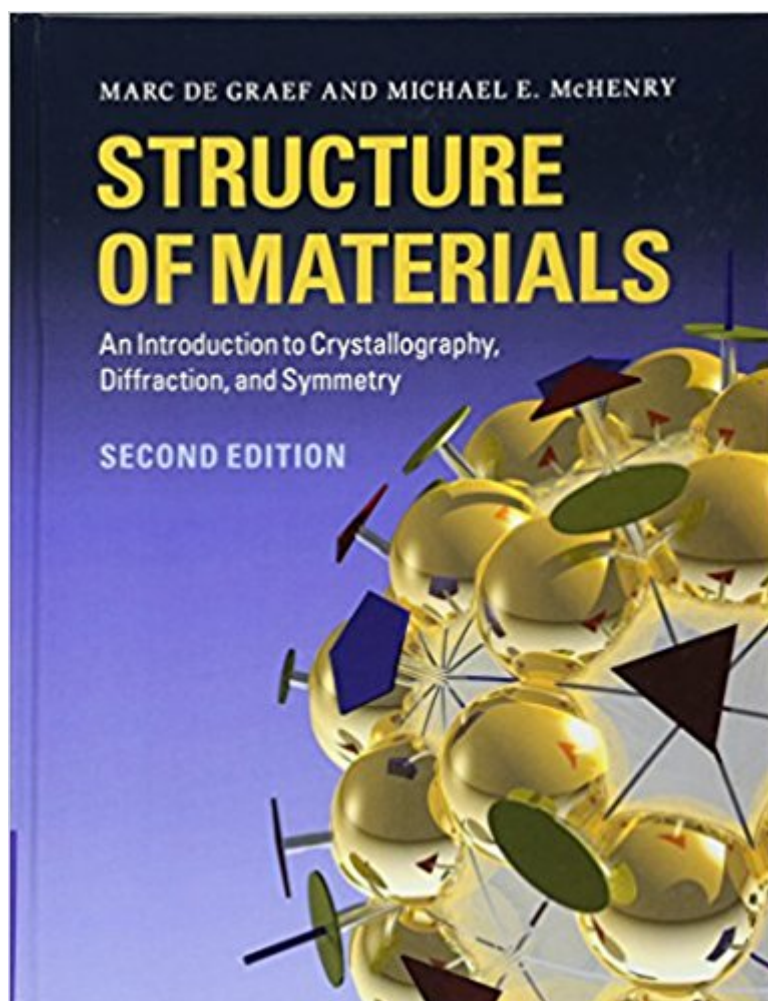




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Structure Of Materials: An Introduction To Crystallography, Diffraction And Symmetry



Synopsis

This highly readable, popular textbook for upper undergraduates and graduates comprehensively covers the fundamentals of crystallography and symmetry, applying these concepts to a large range of materials. New to this edition are more streamlined coverage of crystallography, additional coverage of magnetic point group symmetry and updated material on extraterrestrial minerals and rocks. New exercises at the end of chapters, plus over 500 additional exercises available online, allow students to check their understanding of key concepts and put into practice what they have learnt. Over 400 illustrations within the text help students visualise crystal structures and more abstract mathematical objects, supporting more difficult topics like point group symmetries. Historical and biographical sections add colour and interest by giving an insight into those who have contributed significantly to the field. Supplementary online material includes password-protected solutions, over 100 crystal structure data files, and Powerpoints of figures from the book.

Book Information

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Customer Reviews

The new edition of this highly readable, popular textbook covers the fundamentals of crystallography, symmetry and diffraction and applies these concepts to a large range of materials. Now with new end-of-chapter exercises, more illustrations, more streamlined coverage of crystallography and additional coverage of magnetic point group symmetry.

Marc De Graef is a Professor in the Department of Materials Science and Engineering at Carnegie

Mellon University in Pittsburgh, USA, where he is also Co-director of the J. Earle and Mary Roberts Materials Characterization Laboratory. He received his Ph.D. in Physics in 1989 from the Catholic University of Leuven. An accomplished writer in the field, he is on the Board of Directors for the Minerals, Metals and Materials Society (TMS). Michael E. McHenry is Professor of Materials Science and Engineering, with an appointment in Physics, at Carnegie Mellon University in Pittsburgh, USA. He received his Ph.D. in Materials Science and Engineering in 1988 from the Massachusetts Institute of Technology, before which he spent three years working in industry as a process engineer. Also an accomplished writer, he is Publication Chair for the Magnetism and Magnetic Materials (MMM) Conference.

The book covers a lot of material essential to understanding materials science in a fairly competent manor. Easy to read and follow.

This is an introductory book dedicated to the structures of a broad range of materials from metals to polymers. The author provides a comprehensive yet clear presentation about metallic and ceramic materials. The discussion on organic materials is just brief. One may refer to other textbooks if organic materials are of interest.

good

Love this book

I don't know about the editorial content, but the printing is defective. Many of the first hundred pages were printed with plates that were dripping with excess ink. The attached images are from scans with a black background, so this is no optical bleed-through, it's soaking-wet ink bleed-through. The verso says "Printed in the United Kingdom at the University Press, Cambridge." They must have had a pint too many.

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