

April 8, 2002

- **This Week:** *Demo a day!*
- **Redox:** Readings and Assigned Problems (with solutions) are now online!

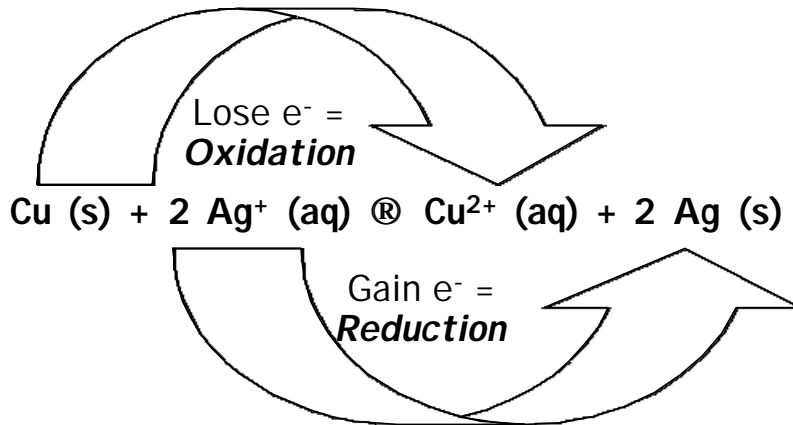
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Oxidation- Reduction Chemistry

Chem 36
Spring 2002

Definitions

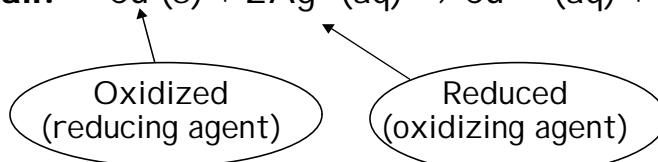
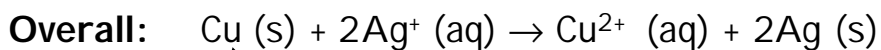
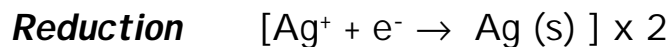
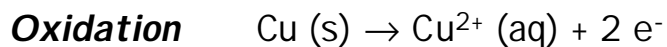
- Redox reactions involve *electron transfer*:



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Half-Reactions

- Consider each process individually:



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Balancing Redox Reactions

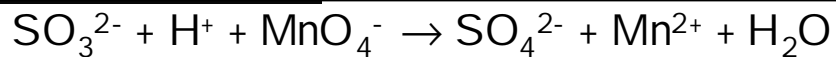
➤ The Half-Reaction Method

Three Steps:

1. Determine *net ionic equations* for both half-reactions
2. Balance half-reactions with respect to *mass and charge*
3. Combine so as that *electrons cancel*

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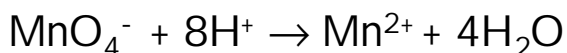
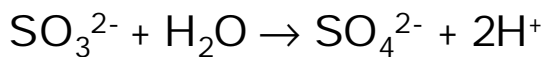
Example



1. Write Skeleton Half-Reactions



2. Mass Balance

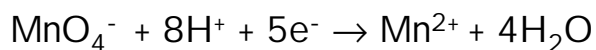


•Add H₂O to side needing oxygen
•Add H⁺ to balance hydrogen

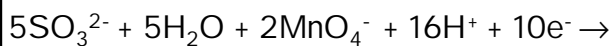
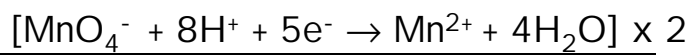
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Example: Continued

3. Charge Balance (use electrons)



4. Combine!



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