

2nd International Conference on Electronic Materials Scheduled for September 1990

The second International Conference on Electronic Materials (ICEM-90) will be held September 17-19, 1990 in Newark, New Jersey at the Newark Radisson Hotel near the Newark International Airport. This biennial conference, co-sponsored by the Materials Research Society, the European Materials Research Society, and the Japan Society of Applied Physics, will provide an opportunity for investigators of advanced electronic materials to discuss recent progress and future trends.

Following the successful format of the first conference, there will be no parallel sessions, and the technical sessions will integrate oral and poster presentations to provide participants with maximum opportunities for interaction. A proceedings will be published.

Oral and poster papers are being solicited on the following topics:

- Materials for High T_c Superconducting Electronics—Thin film growth and processing techniques; HTSC interface with metals and dielectrics; multilayers and heterostructures; electronic, microwave, optical properties; HTSC compatible substrates; and buffer layers for incompatible substrates.
- Materials for Optoelectronics—Technologies for integration of optical, optoelectronic and electronic components; optoelectronic integrated circuits (OEICs); photonic integrated circuits (PICs); quantum well materials; layered semiconductor structures; materials and technologies for integrated waveguide structures, including silicon oxides, organics; materials for active devices, including III-V, IV and II-VI semiconductors; strained layer structures; GaAs on Si; techniques for controlled growth of complex semiconductor structures; and high quality III-V semiconductor substrates for optoelectronics.
- Advanced Thin Film Technology—Heteroepitaxy, silicon: germanium alloys and their processing (e.g., deposition, oxidation, etching, contact and junction fabrication), bandgap-engineering, heterojunction bipolar devices, low-temperature processing (epitaxy, oxidation, nitridation, CVD of nitrides and oxides), integrated processing, *in situ* process monitoring and diagnostics, and novel material sets and their applications.
- Diamond for Electronic and Optical

Applications—Growth techniques, including doping, morphology and film optical quality; electrical and optical characterization, including breakdown voltage, mobility, work function, energy levels of traps, optical transmission and absorption, thermal conductivity, and radiation damage threshold; electrical and optical devices, including Schottky and ohmic contacts, transistors, light emitting devices, lasers, solar cells, and windows.

The deadline for submitting abstracts is **May 1, 1990**. Abstract templates and instructions for submitting abstracts are available from the Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237; telephone (412) 367-3003; fax (412) 367-4373.

Related Conferences Precede, Follow ICEM-90

Two related conferences, both co-sponsored by MRS, will be held, one prior to and one following ICEM-90. The 7th International Conference on Ion Beam Modification of Materials (IBMM-90) will be held September 9-14, 1990 in Knoxville, Tennessee immediately prior to ICEM-90. (See related article in this section.)

Following ICEM-90, the 2nd International Conference on New Diamond Sciences and Technology (2nd ICNDST) will be held September 23-27 in Crystal City, Virginia (near Washington, DC). For further information, contact: 2nd ICNDST, Russell Messier, Professor of Engineering Science & Mechanics, Pennsylvania State University, 265 Materials Research Laboratory, University Park, PA 16802, (814) 865-3704, fax (814) 865-2326. Look for more details on ICNDST in upcoming issues of the *MRS BULLETIN*.

Oak Ridge Lab Sponsors 7th International Conference on Ion Beam Modification of Materials

The Seventh International Conference on Ion Beam Modification of Materials (IBMM-90) will be held September 9-14, 1990 in Knoxville, Tennessee at the Holiday Inn Downtown/Convention Center, site of the 1982 World's Fair. This biennial conference brings together investigators of materials modification by ion beams to discuss recent progress and future trends. The 1990 gathering is being sponsored by Oak Ridge National Laboratory (ORNL) and co-sponsored by the Materials Research Society.

Co-chairs for the IBMM conference are B.R. Appleton and C.W. White of ORNL. The conference organization and the technical program are being coordinated through an International Advisory Committee and an International Program Committee.

IBMM-90 will adhere to the traditional format of previous IBMM meetings. There will be no parallel sessions, and the technical sessions will consist predominantly of invited oral presentations and contributed posters. Previous conferences in this series have attracted up to 400 participants from the ion beam community, with about half coming from abroad. A post-conference tour of the ion beam facilities at Oak Ridge National Laboratory, including the Surface Modification and Characterization Research Facility, will be offered to interested participants.

The Program Committee will be pleased to consider abstracts on the following general topics:

- Ion-solid interactions, range and straggling, sputtering;
- Ion beam processing of metals, corrosion, tribology, metastable alloys;
- Ion beam processing of semiconductors, beam-induced amorphization and crystallization, buried insulators and silicides, MeV implantation, device applications;
- Ion beam processing of insulators, hardening, toughness and wear, optical and electrical properties, waveguides, dielectrics, polymers;
- Ion beam mixing, recoil implantation, silicides, metastable alloys, adhesion; and
- Novel techniques and applications, ion beam deposition, ion-assisted deposition, ionized cluster deposition, high-energy implantation, superlattices, focused ion beams, lithography, superconductors, diamond.

