28 Finalists Compete for Graduate Student Awards at 1990 MRS Fall Meeting

At the 1990 MRS Fall Meeting in Boston, 28 graduate students will participate in three concurrent Special Student Talk Sessions scheduled at the Boston Marriott/ Copley Place Hotel, Tuesday, November 27, starting at 12:10 p.m. All MRS meeting participants are invited to hear the finalists give 10-minute talks on papers they are presenting at the Fall Meeting. Winners will be announced at the Plenary Session on Wednesday evening, November 28.

All finalists receive a waiver of the Fall Meeting registration fee and they receive MRS membership for 1991. Winners also receive a cash prize and plaque.

Following is a list of finalists, their places of study, and their papers.

Joseph W. Burnett, University of Pittsburgh, (Paper A8.3) The Fluence Dependence of the Sputtering Yield of Ru(0001).

Cho-Jen Tsai, California Institute of Technology, (Paper A7.2) Strain Modification and Thermal Stability of Si_xGe_{1-x} Films Grown by Ion-Assisted Molecular Beam Epitaxy.

Tak Keung Cheng, Massachusetts Institute of Technology, (Paper B4.16) Time-Resolved Study of Coherent Lattice Vibrations in Layered Materials: Bismuth, Antimony and Tellurium.

Yinshi Liu, Carnegie Mellon University, (Paper C10.10) A Study of Surface Miscibility Gaps in Cu-Ag Alloys.

Paul F. Lyman, University of Florida, (Paper C9.10) Development of Pseudomorphic Structure in Ge Films Deposited on Si(100) at Low Temperatures.

J. Vrijmoeth, FOM-Institute for Atomic and Molecular Physics, (Paper C5.9/J4.9) Monolayer Resolution in Medium Energy Ion Scattering Experiments on the $NiSi_2$(111) Surface.

Peng Bai, Rensselaer Polytechnic Institute, (Paper D5.8) CU Deposition on Rough Ceramic Substrate: Physical Structure, Microstructure, and Resistivity.

Charlotte S. Becquart, University of Connecticut, (Paper F9.26) Molecular Dynamics Studies of Tweed and w-Phase Instabilities in B2 $Ni_{62.5}Al_{37.5}$ Alloys.

An Tu, Rensselaer Polytechnic Institute, (Paper G17.3) Raman Scattering in Semiconductor Nanocrystals.

Chang-Beom Eom, Stanford University, (Paper H13.8) Synthesis and Properties of A-Axis $YBa_2Cu_3O_7$ Thin Films and YBCO/ PrBCO Multilayers.

Harold S. Lessure, Carnegie Mellon Research Institute, (Paper H5.98) Dependence of Magnetic Hysteresis and Critical Current Density on Defect Structure in Neutron-Irradiated YBC.

João L. Vargas, University of Wisconsin-Madison, (Paper H9.2) Evaluation of Ordered Oxygen Vacancy Flux Pinning in $YBa_2Cu_3O_{7-\delta}$.

Timothy Foecke, University of Minnesota, (Paper K5.4) Imaging of Cracks in Semiconductor Surfaces Using Scanning

Tunneling Microscopy.

Qing Ma, Massachusetts Institute of Technology, (Paper K1.5) Effect of Grain Boundary Structure on Grain Boundary Diffusivities in the Au/Ag System.

John B. Deppe, University of California, (Paper L2.6) Network Dynamics and Lattice Dynamics Studies of Vibrational Modes in Lithium Doped Borate Glasses.

Sossina M. Haile, Massachusetts Institute of Technology, (Paper L10.6) Syntheses, Structure, and Ionic Conductivity of $K_3NdSi_6O_{15}$.

Cathy Lane, University of Pennsylvania, (Paper L2.4) Molecular Dynamics Simulations of Ion Transport in Beta"-Alumina.

Laurence D. Howe, University of Birmingham, (Paper M1.7) Molecular Flow in a Model Pore System.

Gilles Chanvillard, University de Sherbrooke, (Paper O4.4) Micro-Mechanical Modeling of the Pull-Out Behaviour of Corrugated Steel Fibres From Cementitious Matrices.

Robert J. Finch, University of New Mexico, (Paper P6.2) Phase Relations of the Uranyl Oxide Hydrates and their Significance to the Disposal of Spent Fuel.

