



wwPDB EM Validation Summary Report ⓘ

May 6, 2024 – 01:35 PM EDT

PDB ID : 6X80
EMDB ID : EMD-22088
Title : Structure of the Campylobacter jejuni G508A Flagellar Filament
Authors : Kreutzberger, M.A.B.; Wang, F.; Egelman, E.H.
Deposited on : 2020-06-01
Resolution : 3.50 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 ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis	:	0.0.1.dev92
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

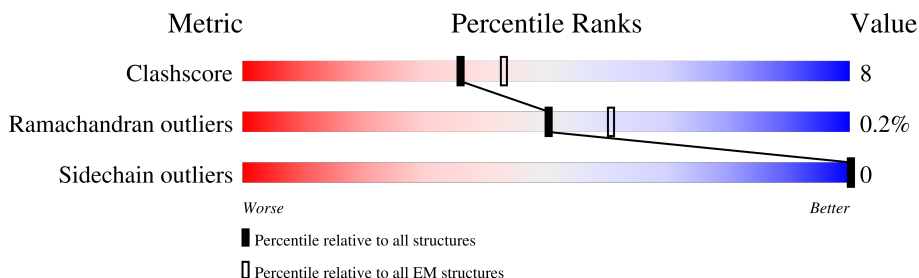
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	576	
1	B	576	
1	C	576	
1	D	576	
1	E	576	
1	F	576	
1	G	576	
1	H	576	

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Mol	Chain	Length	Quality of chain
1	I	576	 83%16%
1	J	576	 84%16%
1	K	576	 82%18%
1	L	576	 85%15%
1	M	576	 84%16%
1	N	576	 83%17%
1	O	576	 84%16%
1	P	576	 82%17%
1	Q	576	 84%15%
1	R	576	 81%18%
1	S	576	 82%18%
1	T	576	 85%15%
1	U	576	 81%19%
1	V	576	 84%16%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 97482 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 Flagellin A.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	B	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	C	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	D	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	E	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	F	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	G	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	H	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	I	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	J	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	K	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	L	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	M	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	N	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	O	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	P	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	Q	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		

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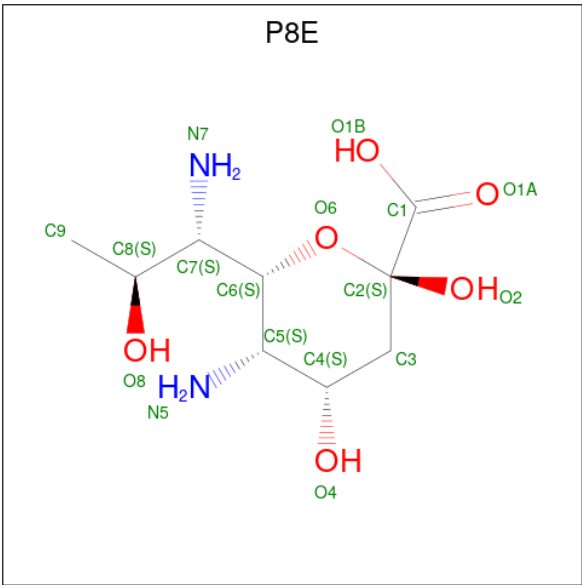
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Mol	Chain	Residues	Atoms					AltConf	Trace
1	R	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	S	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	T	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	U	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		
1	V	574	Total	C	N	O	S	0	0
			4159	2533	731	883	12		

There are 22 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	508	ALA	GLY	engineered mutation	UNP P22251
B	508	ALA	GLY	engineered mutation	UNP P22251
C	508	ALA	GLY	engineered mutation	UNP P22251
D	508	ALA	GLY	engineered mutation	UNP P22251
E	508	ALA	GLY	engineered mutation	UNP P22251
F	508	ALA	GLY	engineered mutation	UNP P22251
G	508	ALA	GLY	engineered mutation	UNP P22251
H	508	ALA	GLY	engineered mutation	UNP P22251
I	508	ALA	GLY	engineered mutation	UNP P22251
J	508	ALA	GLY	engineered mutation	UNP P22251
K	508	ALA	GLY	engineered mutation	UNP P22251
L	508	ALA	GLY	engineered mutation	UNP P22251
M	508	ALA	GLY	engineered mutation	UNP P22251
N	508	ALA	GLY	engineered mutation	UNP P22251
O	508	ALA	GLY	engineered mutation	UNP P22251
P	508	ALA	GLY	engineered mutation	UNP P22251
Q	508	ALA	GLY	engineered mutation	UNP P22251
R	508	ALA	GLY	engineered mutation	UNP P22251
S	508	ALA	GLY	engineered mutation	UNP P22251
T	508	ALA	GLY	engineered mutation	UNP P22251
U	508	ALA	GLY	engineered mutation	UNP P22251
V	508	ALA	GLY	engineered mutation	UNP P22251

- Molecule 2 is 5,7-diamino-3,5,7,9-tetradecoxy-L-glycero-alpha-L-manno-non-2-ulopyranosonic acid (three-letter code: P8E) (formula: C₉H₁₈N₂O₆) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	
2	A	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	A	1	Total 16	C 9	N 2	O 5	0
2	A	1	Total 16	C 9	N 2	O 5	0
2	A	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	B	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0

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Mol	Chain	Residues	Atoms				AltConf
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	C	1	Total 16	C 9	N 2	O 5	0
2	D	1	Total 16	C 9	N 2	O 5	0
2	D	1	Total 16	C 9	N 2	O 5	0
2	D	1	Total 16	C 9	N 2	O 5	0
2	D	1	Total 16	C 9	N 2	O 5	0
2	D	1	Total 16	C 9	N 2	O 5	0

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Mol	Chain	Residues	Atoms				AltConf
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	D	1	Total	C	N	O	0
			16	9	2	5	
2	E	1	Total	C	N	O	0
			16	9	2	5	
2	E	1	Total	C	N	O	0
			16	9	2	5	
2	E	1	Total	C	N	O	0
			16	9	2	5	
2	E	1	Total	C	N	O	0
			16	9	2	5	
2	E	1	Total	C	N	O	0
			16	9	2	5	
2	E	1	Total	C	N	O	0
			16	9	2	5	
2	E	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	E	1	Total 16	C 9	N 2	O 5	0
2	E	1	Total 16	C 9	N 2	O 5	0
2	E	1	Total 16	C 9	N 2	O 5	0
2	E	1	Total 16	C 9	N 2	O 5	0
2	E	1	Total 16	C 9	N 2	O 5	0
2	E	1	Total 16	C 9	N 2	O 5	0
2	E	1	Total 16	C 9	N 2	O 5	0
2	E	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0
2	F	1	Total 16	C 9	N 2	O 5	0

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Mol	Chain	Residues	Atoms				AltConf
2	F	1	Total	C	N	O	0
			16	9	2	5	
2	F	1	Total	C	N	O	0
			16	9	2	5	
2	F	1	Total	C	N	O	0
			16	9	2	5	
2	F	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	
2	G	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	H	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	I	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	J	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	K	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	
2	L	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	L	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	M	1	Total 16	C 9	N 2	O 5	0
2	N	1	Total 16	C 9	N 2	O 5	0
2	N	1	Total 16	C 9	N 2	O 5	0
2	N	1	Total 16	C 9	N 2	O 5	0

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Mol	Chain	Residues	Atoms				AltConf
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	N	1	Total	C	N	O	0
			16	9	2	5	
2	O	1	Total	C	N	O	0
			16	9	2	5	
2	O	1	Total	C	N	O	0
			16	9	2	5	
2	O	1	Total	C	N	O	0
			16	9	2	5	
2	O	1	Total	C	N	O	0
			16	9	2	5	
2	O	1	Total	C	N	O	0
			16	9	2	5	
2	O	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	O	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0
2	P	1	Total 16	C 9	N 2	O 5	0

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Mol	Chain	Residues	Atoms				AltConf
2	P	1	Total	C	N	O	0
			16	9	2	5	
2	P	1	Total	C	N	O	0
			16	9	2	5	
2	P	1	Total	C	N	O	0
			16	9	2	5	
2	P	1	Total	C	N	O	0
			16	9	2	5	
2	P	1	Total	C	N	O	0
			16	9	2	5	
2	P	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	
2	Q	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	Q	1	Total 16	C 9	N 2	O 5	0
2	Q	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	R	1	Total 16	C 9	N 2	O 5	0
2	S	1	Total 16	C 9	N 2	O 5	0
2	S	1	Total 16	C 9	N 2	O 5	0

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Mol	Chain	Residues	Atoms				AltConf
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	S	1	Total	C	N	O	0
			16	9	2	5	
2	T	1	Total	C	N	O	0
			16	9	2	5	
2	T	1	Total	C	N	O	0
			16	9	2	5	
2	T	1	Total	C	N	O	0
			16	9	2	5	
2	T	1	Total	C	N	O	0
			16	9	2	5	
2	T	1	Total	C	N	O	0
			16	9	2	5	

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Mol	Chain	Residues	Atoms				AltConf
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	T	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0

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Mol	Chain	Residues	Atoms				AltConf
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	U	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0
2	V	1	Total 16	C 9	N 2	O 5	0

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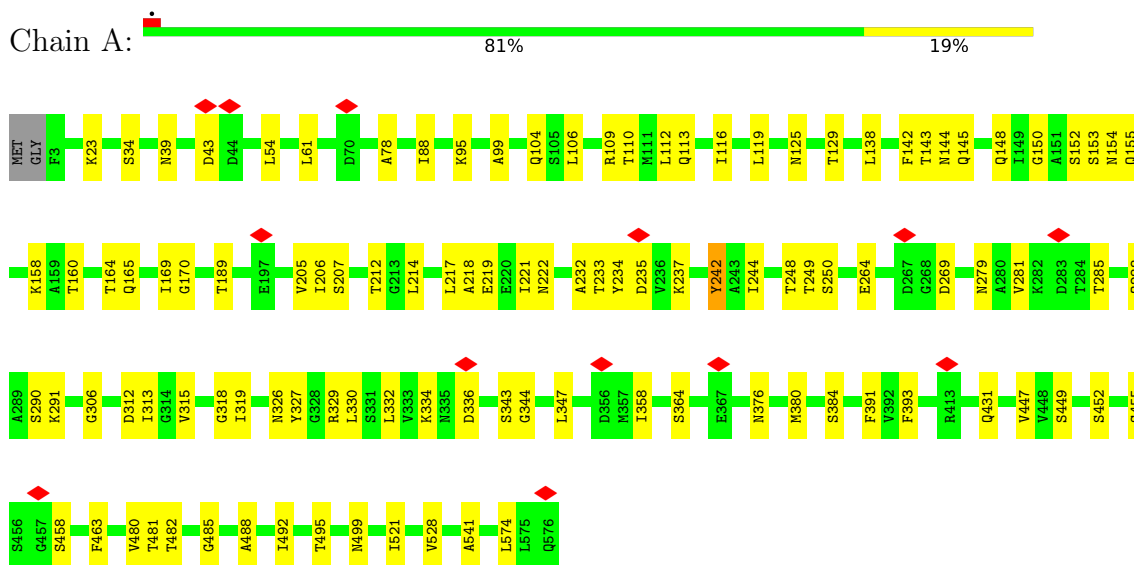
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Mol	Chain	Residues	Atoms				AltConf
2	V	1	Total	C	N	O	0
			16	9	2	5	
2	V	1	Total	C	N	O	0
			16	9	2	5	
2	V	1	Total	C	N	O	0
			16	9	2	5	

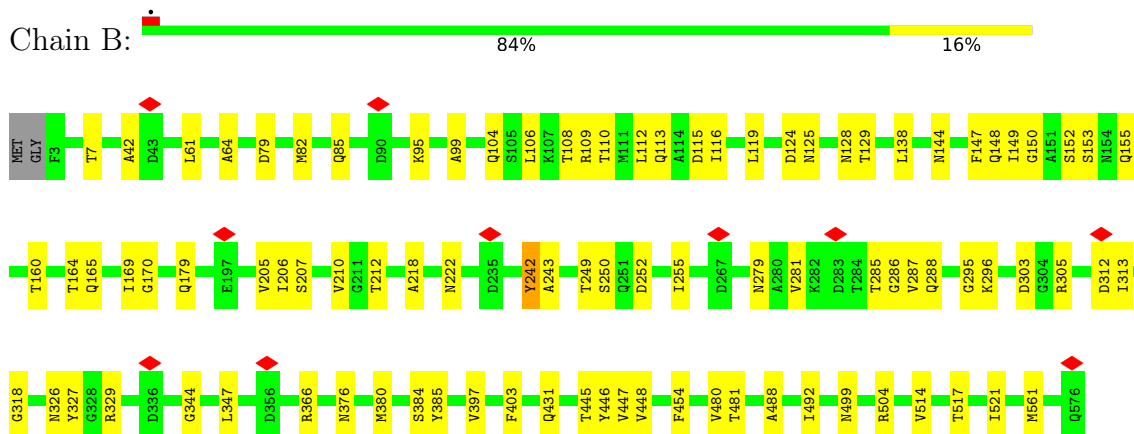
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

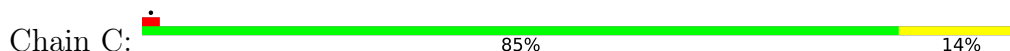
• Molecule 1: Flagellin A

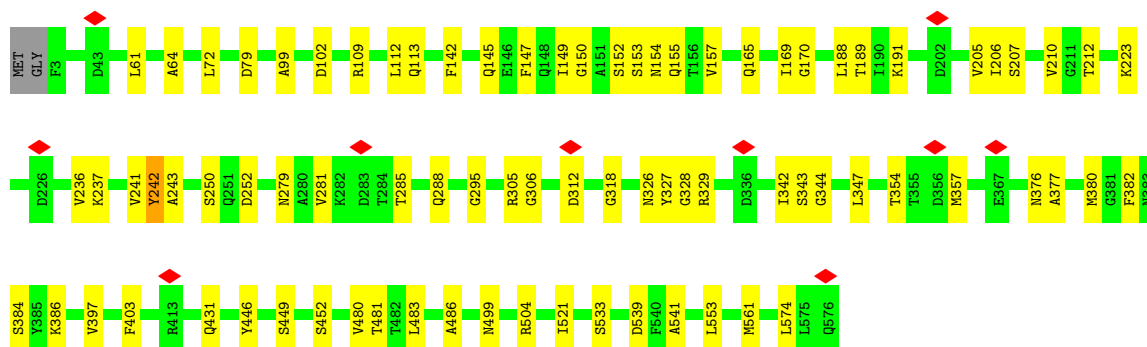


• Molecule 1: Flagellin A

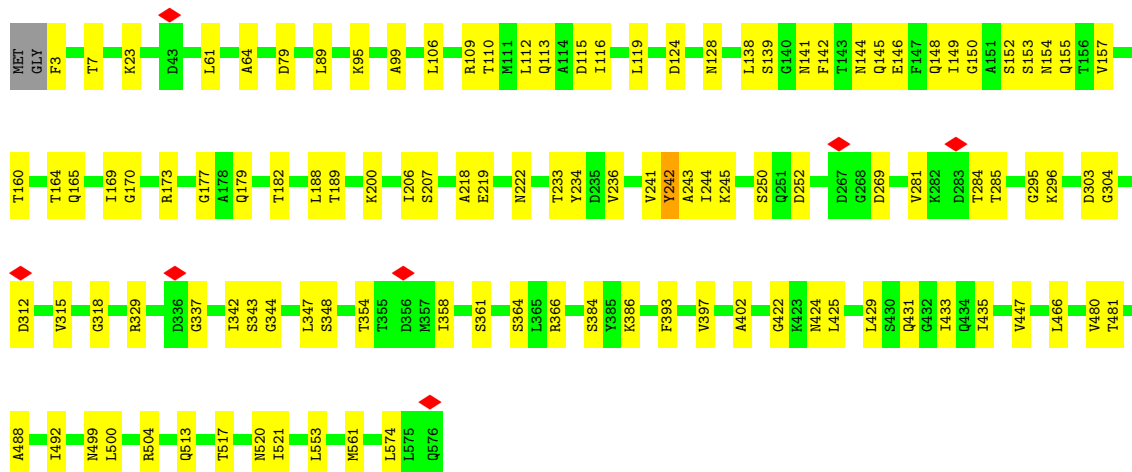
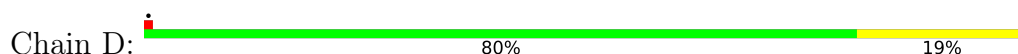


• Molecule 1: Flagellin A

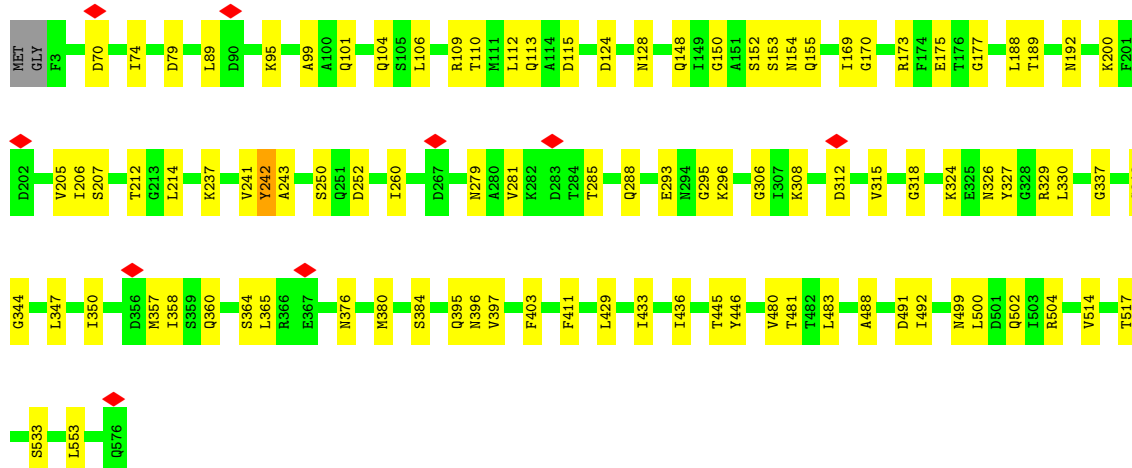
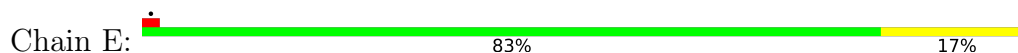





• Molecule 1: Flagellin A

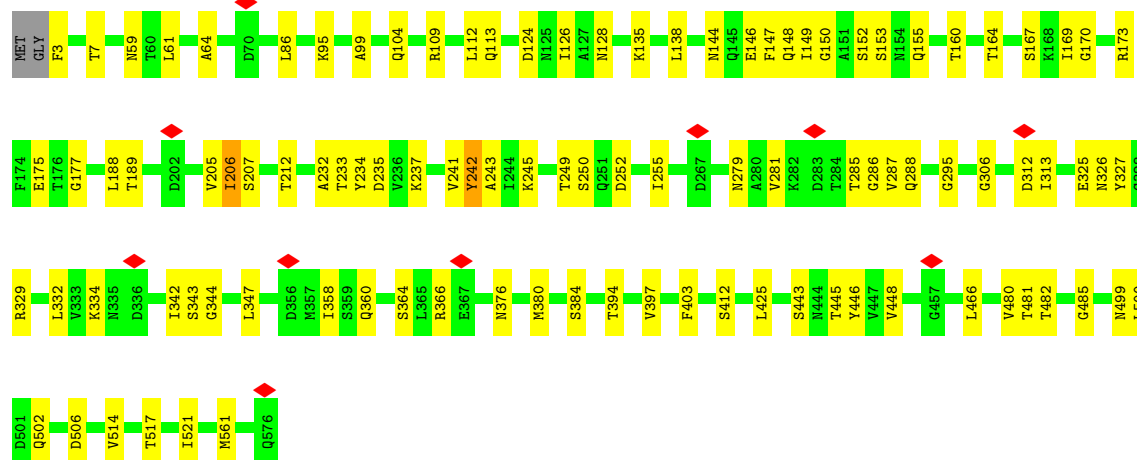


• Molecule 1: Flagellin A




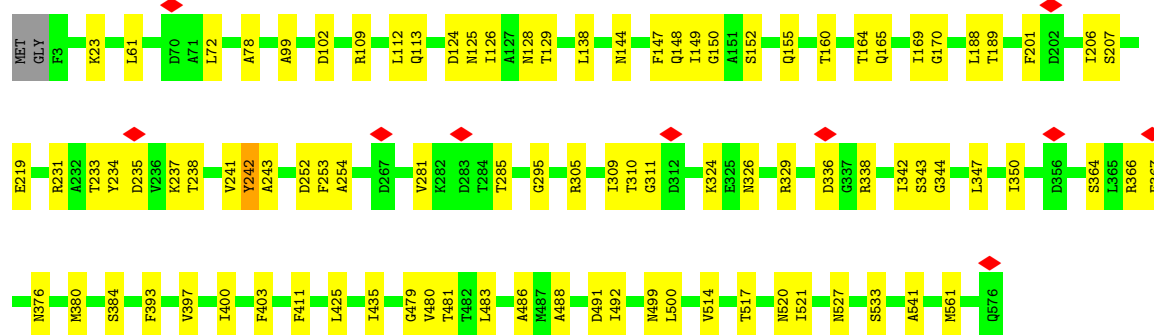
• Molecule 1: Flagellin A

Chain F:  82% 17%




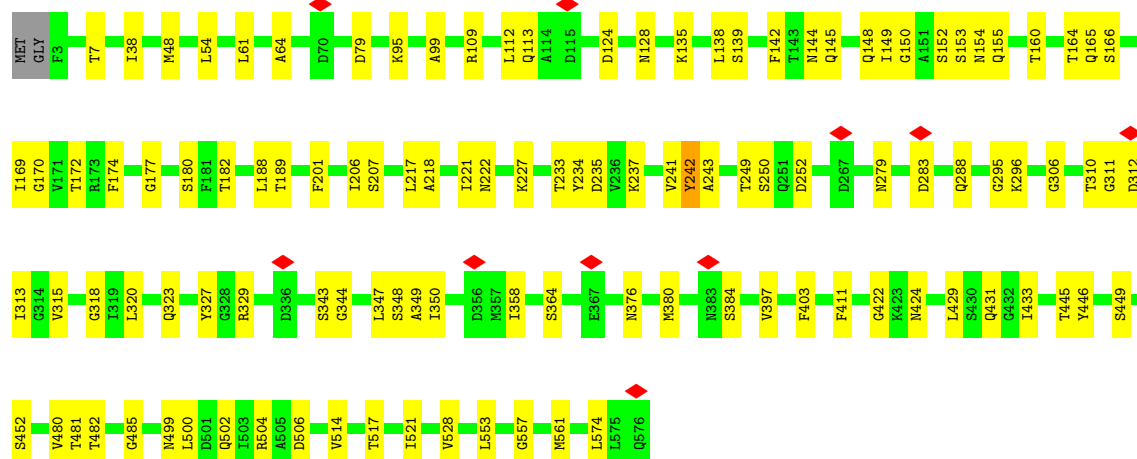
• Molecule 1: Flagellin A

Chain G:  84% 16%

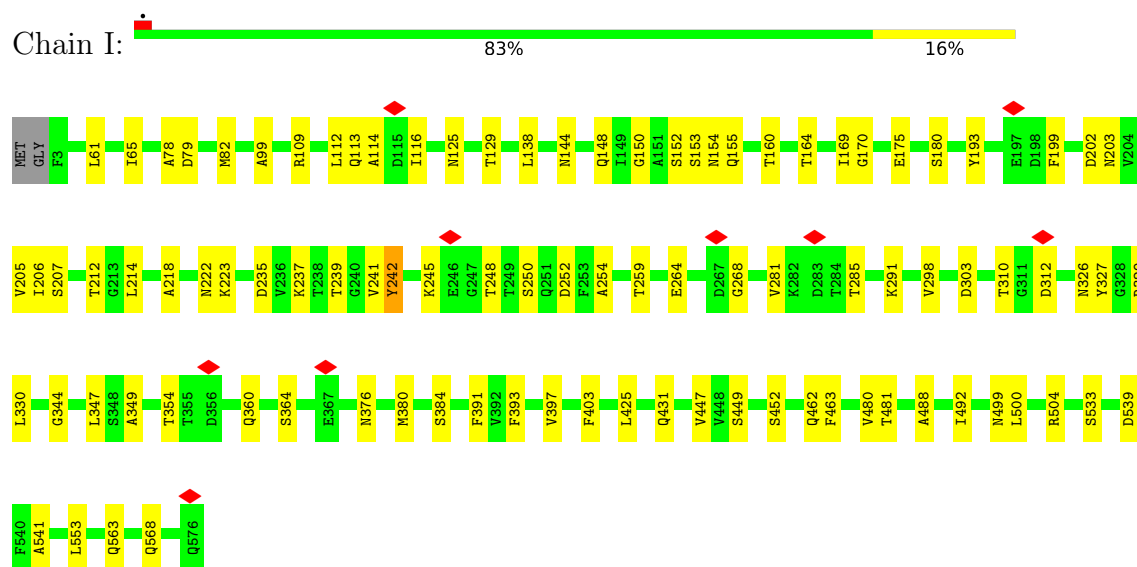


• Molecule 1: Flagellin A

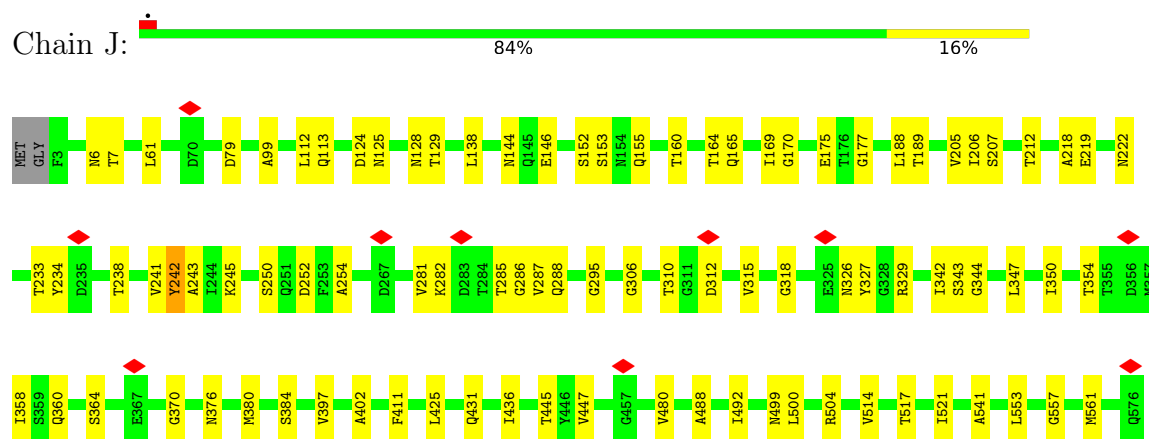
Chain H:  80% 20%



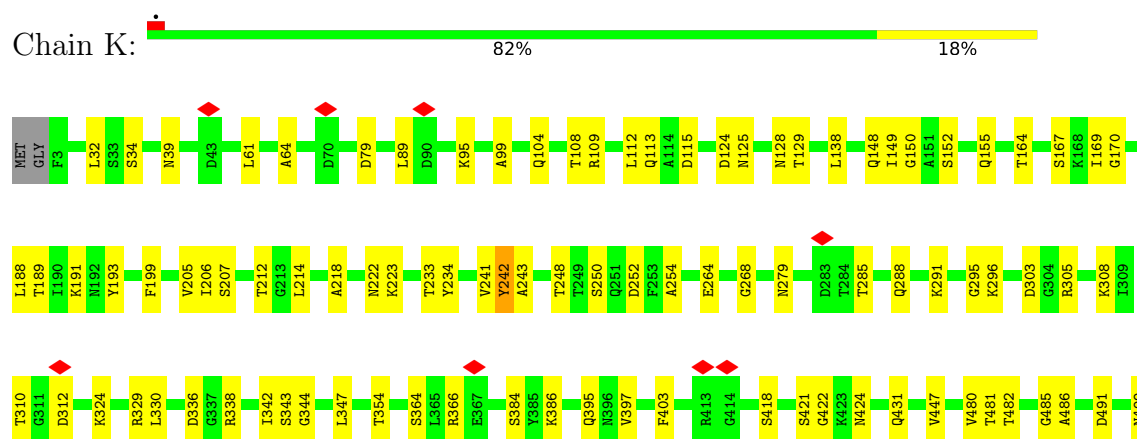
- Molecule 1: Flagellin A



- Molecule 1: Flagellin A

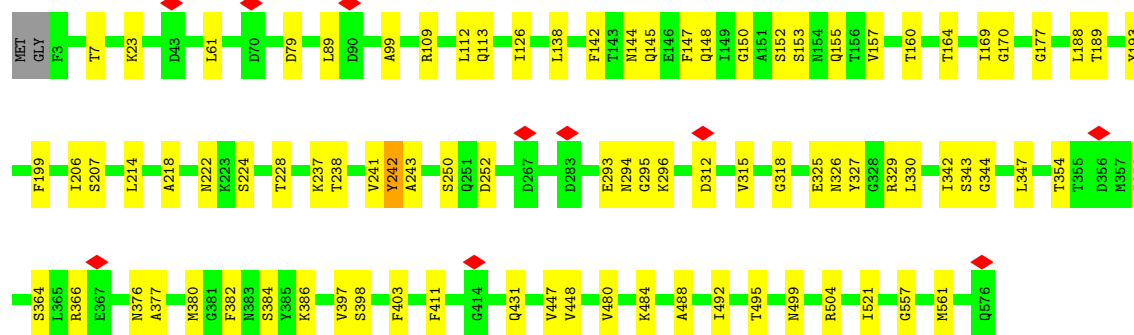
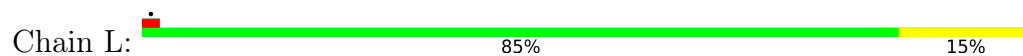


- Molecule 1: Flagellin A

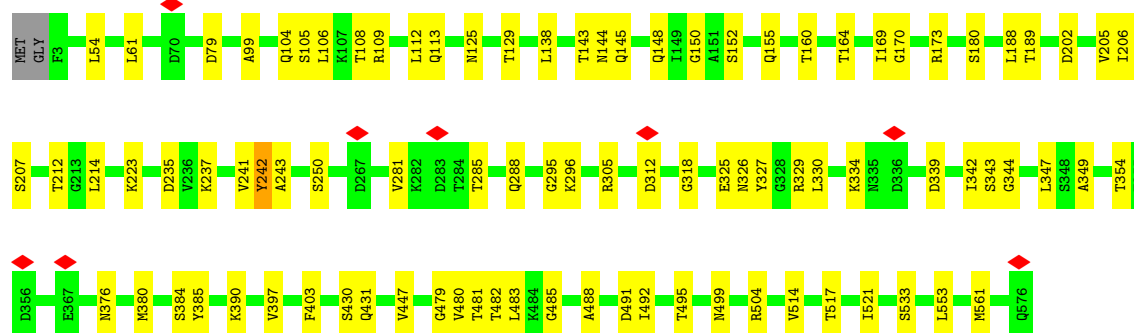
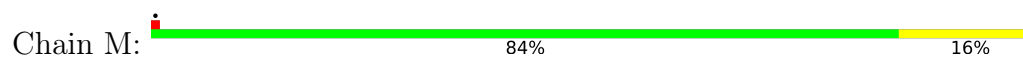




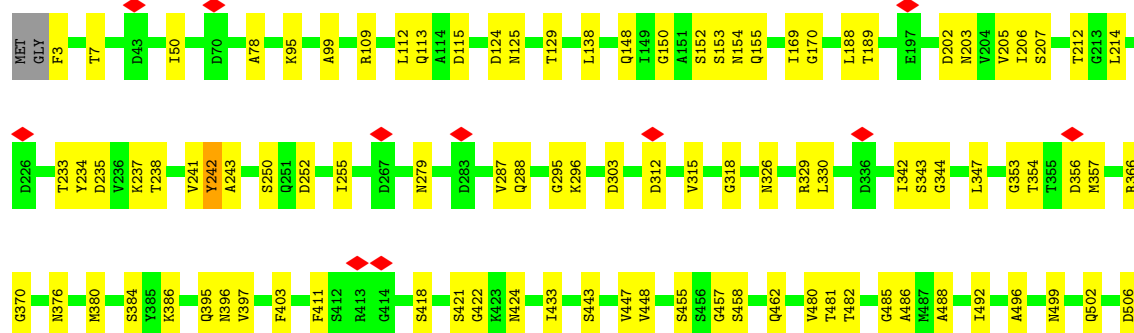
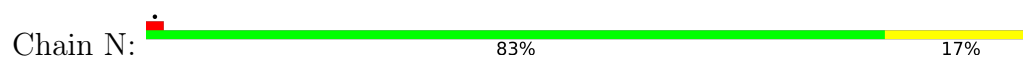
• Molecule 1: Flagellin A



• Molecule 1: Flagellin A



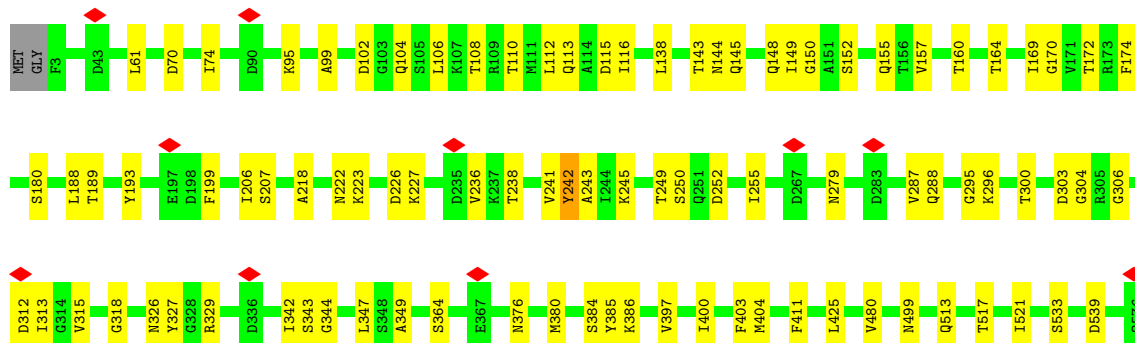
• Molecule 1: Flagellin A





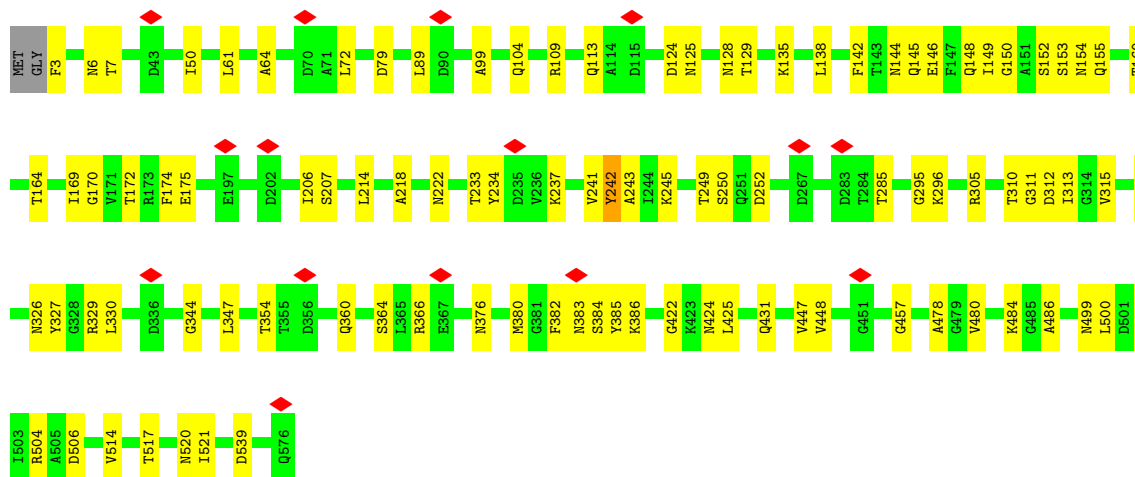
• Molecule 1: Flagellin A

Chain O: 84% 16%



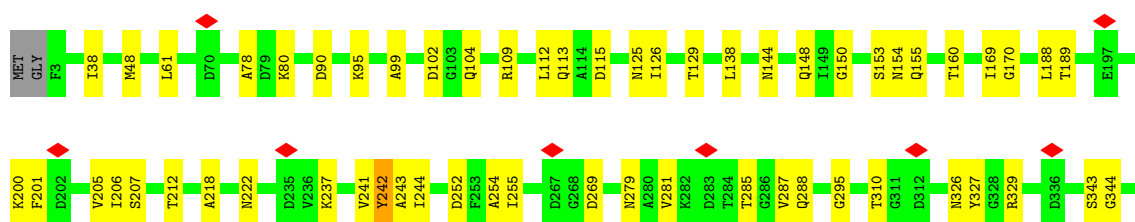
• Molecule 1: Flagellin A

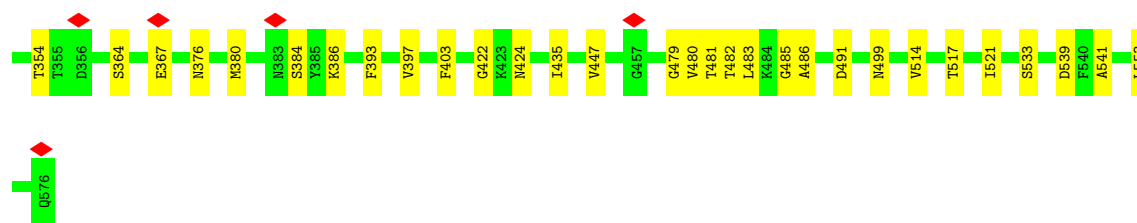
Chain P: 82% 17%



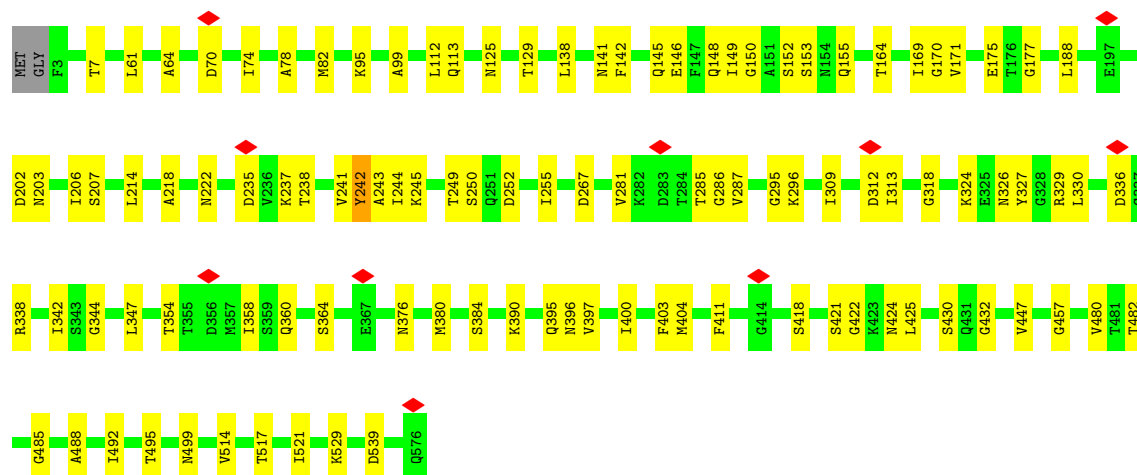
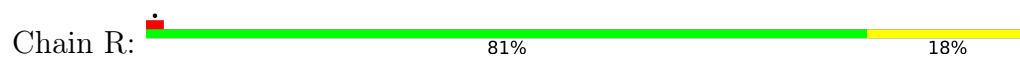
• Molecule 1: Flagellin A

Chain Q: 84% 15%

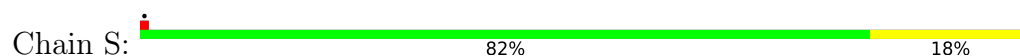




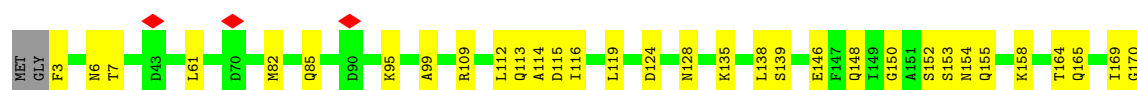
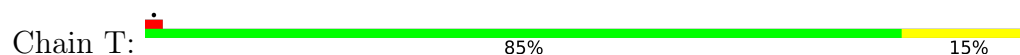
• Molecule 1: Flagellin A

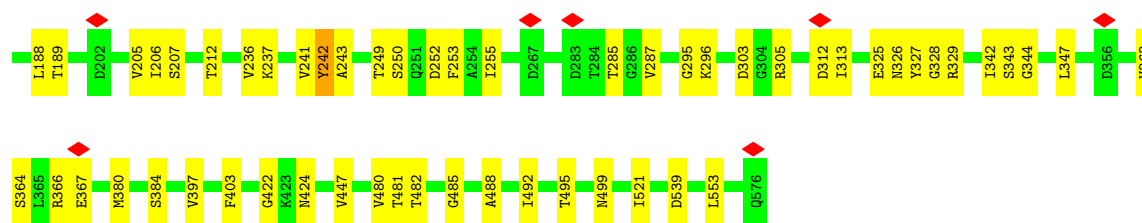


• Molecule 1: Flagellin A

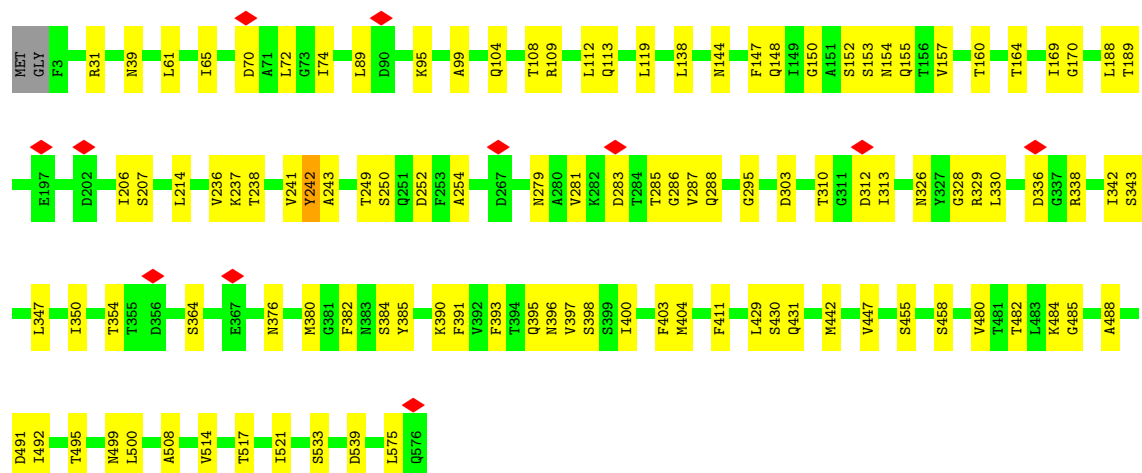
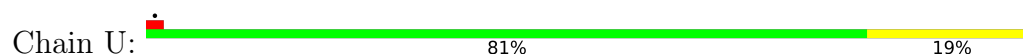


• Molecule 1: Flagellin A

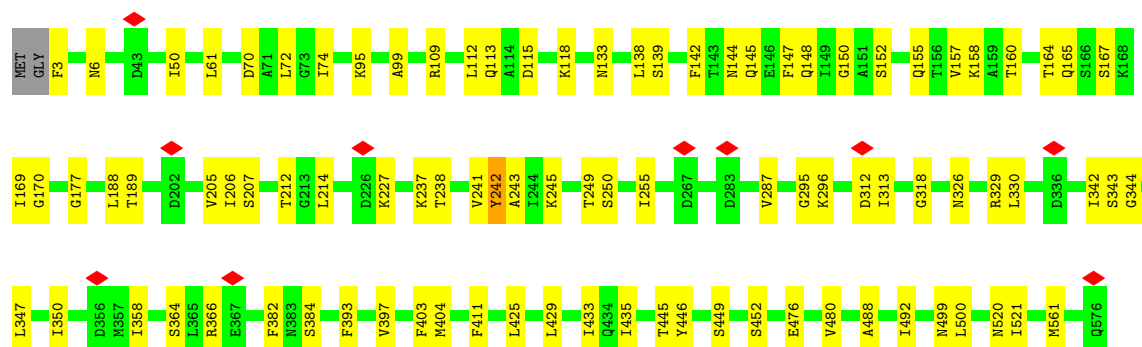
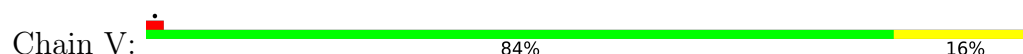




• Molecule 1: Flagellin A



• Molecule 1: Flagellin A



4 Experimental information

Property	Value	Source
EM reconstruction method	HELICAL	Depositor
Imposed symmetry	HELICAL, twist=65.32°, rise=4.8 Å, axial sym=C1	Depositor
Number of segments used	116959	Depositor
Resolution determination method	OTHER	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	51	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.019	Depositor
Minimum map value	-0.008	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.0054	Depositor
Map size (Å)	414.72003, 414.72003, 453.6	wwPDB
Map dimensions	384, 384, 420	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.08, 1.08, 1.08	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: P8E

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	0.33	0/4185	0.47	0/5642
1	B	0.33	0/4185	0.47	0/5642
1	C	0.33	0/4185	0.47	0/5642
1	D	0.33	0/4185	0.47	0/5642
1	E	0.33	0/4185	0.47	0/5642
1	F	0.33	0/4185	0.47	0/5642
1	G	0.33	0/4185	0.46	0/5642
1	H	0.33	0/4185	0.46	0/5642
1	I	0.33	0/4185	0.47	0/5642
1	J	0.33	0/4185	0.47	0/5642
1	K	0.33	0/4185	0.47	0/5642
1	L	0.33	0/4185	0.47	0/5642
1	M	0.33	0/4185	0.47	0/5642
1	N	0.33	0/4185	0.47	0/5642
1	O	0.33	0/4185	0.47	0/5642
1	P	0.33	0/4185	0.46	0/5642
1	Q	0.33	0/4185	0.47	0/5642
1	R	0.32	0/4185	0.47	0/5642
1	S	0.33	0/4185	0.47	0/5642
1	T	0.33	0/4185	0.47	0/5642
1	U	0.33	0/4185	0.47	0/5642
1	V	0.32	0/4185	0.46	0/5642
All	All	0.33	0/92070	0.47	0/124124

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	2
1	C	0	2
1	D	0	2
1	E	0	2
1	F	0	2
1	G	0	2
1	H	0	2
1	I	0	2
1	J	0	2
1	K	0	2
1	L	0	2
1	M	0	2
1	N	0	2
1	O	0	2
1	P	0	2
1	Q	0	2
1	R	0	2
1	S	0	2
1	T	0	2
1	U	0	2
1	V	0	2
All	All	0	44

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

5 of 44 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	206	ILE	Peptide
1	A	242	TYR	Peptide
1	B	206	ILE	Peptide
1	B	242	TYR	Peptide
1	C	206	ILE	Peptide

5.2 Too-close contacts

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

the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4159	0	4125	71	0
1	B	4159	0	4125	60	0
1	C	4159	0	4125	56	0
1	D	4159	0	4125	77	0
1	E	4159	0	4125	63	0
1	F	4159	0	4125	72	0
1	G	4159	0	4125	66	0
1	H	4159	0	4125	68	0
1	I	4159	0	4125	60	0
1	J	4159	0	4125	61	0
1	K	4159	0	4125	67	0
1	L	4159	0	4125	60	0
1	M	4159	0	4125	61	0
1	N	4159	0	4125	63	0
1	O	4159	0	4125	60	0
1	P	4159	0	4125	72	0
1	Q	4159	0	4125	61	0
1	R	4159	0	4125	70	0
1	S	4159	0	4125	65	0
1	T	4159	0	4125	56	0
1	U	4159	0	4125	75	0
1	V	4159	0	4125	59	0
2	A	272	0	0	13	0
2	B	272	0	0	11	0
2	C	272	0	0	16	0
2	D	272	0	0	13	0
2	E	272	0	0	10	0
2	F	272	0	0	14	0
2	G	272	0	0	13	0
2	H	272	0	0	14	0
2	I	272	0	0	14	0
2	J	272	0	0	13	0
2	K	272	0	0	14	0
2	L	272	0	0	14	0
2	M	272	0	0	14	0
2	N	272	0	0	13	0
2	O	272	0	0	13	0
2	P	272	0	0	16	0
2	Q	272	0	0	16	0
2	R	272	0	0	13	0
2	S	272	0	0	12	0
2	T	272	0	0	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	U	272	0	0	11	0
2	V	272	0	0	8	0
All	All	97482	0	90750	1596	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 1596 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:250:SER:HB3	1:U:312:ASP:HB3	1.62	0.81
1:R:250:SER:HB3	1:R:312:ASP:HB3	1.61	0.81
1:S:250:SER:HB3	1:S:312:ASP:HB3	1.63	0.81
1:D:344:GLY:H	1:D:347:LEU:HD11	1.47	0.79
1:O:144:ASN:H	1:O:160:THR:HG22	1.47	0.78

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	572/576 (99%)	524 (92%)	47 (8%)	1 (0%)	47	81
1	B	572/576 (99%)	526 (92%)	45 (8%)	1 (0%)	47	81
1	C	572/576 (99%)	524 (92%)	47 (8%)	1 (0%)	47	81
1	D	572/576 (99%)	522 (91%)	49 (9%)	1 (0%)	47	81
1	E	572/576 (99%)	522 (91%)	49 (9%)	1 (0%)	47	81
1	F	572/576 (99%)	517 (90%)	54 (9%)	1 (0%)	47	81
1	G	572/576 (99%)	528 (92%)	43 (8%)	1 (0%)	47	81
1	H	572/576 (99%)	521 (91%)	50 (9%)	1 (0%)	47	81

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	I	572/576 (99%)	523 (91%)	48 (8%)	1 (0%)	47	81
1	J	572/576 (99%)	526 (92%)	45 (8%)	1 (0%)	47	81
1	K	572/576 (99%)	519 (91%)	52 (9%)	1 (0%)	47	81
1	L	572/576 (99%)	523 (91%)	48 (8%)	1 (0%)	47	81
1	M	572/576 (99%)	526 (92%)	45 (8%)	1 (0%)	47	81
1	N	572/576 (99%)	527 (92%)	44 (8%)	1 (0%)	47	81
1	O	572/576 (99%)	517 (90%)	54 (9%)	1 (0%)	47	81
1	P	572/576 (99%)	521 (91%)	50 (9%)	1 (0%)	47	81
1	Q	572/576 (99%)	518 (91%)	53 (9%)	1 (0%)	47	81
1	R	572/576 (99%)	522 (91%)	49 (9%)	1 (0%)	47	81
1	S	572/576 (99%)	521 (91%)	50 (9%)	1 (0%)	47	81
1	T	572/576 (99%)	519 (91%)	52 (9%)	1 (0%)	47	81
1	U	572/576 (99%)	524 (92%)	47 (8%)	1 (0%)	47	81
1	V	572/576 (99%)	523 (91%)	48 (8%)	1 (0%)	47	81
All	All	12584/12672 (99%)	11493 (91%)	1069 (8%)	22 (0%)	50	81

5 of 22 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	207	SER
1	F	207	SER
1	G	207	SER
1	H	207	SER
1	J	207	SER

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	450/451 (100%)	450 (100%)	0	100	100
1	B	450/451 (100%)	450 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	450/451 (100%)	450 (100%)	0	100	100
1	D	450/451 (100%)	450 (100%)	0	100	100
1	E	450/451 (100%)	450 (100%)	0	100	100
1	F	450/451 (100%)	450 (100%)	0	100	100
1	G	450/451 (100%)	450 (100%)	0	100	100
1	H	450/451 (100%)	450 (100%)	0	100	100
1	I	450/451 (100%)	450 (100%)	0	100	100
1	J	450/451 (100%)	450 (100%)	0	100	100
1	K	450/451 (100%)	450 (100%)	0	100	100
1	L	450/451 (100%)	450 (100%)	0	100	100
1	M	450/451 (100%)	450 (100%)	0	100	100
1	N	450/451 (100%)	450 (100%)	0	100	100
1	O	450/451 (100%)	450 (100%)	0	100	100
1	P	450/451 (100%)	450 (100%)	0	100	100
1	Q	450/451 (100%)	450 (100%)	0	100	100
1	R	450/451 (100%)	450 (100%)	0	100	100
1	S	450/451 (100%)	450 (100%)	0	100	100
1	T	450/451 (100%)	450 (100%)	0	100	100
1	U	450/451 (100%)	450 (100%)	0	100	100
1	V	450/451 (100%)	450 (100%)	0	100	100
All	All	9900/9922 (100%)	9900 (100%)	0	100	100

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

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 275 such sidechains are listed below:

Mol	Chain	Res	Type
1	S	155	GLN
1	T	85	GLN
1	U	511	GLN
1	H	104	GLN
1	H	63	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

374 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	P8E	F	602	-	15,16,17	1.79	2 (13%)	17,23,26	1.29	2 (11%)
2	P8E	O	606	-	15,16,17	1.80	2 (13%)	17,23,26	1.51	5 (29%)
2	P8E	S	605	-	15,16,17	1.82	2 (13%)	17,23,26	1.41	4 (23%)
2	P8E	E	611	-	15,16,17	1.82	2 (13%)	17,23,26	1.25	3 (17%)
2	P8E	I	601	-	15,16,17	1.77	2 (13%)	17,23,26	1.19	2 (11%)
2	P8E	Q	605	-	15,16,17	1.82	2 (13%)	17,23,26	1.47	5 (29%)
2	P8E	B	602	-	15,16,17	1.79	2 (13%)	17,23,26	1.28	1 (5%)
2	P8E	T	613	-	15,16,17	1.82	2 (13%)	17,23,26	1.23	2 (11%)
2	P8E	H	617	-	15,16,17	1.90	2 (13%)	17,23,26	1.72	4 (23%)
2	P8E	F	610	-	15,16,17	1.82	2 (13%)	17,23,26	1.28	2 (11%)
2	P8E	T	604	-	15,16,17	1.83	2 (13%)	17,23,26	1.40	3 (17%)
2	P8E	E	615	-	15,16,17	1.76	2 (13%)	17,23,26	1.41	4 (23%)
2	P8E	R	604	-	15,16,17	1.82	2 (13%)	17,23,26	1.41	4 (23%)
2	P8E	P	602	-	15,16,17	1.84	2 (13%)	17,23,26	1.56	3 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	P	617	-	15,16,17	1.89	2 (13%)	17,23,26	1.76	6 (35%)
2	P8E	M	601	-	15,16,17	1.78	2 (13%)	17,23,26	1.19	2 (11%)
2	P8E	F	607	-	15,16,17	1.90	2 (13%)	17,23,26	1.62	5 (29%)
2	P8E	A	605	-	15,16,17	1.81	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	U	608	-	15,16,17	1.79	2 (13%)	17,23,26	1.45	3 (17%)
2	P8E	E	612	-	15,16,17	1.79	2 (13%)	17,23,26	1.55	5 (29%)
2	P8E	V	608	-	15,16,17	1.77	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	P	610	-	15,16,17	1.82	2 (13%)	17,23,26	1.30	3 (17%)
2	P8E	E	604	-	15,16,17	1.84	2 (13%)	17,23,26	1.44	4 (23%)
2	P8E	T	612	-	15,16,17	1.81	2 (13%)	17,23,26	1.42	5 (29%)
2	P8E	B	605	-	15,16,17	1.80	2 (13%)	17,23,26	1.42	4 (23%)
2	P8E	T	616	-	15,16,17	1.77	2 (13%)	17,23,26	1.37	3 (17%)
2	P8E	K	616	-	15,16,17	1.76	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	K	613	-	15,16,17	1.81	2 (13%)	17,23,26	1.29	3 (17%)
2	P8E	R	603	-	15,16,17	1.80	2 (13%)	17,23,26	1.46	5 (29%)
2	P8E	U	613	-	15,16,17	1.82	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	Q	616	-	15,16,17	1.80	2 (13%)	17,23,26	1.41	3 (17%)
2	P8E	F	604	-	15,16,17	1.82	2 (13%)	17,23,26	1.46	4 (23%)
2	P8E	D	610	-	15,16,17	1.82	2 (13%)	17,23,26	1.29	3 (17%)
2	P8E	E	602	-	15,16,17	1.85	2 (13%)	17,23,26	1.48	3 (17%)
2	P8E	M	605	-	15,16,17	1.83	2 (13%)	17,23,26	1.47	5 (29%)
2	P8E	T	601	-	15,16,17	1.81	2 (13%)	17,23,26	1.22	2 (11%)
2	P8E	V	616	-	15,16,17	1.73	2 (13%)	17,23,26	1.41	4 (23%)
2	P8E	S	617	-	15,16,17	1.91	2 (13%)	17,23,26	1.75	5 (29%)
2	P8E	H	602	-	15,16,17	1.78	2 (13%)	17,23,26	1.30	2 (11%)
2	P8E	I	615	-	15,16,17	1.80	2 (13%)	17,23,26	1.43	5 (29%)
2	P8E	E	616	-	15,16,17	1.77	2 (13%)	17,23,26	1.22	2 (11%)
2	P8E	P	604	-	15,16,17	1.81	2 (13%)	17,23,26	1.43	4 (23%)
2	P8E	N	614	-	15,16,17	1.85	2 (13%)	17,23,26	1.24	2 (11%)
2	P8E	Q	606	-	15,16,17	1.78	2 (13%)	17,23,26	1.53	5 (29%)
2	P8E	S	613	-	15,16,17	1.81	2 (13%)	17,23,26	1.25	1 (5%)
2	P8E	B	607	-	15,16,17	1.89	2 (13%)	17,23,26	1.51	4 (23%)
2	P8E	D	603	-	15,16,17	1.80	2 (13%)	17,23,26	1.49	4 (23%)
2	P8E	P	612	-	15,16,17	1.76	2 (13%)	17,23,26	1.50	4 (23%)
2	P8E	E	601	-	15,16,17	1.83	2 (13%)	17,23,26	1.23	3 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	O	615	-	15,16,17	1.79	2 (13%)	17,23,26	1.40	3 (17%)
2	P8E	P	611	-	15,16,17	1.82	2 (13%)	17,23,26	1.28	2 (11%)
2	P8E	J	606	-	15,16,17	1.81	2 (13%)	17,23,26	1.54	4 (23%)
2	P8E	V	606	-	15,16,17	1.82	2 (13%)	17,23,26	1.52	5 (29%)
2	P8E	V	603	-	15,16,17	1.79	2 (13%)	17,23,26	1.42	4 (23%)
2	P8E	C	603	-	15,16,17	1.81	2 (13%)	17,23,26	1.46	5 (29%)
2	P8E	U	605	-	15,16,17	1.80	2 (13%)	17,23,26	1.39	4 (23%)
2	P8E	L	610	-	15,16,17	1.84	2 (13%)	17,23,26	1.41	2 (11%)
2	P8E	K	610	-	15,16,17	1.82	2 (13%)	17,23,26	1.28	2 (11%)
2	P8E	K	612	-	15,16,17	1.77	2 (13%)	17,23,26	1.50	5 (29%)
2	P8E	I	608	-	15,16,17	1.78	2 (13%)	17,23,26	1.58	4 (23%)
2	P8E	C	615	-	15,16,17	1.79	2 (13%)	17,23,26	1.36	2 (11%)
2	P8E	M	616	-	15,16,17	1.77	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	R	612	-	15,16,17	1.80	2 (13%)	17,23,26	1.44	5 (29%)
2	P8E	P	605	-	15,16,17	1.81	2 (13%)	17,23,26	1.47	5 (29%)
2	P8E	G	609	-	15,16,17	1.85	2 (13%)	17,23,26	1.31	2 (11%)
2	P8E	H	614	-	15,16,17	1.78	2 (13%)	17,23,26	1.29	2 (11%)
2	P8E	E	605	-	15,16,17	1.81	2 (13%)	17,23,26	1.48	5 (29%)
2	P8E	G	614	-	15,16,17	1.84	2 (13%)	17,23,26	1.25	2 (11%)
2	P8E	J	610	-	15,16,17	1.84	2 (13%)	17,23,26	1.37	3 (17%)
2	P8E	K	603	-	15,16,17	1.80	2 (13%)	17,23,26	1.45	5 (29%)
2	P8E	M	606	-	15,16,17	1.82	2 (13%)	17,23,26	1.54	5 (29%)
2	P8E	F	601	-	15,16,17	1.85	2 (13%)	17,23,26	1.32	3 (17%)
2	P8E	O	613	-	15,16,17	1.83	2 (13%)	17,23,26	1.36	4 (23%)
2	P8E	U	614	-	15,16,17	1.85	2 (13%)	17,23,26	1.27	3 (17%)
2	P8E	J	617	-	15,16,17	1.93	2 (13%)	17,23,26	1.72	4 (23%)
2	P8E	M	615	-	15,16,17	1.78	2 (13%)	17,23,26	1.40	4 (23%)
2	P8E	K	614	-	15,16,17	1.84	2 (13%)	17,23,26	1.29	2 (11%)
2	P8E	J	615	-	15,16,17	1.78	2 (13%)	17,23,26	1.48	4 (23%)
2	P8E	J	616	-	15,16,17	1.80	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	P	607	-	15,16,17	1.85	2 (13%)	17,23,26	1.48	4 (23%)
2	P8E	D	602	-	15,16,17	1.78	2 (13%)	17,23,26	1.26	2 (11%)
2	P8E	T	609	-	15,16,17	1.87	2 (13%)	17,23,26	1.48	4 (23%)
2	P8E	L	602	-	15,16,17	1.80	2 (13%)	17,23,26	1.33	2 (11%)
2	P8E	L	617	-	15,16,17	1.91	2 (13%)	17,23,26	1.70	5 (29%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	N	610	-	15,16,17	1.83	2 (13%)	17,23,26	1.22	1 (5%)
2	P8E	N	613	-	15,16,17	1.82	2 (13%)	17,23,26	1.27	2 (11%)
2	P8E	B	610	-	15,16,17	1.83	2 (13%)	17,23,26	1.36	2 (11%)
2	P8E	B	606	-	15,16,17	1.80	2 (13%)	17,23,26	1.53	4 (23%)
2	P8E	N	612	-	15,16,17	1.78	2 (13%)	17,23,26	1.48	5 (29%)
2	P8E	F	605	-	15,16,17	1.81	2 (13%)	17,23,26	1.47	5 (29%)
2	P8E	P	608	-	15,16,17	1.81	2 (13%)	17,23,26	1.47	4 (23%)
2	P8E	C	610	-	15,16,17	1.85	2 (13%)	17,23,26	1.45	3 (17%)
2	P8E	H	604	-	15,16,17	1.83	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	R	617	-	15,16,17	1.93	2 (13%)	17,23,26	1.72	4 (23%)
2	P8E	T	610	-	15,16,17	1.81	2 (13%)	17,23,26	1.28	3 (17%)
2	P8E	K	611	-	15,16,17	1.86	2 (13%)	17,23,26	1.53	4 (23%)
2	P8E	C	607	-	15,16,17	1.88	2 (13%)	17,23,26	1.53	4 (23%)
2	P8E	Q	613	-	15,16,17	1.82	2 (13%)	17,23,26	1.29	3 (17%)
2	P8E	R	613	-	15,16,17	1.85	2 (13%)	17,23,26	1.30	3 (17%)
2	P8E	P	609	-	15,16,17	1.84	2 (13%)	17,23,26	1.40	3 (17%)
2	P8E	V	614	-	15,16,17	1.82	2 (13%)	17,23,26	1.27	2 (11%)
2	P8E	A	615	-	15,16,17	1.80	2 (13%)	17,23,26	1.39	4 (23%)
2	P8E	U	616	-	15,16,17	1.79	2 (13%)	17,23,26	1.34	3 (17%)
2	P8E	M	607	-	15,16,17	1.90	2 (13%)	17,23,26	1.49	3 (17%)
2	P8E	M	602	-	15,16,17	1.78	2 (13%)	17,23,26	1.34	2 (11%)
2	P8E	V	613	-	15,16,17	1.84	2 (13%)	17,23,26	1.29	3 (17%)
2	P8E	E	606	-	15,16,17	1.83	2 (13%)	17,23,26	1.63	5 (29%)
2	P8E	U	607	-	15,16,17	1.91	2 (13%)	17,23,26	1.59	4 (23%)
2	P8E	J	605	-	15,16,17	1.81	2 (13%)	17,23,26	1.50	4 (23%)
2	P8E	E	617	-	15,16,17	1.94	2 (13%)	17,23,26	1.81	5 (29%)
2	P8E	D	615	-	15,16,17	1.79	2 (13%)	17,23,26	1.46	5 (29%)
2	P8E	N	604	-	15,16,17	1.81	2 (13%)	17,23,26	1.37	3 (17%)
2	P8E	T	603	-	15,16,17	1.78	2 (13%)	17,23,26	1.44	3 (17%)
2	P8E	F	609	-	15,16,17	1.85	2 (13%)	17,23,26	1.45	3 (17%)
2	P8E	B	615	-	15,16,17	1.79	2 (13%)	17,23,26	1.44	5 (29%)
2	P8E	M	612	-	15,16,17	1.80	2 (13%)	17,23,26	1.46	5 (29%)
2	P8E	P	613	-	15,16,17	1.87	2 (13%)	17,23,26	1.39	4 (23%)
2	P8E	J	601	-	15,16,17	1.86	2 (13%)	17,23,26	1.19	2 (11%)
2	P8E	D	605	-	15,16,17	1.81	2 (13%)	17,23,26	1.41	3 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	I	613	-	15,16,17	1.81	2 (13%)	17,23,26	1.29	2 (11%)
2	P8E	O	609	-	15,16,17	1.88	2 (13%)	17,23,26	1.42	3 (17%)
2	P8E	L	605	-	15,16,17	1.80	2 (13%)	17,23,26	1.41	4 (23%)
2	P8E	A	612	-	15,16,17	1.77	2 (13%)	17,23,26	1.55	5 (29%)
2	P8E	Q	604	-	15,16,17	1.84	2 (13%)	17,23,26	1.44	4 (23%)
2	P8E	H	610	-	15,16,17	1.84	2 (13%)	17,23,26	1.41	3 (17%)
2	P8E	L	613	-	15,16,17	1.85	2 (13%)	17,23,26	1.28	3 (17%)
2	P8E	L	611	-	15,16,17	1.84	2 (13%)	17,23,26	1.32	3 (17%)
2	P8E	N	615	-	15,16,17	1.81	2 (13%)	17,23,26	1.34	2 (11%)
2	P8E	T	602	-	15,16,17	1.80	2 (13%)	17,23,26	1.41	3 (17%)
2	P8E	S	611	-	15,16,17	1.84	2 (13%)	17,23,26	1.38	4 (23%)
2	P8E	R	602	-	15,16,17	1.81	2 (13%)	17,23,26	1.30	1 (5%)
2	P8E	N	602	-	15,16,17	1.80	2 (13%)	17,23,26	1.33	2 (11%)
2	P8E	H	607	-	15,16,17	1.87	2 (13%)	17,23,26	1.63	3 (17%)
2	P8E	B	612	-	15,16,17	1.81	2 (13%)	17,23,26	1.48	5 (29%)
2	P8E	G	613	-	15,16,17	1.83	2 (13%)	17,23,26	1.26	2 (11%)
2	P8E	L	615	-	15,16,17	1.82	2 (13%)	17,23,26	1.52	5 (29%)
2	P8E	G	611	-	15,16,17	1.83	2 (13%)	17,23,26	1.26	2 (11%)
2	P8E	V	604	-	15,16,17	1.81	2 (13%)	17,23,26	1.42	3 (17%)
2	P8E	R	611	-	15,16,17	1.82	2 (13%)	17,23,26	1.33	2 (11%)
2	P8E	B	611	-	15,16,17	1.88	2 (13%)	17,23,26	1.42	4 (23%)
2	P8E	R	610	-	15,16,17	1.83	2 (13%)	17,23,26	1.31	3 (17%)
2	P8E	H	603	-	15,16,17	1.82	2 (13%)	17,23,26	1.46	4 (23%)
2	P8E	F	617	-	15,16,17	1.93	2 (13%)	17,23,26	1.67	4 (23%)
2	P8E	S	608	-	15,16,17	1.79	2 (13%)	17,23,26	1.46	4 (23%)
2	P8E	K	617	-	15,16,17	1.93	2 (13%)	17,23,26	1.72	4 (23%)
2	P8E	K	605	-	15,16,17	1.82	2 (13%)	17,23,26	1.39	4 (23%)
2	P8E	A	611	-	15,16,17	1.79	2 (13%)	17,23,26	1.21	3 (17%)
2	P8E	I	605	-	15,16,17	1.80	2 (13%)	17,23,26	1.35	3 (17%)
2	P8E	G	608	-	15,16,17	1.79	2 (13%)	17,23,26	1.50	5 (29%)
2	P8E	F	616	-	15,16,17	1.77	2 (13%)	17,23,26	1.56	5 (29%)
2	P8E	J	608	-	15,16,17	1.77	2 (13%)	17,23,26	1.37	3 (17%)
2	P8E	P	606	-	15,16,17	1.79	2 (13%)	17,23,26	1.54	5 (29%)
2	P8E	G	615	-	15,16,17	1.76	2 (13%)	17,23,26	1.61	4 (23%)
2	P8E	P	615	-	15,16,17	1.82	2 (13%)	17,23,26	1.50	4 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	B	601	-	15,16,17	1.83	2 (13%)	17,23,26	1.26	3 (17%)
2	P8E	G	607	-	15,16,17	1.87	2 (13%)	17,23,26	1.66	3 (17%)
2	P8E	K	604	-	15,16,17	1.81	2 (13%)	17,23,26	1.42	4 (23%)
2	P8E	L	608	-	15,16,17	1.77	2 (13%)	17,23,26	1.24	1 (5%)
2	P8E	V	609	-	15,16,17	1.84	2 (13%)	17,23,26	1.31	2 (11%)
2	P8E	N	605	-	15,16,17	1.79	2 (13%)	17,23,26	1.34	3 (17%)
2	P8E	C	614	-	15,16,17	1.84	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	D	606	-	15,16,17	1.78	2 (13%)	17,23,26	1.55	5 (29%)
2	P8E	F	606	-	15,16,17	1.79	2 (13%)	17,23,26	1.60	5 (29%)
2	P8E	T	607	-	15,16,17	1.89	2 (13%)	17,23,26	1.57	4 (23%)
2	P8E	D	617	-	15,16,17	1.92	2 (13%)	17,23,26	1.80	5 (29%)
2	P8E	L	609	-	15,16,17	1.85	2 (13%)	17,23,26	1.37	3 (17%)
2	P8E	F	615	-	15,16,17	1.80	2 (13%)	17,23,26	1.39	4 (23%)
2	P8E	L	606	-	15,16,17	1.80	2 (13%)	17,23,26	1.52	5 (29%)
2	P8E	I	609	-	15,16,17	1.89	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	Q	609	-	15,16,17	1.81	2 (13%)	17,23,26	1.24	3 (17%)
2	P8E	H	611	-	15,16,17	1.87	2 (13%)	17,23,26	1.39	4 (23%)
2	P8E	M	608	-	15,16,17	1.76	2 (13%)	17,23,26	1.41	3 (17%)
2	P8E	R	615	-	15,16,17	1.77	2 (13%)	17,23,26	1.38	4 (23%)
2	P8E	A	608	-	15,16,17	1.76	2 (13%)	17,23,26	1.31	2 (11%)
2	P8E	L	614	-	15,16,17	1.81	2 (13%)	17,23,26	1.26	2 (11%)
2	P8E	F	612	-	15,16,17	1.81	2 (13%)	17,23,26	1.51	5 (29%)
2	P8E	D	613	-	15,16,17	1.83	2 (13%)	17,23,26	1.31	2 (11%)
2	P8E	S	614	-	15,16,17	1.84	2 (13%)	17,23,26	1.26	3 (17%)
2	P8E	Q	601	-	15,16,17	1.79	2 (13%)	17,23,26	1.21	2 (11%)
2	P8E	D	604	-	15,16,17	1.80	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	F	611	-	15,16,17	1.86	2 (13%)	17,23,26	1.36	2 (11%)
2	P8E	N	606	-	15,16,17	1.81	2 (13%)	17,23,26	1.59	5 (29%)
2	P8E	T	615	-	15,16,17	1.80	2 (13%)	17,23,26	1.48	5 (29%)
2	P8E	O	614	-	15,16,17	1.83	2 (13%)	17,23,26	1.26	3 (17%)
2	P8E	A	609	-	15,16,17	1.84	2 (13%)	17,23,26	1.34	3 (17%)
2	P8E	G	605	-	15,16,17	1.80	2 (13%)	17,23,26	1.40	4 (23%)
2	P8E	B	608	-	15,16,17	1.76	2 (13%)	17,23,26	1.57	4 (23%)
2	P8E	V	601	-	15,16,17	1.83	2 (13%)	17,23,26	1.23	2 (11%)
2	P8E	P	616	-	15,16,17	1.77	2 (13%)	17,23,26	1.38	3 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	S	604	-	15,16,17	1.81	2 (13%)	17,23,26	1.37	3 (17%)
2	P8E	O	611	-	15,16,17	1.83	2 (13%)	17,23,26	1.34	3 (17%)
2	P8E	U	602	-	15,16,17	1.81	2 (13%)	17,23,26	1.42	2 (11%)
2	P8E	U	609	-	15,16,17	1.85	2 (13%)	17,23,26	1.28	1 (5%)
2	P8E	R	608	-	15,16,17	1.80	2 (13%)	17,23,26	1.24	2 (11%)
2	P8E	C	612	-	15,16,17	1.78	2 (13%)	17,23,26	1.51	4 (23%)
2	P8E	Q	607	-	15,16,17	1.92	2 (13%)	17,23,26	1.53	4 (23%)
2	P8E	V	607	-	15,16,17	1.87	2 (13%)	17,23,26	1.77	3 (17%)
2	P8E	P	601	-	15,16,17	1.85	2 (13%)	17,23,26	1.24	3 (17%)
2	P8E	R	607	-	15,16,17	1.86	2 (13%)	17,23,26	1.47	4 (23%)
2	P8E	C	611	-	15,16,17	1.81	2 (13%)	17,23,26	1.32	3 (17%)
2	P8E	F	613	-	15,16,17	1.80	2 (13%)	17,23,26	1.23	2 (11%)
2	P8E	G	610	-	15,16,17	1.83	2 (13%)	17,23,26	1.36	2 (11%)
2	P8E	C	604	-	15,16,17	1.83	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	D	616	-	15,16,17	1.77	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	L	612	-	15,16,17	1.79	2 (13%)	17,23,26	1.44	4 (23%)
2	P8E	J	607	-	15,16,17	1.87	2 (13%)	17,23,26	1.60	3 (17%)
2	P8E	U	612	-	15,16,17	1.81	2 (13%)	17,23,26	1.43	4 (23%)
2	P8E	I	616	-	15,16,17	1.77	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	M	609	-	15,16,17	1.86	2 (13%)	17,23,26	1.43	2 (11%)
2	P8E	L	604	-	15,16,17	1.83	2 (13%)	17,23,26	1.43	4 (23%)
2	P8E	C	602	-	15,16,17	1.78	2 (13%)	17,23,26	1.27	1 (5%)
2	P8E	G	606	-	15,16,17	1.78	2 (13%)	17,23,26	1.53	5 (29%)
2	P8E	A	607	-	15,16,17	1.89	2 (13%)	17,23,26	1.54	3 (17%)
2	P8E	U	610	-	15,16,17	1.84	2 (13%)	17,23,26	1.34	3 (17%)
2	P8E	H	615	-	15,16,17	1.77	2 (13%)	17,23,26	1.42	5 (29%)
2	P8E	A	617	-	15,16,17	1.91	2 (13%)	17,23,26	1.72	4 (23%)
2	P8E	H	609	-	15,16,17	1.81	2 (13%)	17,23,26	1.30	2 (11%)
2	P8E	B	616	-	15,16,17	1.75	2 (13%)	17,23,26	1.52	5 (29%)
2	P8E	D	607	-	15,16,17	1.90	2 (13%)	17,23,26	1.62	3 (17%)
2	P8E	N	616	-	15,16,17	1.79	2 (13%)	17,23,26	1.35	3 (17%)
2	P8E	U	603	-	15,16,17	1.79	2 (13%)	17,23,26	1.40	3 (17%)
2	P8E	K	606	-	15,16,17	1.82	2 (13%)	17,23,26	1.55	5 (29%)
2	P8E	H	605	-	15,16,17	1.79	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	I	606	-	15,16,17	1.84	2 (13%)	17,23,26	1.57	5 (29%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	K	615	-	15,16,17	1.79	2 (13%)	17,23,26	1.58	5 (29%)
2	P8E	G	604	-	15,16,17	1.81	2 (13%)	17,23,26	1.40	4 (23%)
2	P8E	L	616	-	15,16,17	1.76	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	B	603	-	15,16,17	1.78	2 (13%)	17,23,26	1.39	4 (23%)
2	P8E	T	614	-	15,16,17	1.82	2 (13%)	17,23,26	1.32	2 (11%)
2	P8E	V	602	-	15,16,17	1.83	2 (13%)	17,23,26	1.50	2 (11%)
2	P8E	E	603	-	15,16,17	1.80	2 (13%)	17,23,26	1.40	3 (17%)
2	P8E	S	612	-	15,16,17	1.79	2 (13%)	17,23,26	1.48	5 (29%)
2	P8E	N	607	-	15,16,17	1.84	2 (13%)	17,23,26	1.44	3 (17%)
2	P8E	R	605	-	15,16,17	1.82	2 (13%)	17,23,26	1.38	4 (23%)
2	P8E	Q	614	-	15,16,17	1.79	2 (13%)	17,23,26	1.21	1 (5%)
2	P8E	K	601	-	15,16,17	1.85	2 (13%)	17,23,26	1.29	3 (17%)
2	P8E	E	613	-	15,16,17	1.83	2 (13%)	17,23,26	1.29	3 (17%)
2	P8E	A	606	-	15,16,17	1.83	2 (13%)	17,23,26	1.55	4 (23%)
2	P8E	D	601	-	15,16,17	1.84	2 (13%)	17,23,26	1.27	3 (17%)
2	P8E	A	602	-	15,16,17	1.80	2 (13%)	17,23,26	1.41	4 (23%)
2	P8E	O	612	-	15,16,17	1.79	2 (13%)	17,23,26	1.53	5 (29%)
2	P8E	G	612	-	15,16,17	1.79	2 (13%)	17,23,26	1.51	4 (23%)
2	P8E	F	608	-	15,16,17	1.75	2 (13%)	17,23,26	1.42	4 (23%)
2	P8E	E	609	-	15,16,17	1.84	2 (13%)	17,23,26	1.32	2 (11%)
2	P8E	I	602	-	15,16,17	1.82	2 (13%)	17,23,26	1.36	4 (23%)
2	P8E	A	614	-	15,16,17	1.83	2 (13%)	17,23,26	1.32	3 (17%)
2	P8E	H	612	-	15,16,17	1.80	2 (13%)	17,23,26	1.53	5 (29%)
2	P8E	M	611	-	15,16,17	1.83	2 (13%)	17,23,26	1.34	3 (17%)
2	P8E	O	602	-	15,16,17	1.83	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	O	617	-	15,16,17	1.93	2 (13%)	17,23,26	1.75	4 (23%)
2	P8E	G	603	-	15,16,17	1.80	2 (13%)	17,23,26	1.43	5 (29%)
2	P8E	S	616	-	15,16,17	1.77	2 (13%)	17,23,26	1.58	5 (29%)
2	P8E	C	609	-	15,16,17	1.83	2 (13%)	17,23,26	1.30	1 (5%)
2	P8E	G	617	-	15,16,17	1.94	2 (13%)	17,23,26	1.73	5 (29%)
2	P8E	R	609	-	15,16,17	1.84	2 (13%)	17,23,26	1.33	2 (11%)
2	P8E	E	607	-	15,16,17	1.87	2 (13%)	17,23,26	1.54	4 (23%)
2	P8E	D	611	-	15,16,17	1.84	2 (13%)	17,23,26	1.31	2 (11%)
2	P8E	I	614	-	15,16,17	1.85	2 (13%)	17,23,26	1.30	2 (11%)
2	P8E	Q	608	-	15,16,17	1.80	2 (13%)	17,23,26	1.41	3 (17%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	C	605	-	15,16,17	1.79	2 (13%)	17,23,26	1.40	4 (23%)
2	P8E	L	601	-	15,16,17	1.82	2 (13%)	17,23,26	1.32	4 (23%)
2	P8E	O	610	-	15,16,17	1.82	2 (13%)	17,23,26	1.30	2 (11%)
2	P8E	G	616	-	15,16,17	1.78	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	H	606	-	15,16,17	1.78	2 (13%)	17,23,26	1.50	5 (29%)
2	P8E	D	609	-	15,16,17	1.84	2 (13%)	17,23,26	1.34	3 (17%)
2	P8E	J	613	-	15,16,17	1.82	2 (13%)	17,23,26	1.25	1 (5%)
2	P8E	M	614	-	15,16,17	1.85	2 (13%)	17,23,26	1.35	3 (17%)
2	P8E	D	608	-	15,16,17	1.80	2 (13%)	17,23,26	1.47	4 (23%)
2	P8E	O	608	-	15,16,17	1.78	2 (13%)	17,23,26	1.27	1 (5%)
2	P8E	J	604	-	15,16,17	1.82	2 (13%)	17,23,26	1.40	3 (17%)
2	P8E	F	603	-	15,16,17	1.80	2 (13%)	17,23,26	1.39	3 (17%)
2	P8E	L	607	-	15,16,17	1.88	2 (13%)	17,23,26	1.53	5 (29%)
2	P8E	O	607	-	15,16,17	1.87	2 (13%)	17,23,26	1.43	3 (17%)
2	P8E	S	609	-	15,16,17	1.86	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	G	601	-	15,16,17	1.79	2 (13%)	17,23,26	1.24	2 (11%)
2	P8E	N	611	-	15,16,17	1.87	2 (13%)	17,23,26	1.44	4 (23%)
2	P8E	C	608	-	15,16,17	1.78	2 (13%)	17,23,26	1.28	2 (11%)
2	P8E	O	603	-	15,16,17	1.80	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	A	601	-	15,16,17	1.86	2 (13%)	17,23,26	1.30	3 (17%)
2	P8E	H	601	-	15,16,17	1.79	2 (13%)	17,23,26	1.14	1 (5%)
2	P8E	Q	602	-	15,16,17	1.85	2 (13%)	17,23,26	1.59	5 (29%)
2	P8E	S	601	-	15,16,17	1.83	2 (13%)	17,23,26	1.31	3 (17%)
2	P8E	Q	612	-	15,16,17	1.76	2 (13%)	17,23,26	1.48	4 (23%)
2	P8E	P	603	-	15,16,17	1.79	2 (13%)	17,23,26	1.43	5 (29%)
2	P8E	O	604	-	15,16,17	1.83	2 (13%)	17,23,26	1.37	3 (17%)
2	P8E	J	602	-	15,16,17	1.83	2 (13%)	17,23,26	1.34	3 (17%)
2	P8E	S	610	-	15,16,17	1.85	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	J	609	-	15,16,17	1.82	2 (13%)	17,23,26	1.28	2 (11%)
2	P8E	R	616	-	15,16,17	1.76	2 (13%)	17,23,26	1.43	3 (17%)
2	P8E	Q	610	-	15,16,17	1.80	2 (13%)	17,23,26	1.25	2 (11%)
2	P8E	V	612	-	15,16,17	1.79	2 (13%)	17,23,26	1.47	4 (23%)
2	P8E	N	601	-	15,16,17	1.82	2 (13%)	17,23,26	1.22	2 (11%)
2	P8E	B	614	-	15,16,17	1.82	2 (13%)	17,23,26	1.31	2 (11%)
2	P8E	K	608	-	15,16,17	1.78	2 (13%)	17,23,26	1.32	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	S	607	-	15,16,17	1.86	2 (13%)	17,23,26	1.58	3 (17%)
2	P8E	J	612	-	15,16,17	1.79	2 (13%)	17,23,26	1.51	5 (29%)
2	P8E	V	610	-	15,16,17	1.83	2 (13%)	17,23,26	1.28	3 (17%)
2	P8E	R	601	-	15,16,17	1.87	2 (13%)	17,23,26	1.33	3 (17%)
2	P8E	C	613	-	15,16,17	1.81	2 (13%)	17,23,26	1.28	1 (5%)
2	P8E	H	616	-	15,16,17	1.79	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	I	612	-	15,16,17	1.78	2 (13%)	17,23,26	1.49	5 (29%)
2	P8E	K	609	-	15,16,17	1.83	2 (13%)	17,23,26	1.33	2 (11%)
2	P8E	U	617	-	15,16,17	1.93	2 (13%)	17,23,26	1.68	5 (29%)
2	P8E	U	606	-	15,16,17	1.81	2 (13%)	17,23,26	1.59	5 (29%)
2	P8E	Q	603	-	15,16,17	1.79	2 (13%)	17,23,26	1.46	4 (23%)
2	P8E	V	617	-	15,16,17	1.95	2 (13%)	17,23,26	1.71	6 (35%)
2	P8E	I	604	-	15,16,17	1.83	2 (13%)	17,23,26	1.43	4 (23%)
2	P8E	C	606	-	15,16,17	1.78	2 (13%)	17,23,26	1.49	5 (29%)
2	P8E	U	611	-	15,16,17	1.85	2 (13%)	17,23,26	1.45	2 (11%)
2	P8E	I	610	-	15,16,17	1.85	2 (13%)	17,23,26	1.42	3 (17%)
2	P8E	C	617	-	15,16,17	1.95	2 (13%)	17,23,26	1.69	5 (29%)
2	P8E	U	604	-	15,16,17	1.83	2 (13%)	17,23,26	1.44	4 (23%)
2	P8E	J	603	-	15,16,17	1.81	2 (13%)	17,23,26	1.44	4 (23%)
2	P8E	M	617	-	15,16,17	1.95	2 (13%)	17,23,26	1.64	4 (23%)
2	P8E	O	601	-	15,16,17	1.92	2 (13%)	17,23,26	1.76	4 (23%)
2	P8E	G	602	-	15,16,17	1.79	2 (13%)	17,23,26	1.36	4 (23%)
2	P8E	M	613	-	15,16,17	1.80	2 (13%)	17,23,26	1.18	1 (5%)
2	P8E	I	617	-	15,16,17	1.92	2 (13%)	17,23,26	1.70	5 (29%)
2	P8E	J	614	-	15,16,17	1.84	2 (13%)	17,23,26	1.25	2 (11%)
2	P8E	A	613	-	15,16,17	1.81	2 (13%)	17,23,26	1.24	2 (11%)
2	P8E	M	610	-	15,16,17	1.85	2 (13%)	17,23,26	1.36	3 (17%)
2	P8E	A	616	-	15,16,17	1.75	2 (13%)	17,23,26	1.55	5 (29%)
2	P8E	N	608	-	15,16,17	1.79	2 (13%)	17,23,26	1.47	4 (23%)
2	P8E	S	606	-	15,16,17	1.80	2 (13%)	17,23,26	1.49	5 (29%)
2	P8E	A	610	-	15,16,17	1.84	2 (13%)	17,23,26	1.28	3 (17%)
2	P8E	I	603	-	15,16,17	1.78	2 (13%)	17,23,26	1.47	5 (29%)
2	P8E	K	607	-	15,16,17	1.85	2 (13%)	17,23,26	1.54	4 (23%)
2	P8E	P	614	-	15,16,17	1.82	2 (13%)	17,23,26	1.37	3 (17%)
2	P8E	B	609	-	15,16,17	1.84	2 (13%)	17,23,26	1.49	5 (29%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	T	605	-	15,16,17	1.81	2 (13%)	17,23,26	1.45	5 (29%)
2	P8E	E	608	-	15,16,17	1.80	2 (13%)	17,23,26	1.28	1 (5%)
2	P8E	V	615	-	15,16,17	1.77	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	T	611	-	15,16,17	1.86	2 (13%)	17,23,26	1.53	4 (23%)
2	P8E	O	605	-	15,16,17	1.79	2 (13%)	17,23,26	1.35	3 (17%)
2	P8E	M	603	-	15,16,17	1.78	2 (13%)	17,23,26	1.41	4 (23%)
2	P8E	D	614	-	15,16,17	1.81	2 (13%)	17,23,26	1.27	3 (17%)
2	P8E	Q	611	-	15,16,17	1.86	2 (13%)	17,23,26	1.41	4 (23%)
2	P8E	F	614	-	15,16,17	1.85	2 (13%)	17,23,26	1.34	2 (11%)
2	P8E	A	603	-	15,16,17	1.79	2 (13%)	17,23,26	1.44	4 (23%)
2	P8E	N	609	-	15,16,17	1.82	2 (13%)	17,23,26	1.33	2 (11%)
2	P8E	T	608	-	15,16,17	1.78	2 (13%)	17,23,26	1.35	3 (17%)
2	P8E	C	616	-	15,16,17	1.78	2 (13%)	17,23,26	1.42	4 (23%)
2	P8E	B	613	-	15,16,17	1.84	2 (13%)	17,23,26	1.38	3 (17%)
2	P8E	S	602	-	15,16,17	1.82	2 (13%)	17,23,26	1.31	3 (17%)
2	P8E	J	611	-	15,16,17	1.81	2 (13%)	17,23,26	1.19	2 (11%)
2	P8E	R	614	-	15,16,17	1.82	2 (13%)	17,23,26	1.32	3 (17%)
2	P8E	V	611	-	15,16,17	1.82	2 (13%)	17,23,26	1.26	3 (17%)
2	P8E	M	604	-	15,16,17	1.82	2 (13%)	17,23,26	1.39	3 (17%)
2	P8E	E	614	-	15,16,17	1.84	2 (13%)	17,23,26	1.38	2 (11%)
2	P8E	A	604	-	15,16,17	1.82	2 (13%)	17,23,26	1.45	4 (23%)
2	P8E	C	601	-	15,16,17	1.90	2 (13%)	17,23,26	1.65	5 (29%)
2	P8E	B	617	-	15,16,17	1.94	2 (13%)	17,23,26	1.77	5 (29%)
2	P8E	I	611	-	15,16,17	1.86	2 (13%)	17,23,26	1.47	4 (23%)
2	P8E	Q	615	-	15,16,17	1.78	2 (13%)	17,23,26	1.48	5 (29%)
2	P8E	U	601	-	15,16,17	1.79	2 (13%)	17,23,26	1.19	2 (11%)
2	P8E	E	610	-	15,16,17	1.83	2 (13%)	17,23,26	1.29	3 (17%)
2	P8E	D	612	-	15,16,17	1.79	2 (13%)	17,23,26	1.49	4 (23%)
2	P8E	N	603	-	15,16,17	1.76	2 (13%)	17,23,26	1.40	3 (17%)
2	P8E	O	616	-	15,16,17	1.78	2 (13%)	17,23,26	1.54	5 (29%)
2	P8E	R	606	-	15,16,17	1.79	2 (13%)	17,23,26	1.52	5 (29%)
2	P8E	N	617	-	15,16,17	1.95	2 (13%)	17,23,26	1.68	5 (29%)
2	P8E	L	603	-	15,16,17	1.81	2 (13%)	17,23,26	1.43	5 (29%)
2	P8E	B	604	-	15,16,17	1.82	2 (13%)	17,23,26	1.42	3 (17%)
2	P8E	H	608	-	15,16,17	1.77	2 (13%)	17,23,26	1.43	4 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	P8E	S	603	-	15,16,17	1.78	2 (13%)	17,23,26	1.48	4 (23%)
2	P8E	V	605	-	15,16,17	1.81	2 (13%)	17,23,26	1.35	3 (17%)
2	P8E	T	606	-	15,16,17	1.80	2 (13%)	17,23,26	1.54	5 (29%)
2	P8E	U	615	-	15,16,17	1.81	2 (13%)	17,23,26	1.40	3 (17%)
2	P8E	S	615	-	15,16,17	1.79	2 (13%)	17,23,26	1.39	3 (17%)
2	P8E	K	602	-	15,16,17	1.83	2 (13%)	17,23,26	1.39	4 (23%)
2	P8E	T	617	-	15,16,17	1.92	2 (13%)	17,23,26	1.69	5 (29%)
2	P8E	Q	617	-	15,16,17	1.93	2 (13%)	17,23,26	1.74	6 (35%)
2	P8E	I	607	-	15,16,17	1.86	2 (13%)	17,23,26	1.45	4 (23%)
2	P8E	H	613	-	15,16,17	1.85	2 (13%)	17,23,26	1.24	3 (17%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	F	602	-	-	5/11/28/32	0/1/1/1
2	P8E	O	606	-	-	6/11/28/32	0/1/1/1
2	P8E	S	605	-	-	6/11/28/32	0/1/1/1
2	P8E	E	611	-	-	8/11/28/32	0/1/1/1
2	P8E	I	601	-	-	5/11/28/32	0/1/1/1
2	P8E	Q	605	-	-	4/11/28/32	0/1/1/1
2	P8E	B	602	-	-	4/11/28/32	0/1/1/1
2	P8E	T	613	-	-	6/11/28/32	0/1/1/1
2	P8E	H	617	-	-	4/11/28/32	0/1/1/1
2	P8E	F	610	-	-	5/11/28/32	0/1/1/1
2	P8E	T	604	-	-	8/11/28/32	0/1/1/1
2	P8E	E	615	-	-	4/11/28/32	0/1/1/1
2	P8E	R	604	-	-	3/11/28/32	0/1/1/1
2	P8E	P	602	-	-	4/11/28/32	0/1/1/1
2	P8E	P	617	-	-	3/11/28/32	0/1/1/1
2	P8E	M	601	-	-	4/11/28/32	0/1/1/1
2	P8E	F	607	-	-	4/11/28/32	0/1/1/1
2	P8E	A	605	-	-	5/11/28/32	0/1/1/1
2	P8E	U	608	-	-	4/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	E	612	-	-	3/11/28/32	0/1/1/1
2	P8E	V	608	-	-	4/11/28/32	0/1/1/1
2	P8E	P	610	-	-	4/11/28/32	0/1/1/1
2	P8E	E	604	-	-	7/11/28/32	0/1/1/1
2	P8E	T	612	-	-	2/11/28/32	0/1/1/1
2	P8E	B	605	-	-	7/11/28/32	0/1/1/1
2	P8E	T	616	-	-	6/11/28/32	0/1/1/1
2	P8E	K	616	-	-	6/11/28/32	0/1/1/1
2	P8E	K	613	-	-	3/11/28/32	0/1/1/1
2	P8E	R	603	-	-	1/11/28/32	0/1/1/1
2	P8E	U	613	-	-	1/11/28/32	0/1/1/1
2	P8E	Q	616	-	-	6/11/28/32	0/1/1/1
2	P8E	F	604	-	-	5/11/28/32	0/1/1/1
2	P8E	D	610	-	-	5/11/28/32	0/1/1/1
2	P8E	E	602	-	-	4/11/28/32	0/1/1/1
2	P8E	M	605	-	-	4/11/28/32	0/1/1/1
2	P8E	T	601	-	-	2/11/28/32	0/1/1/1
2	P8E	V	616	-	-	6/11/28/32	0/1/1/1
2	P8E	S	617	-	-	0/11/28/32	0/1/1/1
2	P8E	H	602	-	-	6/11/28/32	0/1/1/1
2	P8E	I	615	-	-	3/11/28/32	0/1/1/1
2	P8E	E	616	-	-	8/11/28/32	0/1/1/1
2	P8E	P	604	-	-	6/11/28/32	0/1/1/1
2	P8E	N	614	-	-	8/11/28/32	0/1/1/1
2	P8E	Q	606	-	-	7/11/28/32	0/1/1/1
2	P8E	S	613	-	-	0/11/28/32	0/1/1/1
2	P8E	B	607	-	-	5/11/28/32	0/1/1/1
2	P8E	D	603	-	-	4/11/28/32	0/1/1/1
2	P8E	P	612	-	-	4/11/28/32	0/1/1/1
2	P8E	E	601	-	-	2/11/28/32	0/1/1/1
2	P8E	O	615	-	-	6/11/28/32	0/1/1/1
2	P8E	P	611	-	-	1/11/28/32	0/1/1/1
2	P8E	J	606	-	-	4/11/28/32	0/1/1/1
2	P8E	V	606	-	-	6/11/28/32	0/1/1/1
2	P8E	V	603	-	-	0/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	C	603	-	-	5/11/28/32	0/1/1/1
2	P8E	U	605	-	-	6/11/28/32	0/1/1/1
2	P8E	L	610	-	-	4/11/28/32	0/1/1/1
2	P8E	K	610	-	-	5/11/28/32	0/1/1/1
2	P8E	K	612	-	-	3/11/28/32	0/1/1/1
2	P8E	I	608	-	-	4/11/28/32	0/1/1/1
2	P8E	C	615	-	-	3/11/28/32	0/1/1/1
2	P8E	M	616	-	-	5/11/28/32	0/1/1/1
2	P8E	R	612	-	-	2/11/28/32	0/1/1/1
2	P8E	P	605	-	-	6/11/28/32	0/1/1/1
2	P8E	G	609	-	-	3/11/28/32	0/1/1/1
2	P8E	H	614	-	-	5/11/28/32	0/1/1/1
2	P8E	E	605	-	-	4/11/28/32	0/1/1/1
2	P8E	G	614	-	-	1/11/28/32	0/1/1/1
2	P8E	J	610	-	-	4/11/28/32	0/1/1/1
2	P8E	K	603	-	-	4/11/28/32	0/1/1/1
2	P8E	M	606	-	-	7/11/28/32	0/1/1/1
2	P8E	F	601	-	-	2/11/28/32	0/1/1/1
2	P8E	O	613	-	-	1/11/28/32	0/1/1/1
2	P8E	U	614	-	-	5/11/28/32	0/1/1/1
2	P8E	J	617	-	-	3/11/28/32	0/1/1/1
2	P8E	M	615	-	-	3/11/28/32	0/1/1/1
2	P8E	K	614	-	-	4/11/28/32	0/1/1/1
2	P8E	J	615	-	-	3/11/28/32	0/1/1/1
2	P8E	J	616	-	-	5/11/28/32	0/1/1/1
2	P8E	P	607	-	-	4/11/28/32	0/1/1/1
2	P8E	D	602	-	-	4/11/28/32	0/1/1/1
2	P8E	T	609	-	-	7/11/28/32	0/1/1/1
2	P8E	L	602	-	-	4/11/28/32	0/1/1/1
2	P8E	L	617	-	-	1/11/28/32	0/1/1/1
2	P8E	N	610	-	-	4/11/28/32	0/1/1/1
2	P8E	N	613	-	-	0/11/28/32	0/1/1/1
2	P8E	B	610	-	-	4/11/28/32	0/1/1/1
2	P8E	B	606	-	-	2/11/28/32	0/1/1/1
2	P8E	N	612	-	-	5/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	F	605	-	-	5/11/28/32	0/1/1/1
2	P8E	P	608	-	-	4/11/28/32	0/1/1/1
2	P8E	C	610	-	-	4/11/28/32	0/1/1/1
2	P8E	H	604	-	-	7/11/28/32	0/1/1/1
2	P8E	R	617	-	-	3/11/28/32	0/1/1/1
2	P8E	T	610	-	-	5/11/28/32	0/1/1/1
2	P8E	K	611	-	-	4/11/28/32	0/1/1/1
2	P8E	C	607	-	-	4/11/28/32	0/1/1/1
2	P8E	Q	613	-	-	1/11/28/32	0/1/1/1
2	P8E	R	613	-	-	7/11/28/32	0/1/1/1
2	P8E	P	609	-	-	1/11/28/32	0/1/1/1
2	P8E	V	614	-	-	5/11/28/32	0/1/1/1
2	P8E	A	615	-	-	3/11/28/32	0/1/1/1
2	P8E	U	616	-	-	5/11/28/32	0/1/1/1
2	P8E	M	607	-	-	3/11/28/32	0/1/1/1
2	P8E	M	602	-	-	4/11/28/32	0/1/1/1
2	P8E	V	613	-	-	1/11/28/32	0/1/1/1
2	P8E	E	606	-	-	3/11/28/32	0/1/1/1
2	P8E	U	607	-	-	3/11/28/32	0/1/1/1
2	P8E	J	605	-	-	4/11/28/32	0/1/1/1
2	P8E	E	617	-	-	1/11/28/32	0/1/1/1
2	P8E	D	615	-	-	7/11/28/32	0/1/1/1
2	P8E	N	604	-	-	3/11/28/32	0/1/1/1
2	P8E	T	603	-	-	4/11/28/32	0/1/1/1
2	P8E	F	609	-	-	5/11/28/32	0/1/1/1
2	P8E	B	615	-	-	4/11/28/32	0/1/1/1
2	P8E	M	612	-	-	2/11/28/32	0/1/1/1
2	P8E	P	613	-	-	3/11/28/32	0/1/1/1
2	P8E	J	601	-	-	3/11/28/32	0/1/1/1
2	P8E	D	605	-	-	5/11/28/32	0/1/1/1
2	P8E	I	613	-	-	5/11/28/32	0/1/1/1
2	P8E	O	609	-	-	2/11/28/32	0/1/1/1
2	P8E	L	605	-	-	6/11/28/32	0/1/1/1
2	P8E	A	612	-	-	5/11/28/32	0/1/1/1
2	P8E	Q	604	-	-	7/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	H	610	-	-	4/11/28/32	0/1/1/1
2	P8E	L	613	-	-	4/11/28/32	0/1/1/1
2	P8E	L	611	-	-	0/11/28/32	0/1/1/1
2	P8E	N	615	-	-	1/11/28/32	0/1/1/1
2	P8E	T	602	-	-	5/11/28/32	0/1/1/1
2	P8E	S	611	-	-	1/11/28/32	0/1/1/1
2	P8E	R	602	-	-	4/11/28/32	0/1/1/1
2	P8E	N	602	-	-	4/11/28/32	0/1/1/1
2	P8E	H	607	-	-	1/11/28/32	0/1/1/1
2	P8E	B	612	-	-	4/11/28/32	0/1/1/1
2	P8E	G	613	-	-	3/11/28/32	0/1/1/1
2	P8E	L	615	-	-	2/11/28/32	0/1/1/1
2	P8E	G	611	-	-	1/11/28/32	0/1/1/1
2	P8E	V	604	-	-	7/11/28/32	0/1/1/1
2	P8E	R	611	-	-	1/11/28/32	0/1/1/1
2	P8E	B	611	-	-	2/11/28/32	0/1/1/1
2	P8E	R	610	-	-	5/11/28/32	0/1/1/1
2	P8E	H	603	-	-	3/11/28/32	0/1/1/1
2	P8E	F	617	-	-	3/11/28/32	0/1/1/1
2	P8E	S	608	-	-	4/11/28/32	0/1/1/1
2	P8E	K	617	-	-	0/11/28/32	0/1/1/1
2	P8E	K	605	-	-	5/11/28/32	0/1/1/1
2	P8E	A	611	-	-	8/11/28/32	0/1/1/1
2	P8E	I	605	-	-	3/11/28/32	0/1/1/1
2	P8E	G	608	-	-	4/11/28/32	0/1/1/1
2	P8E	F	616	-	-	6/11/28/32	0/1/1/1
2	P8E	J	608	-	-	4/11/28/32	0/1/1/1
2	P8E	P	606	-	-	7/11/28/32	0/1/1/1
2	P8E	G	615	-	-	4/11/28/32	0/1/1/1
2	P8E	P	615	-	-	3/11/28/32	0/1/1/1
2	P8E	B	601	-	-	4/11/28/32	0/1/1/1
2	P8E	G	607	-	-	5/11/28/32	0/1/1/1
2	P8E	K	604	-	-	3/11/28/32	0/1/1/1
2	P8E	L	608	-	-	4/11/28/32	0/1/1/1
2	P8E	V	609	-	-	2/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	N	605	-	-	4/11/28/32	0/1/1/1
2	P8E	C	614	-	-	5/11/28/32	0/1/1/1
2	P8E	D	606	-	-	2/11/28/32	0/1/1/1
2	P8E	F	606	-	-	2/11/28/32	0/1/1/1
2	P8E	T	607	-	-	3/11/28/32	0/1/1/1
2	P8E	D	617	-	-	0/11/28/32	0/1/1/1
2	P8E	L	609	-	-	2/11/28/32	0/1/1/1
2	P8E	F	615	-	-	4/11/28/32	0/1/1/1
2	P8E	L	606	-	-	6/11/28/32	0/1/1/1
2	P8E	I	609	-	-	7/11/28/32	0/1/1/1
2	P8E	Q	609	-	-	6/11/28/32	0/1/1/1
2	P8E	H	611	-	-	1/11/28/32	0/1/1/1
2	P8E	M	608	-	-	6/11/28/32	0/1/1/1
2	P8E	R	615	-	-	4/11/28/32	0/1/1/1
2	P8E	A	608	-	-	4/11/28/32	0/1/1/1
2	P8E	L	614	-	-	0/11/28/32	0/1/1/1
2	P8E	F	612	-	-	10/11/28/32	0/1/1/1
2	P8E	D	613	-	-	3/11/28/32	0/1/1/1
2	P8E	S	614	-	-	4/11/28/32	0/1/1/1
2	P8E	Q	601	-	-	4/11/28/32	0/1/1/1
2	P8E	D	604	-	-	7/11/28/32	0/1/1/1
2	P8E	F	611	-	-	5/11/28/32	0/1/1/1
2	P8E	N	606	-	-	3/11/28/32	0/1/1/1
2	P8E	T	615	-	-	3/11/28/32	0/1/1/1
2	P8E	O	614	-	-	3/11/28/32	0/1/1/1
2	P8E	A	609	-	-	1/11/28/32	0/1/1/1
2	P8E	G	605	-	-	5/11/28/32	0/1/1/1
2	P8E	B	608	-	-	5/11/28/32	0/1/1/1
2	P8E	V	601	-	-	3/11/28/32	0/1/1/1
2	P8E	P	616	-	-	5/11/28/32	0/1/1/1
2	P8E	S	604	-	-	7/11/28/32	0/1/1/1
2	P8E	O	611	-	-	1/11/28/32	0/1/1/1
2	P8E	U	602	-	-	6/11/28/32	0/1/1/1
2	P8E	U	609	-	-	8/11/28/32	0/1/1/1
2	P8E	R	608	-	-	4/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	C	612	-	-	9/11/28/32	0/1/1/1
2	P8E	Q	607	-	-	4/11/28/32	0/1/1/1
2	P8E	V	607	-	-	3/11/28/32	0/1/1/1
2	P8E	P	601	-	-	3/11/28/32	0/1/1/1
2	P8E	R	607	-	-	1/11/28/32	0/1/1/1
2	P8E	C	611	-	-	1/11/28/32	0/1/1/1
2	P8E	F	613	-	-	0/11/28/32	0/1/1/1
2	P8E	G	610	-	-	4/11/28/32	0/1/1/1
2	P8E	C	604	-	-	7/11/28/32	0/1/1/1
2	P8E	D	616	-	-	5/11/28/32	0/1/1/1
2	P8E	L	612	-	-	5/11/28/32	0/1/1/1
2	P8E	J	607	-	-	8/11/28/32	0/1/1/1
2	P8E	U	612	-	-	4/11/28/32	0/1/1/1
2	P8E	I	616	-	-	5/11/28/32	0/1/1/1
2	P8E	M	609	-	-	5/11/28/32	0/1/1/1
2	P8E	L	604	-	-	7/11/28/32	0/1/1/1
2	P8E	C	602	-	-	5/11/28/32	0/1/1/1
2	P8E	G	606	-	-	7/11/28/32	0/1/1/1
2	P8E	A	607	-	-	5/11/28/32	0/1/1/1
2	P8E	U	610	-	-	5/11/28/32	0/1/1/1
2	P8E	H	615	-	-	4/11/28/32	0/1/1/1
2	P8E	A	617	-	-	1/11/28/32	0/1/1/1
2	P8E	H	609	-	-	4/11/28/32	0/1/1/1
2	P8E	B	616	-	-	6/11/28/32	0/1/1/1
2	P8E	D	607	-	-	4/11/28/32	0/1/1/1
2	P8E	N	616	-	-	6/11/28/32	0/1/1/1
2	P8E	U	603	-	-	4/11/28/32	0/1/1/1
2	P8E	K	606	-	-	6/11/28/32	0/1/1/1
2	P8E	H	605	-	-	4/11/28/32	0/1/1/1
2	P8E	I	606	-	-	6/11/28/32	0/1/1/1
2	P8E	K	615	-	-	2/11/28/32	0/1/1/1
2	P8E	G	604	-	-	7/11/28/32	0/1/1/1
2	P8E	L	616	-	-	4/11/28/32	0/1/1/1
2	P8E	B	603	-	-	4/11/28/32	0/1/1/1
2	P8E	T	614	-	-	5/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	V	602	-	-	4/11/28/32	0/1/1/1
2	P8E	E	603	-	-	0/11/28/32	0/1/1/1
2	P8E	S	612	-	-	3/11/28/32	0/1/1/1
2	P8E	N	607	-	-	3/11/28/32	0/1/1/1
2	P8E	R	605	-	-	5/11/28/32	0/1/1/1
2	P8E	Q	614	-	-	7/11/28/32	0/1/1/1
2	P8E	K	601	-	-	3/11/28/32	0/1/1/1
2	P8E	E	613	-	-	7/11/28/32	0/1/1/1
2	P8E	A	606	-	-	2/11/28/32	0/1/1/1
2	P8E	D	601	-	-	3/11/28/32	0/1/1/1
2	P8E	A	602	-	-	4/11/28/32	0/1/1/1
2	P8E	O	612	-	-	4/11/28/32	0/1/1/1
2	P8E	G	612	-	-	6/11/28/32	0/1/1/1
2	P8E	F	608	-	-	4/11/28/32	0/1/1/1
2	P8E	E	609	-	-	2/11/28/32	0/1/1/1
2	P8E	I	602	-	-	5/11/28/32	0/1/1/1
2	P8E	A	614	-	-	0/11/28/32	0/1/1/1
2	P8E	H	612	-	-	5/11/28/32	0/1/1/1
2	P8E	M	611	-	-	4/11/28/32	0/1/1/1
2	P8E	O	602	-	-	4/11/28/32	0/1/1/1
2	P8E	O	617	-	-	2/11/28/32	0/1/1/1
2	P8E	G	603	-	-	4/11/28/32	0/1/1/1
2	P8E	S	616	-	-	7/11/28/32	0/1/1/1
2	P8E	C	609	-	-	5/11/28/32	0/1/1/1
2	P8E	G	617	-	-	3/11/28/32	0/1/1/1
2	P8E	R	609	-	-	2/11/28/32	0/1/1/1
2	P8E	E	607	-	-	2/11/28/32	0/1/1/1
2	P8E	D	611	-	-	4/11/28/32	0/1/1/1
2	P8E	I	614	-	-	6/11/28/32	0/1/1/1
2	P8E	Q	608	-	-	4/11/28/32	0/1/1/1
2	P8E	C	605	-	-	6/11/28/32	0/1/1/1
2	P8E	L	601	-	-	2/11/28/32	0/1/1/1
2	P8E	O	610	-	-	5/11/28/32	0/1/1/1
2	P8E	G	616	-	-	4/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	H	606	-	-	6/11/28/32	0/1/1/1
2	P8E	D	609	-	-	5/11/28/32	0/1/1/1
2	P8E	J	613	-	-	5/11/28/32	0/1/1/1
2	P8E	M	614	-	-	5/11/28/32	0/1/1/1
2	P8E	D	608	-	-	4/11/28/32	0/1/1/1
2	P8E	O	608	-	-	4/11/28/32	0/1/1/1
2	P8E	J	604	-	-	7/11/28/32	0/1/1/1
2	P8E	F	603	-	-	4/11/28/32	0/1/1/1
2	P8E	L	607	-	-	0/11/28/32	0/1/1/1
2	P8E	O	607	-	-	3/11/28/32	0/1/1/1
2	P8E	S	609	-	-	3/11/28/32	0/1/1/1
2	P8E	G	601	-	-	7/11/28/32	0/1/1/1
2	P8E	N	611	-	-	1/11/28/32	0/1/1/1
2	P8E	C	608	-	-	6/11/28/32	0/1/1/1
2	P8E	O	603	-	-	0/11/28/32	0/1/1/1
2	P8E	A	601	-	-	4/11/28/32	0/1/1/1
2	P8E	H	601	-	-	2/11/28/32	0/1/1/1
2	P8E	Q	602	-	-	5/11/28/32	0/1/1/1
2	P8E	S	601	-	-	4/11/28/32	0/1/1/1
2	P8E	Q	612	-	-	6/11/28/32	0/1/1/1
2	P8E	P	603	-	-	4/11/28/32	0/1/1/1
2	P8E	O	604	-	-	7/11/28/32	0/1/1/1
2	P8E	J	602	-	-	4/11/28/32	0/1/1/1
2	P8E	S	610	-	-	4/11/28/32	0/1/1/1
2	P8E	J	609	-	-	6/11/28/32	0/1/1/1
2	P8E	R	616	-	-	5/11/28/32	0/1/1/1
2	P8E	Q	610	-	-	4/11/28/32	0/1/1/1
2	P8E	V	612	-	-	5/11/28/32	0/1/1/1
2	P8E	N	601	-	-	3/11/28/32	0/1/1/1
2	P8E	B	614	-	-	5/11/28/32	0/1/1/1
2	P8E	K	608	-	-	4/11/28/32	0/1/1/1
2	P8E	S	607	-	-	4/11/28/32	0/1/1/1
2	P8E	J	612	-	-	2/11/28/32	0/1/1/1
2	P8E	V	610	-	-	4/11/28/32	0/1/1/1
2	P8E	R	601	-	-	3/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	C	613	-	-	6/11/28/32	0/1/1/1
2	P8E	H	616	-	-	5/11/28/32	0/1/1/1
2	P8E	I	612	-	-	5/11/28/32	0/1/1/1
2	P8E	K	609	-	-	2/11/28/32	0/1/1/1
2	P8E	U	617	-	-	4/11/28/32	0/1/1/1
2	P8E	U	606	-	-	2/11/28/32	0/1/1/1
2	P8E	Q	603	-	-	5/11/28/32	0/1/1/1
2	P8E	V	617	-	-	3/11/28/32	0/1/1/1
2	P8E	I	604	-	-	2/11/28/32	0/1/1/1
2	P8E	C	606	-	-	8/11/28/32	0/1/1/1
2	P8E	U	611	-	-	3/11/28/32	0/1/1/1
2	P8E	I	610	-	-	4/11/28/32	0/1/1/1
2	P8E	C	617	-	-	2/11/28/32	0/1/1/1
2	P8E	U	604	-	-	3/11/28/32	0/1/1/1
2	P8E	J	603	-	-	5/11/28/32	0/1/1/1
2	P8E	M	617	-	-	4/11/28/32	0/1/1/1
2	P8E	O	601	-	-	3/11/28/32	0/1/1/1
2	P8E	G	602	-	-	4/11/28/32	0/1/1/1
2	P8E	M	613	-	-	3/11/28/32	0/1/1/1
2	P8E	I	617	-	-	3/11/28/32	0/1/1/1
2	P8E	J	614	-	-	7/11/28/32	0/1/1/1
2	P8E	A	613	-	-	3/11/28/32	0/1/1/1
2	P8E	M	610	-	-	4/11/28/32	0/1/1/1
2	P8E	A	616	-	-	8/11/28/32	0/1/1/1
2	P8E	N	608	-	-	4/11/28/32	0/1/1/1
2	P8E	S	606	-	-	4/11/28/32	0/1/1/1
2	P8E	A	610	-	-	5/11/28/32	0/1/1/1
2	P8E	I	603	-	-	5/11/28/32	0/1/1/1
2	P8E	K	607	-	-	0/11/28/32	0/1/1/1
2	P8E	P	614	-	-	4/11/28/32	0/1/1/1
2	P8E	B	609	-	-	4/11/28/32	0/1/1/1
2	P8E	T	605	-	-	5/11/28/32	0/1/1/1
2	P8E	E	608	-	-	4/11/28/32	0/1/1/1
2	P8E	V	615	-	-	0/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	T	611	-	-	5/11/28/32	0/1/1/1
2	P8E	O	605	-	-	4/11/28/32	0/1/1/1
2	P8E	M	603	-	-	4/11/28/32	0/1/1/1
2	P8E	D	614	-	-	4/11/28/32	0/1/1/1
2	P8E	Q	611	-	-	1/11/28/32	0/1/1/1
2	P8E	F	614	-	-	5/11/28/32	0/1/1/1
2	P8E	A	603	-	-	0/11/28/32	0/1/1/1
2	P8E	N	609	-	-	2/11/28/32	0/1/1/1
2	P8E	T	608	-	-	5/11/28/32	0/1/1/1
2	P8E	C	616	-	-	5/11/28/32	0/1/1/1
2	P8E	B	613	-	-	1/11/28/32	0/1/1/1
2	P8E	S	602	-	-	4/11/28/32	0/1/1/1
2	P8E	J	611	-	-	4/11/28/32	0/1/1/1
2	P8E	R	614	-	-	1/11/28/32	0/1/1/1
2	P8E	V	611	-	-	1/11/28/32	0/1/1/1
2	P8E	M	604	-	-	7/11/28/32	0/1/1/1
2	P8E	E	614	-	-	4/11/28/32	0/1/1/1
2	P8E	A	604	-	-	8/11/28/32	0/1/1/1
2	P8E	C	601	-	-	3/11/28/32	0/1/1/1
2	P8E	B	617	-	-	1/11/28/32	0/1/1/1
2	P8E	I	611	-	-	5/11/28/32	0/1/1/1
2	P8E	Q	615	-	-	3/11/28/32	0/1/1/1
2	P8E	U	601	-	-	6/11/28/32	0/1/1/1
2	P8E	E	610	-	-	5/11/28/32	0/1/1/1
2	P8E	D	612	-	-	8/11/28/32	0/1/1/1
2	P8E	N	603	-	-	0/11/28/32	0/1/1/1
2	P8E	O	616	-	-	6/11/28/32	0/1/1/1
2	P8E	R	606	-	-	3/11/28/32	0/1/1/1
2	P8E	N	617	-	-	3/11/28/32	0/1/1/1
2	P8E	L	603	-	-	4/11/28/32	0/1/1/1
2	P8E	B	604	-	-	7/11/28/32	0/1/1/1
2	P8E	H	608	-	-	4/11/28/32	0/1/1/1
2	P8E	S	603	-	-	0/11/28/32	0/1/1/1
2	P8E	V	605	-	-	4/11/28/32	0/1/1/1
2	P8E	T	606	-	-	7/11/28/32	0/1/1/1
2	P8E	U	615	-	-	4/11/28/32	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	P8E	S	615	-	-	2/11/28/32	0/1/1/1
2	P8E	K	602	-	-	4/11/28/32	0/1/1/1
2	P8E	T	617	-	-	3/11/28/32	0/1/1/1
2	P8E	Q	617	-	-	3/11/28/32	0/1/1/1
2	P8E	I	607	-	-	2/11/28/32	0/1/1/1
2	P8E	H	613	-	-	0/11/28/32	0/1/1/1

The worst 5 of 748 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	V	617	P8E	O6-C2	5.34	1.50	1.43
2	U	617	P8E	O6-C2	5.27	1.50	1.43
2	Q	617	P8E	O6-C2	5.26	1.50	1.43
2	M	617	P8E	O6-C2	5.26	1.50	1.43
2	B	617	P8E	O6-C2	5.24	1.50	1.43

The worst 5 of 1280 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	O	601	P8E	O6-C2-C3	4.39	116.50	110.46
2	V	607	P8E	C4-C3-C2	3.92	116.84	109.81
2	C	601	P8E	O6-C2-C3	3.87	115.79	110.46
2	V	607	P8E	O6-C2-C3	3.75	115.62	110.46
2	D	617	P8E	O6-C6-C5	3.66	114.57	108.51

There are no chirality outliers.

5 of 1493 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	601	P8E	O6-C6-C7-N7
2	A	602	P8E	C6-C7-C8-C9
2	A	602	P8E	N7-C7-C8-C9
2	A	602	P8E	C6-C7-C8-O8
2	A	602	P8E	N7-C7-C8-O8

There are no ring outliers.

204 monomers are involved in 288 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	O	606	P8E	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	E	611	P8E	1	0
2	I	601	P8E	1	0
2	H	617	P8E	1	0
2	E	615	P8E	1	0
2	P	617	P8E	1	0
2	M	601	P8E	1	0
2	F	607	P8E	1	0
2	E	612	P8E	2	0
2	P	610	P8E	2	0
2	T	612	P8E	2	0
2	T	616	P8E	1	0
2	K	616	P8E	2	0
2	R	603	P8E	1	0
2	Q	616	P8E	3	0
2	D	610	P8E	2	0
2	T	601	P8E	1	0
2	V	616	P8E	1	0
2	S	617	P8E	1	0
2	E	616	P8E	2	0
2	N	614	P8E	1	0
2	Q	606	P8E	3	0
2	P	612	P8E	2	0
2	E	601	P8E	1	0
2	O	615	P8E	1	0
2	P	611	P8E	1	0
2	J	606	P8E	1	0
2	V	606	P8E	1	0
2	V	603	P8E	1	0
2	C	603	P8E	1	0
2	L	610	P8E	2	0
2	K	610	P8E	1	0
2	K	612	P8E	2	0
2	I	608	P8E	1	0
2	C	615	P8E	1	0
2	M	616	P8E	2	0
2	R	612	P8E	2	0
2	H	614	P8E	1	0
2	G	614	P8E	1	0
2	J	610	P8E	2	0
2	K	603	P8E	1	0
2	M	606	P8E	2	0
2	F	601	P8E	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	U	614	P8E	1	0
2	J	617	P8E	1	0
2	M	615	P8E	1	0
2	J	615	P8E	1	0
2	J	616	P8E	2	0
2	L	617	P8E	1	0
2	N	610	P8E	1	0
2	B	610	P8E	1	0
2	B	606	P8E	1	0
2	N	612	P8E	2	0
2	C	610	P8E	2	0
2	R	617	P8E	1	0
2	T	610	P8E	1	0
2	K	611	P8E	1	0
2	A	615	P8E	1	0
2	U	616	P8E	2	0
2	E	617	P8E	1	0
2	T	603	P8E	1	0
2	B	615	P8E	1	0
2	M	612	P8E	3	0
2	J	601	P8E	1	0
2	A	612	P8E	2	0
2	H	610	P8E	2	0
2	L	611	P8E	1	0
2	N	615	P8E	1	0
2	B	612	P8E	2	0
2	L	615	P8E	1	0
2	G	611	P8E	1	0
2	R	610	P8E	1	0
2	H	603	P8E	1	0
2	F	617	P8E	1	0
2	K	617	P8E	2	0
2	G	608	P8E	1	0
2	F	616	P8E	2	0
2	J	608	P8E	1	0
2	P	606	P8E	1	0
2	G	615	P8E	1	0
2	P	615	P8E	2	0
2	B	601	P8E	1	0
2	L	608	P8E	1	0
2	D	606	P8E	2	0
2	F	606	P8E	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	617	P8E	1	0
2	F	615	P8E	1	0
2	L	606	P8E	2	0
2	H	611	P8E	1	0
2	M	608	P8E	1	0
2	R	615	P8E	1	0
2	A	608	P8E	1	0
2	F	612	P8E	3	0
2	S	614	P8E	1	0
2	Q	601	P8E	1	0
2	N	606	P8E	2	0
2	T	615	P8E	1	0
2	O	614	P8E	1	0
2	V	601	P8E	1	0
2	P	616	P8E	4	0
2	C	612	P8E	3	0
2	P	601	P8E	1	0
2	C	611	P8E	1	0
2	D	616	P8E	3	0
2	L	612	P8E	2	0
2	U	612	P8E	2	0
2	I	616	P8E	2	0
2	G	606	P8E	3	0
2	U	610	P8E	2	0
2	H	615	P8E	1	0
2	A	617	P8E	2	0
2	B	616	P8E	2	0
2	N	616	P8E	3	0
2	U	603	P8E	1	0
2	K	606	P8E	1	0
2	I	606	P8E	2	0
2	K	615	P8E	2	0
2	L	616	P8E	2	0
2	B	603	P8E	1	0
2	T	614	P8E	1	0
2	E	603	P8E	1	0
2	S	612	P8E	2	0
2	K	601	P8E	1	0
2	A	606	P8E	2	0
2	D	601	P8E	1	0
2	O	612	P8E	2	0
2	G	612	P8E	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	I	602	P8E	1	0
2	H	612	P8E	2	0
2	O	617	P8E	1	0
2	G	603	P8E	1	0
2	S	616	P8E	1	0
2	G	617	P8E	1	0
2	I	614	P8E	1	0
2	Q	608	P8E	1	0
2	L	601	P8E	1	0
2	O	610	P8E	1	0
2	G	616	P8E	1	0
2	H	606	P8E	2	0
2	M	614	P8E	1	0
2	O	608	P8E	1	0
2	F	603	P8E	1	0
2	G	601	P8E	1	0
2	C	608	P8E	1	0
2	O	603	P8E	1	0
2	A	601	P8E	1	0
2	H	601	P8E	1	0
2	S	601	P8E	1	0
2	Q	612	P8E	2	0
2	P	603	P8E	1	0
2	S	610	P8E	2	0
2	J	609	P8E	1	0
2	R	616	P8E	3	0
2	Q	610	P8E	1	0
2	V	612	P8E	2	0
2	N	601	P8E	1	0
2	B	614	P8E	1	0
2	J	612	P8E	2	0
2	R	601	P8E	1	0
2	C	613	P8E	1	0
2	H	616	P8E	1	0
2	I	612	P8E	2	0
2	U	617	P8E	1	0
2	Q	603	P8E	1	0
2	V	617	P8E	1	0
2	C	606	P8E	2	0
2	U	611	P8E	1	0
2	I	610	P8E	2	0
2	C	617	P8E	1	0

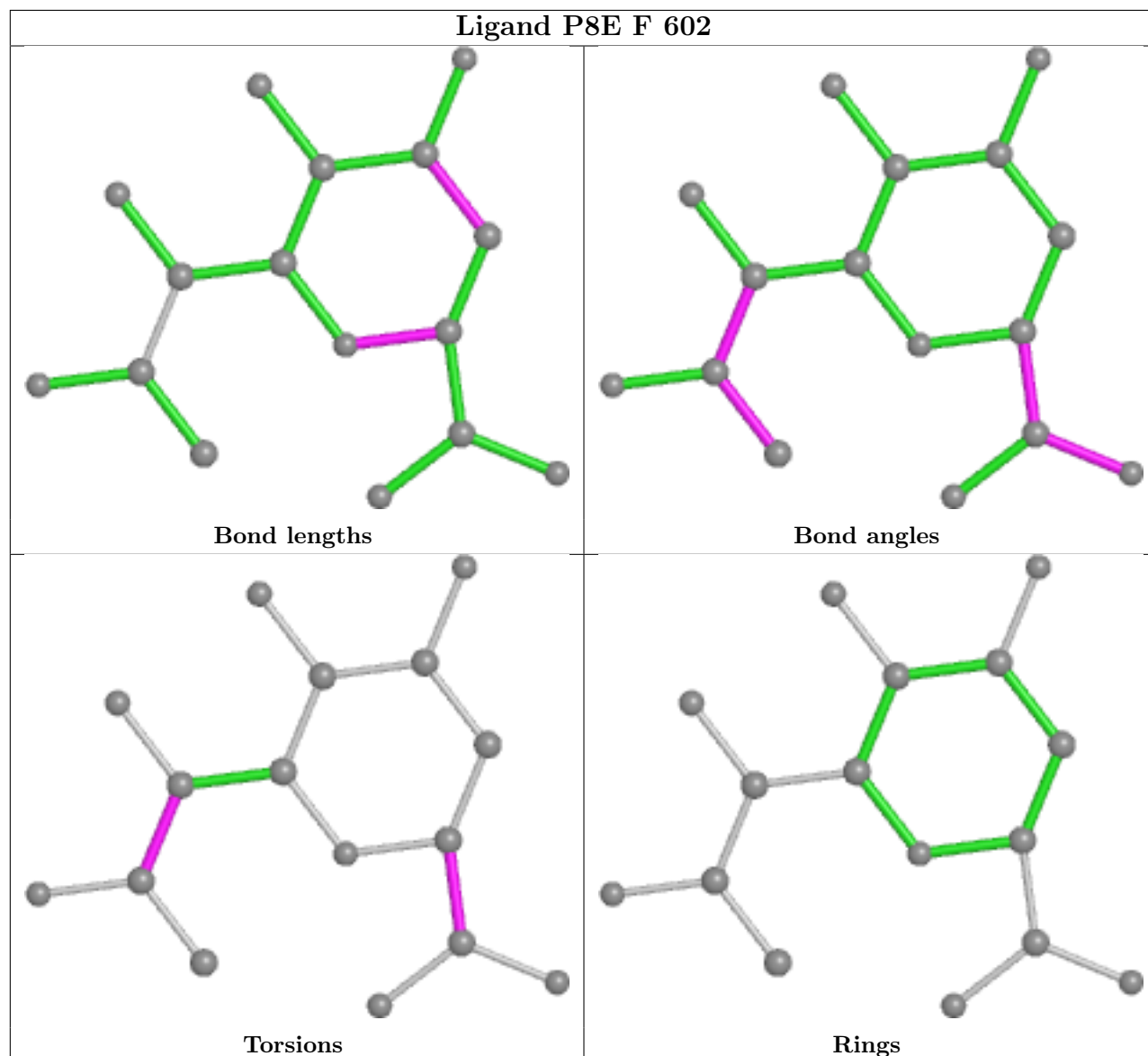
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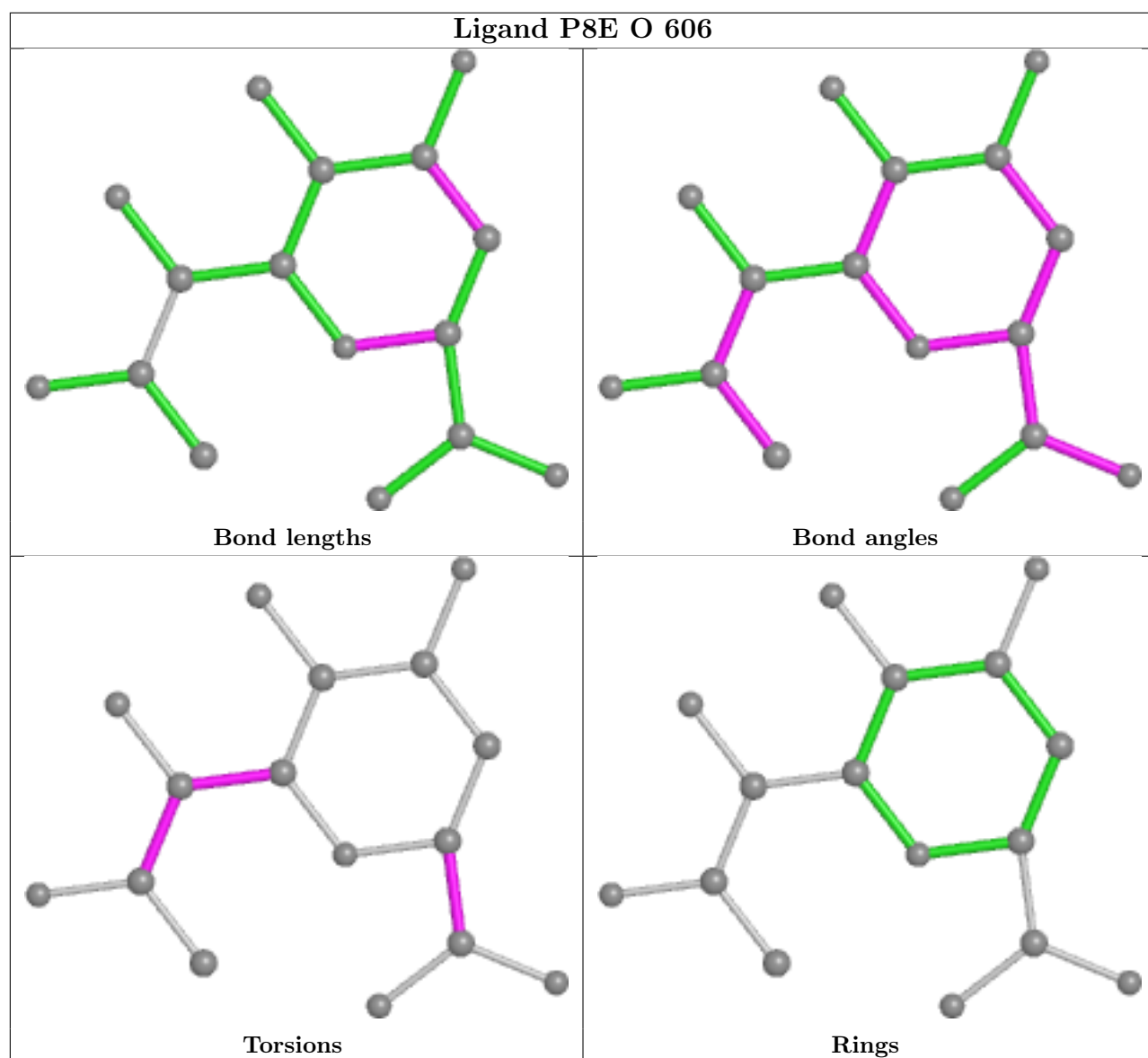
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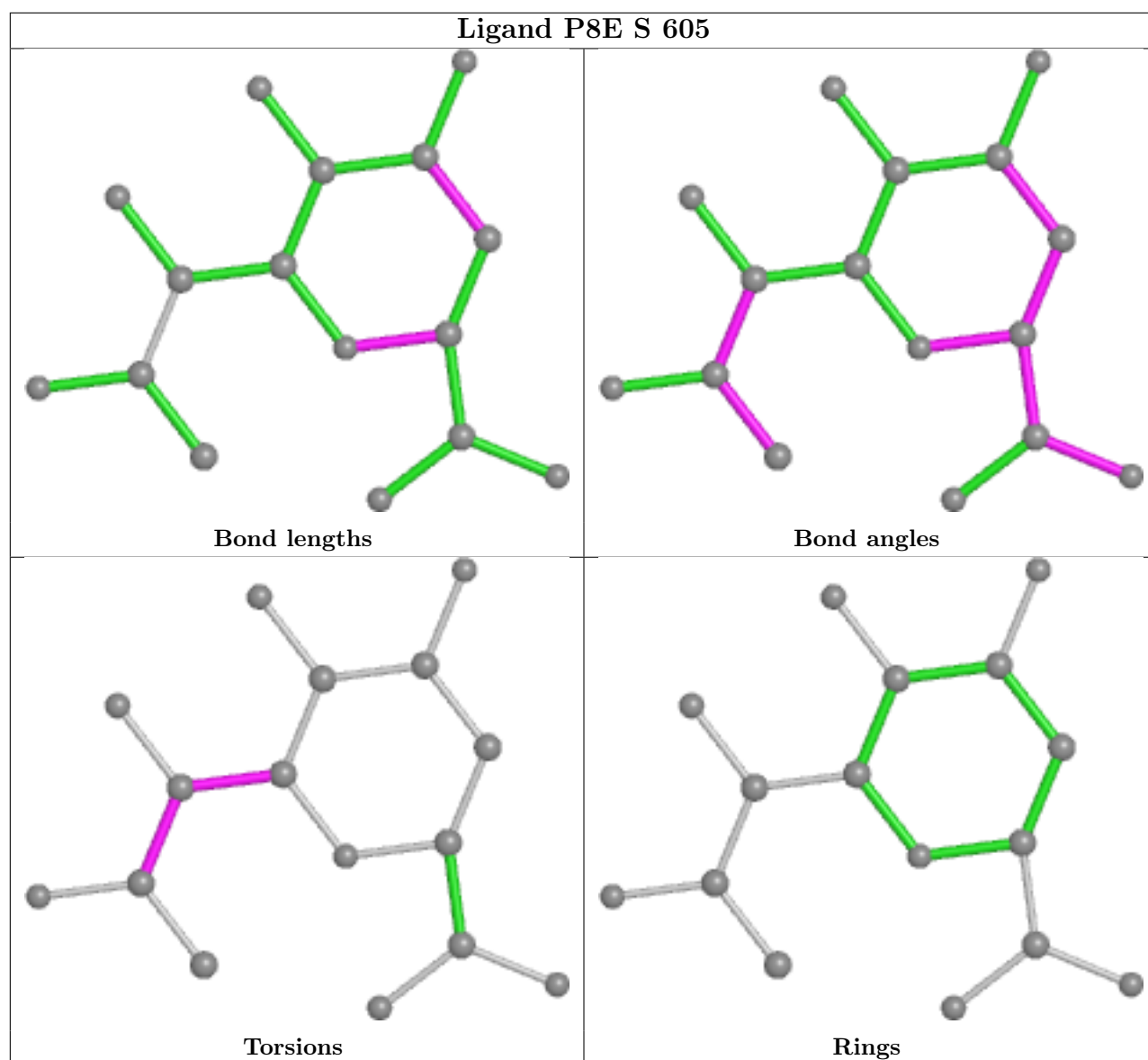
Mol	Chain	Res	Type	Clashes	Symm-Clashes
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2	O	601	P8E	1	0
2	I	617	P8E	1	0
2	J	614	P8E	1	0
2	M	610	P8E	2	0
2	A	616	P8E	1	0
2	S	606	P8E	2	0
2	A	610	P8E	2	0
2	I	603	P8E	1	0
2	P	614	P8E	1	0
2	V	615	P8E	1	0
2	D	614	P8E	1	0
2	Q	611	P8E	1	0
2	F	614	P8E	1	0
2	A	603	P8E	1	0
2	T	608	P8E	1	0
2	C	616	P8E	2	0
2	C	601	P8E	1	0
2	B	617	P8E	1	0
2	Q	615	P8E	1	0
2	U	601	P8E	1	0
2	E	610	P8E	1	0
2	D	612	P8E	3	0
2	N	603	P8E	1	0
2	O	616	P8E	2	0
2	R	606	P8E	3	0
2	N	617	P8E	1	0
2	L	603	P8E	1	0
2	H	608	P8E	1	0
2	S	603	P8E	1	0
2	T	606	P8E	2	0
2	S	615	P8E	1	0
2	K	602	P8E	1	0
2	T	617	P8E	2	0
2	Q	617	P8E	2	0

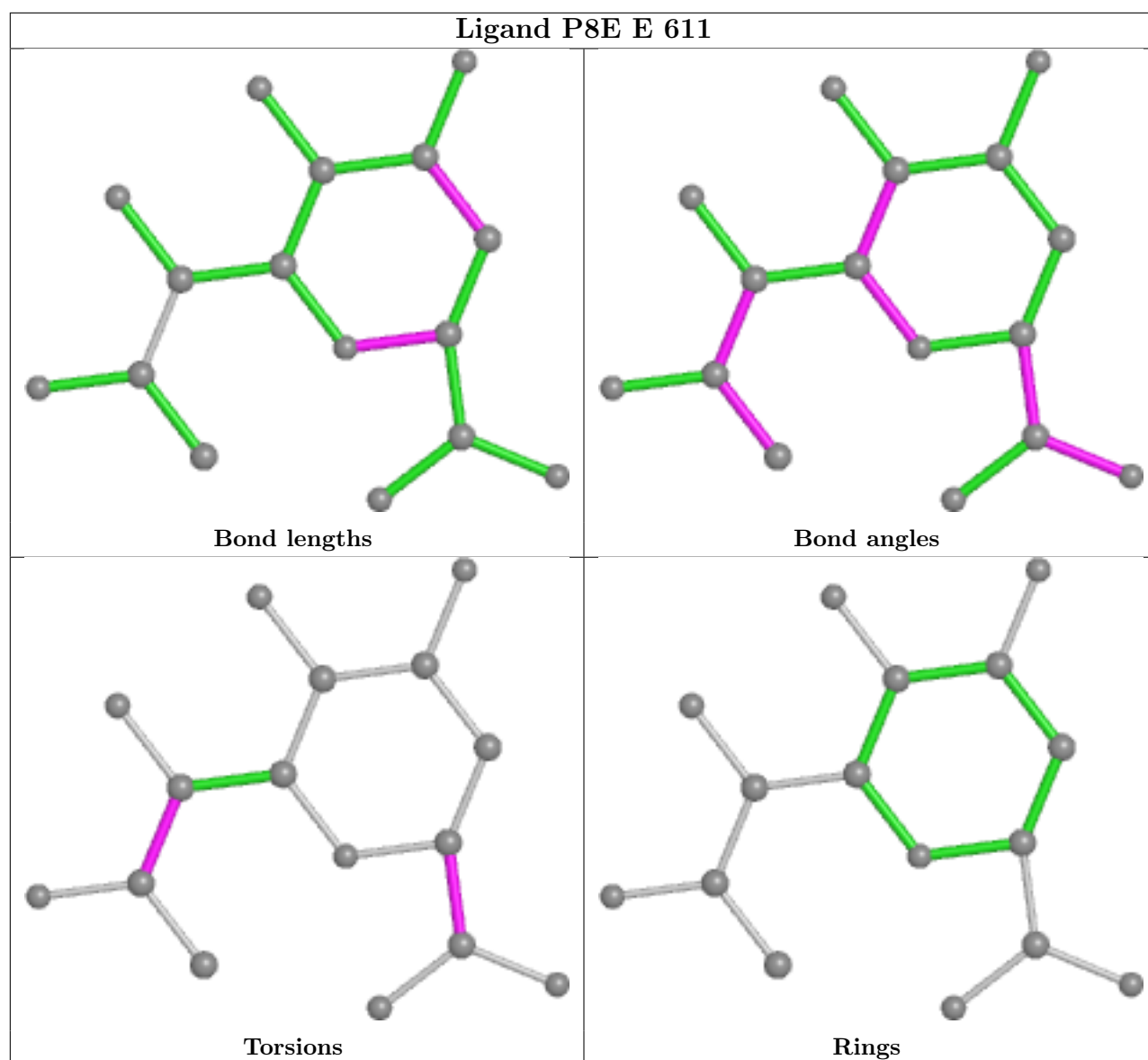
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring

in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

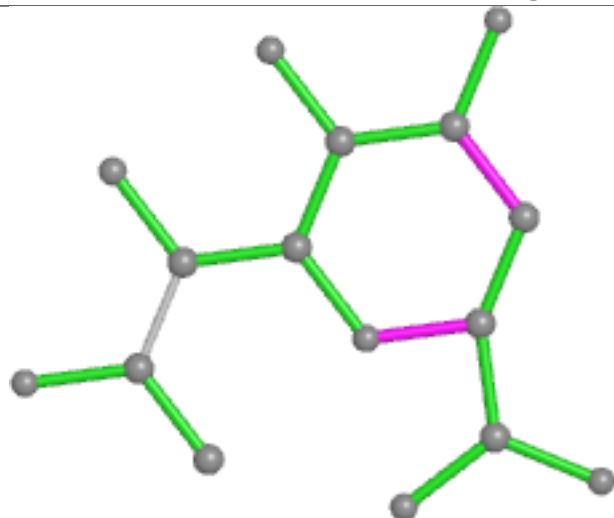




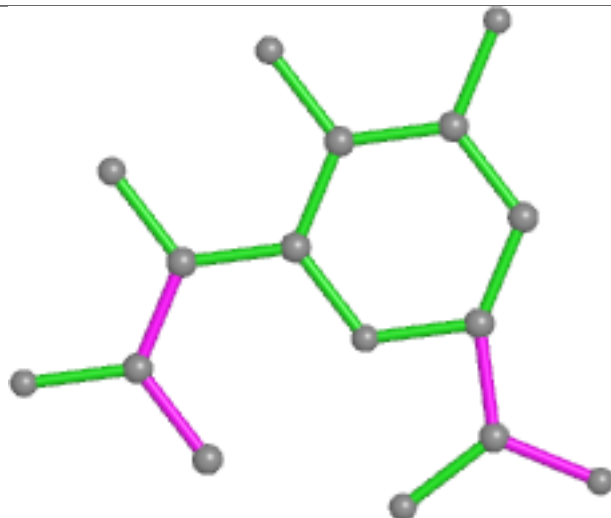




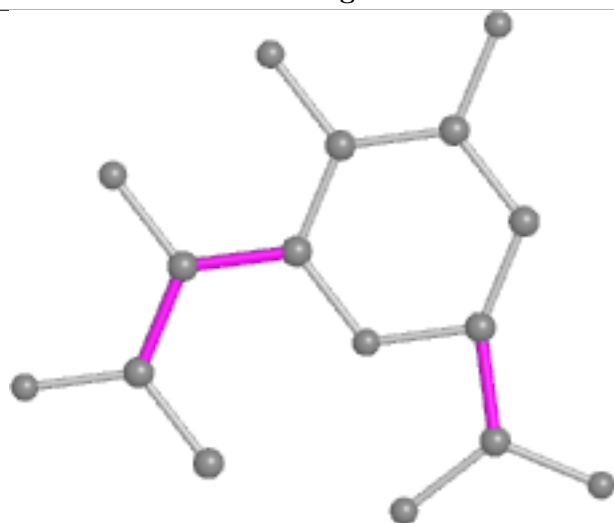
Ligand P8E I 601



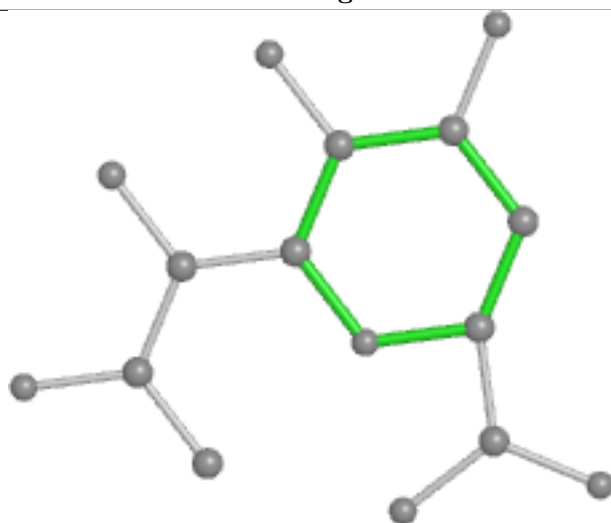
Bond lengths



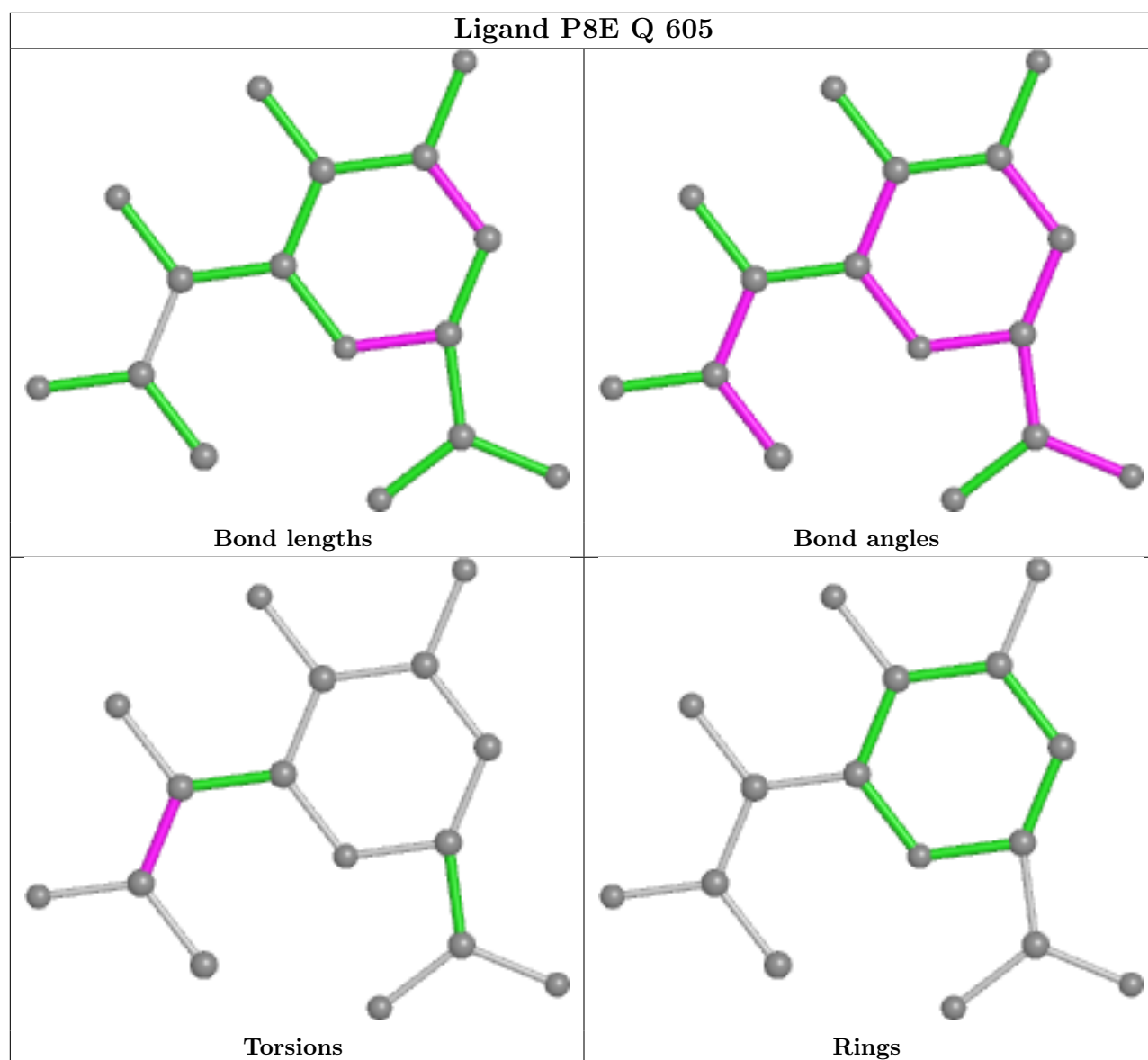
Bond angles

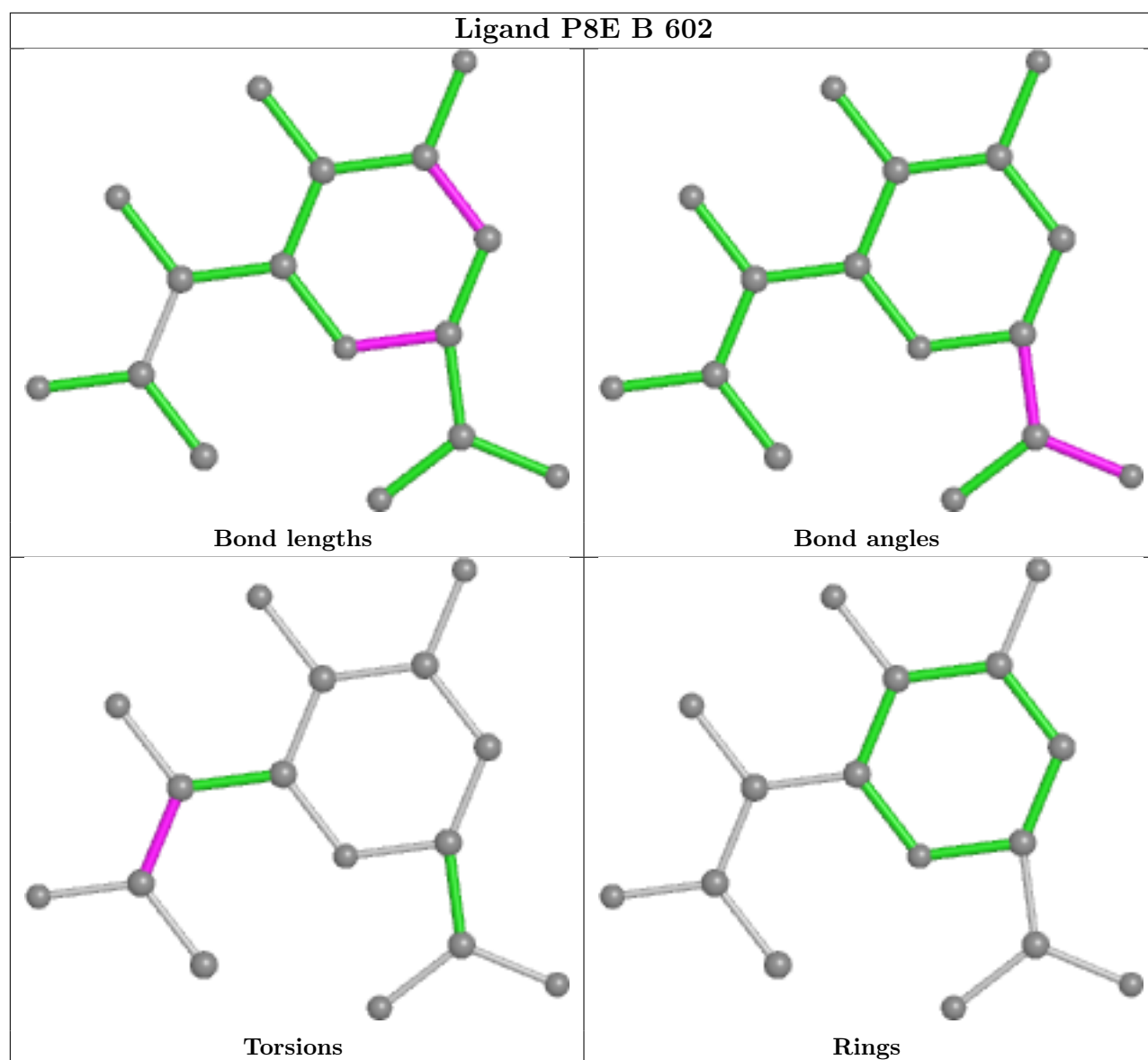


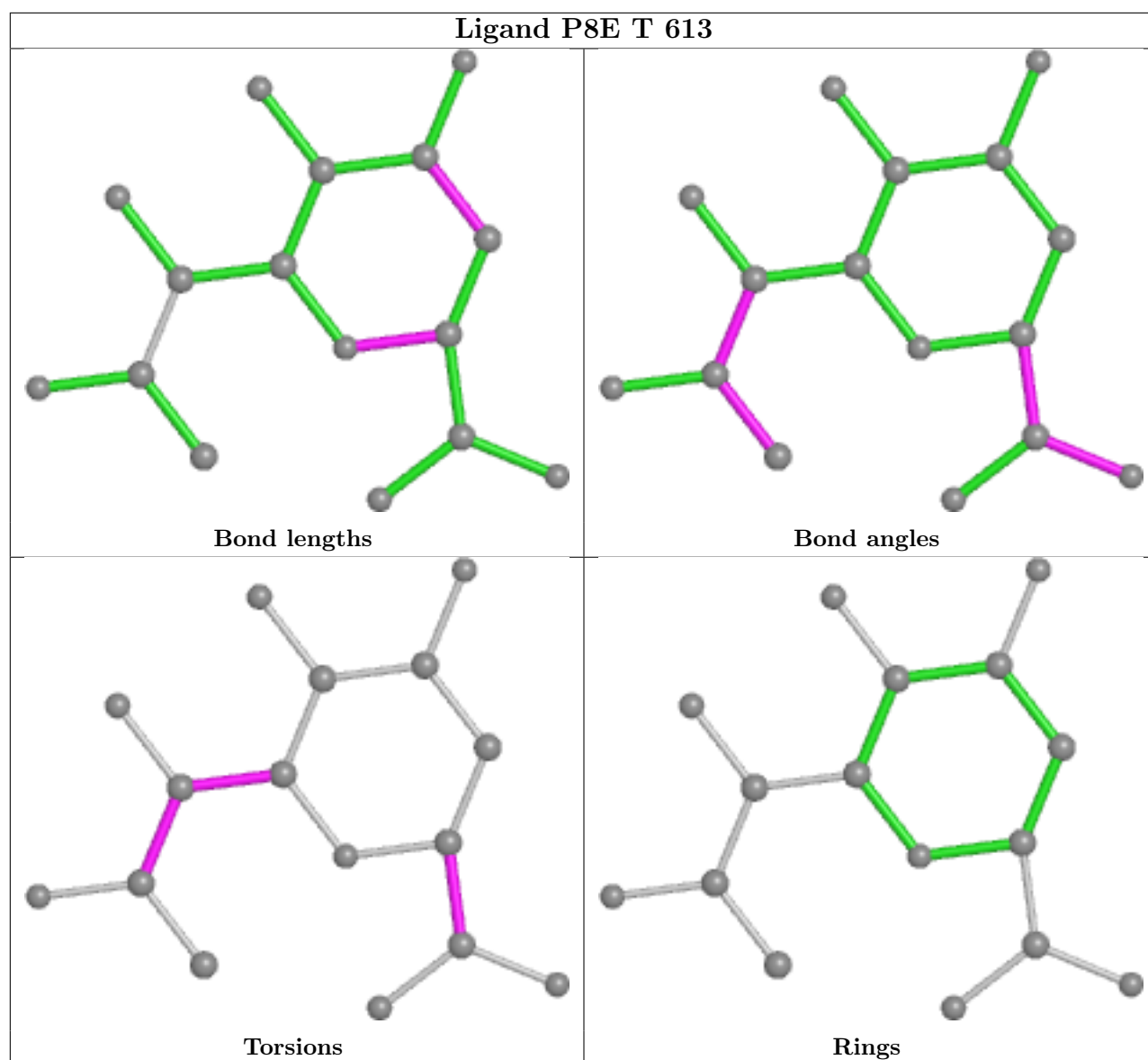
Torsions

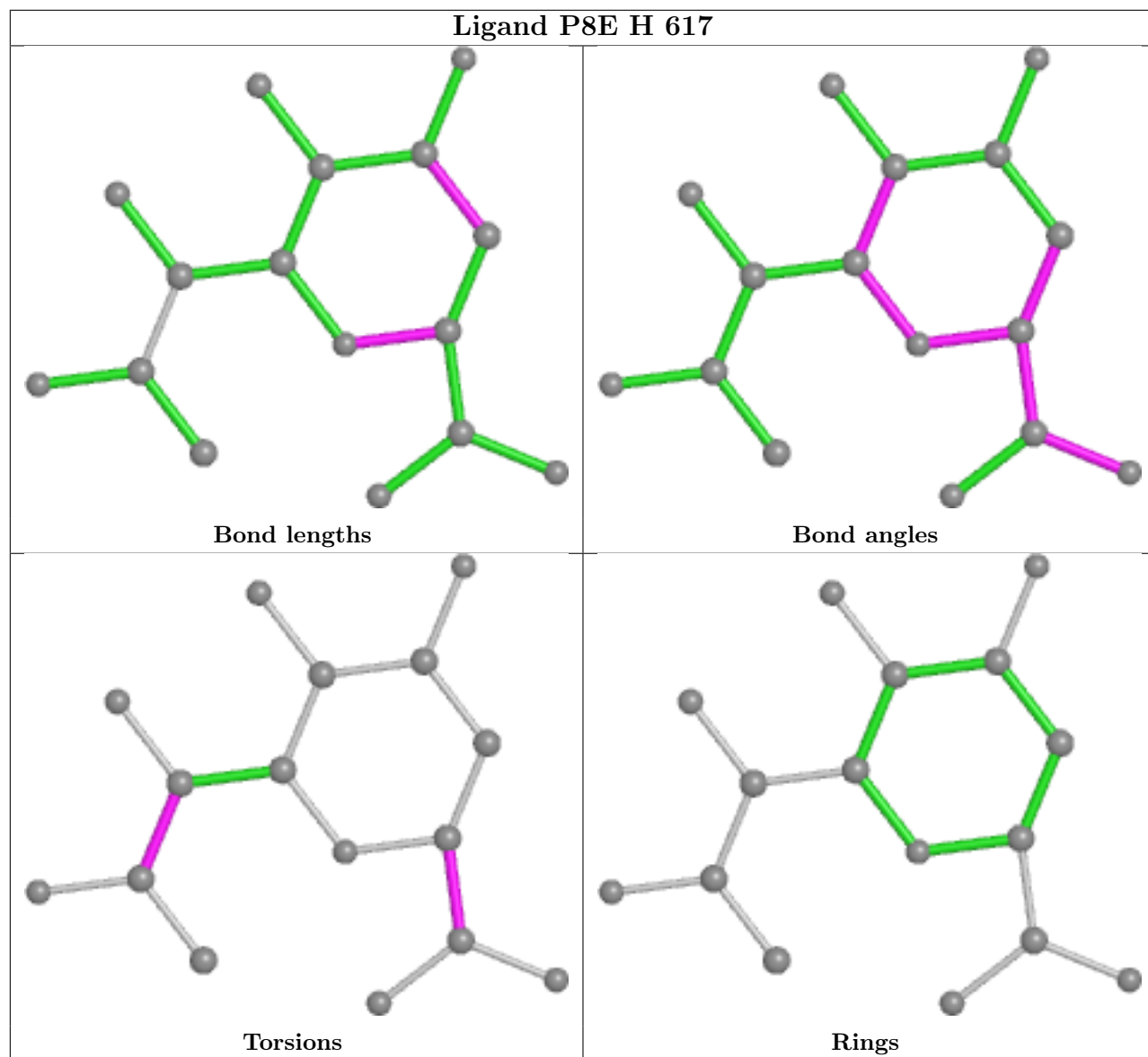


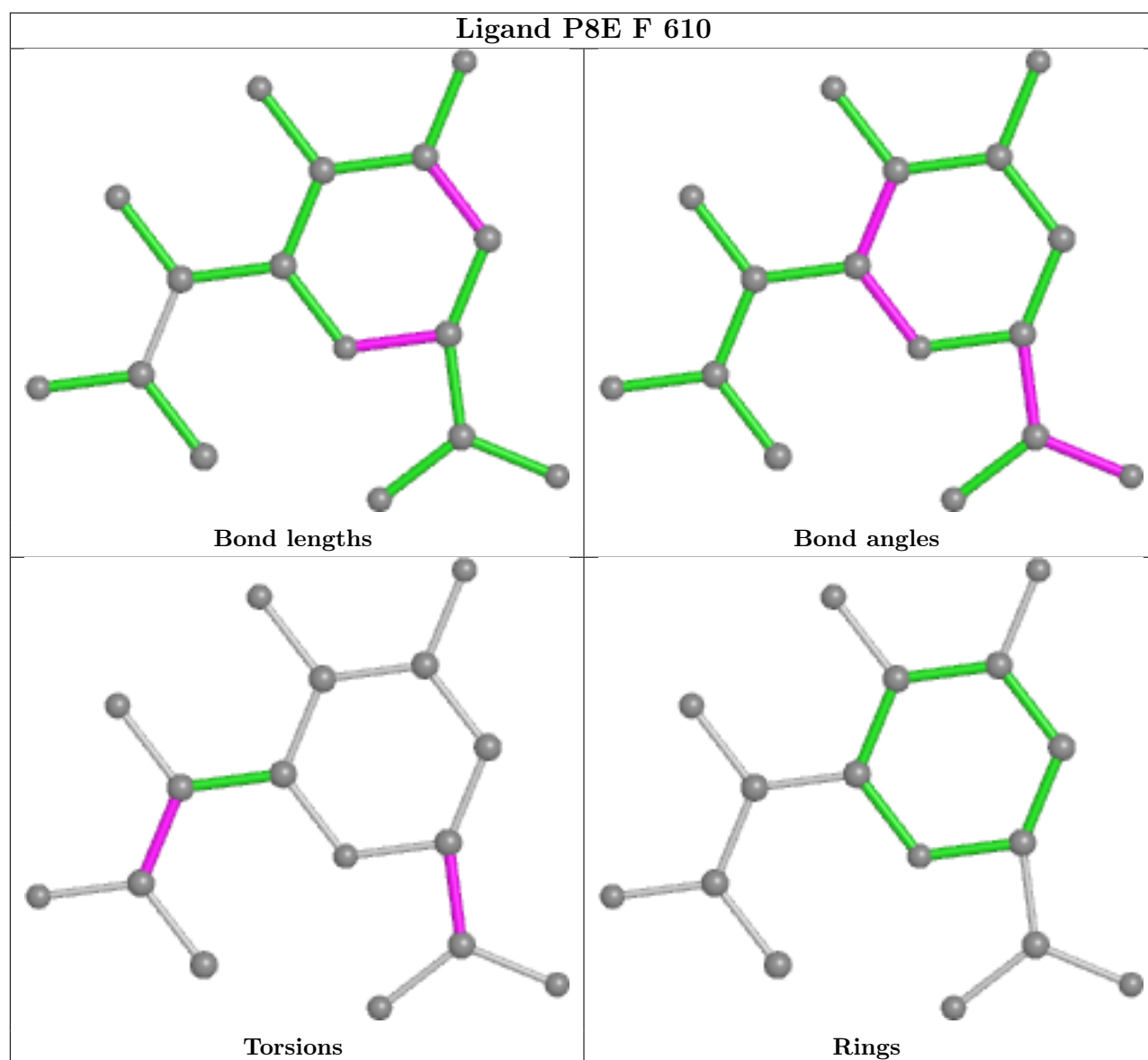
Rings

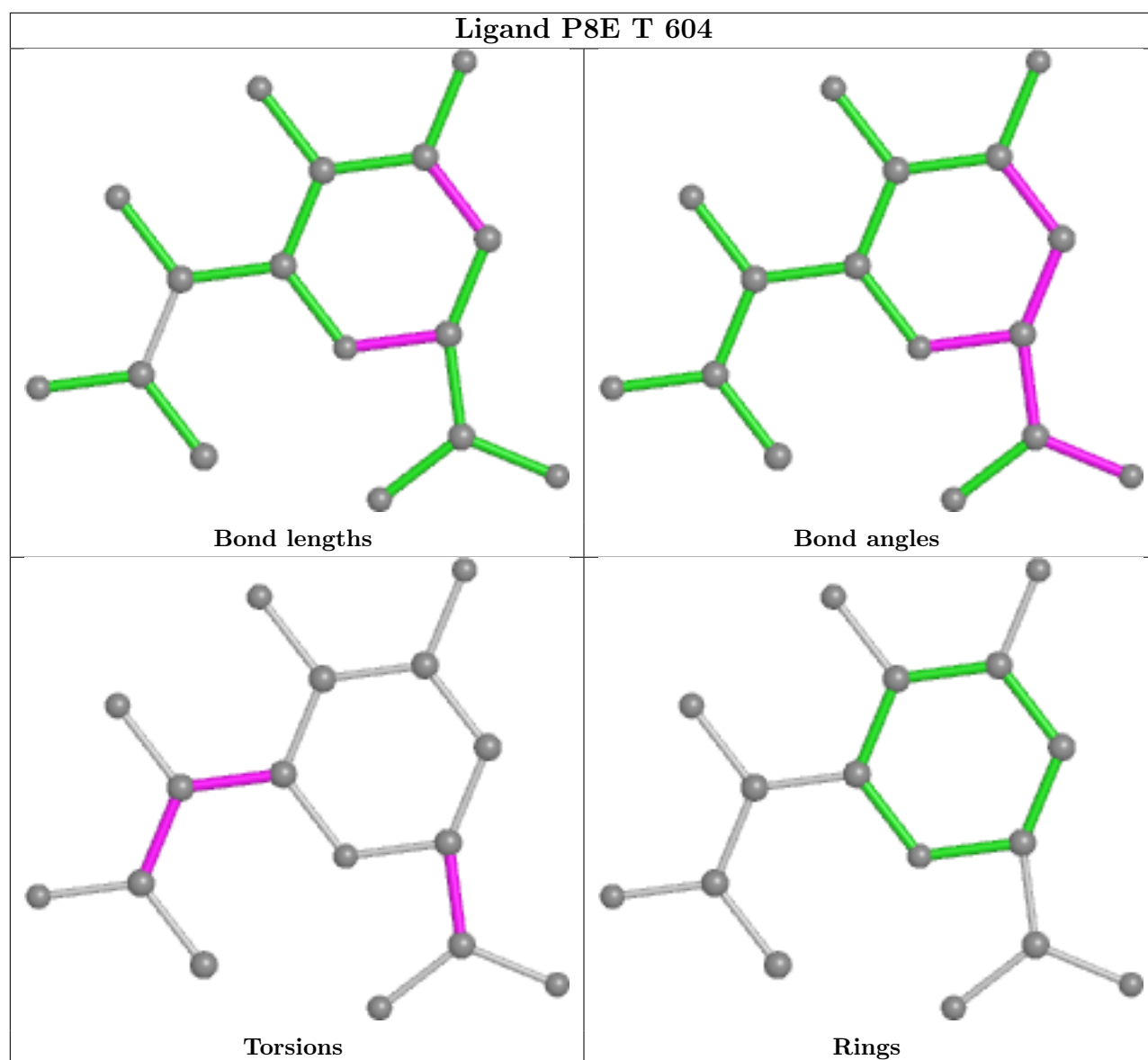


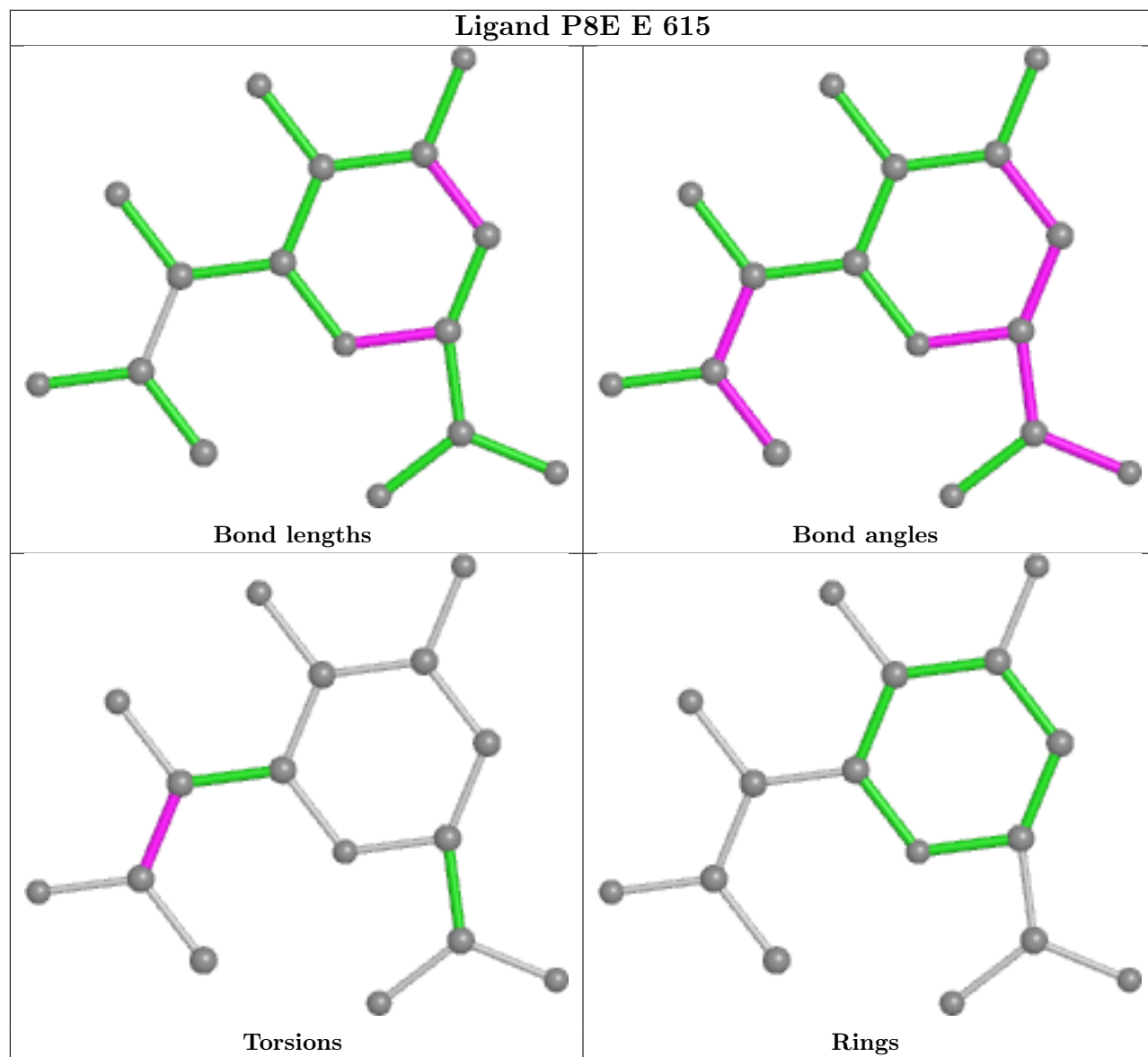


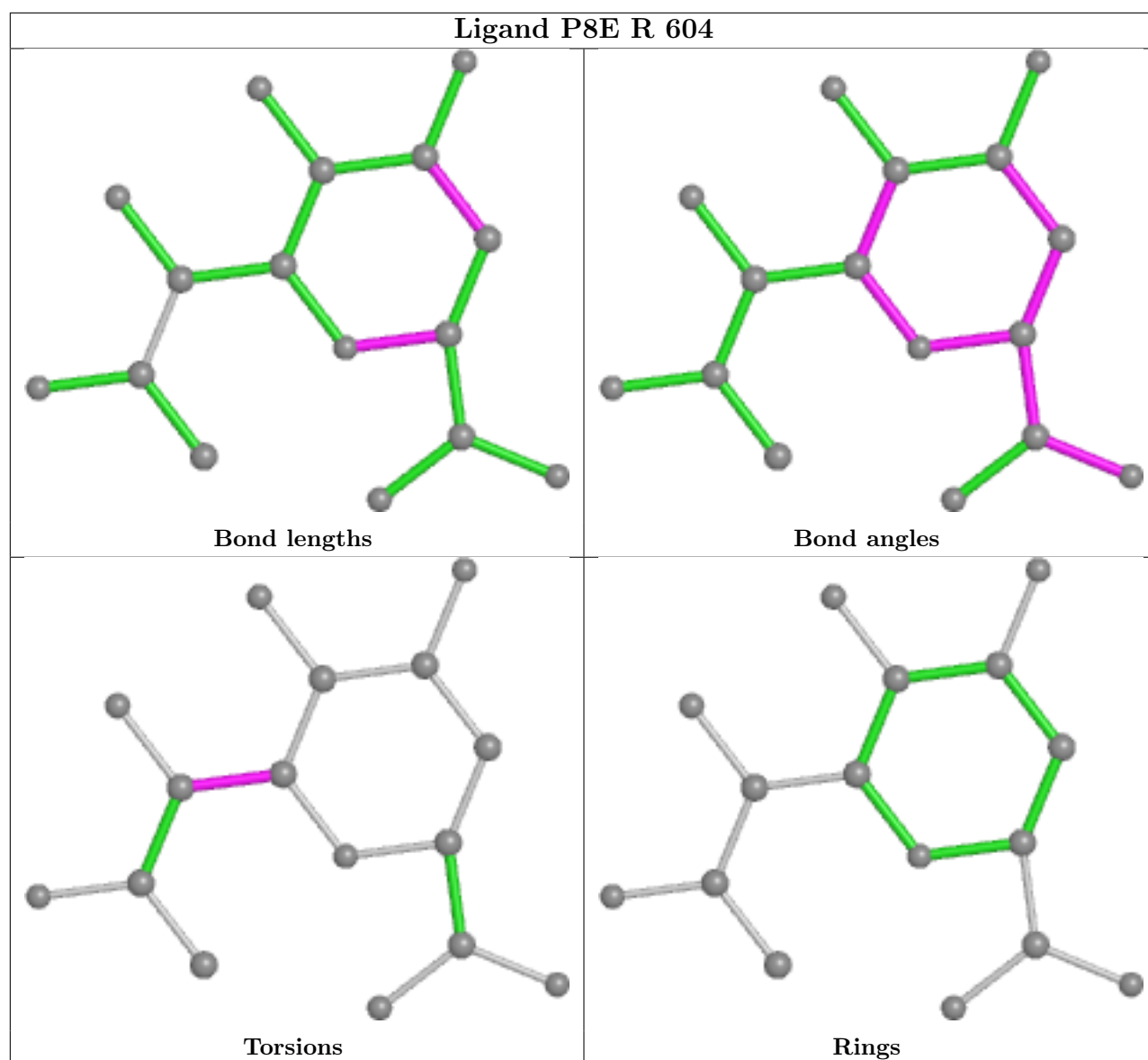


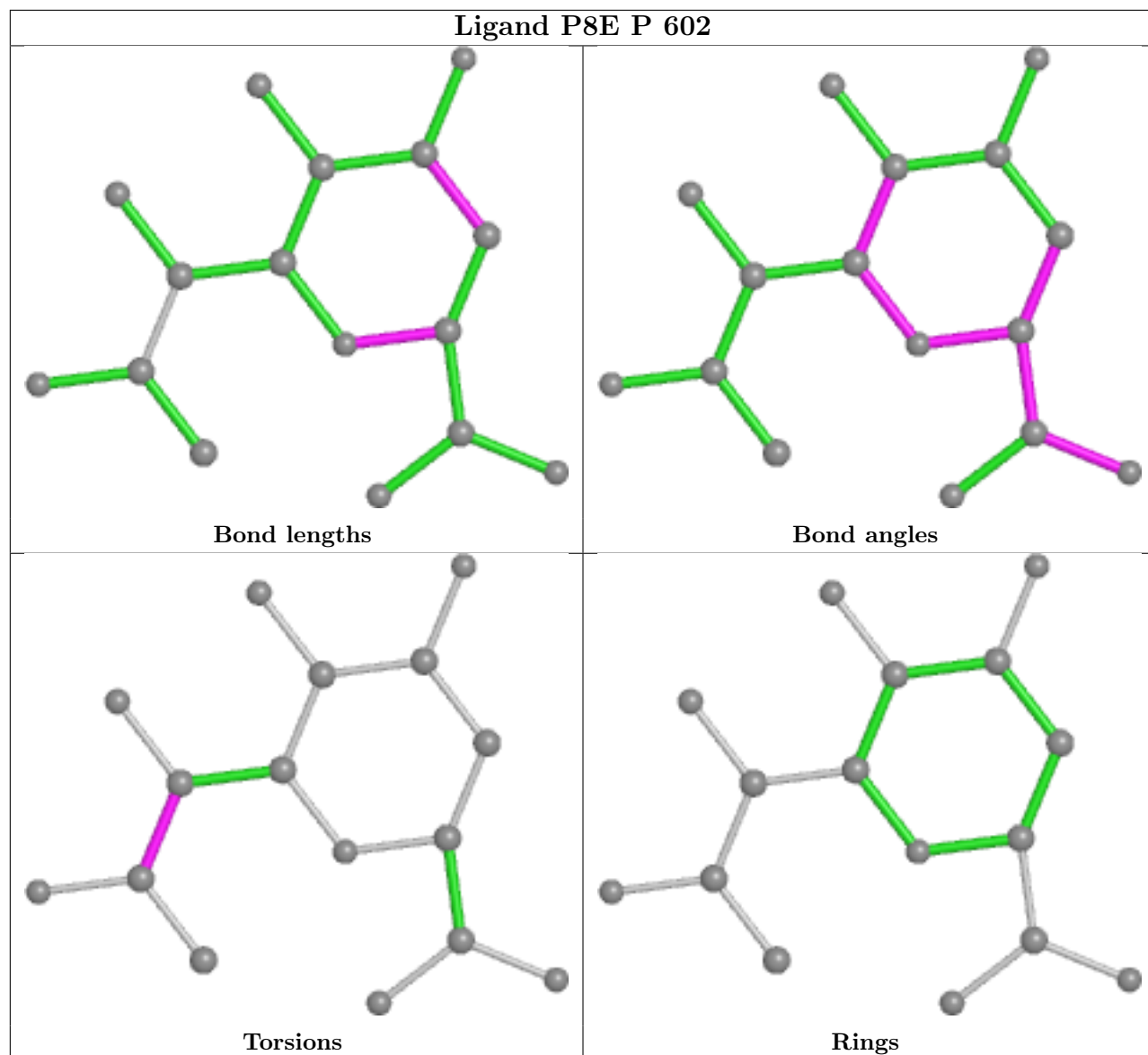




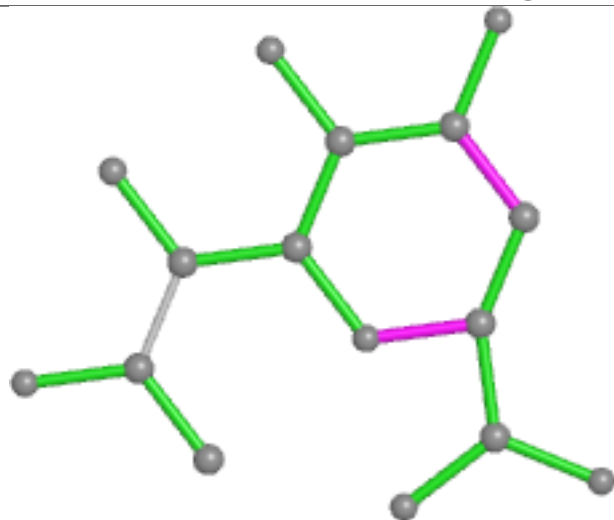




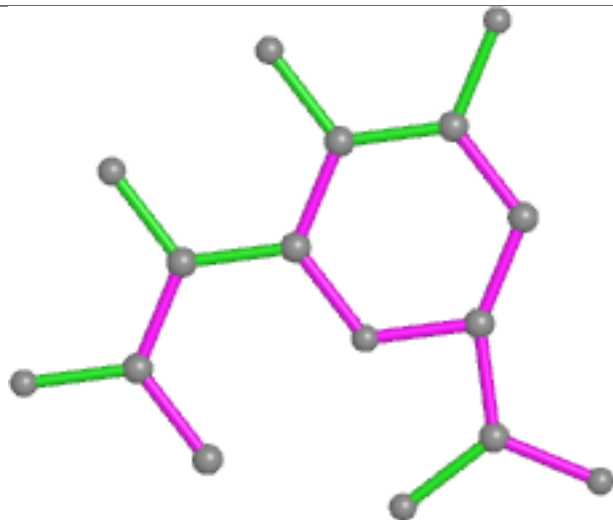




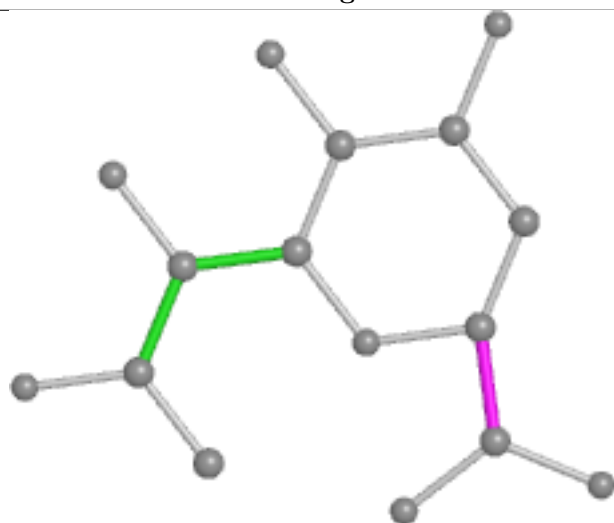
Ligand P8E P 617



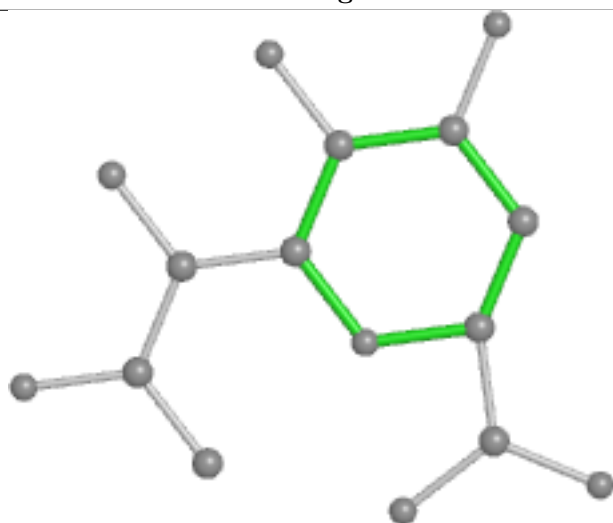
Bond lengths



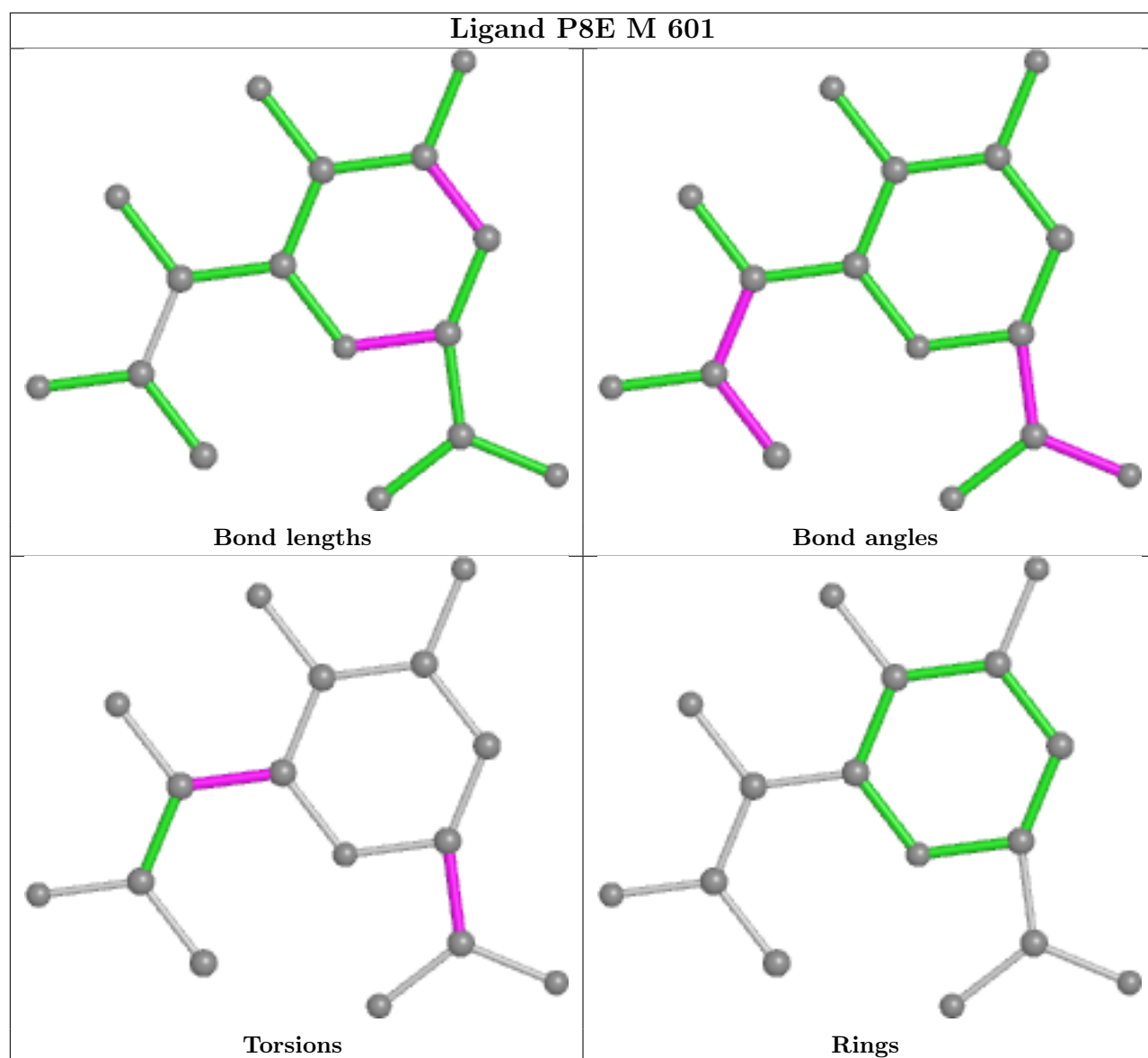
Bond angles

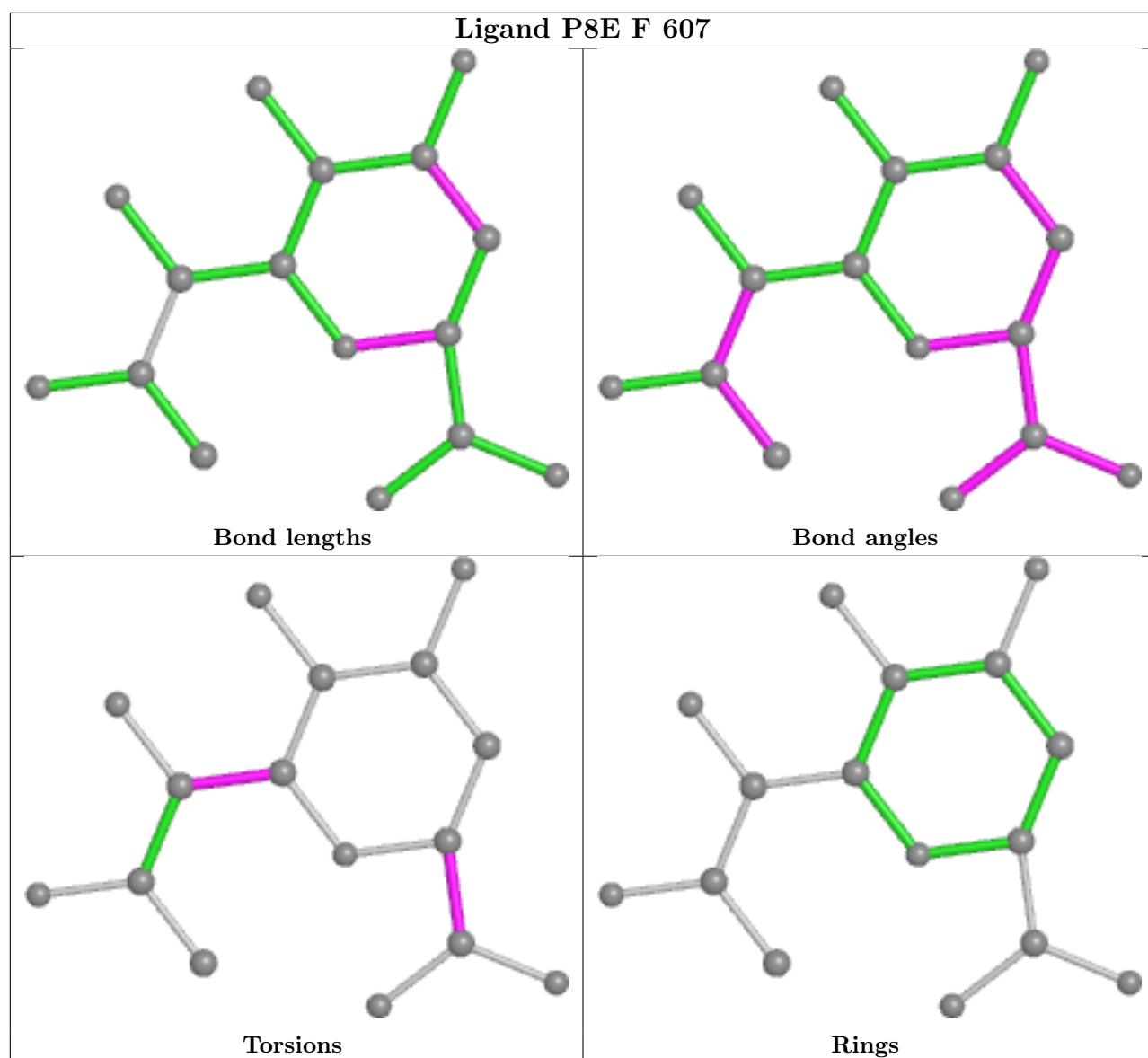


Torsions

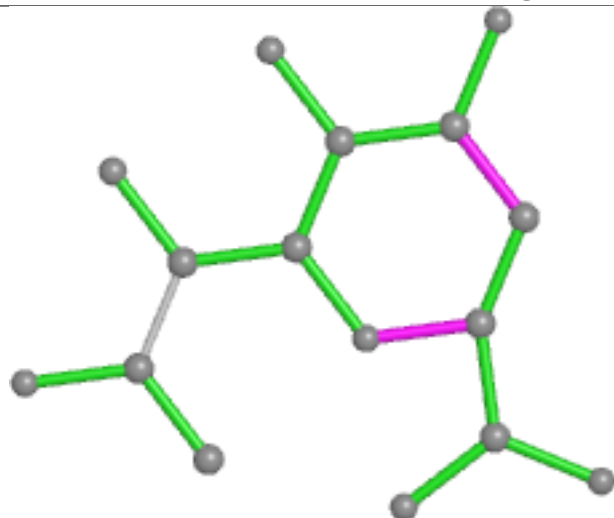


Rings

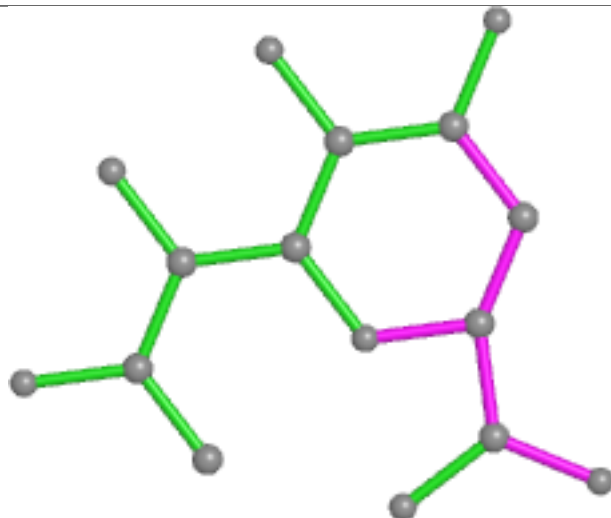




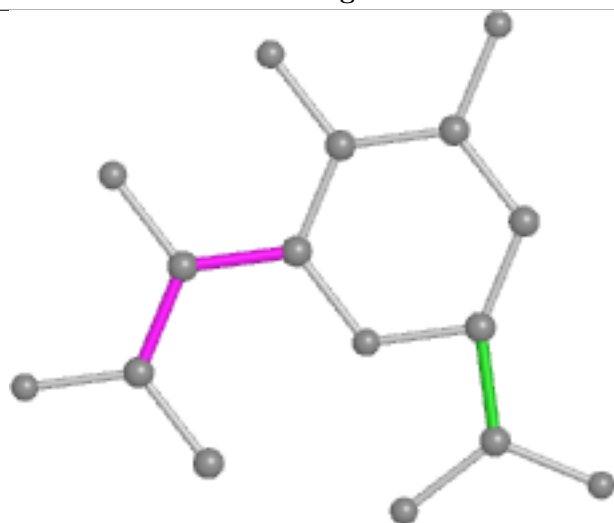
Ligand P8E A 605



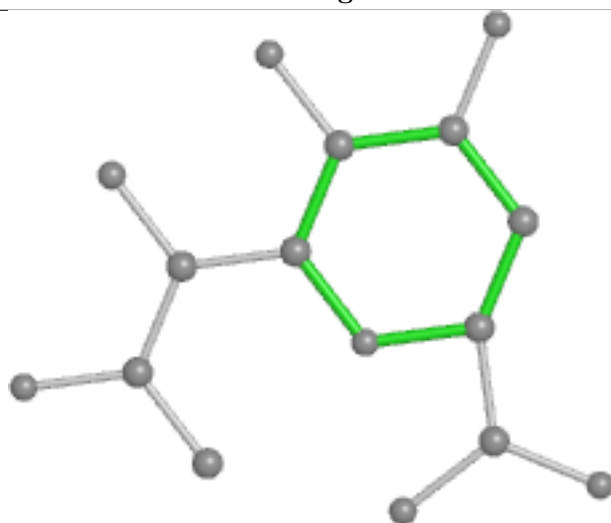
Bond lengths



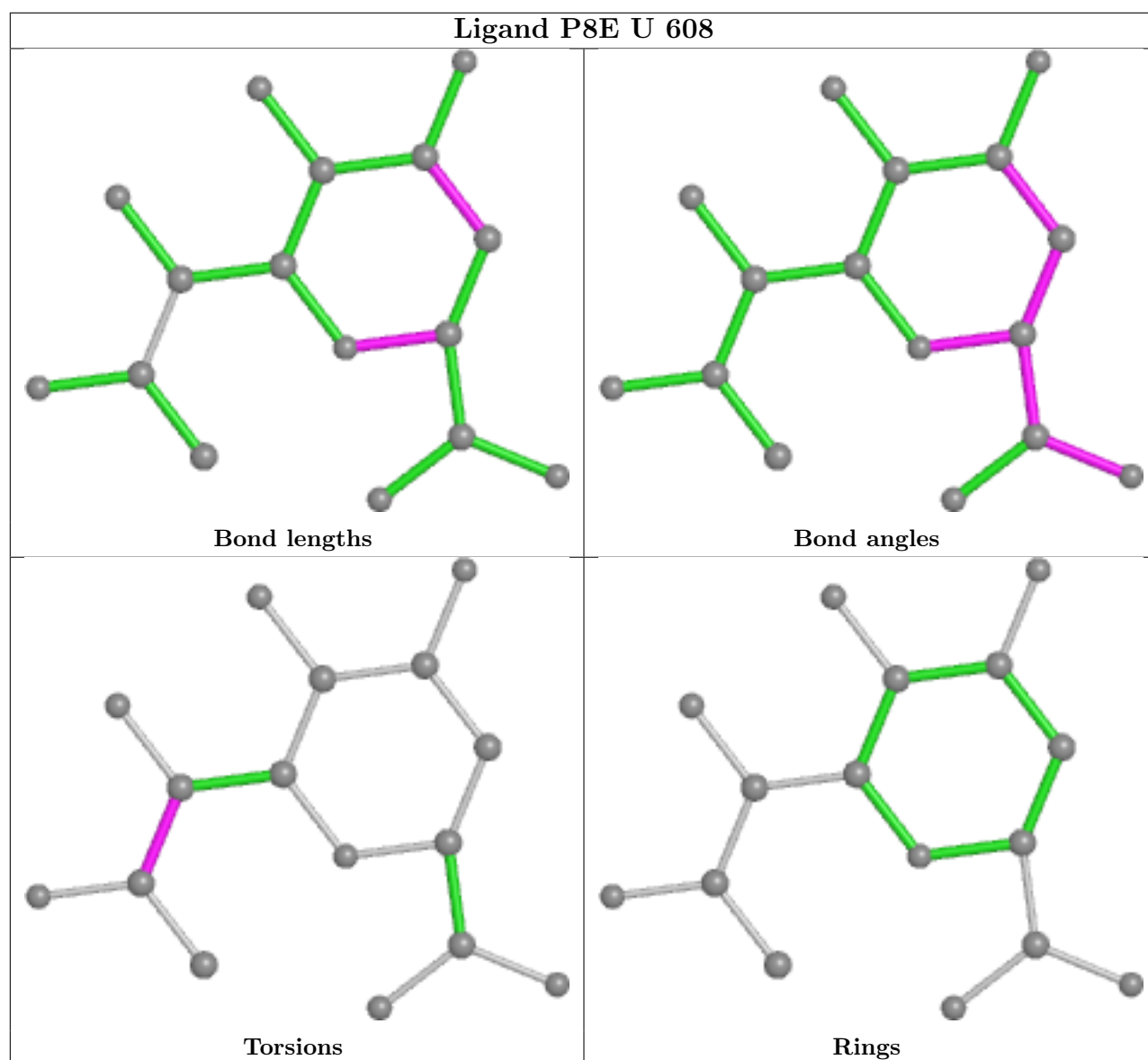
Bond angles

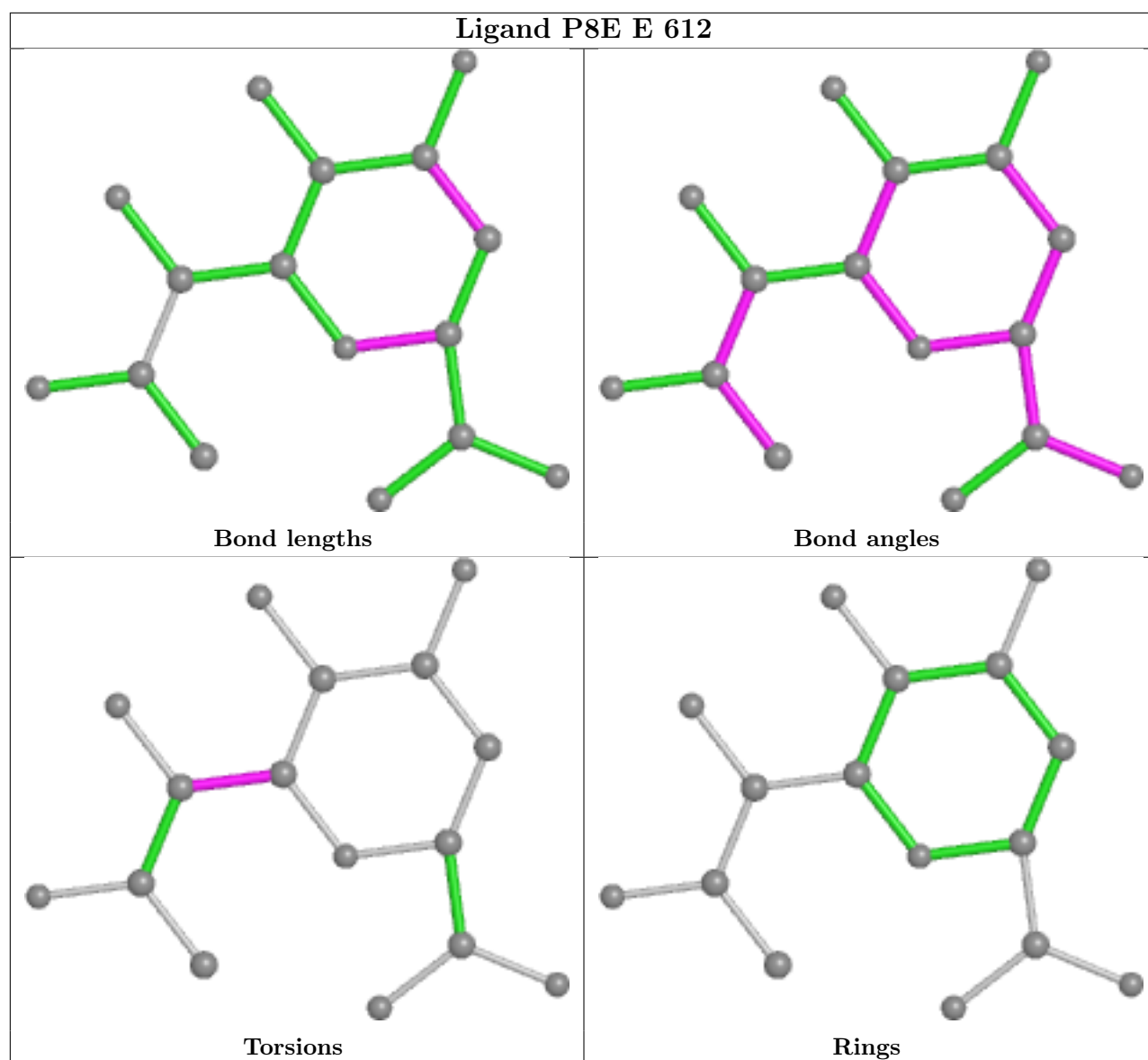


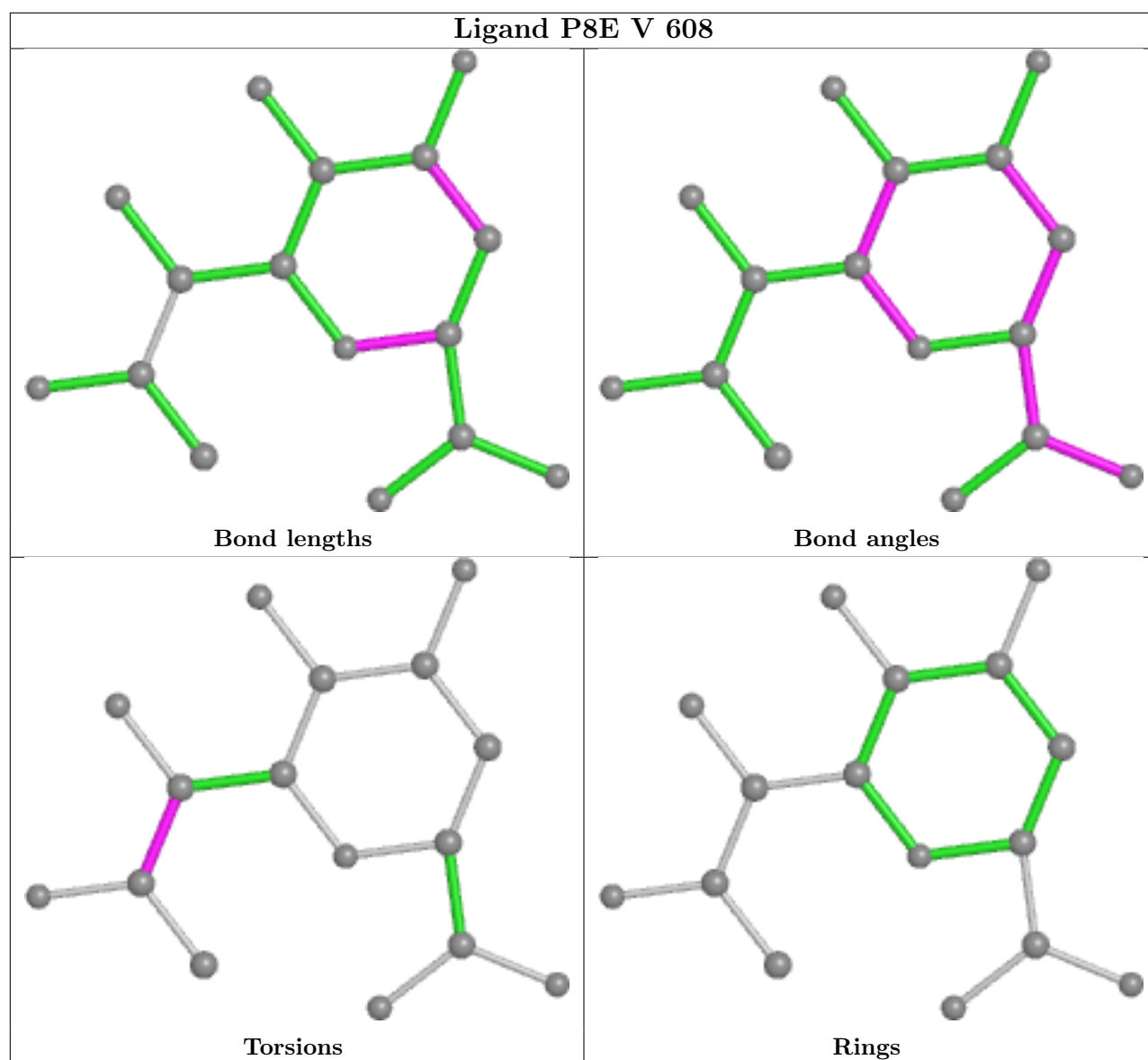
Torsions

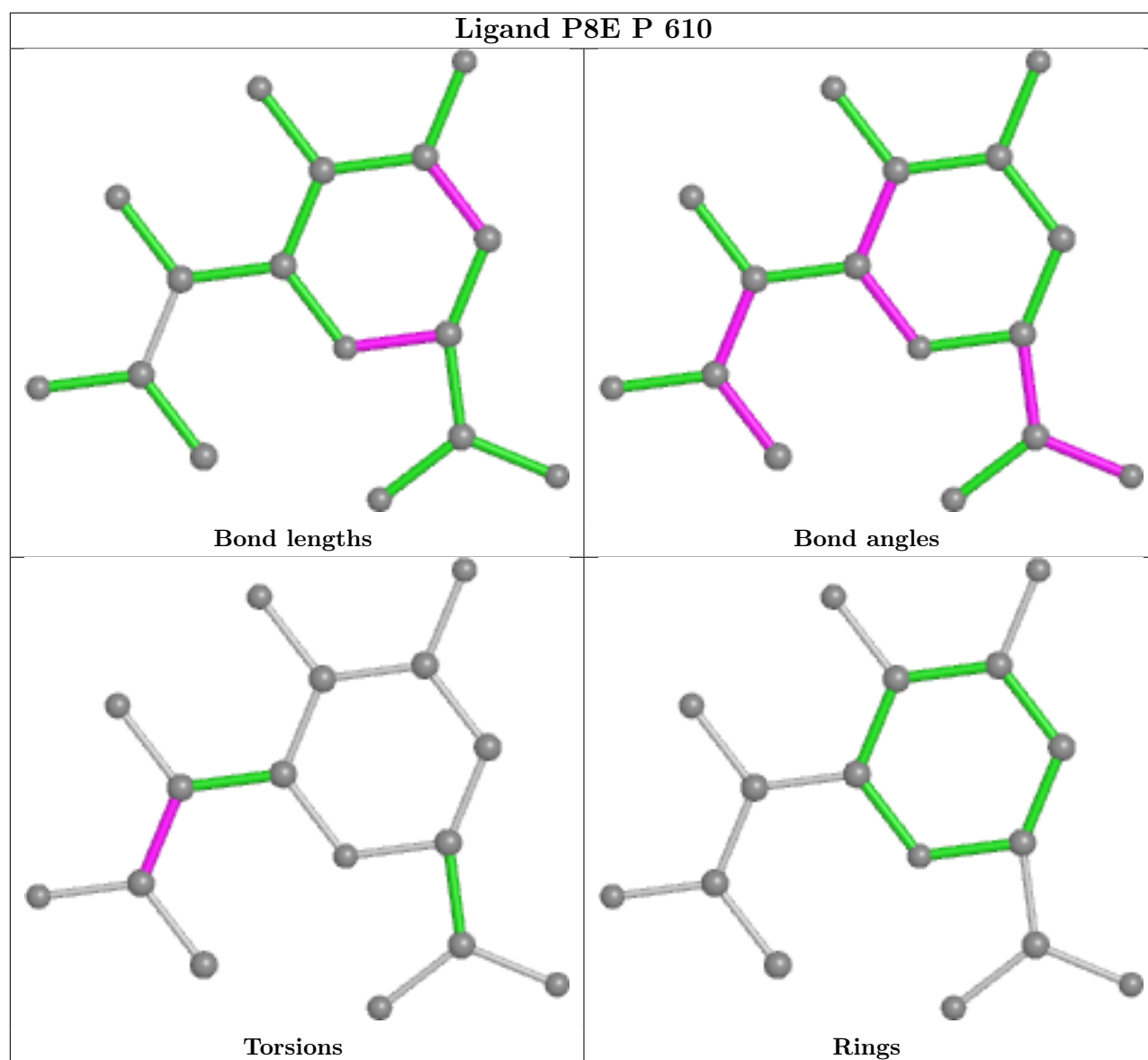


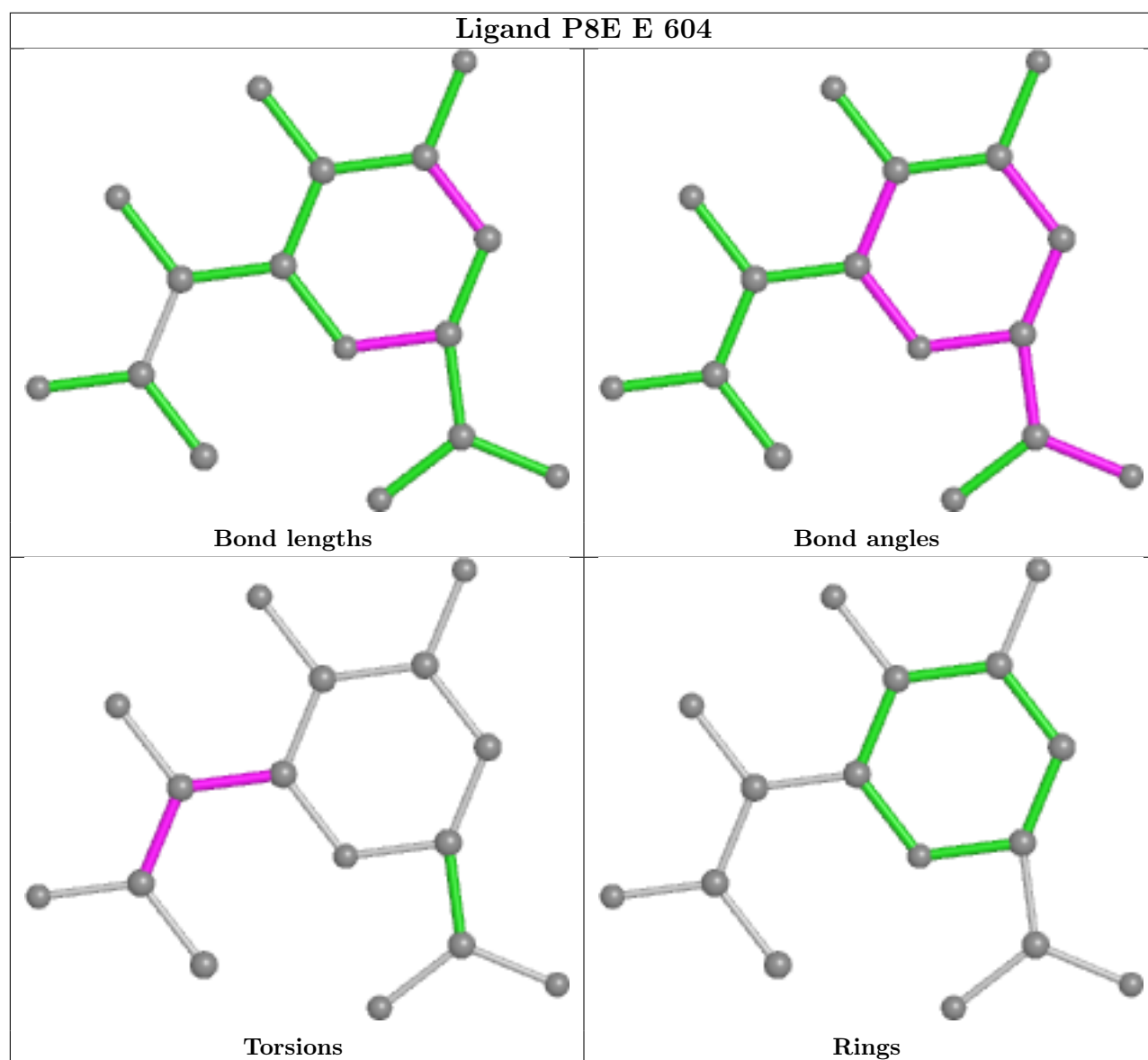
Rings

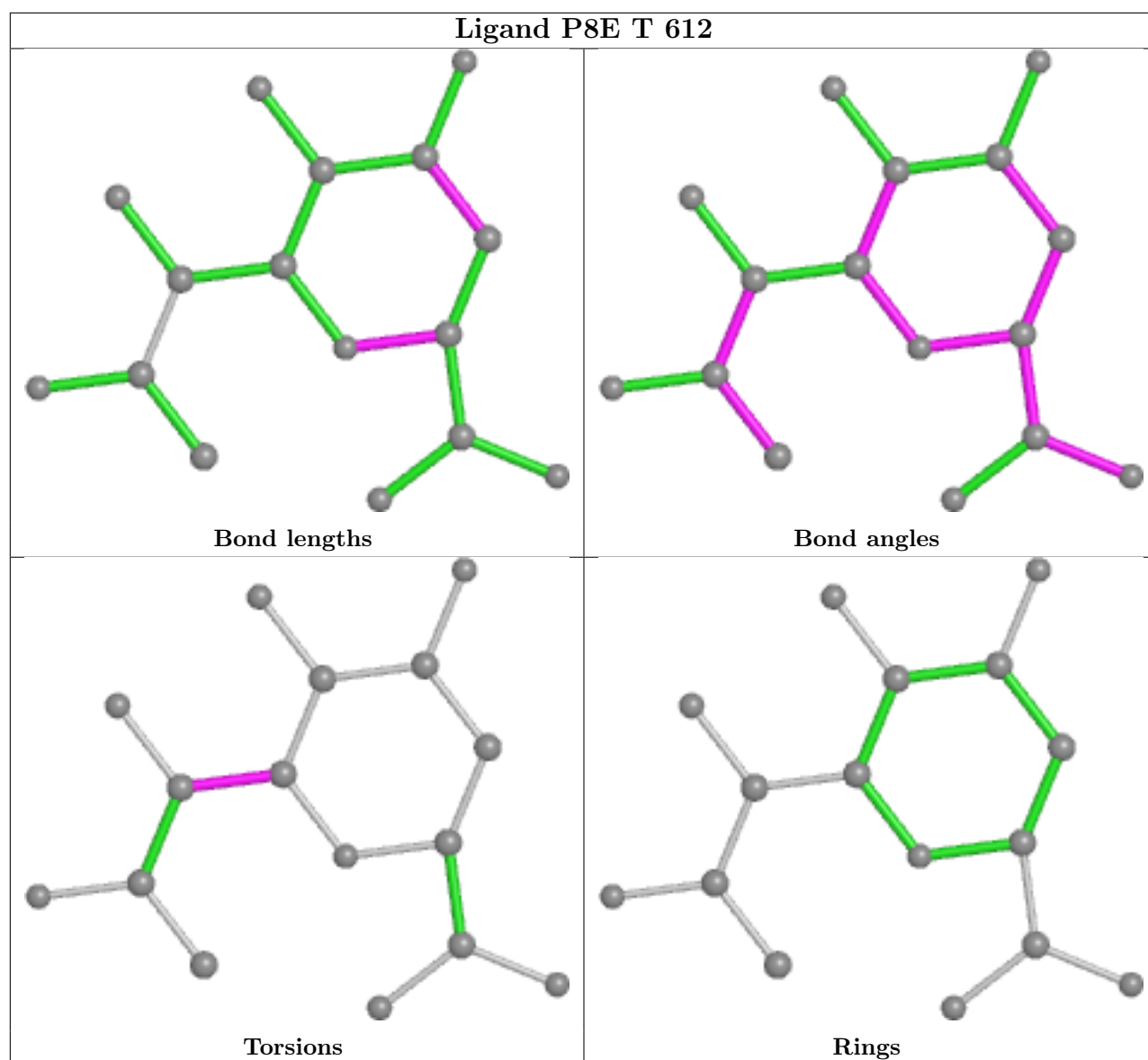




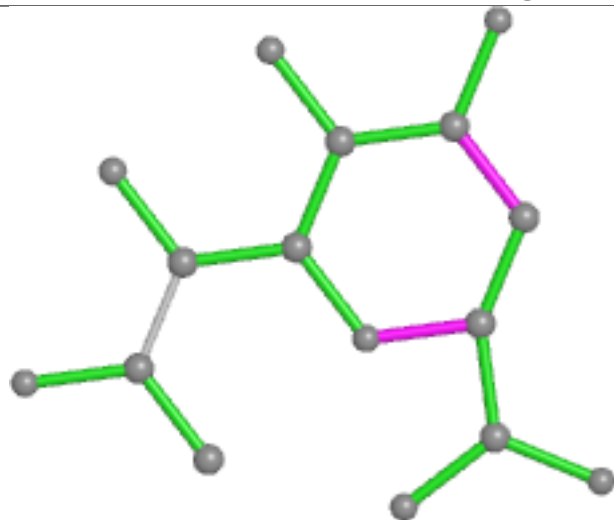




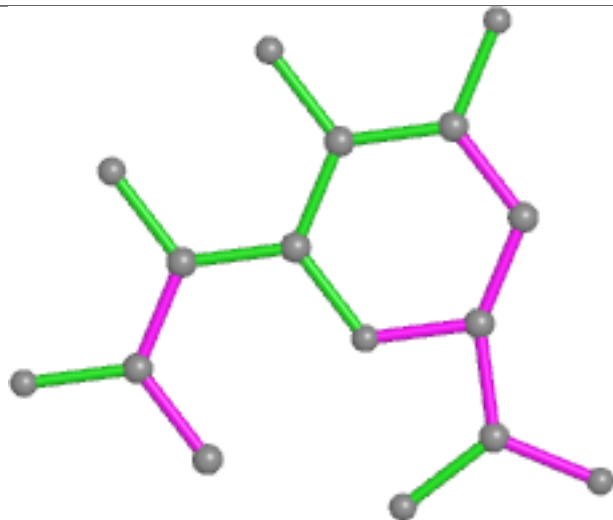




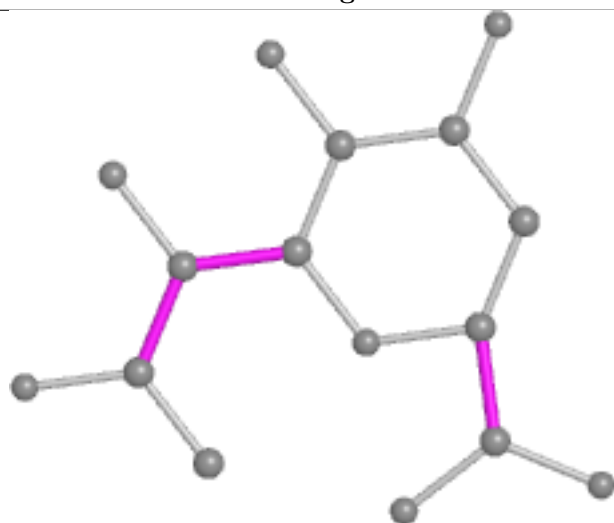
Ligand P8E B 605



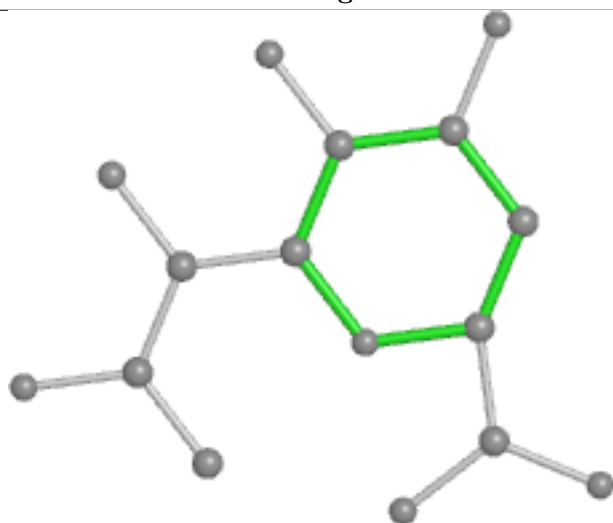
Bond lengths



Bond angles

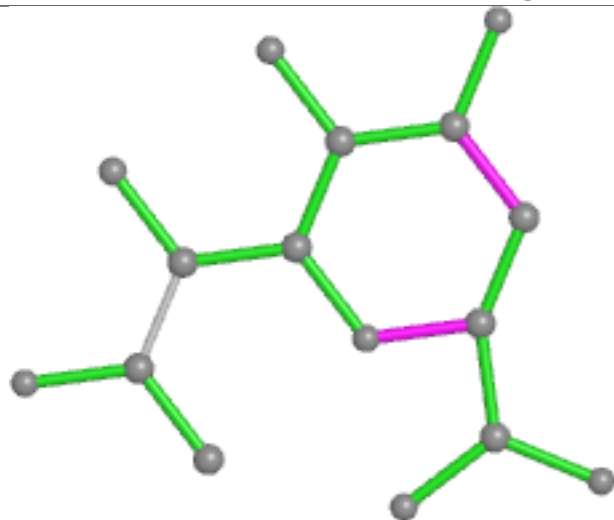


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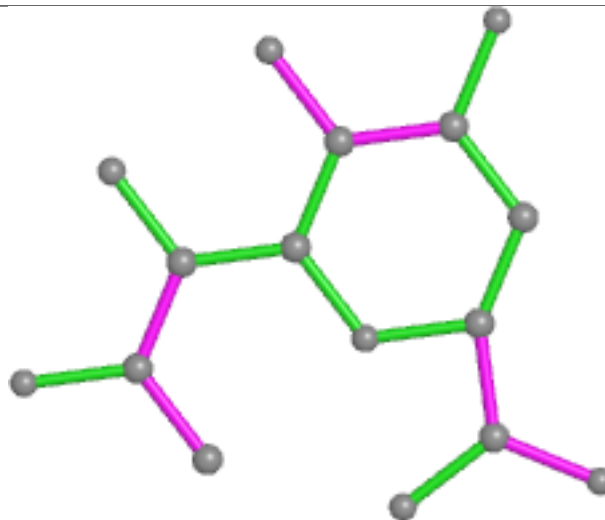


