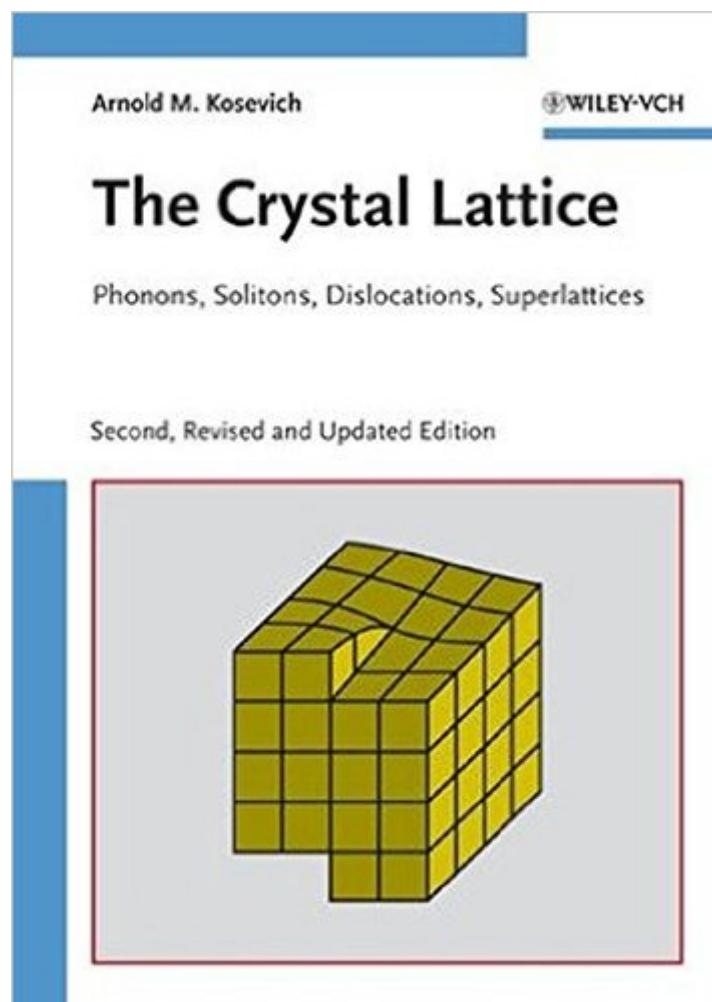


The book was found

The Crystal Lattice: Phonons, Solitons, Dislocations, Superlattices



Synopsis

The aim of this successful book is to describe and analyse peculiarities of classical and quantum dynamics of a crystal as a spatially periodic structure. In the second revised and updated edition, the author focuses on low-dimensional models of crystals and on superlattices. Both traditional questions like the spectrum of vibrations, the idea of phonon gas, dislocations etc. and new aspects like the theory of quantum crystals, solitons in 1D crystals, dislocation theory of melting of 2D crystals etc. are discussed. The author gives an explanation of a set of phenomena which entered into solid state physics during the last decades. It is shown that the crystal properties are sensitive to the dimension of the crystal and its defect structure, and depend slightly on whether the periodic structure consists of atoms, or electrical dipoles, or magnetic moments (spins). Considerable attention is devoted to the dislocation mechanisms as a basis of the theory of plasticity and numerous technological applications of crystalline materials.

Book Information

Hardcover: 356 pages

Publisher: Wiley-VCH; 2 edition (September 12, 2005)

Language: English

ISBN-10: 3527405089

ISBN-13: 978-3527405084

Product Dimensions: 7 x 0.9 x 9.7 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #5,731,861 in Books (See Top 100 in Books) #92 in Books > Science & Math > Chemistry > Chemical Physics #3201 in Books > Science & Math > Physics > Solid-State Physics #4991 in Books > Science & Math > Physics > Electromagnetism

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

The Crystal Lattice: Phonons, Solitons, Dislocations, Superlattices Crystal Healing: How crystal healing works, crystal therapy, the human energy field, gemstones, and how to use crystals for healing and increased energy! Wicca Crystal Magic: A Beginner's Guide to Practicing Wiccan

Crystal Magic, with Simple Crystal Spells The Crystal Healer: Crystal prescriptions that will change your life forever Crystal Grids: How to Combine & Focus Crystal Energies to Enhance Your Life Nanoscale Energy Transport and Conversion: A Parallel Treatment of Electrons, Molecules,

Phonons, and Photons (MIT-Pappalardo Series in Mechanical Engineering) Chinese Lattice

Designs (Dover Pictorial Archive) The New Book of Chinese Lattice Designs (Dover Pictorial Archives) Complexity of Lattice Problems: A Cryptographic Perspective (The Springer International Series in Engineering and Computer Science) Easy Mandala Snowflakes. Glowing Coloring Patterns for Beginners: 40 Simple Ice Crystal Designs on Midnight Black Background Pages for Stress Relief ... Minded Art Therapy for Grownups) (Volume 1) The Train to Crystal City: FDR's Secret Prisoner Exchange Program and America's Only Family Internment Camp During World War II My Little Pony: Twilight Sparkle and the Crystal Heart Spell (My Little Pony Chapter Books) Guide to the Crystal Gems (Steven Universe) DanTDM: Trayaurus and the Enchanted Crystal DK Eyewitness Books: Crystal & Gem Reporting with Visual Studio and Crystal Reports The Navajo: A Reprint in Its Entirety of a Catalogue Published by J.B. Moore, Indian Trader, of the Crystal Trading Post, New Mexico, in 1911. The Crystal and the Way of Light: Sutra, Tantra, and Dzogchen (Tibetan Buddhist Philosophy) Water Crystal Healing: Music and Images to Restore Your Well-Being Crystalline Transmission: A Synthesis of Light (The Crystal Trilogy Vol. 3)

[Dmca](#)