Full wwPDB X-ray Structure Validation Report ⓘ

Dec 17, 2023 – 07:26 PM EST

PDB ID	:	1C51
Title	:	PHOTOSYNTHETIC REACTION CENTER AND CORE ANTENNA SYSTEM (TRIMERIC), ALPHA CARBON ONLY
Authors	:	Klukas, O.; Schubert, W.D.; Jordan, P.; Krauss, N.; Fromme, P.; Witt, H.T.; Saenger, W.
Deposited on	:	1999-10-21
Resolution	:	4.00 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

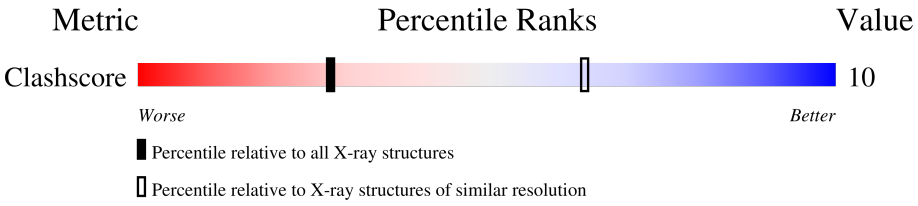
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance

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

The reported resolution of this entry is 4.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1148 (4.30-3.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	597	99% .
2	B	619	100%
3	C	77	95% 5%
4	D	125	97% .
5	E	75	97% .
6	F	153	100%
7	K	78	100%
8	L	120	96% .

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
9	CLA	A	598	X	-	-	-
9	CLA	A	599	X	-	-	-
9	CLA	A	600	X	-	-	-
9	CLA	A	603	X	-	-	-
9	CLA	A	604	X	-	-	-
9	CLA	A	605	X	-	-	-
9	CLA	A	606	X	-	-	-
9	CLA	A	607	X	-	-	-
9	CLA	A	608	X	-	-	-
9	CLA	A	609	X	-	-	-
9	CLA	A	610	X	-	-	-
9	CLA	A	611	X	-	-	-
9	CLA	A	612	X	-	-	-
9	CLA	A	613	X	-	-	-
9	CLA	A	616	X	-	-	-
9	CLA	A	619	X	-	-	-
9	CLA	A	620	X	-	-	-
9	CLA	A	621	X	-	-	-
9	CLA	A	622	X	-	-	-
9	CLA	A	623	X	-	-	-
9	CLA	A	624	X	-	-	-
9	CLA	A	625	X	-	-	-
9	CLA	A	626	X	-	-	-
9	CLA	A	627	X	-	-	-
9	CLA	A	628	X	-	-	-
9	CLA	A	629	X	-	-	-
9	CLA	B	620	X	-	-	-
9	CLA	B	621	X	-	-	-
9	CLA	B	622	X	-	-	-
9	CLA	B	624	X	-	-	-
9	CLA	B	625	X	-	-	-
9	CLA	B	626	X	-	-	-
9	CLA	B	627	X	-	-	-
9	CLA	B	628	X	-	-	-
9	CLA	B	629	X	-	-	-
9	CLA	B	630	X	-	-	-
9	CLA	B	631	X	-	-	-
9	CLA	B	632	X	-	-	-
9	CLA	B	633	X	-	-	-
9	CLA	B	634	X	-	-	-
9	CLA	B	635	X	-	-	-
9	CLA	B	636	X	-	-	-
9	CLA	B	637	X	-	-	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
9	CLA	B	638	X	-	-	-
9	CLA	B	639	X	-	-	-
9	CLA	B	640	X	-	-	-
9	CLA	B	641	X	-	-	-
9	CLA	B	642	X	-	-	-
9	CLA	B	643	X	-	-	-
9	CLA	B	644	X	-	-	-
9	CLA	B	645	X	-	-	-
9	CLA	B	646	X	-	-	-
9	CLA	B	647	X	-	-	-
9	CLA	B	648	X	-	-	-
9	CLA	B	649	X	-	-	-
9	CLA	B	650	X	-	-	-
9	CLA	B	651	X	-	-	-
9	CLA	B	652	X	-	-	-
9	CLA	B	653	X	-	-	-
9	CLA	F	154	X	-	-	-
9	CLA	F	155	X	-	-	-
9	CLA	F	156	X	-	-	-
9	CLA	F	157	X	-	-	-
9	CLA	K	135	X	-	-	-
9	CLA	L	147	X	-	-	-
9	CLA	L	149	X	-	-	-
9	CLA	L	163	X	-	-	-

2 Entry composition (i)

There are 11 unique types of molecules in this entry. The entry contains 3672 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAA).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
1	A	597	Total C 597 597	0	0	597

- Molecule 2 is a protein called PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAB).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
2	B	619	Total C 619 619	0	0	619

- Molecule 3 is a protein called PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAC).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
3	C	77	Total C 77 77	0	0	77

- Molecule 4 is a protein called PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAD).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
4	D	125	Total C 125 125	0	0	125

- Molecule 5 is a protein called PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAE).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
5	E	75	Total C 75 75	0	0	75

- Molecule 6 is a protein called PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAF).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
6	F	153	Total C 153 153	0	0	153

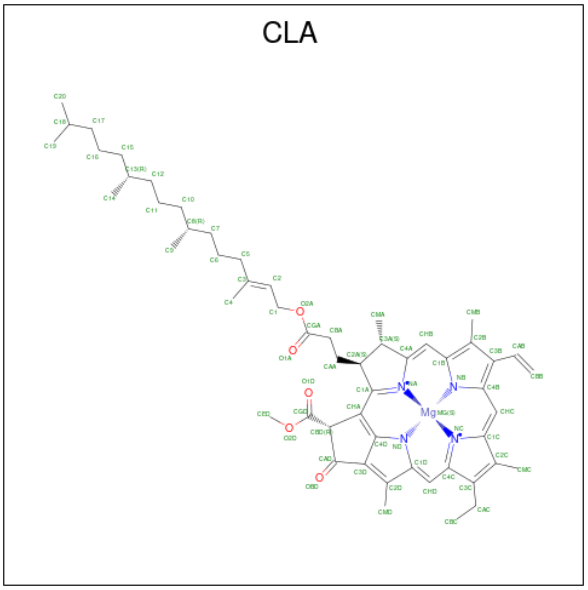
- Molecule 7 is a protein called PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAK).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
7	K	78	Total C 78 78	0	0	78

- Molecule 8 is a protein called PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAL).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
8	L	120	Total C 120 120	0	0	120

- Molecule 9 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0
9	A	1	Total C Mg N 25 20 1 4	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
9	A	1	Total 25	C 20	Mg 1	N 4	0	0
9	A	1	Total 25	C 20	Mg 1	N 4	0	0
9	A	1	Total 25	C 20	Mg 1	N 4	0	0
9	A	1	Total 25	C 20	Mg 1	N 4	0	0
9	A	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0
9	B	1	Total 25	C 20	Mg 1	N 4	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	B	1	Total C Mg N 25 20 1 4	0	0
9	F	1	Total C Mg N 25 20 1 4	0	0
9	F	1	Total C Mg N 25 20 1 4	0	0
9	F	1	Total C Mg N 25 20 1 4	0	0
9	F	1	Total C Mg N 25 20 1 4	0	0

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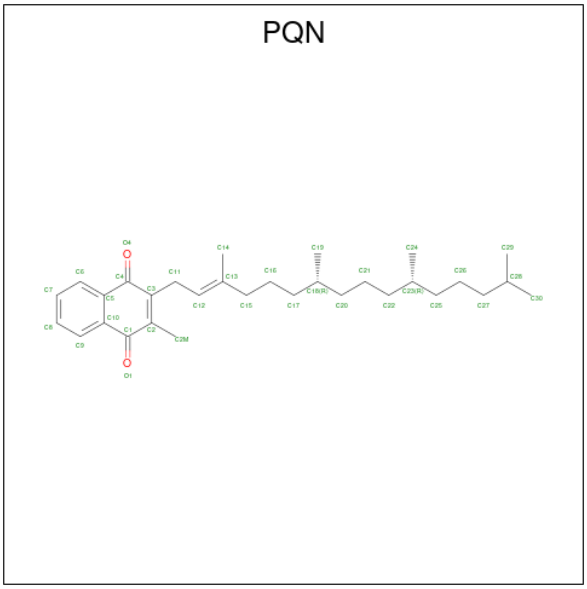
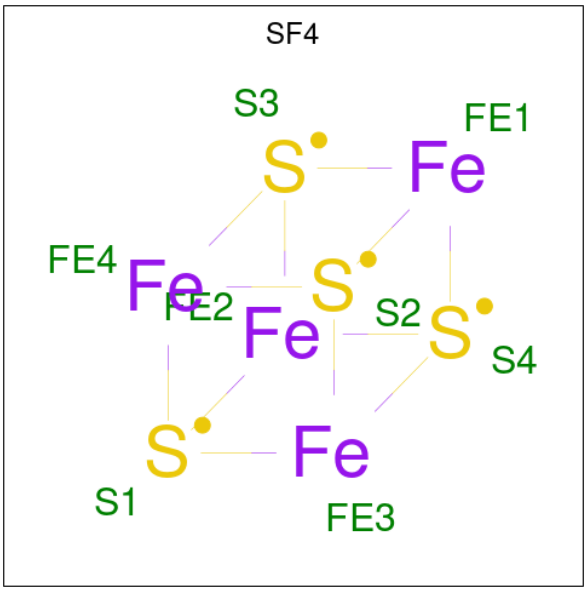
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
9	F	1	Total C Mg N 25 20 1 4	0	0
9	K	1	Total C Mg N 25 20 1 4	0	0
9	L	1	Total C Mg N 25 20 1 4	0	0
9	L	1	Total C Mg N 25 20 1 4	0	0
9	L	1	Total C Mg N 25 20 1 4	0	0

- Molecule 10 is PHYLLOQUINONE (three-letter code: PQN) (formula: $C_{31}H_{46}O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
10	A	1	Total C 2 2	0	0
10	B	1	Total C 2 2	0	0

- Molecule 11 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
11	A	1	Total Fe S 8 4 4	0	0
11	C	1	Total Fe S 8 4 4	0	0
11	C	1	Total Fe S 8 4 4	0	0

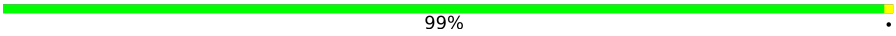
3 Residue-property plots (i)

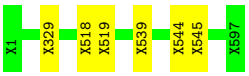
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded 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. 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.

Note EDS was not executed.

• Molecule 1: PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAA)

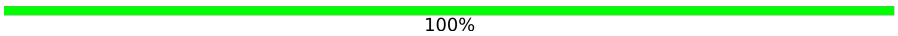
Chain A:





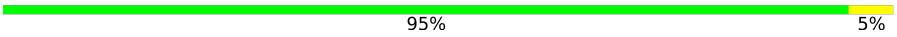
• Molecule 2: PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAB)

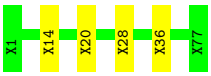
Chain B:



• Molecule 3: PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAC)

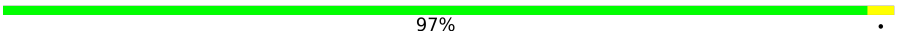
Chain C:

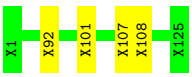




• Molecule 4: PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAD)

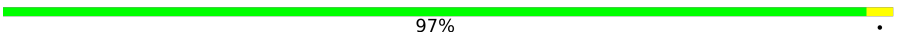
Chain D:

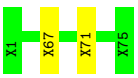




• Molecule 5: PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAE)

Chain E:



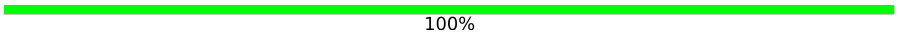


• Molecule 6: PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAF)

Chain F: 

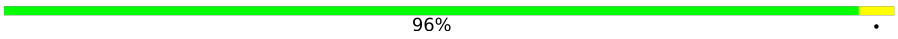
There are no outlier residues recorded for this chain.

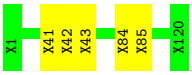
• Molecule 7: PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAK)

Chain K: 

There are no outlier residues recorded for this chain.

• Molecule 8: PROTEIN (PHOTOSYSTEM I: SUBUNIT PSAL)

Chain L: 



4 Data and refinement statistics (i)

Xtriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 63	Depositor
Cell constants a, b, c, α, β, γ	286.00Å 286.00Å 167.00Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	60.00 – 4.00	Depositor
% Data completeness (in resolution range)	(Not available) (60.00-4.00)	Depositor
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
Refinement program		Depositor
R, R_{free}	(Not available) , (Not available)	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	3672	wwPDB-VP
Average B, all atoms (Å^2)	20.0	wwPDB-VP

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CLA, SF4, PQN

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).

There are no protein, RNA or DNA chains available to summarize Z scores of covalent bonds and angles.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	597	0	0	4	0
2	B	619	0	0	6	0
3	C	77	0	0	3	0
4	D	125	0	0	2	0
5	E	75	0	0	1	0
6	F	153	0	0	0	0
7	K	78	0	0	0	0
8	L	120	0	0	0	4
9	A	750	0	90	8	0
9	B	825	0	99	22	0
9	F	125	0	15	0	0
9	K	25	0	3	13	0
9	L	75	0	9	0	0
10	A	2	0	0	0	0
10	B	2	0	0	0	0
11	A	8	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	C	16	0	0	2	0
All	All	3672	0	216	39	4

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (39) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A:628:CLA:HHD	9:A:629:CLA:C2D	1.46	1.44
2:B:358:UNK:CA	9:B:627:CLA:C1A	2.28	1.10
9:A:628:CLA:C3C	9:A:629:CLA:C3D	2.33	1.06
9:A:628:CLA:CHD	9:A:629:CLA:C2D	2.33	1.06
9:B:641:CLA:HHC	9:K:135:CLA:C3D	1.95	0.95
3:C:20:UNK:CA	11:C:78:SF4:S1	2.56	0.94
3:C:28:UNK:CA	3:C:36:UNK:CA	2.47	0.93
9:A:628:CLA:HHD	9:A:629:CLA:C3D	1.99	0.93
2:B:358:UNK:CA	9:B:627:CLA:C2A	2.47	0.92
9:B:641:CLA:HHC	9:K:135:CLA:C2D	2.06	0.85
9:B:641:CLA:CHC	9:K:135:CLA:C2D	2.57	0.82
9:B:641:CLA:CHC	9:K:135:CLA:C3D	2.58	0.81
9:A:628:CLA:CHD	9:A:629:CLA:C3D	2.60	0.78
9:B:629:CLA:C3B	9:B:636:CLA:C3A	2.62	0.78
4:D:107:UNK:CA	4:D:108:UNK:CA	2.64	0.75
2:B:358:UNK:CA	9:B:627:CLA:NA	2.51	0.73
9:B:641:CLA:C2C	9:K:135:CLA:C2D	2.66	0.73
9:B:629:CLA:C3B	9:B:636:CLA:C2A	2.66	0.73
9:B:641:CLA:C2C	9:K:135:CLA:CHD	2.68	0.71
3:C:14:UNK:CA	11:C:79:SF4:S2	2.82	0.68
2:B:358:UNK:CA	9:B:627:CLA:C4A	2.73	0.67
2:B:358:UNK:CA	9:B:627:CLA:C3A	2.74	0.66
9:A:628:CLA:C4C	9:A:629:CLA:C3D	2.75	0.65
1:A:544:UNK:CA	1:A:545:UNK:CA	2.74	0.65
2:B:455:UNK:CA	2:B:456:UNK:CA	2.75	0.65
9:B:641:CLA:C2C	9:K:135:CLA:C1D	2.78	0.61
9:B:641:CLA:C1C	9:K:135:CLA:C1D	2.79	0.60
9:B:641:CLA:C1C	9:K:135:CLA:C2D	2.81	0.59
9:B:641:CLA:C2C	9:K:135:CLA:HHD	2.35	0.57
9:B:629:CLA:C3B	9:B:636:CLA:C4A	2.84	0.56
1:A:329:UNK:CA	9:A:612:CLA:C2D	2.88	0.51
9:B:629:CLA:C3B	9:B:636:CLA:C1A	2.90	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:518:UNK:CA	1:A:519:UNK:CA	2.91	0.49
5:E:67:UNK:CA	5:E:71:UNK:CA	2.91	0.47
9:B:641:CLA:CHC	9:K:135:CLA:C1D	2.91	0.47
9:B:641:CLA:CHC	9:K:135:CLA:C4D	2.94	0.45
4:D:92:UNK:CA	4:D:101:UNK:CA	2.96	0.43
9:B:641:CLA:C3C	9:K:135:CLA:CHD	2.97	0.42
1:A:539:UNK:CA	9:A:600:CLA:C3A	2.99	0.40

All (4) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L:42:UNK:CA	8:L:85:UNK:CA[3_665]	1.93	0.27
8:L:41:UNK:CA	8:L:85:UNK:CA[3_665]	2.08	0.12
8:L:42:UNK:CA	8:L:84:UNK:CA[3_665]	2.08	0.12
8:L:43:UNK:CA	8:L:84:UNK:CA[3_665]	2.09	0.11

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains (i)

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

77 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	CLA	A	604	-	27,32,73	2.61	11 (40%)	30,54,113	1.94	4 (13%)
9	CLA	B	650	-	27,32,73	2.63	11 (40%)	30,54,113	1.83	3 (10%)
9	CLA	B	627	-	27,32,73	2.61	11 (40%)	30,54,113	1.89	3 (10%)
9	CLA	B	630	-	27,32,73	2.55	11 (40%)	30,54,113	1.91	5 (16%)
9	CLA	B	646	-	27,32,73	2.59	11 (40%)	30,54,113	2.08	3 (10%)
9	CLA	B	638	-	27,32,73	2.52	10 (37%)	30,54,113	1.74	3 (10%)
9	CLA	F	158	-	27,32,73	3.15	11 (40%)	30,54,113	2.48	9 (30%)
9	CLA	A	600	-	27,32,73	2.62	11 (40%)	30,54,113	2.10	3 (10%)
9	CLA	A	623	-	27,32,73	2.73	11 (40%)	30,54,113	1.93	4 (13%)
9	CLA	A	605	-	27,32,73	2.60	11 (40%)	30,54,113	1.94	5 (16%)
9	CLA	A	621	-	27,32,73	2.55	11 (40%)	30,54,113	1.97	3 (10%)
9	CLA	A	624	-	27,32,73	2.59	11 (40%)	30,54,113	2.04	3 (10%)
9	CLA	B	634	-	27,32,73	2.60	9 (33%)	30,54,113	1.93	3 (10%)
9	CLA	B	642	-	27,32,73	2.53	11 (40%)	30,54,113	2.00	4 (13%)
9	CLA	A	598	-	27,32,73	2.51	12 (44%)	30,54,113	1.75	3 (10%)
9	CLA	B	621	-	27,32,73	2.54	10 (37%)	30,54,113	1.87	3 (10%)
9	CLA	B	624	-	27,32,73	2.57	11 (40%)	30,54,113	1.89	4 (13%)
9	CLA	B	639	-	27,32,73	2.58	11 (40%)	30,54,113	2.00	5 (16%)
9	CLA	B	641	-	27,32,73	2.64	11 (40%)	30,54,113	1.89	5 (16%)
9	CLA	B	649	-	27,32,73	2.62	11 (40%)	30,54,113	1.88	4 (13%)
9	CLA	A	628	-	27,32,73	2.65	11 (40%)	30,54,113	1.77	4 (13%)
9	CLA	B	626	-	27,32,73	2.56	11 (40%)	30,54,113	1.97	3 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
9	CLA	B	625	-	27,32,73	2.52	11 (40%)	30,54,113	2.05	4 (13%)
9	CLA	B	647	-	27,32,73	2.46	10 (37%)	30,54,113	1.87	3 (10%)
9	CLA	F	155	-	27,32,73	2.50	10 (37%)	30,54,113	1.94	4 (13%)
9	CLA	B	651	-	27,32,73	2.50	11 (40%)	30,54,113	2.08	3 (10%)
9	CLA	B	652	-	27,32,73	2.54	11 (40%)	30,54,113	2.12	4 (13%)
9	CLA	A	627	-	27,32,73	2.48	11 (40%)	30,54,113	1.98	3 (10%)
9	CLA	F	156	-	27,32,73	2.78	11 (40%)	30,54,113	2.03	4 (13%)
11	SF4	A	602	1	0,12,12	-	-	-		
9	CLA	A	611	-	27,32,73	2.50	11 (40%)	30,54,113	1.97	4 (13%)
9	CLA	A	619	-	27,32,73	2.53	11 (40%)	30,54,113	1.89	3 (10%)
9	CLA	B	631	-	27,32,73	2.49	11 (40%)	30,54,113	1.91	4 (13%)
9	CLA	A	616	-	27,32,73	2.67	11 (40%)	30,54,113	1.97	3 (10%)
9	CLA	A	606	-	27,32,73	2.42	10 (37%)	30,54,113	1.81	3 (10%)
9	CLA	B	645	-	27,32,73	2.72	11 (40%)	30,54,113	1.93	5 (16%)
9	CLA	B	653	-	27,32,73	2.52	9 (33%)	30,54,113	2.07	3 (10%)
9	CLA	B	637	-	27,32,73	2.59	11 (40%)	30,54,113	2.08	5 (16%)
9	CLA	A	603	-	27,32,73	2.61	11 (40%)	30,54,113	2.00	3 (10%)
9	CLA	K	135	-	27,32,73	2.74	11 (40%)	30,54,113	1.90	4 (13%)
9	CLA	B	622	-	27,32,73	2.47	10 (37%)	30,54,113	2.03	3 (10%)
9	CLA	L	147	-	27,32,73	2.69	11 (40%)	30,54,113	1.87	3 (10%)
9	CLA	B	648	-	27,32,73	2.52	11 (40%)	30,54,113	1.79	3 (10%)
9	CLA	A	626	-	27,32,73	2.55	11 (40%)	30,54,113	2.00	3 (10%)
9	CLA	B	640	-	27,32,73	2.84	10 (37%)	30,54,113	3.09	10 (33%)
11	SF4	C	79	-	0,12,12	-	-	-		
9	CLA	F	154	-	27,32,73	2.66	11 (40%)	30,54,113	1.99	3 (10%)
9	CLA	A	609	-	27,32,73	2.56	11 (40%)	30,54,113	2.02	4 (13%)
9	CLA	B	629	-	27,32,73	2.43	10 (37%)	30,54,113	2.02	3 (10%)
9	CLA	B	633	-	27,32,73	2.64	11 (40%)	30,54,113	1.91	4 (13%)
9	CLA	F	157	-	27,32,73	2.59	11 (40%)	30,54,113	1.89	3 (10%)
9	CLA	A	612	-	27,32,73	2.74	11 (40%)	30,54,113	3.44	13 (43%)
9	CLA	A	625	-	27,32,73	2.70	11 (40%)	30,54,113	1.98	4 (13%)
9	CLA	B	636	-	27,32,73	2.48	11 (40%)	30,54,113	2.13	4 (13%)
9	CLA	B	643	-	27,32,73	2.49	11 (40%)	30,54,113	1.98	4 (13%)
9	CLA	A	607	-	27,32,73	2.55	11 (40%)	30,54,113	2.15	3 (10%)
9	CLA	L	163	-	27,32,73	2.43	8 (29%)	30,54,113	1.85	3 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
9	CLA	A	614	-	27,32,73	3.15	11 (40%)	30,54,113	2.51	9 (30%)
9	CLA	B	632	-	27,32,73	2.63	11 (40%)	30,54,113	1.96	4 (13%)
9	CLA	A	615	-	27,32,73	3.16	10 (37%)	30,54,113	2.50	9 (30%)
9	CLA	A	608	-	27,32,73	2.64	11 (40%)	30,54,113	1.89	4 (13%)
9	CLA	A	620	-	27,32,73	2.47	11 (40%)	30,54,113	1.94	4 (13%)
9	CLA	B	644	-	27,32,73	2.66	10 (37%)	30,54,113	1.90	4 (13%)
9	CLA	A	599	-	27,32,73	2.68	11 (40%)	30,54,113	2.13	4 (13%)
9	CLA	B	635	-	27,32,73	2.55	10 (37%)	30,54,113	3.52	13 (43%)
9	CLA	A	613	-	27,32,73	2.44	9 (33%)	30,54,113	1.91	4 (13%)
9	CLA	A	618	-	27,32,73	3.17	11 (40%)	30,54,113	2.49	9 (30%)
9	CLA	A	622	-	27,32,73	2.45	10 (37%)	30,54,113	2.07	5 (16%)
9	CLA	B	620	-	27,32,73	2.49	9 (33%)	30,54,113	1.95	4 (13%)
9	CLA	A	610	-	27,32,73	2.53	10 (37%)	30,54,113	2.10	4 (13%)
9	CLA	B	628	-	27,32,73	2.61	11 (40%)	30,54,113	2.19	4 (13%)
9	CLA	A	629	-	27,32,73	2.62	11 (40%)	30,54,113	1.97	5 (16%)
11	SF4	C	78	-	0,12,12	-	-	-		
9	CLA	A	617	-	27,32,73	3.17	10 (37%)	30,54,113	2.50	9 (30%)
9	CLA	L	149	-	27,32,73	2.56	11 (40%)	30,54,113	2.20	5 (16%)

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	CLA	A	604	-	1/1/4/20	-	-
9	CLA	B	650	-	1/1/4/20	-	-
9	CLA	B	627	-	1/1/4/20	-	-
9	CLA	B	630	-	1/1/4/20	-	-
9	CLA	B	646	-	1/1/4/20	-	-
9	CLA	B	638	-	1/1/4/20	-	-
9	CLA	A	600	-	1/1/4/20	-	-
9	CLA	A	623	-	1/1/4/20	-	-
9	CLA	A	605	-	1/1/4/20	-	-
9	CLA	A	621	-	1/1/4/20	-	-
9	CLA	A	624	-	1/1/4/20	-	-
9	CLA	B	634	-	1/1/4/20	-	-
9	CLA	B	642	-	1/1/4/20	-	-
9	CLA	A	598	-	1/1/4/20	-	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	CLA	B	621	-	1/1/4/20	-	-
9	CLA	B	624	-	1/1/4/20	-	-
9	CLA	B	639	-	1/1/4/20	-	-
9	CLA	B	641	-	1/1/4/20	-	-
9	CLA	B	649	-	1/1/4/20	-	-
9	CLA	A	628	-	1/1/4/20	-	-
9	CLA	B	626	-	1/1/4/20	-	-
9	CLA	B	625	-	1/1/4/20	-	-
9	CLA	B	647	-	1/1/4/20	-	-
9	CLA	F	155	-	1/1/4/20	-	-
9	CLA	B	651	-	1/1/4/20	-	-
9	CLA	B	652	-	1/1/4/20	-	-
9	CLA	A	627	-	1/1/4/20	-	-
9	CLA	F	156	-	1/1/4/20	-	-
11	SF4	A	602	1	-	-	0/6/5/5
9	CLA	A	611	-	1/1/4/20	-	-
9	CLA	A	619	-	1/1/4/20	-	-
9	CLA	B	631	-	1/1/4/20	-	-
9	CLA	A	616	-	1/1/4/20	-	-
9	CLA	A	606	-	1/1/4/20	-	-
9	CLA	B	645	-	1/1/4/20	-	-
9	CLA	B	653	-	1/1/4/20	-	-
9	CLA	B	637	-	1/1/4/20	-	-
9	CLA	A	603	-	1/1/4/20	-	-
9	CLA	K	135	-	1/1/4/20	-	-
9	CLA	B	622	-	1/1/4/20	-	-
9	CLA	L	147	-	1/1/4/20	-	-
9	CLA	B	648	-	1/1/4/20	-	-
9	CLA	A	626	-	1/1/4/20	-	-
9	CLA	B	640	-	1/1/4/20	-	-
11	SF4	C	79	-	-	-	0/6/5/5
9	CLA	F	154	-	1/1/4/20	-	-
9	CLA	A	609	-	1/1/4/20	-	-
9	CLA	B	629	-	1/1/4/20	-	-
9	CLA	B	633	-	1/1/4/20	-	-
9	CLA	F	157	-	1/1/4/20	-	-
9	CLA	A	612	-	1/1/4/20	-	-
9	CLA	A	625	-	1/1/4/20	-	-
9	CLA	B	636	-	1/1/4/20	-	-
9	CLA	B	643	-	1/1/4/20	-	-
9	CLA	A	607	-	1/1/4/20	-	-
9	CLA	L	163	-	1/1/4/20	-	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	CLA	B	632	-	1/1/4/20	-	-
9	CLA	B	644	-	1/1/4/20	-	-
9	CLA	A	620	-	1/1/4/20	-	-
9	CLA	A	608	-	1/1/4/20	-	-
9	CLA	A	599	-	1/1/4/20	-	-
9	CLA	B	635	-	1/1/4/20	-	-
9	CLA	A	613	-	1/1/4/20	-	-
9	CLA	A	622	-	1/1/4/20	-	-
11	SF4	C	78	-	-	-	0/6/5/5
9	CLA	B	620	-	1/1/4/20	-	-
9	CLA	A	610	-	1/1/4/20	-	-
9	CLA	B	628	-	1/1/4/20	-	-
9	CLA	A	629	-	1/1/4/20	-	-
9	CLA	L	149	-	1/1/4/20	-	-

All (768) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	617	CLA	C3D-C2D	8.95	1.55	1.35
9	A	615	CLA	C3D-C2D	8.95	1.55	1.35
9	A	614	CLA	C3D-C2D	8.95	1.55	1.35
9	A	618	CLA	C3D-C2D	8.94	1.55	1.35
9	F	158	CLA	C3D-C2D	8.91	1.55	1.35
9	B	640	CLA	MG-ND	-7.41	1.91	2.05
9	B	620	CLA	C3A-C2A	-7.24	1.33	1.52
9	A	600	CLA	C3A-C2A	-7.11	1.34	1.52
9	A	599	CLA	C3A-C2A	-6.98	1.34	1.52
9	A	598	CLA	C3A-C2A	-6.88	1.34	1.52
9	B	622	CLA	C3A-C2A	-6.79	1.35	1.52
9	A	612	CLA	MG-ND	-6.72	1.92	2.05
9	B	621	CLA	C3A-C2A	-6.64	1.35	1.52
9	B	635	CLA	MG-ND	-6.54	1.92	2.05
9	A	604	CLA	C3A-C2A	-6.52	1.35	1.52
9	A	600	CLA	CHB-C4A	6.51	1.39	1.34
9	A	624	CLA	C3A-C2A	-6.50	1.35	1.52
9	A	618	CLA	MG-ND	6.49	2.18	2.05
9	A	615	CLA	MG-ND	6.49	2.18	2.05
9	A	614	CLA	MG-ND	6.49	2.18	2.05
9	B	646	CLA	C3A-C2A	-6.48	1.35	1.52
9	K	135	CLA	C3A-C2A	-6.47	1.35	1.52
9	A	617	CLA	MG-ND	6.46	2.18	2.05
9	A	625	CLA	C3A-C2A	-6.45	1.35	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	F	158	CLA	C3A-C2A	-6.44	1.35	1.52
9	A	617	CLA	C3A-C2A	-6.43	1.36	1.52
9	A	614	CLA	C3A-C2A	-6.43	1.36	1.52
9	B	626	CLA	C3A-C2A	-6.41	1.36	1.52
9	F	156	CLA	C3A-C2A	-6.41	1.36	1.52
9	A	610	CLA	C3A-C2A	-6.40	1.36	1.52
9	A	615	CLA	C3A-C2A	-6.40	1.36	1.52
9	F	158	CLA	MG-ND	6.40	2.18	2.05
9	A	616	CLA	C3A-C2A	-6.40	1.36	1.52
9	F	154	CLA	C3A-C2A	-6.39	1.36	1.52
9	A	608	CLA	C3A-C2A	-6.37	1.36	1.52
9	B	641	CLA	C3A-C2A	-6.37	1.36	1.52
9	A	618	CLA	C3A-C2A	-6.36	1.36	1.52
9	B	634	CLA	C3A-C2A	-6.36	1.36	1.52
9	B	632	CLA	C3A-C2A	-6.35	1.36	1.52
9	B	653	CLA	C3A-C2A	-6.34	1.36	1.52
9	A	619	CLA	C3A-C2A	-6.31	1.36	1.52
9	B	639	CLA	C3A-C2A	-6.31	1.36	1.52
9	A	627	CLA	C3A-C2A	-6.30	1.36	1.52
9	B	624	CLA	C3A-C2A	-6.30	1.36	1.52
9	B	645	CLA	C3A-C2A	-6.29	1.36	1.52
9	A	607	CLA	C3A-C2A	-6.29	1.36	1.52
9	A	621	CLA	C3A-C2A	-6.28	1.36	1.52
9	B	644	CLA	C3A-C2A	-6.28	1.36	1.52
9	A	611	CLA	C3A-C2A	-6.28	1.36	1.52
9	B	638	CLA	C3A-C2A	-6.27	1.36	1.52
9	F	157	CLA	C3A-C2A	-6.26	1.36	1.52
9	A	620	CLA	C3A-C2A	-6.26	1.36	1.52
9	A	609	CLA	C3A-C2A	-6.26	1.36	1.52
9	B	627	CLA	C3A-C2A	-6.25	1.36	1.52
9	B	637	CLA	C3A-C2A	-6.23	1.36	1.52
9	A	622	CLA	C3A-C2A	-6.22	1.36	1.52
9	L	149	CLA	C3A-C2A	-6.21	1.36	1.52
9	B	629	CLA	C3A-C2A	-6.21	1.36	1.52
9	B	631	CLA	C3A-C2A	-6.20	1.36	1.52
9	B	649	CLA	C3A-C2A	-6.20	1.36	1.52
9	B	636	CLA	C3A-C2A	-6.20	1.36	1.52
9	B	650	CLA	C3A-C2A	-6.20	1.36	1.52
9	B	642	CLA	C3A-C2A	-6.19	1.36	1.52
9	B	633	CLA	C3A-C2A	-6.18	1.36	1.52
9	A	623	CLA	C3A-C2A	-6.16	1.36	1.52
9	F	155	CLA	C3A-C2A	-6.16	1.36	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	B	625	CLA	C3A-C2A	-6.14	1.36	1.52
9	A	605	CLA	C3A-C2A	-6.11	1.36	1.52
9	A	603	CLA	C3A-C2A	-6.11	1.36	1.52
9	A	599	CLA	C4B-NB	6.11	1.40	1.35
9	B	648	CLA	C3A-C2A	-6.10	1.36	1.52
9	A	626	CLA	C3A-C2A	-6.09	1.36	1.52
9	L	163	CLA	C3A-C2A	-6.09	1.36	1.52
9	B	643	CLA	C3A-C2A	-6.09	1.36	1.52
9	B	652	CLA	C3A-C2A	-6.08	1.36	1.52
9	B	628	CLA	C3A-C2A	-6.07	1.36	1.52
9	A	628	CLA	C3A-C2A	-6.05	1.37	1.52
9	L	147	CLA	C3A-C2A	-6.04	1.37	1.52
9	B	651	CLA	C3A-C2A	-6.04	1.37	1.52
9	A	629	CLA	C3A-C2A	-6.02	1.37	1.52
9	A	606	CLA	C3A-C2A	-5.99	1.37	1.52
9	B	647	CLA	C3A-C2A	-5.97	1.37	1.52
9	B	630	CLA	C3A-C2A	-5.95	1.37	1.52
9	A	613	CLA	C3A-C2A	-5.91	1.37	1.52
9	L	147	CLA	CHB-C4A	5.80	1.39	1.34
9	B	640	CLA	MG-NA	-5.36	1.93	2.06
9	B	640	CLA	MG-NC	-5.31	1.93	2.06
9	K	135	CLA	MG-ND	-5.29	1.95	2.05
9	F	156	CLA	CHB-C4A	5.29	1.38	1.34
9	A	629	CLA	CHB-C4A	5.28	1.38	1.34
9	B	634	CLA	MG-ND	-5.26	1.95	2.05
9	B	644	CLA	MG-ND	-5.24	1.95	2.05
9	B	645	CLA	CHB-C4A	5.21	1.38	1.34
9	A	612	CLA	MG-NC	-5.16	1.94	2.06
9	F	156	CLA	MG-ND	-5.12	1.95	2.05
9	B	628	CLA	MG-ND	-5.12	1.95	2.05
9	B	628	CLA	CHB-C4A	5.12	1.38	1.34
9	A	604	CLA	MG-ND	-5.11	1.95	2.05
9	A	599	CLA	CHB-C4A	5.10	1.38	1.34
9	B	637	CLA	MG-ND	-5.08	1.95	2.05
9	B	653	CLA	MG-ND	-5.04	1.95	2.05
9	A	623	CLA	CHB-C4A	5.04	1.38	1.34
9	B	645	CLA	MG-ND	-5.01	1.95	2.05
9	A	619	CLA	MG-ND	-5.00	1.95	2.05
9	B	650	CLA	CHB-C4A	4.99	1.38	1.34
9	A	616	CLA	CHB-C4A	4.99	1.38	1.34
9	A	603	CLA	MG-ND	-4.92	1.96	2.05
9	B	638	CLA	MG-ND	-4.91	1.96	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	B	652	CLA	MG-ND	-4.90	1.96	2.05
9	A	621	CLA	MG-ND	-4.88	1.96	2.05
9	A	622	CLA	MG-ND	-4.87	1.96	2.05
9	B	621	CLA	MG-NA	-4.86	1.94	2.06
9	K	135	CLA	MG-NC	-4.85	1.94	2.06
9	B	635	CLA	MG-NC	-4.85	1.94	2.06
9	A	625	CLA	CHB-C4A	4.84	1.38	1.34
9	A	623	CLA	C4B-NB	4.84	1.39	1.35
9	B	621	CLA	MG-ND	-4.83	1.96	2.05
9	F	154	CLA	MG-ND	-4.83	1.96	2.05
9	L	149	CLA	MG-ND	-4.82	1.96	2.05
9	B	650	CLA	MG-ND	-4.82	1.96	2.05
9	A	610	CLA	MG-ND	-4.80	1.96	2.05
9	B	649	CLA	CHB-C4A	4.79	1.38	1.34
9	A	612	CLA	MG-NA	-4.78	1.94	2.06
9	A	609	CLA	MG-ND	-4.78	1.96	2.05
9	A	607	CLA	MG-ND	-4.78	1.96	2.05
9	B	627	CLA	CHB-C4A	4.78	1.38	1.34
9	F	156	CLA	C4B-NB	4.77	1.39	1.35
9	A	605	CLA	CHB-C4A	4.77	1.38	1.34
9	B	632	CLA	MG-ND	-4.77	1.96	2.05
9	B	626	CLA	MG-ND	-4.76	1.96	2.05
9	F	155	CLA	MG-ND	-4.76	1.96	2.05
9	A	625	CLA	MG-ND	-4.76	1.96	2.05
9	A	608	CLA	MG-ND	-4.74	1.96	2.05
9	A	628	CLA	MG-NC	-4.72	1.95	2.06
9	B	646	CLA	MG-ND	-4.72	1.96	2.05
9	A	627	CLA	MG-ND	-4.71	1.96	2.05
9	B	639	CLA	MG-ND	-4.71	1.96	2.05
9	B	649	CLA	MG-ND	-4.70	1.96	2.05
9	B	635	CLA	MG-NA	-4.67	1.95	2.06
9	B	636	CLA	MG-ND	-4.63	1.96	2.05
9	B	646	CLA	C4B-NB	4.63	1.39	1.35
9	A	613	CLA	MG-ND	-4.62	1.96	2.05
9	B	651	CLA	MG-ND	-4.62	1.96	2.05
9	B	638	CLA	MG-NA	-4.62	1.95	2.06
9	B	645	CLA	MG-NC	-4.61	1.95	2.06
9	A	608	CLA	MG-NA	-4.60	1.95	2.06
9	B	624	CLA	MG-ND	-4.59	1.96	2.05
9	L	163	CLA	MG-NA	-4.59	1.95	2.06
9	L	163	CLA	MG-ND	-4.59	1.96	2.05
9	A	616	CLA	MG-ND	-4.59	1.96	2.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	603	CLA	CHB-C4A	4.58	1.38	1.34
9	A	617	CLA	CHB-C4A	4.57	1.38	1.34
9	B	647	CLA	MG-ND	-4.57	1.96	2.05
9	B	620	CLA	MG-NC	-4.57	1.95	2.06
9	B	641	CLA	MG-NA	-4.57	1.95	2.06
9	B	652	CLA	CHB-C4A	4.56	1.38	1.34
9	A	620	CLA	MG-ND	-4.55	1.96	2.05
9	A	604	CLA	MG-NC	-4.54	1.95	2.06
9	B	643	CLA	MG-ND	-4.53	1.96	2.05
9	L	147	CLA	C4B-NB	4.51	1.39	1.35
9	B	644	CLA	CHB-C4A	4.51	1.38	1.34
9	B	637	CLA	CHB-C4A	4.51	1.38	1.34
9	A	606	CLA	MG-ND	-4.51	1.96	2.05
9	A	628	CLA	MG-NA	-4.50	1.95	2.06
9	B	632	CLA	MG-NA	-4.50	1.95	2.06
9	F	158	CLA	CHB-C4A	4.49	1.38	1.34
9	A	605	CLA	MG-NC	-4.49	1.95	2.06
9	B	622	CLA	C4B-NB	4.48	1.39	1.35
9	A	618	CLA	CHB-C4A	4.48	1.38	1.34
9	B	625	CLA	MG-ND	-4.47	1.96	2.05
9	B	641	CLA	C1B-NB	4.46	1.39	1.35
9	B	633	CLA	MG-ND	-4.46	1.96	2.05
9	F	156	CLA	MG-NA	-4.46	1.95	2.06
9	A	604	CLA	MG-NA	-4.45	1.95	2.06
9	A	615	CLA	CHB-C4A	4.45	1.38	1.34
9	B	633	CLA	CHB-C4A	4.45	1.38	1.34
9	K	135	CLA	MG-NA	-4.44	1.95	2.06
9	F	154	CLA	CHB-C4A	4.44	1.38	1.34
9	F	157	CLA	MG-ND	-4.44	1.97	2.05
9	F	154	CLA	MG-NC	-4.43	1.95	2.06
9	A	624	CLA	C4B-NB	4.43	1.39	1.35
9	B	633	CLA	C4B-NB	4.43	1.39	1.35
9	L	163	CLA	MG-NC	-4.42	1.95	2.06
9	B	648	CLA	MG-ND	-4.41	1.97	2.05
9	B	625	CLA	C1B-NB	4.40	1.39	1.35
9	B	641	CLA	MG-NC	-4.39	1.95	2.06
9	B	626	CLA	MG-NA	-4.39	1.95	2.06
9	B	641	CLA	MG-ND	-4.39	1.97	2.05
9	A	598	CLA	MG-NA	-4.39	1.95	2.06
9	A	624	CLA	CHB-C4A	4.38	1.38	1.34
9	A	611	CLA	MG-ND	-4.38	1.97	2.05
9	B	640	CLA	CHB-C4A	4.37	1.38	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	B	631	CLA	MG-ND	-4.37	1.97	2.05
9	B	624	CLA	C1B-NB	4.37	1.39	1.35
9	F	157	CLA	CHB-C4A	4.36	1.38	1.34
9	A	626	CLA	MG-ND	-4.35	1.97	2.05
9	A	611	CLA	MG-NA	-4.35	1.95	2.06
9	B	630	CLA	C1B-NB	4.35	1.39	1.35
9	B	642	CLA	MG-ND	-4.34	1.97	2.05
9	A	612	CLA	C4B-NB	4.34	1.39	1.35
9	A	623	CLA	MG-ND	-4.34	1.97	2.05
9	B	631	CLA	C1B-NB	4.33	1.39	1.35
9	A	605	CLA	MG-ND	-4.33	1.97	2.05
9	A	626	CLA	CHB-C4A	4.31	1.38	1.34
9	A	610	CLA	C1B-NB	4.30	1.39	1.35
9	A	609	CLA	CHB-C4A	4.29	1.38	1.34
9	B	621	CLA	MG-NC	-4.29	1.96	2.06
9	A	625	CLA	MG-NC	-4.29	1.96	2.06
9	F	157	CLA	C4B-NB	4.29	1.39	1.35
9	A	622	CLA	MG-NA	-4.29	1.96	2.06
9	L	149	CLA	CHB-C4A	4.28	1.38	1.34
9	B	620	CLA	MG-NA	-4.27	1.96	2.06
9	A	614	CLA	CHB-C4A	4.27	1.38	1.34
9	A	620	CLA	MG-NA	-4.26	1.96	2.06
9	B	620	CLA	MG-ND	-4.26	1.97	2.05
9	A	623	CLA	C1B-NB	4.24	1.39	1.35
9	B	622	CLA	MG-ND	-4.24	1.97	2.05
9	B	649	CLA	MG-NC	-4.24	1.96	2.06
9	A	607	CLA	CHB-C4A	4.24	1.38	1.34
9	B	622	CLA	MG-NA	-4.24	1.96	2.06
9	A	628	CLA	MG-ND	-4.24	1.97	2.05
9	B	647	CLA	MG-NA	-4.23	1.96	2.06
9	B	643	CLA	CHB-C4A	4.23	1.38	1.34
9	L	149	CLA	C4B-NB	4.23	1.39	1.35
9	B	636	CLA	MG-NC	-4.23	1.96	2.06
9	B	627	CLA	MG-ND	-4.23	1.97	2.05
9	B	630	CLA	C4B-NB	4.23	1.39	1.35
9	A	629	CLA	MG-ND	-4.22	1.97	2.05
9	B	642	CLA	C1B-NB	4.21	1.39	1.35
9	B	651	CLA	CHB-C4A	4.21	1.38	1.34
9	A	606	CLA	C1B-NB	4.21	1.39	1.35
9	B	634	CLA	MG-NA	-4.21	1.96	2.06
9	B	637	CLA	MG-NC	-4.21	1.96	2.06
9	A	609	CLA	MG-NA	-4.21	1.96	2.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	B	630	CLA	MG-ND	-4.20	1.97	2.05
9	A	609	CLA	MG-NC	-4.20	1.96	2.06
9	F	156	CLA	MG-NC	-4.20	1.96	2.06
9	A	603	CLA	MG-NA	-4.19	1.96	2.06
9	B	647	CLA	MG-NC	-4.19	1.96	2.06
9	K	135	CLA	CHB-C4A	4.19	1.38	1.34
9	B	638	CLA	MG-NC	-4.18	1.96	2.06
9	A	624	CLA	MG-ND	-4.18	1.97	2.05
9	A	608	CLA	C4B-NB	4.18	1.38	1.35
9	F	155	CLA	MG-NA	-4.17	1.96	2.06
9	A	619	CLA	MG-NC	-4.17	1.96	2.06
9	A	605	CLA	MG-NA	-4.17	1.96	2.06
9	A	625	CLA	MG-NA	-4.17	1.96	2.06
9	B	624	CLA	C4B-NB	4.16	1.38	1.35
9	A	616	CLA	C1B-NB	4.16	1.38	1.35
9	B	650	CLA	MG-NC	-4.16	1.96	2.06
9	B	648	CLA	MG-NA	-4.15	1.96	2.06
9	B	633	CLA	MG-NC	-4.15	1.96	2.06
9	L	147	CLA	MG-ND	-4.15	1.97	2.05
9	B	651	CLA	MG-NC	-4.15	1.96	2.06
9	A	618	CLA	C2B-C1B	4.14	1.47	1.39
9	B	648	CLA	MG-NC	-4.14	1.96	2.06
9	B	653	CLA	MG-NA	-4.14	1.96	2.06
9	A	629	CLA	C1B-NB	4.14	1.38	1.35
9	A	617	CLA	C2B-C1B	4.14	1.47	1.39
9	B	632	CLA	MG-NC	-4.14	1.96	2.06
9	A	607	CLA	C1B-NB	4.13	1.38	1.35
9	F	158	CLA	C2B-C1B	4.13	1.47	1.39
9	B	646	CLA	MG-NC	-4.13	1.96	2.06
9	A	626	CLA	MG-NA	-4.13	1.96	2.06
9	L	147	CLA	C1B-NB	4.13	1.38	1.35
9	A	614	CLA	C2B-C1B	4.13	1.47	1.39
9	A	620	CLA	MG-NC	-4.12	1.96	2.06
9	B	625	CLA	CHB-C4A	4.12	1.38	1.34
9	A	616	CLA	MG-NA	-4.12	1.96	2.06
9	B	645	CLA	MG-NA	-4.12	1.96	2.06
9	K	135	CLA	C4B-NB	4.12	1.38	1.35
9	B	653	CLA	MG-NC	-4.11	1.96	2.06
9	B	627	CLA	C1B-NB	4.11	1.38	1.35
9	B	649	CLA	MG-NA	-4.11	1.96	2.06
9	A	627	CLA	MG-NA	-4.11	1.96	2.06
9	B	629	CLA	MG-NA	-4.11	1.96	2.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	615	CLA	C2B-C1B	4.10	1.47	1.39
9	A	621	CLA	CHB-C4A	4.09	1.38	1.34
9	A	628	CLA	C1B-NB	4.09	1.38	1.35
9	A	619	CLA	MG-NA	-4.09	1.96	2.06
9	A	610	CLA	MG-NC	-4.09	1.96	2.06
9	A	623	CLA	MG-NC	-4.08	1.96	2.06
9	A	624	CLA	MG-NA	-4.08	1.96	2.06
9	B	626	CLA	MG-NC	-4.08	1.96	2.06
9	A	626	CLA	C1B-NB	4.08	1.38	1.35
9	A	603	CLA	MG-NC	-4.07	1.96	2.06
9	F	155	CLA	MG-NC	-4.07	1.96	2.06
9	F	154	CLA	MG-NA	-4.07	1.96	2.06
9	B	644	CLA	MG-NA	-4.06	1.96	2.06
9	B	629	CLA	C4B-NB	4.06	1.38	1.35
9	B	644	CLA	MG-NC	-4.05	1.96	2.06
9	B	632	CLA	CHB-C4A	4.05	1.37	1.34
9	B	639	CLA	C4B-NB	4.05	1.38	1.35
9	A	613	CLA	MG-NC	-4.05	1.96	2.06
9	L	149	CLA	C1B-NB	4.03	1.38	1.35
9	B	650	CLA	MG-NA	-4.03	1.96	2.06
9	F	154	CLA	C1B-NB	4.02	1.38	1.35
9	B	646	CLA	MG-NA	-4.02	1.96	2.06
9	B	642	CLA	MG-NC	-4.02	1.96	2.06
9	B	634	CLA	C4B-NB	4.02	1.38	1.35
9	A	608	CLA	MG-NC	-4.02	1.96	2.06
9	A	621	CLA	MG-NC	-4.02	1.96	2.06
9	A	613	CLA	MG-NA	-4.01	1.96	2.06
9	B	633	CLA	C1B-NB	4.01	1.38	1.35
9	F	157	CLA	MG-NC	-4.01	1.96	2.06
9	B	624	CLA	MG-NA	-4.01	1.96	2.06
9	L	147	CLA	MG-NA	-4.01	1.96	2.06
9	L	147	CLA	MG-NC	-4.01	1.96	2.06
9	A	628	CLA	CHB-C4A	4.00	1.37	1.34
9	B	642	CLA	MG-NA	-4.00	1.96	2.06
9	A	629	CLA	C4B-NB	4.00	1.38	1.35
9	A	606	CLA	MG-NC	-4.00	1.96	2.06
9	A	626	CLA	MG-NC	-4.00	1.96	2.06
9	B	626	CLA	CHB-C4A	3.99	1.37	1.34
9	A	605	CLA	C1B-NB	3.98	1.38	1.35
9	A	629	CLA	MG-NA	-3.98	1.96	2.06
9	A	625	CLA	C4B-NB	3.98	1.38	1.35
9	A	628	CLA	C4B-NB	3.98	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	598	CLA	MG-NC	-3.97	1.96	2.06
9	B	647	CLA	C1B-NB	3.97	1.38	1.35
9	A	606	CLA	MG-NA	-3.97	1.96	2.06
9	B	629	CLA	MG-ND	-3.97	1.97	2.05
9	B	624	CLA	MG-NC	-3.97	1.96	2.06
9	F	157	CLA	MG-NA	-3.96	1.96	2.06
9	B	633	CLA	MG-NA	-3.96	1.96	2.06
9	B	637	CLA	MG-NA	-3.96	1.96	2.06
9	A	616	CLA	MG-NC	-3.96	1.96	2.06
9	A	612	CLA	CHB-C4A	3.96	1.37	1.34
9	B	627	CLA	C4B-NB	3.96	1.38	1.35
9	L	163	CLA	C1B-CHB	-3.95	1.35	1.43
9	B	629	CLA	MG-NC	-3.95	1.96	2.06
9	B	649	CLA	C4B-NB	3.95	1.38	1.35
9	A	611	CLA	MG-NC	-3.95	1.96	2.06
9	B	639	CLA	MG-NA	-3.95	1.96	2.06
9	B	627	CLA	MG-NA	-3.95	1.96	2.06
9	B	634	CLA	MG-NC	-3.95	1.96	2.06
9	A	622	CLA	MG-NC	-3.94	1.96	2.06
9	B	636	CLA	MG-NA	-3.94	1.96	2.06
9	B	652	CLA	C4B-NB	3.94	1.38	1.35
9	B	630	CLA	MG-NA	-3.93	1.96	2.06
9	B	652	CLA	MG-NC	-3.93	1.96	2.06
9	A	610	CLA	MG-NA	-3.93	1.96	2.06
9	A	623	CLA	MG-NA	-3.92	1.97	2.06
9	F	157	CLA	C1B-NB	3.92	1.38	1.35
9	B	648	CLA	C4B-NB	3.92	1.38	1.35
9	B	643	CLA	MG-NC	-3.92	1.97	2.06
9	A	627	CLA	C4B-NB	3.91	1.38	1.35
9	B	644	CLA	C1B-NB	3.91	1.38	1.35
9	A	619	CLA	C1B-NB	3.91	1.38	1.35
9	A	600	CLA	C1B-NB	3.90	1.38	1.35
9	A	622	CLA	C1B-NB	3.90	1.38	1.35
9	B	646	CLA	C1B-NB	3.90	1.38	1.35
9	L	149	CLA	MG-NC	-3.90	1.97	2.06
9	B	639	CLA	CHB-C4A	3.89	1.37	1.34
9	A	603	CLA	C4B-NB	3.89	1.38	1.35
9	B	639	CLA	C1B-NB	3.89	1.38	1.35
9	B	620	CLA	C1B-CHB	-3.88	1.36	1.43
9	B	634	CLA	CHB-C4A	3.88	1.37	1.34
9	A	621	CLA	C1B-NB	3.88	1.38	1.35
9	B	627	CLA	MG-NC	-3.86	1.97	2.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	625	CLA	C1B-NB	3.86	1.38	1.35
9	B	644	CLA	C4B-NB	3.86	1.38	1.35
9	B	625	CLA	MG-NA	-3.86	1.97	2.06
9	B	652	CLA	C1B-NB	3.85	1.38	1.35
9	B	631	CLA	MG-NA	-3.84	1.97	2.06
9	B	626	CLA	C4B-NB	3.84	1.38	1.35
9	A	598	CLA	C1B-NB	3.84	1.38	1.35
9	A	611	CLA	C1B-CHB	-3.84	1.36	1.43
9	A	624	CLA	MG-NC	-3.83	1.97	2.06
9	F	155	CLA	CHB-C4A	3.83	1.37	1.34
9	B	651	CLA	MG-NA	-3.82	1.97	2.06
9	A	603	CLA	C1B-NB	3.82	1.38	1.35
9	B	639	CLA	MG-NC	-3.82	1.97	2.06
9	B	631	CLA	MG-NC	-3.81	1.97	2.06
9	A	607	CLA	MG-NC	-3.81	1.97	2.06
9	B	635	CLA	C4B-NB	3.81	1.38	1.35
9	B	650	CLA	C1B-NB	3.81	1.38	1.35
9	B	643	CLA	MG-NA	-3.80	1.97	2.06
9	A	607	CLA	MG-NA	-3.80	1.97	2.06
9	A	621	CLA	MG-NA	-3.80	1.97	2.06
9	A	613	CLA	C1B-NB	3.79	1.38	1.35
9	B	642	CLA	CHB-C4A	3.78	1.37	1.34
9	B	628	CLA	C1B-NB	3.78	1.38	1.35
9	B	630	CLA	MG-NC	-3.78	1.97	2.06
9	B	640	CLA	C4B-CHC	-3.77	1.36	1.43
9	B	640	CLA	CHA-C4D	-3.77	1.30	1.38
9	B	648	CLA	CHB-C4A	3.77	1.37	1.34
9	A	629	CLA	MG-NC	-3.76	1.97	2.06
9	L	149	CLA	MG-NA	-3.76	1.97	2.06
9	A	608	CLA	C1B-NB	3.76	1.38	1.35
9	A	616	CLA	C4B-NB	3.76	1.38	1.35
9	B	636	CLA	C1B-NB	3.75	1.38	1.35
9	B	645	CLA	C1B-NB	3.75	1.38	1.35
9	A	599	CLA	MG-NA	-3.75	1.97	2.06
9	B	628	CLA	MG-NA	-3.74	1.97	2.06
9	B	634	CLA	C4B-CHC	-3.74	1.36	1.43
9	B	632	CLA	C4B-NB	3.74	1.38	1.35
9	A	627	CLA	MG-NC	-3.73	1.97	2.06
9	B	650	CLA	C4B-NB	3.71	1.38	1.35
9	B	629	CLA	C1B-CHB	-3.70	1.36	1.43
9	B	628	CLA	C4B-NB	3.70	1.38	1.35
9	B	638	CLA	C4B-NB	3.69	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	613	CLA	C4B-CHC	-3.69	1.36	1.43
9	A	622	CLA	C1B-CHB	-3.69	1.36	1.43
9	B	621	CLA	C4B-NB	3.68	1.38	1.35
9	B	625	CLA	C4B-NB	3.67	1.38	1.35
9	B	653	CLA	CHB-C4A	3.67	1.37	1.34
9	A	612	CLA	C3B-C4B	3.66	1.46	1.39
9	B	643	CLA	C1B-NB	3.66	1.38	1.35
9	B	651	CLA	C1B-NB	3.66	1.38	1.35
9	B	624	CLA	CHB-C4A	3.66	1.37	1.34
9	A	611	CLA	C4B-NB	3.66	1.38	1.35
9	A	599	CLA	MG-ND	-3.65	1.98	2.05
9	B	652	CLA	MG-NA	-3.65	1.97	2.06
9	A	610	CLA	C4B-NB	3.64	1.38	1.35
9	B	632	CLA	C1B-NB	3.63	1.38	1.35
9	A	627	CLA	C1B-NB	3.63	1.38	1.35
9	B	641	CLA	C4B-NB	3.62	1.38	1.35
9	F	158	CLA	C2D-C1D	3.61	1.52	1.44
9	A	615	CLA	C2D-C1D	3.61	1.52	1.44
9	A	617	CLA	C2D-C1D	3.61	1.52	1.44
9	B	651	CLA	C4B-CHC	-3.61	1.36	1.43
9	A	626	CLA	C4B-NB	3.61	1.38	1.35
9	A	621	CLA	C4B-NB	3.60	1.38	1.35
9	B	628	CLA	MG-NC	-3.60	1.97	2.06
9	B	631	CLA	CHB-C4A	3.59	1.37	1.34
9	A	606	CLA	C1B-CHB	-3.59	1.36	1.43
9	A	614	CLA	C2D-C1D	3.59	1.52	1.44
9	B	631	CLA	C4B-NB	3.58	1.38	1.35
9	B	625	CLA	MG-NC	-3.58	1.97	2.06
9	B	648	CLA	C1B-NB	3.58	1.38	1.35
9	B	635	CLA	C3B-C4B	3.57	1.46	1.39
9	B	645	CLA	C4B-NB	3.57	1.38	1.35
9	A	612	CLA	C2B-C1B	3.56	1.46	1.39
9	A	609	CLA	C1B-NB	3.56	1.38	1.35
9	A	598	CLA	CHB-C4A	3.56	1.37	1.34
9	B	647	CLA	C4B-NB	3.55	1.38	1.35
9	F	155	CLA	C4B-CHC	-3.54	1.36	1.43
9	A	618	CLA	C2D-C1D	3.54	1.52	1.44
9	A	623	CLA	C2B-C1B	3.53	1.46	1.39
9	B	644	CLA	C4B-CHC	-3.51	1.36	1.43
9	A	618	CLA	C3B-C4B	3.51	1.46	1.39
9	K	135	CLA	C4B-CHC	-3.51	1.36	1.43
9	B	630	CLA	CHB-C4A	3.51	1.37	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	B	638	CLA	C1B-CHB	-3.51	1.36	1.43
9	B	637	CLA	C4B-CHC	-3.50	1.36	1.43
9	A	611	CLA	C1B-NB	3.50	1.38	1.35
9	A	612	CLA	C1B-NB	3.50	1.38	1.35
9	A	604	CLA	C1B-NB	3.50	1.38	1.35
9	B	635	CLA	C2B-C1B	3.49	1.46	1.39
9	A	620	CLA	C1B-CHB	-3.49	1.36	1.43
9	A	627	CLA	C1B-CHB	-3.49	1.36	1.43
9	F	156	CLA	C1B-NB	3.48	1.38	1.35
9	A	620	CLA	C1B-NB	3.47	1.38	1.35
9	A	608	CLA	CHB-C4A	3.47	1.37	1.34
9	B	649	CLA	C1B-NB	3.47	1.38	1.35
9	B	647	CLA	C1B-CHB	-3.45	1.36	1.43
9	K	135	CLA	C1B-NB	3.44	1.38	1.35
9	B	637	CLA	C4B-NB	3.44	1.38	1.35
9	A	628	CLA	C1B-CHB	-3.44	1.37	1.43
9	F	155	CLA	C4B-NB	3.43	1.38	1.35
9	B	635	CLA	C1B-NB	3.43	1.38	1.35
9	B	643	CLA	C4B-NB	3.42	1.38	1.35
9	B	622	CLA	C1B-CHB	-3.42	1.37	1.43
9	B	620	CLA	C3B-C4B	3.42	1.45	1.39
9	A	620	CLA	C4B-NB	3.42	1.38	1.35
9	F	158	CLA	C3B-C4B	3.41	1.45	1.39
9	A	600	CLA	MG-ND	-3.40	1.99	2.05
9	A	598	CLA	C1B-CHB	-3.39	1.37	1.43
9	F	154	CLA	C4B-NB	3.39	1.38	1.35
9	B	636	CLA	C4B-NB	3.38	1.38	1.35
9	B	653	CLA	C4B-NB	3.37	1.38	1.35
9	A	604	CLA	C4B-CHC	-3.35	1.37	1.43
9	B	630	CLA	C2B-C1B	3.35	1.45	1.39
9	A	615	CLA	C3C-C2C	3.35	1.42	1.35
9	F	158	CLA	C3C-C2C	3.35	1.42	1.35
9	B	653	CLA	C1B-CHB	-3.35	1.37	1.43
9	A	615	CLA	C3B-C4B	3.35	1.45	1.39
9	B	637	CLA	C1B-NB	3.34	1.38	1.35
9	B	640	CLA	C4B-NB	3.34	1.38	1.35
9	A	618	CLA	C3C-C2C	3.33	1.42	1.35
9	A	624	CLA	C1B-NB	3.33	1.38	1.35
9	A	614	CLA	C3C-C2C	3.33	1.42	1.35
9	B	630	CLA	C3B-C4B	3.33	1.45	1.39
9	A	617	CLA	C3B-C4B	3.32	1.45	1.39
9	A	614	CLA	C3B-C4B	3.32	1.45	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	604	CLA	C1B-CHB	-3.31	1.37	1.43
9	B	642	CLA	C4B-CHC	-3.31	1.37	1.43
9	B	641	CLA	C3B-C4B	3.30	1.45	1.39
9	B	648	CLA	C1B-CHB	-3.30	1.37	1.43
9	B	638	CLA	C4B-CHC	-3.30	1.37	1.43
9	A	617	CLA	C3C-C2C	3.30	1.42	1.35
9	A	613	CLA	C1B-CHB	-3.29	1.37	1.43
9	A	619	CLA	CHB-C4A	3.29	1.37	1.34
9	A	604	CLA	C4B-NB	3.29	1.38	1.35
9	B	624	CLA	C1B-CHB	-3.28	1.37	1.43
9	B	635	CLA	C1B-CHB	-3.28	1.37	1.43
9	A	606	CLA	C4B-NB	3.27	1.38	1.35
9	B	642	CLA	C4B-NB	3.25	1.38	1.35
9	B	629	CLA	C1B-NB	3.25	1.38	1.35
9	A	612	CLA	C4B-CHC	-3.24	1.37	1.43
9	A	625	CLA	C4B-CHC	-3.24	1.37	1.43
9	B	621	CLA	C1B-CHB	-3.23	1.37	1.43
9	B	632	CLA	C4B-CHC	-3.23	1.37	1.43
9	B	636	CLA	C1B-CHB	-3.21	1.37	1.43
9	B	640	CLA	C1B-NB	3.21	1.38	1.35
9	A	600	CLA	C4B-NB	3.21	1.38	1.35
9	A	619	CLA	C4B-NB	3.20	1.38	1.35
9	B	641	CLA	C1B-CHB	-3.20	1.37	1.43
9	A	600	CLA	C2B-C1B	3.19	1.45	1.39
9	A	609	CLA	C4B-CHC	-3.18	1.37	1.43
9	A	607	CLA	C4B-CHC	-3.18	1.37	1.43
9	A	609	CLA	C4B-NB	3.17	1.38	1.35
9	F	158	CLA	C3D-C4D	3.17	1.51	1.44
9	A	621	CLA	C4B-CHC	-3.17	1.37	1.43
9	A	599	CLA	C2B-C1B	3.17	1.45	1.39
9	B	633	CLA	C2B-C1B	3.16	1.45	1.39
9	B	653	CLA	C4B-CHC	-3.16	1.37	1.43
9	L	163	CLA	C1B-NB	3.16	1.38	1.35
9	A	614	CLA	C3D-C4D	3.15	1.51	1.44
9	A	618	CLA	C3D-C4D	3.15	1.51	1.44
9	A	613	CLA	C4B-NB	3.15	1.38	1.35
9	A	607	CLA	C4B-NB	3.15	1.38	1.35
9	A	615	CLA	C3D-C4D	3.14	1.51	1.44
9	A	617	CLA	C3D-C4D	3.14	1.51	1.44
9	B	626	CLA	C1B-CHB	-3.14	1.37	1.43
9	F	154	CLA	C4B-CHC	-3.14	1.37	1.43
9	B	639	CLA	C3B-C4B	3.12	1.45	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	623	CLA	C4B-CHC	-3.12	1.37	1.43
9	L	163	CLA	C4B-CHC	-3.12	1.37	1.43
9	B	638	CLA	C1B-NB	3.11	1.38	1.35
9	A	603	CLA	C4B-CHC	-3.11	1.37	1.43
9	B	626	CLA	C4B-CHC	-3.11	1.37	1.43
9	B	649	CLA	C4B-CHC	-3.10	1.37	1.43
9	B	653	CLA	C1B-NB	3.09	1.38	1.35
9	B	622	CLA	MG-NC	-3.09	1.98	2.06
9	A	598	CLA	MG-ND	-3.09	1.99	2.05
9	B	633	CLA	C4B-CHC	-3.08	1.37	1.43
9	B	621	CLA	CHB-C4A	3.08	1.37	1.34
9	B	646	CLA	C4B-CHC	-3.08	1.37	1.43
9	A	605	CLA	C3B-C4B	3.08	1.45	1.39
9	A	608	CLA	C4B-CHC	-3.06	1.37	1.43
9	B	631	CLA	C1B-CHB	-3.06	1.37	1.43
9	A	619	CLA	C4B-CHC	-3.06	1.37	1.43
9	A	619	CLA	C1B-CHB	-3.05	1.37	1.43
9	B	640	CLA	C2B-C1B	3.04	1.45	1.39
9	B	627	CLA	C4B-CHC	-3.04	1.37	1.43
9	A	616	CLA	C4B-CHC	-3.03	1.37	1.43
9	B	651	CLA	C4B-NB	3.03	1.37	1.35
9	B	629	CLA	C4B-CHC	-3.02	1.37	1.43
9	A	610	CLA	CHB-C4A	3.02	1.37	1.34
9	A	609	CLA	C1B-CHB	-3.02	1.37	1.43
9	B	634	CLA	C1B-NB	3.01	1.37	1.35
9	B	647	CLA	C4B-CHC	-3.01	1.37	1.43
9	B	641	CLA	CHB-C4A	3.01	1.37	1.34
9	B	634	CLA	C1B-CHB	-3.00	1.37	1.43
9	A	624	CLA	C1B-CHB	-3.00	1.37	1.43
9	A	610	CLA	C1B-CHB	-3.00	1.37	1.43
9	A	605	CLA	C1B-CHB	-3.00	1.37	1.43
9	A	626	CLA	C4B-CHC	-2.99	1.37	1.43
9	B	640	CLA	C1B-CHB	-2.99	1.37	1.43
9	A	600	CLA	C3B-C4B	2.99	1.45	1.39
9	A	626	CLA	C1B-CHB	-2.99	1.37	1.43
9	B	621	CLA	C2B-C1B	2.99	1.45	1.39
9	B	643	CLA	C4B-CHC	-2.99	1.37	1.43
9	A	610	CLA	C4B-CHC	-2.98	1.37	1.43
9	F	156	CLA	C2B-C1B	2.98	1.45	1.39
9	B	641	CLA	C2B-C1B	2.98	1.45	1.39
9	B	621	CLA	C4B-CHC	-2.98	1.37	1.43
9	A	608	CLA	C1B-CHB	-2.97	1.37	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	B	622	CLA	C3B-C4B	2.97	1.45	1.39
9	A	608	CLA	C2B-C1B	2.97	1.45	1.39
9	A	623	CLA	C3B-C4B	2.97	1.45	1.39
9	A	611	CLA	CHB-C4A	2.97	1.37	1.34
9	A	612	CLA	C1B-CHB	-2.96	1.37	1.43
9	B	646	CLA	C1B-CHB	-2.96	1.37	1.43
9	A	603	CLA	C1B-CHB	-2.94	1.37	1.43
9	B	622	CLA	C2B-C1B	2.93	1.45	1.39
9	A	599	CLA	C3B-C4B	2.93	1.45	1.39
9	A	605	CLA	C4B-CHC	-2.93	1.38	1.43
9	B	639	CLA	C2B-C1B	2.93	1.45	1.39
9	B	650	CLA	C4B-CHC	-2.93	1.38	1.43
9	A	627	CLA	CHB-C4A	2.93	1.37	1.34
9	A	629	CLA	C3B-C4B	2.91	1.45	1.39
9	A	613	CLA	CHB-C4A	2.91	1.37	1.34
9	B	639	CLA	C1B-CHB	-2.90	1.38	1.43
9	A	625	CLA	C2B-C1B	2.90	1.45	1.39
9	A	620	CLA	C3B-C4B	2.89	1.45	1.39
9	B	643	CLA	C1B-CHB	-2.89	1.38	1.43
9	A	625	CLA	C1B-CHB	-2.89	1.38	1.43
9	B	630	CLA	C1B-CHB	-2.89	1.38	1.43
9	A	628	CLA	C3B-C4B	2.89	1.45	1.39
9	F	154	CLA	C2B-C1B	2.89	1.45	1.39
9	B	645	CLA	C4B-CHC	-2.88	1.38	1.43
9	F	155	CLA	C1B-NB	2.88	1.37	1.35
9	A	628	CLA	C4B-CHC	-2.87	1.38	1.43
9	B	632	CLA	C2B-C1B	2.86	1.45	1.39
9	B	652	CLA	C4B-CHC	-2.86	1.38	1.43
9	A	605	CLA	C2B-C1B	2.86	1.45	1.39
9	L	147	CLA	C4B-CHC	-2.86	1.38	1.43
9	A	629	CLA	C1B-CHB	-2.85	1.38	1.43
9	B	631	CLA	C4B-CHC	-2.84	1.38	1.43
9	A	621	CLA	C1B-CHB	-2.84	1.38	1.43
9	B	645	CLA	C3B-C4B	2.84	1.44	1.39
9	A	616	CLA	C3B-C4B	2.83	1.44	1.39
9	K	135	CLA	C2B-C1B	2.83	1.44	1.39
9	B	627	CLA	C1B-CHB	-2.83	1.38	1.43
9	A	598	CLA	C3B-C4B	2.82	1.44	1.39
9	B	645	CLA	C1B-CHB	-2.82	1.38	1.43
9	B	632	CLA	C1B-CHB	-2.82	1.38	1.43
9	L	163	CLA	C4B-NB	2.81	1.37	1.35
9	A	616	CLA	C1B-CHB	-2.81	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	599	CLA	C1B-CHB	-2.81	1.38	1.43
9	B	651	CLA	C1B-CHB	-2.80	1.38	1.43
9	B	642	CLA	C2B-C1B	2.80	1.44	1.39
9	F	154	CLA	C3B-C4B	2.80	1.44	1.39
9	A	611	CLA	C3B-C4B	2.80	1.44	1.39
9	A	606	CLA	C4B-CHC	-2.79	1.38	1.43
9	A	599	CLA	MG-NC	-2.79	1.99	2.06
9	B	646	CLA	C2B-C1B	2.78	1.44	1.39
9	A	606	CLA	C3B-C4B	2.78	1.44	1.39
9	B	636	CLA	CHB-C4A	2.78	1.36	1.34
9	B	642	CLA	C1B-CHB	-2.78	1.38	1.43
9	F	156	CLA	C1B-CHB	-2.77	1.38	1.43
9	L	147	CLA	C2B-C1B	2.77	1.44	1.39
9	B	629	CLA	CHB-C4A	2.76	1.36	1.34
9	A	624	CLA	C4B-CHC	-2.76	1.38	1.43
9	A	622	CLA	C4B-CHC	-2.76	1.38	1.43
9	B	650	CLA	C1B-CHB	-2.75	1.38	1.43
9	B	627	CLA	C2B-C1B	2.75	1.44	1.39
9	B	649	CLA	C2B-C1B	2.75	1.44	1.39
9	B	625	CLA	C1B-CHB	-2.75	1.38	1.43
9	L	149	CLA	C4B-CHC	-2.74	1.38	1.43
9	B	626	CLA	C1B-NB	2.74	1.37	1.35
9	B	652	CLA	C1B-CHB	-2.74	1.38	1.43
9	B	649	CLA	C1B-CHB	-2.74	1.38	1.43
9	F	155	CLA	C1B-CHB	-2.73	1.38	1.43
9	A	598	CLA	C4B-CHC	-2.73	1.38	1.43
9	A	607	CLA	C2B-C1B	2.73	1.44	1.39
9	F	156	CLA	C4B-CHC	-2.73	1.38	1.43
9	B	628	CLA	C3B-C4B	2.72	1.44	1.39
9	B	625	CLA	C3B-C4B	2.72	1.44	1.39
9	F	157	CLA	C3B-C4B	2.71	1.44	1.39
9	F	157	CLA	C1B-CHB	-2.71	1.38	1.43
9	A	626	CLA	C2B-C1B	2.71	1.44	1.39
9	A	624	CLA	C3B-C4B	2.70	1.44	1.39
9	B	633	CLA	C3B-C4B	2.68	1.44	1.39
9	B	637	CLA	C2B-C1B	2.68	1.44	1.39
9	F	157	CLA	C2B-C1B	2.67	1.44	1.39
9	A	620	CLA	C4B-CHC	-2.66	1.38	1.43
9	A	625	CLA	C3B-C4B	2.66	1.44	1.39
9	A	615	CLA	C4B-CHC	-2.64	1.38	1.43
9	A	624	CLA	C2B-C1B	2.63	1.44	1.39
9	B	636	CLA	C4B-CHC	-2.63	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	600	CLA	MG-NC	-2.63	2.00	2.06
9	A	604	CLA	CHB-C4A	2.62	1.36	1.34
9	F	154	CLA	C1B-CHB	-2.62	1.38	1.43
9	L	149	CLA	C2B-C1B	2.62	1.44	1.39
9	B	622	CLA	C1B-NB	2.62	1.37	1.35
9	A	614	CLA	C4B-CHC	-2.62	1.38	1.43
9	A	617	CLA	C4B-CHC	-2.61	1.38	1.43
9	A	605	CLA	C4B-NB	2.61	1.37	1.35
9	B	644	CLA	C1B-CHB	-2.61	1.38	1.43
9	A	618	CLA	C4B-CHC	-2.61	1.38	1.43
9	L	147	CLA	C1B-CHB	-2.60	1.38	1.43
9	B	648	CLA	C3B-C4B	2.60	1.44	1.39
9	B	633	CLA	C1B-CHB	-2.60	1.38	1.43
9	A	629	CLA	C2B-C1B	2.59	1.44	1.39
9	A	629	CLA	C4B-CHC	-2.59	1.38	1.43
9	F	158	CLA	C4B-CHC	-2.58	1.38	1.43
9	B	650	CLA	C3B-C4B	2.57	1.44	1.39
9	B	628	CLA	C4B-CHC	-2.57	1.38	1.43
9	B	648	CLA	C4B-CHC	-2.56	1.38	1.43
9	B	650	CLA	C2B-C1B	2.56	1.44	1.39
9	B	646	CLA	C3B-C4B	2.56	1.44	1.39
9	A	627	CLA	C4B-CHC	-2.56	1.38	1.43
9	A	611	CLA	C4B-CHC	-2.56	1.38	1.43
9	B	636	CLA	C3B-C4B	2.55	1.44	1.39
9	A	608	CLA	C3B-C4B	2.55	1.44	1.39
9	B	620	CLA	C1B-NB	2.55	1.37	1.35
9	B	628	CLA	C2B-C1B	2.55	1.44	1.39
9	A	628	CLA	C2B-C1B	2.54	1.44	1.39
9	L	147	CLA	C3B-C4B	2.54	1.44	1.39
9	A	616	CLA	C2B-C1B	2.53	1.44	1.39
9	B	641	CLA	C4B-CHC	-2.53	1.38	1.43
9	B	645	CLA	C2B-C1B	2.52	1.44	1.39
9	B	628	CLA	C1B-CHB	-2.52	1.38	1.43
9	A	620	CLA	C2B-C1B	2.51	1.44	1.39
9	F	157	CLA	C4B-CHC	-2.51	1.38	1.43
9	F	156	CLA	C3B-C4B	2.51	1.44	1.39
9	B	649	CLA	C3B-C4B	2.51	1.44	1.39
9	A	598	CLA	C2B-C1B	2.50	1.44	1.39
9	K	135	CLA	C1B-CHB	-2.50	1.38	1.43
9	B	627	CLA	C3B-C4B	2.50	1.44	1.39
9	A	603	CLA	C2B-C1B	2.49	1.44	1.39
9	A	626	CLA	C3B-C4B	2.48	1.44	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	B	630	CLA	C4B-CHC	-2.48	1.38	1.43
9	A	600	CLA	MG-NA	-2.48	2.00	2.06
9	B	646	CLA	CHB-C4A	2.47	1.36	1.34
9	A	622	CLA	CHB-C4A	2.45	1.36	1.34
9	B	624	CLA	C4B-CHC	-2.45	1.38	1.43
9	A	607	CLA	C3B-C4B	2.45	1.44	1.39
9	L	149	CLA	C1B-CHB	-2.45	1.38	1.43
9	B	639	CLA	C4B-CHC	-2.45	1.38	1.43
9	B	636	CLA	C2B-C1B	2.44	1.44	1.39
9	A	604	CLA	C3B-C4B	2.43	1.44	1.39
9	A	598	CLA	C4B-NB	2.43	1.37	1.35
9	B	620	CLA	C4B-CHC	-2.43	1.39	1.43
9	B	647	CLA	C3B-C4B	2.42	1.44	1.39
9	B	624	CLA	C3B-C4B	2.42	1.44	1.39
9	A	607	CLA	C1B-CHB	-2.42	1.39	1.43
9	B	643	CLA	C3B-C4B	2.41	1.44	1.39
9	B	647	CLA	C2B-C1B	2.39	1.44	1.39
9	B	631	CLA	C3B-C4B	2.39	1.44	1.39
9	B	625	CLA	C2B-C1B	2.38	1.44	1.39
9	K	135	CLA	C3B-C4B	2.38	1.44	1.39
9	B	632	CLA	C3B-C4B	2.38	1.44	1.39
9	F	155	CLA	C2B-C1B	2.37	1.44	1.39
9	B	635	CLA	CHA-C4D	-2.36	1.33	1.38
9	A	599	CLA	C1B-NB	2.36	1.37	1.35
9	B	642	CLA	C3B-C4B	2.35	1.44	1.39
9	B	635	CLA	C4B-CHC	-2.34	1.39	1.43
9	B	637	CLA	C1B-CHB	-2.33	1.39	1.43
9	B	643	CLA	C2B-C1B	2.31	1.44	1.39
9	A	609	CLA	C3B-C4B	2.30	1.44	1.39
9	A	610	CLA	C2B-C1B	2.29	1.44	1.39
9	A	609	CLA	C2B-C1B	2.29	1.43	1.39
9	A	621	CLA	C2B-C1B	2.28	1.43	1.39
9	A	622	CLA	C3B-C4B	2.28	1.43	1.39
9	A	599	CLA	C4B-CHC	-2.27	1.39	1.43
9	A	612	CLA	CHA-C4D	-2.27	1.34	1.38
9	B	648	CLA	C2B-C1B	2.27	1.43	1.39
9	B	620	CLA	C2B-C1B	2.26	1.43	1.39
9	B	652	CLA	C3B-C4B	2.25	1.43	1.39
9	A	621	CLA	C3B-C4B	2.24	1.43	1.39
9	A	604	CLA	C2B-C1B	2.23	1.43	1.39
9	A	627	CLA	C3B-C4B	2.23	1.43	1.39
9	B	651	CLA	C2B-C1B	2.23	1.43	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	619	CLA	C3B-C4B	2.21	1.43	1.39
9	B	638	CLA	CHB-C4A	2.21	1.36	1.34
9	B	624	CLA	C2B-C1B	2.21	1.43	1.39
9	A	600	CLA	C4B-CHC	-2.20	1.39	1.43
9	B	626	CLA	C3B-C4B	2.20	1.43	1.39
9	A	620	CLA	CHB-C4A	2.20	1.36	1.34
9	B	625	CLA	C4B-CHC	-2.19	1.39	1.43
9	B	621	CLA	C3B-C4B	2.19	1.43	1.39
9	B	637	CLA	C3B-C4B	2.18	1.43	1.39
9	B	651	CLA	C3B-C4B	2.18	1.43	1.39
9	B	638	CLA	C2B-C1B	2.17	1.43	1.39
9	B	626	CLA	C2B-C1B	2.16	1.43	1.39
9	A	619	CLA	C2B-C1B	2.16	1.43	1.39
9	A	598	CLA	C4C-NC	2.15	1.40	1.37
9	A	622	CLA	C4B-NB	2.15	1.37	1.35
9	B	622	CLA	CHB-C4A	2.15	1.36	1.34
9	A	603	CLA	C3B-C4B	2.14	1.43	1.39
9	B	652	CLA	C2B-C1B	2.13	1.43	1.39
9	A	600	CLA	C4C-NC	2.11	1.40	1.37
9	B	631	CLA	C2B-C1B	2.11	1.43	1.39
9	A	623	CLA	C1B-CHB	-2.11	1.39	1.43
9	A	611	CLA	C2B-C1B	2.09	1.43	1.39
9	B	629	CLA	C3B-C4B	2.08	1.43	1.39
9	A	606	CLA	C2B-C1B	2.07	1.43	1.39
9	L	149	CLA	C3B-C4B	2.06	1.43	1.39
9	B	644	CLA	C2B-C1B	2.05	1.43	1.39
9	A	614	CLA	C4B-NB	2.05	1.37	1.35
9	A	627	CLA	C2B-C1B	2.04	1.43	1.39
9	F	158	CLA	C4C-NC	-2.00	1.33	1.37
9	A	618	CLA	C4C-NC	-2.00	1.33	1.37