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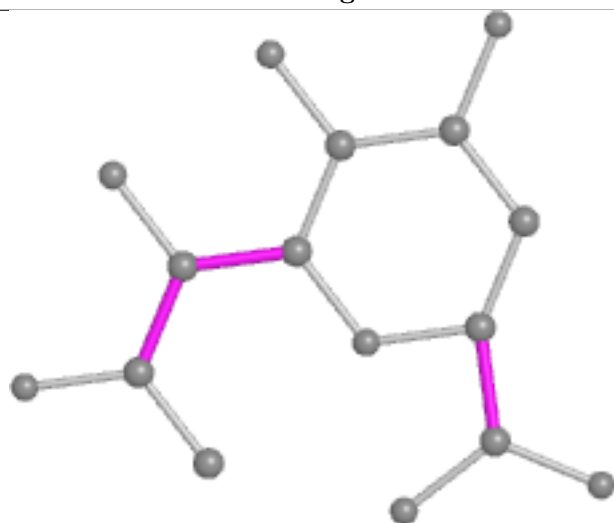
Ligand P8E T 616



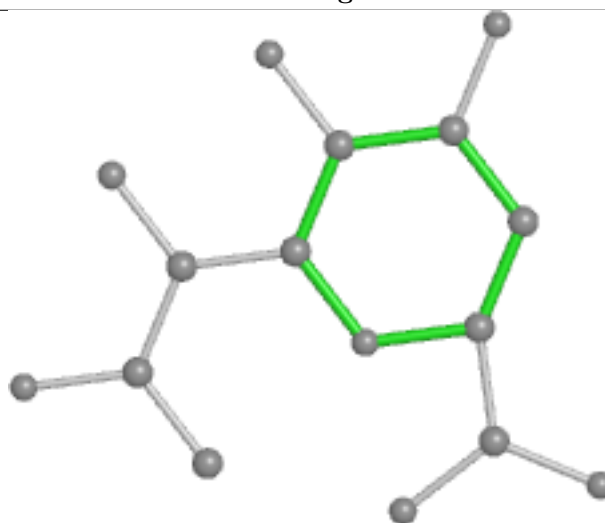
Bond lengths



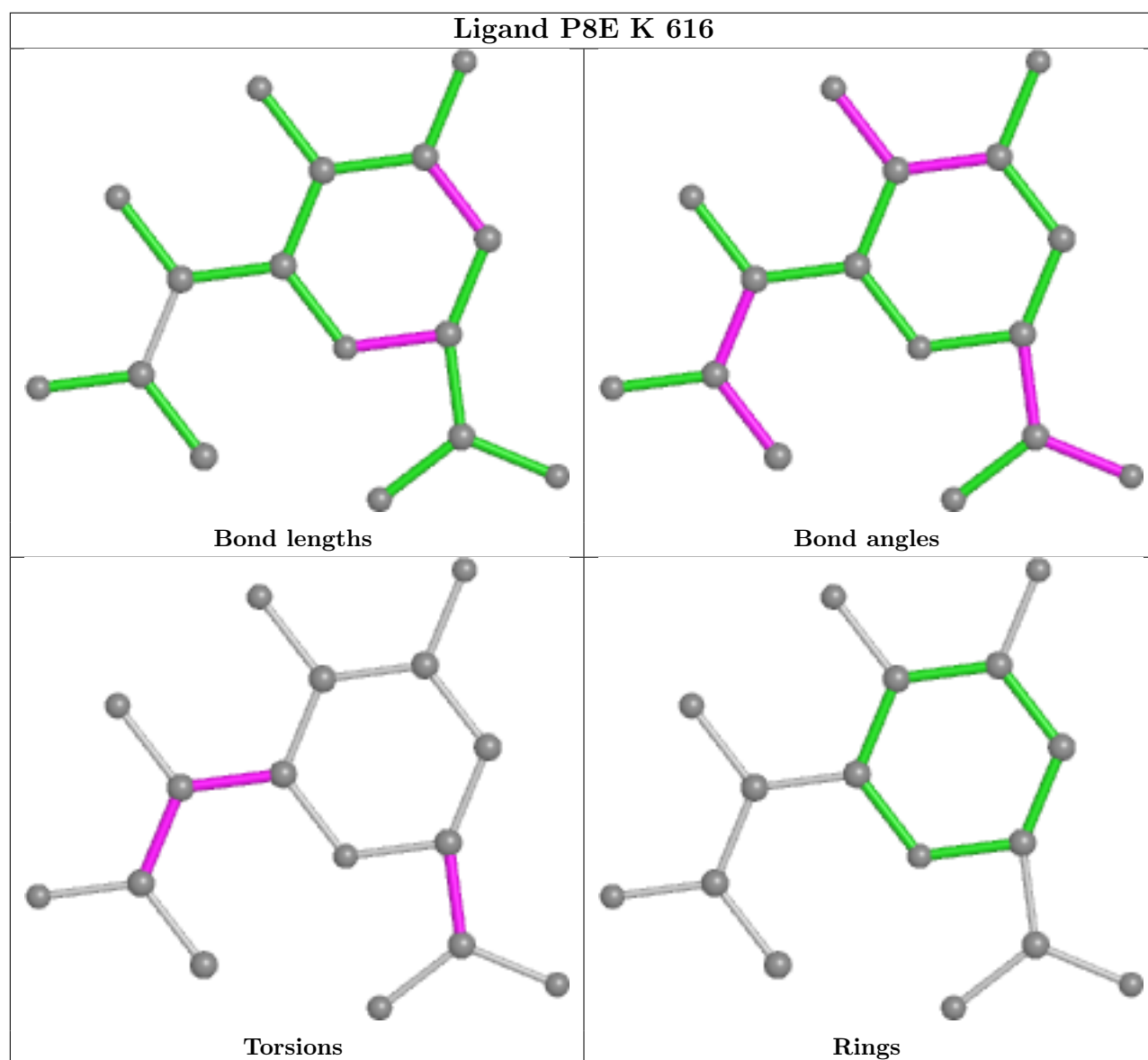
Bond angles



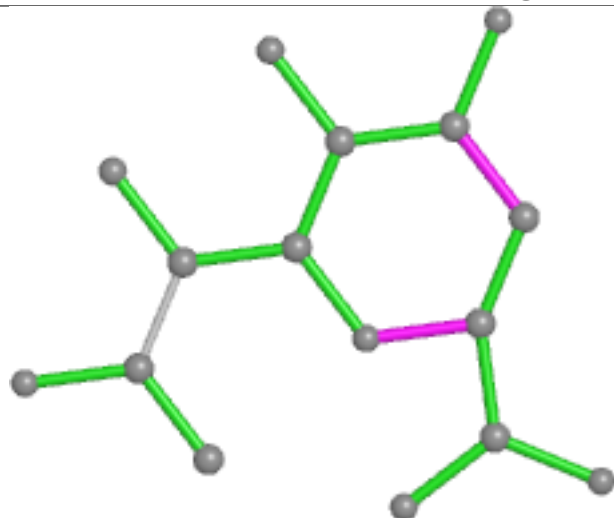
Torsions



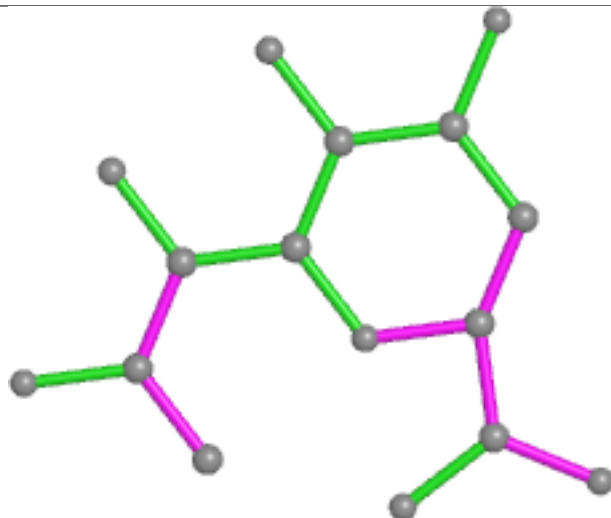
Rings



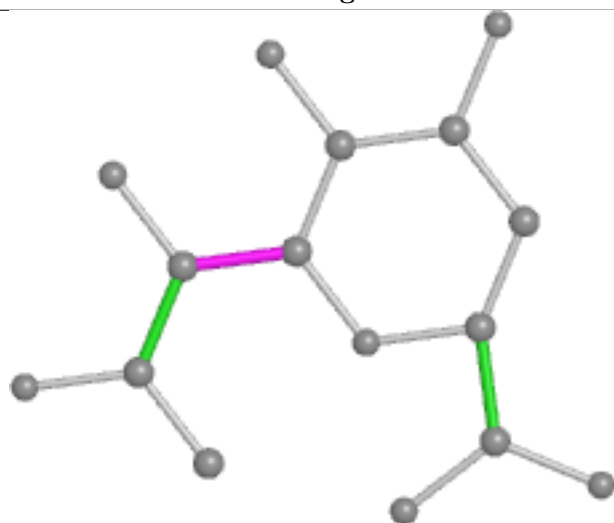
Ligand P8E K 613



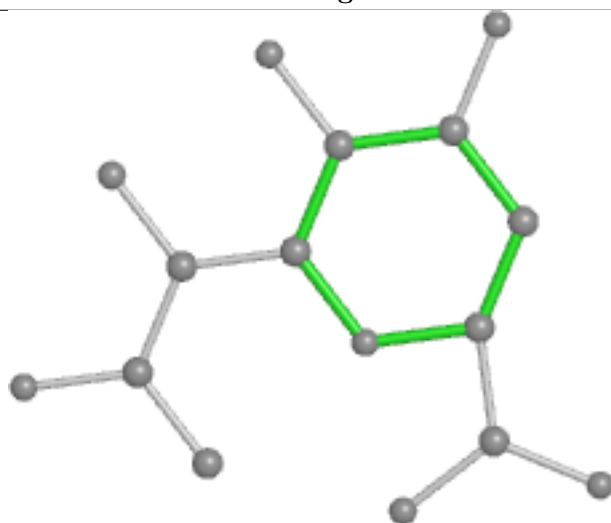
Bond lengths



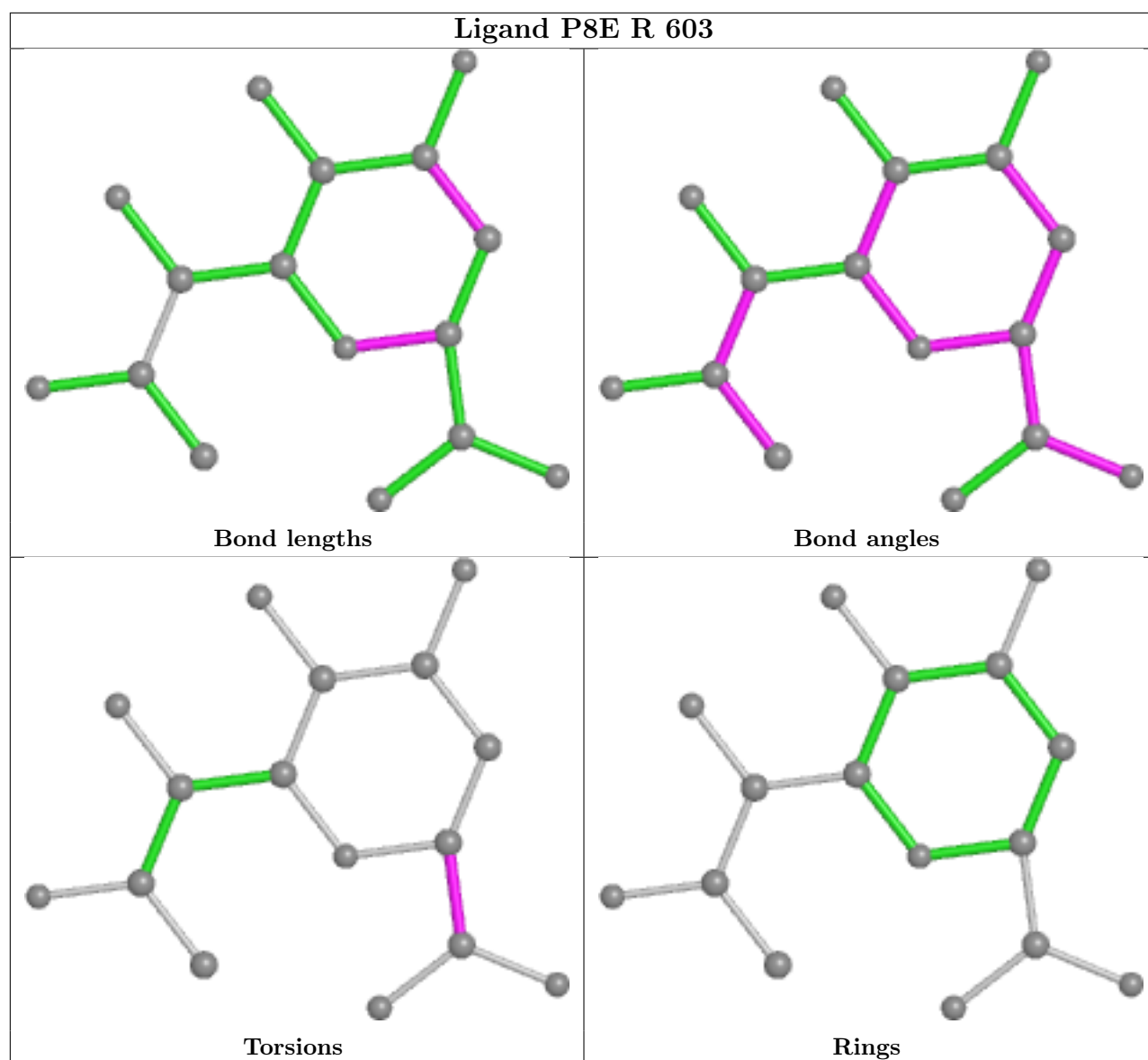
Bond angles



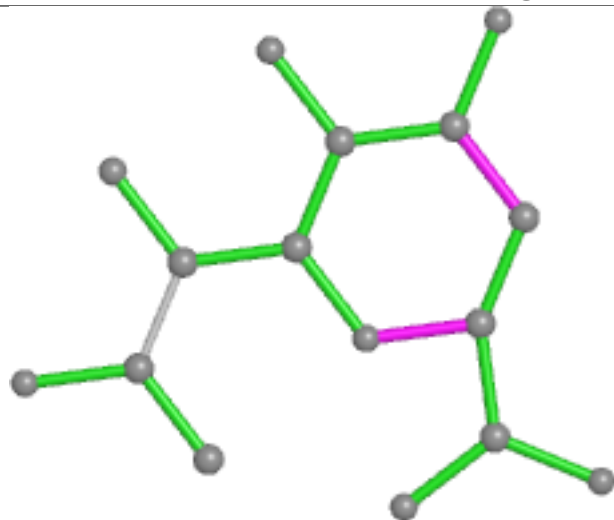
Torsions



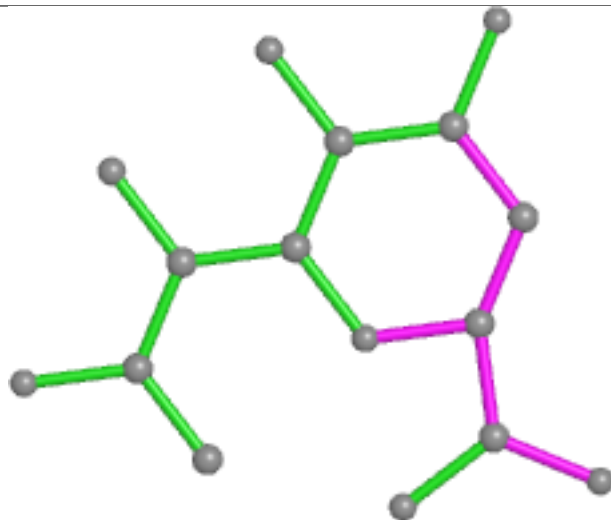
Rings



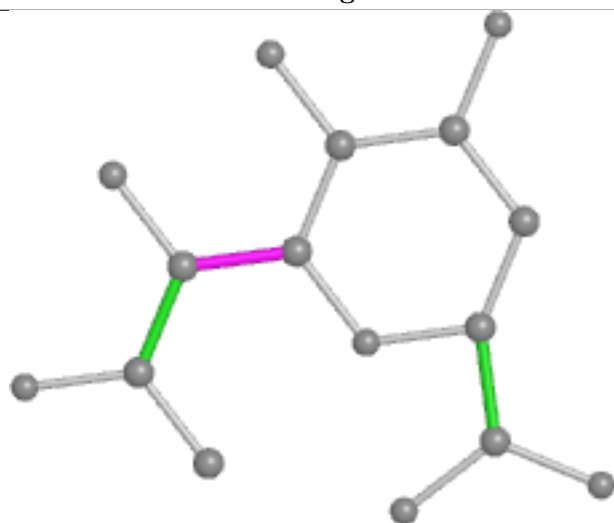
Ligand P8E U 613



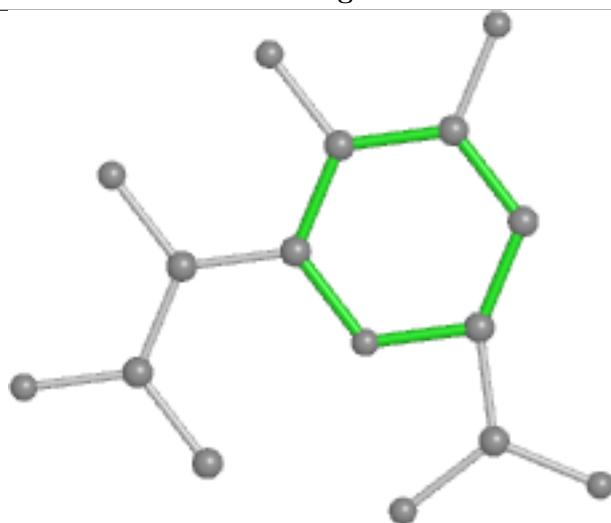
Bond lengths



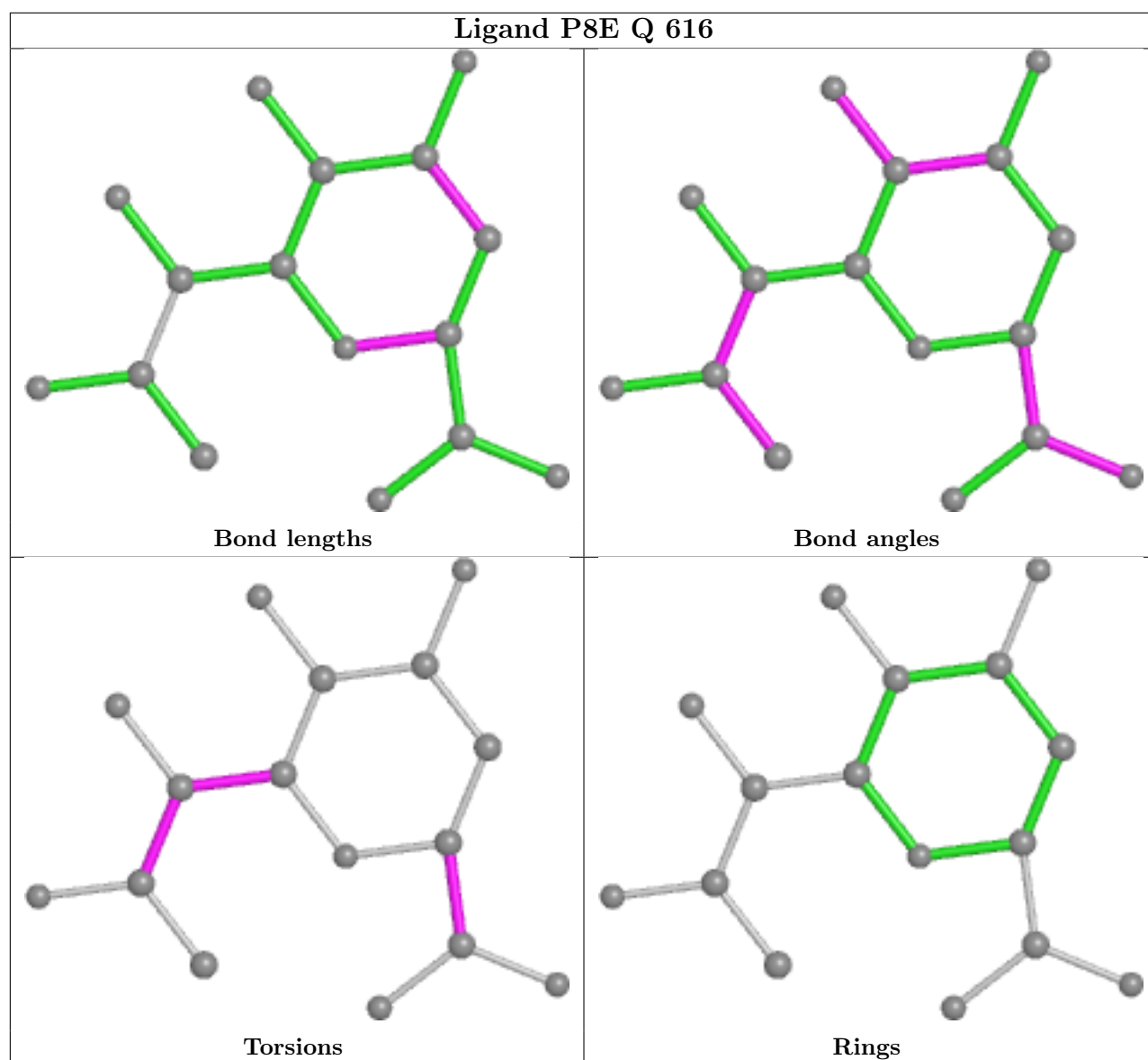
Bond angles

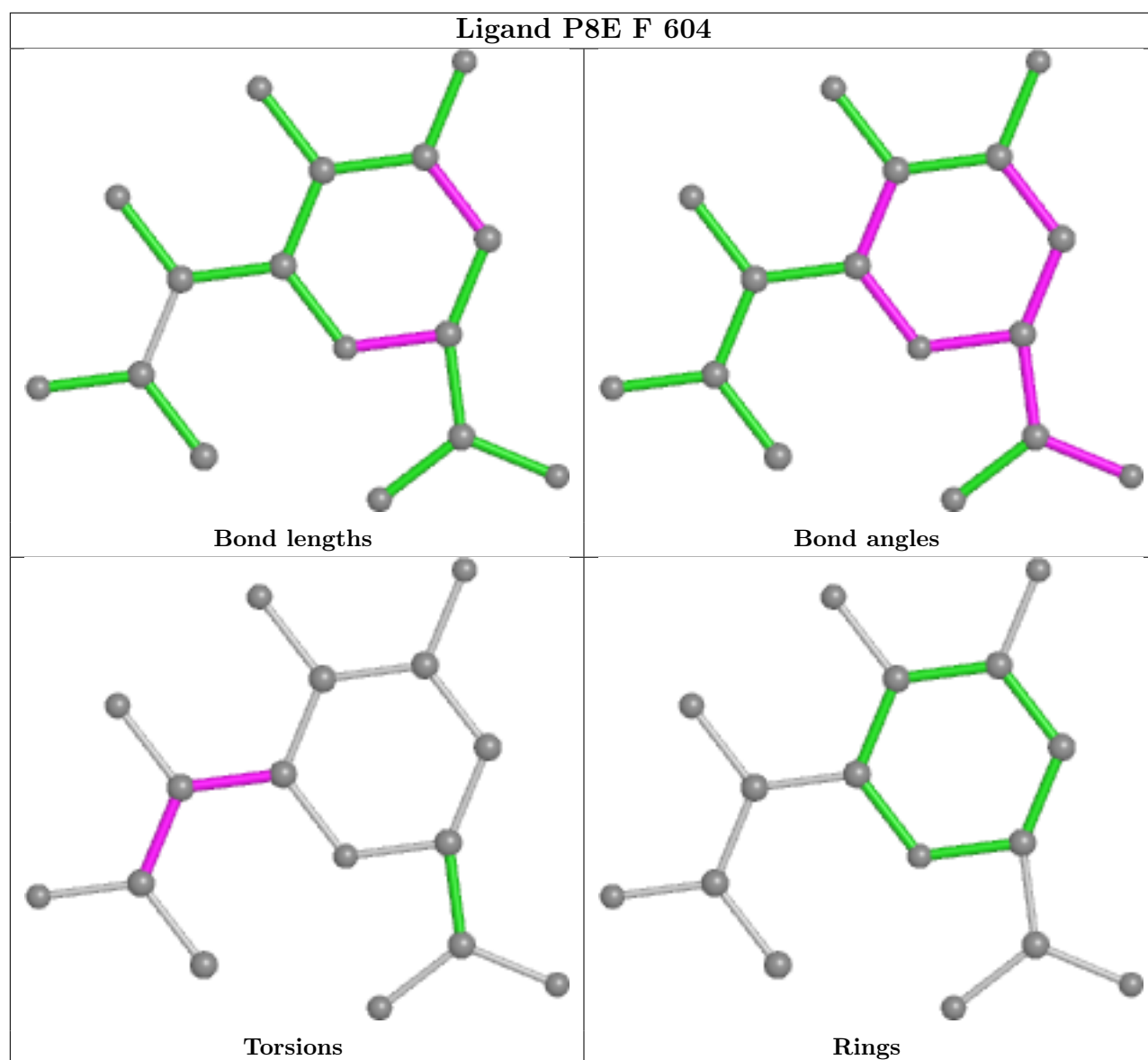


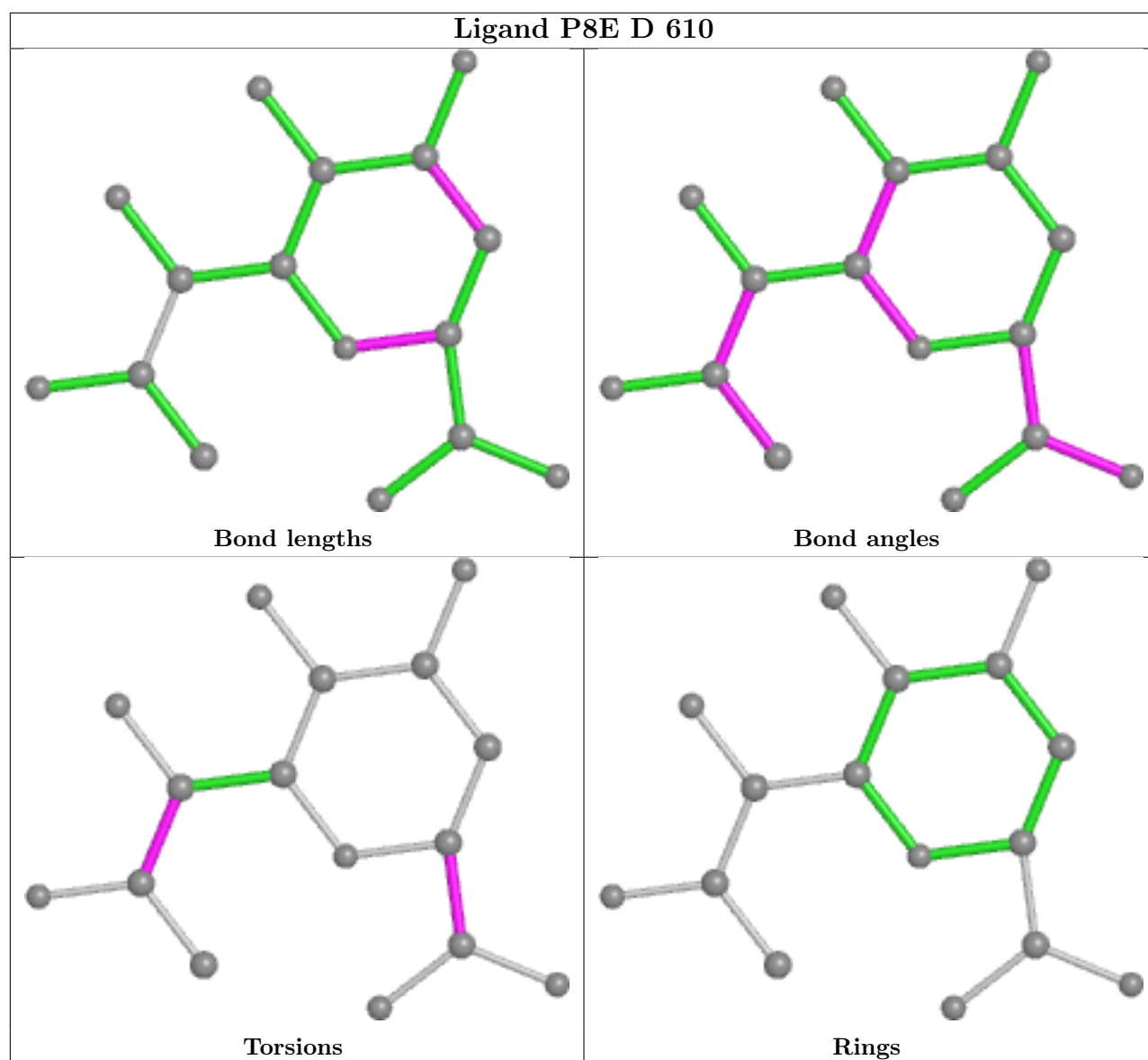
Torsions

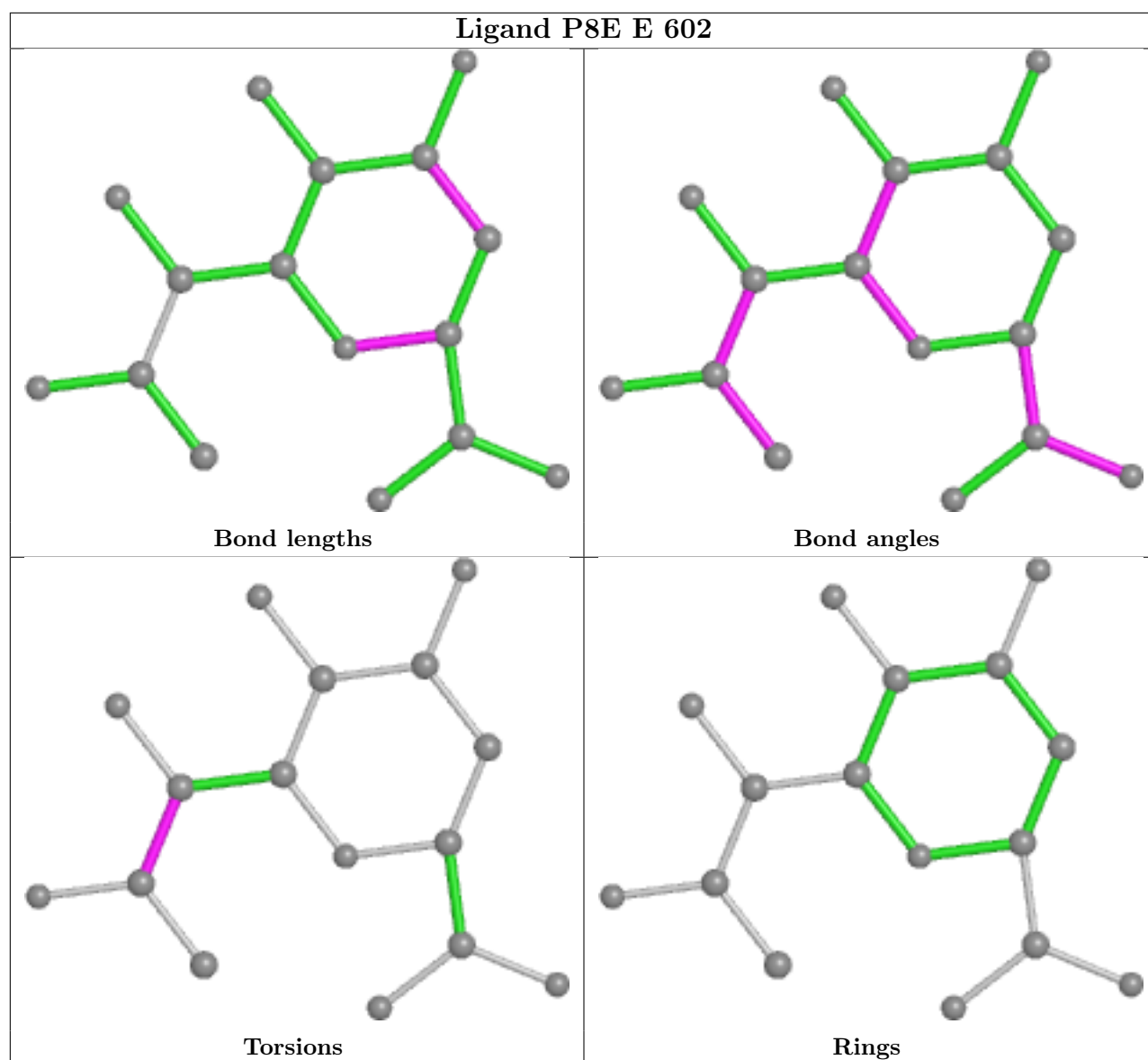


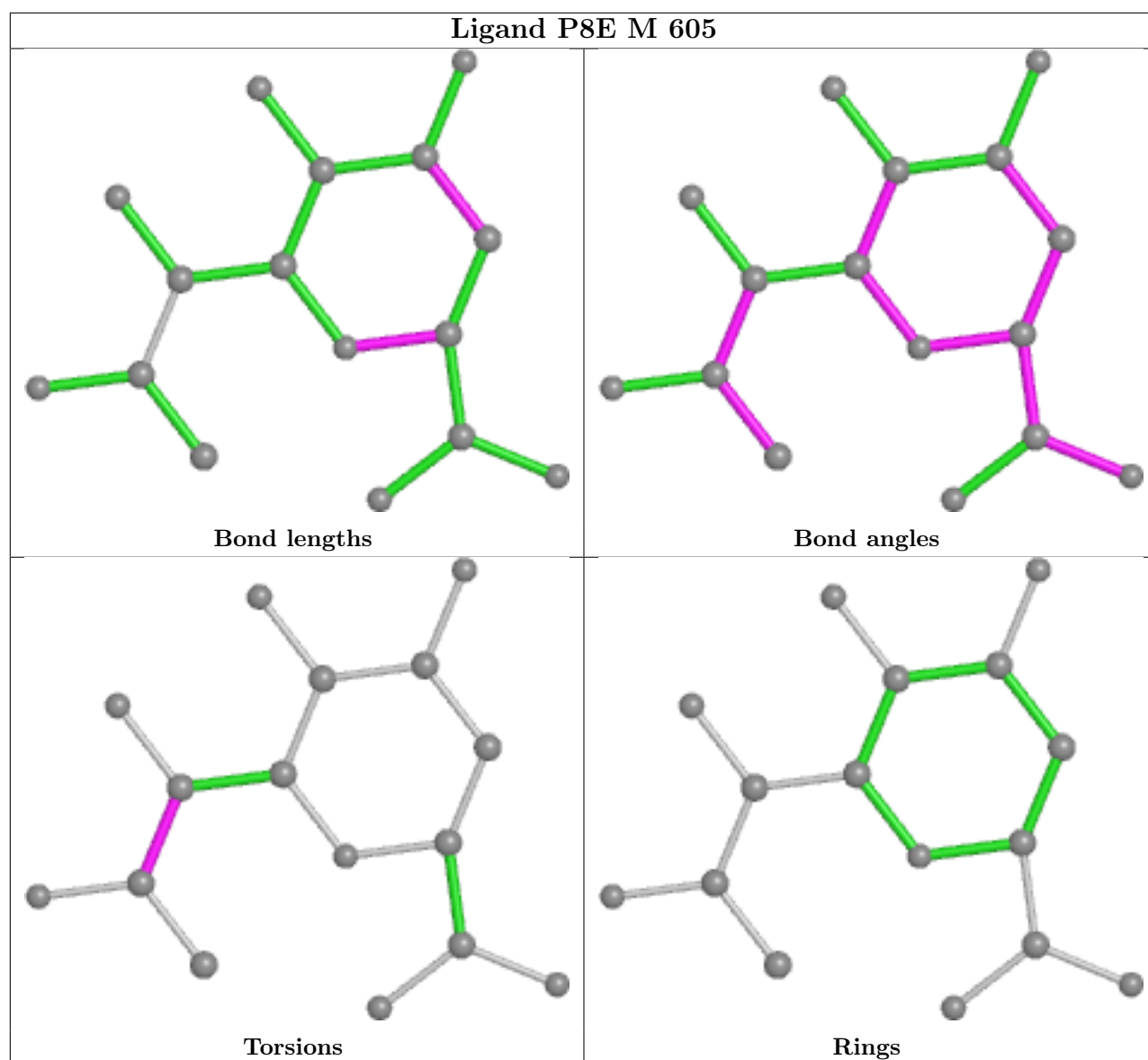
Rings

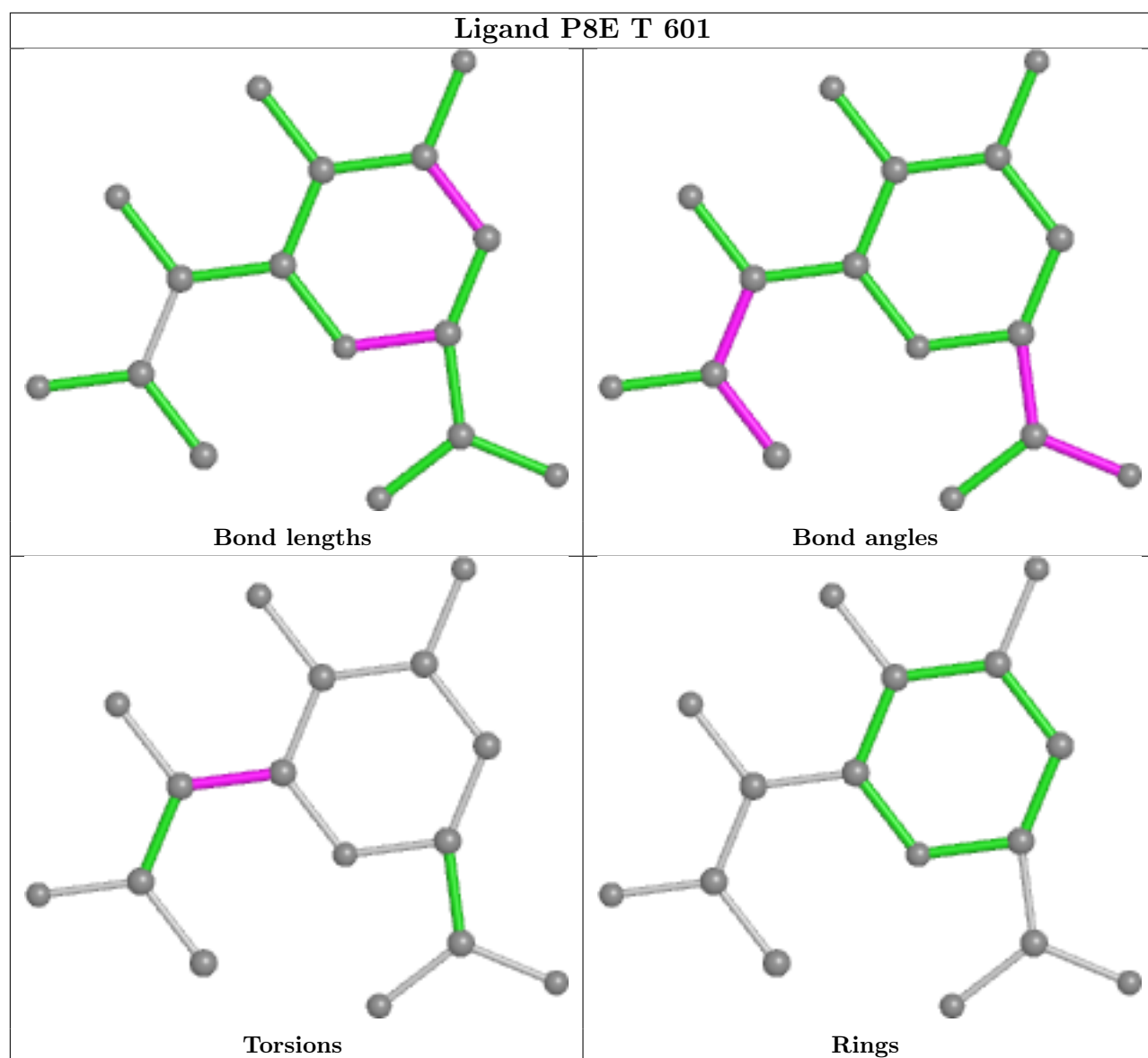


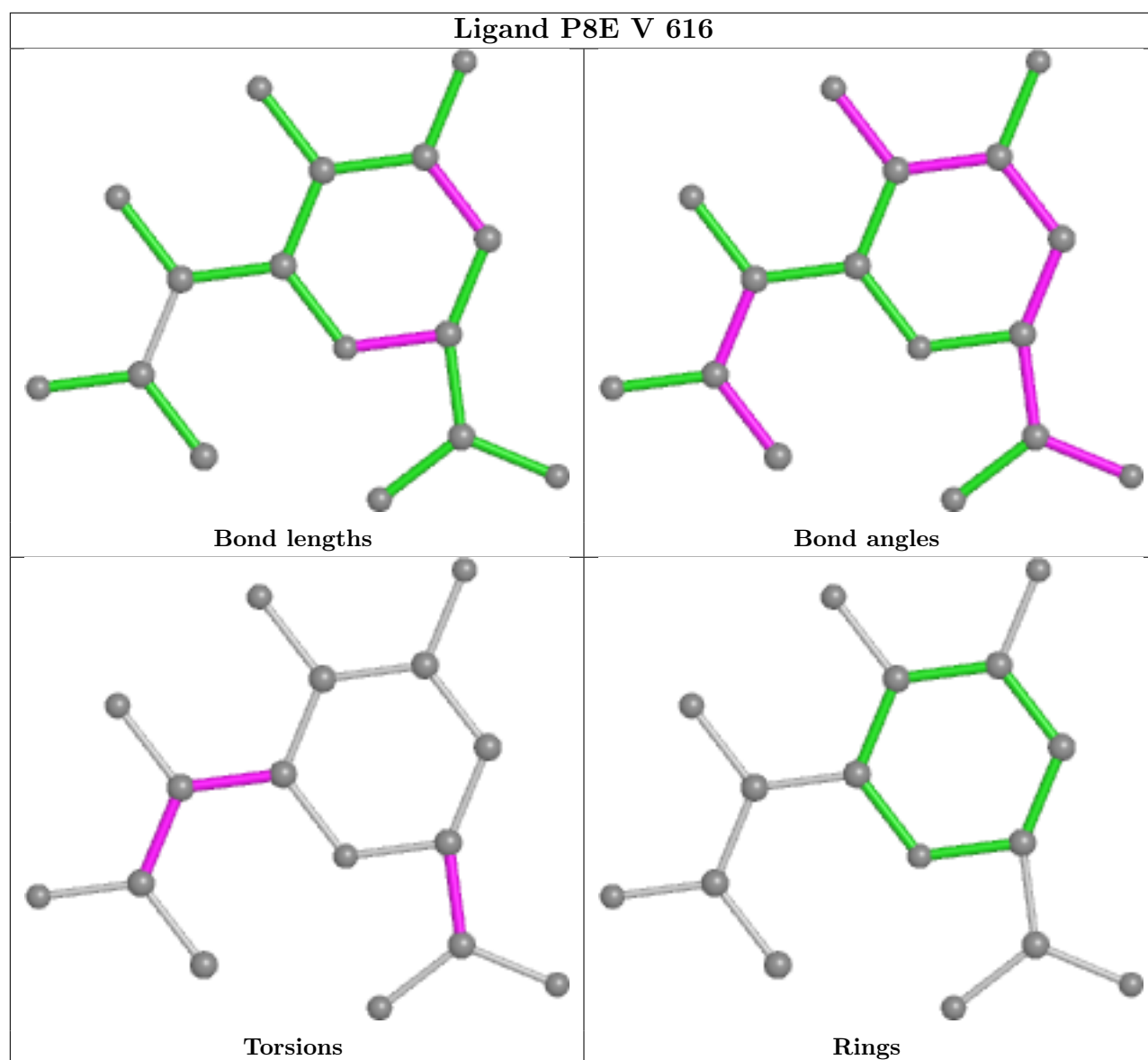


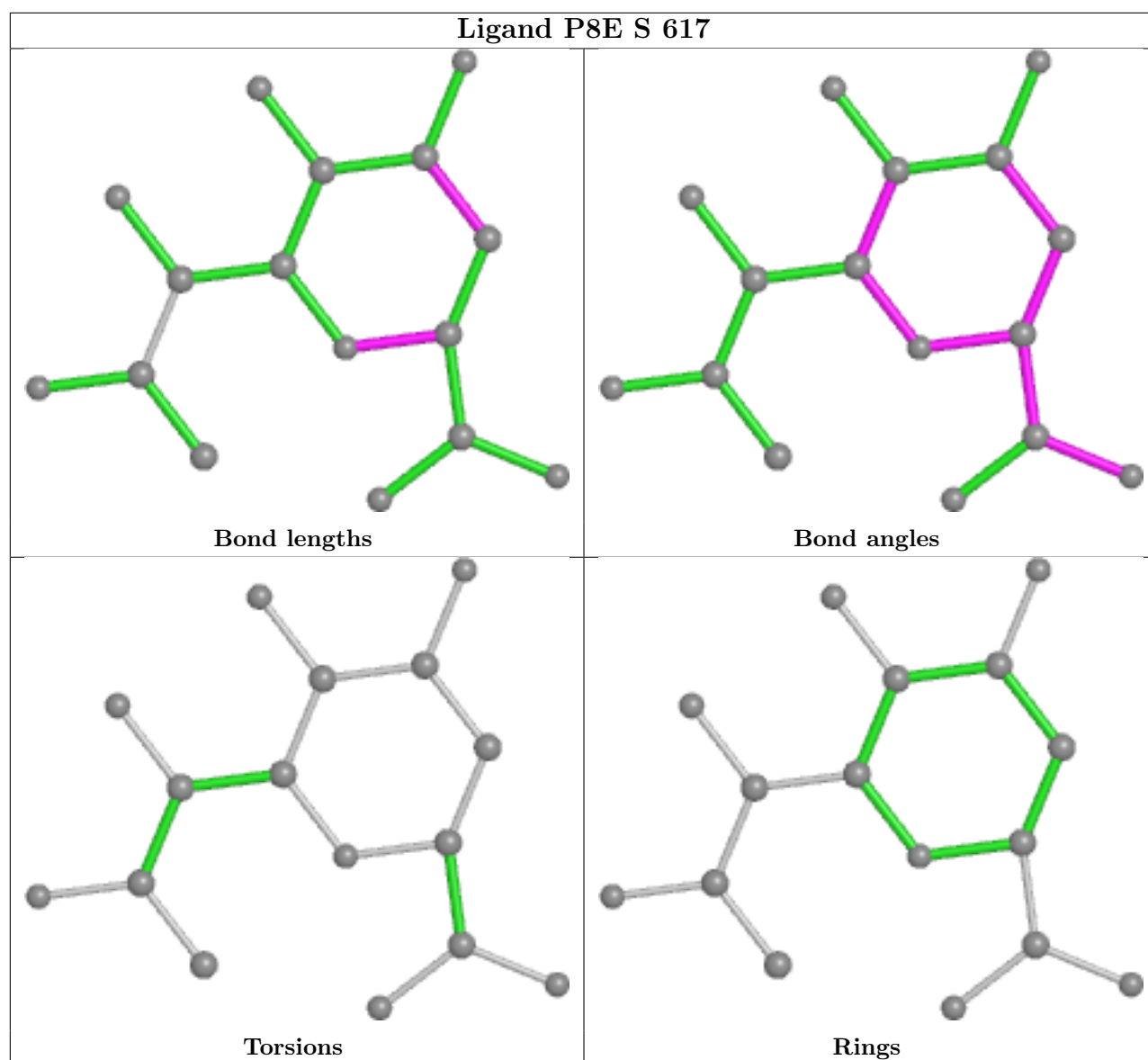




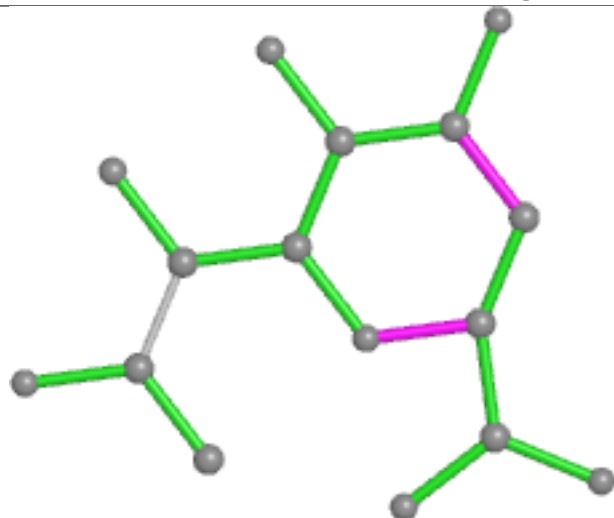




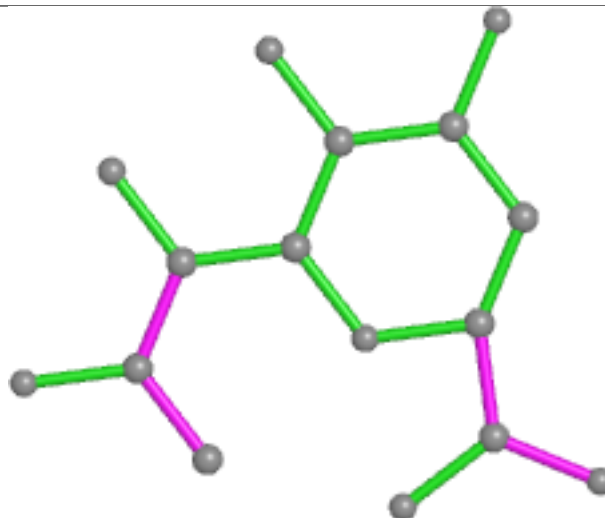




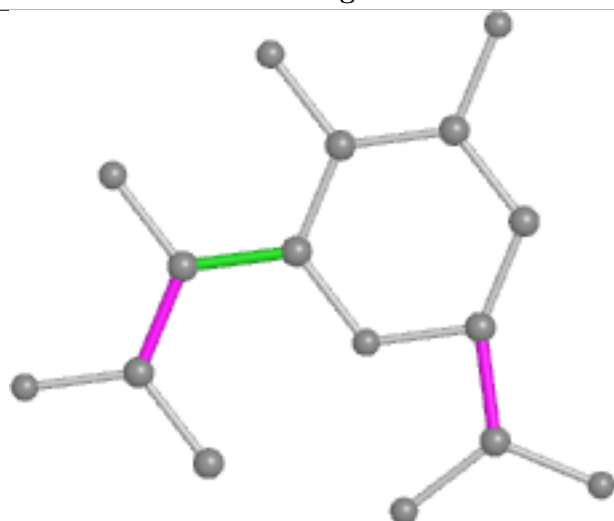
Ligand P8E H 602



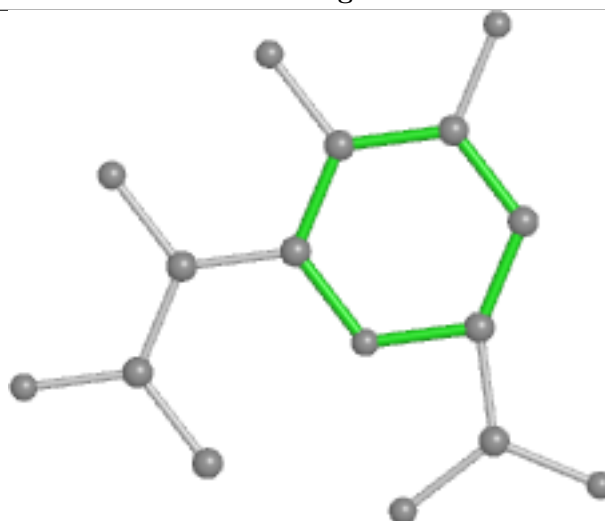
Bond lengths



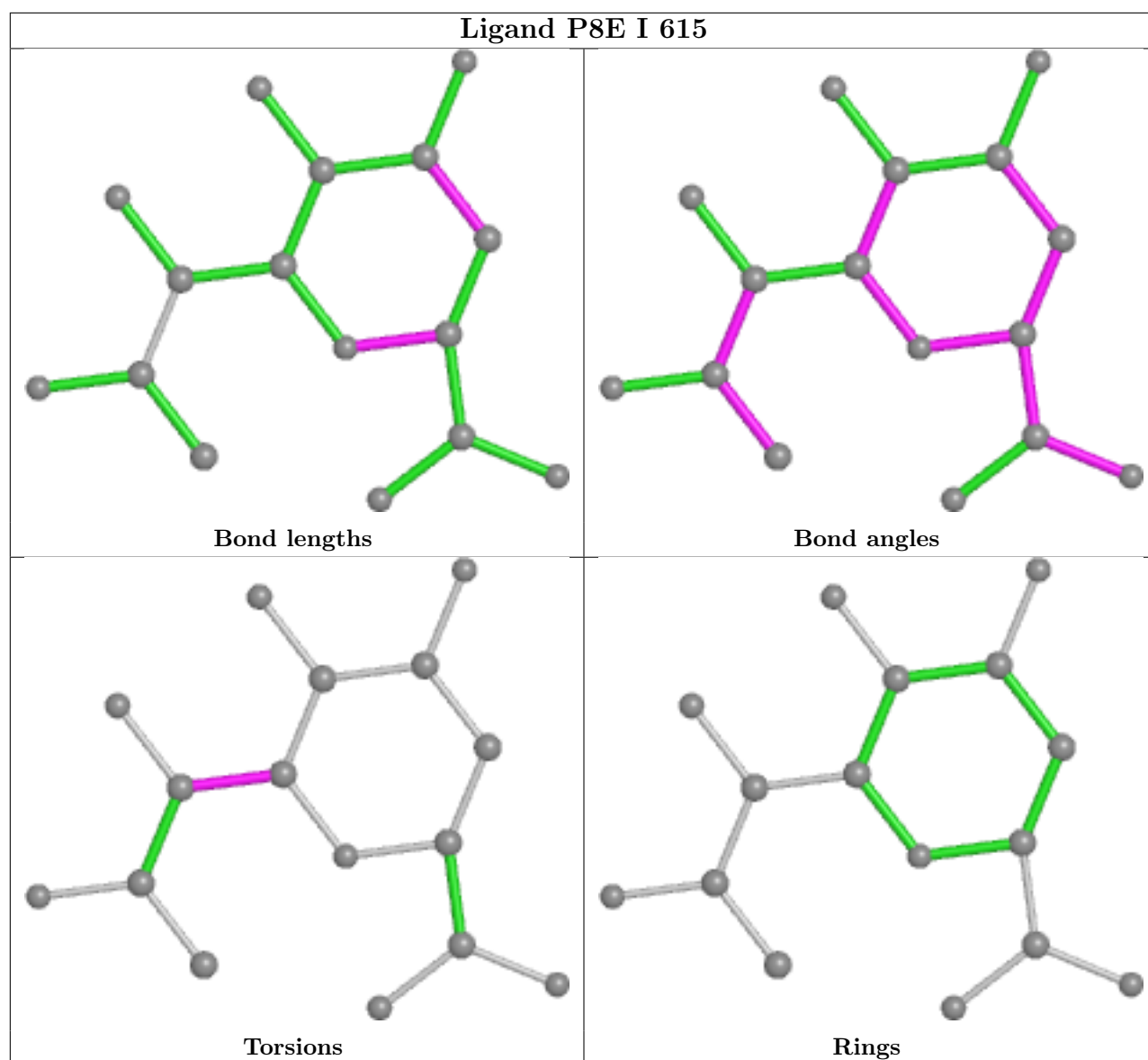
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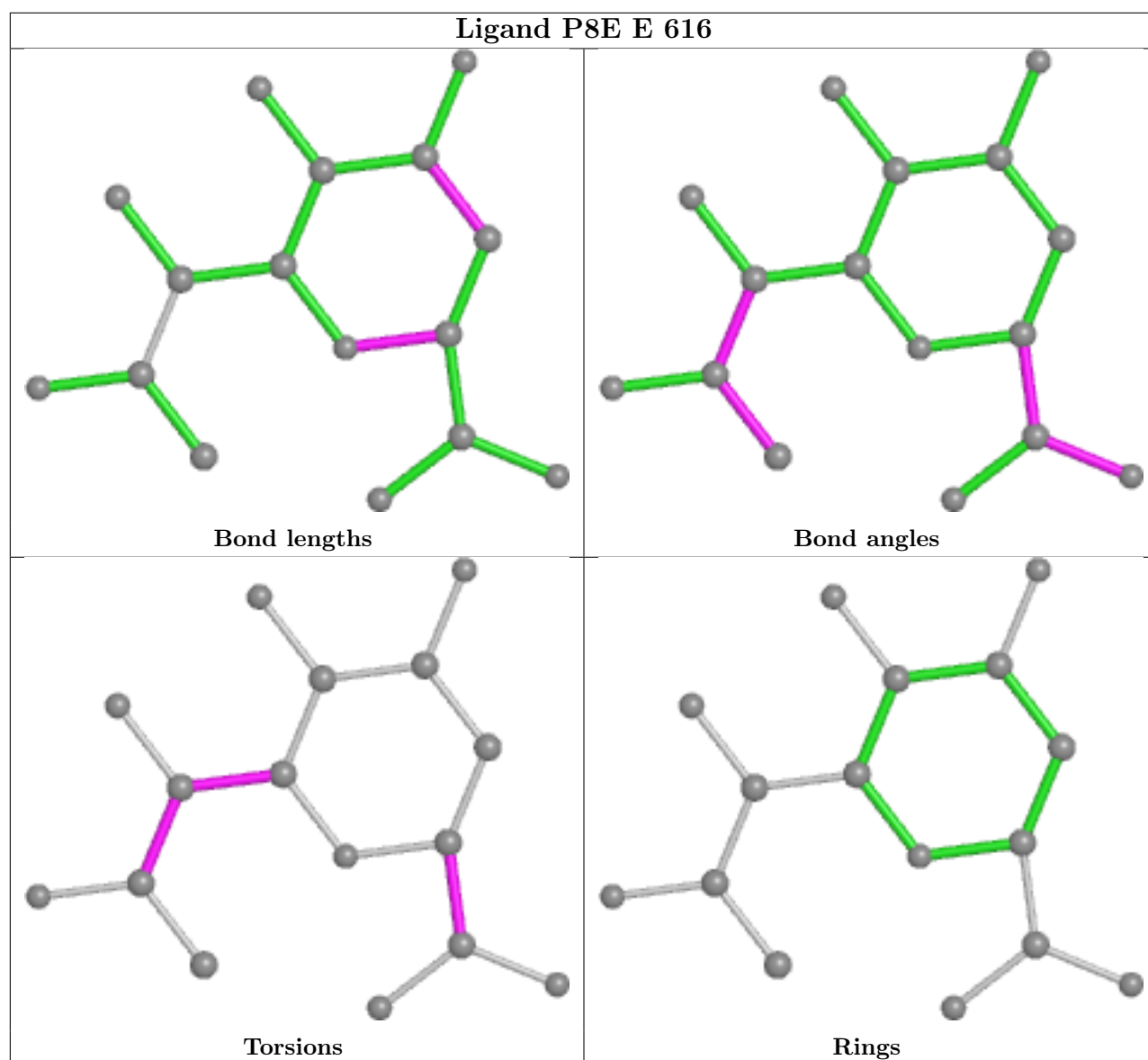


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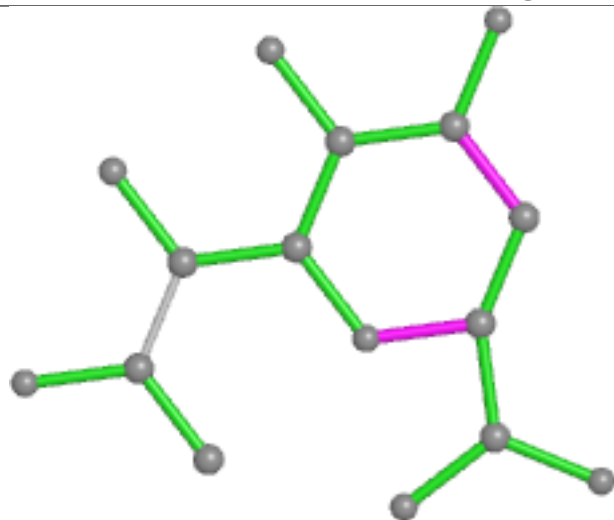


Rings

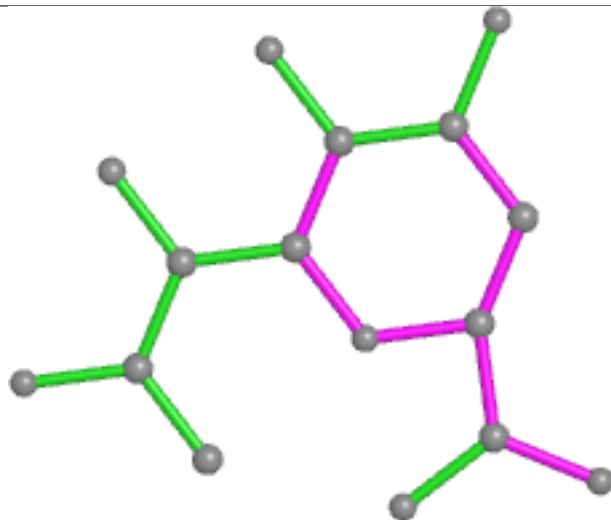




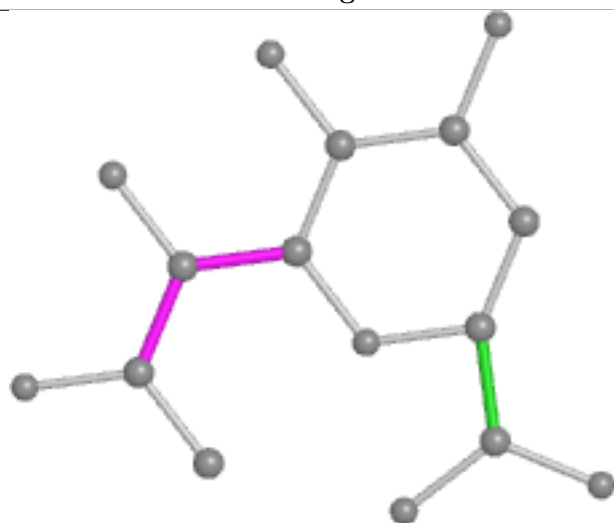
Ligand P8E P 604



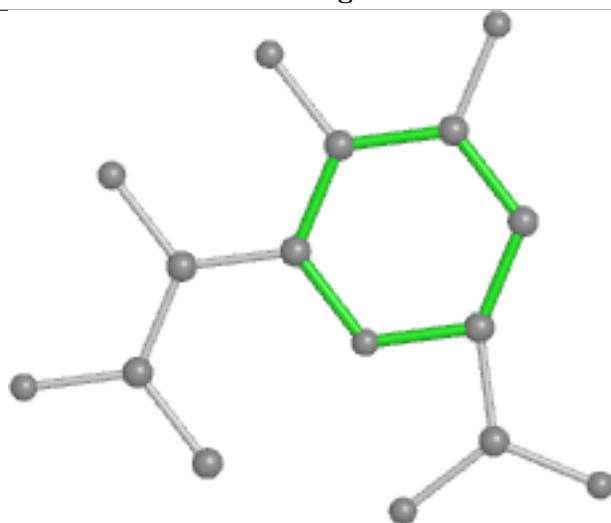
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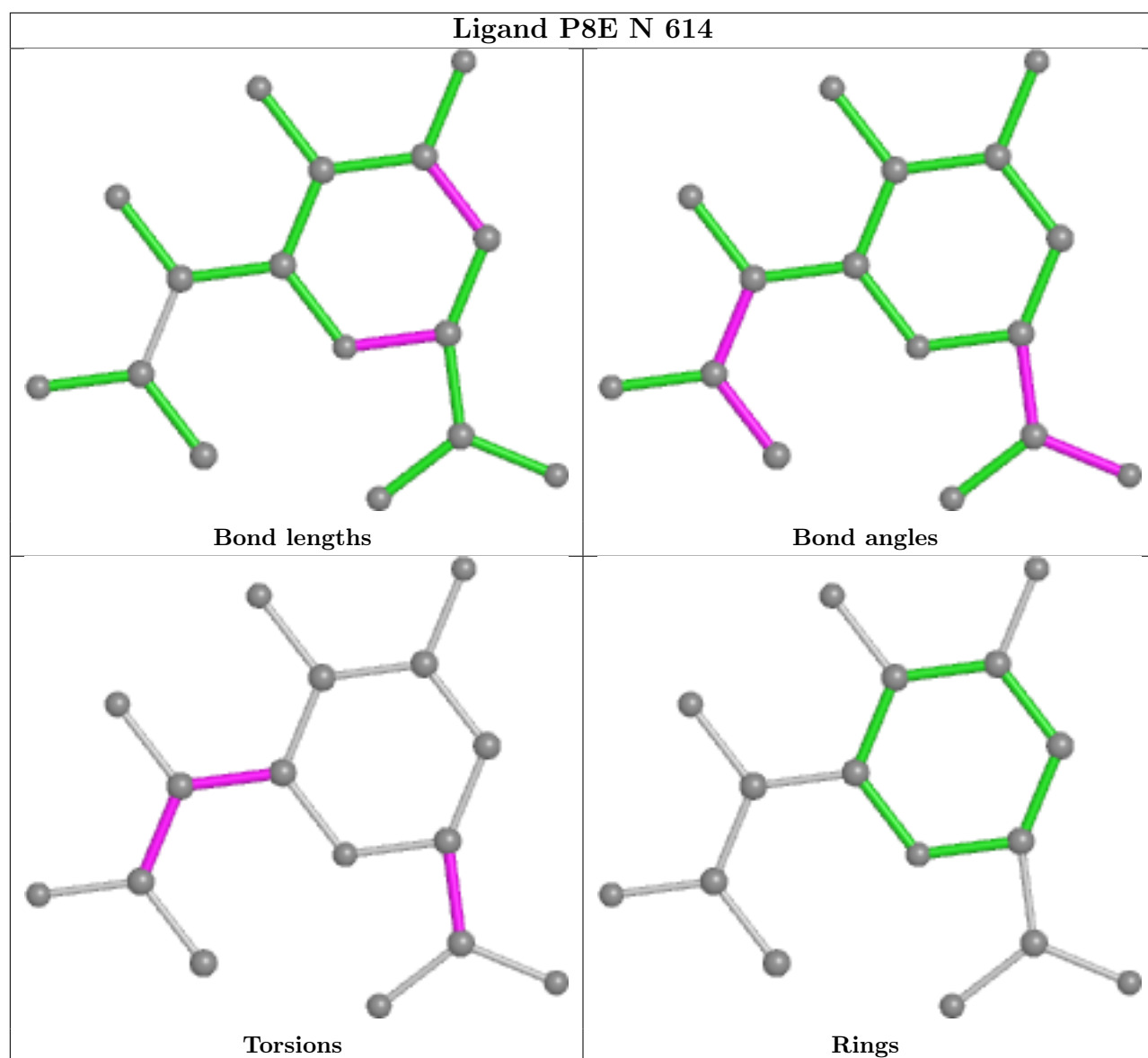
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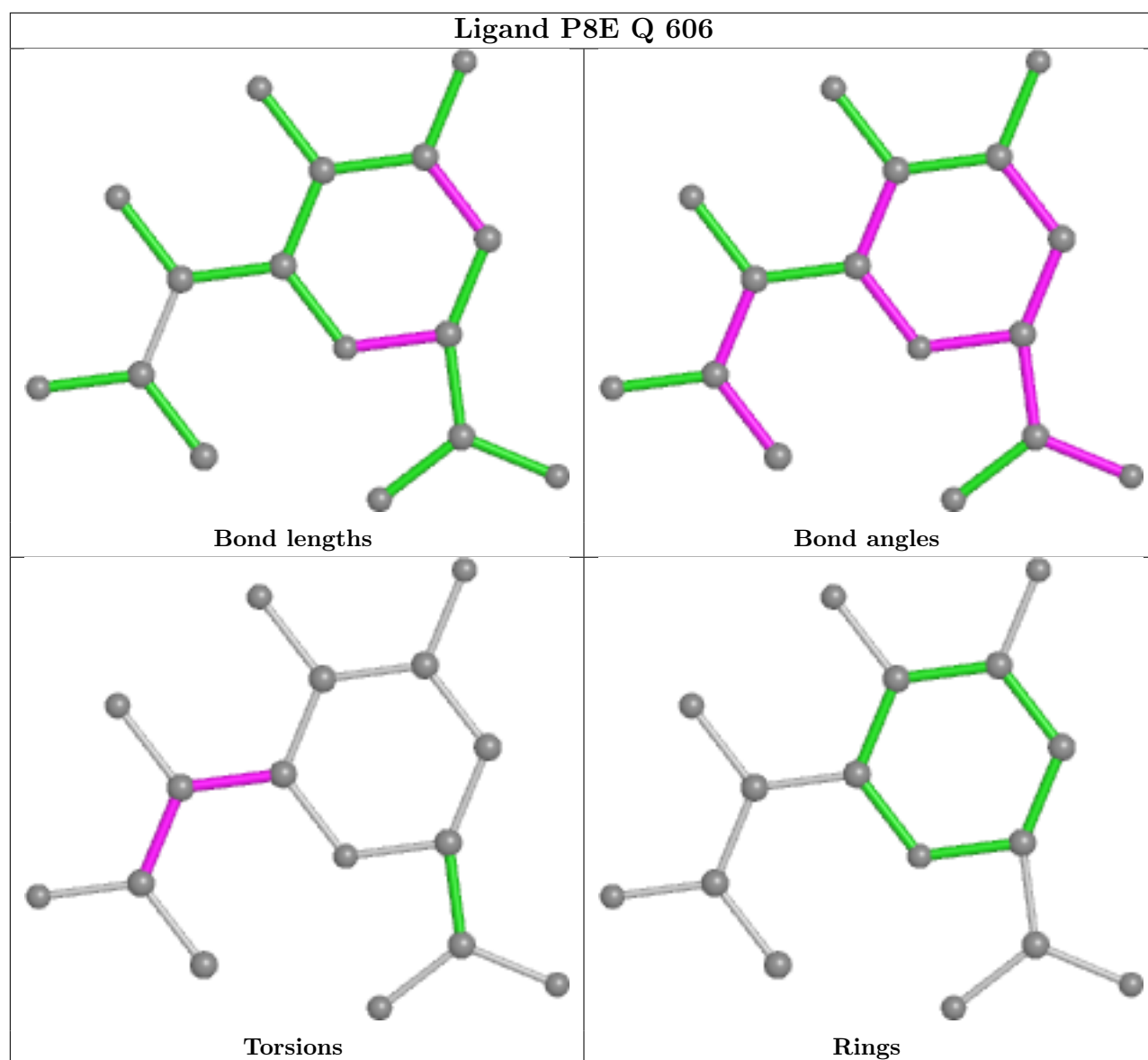


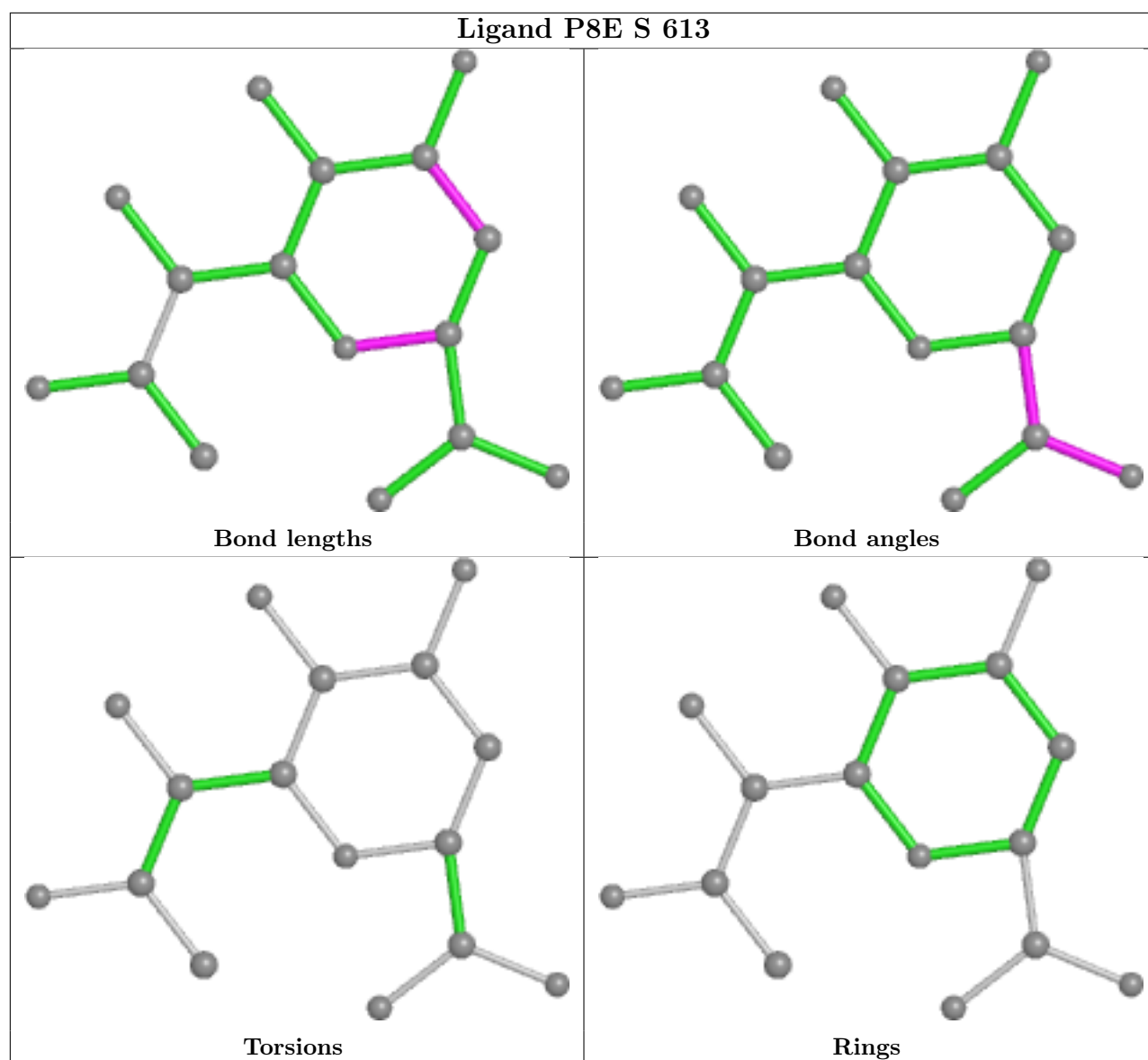
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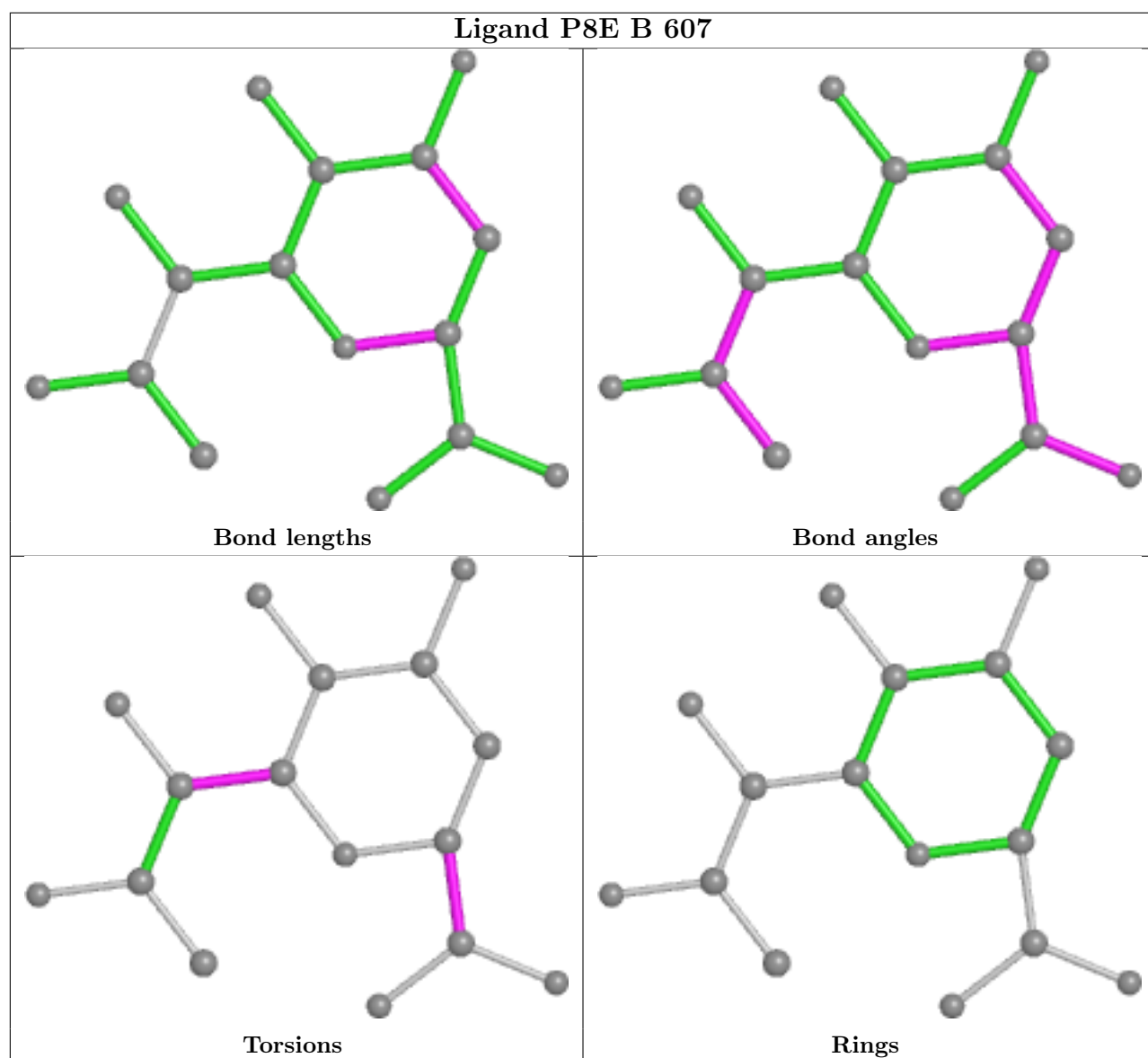


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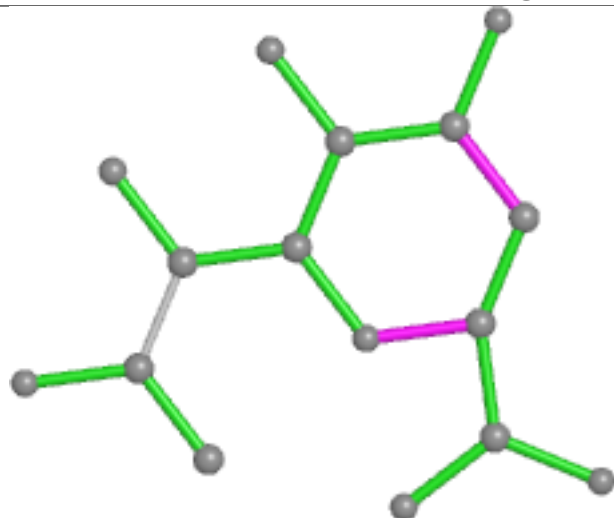




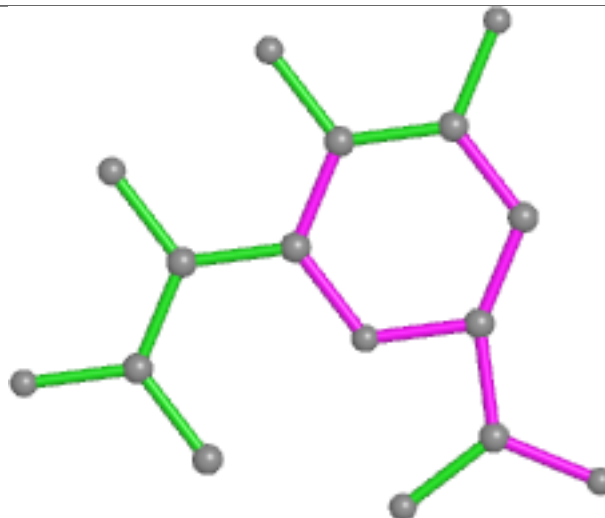




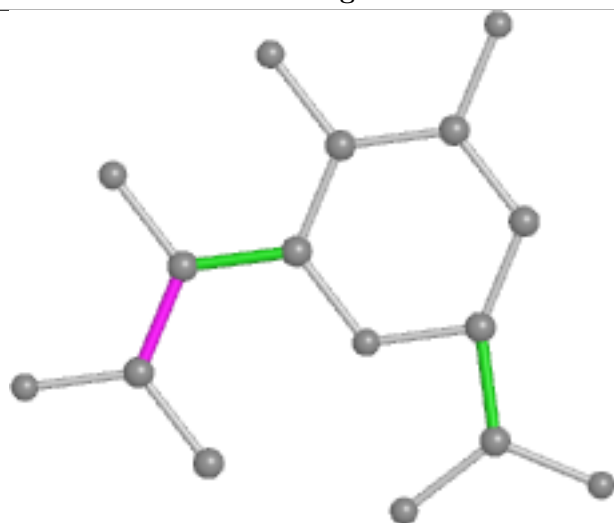
Ligand P8E D 603



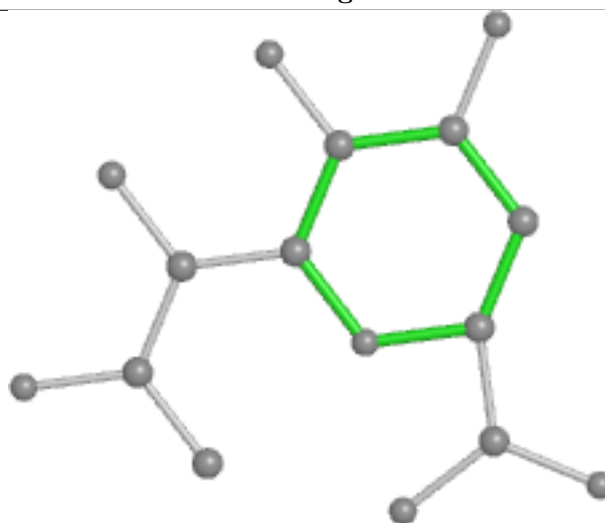
Bond lengths



Bond angles

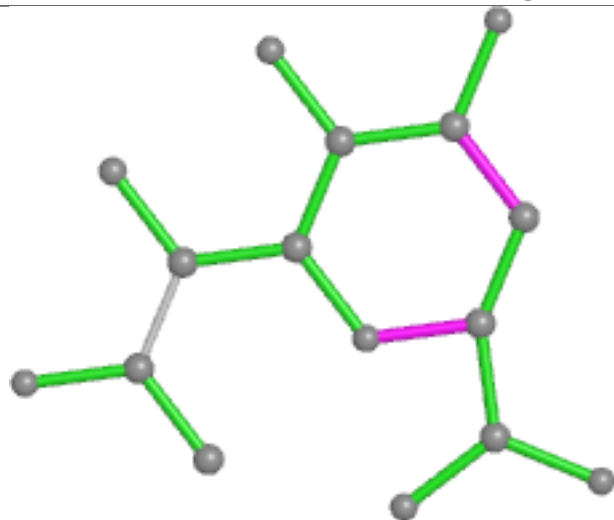


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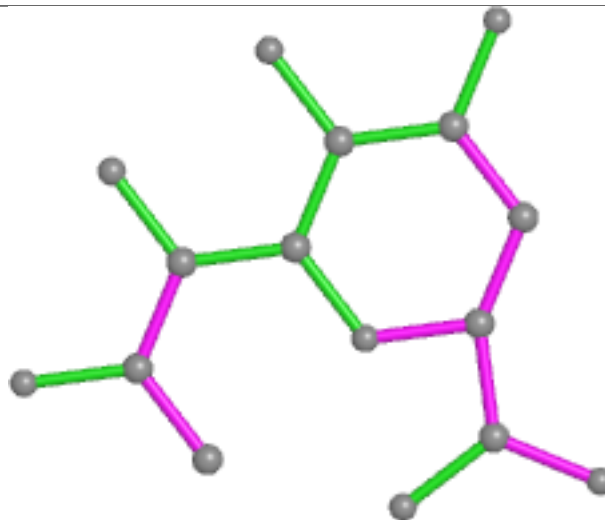


Rings

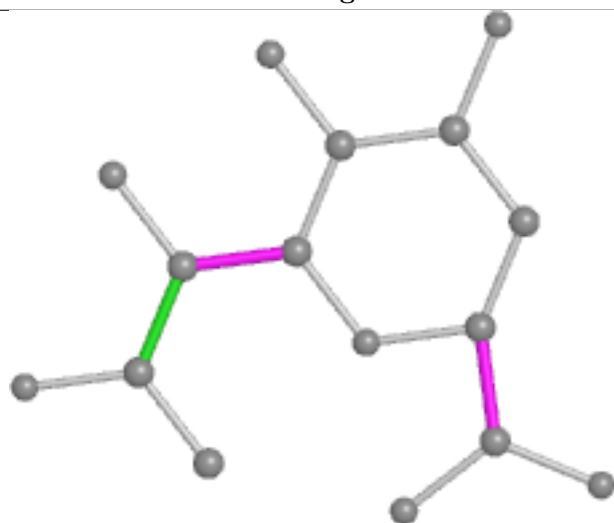
Ligand P8E P 612



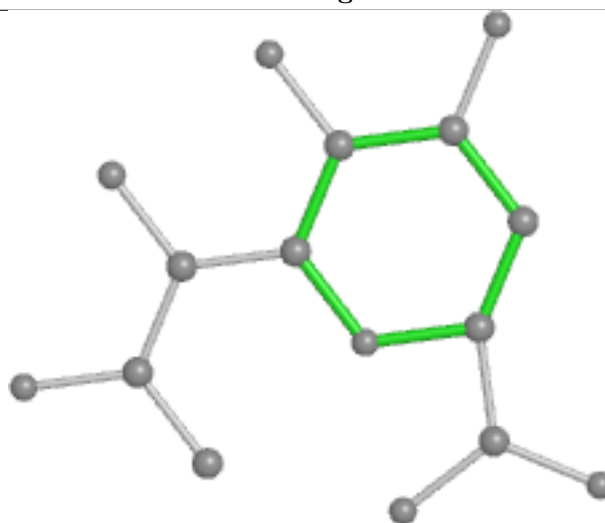
Bond lengths



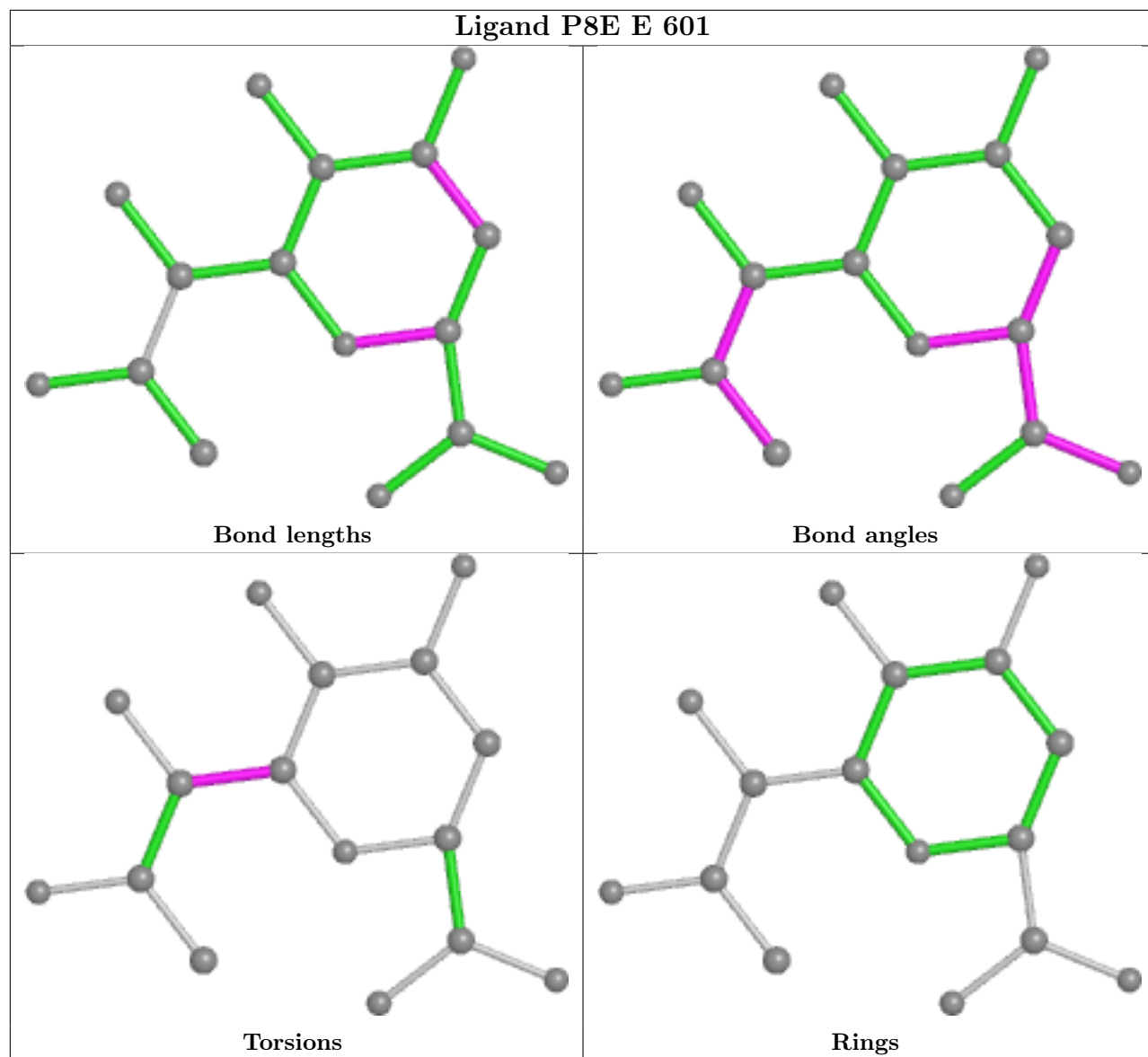
Bond angles



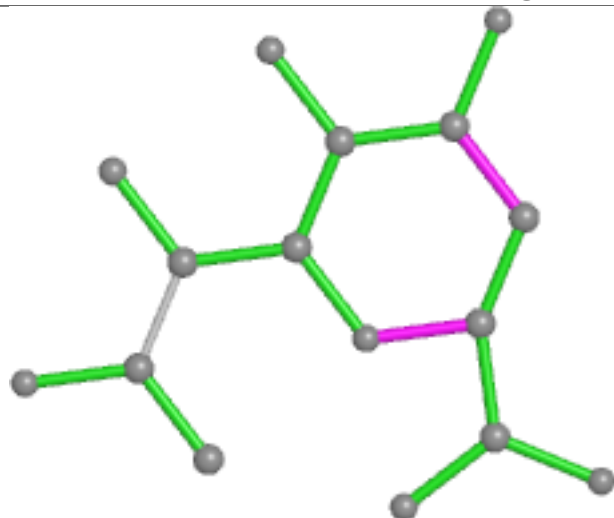
Torsions



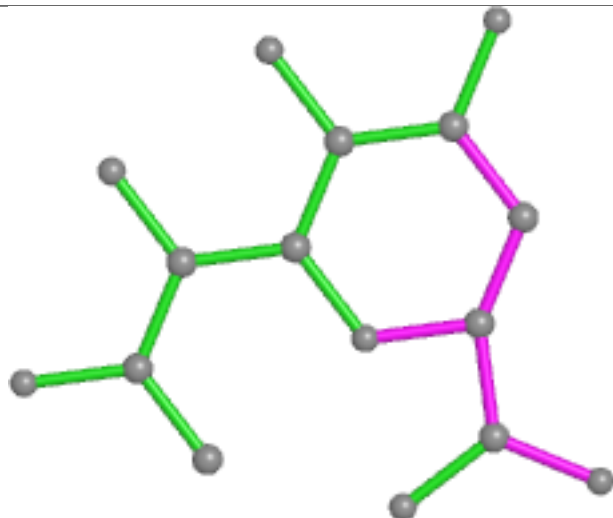
Rings



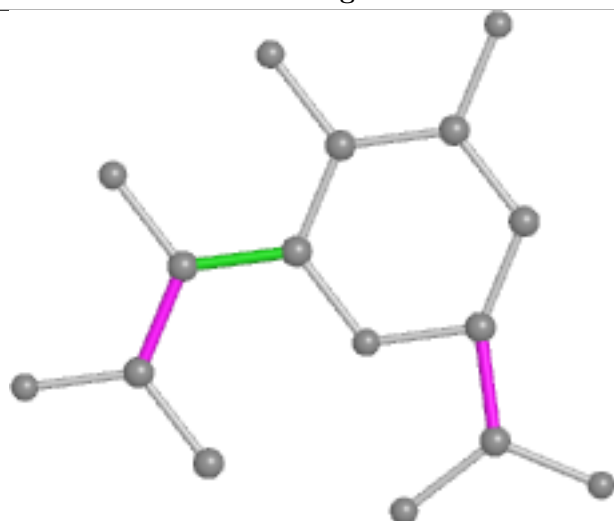
Ligand P8E O 615



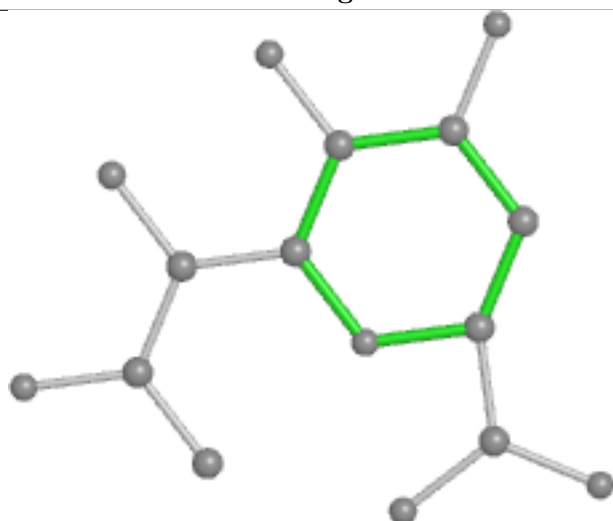
Bond lengths



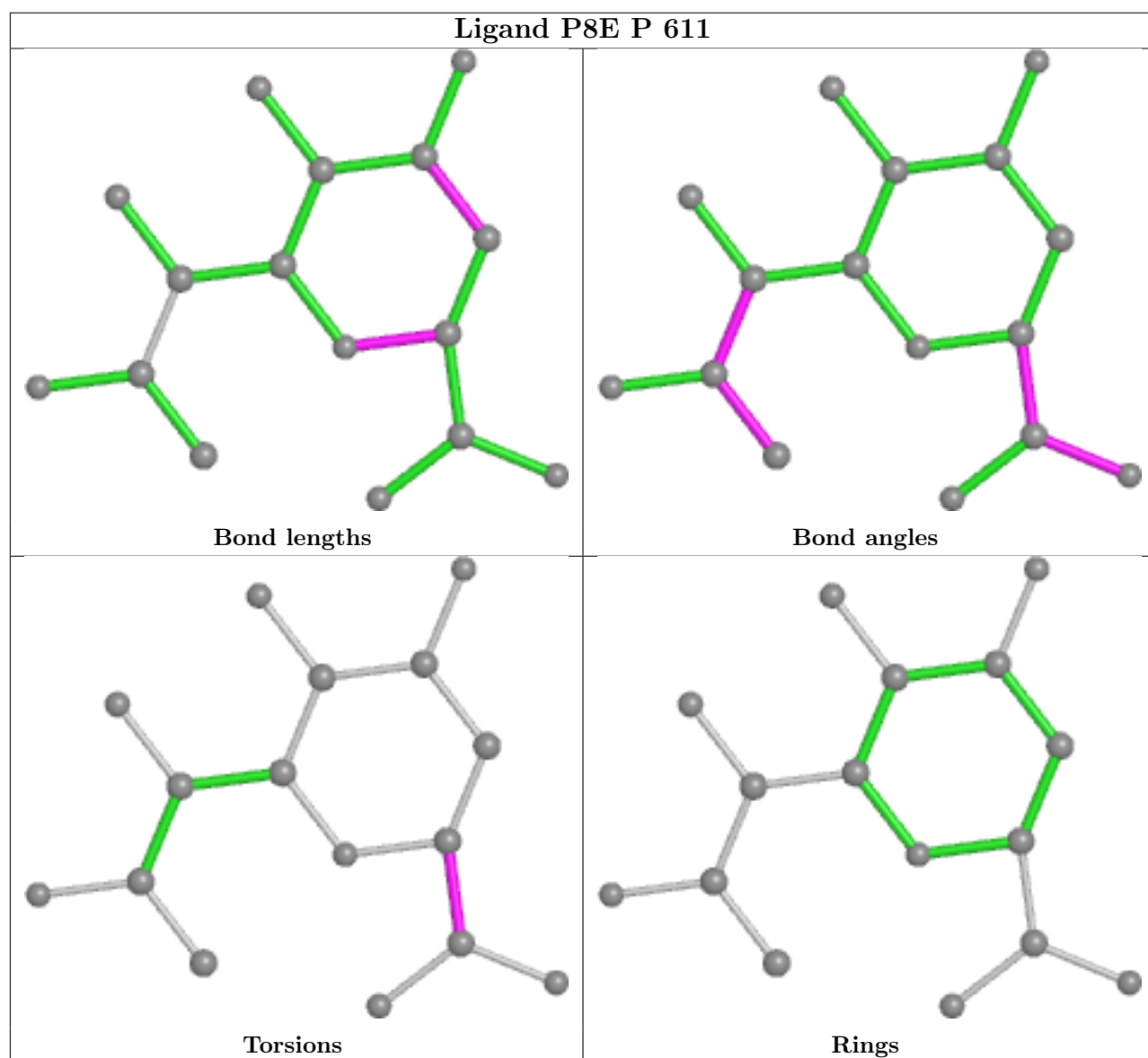
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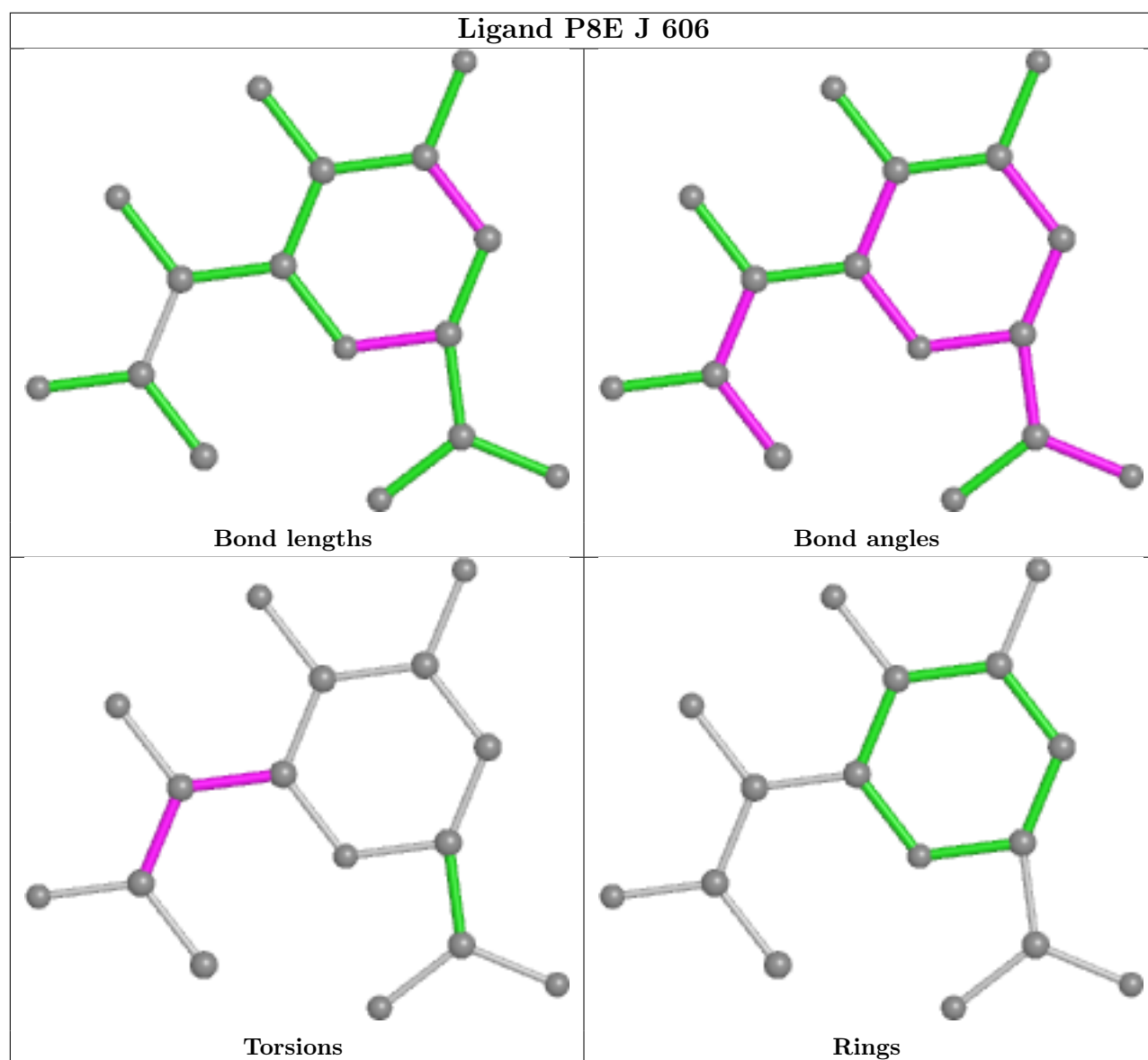


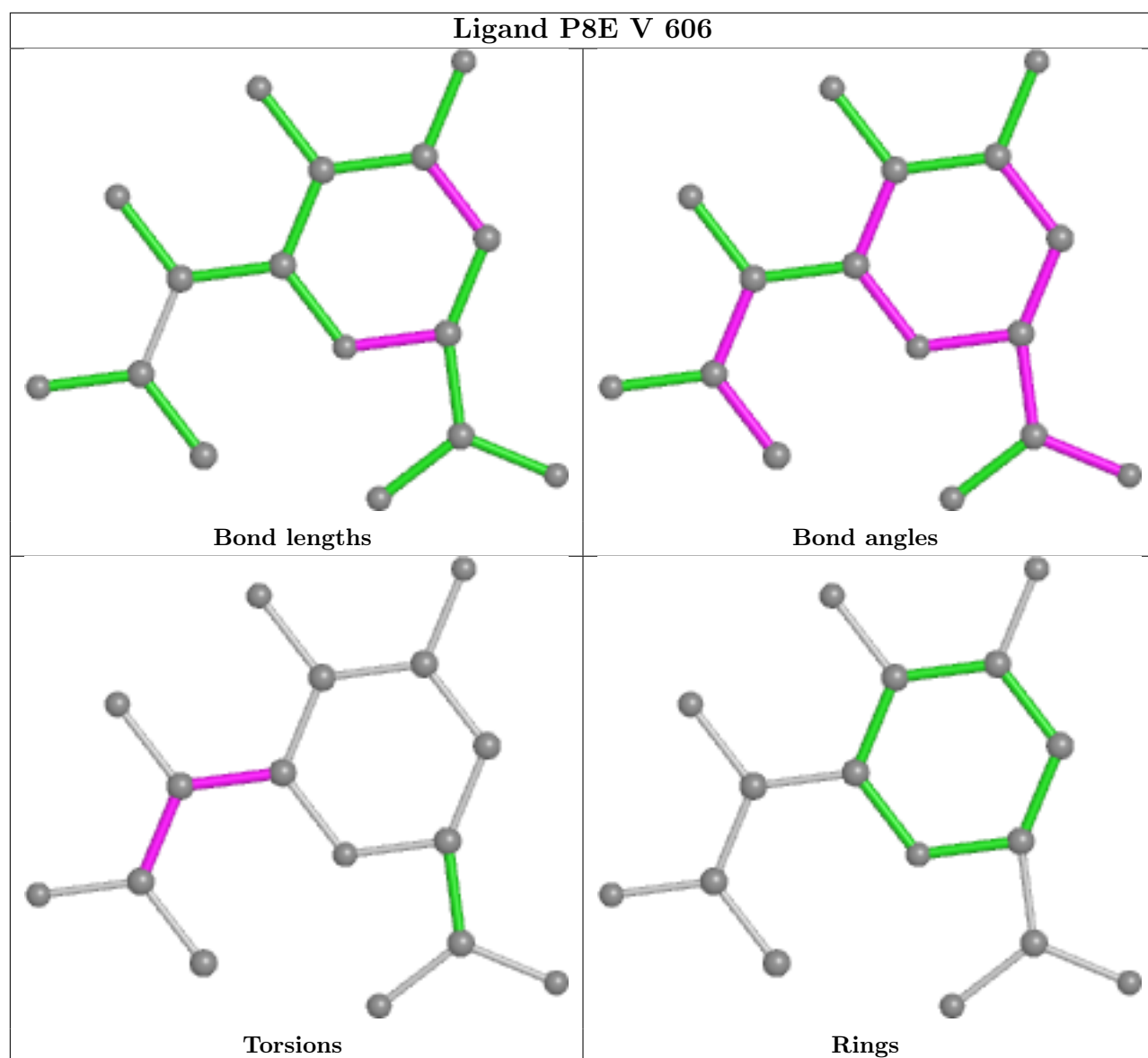
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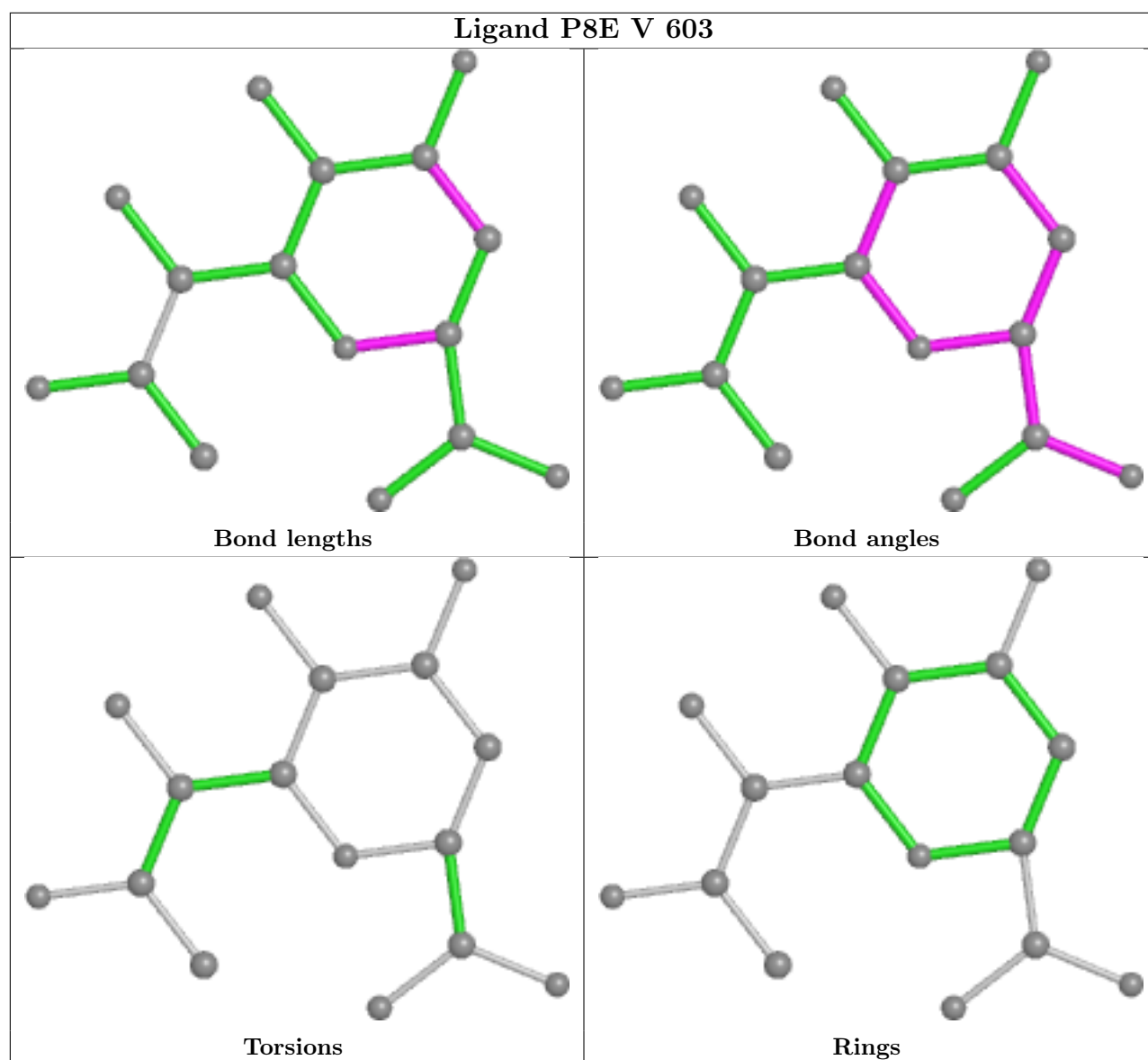


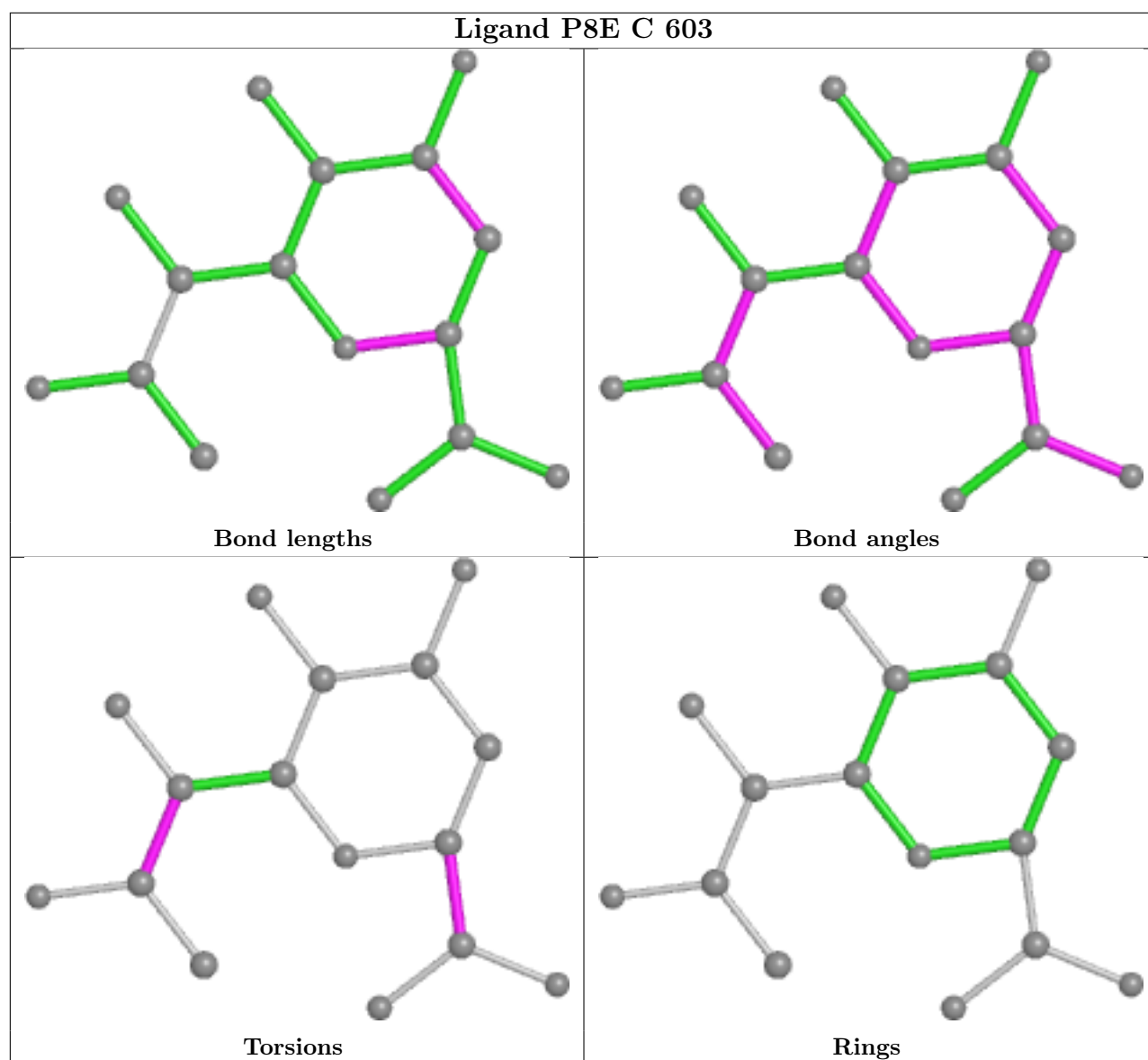
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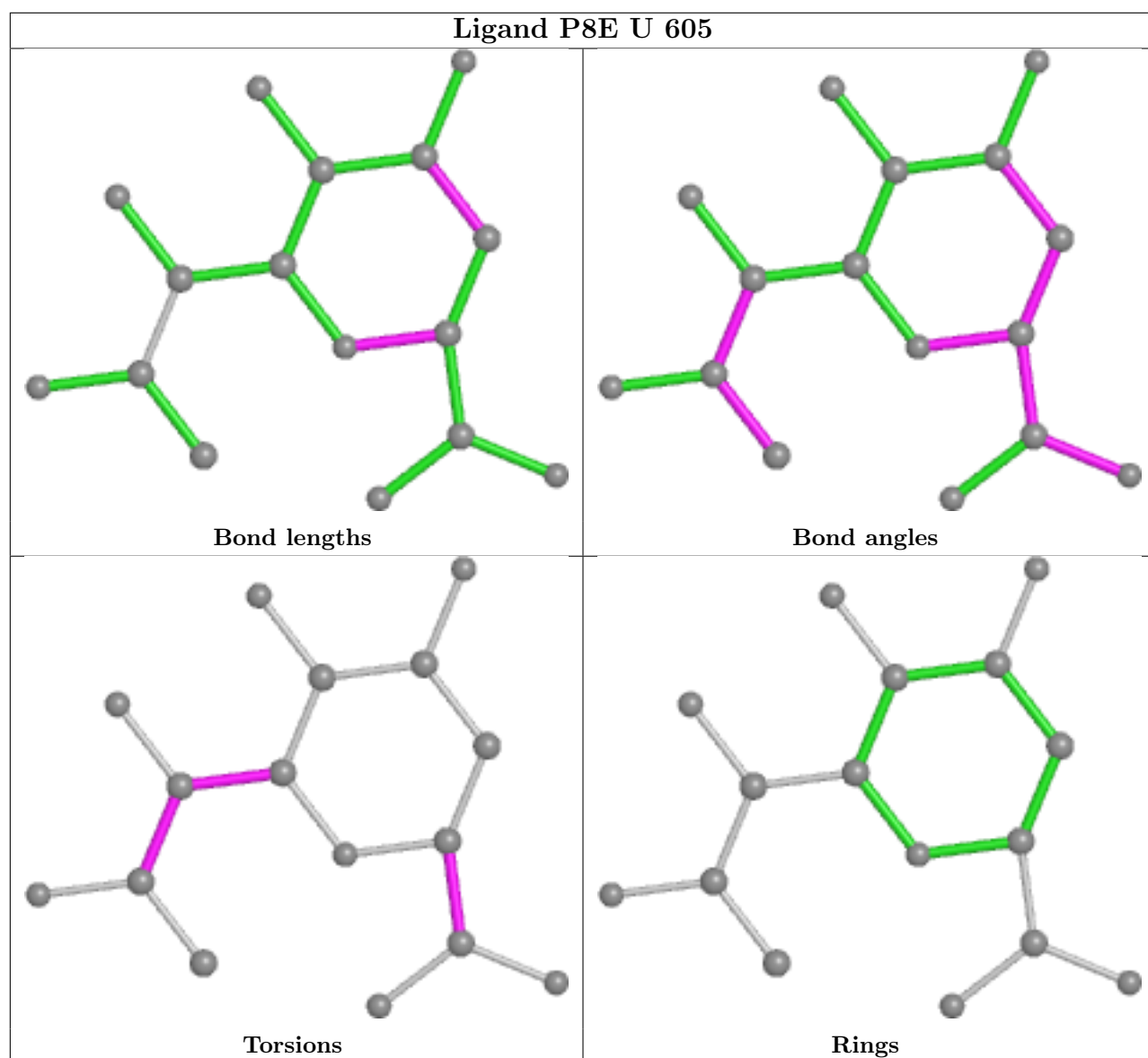


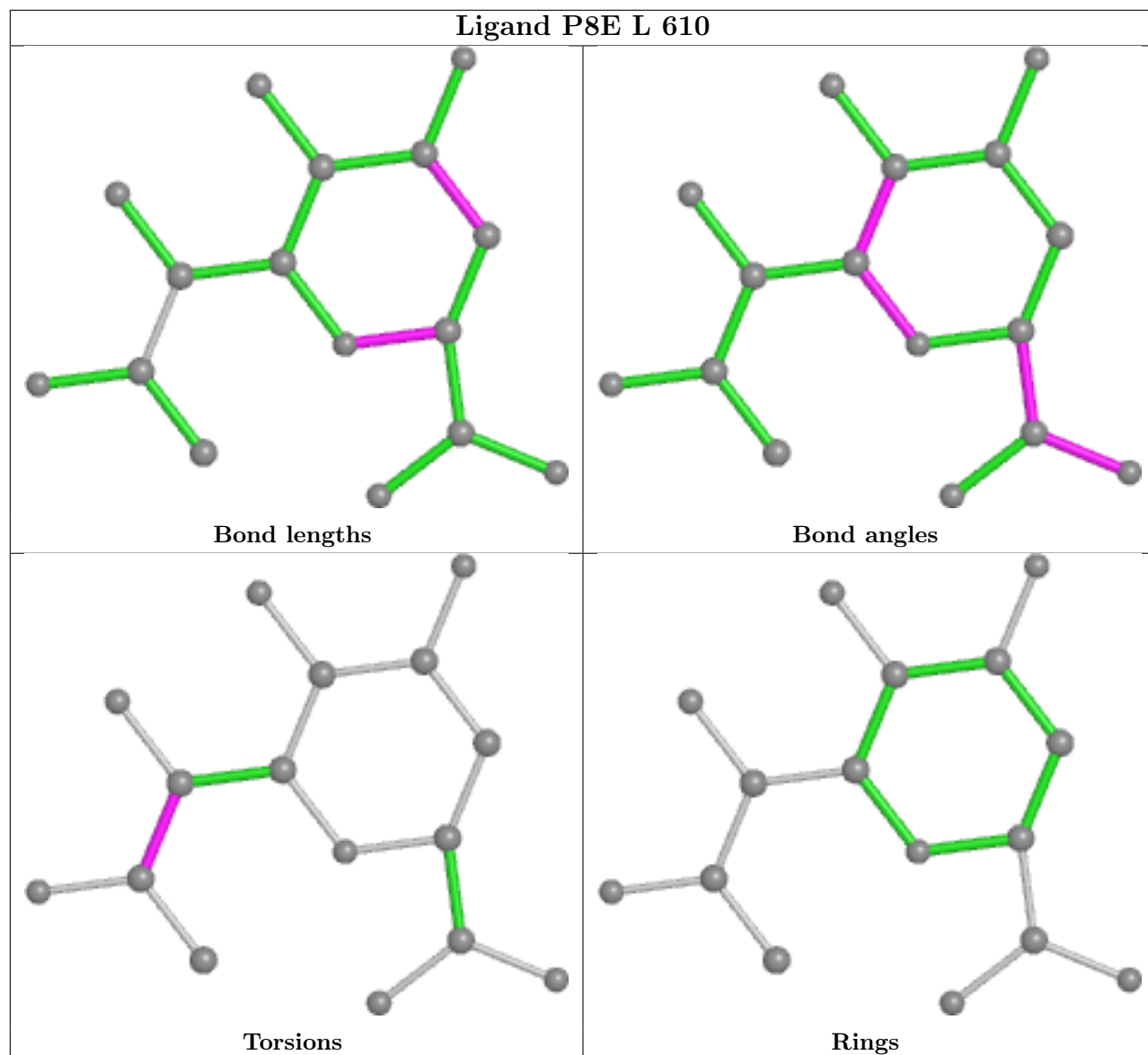


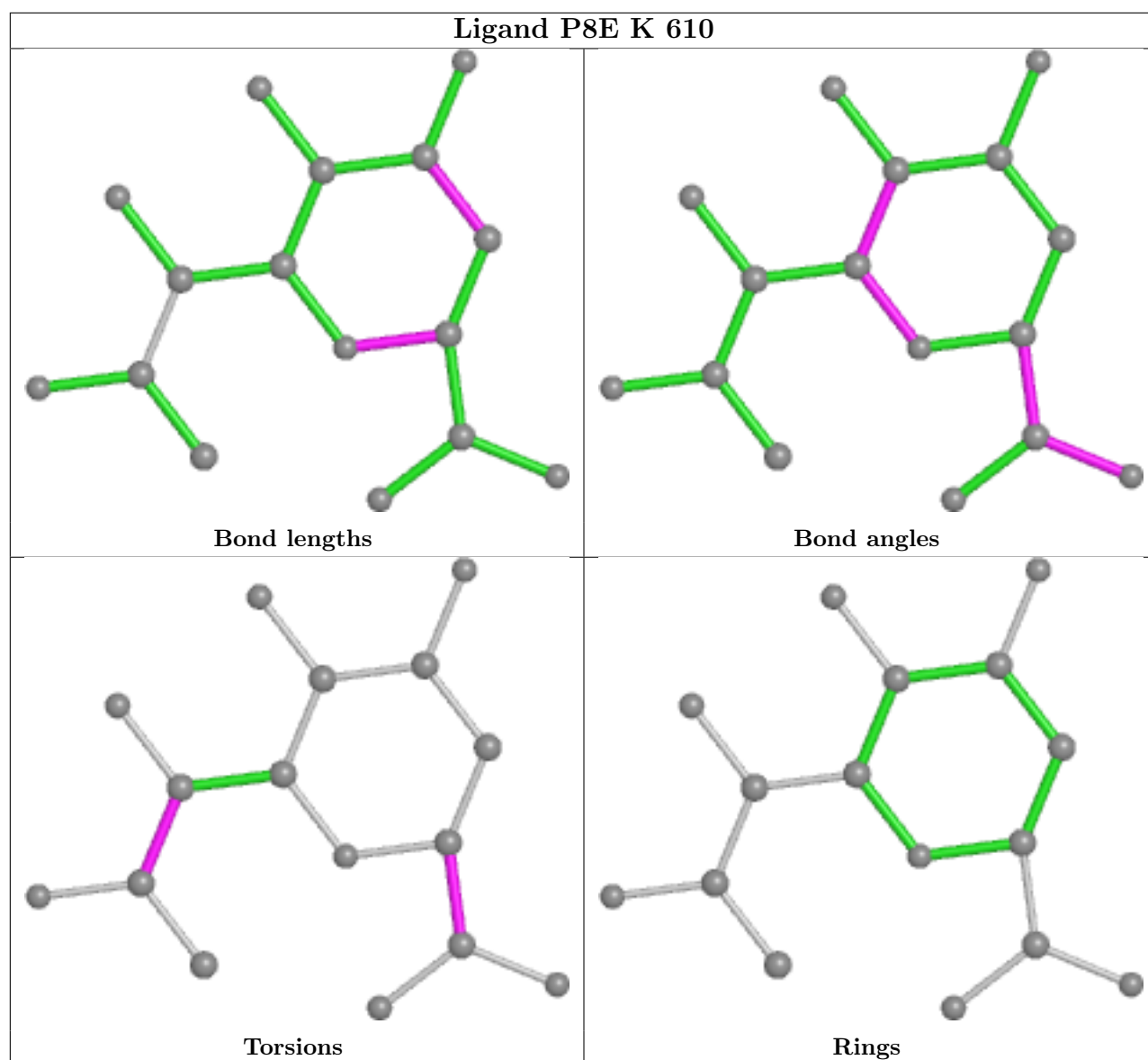


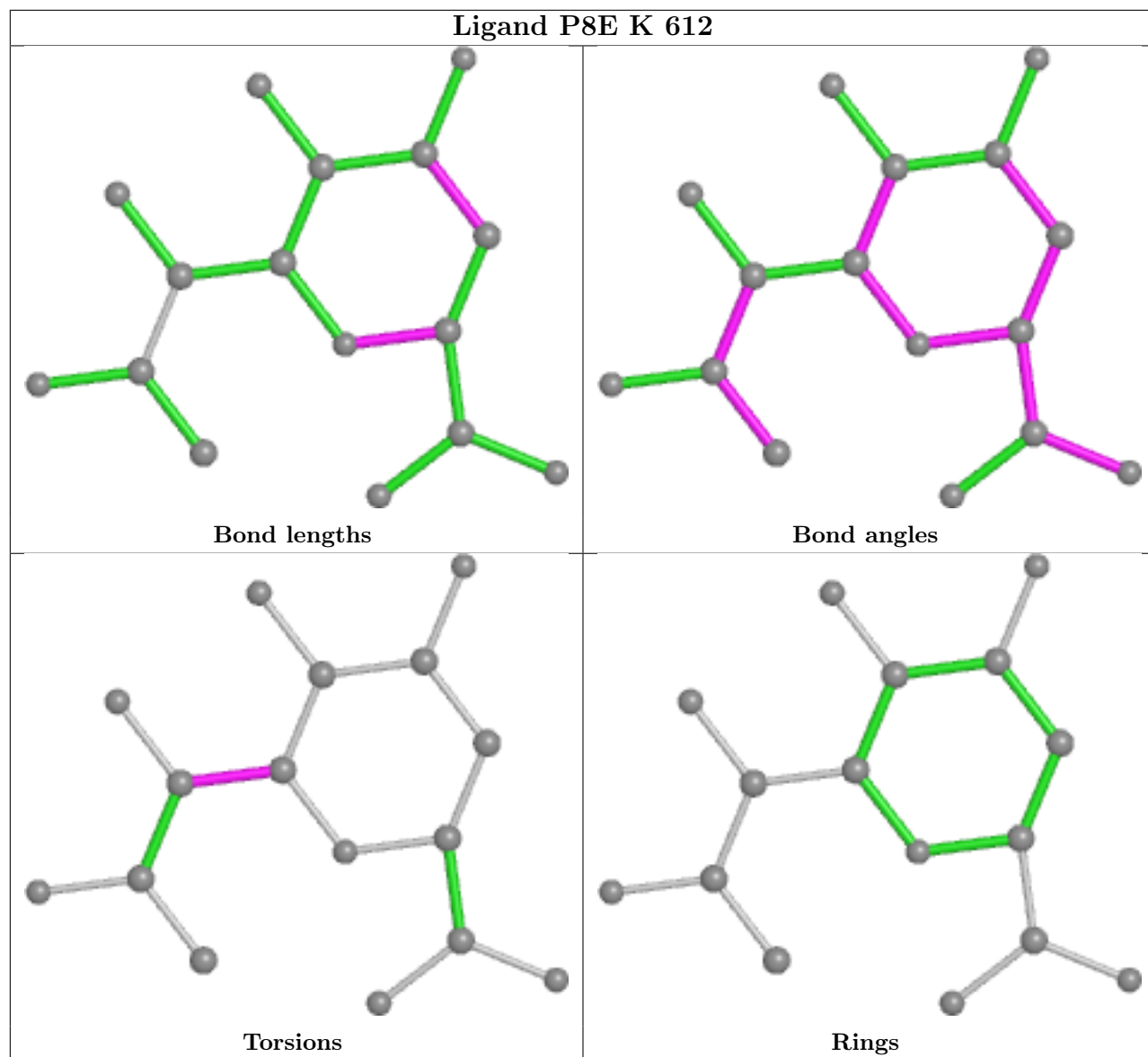


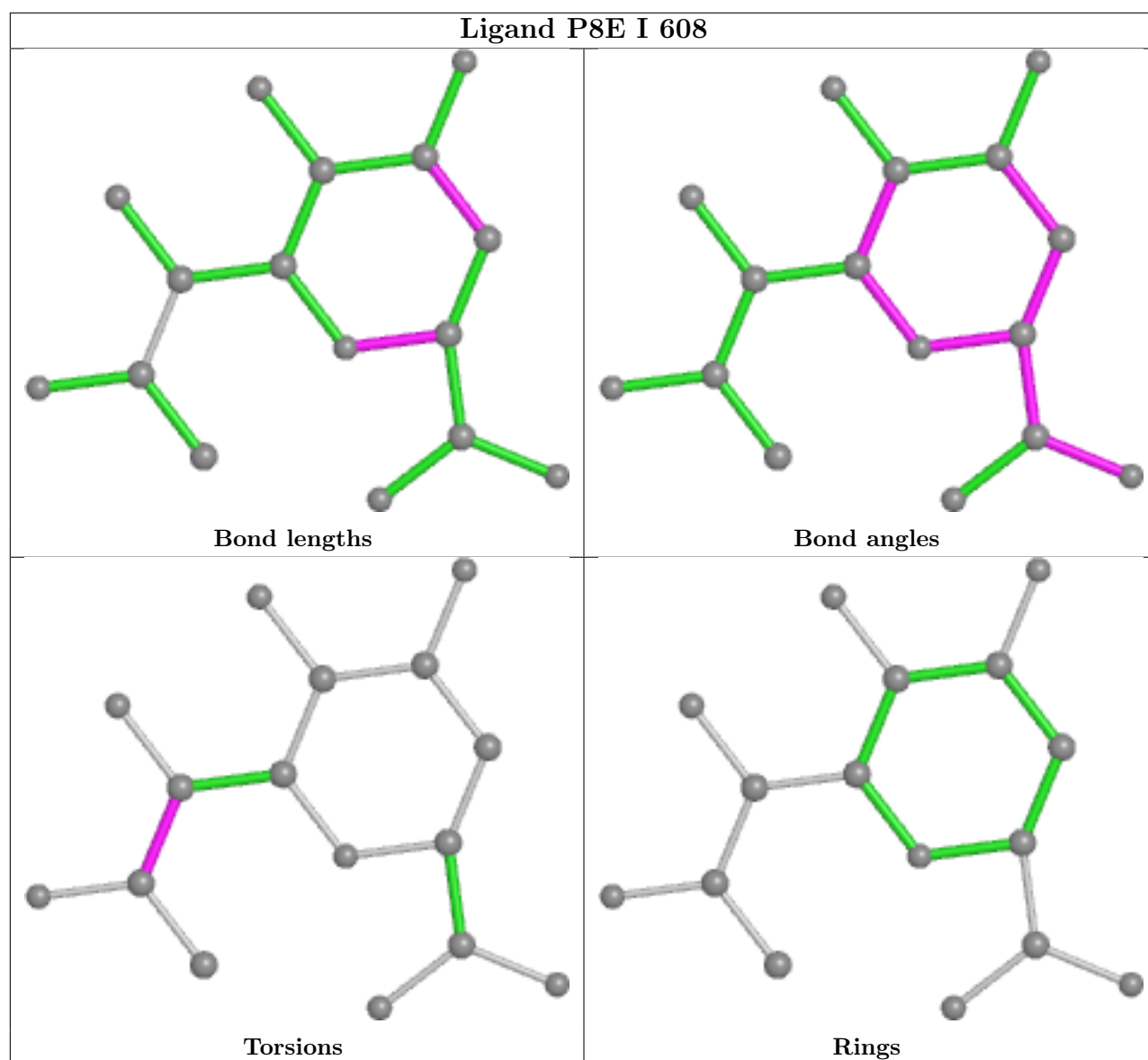


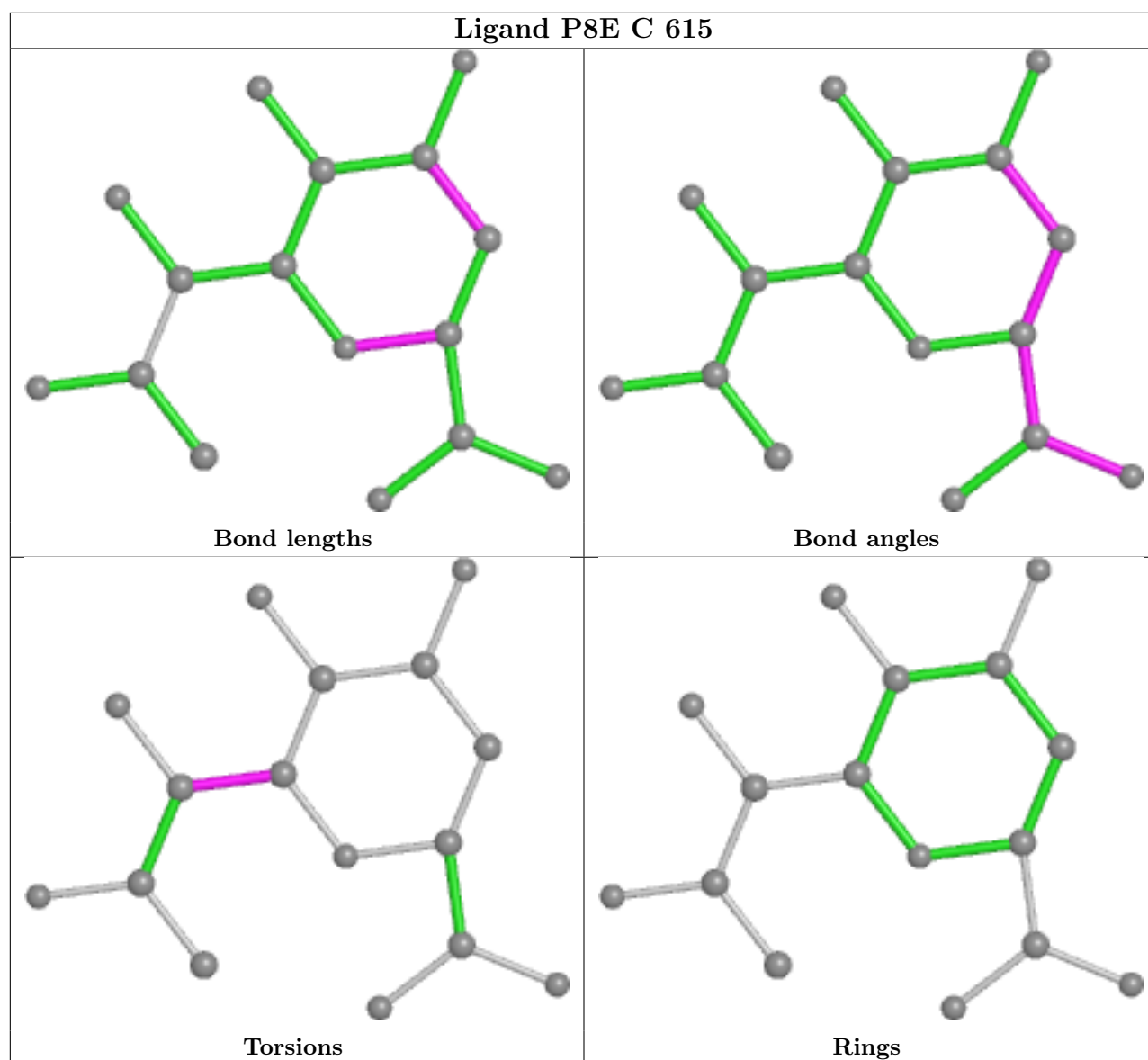


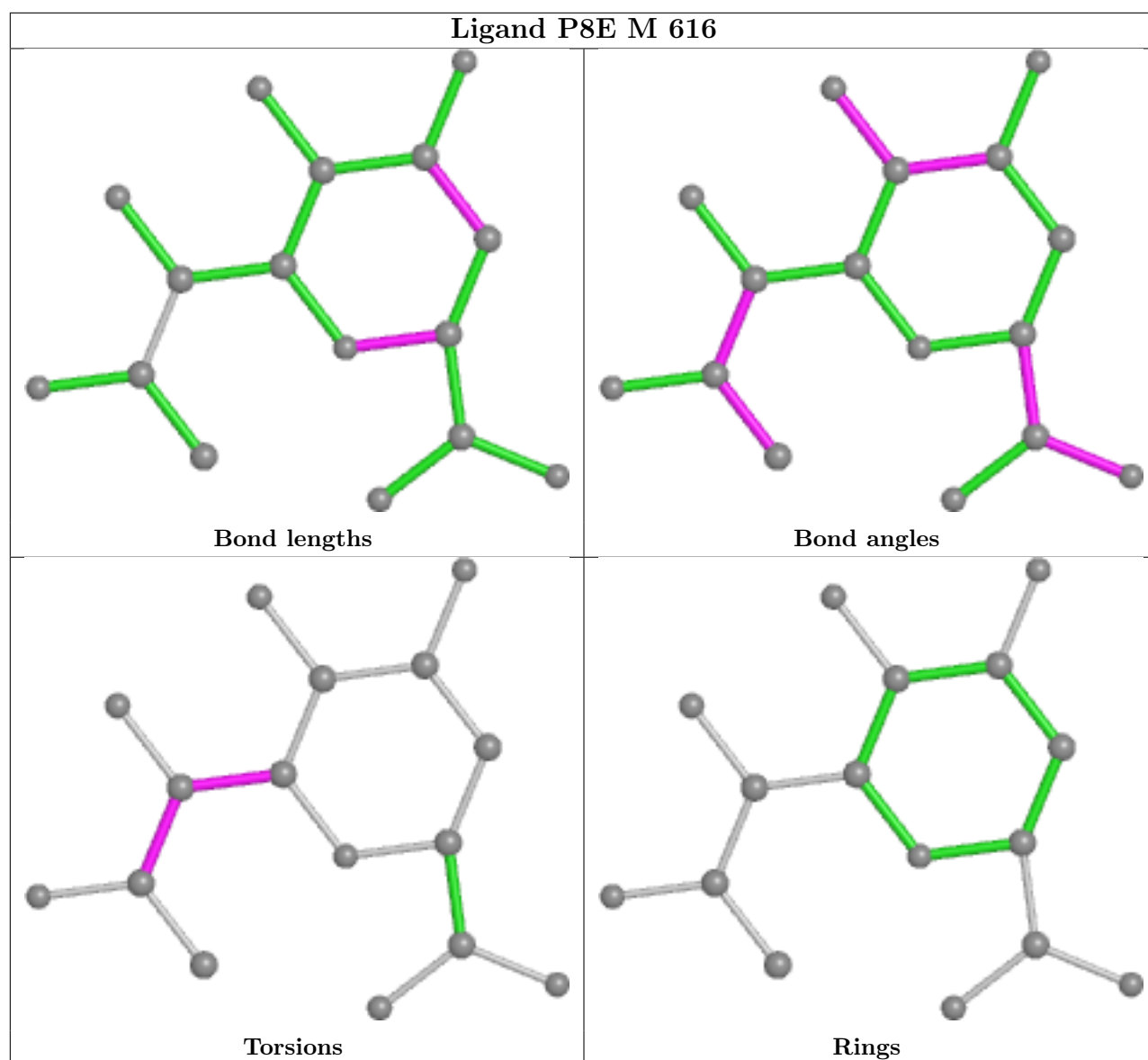


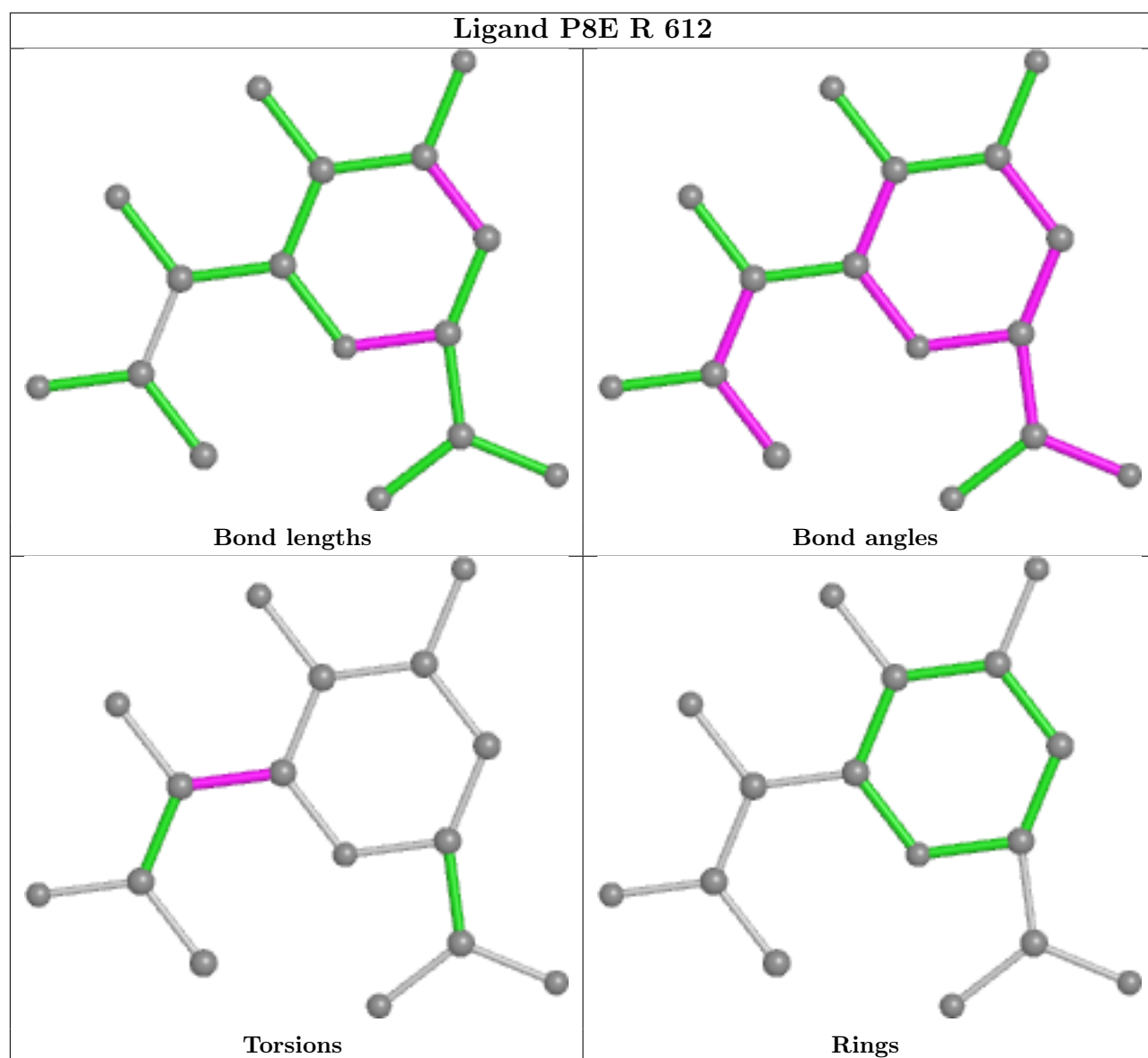




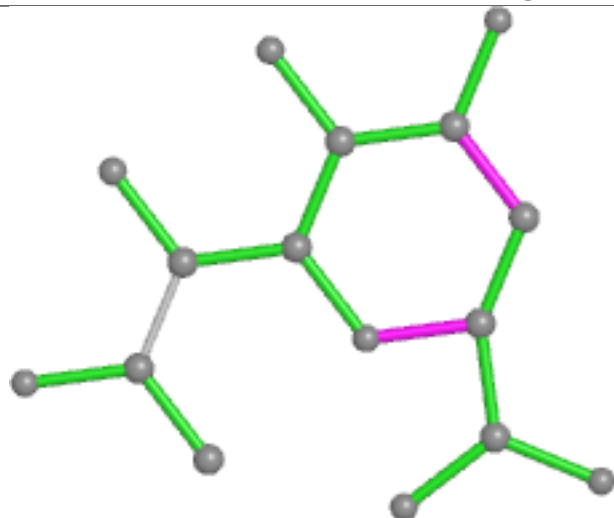




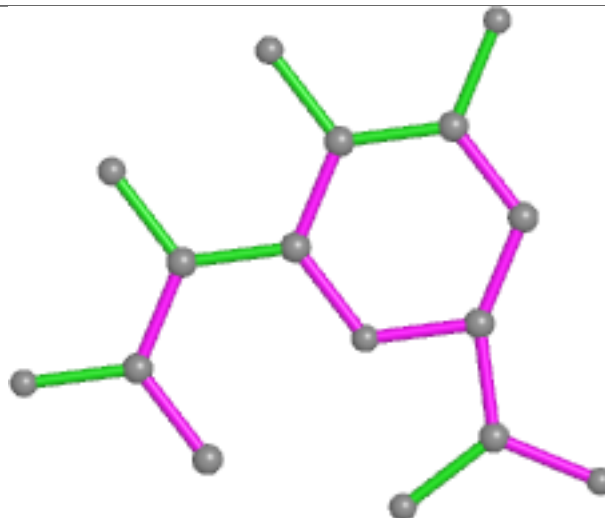




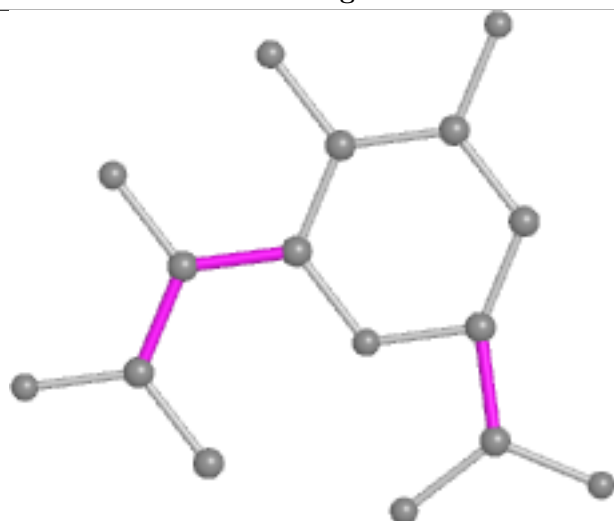
Ligand P8E P 605



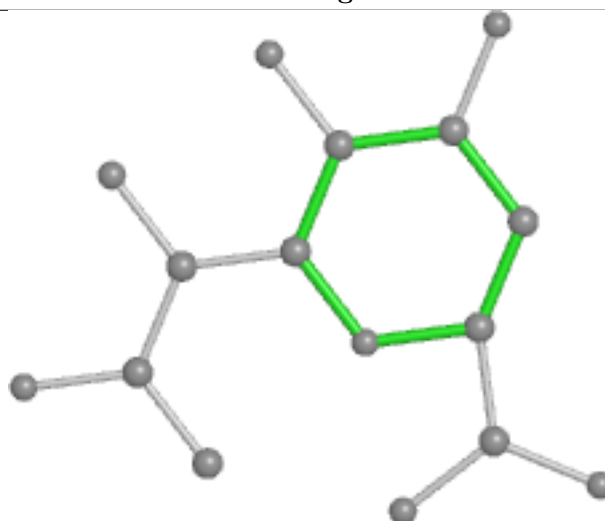
Bond lengths



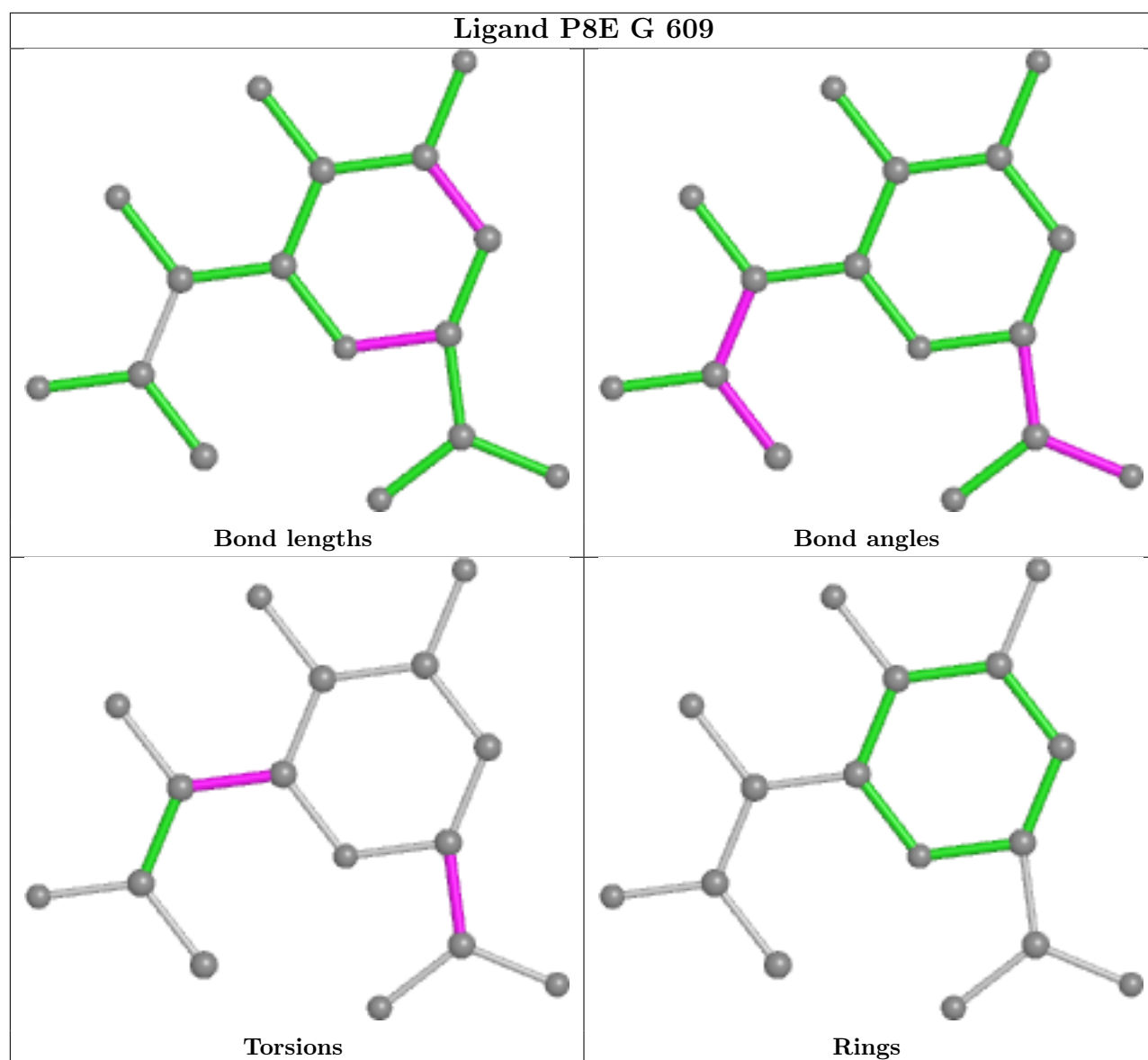
Bond angles

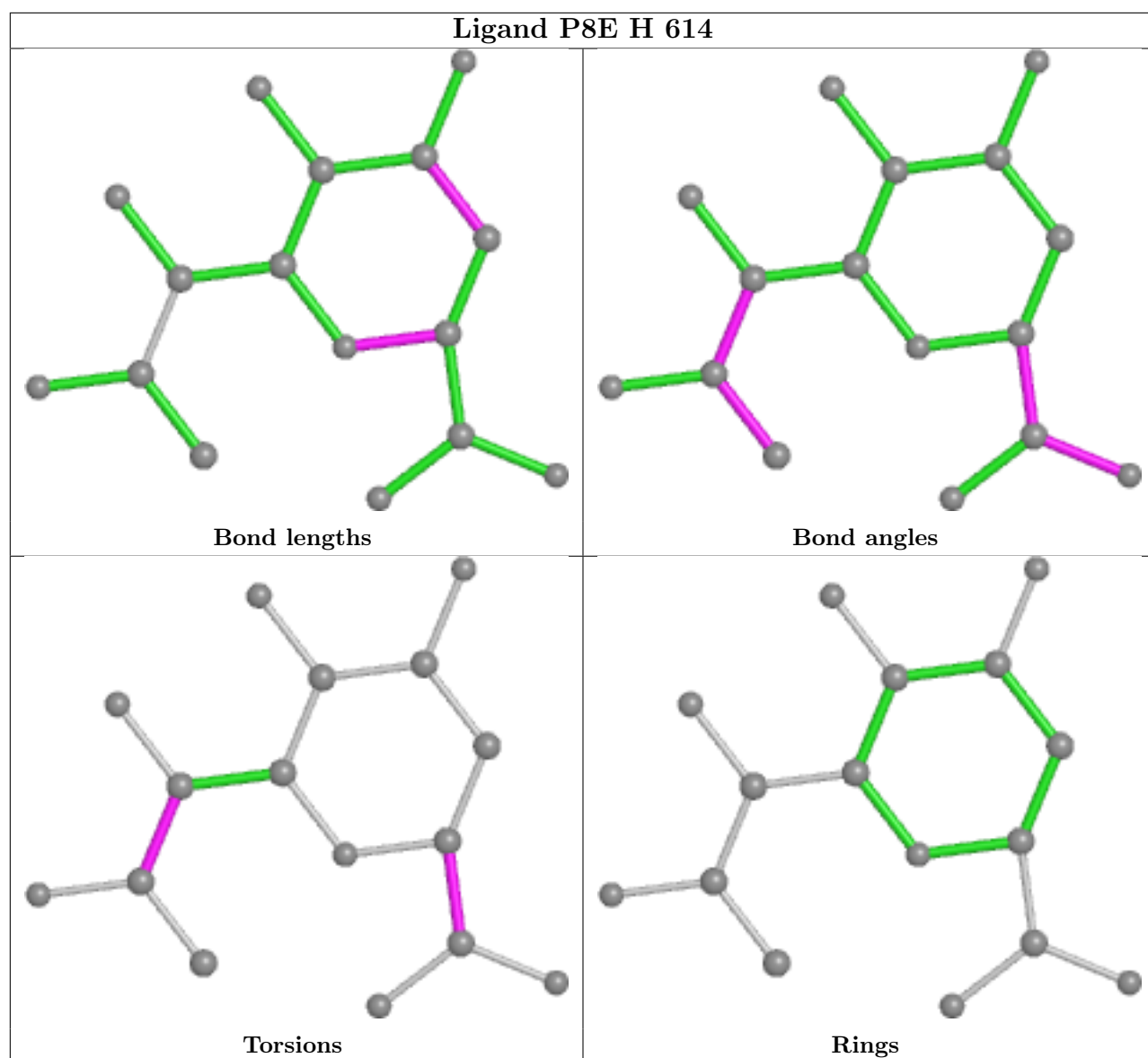


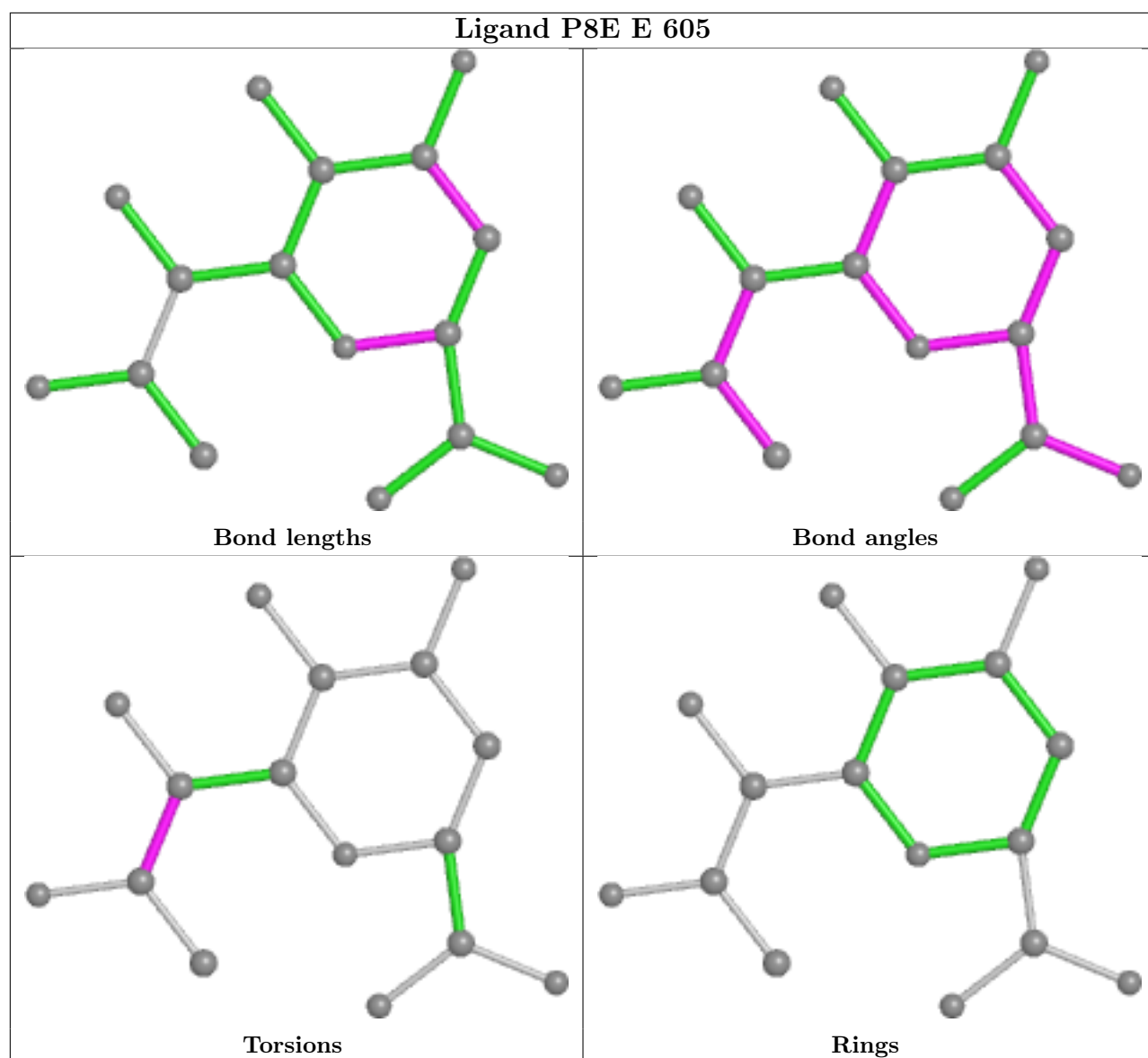
Torsions

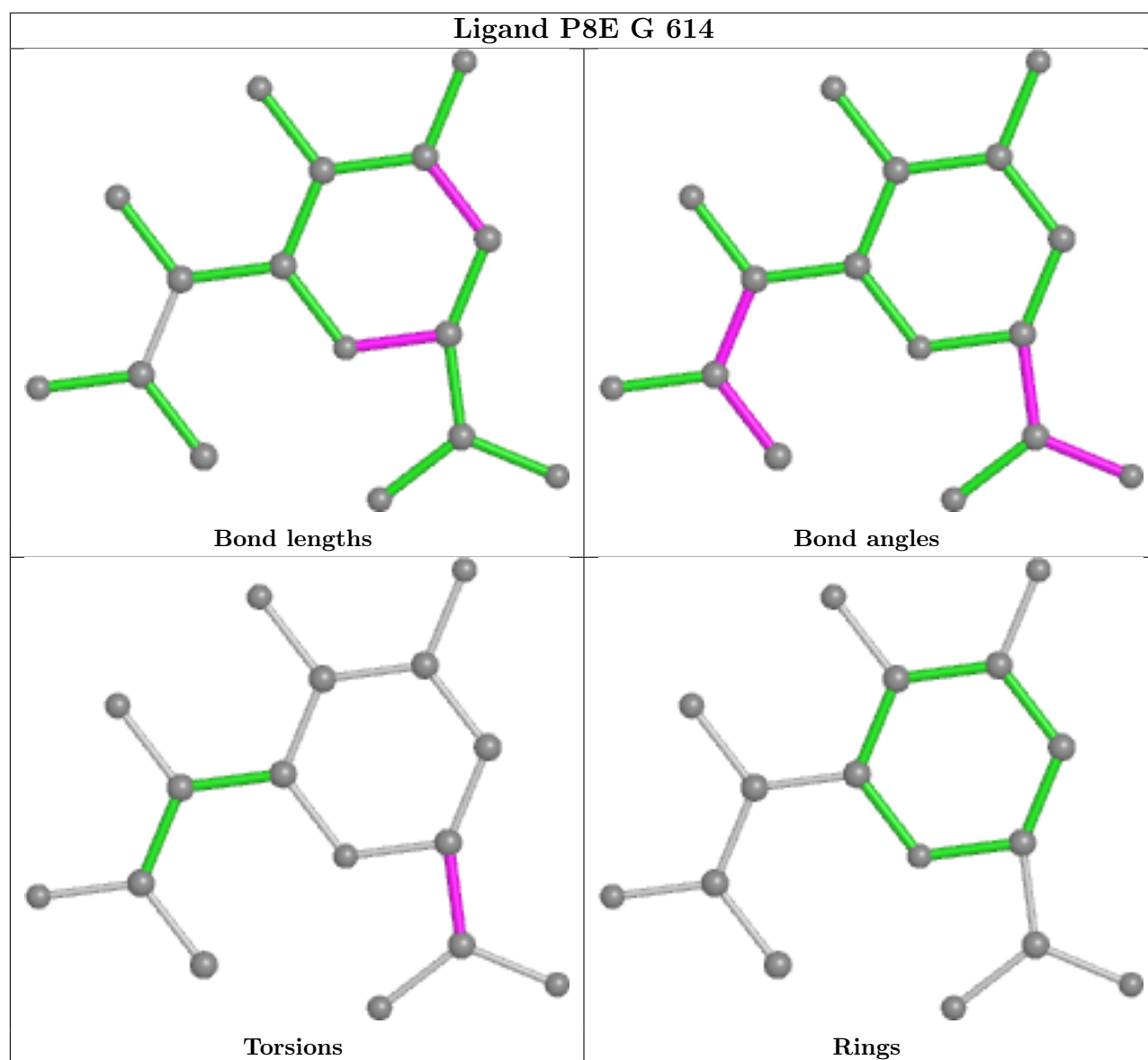


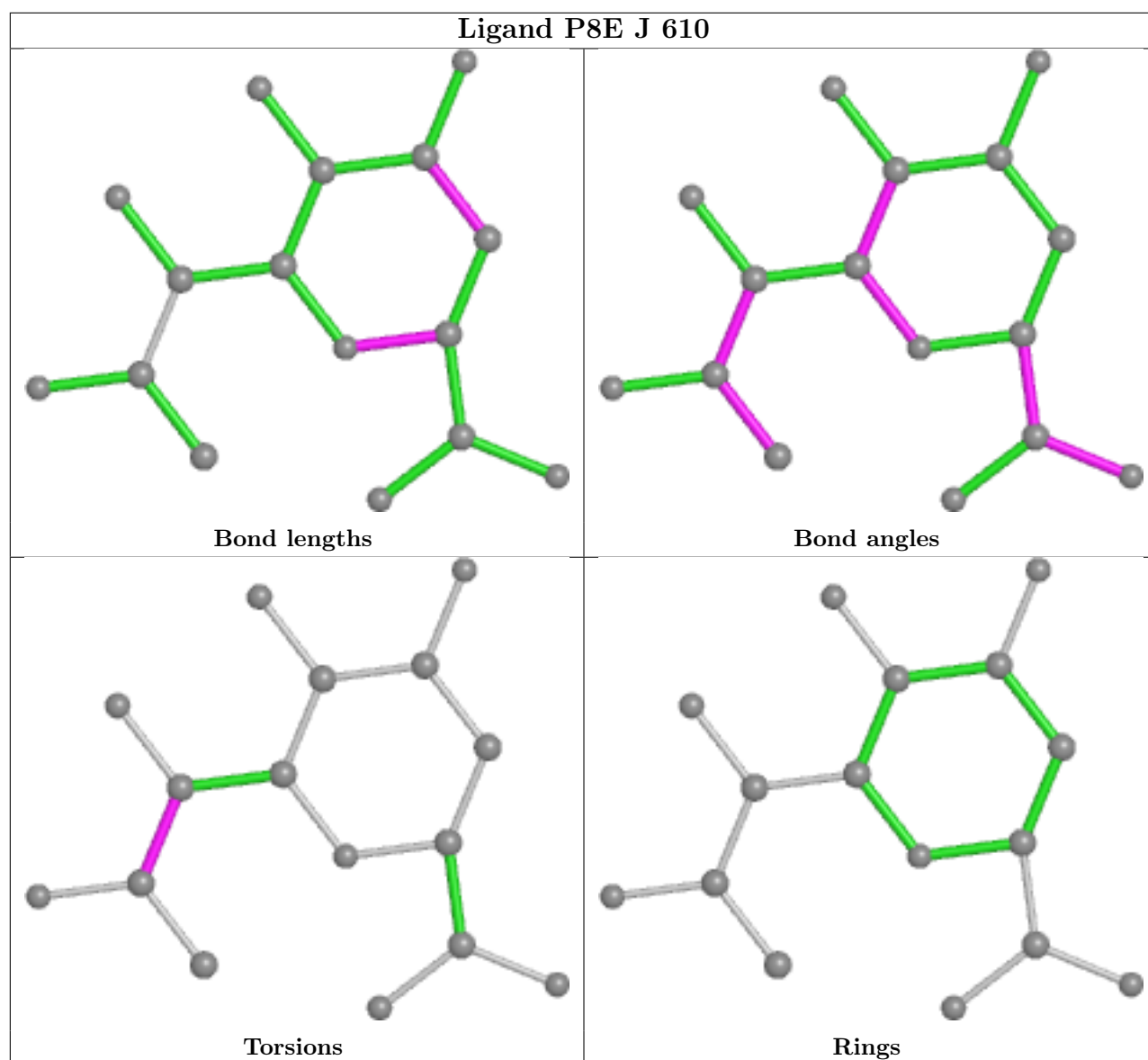
Rings



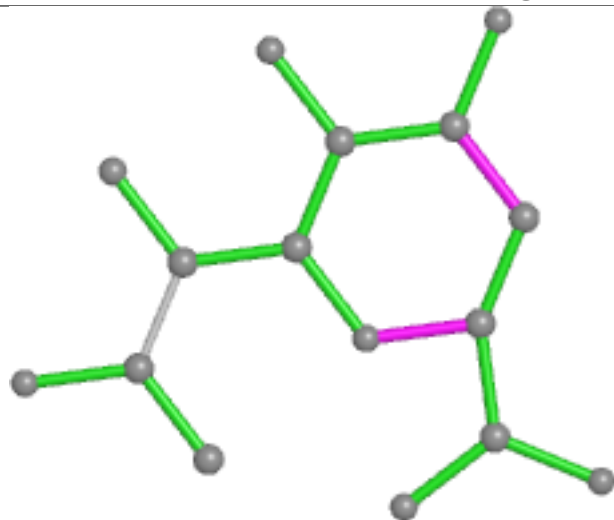




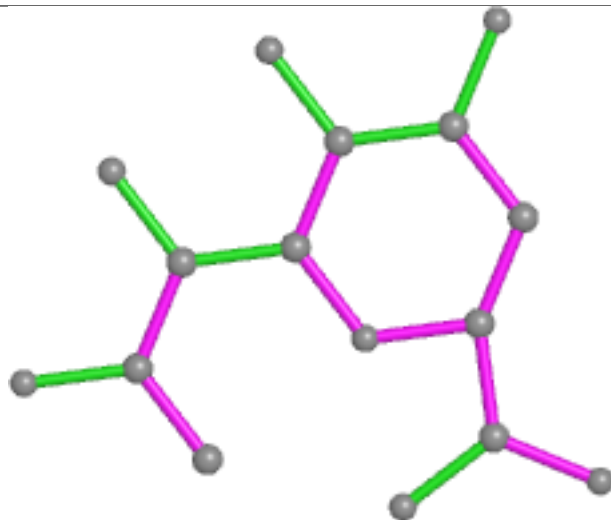




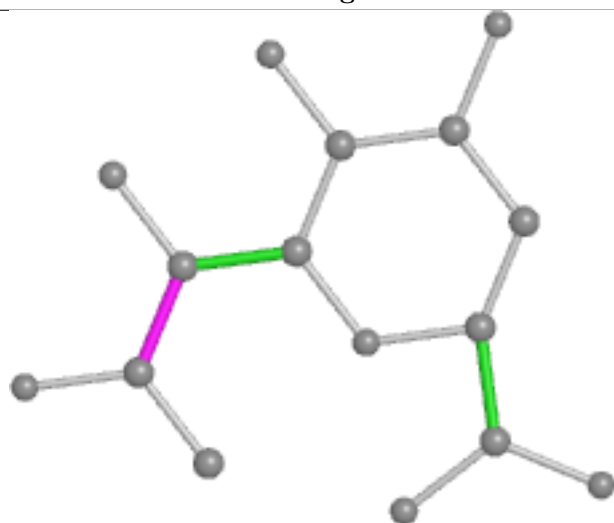
Ligand P8E K 603



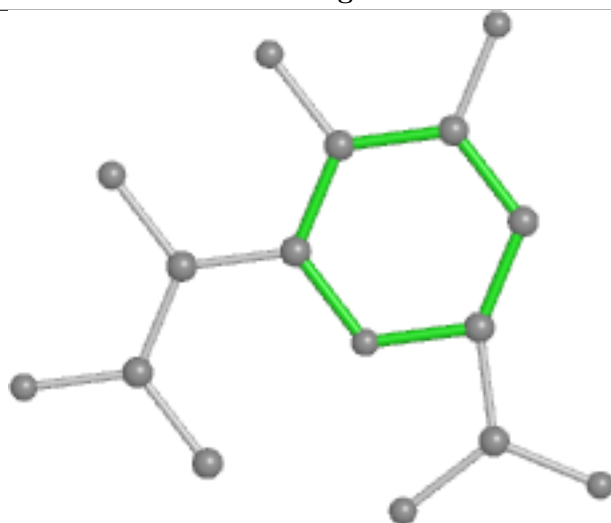
Bond lengths



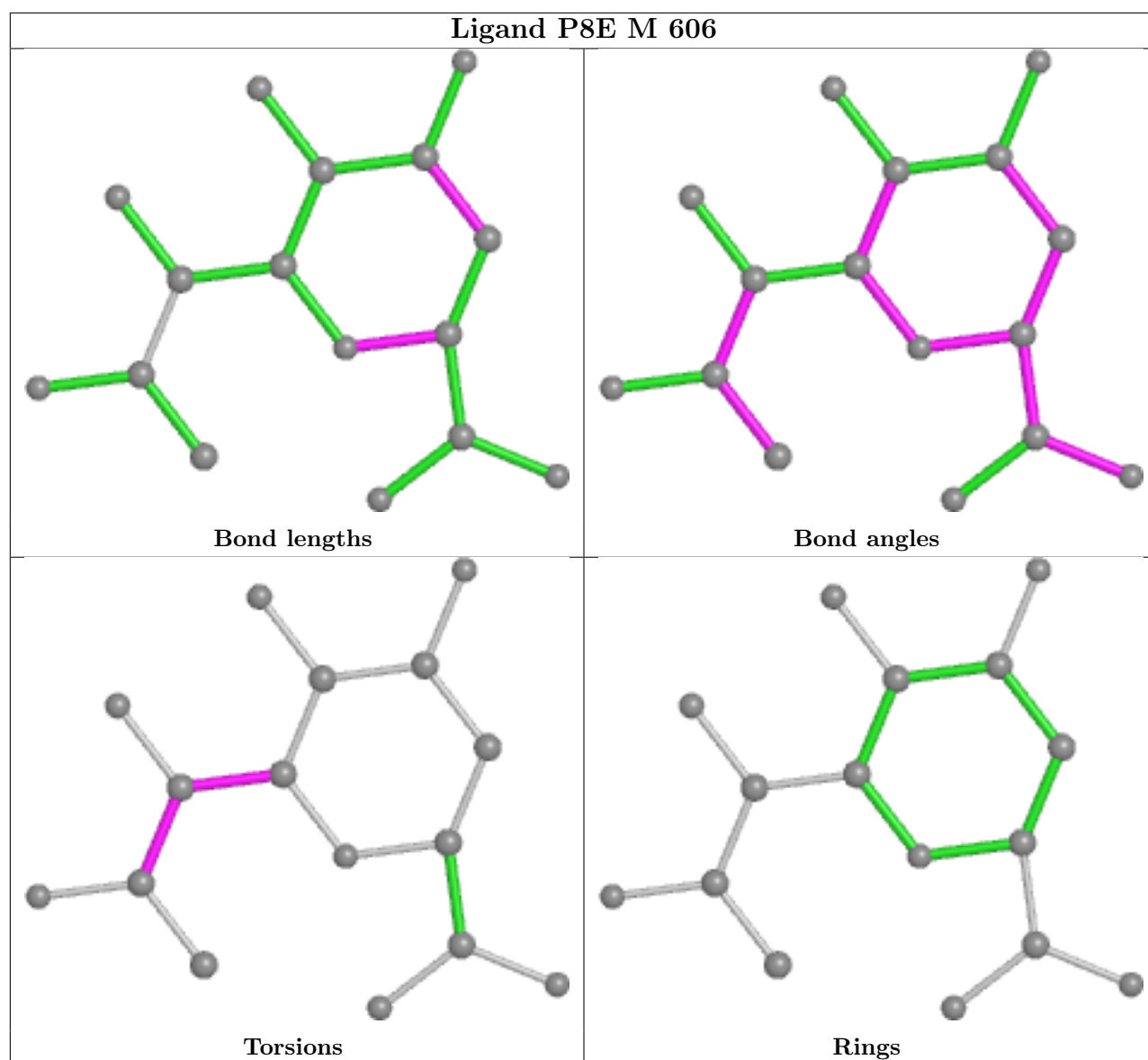
Bond angles

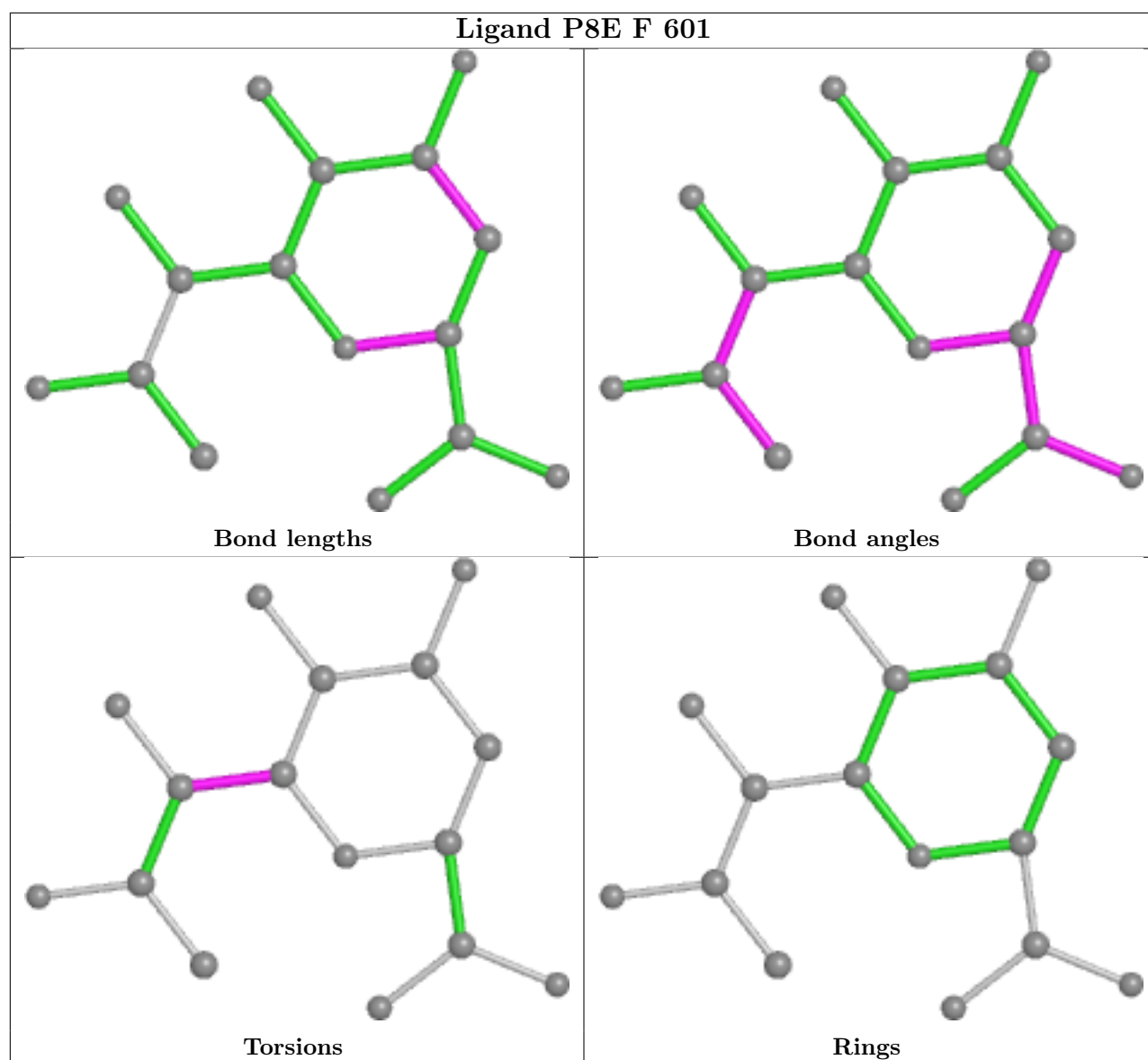


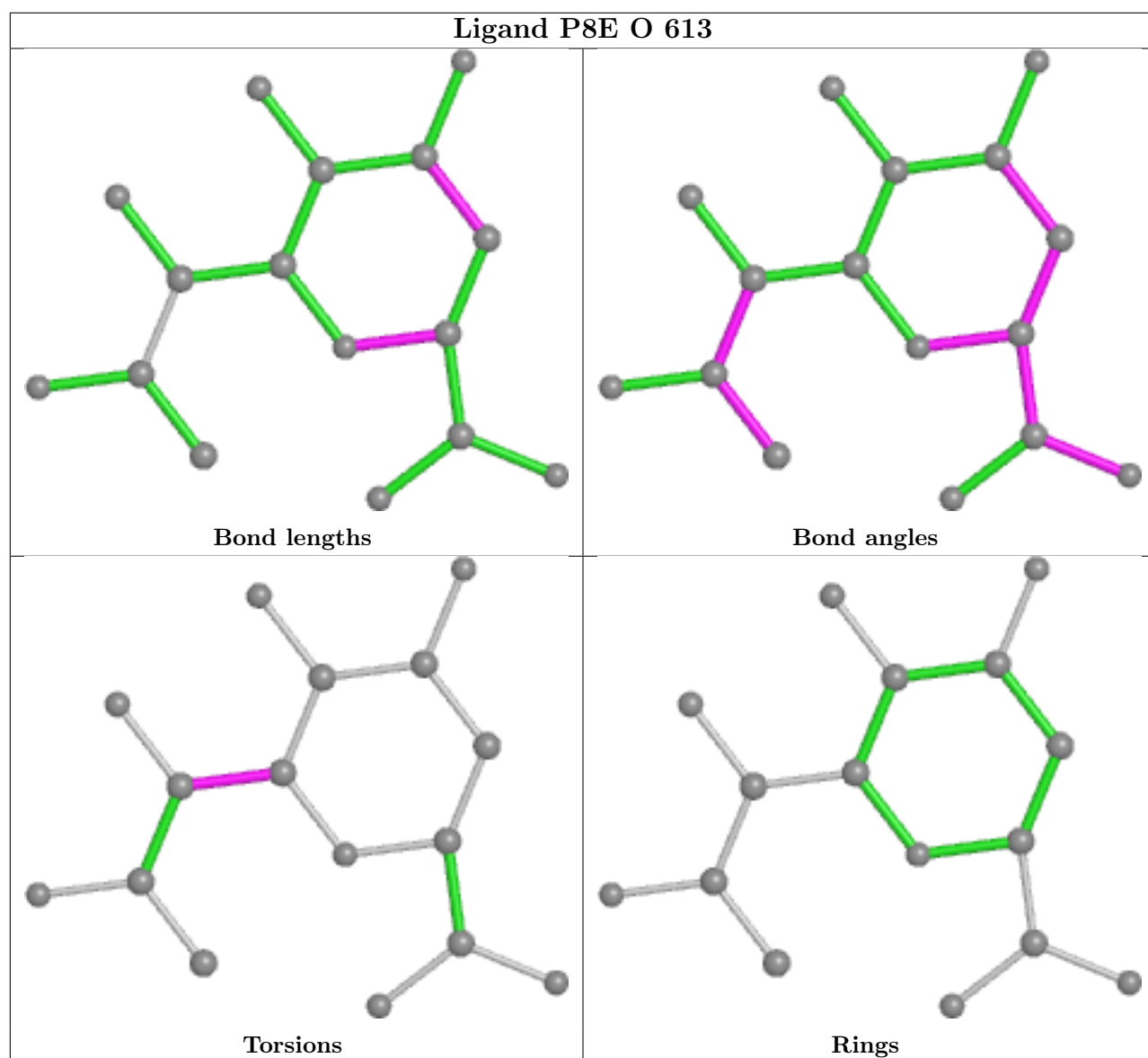
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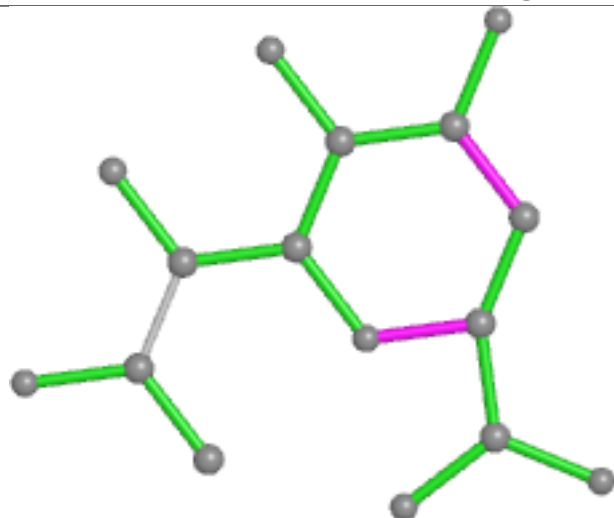
Rings



