

Unit 2: Bonding and States of Matter

AP Chemistry

Section 1- Bonding

Vocabulary Terms to Know:

Chemical bond, ionic bond, Coulomb's Law, lattice energy, dissociation, metallic bond, alloy, covalent bond, molecule, diatomic molecule, bond length, network solids, single bond, double bond, triple bond, resonance structures, formal charge, nonpolar, polar, partial charges, bond enthalpy, VSEPR Theory, electronic domains, molecular geometry, orbital hybridization, sigma bond, pi bond

Textbook Practice Problems:

- Pgs. 333-337: 8.1, 8.2, 8.5, 8.7, 8.8, 8.9, 8.13, 8.15, 8.17, 8.19, 8.21ac, 8.27, 8.31, 8.33, 8.35, 8.39, 8.41, 8.45, 8.47, 8.53ac, 8.55, 8.59, 8.60, 8.65, 8.69
- Pgs. 388-391: 9.1, 9.5, 9.7, 9.11ab, 9.13, 9.17, 9.19, 9.23, 9.29, 9.33a, 9.35, 9.39, 9.41, 9.51, 9.57

Section 2- Gases

Vocabulary Terms to Know:

Kinetic Molecular Theory, barometer, manometer, Boyle's Law, Charles' Law, Gay-Lussac's Law, Avogadro's Law, ideal gas, real gas, Dalton's Law, water displacement, mole fraction, diffusion, effusion, Graham's Law

Textbook Practice Problems:

- Pgs. 432-437: 10.1, 10.2, 10.5, 10.7, 10.9, 10.11, 10.21, 10.23, 10.25, 10.31, 10.35, 10.37, 10.39, 10.41, 10.43, 10.47, 10.49, 10.51, 10.55, 10.57, 10.59, 10.61, 10.63, 10.67, 10.73, 10.75, 10.83a

Section 3- Liquids / Solids / IMFs

Vocabulary Terms to Know:

Intermolecular forces, intramolecular forces, London dispersion forces, polarizability, dipole-dipole forces, hydrogen bonding, surface tension, capillary action, cohesive forces, adhesive forces, viscosity, volatility, crystalline solids, amorphous solids, molecular solids, ionic solids, covalent network, atomic solids, electron sea model, band model, substitutional alloy, interstitial alloy, vaporization, enthalpy of vaporization, vapor pressure, nonvolatile, volatile, boiling point, sublimation, melting point, enthalpy of fusion, supercooling, superheating, triple point, critical temperature, critical pressure, critical point

Textbook Practice Problems:

- Pgs. 471-477: 11.1, 11.2, 11.3, 11.6, 11.7, 11.9, 11.11, 11.15, 11.17, 11.18, 11.19, 11.21, 11.23, 11.25, 11.33, 11.35, 11.37, 11.39, 11.41, 11.49, 11.51, 11.53, 11.57, 11.61, 11.73, 11.81