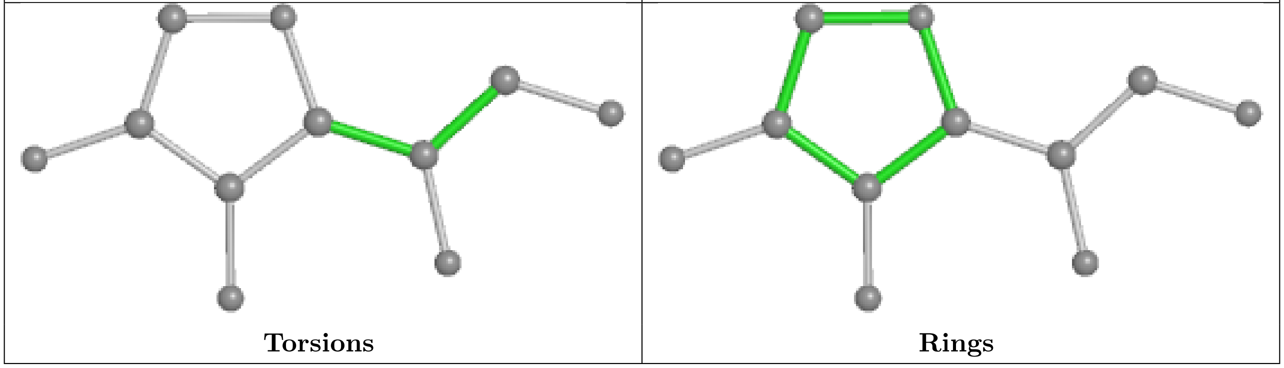


Torsions **Rings**

Ligand A1AIO B 2022

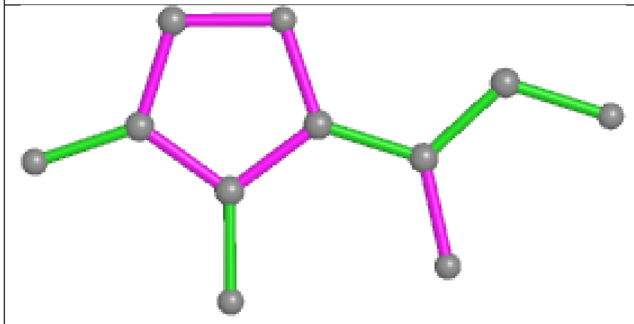


Bond lengths **Bond angles**

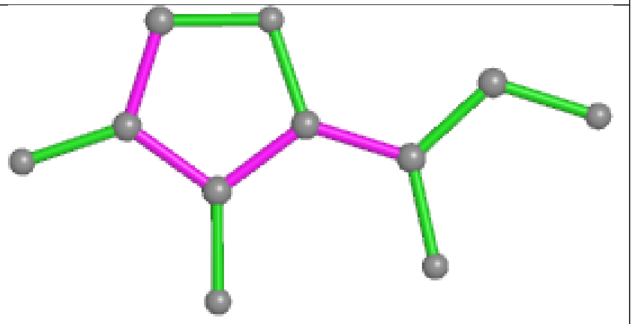


Torsions **Rings**

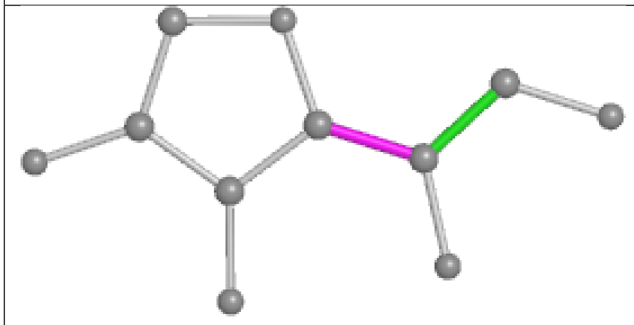
Ligand A1AIO B 2018



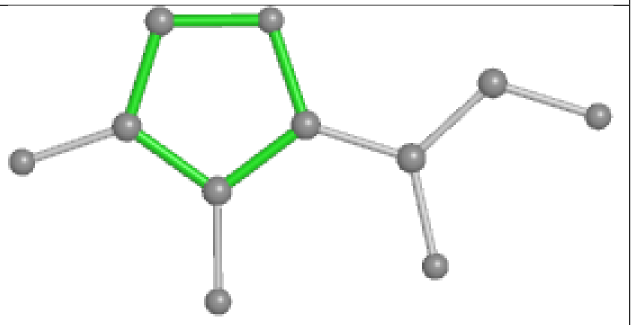
Bond lengths



Bond angles

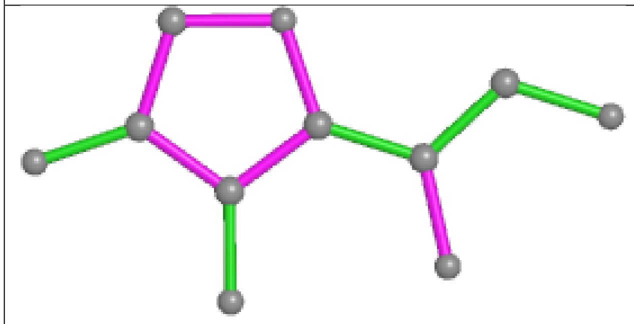


Torsions

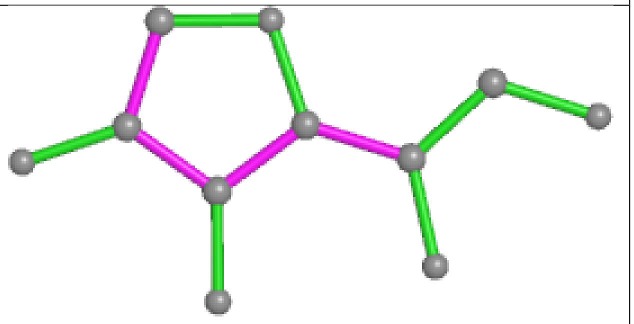