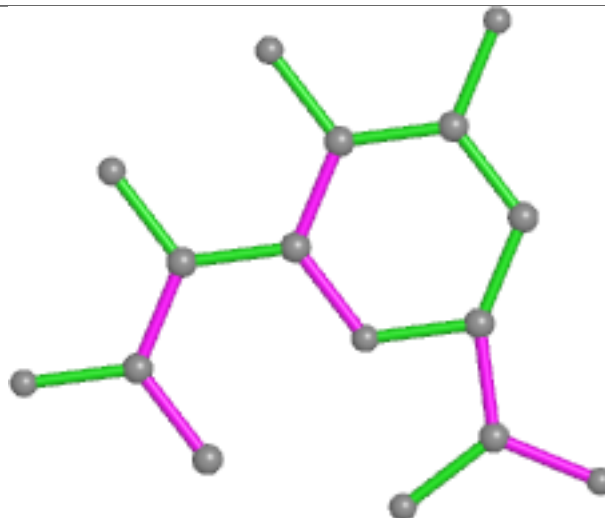




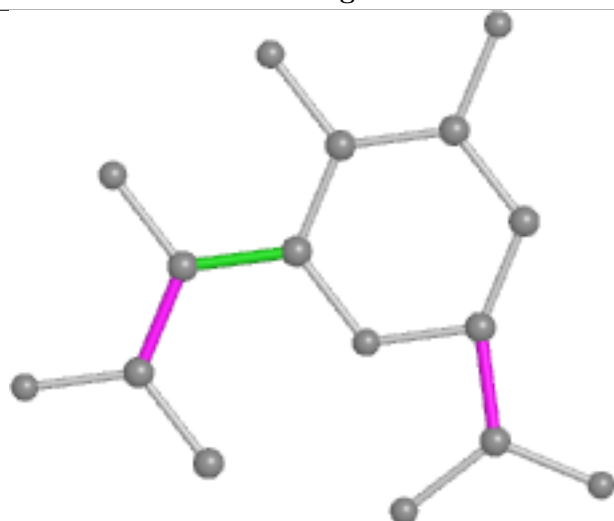
Ligand P8E U 614



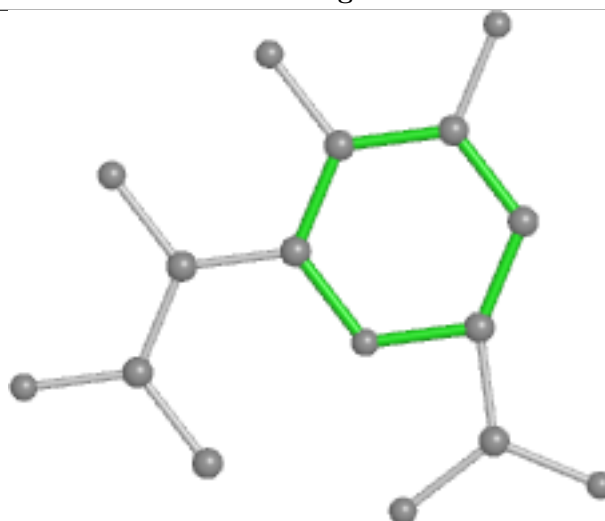
Bond lengths



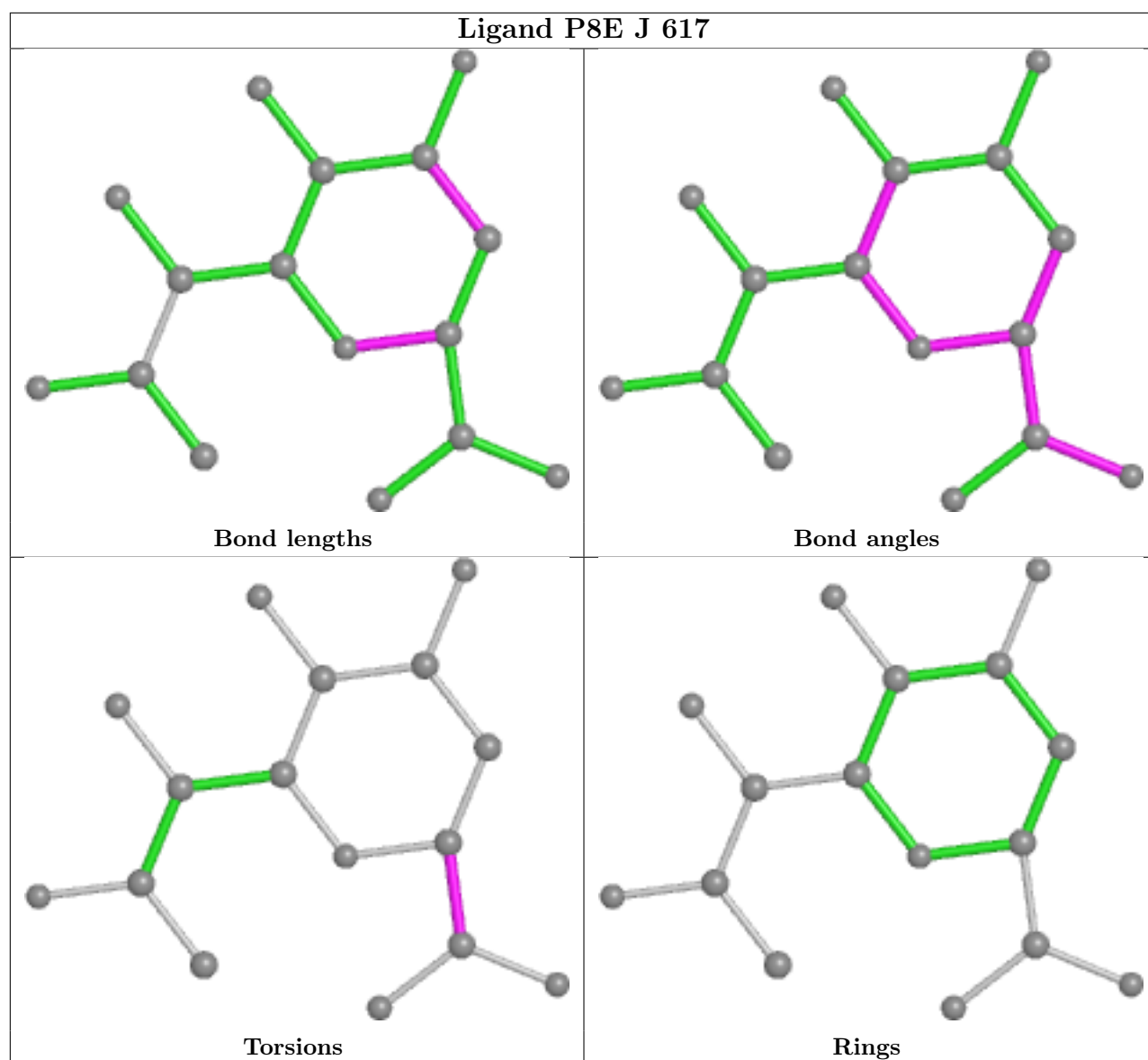
Bond angles

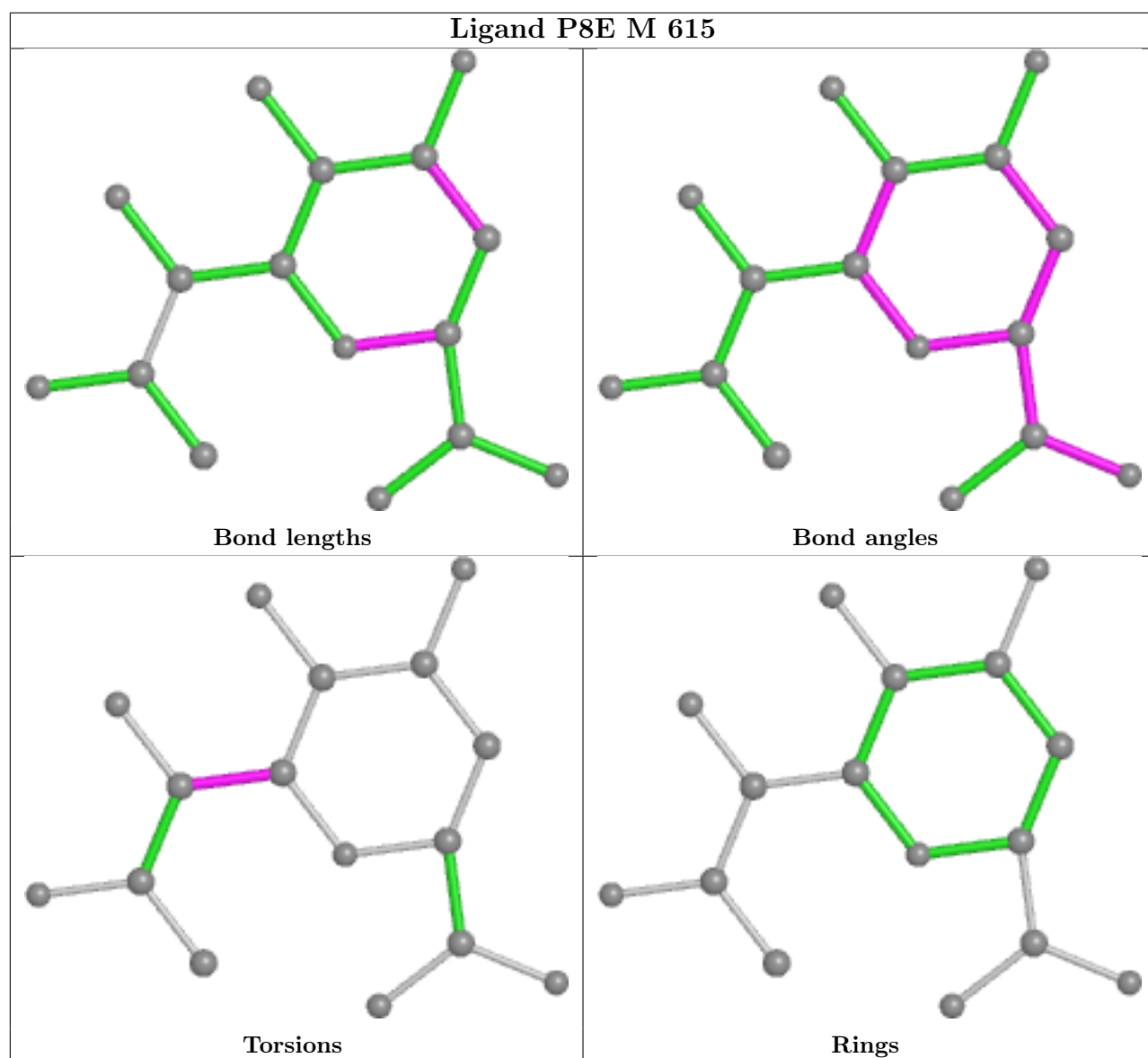


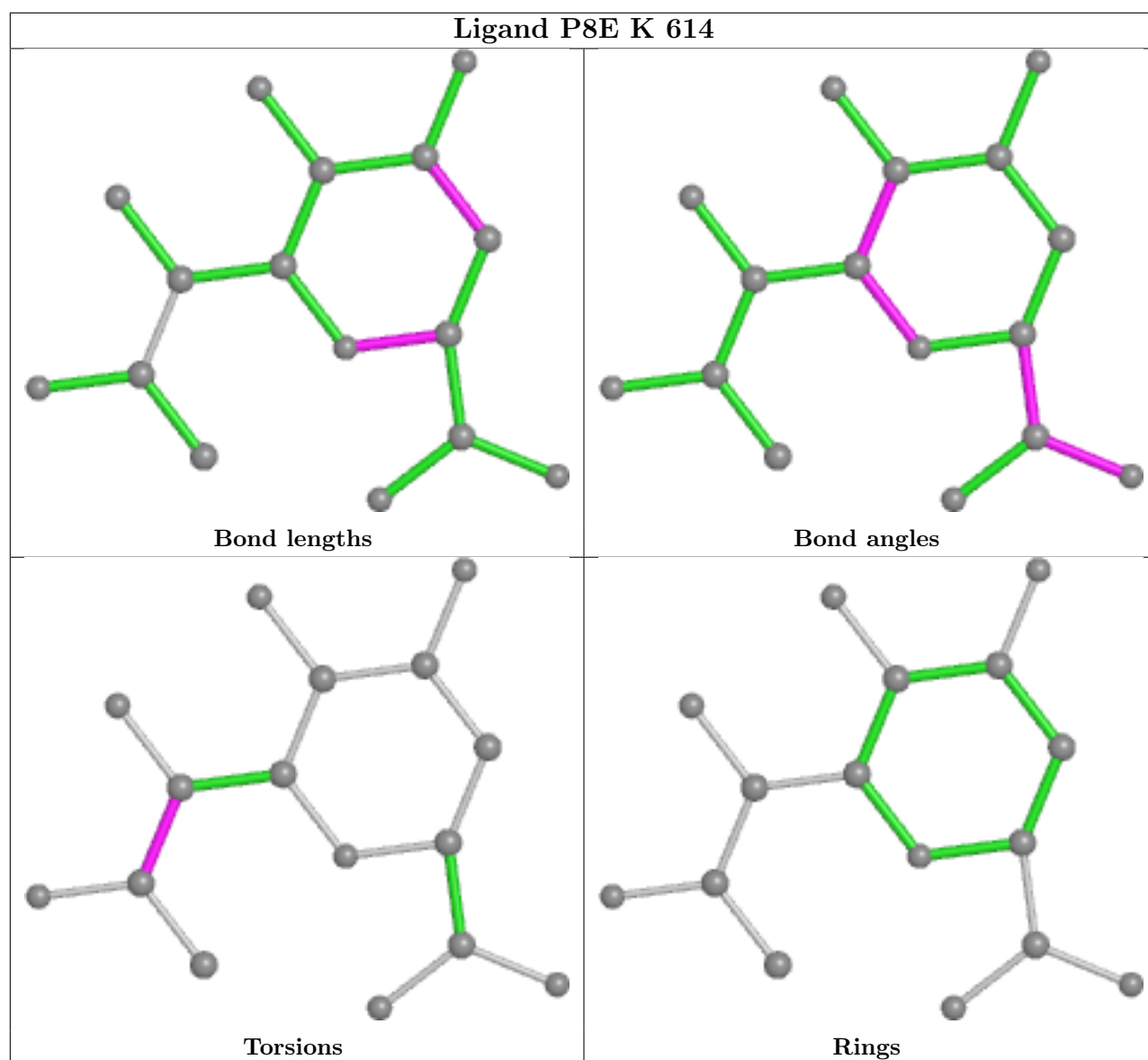
Torsions

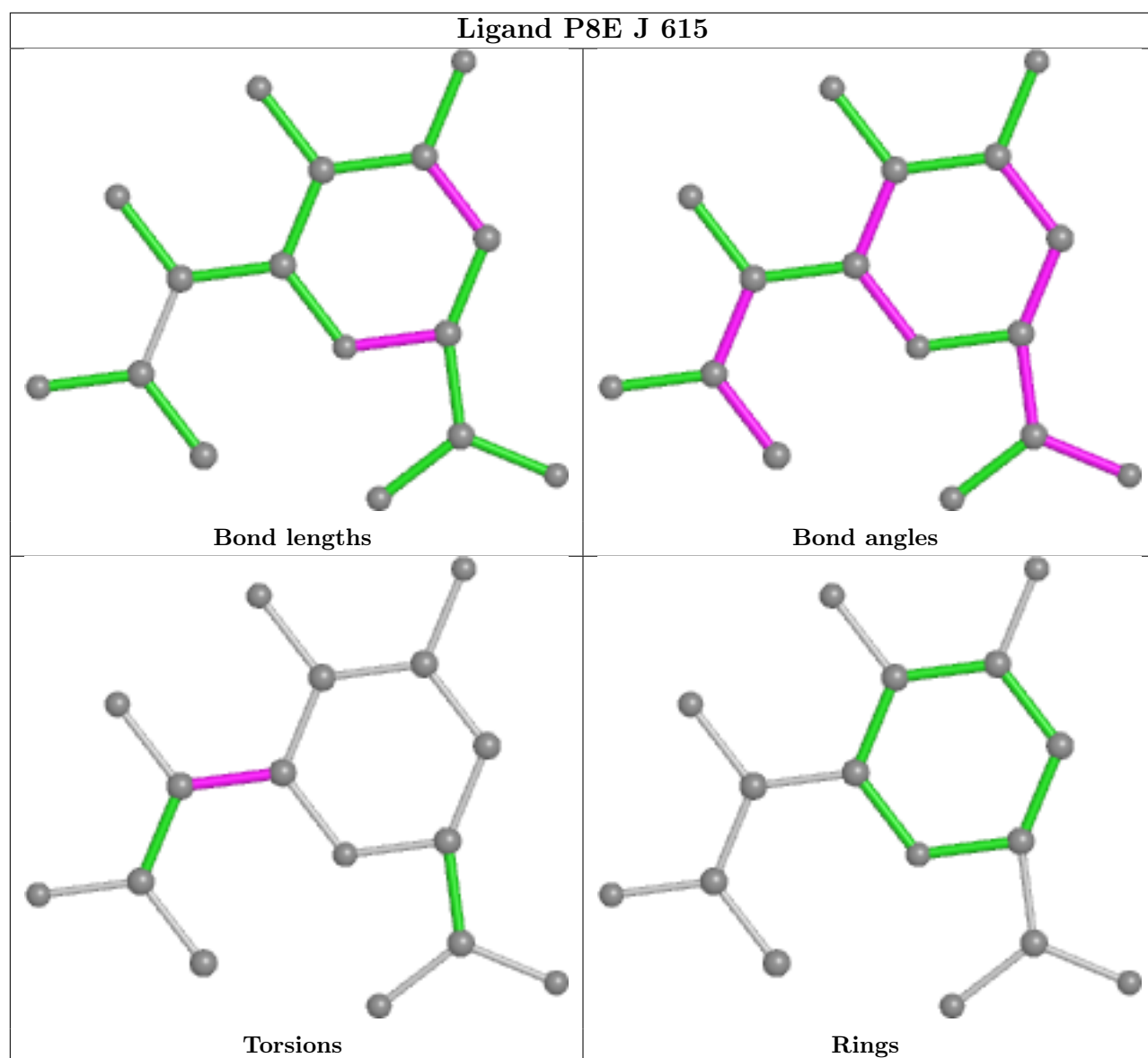


Rings

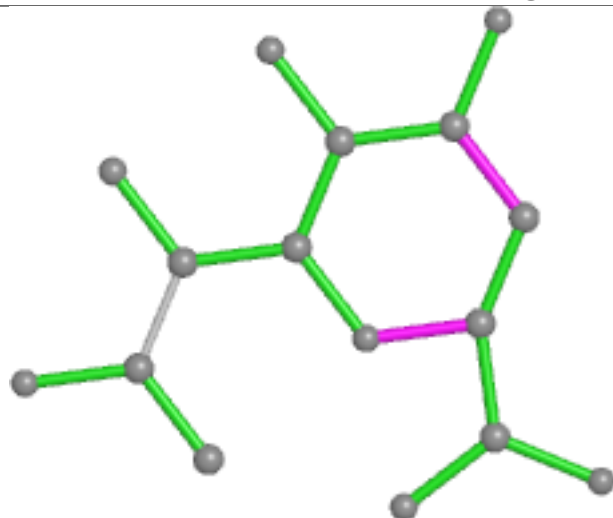




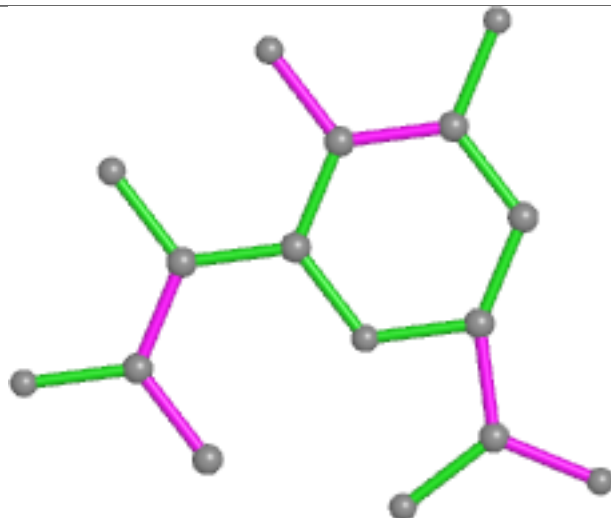




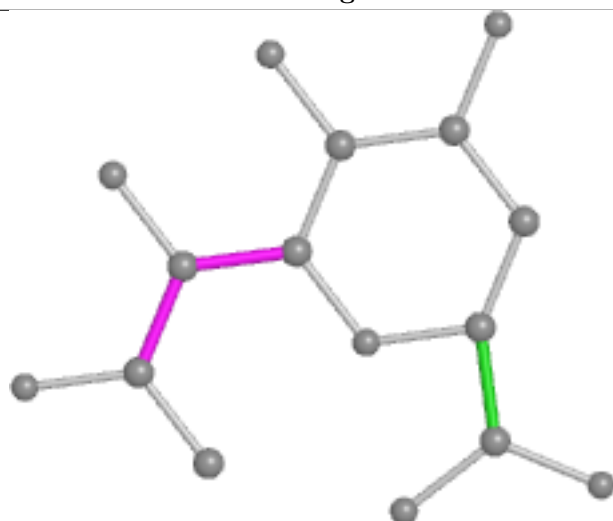
Ligand P8E J 616



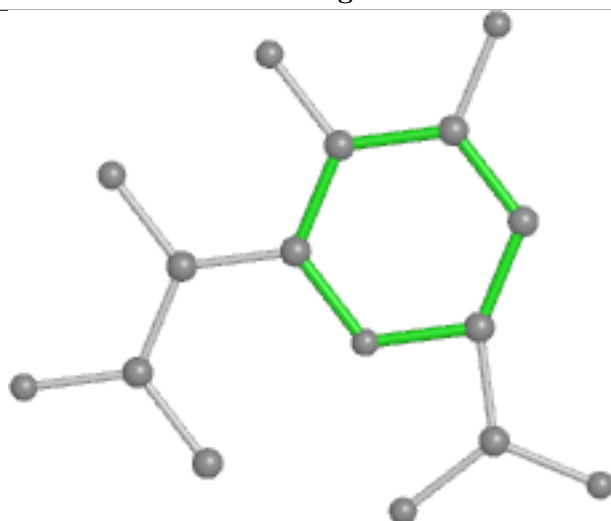
Bond lengths



Bond angles

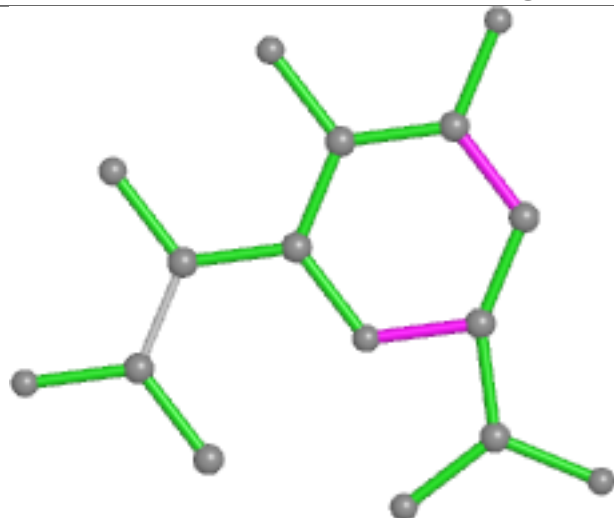


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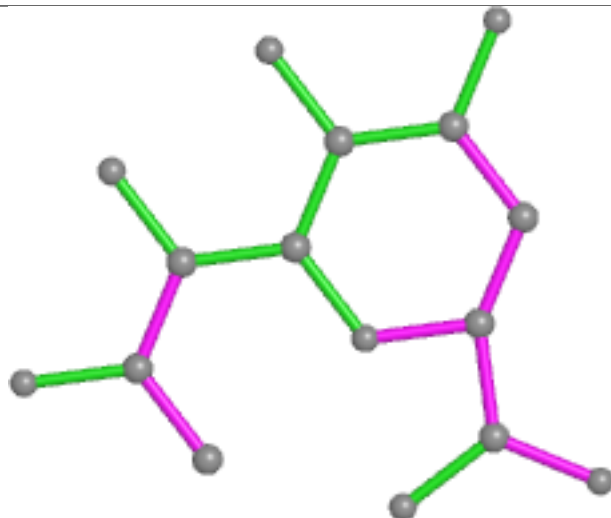


Rings

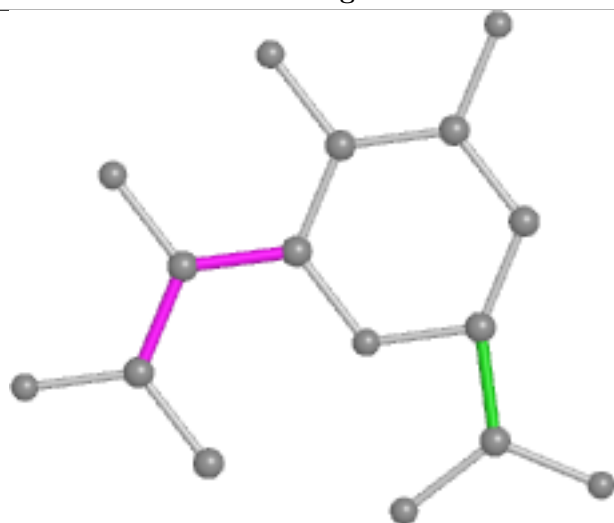
Ligand P8E P 607



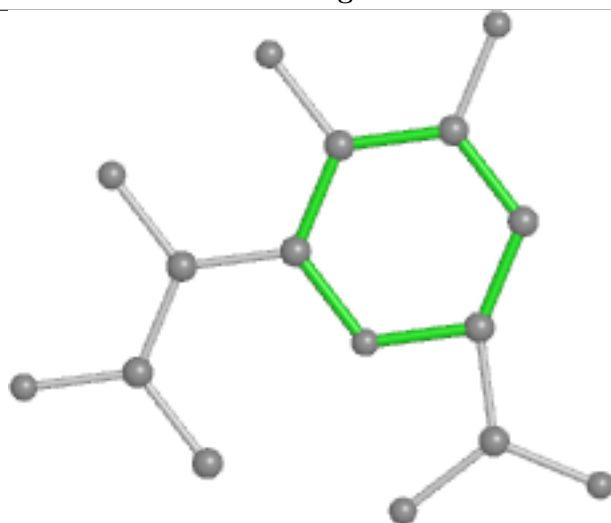
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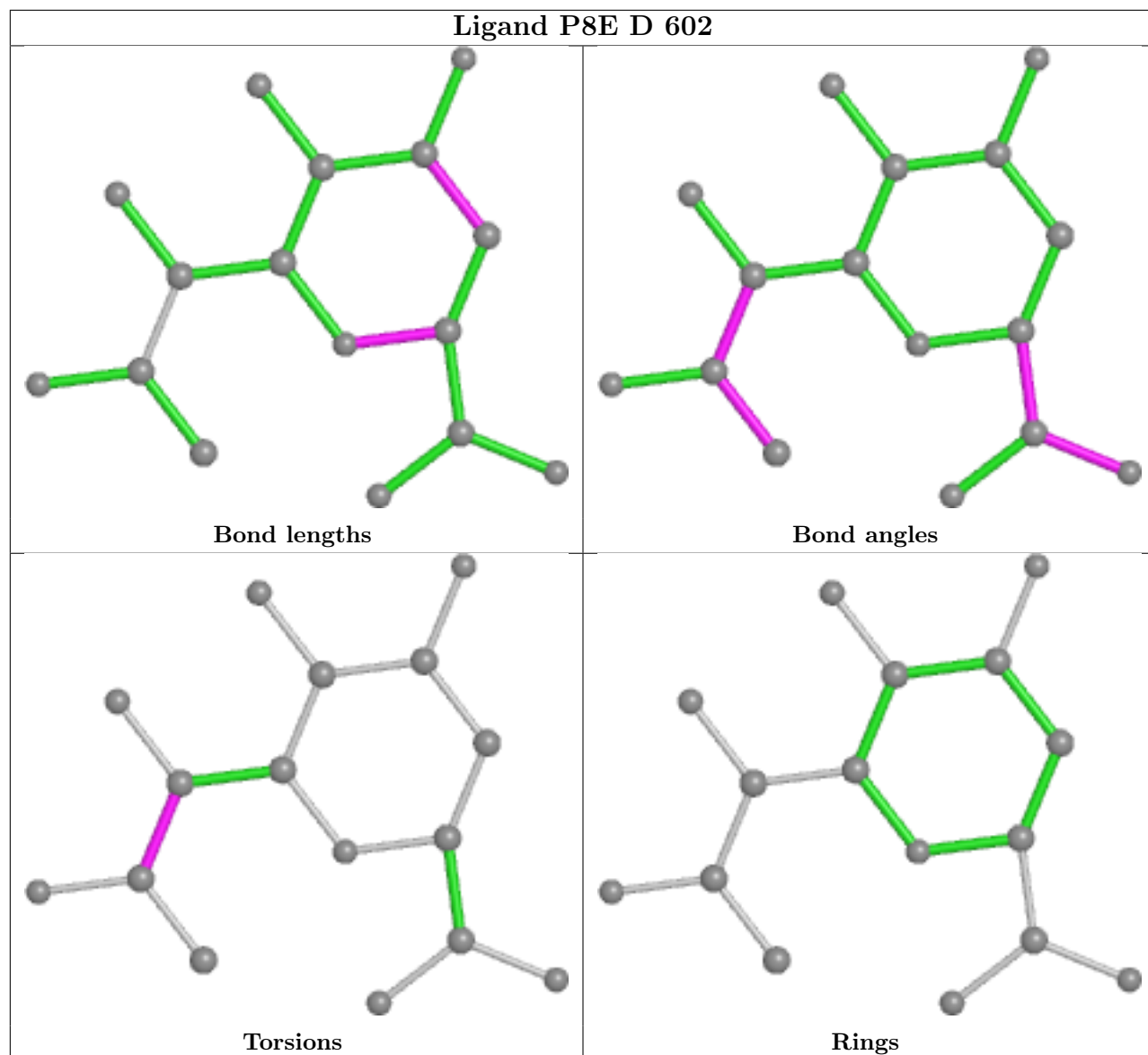
Bond angles

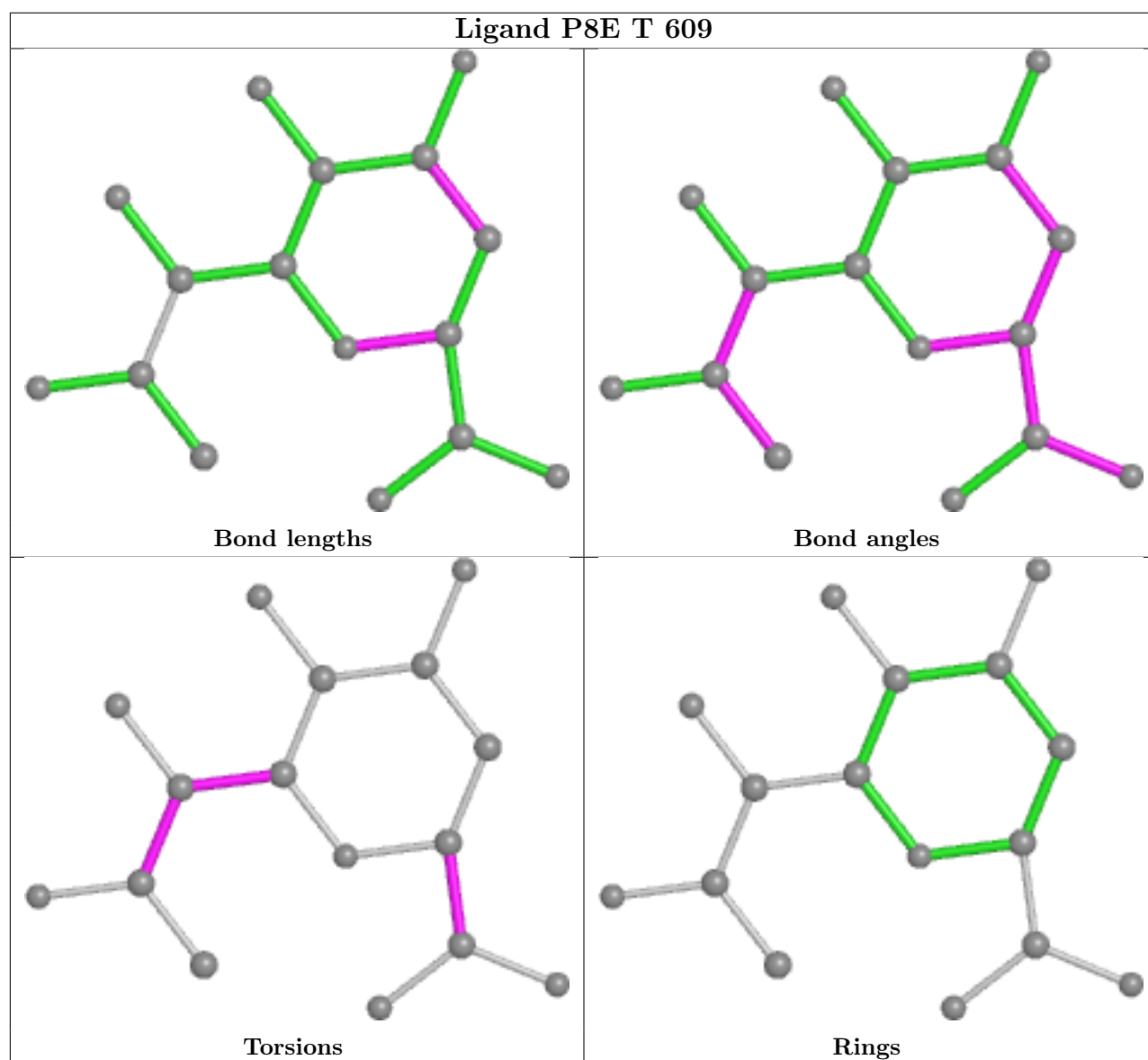


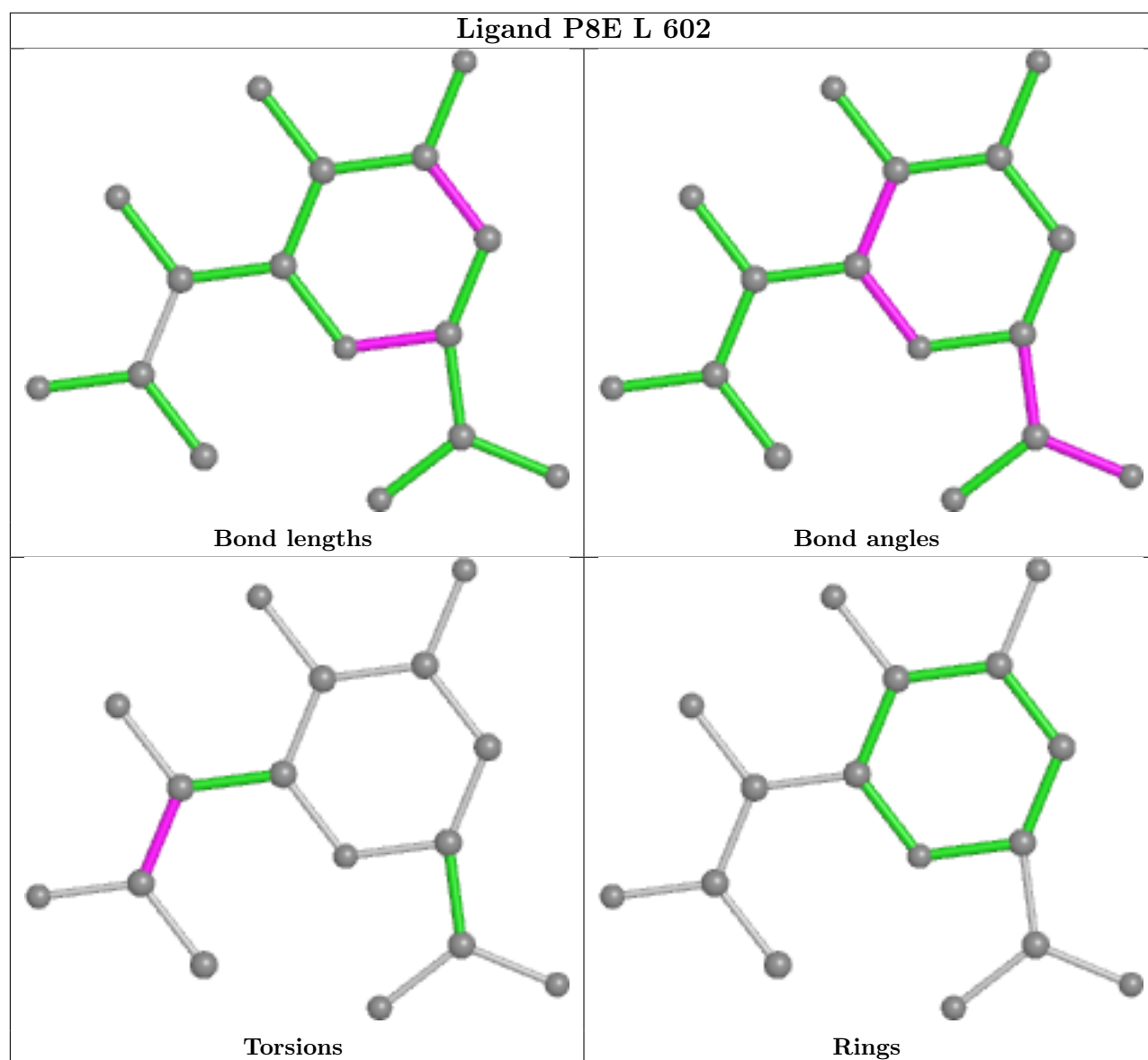
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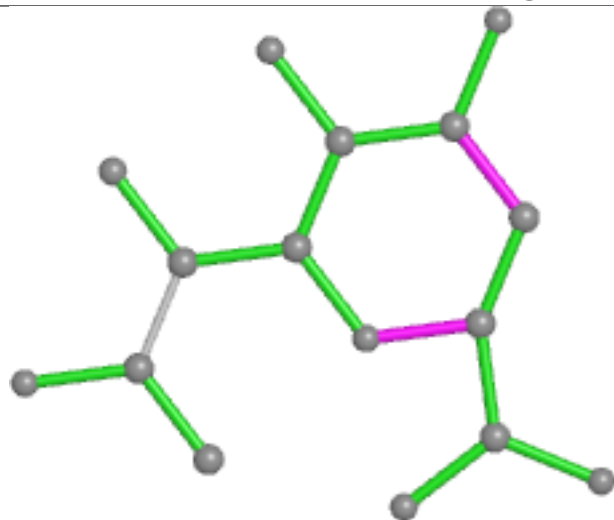
Rings



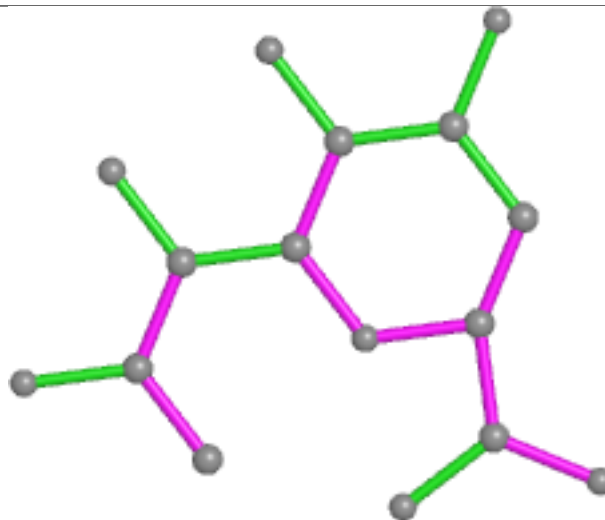




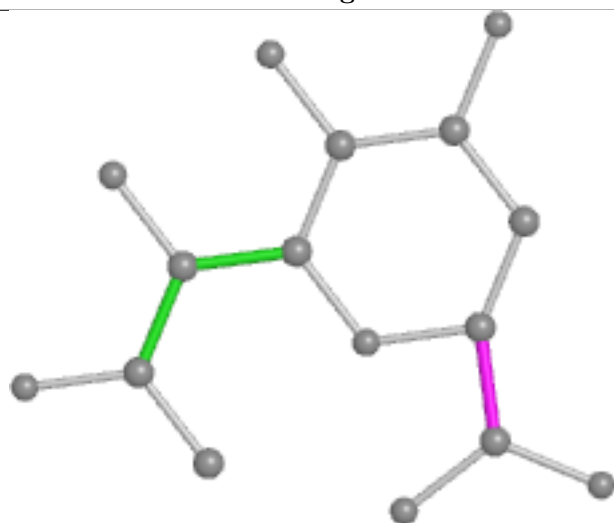
Ligand P8E L 617



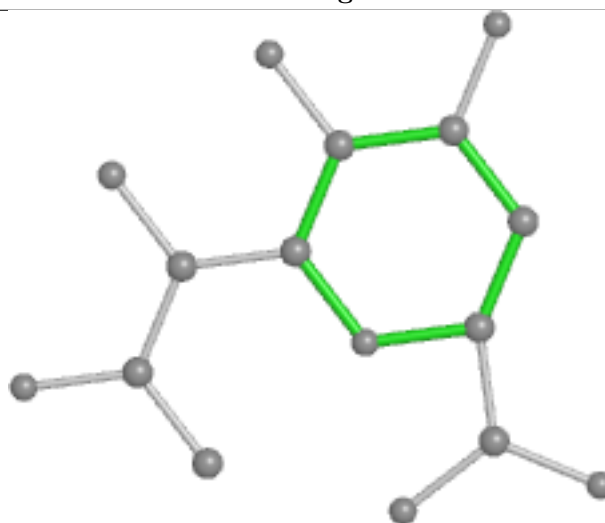
Bond lengths



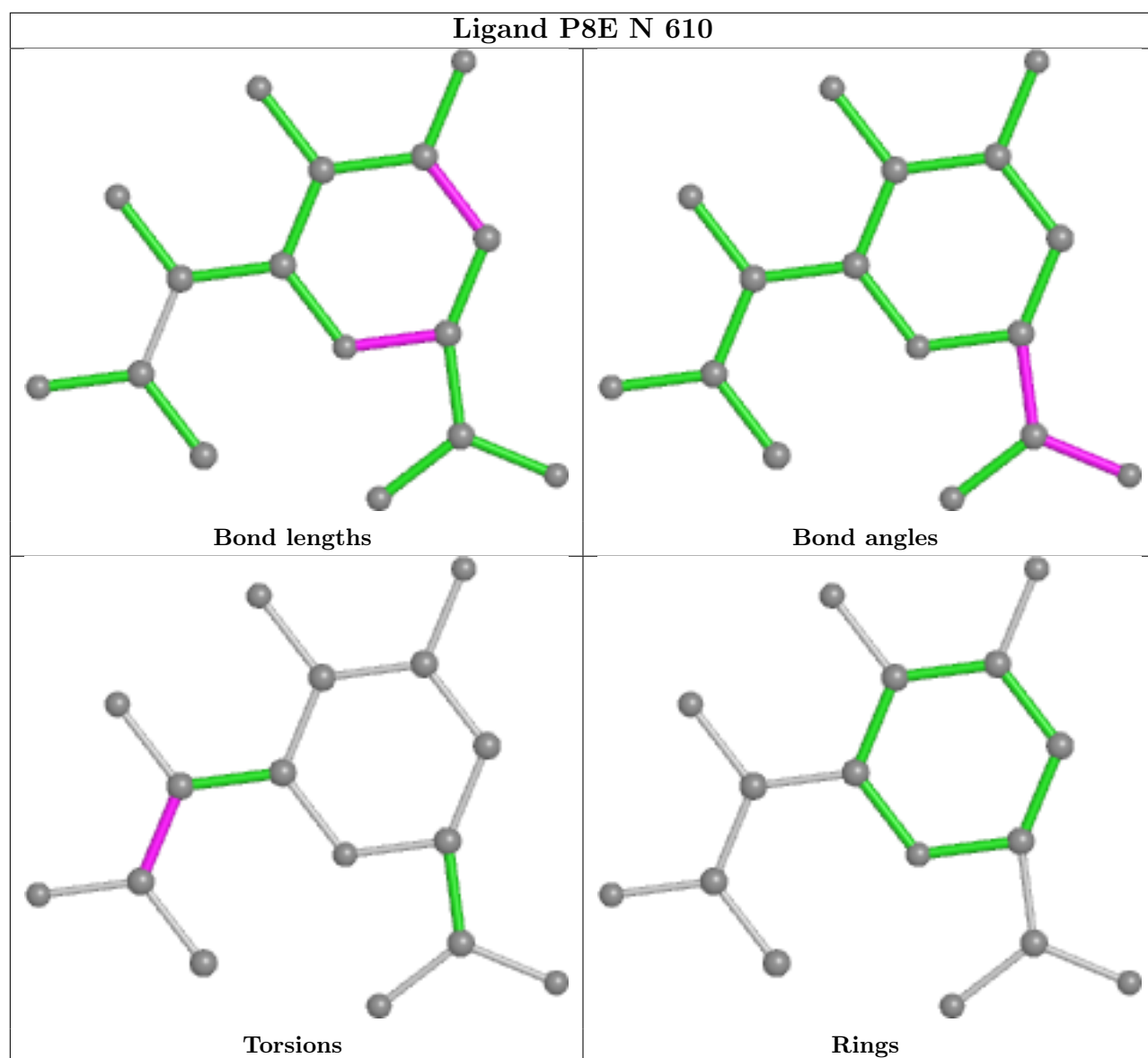
Bond angles



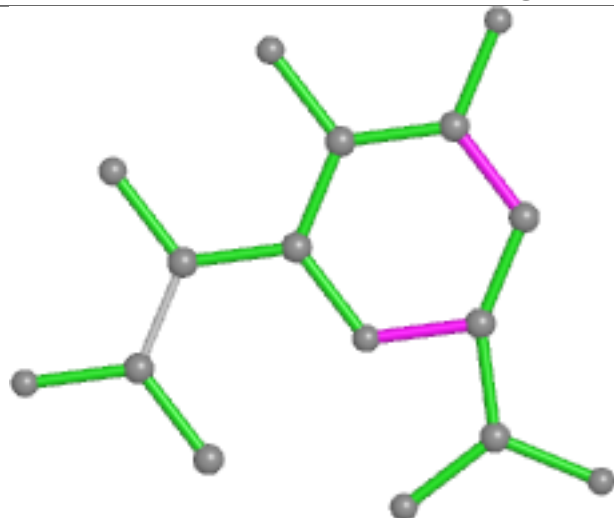
Torsions



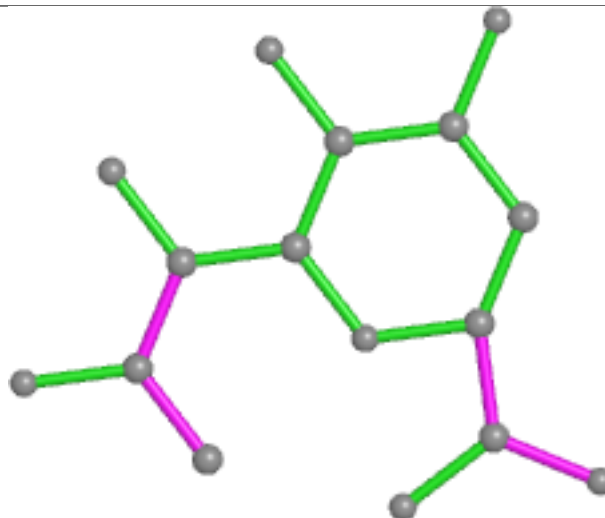
Rings



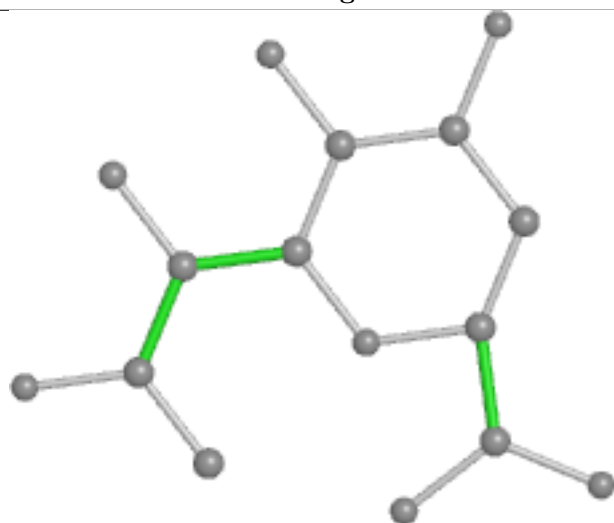
Ligand P8E N 613



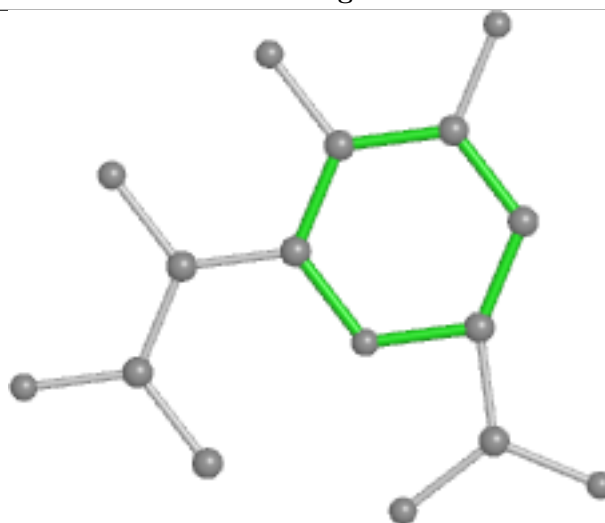
Bond lengths



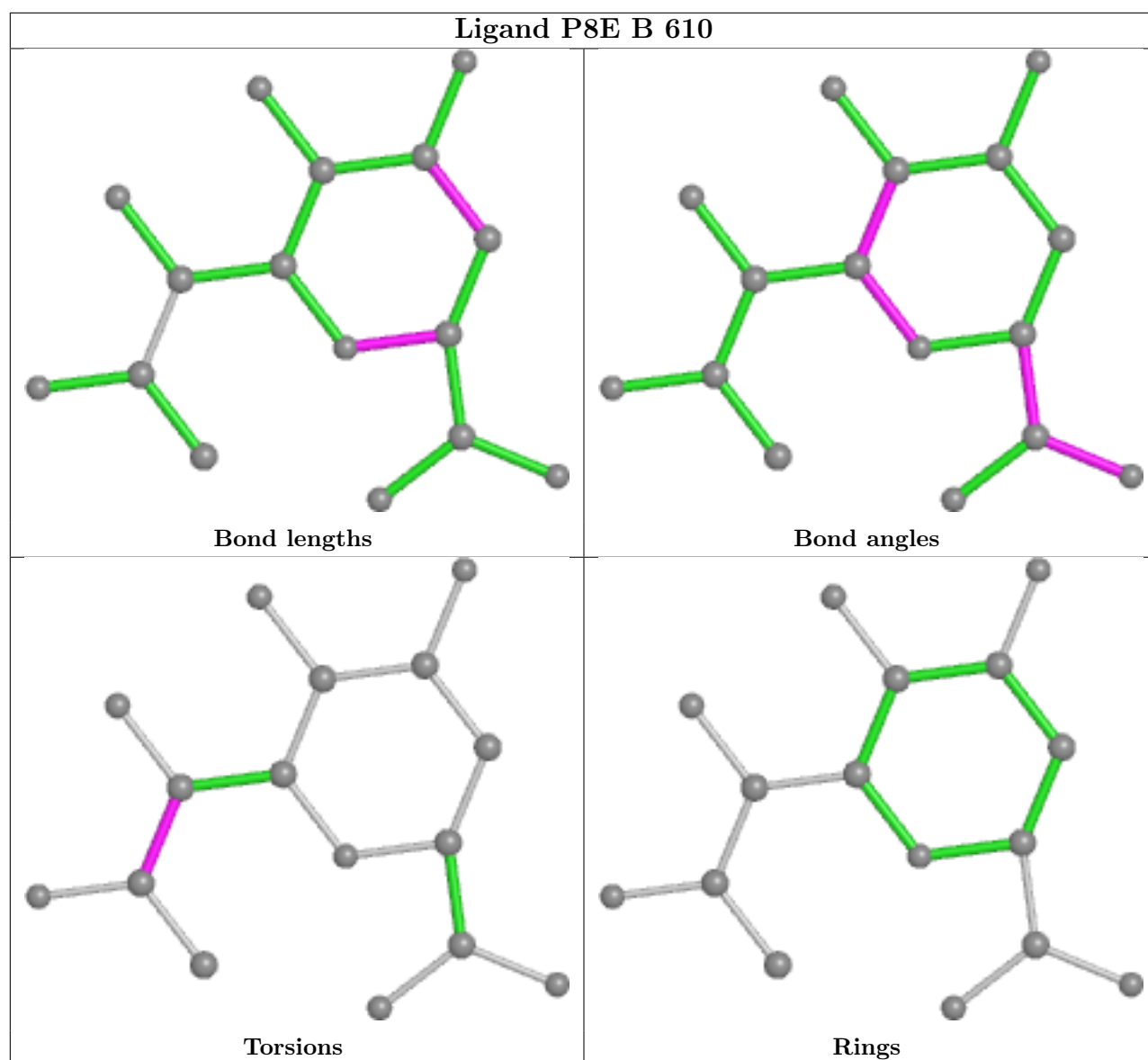
Bond angles

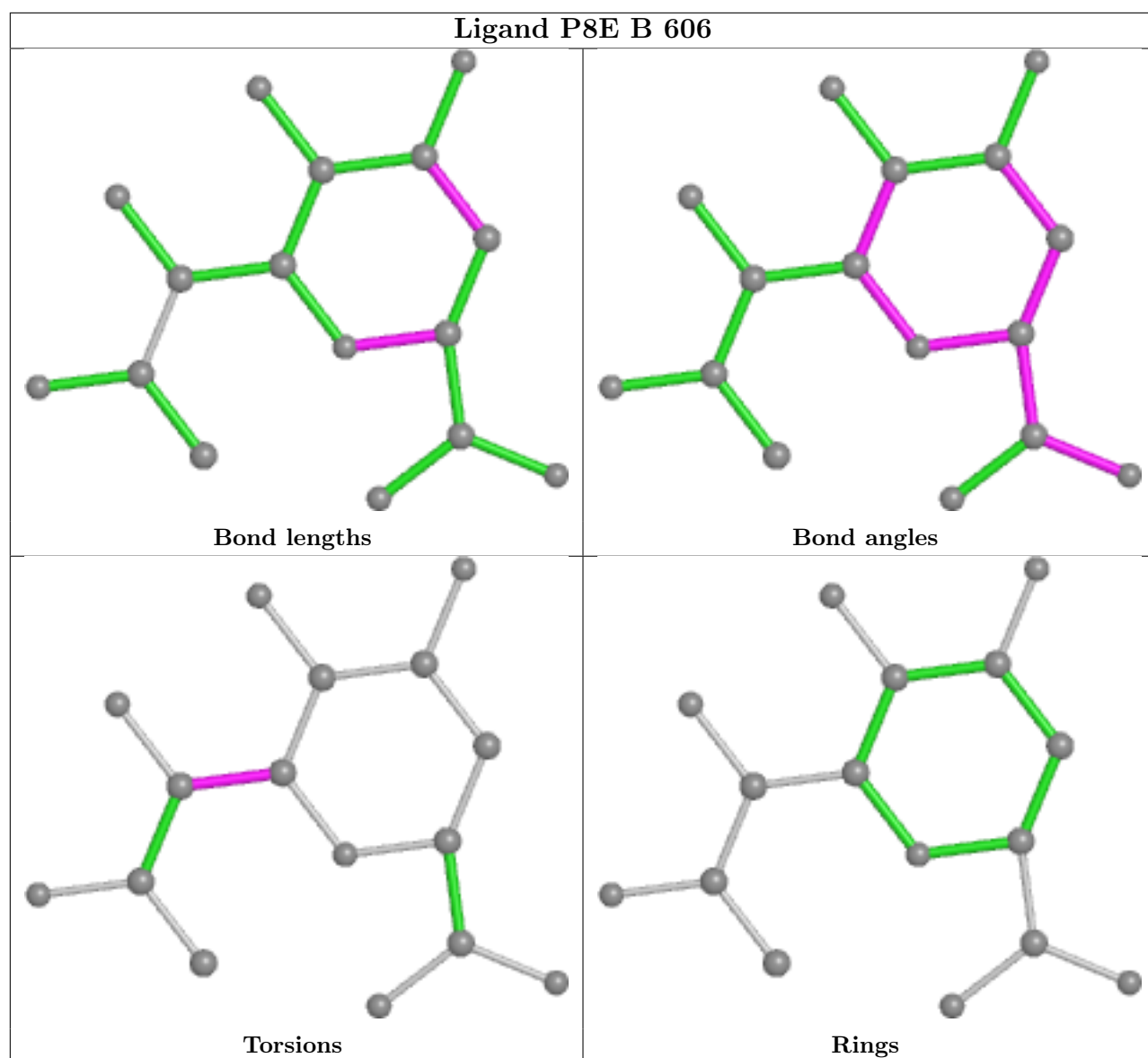


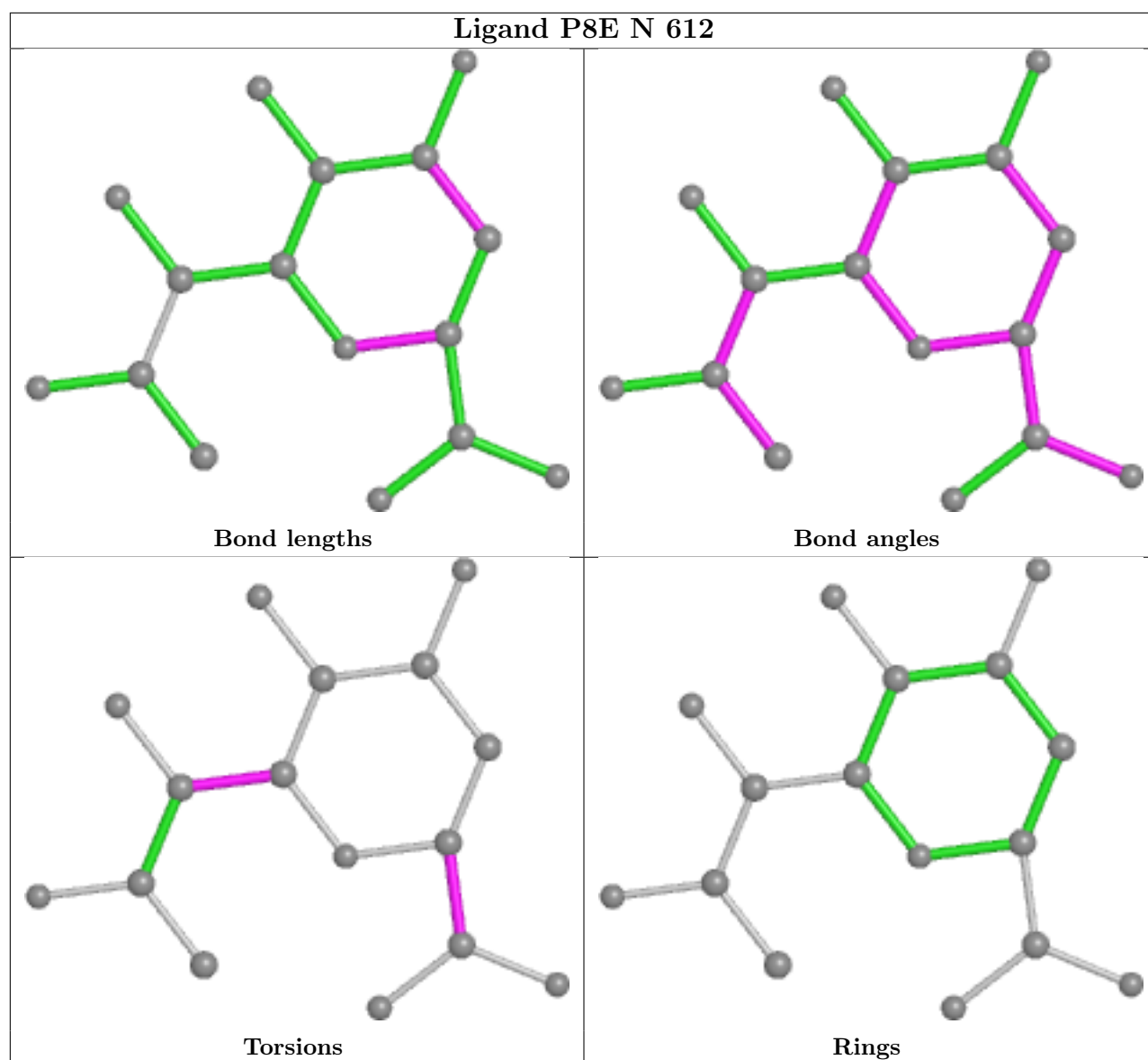
Torsions



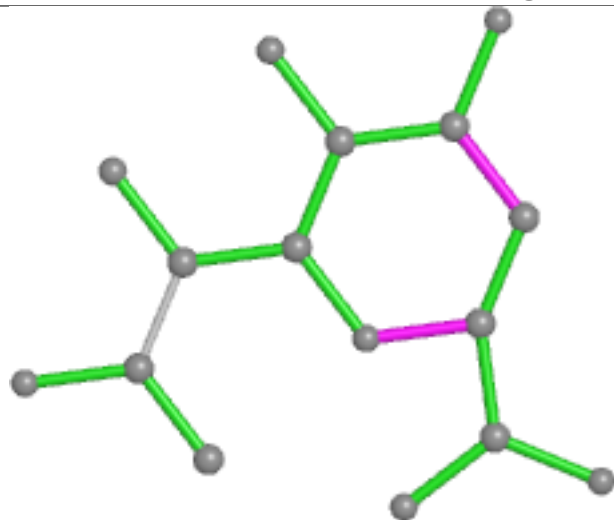
Rings



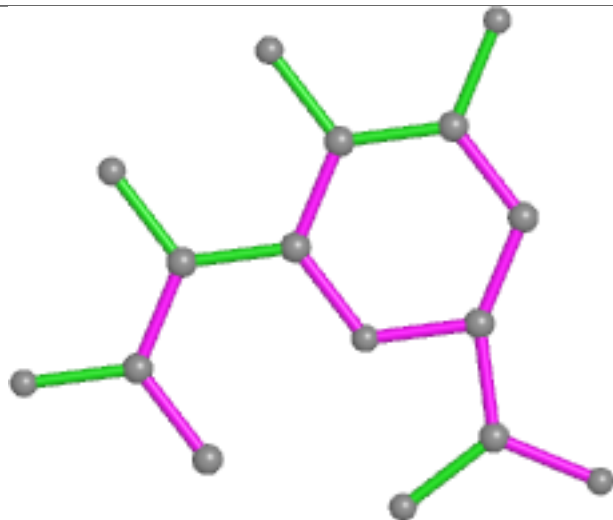




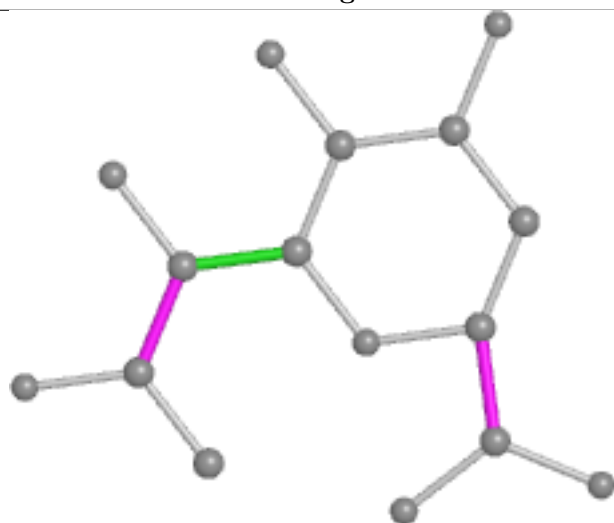
Ligand P8E F 605



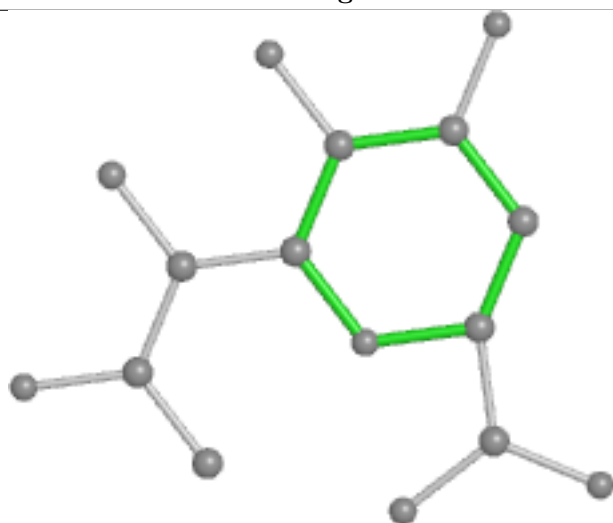
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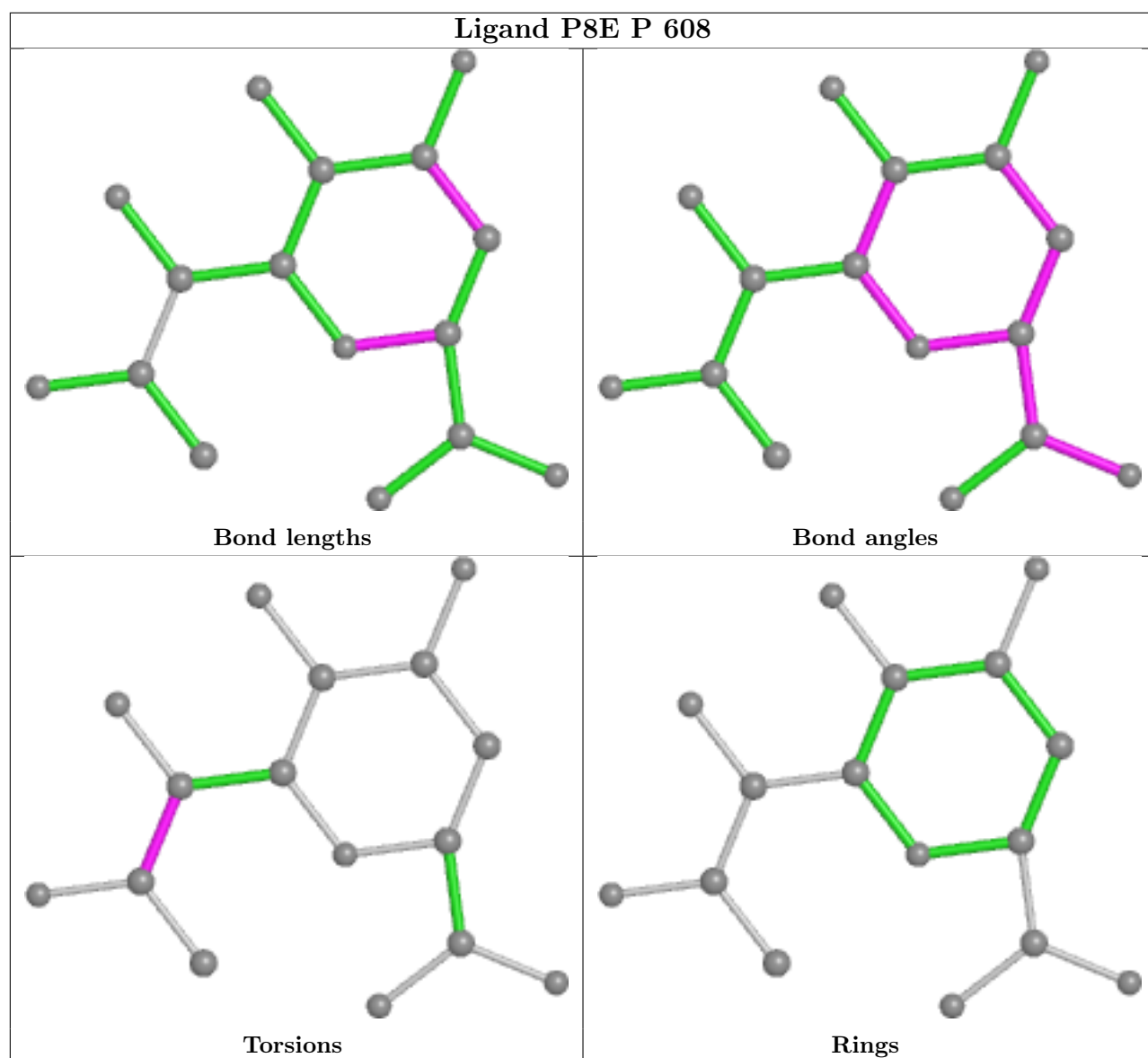
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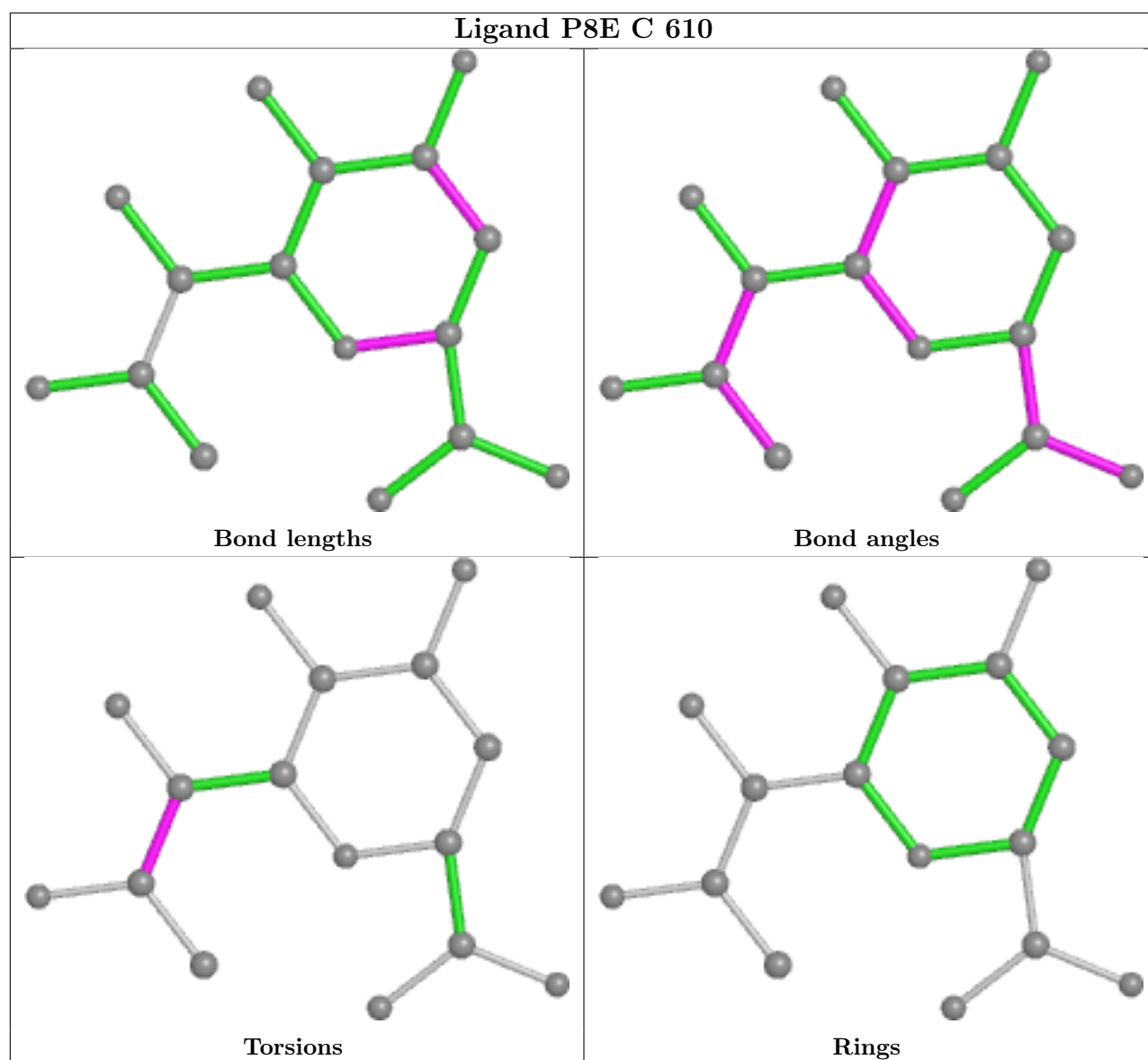


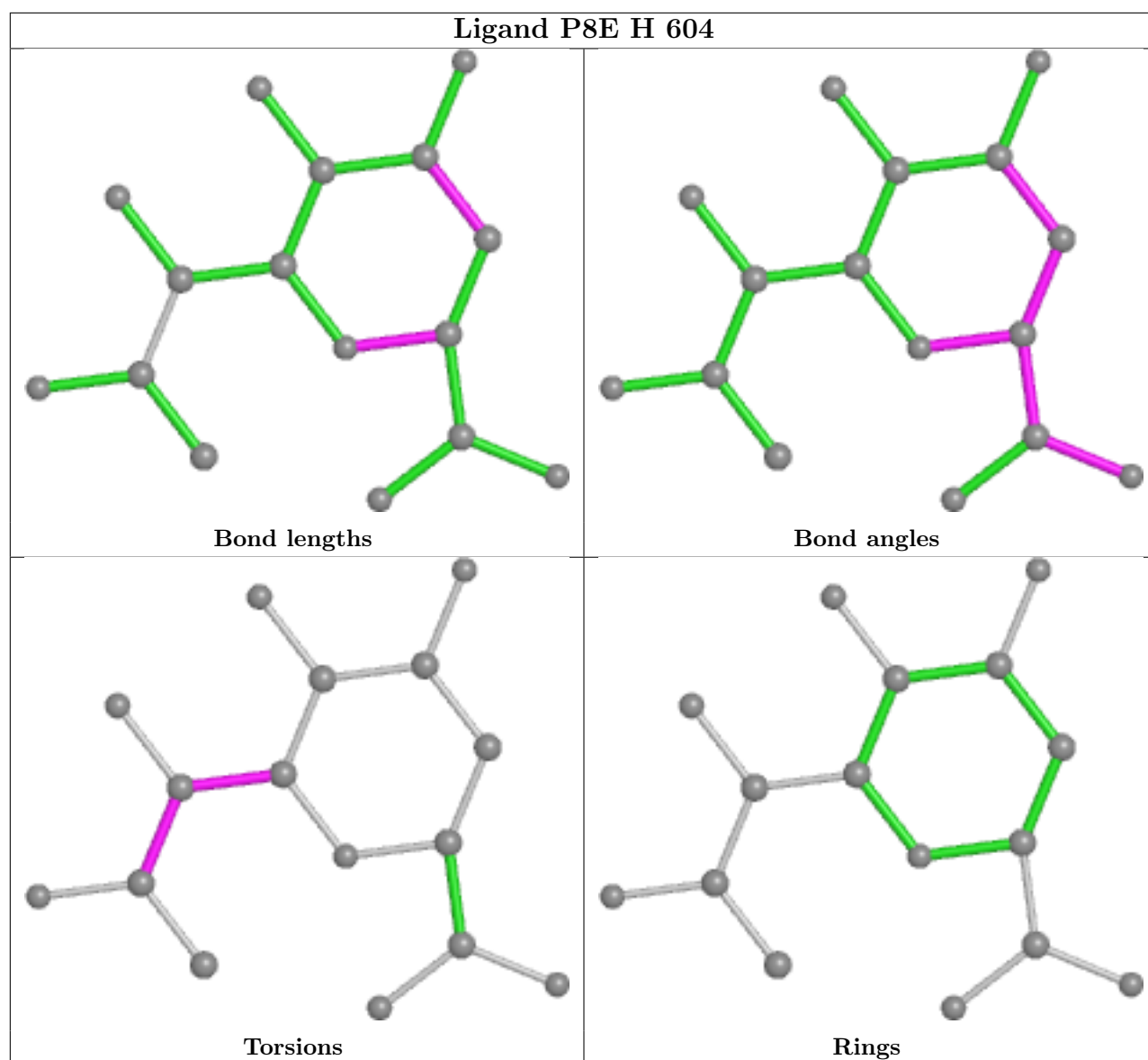
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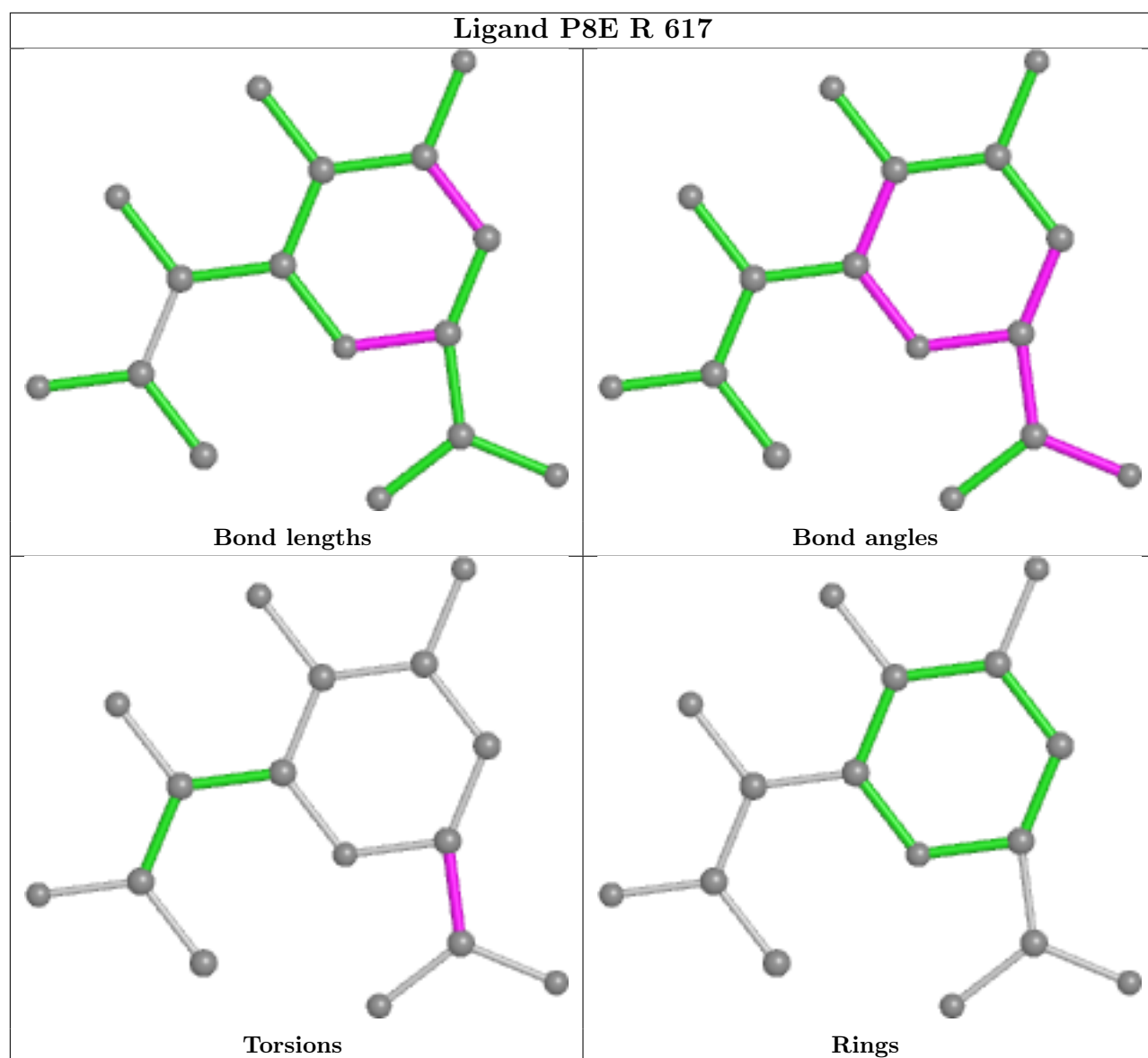


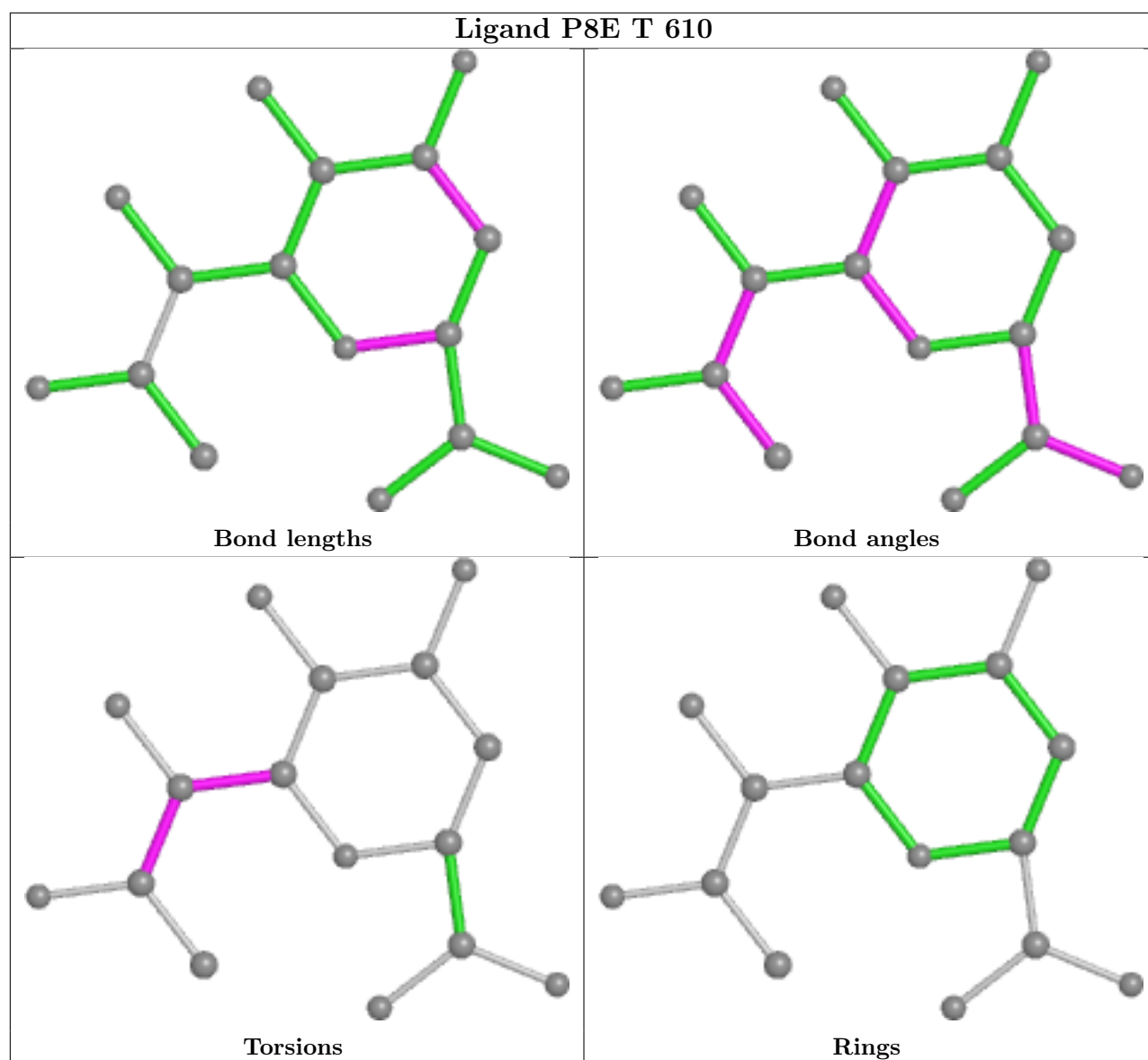
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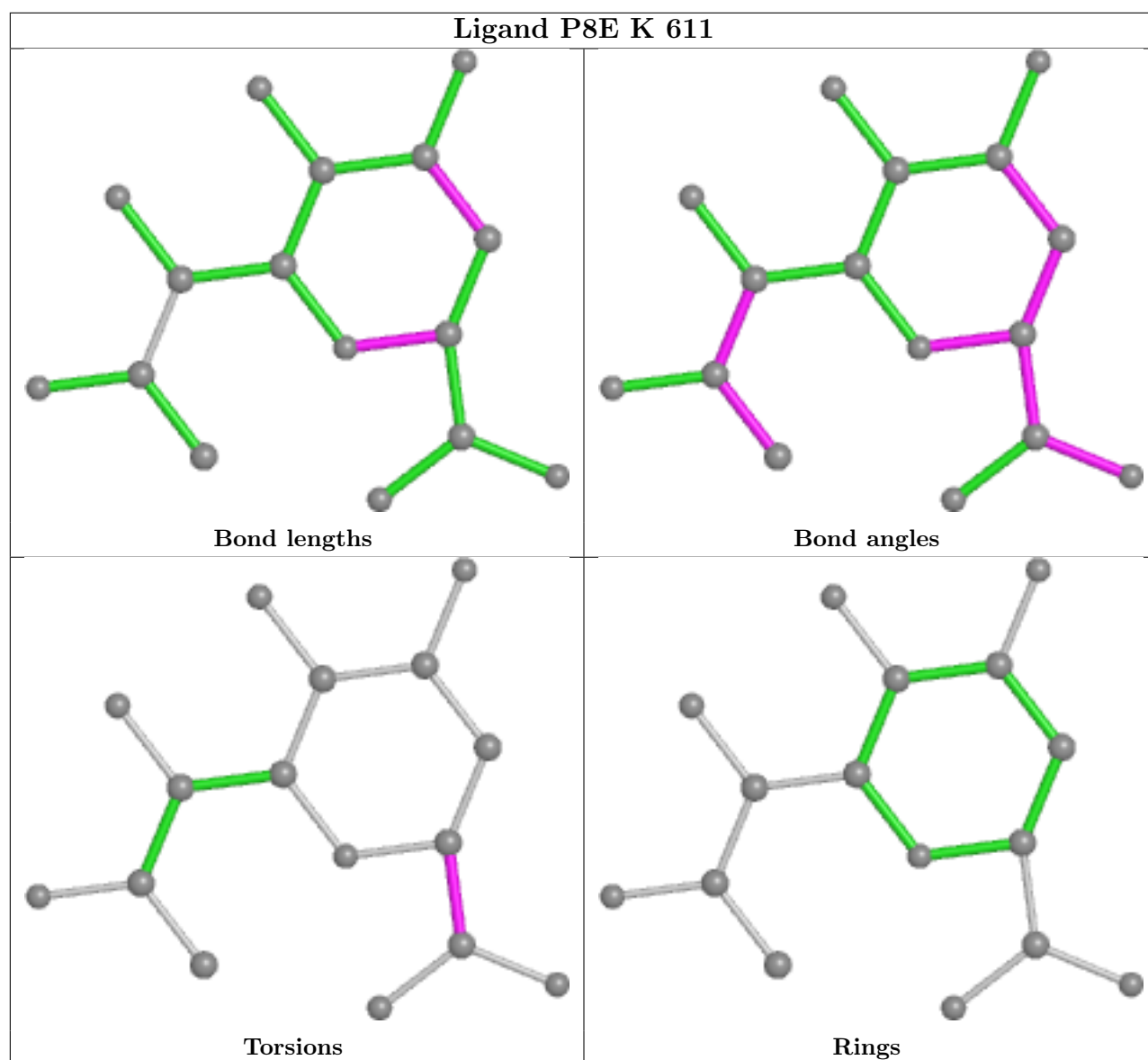


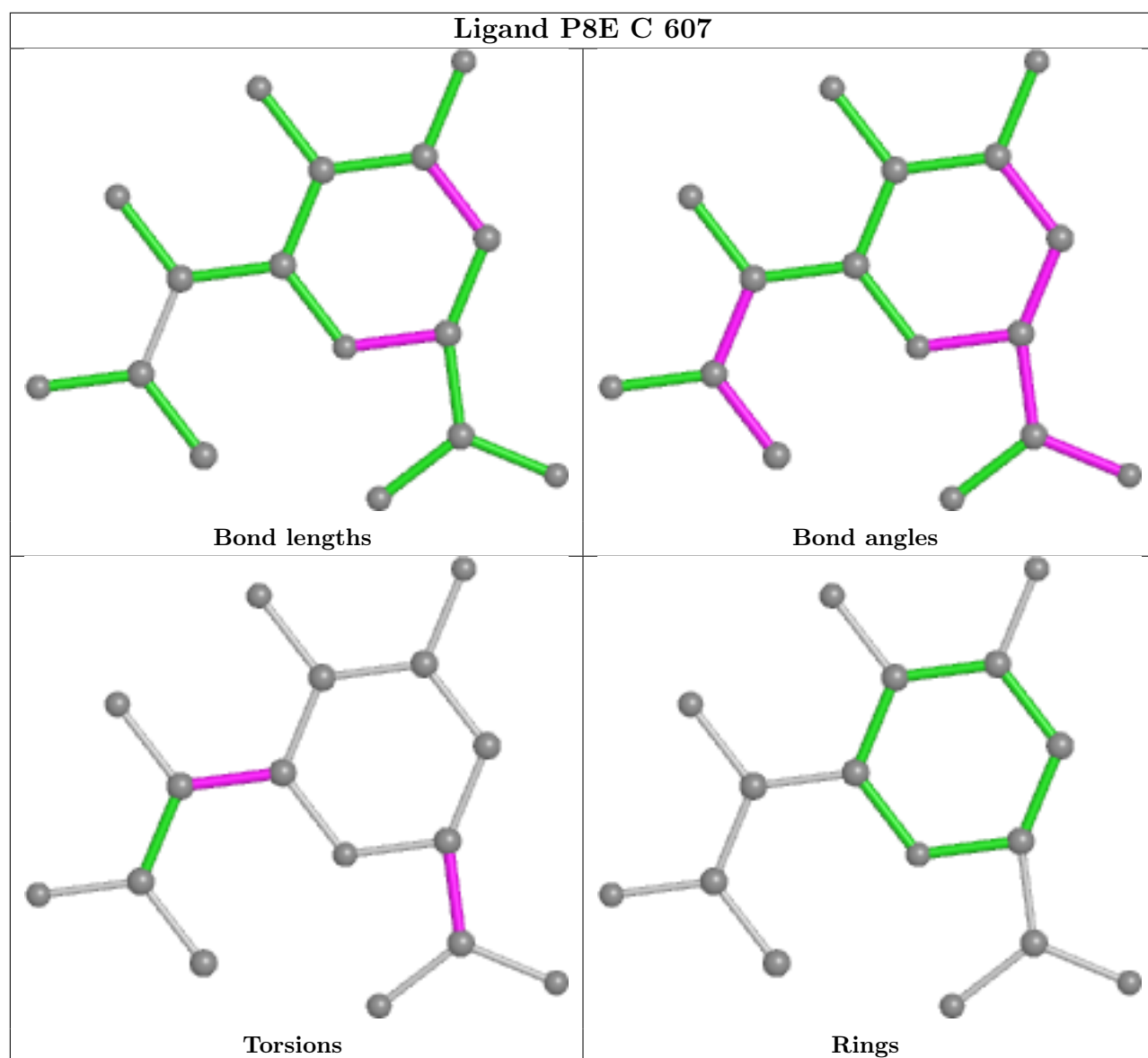


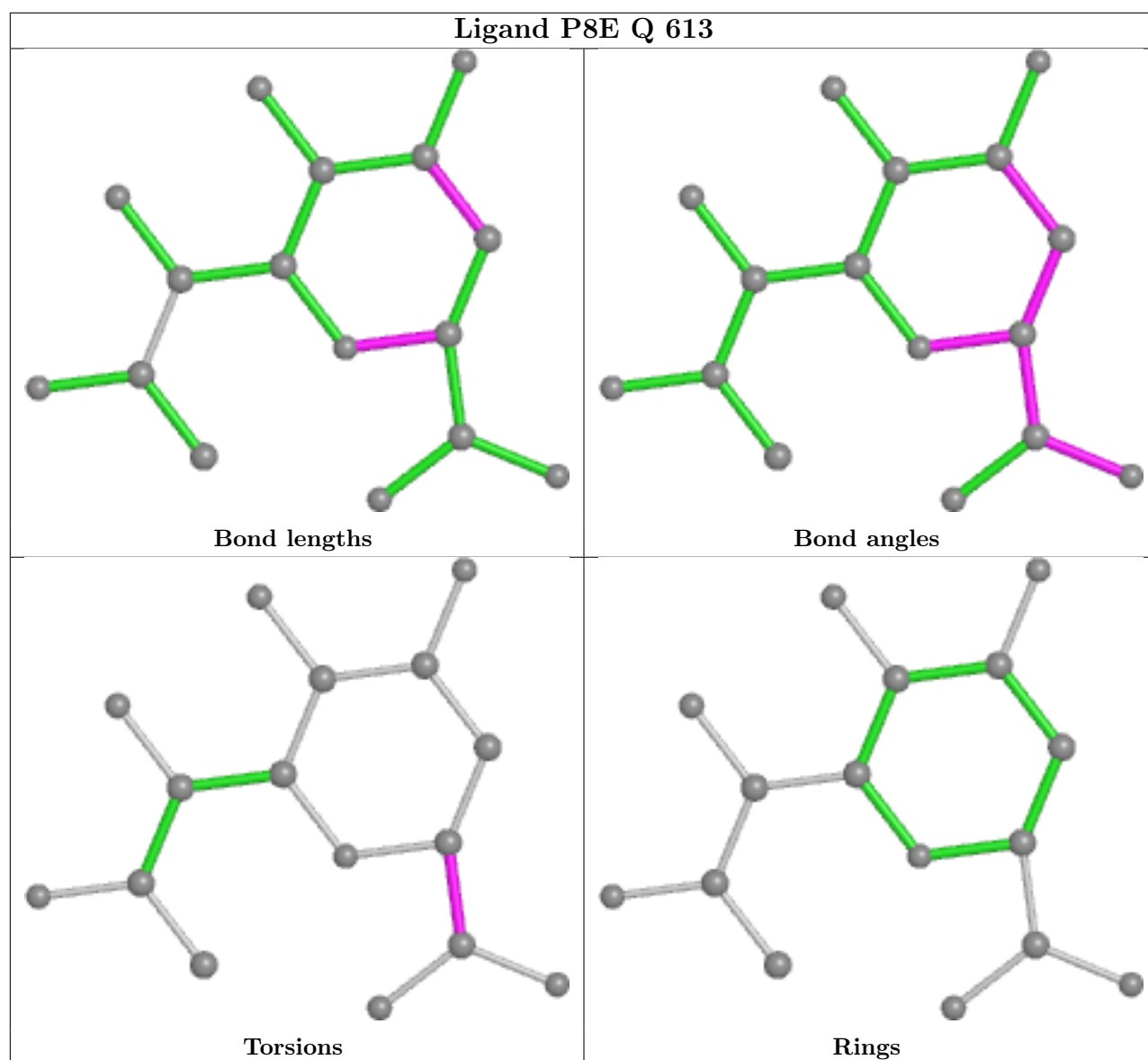




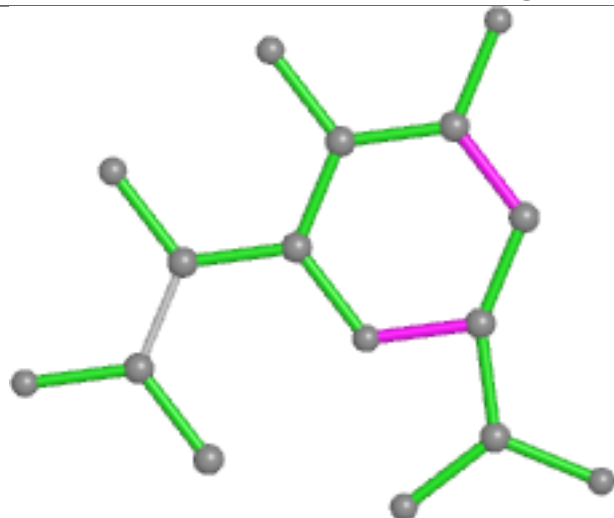




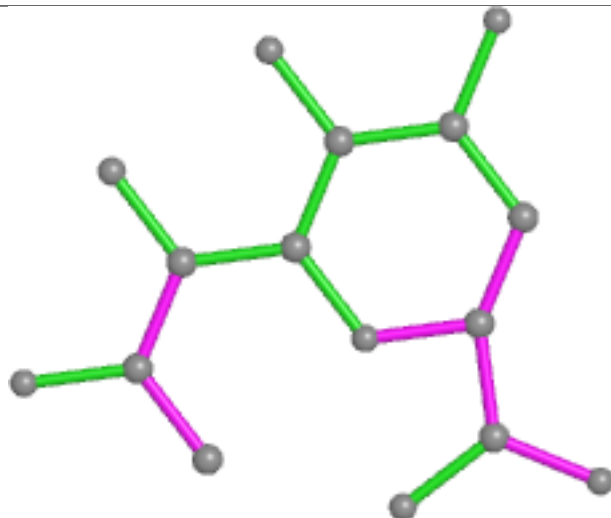




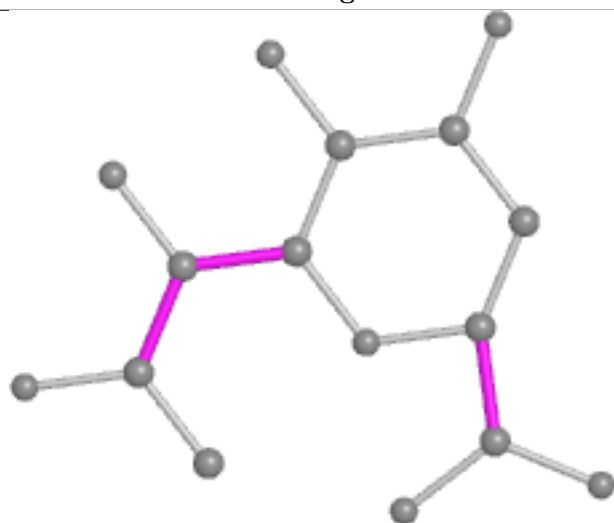
Ligand P8E R 613



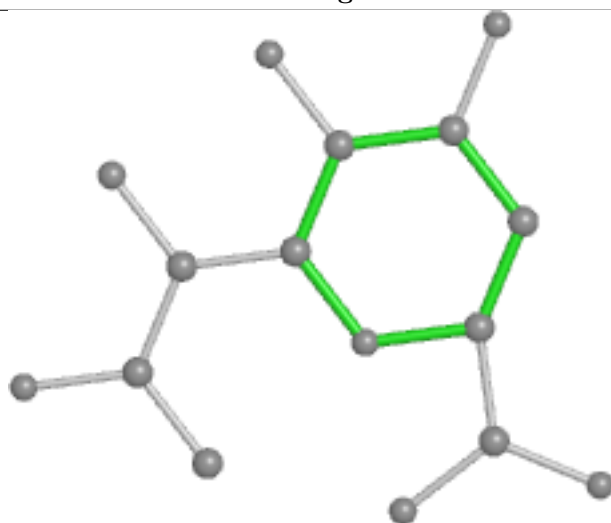
Bond lengths



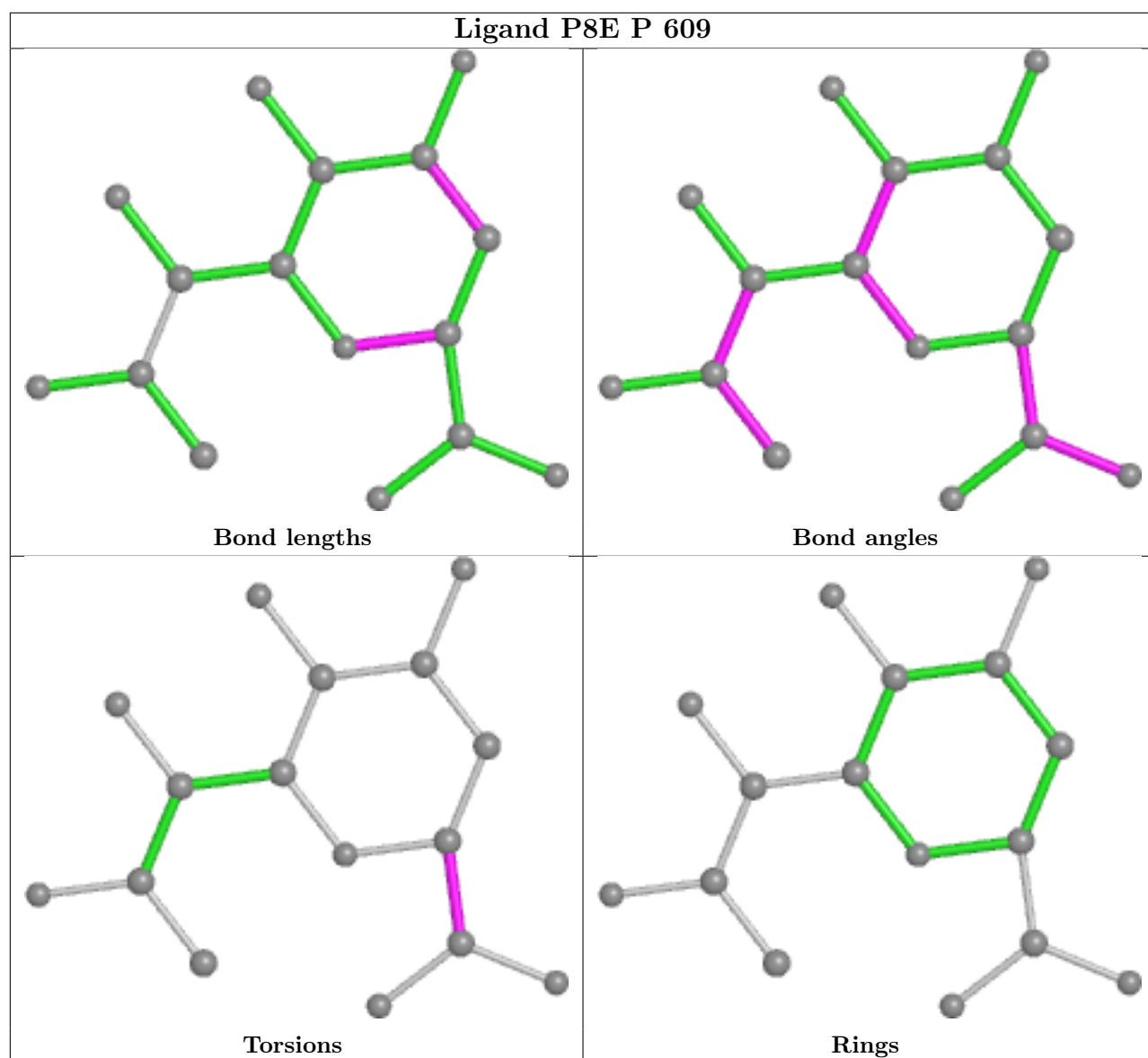
Bond angles

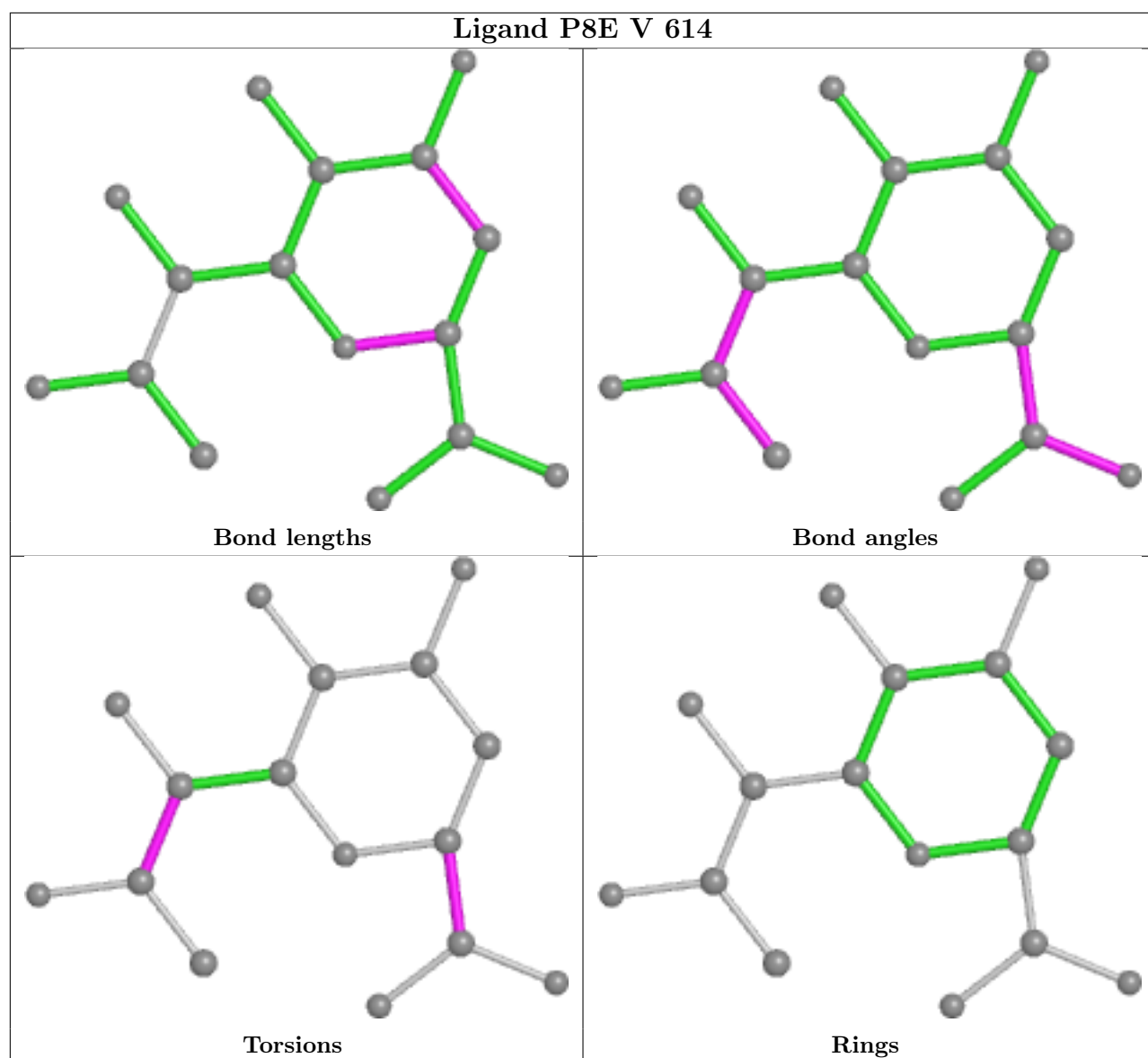


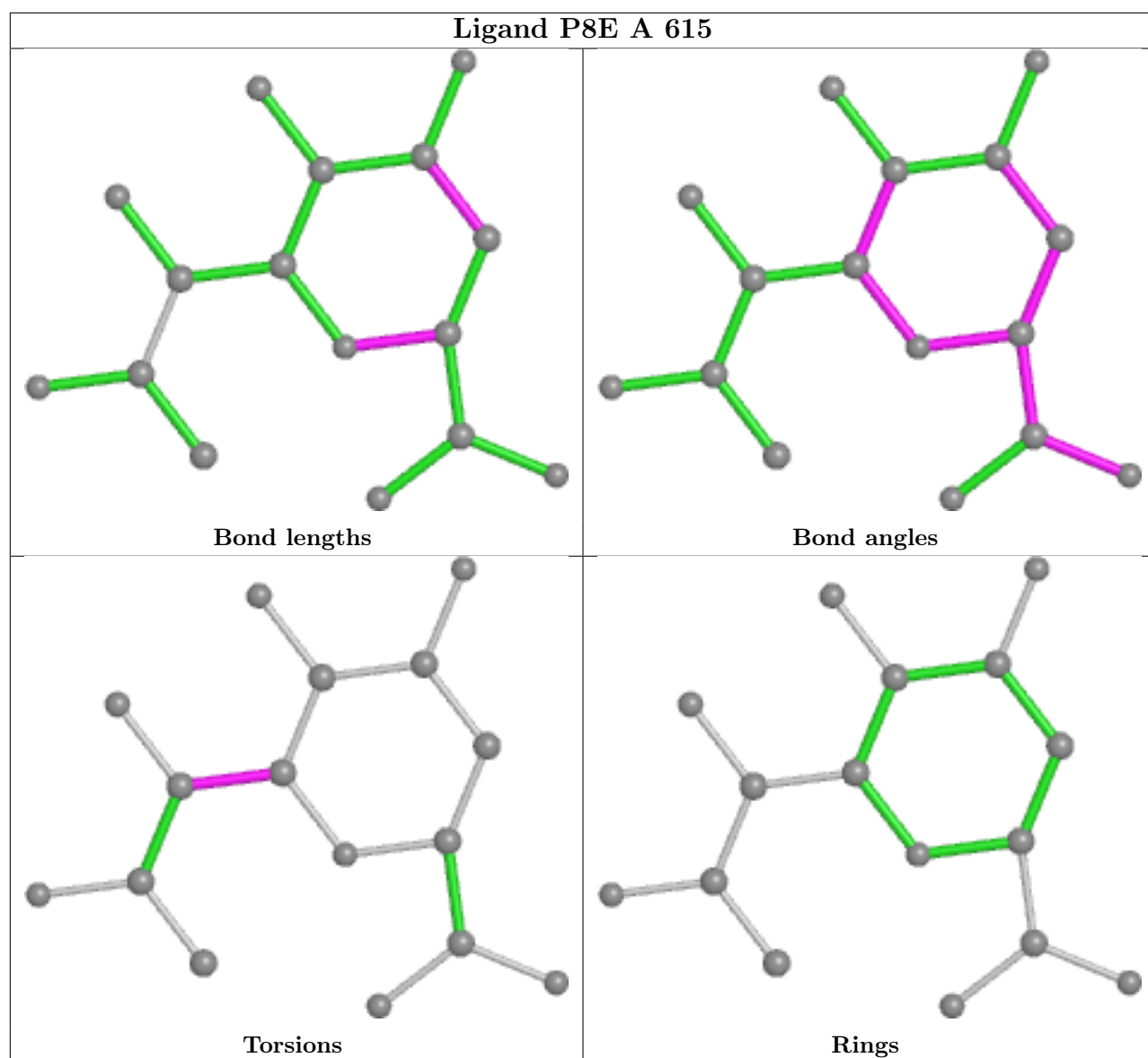
Torsions



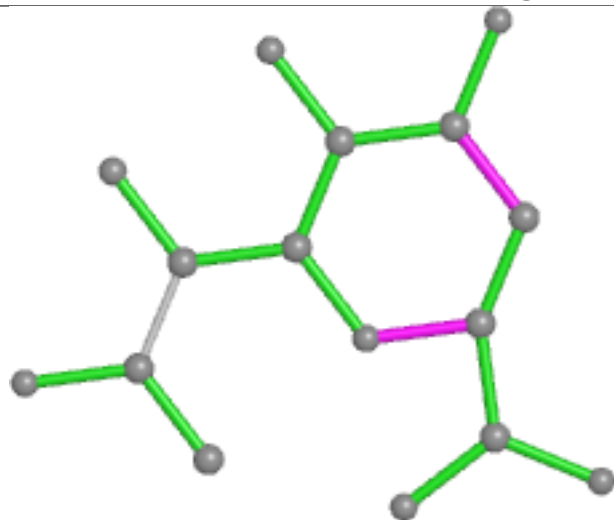
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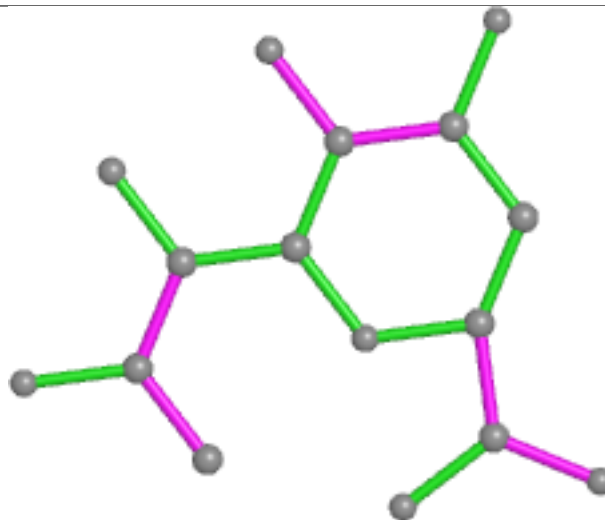




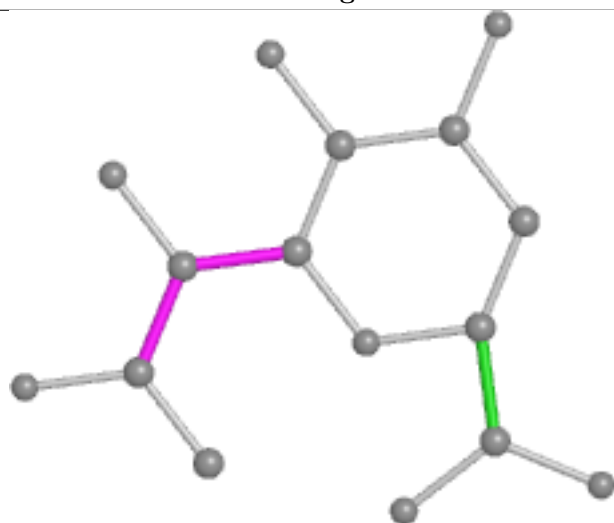
Ligand P8E U 616



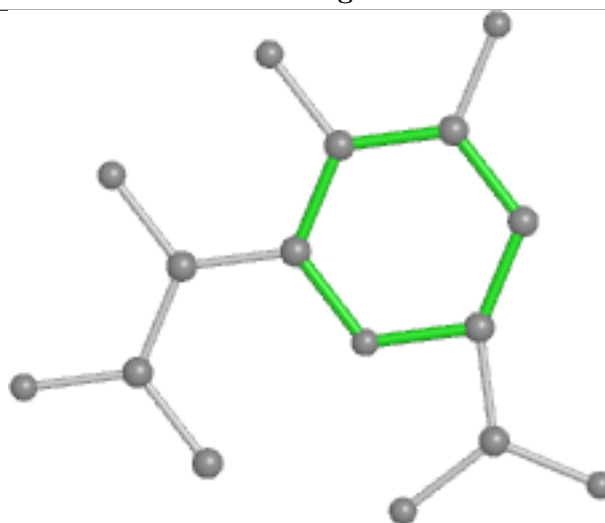
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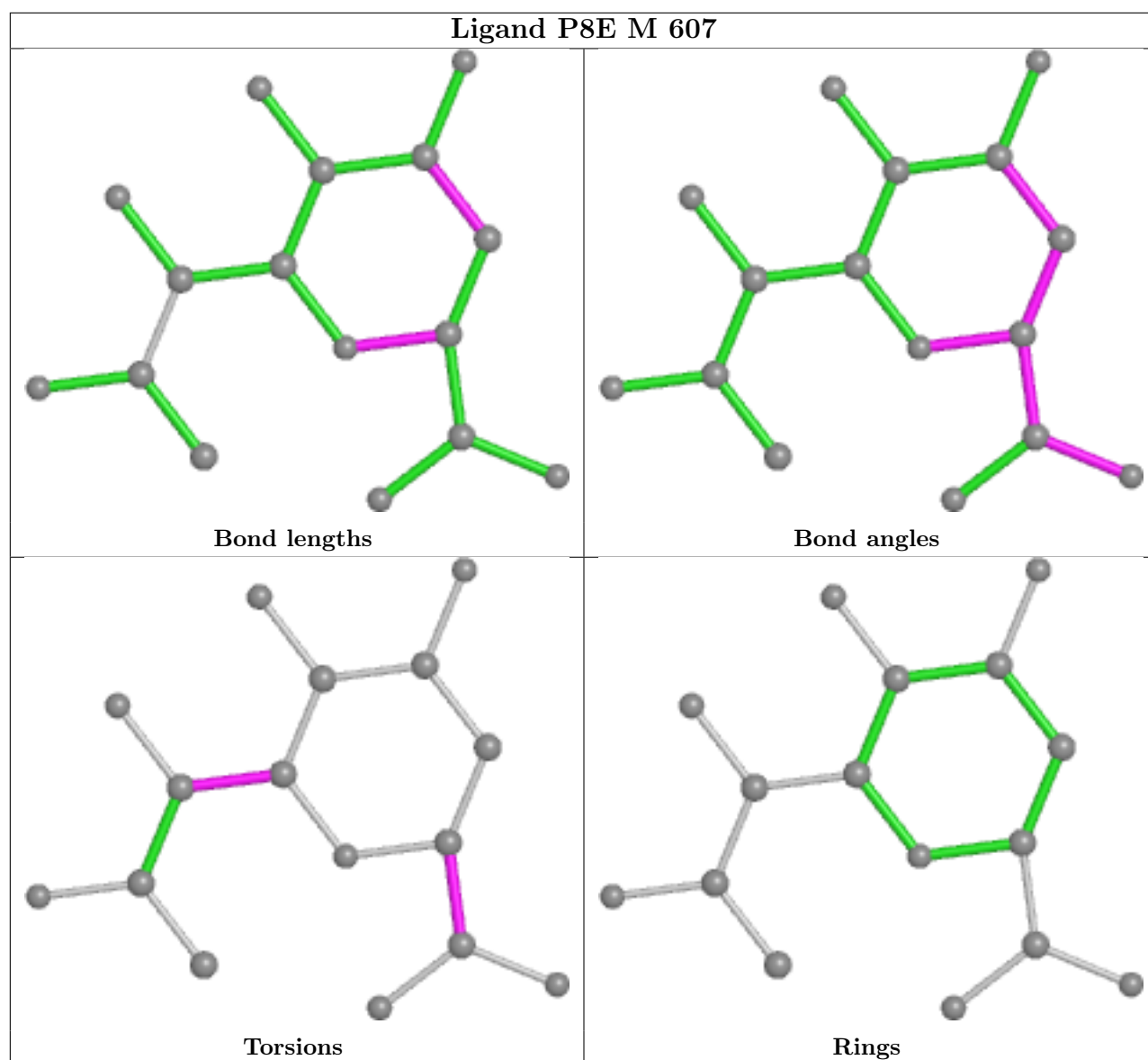
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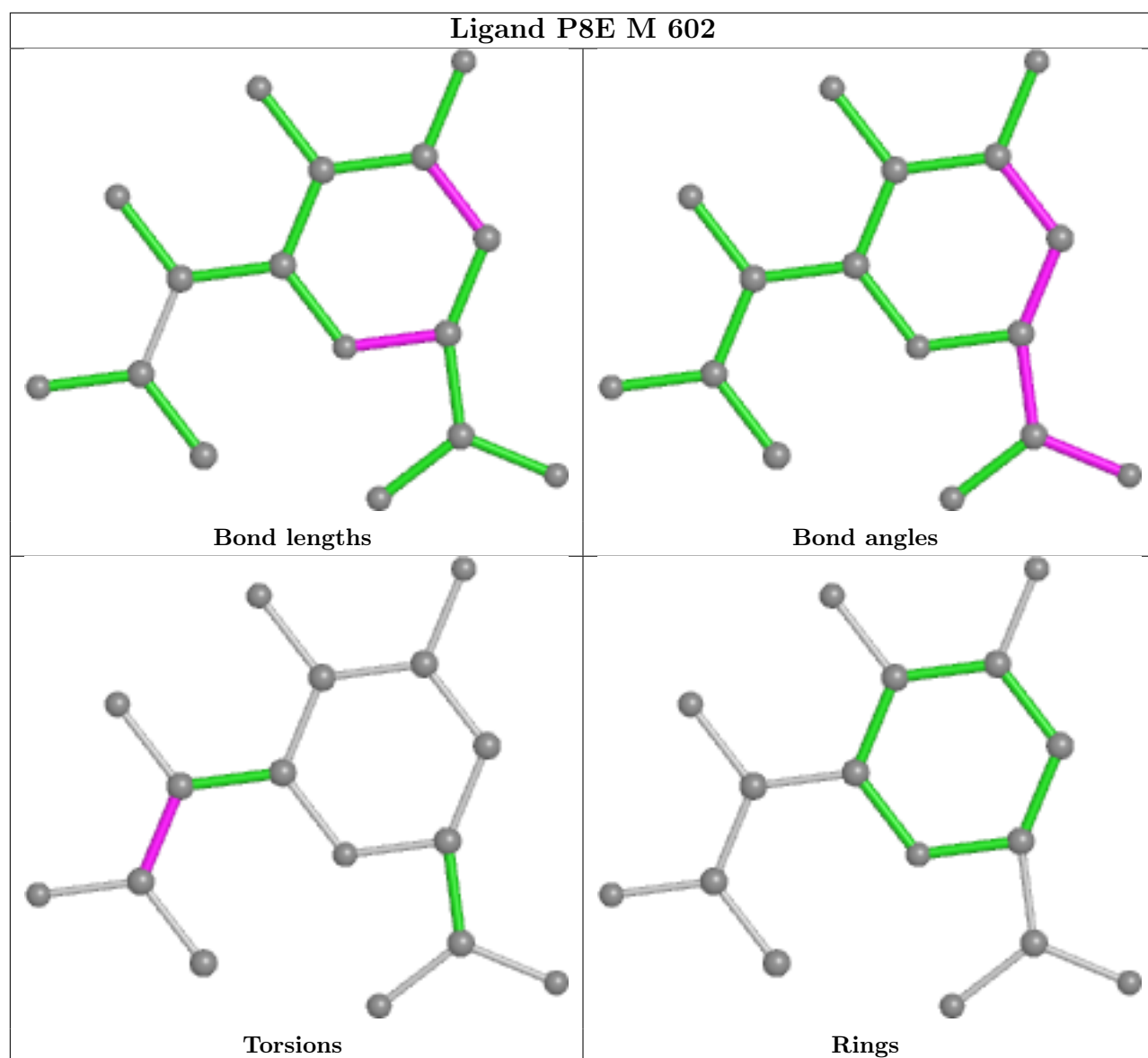


Torsions

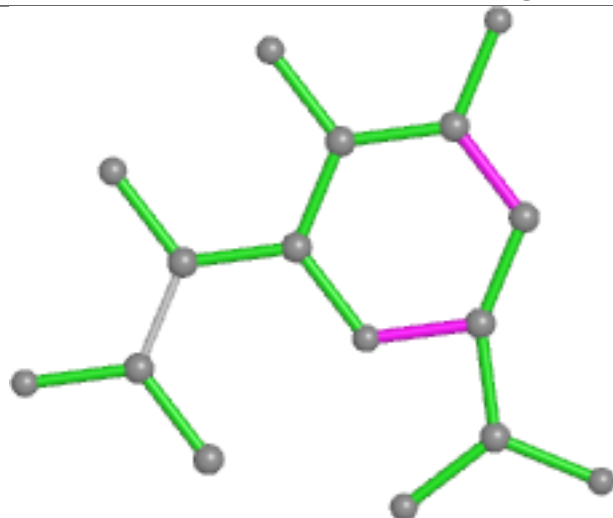


Rings

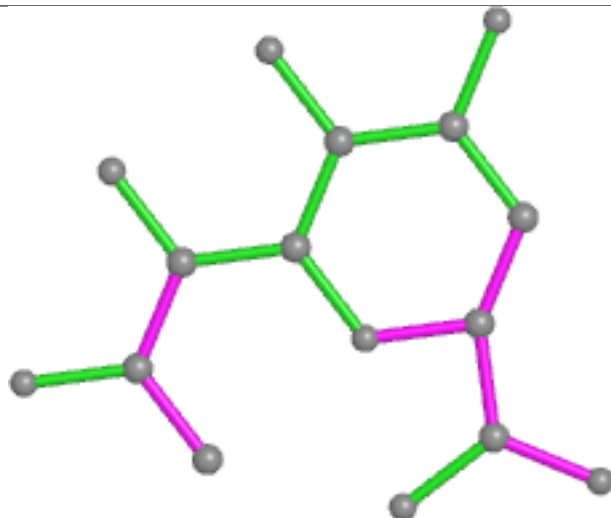




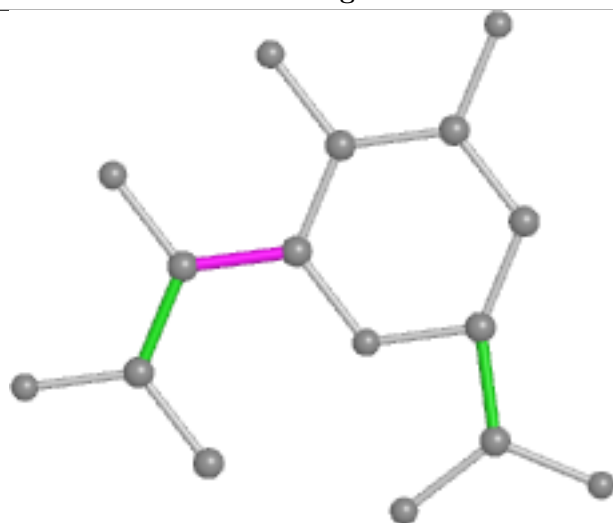
Ligand P8E V 613



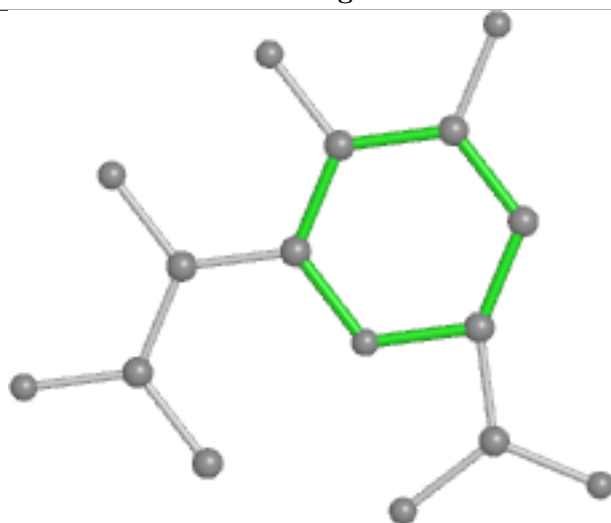
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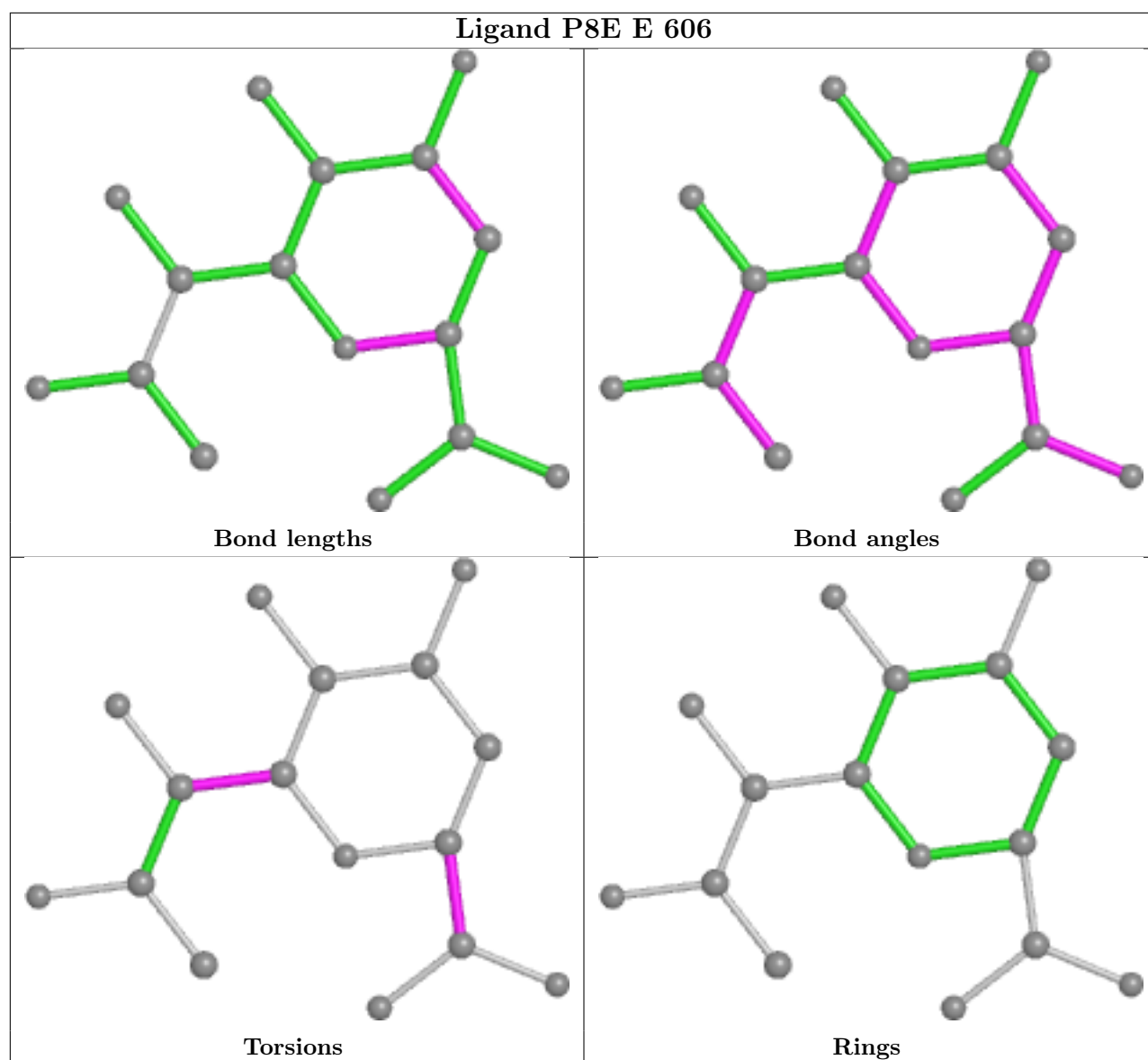
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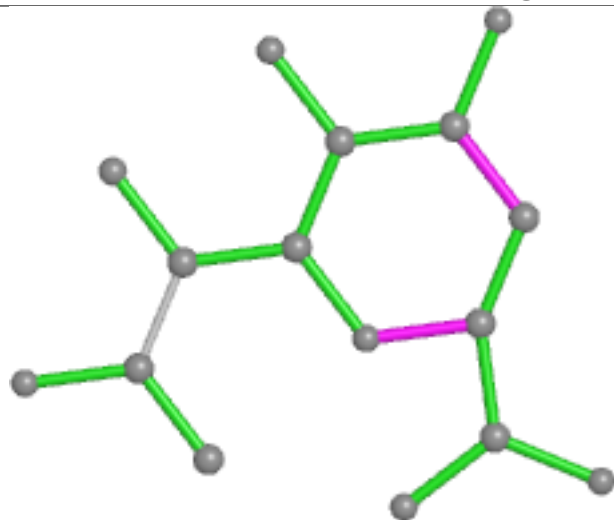
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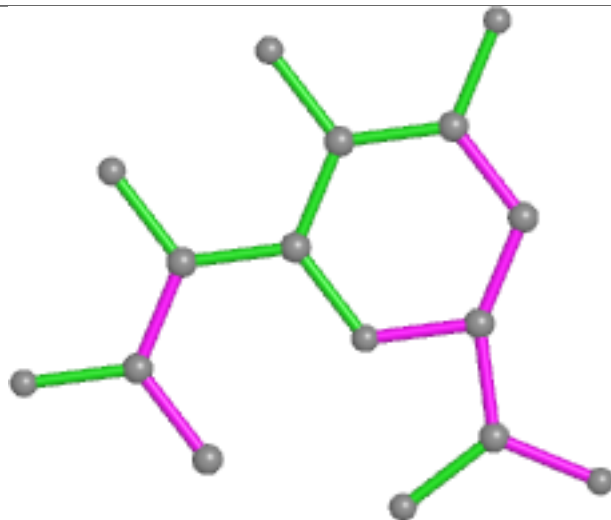
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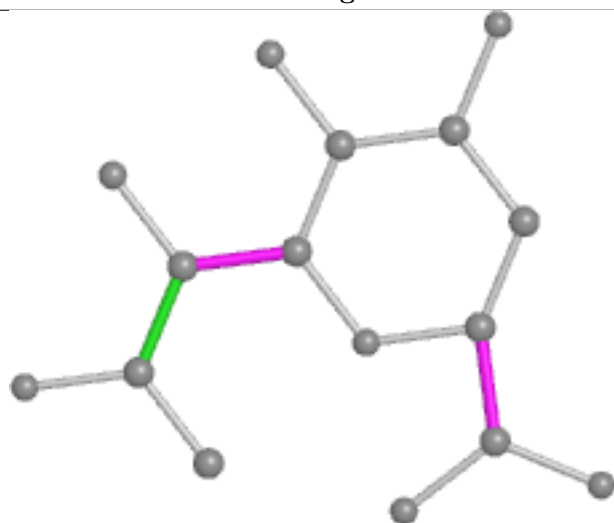
Ligand P8E U 607



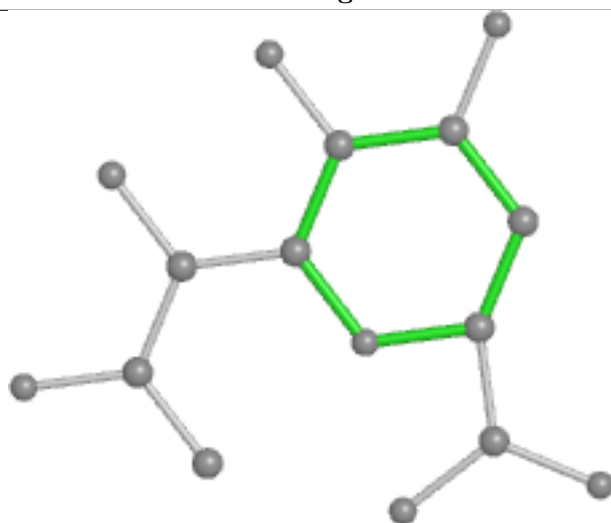
Bond lengths



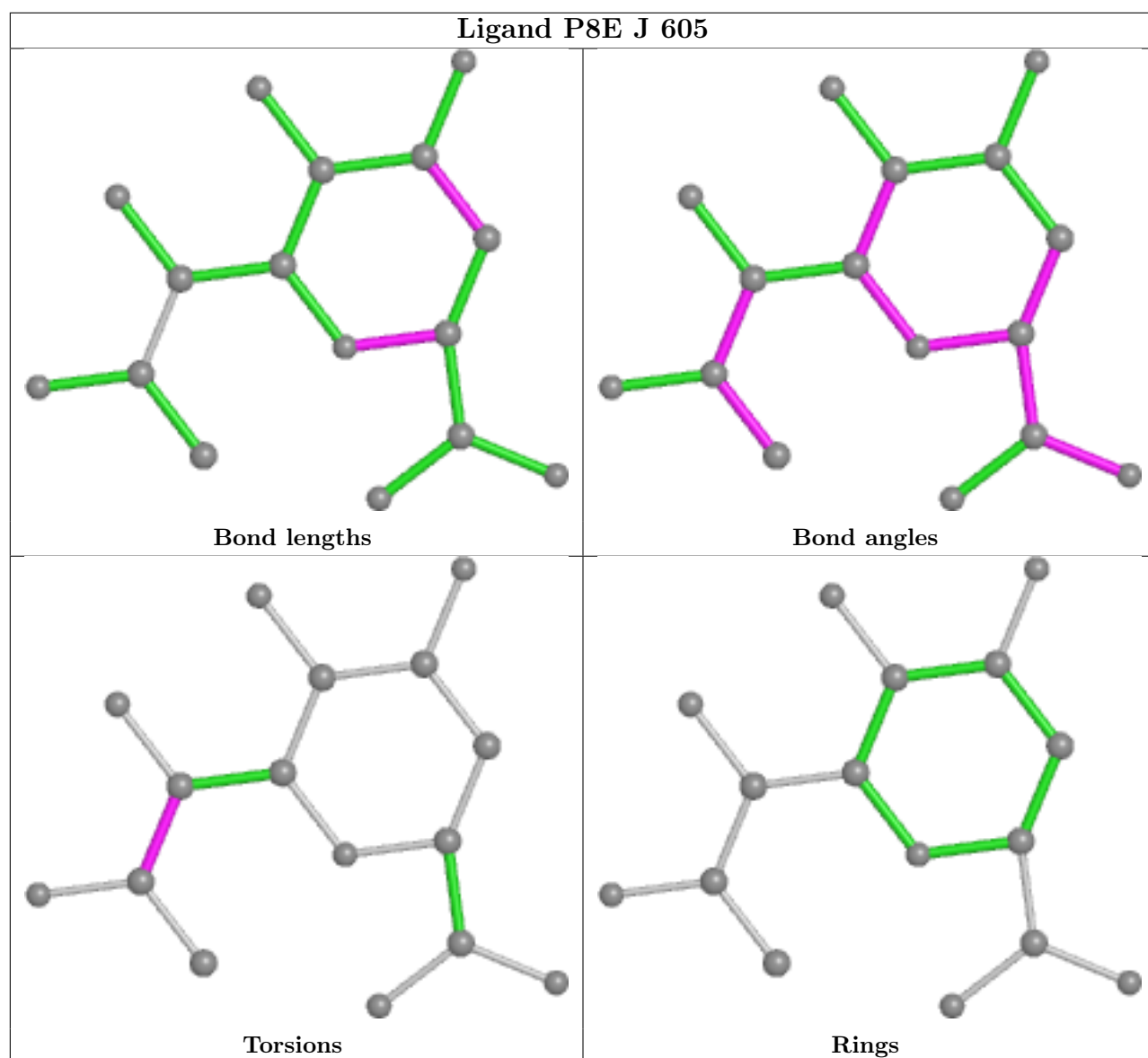
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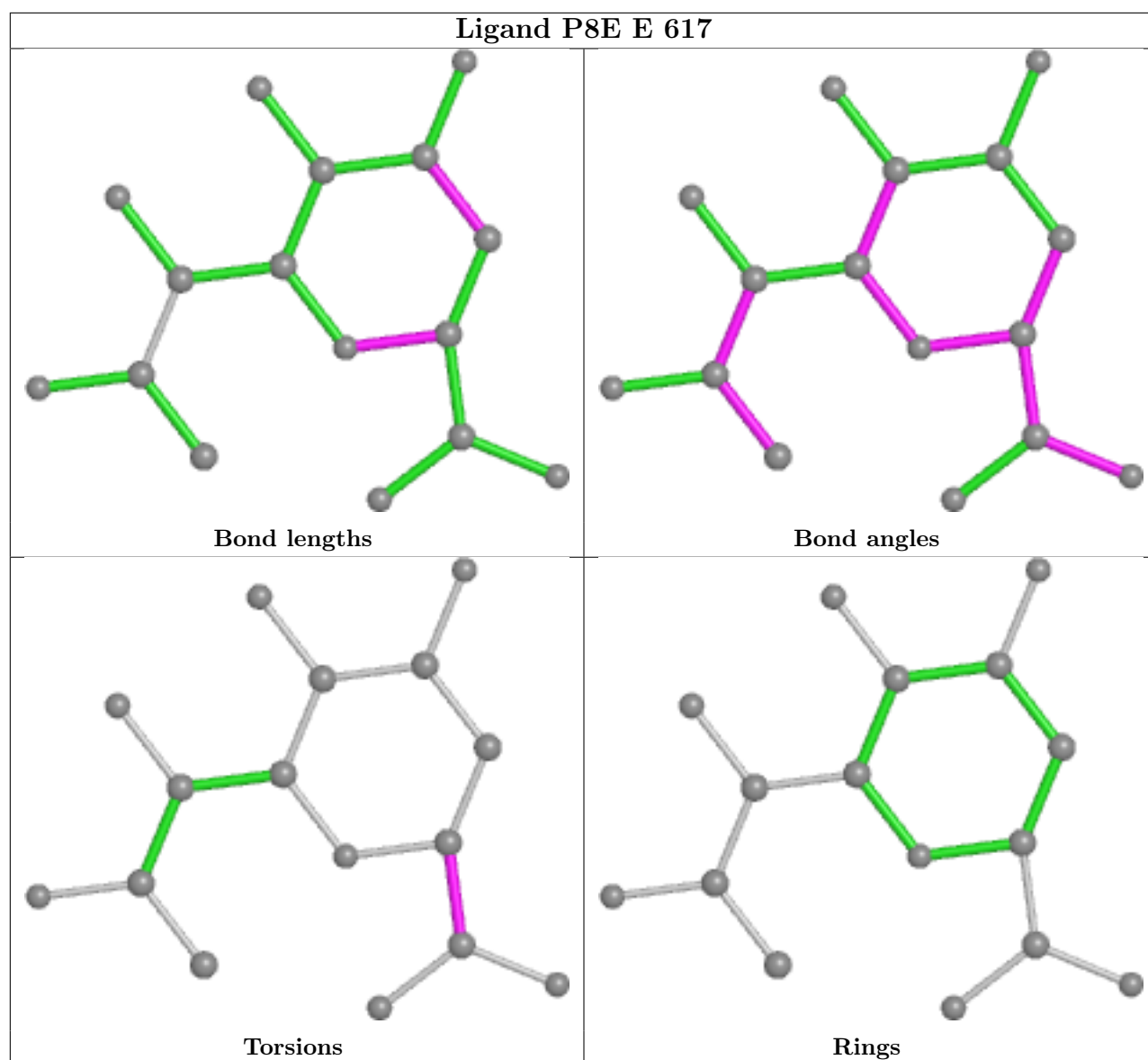


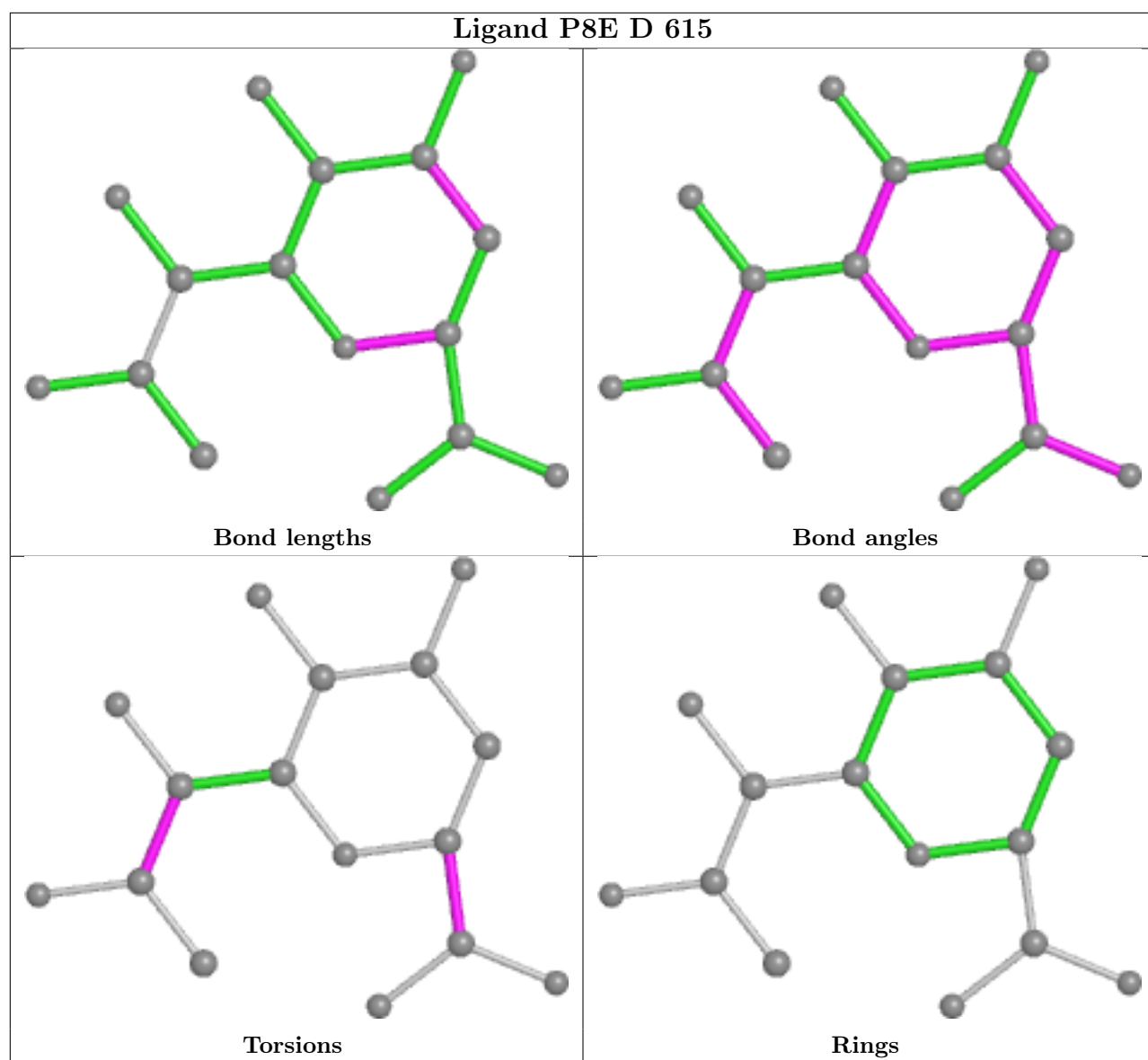
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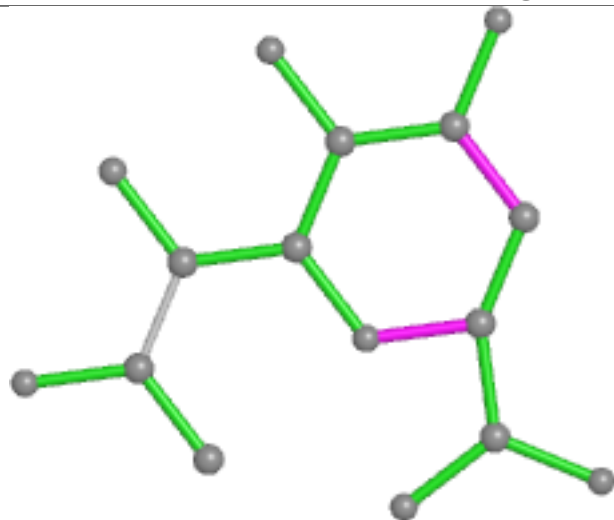
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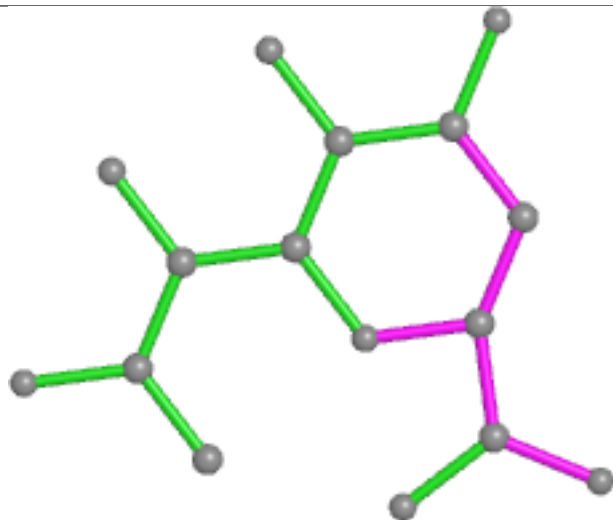




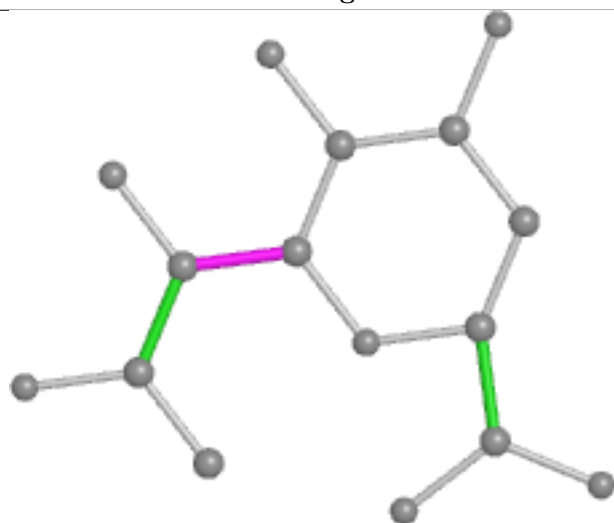
Ligand P8E N 604



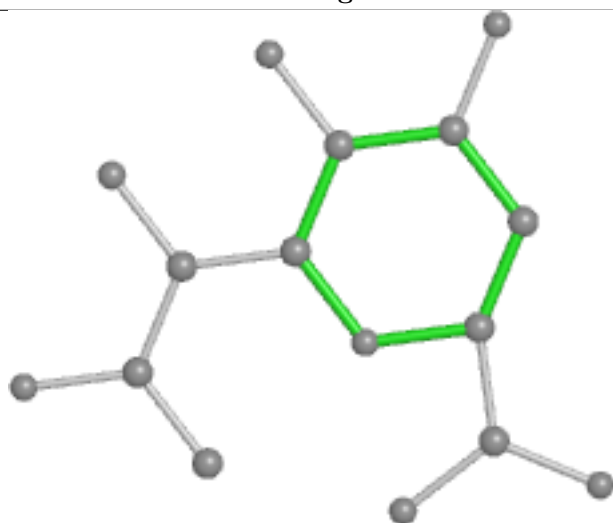
Bond lengths



Bond angles

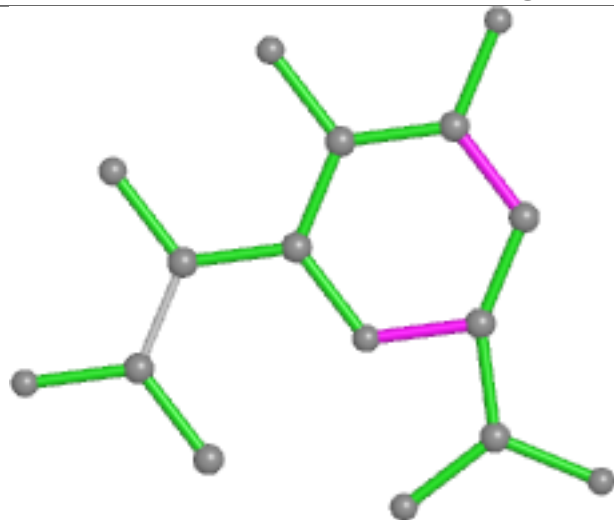


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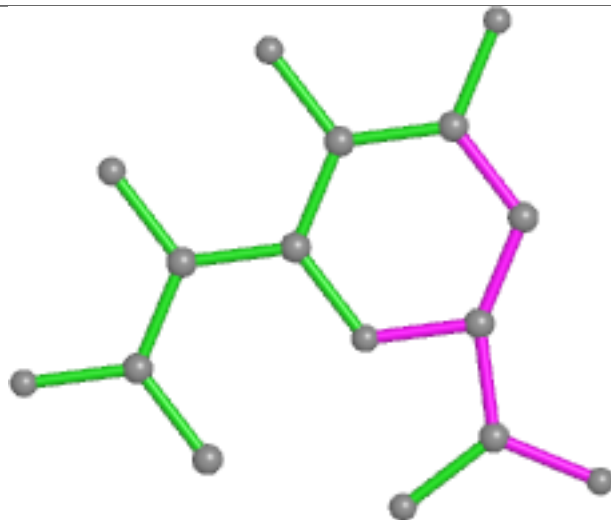


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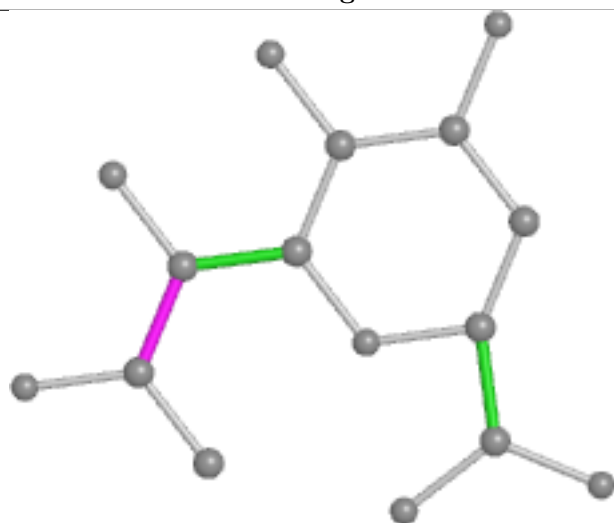
Ligand P8E T 603



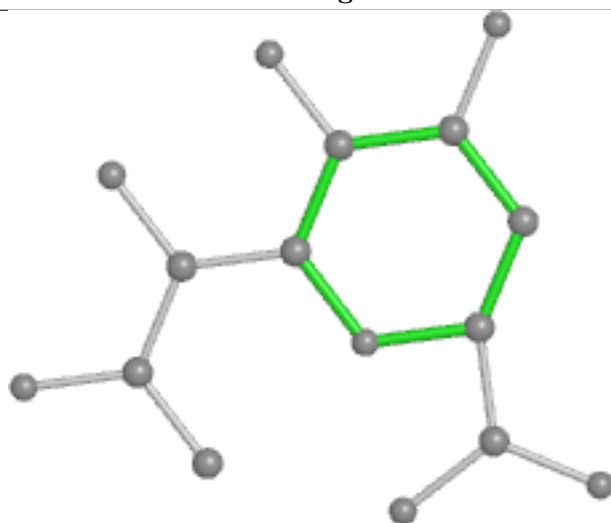
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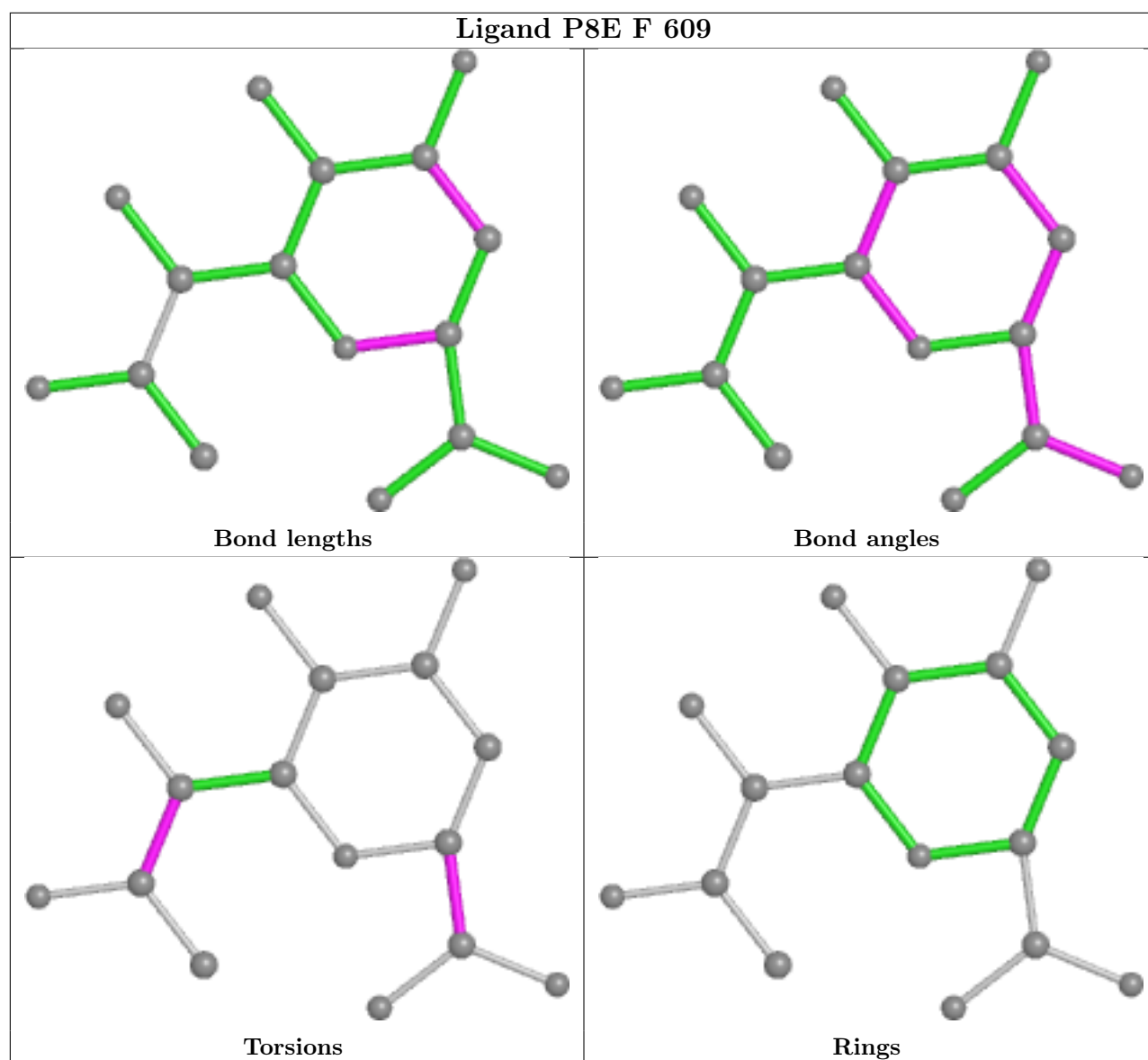
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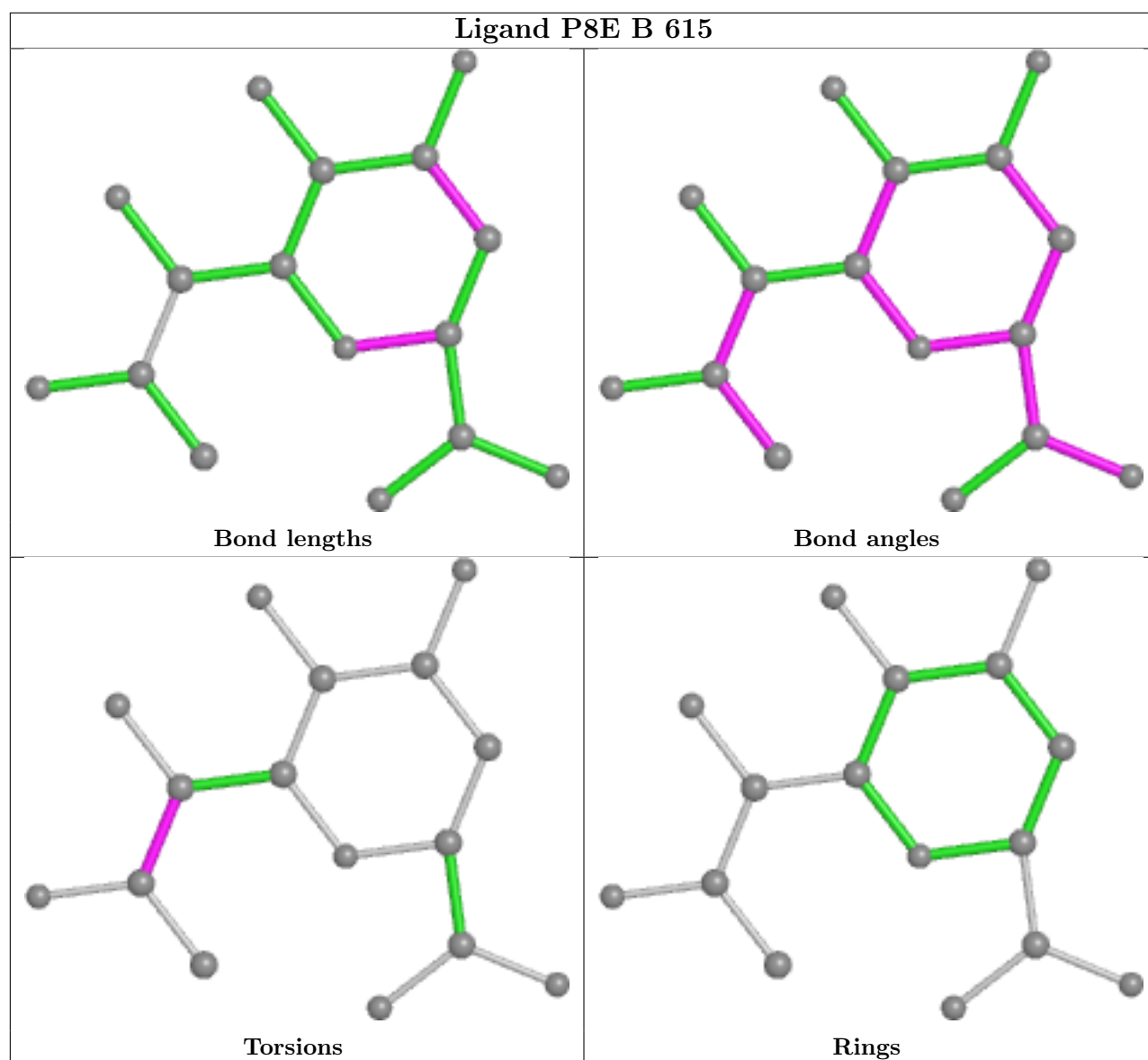


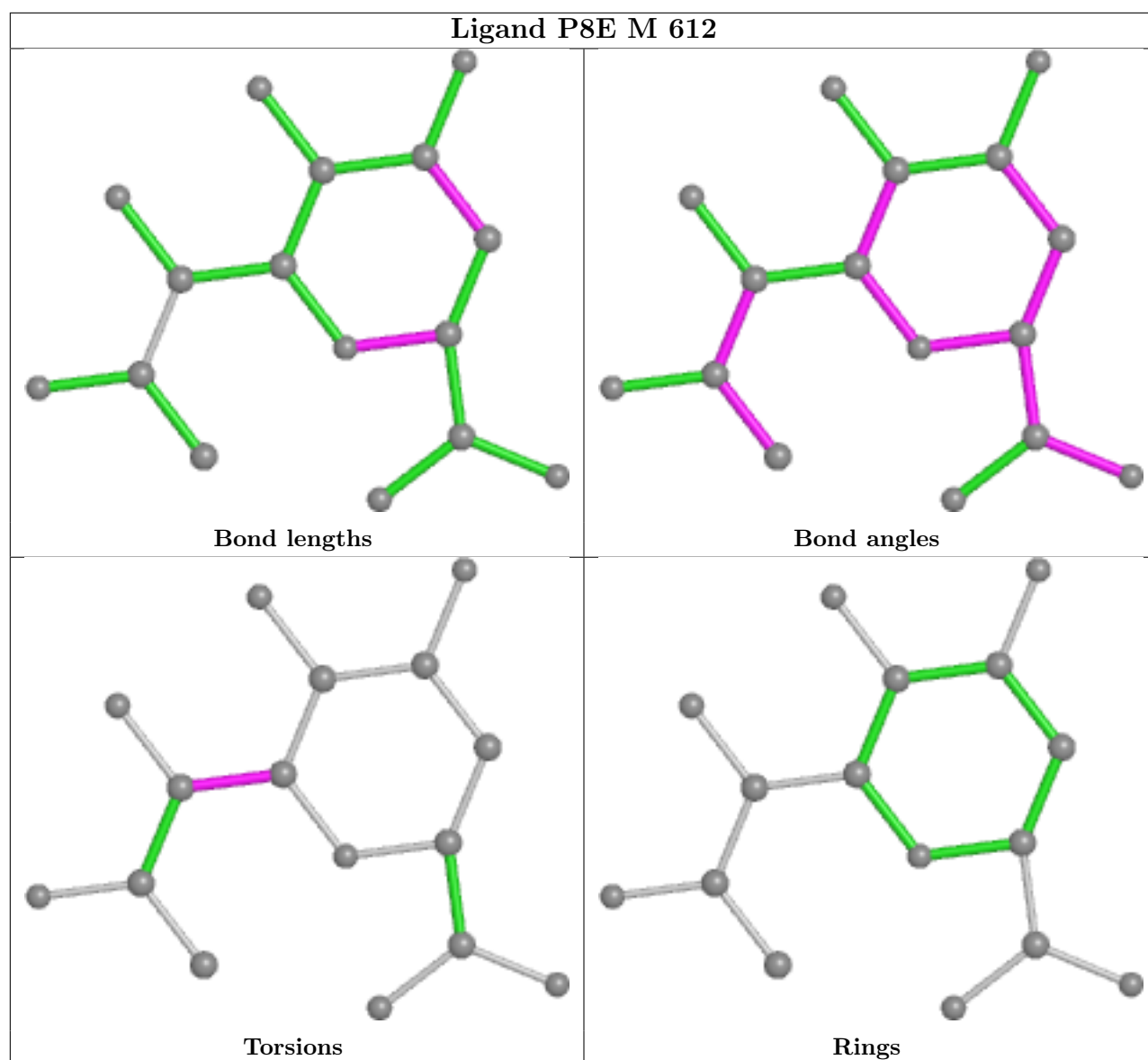
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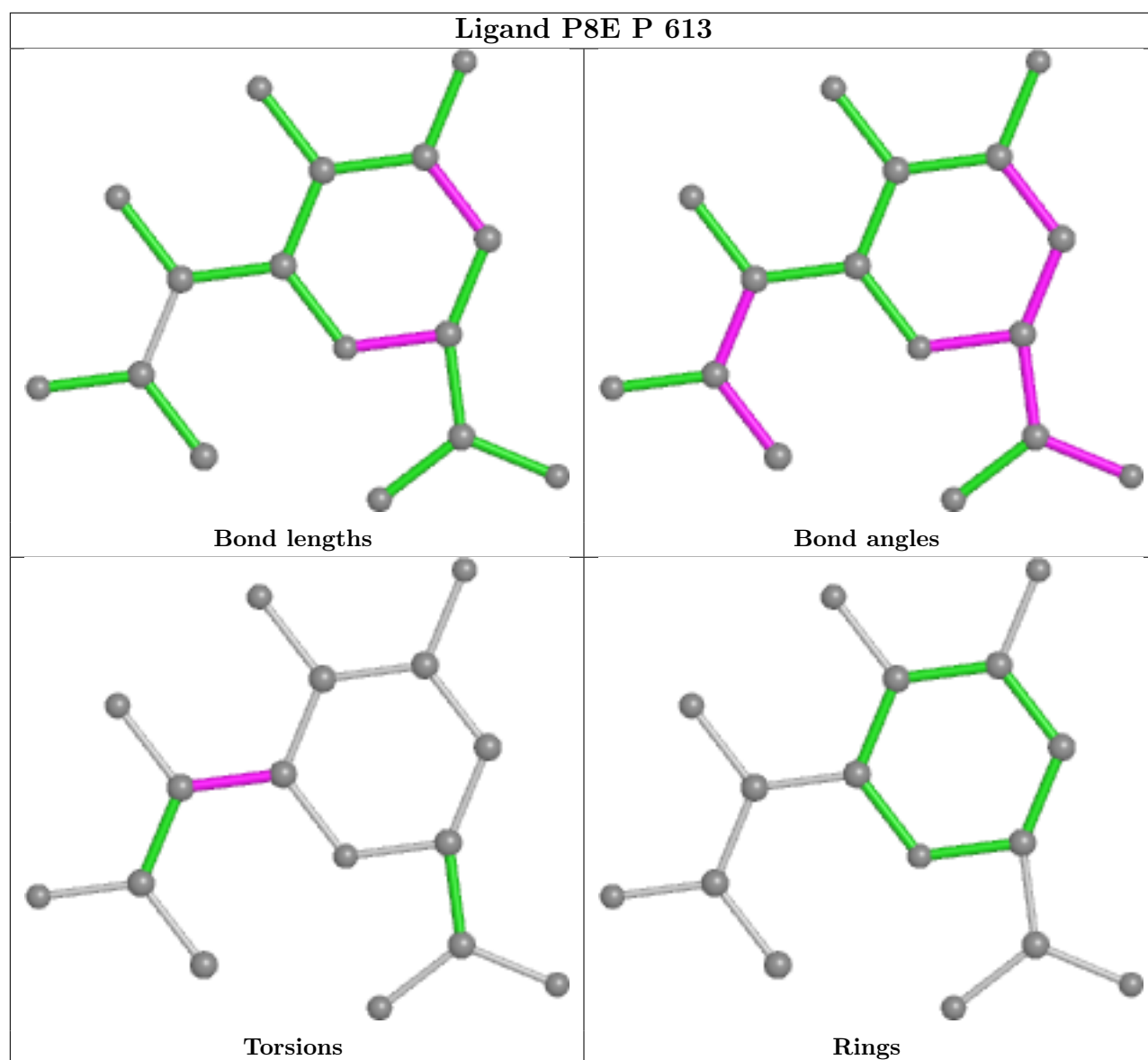


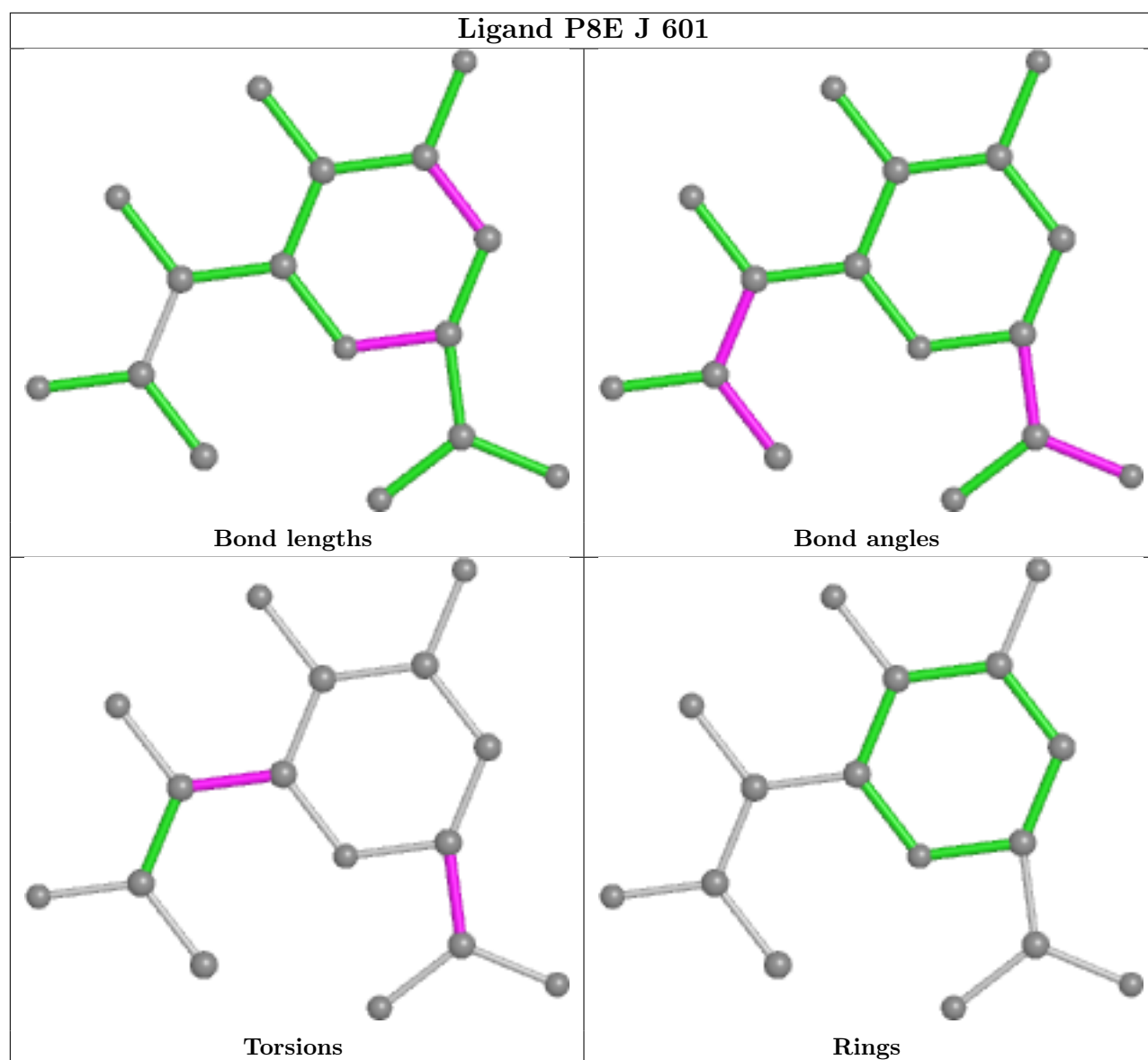
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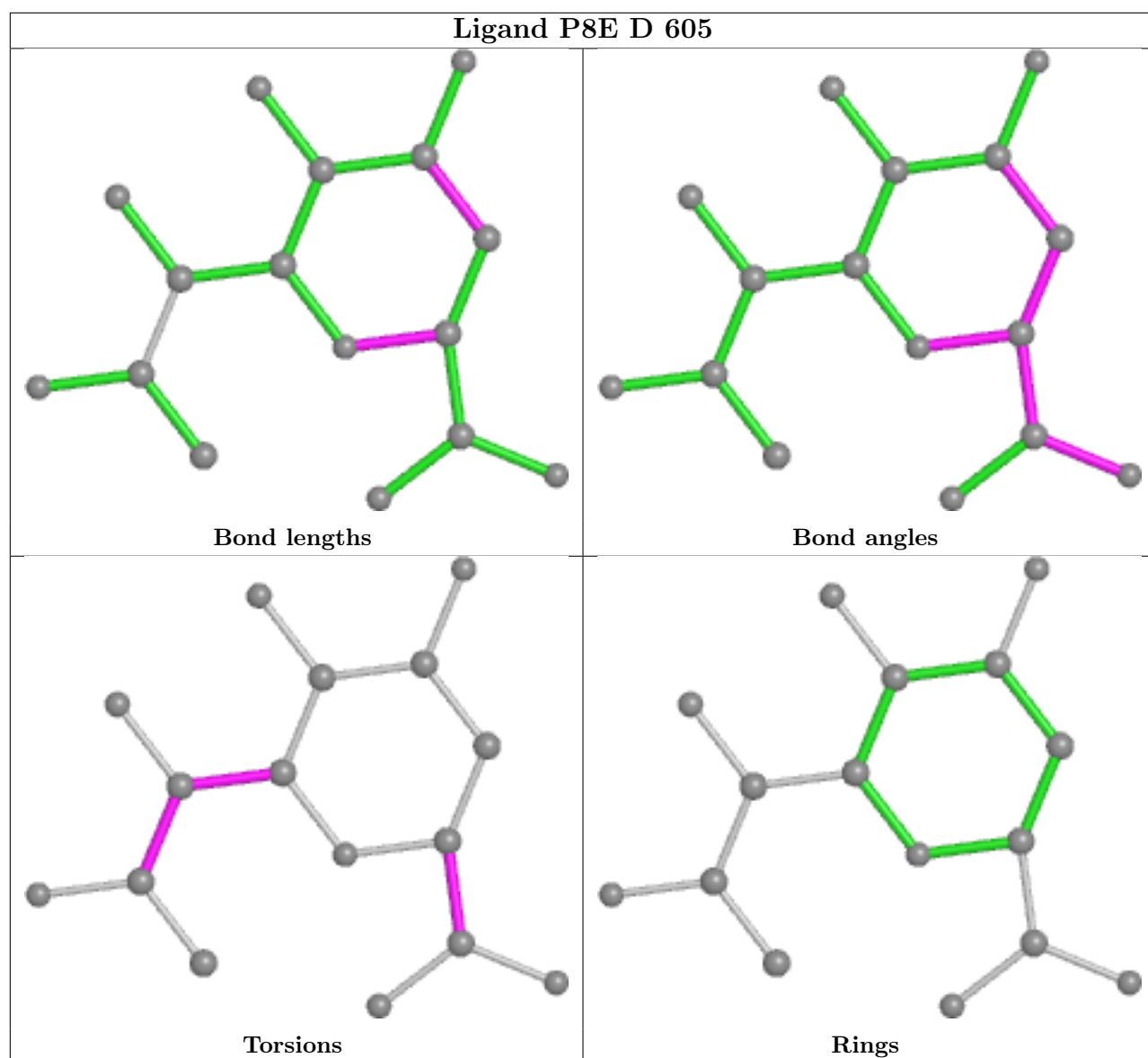




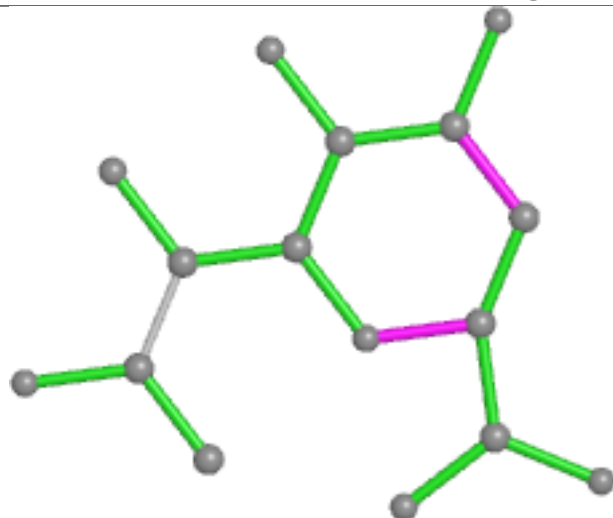




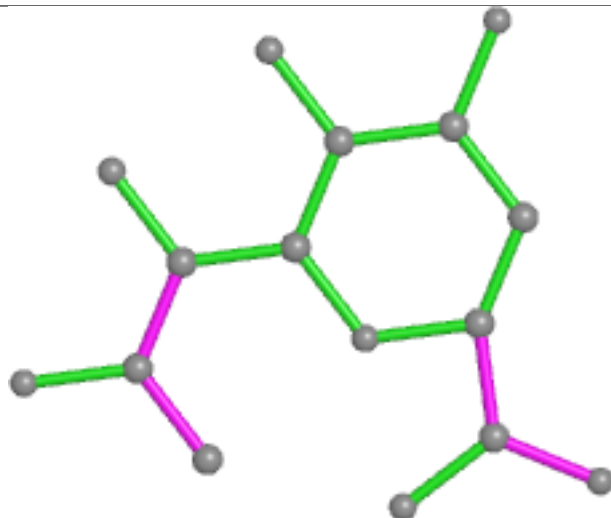




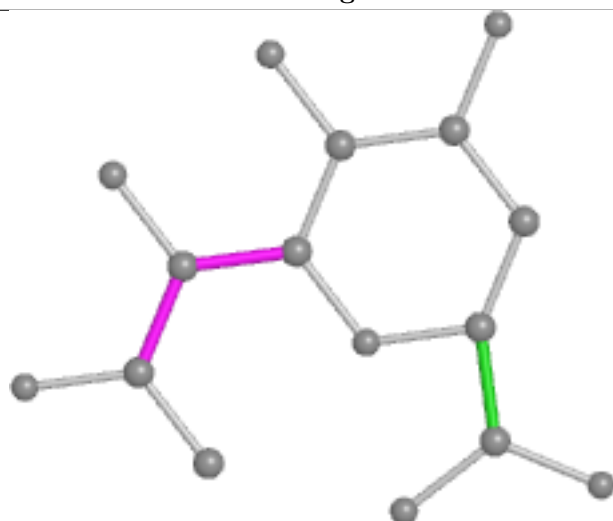
Ligand P8E I 613



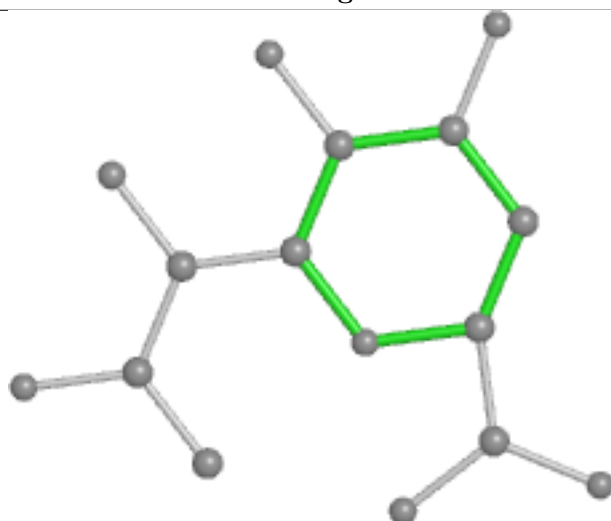
Bond lengths



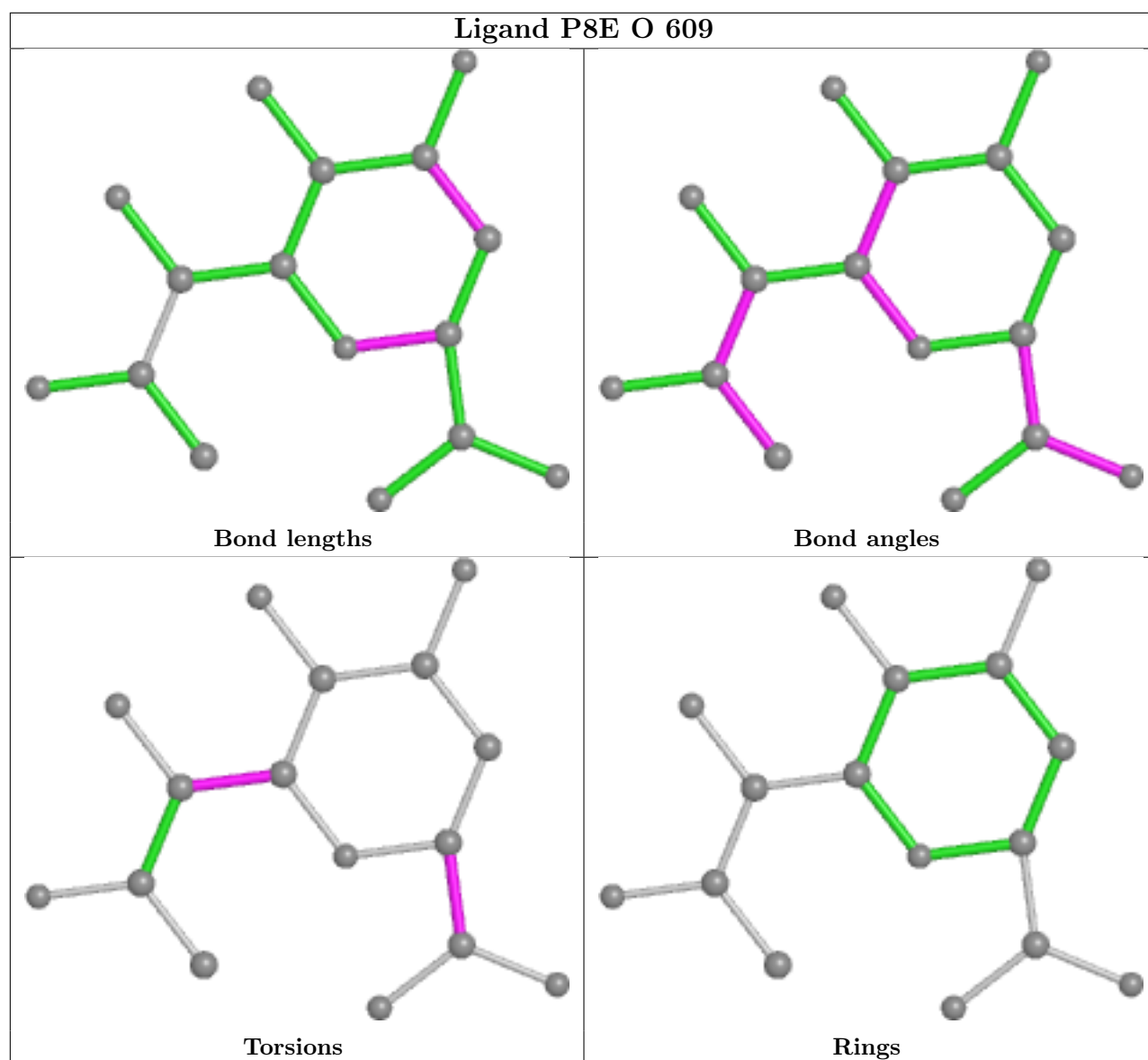
Bond angles



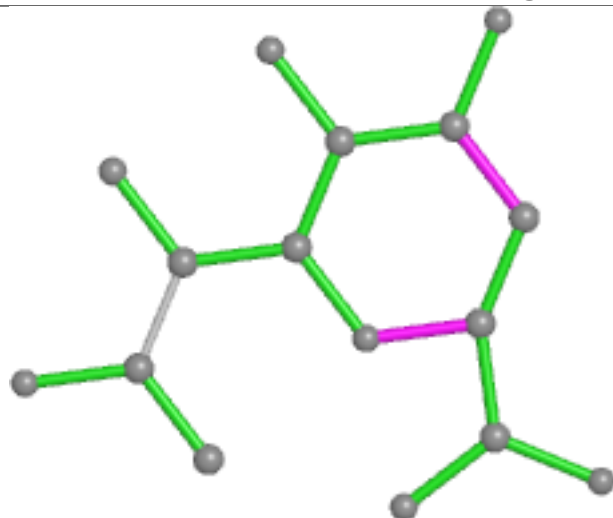
Torsions



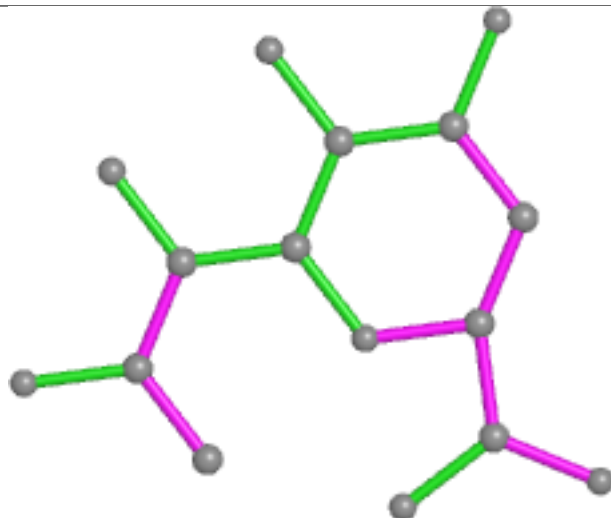
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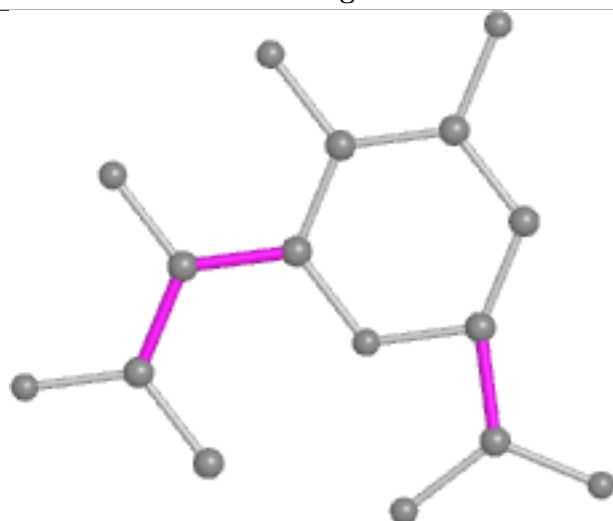
Ligand P8E L 605



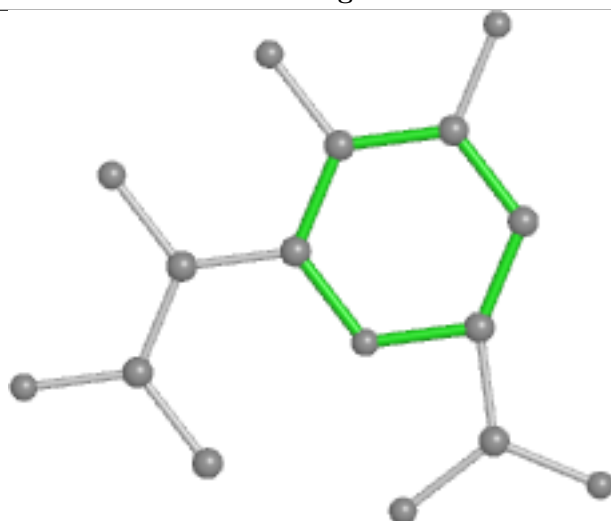
Bond lengths



Bond angles

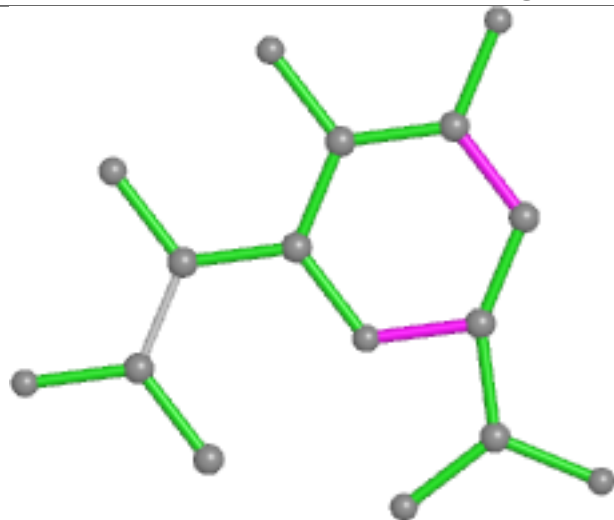


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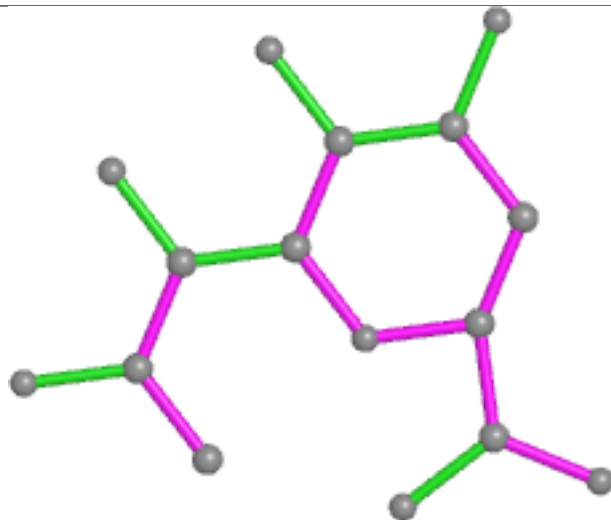


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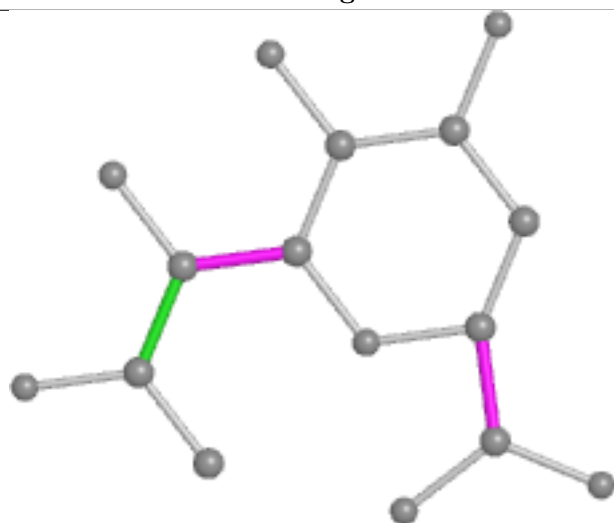
Ligand P8E A 612



