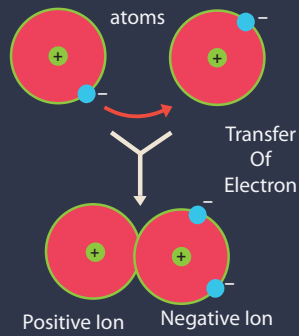


Chemical Bonding

Attractive force that holds ions and atoms together and stabilizes them by overall loss of energy

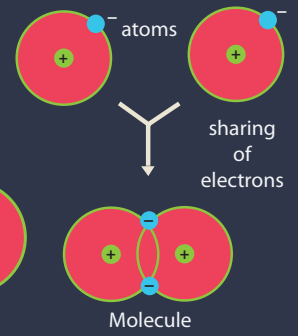
Ionic Bond

Formed by complete transfer of valence electrons to attain stability



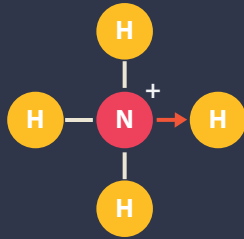
Covalent Bond

Bonds in which two atoms share a pair of electrons



Coordinate Bond

A covalent chemical bond between two atoms that is produced when one atom shares a pair of electrons with another atom lacking such a pair. Also called coordinate covalent bond



Covalent Compounds



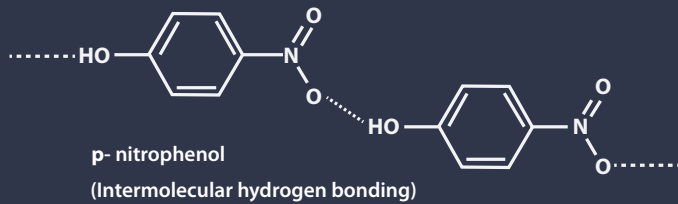
Metallic Bond

Bond is formed when metals share their electrons

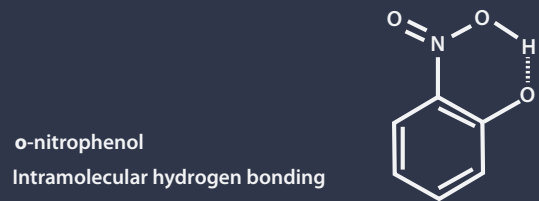
Hydrogen Bond

Hydrogen bond is the chemical bond between H-atom and electronegative atom

Inter Molecular Hydrogen bonding



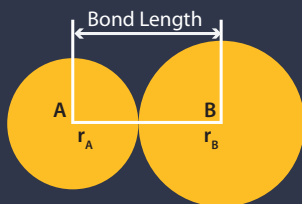
Intra Molecular Hydrogen bonding



Bond Parameters

Bond Length

Average distance between nuclei of two bonded atoms in a molecule.

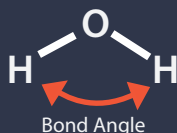


Factors affecting

- Bond multiplicity
- Size of the atom

Bond Angle

A bond angle is the angle formed between three atoms across at least two bonds. Contribute to the shape of a molecule.



Bond Enthalpy

Enthalpy change when one mole of bonds are broken in a substance at 298 K. The higher its value, the stronger the bond and the more energy required to break it.

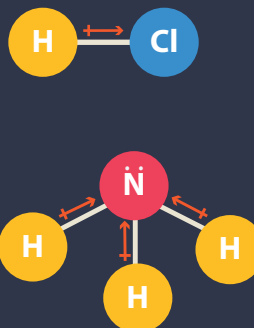
Factors affecting

- Atomic size
- Electronegativity
- Extent of overlapping

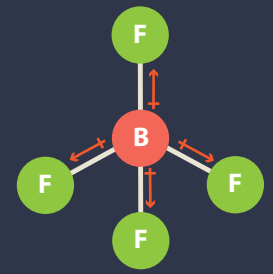
Polarity of Bonds

State of atom or molecule having positive and negative charges in case of magnetic or an electrical poles

Polar bonds/molecules Examples- HCl, NH₃



Non-polar bonds/molecules Examples- BF₃, CCl₄



Bond Order

Number of bonds that form between two atoms



Bond order is 1



Bond order is 2



Bond order is 3

