

Subject Index of Volume 195

Bearings of YBCO

Low power high speed rotor (200 000 rpm) with HTSC bearings, 731

Bolometer

Composite bolometer based on $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+x}$ single crystals, 727

Buffer layers

Deposition of buffer layers for MOCVD of $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-x}$ on GaAs, 295

Ceramics

Bridgman growth and enhanced critical currents in textured $\text{YBa}_2\text{Cu}_3\text{O}_7$ - Y_2BaCuO_5 composites, 11

Processing of Bi-2223 ceramics in the system BPSCCO, 43

A new elaboration process of the superconducting $\text{Tl}_2\text{Ba}_2\text{Cu}_1\text{O}_6$ phase with $T_c=90$ K, 47

Preparation of $\text{Ba}_{0.6}\text{K}_{0.4}\text{BiO}_3$ pure superconducting powder, 73

Characterization of high- T_c superconductors by mass spectral methods of surface analysis (LIMS, SNMS), 145

X-ray texture analysis in YBaCuO ceramics and films, 149

Mechanical alignment of the grains of sintered YBaCuO , 161

Magnetic characterization of differently processed YBaCuO -ceramics, 173

Comparison of IR-active phonons in YBCO ceramics with different carrier concentrations, 355

The effects of Co substitutions for Cu in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ on the phonon Raman spectrum, 363

Specific heat of the 90-K superconductor $\text{Tl}_2\text{Ba}_2\text{CuO}_6$ ("2201") prepared in high pressure Ar or He gas, 547

A systematic neutron diffraction study of $\text{RBa}_2\text{Cu}_3\text{O}_7$ (R = yttrium and rare earths) high- T_c superconductors, 599

Magnetic properties of the $\text{Tl}_2\text{Ba}_2\text{Cu}_1\text{O}_{6+\delta}$ 90 K superconductor, 607

Coevaporation

$\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films on GaAs with high critical current densities, 215

Large area deposition of $\text{YBa}_2\text{Cu}_3\text{O}_7$ films by thermal co-evaporation, 271

Non-linear microwave surface impedance of patterned $\text{YBa}_2\text{Cu}_3\text{O}_7$ thin films, 563

Crystal growth

Fabrication and properties of single crystals and LPE films in some HTSC systems, 1

Crucible free techniques in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ -crystal growth, 7

Possibility of striations in HTSC films caused by self-destabilization of the growth temperature, 117

High-resolution transmission electron microscopic (HRTEM) studies of $\text{Tl}_2\text{Ba}_2\text{CuO}_{6\pm x}$, 125

$\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films on GaAs with high critical current densities, 215

Defects

Defects analysis of in situ grown BiSrCaCuO thin films, 251

Defects and the thermal conductivity of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ and $\text{YBa}_2\text{Cu}_4\text{O}_8$, 655

Devices

Preparation and non-destructive characterization of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films for microwave applications, 559

$\text{YBa}_2\text{Cu}_3\text{O}_7$ devices grown by evaporation, 695

A BSCCO(2223) thin film DC SQUID utilising natural grain boundary weak-links, 703

Materials aspects of integrated high T_c dc-SQUID magnetometer fabrication, 707

On-chip diagnostic of high- T_c superconductors at mm-wave frequencies, 711

High frequency broadband characterization of metal/high T_c superconducting coplanar structures, 715

Fabrication aspects of microwave devices, including ramp-type high- T_c Josephson junctions and log-periodic antennas, 719

Multilayers for high- T_c superconducting electric field effect devices, 723

Composite bolometer based on $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+x}$ single crystals, 727

Low power high speed rotor (200 000 rpm) with HTSC bearings, 731

Electric transport properties

Grain misorientation and properties of HTSC thin films, 263

Electric field effect in high- T_c superconductors, 519

Granularity effects in transport properties of 123 superconducting thin films, 635

Electronic structure

Electronic structure of pure and substituted $\text{BaBiO}_{3-\delta}$ single crystals, 543

Crystal field, cluster formation and percolative superconductivity in $\text{ErBa}_2\text{Cu}_3\text{O}_x$, 595

Search for characteristic lengthscales of the magnetic field distribution at the surface of superconducting $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ single crystals, 491

Filaments

High T_c superconducting $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ filaments: An improved thermal treatment, 31

Problems of obtaining highly textured HTSC coatings, 157

Influence of the constant load sintering on the improvement of the transport critical current in $\text{Ag}-(\text{Bi}, \text{Pb})_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_x$ tape form conductor, 165

Enhancement of critical current density j_{cm} and pinning energy U in melt textured $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ on Ag-tape by heavy ion irradiation, 403

High critical currents in Ag -BSCCO(2223) tapes: Are the grain boundaries really 'weak-links'?, 503

High temperature superconductors for power cables, 507

High critical currents in Bi(2223) tapes with Ag and hardened Ag sheaths, 511

The relation between crossover of the intergrain loss-peak temperature-field characteristics of the $\text{Ag}-\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_x$ screen-printed tapes and their J_c values, 639

Investigation of oxygen exchange of $\text{Y}-\text{Ba}-\text{Cu}-\text{O}$ powders and AgPd sheathed tapes, 671

Growth and optical study of superconducting superlattices, 187

Comparison of IR-active phonons in YBCO ceramics with different carrier concentrations, 355

