

MRS-I Emphasizes Polymeric Materials and Ion-Beam Processing of Materials at 2003 Conference

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The 14th Annual General Meeting of the Materials Research Society of India (MRS-I) was held in Mumbai (Bombay), India, February 11–13, 2003. The meeting, which took place at the Bhabha Atomic Research Centre (BARC), was convened by S. Banerjee (BARC), who chairs the Mumbai Chapter of MRS-I and Ashok Misra (Indian Institute of Technology), who chaired the organizing committee. A symposium on novel polymeric materials and a mini-symposium on ion-beam pro-

cessing of materials were special features. This event followed a scientific meeting of the Asia Pacific Academy of Materials (APAM)—India, of which MRS-I is a founding member and to which MRS-I has retained a strong connection. APAM was held February 10 at the Homi Bhabha Centre for Science Education of the Tata Institute of Fundamental Research in Mankhurd.

R. Chidambaram, principal scientific secretary to the government of India,

opened the meeting. In his address, he emphasized the need to apply modern materials to the development of rural industry. He also released a compilation, titled "Materials Research in BARC: Highlights," which was specially prepared for this occasion. In the keynote address, Anil Kakodkar, chair of the Atomic Energy Commission and secretary to the government of India, discussed challenges and opportunities for materials research and development (R&D) in the Indian nuclear

Materials Research Society of India (MRS-I) Honors, Medals, and Awards for 2003

Distinguished Materials Scientist of the Year

A.K. Barua, Indian Association for the Cultivation of Science, Kolkata (Calcutta)

Distinguished Lectureship

S. Sivaram, National Chemical Laboratory, Pune

MRS-I-ICSC Superconductivity and Materials Science Annual Prize

S. Banerjee, Bhabha Atomic Research Centre, Mumbai (Bombay)

B.M. Arora, Tata Institute of Fundamental Research, Mumbai

MRS-I Medals

A. Bharathi, Indira Gandhi Centre for Atomic Research, Kalpakkam

Bhupendra N. Dev, Institute of Physics, Bhubaneswar, Orissa State

Devang V. Khakhar, Indian Institute of Technology, Mumbai

G.P. Kothiyal, Bhabha Atomic Research Centre, Mumbai

K. Jyothindra Kumar, Government Dental College, Thiruvananthapuram

A.N. Maitra, University of Delhi

R. Mitra, Indian Institute of Technology, Kharagpur

A. Narayanasamy, Madras University, Chennai

C.K.S. Pillai, Regional Research Laboratory, Thiruvananthapuram

Shanker Ram, Indian Institute of Technology, Kharagpur

Murali Sastry, National Chemical Laboratory, Pune

S.S. Sekhon, Guru Nanak Dev University, Amritsar

Amarnath Sen, Central Glass and Ceramic Research Institute, Kolkata

G.N. Subbanna, Materials Research Centre, Indian Institute of Science, Bangalore

Best Paper Prize (for a publication in Bulletin of Materials Science)

S. Abiraman, **H.K. Varma**, **T.V. Kumari**, **P.R. Umashankar**, and **A. John** (Biomedical Technology Wing, Sree Chitra Tirunal Institute of Medical Science & Technology,



(Front row, left to right): D.V. Khakhar, A. Sen, A. Bharathi, B.M. Arora, D. Chakravorty, R. Chidambaram, A.K. Barua, S. Banerjee, and B.N. Dev; (back row, left to right): G.N. Subbanna, S. Ram, S.S. Sekhon, K.J. Kumar, G.P. Kothiyal, R. Mitra, M. Sastry, A. Narayanasamy, and C.K.S. Pillai.

Poojapura, Thiruvananthapuram), "Preliminary *in vitro* and *in vivo* Characterization of a Sol-Gel Derived Bioactive Glass-Ceramic System," *Bulletin of Materials Science* 25 (5) (2002), p. 419

Best Poster Prize (presented during the Annual General Meeting)

B. Gouri, **C.P. Reghunadhan**, **R. Ramaswamy**, and **K.N. Ninan** (Vikram Sarabhai Space Centre, Thiruvananthapuram), "High-Temperature Adhesives Based on Alderene Thermoset"

Y. Kashyap, **P.S. Karkar**, **R.S. Rao**, **A. Sinha**, and **B.K. Godwal** (Bhabha Atomic Research Centre, Mumbai), "A Simulation Study of Atomic Resolution X-Ray Holography"

A. Mondal and **S. Ram** (Indian Institute of Technology, Kharagpur), "Al₂O₃ Stabilized t-ZrO₂ in Nanoparticles with Transparent Amorphous Polymeric Gel by Hydrolysis in Aqueous Solution"

S. Choudhury, **G.K. Dey**, and **J.V. Yakhmi** (Bhabha Atomic Research Centre, Mumbai), "Crystallization of Cobalt-Hexacyanoferrate under the Langmuir Monolayer"

program and addressed the importance of nuclear materials. D. Chakravorty, president of MRS-I and professor at the Indian Association for the Cultivation of Science, Kolkata (Calcutta), gave the presidential address, focusing on new nano-sized effects in glass ceramics. On the second day of the meeting, A. Windle (University of Cambridge, UK) delivered a special evening lecture titled "Carbon Nanotubes Under Stress."

