



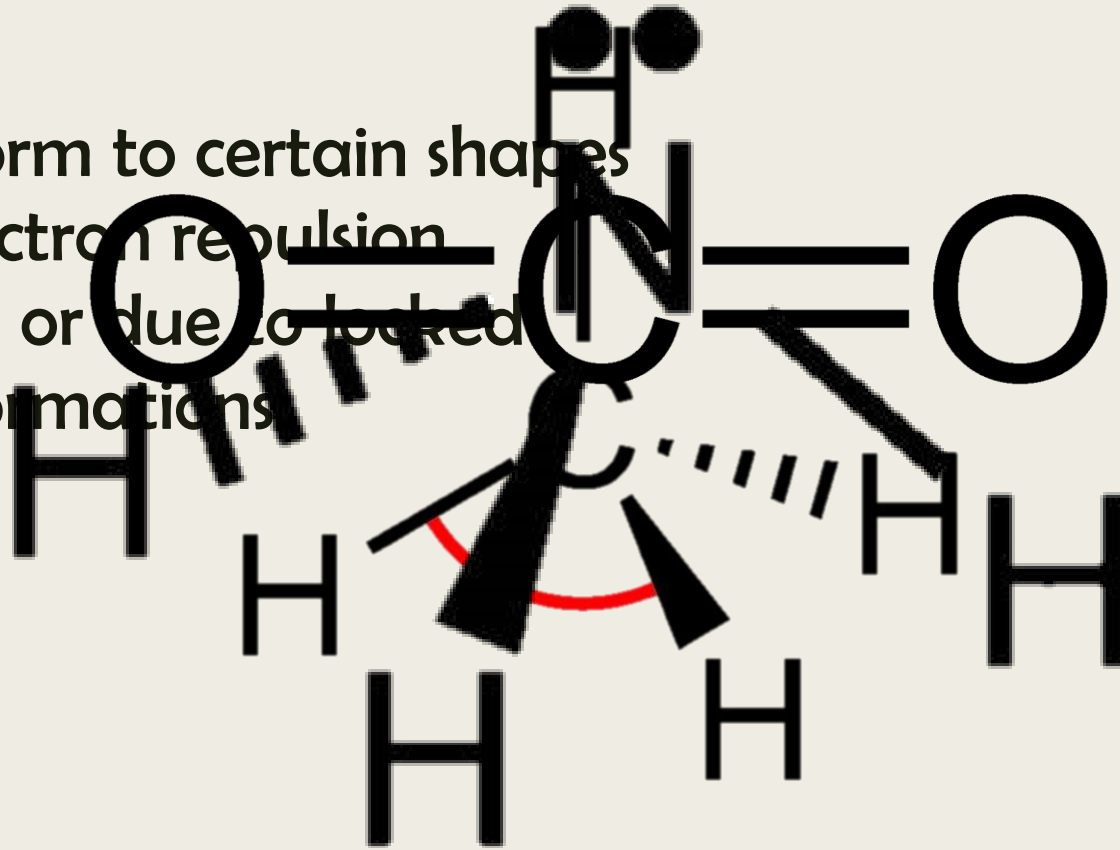
CYCLOHEXANE

A STUDY IN FORM, FUNCTION, AND BEAUTY

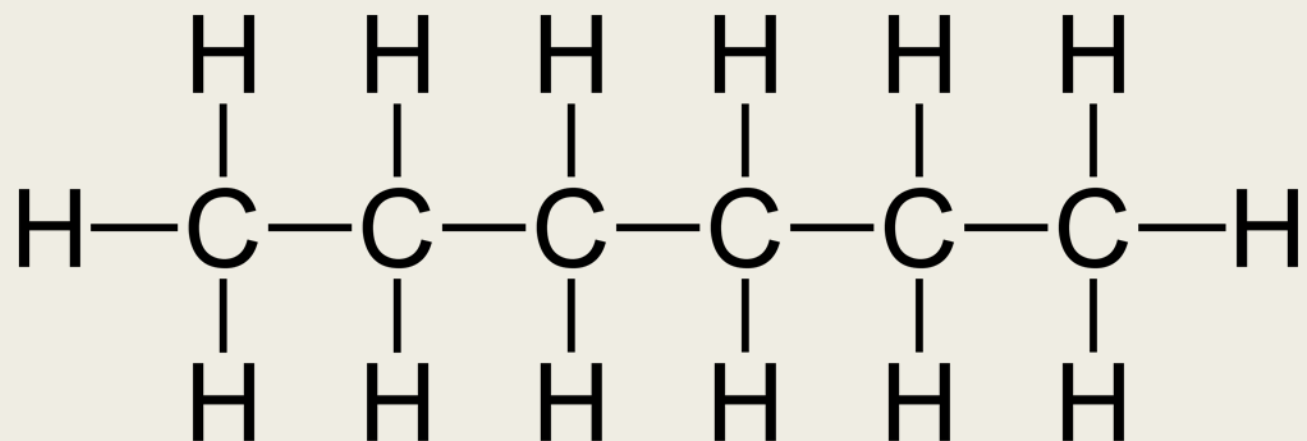


The importance of bond angles in chemistry

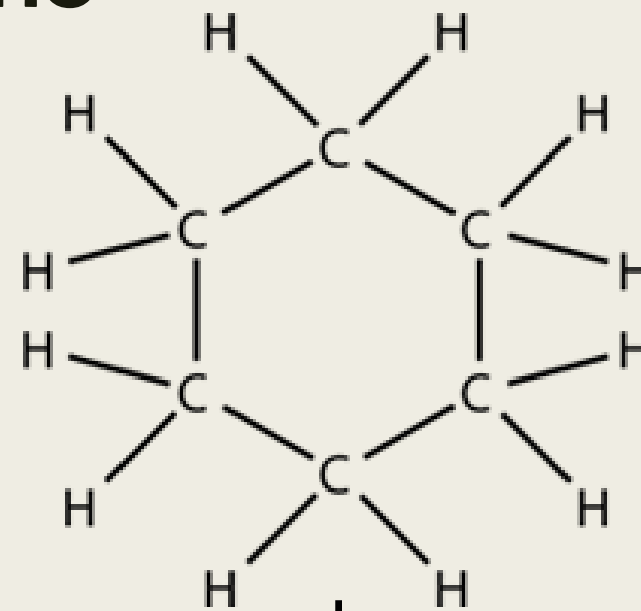
Molecules conform to certain shapes to minimize electron repulsion between atoms or due to locked structural conformations.



