wwPDB EM Validation Summary Report (i)

Feb 15, 2026 – 05:46 AM JST

PDB ID	:	9LTI / pdb_00009lti
EMDB ID	:	EMD-63370
Title	:	Cryo-EM structure of LH1-RC from Ery. sanguineus
Authors	:	Yue, X.-Y.; Wang, G.-L.; Yu, L.-J.
Deposited on	:	2025-02-06
Resolution	:	2.27 Å(reported)

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

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

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

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

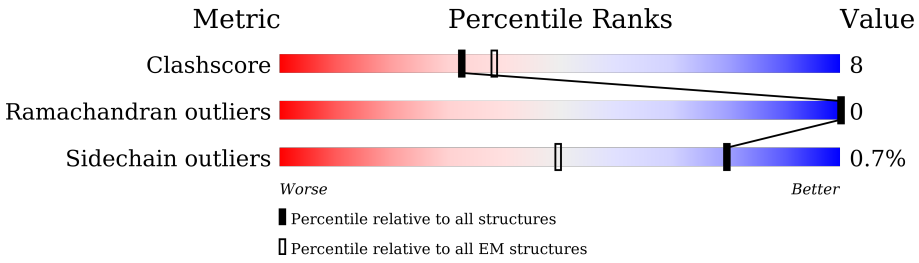
EMDB validation analysis	:	FAILED
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	NOT EXECUTED
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.48

1 Overall quality at a glance

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

The reported resolution of this entry is 2.27 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	A	64	52% 17% 31%
1	B	64	61% 8% 31%
1	C	64	56% 12% 31%
1	D	64	48% 20% 31%
1	E	64	61% 8% 31%
1	F	64	47% 22% 31%
1	G	64	58% 11% 31%
1	I	64	52% 17% 31%
1	J	64	58% 11% 31%

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Mol	Chain	Length	Quality of chain
1	K	64	62% 6% 31%
1	N	64	58% 11% 31%
1	O	64	61% 8% 31%
1	P	64	58% 11% 31%
1	Q	64	47% 22% 31%
1	R	64	66% 31%
1	S	64	56% 12% 31%
2	a	52	60% 17% 23%
2	b	52	69% 8% 23%
2	c	52	63% 13% 23%
2	d	52	71% 6% 23%
2	e	52	62% 15% 23%
2	f	52	58% 17% 23%
2	g	52	67% 10% 23%
2	i	52	71% 6% 23%
2	j	52	73% 23%
2	k	52	65% 12% 23%
2	n	52	65% 12% 23%
2	o	52	69% 8% 23%
2	p	52	69% 8% 23%
2	q	52	65% 10% 23%
2	r	52	67% 10% 23%
2	s	52	69% 8% 23%
3	L	274	83% 16%
4	H	268	85% 13%

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Mol	Chain	Length	Quality of chain
5	M	323	
6	T	135	

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	A1ELD	R	102	-	X	X	-

2 Entry composition (i)

There are 19 unique types of molecules in this entry. The entry contains 22831 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Light-harvesting complex 1 alpha chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	B	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	C	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	D	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	E	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	F	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	G	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	Q	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	I	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	J	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	K	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	R	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	S	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	N	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	O	44	Total	C	N	O	S	0	0
			384	260	67	56	1		
1	P	44	Total	C	N	O	S	0	0
			384	260	67	56	1		

- Molecule 2 is a protein called Antenna complex alpha/beta subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	b	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	a	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	p	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	o	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	n	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	s	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	r	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	k	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	j	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	c	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	d	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	e	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	f	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	g	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	q	40	Total	C	N	O	S	0	0
			326	223	49	52	2		
2	i	40	Total	C	N	O	S	0	0
			326	223	49	52	2		

- Molecule 3 is a protein called Reaction center protein L chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L	273	Total	C	N	O	S	0	0
			2135	1431	340	358	6		

- Molecule 4 is a protein called Photosynthetic reaction center H subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	H	265	Total	C	N	O	S	0	0
			2079	1343	347	380	9		

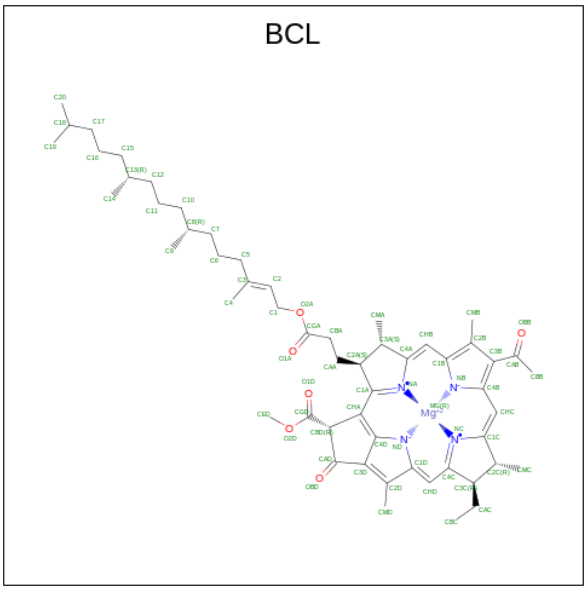
- Molecule 5 is a protein called Reaction center protein M chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	M	320	Total	C	N	O	S	0	0
			2543	1689	412	433	9		

- Molecule 6 is a protein called Secreted protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	T	20	Total	C	N	O	S	0	0
			120	68	23	28	1		

- Molecule 7 is BACTERIOCHLOROPHYLL A (CCD ID: BCL) (formula: $C_{55}H_{74}MgN_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
7	A	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	B	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	C	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	D	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	E	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	F	1	Total	C	Mg	N	O	0
			66	55	1	4	6	

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Mol	Chain	Residues	Atoms					AltConf
7	G	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	Q	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	I	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	J	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	K	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	R	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	S	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	N	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	O	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	P	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	b	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	a	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	p	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	o	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	n	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	s	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	r	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	k	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	j	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	c	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	d	1	Total	C	Mg	N	O	0
			66	55	1	4	6	

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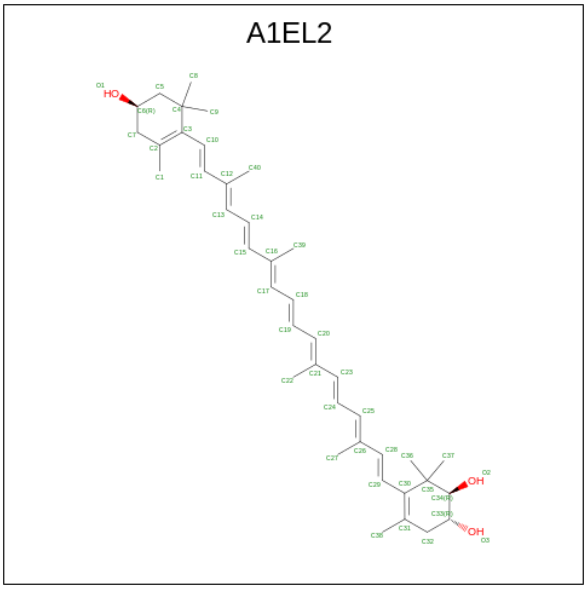
Mol	Chain	Residues	Atoms					AltConf
7	e	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	f	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	g	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	q	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	i	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	L	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	L	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	M	1	Total	C	Mg	N	O	0
			66	55	1	4	6	
7	M	1	Total	C	Mg	N	O	0
			66	55	1	4	6	

- Molecule 8 is (1 {R},2 {R})-3,3,5-trimethyl-4-[(1 {E},3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E},17 {E})-3,7,12,16-tetramethyl-18-[(4 {R})-2,6,6-trimethyl-4-oxidanyl-cyclohexen-1-yl]octadeca-1,3,5,7,9,11,13,15,17-nonaenyl]cyclohex-4-ene-1,2-diol (CCD ID: A1EL2) (formula: $C_{40}H_{56}O_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
8	A	1	Total	C	O	0
			43	40	3	

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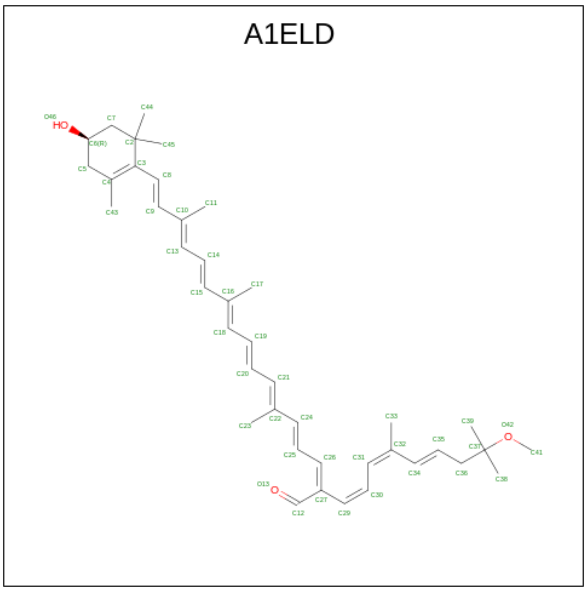
Mol	Chain	Residues	Atoms			AltConf
8	B	1	Total	C	O	0
			43	40	3	
8	C	1	Total	C	O	0
			43	40	3	
8	D	1	Total	C	O	0
			43	40	3	
8	E	1	Total	C	O	0
			43	40	3	
8	F	1	Total	C	O	0
			43	40	3	
8	G	1	Total	C	O	0
			43	40	3	
8	Q	1	Total	C	O	0
			43	40	3	
8	I	1	Total	C	O	0
			43	40	3	
8	J	1	Total	C	O	0
			43	40	3	
8	K	1	Total	C	O	0
			43	40	3	
8	N	1	Total	C	O	0
			43	40	3	
8	O	1	Total	C	O	0
			43	40	3	
8	P	1	Total	C	O	0
			43	40	3	
8	r	1	Total	C	O	0
			43	40	3	
8	r	1	Total	C	O	0
			43	40	3	

- Molecule 9 is (2 {Z},4 {E},6 {E},8 {E},10 {E},12 {E},14 {E},16 {E})-2-[(1 {Z},3 {Z},5 {E})-8-methoxy-4,8-dimethyl-nona-1,3,5-trienyl]-6,11,15-trimethyl-17-[(4 {R})-2,6,6-trimethyl-4-oxidanyl-cyclohexen-1-yl]heptadeca-2,4,6,8,10,12,14,16-octaenal (CCD ID: A1ELD) (formula: $C_{41}H_{56}O_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
9	A	1	Total	C	O	0
			44	41	3	
9	B	1	Total	C	O	0
			44	41	3	
9	C	1	Total	C	O	0
			44	41	3	
9	J	1	Total	C	O	0
			44	41	3	
9	R	1	Total	C	O	0
			44	41	3	
9	R	1	Total	C	O	0
			44	41	3	
9	O	1	Total	C	O	0
			44	41	3	
9	b	1	Total	C	O	0
			44	41	3	
9	o	1	Total	C	O	0
			44	41	3	
9	r	1	Total	C	O	0
			44	41	3	
9	j	1	Total	C	O	0
			44	41	3	
9	d	1	Total	C	O	0
			44	41	3	
9	e	1	Total	C	O	0
			44	41	3	
9	f	1	Total	C	O	0
			44	41	3	

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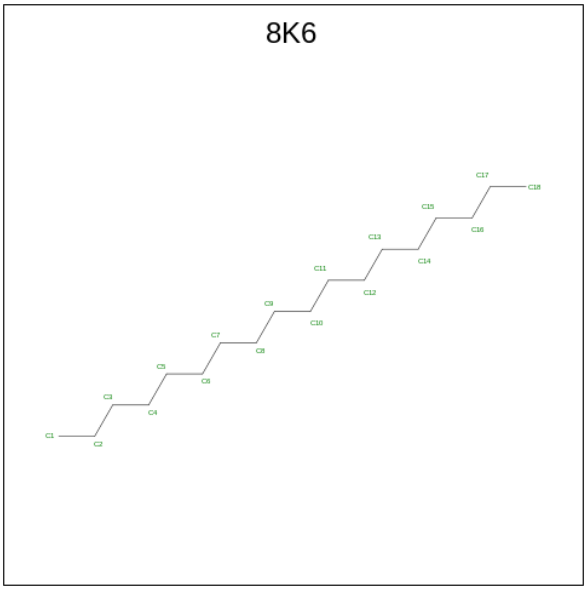
Mol	Chain	Residues	Atoms	AltConf
9	g	1	Total C O 44 41 3	0
9	q	1	Total C O 44 41 3	0

- Molecule 10 is Octadecane (CCD ID: 8K6) (formula: $C_{18}H_{38}$).



Mol	Chain	Residues	Atoms	AltConf
10	C	1	Total C 9 9	0
10	Q	1	Total C 18 18	0
10	Q	1	Total C 18 18	0
10	S	1	Total C 13 13	0
10	f	1	Total C 14 14	0
10	L	1	Total C 12 12	0
10	L	1	Total C 14 14	0
10	L	1	Total C 10 10	0
10	L	1	Total C 15 15	0

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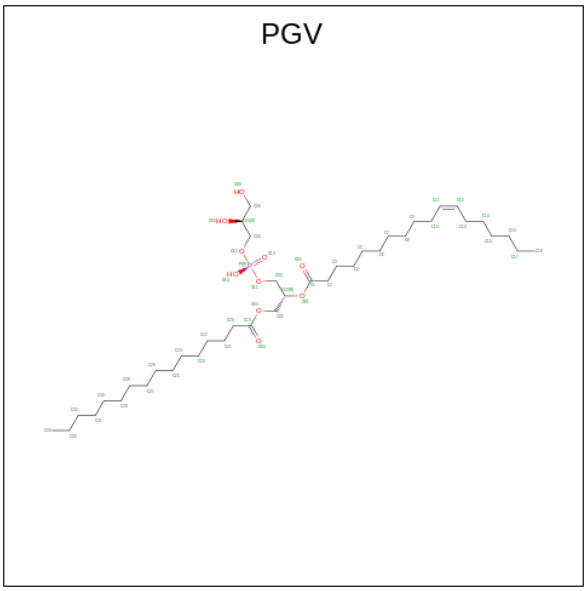
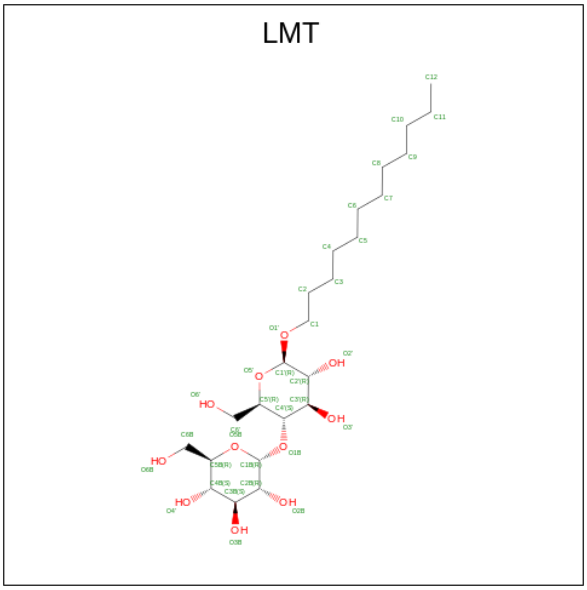
Mol	Chain	Residues	Atoms	AltConf
10	H	1	Total C 18 18	0
10	M	1	Total C 15 15	0

- Molecule 11 is (1R)-2-{[{[(2S)-2,3-DIHYDROXYPROPYL]OXY}(HYDROXY)PHOSPHORYL]OXY}-1-[(PALMITOYLOXY)METHYL]ETHYL (11E)-OCTADEC-11-ENOATE (CCD ID: PGV) (formula: $C_{40}H_{77}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



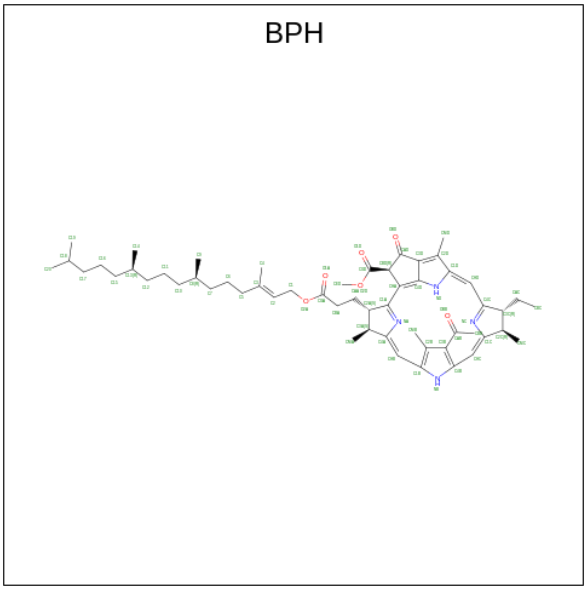
Mol	Chain	Residues	Atoms	AltConf
11	D	1	Total C O P 51 40 10 1	0
11	F	1	Total C O P 51 40 10 1	0
11	G	1	Total C O P 23 14 8 1	0
11	L	1	Total C O P 21 12 8 1	0
11	L	1	Total C O P 29 18 10 1	0
11	M	1	Total C O P 38 29 8 1	0
11	T	1	Total C O 20 16 4	0
11	T	1	Total C O P 30 21 8 1	0

- Molecule 12 is DODECYL-BETA-D-MALTOSIDE (CCD ID: LMT) (formula: $C_{24}H_{46}O_{11}$).



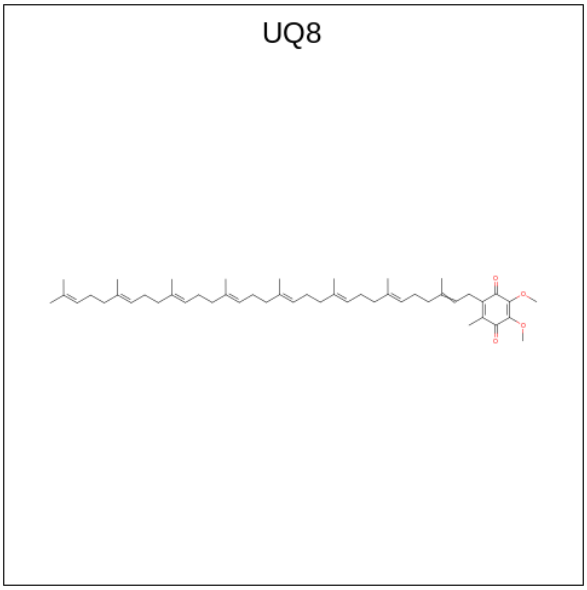
Mol	Chain	Residues	Atoms			AltConf
12	G	1	Total	C	O	0
			30	19	11	
12	N	1	Total	C	O	0
			26	15	11	
12	L	1	Total	C	O	0
			28	17	11	

- Molecule 13 is BACTERIOPHEOPHYTIN A (CCD ID: BPH) (formula: $C_{55}H_{76}N_4O_6$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
13	L	1	Total	C	N	O	0
			65	55	4	6	
13	L	1	Total	C	N	O	0
			65	55	4	6	

- Molecule 14 is Ubiquinone-8 (CCD ID: UQ8) (formula: $C_{49}H_{74}O_4$) (labeled as "Ligand of Interest" by depositor).

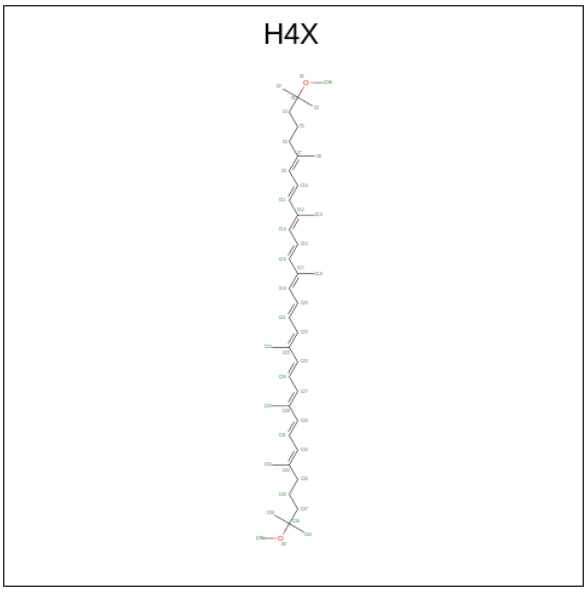


Mol	Chain	Residues	Atoms			AltConf
14	L	1	Total	C	O	0
			19	15	4	
14	L	1	Total	C	O	0
			18	14	4	
14	M	1	Total	C	O	0
			53	49	4	

- Molecule 15 is FE (III) ION (CCD ID: FE) (formula: Fe) (labeled as "Ligand of Interest" by depositor).

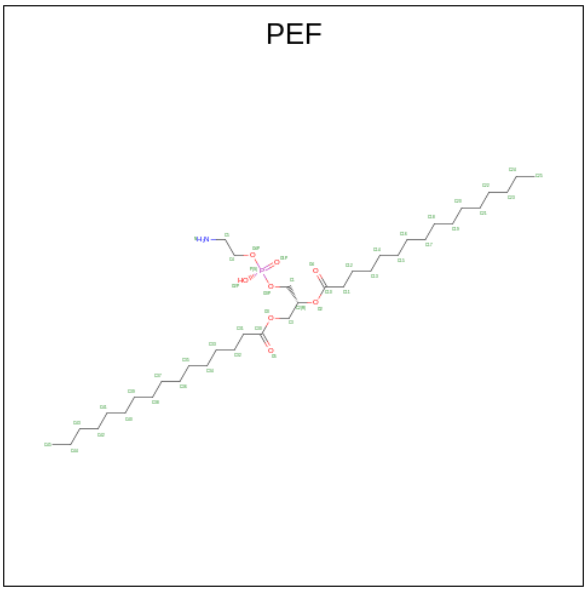
Mol	Chain	Residues	Atoms		AltConf
15	M	1	Total	Fe	0
			1	1	

- Molecule 16 is (6 {E},8 {E},10 {E},12 {E},14 {E},16 {E},18 {E},20 {E},22 {E},24 {E},26 {E})-2,31-dimethoxy-2,6,10,14,19,23,27,31-octamethyl-dotriaconta-6,8,10,12,14,16,18,20,22 ,24,26-undecaene (CCD ID: H4X) (formula: $C_{42}H_{64}O_2$) (labeled as "Ligand of Interest" by depositor).



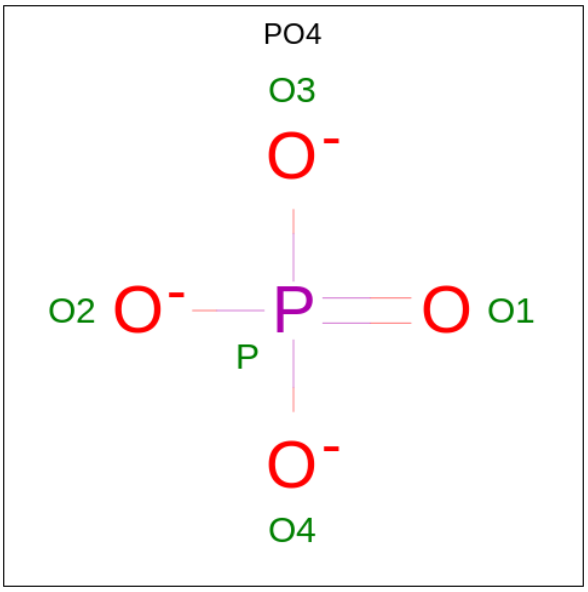
Mol	Chain	Residues	Atoms			AltConf
16	M	1	Total	C	O	0
			44	42	2	

- Molecule 17 is DI-PALMITOYL-3-SN-PHOSPHATIDYLETHANOLAMINE (CCD ID: PEF) (formula: $C_{37}H_{74}NO_8P$).



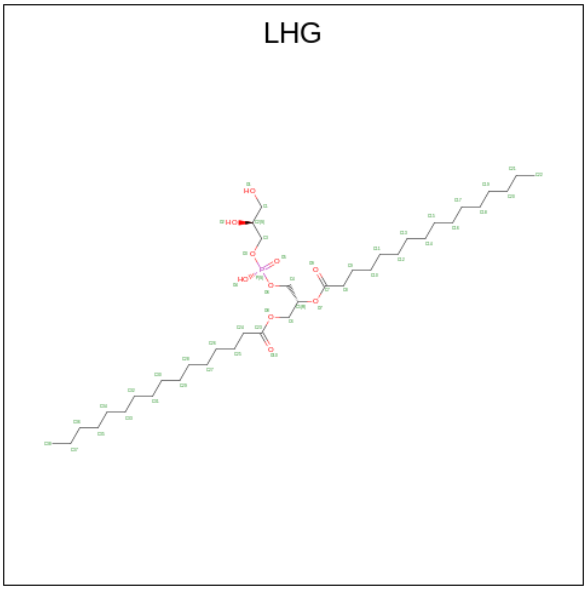
Mol	Chain	Residues	Atoms					AltConf
17	M	1	Total	C	N	O	P	0
			43	33	1	8	1	

- Molecule 18 is PHOSPHATE ION (CCD ID: PO4) (formula: O_4P).



Mol	Chain	Residues	Atoms			AltConf
18	M	1	Total	O	P	0
			5	4	1	

- Molecule 19 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (CCD ID: LHG) (formula: $C_{38}H_{75}O_{10}P$) (labeled as "Ligand of Interest" by depositor).



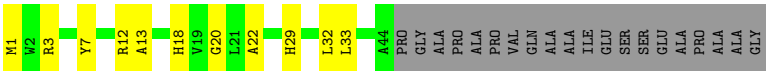
Mol	Chain	Residues	Atoms			AltConf
19	T	1	Total	C	O	0
			10	9	1	

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.

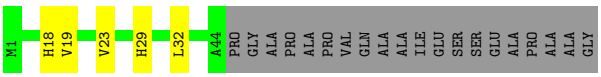
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain A:



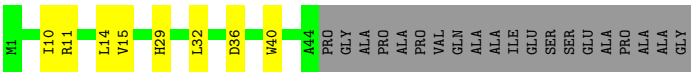
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain B:



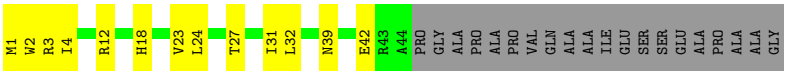
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain C:



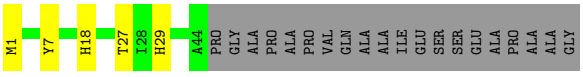
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain D:



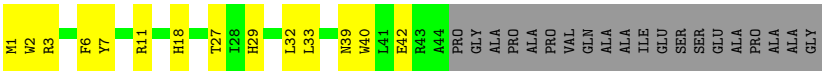
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain E:



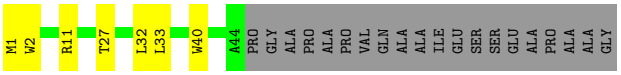
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain F:



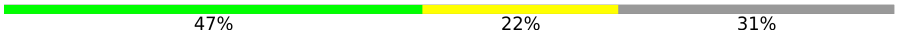
• Molecule 1: Light-harvesting complex 1 alpha chain

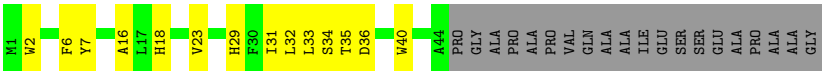
Chain G:



• Molecule 1: Light-harvesting complex 1 alpha chain

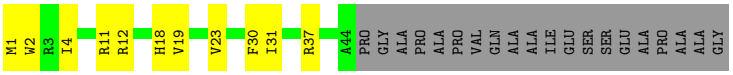
Chain Q:





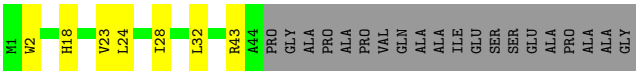
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain I:



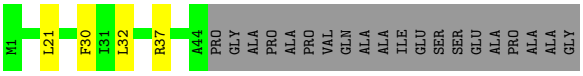
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain J:



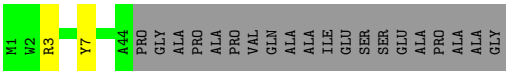
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain K:



• Molecule 1: Light-harvesting complex 1 alpha chain

Chain R:

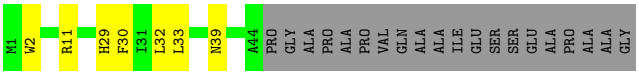


• Molecule 1: Light-harvesting complex 1 alpha chain

Chain S:

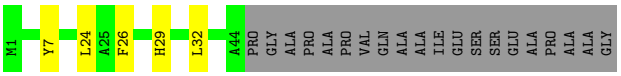
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain N:



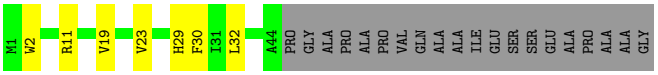
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain O:



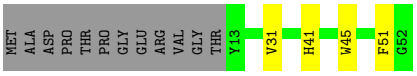
• Molecule 1: Light-harvesting complex 1 alpha chain

Chain P:



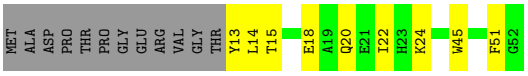
• Molecule 2: Antenna complex alpha/beta subunit

Chain b:



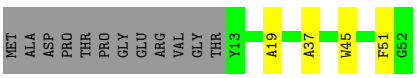
• Molecule 2: Antenna complex alpha/beta subunit

Chain a:



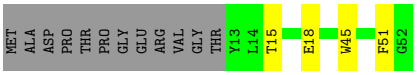
• Molecule 2: Antenna complex alpha/beta subunit

Chain p:



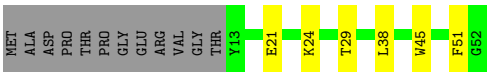
• Molecule 2: Antenna complex alpha/beta subunit

Chain o:



• Molecule 2: Antenna complex alpha/beta subunit

Chain n:

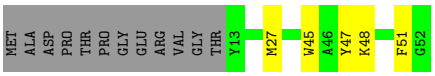


• Molecule 2: Antenna complex alpha/beta subunit

Chain s:

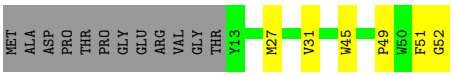
• Molecule 2: Antenna complex alpha/beta subunit

Chain r:



• Molecule 2: Antenna complex alpha/beta subunit

Chain k:

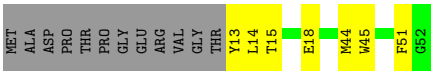


• Molecule 2: Antenna complex alpha/beta subunit

Chain j:

• Molecule 2: Antenna complex alpha/beta subunit

Chain c:

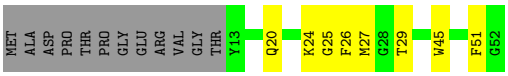


• Molecule 2: Antenna complex alpha/beta subunit

Chain d:

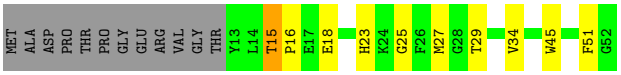
• Molecule 2: Antenna complex alpha/beta subunit

Chain e:



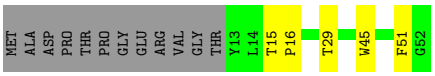
• Molecule 2: Antenna complex alpha/beta subunit

Chain f:



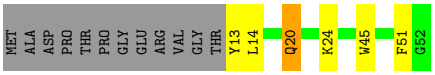
• Molecule 2: Antenna complex alpha/beta subunit

Chain g:



• Molecule 2: Antenna complex alpha/beta subunit

Chain q:

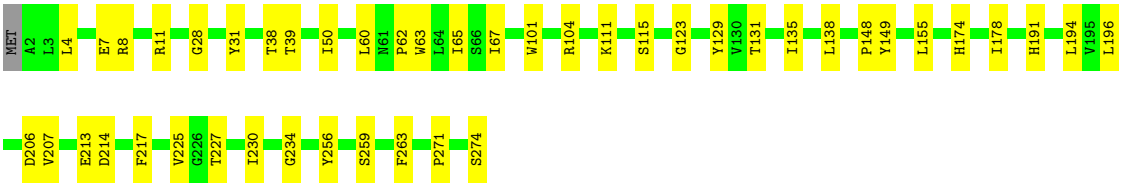


• Molecule 2: Antenna complex alpha/beta subunit

Chain i:

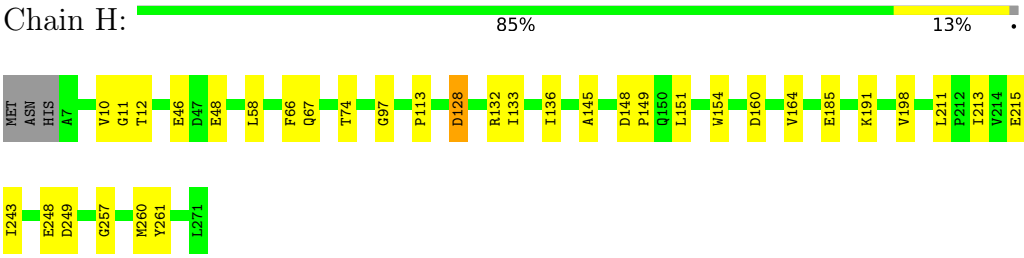
• Molecule 3: Reaction center protein L chain

Chain L:



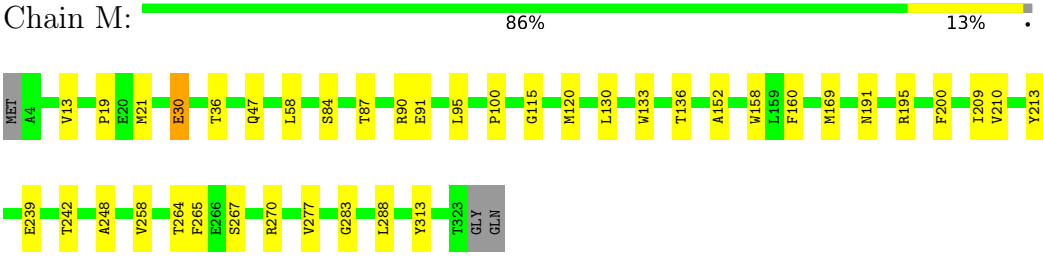
• Molecule 4: Photosynthetic reaction center H subunit

Chain H:



