

XXXIII INTERNATIONAL CONFERENCE ON COORDINATION CHEMISTRY

"The Chemistry of Metal Ions in Everyday Life"

dedicated to Luigi Sacconi

Centro Congressi e Centro Affari Firenze, Firenze, Italy
August 30 - September 4, 1998

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Organized by:

Università di Firenze, Area della Ricerca di Firenze del CNR, Società Chimica Italiana

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Ministero dell'Università e della Ricerca Scientifica, Ministero degli Affari Esteri, Comune di Firenze

Important Information and Dates:

All correspondence, regarding **submission of abstracts and inquiries MUST BE ADDRESSED to the 33rd ICCS Secretariat:**

33rd ICCS Secretariat, Department of Chemistry, University of Florence,
Via Gino Capponi, 7, I - 50121 Firenze, Italy

The registration form and the **payment of the registration fee MUST BE ADDRESSED to Società Chimica Italiana:**

331d ICCS Registration Office, Società Chimica Italiana
Attn. Ms. Valeria Sleiter, Viale Liegi, 48, I - 00198 Roma, Italy

The **Hotel reservation form MUST BE ADDRESSED to the Newtours S. r. l.:**

"Newtours/" S.r.l., Attn. Ms. Michela Evangelisti, Via San Donato, 22, I - 50137 Florence, Italy

Abstract Submission Deadline March 31st, 1998
Early Registration Deadline March 31st, 1998

For additional information and the latest news, visit the Internet page at the address:

<http://risc3.1rm.fi.cnr.it:8002/>

The 33rd ICCO will be held from Sunday, August 30th till Friday, September 4th, 1998. On Sunday, the activities will take place at the City Hall, Palazzo Vecchio. From Monday through Friday, the scientific activities will take place at the Centro Congressi e Centro Affari, Piazza Adua 1, close to the central railway station "Santa Maria Novella".

ABOUT COORDINATION CHEMISTRY

Coordination Chemistry is a branch of Science which regards the species and the reactions involving metal ions. Historically, it began to develop in the late fifties when the laws of chemical bonding involving the metal ions begun to be understood. Eventually, this science became the basis for the investigation and application of industrial catalysis, both in homogeneous and heterogeneous phases. In fact, most of the homogeneous catalysts are coordination compounds, typically the titanium-based compounds used in Ziegler-Natta polymerization reactions. In addition, most of the heterogeneous catalysts involve metal-substrate interactions.

The chemistry of metal ions, which is the essence of this conference as underlined by the subtitle, has exploded in the last decade due to its implications in new branches of science, including supramolecular chemistry which is a part of this meeting for what is in common with coordination chemistry. Typical examples of the chemistry of metal ions are magnetic materials, liquid crystals, electronic devices (including semi- and super-conductors), materials with non-linear optical properties, energy storage devices etc. Of course, all of these RTD strategies must take into account

environmental compatibilities. Therefore great emphasis is given to the interaction of metal ions with living organisms, and particularly humans, e.g. how do lead and aluminium interact with proteins and tissues and what is the molecular basis of their toxicity?

Metal ions have quite recently been discovered to have a catalytic role in gene factors, DNA and RNA replications and in biological catalysis of many reactions in all metabolic processes.

Finally, metal ions have been discovered to play an important part in powerful drugs from the famous cis-platinum and iron-bleomycin as anticancer drugs, to gold- and copper-containing drugs such as antiarthritic. Metal ions are also often used as contrast agents, typically those used in magnetic resonance imaging.

These are just some glimpses of the impact of coordination chemistry on the many diverse technological areas.

Plenary Lectures

Claudio Bianchini, ISSECC CNR, Florence, Italy
Kim R. Dunbar, Michigan State University, MI, USA
Odile Eisenstein, University of Montpellier, France
Harry B. Gray, Caltech, Pasadena, CA, USA
Hiizu Iwamura, Kyushu University, Fukuoka, Japan
Stephen J. Lippard, MIT, Cambridge, MA, USA
Robin N. Perutz, University of York, UK
Lawrence Que, Jr., University of Minnesota, MN, USA
Alex von Zelewsky, University of Fribourg, Switzerland

Special Lecture "The View of a Nobel Laureate"

Jean-Marie Lehn, University of Strasbourg, France

Pre-conference Lecture "Metal Ions in Environment and Life"

Helmut Sigel, University of Basel, Switzerland

Special Session "The Way we were"

Fred Basolo, Northwestern University, IL, USA
Stanley Kirschner, Wayne State University, MI, USA
Luigi Maria Venanzi, ETH, Zurich, Switzerland
Shoichiro Yamada, University of Osaka, Japan

