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The First International Collaborative and Cooperative Chemistry Symposium

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The First International Collaborative and Cooperative Chemistry Symposium (1-ICCCS) took place on the 15th and 16th November 2010 at the National University of Singapore. Historically, this meeting grew out of initiatives by the Chemistry Department at the National University of Singapore to establish several bilateral research and academic relationships with key universities in Asia and the Asia-Pacific region. A principal mechanism for developing these relationships has been several symposia in which outstanding and promising chemists from these regions are brought together to discuss recent advances in all fields of chemistry. One such symposium between chemists from the University of Queensland and the National University of Singapore was the subject of a previous Research Front in *The Australian Journal of Chemistry – An International Journal for Chemical Science*.[1] This issue of *AJC* contains another Research Front based on the contributions of participants at the 1-ICCCS.

As a participant, the overwhelming impressions created by this symposium were of the quality of chemistry presented and the diversity of the participants. In part this diversity was geographic, with participants from Australia (University of Queensland), China (Peking University, Zhejiang University and Tsinghua University), India (Indian Institute of Technology-Kanpur and University of Hyderabad), Japan (Kyoto University and Ritsumeikan University), South Korea (Seoul National University) and of course Singapore (National University of Singapore). In part, the diversity was due to the breadth of the science presented, with the theme of the symposium *Frontiers in Molecular Design and Synthesis* being broadly interpreted by the organisers. Organic total synthesis and synthetic methodology presentations were accompanied by Materials Chemistry presented from a biological, organic or inorganic perspective, as well as research on biological catalysts and computational chemistry. The submissions to this Research Front nicely mirror the range of science covered at the symposium.

A brief examination of the contributions to this issue demonstrates the scope of the work covered at the symposium. Kita and co-workers (Ritsumeikan University, Japan) have contributed a Communication detailing methodology for producing iodonium salts utilising a 'Green Chemistry' oxidant.[2] Organic synthetic methodology is the subject of a paper involving metal-catalyzed acetylene reactions. Balamurugan[3] (University of Hyberdad) discusses copper-mediated homo- and heterocoupling of terminal acetylenes. Synthesis of biologically relevant molecules is presented in papers contributed by Blanchfield[4] (University of Queensland, Australia) and Chang[5] (National University of Singapore). The former reports the synthesis of a disaccharide for synthetic vaccine construction, while the latter details methodology for the construction of a triazine library via combinatorial chemistry. The theme of bioactive compounds is continued in a paper from De Voss and co-workers[6] (University of Queensland), in which the structure of a novel steroidal saponin from an Australian *Dioscorea* sp. is elucidated. Verma's (Indian Institute of Technology-Kanpur) full paper[7] nicely bridges between biomolecules and materials as he describes the synthesis and optical properties of a biotin-cholesterol conjugate which may be useful in studying biomolecular interactions. Several full papers from Indian authors deal with the structure, preparation and coordination chemistry of several metal complexes: Das[8] (University of Hyberdad) reports three new square planar bis(dithiolene) complexes; Bera and co-workers[9] (Indian Institute of Technology-Kanpur) detail the coordination chemistry of naphthyridine ligands in bimetallic systems; and Chandrasekhar and Bera[10] (Indian Institute of Technology-Kanpur) describe the chemistry of

James De Voss received a B.Sc. (Hons) in Chemistry from the University of Queensland in 1984. He was a Royal Commission for the Exhibition of 1851 scholar at Cambridge University, where he worked on the biosynthesis of vitamin B_{12} and obtained his Ph.D. under the supervision of Prof. Sir Alan Battersby. A postdoctoral fellowship, again from the Royal Commission for the Exhibition of 1851, allowed him to work with Prof. Craig Townsend at Johns Hopkins University on the mechanism of DNA cleavage caused by the enediyne antibiotic calicheamicin. He was then introduced to the cytochromes P450 by Prof. Paul Ortiz de Montellano with whom he worked while at the University of California, San Francisco. Since returning to the University of Queensland to take up an academic appointment, initially as a Senior lecturer (1995) and subsequently as a Reader (2004) and then a Professor (2008), he has continued his interest in problems at the interface of chemistry and biology, applying chemical principles and techniques to biological problems. He currently works with a range of bacterial, insect and mammalian P450s, as well as on the biogenesis of insect pheromones and the phytochemistry of herbal medicines.

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cyclometalated iridium (III) complexes. Finally, Wu[11] (National University of Singapore) provide a review discussing higher order and fused acenes as near-infrared absorbing and emitting compounds of interest to materials chemists.

I would like to thank those at the National University of Singapore for their tireless efforts in organizing this symposium and for their hospitality. The series is planned to continue with 2-ICCCS due to be held at the University of Queensland in 2011. Finally, I would also like to acknowledge *AJC* for its continuing support of chemistry in Australasia and in the Asia-Pacific region and for suggesting and organizing this Research Front.

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