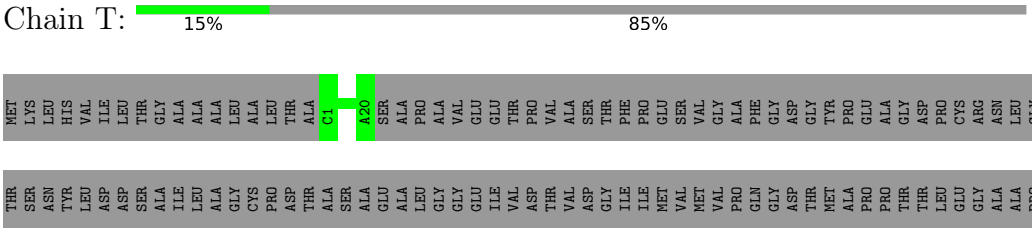
• Molecule 5: Reaction center protein M chain

Chain M:



• Molecule 6: Secreted protein

Chain T:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	210570	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50.5	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: UQ8, BCL, FE, A1ELD, 8K6, LHG, A1EL2, LMT, BPH, PO4, H4X, PEF, PGV

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.12	0/397	0.26	0/540
1	B	0.10	0/397	0.19	0/540
1	C	0.58	0/397	0.87	0/540
1	D	0.09	0/397	0.20	0/540
1	E	0.09	0/397	0.20	0/540
1	F	0.09	0/397	0.25	0/540
1	G	0.09	0/397	0.19	0/540
1	I	0.09	0/397	0.21	0/540
1	J	0.18	0/397	0.27	0/540
1	K	0.54	0/397	0.72	0/540
1	N	0.09	0/397	0.19	0/540
1	O	0.07	0/397	0.18	0/540
1	P	0.19	0/397	0.32	0/540
1	Q	0.09	0/397	0.20	0/540
1	R	0.10	0/397	0.28	0/540
1	S	0.10	0/397	0.28	0/540
2	a	0.14	0/339	0.27	0/462
2	b	0.12	0/339	0.25	0/462
2	c	0.13	0/339	0.26	0/462
2	d	0.11	0/339	0.21	0/462
2	e	0.12	0/339	0.25	0/462
2	f	0.13	0/339	0.28	0/462
2	g	0.13	0/339	0.28	0/462
2	i	0.10	0/339	0.21	0/462
2	j	0.12	0/339	0.24	0/462
2	k	0.11	0/339	0.25	0/462
2	n	0.12	0/339	0.24	0/462
2	o	0.10	0/339	0.21	0/462
2	p	0.11	0/339	0.23	0/462
2	q	0.12	0/339	0.22	0/462
2	r	0.11	0/339	0.26	0/462
2	s	0.11	0/339	0.20	0/462

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
3	L	0.14	0/2214	0.30	0/3033
4	H	0.23	0/2139	0.36	1/2912 (0.0%)
5	M	0.13	0/2640	0.27	0/3612
6	T	0.06	0/119	0.17	0/161
All	All	0.18	0/18888	0.31	1/25750 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	H	198	VAL	N-CA-C	-5.57	107.30	112.43

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	384	0	389	12	0
1	B	384	0	389	5	0
1	C	384	0	389	8	0
1	D	384	0	389	13	0
1	E	384	0	389	10	0
1	F	384	0	389	16	0
1	G	384	0	389	6	0
1	I	384	0	389	12	0
1	J	384	0	389	10	0
1	K	384	0	389	3	0
1	N	384	0	389	11	0
1	O	384	0	389	5	0
1	P	384	0	389	7	0
1	Q	384	0	389	14	0
1	R	384	0	389	12	0
1	S	384	0	389	7	0
2	a	326	0	317	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	b	326	0	317	3	0
2	c	326	0	317	8	0
2	d	326	0	317	1	0
2	e	326	0	317	8	0
2	f	326	0	317	10	0
2	g	326	0	317	6	0
2	i	326	0	317	2	0
2	j	326	0	317	1	0
2	k	326	0	317	6	0
2	n	326	0	317	4	0
2	o	326	0	317	2	0
2	p	326	0	317	3	0
2	q	326	0	317	3	0
2	r	326	0	317	9	0
2	s	326	0	317	4	0
3	L	2135	0	2086	43	0
4	H	2079	0	2037	25	0
5	M	2543	0	2434	36	0
6	T	120	0	103	0	0
7	A	66	0	74	2	0
7	B	66	0	74	4	0
7	C	66	0	74	5	0
7	D	66	0	74	0	0
7	E	66	0	74	3	0
7	F	66	0	74	3	0
7	G	66	0	74	1	0
7	I	66	0	74	3	0
7	J	66	0	74	1	0
7	K	66	0	74	1	0
7	L	132	0	148	9	0
7	M	132	0	148	4	0
7	N	66	0	74	3	0
7	O	66	0	74	2	0
7	P	66	0	74	3	0
7	Q	66	0	74	1	0
7	R	66	0	74	2	0
7	S	66	0	74	3	0
7	a	66	0	74	4	0
7	b	66	0	74	8	0
7	c	66	0	74	3	0
7	d	66	0	74	4	0
7	e	66	0	74	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	f	66	0	74	5	0
7	g	66	0	74	2	0
7	i	66	0	74	0	0
7	j	66	0	74	2	0
7	k	66	0	74	3	0
7	n	66	0	74	5	0
7	o	66	0	74	4	0
7	p	66	0	74	3	0
7	q	66	0	74	3	0
7	r	66	0	74	2	0
7	s	66	0	74	3	0
8	A	43	0	0	1	0
8	B	43	0	0	1	0
8	C	43	0	0	0	0
8	D	43	0	0	1	0
8	E	43	0	0	1	0
8	F	43	0	0	1	0
8	G	43	0	0	0	0
8	I	43	0	0	4	0
8	J	43	0	0	3	0
8	K	43	0	0	1	0
8	N	43	0	0	0	0
8	O	43	0	0	0	0
8	P	43	0	0	1	0
8	Q	43	0	0	1	0
8	r	86	0	0	9	0
9	A	44	0	0	0	0
9	B	44	0	0	1	0
9	C	44	0	0	0	0
9	J	44	0	0	0	0
9	O	44	0	0	1	0
9	R	88	0	0	23	0
9	b	44	0	0	0	0
9	d	44	0	0	1	0
9	e	44	0	0	7	0
9	f	44	0	0	7	0
9	g	44	0	0	3	0
9	j	44	0	0	0	0
9	o	44	0	0	1	0
9	q	44	0	0	0	0
9	r	44	0	0	1	0
10	C	9	0	14	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	H	18	0	38	0	0
10	L	51	0	92	11	0
10	M	15	0	29	1	0
10	Q	36	0	76	8	0
10	S	13	0	25	1	0
10	f	14	0	27	0	0
11	D	51	0	76	8	0
11	F	51	0	76	4	0
11	G	23	0	21	1	0
11	L	50	0	43	4	0
11	M	38	0	50	3	0
11	T	50	0	54	3	0
12	G	30	0	32	0	0
12	L	28	0	29	2	0
12	N	26	0	24	1	0
13	L	130	0	150	6	0
14	L	37	0	32	6	0
14	M	53	0	74	1	0
15	M	1	0	0	0	0
16	M	44	0	0	0	0
17	M	43	0	62	1	0
18	M	5	0	0	0	0
19	T	10	0	14	3	0
All	All	22831	0	21658	370	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 8.

The worst 5 of 370 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:R:102:A1ELD:C35	9:R:102:A1ELD:C36	1.76	1.59
9:R:102:A1ELD:C39	9:R:102:A1ELD:C37	1.80	1.59
9:R:102:A1ELD:C39	1:N:33:LEU:CD1	2.15	1.24
9:R:102:A1ELD:C39	1:N:33:LEU:HD11	1.76	1.14
9:R:102:A1ELD:C39	1:N:33:LEU:HD12	1.80	1.11

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	42/64 (66%)	42 (100%)	0	0	100	100
1	B	42/64 (66%)	42 (100%)	0	0	100	100
1	C	42/64 (66%)	42 (100%)	0	0	100	100
1	D	42/64 (66%)	42 (100%)	0	0	100	100
1	E	42/64 (66%)	42 (100%)	0	0	100	100
1	F	42/64 (66%)	42 (100%)	0	0	100	100
1	G	42/64 (66%)	42 (100%)	0	0	100	100
1	I	42/64 (66%)	42 (100%)	0	0	100	100
1	J	42/64 (66%)	42 (100%)	0	0	100	100
1	K	42/64 (66%)	41 (98%)	1 (2%)	0	100	100
1	N	42/64 (66%)	42 (100%)	0	0	100	100
1	O	42/64 (66%)	42 (100%)	0	0	100	100
1	P	42/64 (66%)	42 (100%)	0	0	100	100
1	Q	42/64 (66%)	42 (100%)	0	0	100	100
1	R	42/64 (66%)	42 (100%)	0	0	100	100
1	S	42/64 (66%)	42 (100%)	0	0	100	100
2	a	38/52 (73%)	37 (97%)	1 (3%)	0	100	100
2	b	38/52 (73%)	38 (100%)	0	0	100	100
2	c	38/52 (73%)	38 (100%)	0	0	100	100
2	d	38/52 (73%)	38 (100%)	0	0	100	100
2	e	38/52 (73%)	38 (100%)	0	0	100	100
2	f	38/52 (73%)	38 (100%)	0	0	100	100
2	g	38/52 (73%)	37 (97%)	1 (3%)	0	100	100
2	i	38/52 (73%)	37 (97%)	1 (3%)	0	100	100
2	j	38/52 (73%)	37 (97%)	1 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	k	38/52 (73%)	37 (97%)	1 (3%)	0	100	100
2	n	38/52 (73%)	38 (100%)	0	0	100	100
2	o	38/52 (73%)	38 (100%)	0	0	100	100
2	p	38/52 (73%)	37 (97%)	1 (3%)	0	100	100
2	q	38/52 (73%)	37 (97%)	1 (3%)	0	100	100
2	r	38/52 (73%)	38 (100%)	0	0	100	100
2	s	38/52 (73%)	37 (97%)	1 (3%)	0	100	100
3	L	271/274 (99%)	268 (99%)	3 (1%)	0	100	100
4	H	263/268 (98%)	258 (98%)	5 (2%)	0	100	100
5	M	318/323 (98%)	314 (99%)	4 (1%)	0	100	100
6	T	18/135 (13%)	18 (100%)	0	0	100	100
All	All	2150/2856 (75%)	2129 (99%)	21 (1%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	38/49 (78%)	38 (100%)	0	100	100
1	B	38/49 (78%)	38 (100%)	0	100	100
1	C	38/49 (78%)	38 (100%)	0	100	100
1	D	38/49 (78%)	38 (100%)	0	100	100
1	E	38/49 (78%)	38 (100%)	0	100	100
1	F	38/49 (78%)	38 (100%)	0	100	100
1	G	38/49 (78%)	38 (100%)	0	100	100
1	I	38/49 (78%)	38 (100%)	0	100	100
1	J	38/49 (78%)	38 (100%)	0	100	100
1	K	38/49 (78%)	37 (97%)	1 (3%)	41	56

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	N	38/49 (78%)	38 (100%)	0	100 100
1	O	38/49 (78%)	38 (100%)	0	100 100
1	P	38/49 (78%)	38 (100%)	0	100 100
1	Q	38/49 (78%)	38 (100%)	0	100 100
1	R	38/49 (78%)	38 (100%)	0	100 100
1	S	38/49 (78%)	38 (100%)	0	100 100
2	a	31/40 (78%)	30 (97%)	1 (3%)	34 47
2	b	31/40 (78%)	30 (97%)	1 (3%)	34 47
2	c	31/40 (78%)	31 (100%)	0	100 100
2	d	31/40 (78%)	30 (97%)	1 (3%)	34 47
2	e	31/40 (78%)	31 (100%)	0	100 100
2	f	31/40 (78%)	30 (97%)	1 (3%)	34 47
2	g	31/40 (78%)	31 (100%)	0	100 100
2	i	31/40 (78%)	31 (100%)	0	100 100
2	j	31/40 (78%)	31 (100%)	0	100 100
2	k	31/40 (78%)	31 (100%)	0	100 100
2	n	31/40 (78%)	31 (100%)	0	100 100
2	o	31/40 (78%)	31 (100%)	0	100 100
2	p	31/40 (78%)	31 (100%)	0	100 100
2	q	31/40 (78%)	30 (97%)	1 (3%)	34 47
2	r	31/40 (78%)	31 (100%)	0	100 100
2	s	31/40 (78%)	31 (100%)	0	100 100
3	L	215/216 (100%)	214 (100%)	1 (0%)	86 93
4	H	216/220 (98%)	212 (98%)	4 (2%)	52 67
5	M	250/252 (99%)	249 (100%)	1 (0%)	89 94
6	T	9/94 (10%)	9 (100%)	0	100 100
All	All	1794/2206 (81%)	1782 (99%)	12 (1%)	80 89

5 of 12 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	H	128	ASP
4	H	133	ILE

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Mol	Chain	Res	Type
5	M	30	GLU
4	H	136	ILE
2	d	20	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 7 such sidechains are listed below:

Mol	Chain	Res	Type
2	a	20	GLN
4	H	204	ASN
5	M	302	GLN
5	M	296	ASN
1	P	18	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 100 ligands modelled in this entry, 1 is monoatomic - leaving 99 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
14	UQ8	L	306	-	18,18,53	1.07	2 (11%)	22,25,67	0.74	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
9	A1ELD	A	103	-	43,44,44	1.66	10 (23%)	51,58,58	1.47	10 (19%)
9	A1ELD	R	102	-	43,44,44	6.22	37 (86%)	51,58,58	4.71	27 (52%)
19	LHG	T	302	-	9,9,48	0.28	0	8,8,54	1.12	1 (12%)
14	UQ8	L	304	-	19,19,53	1.01	2 (10%)	23,26,67	0.99	1 (4%)
7	BCL	B	101	1	64,74,74	1.69	12 (18%)	78,115,115	2.32	21 (26%)
7	BCL	K	101	1	64,74,74	1.70	13 (20%)	78,115,115	2.30	22 (28%)
8	A1EL2	C	103	-	43,44,44	1.63	8 (18%)	56,62,62	1.53	9 (16%)
10	8K6	f	103	-	13,13,17	0.09	0	12,12,16	0.08	0
18	PO4	M	409	-	4,4,4	0.96	0	6,6,6	0.43	0
8	A1EL2	r	103	-	43,44,44	4.76	34 (79%)	56,62,62	2.88	30 (53%)
9	A1ELD	C	102	-	43,44,44	1.61	6 (13%)	51,58,58	1.76	11 (21%)
7	BCL	N	101	1	64,74,74	1.71	13 (20%)	78,115,115	2.26	21 (26%)
8	A1EL2	P	102	-	43,44,44	3.45	21 (48%)	56,62,62	2.23	26 (46%)
7	BCL	g	102	2	64,74,74	1.70	13 (20%)	78,115,115	2.14	21 (26%)
7	BCL	M	403	5	64,74,74	1.64	13 (20%)	78,115,115	2.24	18 (23%)
9	A1ELD	q	101	-	43,44,44	1.70	10 (23%)	51,58,58	1.61	10 (19%)
10	8K6	L	311	-	13,13,17	0.08	0	12,12,16	0.11	0
10	8K6	S	102	-	12,12,17	0.09	0	11,11,16	0.10	0
7	BCL	e	102	2	64,74,74	1.72	12 (18%)	78,115,115	2.17	21 (26%)
7	BCL	s	101	2	64,74,74	1.71	11 (17%)	78,115,115	2.12	19 (24%)
11	PGV	T	303	-	29,29,50	1.22	2 (6%)	33,34,56	1.31	4 (12%)
13	BPH	L	305	-	51,70,70	0.56	1 (1%)	52,101,101	1.00	2 (3%)
13	BPH	L	303	-	51,70,70	1.82	8 (15%)	52,101,101	2.02	12 (23%)
7	BCL	Q	101	1	64,74,74	1.68	14 (21%)	78,115,115	2.26	19 (24%)
9	A1ELD	J	103	-	43,44,44	1.87	13 (30%)	51,58,58	1.55	10 (19%)
8	A1EL2	O	103	-	43,44,44	2.90	23 (53%)	56,62,62	1.82	15 (26%)
8	A1EL2	G	102	-	43,44,44	2.26	18 (41%)	56,62,62	1.40	9 (16%)
11	PGV	L	307	-	20,20,50	1.25	2 (10%)	24,25,56	1.38	3 (12%)
16	H4X	M	405	-	43,43,43	1.60	8 (18%)	50,54,54	1.27	9 (18%)
7	BCL	b	102	2	64,74,74	1.72	12 (18%)	78,115,115	2.11	21 (26%)
8	A1EL2	J	102	-	43,44,44	3.81	29 (67%)	56,62,62	4.38	36 (64%)
8	A1EL2	F	102	-	43,44,44	1.62	8 (18%)	56,62,62	1.52	10 (17%)
7	BCL	o	102	2	64,74,74	1.68	12 (18%)	78,115,115	2.11	21 (26%)
7	BCL	I	101	1	64,74,74	1.69	11 (17%)	78,115,115	2.30	22 (28%)
9	A1ELD	O	102	-	43,44,44	3.36	21 (48%)	51,58,58	2.74	17 (33%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
9	A1ELD	b	101	-	43,44,44	1.83	10 (23%)	51,58,58	1.58	11 (21%)
10	8K6	Q	104	-	17,17,17	0.07	0	16,16,16	0.11	0
14	UQ8	M	402	-	53,53,53	0.65	2 (3%)	64,67,67	0.56	0
11	PGV	F	103	-	50,50,50	0.90	2 (4%)	53,56,56	1.08	4 (7%)
11	PGV	L	308	-	28,28,50	1.23	2 (7%)	31,34,56	1.28	4 (12%)
11	PGV	M	408	-	37,37,50	1.09	2 (5%)	41,42,56	1.20	4 (9%)
7	BCL	O	101	1	64,74,74	1.71	12 (18%)	78,115,115	2.30	18 (23%)
9	A1ELD	g	101	-	43,44,44	1.69	9 (20%)	51,58,58	1.72	11 (21%)
7	BCL	J	101	1	64,74,74	1.72	13 (20%)	78,115,115	2.31	18 (23%)
7	BCL	S	101	1	64,74,74	1.72	12 (18%)	78,115,115	2.37	21 (26%)
12	LMT	L	309	-	29,29,36	1.30	5 (17%)	40,40,47	1.06	1 (2%)
7	BCL	D	101	1	64,74,74	1.67	13 (20%)	78,115,115	2.39	25 (32%)
8	A1EL2	A	102	-	43,44,44	1.62	8 (18%)	56,62,62	1.52	10 (17%)
7	BCL	L	302	3	64,74,74	1.68	12 (18%)	78,115,115	2.10	20 (25%)
9	A1ELD	R	103	-	43,44,44	1.74	10 (23%)	51,58,58	1.64	12 (23%)
9	A1ELD	e	101	-	43,44,44	2.62	22 (51%)	51,58,58	1.53	10 (19%)
8	A1EL2	E	102	-	43,44,44	1.63	8 (18%)	56,62,62	1.53	10 (17%)
8	A1EL2	I	102	-	43,44,44	2.73	22 (51%)	56,62,62	3.18	29 (51%)
11	PGV	T	301	-	19,19,50	1.52	2 (10%)	21,21,56	1.59	5 (23%)
7	BCL	r	104	2	64,74,74	1.70	11 (17%)	78,115,115	2.14	17 (21%)
8	A1EL2	B	102	-	43,44,44	1.63	8 (18%)	56,62,62	1.52	10 (17%)
11	PGV	G	103	-	22,22,50	1.75	3 (13%)	24,26,56	1.48	3 (12%)
17	PEF	M	407	-	42,42,46	0.28	0	45,47,51	0.32	0
12	LMT	N	103	-	27,27,36	1.35	6 (22%)	37,38,47	0.92	1 (2%)
7	BCL	A	101	1	64,74,74	1.70	14 (21%)	78,115,115	2.31	22 (28%)
7	BCL	L	301	3	64,74,74	1.72	12 (18%)	78,115,115	2.34	19 (24%)
7	BCL	a	101	2	64,74,74	1.66	11 (17%)	78,115,115	2.10	19 (24%)
9	A1ELD	o	101	-	43,44,44	4.99	31 (72%)	51,58,58	1.86	13 (25%)
8	A1EL2	Q	102	-	43,44,44	3.24	25 (58%)	56,62,62	1.43	7 (12%)
7	BCL	G	101	1	64,74,74	1.70	12 (18%)	78,115,115	2.28	20 (25%)
10	8K6	L	310	-	11,11,17	0.08	0	10,10,16	0.07	0
7	BCL	E	101	1	64,74,74	1.69	12 (18%)	78,115,115	2.24	21 (26%)
7	BCL	d	102	2	64,74,74	1.70	11 (17%)	78,115,115	2.22	19 (24%)
8	A1EL2	D	102	-	43,44,44	1.63	8 (18%)	56,62,62	1.53	10 (17%)
7	BCL	P	101	1	64,74,74	1.71	12 (18%)	78,115,115	2.27	20 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
10	8K6	Q	103	-	17,17,17	0.09	0	16,16,16	0.07	0
7	BCL	F	101	1	64,74,74	1.83	15 (23%)	78,115,115	2.12	17 (21%)
9	A1ELD	j	101	-	43,44,44	1.32	6 (13%)	51,58,58	1.75	11 (21%)
7	BCL	i	101	2	64,74,74	1.70	12 (18%)	78,115,115	2.27	21 (26%)
12	LMT	G	104	-	31,31,36	1.27	5 (16%)	42,42,47	0.93	2 (4%)
10	8K6	H	301	-	17,17,17	0.08	0	16,16,16	0.06	0
8	A1EL2	r	102	-	43,44,44	2.38	14 (32%)	56,62,62	1.67	13 (23%)
7	BCL	C	101	1	64,74,74	1.67	13 (20%)	78,115,115	2.35	22 (28%)
7	BCL	k	101	2	64,74,74	1.68	11 (17%)	78,115,115	2.07	18 (23%)
7	BCL	j	102	2	64,74,74	1.69	12 (18%)	78,115,115	2.16	19 (24%)
9	A1ELD	d	101	-	43,44,44	1.91	14 (32%)	51,58,58	1.46	9 (17%)
10	8K6	C	104	-	8,8,17	0.09	0	7,7,16	0.10	0
7	BCL	q	102	2	64,74,74	1.70	11 (17%)	78,115,115	2.19	21 (26%)
7	BCL	R	101	1	64,74,74	1.68	14 (21%)	78,115,115	2.27	17 (21%)
7	BCL	p	101	2	64,74,74	1.70	12 (18%)	78,115,115	2.10	19 (24%)
10	8K6	M	406	-	14,14,17	0.09	0	13,13,16	0.11	0
10	8K6	L	312	-	9,9,17	0.10	0	8,8,16	0.08	0
8	A1EL2	K	102	-	43,44,44	1.90	13 (30%)	56,62,62	1.31	7 (12%)
7	BCL	f	102	2	64,74,74	1.68	11 (17%)	78,115,115	2.24	23 (29%)
7	BCL	n	101	2	64,74,74	1.71	12 (18%)	78,115,115	2.19	22 (28%)
9	A1ELD	B	103	-	43,44,44	2.37	19 (44%)	51,58,58	2.06	16 (31%)
7	BCL	M	401	5	64,74,74	1.74	14 (21%)	78,115,115	2.48	24 (30%)
8	A1EL2	N	102	-	43,44,44	1.61	8 (18%)	56,62,62	1.49	10 (17%)
10	8K6	L	313	-	14,14,17	0.10	0	13,13,16	0.12	0
11	PGV	D	103	-	50,50,50	0.91	2 (4%)	53,56,56	1.06	4 (7%)
9	A1ELD	r	101	-	43,44,44	1.71	10 (23%)	51,58,58	1.59	12 (23%)
9	A1ELD	f	101	-	43,44,44	1.67	9 (20%)	51,58,58	1.52	11 (21%)
7	BCL	c	101	2	64,74,74	1.70	11 (17%)	78,115,115	2.20	20 (25%)

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
14	UQ8	L	306	-	-	2/9/33/75	0/1/1/1
9	A1ELD	A	103	-	-	3/42/61/61	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	A1ELD	R	102	-	-	3/42/61/61	0/1/1/1
19	LHG	T	302	-	-	3/6/7/53	-
14	UQ8	L	304	-	-	7/11/35/75	0/1/1/1
7	BCL	B	101	1	-	22/37/137/137	-
7	BCL	K	101	1	-	16/37/137/137	-
8	A1EL2	C	103	-	-	4/29/72/72	0/2/2/2
10	8K6	f	103	-	-	0/11/11/15	-
8	A1EL2	r	103	-	-	2/29/72/72	0/2/2/2
9	A1ELD	C	102	-	-	3/42/61/61	0/1/1/1
7	BCL	N	101	1	-	13/37/137/137	-
8	A1EL2	P	102	-	-	4/29/72/72	0/2/2/2
7	BCL	g	102	2	-	17/37/137/137	-
7	BCL	M	403	5	-	13/37/137/137	-
9	A1ELD	q	101	-	-	5/42/61/61	0/1/1/1
10	8K6	L	311	-	-	0/11/11/15	-
10	8K6	S	102	-	-	2/10/10/15	-
7	BCL	e	102	2	-	14/37/137/137	-
7	BCL	s	101	2	-	19/37/137/137	-
11	PGV	T	303	-	-	9/31/31/55	-
13	BPH	L	305	-	-	16/37/105/105	0/5/6/6
13	BPH	L	303	-	-	11/37/105/105	0/5/6/6
7	BCL	Q	101	1	-	18/37/137/137	-
9	A1ELD	J	103	-	-	3/42/61/61	0/1/1/1
8	A1EL2	O	103	-	-	3/29/72/72	0/2/2/2
8	A1EL2	G	102	-	-	4/29/72/72	0/2/2/2
11	PGV	L	307	-	-	4/21/21/55	-
16	H4X	M	405	-	-	2/51/51/51	-
7	BCL	b	102	2	-	15/37/137/137	-
8	A1EL2	J	102	-	-	4/29/72/72	0/2/2/2
8	A1EL2	F	102	-	-	4/29/72/72	0/2/2/2
7	BCL	o	102	2	-	19/37/137/137	-
7	BCL	I	101	1	-	16/37/137/137	-
9	A1ELD	O	102	-	-	3/42/61/61	0/1/1/1
9	A1ELD	b	101	-	-	3/42/61/61	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
10	8K6	Q	104	-	-	4/15/15/15	-
14	UQ8	M	402	-	-	8/51/75/75	0/1/1/1
11	PGV	F	103	-	-	9/55/55/55	-
11	PGV	L	308	-	-	12/33/33/55	-
11	PGV	M	408	-	-	12/39/39/55	-
7	BCL	O	101	1	-	18/37/137/137	-
9	A1ELD	g	101	-	-	3/42/61/61	0/1/1/1
7	BCL	J	101	1	-	14/37/137/137	-
7	BCL	S	101	1	-	24/37/137/137	-
12	LMT	L	309	-	-	7/14/54/61	0/2/2/2
7	BCL	D	101	1	-	18/37/137/137	-
8	A1EL2	A	102	-	-	4/29/72/72	0/2/2/2
7	BCL	L	302	3	-	13/37/137/137	-
9	A1ELD	R	103	-	-	5/42/61/61	0/1/1/1
9	A1ELD	e	101	-	-	3/42/61/61	0/1/1/1
8	A1EL2	E	102	-	-	4/29/72/72	0/2/2/2
8	A1EL2	I	102	-	-	4/29/72/72	0/2/2/2
11	PGV	T	301	-	-	6/20/20/55	-
7	BCL	r	104	2	-	18/37/137/137	-
8	A1EL2	B	102	-	-	4/29/72/72	0/2/2/2
11	PGV	G	103	-	-	6/23/23/55	-
17	PEF	M	407	-	-	4/46/46/50	-
12	LMT	N	103	-	-	3/12/52/61	0/2/2/2
7	BCL	A	101	1	-	11/37/137/137	-
7	BCL	L	301	3	-	9/37/137/137	-
7	BCL	a	101	2	-	18/37/137/137	-
9	A1ELD	o	101	-	-	3/42/61/61	0/1/1/1
8	A1EL2	Q	102	-	-	4/29/72/72	0/2/2/2
7	BCL	G	101	1	-	19/37/137/137	-
10	8K6	L	310	-	-	0/9/9/15	-
7	BCL	E	101	1	-	17/37/137/137	-
7	BCL	d	102	2	-	16/37/137/137	-
8	A1EL2	D	102	-	-	4/29/72/72	0/2/2/2
7	BCL	P	101	1	-	16/37/137/137	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
10	8K6	Q	103	-	-	2/15/15/15	-
7	BCL	F	101	1	-	16/37/137/137	-
9	A1ELD	j	101	-	-	3/42/61/61	0/1/1/1
7	BCL	i	101	2	-	17/37/137/137	-
12	LMT	G	104	-	-	4/16/56/61	0/2/2/2
10	8K6	H	301	-	-	1/15/15/15	-
8	A1EL2	r	102	-	-	9/29/72/72	0/2/2/2
7	BCL	C	101	1	-	12/37/137/137	-
7	BCL	k	101	2	-	17/37/137/137	-
7	BCL	j	102	2	-	13/37/137/137	-
9	A1ELD	d	101	-	-	3/42/61/61	0/1/1/1
10	8K6	C	104	-	-	3/6/6/15	-
7	BCL	q	102	2	-	17/37/137/137	-
7	BCL	R	101	1	-	17/37/137/137	-
7	BCL	p	101	2	-	23/37/137/137	-
10	8K6	M	406	-	-	2/12/12/15	-
10	8K6	L	312	-	-	0/7/7/15	-
8	A1EL2	K	102	-	-	4/29/72/72	0/2/2/2
7	BCL	f	102	2	-	17/37/137/137	-
7	BCL	n	101	2	-	19/37/137/137	-
9	A1ELD	B	103	-	-	3/42/61/61	0/1/1/1
7	BCL	M	401	5	-	9/37/137/137	-
8	A1EL2	N	102	-	-	2/29/72/72	0/2/2/2
10	8K6	L	313	-	-	0/12/12/15	-
11	PGV	D	103	-	-	12/55/55/55	-
9	A1ELD	r	101	-	-	0/42/61/61	0/1/1/1
9	A1ELD	f	101	-	-	3/42/61/61	0/1/1/1
7	BCL	c	101	2	-	26/37/137/137	-

The worst 5 of 989 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	R	102	A1ELD	C36-C35	16.77	1.76	1.50
9	R	102	A1ELD	C39-C37	12.20	1.80	1.52
9	R	102	A1ELD	C5-C4	11.91	1.69	1.51
8	r	103	A1EL2	C33-C34	11.72	1.69	1.52
9	o	101	A1ELD	C13-C10	11.63	1.51	1.35

The worst 5 of 1230 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	J	102	A1EL2	C40-C12-C13	-11.90	106.26	122.92
9	R	102	A1ELD	C11-C10-C13	-11.77	106.44	122.92
9	R	102	A1ELD	C33-C32-C31	-11.50	106.82	122.92
8	J	102	A1EL2	C27-C26-C25	-11.13	107.33	122.92
8	J	102	A1EL2	C39-C16-C17	-10.20	108.64	122.92

There are no chirality outliers.

5 of 860 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	B	101	BCL	C1A-C2A-CAA-CBA
7	D	101	BCL	C1A-C2A-CAA-CBA
7	Q	101	BCL	C3A-C2A-CAA-CBA
7	Q	101	BCL	C4-C3-C5-C6
7	J	101	BCL	CBD-CGD-O2D-CED

There are no ring outliers.

79 monomers are involved in 220 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	R	102	A1ELD	23	0
19	T	302	LHG	3	0
14	L	304	UQ8	6	0
7	B	101	BCL	4	0
7	K	101	BCL	1	0
8	r	103	A1EL2	1	0
7	N	101	BCL	3	0
8	P	102	A1EL2	1	0
7	g	102	BCL	2	0
7	M	403	BCL	3	0
10	L	311	8K6	2	0
10	S	102	8K6	1	0
7	e	102	BCL	2	0
7	s	101	BCL	3	0
11	T	303	PGV	3	0
13	L	305	BPH	1	0
13	L	303	BPH	5	0
7	Q	101	BCL	1	0
11	L	307	PGV	1	0
7	b	102	BCL	8	0
8	J	102	A1EL2	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	F	102	A1EL2	1	0
7	o	102	BCL	4	0
7	I	101	BCL	3	0
9	O	102	A1ELD	1	0
10	Q	104	8K6	4	0
14	M	402	UQ8	1	0
11	F	103	PGV	4	0
11	L	308	PGV	3	0
11	M	408	PGV	3	0
7	O	101	BCL	2	0
9	g	101	A1ELD	3	0
7	J	101	BCL	1	0
7	S	101	BCL	3	0
12	L	309	LMT	2	0
8	A	102	A1EL2	1	0
7	L	302	BCL	7	0
9	e	101	A1ELD	7	0
8	E	102	A1EL2	1	0
8	I	102	A1EL2	4	0
7	r	104	BCL	2	0
8	B	102	A1EL2	1	0
11	G	103	PGV	1	0
17	M	407	PEF	1	0
12	N	103	LMT	1	0
7	A	101	BCL	2	0
7	L	301	BCL	2	0
7	a	101	BCL	4	0
9	o	101	A1ELD	1	0
8	Q	102	A1EL2	1	0
7	G	101	BCL	1	0
10	L	310	8K6	1	0
7	E	101	BCL	3	0
7	d	102	BCL	4	0
8	D	102	A1EL2	1	0
7	P	101	BCL	3	0
10	Q	103	8K6	4	0
7	F	101	BCL	3	0
8	r	102	A1EL2	8	0
7	C	101	BCL	5	0
7	k	101	BCL	3	0
7	j	102	BCL	2	0
9	d	101	A1ELD	1	0

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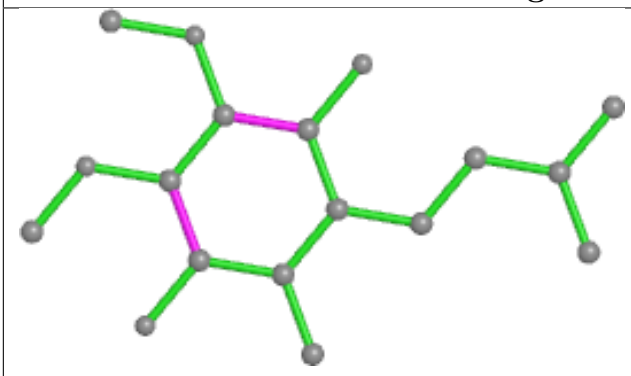
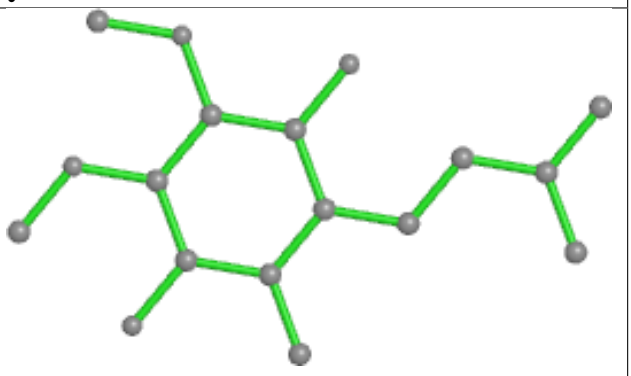
Mol	Chain	Res	Type	Clashes	Symm-Clashes
10	C	104	8K6	1	0
7	q	102	BCL	3	0
7	R	101	BCL	2	0
7	p	101	BCL	3	0
10	M	406	8K6	1	0
10	L	312	8K6	1	0
8	K	102	A1EL2	1	0
7	f	102	BCL	5	0
7	n	101	BCL	5	0
9	B	103	A1ELD	1	0
7	M	401	BCL	1	0
10	L	313	8K6	7	0
11	D	103	PGV	8	0
9	r	101	A1ELD	1	0
9	f	101	A1ELD	7	0
7	c	101	BCL	3	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.

