Editorial—'All Aboard' special issue

This 'All Aboard' special issue of New Journal of Chemistry contains papers that have been authored by members of the NJC Editorial and Advisory Boards. Papers in this issue include contributions from:

Professor Didier Astruc. Didier did his studies including a PhD in Rennes and was a post-doctoral fellow at MIT with R. R. Schrock. He has been Professor of Chemistry at the University of Bordeaux I since 1984 and is a Senior Member of the Institut Universitaire de France (IUF). His interests have been in transition-metal inorganic and organometallic chemistry (electron-reservoir complexes) and have recently moved towards molecular nanosciences with special focus on catalysis, sensors and molecular electronics.

Professor Martin Banwell. Martin received his PhD from the Victoria University of Wellington in 1979 then spent a postdoctoral period at Ohio State University with Leo Paquette. In late 1980 he moved to a Senior Teaching Fellowship in the (then) Department of Organic Chemistry at the University of Adelaide. He was appointed to lectureships at the University of Auckland (1982) and the University of Melbourne (1986) before moving the Australian National University in 1995 as a Senior Fellow at the Research School of Chemistry, Institute of Advanced Studies, where he was promoted to a Chair of Chemistry in 1999. His research interests are focused on the development of new synthetic methodologies and the total synthesis of biologically active natural products.

Professor Carsten Bolm. Carsten was born in Braunschweig in 1960. He studied chemistry at the TU Braunschweig (Germany) and at the University of Wisconsin, Madison (USA). In 1987 he obtained his doctorate with Professor Reetz in Marburg (Germany). After postdoctoral training with Professor Sharpless at MIT, Cambridge (USA), Carsten Bolm worked in Basel (Switzerland) with Professor Giese to obtain his habilitation. In 1993 he became Professor of Organic Chemistry at the University of Marburg (Germany), and since 1996 he has a chair of Organic Chemistry at the RWTH Aachen (Germany). The major focus of his current research is on asymmetric catalysis, organic reactions with organometallics and pseudopeptides.

Professor Pierre Braunstein. Pierre graduated from the Ecole Supérieure de Chimie Mulhouse, France, and worked for his Dr. Ing. degree in the Université Louis Pasteur in Strasbourg. He then went to University College London to postdoc with Ron Nyholm (following his sudden death, he collaborated with R. J. H. Clark) and after returning to Strasbourg for his Doctorat d'Etat, he spent the academic year 1974/75 at the Technische Universität Munich with Prof. E. O. Fischer as an A. von Humboldt Fellow. He is Director of Research with the CNRS and leads the Coordination Chemistry Laboratory (UMR 7513 CNRS), University Louis Pasteur. Much of his research has revolved around the rational synthesis of complexes and clusters containing new metal–metal bonds, their structure, bonding and reactivity. He has also developed a range of functional ligands (P, Si, . . .) and studied their metal–ligand interactions in mono- and bimetallic systems that have led to a number of unprecedented structures, stoichiometric transformations and homogeneous catalysts. He was one of three Associate Editors for *New Journal of Chemistry* until 2002.

Professor Bruno Chaudret. Bruno, born in 1953, studied at the Ecole Nationale Supérieure de Chimie de Paris from which he graduated in 1975. He received his PhD from Imperial College of Science and Technology (London) in 1977 working for Prof. Geoffrey Wilkinson and his "Doctorat d'Etat" in 1979 from Université Paul Sabatier Toulouse working for Prof. René Poilblanc. He is presently Directeur de Recherche in

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the "Laboratoire de Chimie de Coordination du CNRS" in Toulouse (France), leader of a research group of 20 persons and Director of the advanced course "DEA Chimie et Physicochimie des Eléments de Transition". His research interests concern the chemistry and spectroscopic properties of polyhydride, dihydrogen and more generally σ-bond complexes and their applications in catalysis as well as the synthesis, chemistry and physical properties of nanoparticles of metal, alloys and oxides and their applications as catalysts, magnetic materials and gas sensors.