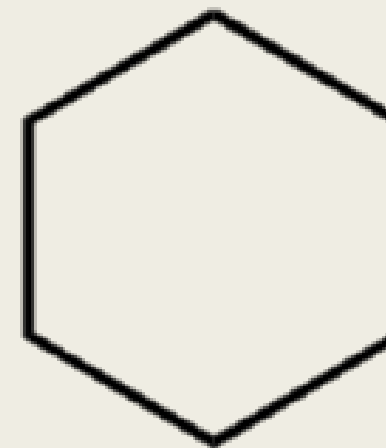
Cyclohexane versus linear hexane



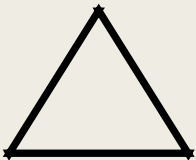

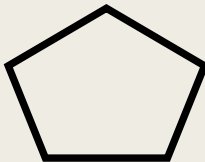
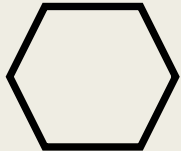
109.5°

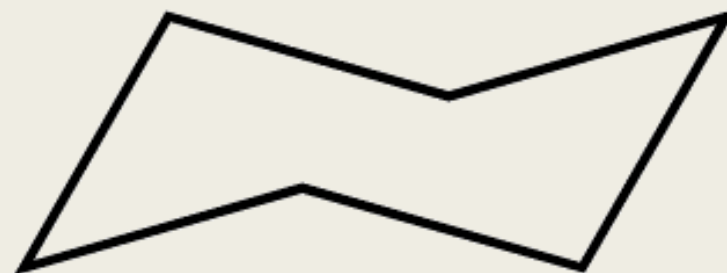
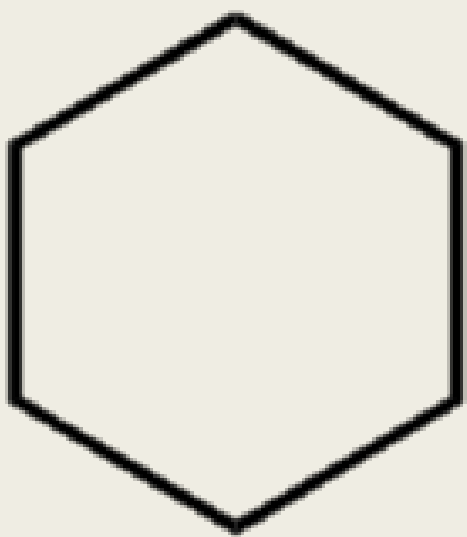


