

$$\textcircled{8} \quad \Delta S_{\text{rxn}} = n S_{\text{prod}} - n S_{\text{react}}$$

$$-117 = [2(264)] - [2(211) + \underline{O_2}]$$

$$\textcircled{10} \quad \Delta G = \Delta H - T\Delta S$$

①

BIGGER Than

Apr 4-7:36 AM

$$\textcircled{12} \quad \Delta G = -RT \ln K$$

$$\textcircled{512} = (-8.314 \times 10^{-3})(298) \ln K$$

$$+ \Delta G \rightarrow \text{smaller} \rightarrow K = 1.78 \times 10^{-90} \quad \text{REALLY SMALL}$$

$$K = \frac{[\text{Prod}]}{[\text{React}]}$$

FAVORS reactant

Apr 4-7:59 AM

⑧ $\Delta G = -RT \ln K$

$180.9 = (-8.314 \times 10^{-3})(298) \ln K$

$\Delta G = n \sum E_{red} - n \sum E_{ox}$

$= [x + 137.3] + [318.2 + x]$

180.9 kJ

Apr 4-8:02 AM

Chap 20 REDOX + Electrochemistry

Reduction (↓) take away from

GER, RIG

gain e⁻ ⇒ Reduction

gain negative # (charge)

+ ⊖ = gets smaller (reduces)

Oxidation

LEO, OIL

lose e⁻ ⇒ oxidation

+ ⊕ = # gets larger

is the OXIDATION

Apr 4-8:06 AM

Oxidation # - WHAAA?

O^{-2} , Ca^{+2} , Na^{+1} , F^{-1}
 Fe^{+2} or $+3$

#e⁻ ^{GER} gained / ^{LEO} lost to become stable.

OR Full valence shell
 Full valence shell (stable octet)