All (318) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	B	635	CLA	C1C-NC-C4C	-12.21	101.22	106.71
9	B	640	CLA	C1C-NC-C4C	-10.84	101.83	106.71
9	A	612	CLA	C1C-NC-C4C	-10.81	101.85	106.71
9	B	628	CLA	C1C-NC-C4C	-7.97	103.12	106.71
9	A	600	CLA	C4A-NA-C1A	-7.84	103.18	106.71
9	B	652	CLA	C1C-NC-C4C	-7.62	103.28	106.71
9	A	607	CLA	C1C-NC-C4C	-7.49	103.34	106.71
9	A	599	CLA	C1C-NC-C4C	-7.38	103.39	106.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	A	622	CLA	C1C-NC-C4C	-7.37	103.39	106.71
9	L	149	CLA	C4A-NA-C1A	-7.26	103.44	106.71
9	L	149	CLA	C1C-NC-C4C	-7.18	103.48	106.71
9	A	610	CLA	C1C-NC-C4C	-7.12	103.51	106.71
9	B	653	CLA	C4A-NA-C1A	-7.11	103.51	106.71
9	B	636	CLA	C4A-NA-C1A	-7.11	103.51	106.71
9	A	607	CLA	C4A-NA-C1A	-7.06	103.53	106.71
9	B	637	CLA	C1C-NC-C4C	-7.02	103.55	106.71
9	B	646	CLA	C4A-NA-C1A	-7.02	103.55	106.71
9	B	628	CLA	C4A-NA-C1A	-7.01	103.55	106.71
9	B	651	CLA	C4A-NA-C1A	-6.98	103.57	106.71
9	A	620	CLA	C4A-NA-C1A	-6.92	103.59	106.71
9	B	625	CLA	C1C-NC-C4C	-6.92	103.60	106.71
9	B	640	CLA	C1D-ND-C4D	-6.89	101.44	106.33
9	B	634	CLA	C4A-NA-C1A	-6.86	103.62	106.71
9	B	622	CLA	C1C-NC-C4C	-6.85	103.63	106.71
9	B	636	CLA	C1C-NC-C4C	-6.83	103.63	106.71
9	A	603	CLA	C4A-NA-C1A	-6.82	103.64	106.71
9	A	624	CLA	C4A-NA-C1A	-6.81	103.64	106.71
9	A	621	CLA	C4A-NA-C1A	-6.79	103.65	106.71
9	A	626	CLA	C1C-NC-C4C	-6.78	103.66	106.71
9	F	156	CLA	C4A-NA-C1A	-6.78	103.66	106.71
9	B	639	CLA	C4A-NA-C1A	-6.77	103.66	106.71
9	A	610	CLA	C4A-NA-C1A	-6.77	103.66	106.71
9	A	616	CLA	C4A-NA-C1A	-6.74	103.68	106.71
9	A	599	CLA	C4A-NA-C1A	-6.73	103.68	106.71
9	A	612	CLA	C1D-ND-C4D	-6.72	101.56	106.33
9	A	627	CLA	C1C-NC-C4C	-6.69	103.70	106.71
9	B	643	CLA	C4A-NA-C1A	-6.69	103.70	106.71
9	B	646	CLA	C1C-NC-C4C	-6.66	103.71	106.71
9	B	653	CLA	C1C-NC-C4C	-6.63	103.73	106.71
9	B	652	CLA	C4A-NA-C1A	-6.62	103.73	106.71
9	B	637	CLA	C4A-NA-C1A	-6.61	103.73	106.71
9	B	626	CLA	C4A-NA-C1A	-6.60	103.74	106.71
9	B	635	CLA	C4A-NA-C1A	-6.60	103.74	106.71
9	A	615	CLA	C1D-ND-C4D	6.58	111.01	106.33
9	F	155	CLA	C4A-NA-C1A	-6.56	103.76	106.71
9	B	651	CLA	C1C-NC-C4C	-6.55	103.76	106.71
9	F	158	CLA	C1D-ND-C4D	6.54	110.98	106.33
9	B	630	CLA	C1C-NC-C4C	-6.53	103.77	106.71
9	A	617	CLA	C1D-ND-C4D	6.52	110.97	106.33
9	A	619	CLA	C4A-NA-C1A	-6.52	103.78	106.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	B	639	CLA	C1C-NC-C4C	-6.50	103.78	106.71
9	A	629	CLA	C1C-NC-C4C	-6.50	103.78	106.71
9	B	625	CLA	C4A-NA-C1A	-6.49	103.79	106.71
9	B	629	CLA	C1C-NC-C4C	-6.47	103.80	106.71
9	A	614	CLA	C1D-ND-C4D	6.47	110.93	106.33
9	A	618	CLA	C1D-ND-C4D	6.47	110.93	106.33
9	A	624	CLA	C1C-NC-C4C	-6.46	103.80	106.71
9	F	154	CLA	C1C-NC-C4C	-6.45	103.81	106.71
9	A	608	CLA	C1C-NC-C4C	-6.43	103.82	106.71
9	B	635	CLA	C1D-ND-C4D	-6.41	101.78	106.33
9	A	609	CLA	C1C-NC-C4C	-6.40	103.83	106.71
9	A	625	CLA	C4A-NA-C1A	-6.40	103.83	106.71
9	A	600	CLA	C1C-NC-C4C	-6.40	103.83	106.71
9	B	627	CLA	C1C-NC-C4C	-6.38	103.84	106.71
9	B	644	CLA	C4A-NA-C1A	-6.36	103.85	106.71
9	F	158	CLA	CHD-C4C-NC	6.35	134.00	124.21
9	B	647	CLA	C1C-NC-C4C	-6.35	103.85	106.71
9	B	645	CLA	C1C-NC-C4C	-6.34	103.85	106.71
9	A	627	CLA	C4A-NA-C1A	-6.33	103.86	106.71
9	B	643	CLA	C1C-NC-C4C	-6.32	103.87	106.71
9	B	632	CLA	C4A-NA-C1A	-6.31	103.87	106.71
9	A	615	CLA	CHD-C4C-NC	6.31	133.94	124.21
9	B	622	CLA	C4A-NA-C1A	-6.31	103.87	106.71
9	B	631	CLA	C4A-NA-C1A	-6.31	103.87	106.71
9	A	609	CLA	C4A-NA-C1A	-6.30	103.87	106.71
9	A	614	CLA	CHD-C4C-NC	6.29	133.91	124.21
9	B	620	CLA	C4A-NA-C1A	-6.28	103.88	106.71
9	B	629	CLA	C4A-NA-C1A	-6.26	103.89	106.71
9	A	621	CLA	C1C-NC-C4C	-6.26	103.89	106.71
9	A	612	CLA	CHA-C4D-ND	6.26	130.56	124.52
9	A	623	CLA	C4A-NA-C1A	-6.25	103.89	106.71
9	B	633	CLA	C1C-NC-C4C	-6.25	103.90	106.71
9	A	625	CLA	C1C-NC-C4C	-6.25	103.90	106.71
9	A	617	CLA	CHD-C4C-NC	6.24	133.83	124.21
9	A	611	CLA	C4A-NA-C1A	-6.24	103.90	106.71
9	A	616	CLA	C1C-NC-C4C	-6.22	103.91	106.71
9	B	642	CLA	C1C-NC-C4C	-6.22	103.91	106.71
9	B	644	CLA	C1C-NC-C4C	-6.21	103.91	106.71
9	B	624	CLA	C4A-NA-C1A	-6.20	103.92	106.71
9	A	603	CLA	C1C-NC-C4C	-6.19	103.92	106.71
9	A	618	CLA	CHD-C4C-NC	6.19	133.75	124.21
9	K	135	CLA	C4A-NA-C1A	-6.18	103.93	106.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	A	611	CLA	C1C-NC-C4C	-6.17	103.93	106.71
9	A	613	CLA	C1C-NC-C4C	-6.17	103.93	106.71
9	A	622	CLA	C4A-NA-C1A	-6.16	103.94	106.71
9	A	623	CLA	C1C-NC-C4C	-6.16	103.94	106.71
9	F	157	CLA	C1C-NC-C4C	-6.14	103.94	106.71
9	A	604	CLA	C1C-NC-C4C	-6.13	103.95	106.71
9	F	154	CLA	C4A-NA-C1A	-6.10	103.96	106.71
9	A	613	CLA	C4A-NA-C1A	-6.10	103.97	106.71
9	B	632	CLA	C1C-NC-C4C	-6.09	103.97	106.71
9	F	155	CLA	C1C-NC-C4C	-6.06	103.98	106.71
9	A	605	CLA	C1C-NC-C4C	-6.05	103.99	106.71
9	B	649	CLA	C4A-NA-C1A	-6.03	103.99	106.71
9	A	604	CLA	C4A-NA-C1A	-6.03	104.00	106.71
9	B	634	CLA	C1C-NC-C4C	-6.02	104.00	106.71
9	B	631	CLA	C1C-NC-C4C	-6.01	104.00	106.71
9	B	642	CLA	C4A-NA-C1A	-6.01	104.00	106.71
9	B	650	CLA	C1C-NC-C4C	-5.99	104.01	106.71
9	A	626	CLA	C4A-NA-C1A	-5.98	104.02	106.71
9	B	626	CLA	C1C-NC-C4C	-5.97	104.02	106.71
9	A	606	CLA	C4A-NA-C1A	-5.95	104.03	106.71
9	F	156	CLA	C1C-NC-C4C	-5.93	104.04	106.71
9	B	633	CLA	C4A-NA-C1A	-5.88	104.06	106.71
9	B	621	CLA	C1C-NC-C4C	-5.88	104.06	106.71
9	B	620	CLA	C1C-NC-C4C	-5.87	104.06	106.71
9	B	649	CLA	C1C-NC-C4C	-5.87	104.07	106.71
9	B	621	CLA	C4A-NA-C1A	-5.86	104.07	106.71
9	A	619	CLA	C1C-NC-C4C	-5.82	104.09	106.71
9	B	641	CLA	C1C-NC-C4C	-5.81	104.09	106.71
9	A	629	CLA	C4A-NA-C1A	-5.80	104.10	106.71
9	B	645	CLA	C4A-NA-C1A	-5.74	104.12	106.71
9	B	624	CLA	C1C-NC-C4C	-5.69	104.15	106.71
9	L	147	CLA	C1C-NC-C4C	-5.69	104.15	106.71
9	B	650	CLA	C4A-NA-C1A	-5.67	104.16	106.71
9	L	147	CLA	C4A-NA-C1A	-5.66	104.16	106.71
9	B	630	CLA	C4A-NA-C1A	-5.58	104.20	106.71
9	F	157	CLA	C4A-NA-C1A	-5.56	104.21	106.71
9	A	605	CLA	C4A-NA-C1A	-5.54	104.22	106.71
9	B	648	CLA	C1C-NC-C4C	-5.51	104.23	106.71
9	L	163	CLA	C4A-NA-C1A	-5.50	104.23	106.71
9	B	638	CLA	C1C-NC-C4C	-5.44	104.26	106.71
9	B	638	CLA	C4A-NA-C1A	-5.44	104.26	106.71
9	A	606	CLA	C1C-NC-C4C	-5.42	104.27	106.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	B	627	CLA	C4A-NA-C1A	-5.36	104.30	106.71
9	L	163	CLA	C1C-NC-C4C	-5.33	104.31	106.71
9	A	608	CLA	C4A-NA-C1A	-5.33	104.31	106.71
9	K	135	CLA	C1C-NC-C4C	-5.33	104.31	106.71
9	A	598	CLA	C4A-NA-C1A	-5.32	104.31	106.71
9	B	648	CLA	C4A-NA-C1A	-5.28	104.33	106.71
9	B	647	CLA	C4A-NA-C1A	-5.25	104.35	106.71
9	A	598	CLA	C1C-NC-C4C	-5.20	104.37	106.71
9	A	612	CLA	C3D-C4D-CHA	-5.18	114.07	124.98
9	A	620	CLA	C1C-NC-C4C	-5.18	104.38	106.71
9	A	612	CLA	C4A-NA-C1A	-5.14	104.39	106.71
9	B	640	CLA	CHA-C4D-ND	5.08	129.42	124.52
9	B	641	CLA	C4A-NA-C1A	-4.95	104.48	106.71
9	F	158	CLA	C3C-C4C-CHD	-4.92	114.45	125.22
9	A	615	CLA	C3C-C4C-CHD	-4.91	114.47	125.22
9	A	617	CLA	C3C-C4C-CHD	-4.89	114.50	125.22
9	A	614	CLA	C3C-C4C-CHD	-4.89	114.52	125.22
9	A	618	CLA	C3C-C4C-CHD	-4.86	114.57	125.22
9	A	628	CLA	C4A-NA-C1A	-4.84	104.53	106.71
9	B	640	CLA	C3D-C4D-CHA	-4.66	115.16	124.98
9	B	635	CLA	CHA-C4D-ND	4.66	129.02	124.52
9	A	628	CLA	C1C-NC-C4C	-4.62	104.63	106.71
9	B	635	CLA	C3C-C4C-NC	4.48	114.11	109.97
9	A	628	CLA	C1D-ND-C4D	-4.40	103.21	106.33
9	B	635	CLA	C3D-C4D-CHA	-4.39	115.73	124.98
9	L	163	CLA	C1D-ND-C4D	-4.26	103.31	106.33
9	B	641	CLA	C1D-ND-C4D	-4.16	103.38	106.33
9	B	642	CLA	C1D-ND-C4D	-4.07	103.45	106.33
9	A	617	CLA	C2D-C3D-C4D	-4.01	102.83	107.28
9	A	618	CLA	C2D-C3D-C4D	-4.00	102.85	107.28
9	A	614	CLA	C2D-C3D-C4D	-4.00	102.85	107.28
9	B	629	CLA	C1D-ND-C4D	-3.99	103.50	106.33
9	F	156	CLA	C1D-ND-C4D	-3.96	103.52	106.33
9	A	615	CLA	C2D-C3D-C4D	-3.95	102.90	107.28
9	L	147	CLA	C1D-ND-C4D	-3.95	103.53	106.33
9	B	640	CLA	C3D-C4D-ND	3.95	115.42	109.46
9	A	612	CLA	C3D-C4D-ND	3.91	115.37	109.46
9	F	158	CLA	C2D-C3D-C4D	-3.91	102.95	107.28
9	A	611	CLA	C1D-ND-C4D	-3.90	103.56	106.33
9	F	154	CLA	C1D-ND-C4D	-3.84	103.61	106.33
9	B	635	CLA	C3D-C4D-ND	3.83	115.25	109.46
9	A	609	CLA	C1D-ND-C4D	-3.79	103.65	106.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	A	614	CLA	C3D-C2D-C1D	-3.78	103.09	107.28
9	A	615	CLA	C3D-C2D-C1D	-3.77	103.10	107.28
9	A	617	CLA	C3D-C2D-C1D	-3.77	103.11	107.28
9	A	618	CLA	C3D-C2D-C1D	-3.76	103.11	107.28
9	B	648	CLA	C1D-ND-C4D	-3.76	103.67	106.33
9	A	626	CLA	C1D-ND-C4D	-3.75	103.67	106.33
9	F	158	CLA	C3D-C2D-C1D	-3.74	103.13	107.28
9	F	157	CLA	C1D-ND-C4D	-3.66	103.74	106.33
9	K	135	CLA	C1D-ND-C4D	-3.63	103.75	106.33
9	L	149	CLA	C1D-ND-C4D	-3.61	103.77	106.33
9	A	624	CLA	C1D-ND-C4D	-3.61	103.77	106.33
9	B	632	CLA	C1D-ND-C4D	-3.61	103.77	106.33
9	B	621	CLA	C1D-ND-C4D	-3.59	103.79	106.33
9	A	605	CLA	C1D-ND-C4D	-3.58	103.80	106.33
9	A	629	CLA	C1D-ND-C4D	-3.57	103.80	106.33
9	B	626	CLA	C1D-ND-C4D	-3.56	103.80	106.33
9	A	603	CLA	C1D-ND-C4D	-3.55	103.81	106.33
9	B	627	CLA	C1D-ND-C4D	-3.54	103.82	106.33
9	A	620	CLA	C1D-ND-C4D	-3.53	103.83	106.33
9	A	612	CLA	C3B-C4B-NB	3.53	113.20	110.11
9	A	598	CLA	C1D-ND-C4D	-3.53	103.83	106.33
9	B	647	CLA	C1D-ND-C4D	-3.49	103.86	106.33
9	B	651	CLA	C1D-ND-C4D	-3.48	103.86	106.33
9	A	623	CLA	C1D-ND-C4D	-3.48	103.87	106.33
9	A	608	CLA	C1D-ND-C4D	-3.47	103.87	106.33
9	B	640	CLA	C3C-C4C-NC	3.47	113.17	109.97
9	B	622	CLA	C1D-ND-C4D	-3.46	103.88	106.33
9	B	646	CLA	C1D-ND-C4D	-3.45	103.88	106.33
9	A	599	CLA	C1D-ND-C4D	-3.45	103.88	106.33
9	A	604	CLA	C1D-ND-C4D	-3.44	103.89	106.33
9	B	633	CLA	C1D-ND-C4D	-3.42	103.91	106.33
9	A	610	CLA	C1D-ND-C4D	-3.40	103.92	106.33
9	B	635	CLA	CHD-C1D-ND	-3.39	121.24	124.52
9	B	653	CLA	C1D-ND-C4D	-3.39	103.93	106.33
9	A	625	CLA	C1D-ND-C4D	-3.38	103.94	106.33
9	A	612	CLA	CHD-C1D-ND	-3.38	121.25	124.52
9	B	624	CLA	C1D-ND-C4D	-3.32	103.97	106.33
9	A	614	CLA	C4A-NA-C1A	3.32	108.20	106.71
9	A	627	CLA	C1D-ND-C4D	-3.30	103.99	106.33
9	B	625	CLA	C1D-ND-C4D	-3.30	103.99	106.33
9	B	630	CLA	C1D-ND-C4D	-3.29	104.00	106.33
9	F	155	CLA	C1D-ND-C4D	-3.29	104.00	106.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	A	613	CLA	C1D-ND-C4D	-3.27	104.01	106.33
9	A	621	CLA	C1D-ND-C4D	-3.27	104.01	106.33
9	B	620	CLA	C1D-ND-C4D	-3.26	104.02	106.33
9	B	637	CLA	C1D-ND-C4D	-3.25	104.03	106.33
9	B	649	CLA	C1D-ND-C4D	-3.23	104.04	106.33
9	B	640	CLA	CHD-C1D-ND	-3.23	121.39	124.52
9	A	616	CLA	C1D-ND-C4D	-3.23	104.04	106.33
9	B	645	CLA	C1D-ND-C4D	-3.22	104.05	106.33
9	B	631	CLA	C1D-ND-C4D	-3.21	104.06	106.33
9	B	638	CLA	C1D-ND-C4D	-3.21	104.06	106.33
9	A	600	CLA	C1D-ND-C4D	-3.21	104.06	106.33
9	A	618	CLA	C4A-NA-C1A	3.19	108.14	106.71
9	A	612	CLA	C3C-C4C-NC	3.17	112.90	109.97
9	B	650	CLA	C1D-ND-C4D	-3.16	104.09	106.33
9	B	636	CLA	C1D-ND-C4D	-3.15	104.10	106.33
9	A	606	CLA	C1D-ND-C4D	-3.08	104.15	106.33
9	A	617	CLA	C4A-NA-C1A	3.08	108.09	106.71
9	A	615	CLA	C4A-NA-C1A	3.07	108.09	106.71
9	A	619	CLA	C1D-ND-C4D	-2.99	104.21	106.33
9	B	639	CLA	C1D-ND-C4D	-2.96	104.23	106.33
9	A	612	CLA	C2B-C1B-NB	2.96	112.70	110.11
9	B	643	CLA	C1D-ND-C4D	-2.95	104.24	106.33
9	B	634	CLA	C1D-ND-C4D	-2.93	104.25	106.33
9	B	635	CLA	C3A-C4A-NA	2.92	116.05	109.92
9	B	652	CLA	C1D-ND-C4D	-2.90	104.27	106.33
9	A	607	CLA	C1D-ND-C4D	-2.84	104.32	106.33
9	B	644	CLA	C1D-ND-C4D	-2.83	104.33	106.33
9	B	628	CLA	C3C-C4C-NC	2.83	112.58	109.97
9	B	640	CLA	C3D-C2D-C1D	-2.81	104.16	107.28
9	A	612	CLA	C3A-C4A-NA	2.79	115.78	109.92
9	A	622	CLA	C1D-ND-C4D	-2.78	104.36	106.33
9	A	605	CLA	C2B-C1B-NB	2.74	112.51	110.11
9	B	652	CLA	C3C-C4C-NC	2.74	112.50	109.97
9	A	617	CLA	C2A-C1A-CHA	2.69	127.22	122.63
9	A	615	CLA	C2A-C1A-CHA	2.68	127.20	122.63
9	F	158	CLA	C2A-C1A-CHA	2.67	127.18	122.63
9	A	614	CLA	C2A-C1A-CHA	2.65	127.16	122.63
9	A	618	CLA	C3C-C2C-C1C	-2.64	104.05	107.21
9	B	636	CLA	C3C-C4C-NC	2.64	112.40	109.97
9	A	618	CLA	C2A-C1A-CHA	2.62	127.11	122.63
9	A	614	CLA	C3C-C2C-C1C	-2.58	104.12	107.21
9	F	158	CLA	C4A-NA-C1A	2.56	107.86	106.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	F	158	CLA	C3C-C2C-C1C	-2.55	104.16	107.21
9	A	615	CLA	C3C-C2C-C1C	-2.54	104.17	107.21
9	A	617	CLA	C3C-C2C-C1C	-2.52	104.19	107.21
9	A	612	CLA	C3A-C4A-CHB	-2.51	120.84	123.91
9	B	645	CLA	C2B-C1B-NB	2.49	112.29	110.11
9	B	620	CLA	C2B-C1B-NB	2.49	112.29	110.11
9	A	628	CLA	C2B-C1B-NB	2.45	112.26	110.11
9	B	635	CLA	C3D-C2D-C1D	-2.45	104.56	107.28
9	B	625	CLA	C3C-C4C-NC	2.42	112.20	109.97
9	F	158	CLA	CHD-C1D-ND	-2.41	122.18	124.52
9	A	610	CLA	C3C-C4C-NC	2.38	112.16	109.97
9	A	618	CLA	CHD-C1D-ND	-2.36	122.23	124.52
9	B	635	CLA	C3A-C4A-CHB	-2.33	121.06	123.91
9	A	617	CLA	CHD-C1D-ND	-2.31	122.28	124.52
9	A	629	CLA	C3C-C4C-NC	2.31	112.10	109.97
9	L	149	CLA	C3C-C4C-NC	2.31	112.10	109.97
9	A	614	CLA	CHD-C1D-ND	-2.30	122.29	124.52
9	B	640	CLA	C2D-C1D-ND	2.30	112.93	109.46
9	B	641	CLA	C2B-C1B-NB	2.30	112.12	110.11
9	A	615	CLA	CHD-C1D-ND	-2.29	122.30	124.52
9	B	640	CLA	C3B-C4B-NB	2.29	112.11	110.11
9	B	632	CLA	C3B-C4B-NB	2.29	112.11	110.11
9	A	599	CLA	C3C-C4C-NC	2.28	112.08	109.97
9	B	635	CLA	C2B-C1B-NB	2.25	112.07	110.11
9	A	611	CLA	C2B-C1B-NB	2.25	112.07	110.11
9	A	620	CLA	C2B-C1B-NB	2.23	112.06	110.11
9	A	604	CLA	C2B-C1B-NB	2.23	112.06	110.11
9	A	605	CLA	C3B-C4B-NB	2.23	112.06	110.11
9	B	633	CLA	C3B-C4B-NB	2.22	112.05	110.11
9	B	645	CLA	C3C-C4C-NC	2.22	112.02	109.97
9	A	608	CLA	C3B-C4B-NB	2.19	112.03	110.11
9	B	642	CLA	C3B-C4B-NB	2.18	112.02	110.11
9	A	623	CLA	C3B-C4B-NB	2.16	112.00	110.11
9	A	629	CLA	C2B-C1B-NB	2.16	112.00	110.11
9	B	628	CLA	C1D-ND-C4D	-2.15	104.81	106.33
9	A	622	CLA	C3C-C4C-NC	2.15	111.95	109.97
9	B	643	CLA	C3C-C4C-NC	2.13	111.94	109.97
9	A	625	CLA	C3B-C4B-NB	2.13	111.97	110.11
9	F	155	CLA	C3B-C4B-NB	2.11	111.96	110.11
9	A	612	CLA	C2C-C1C-NC	2.11	113.09	109.51
9	B	631	CLA	C3C-C4C-NC	2.10	111.91	109.97
9	A	609	CLA	C2B-C1B-NB	2.08	111.93	110.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	B	637	CLA	C3B-C4B-NB	2.07	111.92	110.11
9	B	635	CLA	C2D-C1D-ND	2.07	112.58	109.46
9	B	639	CLA	C3C-C4C-NC	2.07	111.88	109.97
9	B	644	CLA	C3C-C4C-NC	2.07	111.88	109.97
9	B	637	CLA	C3C-C4C-NC	2.06	111.88	109.97
9	F	156	CLA	C3B-C4B-NB	2.06	111.92	110.11
9	B	649	CLA	C3B-C4B-NB	2.06	111.91	110.11
9	B	630	CLA	C3B-C4B-NB	2.05	111.91	110.11
9	B	630	CLA	C2B-C1B-NB	2.04	111.89	110.11
9	A	622	CLA	C2B-C1B-NB	2.04	111.89	110.11
9	B	639	CLA	C2B-C1B-NB	2.03	111.89	110.11
9	K	135	CLA	C3C-C4C-NC	2.03	111.85	109.97
9	B	624	CLA	C2B-C1B-NB	2.02	111.88	110.11
9	A	613	CLA	C3C-C4C-NC	2.01	111.82	109.97
9	L	149	CLA	C3B-C4B-NB	2.01	111.86	110.11
9	B	641	CLA	C3B-C4B-NB	2.00	111.86	110.11

All (67) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
9	A	598	CLA	ND
9	A	599	CLA	ND
9	A	600	CLA	ND
9	A	603	CLA	ND
9	A	604	CLA	ND
9	A	605	CLA	ND
9	A	606	CLA	ND
9	A	607	CLA	ND
9	A	608	CLA	ND
9	A	609	CLA	ND
9	A	610	CLA	ND
9	A	611	CLA	ND
9	A	612	CLA	ND
9	A	613	CLA	ND
9	A	616	CLA	ND
9	A	619	CLA	ND
9	A	620	CLA	ND
9	A	621	CLA	ND
9	A	622	CLA	ND
9	A	623	CLA	ND
9	A	624	CLA	ND
9	A	625	CLA	ND

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Mol	Chain	Res	Type	Atom
9	A	626	CLA	ND
9	A	627	CLA	ND
9	A	628	CLA	ND
9	A	629	CLA	ND
9	B	620	CLA	ND
9	B	621	CLA	ND
9	B	622	CLA	ND
9	B	624	CLA	ND
9	B	625	CLA	ND
9	B	626	CLA	ND
9	B	627	CLA	ND
9	B	628	CLA	ND
9	B	629	CLA	ND
9	B	630	CLA	ND
9	B	631	CLA	ND
9	B	632	CLA	ND
9	B	633	CLA	ND
9	B	634	CLA	ND
9	B	635	CLA	ND
9	B	636	CLA	ND
9	B	637	CLA	ND
9	B	638	CLA	ND
9	B	639	CLA	ND
9	B	640	CLA	ND
9	B	641	CLA	ND
9	B	642	CLA	ND
9	B	643	CLA	ND
9	B	644	CLA	ND
9	B	645	CLA	ND
9	B	646	CLA	ND
9	B	647	CLA	ND
9	B	648	CLA	ND
9	B	649	CLA	ND
9	B	650	CLA	ND
9	B	651	CLA	ND
9	B	652	CLA	ND
9	B	653	CLA	ND
9	F	154	CLA	ND
9	F	155	CLA	ND
9	F	156	CLA	ND
9	F	157	CLA	ND
9	K	135	CLA	ND

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Mol	Chain	Res	Type	Atom
9	L	147	CLA	ND
9	L	149	CLA	ND
9	L	163	CLA	ND

There are no torsion outliers.

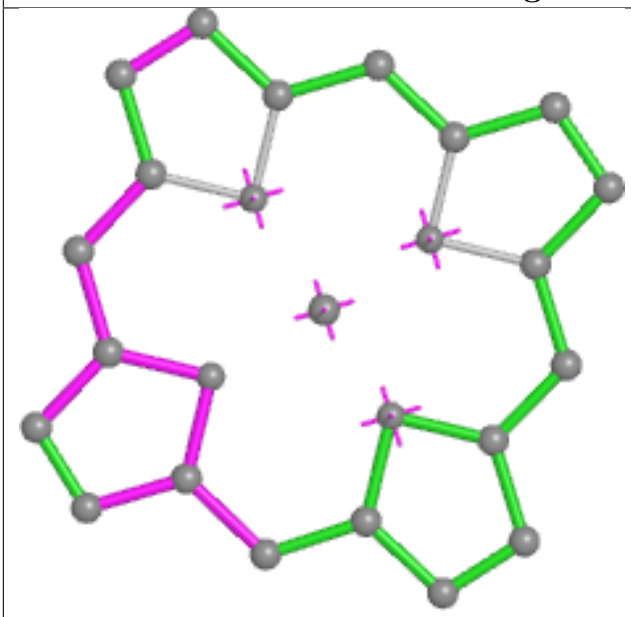
There are no ring outliers.