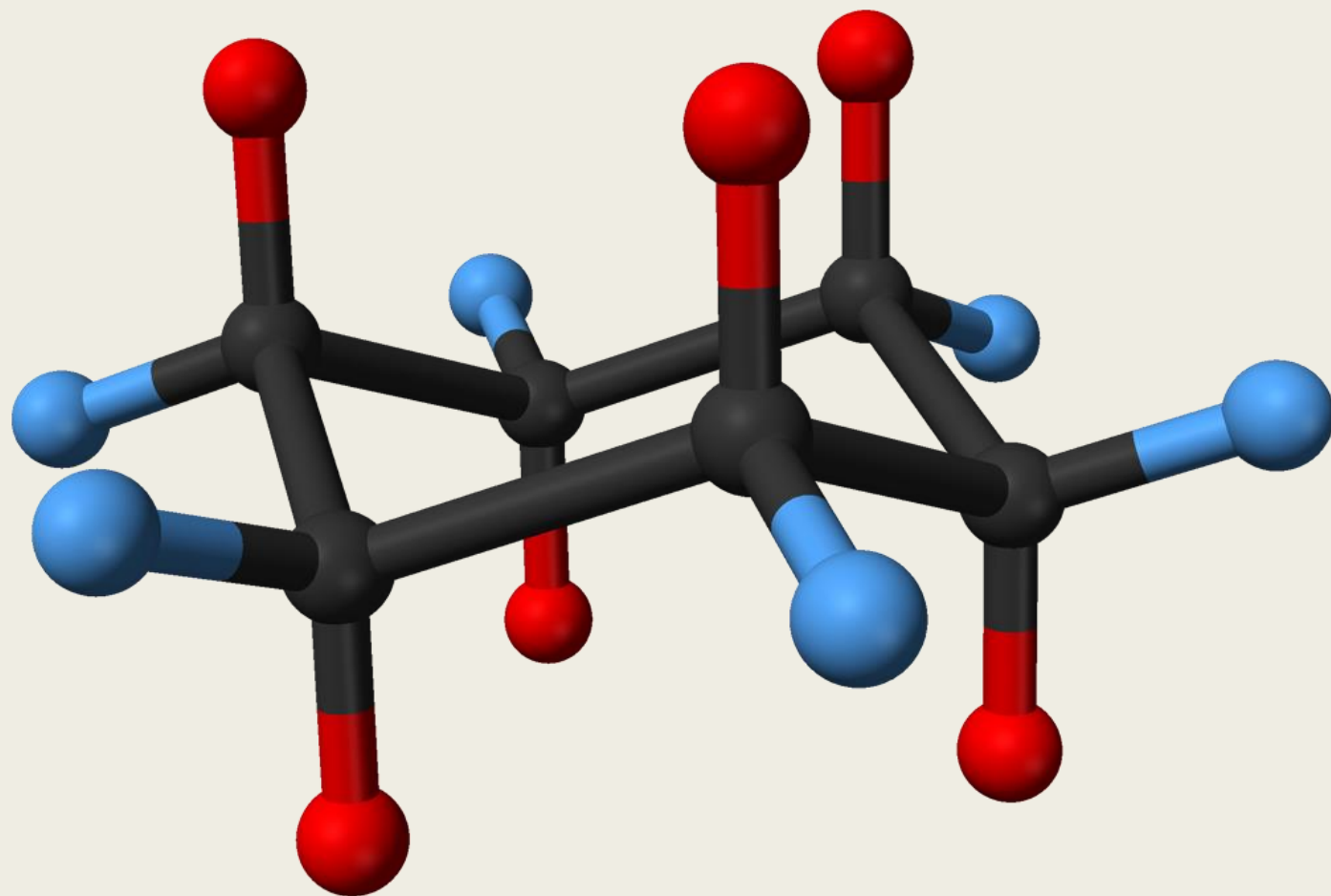
