

CHAPTER OVERVIEW

17: Electrochemical Cells

When an electrical current flows through matter, permanent chemical changes often occur. In some cases electrical energy supplied from an outside source can cause a chemical reaction to take place. Such a process is called **electrolysis**, and the system to which electricity is supplied is called an **electrolytic cell**. It is also possible to produce a flow of electricity as a result of a spontaneous chemical reaction. A chemical system which can cause a current to flow in this way is called a **galvanic cell** or a **voltaic cell**. Since an electrical current is a flow of electrons or other charged particles, it should come as no surprise that both electrolytic and galvanic cells involve **redox reactions**.

Topic hierarchy

[17.1: Prelude to Electrochemistry](#)

[17.2: Electrolysis](#)

[17.3: Electrolysis of Brine](#)

[17.4: Aluminum Production](#)

[17.5: Refining of Copper](#)

[17.6: Electroplating](#)

[17.7: Quantitative Aspects of Electrolysis](#)

[17.8: Galvanic Cells](#)

[17.9: Cell Notation and Conventions](#)

[17.10: Electromotive Force of Galvanic Cells](#)

[17.11: Storage Batteries](#)

[17.12: Fuel Cells](#)

[17.13: Galvanic Cells and Free Energy](#)

[17.14: Cells at Non-Standard Conditions](#)

This page titled [17: Electrochemical Cells](#) is shared under a [CC BY-NC-SA 4.0](#) license and was authored, remixed, and/or curated by [Ed Vitz](#), [John W. Moore](#), [Justin Shorb](#), [Xavier Prat-Resina](#), [Tim Wendorff](#), & [Adam Hahn](#).