

Atomic Theory | Definitions

Covalent Bonding: Sharing of electrons

Polar Covalent: Where bonding electrons are shared unequally between atoms

Ionic Bonding: Bond is held together by the attraction of oppositely charged ions.
(e.g. Sodium Chloride)

Electronegativity: Measure of the forces of attraction an atom in a molecule has for a shared pair of electrons

First ionisation energy: Minimum energy required to remove the electron most loosely bound from gaseous elements

Energy Levels: Specific or fixed amounts of energy an electron in an atom can have

Orbitals: Regions in space where an electron is most likely to be found

Ground State: When an atom occupies the lowest available energy level

Dipole movement: If an atom's centre of positive charge does not coincide with its centre of negative charge.

Transition Elements/Metals definition: Partially filled d-sub-level

Transition Elements characteristics: Catalysts, Coloured compounds, Variable valency

Atomic Number: Number of protons in an atom (in a neutral atom this equals the number of electrons also)

Mass number: Number of protons and neutrons in the nucleus of an atom

Relative atomic mass: Average mass of an atom of an element compared to the average mass of $\frac{1}{12}^{th}$ of a carbon-12 atom

Excited state: When an atom gains energy and jumps up one or more energy levels

Crystal Structure: A unique arrangement of atoms in a crystal

Allotrope: Different physical forms in which an element can exist.

Shape of an S-Orbital: Spherical

Shape of a P-Orbital: Dumbbell shaped

Quantum number: Gives the main energy level or shell that an electron is on (e.g. n=1, n=2, etc)

Bond Angle: The angle that is formed between two adjacent bonds on the same atom.

Hydrogen Bonds: When Hydrogen is bonded to a very electronegative element, the bond is polar.

Electronic configuration: $1S^2, 2S^2, 2P_x^2, 2P_y^2, 2P_z^2, 3S^2, 3P_x^2, 3P_y^2, 3P_z^2$