

Chapter 20: Electron Transfer Rxns

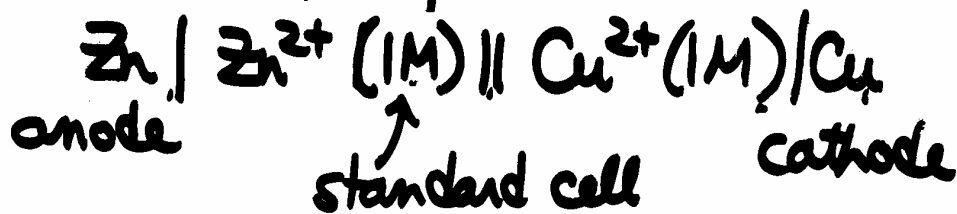
- Balance redox reactions in acidic & basic conditions
- Draw a voltaic cell and electrolytic cell
Figure out: cathode + cathodic rxn
anode + anodic rxn
sign on electrodes
direction of e^- flow
overall rxn

Relationship between E° , ΔG & K for
voltaic & electrolytic cell

spont. rxn: voltaic: $E^\circ > 0$, $\Delta G < 0$ K is big

nonspont.: electrolytic $E^\circ < 0$, $\Delta G > 0$ K is small

- shorthand notation for voltaic cell



- find E° for standard cell from table
careful: listing of table can be reversed
- find E for nonstandard cell with Nernst Eq.

Given: $E = E^\circ - \frac{0.0592}{n} \log Q$ $E = E^\circ - \frac{0.0257}{n} \ln Q$