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**Electrochemistry Fundamentals in Materials Design**

Electrochemistry is the science of the electron conducting and ion conducting interface. The principles of electrochemistry start from Poison equation which was simplified by Debye and Huckel theory to explain the thermodynamics of electrochemical interface which are then used as a basis for applying Eyring activated complex theory to explain the charge transfers which occur at the electrode/electrolyte interface.

This tutorial is based on the full course designated CHEE412/512 which was developed by Professor Gervasio and is offered by the Department of Chemical and Environmental Engineering at University of Arizona. The textbook for this course is *Electrochemistry* by Carl H. Hamann, Andrew Hamnett & Wolf Vielstich, Wiley-VCH, 2nd Ed, 2007, ISBN: 978-3-527-31069-2