

Editorial

XIV International Materials Research Congress: Symposium 7, Materials Characterization — Cancun, August 2005

The XIV International Materials Research Congress was held in Cancun, Mexico from 21 to 25 August 2005. It was organized by Academia Mexicana de Ciencias de Materiales (AMCM), the International Union of Materials Research Societies (IUMRS) and the National Association of Corrosion Engineers International (NACE). About 1000 specialized scientists from 31 countries participated in the various events.

This special issue of Materials Characterization contains papers contributed to the Symposium — 7 titled “Materials Characterization”. This event is intended as a vehicle for the dissemination of research results on materials science which provided an excellent opportunity for materials scientists around the world to have a common platform to exchange their findings and to discuss developments and to start collaborating at the national and international level. It was also aimed at promoting contacts amongst researchers and research groups for the creation of multinational thematic and research networks, as well as promoting contacts for future collaborative joint projects within some of the American-funded programs and other transnational collaborative programs.

Some important topics addressed at the conference were the analytical techniques focused on the microstructural, chemical, optical, electronic and magnetic properties of materials. These included metals, alloys, ceramics, steels, composites, concrete, and surface coatings prepared by a wide variety of techniques.

Structural characterization techniques included scanning electron microscopy (SEM), X-ray diffraction (XRD),

transmission electron microscopy (TEM), atomic force microscopy (AFM), light optical microscopy (LOM), atomic absorption, luminescence, thermo luminescence, energy transfer, photorefractive effect, birefringence, photocatalysis, photoconductivity, birefringence and laser emission. Theoretical models developed from these properties are also featured.

The symposium program included 44 oral and 203 poster presentations. In addition, invited talks were focused on the potential application of nano materials in various fields of application especially in the area of energy conservation devices and corrosion prevention applications. Among the 66 articles submitted to the conference, about 30 articles were selected after peer review and were recommended for publication in this special issue.

We would like to thank the members of the International Scientific Advisory Committee, as well as the reviewers for their valuable comments, which have certainly helped to improve the quality of the manuscripts. We also wish to thank the Mexican Academy of Materials Science, Instituto Mexicano del Petróleo, D.F. México and Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Monterrey, Mexico, for their support in organizing the symposium.

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