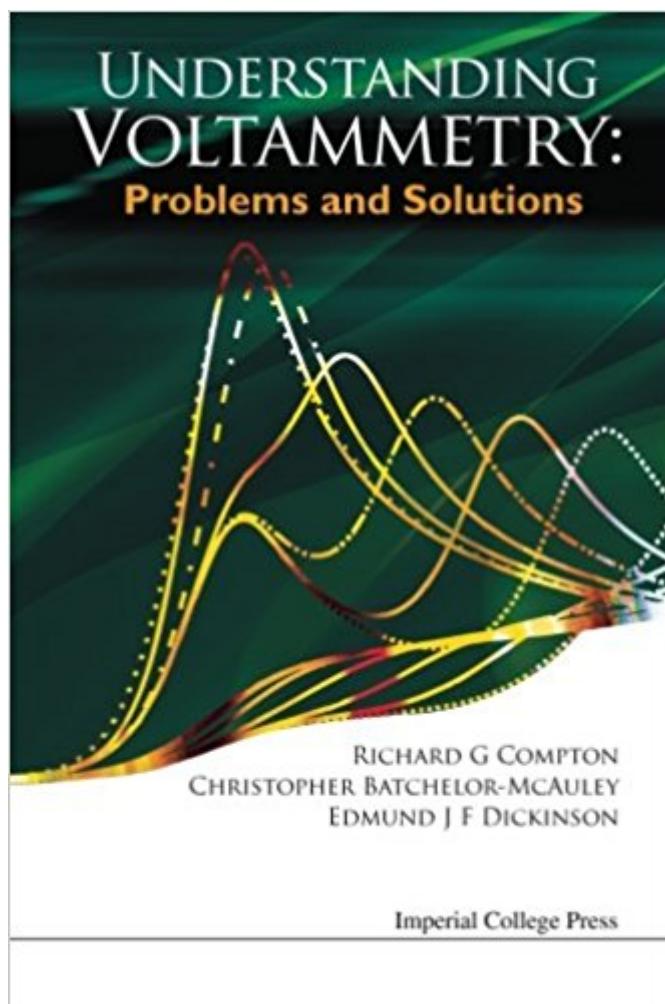


The book was found

Understanding Voltammetry: Problems And Solutions



Synopsis

The field of electrochemical measurement, with respect to thermodynamics, kinetics and analysis, is widely recognised but the subject can be unpredictable to the novice, even if they have a strong physical and chemical background, especially if they wish to pursue quantitative measurements. Accordingly, some significant experiments are, perhaps wisely, never attempted, while the literature is sadly replete with flawed attempts at rigorous voltammetry. This book presents problems and worked solutions for a wide range of theoretical and experimental subjects in the field of voltammetry. The reader is assumed to have knowledge up to a Master's level of physical chemistry, but no exposure to electrochemistry in general, or voltammetry in particular, is required. The problems included range in difficulty from senior undergraduate to research level, and develop important practical approaches in voltammetry. The problems presented in the earlier chapters focus on the fundamental theories of thermodynamics, electron transfer and diffusion. Voltammetric experiments and their analysis are then considered, including extensive problems on both macroelectrode and microelectrode voltammetry. Convection, hydrodynamic electrodes, homogeneous kinetics, adsorption and electroanalytical applications are discussed in the later chapters, as well as problems on two rapidly developing fields of voltammetry: weakly supported media and nanoscale electrodes. There is huge interest in the experimental procedure of voltammetry at present, and yet no dedicated question and answer book with exclusive voltammetric focus exists, in spite of the inherent challenges of the subject. This book aims to fill that niche. Readership: Senior undergraduates, graduates and researchers interested or specialising in electrochemistry and especially, voltammetry.

Book Information

Paperback: 272 pages

Publisher: Imperial College Press (December 29, 2011)

Language: English

ISBN-10: 1848167318

ISBN-13: 978-1848167315

Product Dimensions: 6 x 0.6 x 9 inches

Shipping Weight: 1 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #2,539,657 in Books (See Top 100 in Books) #85 in Books > Science & Math > Chemistry > Physical & Theoretical > Electrochemistry #103 in Books > Science & Math >