Floating-zone technique

Growth of $\text{Bi}-(\text{Sr}, \text{La})-\text{Cu}-\text{O}$ single crystals with the floating-zone technique, 15

Fluorination

New synthesis method of superconducting $\text{Nd}_2\text{CuO}_{4-x}\text{F}_x$, $\text{Pr}_2\text{CuO}_{4-x}\text{F}_x$, 69

- Influence of fluorination on the transport properties of $\text{La}_{1.85-y}\text{Sr}_{0.15}\text{Nd}_y\text{CuO}_4$ near the low-temperature structural transition, 335
- Fluorination of an epitaxial YBaCuO thin film with controlled oxygen vacancies, 339
- Gallium**
- “Superconductor-ization” of $\text{GaSr}_2\text{YCu}_2\text{O}_7$, 19
- Electrical resistivity of $\text{PrBa}_2\text{Cu}_{3-x}\text{Ga}_x\text{O}_{7-y}$ (001) and (105) oriented thin films, 643
- Hall measurements**
- Superconducting and normal-state transport properties in bulk YBaCuO , doped with Zn, 347
- Influence of pinning by columnar defects on the longitudinal and Hall resistivities of $\text{YBa}_2\text{Cu}_3\text{O}_7$ single crystals in the mixed state, 415
- Nanostructural characterization of interfaces of thin films of $\text{YBa}_2\text{Cu}_3\text{O}_7$ with various kinds of substrates, 85
- Microstructures and precipitates in laser-ablated YBCO thin films on SrTiO_3 (110), 93
- High-resolution transmission electron microscopic (HRTEM) studies of $\text{Tl}_2\text{Ba}_2\text{CuO}_{6\pm x}$, 125
- Columnar defects induced by high energy heavy ions in HTSC. Their effect on irreversibility line and pinning properties, 395
- Irradiation**
- Ion-beam induced metal insulator transition in YBCO films, 527
- The influence of gamma irradiation on superconductivity of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$, 659
- Josephson junctions**
- $\text{YBa}_2\text{Cu}_3\text{O}_7$ devices grown by evaporation, 695
- On-chip diagnostic of high- T_c superconductors at mm-wave frequencies, 711
- Fabrication aspects of microwave devices, including ramp-type high- T_c Josephson junctions and log-periodic antennas, 719
- Laser ablation**
- Microstructures and precipitates in laser-ablated YBCO thin films on SrTiO_3 (110), 93
- Thin films of $(\text{RE})\text{Ba}_2\text{Cu}_3\text{O}_7$ in-situ epitaxially grown by laser ablation: Crystalline structure, resistivity and critical exponents of temperature dependent critical currents, 195
- Laser ablated YBCO thin films – relations between structural and electrical properties, 199
- Bi-epitaxial template grain boundaries with different in-plane angles on (100) MgO substrates, 231
- \bar{a} -axis laser ablated superconducting YBCO thin films. Growth mechanism on MgO substrate, 235
- Structural defects in YBaCuO thin films grown on MgO substrates, 239
- Defects analysis of in situ grown BiSrCaCuO thin films, 251
- Conditions for the textured growth of Y-Ba-Cu-O films on Zr foils, 275
- Fluorination of an epitaxial YBaCuO thin film with controlled oxygen vacancies, 339
- Laser deposition**
- Oxygen diffusion in laser deposited YBaCuO thin films, 203
- Pulsed laser deposition of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ superconducting thin films: Correlation between preparation conditions and structural and electrical properties, 207
- Buffer layers of yttria stabilized zirconia for $\text{YBa}_2\text{Cu}_3\text{O}_7$ devices on silicon substrates, 219
- Optimization of YBCO thin films grown on MgO for microwave applications, 243
- Superconducting properties of electrochemically Li^+ intercalated $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films, 343
