Final Call for Papers Issued for 15th International Conference on Microscopy of Semiconducting Materials

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The 15th International Conference on Microscopy of Semiconducting Materials will be held at the University of Cambridge April 2–5, 2007. The conference will focus on the latest developments in the study of the structural and electrical properties of semiconductors by the application of transmission and scanning electron microscopy, scanning probe microscopy, and x-ray-based methods. The abstract deadline is December 6, 2006.

Conference sessions will concentrate on key topics including state-of-the-art studies in high-resolution imaging and analytical electron microscopy; advanced scanning probe microscopy, scanning electron microscopy, and focused ion-beam applications; novel epitaxial layer phenomena; the properties of quantum nanostructures; III–nitride developments; GeSi/Si for advanced devices; metal–semiconductor contacts; and silicides and the important effects of critical device processing treatments.


The conference proceedings will be published, and contributed papers are requested in all above areas. The conference chairs are Tony Cullis (Sheffield Univ.) and Paul Midgley (Univ. of Cambridge). The conference is endorsed by the Materials Research Society. Further details and information on abstract submission and registration can be accessed from Web site http://conferences.iop.org/MSMXV or by e-mail to claire.garland@iop.org.

UPCOMING CONFERENCES

New materials with nanoscale porosity are now being created as a result of developments in synthetic chemistry and materials science. These include metalorganic frameworks, aluminum and anodized alumina, and sol-gel-derived materials. These materials have pores ranging in size from a few angstroms to tens of nanometers and exhibit many interesting properties: extremely high surface area, low density, gas storage capacity, selective molecular binding, remarkable high-temperature stability, luminosity, and ferro- or antiferromagnetism. Methods to control pore size are improving and the application of high-level quantum chemistry methods are beginning to reveal the mechanisms behind some of their unusual properties. As a result, there is growing interest in a host of applications, including gas storage, separations, catalysis, drug delivery, and sensing.

Symposium J3, “Nanoporous Materials: Chemistry and Applications,” which is being held as part of the Spring 2007 Meeting of the Electrochemical Society in Chicago May 6–11, 2007, will highlight the latest developments in the field of nanoporous materials, particularly their chemical aspects, but also critical issues in materials science required for their development. Papers in the following areas are solicited: (1) synthetic and reaction chemistry of nanoporous materials, including metalorganic frameworks or coordination polymers, anodized aluminum oxide, carbon nanotubes, block copolymers, and more traditional nanoporous materials such as zeolites; (2) formation of nanoporous films or material hybrids on substrates or supports to enable gas- or liquid-phase separations and high-temperature applications such as catalysis; (3) modeling and theory to predict and optimize the pore environment; (4) measurements and characterization, including gas sorption, diffusion, catalysis, and electro-optical properties; (5) development of devices such as molecular sensors, separation membranes, batteries, and fuel cells; and (6) novel applications such as targeted drug delivery.