Professor Robert H. Crabtree. Bob was educated at New College Oxford with Malcolm Green, did his Ph.D. with Joseph Chatt at Sussex University and spent four years in Paris in Hugh Felkin's lab at the CNRS Natural Products Institute, headed by Derek Barton. In 1977 he went to the US as an Assistant Professor at Yale, where he is now Professor of Chemistry. He has been most directly involved in organometallic and bioinorganic chemistry. His early work was on catalytic alkane C–H activation and functionalization chemistry *via* oxidative addition and mercury photosensitized pathways. More recently, he extended this to C–F bond activation. In hydride chemistry, he contributed to the development of dihydrogen complexes, including the development of physical methods for their detection, and developed the chemistry of M–H···H–(N,O) hydrogen bonding in inorganic chemistry. He discovered halocarbon and HF complexation. Early work on hydrogenation led to a homogeneous hydrogenation catalyst with useful properties. He has also been involved in the bioinorganic chemistry of nickel and manganese, in particular, successful functional modeling of CO dehydrogenase and photosynthetic O_2 evolution. He is looking at applications of combinatorial chemistry to organometallic problems. He is currently one of three Associate Editors for *New Journal of Chemistry*.

Professor Ian Dance. Ian was born in the Hunter Valley of New South Wales in Australia. At the University of Sydney his first research was inspired by Professor Hans Freeman. After PhD studies (1966) with Professor Jack Lewis at the University of Manchester he moved to the USA for postdoctoral research with Professor Richard Holm at the University of Wisconsin and MIT, followed by a faculty position at the University of Wisconsin. In 1975 he moved to the School of Chemistry at the University of New South Wales, and was appointed Professor of Inorganic Chemistry in 1986, becoming a Faculty of Science Professor in 2000. Ian's research interests include metal thiolates, metal chalcogenide clusters, metal polysulfide and polyselenide complexes, the gas phase chemistry of metal sulfides, oxides, phosphides and carbides, metallocarbohedrenes, and density functional calculations of the structures and properties of unprecedented inorganic molecules. In bio-inorganic chemistry he is using density functional methods to investigate the chemical mechanisms of the enzymes nitrogenase and hydrogenase. His third main research field is supramolecular inorganic chemistry, with emphasis on the packing of molecules in crystals and the determination of intermolecular energies.

Professor Pierre H. Dixneuf. Pierre is professor of chemistry at the University of Rennes, capital of Bretagne. His recent interests involve the design of molecular catalysts for innovative catalytic combinations of molecules with atom savings and polymerisation. His group has discovered new carbon-rich organometallics and ruthenium precatalysts and gained experience in the field of vinylidenes and cumulenes. He showed that ruthenium–allenylidenes and *in situ* prepared multicomponent carbene–ruthenium catalysts are both active in alkene metathesis, for fine chemistry and ROMP of cyclic alkenes. His study of electron-rich metal complexes has led to new combinations of simple hydrocarbon derivatives with unprecedent catalysed C–C and C=C bond formation reactions. The recycling of catalysts in ionic liquids is currently being investigated.

Professor Odile Eisenstein. Odile was born near Paris in 1949. After a PhD in 1977 at Université de Paris-Sud with Nguyen Trong Anh and Lionel Salem, she was a postdoctoral fellow at the ETH (Zürich) with Jack D. Dunitz and at Cornell University with Roald Hoffmann. She then took for 2 years a position as Assistant Professor at University of Michigan at Ann Arbor. She returned to France where she became Directeur de Recherche at the CNRS and head of the Laboratoire of Theoretical Chemistry at Paris-Sud. She moved to Montpellier in 1996 where she is the head of the LSDMSMS. Her research interests concern the application of computational methods for understanding the structure and reactivity of transition metal complexes. Her focus has been on polyhydrides, electron deficient complexes and lately on weak interactions and lanthanide complexes. She was the Editor-in-Chief of *New Journal of Chemistry* from 1993 till 2000.

Dr. François Fajula. François is the head of the laboratory of Catalytic Materials and Catalysis for Organic Chemistry, a CNRS-supported unit of 70 people, including 40 permanent

staff, hosted by the School of Chemistry of Montpellier, France. He gained his PhD (1974) and Doctorate of Science (1978) in Strasbourg under the supervision of the late Prof. F. Gault. In 1979–1980 he was research associate at Texas A&M University in the group of Prof. J. Lunsford. His current fields of interest are in synthesis and catalysis by micro- and mesoporous materials.

