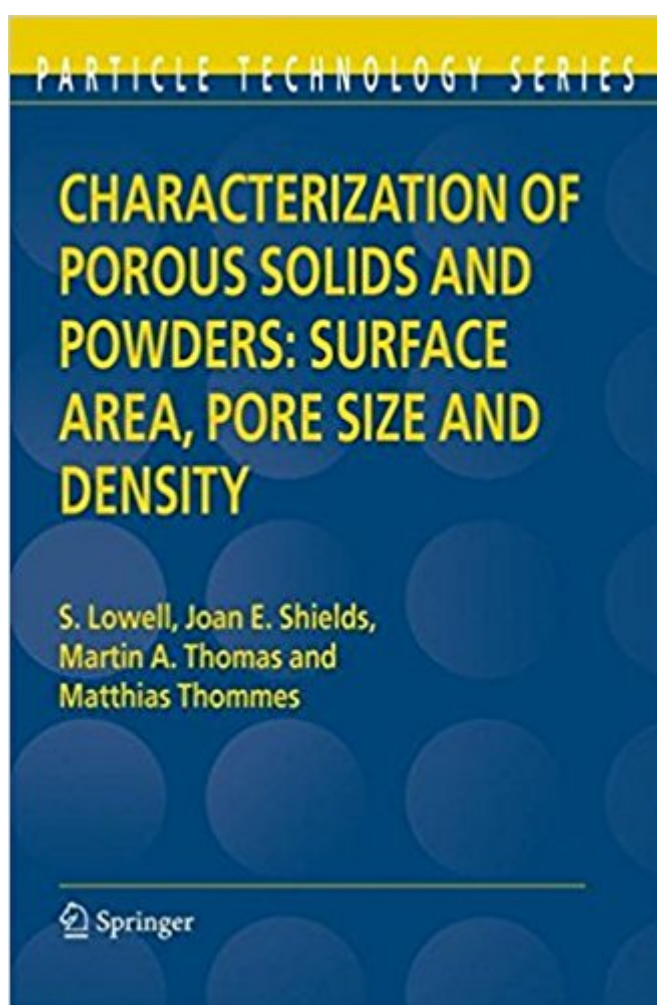


The book was found

Characterization Of Porous Solids And Powders: Surface Area, Pore Size And Density (Particle Technology Series)



Synopsis

The growth of interest in newly developed porous materials has prompted the writing of this book for those who have the need to make meaningful measurements without the benefit of years of experience. One might consider this new book as the 4th edition of "Powder Surface Area and Porosity" (Lowell & Shields), but for this new edition we set out to incorporate recent developments in the understanding of fluids in many types of porous materials, not just powders. Based on this, we felt that it would be prudent to change the title to "Characterization of Porous Solids and Powders: Surface Area, Porosity and Density". This book gives a unique overview of principles associated with the characterization of solids with regard to their surface area, pore size, pore volume and density. It covers methods based on gas adsorption (both physisorption and chemisorption), mercury porosimetry and pycnometry. Not only are the theoretical and experimental basics of these techniques presented in detail but also, in light of the tremendous progress made in recent years in materials science and nanotechnology, the most recent developments are described. In particular, the application of classical theories and methods for pore size analysis are contrasted with the most advanced microscopic theories based on statistical mechanics (e.g. Density Functional Theory and Molecular Simulation). The characterization of heterogeneous catalysts is more prominent than in earlier editions; the sections on mercury porosimetry and particularly chemisorption have been updated and greatly expanded.

Book Information

Series: Particle Technology Series (Book 16)

Hardcover: 350 pages

Publisher: Springer; 4th Revised edition edition (June 1, 2006)

Language: English

ISBN-10: 1402023022

ISBN-13: 978-1402023026

Product Dimensions: 6.1 x 0.8 x 9.2 inches

Shipping Weight: 1.8 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars 1 customer review

Best Sellers Rank: #703,140 in Books (See Top 100 in Books) #50 in Books > Engineering & Transportation > Engineering > Materials & Material Science > Testing #116 in Books > Science & Math > Technology > Nanotechnology #204 in Books > Science & Math > Chemistry > Analytic

Customer Reviews

An updated version of the classical textbook (Powder Surface Area and Porosity, 3rd ed., 1991) by the first two authors "the book now includes recent developments in the areas of density functional theory, molecular simulations, pore network theories, and it has an expanded section on heterogeneous catalysts". An interesting aspect is the book's clear division between theoretical aspects (Part 1) and experimental aspects (Part 2) of the various techniques. The book also demonstrates a good balance between how deep a theoretical concept is being discussed and how many real-world examples are presented. Summing up: Recommended. Lower-division undergraduates through professionals; two-year technical program students." H. Giesche, Alfred University, in CHOICE, May 2005, Vol. 42 No.09

I bought this book to quickly get an overview over the BET method and theory, pore size determination and adsorption isotherms. And the book delivered exactly that. It does not go into much detail but is thorough nevertheless. For every chapter there are many references that help to dig deeper into a particular subject. So this is an ideal entry point if you are (like me) new to the subject matter.

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

Characterization of Porous Solids and Powders: Surface Area, Pore Size and Density (Particle Technology Series) Surface Wave Methods for Near-Surface Site Characterization Osteoporosis: How To Reverse Osteoporosis, Build Bone Density And Regain Your Life (Osteoporosis, Bone Density, Strong Bones, Healthy Bones, Osteoporosis Cure) Finite Element Methods for Particle Transport: Applications to Reactor and Radiation Physics (Research Studies in Particle and Nuclear Technology) Pore Pressure: Fundamentals, General Ramifications and Implications for Structural Geology - AAPG Continuing Education Course Note Series #4 Vogue 1950s Pocket Size Adult Coloring Book: 50s Fashion Coloring Book for Adults Travel Size (Travel Size Coloring Books) (Volume 12) Light Scattering, Size Exclusion Chromatography and Asymmetric Flow Field Flow Fractionation: Powerful Tools for the Characterization of Polymers, Proteins and Nanoparticles Particle Size Analysis In Pharmaceuticals And Other Industries: Theory And Practice (Prentice Hall International Series in Computer Science) Particle Size Analysis In Pharmaceuticals And Other Industries (Prentice Hall International Series in Computer Science) Practical Treatise on Perfumery: Comprising Directions for Making All Kinds of Perfumes, Sachet Powders, Fumigating Materials, Dentifrices, Cosmetics, ... and Tests of... (Gardening in America) Glass Fusing Design Techniques with Powders on Fiber Paper Kratom: Kratom for Beginners, Kratom Plants, Kratom Pills, Kratom Powders, Everything You Need to Know (Kratom, Kratom Books) Porous Silicon for Biomedical

Applications (Woodhead Publishing Series in Biomaterials) Modeling Groundwater Flow and Pollution (Theory and Applications of Transport in Porous Media) Dynamics of Fluids in Porous Media (Dover Civil and Mechanical Engineering) Electrochemistry of Porous Materials Reactive Transport in Porous Media (Reviews in mineralogy) Polymer Nanocomposites: Processing, Characterization, And Applications (McGraw-Hill Nanoscience and Technology) Soft Solids: A Primer to the Theoretical Mechanics of Materials (Modeling and Simulation in Science, Engineering and Technology) Mountain Biking the San Francisco Bay Area: A Guide To The Bay Area's Greatest Off-Road Bicycle Rides (Regional Mountain Biking Series)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)