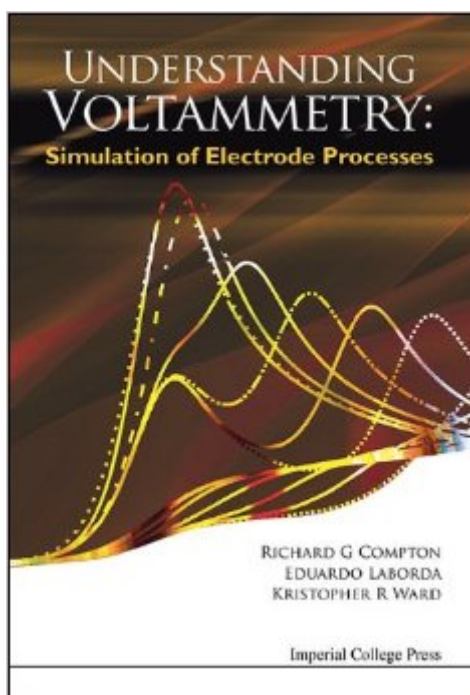


The book was found

Understanding Voltammetry: Simulation Of Electrode Processes



Synopsis

This is the first textbook in the field of electrochemistry that will teach experimental electrochemists how to carry out simulation of electrode processes. Processes at both macro- and micro-electrodes are examined and the simulation of both diffusion-only and diffusion-convection processes are addressed. The simulation of processes with coupled homogeneous kinetics and at microelectrode arrays are further discussed. Over the course of the book the reader's understanding is developed to the point where they will be able to undertake and solve research-level problems. The book leads the reader through from a basic understanding of the principles underlying electrochemical simulation to the development of computer programs which describe the complex processes found in voltammetry. This is the third book in the 'Understanding Voltammetry' series, published with Imperial College Press and written by the Compton group. Other books in the series include 'Understanding Voltammetry', written by Richard G Compton with Craig Banks and also 'Understanding Voltammetry: Problems and Solutions' (2012) written by Richard G Compton with Christopher Batchelor-McAuley and Edmund Dickinson. These are and continue to be successful textbooks for graduates in electrochemistry and electroanalytical studies.

Contents: Introduction Mathematical Model of an Electrochemical System Numerical Solution of the Model System Diffusion-Only Electrochemical Problems in One-Dimensional Systems First-Order Chemical Kinetic Mechanisms Second-Order Chemical Kinetic Mechanisms Electrochemical Simulation in Weakly Supported Media Hydrodynamic Voltammetry Two-Dimensional Systems: Microdisc Electrodes Heterogeneous Surfaces Appendix A: Review of C++ Appendix B: Microdisc Program Readership: Graduate students pursuing electrochemistry and electroanalytical studies, as well as researchers and professionals working in the area.

Book Information

File Size: 13848 KB

Print Length: 260 pages

Page Numbers Source ISBN: 1783263237

Publisher: ICP (November 22, 2013)

Publication Date: November 22, 2013

Sold by: Digital Services LLC

Language: English

ASIN: B00KMLQV2S

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #1,095,845 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #53

in Kindle Store > Kindle eBooks > Nonfiction > Science > Chemistry > Analytic #70 in Books >

Science & Math > Chemistry > Physical & Theoretical > Electrochemistry #122 in Kindle Store >

Kindle eBooks > Nonfiction > Science > Chemistry > Physical & Theoretical

Customer Reviews

Excellent supplement to Introduction to Voltammetry. The treatment of simulations is very good with well written software examples.

[Download to continue reading...](#)

Understanding Voltammetry: Simulation of Electrode Processes A First Course in Electrode Processes: RSC Electrode Processes and Electrochemical Engineering Understanding Voltammetry (2Nd Edition) Understanding Voltammetry: Problems and Solutions Electrode Potentials (Oxford Chemistry Primers) Understanding Bergson, Understanding Modernism (Understanding Philosophy, Understanding Modernism) Understanding Molecular Simulation, Second Edition: From Algorithms to Applications (Computational Science) Understanding Polymer Processing: Processes and Governing Equations Understanding and Manipulating Excited-State Processes (Molecular and Supramolecular Photochemistry) SBI: Advanced Word Processing Simulation (with CD-ROM) (Word Processing I) Programming 8-bit PIC Microcontrollers in C: with Interactive Hardware Simulation Interfacing PIC Microcontrollers, Second Edition: Embedded Design by Interactive Simulation Interfacing PIC Microcontrollers: Embedded Design by Interactive Simulation Controller Area Network Prototyping With Arduino: Creating CAN Monitoring, Diagnostics, and Simulation Applications Fortran Programs for Chemical Process Design, Analysis, and Simulation Aircraft Dynamics: From Modeling to Simulation Introduction to Device Modeling and Circuit Simulation Analog Design and Simulation using OrCAD Capture and PSpice CMOS Circuit Design, Layout, and Simulation, 3rd Edition (IEEE Press Series on Microelectronic Systems)

[Dmca](#)