

Chemistry Chapter 9

1. **Coordinate Covalent Bond:** forms when one atom donates a pair of electrons to be shared with an atom or ion that needs two electrons to become stable.
2. **Covalent Bond:** a chemical bond that results from the sharing of valence electrons.
3. **Endothermic:** A chemical reaction in which a greater amount of energy is required to break the existing bonds in the reactants than is released when the new bonds form in the product molecules.
4. **Exothermic:** a chemical reaction in which more energy is released than is required to break bonds in the initial reaction.
5. **Hybridization:** the process by which the valence electrons of an atom are rearranged to form four new, identical hybrid orbitals.
6. **Lewis Structure:** a model that uses electron-dot structures to show how electrons are arranged in molecules. Pairs of dots or lines represent bonding pairs.
7. **Molecule:** forms when two or more atoms covalently bond and is lower in potential energy than its constituent.
8. **Oxyacid:** any acid that contains hydrogen and an oxyanion.
9. **Pi Bond:** a bond that is formed when parallel orbitals overlap to share electrons.
10. **Polar Covalent:** a type of bond that forms when electrons are not shared equally.
11. **Resonance:** condition that occurs when more than one valid Lewis structure exists for the same molecule.
12. **Sigma Bond:** a single covalent bond that is formed when an electron pair is shared by the direct overlap of bonding orbitals.
13. **Structural Formula:** a molecular model that uses symbols and bonds to show relative positions of atoms; can be predicted for many molecules by drawing the Lewis structure.
14. **VSEPR Model:** Valence Shell Electron Pair Repulsion model, which is based on an arrangement that minimizes the repulsion of shared and unshared pairs of electrons around the central atom.