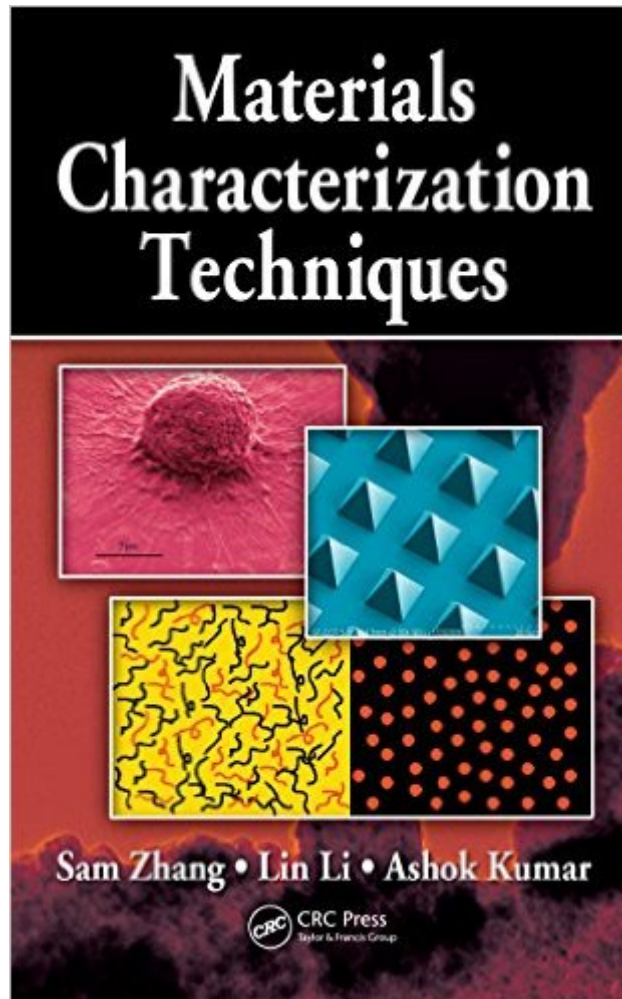


The book was found

Materials Characterization Techniques



Synopsis

Experts must be able to analyze and distinguish all materials, or combinations of materials, in use today—whether they be metals, ceramics, polymers, semiconductors, or composites. To understand a material's structure, how that structure determines its properties, and how that material will subsequently work in technological applications, researchers apply basic principles of chemistry, physics, and biology to address its scientific fundamentals, as well as how it is processed and engineered for use. Emphasizing practical applications and real-world case studies, *Materials Characterization Techniques* presents the principles of widely used, advanced surface and structural characterization techniques for quality assurance, contamination control, and process improvement. This useful volume:

- Explores scientific processes to characterize materials using modern technologies
- Provides analysis of materials' performance under specific use conditions
- Focuses on the interrelationships and interdependence between processing, structure, properties, and performance
- Details the sophisticated instruments involved in an interdisciplinary approach to understanding the wide range of mutually interacting processes, mechanisms, and materials
- Covers electron, X-ray-photoelectron, and UV spectroscopy; scanning-electron, atomic-force, transmission-electron, and laser-confocal-scanning-florescent microscopy, and gel electrophoresis chromatography
- Presents the fundamentals of vacuum, as well as X-ray diffraction principles

Explaining appropriate uses and related technical requirements for characterization techniques, the authors omit lengthy and often intimidating derivations and formulations. Instead, they emphasize useful basic principles and applications of modern technologies used to characterize engineering materials, helping readers grasp micro- and nanoscale properties. This text will serve as a valuable guide for scientists and engineers involved in characterization and also as a powerful introduction to the field for advanced undergraduate and graduate students.

Book Information

File Size: 15553 KB

Print Length: 344 pages

Simultaneous Device Usage: Up to 4 simultaneous devices, per publisher limits

Publisher: CRC Press; 1 edition (December 22, 2008)

Publication Date: December 22, 2008

Sold by: Digital Services LLC

Language: English

ASIN: B005H7L7XU

Text-to-Speech: Not enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #989,071 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #28

in Kindle Store > Kindle eBooks > Nonfiction > Science > Physics > Statics #38 in Kindle Store

> Kindle eBooks > Nonfiction > Science > Technology > Nanotechnology #75 in Kindle Store >

Kindle eBooks > Nonfiction > Science > Chemistry > Industrial & Technical

Customer Reviews

Who is printing these books? I see another reviewer also received an incorrect print with correct cover. Same issue here - I'm not sure how that happens.

The book SENT TO ME by the publisher met my expectations.

Correct cover, wrong binding

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

Materials Characterization Techniques Fundamentals of Powder Diffraction and Structural Characterization of Materials, Second Edition Low-Dimensional and Nanostructured Materials and Devices: Properties, Synthesis, Characterization, Modelling and Applications (NanoScience and Technology) Materials Characterization: Introduction to Microscopic and Spectroscopic Methods Polymer Characterization: Laboratory Techniques and Analysis Surface Wave Methods for Near-Surface Site Characterization Semiconductor Material and Device Characterization A Practical Guide to Oil & Gas Resource Characterization For Geologists and Reservoir Engineers Characterization of Porous Solids and Powders: Surface Area, Pore Size and Density (Particle Technology Series) American Herbal Pharmacopoeia: Botanical Pharmacognosy - Microscopic Characterization of Botanical Medicines Biophysical Characterization of Proteins in Developing Biopharmaceuticals Colloidal Carriers for Controlled Drug Delivery and Targeting: Modification, Characterization, and In Vivo Distribution Experimental Organometallic Chemistry: A Practicum in Synthesis and Characterization (ACS Symposium Series 357) The Chemistry of Metal-Organic Frameworks: Synthesis, Characterization, and Applications Polymer Synthesis and Characterization: A Laboratory Manual Polymer Characterization: Physical Property, Spectroscopic,

and Chromatographic Methods (ACS Advances in Chemistry) Comprehensive Desk Reference of Polymer Characterization and Analysis (ACS Symposium Series) Carbonate Reservoir Characterization: An Integrated Approach A Handbook of Tropical Soil Biology: Sampling and Characterization of Below-ground Biodiversity Light Scattering, Size Exclusion Chromatography and Asymmetric Flow Field Flow Fractionation: Powerful Tools for the Characterization of Polymers, Proteins and Nanoparticles

[Dmca](#)