

Redox Reactions and Electrochemistry

Reading Assignments

Chemistry (sixth edition), Chpt. 4 (Sect. 9, 10), 17

Supplementary Reading

none

Homework/Activities

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|-----------------------------------|-------------------------------------|------------|
| • Chpt 4 #57-65o, Chpt 17 #13, 15 | (oxidation states, redox reactions) | Due: _____ |
| • Chpt 17 #35, 43-47o | (reduction potential) | Due: _____ |
| • Chpt 17 #51, 53, 57 | (Nernst equation) | Due: _____ |
| • Chpt 17 #73-77o, 83 | (electrolysis, Faraday's Law) | Due: _____ |

Concepts/Topics

- Oxidation states
- Redox reactions: half reactions, balancing reactions
- Electrochemical cells - galvanic cells, electrolytic cells
- Anode, cathode, cell notation
- Reduction potential (E°), spontaneity
- Nernst equation
- Electrolysis, Faraday's Law
- Cell potential and equilibrium constant

Web Resources (tutorials/practice problems)

Oxidation States (Khan Academy)	www.youtube.com/v/_fNNQfGGYr4
More on Oxidation States (Khan)	www.youtube.com/v/GA88JI4AymY
Redox Equations (Khan)	www.youtube.com/v/yp60-oVxrT4
Redox Reactions (Chem Guy)	www.youtube.com/v/zcVLtoAyd0
Redox Reactions (Mark Matthews)	www.youtube.com/v/FTXVPrpN3Z4
Galvanic Cells (Khan)	www.youtube.com/v/N4L3dDIixSU
Balancing Redox Equations	science.widener.edu/svb/tutorial/balanceredoxcsn7.html
Calculating E°	science.widener.edu/svb/tutorial/calceocsn7.html
Faraday's Law	science.widener.edu/svb/tutorial/faradaycsn7.html
Nernst Equation	science.widener.edu/svb/tutorial/nernstcsn7.html
Review Questions (Science Geek)	www.sciencegeek.net/APchemistry/APtaters/chap17rev.htm