

## UPCOMING CONFERENCES

### MORIS 2006 to be Held in Japan

[www.ecs.cst.nihon-u.ac.jp/moris2006ws](http://www.ecs.cst.nihon-u.ac.jp/moris2006ws)

The Workshop on Thermal and Optical Magnetic Materials and Devices (MORIS 2006) will be held June 6–8, 2006, at the Tomiura Royal Hotel in Chiba, Japan. Thermomagnetic physics has progressed as its use in the recording process for magneto-optical disks has spread toward application to HDDs and magnetic random-access memory (MRAM). In addition, magneto-optical effects have been actively studied for magnetophotonic crystals in new functional devices. The workshop chair is Masahiko Kaneko (Sony Corp.).

Topics related to thermomagnetism and magneto-optics will be discussed, from

basic physics through applications, including materials, components, measurements, theory and physics, system design, simulations, devices, and high-density recording. The topics include hybrid recording (heat-assisted magnetic recording), high anisotropy recording materials, thermally assisted MRAM, thermal aspects of spintronics, thermomagnetic phenomena and micromagnetics, magnetic semiconductors, fast magnetization reversal and spin dynamics, magnetophotonic crystals, magneto-optical effects, magneto-optical recording, magneto-optical devices and components,

magnetic microscopy and measurements, nanoparticles, and nanostructures.

**The deadline for abstracts is March 6, 2006.**

The meeting is sponsored by the Magnetics Society of Japan and endorsed by the Materials Research Society. For more information, contact MORIS 2006 Workshop Secretariat, Proactive Inc., Promena Kobe 16F, 1-8-1, Higashikawasaki-cho, Chuo-ku, Kobe 650-0044, Japan; tel. 81-78-366-5050, fax 81-78-366-5051, e-mail [moris2006ws@pac.ne.jp](mailto:moris2006ws@pac.ne.jp), or Web site [www.ecs.cst.nihon-u.ac.jp/moris2006ws](http://www.ecs.cst.nihon-u.ac.jp/moris2006ws).

### Gordon Research Conference to be Held in August 2005

[www.grc.org/programs/2005/combhigh.htm](http://www.grc.org/programs/2005/combhigh.htm)

The Gordon Research Conference on Combinatorial and High-Throughput Materials Science III will be held August 14–19, 2005, at the Queen's College, Oxford, U.K. The workshop chairs are James N. Cawse of GE Global Research in the United States and Wilhelm F. Maier of the University of the Saarland in Germany.

Materials—solids with a function—rule technological development and are thus intimately connected to humankind's standard of living. The worldwide demand for better materials is infinite. Often little is known about the connection of chemical composition and microstructure to final function, so materials development is a time-consuming, tedious, and highly empirical task. With the onset of combinatorial approaches to materials development and discovery 10 years ago, a new technology has emerged that allows significant acceleration of research and development through parallel and rapid sequential experimentation. The technology is highly interdisciplinary and the field has developed rapidly.

Combinatorial materials research is much more complex than the traditional "one at a time" approach in research and development. The combinatorial workflow is composed of the following:

- high-throughput synthesis of materials libraries;
- their functional characterization;
- associated software to effectively screen the libraries;
- experimental design, the tools for planning the libraries; and
- data mining, optimization, and search strategies.

In this third Gordon Research Conference on the topic, the focus is slowly shifting from the technological developments and optimization to actual discoveries of new materials as well as of new knowledge and the theoretical and practical problems associated with infinite parameter spaces. Therefore, this conference will not only present the state of the art in the field, but also introduce the challenging problems of the future. A group of internationally renowned

speakers and discussion leaders has been assembled. While all the talks have been filled, submission of posters in the field is encouraged.

The conference will be held in the historic precincts of the Queen's College, Oxford. Meals will be served in the dining hall, while the talks will be given in a state-of-the-art lecture hall. The format of the Gordon Conferences allows ample time for exploration of colleges and the city of Oxford. Tours and demonstrations of the history, arts, and sciences of the colleges will be available.

The registration fee for the conference is \$1000, which includes lodging and all meals. Support is available for students and junior faculty. Requests for support should be entered in the "Activities" box at the end of the online registration form at Web site [www.grc.org](http://www.grc.org). Poster submissions improve the chances of obtaining support.

The conference is endorsed by the Materials Research Society. For more information, access Web site [www.grc.org/programs/2005/combhigh.htm](http://www.grc.org/programs/2005/combhigh.htm).

### The 29th International Symposium on the Scientific Basis for Nuclear Waste Management to be Held in September 2005

[www.sckcen.be/MRS2005](http://www.sckcen.be/MRS2005)

The 29th International Symposium on the Scientific Basis for Nuclear Waste Management, organized by SCK-CEN (the Belgian Nuclear Research Centre) in cooperation with the Materials Research Society, will be held in Ghent, Belgium, September 12–16, 2005. The conference chair is Pierre Van Iseghem (SCK-CEN, Belgium). The aim of this symposium is to gather people working in the field of

nuclear waste management, in particular on the characterization of the different engineered and natural barriers in view of the final disposal of long-living and high-level radioactive waste.

The technical sessions of the conference will concentrate on waste forms (e.g., spent fuel, glass, ceramics, cement, and bitumen), container materials, radionuclide behavior, natural analogues, inte-

grated processes, and performance assessment. The session on integrated processes will highlight a new focus in current research and development, considering interactions between the different barriers of the disposal concept.