Rings

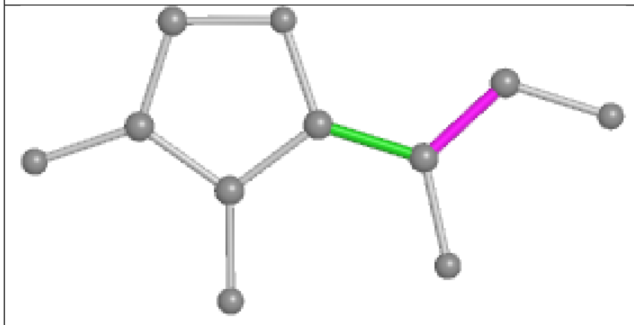
Ligand A1AIO B 2002



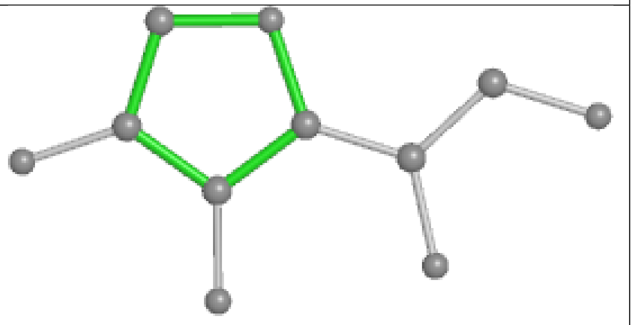
Bond lengths



Bond angles

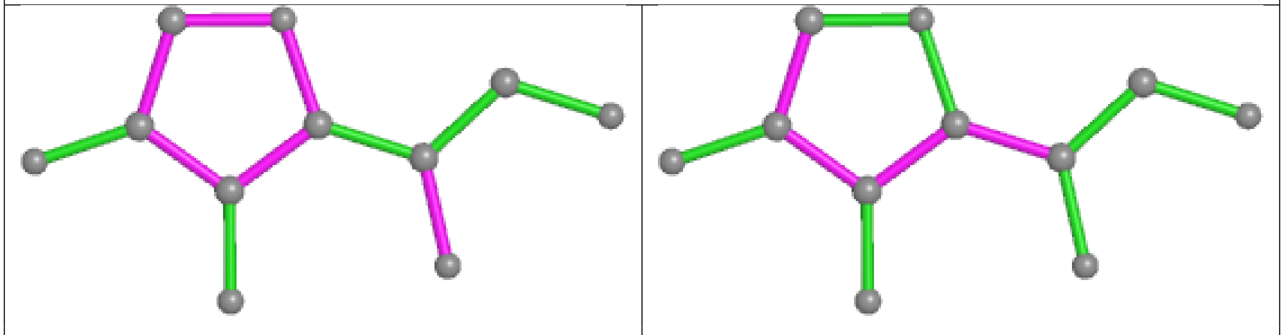


Torsions

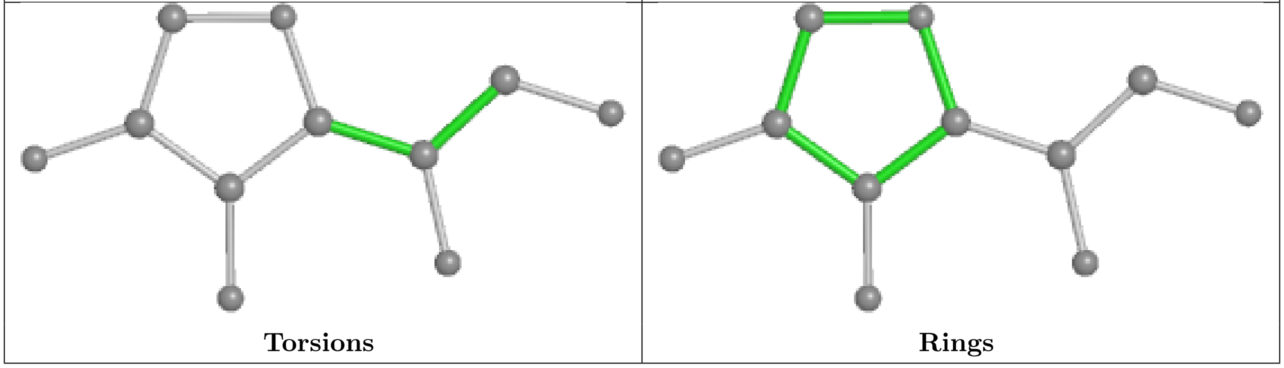


Rings

Ligand A1AIO A 2032

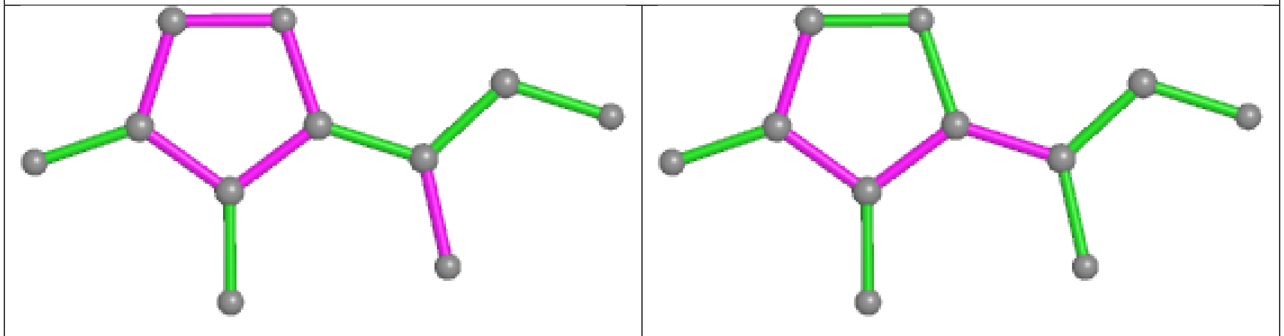


Bond lengths Bond angles

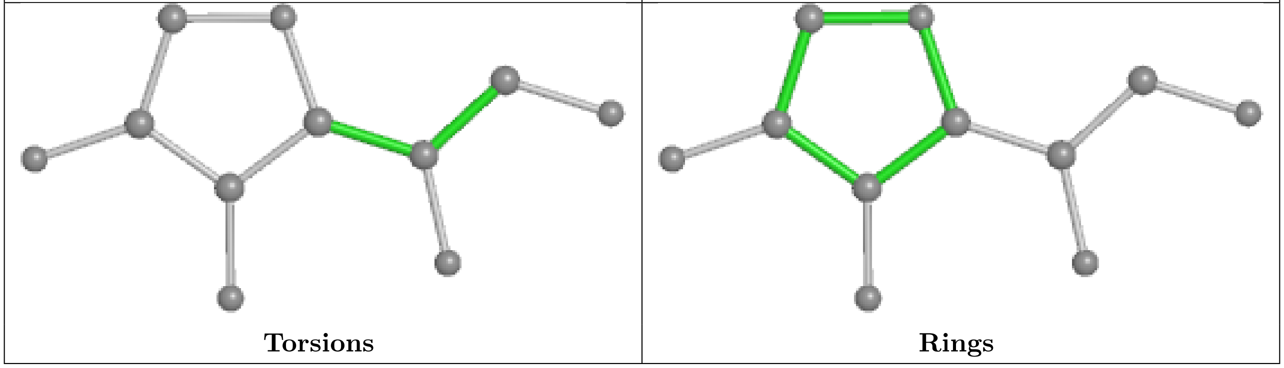


Torsions Rings

Ligand A1AIO A 2043

