

PREFACE

These lecture notes were first prepared for a series of six seminars that were held during Winter 1987-88 at the Institute for Intermediate Energy Physics/ETH Zürich, located at the Paul Scherrer Institute near Villigen, Switzerland. The notes were revised for a one-week inter-term course at the Physics Institute of the University of Zürich in March 1988.

The subject matter of these seminars was suggested by my research interests at the time—muon and microwave studies of high temperature superconductivity. Although much of the background material is not new, going back twenty years or more, what is new is emphasis on the modern high-temperature superconductors discovered by K. A. Müller and J. G. Bednorz, whom it was my pleasure to know while working at IBM Rüschlikon.

I was on sabbatical leave from the Department of Physics of the University of California at Berkeley during this early period and wish to acknowledge my appreciation to those colleagues who arranged for my stay in Switzerland and provided such a supportive and stimulating environment for research, teaching and learning: Dr. Alex Schenck at the Institute for Intermediate Energy Physics/ETH Zürich; Dr. Claude Petitjean at the Paul Scherrer Institute; Professors Walter Kundig and Franz Waldner and Dr. Bruce Patterson at the University of Zürich; Professor Alex Müller and Drs. Georg Bednorz and Keith Blazey at the IBM Zürich Research Laboratory, Rüschlikon.

The notes were revised and considerably expanded for a special topics graduate seminar, offered in the Physics Department of the University of California at Berkeley during Fall 1990. I am grateful to those graduate research students who participated in the seminar and who gave me stimulation and encouragement. I want particularly to mention Chandu Karadi, Harry Lam, Andrew Miklich, Beth Parks and Tim Shaw.

Drs. Paul Berdahl and Nathan Newman and visiting research physicist Antonello Andreone made many valuable suggestions during the course of a workshop offered at the Lawrence Berkeley Laboratory in Spring 1992.

These chapters took their present form for a colloquium series in Summer 1992 at the University of Wuppertal where, through the Minister for Science and Research of the State of Nordrhein-Westfalen, I held an appointment as University Professor. I thank Professor Helmut Piel for making the necessary arrangements and for his unbounded personal support and hospitality. I want particularly to mention Susannah Orbach, Matthias Hein and Martin Strupp, who participated actively in the colloquium series and made a number of very helpful suggestions.

My colleague and collaborator D. W. Cooke has generously allowed me to include material on which we worked together. I am also grateful to J. R. Clem, John Clarke, Vladimir Kresin, Jürgen Halbritter, P. L. Richards and D. J. Scalapino for instructive discussions of the microwave properties of superconductors.

The preparation of this work in its final form was supported in part by the Director, Office of Energy Research, Office of Basic Energy Sciences, Materials Sciences Division, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

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Berkeley, California
September 1992