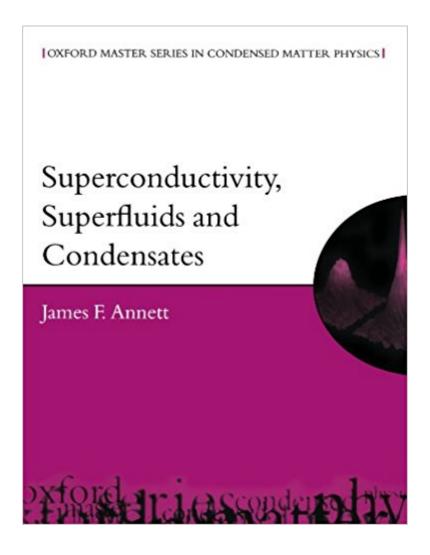


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Superconductivity, Superfluids, And Condensates (Oxford Master Series In Physics)





Synopsis

Superconductivity, provides a basic introduction to one of the most innovative areas in condensed matter physics today. This book includes ample tutorial material, including illustrations, chapter summaries, graded problem sets, and concise examples. This book is part of the Oxford Master Series in Condensed Matter Physics.

Book Information

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Customer Reviews

"Annett (physics, University of Bristol) covers three main strands in condensed matter physics in this text for senior undergraduate and graduate students. Subjects are developed in a way which gradually builds up key concepts and the necessary mathematical machinery. The book begins with a review of basics of the Bose-Einstein ideal gas before going into techniques of magnetic trapping and cooling of atoms and the discovery of Bose-Einstein condensates in dilute atomic gases. The physical phenomena of superfluidity are then introduced, and the theory of superconductivity is developed in stages, starting with simpler theories and then developing the mathematical concepts of a quantum coherent state. --SciTech Book News

James F. Annett is Professor of Physics at the University of Bristol, U.K. .

It's true the book has typos and minor errors. However, it is still an amazing book. This is probably

the best introduction to superconductivity ever written, from a pedagogical point of view. Not good for the expert, because it spends so much time explaining basic principles. However, for the beginner, this introductory book will not be an insult to your intelligence, and it will not waste any of your time. It goes straight to the important topics, and overview of current research while building up all the fundamentals needed. Some knowledge of solid state physics is recommended, in fact, probably essential (I can't see myself reading this intro without knowledge of ss physics). Anyhow, what I really liked about the book is how it spends time discussing each topic it introduces - for example, a thorough discussion of macroscopic coherent states is provided, and this is used to motivate the form of the BCS ground state wavefunction. I don't recall seeing this in other textbooks, at least, not at the beginner level. And the presentation by this author is impeccable (apart from the typos) and makes a lot of sense. This book is highly recommended.

This s*** is the bomb.

Judging from this volume, Annett seems to be a great teacher and a great writer. The distance between the material covered here and actual research is quite large, but that's OK, since the book is advertised as a pedagogical introduction, and it is really good at that. Every chapter includes a number of smartly-chosen problems, the solutions to which are given in an Appendix. I have given the book 4 stars instead of 5, because it suffers from horrendous copy-editing. Grammatical mistakes, typos in equations, wrong references to previous equations (and the list goes on). One gets the feeling that the publisher received the author's manuscript and published it as is. This makes it very difficult to understand why it's so expensive. Hopefully these errors will be removed in a future edition.

As most of the books of this serie, this one is also a successful introduction to the desired subject. The text is very pedagogical and the author never avoids a calculation which leads to an important result. Every formula is generally commented in order to extract the physics behind. All the important subjects related to BEC are touched. The main core of the book seems ,for me, understandable by a good undergraduate student. Of course that won't make you a specialist of this wide subject which required a lot of knowledges from different parts of physics , but at least the most important things will be kwnown and you will have the sufficent stuff to go more deeply in the subject of your choice with the required litterature (which may be found in the bibliography of the book). I think it deserves its five stars since the objectives of the books (being an clear introduction

without being to light) are definitly reached. Definitly a nice book!

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