

Journal of Materials Research

Articles in the December 1991 Issue (Vol. 6, No. 12)

A Kinetic Study of the Phase Transformations in Al_2O_3 and $\text{Na}_2\text{O} \cdot 6\text{Al}_2\text{O}_3$ by a Combined Use of ^{27}Al MAS NMR Spectroscopy and X-ray Diffraction: Importance of Nucleation, by S. Prabakar, K.J. Rao, and C.N.R. Rao.

Deformation and Microstructural Changes in SiC Whisker-Reinforced Si_3N_4 Composites, by D.A. Koester, K.L. More, and R.F. Davis.

Deformation of an Extruded Nickel Beryllide Between Room Temperature and 820°C , by G.M. Pharr, S.V. Courington, J. Wadsworth, and T.G. Nieh.

Diffusional Transformation and Structural Relaxation in $\text{Y}_1\text{Ba}_2\text{Cu}_{3-x}\text{Ni}_x\text{O}_{7-z}$ Compounds, by S.V. Raman, Y.Y. Sun, K. Matsuishi, and X. Quan.

Effect of Tip Radius on Nanoindentation, by C.W. Shih, M. Yang, and J.C.M. Li.

Effects of Process History and Aging on the Properties of Polyimide Films, by D.D. Denton, M.C. Buncick, and H. Pranjoto.

Green's Function for Generalized Hilbert Problem for Cracks and Free Surfaces in Composite Materials, by V.K. Tewary.

Elastic Green's Function for a Bimaterial Composite Solid Containing a Free Surface Normal to the Interface, by V.K. Tewary.

Generalized Plane Strain Analysis of a Bimaterial Composite Containing a Free Surface Normal to the Interface, by V.K. Tewary and R.D. Kriz.

Electron Channeling Patterns of a-axis and c-axis $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films, by K.H. Young, J.Z. Sun, D. Kapolnek, E.J. Tarsa, A. Inam, and B.H.T. Chai.

Evolution of Crystalline Zirconia Structure in Heat Treated Ceria Stabilized Zirconia Gels, by V.S. Nagarajan and K.J. Rao.

Formation, Microstructure, Chemical Long-Range Order, and Stability of Quasicrystals in Al-Pd-Mn Alloys, by A-P. Tsai, Y. Yokoyama, A. Inoue, and T. Masumoto.

Germanium Supersaturation during the Crystallization of Amorphous Te-Ge-Sn Thin Films, by M. Libera, M. Chen, and K. Rubin.

Grain Boundary in Textured $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Superconductor, by Y. Zhu, H. Zhang, H. Wang, and M. Suenaga.

Growth of Stable Al-Pd-Mn Icosahedral Phase, by C. Dong, J.M. Dubois, M. de Boissieu, M. Boudard, and C. Janot.

Interaction of a Screw Dislocation with a Crack in an Anisotropic Body, by T-Y. Zhang and J.E. Hack.

Optical Properties of HgS and $\text{HgS}:Co^{2+}$ Crystals, by S-H. Choe, K-S. Yu, J-E. Kim, H.Y. Park, and W-T. Kim.

Plastic Flow between Bridgman Anvils under High Pressures, by D. Kuhlmann-Wilsdorf, B.C. Cai, and R.B. Nelson.

Preparation and Structural Characterization of Sputtered CoO , NiO , and $\text{Ni}_{0.5}\text{Co}_{0.5}\text{O}$ Thin Epitaxial Films, by M.J. Carey, F.E. Spada, A.E. Berkowitz, W. Cao, and G. Thomas.

Properties and Behavior of the Platinum Group Metals in the Glass Resulting from the Vitrification of Simulated Nuclear Fuel Reprocessing Waste, by C. Krause and B. Luckscheiter.

Silicon Oxycarbide Glasses I: Preparation and Chemistry, by G.M. Renlund, S. Prochazka, and R.H. Doremus.

Silicon Oxycarbide Glasses II: Structure and Properties, by G.M. Renlund, S. Prochazka, and R.H. Doremus.

Small-Angle Neutron Scattering Characterization of Processing/Microstructure Relationships in the Sintering of Crystalline and Glassy Ceramics, by G.G. Long, S. Krueger, R.A. Gerhardt, and R.A. Page.

Solidification of $\text{Al}_{65}\text{Cu}_{20}\text{Co}_{15}$ and $\text{Al}_{65}\text{Cu}_{15}\text{Co}_{20}$ Alloys, by B. Grushko and K. Urban.

Some Aspects of Forces and Fields in Atomic Models of Crack Tips, by R.G. Hoagland, M.S. Daw, and J.P. Hirth.

Microstructure and Thermal Stability of Amorphous Materials in $\text{GeS}_2\text{-La}_2\text{S}_3$ System, by P.N. Kumta and S.H. Risbud.

Synthesis of KSbOSiO_4 by Sol-Gel Route, by Y. Kanno, C. Pagnoux, Y. Piffard, and M. Tournoux.

The Existence of Ni_3MSb Phases in Ternary Nickel-M/ Antimony Systems (Where "M" Represents Aluminum, Gallium, or Indium), by C-H. Jan and Y.A. Chang.

The Hardness and Young's Modulus of Bulk $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ (1:2:3) and $\text{YBa}_2\text{Cu}_4\text{O}_8$ (1:2:4) as Determined by Ultralow Load Indentation, by B.N. Lucas, W.C. Oliver, R.K. Williams, J. Brynestad, and M.E. O'Hern.

Send manuscripts for consideration in JMR to any one of the following:

■ Dr. Walter L. Brown, Editor-in-Chief, Journal of Materials Research, Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237; telephone (412) 367-9111; fax (412) 367-4373.

■ Dr. Werner Lutze, Kernforschungszentrum Karlsruhe, Postfach 3640, D-7500 Karlsruhe, Germany; telephone 49-7247-824457; fax 49-7247-823927.

■ Prof. Shigeyuki Sōmiya, Nishi Tokyo University, 3-7-19 Seijo, Setagaya, Tokyo 157, Japan; telephone 81-3-417-2866; fax 81-3-415-6619.

For information about advertising in upcoming issues of JMR, call Mary E. Kaufold at (412) 367-3036.