Joel P. Nic, Michigan Technological University, (Paper Q10.21) Alloying of $A1_3Ti$ with Mn and Cr to Form Cubic $L1_2$ Phases.

Joseph D. Rigney, Case Western Reserve, (Paper Q14.2) Loading Rate Effects on Ductile-Phase Toughening in In-situ Niobium Silicide-Niobium Composites.

Philip G. Kaatz, Carnegie Mellon University, (Paper R1-1.3) Third-Order Nonlinear Optical Properties of Polysilane Films.

Michael F. Roberts, University of Rochester, (Paper R2-1.5) Effects of Complexation on the Glass Transition Temperature of Polymers.

Emmanuel D. Dimotakis, Michigan State University, (Paper S4.9) New Route to Layered Double Hydroxides (LDHs) Interlayered by Organic Anions: Precursors to Pillared Microporous Derivatives.

Thomas M. Breunig, Georgia Institute of Technology, (Paper U3.7) Impact of X-ray Tomographic Microscopy on Deformation Studies of a SiC/Al MMC.

Michael J. Dougherty, University of Massachusetts, (Paper V2.5) In Vivo Synthesis of Chain Folded Polypeptides Using Natural Consensus β-Hairpin Residues.

Jian-Ping Zheng, State University of New York at Buffalo, (Paper Y5.6) Optical Properties and Carrier Dynamics of Semiconductor Microcrystals. MRS

Inaugural Winners Announced in MRS Medals Competition

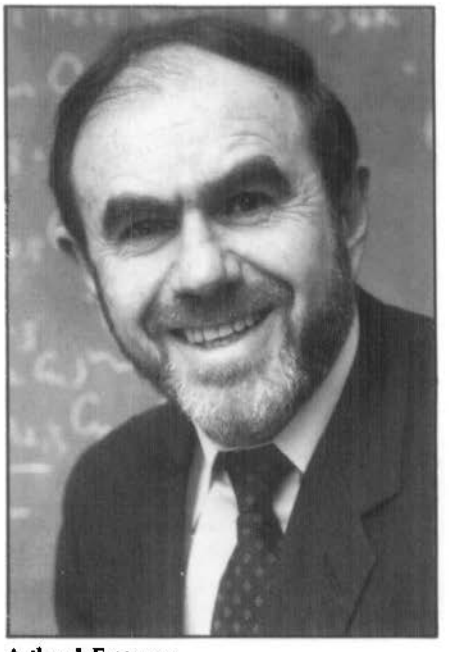
A physicist and a chemist, both from Northwestern University and both active in the study of novel types of materials, will be the first two scientists to receive the MRS Medal. Arthur J. Freeman of Northwestern's Department of Physics and Duward F. Shriver of the Materials Research Center and Department of Chemistry will receive the awards during special ceremonies at the 1990 MRS Fall Meeting in Boston.

The MRS Medal is awarded in recognition of a specific outstanding research achievement having major impact on the progress of any of the numerous fields which together comprise materials research.

Freeman will be recognized for pioneering achievements in laying the foundations of the newly developing field of monolayer magnetism and artifically layered magnetic materials. "This is an area that has recently captured the imagination of a diversity of materials scientists," says John Baglin (IBM Almaden Research), chair of the Medals Selection Committee. "It is also a concept that promises to revolutionize our view of the nature of magnetic phenomena at an atomic scale."

Shriver will receive the MRS Medal in recognition of his seminal work in the synthesis, characterization, understanding and application of polymer-based solid electrolyte materials. "The impact of Professor Shriver's work is impressive," says Baglin, "both intellectually and in emerging applications such as new kinds of commercial batteries. His work, creatively and dynamically developing the science of a novel set of materials having designed properties, has opened new and significant vistas for current applications and future basic materials studies."

Each Medalist will present a special invited paper dealing with his award research as part of the Symposium X series, Frontiers of Materials Research, at the 1990 MRS Fall Meeting.



Arthur J. Freeman

Duward F. Shriver

Arthur J. Freeman

Professor Freeman's innovative work has taken the form of specific computational predictions concerning the fundamental physical properties of manmade magnetic structures, the nature of the magnetic order, the magnitude of the magnetic moments, the hyperfine fields, the electric field gradients, the surface magnetic anisotropy and surface relaxation effects. His dramatic predictions of "giant" moments were presented when it was still fashionable to consider surfaces to be magnetically intrinsically dead. Related experimental and theoretical work on low-dimensional magnetic materials has become a major