- Synthesis and characterization of “infinite layer” compounds doped with p-type carriers, 371
- Liquid-phase epitaxy**
- Fabrication and properties of single crystals and LPE films in some HTSC systems, 1
- Magnetic behaviour**
- Enhancement of critical current density j_{cm} and pinning energy U in melt textured $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ on Ag-tape by heavy ion irradiation, 403
- Time dependence of the magnetization in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$, 439
- Magnetic properties of the $\text{Tl}_2\text{Ba}_2\text{Cu}_1\text{O}_{6+\delta}$ 90 K superconductor, 607
- Disorder and non-linear magnetic response of high T_c superconductors, 611
- A model for low-field flux penetration in disordered superconductors, 615
- The preparation and magnetic properties of the high T_c superconductor (2234) $\text{Bi}_{1.6}\text{Pb}_{0.4}\text{Sr}_2\text{Ca}_3\text{Cu}_4\text{O}_{12+y}$, 619
- Which kind of disorder most influences the magnetic properties of high- T_c superconductors?, 631
- Magneto-optics**
- Magneto-optical imaging of Shubnikov phase, 483
- Characterization of superconductors using magneto-optic techniques, 499
- Magneto-resistance**
- Effect of dimensional crossover on magneto-resistance of $\text{YBa}_2\text{Cu}_3\text{O}_7/\text{PrBa}_2\text{Cu}_3\text{O}_7$ superlattices, 191
- Magneto-resistance and conductivity fluctuations in $(\text{Tl}_{0.5}\text{Pb}_{0.5})\text{Sr}_2(\text{Ca}_{1-x}\text{Y}_x)\text{Cu}_2\text{O}_7$ superconductors, 651
- Mechanical properties**
- Toughness and thermoshock resistance of polycrystalline $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$, 679
- Melt growth**
- Bridgman growth and enhanced critical currents in textured $\text{YBa}_2\text{Cu}_3\text{O}_7\text{-Y}_2\text{BaCuO}_5$ composites, 11
- Melt processing of powdered arc-cast $\text{YBa}_2\text{Cu}_3\text{O}_y$ materials, 23
- A modified QMG method of high T_c YBCO preparation, 27
- Synthesis of Bi-based high temperature superconductors using melt technologies, 35
- Characterisation of Bi-Pb-Sr-Ca-Cu-O rods subject to direct current zoning (DCZ) and direct current annealing (DCA), 39
- Peak-effect, scaling behavior and voltage-current characteristics for $\text{TmBa}_2\text{Cu}_3\text{O}_{7-\delta}$ single crystal, 479
- The preparation and magnetic properties of the high T_c superconductor (2234) $\text{Bi}_{1.6}\text{Pb}_{0.4}\text{Sr}_2\text{Ca}_3\text{Cu}_4\text{O}_{12+y}$, 619
- The relation between crossover of the intergrain loss-peak temperature-field characteristics of the Ag- $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_x$ screen-printed tapes and their J_c values, 639
- Metal-insulator transition**
- Ion-beam induced metal insulator transition in YBCO films, 527
- Microstructure**
- Melt processing of powdered arc-cast $\text{YBa}_2\text{Cu}_3\text{O}_y$ materials, 23
- Characterisation of Bi-Pb-Sr-Ca-Cu-O rods subject to direct current zoning (DCZ) and direct current annealing (DCA), 39
- Evolution of structure and superconductivity with lithium content in $\text{Li}_{1-x}\text{Ti}_2\text{O}_4$, 81
- Nanostructural characterization of interfaces of thin films of $\text{YBa}_2\text{Cu}_3\text{O}_7$ with various kinds of substrates, 85
- Microstructures and precipitates in laser-ablated YBCO thin films on SrTiO_3 (110), 93
- Surface morphology of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films on SrTiO_3 (100) studied by scanning tunneling microscopy, 97

