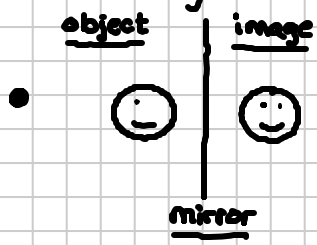
Lecture 26.1 Optical Isomers

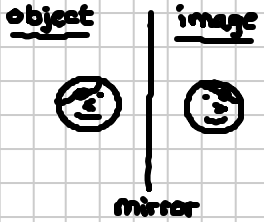
Note Title 4/15/2012

Optical Isomers: Molecules whose mirror? image cannot be superimposed? overlayed

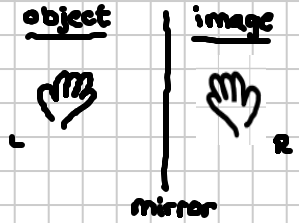
Mirror Images



Superimposable: Y/N
optical Isomers: Y/N

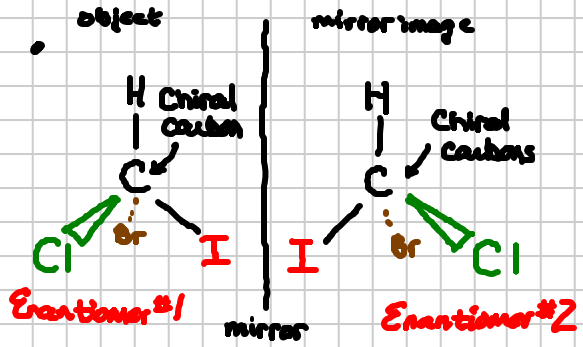


Superimposable: Y/N
optical Isomers: Y/N

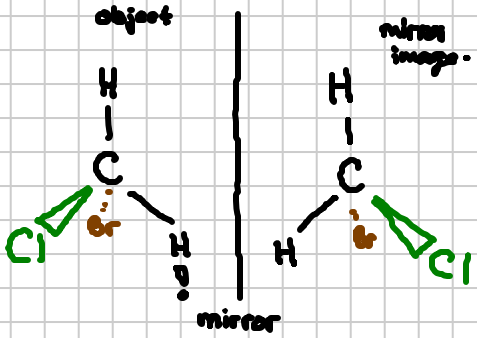


Superimposable: Y/N
optical Isomers: Y/N

... Applied To Molecules



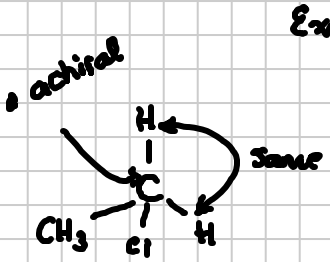
Superimposable: Y/N
optical Isomers: Y/N
Enantiomers: Y/N

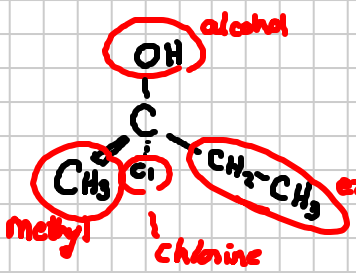


Superimposable: Y/N
optical Isomers: Y/N
Enantiomers Y/N

Optically active carbons (chiral) always have 4 different groups attached to 4 corners

Example





4 diff groups!
⇒ Chiral carbon
⇒ optical isomers.