

## Upcoming Journal of Materials Research to Feature High $T_c$ Superconductors

The sixth issue of *Journal of Materials Research* in 1987 will feature a special section of original research articles on high  $T_c$  superconductors. A call for papers was issued in May, requesting articles focusing on new results in materials aspects of high  $T_c$  superconductors, and the articles accepted for publication in this issue offer further insights into this rapidly developing field. The following is a partial list of high  $T_c$  superconductor articles expected to appear in the November/December issue:

- Elastic Constants and Debye Temperature of Polycrystalline  $Y_1Ba_2Cu_3O_{7-x}$ , by H.M. Ledbetter, M.W. Austin, S.A. Kim, and M. Lei.
- EPR Assessment of the Electronic Charge of Cu in  $YBa_2Cu_3O_{7-\delta}$ , by S. Benakki, E. Christoffel, A. Goltzene, B. Meyer, C. Schwab, M.J. Besnus, A. Meyer, S. Vilminot, and M. Drillon.
- Fabrication of Oxide Superconductors from Multilayered Metallic Thin Films, by M. Nastasi, P.N. Arendt, J.R. Tesmer, C.J. Maggiore, R.C. Cordi, D.L. Bish, J.D. Thompson, S-W. Cheong, N. Bordes, J.F. Smith, and I.D. Raistrick.
- Thermodynamic Study at High Temperature of the Superconducting System  $YBa_2Cu_3O_z$  with  $6 < z < 7$ , by J.F. Marucco, C. Noguera, P. Garoche, and G. Collin.
- Magnetic and Electronic Properties of M-Ba-Cu-O (M = Y, Er, Eu), by H. Jenny, B. Walz, G. Leemann, V. Geiser, S. Jost, T. Frey, and H-J. Güntherodt.
- Magnetization Studies of the High  $T_c$

Compound  $Y_1Ba_2Cu_3O_z$ , by J.R. Thompson, D.K. Christen, S.T. Sekula, J. Brynestad, and Y.C. Kim.

- Mechanisms of High  $T_c$  Superconductivity in Low Dimensional Materials, by V.Z. Kresin.
- Microstructural Characterization of  $YBa_2Cu_3O_{7-x}$ , by M. Sarikaya, B.L. Thiel, I.A. Aksay, W.J. Weber, and W.S. Frydrych.
- Oxygen Content, Microstructure and Superconductivity of  $YBa_2Cu_3O_{7-x}$ , by M.P.A. Vieggers, D.M. de Leeuw, C.A.H.A. Mutsaers, H.A.M. van Hal, H.C.A. Smoorenburg, J.H.T. Hengst, J.W.C. de Vries, and P.C. Zalm.
- Phase Relations in Pseudobinary  $Ba_2MCu_3O_{6.5+x}$  (M = Y, Gd), by J. Hauck, K. Bickmann, and F. Zucht.
- Pressure Dependence of the Superconducting Transition Temperatures in  $La_{1.85}Sr_{0.15}CuO_4$  to 8 GPa, by D. Erskine, E. Hess, P.Y. Yu, and A.M. Stacy.
- Reoxygenation of Vacuum Annealed  $YBa_2Cu_3O_{6.9}$ , by D.S. Ginley, P.J. Nigrey, E.L. Venturini, B. Morosin, and J.F. Kwak.
- Shear-Modulus Change Below  $T_c$  in  $YBa_2Cu_3O_{7-x}$ , by H.M. Ledbetter, M.W. Austin, S.A. Kim, T. Datta, and C.E. Violet.
- The Role of Boundaries in the Superconducting Properties of Sintered  $YBa_2Cu_3O_{7-x}$ , by R.A. Camps, J.E. Evetts, B.A. Glowacki, S.B. Newcomb, and W.M. Stobbs.
- Thin Film Synthesis of the High- $T_c$  Oxide Superconductor  $YBa_2Cu_3O_7$  by Electron Beam Codeposition, by M. Naito, R.H. Hammond, B. Oh, M.R. Hahn, J.W.P. Hsu, P. Rosenthal, A.F. Marshall, M.R. Beasley, T.H. Geballe, and A.

Kapitulnik.

- X-Ray Photoemission Spectroscopy of the 90 K Superconductor  $Ba_2YCu_3O_{7-\delta}$ , by Z. Iqbal, E. Leone, R. Chin, A.J. Signorelli, A. Bose, and H. Eckhardt.

In addition to high  $T_c$  superconductor articles, the November/December issue of *Journal of Materials Research* will also contain articles on glasses, alloys, polymers, and semiconductors. The following is a partial list of other articles scheduled for the November/December issue:

- 193-nm Excimer Laser-Assisted Etching of Polysilicon, by M.D. Armacost, S.V. Babu, S.V. Nguyen, and J.F. Rembetski.
  - Crystallinity of rf-Sputtered  $MoS_2$  Films, by J.R. Lince and P.D. Fleischauer.
  - Erosion of Amorphous Nickel-Phosphorus, by K.C. Goretta, J.L. Routbort, A. Mayer, and R.B. Schwarz.
  - Fluoropolymer Barriers to Stress Corrosion in Optical Fibers, by L. Klinger and J.R. Griffith.
  - Graphite-Alkali Metal-Heavy Metal Ternary Compounds: Synthesis, Structure and Superconductivity, by P. Lagrange.
  - Hydration Phase Transitions and Magnetic Properties of Vermiculite Intercalation Compounds, by N. Wada, M. Suzuki, D.R. Hines, K. Koga, and H. Nishihara.
  - *In-Situ* Capacitance Studies of Thin Polymer Films During Compressed Fluid Extraction, by D.H. Ziger.
  - Interaction of a 10 eV Silicon Beam with the Si(111) Surface: A Molecular Dynamics Study, by B.W. Dodson and P.A. Taylor.
  - Kinetics of Surface Area Changes in Glass-Like Carbon: Reanalysis of the Data, by J. Lachter and R.H. Bragg.
  - Luminescent Properties of X-Irradiated Rare-Earth-Doped Barium Copper Oxides, by D.W. Cooke, H. Rempp, Z. Fisk, J.L. Smith, and M.S. Jahan.
  - Optical Transmission of Graphite and Potassium Graphite Intercalation Compounds, by J.M. Zhang and P.C. Eklund.
  - Precipitation Phenomena in High Dose Iron Implanted Silica and Annealing Behavior, by A. Perez, M. Treilleux, T. Capra, and D. Griscom.
  - Raman Microprobe Measurements of Residual Strains at the Interfaces of Si on Quartz, by Y.M. Cheong, H.L. Marcus, and F. Adar.
  - Structures and Physical Properties of Carbon Fibers from Coal Tar Mesophase Pitch, by T. Hamada, T. Nishida, Y. Sajiki, M. Matsumoto, and M. Endo.
  - The Solidification of Aluminum-Manganese Powders, by B.A. Mueller, R.J. Schaefer, and J.H. Perepezko.
  - Transformation Toughening of Glass-Ceramics, by D.R. Clarke and B. Schwartz.
- Copies of this issue will be available at the MRS Fall Meeting in Boston.

For information on article submission requirements for *Journal of Materials Research*, contact Linda Krysinski, Editorial Office Supervisor, Journal of Materials Research, Materials Research Society, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237; telephone (412) 367-9111.

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