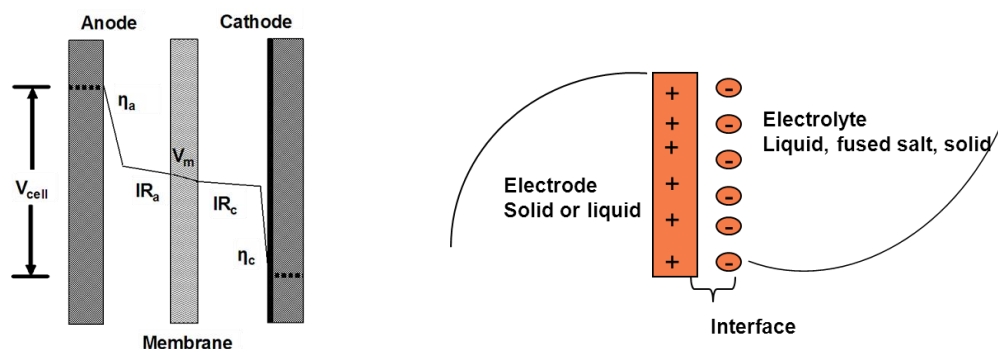


***NEW* FALL 2011 COURSE**

CHE 494 ELECTROCHEMICAL ENGINEERING

SELECTED TOPICS IN CHEMICAL ENGINEERING



Course Outline:

Electrochemistry and electrochemical engineering is an interdisciplinary field that is increasingly finding application in cutting-edge technologies such as energy conversion (batteries & fuel cells, photovoltaics), water treatment, solid-state chemistry (semiconductors), electrochemical synthesis, electrodeposition, corrosion and biology. This course will explore the role of thermodynamics, charge transfer kinetics and ionic structure and transport on the behavior and design of electrochemical systems. Topics to be covered:

- Electrochemical cells, potential and current
- Faradaic/non-faradaic kinetics, convective ionic transport
- Electrochemical methods (DC, EIS) and instrumentation
- Current distribution, electrochemical processes, bio-systems

Questions?

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