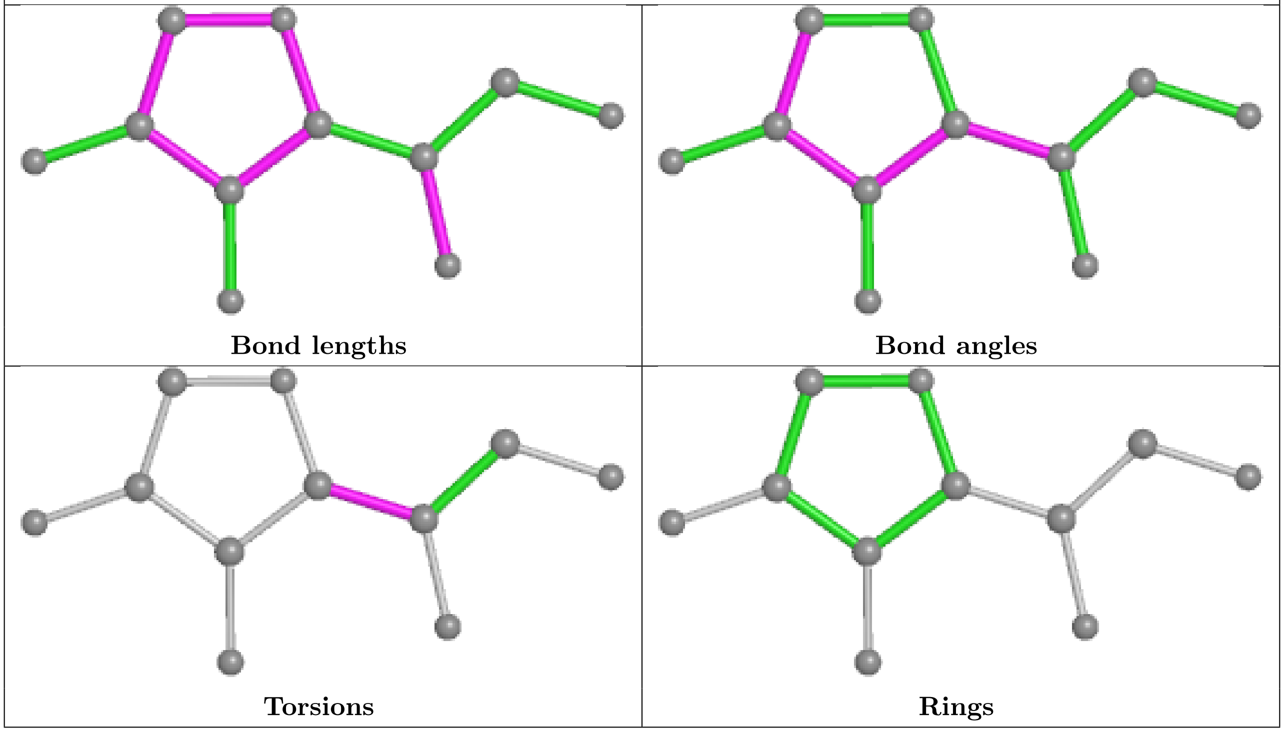


Bond lengths Bond angles



Torsions Rings

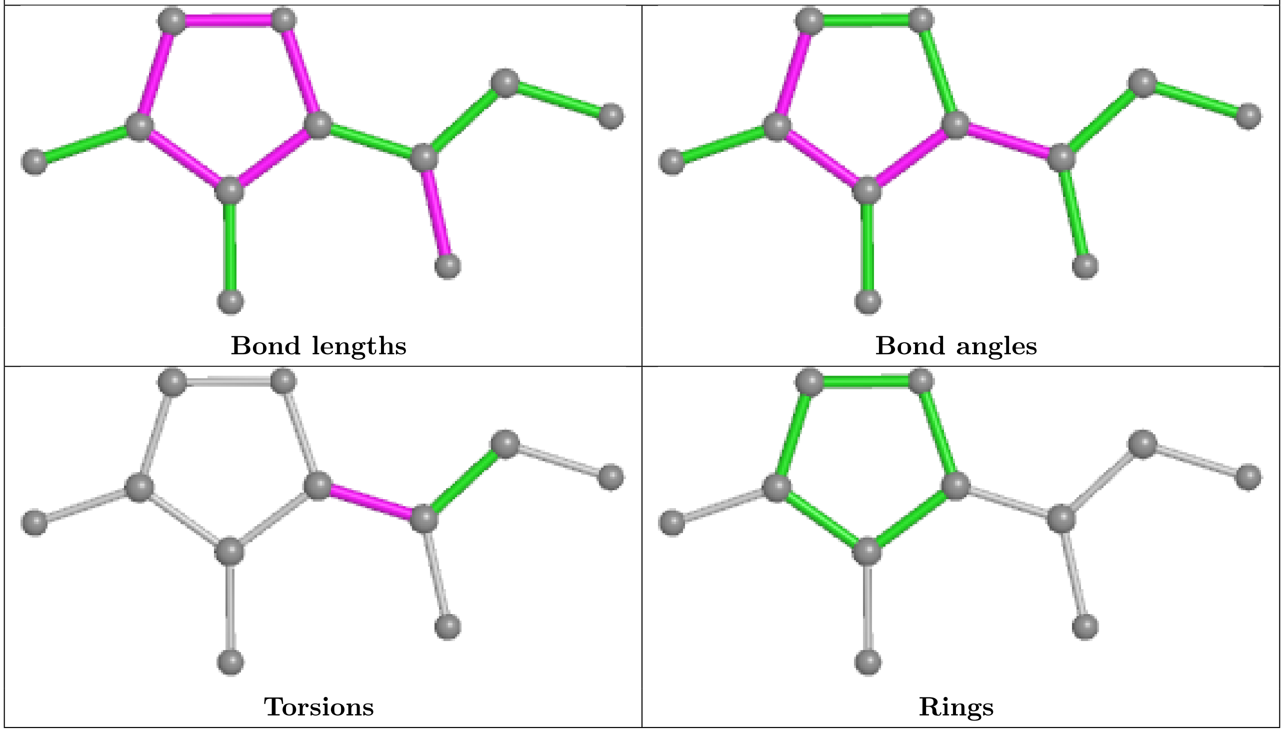
Ligand A1AIO A 2030



Bond lengths Bond angles

Torsions Rings

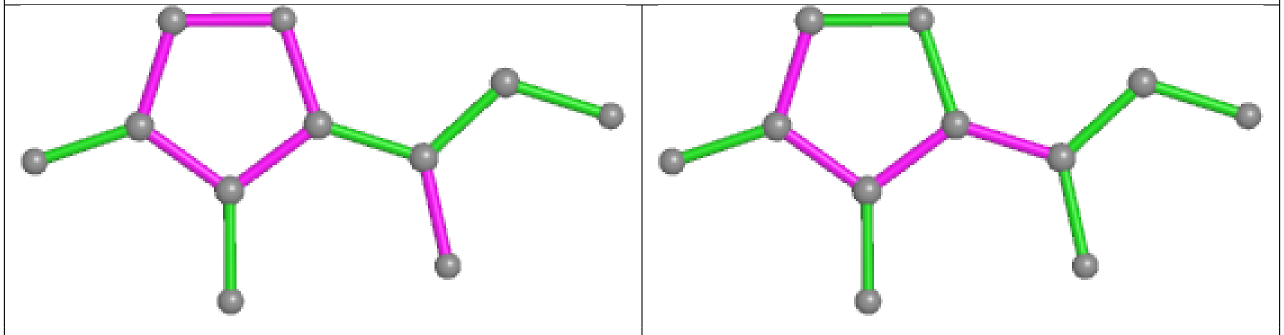
Ligand A1AIO A 2052



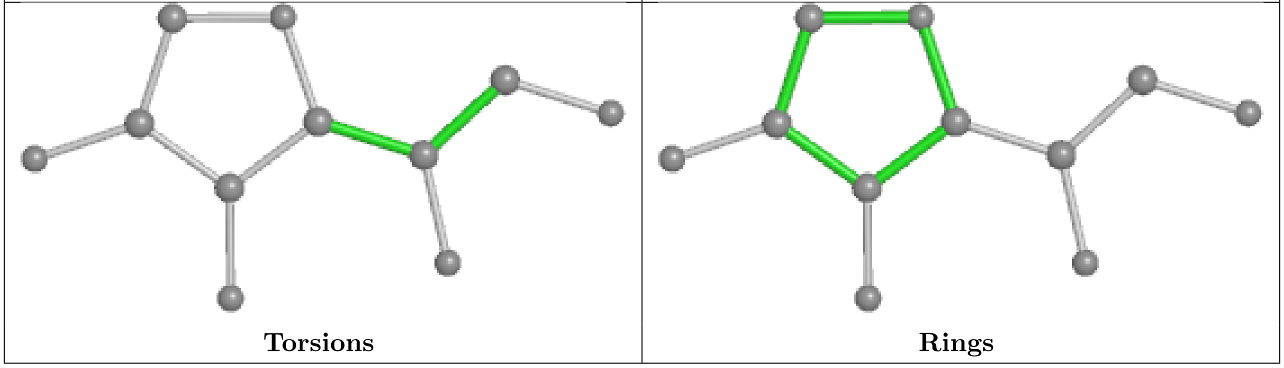
Bond lengths Bond angles

Torsions Rings

Ligand A1AIO A 2015

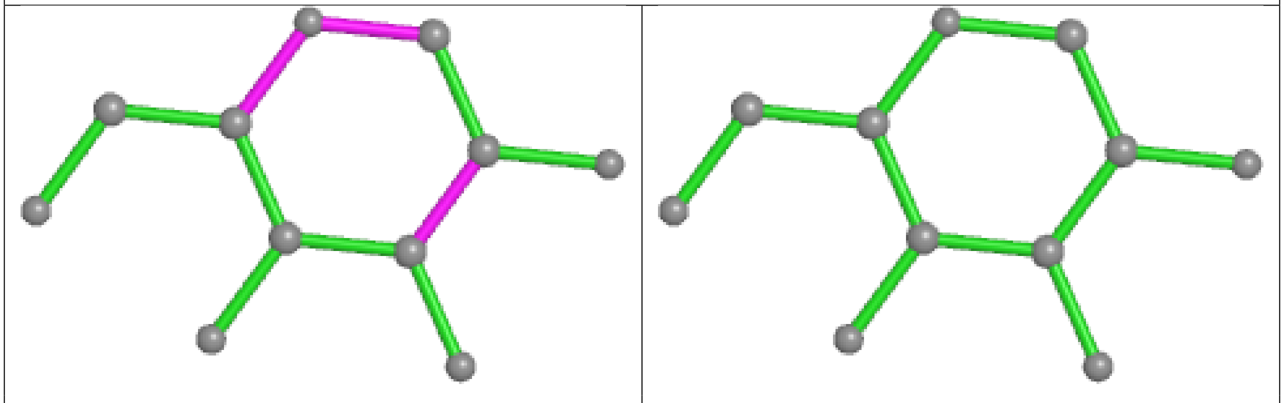


Bond lengths **Bond angles**

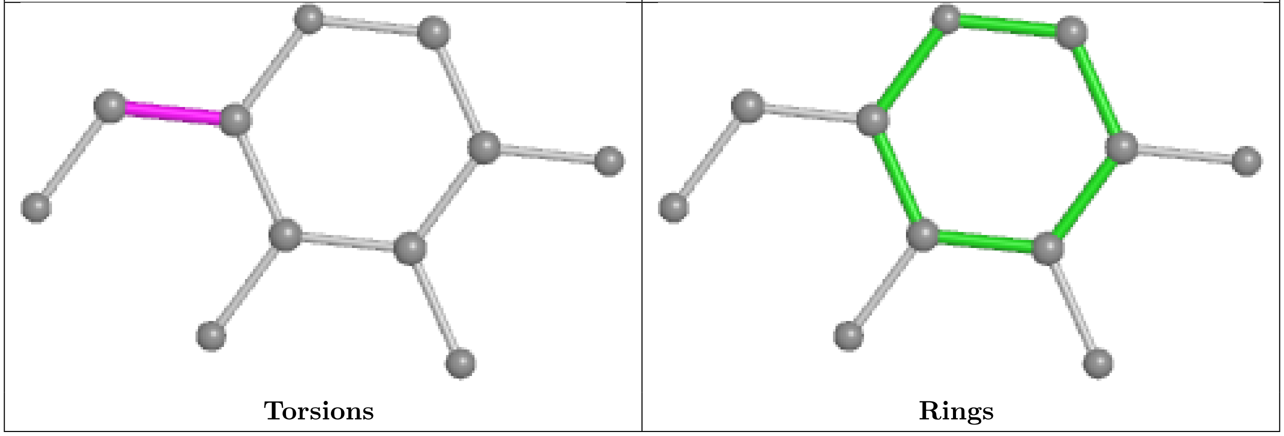