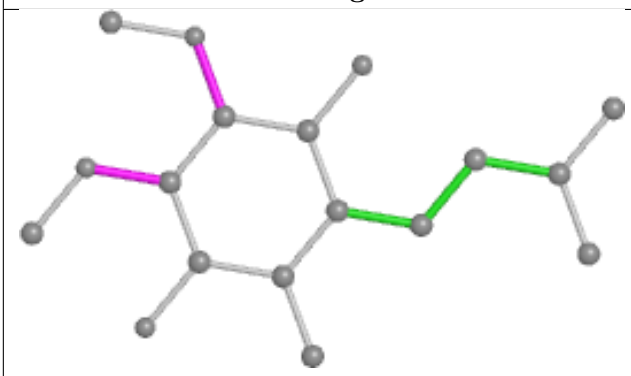
Ligand UQ8 L 306



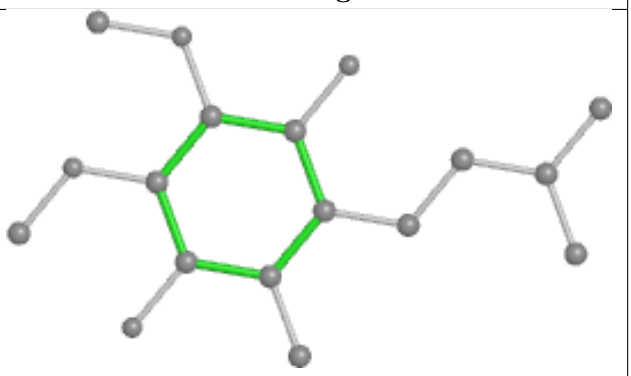
Bond lengths



Bond angles

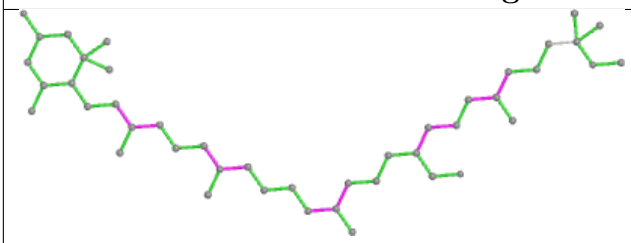


Torsions

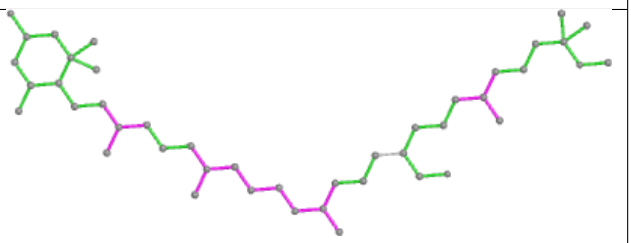


Rings

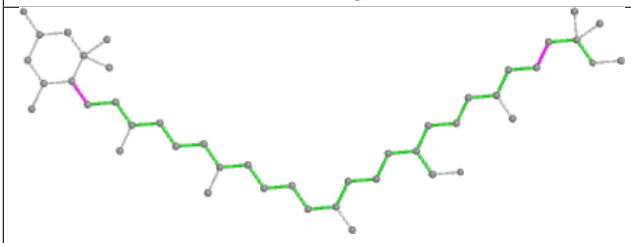
Ligand A1ELD A 103



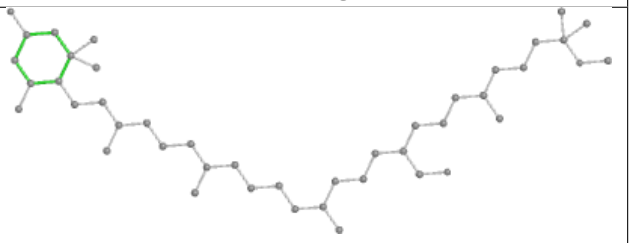
Bond lengths



Bond angles

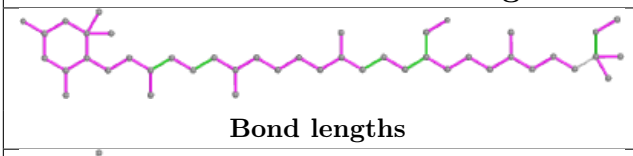


Torsions



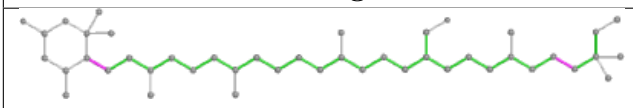
Rings

Ligand A1ELD R 102

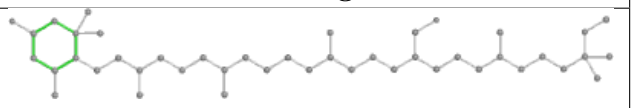


Bond lengths

Bond angles

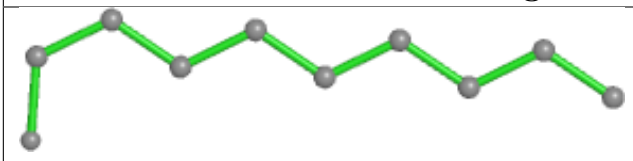


Torsions

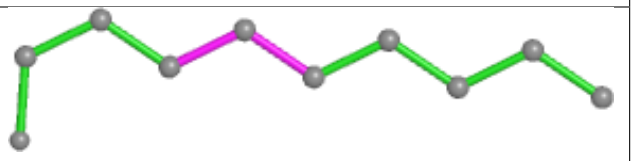


Rings

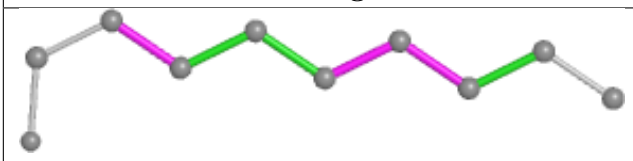
Ligand LHG T 302



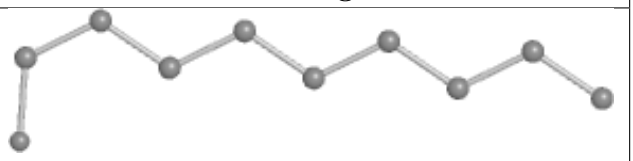
Bond lengths



Bond angles

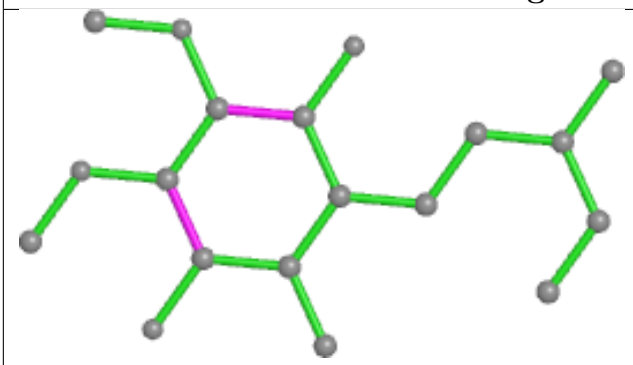


Torsions

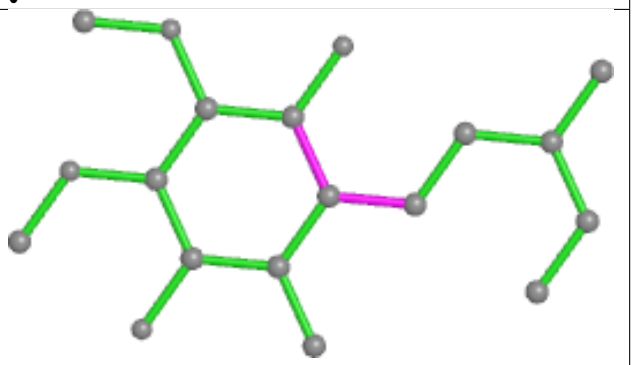


Rings

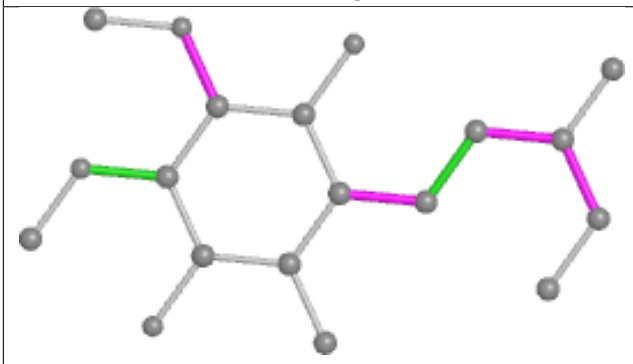
Ligand UQ8 L 304



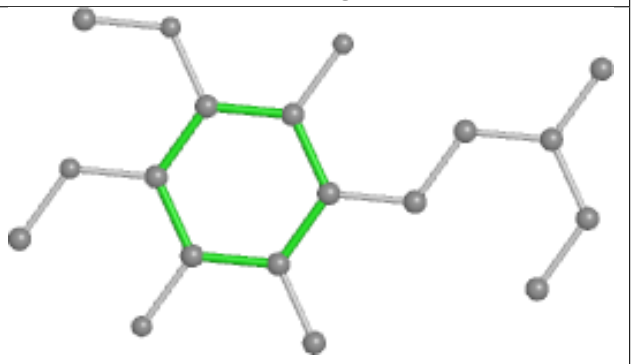
Bond lengths



Bond angles

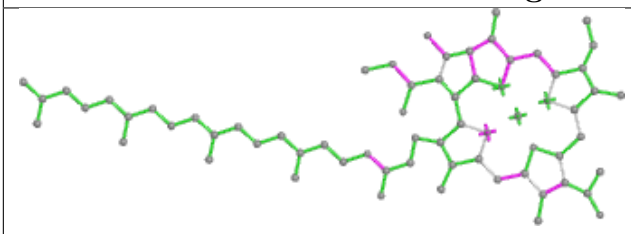


Torsions

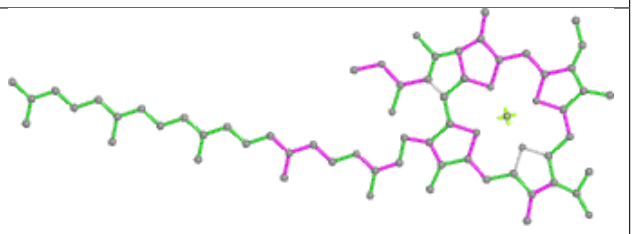


Rings

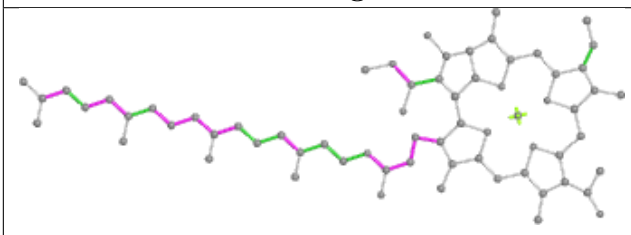
Ligand BCL B 101



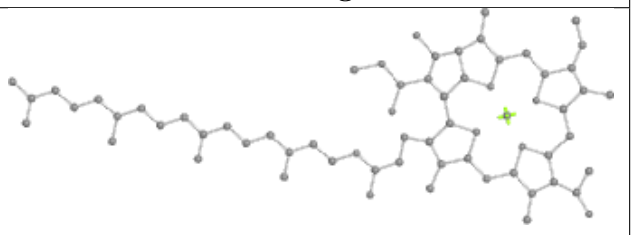
Bond lengths



Bond angles

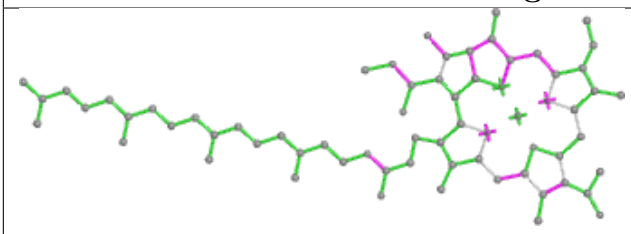


Torsions

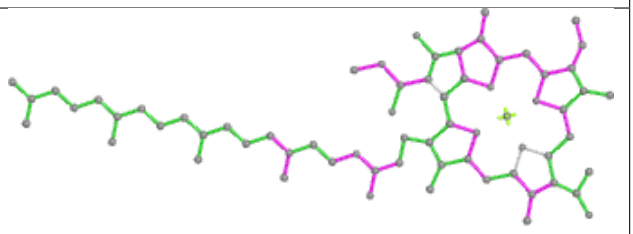


Rings

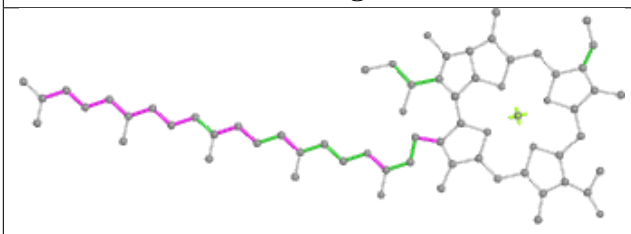
Ligand BCL K 101



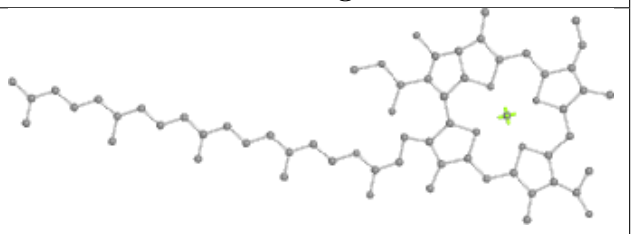
Bond lengths



Bond angles

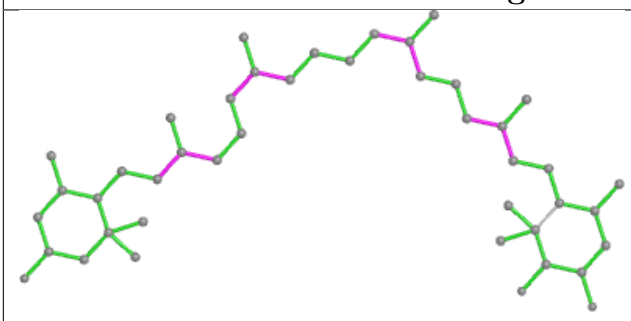


Torsions

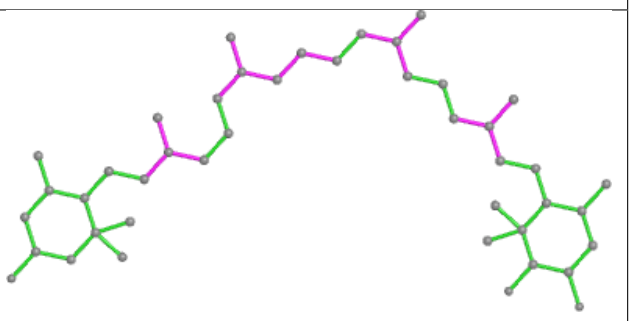


Rings

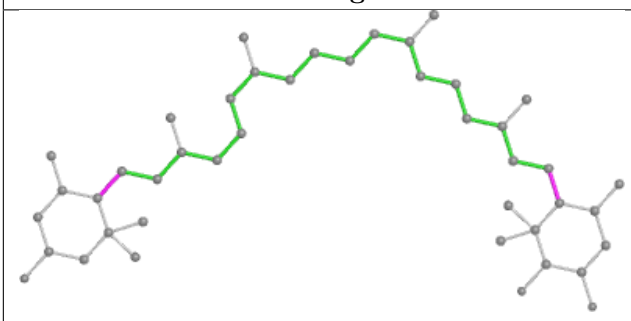
Ligand A1EL2 C 103



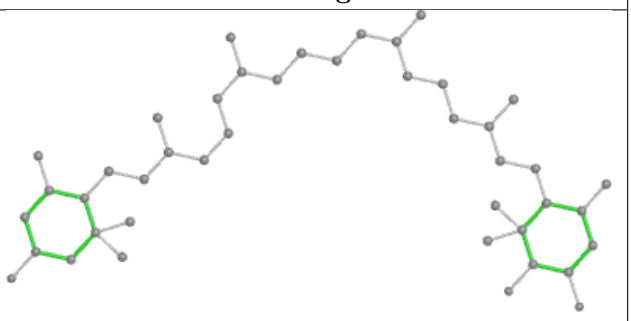
Bond lengths



Bond angles

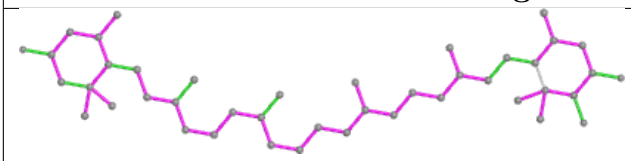


Torsions

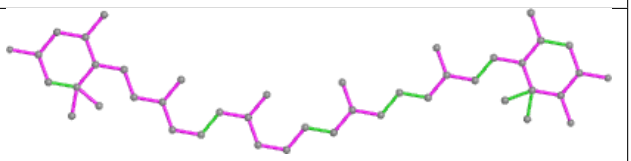


Rings

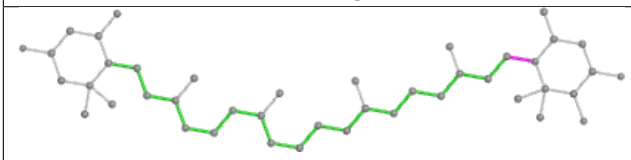
Ligand A1EL2 r 103



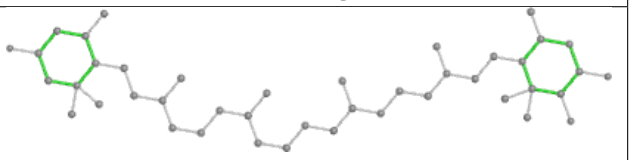
Bond lengths



Bond angles

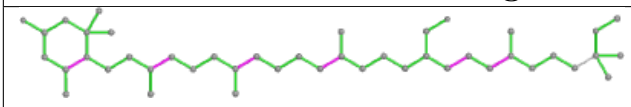


Torsions

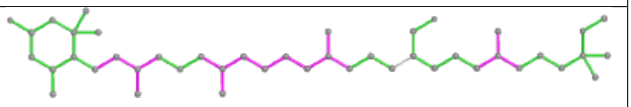


Rings

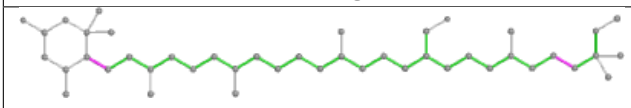
Ligand A1ELD C 102



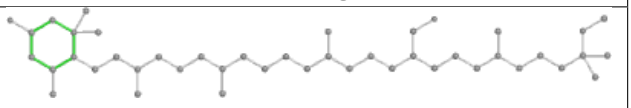
Bond lengths



Bond angles

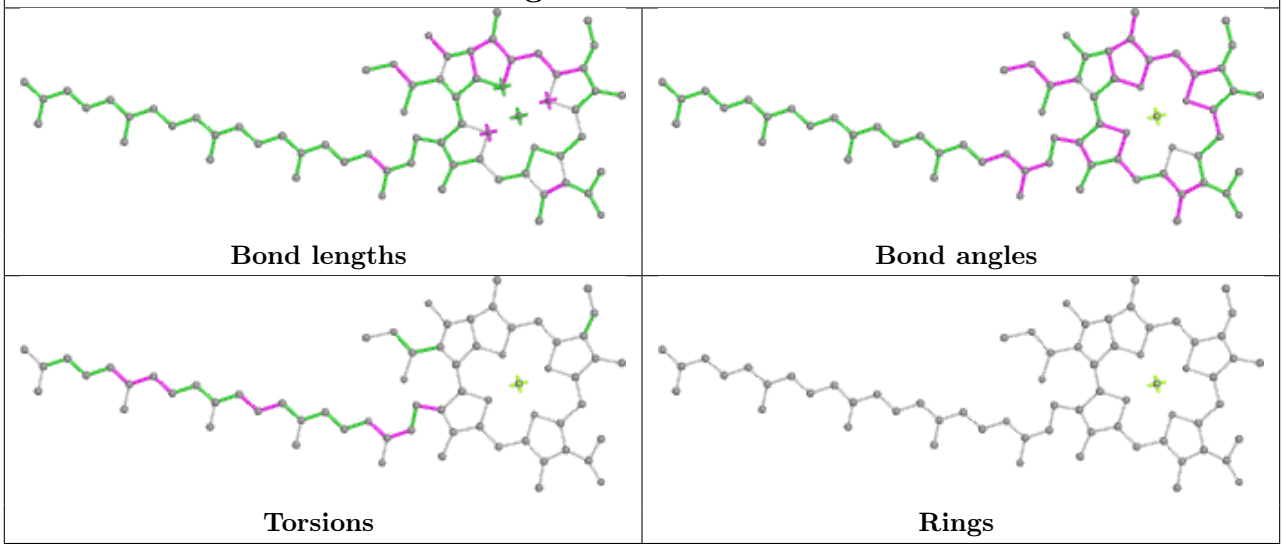


Torsions

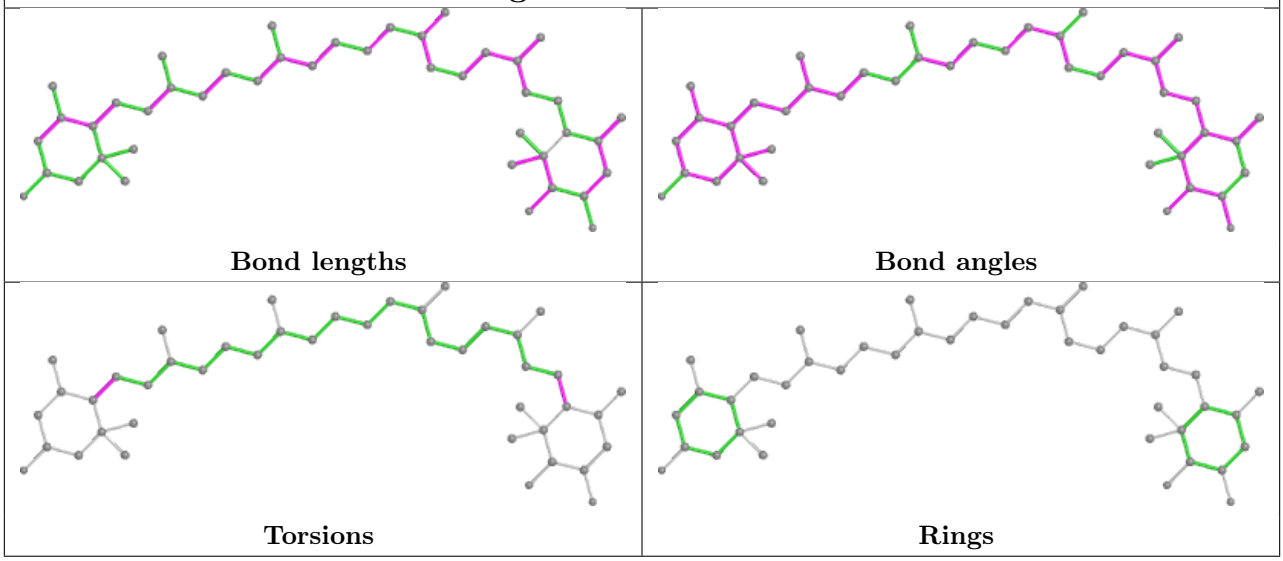


Rings

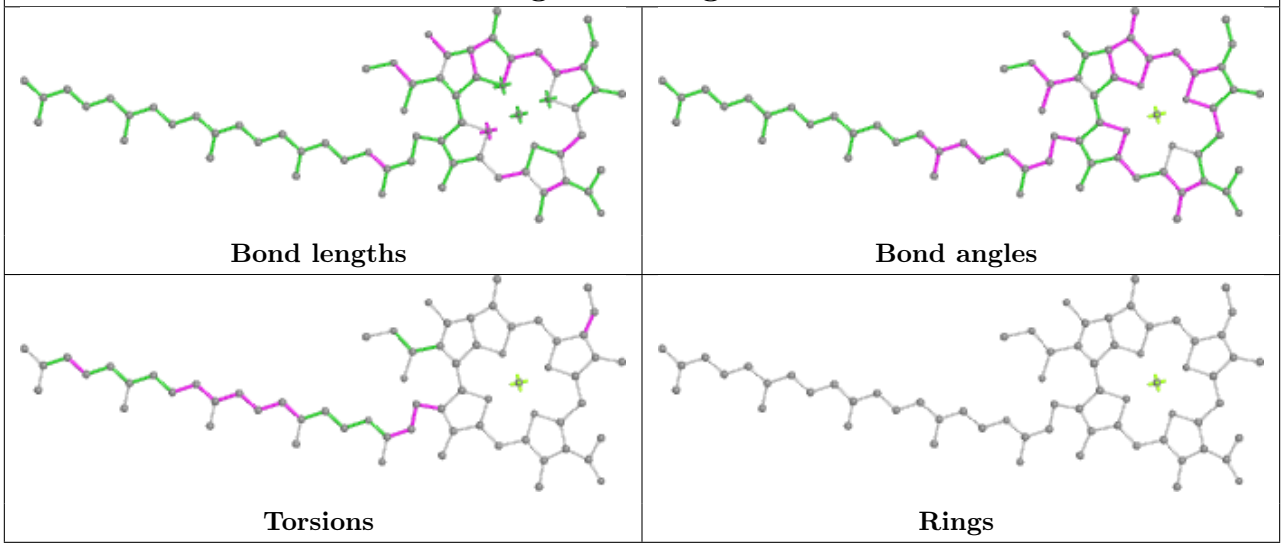
Ligand BCL N 101



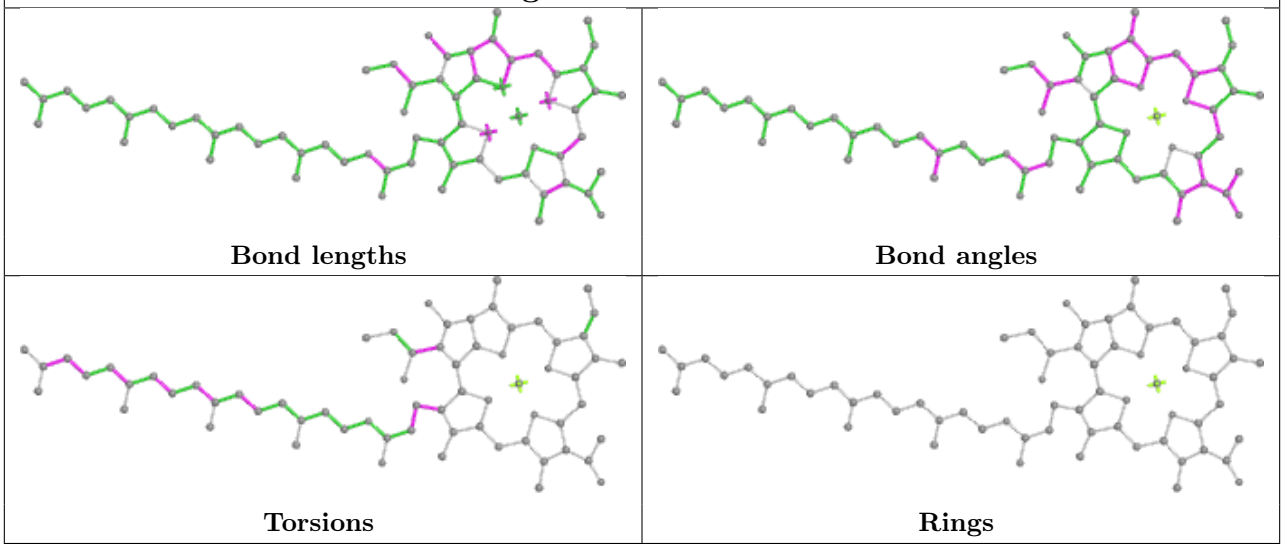
Ligand A1EL2 P 102



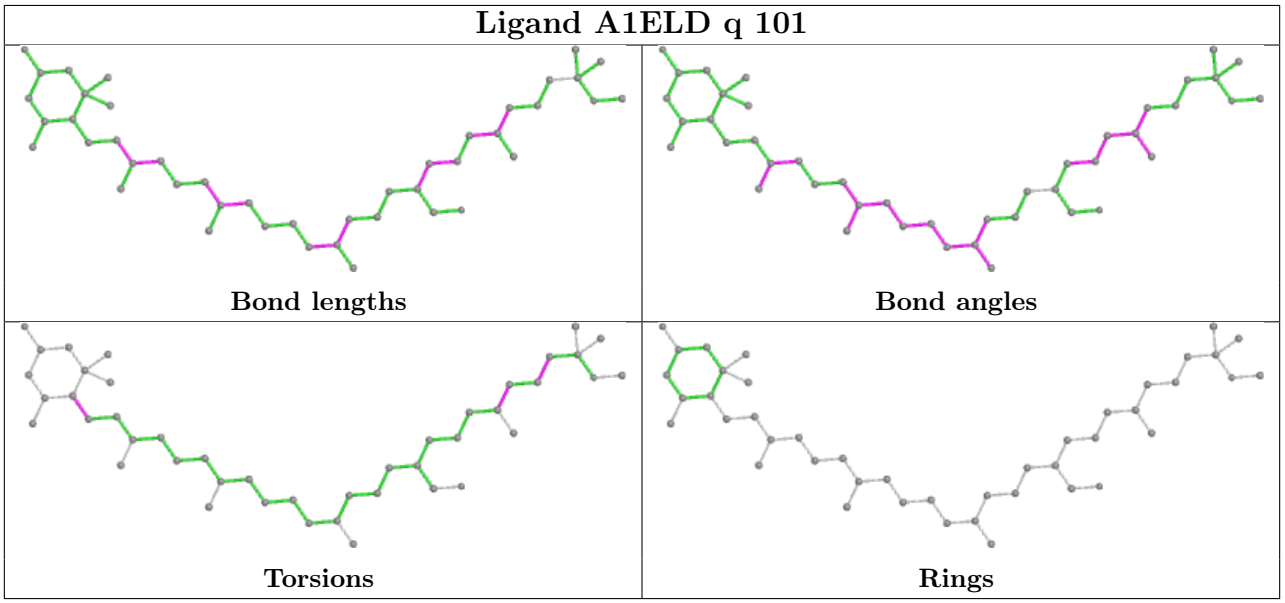
Ligand BCL g 102



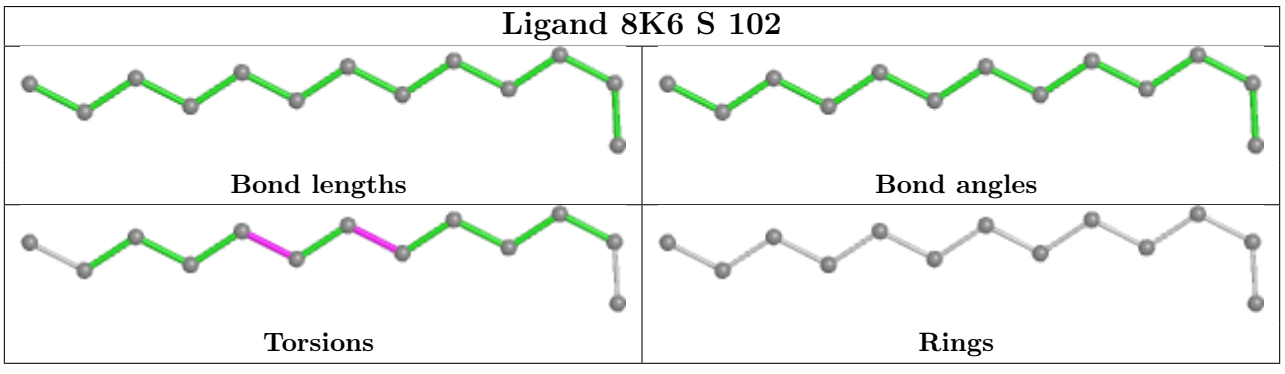
Ligand BCL M 403



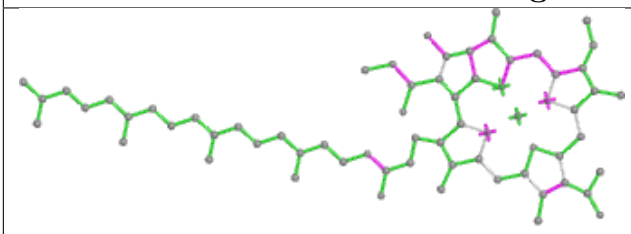
Ligand A1ELD q 101



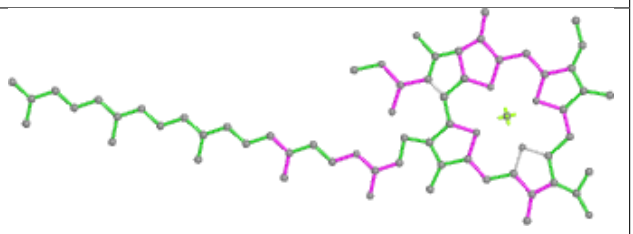
Ligand 8K6 S 102



