

PREFACE TO THE FIRST EDITION

THIS book is based to a large extent on lectures we have given to undergraduate and first-year postgraduate students. We intend that it should indeed be an *introduction* to superconductivity and have selected and presented our material with this in mind. We do not intend the contents to be read as a definitive and exhaustive treatment of superconductivity; several such texts are already published and it has not been our intention to compete with these. Rather our object has been to explain as clearly as possible the basic phenomena and concepts of superconductivity in a manner which will be understood by those with no previous knowledge of superconductivity and only a modest acquaintance with solid-state physics.

In this book we have concentrated on the physics of superconductivity and, though we occasionally mention applications, we have not treated these in any detail. We hope, nevertheless, that this book will be useful both to “pure” physicists and to those interested in practical applications. With this in mind, we have used the rationalized MKS system throughout. Many of those interested in practical applications will be engineers brought up on the MKS system and, furthermore, MKS units are increasingly used in physics teaching. It seemed to us that someone should take the plunge and write a book on superconductivity using the MKS system. The MKS approach has involved us in some thought about the meaning of B and H in superconductors, a point which is discussed in Appendix A.

We have, of course, drawn on other texts on the subject and, in particular, we have made frequent use of Shoenberg’s classic monograph *Superconductivity*. Because our book is an introduction, we have not attempted to include a complete list of references, but have referred to some of the key papers where this seemed appropriate.

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University of Manchester
Institute of Science and Technology
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E.H.R.
A.C.R.-I.