An awards ceremony was held on February 11, and the nearly 360 participants were treated to award talks

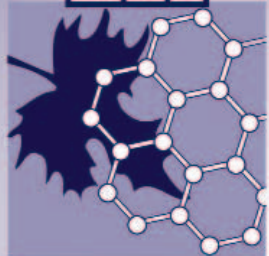
throughout the meeting (see sidebar). In addition, there were ~200 contributed presentations, grouped into four categories: (1) polymers; (2) thin films, surfaces, and interfaces; (3) glasses and ceramics; and (4) materials processing and characterization.

The symposium on novel polymeric materials emphasized electro-optical properties, fuel cells, polymeric nanocomposites, thermoplastics, ionomers, polyolefins, conducting polymers, polymers with embedded information, and radiation processing of polymers.

Ion-beam processing of materials has become very important in recent years, not only because it affects controlled surface and bulk modifications, but also because it is a good tool for synthesis and organization of nanomaterials. Focused ion-beam processing has been widely used for producing patterns as small as ~50 nm on substrates. These aspects were discussed in the mini-symposium on ion-beam processing of materials, as part of the meeting.




2003
MRS



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SYMPOSIA

Integrated Device Technology

- A: Micro- and Nanosystems
- B: Materials, Integration, and Packaging Issues for High-Frequency Devices
- C: Ferroelectric Thin Films XII
- D: Materials and Devices for Smart Systems
- E: Fundamentals of Novel Oxide/Semiconductor Interfaces

Organic, Soft, and Biological Materials

- F: Biomaterials for Tissue Engineering
- G: Molecularly Imprinted Materials
- H: Biological and Bio-Inspired Materials Assembly
- I: Biomaterials for Drug Delivery
- J: Interfaces in Organic and Molecular Electronics
- K: Functional Organic Materials and Devices

Nano- to Microstructured Materials

- L: Continuous Nanophase and Nanostructured Materials
- M: Nontraditional Approaches to Patterning
- N: Quantum Dots, Nanoparticles, and Nanowires
- O: Nanostructured Organic Materials
- P: Dynamics in Small Confining Systems VII
- Q: Mechanical Properties of Nanostructured Materials and Nanocomposites

Inorganic Materials and Films

- R: Radiation Effects and Ion Beam Processing of Materials
- S: Thermoelectric Materials 2003—Research and Applications
- T: Self-Organized Processes in Semiconductor Heteroepitaxy
- U: Thin Films—Stresses and Mechanical Properties X

Photonics

- V: Critical Interfacial Issues in Thin Film Optoelectronic and Energy Conversion Devices
- W: Engineered Porosity for Microphotonics and Plasmonics
- Y: GaN and Related Alloys
- Z: Progress in Compound Semiconductor Materials III—Electronic and Optoelectronic Applications

Energy Storage, Generation, and Transport

- AA: Synthesis, Characterization, and Properties of Energetic/Reactive Nanomaterials
- BB: Materials and Technologies for a Hydrogen Economy
- CC: Microbattery and Micropower Systems
- DD: Actinides—Basic Science, Applications, and Technology
- EE: Frontiers in Superconducting Materials—New Materials and Applications

Information Storage Materials

- FF: Advanced Magnetic Nanostructures
- GG: Advanced Characterization Techniques for Data Storage Materials
- HH: Phase Change and Nonmagnetic Materials for Data Storage

Design of Materials by Man and Nature

- X: Frontiers of Materials Research
- II: The Science of Gem Materials
- JJ: Combinatorial and Artificial Intelligence Methods in Materials Science II
- KK: Atomic Scale Materials Design—Modeling and Simulation
- LL: Quasicrystals
- MM: Amorphous and Nanocrystalline Metals

MEETING ACTIVITIES

Symposium Tutorial Program

Available only to meeting registrants, the symposium tutorials will concentrate on new, rapidly breaking areas of research.

Exhibit and Research Tools Seminars

A major exhibit encompassing the full spectrum of equipment, instrumentation, products, software, publications, and services is scheduled for December 2-4 in the Hynes Convention Center, convenient to the technical session rooms. Research Tools Seminars, an educational seminar series that focuses on the scientific basis and practical application of commercially available, state-of-the-art tools, will be held again this fall.

Publications Desk

A full display of over 775 books, plus videotapes and electronic databases, will be available at the MRS Publications Desk.

Symposium Assistant Opportunities

Graduate students planning to attend the 2003 MRS Fall Meeting are encouraged to apply for a Symposium Assistant (audio-visual assistant) position.

Career Center

A Career Center for MRS meeting attendees will be open Tuesday through Thursday.

The 2003 MRS Fall Meeting will serve as a key forum for discussion of interdisciplinary leading-edge materials research from around the world.

Various meeting formats—oral, poster, round-table, forum and workshop sessions—are offered to maximize participation.