Science and Technology of Fast Ion Conductors Is Topic of NATO Advanced Study Institute

The Science and Technology of Fast Ion Conductors is the topic of a NATO Advanced Study Institute to be held at the "Ettore Majorana" International Center for Scientific Culture in Erice, Italy, July 1-15, 1987. The course is addressed to researchers in both academia and industry in the fields of materials science, solid-state chemistry, electrochemistry, and physics with interests in solid-state ionics. Graduate students as well as scientists from allied fields in industry and government are invited to participate.

Because of the novelty and vitality of the field of solid-state ionics, it has grown rapidly since its rediscovery in the 1960s. International symposia on this subject have been large, with invited talks concentrating on the latest developments rather than being tutorial. The Advanced Study Institute is intended to provide this tutorial element. Two weeks of tutorials presented by a team of international experts will give attendees the background and perspective necessary to understand the field of solid-state ionics and to conduct their own research. The lectures will be published and made available to the participants during the Institute.

The proposed program and lecturers are as follows:

Polymers: Fabrication and Fast Ion Conductor Properties, M. Armand (University of Grenoble, France)

NMR, IR, and Raman Spectroscopies, M. Balkanski, Institute Co-director (University of Paris, France)

Static and Dynamic Simulations—X-ray and Neutron Diffraction, R. Catlow (University of Keele, U.K.)

Crystalline Cationic Fast Ion Conductors, G. Farrington (University of Pennsylvania, U.S.)

Solid State Batteries and Intercalation Materials, P. Hagenmuller (University of Bordeaux, France)

Physical Chemistry of Intercalation

NATO Advanced Study Institute

Chateau de Bonas, France

June 10-19, 1987

For information, contact:
Prof. J.E. Fischer
MSE/LRSM K1
University of Pennsylvania
Philadelphia, PA 19104

Chemical Sensors—Impedance Spectroscopy, M. Kleitz (University of Grenoble, France)

Multiphase and Polycrystalline Fast Ion Conductors, J. Maier (Max-Planck-Institute, W. Germany)

Mixed Conductors—Crystalline Anionic Fast Conductors, I. Reiss (Technion, Israel)

Amorphous Fast Ion Conductors—Reaction Kinetics at Amorphous Fast Ion Conductor-Electrode Interfaces, H.L. Tuller, Institute Co-director (Massachusetts Institute of Technology, U.S.)

Phase Stability of Crystalline Fast Ion Conductors, Electrochemical Measurement Techniques, W. Weppner (Max-Planck-Institute, W. Germany)

Crystal Structure—Diffusion and Transport Correlations, B. Wuensch (Massachusetts Institute of Technology, U.S.)

The deadline for applications was March 15, 1987, but space may still be available. For information, contact: Prof. Harry L. Tuller, Co-director, NATO Advanced Study Institute, Massachusetts Institute of Technology, Room 13-3126, 77 Massachusetts Avenue, Cambridge, MA 02139; telephone (617) 253-6890.

Call for Papers Issued for Conference on Compound Semiconductor Growth, Processing and Devices for the 1990s: Japan/U.S. Perspectives

A conference on Compound Semiconductor Growth, Processing and Devices for the 1990s: Japan/U.S. Perspectives will be held at the University of Florida campus, Gainesville, October 26-28, 1987. This unique conference will combine in one meeting the key aspects of growth, processing, and device structures. Contributing further to the uniqueness of this conference is the heavy participation of Japanese speakers. There will be about 30 invited talks over the three days of the conference, about half from Japan and half from the United States. To increase participation, poster papers are being solicited, and each day will conclude with a panel discussion. The conference chairs, Tim Anderson, Luis Figueroa, and Paul Holloway, all from the University of Florida, expect this conference to develop into a major forum for Japanese/U.S. discussion in optoelectronics, electro-optics, and very high speed microelectronics.

Poster papers are solicited in the following areas:

- Growth—bulk crystal, MBE, MOCVD, VPE, ATE and flow epitaxy, LPE, ionized cluster beam
- Processing—focused ion beam, plasma, photon-assisted, contacts/interconnects, passivation, packaging
- Devices—monolithic optoelectronic ICs, quantum-well lasers and detectors, surface emitting lasers, high speed field-effect transistors, ballistic transistors

Send abstracts by **September 10, 1987** to Paul Holloway, Department of Materials Science and Engineering, University of Florida, Gainesville, FL 32611; telephone (904) 392-6664.

Second International Conference on Effects of Modes of Formation on the Structure of Glasses

Vanderbilt University, Nashville, Tennessee
June 15-18, 1987

Topics: The glassy state, atomic and electronic structure as a function of liquid-solid transition, sol-gel glass transitions, CVD plasma and ion deposition, and other methods of forming the glassy state.