11 monomers are involved in 32 short contacts:

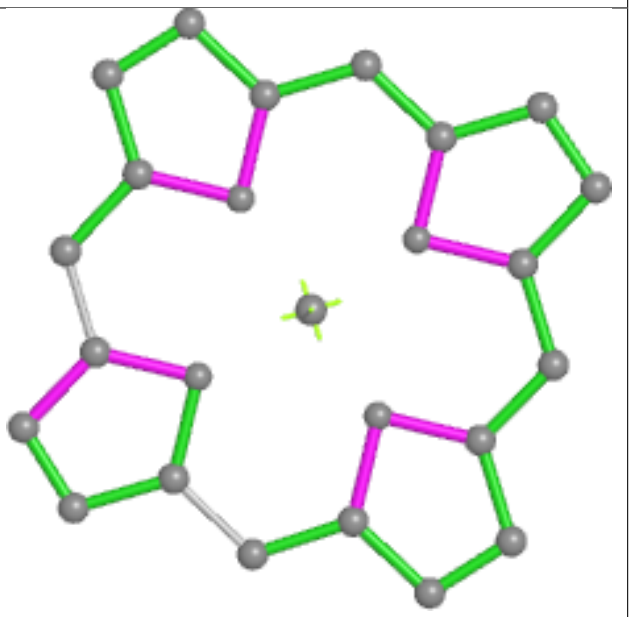
Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	B	627	CLA	5	0
9	A	600	CLA	1	0
9	B	641	CLA	13	0
9	A	628	CLA	6	0
9	K	135	CLA	13	0
11	C	79	SF4	1	0
9	B	629	CLA	4	0
9	A	612	CLA	1	0
9	B	636	CLA	4	0
9	A	629	CLA	6	0
11	C	78	SF4	1	0

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

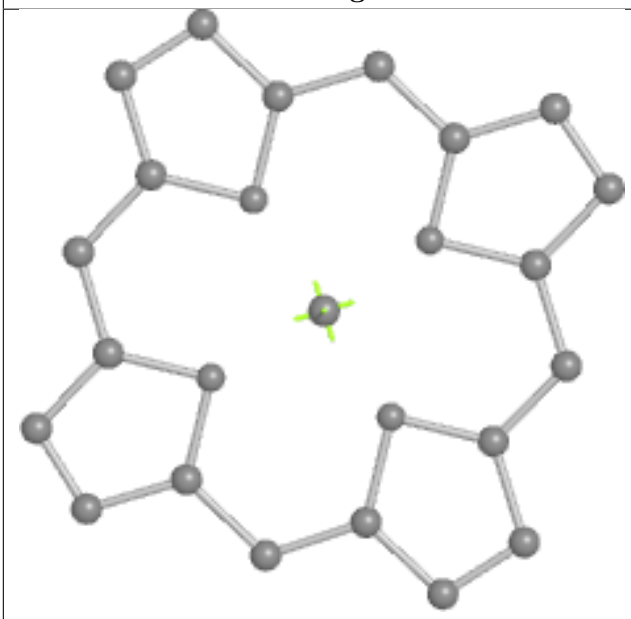
Ligand CLA A 604



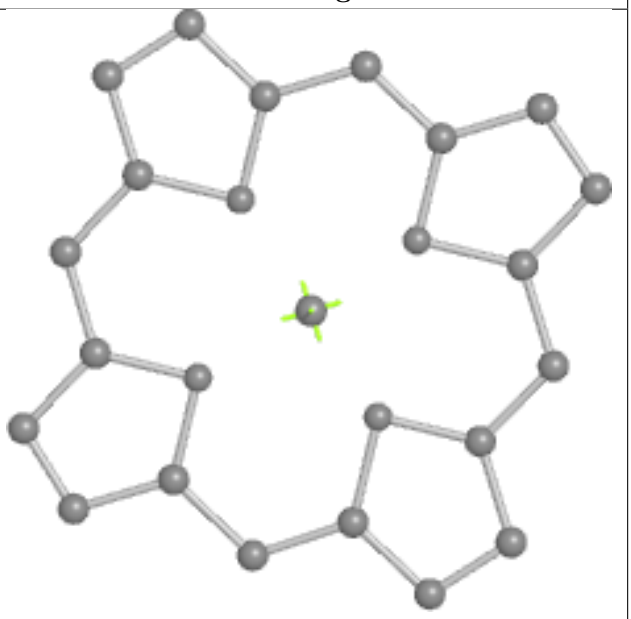
Bond lengths



Bond angles

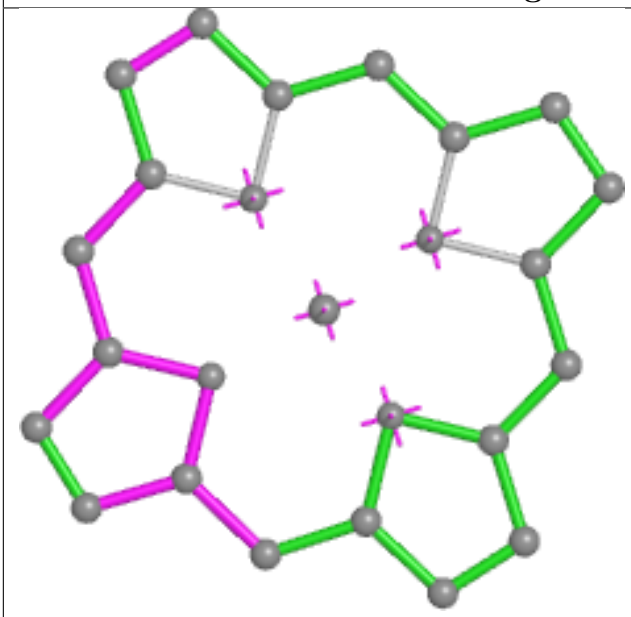


Torsions

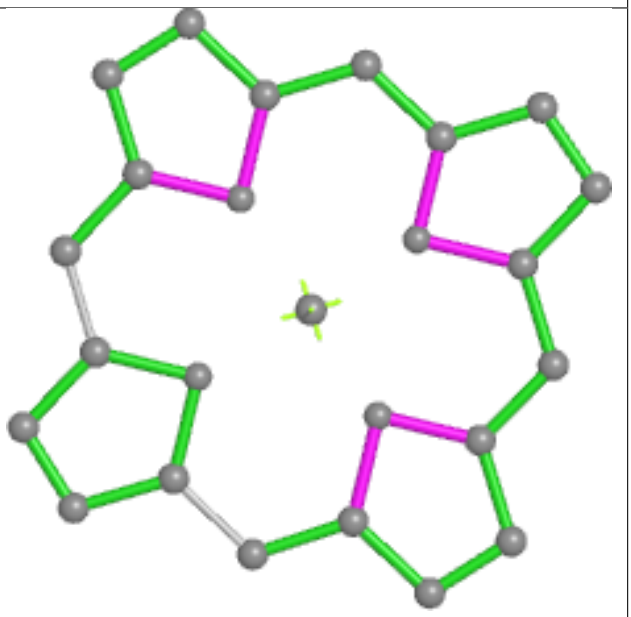


Rings

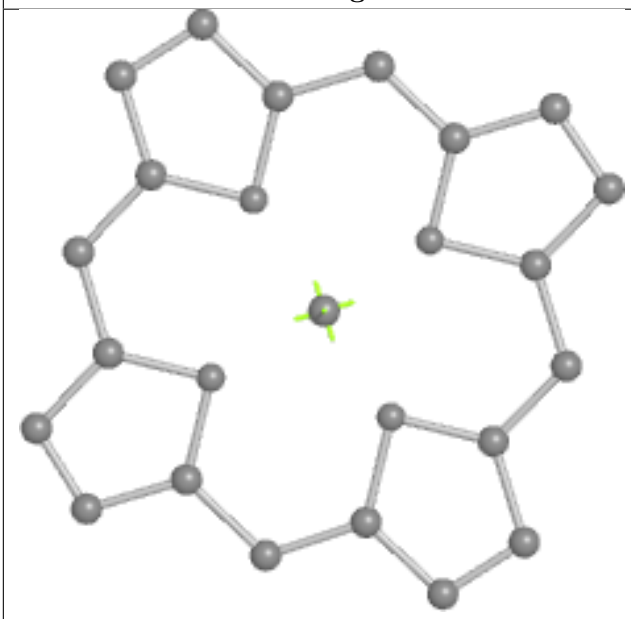
Ligand CLA B 650



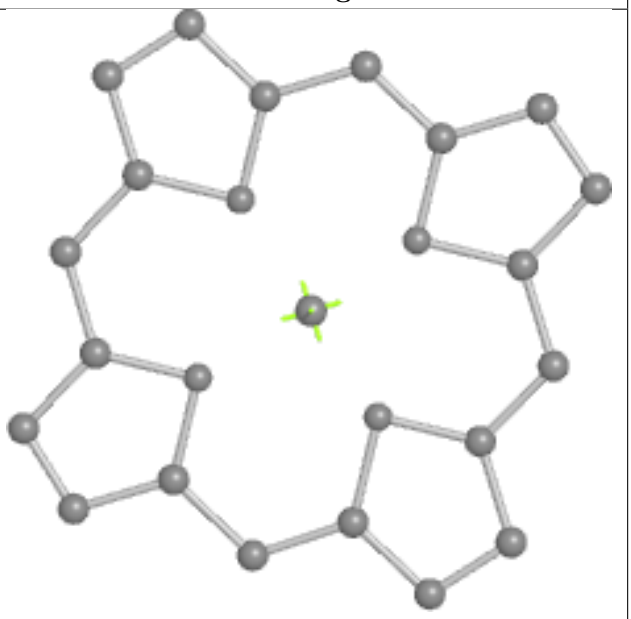
Bond lengths



Bond angles

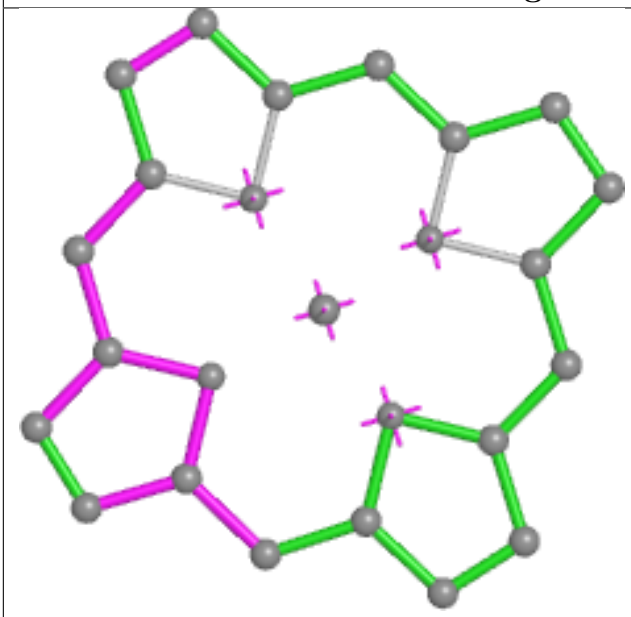


Torsions

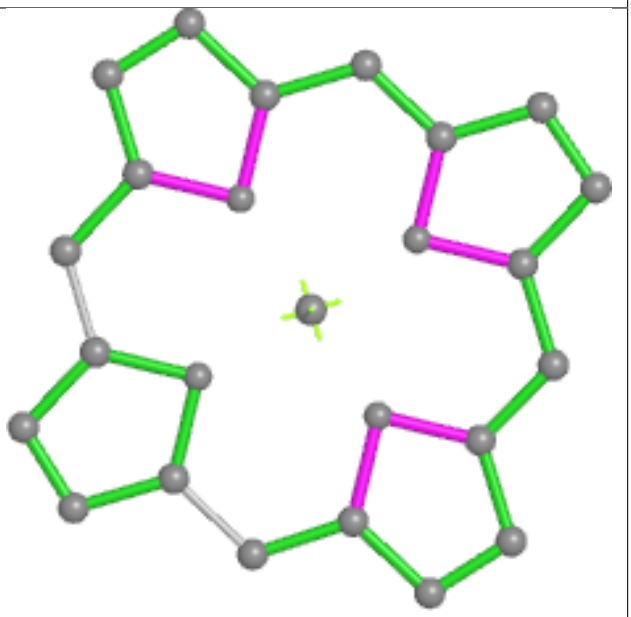


Rings

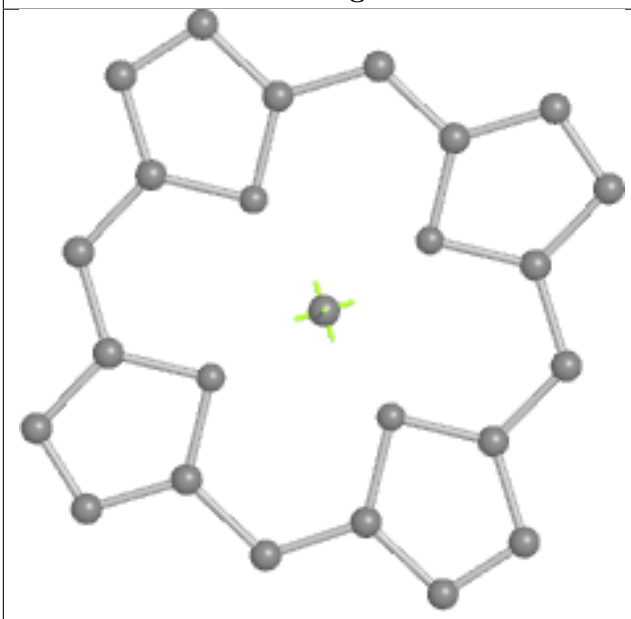
Ligand CLA B 627



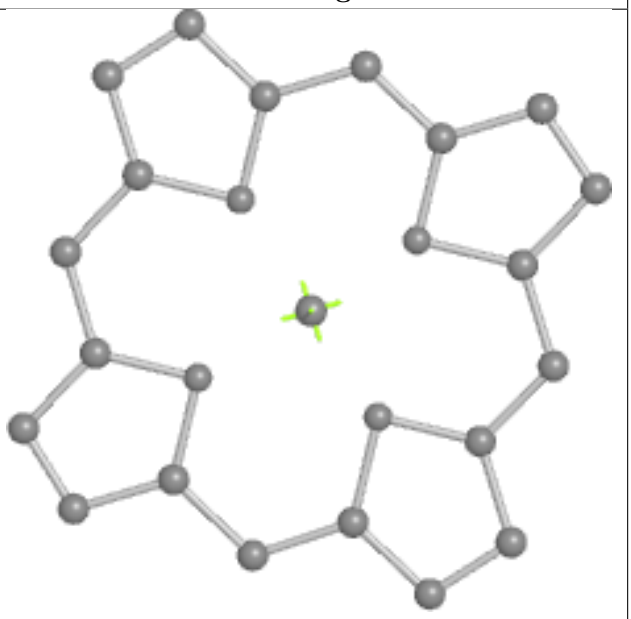
Bond lengths



Bond angles

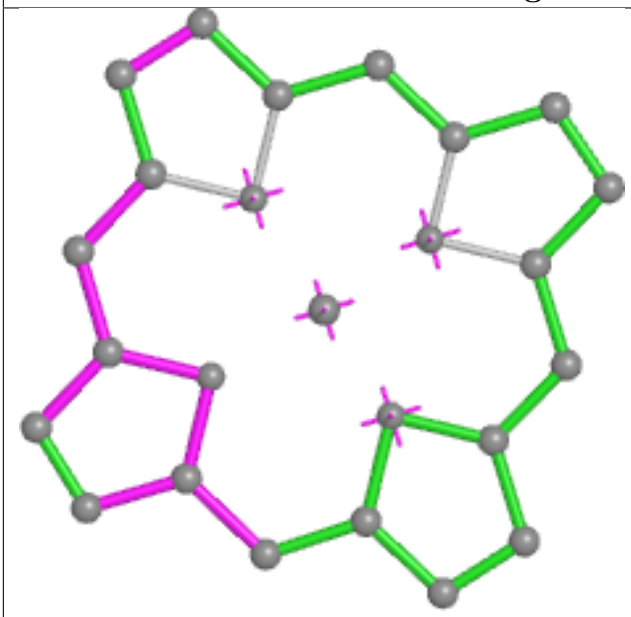


Torsions

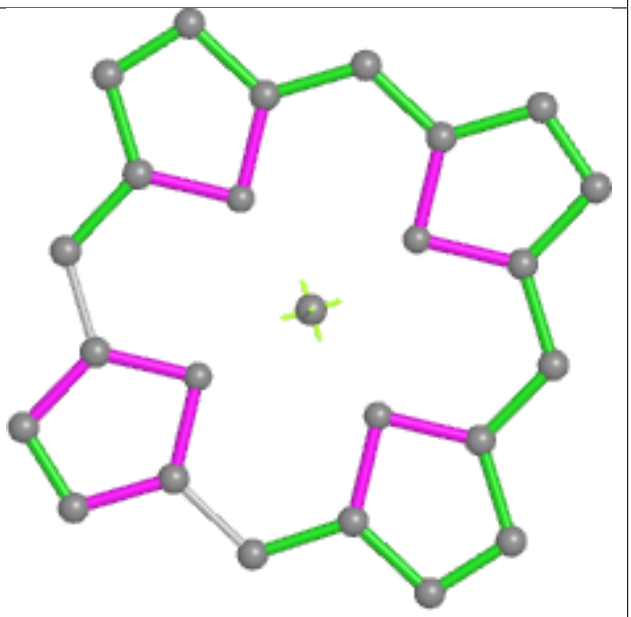


Rings

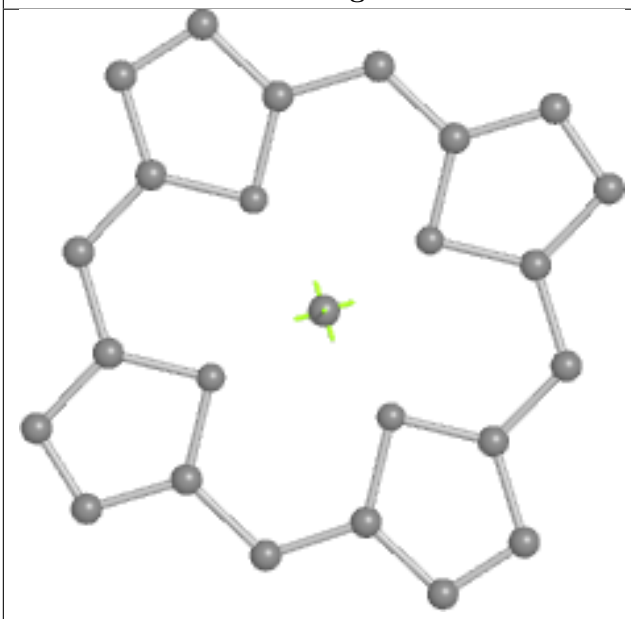
Ligand CLA B 630



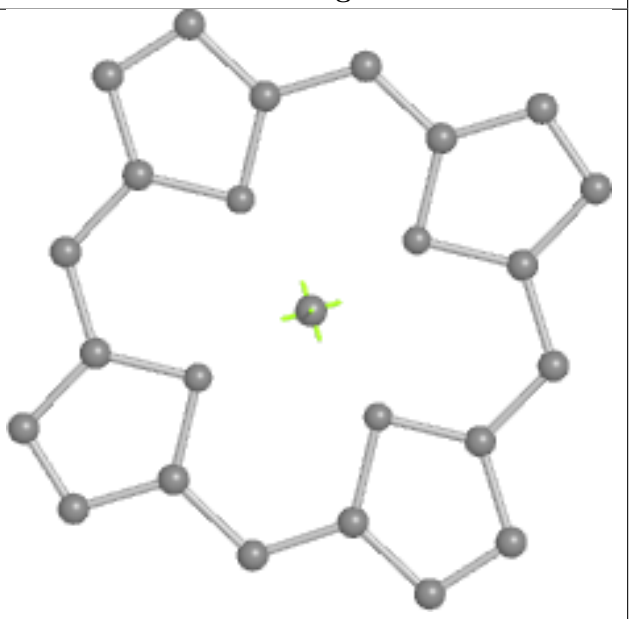
Bond lengths



Bond angles

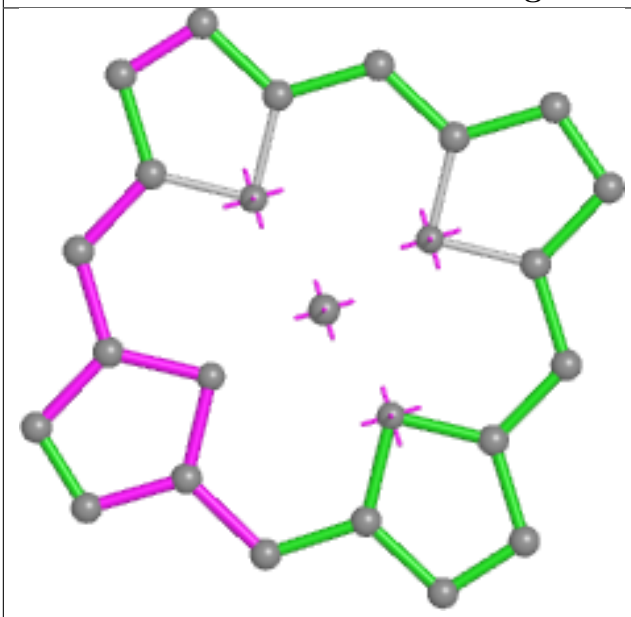


Torsions

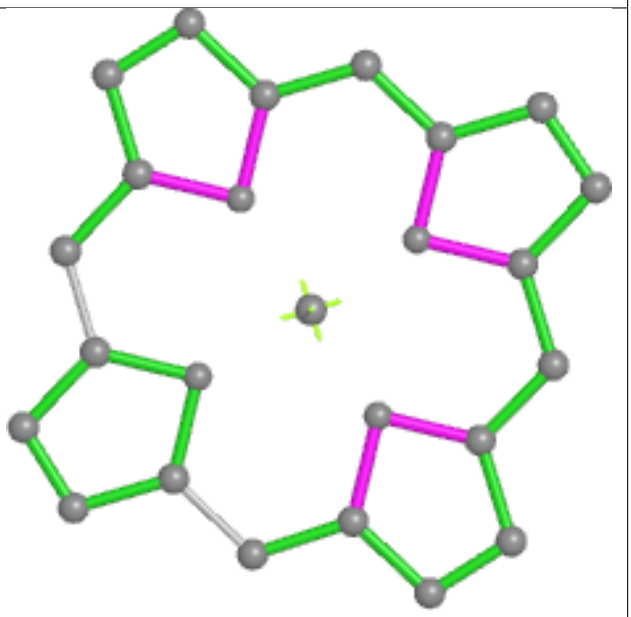


Rings

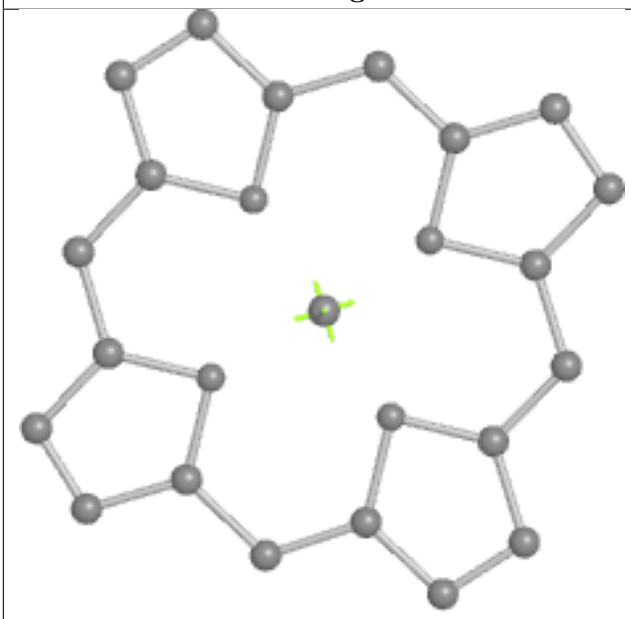
Ligand CLA B 646



Bond lengths



Bond angles



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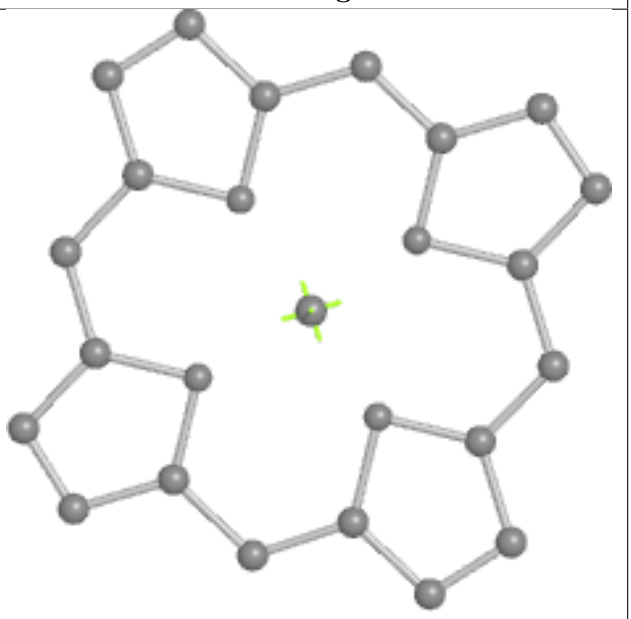
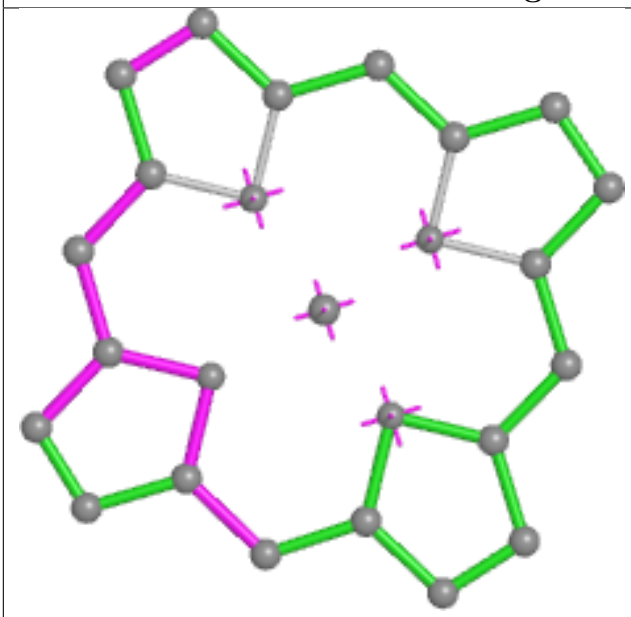


Rings

Ligand CLA B 638



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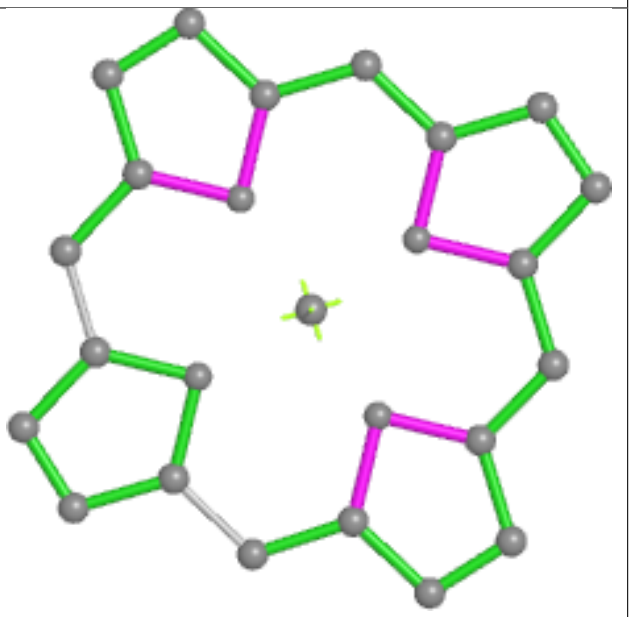
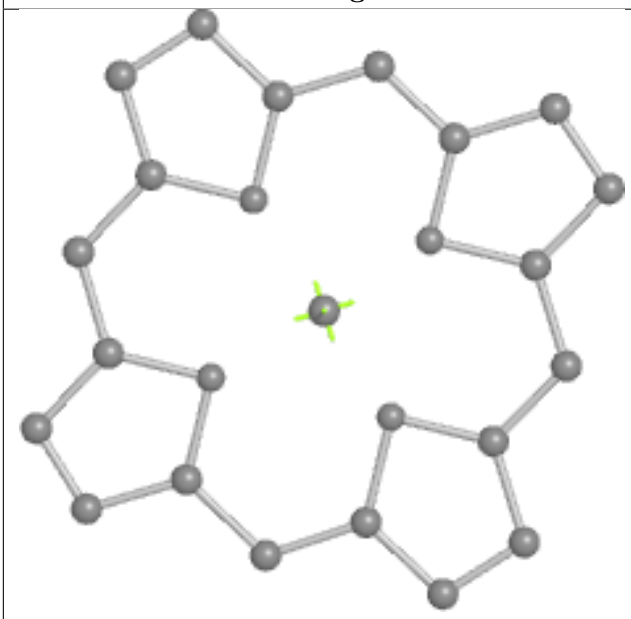


Bond angles



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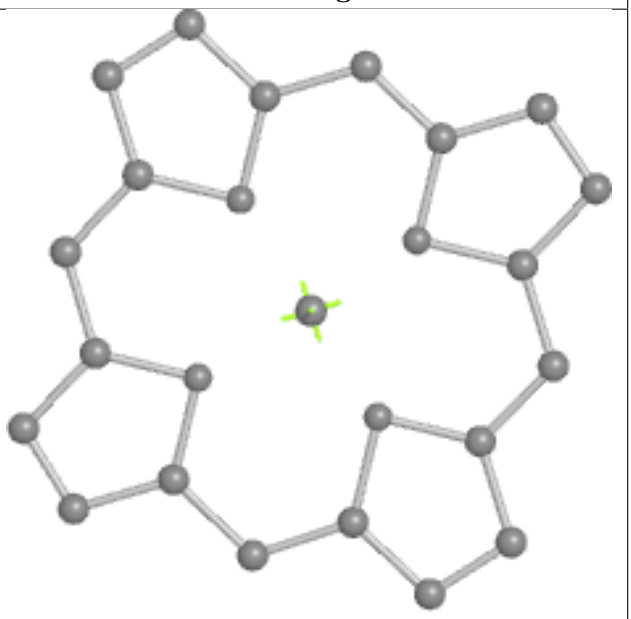
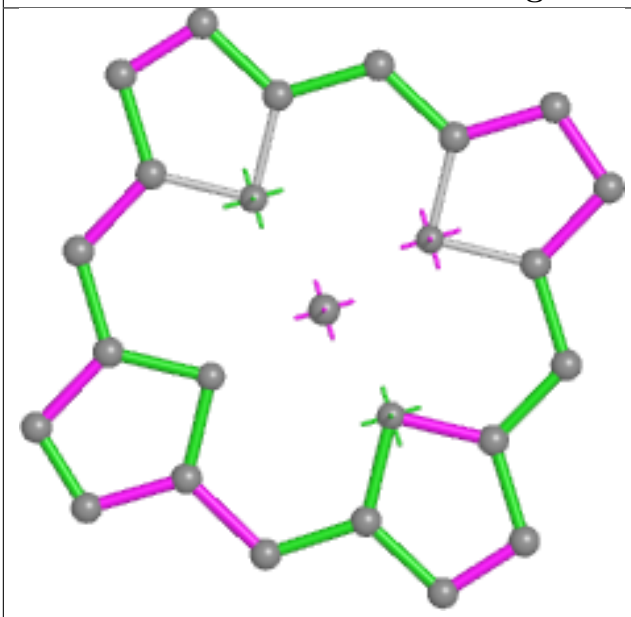


Rings

Ligand CLA F 158



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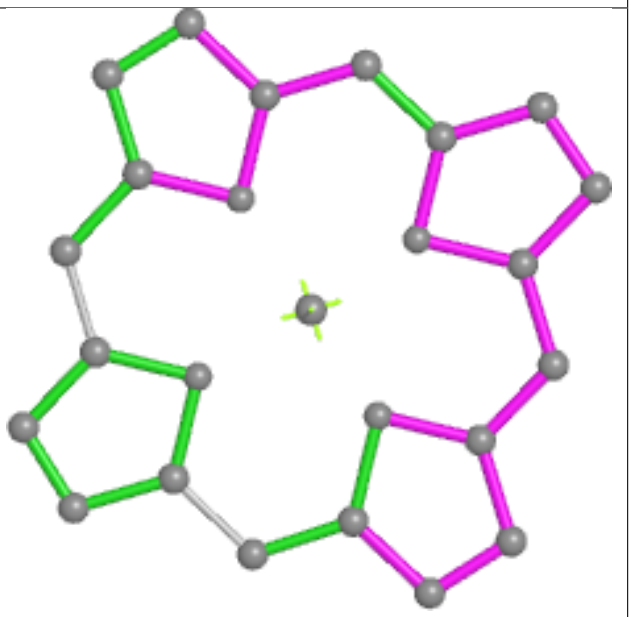
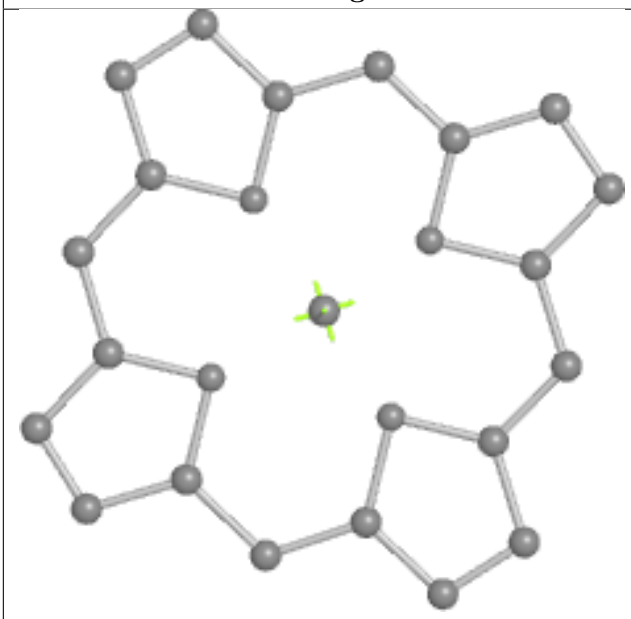


Bond angles



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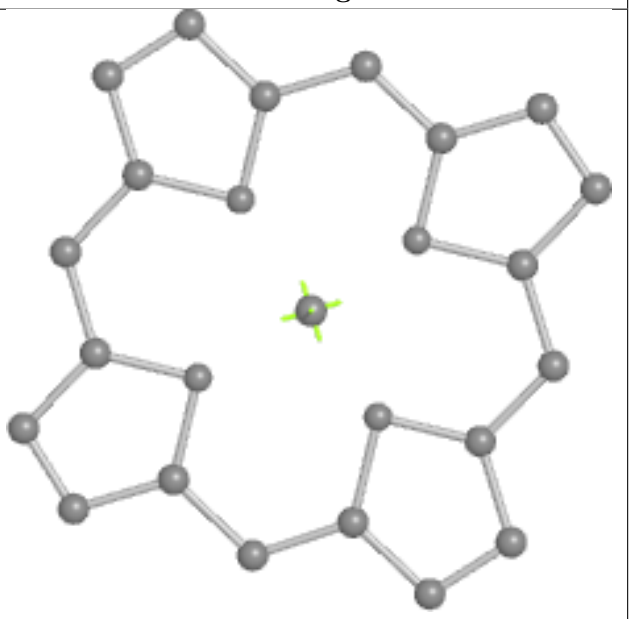
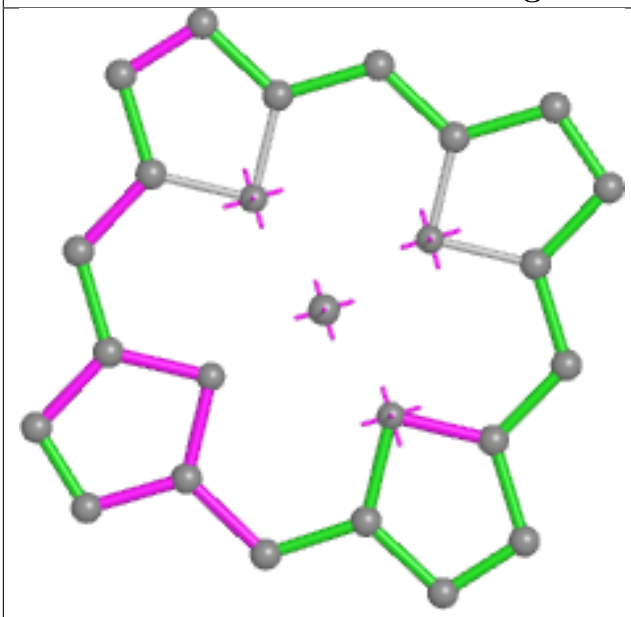


Rings

Ligand CLA A 600



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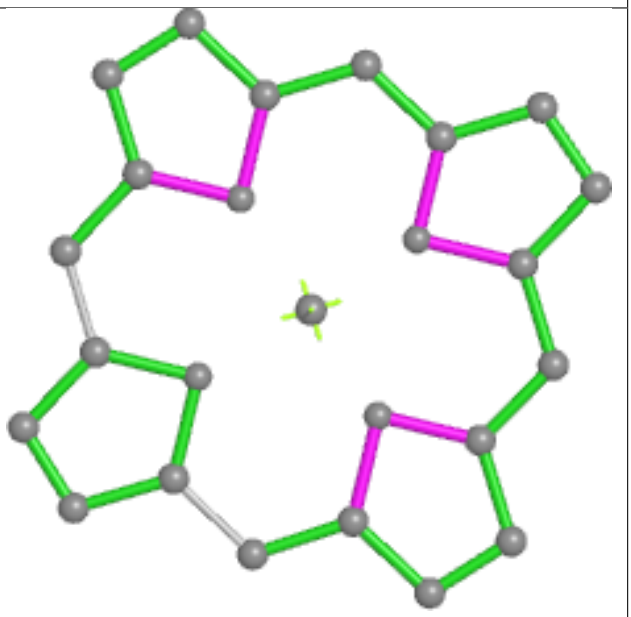
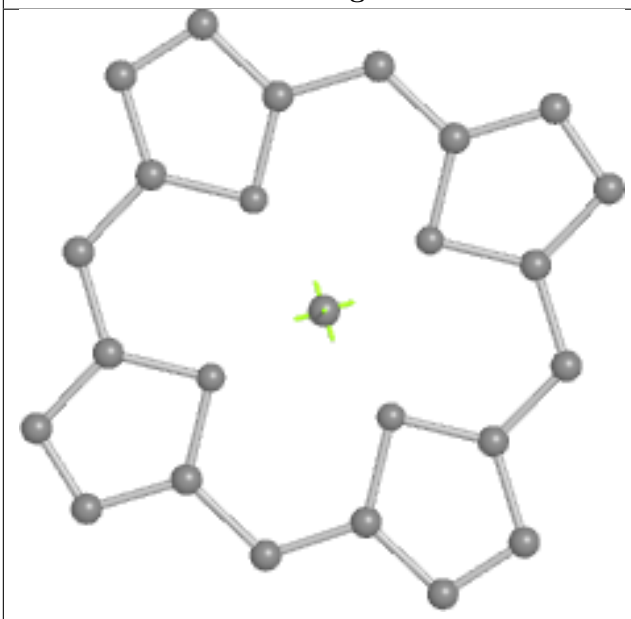
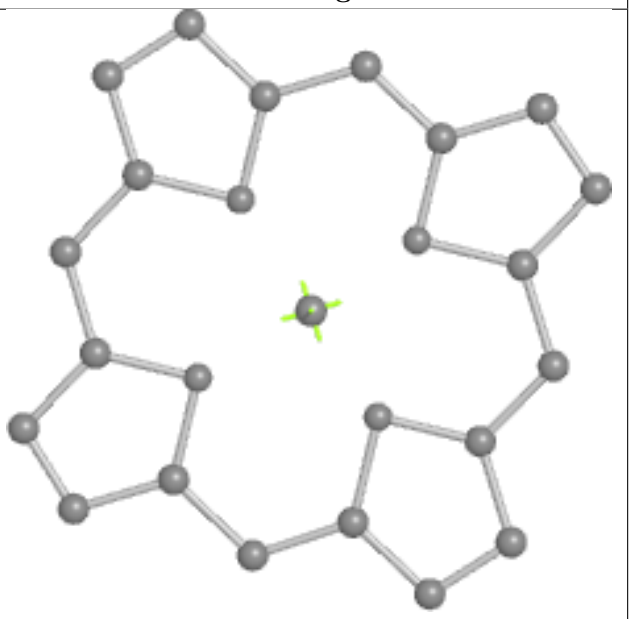


Bond angles

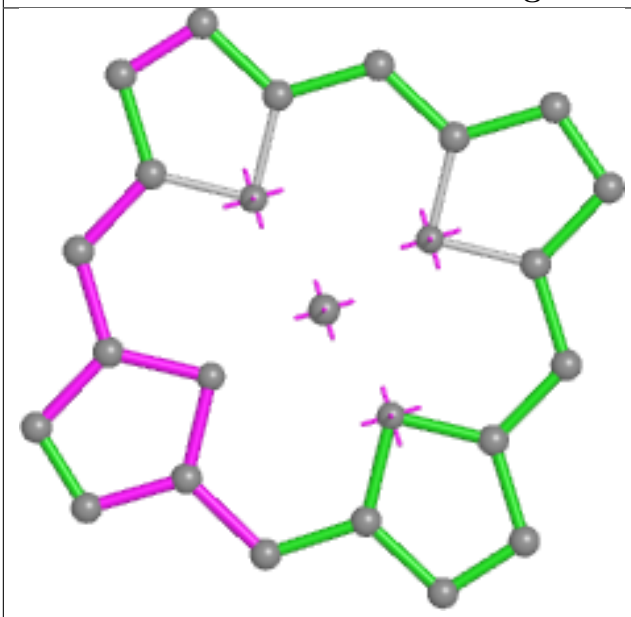


Torsions



Rings

Ligand CLA A 623



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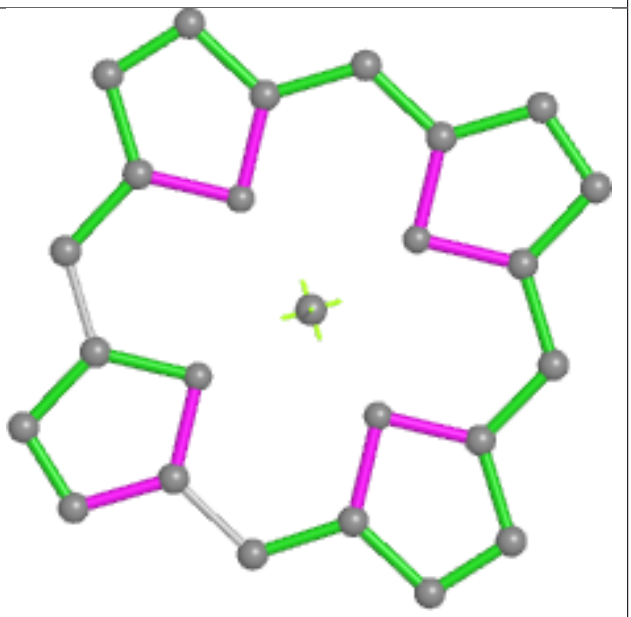
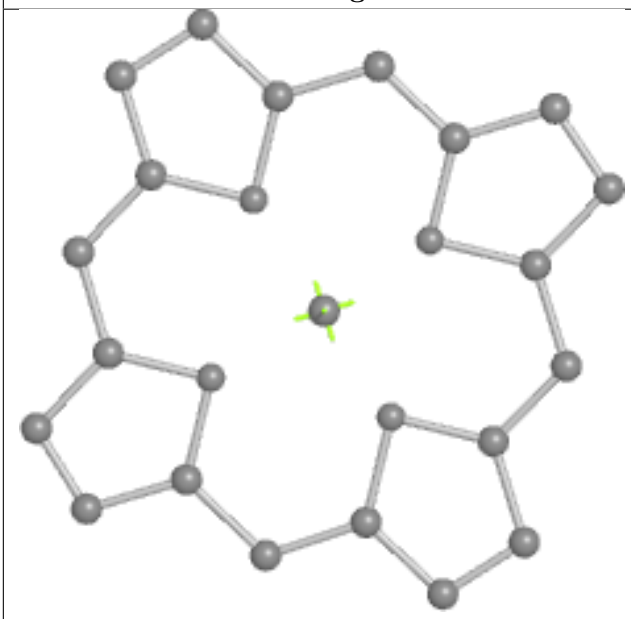
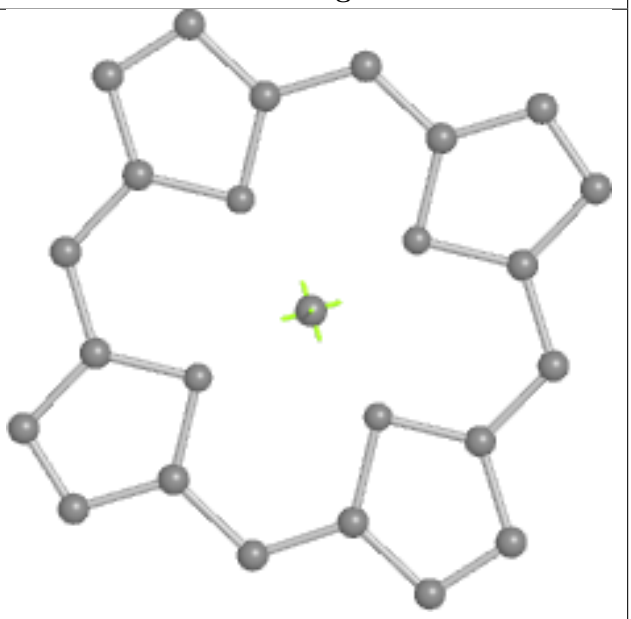


Bond angles

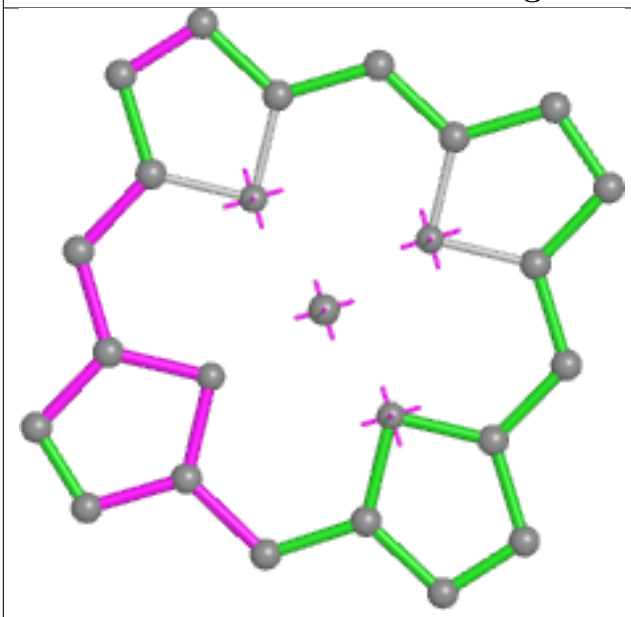


Torsions



Rings

Ligand CLA A 605



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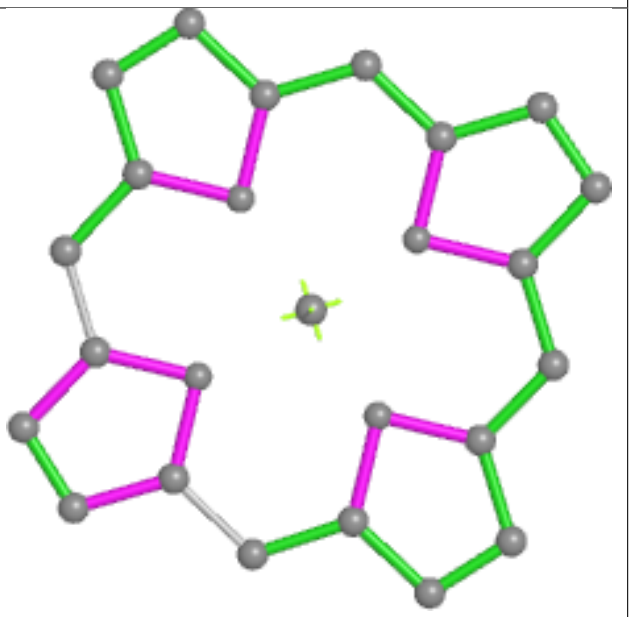

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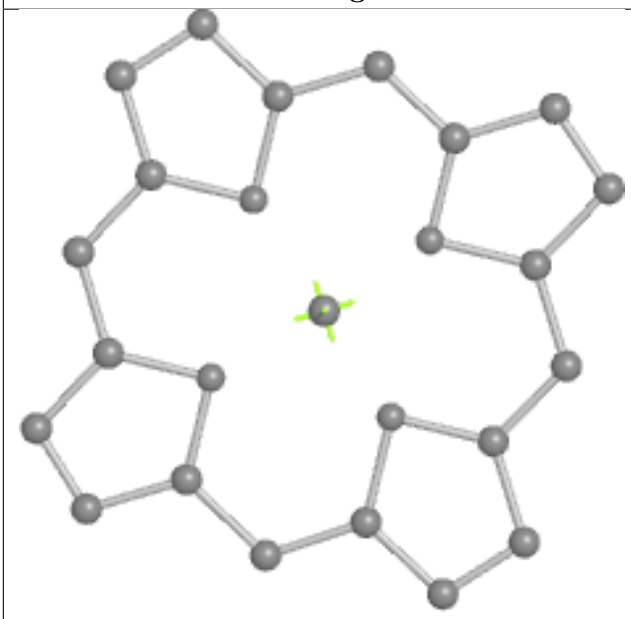

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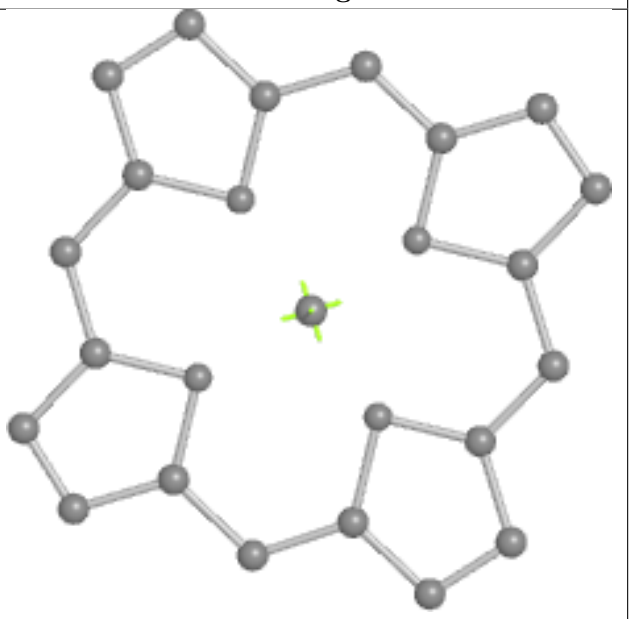
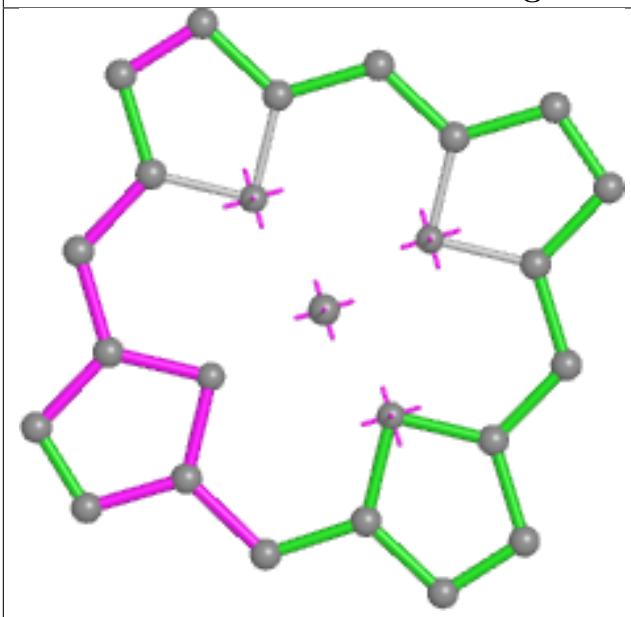


Rings

Ligand CLA A 621



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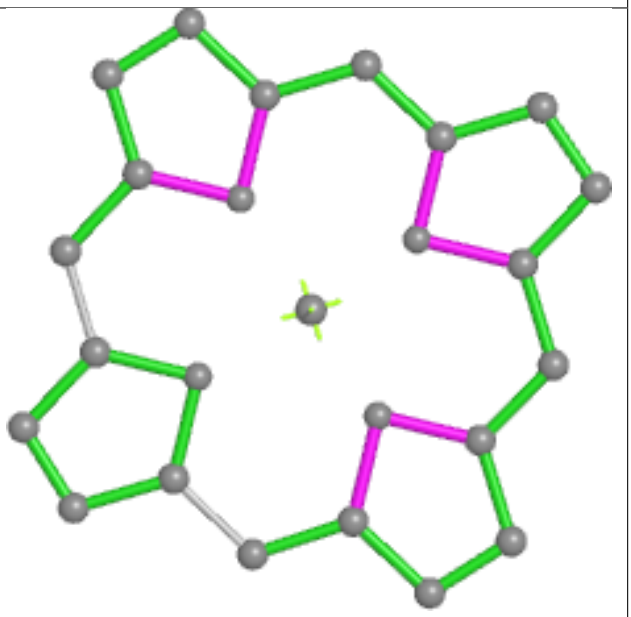

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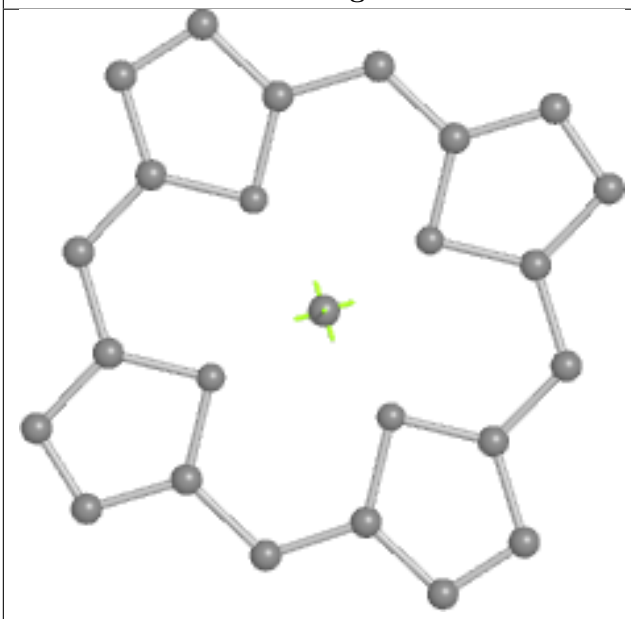

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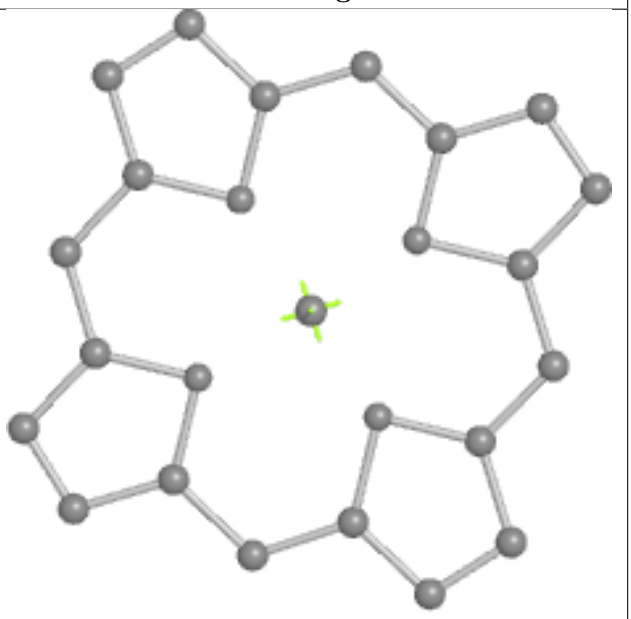
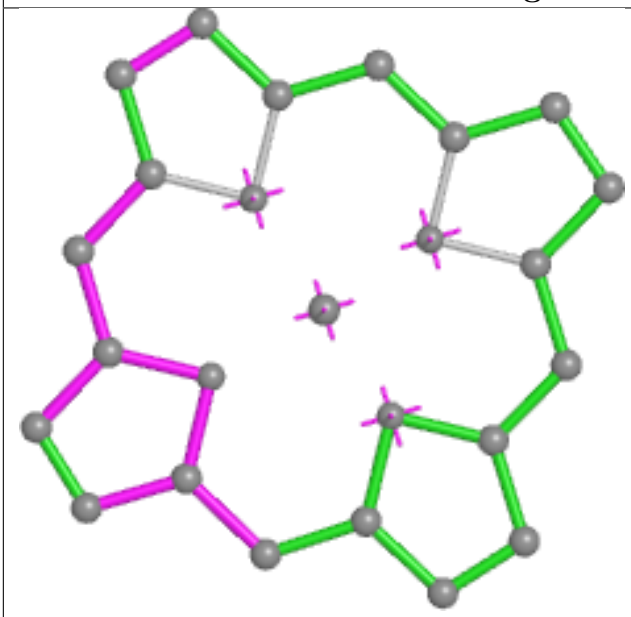


Rings

Ligand CLA A 624



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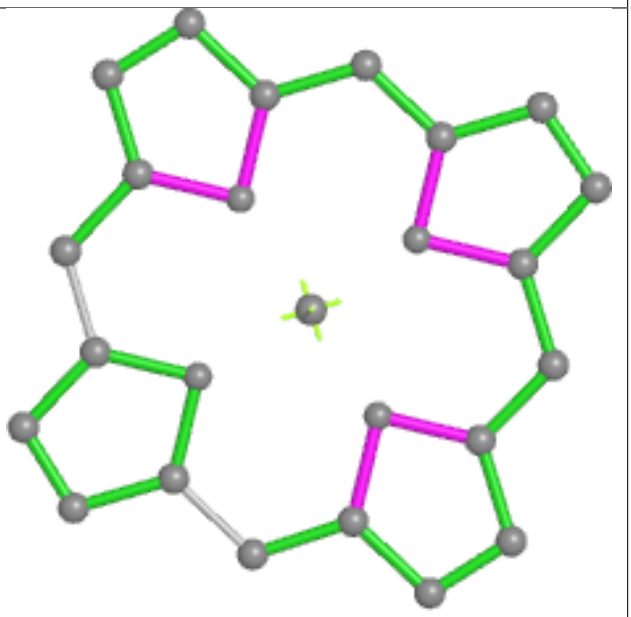
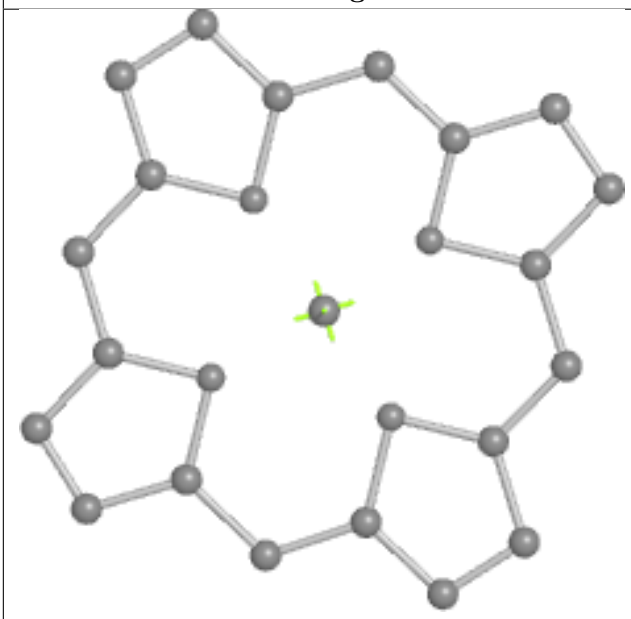


Bond angles



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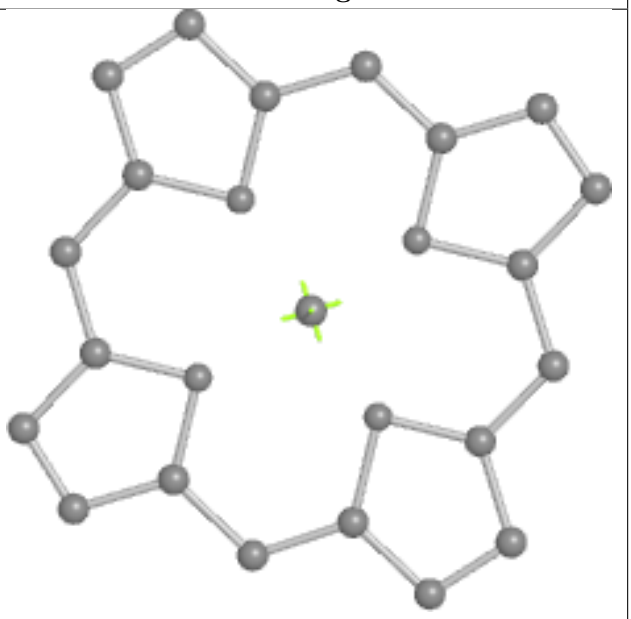
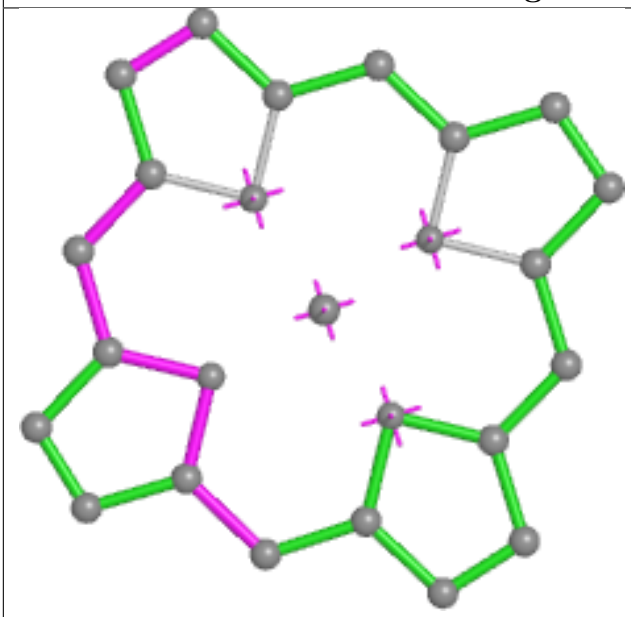


Rings

Ligand CLA B 634



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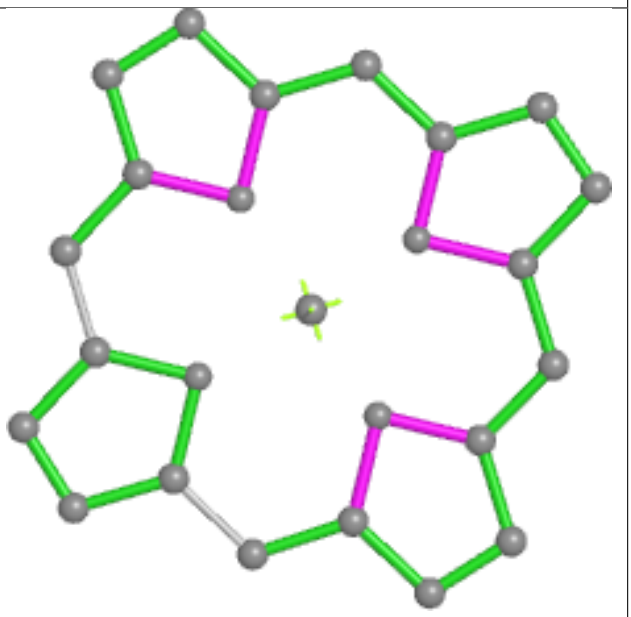
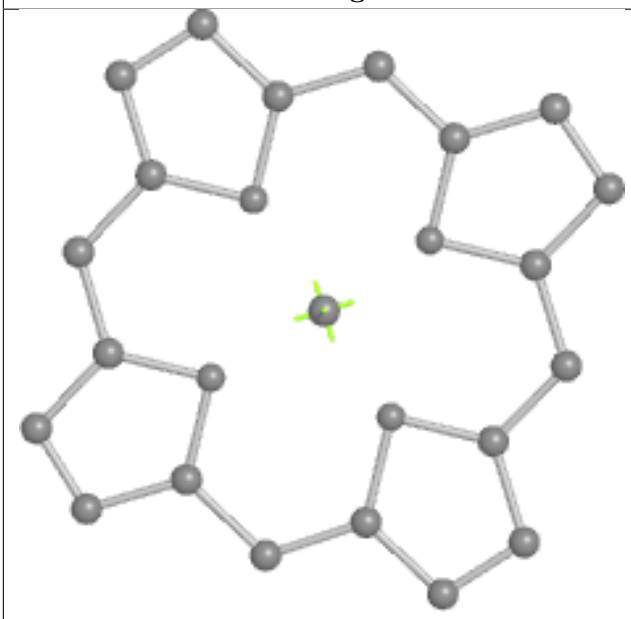


Bond angles



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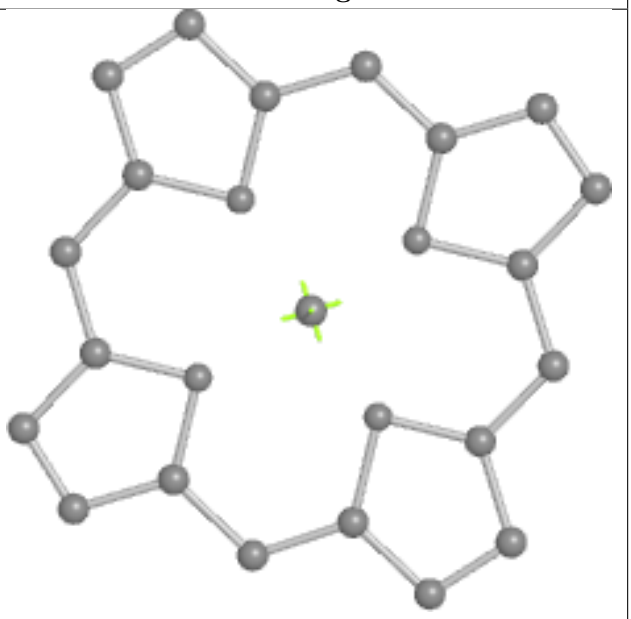
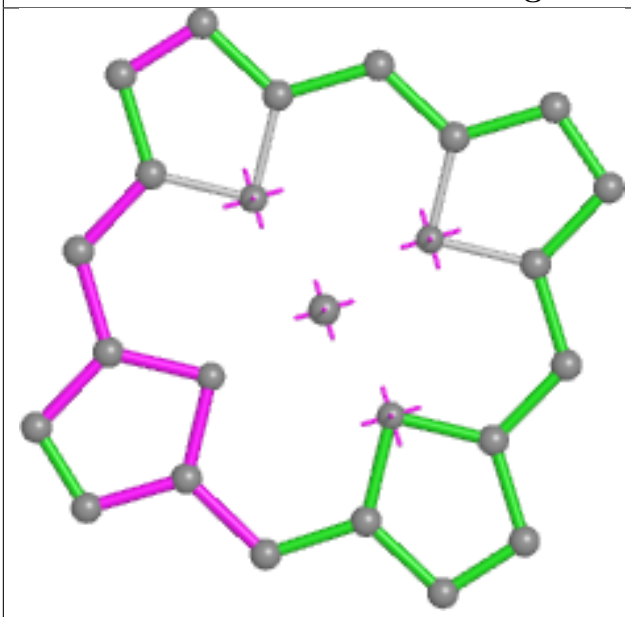
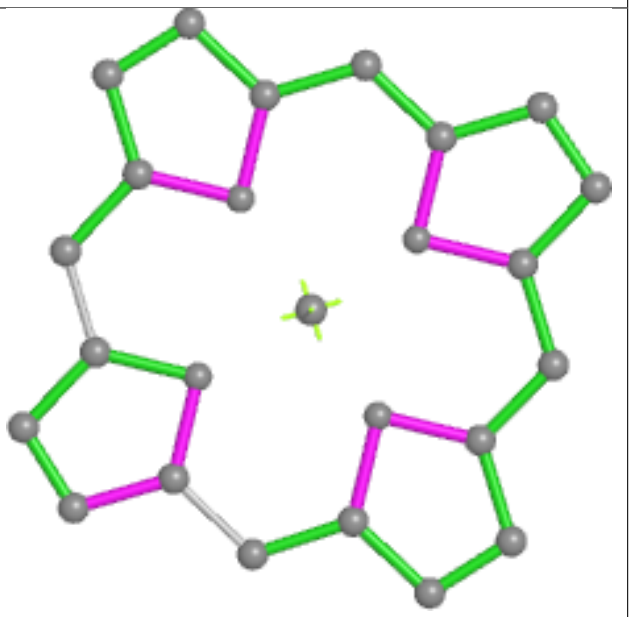