List of lecturers at the XXXIII ICC

Tutorials in Advanced Spectroscopy

EPR-ENDOR

Edgar J. J. Groenen, Leiden, The Netherlands

Preedge, EXAFS, XANES

James Penner-Hahn, University of Michigan, USA

NMR of Paramagnetic Compounds

Claudio Luchinat, Florence, Italy

NMR of Solids

Ann McDermott, Columbia University, NY, USA

A: Supramolecular Chemistry

Nanostructures. Synthesis versus Self-assembly

Peter Belser, Fribourg, Switzerland

Gianfranco Denti, Pisa, Italy

Makoto Fujita, Okazaki, Japan

Jean Pierre Sauvage, Strasbourg, France

Supramolecular Photochemistry

Lucia Flamigni, Bologna, Italy

Masa-aki Haga, Kamihama, Japan

Thomas J. Meyer, Chapel Hill, NC, USA

Daniel G. Nocera, Michigan State, MI, USA

Franco Scandola, Ferrara, Italy

Dendrimers

Sebastiano Campagna, Messina, Italy

Edwin C. Constable, Basel, Switzerland

Jean-Pierre Majoral, Toulouse, France

Nicholas J. Turro, New York, NY, USA

Fritz Vögtle, Bonn, Germany

Supramolecular Switches and Machines

Vincenzo Balzani, Bologna, Italy

A. Prasanna de Silva, Belfast, UK

Luigi Fabbrizzi Pavia, Italy

Supramolecular Electrochemistry

Didier Astruc, Bordeaux, France

Paul D. Beer, Oxford, UK

Michael J. Therien, Philadelphia, PA, USA

Margherita Venturi, Bologna, Italy

Heterogeneous and Solid State Systems

Donald Fitzmaurice, Dublin, Ireland

Michael Graetzel, Lausanne, Switzerland

Olivier Kahn, Bordeaux, France

Thomas E. Mallouk, Penn State, PA, USA

Molecular Electronics and Non-linear Optics

Luisa De Cola, Bologna, Italy

Jean-Pierre Launay, Toulouse, France

John A. McCleverty, Bristol, UK

Session Lecturers

Hans Gudel, Bern, Switzerland

Fraser J. Stoddart, Birmingham, UK

Jeffrey Zink, Los Angeles, CA, USA

B: Coordination Compounds in Material Chemistry

Molecular Metals and Superconductors

Eric Canadell, Barcelona, Spain

Patrick Cassoux, Toulouse, France

Hayao Kobayashi, Okazaki, Aichi, Japan

Coordination Complexes as Magnetic Materials

George Christou, Bloomington, IN, USA

Peter Day, London, UK

Michael Verdaguer, Paris, France

Masahiro Yamashita, Nagoya, Japan

Intercalation Compounds

Thomas Bein, West Lafayette, IN, USA

Mercouri G. Kanatzidis, Michigan State, MI, USA

Jean Rouxel, Nantes, France

Jean-Marie Tarascon, Amiens, France

Spin Crossover

Marie-Laure Boillot, Orsay, France

Philipp Gütlich, Mainz, Germany

Jaap G. Haasnoot, Leiden, The Netherlands

Andreas Hauser, Geneva, Switzerland

Precursors for electronic Materials

Leonard V. Interrante, Troy, NY, USA

Polynuclear Transition Metal Compounds

James A. Ibers, Northwestern University, IL, USA

Achim Müller, Bielefeld, Germany

Low-Dimensional Inorganic Solids

Jing Li, Rutgers, NJ, USA

Session Lecturers

Lidia Armelao, Padua, Italy

Renato Ugo, Milan, Italy

Yuri V. Yablakov, Kazan, Russia

C: Organometallic Chemistry & Catalysis*Computational Methods*

Thomas Albright, Houston, TX, USA
Maria Jose Calhorda, Lisbon, Portugal
Peter Comba, Heidelberg, Germany
Alfred Barry P. Lever, Toronto, Canada

Metal Complexes of Cyclic Polyenes and Fullerenes

Alan L. Balch, Davis, CA, USA
Jurgen Heck, Hamburg, Germany
Brian F. G. Johnson, Cambridge, UK
John R. Shapley, Urbana, IL, USA
Hubert Wadeppohl, Heidelberg, Germany

Main Group Elements

Dainis Dakternieks, Deakin, Australia
Klaus Jurkshat, Dortmund, Germany
Lai Yoong Goh, Kuala Lumpur, Malaysia
Otto J. Scherer, Kaiserslautern, Germany
Kohei Tamao, Kyoto, Japan

Early Transition Metals

John E. Bercaw, Caltech, Pasadena, CA, USA
Richard R. Schrock, MIT, Cambridge, MA, USA
Kazuyuki Tatsumi, Nagoya, Japan

C-C Bond Formation and Bond Breaking

Pierre H. Dixneuf, Rennes, France
Cornelis J. Elsevier, Amsterdam, The Netherlands
John Gladysz, Salt Lake City, UT, USA
David Milstein, Rehovot, Israel

