

## Prospect

News of the IUMRS and its Adhering Bodies

### *Forum on Materials Education: Future Directions*

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#### Materials Education Symposium

How is Materials Education evolving? What new challenges is it facing, world-wide? What new ideas for curriculum and teaching strategies are succeeding? Where are the big future opportunities for Education in Materials Science, Engineering and Technology? These questions will be explored in special Forum sessions of the Symposium on Education in Materials Science and Engineering (MSE) that will be held July 3–8, 2005, as part of the IUMRS-ICAM International Conference hosted by the Materials Research Society of Singapore.



In the Symposium sessions, speakers from around the world will describe MSE programs and innovations in their own countries. Some of the presentations will describe recently established degree programs in Nanotechnology or Biotechnology, and new programs emphasizing environmentally compatible technologies. Such cases typify the increasing demands on educators and their universities to nimbly adopt emerging fields of major impact and relevance. How can MSE curricula be updated responsibly to match the fast-changing topical demands of today? How can an academic department keep its faculty constantly updated as articulate and inspiring teachers in this avalanche of fast-moving fields? These questions will top the agenda for one of the Forum sessions.

What about the modes of delivery of Materials Education? Web-based global networks are developing, capable of supporting distance learning and the easy exchange of modular teaching resources (software and reference material), both locally and internationally. Access to these resources will itself change the face of Materials Education at all levels, including programs of schools as well as those of universities and institutions offering continuing education for the workforce. The Forum sessions will seek to review programs in these areas, and discuss actions to optimize the value and functionality of such resources in the future. They will also discuss practical questions arising from “globalization”, such as how to develop a level of international consensus on identifying “core” curricula for MSE degree programs that would be appropriate for the interests and education infrastructure of many nations.

Being multidisciplinary by nature, MSE may be regarded as one of the richest resources from which to engage the interest

and understanding of students and teachers in schools (K-12), and of the community in general. It surely behooves the MSE education community to pay attention to the need for science education of all those who will not be entering technical careers—since they represent the greater community that enjoys the benefits from new technologies, debates their societal and economic impacts, and purchases their products. Creative outreach will be represented by speakers from several countries, and topics will include student motivational programs, and the new traveling exhibit “Strange Matter” recently launched at the Boston Museum of Science by the Materials Research Society and supported by the U.S. National Science Foundation.

#### Journal of Materials Education

The Proceedings of the symposium, including Forum Reports, will be published by the Journal of Materials Education. This peer-reviewed journal was established in 1979 by the International Council on Materials Education, with Prof. Rustum Roy as Founding Editor. It has developed a truly international reach, with a translation edition in Spanish, and selected publication in Japanese.



Since 2000, the Journal has been produced with the benefit of enormous collaborative support from the Universidad Autónoma del Estado de México, whose remarkable dedication to the advancement of materials education is reflected in this activity. The symposium will include a presentation describing this collaboration, by Prof. Rafael López-Castañares, Editor-in-Chief of the Spanish Edition, which will be followed by his receipt of a Special Award in recognition of the distinguished contributions by his university to the success and quality of this international professional journal.

#### Summary

A stimulating international symposium, and in-depth, forward-looking fora on “The Big Picture for Materials Education” are anticipated. Further information may be found by selecting Symposium Z at the conference Web site [www.mrs.org.sg/icmat2005/](http://www.mrs.org.sg/icmat2005/). 