

## MRS-I Meeting Featured Talks on Building, Magnetic and Electronic, and Glass Fiber Materials

The Ninth Annual General Meeting (AGM) of the Materials Research Society of India (MRS-I) was jointly hosted by the Indian Institute of Technology (IIT) in Madras and the Madras Chapter of MRS-I. The deliberations spanning over three days began with a dignified note at the Central Lecture Theatre, IIT—Madras on February 11 with the inaugural function, presided over by S.K. Joshi, President of MRS-I. R. Natarajan, Director of IIT—Madras extended a warm and hearty welcome to the august gathering of participants. P. Rama Rao, past president of MRS-I and presently chair of the Atomic Energy Regulatory Board, delivered the inaugural address.

The curtain-raisers to the technical deliberations on the second day were the MRS-I-ICSC [International Conference on Superconductivity] Superconductivity and Materials Science Prize lectures delivered by the 1998 prize recipients Placid Rodriguez, director of Indra Gandhi Centre for Atomic Research (IGCAR), Kalpakkam ("Contributions to Chemical Kinetics of Plastic Deformation") and R. Vijayaraghavan, SAMEER, IIT—Mumbai ("Basic Studies on the Physics of Metals"). Three out of the nine technical sessions of the meeting were devoted exclusively to the 13 MRS-I Medalists—distinguished scientists, engineers, and technologists who were recognized for their outstanding contributions in diverse fields:

- K.B.R. Varma, Materials Research Centre (MRC), Indian Institute of Science (IISc), Bangalore, "Tailoring of Materials for Electro-Optic and Nonlinear Optical Devices";
- Om Prakash, Benares Hindu University (BHU), Varanasi, "Exploring Novel Dielectric Characteristics of Valence Compensated Oxide Perovskites";
- Tarun Bandyopadhyay, Central Glass and Ceramic Research Institute (CGCRI), Calcutta, "Optical Fibre Technology: Trends and Options";
- Neeraj Khare, National Physical Laboratory (NPL), New Delhi, "Role of Grain Boundaries in High- $T_c$  Superconductors and In-Doped Rare-Earth Manganese Oxides";
- B. Viswanathan, IIT—Madras, "Mesoporous Zeolite Materials";
- P.S. Goyal, Bhabha Atomic Research Centre (BARC), Mumbai, "Characterization of Micellar Solutions Using Small Angle Neutron Scattering";
- Prabha D. Nair, Sri Chithra Tirunal Institute of Medical Science and Technology, Trivandrum, "Porous Polymers for

Medical Applications";

- Prabha R. Chatterji, Indian Institute of Chemical Technology (IICT), Hyderabad, "Blocks, Combs, Brushes and Nets: Structure-Function Relationship in Synthetic Macromolecules";
- P.R. Vasudeva Rao, IGCAR, Kalpakkam, "Separation Processes for Actinides: Then and Now";
- A.K. Jha, Regional Research Laboratory (RRL), Bhopal, "Characterization of Tribological Properties for Improved Performance of Materials";
- G. Malkondaiah, Defence Metallurgical Research Laboratory (DMRL), Hyderabad, "On the Fatigue Resistance in Titanium Aluminum-Based Alloys";
- S.N. Kaul, University of Hyderabad, Hyderabad, "Magnetic Phase Diagrams for Random Quench Disordered Materials";
- K.S. Ghosh, Tata Iron & Steel Company, Jamshedpur, "Recent Developments in Refractories Technology at Tata Steel."

The technical sessions also featured invited lectures by distinguished speakers from within the country as well as abroad on diverse topics of scientific as well as technical interest, falling within the broad firmament of "advanced materials." The invited speakers on "Building Materials" were Vimal Kumar of Technology Information and Forecasting Center (TIFAC), New Delhi, "Fly Ash: A Valuable Building Material"; Sachin Dixit of Tata SSL Ltd., Mumbai, "Low Relaxation Strands and Their Use in Prestressed Concrete Structures"; and Ganesh Babu of IIT—Madras, "Methodology for the Evaluation of the Reactivity of Piezoelectric Materials." The invited lectures on "Electronic and Magnetic Materials" were delivered by Vikram