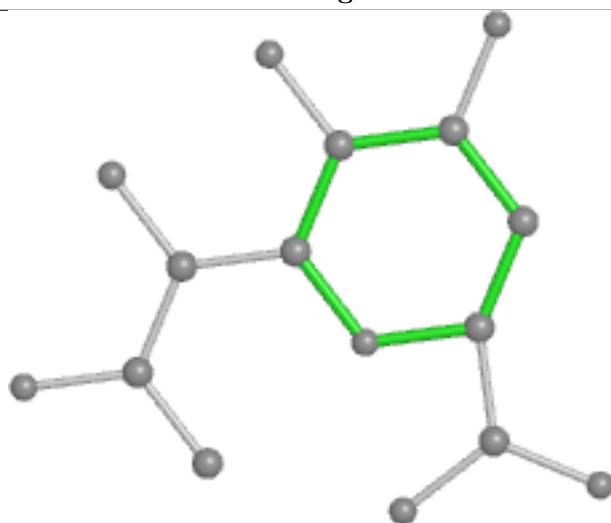
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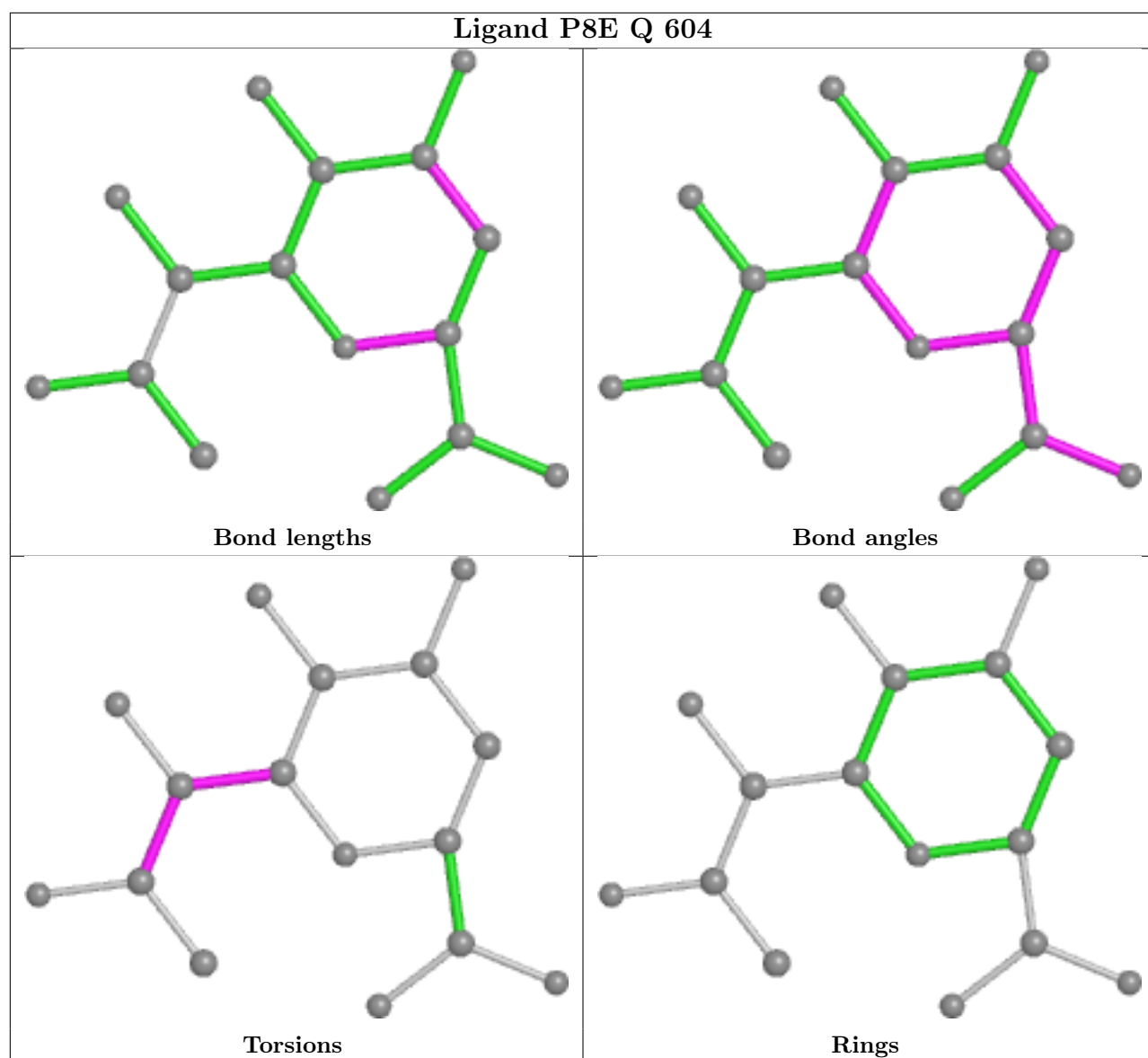
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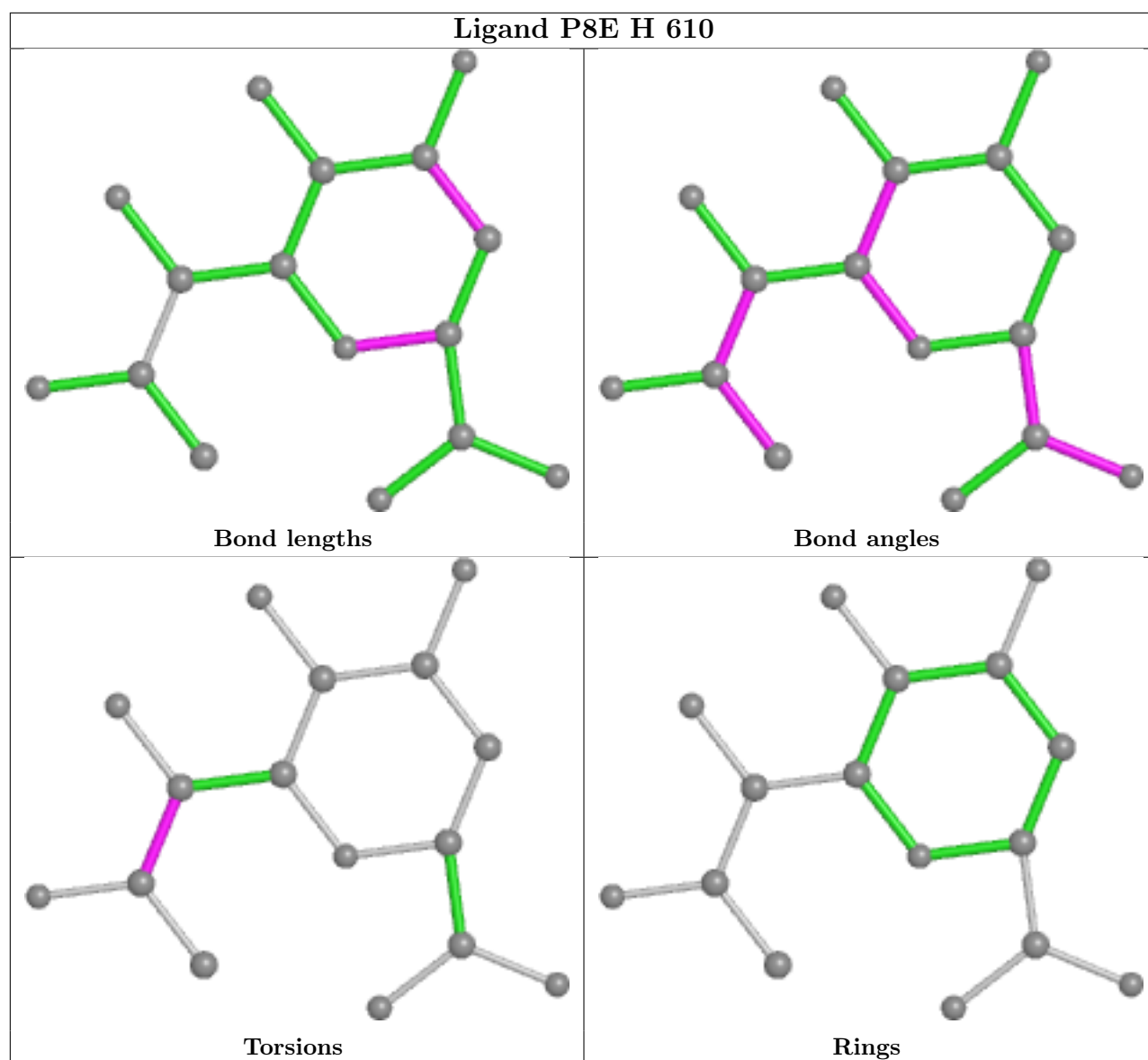


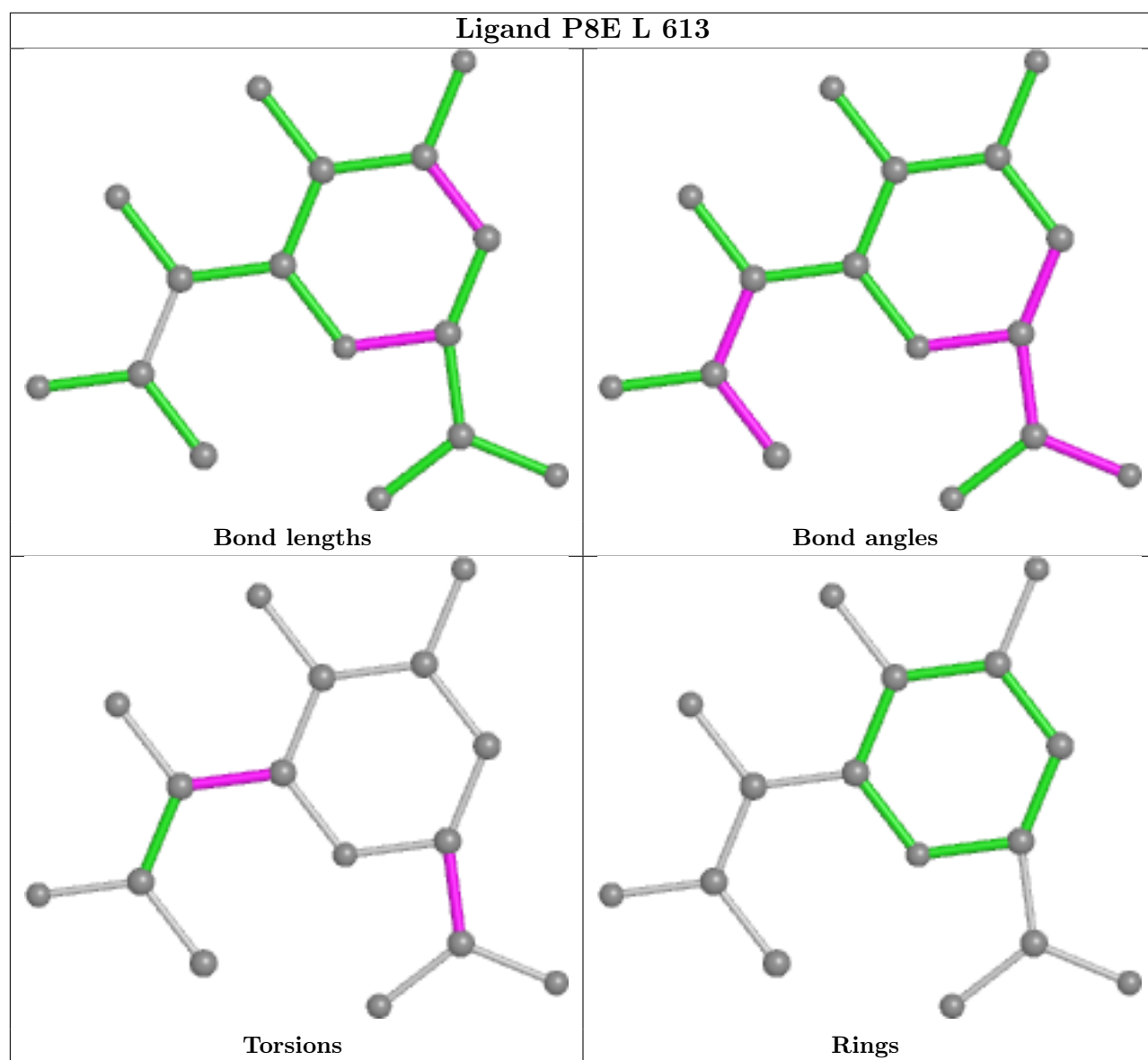
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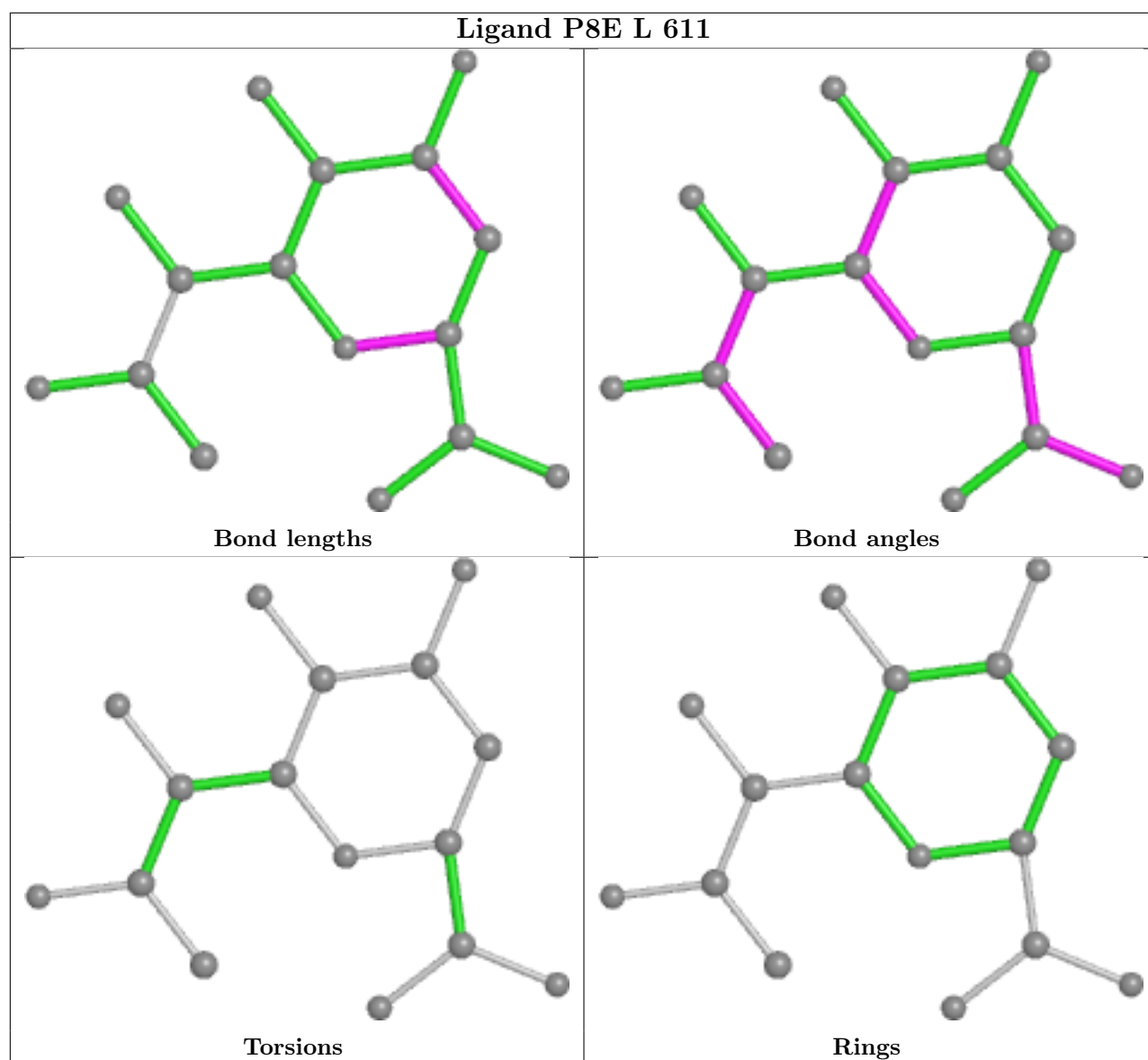


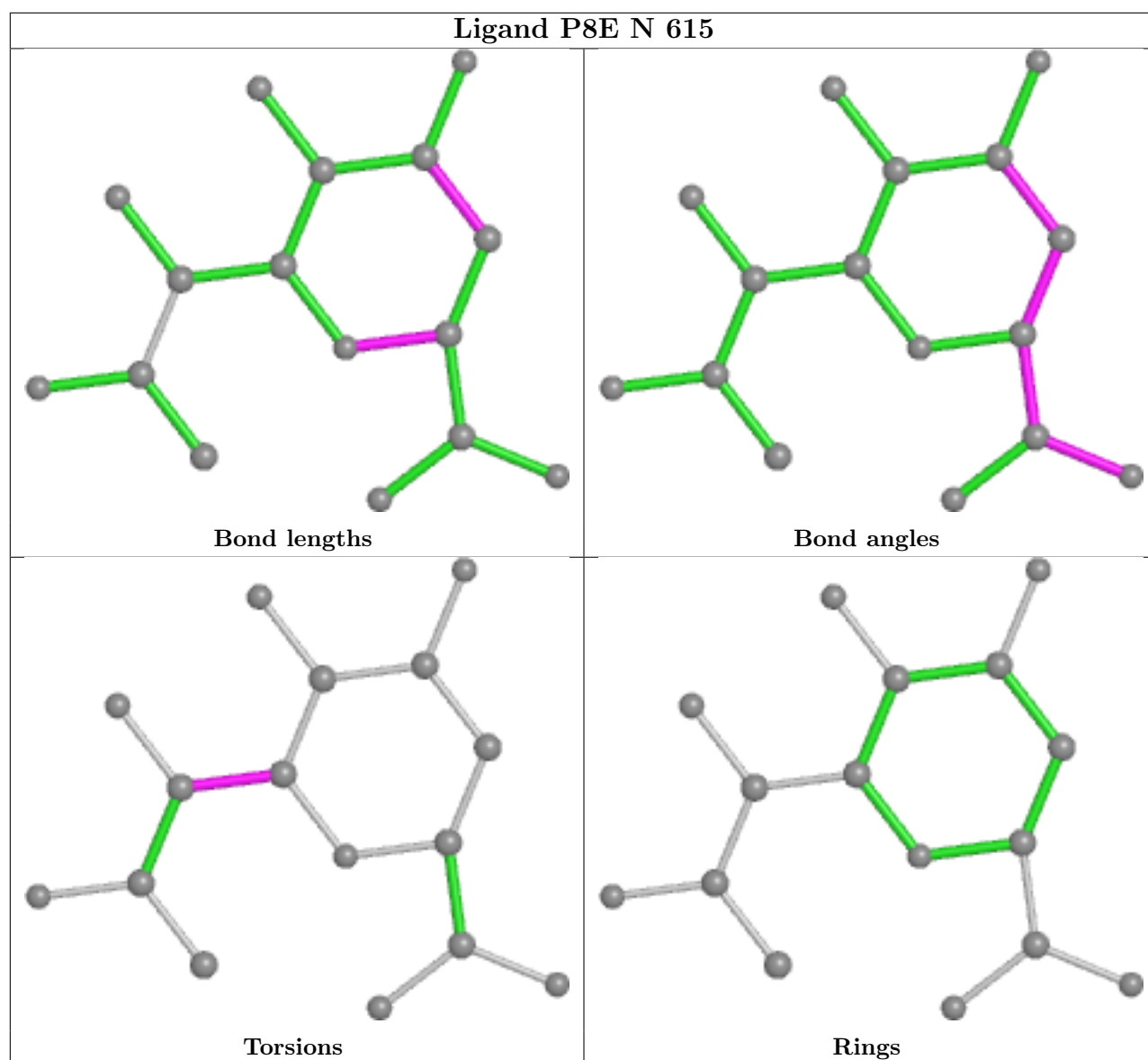
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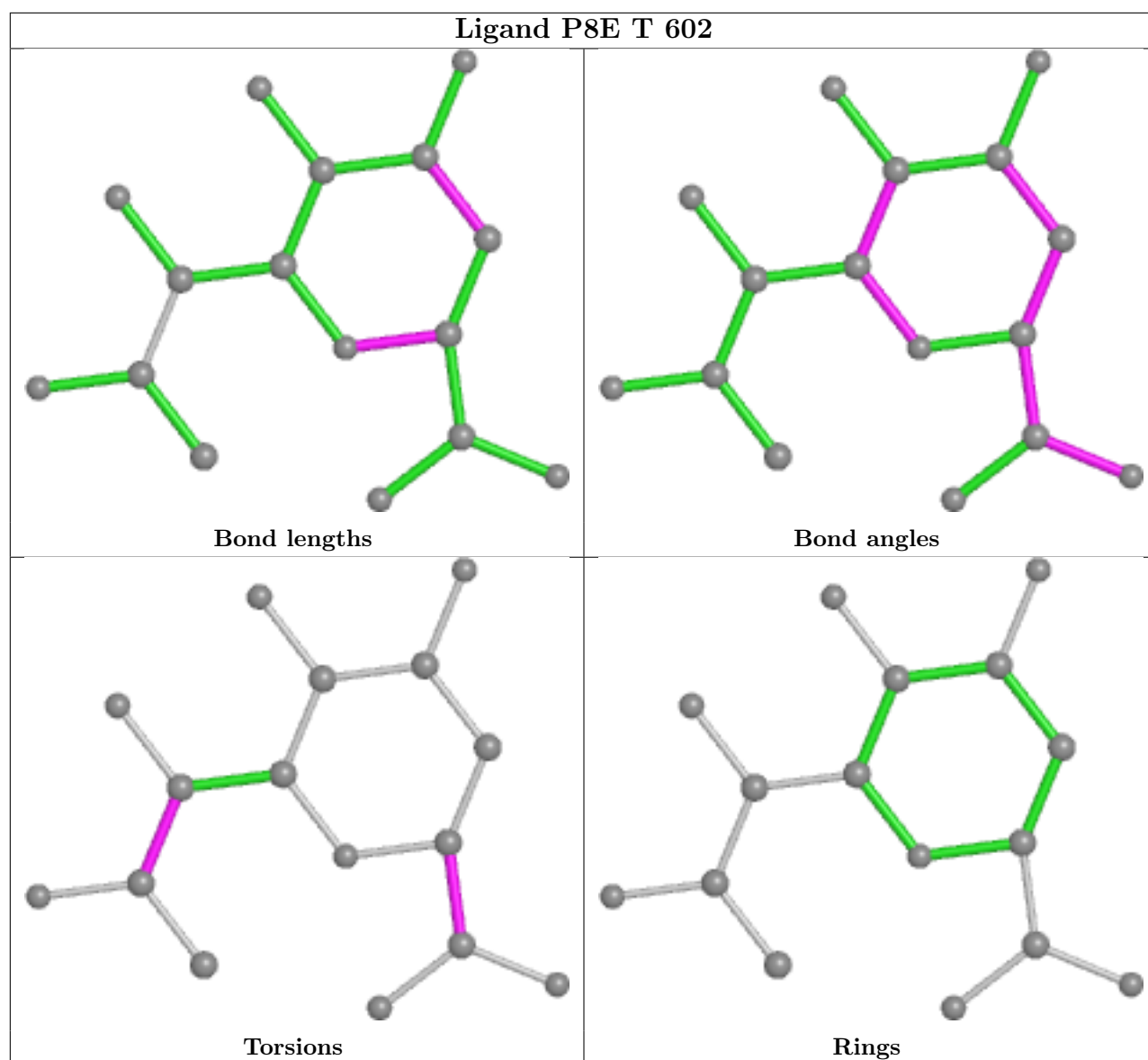




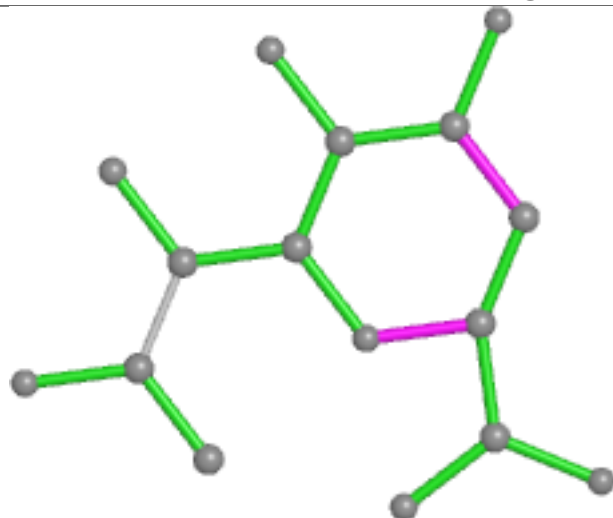




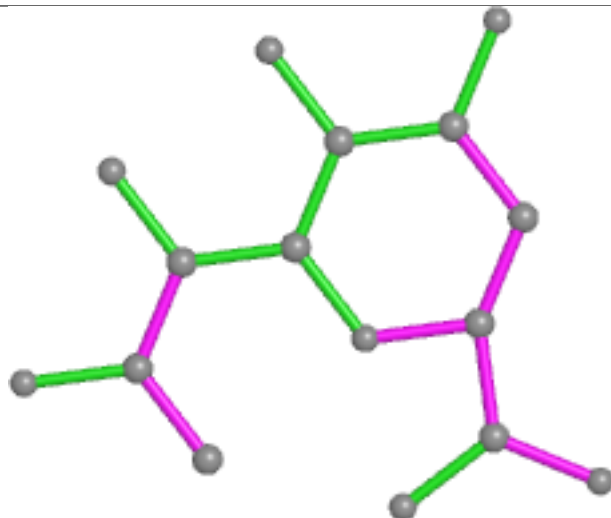




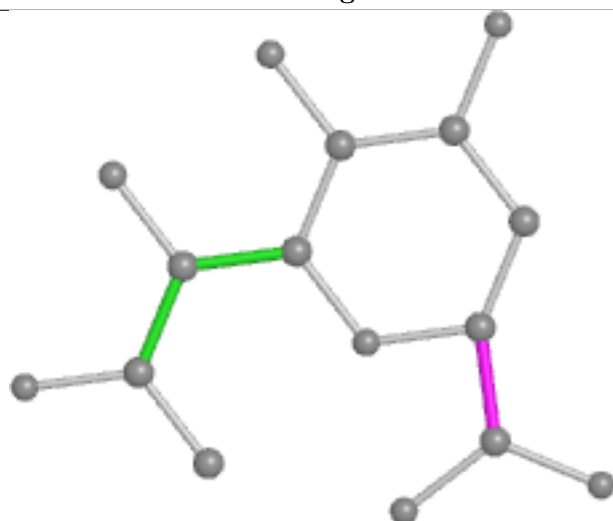
Ligand P8E S 611



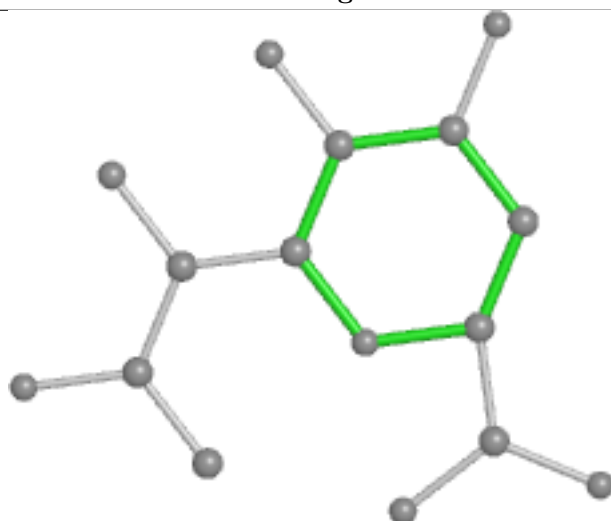
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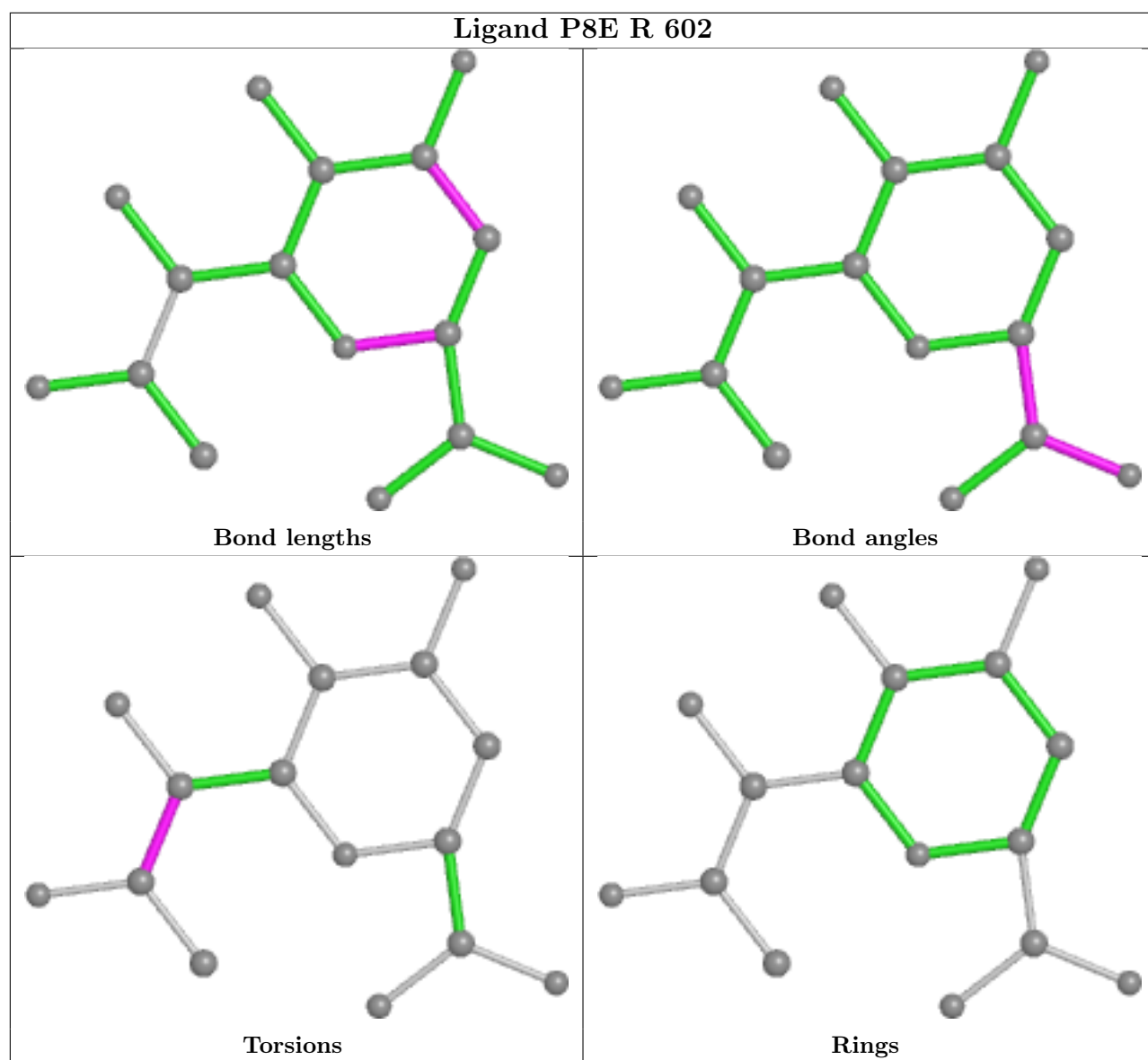
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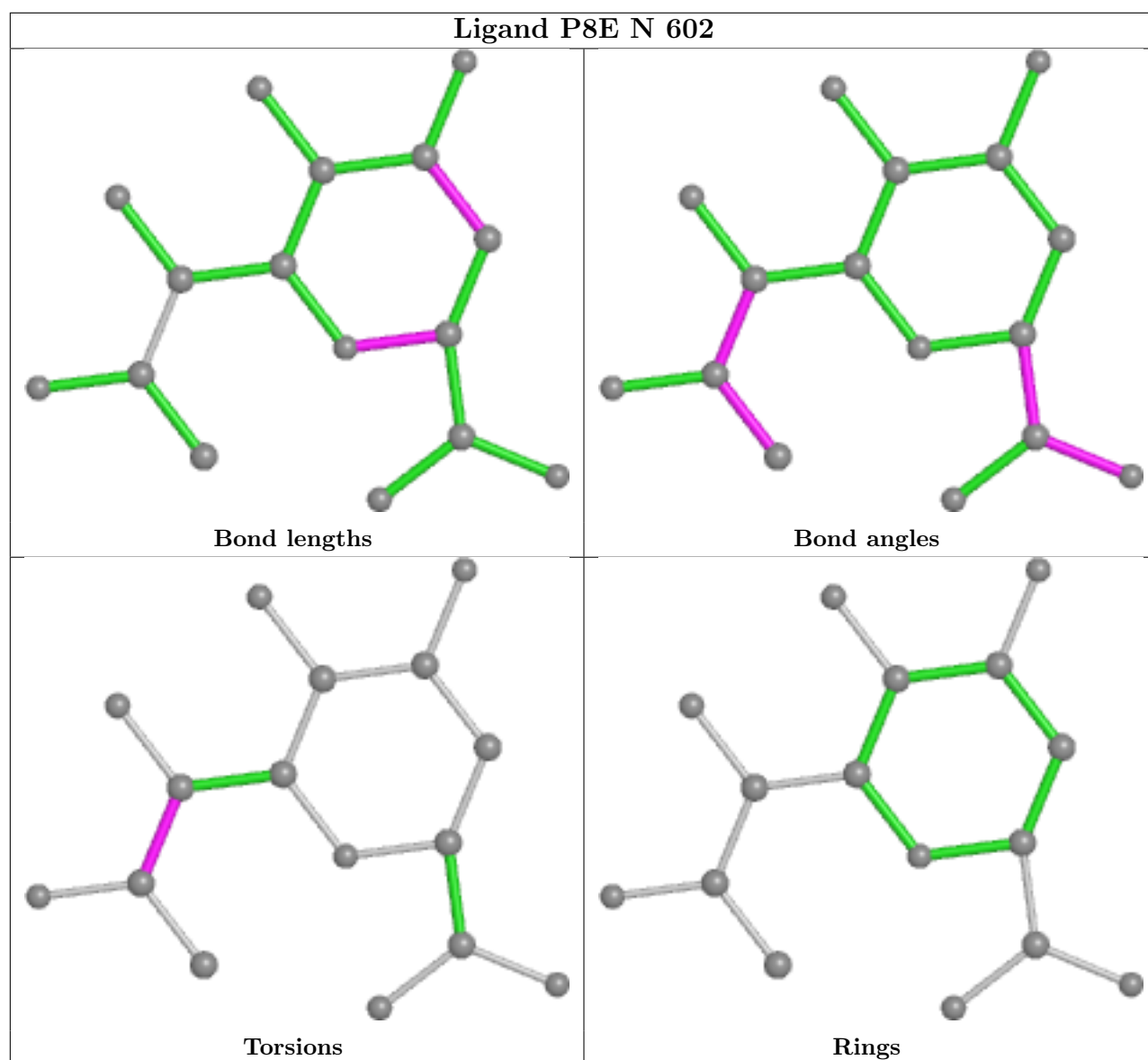


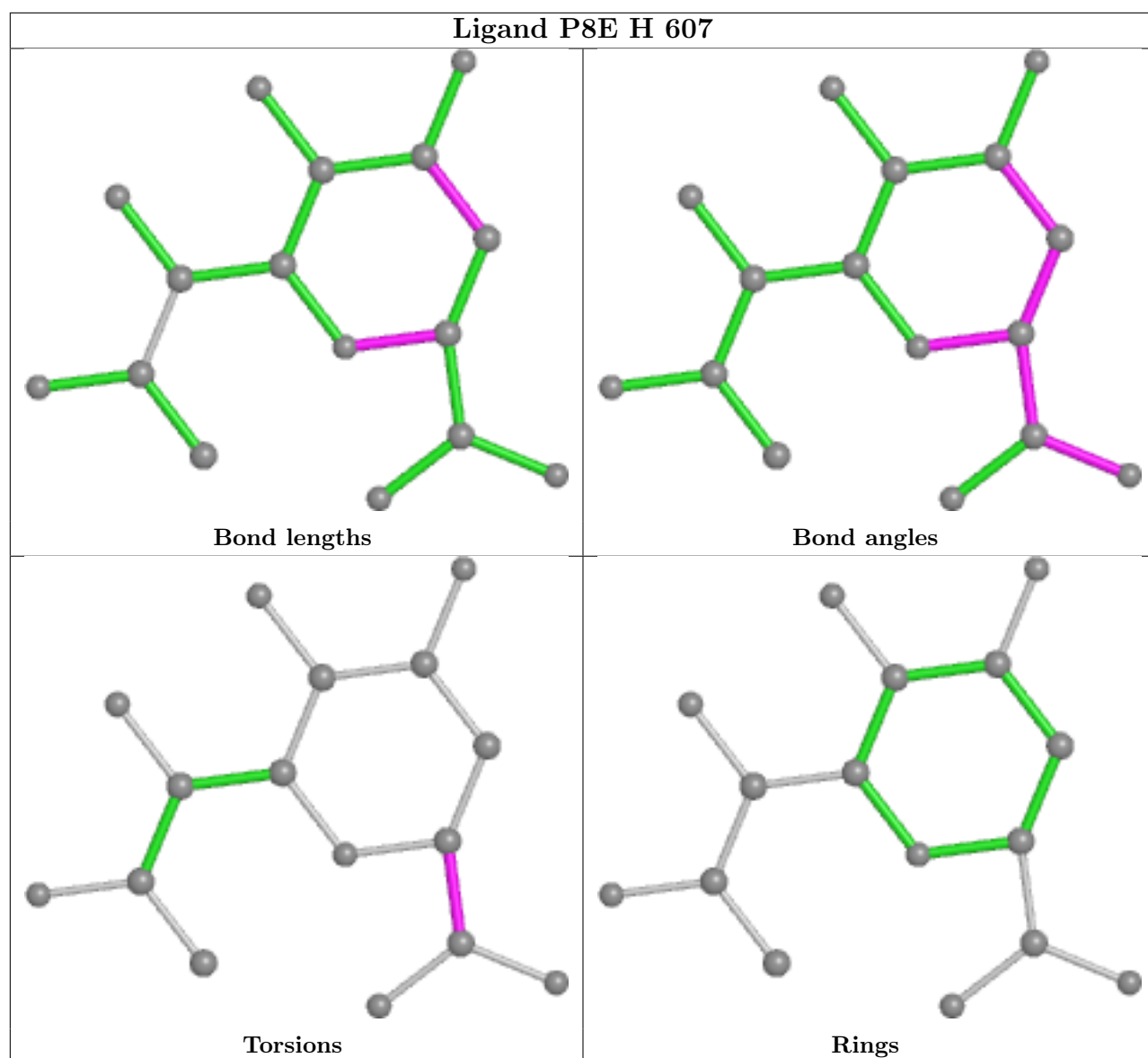
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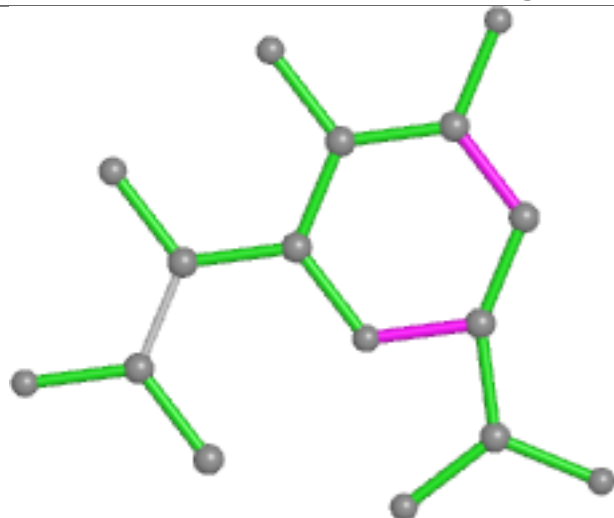
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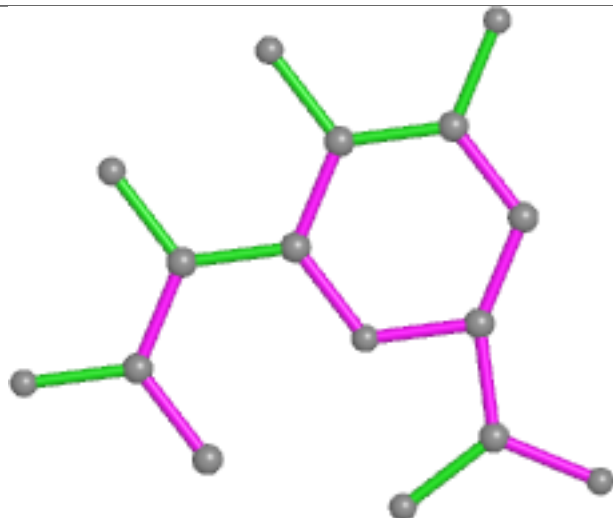




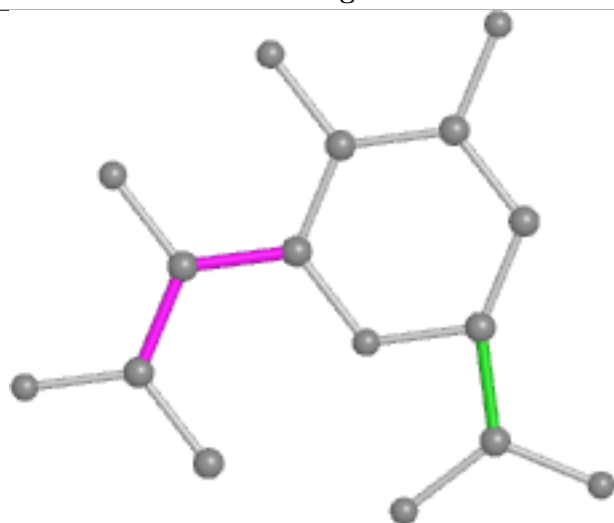
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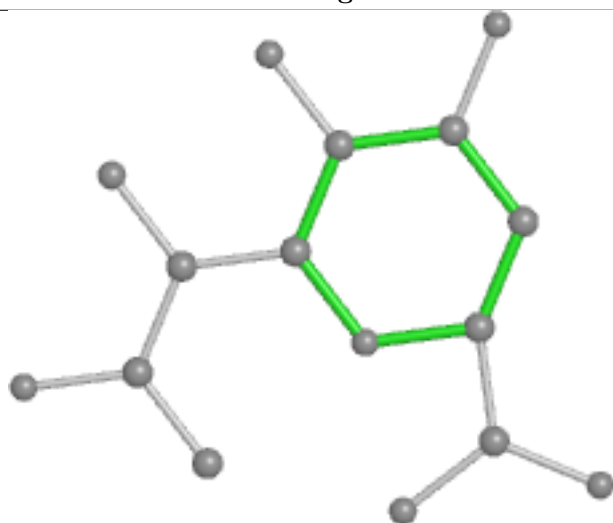
Bond lengths



Bond angles

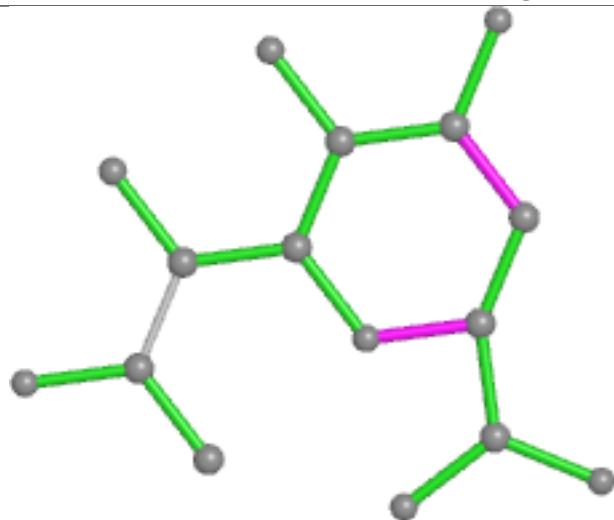


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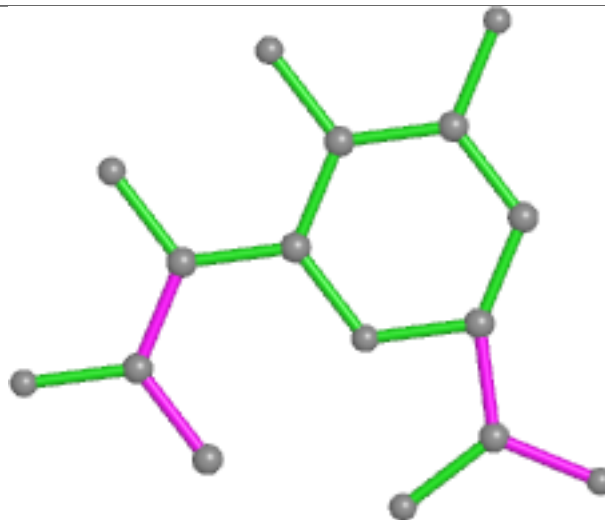


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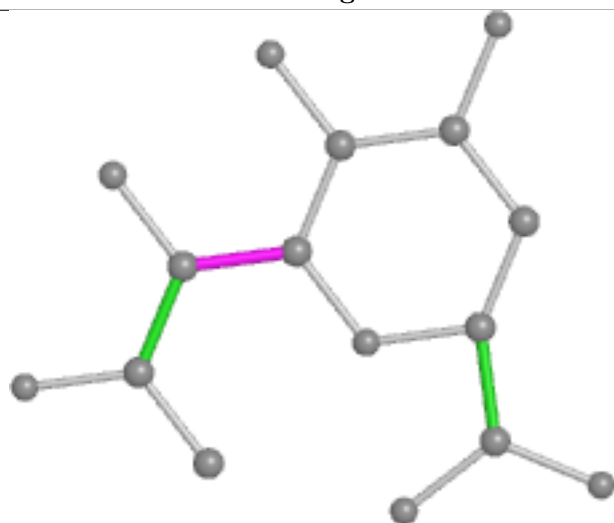
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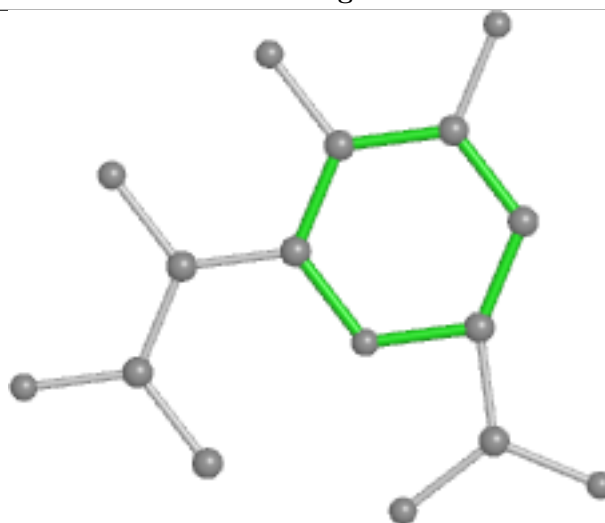
Bond lengths



Bond angles

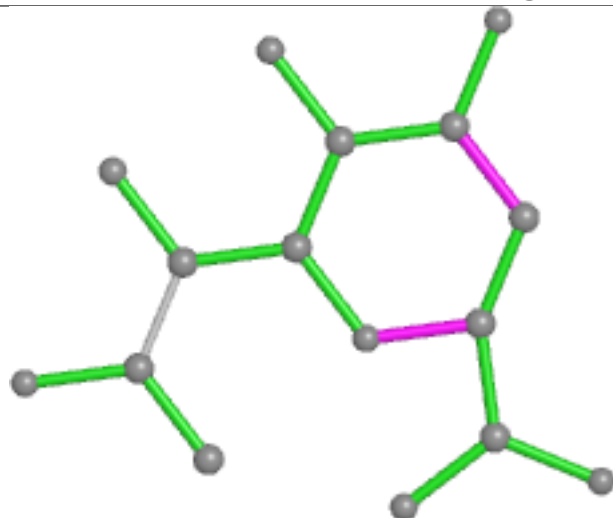


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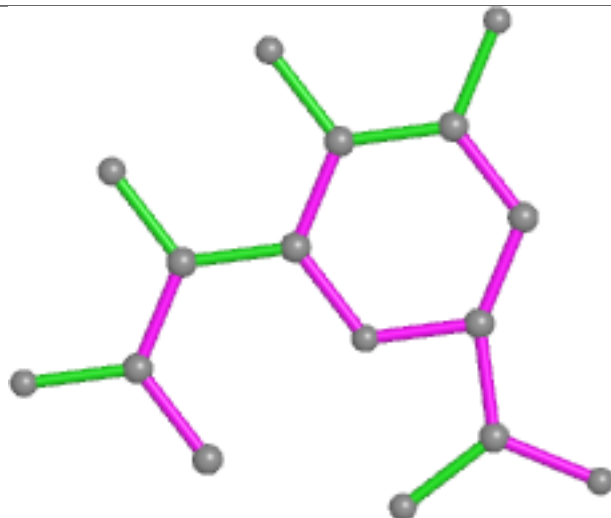


Rings

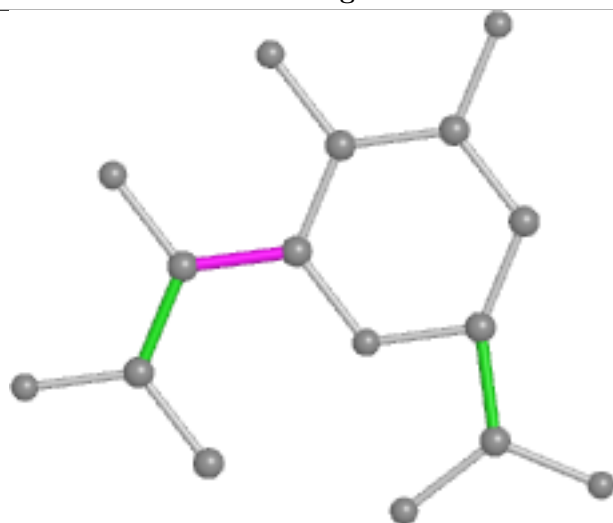
Ligand P8E L 615



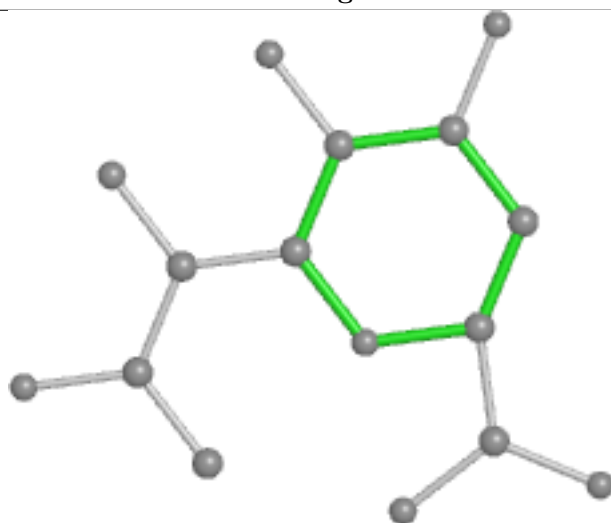
Bond lengths



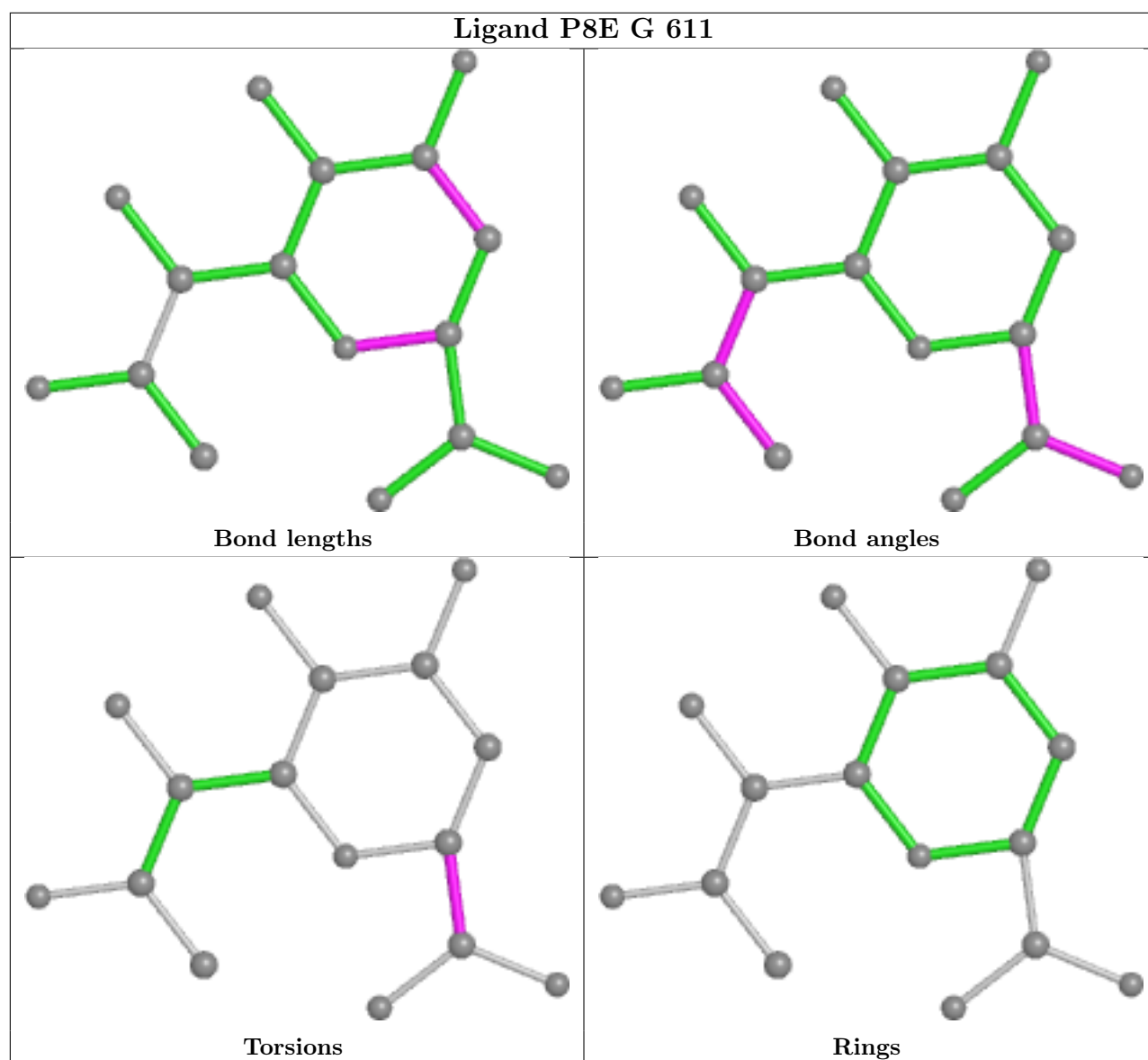
Bond angles

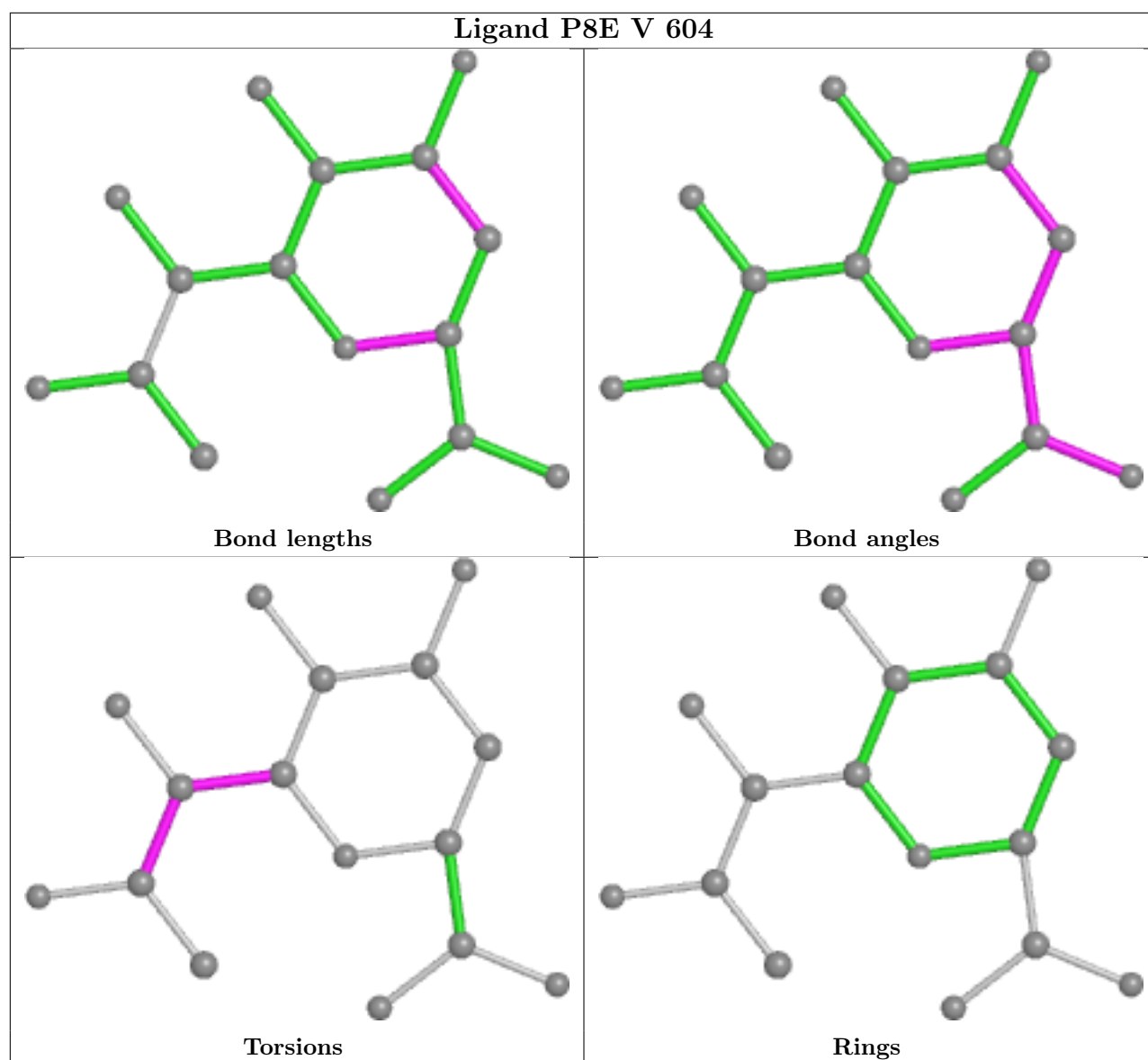


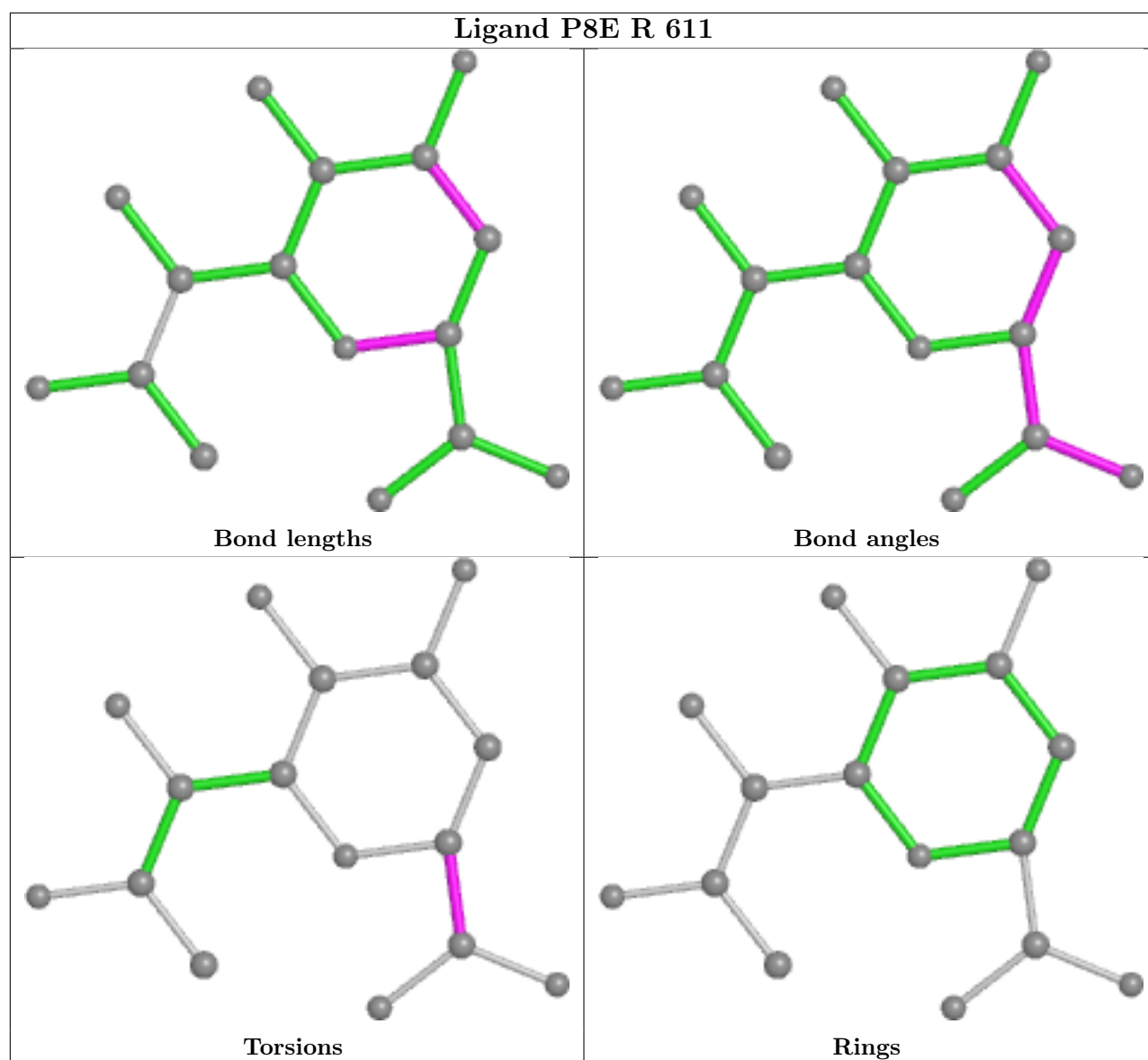
Torsions

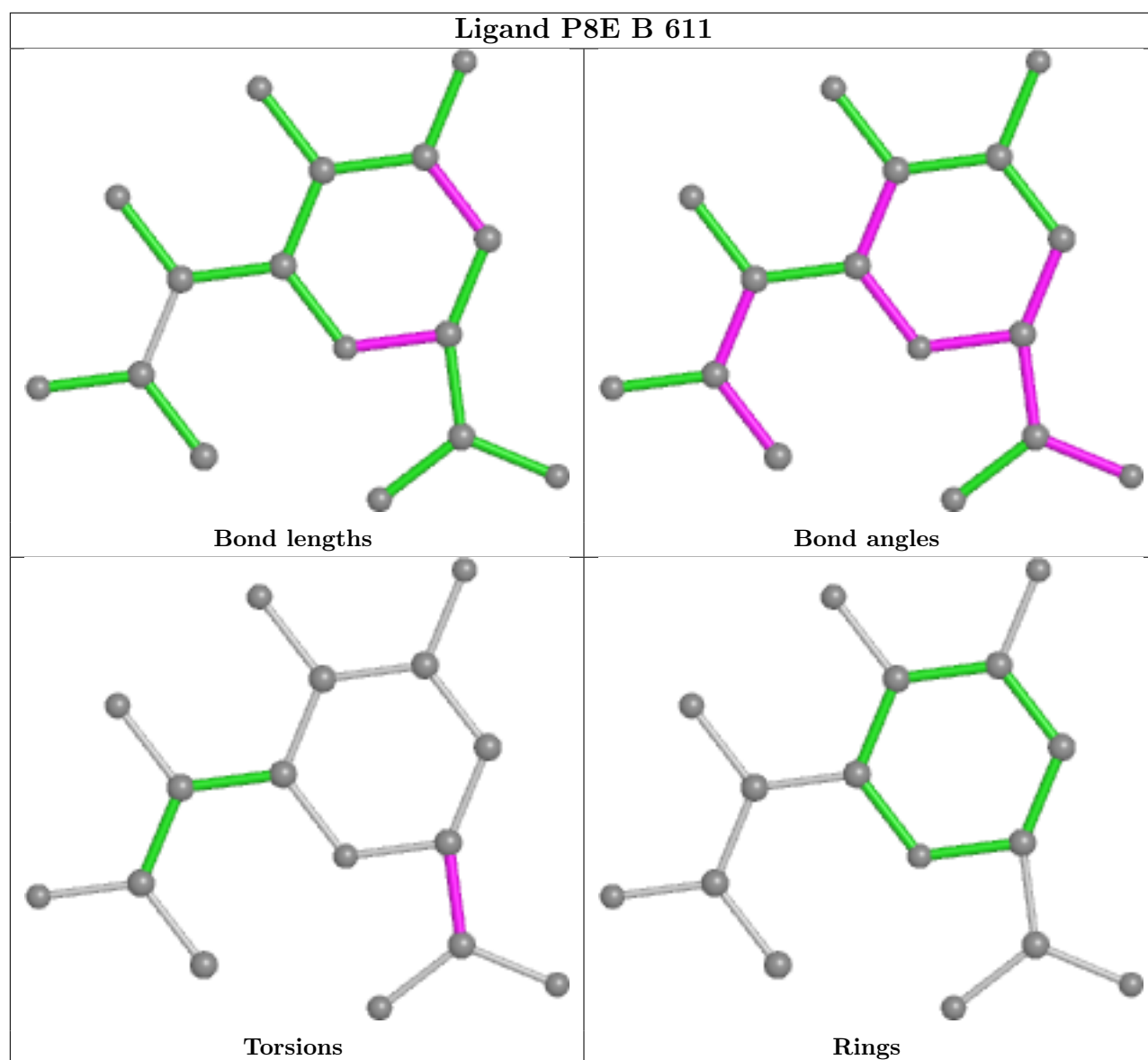


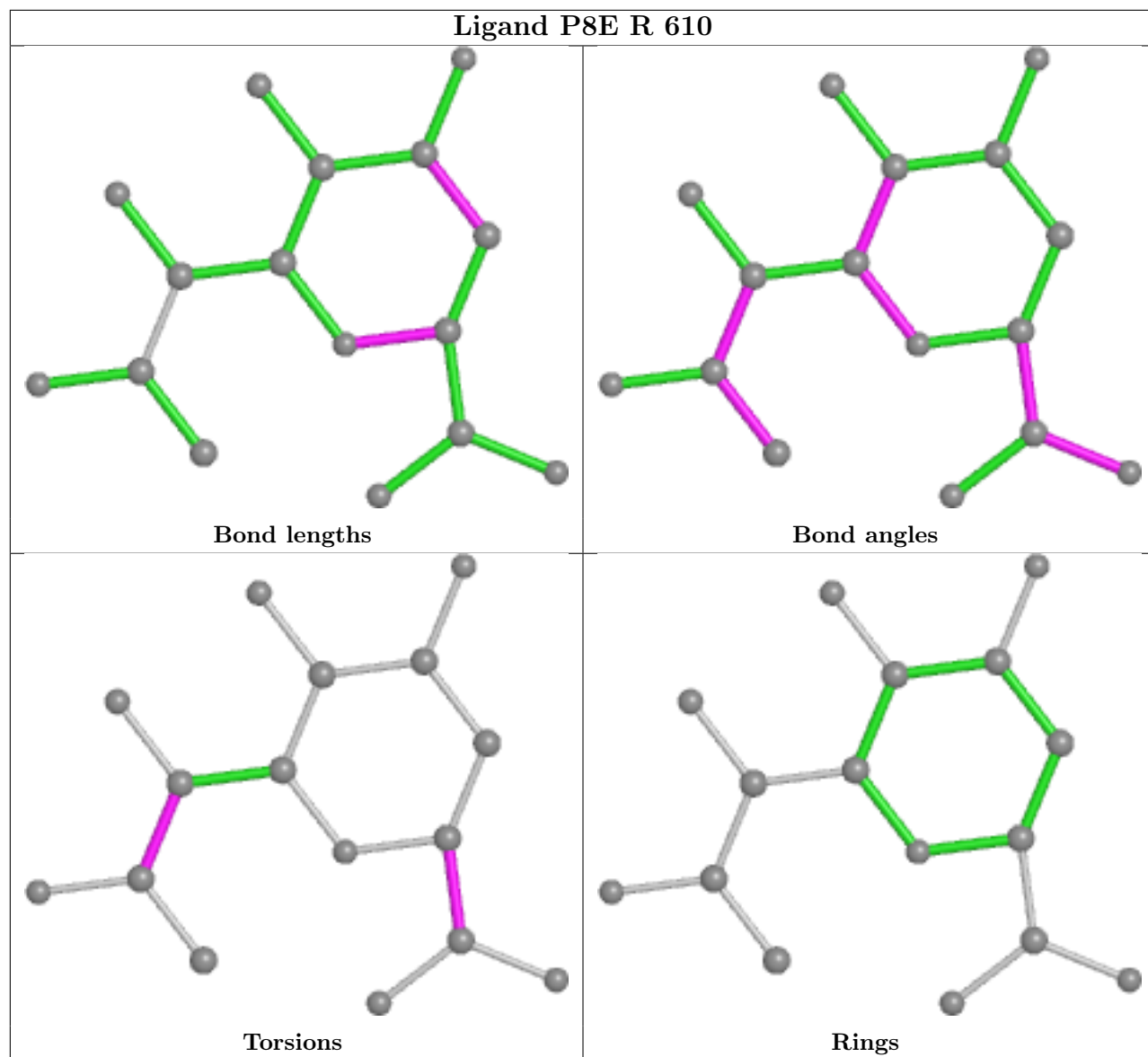
Rings

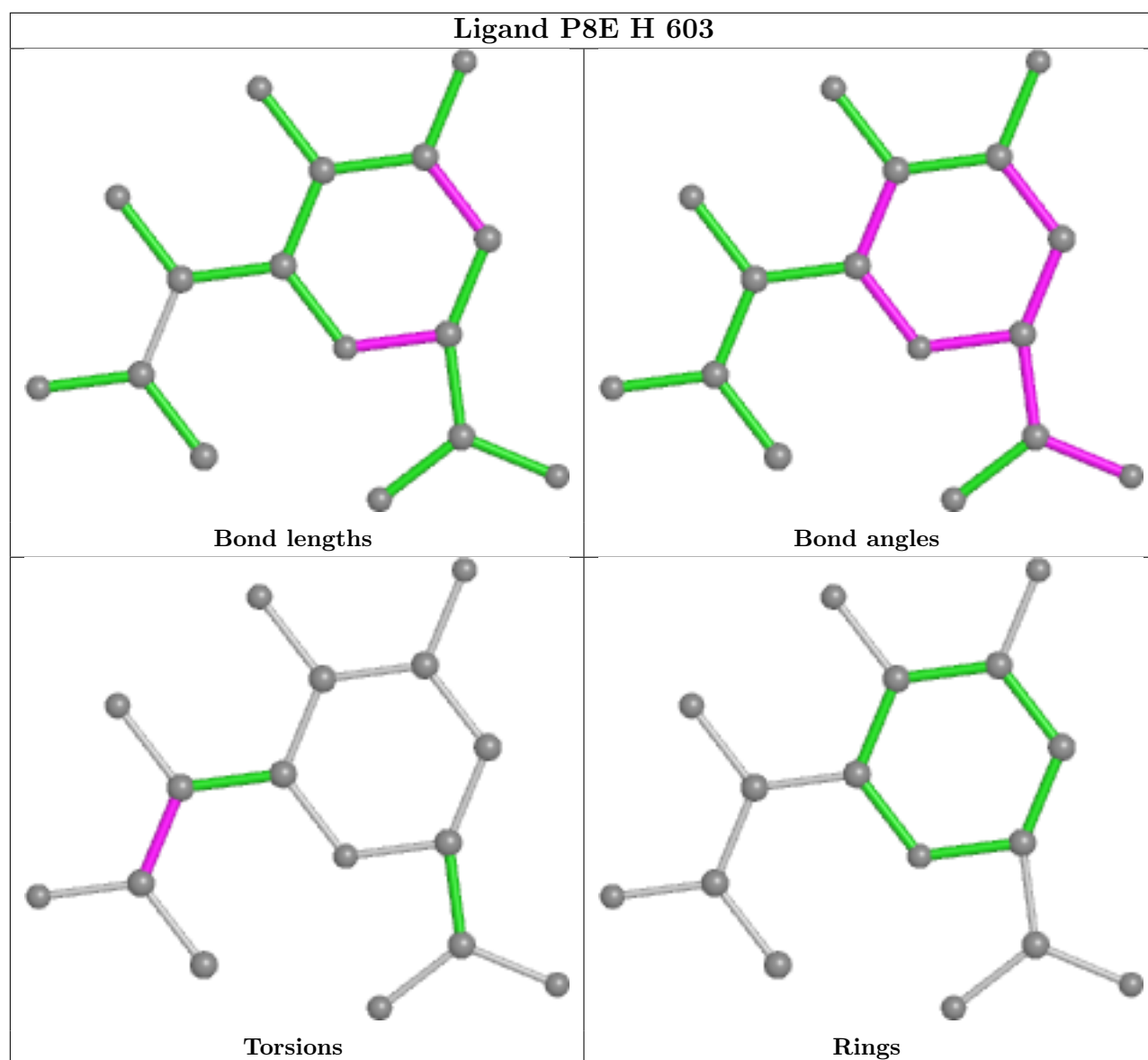


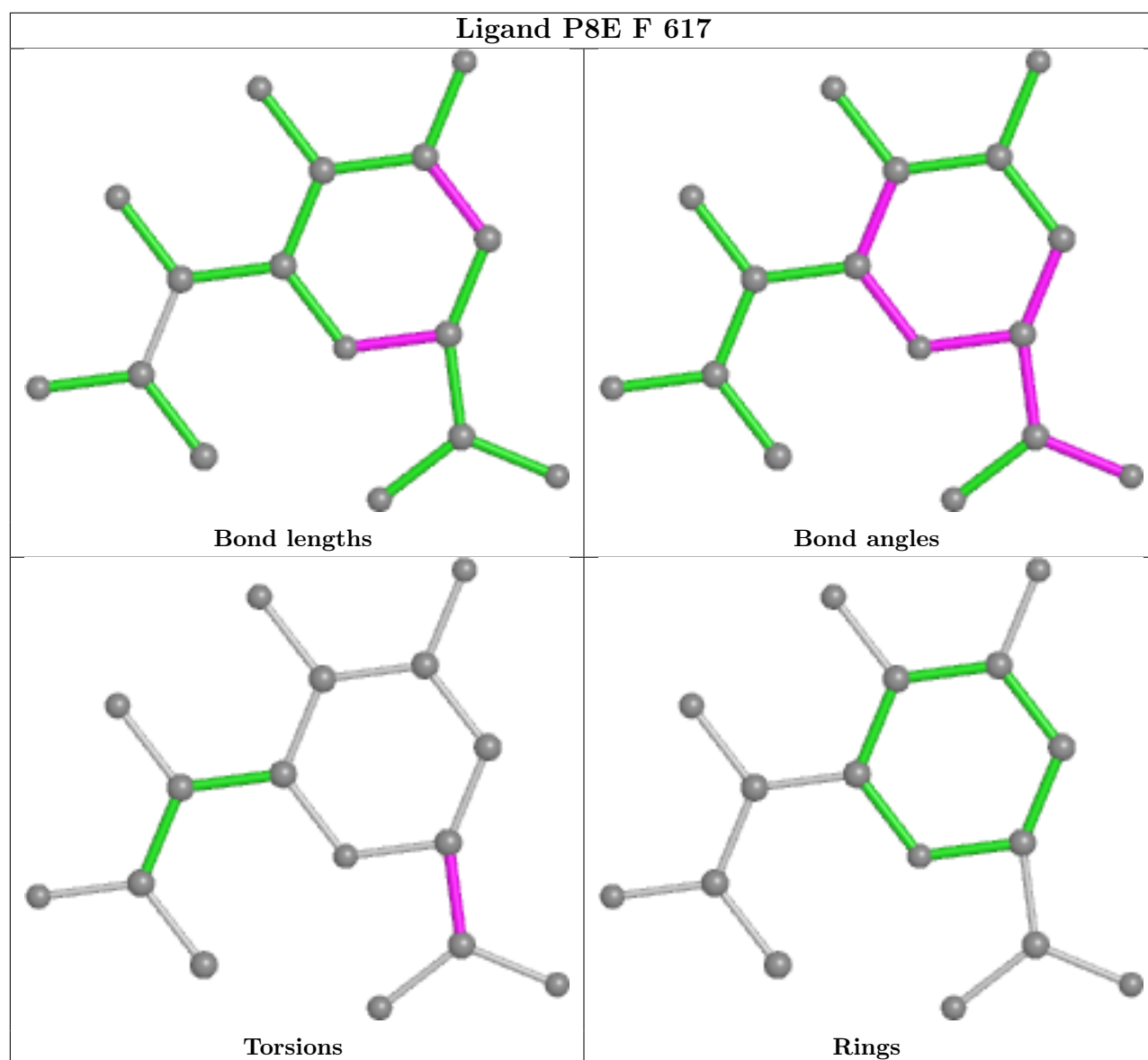


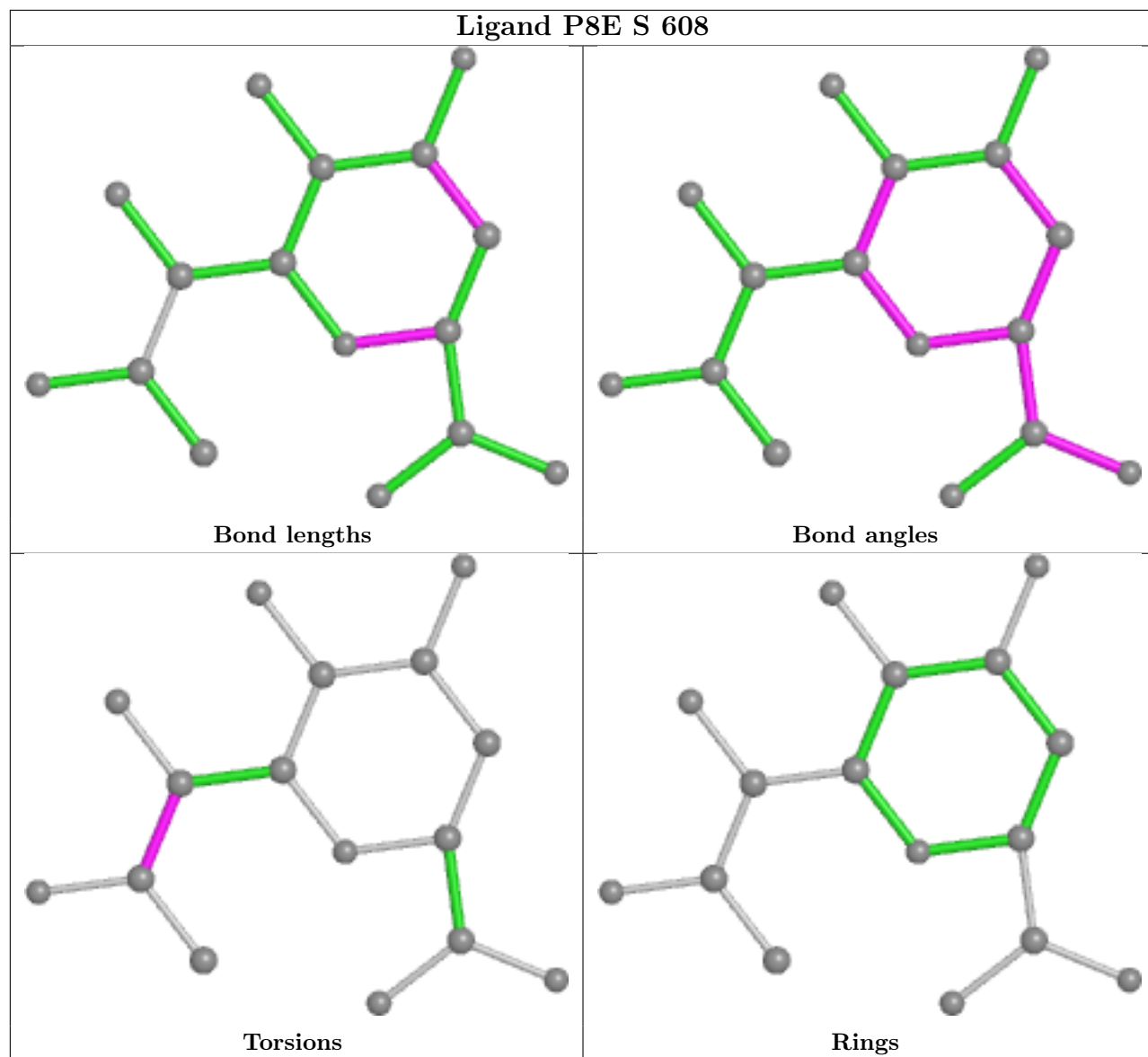


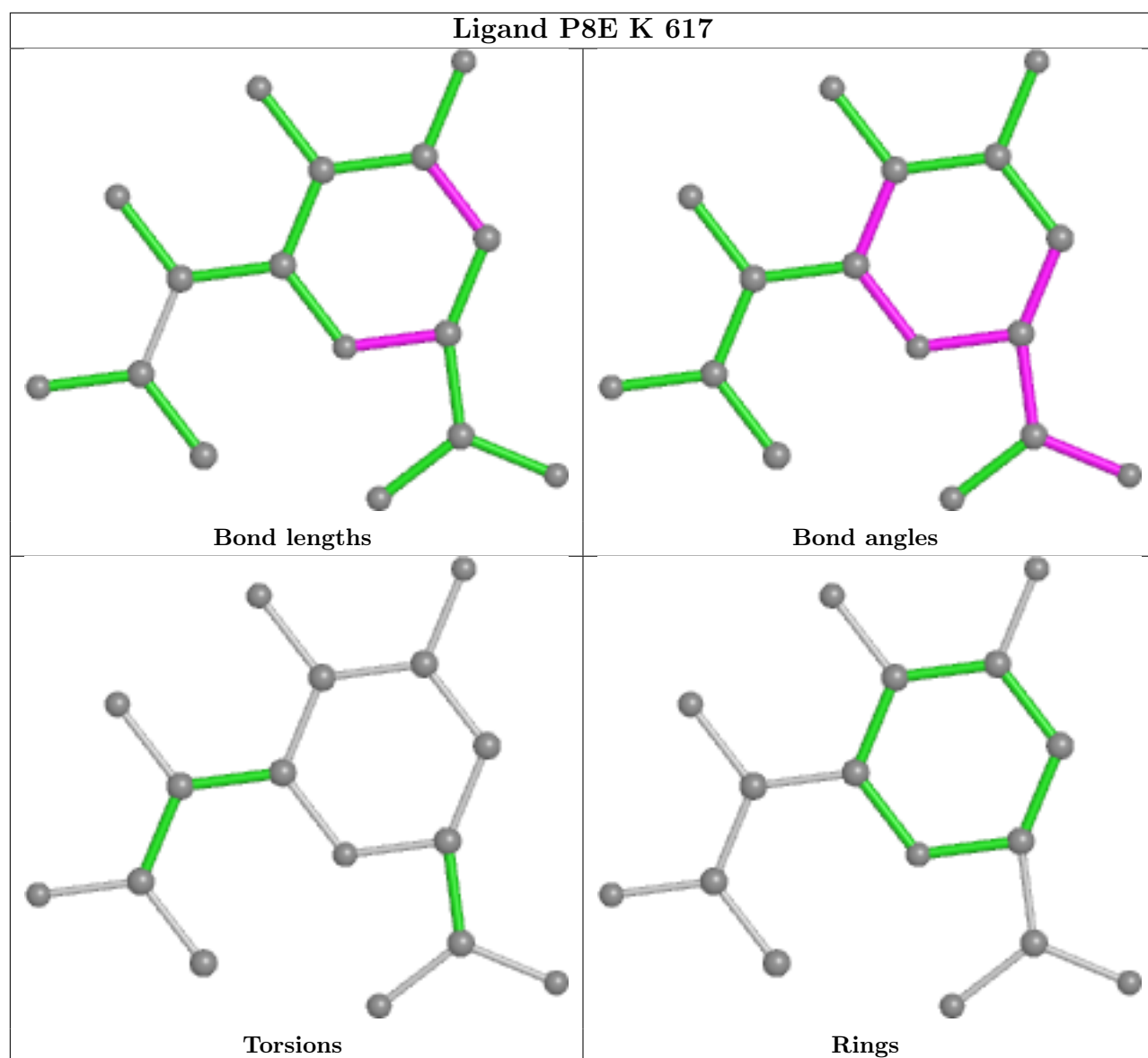


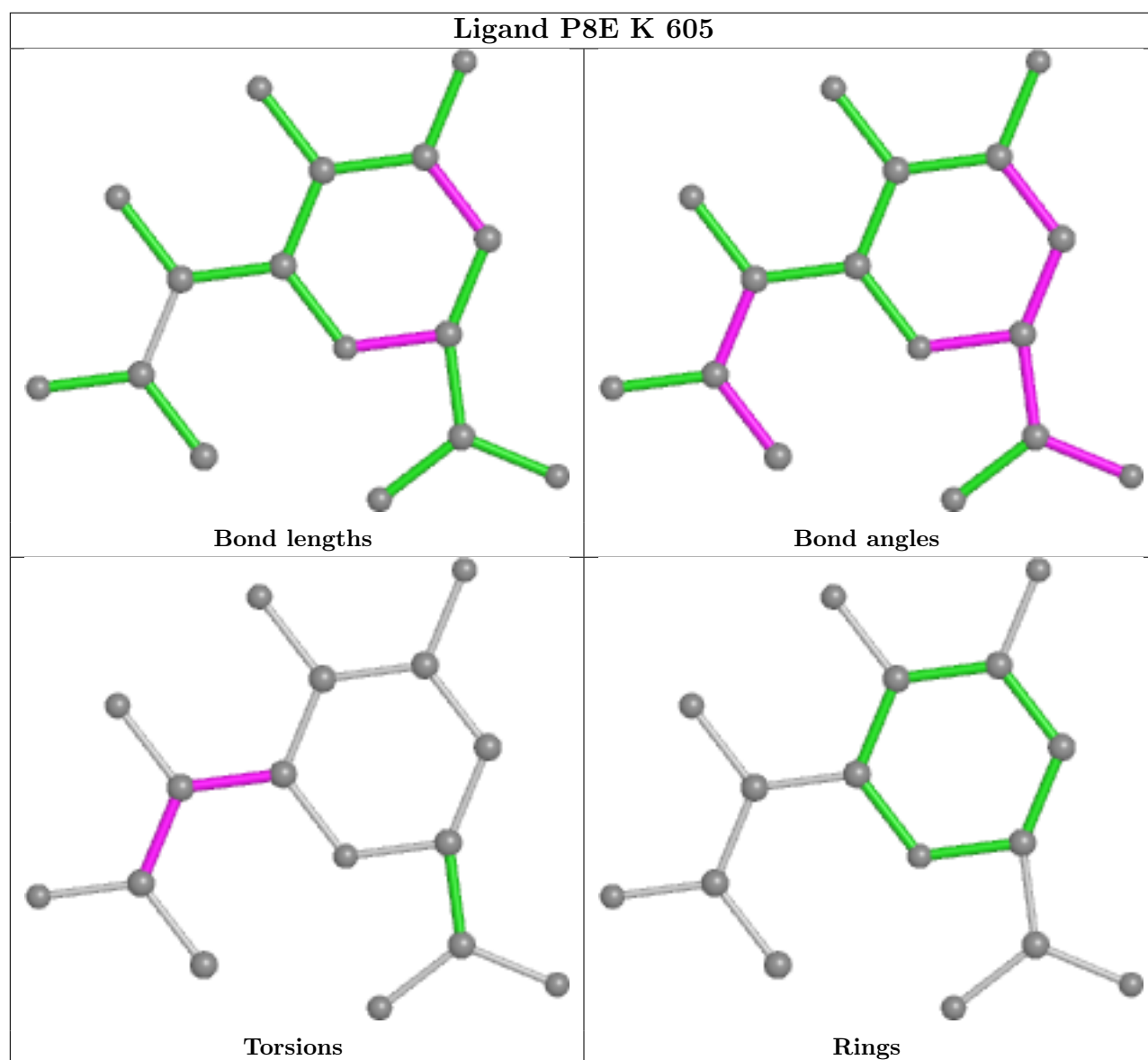




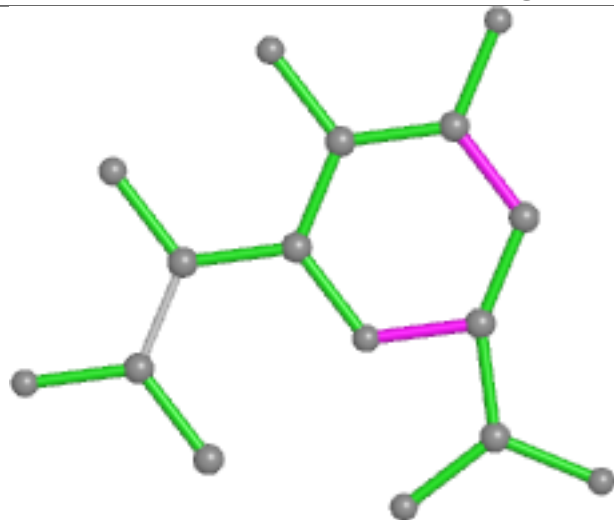




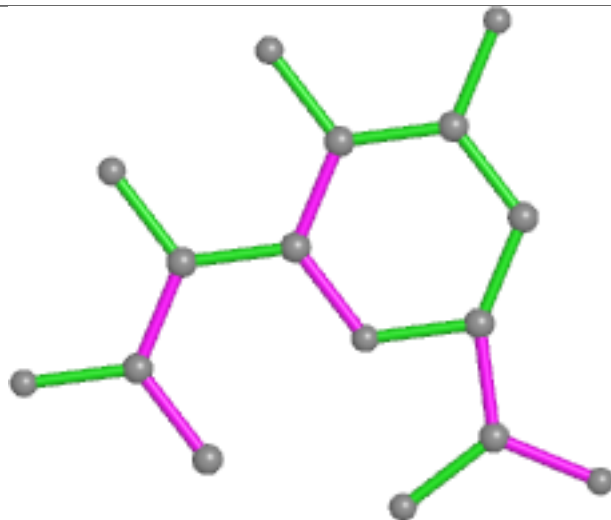




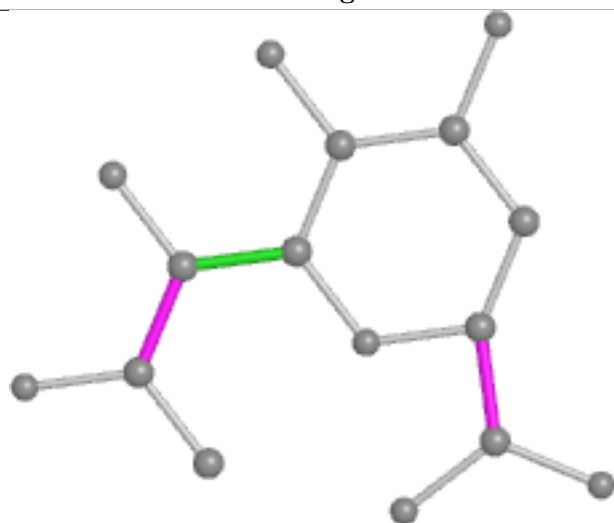
Ligand P8E A 611



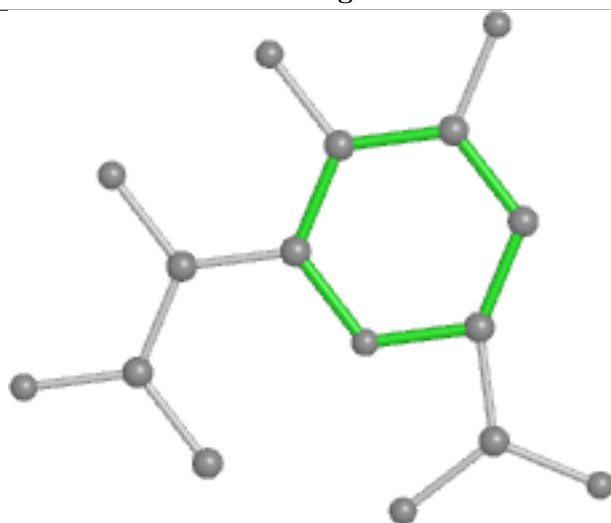
Bond lengths



Bond angles

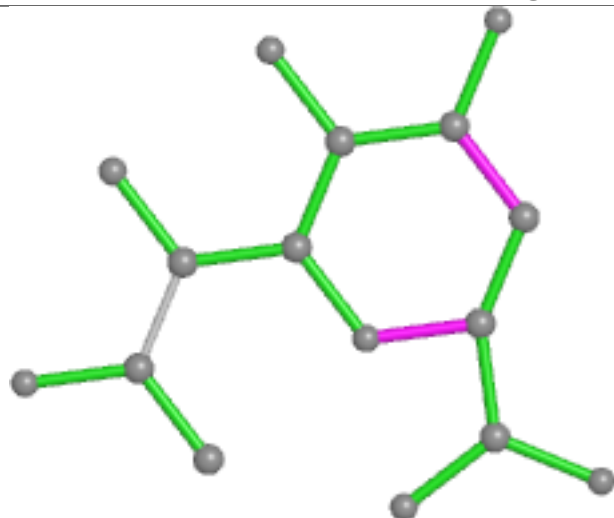


Torsions

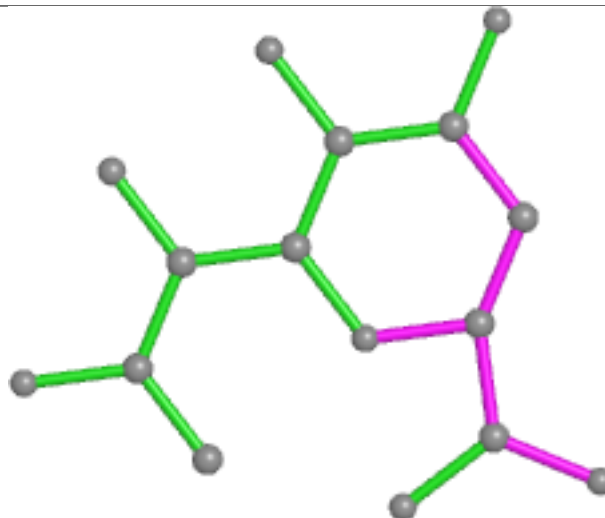


Rings

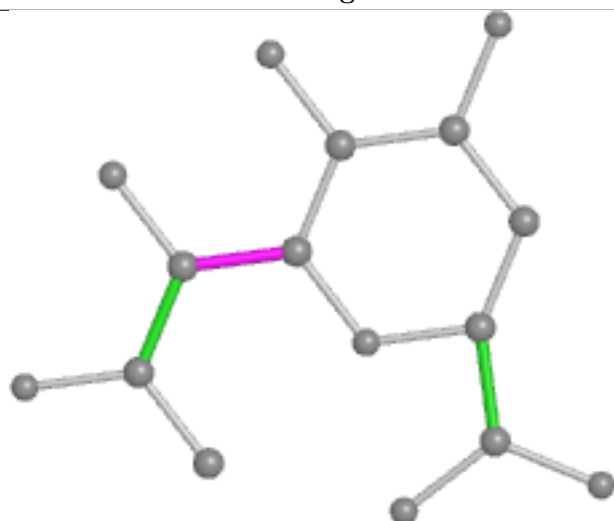
Ligand P8E I 605



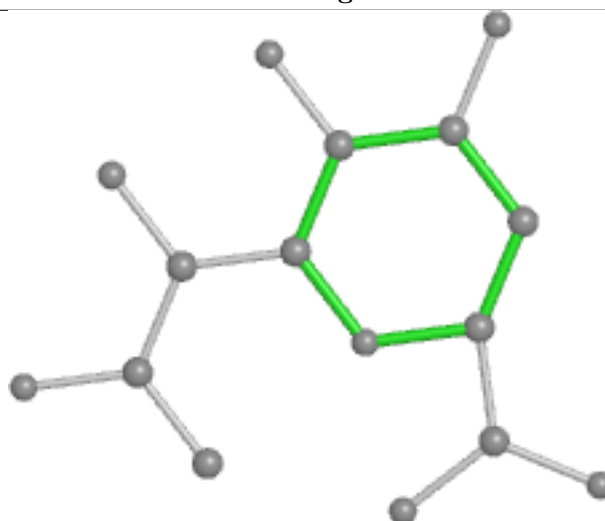
Bond lengths



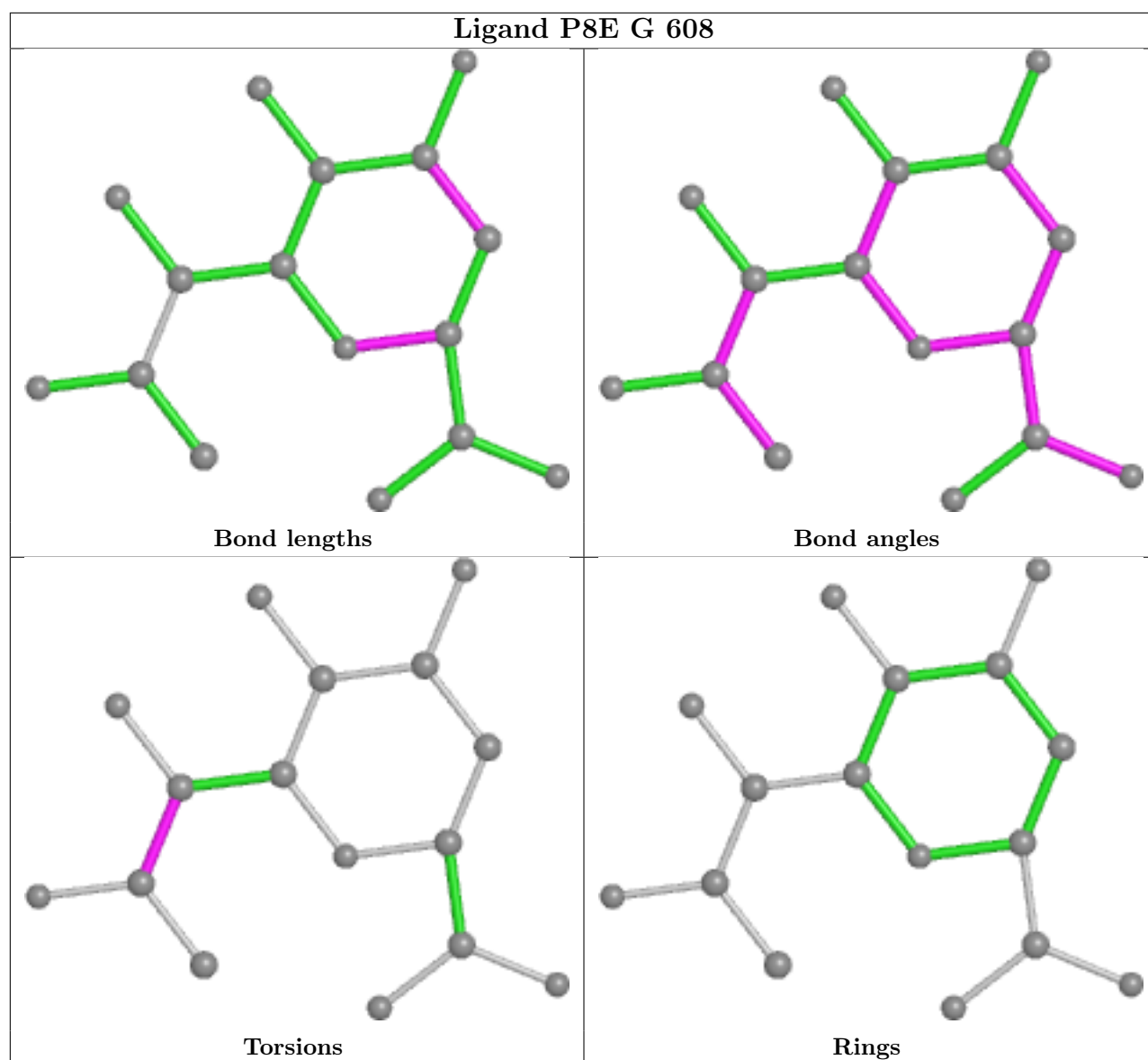
Bond angles

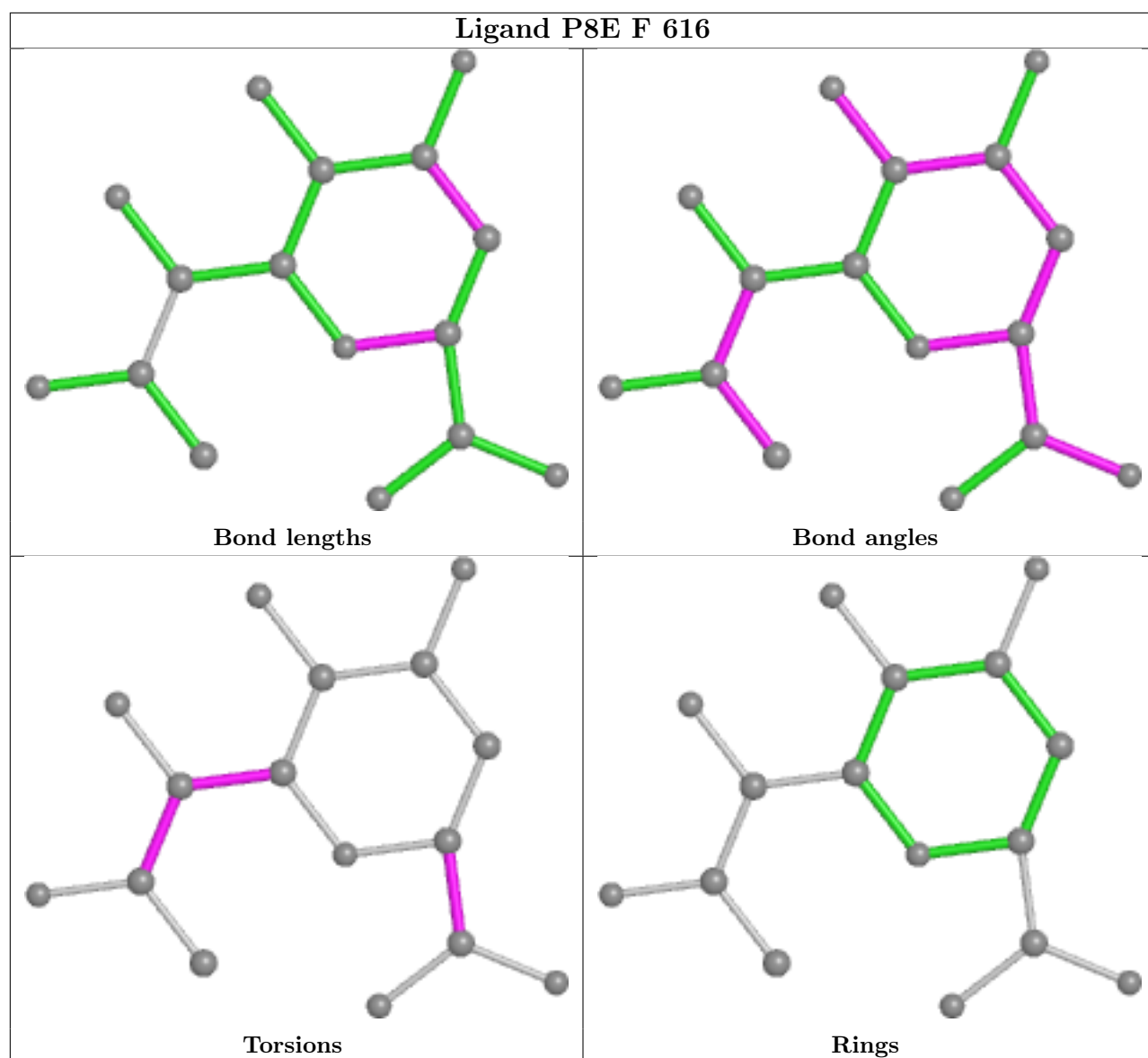


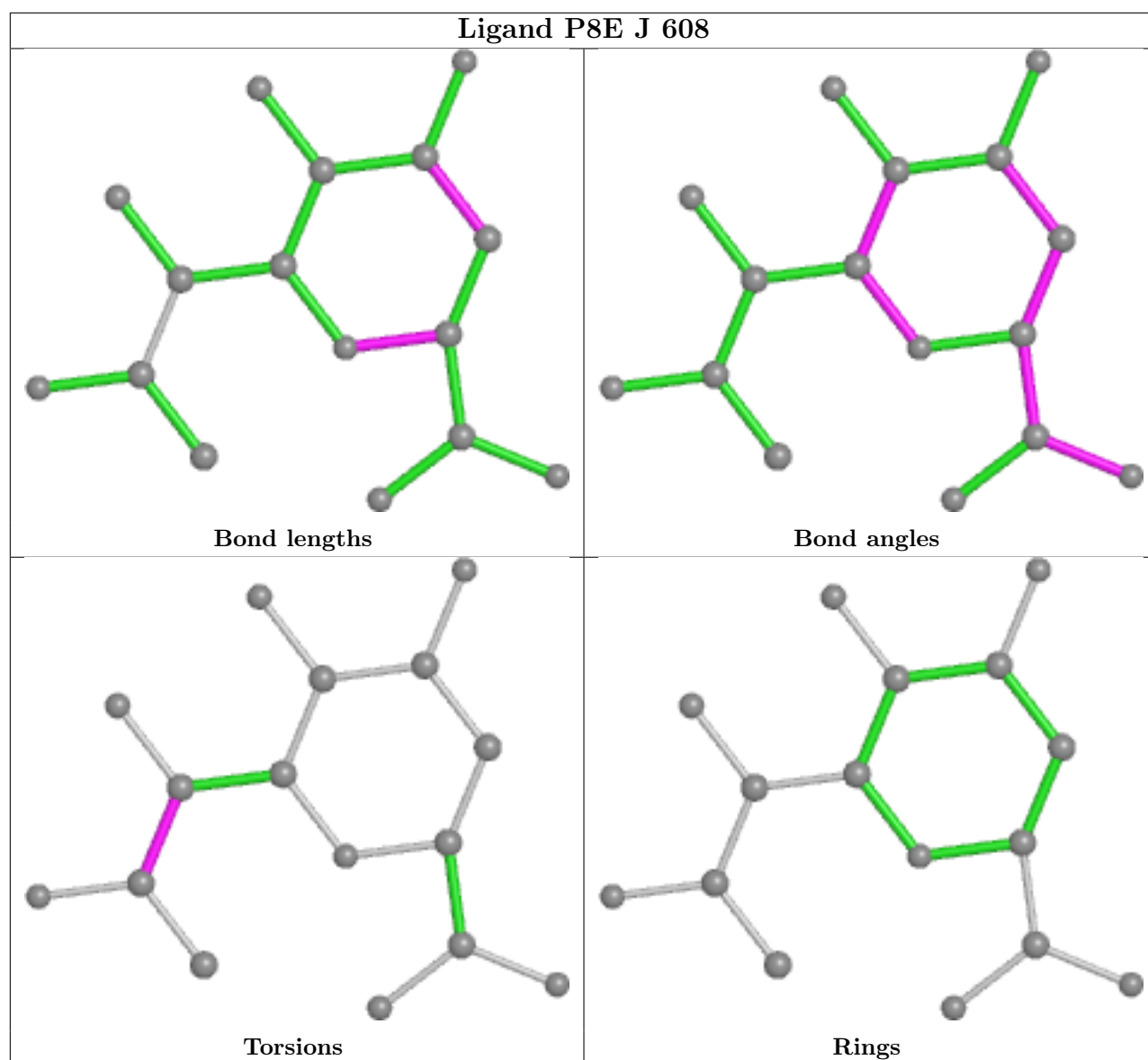
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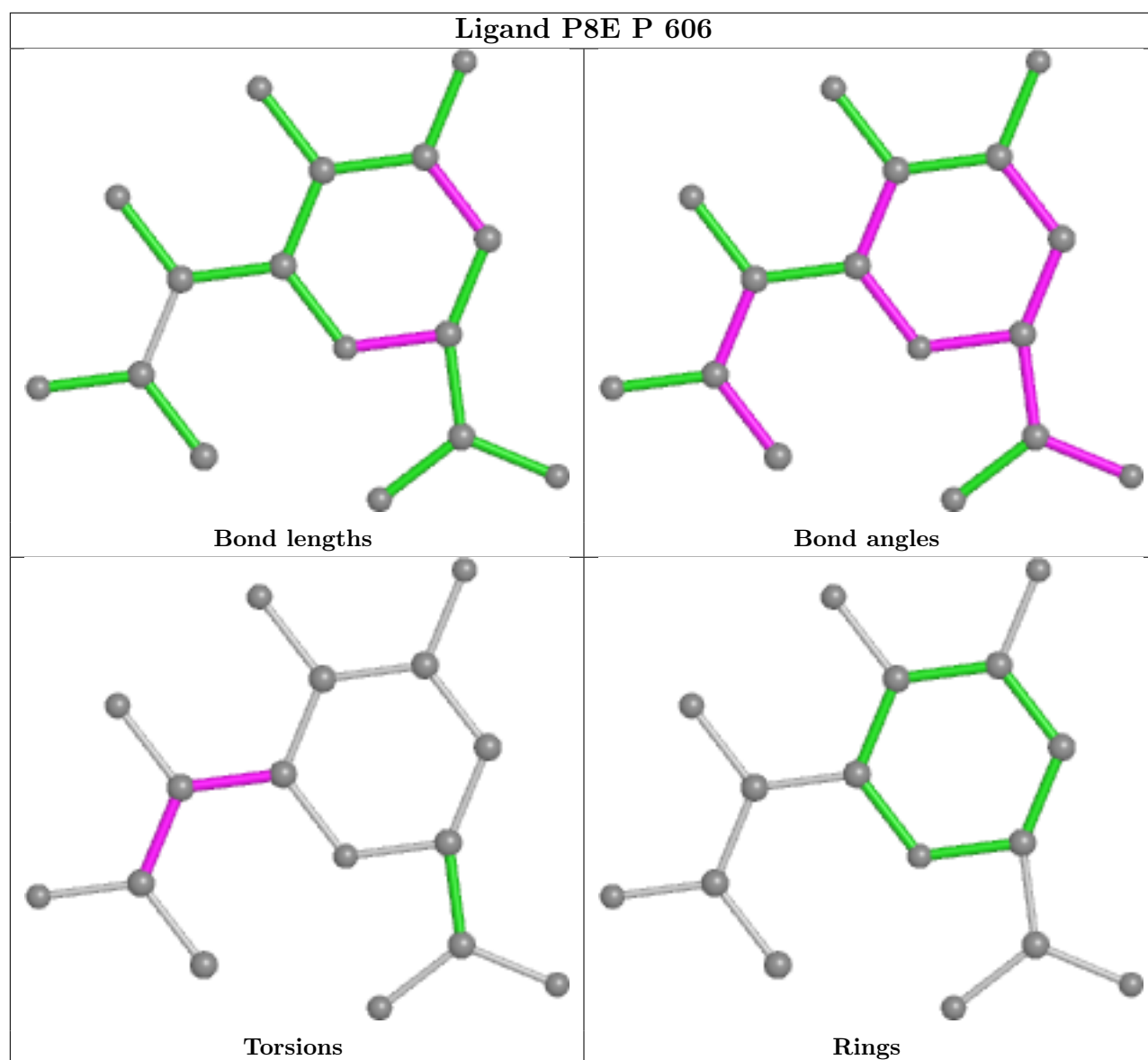


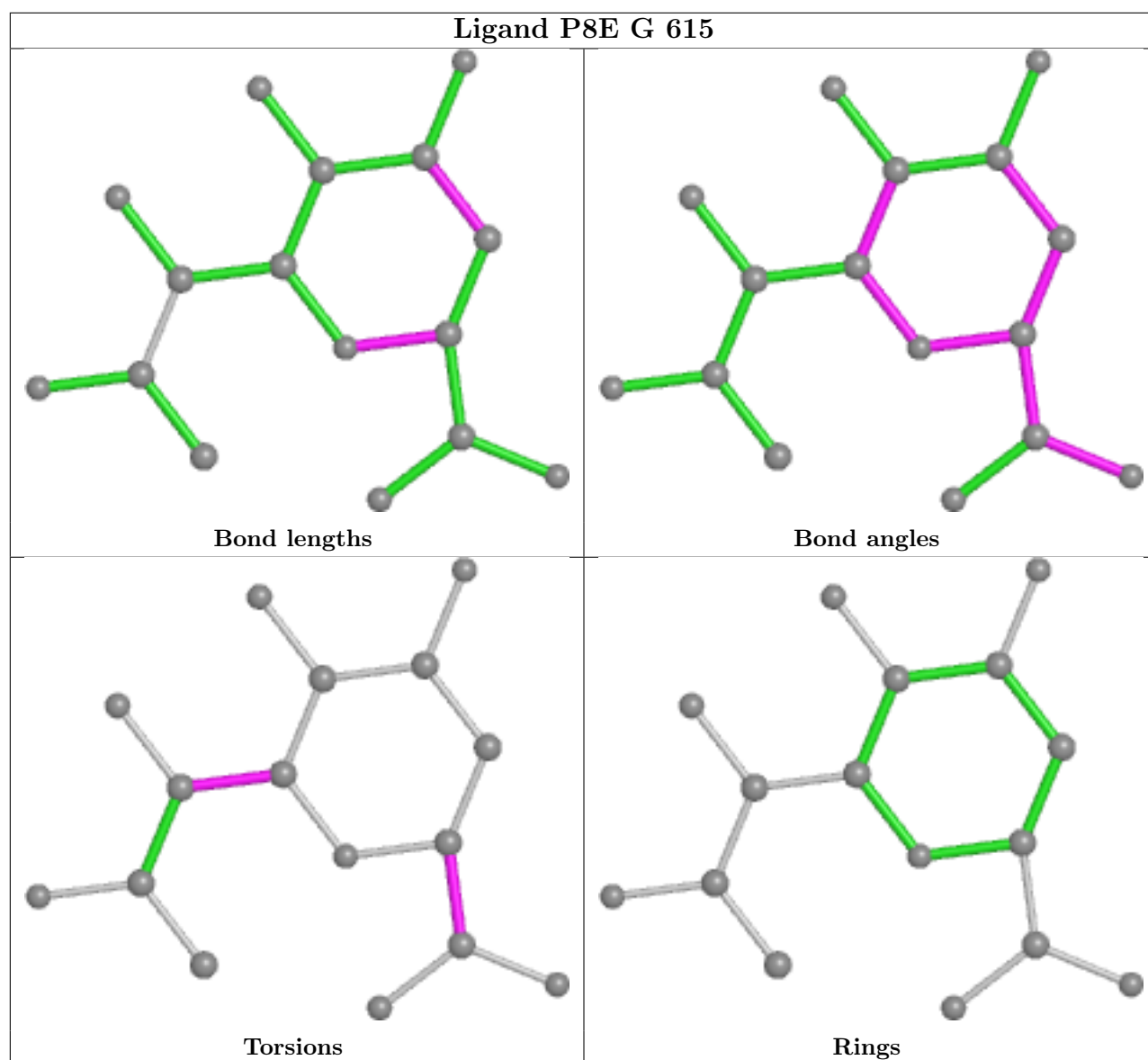
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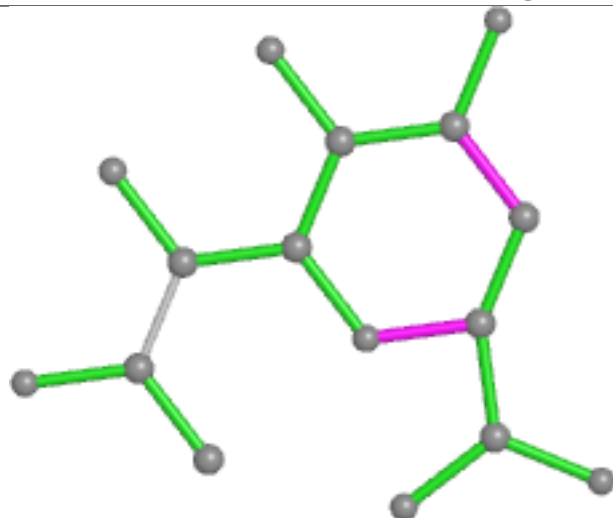




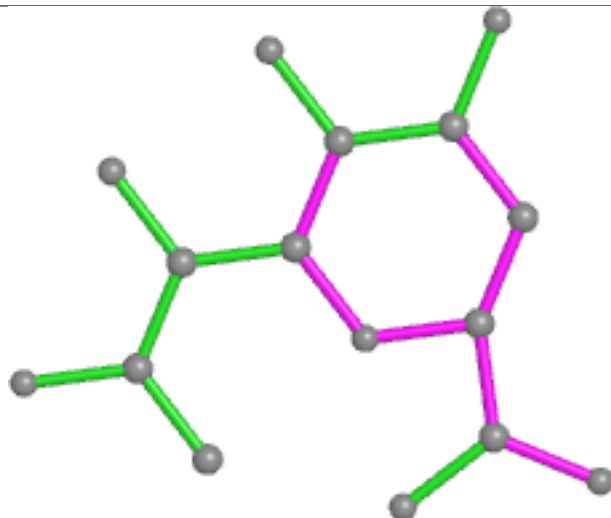




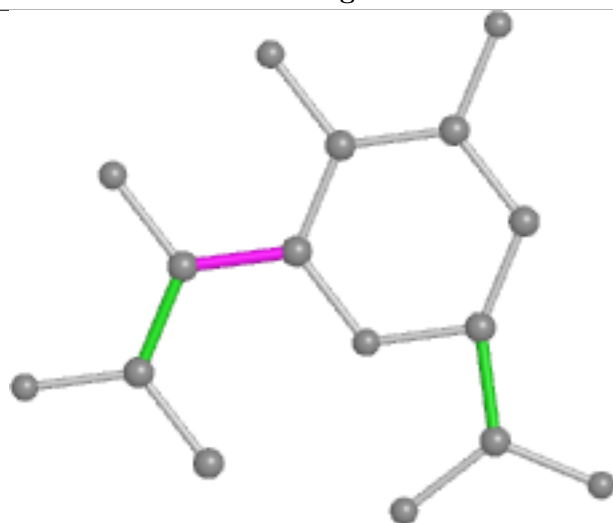
Ligand P8E P 615



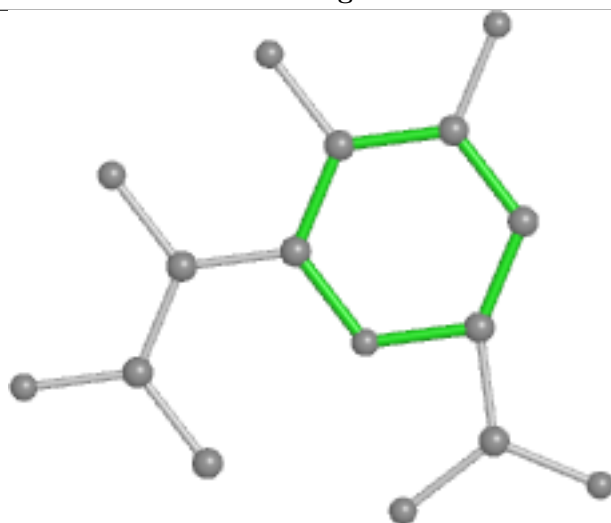
Bond lengths



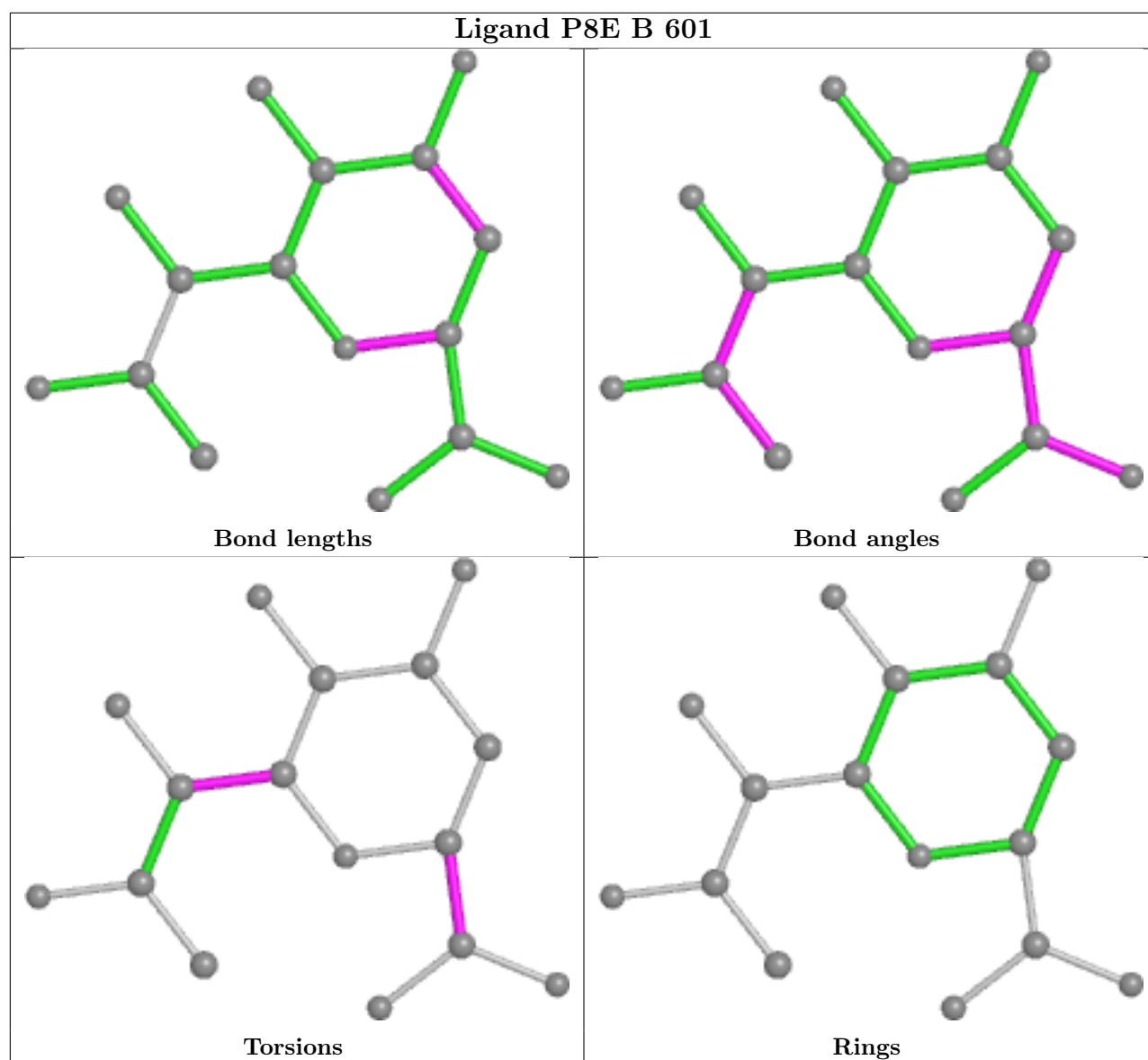
Bond angles

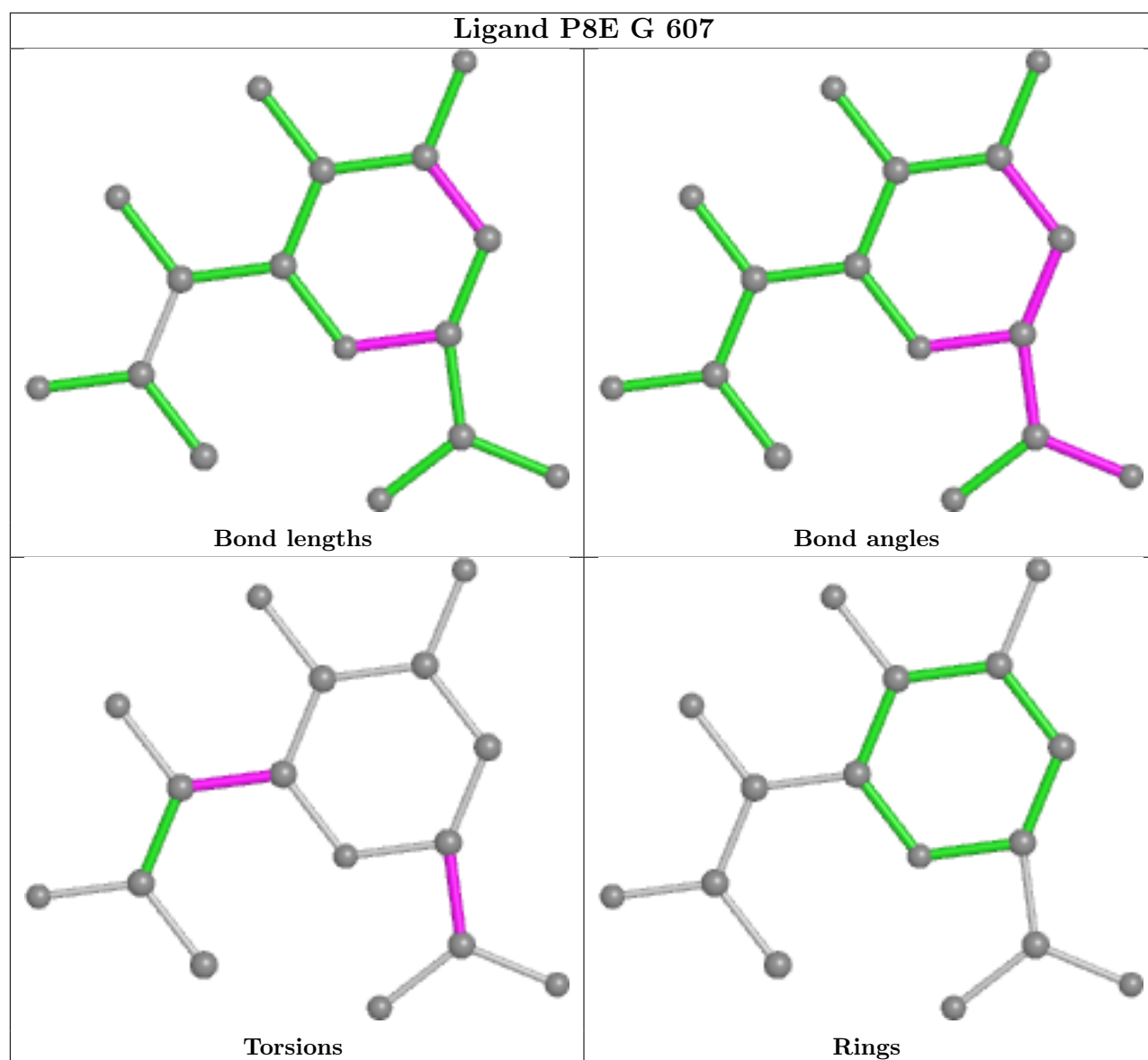


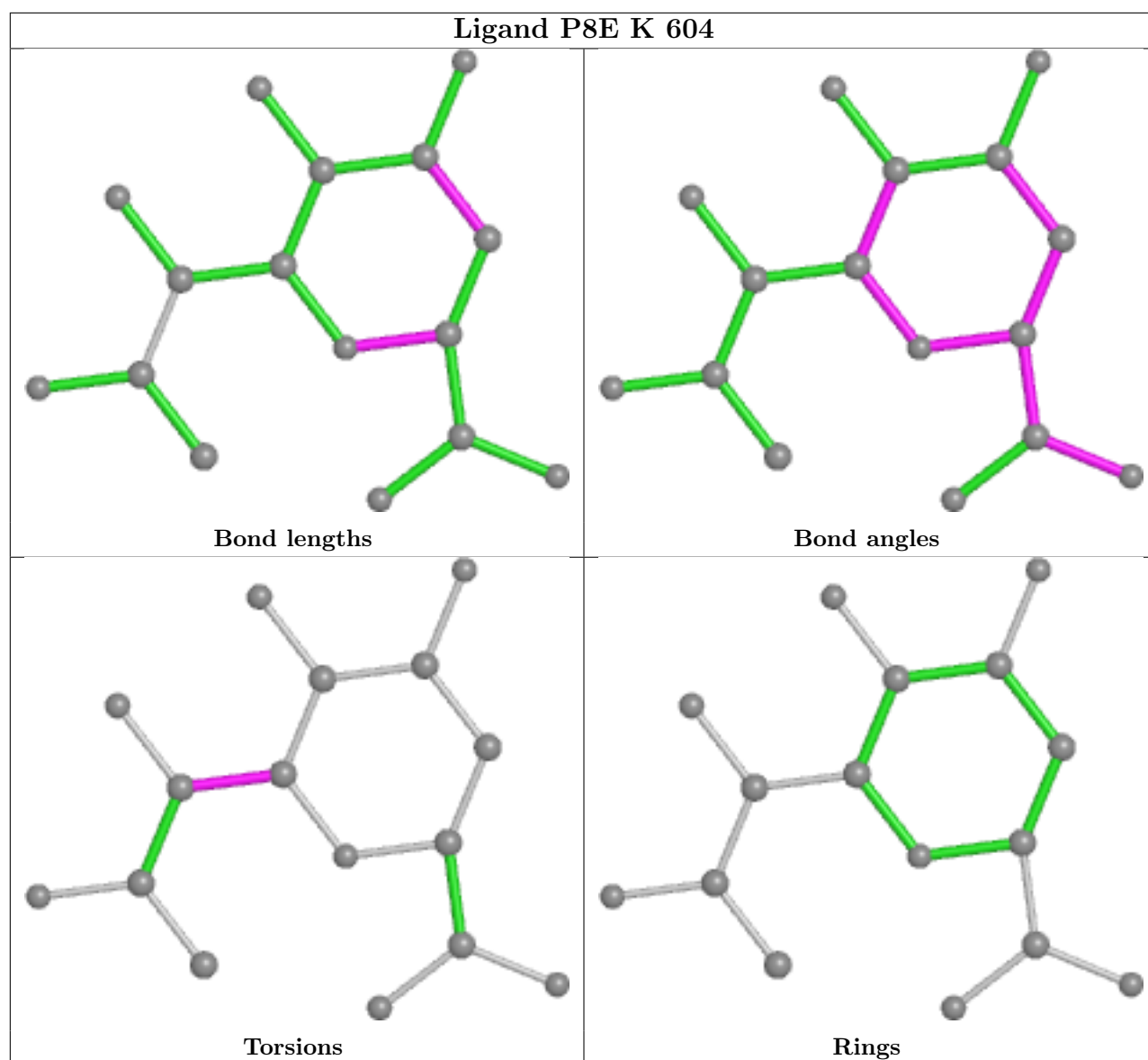
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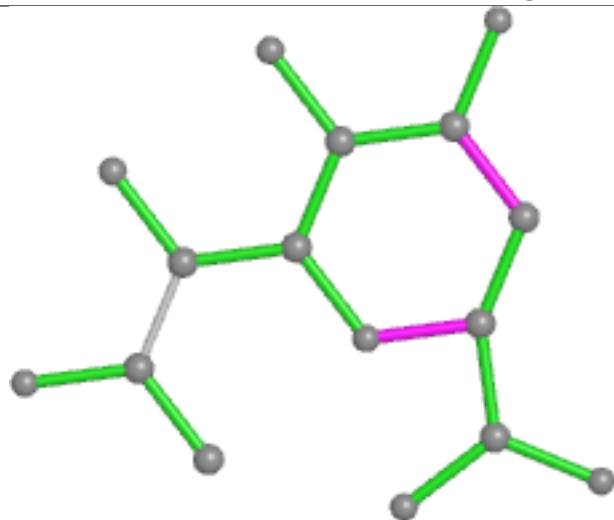
Rings



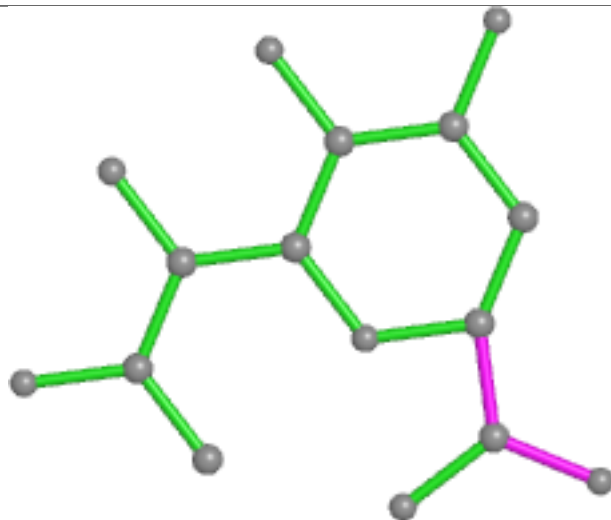




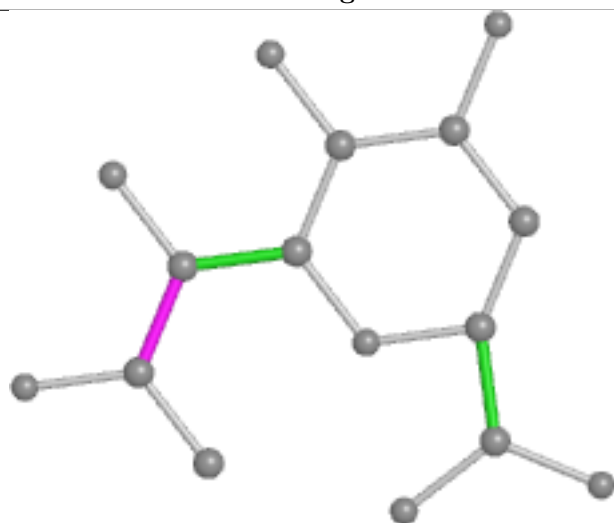
Ligand P8E L 608



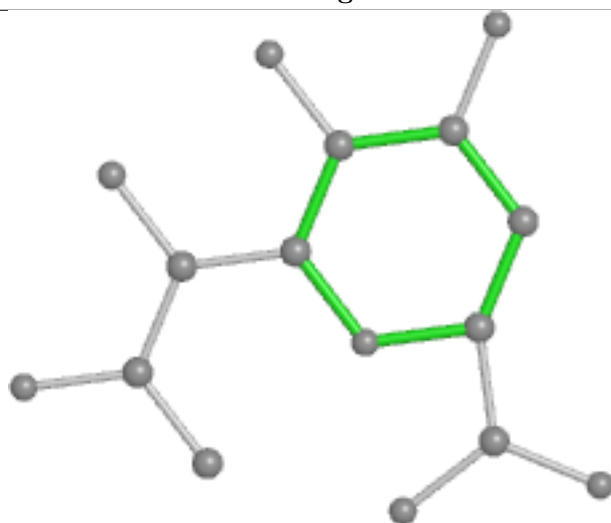
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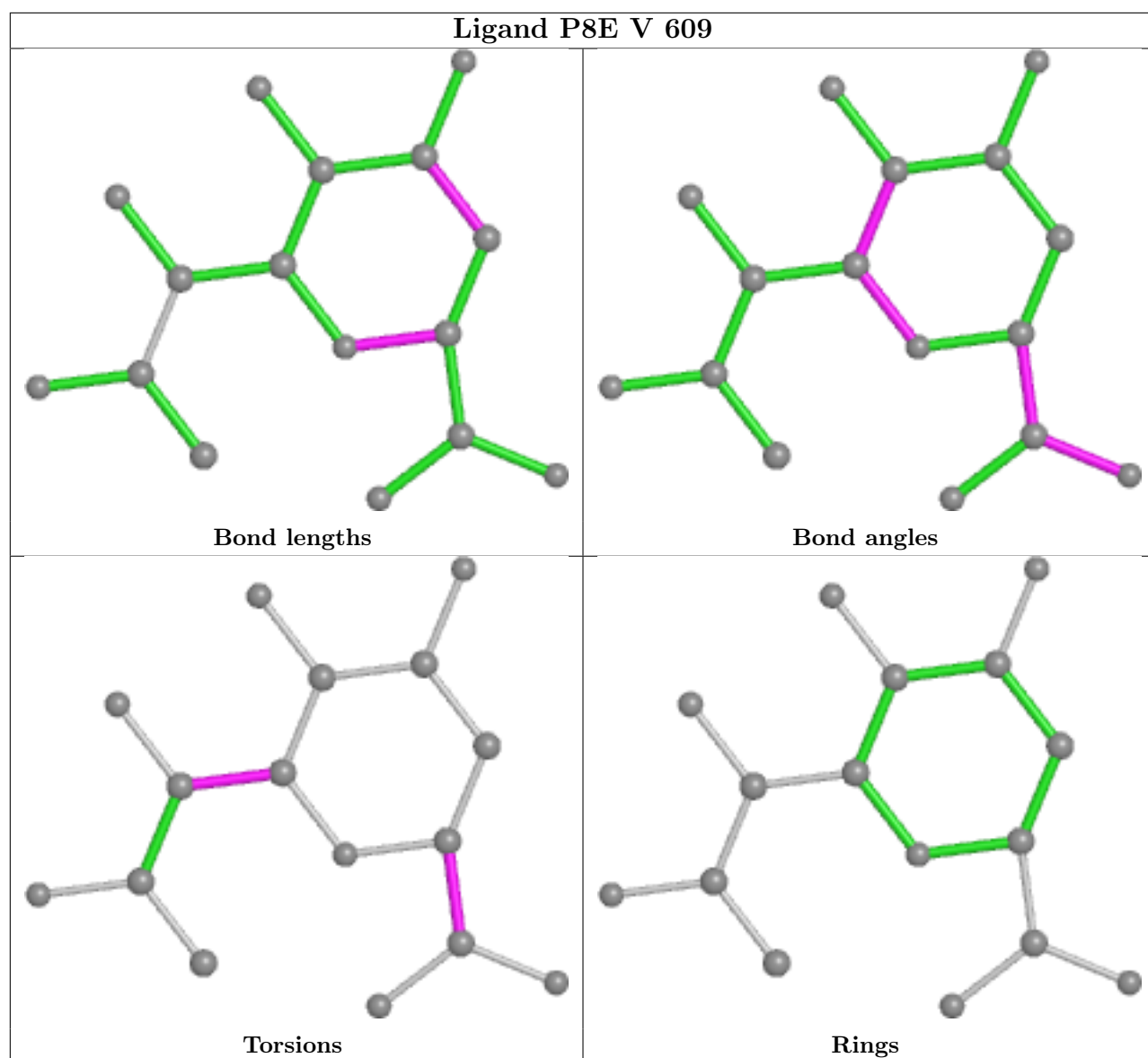
Bond angles



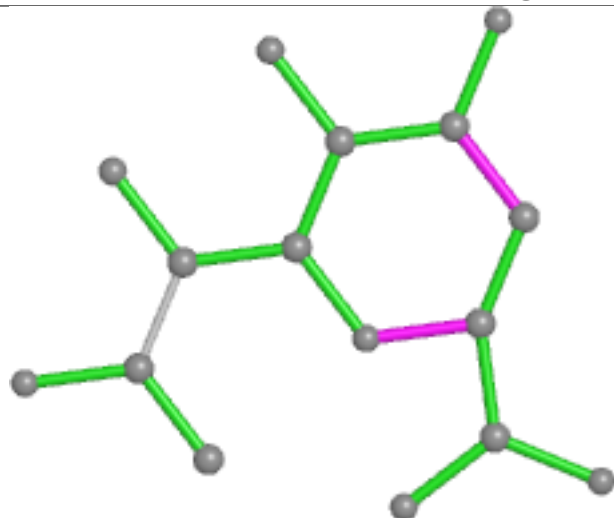
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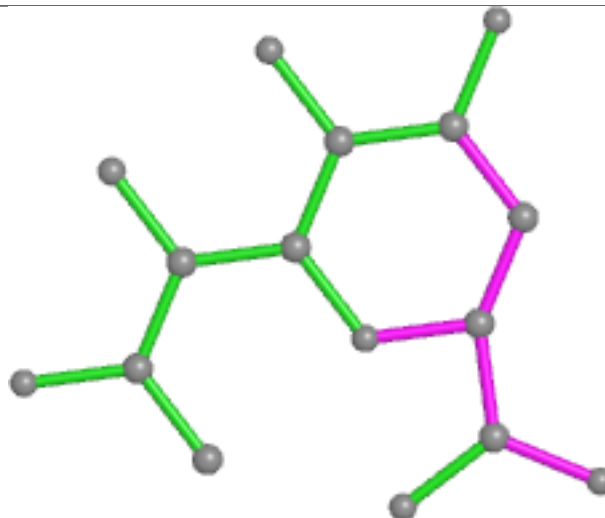
Rings



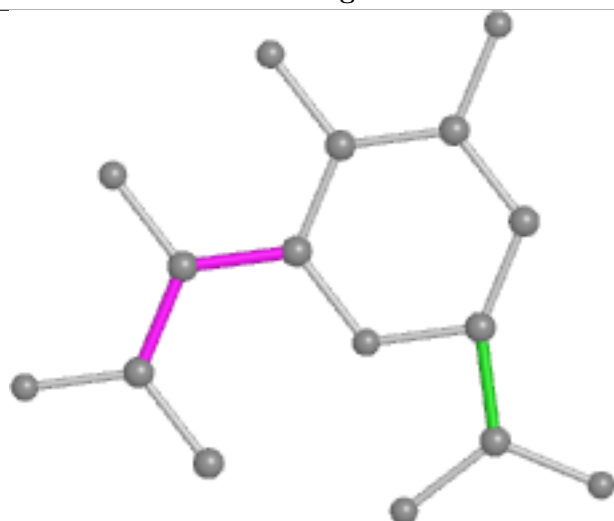
Ligand P8E N 605



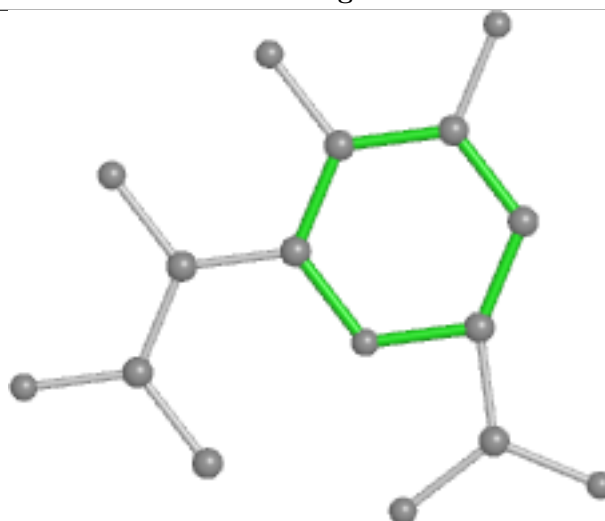
Bond lengths



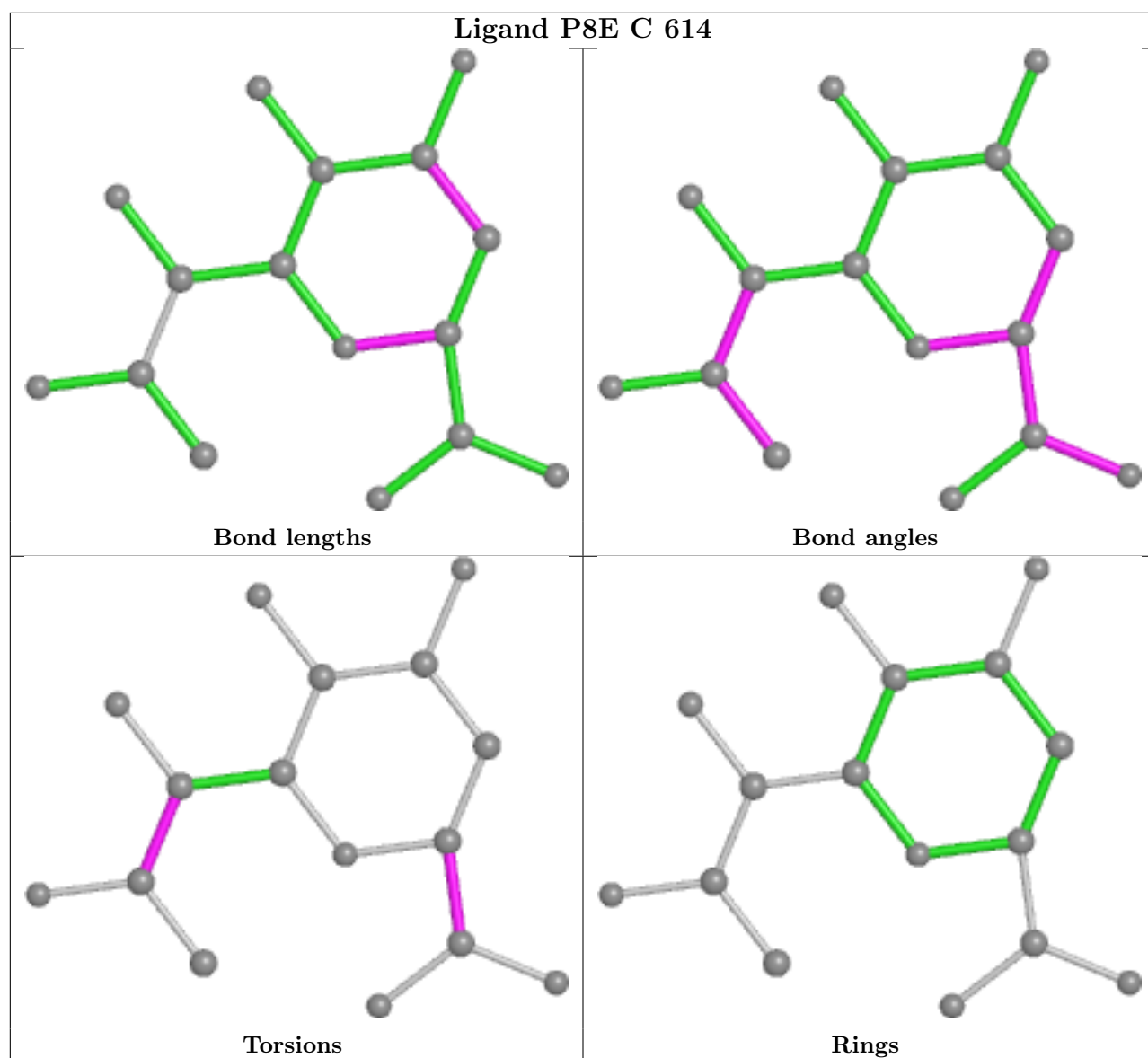
Bond angles

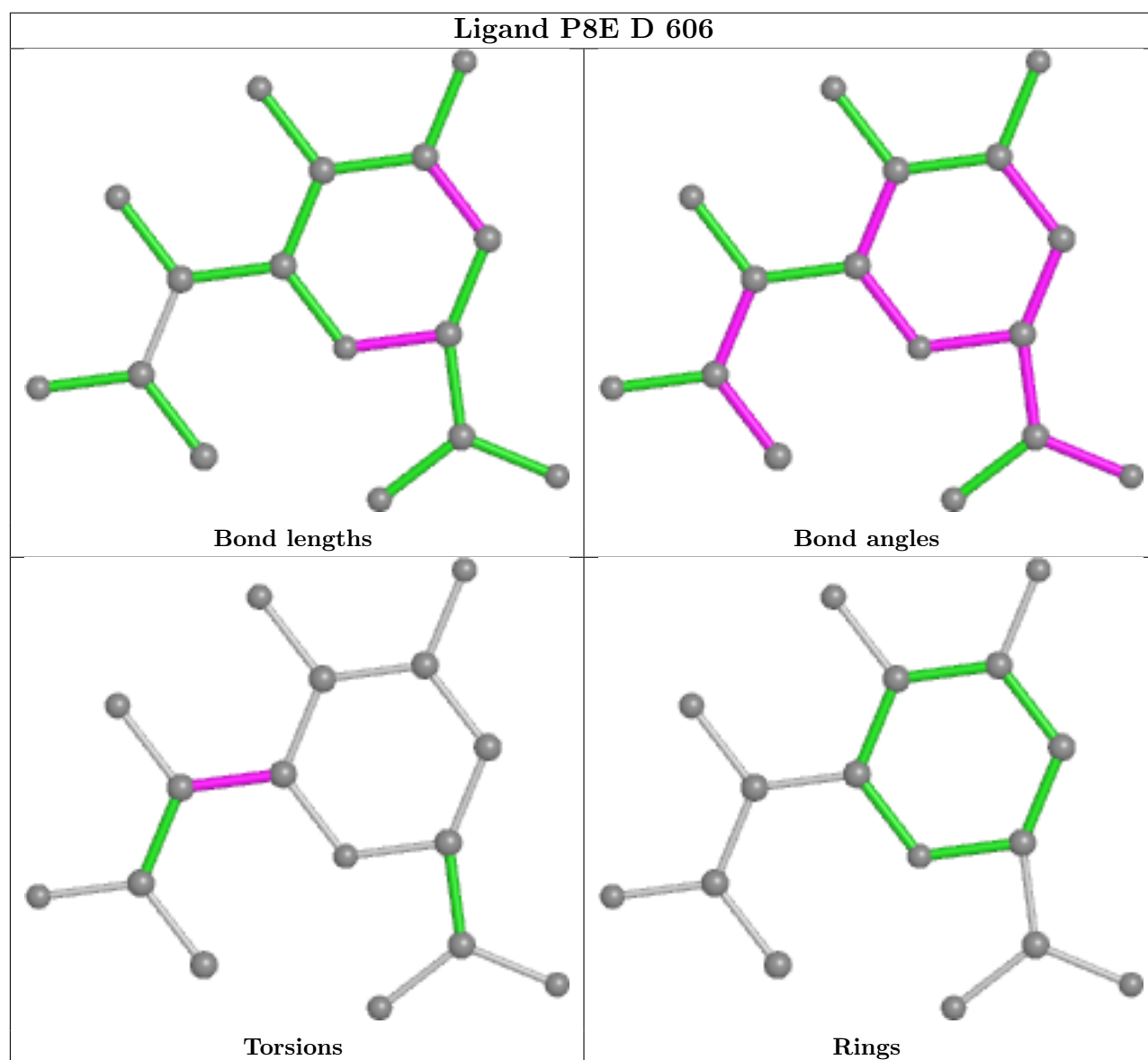


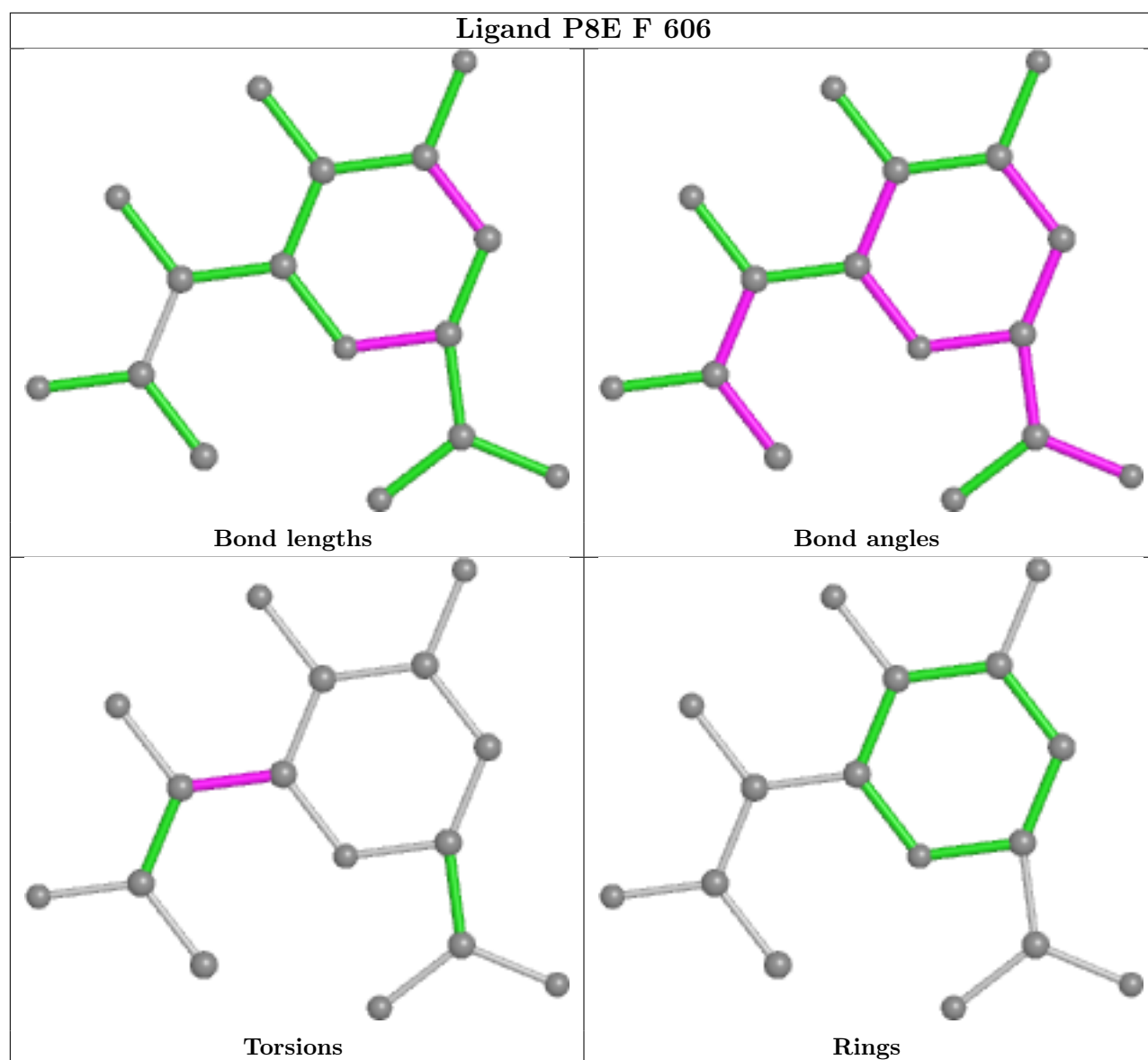
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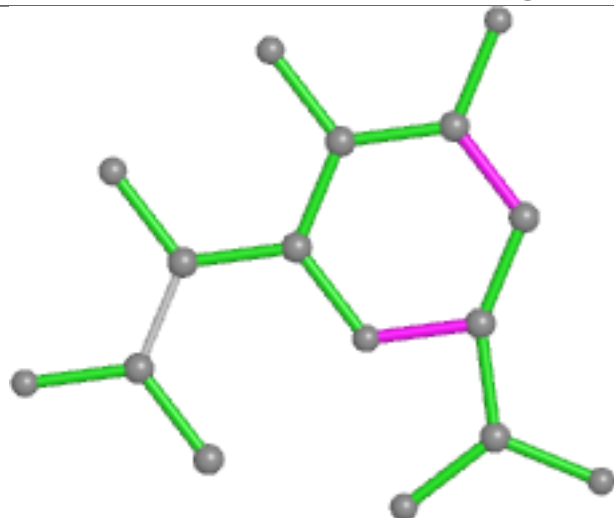
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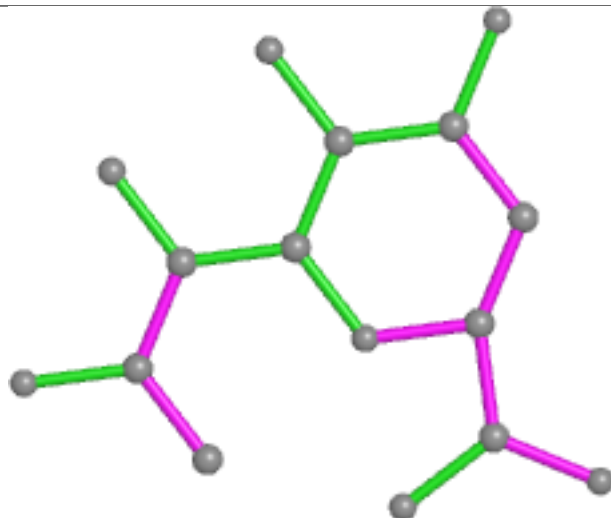




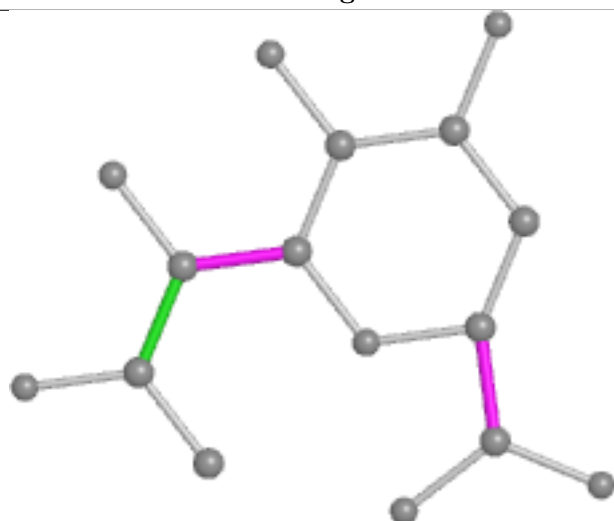
Ligand P8E T 607



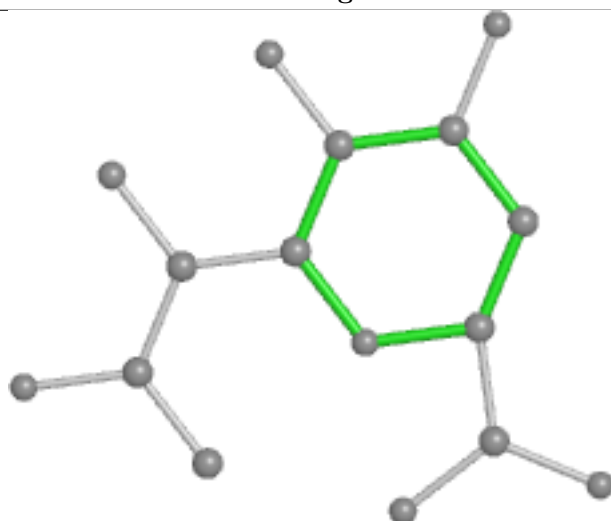
Bond lengths



Bond angles

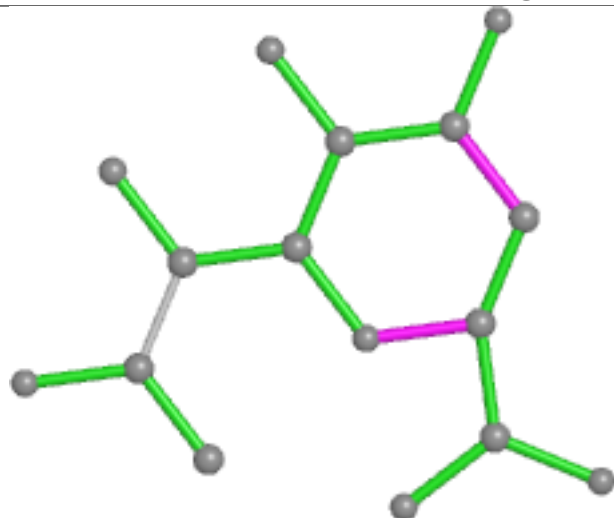


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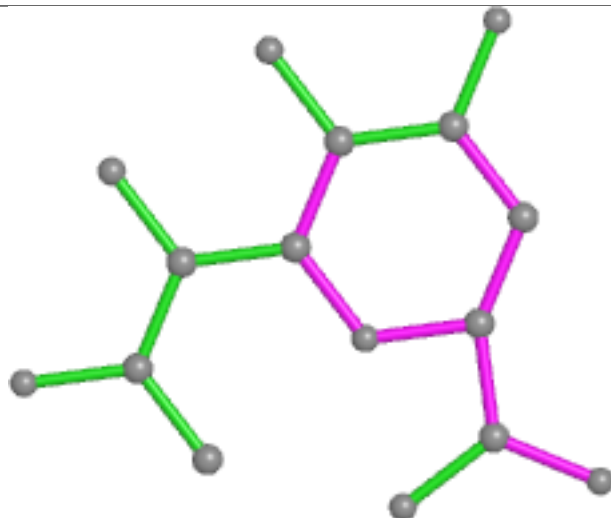


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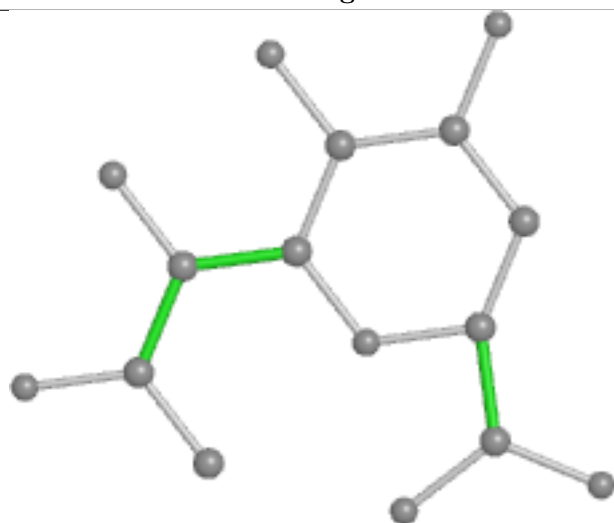
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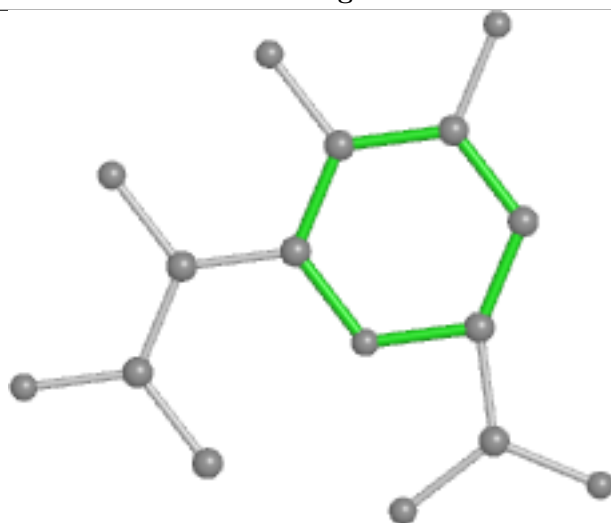
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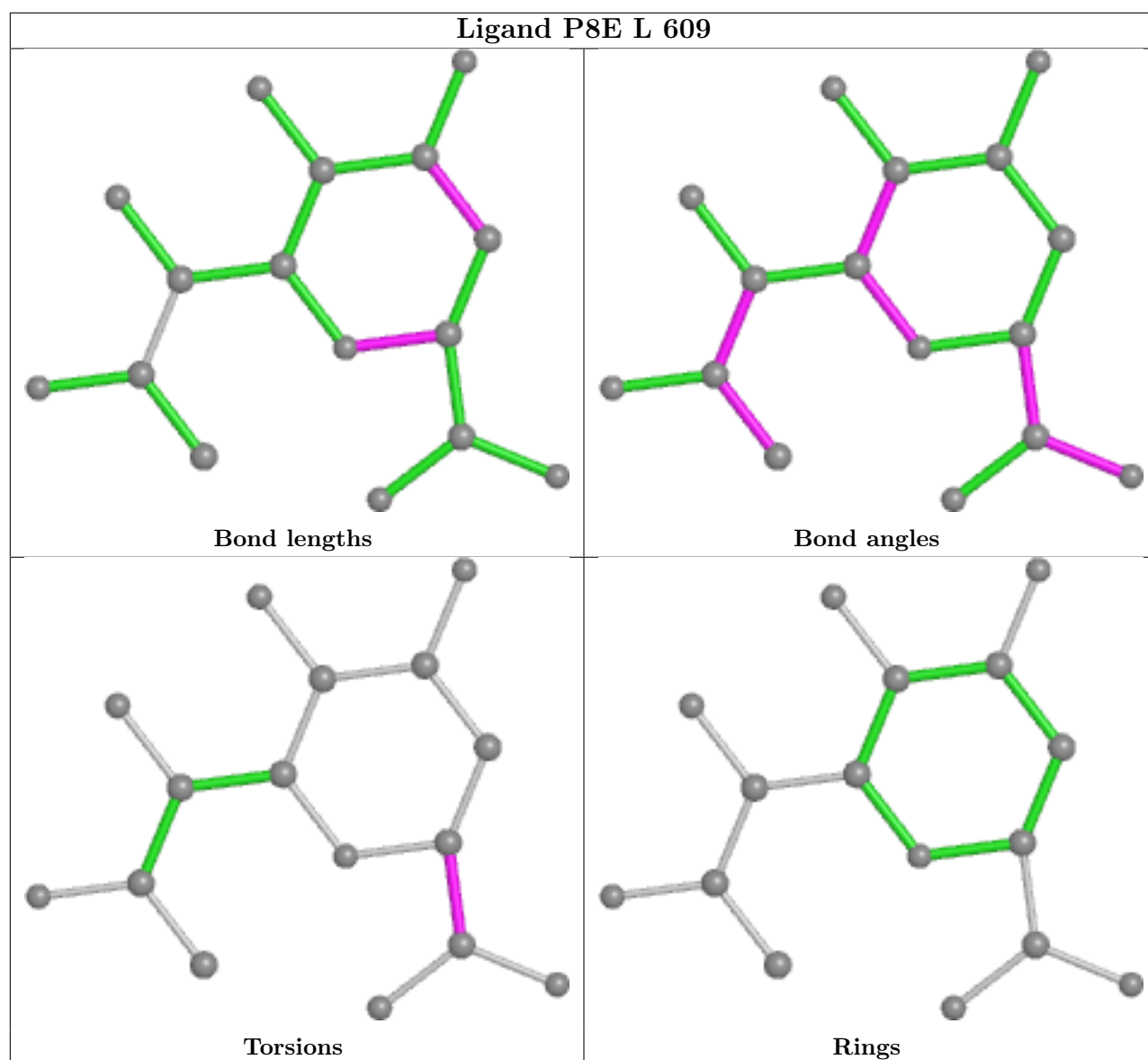
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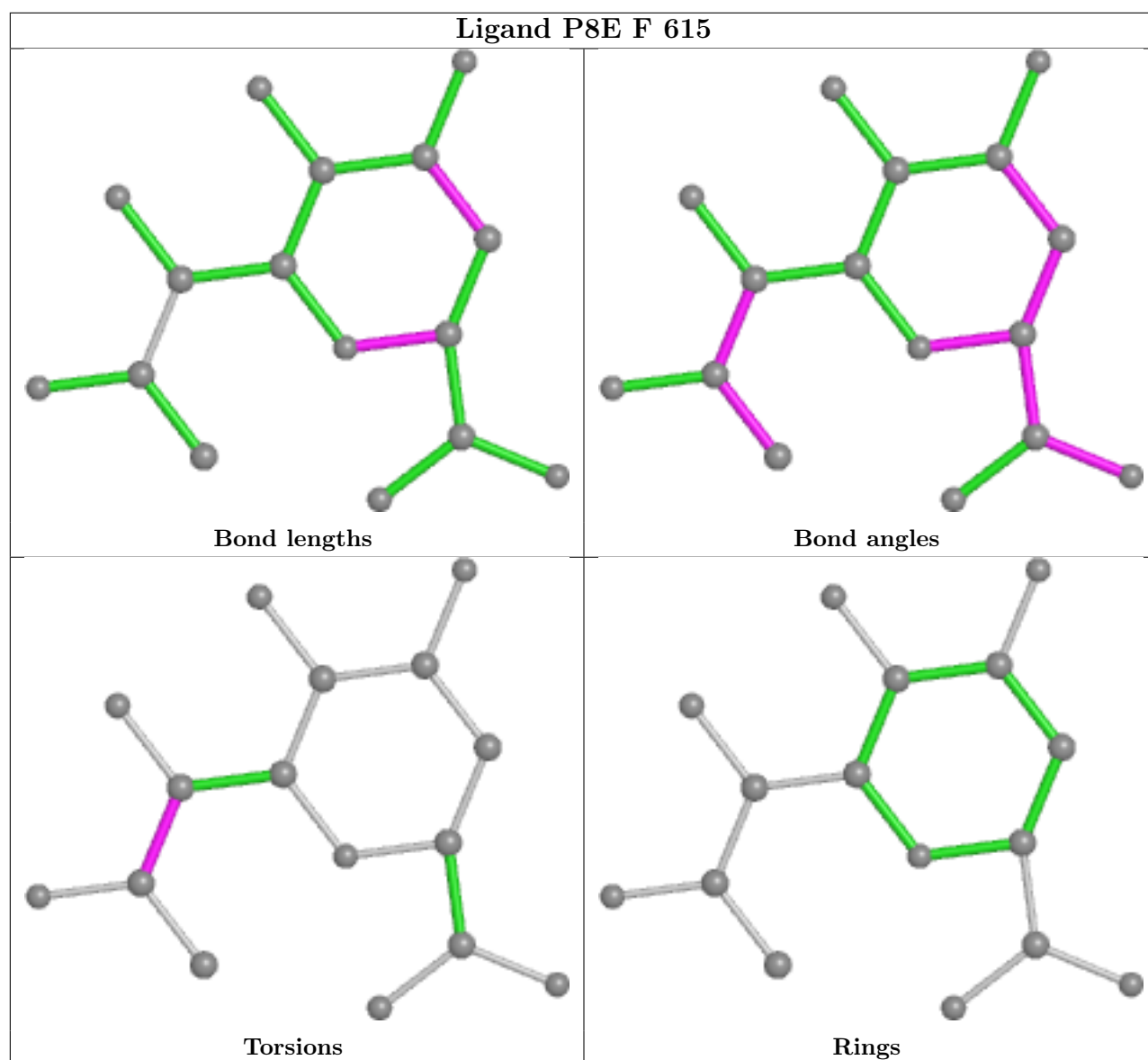


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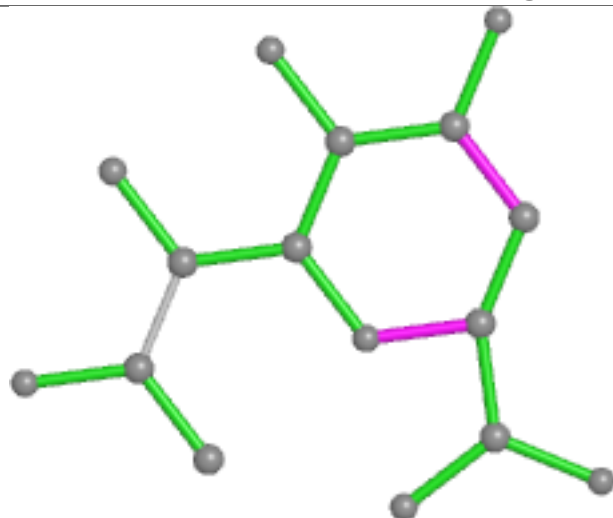


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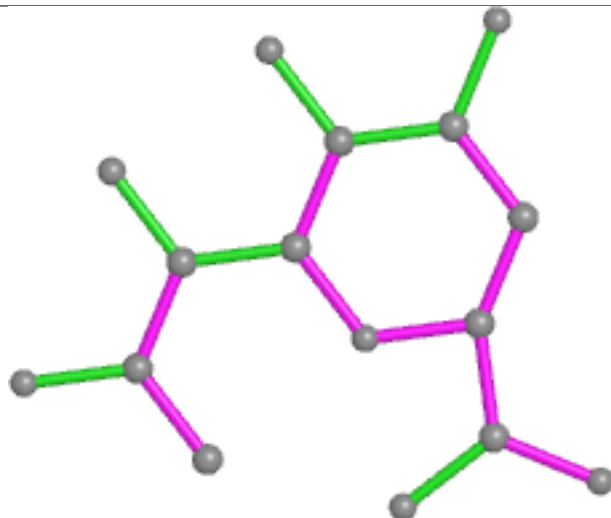




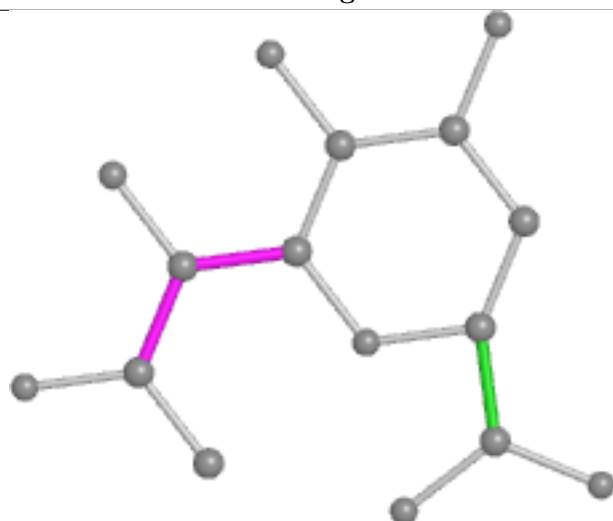
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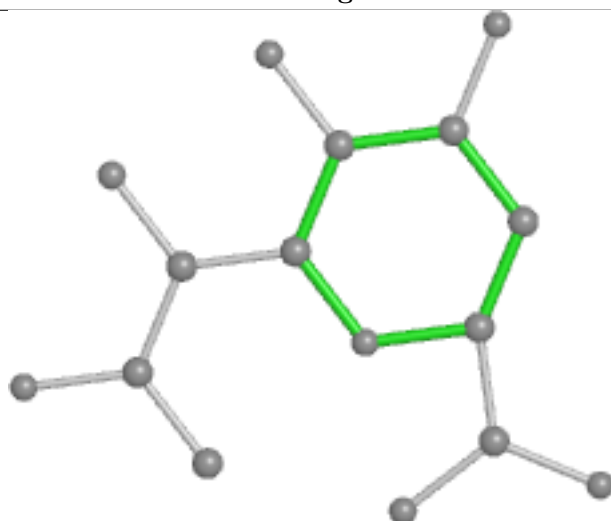
Bond lengths



Bond angles

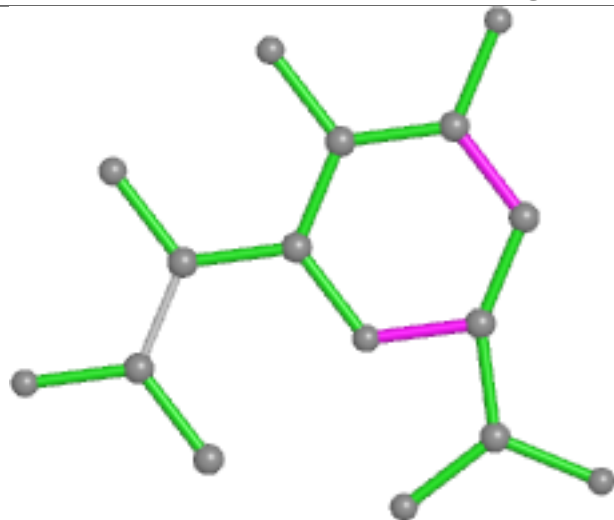


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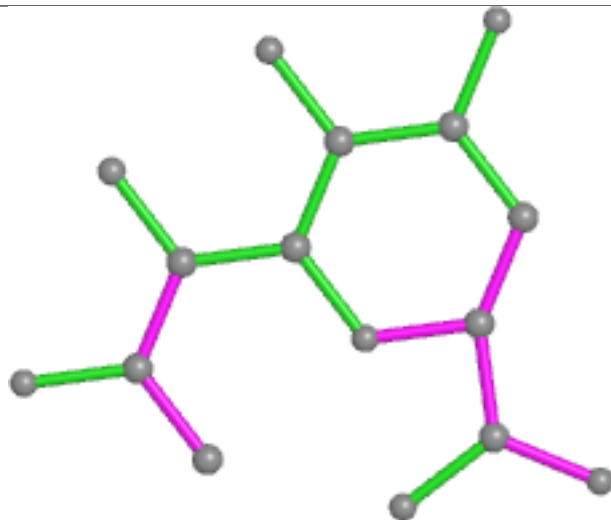


Rings

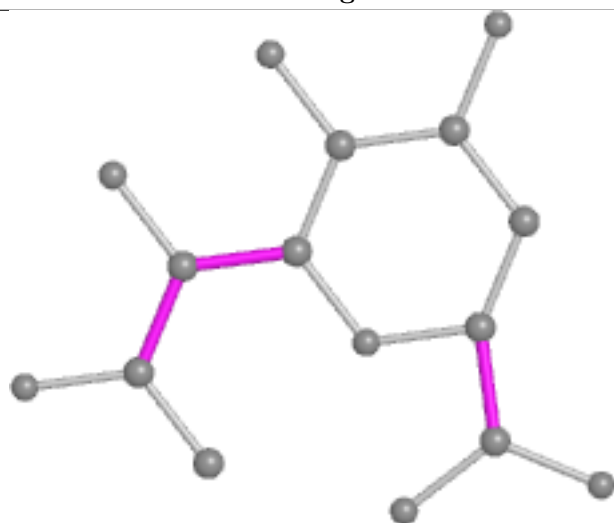
Ligand P8E I 609



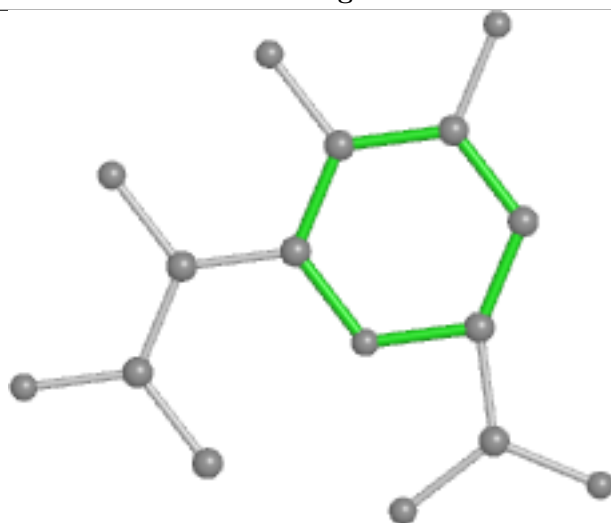
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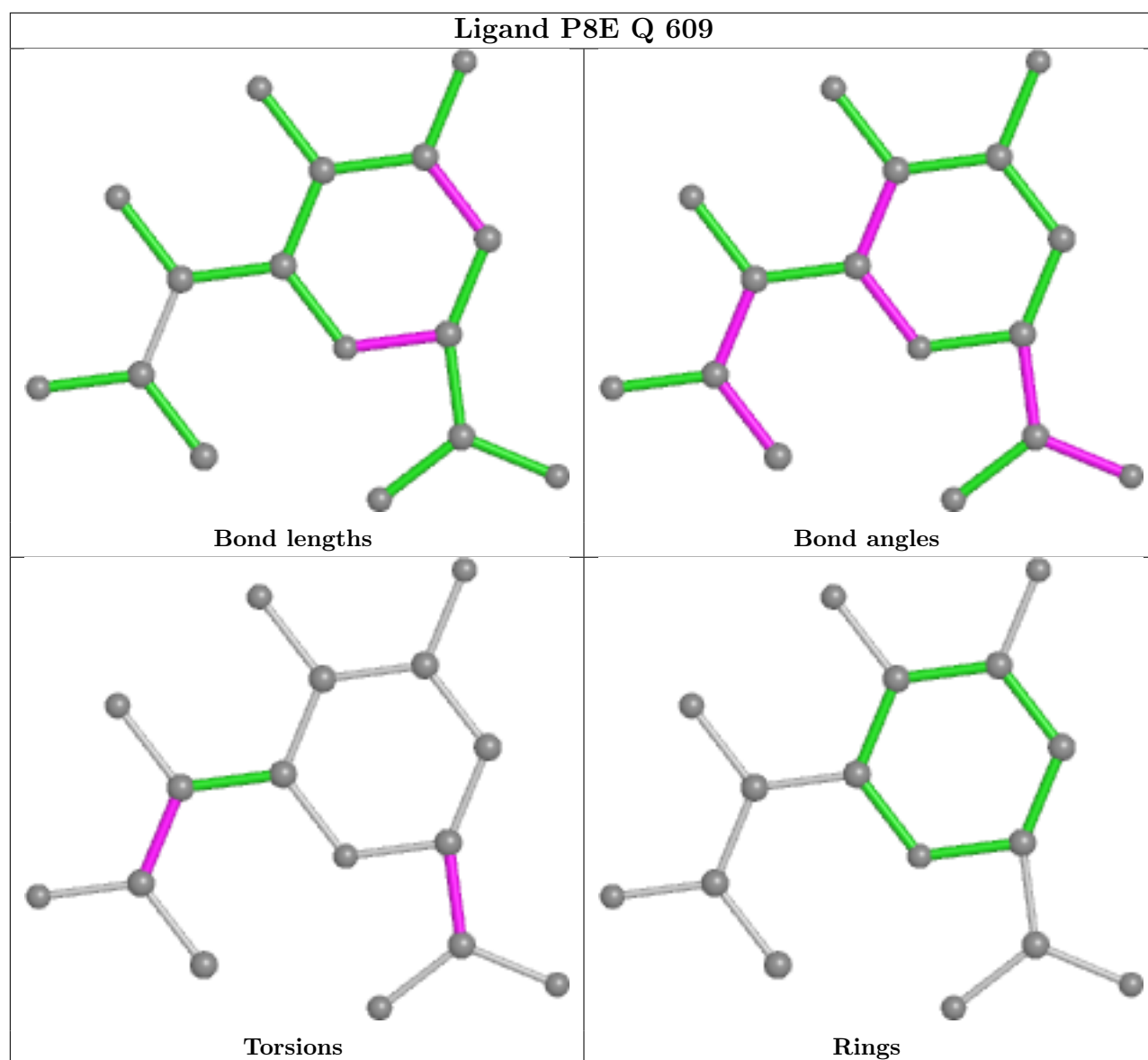
Bond angles

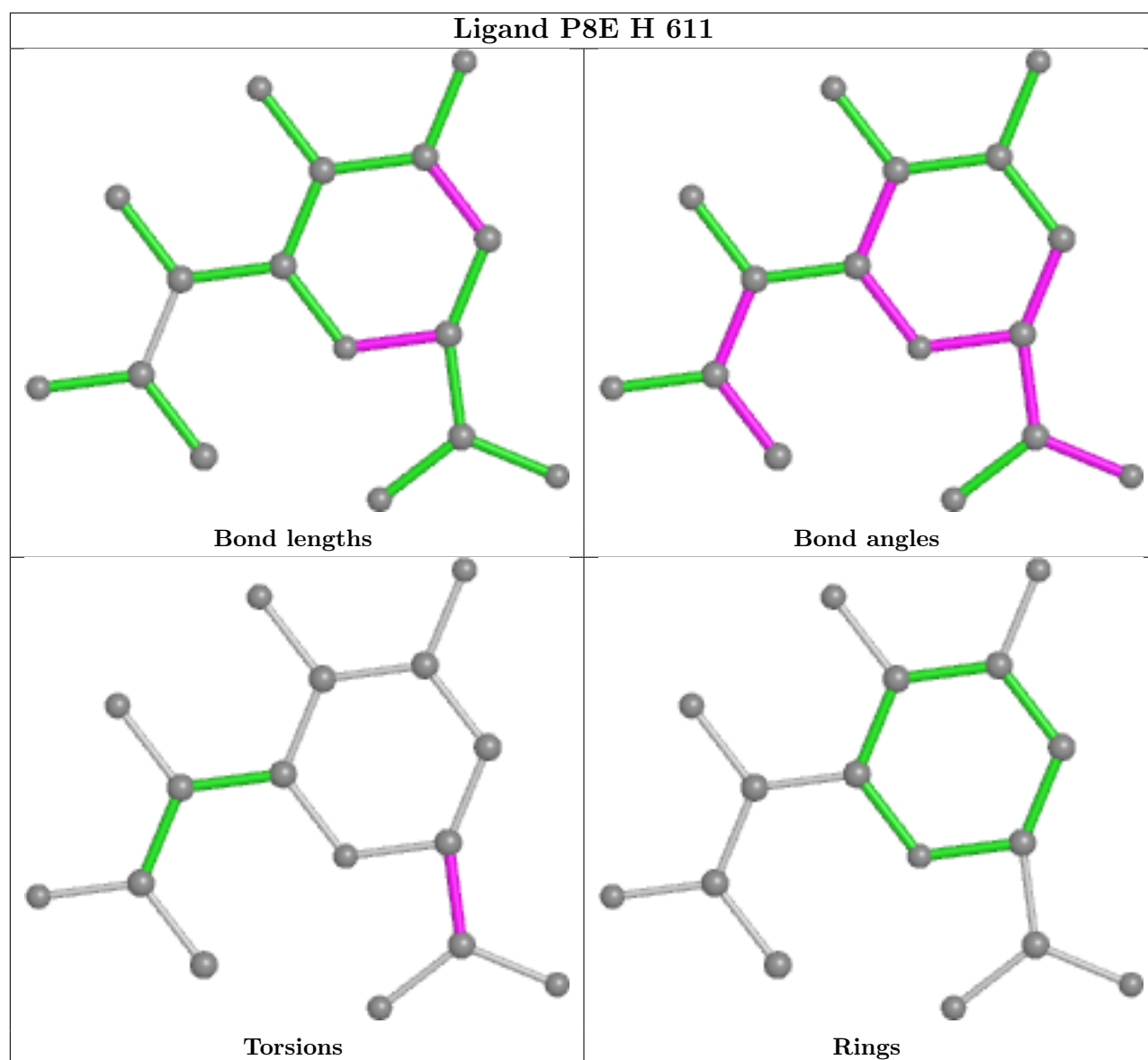


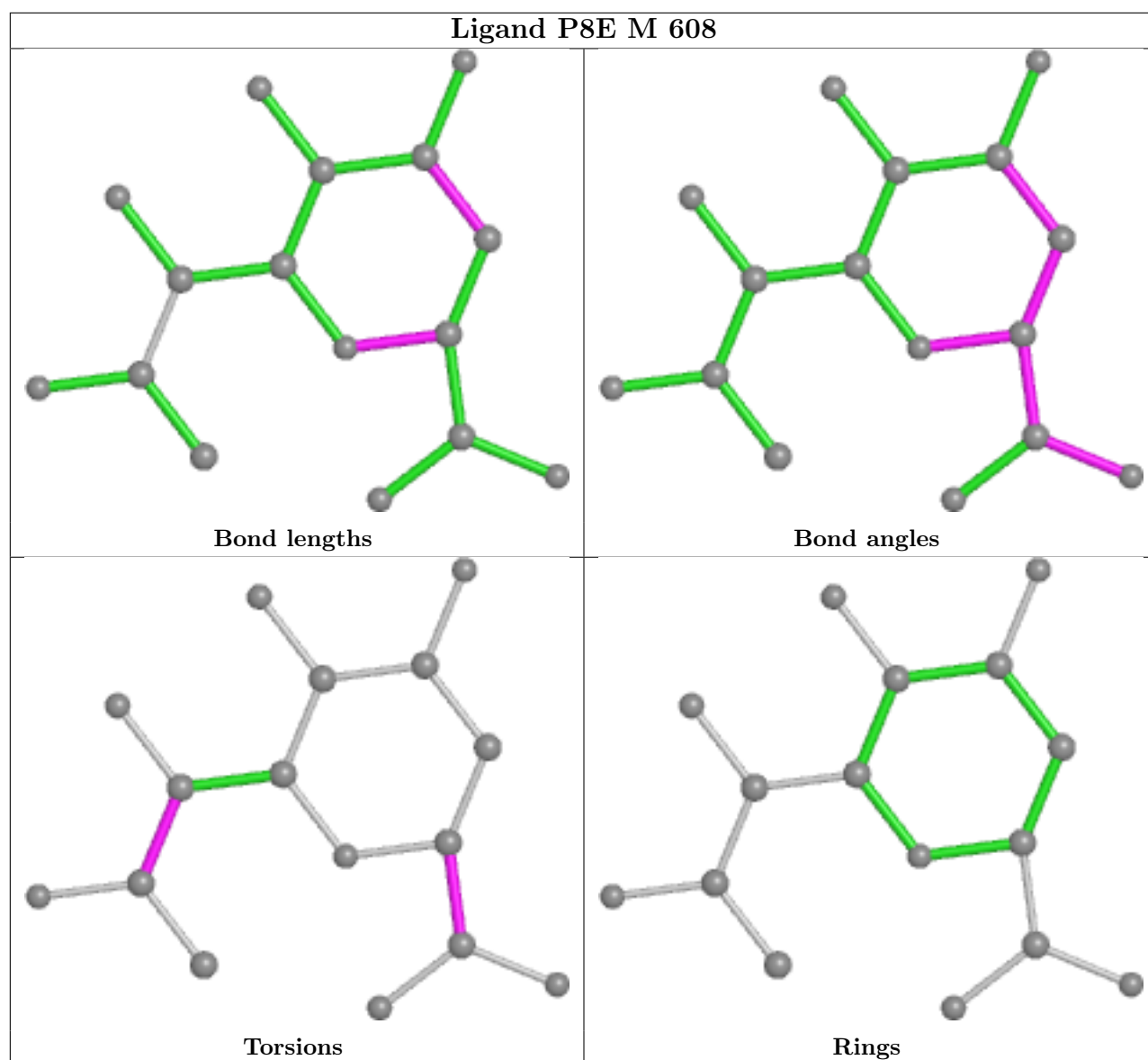
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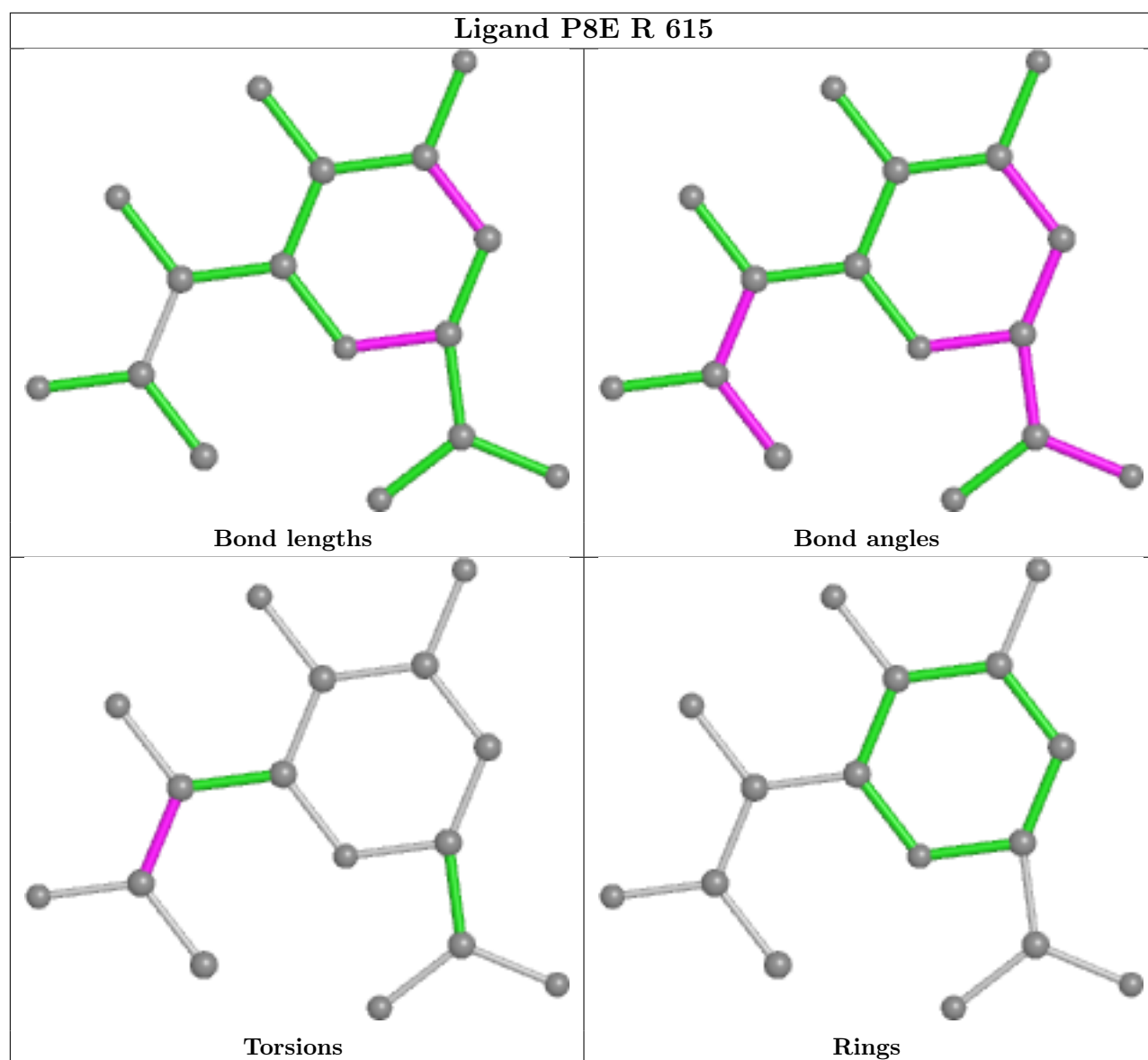


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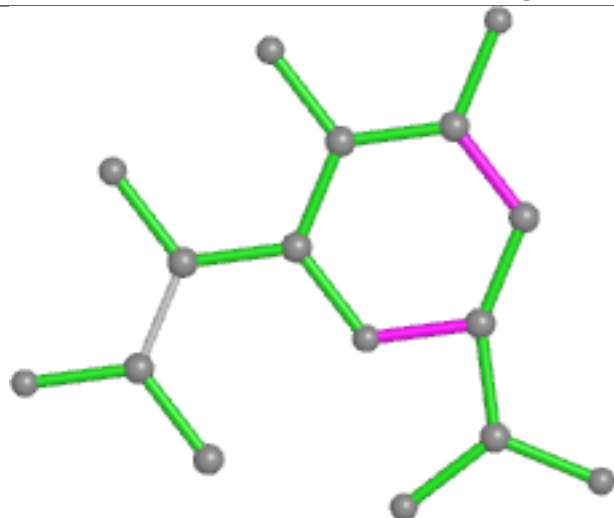




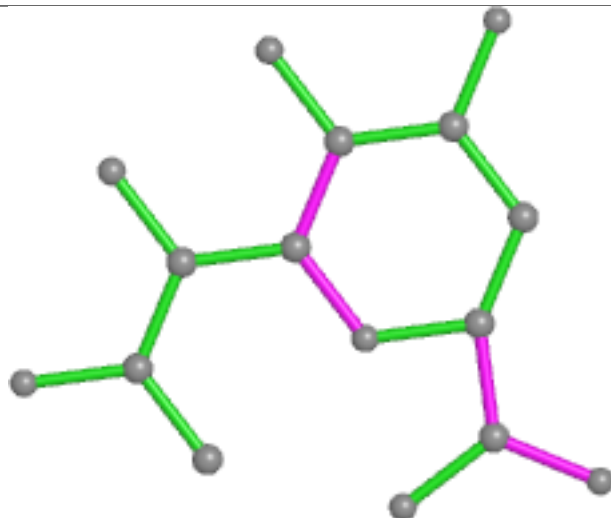




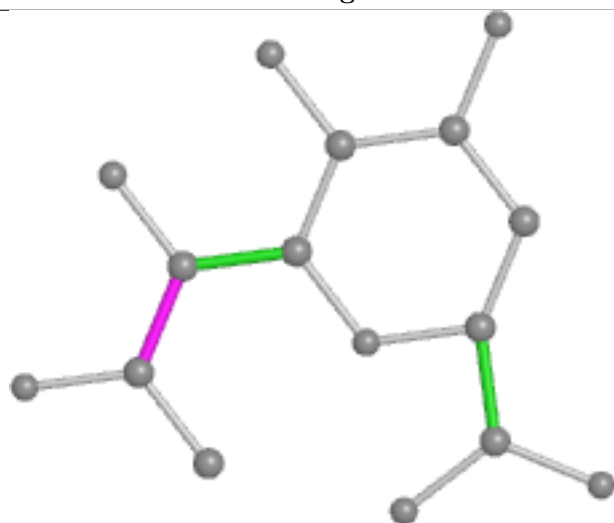
Ligand P8E A 608



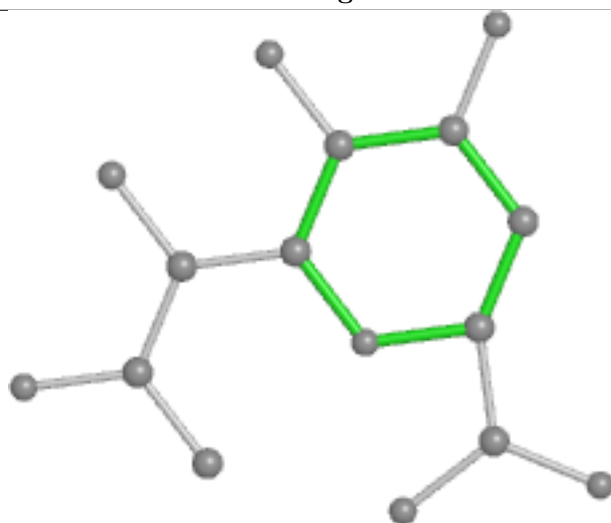
Bond lengths



Bond angles

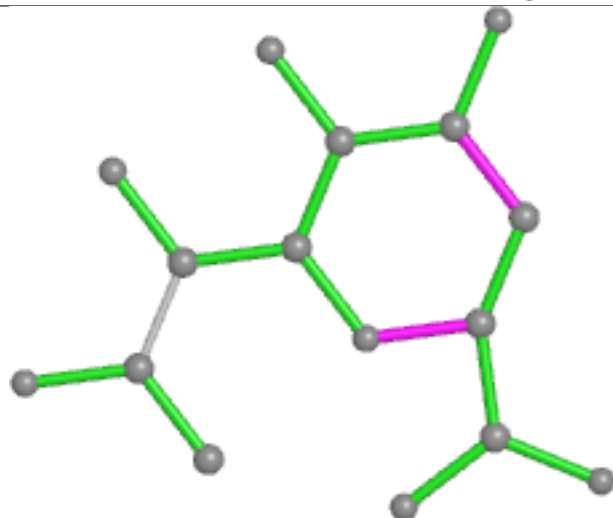


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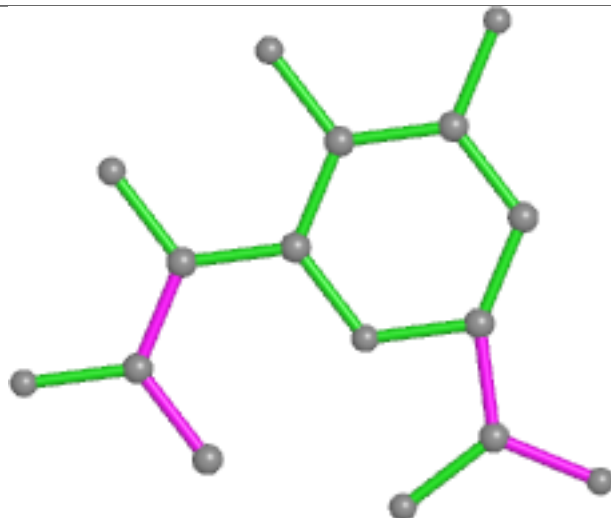


Rings

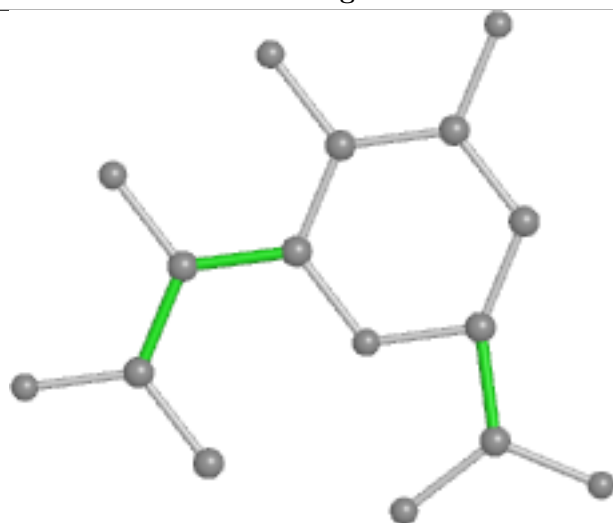
Ligand P8E L 614



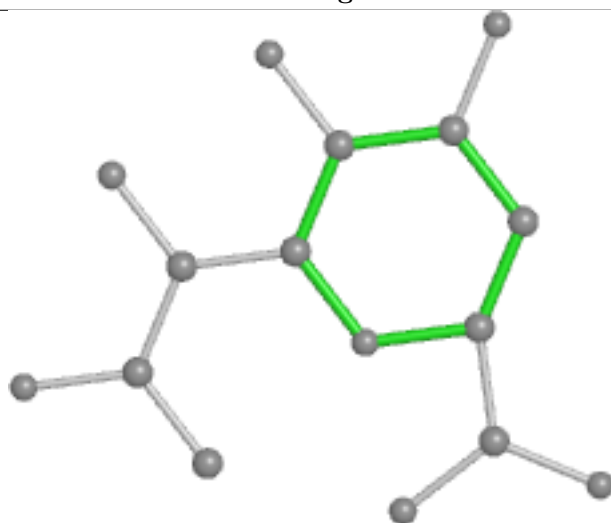
Bond lengths



Bond angles

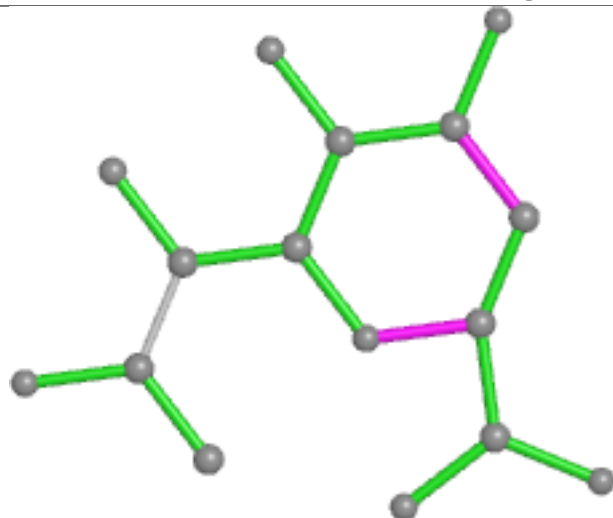


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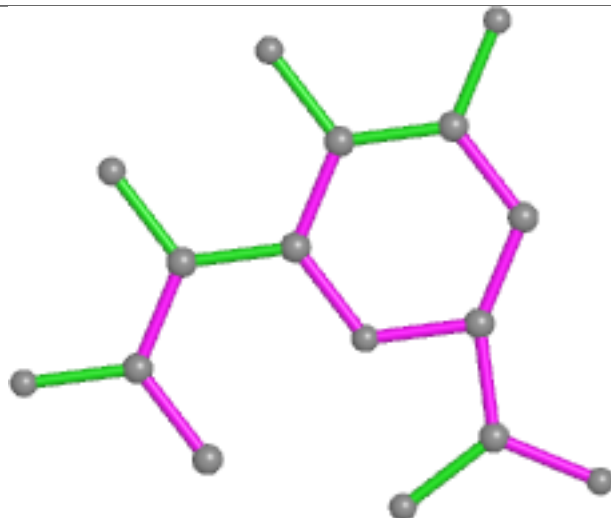