Rings

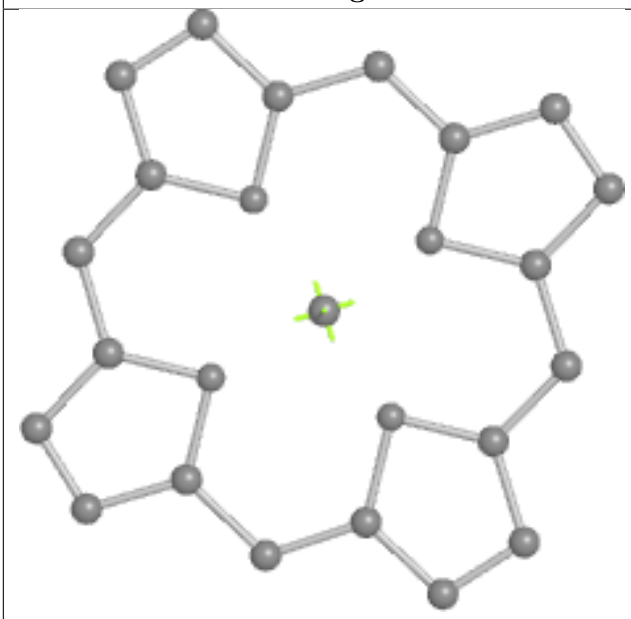
Ligand CLA B 642



Bond lengths



Bond angles



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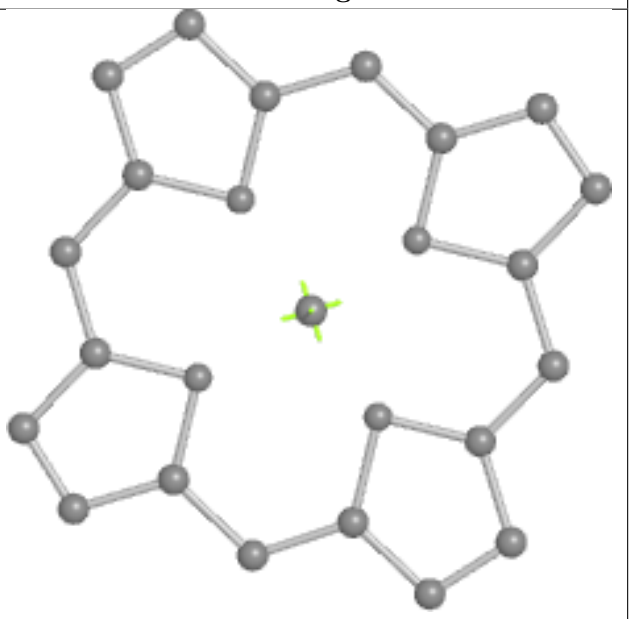
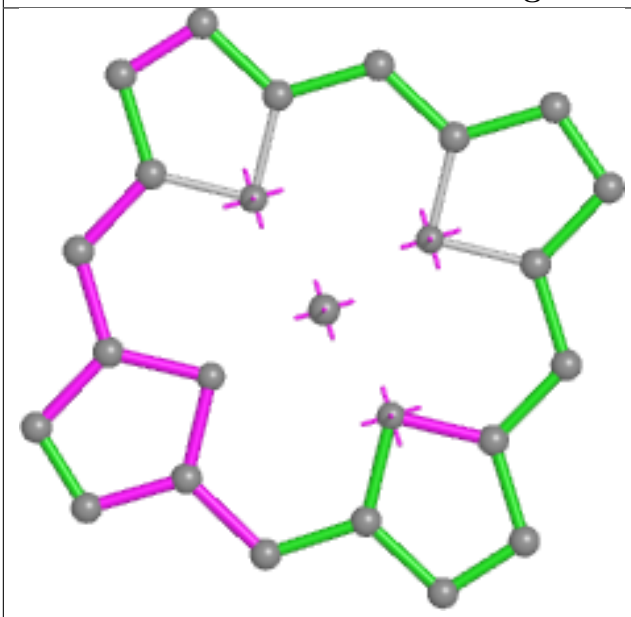
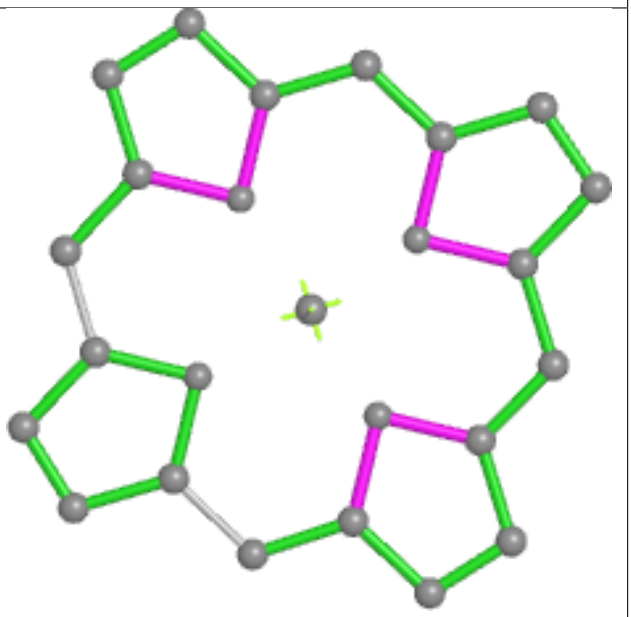


Rings

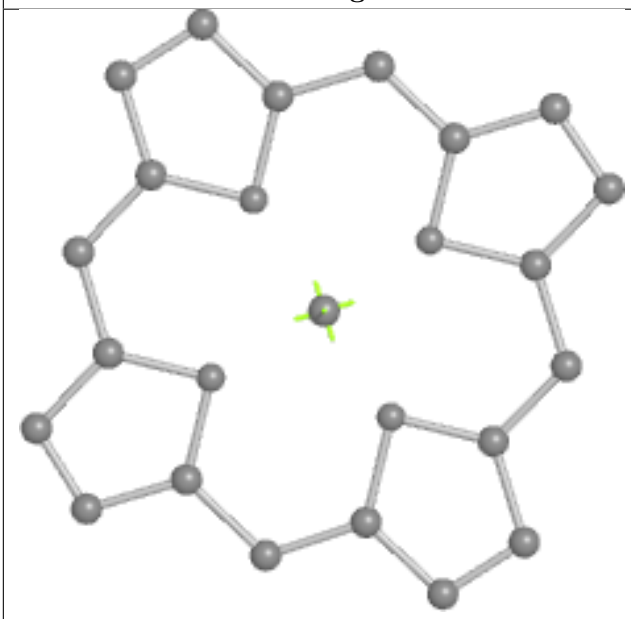
Ligand CLA A 598



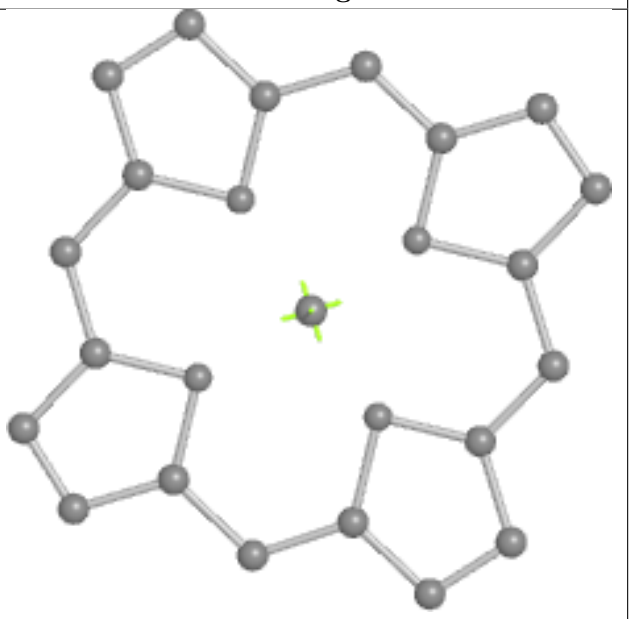
Bond lengths



Bond angles

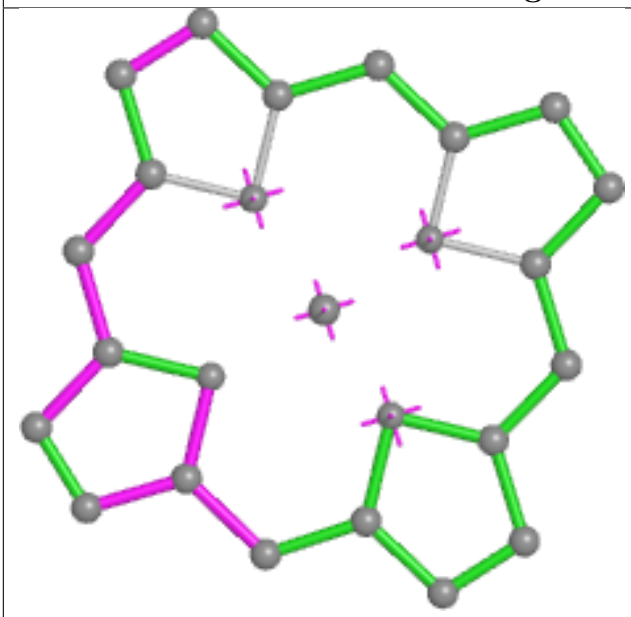


Torsions

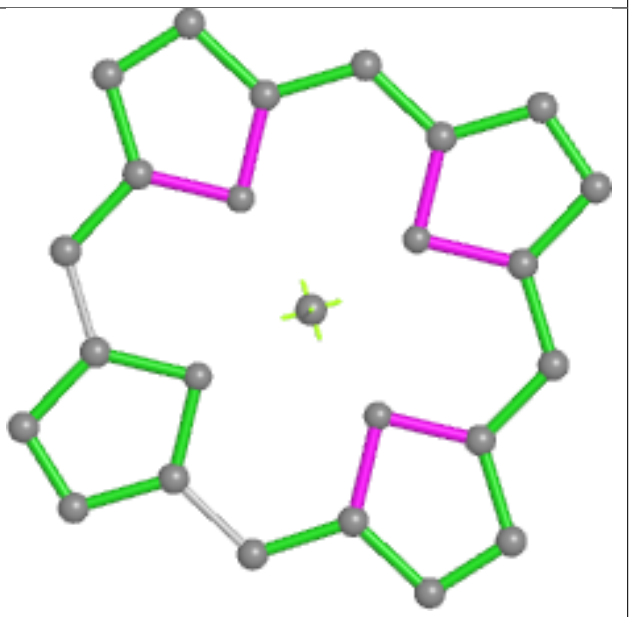


Rings

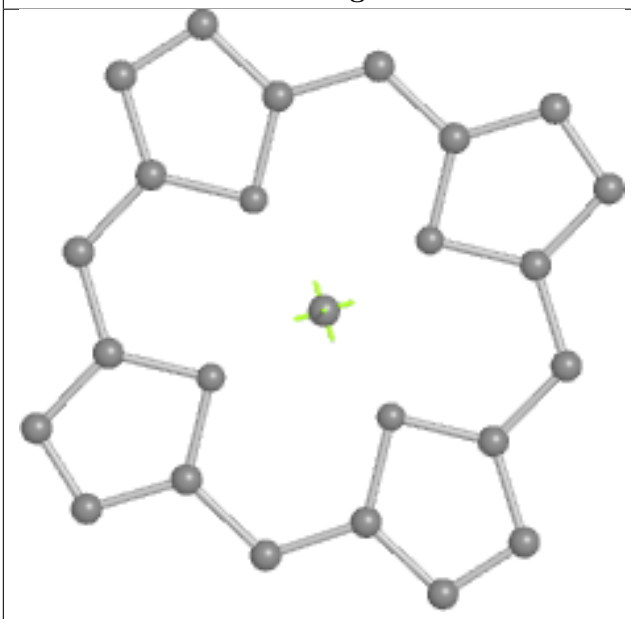
Ligand CLA B 621



Bond lengths



Bond angles



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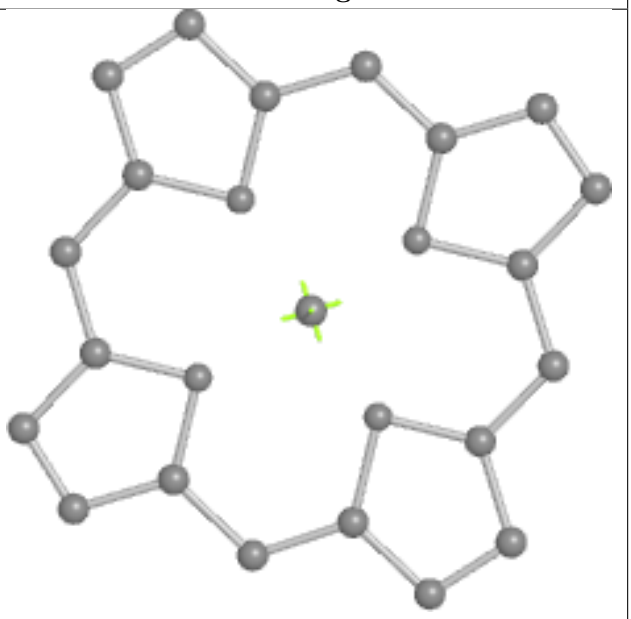
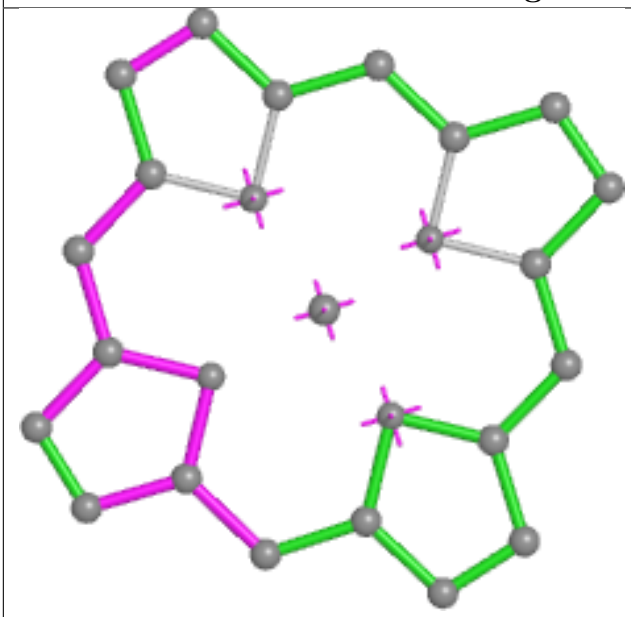
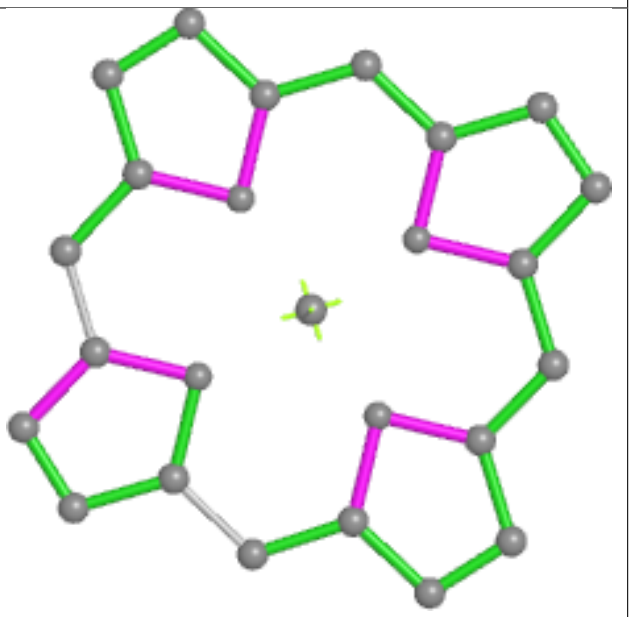


Rings

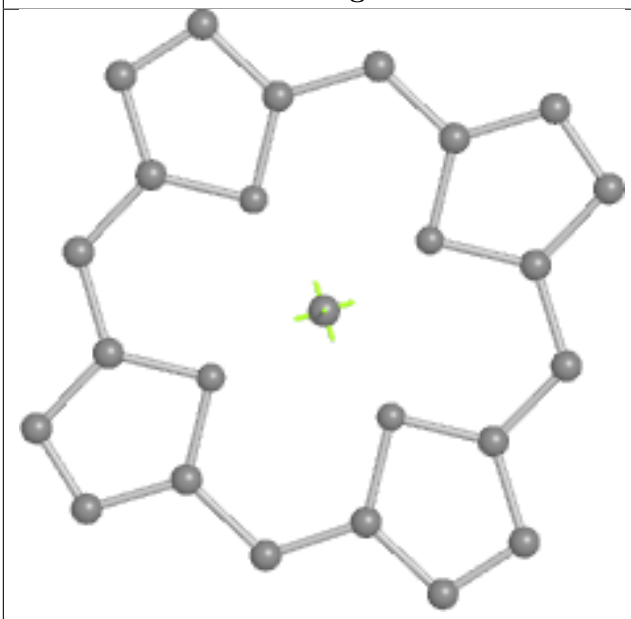
Ligand CLA B 624



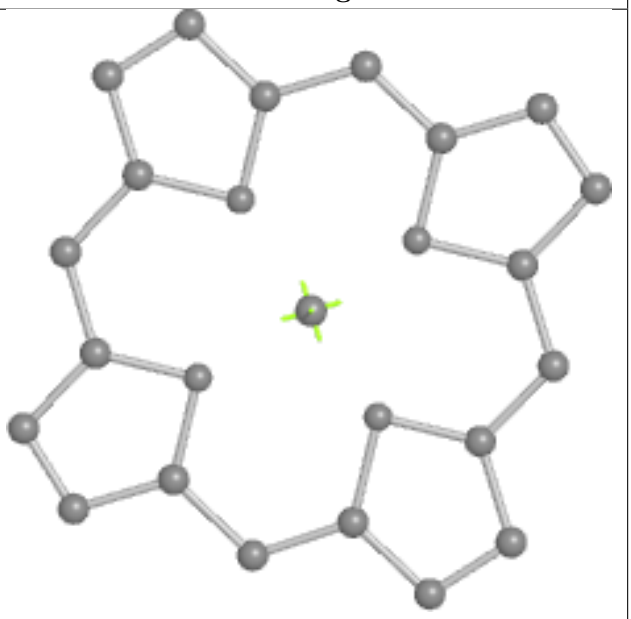
Bond lengths



Bond angles

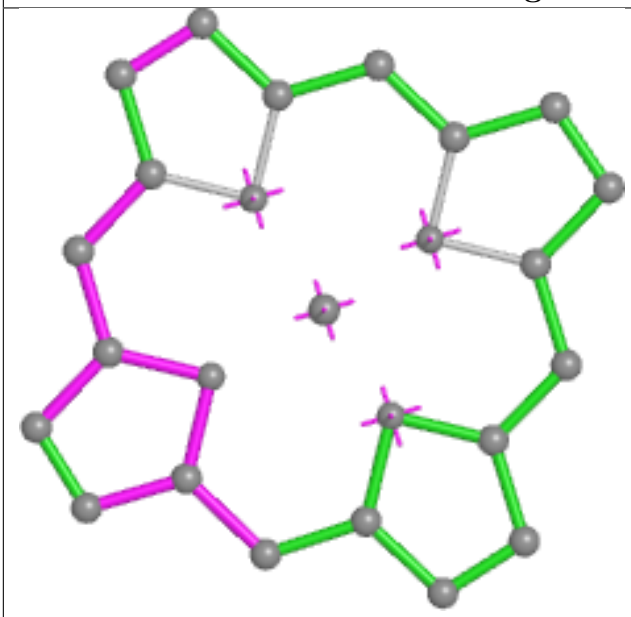


Torsions



Rings

Ligand CLA B 639



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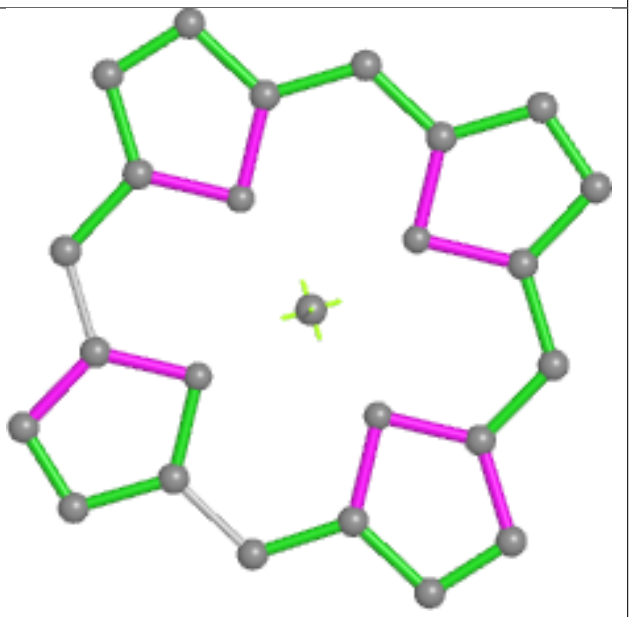
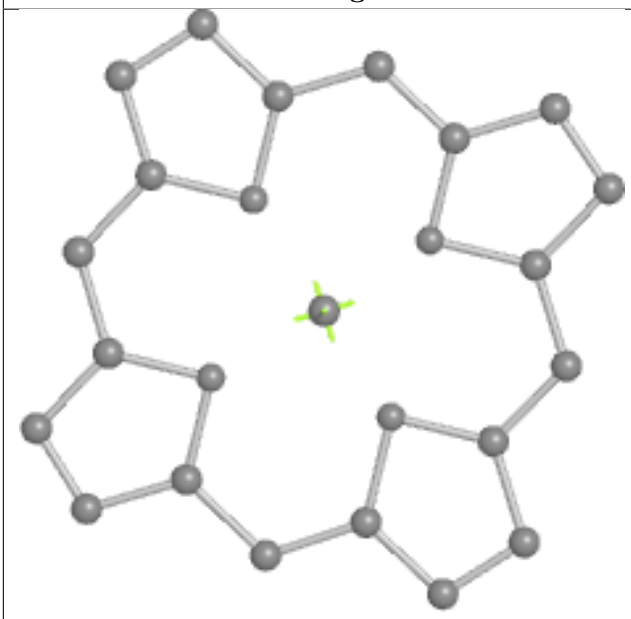
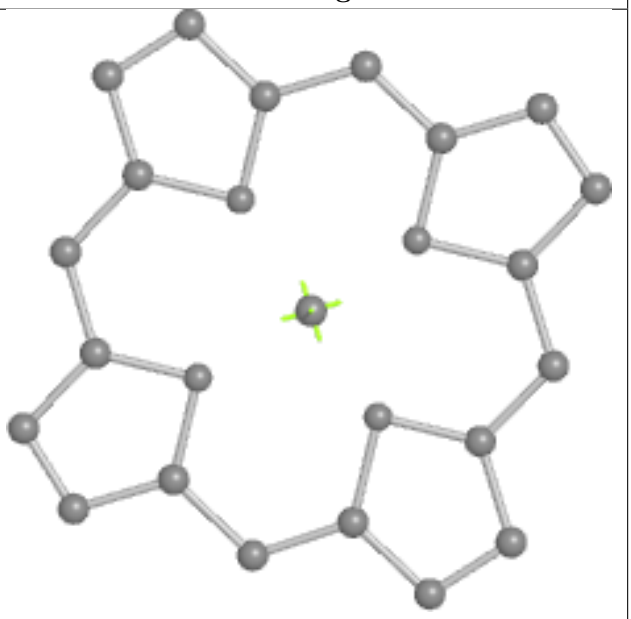


Bond angles

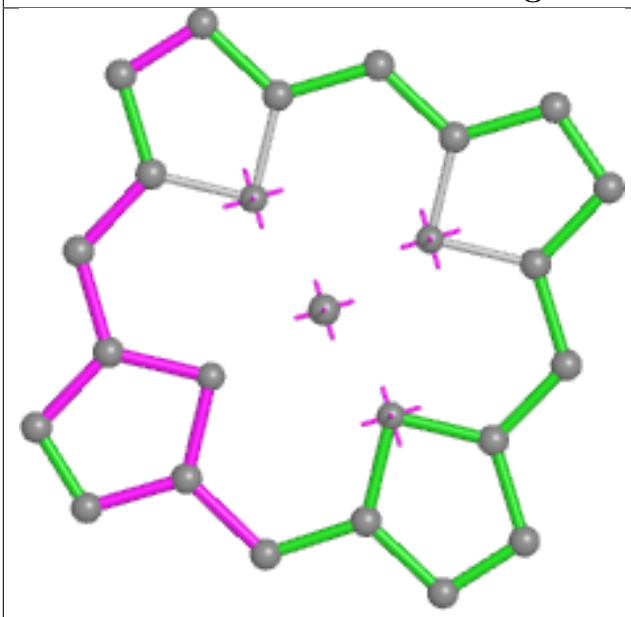


Torsions



Rings

Ligand CLA B 641



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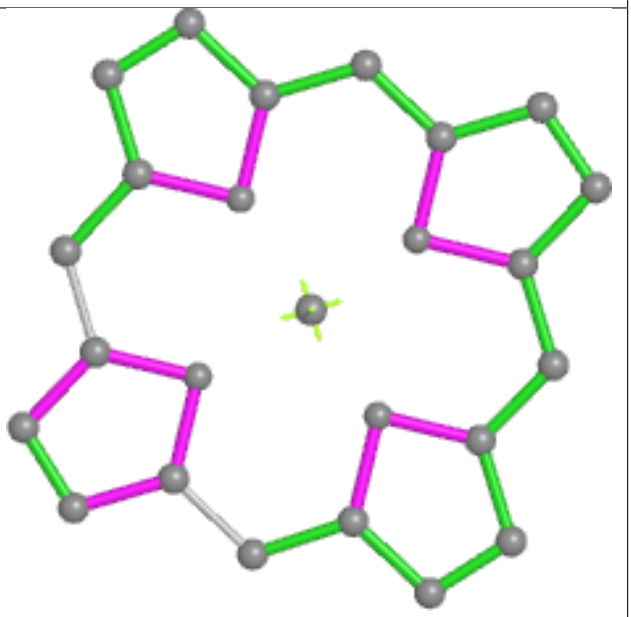
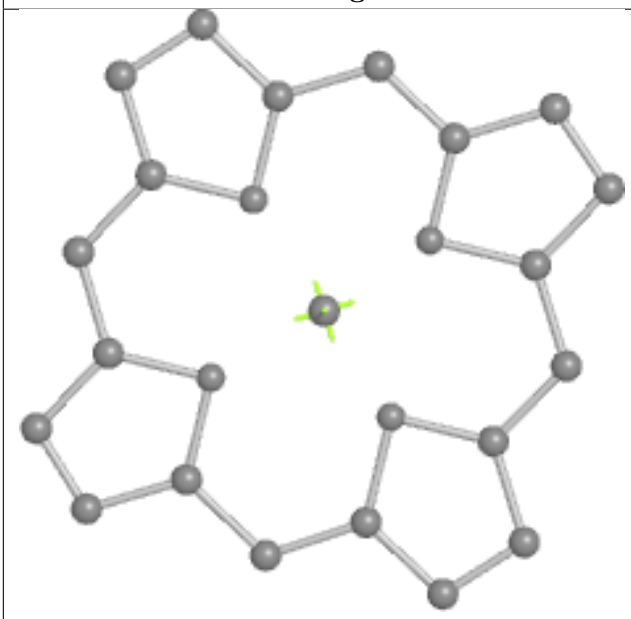


Bond angles



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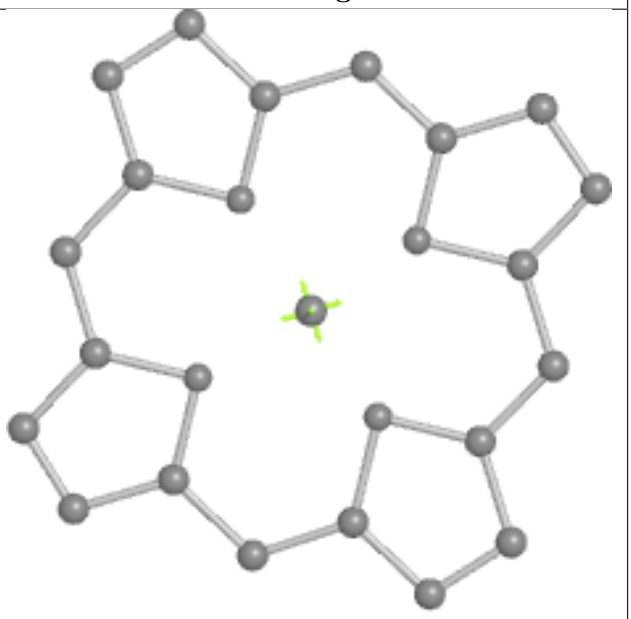
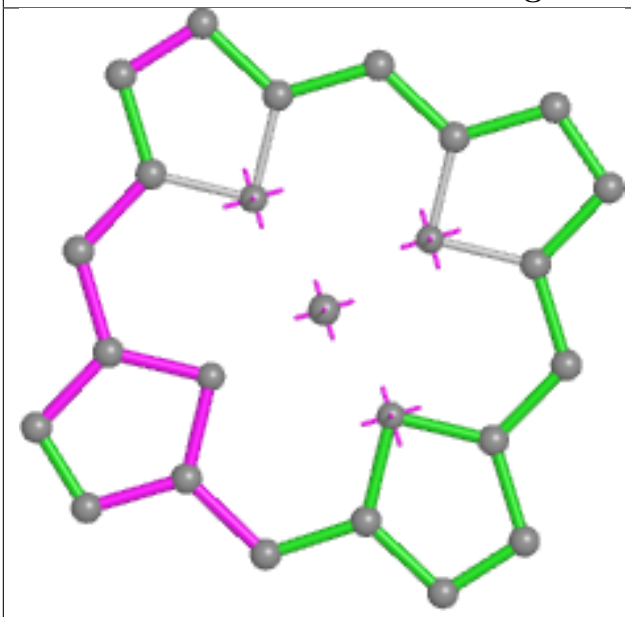
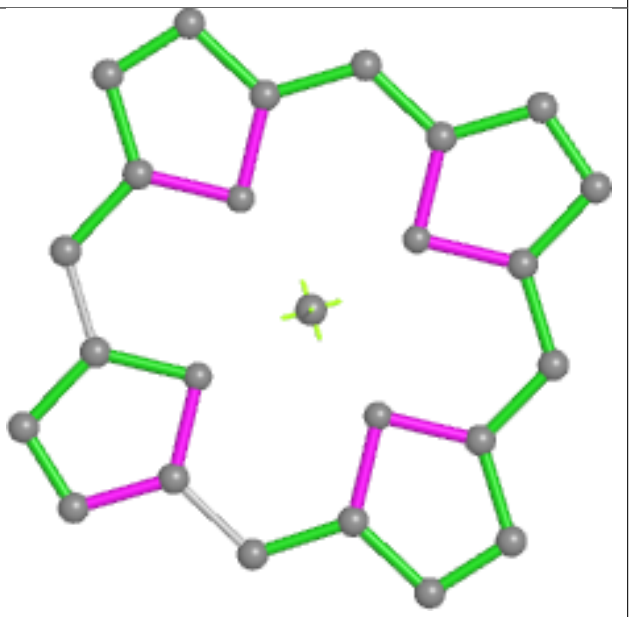


Rings

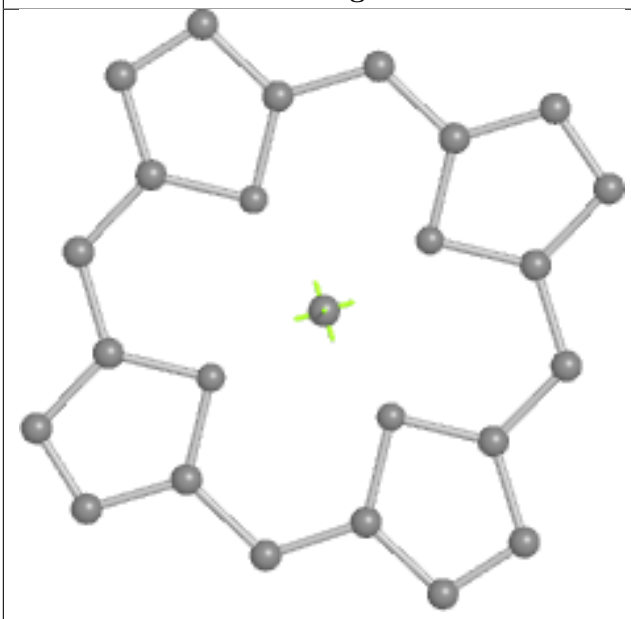
Ligand CLA B 649



Bond lengths



Bond angles



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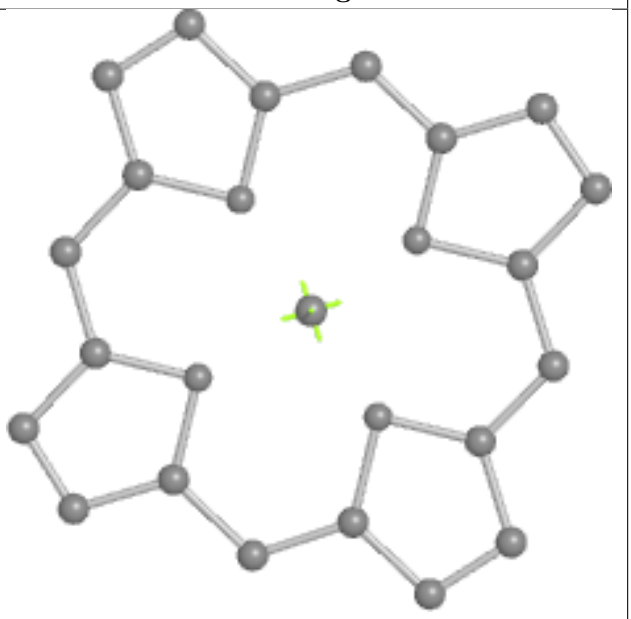
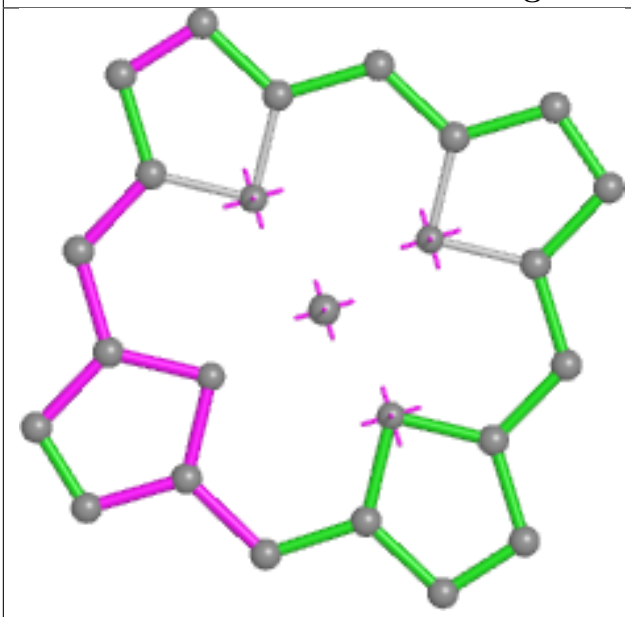
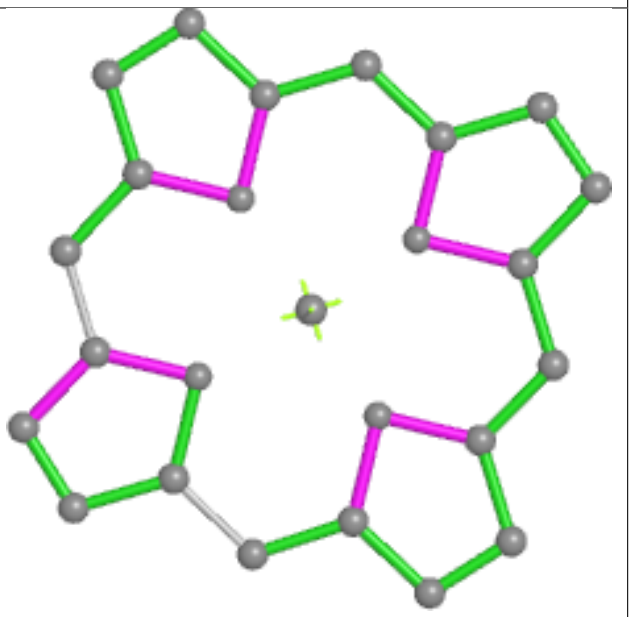


Rings

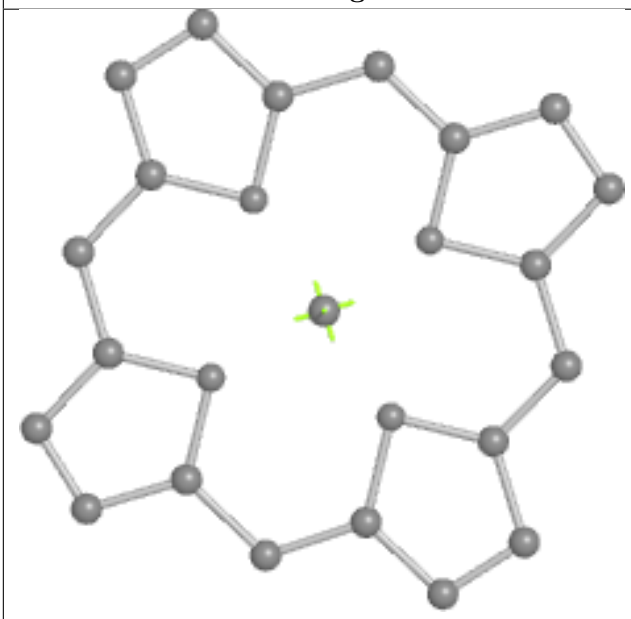
Ligand CLA A 628



Bond lengths



Bond angles



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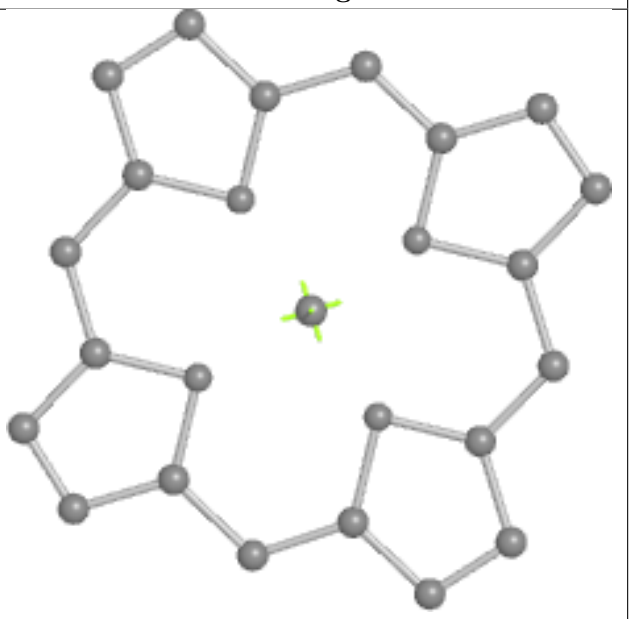
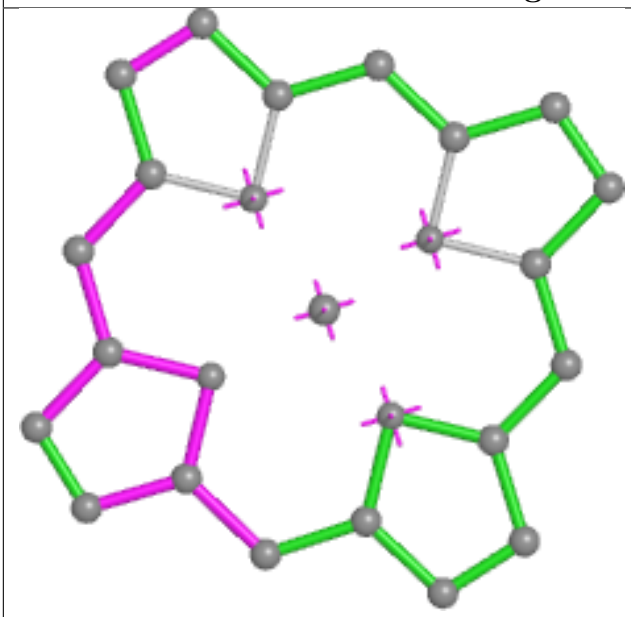
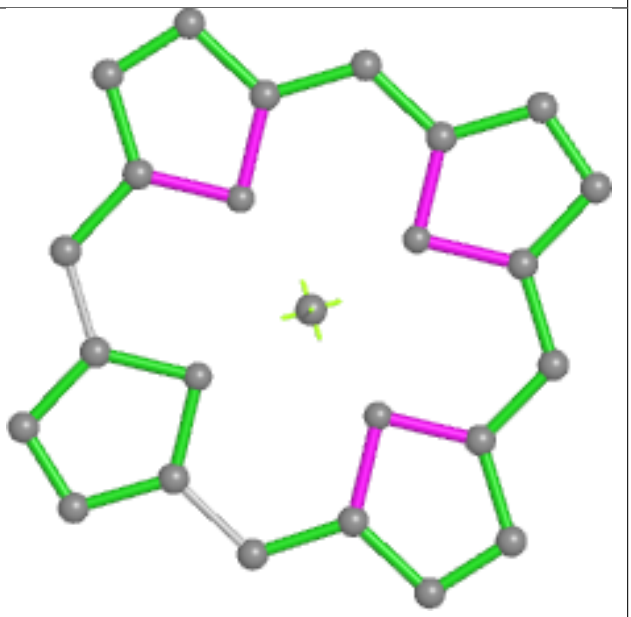


Rings

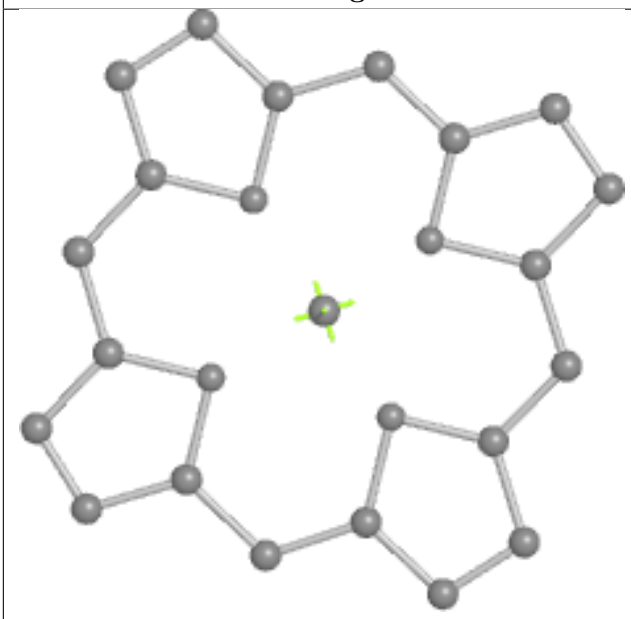
Ligand CLA B 626



Bond lengths



Bond angles



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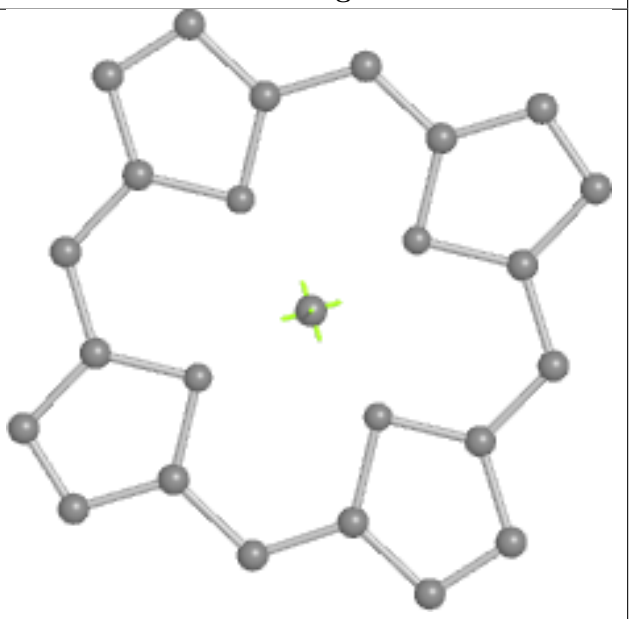
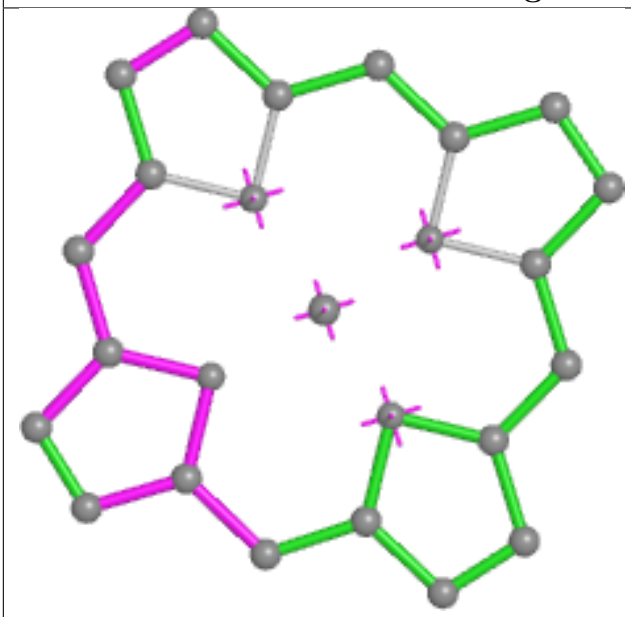


Rings

Ligand CLA B 625



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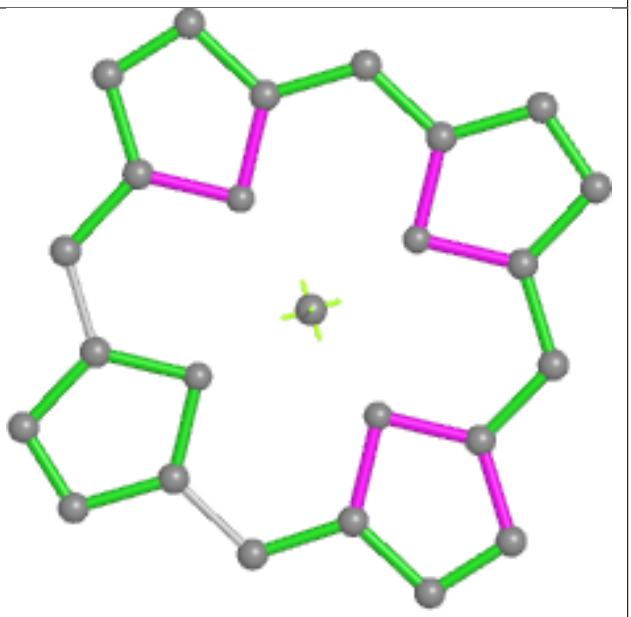
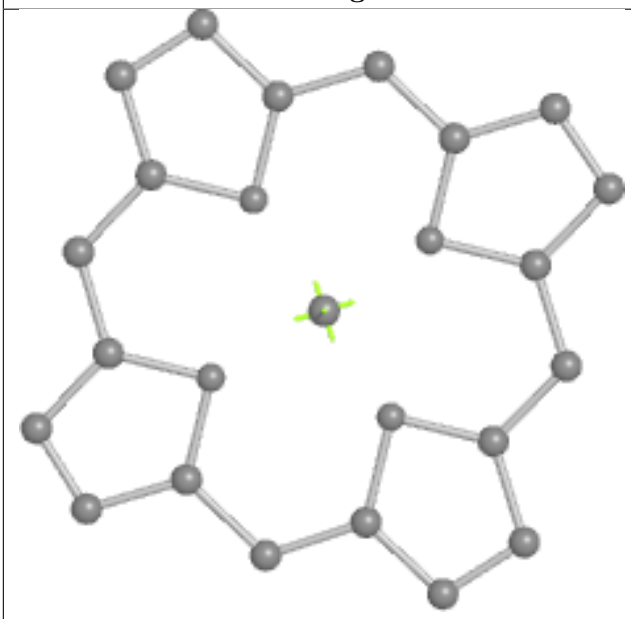


Bond angles



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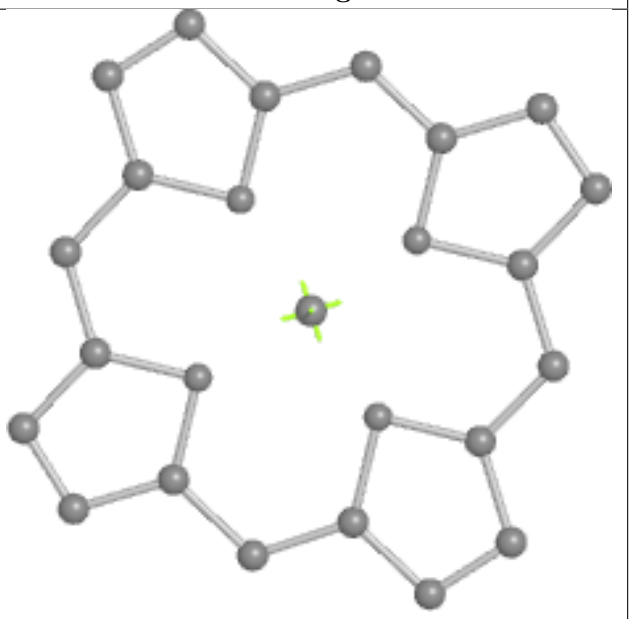
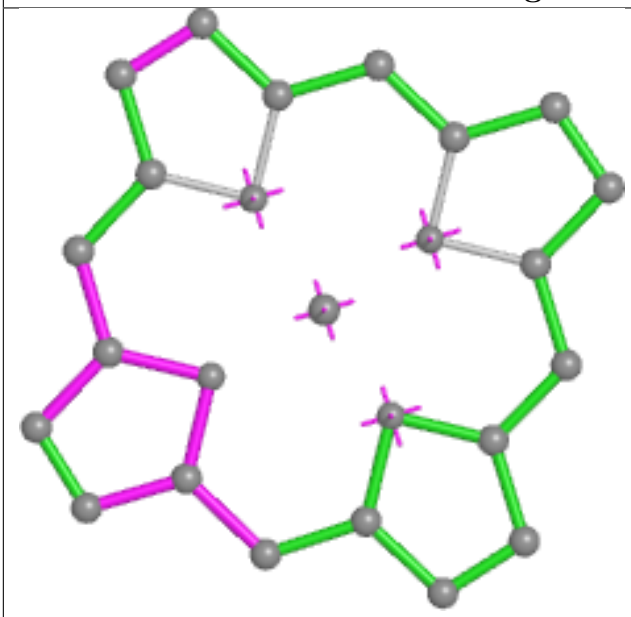


Rings

Ligand CLA B 647



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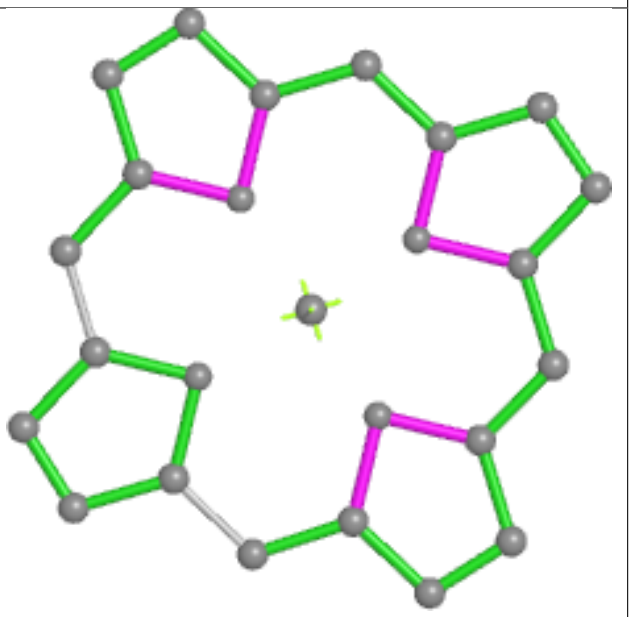
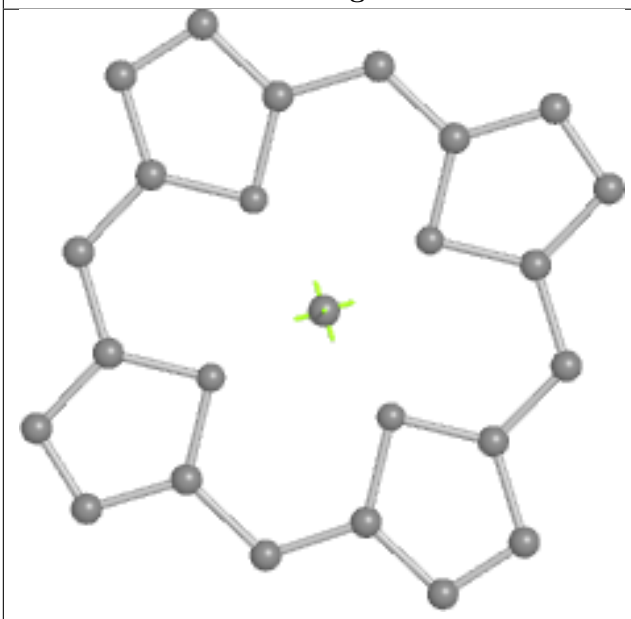
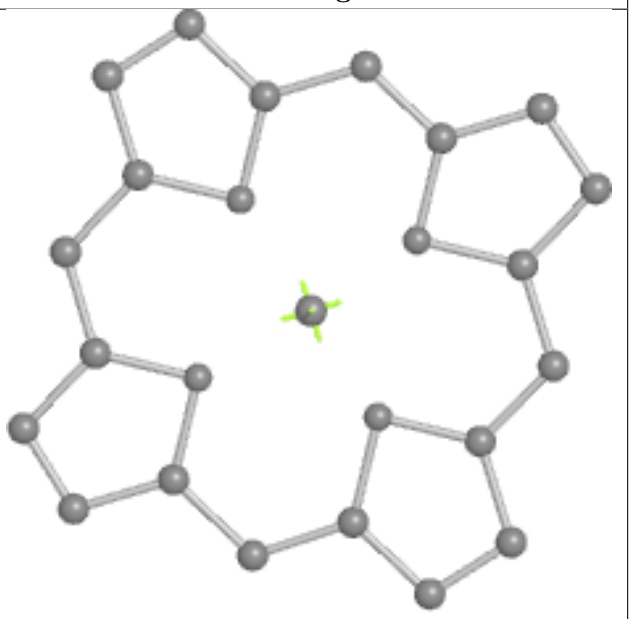


Bond angles

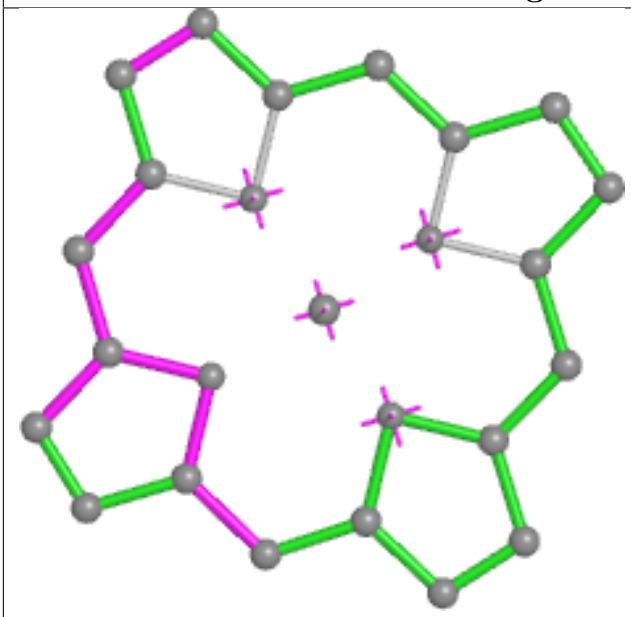


Torsions



Rings

Ligand CLA F 155



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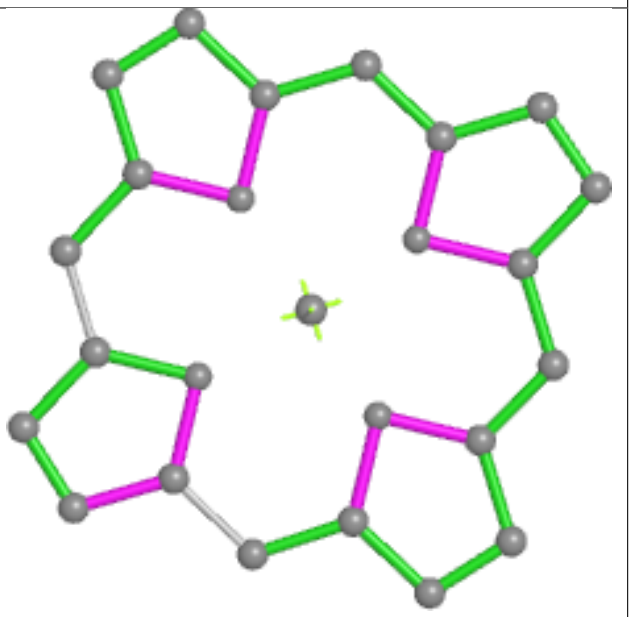
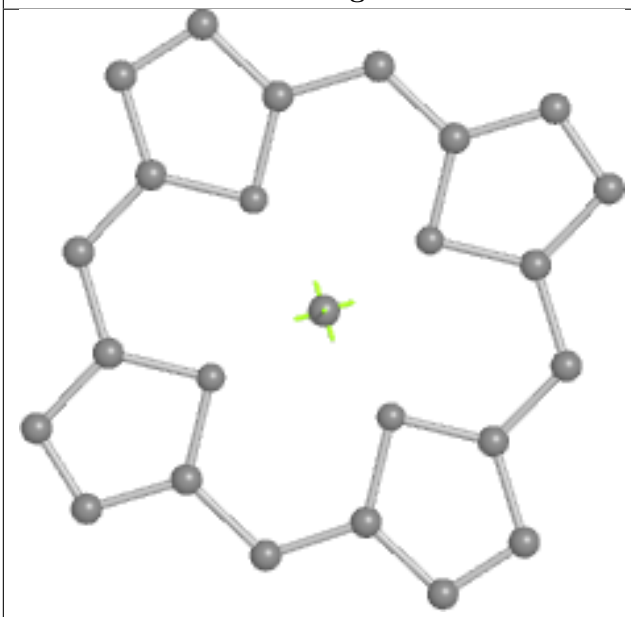


Bond angles



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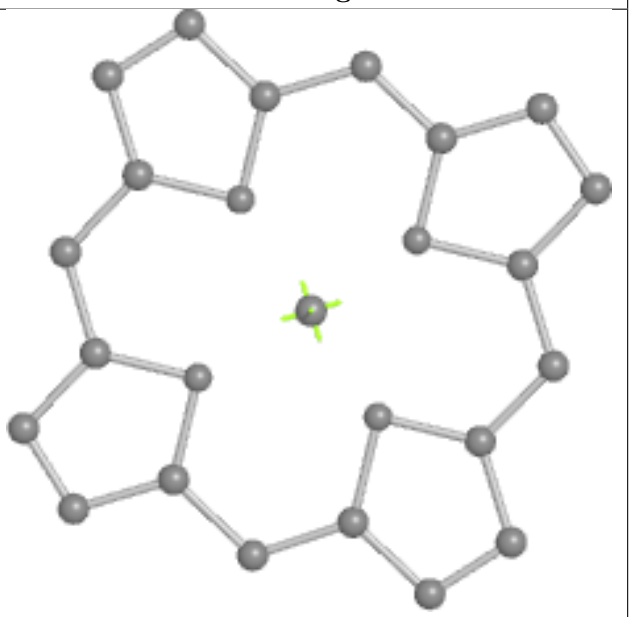
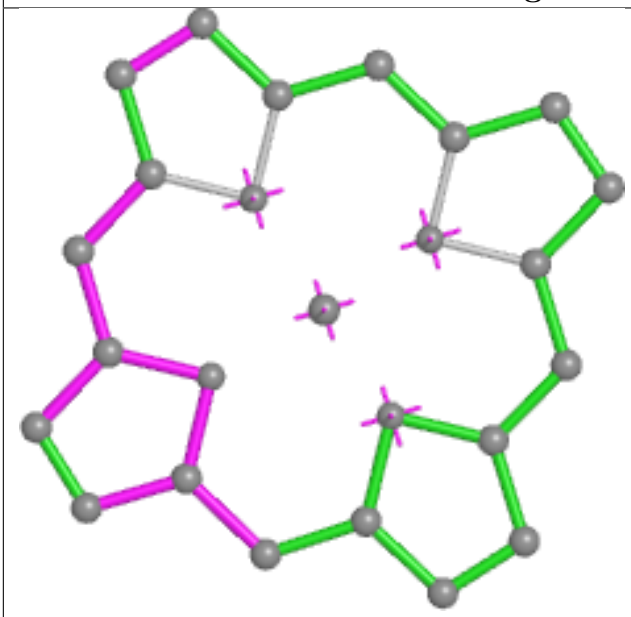