Customer Reviews

"This is a very good book on voltammetric techniques. It presents a correct and deep discussion of all important issues in this field. Several ideas, theories, and experimental procedures are described with refreshing clarity. Its unique structure based on selected problems and their solutions helps the reader understand the topics covered. It is also an excellent textbook, which is worth studying carefully by newcomers and experienced electrochemists alike. Can be recommended to graduate students, teachers, and researchers, i.e., to everybody who studies, teaches, or applies voltammetric techniques. This book is a helpful addition to the library of colleagues using voltammetry or the library of any university where courses in electrochemistry are offered." -- Analytical and Bioanalytical, Chemistry "The presentation of the relevant theory through real cases is undoubtedly one of the main characteristics, which makes this book of real interest, particularly for students but also to more experienced scientists | Although this volume is a complement to the textbook cited above, it can stand alone and may become one of those books that you keep returning to." -- Chemistry World

The power of electrochemical measurements in respect of thermodynamics, kinetics and analysis is widely recognized but the subject can be unpredictable to the novice even if they have a strong physical and chemical background, especially if they wish to pursue quantitative measurements. Accordingly, some significant experiments are perhaps wisely never attempted while the literature is sadly replete with flawed attempts at rigorous voltammetry. This book presents problems and worked solutions for a wide range of theoretical and experimental subjects in the field of voltammetry. The reader is assumed to have knowledge up to a Masters level of physical chemistry but no exposure to electrochemistry in general, or voltammetry in particular. The problems included range in difficulty from senior undergraduate to research level, and develop important practical approaches in voltammetry. Problems are presented in the early chapters on fundamental theories of thermodynamics, electron transfer and diffusion. Voltammetric experiments and their analysis are then considered, including extensive problems on both macroelectrode and microelectrode voltammetry. Convection, hydrodynamic electrodes, homogeneous kinetics, adsorption and electroanalytical applications are discussed in the later chapters, as well as problems on two rapidly developing fields of voltammetry: weakly supported media and nanoscale electrodes. There is huge

interest in the experimental procedure of voltammetry at present, and yet no dedicated question and answer (worked examples) book with exclusive voltammetric focus exists, in spite of the inherent challenges of the subject. This book provides instruction via problems and worked solutions from fundamental theory up to advanced applications and recent developments.

Great supplement to Introduction to Voltammetry.

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

Understanding Voltammetry: Problems and Solutions Understanding Voltammetry (2Nd Edition)
Understanding Voltammetry: Simulation of Electrode Processes Prostate Problems Home Remedies, How To Fight Prostate Problems At Home, Get Rid Of Prostate Problems Fast!: Back On Track - Fighting Prostate Problems At Home Understanding Voice Problems: A Physiological Perspective for Diagnosis and Treatment (Understanding Voice Problems: Phys Persp/ Diag & Treatment) 100 Math Brainteasers (Grade 7, 8, 9, 10). Arithmetic, Algebra and Geometry Brain Teasers, Puzzles, Games and Problems with Solutions: Math olympiad contest problems for elementary and middle schools How trace element selenium affects men's health: Discover how selenium can affect: prostate problems, eczema problems, asthma breathing, and 9 other health problems 10 Simple Solutions to Adult ADD: How to Overcome Chronic Distraction and Accomplish Your Goals (The New Harbinger Ten Simple Solutions Series) Natural Solutions for Cleaning & Wellness: Health Remedies and Green Cleaning Solutions Without Toxins or Chemicals 10 Simple Solutions to Migraines: Recognize Triggers, Control Symptoms, and Reclaim Your Life (The New Harbinger Ten Simple Solutions Series) Enlarged Prostate Solutions: Natural Solutions for Prostate Health without Drugs or Surgery Hair Loss Solutions for Men: How to Cheat Hair Loss for Life (Hair Loss Solutions: How to Cheat Hair Loss for Life Book 1) DIY Energy & Money Saving Solutions â€“ Best Practices Volume 1 Landscape Hedge (Simple DIY Money Saving Green Solutions) Ict Framework Solutions: Year 8 (Ict Framework Solutions S.) The Doctors Book of Home Remedies for Dogs and Cats: Over 1,000 Solutions to Your Pet's Problems from Top Vets, Trainers, Breeders and Other Animal Experts Geometric Programming for Design Equation Development and Cost/Profit Optimization: (with illustrative case study problems and solutions), Third Edition (Synthesis Lectures on Engineering) Student's Solutions Manual for Fundamentals of Differential Equations 8e and Fundamentals of Differential Equations and Boundary Value Problems 6e Geometry for Students and Parents: Geometry problems and solutions Health and Poverty: Global Health Problems and Solutions Bose, Spin and Fermi Systems: Problems and Solutions

Contact Us

DMCA

Privacy

FAQ & Help