

Journal of Materials Research

Articles in the May 1991 Issue (Vol. 6, No. 5)

See p. 78 for results of the 1990 JMR "Figure This" Contest.

Amorphization of Elemental and Compound Semiconductors upon Ion Implantation, by K.S. Jones and C.R. Santana.

An Enhanced Rate of the High-T_c Phase Formation in the Bi-Ca-Sr-Cu-O Superconductor by the Two Step Reaction and Rapid Heating, by H.M. Jang, J.H. Moon, and H.J. Shin.

Anomalous Lattice Expansion of Metal-Hydrogen Thin Films, by P.F. Miceli, H. Zabel, J.A. Dura, and C.P. Flynn.

Carbonization and Graphitization of Polyimide "Upilex," by M. Inagaki, K. Sakamoto, and Y. Hishiyama.

Characterization of InP Wafers by Use of a System for High Resolution Photoluminescence Imaging, by T. Vetter and A. Winnacker.

Contribution to the Analysis of the α/β Interface in Some Titanium Alloys, by C. Servant, C. Quesne, T. Baudin, and R. Penelle.

Determination of Yielding and Debonding in Al-Cu Thin Films from Residual Stress Measurements via Diffraction, by C.J. Shute and J.B. Cohen.

Effects and Measurement of Internal Surface Stresses in Materials with Ultrafine Microstructures, by R.C. Cammarata and R.K. Eby.

Glancing Angle X-ray Study of the Effect of Oxygen on Interface Reactions in Al/Ni Bilayers, by S.M. Heald and E.V. Barrera.

Low-Temperature Oxidation of $\text{YBa}_2\text{Cu}_3\text{O}_{6.0}$ with Nitrogen Dioxide, by S.A. Montzka, B.M. Hybertson, R.M. Barkley, and R.E. Sievers.

Mechanical Behavior of Nanocrystalline Cu and Pd, by G.W. Nieman, J.R. Weertman, and R.W. Siegel.

Molecular Composite Films of MoS₂ and Styrene, by W.M.R. Divigalpitiya, R.F. Frindt, and S.R. Morrison.

Note on Sufficient Symmetry Conditions for Isotropy of the Elastic Moduli Tensor, by M.S. Dresselhaus and G. Dresselhaus.

Phase Transformations in Ti₃Al and Ti₃Al + Mo Aluminides, by S. Djanarthy, C. Servant, and R. Penelle.

Photoconductivity of Activated Carbon Fibers, by K. Kuriyama and M.S. Dresselhaus.

Plastic Deformation and Fracture Behaviour of a Fe-Modified Al₃Ti-Base L₁2 Intermetallic Alloy, by H. Gengxiang, C. Shipu, W. Xiaohua, and C. Xiaofu.

Preparation and Characterization of Sputtered TiB_x Films, by W.A. Zdaniewski, J. Wu, S.C. Gujrathi, and K. Oxorn.

Silicate Bonded Unsintered Ceramics of Bayer Process Waste, by A.S. Wagh and V.E. Douse.

Stable, Highly Concentrated Suspensions for Electronic and Ceramic Materials Applications, by I. Sushumna, R.K. Gupta, and E. Ruckenstein.

Stress and Thermal Expansion of β -SiC Films by the Vibrating-Membrane Method, by B.S. Berry, W.C. Pritchett, R.I. Fuentes, and I. Babich.

Structural Changes and Physical Properties of Fe-Ni-Based Metallic Glasses Rapidly Heated by Pulsed Electrical Currents, by L. Zaluski, A. Zaluska, M. Kopcewicz, and R. Schulz.

Superconducting Fibers from Organometallic Precursors 2: Chemistry and Low Temperature Processing, by R.M. Laine, K.A. Youndahl, R.A. Kennish, M.L. Hoppe, Z-F. Zhang, and J. Ray.

Synthesis of Intermetallic NiAl and Ni₃Al Fine Powders through Organometallic Precursors, by O. Abe and A. Tsuge.

Synthesis of Porosity Controlled Ceramic Membranes, by Q. Xu and M.A. Anderson.

Ternary Atom Site Location in L₁2-Structured Intermetallic Compounds, by P.R. Munroe and I. Baker.

The Influence of Implanted Impurities on the Thermally-Induced Epitaxial Recrystallization of CoSi₂, by M.C. Ridgway, R.G. Elliman, M. Petracic, R.P. Thornton, and J.S. Williams.

The Nature of [001] Tilt Grain Boundaries in $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$, by F. W. Gayle and D.L. Kaiser.

Thermodynamic and Structural Properties of [001] Twist Boundaries in Gold, by R. Najafabadi, D.J. Srolovitz, and R. LeSar.

Thermodynamic Instability of the $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Phase at the 1:2:3 Composition, by F.H. Garzon, I.D. Raistrick, D.S. Giley, and John W. Halloran.

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, West 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.