

Electrochemistry

Oxidation: Loss of electrons, positive charge.

Ex. $\text{Cl} \rightarrow \text{Cl}^{+2}$ (Cl lost 2 electrons).

Reduction: Gain of electrons, negative charge.

Ex. $\text{O} \rightarrow \text{O}^{-2}$ (O gained 2 electrons).

Oxidant: The atom being reduced.

Reductant: The atom being oxidized.

$$\Delta G = -RT \ln K$$

$\Delta G > 0$ non-spontaneous

$\Delta G < 0$ spontaneous

$\Delta G = 0$ Equilibrium

$$\Delta G = -nFE_{\text{cell}}$$

E_{cell} :

- $\Delta G > 0$ spontaneous
- $\Delta G < 0$ non-spontaneous