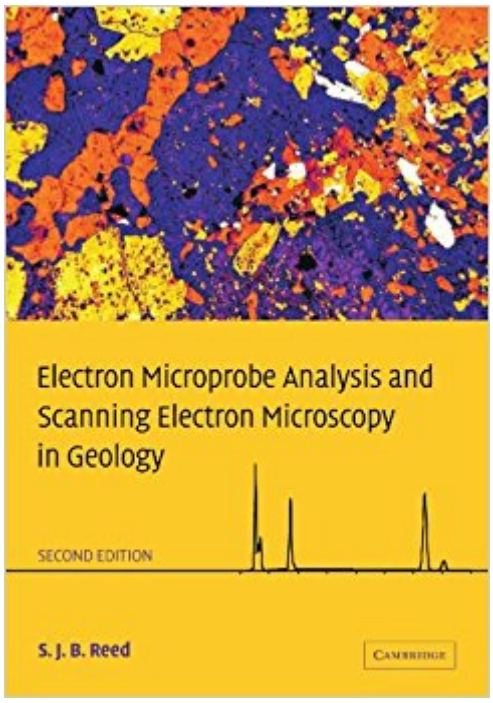
Electron Microprobe Analysis And Scanning Electron Microscopy In Geology



Synopsis

Originally published in 2005, this book covers the closely related techniques of electron microprobe analysis (EMPA) and scanning electron microscopy (SEM) specifically from a geological viewpoint. Topics discussed include: principles of electron-target interactions, electron beam instrumentation, X-ray spectrometry, general principles of SEM image formation, production of X-ray 'maps' showing elemental distributions, procedures for qualitative and quantitative X-ray analysis (both energy-dispersive and wavelength-dispersive), the use of both 'true' electron microprobes and SEMs fitted with X-ray spectrometers, and practical matters such as sample preparation and treatment of results. Throughout, there is an emphasis on geological aspects not mentioned in similar books aimed at a more general readership. The book avoids unnecessary technical detail in order to be easily accessible, and forms a comprehensive text on EMPA and SEM for geological postgraduate and postdoctoral researchers, as well as those working in industrial laboratories.

Book Information

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Customer Reviews

Review of the hardback: 'The subject is treated in a clear and logical fashion ... Dr Reed has produced an excellent and thoroughly readable book ... highly recommended for all those who use the electron microprobe.' Allan Pring, Geological MagazineReview of the hardback: 'A good introductory level of information on all the main aspects of scanning electron microscopy and microanalysis that is not so readily available anywhere else. The book is well illustrated and written in a clear and readable style ... It is strongly recommended for new users and should have a place

in every laboratory. It would make an excellent textbook for introductory courses.' M. T. Styles, AnalystReview of the hardback: 'This book is a valuable introduction to the use and geological application of scanning electron microscopes and electron microprobes ... by far the most readable of the microscope/microprobe books that I have seen ... It is pitched at the right level for the market at which it is aimed, postgraduate and postdoctoral workers, or geologists in industrial laboratories ... It is a splendid book that should sit on the bookshelf of anybody working with electron microscopes and microprobes, be part of any laboratory and be required reading for any graduate student working with microbeam techniques.' Peter Treloar, GeoscientistReview of the hardback: ' ...this is a book that has been long overdue, and will certainly go to the top of my students' reading list.' Eric Condliffe, Journal of Petrology

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This book is a concise overview of the subject. I'm sure a text could go into more of the physics behind the SEM and microprob, but this books purpose is to introduce the reader to the diverse geological applications of these tools. It is easily read and offers enough background to be useful in practice.

Excellent overview book about SEM and microprobe techniques.

As expected.

Great

This book is great for someone who has a little background in physics and calculus. It gives a good breakdown of how the probe works and what kinds of analyses it works best for. This is not an in-depth book on quatitative analyses, but rather, an excellent place to start!

Electron Microprobe Analysis and Scanning Electron Microscopy in Geology Electron microscopy for beginners: Easy course for understanding and doing electron microscopy (Electron microscopy

in Science) Scanning Electron Microscopy, X-Ray Microanalysis, and Analytical Electron Microscopy: A Laboratory Workbook Scanning Transmission Electron Microscopy: Imaging and Analysis Scanning Transmission Electron Microscopy of Nanomaterials : Basics of Imaging and Analysis Scanning Transmission Electron Microscopy of Nanomaterials: Basics of Imaging Analysis Confocal Laser Scanning Microscopy (Royal Microscopical Society Microscopy Handbooks) Scanning Electron Microscopy and X-Ray Microanalysis: A Text for Biologists, Materials Scientists, and Geologists Scanning Electron Microscopy and X-ray Microanalysis: Third Edition Scanning Electron Microscopy and X-Ray Microanalysis Scanning and Transmission Electron Microscopy: An Introduction Fungal morphology and ecology: Mostly scanning electron microscopy Handbook of Sample Preparation for Scanning Electron Microscopy and X-Ray Microanalysis Scanning Electron Microscopy: Applications to Materials and Device Science Normal, Transformed and Leukemic Leukocytes: A Scanning Electron Microscopy Atlas Principles and Practice of Variable Pressure: Environmental Scanning Electron Microscopy (VP-ESEM) Scanning Electron Microscopy: Physics of Image Formation and Microanalysis (Springer Series in Optical Sciences) Biological Low-Voltage Scanning Electron Microscopy New Horizons of Applied Scanning Electron Microscopy (Springer Series in Surface Sciences) Image Formation in Low-Voltage Scanning Electron Microscopy (SPIE Tutorial Text Vol. TT12) (Tutorial Texts in Optical Engineering)