

Revision by YSS- Chemistry Study Mr. Riley

Major formal oxidation states of some elements and poly atomic ions

+1 Ions

| | | |
|-------------|-------|-----------------|
| Ammonium | ----- | NH_4^+ |
| Cesium | ----- | Cs^+ |
| Copper (I) | ----- | Cu^+ |
| Gold (I) | ----- | Au^+ |
| Hydrogen | ----- | H^+ |
| Lithium | ----- | Li^+ |
| Potassium | ----- | K^+ |
| Rubidium | ----- | Rb^+ |
| Sodium | ----- | Na^+ |
| Silver | ----- | Ag^+ |
| Thalium (I) | ----- | Tl^+ |

+2 Ions

| | | |
|----------------|-------|--------------------|
| Barium | ----- | Ba^{+2} |
| Beryllium | ----- | Be^{+2} |
| Cadmium | ----- | Cd^{+2} |
| Calcium | ----- | Ca^{+2} |
| Cerium (II) | ----- | Ce^{+2} |
| Chromium (II) | ----- | Cr^{+2} |
| Copper (II) | ----- | Cu^{+2} |
| Iron (II) | ----- | Fe^{+2} |
| Lead (II) | ----- | Pb^{+2} |
| Magnesium | ----- | Mg^{+2} |
| Manganese (II) | ----- | Mn^{+2} |
| Mercury (I) | ----- | Hg_2^{+2} |
| Mercury (II) | ----- | Hg^{+2} |
| Nickel (II) | ----- | Ni^{+2} |
| Strontium | ----- | Sr^{+2} |
| Tin (II) | ----- | Sn^{+2} |
| Zinc | ----- | Zn^{+2} |

+3 Ions

| | | |
|-----------------|-------|------------------|
| Aluminum | ----- | Al^{+3} |
| Antimony (III) | ----- | Sb^{+3} |
| Arsenic (III) | ----- | As^{+3} |
| Bismuth (III) | ----- | Bi^{+3} |
| Boron | ----- | B^{+3} |
| Cerium (III) | ----- | Ce^{+3} |
| Chromium (III) | ----- | Cr^{+3} |
| Cobalt (III) | ----- | Co^{+3} |
| Gold (III) | ----- | Au^{+3} |
| Iron (III) | ----- | Fe^{+3} |
| Manganese (III) | ----- | Mn^{+3} |
| Thallium (III) | ----- | Tl^{+3} |
| Titanium (III) | ----- | Ti^{+3} |
| Tungsten (III) | ----- | W^{+3} |
| Vanadium (III) | ----- | V^{+3} |
| Zirconium (III) | ----- | Zr^{+3} |

+4 Ions

| | | |
|----------------|-------|------------------|
| Cerium (IV) | ----- | Ce^{+4} |
| Lead (IV) | ----- | Pb^{+4} |
| Manganese (IV) | ----- | Mn^{+4} |
| Tin (IV) | ----- | Sn^{+4} |
| Titanium (IV) | ----- | Ti^{+4} |
| Tungsten (IV) | ----- | W^{+4} |

+5 Ions

| | | |
|--------------|-------|------------------|
| Antimony (V) | ----- | Sb^{+5} |
| Arsenic (V) | ----- | As^{+5} |
| Bismuth (V) | ----- | Bi^{+5} |
| Tungsten (V) | ----- | W^{+5} |
| Uranium (V) | ----- | U^{+5} |
| Vanadium (V) | ----- | V^{+5} |

+6 Ions

| | | |
|----------------|-------|------------------|
| Chromium (VI) | ----- | Cr^{+6} |
| Manganese (VI) | ----- | Mn^{+6} |
| Tungsten (VI) | ----- | W^{+6} |
| Uranium (VI) | ----- | U^{+6} |

-1 Ions

| | | |
|----------------------|-------|------------------------------------|
| Acetate | ----- | $\text{C}_2\text{H}_3\text{O}_2^-$ |
| Amide | ----- | NH_2^- |
| Azide | ----- | N_3^- |
| Benzoate | ----- | $\text{C}_7\text{H}_6\text{O}_2^-$ |
| Bromate | ----- | BrO_3^- |
| Bromide | ----- | Br^- |
| Chlorate | ----- | ClO_3^- |
| Chloride | ----- | Cl^- |
| Chlorite | ----- | ClO_2^- |
| Cyanate | ----- | OCN^- |
| Cyanide | ----- | CN^- |
| Dihydrogen phosphate | ----- | H_2PO_4^- |
| Fluoride | ----- | F^- |
| Hydrogen carbonate | ----- | HCO_3^- |
| Hydrogen sulfate | ----- | HSO_4^- |
| Hydroxide | ----- | OH^- |
| Hypochlorite | ----- | ClO^- |
| Iodide | ----- | I^- |
| Nitrate | ----- | NO_3^- |
| Nitrite | ----- | NO_2^- |
| Perchlorate | ----- | ClO_4^- |
| Permanganate | ----- | MnO_4^- |
| Thiocyanate | ----- | SCN^- |
| Hydride | ----- | H^- |

-2 Ions

| | | |
|----------------|-------|------------------------------|
| Carbonate | ----- | CO_3^{-2} |
| Chromate | ----- | CrO_4^{-2} |
| Dichromate | ----- | $\text{Cr}_2\text{O}_7^{-2}$ |
| Disulfate | ----- | $\text{S}_2\text{O}_7^{-2}$ |
| Hydrophosphate | ----- | HPO_4^{-2} |
| Manganate | ----- | MnO_4^{-2} |
| Oxalate | ----- | $\text{C}_2\text{O}_4^{-2}$ |
| Oxide | ----- | O^{-2} |
| Peroxide | ----- | O_2^{-2} |
| Sulfate | ----- | SO_4^{-2} |
| Sulfide | ----- | S^{-2} |
| Sulfite | ----- | SO_3^{-2} |
| Thiosulfate | ----- | $\text{S}_2\text{O}_3^{-2}$ |

-3 Ions

| | | |
|-----------|-------|---------------------|
| Arsenate | ----- | AsO_4^{-3} |
| Arsenite | ----- | AsO_3^{-3} |
| Borate | ----- | BO_3^{-3} |
| Nitride | ----- | N^{-3} |
| Phosphate | ----- | PO_4^{-3} |
| Phosphide | ----- | P^{-3} |