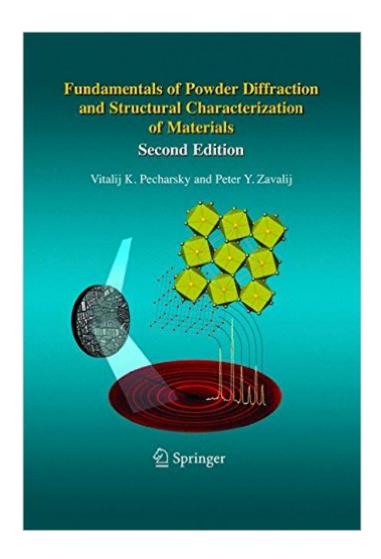
## The book was found

# Fundamentals Of Powder Diffraction And Structural Characterization Of Materials, Second Edition





## **Synopsis**

A little over ?ve years have passed since the ?rst edition of this book appeared in print. Seems like an instant but also eternity, especially considering numerous developments in the hardware and software that have made it from the laboratory test beds into the real world of powder diffraction. This prompted a revision, which had to be beyond cosmetic limits. The book was, and remains focused on standard laboratory powder diffractometry. It is still meant to be used as a text for teaching students about the capabilities and limitations of the powder diffraction method. We also hope that it goes beyond a simple text, and therefore, is useful as a reference to practitioners of the technique. The original book had seven long chapters that may have made its use as a text - convenient. So the second edition is broken down into 25 shorter chapters. The ?rst ?fteen are concerned with the fundamentals of powder diffraction, which makes it much more logical, considering a typical 16-week long semester. The last ten ch- ters are concerned with practical examples of structure solution and re?nement, which were preserved from the ?rst edition and expanded by another example â "R solving the crystal structure of Tylenol.

### **Book Information**

Paperback: 744 pages

Publisher: Springer; 2nd ed. 2009 edition (November 26, 2008)

Language: English

ISBN-10: 0387095780

ISBN-13: 978-0387095783

Product Dimensions: 6.1 x 1.7 x 9.2 inches

Shipping Weight: 2.9 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars Â See all reviews (6 customer reviews)

Best Sellers Rank: #496,438 in Books (See Top 100 in Books) #22 in Books > Science & Math >

Chemistry > Crystallography #28 in Books > Engineering & Transportation > Engineering >

Materials & Material Science > Testing #68 in Books > Textbooks > Medicine & Health Sciences

> Medicine > Clinical > Hematology

#### Customer Reviews

This book provides an in-depth introduction to the theories and applications of the powder diffraction method for structure determination. The emphasis is placed on powder diffraction data collected using conventional x-ray sources, which remain primary tools for thousands of researchers and students from materials science, solid-state chemistry, physics, geology, and other science or

engineering background, in their daily experimental work. It is still meant to be used as the text for teaching students about the capabilities and limitations of the powder diffraction method. This edition is divided into 25 chapters. The first fifteen are concerned with the fundamentals of powder diffraction. The last ten chapters are concerned with practical examples of structure solution and refinement. I think the book is properly structured, figures are representative, and each chapter ends with problems to solve for the reader. I have not found the solutions to the problems raised at the end of each chapter. These solutions would be provided a proper understanding of crystallography in general and X-ray powder diffraction in particular. In my opinion this book is the best in the field so far. I highly recommend buying this book to all researchers in difractometry. P.S. The solutions manual can be obtained by request addressed to Mr. Pecharsky.

It is good

Likely one of the absolute best texts on the topic of XRD and powder diffraction.

#### Download to continue reading...

Fundamentals of Powder Diffraction and Structural Characterization of Materials, Second Edition Powder Diffraction: The Rietveld Method and the Two Stage Method to Determine and Refine Crystal Structures from Powder Diffraction Data Minerals and Rocks: Exercises in Crystal and Mineral Chemistry, Crystallography, X-ray Powder Diffraction, Mineral and Rock Identification, and Ore Mineralogy Kratom: The Truth About Mitragyna Speciosa: An Introductory Guide to Capsules, Powder, Extract, And The Full Effects (Ketum, Kratum, Kratom Capsules, Kratom Powder, Kratom Extract) Structure of Materials: An Introduction to Crystallography, Diffraction and Symmetry Low-Dimensional and Nanostructured Materials and Devices: Properties, Synthesis, Characterization, Modelling and Applications (NanoScience and Technology) Materials Characterization: Introduction to Microscopic and Spectroscopic Methods Materials Characterization Techniques Fundamentals of Structural Dynamics:2nd (Second) edition Structural Analysis and Synthesis: A Laboratory Course in Structural Geology 3rd (third) edition by Rowland, Stehen M., Duebendorfer, Ernest M., Schiefelbein, I published by Wiley-Blackwell (2007) [Spiral-bound] Strain and Dislocation Gradients from Diffraction: Spatially-Resolved Local Structure and Defects Organic Additives and Ceramic Processing, Second Edition: With Applications in Powder Metallurgy, Ink, and Paint Transmission Electron Microscopy: Diffraction, Imaging, and Spectrometry Principles of Optics: Electromagnetic Theory of Propagation, Interference and Diffraction of Light A Practical Guide for the Preparation of Specimens for X-Ray Fluorescence and X-Ray Diffraction Analysis

Neutron Diffraction Structural Stability of Steel: Concepts and Applications for Structural Engineers Structural Analysis and Synthesis: A Laboratory Course in Structural Geology The Techniques of Modern Structural Geology, Volume 3: Applications of Continuum Mechanics in Structural Geology Fundamentals of Nursing: Human Health and Function (Craven, Fundamentals of Nursing: Human Health and Functionraven, Fundamentals of Nurs)

**Dmca**