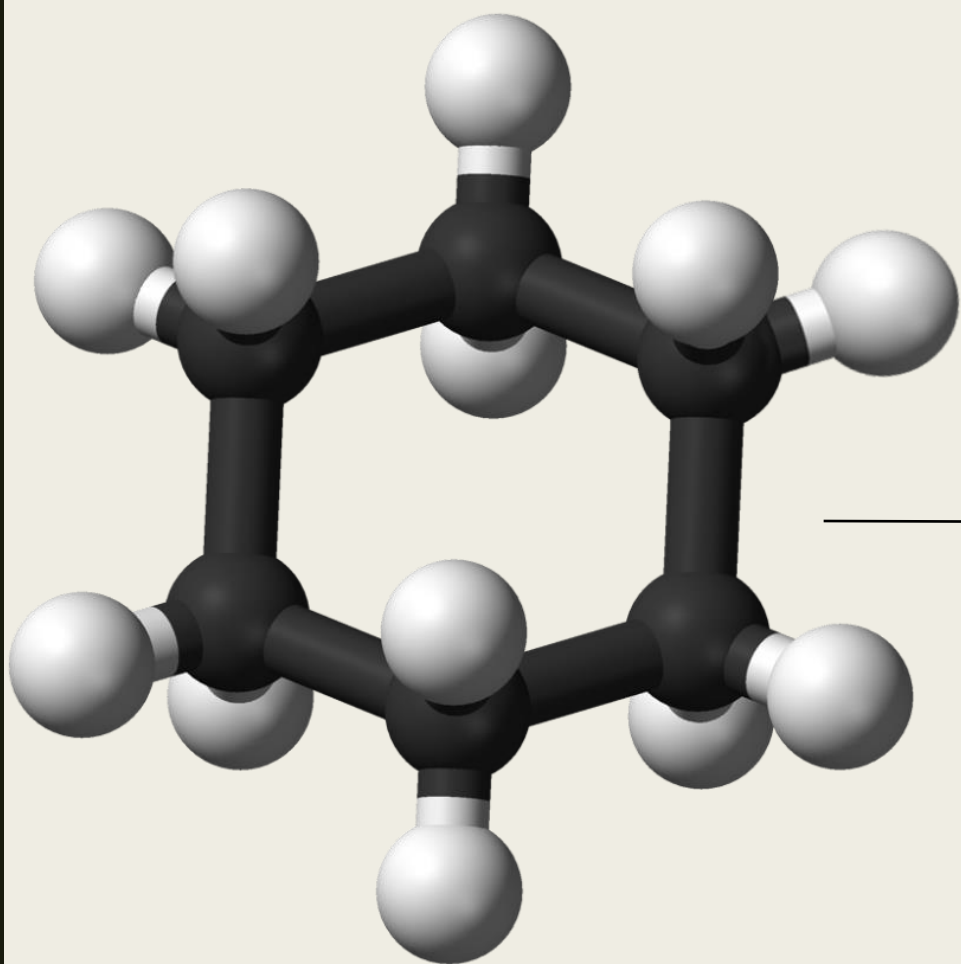
$\sim 109.5^\circ$