- Microstructural studies of non-stoichiometric YBCO thick films processed on YSZ substrates, 101
- Scanning tunneling microscopy study on $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ films with growth stop by observing reflection high-energy electron diffraction oscillations, 105
- Bulk and surface structure of epitaxial $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films grown on Mg_2TiO_4 (001) substrate layers. : I: Bulk structure investigated by TEM, 109
- Bulk and surface structure of epitaxial $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films grown on Mg_2TiO_4 (001) substrate layers. : II: Orientation and surface structure, 113
- Microstructure investigations of the epitaxial growth of ultrathin $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_x$ superconducting films on (001) SrTiO_3 substrates, 129
- Microstructure of Bi_{2212} and $(\text{Bi}/\text{Pb})_{2212}$ single crystals and effect of electron donors and acceptors, 133
- Selective ^{18}O labelling in *a*-axis oriented YBaCuO thin films, 137
- SIMS study of low energy $^2\text{H}^+$ ion-implanted $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films, 141
- Structural analysis of the charge transfer mechanism in the superconducting compounds $\text{Pb}_2\text{Sr}_2\text{Y}_{1-x}\text{Ca}_x\text{Cu}_3\text{O}_{8+\delta}$, 169
- Thin films of $(\text{RE})\text{Ba}_2\text{Cu}_3\text{O}_7$ in-situ epitaxially grown by laser ablation: Crystalline structure, resistivity and critical exponents of temperature dependent critical currents, 195
- Oxygen diffusion in laser deposited YBaCuO thin films, 203
- Crack formation in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films on silicon, 223
- Reactive growth of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ layers on Y_2BaCuO_5 substrates, 227
- Bi-epitaxial template grain boundaries with different in-plane angles on (100) MgO substrates, 231
- Optimization of YBCO thin films grown on MgO for microwave applications, 243
- Surface and interface properties of cleaned and Ag-covered $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ films, 247
- Preparation and room temperature ion irradiation of sputtered YBaCuO -films, 255
- Grain misorientation and properties of HTSC thin films, 263
- Growth and properties of MOCVD $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 287
- Structural effects of element substitution on superconducting properties in 1-2-3 YBCO: An electron microscopy study, 307
- Effects of simultaneous Pb/Bi and Y/Ca substitution on structural and superconducting properties of the 2212 BSCCO phase, 315
- Structure and superconductivity in Co doped $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$, 327
- Critical currents in real HTSC materials, 387
- A systematic neutron diffraction study of $\text{RBa}_2\text{Cu}_3\text{O}_7$ (R = yttrium and rare earths) high- T_c superconductors, 599
- Influence of the granularity on the thermoelectric power of polycrystalline $\text{Bi}_{1.5}\text{Pb}_{0.5}\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_y$ superconductors, 623
- Influence of the polycrystallinity on the paraconductivity in copperoxide superconductors, 627
- Which kind of disorder most influences the magnetic properties of high- T_c superconductors?, 631
- Granularity effects in transport properties of 123 superconducting thin films, 635
- Study of oxygen content and of disorder in YBaCuO thin films with enlarged *c*-axis lattice parameter, 675
- Toughness and thermoshock resistance of polycrystalline $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$, 679
- Mechanochemical effects of grinding on the $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ superconductor, 683
- Structure and Raman spectrum of $\text{BiSr}_2\text{CaCu}_2\text{O}_7$ (Bi_{1212}) superconductor, 691
- Microwave properties
- Non-bolometric microwave response of a granular $\text{Bi}(\text{Pb})\text{SrCaCuO}$ thin film, 567
- Microwave properties of structured $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 571
- Surface resistance of large $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ crystals at 3 GHz with residual losses caused by flux compounds, 575
- Weak link effects in the surface impedance of cuprate superconductors, 579
- Low field microwave absorption study of defects in $\text{YBa}_2\text{Cu}_3\text{O}_7$ crystals and films, 583
- Comparative study of the irreversibility line and of harmonic generation in field modulated microwave absorption on $\text{YBa}_2\text{Cu}_3\text{O}_7$ thin films, 587
- Preparation of 110 K $\text{Bi}(\text{Pb})\text{SrCaCuO}$ superconducting thin films by r.f. magnetron sputtering and their response to microwave radiation, 591
- Growth and properties of MOCVD $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 287
- Low-pressure single aerosol source MOCVD of YBCO thin films, 291
- Deposition of buffer layers for MOCVD of $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-x}$ on GaAs, 295
- Compositional effects in $\text{Y}_x\text{Ba}_y\text{Cu}_z\text{O}_{7-\delta}$ thin films prepared by metalorganic chemical vapour deposition, 299
- Transport critical current in MOCVD $\text{YBa}_2\text{Cu}_3\text{O}_7$ thin films using a pulse technique, 475
- Comparative study of the irreversibility line and of harmonic generation in field modulated microwave absorption on $\text{YBa}_2\text{Cu}_3\text{O}_7$ thin films, 587
- Monte Carlo
- SIMS study of low energy $^2\text{H}^+$ ion-implanted $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films, 141
- Structure and superconductivity in Co doped $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$, 327
- Mössbauer spectroscopy
- No evidence of Fe transfer between Cu1 and Cu2 sites in $\text{YBa}_2(\text{Cu}_{1-x}\text{Fe}_x)_3\text{O}_{7-d}$ ($0.02 \leq x \leq 0.04$) annealed in an inert atmosphere, 331
- Paraconductivity
- Non-universal behaviour of paraconductivity in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films, 647
- Phase equilibria
- Phase equilibria in the binary $\text{TlO}_{1.5}\text{-CuO}$, $\text{TlO}_{1.5}\text{-BaO}$ and ternary $\text{TlO}_{1.5}\text{-BaO-CuO}$ systems, 53
- Phase transitions
- Pressure effects on the structural phase transitions in $\text{La}_{2-x}\text{Ba}_x\text{CuO}_4$, 603
- Photoconductivity
- Optical conductivity and carrier relaxation rate in the normal state of high T_c thin films, 663
- Photoexcitation effects in $\text{YBa}_2\text{Cu}_3\text{O}_x$, 667
- Pinning
- Structural effects of element substitution on superconducting properties in 1-2-3 YBCO: An electron microscopy study, 307
- Pinning energy in HTSC and its influence on electric and magnetic properties, 379
- Critical currents in real HTSC materials, 387
- Columnar defects induced by high energy heavy ions in HTSC. Their effect on irreversibility line and pinning properties, 395
- Enhancement of critical current density j_{cm} and pinning energy U in melt textured $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ on Ag-tape by heavy ion irradiation, 403
- Flux pinning by columnar defects in high-temperature superconducting crystals, 407
- Effect of columnar defects on the critical current anisotropy of epitaxial $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films and $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}/\text{PrBa}_2\text{Cu}_3\text{O}_{7-\delta}$ multilayers, 411
- Influence of pinning by columnar defects on the longitudinal and Hall resistivities of $\text{YBa}_2\text{Cu}_3\text{O}_7$ single crystals in the mixed state, 415