Professor John A. Gladysz. John is a native of the Kalamazoo, Michigan area, and obtained B.S. and Ph.D degrees from the University of Michigan and Stanford University. He has held faculty appointments at UCLA (1974–1982), the University of Utah (1982–1998), and the University of Erlangen-Nürnberg (1998–present). His research spans a wide range of problems in the general areas of synthetic and mechanistic organometallic chemistry, catalysis, and materials science.

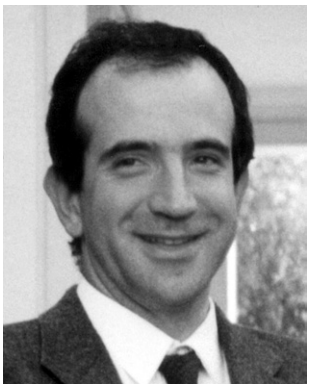
Professor George Gokel. George earned a B.S. at Tulane University in New Orleans and a Ph.D. (chemistry) at the University of Southern California in Los Angeles. After post-doctoral work with Donald Cram at UCLA and a brief period in DuPont's Central Research Department, Dr. Gokel began an academic career. He has held faculty positions in the chemistry departments at the Pennsylvania State University, the University of Maryland, and the University of Miami. He is currently Professor in the Department of Molecular Biology and Pharmacology and Director of the Bioorganic Chemistry Program at the Washington University School of Medicine in St. Louis, Missouri, USA. His major interest is in developing synthetic organic model systems that can be used to mimic and to understand biological phenomena. Two areas of current effort involve the development of synthetic ion channels and receptors for cation complexation, particularly involving cation–π interactions.

Professor Reinhard Hoffmann. Reinhard studied chemistry from 1951 to 1958 at the University of Bonn, finishing with a doctorate under the guidance of Prof. B. Helferich. Two years of postdoctoral studies at the Pennsylvania State University were followed by a second postdoctorate with Professor G. Wittig at the University of Heidelberg. There Prof. Hoffmann started his independent research that led to his habilitation in 1964. Three years later he was appointed as Dozent at the Technische Hochschule Darmstadt. Since 1970 he has held a position as professor of organic chemistry at the Universität Marburg (emeritus status since 2001). Prof. Hoffmann had the pleasure of being visiting professor at the University of Wisconsin, the Universität Bern, the University of California at Berkeley, and Kyoto University. Over the years Prof. Hoffmann's scientific interests changed from reactive intermediates (benzyne, nucleophilic carbenes) over electron rich alkenes, stereochemistry of 2,3-sigmatropic rearrangements, development of the allylboration reaction for the stereoselective synthesis of natural products, to conformation design.

Professor Miguel Julve. Miguel was born in Moncada (Valencia, Spain), in 1953. He graduated in chemistry at the University of Valencia and he obtained his Ph.D. degree in chemistry in 1981 at the same University under the supervision of Professors Juan Faus Payá and José María Moratal Mascarell, working on the complex formation between violurate and first-row transition metal ions. He then carried out a two-year post-doctoral stage at the Laboratoire de Spectrochimie des Elements de Transition under Professor Olivier Kahn at the University of Paris-Sud (France), where he worked on the preparation, structural characterization and magnetic investigation of homo- and heterometallic oxalato-bridged complexes. After this, he came back to the Department of Inorganic Chemistry of the Chemistry Faculty at the University of Valencia as Assistant Professor of inorganic chemistry, where he got promotion to Full Professor in 1992. His main research interests concern the fields of molecular magnetism and coordination chemistry. The synthetic strategy he uses consists of designing extended arrays of magnetic centers by using suitable mononuclear precursors as complexes. The rational design of polynuclear compounds with novel magnetic properties, the preparation of new molecule-based magnets and the search for strong magnetic interactions (either ferro- or antiferromagnetic) through extended bridges are the main topics of his research work.