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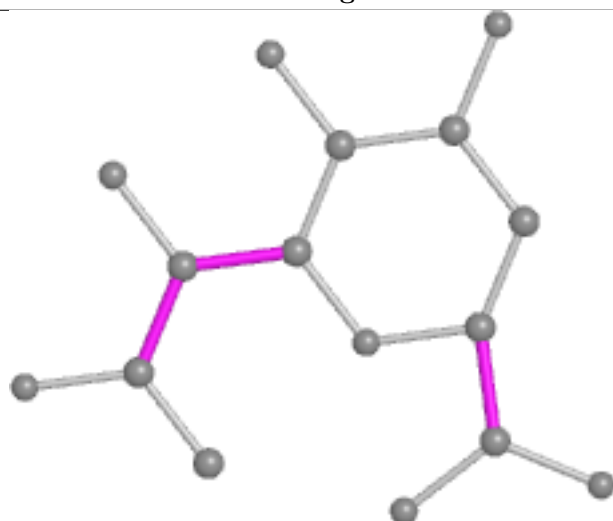
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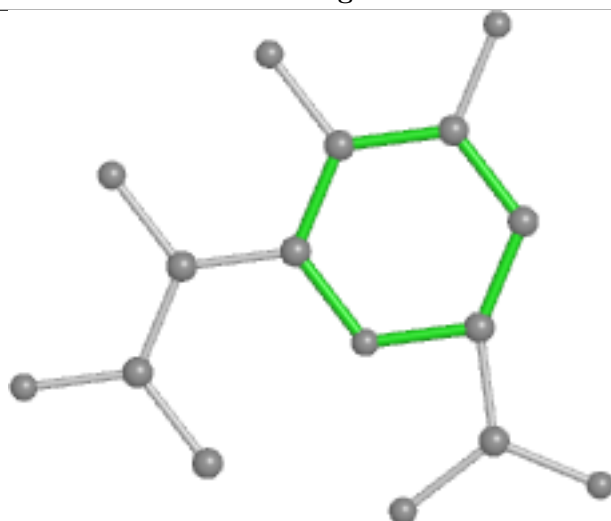
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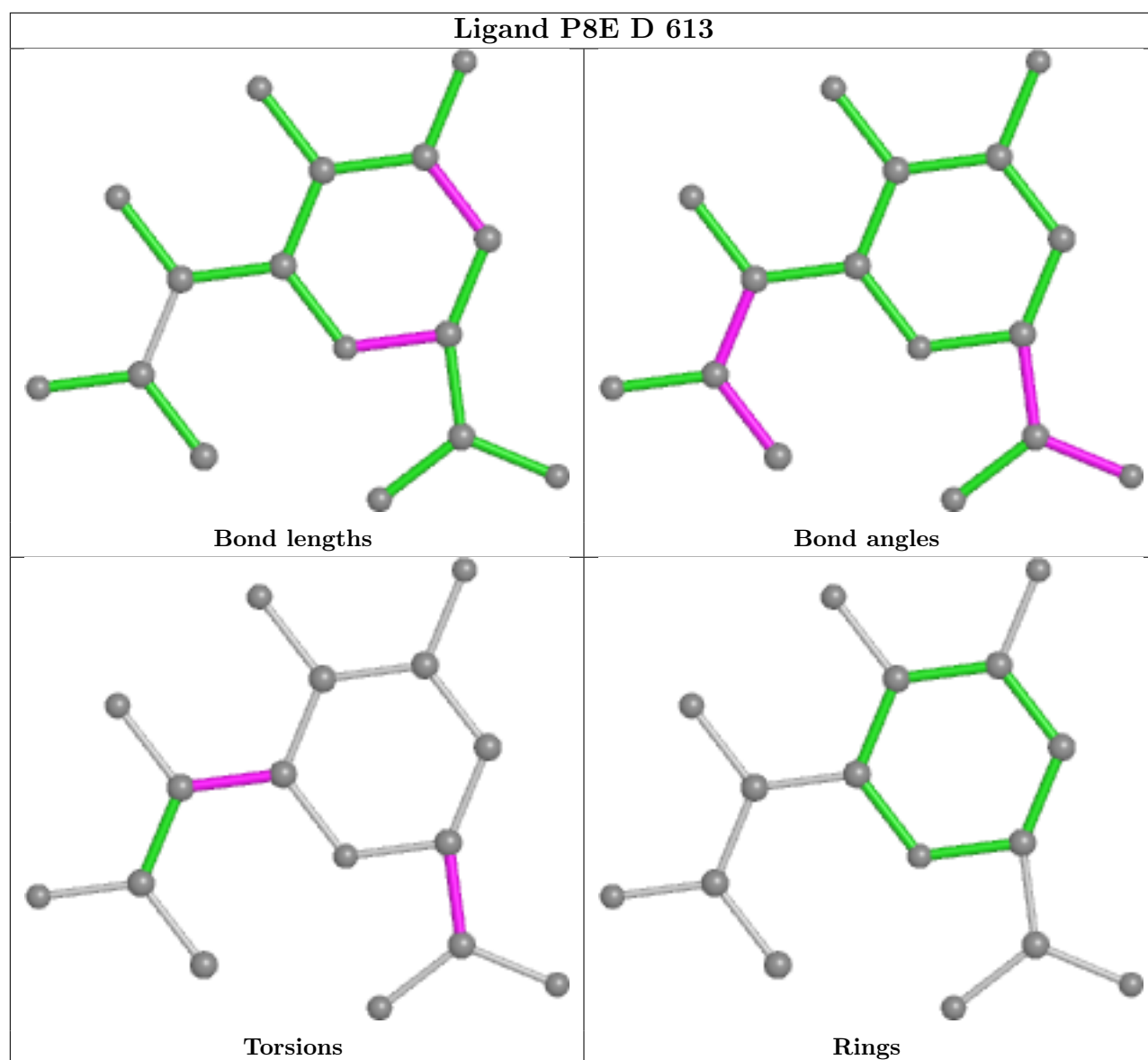
Bond angles

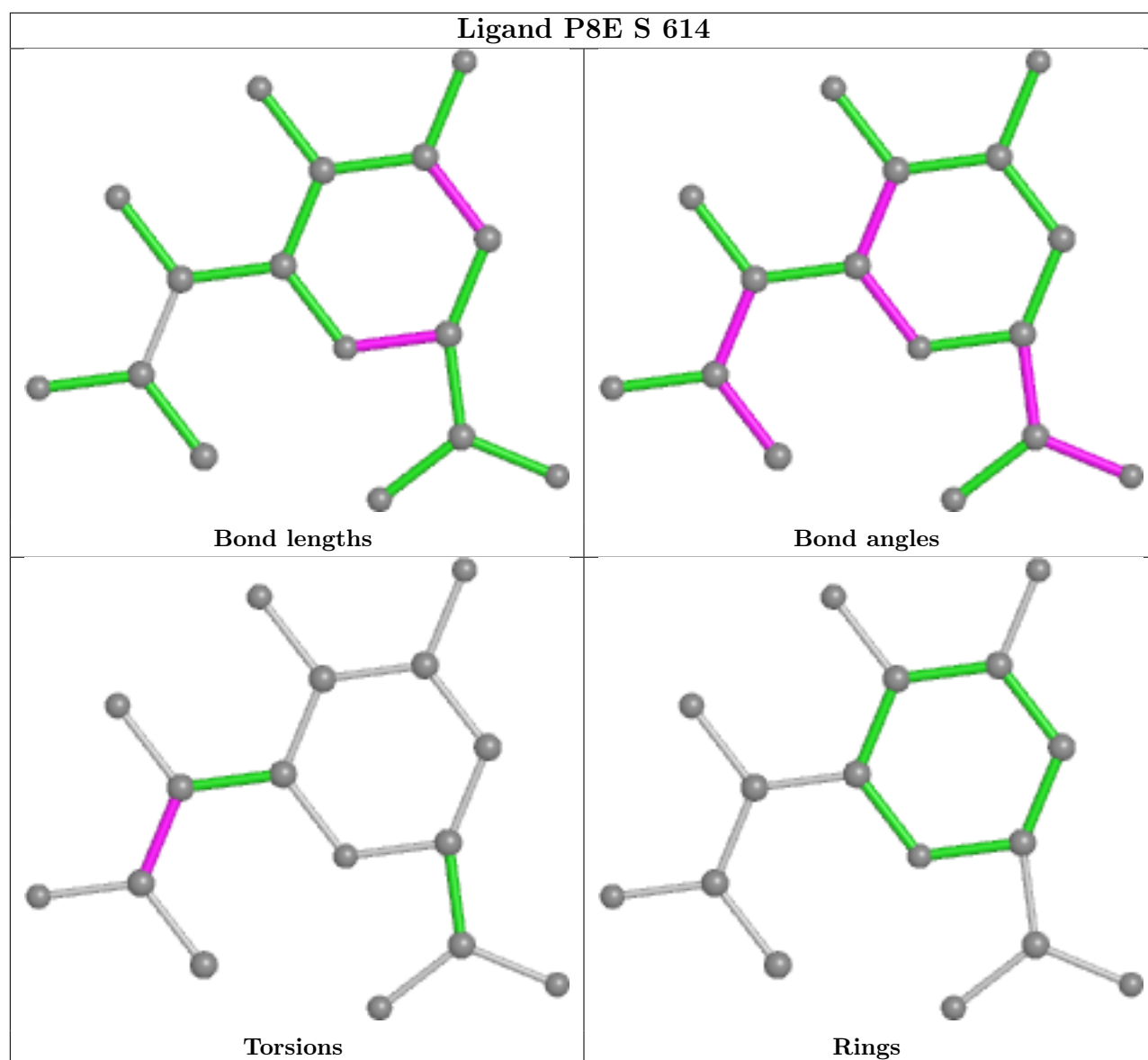


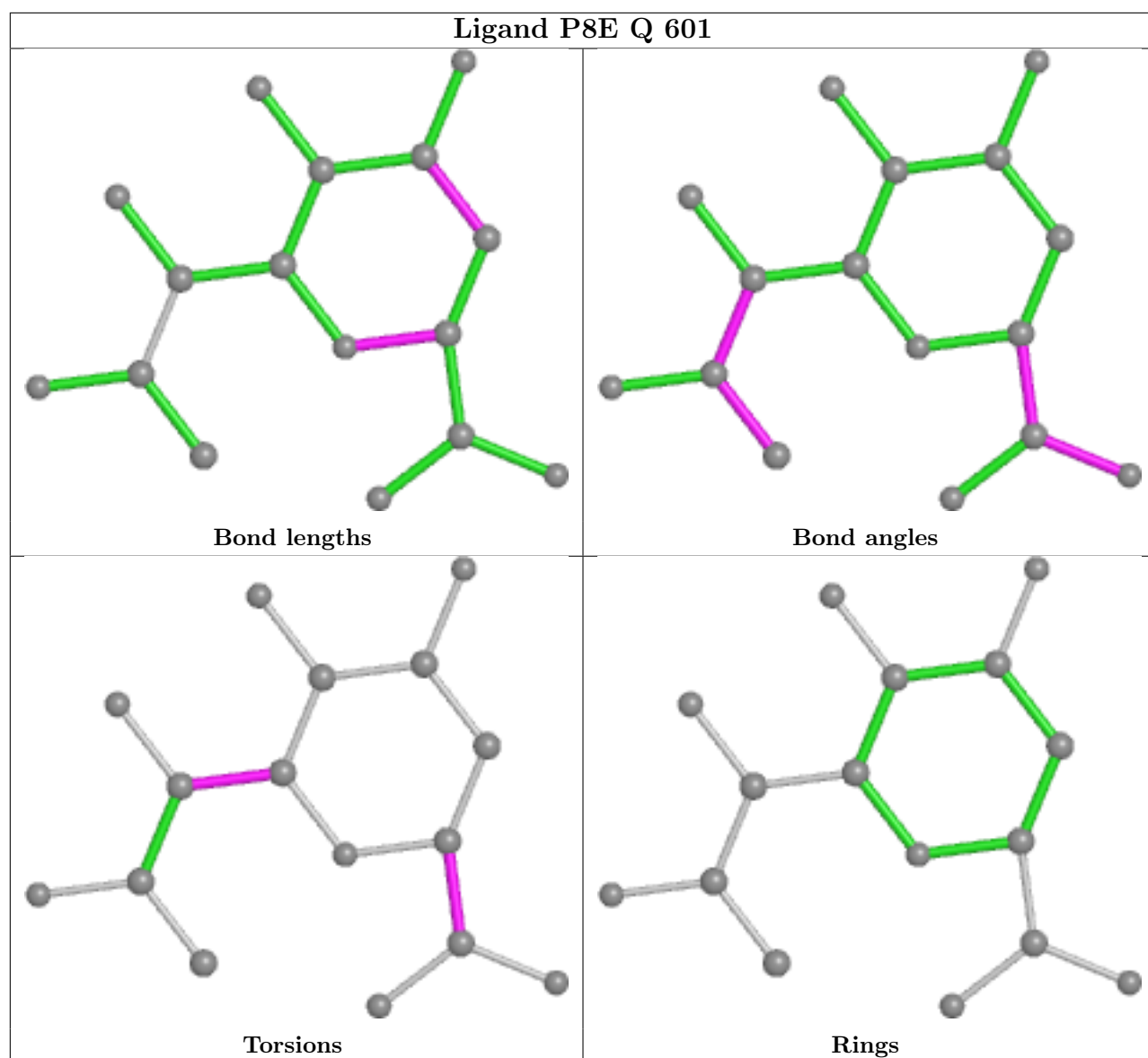
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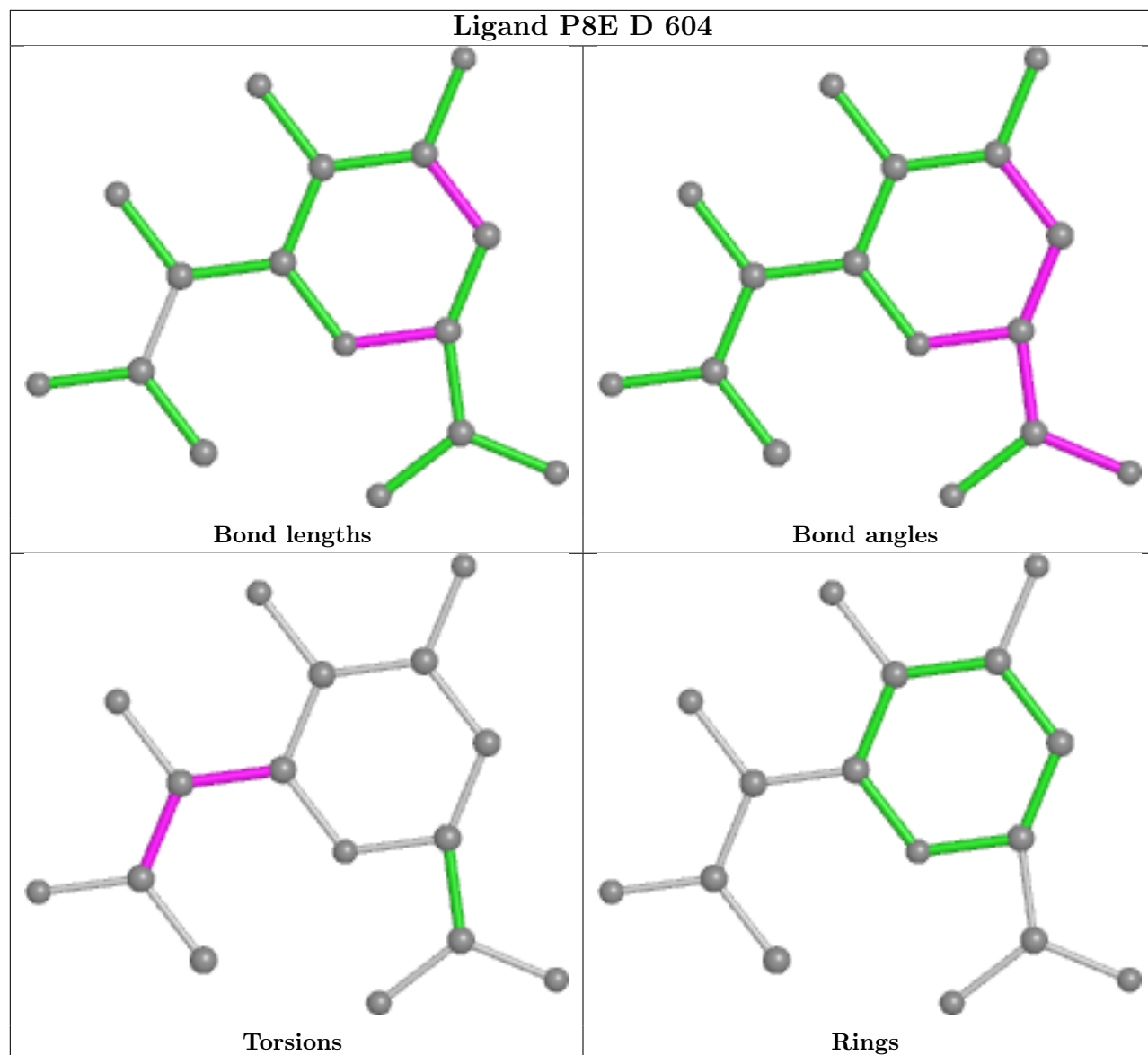


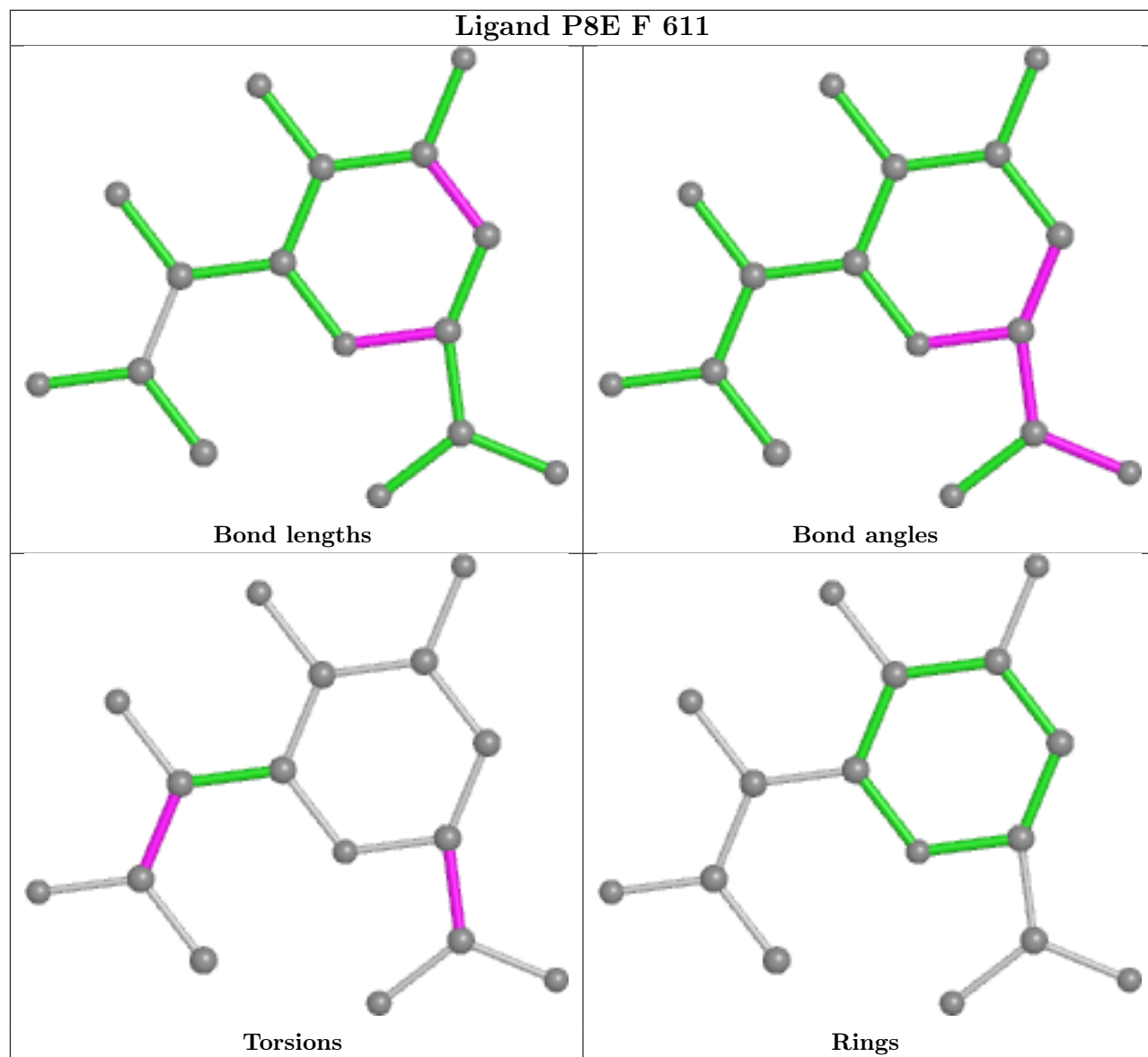
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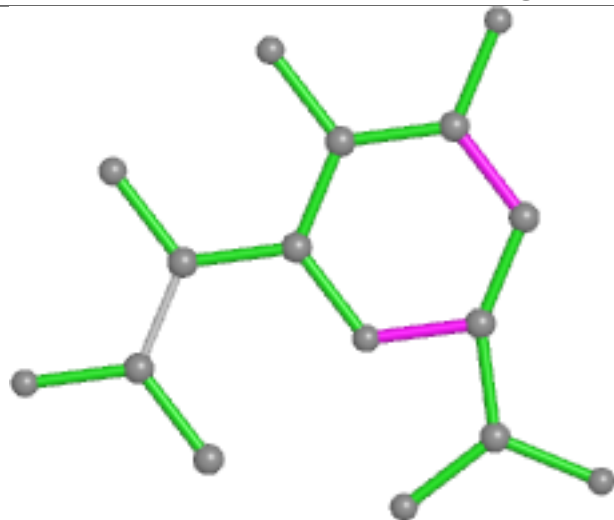




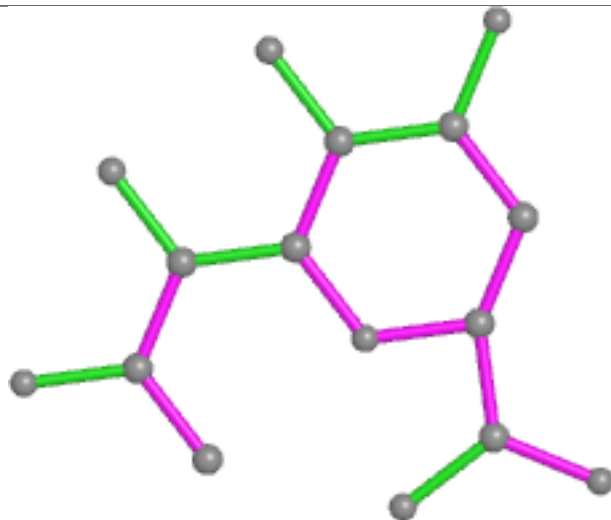




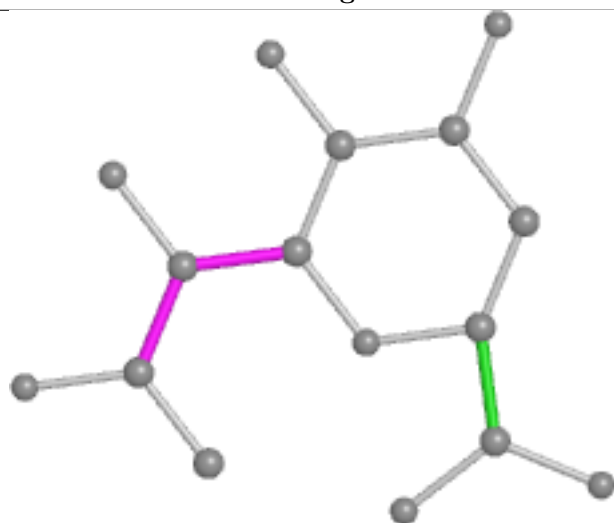
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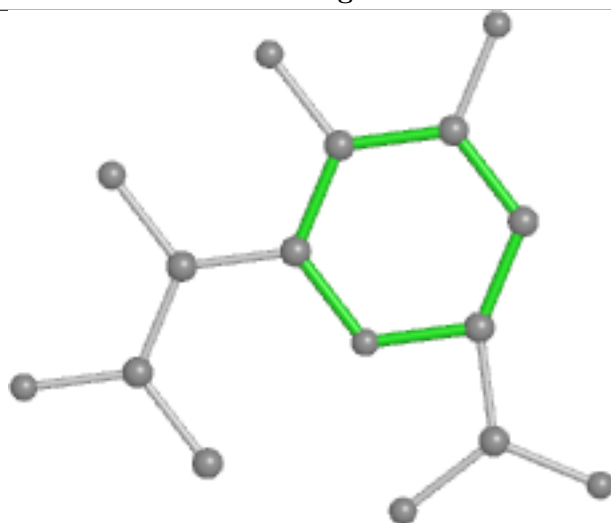
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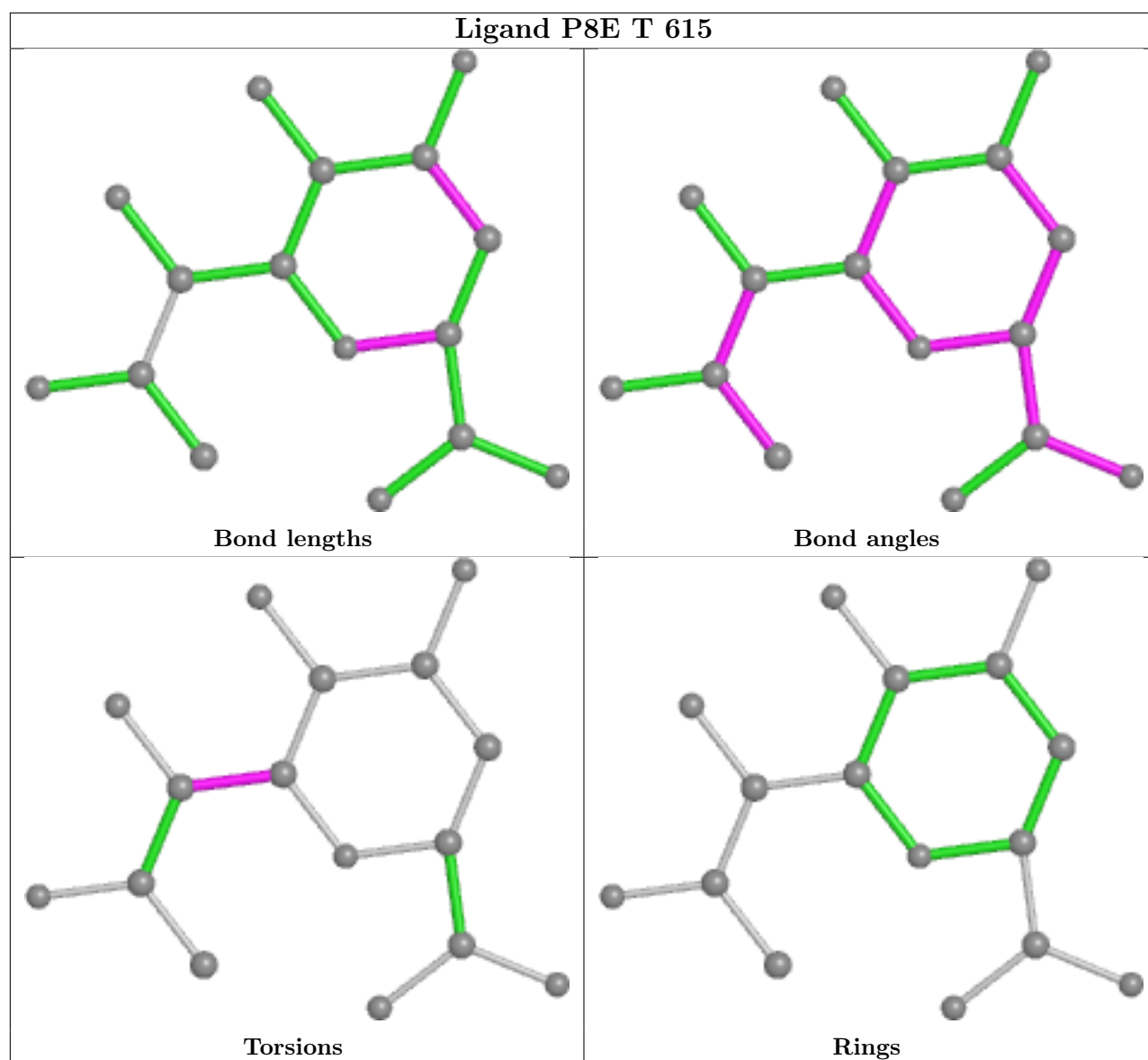
Bond angles



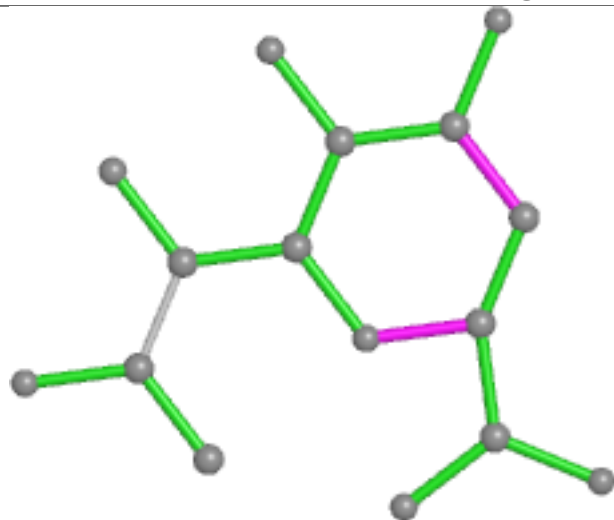
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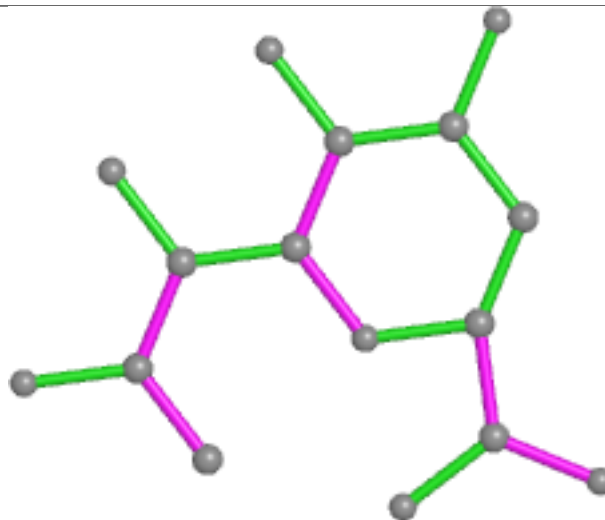
Rings



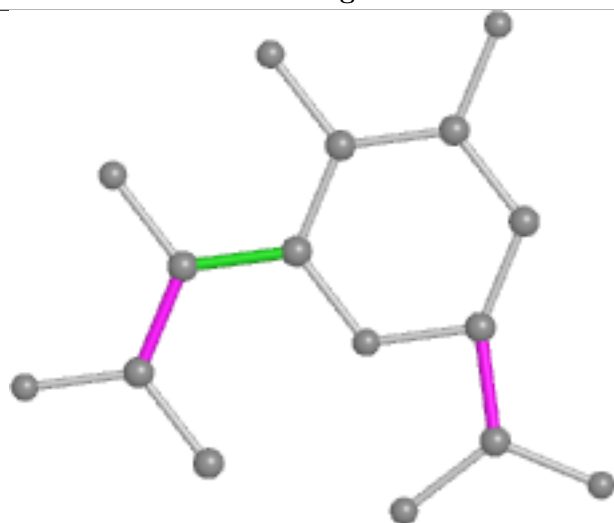
Ligand P8E O 614



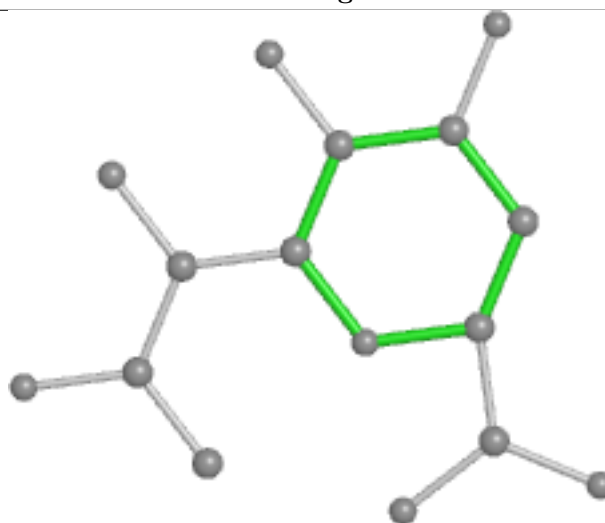
Bond lengths



Bond angles

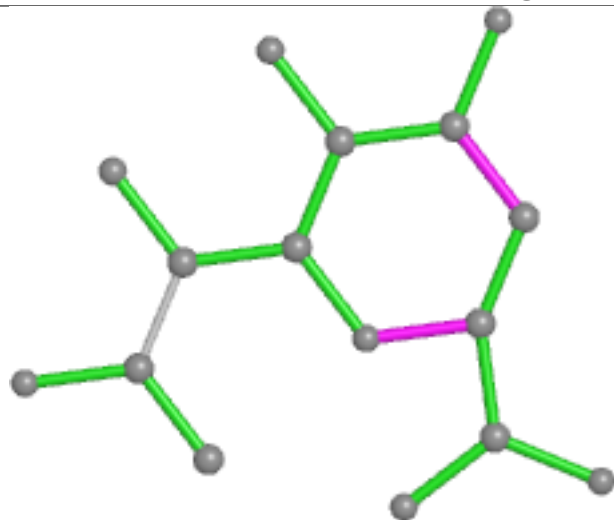


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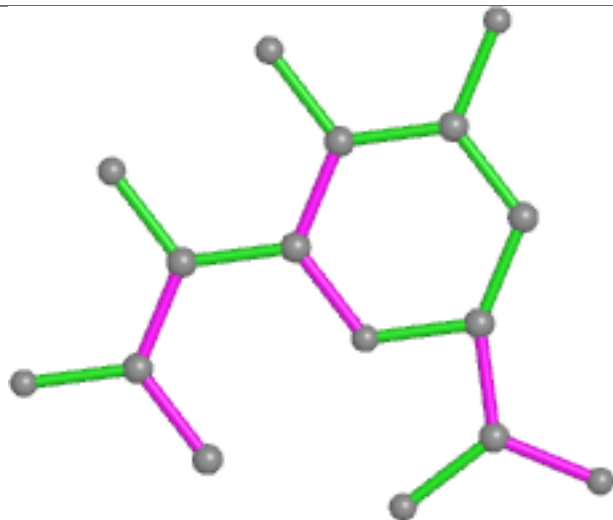


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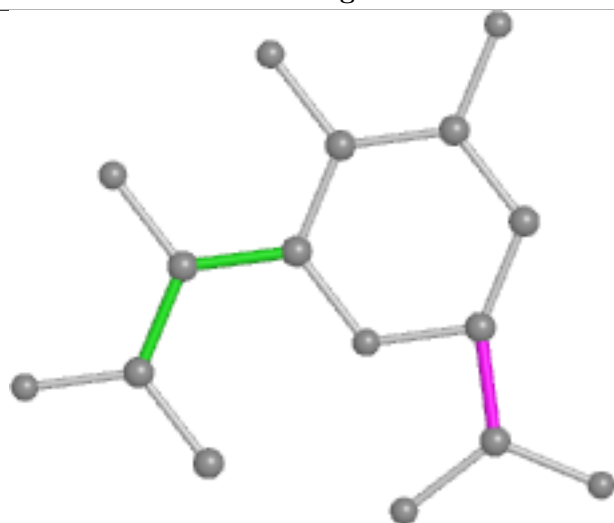
Ligand P8E A 609



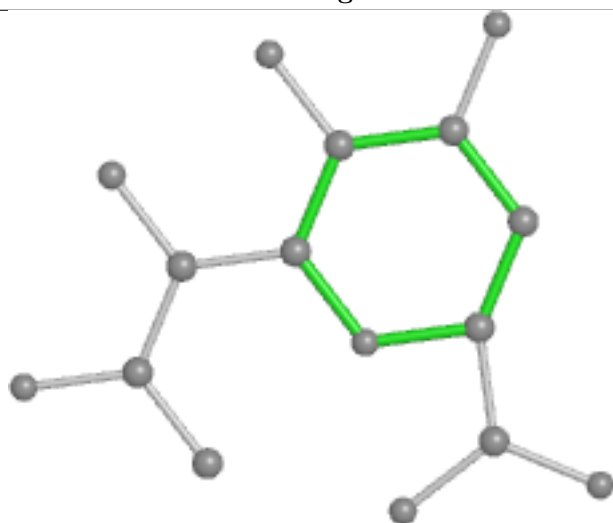
Bond lengths



Bond angles

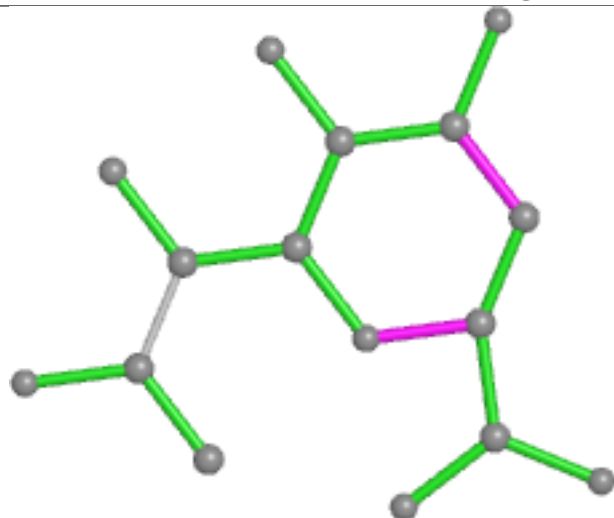


Torsions

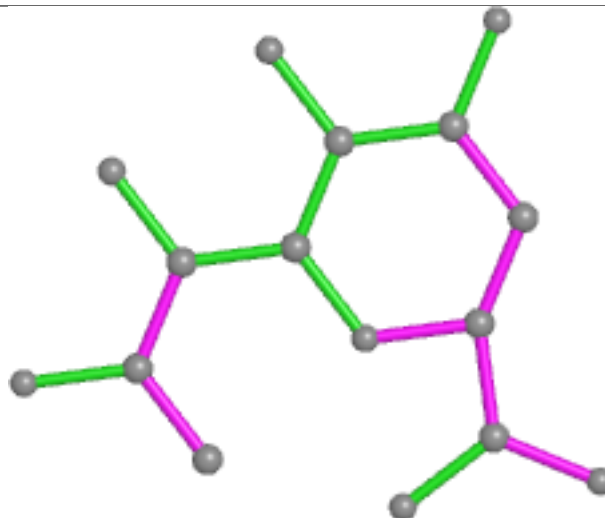


Rings

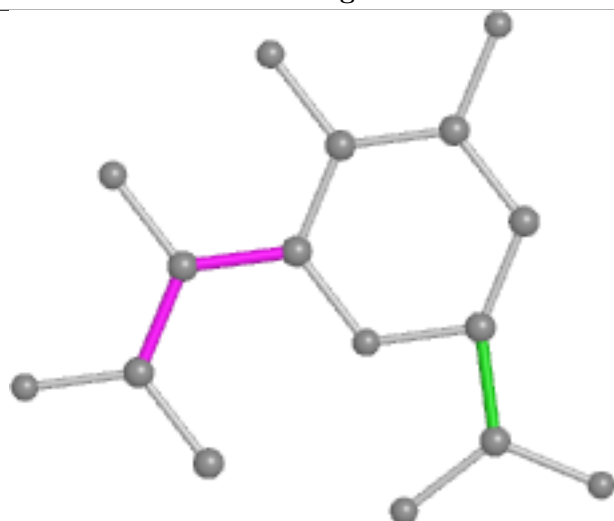
Ligand P8E G 605



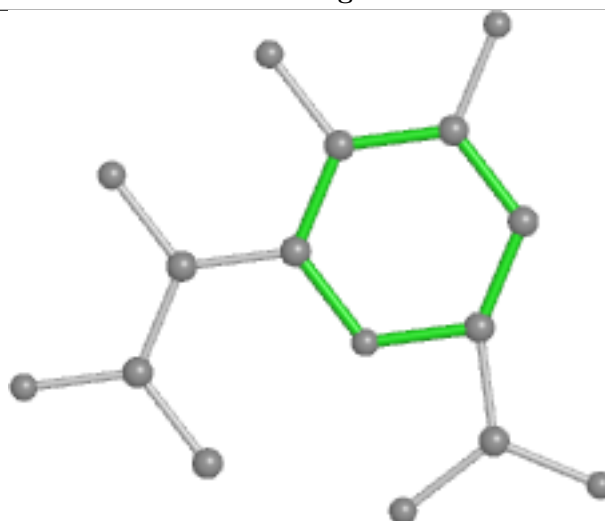
Bond lengths



Bond angles

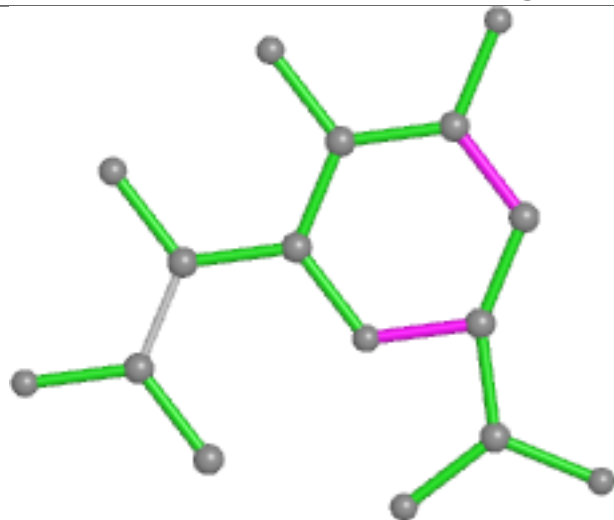


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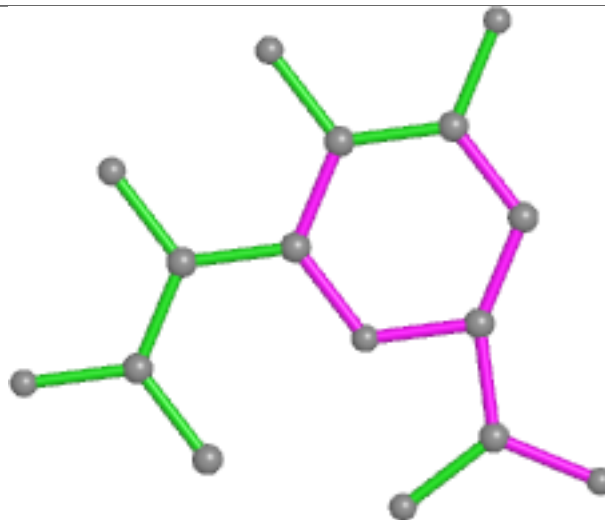


Rings

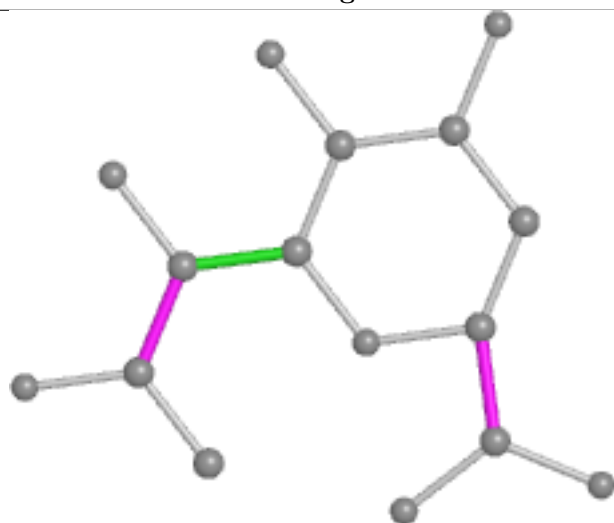
Ligand P8E B 608



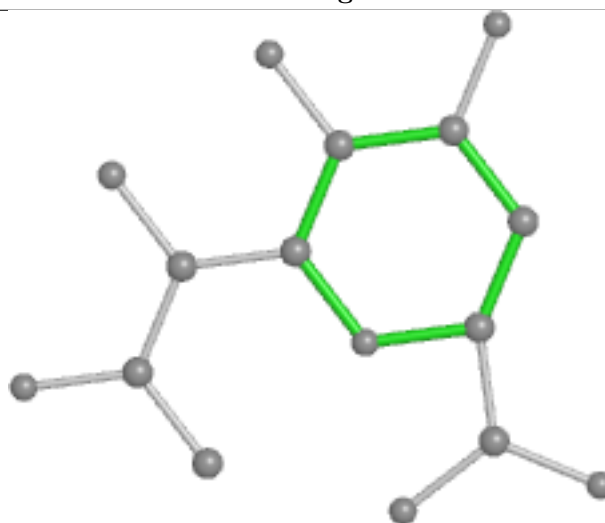
Bond lengths



Bond angles

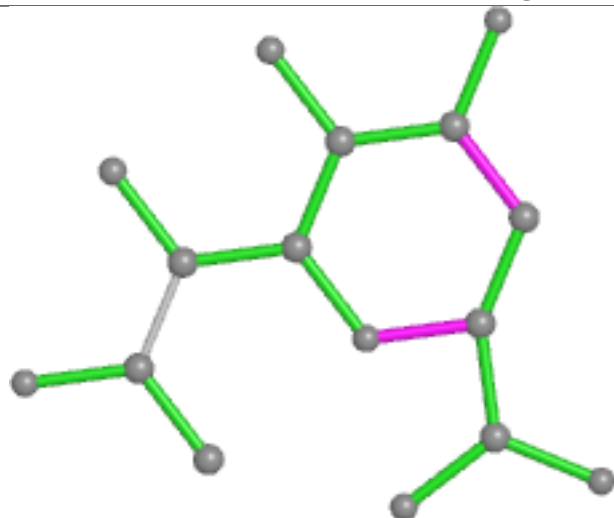


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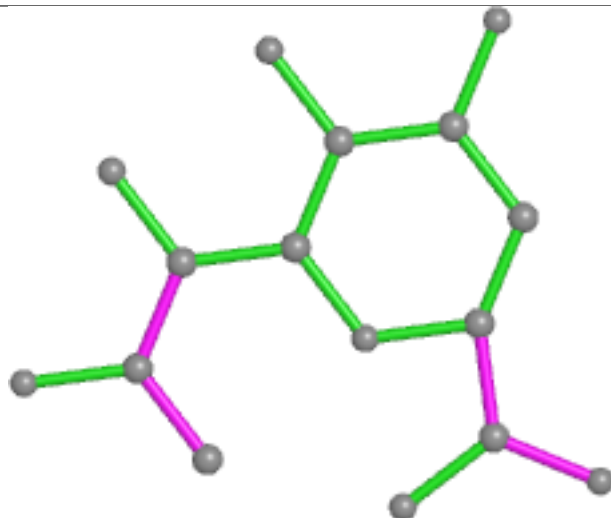


Rings

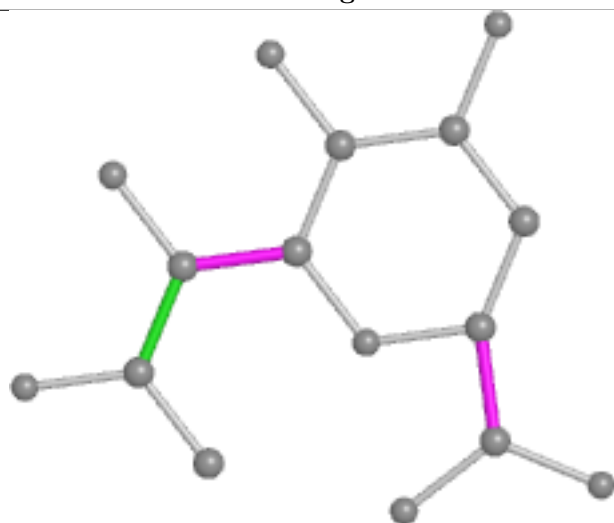
Ligand P8E V 601



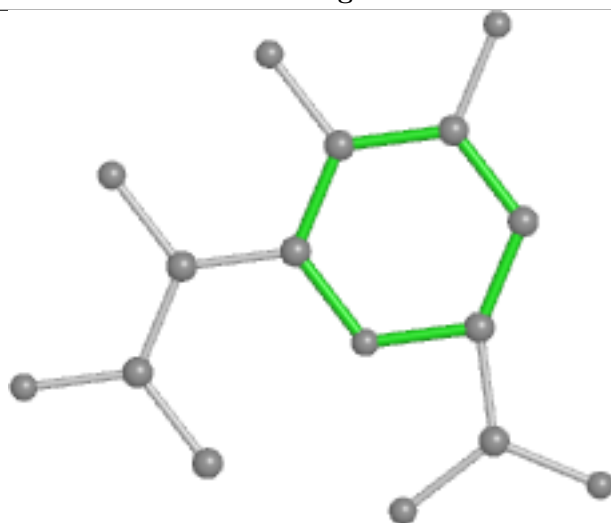
Bond lengths



Bond angles

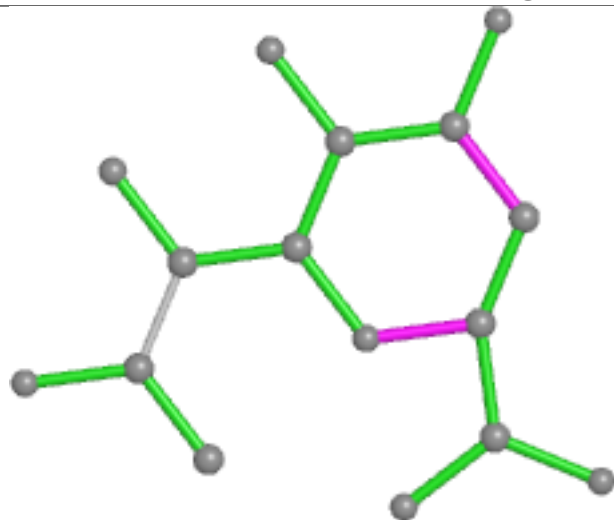


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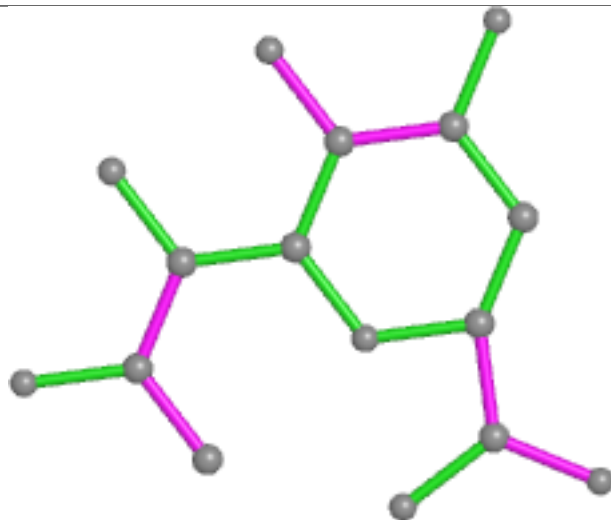


Rings

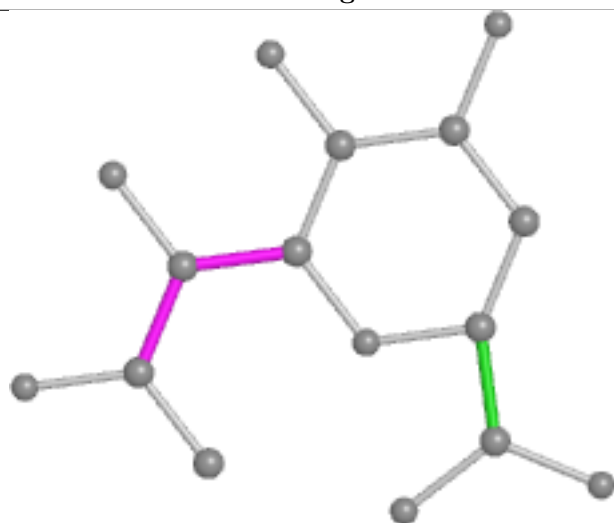
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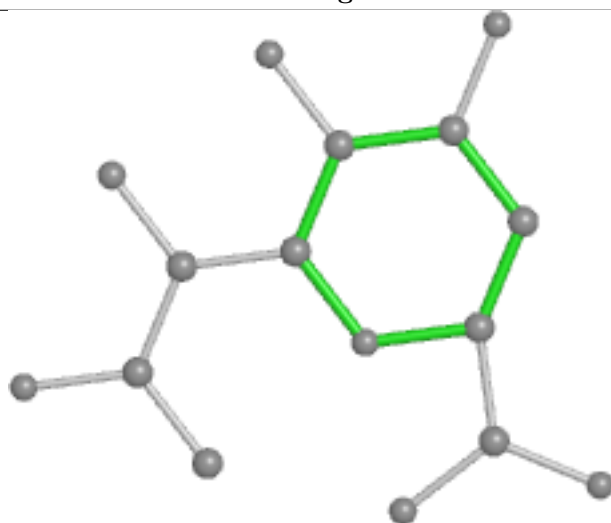
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Bond angles

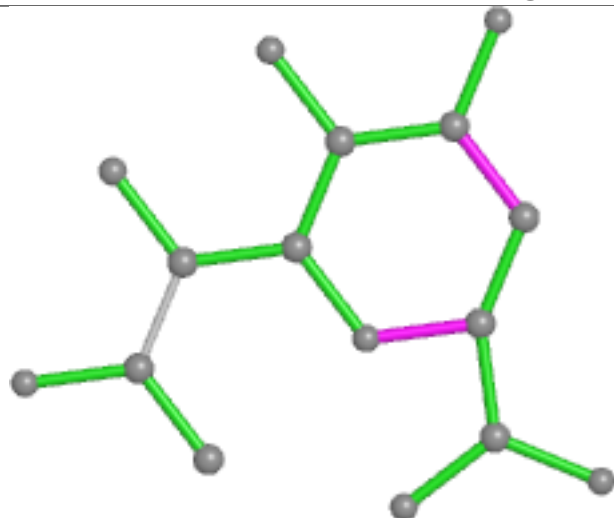


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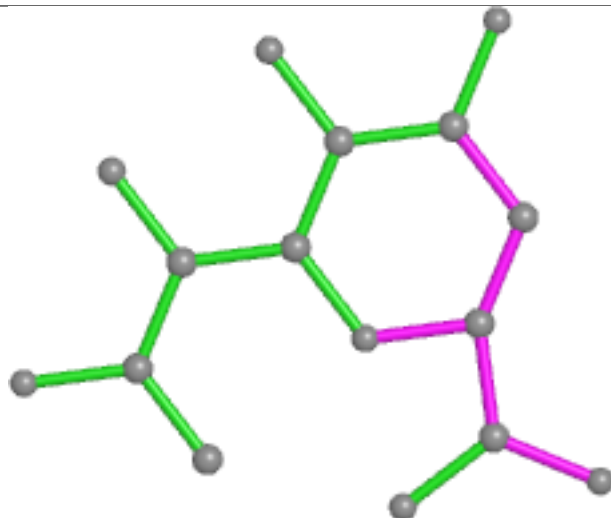


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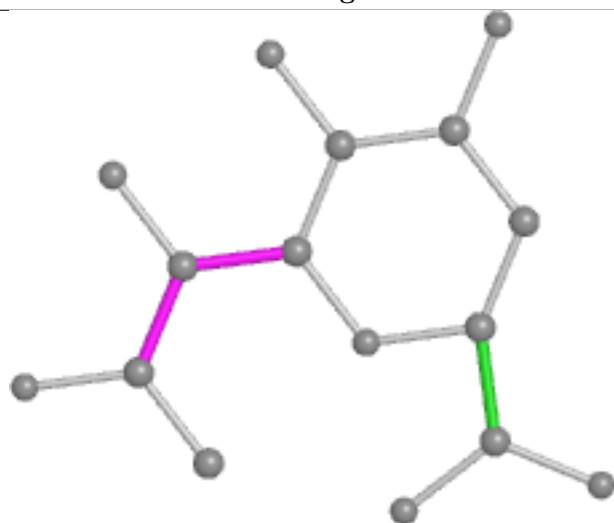
Ligand P8E S 604



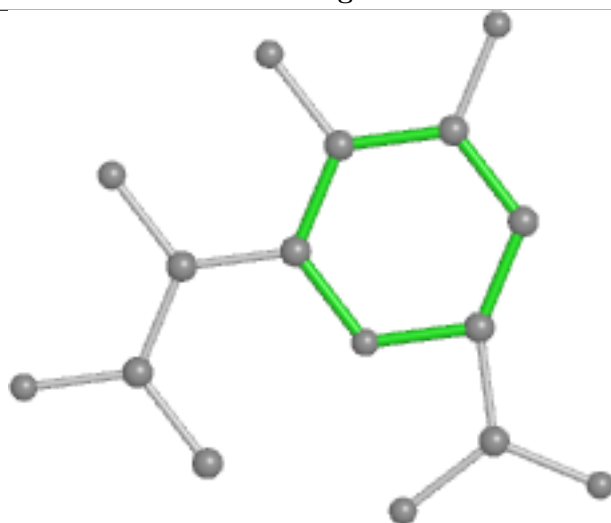
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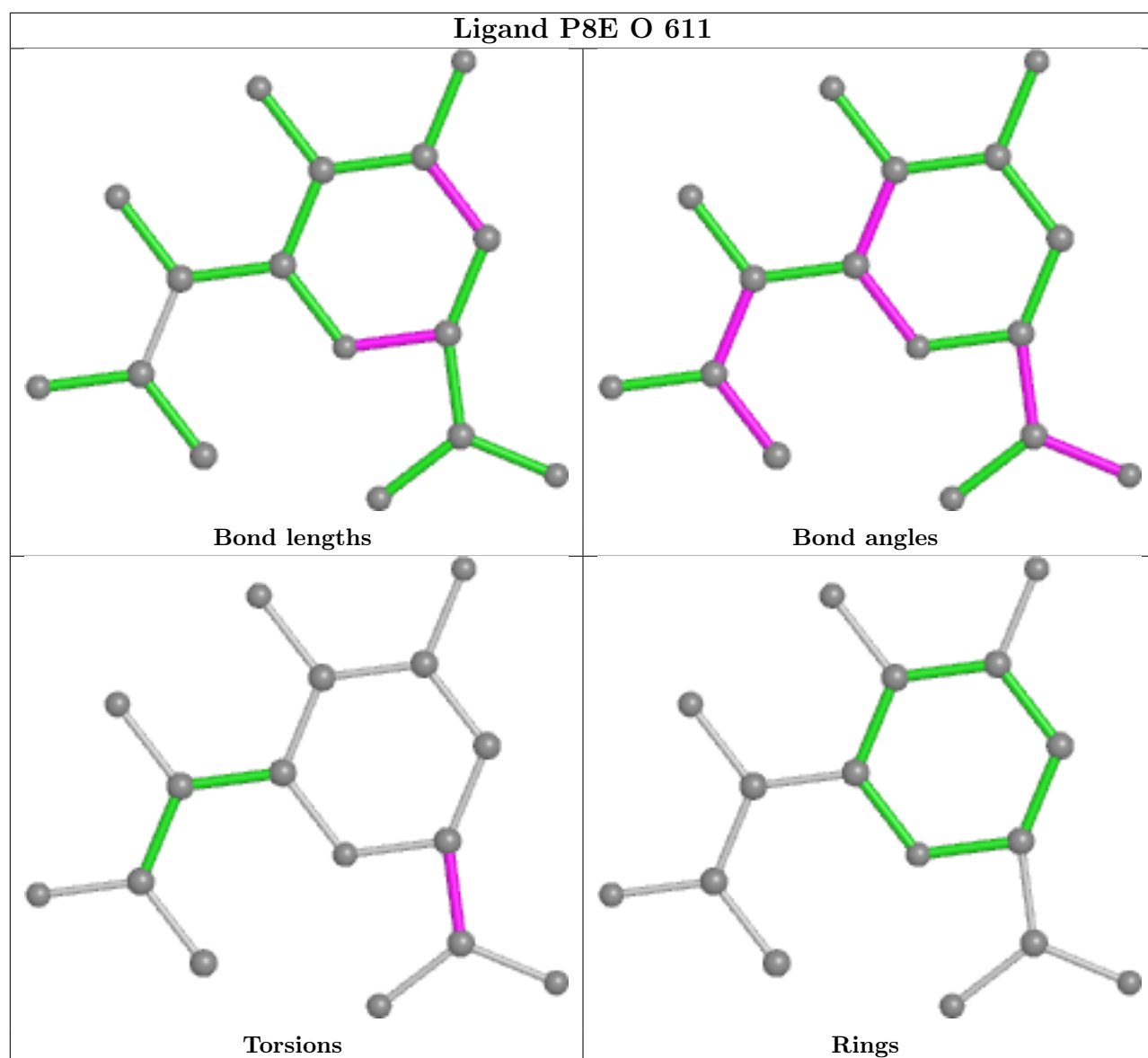
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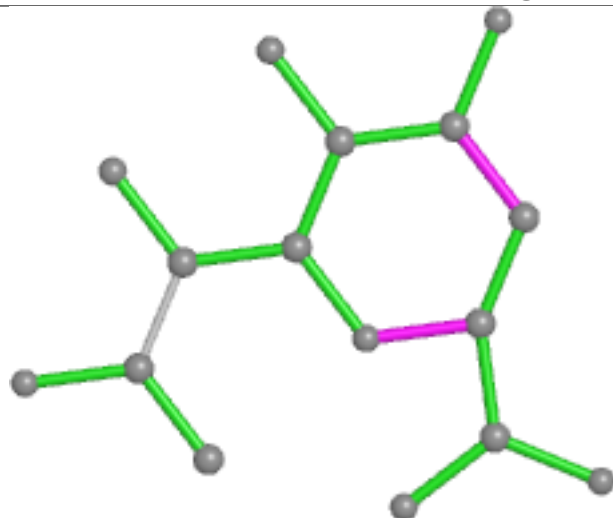
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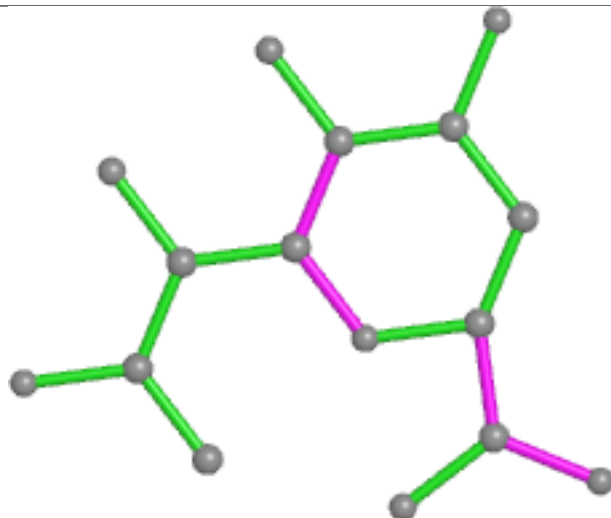
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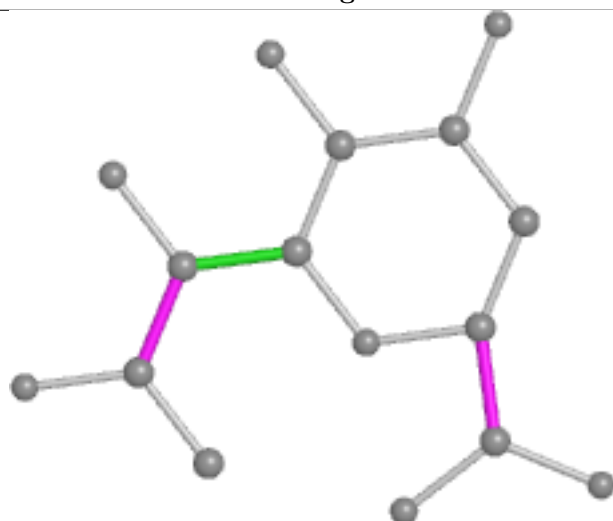
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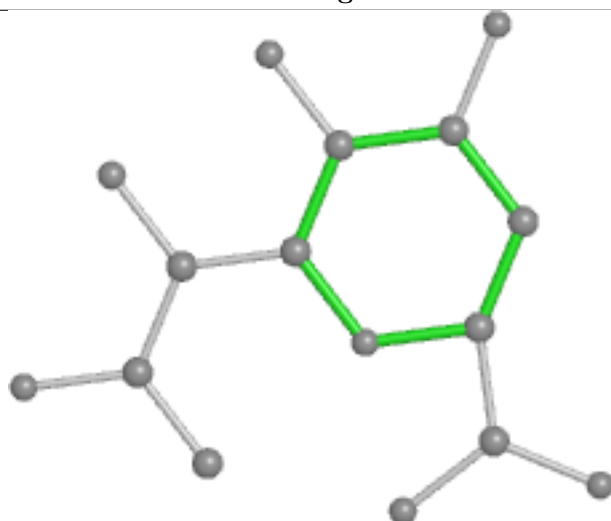
Bond lengths



Bond angles

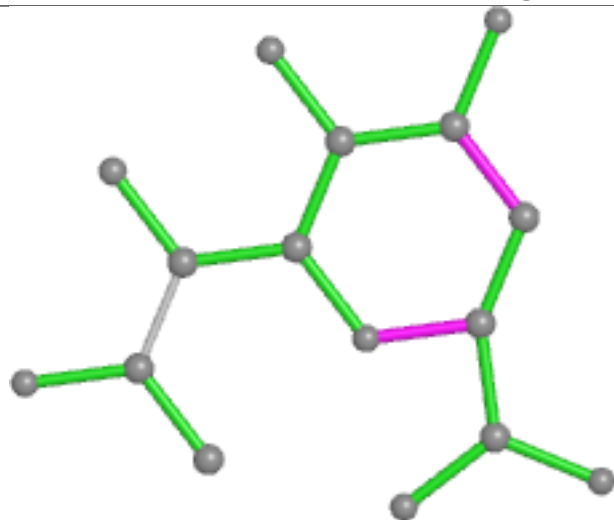


Torsions

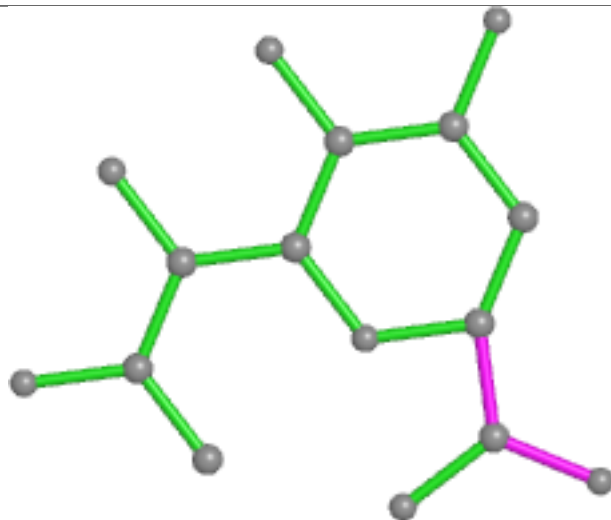


Rings

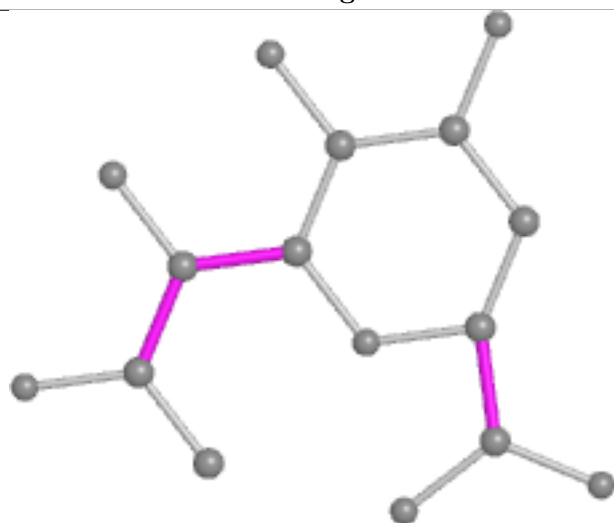
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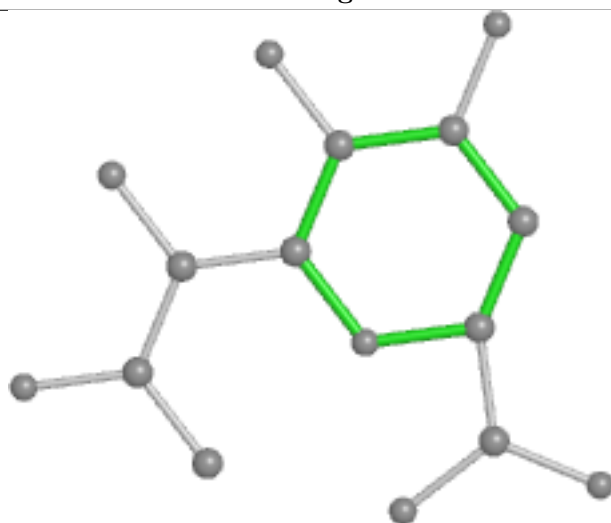
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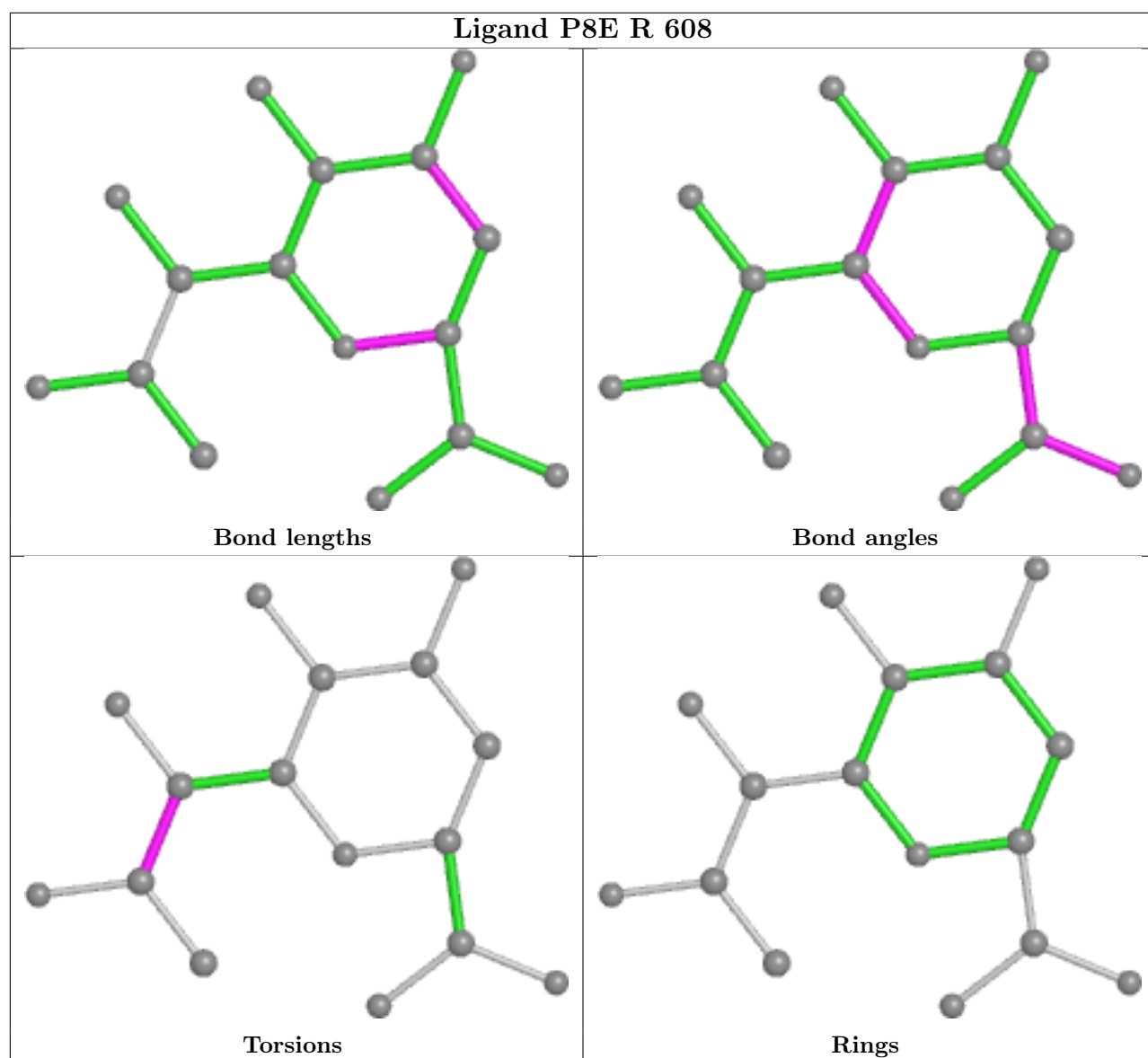
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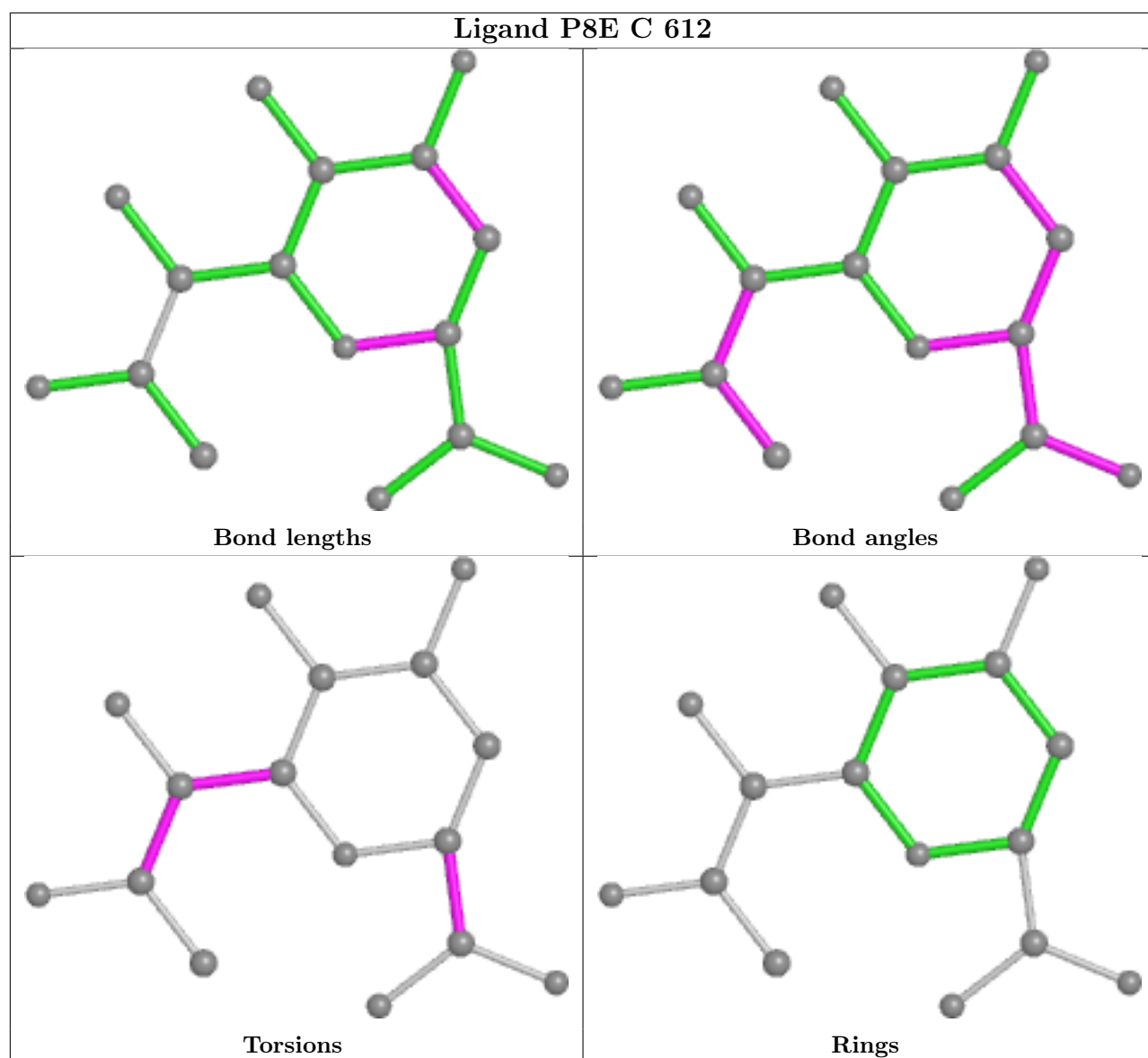


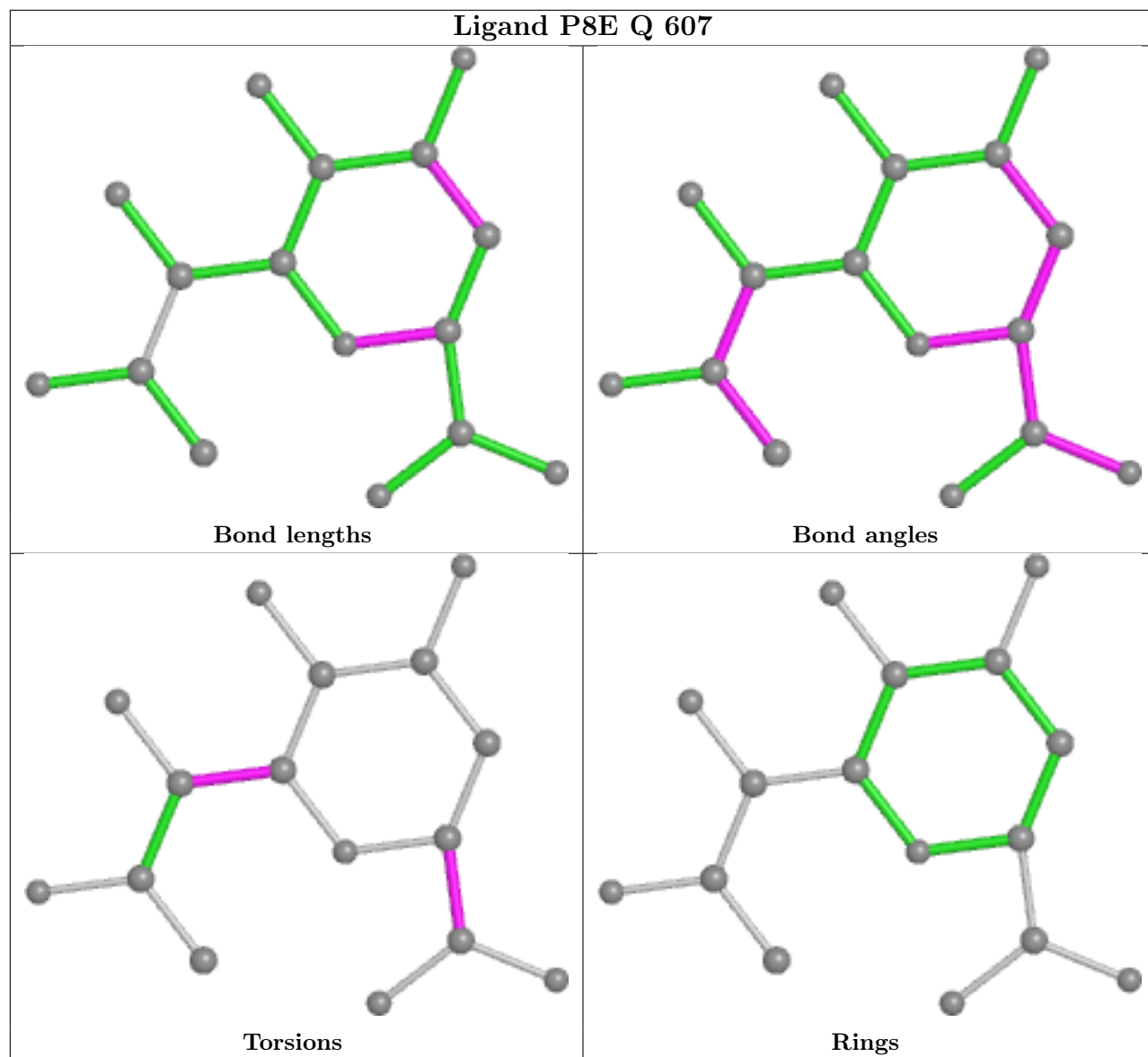
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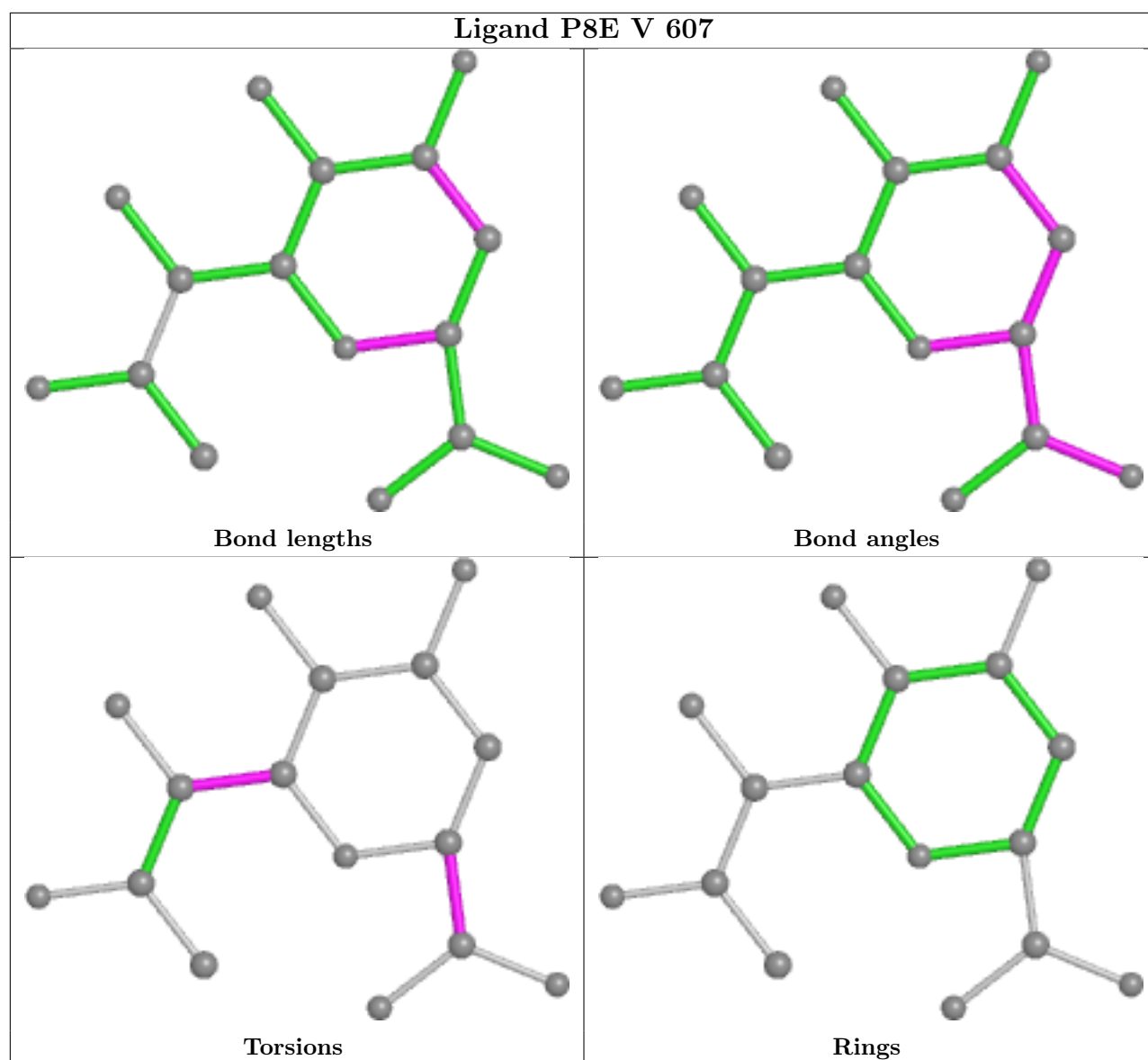


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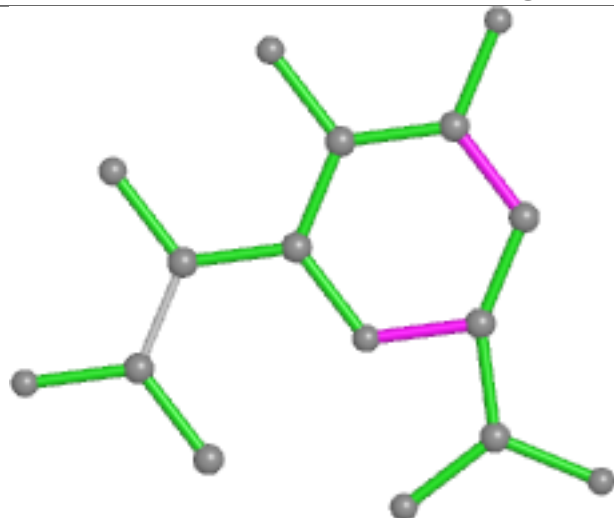




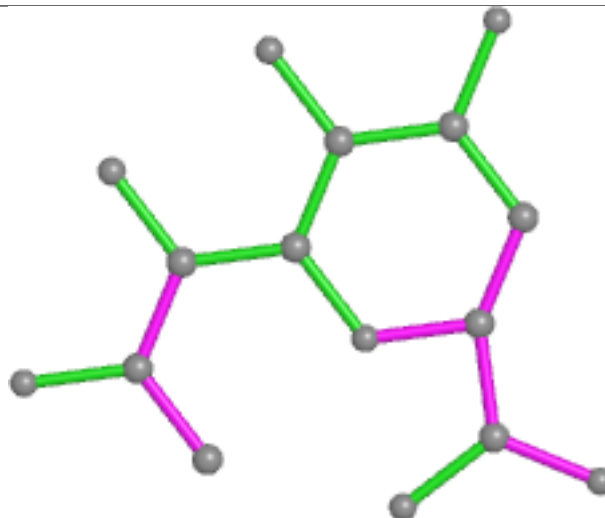




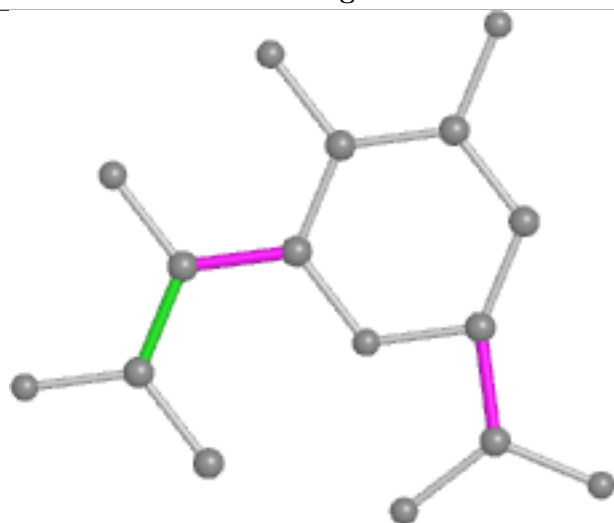
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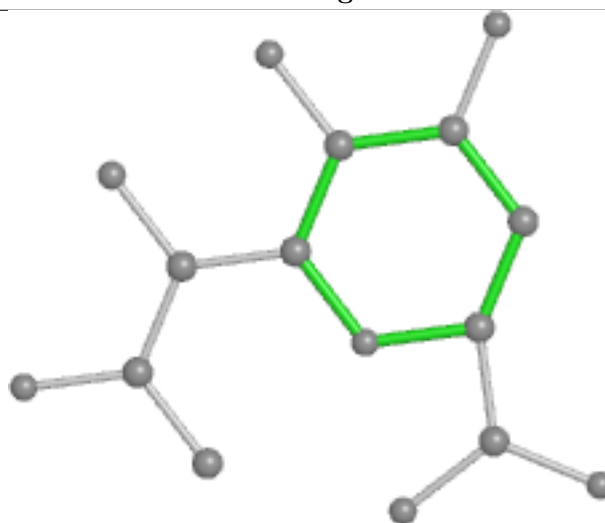
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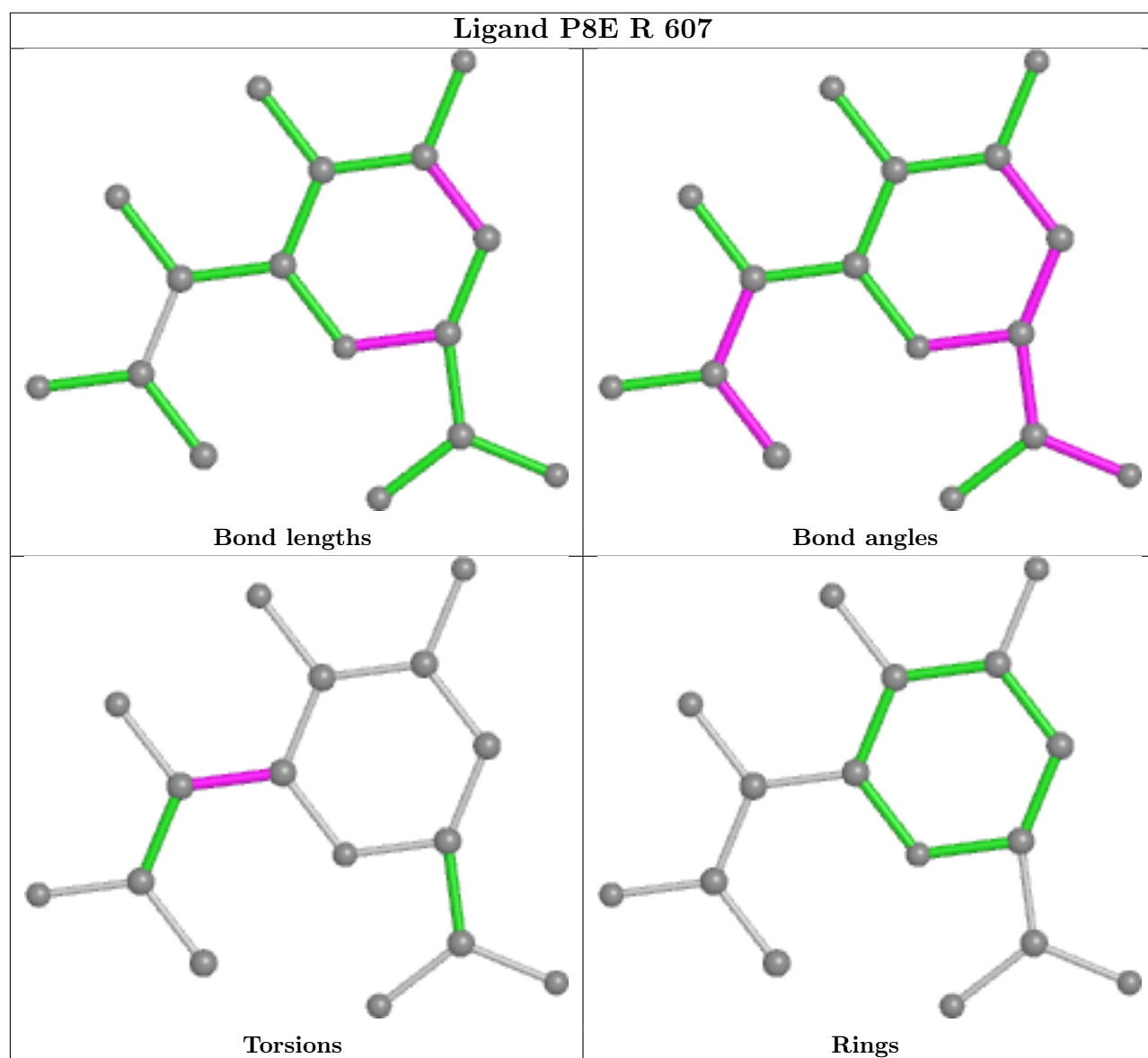
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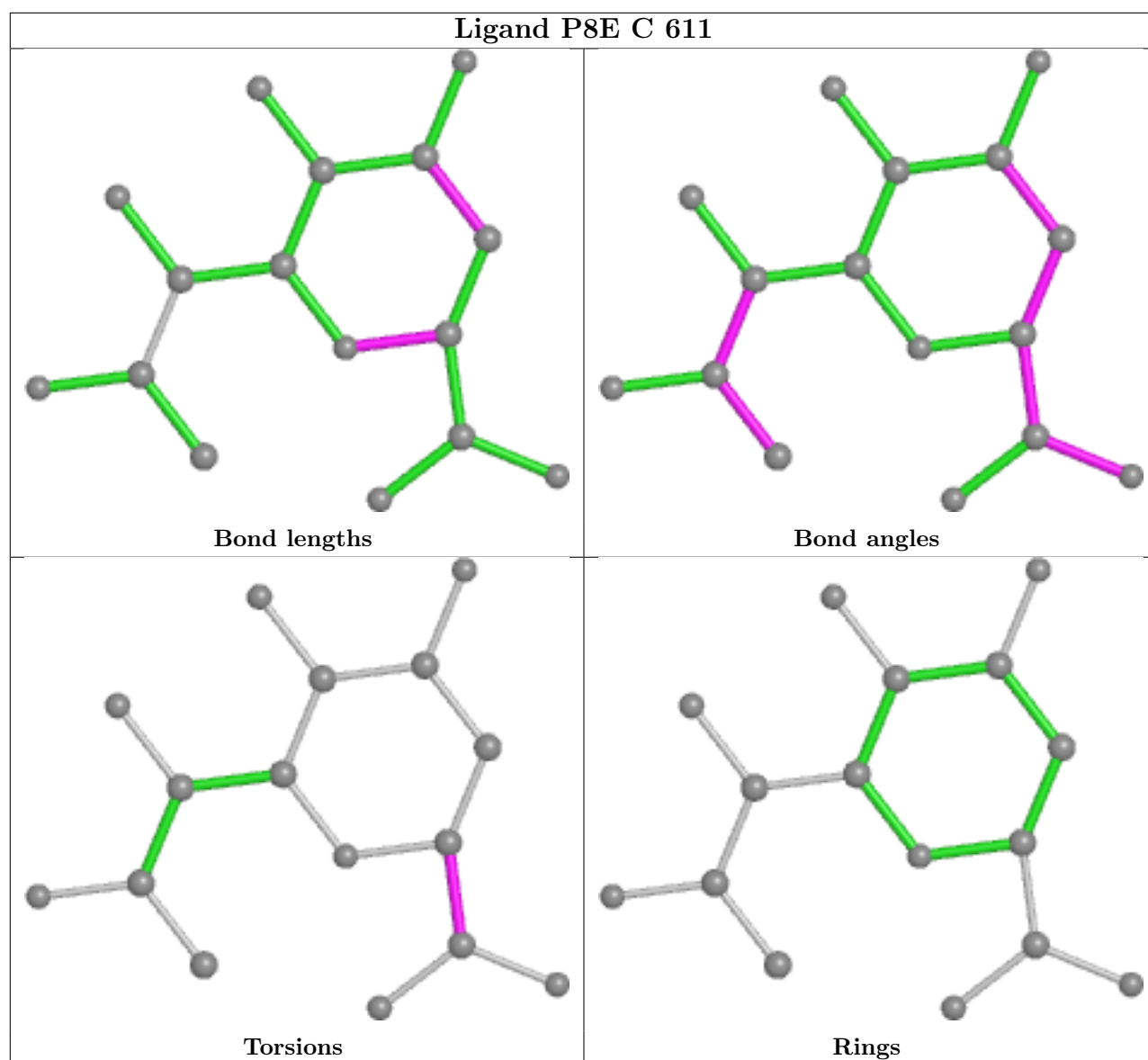


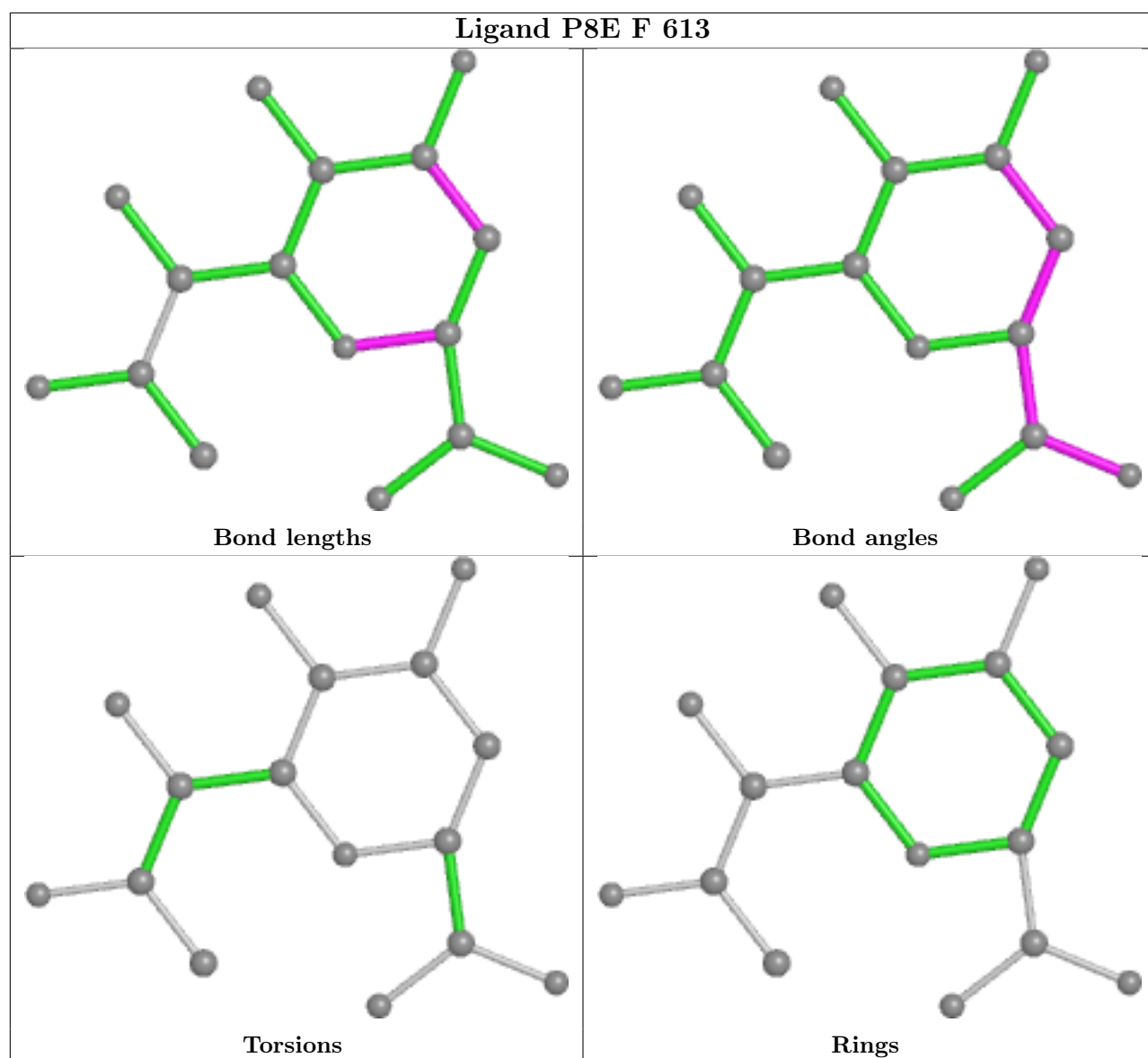
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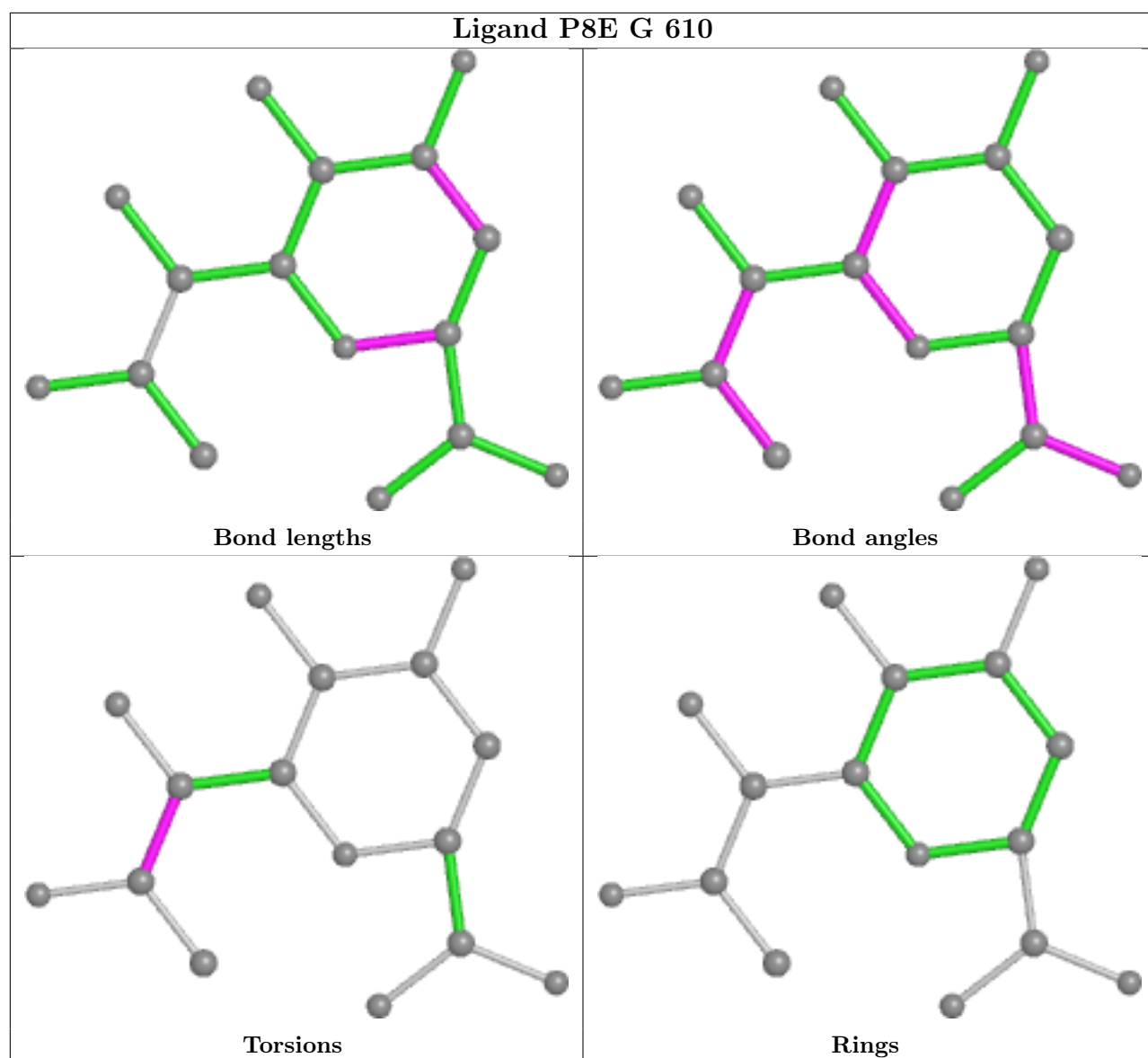


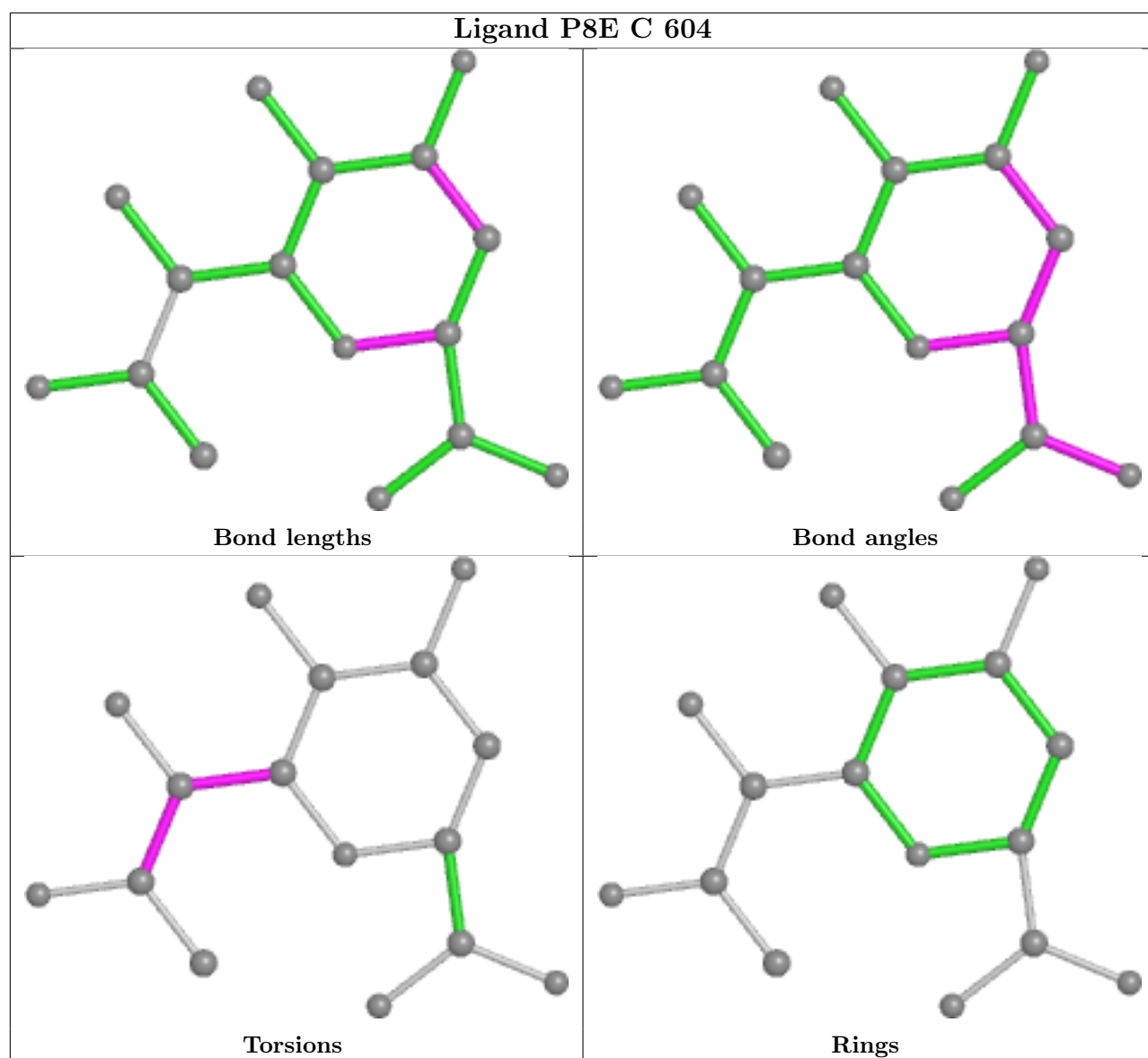
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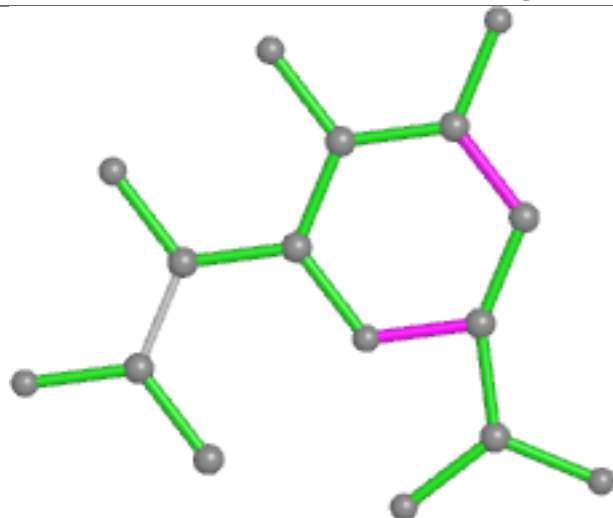




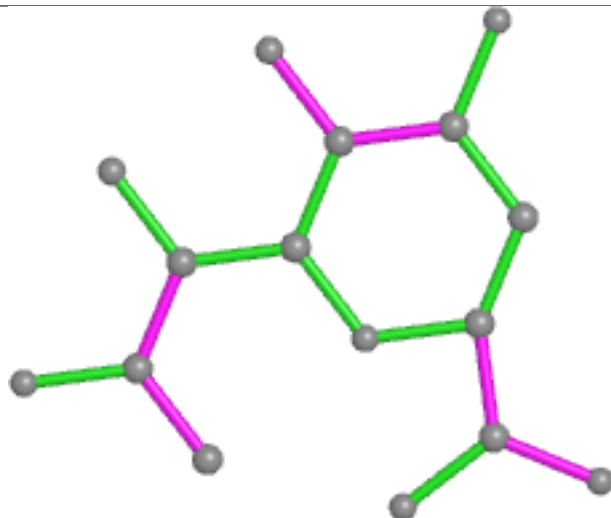




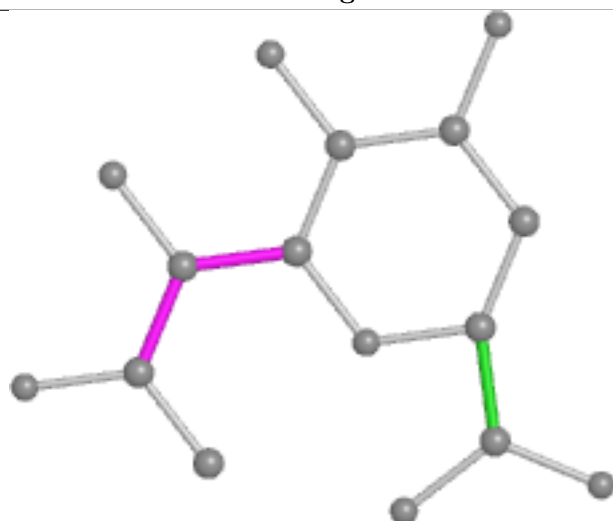
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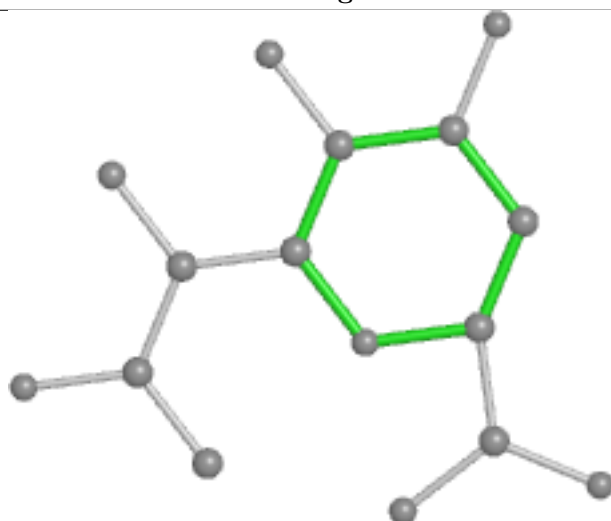
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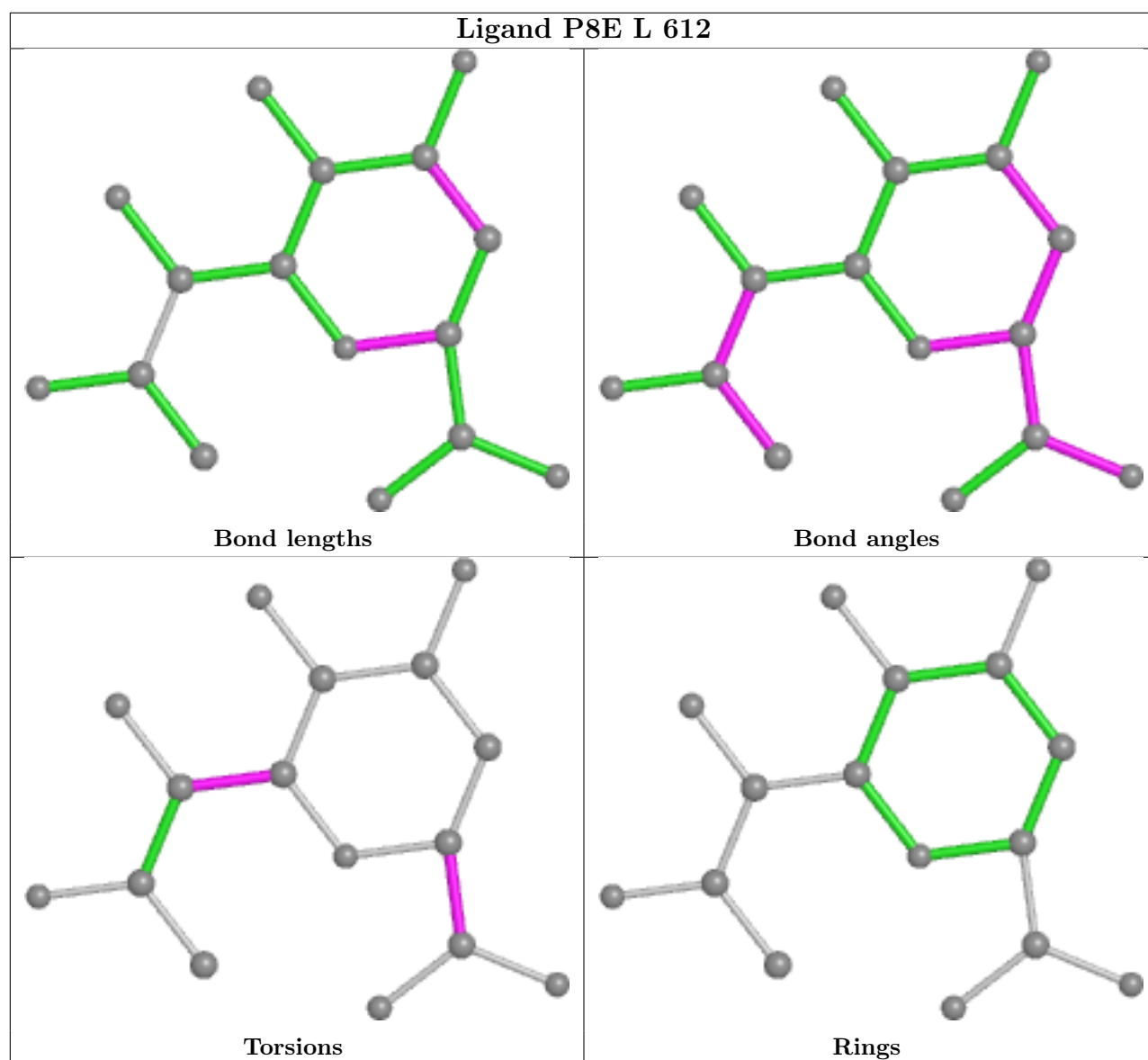
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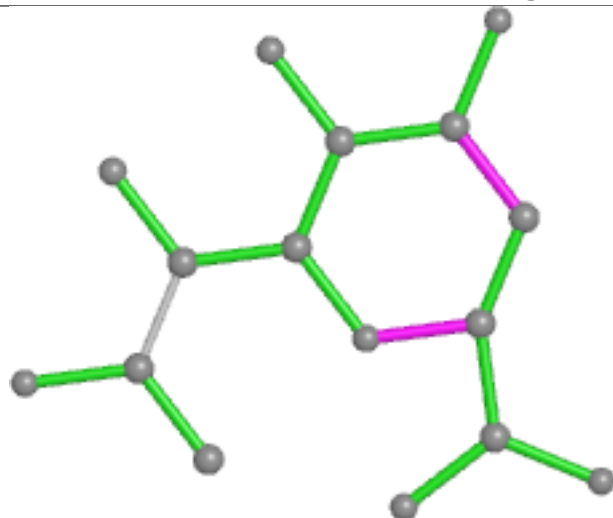
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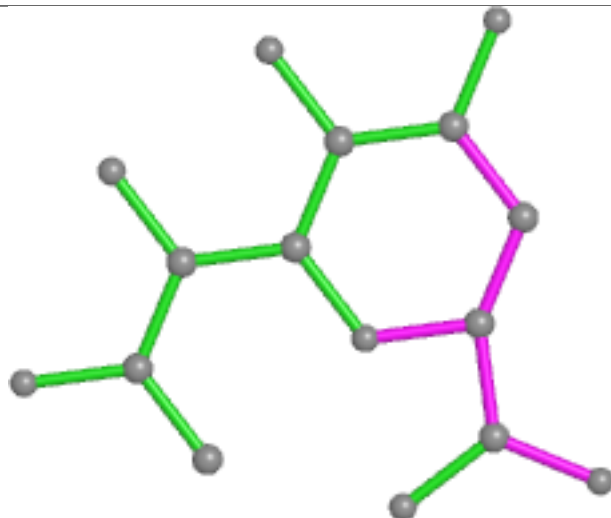
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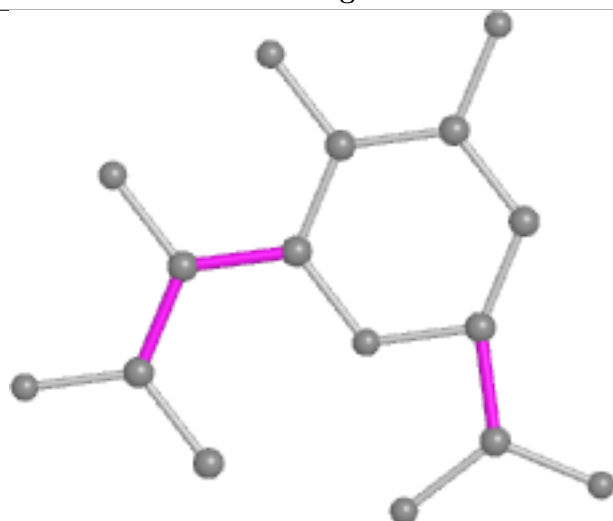
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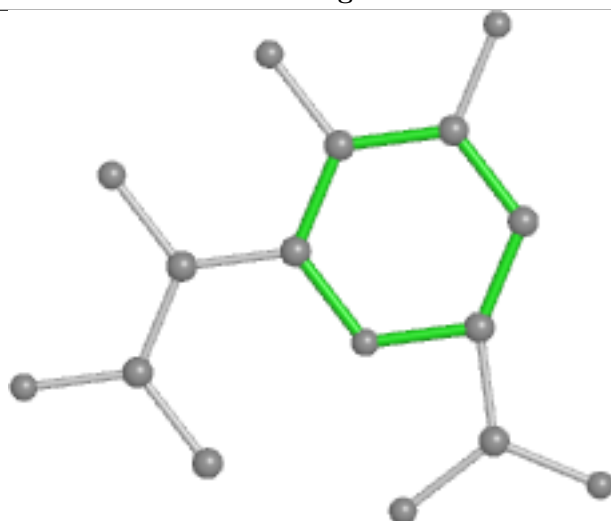
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Bond angles

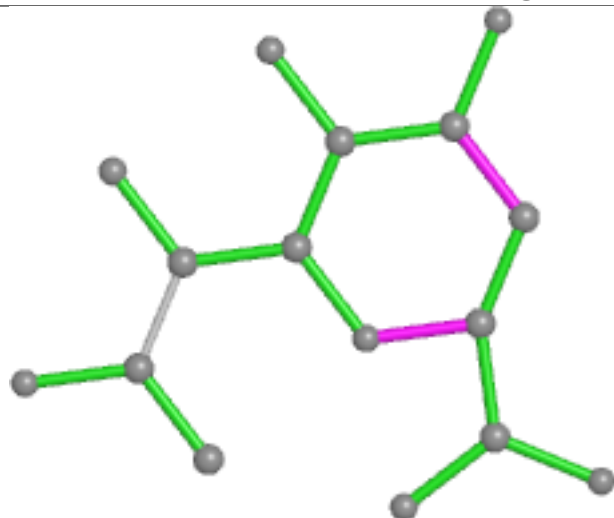


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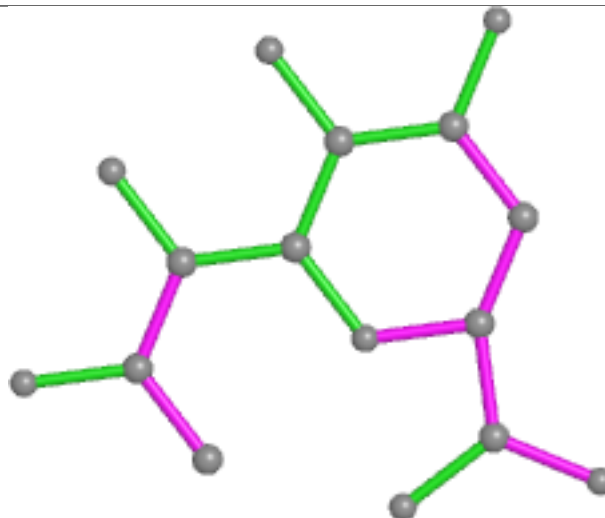


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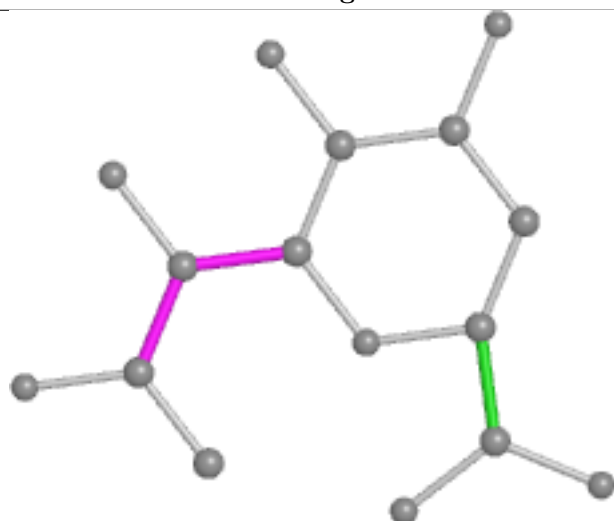
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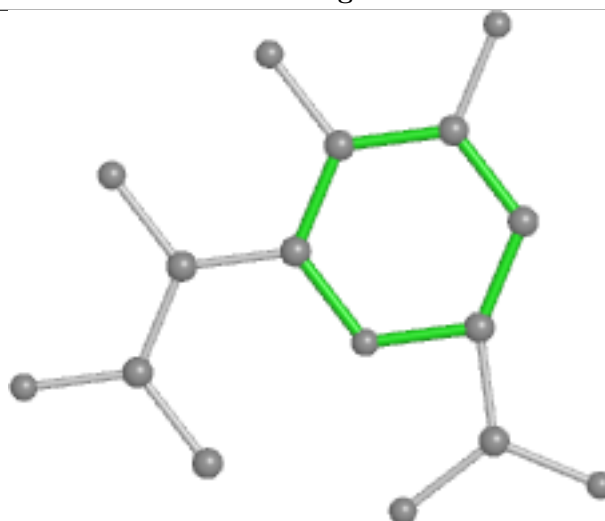
Bond lengths



Bond angles

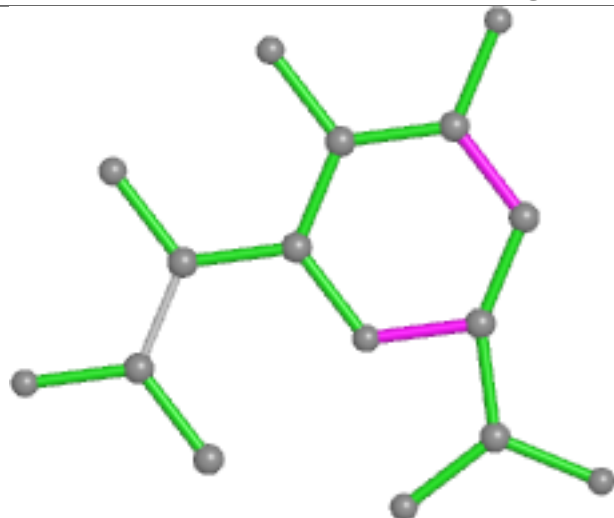


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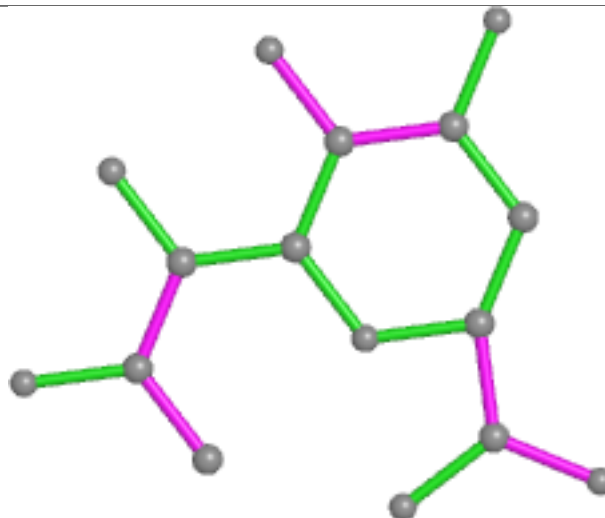


Rings

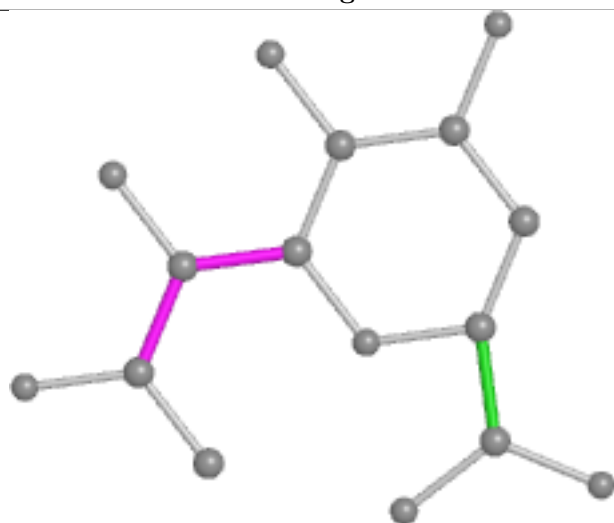
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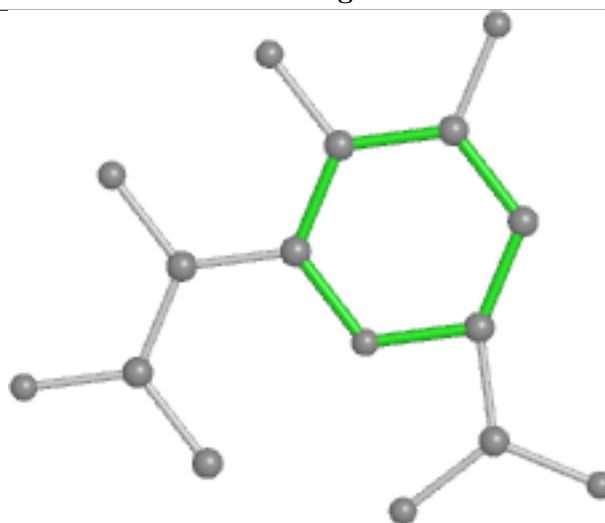
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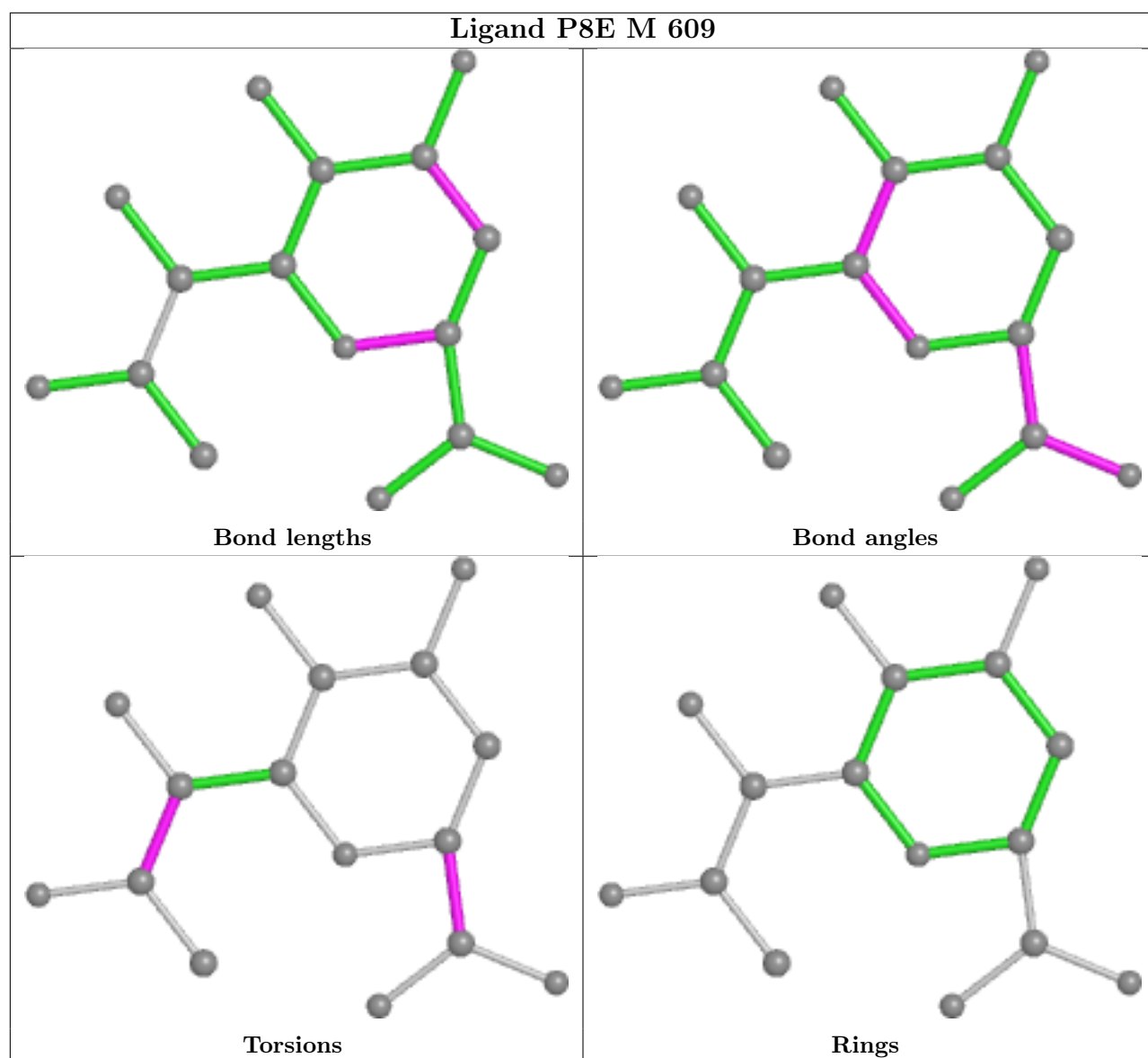
Bond angles



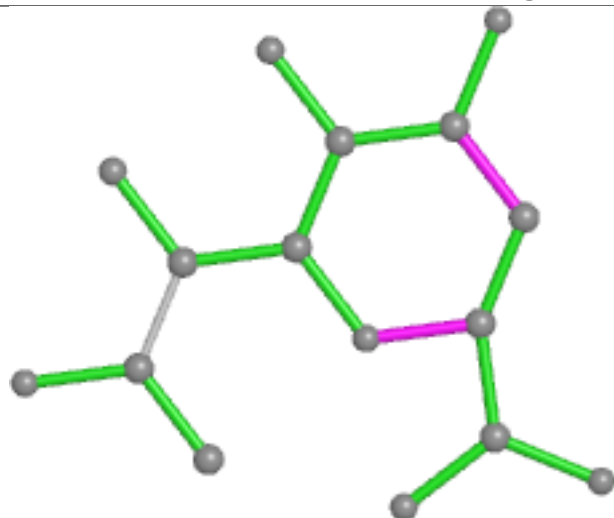
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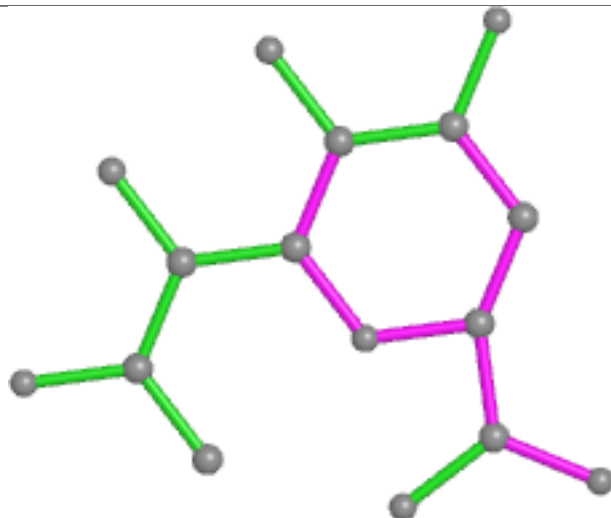
Rings



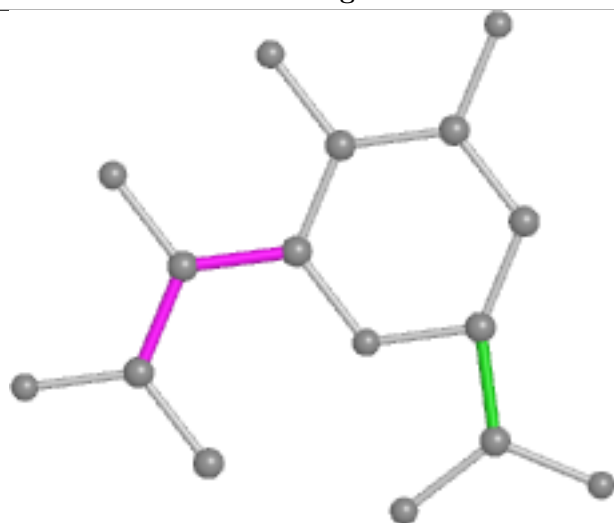
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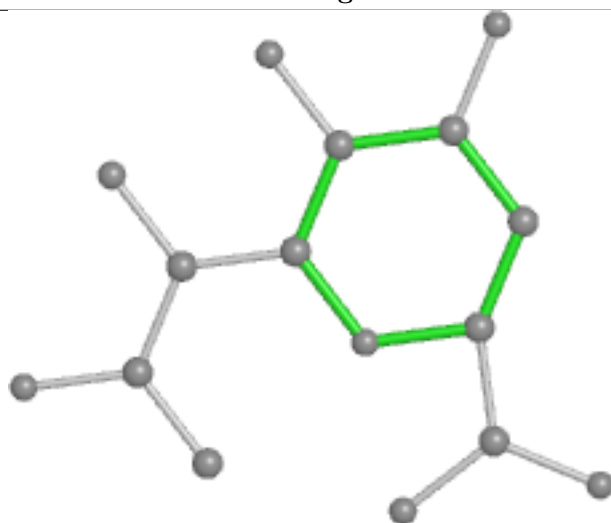
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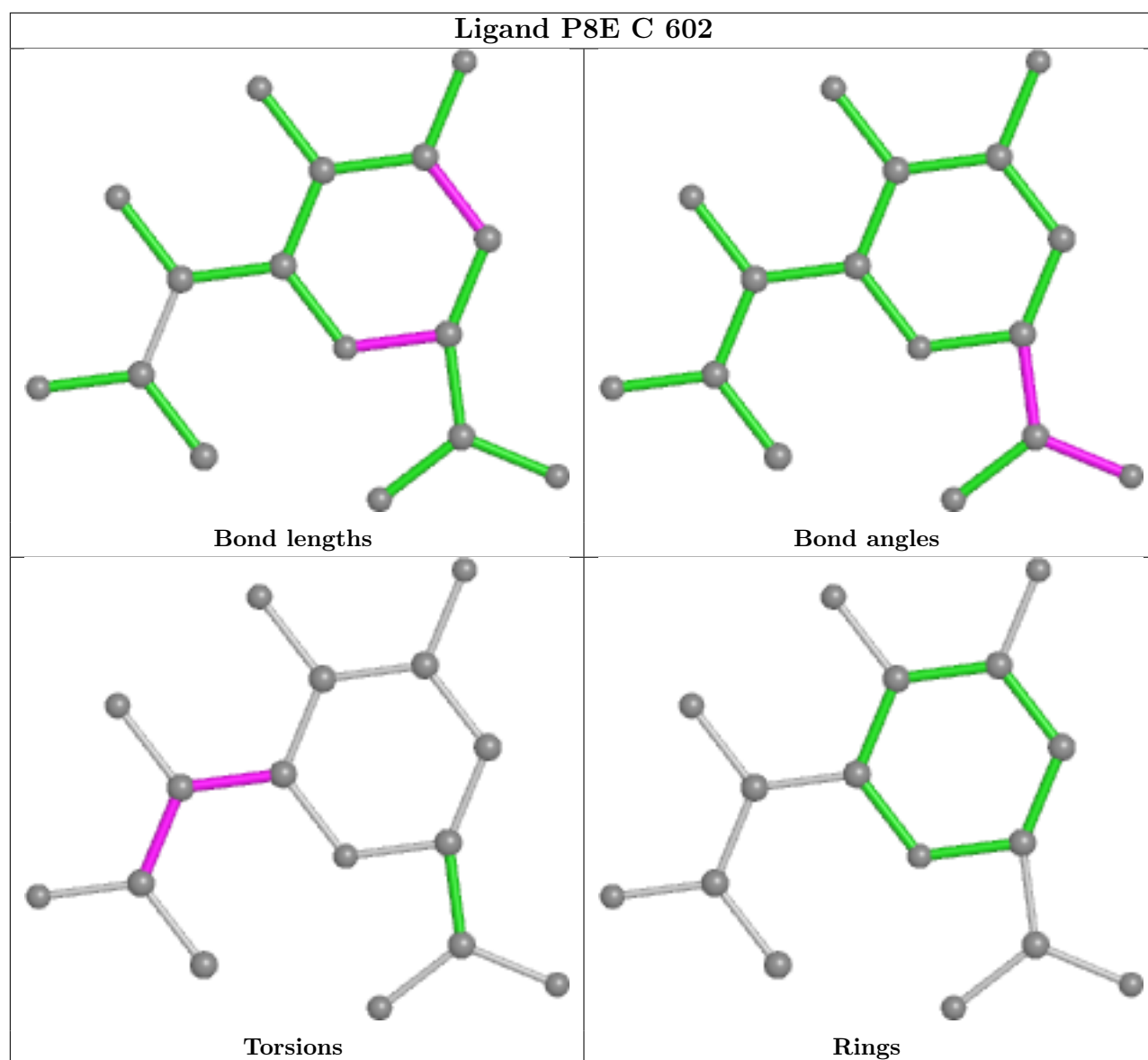
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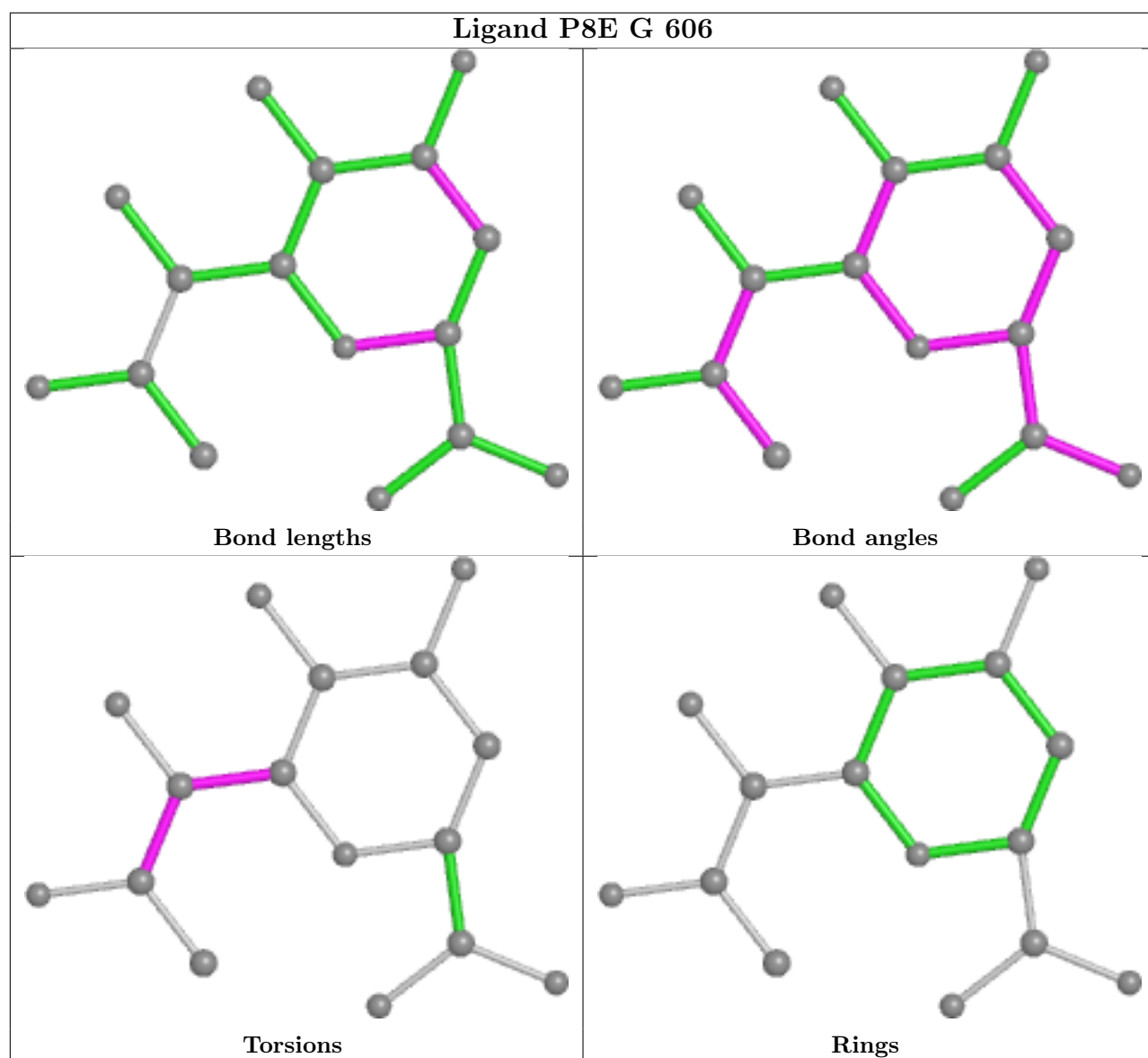


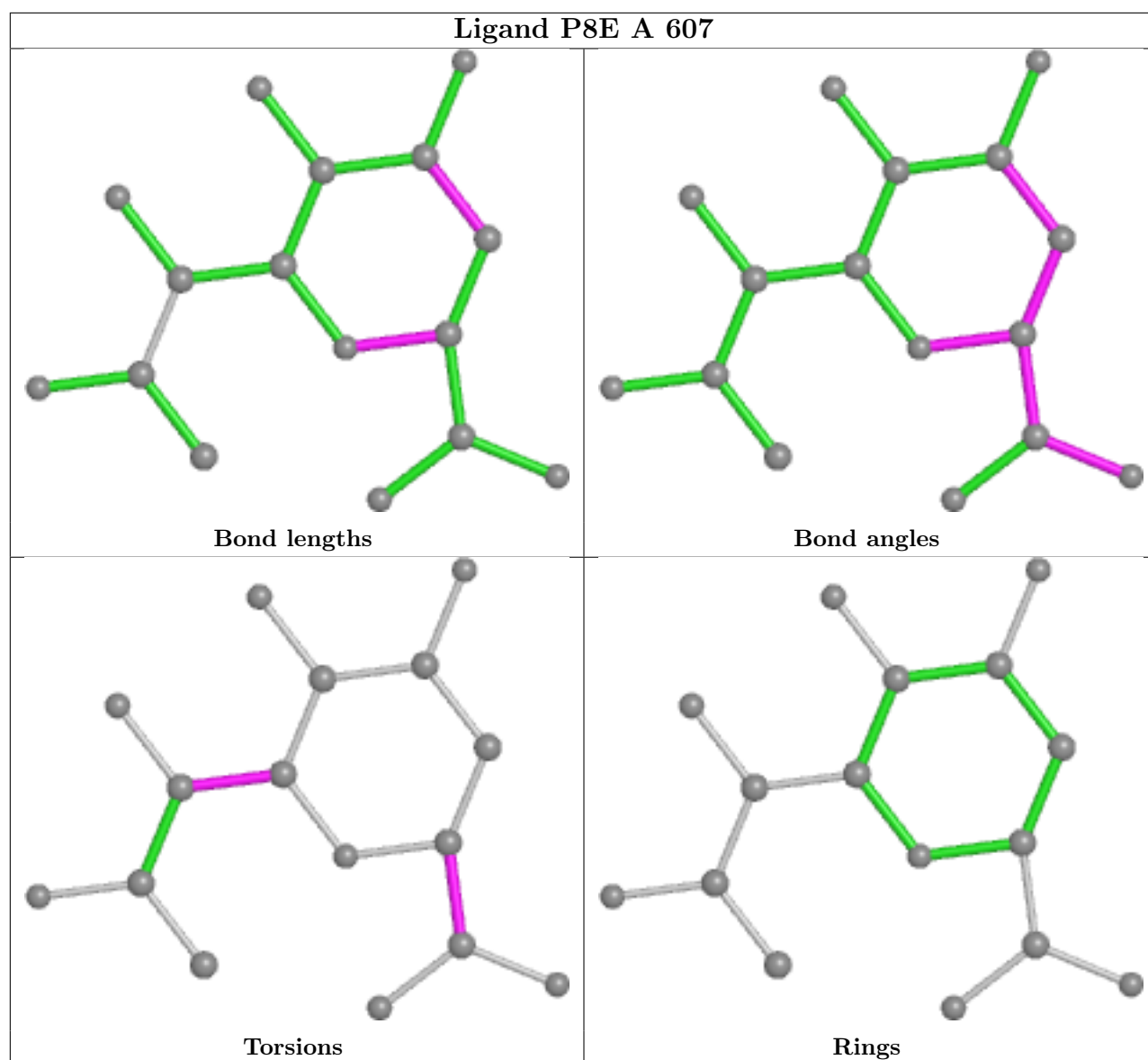
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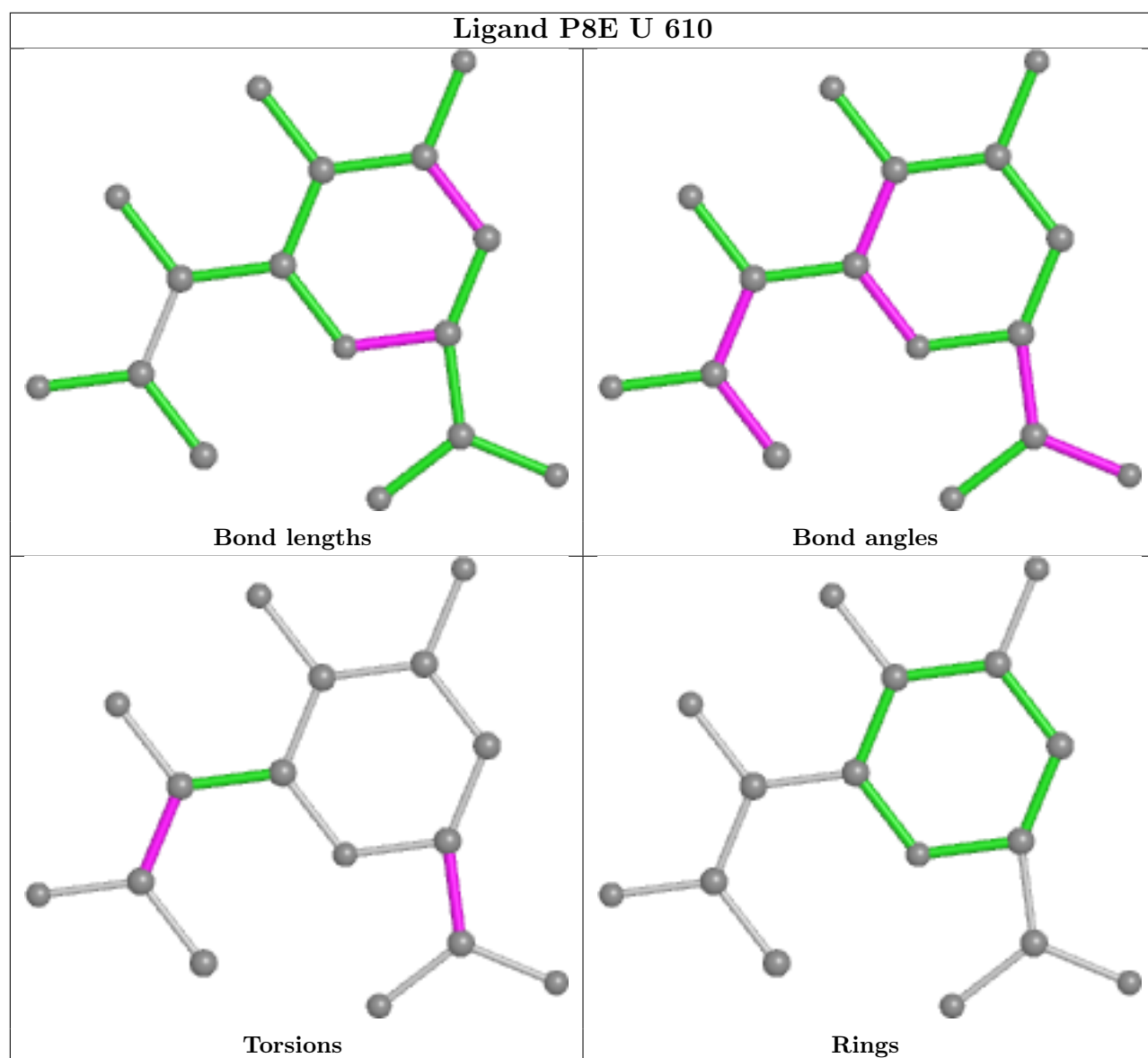


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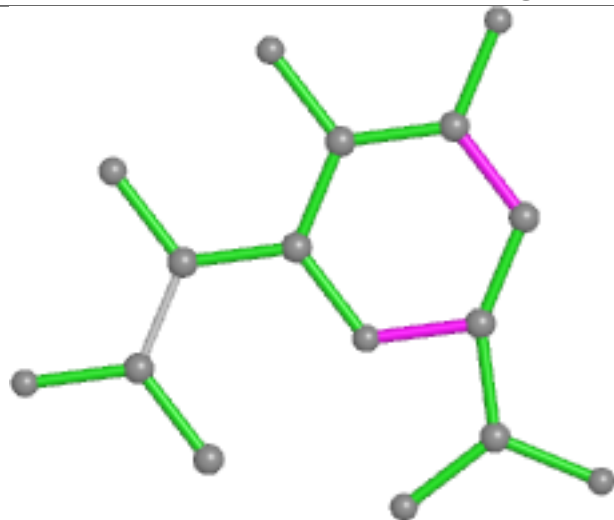




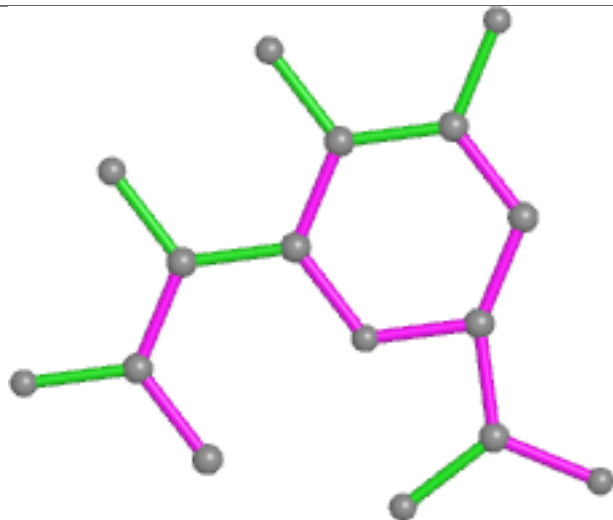




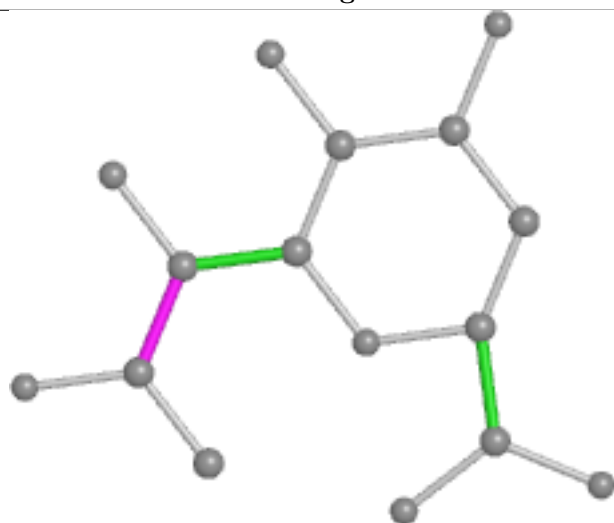
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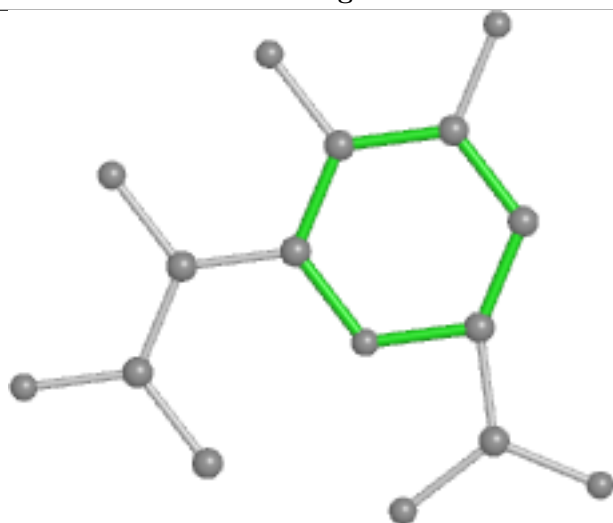
Bond lengths



Bond angles

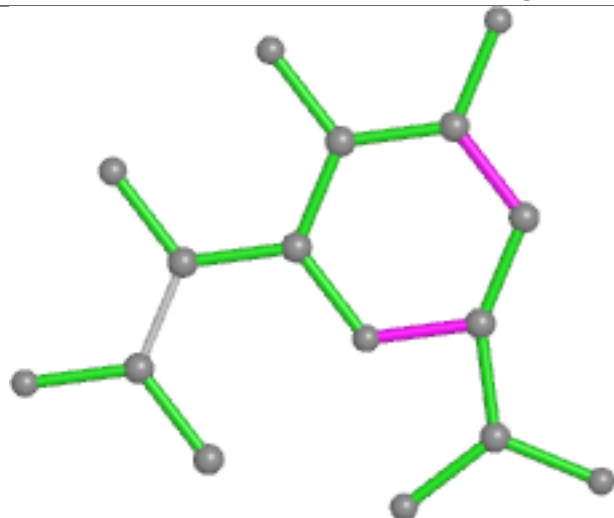


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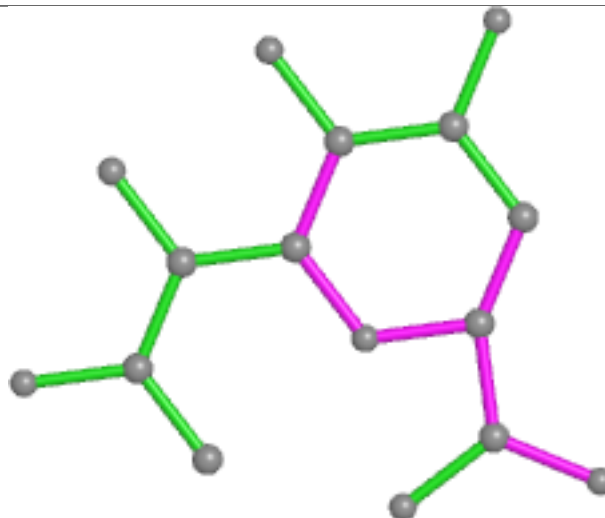


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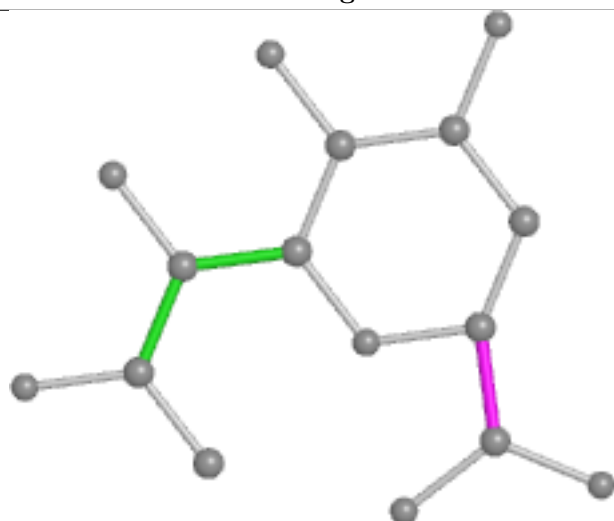
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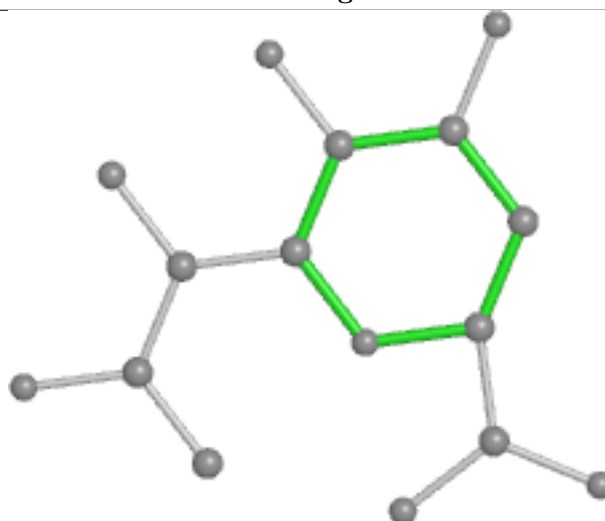
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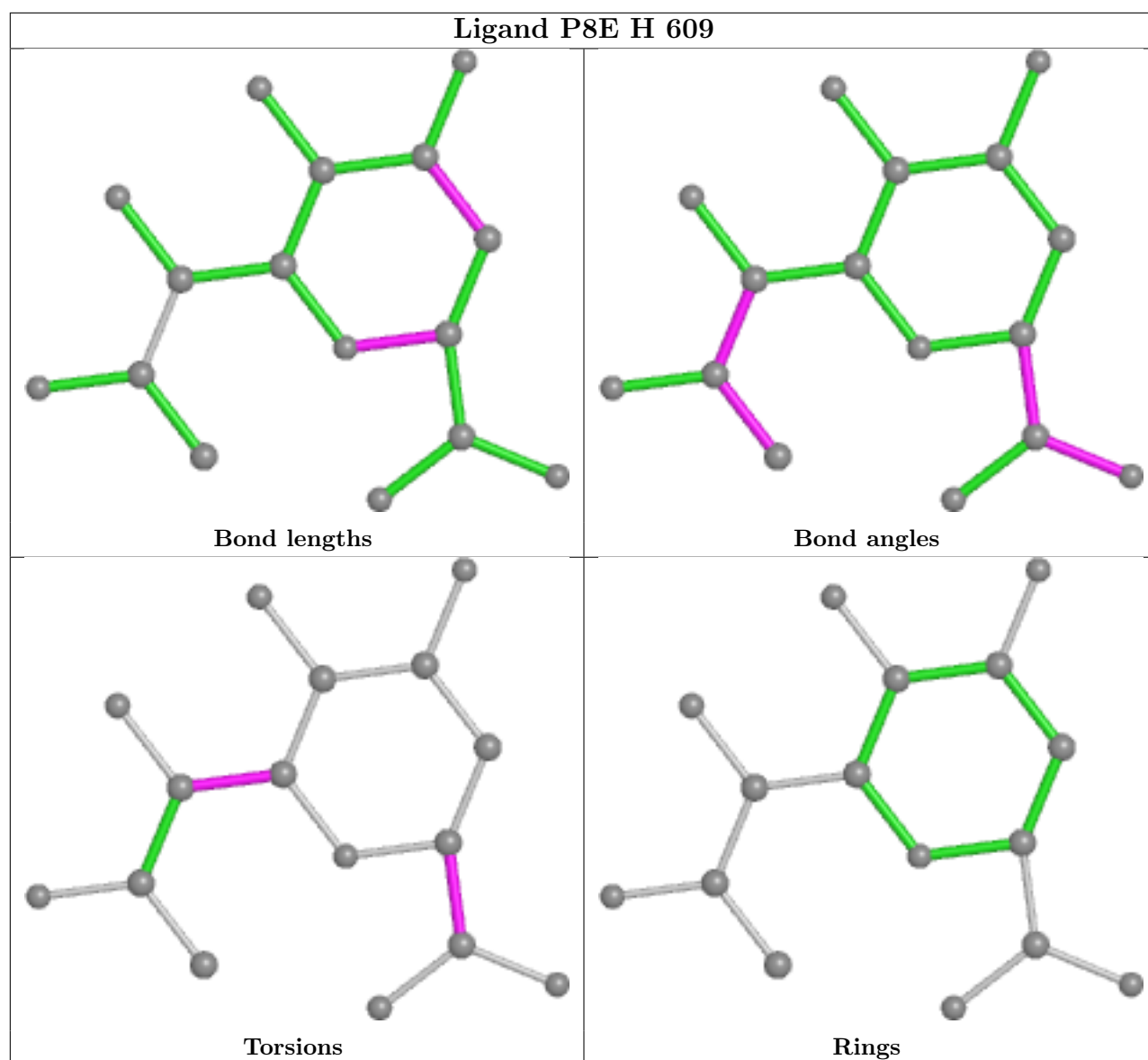
Bond angles

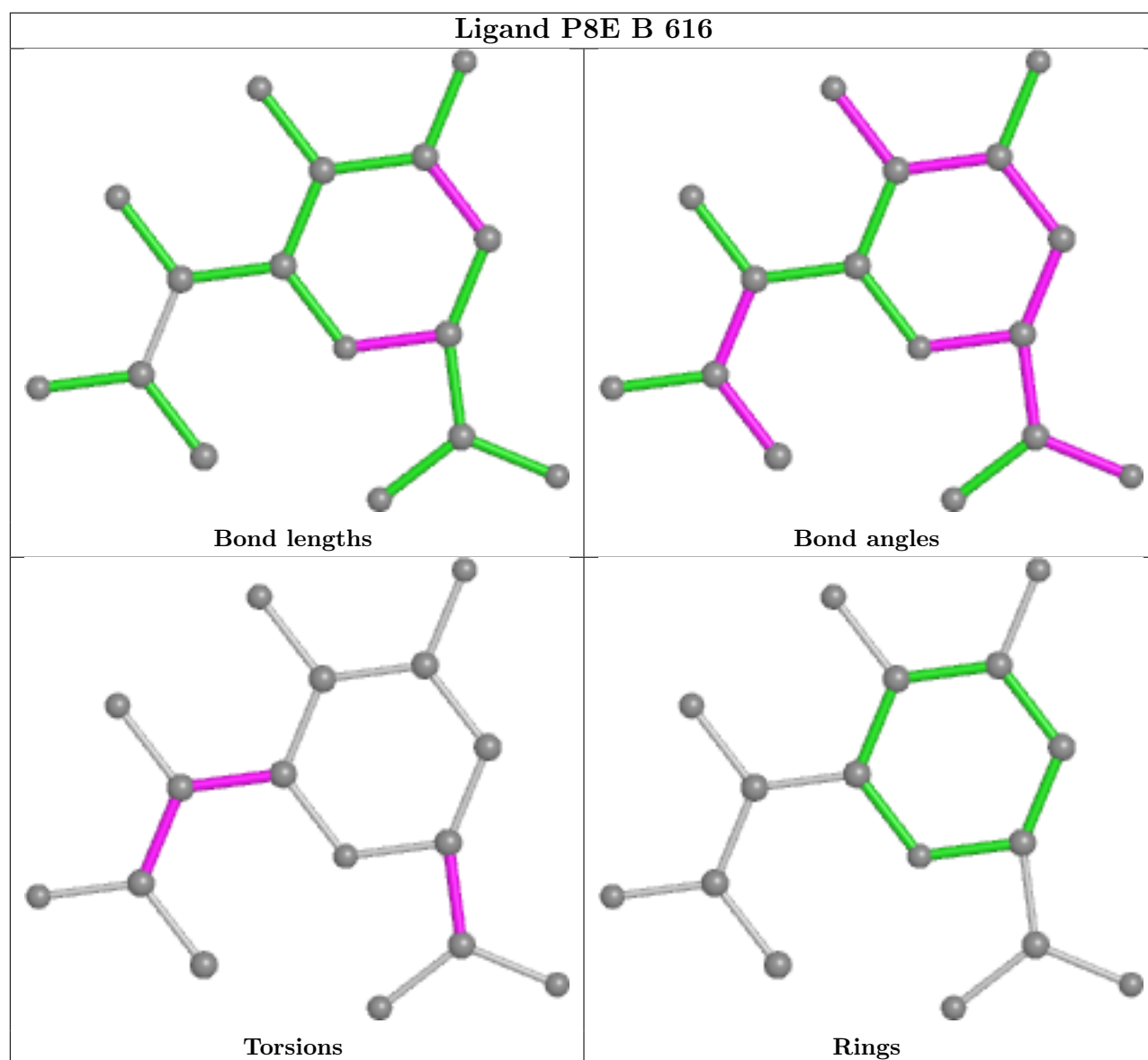


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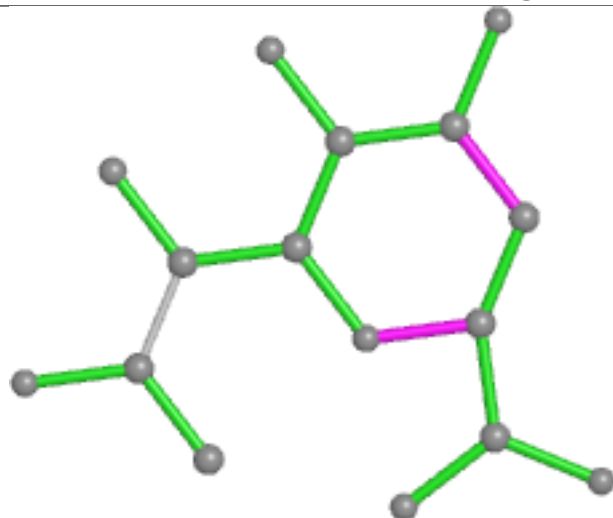


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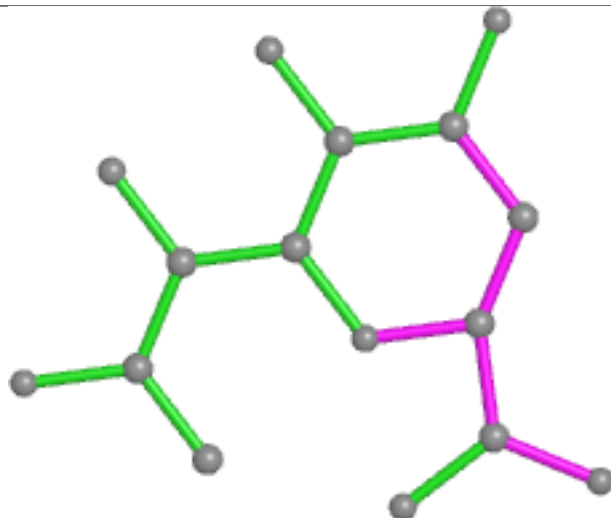




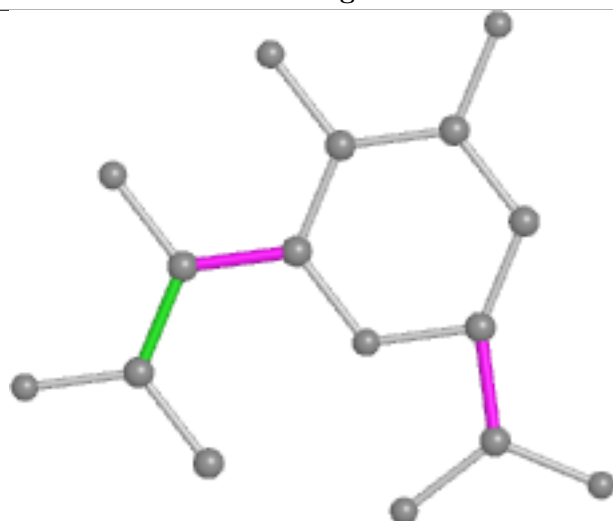
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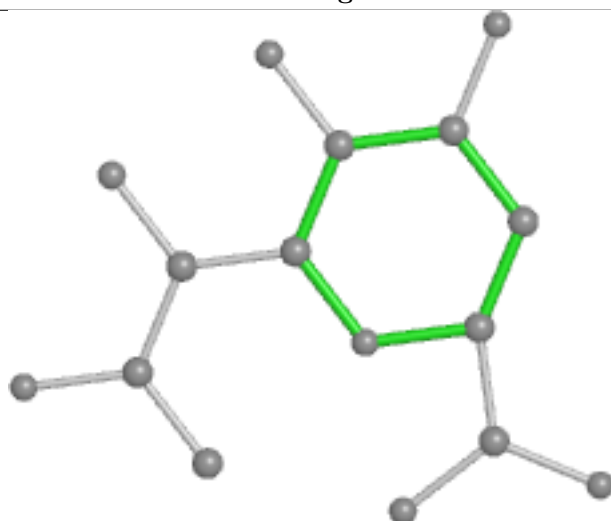
Bond lengths



Bond angles

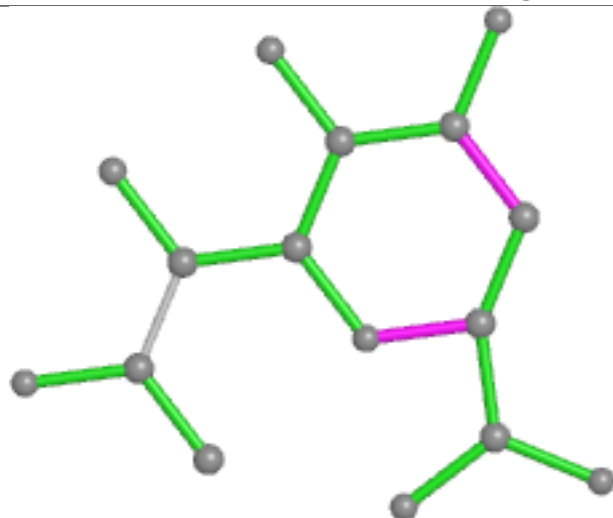


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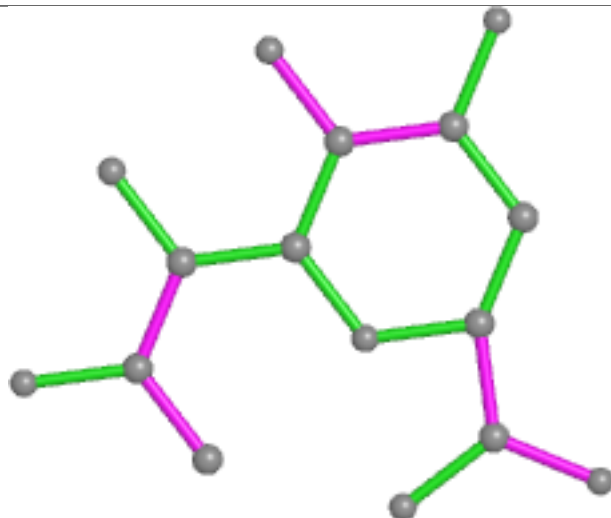


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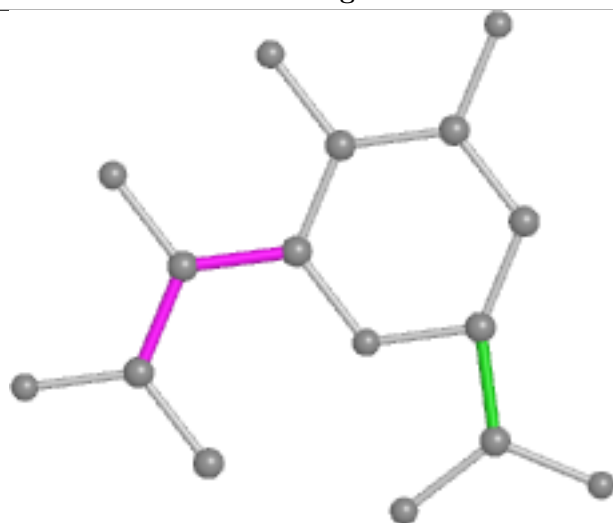
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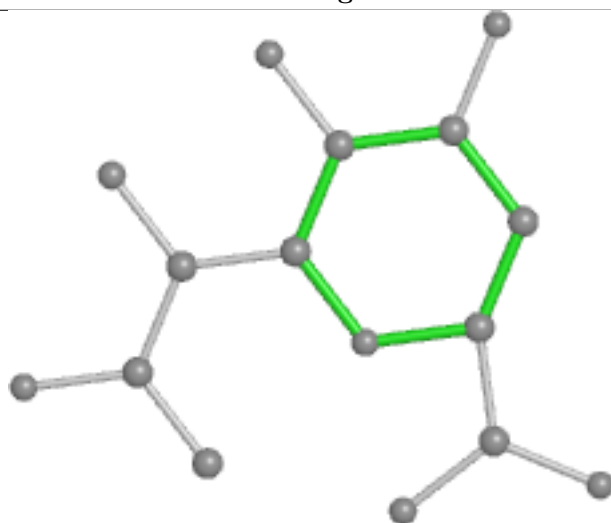
Bond lengths



Bond angles

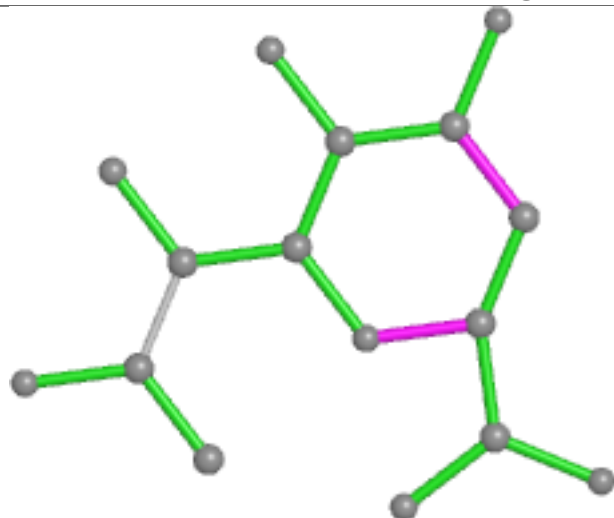


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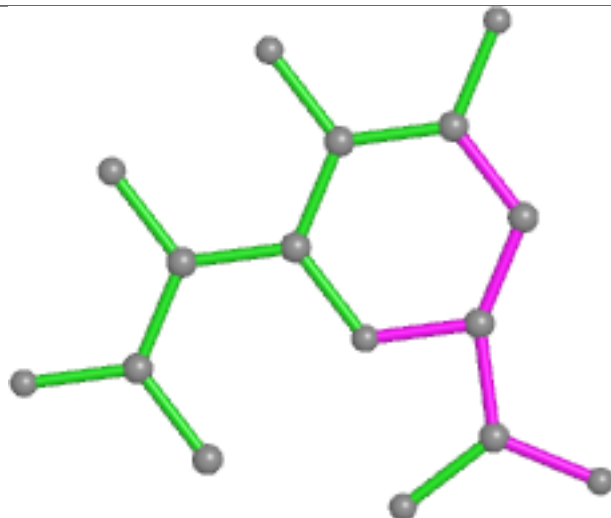


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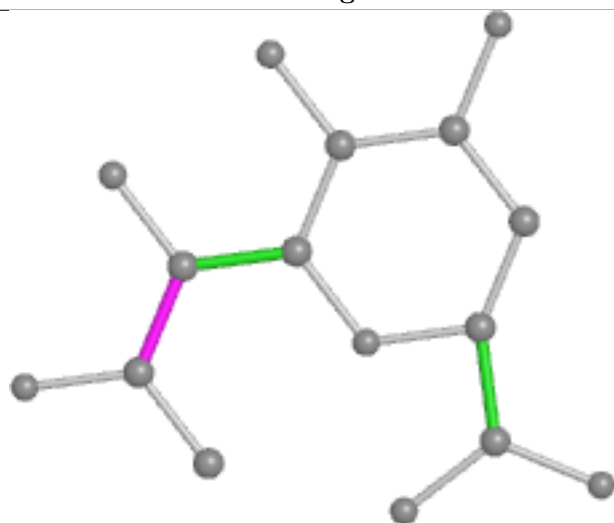
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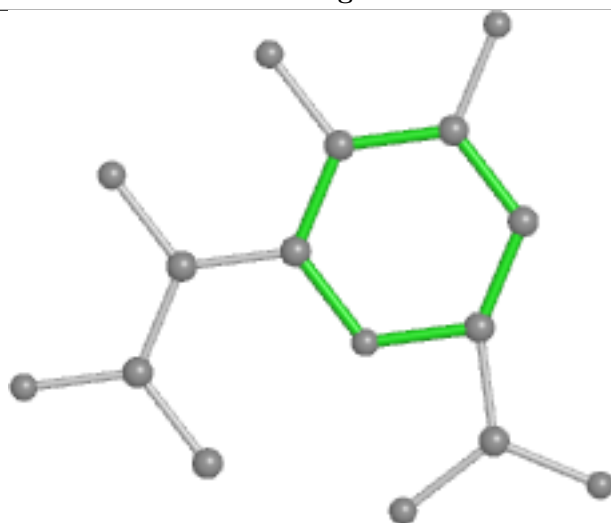
Bond lengths



Bond angles

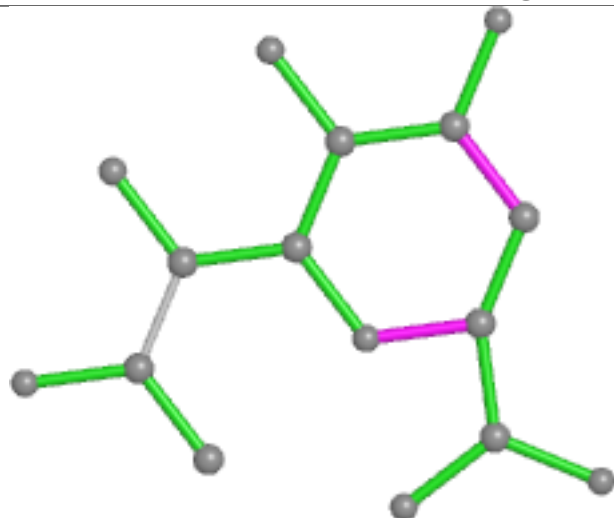


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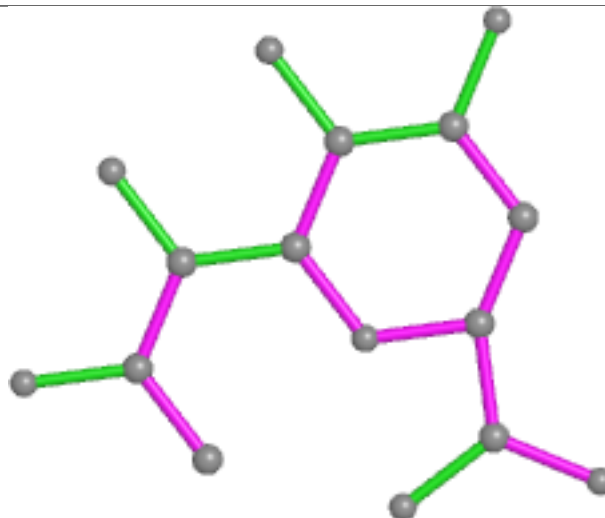


Rings

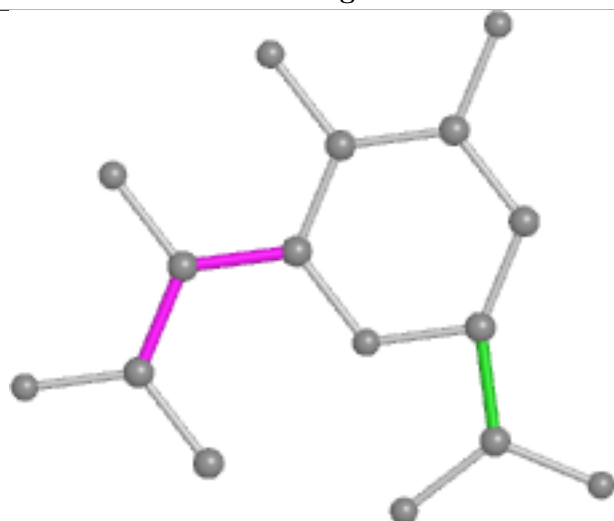
Ligand P8E K 606



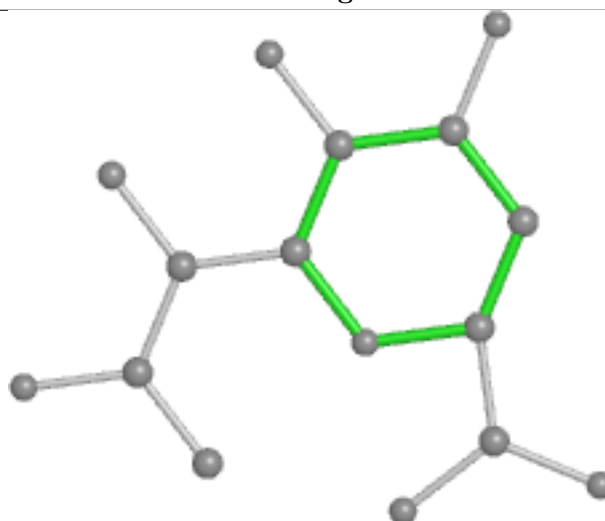
Bond lengths



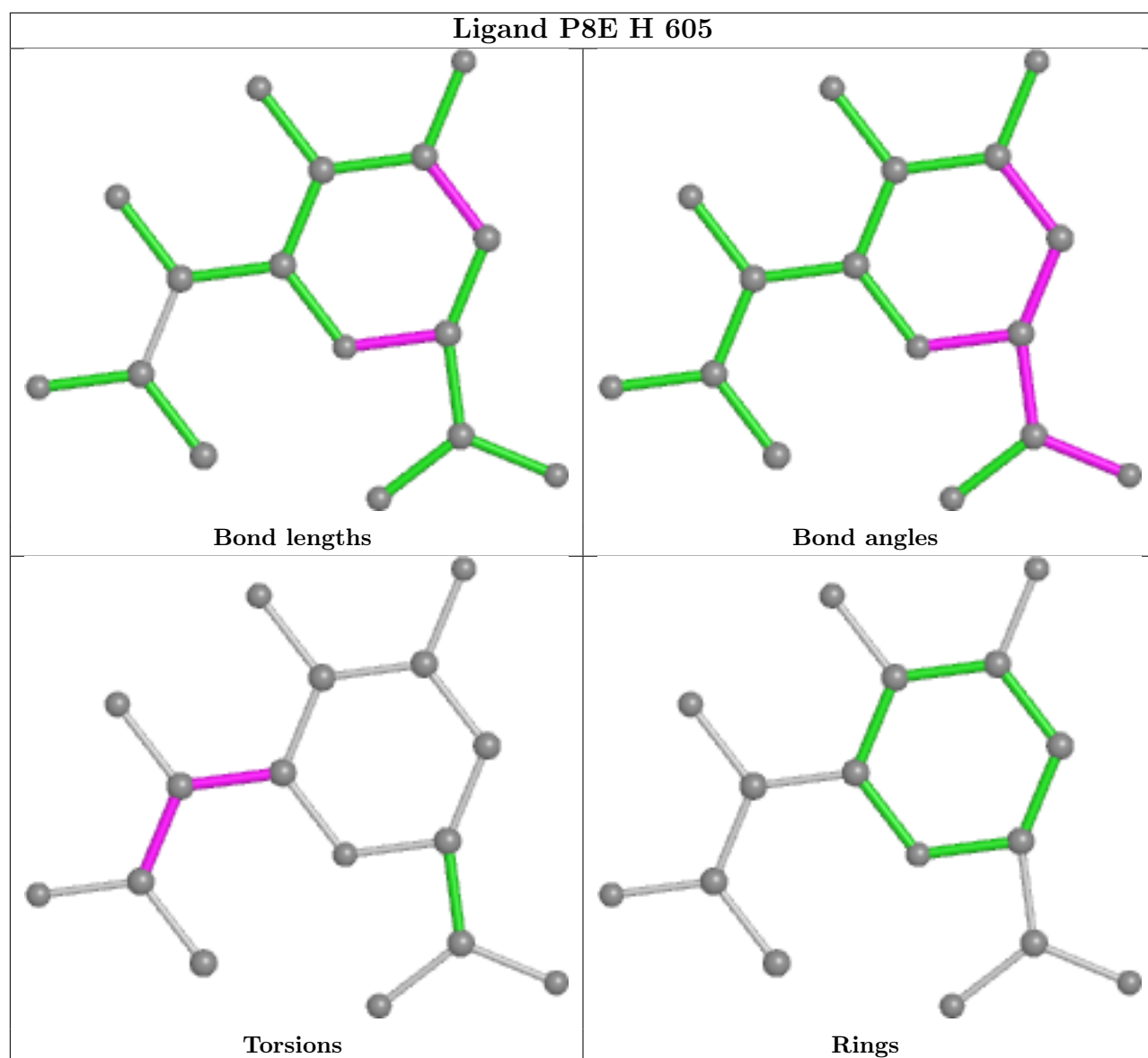
Bond angles



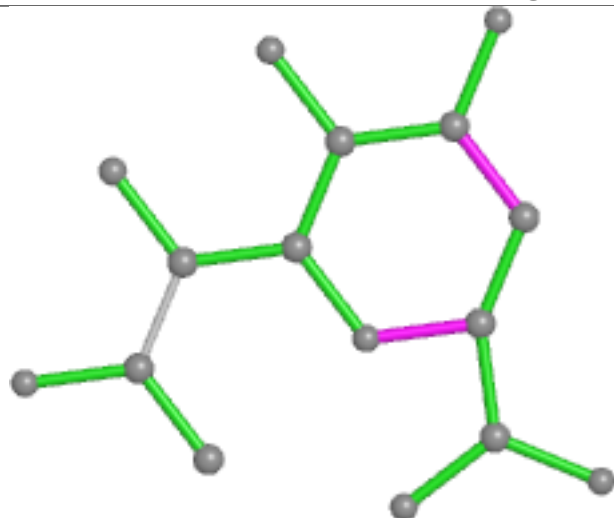
Torsions



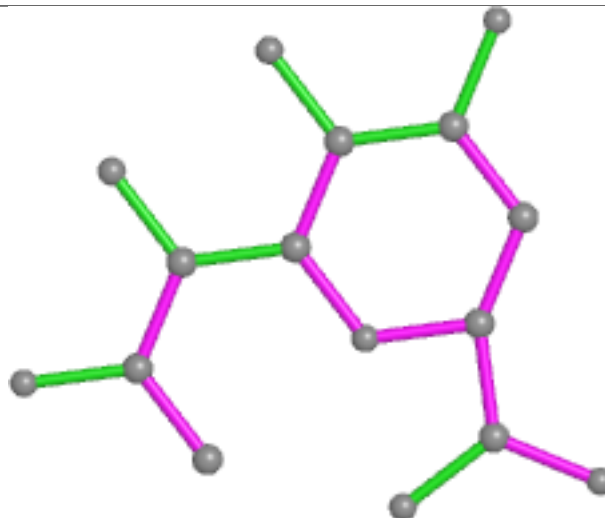
Rings



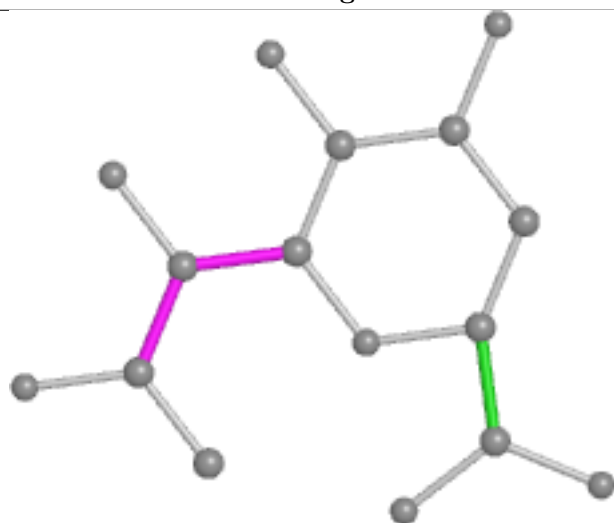
Ligand P8E I 606



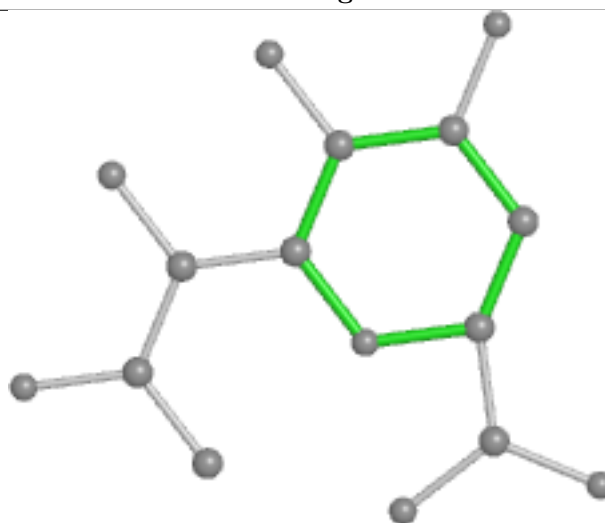
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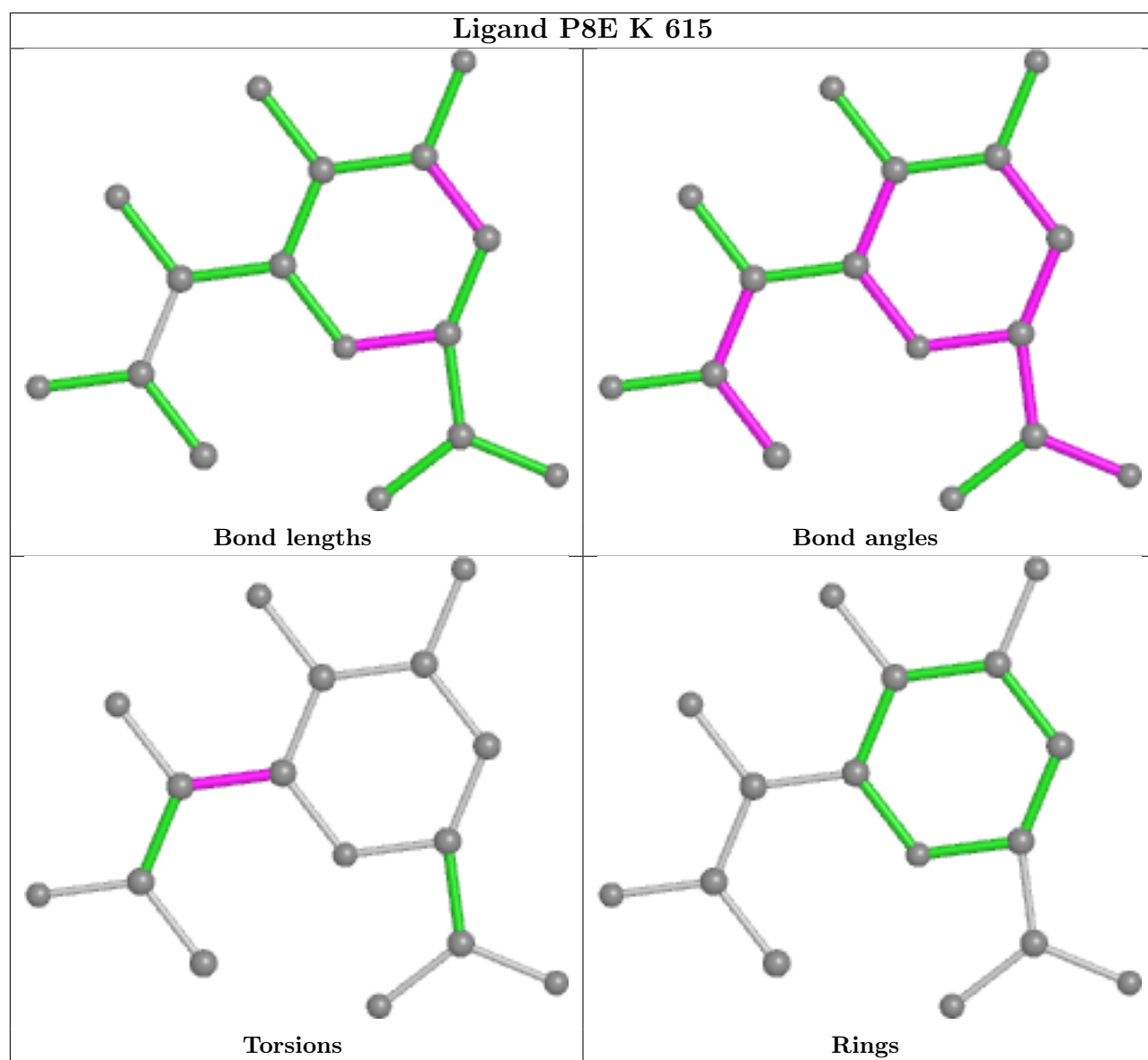
Bond angles



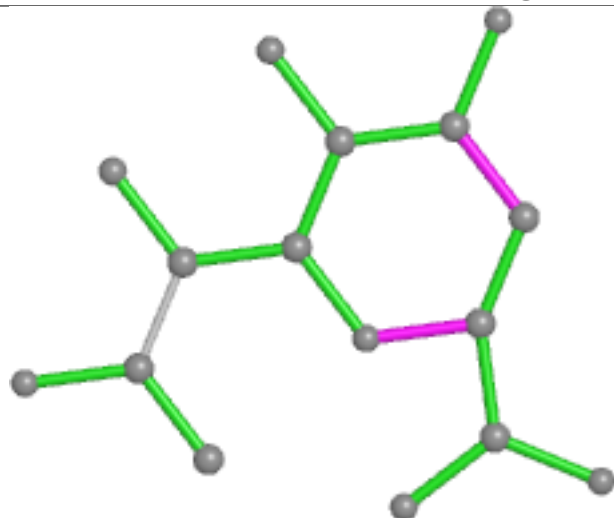
Torsions



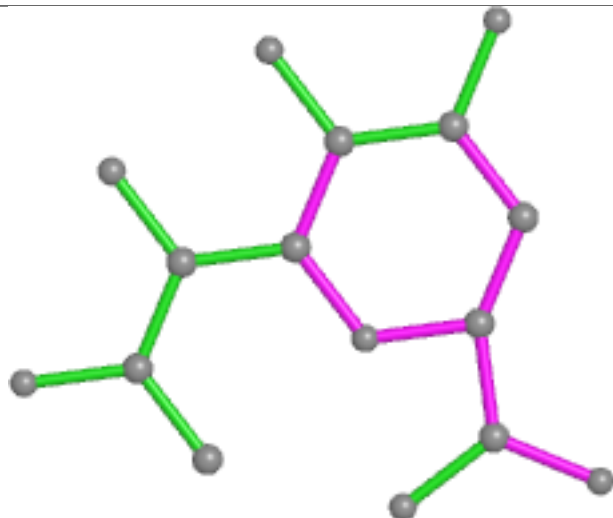
Rings



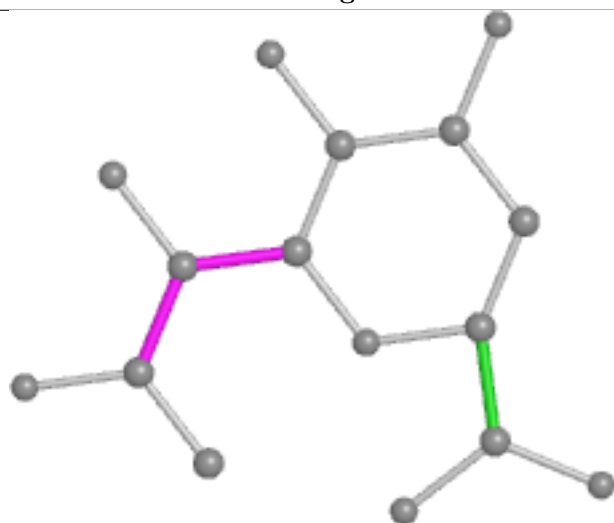
Ligand P8E G 604



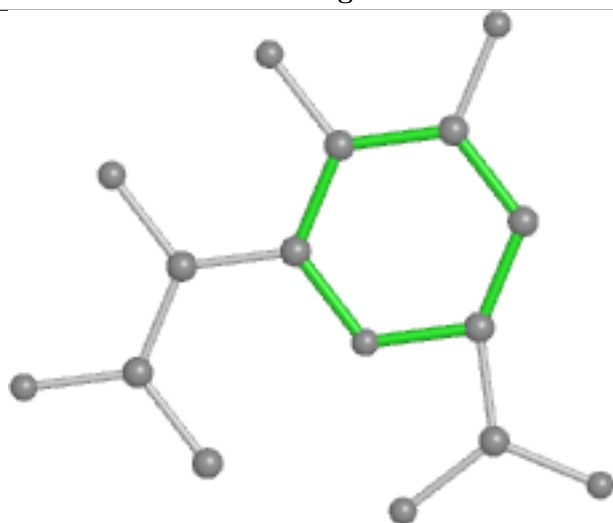
Bond lengths



Bond angles

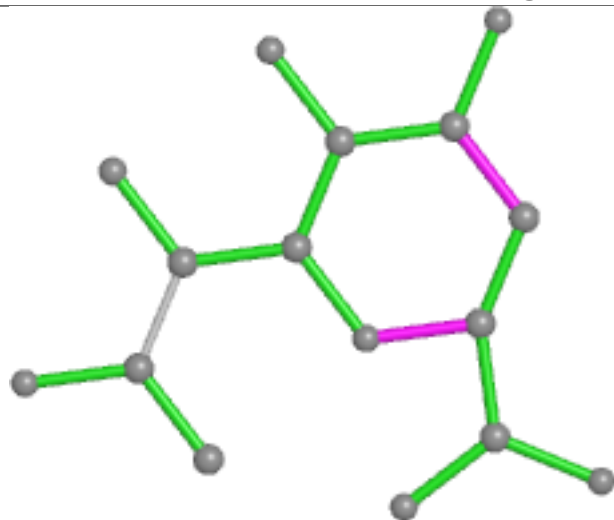


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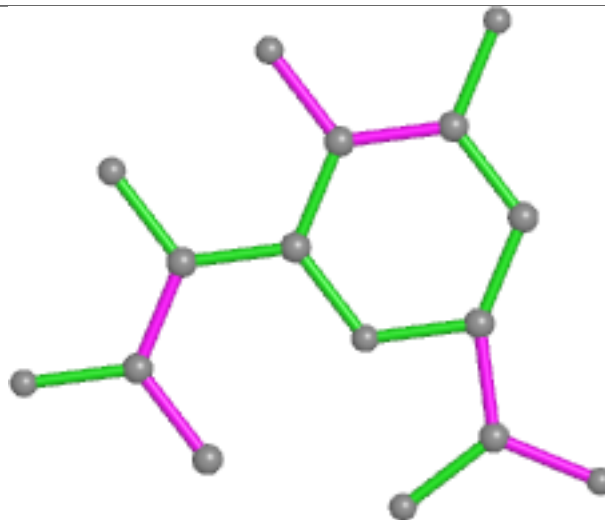


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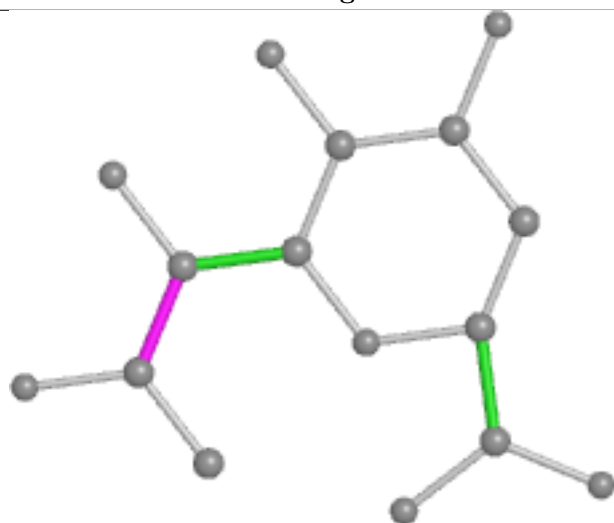
Ligand P8E L 616



