**Chemical Bonding and Molecular Geometry Study Guide**

**Lewis Structures**

* Octet rule
* Duet rule
* Bonding electron pair
* Non-bonding electron pair
* VSEPR theory
* Electron domains
* Lone pair
* Molecular geometry
* Electron geometry
* Polar molecule
* Dipole Moment
* Non-polar molecule
* Resonance structures
* Formal charge
* Free radical
* Sigma bonds
* Pi ponds
* Isomer
* Hybridization: sp, sp2, sp3

**Bond Types**

* Ionic Bond
* Covalent Bond
* Metallic Bond
* Lattice energy
* Electrostatic attraction
* Electronegativity
* Percent ionic character
* Polar bond
* Non-polar bond
* Bond energy
* Bond length
* Intermolecular Forces
  + Ion – Dipole
  + Hydrogen Bond
  + Dipole-Dipole
  + LDF

**Physical Properties**

* Solubility in polar and non-polar solvents
* Melting points
* Boiling points
* Conductivity