CSUSM
STEM Success Center

Electrochemistry.

RedOx Equations:

Anode: $Zn(s) \rightarrow Zn^{-2}(aq) + 2e^-$ (*Oxidation*)

Cathode: $Cu^{-2}(aq) + 2e^- \rightarrow Cu(s)$ (**Reduction**)

Overall: $Zn(s) + Cu^{-2}(aq) \rightarrow Zn^{-2}(aq) + Cu(s)$

Cell: $Zn(s) \mid Zn^{-2}(aq) \mid\mid Cu^{-2}(aq) \mid Cu(s)$

| = Phase boundary

|| = Salt bridge

Oxidation Is Loss (OIL) of electrons; Oxidation number increases; more positive.

Reduction Is Gain (RIG) of electrons; Oxidation number decreases; more negative.

Oxidation occurs at Anode, which gains electrons and mass. (plating)

Reduction occurs at Cathode, which loses electrons and mass. (dissolving)