Rings

Ligand CLA B 651



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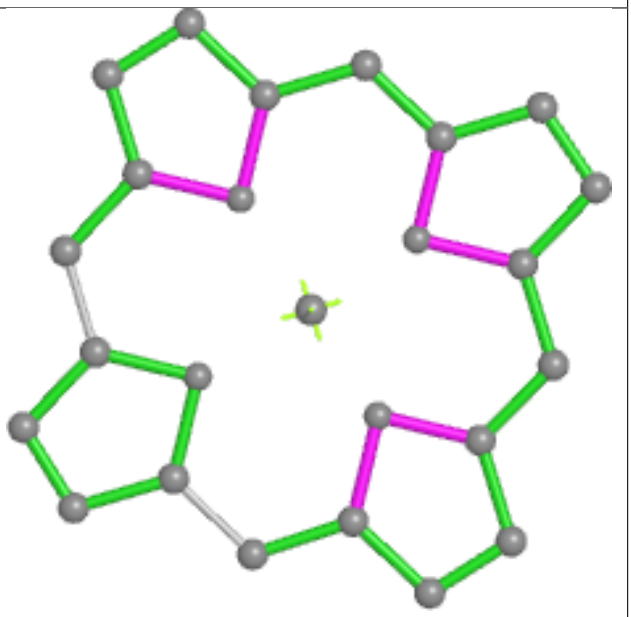
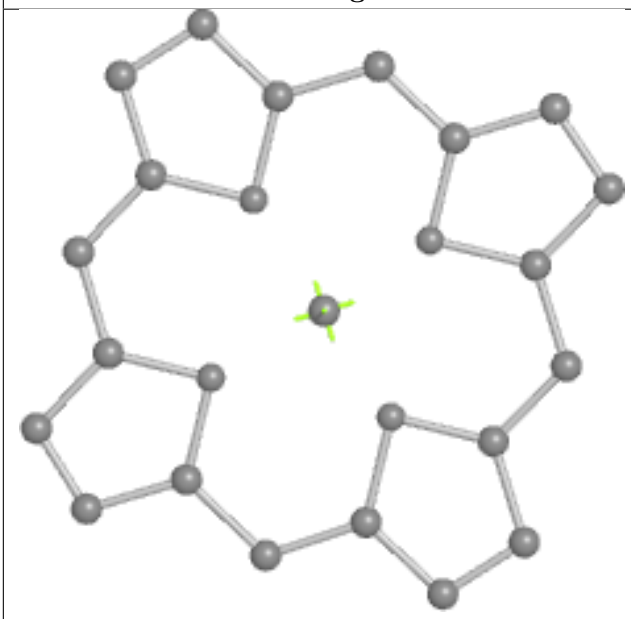


Bond angles



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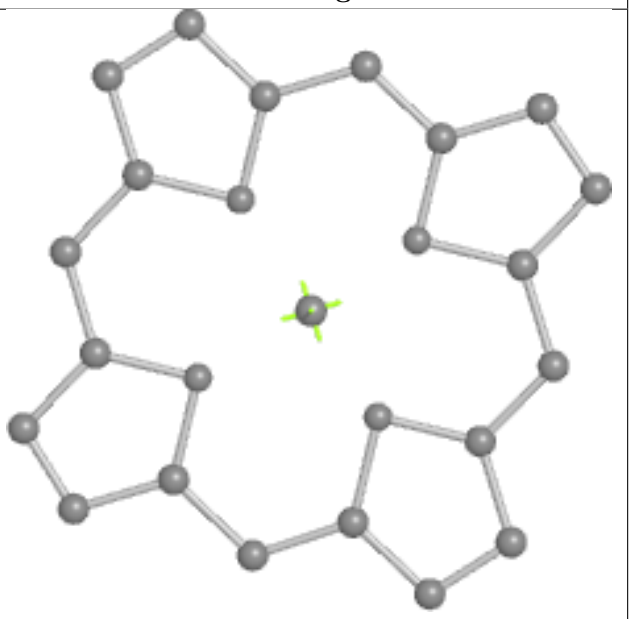
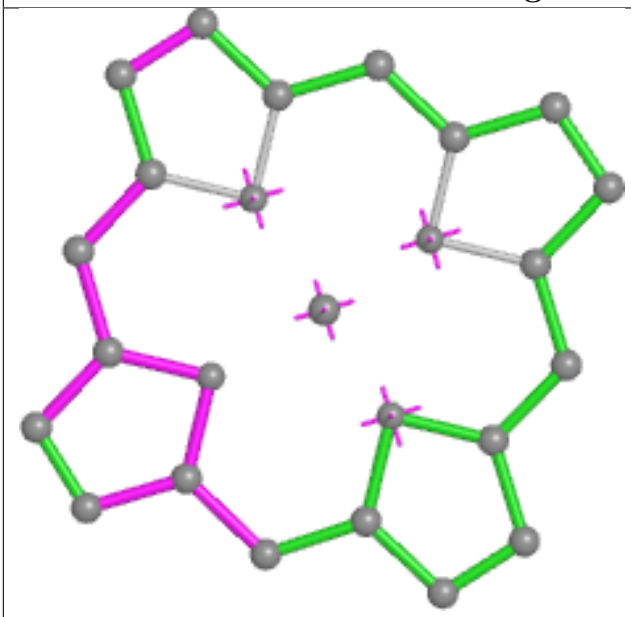
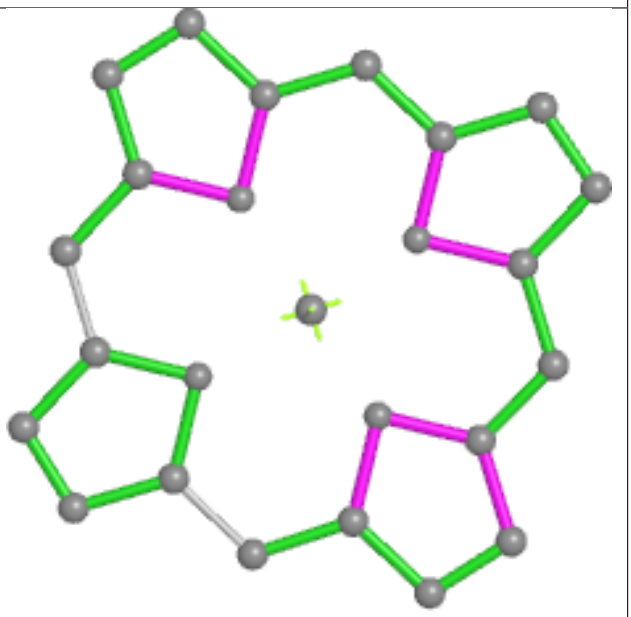


Rings

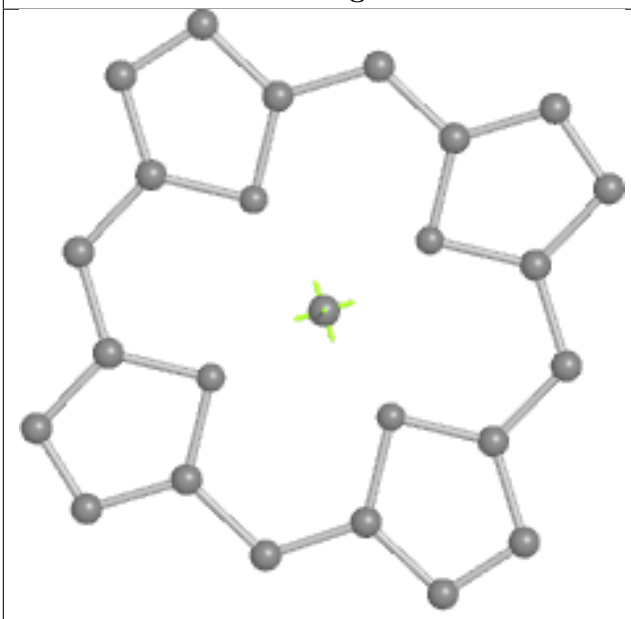
Ligand CLA B 652



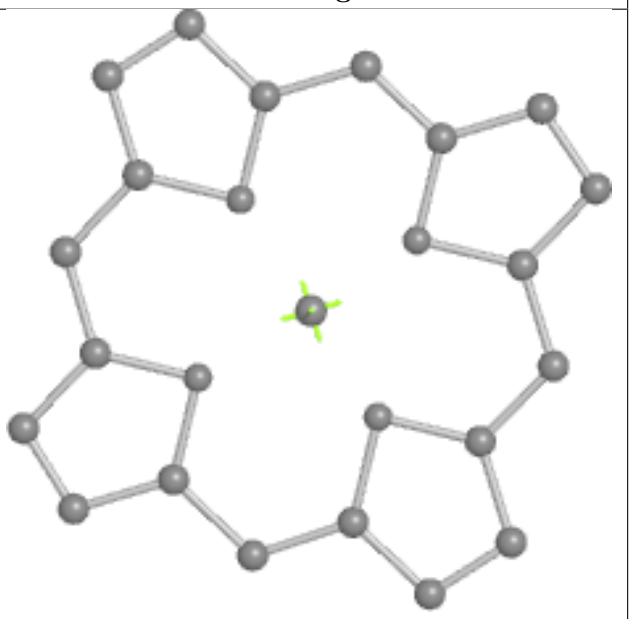
Bond lengths



Bond angles

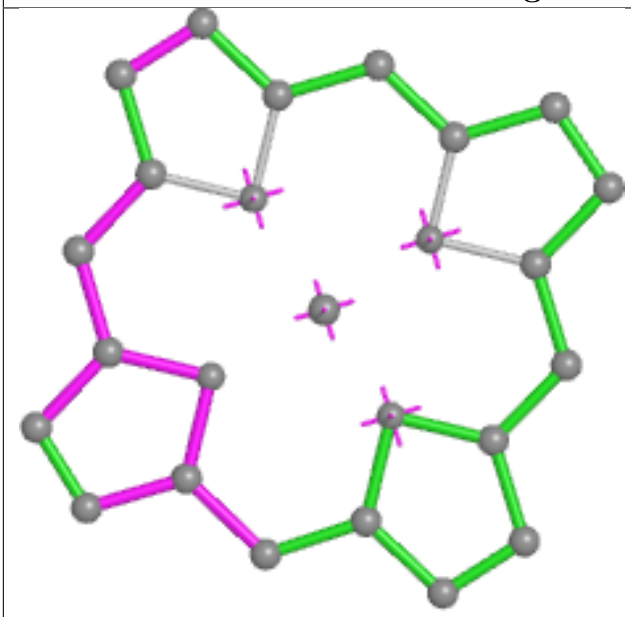


Torsions

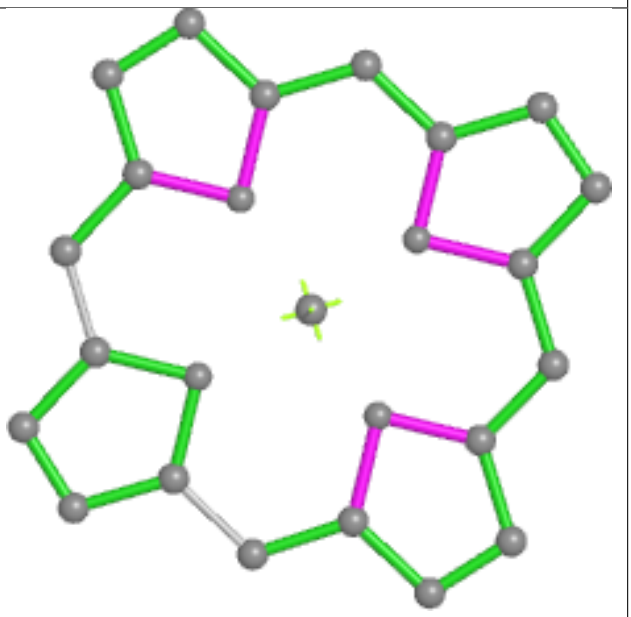


Rings

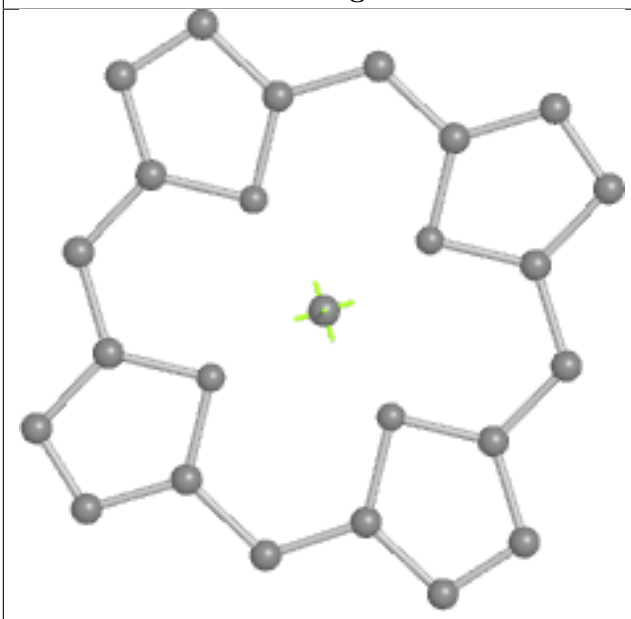
Ligand CLA A 627



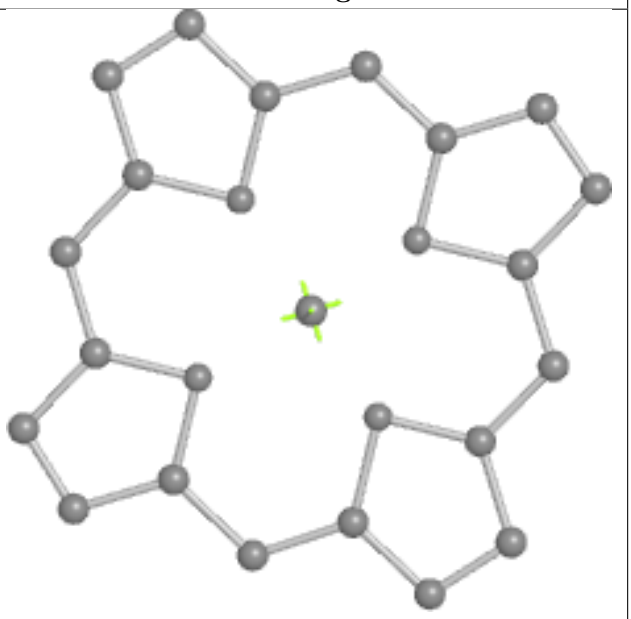
Bond lengths



Bond angles

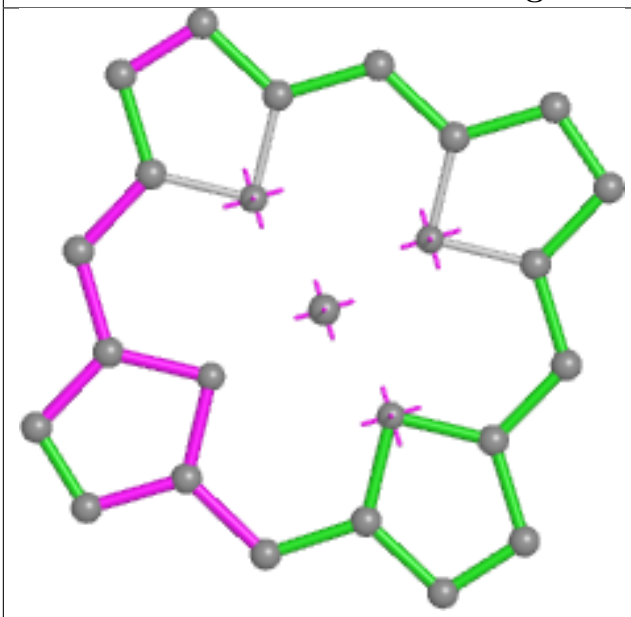


Torsions

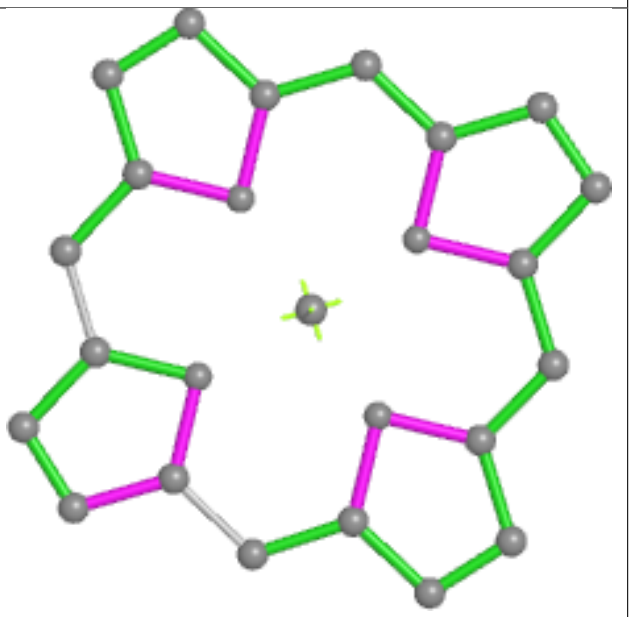


Rings

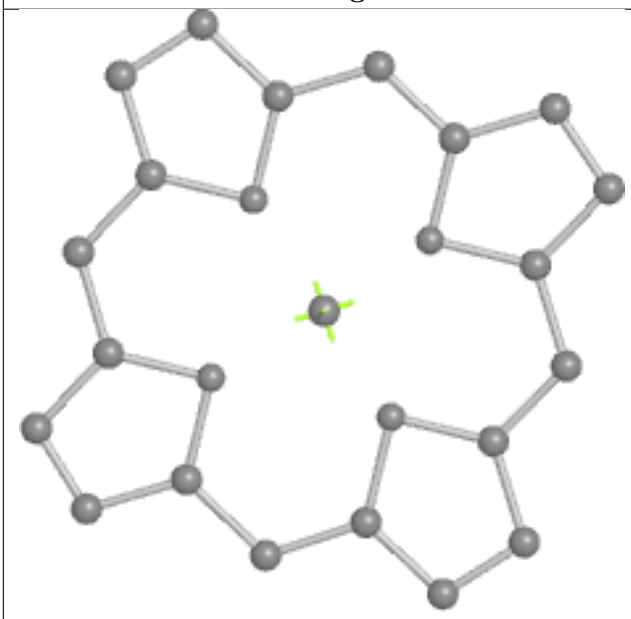
Ligand CLA F 156



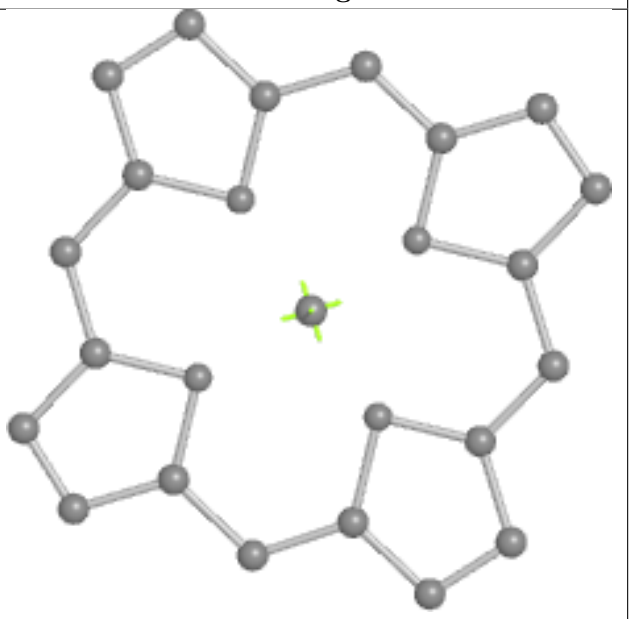
Bond lengths



Bond angles

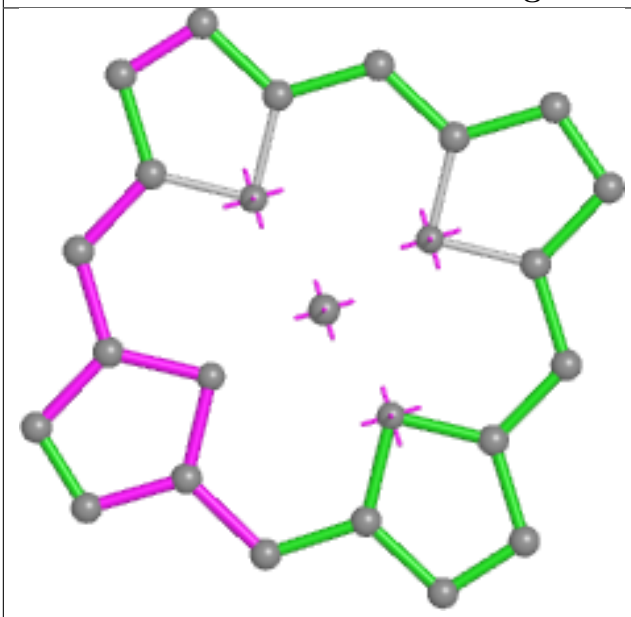


Torsions

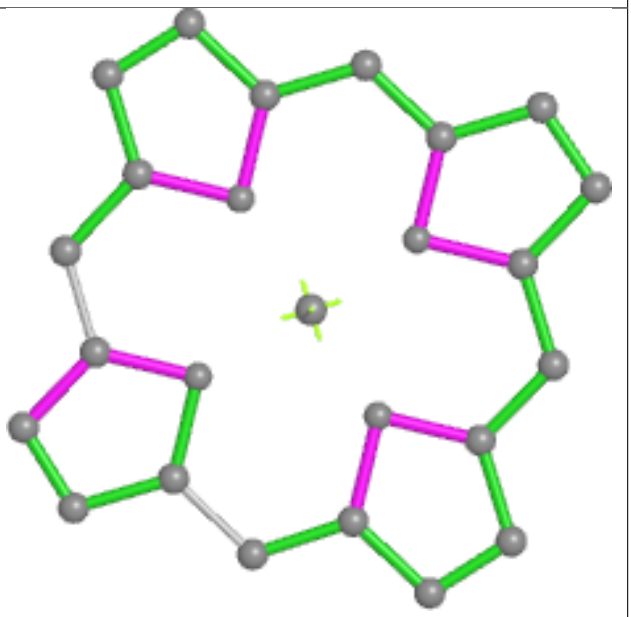


Rings

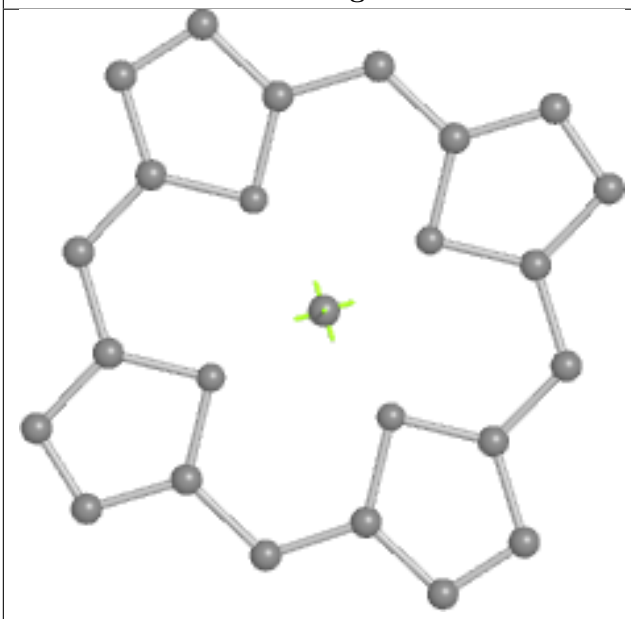
Ligand CLA A 611



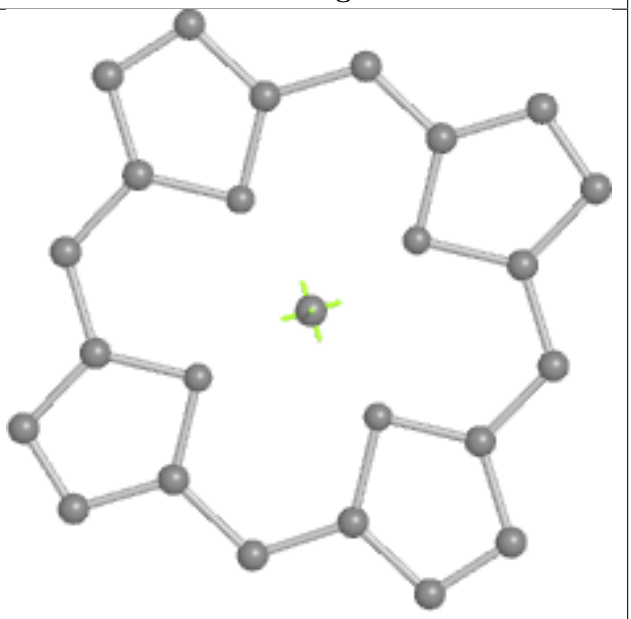
Bond lengths



Bond angles

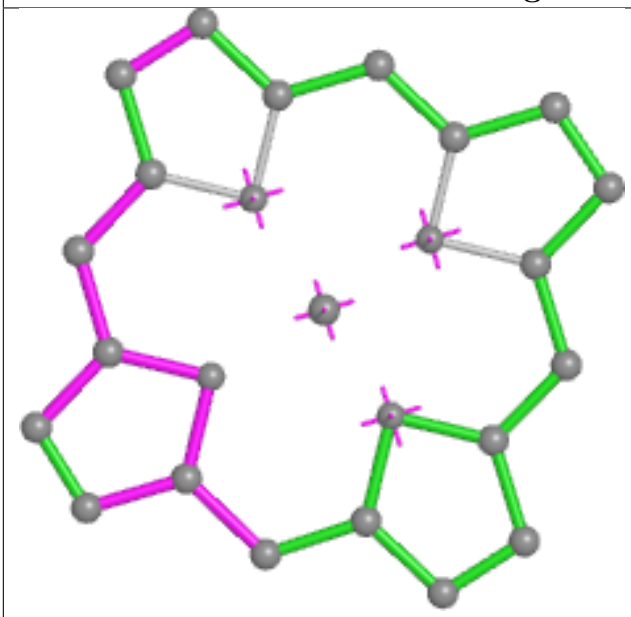


Torsions

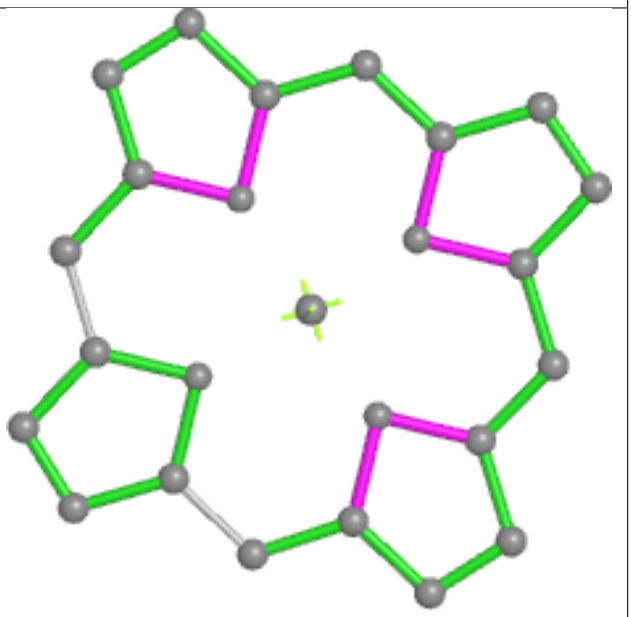


Rings

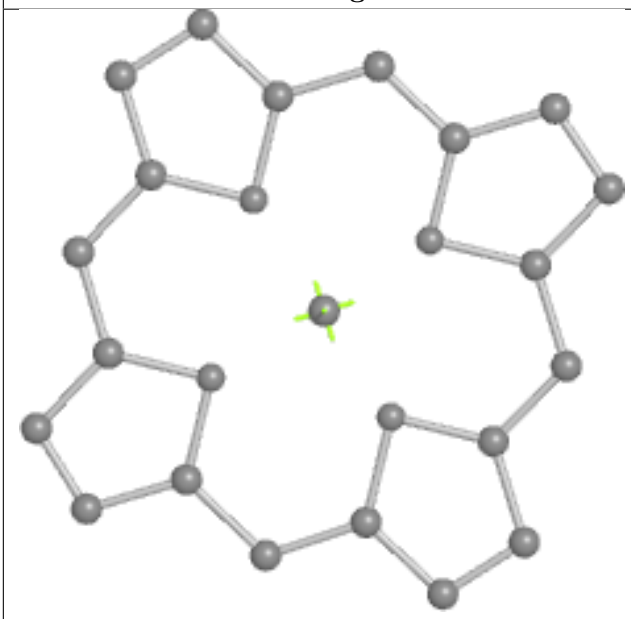
Ligand CLA A 619



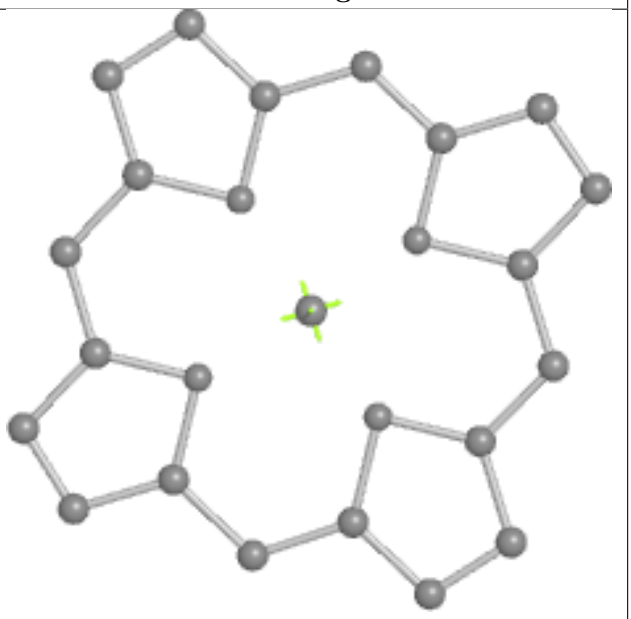
Bond lengths



Bond angles

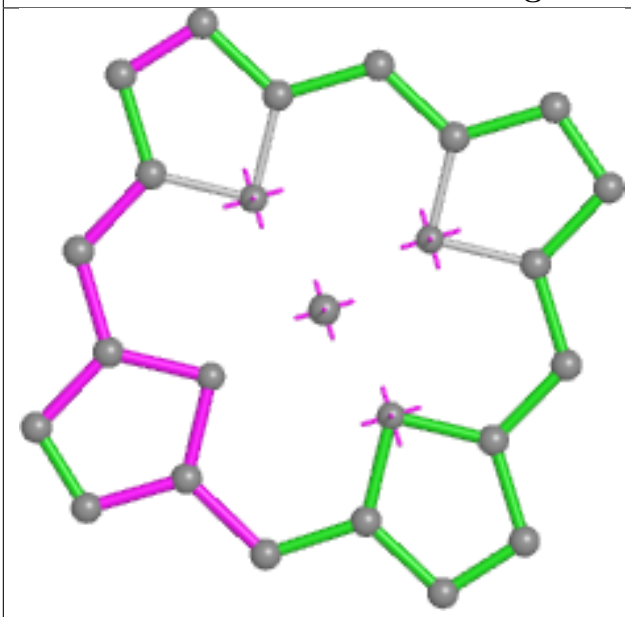


Torsions



Rings

Ligand CLA B 631



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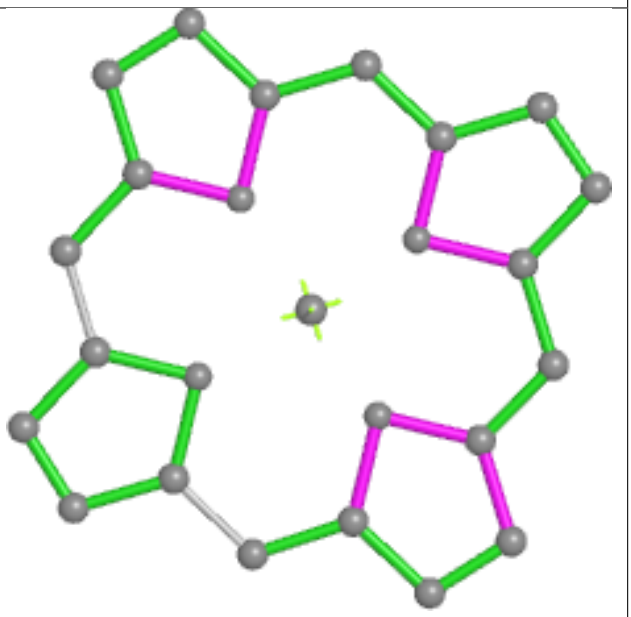
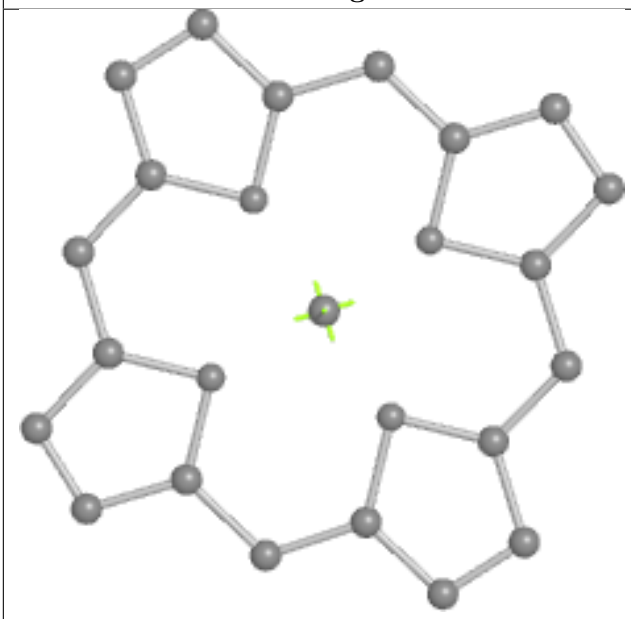
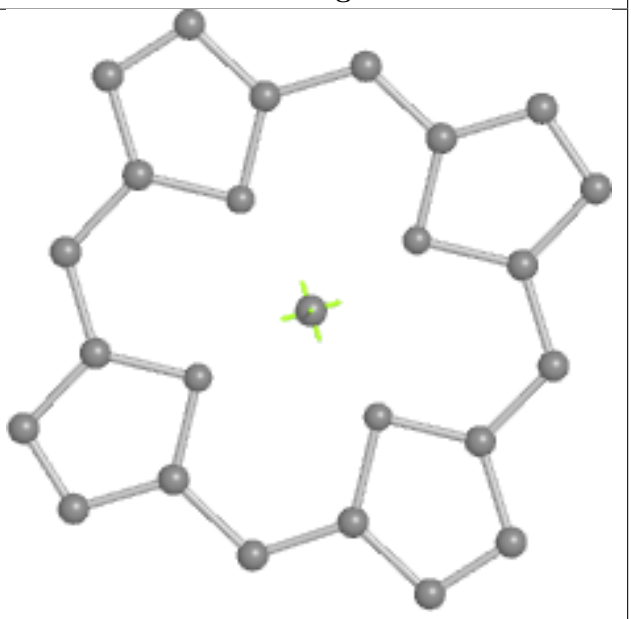


Bond angles

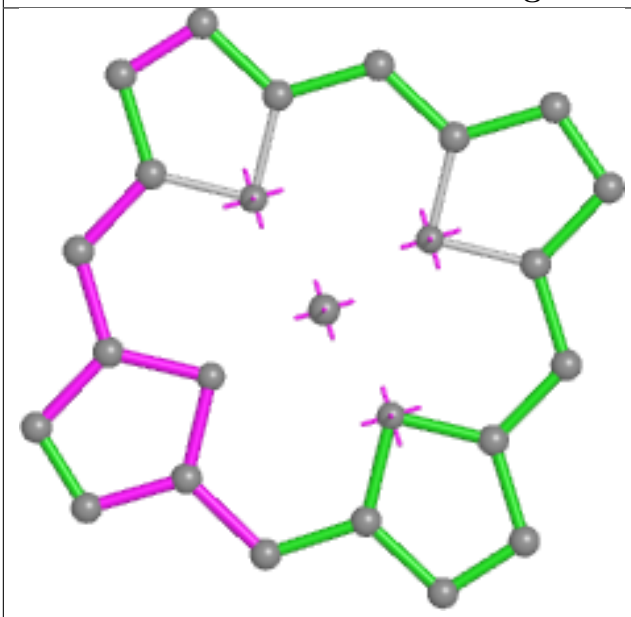


Torsions

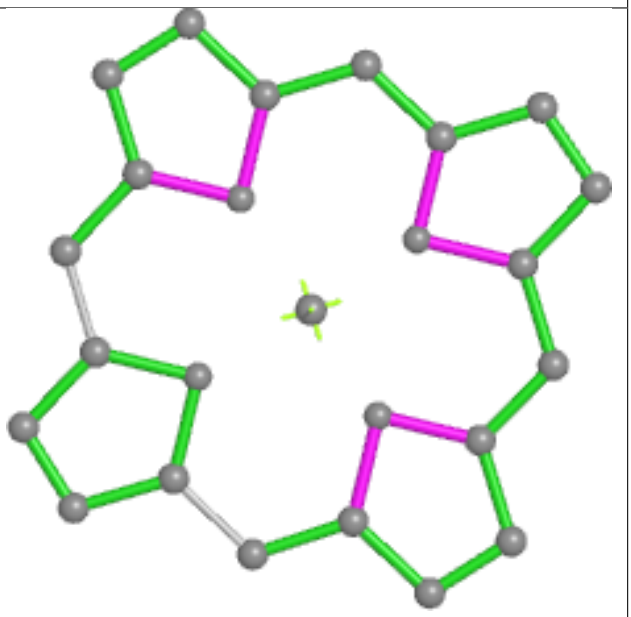


Rings

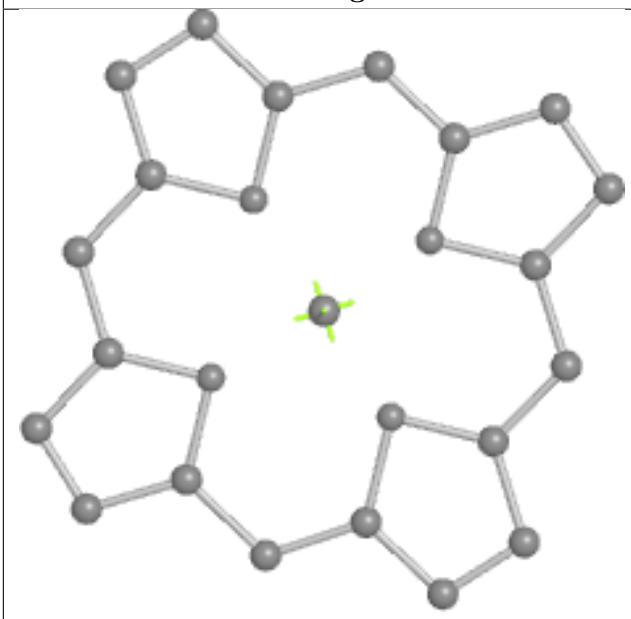
Ligand CLA A 616



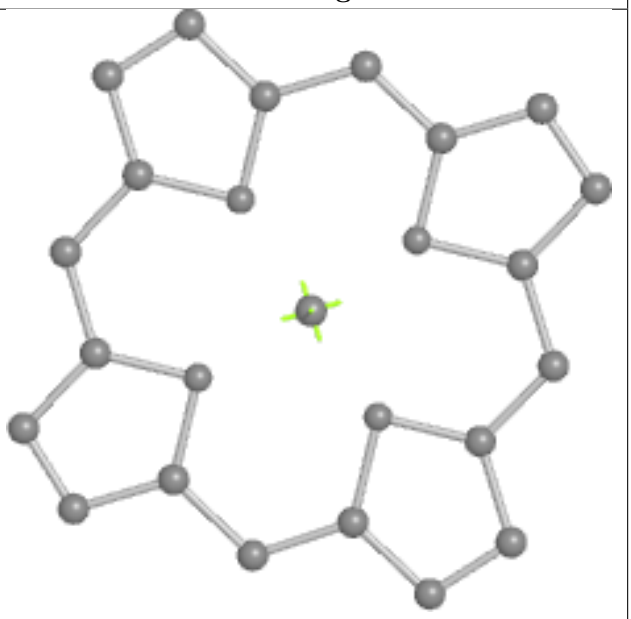
Bond lengths



Bond angles

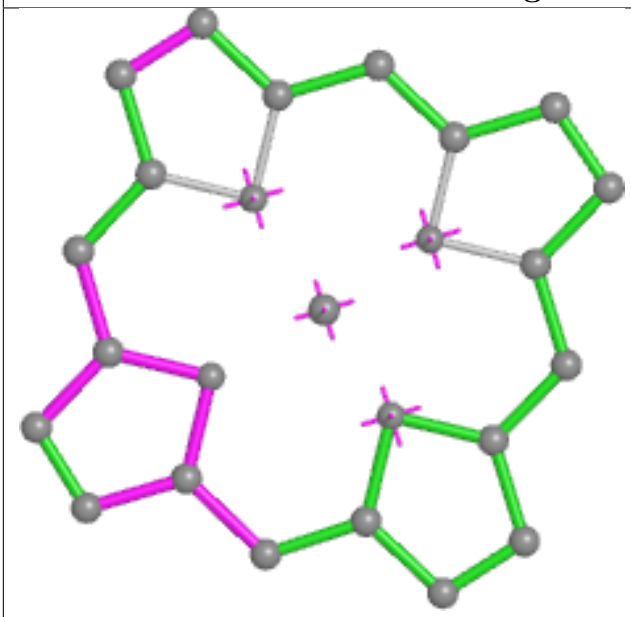


Torsions

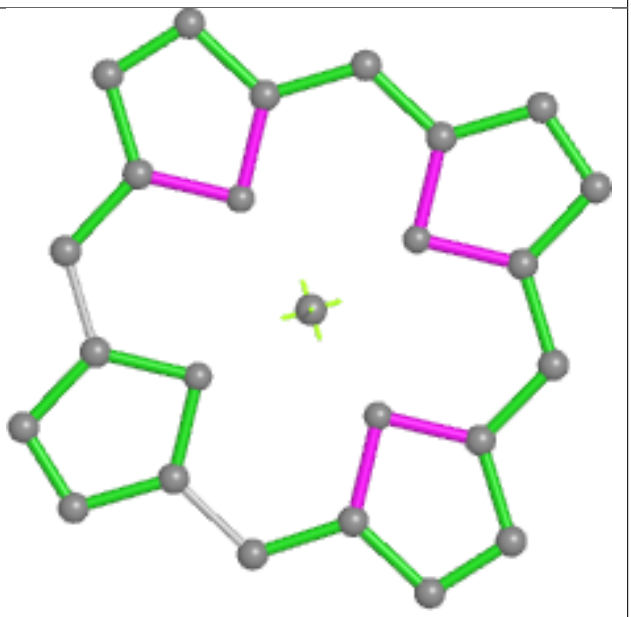


Rings

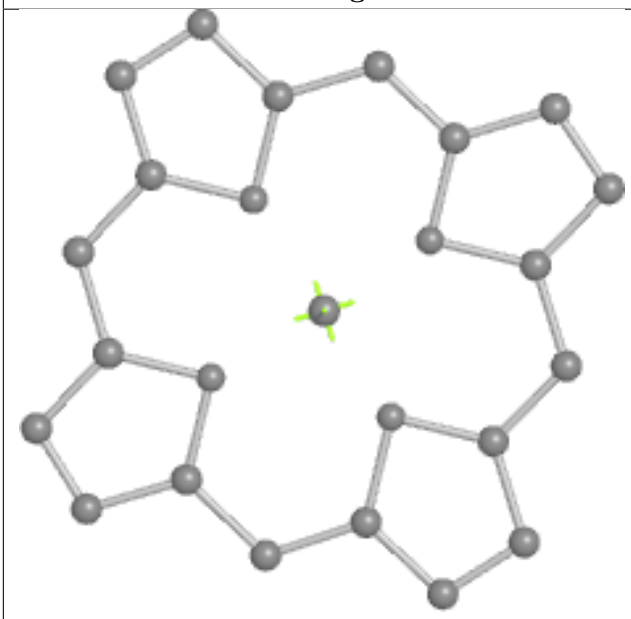
Ligand CLA A 606



Bond lengths



Bond angles



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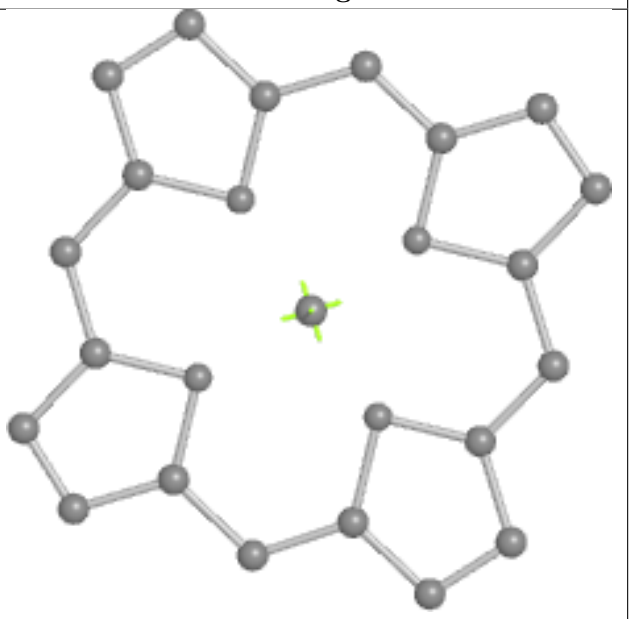
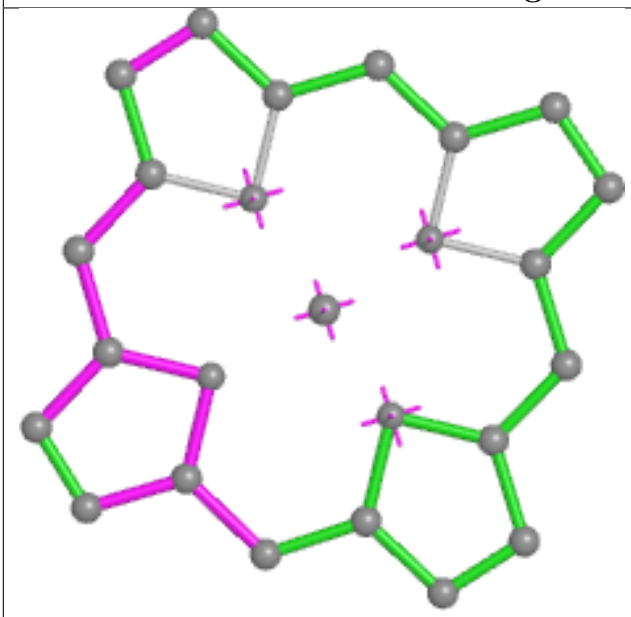
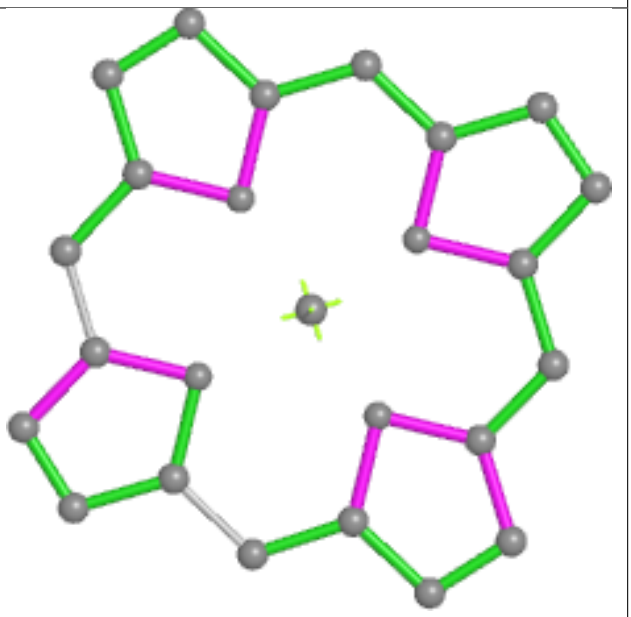


Rings

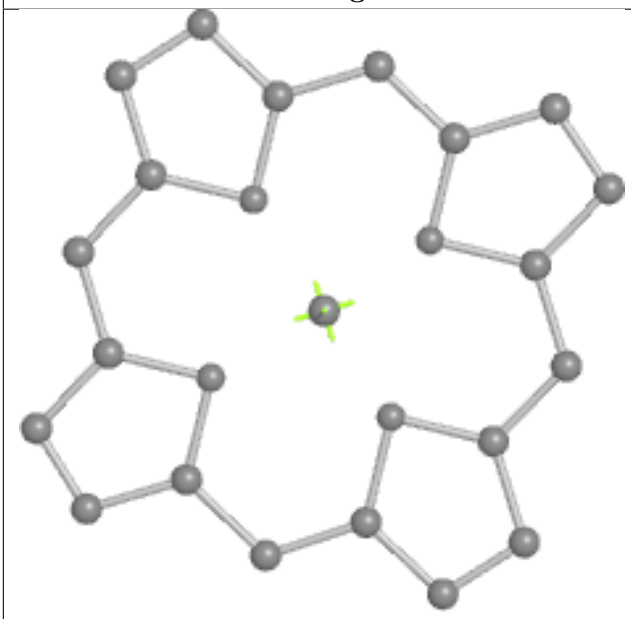
Ligand CLA B 645



Bond lengths



Bond angles



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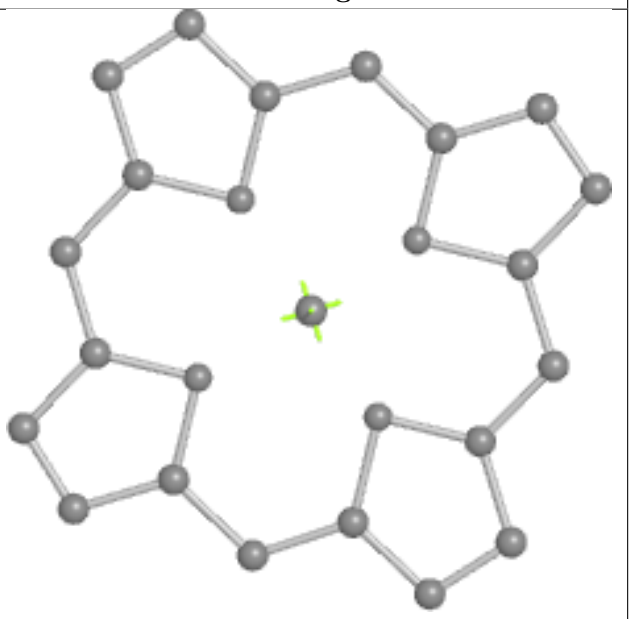
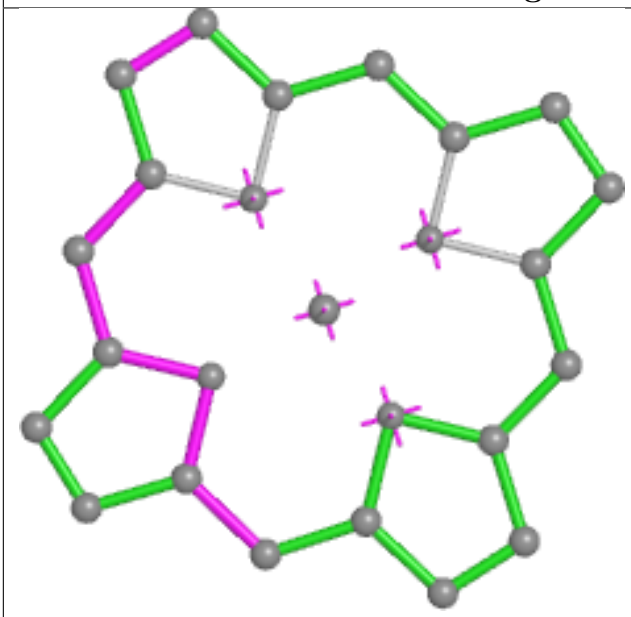
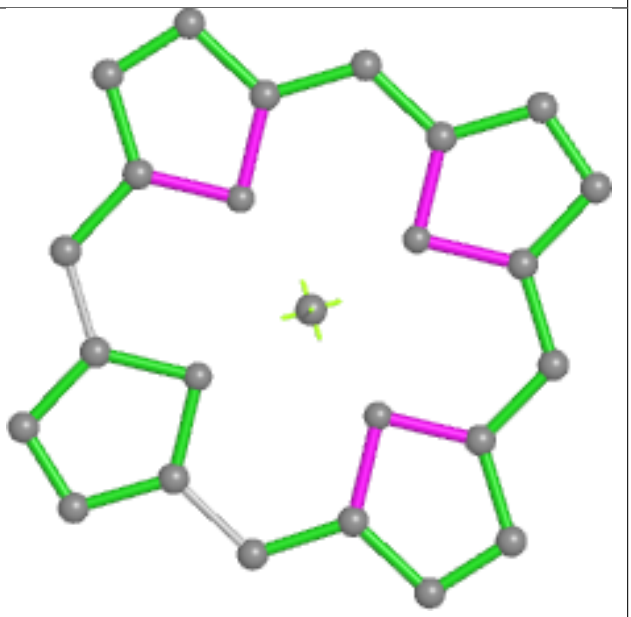


Rings

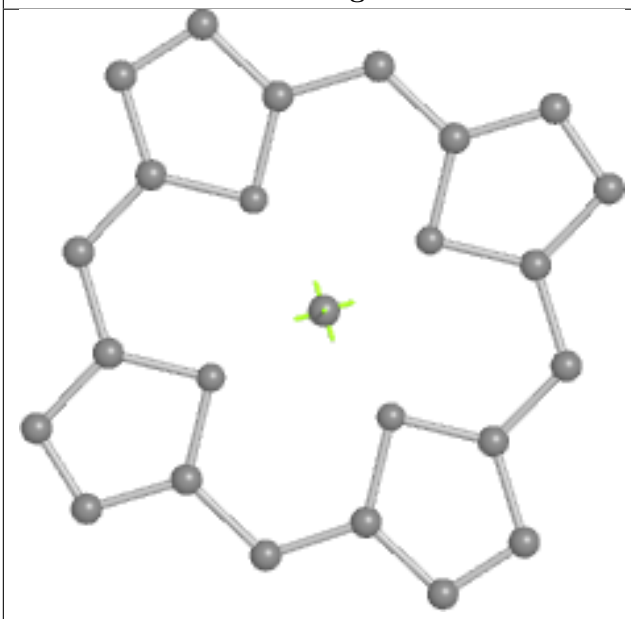
Ligand CLA B 653



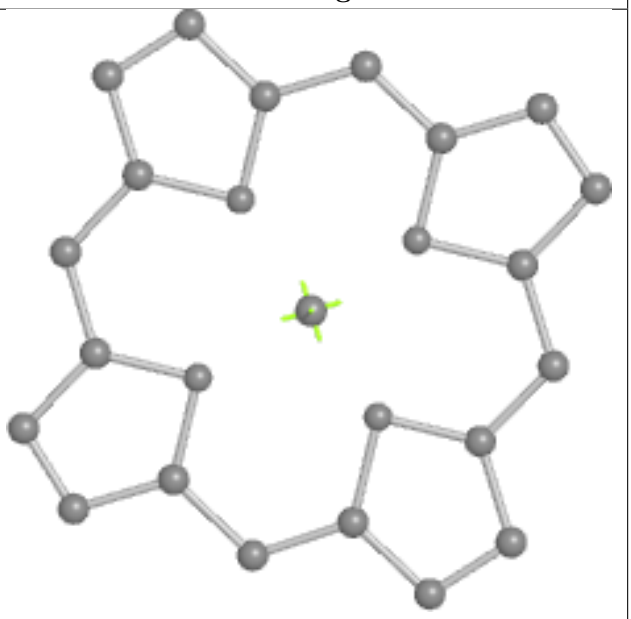
Bond lengths



Bond angles

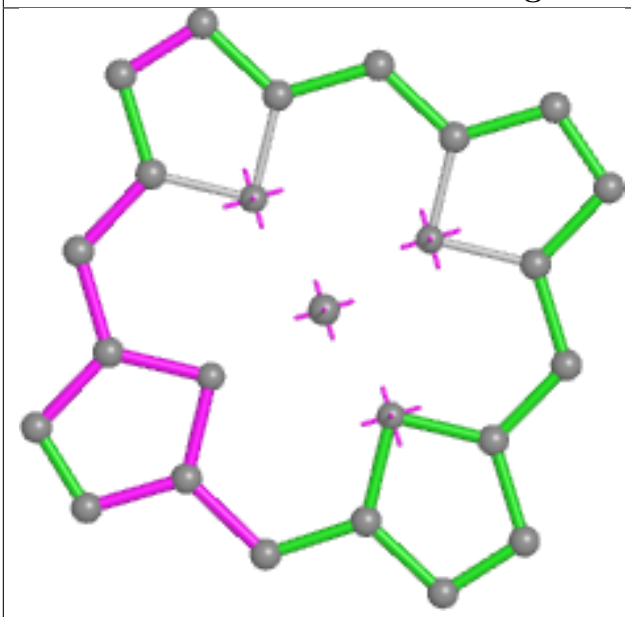


Torsions



Rings

Ligand CLA B 637



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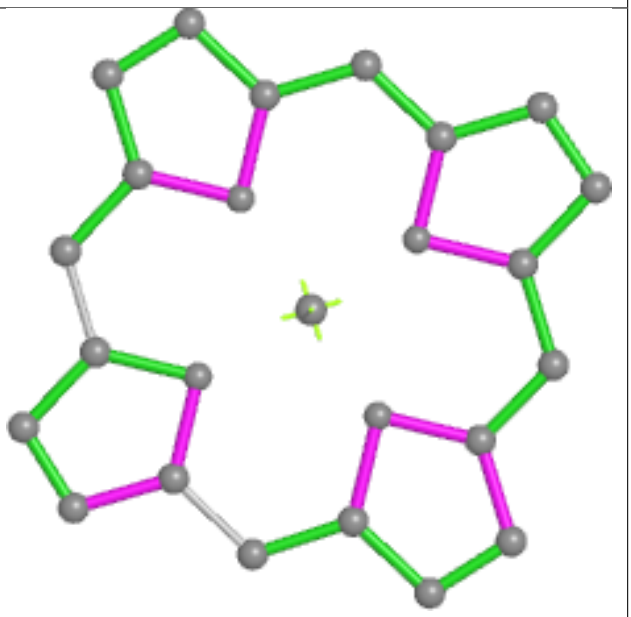
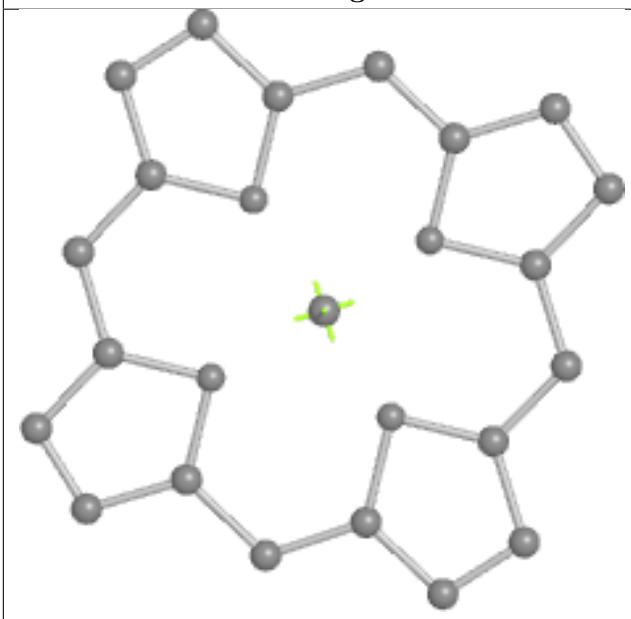