Internationally acknowledged speakers will present keynote lectures. These include B. Grambow (Subatech), "Chemical Processes in the Near Field"; C. Poinssot

(CEA), "Spent Fuel Behavior in Geological Disposal Condition"; G. Lumpkin (University of Cambridge), "Radiation Damage in Ceramics"; and H. Geckeis (FZK), "Radio-nuclide Behavior in Disposal Conditions." D. Feron (CEA) will review two international seminars on "Prediction of the Long-Term Behavior of Container Materials," and E. Wieland (PSI) will summarize an international seminar on "Cements in Radioactive Waste Management." S. Voinis (NEA) will present the NEA project on "Engineered Barrier Systems," and J.L. Gonzales (IAEA) will review the "Joint

Research Projects of IAEA on High-Level Waste in Disposal Conditions." Some of the new projects sponsored by the European Commission on nuclear waste management will also be highlighted. Other keynote lectures will address the status of some of the most advanced disposal sites. Latest developments in Belgium will be highlighted by R. Gens (ONDRAF/NIRAS), "The Supercontainer Disposal Concept"; and by E. Valcke (SCK-CEN) "The CORALUS *In Situ* Test."

Technical tours will be organized on Friday, September 16. Attendees will have

the choice of visiting the nuclear research center in Mol, with a visit to the Hades underground laboratory and Belgoprocess, a company involved in the conditioning and storage of radioactive waste; the Soulaïnes surface storage site in France; or the Jülich Nuclear Research Institute in Germany.

Further information on registration and the technical program will be updated on the conference Web site at [www.sckcen.be/MRS2005](http://www.sckcen.be/MRS2005). For general information, contact Semico NV at tel. 32-9-233-86-60, fax 32-9-233-85-97, or e-mail [MRS2005@sckcen.be](mailto:MRS2005@sckcen.be).

## IEEE Integrated Reliability Workshop 2005 to be Held in October

[www.iirw.org](http://www.iirw.org)

The IEEE International Integrated Reliability Workshop 2005 (IRW 2005) will be held October 17–20, 2005, at Stanford Sierra Conference Center in Fallen Leaf Lake, Calif. The general chair is Rolf-Peter Vollertsen of Infineon Technologies. The workshop focuses on ensuring semiconductor reliability through fabrication, design, testing, characterization, and simulation, as well as the identification of the root-cause defects and physical mechanisms responsible for reliability problems. It provides an environment for understanding, developing, and sharing reliability technology for present and

future semiconductor applications as well as ample opportunity for discussions and interactions among colleagues.

Hot reliability topics for the workshop include high- $\kappa$  and nitrided SiO<sub>2</sub> gate dielectrics, product reliability and burn-in, negative bias temperature instability, Cu interconnects and low- $\kappa$  dielectrics, reliability modeling and simulation, SiGe and strained Si, III–V, silicon-on-insulator, optoelectronics, single event upsets, and reliability assessment of novel devices and future nanotechnologies.

The deadline for abstracts is July 1, 2005. Erwin Hammerl, director of reliability

methodology at Infineon Technologies, will present the keynote address, "Status and Future Trends in Technology Reliability: Balancing Technical Challenges and Affordability." Discussion groups and special interest groups will be developed to address particular topics, and eight tutorials have been scheduled.

The workshop is sponsored by the IEEE Electron Device Society and the IEEE Reliability Society. For more information, access the IRW 2005 Web site at [www.iirw.org](http://www.iirw.org).

## Africa-MRS-Conf3 to be Held December 2005 in Morocco

[www.africamrsconf3.univ.ma](http://www.africamrsconf3.univ.ma)

The third International Conference of the African Materials Research Society (Africa-MRS-Conf3), organized by the Université Hassan II Mohammedia, Morocco, will be held in Marrakech December 7–10, 2005. The chair is A. El Jazouli. The aim of the conference is to contribute to the development of materials education, research, and industrial manufacturing in Africa.

This meeting will be an opportunity for African scientists and their colleagues from all parts of the world to meet, discuss, share their research findings, and explore possibilities for stimulating collaboration in developing materials research and education in Africa. It is a continuation from the first and second conferences that were held, respectively, in Dakar, Senegal (2002), and Johannesburg, South Africa (2003).

The topics include:

- processing, testing, and characterization of materials;
- infrastructure materials;
- materials for energy production;
- polymers, composites, glasses, ceramics, metals, alloys, and oxides;
- raw materials beneficiation (e.g., phosphates and clay);
- materials recycling;
- materials for acoustics;
- nanomaterials;
- biomaterials;
- materials for the environment;
- computational aspects of materials;
- materials education;
- materials for water treatment;
- materials for environmental applications;
- materials for medical applications; and

- catalytic, electrical, magnetic, mechanical, optical and thermal properties of materials.

The deadline for abstracts is July 31, 2005. Abstracts should be sent by e-mail to [africamrsconf3@yahoo.fr](mailto:africamrsconf3@yahoo.fr); they should include the paper title, the names of all authors, the complete postal and e-mail addresses of the corresponding author, and a short abstract. After the review process, all accepted papers will be published in the conference proceedings.

For more information, contact Abdelaziz El Jazouli, Université Hassan II Mohammedia, LCMS, Faculté des Sciences Ben M'Sik, Avenue Idriss Elharty, BP 7995, Casablanca, Morocco; tel. 212-63-29-64-31; fax 212-22-70-46-75; e-mail [africamrsconf3@yahoo.fr](mailto:africamrsconf3@yahoo.fr); or [www.africamrsconf3.univ.ma](http://www.africamrsconf3.univ.ma). □

## Three-Dimensional Multifunctional Ceramic Composites Workshop

October 3–5, 2005 • Beckman Institute • University of Illinois at Urbana-Champaign

**For the most up-to-date information, visit [www.mrs.org/meetings/workshops](http://www.mrs.org/meetings/workshops)**