Torsions **Rings**

Ligand GLA B 2061

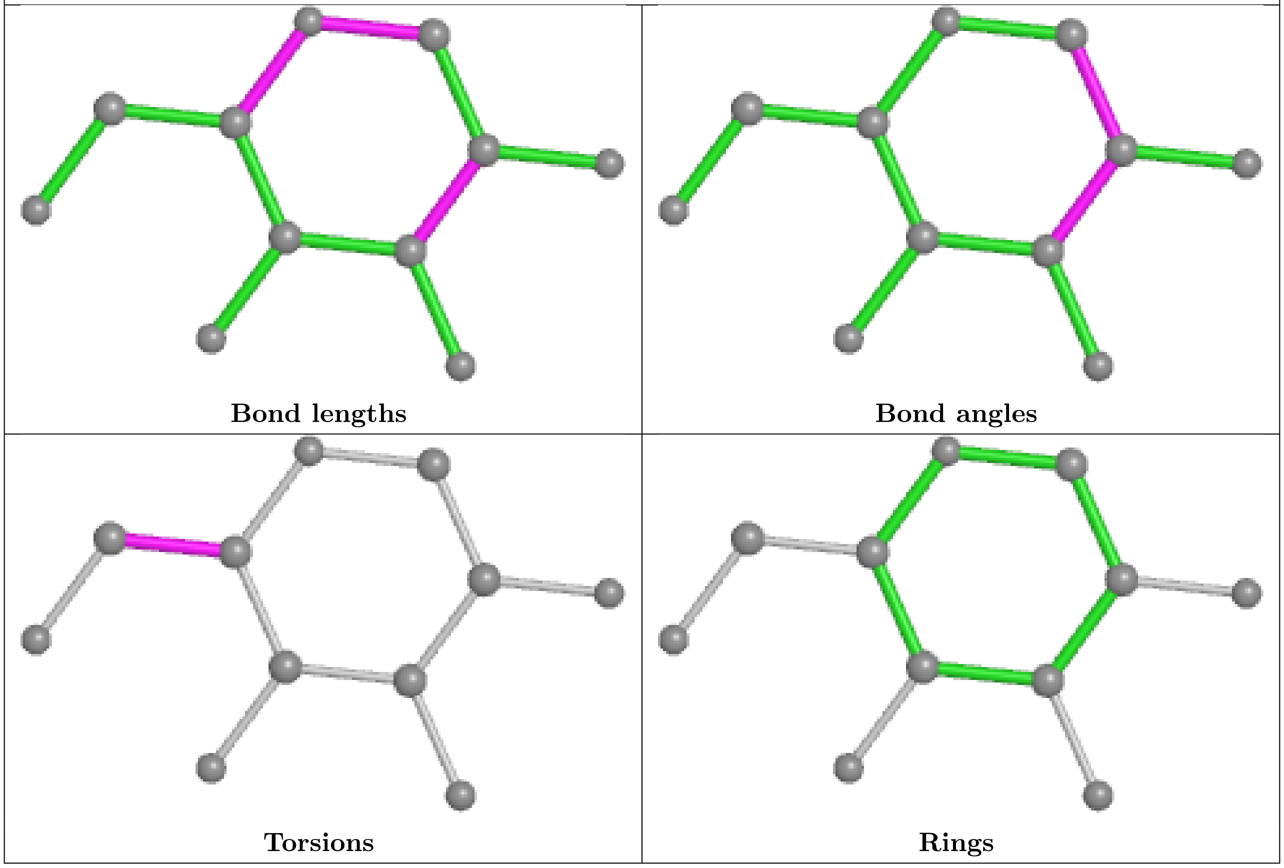


Bond lengths **Bond angles**



Torsions **Rings**

Ligand GLA B 2062



Bond lengths

Bond angles

Torsions

Rings

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

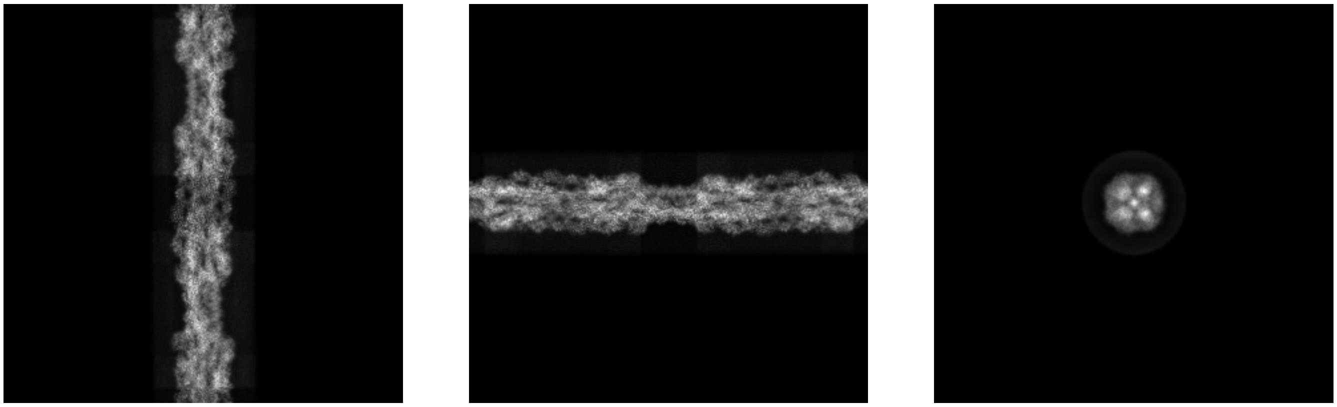
6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-43892. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections ⓘ