- Vibrating reed studies of vortex pinning in high temperature superconductors, 419
- Thermally activated flux motion and quantum creep in $\text{YBa}_2\text{Cu}_3\text{O}_7$ and $\text{Y}_2\text{Ba}_4\text{Cu}_8\text{O}_{16}$ films, 427
- Angular dependence of creep in YBCO single crystals investigated by torque magnetometry, 431
- Angular dependence of magnetoresistance and critical current density of sputtered $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films, 435
- Time dependence of the magnetization in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+z}$, 439
- Multiple maxima in the field dependent magnetisation of superconducting Nb/Cu multilayers, 443
- Experimental observation of quantum creep in high- T_c superconducting YBCO-PrBCO superlattices, 447
- Vortex-activation energy and critical currents of $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films containing screw dislocations, 451
- Reversibility of the mixed state of the 90 K $\text{Tl}_2\text{Ba}_2\text{CuO}_{6+x}$ superconductor, 455
- Irreversibility and critical lines in textured high temperature superconductors: Effects of processing on the magnetic phase diagram, 459
- Magnetization and critical currents in nonstoichiometric $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ of different structural order, 463
- VSM measurements of critical currents for $^2\text{H}^+$ and $^{16}\text{O}^+$ low energy ion implanted $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 467
- Critical magnetization currents in a hydrogenated $\text{La}_{1.85}\text{Sr}_{0.15}\text{CuO}_4$ superconductor, 471
- Transport critical current in MOCVD $\text{YBa}_2\text{Cu}_3\text{O}_7$ thin films using a pulse technique, 475
- Peak-effect, scaling behavior and voltage-current characteristics for $\text{TmBa}_2\text{Cu}_3\text{O}_{7-\delta}$ single crystal, 479
- Magneto-optical imaging of Shubnikov phase, 483
- Search for characteristic length scales of the magnetic field distribution at the surface of superconducting $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ single crystals, 491
- Characterization of superconductors using magneto-optic techniques, 499
- High critical currents in Ag-BSCCO(2223) tapes: Are the grain boundaries really 'weak-links'?, 503
- High temperature superconductors for power cables, 507
- High critical currents in Bi(2223) tapes with Ag and hardened Ag sheaths, 511
- Two dimensional behavior and critical current anisotropy in $(\text{Bi}, \text{Pb})_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10+x}$ tapes, 515
- Plasma spraying
- Bi-Sr-Ca-Cu-O superconducting thick films deposited onto metallic substrates by plasma spraying, 279
- Superconductive and structural properties of plasma sprayed YBaCuO and BiSrCaCuO layers, 283
- Raman spectra
- Microstructure of Bi_{2212} and $(\text{Bi}/\text{Pb})_{2212}$ single crystals and effect of electron donors and acceptors, 133
- Growth and optical study of superconducting superlattices, 187
- Structural defects in YBaCuO thin films grown on MgO substrates, 239
- The effects of Co substitutions for Cu in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ on the phonon Raman spectrum, 363
- Structure and Raman spectrum of $\text{BiSr}_2\text{CaCu}_2\text{O}_7$ (Bi_{1212}) superconductor, 691
- Rare earths
- Thin films of $(\text{RE})\text{Ba}_2\text{Cu}_3\text{O}_7$ in-situ epitaxially grown by laser ablation: Crystalline structure, resistivity and critical exponents of temperature dependent critical currents, 195
- Structural effects of element substitution on superconducting properties in 1-2-3 YBCO: An electron microscopy study, 307
- Anderson-like insulator-metal transition in rare earth doped $\text{Bi}_2\text{Sr}_2(\text{Ca}_z\text{RE}_{1-z})\text{Cu}_2\text{O}_{8+y}$, 375
- A systematic neutron diffraction study of $\text{RBa}_2\text{Cu}_3\text{O}_7$ (R = yttrium and rare earths) high- T_c superconductors, 599
- Resistivity measurements
- The localized character of the "metallic" state in high T_c superconductors, 531
- Influence of the polycrystallinity on the paraconductivity in copperoxide superconductors, 627
- Electrical resistivity of $\text{PrBa}_2\text{Cu}_{3-x}\text{Ga}_x\text{O}_{7-y}$ (001) and (105) oriented thin films, 643
- Photoexcitation effects in $\text{YBa}_2\text{Cu}_3\text{O}_x$, 667
- Study of oxygen content and of disorder in YBaCuO thin films with enlarged *c*-axis lattice parameter, 675
- Scanning tunneling microscopy study on $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ films with growth stop by observing reflection high-energy electron diffraction oscillations, 105
- Rutherford backscattering spectrometry
- Selective ^{18}O labelling in *a*-axis oriented YBaCuO thin films, 137
- Laser ablated YBCO thin films – relations between structural and electrical properties, 199
- Structural defects in YBaCuO thin films grown on MgO substrates, 239
- YBaCuO thin films deposited by ion beam sputtering assisted by implantation of: O, Ne, Ar, Cu, Kr, Xe and Ba, 259
- SEM
- Bulk and surface structure of epitaxial $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films grown on Mg_2TiO_4 (001) substrate layers. : II: Orientation and surface structure, 113
- Laser ablated YBCO thin films – relations between structural and electrical properties, 199
- SIMS
- SIMS study of low energy $^2\text{H}^+$ ion-implanted $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films, 141
- Sintering
- The occurrence of 1212-type phase in the Pb-Sb-Sr-Ca-Y-Cu-O system, 61
- Mechanical alignment of the grains of sintered YBaCuO, 161
- Influence of the constant load sintering on the improvement of the transport critical current in Ag-(Bi, Pb) $_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_x$ tape form conductor, 165
- Preparation, structural and magnetic properties of electron-doped infinite-layer HTSC $\text{Sr}_{1-x}\text{Nd}_x\text{CuO}_{2-\delta}$, 367
- Defects and the thermal conductivity of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ and $\text{YBa}_2\text{Cu}_4\text{O}_8$, 655
- Toughness and thermoshock resistance of polycrystalline $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$, 679
- Solid state reaction
- Synthesis of $\text{YBa}_2\text{Cu}_4\text{O}_8$ at 1×10^5 Pa oxygen pressure, 65
- On the crystallochemistry and superconductivity of the $(\text{Bi}_{1\pm x}\text{Cu}_{1\pm x})_8\text{Sr}_6\text{Ca}_6\text{Cu}_9\text{O}_{24+z}$, 687
- Solid/gas reaction
- Disorder and non-linear magnetic response of high T_c superconductors, 611
- Solid/liquid reaction
- Reactive growth of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ layers on Y_2BaCuO_5 substrates, 227
- Specific heat
- Specific heat of the 90-K superconductor $\text{Tl}_2\text{Ba}_2\text{CuO}_6$ ("2201") prepared in high pressure Ar or He gas, 547
- Spectrometry
- Characterization of high- T_c superconductors by mass spectral methods of surface analysis (LIMS, SNMS), 145

