


Thursday, May 28/15
Science 122

 <http://mvhs-sherrard.weebly.com/>

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1. Check: Nelson - Page 454 - #20 (a,b)
 2. Voltaic Cells - To Be Continued
 3. Worksheets
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Standard Cells and Cell Potentials

(Nelson, Page 454)

standard cell - voltaic cell

- each half-cell contains all entities shown in the half-reaction equations at SATP with a concentration of 1.0 mol/L for the aqueous entities

standard cell potential - ΔE° (unit: V)

$$V = \frac{J}{C}$$

↑
standard 1.0 mol/L and SATP conditions



- maximum electric potential difference of a standard cell
- energy difference per unit charge between the cathode and anode

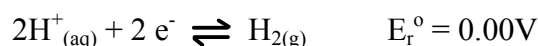
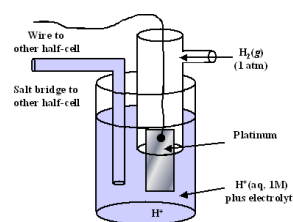
standard reduction potential E_r° - the ability of a standard half-cell to attract electrons (reduction)

The half-cell with the greater attraction for electrons (the one with the more positive reduction potential) gains electrons from the half-cell with the lower reduction potential.

$$\Delta E^\circ = E_{r^\circ \text{ cathode}} - E_{r^\circ \text{ anode}}$$

ΔE° +ve spontaneous

*It is impossible to empirically determine the reduction potential of a single half-cell. In order to assign values for standard reduction potentials, the standard hydrogen half-cell (the reference half-cell) is internationally regarded as the reference half-cell from which all other reduction potentials are derived.



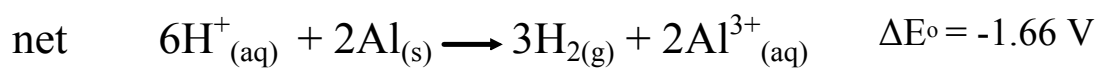
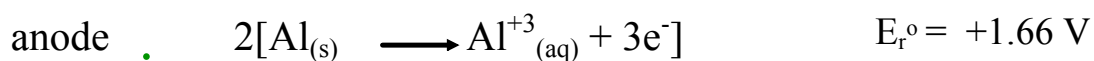
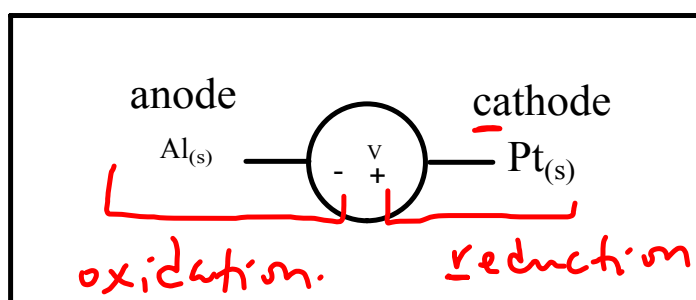
+ E_r° for a half-cell connected to the hydrogen half-cell means that the oxidizing agent in the half-cell is a stronger oxidizing agent and attracts electrons more strongly than the hydrogen ions do

- E_r° for a half-cell connected to the hydrogen half-cell means that the oxidizing agent in the half-cell attracts electrons less strongly than the hydrogen ions do


Example

SRA

SOA



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Physics 122

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1. Rewrite -> Quiz: Unit 3 - Section 1 - Electrostatics
 2. Questions?
Textbook: Page 714, #21-26 (Ohm's Law)
Textbook: Page 737, #40-42 }
Page 744, #46-50 } Power
Textbook: Page 719, #27-31 (Series Circuits)
Textbook: Page 724, #32-35 (Parallel Circuits)
 3. Combination/Complex Circuit
 4. Textbook: Page 728, #36-37 }
Textbook: Page 749, #33-34 } Combination/Complex
 5. ICA - Current to End of Circuits -> Tuesday, June 2/15
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Thursday, May 28/15
Science 10

1. Test - Physics - Finish Up
2. Task Sheets - Due: Friday, May 29 -> EXCEPTION: Practice Exam
3. Items Owing - Deadline: Friday, May 29
4. Practice Exam
5. Intro to Paper Roller Coaster Challenge

<http://paperrollercoasters.com/videos.htm>