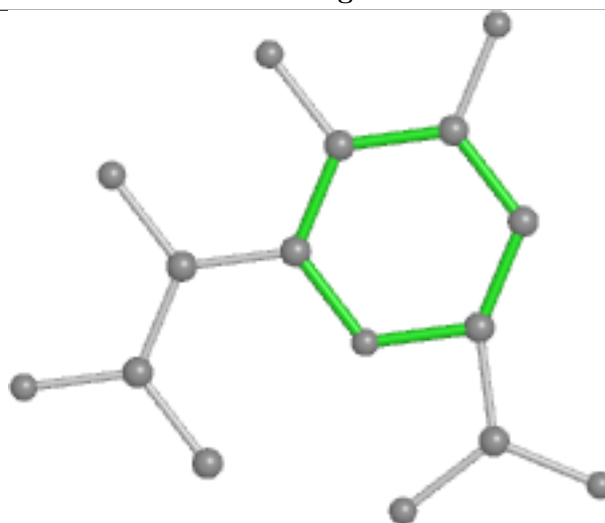
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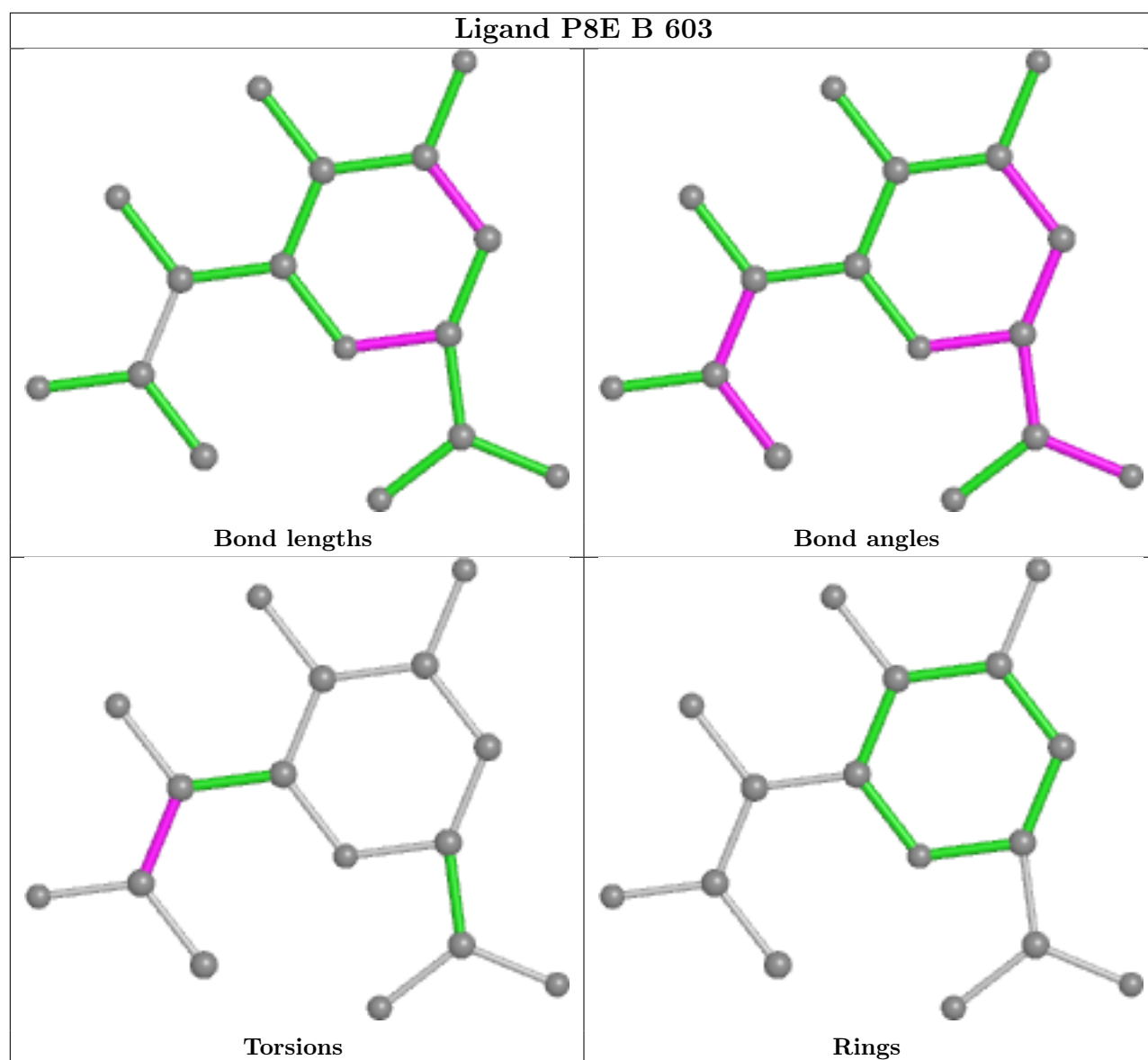
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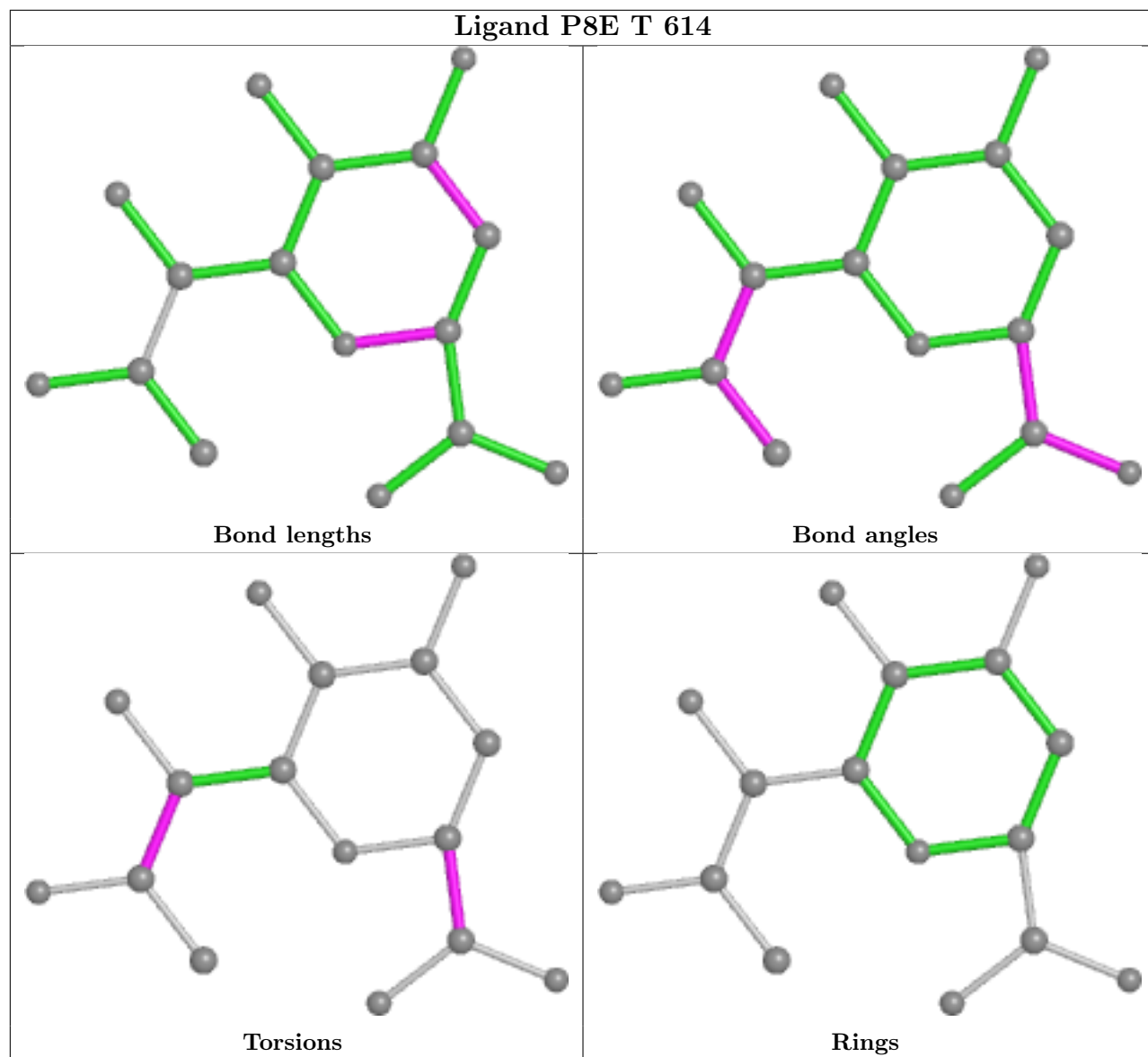


Torsions

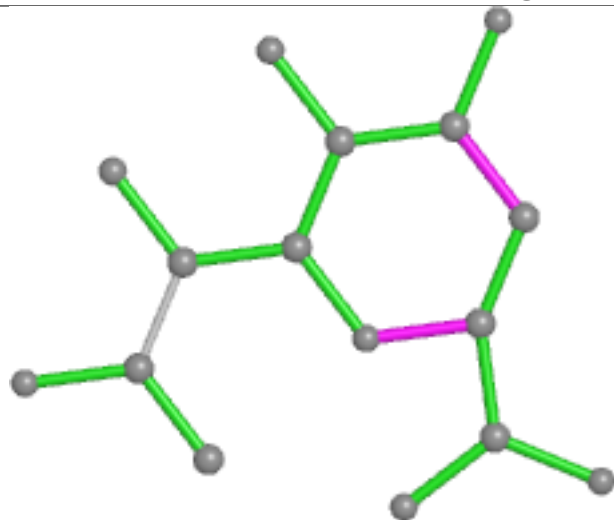


Rings

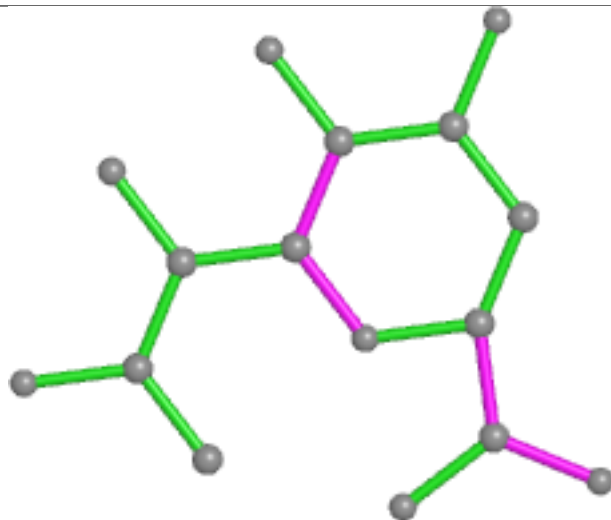




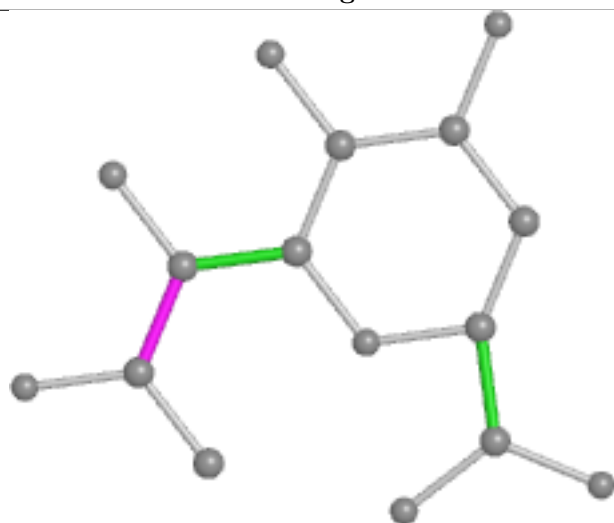
Ligand P8E V 602



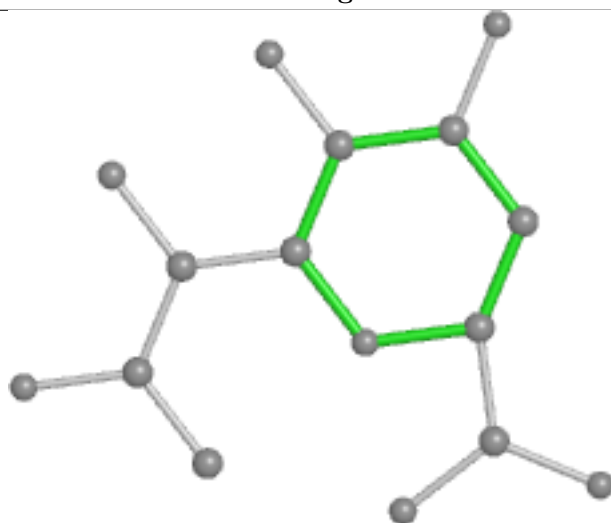
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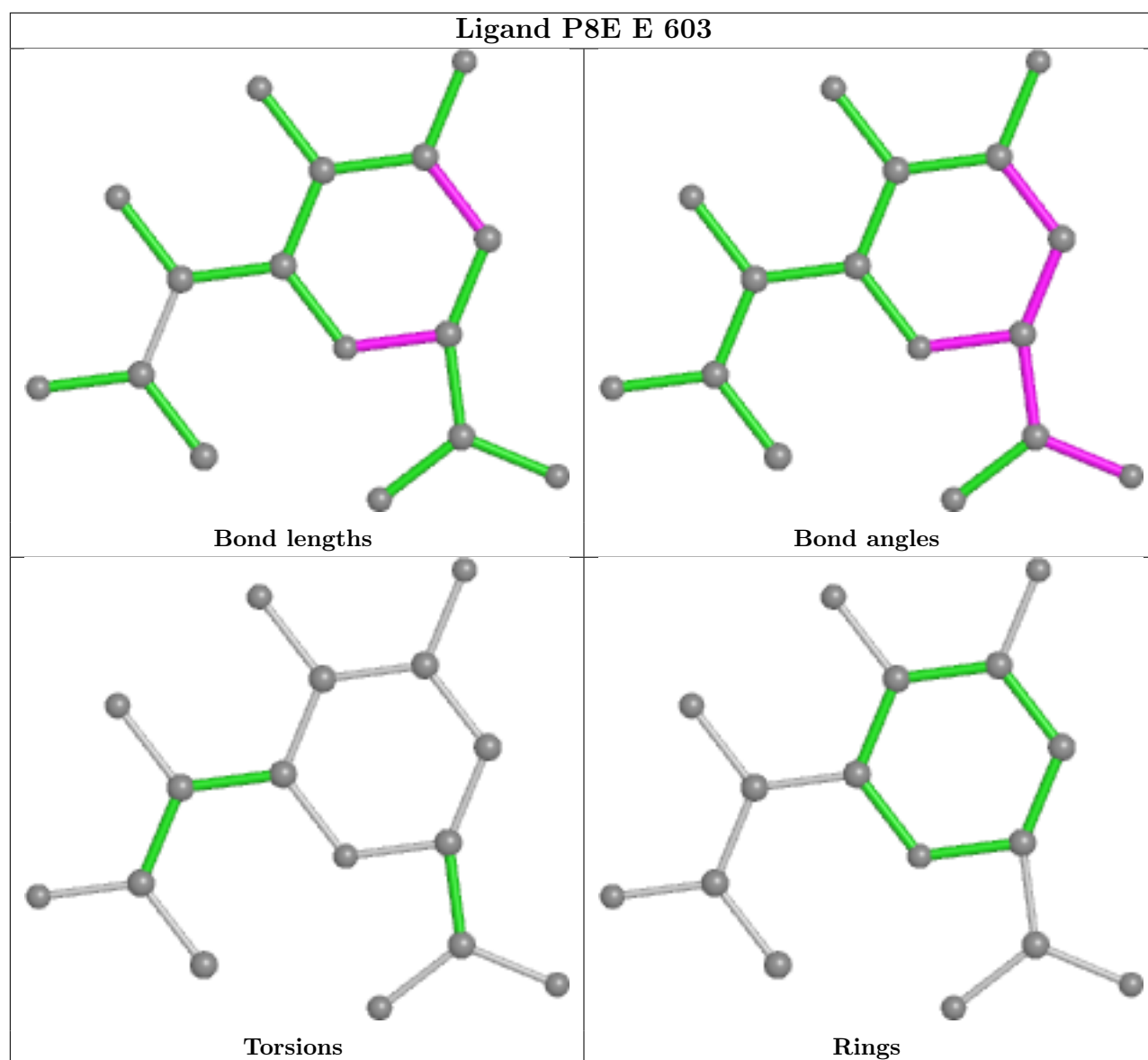
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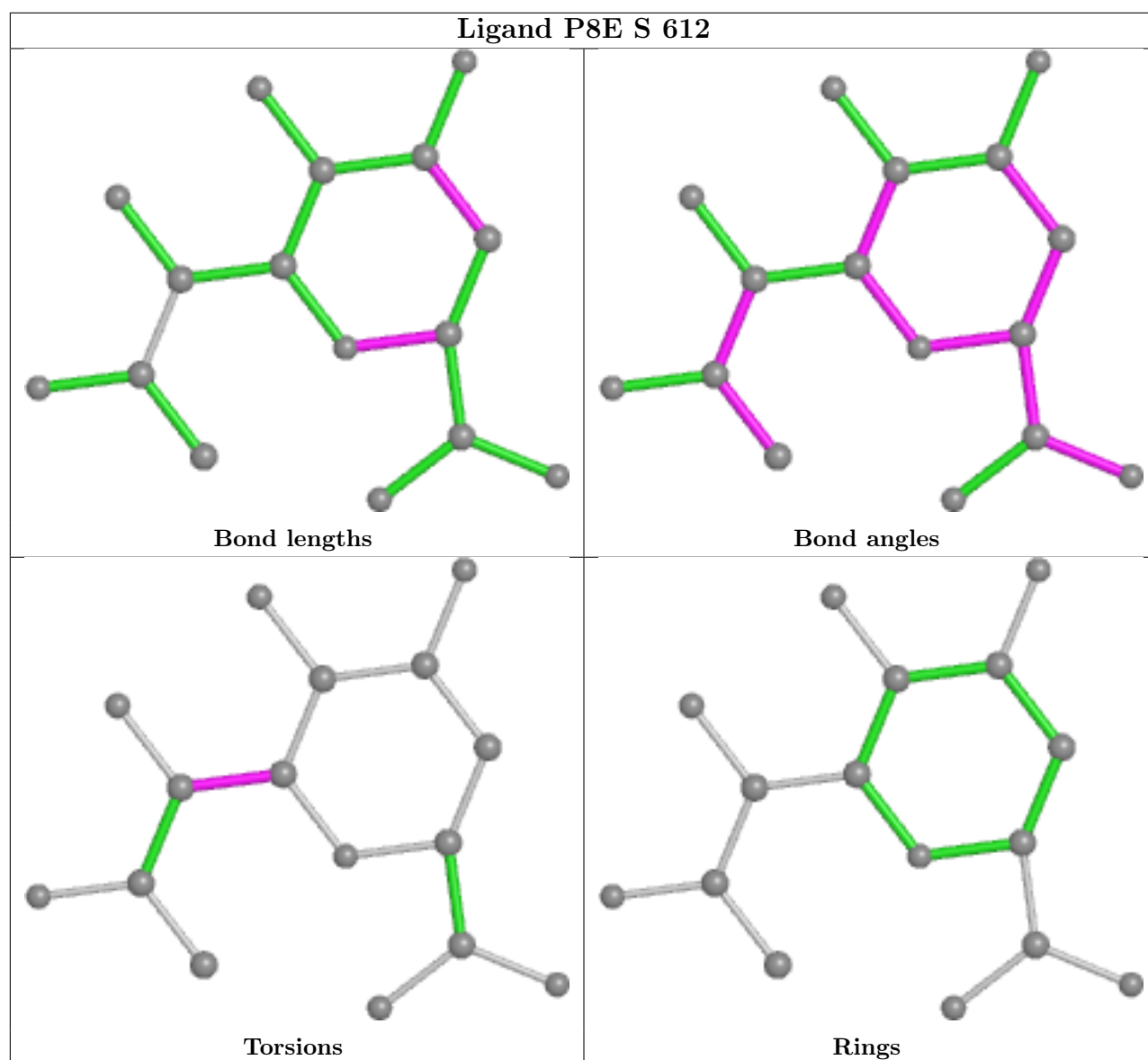


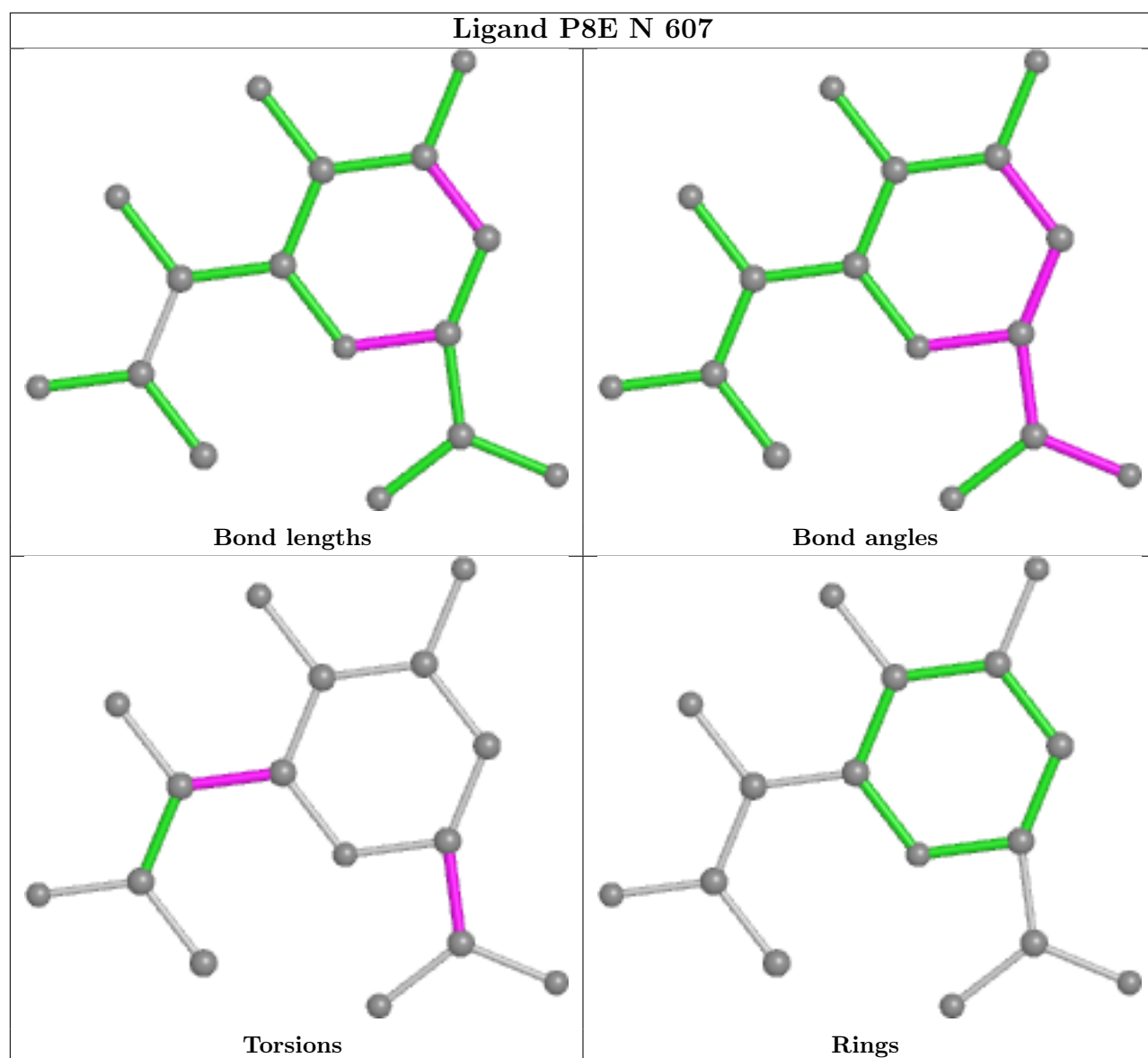
Torsions



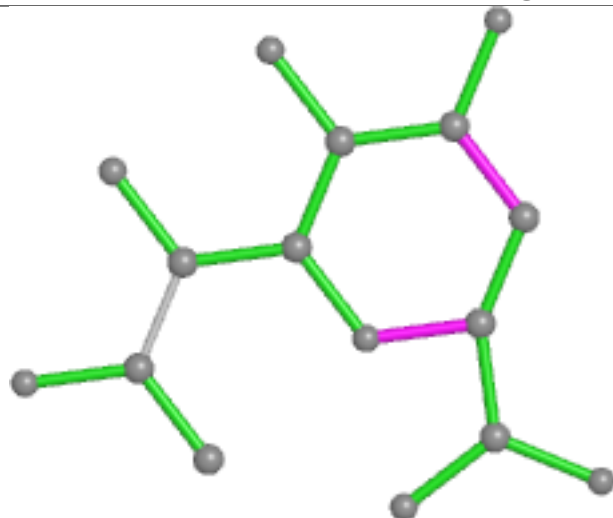
Rings



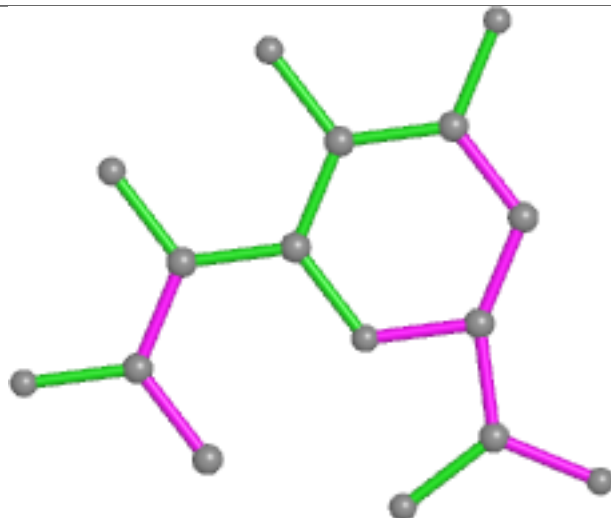




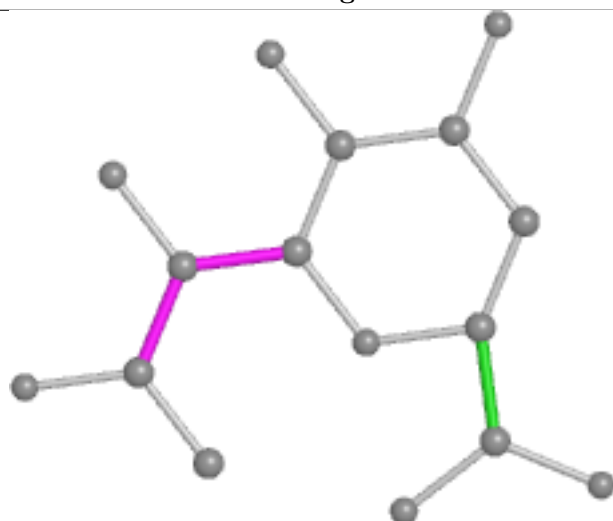
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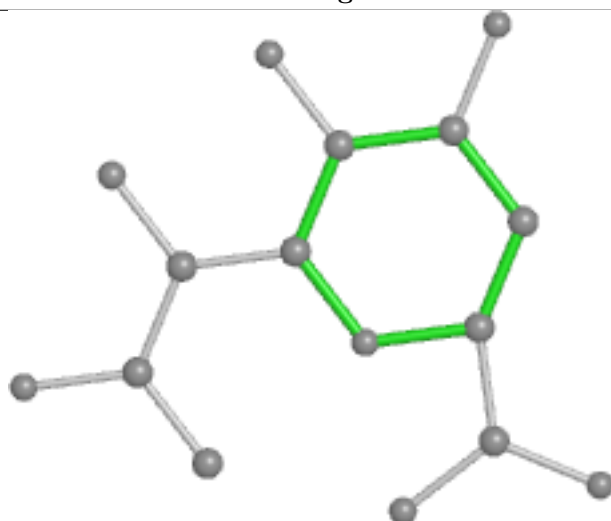
Bond lengths



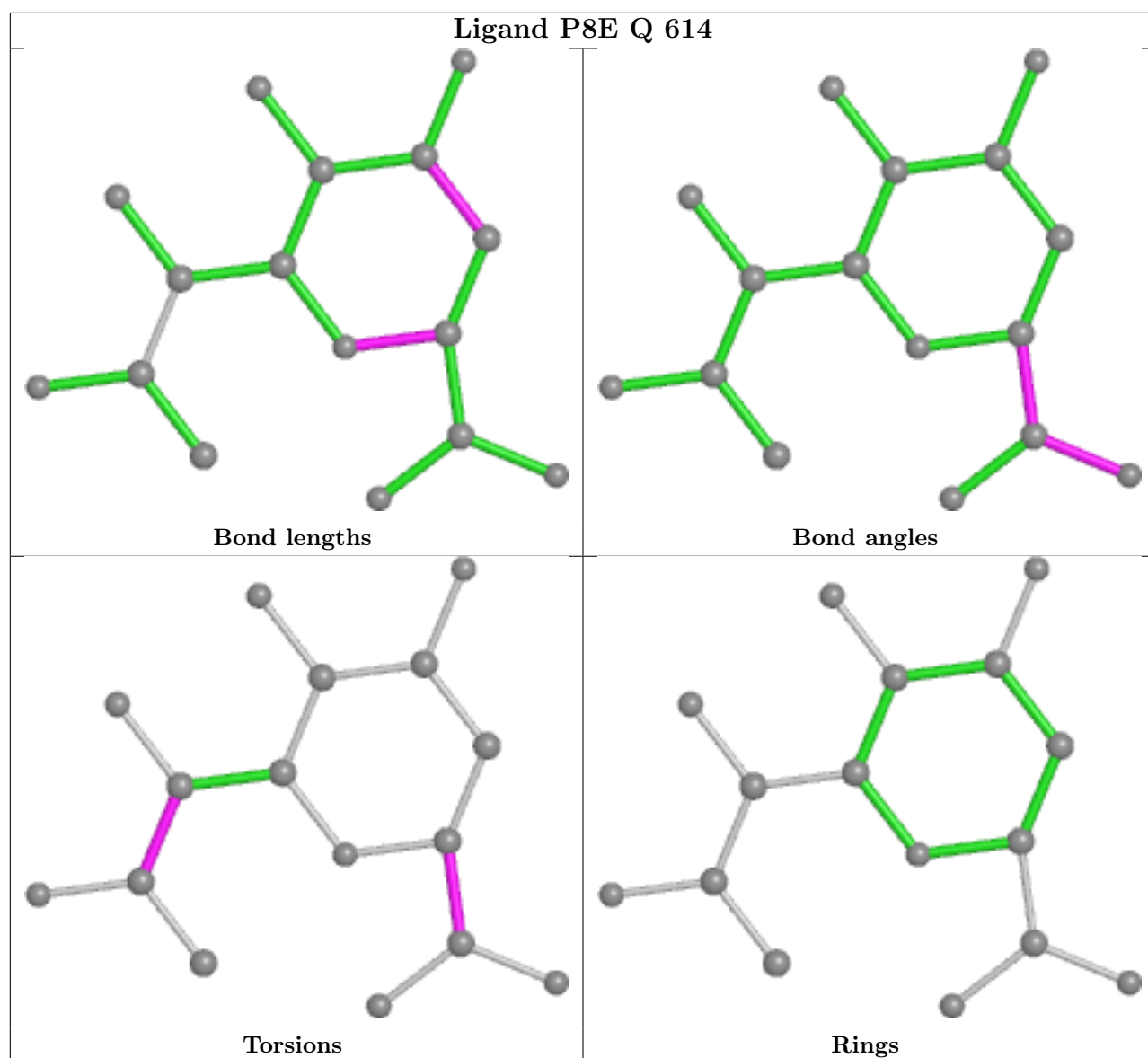
Bond angles

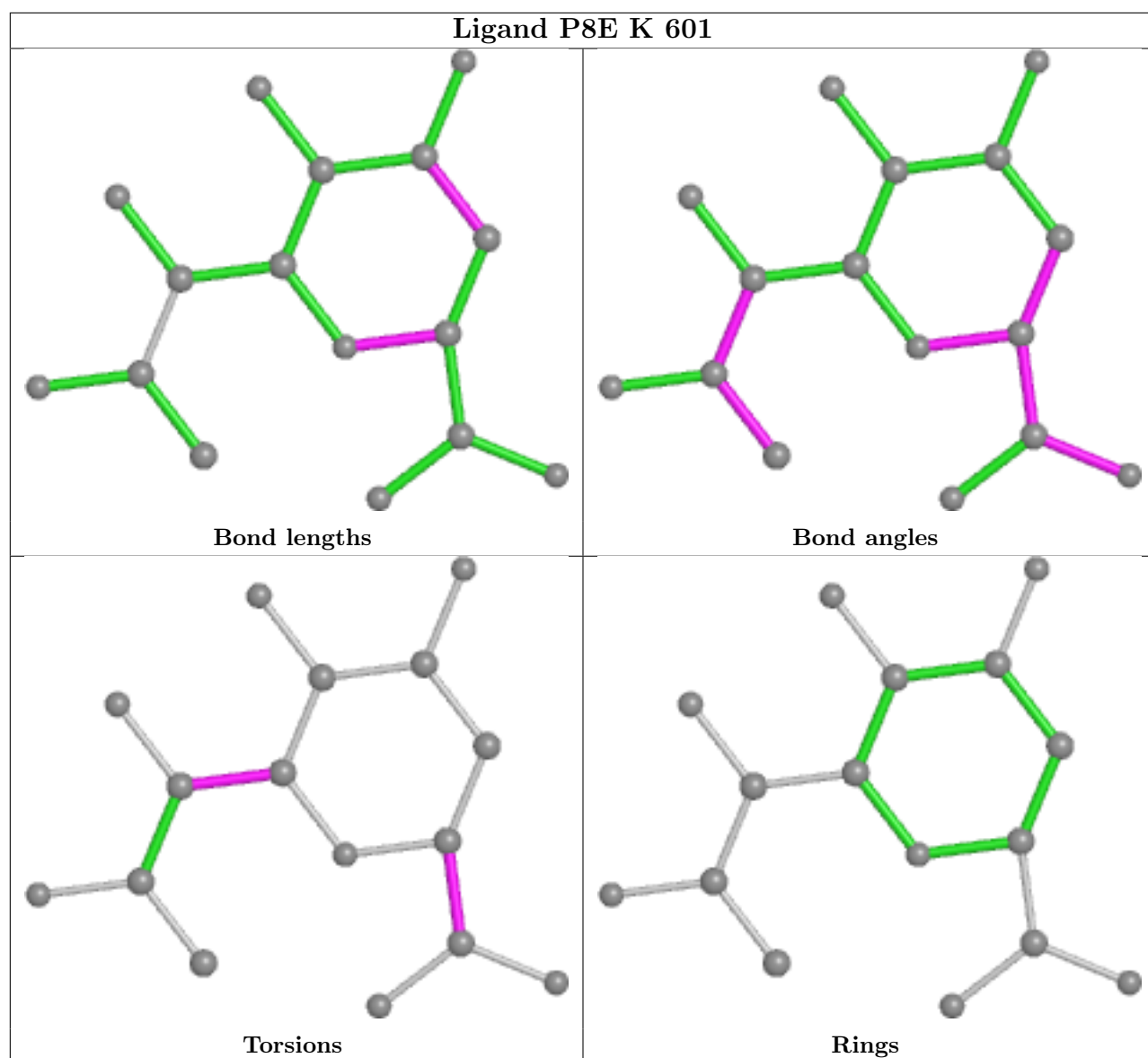


Torsions

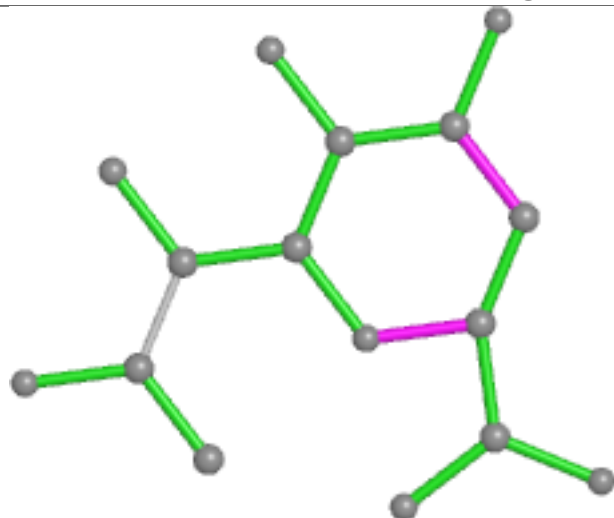


Rings

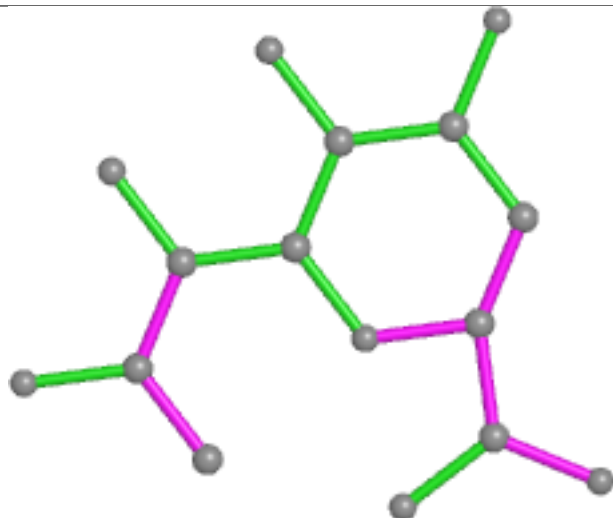




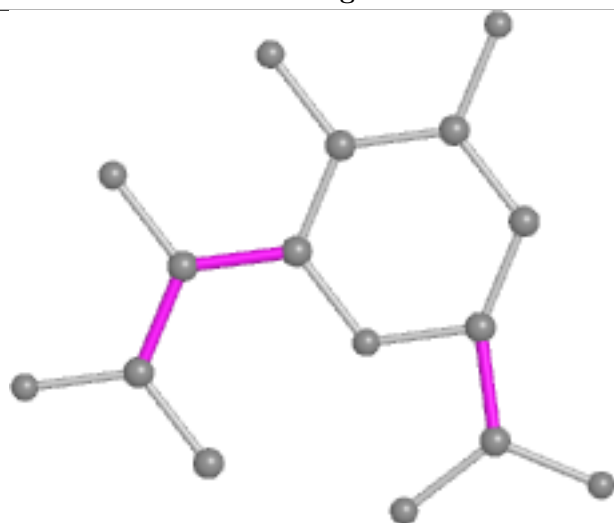
Ligand P8E E 613



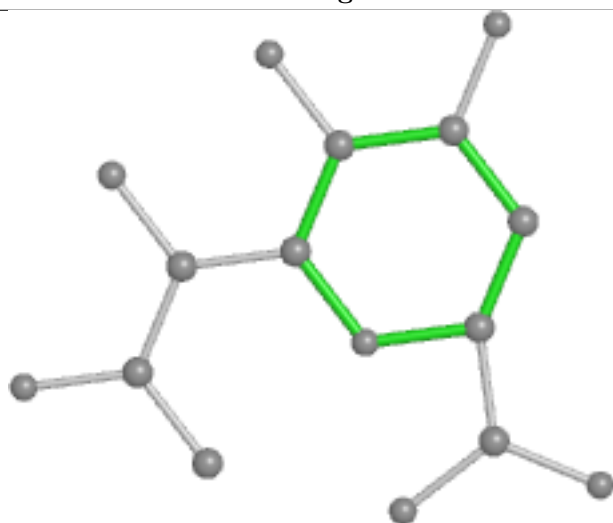
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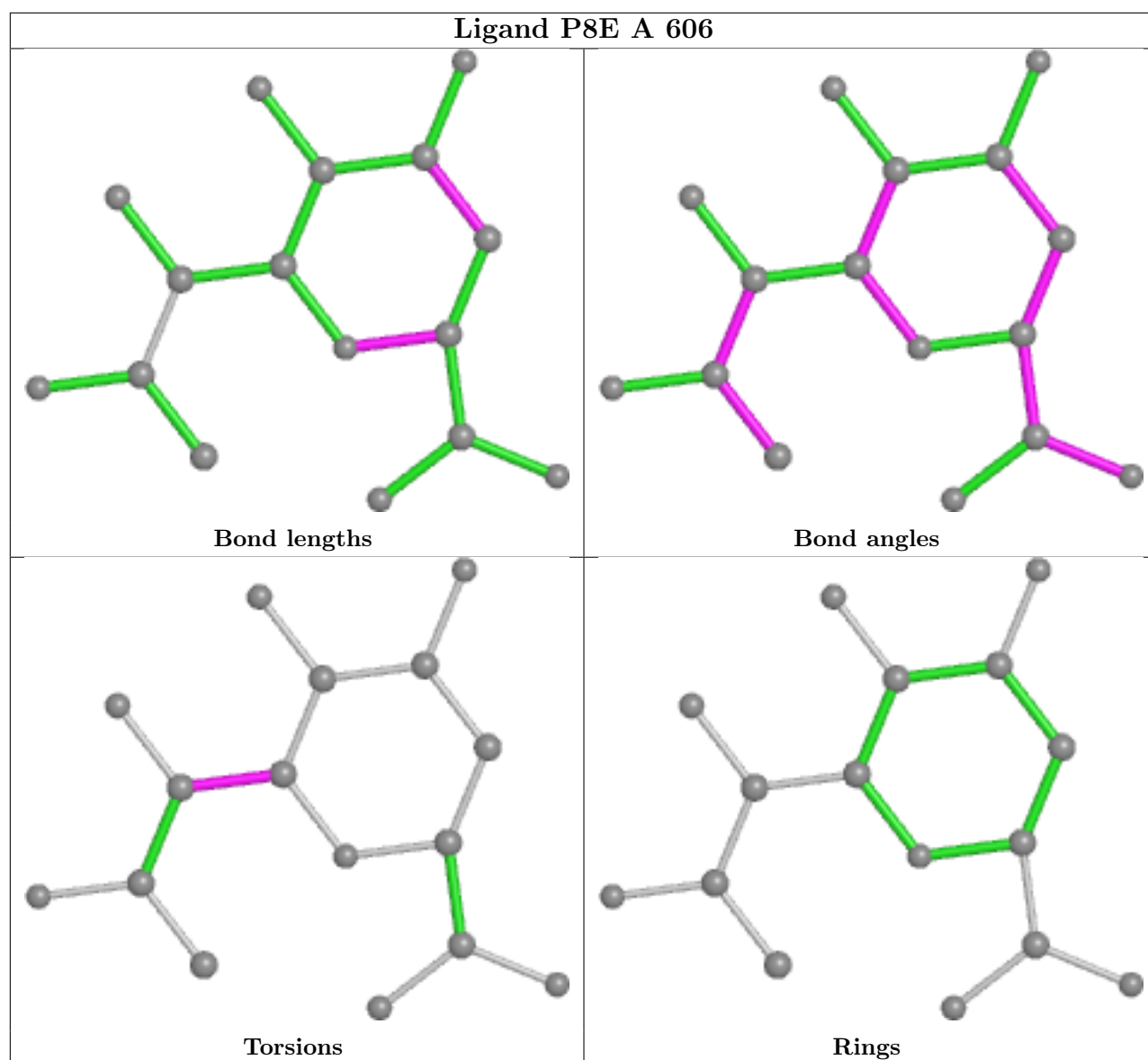
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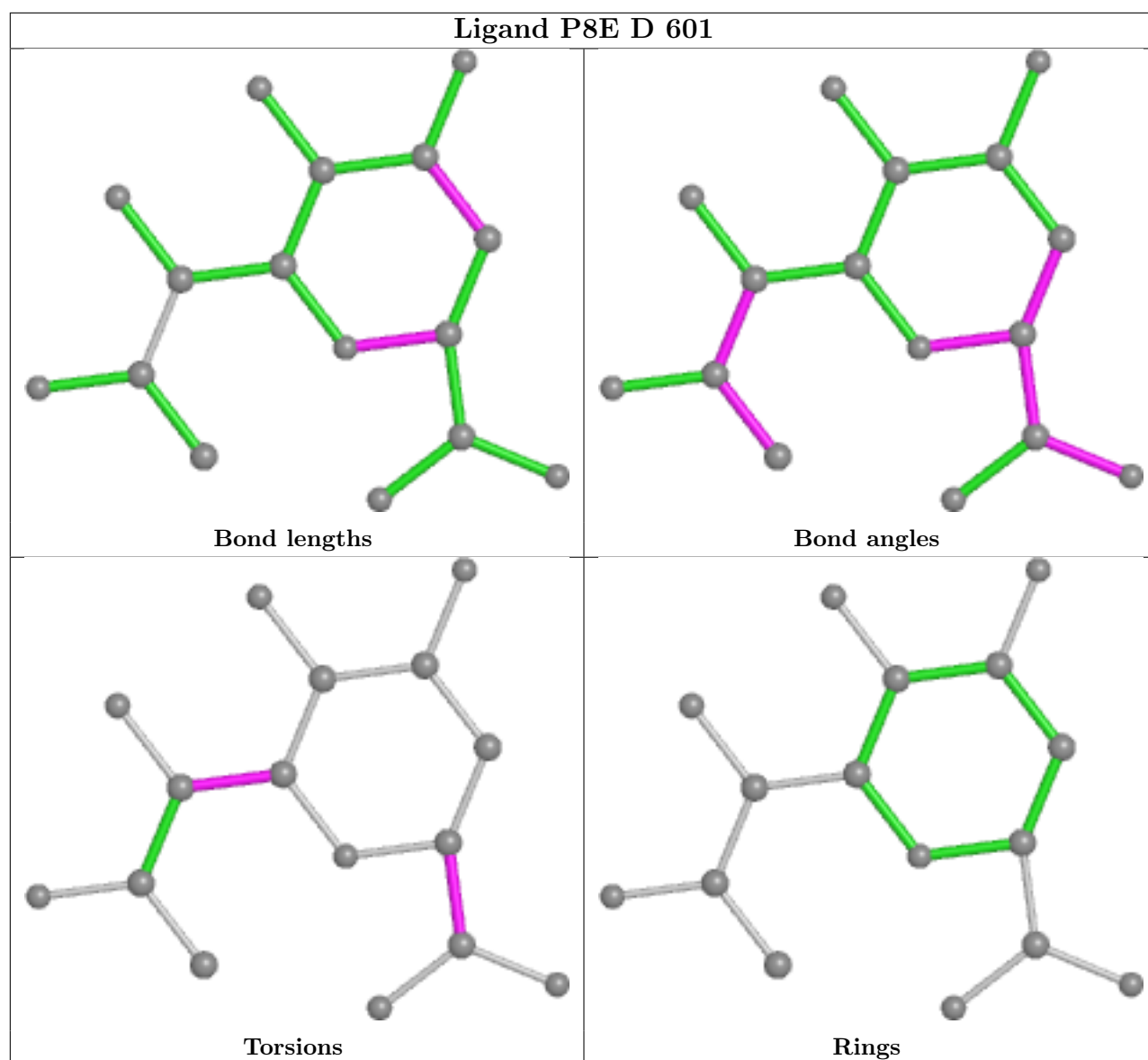


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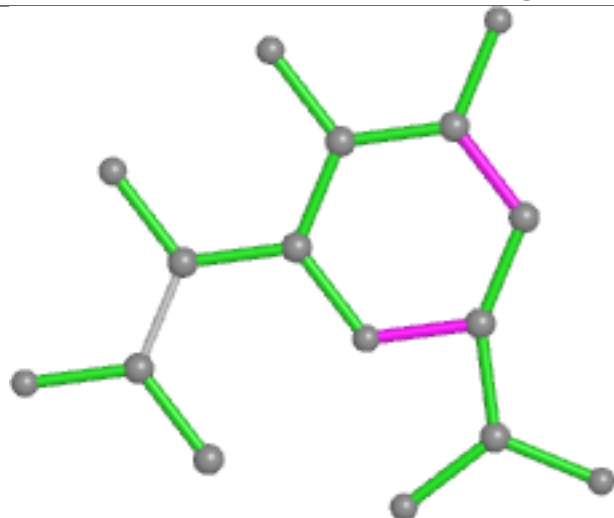


Rings

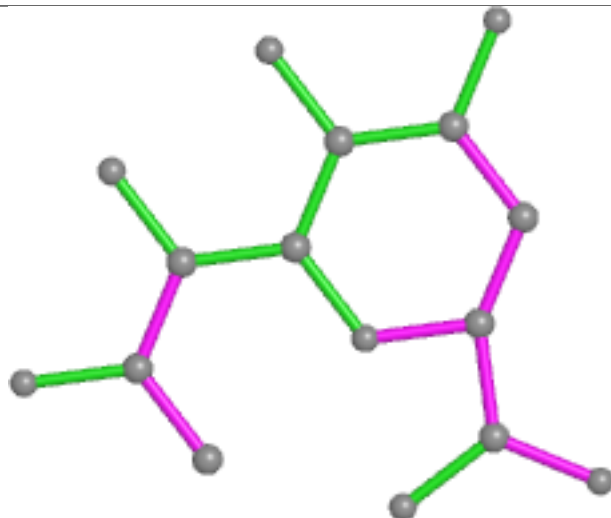




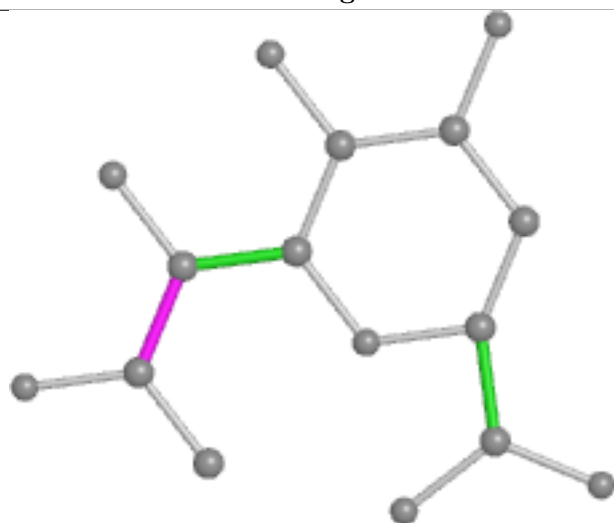
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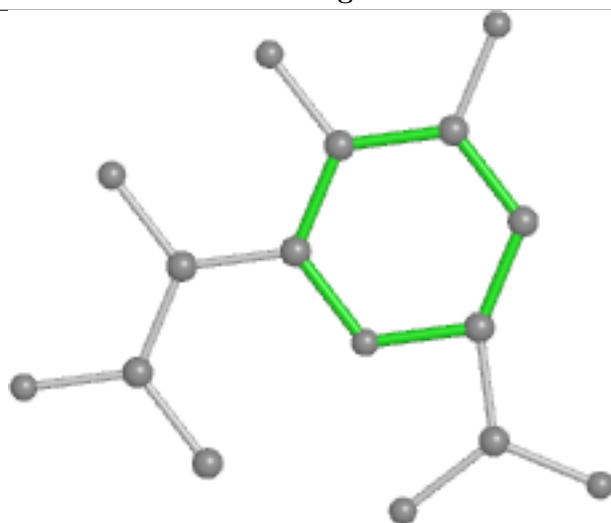
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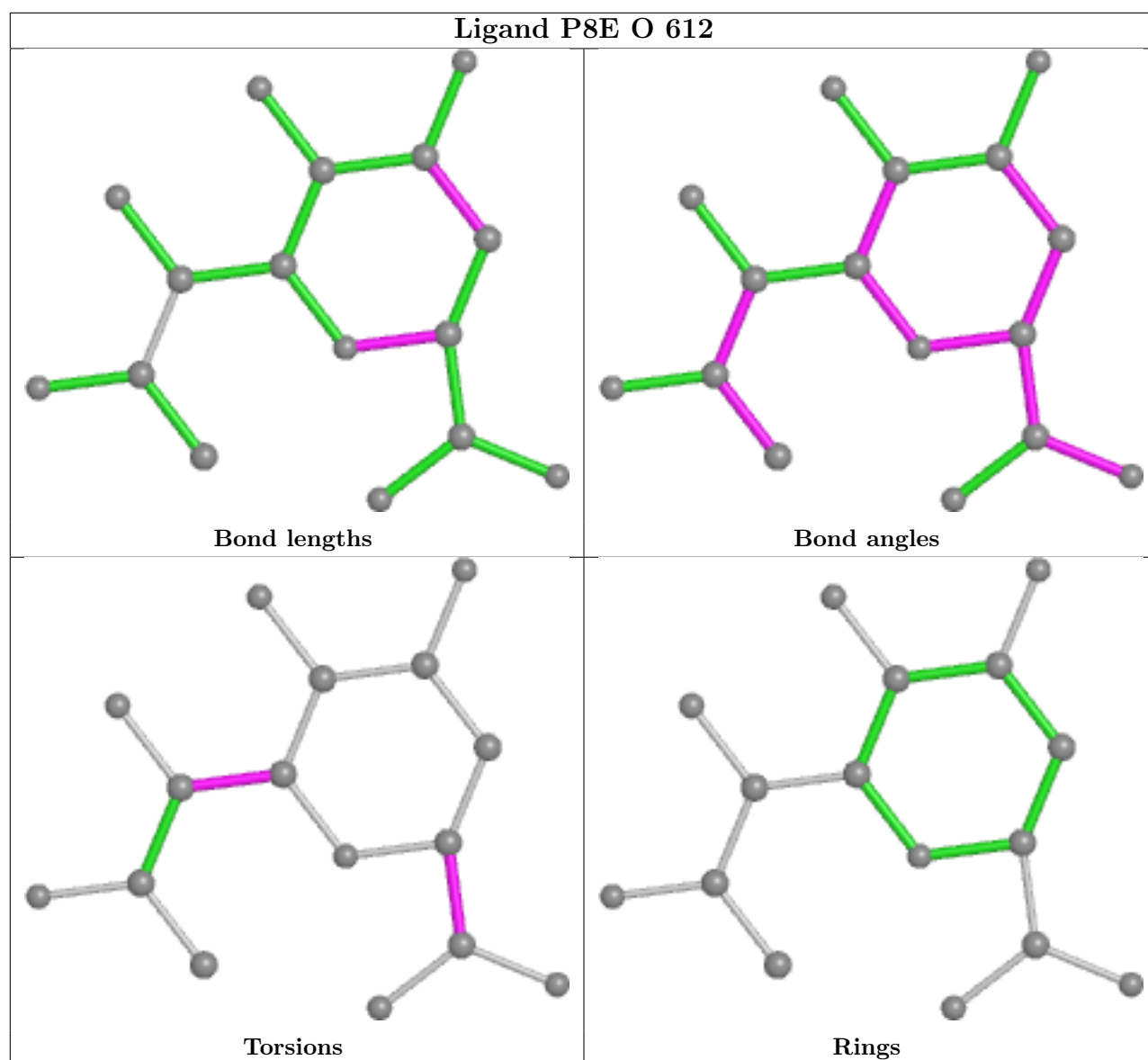
Bond angles



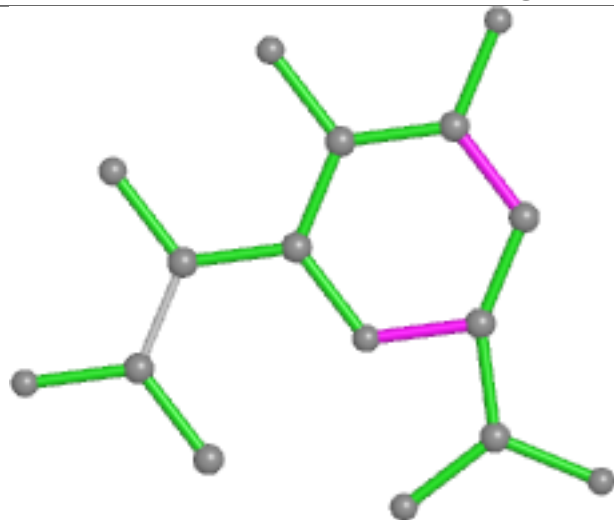
Torsions



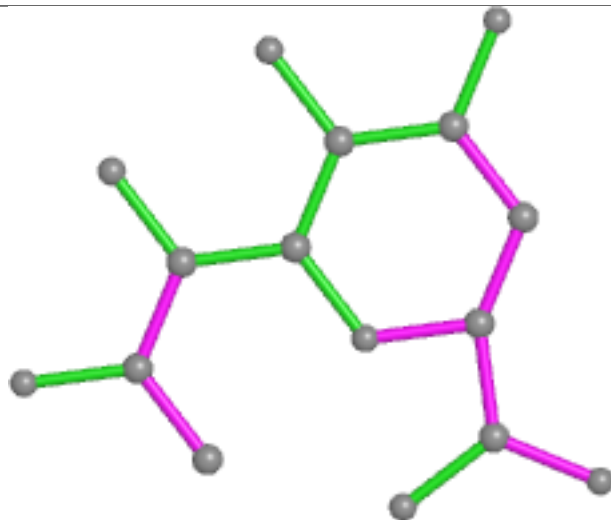
Rings



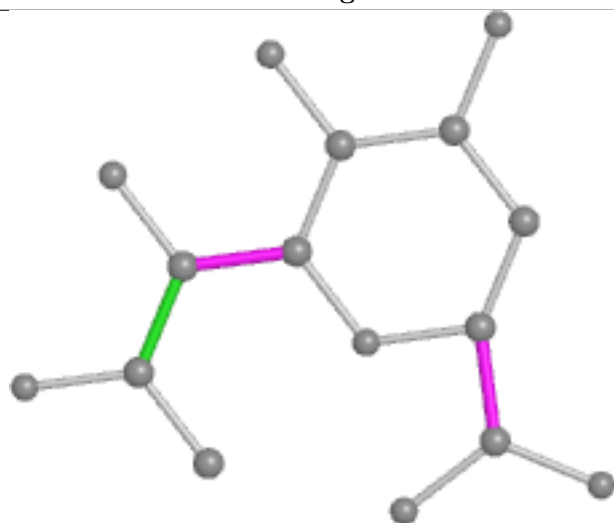
Ligand P8E G 612



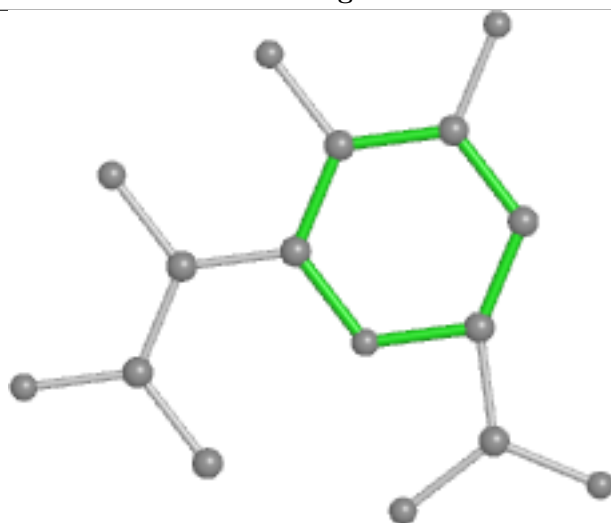
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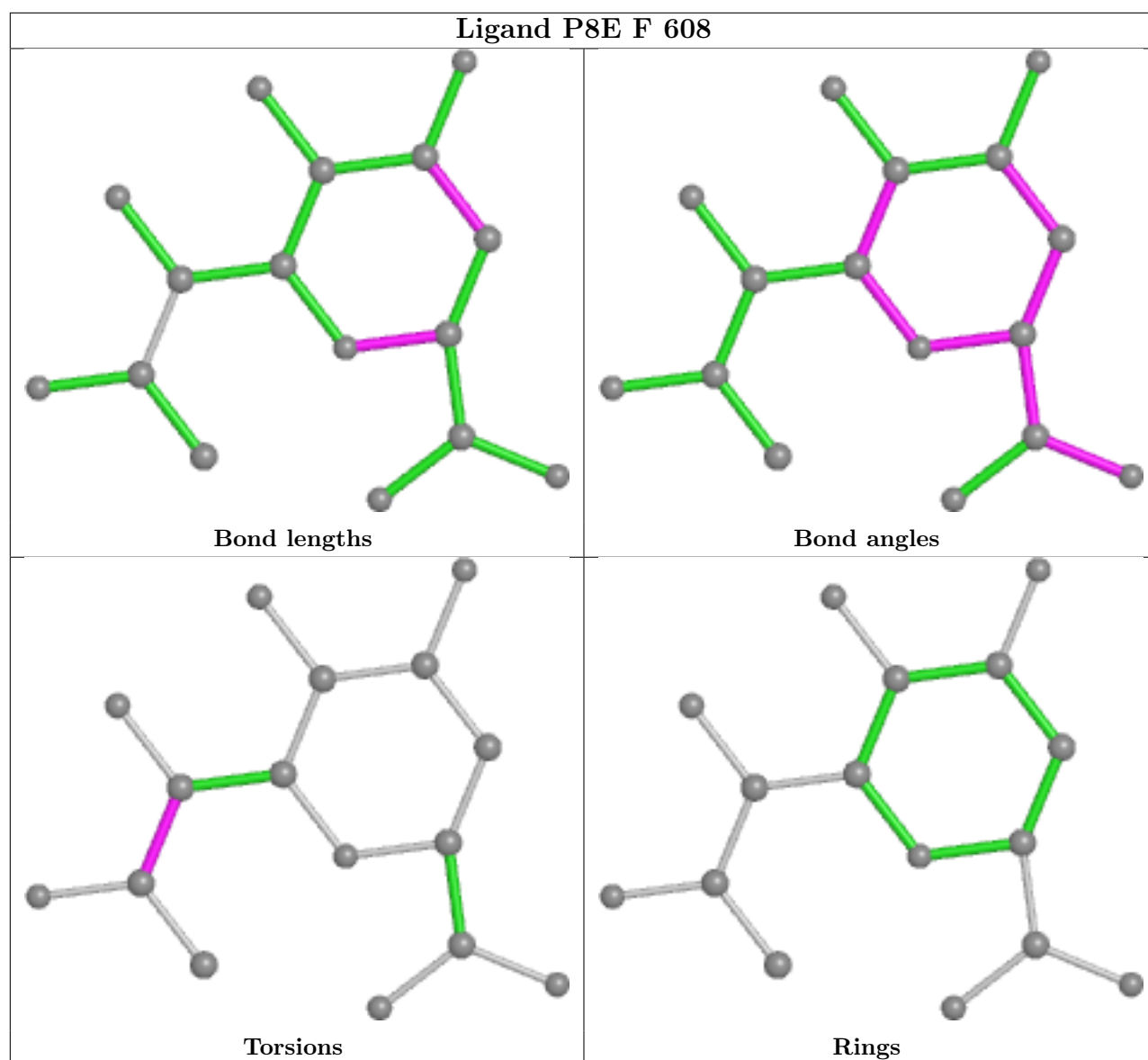
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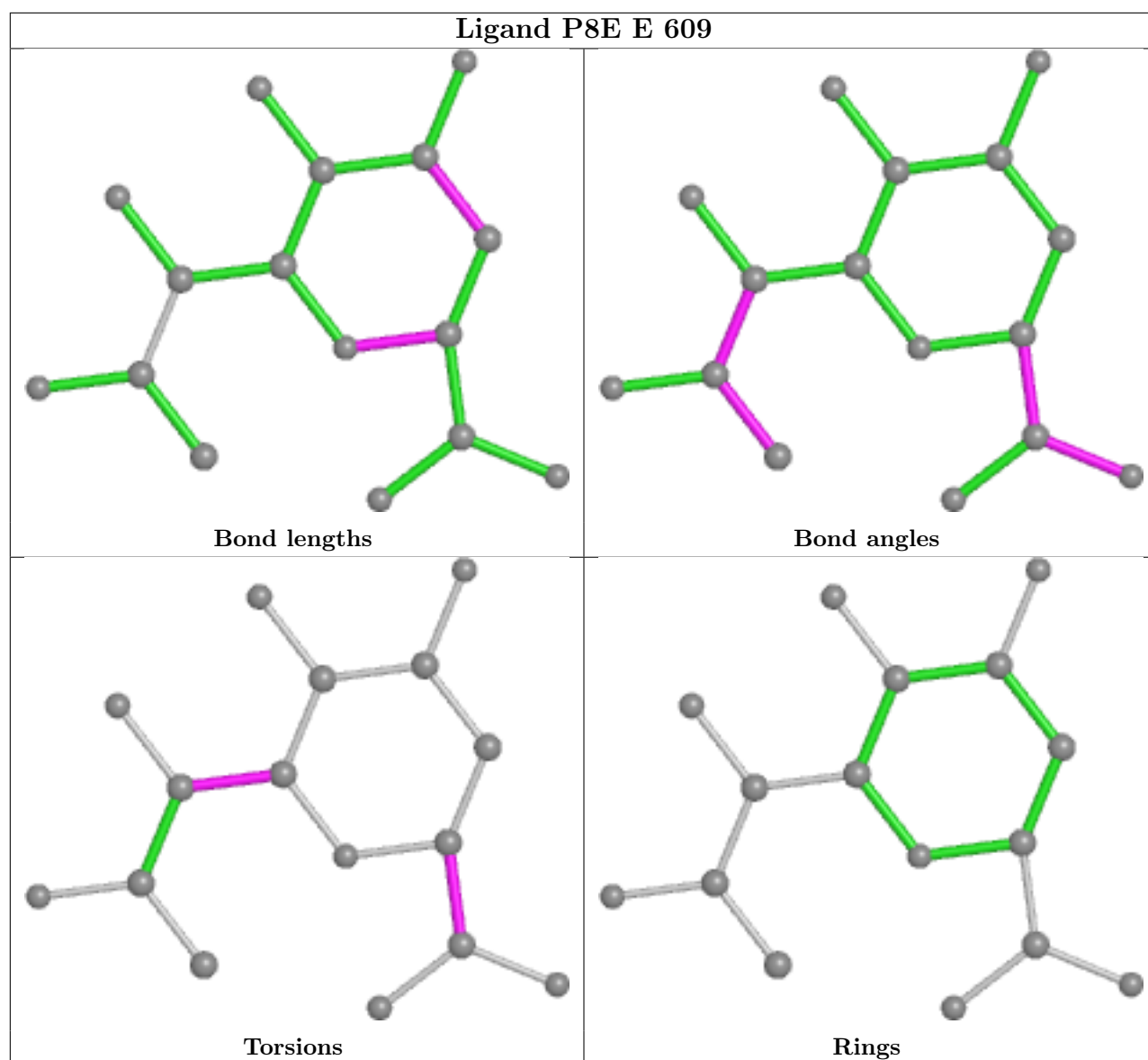


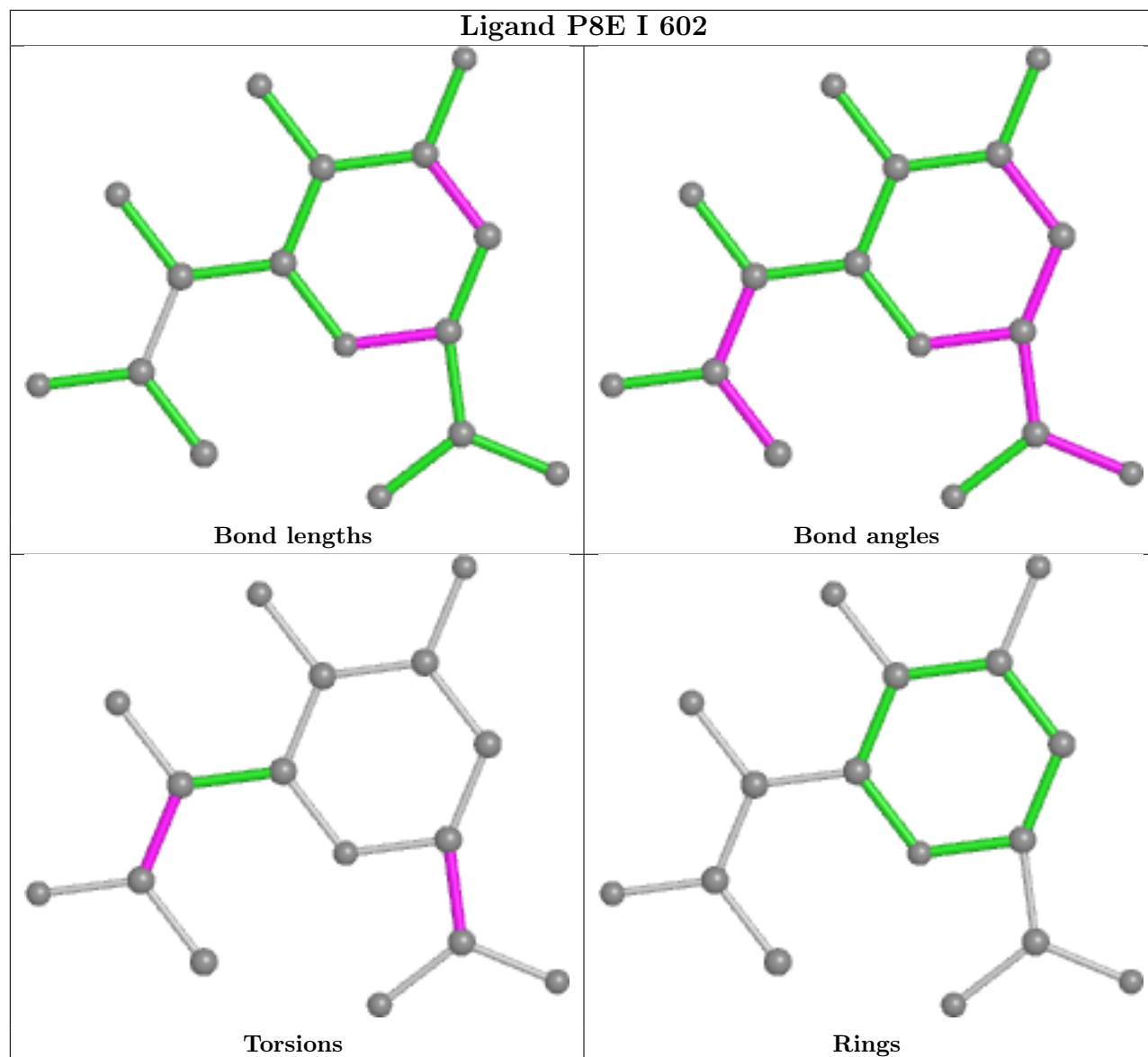
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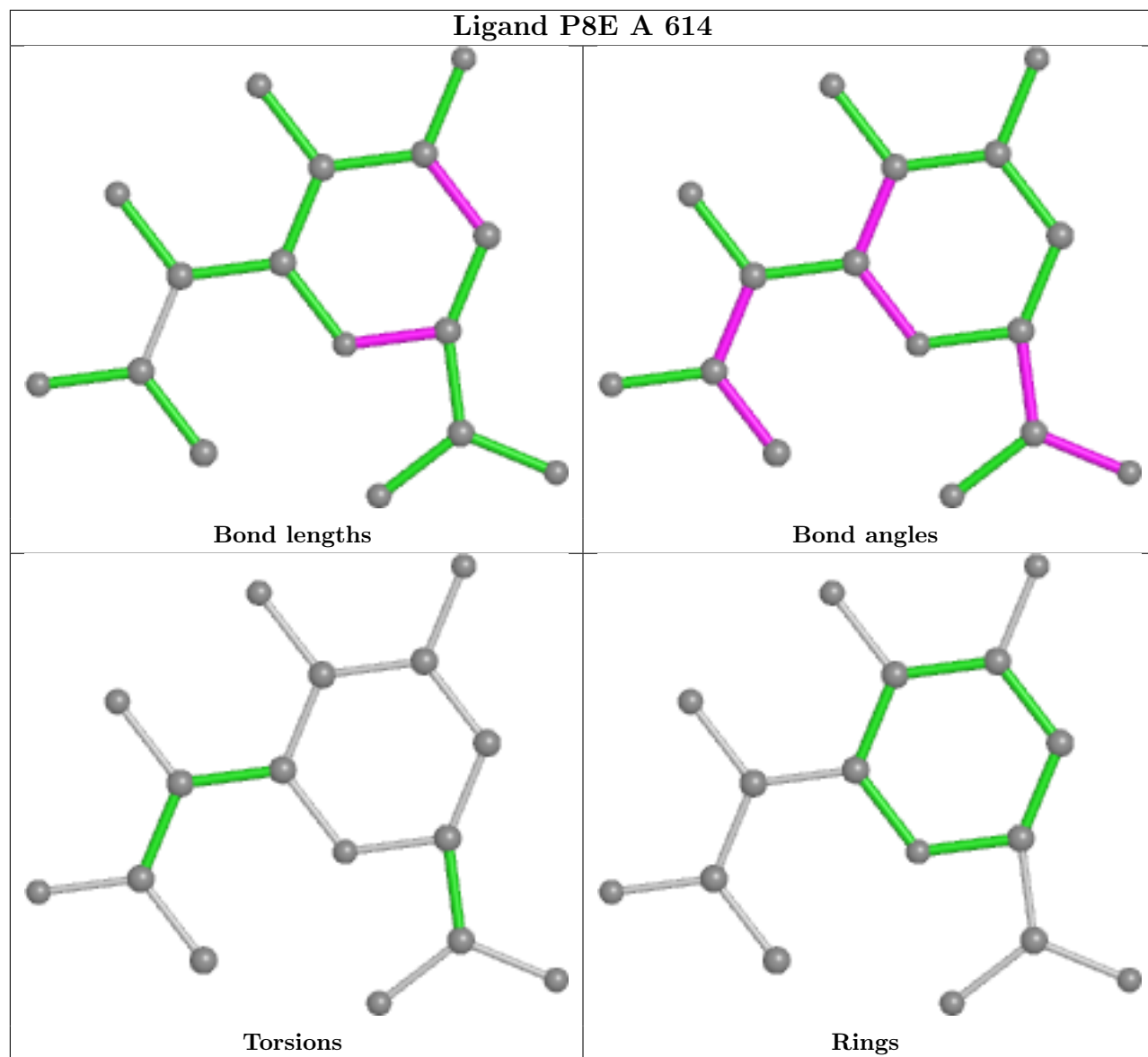


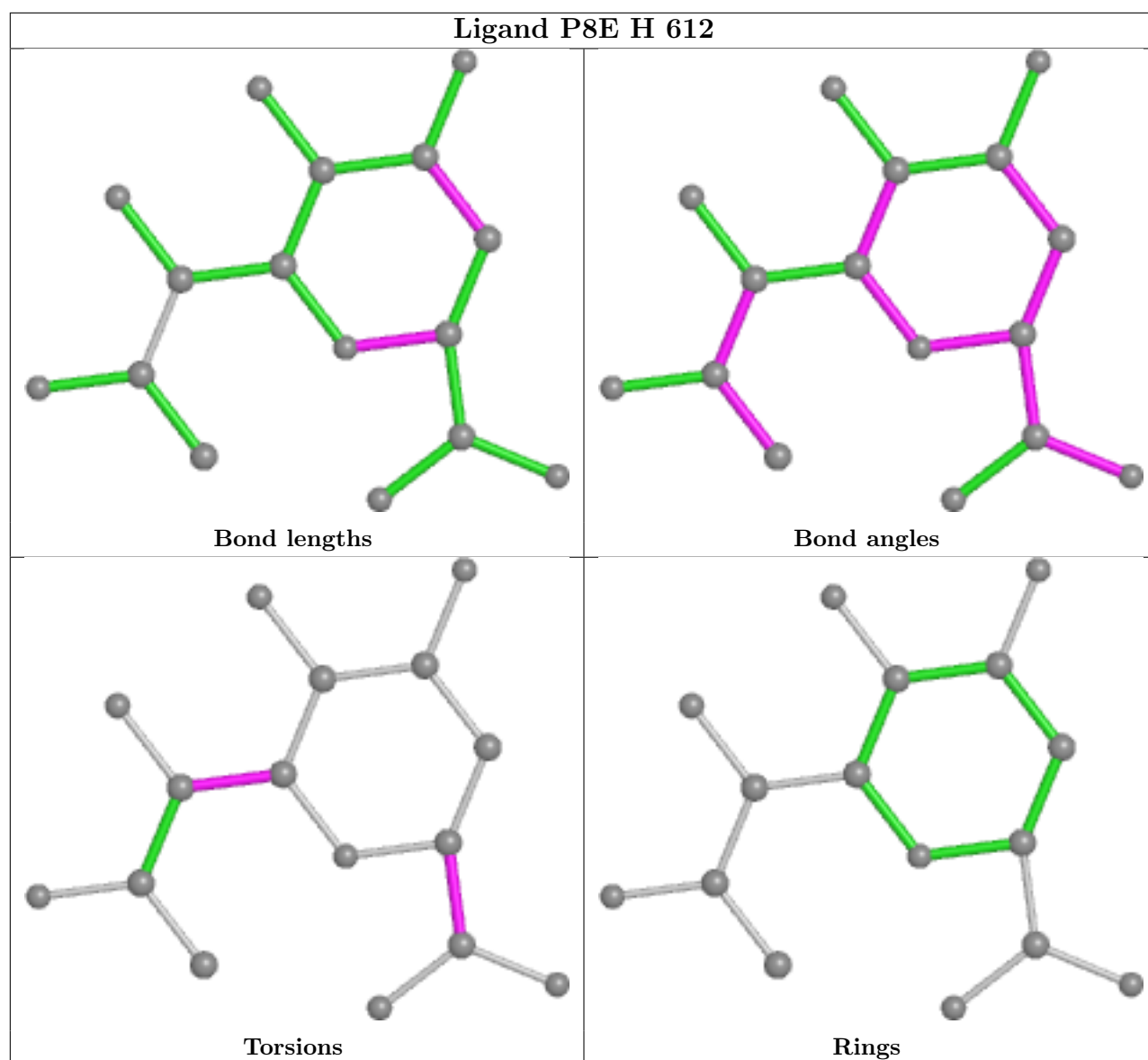
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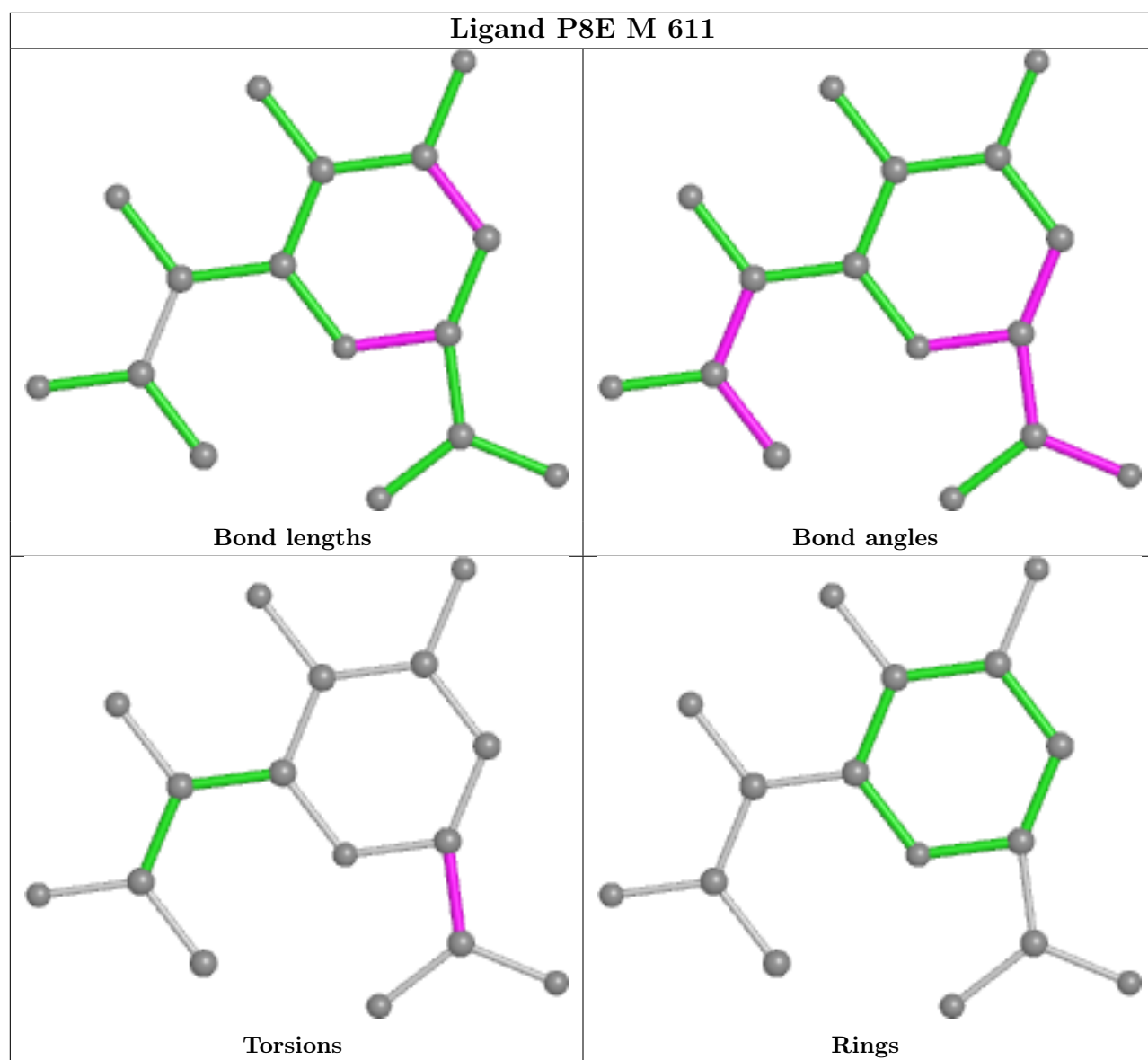


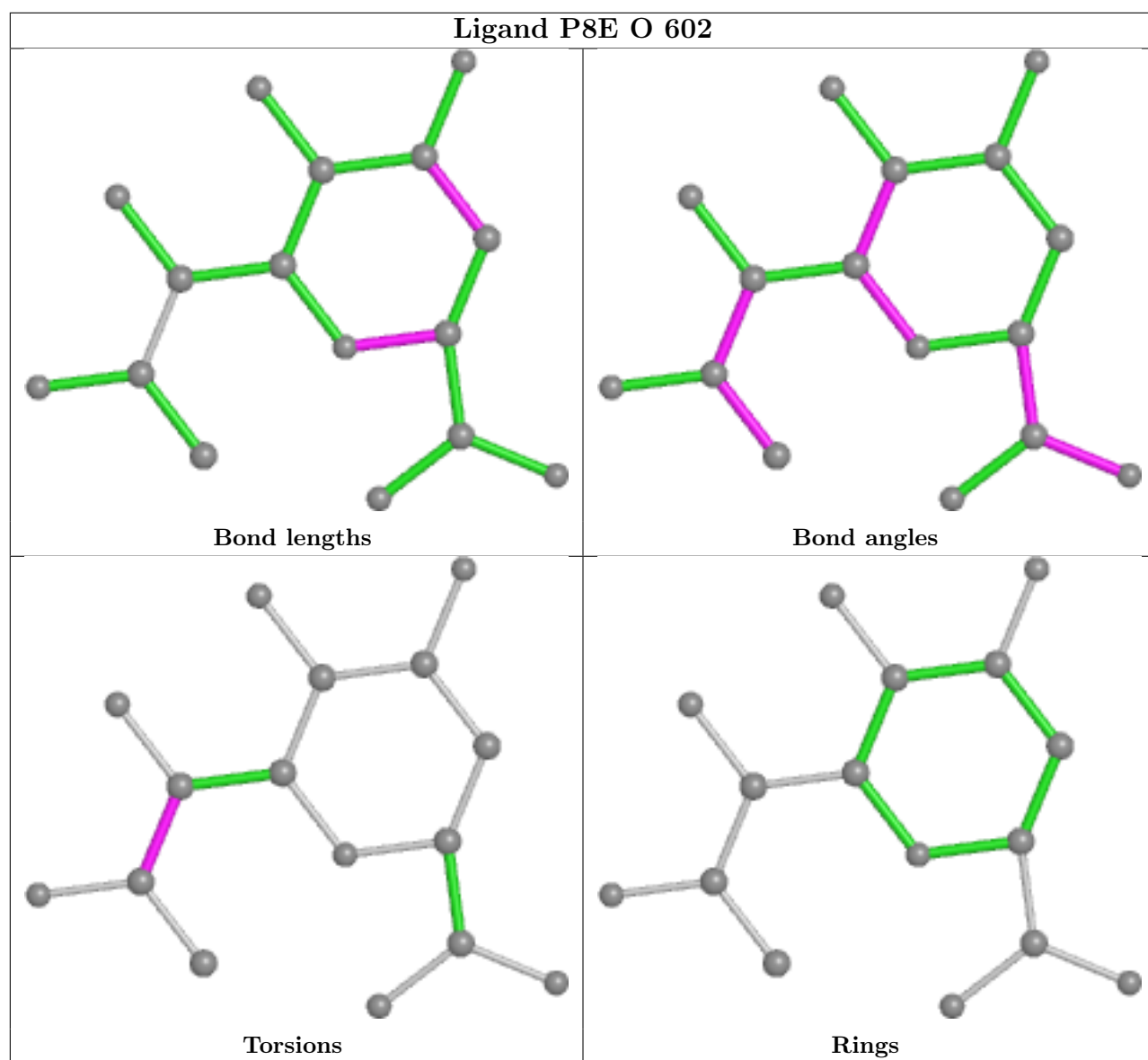




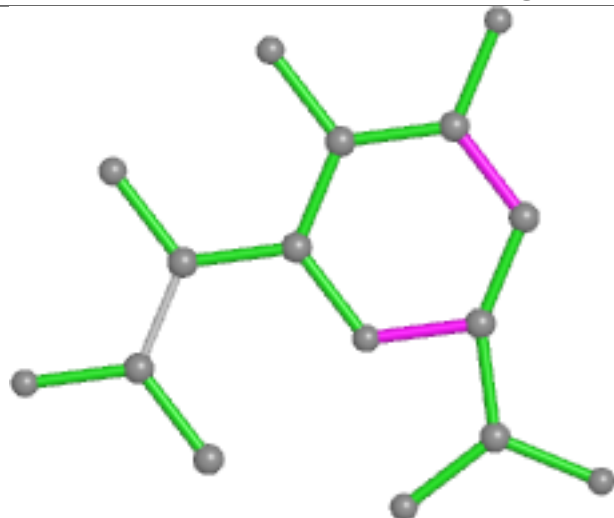




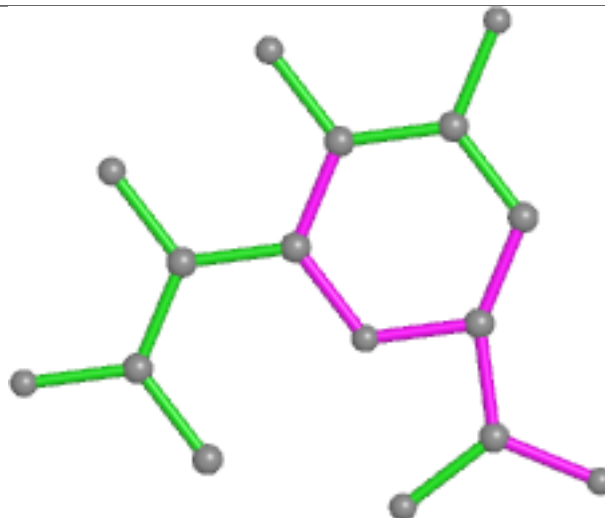




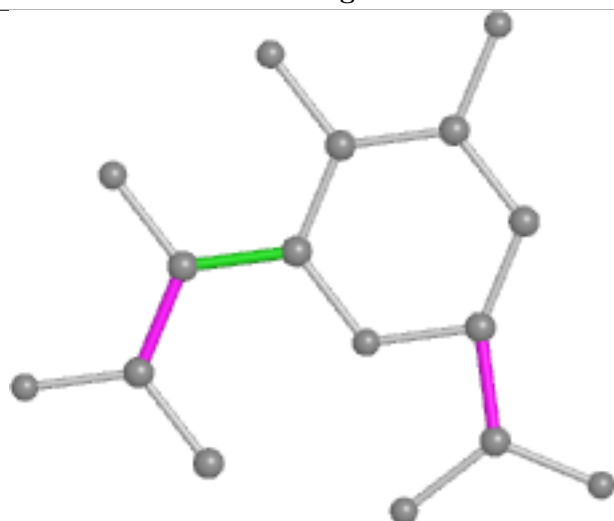
Ligand P8E O 617



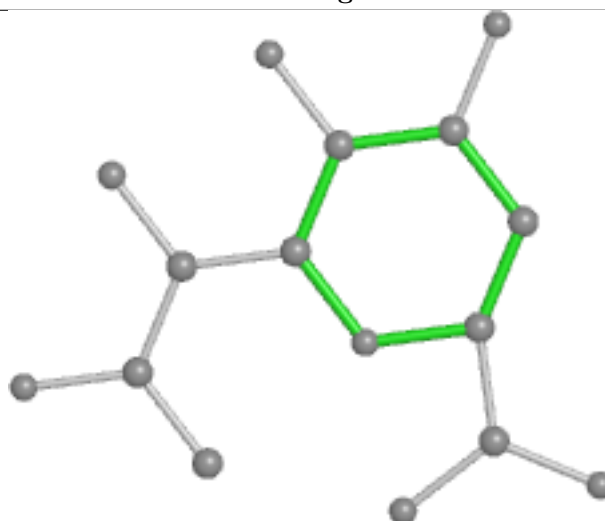
Bond lengths



Bond angles

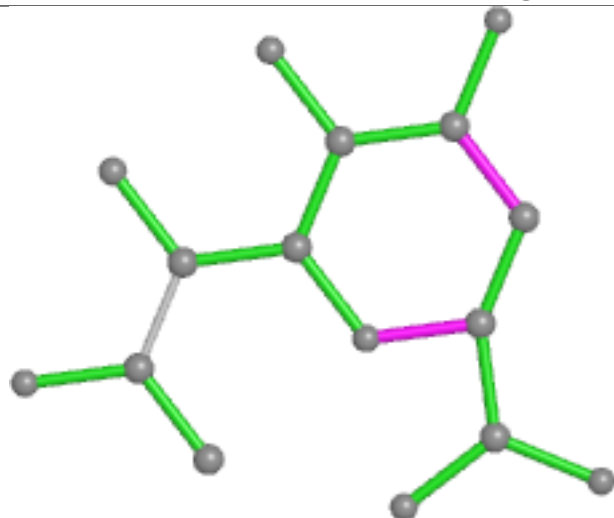


Torsions

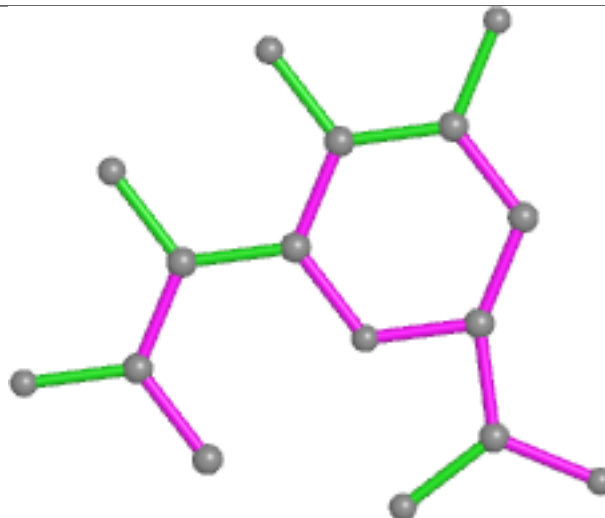


Rings

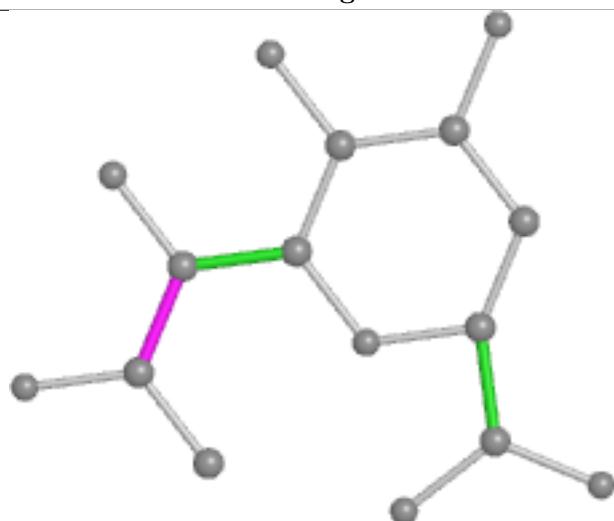
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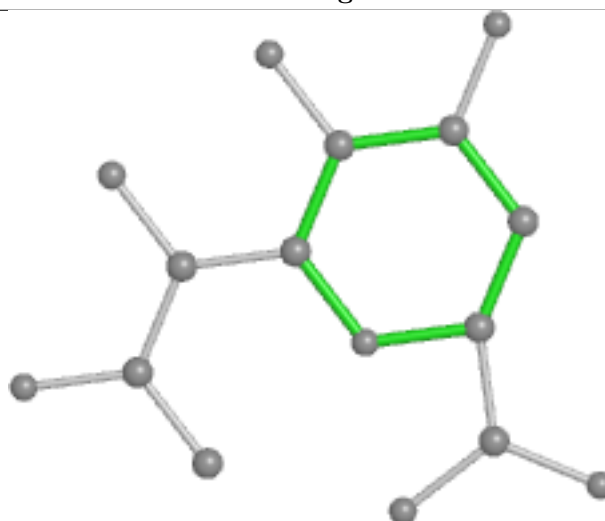
Bond lengths



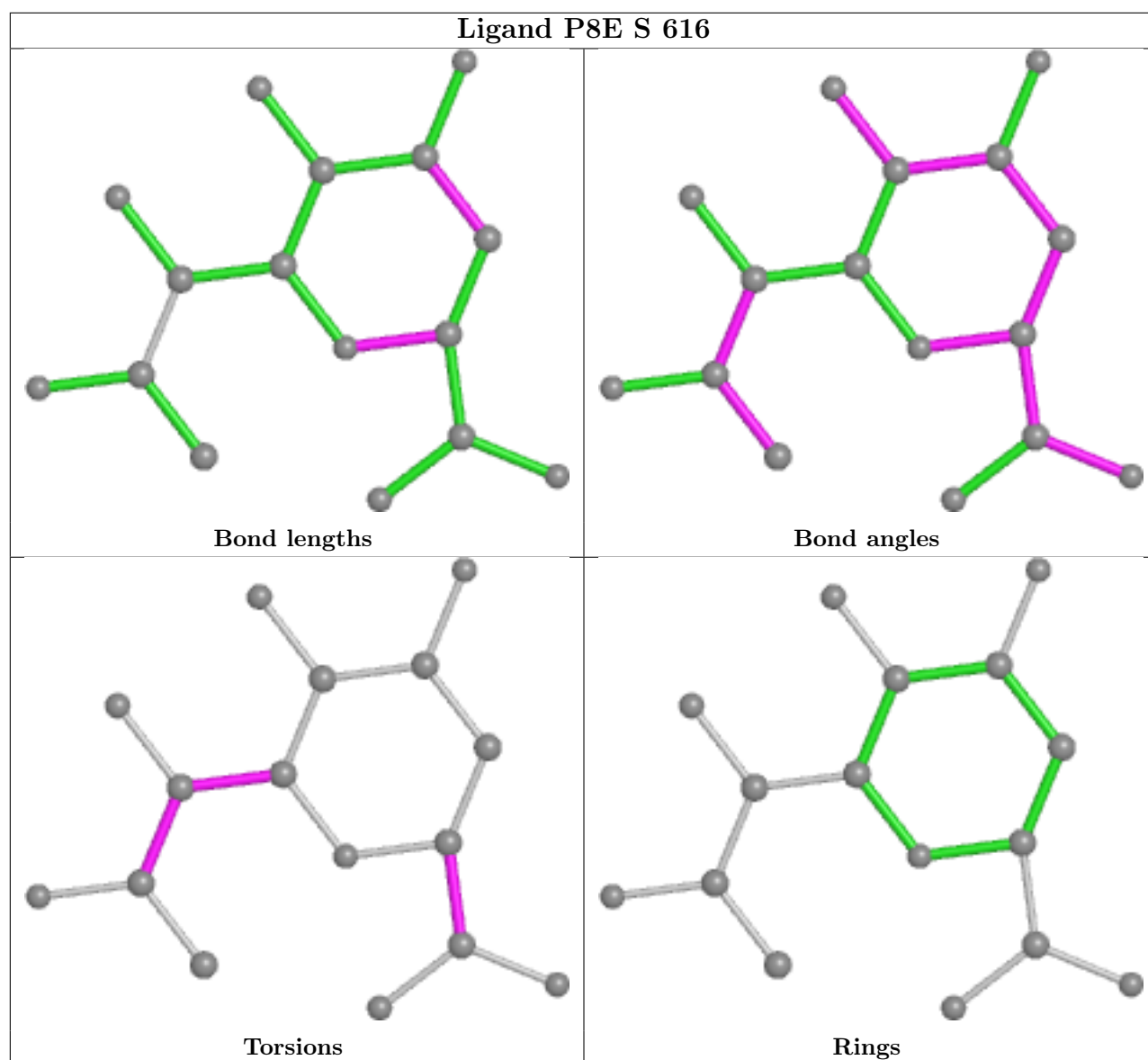
Bond angles

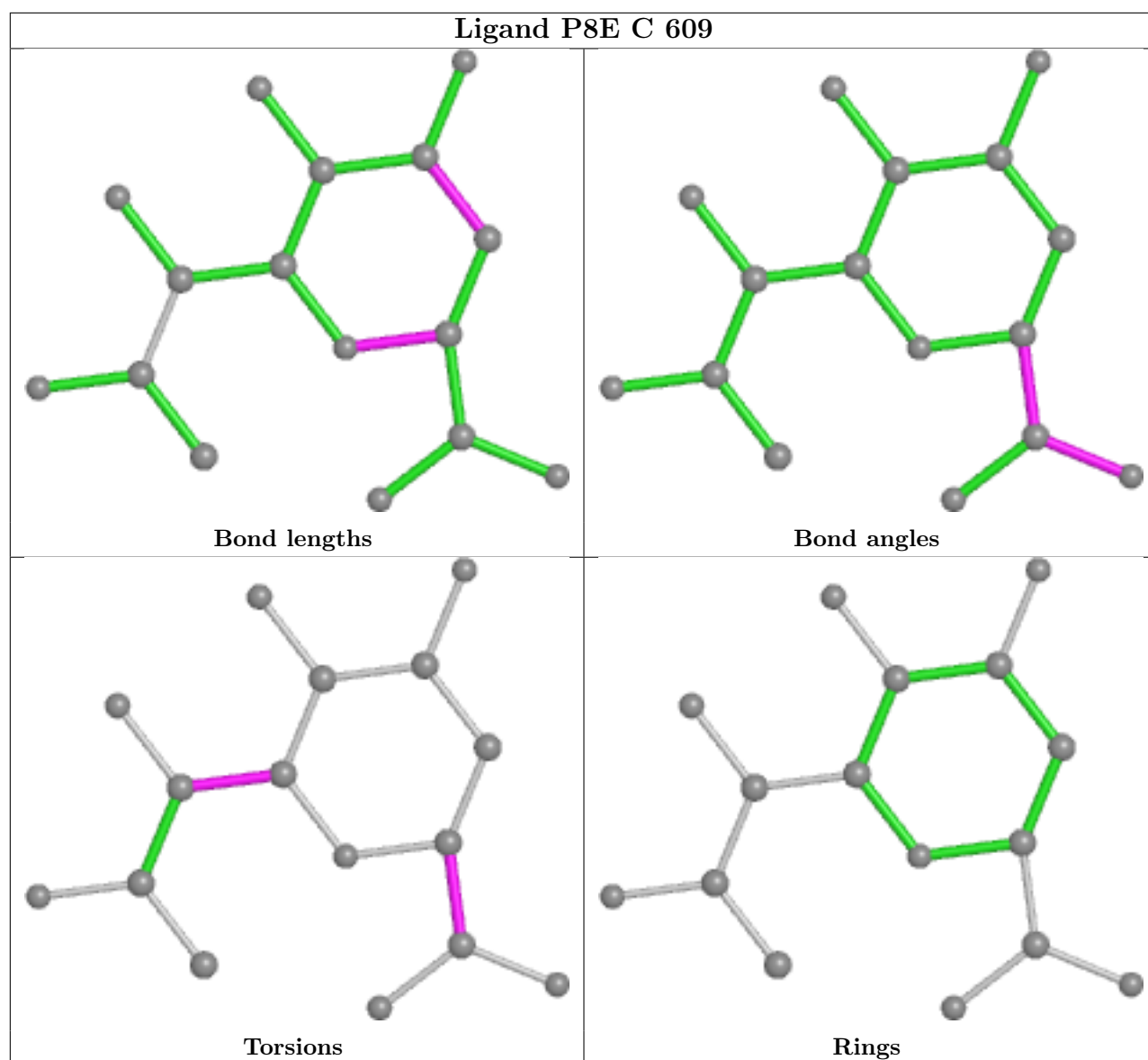


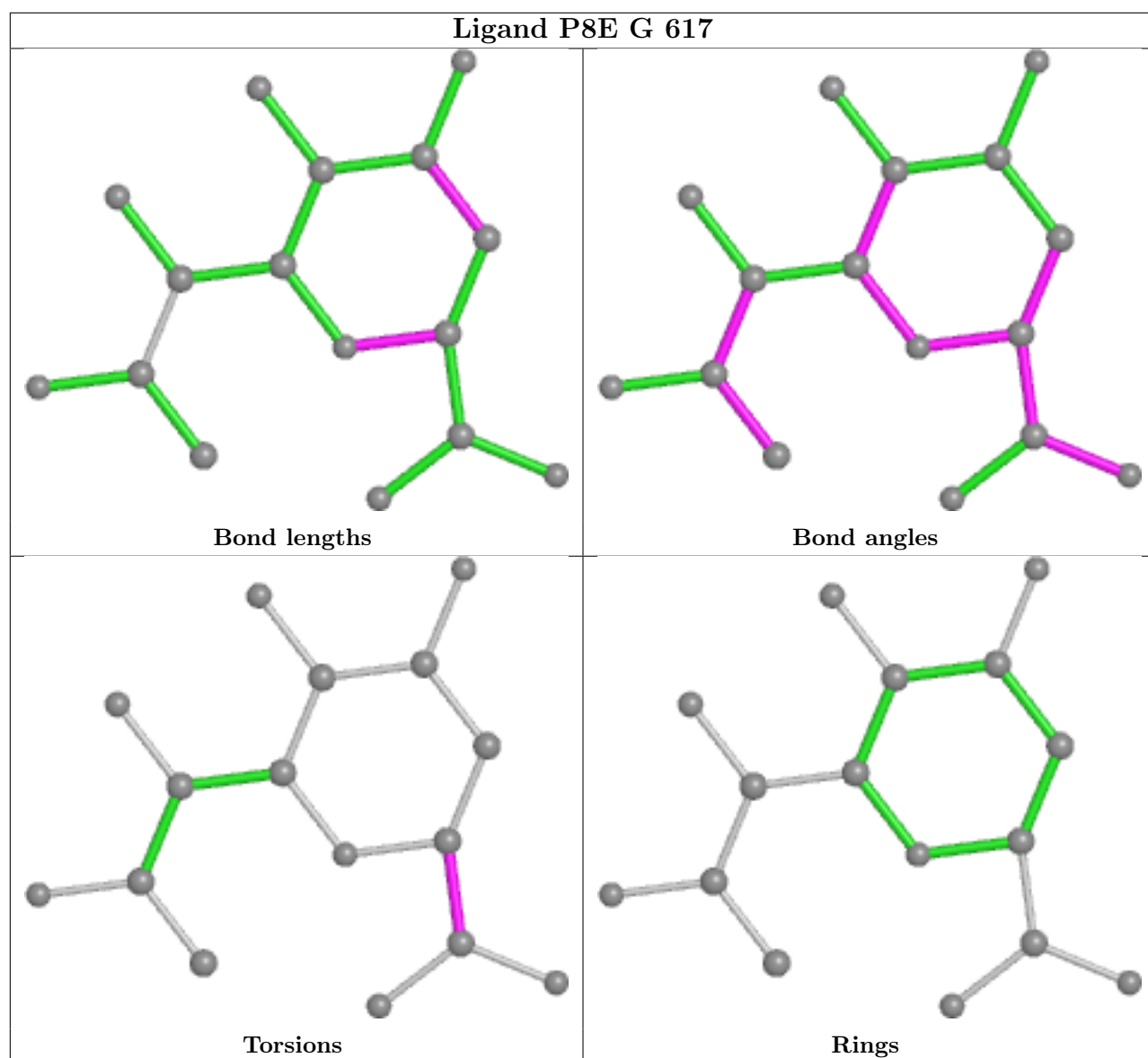
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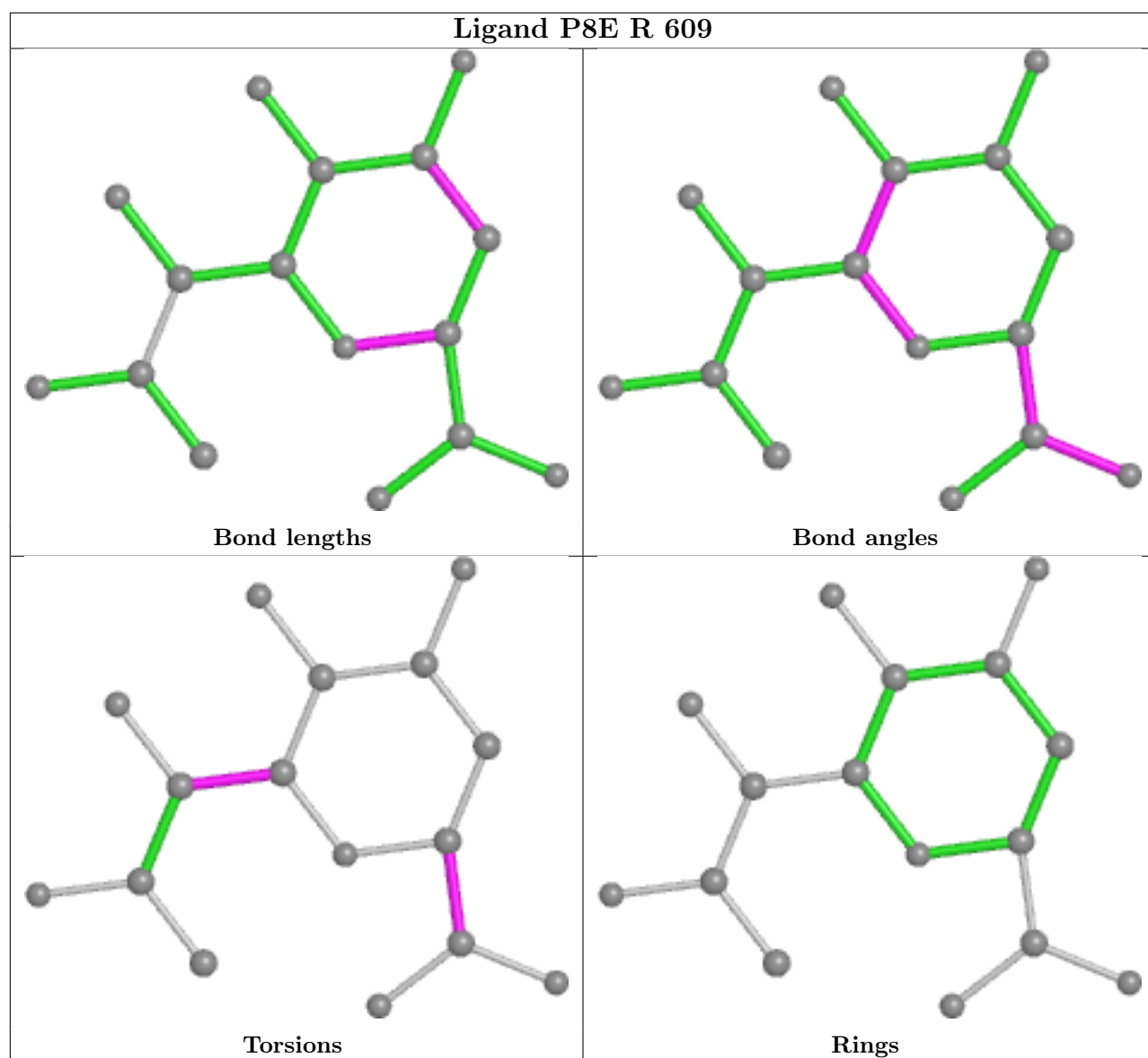


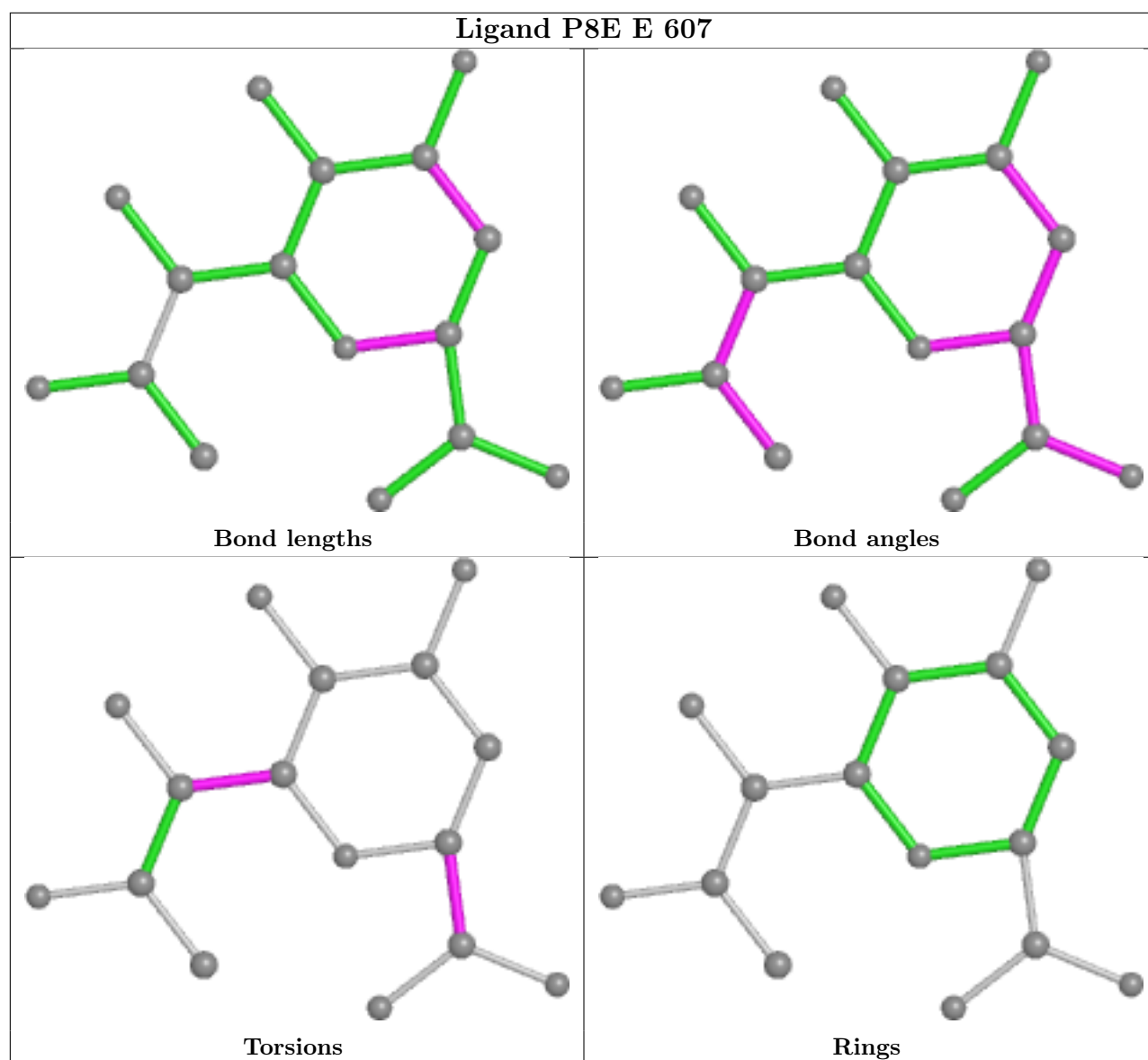
Rings



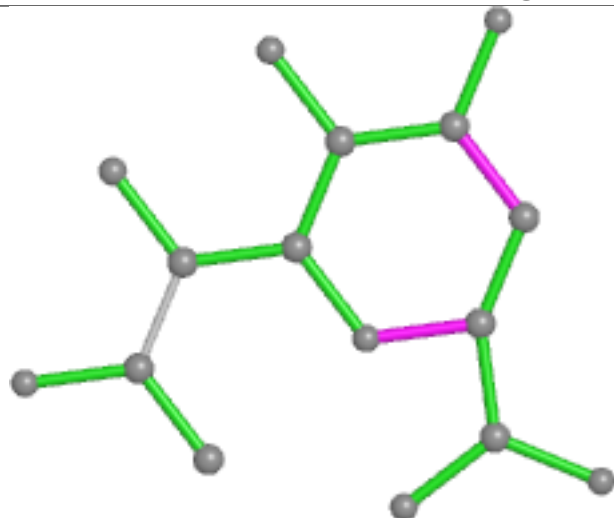




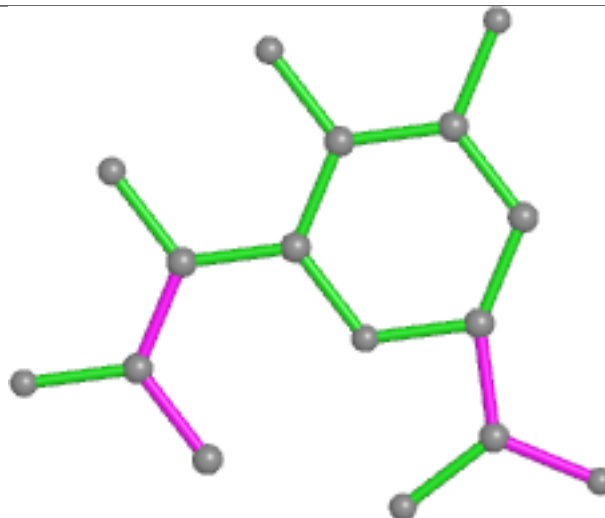




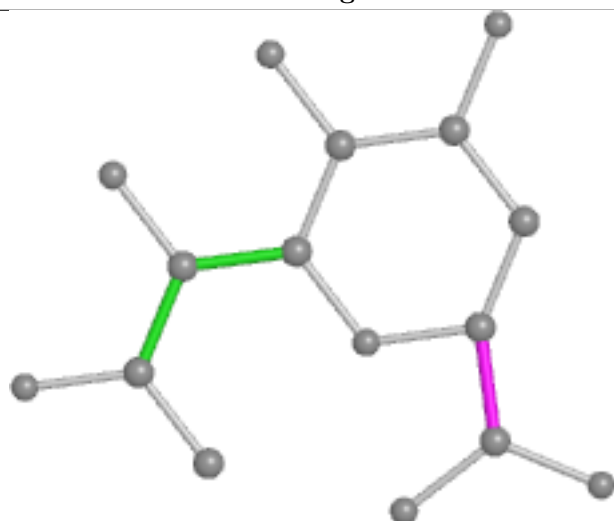
Ligand P8E D 611



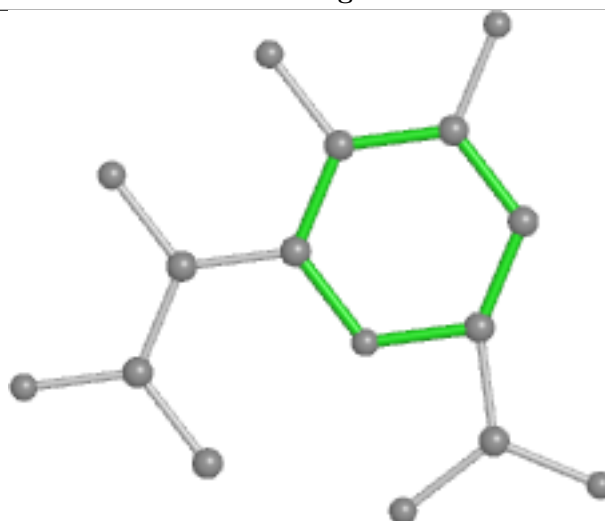
Bond lengths



Bond angles

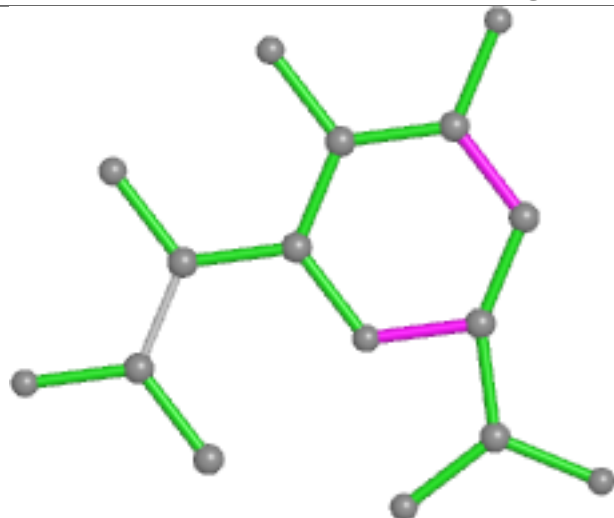


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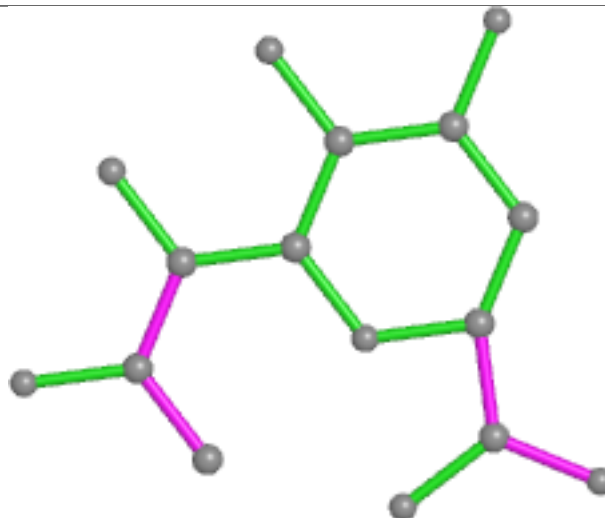


Rings

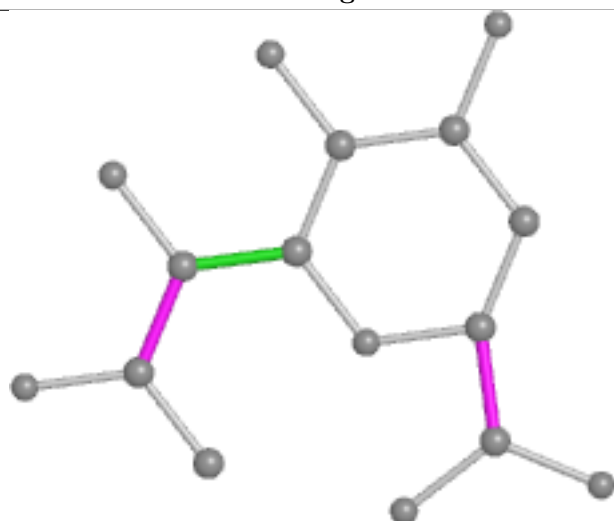
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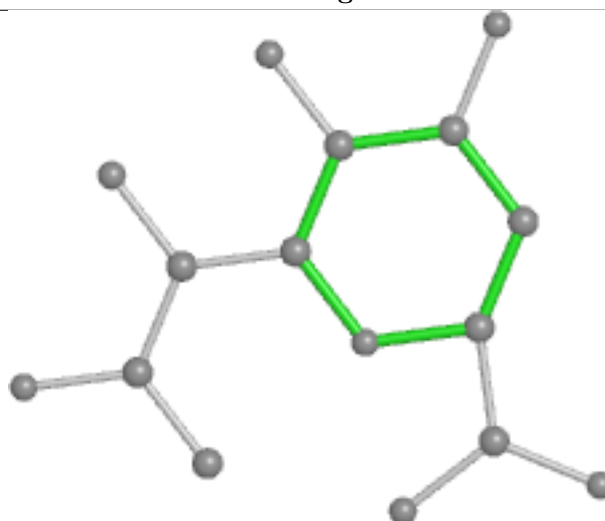
Bond lengths



Bond angles

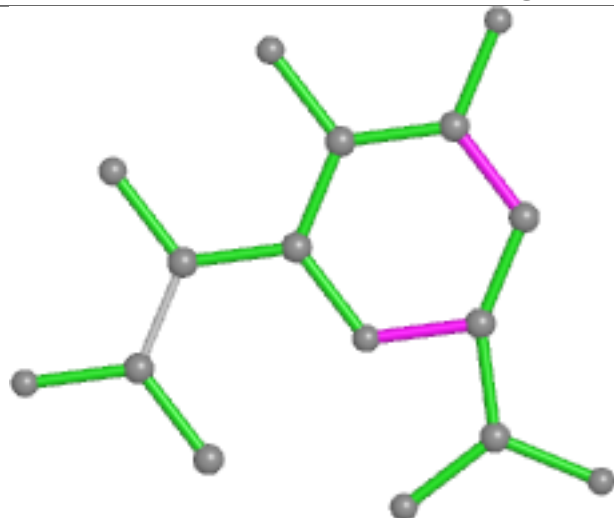


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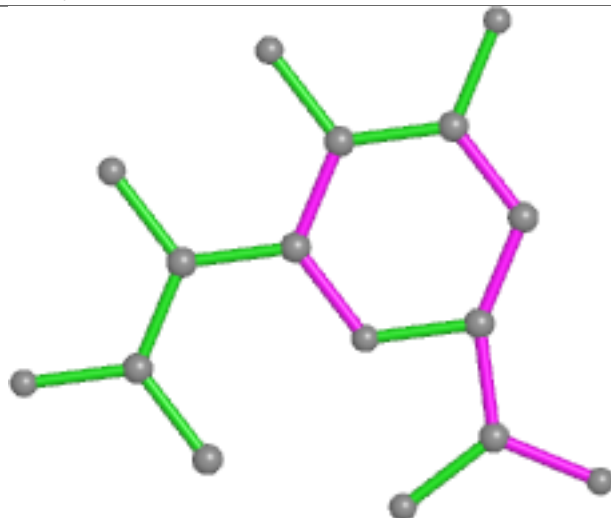


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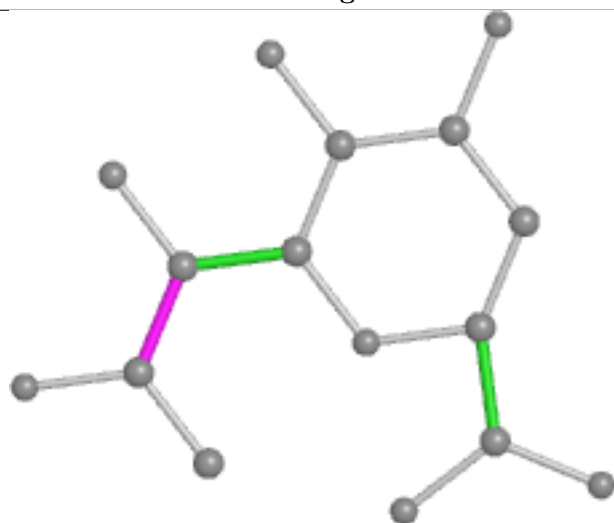
Ligand P8E Q 608



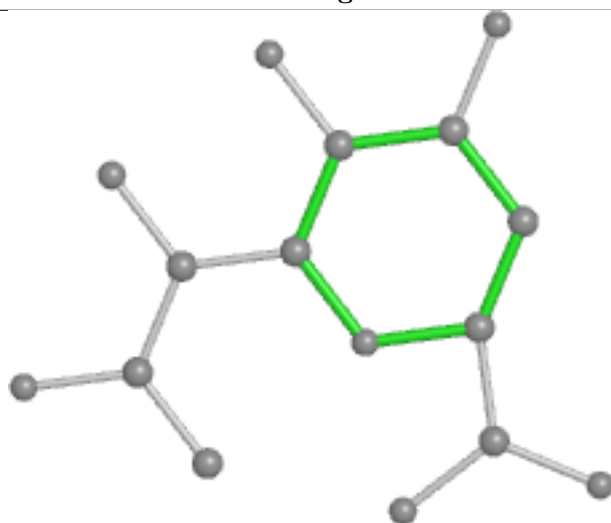
Bond lengths



Bond angles

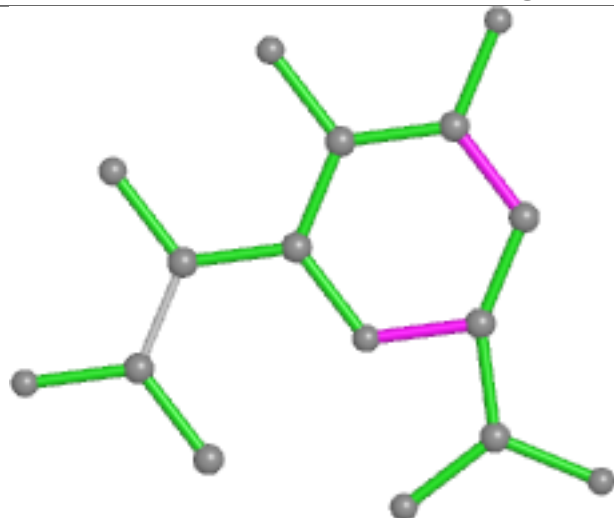


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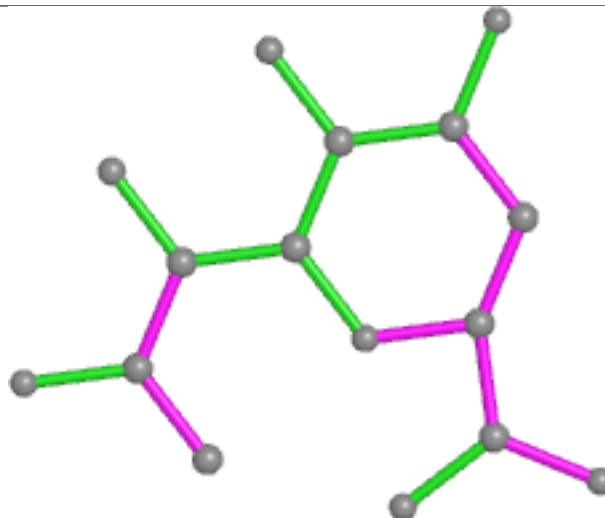


Rings

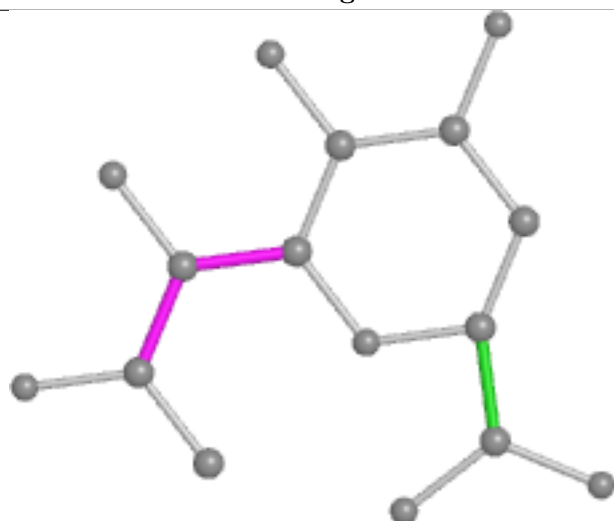
Ligand P8E C 605



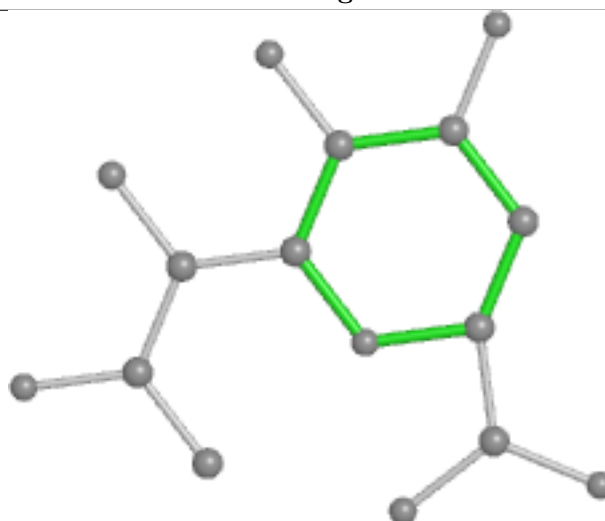
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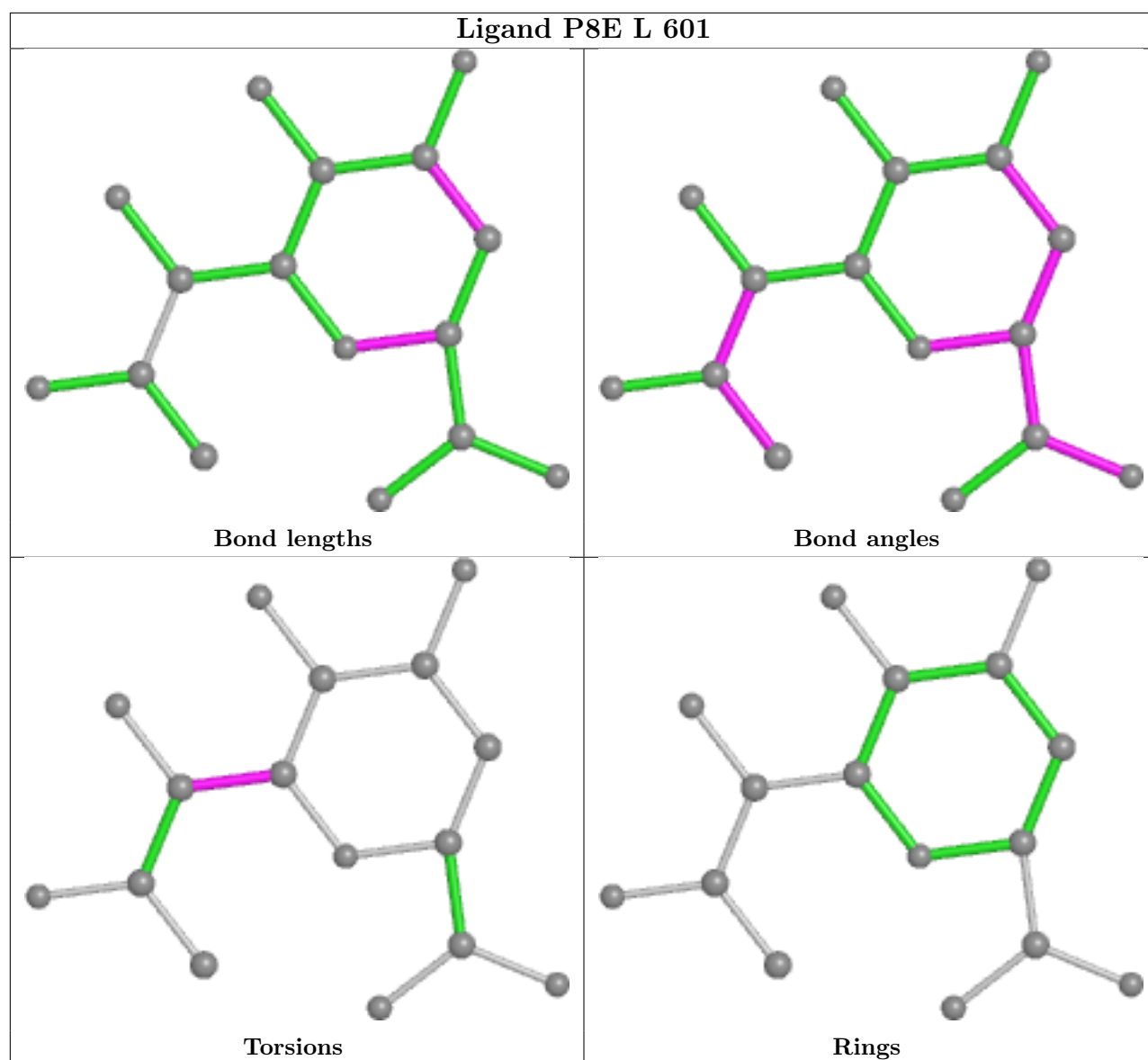
Bond angles

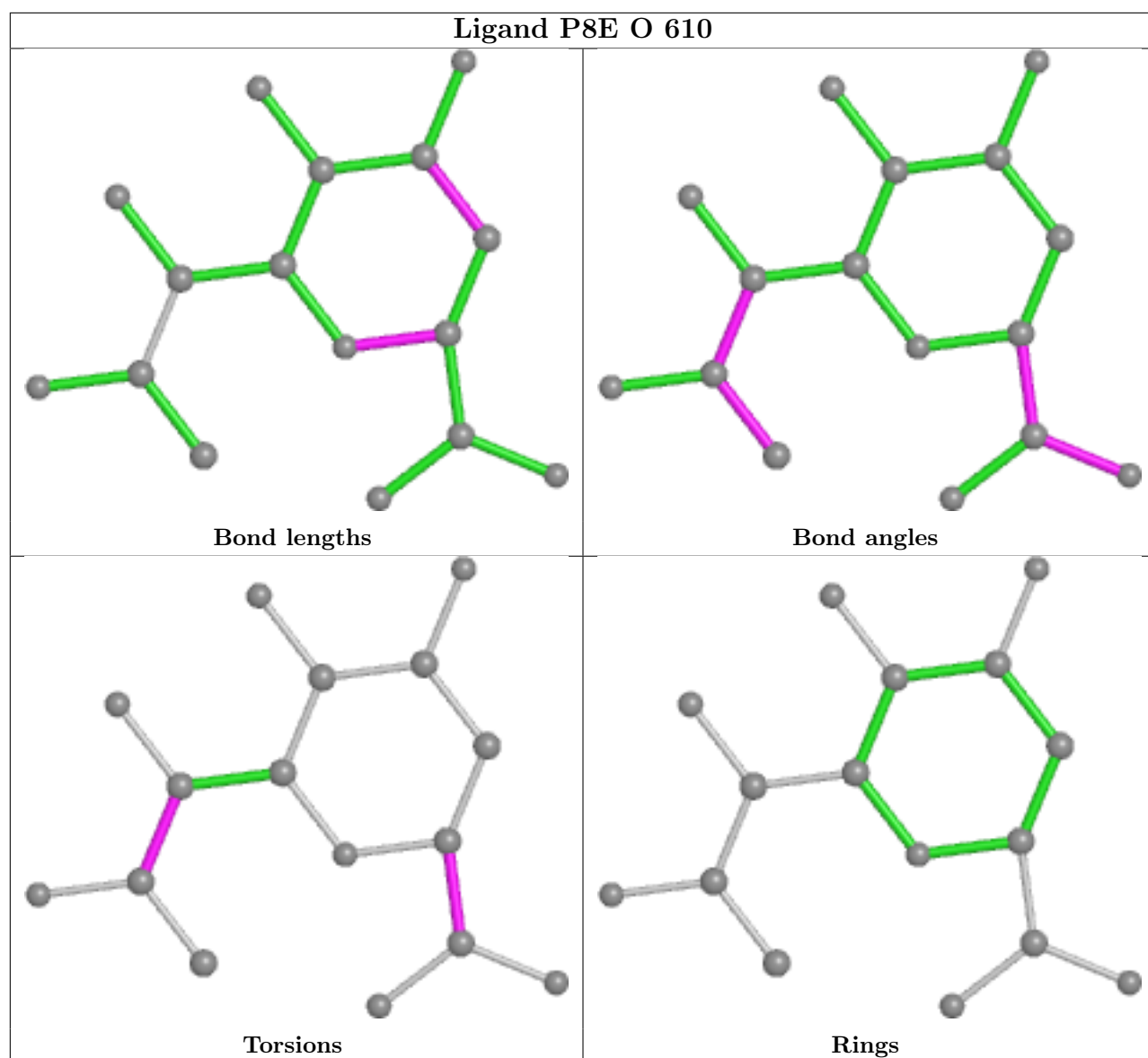


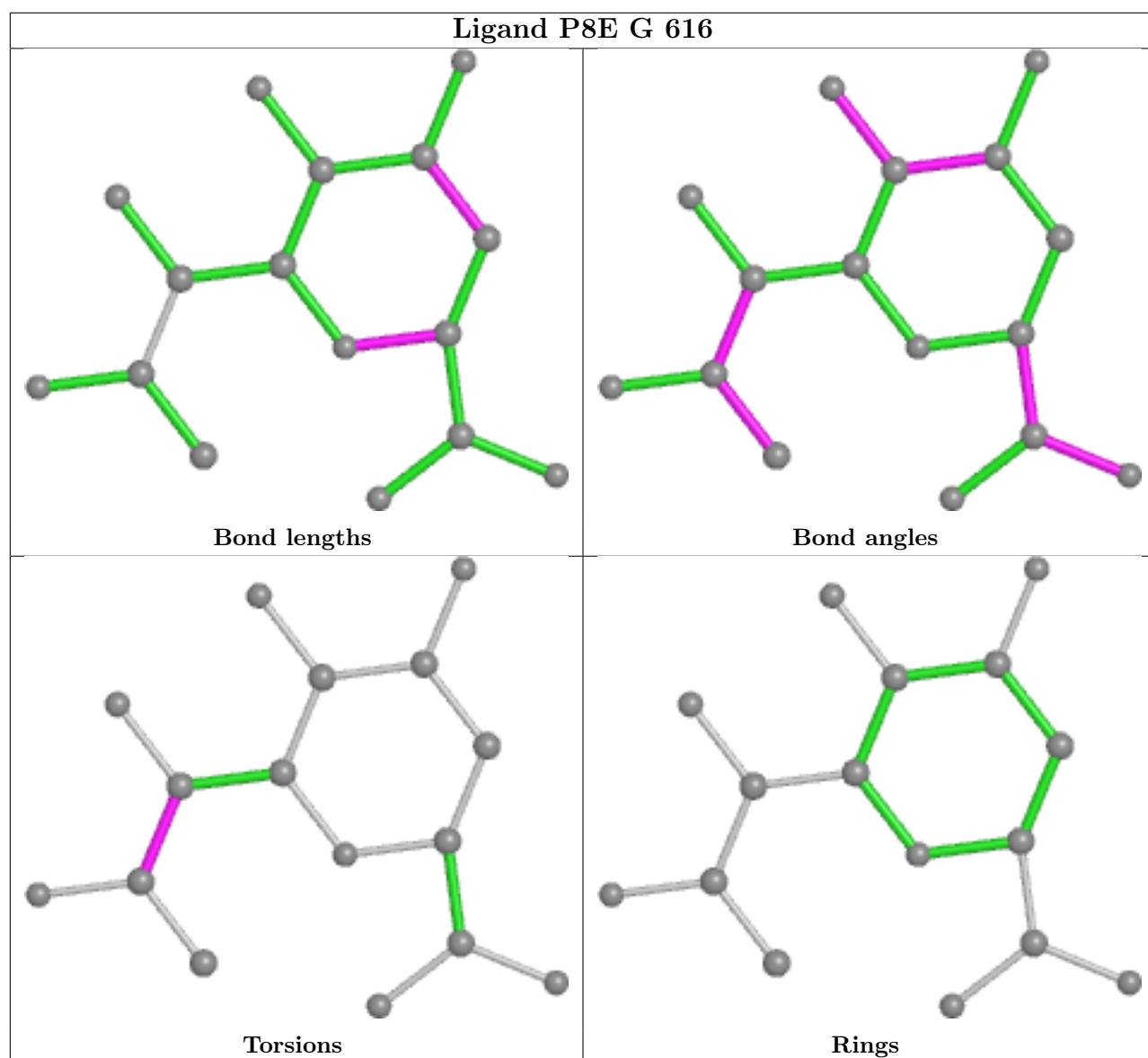
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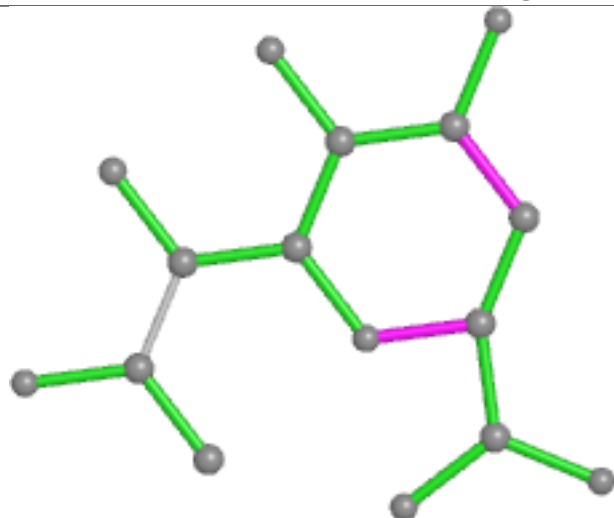
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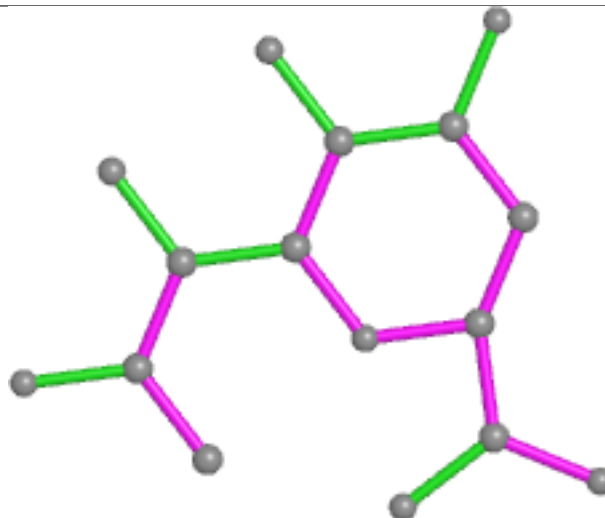




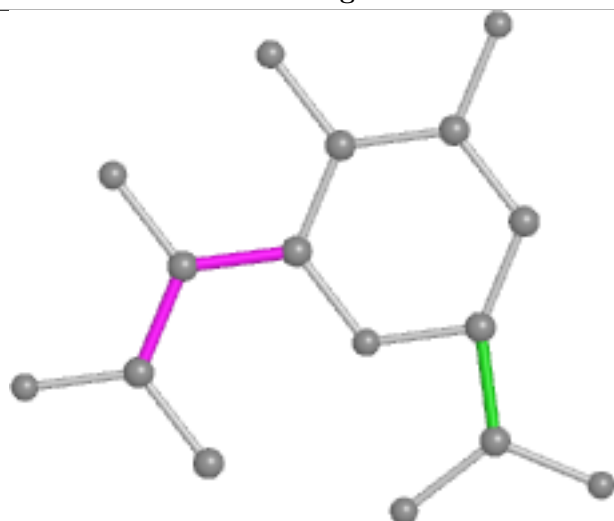
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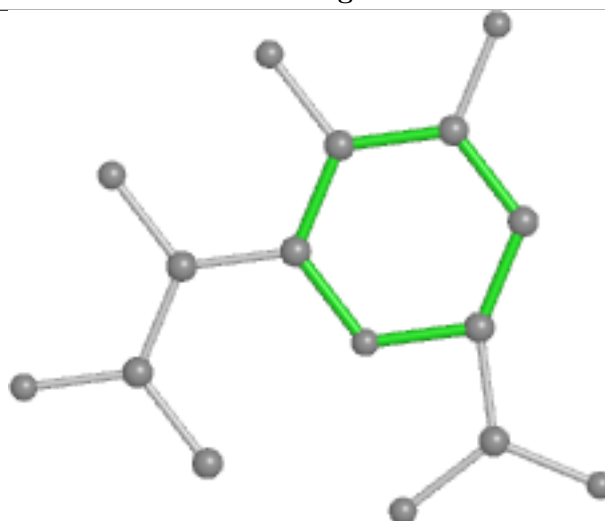
Bond lengths



Bond angles

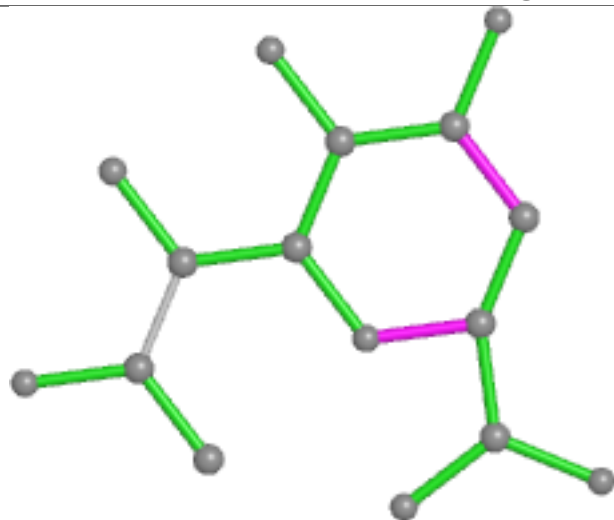


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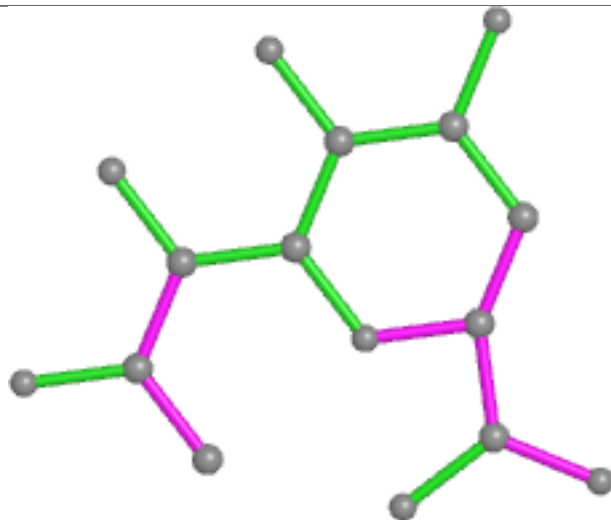


Rings

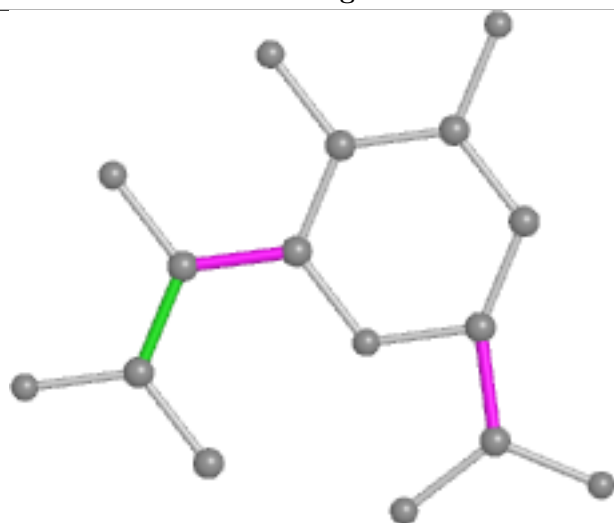
Ligand P8E D 609



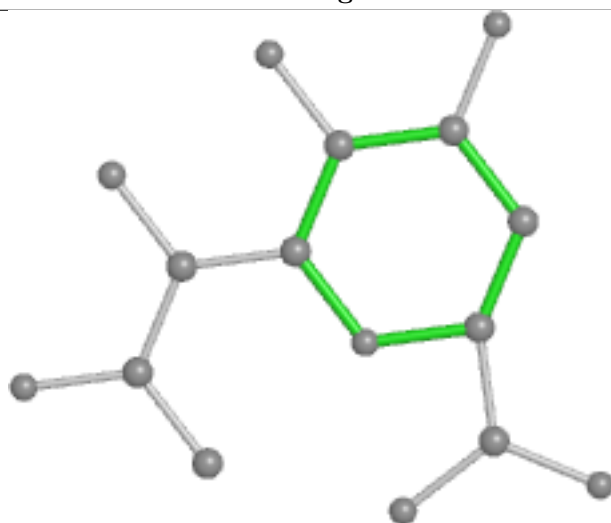
Bond lengths



Bond angles

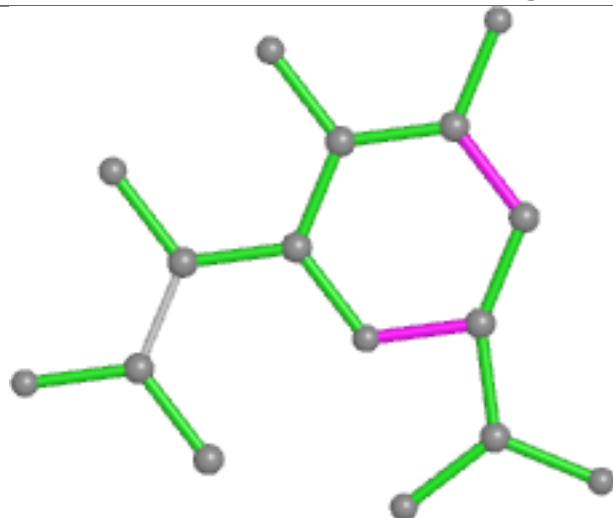


Torsions

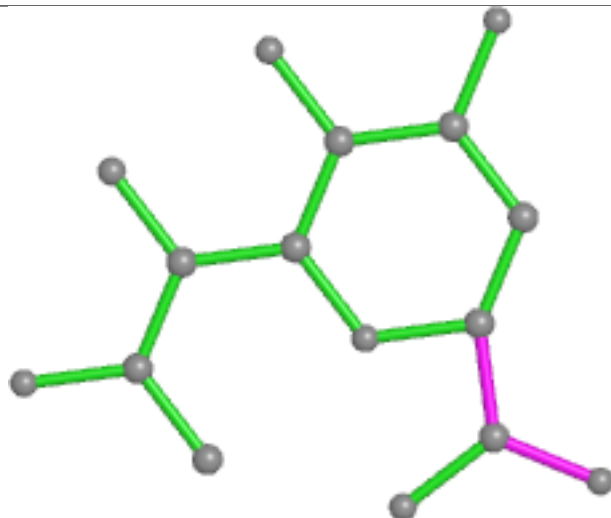


Rings

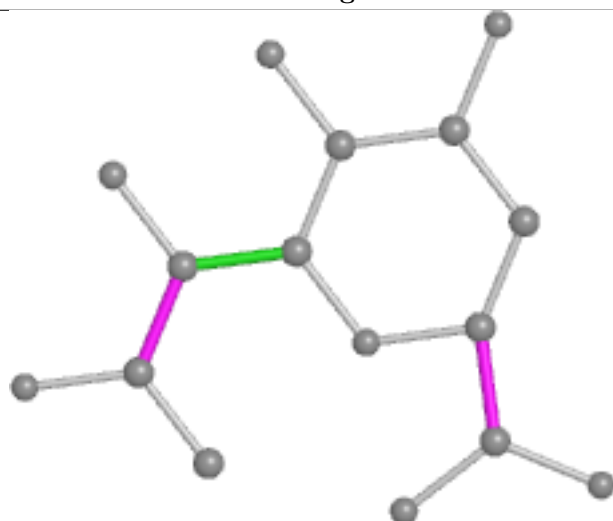
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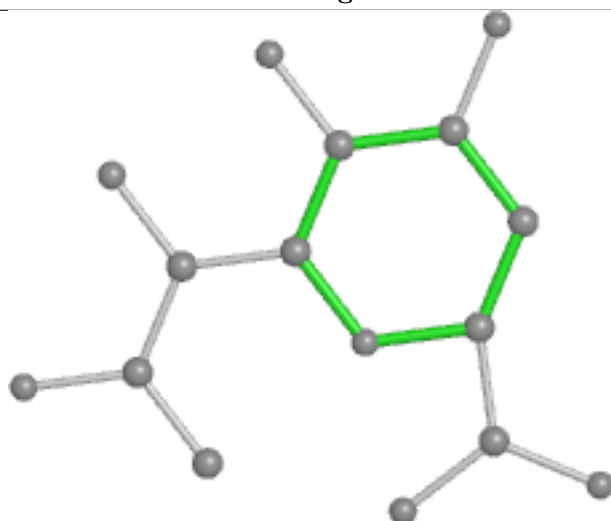
Bond lengths



Bond angles

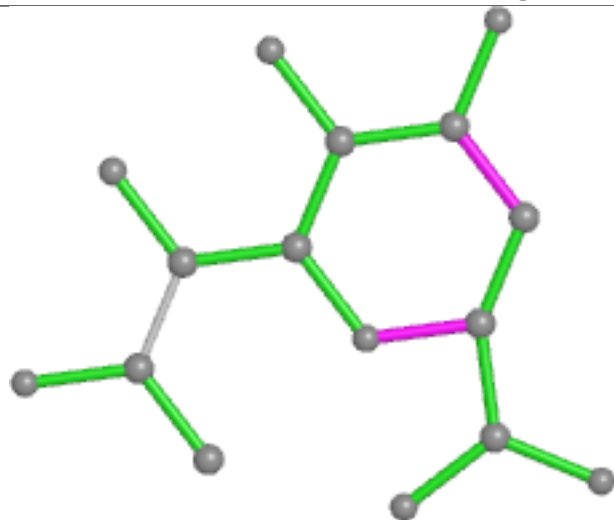


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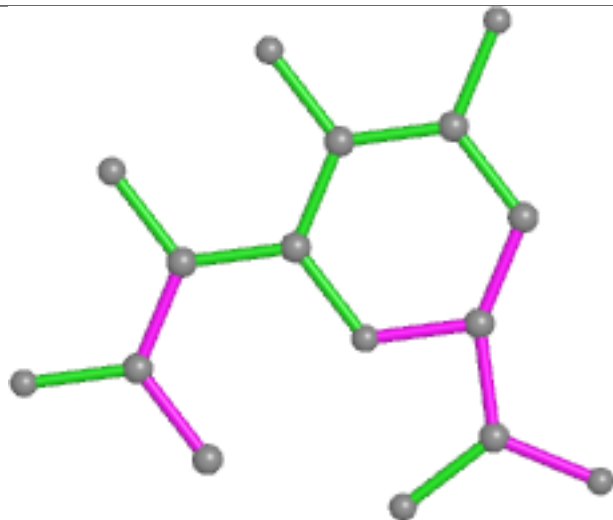


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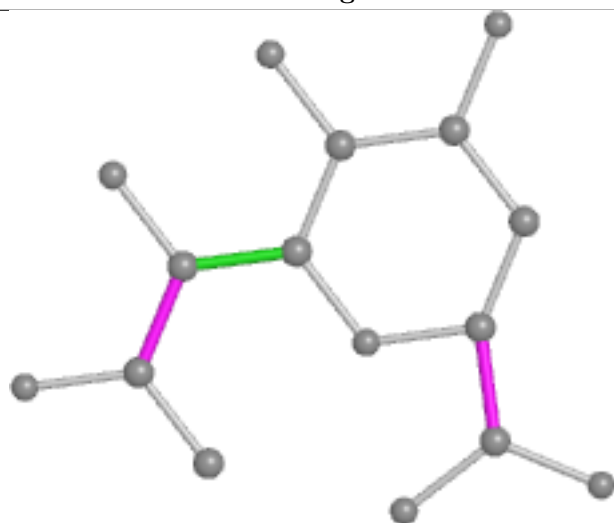
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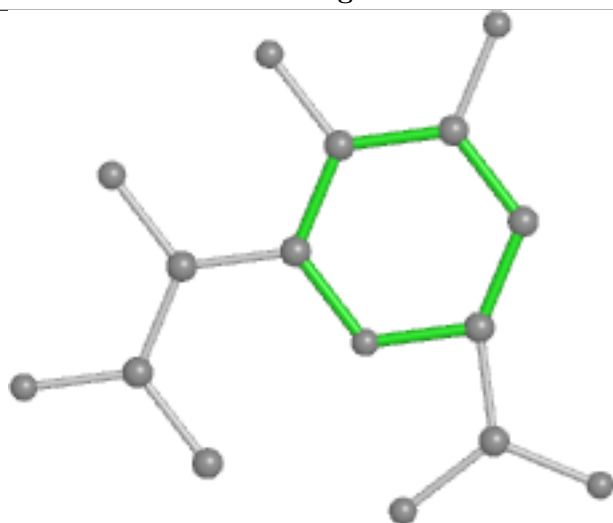
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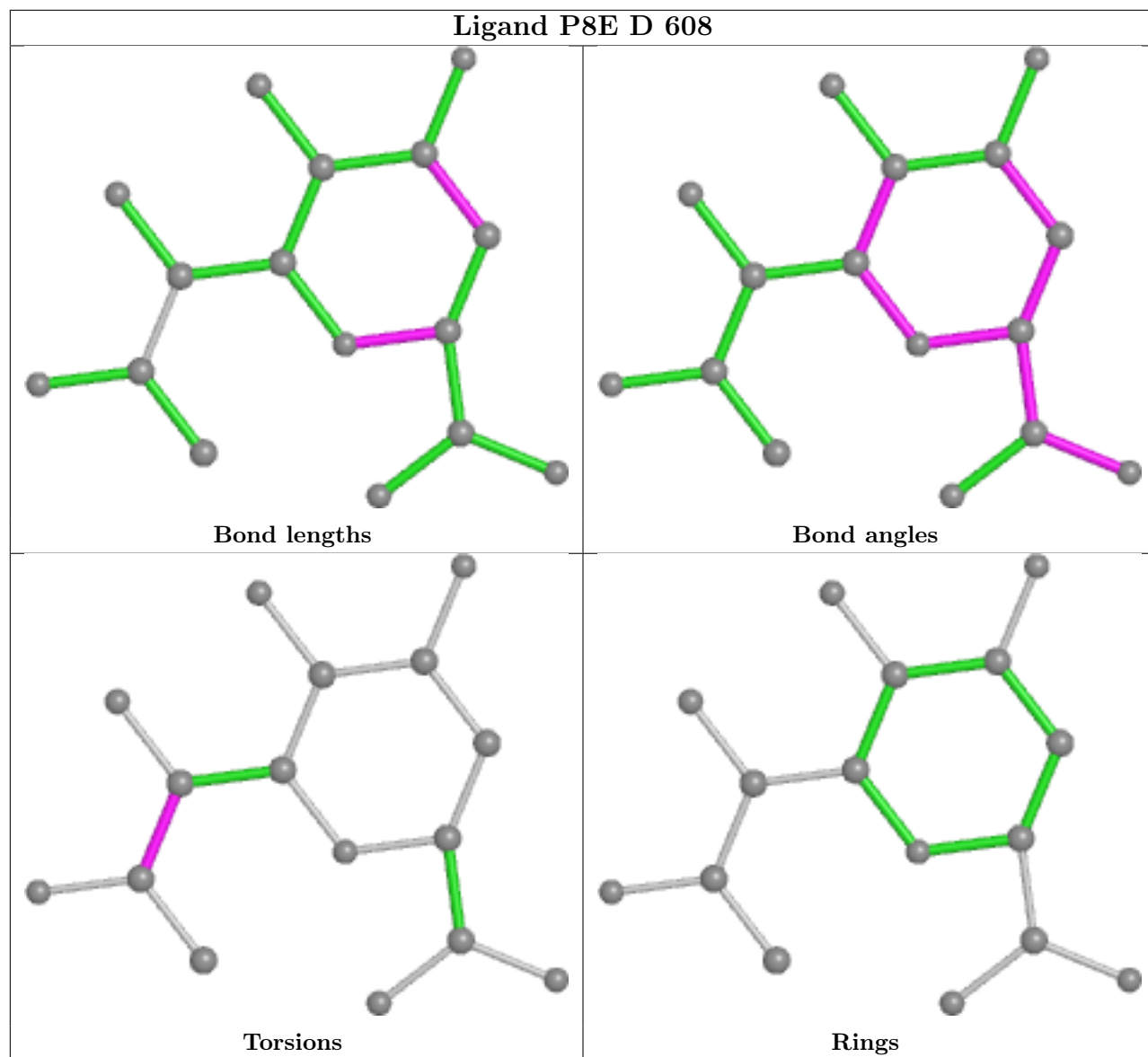
Bond angles



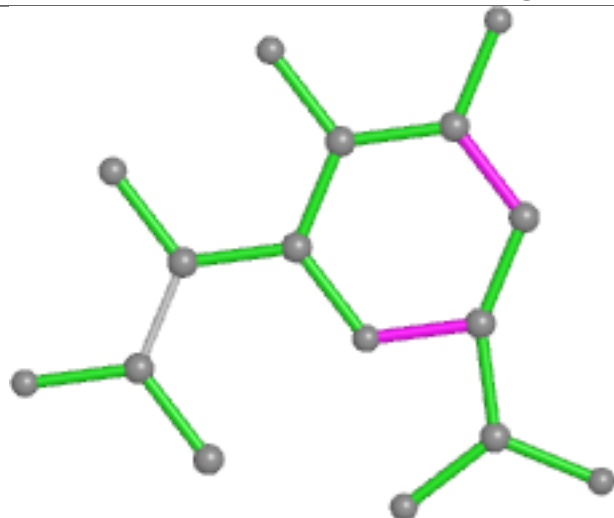
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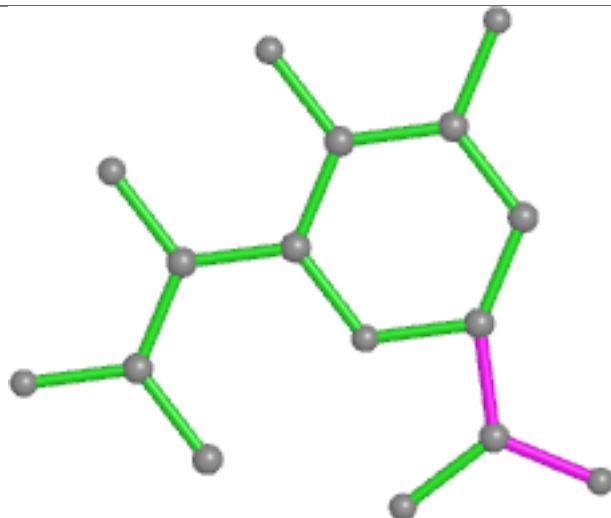
Rings



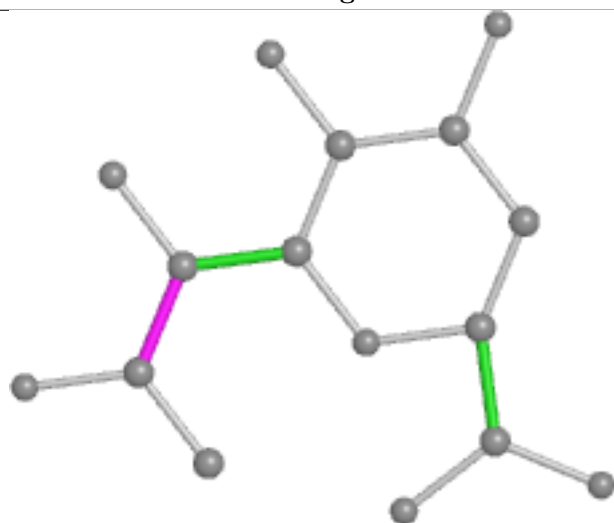
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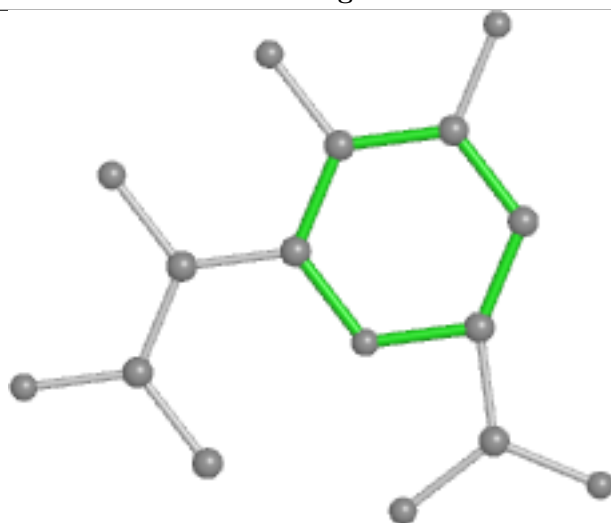
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Bond angles

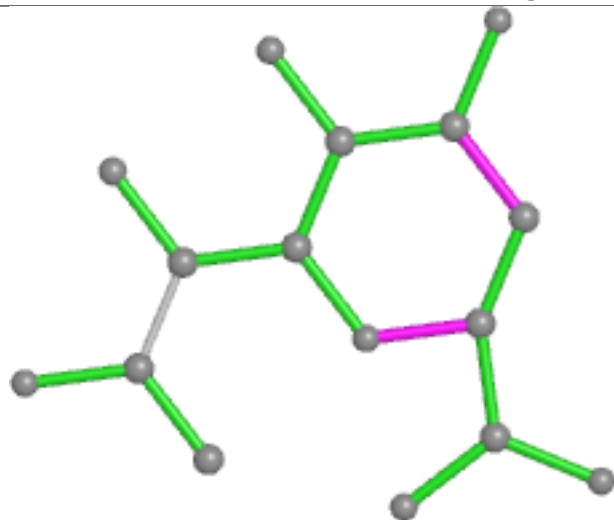


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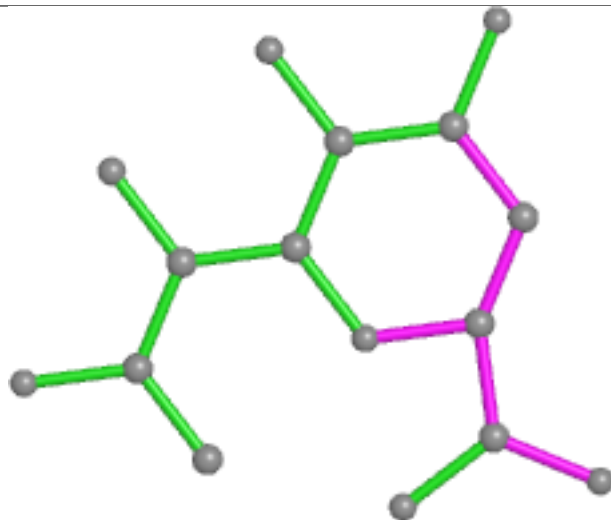


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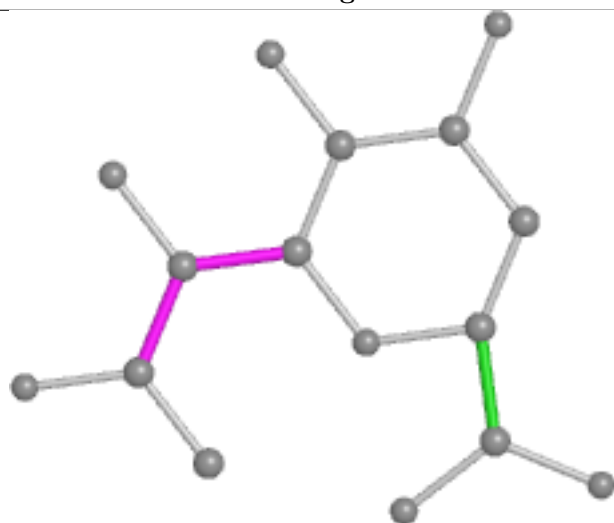
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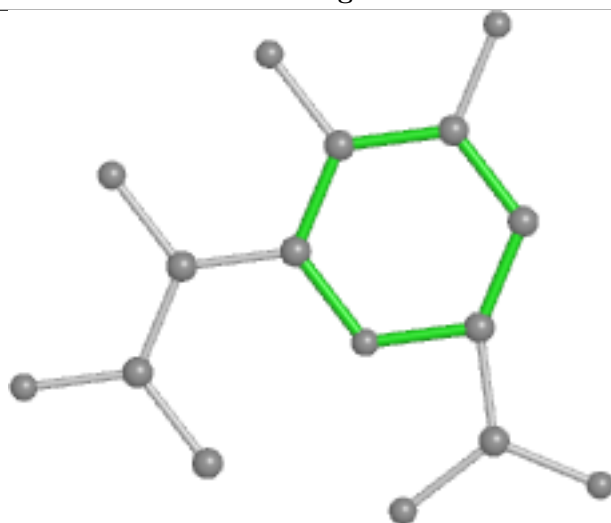
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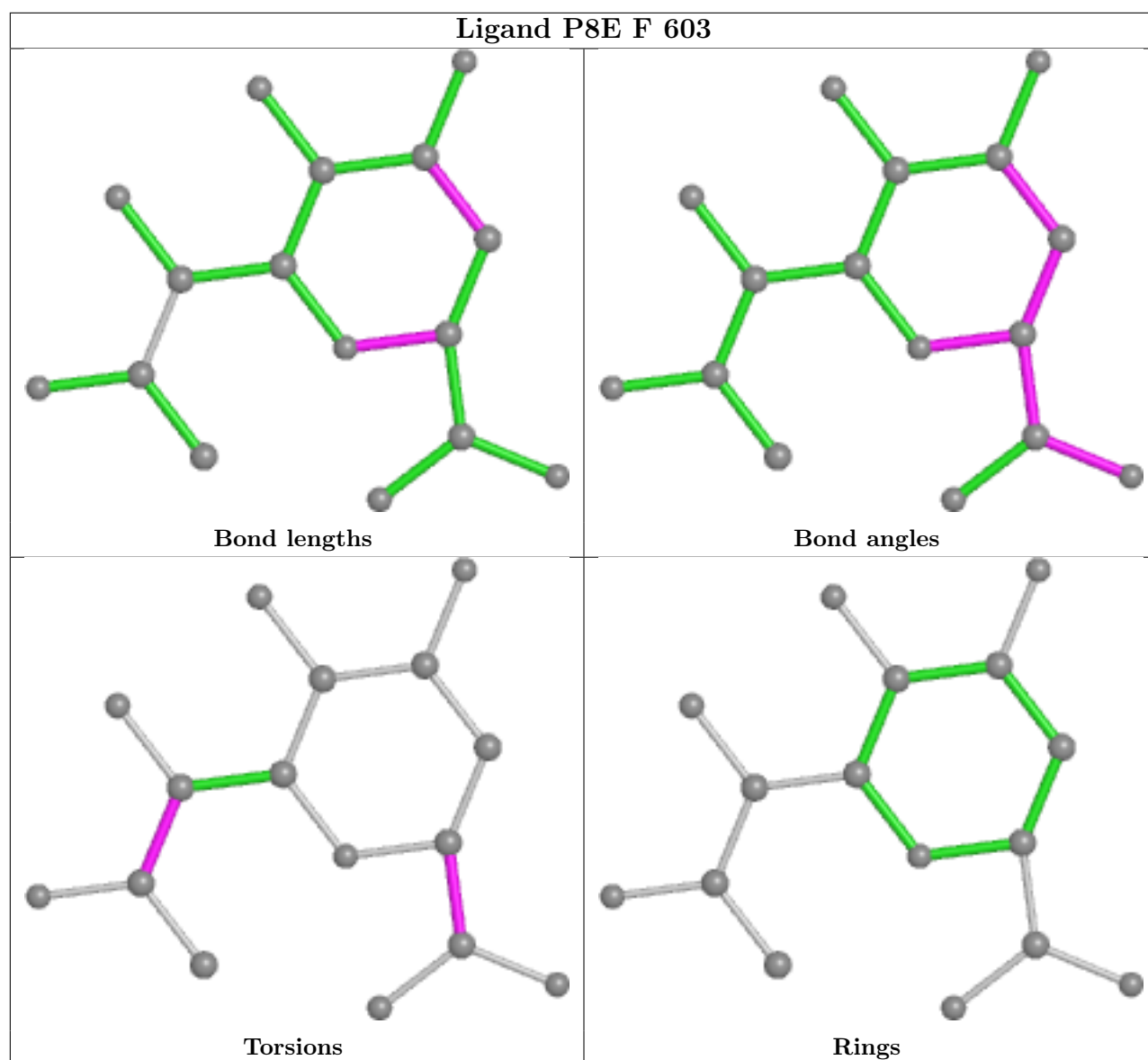
Bond angles



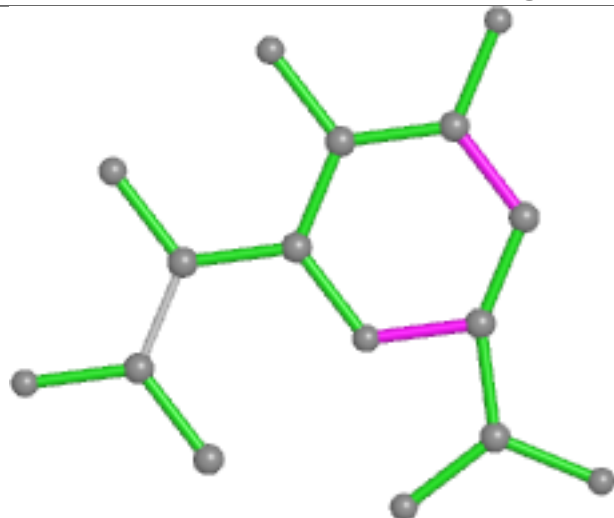
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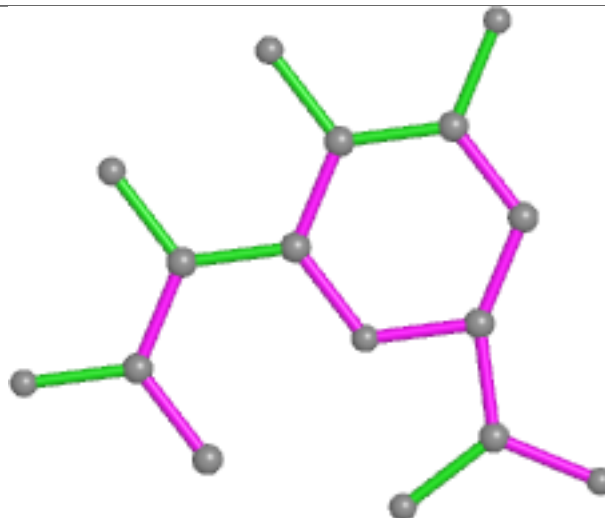
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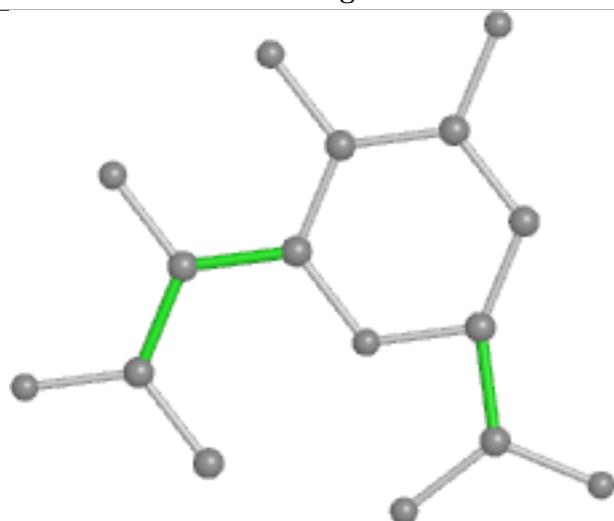
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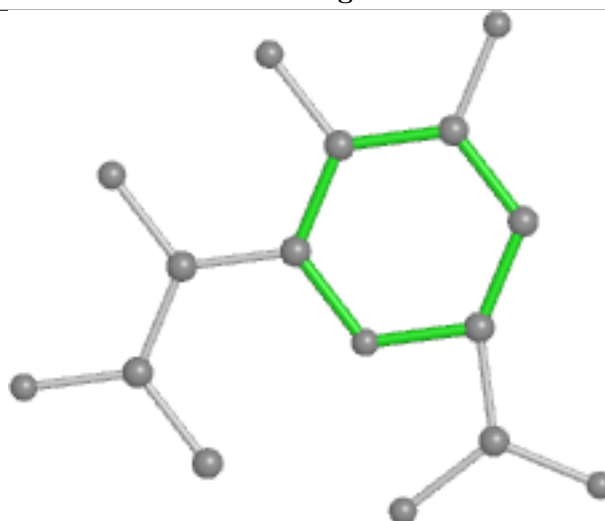
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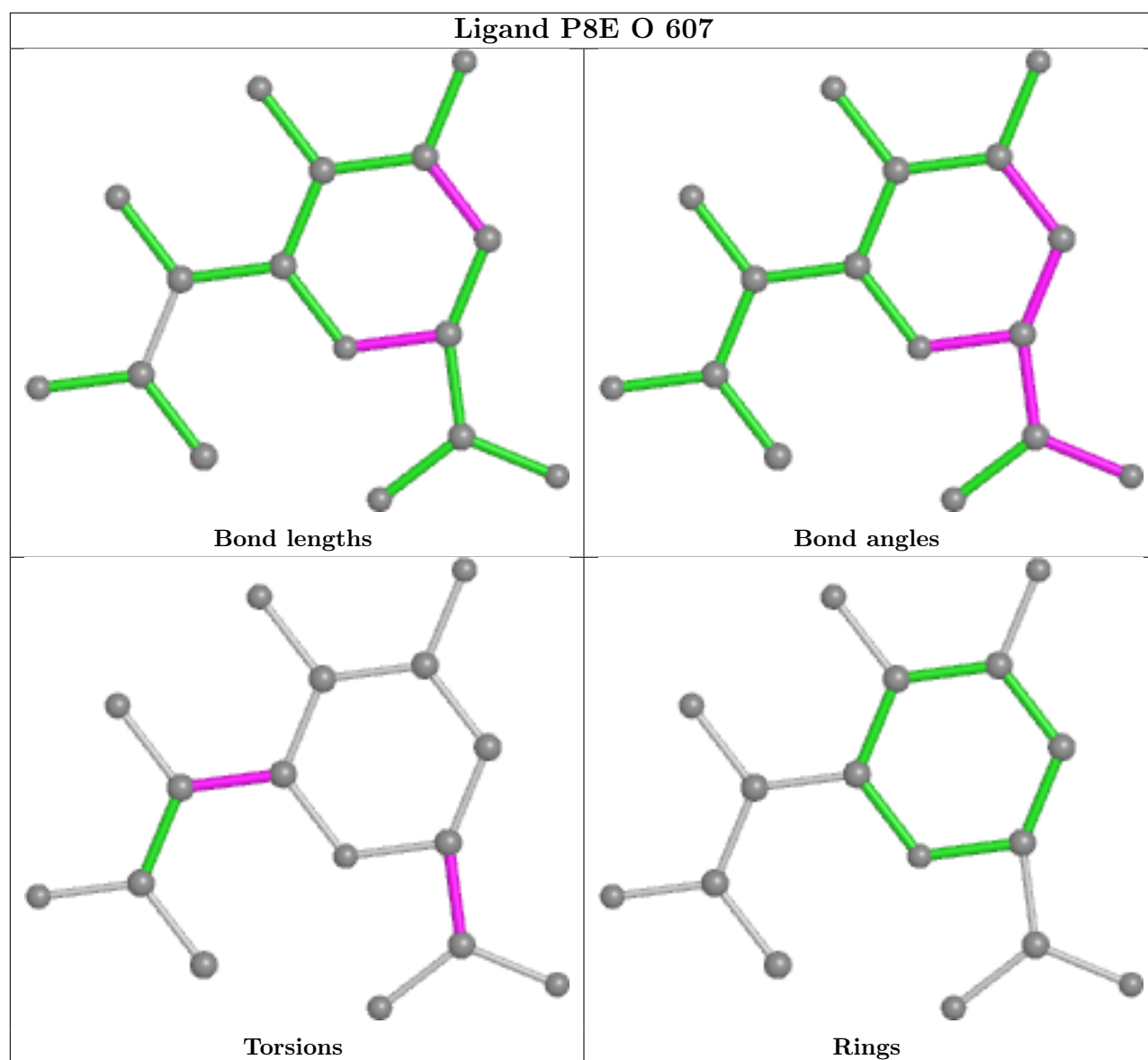
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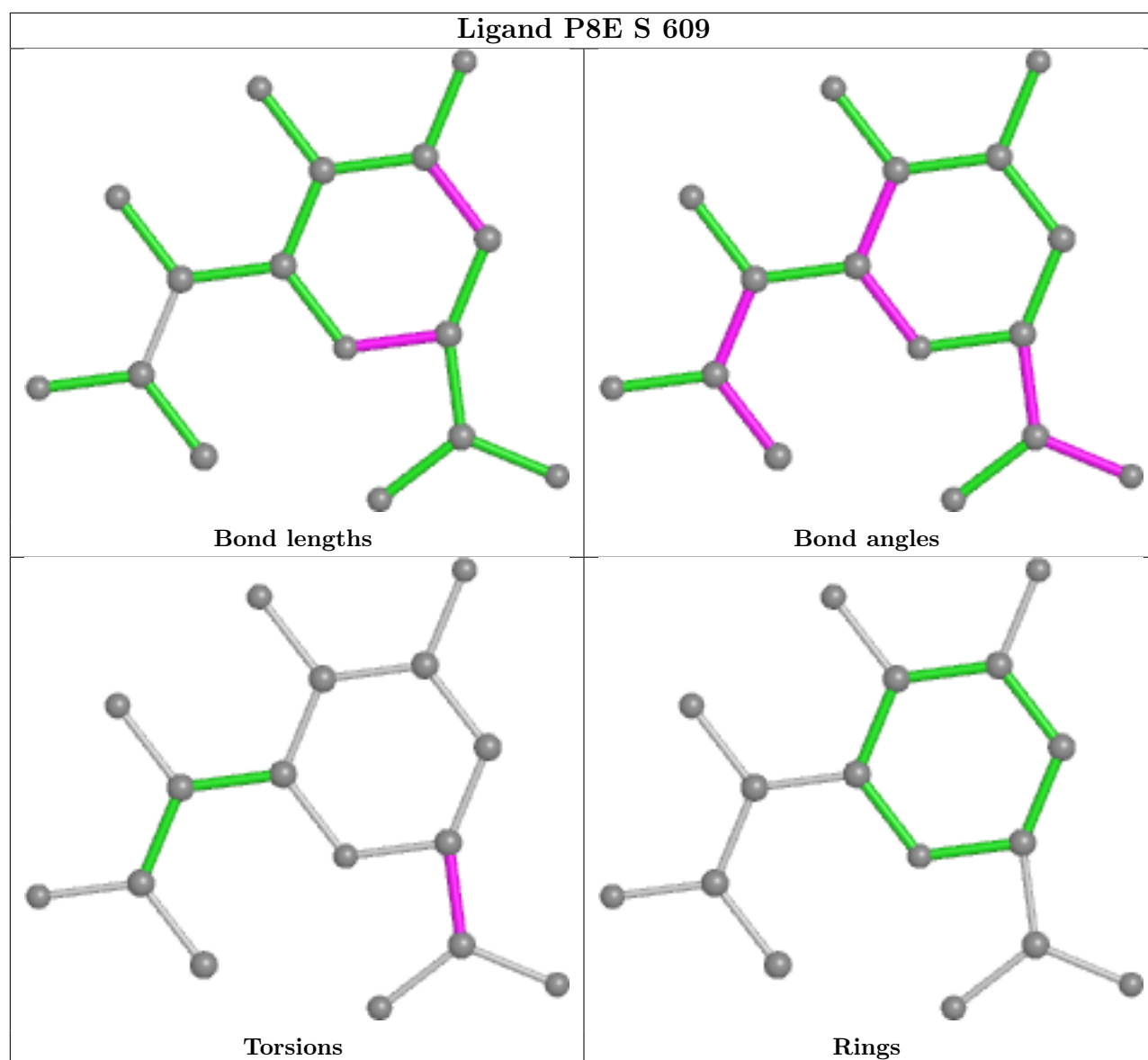


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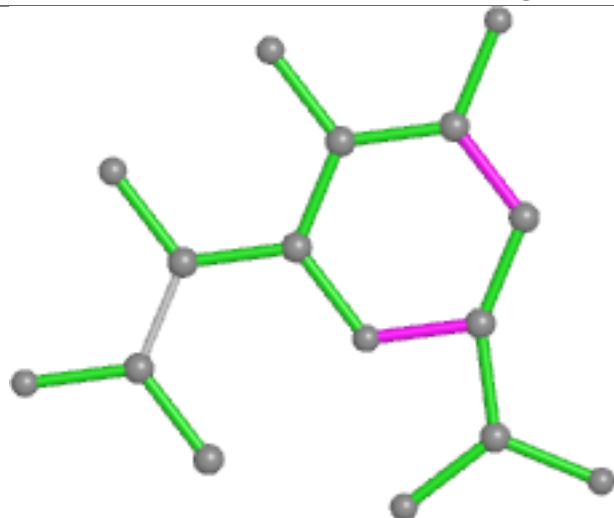


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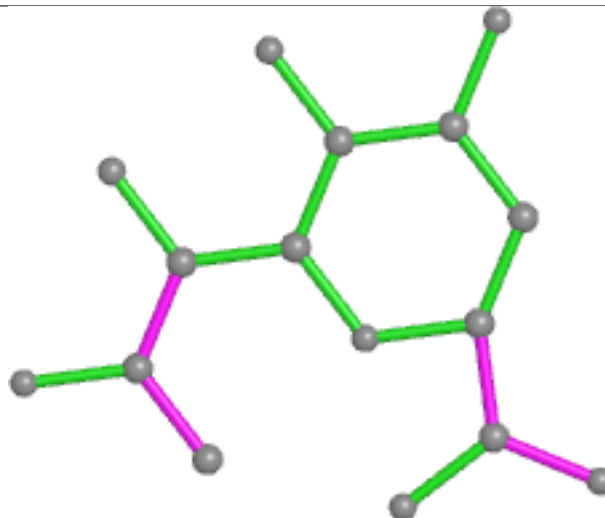




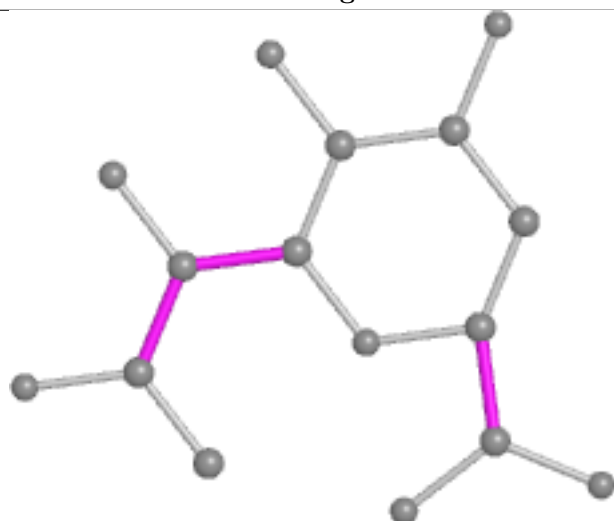
Ligand P8E G 601



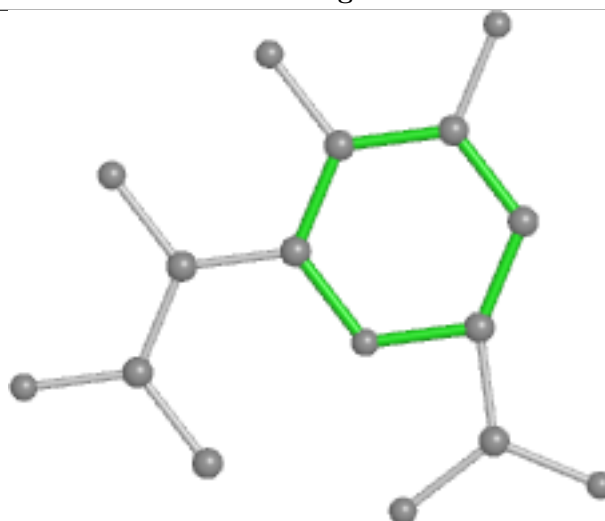
Bond lengths



Bond angles

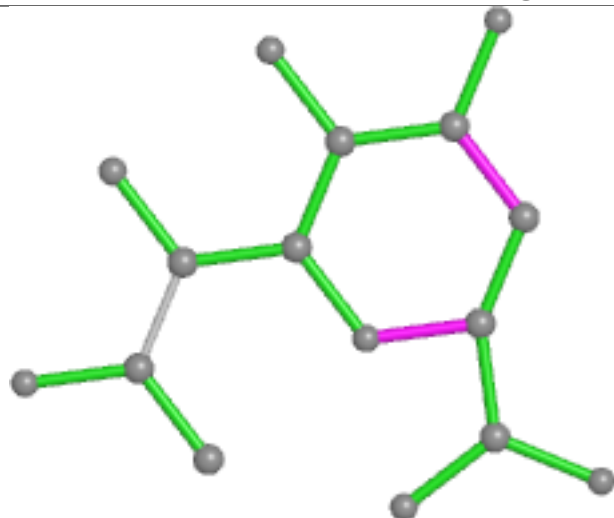


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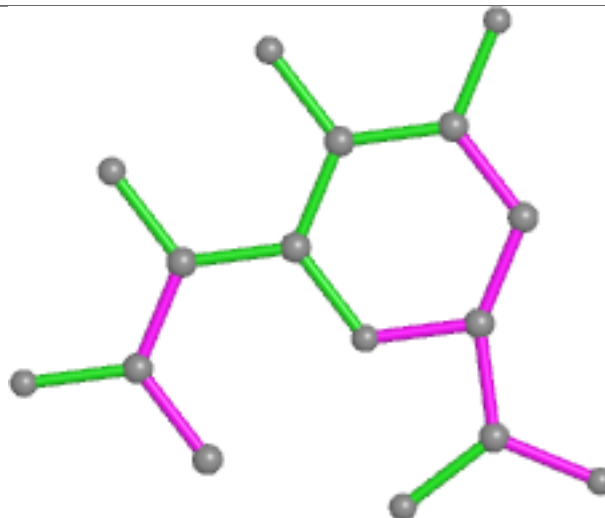


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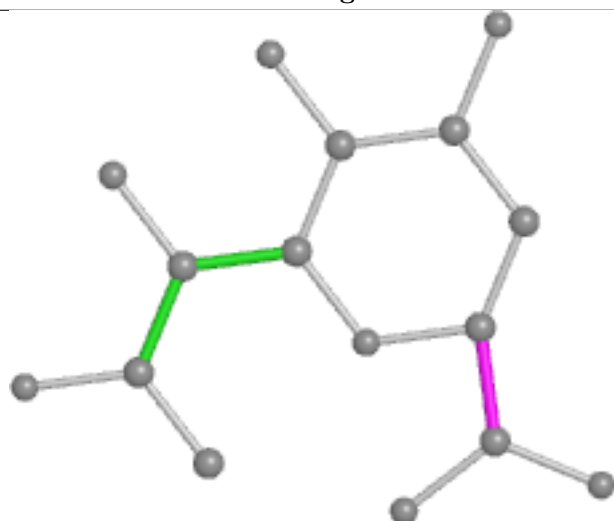
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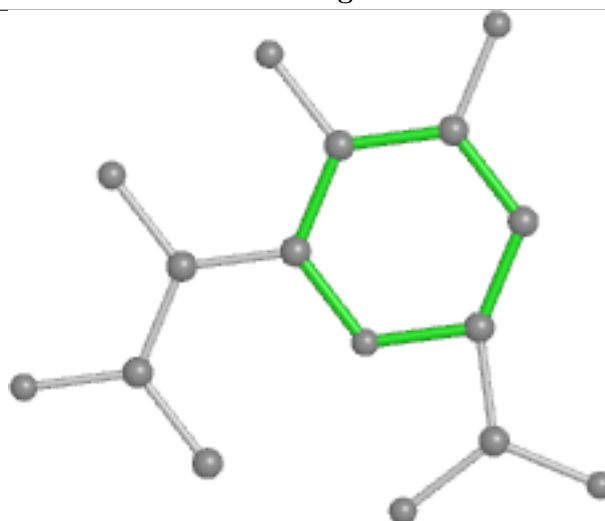
Bond lengths



Bond angles

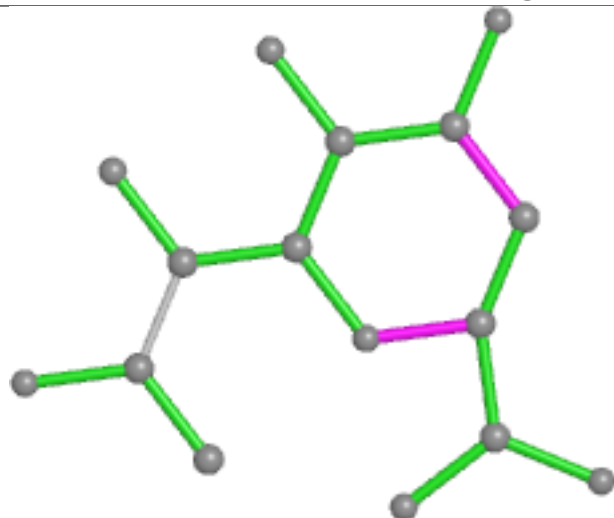


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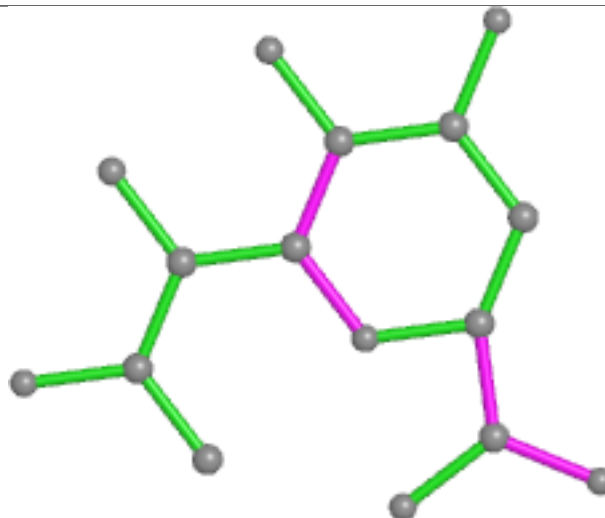


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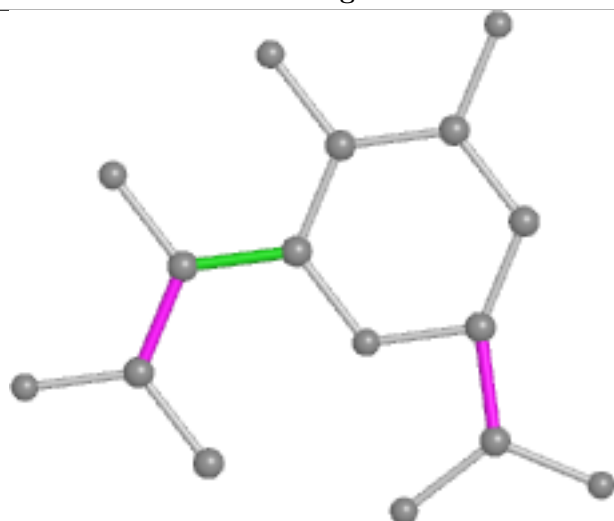
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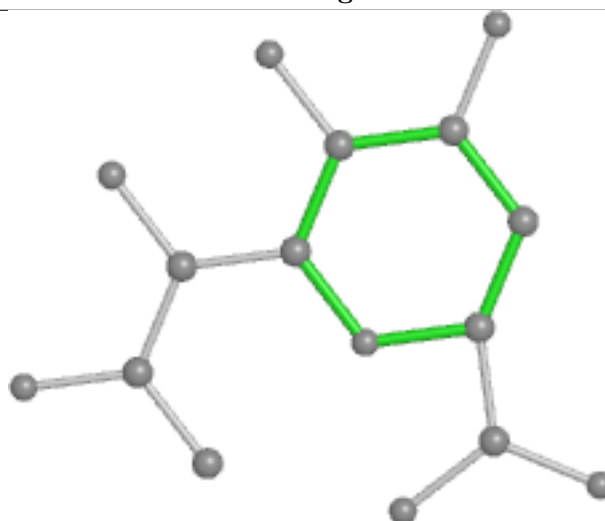
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Bond angles

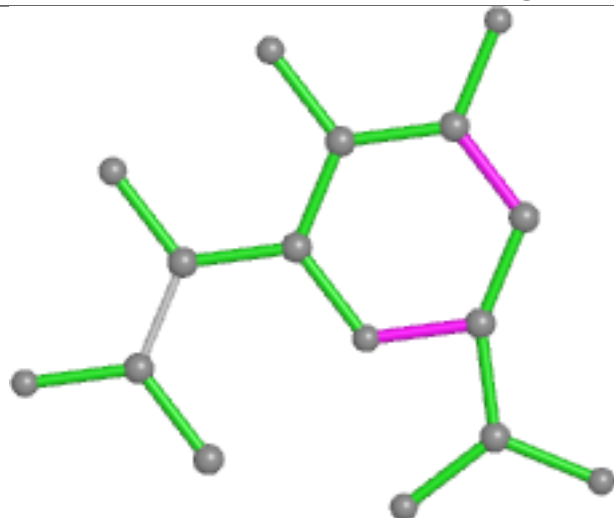


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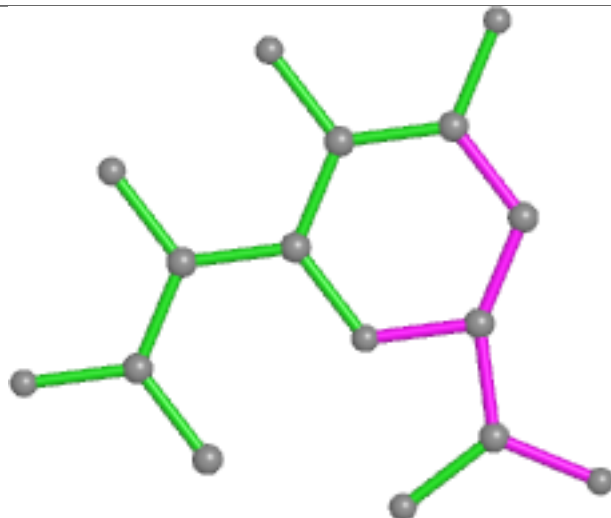


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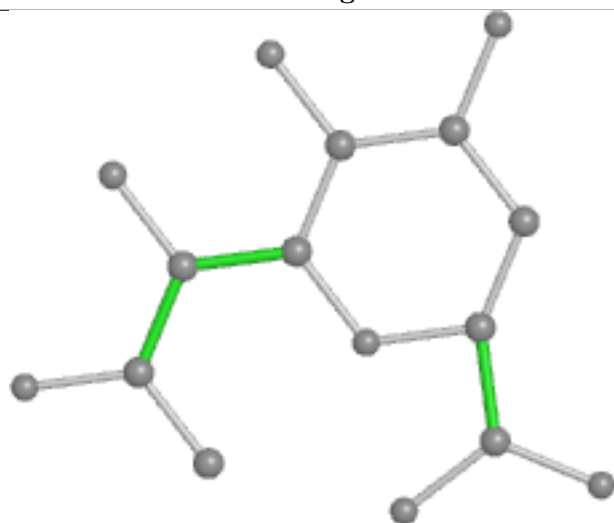
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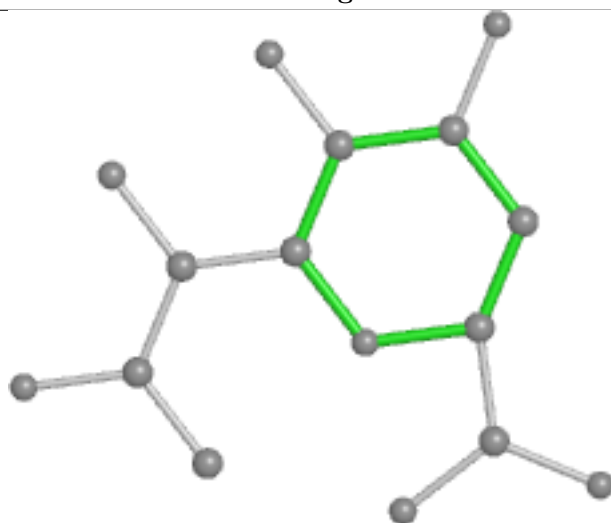
Bond lengths