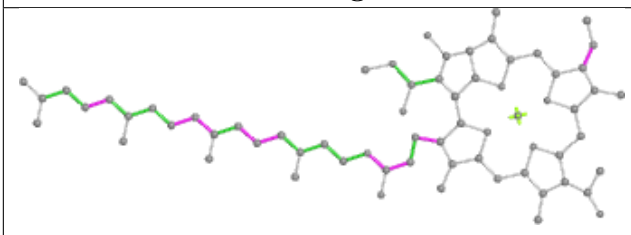
Ligand BCL e 102



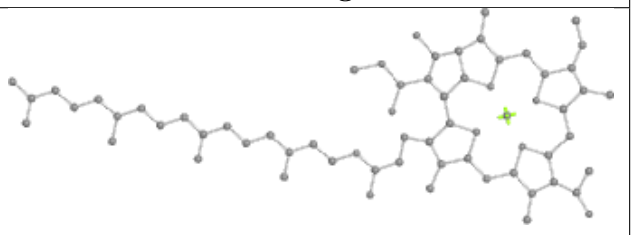
Bond lengths



Bond angles

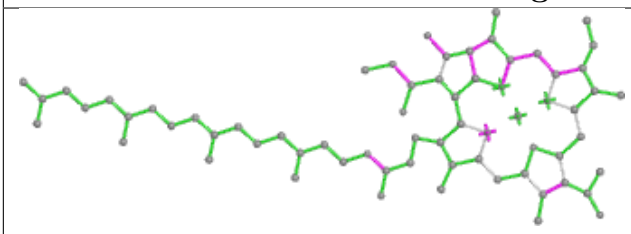


Torsions

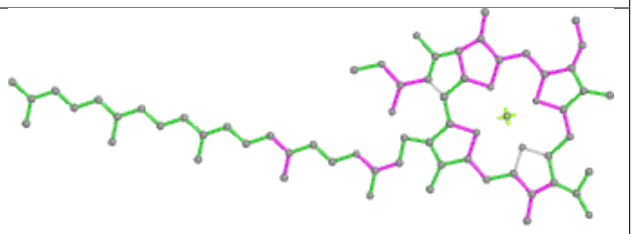


Rings

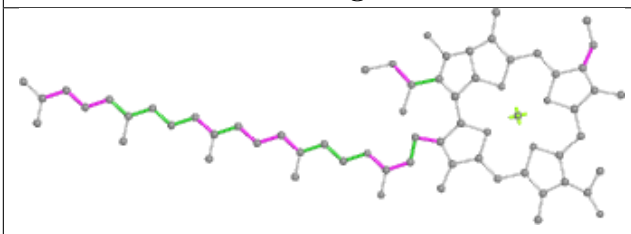
Ligand BCL s 101



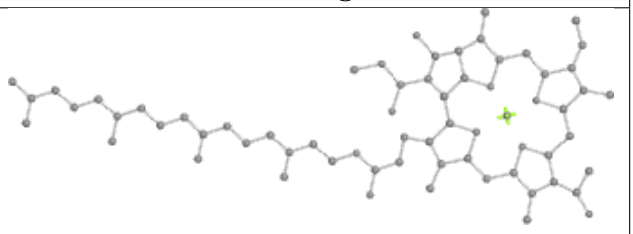
Bond lengths



Bond angles

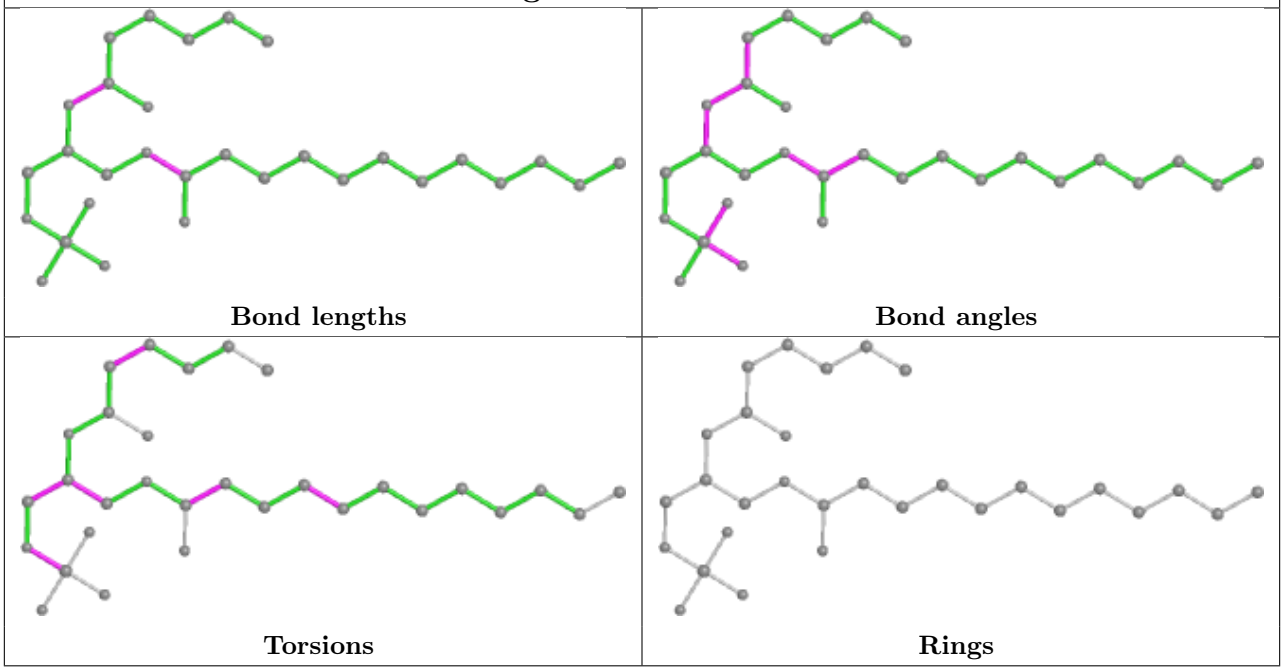


Torsions

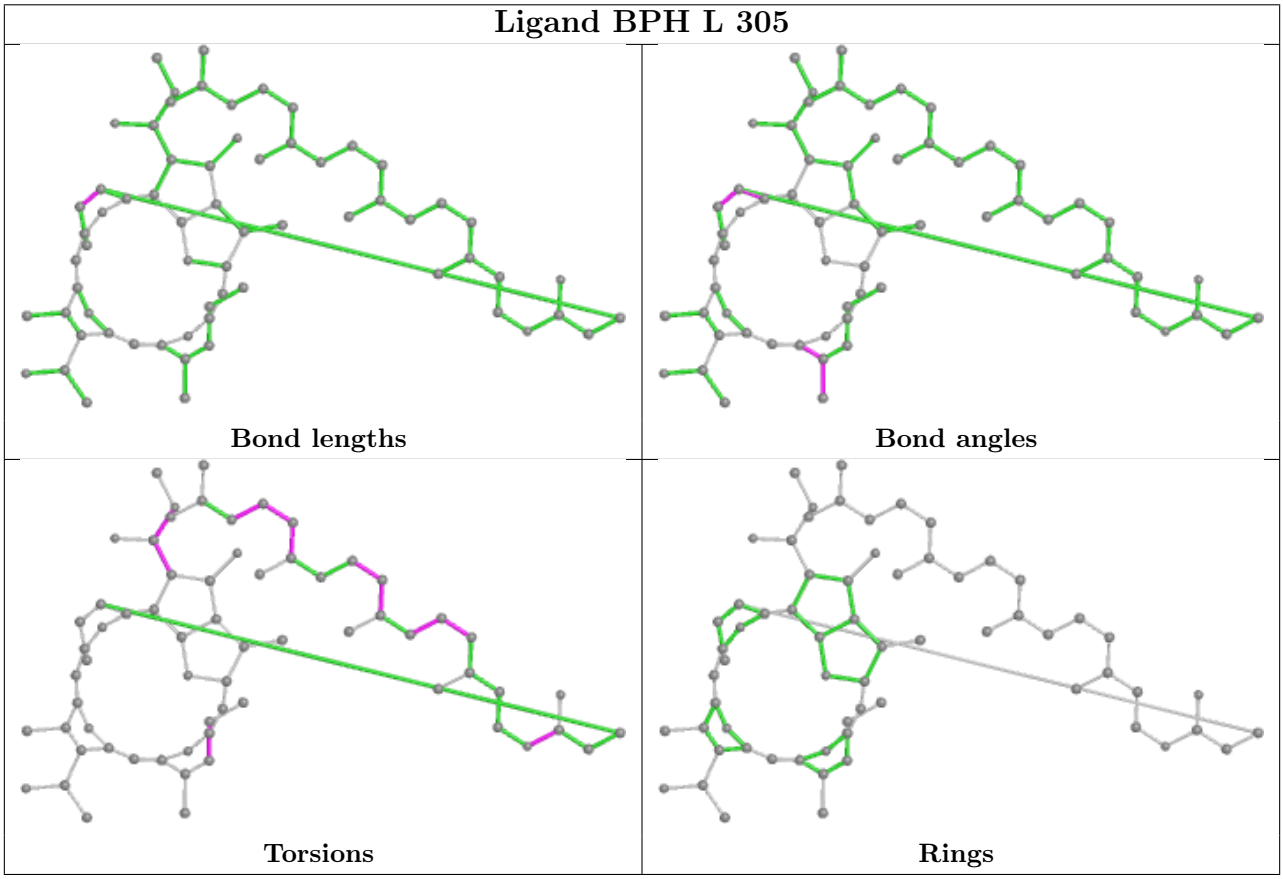


Rings

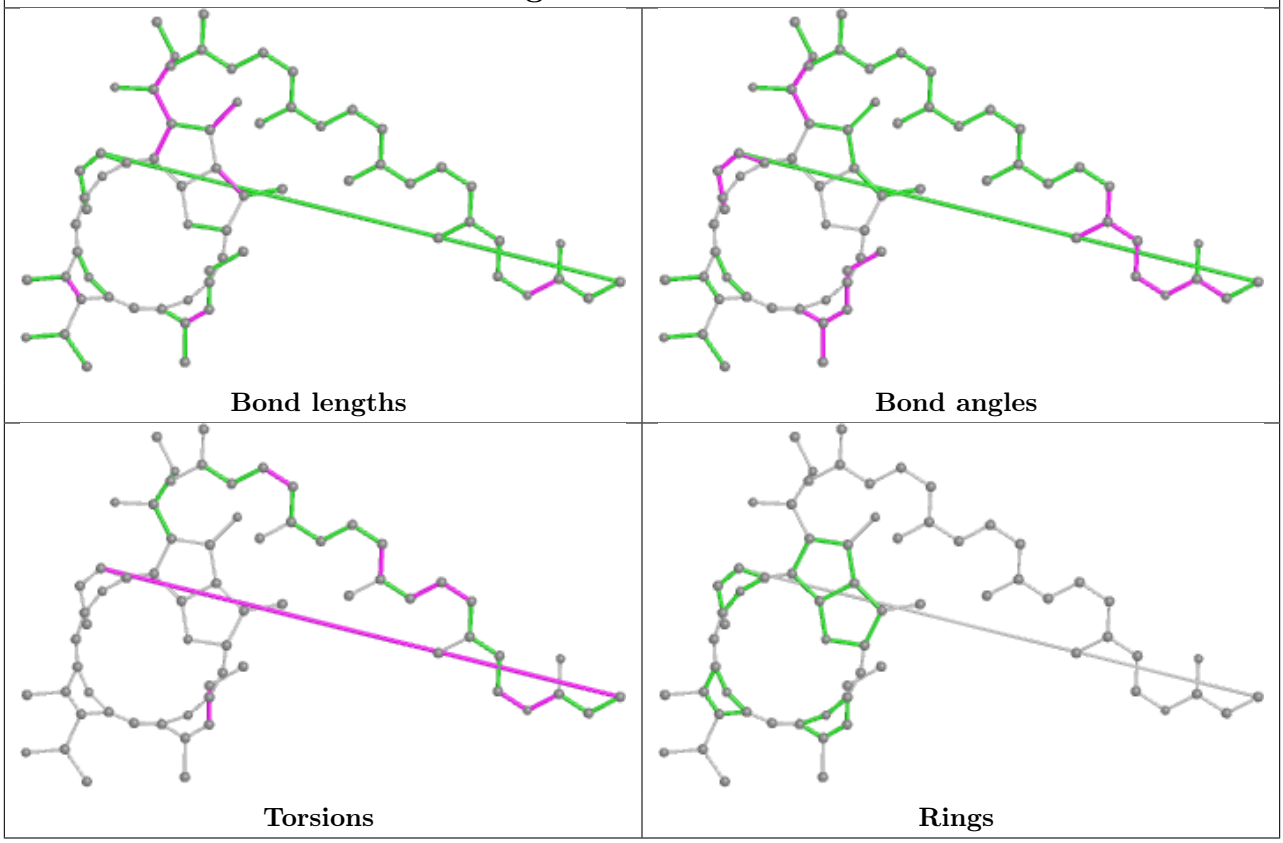
Ligand PGV T 303



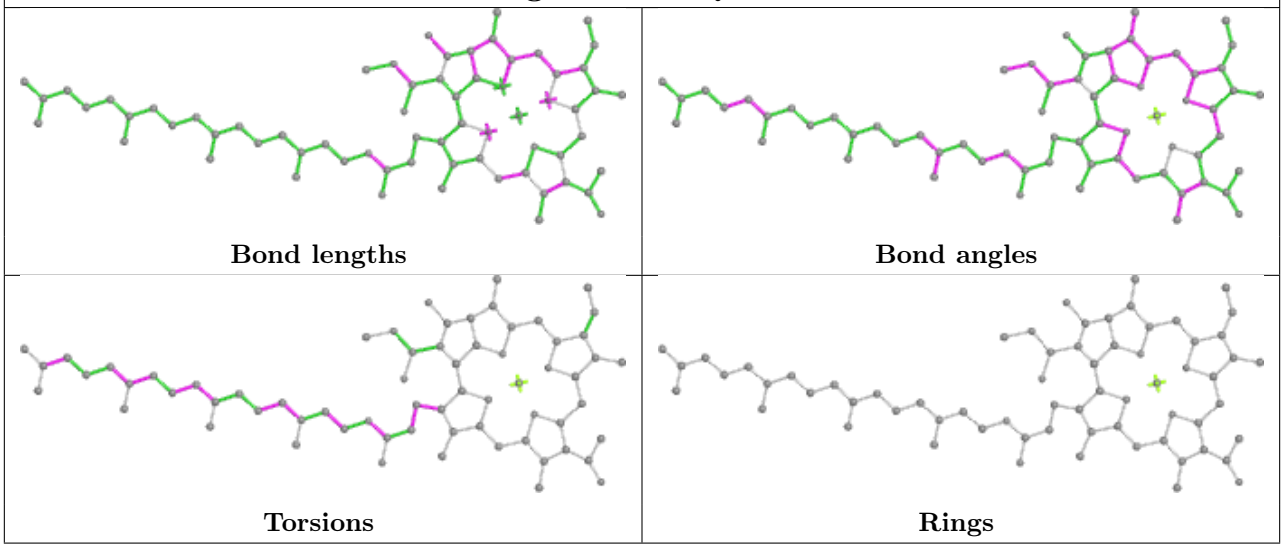
Ligand BPH L 305



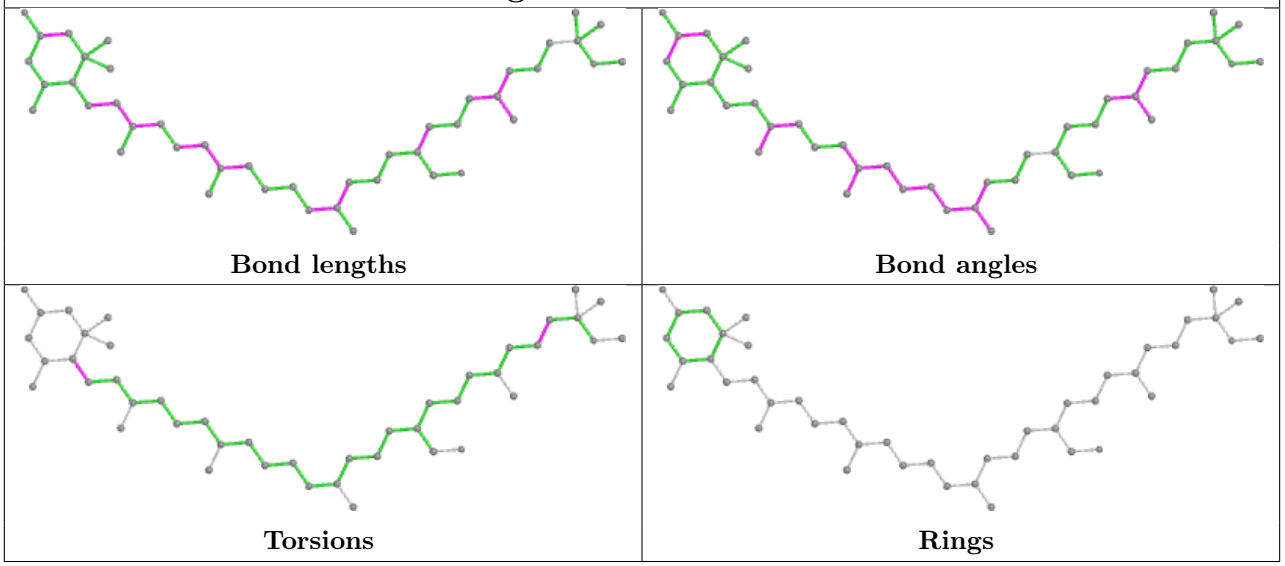
Ligand BPH L 303



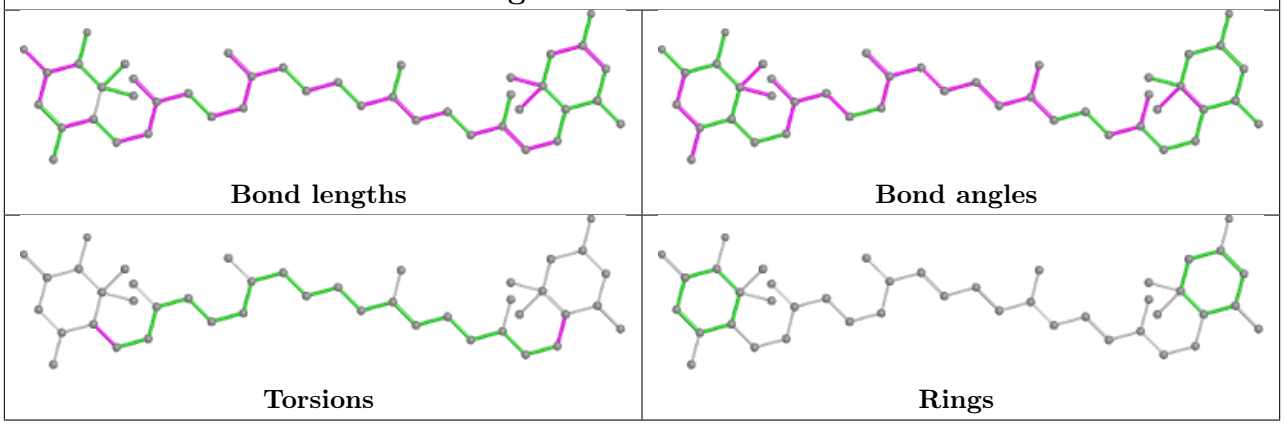
Ligand BCL Q 101



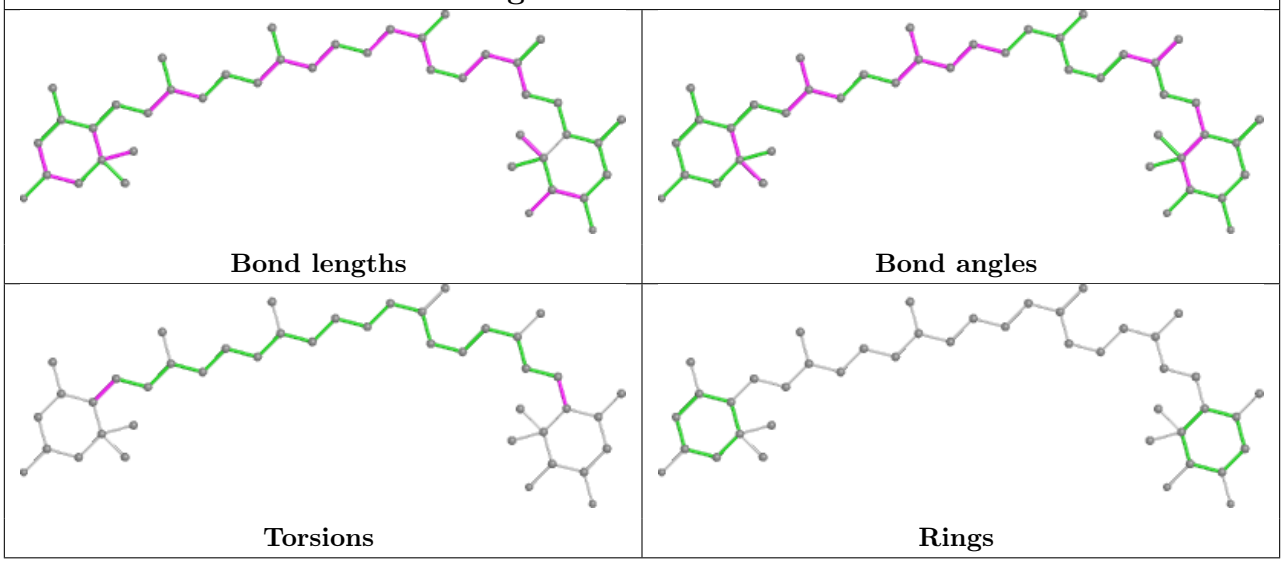
Ligand A1ELD J 103



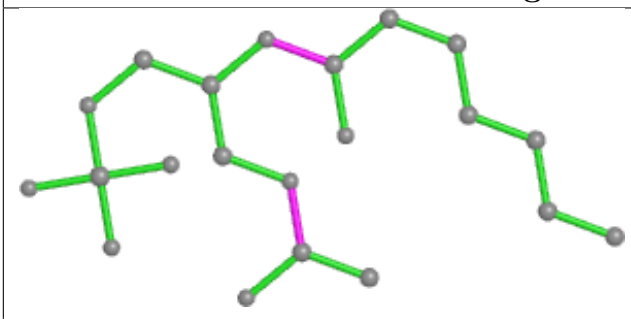
Ligand A1EL2 O 103



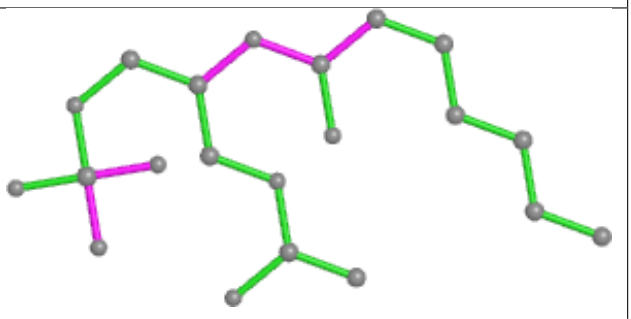
Ligand A1EL2 G 102



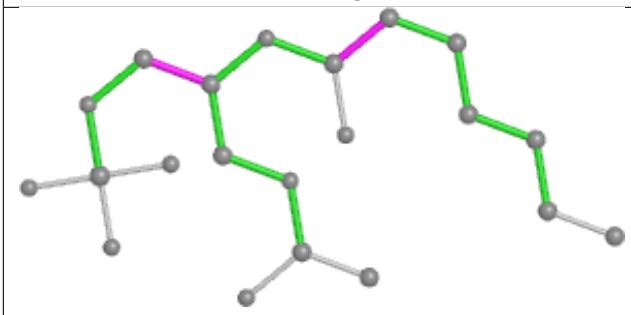
Ligand PGV L 307



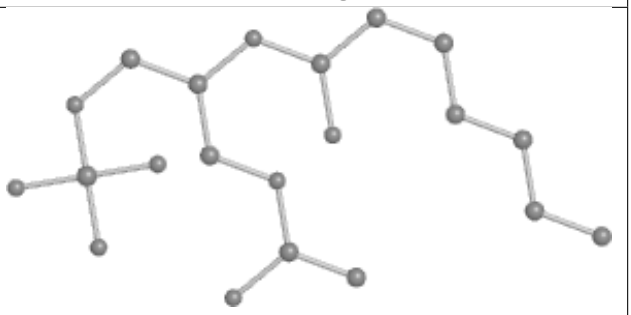
Bond lengths



Bond angles

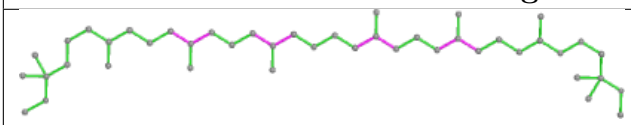


Torsions

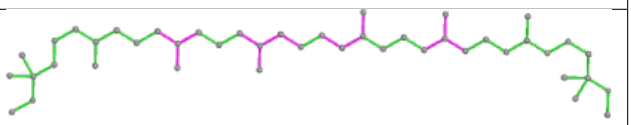


Rings

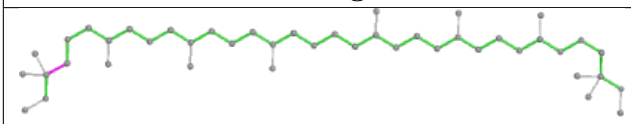
Ligand H4X M 405



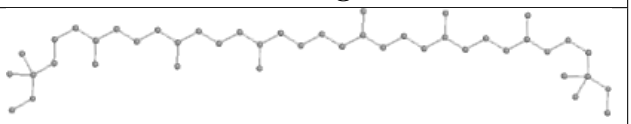
Bond lengths



Bond angles

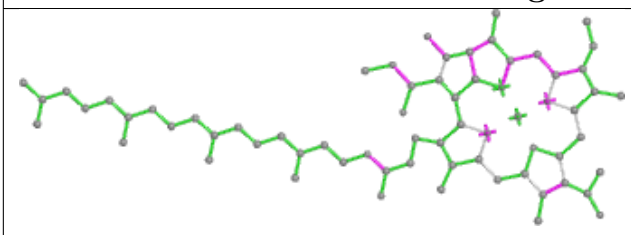


Torsions

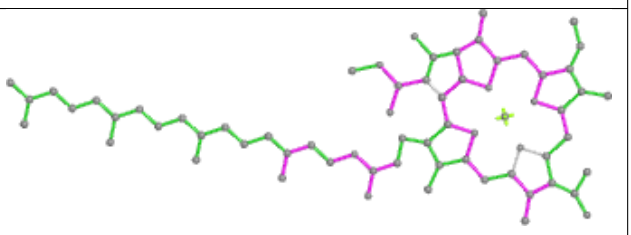


Rings

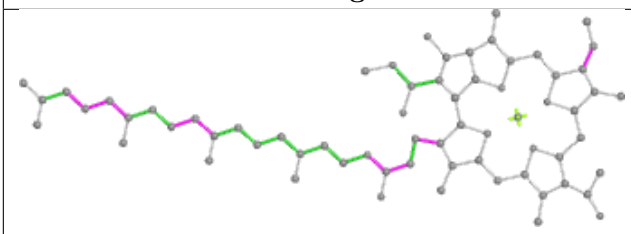
Ligand BCL b 102



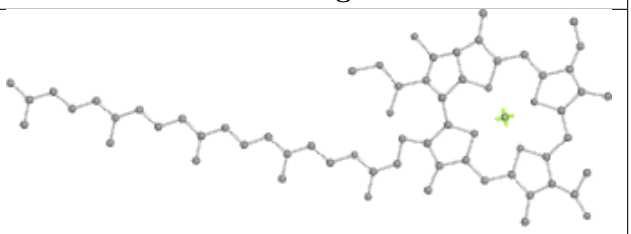
Bond lengths



Bond angles

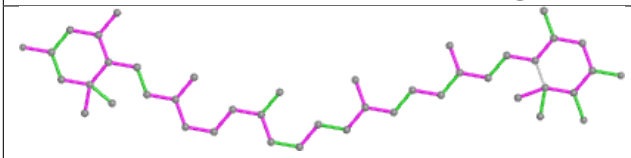


Torsions

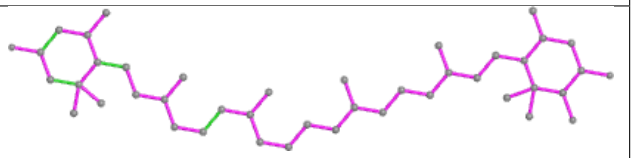


Rings

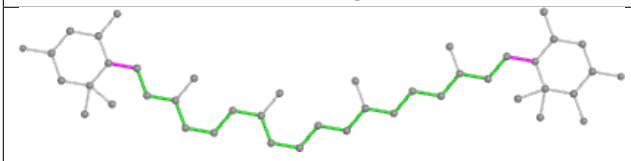
Ligand A1EL2 J 102



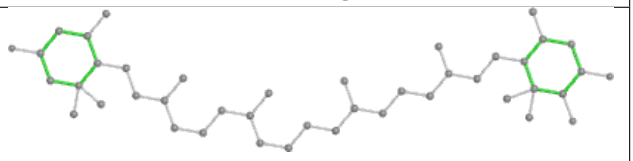
Bond lengths



Bond angles

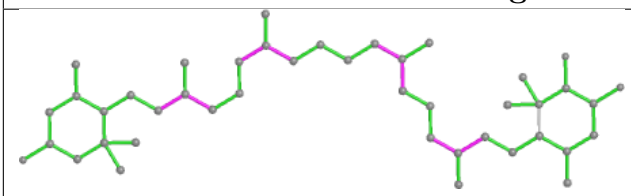


Torsions

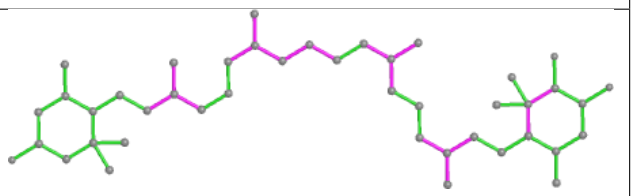


Rings

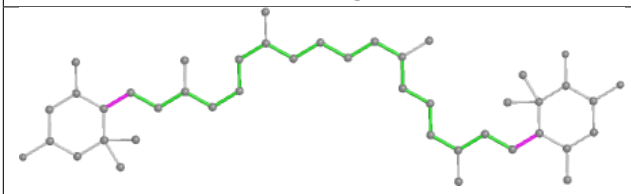
Ligand A1EL2 F 102



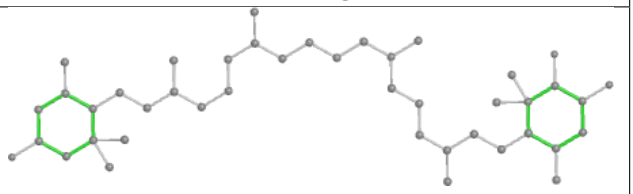
Bond lengths



Bond angles

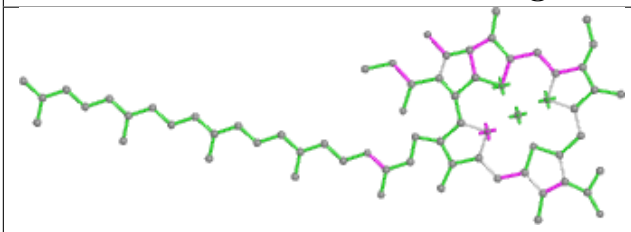


Torsions

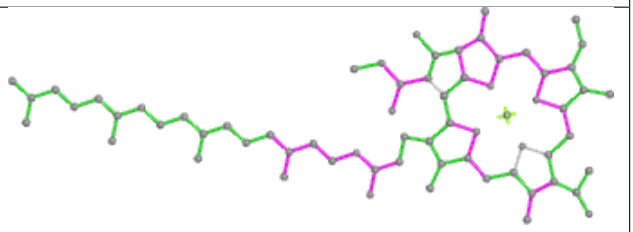


Rings

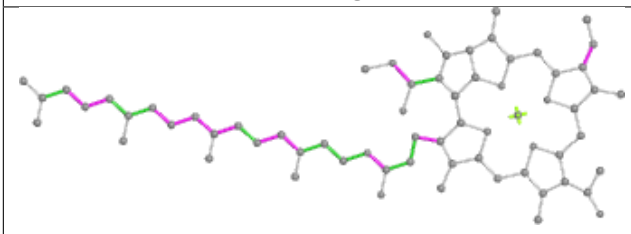
Ligand BCL o 102



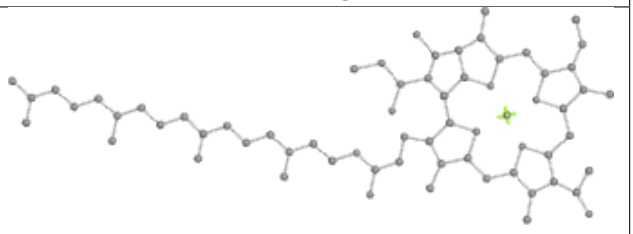
Bond lengths



Bond angles

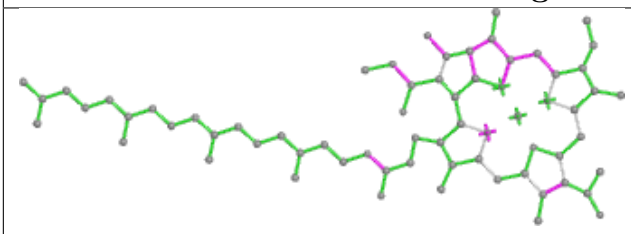


Torsions

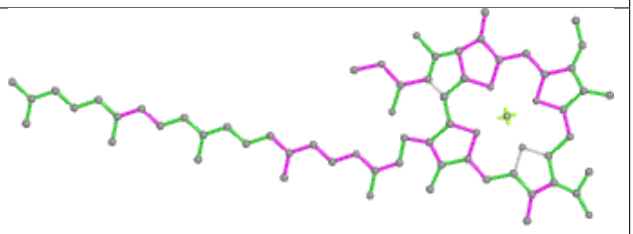


Rings

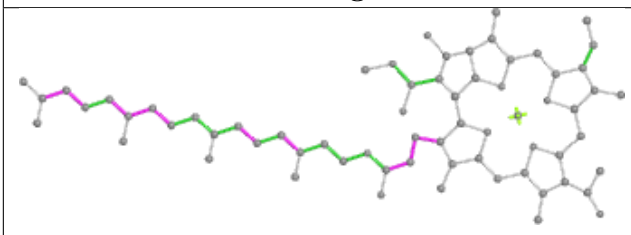
Ligand BCL I 101



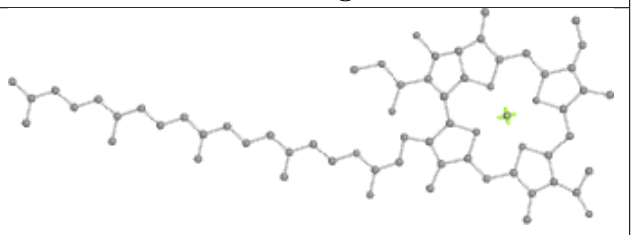
Bond lengths



Bond angles

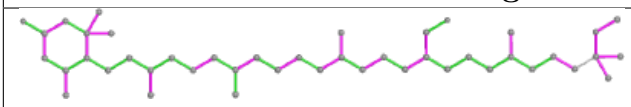


Torsions



Rings

Ligand A1ELD O 102



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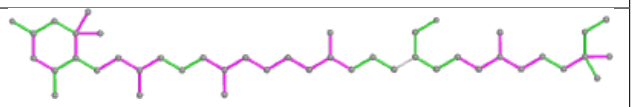
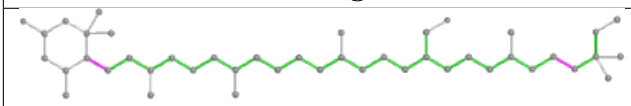
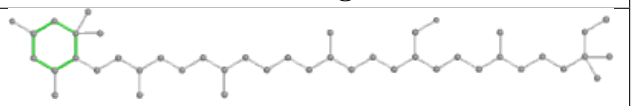