Bond angles



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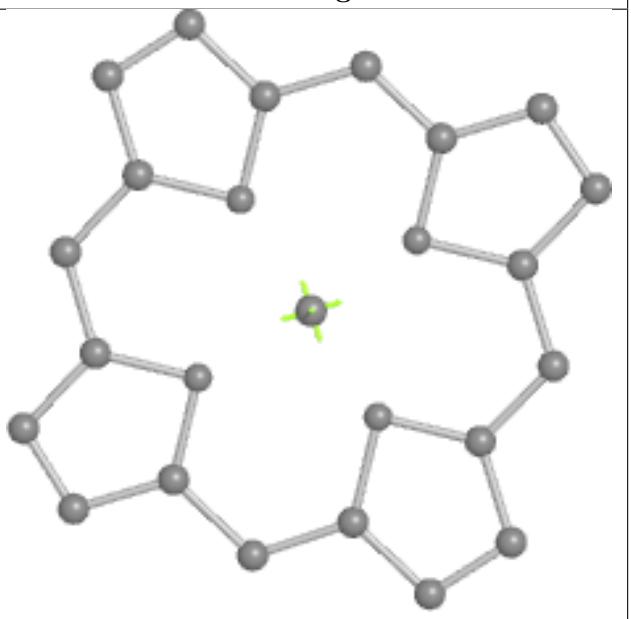
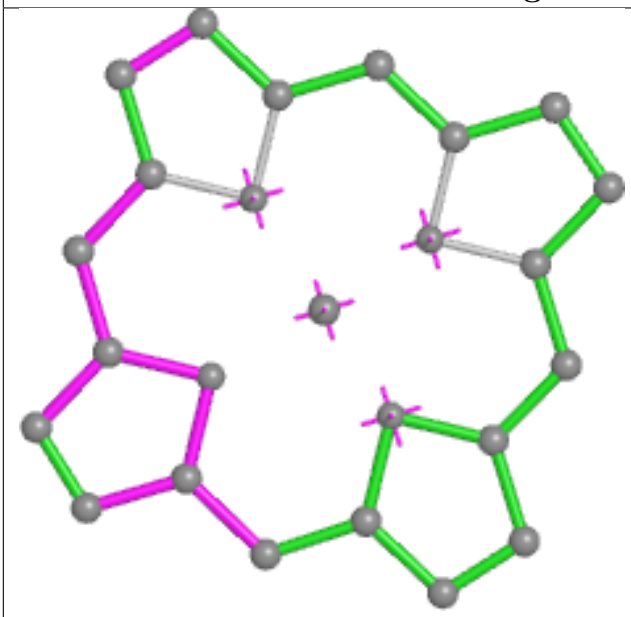
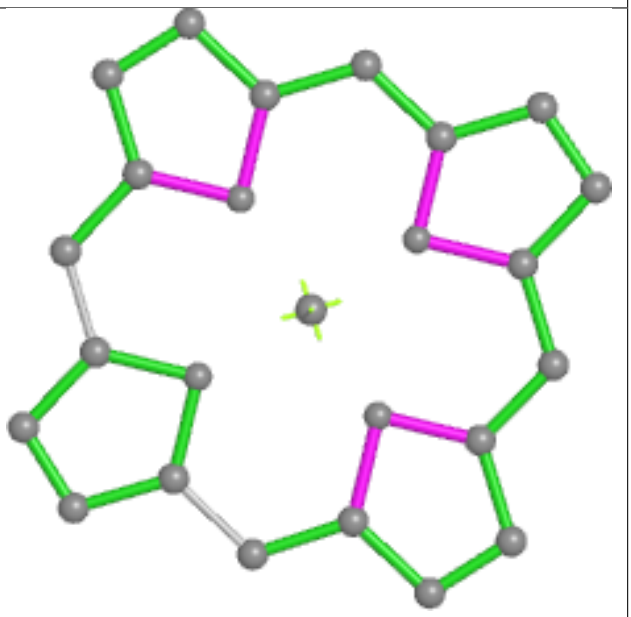


Rings

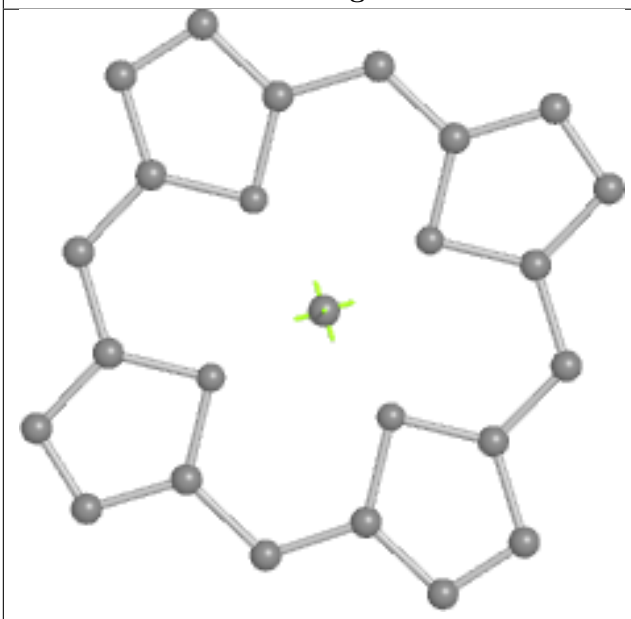
Ligand CLA A 603



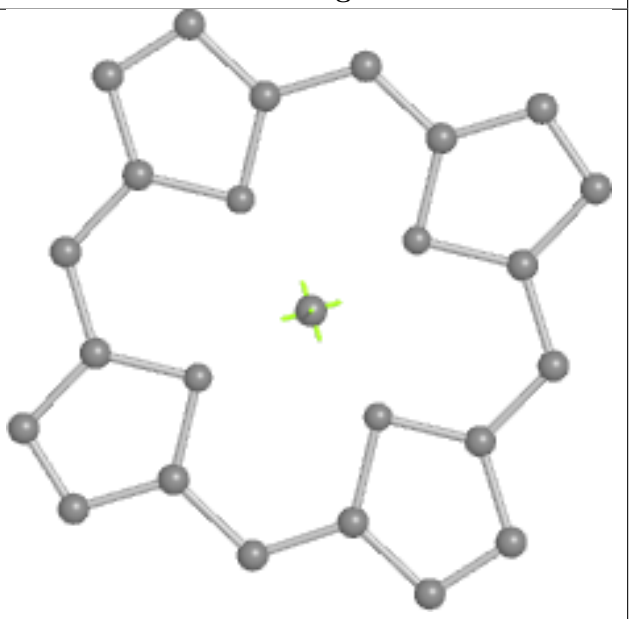
Bond lengths



Bond angles

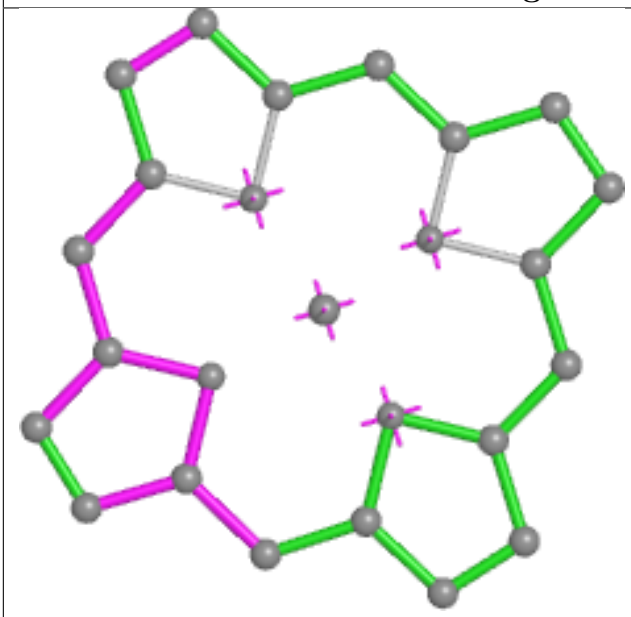


Torsions



Rings

Ligand CLA K 135



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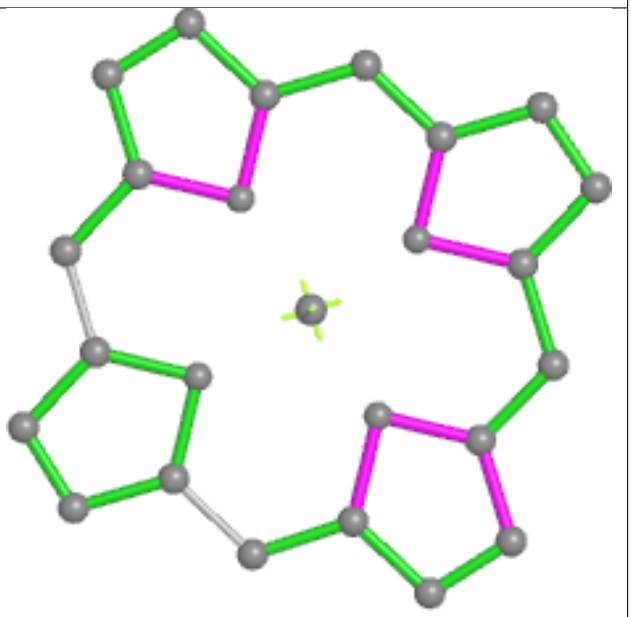
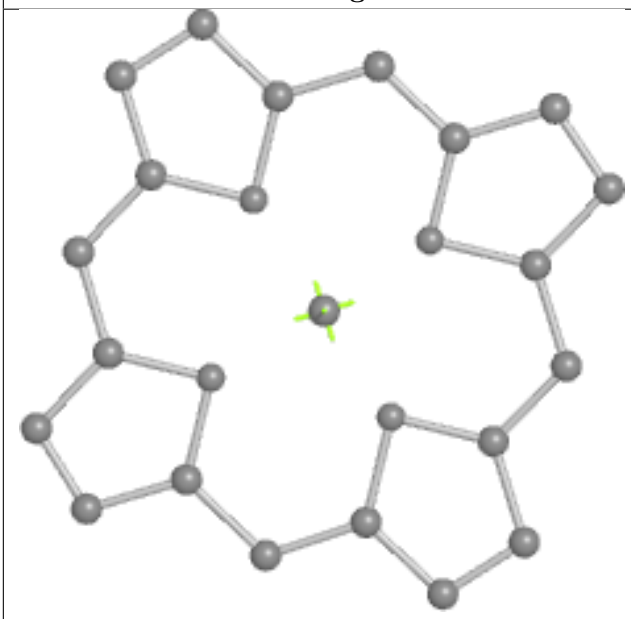


Bond angles



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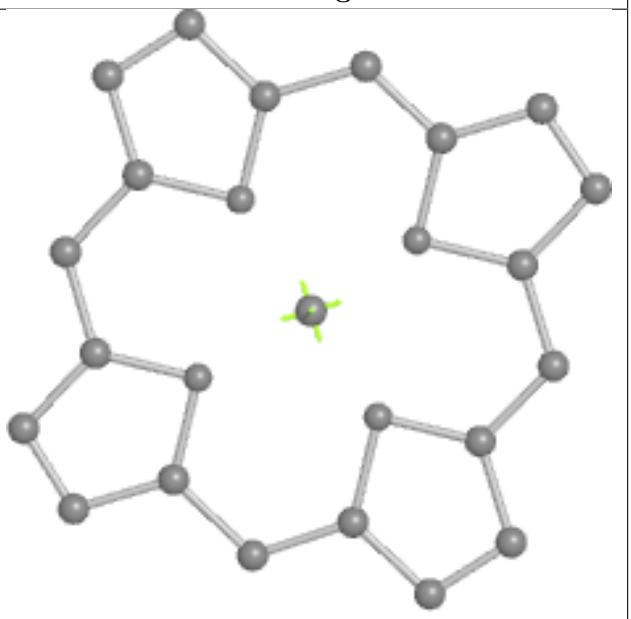
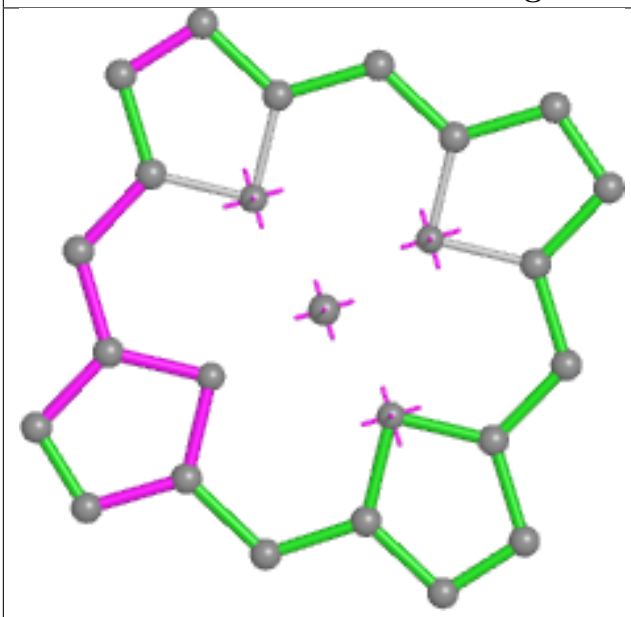


Rings

Ligand CLA B 622



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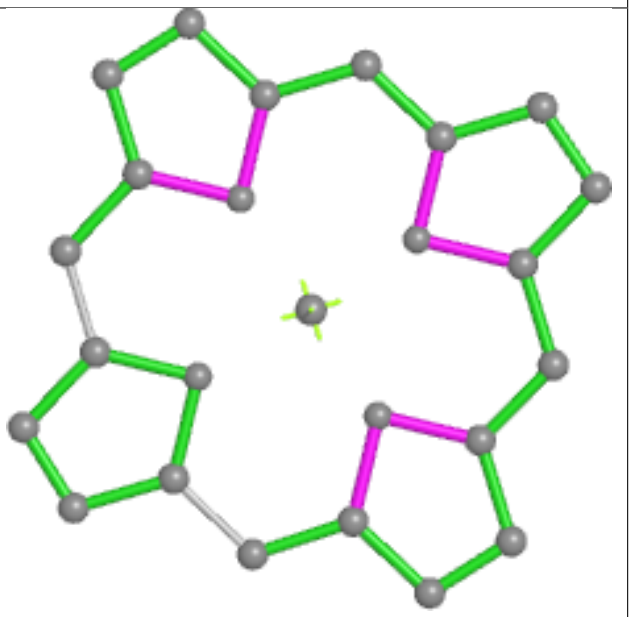
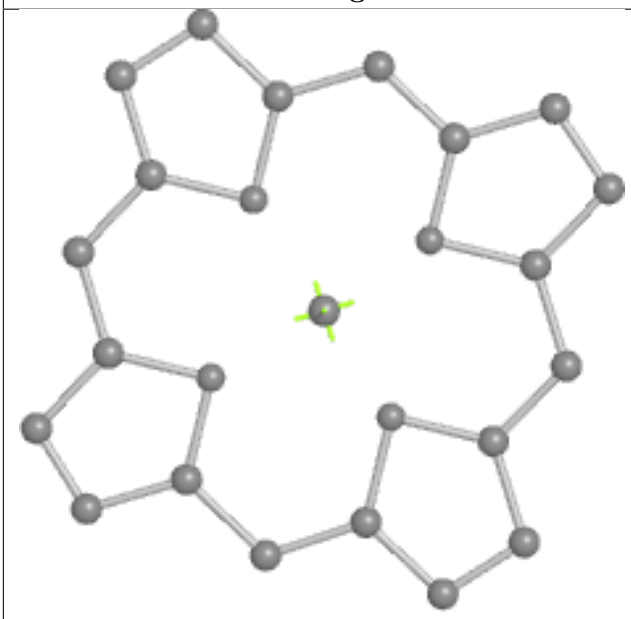
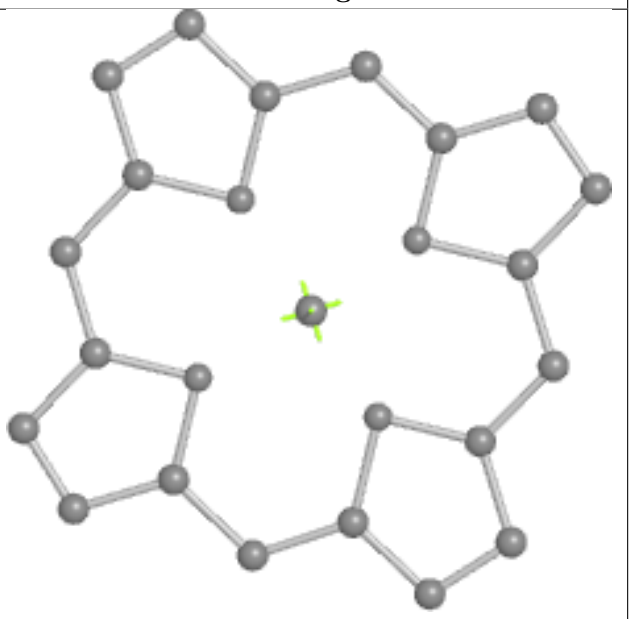


Bond angles

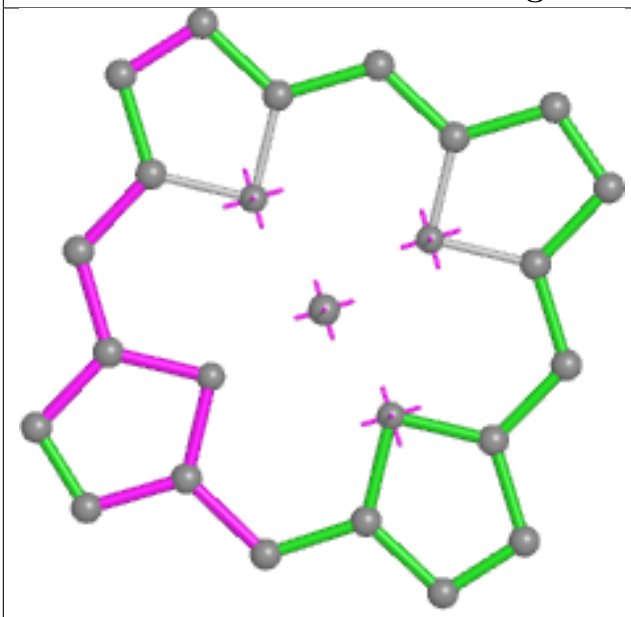


Torsions

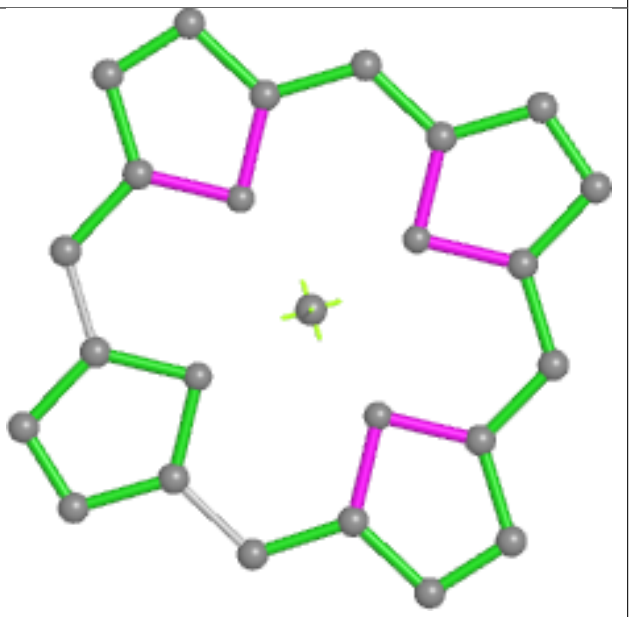


Rings

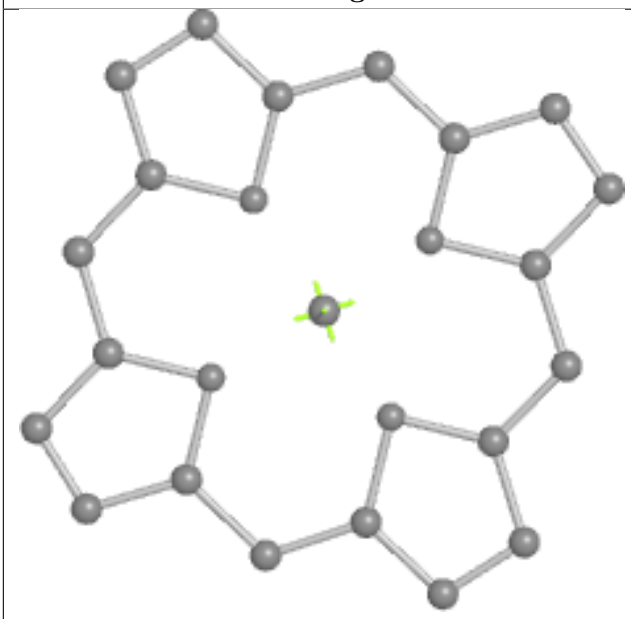
Ligand CLA L 147



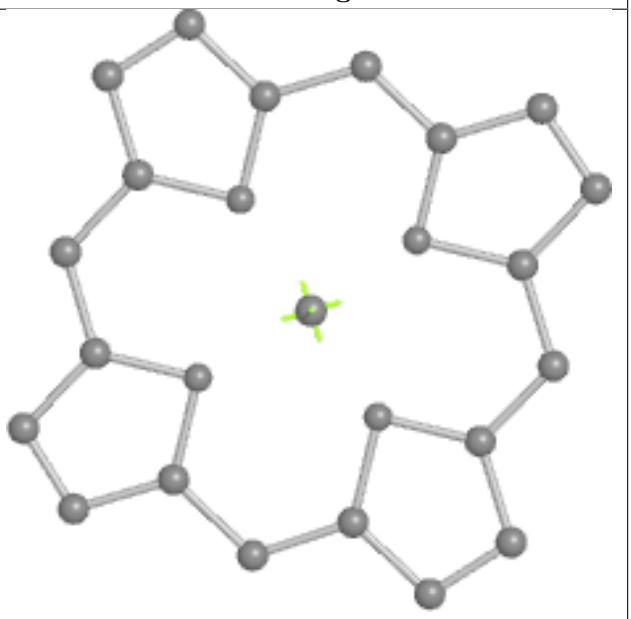
Bond lengths



Bond angles

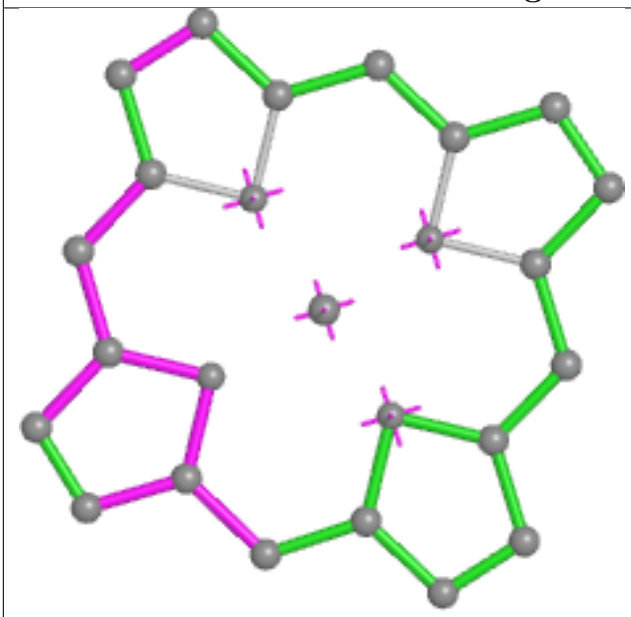


Torsions

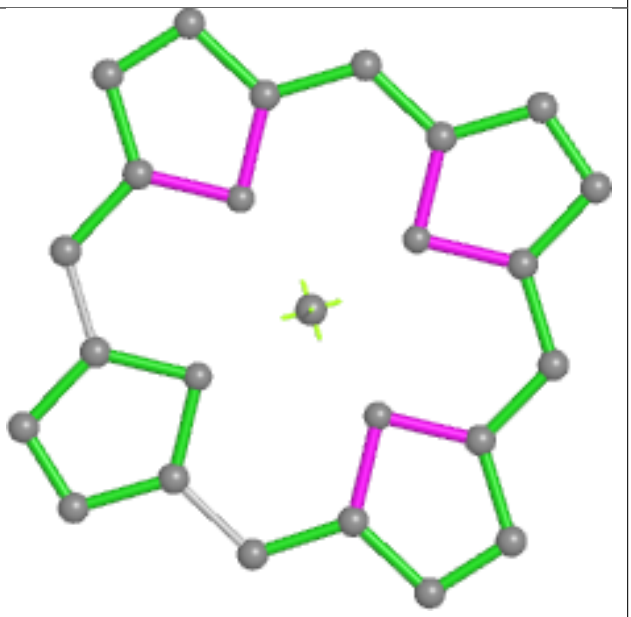


Rings

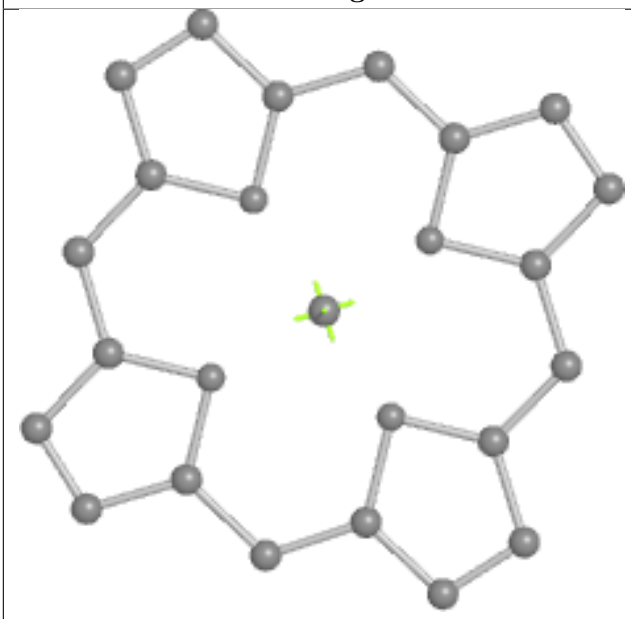
Ligand CLA B 648



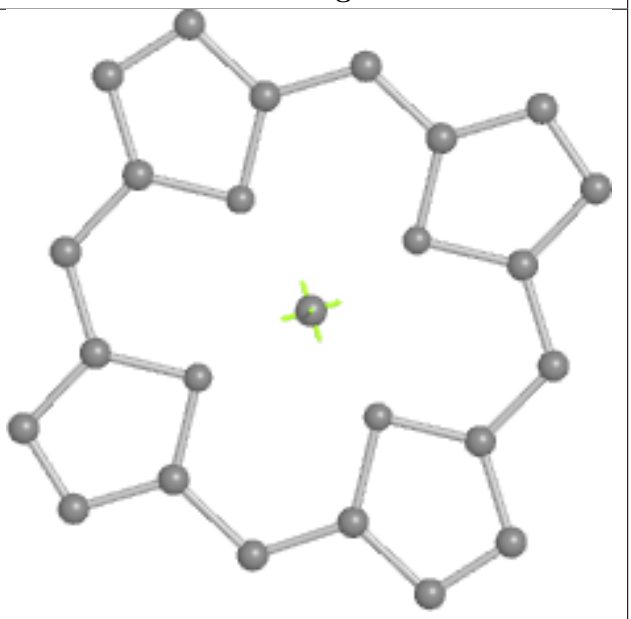
Bond lengths



Bond angles

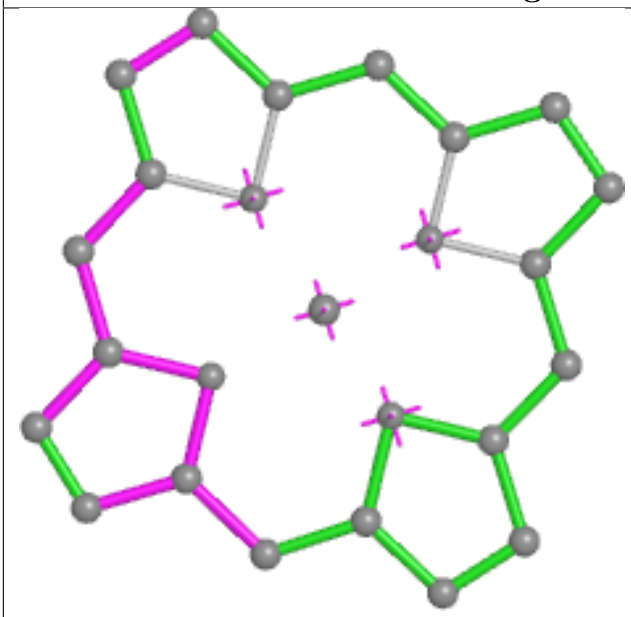


Torsions

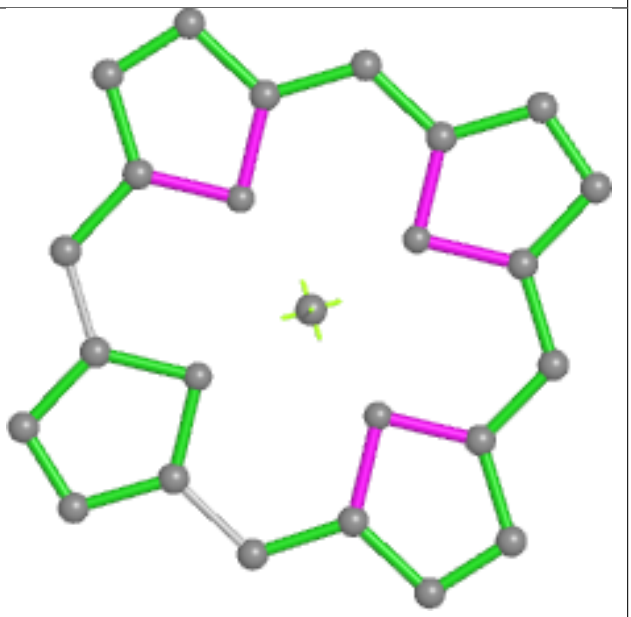


Rings

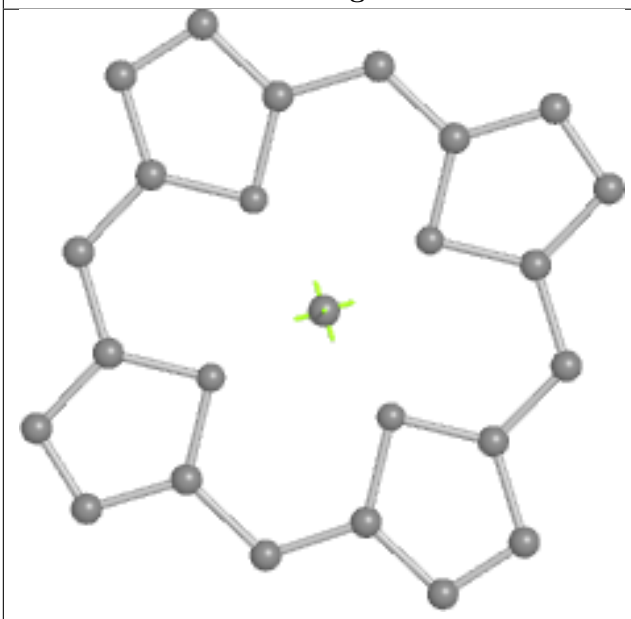
Ligand CLA A 626



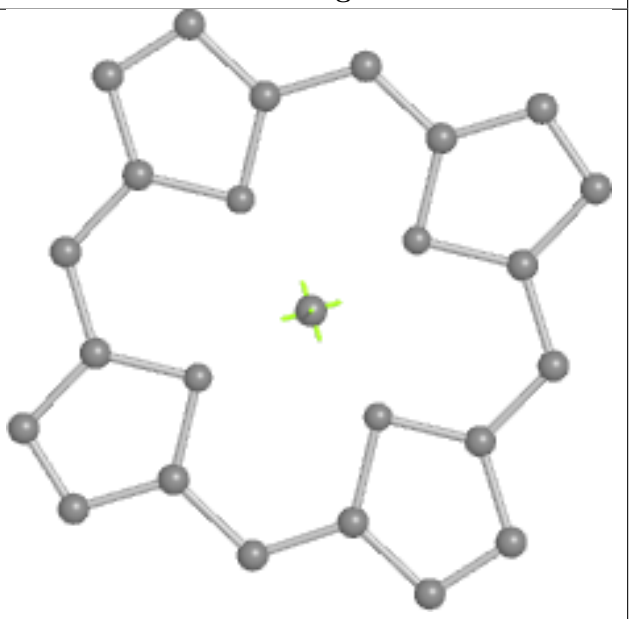
Bond lengths



Bond angles

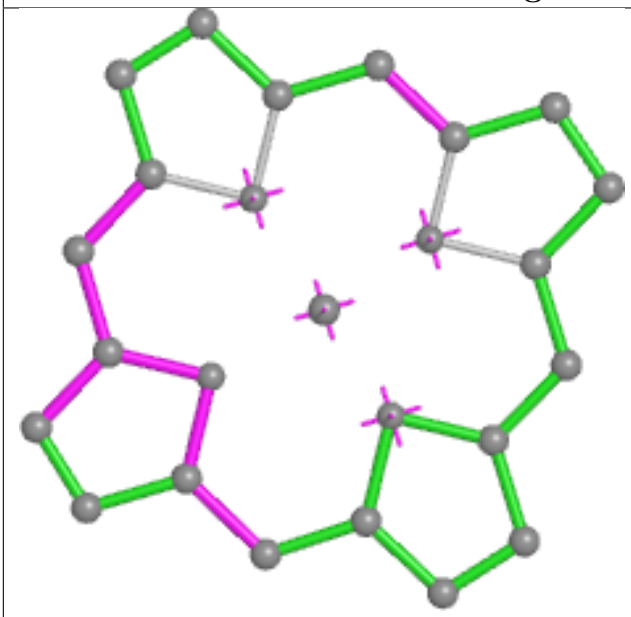


Torsions

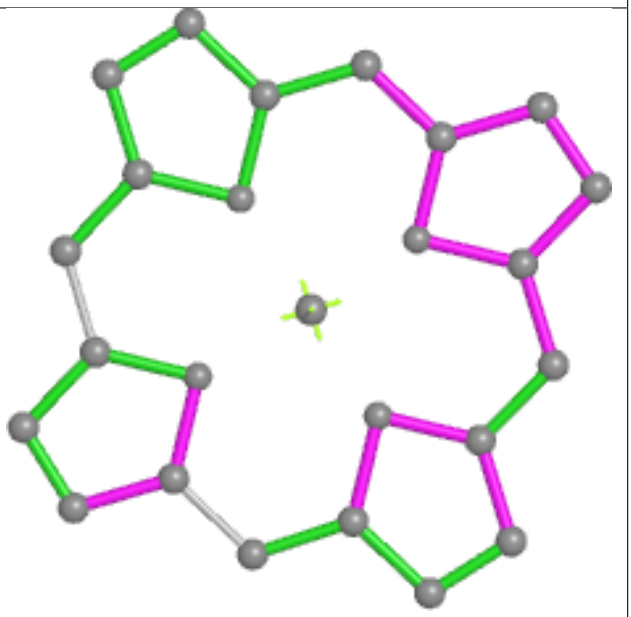


Rings

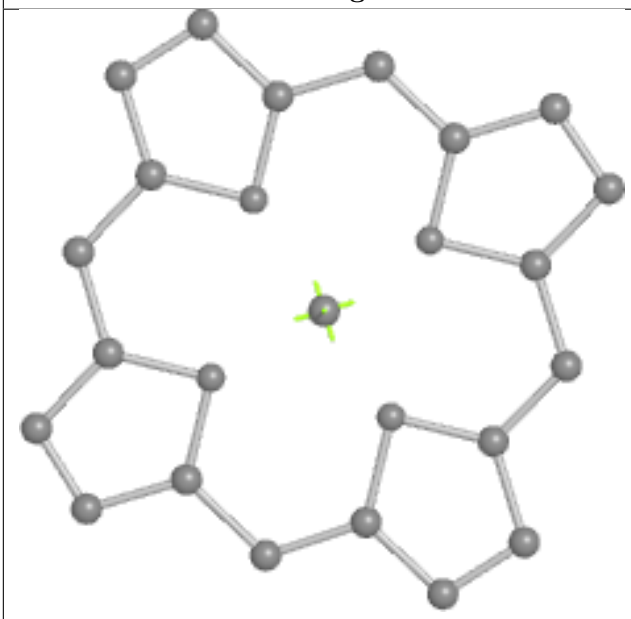
Ligand CLA B 640



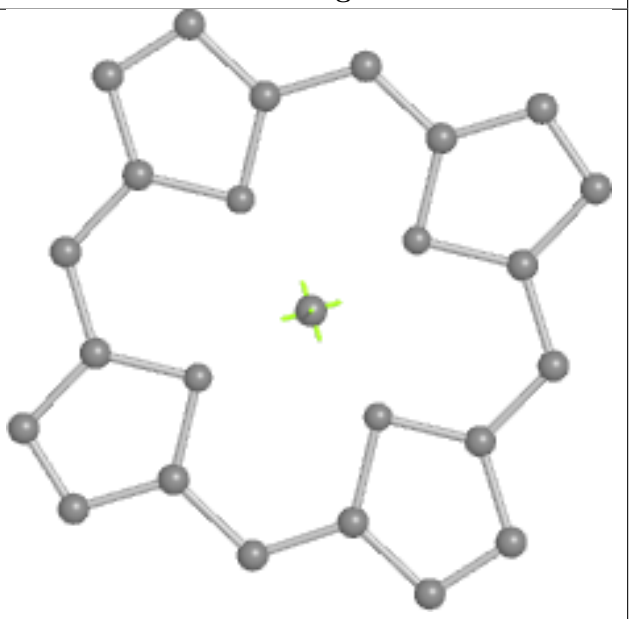
Bond lengths



Bond angles

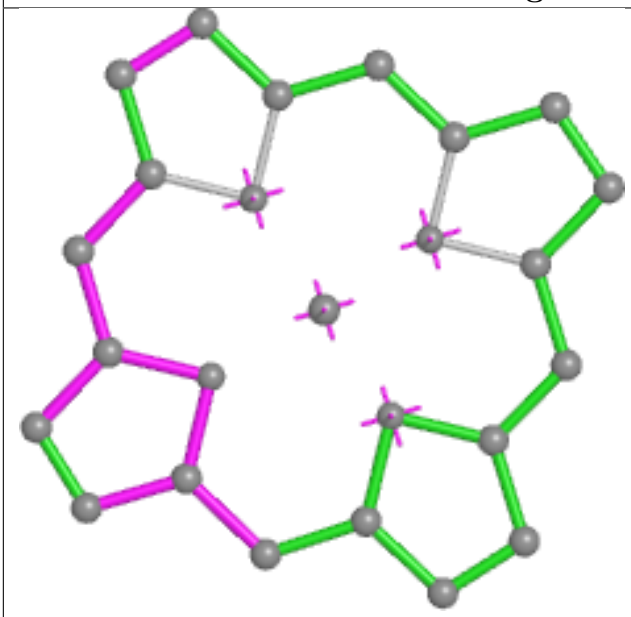


Torsions



Rings

Ligand CLA F 154



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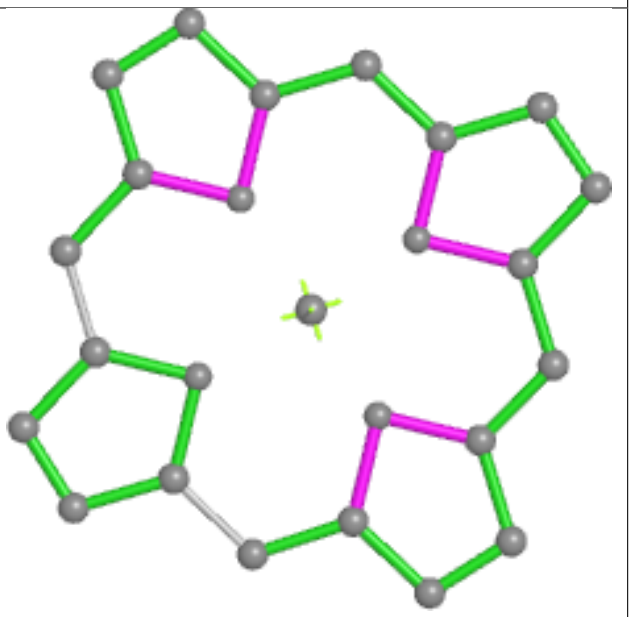
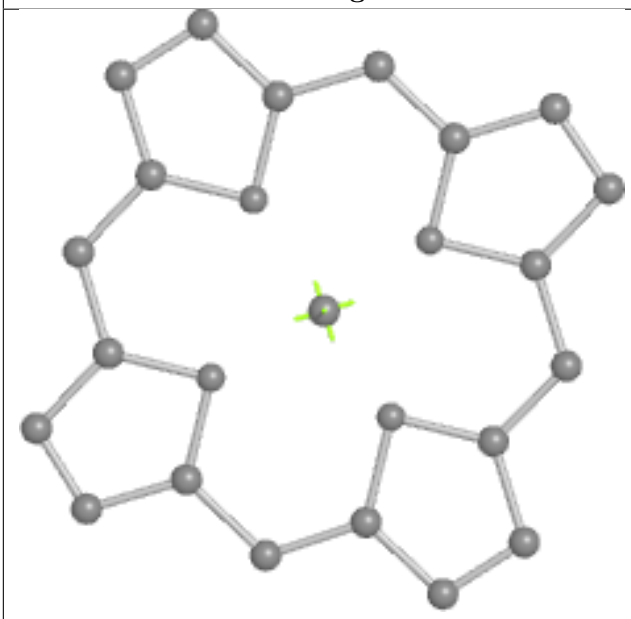
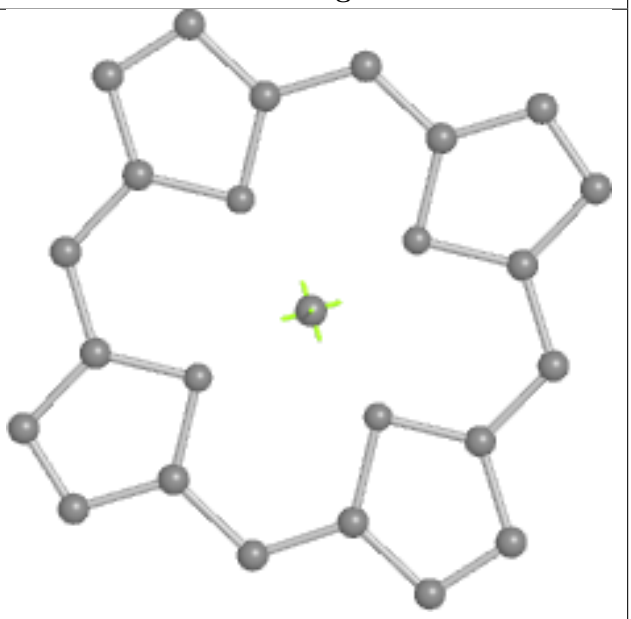


Bond angles

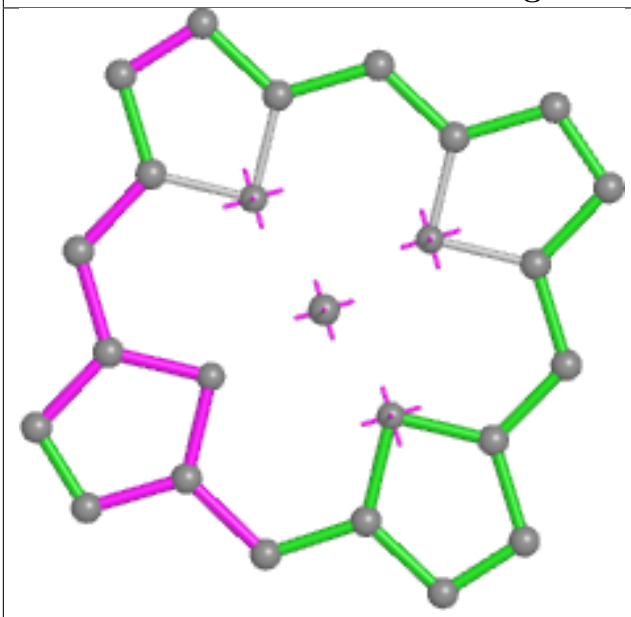


Torsions

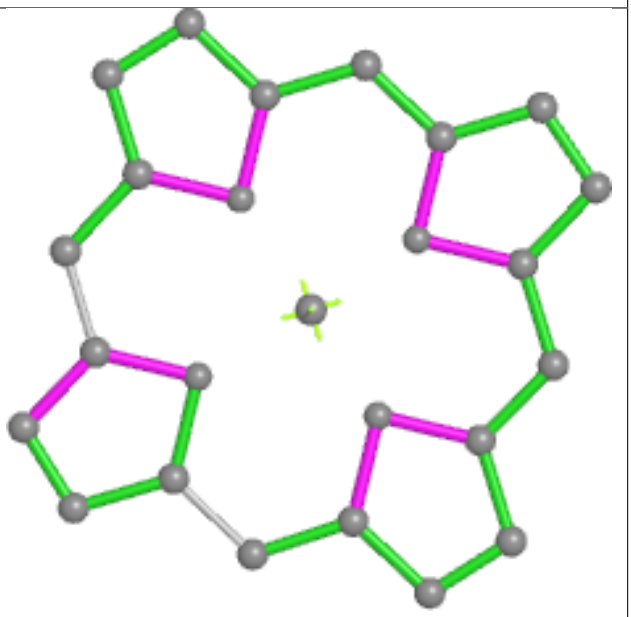


Rings

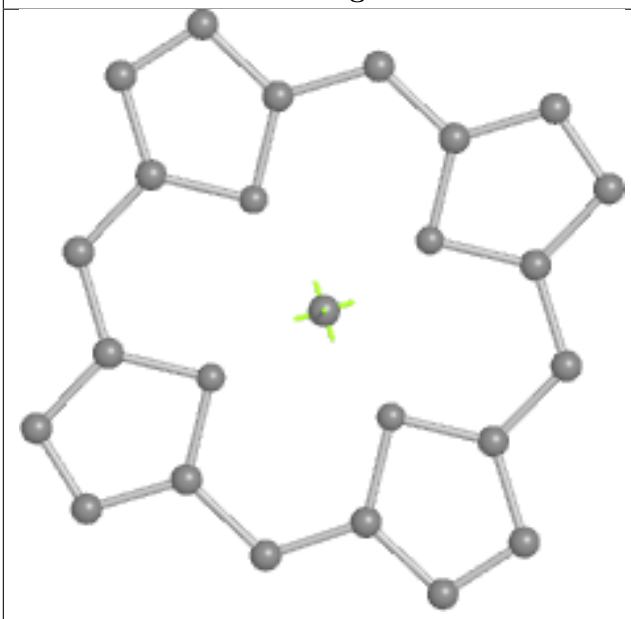
Ligand CLA A 609



Bond lengths



Bond angles



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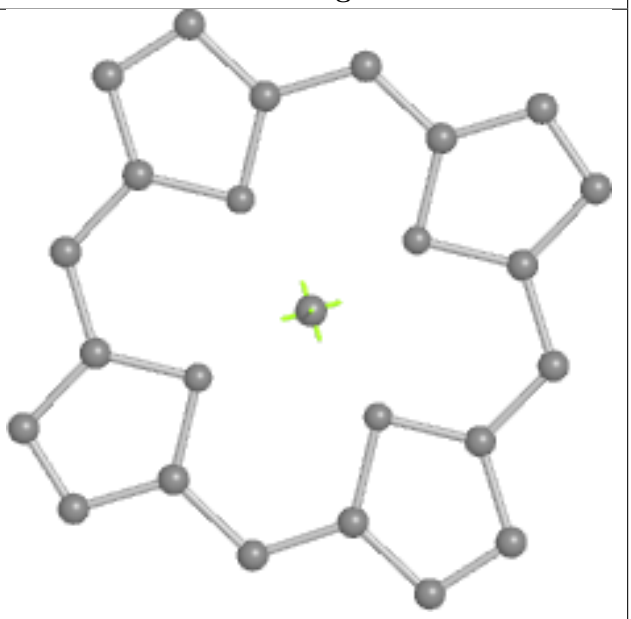
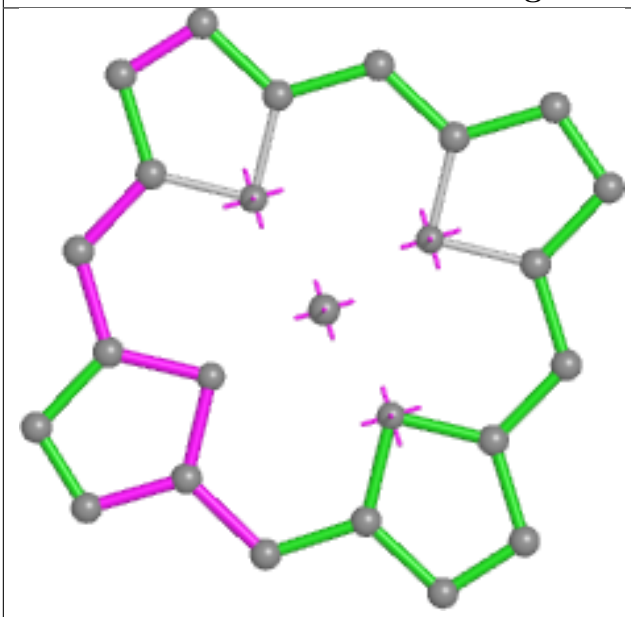


Rings

Ligand CLA B 629



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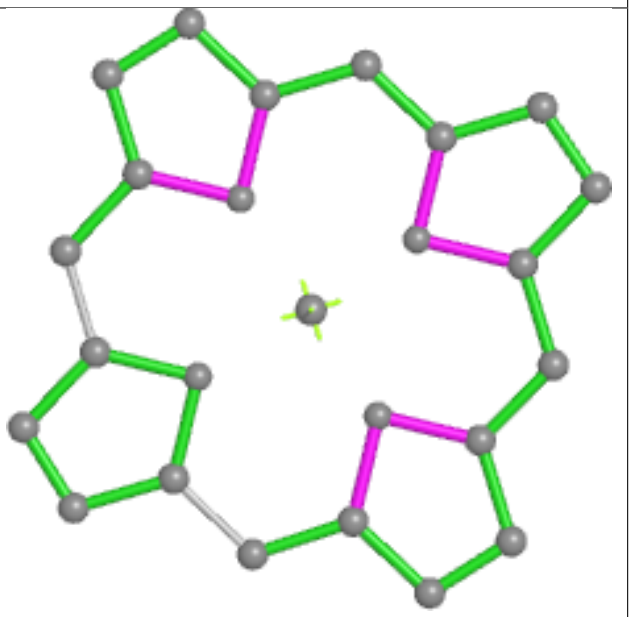
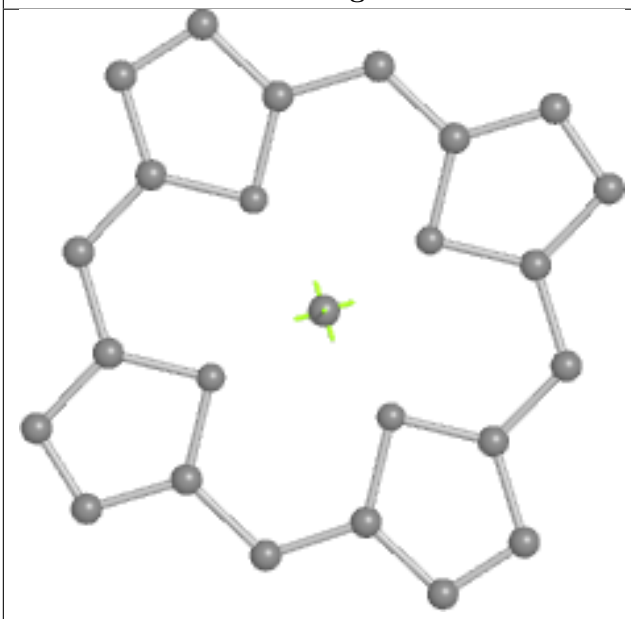


Bond angles



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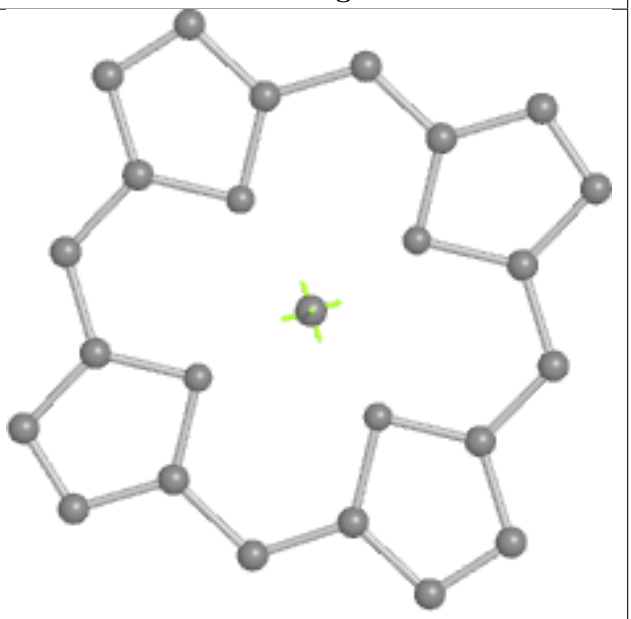
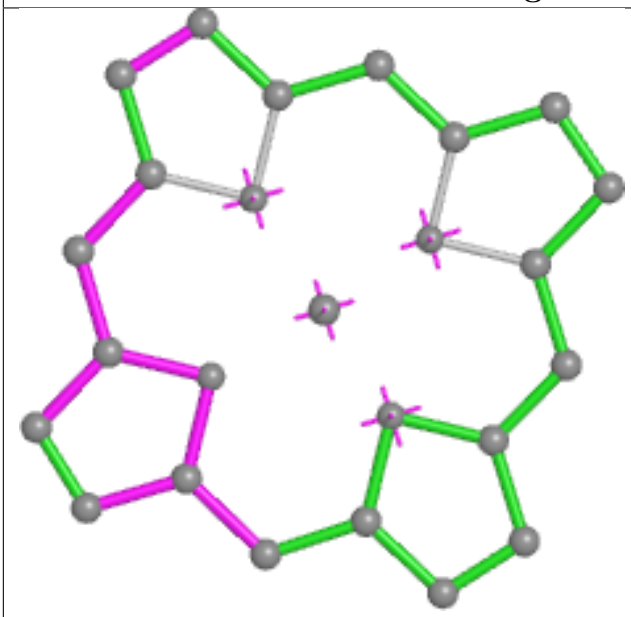


Rings

Ligand CLA B 633



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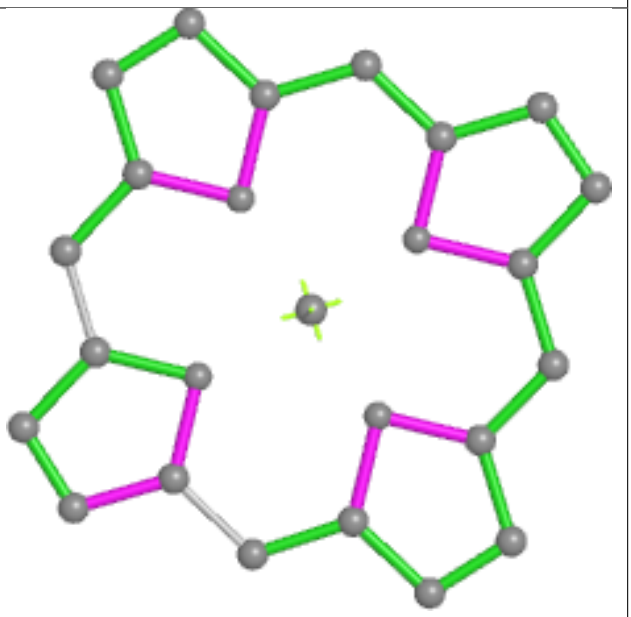
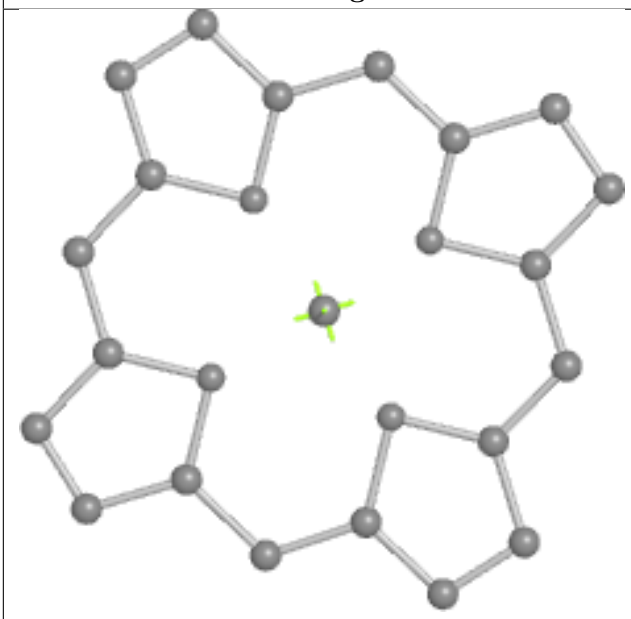


Bond angles



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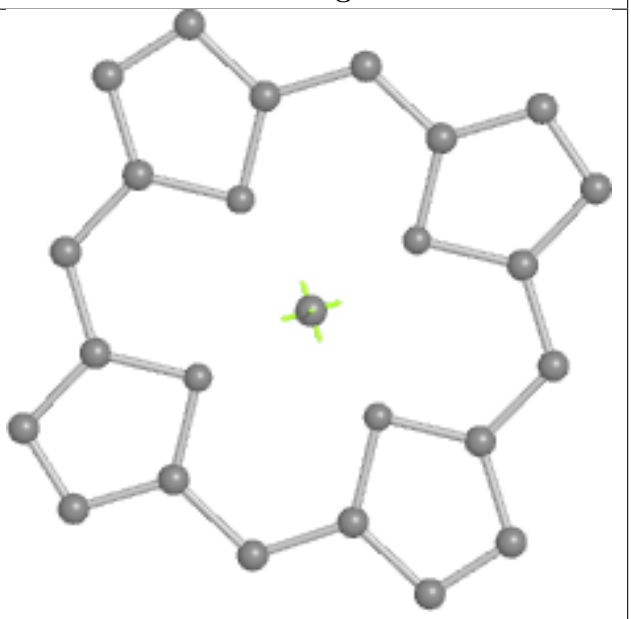
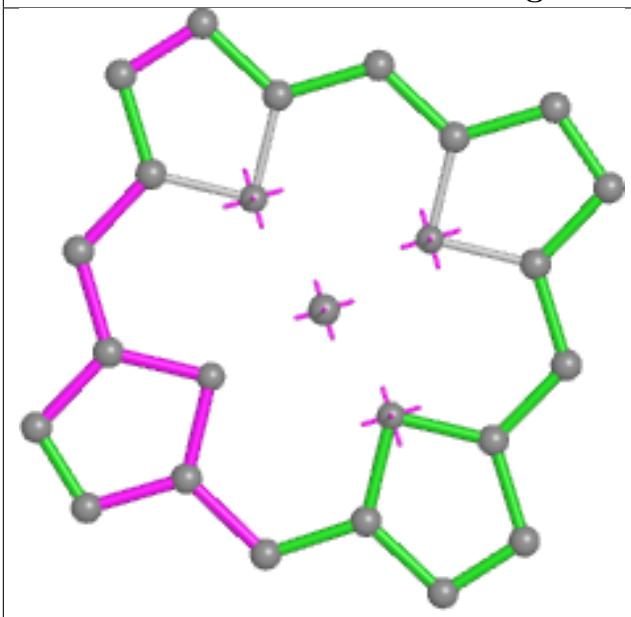


Rings

Ligand CLA F 157



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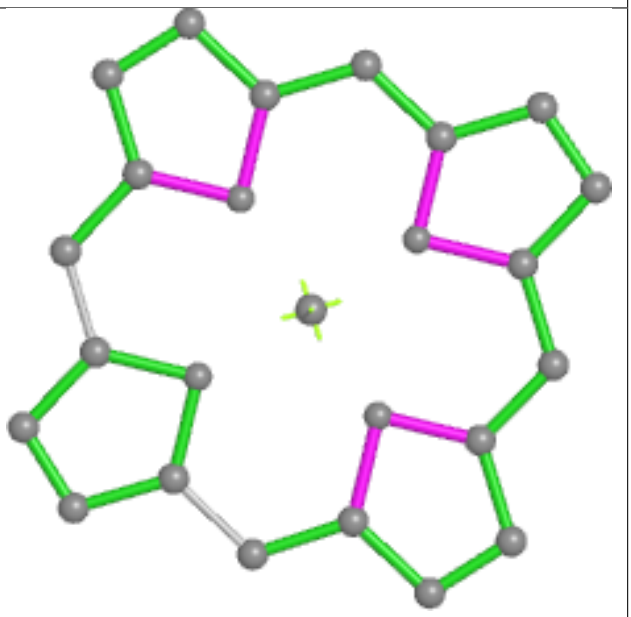
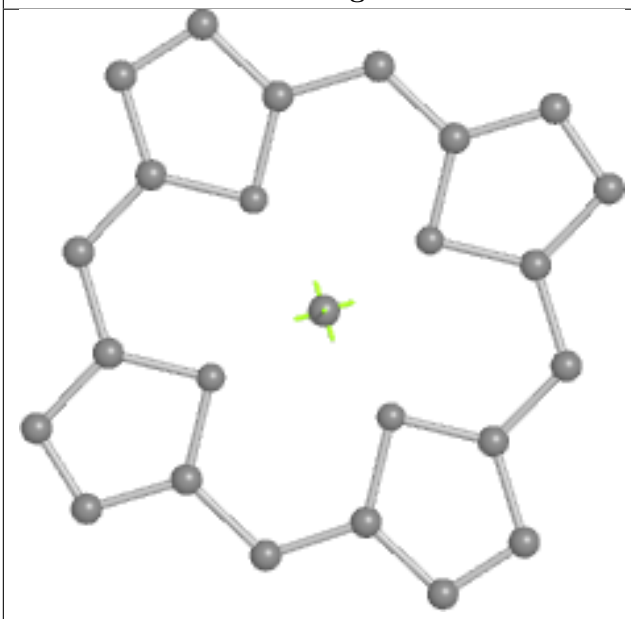


