

Lecture 21 | Predicting Spontaneous Redox reactions $\Delta G < 0$

Note Title

11/14/2011

Redox Rxns: Possibilities...

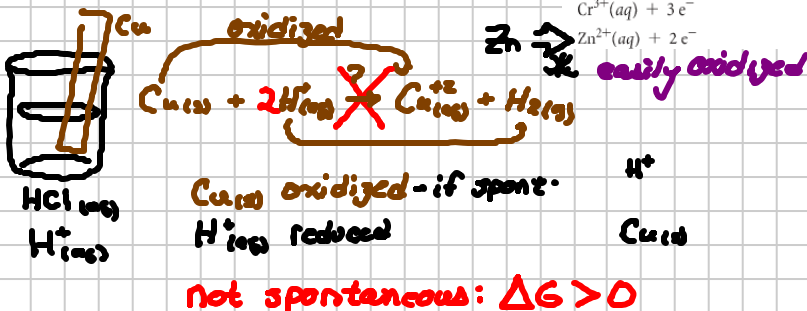
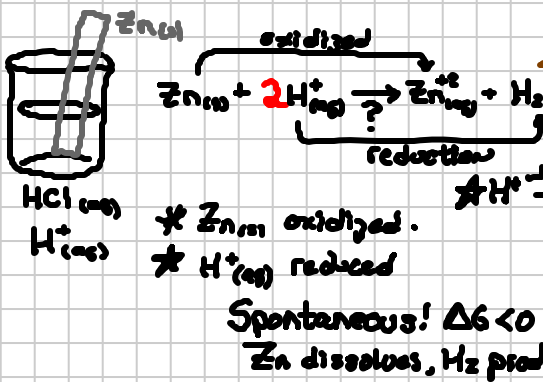
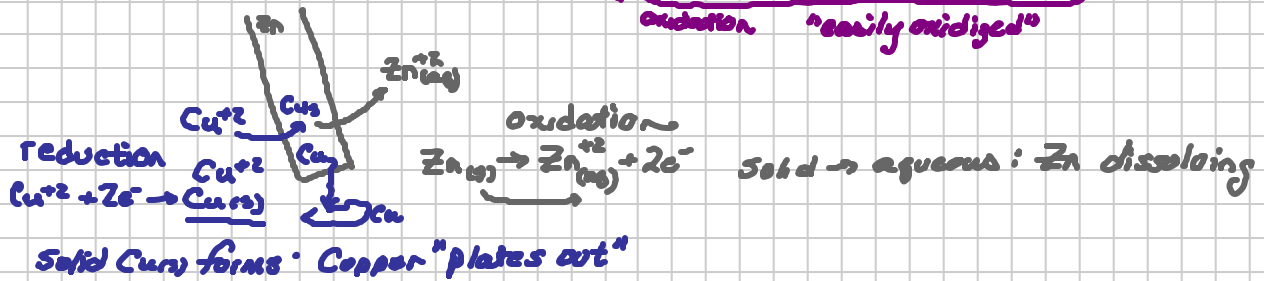
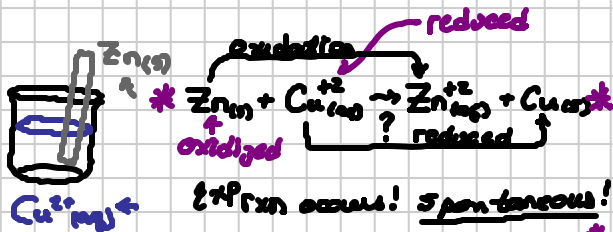
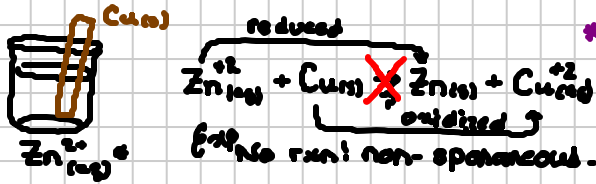


Table. Standard Reduction Potentials

$Cu^{2+}(aq) + 2e^-$	$\rightarrow Cu(s)$	0.34
$SO_4^{2-}(aq) + 4H^+(aq) + 2e^-$	$\rightarrow H_2SO_3(aq) + H_2O(l)$	0.20
$Cu^{2+}(aq) + e^-$	$\rightarrow Cu^+(aq)$	0.16
$Sn^{4+}(aq) + 2e^-$	$\rightarrow Sn^{2+}(aq)$	0.15
$2H^+(aq) + 2e^-$	$\rightarrow H_2(g)$	0
$Fe^{3+}(aq) + 3e^-$	$\rightarrow Fe(s)$	-0.036
$Pb^{2+}(aq) + 2e^-$	$\rightarrow Pb(s)$	-0.13
$Sn^{2+}(aq) + 2e^-$	$\rightarrow Sn(s)$	-0.14
$Ni^{2+}(aq) + 2e^-$	$\rightarrow Ni(s)$	-0.23
$Cd^{2+}(aq) + 2e^-$	$\rightarrow Cd(s)$	-0.40
$Fe^{2+}(aq) + 2e^-$	$\rightarrow Fe(s)$	-0.45
$Cr^{3+}(aq) + e^-$	$\rightarrow Cr^{2+}(aq)$	-0.50
$Cr^{3+}(aq) + 3e^-$	$\rightarrow Cr(s)$	-0.73
$Zn^{2+}(aq) + 2e^-$	$\rightarrow Zn(s)$	-0.76

$Cu^{2+}(aq) + 2e^- \rightarrow Cu(s)$ easily reduced
 $Zn^{2+}(aq) + 2e^- \rightarrow Zn(s)$ easily oxidized