Bond angles

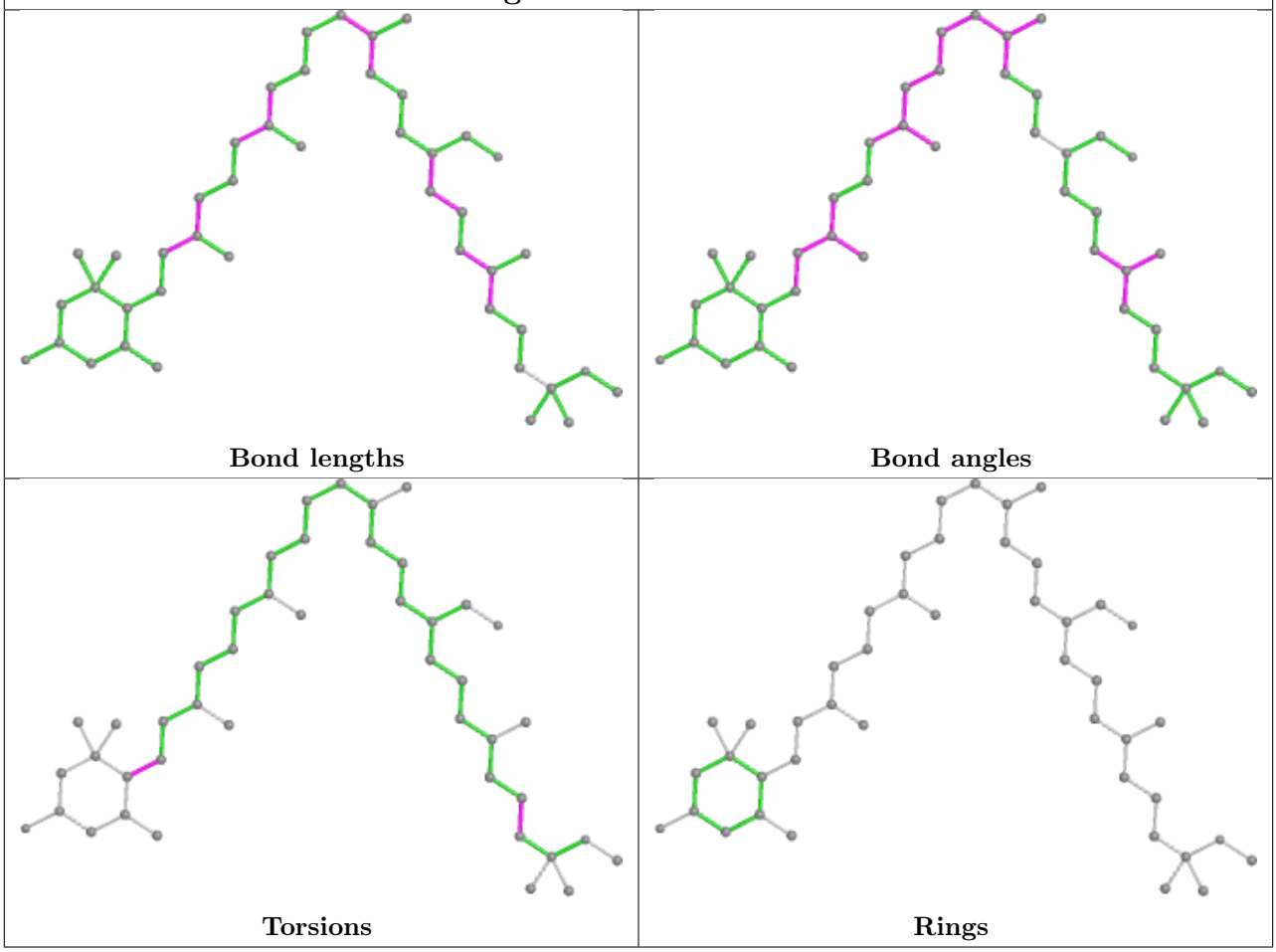


Torsions

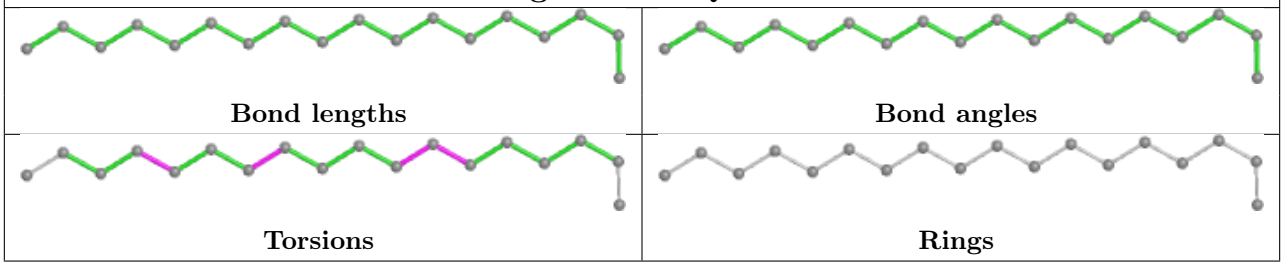


Rings

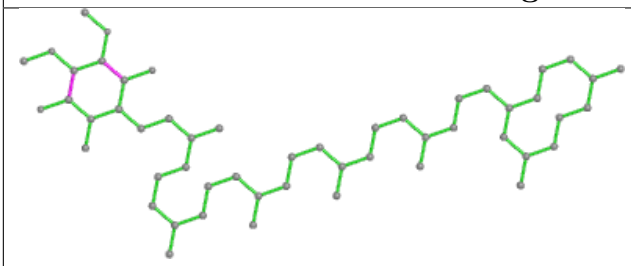
Ligand A1ELD b 101



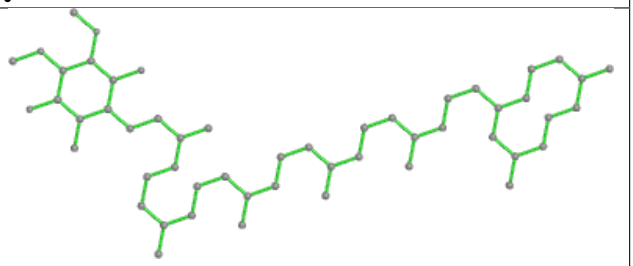
Ligand 8K6 Q 104



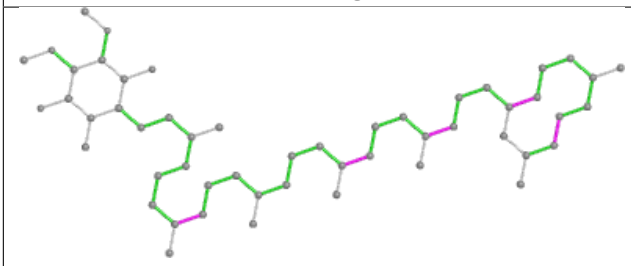
Ligand UQ8 M 402



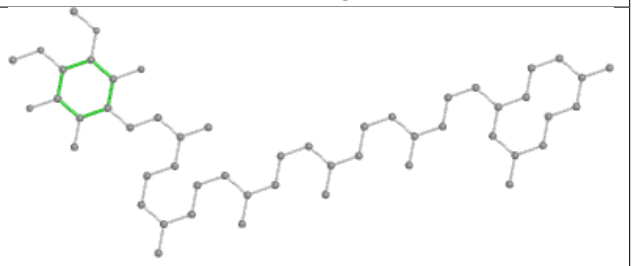
Bond lengths



Bond angles

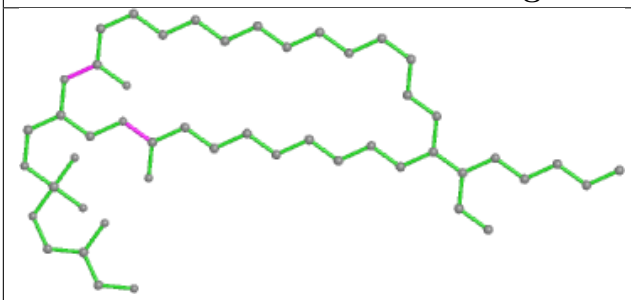


Torsions



Rings

Ligand PGV F 103



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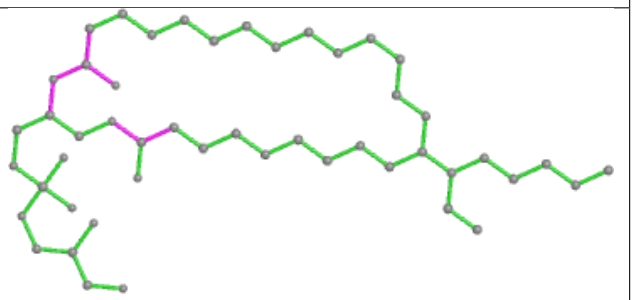
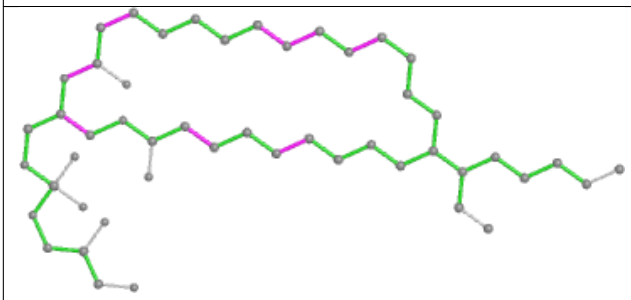


Bond angles



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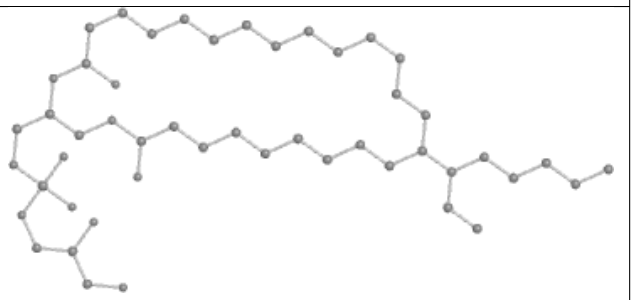
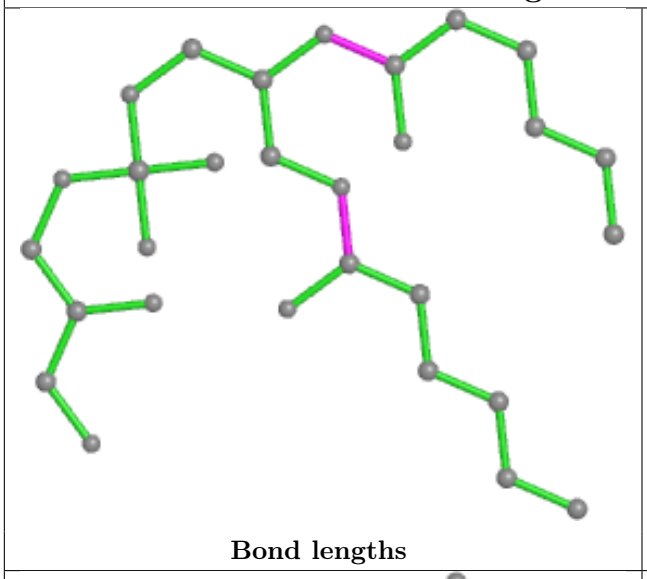
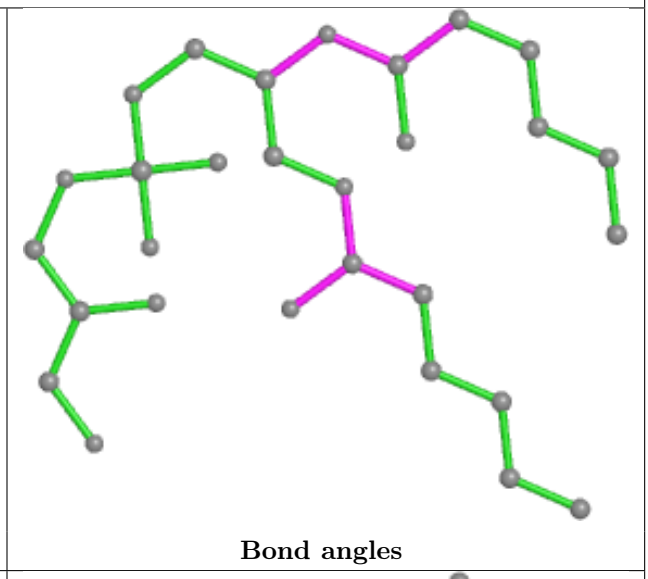


Rings

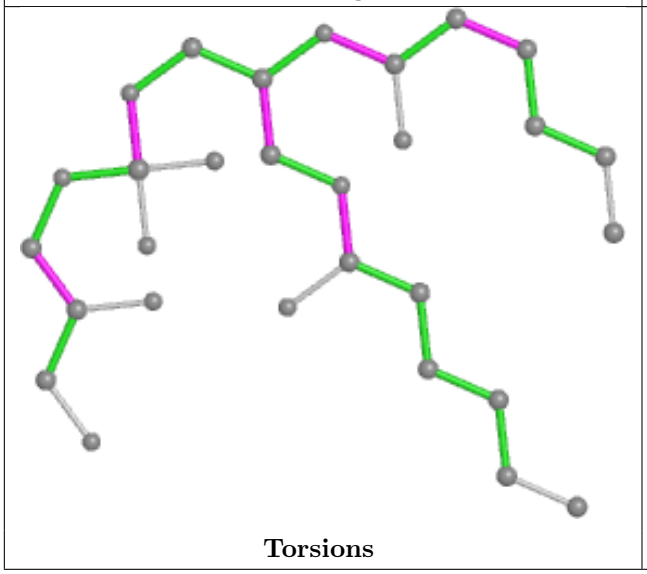
Ligand PGV L 308



Bond lengths



Bond angles



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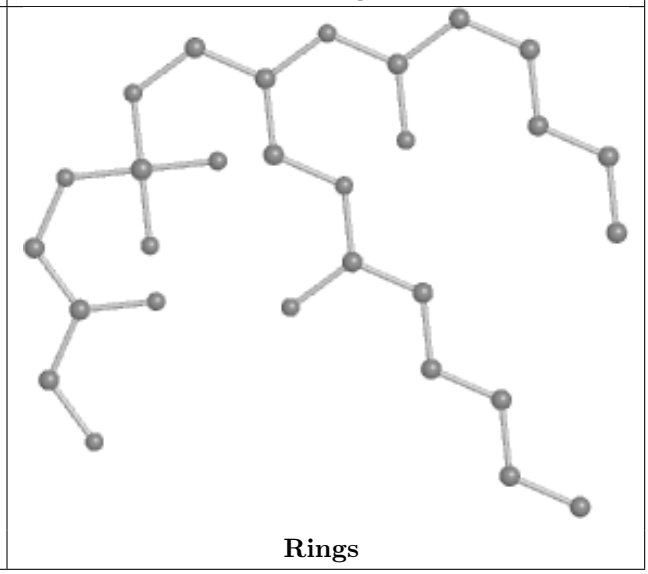
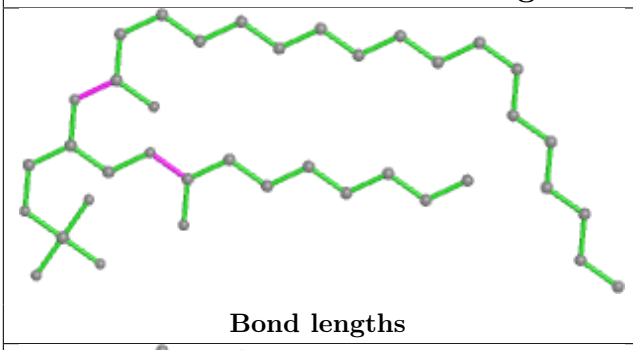
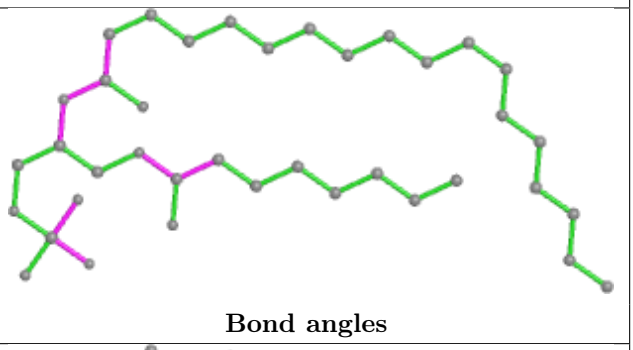


Rings

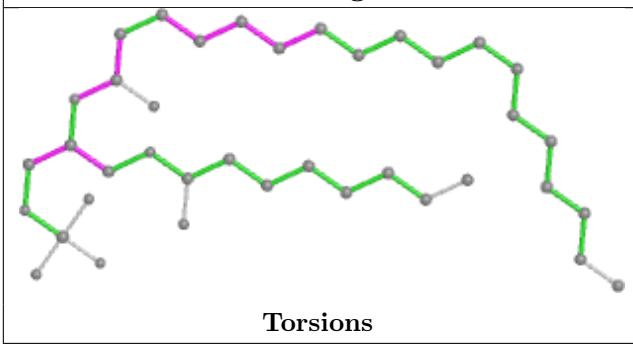
Ligand PGV M 408



Bond lengths



Bond angles



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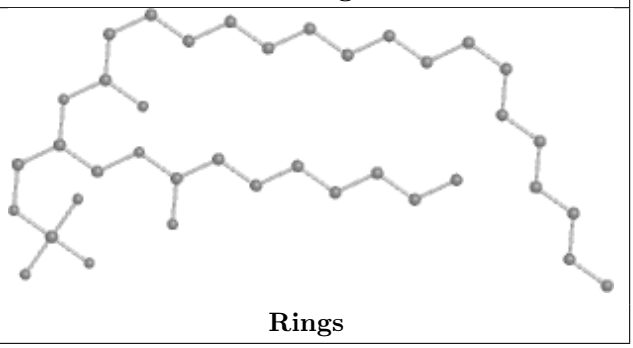
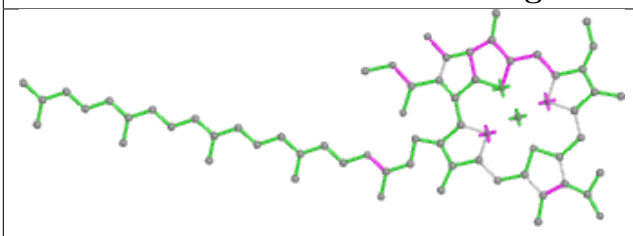


Rings

Ligand BCL O 101



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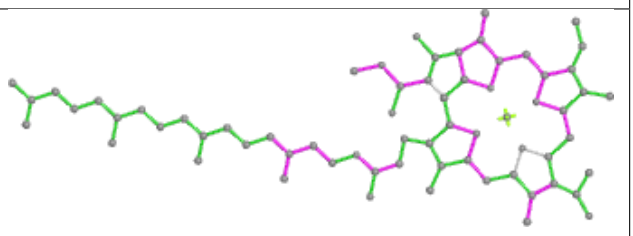
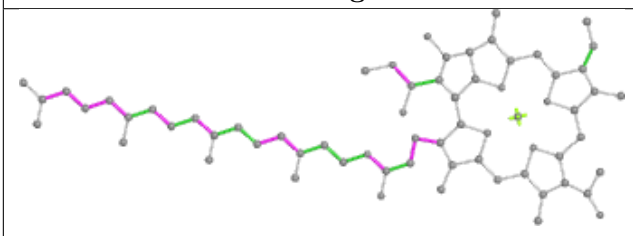


Bond angles



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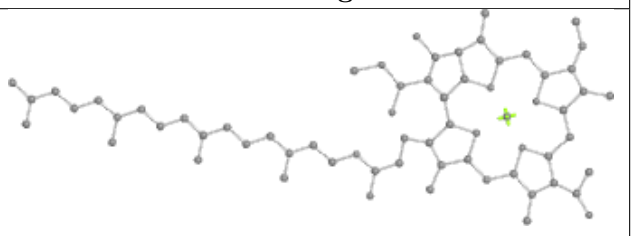
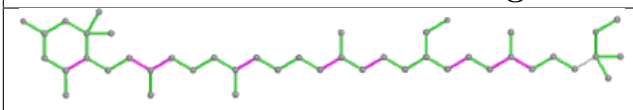


Rings

Ligand A1ELD g 101



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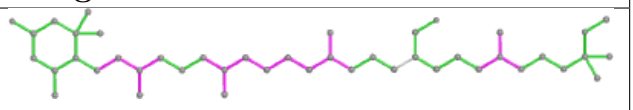
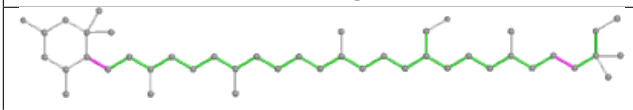
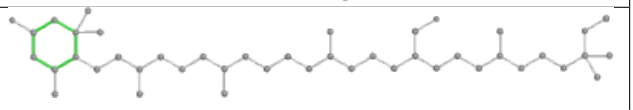


Bond angles

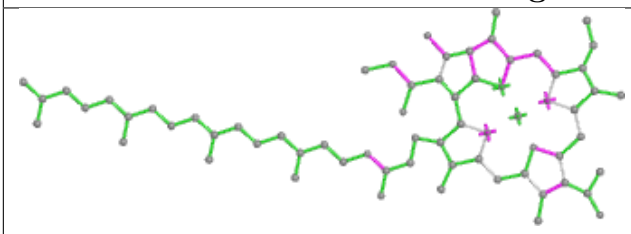


Torsions

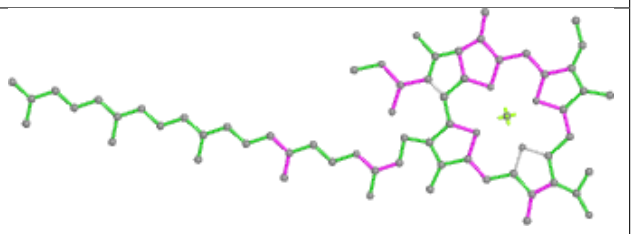


Rings

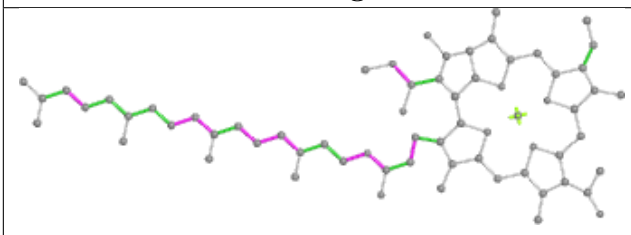
Ligand BCL J 101



Bond lengths



Bond angles



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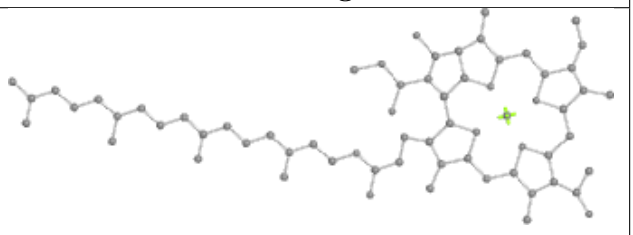
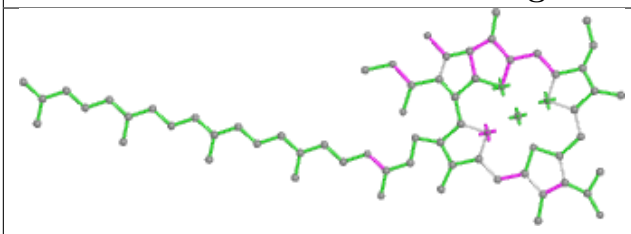
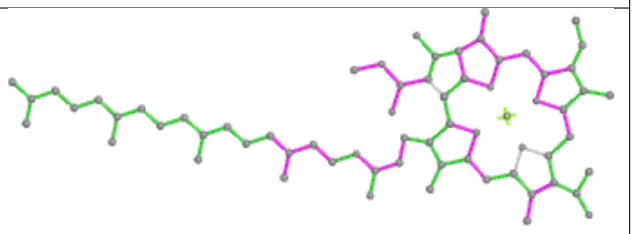


Rings

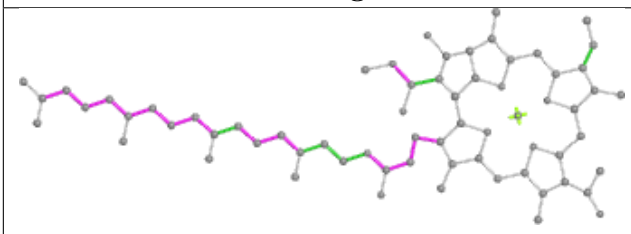
Ligand BCL S 101



Bond lengths



Bond angles



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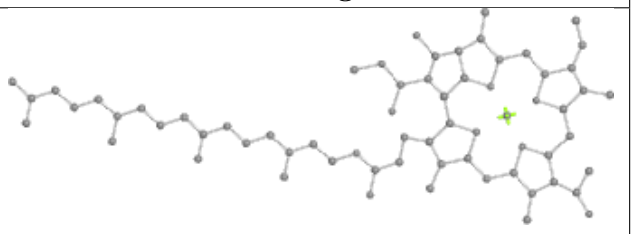
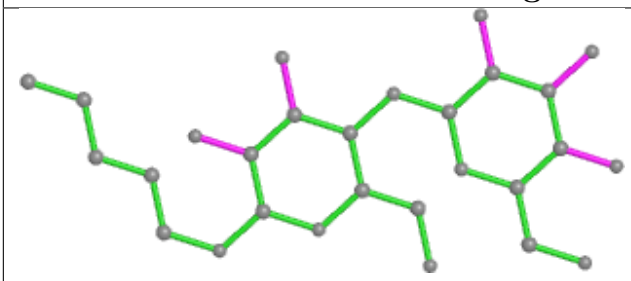


Rings

Ligand LMT L 309



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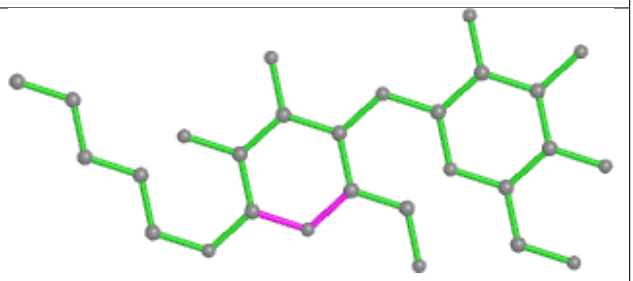
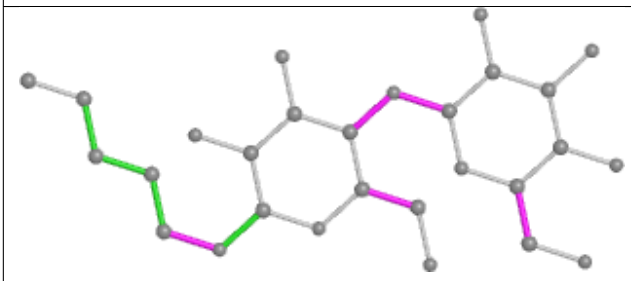


Bond angles



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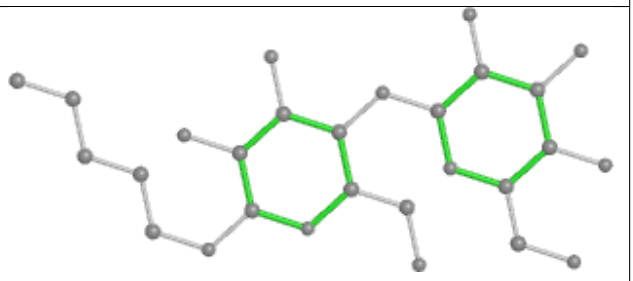
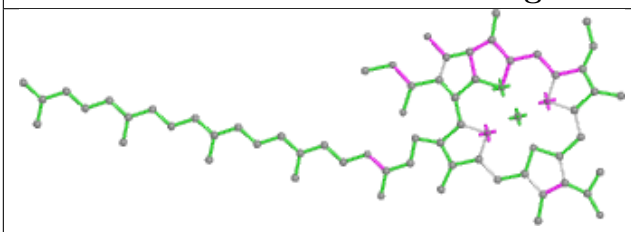


Rings

Ligand BCL D 101



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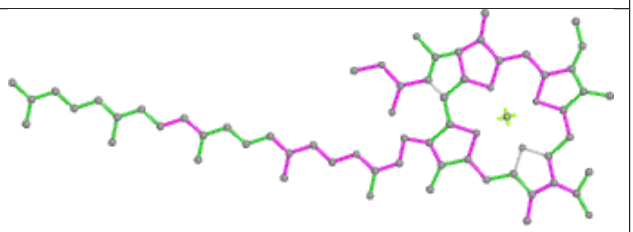
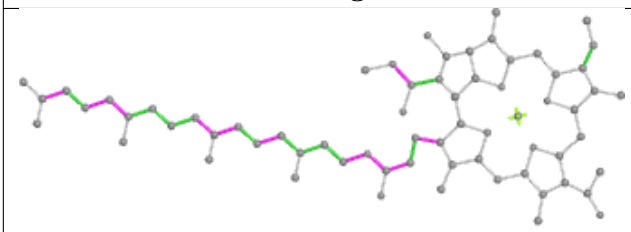
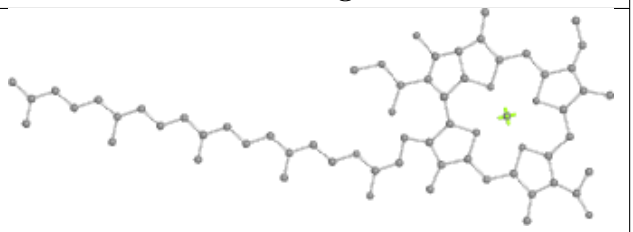


Bond angles

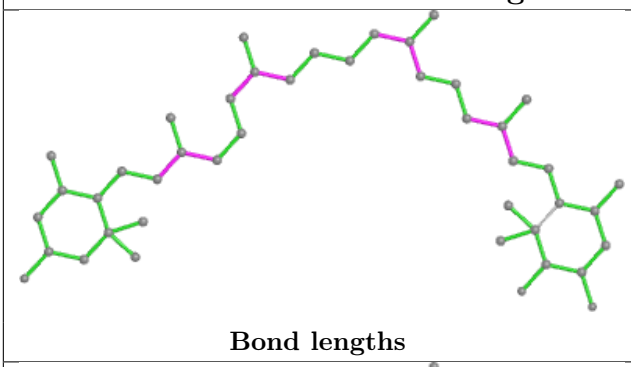


Torsions

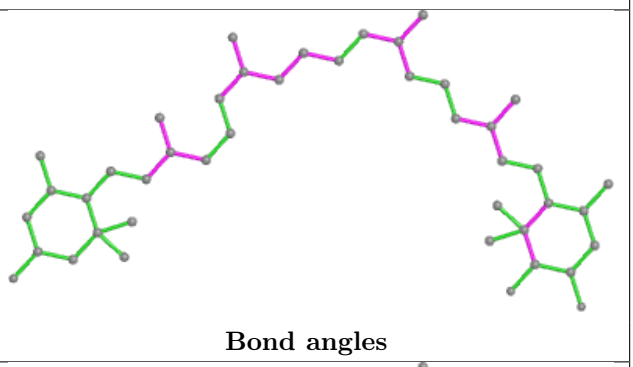


Rings

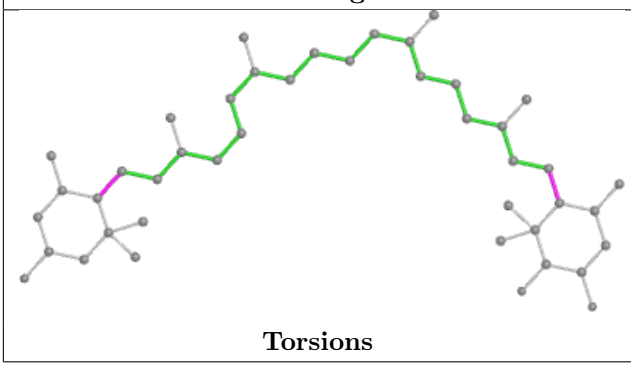
Ligand A1EL2 A 102



Bond lengths



Bond angles



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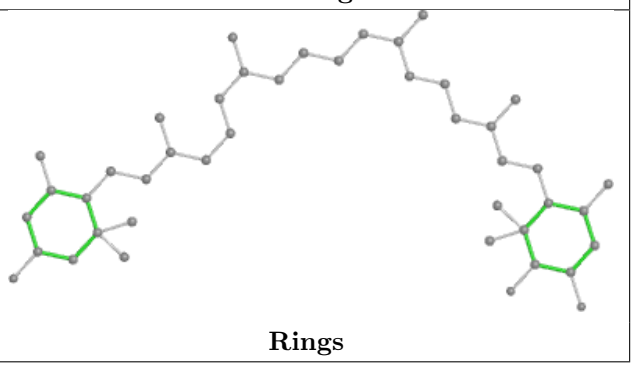
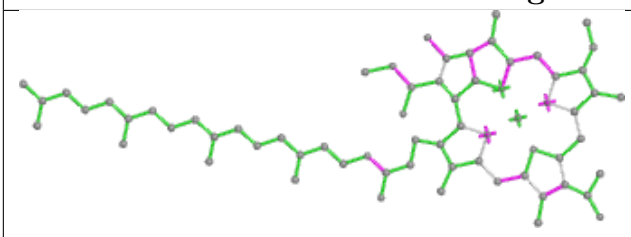
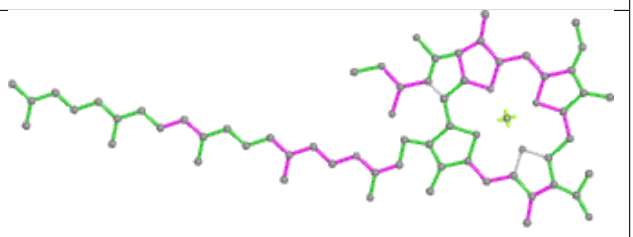


