



- electrons flow from anode to cathode
- Oxidation occurs @ anode
- Reduction occurs @ cathode
- Salt bridge used to keep charges balanced
 - ↳ doesn't have to have same ions as rxn, just needs to have charge flow to keep balanced

Electromotive force (emf)

- e^- , like water, flow from high potential energy to low potential energy
- The potential energy difference b/w the anode and cathode drives the flow of e^-
- This is called the electromotive force (emf) of the cell

$$E_{\text{cell}} = \text{cell potential or emf (Volts, V)} \quad 1\text{V} = 1\text{J/C}$$

- for a (spontaneous) voltaic cell, $E_{\text{cell}} > 0$

⇒ current flows from anode to cathode

Large, positive $E_{\text{cell}} \Rightarrow$ more favored rxn and more current

↑ Coulombs, unit of charge

Standard reduction potentials

- A value of E_{red}^0 for a reduction can be measured relative to H^+ reduction
- Values are per unit charge, so multiplying by a coefficient does not change E_{red}^0

