Organic chemistry - Part 02

toppr

Isomerism

Isomers are molecules that have the same molecular formula, but have a different structures or arrangement of the atoms in space. This phenomenon is called Isomerism.

Structural

Isomers are molecules that have the same molecular formula but different structures.

- Chain
- Positional
- Functional
- Metamerism
- Tautomerism
- Ring-chain

Stereo

- Geometric

Isomers differ in their spatial arrangement about a doble bond.

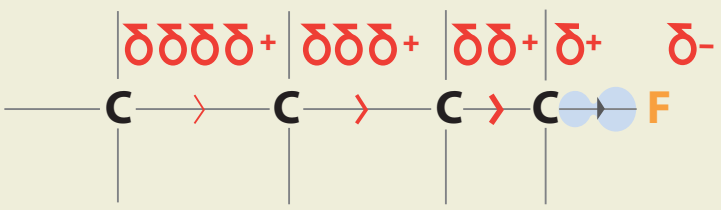
- Optical

Isomers differ in atoms in 3D space which create mirror images of each other.

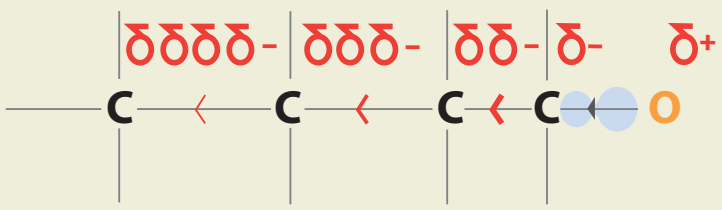
Electronic factors that influence organic reactions

Inductive effect

Permanent state of polarization.



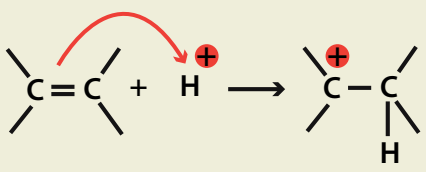
-I effect



+I effect

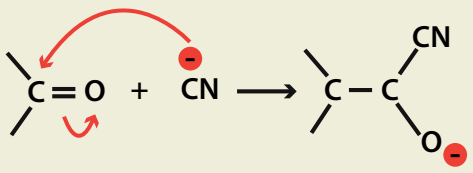
Electromeric effect

temporary polarisation and reversible,Occurs in the presence of reagent.



+E effect

π-electrons of the multiple bond are transferred to that atom to which the reagent gets attached



-E effect

π-electrons of the multiple bond are transferred to that atom to which the attacking reagents do not get attached.

Mesomeric effect

The permanent polarization of a group conjugated with a π bond or a set of alternate π bonds.

-M effect

+M effect