

Table of Contents

Preface

Experimental Indications on the Superconducting Gap of Oxide Superconductors	1
A. Maeda, S. Tajima and K. Kitazawa	
Electrodynamic Parameters of YBa₂Cu₃O_y	59
D.H. Wu	
Magnetism in the Layered Cuprates: μSR Studies	85
R.L. Lichti	
Harmonic and Static Susceptibilities of YBa₂Cu₃O₇	103
T. Ishida, R.B. Goldfarb, S. Okayasu, Y. Kazumata, J. Franz, T. Arndt and W. Schauer	
Studies of Single Crystal Superconductors by Magnetically Modulated Resistance	133
B.F. Kim, K. Moorjani, F.J. Adrian and J. Bohandy	
X-Ray and UV-Light Irradiation Effects on Oxide Superconducting Thin Films	153
A. Enokihara, S. Kohiki, K. Setsune and K. Wasa	
Environmental and Chemical Durability of High-Temperature Superconductors	165
N.P. Bansal	
Valence States and Density of Holes in Superconducting Layered Cuprates	187
F. Studer, C. Michel and B. Raveau	
Effects of Oxygen Inhomogeneities on the Properties of YBa₂Cu₃O_{7-δ} Crystals	229
M.S. Osofsky, J.L. Cohn, E.F. Skelton, M.M. Miller, R.J. Soulen, Jr. and S.A. Wolf	
Dependence of the Superconducting Properties in Bulk YBa₂Cu₃O_x Ceramics on Microstructure	247
M. Kuwabara	
Microstructure and Phase Transitions in La_{2-x}(Sr,Ba)_xCuO₄	257
C.H. Chen	
Anisotropy and Dimensional Characteristics in CVD Route Y₁Ba₂Cu₃O_{7-δ}	277
K. Watanabe, N. Kobayashi, S. Awaji, H. Yamane, T. Hirai and Y. Muto	
Solidification Processing for High-T_c Oxide Superconductors	289
T. Izumi	
High-Temperature Superconductors by Crystallization of Rapidly Quenched Glasses	303
N.P. Bansal	
Hot Mechanical Processing of Bulk Superconducting Ceramic and Ceramic Composite	339
B.C. Hendrix, J.C. Borofka and J.K. Tien	
Shock-Wave Processing of High-Temperature Superconductors	355
S.T. Weir, W.J. Nellis, C.L. Seaman, E.A. Early, M.B. Maple, M.J. Kramer, J.Z. Liu and R.N. Shelton	
Reaction of YBa₂Cu₃O_{7-δ} with Gold, Silver, Bismuth and Lead: Substitution Chemistry and Composite Fabrication	377
A.F. Hepp and J.R. Gaier	
Chemical Vapor Deposition of Oxide High-T_c Superconducting Thin Films	395
T. Sugimoto	
Chemical Vapour Deposition of HTSC: An Overview of Thermodynamic Modeling	455
A. Hårsta, M. Ottosson and J. Carlsson	
Group IIA β-Diketonate Compounds as CVD-Precursors for High-T_c Superconductors	473
W.S. Rees, Jr. and A.R. Barron	
Low Temperature Growth of Superconducting Thin Films and Heterostructures	495
S. Witanachchi, D.T. Shaw and H.S. Kwok	
On the Growth of Y-Based and Bi-Based High-T_c Superconductor Thin Films	505
J. Azoulay	
Synthesis of High-Temperature Superconductors by Oxidation of a Precursor Alloy	523
J.S. Luo, D. Michel, J.P. Chevalier, N. Merchant, V.A. Maroni, D.M. Gruen, K.H. Sandhage and C.A. Craven	
In Situ Preparation of Superconducting Bi(Pb)SrCaCuO Thin Films by Magnetron Sputtering in Pure Oxygen	547
Y. Hakuraku	

Growth and Properties of Bi-Sr-Ca-Cu Films by Liquid Phase Epitaxy	555
G. Balestrino	
Processing Induced Transitions in the Crystal and Electronic Structure of Bi-Sr-Ca-Cu Oxide Thin Films	571
J.-. Yeh	
Thick Film High-Temperature Superconductors	593
M. Levinson	
Flux Flow and Pinning by Twin Boundaries in Single Crystal $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$	609
W. Kwok, S. Fleshler, U. Welp, V.M. Vinokur, J.W. Downey and G.W. Crabtree	
Critical Currents and Flux Creep in High-T_c Superconductors	629
D.L. Shi	
Fabrication and Critical Current Density of Ag-Sheathed $\text{Bi}(\text{Pb})\text{SrCaCuO}$ Superconducting Tapes	649
S.X. Dou and H.K. Liu	
Critical Current Properties in Superconducting Melt Processed Y-Ba-Cu-O	677
T. Matsushita	
Layered Type Josephson Junctions Using a Bi-Based High-T_c Superconductor	693
K. Mizuno and K. Setsune	
Synthesis and Characterisation of High-T_c Bulk Superconductors, Films and Devices	707
R.P. Gupta and W.S. Khokle	
Laser Ablated Superconducting $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Films on Microwave Substrates: Properties and Applications	735
J.D. Warner and K.B. Bhasin	
High-Temperature Superconducting Coplanar Waveguide Microwave Circuits and Antennas	759
R.N. Simons	
Metal Electrodes on High-T_c Superconductors	783
T. Kusaka and Y. Suzuki	