

Unit 3 Multiple Choice Topics

Bond Types

Ionic Bonding (*transfer of electrons*)
Metallic Bonding (*between metals*)
Covalent Bonding (*sharing electrons*)
 Polar Covalent (*equal sharing*)
 Non-Polar Covalent (*unequal share*)

Bond Energy

Ionization Energy (*energy to remove e^-*)
Electronegativity (*pull of e^- in bond*)
 Lower Electroneg: e^- less of the time
 Higher Electroneg: e^- more of the time

Valence Electrons

Lewis Dot Structure
(*Representation of valence e^-*)
Electron Dot
(*single valence e^-*)
Single Covalent Bond
(*two shared e^- , one per atom*)
Double/Triple Covalent Bond
(*four or six shared e^-*)
Unpaired e^- (*lone e^- in LDS*)
Paired e^- (*two e^- in LDS*)

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Elemental Bonding

Ionic Bonding

(Bonds formed due to transfer of e^-)

Covalent Bonding

(Bonds formed due to sharing of e^-)

Polar Covalent Bonding

(Bond with unequal sharing of e^-)

Non-Polar Covalent Bonding

(Bond with equal sharing of e^-)

Dipole

(visual rep. of partial + and – charges)

States of Matter

Solids

Fixed Volume, Fixed Shape

Strongest Bonds, Ionic Compounds

Liquids

Fixed Volume, Variable Shape

Middle Bonds, Polar Covalent Molecules

Gases

Variable Volume, Variable Shape

Weakest Bonds, Non-Polar Covalent Molecules