

MJC-1Definition of chemical bond.

A chemical bond is the attractive force that holds two or more atoms together in a molecule or compound.

It forms bc atoms tend to achieve stability, usually by completing octet.

Why do bonds form?

Atoms combine to lower their potential energy and become more stable.

Bond formation involve redistribution of electrons b/w atoms.

General characteristics.

- Bonds can involve transfer of electrons (ionic) or sharing of electrons (covalent)
- Strength of a bond depends on factors like distance b/w atoms, charge and overlap of orbitals.
- Bonding explains physical & chemical properties of substances (m.p.t., conductivity, reactivity)

Types of chemical bonds.

- Ionic bond → transfer of electrons (NaCl)
- Covalent bond → sharing of electrons (H_2 , CH_4)
- Metallic bond → sea of electrons in metals (Cu, Fe)
- Hydrogen bond & weak forces → special attractive important in water, DNA, proteins.