Rings

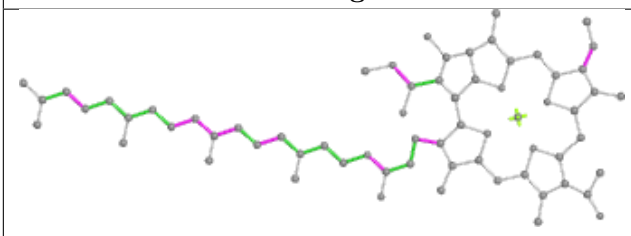
Ligand BCL L 302



Bond lengths



Bond angles



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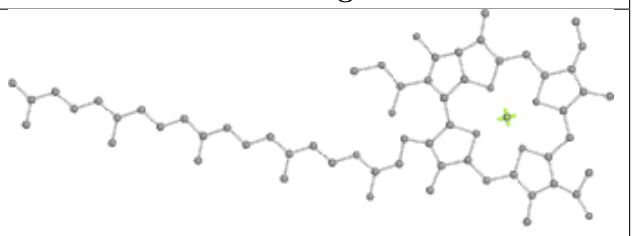
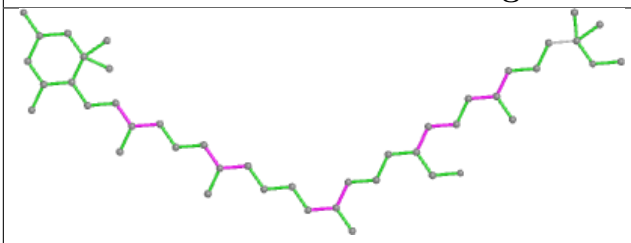
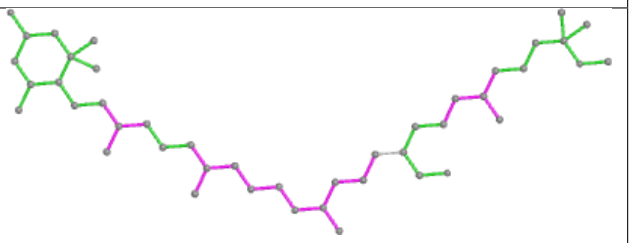


Rings

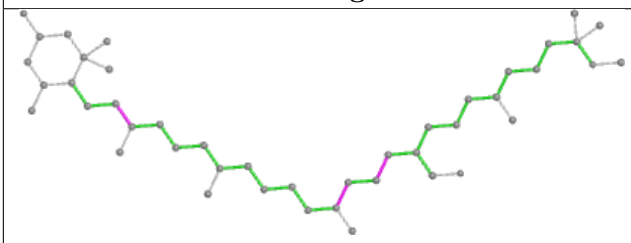
Ligand A1ELD R 103



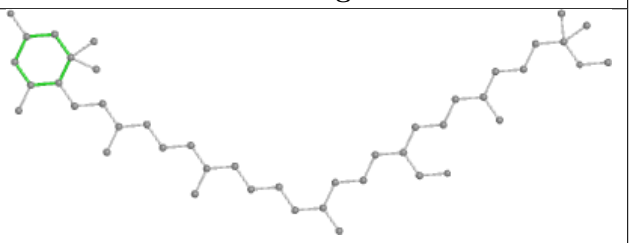
Bond lengths



Bond angles

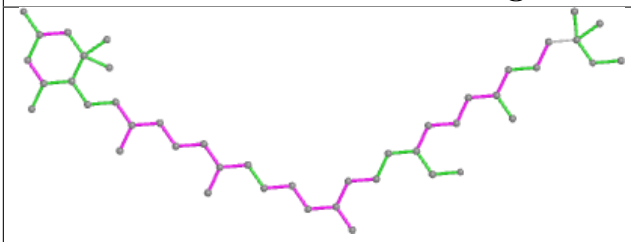


Torsions



Rings

Ligand A1ELD e 101



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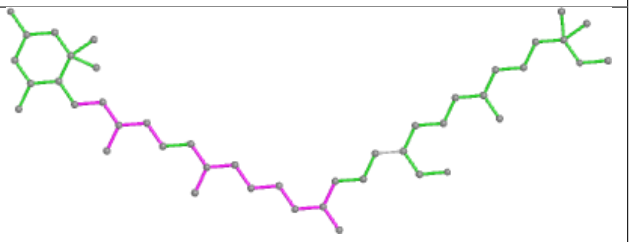
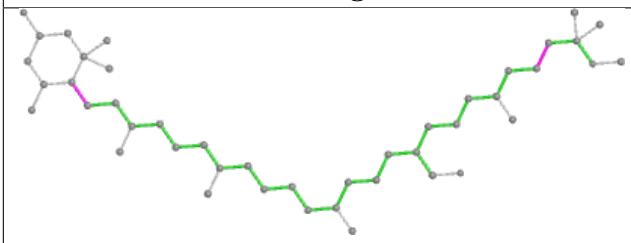


Bond angles



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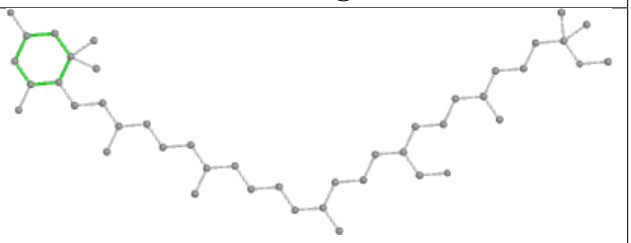
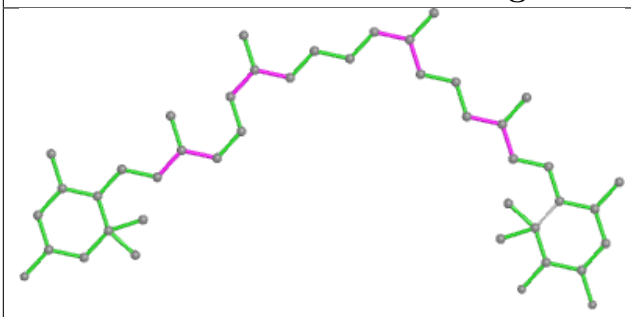


Rings

Ligand A1EL2 E 102



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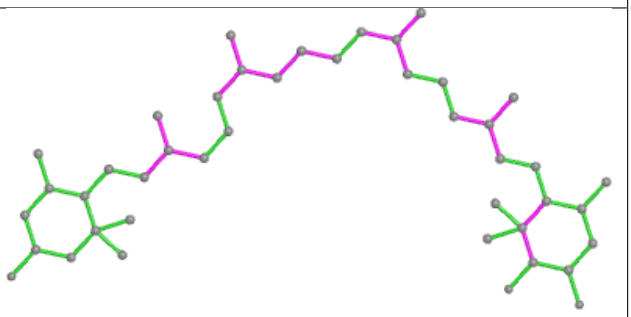

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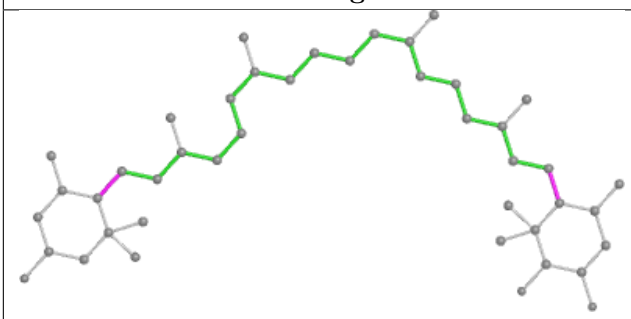

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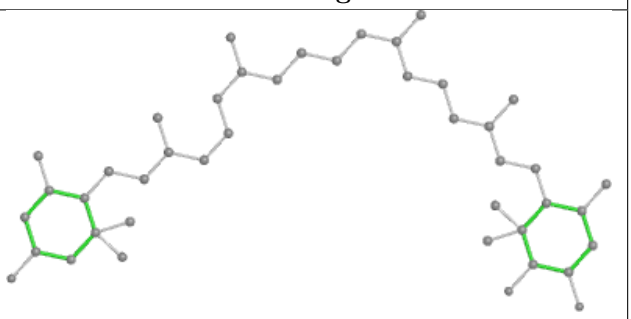
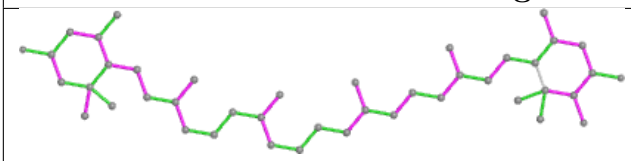


Rings

Ligand A1EL2 I 102



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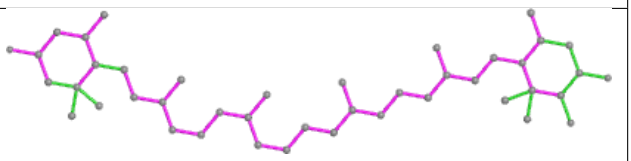
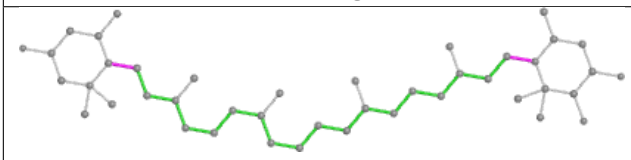


Bond angles



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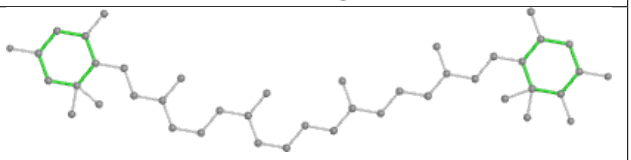
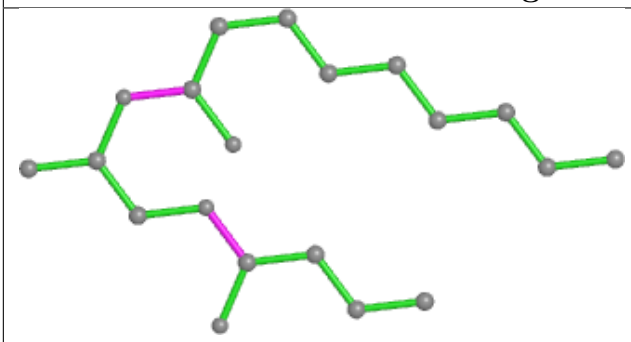


Rings

Ligand PGV T 301



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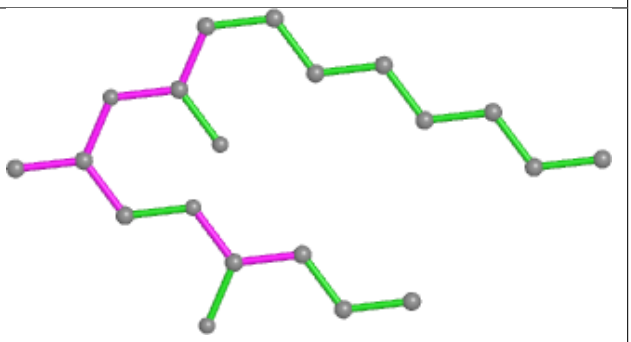

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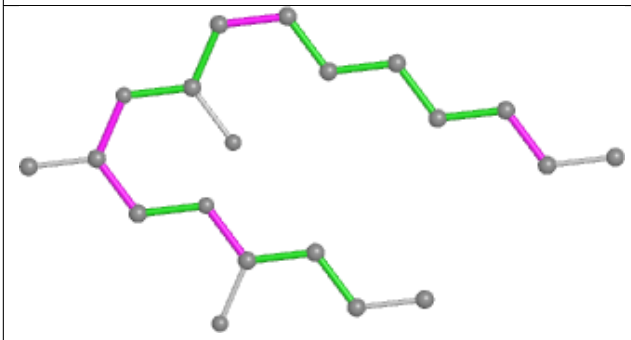

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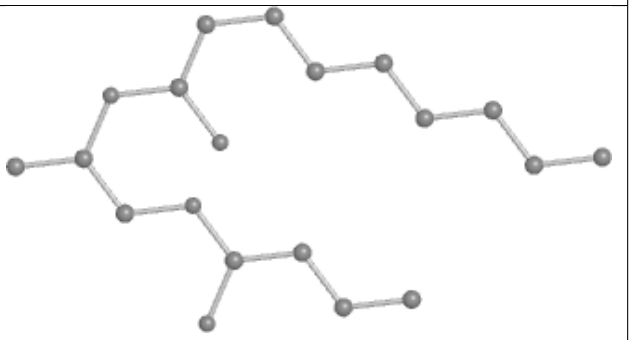
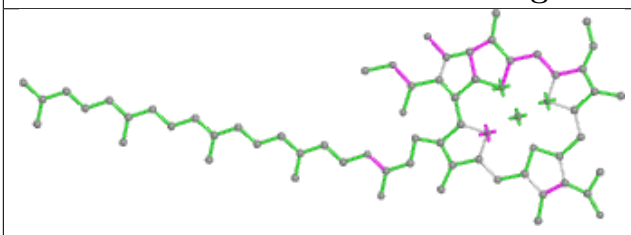


Rings

Ligand BCL r 104



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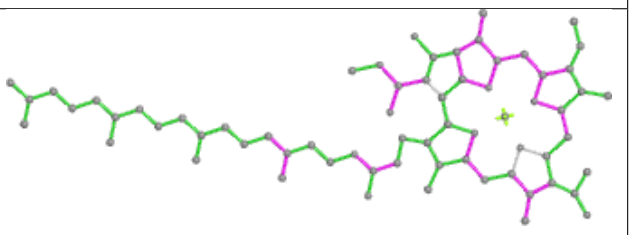

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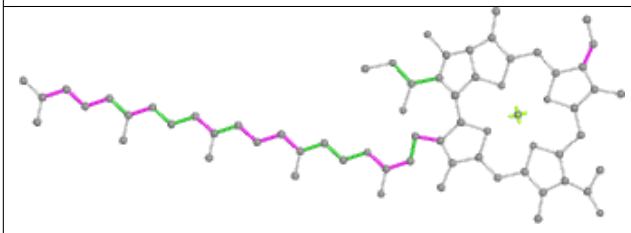

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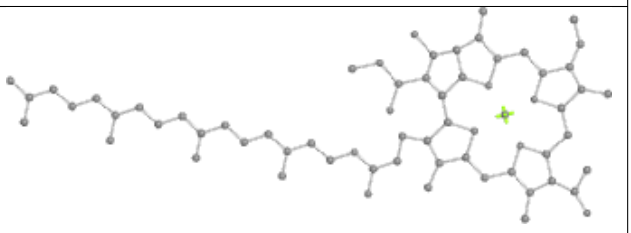
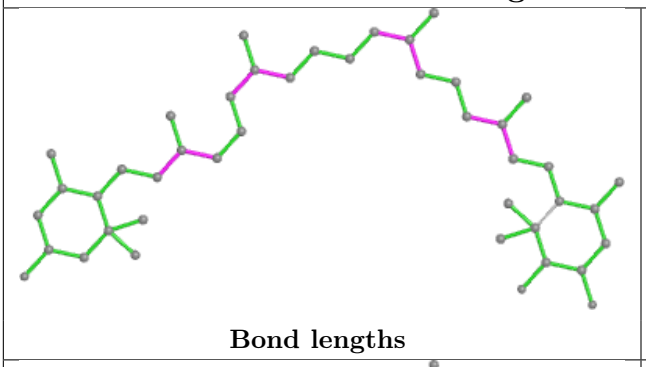


Rings

Ligand A1EL2 B 102



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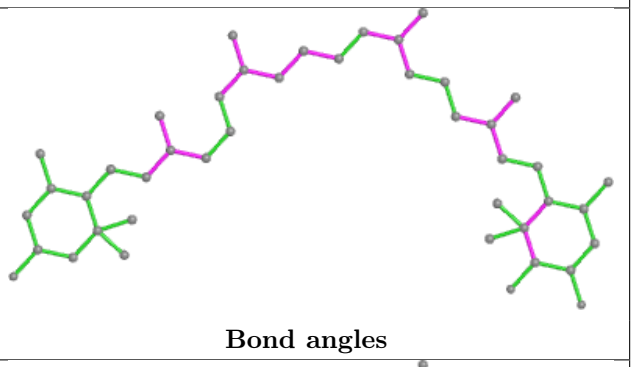

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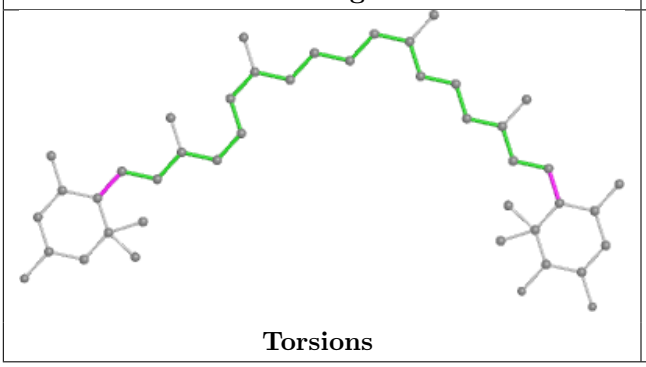

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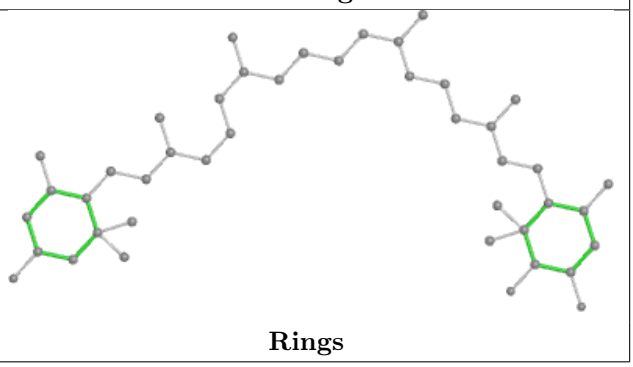
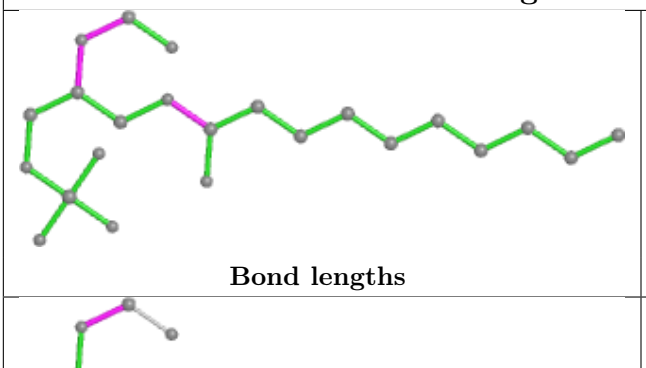


Rings

Ligand PGV G 103



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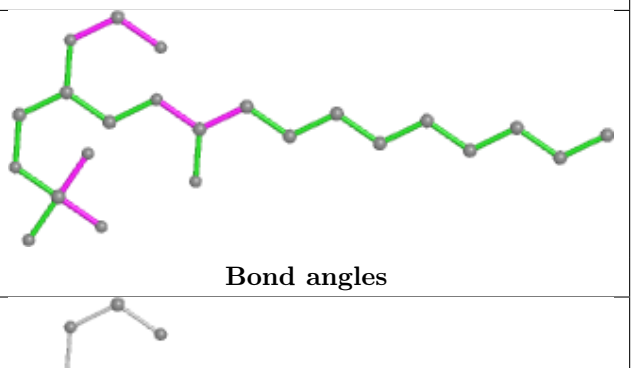

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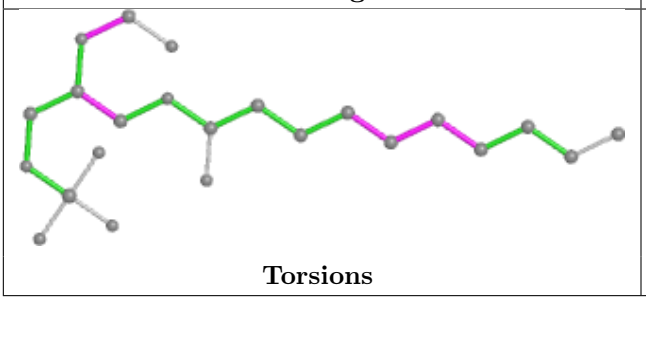

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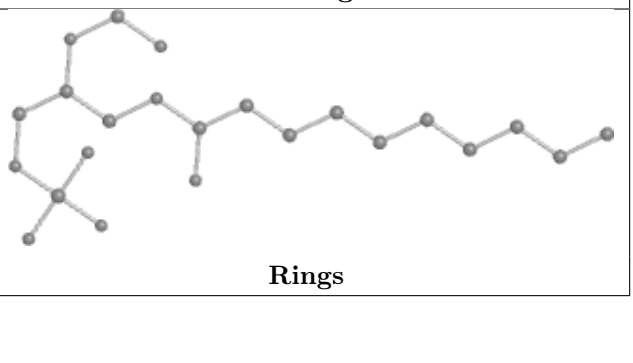
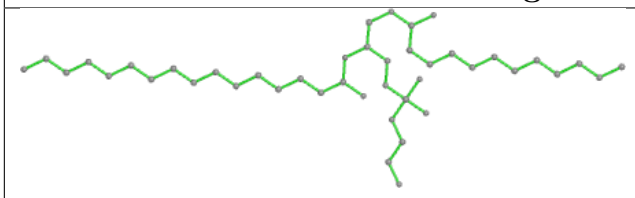


Rings

Ligand PEF M 407



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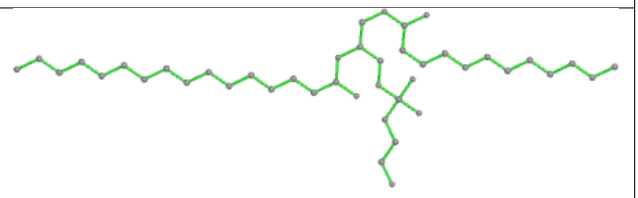
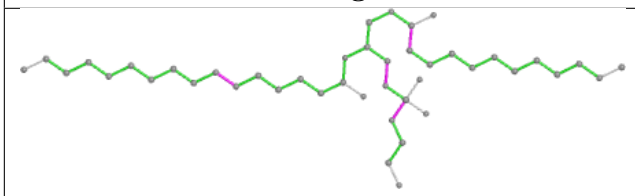


Bond angles



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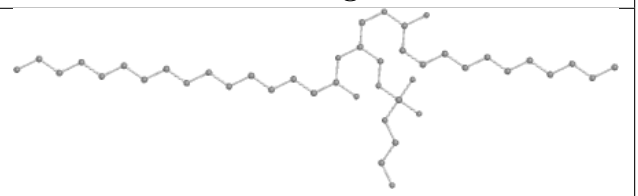
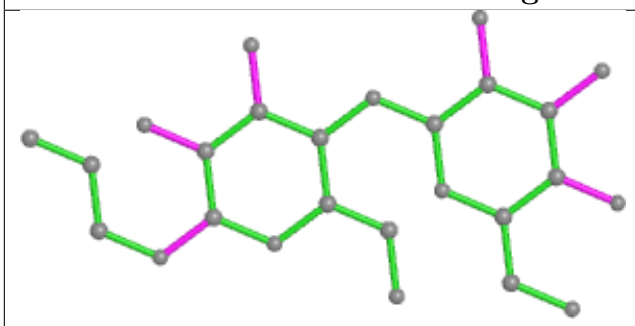


Rings

Ligand LMT N 103



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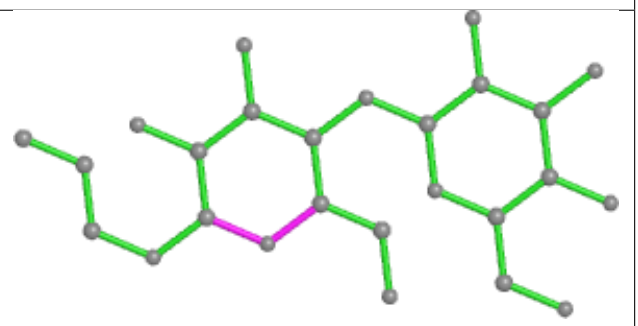
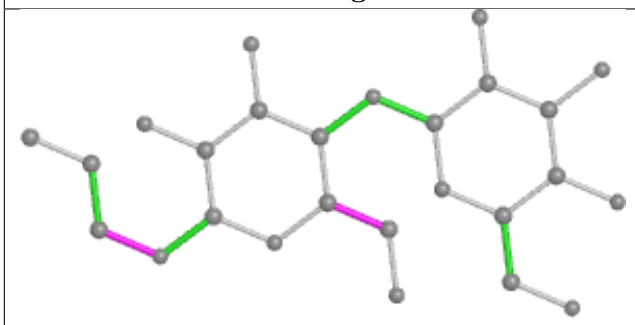


Bond angles



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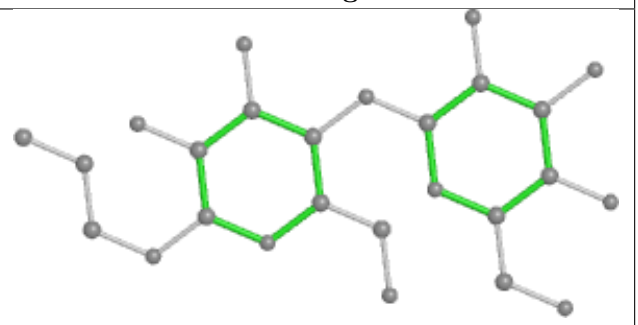
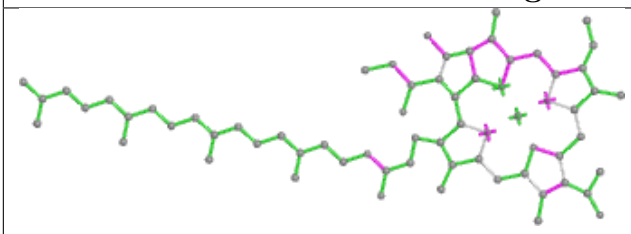


Rings

Ligand BCL A 101



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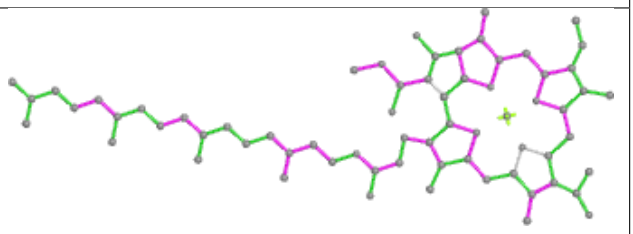
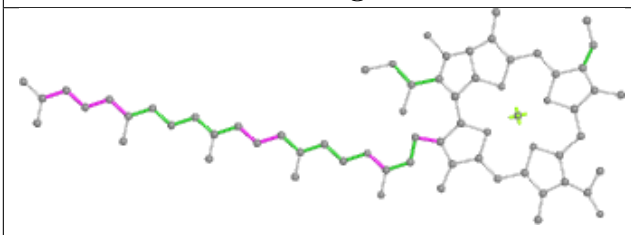


Bond angles



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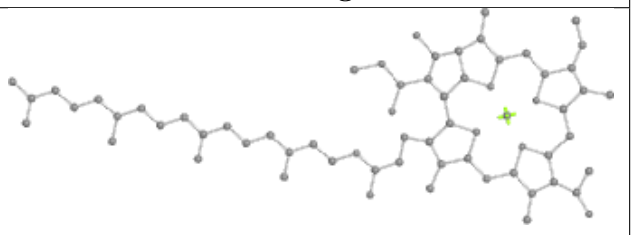
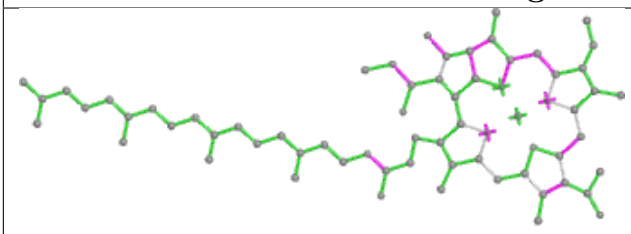


Rings

Ligand BCL L 301



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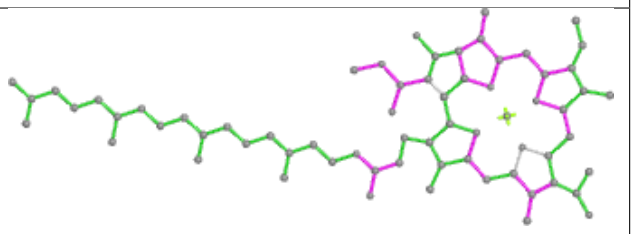
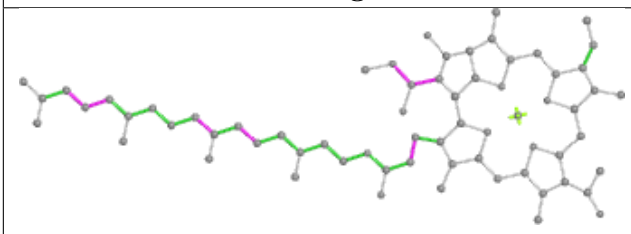


Bond angles



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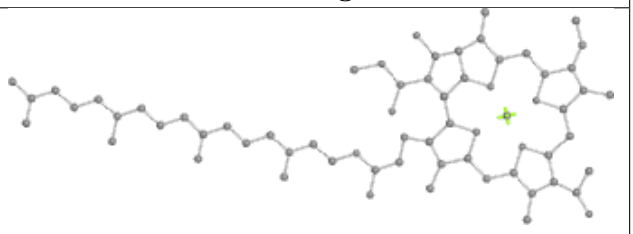
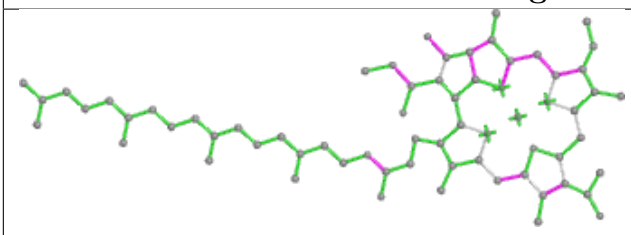


Rings

Ligand BCL a 101



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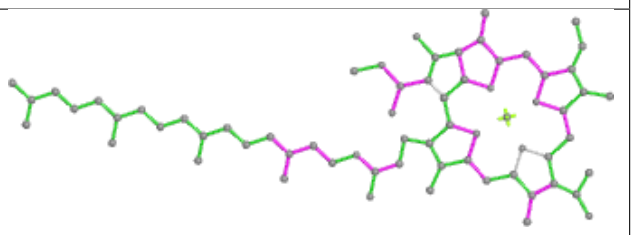
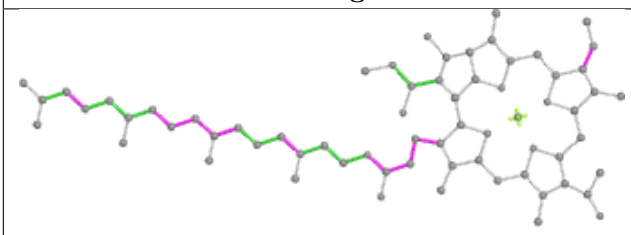


