DESCRIPTION

Electrochemical processes play an increasingly large role in our daily lives; whether in producing or saving energy, rust protection or nerve stimuli in our bodies. This 11-volume encyclopedia provides both an easy introduction to all topics related to modern electrochemistry as well as a comprehensive overview of the subject.

Unrivalled in its breadth and depth, this first-class reference work has been created and written by renowned scientists, covering everything from fundamental research to areas of application.

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ABOUT THE AUTHOR

Series Editors:

Prof. Allen J. Bard: Born December 18, 1933, Prof. Bard received his early education in the public schools of New York City and attended The City College of NY (B.Sc., 1955). He did his graduate work at Harvard Univ. with J.J. Lingane (MA, 1956; PhD, 1958) in electroanalytical chemistry. In 1958 he joined the faculty of The Univ. of Texas at Austin where he currently holds the Norman Hackerman/Welch Regents’ Chair in Chemistry. His research interests have been in the application of electrochemical methods to the study of chemical problems and include investigations in electro-organic chemistry, photoelectrochemistry, electrogenerated chemiluminescence, and electroanalytical chemistry. He has published three books (Electrochemical Methods, with Larry Faulkner, Integrated Chemical Systems, and Chemical Equilibrium) and over 600 papers and chapters while editing the series Electroanalytical Chemistry (21 volumes) and the Encyclopedia of the Electrochemistry of the Elements (16 volumes) plus co-editing the monograph, Standard Potentials in Aqueous Solution. He is currently editor-in-chief of the Journal of the American Chem. Society. The ISI listing of the “50 most cited chemists from 1981-1997” ranks Prof. Bard at number 13 (taken from a total of 627,871 chemists surveyed).

Prof. Martin Stratmann: Born 20 April 1954, studied chemistry at the Ruhr Univ. Bochum and received his diploma in 1980. He finished his PhD in 1982 at the Max Planck Inst. (MPI) für Eisenforschung in Düsseldorf. His professorship in physical chemistry followed in 1992 at the Univ. of Düsseldorf with electrochemical studies on metal surfaces covered with ultrathin electrolyte layers. In 1994 he took over the Chair in Corrosion Sci. and Surface Engin. at the Univ. of Erlangen and since 2000 has been a scientific member of the MPI and director at the MPI für Eisenforschung Düsseldorf, heading a department of interface chemistry and surface engineering. His research interests concentrate on corrosion related electrochemistry, in particular with emphasis on microscopic aspects and in-situ spectroscopy, electrochemistry at buried metal/polymer interfaces - an area where he pioneered novel electrochemical techniques - atmospheric corrosion, adhesion and surface chemistry of reactive metal substrates. He has published more than 150 papers and is co-editor of Steel Research and Materials and Corrosion.