

Chem 475: Electrochemistry and its Applications

Course description: Introduction to equilibrium and kinetics of electrochemical processes including their applications in energy and analytical chemistry.

Course Goals

Develop an understanding of equilibrium involving electrochemical cells.

Develop an understanding of kinetics and mechanism of electrode processes.

Develop an understanding of transport of species in solution and their relationship to electrochemical processes.

Develop an understanding of experimental electrochemical methods and techniques.

Explore typical electrochemical applications, which may include electroanalysis, energy storage devices and others

Chemistry Program Goals

Develop the ability to apply mathematics to chemistry.

Develop an understanding of the use of models, their premises, advantages and limitations.

Develop competence in problem solving.

Develop an understanding of the impact and relevance of chemistry in society.