Bond angles



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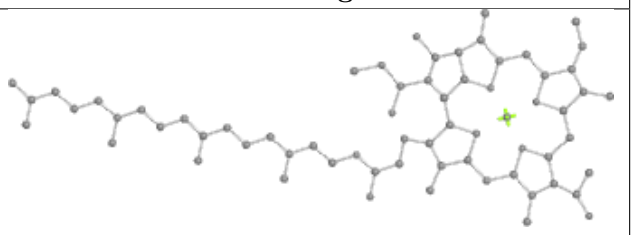
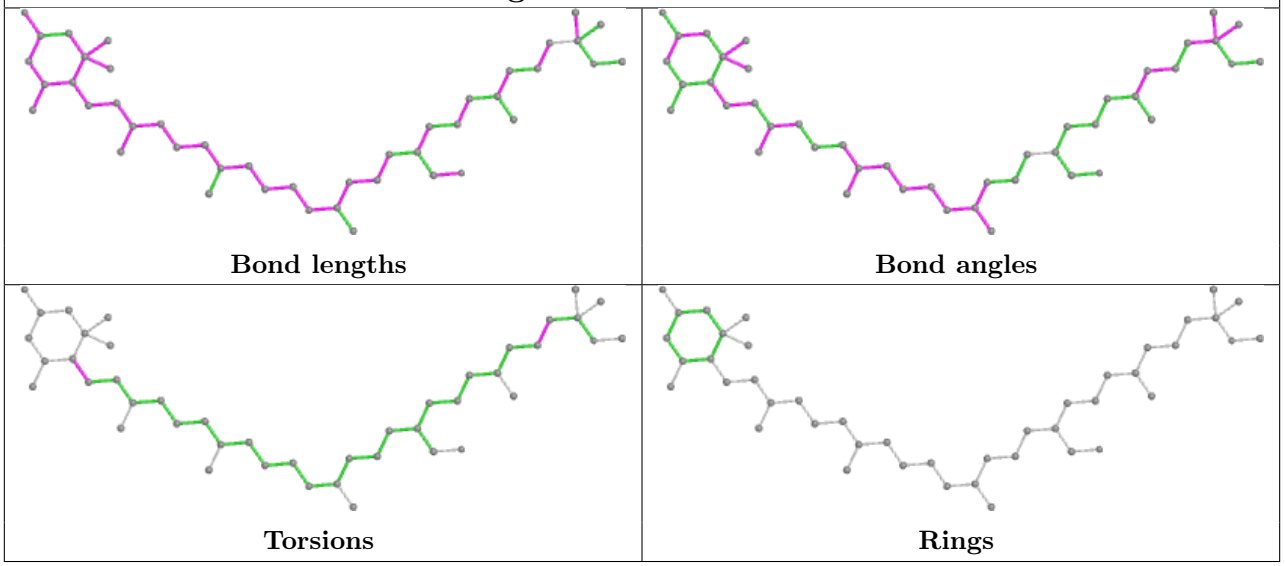
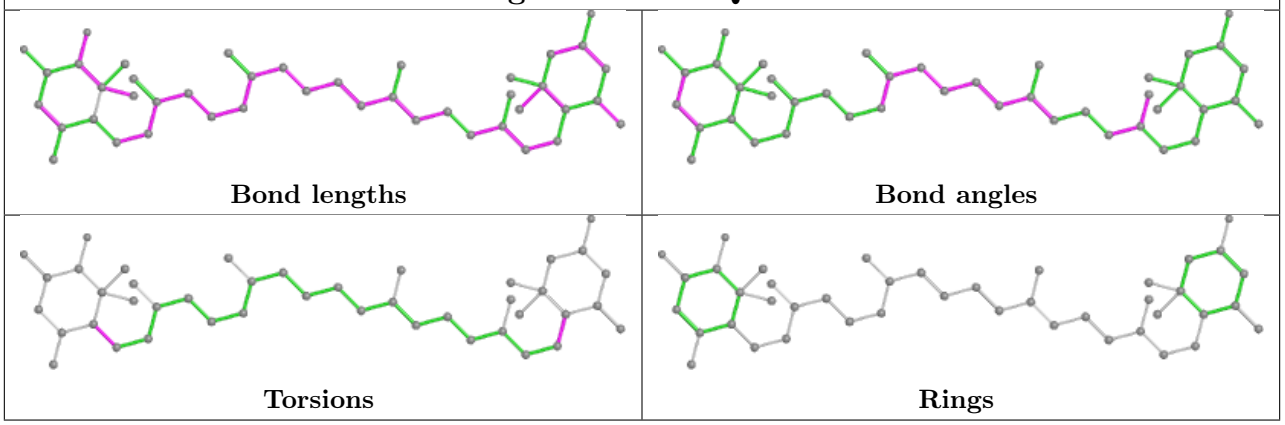


Rings

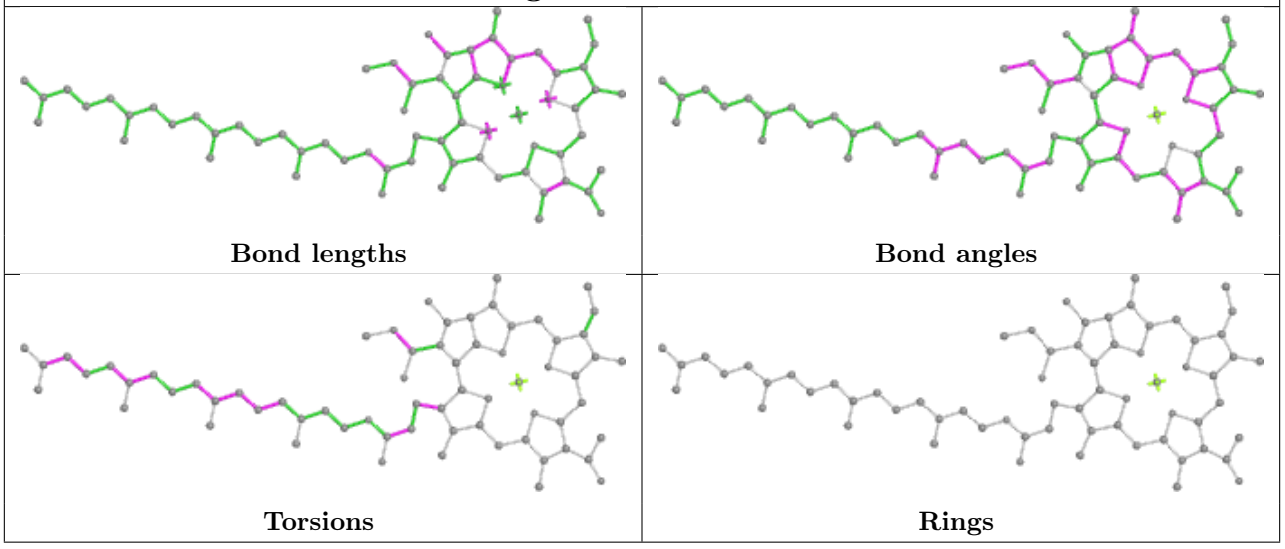
Ligand A1ELD o 101



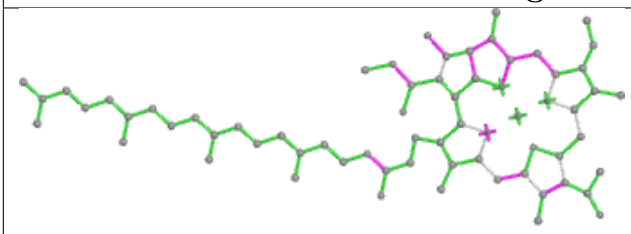
Ligand A1EL2 Q 102



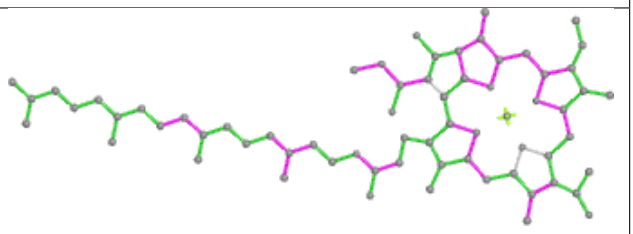
Ligand BCL G 101



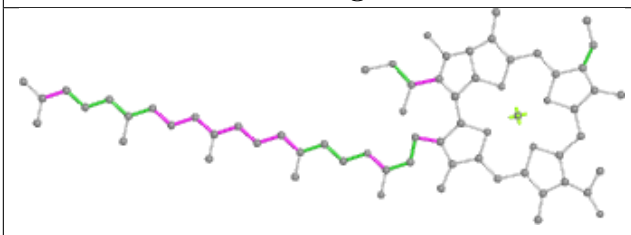
Ligand BCL E 101



Bond lengths



Bond angles



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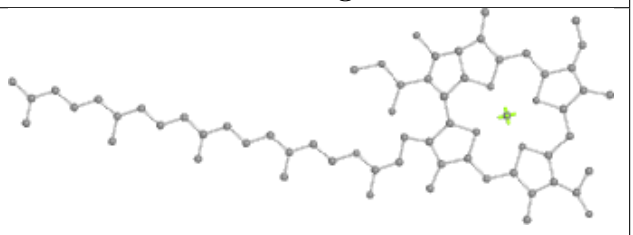
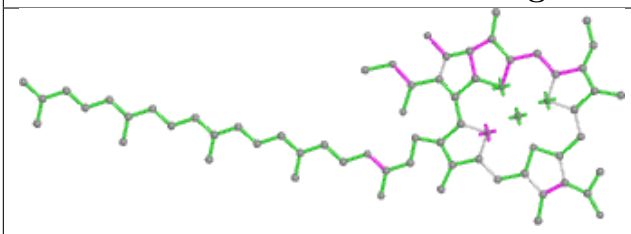
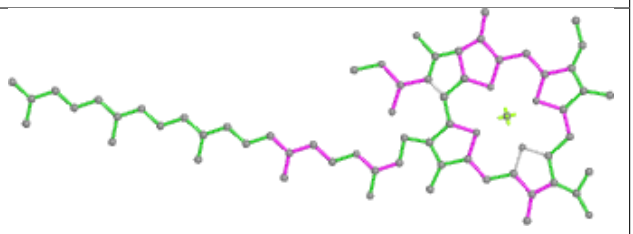