Bond angles



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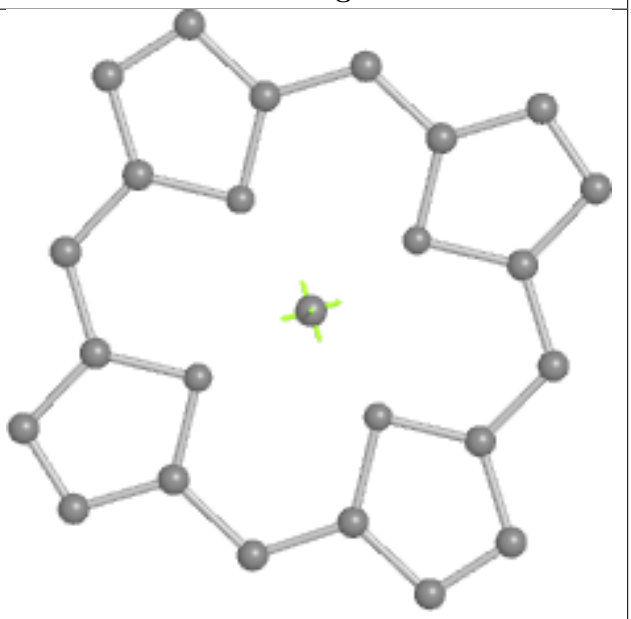
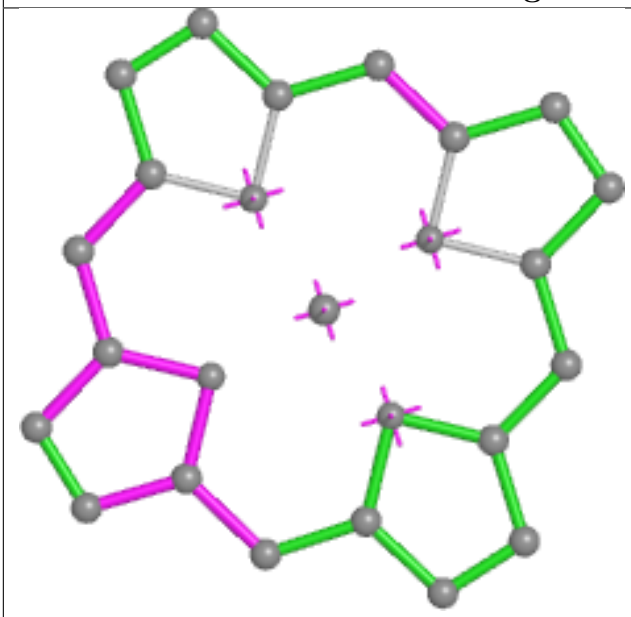


Rings

Ligand CLA A 612



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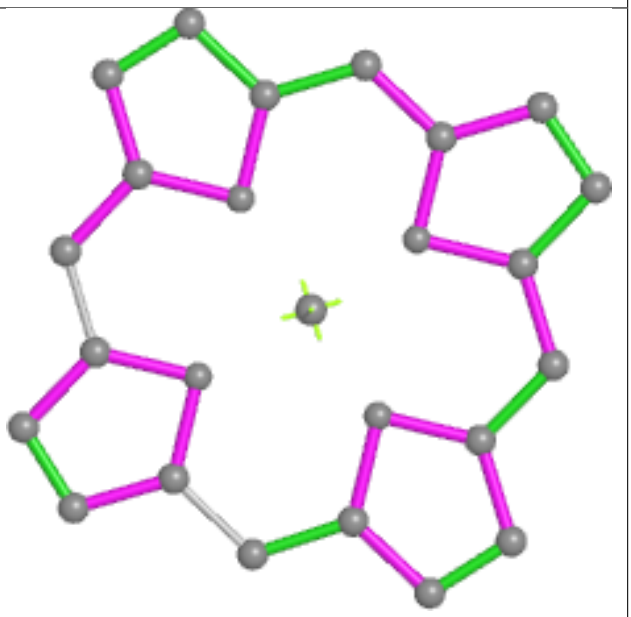
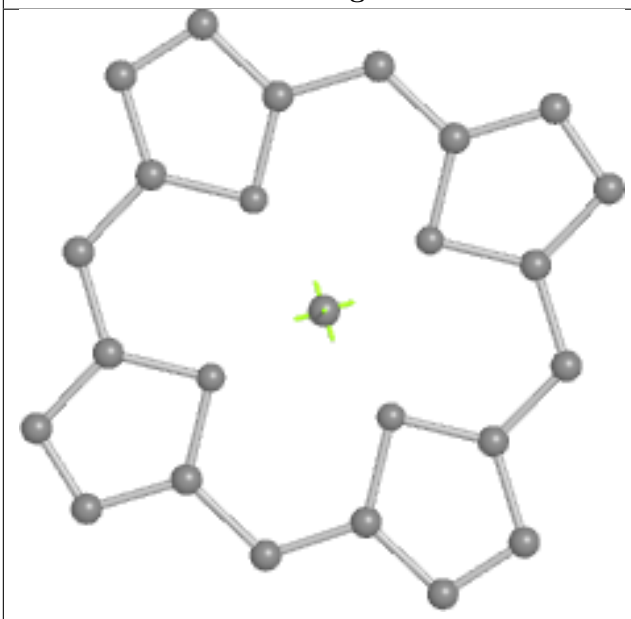


Bond angles



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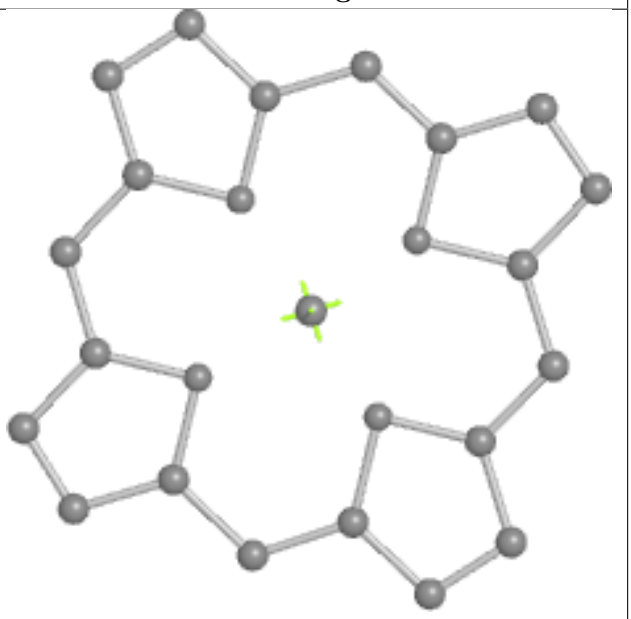
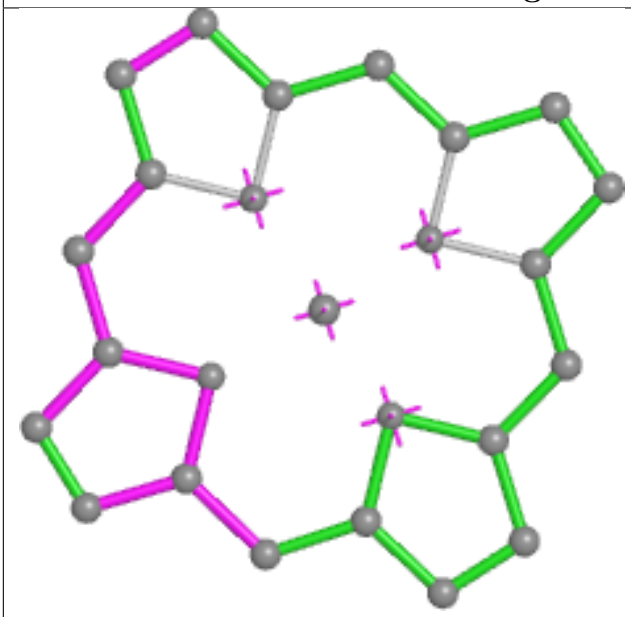


Rings

Ligand CLA A 625



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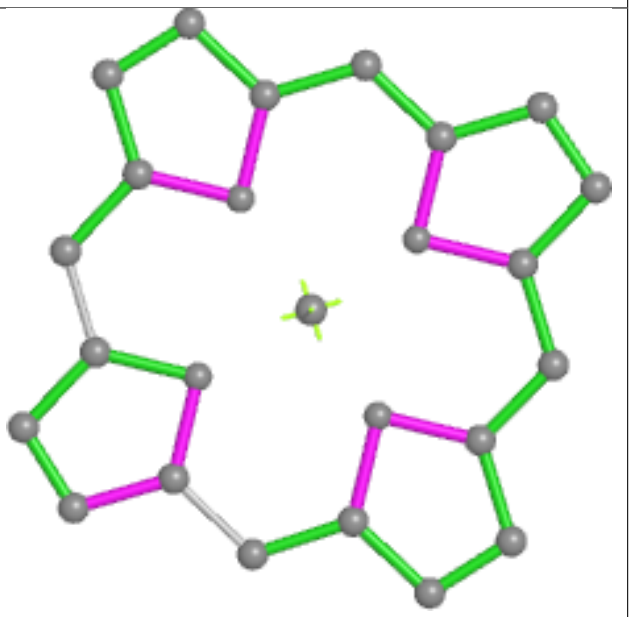
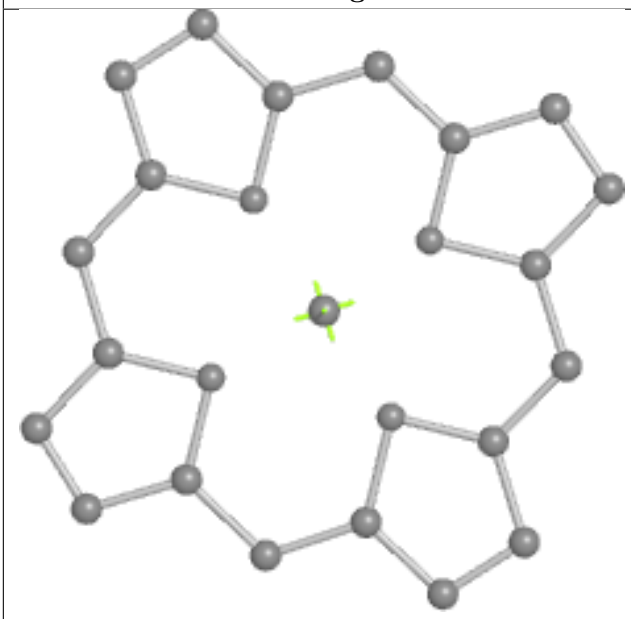


Bond angles



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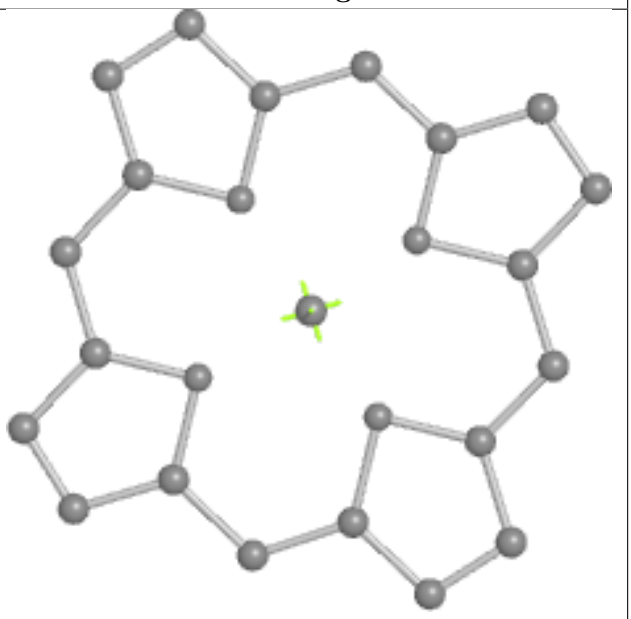
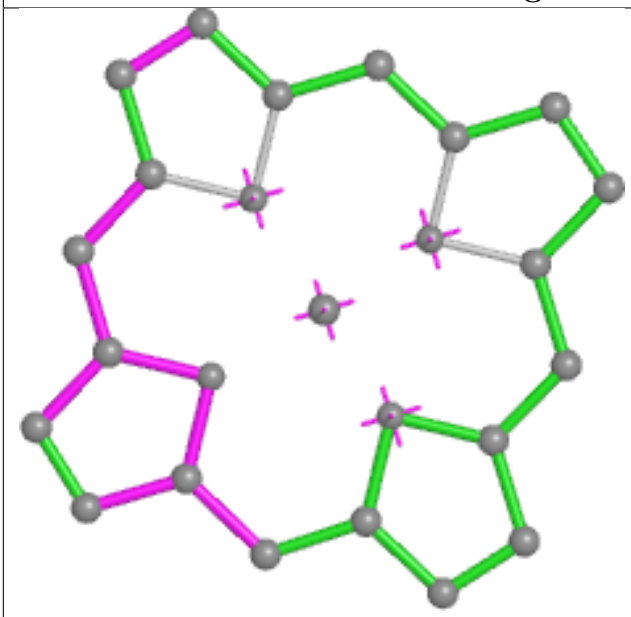


Rings

Ligand CLA B 636



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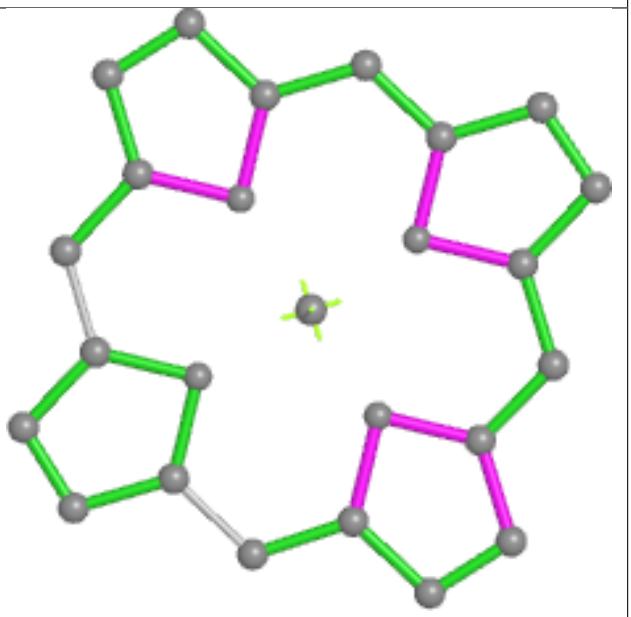
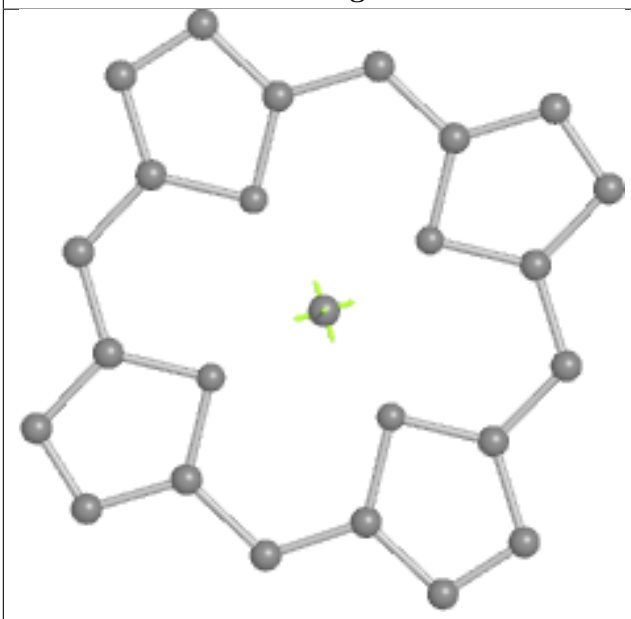


Bond angles



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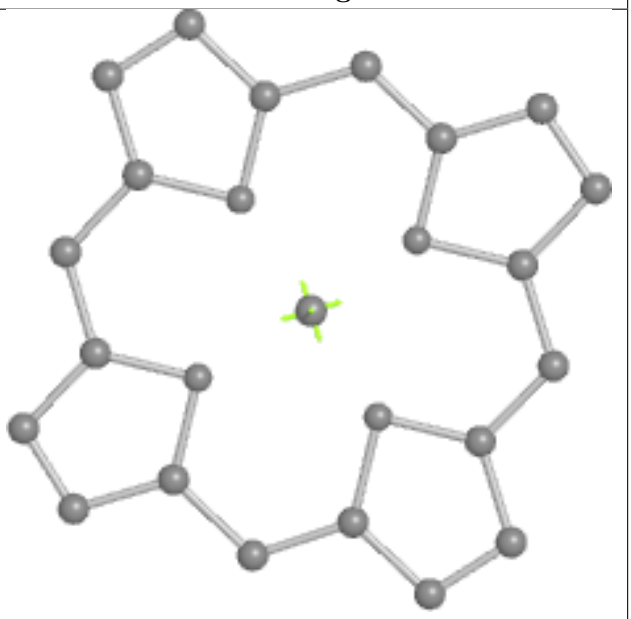
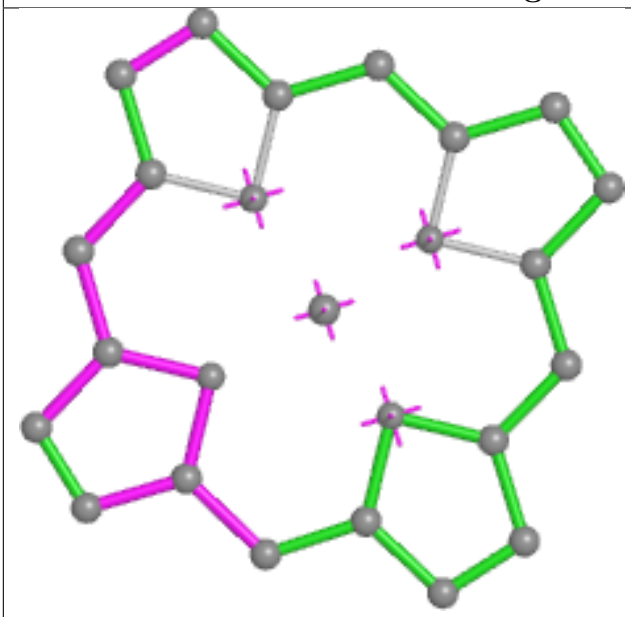


Rings

Ligand CLA B 643



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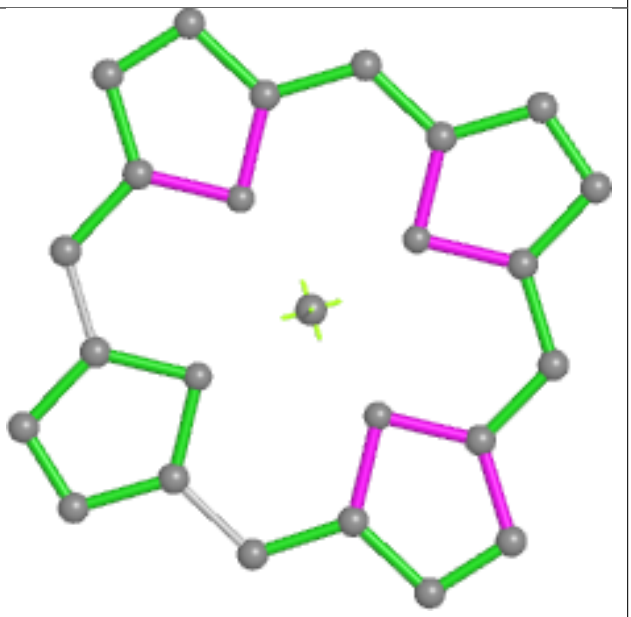
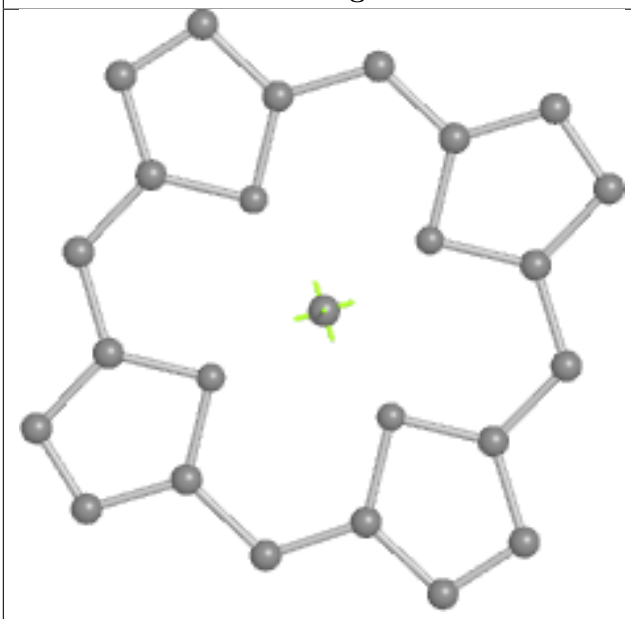
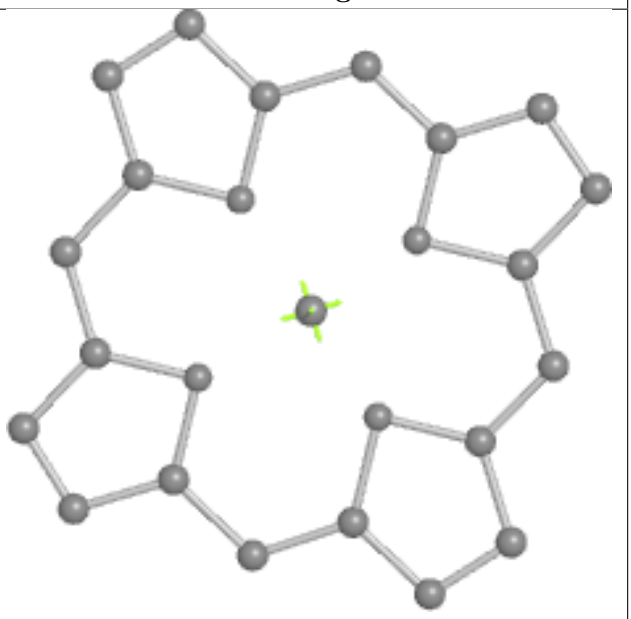


Bond angles

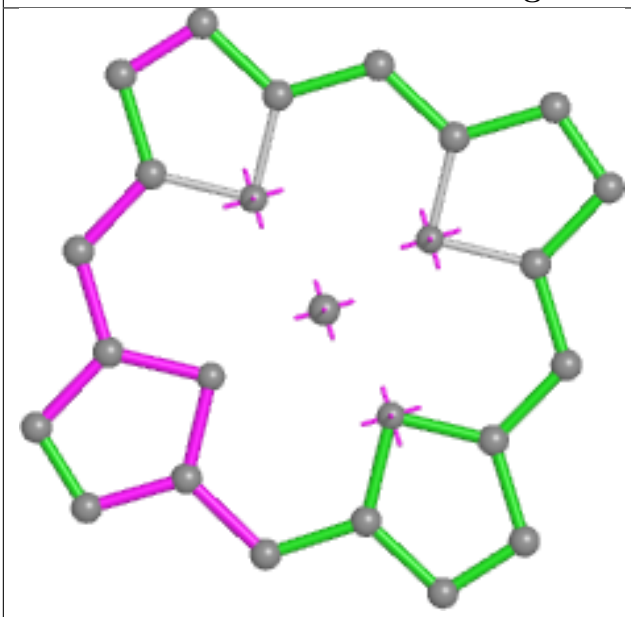


Torsions



Rings

Ligand CLA A 607



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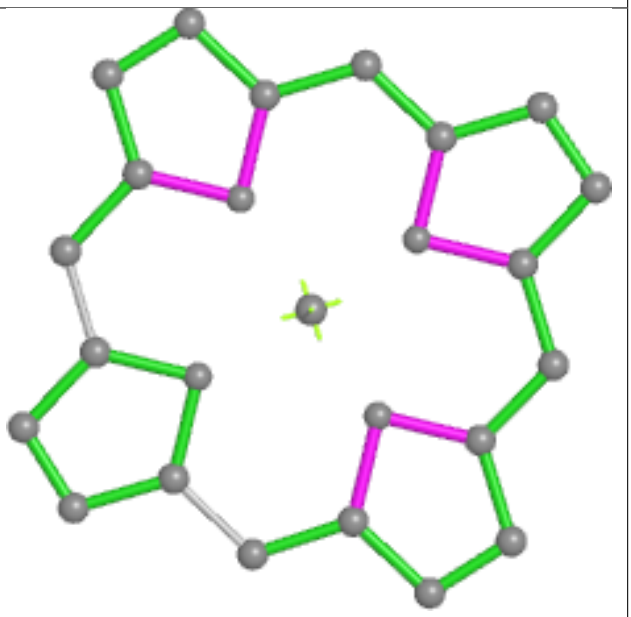
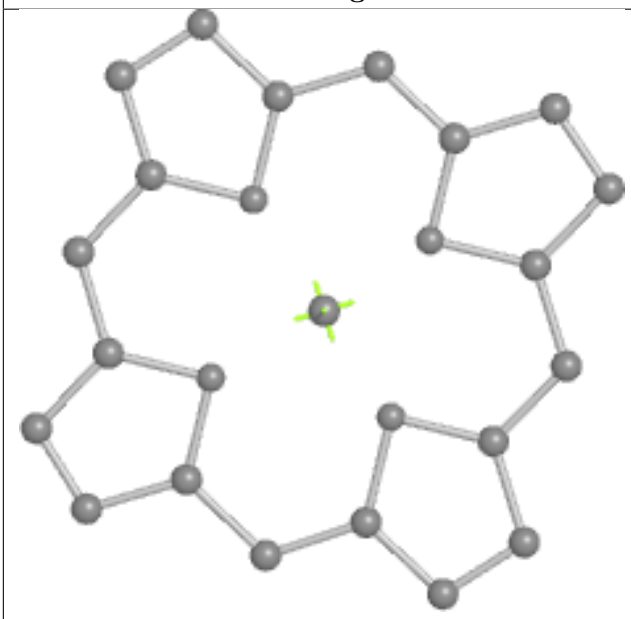


Bond angles



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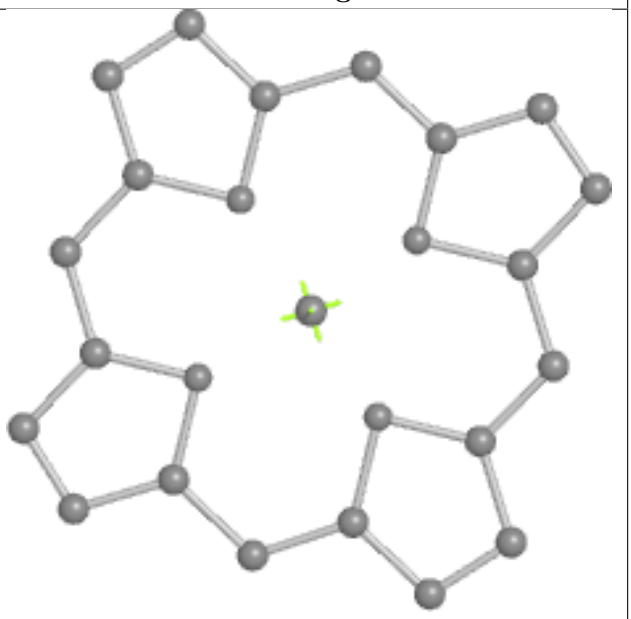
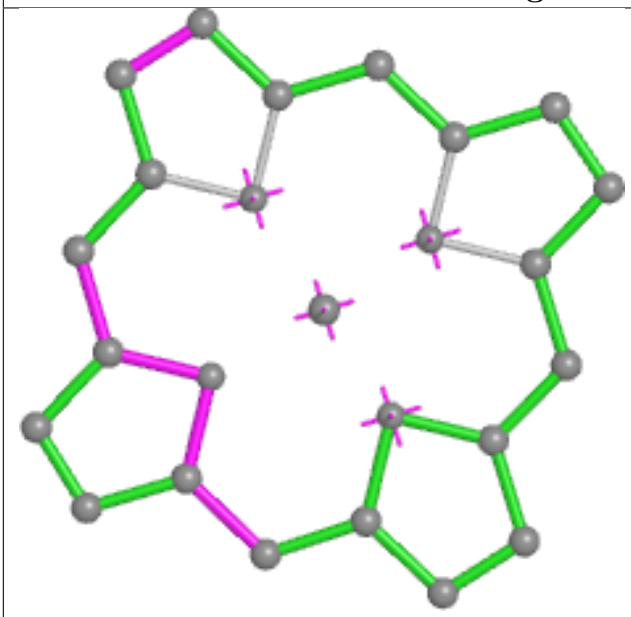


Rings

Ligand CLA L 163



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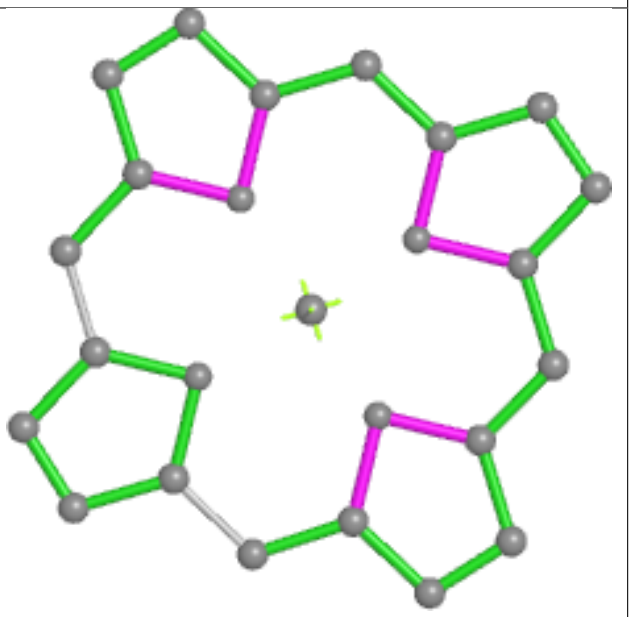
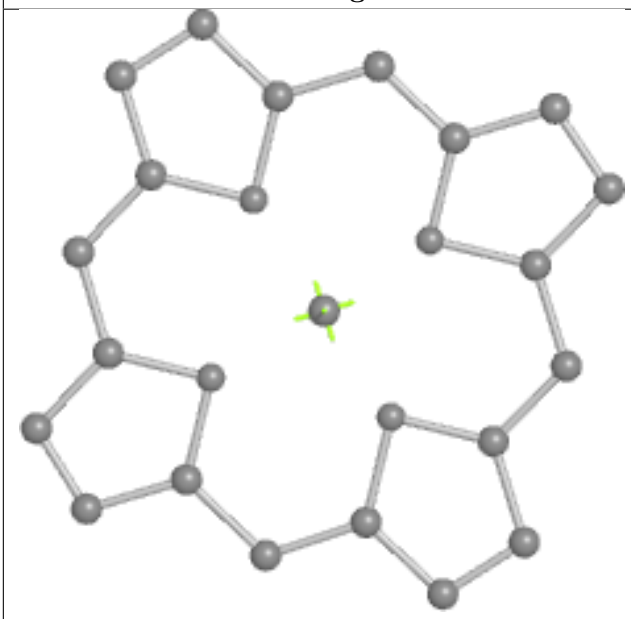


Bond angles



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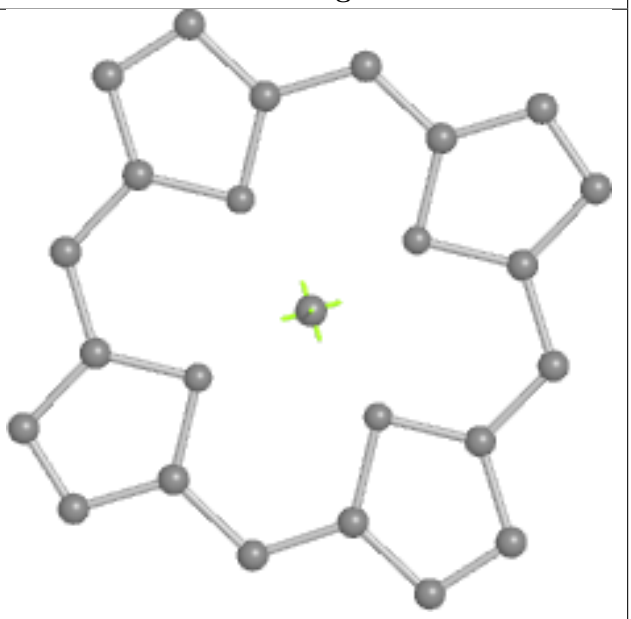
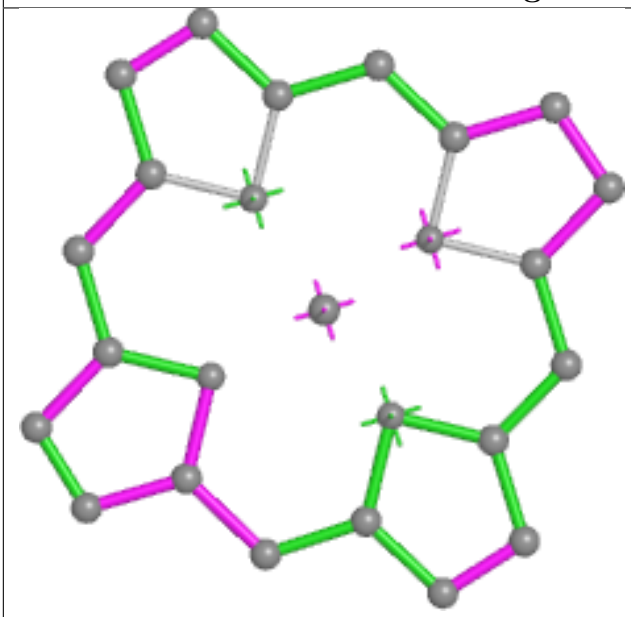
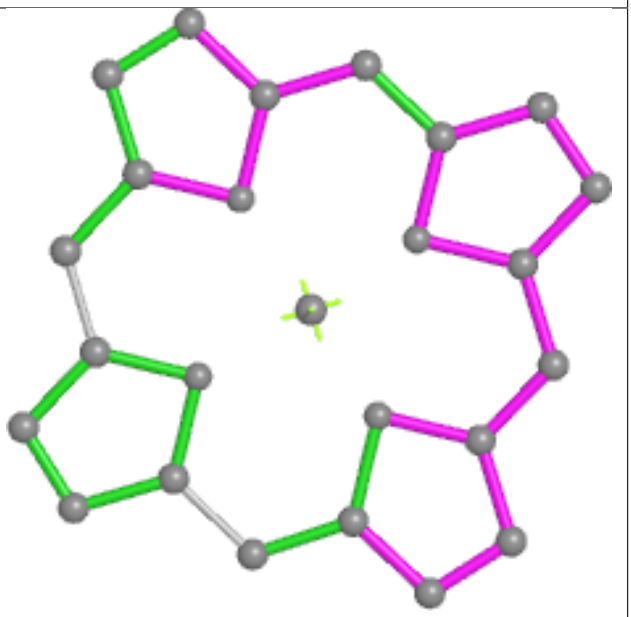


Rings

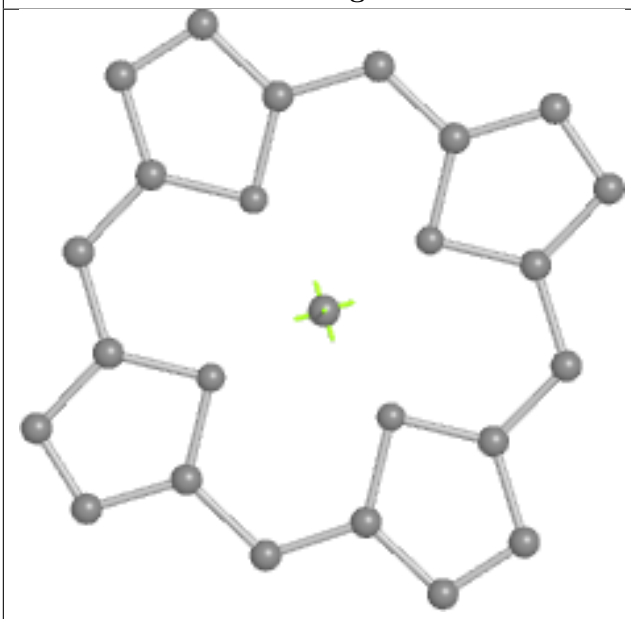
Ligand CLA A 614



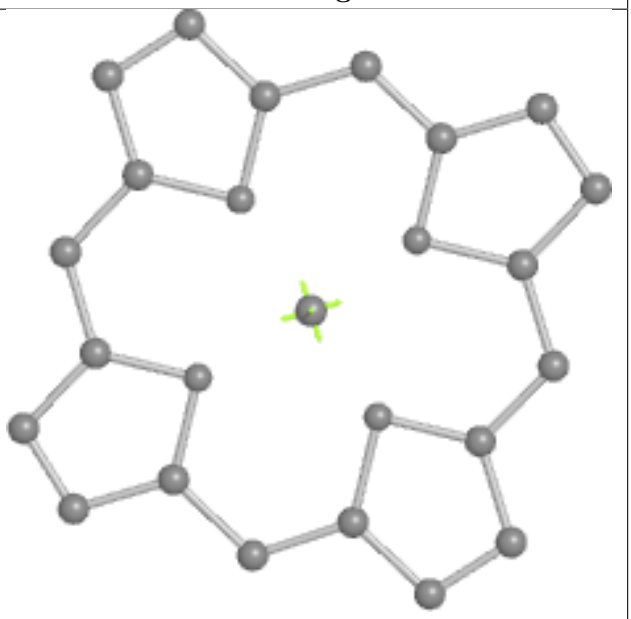
Bond lengths



Bond angles

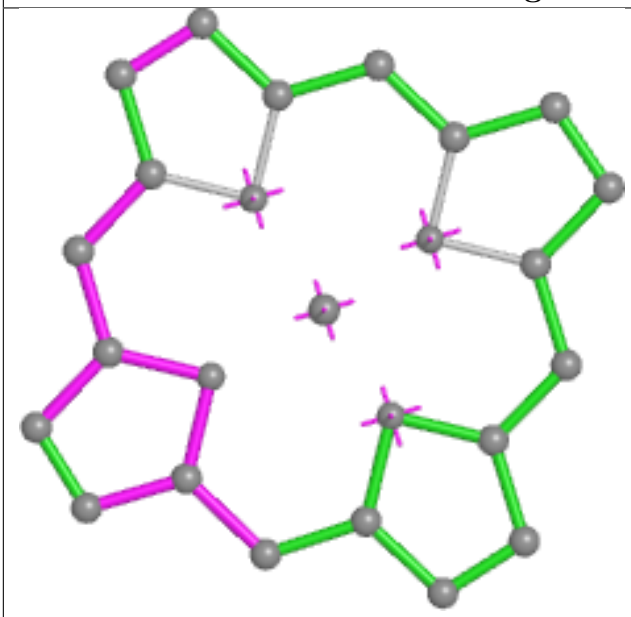


Torsions

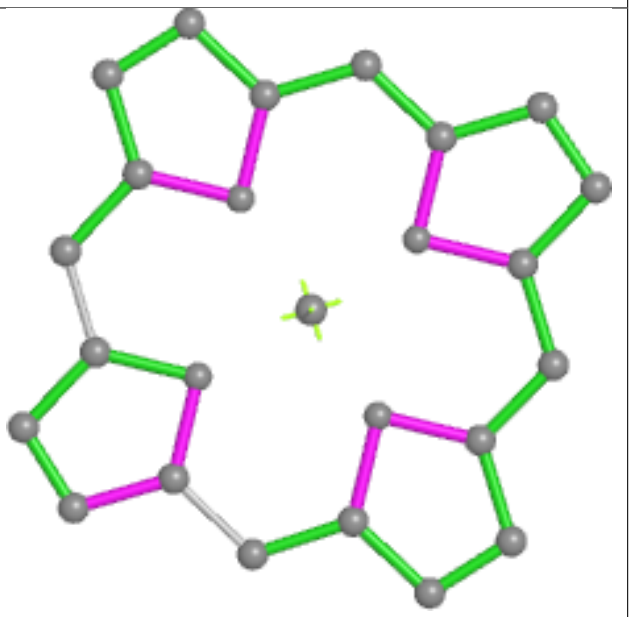


Rings

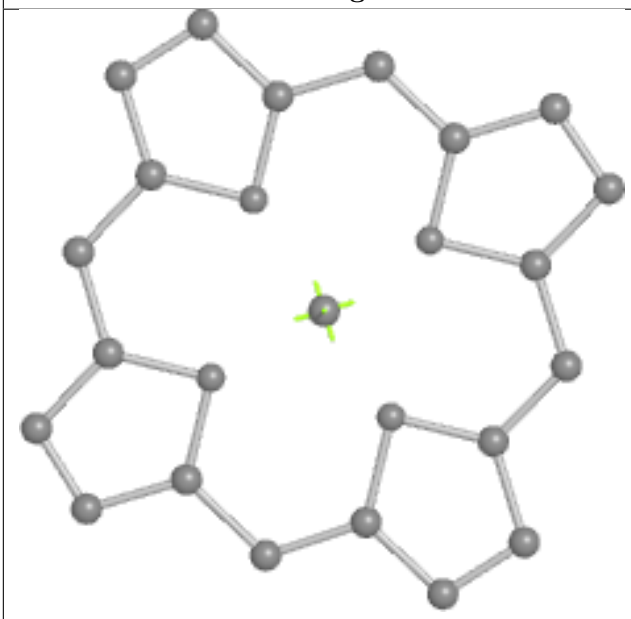
Ligand CLA B 632



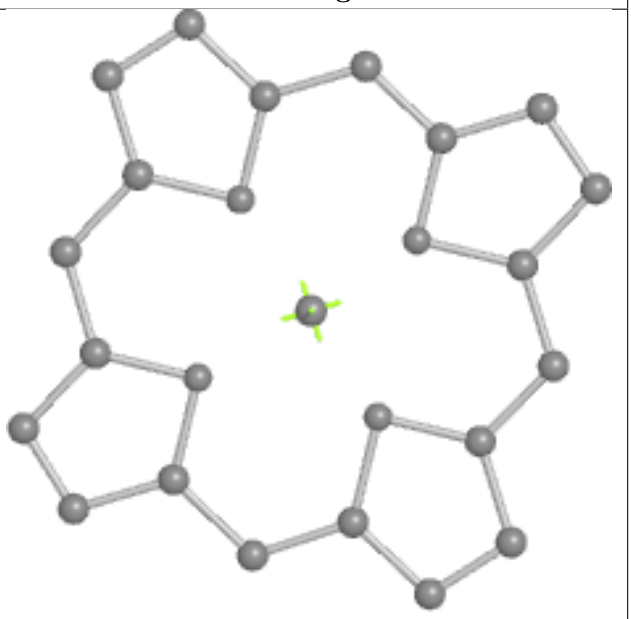
Bond lengths



Bond angles

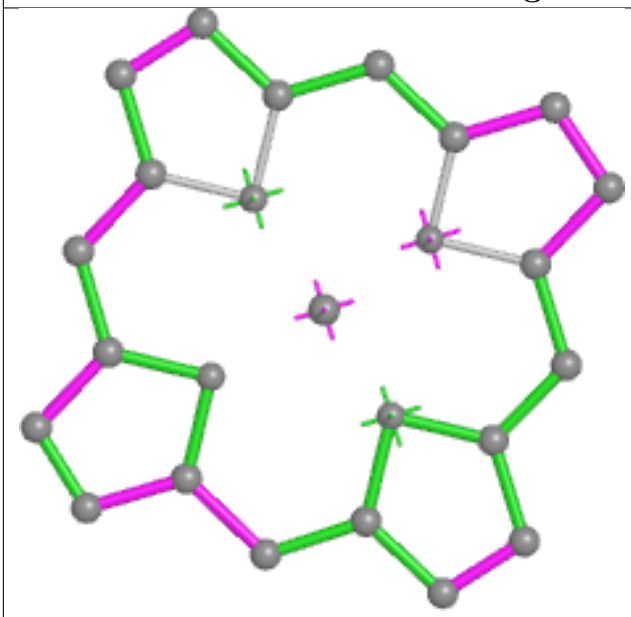


Torsions

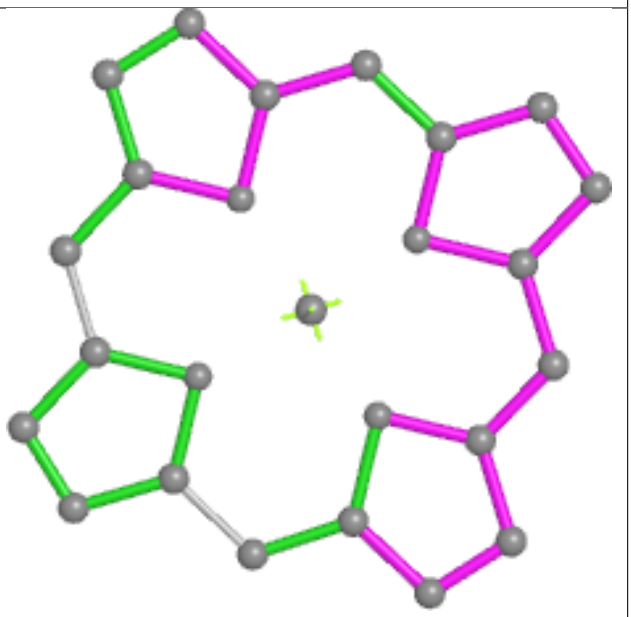


Rings

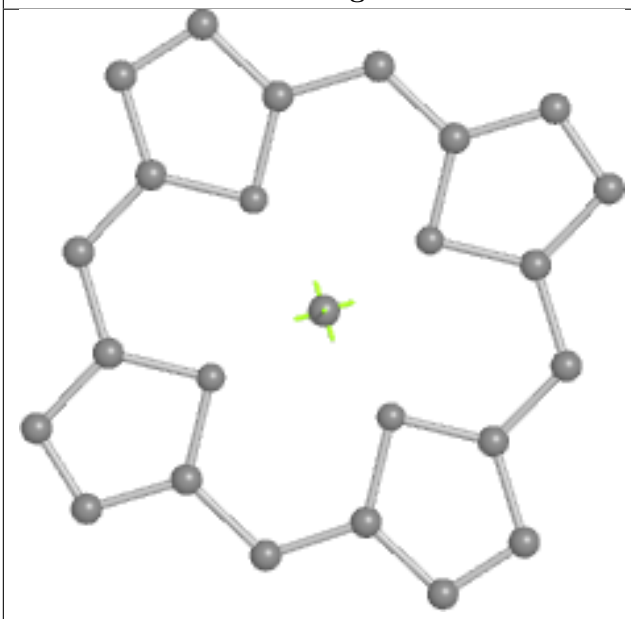
Ligand CLA A 615



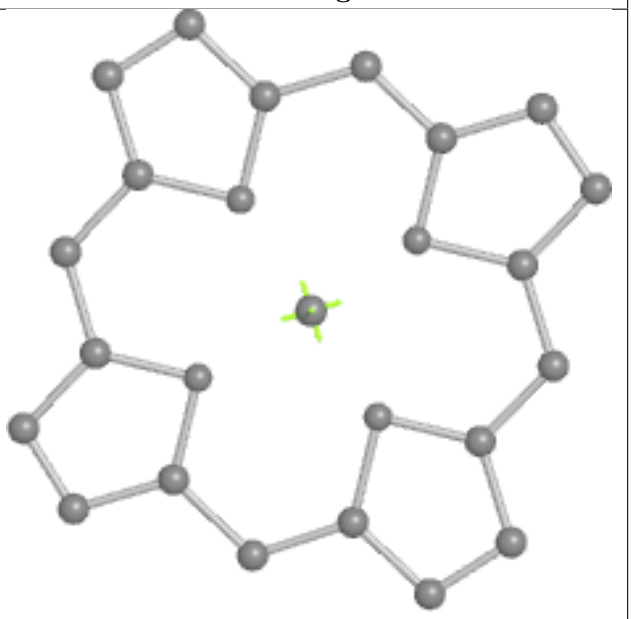
Bond lengths



Bond angles

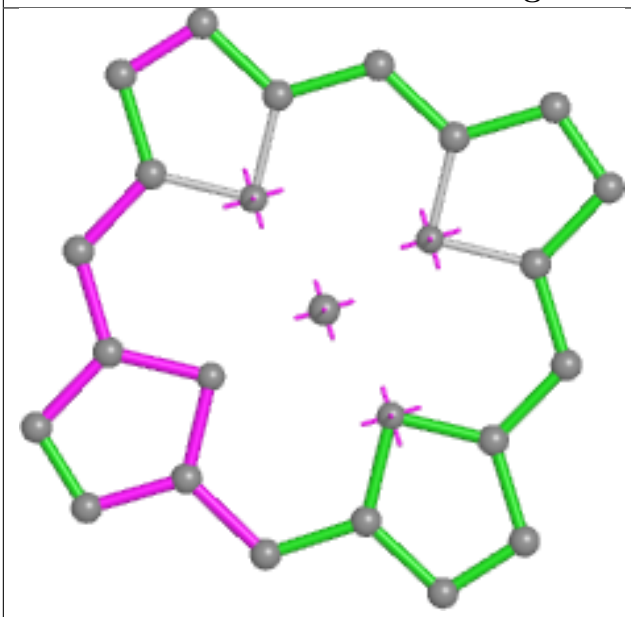


Torsions

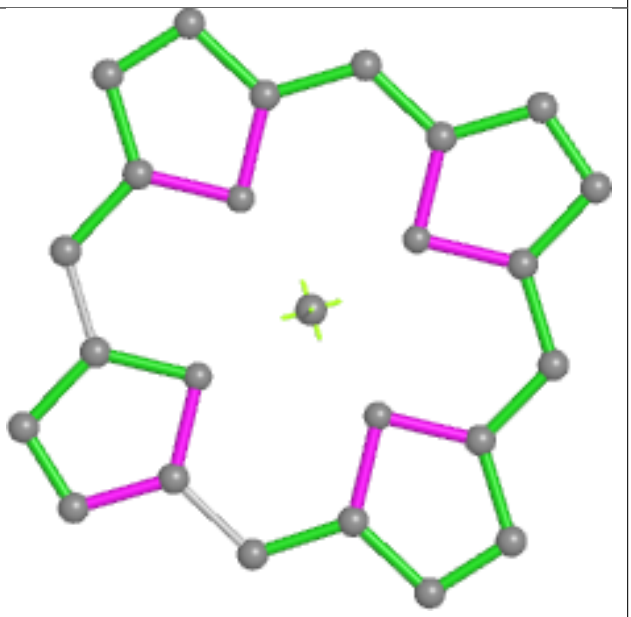


Rings

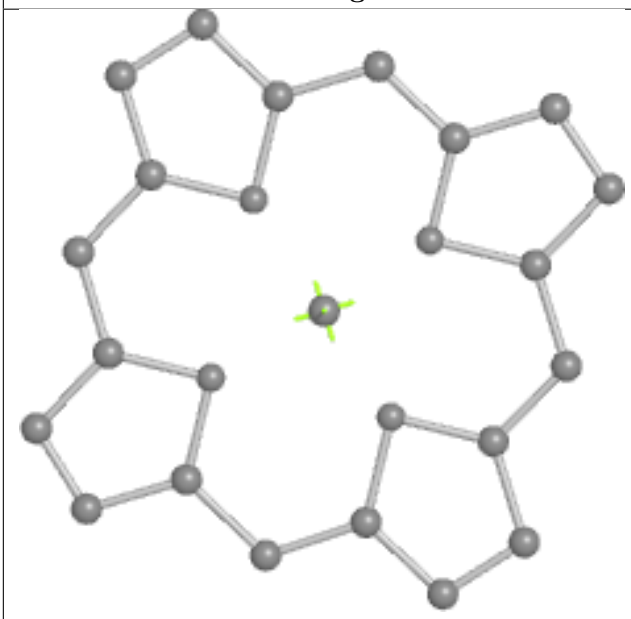
Ligand CLA A 608



Bond lengths



Bond angles



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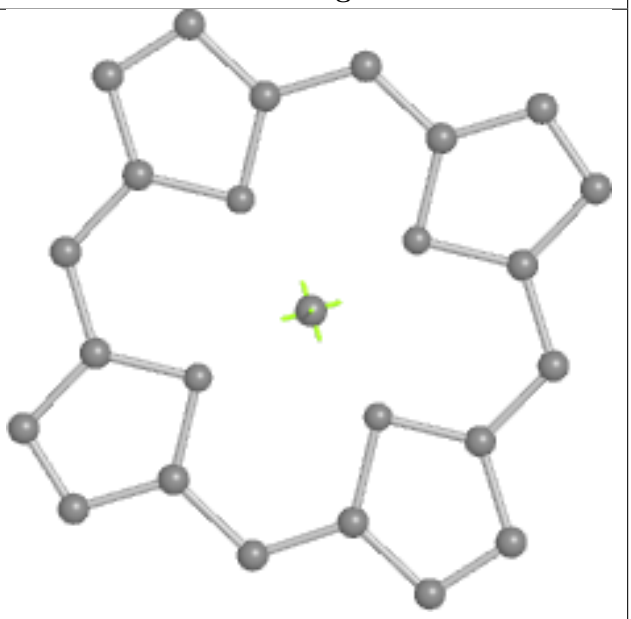
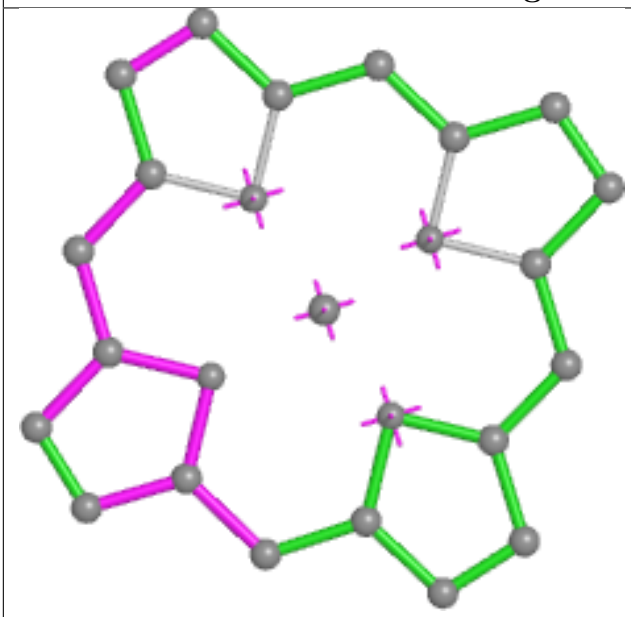


Rings

Ligand CLA A 620



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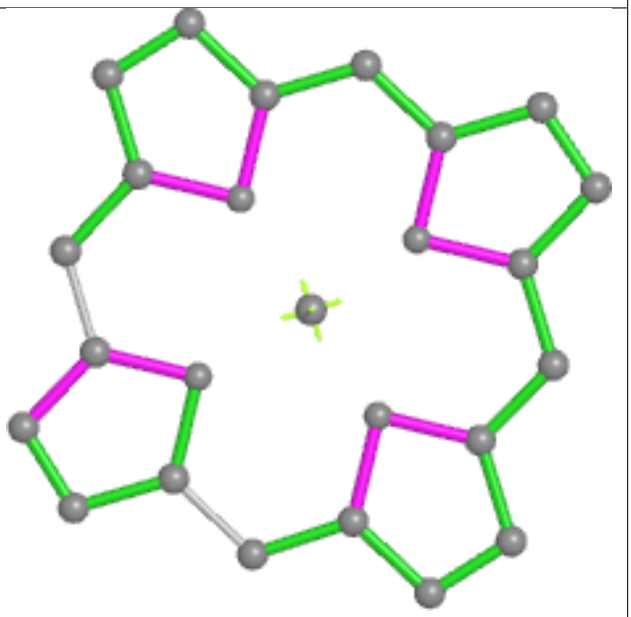
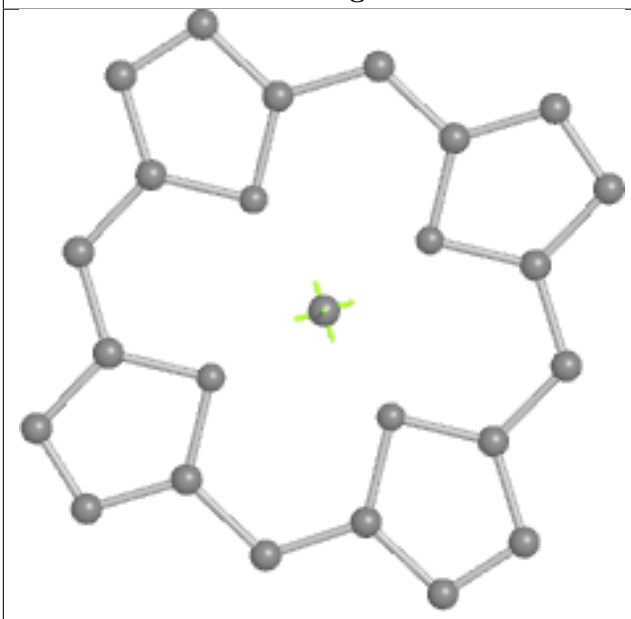


Bond angles



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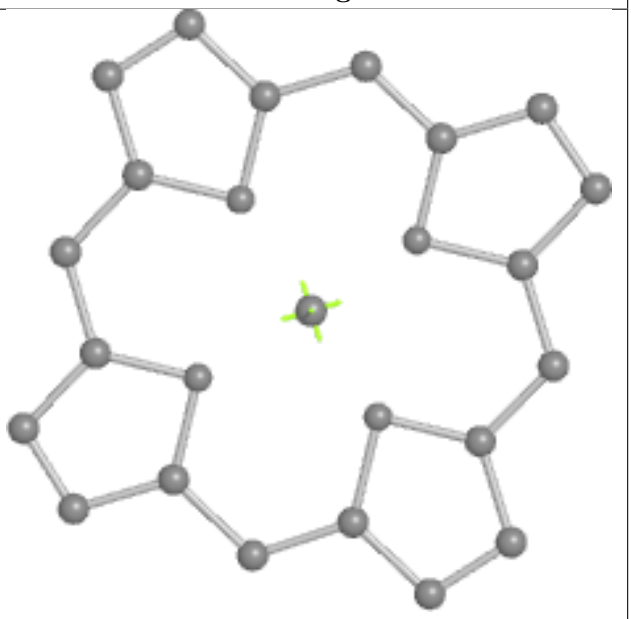
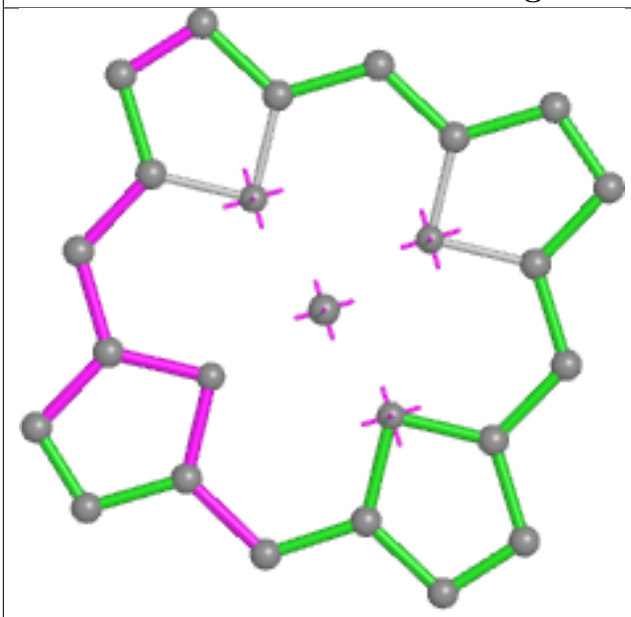