Professor David Parker. David grew up in Durham. and read Chemistry at the University of Oxford, graduating with a First in 1978. His DPhil work was on asymmetric catalysis with John Brown in the Dyson Perrins Laboratory. He gained a NATO post-doctoral fellowship to work with Jean-Marie Lehn in Strasbourg, before being appointed to a Lectureship in Durham in 1982. He was promoted to a Chair in Chemistry in 1992 and served as Head of Department. His research interests are rooted in synthetic chemistry but are

directed into understanding how to exploit the rich chemistry of supramolecular systems, especially involving metal complexes for analytical, diagnostic and therapeutic purposes. Much of this multidisciplinary research cuts through the archaic boundaries of inorganic, organic and analytical chemistry. He has developed responsive and functional macrocyclic metal complexes, such as targeted imaging and therapeutic agents that have been taken into clinical trials. In addition he has devised simple synthetic receptors that selectively signal the presence of bioactive ions.



Professor Luca Prodi. Luca was born in Bologna, Italy, in 1965. He received his *Laurea cum laude* in Chemistry, in 1988 and in 1992 his Ph.D. in Chemical Sciences from the University of Bologna with a thesis on Supramolecular Photochemistry under the supervision of Prof. Vincenzo Balzani. Since 1992 he has been a researcher at the Department of Chemistry "G. Ciamician", University of Bologna. His research focuses on the photophysical and photochemical properties of supramolecular systems, with a particular emphasis on the design and characterisation of fluorescent labels and sensors.

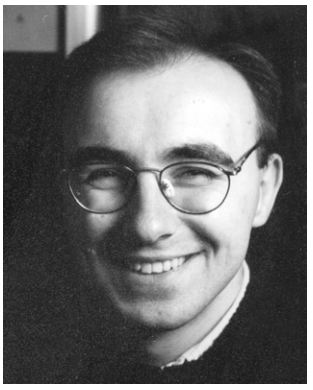
Professor Paul Raithby. Paul is Professor of Inorganic and Structural Chemistry at the University of Bath, having taken up the post in 2000, after 19 years on the academic staff at the University of Cambridge. He is a chemistry graduate of Queen Mary and Westfield College, University of London, where he also read for a Ph.D. in structural chemistry under the supervision of Professor Michael Hursthouse. He undertook a period of postdoctoral research with Professor the Lord Lewis and Professor Brian Johnson, FRS, at Cambridge before joining the faculty there. His group's research interests span aspects of chemistry and materials science including organic and organometallic polymer synthesis and investigations into the opto-electronic properties of these materials. In collaboration with Professor Richard Friend, FRS, at the Cavendish Laboratory, in Cambridge, his group has contributed to the design of a range of new organic and organometallic materials with interesting luminescent properties. His group is also developing the synthesis of high nuclearity transition metal carbonyl cluster chemistry and probing their role in catalysis. In the area of structural chemistry, his group is using single crystal and powder X-ray and neutron diffraction techniques to probe the structures of molecules in their ground and excited states, and is carrying out investigations into structural systematics using statistical and molecular mechanics methodologies on data obtained from structural databases.

Professor Jan Reedijk. Jan was born in 1943, in Westmaas, The Netherlands and is currently Professor of Chemistry at the Leiden Institute of Chemistry, Leiden University, The Netherlands. After obtaining a MSc and Ph.D. from Leiden University (1968) and occupying a junior lectureship, he lectured in Delft University of Technology until 1979, when he accepted his present position. His current research interests include: coordination chemistry of transition-metal ions; bioinorganic chemistry (active-site structure and mechanism, models, metal–DNA interaction); applications of coordination chemistry in catalysis, medicine, ion-exchange, surface chemistry; extended (magnetic; electric) interactions in coordination compounds (dimers, clusters, chains); molecular recognition and intermolecular interactions (catalysis; biomacromolecules).

