

Organometallics in Organic Synthesis

Pure and Applied Chemistry
Vol. 78, No. 2, pp. 197–523 (2006)

This Special Topic Issue includes reviews and research papers based on lectures presented at the 13th IUPAC International Symposium on Organometallic Chemistry Directed Towards Organic Synthesis (OMCOS-13), Geneva, Switzerland, 17–21 July 2005; Foreward, J.R. Bull (PAC Scientific Editor); Preface, A. Alexakis and E.P. Kündig (OMCOS-13 co-chairs).

The past 25 years have witnessed some quite extraordinary advances in the development and synthetic application of organometallic reagents and catalysts. In 2001, Sharpless, Noyori, and Knowles received the Nobel Prize for their work in this area of chemistry; and the high profile has been maintained by the award of the 2005 Nobel Prize in Chemistry to Chauvin, Grubbs, and Schrock for the development of the metathesis method in organic synthesis. These advances are also reflected in the history of the conference series Organometallic Chemistry Directed Towards Organic Synthesis (OMCOS), which has established itself as a popular and enduring international forum for presentation and discussion of mainstream developments and opportunities in this field.

The series was inaugurated in Fort Collins, Colorado, USA in 1981. Proceedings of the plenary program of that event were published in *PAC* **53**(12), 1981, and the topic has since become a regular feature in the Journal, with the distinction of having recorded some of the seminal advances of the period. Indeed, as the OMCOS series has grown in support and stature over the years, it has played a leading role in a trend toward more in-depth coverage of the scientific proceedings of selected IUPAC-sponsored conferences.

This Special Topic issue is devoted to exclusive coverage of OMCOS-13. No less than 37 papers drawn from invitations to all invited presenters on the main lecture program and a selection of meritorious contributed works feature, and constitute a salute to the centrality of, this theme in modern organic synthesis. It is also a tribute to the exceptional efforts of the organizers and authors, whose energy and cooperation have ensured an expeditious passage to publication of this representative record of an outstanding event.

OMCOS-13 had a record number of nearly 1200 participants from 41 countries, and there was an encouragingly high proportion of young scientists in

attendance. Very strong Asian participation at this conference reflected the outstanding level of research and leadership in this field from countries such as Japan, China, South Korea, and Taiwan.

Prof. Shengming Ma, from the Shanghai Institute of Organic Chemistry of the Chinese Academy of Science and the Department of Chemistry, Zhejiang University, China received the OMCOS-13 Award (sponsored by the Yen Chuang Foundation and Springer Verlag). The prize was awarded for his creative research contributions in the field of transition-metal-catalyzed reactions of allenes.

Apart from the OMCOS-13 Award lecture, there were 23 plenary lectures and 20 oral communications that dealt with aspects of reactivity and chemoselectivity of main group and transition metal organometallics. Stereoselectivity issues also figured prominently with a particular emphasis on asymmetric synthesis and catalysis. Mechanistic insights, new reagents for synthesis, new catalyst- and ligand-design and ligand-effects were other important topics. For many of the speakers, total synthesis was the "proving ground" for new or enhanced reactions that demonstrate new levels of selectivity and functional group tolerance. At the other end of the scale, the wealth of practical methods for the flexible synthesis of important building blocks continues to grow. Organometallic methods rest at the heart of the "tool-box" of organic synthesis with the quest for further increases in reactivity, versatility and selectivity.

The quality of the 620 posters that were on display during the entire conference was also outstanding. This extraordinary poster session was highlighted with the Monday evening "poster party" and culminated in the awarding of 37 poster prizes.

The 14th edition of OMCOS will be held in Nara, Japan (2–6 Aug 2007) under the chairmanship of Prof. Koichiro Oshima, Kyoto.



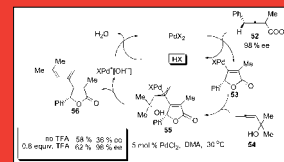
www.iupac.org/publications/pac/2006/7802



IUPAC Official Journal of the
International Union of
Pure and Applied Chemistry

Pure and Applied Chemistry

*Special Topic Issue on the Theme of
Organometallics in Organic Synthesis*



Volume 78, No. 2, February 2006

Special Topic Issue