Bond angles

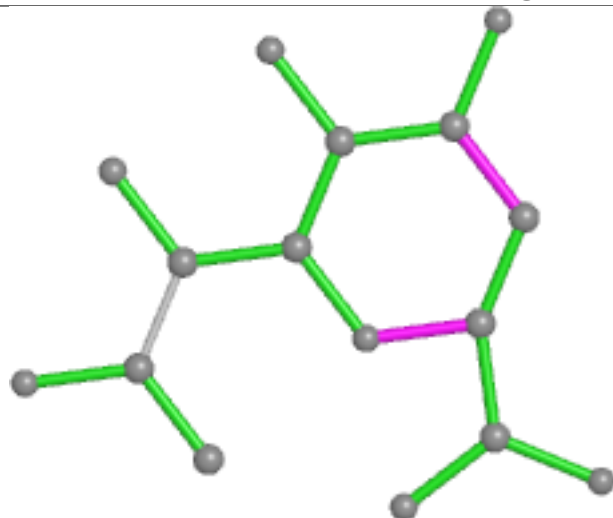


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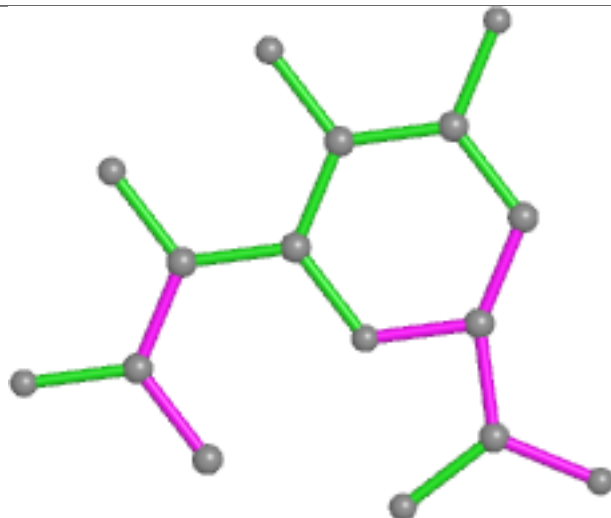


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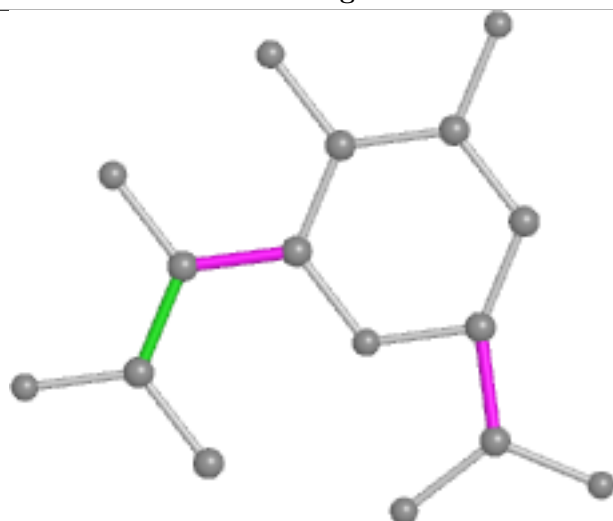
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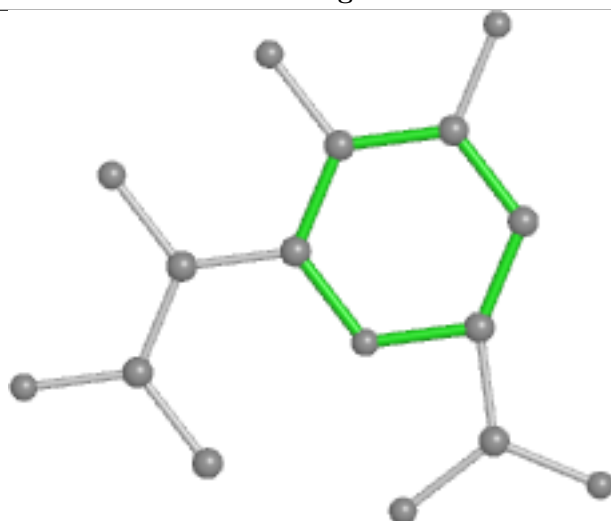
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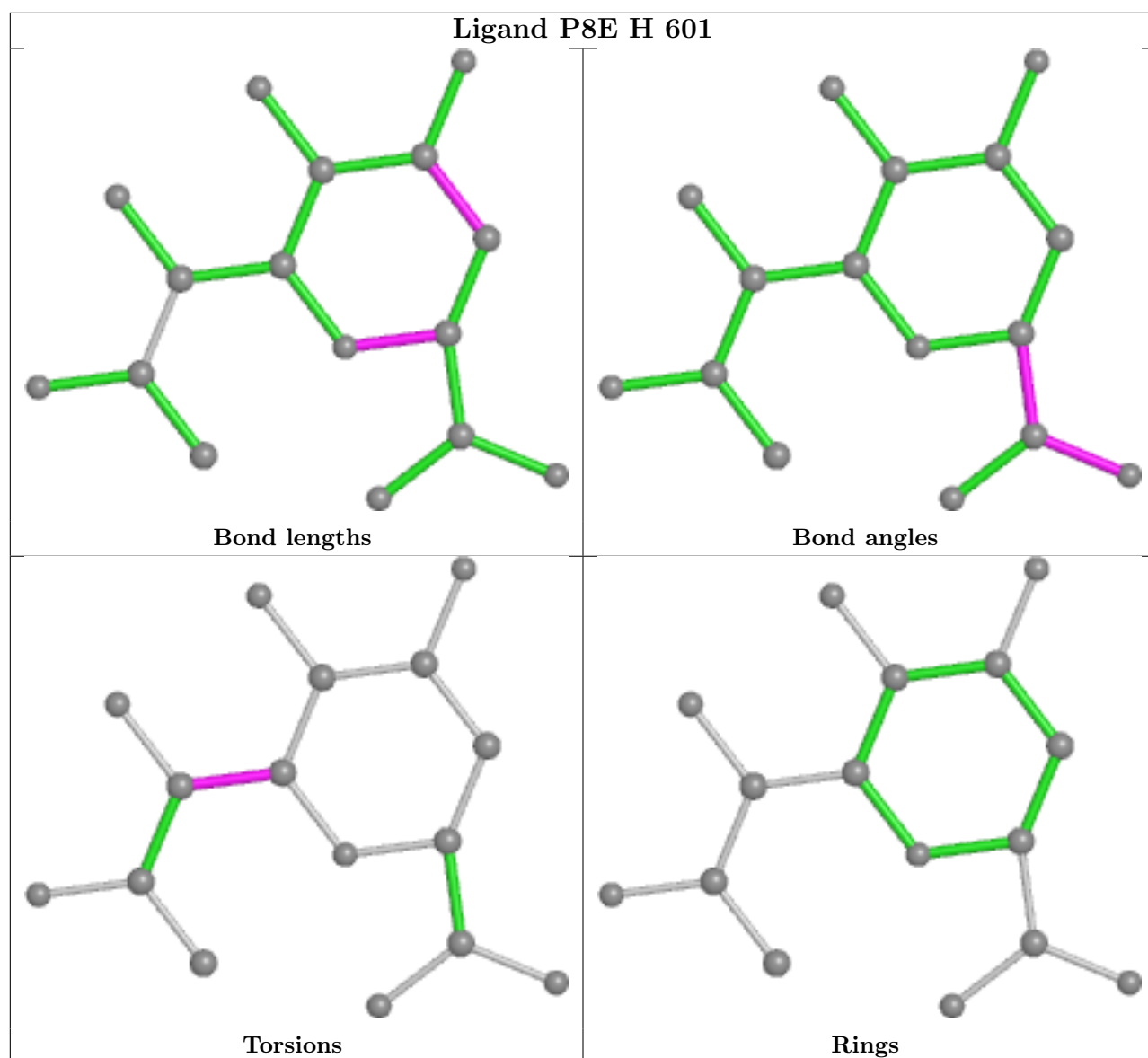
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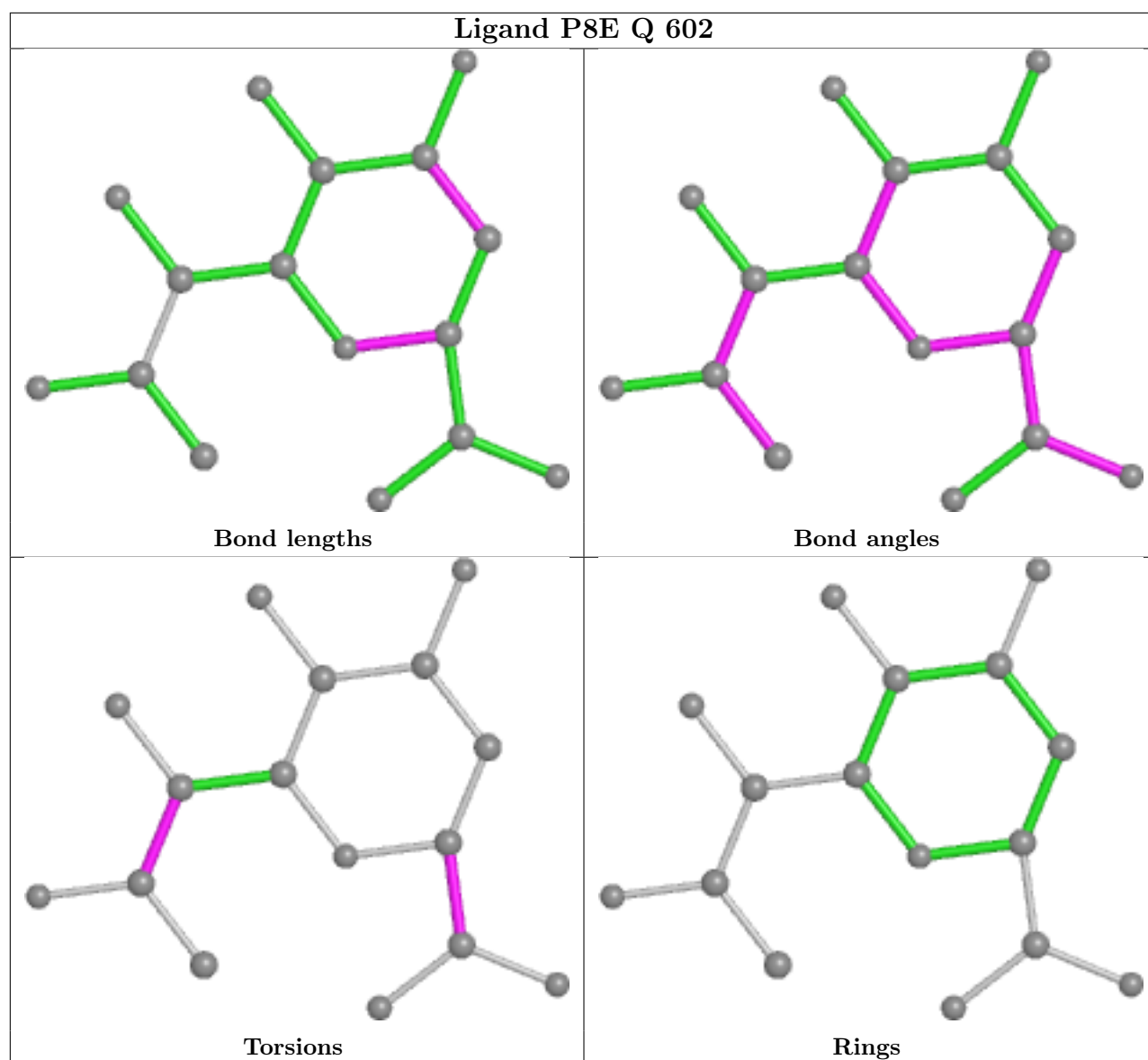


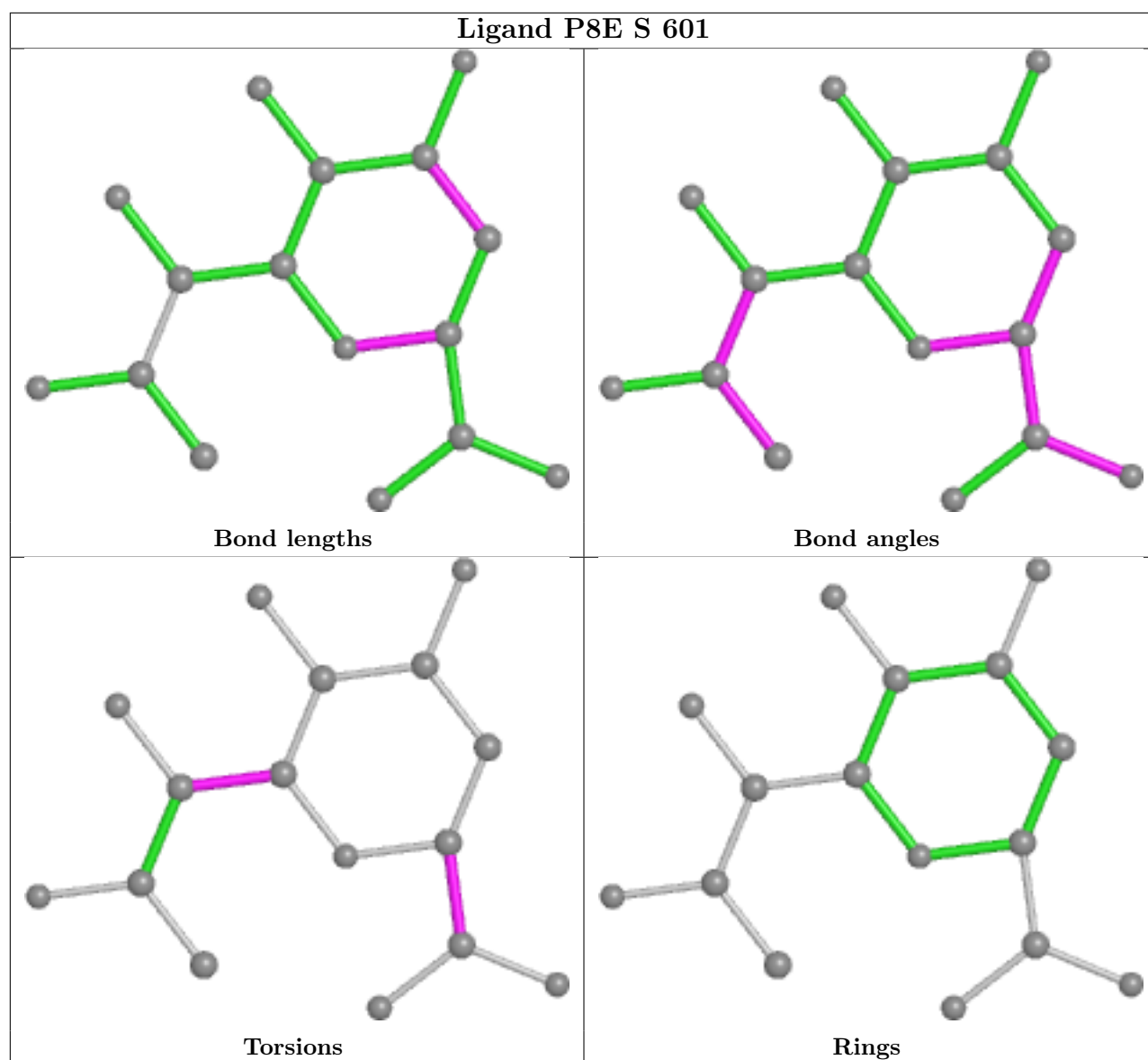
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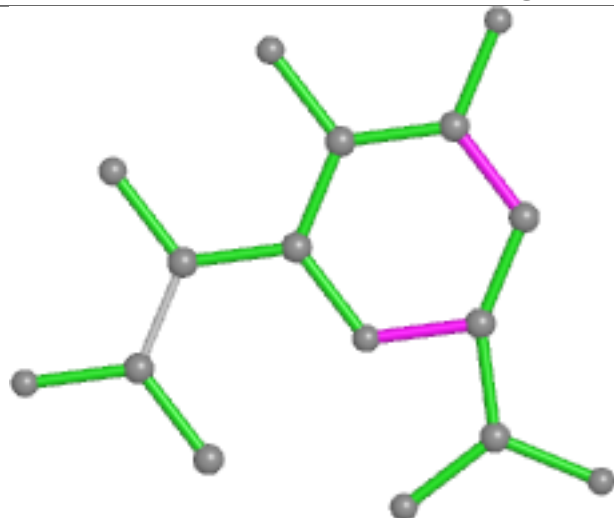
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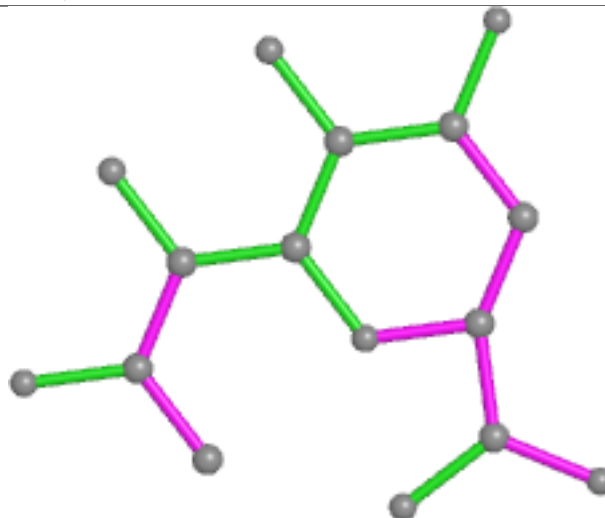




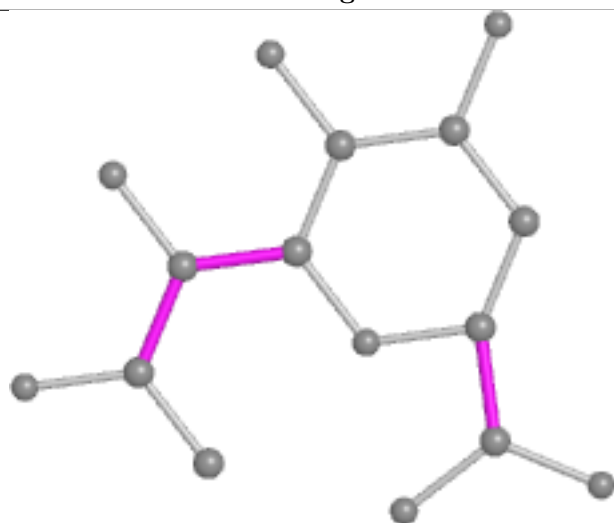
Ligand P8E Q 612



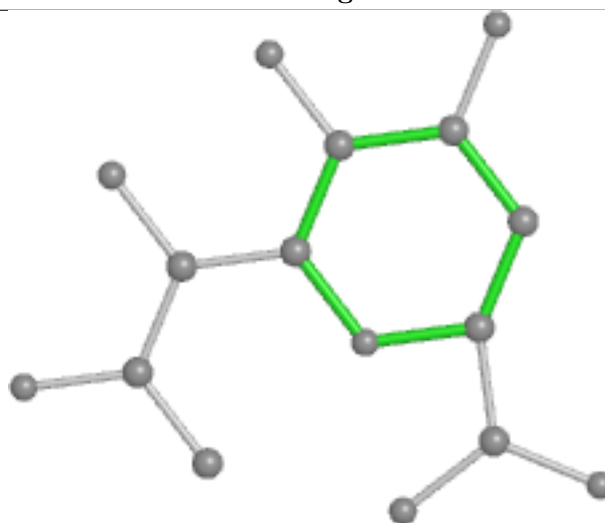
Bond lengths



Bond angles

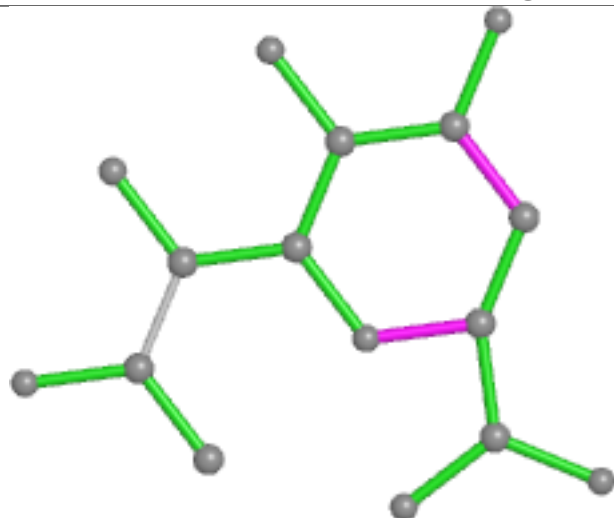


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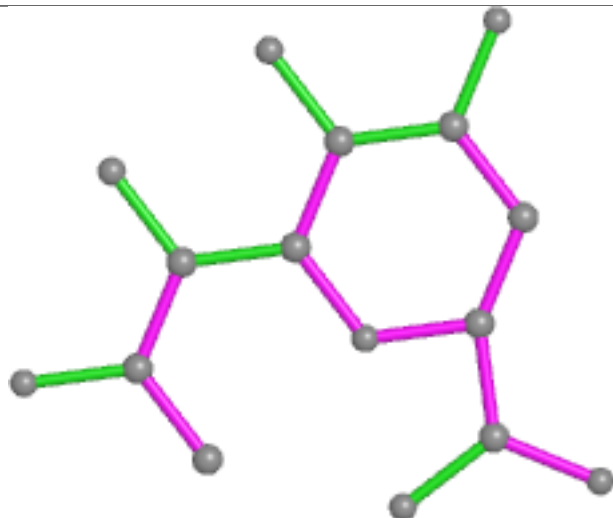


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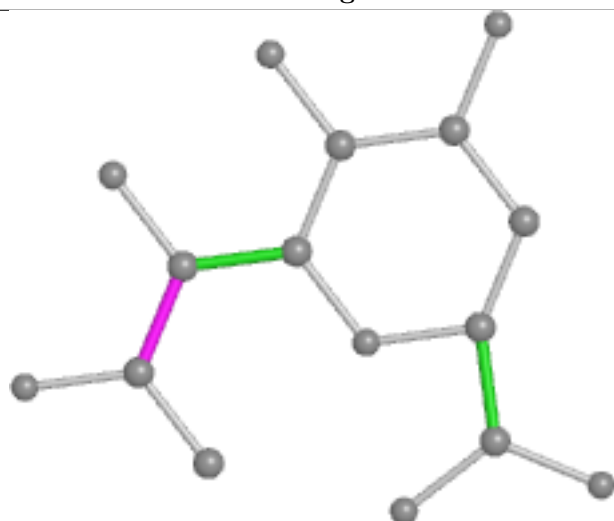
Ligand P8E P 603



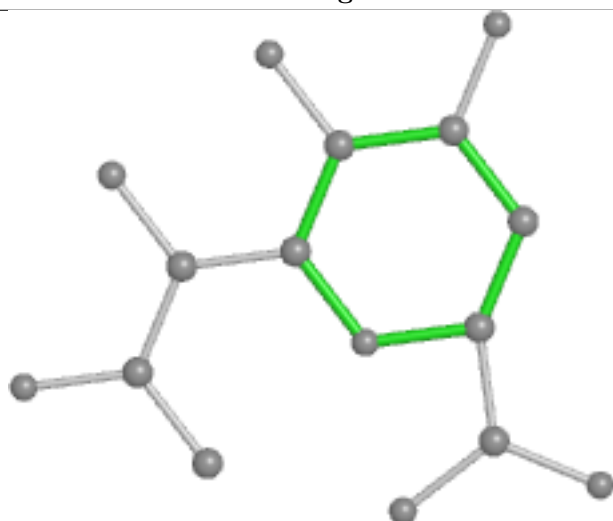
Bond lengths



Bond angles

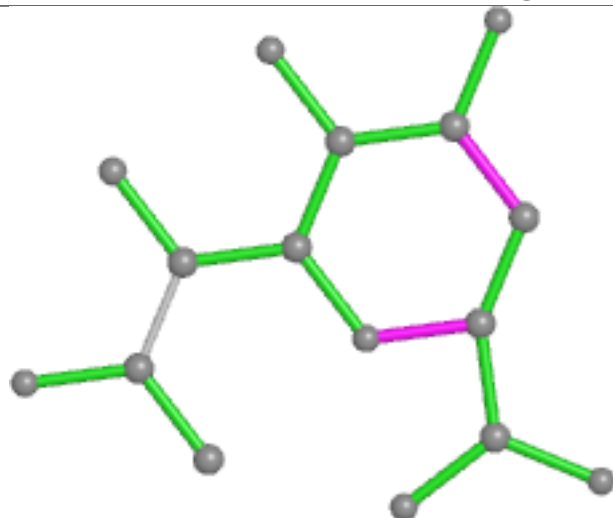


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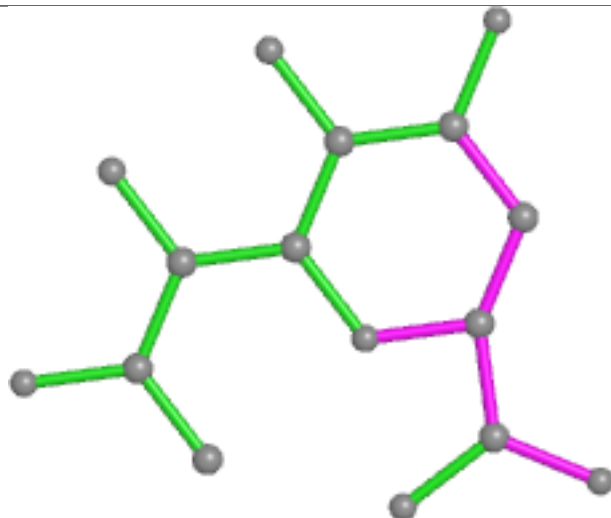


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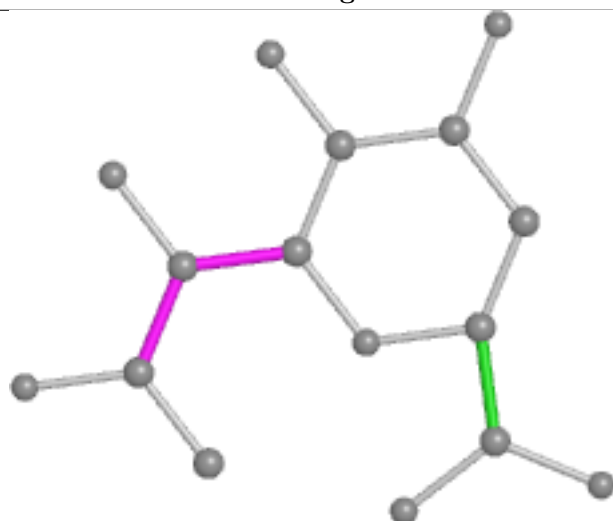
Ligand P8E O 604



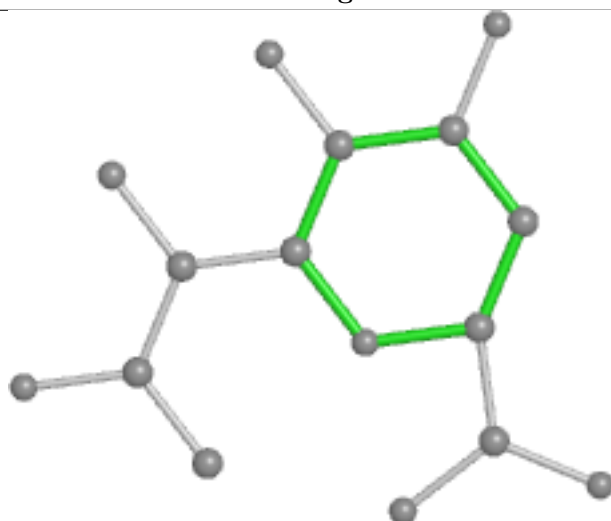
Bond lengths



Bond angles

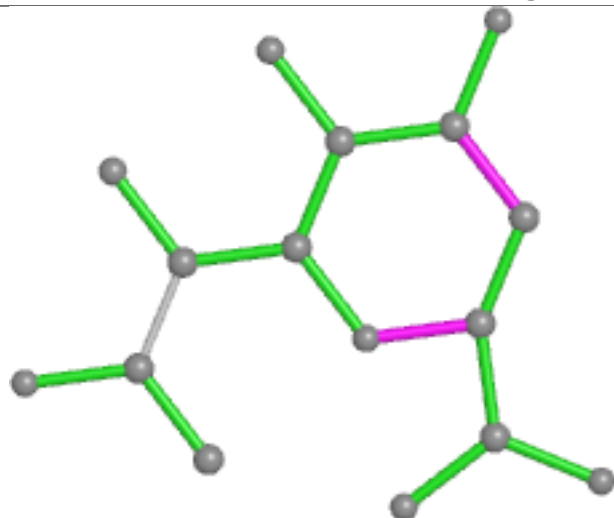


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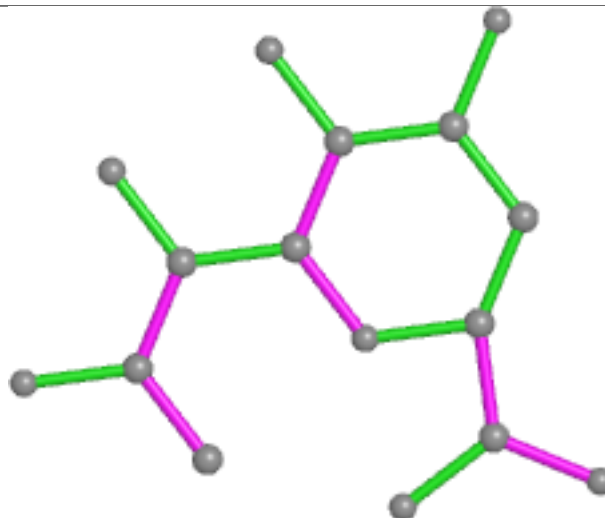


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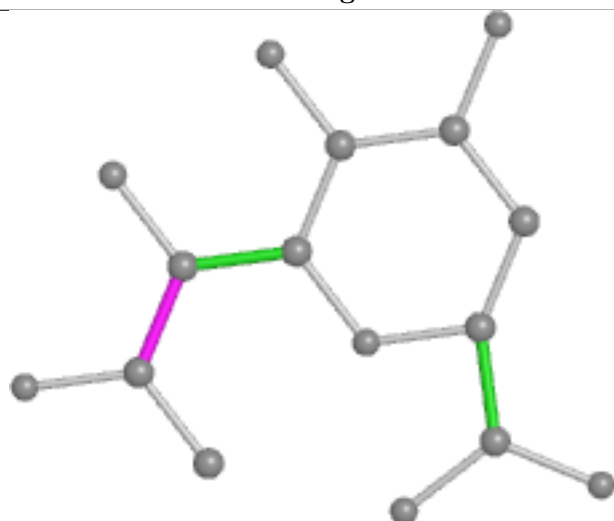
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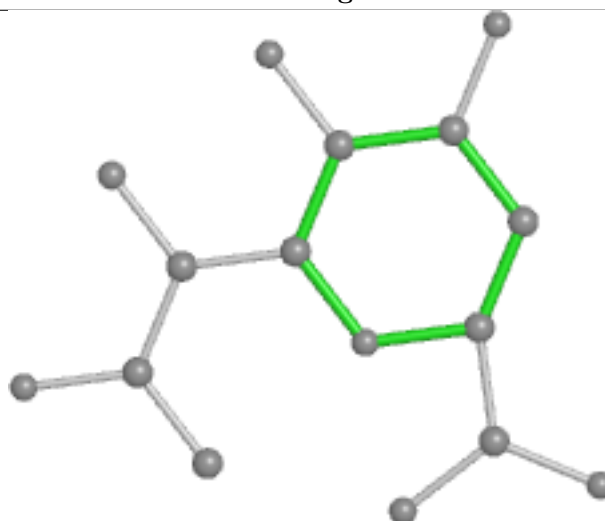
Bond lengths



Bond angles

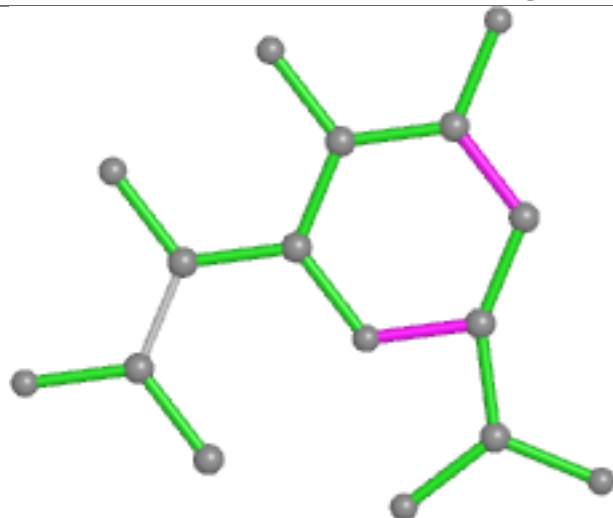


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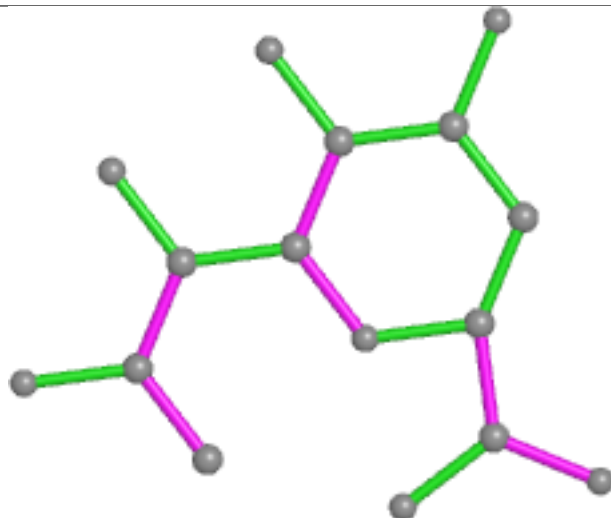


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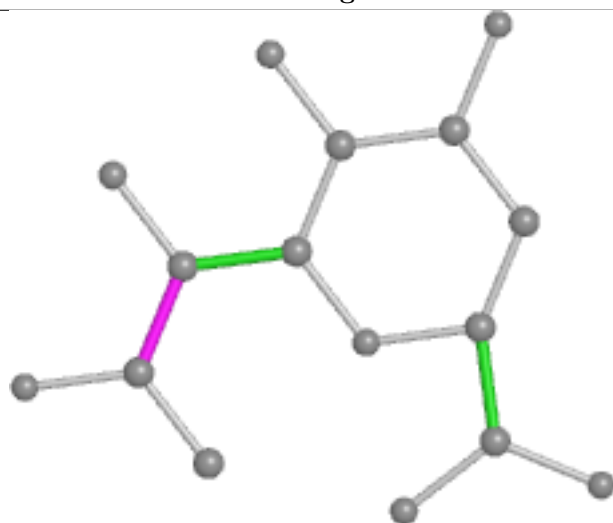
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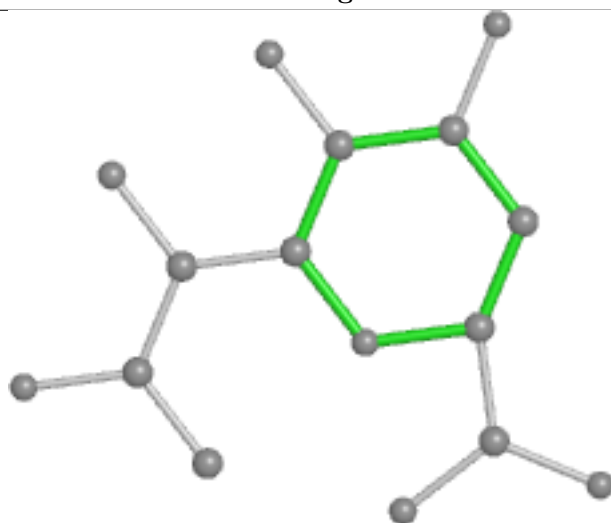
Bond lengths



Bond angles

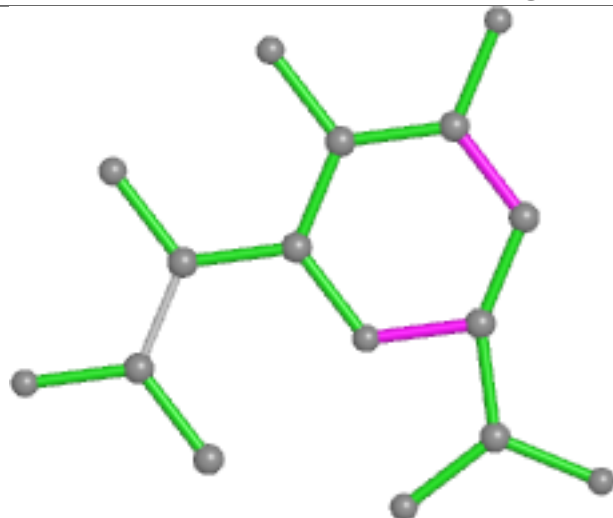


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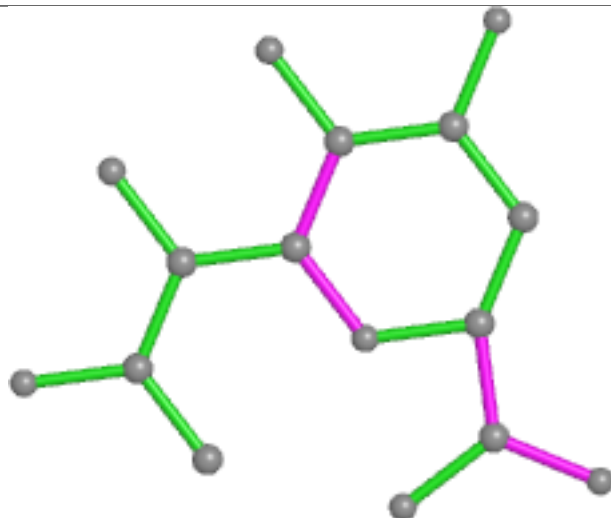


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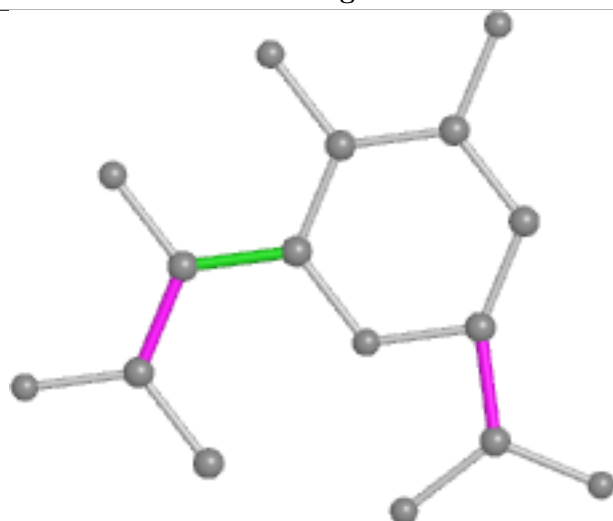
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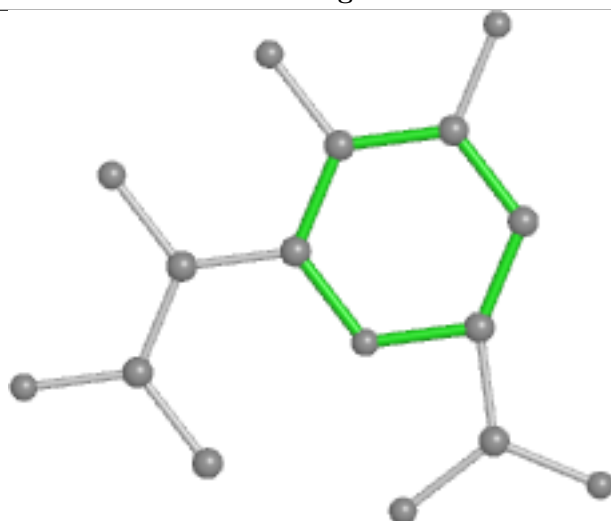
Bond lengths



Bond angles

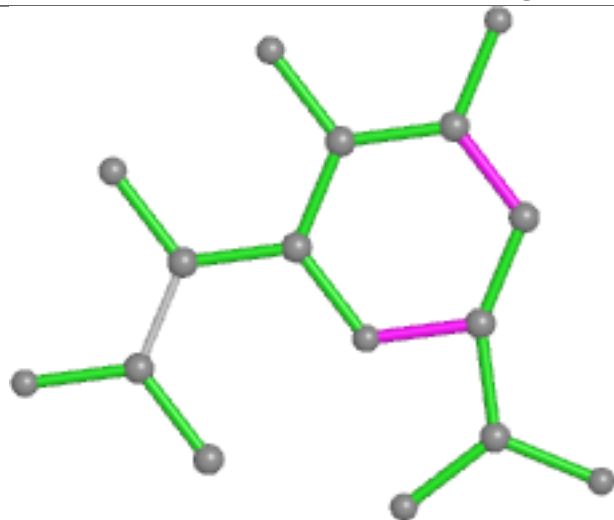


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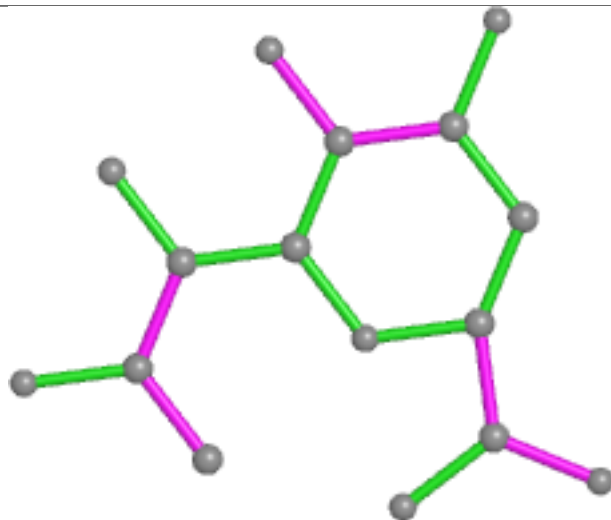


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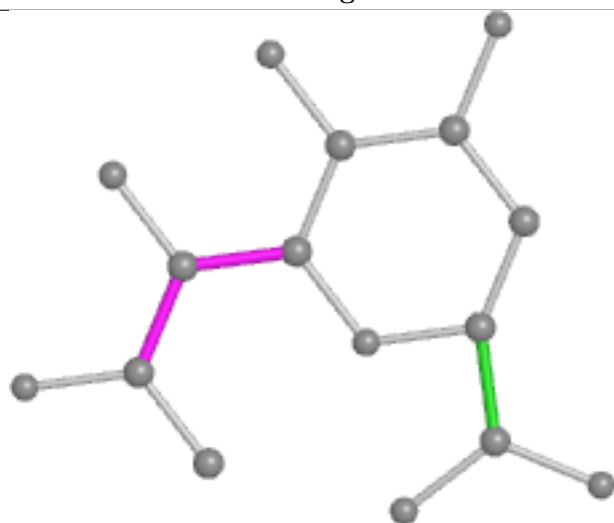
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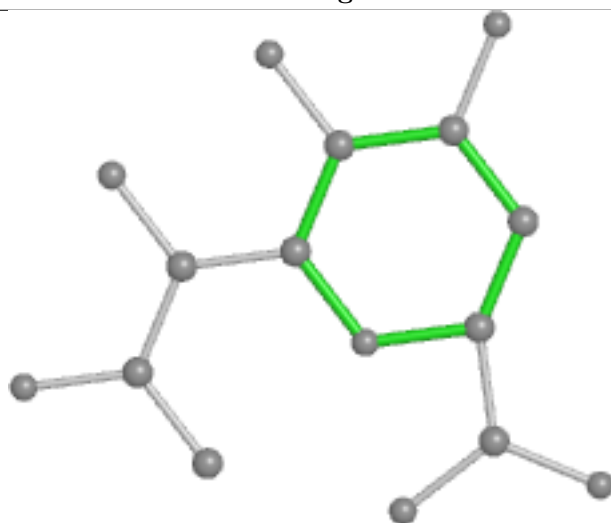
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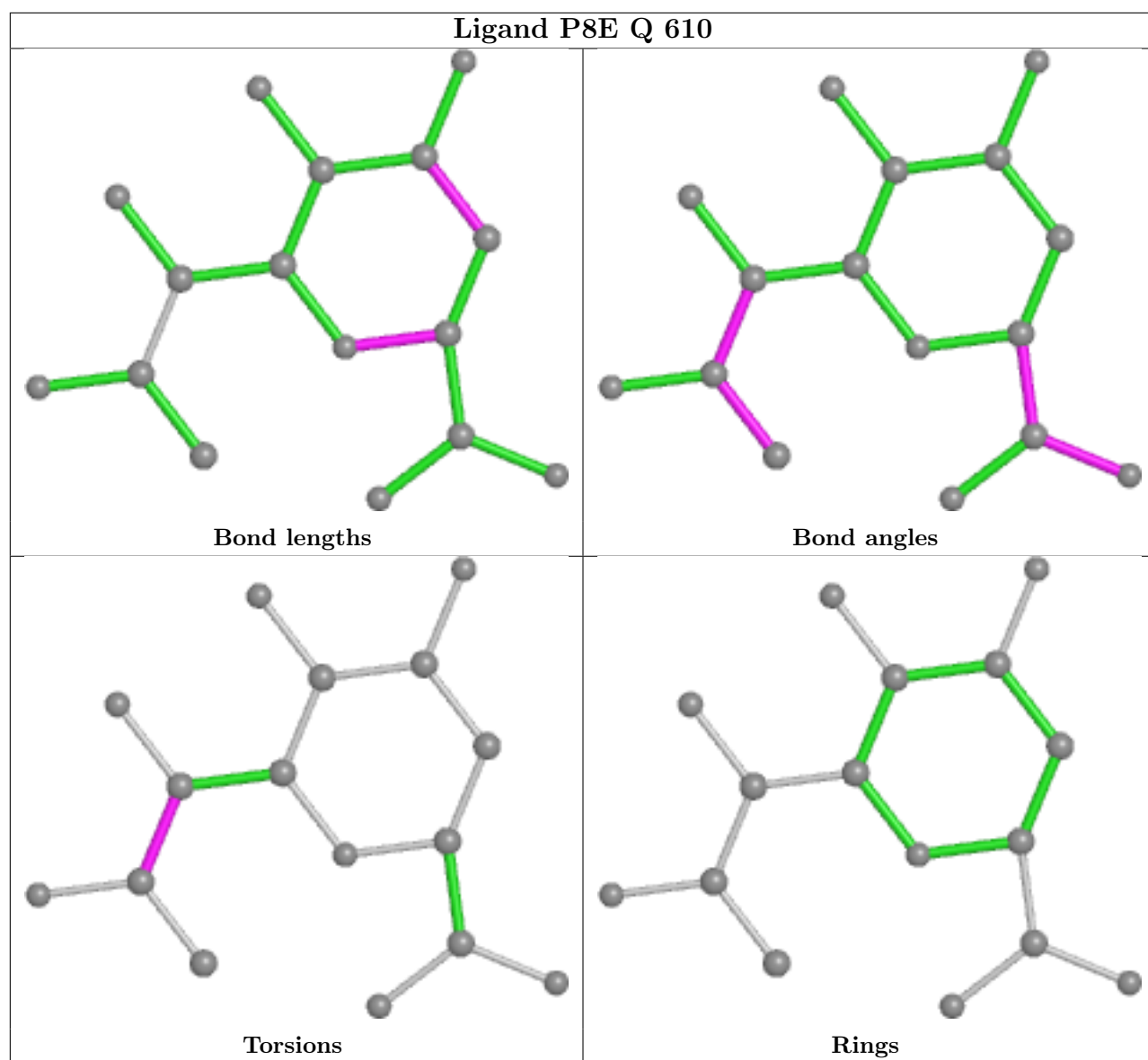
Bond angles



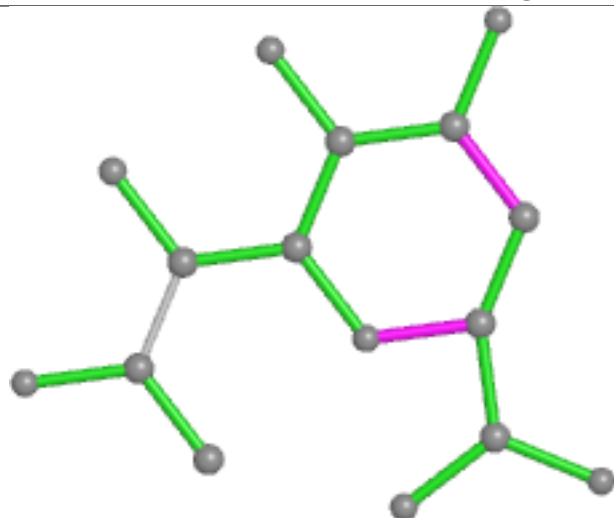
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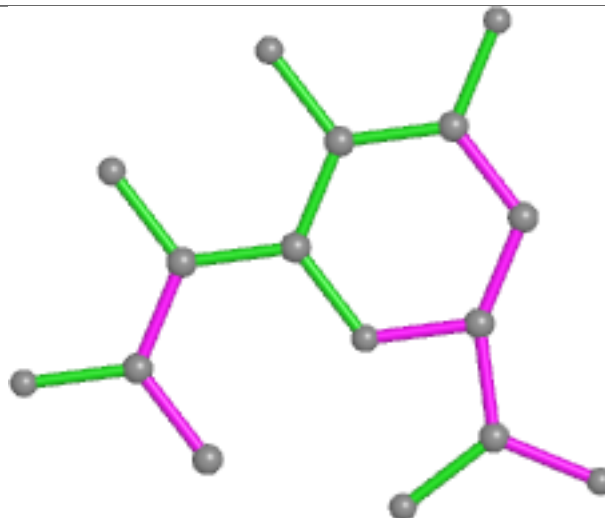
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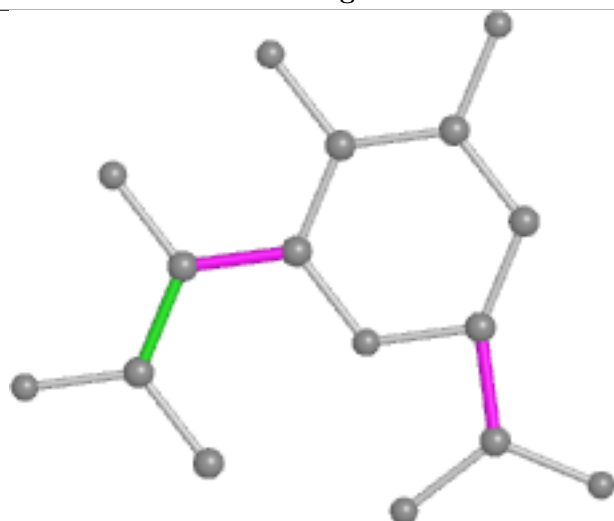
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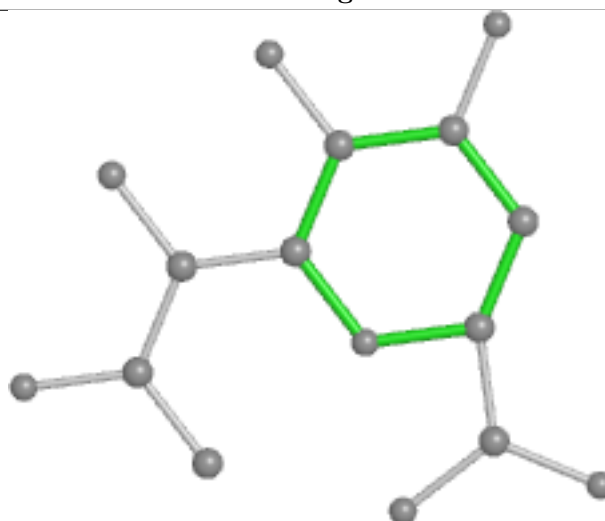
Bond lengths



Bond angles

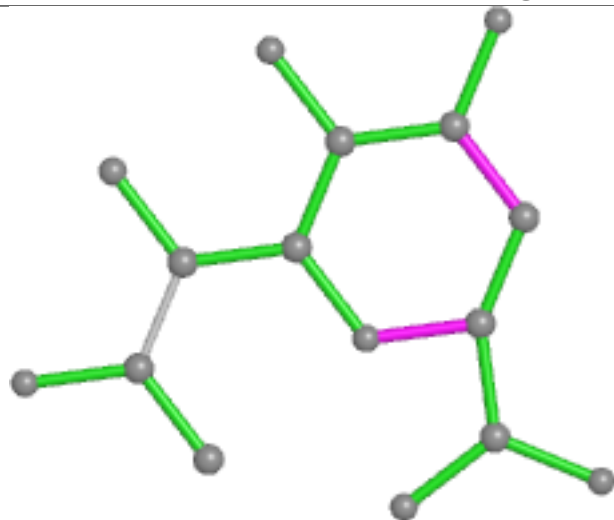


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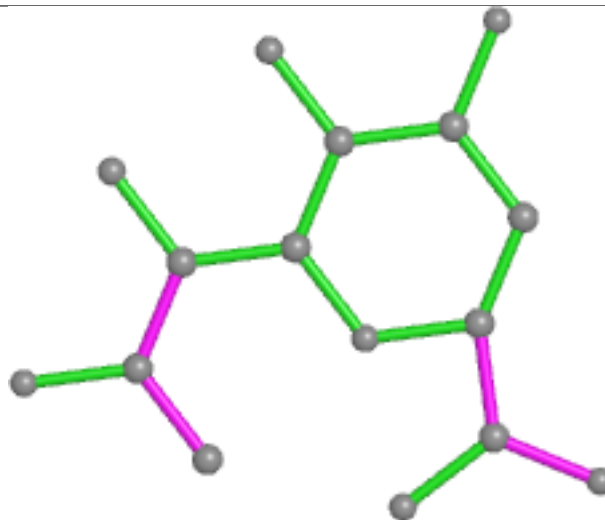


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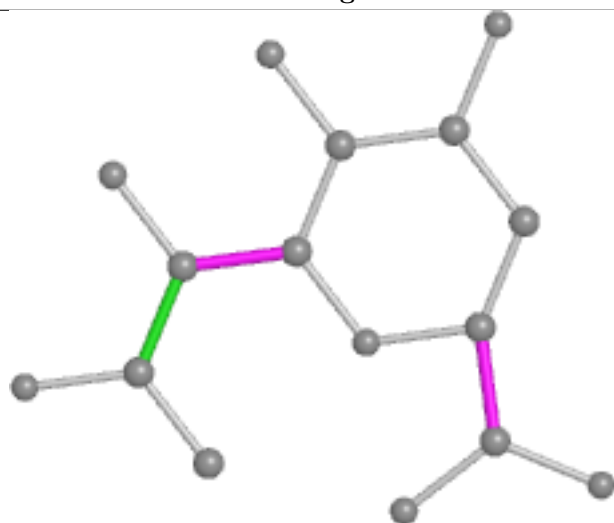
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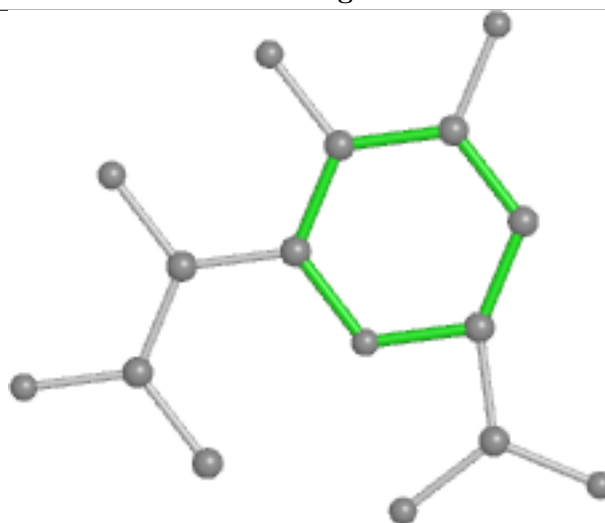
Bond lengths



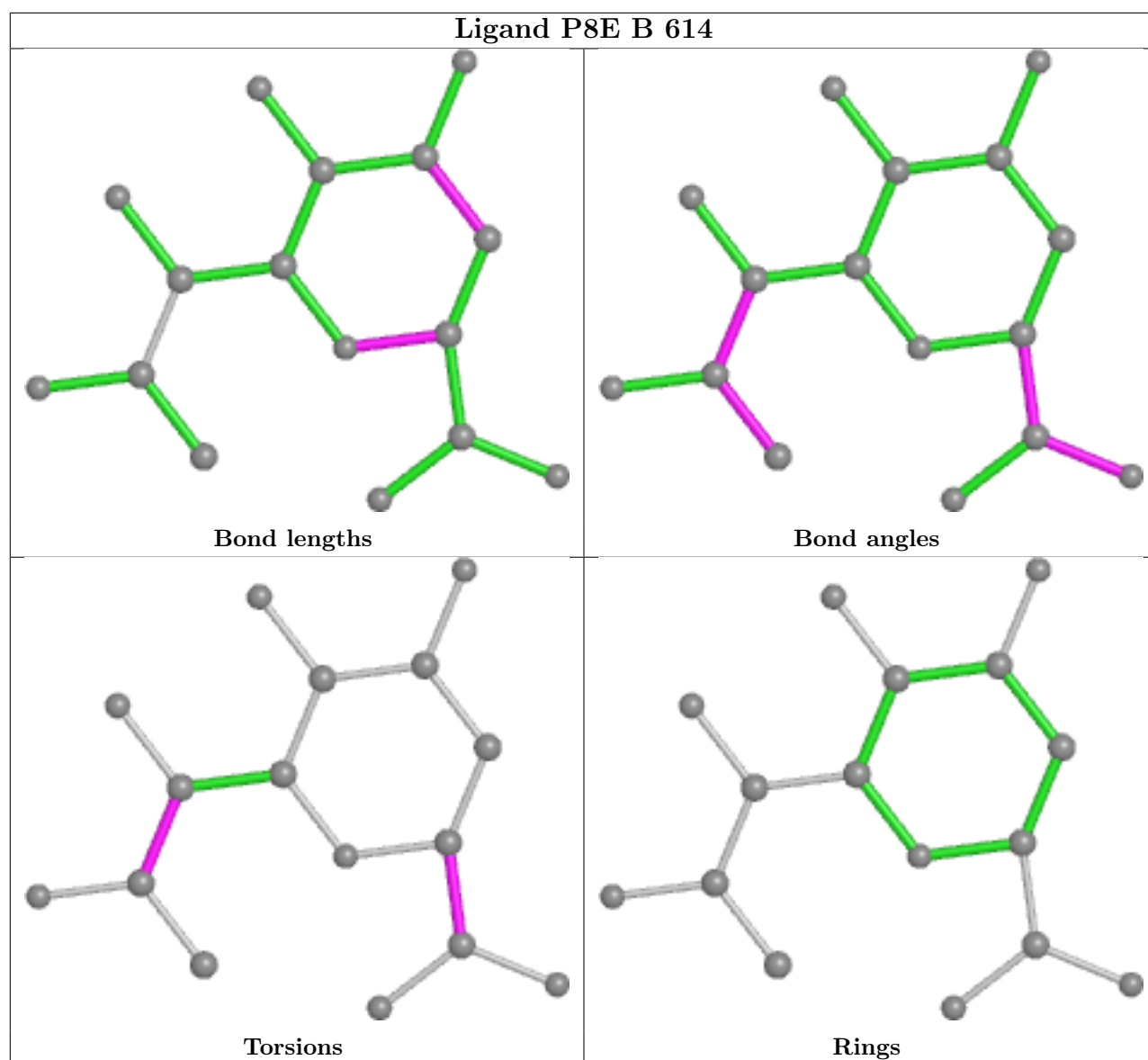
Bond angles

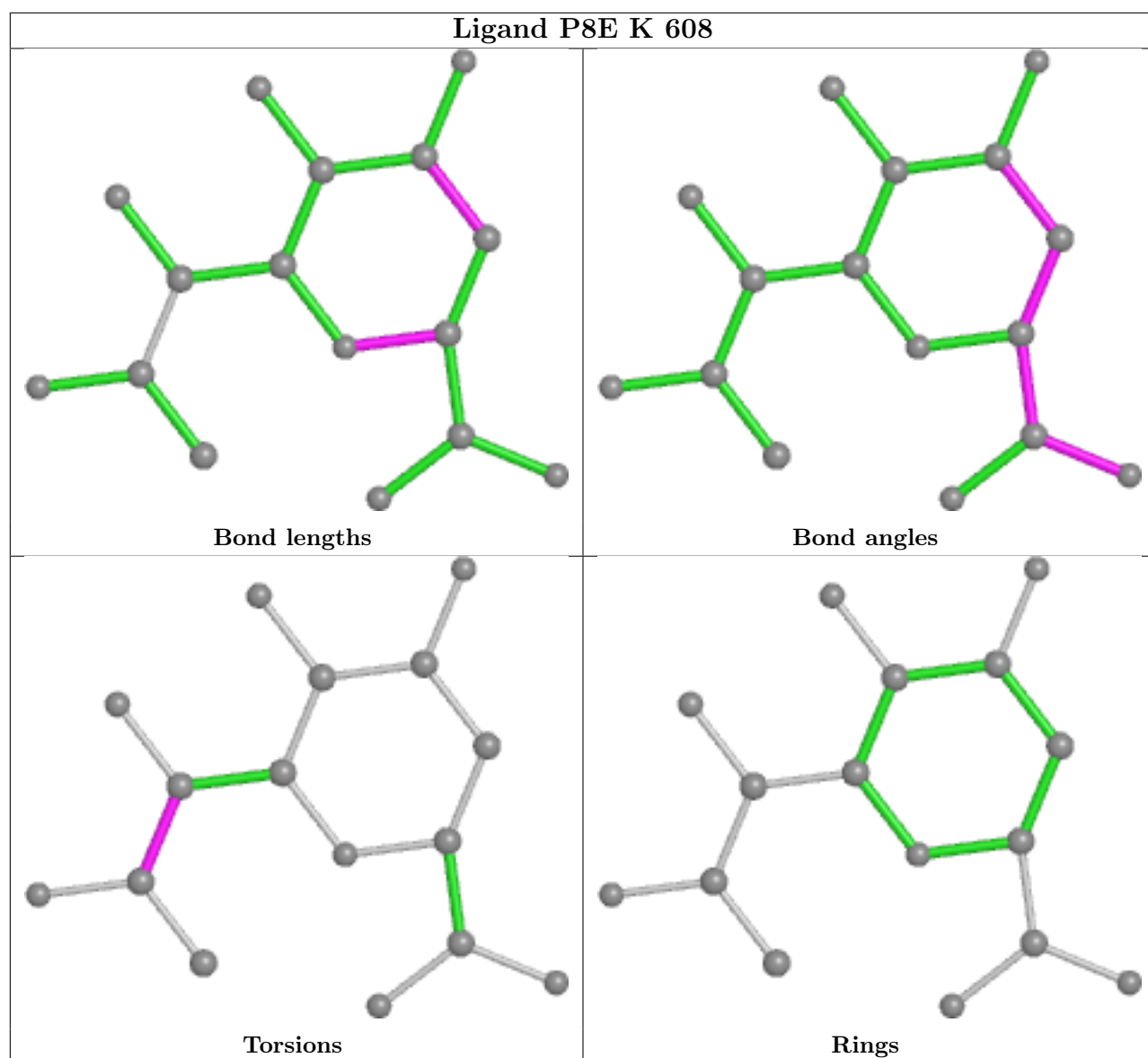


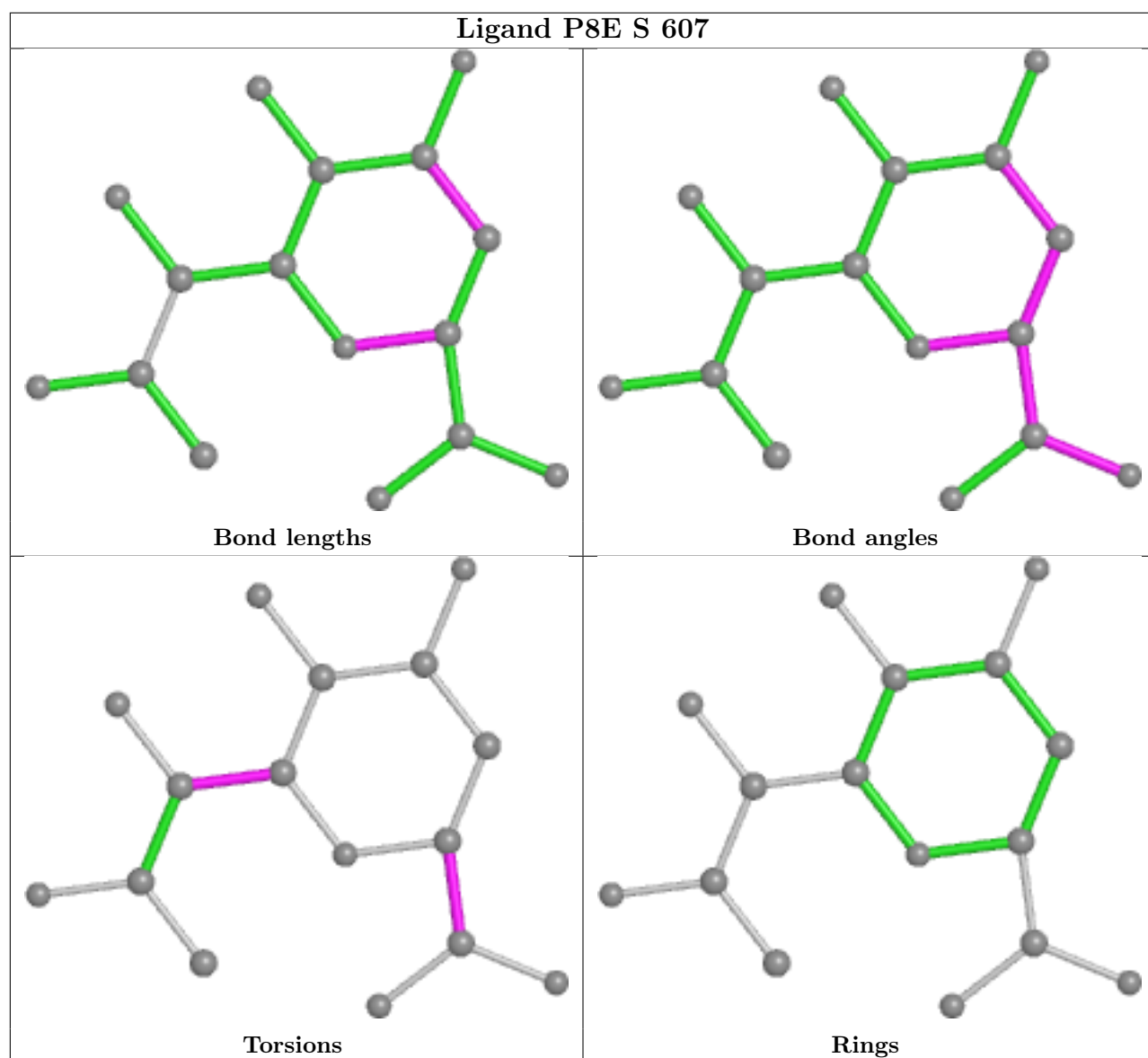
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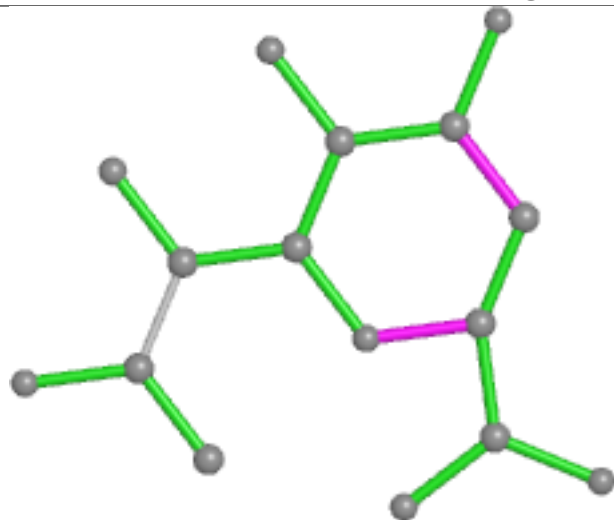
Rings



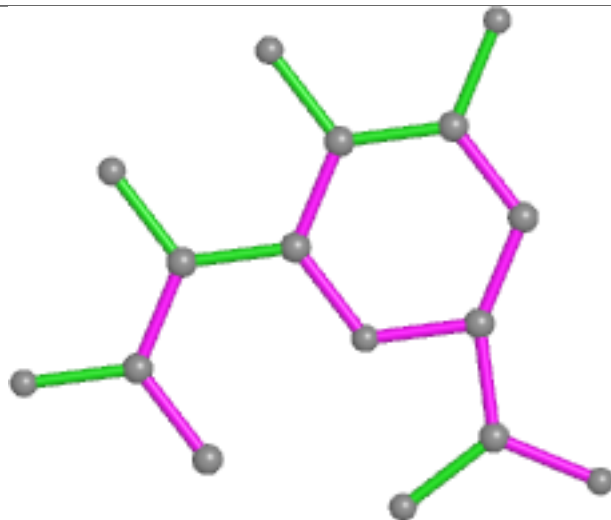




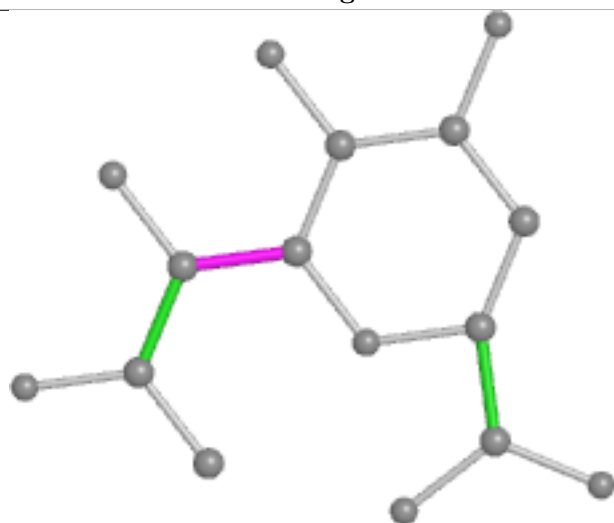
Ligand P8E J 612



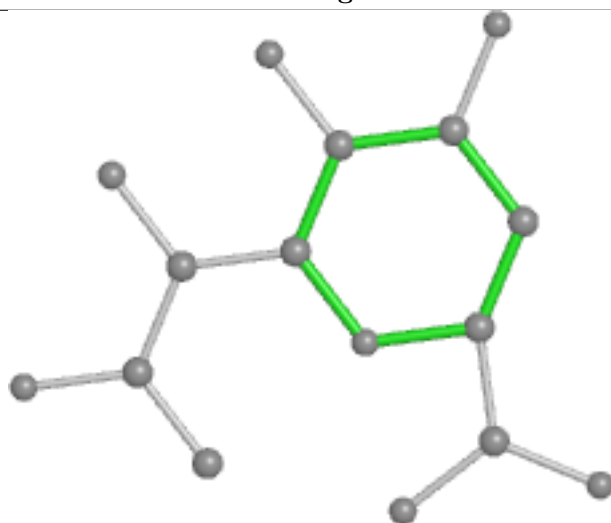
Bond lengths



Bond angles

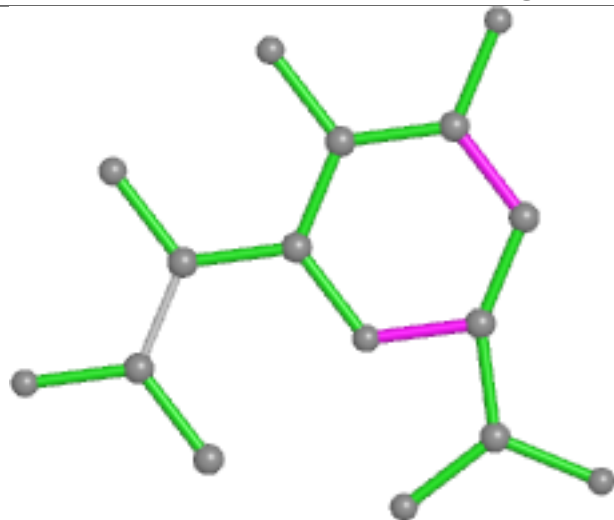


Torsions

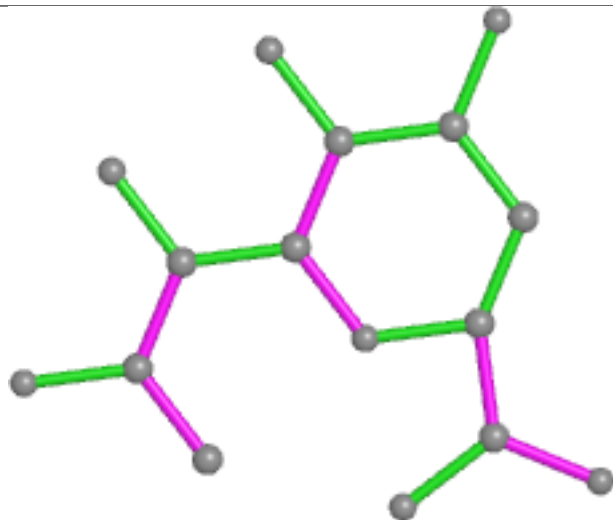


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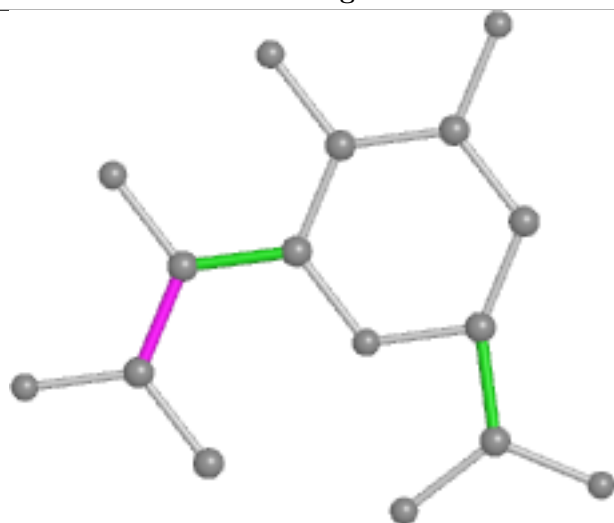
Ligand P8E V 610



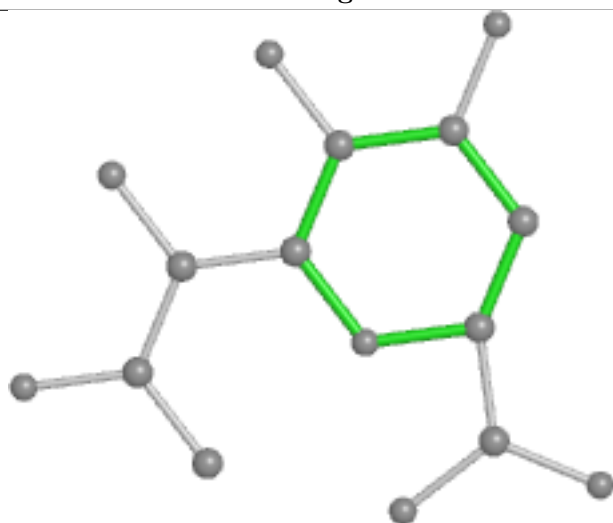
Bond lengths



Bond angles

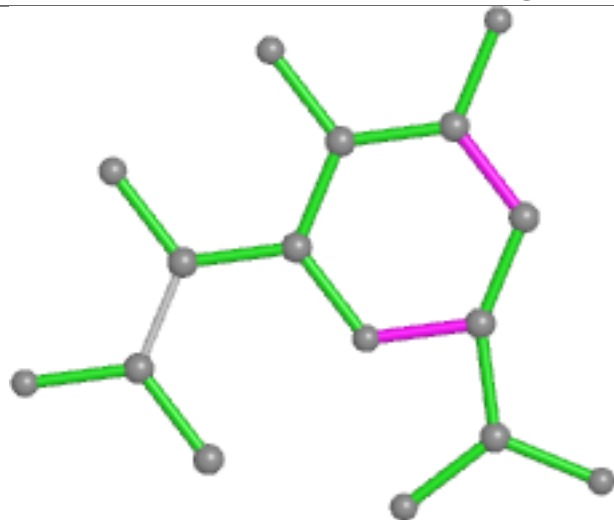


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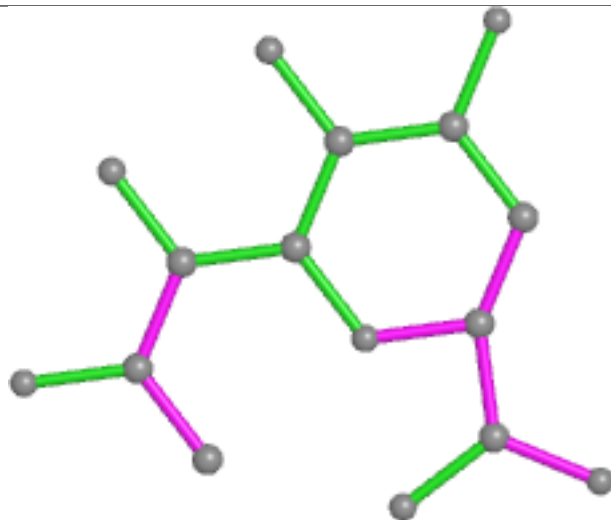


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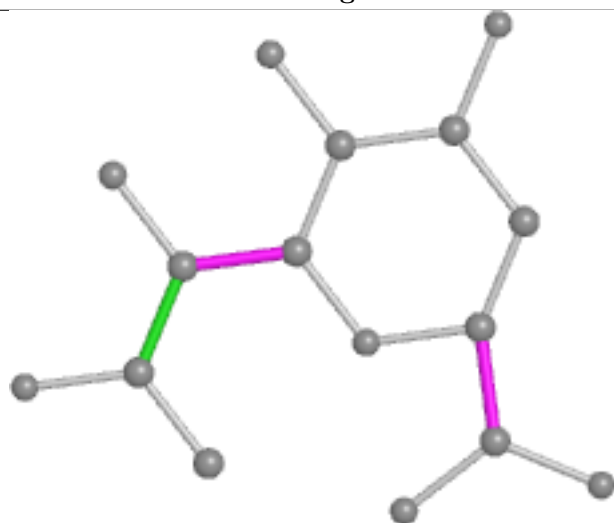
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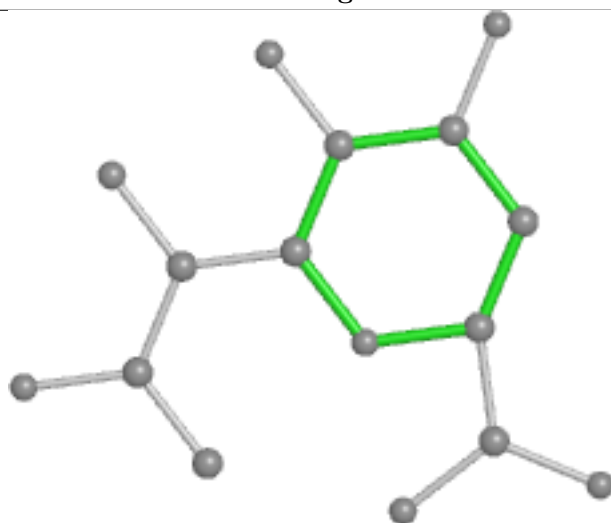
Bond lengths



Bond angles

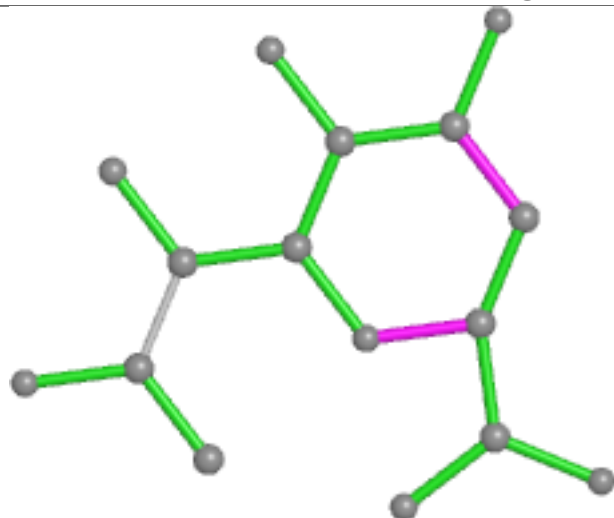


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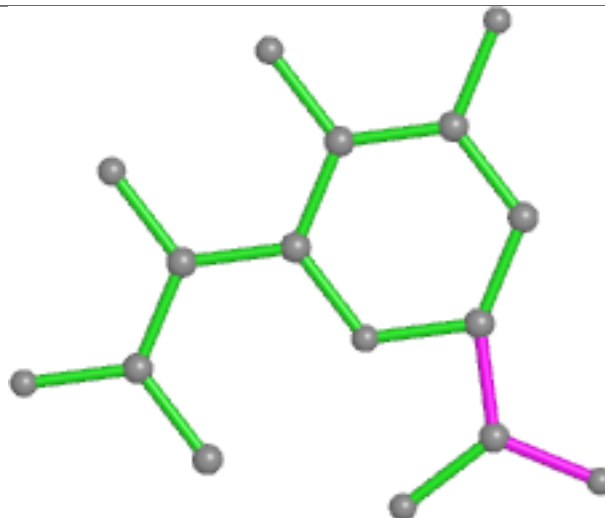


Rings

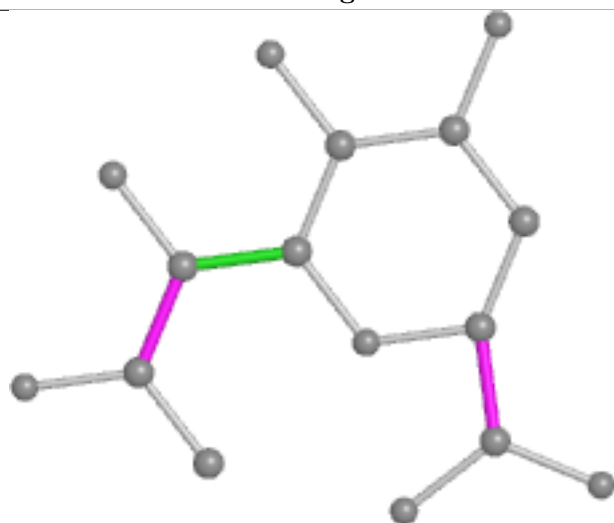
Ligand P8E C 613



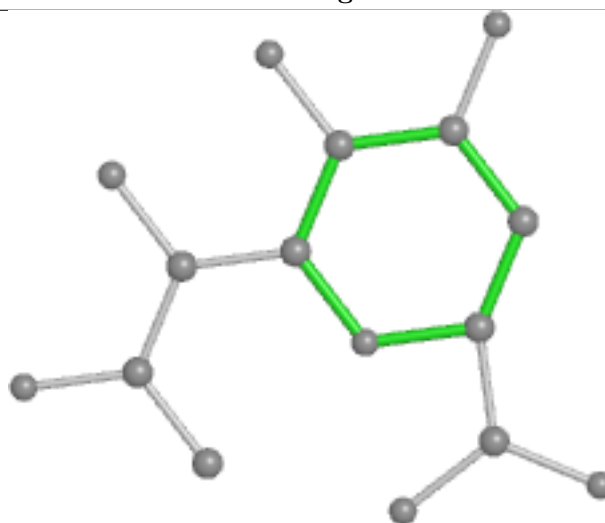
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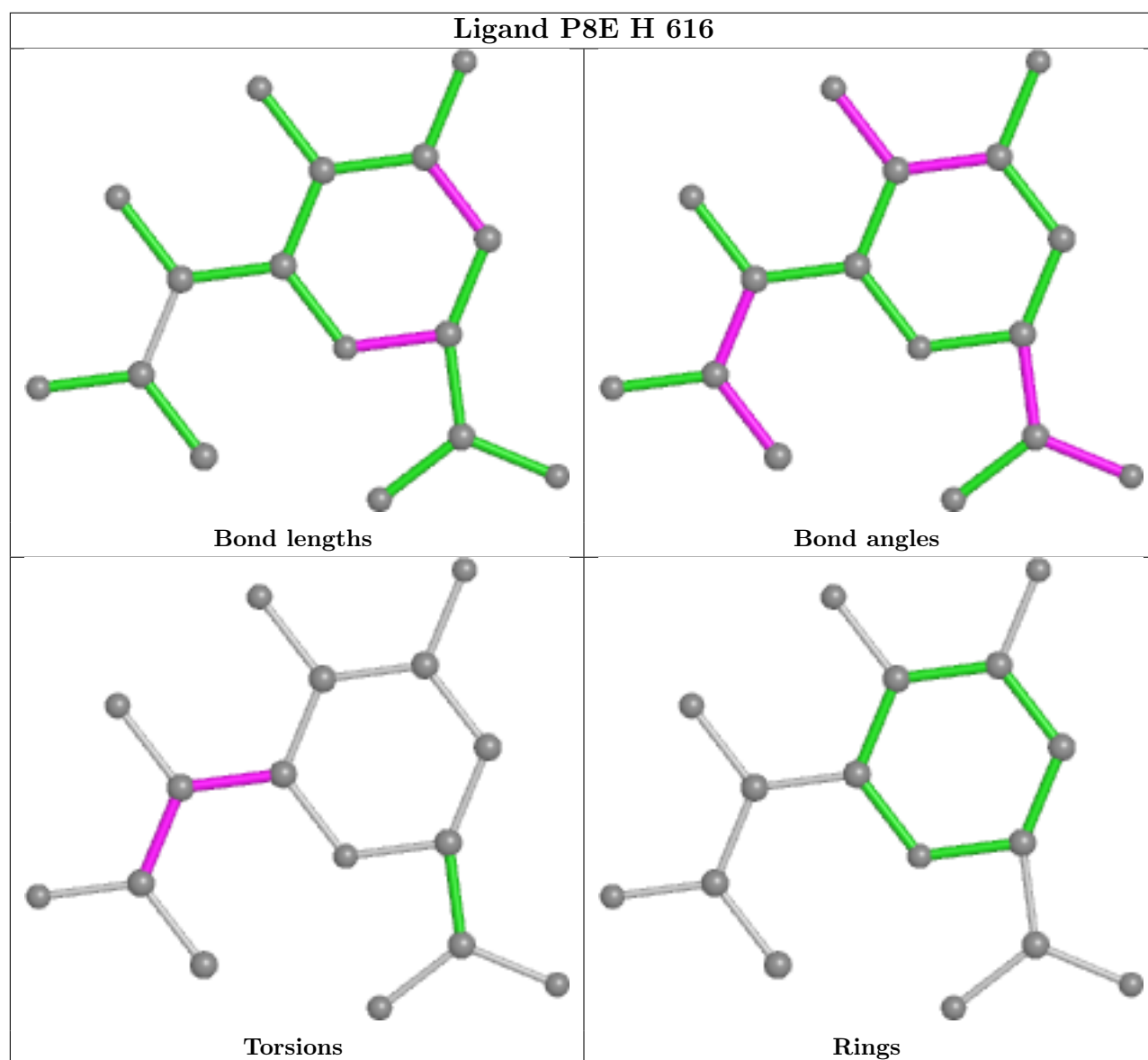
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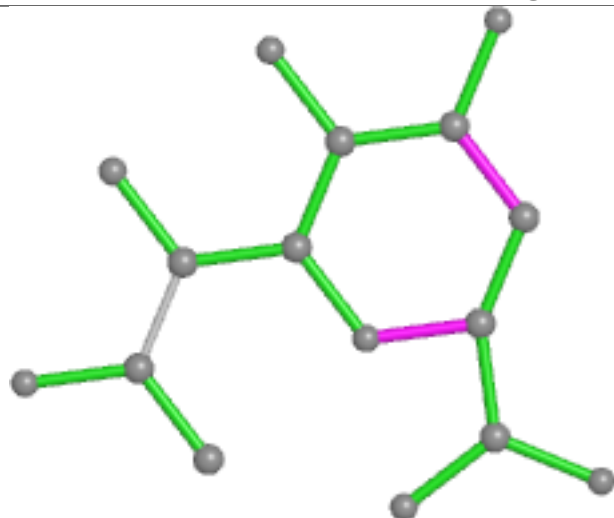
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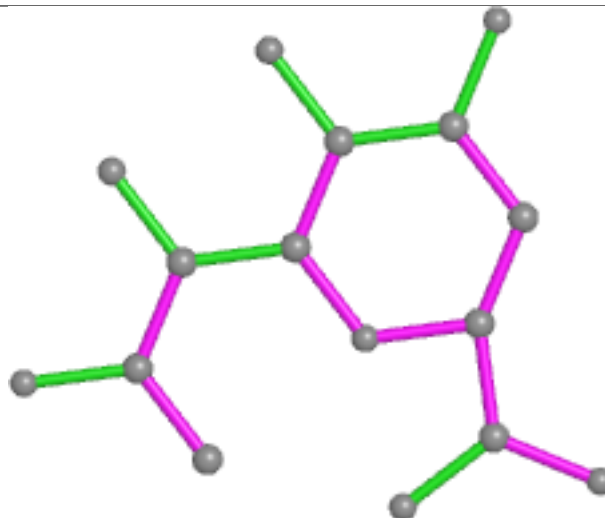
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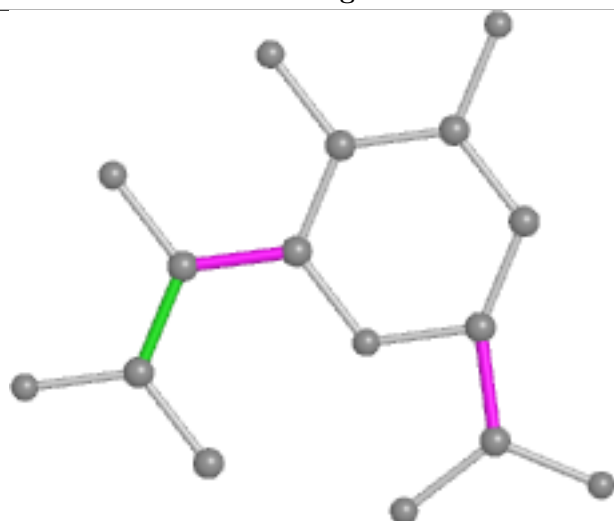
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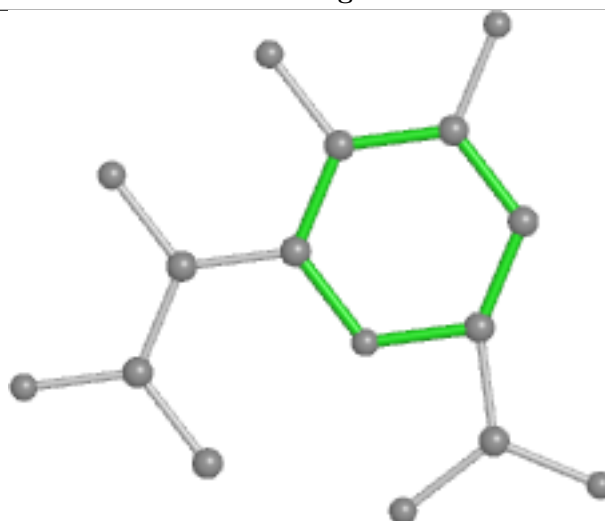
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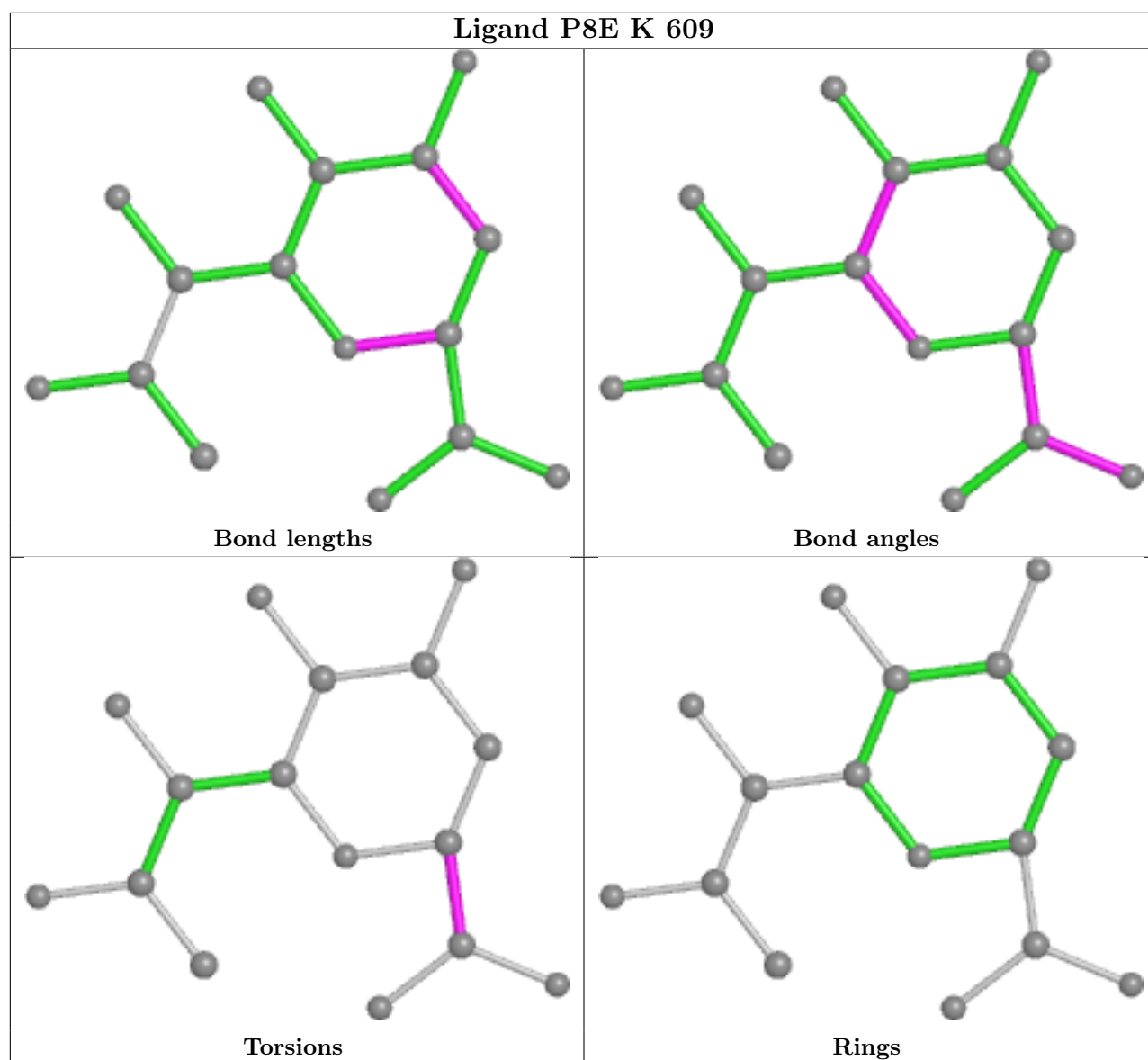
Bond angles



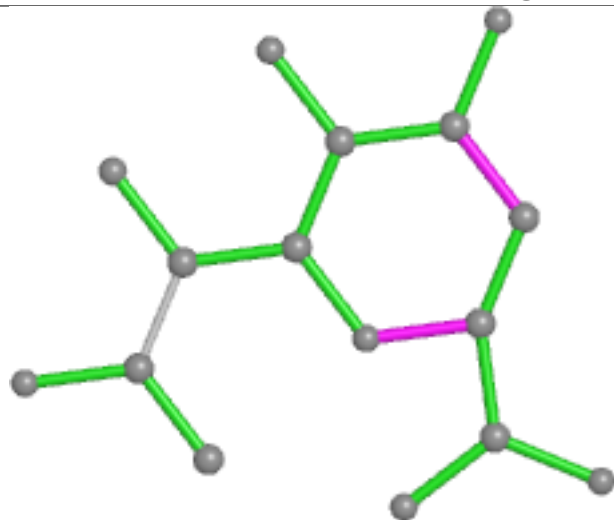
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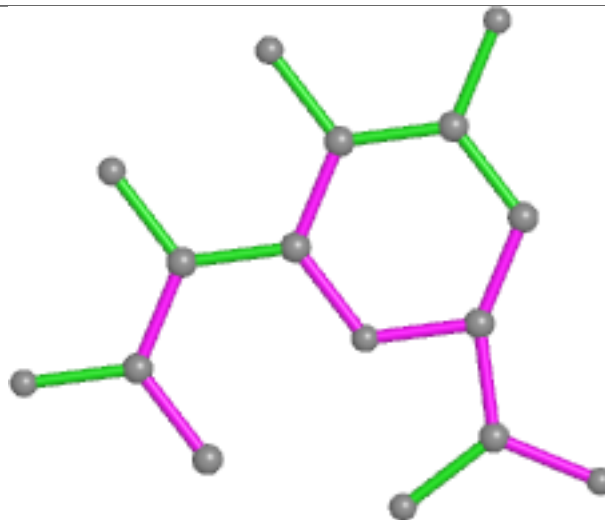
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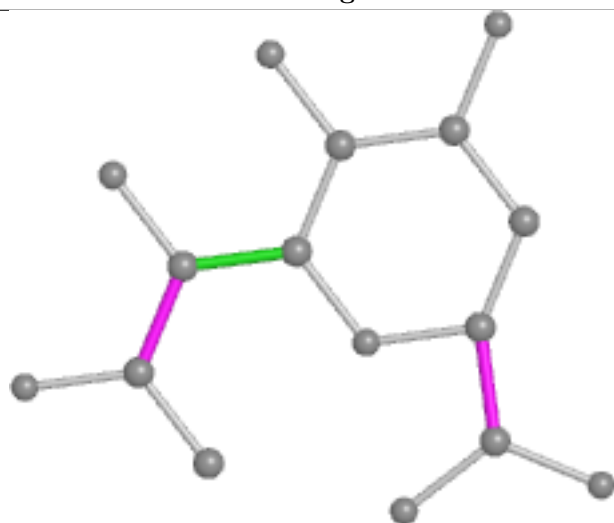
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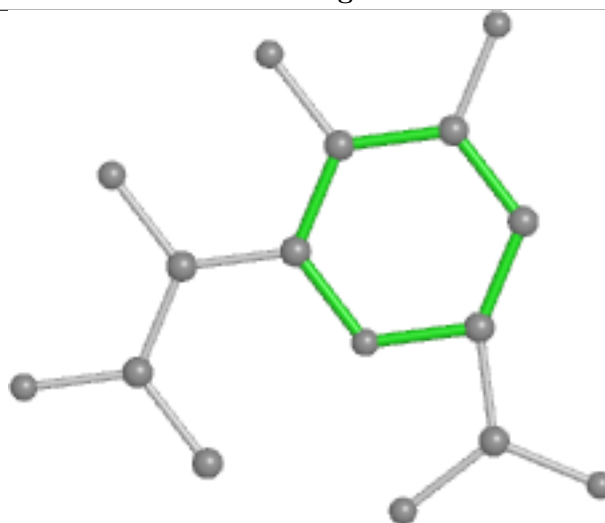
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Bond angles

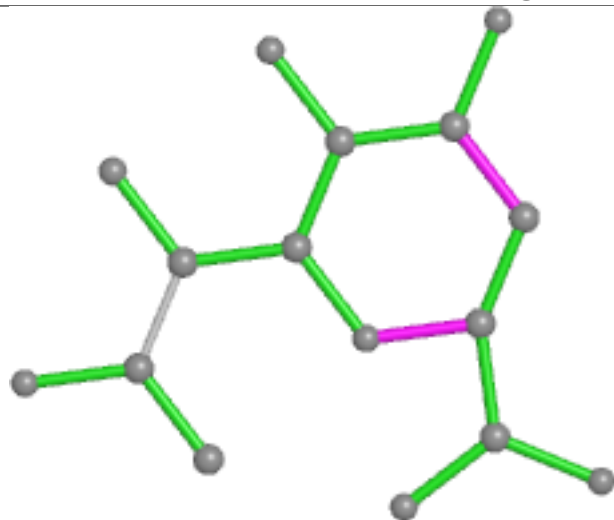


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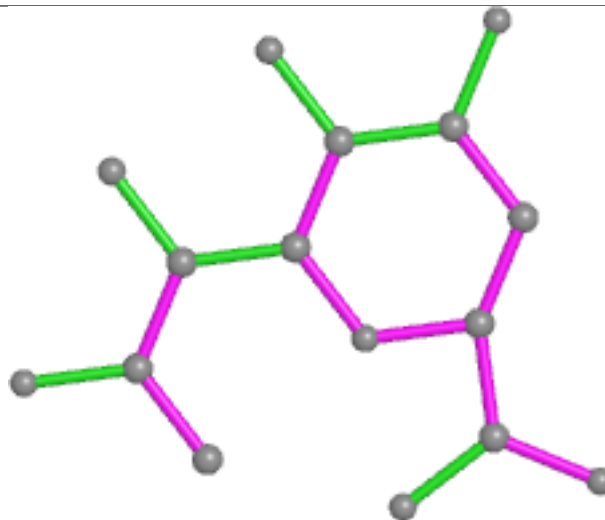


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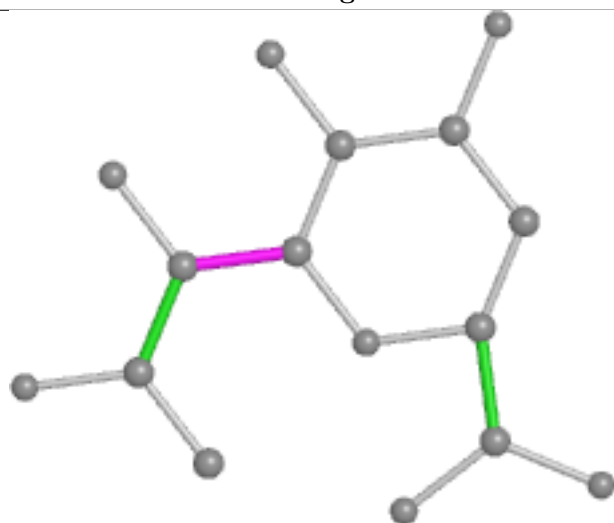
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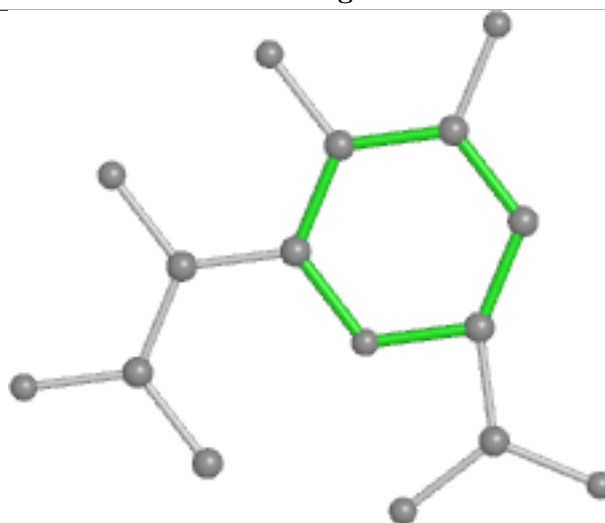
Bond lengths



Bond angles

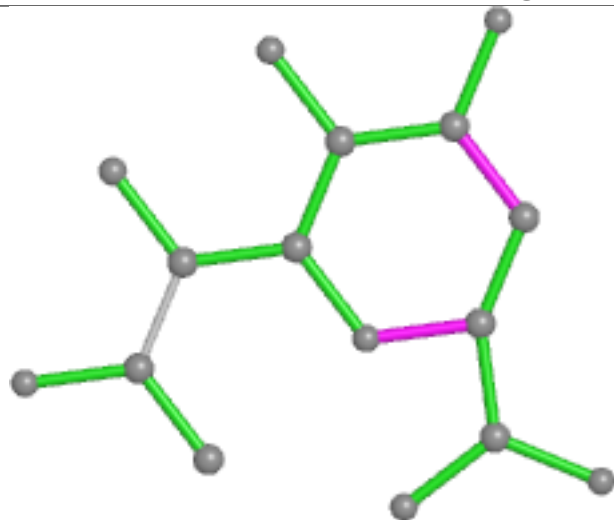


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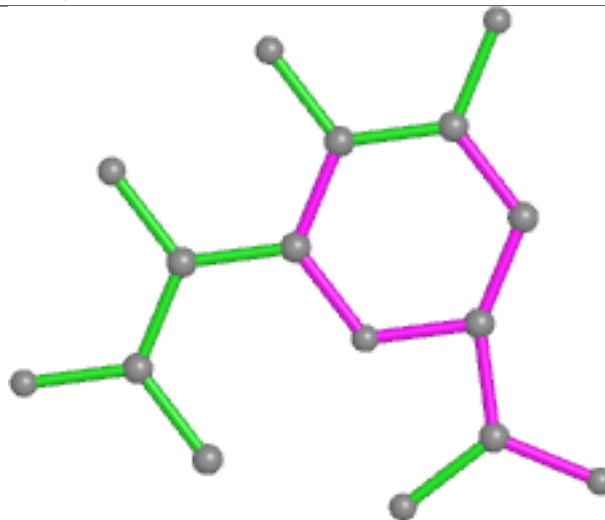


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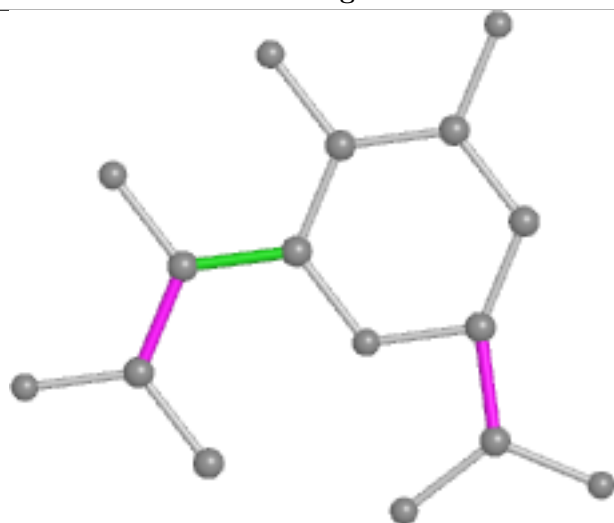
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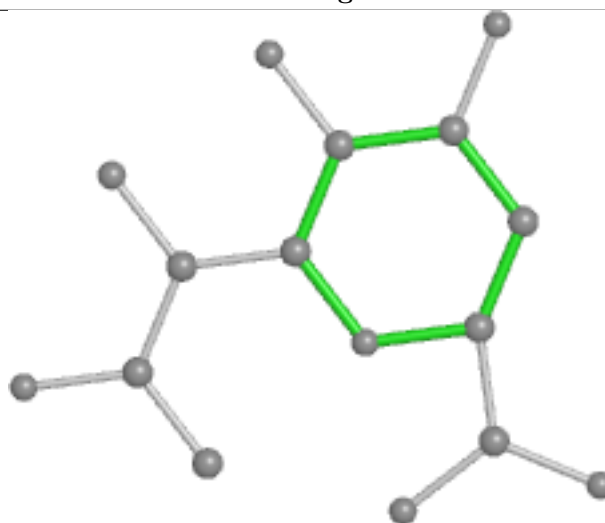
Bond lengths



Bond angles

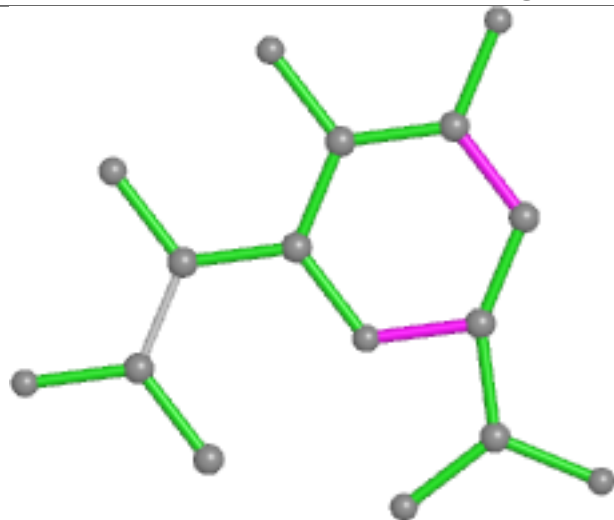


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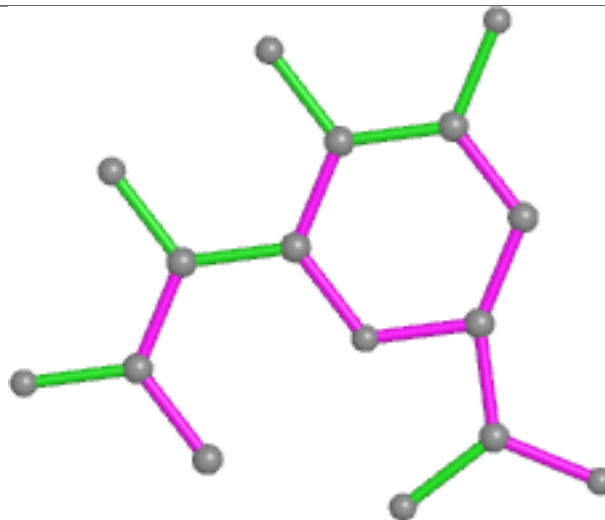


Rings

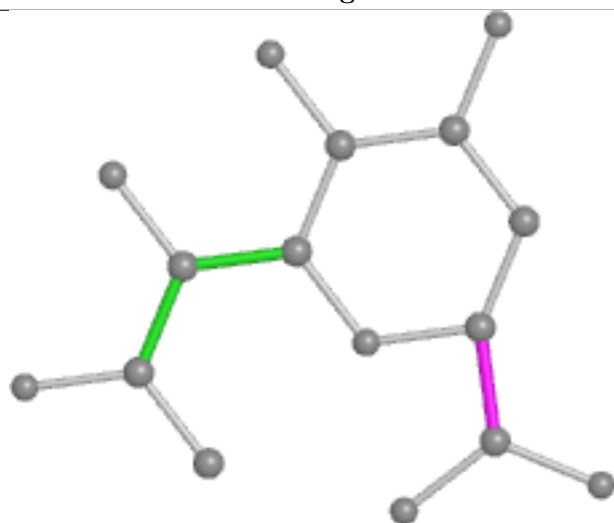
Ligand P8E V 617



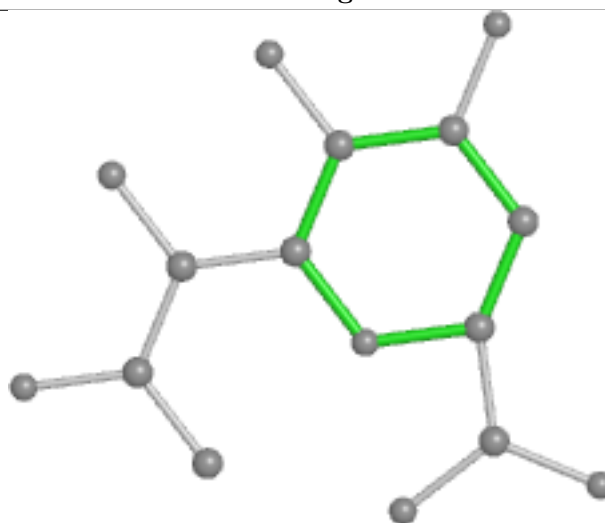
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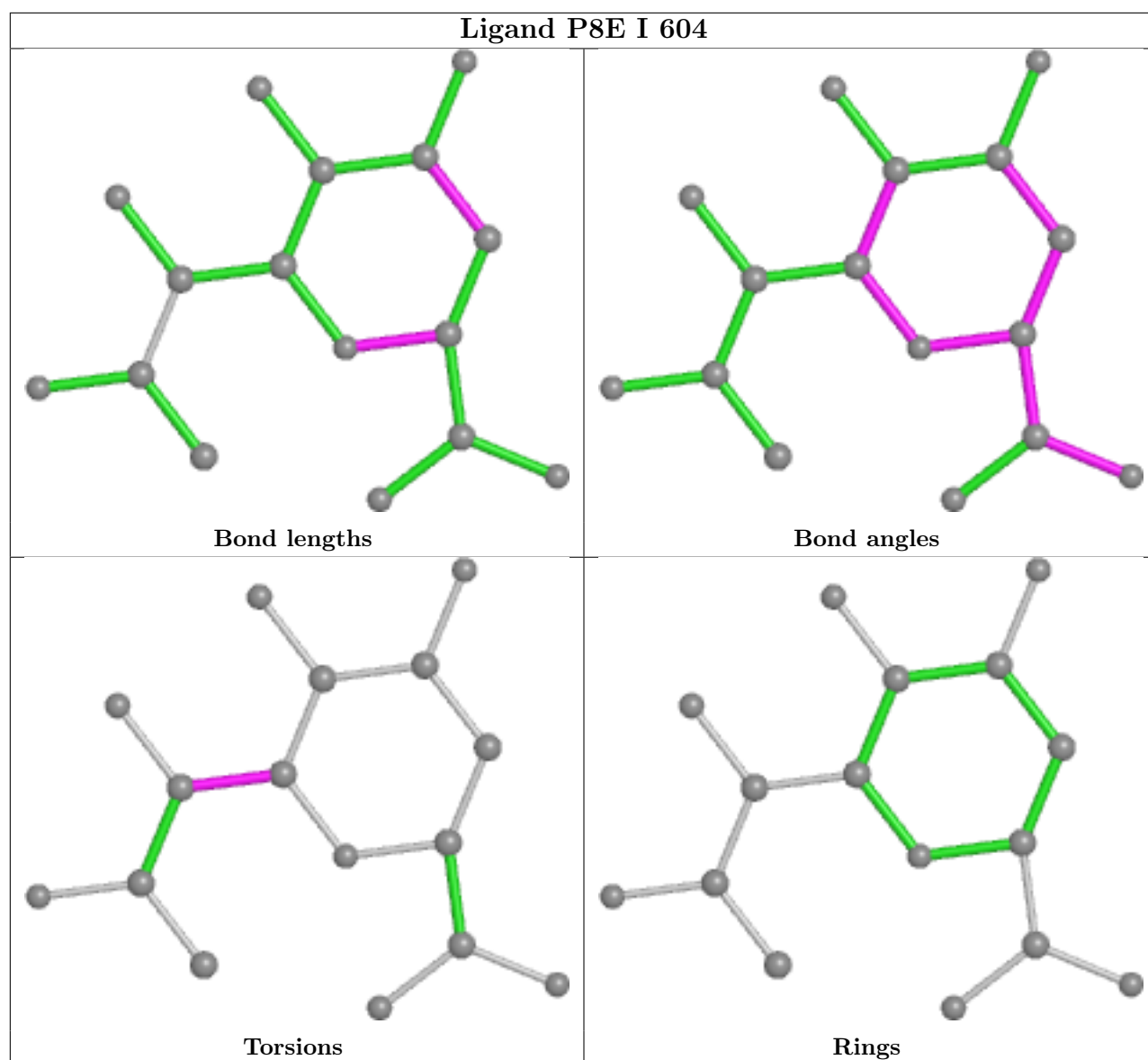
Bond angles



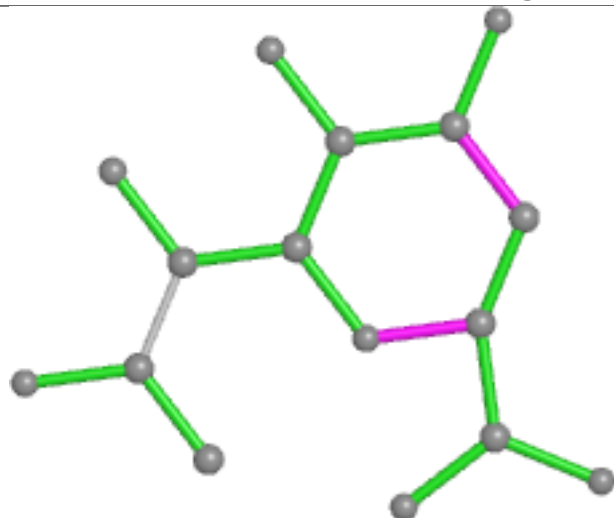
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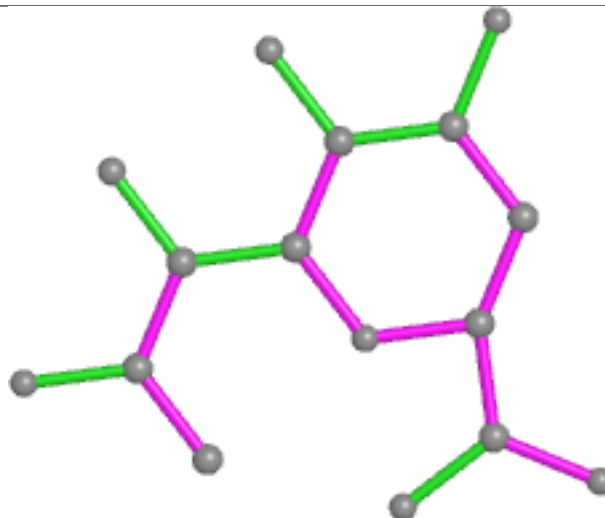
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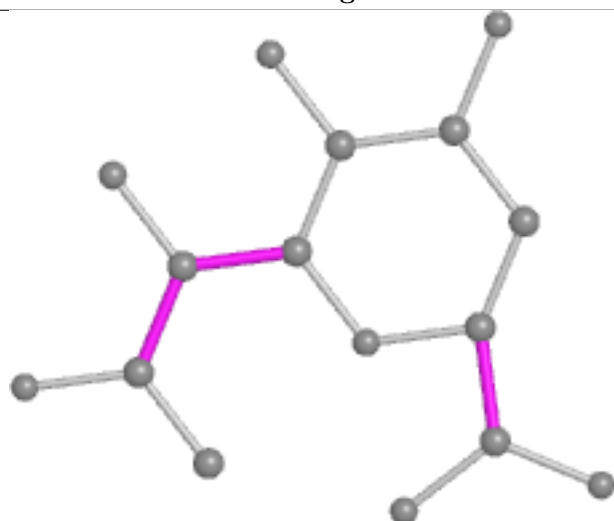
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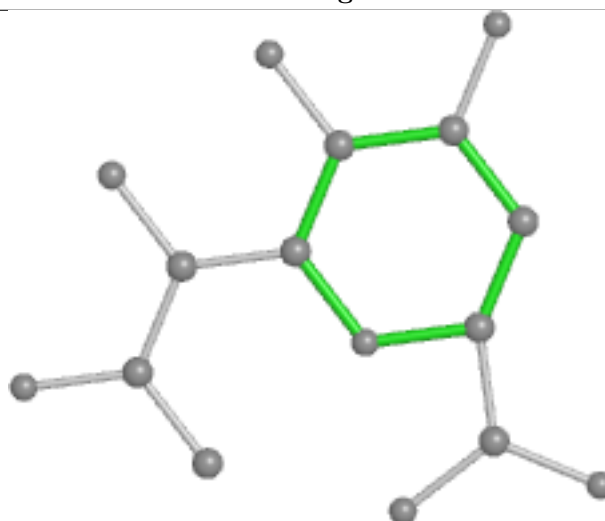
Bond lengths



Bond angles

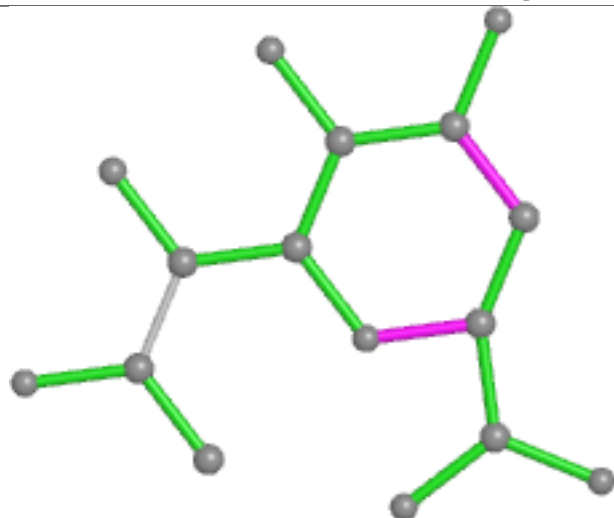


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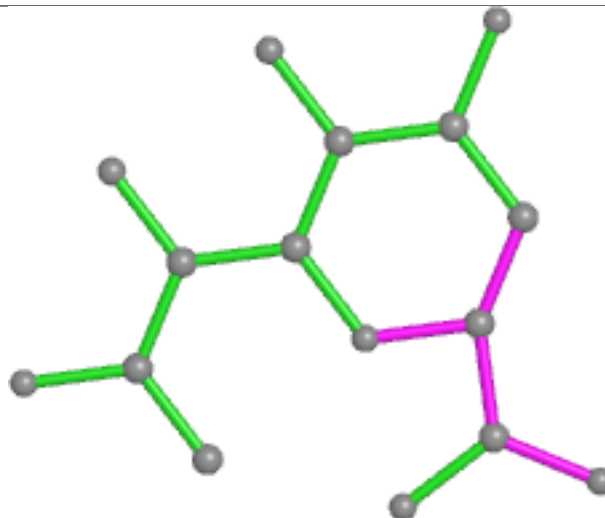


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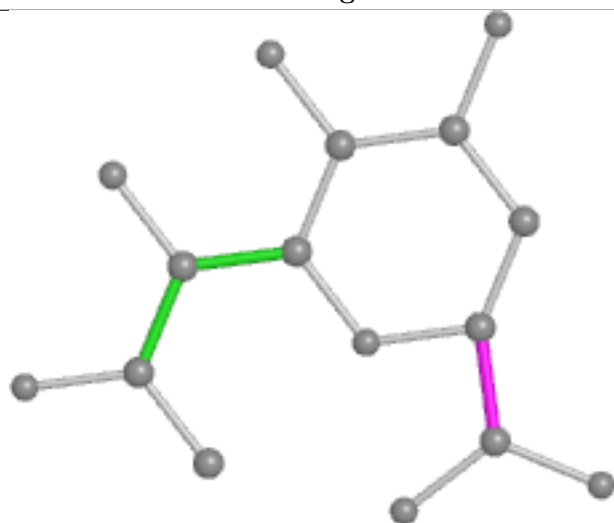
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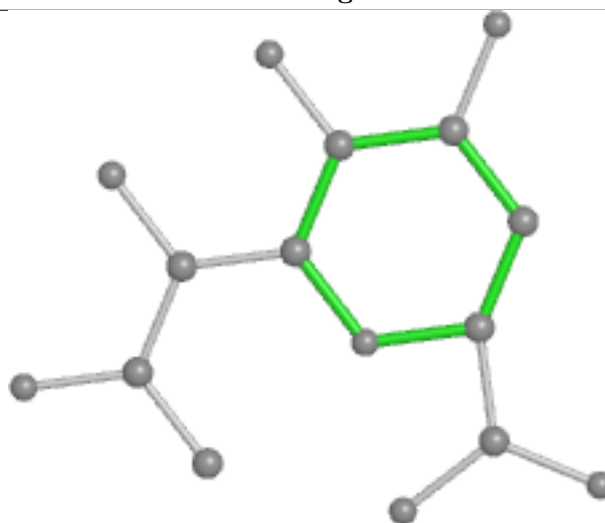
Bond lengths



Bond angles

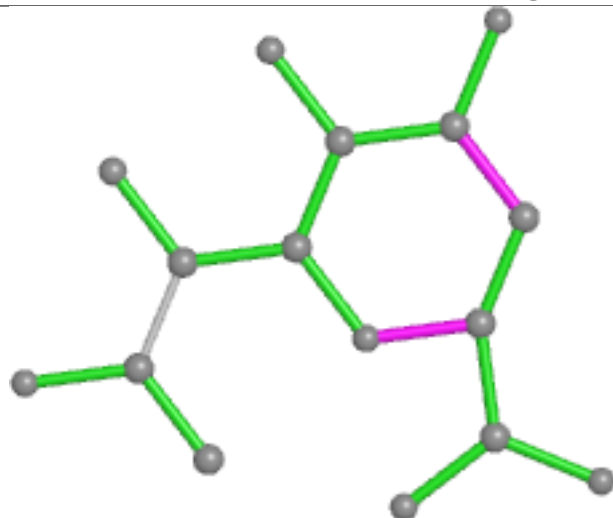


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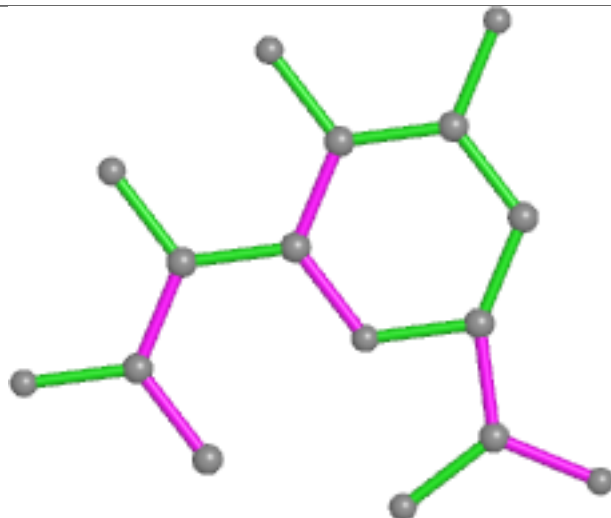


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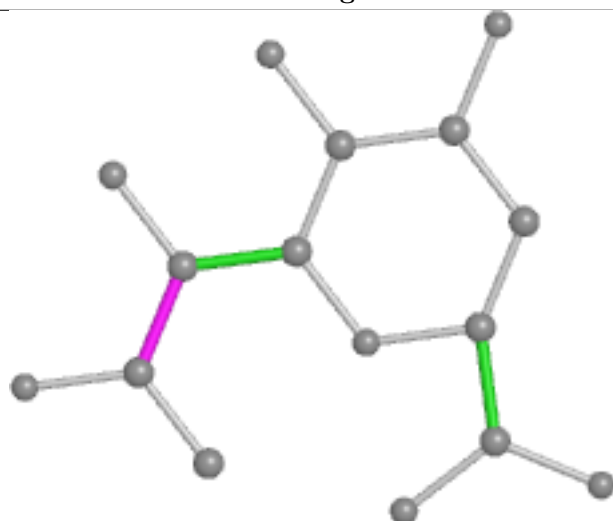
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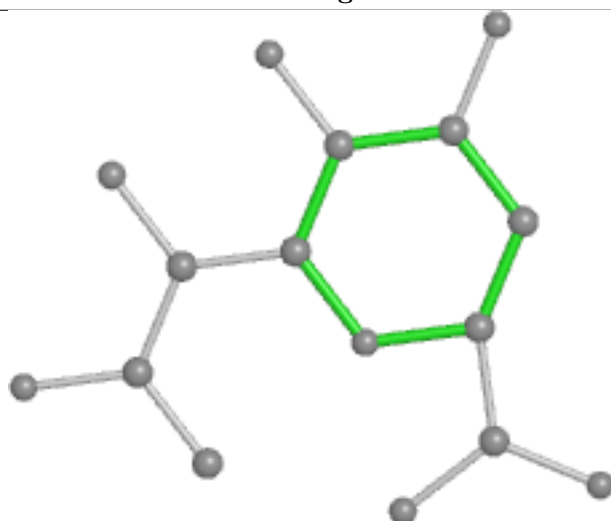
Bond lengths



Bond angles

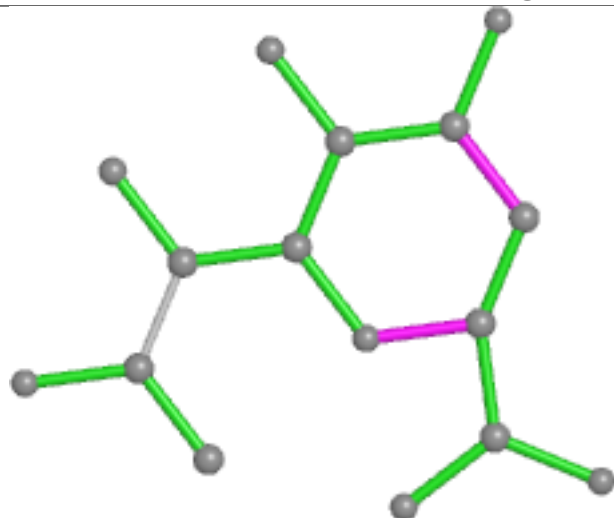


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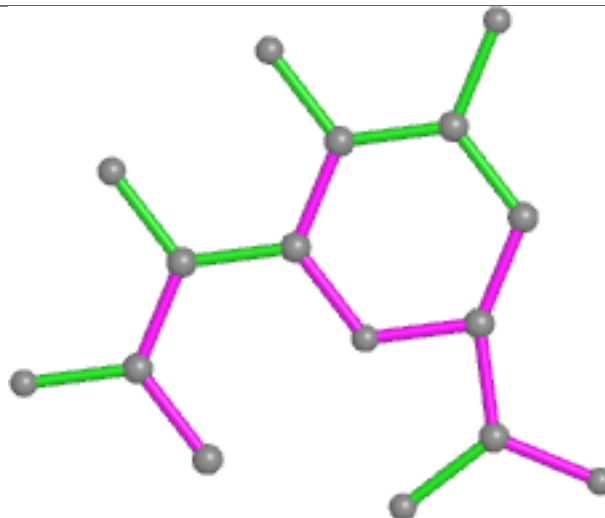


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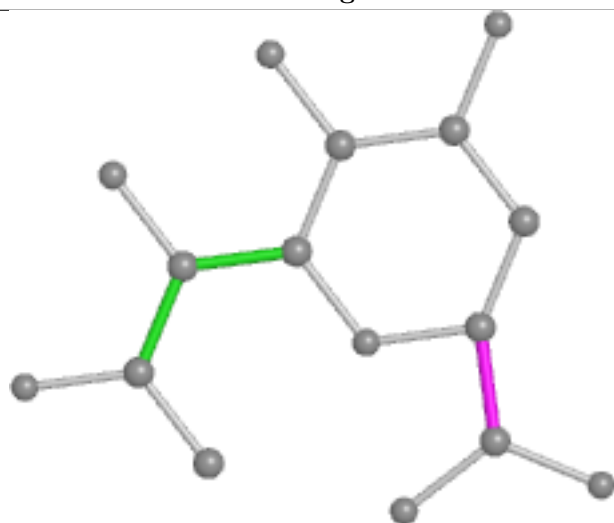
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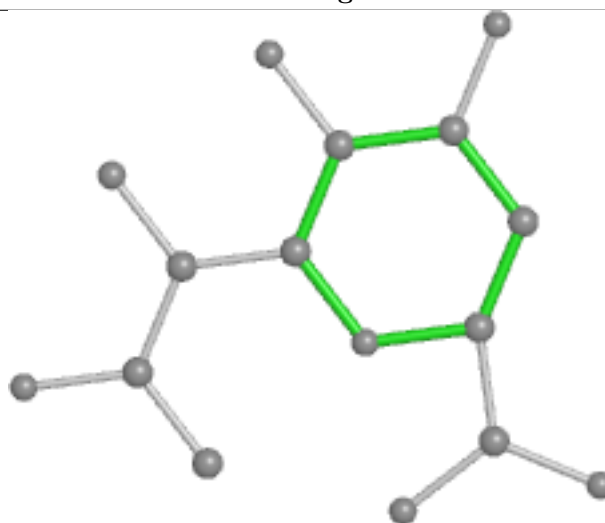
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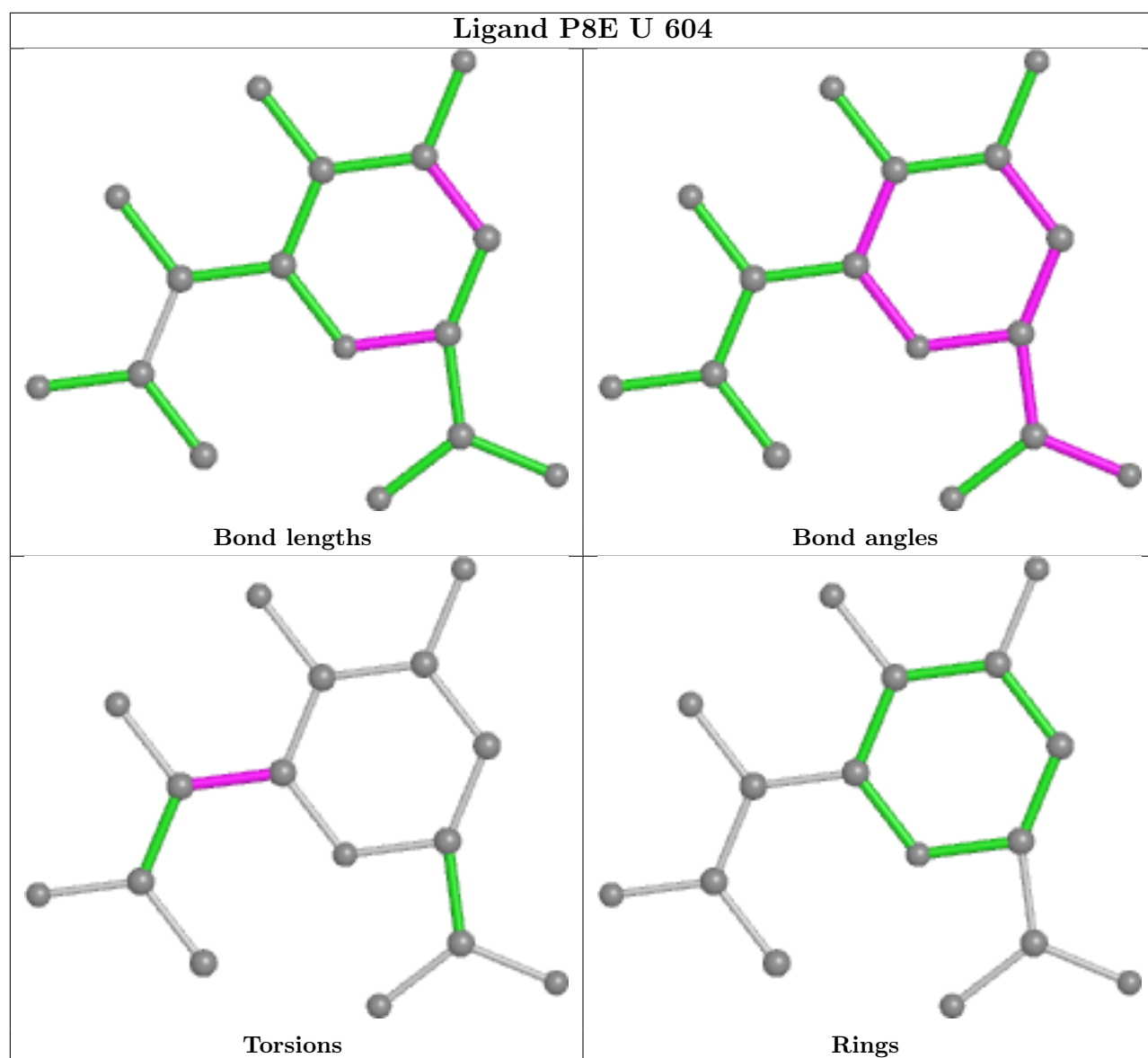
Bond angles

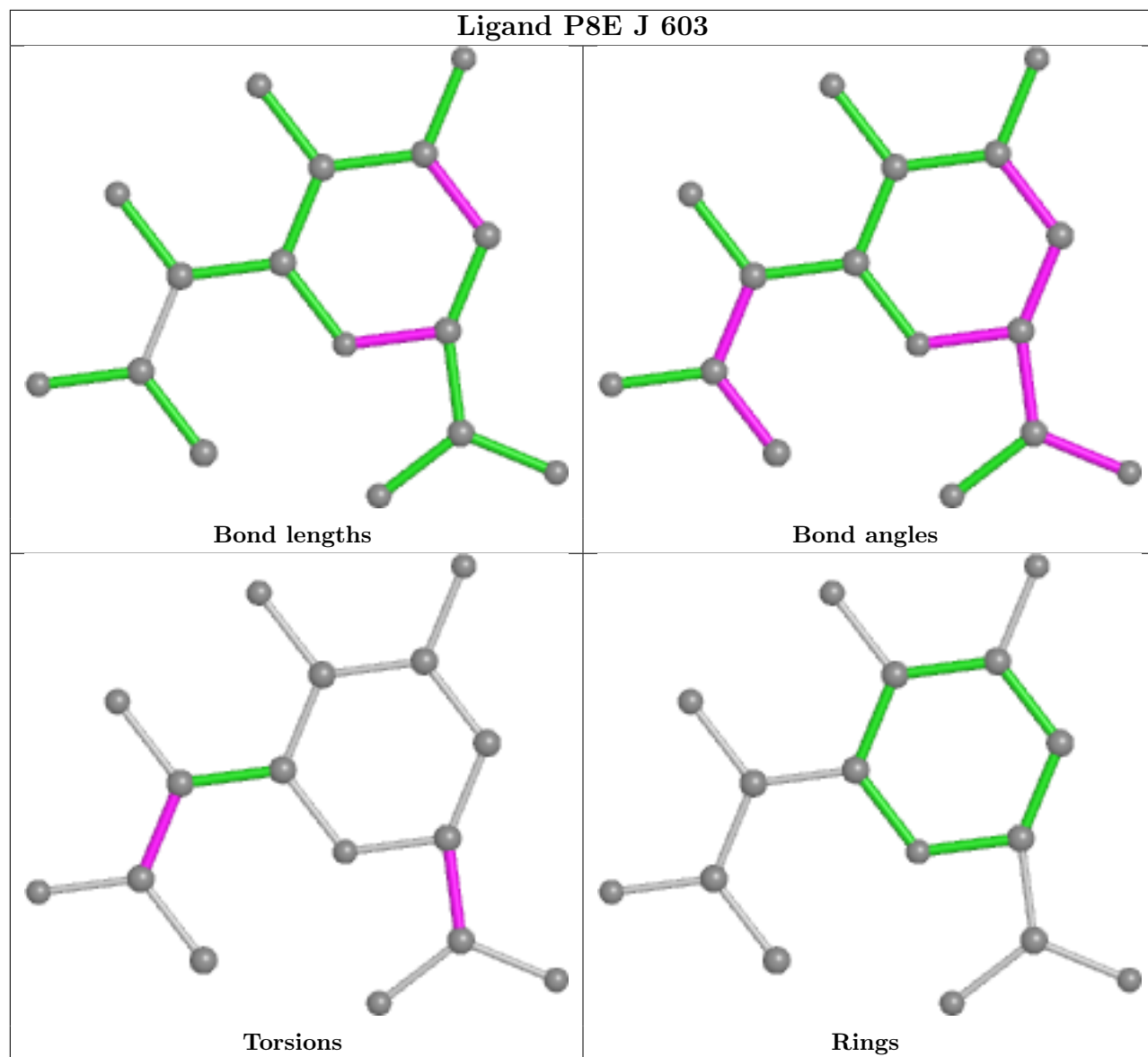


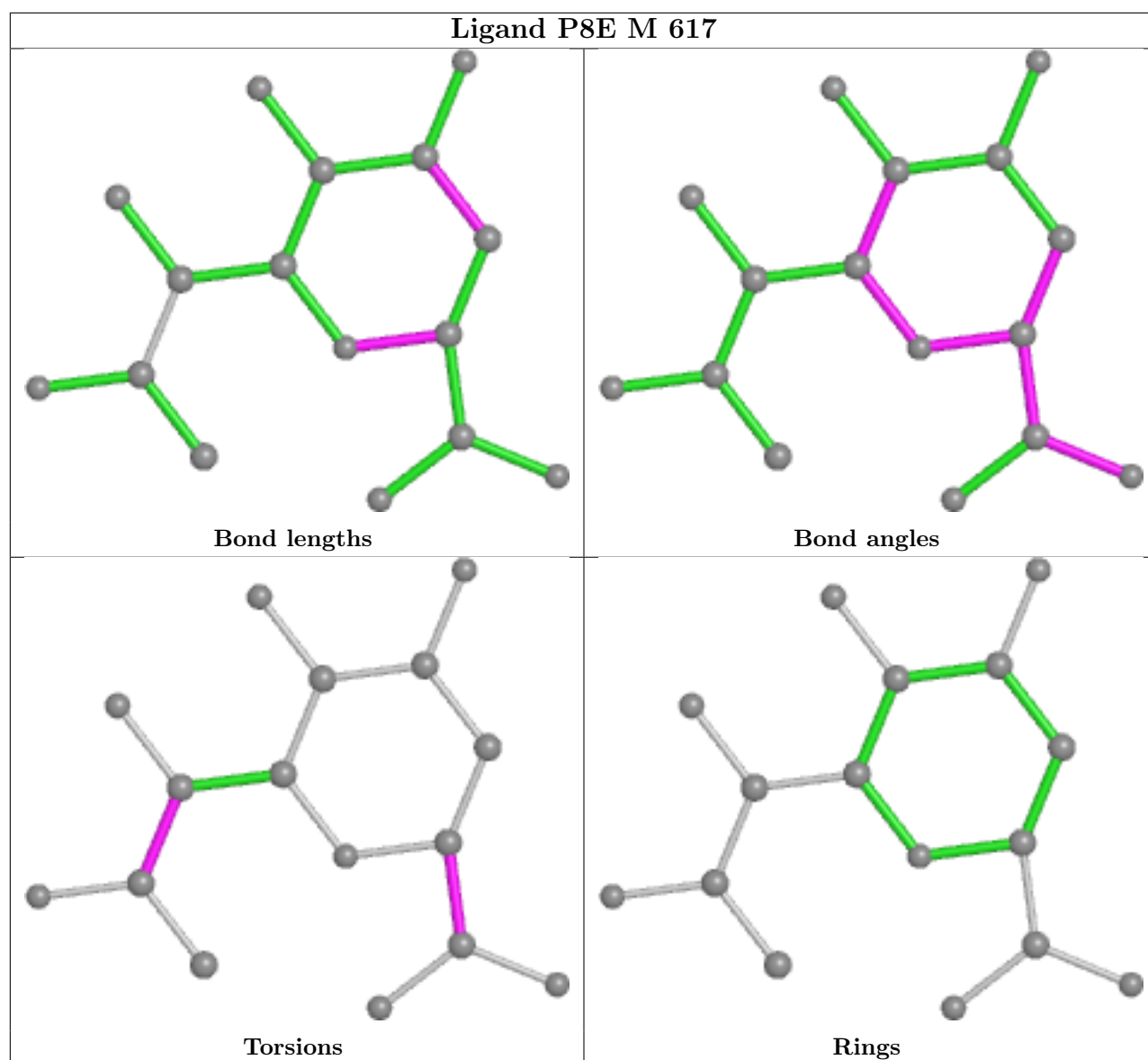
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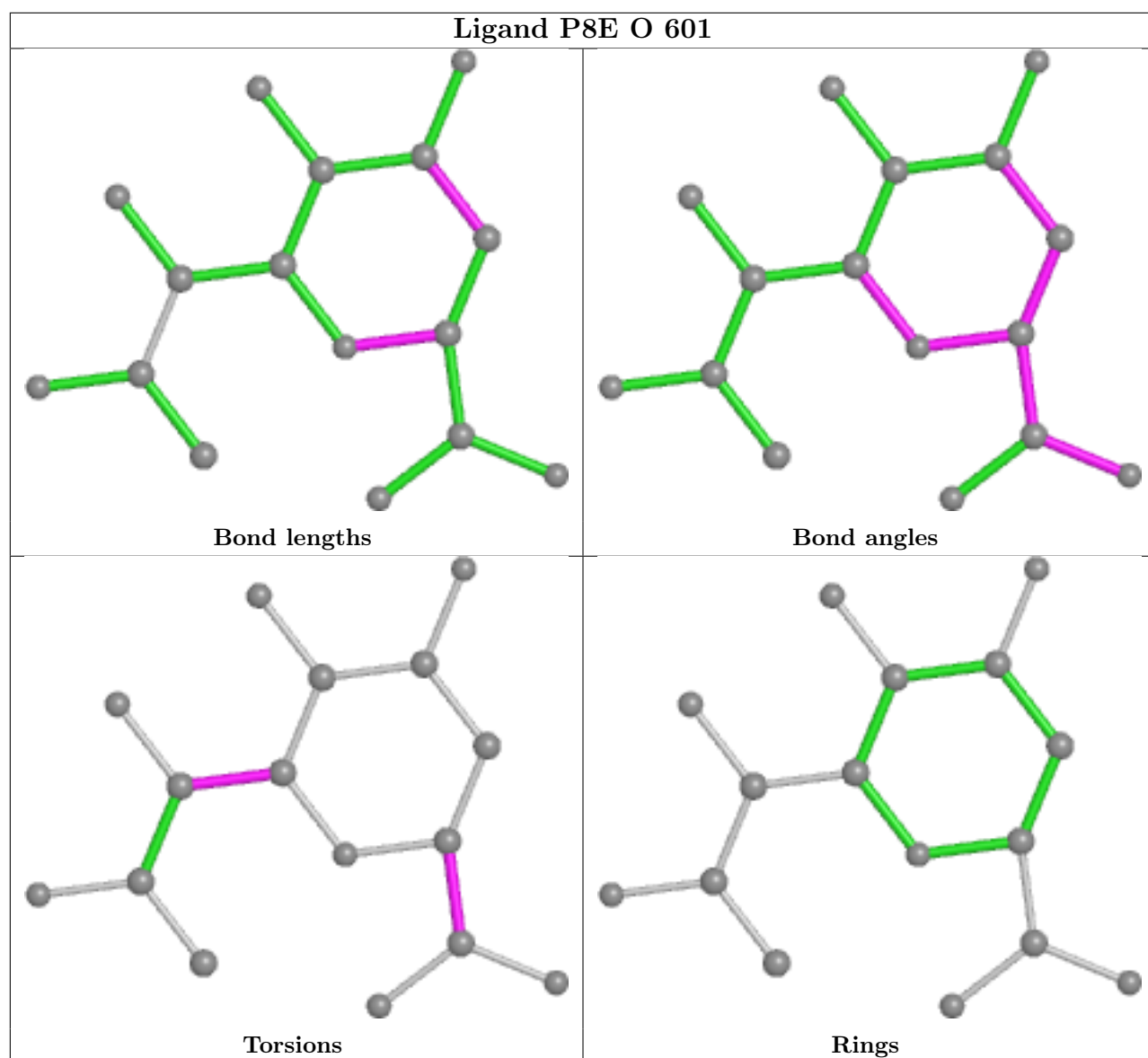


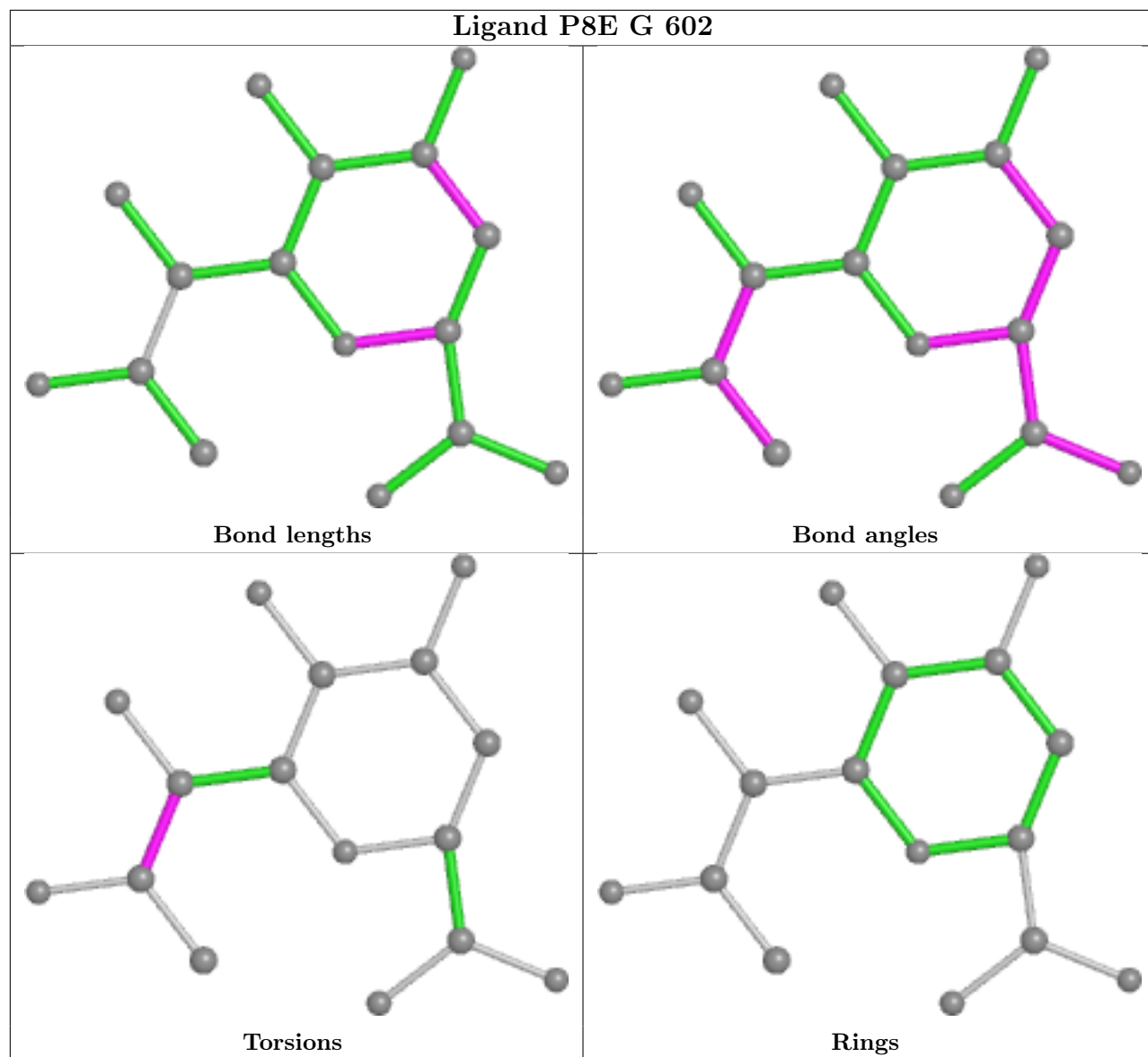
Rings



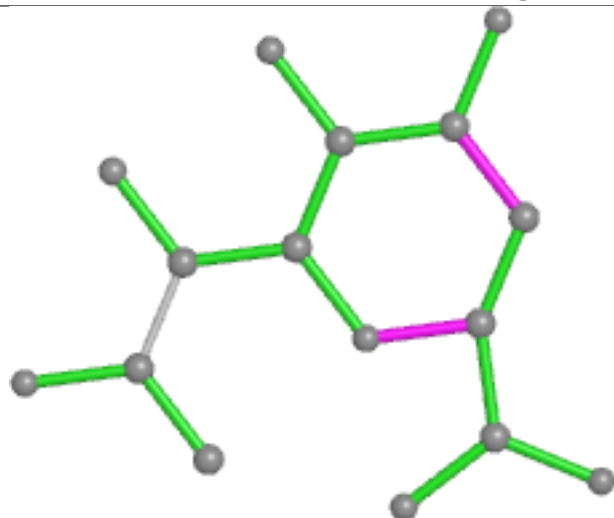




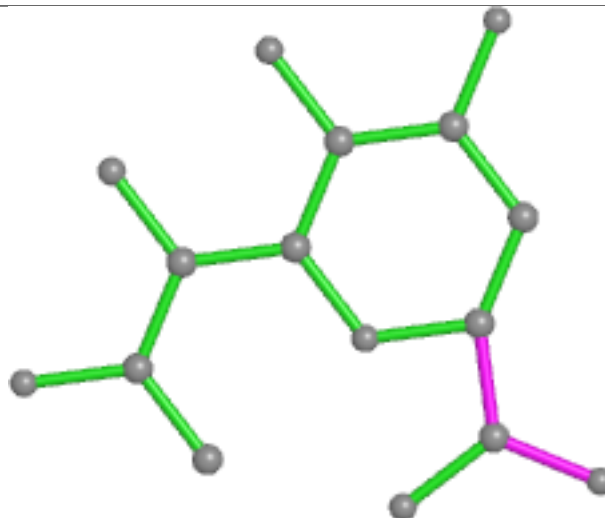




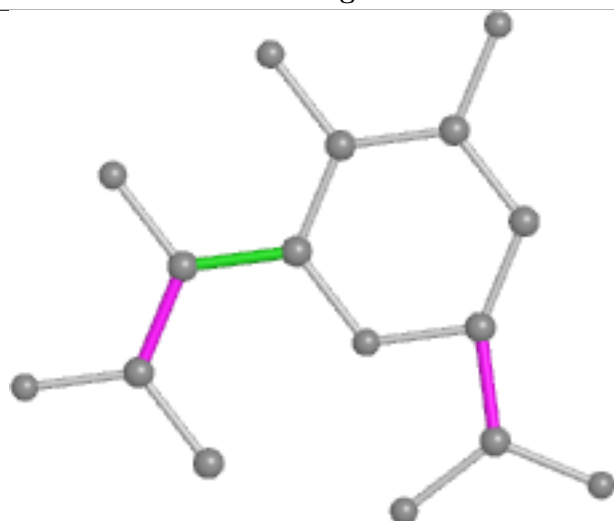
Ligand P8E M 613



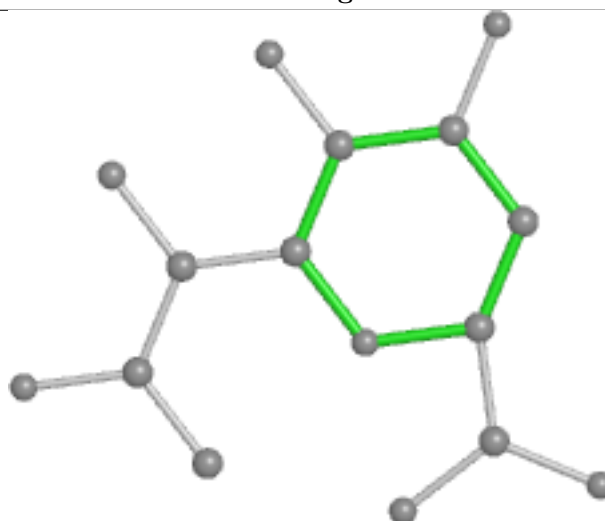
Bond lengths



Bond angles

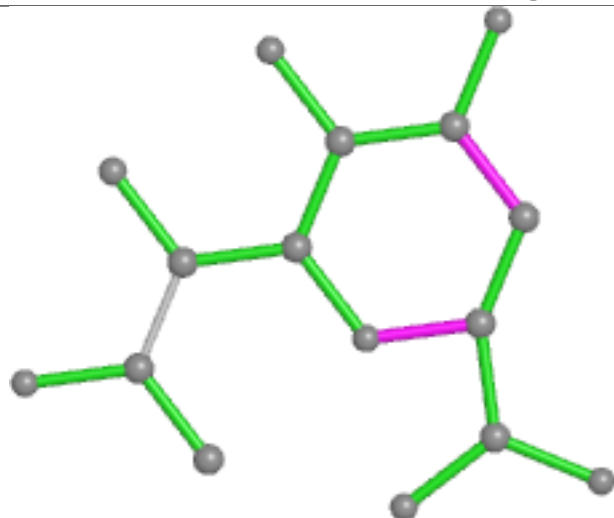


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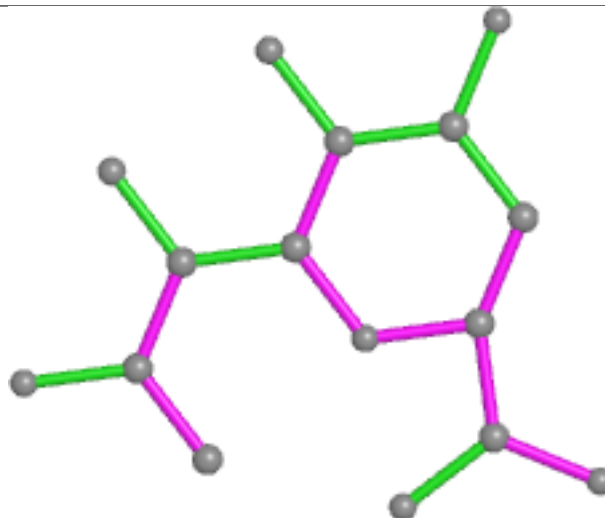


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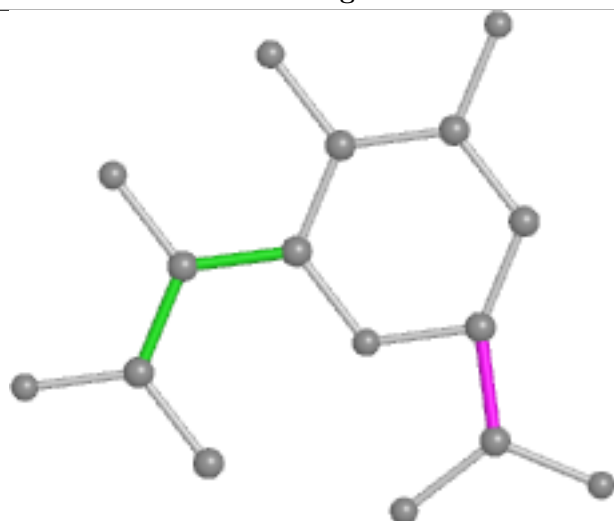
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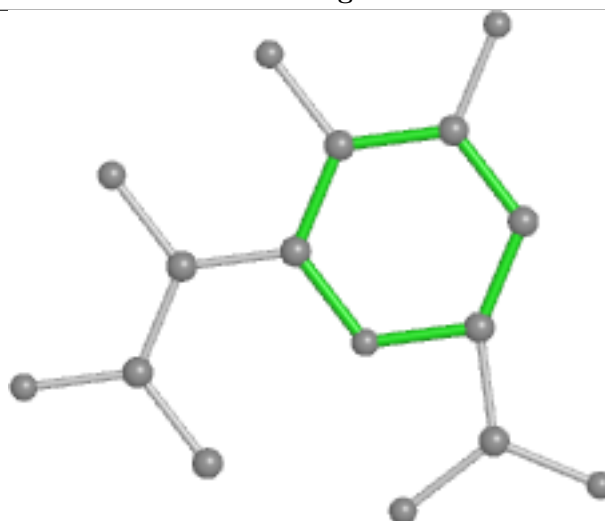
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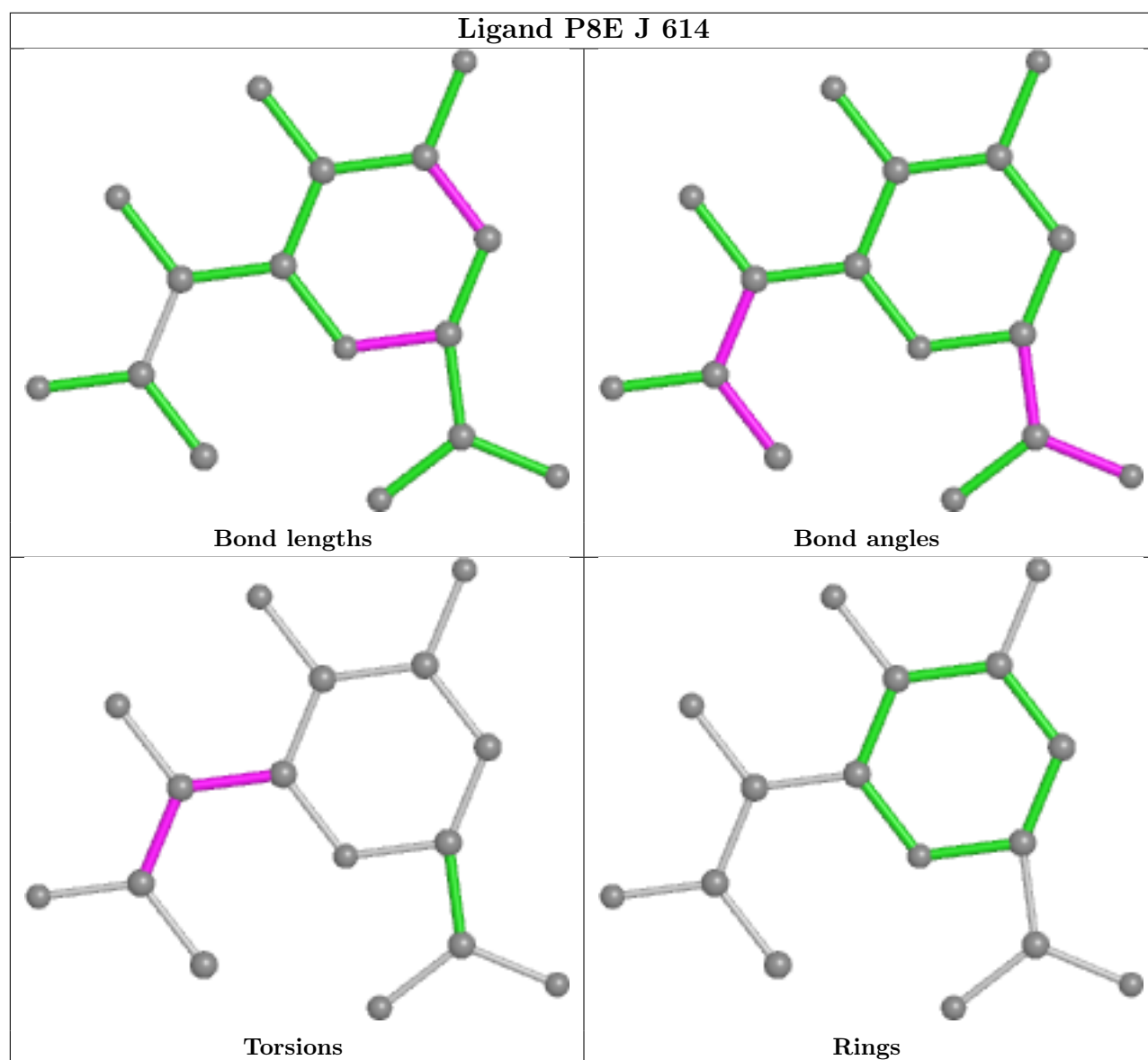
Bond angles



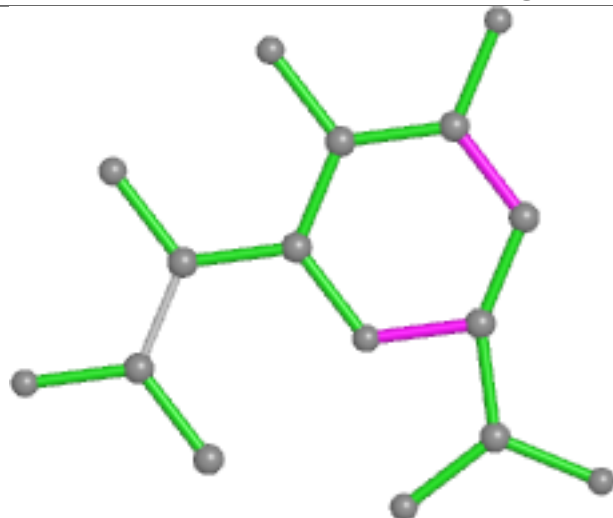
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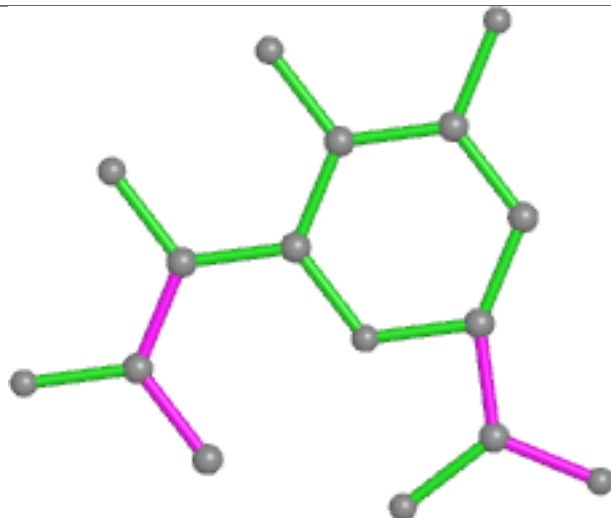
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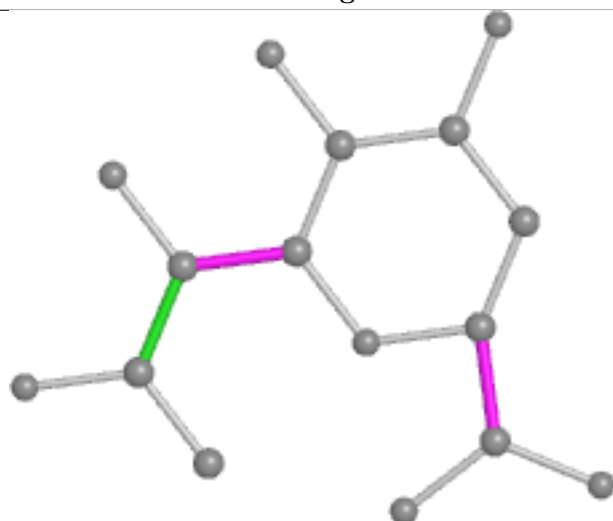
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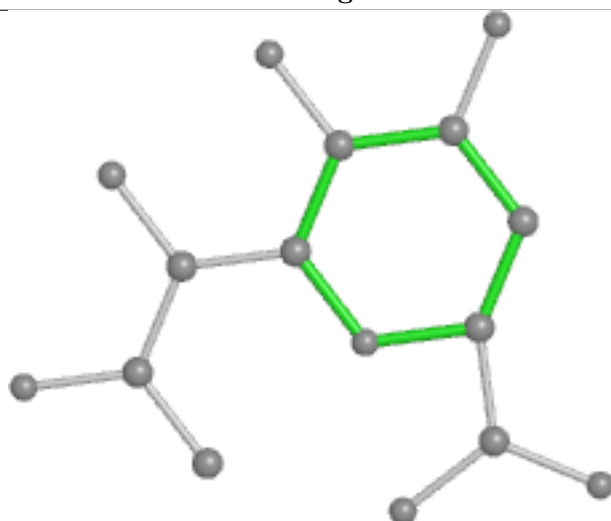
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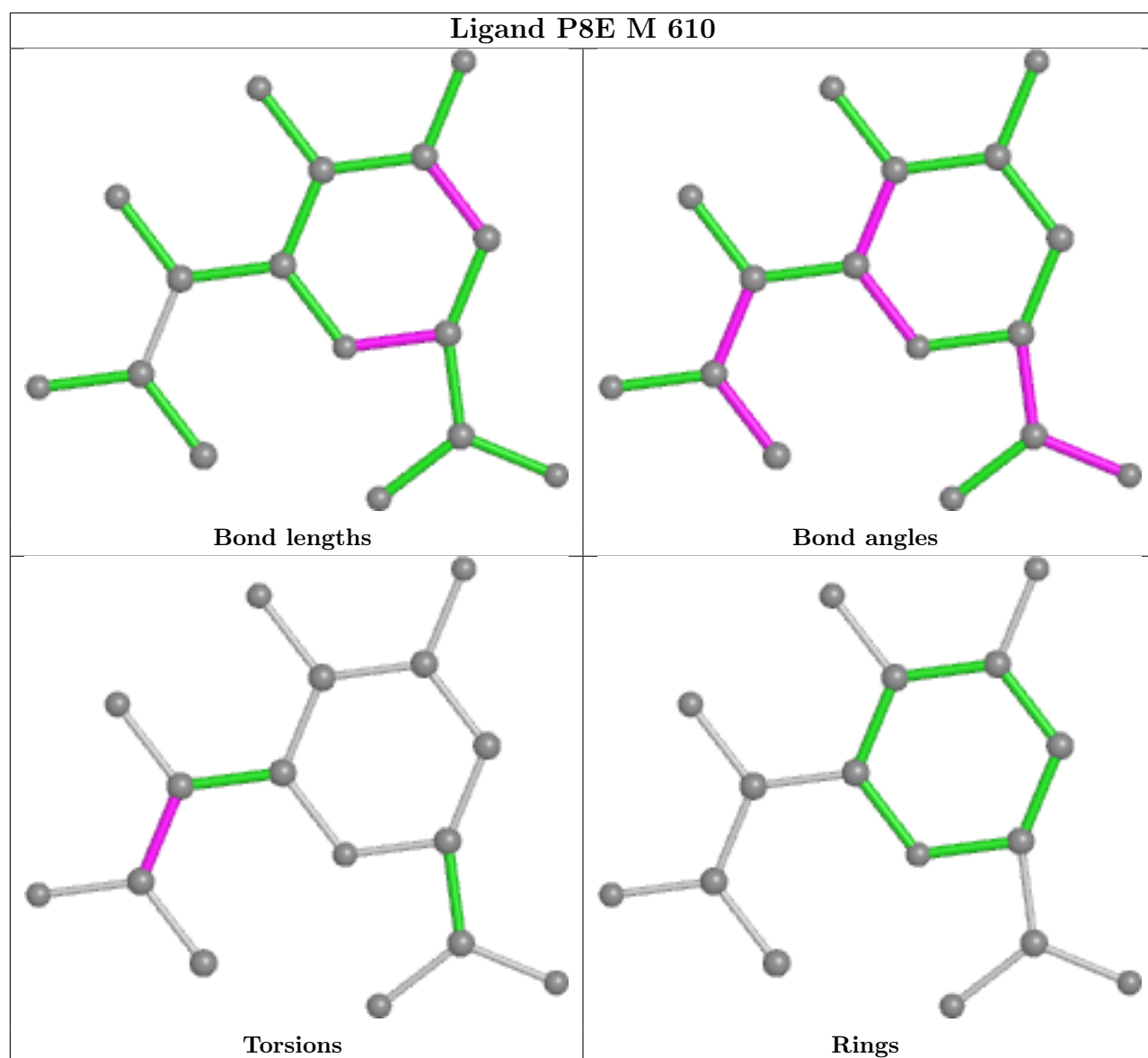
Bond angles



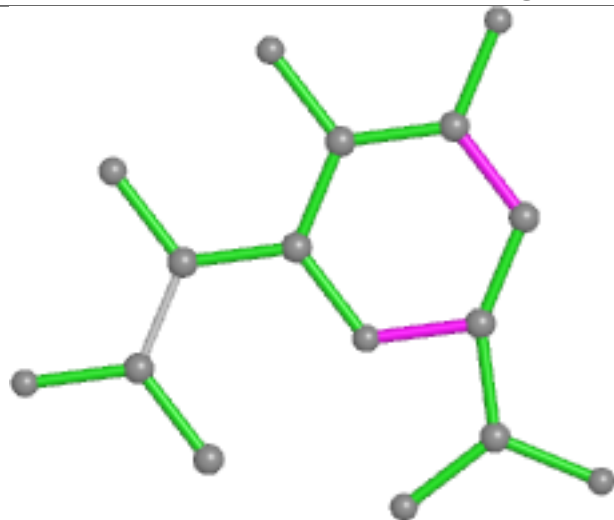
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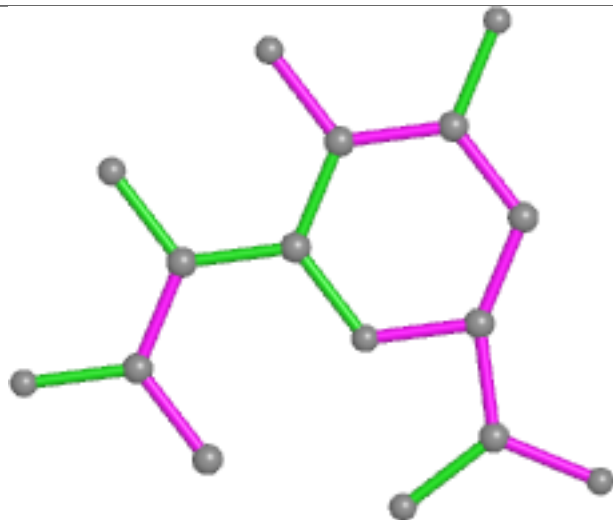
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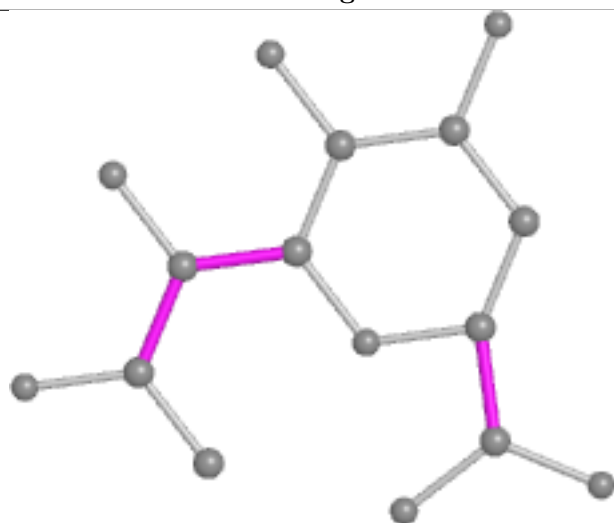
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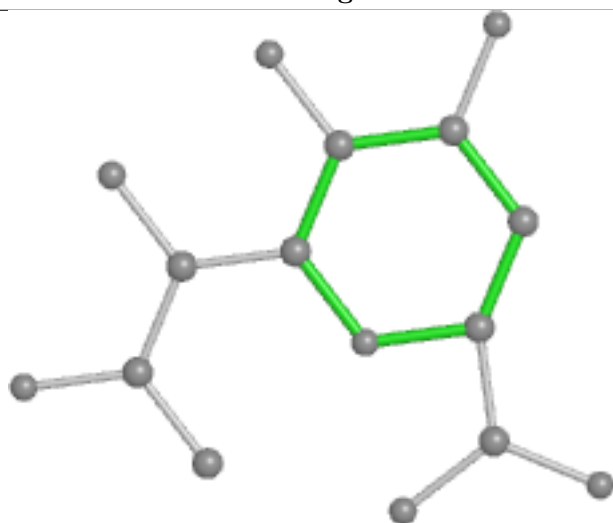
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Bond angles

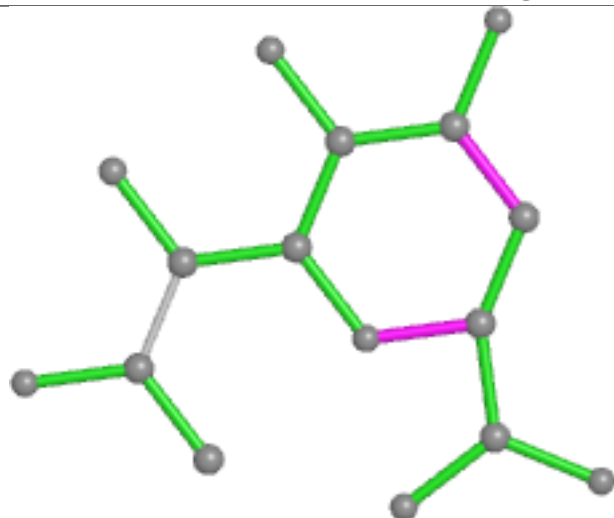


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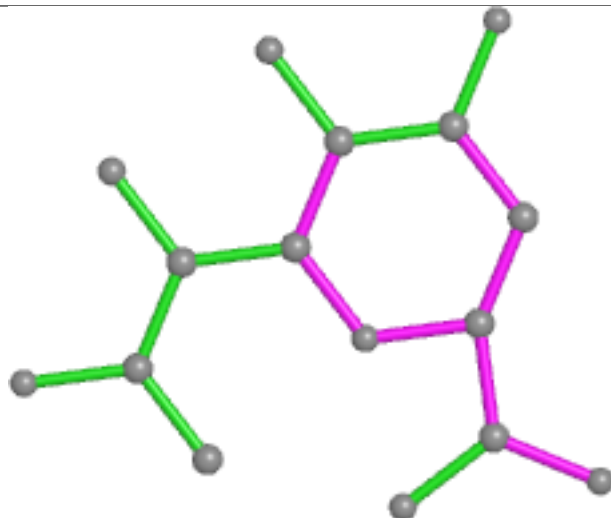


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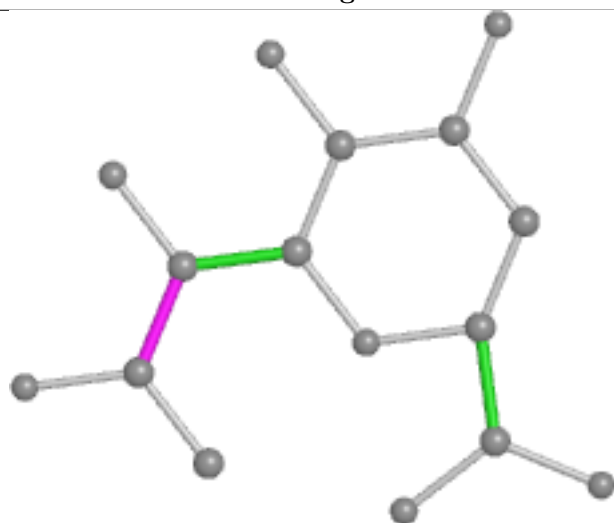
Ligand P8E N 608



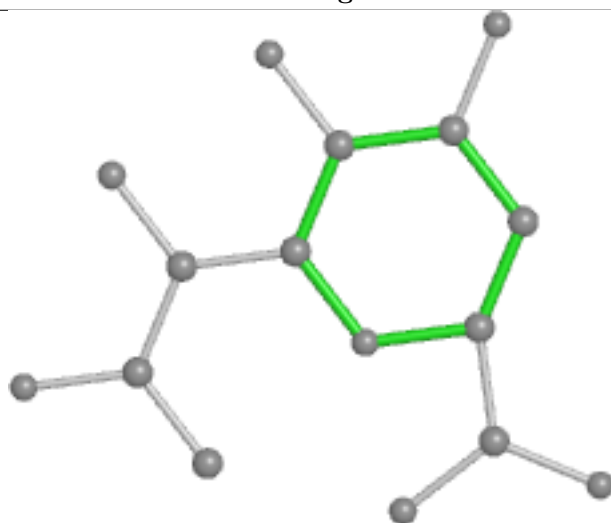
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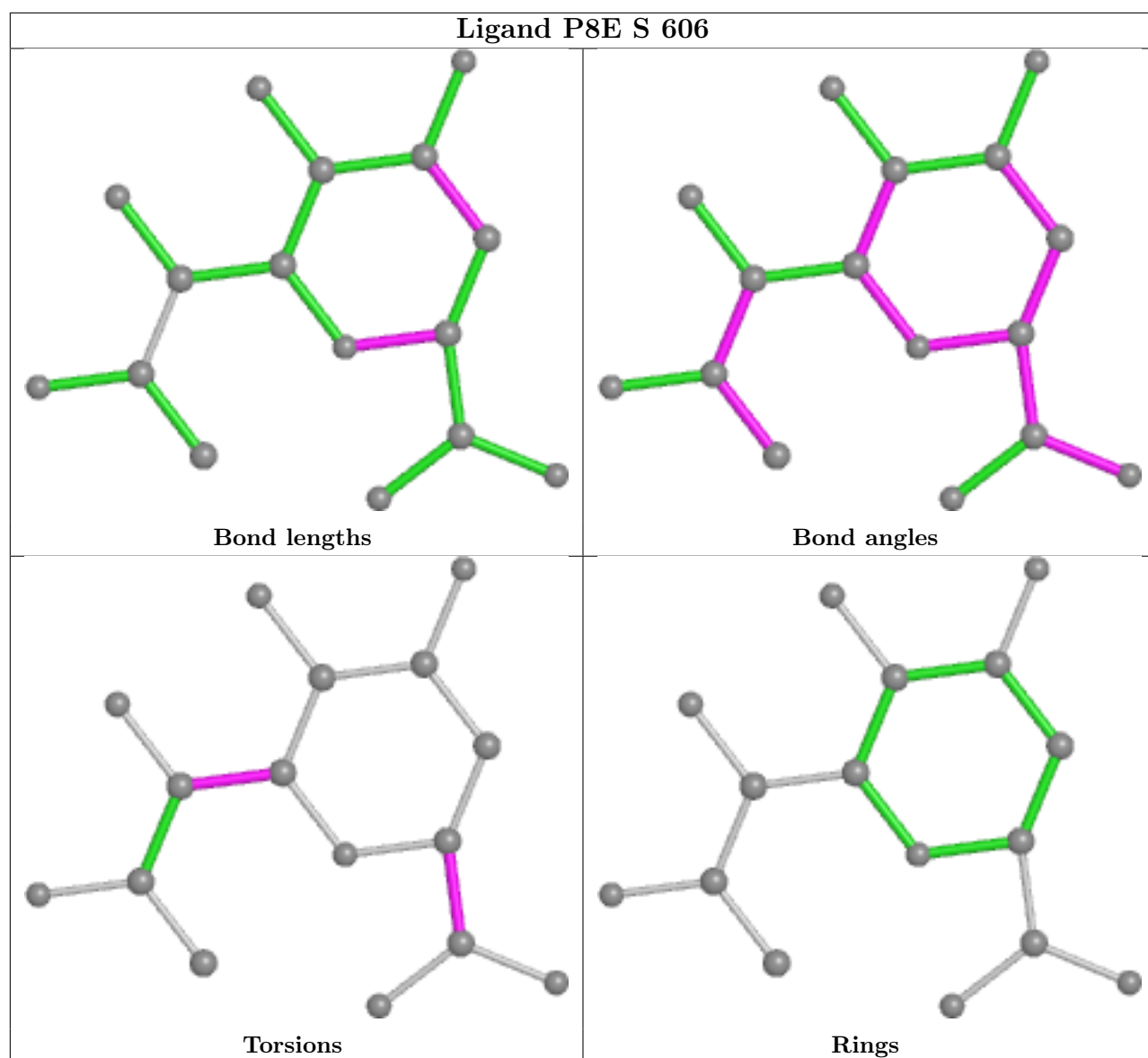
Bond angles

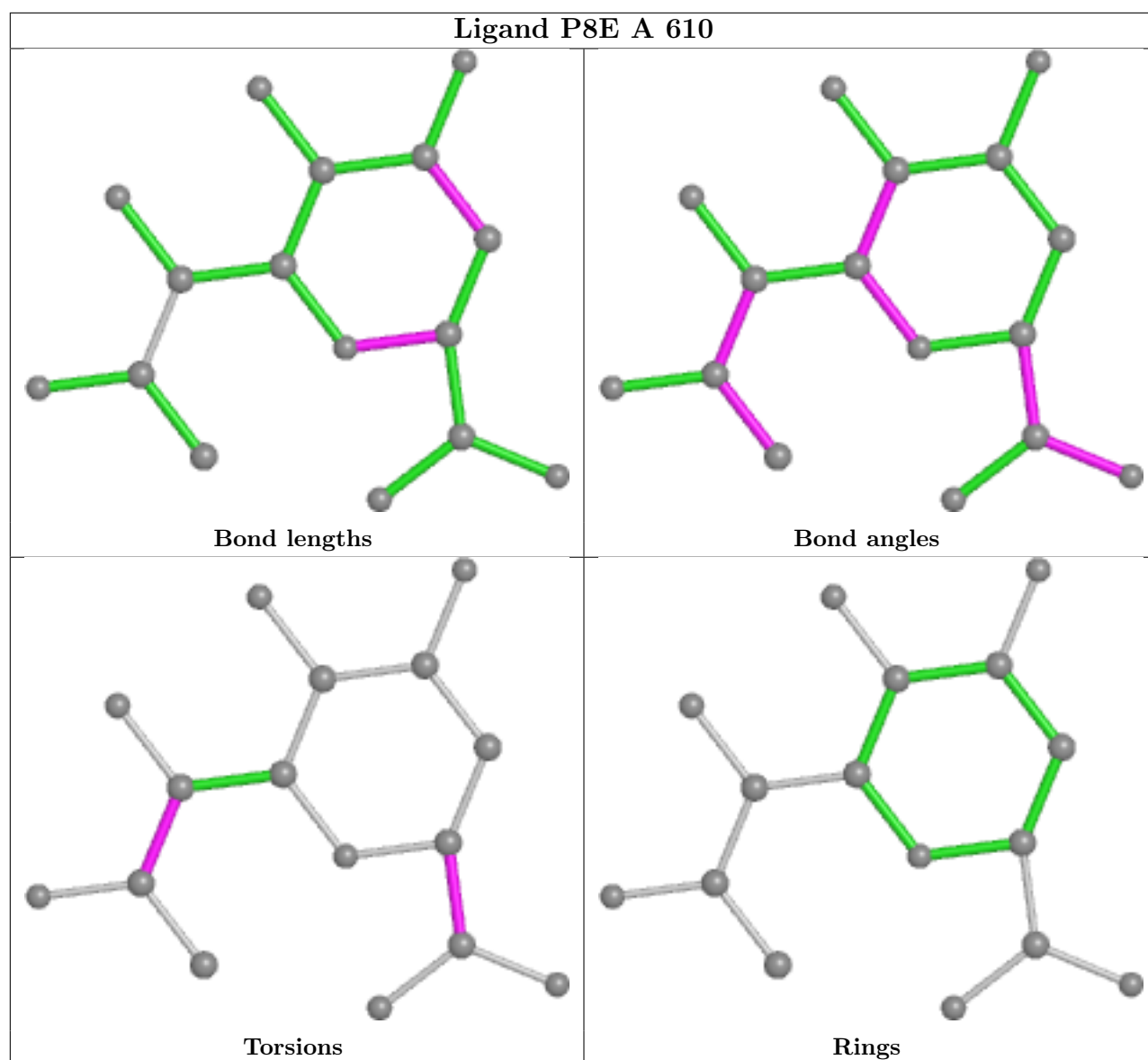


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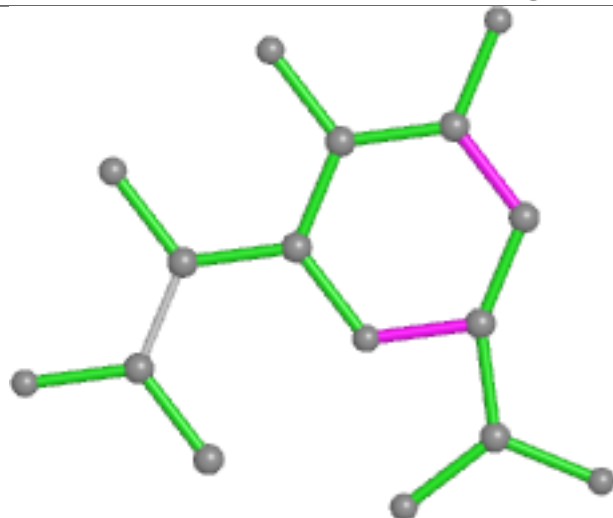


Rings

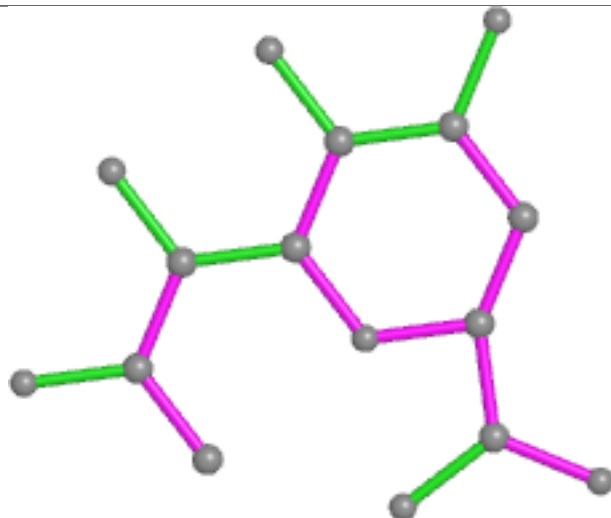




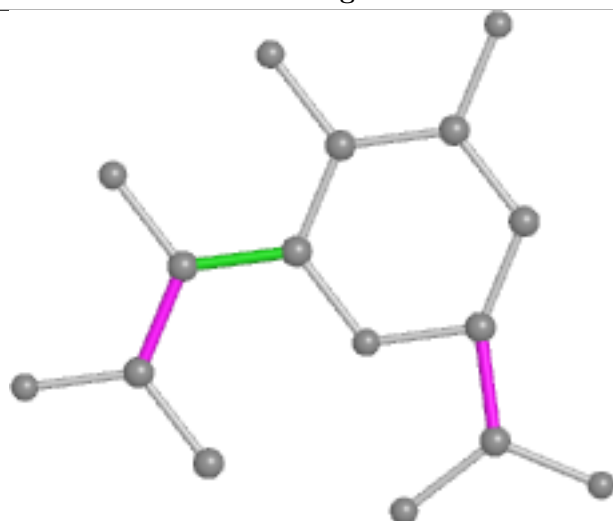
Ligand P8E I 603



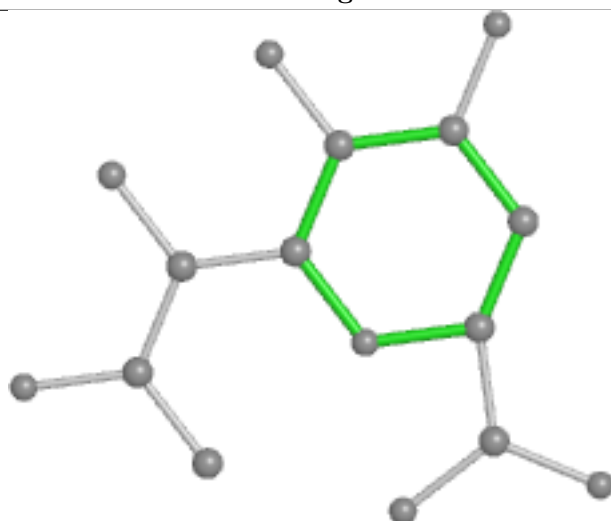
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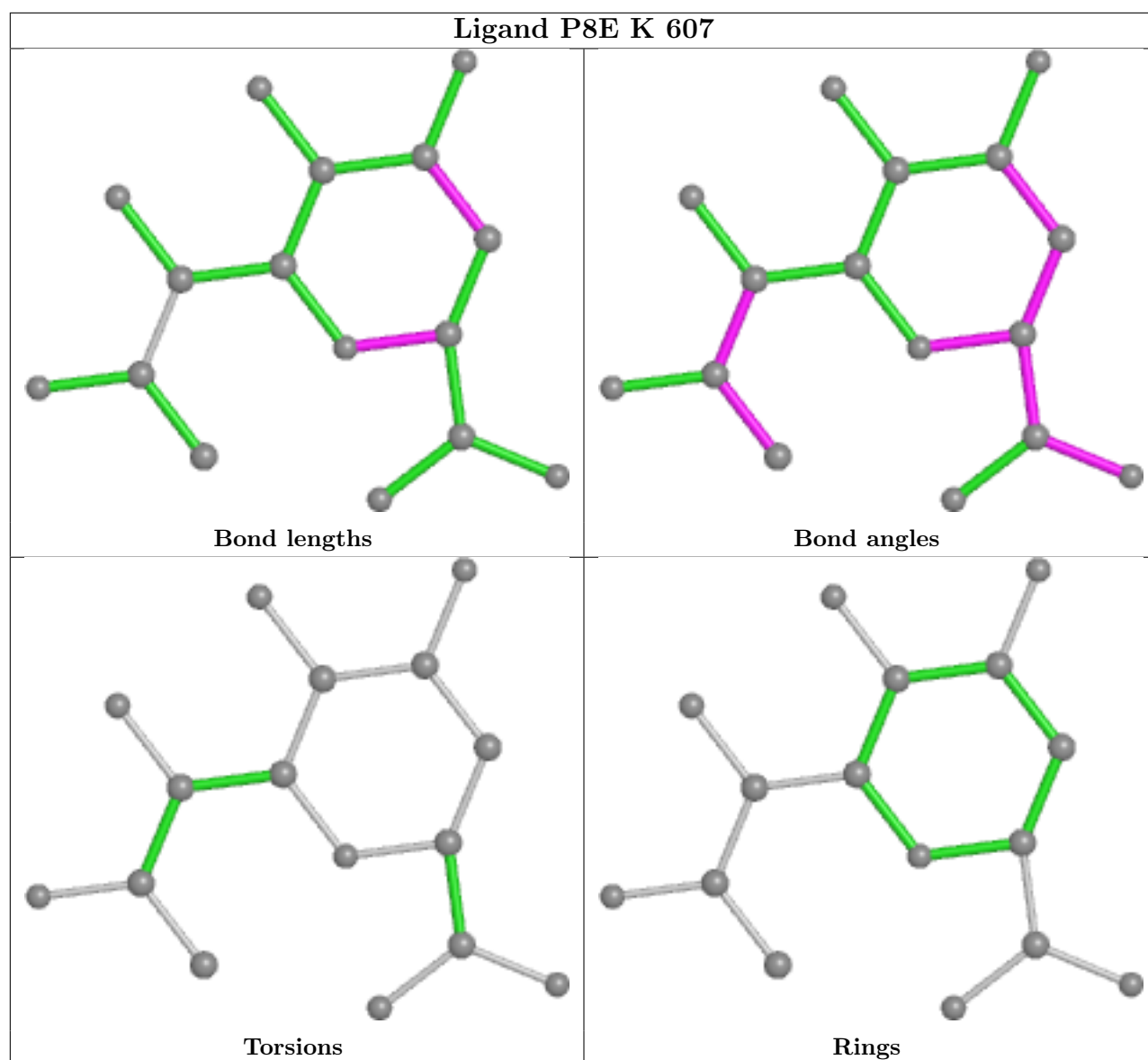
Bond angles



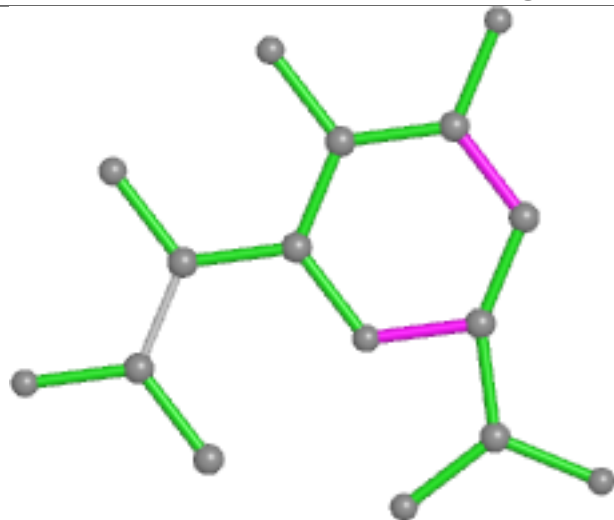
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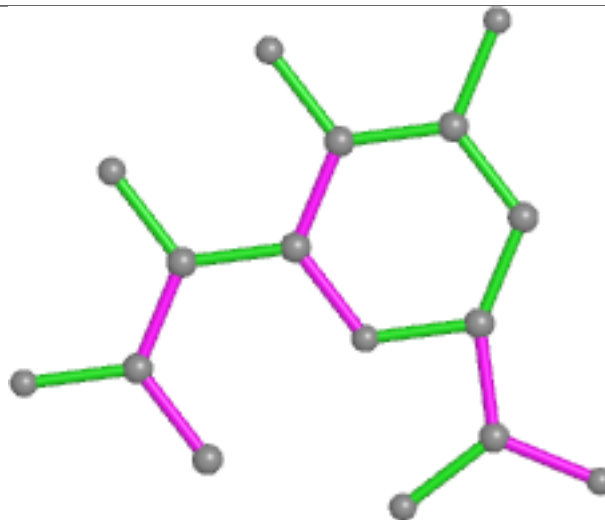
Rings



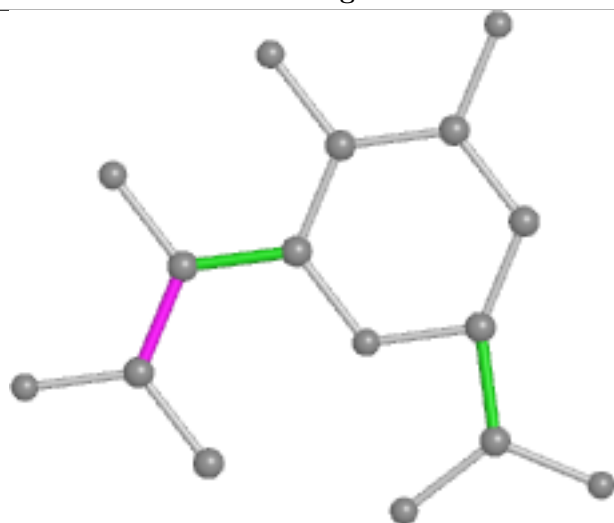
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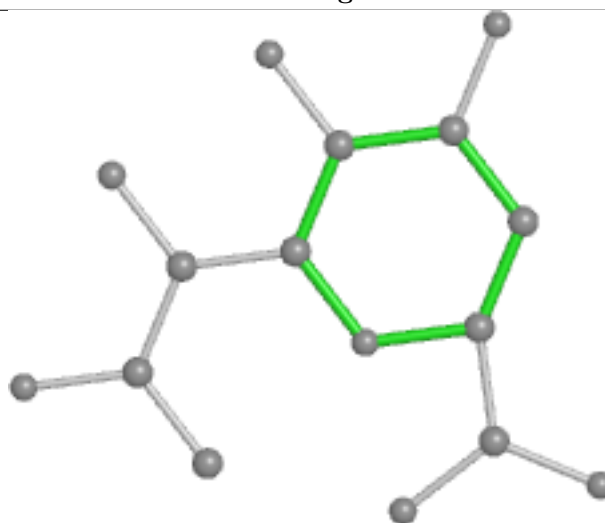
Bond lengths



Bond angles

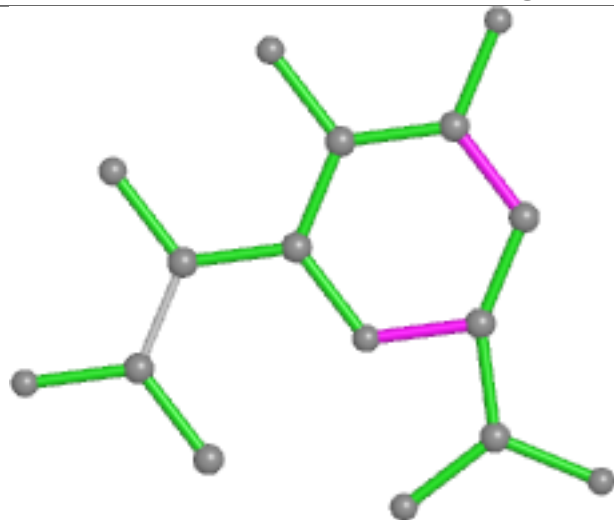


Torsions

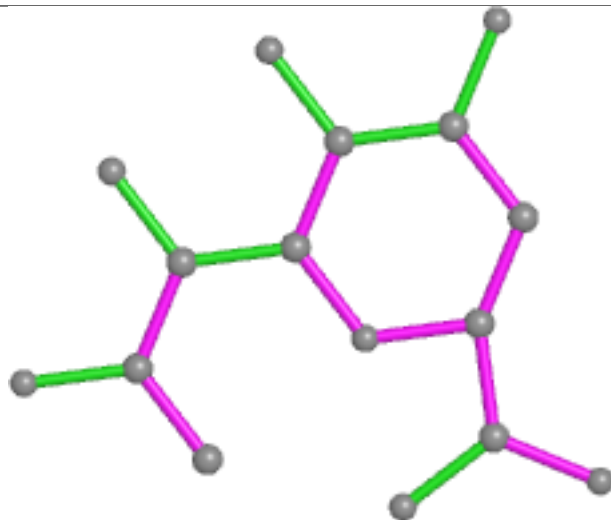


Rings

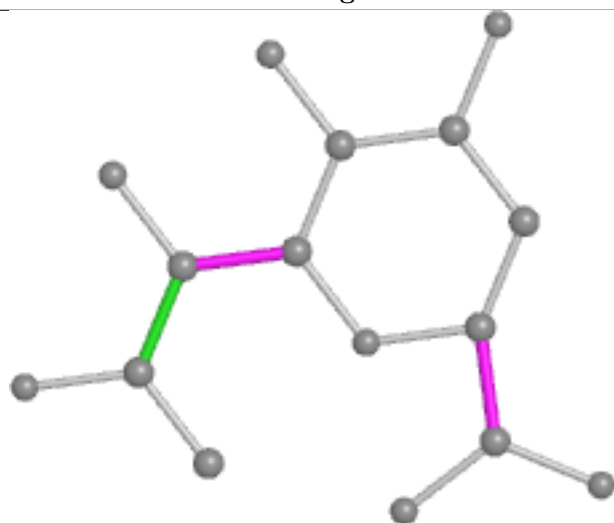
Ligand P8E B 609



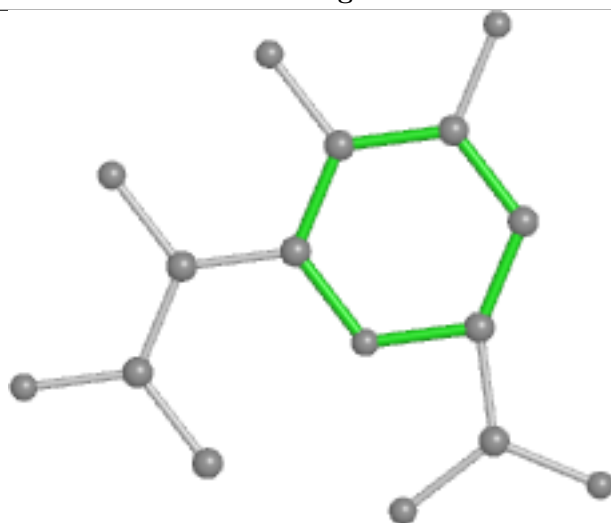
Bond lengths



Bond angles

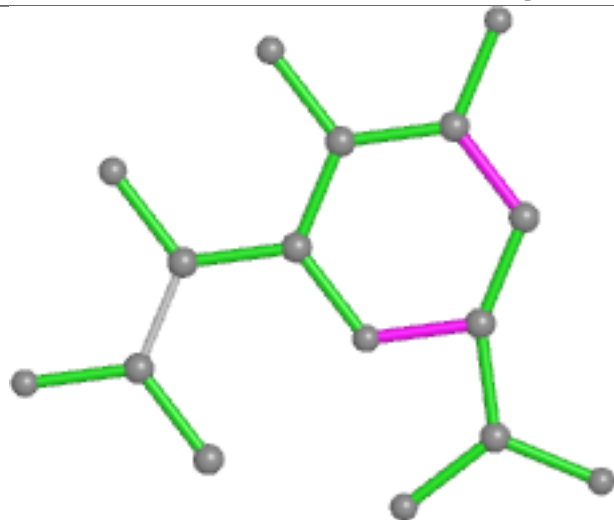


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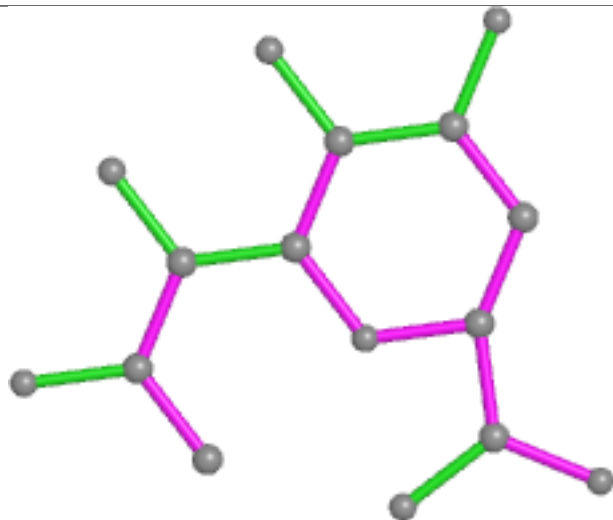


