OMCOS 11

Taipei

2001

OMCOS 11,
Taipei, July 22-26, 2001

The year 2001 marked the first OMCOS meeting in twenty-first century and commemorated the 50th anniversary of the discovery of ferrocene, laying the cornerstone for the field of organometallic chemistry. We were fortunate to organize the 11th OMCOS symposium at the Grand Hotel in Taipei, a vibrant city where East meets West. The venue is a typical Chinese palace-like architecture and the conference was held on the top floor of the Hotel where you can view the landscape of Taipei City. Following the tradition of the OMCOS meetings, the five-day conference began with a reception party on Sunday evening. Dr. Ying-jeou Ma, the then mayor of Taipei City made an opening address at the party.

The conference venue-the Grand Hotel, Taipei.

The meeting attracted 880 participants from all over the world. There were two keynote lectures, five plenary lectures, one OMCOS (Springer) Award lecture, nineteen invited and twenty-four short lectures in addition to about four hundred poster presentations. I should add that two speakers of the conference, Robert H Grubbs and Ei-ichi Negishi won the Nobel prizes in chemistry in 2005 and 2010, respectively.

We were honored to have first two keynote lectures delivered by Professor F. Albert Cotton of Texas A&M University and Professor Akio Yamamoto of Waseda University in commemoration of the ferrocene discovery and the development of organometallic chemistry. Professor Cotton, who witnessed the events in early fifties, shared the story on the true nature of ferrocene led by the research teams of G. Wilkinson and R. B. Woodward at Harvard and E. O. Fischer in Munich. Professor Yamamoto, on the other hand, foresaw the development of environmentally benign processes catalyzed by transition metal complexes. Indeed, recent advances in the C-H activation chemistry, for example, belong to one of these attractive approaches towards this purpose.

The OMCOS award, sponsored by the Springer Verlag and the Yen-Chuang Foundation, was presented to Professor Gregory C. Fu of MIT for his outstanding contributions to the development of new catalytic systems in organic synthesis. The pioneering work on the cross coupling reactions involving nonactivating aliphatic C-X bonds was discussed. Invited speakers including the 2010 Nobel laureate, Professor Ei-ichi Negishi of Purdue University, Professor Marta Catallani of University of Parma, Lanny S. Liebeskind of Emory University and Professor Masato Tanaka of National Institute of Advanced Industrial Science and Tachnology, Tsukuba gave broad view on the versatility and applications of the cross coupling reactions. The use of functionalized organometallics for stereoselective reactions was presented by Professor Paul Knochel of Munich. Various aspects of these important reactions have been demonstrated to be powerful for the synthesis of complex polyfunctional target molecules. The last plenary lecture was offered by Professor Robert H. Grubbs of Caltech. Needless to say, his important contributions to this area enabled him to share the Nobel Prize in chemistry in 2005 with Professors Yves Chauvin and Richard R. Schrock.

Professor Ben L Feringa of the University of Groningen showed beautiful examples on the control and amplification of chirality by transition metal catalysis. Tandem conjugate addition-aldol reactions, ring annulations and kinetic resolutions were presented. Other talks on asymmetric synthesis involve Professor Jean-Pierre Genet's (CNRS, ENSCP, Paris) ruthenium asymmetric hydrogenation, and Professor A. Alexakis' (Geneva) copper-meidated Michael addition. Professor Shun-Ichi Murahashi of Osaka University shared his story on the use of low valent ruthenium hydride complexes and related transition metal hydride complexes to serve as the Lewis acid and base catalysts with low redox potentials. Professor Keiji Maruoka of Kyoto University described bidentate Lewis acid catalysis in asymmetric synthesis.

The total synthesis plenary talk was given by Professor Paul A. Wender of Stanford University who focused on the synthesis and investigation of molecules of structural, biological and medicinal significance. A series of metal-catalyzed cycloaddition reactions that produced various ring sizes including medium rings for multicomponent syntheses of complex materials. Another rhenium oxide based oxidative novel cyclizatoin reactions leading polyether syntheses were reported by Professor Ehud Keinan of Technion. Professor Alain Krief of Namur described the asymmetric catalytic dihydroxylation of double bonds using air as the co-oxidant.

The use of the Pauson Khand reaction for cyclopentenone was discussed by Nakcheol Jeong of Korea University and Miquel A. Pericas of Universitat de Barcelona. Professor Iwao Ojima of SUNY at Stony Brook, on

the other hand, used rhodium-based cyclization reactions leading to polycyclic products from the corresponding acyclic derivatives. Professor John Montgomery of the University of Michigan showed the powerful nickel-catlyzed cyclizations of alkynyl enones and alkynyl enals. Professor Chien-Hong Cheng of National Tsing Hua University highlighted the nickel-catalyzed cycloaddtion reactions involving strained cyclic alkenes. The application of arene chromium complexes with functionalized anellated rings for the synthesis of highly substituted polycycles were described by Holger Butenschön of Hanover University..

Main group organometallic compound in organic synthesis were also an important part of this OMCOS meeting. Professor Robert A. Batey of University of Toronto described the usefulness of organboron compounds for a variety of C-C bond forming reactions. Professor Koichi Narasaka of University of Tokyo described the metal assisted amination with oxime derivatives. The use of metallated methoxyallenes for heterocycle synthesis was reported by Professor Hans-Ulrich Reissig of Free University of Berlin. Professor William B. Motherwell gave a talk on the use of organozinc for C-C bond formation.

PostOMCOS- Symposium—Thirty Years of the Cross-Coupling Reaction—
July 27-29, 2001, Kyoto Research Park, Japan

Immediately after the OMCOS-11, Professor Kohei Tamao of Kyoto University organized a post meeting on 30th anniversary for the discovery of the cross coupling reactions. All important pioneers s in this area including Robert J. P Corriu, Jay K. Kochi, Makoto Kumada, Ei-ichi Negeshi, Akira Suzuki, Kohei Tamao, Akio Yamamoto, etc. participated in this landmark meeting. They presented the first hand story on the discovery and development of the cross coupling reactions.

A picture of key scientists who attended the International Symposium on "Thirty Years of the Cross Coupling Reaction" held on July 27-29 in Kyoto.(Reprint with permission from the Journal of Organometallic Chemistry).

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Dr. Ying-jeou Ma, the then mayor of Taipei City addressed in the opening ceremony.

At the welcome reception.

Robert H. Grubbs gave a plenary lecture.

Buffet dinner at a poster session.

A corner of a poster session.

Professor Jiro Tsuji showed his memory talent at the OMCOS award dinner.

Professor Gregory C. Fu received the OMCOS award from Professor Jiro Tsiji.

Professor Eiichi Nakamura played flute at the OMCOS award dinner.

Chinese opera at the conference dinner.