Spectroscopy

- Surface and interface properties of cleaned and Ag-covered $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ films, 247
- Tunneling spectroscopy of Bi(Pb)-Sr-Ca-Cu-O superconductors, 551

Sputtering

- Theoretical model of heat exchanges during the rapid thermal annealing of YBaCuO thin films, 121
- In situ resistance measurements of YBaCuO thin films during the oxygenation process for various elaboration conditions, 211
- Preparation and room temperature ion irradiation of sputtered YBaCuO-films, 255
- YBaCuO thin films deposited by ion beam sputtering assisted by implantation of: O, Ne, Ar, Cu, Kr, Xe and Ba, 259
- Large area deposition of YBaCuO thin films by means of hollow cathode sputtering, 267
- Growth of SrCuO₂ epitaxial thin films, 303
- Angular dependence of magnetoresistance and critical current density of sputtered $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films, 435
- Effect of oxygen deficiency and disorder on microwave losses of epitaxially grown $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films, 555
- Preparation and non-destructive characterization of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films for microwave applications, 559
- Non-bolometric microwave response of a granular Bi(Pb)SrCaCuO thin film, 567
- Microwave properties of structured $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 571
- Preparation of 110 K Bi(Pb)SrCaCuO superconducting thin films by r.f. magnetron sputtering and their response to microwave radiation, 591
- Granularity effects in transport properties of 123 superconducting thin films, 635
- Electrical resistivity of $\text{PrBa}_2\text{Cu}_{3-x}\text{Ga}_x\text{O}_{7-y}$ (001) and (105) oriented thin films, 643
- Study of oxygen content and of disorder in YBaCuO thin films with enlarged *c*-axis lattice parameter, 675
- High frequency broadband characterization of metal/high T_c superconducting coplanar structures, 715
- Bridgman growth and enhanced critical currents in textured $\text{YBa}_2\text{Cu}_3\text{O}_7$ - Y_2BaCuO_5 composites, 11
- AC susceptibility measurements: A quality test for high T_c superconducting bulk materials, 177
- Reversibility of the mixed state of the 90 K $\text{Tl}_2\text{Ba}_2\text{CuO}_{6+x}$ superconductor, 455
- $\text{YBa}_2\text{Cu}_3\text{O}_7$ devices grown by evaporation, 695
- A BSCCO(2223) thin film DC SQUID utilising natural grain boundary weak-links, 703
- Materials aspects of integrated high T_c dc-SQUID magnetometer fabrication, 707

STM

- Microstructures and precipitates in laser-ablated YBCO thin films on SrTiO₃ (110), 93
- Surface morphology of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films on SrTiO₃(100) studied by scanning tunneling microscopy, 97
- Scanning tunneling microscopy study on $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ films with growth stop by observing reflection high-energy electron diffraction oscillations, 105
- Bulk and surface structure of epitaxial $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films grown on Mg₂TiO₄ (001) substrate layers. : II: Orientation and surface structure, 113

Substitution/doping

- "Superconductor-ization" of $\text{GaSr}_2\text{YCu}_2\text{O}_7$, 19
- High-resolution transmission electron microscopic (HRTEM) studies of $\text{Tl}_2\text{Ba}_2\text{CuO}_{6\pm x}$, 125
- Structural analysis of the charge transfer mechanism in the superconducting compounds $\text{Pb}_2\text{Sr}_2\text{Y}_{1-x}\text{Ca}_x\text{Cu}_3\text{O}_{8+\delta}$, 169

