

<<声子与电子导论INTRODUCTION>>

图书基本信息

书名：<<声子与电子导论INTRODUCTION TO PHONONS AND ELECTRONS>>

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内容概要

This book focuses on phonons and electrons, which the student needs to learn first in solid state physics. The required quantum theory and statistical physics are derived from scratch. Systematic in structure and tutorial in style, the treatment is filled with detailed mathematical steps and physical interpretations. This approach ensures a self-sufficient content for easier teaching and learning. The objective is to introduce the concepts of phonons and electrons in a more rigorous and yet clearer way, so that the student does not need to relearn them in more advanced courses. Examples are the transition from lattice vibrations to phonons and from free electrons to energy bands. The book can be used as the beginning module of a one-year introductory course on solid state physics, and the instructor will have a chance to choose additional topics. Alternatively, it can be taught as a stand-alone text for building the most-needed foundation in just one semester.

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