

CHAPTER 19 ELECTROCHEMISTRY

- spontaneous redox reactions $\rightarrow$ ^{release} of ϵ $\rightarrow$ electricity
- electricity $\rightarrow$ force a nonspontaneous redox reaction [electrolysis]
- $\Delta G = -nFE_{cell}^0$

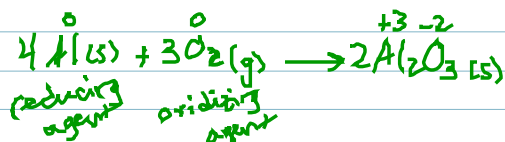
* OXIDATION NUMBERS

* BALANCE REDOX REACTION

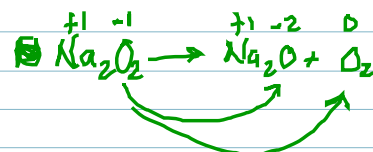
$\rightarrow$ must balance in mass and charge

REDOX REACTIONS

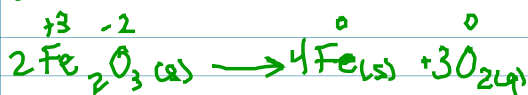
① COMBINATION (SYNTHESIS)



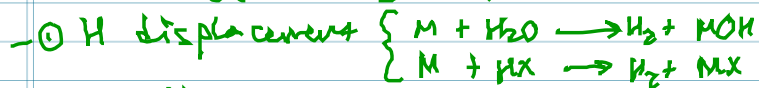
④ DISPROPORTIONATION



② DECOMPOSITION



③ SINGLE REPLACEMENT



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 - $\Delta G - K - E^\circ_{\text{cell}}$
-

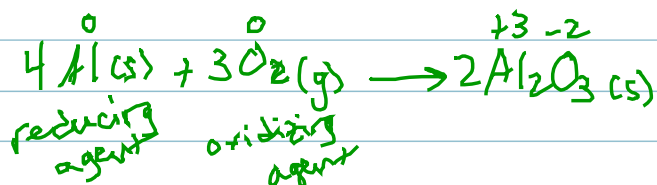
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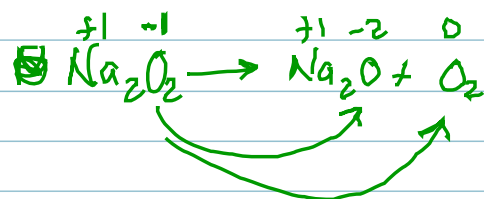
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REDOX REACTIONS

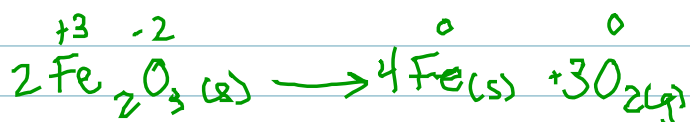
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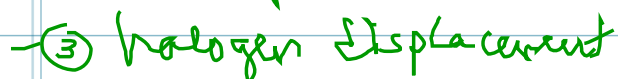
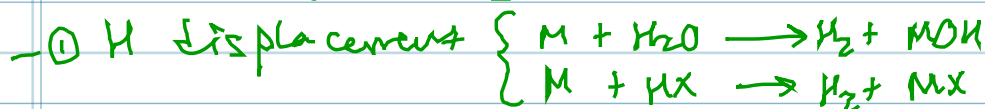
④ DISPROPORTIONATION



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Write the balanced equation for the reaction turning Fe^{2+} into Fe^{3+} using $\text{Cr}_2\text{O}_7^{2-}$ in an acidic solution.