- Structural effects of element substitution on superconducting properties in 1-2-3 YBCO: An electron microscopy study, 307
- Effects of simultaneous Pb/Bi and Y/Ca substitution on structural and superconducting properties of the 2212 BSCCO phase, 315
- Bond valence sum, hole density and irreversibility line in Ca substituted $\text{YSrBaCu}_{3-y}\text{M}_y\text{O}_{6+z}$ (M=Al, Fe, Co), 323
- Structure and superconductivity in Co doped $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$, 327
- No evidence of Fe transfer between Cu1 and Cu2 sites in $\text{YBa}_2(\text{Cu}_{1-x}\text{Fe}_x)_3\text{O}_{7-d}$ ($0.02 \leq x \leq 0.04$) annealed in an inert atmosphere, 331
- Influence of fluorination on the transport properties of $\text{La}_{1.85-y}\text{Sr}_{0.15}\text{Nd}_y\text{CuO}_4$ near the low-temperature structural transition, 335
- Fluorination of an epitaxial YBaCuO thin film with controlled oxygen vacancies, 339
- Superconducting properties of electrochemically Li⁺ intercalated $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films, 343
- Superconducting and normal-state transport properties in bulk YBaCuO, doped with Zn, 347
- Normal-state susceptibility versus oxygen content in the $\text{YBa}_2\text{Cu}_3\text{O}_x$ and $\text{Y}_2\text{Ba}_4\text{Cu}_7\text{O}_y$ superconducting phases, 351
- Comparison of IR-active phonons in YBCO ceramics with different carrier concentrations, 355
- Raman scattering on $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ single crystals with variable oxygen content, 359
- The effects of Co substitutions for Cu in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ on the phonon Raman spectrum, 363
- Preparation, structural and magnetic properties of electron-doped infinite-layer HTSC $\text{Sr}_{1-x}\text{Nd}_x\text{CuO}_{2-\delta}$, 367
- Synthesis and characterization of "infinite layer" compounds doped with p-type carriers, 371
- Anderson-like insulator-metal transition in rare earth doped $\text{Bi}_2\text{Sr}_2(\text{Ca}_z\text{RE}_{1-z})\text{Cu}_2\text{O}_{8+yz}$, 375
- VSM measurements of critical currents for $^2\text{H}^+$ and $^{16}\text{O}^+$ low energy ion implanted $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 467
- Electronic structure of pure and substituted $\text{BaBiO}_{3-\delta}$ single crystals, 543
- Magnetoresistance and conductivity fluctuations in $(\text{Tl}_{0.5}\text{Pb}_{0.5})\text{Sr}_2(\text{Ca}_{1-x}\text{Y}_x)\text{Cu}_2\text{O}_7$ superconductors, 651
- Superconductors for high-power applications
 - High temperature superconductors for power cables, 507
- Superlattices
 - Superconducting properties of ultrathin Y(Dy)Ba₂Cu₃O₇ layers in Y(Dy)Ba₂Cu₃O₇-PrBa₂Cu₃O₇ heterostructures, 181
 - Growth and optical study of superconducting superlattices, 187
 - Effect of dimensional crossover on magnetoresistance of $\text{YBa}_2\text{Cu}_3\text{O}_7/\text{PrBa}_2\text{Cu}_3\text{O}_7$ superlattices, 191
 - Buffer layers of yttria stabilized zirconia for $\text{YBa}_2\text{Cu}_3\text{O}_7$ devices on silicon substrates, 219
 - Tunneling spectroscopy of Bi(Pb)-Sr-Ca-Cu-O superconductors, 551
- Surface properties
 - Surface stability of superconducting oxides, 535
 - Electronic structure of pure and substituted $\text{BaBiO}_{3-\delta}$ single crystals, 543
 - Effect of oxygen deficiency and disorder on microwave losses of epitaxially grown $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films, 555
 - Non-linear microwave surface impedance of patterned $\text{YBa}_2\text{Cu}_3\text{O}_7$ thin films, 563
 - Microwave properties of structured $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 571
 - Surface resistance of large $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ crystals at 3 GHz with residual losses caused by flux compounds, 575
 - Weak link effects in the surface impedance of cuprate superconductors, 579

Susceptibility measurements

Preparation of $\text{Ba}_{0.6}\text{K}_{0.4}\text{BiO}_3$ pure superconducting powder, 73
 Enhancement of T_c in 2D $(\text{Ba}, \text{K})_2(\text{Pb}, \text{Bi})\text{O}_4$ with respect to 3D $\text{Ba}(\text{Pb}, \text{Bi})\text{O}_3$, 77

Magnetic characterization of differently processed YBaCuO-ceramics, 173

AC susceptibility measurements: A quality test for high T_c superconducting bulk materials, 177

Growth and properties of MOCVD $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 287

Bond valence sum, hole density and irreversibility line in Ca substituted $\text{YSrBaCu}_{3-y}\text{M}_y\text{O}_{6+z}$ ($M = \text{Al}, \text{Fe}, \text{Co}$), 323

Structure and superconductivity in Co doped $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$, 327

Reversibility of the mixed state of the 90 K $\text{Tl}_2\text{Ba}_2\text{CuO}_{6+x}$ superconductor, 455

Irreversibility and critical lines in textured high temperature superconductors: Effects of processing on the magnetic phase diagram, 459

Magnetization and critical currents in nonstoichiometric $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ of different structural order, 463

The relation between crossover of the intergrain loss-peak temperature-field characteristics of the $\text{Ag-Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_x$ screen-printed tapes and their J_c values, 639

TEM

Synthesis of Bi-based high temperature superconductors using melt technologies, 35

Bulk and surface structure of epitaxial $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films grown on Mg_2TiO_4 (001) substrate layers. I: Bulk structure investigated by TEM, 109

Microstructure investigations of the epitaxial growth of ultrathin $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_x$ superconducting films on (001) SrTiO_3 substrates, 129

\bar{a} -axis laser ablated superconducting YBCO thin films. Growth mechanism on MgO substrate, 235

Compositional effects in $\text{Y}_x\text{Ba}_y\text{Cu}_z\text{O}_{7-\delta}$ thin films prepared by metalorganic chemical vapour deposition, 299

Structural effects of element substitution on superconducting properties in 1-2-3 YBCO: An electron microscopy study, 307

Magnetization and critical currents in nonstoichiometric $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ of different structural order, 463

