

Experiment 32: Electrochemistry Addendum

Purpose The purpose of this addendum is to determine the ΔG for one of the voltaic cells.

Background

This experiment consists of four parts. For one of the voltaic cells from either Part 1, Part 2, or Part 3, use your measured voltage to calculate the ΔG for that cell.

The equation that relates ΔG to the voltage of the cell is:

$$\Delta G = -nFE_{\text{cell}}$$

n = the number of moles of electrons transferred in the balanced redox reaction. The value of n will be a whole number (1, 2, 3, 4 etc...).

F is Faraday's constant, 96,485 J / (v·mole).

E_{cell} is the measured voltage of your cell.

This addendum work is worth 10 points of extra credit for Experiment 32. Please show your calculations in the results/calculations section of your notebook.