Journal of Materials Research Articles in the October 1991 Issue (Vol. 6, No. 10)

A Directionally-Disordered Precursor to Amorphization in Electron Irradiated Cu_4Ti_3 , by D.E. Luzzi.

A Phenomenological Model of Ion-Induced Crystallization and Amorphization, by G. Carter and M.J. Nobes.

Cavity Formation and Plastic Flow of a-Si:H During Heavy Ion Bombardment, by S. Kläumunzer, M. Rammensee, S. Löffler, H.C. Neitzert, and G. Saemann-Ischenko.

Characterization of Thermal Plasma CVD Diamond Coatings and the Intermediate SiC Phase, by C. Tsai, W. Gerberich, Z.P. Lu, J. Heberlein, and E. Pfender.

Characterization of $YBa_2Cu_4O_8$ High Temperature Electrical Properties and Thermodynamic Stability, by B-S. Hong and T.O. Mason.

Chemically Disordered Ni $_3$ Al Synthesized by High Vacuum Evaporation, by S.R. Harris, D.H. Pearson, C.M. Garland, and B. Fultz.

Composition and Structure of Si-Ge Layers Produced by Ion Implantation and Laser Melting, by M. Berti, G. Mazzi, L. Calcagnile, A.V. Drigo, P.G. Merli, and A. Migliori.

Design and Production of $Zr_3Ti_2Si_3$ Intermetallic Compound, by P.B. Celis, E. Kagawa, and K. Ishizaki.

Electron Microscope Study of Synroc Before and After Exposure to Aqueous Solutions, by G.R. Lumpkin, K.L. Smith, and M.G. Blackford.

Epitaxy of Barium Titanate Thin Films Grown on MgO by Pulsed-Laser Ablation, by M. G. Norton, C. Scarfone, J. Li, C. B. Carter, and J.W. Mayer.

Examination of the Chemistry Involved in Microwave Plasma Assisted Chemical Vapor Deposition of Diamond, by W.A. Weimer, F.M. Cerio, and C.E. Johnson.

Grain Growth Kinetics and Microstructure in the High T_c YBa₂Cu₃O₂₀ Superconductor, by M.W. Shin, T.M. Hare, A.I. Kingon, and C.C. Koch.

High Dose Neutron Irradiation Damage in Alpha Alumina, by R.A. Youngman, T.E. Mitchell, F.W. Clinard Jr., and G.F. Hurley.

Melt-Spin Processing of YBa₂Cu₃O_{7-x}, by T.J. Folkerts, M.J. Kramer, K.W. Dennis, and R.W. McCallum.

Microstructural and Chemical Effects in Al_2O_3 Implanted with Iron at 77 K and Annealed in Oxidizing or Reducing Atmospheres, by C.J. McHargue, P.S. Sklad, C.W. White, J.C. Mc-Callum, A. Perez, and G. Marest.

Microstructural and Chemical Effects in Al_2O_3 Implanted with Iron at Room Temperature and Annealed in Oxidizing or Reducing Atmospheres, by C.J. McHargue, P.S. Sklad, C.W. White, G.C. Farlow, A. Perez, and G. Marest.

Microstructural Development and Electrical Properties of Sol-Gel Prepared Lead Zirconate-Titanate Thin Films, by C-C. Hsueh and M.L. Mecartney.

Microstructural Features of the Hydrogenation-Dehydrogenation Process in Ti Alloys, by I. Grimberg, L. Levin, O. Botstein, and F.H. Froes.

Phase Equilibria and Solidification Behavior in the PbF₂-AlF₃ System, by L.V. Moulton and R.S. Feigelson.

Residual Stress Measurements of Thin Aluminum Metallizations by Continuous Indentation and X-ray Stress Measurement Techniques, by W.R. LaFontaine, C.A. Paszkiet, M.A. Korhonen, and C-Y. Li.

Sintering Characteristics of Nanocrystalline TiO_2 - A Study Combining Small Angle Neutron Scattering and Nitrogen Absorption-BET, by W. Wagner, R.S. Averback, H. Hahn, W. Petry, and A. Wiedenmann.

Spatial Variations in AC Susceptibility and Microstructure for the $YBa_2Cu_3O_{7x}$ Superconductor and Their Correlation with Room-Temperature Ultrasonic Measurements, by D.J. Roth, M.R. DeGuire, L.E. Dolhert, and A.F. Hepp.

Synthesis of SiC/TaC Ceramics from Tantalum Alkoxide Modified Polycarbosilane, by K. Thorne, E. Liimatta, and J.D. Mackenzie.

The Microstructure of SCS-6 SiC Fiber, by X.J. Ning and P. Pirouz.

Transient Kinetics of Nucleation and Crystallization: I. Nucleation, by G. Shi and J.H. Seinfeld.

Transient Kinetics of Nucleation and Crystallization: II. Crystallization, by G. Shi and J.H. Seinfeld.

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 Sorniya, 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.

MRS BULLETIN/SEPTEMBER 1991