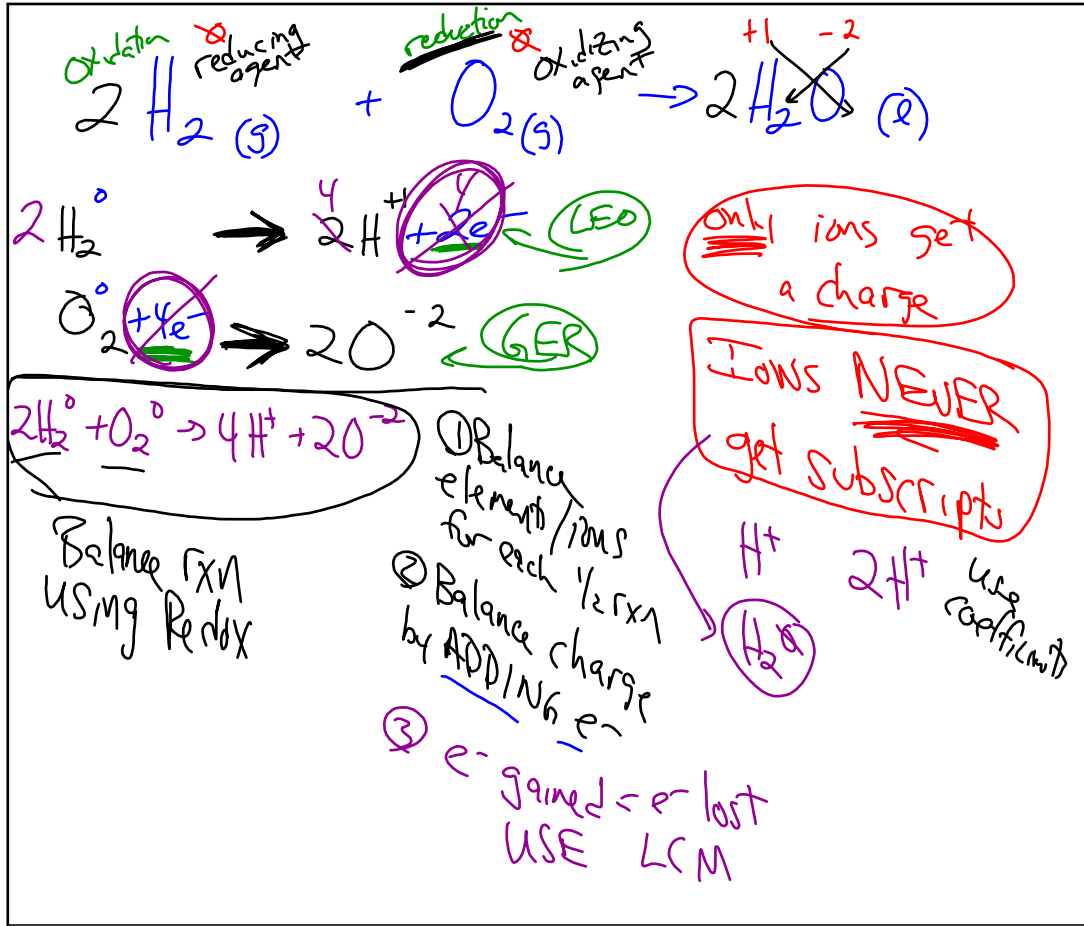
Apr 4-8:12 AM

Half reaction Balance eqns

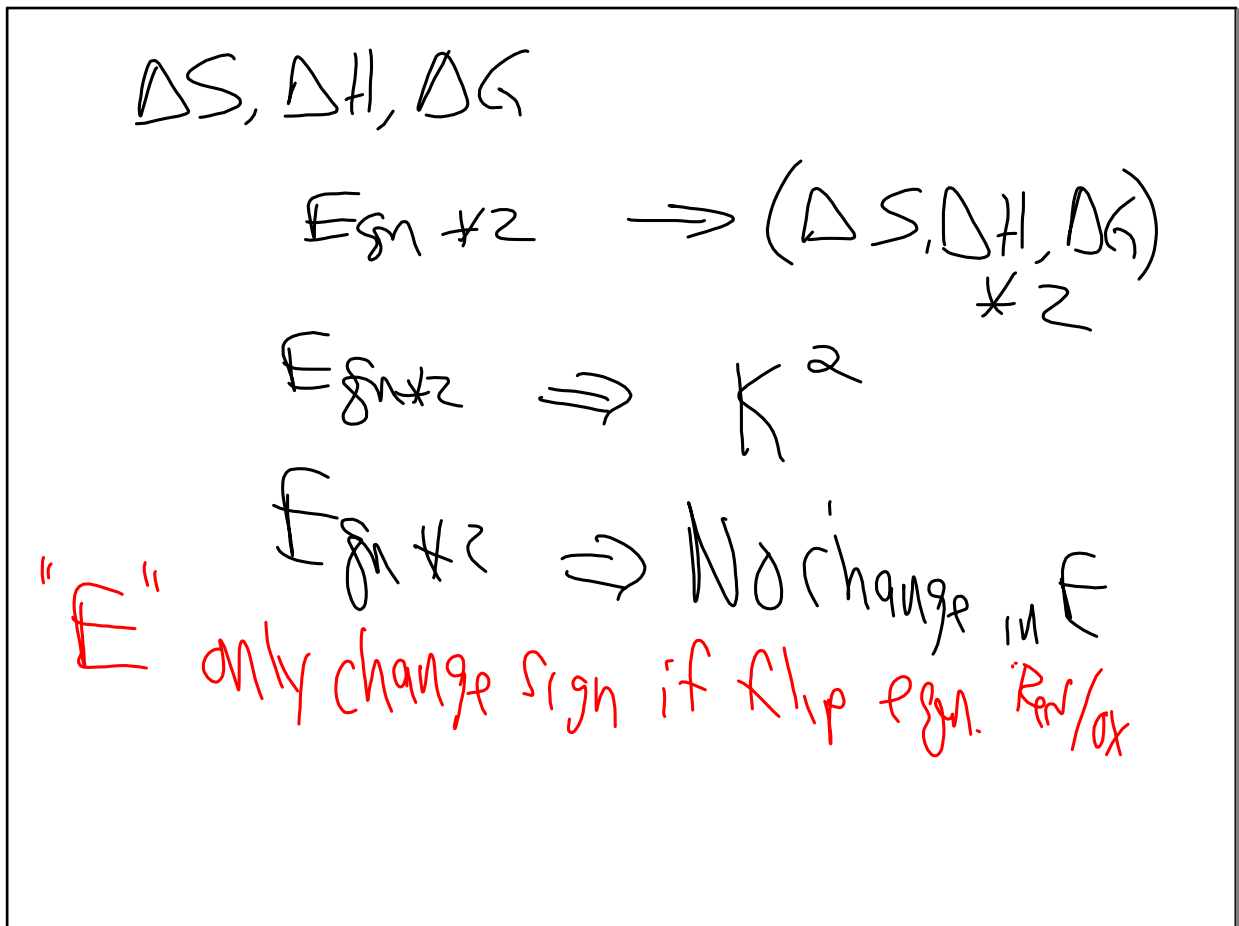
Rxn → Reduction
 ↓ Oxidation

gain e⁻
 #lost = #gained
 lose e⁻

Apr 4-8:19 AM



Apr 4-8:23 AM



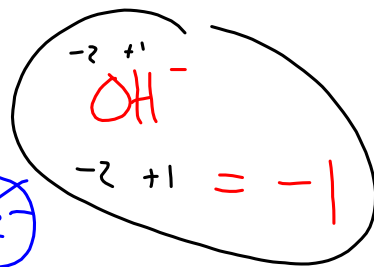
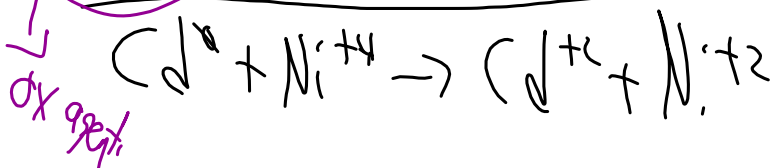