Thermal conductivity

Defects and the thermal conductivity of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ and $\text{YBa}_2\text{Cu}_4\text{O}_8$, 655

Thermal treatment

"Superconductor-ization" of $\text{GaSr}_2\text{YCu}_2\text{O}_7$, 19

High T_c superconducting $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ filaments: An improved thermal treatment, 31

Characterisation of Bi-Pb-Sr-Ca-Cu-O rods subject to direct current zoning (DCZ) and direct current annealing (DCA), 39

Bi cuprates of type 1212 – a new family of superconductors in the Bi series, 57

Preparation of $\text{Ba}_{0.6}\text{K}_{0.4}\text{BiO}_3$ pure superconducting powder, 73

Theoretical model of heat exchanges during the rapid thermal annealing of YBaCuO thin films, 121

Selective ^{18}O labelling in a -axis oriented YBaCuO thin films, 137
 SIMS study of low energy $^2\text{H}^+$ ion-implanted $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films, 141

In situ resistance measurements of YBaCuO thin films during the oxygenation process for various elaboration conditions, 211

Superconductive and structural properties of plasma sprayed YBaCuO and BiSrCaCuO layers, 283

No evidence of Fe transfer between Cu1 and Cu2 sites in $\text{YBa}_2(\text{Cu}_{1-x}\text{Fe}_x)_3\text{O}_{7-d}$ ($0.02 \leq x \leq 0.04$) annealed in an inert atmosphere, 331

Normal-state susceptibility versus oxygen content in the $\text{YBa}_2\text{Cu}_3\text{O}_x$ and $\text{Y}_2\text{Ba}_4\text{Cu}_7\text{O}_y$ superconducting phases, 351

Effect of oxygen deficiency and disorder on microwave losses of epitaxially grown $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films, 555

Preparation of 110 K Bi(Pb)SrCaCuO superconducting thin films by r.f. magnetron sputtering and their response to microwave radiation, 591

Investigation of oxygen exchange of Y-Ba-Cu-O powders and AgPd sheathed tapes, 671

Thermoelectric power

Influence of the granularity on the thermoelectric power of polycrystalline $\text{Bi}_{1.5}\text{Pb}_{0.5}\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_y$ superconductors, 623

Torque magnetometry

Angular dependence of creep in YBCO single crystals investigated by torque magnetometry, 431

Angular dependence of magnetoresistance and critical current density of sputtered $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ films, 435

Multiple maxima in the field dependent magnetisation of superconducting Nb/Cu multilayers, 443

Experimental observation of quantum creep in high- T_c superconducting YBCO-PrBCO superlattices, 447

Vortex-activation energy and critical currents of $\text{Y}_1\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}$ thin films containing screw dislocations, 451

VSM

VSM measurements of critical currents for $^2\text{H}^+$ and $^{16}\text{O}^+$ low energy ion implanted $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ thin films, 467

Peak-effect, scaling behavior and voltage-current characteristics for $\text{TmBa}_2\text{Cu}_3\text{O}_{7-\delta}$ single crystal, 479

Comparative study of the irreversibility line and of harmonic generation in field modulated microwave absorption on $\text{YBa}_2\text{Cu}_3\text{O}_7$ thin films, 587

X-ray diffraction

New synthesis method of superconducting $\text{Nd}_2\text{CuO}_{4-x}\text{F}_x$, $\text{Pr}_2\text{CuO}_{4-x}\text{F}_x$, 69

Preparation of $\text{Ba}_{0.6}\text{K}_{0.4}\text{BiO}_3$ pure superconducting powder, 73
 Microstructural studies of non-stoichiometric YBCO thick films processed on YSZ substrates, 101

X-ray texture analysis in YBaCuO ceramics and films, 149

Structural analysis of the charge transfer mechanism in the superconducting compounds $\text{Pb}_2\text{Sr}_2\text{Y}_{1-x}\text{Ca}_x\text{Cu}_3\text{O}_{8+\delta}$, 169

Laser ablated YBCO thin films – relations between structural and electrical properties, 199

Pulsed laser deposition of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ superconducting thin films: Correlation between preparation conditions and structural and electrical properties, 207

Bi-epitaxial template grain boundaries with different in-plane angles on (100) MgO substrates, 231

Structural defects in YBaCuO thin films grown on MgO substrates, 239

YBaCuO thin films deposited by ion beam sputtering assisted by implantation of: O, Ne, Ar, Cu, Kr, Xe and Ba, 259

Conditions for the textured growth of Y-Ba-Cu-O films on Zr foils, 275

Bi-Sr-Ca-Cu-O superconducting thick films deposited onto metallic substrates by plasma spraying, 279

Compositional effects in $\text{Y}_x\text{Ba}_y\text{Cu}_z\text{O}_{7-\delta}$ thin films prepared by metalorganic chemical vapour deposition, 299

Growth of SrCuO_2 epitaxial thin films, 303

No evidence of Fe transfer between Cu1 and Cu2 sites in $\text{YBa}_2(\text{Cu}_{1-x}\text{Fe}_x)_3\text{O}_{7-d}$ ($0.02 \leq x \leq 0.04$) annealed in an inert atmosphere, 331

Synthesis and characterization of "infinite layer" compounds doped with p-type carriers, 371

Mechanochemical effects of grinding on the $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ superconductor, 683