Contributed papers may still be accepted. For information, contact:

R.A. Weeks, P.O. Box 1689B, Vanderbilt University, Nashville, TN 37235, Telephone (615) 322-2058

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1987 Northeast Regional Meeting

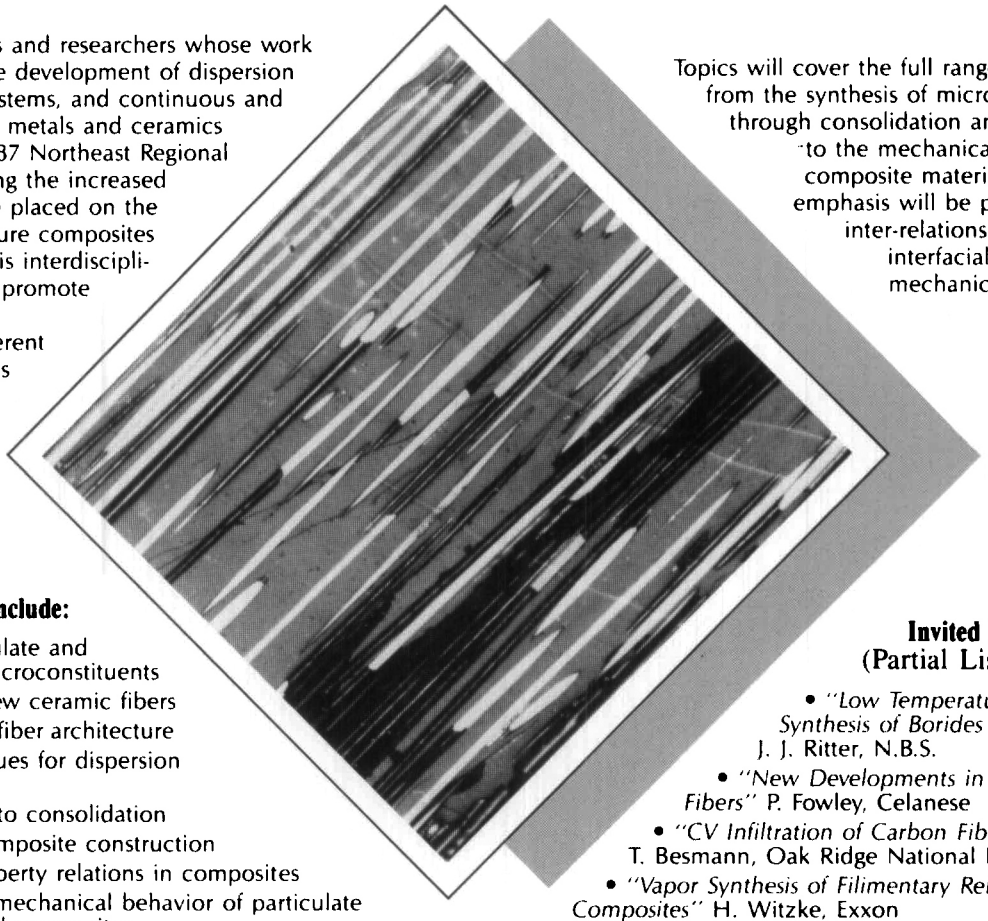
Co-sponsored by The Metallurgical Society and the Materials Research Society

HIGH TEMPERATURE STRUCTURAL COMPOSITES
Synthesis, Characterization and Properties

May 27-29, 1987

Stevens Institute of Technology • Hoboken, New Jersey

Engineers, scientists and researchers whose work is directed toward the development of dispersion strengthened alloy systems, and continuous and short fiber reinforced metals and ceramics should attend the 1987 Northeast Regional Meeting. Underscoring the increased emphasis that will be placed on the use of high temperature composites in the near future, this interdisciplinary conference will promote interaction between researchers from different material specific fields who have similar scientific objectives.



Topics will cover the full range of activities from the synthesis of microconstituents, through consolidation and processing to the mechanical behavior of composite materials. Particular emphasis will be placed on the inter-relationships between interfacial features and mechanical properties.

Major Topic Areas Include:

- Synthesis of particulate and fiber reinforcing microconstituents
- Development of new ceramic fibers
- Three dimensional fiber architecture
- Processing techniques for dispersion alloy systems
- Novel approaches to consolidation
- Net shape bulk composite construction
- Microstructure property relations in composites
- High temperature mechanical behavior of particulate and fiber-reinforced composites

Invited Presentations (Partial List):

- *"Low Temperature Molecular Synthesis of Borides and Nitrites"* J. J. Ritter, N.B.S.
- *"New Developments in Ceramic Fibers"* P. Fowley, Celanese
- *"CV Infiltration of Carbon Fibers"* T. Besmann, Oak Ridge National Laboratory
- *"Vapor Synthesis of Filimentary Reinforced Composites"* H. Witzke, Exxon
- *"Pressure Infiltration of Continuous Fiber Reinforced Matrices"* J. Cornie, M.I.T.
- *"Superplastic Forming and Properties of Particulate Alloys"* A. Ghosh, Rockwell Science Center

Proceedings of the symposium will be published by The Metallurgical Society following the conference.

For more information on the 1987 Northeast Regional Meeting "High Temperature Structural Composites" contact:

Meetings Department
The Metallurgical Society
420 Commonwealth Drive
Warrendale, PA 15086

(412) 776-9050
Telex 9103809397

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