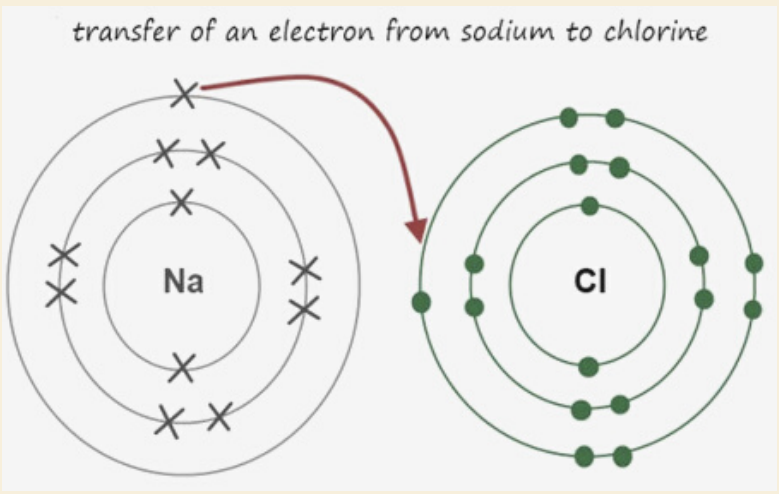
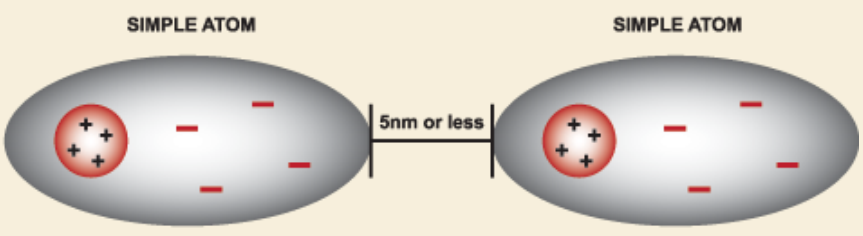
NON-COVALENT BOND*



Ionic bond

In ionic bonds, the metal loses electrons to become a positively charged cation, whereas the nonmetal accepts those electrons to become a negatively charged anion.

Ionic bonding is the complete transfer of valence electrons between atoms. It is a type of chemical bond that generates two oppositely charged ions.

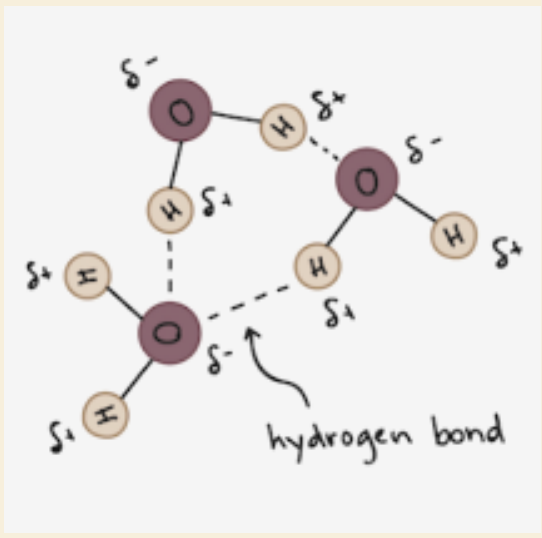


Van der Waals force

Van der Waals forces is the attraction of intermolecular forces between molecules.

They are the weak forces that contribute to intermolecular bonding between molecules. Molecules inherently possess energy and their electrons are always in motion, so transient concentrations of electrons in one region or another lead electrically positive regions of a molecule to be attracted to the electrons of another molecule.

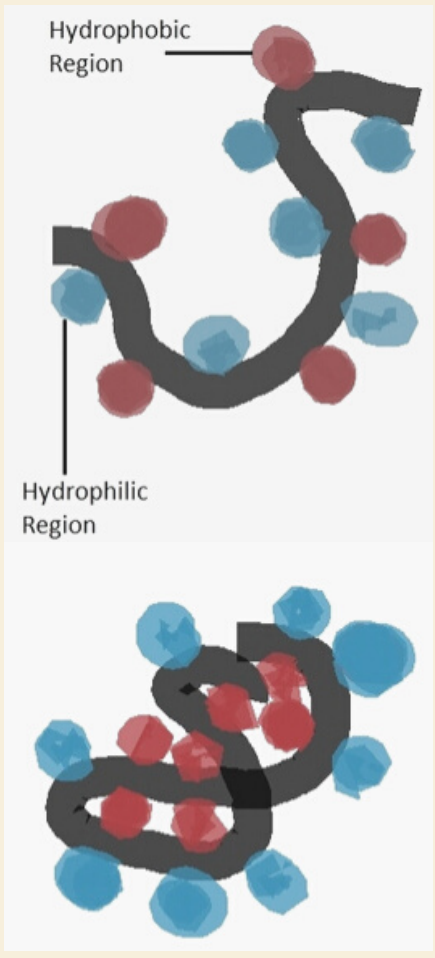
There are two kinds of Van der Waals forces:
(i) weak London Dispersion Forces (ii) stronger dipole-dipole forces.



Hydrogen bond

It is an interaction between a covalently bonded hydrogen atom in donor group and a pair of non-covalently electron on an acceptor pair.

It forms hydrogen bond with itself and other molecules. It is stronger than other non-covalent bonds. It is responsible for thermal properties.



Hydrophobic interaction

It describes the relations between water and hydrophobes. Hydrophobes are nonpolar molecules and usually have a long chain of carbons that do not interact with water molecules.
Eg. The mixing of fat and water