Preface

Organic synthesis continues to grow and develop impressively in response to new research challenges at the boundaries of structural complexity, while playing a central role in the industrial activities and applications of the chemical sciences. The International Conferences on Organic Synthesis (ICOS), which have been organized biennially around the world since 1976 under IUPAC sponsorship, faithfully reflect this growth and development.

The 16th event in this series (ICOS-16) was held in Mérida, México, from 11 to 15 June 2006. The scientific program included 22 plenary and invited speakers, as well as 36 experts who participated in symposia on medicinal chemistry, organocatalysis, enantioselective synthesis of β-amino acids, organolithium compounds in organic synthesis, organic selenium and tellurium compounds in organic synthesis, and applications of microwaves in organic synthesis. In addition, almost 300 posters covering all aspects of modern organic synthesis were displayed by scientists and research scholars. The strong Latin American participation in this feature of the program, followed by those of European, North American, and Asian delegates, attested to the growing contribution of this region to chemical research in organic synthesis. Overall, the scientific program offered comprehensive and fruitful coverage of organic synthesis from a variety of different perspectives.

The Mexican Academy of Sciences and the Mexican Chemical Society (celebrating its 50th Anniversary) featured as cosponsors of ICOS-16 together with IUPAC. This was the second occasion that an IUPAC-sponsored conference has been held in Mexico, the first being the 6th International Symposium on Natural Products Chemistry in Mexico City, in 1969. ICOS-16 attracted almost 500 delegates from 40 countries, mainly those of Latin America, a gratifyingly high proportion of whom were younger scientists.

This issue of *Pure and Applied Chemistry* contains a representative selection of papers based upon lectures delivered at ICOS-16. The theme of synthesis of natural products was covered by M. Brimble (New Zealand), L. C. Dias (Brazil), and C. Gennari (Italy). Different aspects on methodology and control of chemical reactivity were presented by J. Tamariz (Mexico), S. F. Martin (USA), S. Ma (China), and Ph. Renaud (Switzerland). Organic synthesis using phosphorous was covered by R. Réau (France) and C. Nájera (Spain). The broad topic of catalysis was presented by S. Kobayashi (Japan) and C. Crudden (USA). New insights on synthesis using epoxides and aziridines were disclosed by D. Hodgson (UK) and F. McDonald (USA).

Organic synthesis is a fascinating field of chemistry that has often been compared with art. The control of regio-, stereo-, and site selectivity demands deep insight into chemical reactivity as well as knowledge of new and old methodology and catalysis, and the ability to combine these creatively in sustainable processes in order to achieve specific objectives. Despite remarkable progress during recent years, efficient synthesis of specific organic compounds with tailored activities and properties will continue to challenge future generations of chemists. Further progress of organic synthesis will be covered during the next conference in this series (ICOS-17), which will take place in Korea during 2008.

Thanks are due to members of the ICOS-16 Committees, to all participants, and to authors contributing to this issue.

Guillermo Delgado
Conference Editor