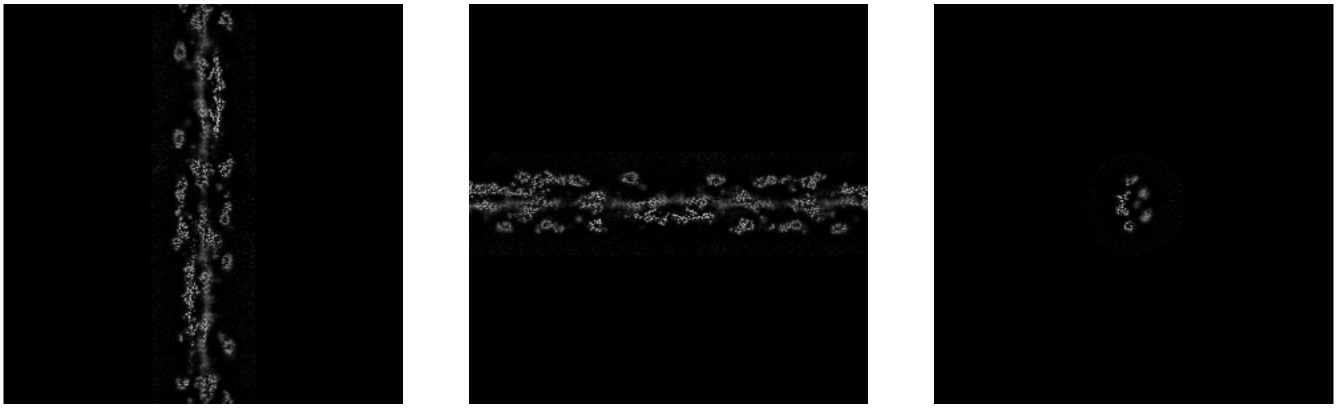
6.1.1 Primary map


X Y Z

The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ

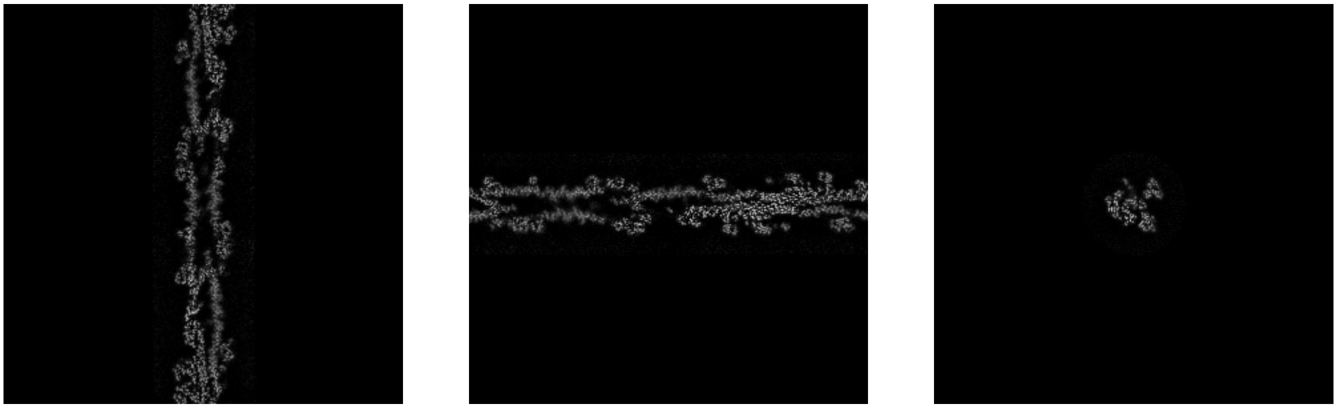
6.2.1 Primary map


X Index: 256 Y Index: 256 Z Index: 256

The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices

6.3.1 Primary map

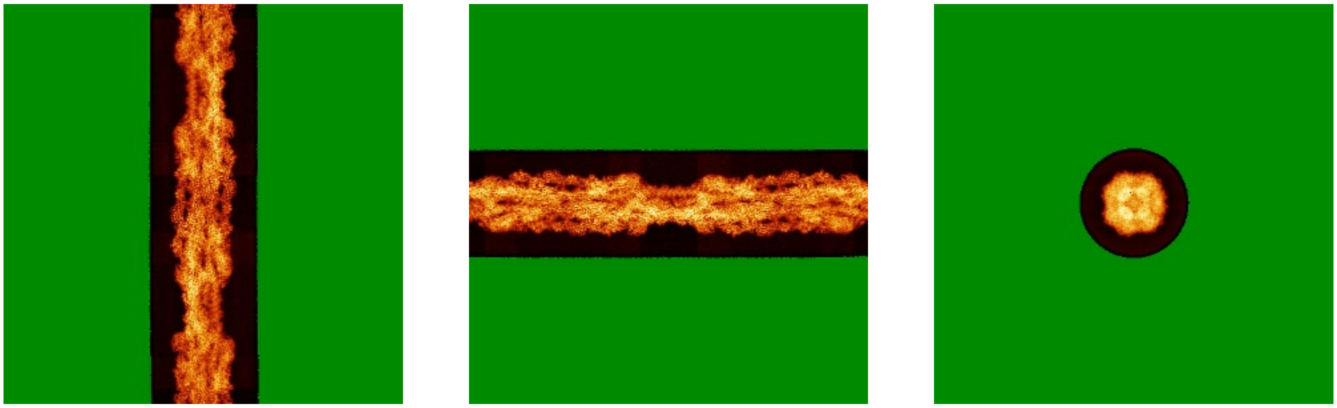


X Index: 270 Y Index: 271 Z Index: 161

The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color)

6.4.1 Primary map



X Y Z

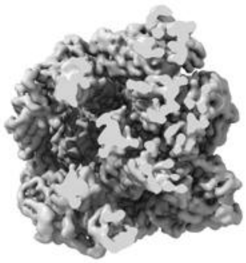
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views