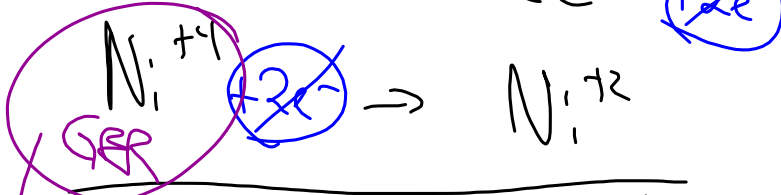
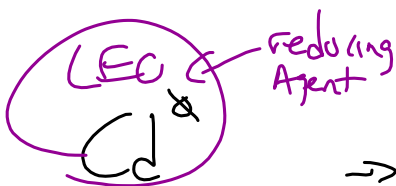
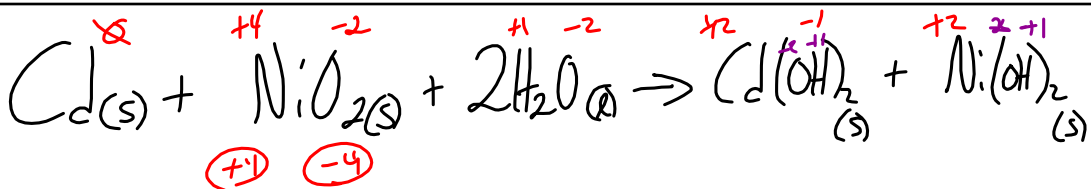
Apr 4-8:55 AM

7/11/7 E reduction potential

Large E value \rightarrow REDUCTION.

* Forces other rxn to undergo oxidation

Apr 4-8:57 AM



Apr 4-9:05 AM

it

$$\frac{20}{12+16}$$

Apr 4-9:15 AM