Theory of Superconductivity is considered one of the best treatments of the field. This monograph, by Nobel Prize-winning physicist J. Robert Schrieffer, has been reprinted because of its enduring value as *the* introduction to the theory of superconductivity. Based on a series of lectures presented by the author at the University of Pennsylvania, the fundamentals of the microscopic theory of superconductivity are stressed as a means of providing the reader with a framework for the literature in which detailed applications of the microscopic theory are made to specific problems. It also serves as a foundation for the more recent developments in this active field.

The author has developed a number of the formal techniques found in the literature to describe pairing correlations basic to superconductivity. For the most part, only a standard graduate course in quantum theory is required to understand the techniques of quantum mechanics used.

J. Robert Schrieffer received his B.S. from MIT. He continued his studies at the University of Illinois, where along with Professors John Bardeen and Leon Cooper he developed the theory of superconductivity. He continued his work as a fellow at the University of Birmingham and the Niels Bohr Institute in Copenhagen. Following work at the Universities of Chicago and Illinois, Schrieffer won the Nobel Prize in 1972 for his work in superconductivity, sharing the honor with Bardeen and Cooper. He was a professor of physics at the University of California, Santa Barbara, and is currently Eminent Scholar Professor at Florida State University and Chief Scientist of the National High Magnetic Field Laboratory.

Cover design by Suzanne Heiser

About the Advanced Book Classics:

Read and cited by scientists and mathematicians worldwide, Advanced Book Classics are works that continue to inform today's groundbreaking research efforts. Redesigned and newly released in paperback, these graduate-level texts and monographs are now available to an even wider audience. Written by the most influential physicists of the twentieth century, these Advanced Book Classics promise to enrich and inspire a new generation of physicists.

ABP *Advanced Book Program*

ISBN 0-7382-0120-0

90000

9 780738 201207

Advanced Book Program
WESTVIEW PRESS
5500 Central Avenue • Boulder, Colorado 80301-2877
12 Hid's Copse Road • Cumnor Hill • Oxford OX2 9JJ
www.westviewpress.com

CONTENTS