6.5.1 Primary map

X

Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

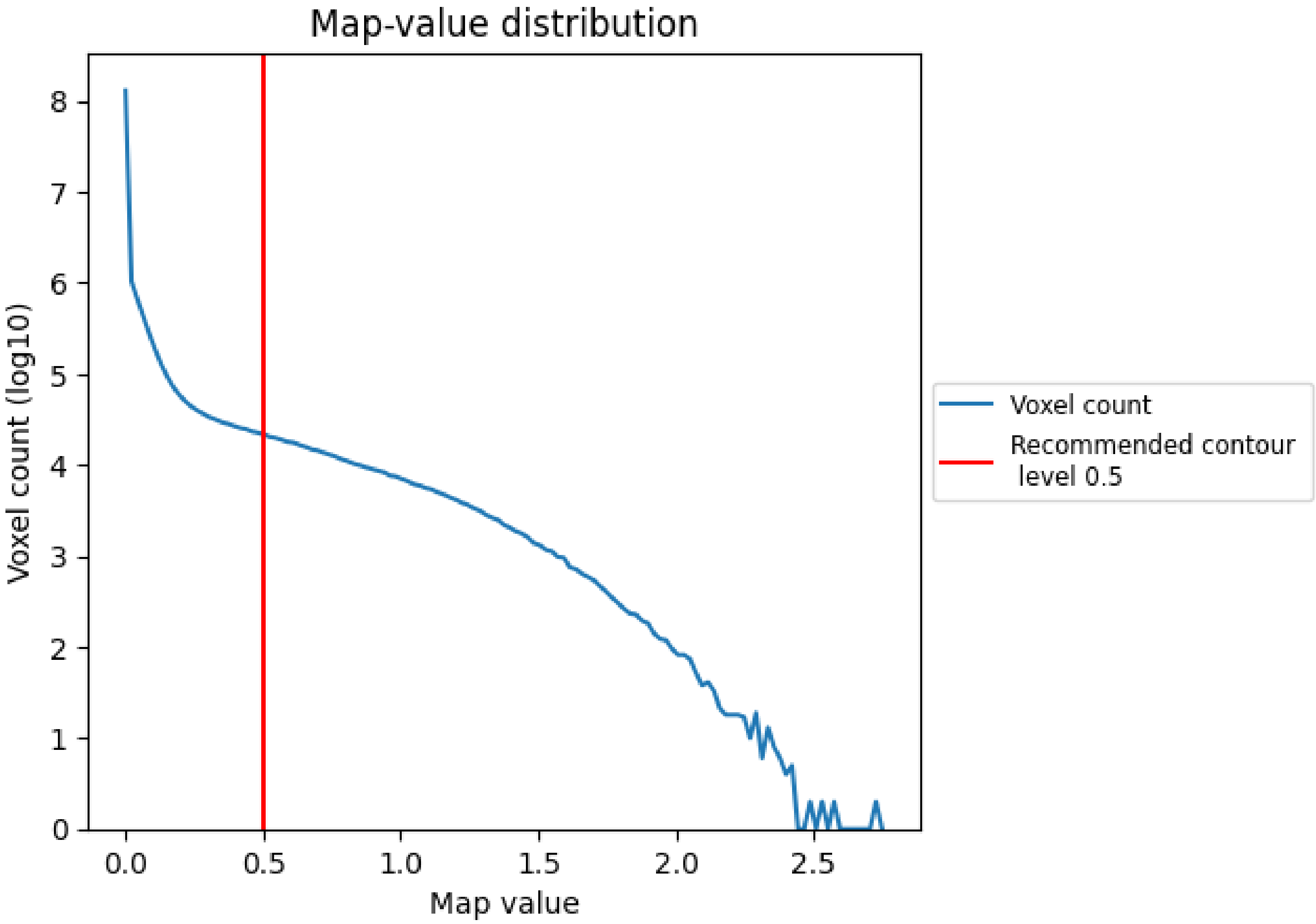
6.6 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis ⓘ

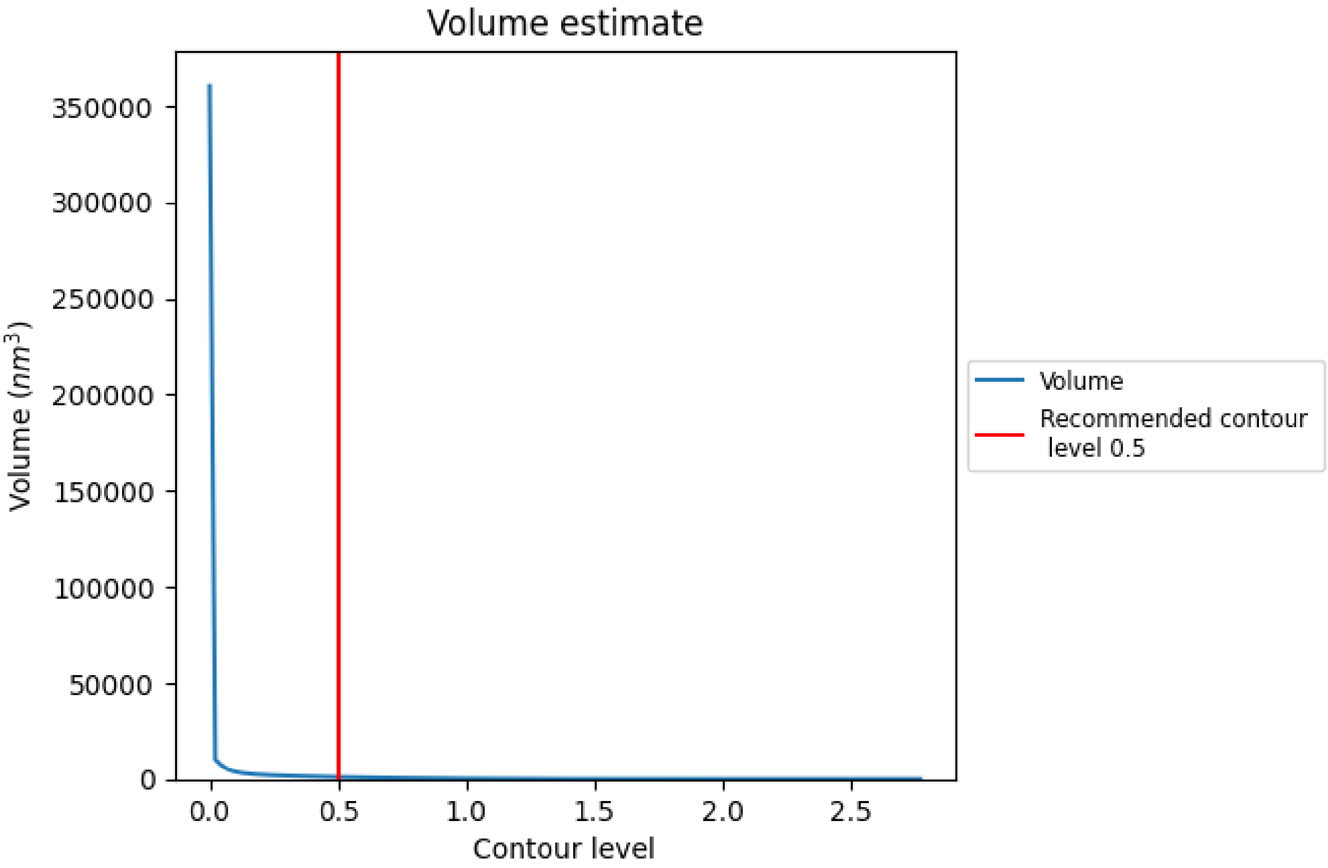
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution ⓘ