Professor Kari Rissanen. Kari was born in 1959. He studied chemistry at the University of Jyväskylä between 1980 and 1985 and studied for his M.Sc. in Organic Chemistry and his Ph.D. in Chemistry (solid state structural chemistry of organic compounds) also at the University of Jyväskylä, being awarded his Ph.D in 1990. Between 1985 and 1993 he was chemistry assistant and assistant professor at the University of Jyväskylä, From 1993 to 1995 he was Associate Professor, Organic Chemistry, at the University of Joensuu, and since 1995 he has been Professor and Head of Laboratory of Organic Chemistry, University of Jyväskylä, Finland. His research interests include structural and synthetic supramolecular and organic chemistry.

Professor Clément Sanchez. Clément was born in 1949, is Director of Research at the French Council Research (CNRS) and has a teaching professor position at l'Ecole Polytechnique (Palaiseau). He received an engineer degree from l'Ecole Nationale Supérieure de Chimie de Paris in 1978 and a thèse d'état (PhD) in physical chemistry from the University of Paris VI in 1981. He did post-doctoral work at the University of California, Berkeley, and is currently performing research at the University Pierre and Marie Curie in Paris. He has guided the direction of the "Laboratoire de Chimie de la Matière Condensée" (University of Paris VI) since 1999. He specializes in the field of chemical and physical properties of transition metal oxide gels. He currently heads a research group of about ten scientists working on sol–gel chemistry of transition metal alkoxides and synthesis of new hybrid organic–inorganic materials. His main interests concerns the study of the relationship between optical, mechanical properties and hybrid material structures. More recently he has focused a part of his research on the study of self-assembly processes to build hybrid organic–inorganic materials textured

at different length scales. He is the current Editor-in-Chief for *New Journal of Chemistry*.



Professor Jonathan W. Steed. Jon was born in Wimbledon, UK in 1969. He obtained his B.Sc. and Ph.D. degrees at University College London, working with Derek Tocher on coordination and organometallic chemistry directed towards the synthesis of inorganic drugs and new metal-mediated synthesis methodologies. Between 1993 and 1995 he was a NATO postdoctoral fellow at the University of Alabama and University of Missouri - Columbia, working with Jerry Atwood, where he developed a new class of supramolecular hosts for anions, an area of chemistry which is still a major part of his current research work. In 1995 he was appointed as a Lecturer at King's College London where he has built up a reputation for crystal engineering studies using strong and weak hydrogen bonds and malleable coordination interactions. He is currently one of three Associate Editors for *New Journal of Chemistry*.

Professor Ulrich Schubert. Ulrich was born in Regensburg, got his Diploma degree in chemistry and his Ph.D. degree at the Technical University of Munich. His Ph.D. thesis (1974, with Prof. E. O. Fischer) was on reactions of carbene complexes. After a postdoctoral year at Stanford University with W. S. Johnson, he did his Habilitation at the Technical University of Munich in 1980 on structure analyses of metal complexes. From 1982 to 1994 he had the position of an Associate Professor of Inorganic Chemistry at the University of Würzburg. Since 1989 he also served in different positions at the Fraunhofer Institute of Silicate Research in Würzburg. In 1994 he was appointed to the Chair of Inorganic Chemistry at the Vienna University of Technology. The current research interests of his group are centered around applied fundamental research on sol–gel processes, especially inorganic–organic hybrid materials, the activation of silicon– and tin–element bonds by transition metal complexes, and the structural chemistry of molecular inorganic compounds.

Professor Vivian W.-W. Yam. Vivian was born in Hong Kong in 1963. She obtained her B.Sc.(Hons) degree in 1985 from The University of Hong Kong and her Ph.D. degree in 1988 from the same university under the supervision of Professor Chi-Ming Che on high-valent metal–oxo chemistry. She was a lecturer in the Department of Applied Science at the City Polytechnic of Hong Kong (now City University of Hong Kong) for two years before moving back to The University of Hong Kong in 1990. She is currently the Chair of Chemistry and Head of the Department of Chemistry at The University of Hong Kong. Her research interests include the photophysics and photochemistry of polynuclear metal complexes and clusters with special emphasis on metal alkynyls, chalcogenides, and chalcogenolates, supramolecular chemistry, and molecular metal-based functional materials for spectrochemical and luminescent sensing, molecular recognition, optoelectronics, and molecular devices.