Kumar of Solid State Physics Laboratory (SSPL), New Delhi, "Materials Form Millimeter Solid-State Devices"; Venkatesan of the University of Maryland, United States, "Colossal Magnetoresistive Manganites: Where Are We with These Materials?"; M.A. Subramanian of Dupont, United States, "Colossal Magnetoresistance Behavior in Pyrochlore Oxides"; R. Krishnan of CNRS, France, "New Metallic Multilayers for High-Density Magneto-Optic Recording"; L.C. Gupta of Tata Institute of Fundamental Research (TIFR), Mumbai, "New and Exciting Quaternary Borocarbide Superconductors"; K.N. Bhat from IIT—Madras, "Microelectronics and Microengineering Materials"; T. Rajasekharan from DMRL, Hyderabad, "A Review of the Infiltration and Growth Process for Shape Forming with High Current Density"; and A. Narayanaswamy from the University of Madras, "Nanocrystalline Magnetic Materials." The invited lectures by M.K. Sridhar from the National Aerospace Laboratory (NAL), Bangalore, "Structure-Property Correlation in Reinforcing Fibres" and Ramachandran from OCF India Ltd., Bangalore, "Glass Fibre: Manufacture and Application" featured the current developments in the area of "Polymer and Polymer Composites."

The 190 posters ranked as the largest number presented at an MRS-I meeting. The poster presentations covered, among other topics, biomaterials, building materials, ceramics and glasses, composites, electronic materials, magnetic materials, metals, polymers, processing technology, thin films, materials characterization, and fracture. Prizes were awarded for the best posters presented.



1998 MRS-India Medal Recipients with the President of MRS-I: (Sitting left to right): A.K. Jha, B. Viswanathan, Prabha D. Nair, P. Rama Rao (Distinguished Materials Scientist of the Year), S.K. Joshi (President, MRS-I), Placid Rodriguez (MRS-I-ICSC Superconductivity and Materials Science Prize), Prabha R. Chatterji, and Om Prakash. (Standing right to left): G. Malkondaiah, Tarun Bandyopadhyay, Neeraj Khare, P.S. Goyal, Vasudeva Rao, K.B. R. Varma, and S.N. Kaul.

The technical sessions elicited considerable academic interaction between the participants. One technical session was devoted exclusively to industry presentations, an idea conceived in order to bring about closer interaction and stronger links between the industrial sector and MRS-I. As part of this novel endeavor, A. Ramakrishna, president of L & T—ECC Group, Madras, delivered the lead lecture. The presentations and discussions that followed involved active participation of several prominent representatives of the industrial sector such as Asian Electronics, Mumbai; Magnetic Solutions, United

States; Optilase, Madras; SICO, Madras; and Steuerung, Hyderabad.

Two satellite symposia were also offered, one by Baldev Raj, director of Metallurgy and materials Science Group, IGCAR, Kalpakkam and S. Ramaprabhu, Department of Physics, IIT—Madras, entitled, "Alternate Energy Materials." This symposium focused on a wide spectrum of topics including hydrogen storage materials, energy options vis-a-vis material resources, solar photovoltaics, fuel cells, thermoelectric sources, processing properties-performance of materials, and advanced energy management systems. IIT—Madras was

the venue of the second satellite symposium, coordinated by O. Prabhakar of the Department of Metallurgy, IIT—Madras, entitled, "New Materials and Processing Technologies." This too covered a wide spectrum of topics such as microporous and mesoporous solids, nanomaterials, rapidly solidified materials, biomaterials, advanced engineering materials, superplasticity and dynamic forming, directional solidification, surface engineering, self-propagating high-temperature synthesis, and intelligent processing materials.

S.V. SUBRAMANYAM  
GENERAL SECRETARY, MRS-I

## IUMRS-ICAM '99 to be Held in China in June, 1999

The 5th International Union of Materials Research Societies International Conference on Advanced Materials (IUMRS-ICAM '99), organized by the Materials Research Society of China (C-MRS), will be held in Beijing, China at the Beijing International Convention Center (BICC) June 13–18, 1999. As the last IUMRS-ICAM in this century, the organizers are designing the conference as a forum to give a forward look to materials science while striding into a new century.