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

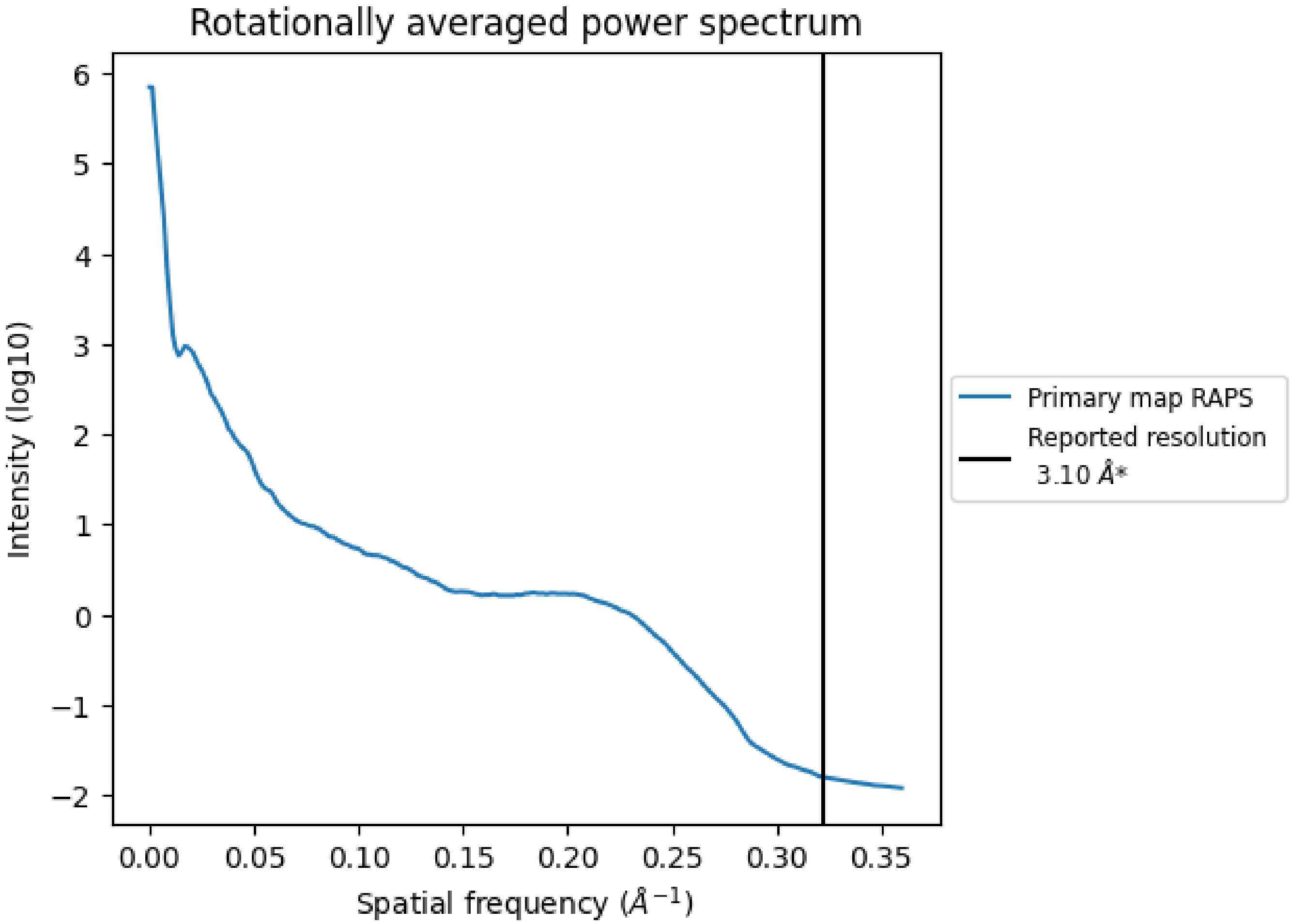
7.2 Volume estimate ⓘ



The volume at the recommended contour level is 1110 nm^3; this corresponds to an approximate mass of 1002 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.323 Å^{-1}

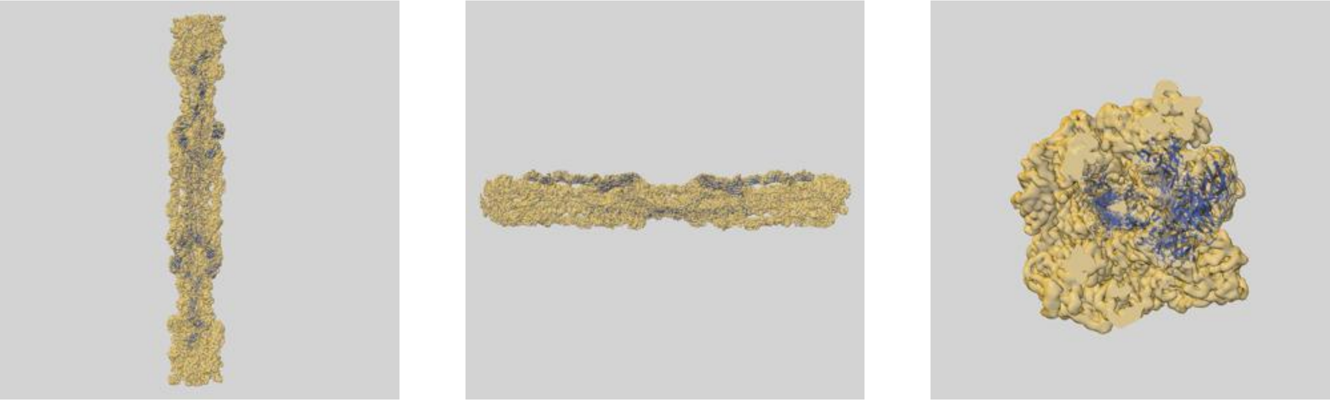
8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-43892 and PDB model 9B4H. Per-residue inclusion information can be found in section 3 on page 22.

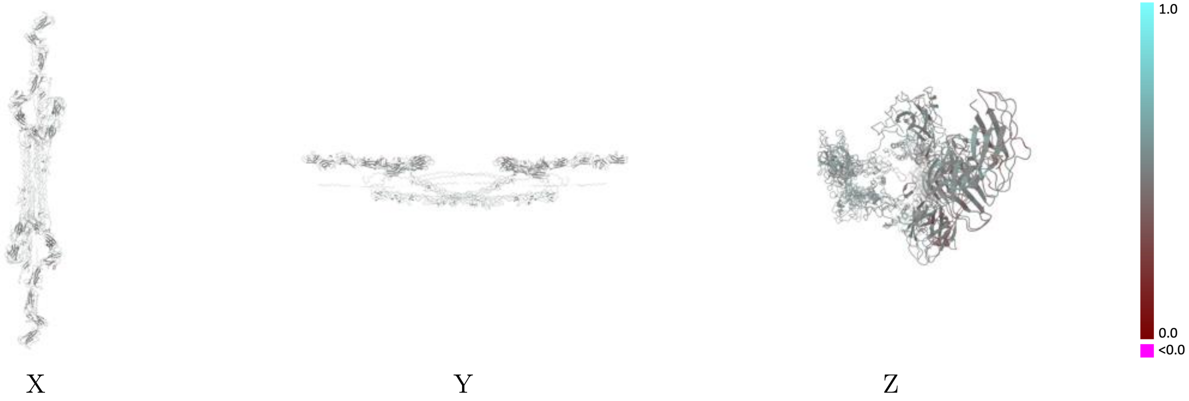
9.1 Map-model overlay (i)



X Y Z

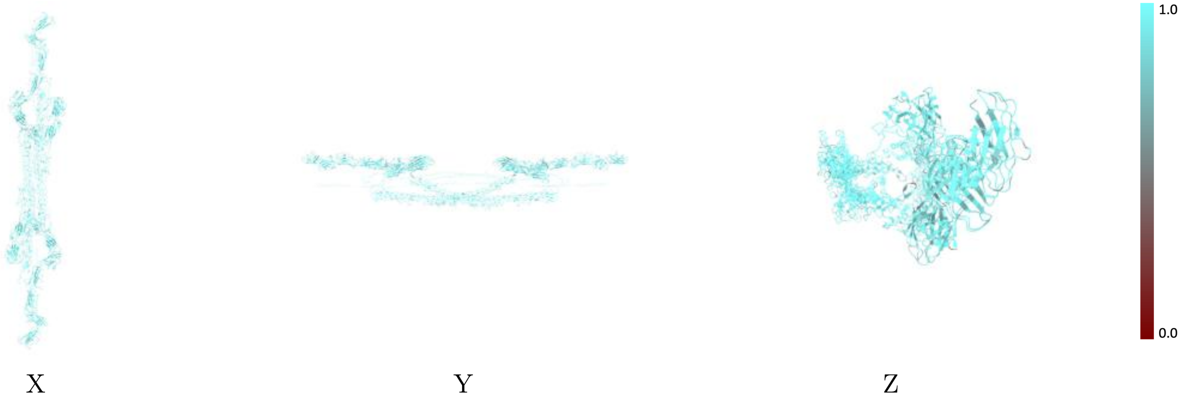
The images above show the 3D surface view of the map at the recommended contour level 0.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ



