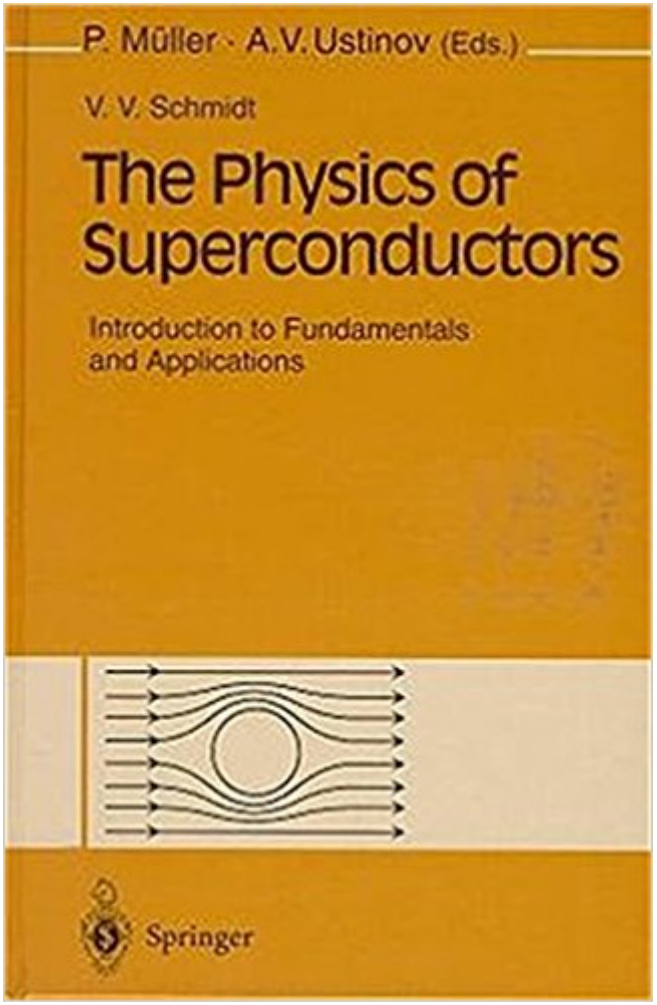
The Physics Of Superconductors: Introduction To Fundamentals And Applications



Synopsis

The original Russian edition is based on a lecture course given by the author and provides a modern treatment of the physics of superconductors with special attention paid to the physical interpretation of the phenomena. This revised English translation has been enlarged by the inclusion of such new developments as High Temperature Superconductivity, and, as such, is the most up-to-date textbook on the subject available. The editor, Paul MÃ ller, is himself a winner of the Walter Schottky Award for Solid State Research.

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Customer Reviews

Text: English (translation) Original Language: Russian

This modern introduction to the physics of superconductors was edited by Paul MÃ ller, (Walter Schottky Award for Solid-state Research) and Alexey V. Ustinov, both at the University of Erlangen. The revised and enlarged text is based on a lecture course given by V. V. Schmidt at the Moscow Institute of Steel and Alloys. It provides a modern treatment of the physics of superconductors with special attention paid to the physical interpretation of the phenomena. This English edition has been enlarged by the inclusion of such new developments as high-temperature superconductivity, and, as such, is the most up-to-date textbook available on the subject. Numerous problems with solutions help the student to become familiar with this field.

This book is the best introduction to superconductivity that I have encountered and probably my favorite physics textbook of all time. Schmidt does an excellent job of concisely laying out the basics of superconductivity in as few words as possible without sacrificing clarity. Many canonical examples are worked out in the text and those that aren't are included as end-of-chapter exercises. Because the explanations are so clear and short I find myself using this book as a reference on conventional superconductivity more often than I use Tinkham.However, the book's main drawback is that Schmidt died before the discovery of high-Tc so it obviously does not contain anything on that subject. Pair this book with Tinkham and more modern reviews on high-Tc superconductivity and you'll be set.

This is a bit of a dated text (written just prior to the Bardeen, Cooper, and Schrieffer explanation) yet a brief and excellent treaty on the subject.It is expressed with clarity and it is easily understandable aimed more to the user than to the researcher.

Interactions: Fundamentals and Applications (Biological and Medical Physics, Biomedical Engineering) Physics: Principles with Applications with MasteringPhysics with Get Ready for Physics (6th Edition) Environmental Soil Physics: Fundamentals, Applications, and Environmental Considerations