

## Conference Call

Michio Sorai, the plenary lecturer, speaking on "Entropy Diagnosis for Phase Transitions Occurring in Functional Materials." Juliana Boerio-Goates gave the invited lecture. Symposium eight was on Industrial Thermodynamics and Data Bases, with a plenary lecture by Michael Fenkel on "Global Communications and Expert Systems in Thermodynamics: Connecting Property Measurement and Chemical Process Design." Invited lectures were given by Pertti Koukkari and Zhoulun Yin.

The conference featured three workshops: Workshop on Thermodynamic Frontiers and Education, with invited lecturer Kazuya Saito; The Ionic Liquids Workshop, with invited lecturers Joan Brennecke and Andreas Heintz; Workshop on New Experimental Techniques, including Nanotechnology, with invited lecturers Joon Won Park and Junko Morikawa. In addition, there were 189 oral presentations, spread over the symposia and workshops, and 283 poster presentations.

The Rossini lecture and the plenary lectures will be published in *Pure and Applied Chemistry*. Selected papers from individual symposia will be published in a variety of other journals.

The plenary and invited lectures demonstrated how chemical thermodynamics is making important and unparalleled contributions to innovative and rapidly developing, interdisciplinary fields such as life sciences, new materials, medicine and pharmacy, agriculture, and green chemistry. These issues are particularly important for those who are in developing or economically disadvantaged. A great benefit of the conference was the opportunity it provided for face-to-face discussion and communication with scientists from developed countries. This should lead to further research and improved education.

Thermodynamics will continue to be an important area of research for many years to come, with a wide range of applications from chemical engineering to the bio-sciences. We look forward to the presentation and discussion of the results of further advances in chemical thermodynamics at the next ICCT, which will take place in Boulder, Colorado, USA, in 2006.

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## Phosphorus Chemistry

by Pascal Metivier

The **16th International Conference on Phosphorus Chemistry** was held 4–9 July 2004 in Birmingham, England, UK. This tri-annual conference provides a forum for the scientific community to discuss the latest results in the field as well as potential future developments.

The conference, which attracted 480 delegates from 35 countries, offered 156 oral presentations and 240 posters. An important part of the conference has been devoted to the application side of phosphorus chemistry, which has encouraged strong industry participation. This conference was sponsored by Rhodia, one of the major phosphorus chemical manufacturers.

The major trends that can be drawn from this conference are the following:

- Phosphorus chemistry is one field where innovative and "non classical" type structures can be obtained. Most of these structures present very specific electronic properties, which opens new horizons in terms of potential applications.
- Research into polymers containing phosphorus moiety is an important emerging area, with potential implications for surface science and biochemistry.
- There is a clear shift in phosphorus chemistry toward catalysis and surface science. In turn, there is diminishing interest in research and development for some of the more classical applications such as agrochemicals or flame-retardants.
- Biological and medicinal chemistry remains one of the key fields for phosphorus chemistry, with the continuing development of oligonucleotides and their use as antisense drugs and the use of phosphorous for antiviral applications and treating bone related diseases.

Full abstracts of oral and poster presentations, as well as photos, are available at the conference Web site <[www.icpc2004.com](http://www.icpc2004.com)>.

The next conference will be held in Xiamen, China, in 2007. Professor Yufen Zhao will be the conference chairman.

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