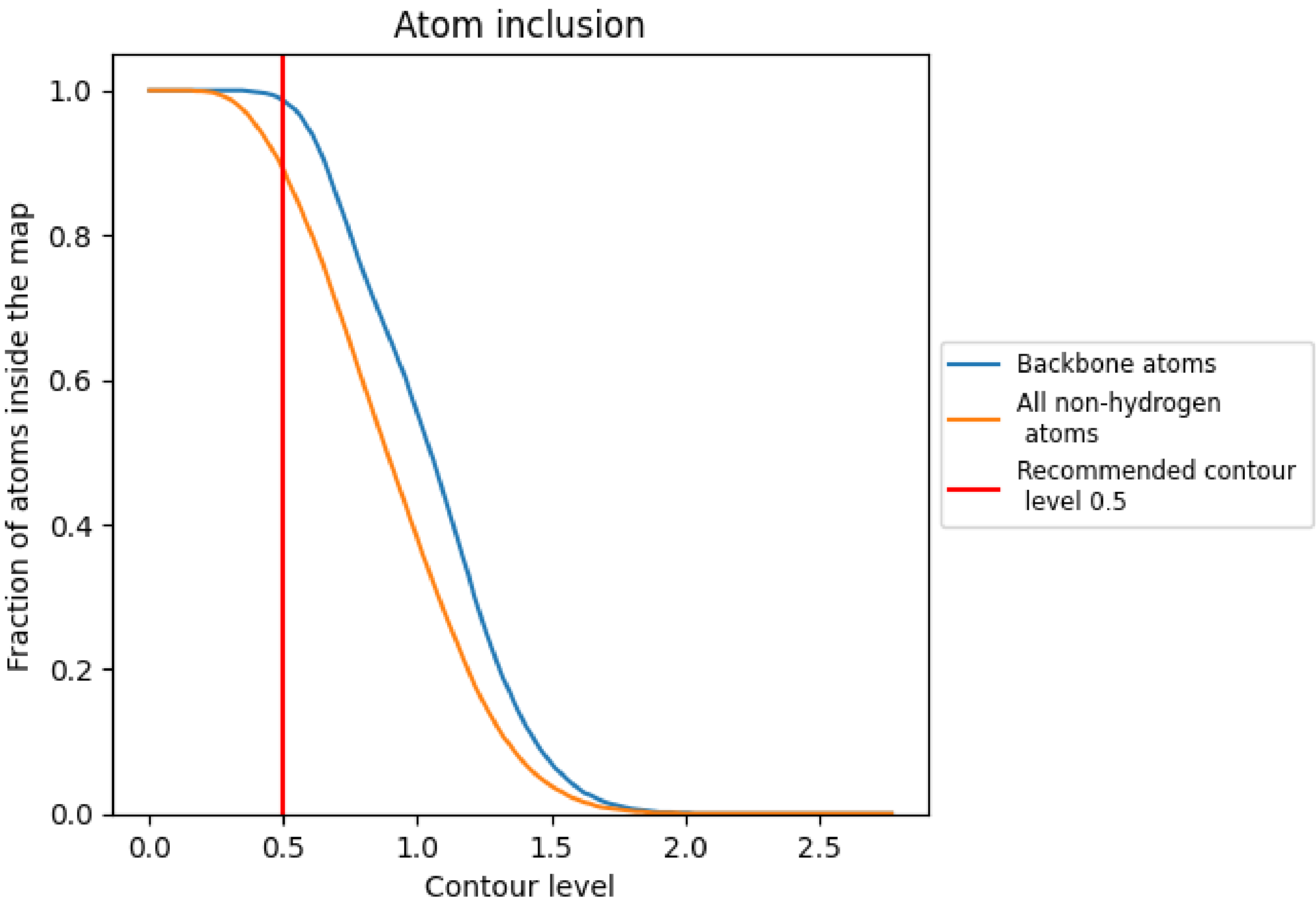
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model ⓘ



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.5).

9.4 Atom inclusion ⓘ



At the recommended contour level, 99% of all backbone atoms, 89% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8900	0.4880
A	0.8940	0.4900
A1	0.7140	0.4580
A2	0.8210	0.4630
A3	0.8930	0.5310
A4	0.8330	0.5290
A5	0.8330	0.4860
A6	0.8330	0.4760
A7	1.0000	0.5530
A9	0.8060	0.4870
B	0.8900	0.4890
B0	0.8890	0.4180
B1	0.7780	0.4140
B3	0.8330	0.4690
B4	0.7220	0.4660
B5	0.7220	0.5070
B6	0.8060	0.4670
B7	0.8890	0.4520
B9	0.6670	0.5150
C0	0.8330	0.4270
C1	0.7780	0.4790
C2	0.6670	0.4470
C3	0.9440	0.4330
C4	0.8330	0.4900
C5	0.7220	0.4670
C6	1.0000	0.4270
C7	0.8890	0.4860
C8	0.7780	0.4280
C9	0.7780	0.4180
D0	0.8890	0.4360
D1	0.5560	0.3560
D2	0.6670	0.4780
D3	0.8330	0.5100
D4	0.8330	0.4810
D5	0.7780	0.4830

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Chain	Atom inclusion	Q-score
D6	0.9440	0.5310
D7	0.8890	0.4730
D8	0.8330	0.4470
D9	0.8890	0.4850
E0	0.8330	0.4820
E1	0.7780	0.4790
E2	0.6670	0.4360
E3	0.8330	0.4660
E4	0.7220	0.3750
E5	0.7780	0.4620
E6	0.7780	0.4810
E7	0.7220	0.5030
E8	0.8330	0.4950
F0	0.7780	0.4980
F2	0.9440	0.5270
F3	0.9440	0.4910
F5	0.6670	0.4890
F6	0.8890	0.5040
F7	0.9170	0.5100
F8	0.9440	0.5430
X	0.9770	0.4900
a1	0.7500	0.4670
a2	0.7860	0.4180
a3	0.8570	0.5080
a4	0.8330	0.5080
a5	0.8330	0.4650
a6	0.8330	0.4790
a7	1.0000	0.5850
a9	0.8060	0.4960
b0	0.9440	0.4330
b1	0.6670	0.4610
b3	0.9440	0.5280
b4	0.8330	0.4610
b5	0.7780	0.4880
b6	0.8610	0.4400
b7	0.9440	0.4880
b9	0.8330	0.4850
c0	0.8330	0.4050
c1	0.8330	0.4300
c2	0.6670	0.4130
c3	0.9440	0.4320
c4	0.8330	0.4440

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Chain	Atom inclusion	Q-score
c5	0.7780	0.4640
c6	1.0000	0.3930
c7	0.8890	0.4920
c8	0.8330	0.4650
c9	0.8330	0.4250
d0	0.7780	0.4100
d1	0.6670	0.3850
d2	0.7220	0.4600
d3	0.8890	0.5220
d4	0.8330	0.4840
d5	0.9440	0.5030
d6	0.9440	0.4680
d7	0.8890	0.4480
d8	0.7780	0.4470
d9	0.6670	0.4410
e0	0.8890	0.5090
e1	0.7780	0.5230
e2	0.7780	0.4800
e3	0.8330	0.4630
e4	0.7780	0.3930
e5	0.7780	0.4600
e6	0.8330	0.4700
e7	0.8330	0.4670
e8	0.8330	0.5300
e9	0.8330	0.4940
f0	0.8330	0.4820
f2	0.8890	0.4740
f3	0.9440	0.5090
f5	0.7220	0.5210
f6	0.9440	0.5080
f7	0.9170	0.5290
f8	1.0000	0.5210