Rings

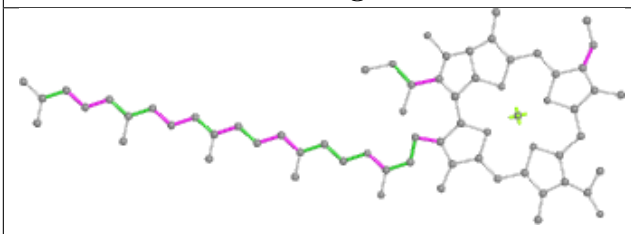
Ligand BCL d 102



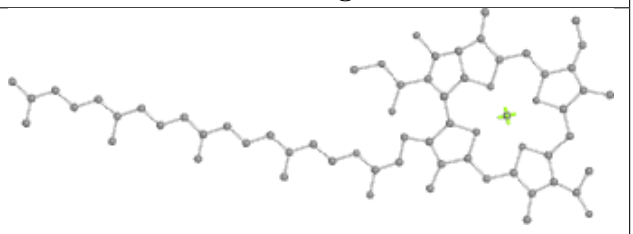
Bond lengths



Bond angles

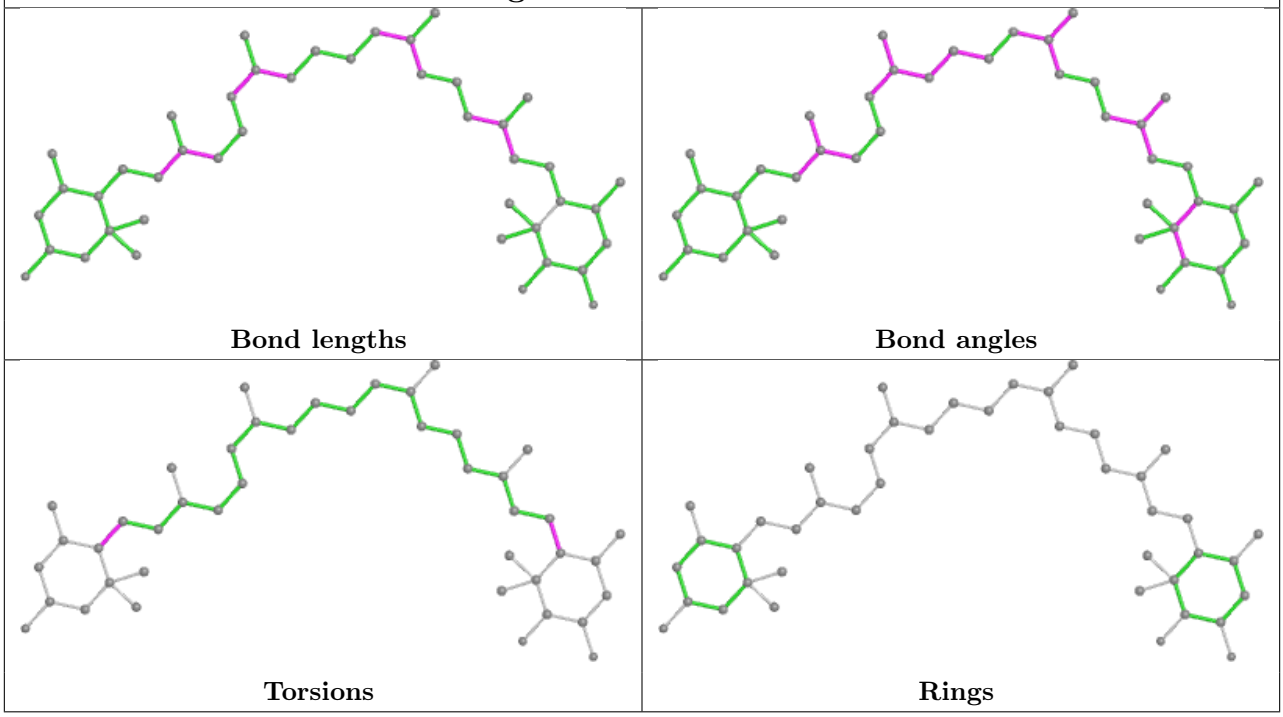


Torsions

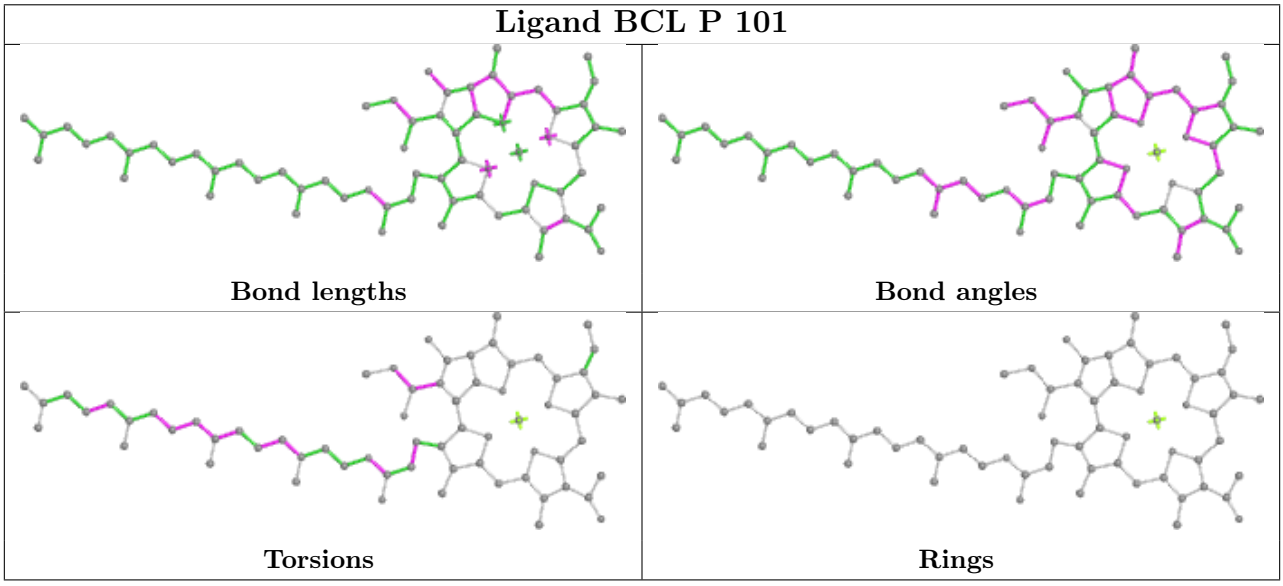


Rings

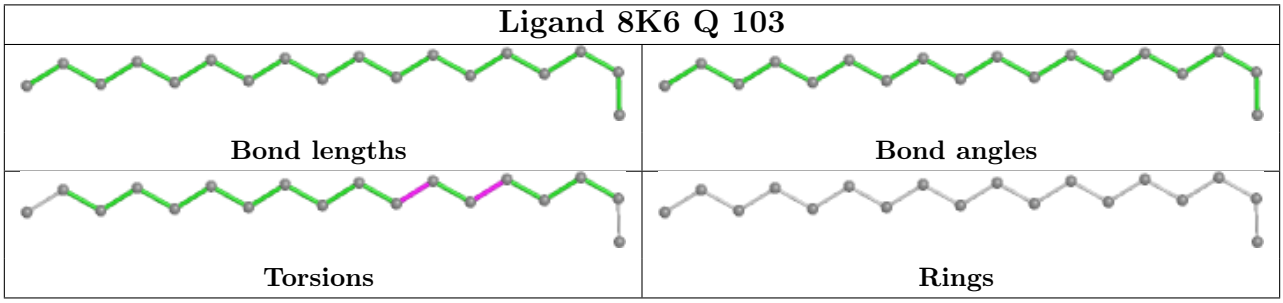
Ligand A1EL2 D 102



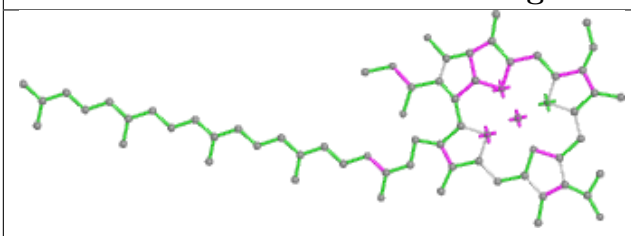
Ligand BCL P 101



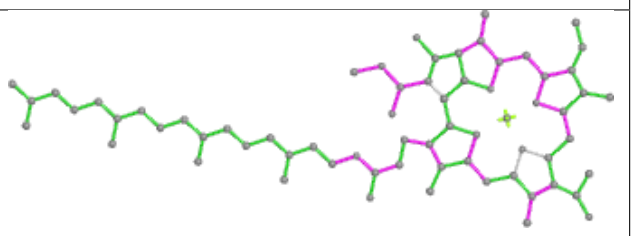
Ligand 8K6 Q 103



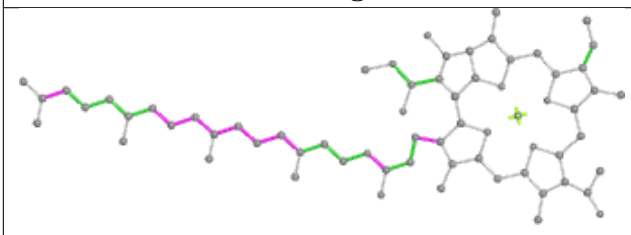
Ligand BCL F 101



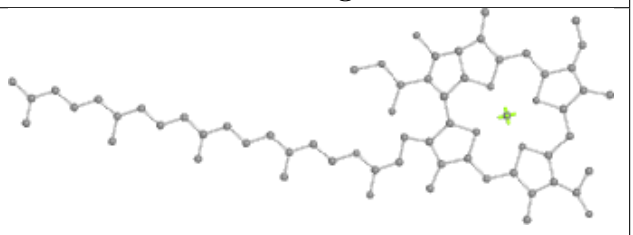
Bond lengths



Bond angles

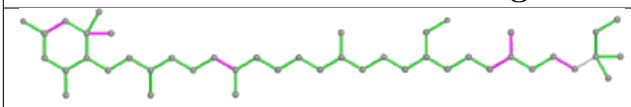


Torsions

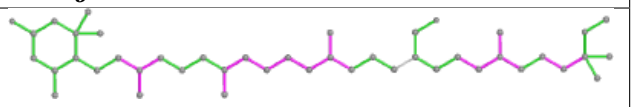


Rings

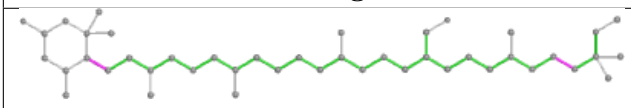
Ligand A1ELD j 101



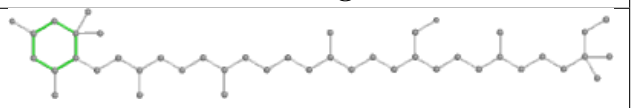
Bond lengths



Bond angles

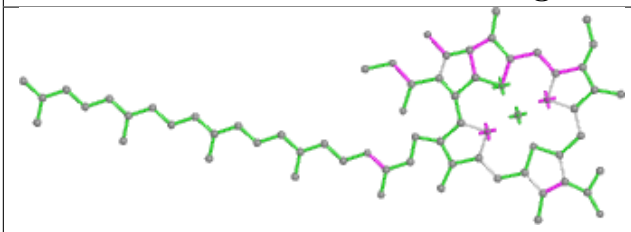


Torsions

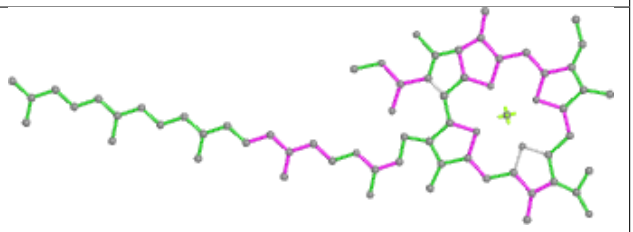


Rings

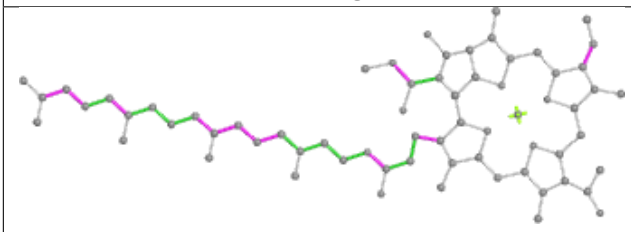
Ligand BCL i 101



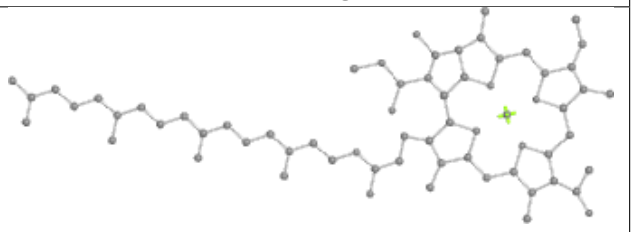
Bond lengths



Bond angles

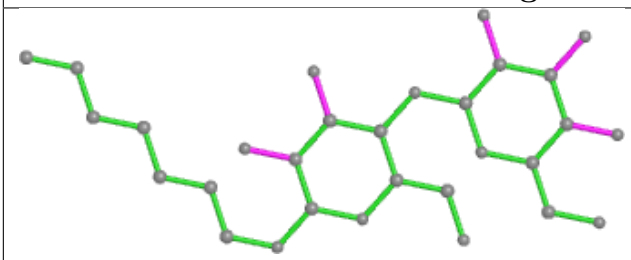


Torsions

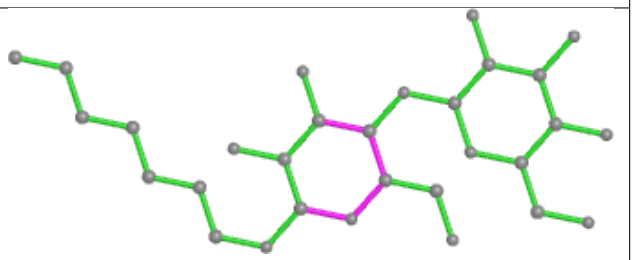


Rings

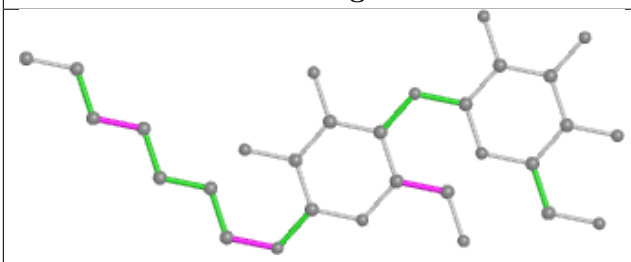
Ligand LMT G 104



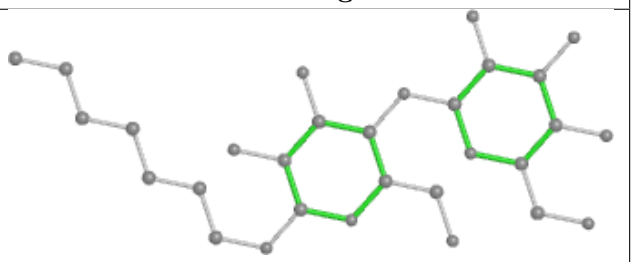
Bond lengths



Bond angles

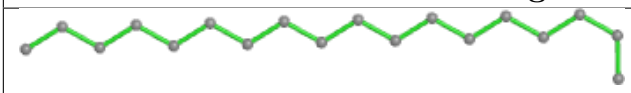


Torsions

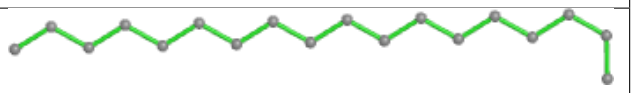


Rings

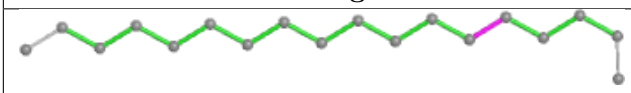
Ligand 8K6 H 301



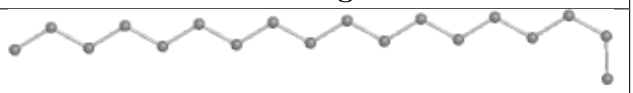
Bond lengths



Bond angles

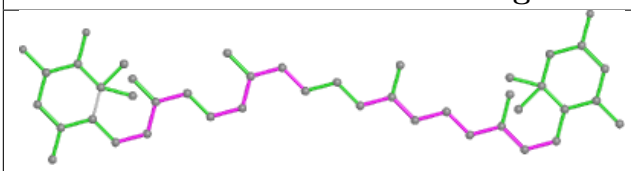


Torsions

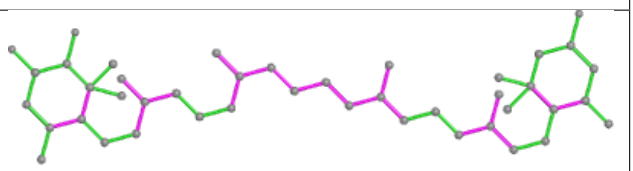


Rings

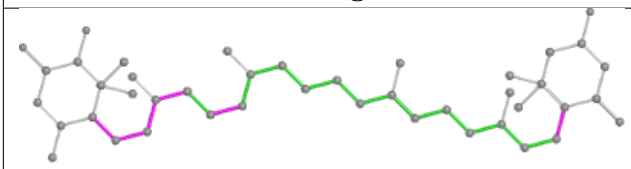
Ligand A1EL2 r 102



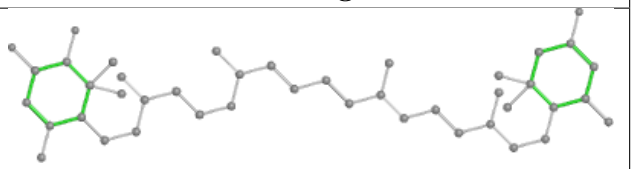
Bond lengths



Bond angles

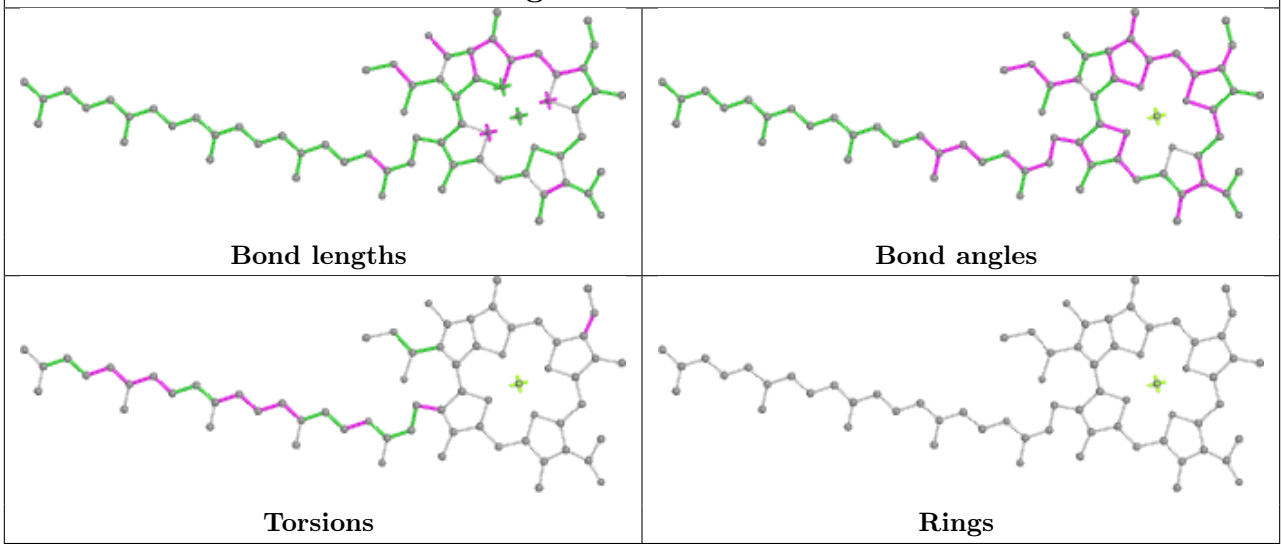


Torsions

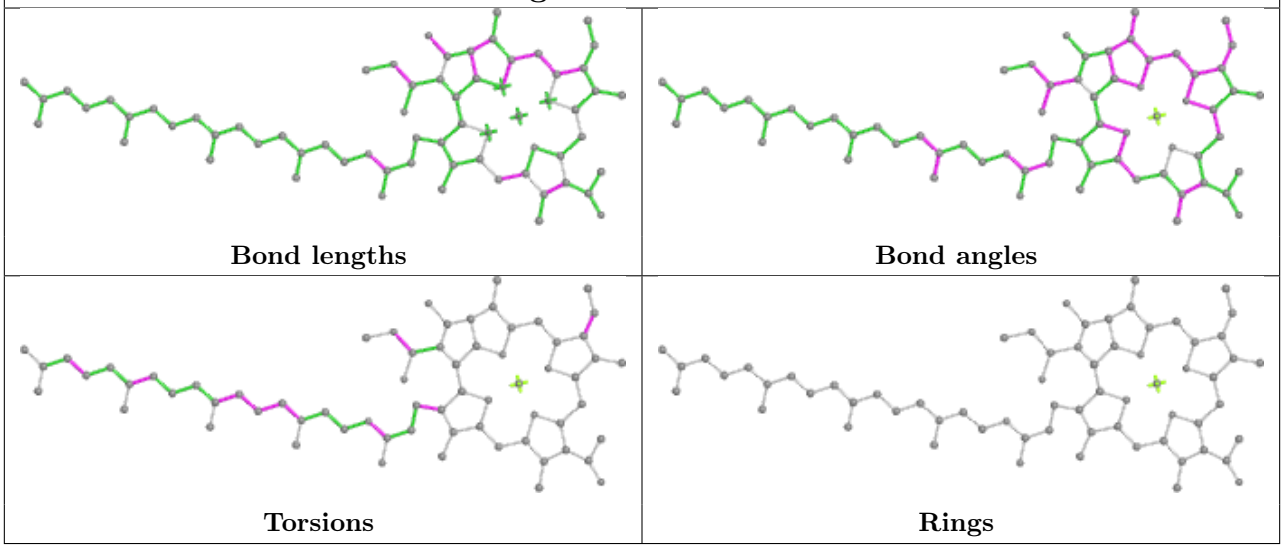


Rings

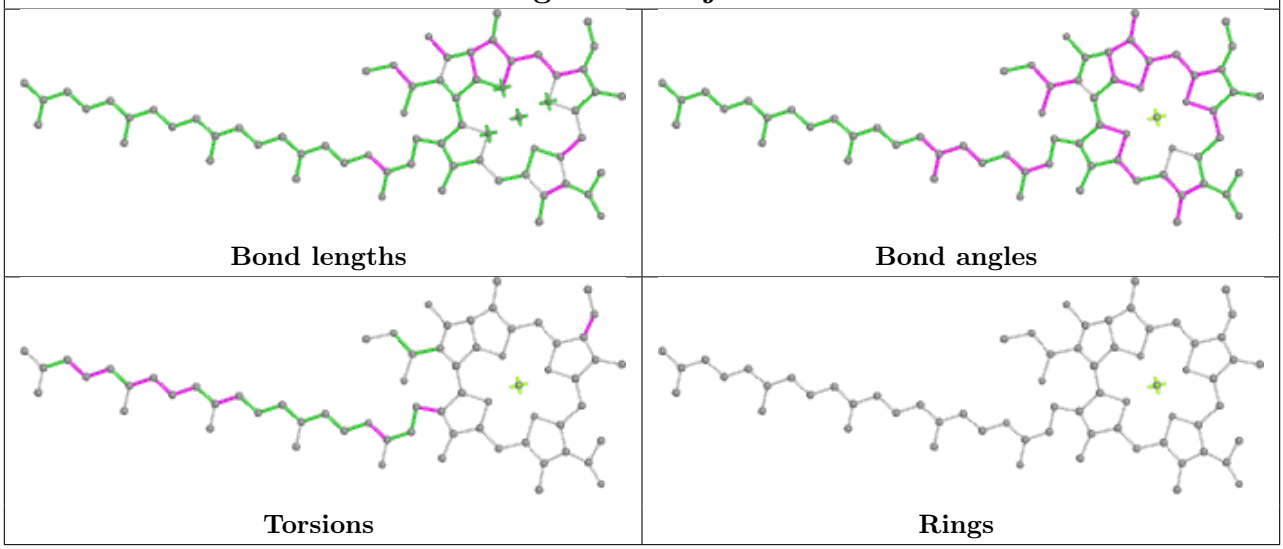
Ligand BCL C 101



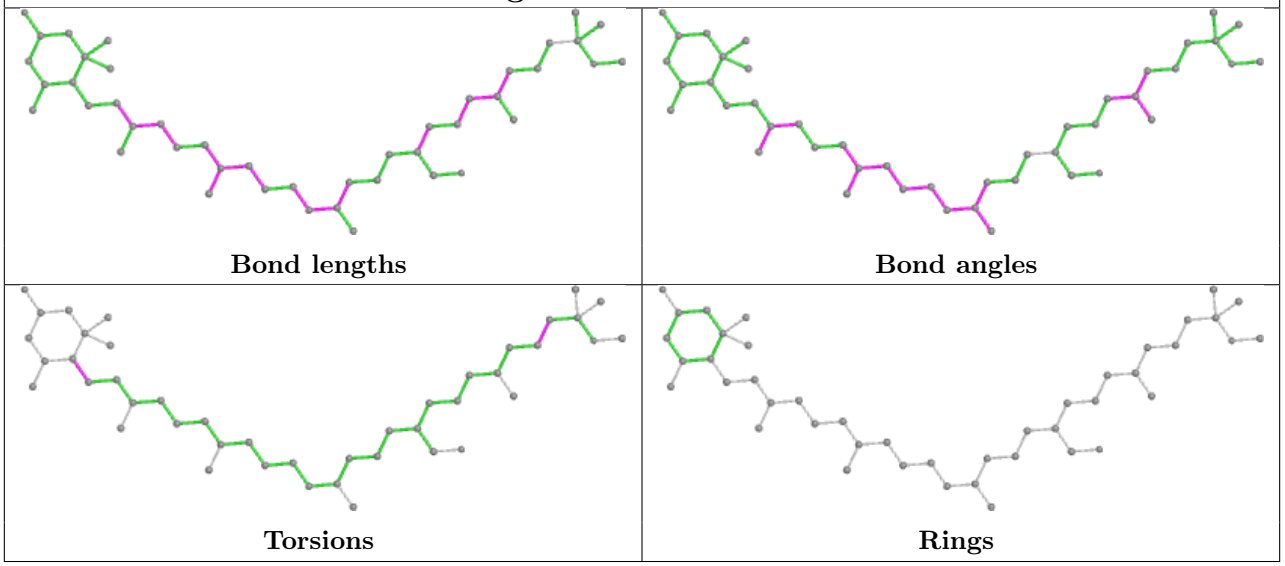
Ligand BCL k 101



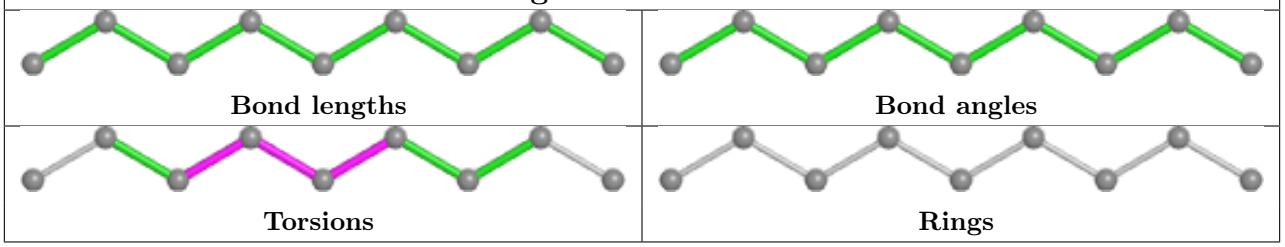
Ligand BCL j 102



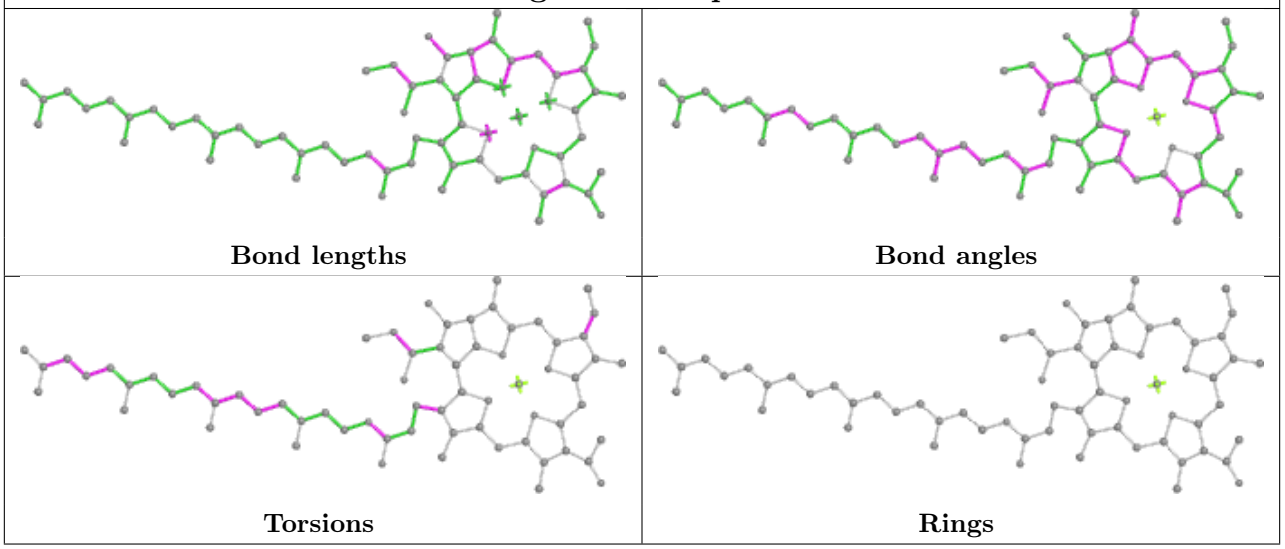
Ligand A1ELD d 101



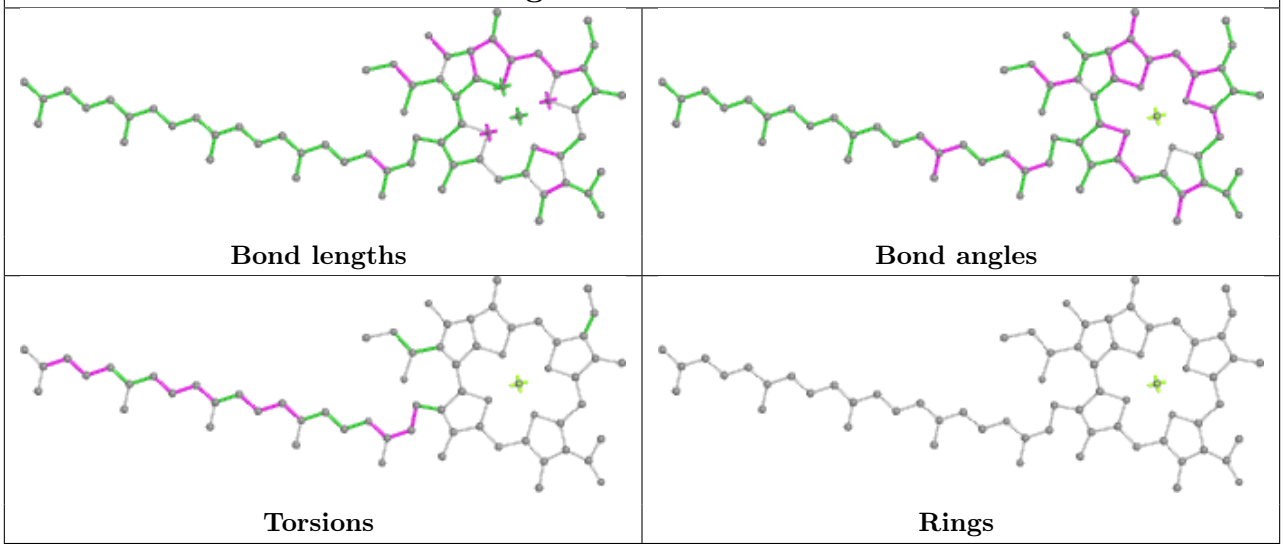
Ligand 8K6 C 104



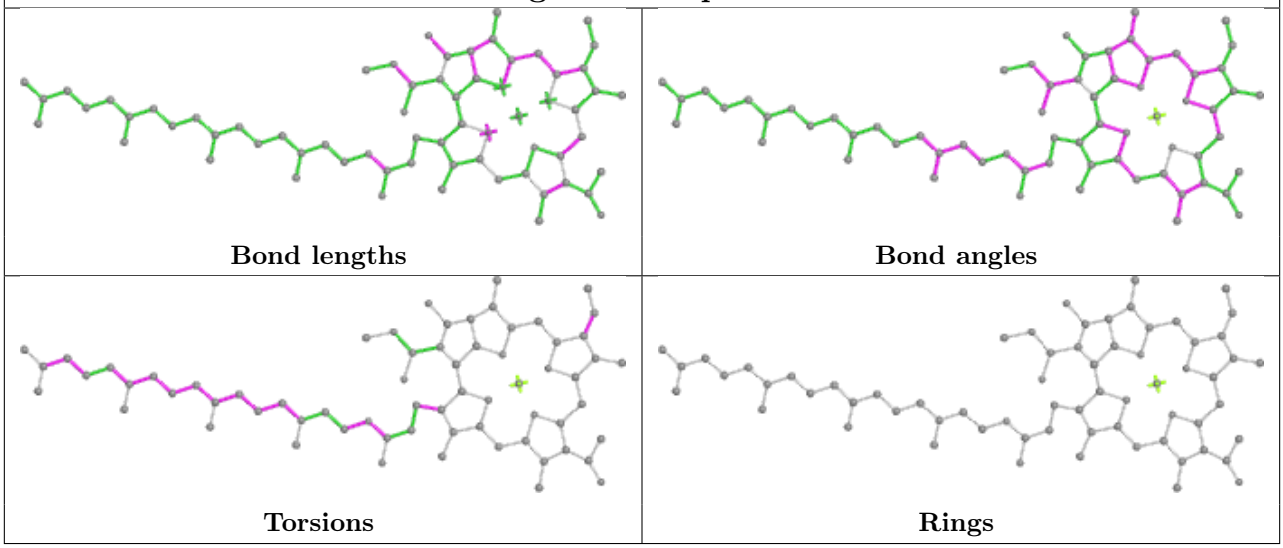
Ligand BCL q 102



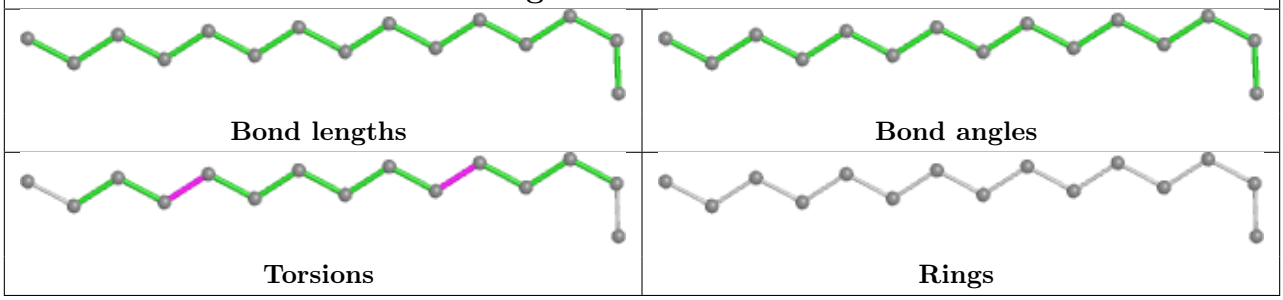
Ligand BCL R 101



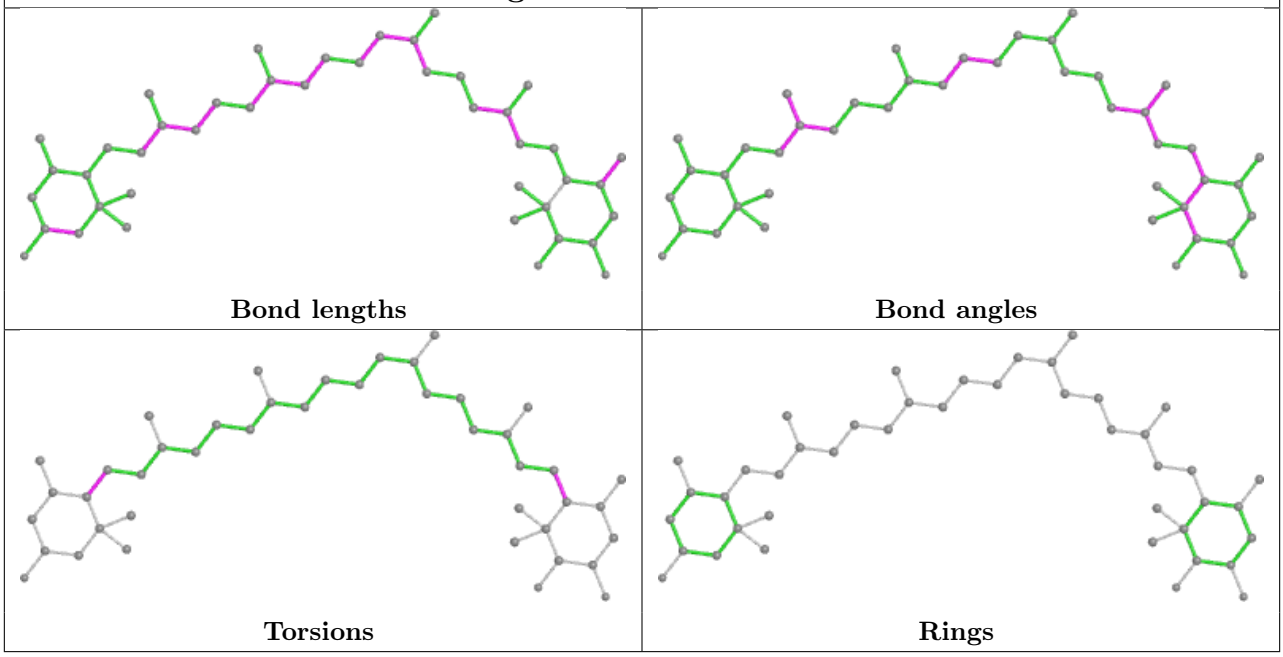
Ligand BCL p 101



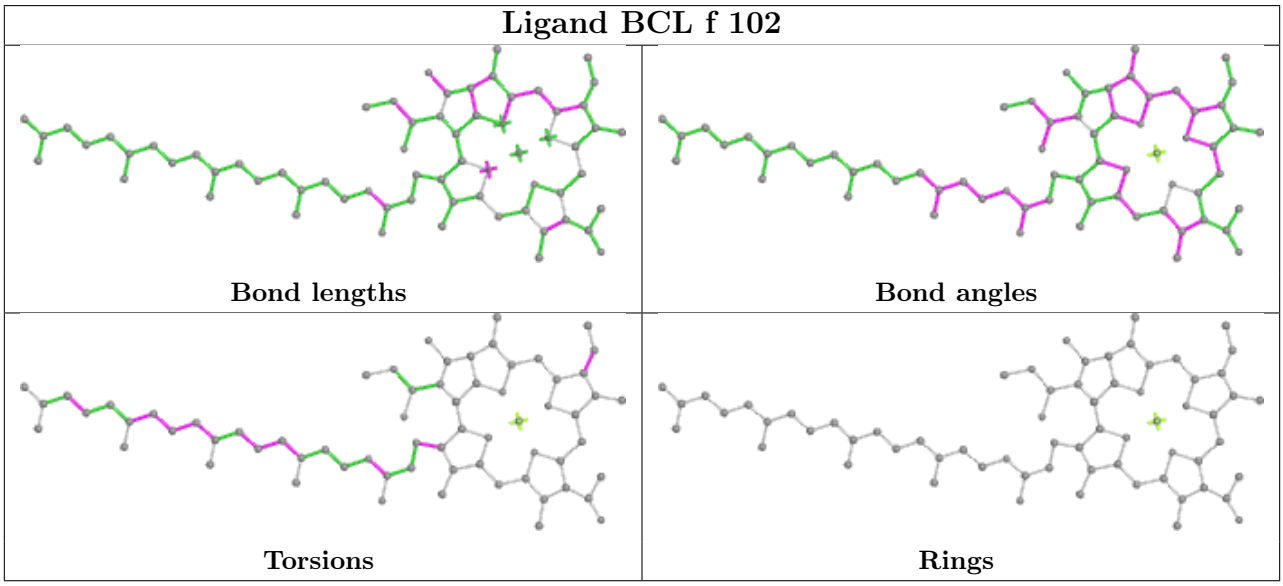
Ligand 8K6 M 406



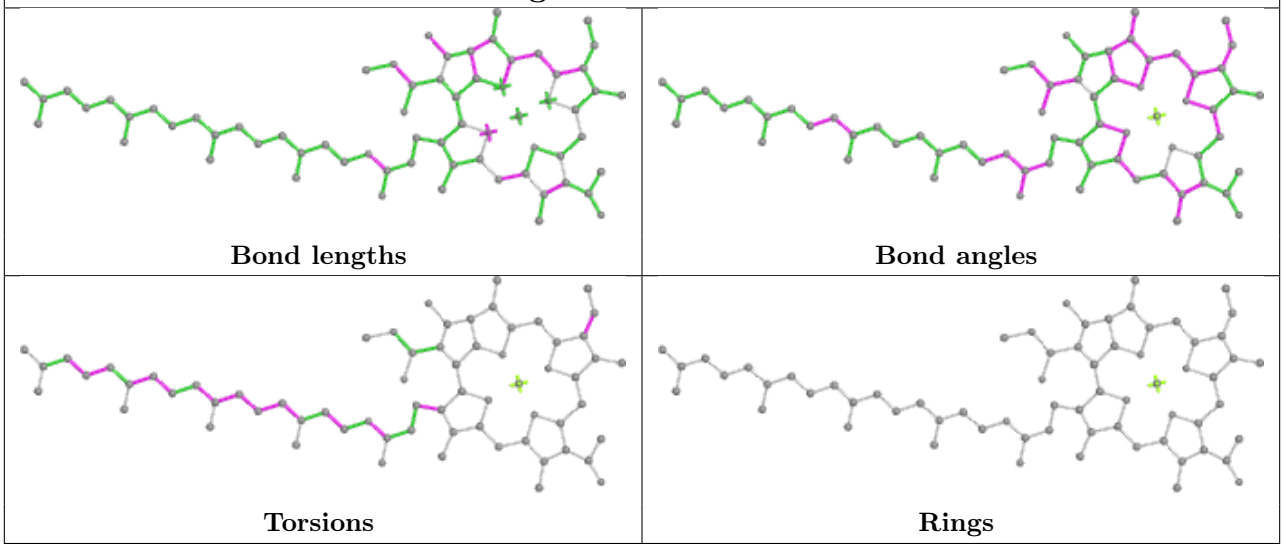
Ligand A1EL2 K 102



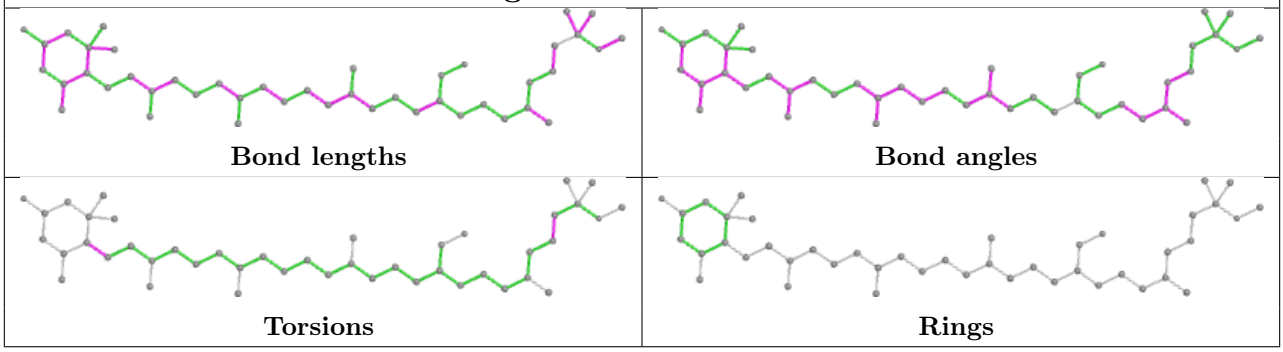
Ligand BCL f 102



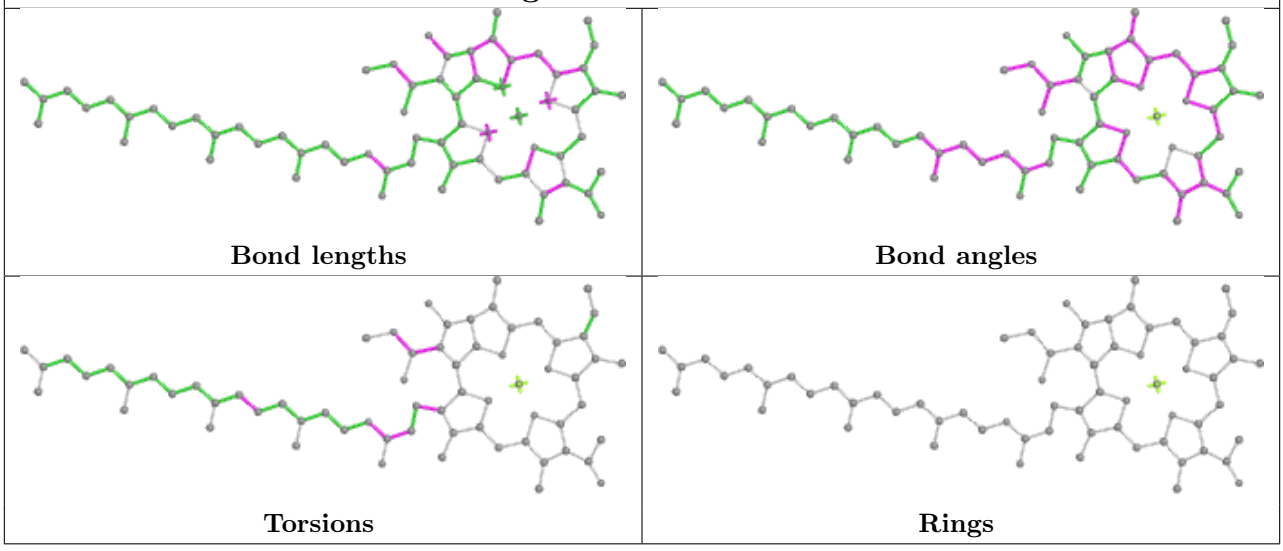
Ligand BCL n 101



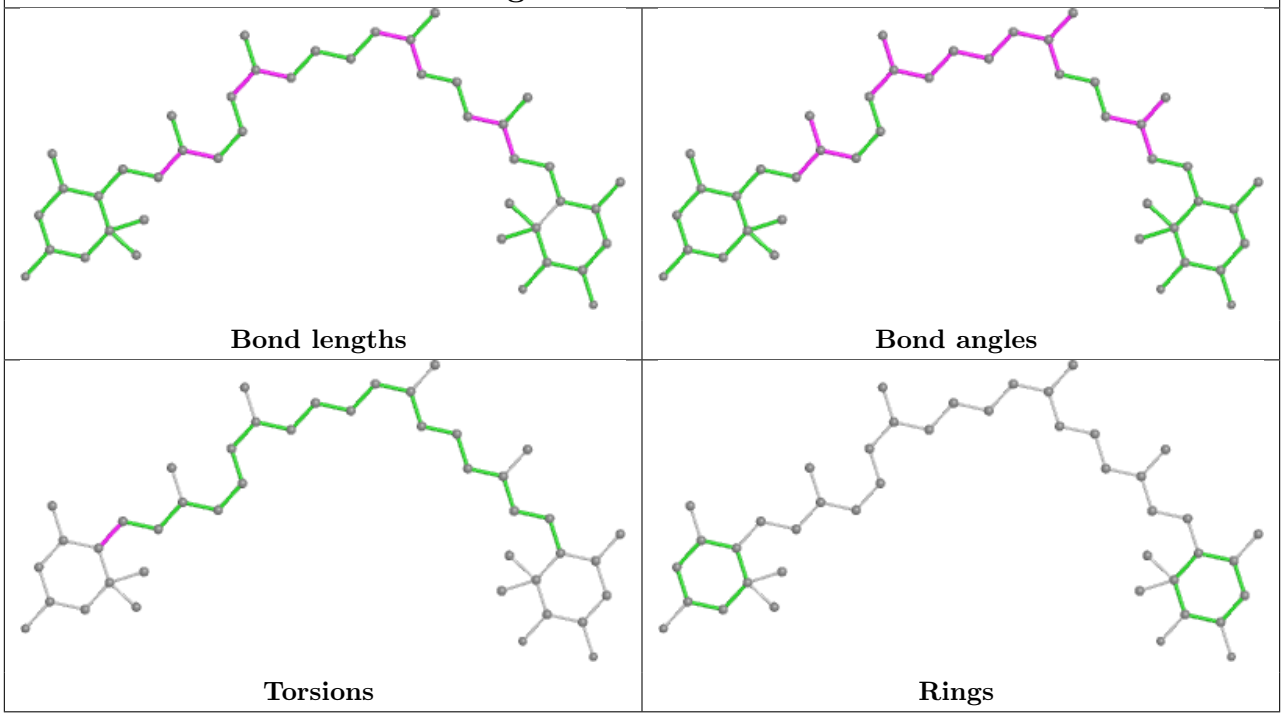
Ligand A1ELD B 103



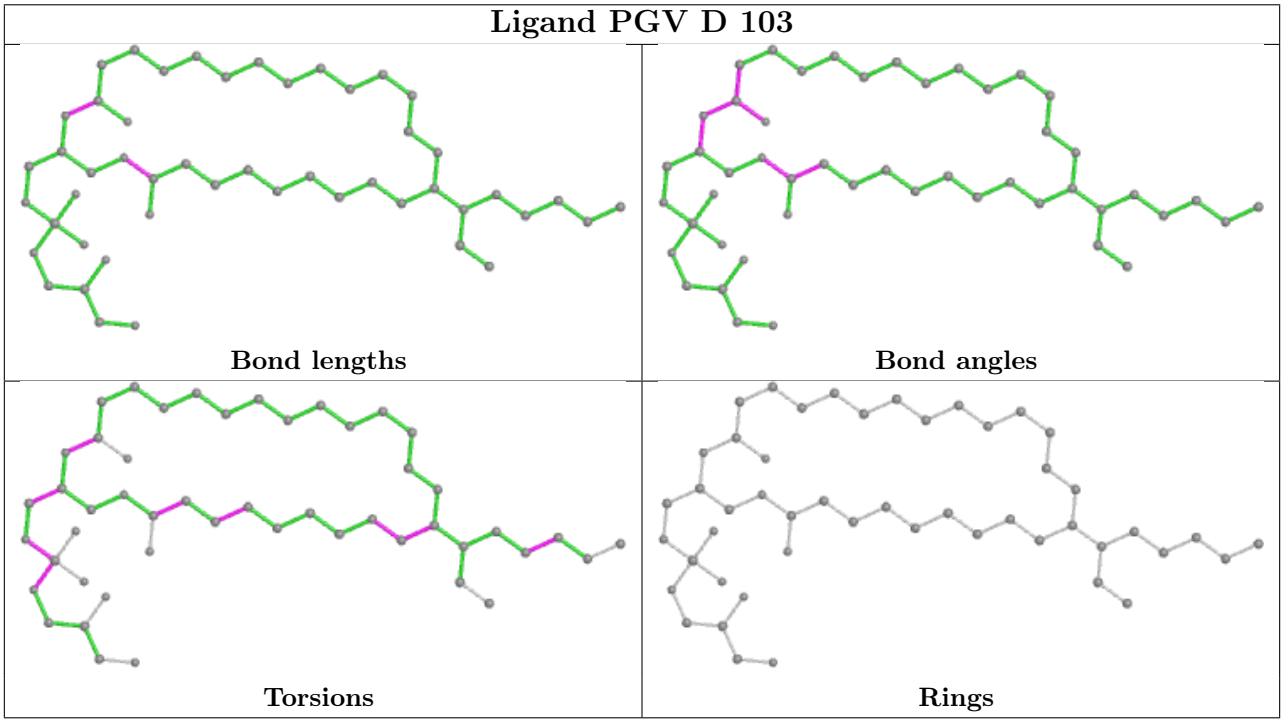
Ligand BCL M 401



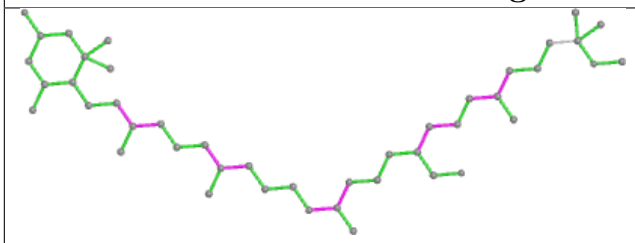
Ligand A1EL2 N 102



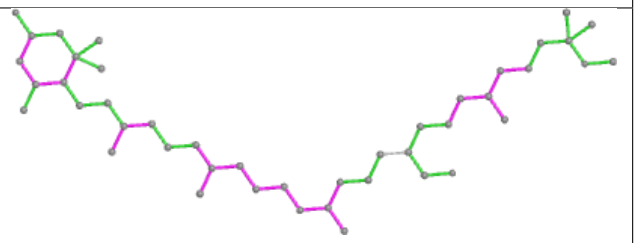
Ligand PGV D 103



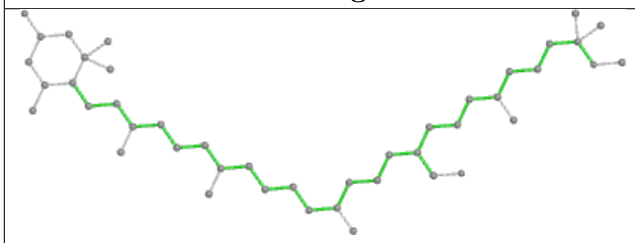
Ligand A1ELD r 101



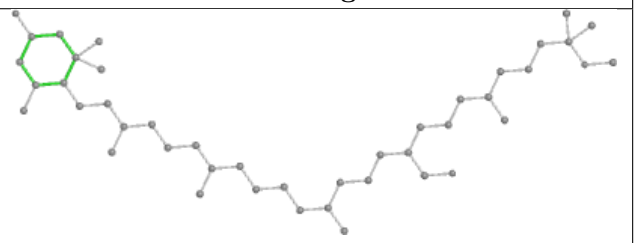
Bond lengths



Bond angles

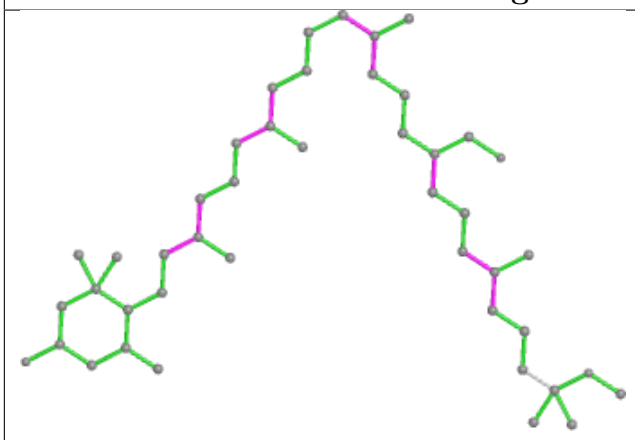


Torsions

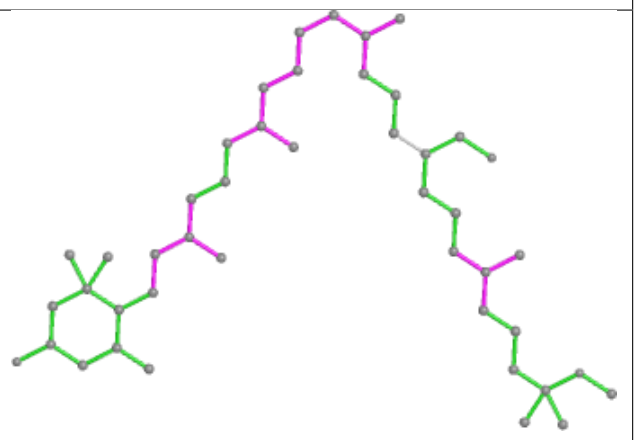


Rings

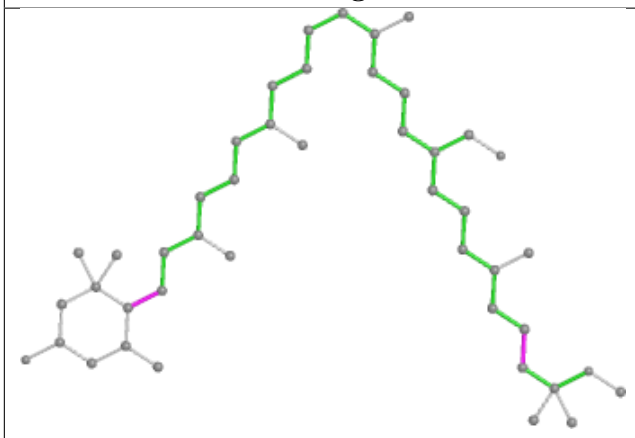
Ligand A1ELD f 101



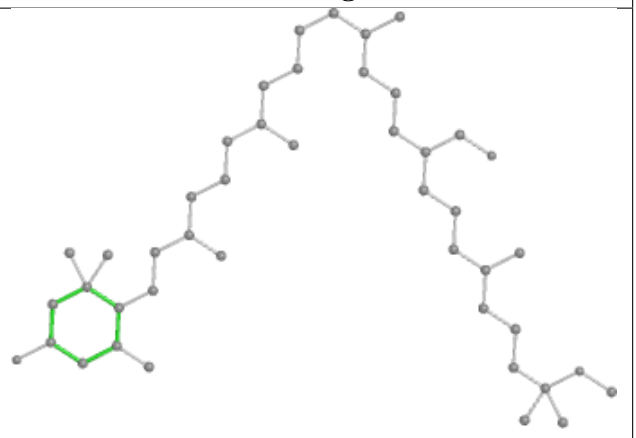
Bond lengths



Bond angles

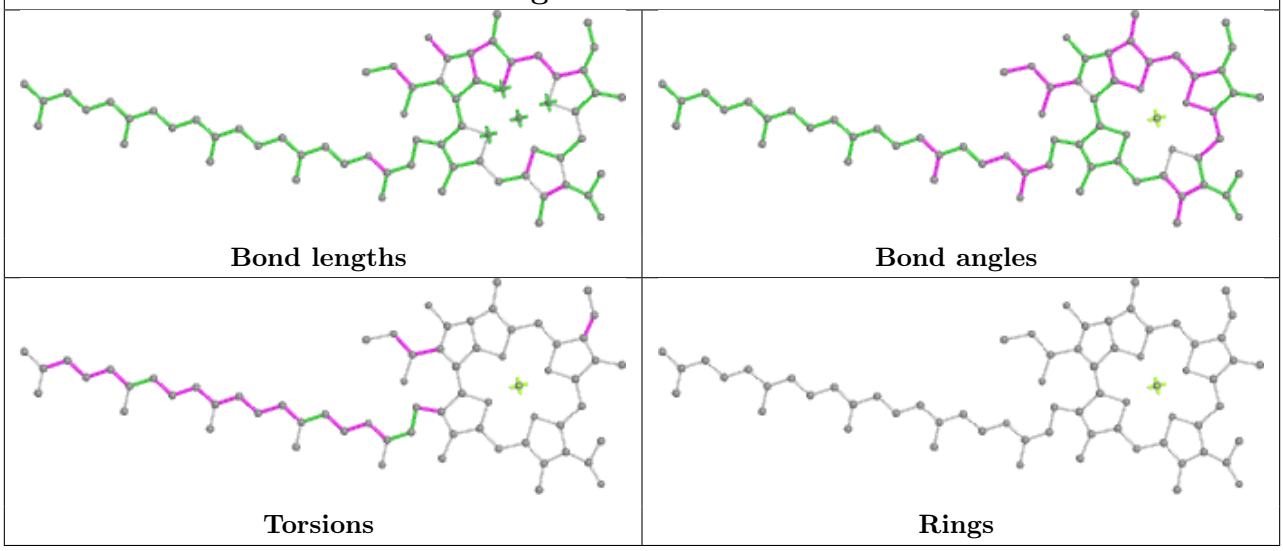


Torsions



Rings

Ligand BCL c 101



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.