Rings

Ligand CLA B 644



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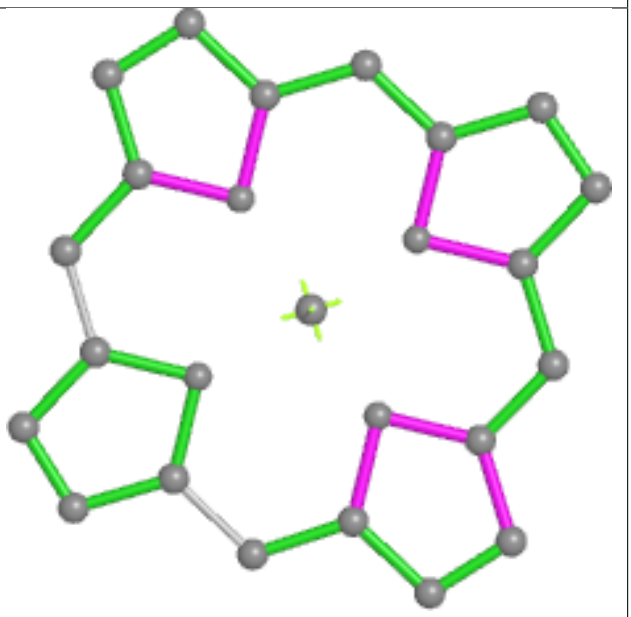
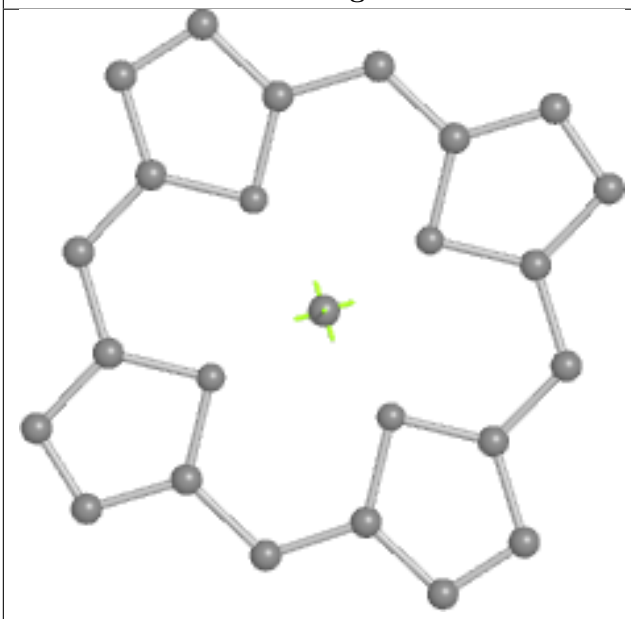


Bond angles



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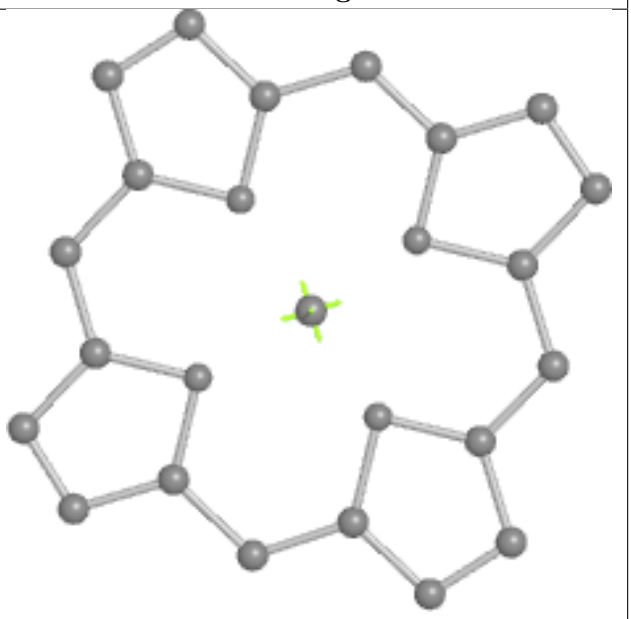
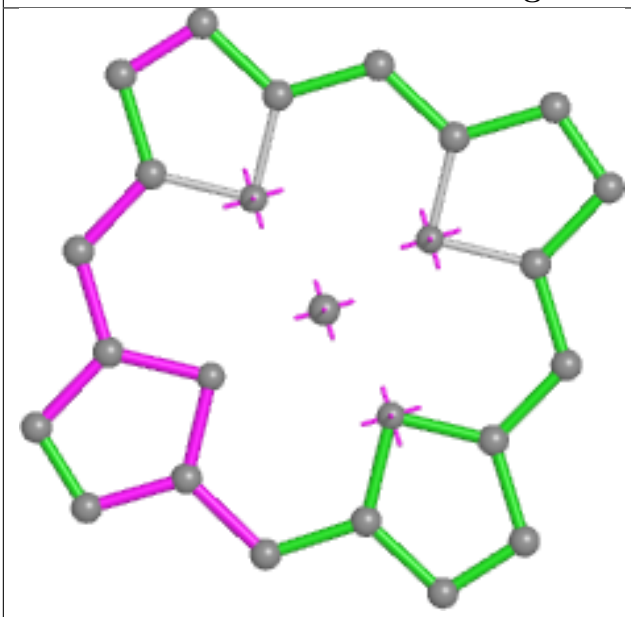


Rings

Ligand CLA A 599



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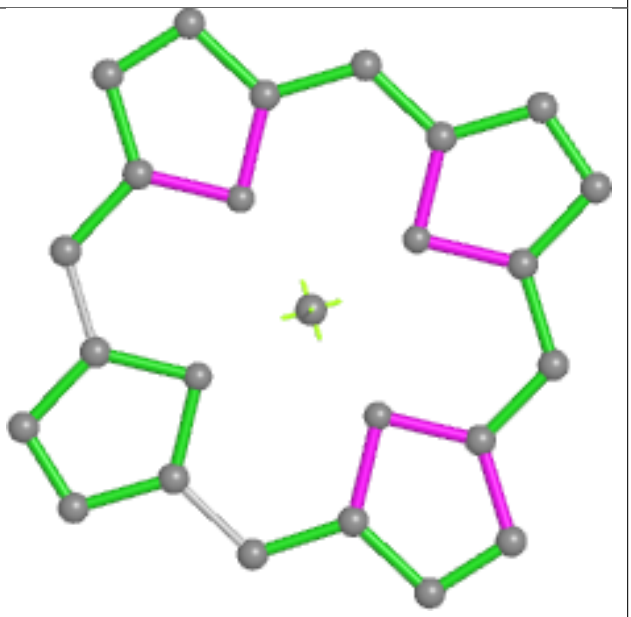
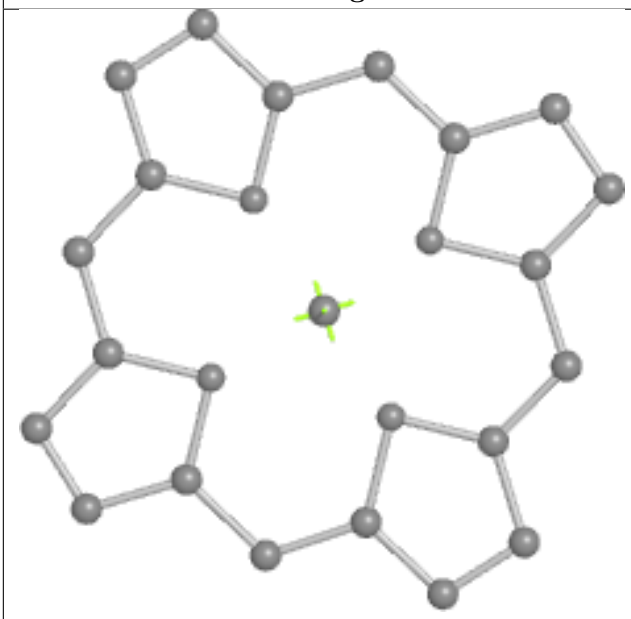
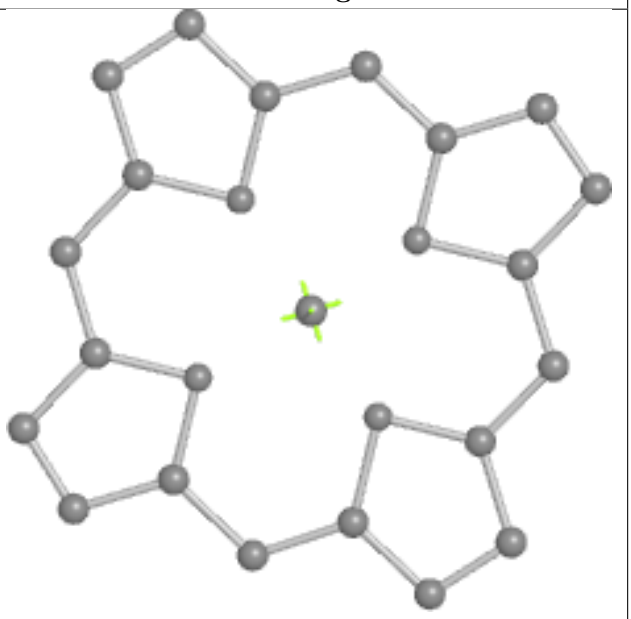


Bond angles

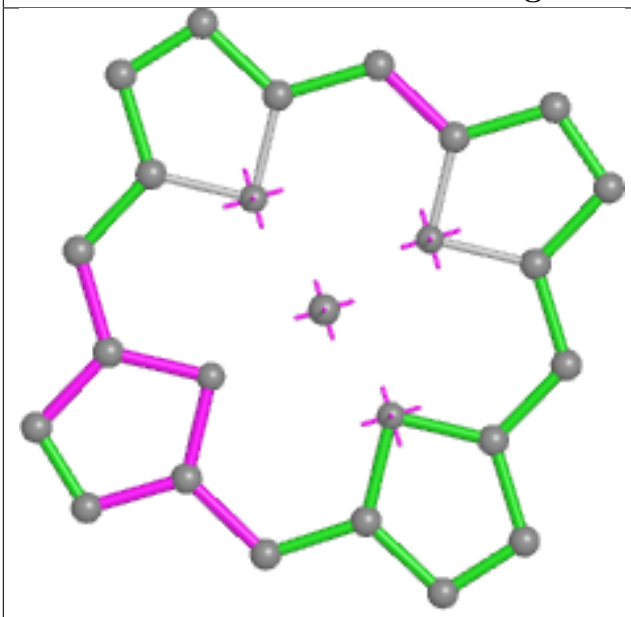


Torsions

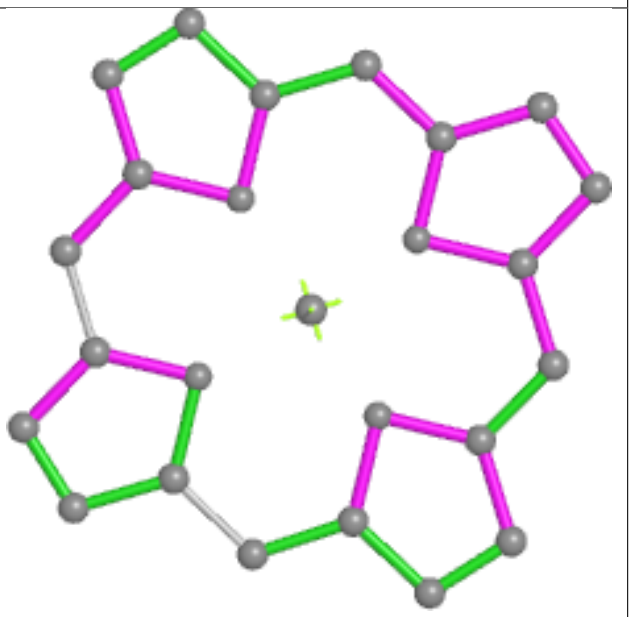


Rings

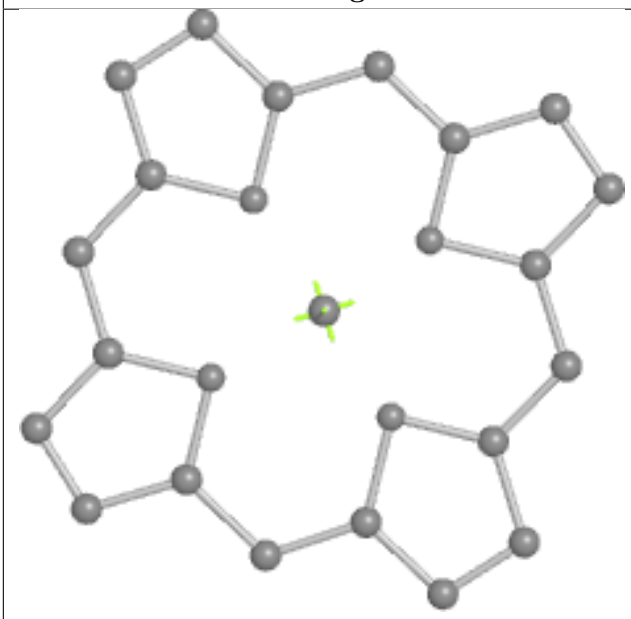
Ligand CLA B 635



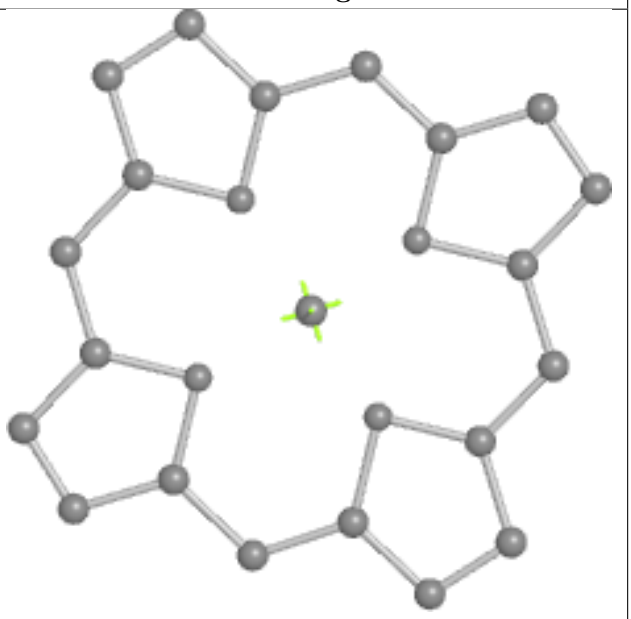
Bond lengths



Bond angles

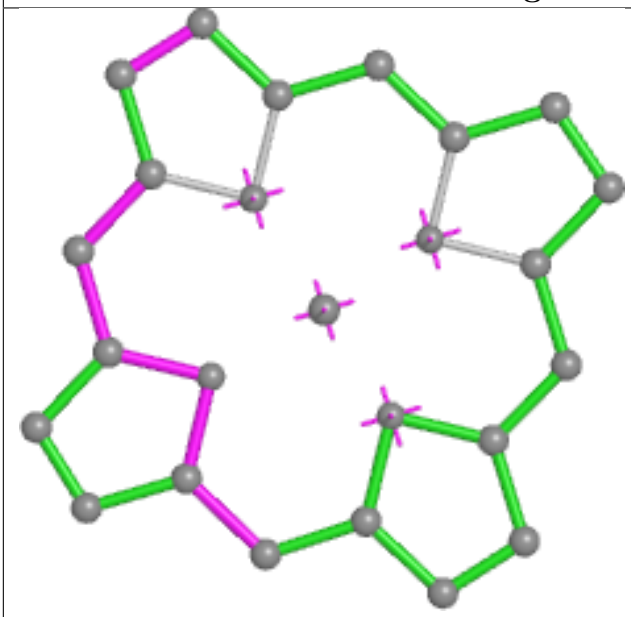


Torsions

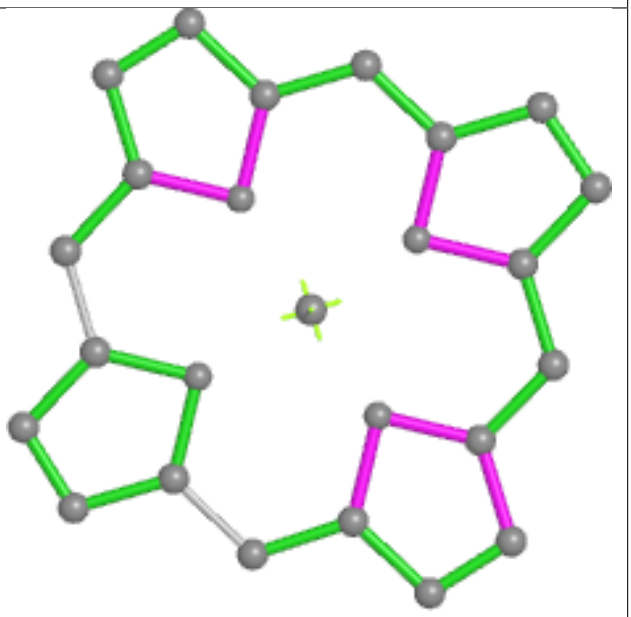


Rings

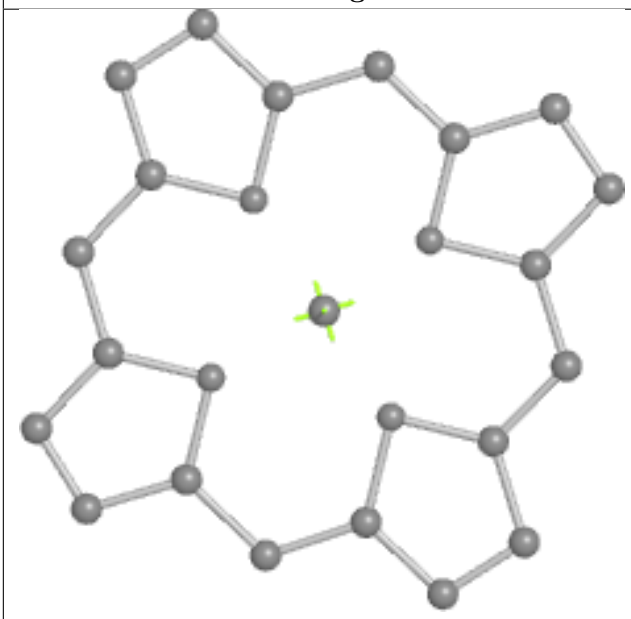
Ligand CLA A 613



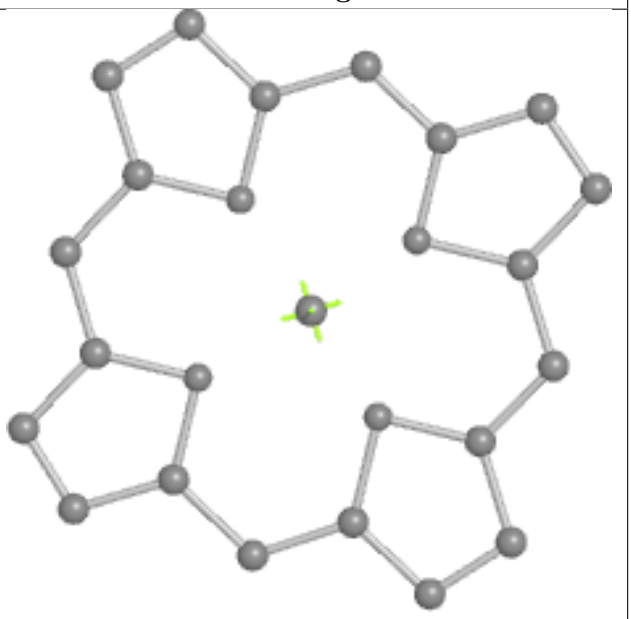
Bond lengths



Bond angles

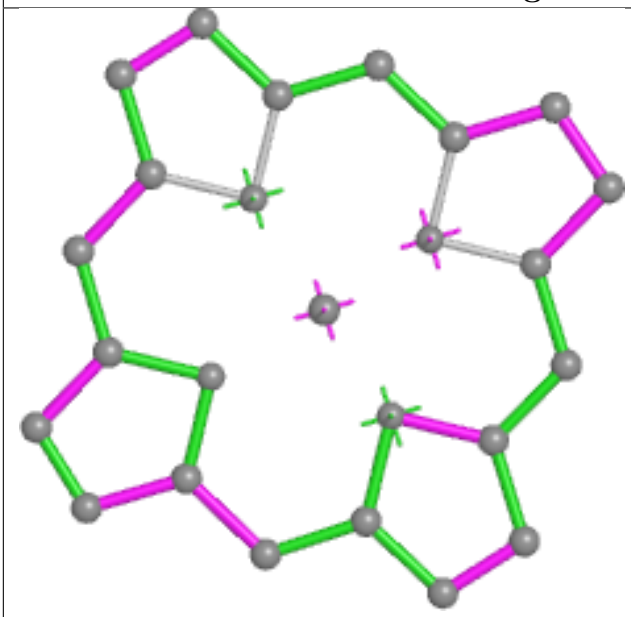


Torsions

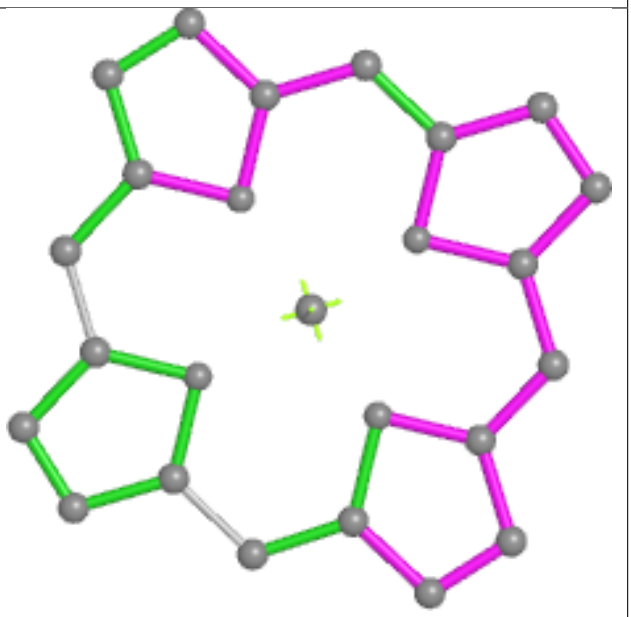


Rings

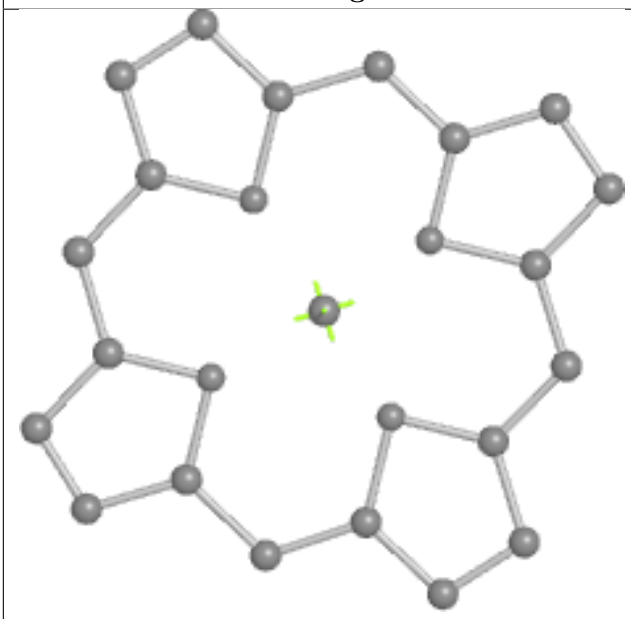
Ligand CLA A 618



Bond lengths



Bond angles



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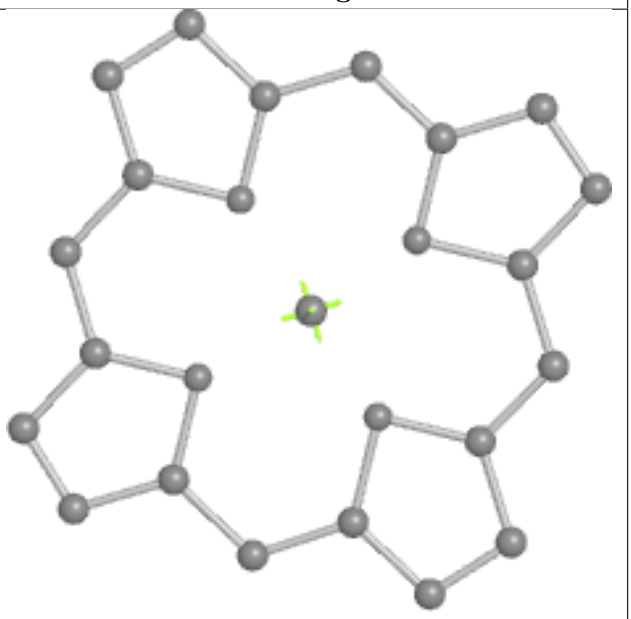
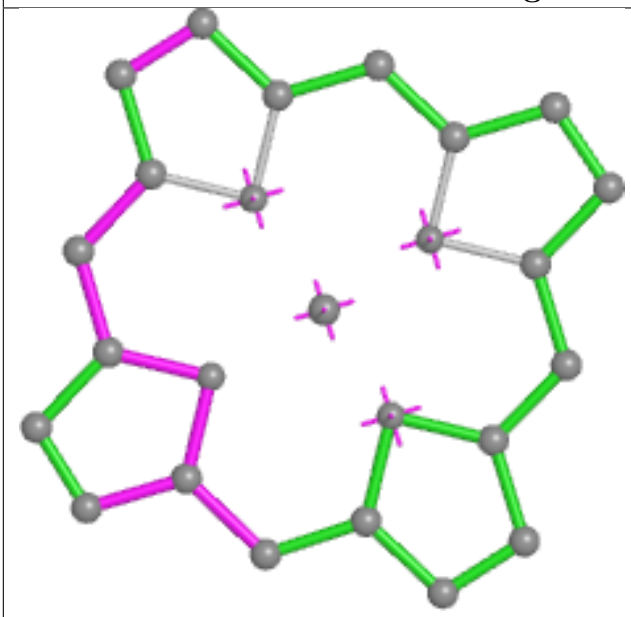
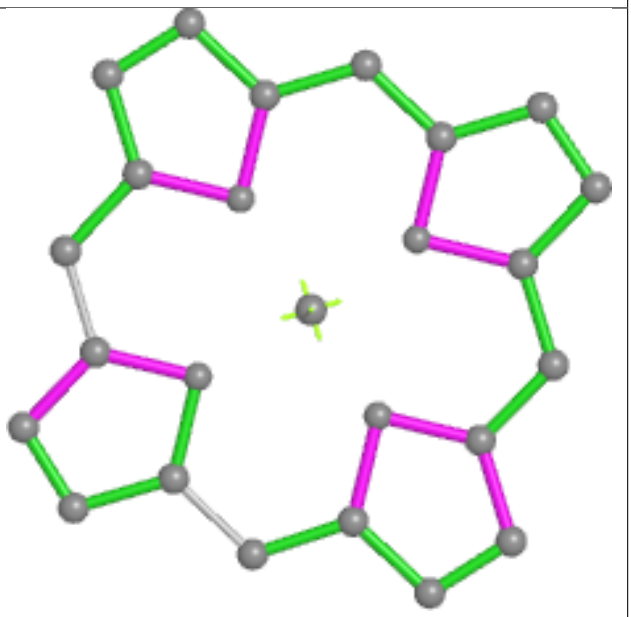


Rings

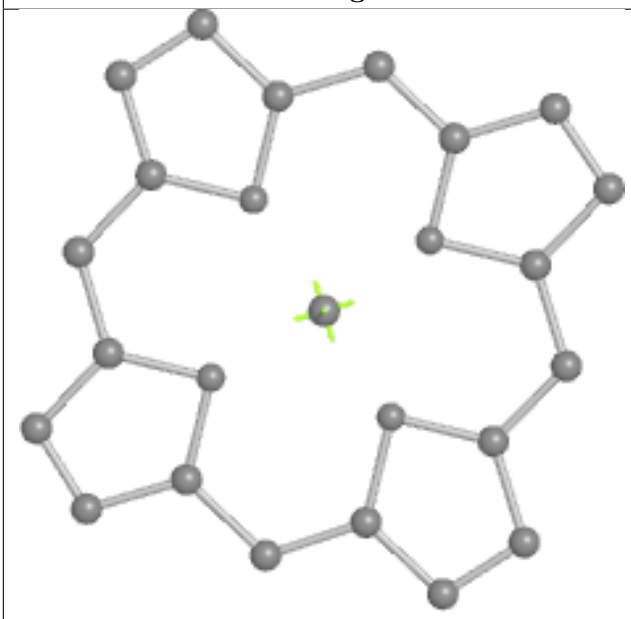
Ligand CLA A 622



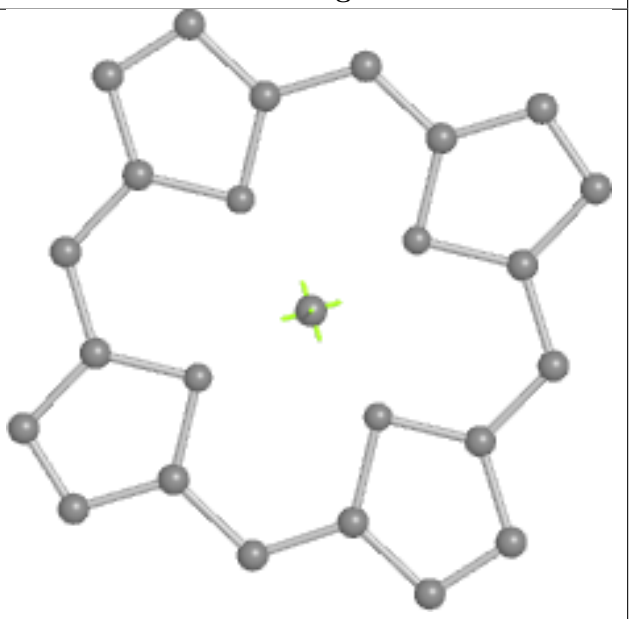
Bond lengths



Bond angles

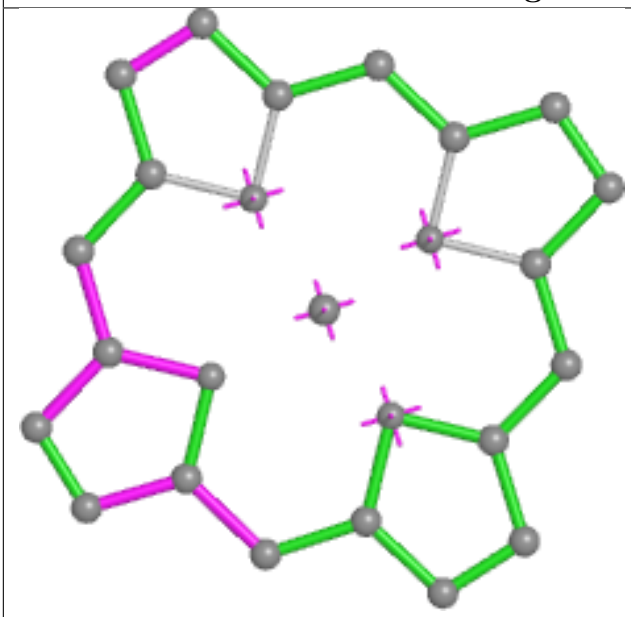


Torsions

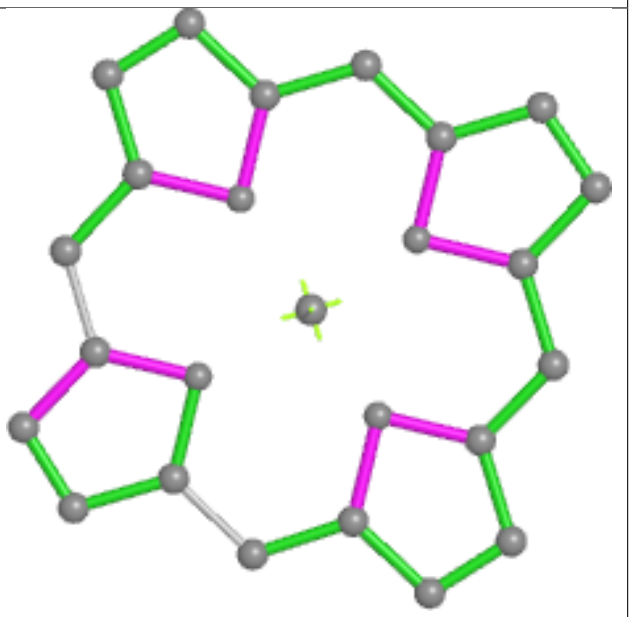


Rings

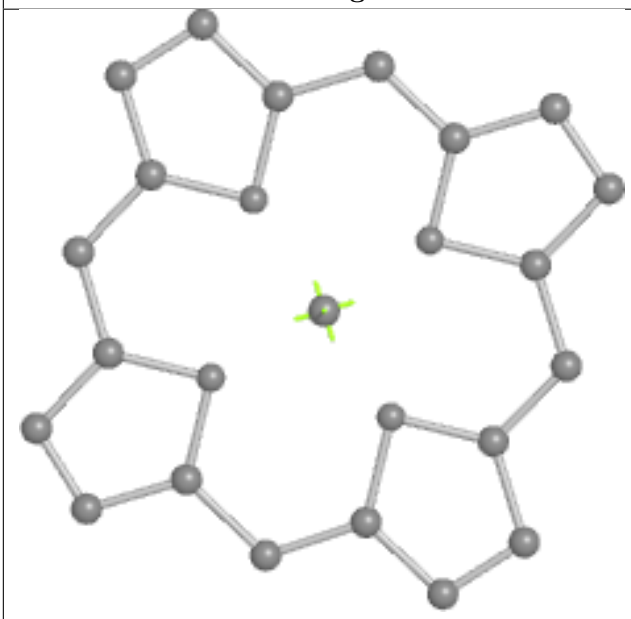
Ligand CLA B 620



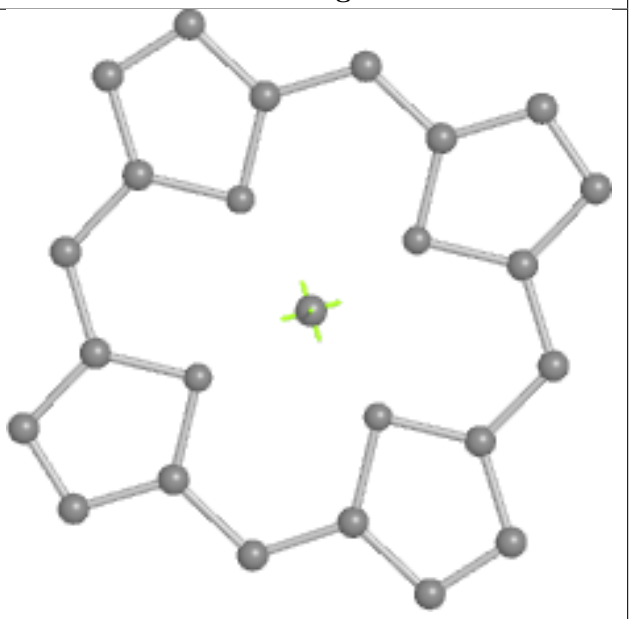
Bond lengths



Bond angles

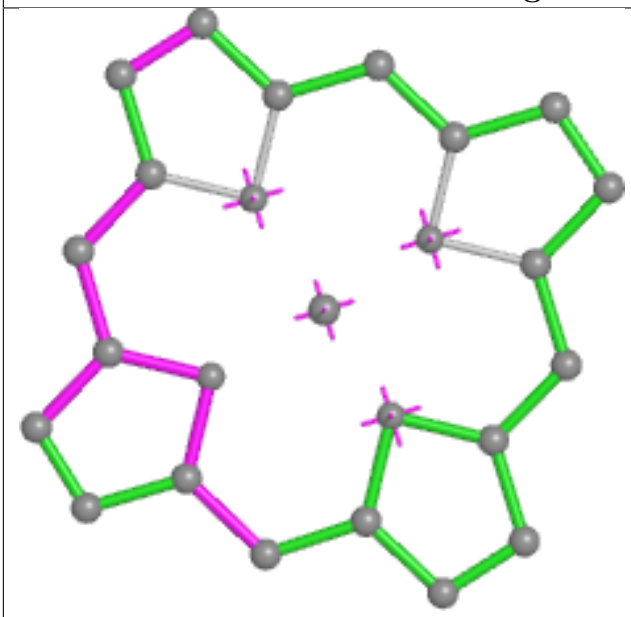


Torsions



Rings

Ligand CLA A 610



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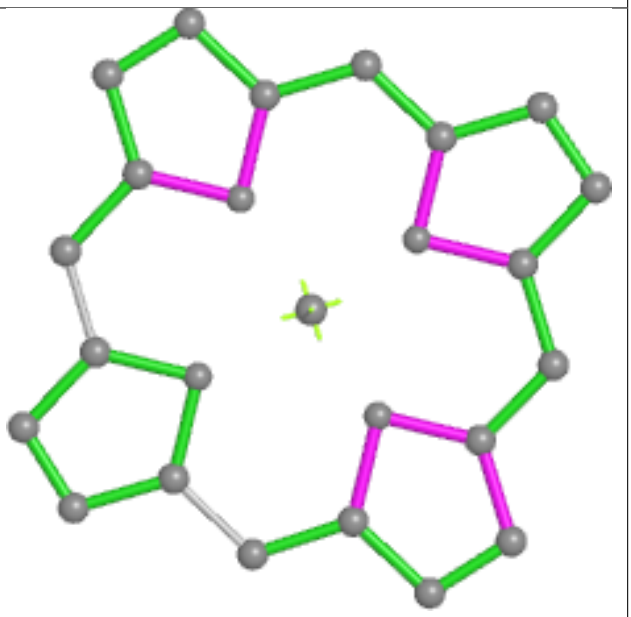
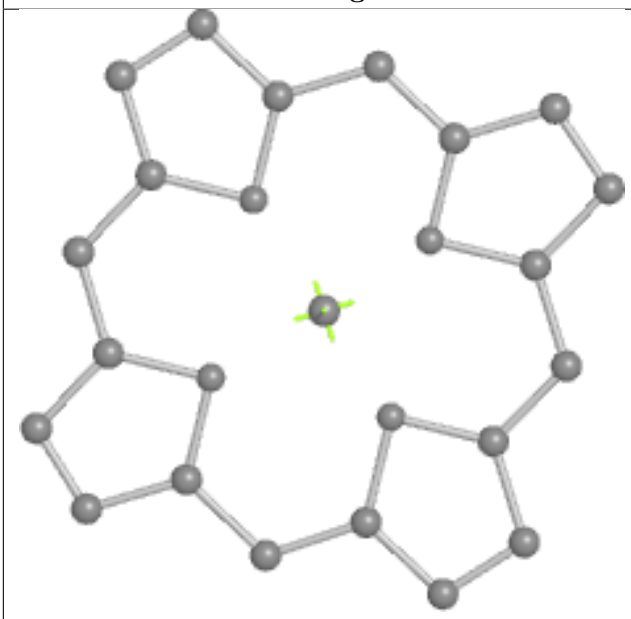
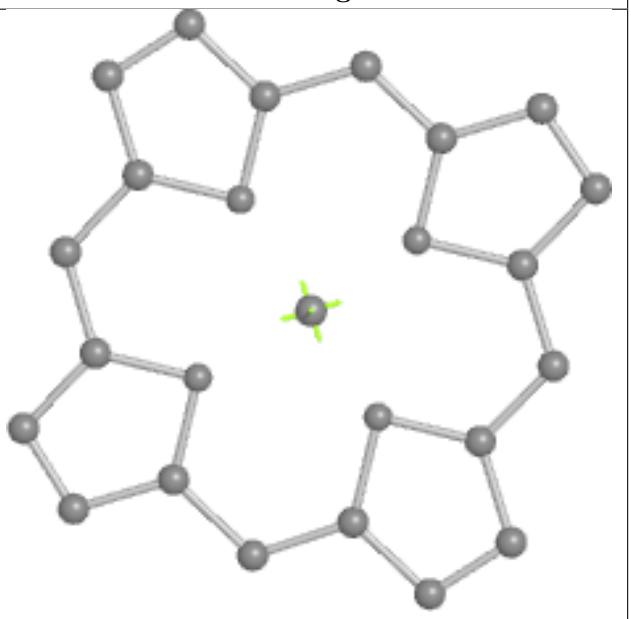


Bond angles

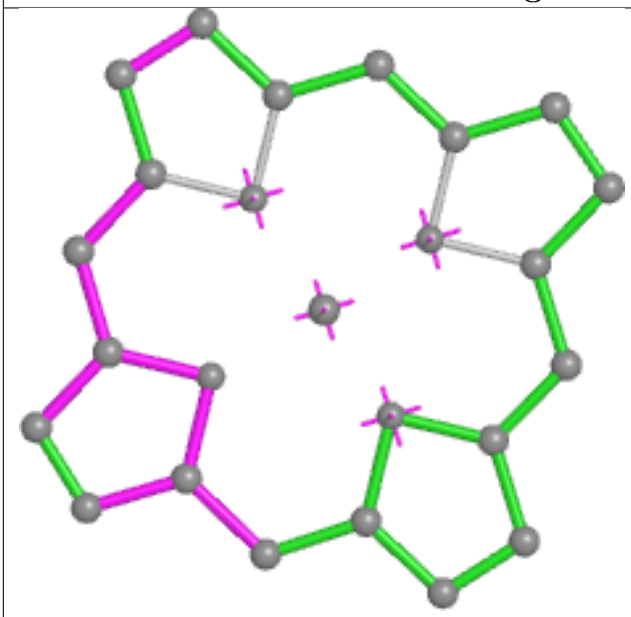


Torsions



Rings

Ligand CLA B 628



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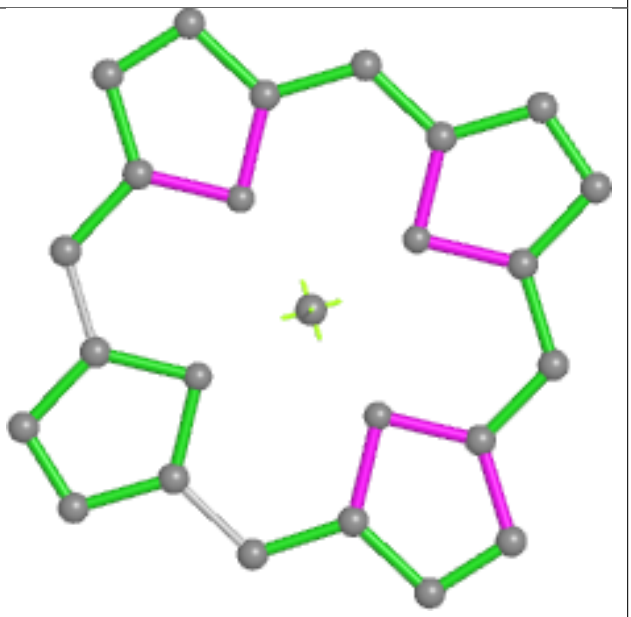
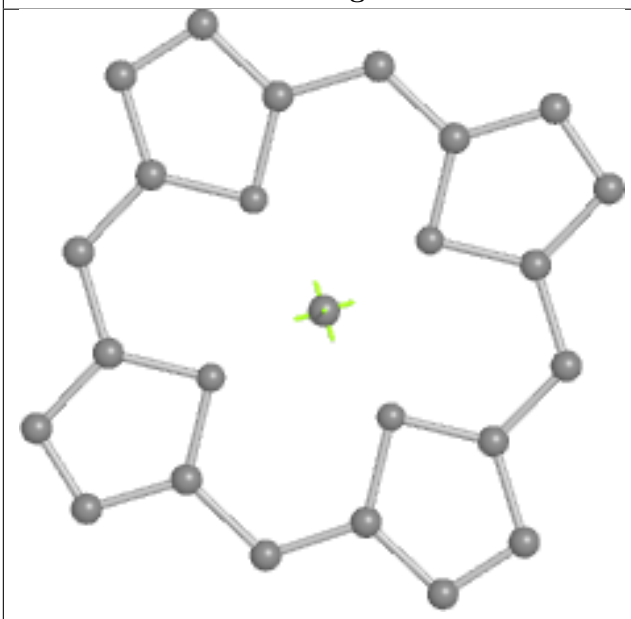


Bond angles



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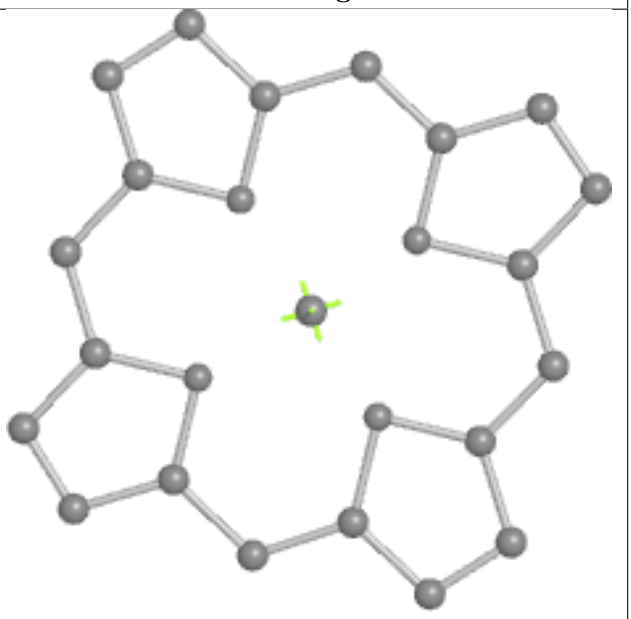
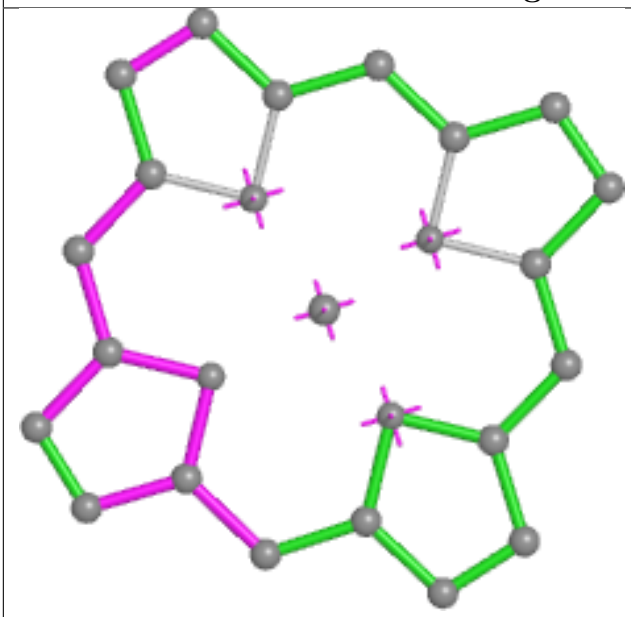
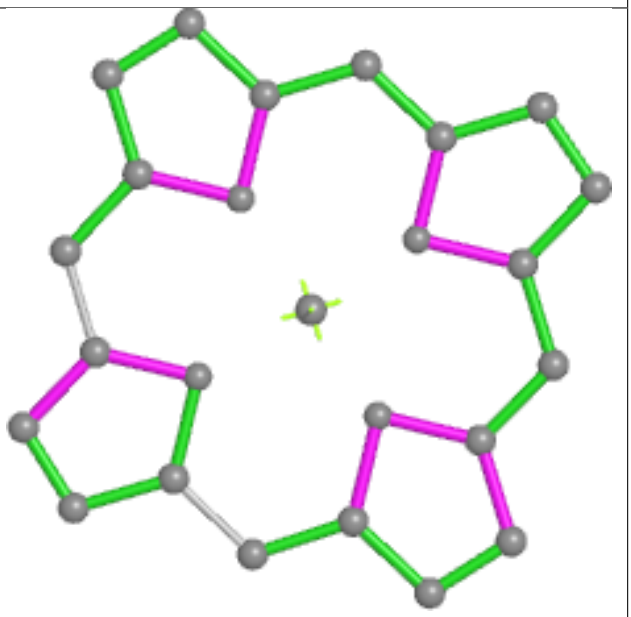


Rings

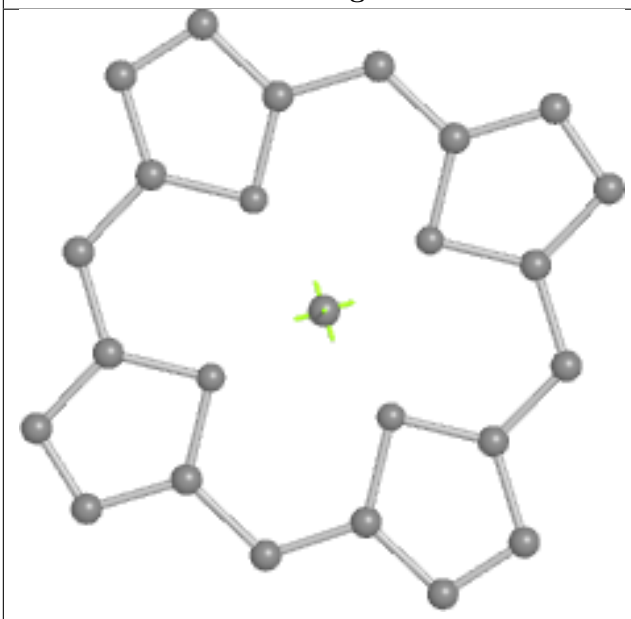
Ligand CLA A 629



Bond lengths



Bond angles



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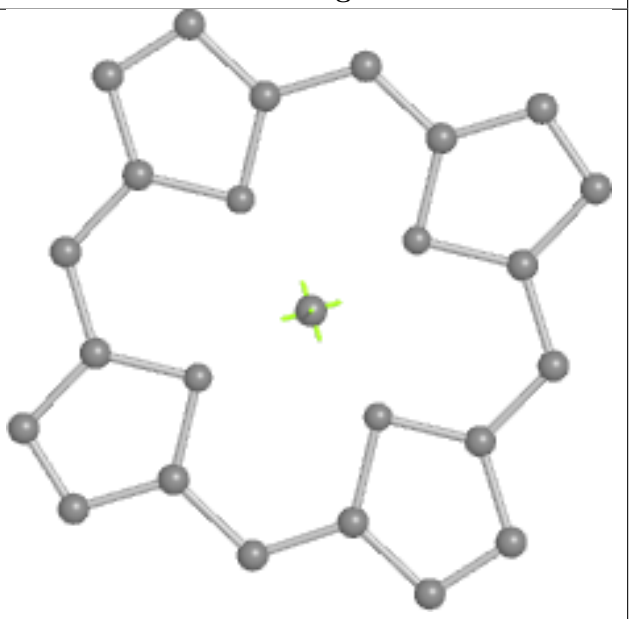
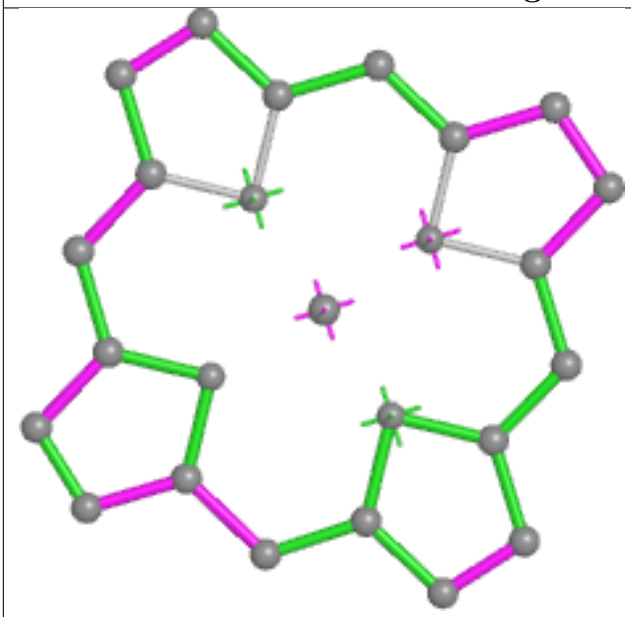
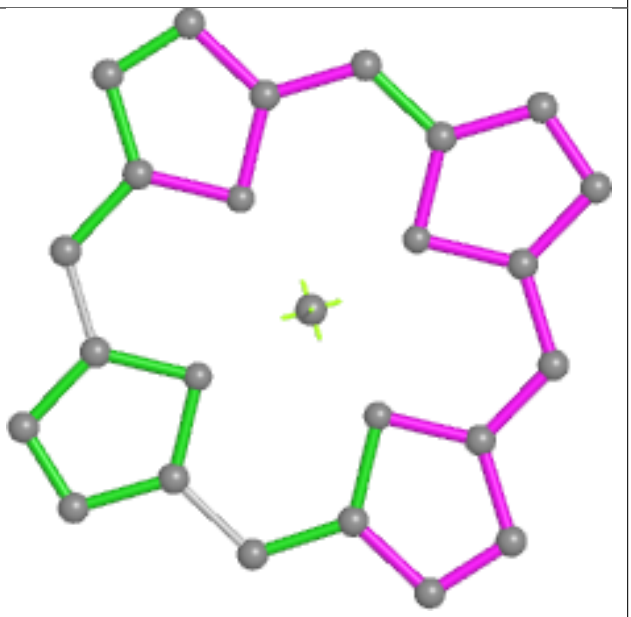


Rings

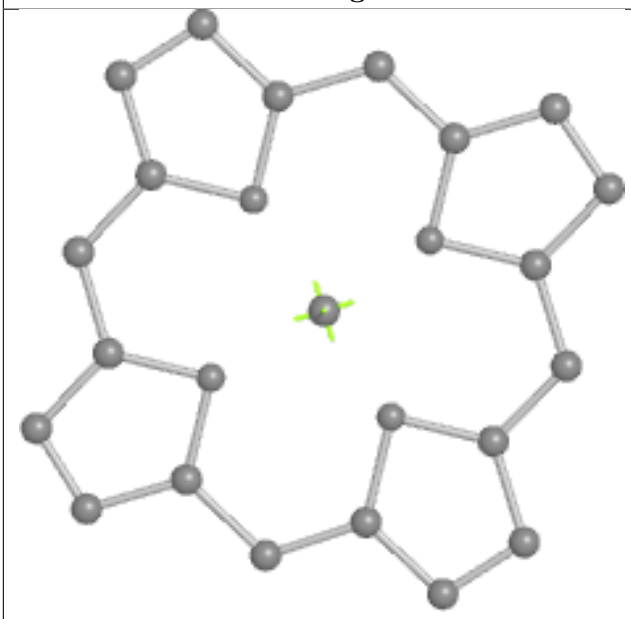
Ligand CLA A 617



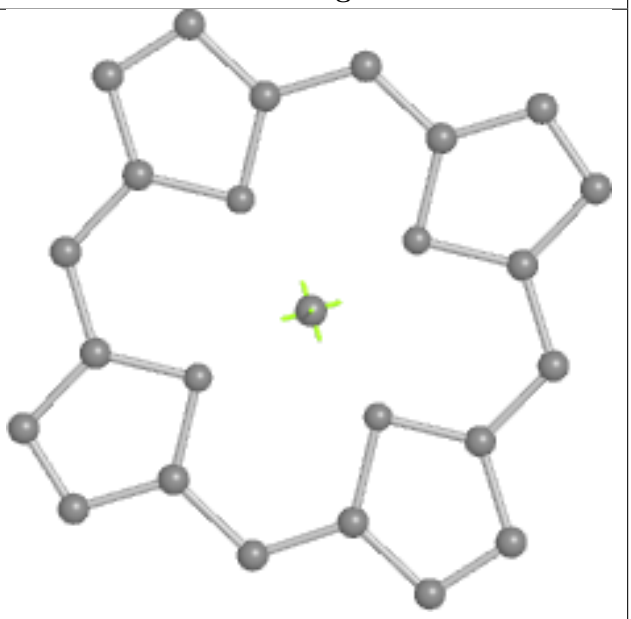
Bond lengths



Bond angles

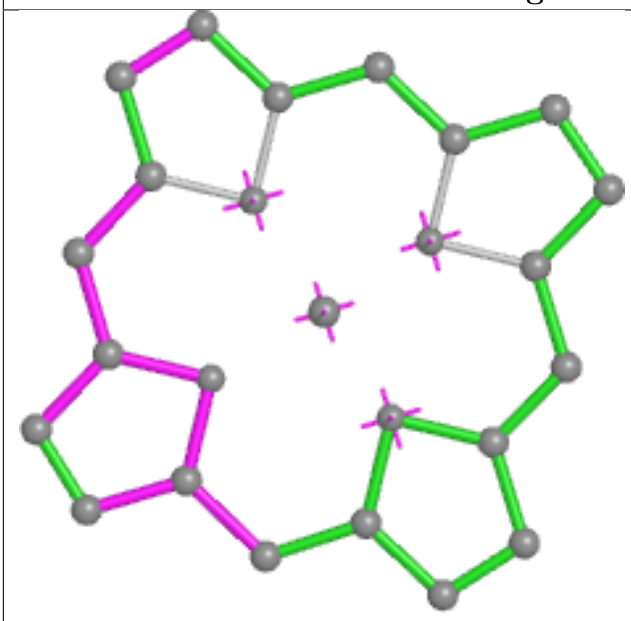


Torsions

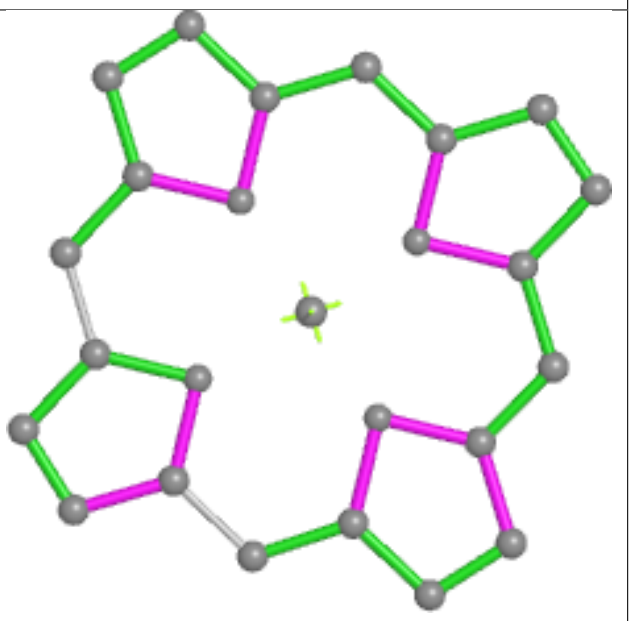


Rings

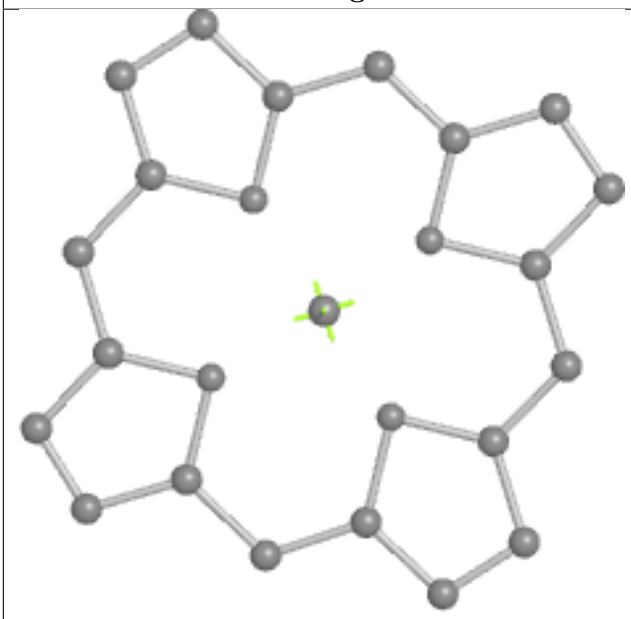
Ligand CLA L 149



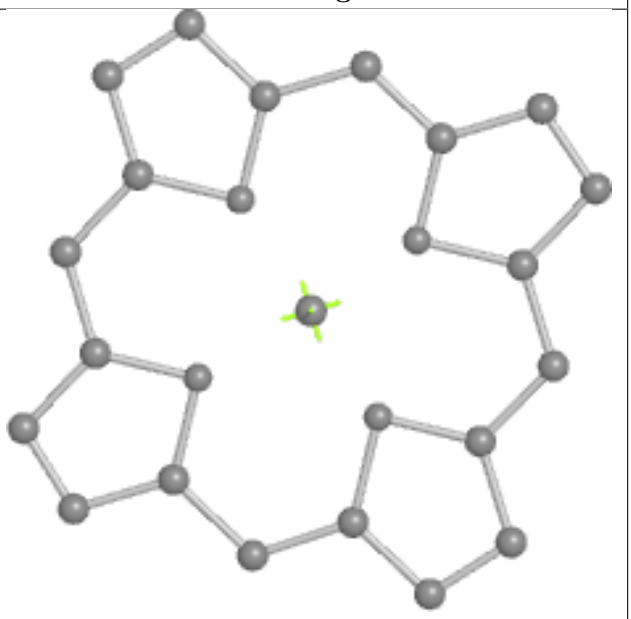
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.