Natural Products and Biodiversity

*Pure and Applied Chemistry*

This special topic issue includes reviews and research papers based on lectures presented at the 25th International Symposium on Chemistry of Natural Products (ISCNP-25) and the 5th International Conference on Biodiversity (ICOB-5), held jointly in Kyoto, Japan, 23–28 July 2006, on the theme of natural products. For a conference report, see Jan-Feb 2007 CI, p. 29.

The natural products theme is deeply rooted in the culture of IUPAC. The first International Symposium on the Chemistry of Natural Products (ISCNP), held 15–25 August 1960, with Sir Alexander Todd (later, Lord Todd) as president, can claim particular credit in the history of the Union. Not only did it take an early bold step toward the truly global reach that characterizes IUPAC conferences in the modern era, but it was the harbinger of numerous sponsored or Union-initiated series devoted to other areas of specialization in the chemical sciences.

International delegates to the inaugural event undertook the then nontrivial journey to Melbourne, Canberra, and Sydney, Australia with an excursion to New Guinea, to participate in a scientific program in which structural elucidation and synthesis were dominant themes, and most familiar modern tools and techniques were still in their infancy. Natural products lore still celebrates the names of certain pioneers who contributed to that first program.

As a series, this hardy biennial has since been hosted throughout the world, and has faithfully served a huge international community of scientists engaged in every conceivable aspect of natural products chemistry. The terms of reference for the ISCNPs series have recently been adapted following a decision to merge with the younger series of International Conferences on Biodiversity (ICOB). This step was inaugurated with ISCNP-24/ICOB-4, which was held in New Delhi, India, from 26–31 January 2004. The change exemplifies the evolving nature of the subject, and its ongoing appeal to scientists engaged in exploring and developing less familiar disciplinary interfaces, as well as traditional mainstream areas. It is thus unsurprising that natural products should be a Special Topic theme for a second time in the recent history of *Pure and Applied Chemistry (PAC)*; see PAC Vol. 75, No. 2–3, pp. 141–419 (2003), for a collection of papers based upon presentations at ISCNP-23, held in Florence, Italy, from 28 July–2 August 2002. That program featured fresh insights into proteomics, genetics, and molecular biology, a trend that ISCNP-25/ICOB-5 has continued to develop. The program also covered related and new features of bioactivity at the molecular level and chemical biological themes, whilst also paying homage to enduring favorites such as structure and synthesis.

It is noteworthy that the Kyoto meeting represents the third occasion that the series has been hosted in Japan, the home of some quite extraordinary manifestations of natural products and biodiversity, as well as some of the outstanding practitioners of the subject. The program of ISCNP-25/ICOB-5 rightly captures some of this local character, but is also a fully repre-
sentative expression of the international participation and appeal that traditionally characterizes the series. It is a pleasure to acknowledge the able and enthusiastic support of the conference editor, Hideo Kigoshi, in preparing this Special Topic issue of 27 topical papers based upon program presentations. The collection aspires to offer an enduring archival record of a subject that continues to reinvent itself, and to astound and challenge its practitioners with the apparently boundless molecular riches of the biosphere.

Foreword by James R. Bull, PAC scientific editor
Preface by Daisuke Uemura, chairman of the conference organizing committee

Advanced Polymers for Emerging Technologies
B.C. Kim and K.D. Ahn, editors
Macromolecular Symposia, Vol. 249/250
Wiley-VCH, 2007, pp. 1–667

Polymers are very versatile materials whose properties and functionalities can be easily manipulated. Owing to these advantages, polymers are finding new applications in electronic, photonic, biomedical, and energy industries. The desired properties of polymers may be obtained through various methods: by designing new polymer molecules and molecular architecture, by blending or hybridizing with other functional materials, and by regulating micro- and nano-structures by adopting specialized processing techniques.

This issue collects many of the research papers presented at the Advanced Polymers for Emerging Technologies symposium that took place in Busan, South Korea, 10–13 October 2006. The first volume offers some innovative ideas for future specialty polymers and the second volume provides solutions to problems frequently encountered in the polymer industry.

Thermodynamics, Solubility and Environmental Issues
Trevor M. Letcher (ed.)
Elsevier, 2007

Environmental problems are becoming an important aspect of our lives as industries grow apace with populations throughout the world. Thermodynamics, Solubility and Environmental Issues highlights some of the problems and shows how chemistry can help to reduce them. The unifying theme is solubility—the most basic and important of thermodynamic properties. This informative book looks at the importance and applications of solubility and thermodynamics, in understanding and in reducing chemical pollution in the environment.

Written by experts in their respective fields, the book represents the latest findings in this very important and broad area. A collection of 25 chapters cover a wide range of topics, including mining, polymer manufacture and applications, radioactive wastes, industries in general, agro-chemicals, soil pollution and biology, together with the basic theory of, and recent developments in, the modeling of environmental pollutants. This reference is suitable for consultants, industrial/local authority scientists, researchers, and graduate and post-graduate students.