

OMCOS-15 Symposium Report



OMCOS traditionally brings together chemists from industry and academia from all over the world to present and discuss the latest advances in new metal-catalysed and metal-mediated reactions, novel preparations and reactions of organometallic reagents, mechanistic insights into important metal-based reactions, and new or improved methods for the synthesis of functional molecules and materials, in which the metal plays a key role. In 2009 the symposium came to the UK for the first time and was no exception. Since Glasgow is the hometown of Prof. Peter Pauson (synthesis of ferrocene; Pauson-Khand reaction), one can even say that OMCOS came home, after so many years. The Glasgow Royal Concert Hall, located in the heart of the city, was a great venue, with excellent acoustics and all the facilities required for a successful symposium, with functioning projection, mobile microphones for discussion, stage lighting, and sufficient space for poster display and mingling.



The symposium programme featured 39 oral presentations, divided into 1 Award Lecture, 5 Plenary Lectures, 18 Invited Lectures and 15 short communications, all in a single session format. The list of oral presenters is shown below; many of these contributions have then been published (Pure Appl. Chem. 2010, 82, 1353-1568). About 350 poster presentations contributed to this exciting event and highlighted the strength, diversity, and novelty, with which this science is be-

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ing practiced; 12 of these were awarded by prizes, generously supported by Thieme. The poster display and scientific exhibition were accessible throughout the symposium.

OMCOS-15 had a record number of Nobel



Prize laureates: two, who received the prize earlier, and one, who was awarded in the following year. The OMCOS-15 Award went to Prof. Keith Fagnou of the University of Ottawa, Canada, for his pioneering work on CH activation and this hot topic resonated in a number of other contributions presented in Glasgow. With great sadness, we learned that not long after the OMCOS symposium,

Keith died of the swine flu.

The credit crunch of 2008/2009 reflected in delegate numbers and the level of sponsorship. This all had placed a great deal of strain on the organizers and forced them to make drastic cuts in the budget to reduce the daunting deficit (at one point it looked like £70,000) to a more acceptable level. Under these circumstances, we were particularly grateful to our sponsors, who remained loyal and saved us from bankruptcy. On the other hand, we regret that a number of companies either considerably reduced their support or withdrew completely. Several of them actually closed down their operation in the UK in the following years and we fear that this may not be the end of it in view of the current economic climate. Nevertheless, in spite of the bleak economy, OMCOS-15 had over 500 participants, coming from 34 countries, with the strongest delegations from Japan, UK, Germany, and Spain. And we managed, after all, to hold the Symposium Dinner, as promised, in the environment of the magnificent Kelvingrove Gallery.

Plenary and Invited Speaker

Lutz ACKERMANN (Georg-August-Universitaet Göttingen): Transition Metal-Catalyzed Direct Arylations via C-H Bond Cleavages

John BROWN (Oxford University): Cata-

lytic Activation of Hydrogen, Silicon and Fluorine by Palladium Complexes

Naoto CHATANI, (Osaka University): Catalytic Transformations Involving the Cleavage of C-H Bonds and C-C Bonds

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Chien-Tien CHEN (National Taiwan Normal University): Directed Evolution of Chiral Oxidovanadium(V) Methoxides into C4-Symmetric Metal Vanadate-Centered Helical Quadruplexes: Synergistic Mono and Divalent Ion-specific Transport and Asymmetric Catalysis

Janine COSSY (ESPCI, Paris): Efficient access to heterocyclic compounds using metals

P. Andrew EVANS (University of Liverpool): New Multi-Component Transition Metal-Catalyzed Carbocyclization Reactions

Keith FAGNOU (University of Ottawa): OMCOS 15 Award Lecture
Methods for the Preparation and Functionalization of Aromatic Heterocycles

Robert H. GRUBBS (Caltech): The Synthesis of Large and Small Molecules Using Olefin Metathesis Catalysts

A. Stephen HASHMI (University of Heidelberg): Homogeneous Gold Catalysis for Organic Synthesis

Takao IKARIYA (Tokyo Institute of Technology): Concerto Molecular Catalysts for Reductive and Oxidative Transformation

David MILSTEIN (Weizmann Institute of Science): New Catalytic Reactions Based on Cooperative Pincer Ligand Systems

Gary MOLANDER (University of Pennsylvania):

vania): Organotrifluoroborates: Transforming Organoboron Chemistry

John MONTGOMERY (University of Michigan): Discovery and Applications of Nickel-Catalyzed Coupling Processes

Ei-ichi NEGISHI (Purdue University): Transition Metal-Catalyzed Organometallic C-C Bond Formation Reactions That Have Revolutionized Organic Synthesis

Steven NOLAN (University of St Andrews): N-Heterocyclic Carbene Gold Complexes: Versatile and Efficient Homogeneous Catalysts

Tomislav ROVIS (Colorado State University): Catalytic Generation and Interception of Metalacycles: A General Strategy to the Controlled Formation of C-C and C-N Bonds

Richard SCHROCK (MIT): Thousands of Monoalkoxide Pyrrolide (MAP) Catalysts for Olefin Metathesis: Efficiency, Longevity, and Asymmetry at the Metal

Brian STOLZ (Caltech): Complex Natural Products as a Driving Force for Discovery of Transition Metal Catalyzed Asymmetric Reactions

Kazuhiko TAKAI (Okayama University): Rhenium and Manganese Catalyzed Carbon-Carbon Bond Formation Using β -Keto Esters

Lutz F. TIETZE (University of Göttingen):

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Multiple Pd-Catalyzed Transformations for The Synthesis of Natural Products and Materials

Valerio ZANOTTI (University of Bologna): Reactions of Bridging C3 Ligands in Diiron Complexes: Unconventional Routes to new Functionalized Organic Frames

Xumu ZHANG (Rutgers University): Practical Asymmetric Hydrogenation and Hydroformylation

Qi-Lin ZHOU (Nankai University): Asymmetric Carbenoid Insertions into the Heteroatom-Hydrogen Bonds

Sendai)

Masahiro MURAKAMI (Kyoto University)
Laurel SCHAFER (University of British Columbia)

Ken TANAKA (Tokyo University of Agriculture and Technology)

On behalf of the Organizing Committee, I would like to thank all who helped us make OMCOS-15 a success. I am particularly indebted to those who did not hesitate to share the financial burden with us. I wish all the best to the future organizers of OMCOS and hope they will have a less bumpy ride than we had.

Short Communications

Takayoshi ARAI (Chiba University)
André CHARETTE (Université de Montréal)
Philippe DAUBAN (Gif-sur-Yvette)
Paul DAVIES (University of Birmingham)
Vy DONG (University of Toronto)
Timo GEHRING (Karlsruher Institut für Technologie)
Michael GREANEY (University of Edinburgh)
Axel JACOBI VON WANGELIN (University of Cologne)
Anny JUTAND (Ecole Normale Supérieure, Paris)
Norbert KRAUSE (Dortmund University of Technology)
Clément MAZET (University of Geneva)
Itaru NAKAMURA (Tohoku University,



Pavel Kočovský
OMCOS-15 Chair

A few photos from OMCOS-15 are shown on the following pages.



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