The 35 symposia and three forums are as follows:

- A Nanostructured Materials
- B High- $T_c$  Superconductors
- C Fullerenes and Related Materials
- D Intermetallic Compounds and Bulk Metallic Glasses
- E Diamond Films and Related Materials
- F Thin Films and Multilayers: Science and Applications
- G Intelligent Materials and Integrated Systems
- H Functional Polymers
- I Hard Magnetic Materials
- J Advanced Information Recording Materials & Processing
- K Materials, Devices, and Applications for Advanced Optical Communication
- L Science & Technology of Artificial Crystals
- M Si-Based Materials and Devices
- N Compound Semiconductor Materials
- O Low-Dimensional Structures and Quantum Devices
- P Display Materials
- Q Radiation Detectors for Imaging in Industry and Medicine
- R Materials Research Inspired by Biological Systems
- S Biomedical Materials
- T Materials for Energy Conversion
- U Ecomaterials
- V Rare Earths and Applications
- W Material Synthesis and Modification by Energetic Beams

- X Surface Engineering
- Y Science and Engineering of Solidification
- Z Materials Research and Thermal Physics in Extreme Cases
- AA Forward Look to Materials Science While Striding into a New Century
- BB Advanced Processing of Materials
- CC Light Metals
- DD Advanced Ceramics
- EE Advanced Polymeric Structural Materials
- FF Advance in Composite Materials
- GG Advanced Materials Characterization and Imaging
- HH Materials Design and Modeling
- II Advances in Porous Materials
- FA The Role of Advanced Materials in Social and Economic Sustainable Development
- FB Global Networks on Materials Research and Development
- FC Materials Education Language.

English is the official language of the conference. The abstract deadline is **February 1, 1999**. Conference registration fees are \$395 before March 31, 1999 and \$445 after March 31, 1999 which includes a volume of symposium abstracts, coffee breaks, reception, entertainment, banquet, and technical visit. The fees for students is \$200 before March 31, 1999 and \$250 after March 31, 1999.

For more information, contact Secretariat, IUMRS-ICAM-1999, C-MRS Office, 7 Baishiqiao Road, Beijing, 100081, CHINA; e-mail: lhd-dms@tsinghua.edu.cn; hanyf@public.east.cn.net; or cmsrsec@public.bta.cn.net. Fax and Phone: Prof. L.J. Hengde, Tsinghua University, Beijing, +86-10-62771160 (fax), +86-10-627857(phone); Dr. Han Yafang, Beijing Institute of Aeronautical Materials, +86-10-62466925 or +86-10-62456212 (fax), +86-10-62451667 or 62452103 (phone); and C-MRS Office, +86-10-68428640 (fax), +86-10-68428640 (phone). The IUMRS-ICAM '99 website is [http://www.chimeb.edu.cn/meeting/e\\_mrs99.htm](http://www.chimeb.edu.cn/meeting/e_mrs99.htm).

## IUMRS-ICA 98 to be Held in India in October

The 5th International Union of Materials Research Societies International Conference in Asia (IUMRS-ICA), organized by Materials Research Society of India (MRS-I) and IUMRS, will be held in Bangalore, India, at the Indian Institute of Science, Jawaharlal Nehru Centre for Advanced Scientific Research, October 13–16, 1998. This conference is held annually to share ideas and achievements in the area of materials science and technology. The earlier conferences in this series were organized by MRS-China (1993), MRS-Taiwan (1994), MRS-Korea (1995), and MRS-Japan (1997).

The scope of the conference includes current developments in the experimental and theoretical studies of materials. The presentations and discussions are expected to help in the fundamental understanding of materials and identify materials processes for technology. English will be the official language of the conference.

Registration fees are Rs. 1500 for participants from India, Rs. 750 for students from India, \$300 for participants outside of India, and \$150 for students outside of India. The fee includes participation in the sessions, conference lunches and dinners, banquets, and a copy of the proceedings of the conference.

For more information, contact Prof. S.V. Subramanyam, General Secretary, MRS-India, IUMRS-ICA 98 Secretariat, Department of Physics, Indian Institute of Science, Bangalore, 560 012, India; phone 0091-80-3340416/3092525; 0091-80-3484307 (res.); fax 0091-80-3340416/ 3341683.