Contributed manuscripts will be published as four-page articles in a special issue of *Nuclear Instruments and Methods in Physics Research, Section B*, edited by D.B. Poker and S.P. Withrow of ORNL. Papers will be refereed after the conference by the same criteria used for normal submission to *NIM B*. To receive complete instructions for the preparation of abstracts and conference registration, write to: IBMM-90, Oak Ridge National Laboratory, P.O. Box 2008, MS 6033, Oak Ridge, TN 37831-6033, USA; fax (615) 574-4143.

Equipment Exhibit

An equipment exhibit and sales/service exhibition (IBMM/EXPO-90) will be an important new feature of IBMM. The invita-

tion to exhibit is being extended to research centers for ion processing of materials, companies that market ion implantation equipment or services, related vacuum and manipulation equipment, surface analysis equipment, electronics, data acquisition and processing equipment, and publishers of scientific literature. For more information, contact J.M. Williams, Oak Ridge National Laboratory, P.O. Box 2008, MS 6057, Oak Ridge, TN 37831-6057, USA; telephone (615) 574-6265.

The IBMM conference will be followed immediately by the Second International Conference on Electronic Materials (see related article in this section).

Next Biennial Wear of Materials Conference Scheduled for 1991

Held every two years since 1977, the International Conference on the Wear of Materials will next be held April 7-11, 1991 at the Hyatt Orlando Hotel, Orlando, Florida. The chairman for the 1991 conference is Prof. David Rigney, Materials Science and Engineering Department, Ohio State University.

Contributions are being solicited in the following categories: (I) full-length papers, (II) shorter communications, (III) poster presentations, and (IV) exhibit-quality micrographs.

(I) Full-Length Papers and (II) Shorter Communications

Full-length papers and one- or two-page communications are being solicited for the following session topics:

- Mechanisms of erosion and wear,
- Wear of various materials combinations,
- Wear of mechanical devices and products in industry (including wear of recording media),
- Wear in lubricated systems,
- Diagnosis of wear failures,
- Effect of service conditions on wear,
- Influence of materials choices in the control of wear,
- Conceptual and engineering modeling of the wear process,
- Design for wear resistance,
- Friction of materials, and
- Wear testing and standards.

Deadlines for these two categories are as follows:

(I) Full-length papers

- Title and abstract (150-200 words) for

steering committee review by March 1, 1990;

- Paper for review by July 1, 1990; and
- Final form due October 1, 1990.

Send abstracts and papers to Prof. K.C. Ludema, Mechanical Engineering, G.G. Brown Building, University of Michigan, Ann Arbor, MI 48109.

(II) Communications

- Title and abstract (150 words) by June 1, 1990;
- Paper for review by September 1, 1990; and
- Final form due November 1, 1990. Send abstracts and papers to R.G. Bayer, IBM Corporation, Technology Laboratory, P.O. Box 8003, Endicott, NY 13760.

(III) Poster Session and (IV) Photomicrograph Competition

Contributions for the poster session are

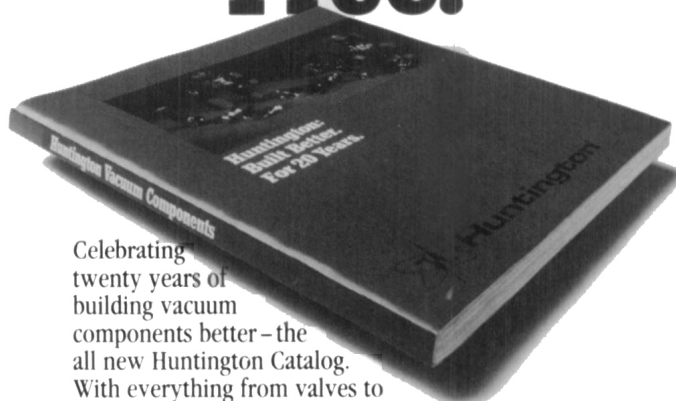
invited in the following areas:

- New materials or surface treatments with improved wear or friction characteristics,
 - Research in progress in tribology, and
 - Wear failure analysis case histories.
- Exhibit-quality micrographs of worn materials or components will be judged competitively for awards.

Send abstracts/descriptions in these categories to arrive January 11, 1991 to Dr. Peter Blau, Oak Ridge National Laboratory, Metals and Ceramics Division, P.O. Box 2008, Oak Ridge, TN 37831.

For information about attending the conference, contact Leslie Friedman, Meetings Department, ASME, 345 East 47th Street, New York, NY 10017-2304; telephone (212) 705-7722. □

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