Rings

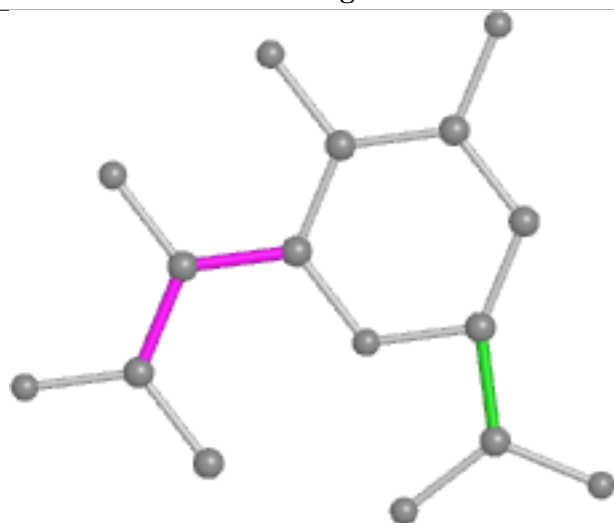
Ligand P8E T 605



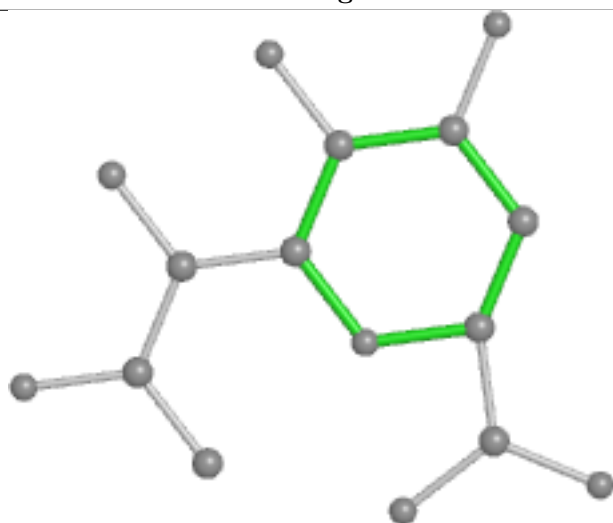
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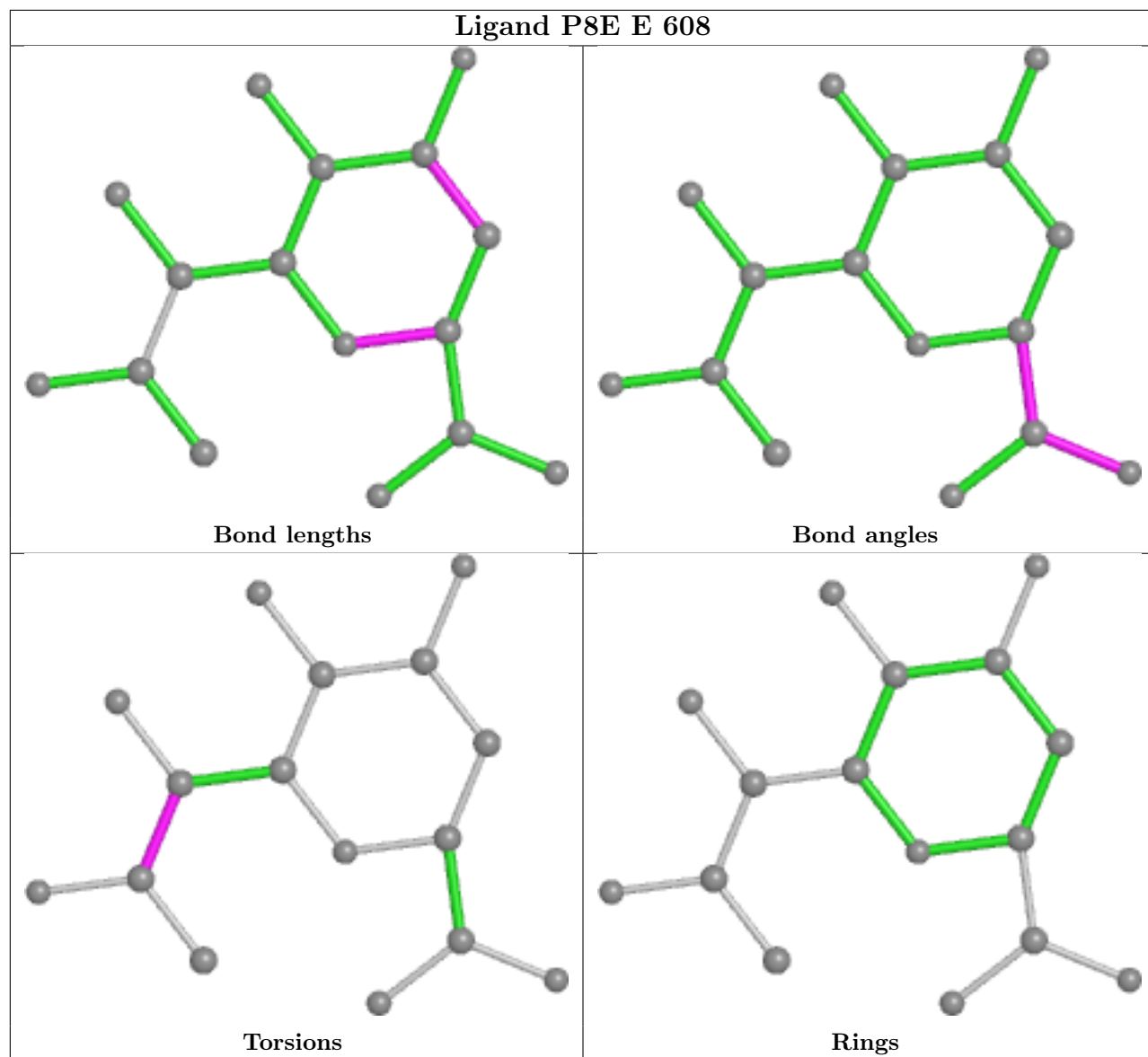
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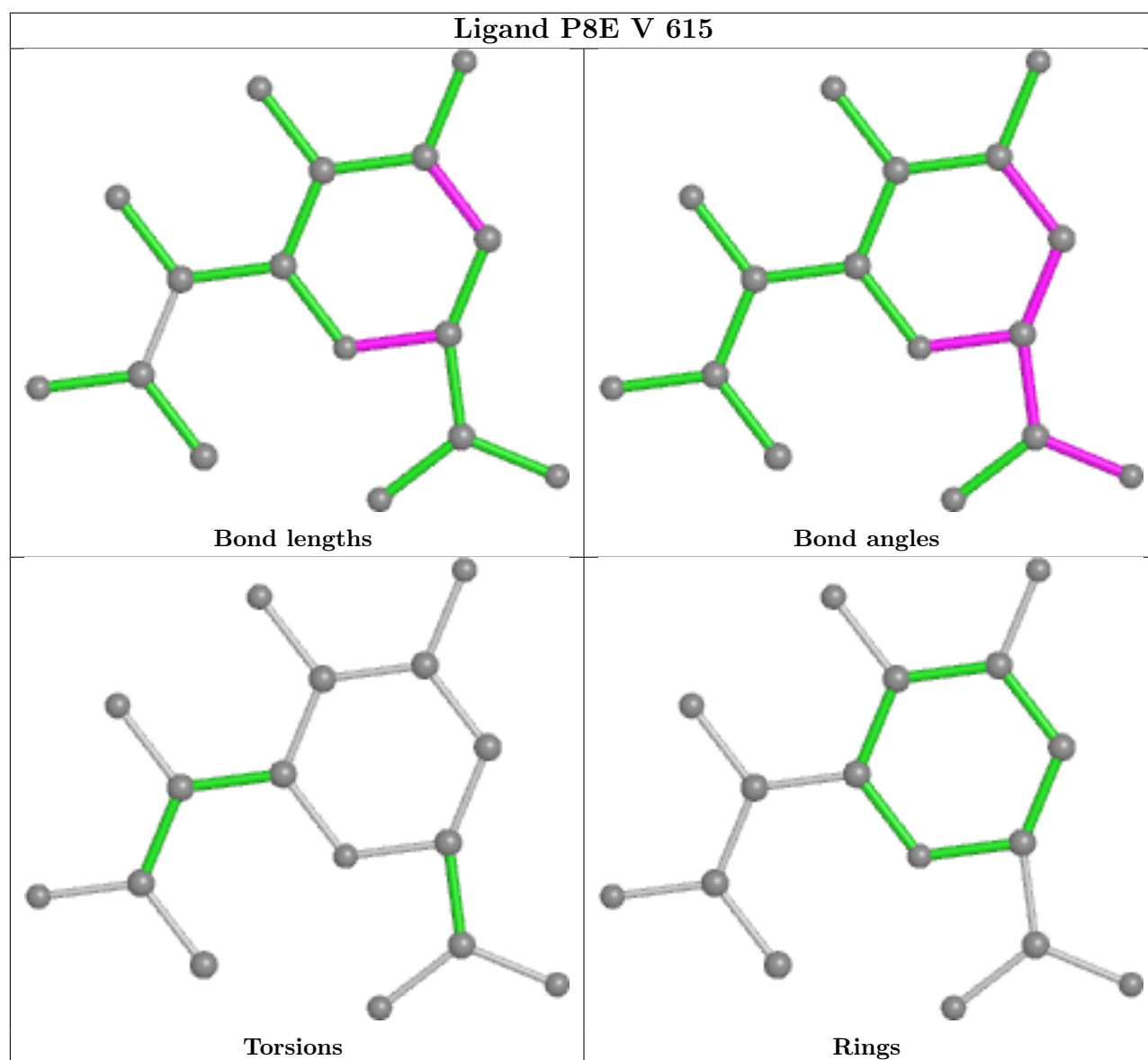


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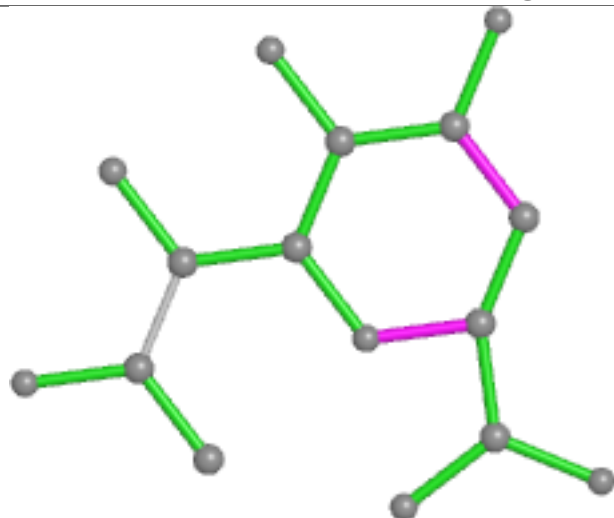


Rings

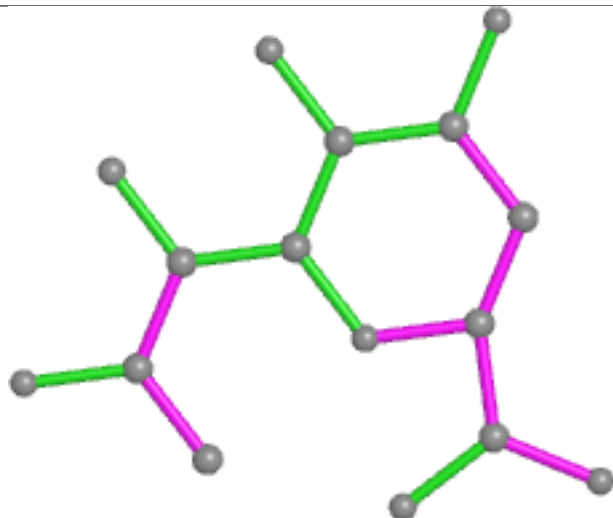




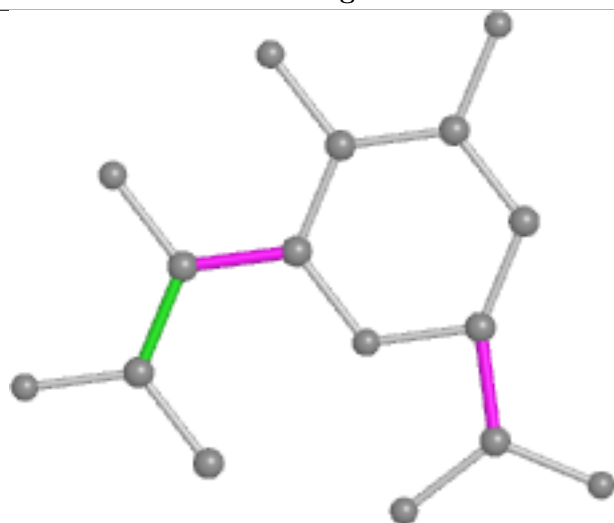
Ligand P8E T 611



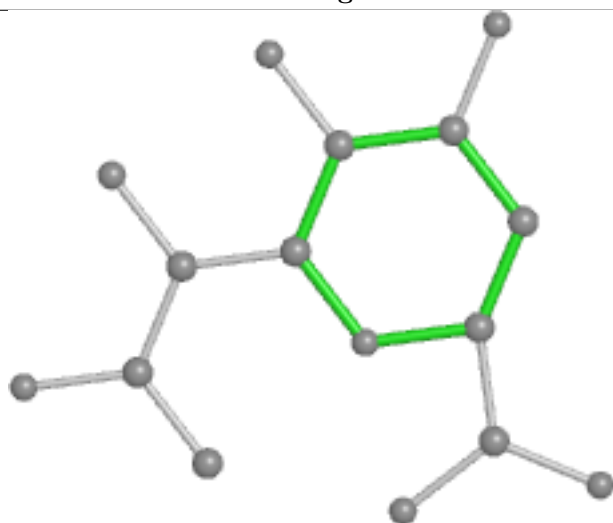
Bond lengths



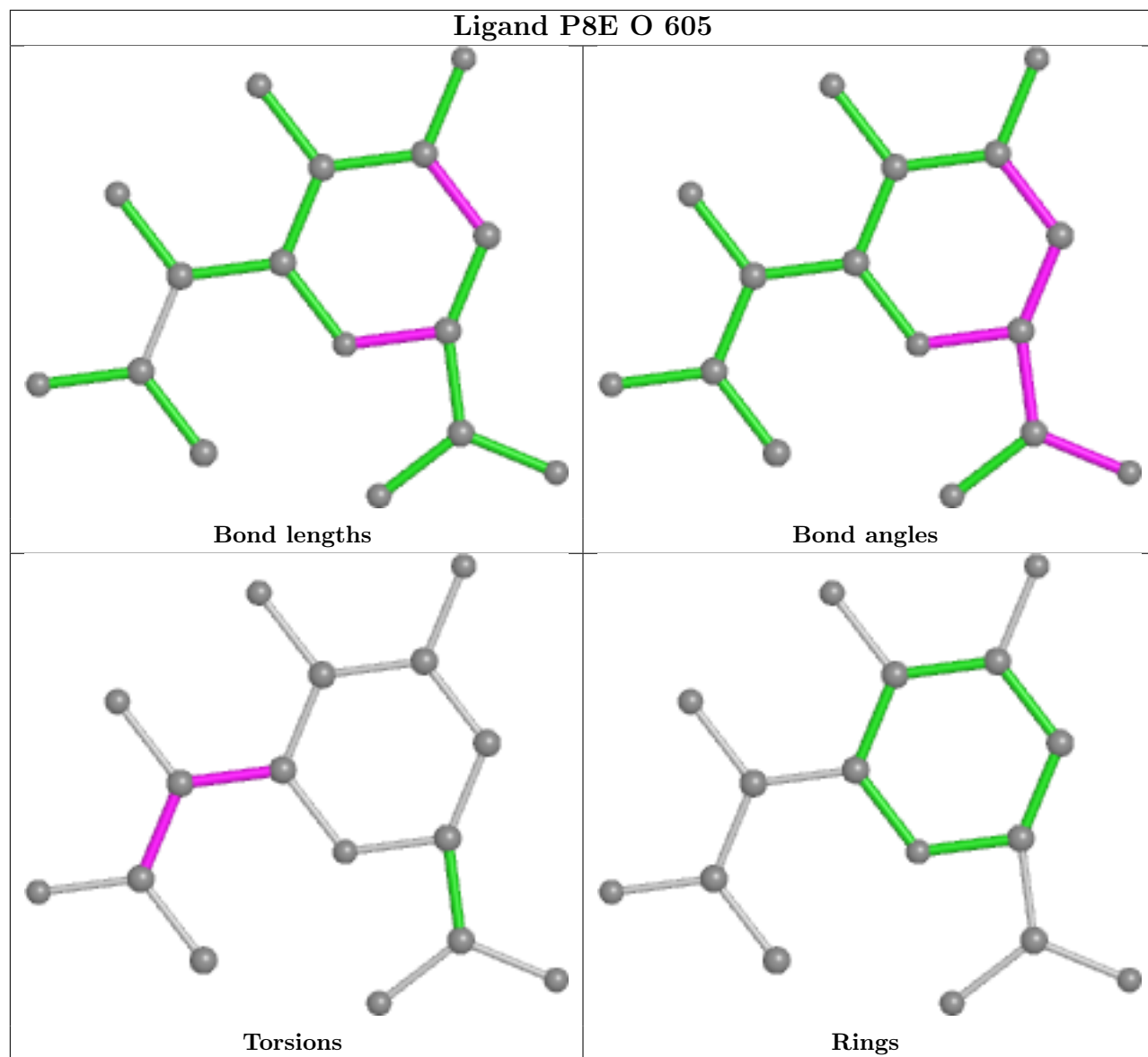
Bond angles

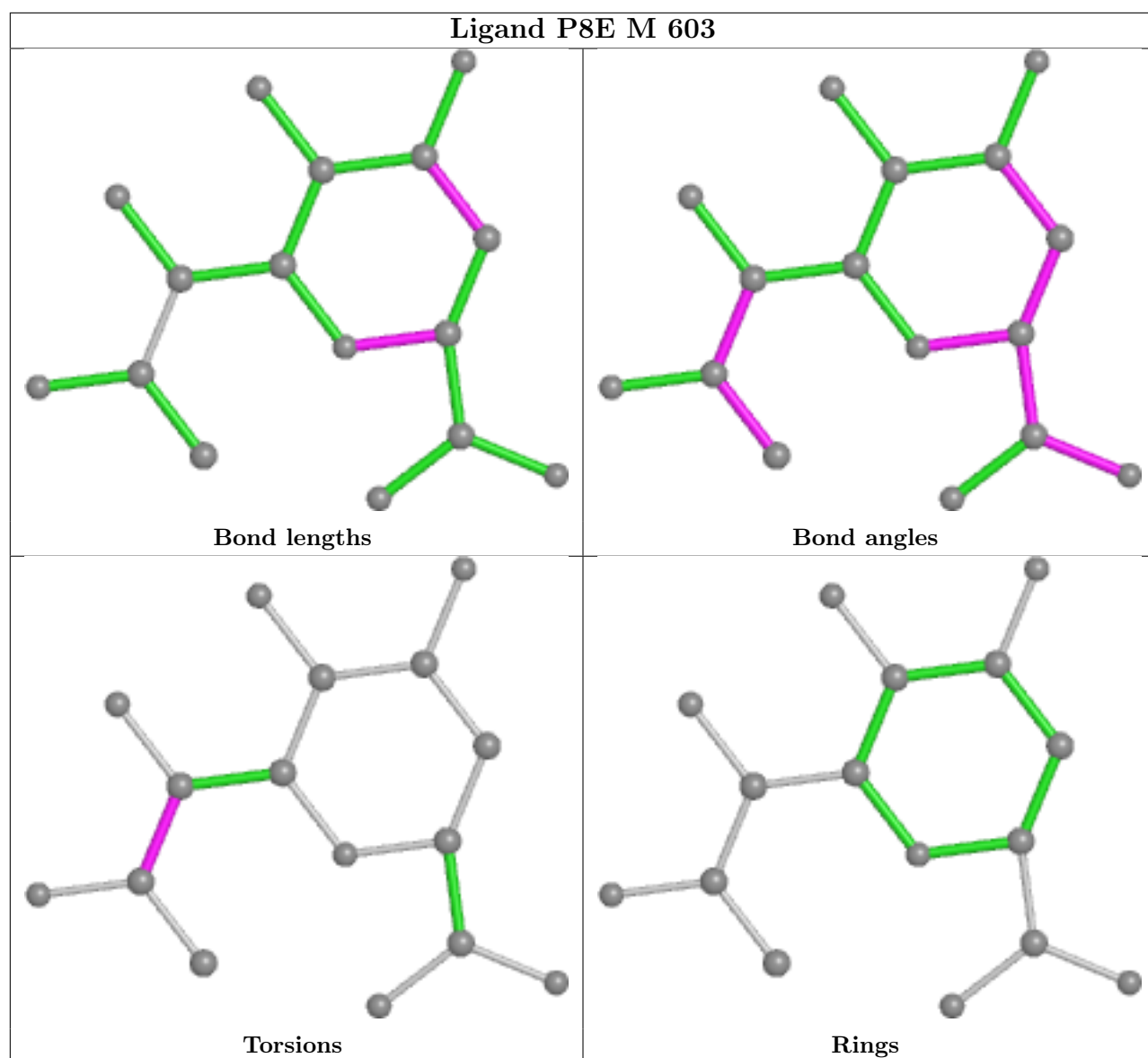


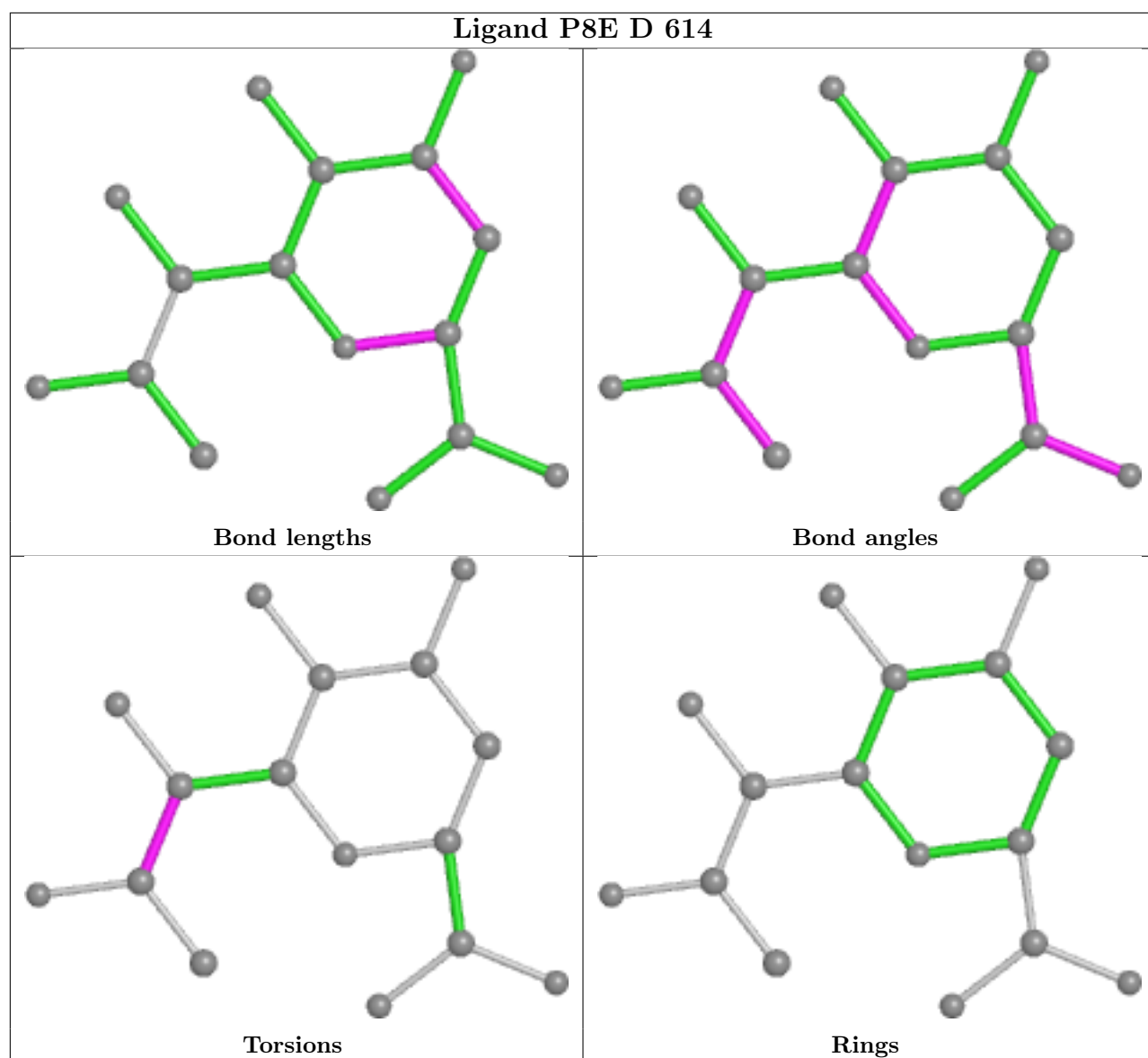
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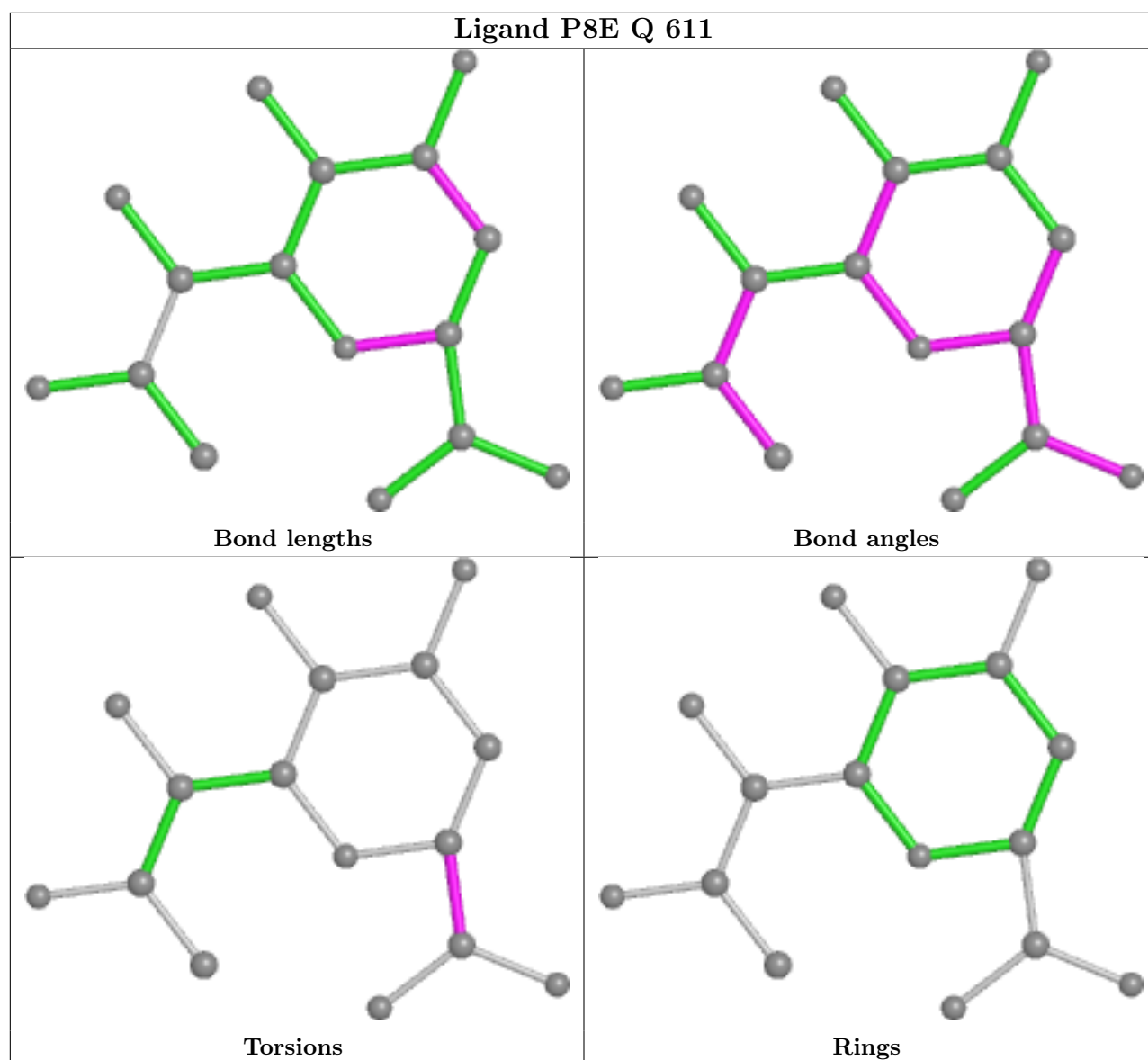


Rings

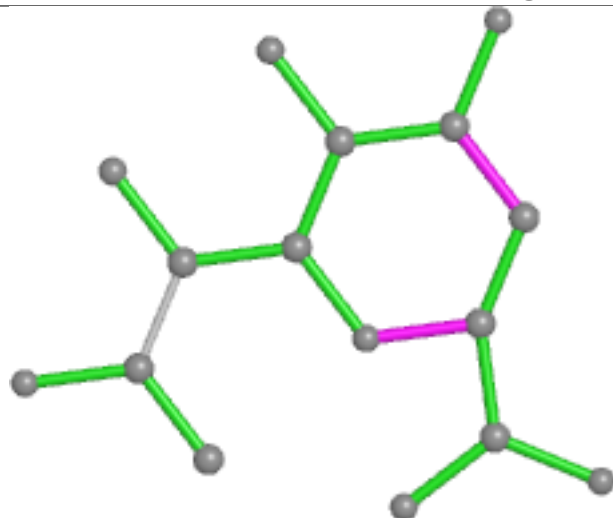




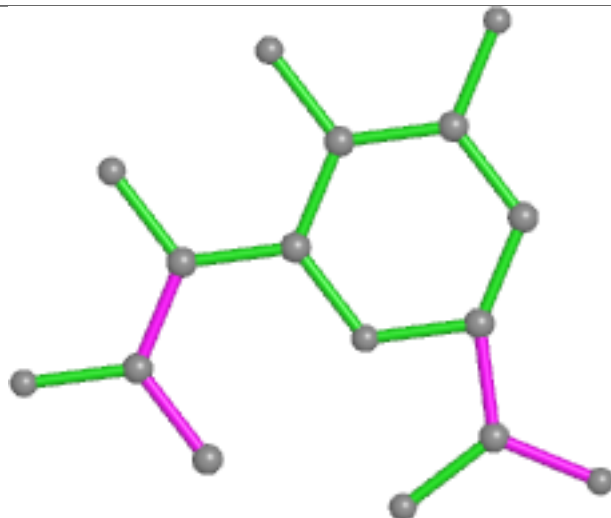




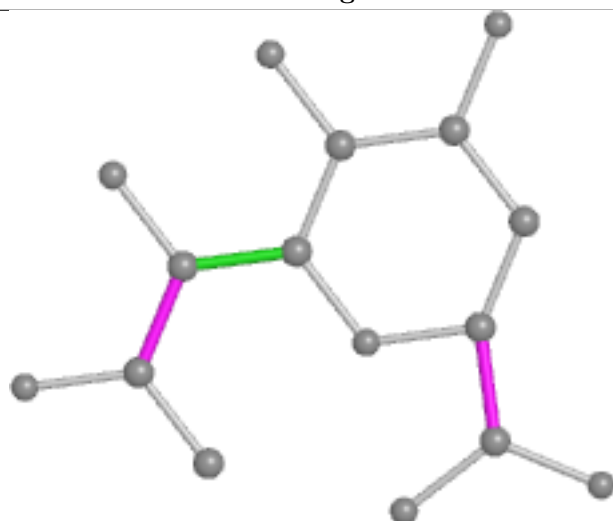
Ligand P8E F 614



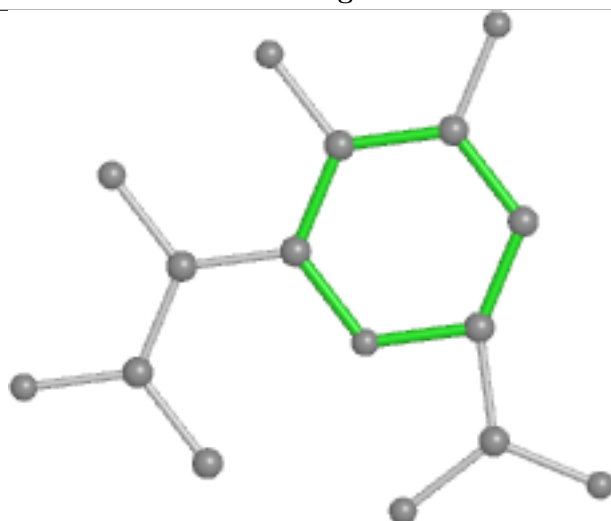
Bond lengths



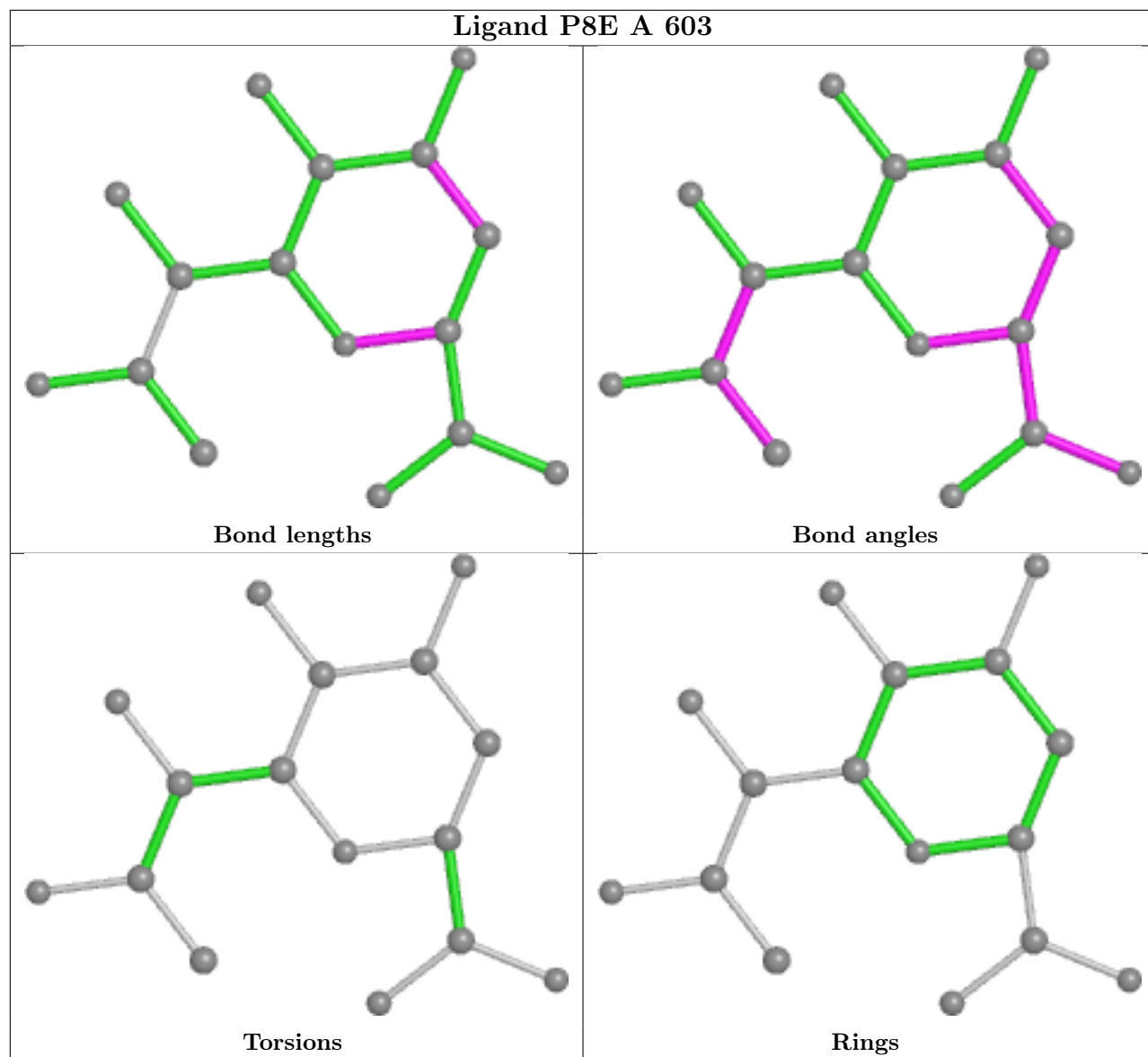
Bond angles

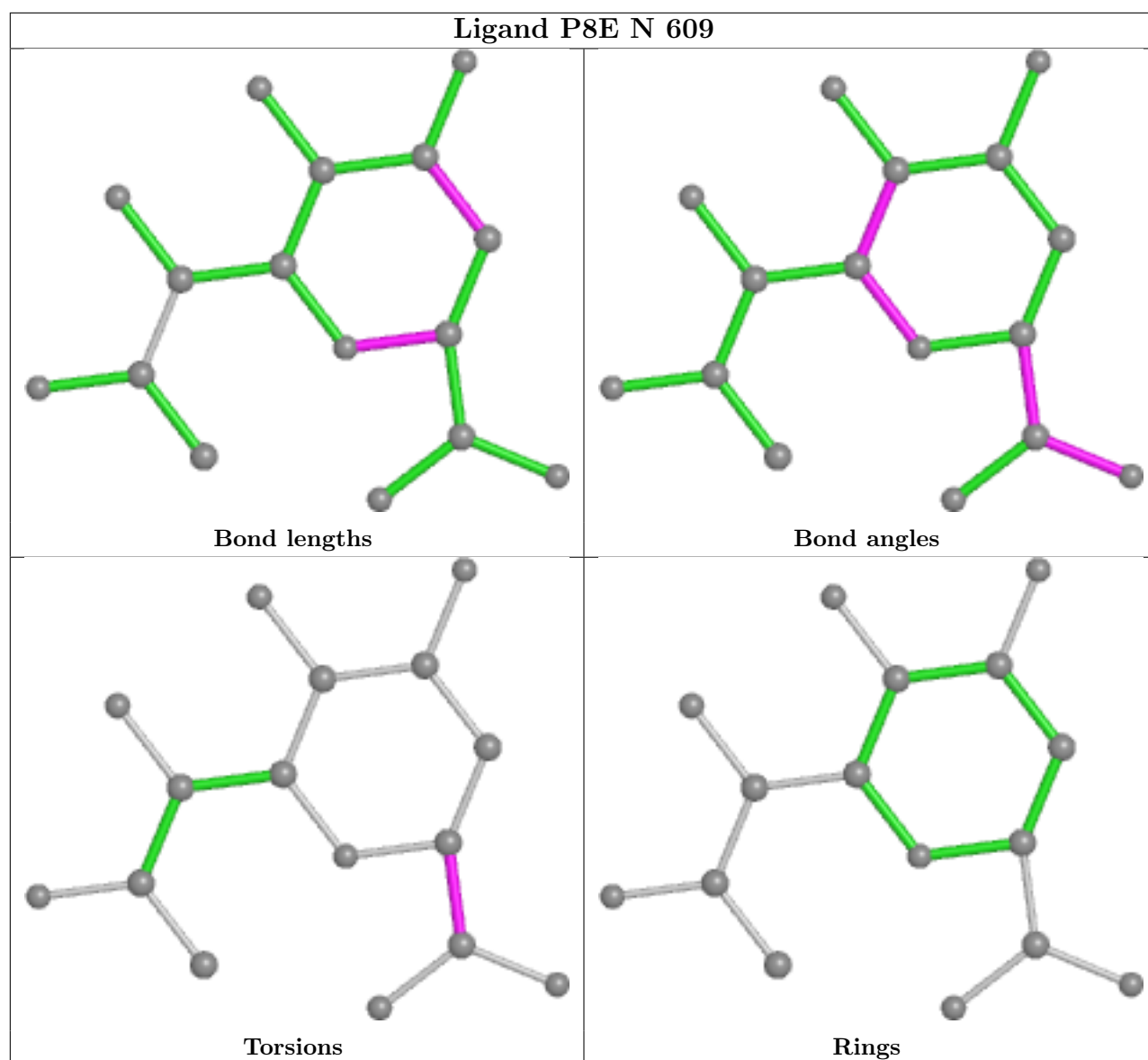


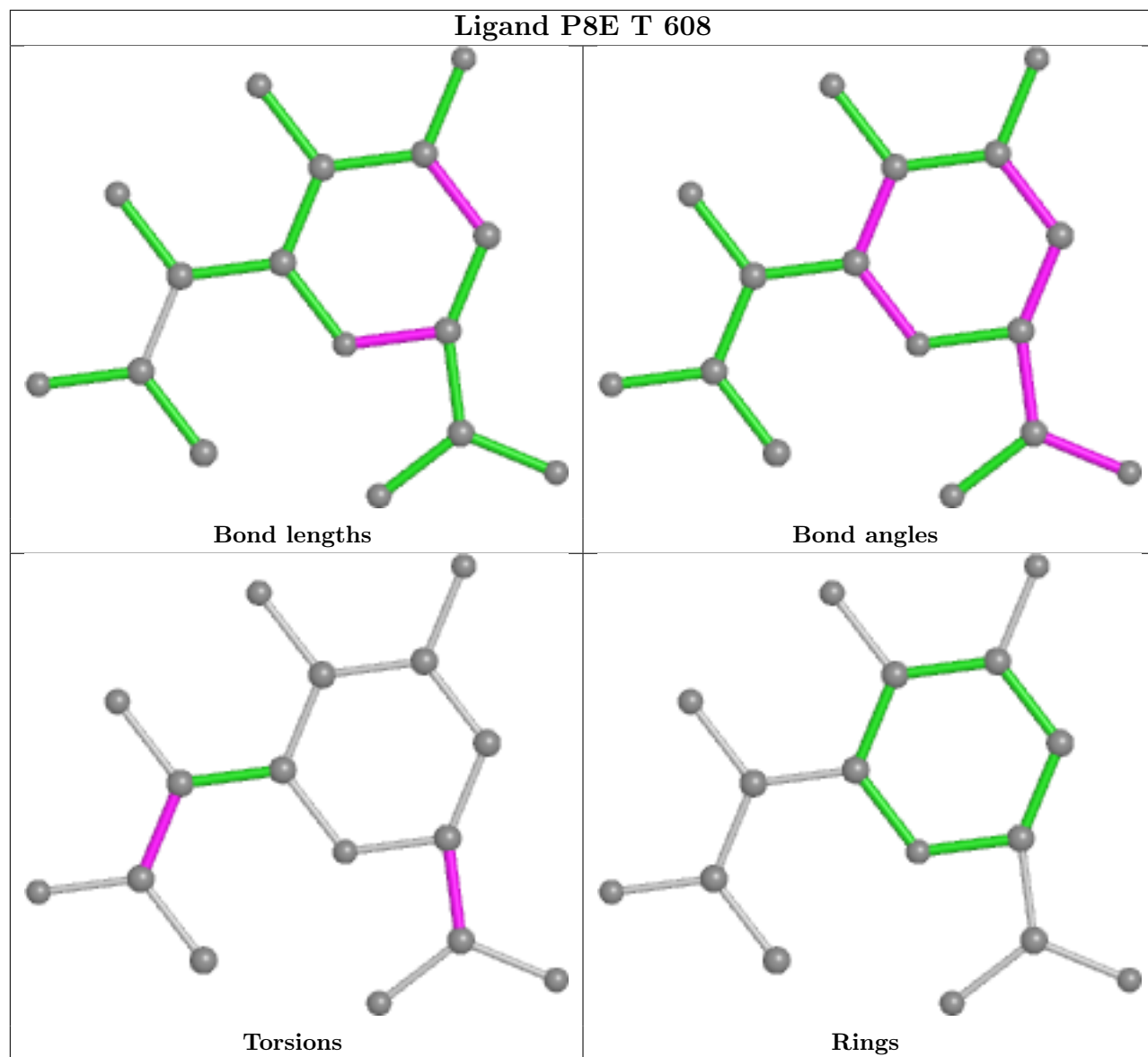
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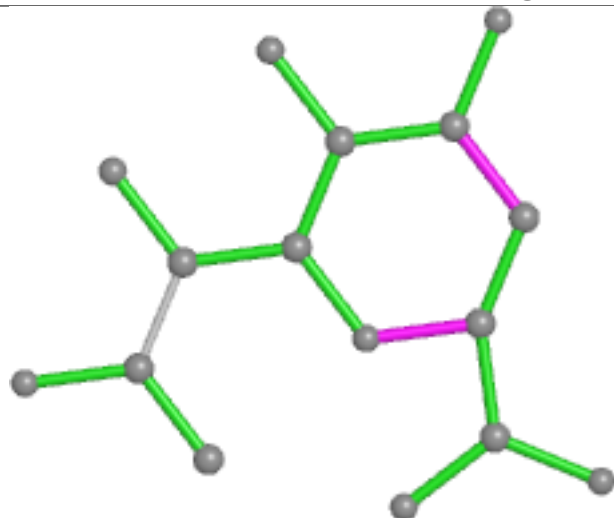
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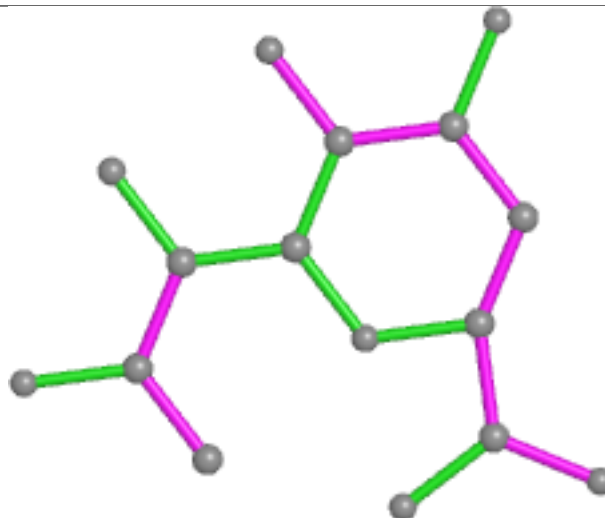




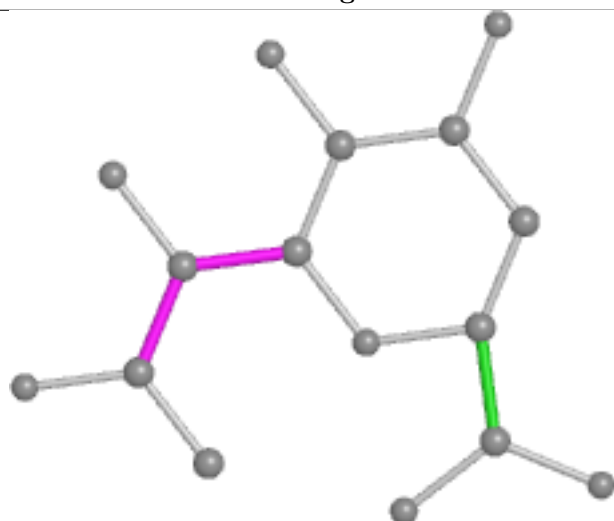
Ligand P8E C 616



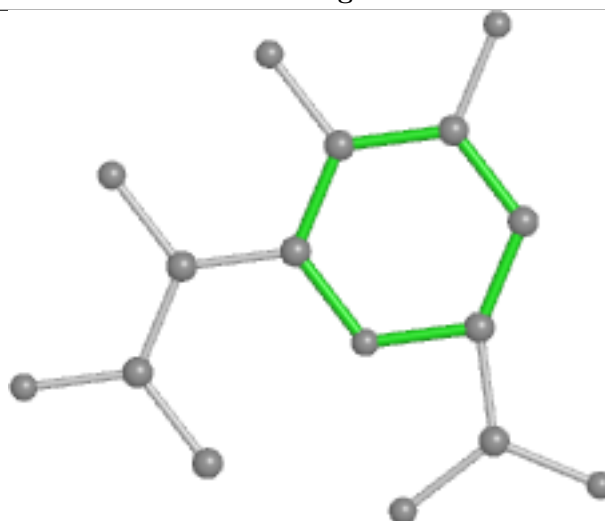
Bond lengths



Bond angles

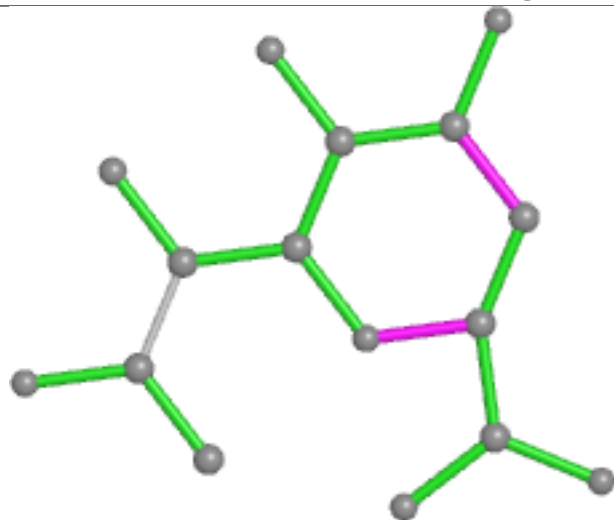


Torsions

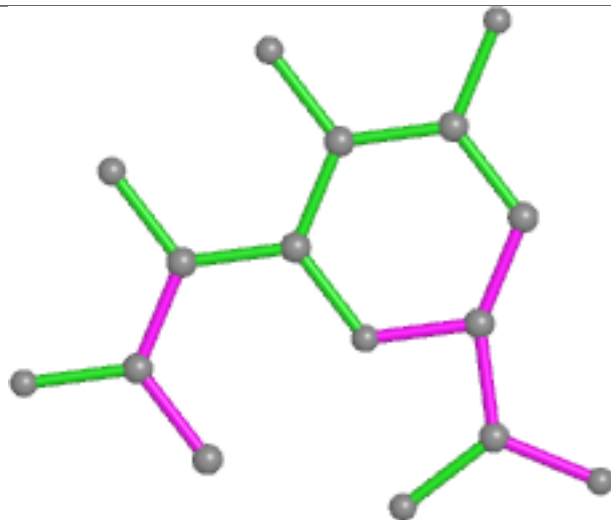


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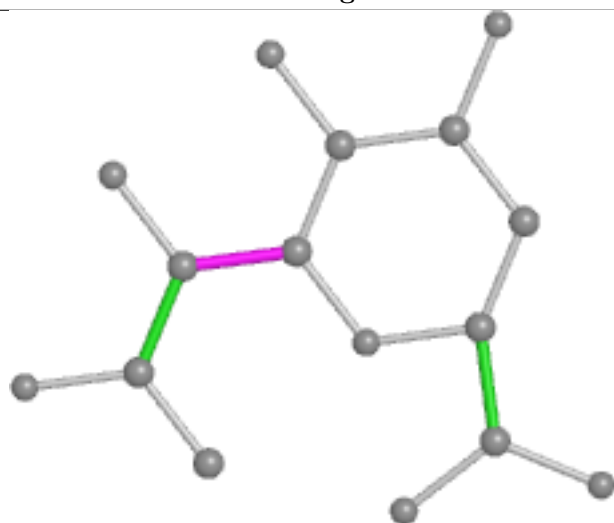
Ligand P8E B 613



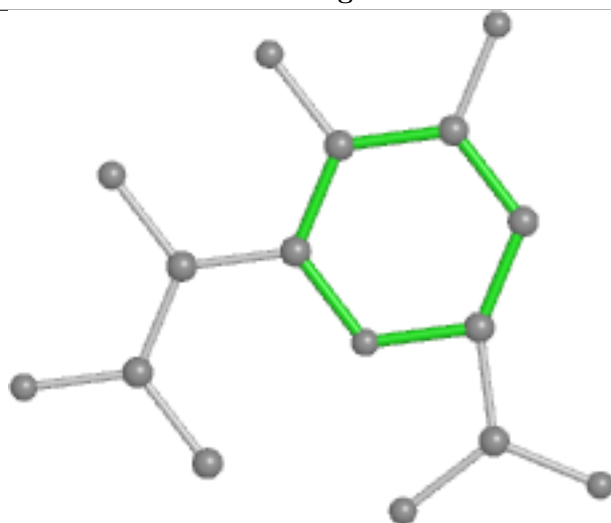
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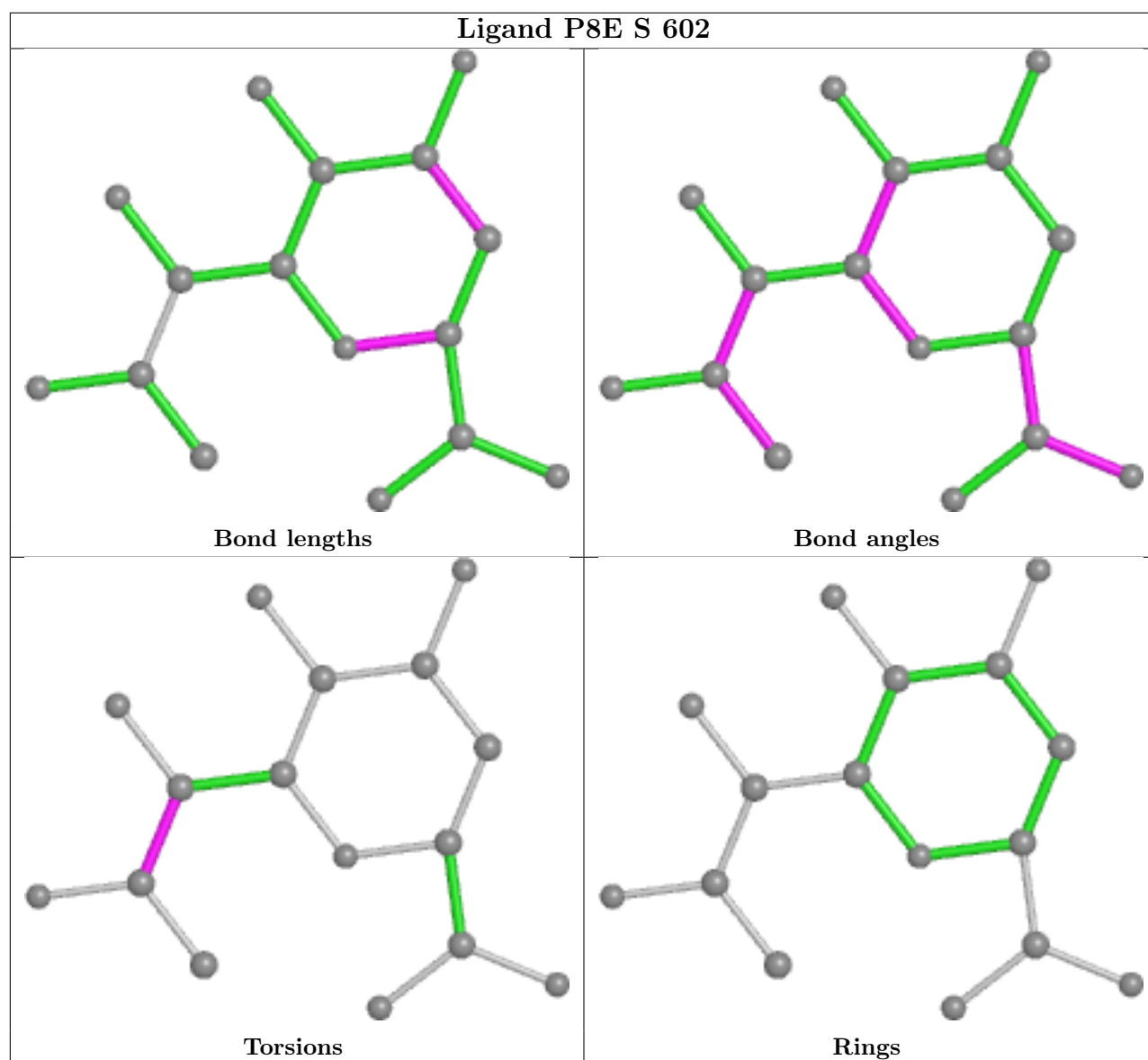
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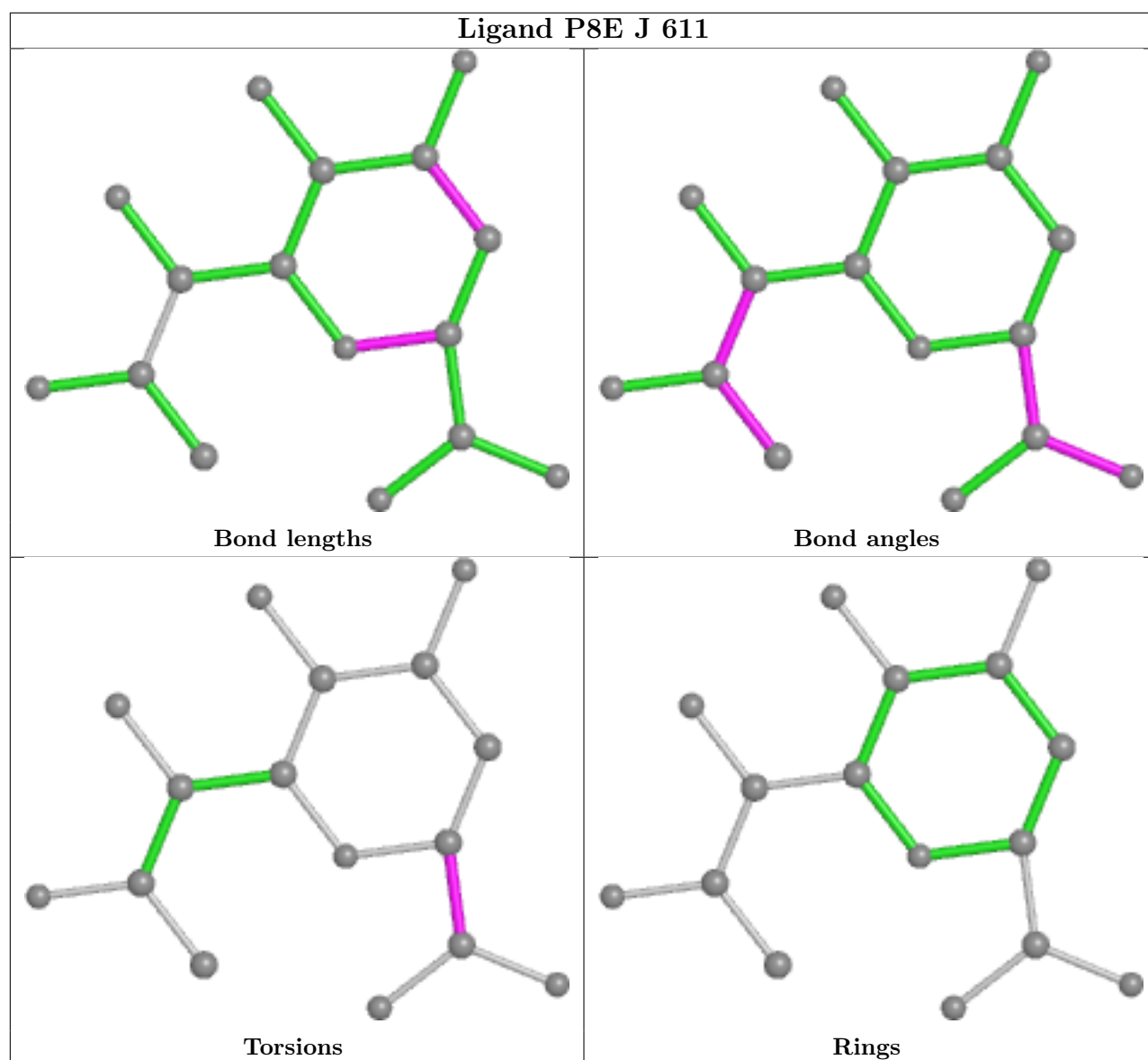


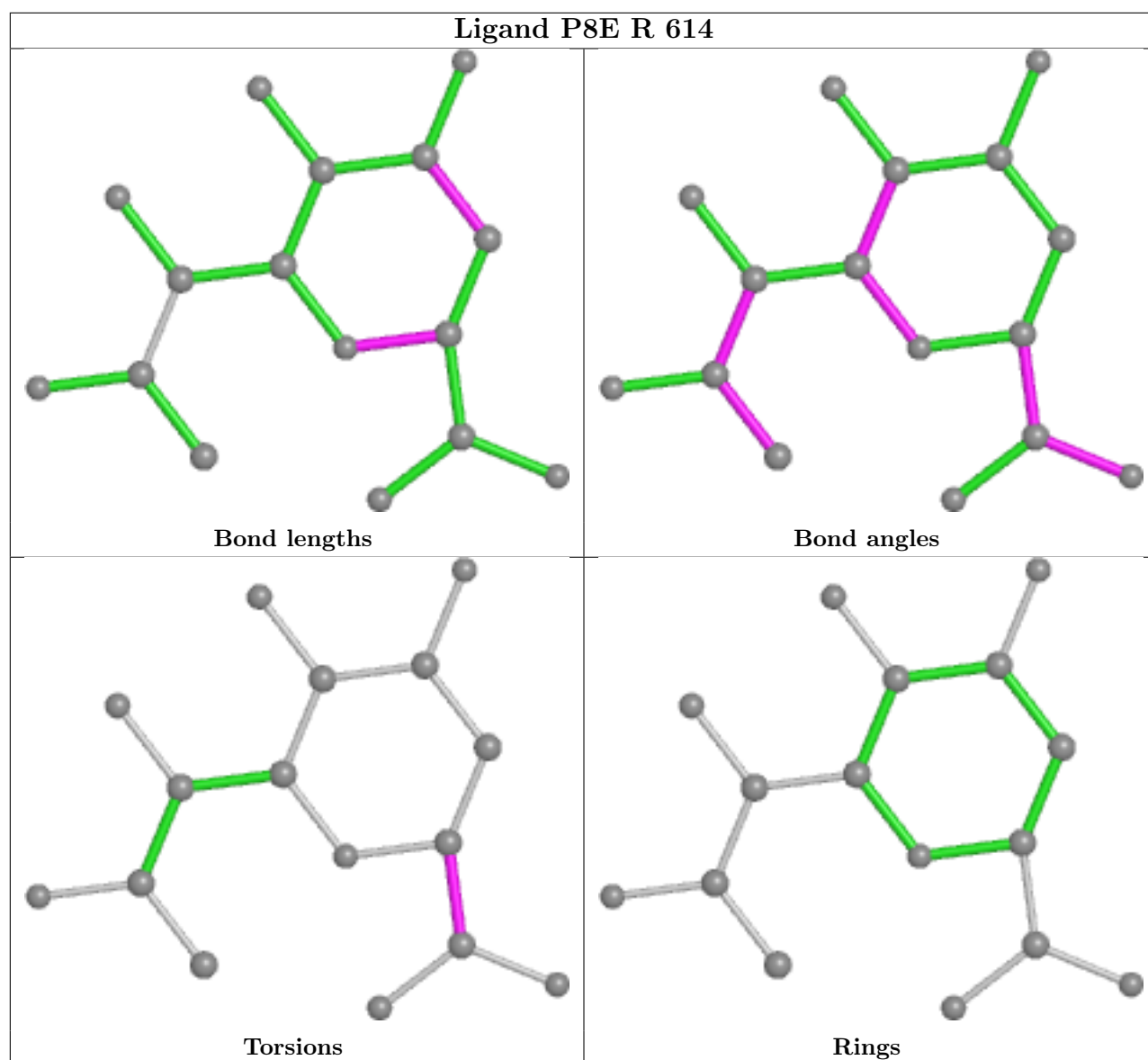
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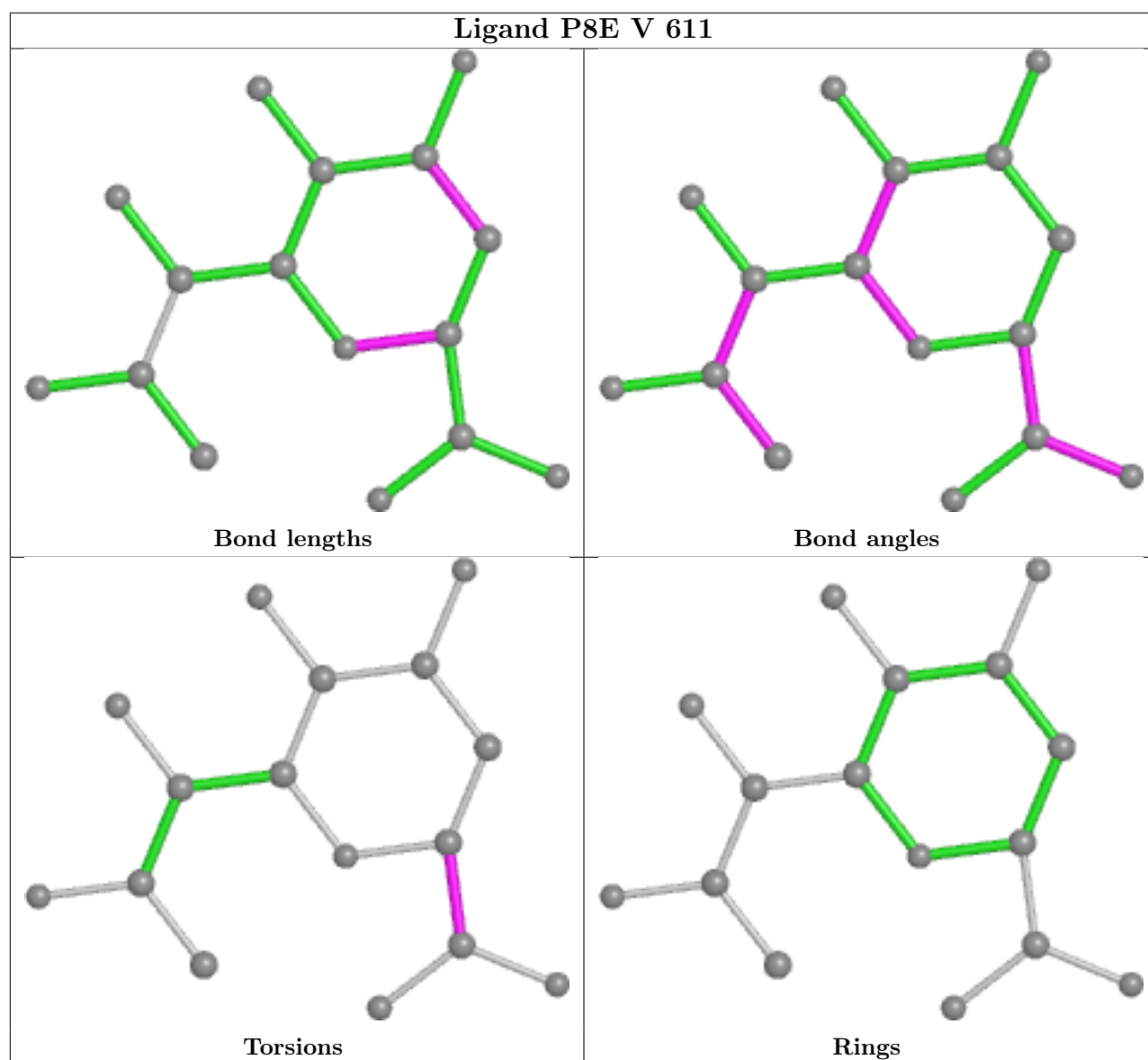


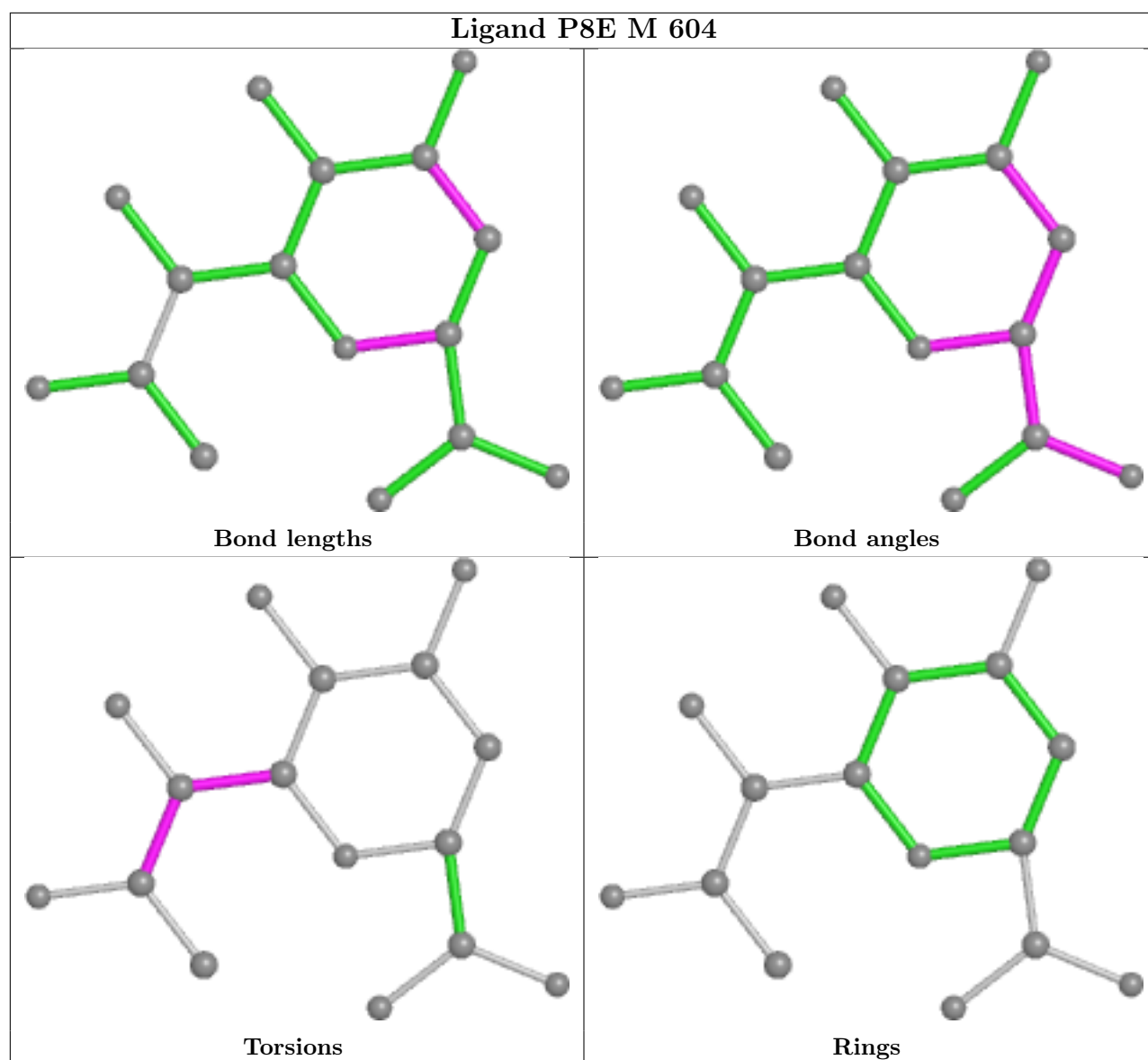
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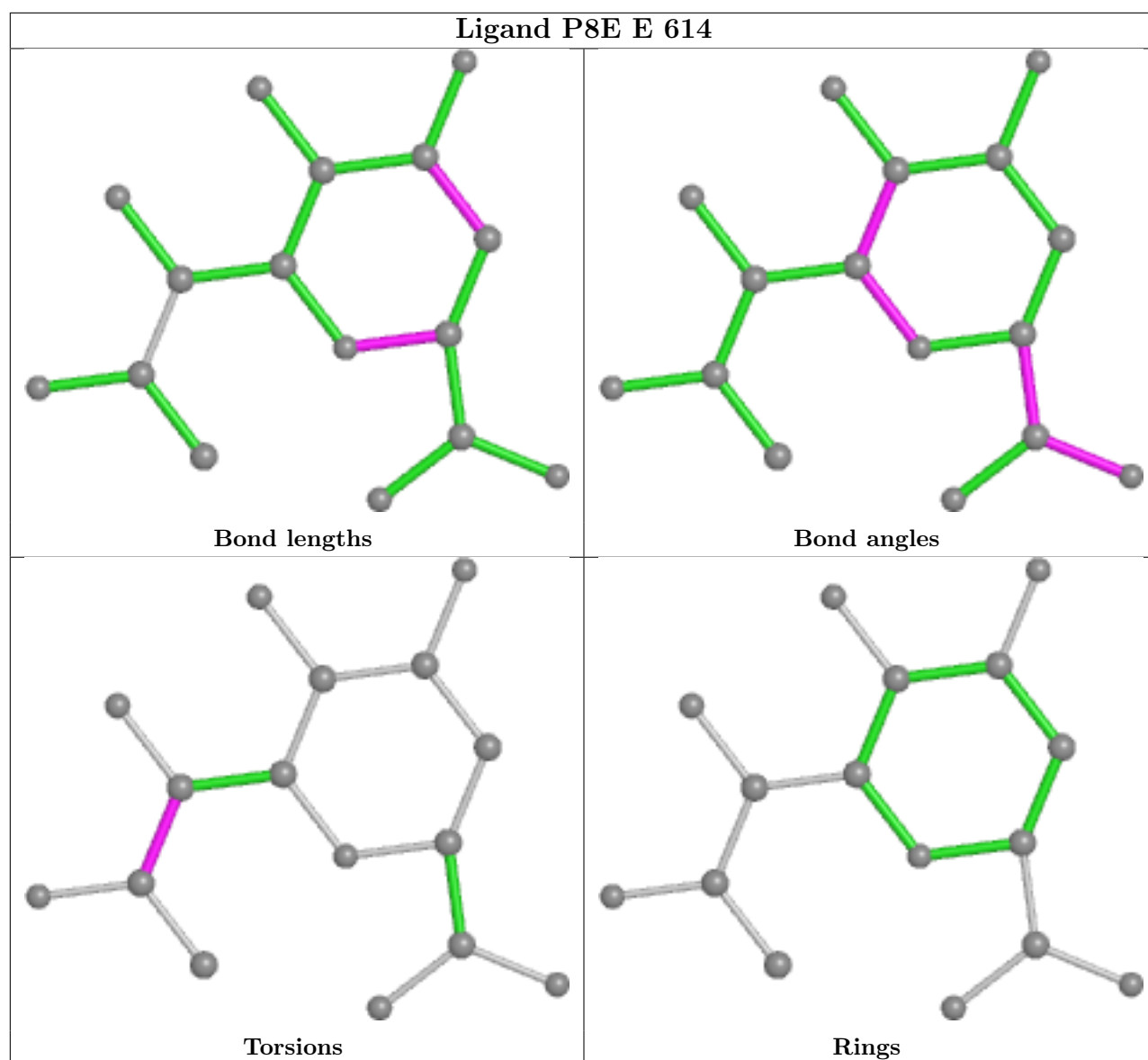




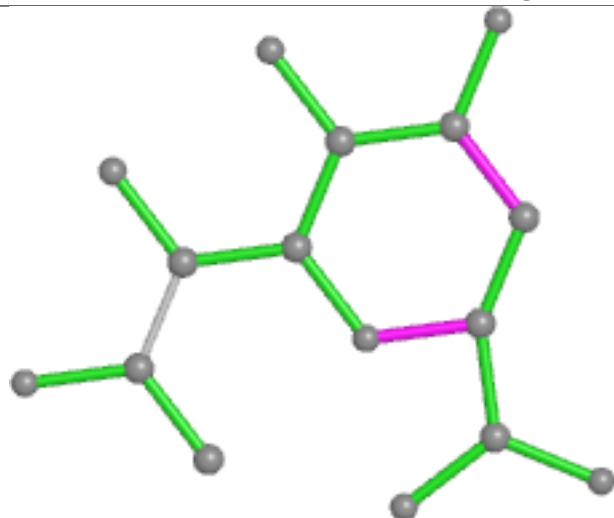




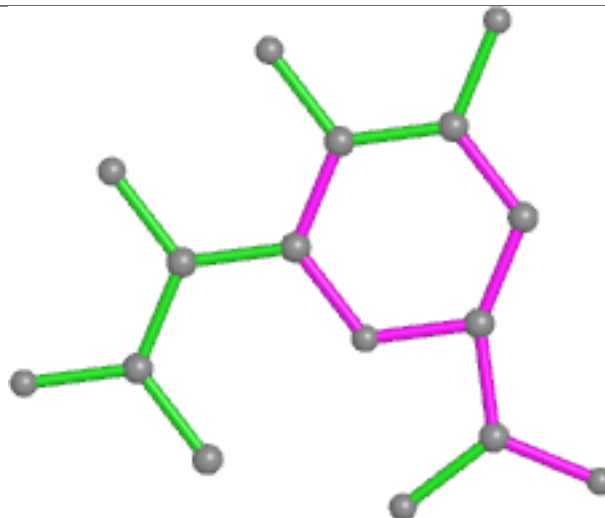




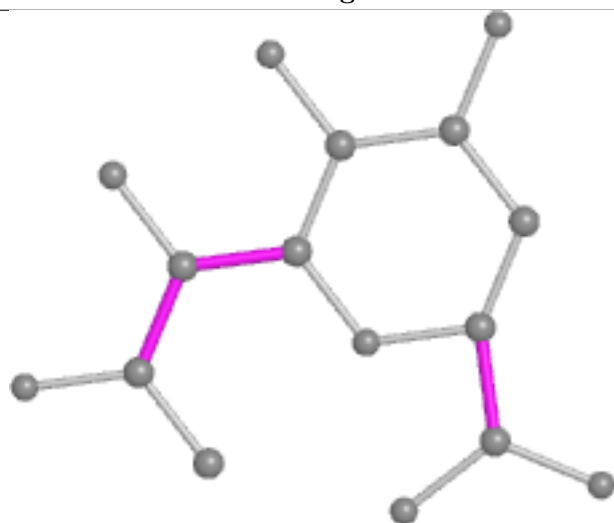
Ligand P8E A 604



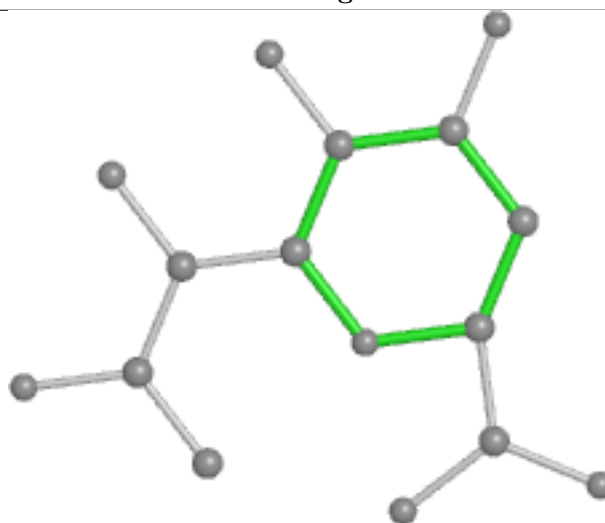
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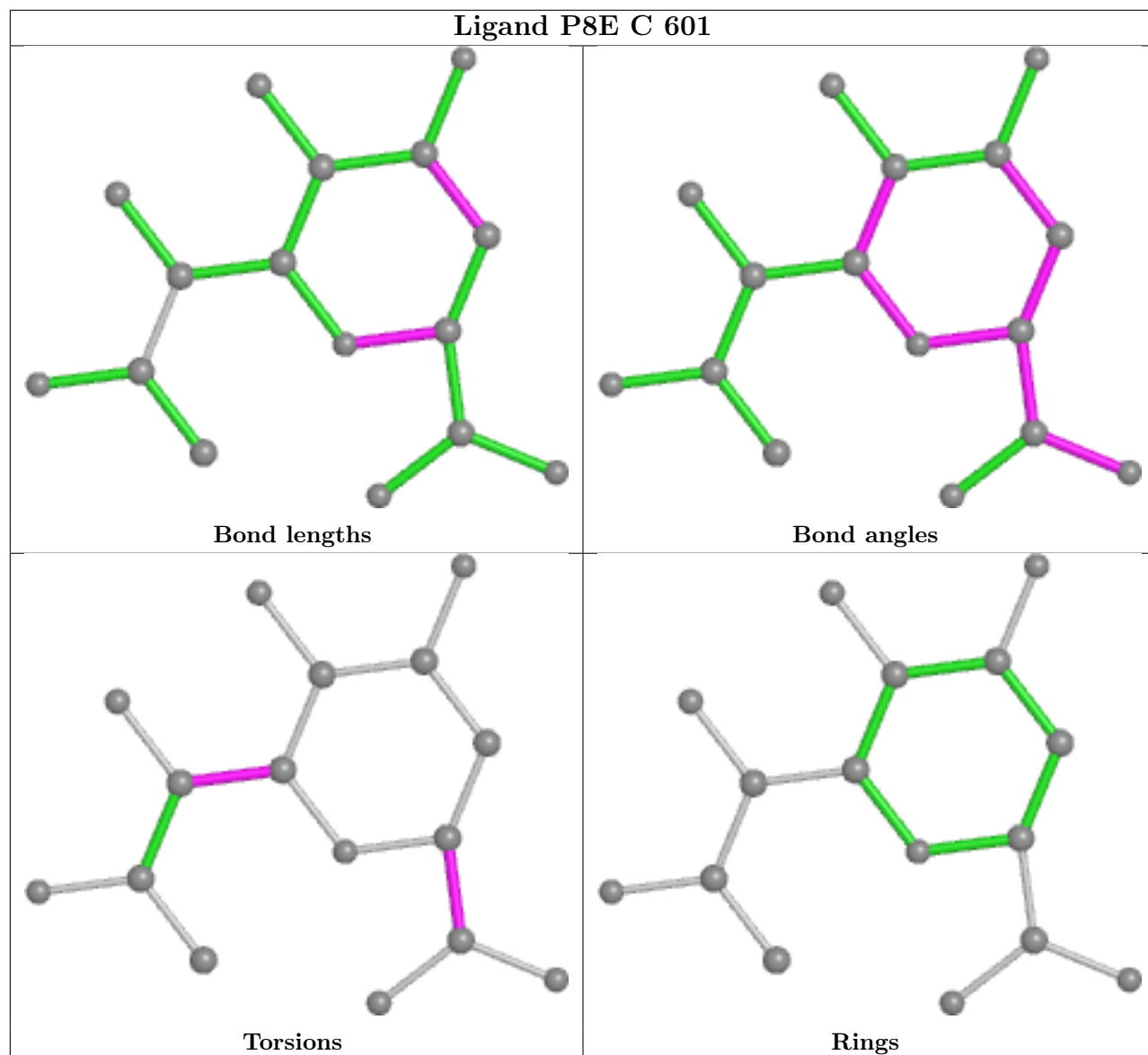
Bond angles



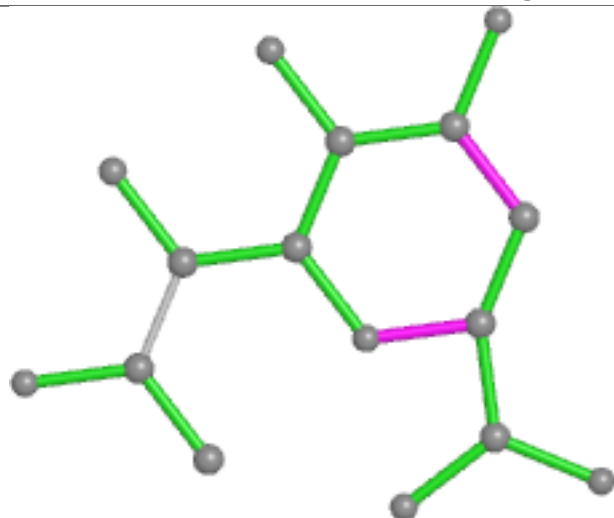
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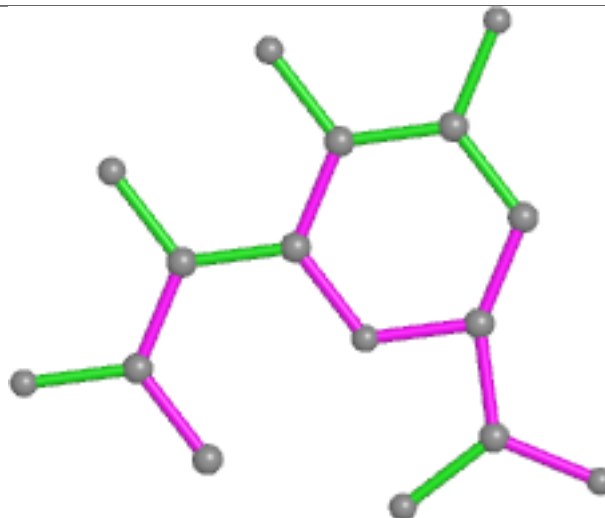
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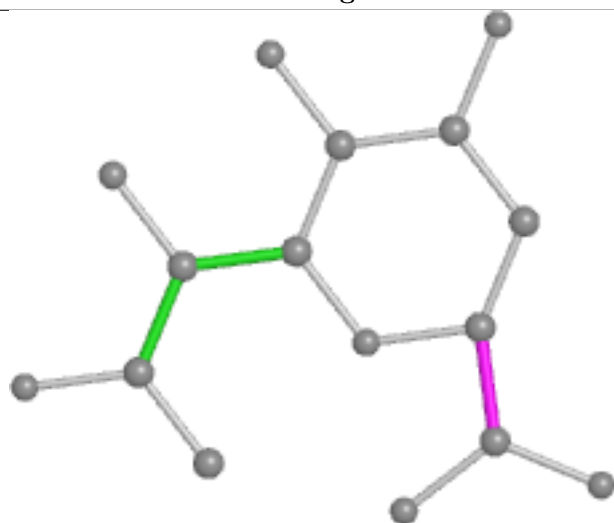
Ligand P8E B 617



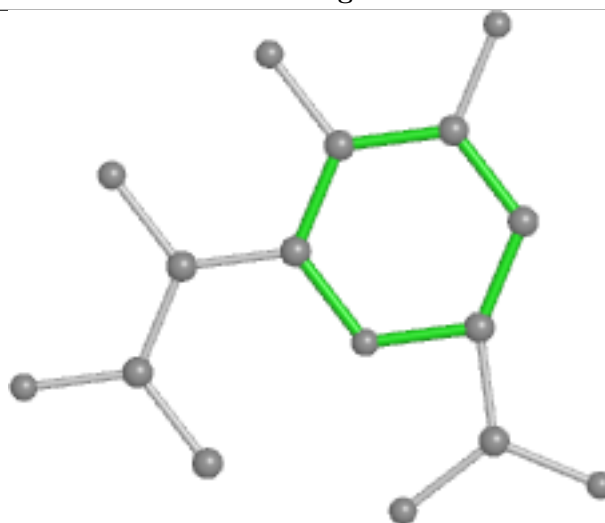
Bond lengths



Bond angles

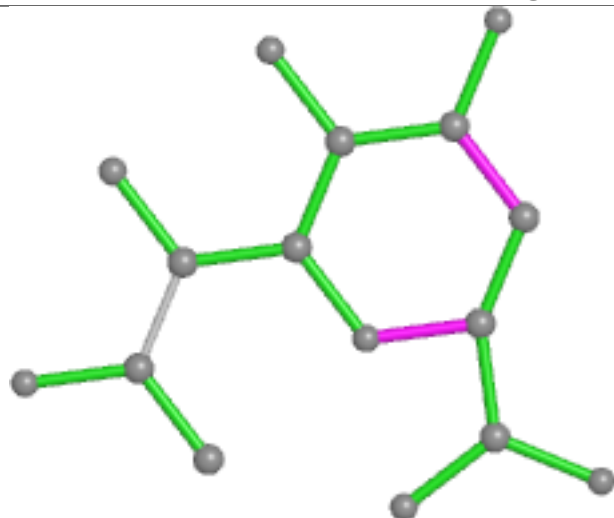


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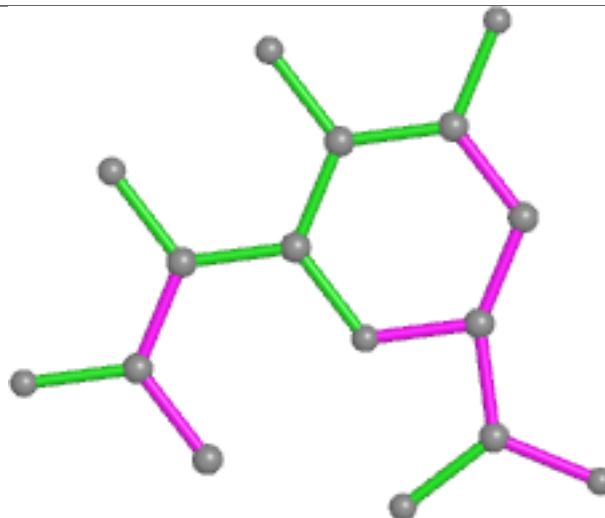


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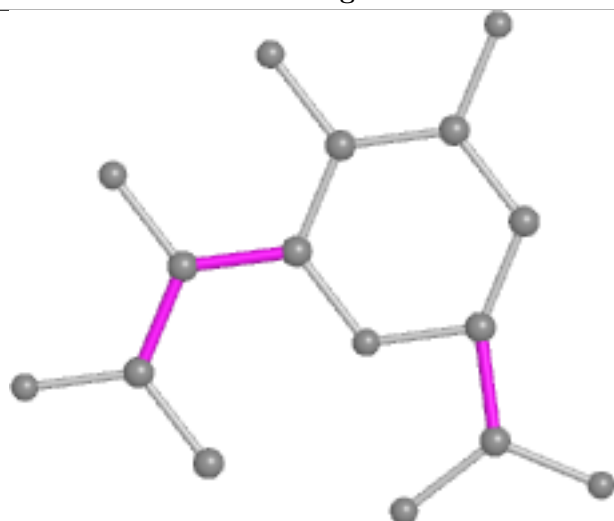
Ligand P8E I 611



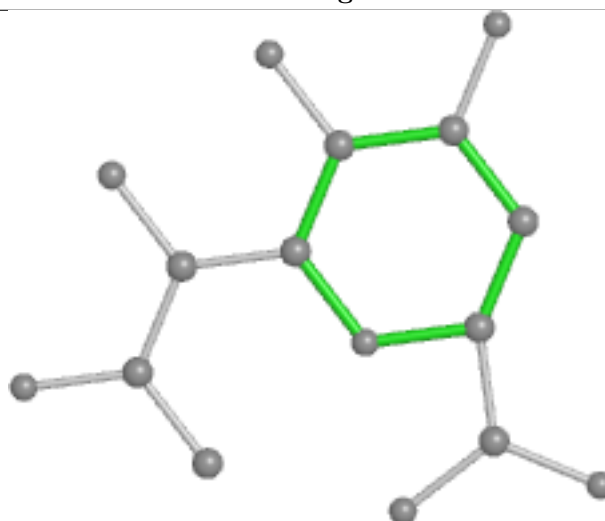
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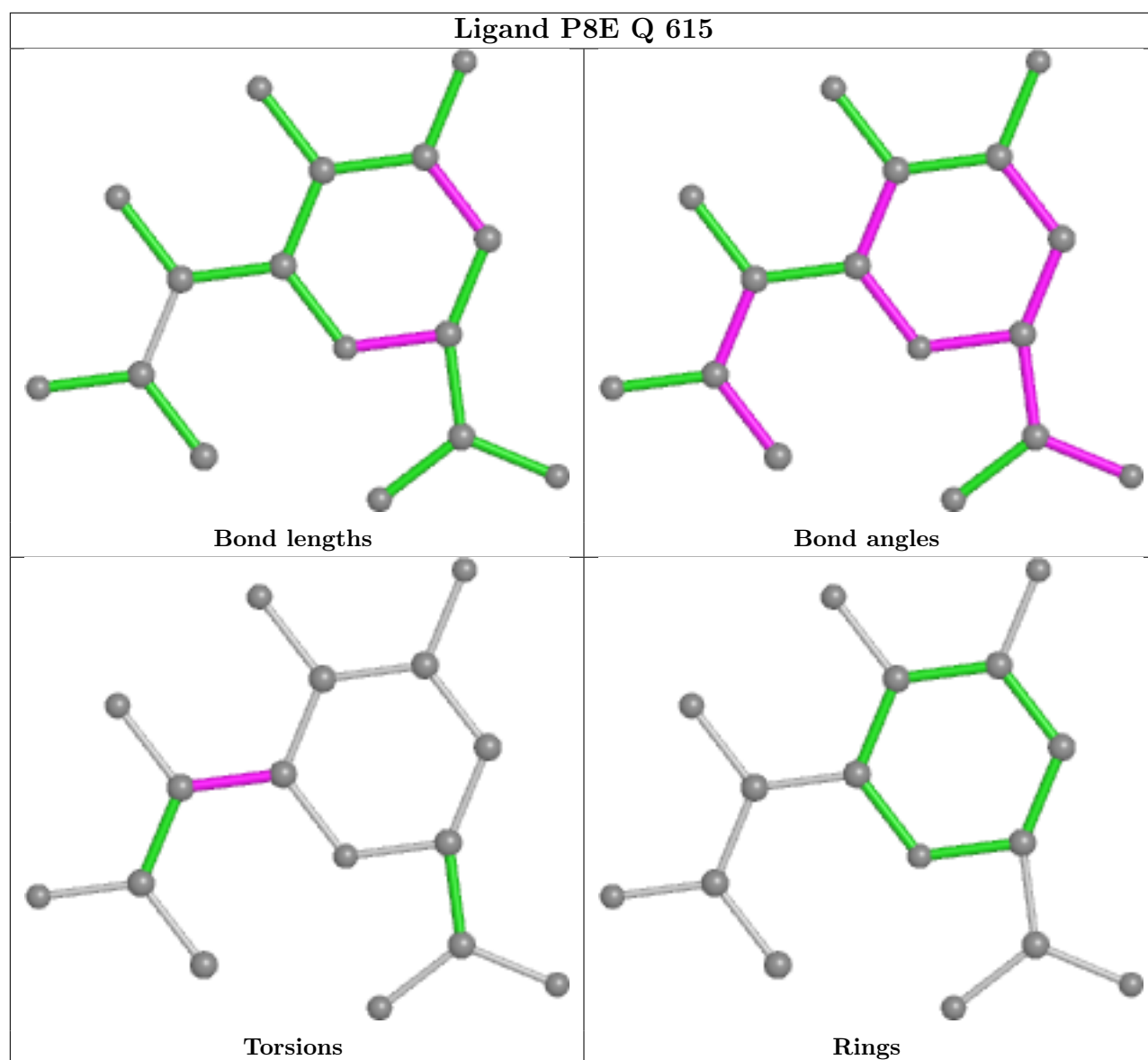
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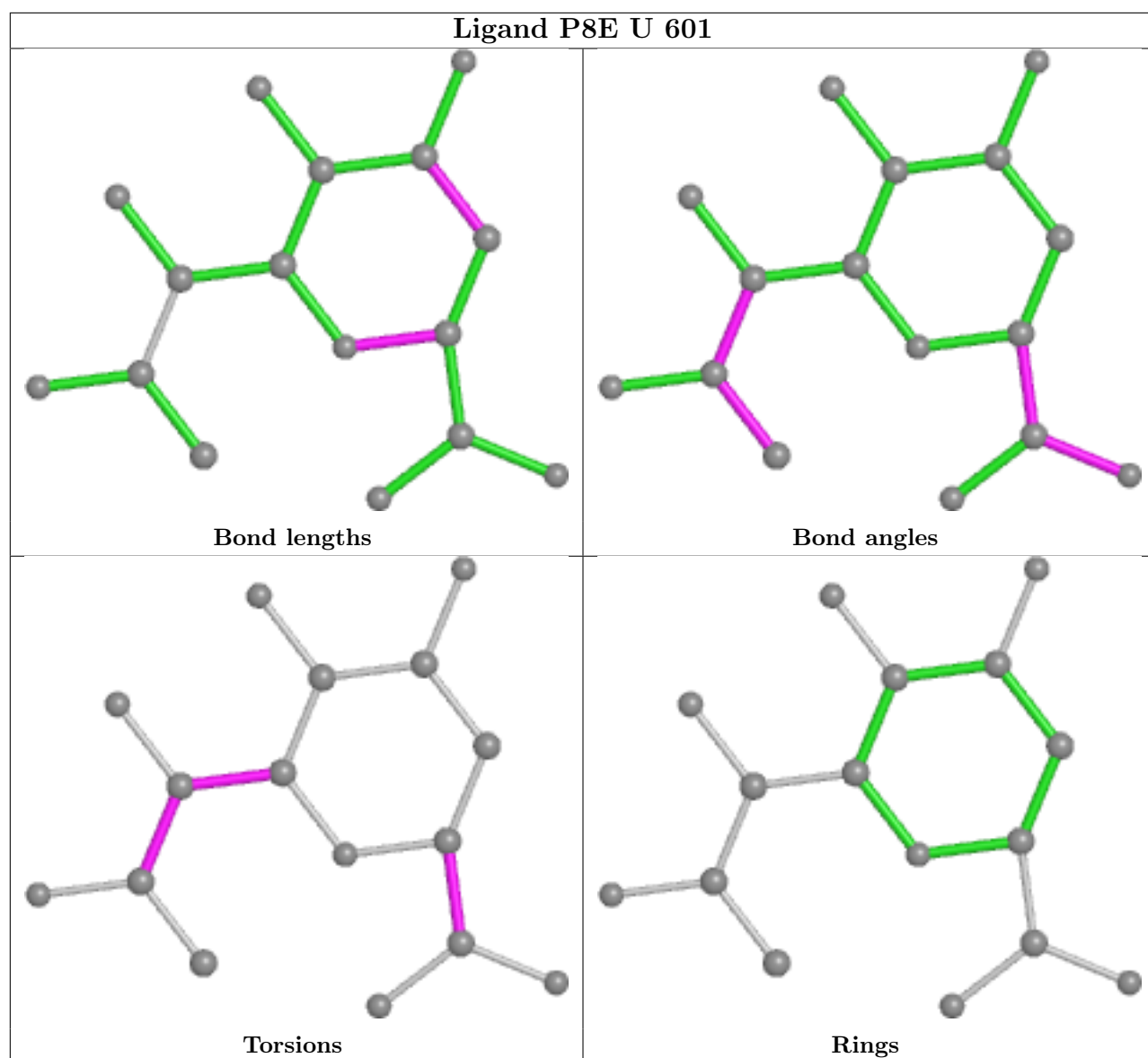


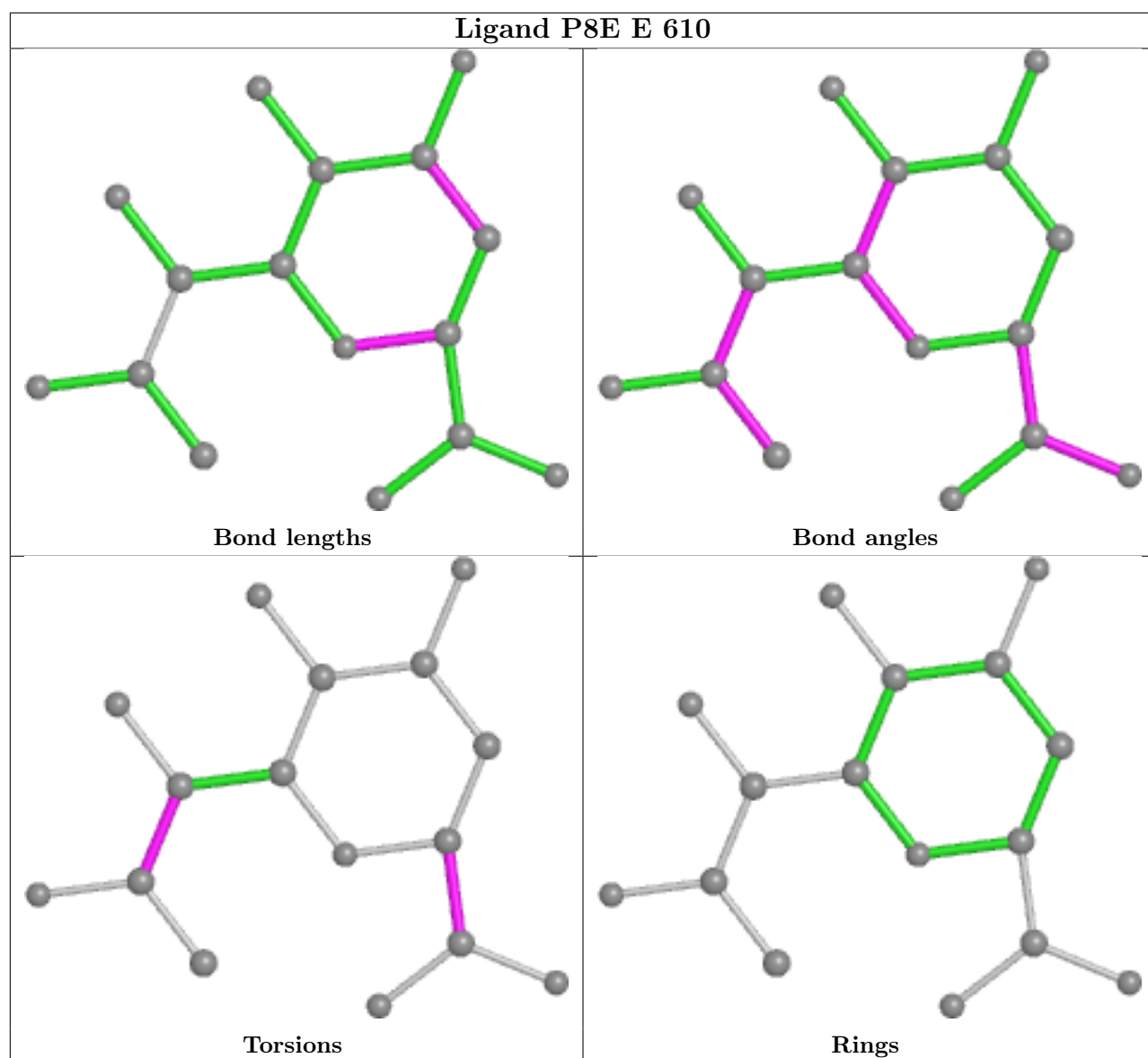
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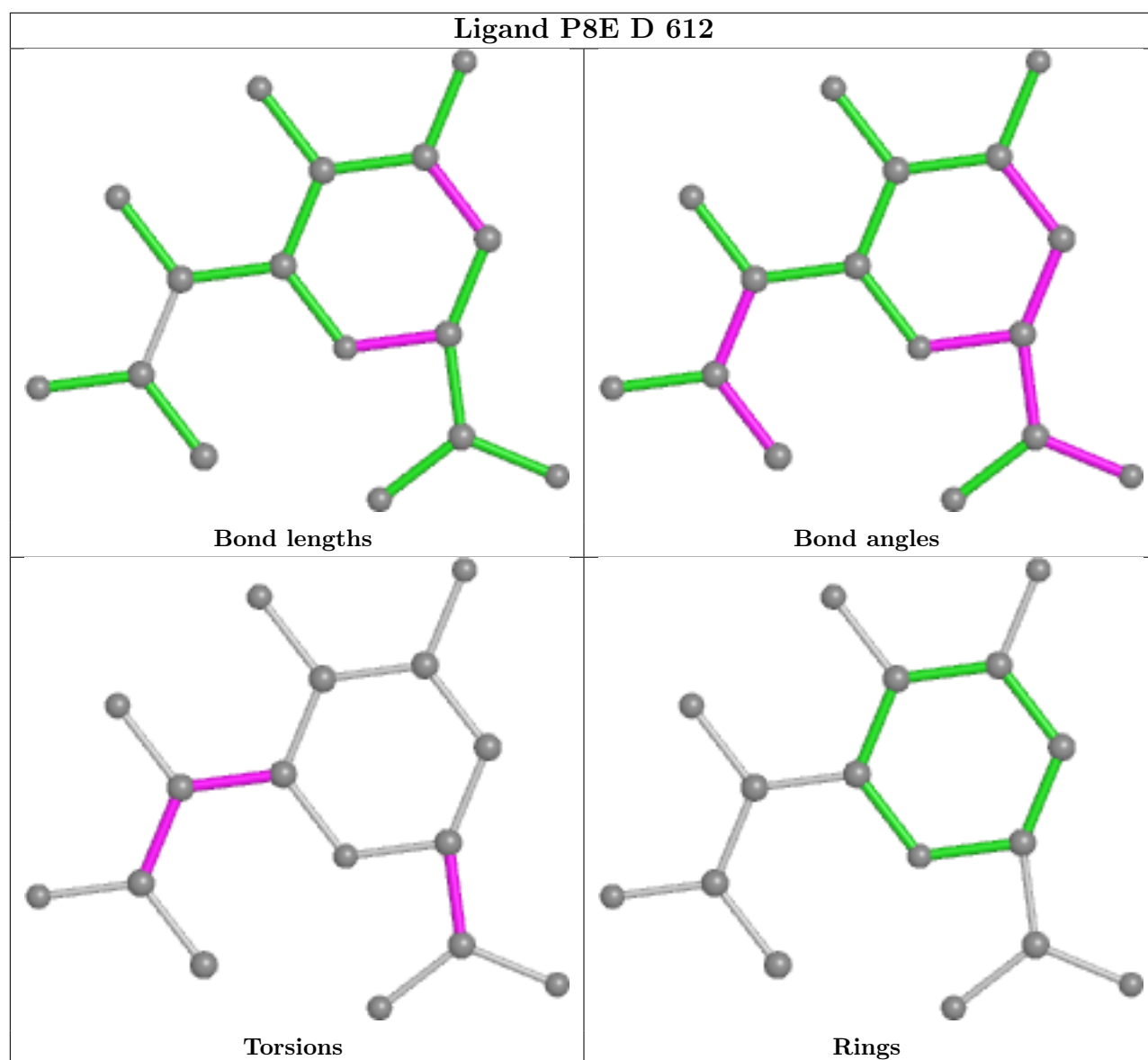


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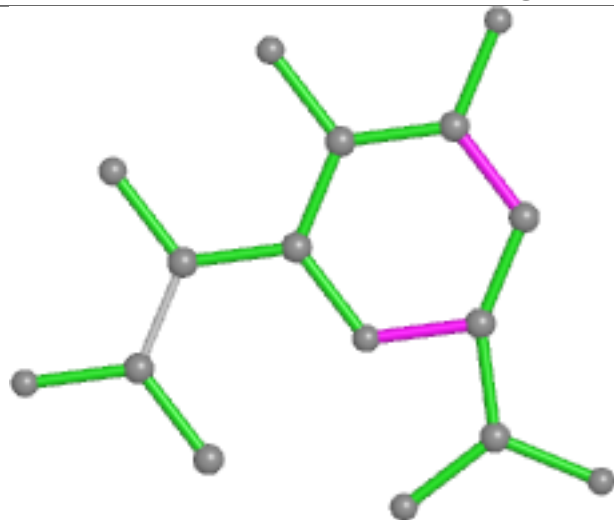




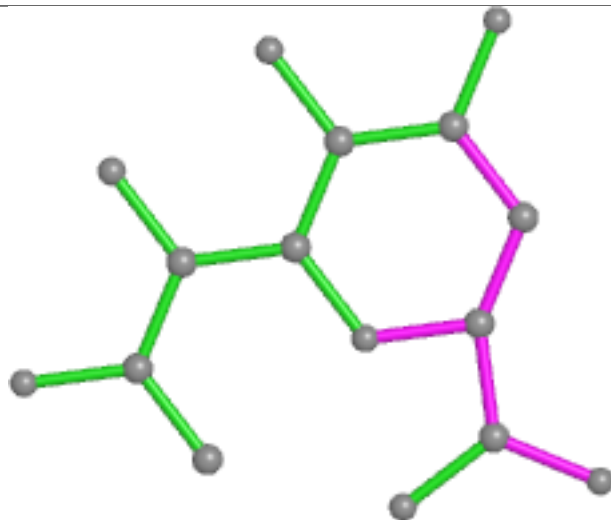




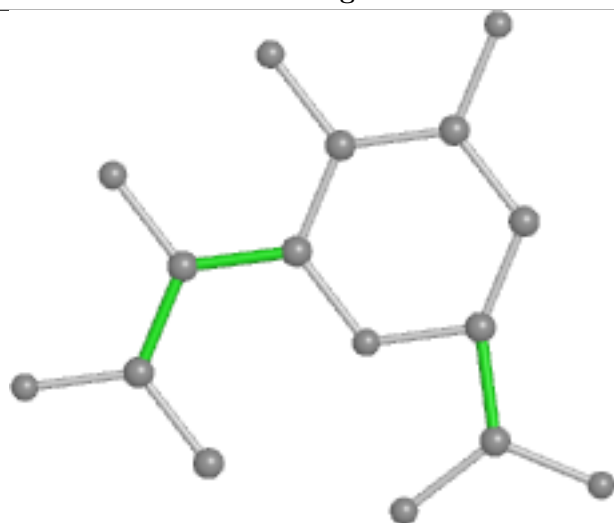
Ligand P8E N 603



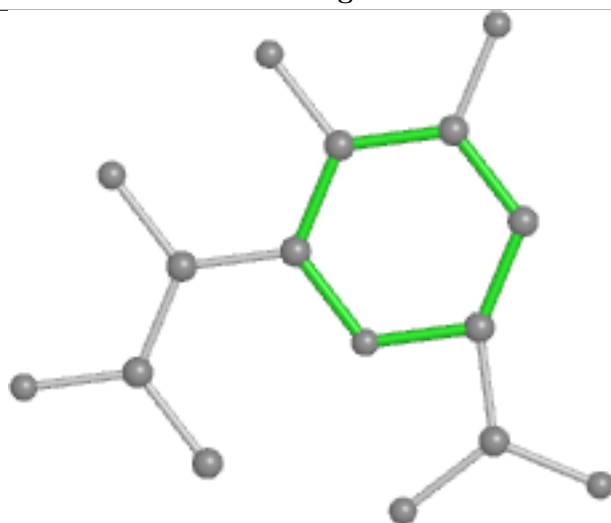
Bond lengths



Bond angles

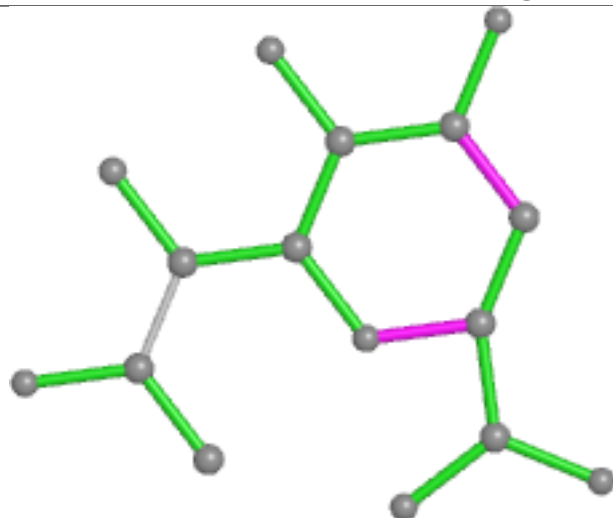


Torsions

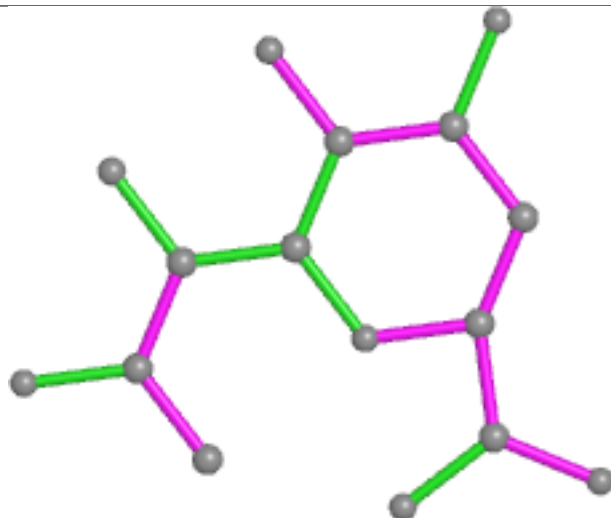


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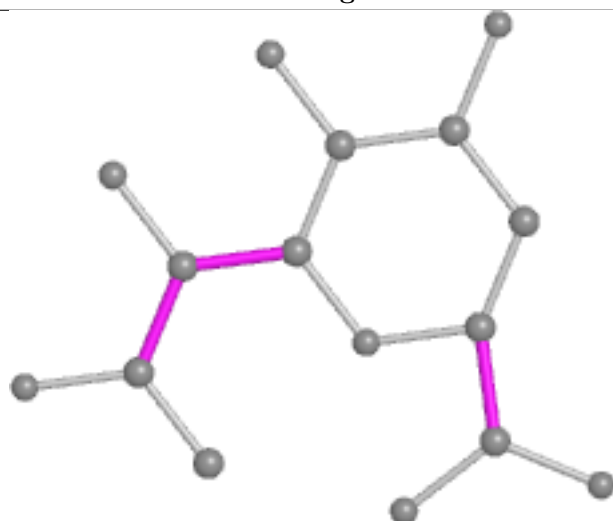
Ligand P8E O 616



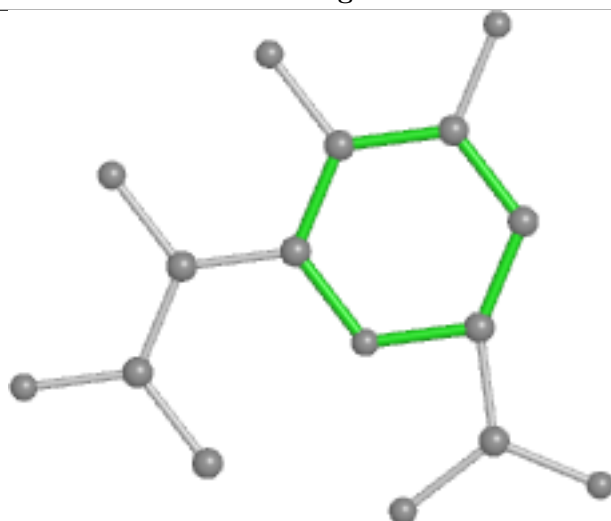
Bond lengths



Bond angles

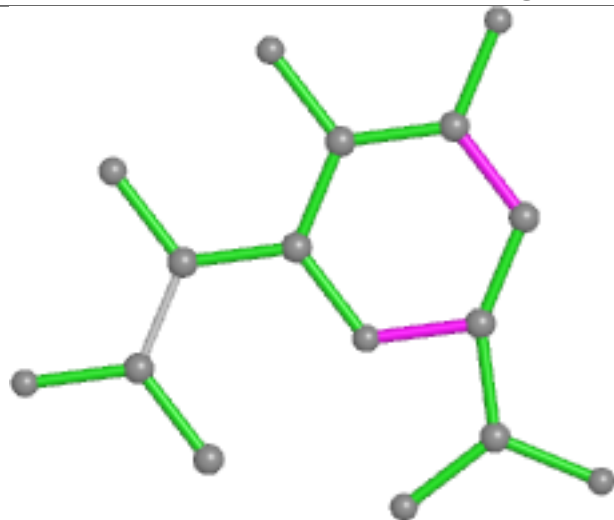


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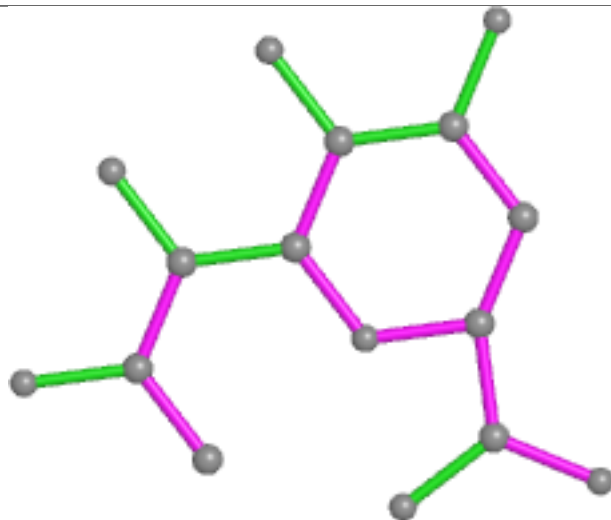


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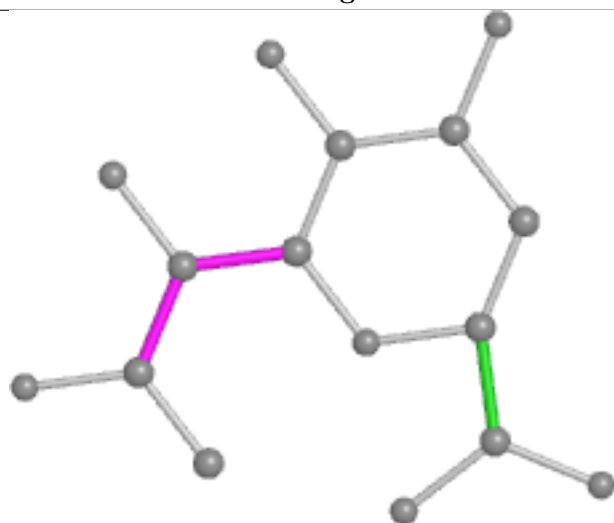
Ligand P8E R 606



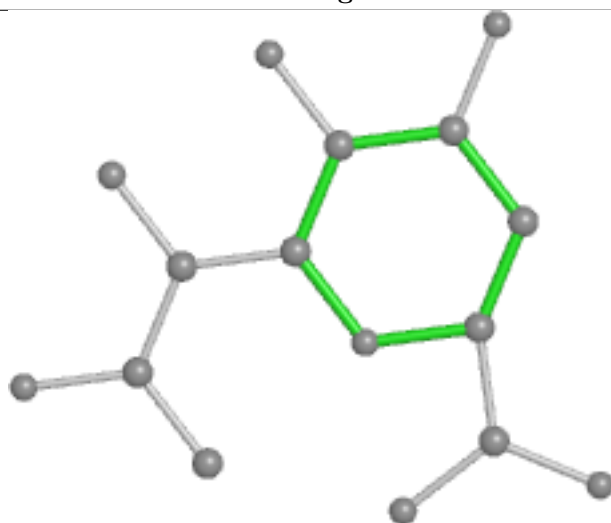
Bond lengths



Bond angles

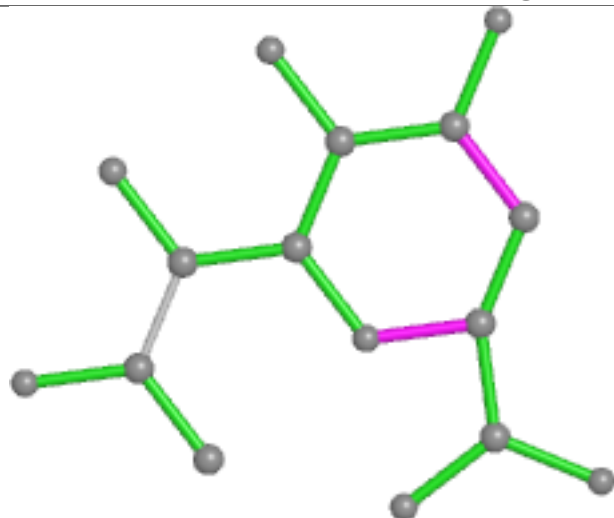


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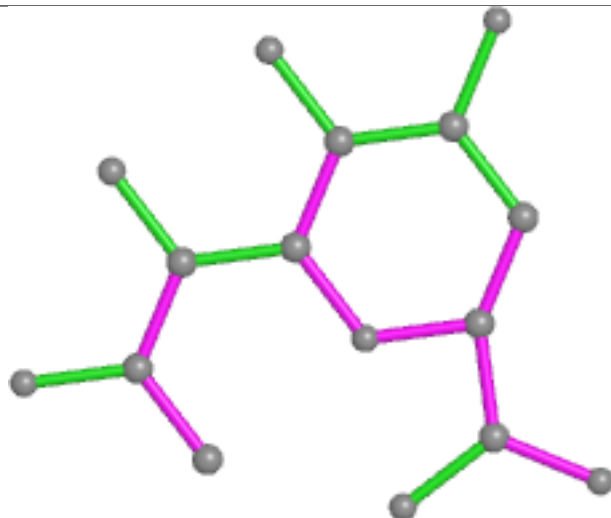


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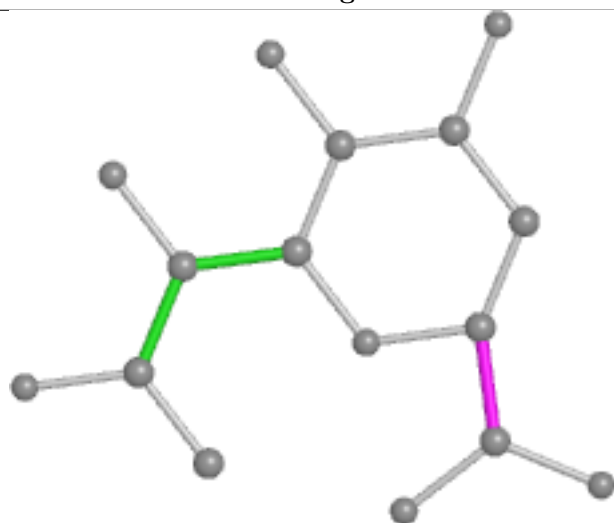
Ligand P8E N 617



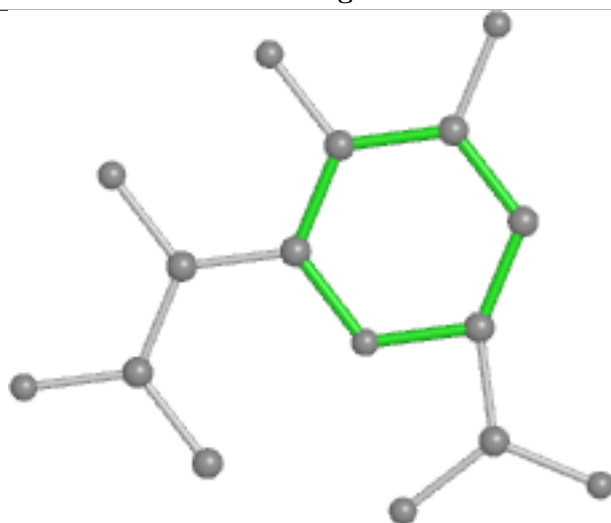
Bond lengths



Bond angles

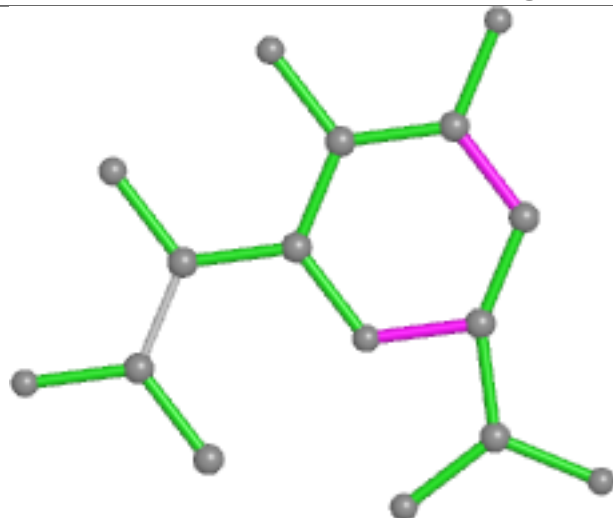


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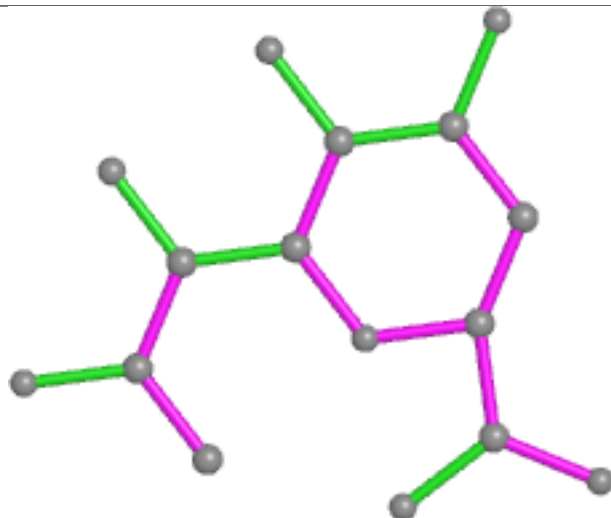


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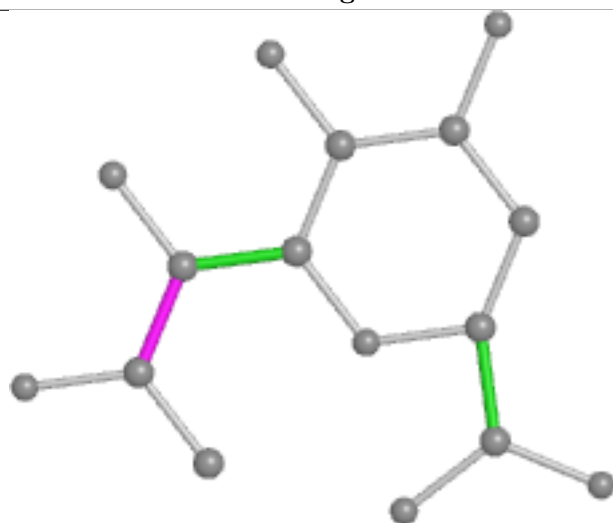
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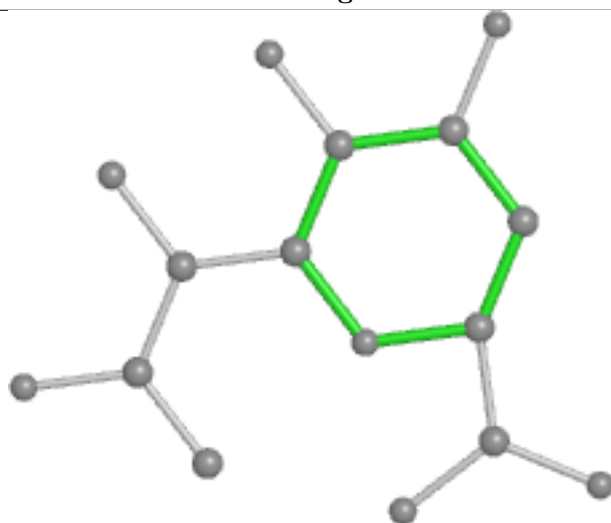
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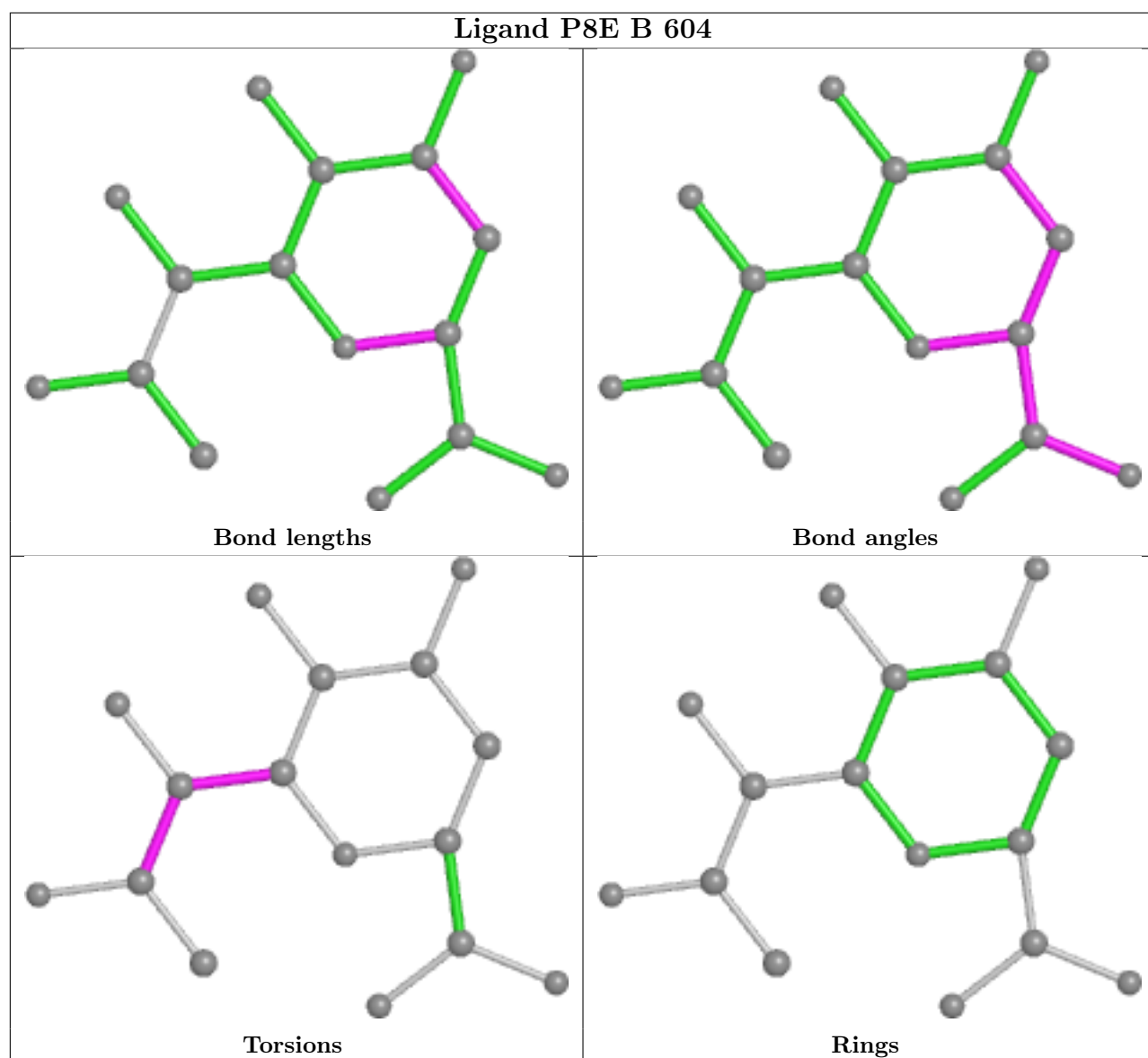
Bond angles

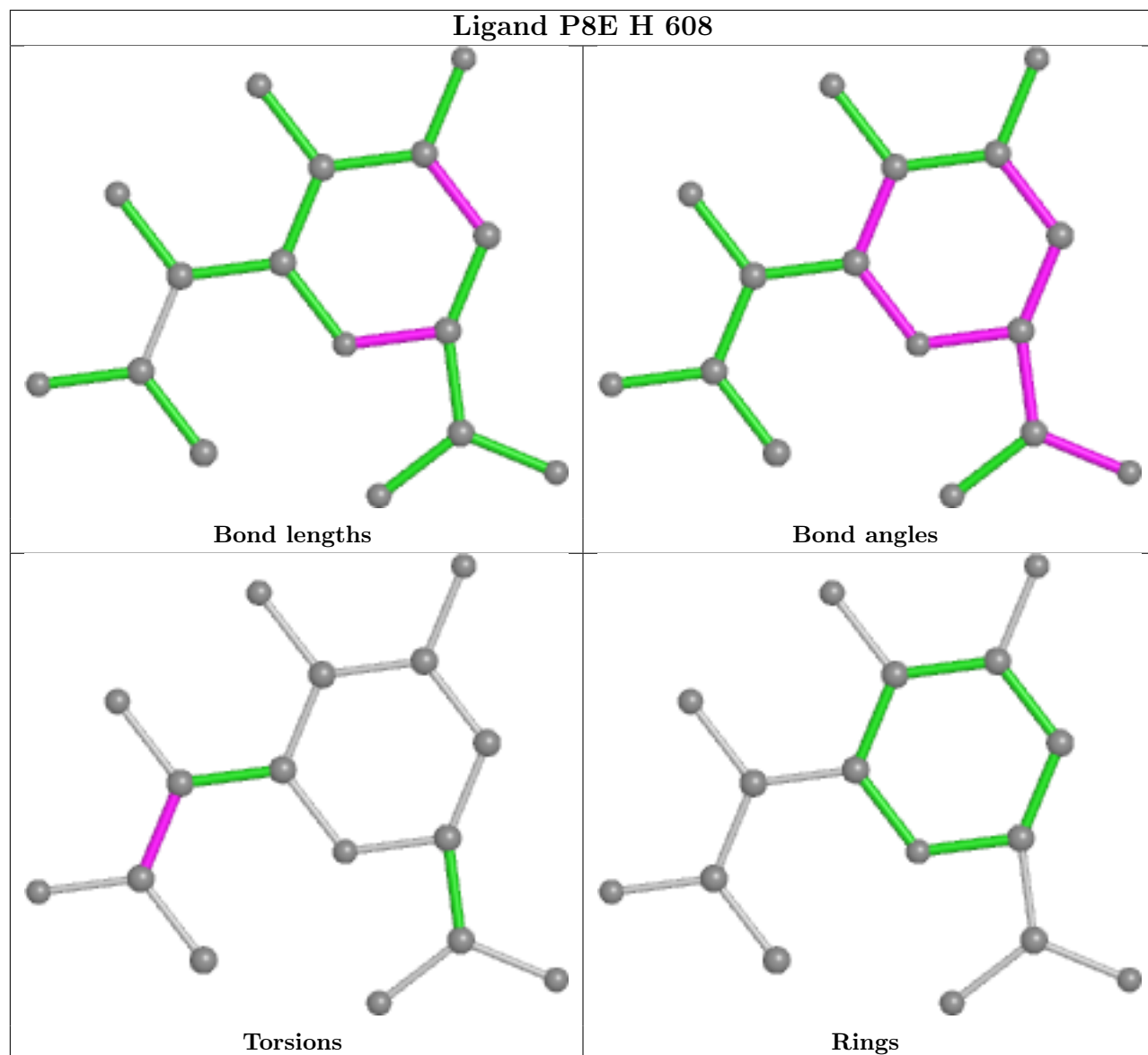


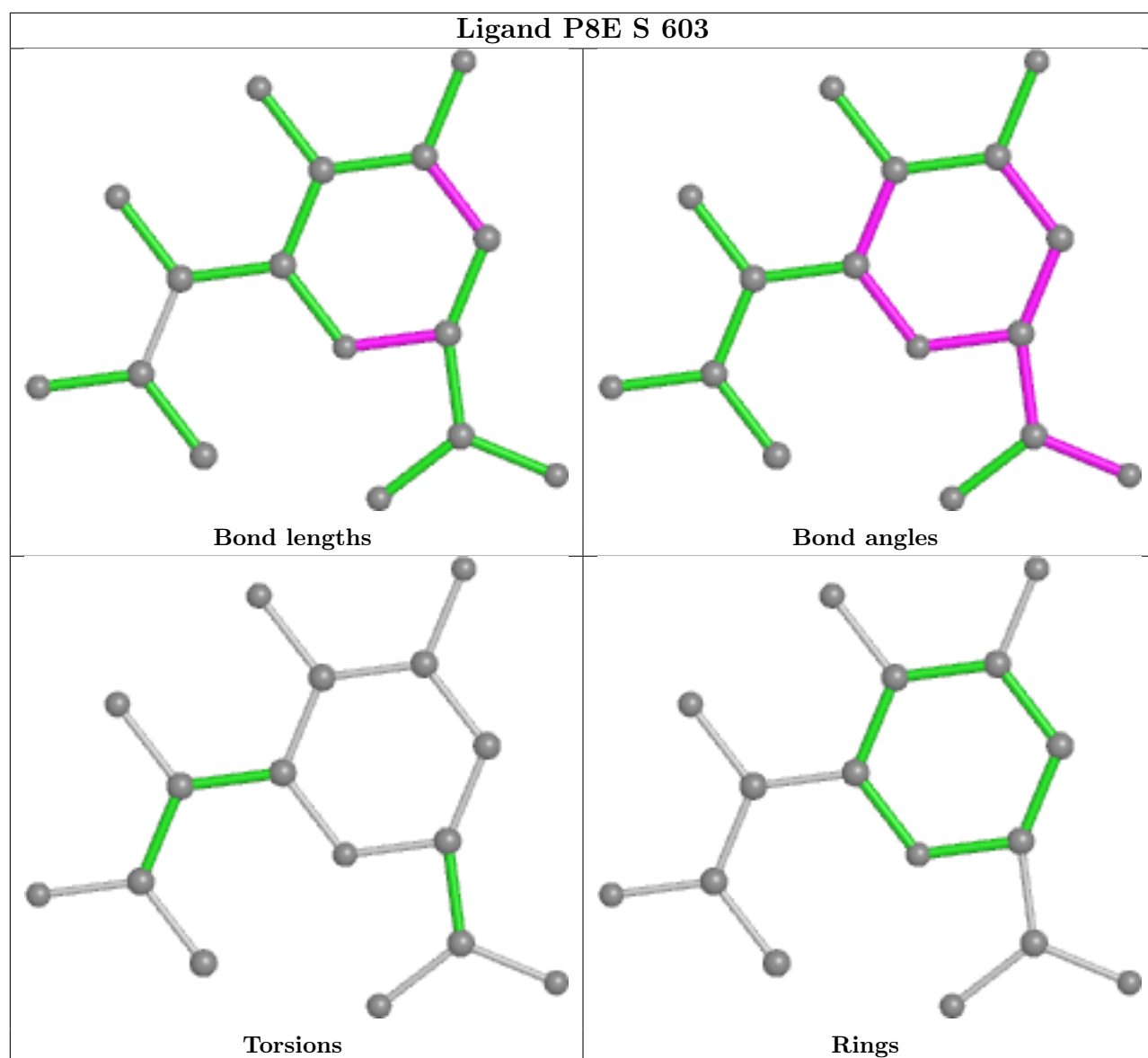
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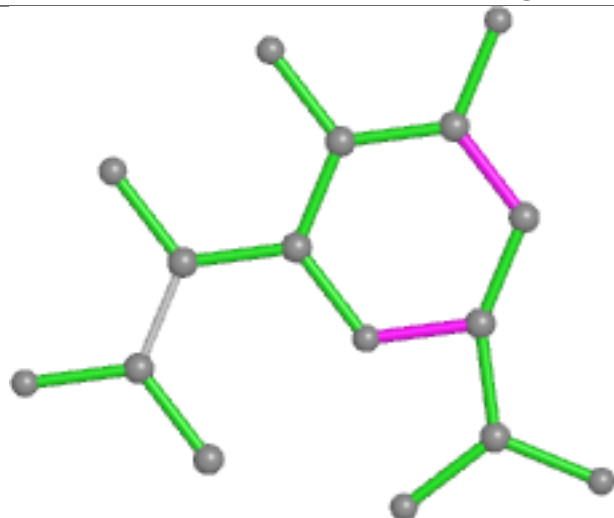
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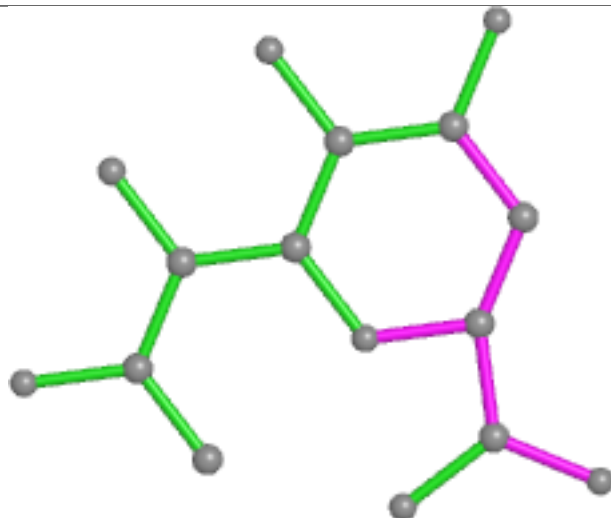




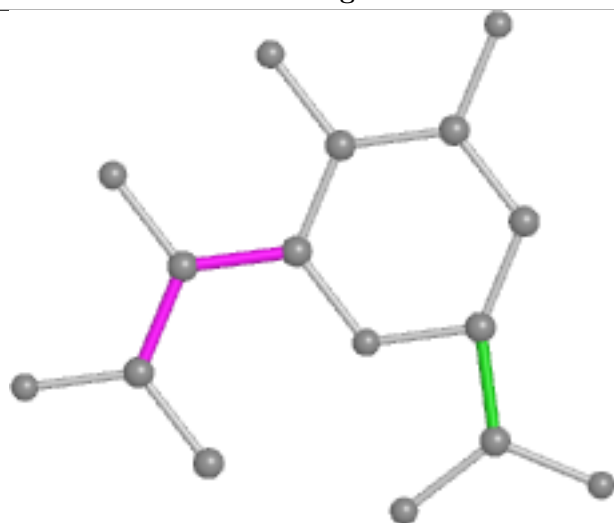
Ligand P8E V 605



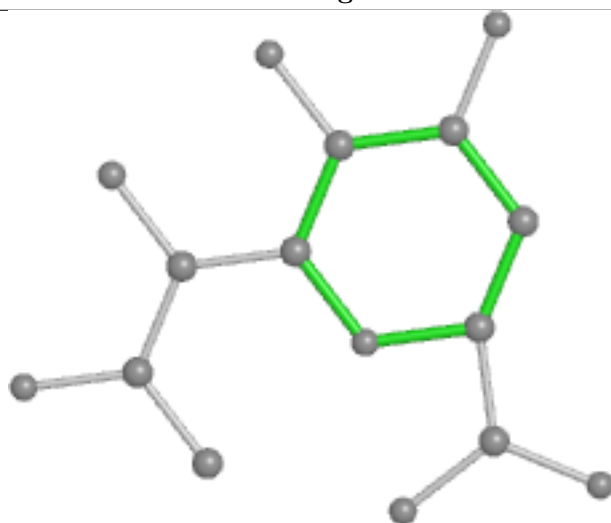
Bond lengths



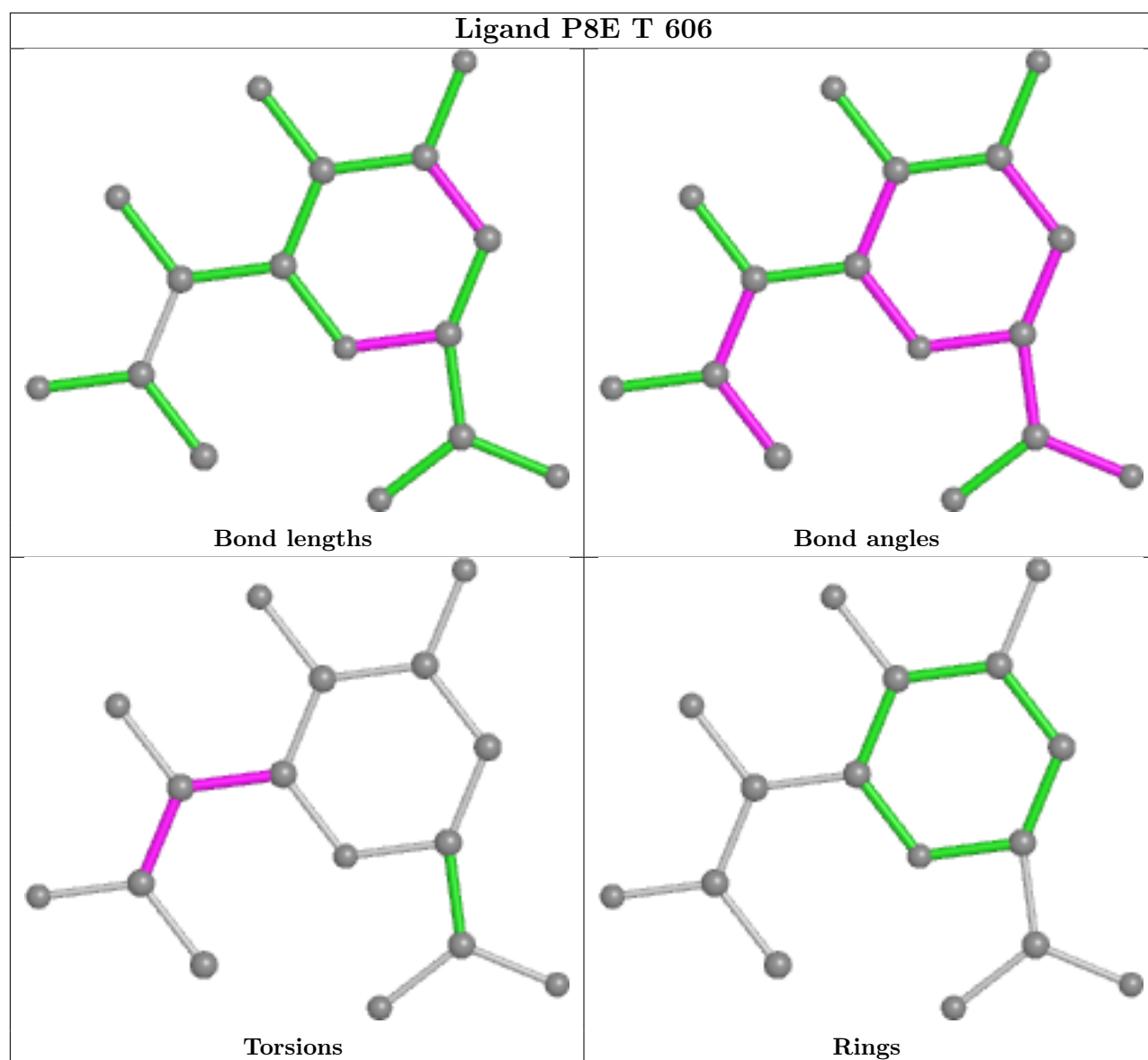
Bond angles

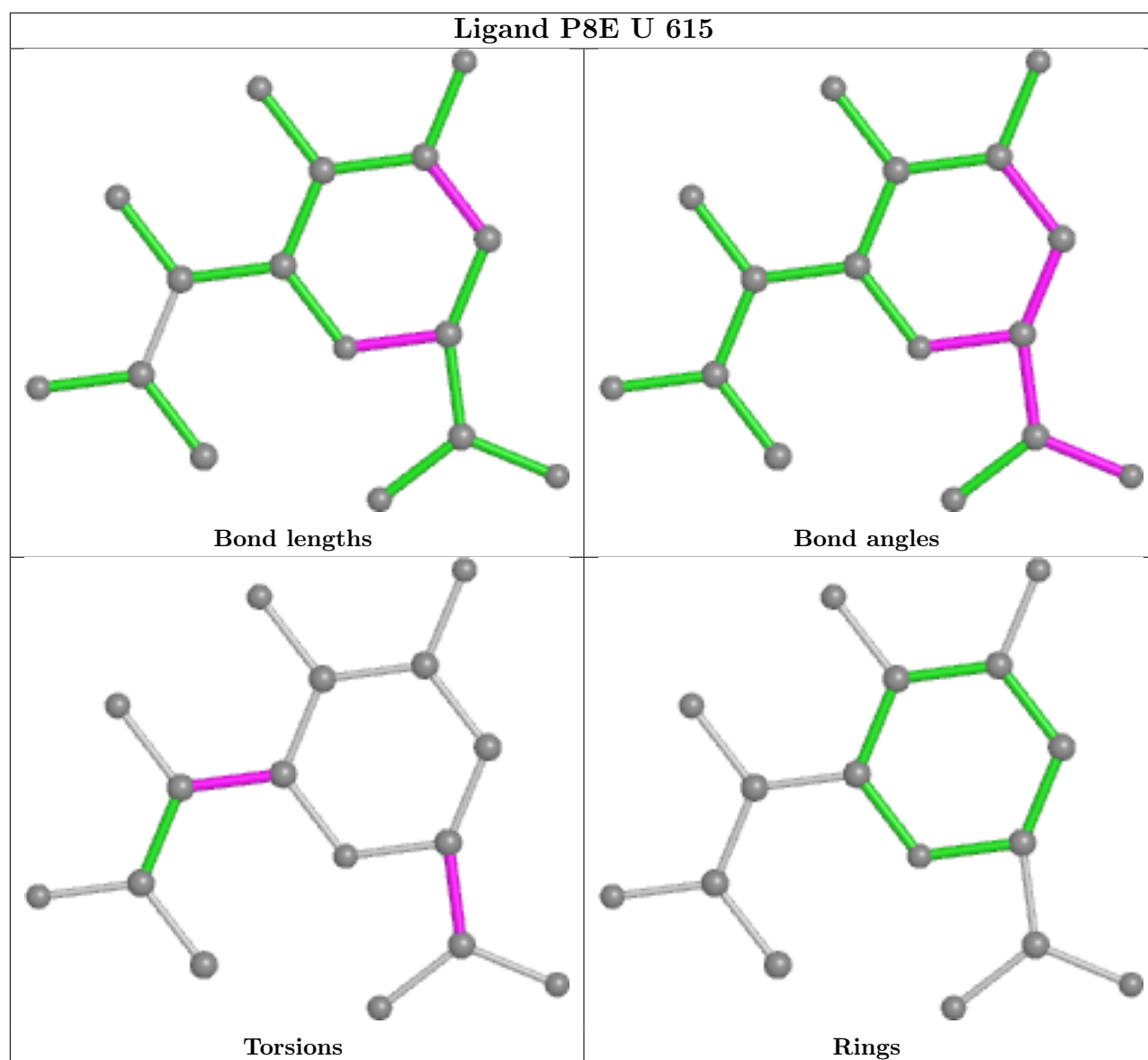


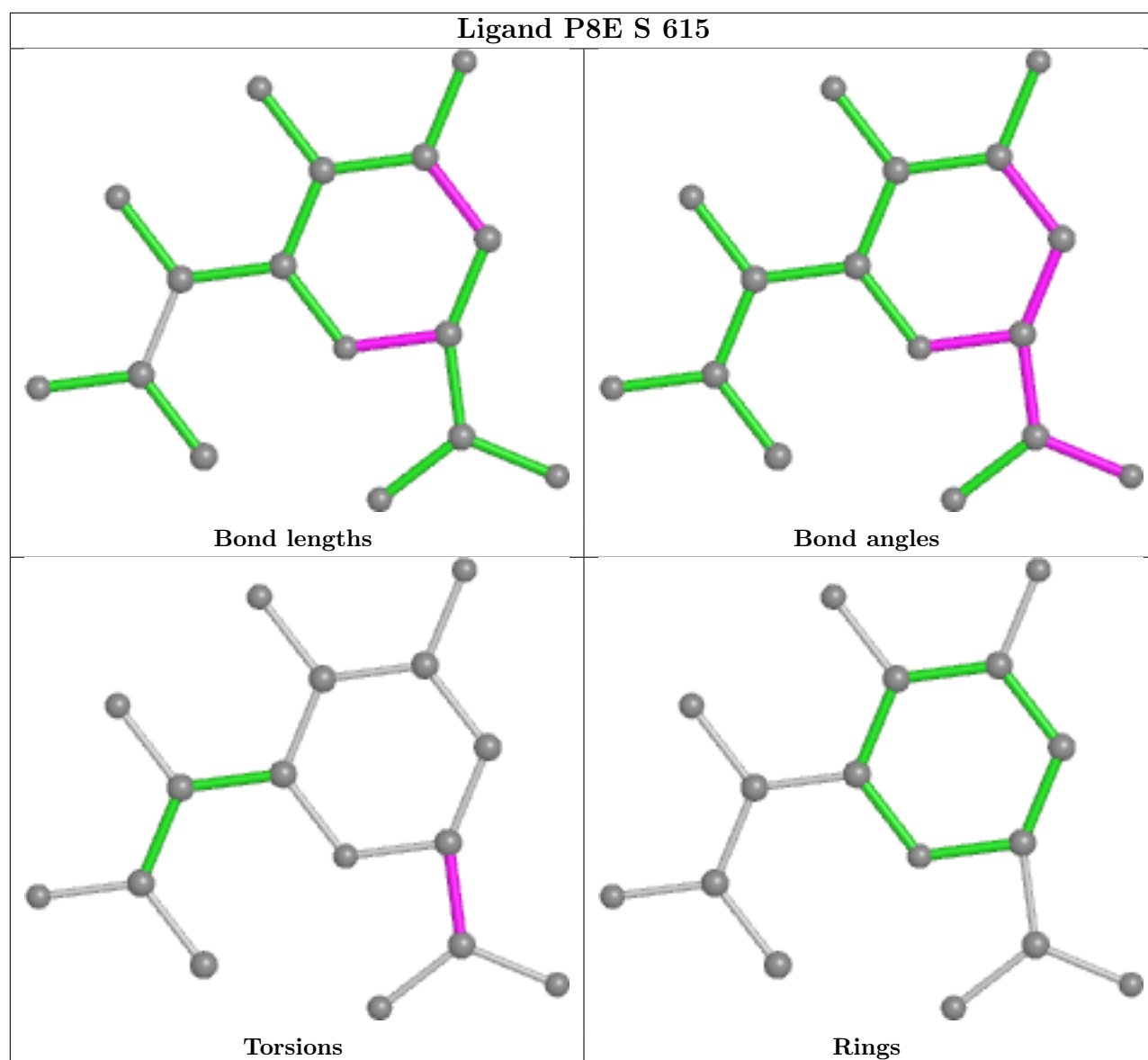
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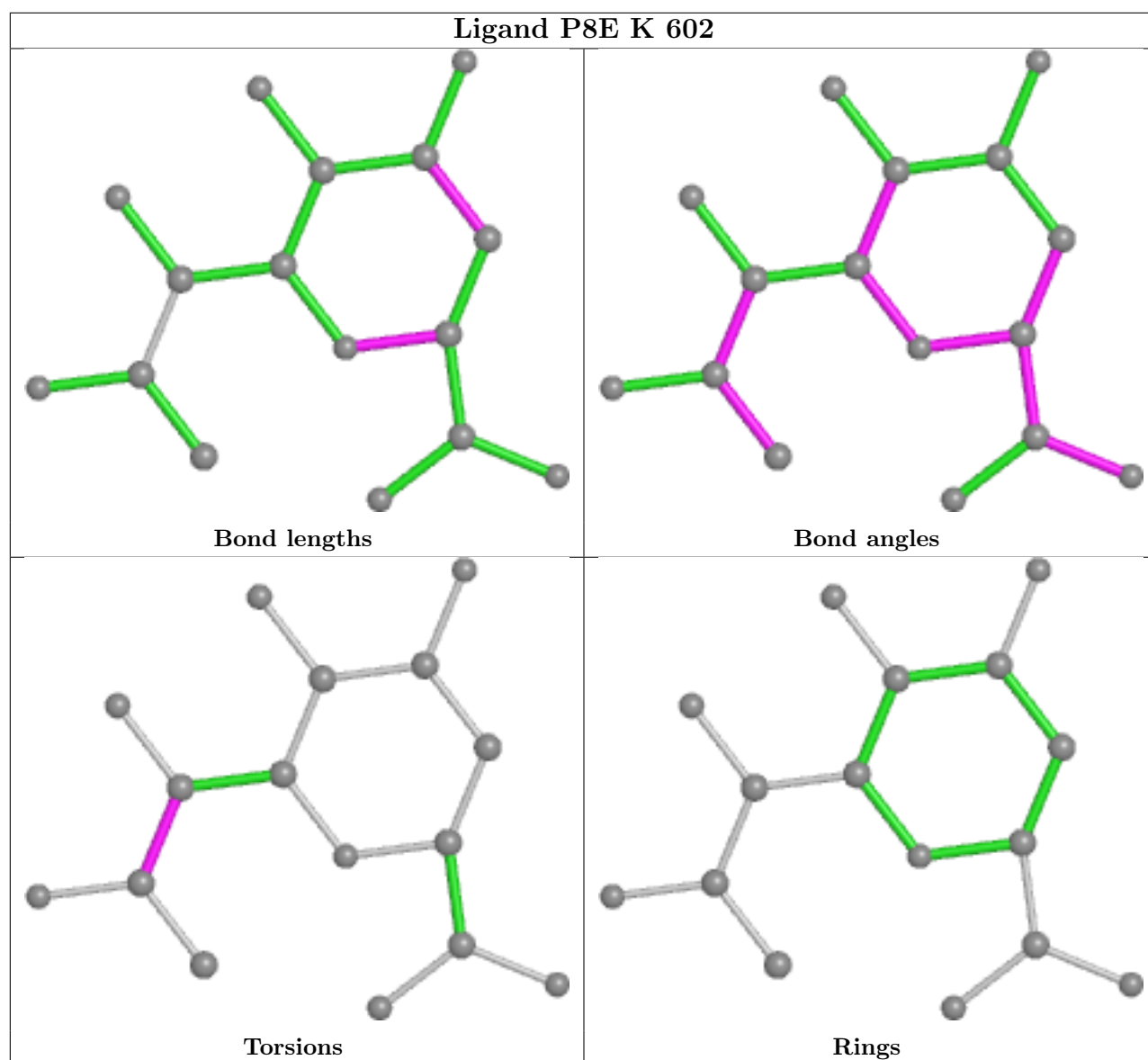


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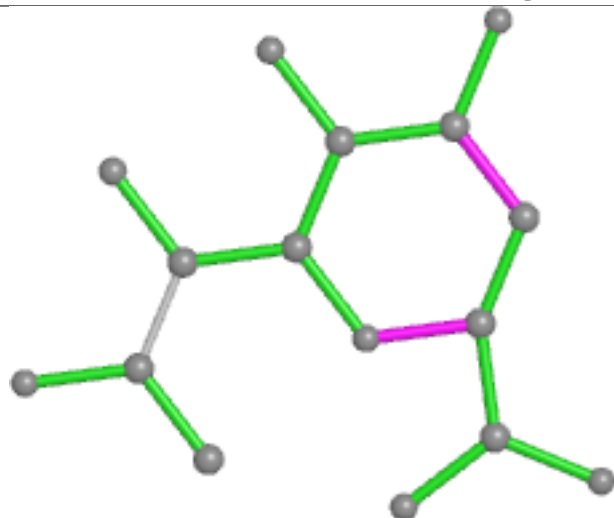




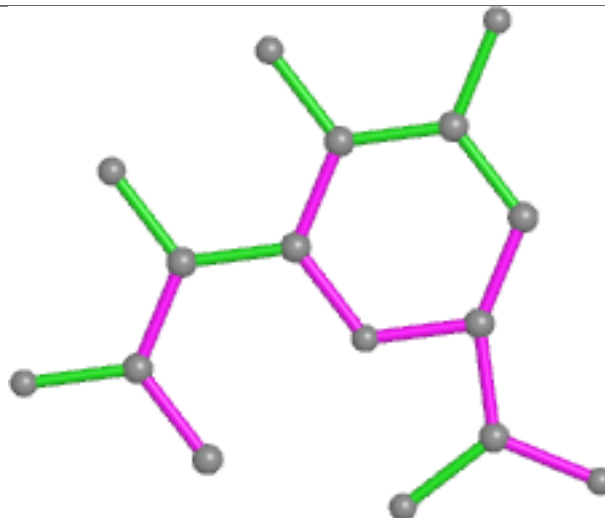




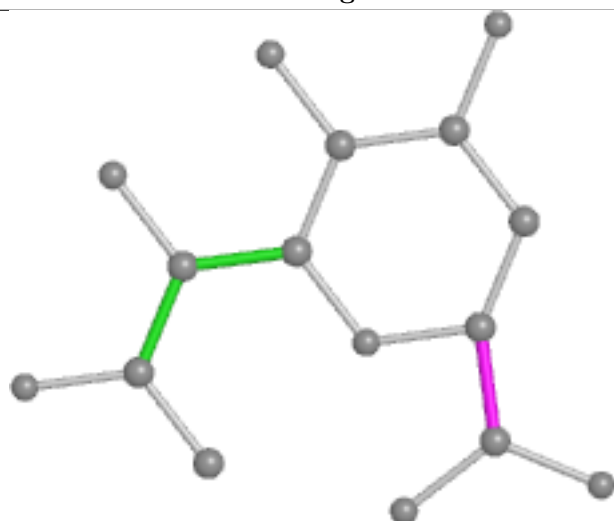
Ligand P8E T 617



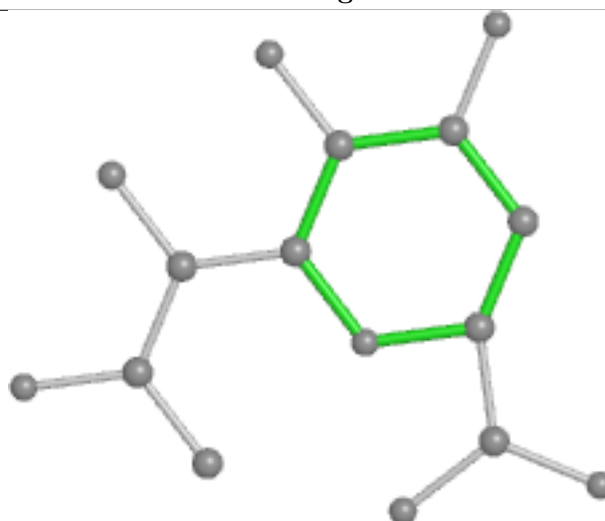
Bond lengths



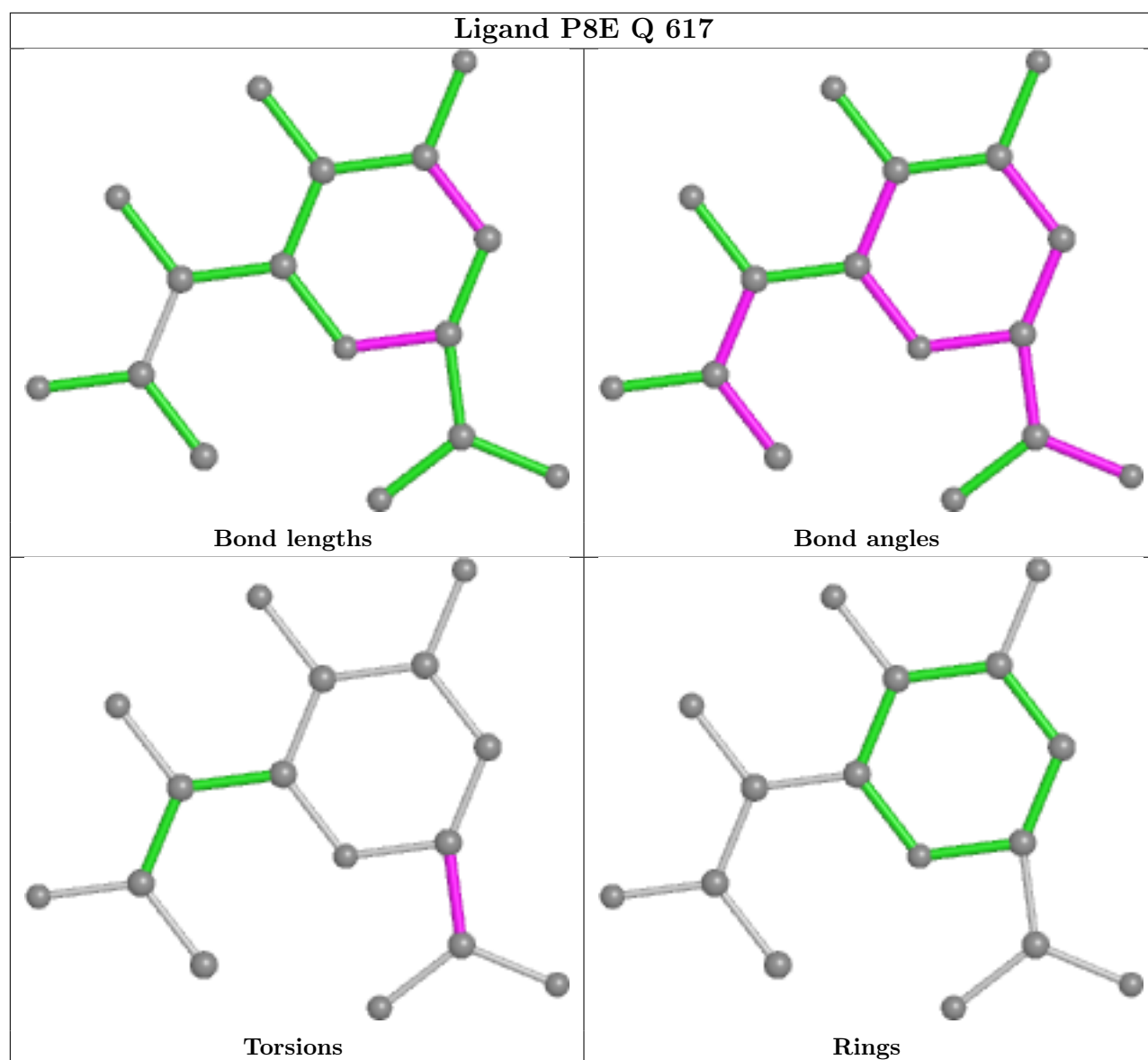
Bond angles



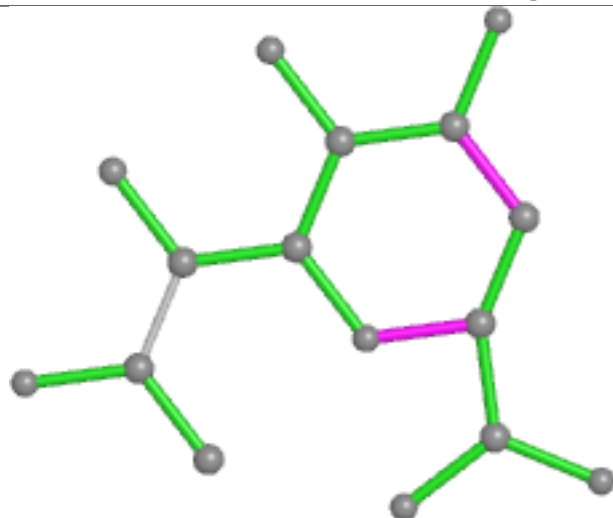
Torsions



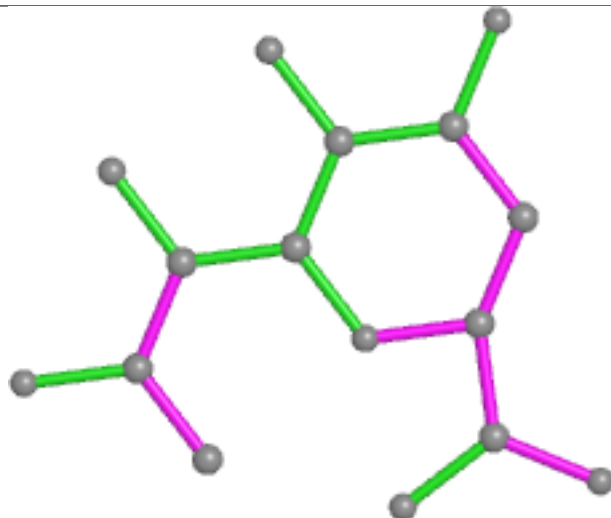
Rings



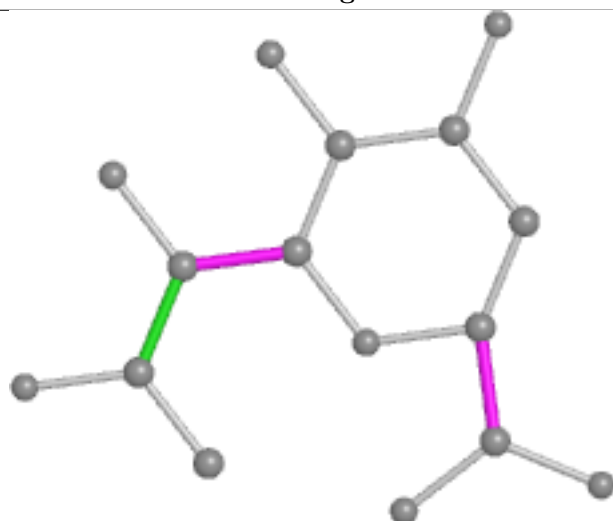
Ligand P8E I 607



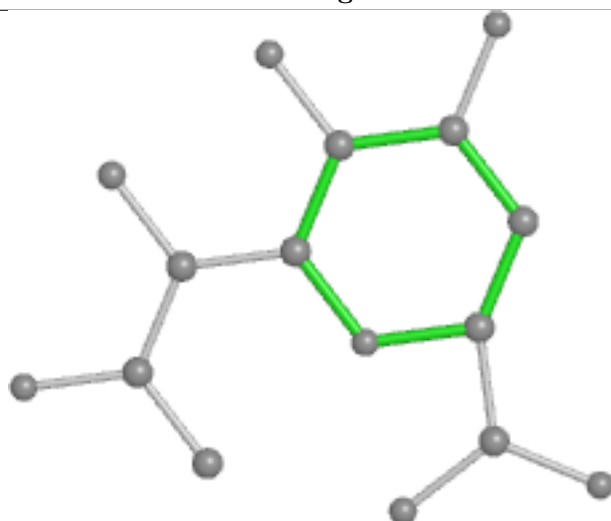
Bond lengths



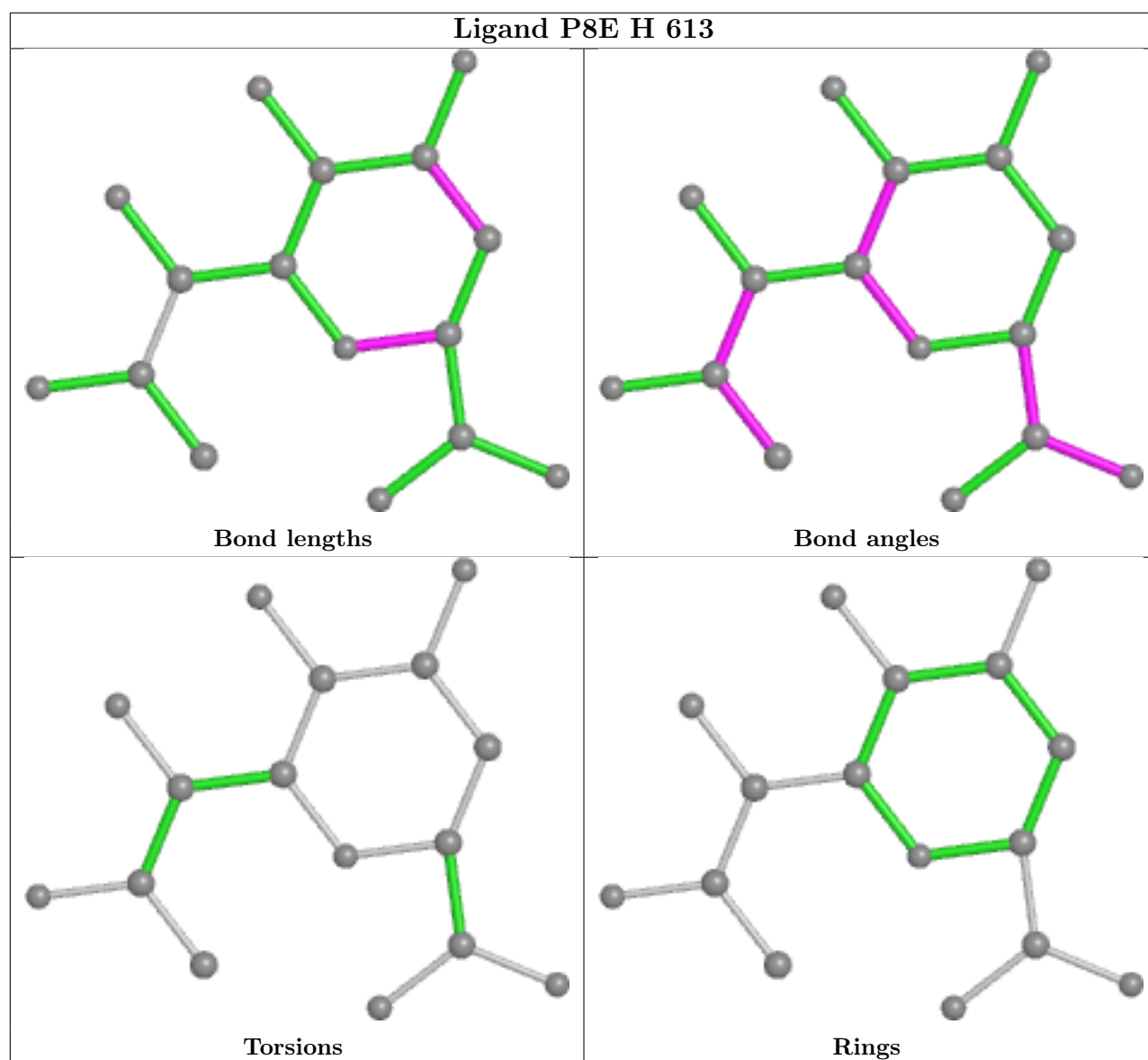
Bond angles



Torsions



Rings



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

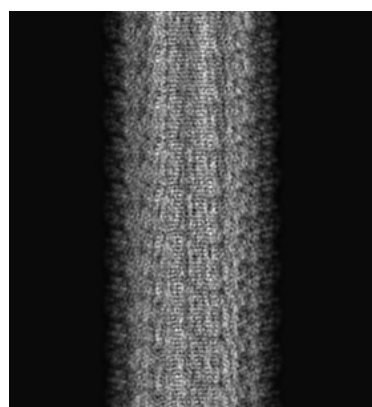
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-22088. These allow visual inspection of the internal detail of the map and identification of artifacts.

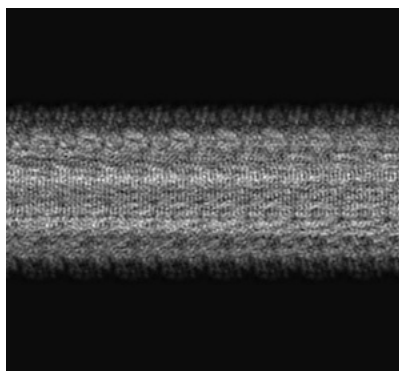
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

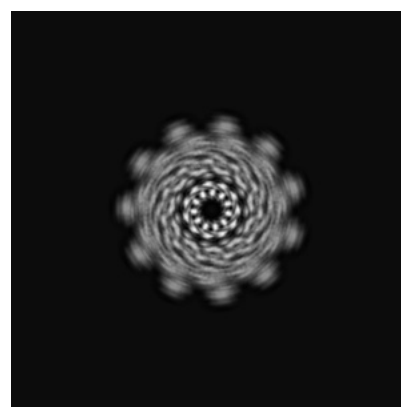
6.1.1 Primary map



X



Y

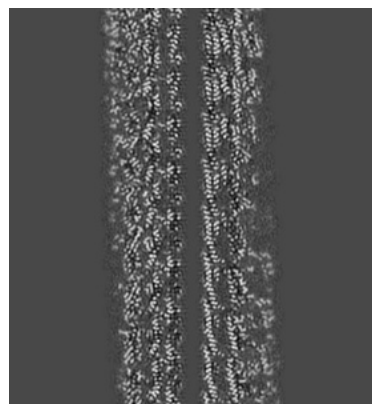


Z

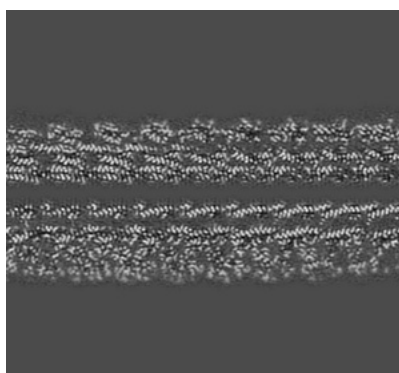
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

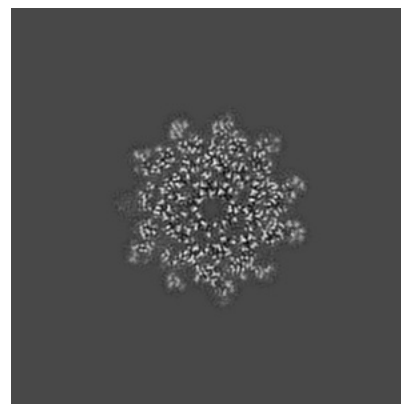
6.2.1 Primary map



X Index: 192



Y Index: 192

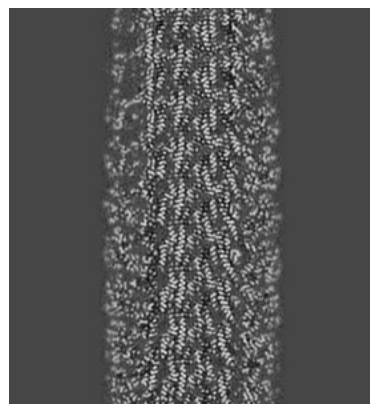


Z Index: 210

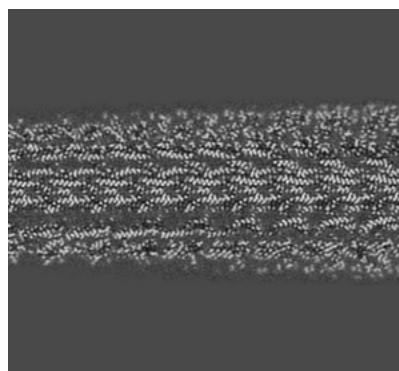
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

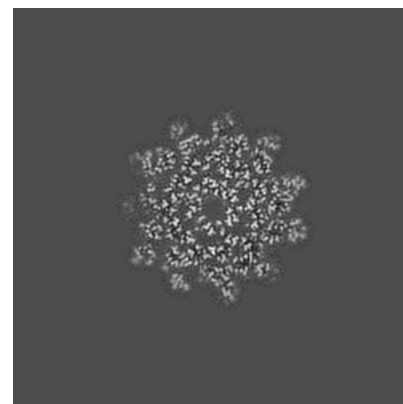
6.3.1 Primary map



X Index: 205



Y Index: 206

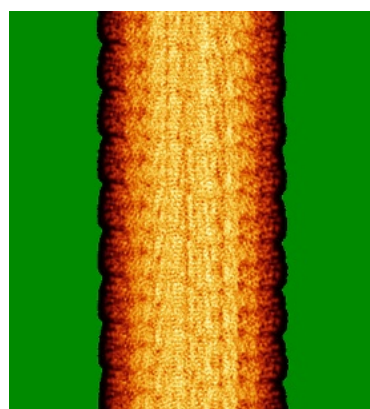


Z Index: 159

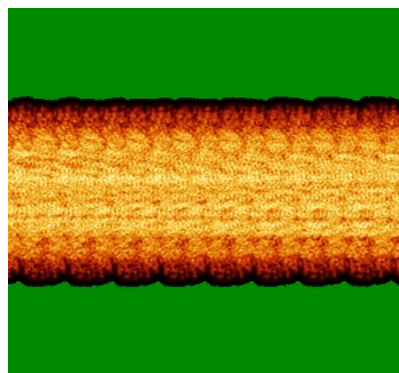
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

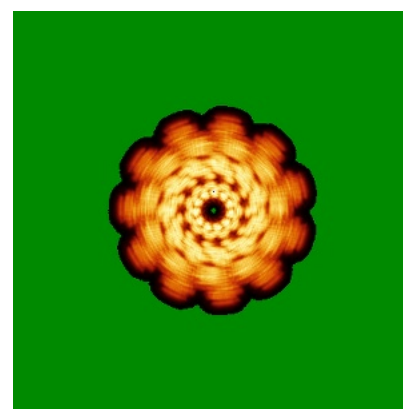
6.4.1 Primary map



X



Y

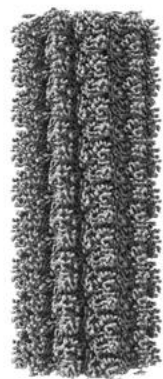


Z

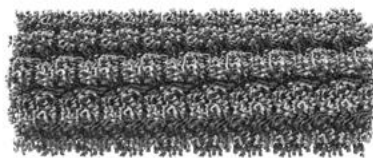
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0054. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

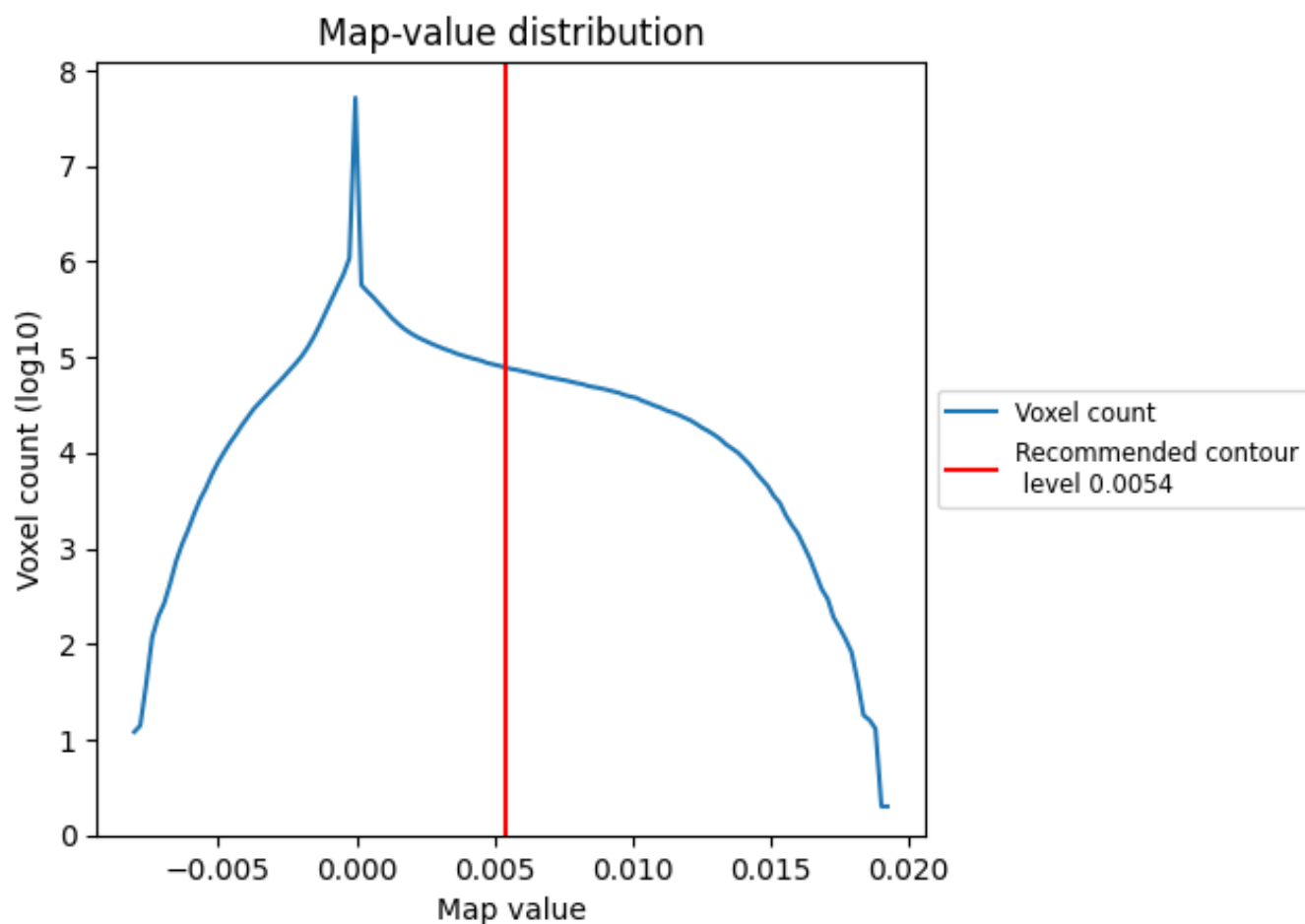
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

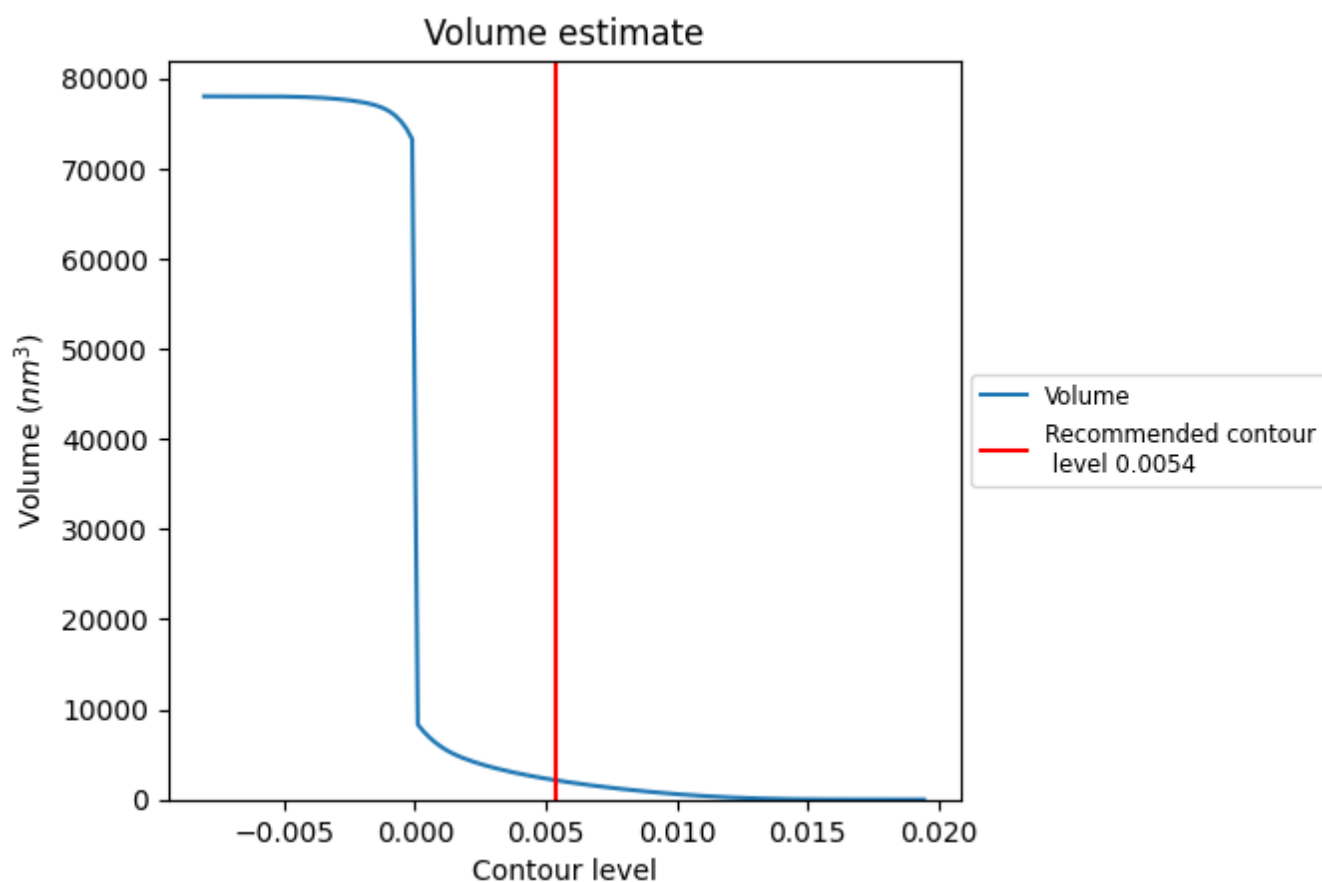
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2138 nm³; this corresponds to an approximate mass of 1932 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

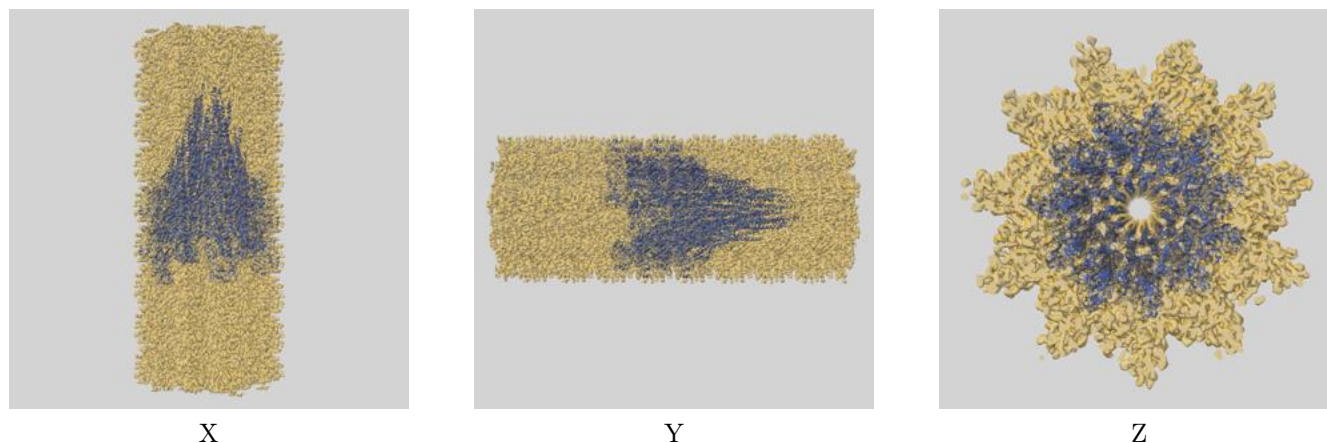
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

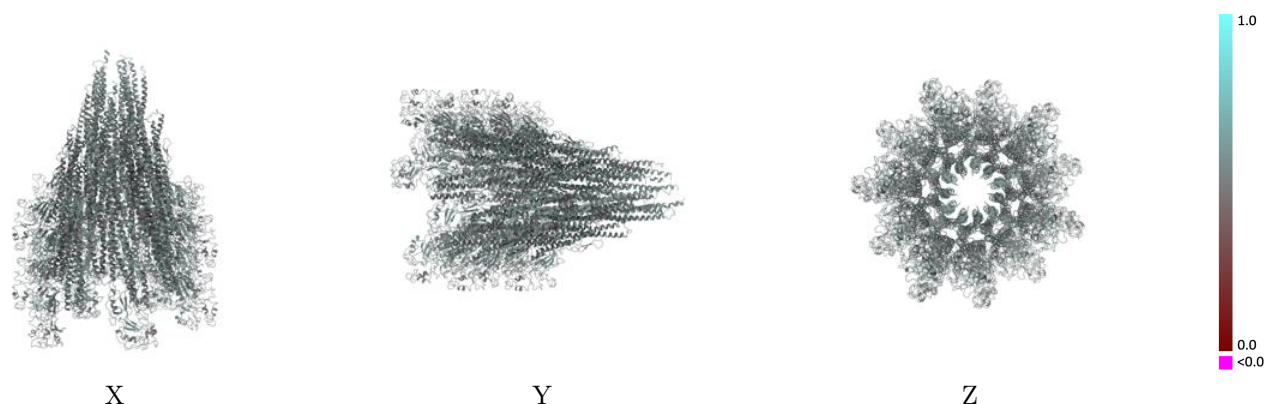
This section contains information regarding the fit between EMDB map EMD-22088 and PDB model 6X80. Per-residue inclusion information can be found in [section 3](#) on [page 25](#).

9.1 Map-model overlay [i](#)



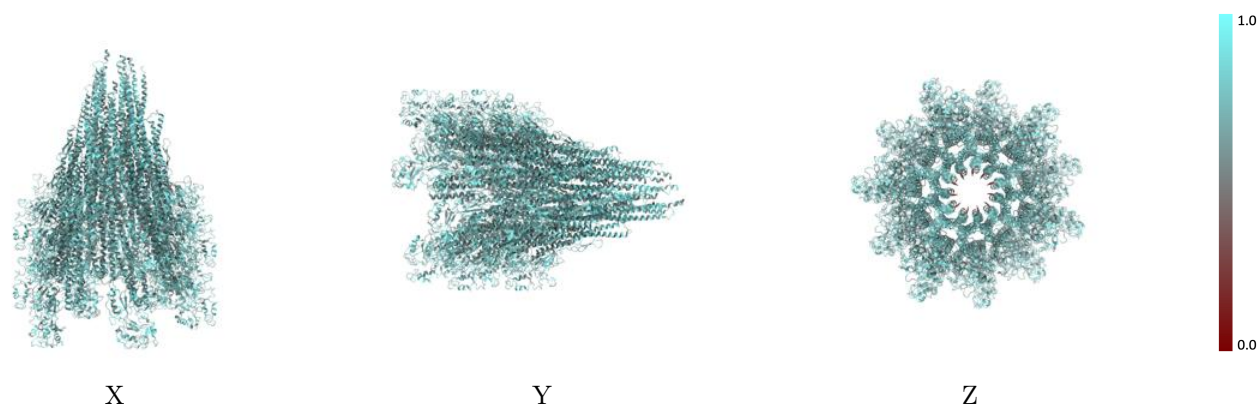
The images above show the 3D surface view of the map at the recommended contour level 0.0054 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



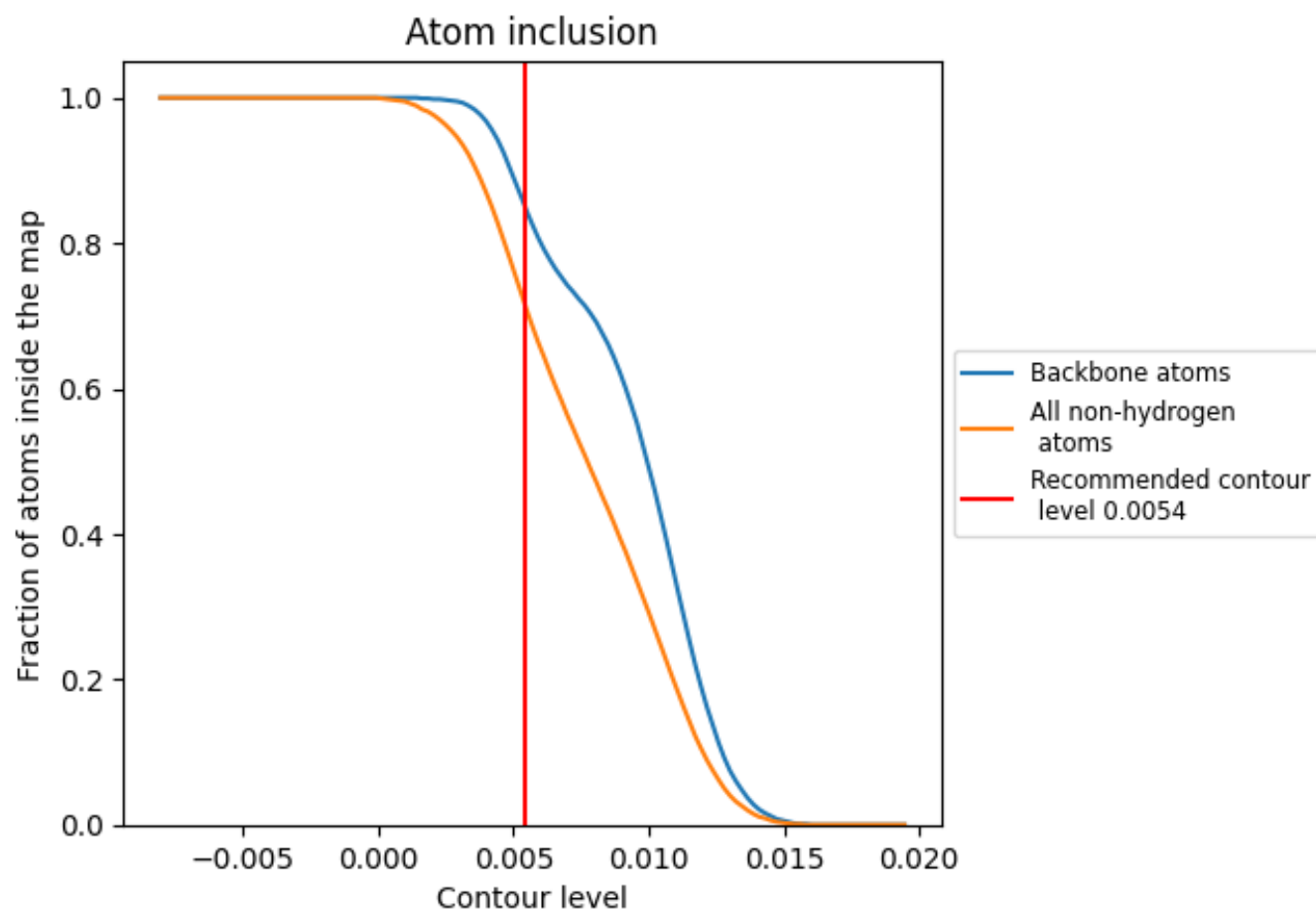
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0054).

9.4 Atom inclusion ⓘ



At the recommended contour level, 85% of all backbone atoms, 72% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.0054) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div><div></div></div> 0.7180	<div><div></div></div> 0.5240
A	<div><div></div></div> 0.7220	<div><div></div></div> 0.5230
B	<div><div></div></div> 0.7170	<div><div></div></div> 0.5230
C	<div><div></div></div> 0.7180	<div><div></div></div> 0.5240
D	<div><div></div></div> 0.7170	<div><div></div></div> 0.5230
E	<div><div></div></div> 0.7220	<div><div></div></div> 0.5230
F	<div><div></div></div> 0.7180	<div><div></div></div> 0.5230
G	<div><div></div></div> 0.7170	<div><div></div></div> 0.5230
H	<div><div></div></div> 0.7150	<div><div></div></div> 0.5230
I	<div><div></div></div> 0.7220	<div><div></div></div> 0.5250
J	<div><div></div></div> 0.7180	<div><div></div></div> 0.5230
K	<div><div></div></div> 0.7160	<div><div></div></div> 0.5250
L	<div><div></div></div> 0.7140	<div><div></div></div> 0.5240
M	<div><div></div></div> 0.7220	<div><div></div></div> 0.5240
N	<div><div></div></div> 0.7200	<div><div></div></div> 0.5240
O	<div><div></div></div> 0.7160	<div><div></div></div> 0.5230
P	<div><div></div></div> 0.7100	<div><div></div></div> 0.5220
Q	<div><div></div></div> 0.7150	<div><div></div></div> 0.5240
R	<div><div></div></div> 0.7160	<div><div></div></div> 0.5230
S	<div><div></div></div> 0.7200	<div><div></div></div> 0.5230
T	<div><div></div></div> 0.7170	<div><div></div></div> 0.5230
U	<div><div></div></div> 0.7210	<div><div></div></div> 0.5240
V	<div><div></div></div> 0.7190	<div><div></div></div> 0.5270

1.0

0.0

<0.0