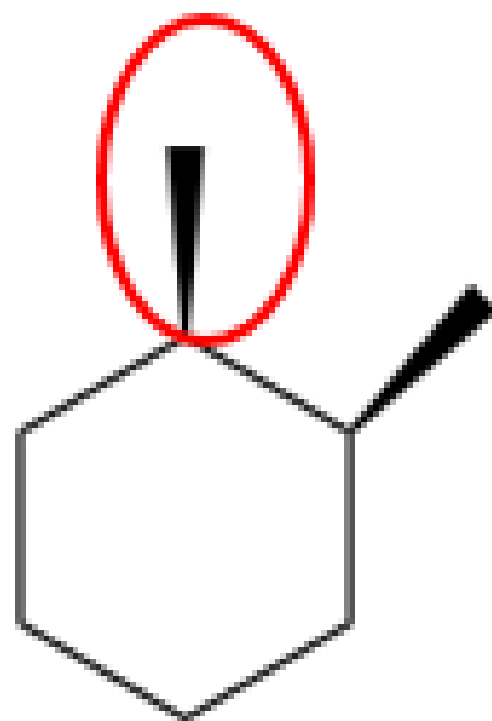
Cyclohexane versus linear hexane

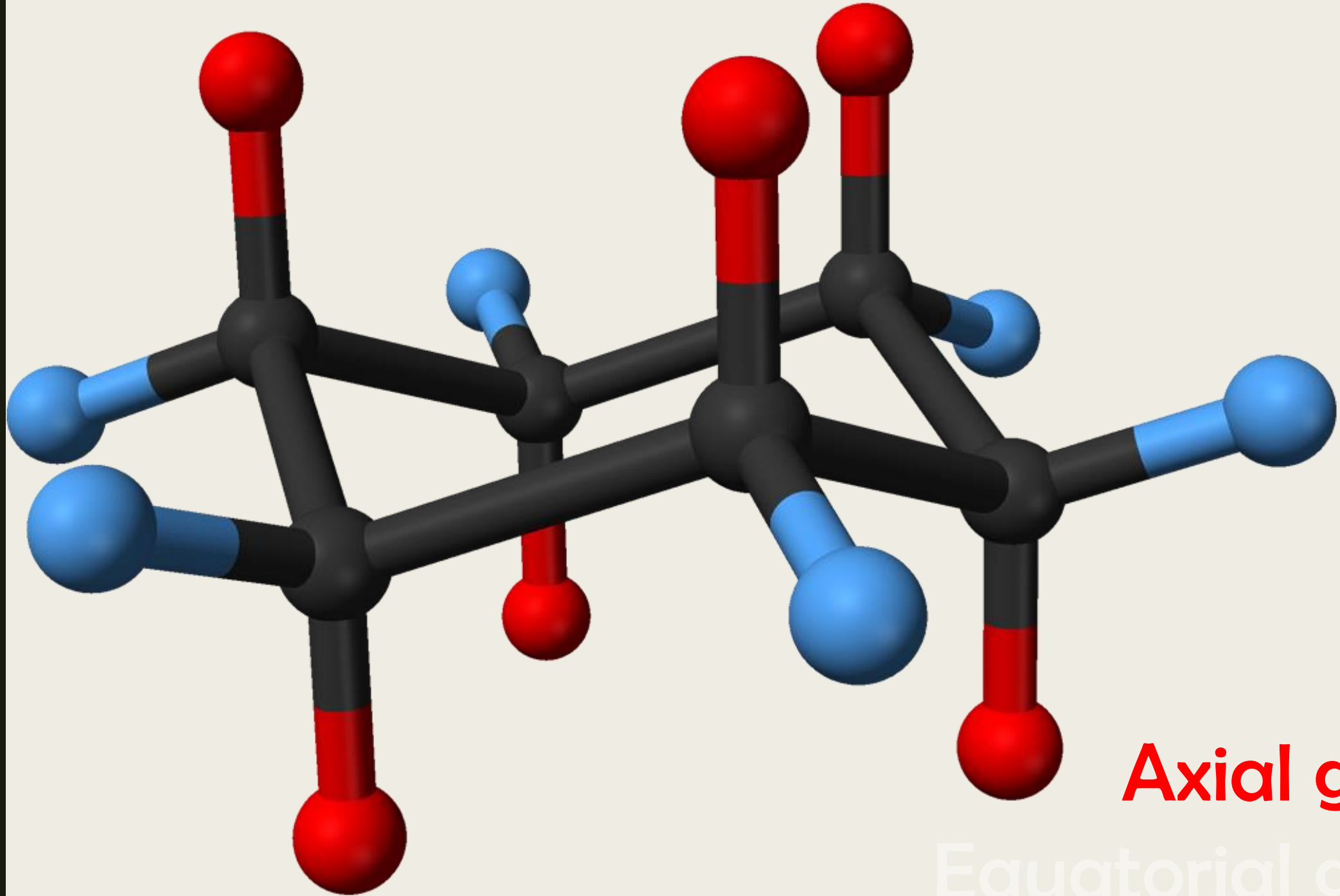
Structure	Molecule	Bond angle
	Cyclopropane	60°
	Cyclobutane	90°
	Cyclopentane	108°
	Cyclohexane	109.5°





