21.4 Cell Diagrams (Video)

This project was preformed to supply **Libretext Authors** with videos on General Chemistry topics which can be used to enhance their projects. Also, these videos are meant to act as a learning resource for **all General Chemistry students**.

Video Topics

Cell diagrams: Shows the components of an electrochemical cell in a symbolic way. The electrode at which the oxidation occurs (anode) is placed at the left side. A single line / is used to show the change in phase.

Then the solution in contact with the anode. A double line // shows the boundary between the two 1/2 cells. Then the solution in contact with the cathode, a single line, and then the cathode electrode.

For the reaction: $\mathbf{Zn_{(s)} + Cu^{2+}_{(aq)} \rightarrow Cu_{(s)} + Zn^{2+}_{(aq)}}$

The cell diagram would be: $\mathbf{Zn_{(s)}/Zn^{2+}_{(aq)}\ //Cu^{2+}_{(aq)}/\ Cu_{(s)}}$

We can measure E_{cell} but we are interested in measuring the ½ cell potential (E°) for each 1/2 reaction. The ° means all species are 1 M and at 1 atm.

$$\mathbf{E°cell = E°(cathode) + E°(anode)}$$

Link to Video

Cell Diagrams: https://youtu.be/IKqOAfivem8

Attribution

- Prof. Steven Farmer (Sonoma State University)