

## Electrochemistry Learning Objectives

At the end of this chapter you should be able to...

- Write simple Red-Ox equations.
- Draw and describe a typical electrochemical cell.
- Calculate cell potentials under standard conditions and non-standard conditions using the Nernst equation.
- Use cell potentials to determine Gibb's Free Energies and Equilibrium Constants.
- Describe battery and fuel-cell usage (charging and discharging) using electrochemical cells.
- Compare efficiencies of batteries for electricity generation with use of fossil fuels for electricity generation.