Substituent

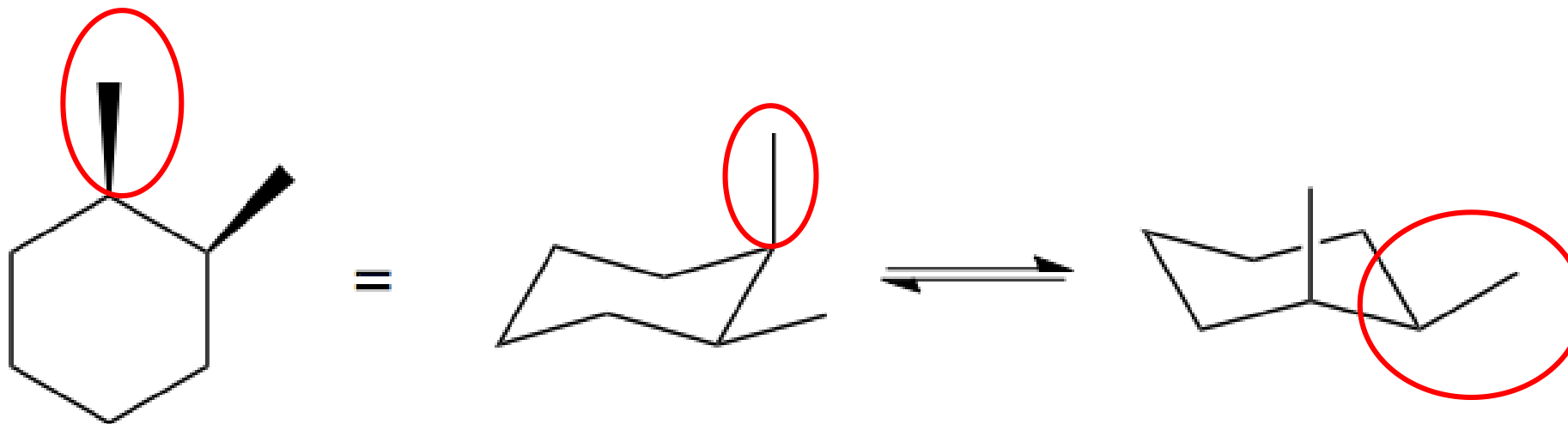




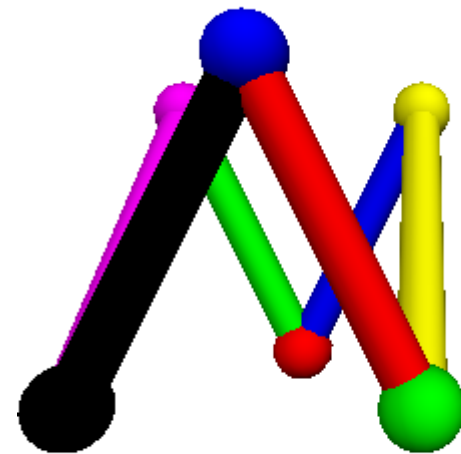
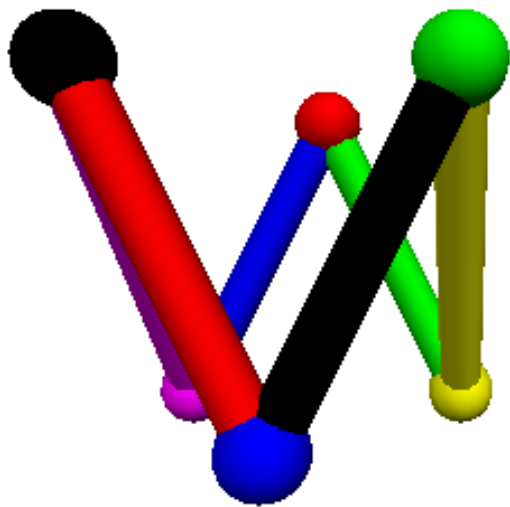
Axial groups

Equatorial groups

Substituent



RTICA in VPython



Problems in smoother RTICA

- Issue in showing incremental transformation in Vpython while maintaining assumed ideal angles between bonds

**Research is what
I'm doing when I
don't know what
I'm doing**