ICEM'94 Held in Taiwan

The 1994 International Conference on Electronic Materials (ICEM'94) was held at the National Chiao Tung University, Hsinchu, Taiwan on December 19–21. Over 650 people from 29 countries attended. The presence of 13 scientists and 2 IUMRS representatives from the former Soviet Union and the Baltic States was an unusual feature of this conference since, before the termination of the Cold War, they could rarely attend international scientific gatherings. ICEM is especially grateful to the International Science Foundation (ISF) for sponsoring much of their participation.

The plenary session featured keynote speeches by J.W. Mayer and Morris Chang. Mayer's presentation on "Low Power Electronics and Pulsed Laser Processing" provided the means to achieve a new class of electronic systems which would dissipate less than 1% of the power of current systems. Chang's speech on the "Overview of IC Industry Development in Asia-Pacific" outlined factors leading to Korea and Taiwan's success in the development of the semiconductor industry.

The 350 papers presented spanned over a wide range of areas at the eight symposia: thin film materials and surface and interface structures, advanced electroceramics and packaging technology, sensor materials, compound semiconducting materials, ULSI materials, high-temperature superconductors, materials technology for display, and recording media.

Four students received the IUMRS Graduate Student Awards. The winners were Donald Y.C. Lie (California Institute of Technology, U.S.) for his research on "Irradiation Induced Damage and Strain in Epitaxial $Ge_{0.10}Si_{0.90}$ Grown on Si (100)," Cheng Kuo Lee (University of Tokyo, Japan) for his research on "Sol-Gel Derive PZT Force Sensor for Scanning Force Microscopy," C. Winnie Chu (Simon Fraser University, Canada) for her research on "Solid State Photochemistry of Cr, Mo, W, Organometallic Complexes as Thin Films on Silicon Substrate," and Wei-Der Chang (National Tsing Hua University, Taiwan) for his research on "*In Situ* Grown Iron Oxide Thin Films as Recording Media."

The post-conference technical tours were a great success for they provided the participants with in-depth understandings of Taiwan's electronic materials and processing developments. Technical Tour A visited high-tech companies within the Science-Based Industrial Park, (the cradle of Taiwan's high-tech industries), namely, the Science-Based Industrial Park Administration Center, Acer Incorporated, Trace Storage Technology Corporation, United Microelectronics Corporation and National Nano Device Laboratory. Technical Tour B visited the Industrial Technology Research Institute (the largest research and development institute in Taiwan) and its four electronic materials R&D laboratories: Electronics Research and Service Organization, Computer and Communication Research Laboratories, Opto-Electronics and System Laboratories, and Materials Research Laboratories. A total of 50 people participated in the two tours.

The attendees found the conference highly successful because it provided them with state-of-the-art information on all aspects of electronic materials. The welcoming reception, banquet, on-site free luncheon periods, and coffee breaks offered ample opportunities for researchers to meet and discuss their work.

IUMRS-ICA-94 Focuses on Structural Materials

The Second IUMRS International Conference in Asia (IUMRS-ICA-94) was held on December 15–16 in Hsinchu, Taiwan. It provided a forum for Asian scientists and engineers to meet and discuss their work on structural materials. Over 270 registrants attended the conference and 143 papers were presented, including two keynote addresses, 19 invited talks, and 122 contributed presentations.

During the plenary session, Hiroshige Suzuki, emeritus professor of Tokyo Institute of Technology, Japan, presented the first keynote speech, "Recent Trends and Future Prospects on Materials Research." The second speech was given by Stephen W. Tsai of Stanford University, U.S., on "Issues and Challenges of Composite Materials." The conference covered all aspects of structural materials through its five symposia, namely, polymer composites, structural ceramics, high performance metals, reliability and failure analysis, and new materials processing.

The symposium on polymer composites, divided into six sessions with 20 presentations of which four were invited talks, covered high performance thermoplastics, composite processing, CAD/CAE, and mechanical properties of composites.

The structural ceramics symposium was divided into seven sessions with 25 oral presentations of which two were invited talks. The areas covered were nano-structure ceramics, non-oxide ceramics, ceramic coating, near net shape processing, and ceramic matrix composite.

The high performance metals symposium had seven sessions with 26 oral presentations and six invited talks. The areas covered included intermetallics, superalloys, nano-structure metals, lightweight metals, and metal matrix composites.

The symposium on reliability and failure analysis had seven sessions with four invited talks. The 24 papers presented spanned over the areas of corrosion protection, tribology, nondestructive evaluation, life prediction, surface and interface analysis, and fatigue studies.

The new materials processing symposium held nine sessions with three invited talks. A total of 41 papers were presented on areas of novel processing, diamond film, energy saving processes, environmental conscious manufacturing, computer integrated manufacturing, and strip casting.

The participants judged the conference a great success. The invited talks and oral presentations provided state-of-the-art knowledge on various aspects of structural materials.

News about IUMRS conferences and other activities should be sent to:

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