

[DOWNLOAD](#)

The Oxford Solid State Basics (Paperback)

By Steven H. Simon

Oxford University Press, United Kingdom, 2013. Paperback. Condition: New. Language: English . Brand New Book. The study of solids is one of the richest, most exciting, and most successful branches of physics. While the subject of solid state physics is often viewed as dry and tedious this new book presents the topic instead as an exciting exposition of fundamental principles and great intellectual breakthroughs. Beginning with a discussion of how the study of heat capacity of solids ushered in the quantum revolution, the author presents the key ideas of the field while emphasizing the deep underlying concepts. The book begins with a discussion of the Einstein/Debye model of specific heat, and the Drude/Sommerfeld theories of electrons in solids, which can all be understood without reference to any underlying crystal structure. The failures of these theories force a more serious investigation of microscopics. Many of the key ideas about waves in solids are then introduced using one dimensional models in order to convey concepts without getting bogged down with details. Only then does the book turn to consider real materials. Chemical bonding is introduced and then atoms can be bonded together to crystal structures and reciprocal space results. Diffraction experiments, as...



[READ ONLINE](#)
[5.25 MB]

Reviews

Definitely among the finest publication I actually have possibly study. I could possibly comprehended almost everything using this published e book. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- Rosamond Runolfsdottir

Extremely helpful to any or all category of individuals. It really is rally fascinating throug studying time period. I am just quickly could possibly get a pleasure of reading a composed ebook.

-- Lawrence Keeling