websites of note

by Zoltan Nagy

Physical and Interfacial Electrochemistry
Ion-solvent interactions. Ion-ion interactions. Electrochemical thermodynamics. Electrode-solution interface. Electrode kinetics. Material transport. Hydrodynamic electrodes. (Lecture notes)

- M. Lyons, Trinity College
- http://chemistry.tcd.ie/undergraduate/chemistry/js/CH3304/index.php

Surface Electrochemistry and Reactivity
The surface of the metal substrate. Platinum single crystals. Charge displacement and anion adsorption. Adatom adsorption. Foreign adatom layers. Potential of zero total charge.

- J. M. Feliu and E. Herrero, Universitat d'Alacant
- http://publicacions.iec.cat/repository/pdf/00000168%5C00000016.pdf

Analytical Electrochemistry: A Laboratory Manual
Cyclic voltammetry at solid electrodes. Cyclic voltammetry with a microelectrode. Chronoamperometry with a planar solid electrode. Cyclic voltammetry of dopamine: an *ec* mechanism. Analysis of trace lead in water by anodic stripping voltammetry. Acetaminophen (Tylenol): electroanalytical study of acetaminophen by cyclic voltammetry. Ascorbic acid (vitamin C): a cyclic voltammetric study of its oxidation at a glassy carbon electrode.

- T. Kuwana, University of Kansas
- http://www.asdlib.org/onlineArticles/elabware/kuwanaEC_lab/ec_labmanual1.htm

Analytical Electrochemistry: The Basic Concepts
Electrochemistry is something that is seldom studied and yet is all around us, including the control circuitry of our body. We are familiar with lightning that reverberates with thunder in a rainstorm, with batteries that power flashlights and hybrid autos, and with sensor devices such as smoke and carbon dioxide detectors, or glucose analyzers for monitoring diabetes. All rely on or exhibit some basic electrochemistry. To understand electrochemical phenomenon we need to have some understanding of basic concepts and the language that conveys these concepts. It is the goal of this module to get you started – so you can explore further as you wish. Web-links and hardcopy references are provided to assist you in that process.

- R. S. Kelly, East Stroudsburg University
- http://www.asdlib.org/onlineArticles/ecourseware/Kelly_Potentiometry/EC_CONCEPTS1.HTM

ElectroChemical DataBase: Gibbs energies of transfer
This searchable collection lists the Gibbs energies of transfer for ions partitioning between water and a mutually immiscible solvent. The solvents listed are 1,2-dichloroethane, 1,6-dichlorohexane, 2-heptanone, 2-octanone, NPOE-nitrophenyloctylether, trifluorotoluene, acetophenone, nitrobenzene and o-dichlorobenzene.

- H. H. Girault, École polytechnique fédérale de Lausanne
- http://sbsrv7.epfl.ch/instituts/isic/lepa/cgi/DB/InterrDB.pl

About the Author

Zoltan Nagy is a semi-retired electrochemist. After 15 years in a variety of electrochemical industrial research, he spent 30 years at Argonne National Laboratory carrying out research on electrode kinetics and surface electrochemistry. Presently he is at the Chemistry Department of the University of North Carolina at Chapel Hill. He welcomes suggestions for entries; send them to nagyz@email.unc.edu