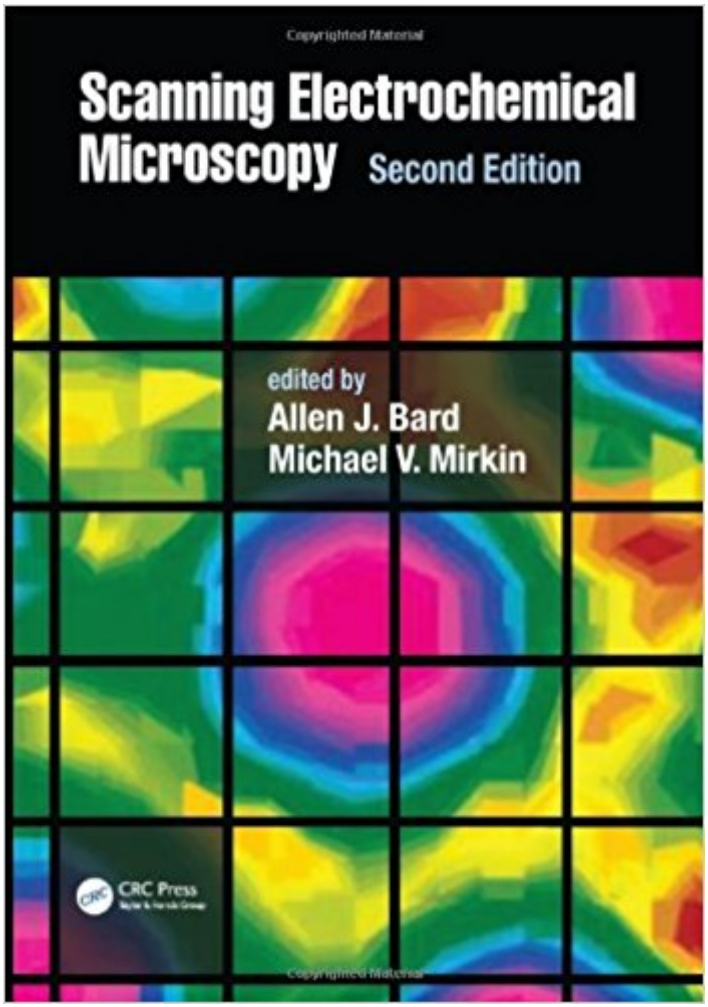
Scanning Electrochemical Microscopy, Second Edition



Synopsis

Because of its simplicity of use and quantitative results, Scanning Electrochemical Microscopy (SECM) has become an indispensable tool for the study of surface reactivity. The fast expansion of the SECM field during the last several years has been fueled by the introduction of new probes, commercially available instrumentation, and new practical applications. Scanning Electrochemical Microscopy, Second Edition offers essential background and in-depth overviews of specific applications in self-contained chapters. Recent methodological advances have greatly increased the capacity of SECM to characterize interfaces at the nanoscale and to obtain molecular-level chemical information. This thoroughly updated edition retains original chapters describing the principles of SECM measurements, instrumentation, preparation of SECM probes, imaging methodologies, and theory and offers: New chapters on studies of single biological cells, corrosion, electrocatalysis, and hybrid techniques Descriptions of recent advances of SECM in several areas of current interest: biotechnological applications, nanofabrication and surface patterning, and molecular transport across films and membranes Discussion of the ongoing shift from micrometer-scale experiments to the nanoscale Useful for a broad range of interdisciplinary researchÃ¢â ¬â ¢from biological systems to probing reactions at the liquidÃ¢â ¬â œliquid interfaceÃ¢â ¬â ¢this book is invaluable to all interested in learning and applying SECM.

Book Information

Hardcover: 670 pages

Publisher: CRC Press; 2 edition (April 16, 2012)

Language: English

ISBN-10: 1439831122

ISBN-13: 978-1439831120

Product Dimensions: 7.1 x 1.6 x 10.1 inches

Shipping Weight: 3.8 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #2,045,293 in Books (See Top 100 in Books) #67 inÃ Â Books > Science & Math > Chemistry > Physical & Theoretical > Electrochemistry #77 inÃ Â Books > Science & Math > Chemistry > Electrochemistry #152 inÃ Â Books > Science & Math > Experiments, Instruments & Measurement > Microscopes & Microsocopy

Customer Reviews

". . .Bard and Mirkin have succeeded in producing the first standard work in this rapidly developing

technique. " Ã¢â ¬â ¢Angewandte Chemie --This text refers to an out of print or unavailable edition of this title.

Allen J. Bard was born in New York City in 1933 and grew up and attended public schools there, including the Bronx High School of Science (1948-51). He attended The City College of the College of New York (CCNY) (B.S., 1955) and Harvard University (M.A., 1956, PhD., 1958). He joined the faculty at The University of Texas at Austin (UT) in 1958, where he spent his entire career. His research interests involve the application of electrochemical methods to the study of chemical problems and include investigations in scanning electrochemical microscopy, electrogenerated chemiluminescence and photoelectrochemistry.

Privacy

FAQ & Help