

AP Chemistry

Categories of Common Reactions

Redox Reactions

1. Synthesis (Direct Combination)
2. Decomposition (Analysis)
3. Single Replacement
4. Burning (Simple combustion)
5. Redox by commonly used “agents”
Oxidizing acids, Manganese, Chromium, Hydrogen Peroxide

Non-Redox Reactions

6. Double Replacement
 - a. Precipitation—see solubility rules
 - b. Formation of a gas—usually CO_2 or SO_2
 - c. Formation of water—“neutralization”
7. Qualitative Analysis
 - a. Ag^+
 - b. Hg_2^{2+}
 - c. Pb^{2+}
8. Acid-Base Reactions
 - a. Arrhenius
 - b. Bronsted-Lowry
 - c. Lewis
 - d. Amphoterism
9. Complexation
 - a. Aka complex ion formation or coordination chemistry
 - b. Simple rule of thumb: # ligands = 2x (charge of central ion)
 - c. Common ligands: NH_3 , $\text{C}_2\text{O}_4^{2-}$, CN^- , H_2O , OH^- , Cl^-