Activation of Small Molecules

Ernesto Carmona, Sevilla, Spain
Jwu-Ting Chen, Taipei, Taiwan
Jose Gimeno, Oviedo, Spain
Iliya I. Moiseev, Moscow, Russia

Transition Metal Hydrides

Kenneth G. Caulton, Bloomington, IN, USA
Guochen Jia, Kowloon, Hong Kong

Hydrodesulfurization and Hydrodenitrogenation

Thomas B. Rauchfuss, Urbana, IL, USA
Edward I. Stiefel, Annandale, NJ, USA

Trends and Perspectives in Homogeneous Catalysis

Rumiya R. Abdreimova, Almaty, Kazakhstan
Peter M. Maitlis, Sheffield, UK
Jozef J. Ziolkowski, Wroclaw, Poland

co-organized by Edward Rosenberg, University of Montana, MT, USA, and Silvio Aime, University of Turin, Italy

Mario Bressan, Pescara, Italy
Boy Cornils, Frankfurt, Germany
Donald J. Darensbourg, College Station, TX, USA
Richard H. Fish, Berkeley, CA, USA
Douglas B. Grotjahn, Tempe, AZ, USA
Philippe Kalck, Toulouse, France
Heinz-Bernhard Kraatz, Ottawa, Canada
Brian F. Hanson, Blacksburg, VA, USA
Bruce M. Novak, Amherst, MA, USA
Charles G. Riordan, Kansas, KS, USA
David R. Tyler, Eugene, OR, USA
Pin Yang, Taiyuan, China

E: Solution Chemistry*Metal Based Drugs (Metals in Medicine)*

Sue Berners-Price, Nathan, Australia
Timothy J. Egan, Capetown, South Africa
Bernhardt Lippert, Dortmund, Germany
Kazuko Matsumoto, Tokyo, Japan
Jan Reedijk, Leiden, The Netherlands
Peter J. Sadler, Edinburgh, UK
Roberto Sanchez-Delgado, Caracas, Venezuela
Wenxia Tang, Nanjing, China
Kui Wang, Beijing, China
Lon J. Wilson, Houston, TX, USA

Contrast Agents in MRI

Silvio Aime, Turin, Italy
Thomas J. Meade, Pasadena, CA, USA
Fulvio Uggeri, Milan, Italy

Solution Supramolecular Chemistry

Cynthia Burrows, Salt Lake City, UT, USA
Daryle H. Busch, Kansas, KS, USA
Thomas A. Kaden, Basel, Switzerland
Dan Meyerstein, Beer-Sheva, Israel
Kenneth N. Raymond, Berkeley, CA, USA

Redox Equilibria

Pradyat Banerjee, Calcutta, India
Dieter Sellmann, Erlangen, Germany

Nucleotides

Einar Sletten, Bergen, Norway
Osamu Yamauchi, Nagoya, Japan

Session Lecturers

Eiichi Kimura, Hiroshima, Japan
Hitoshi Ohtaki, Shiga, Japan

F: Bioinorganic Chemistry

Molecular Dynamics Involving Metal Ions

Lucia Banci, Florence, Italy
Tim Clark, Erlangen, Germany
Per Siegbahn, Stockholm, Sweden

Metalloproteins

Shigetoshi Aono, Ishikawa, Japan
Gerard W. Canters, Leiden, The Netherlands
Luigi Casella, Pavia, Italy
James A. Cowan, Columbus, OH, USA
Sture Forsen, Lund, Sweden
Anjos L. Macedo, Lisbon, Portugal
Bo G. Malmstrom, Gothenburg, Sweden
Alexander D. Ryabov, Moscow, Russia
Shinnichiro Suzuki, Osaka, Japan
Alejandro J. Vila, Rosario, Argentina
Jay R. Winkler, Caltech, Pasadena, CA, USA

Modeling

Dimitri Coucouvannis, Ann Arbor, MI, USA
Lian-Nian Ji, Guangzhou, China
Kenneth D. Karlin, Baltimore, MD, USA
Lechoslaw Latos-Grazynski, Wroclaw, Poland
Bernard Meunier, Toulouse, France
Vincent L. Pecoraro, Ann Arbor, MI, USA
Giovanni Purrello, Catania, Italy
Heinrich Vahrenkamp, Freiburg, Germany
Ann Walker, Tucson, AZ, USA
Karl Wieghardt, Mühleim, Germany

Session Lecturers

H. O. Allen Hill, Oxford, UK
Edward I. Solomon, Stanford, CA, USA

G: Metals in Life and Environment

The Nitrogen Cycle

Barbara K. Burgess, Irvine, CA, USA
Stefano Ciurli, Bologna, Italy

The Nitrogen Activation

Michael D. Fryzuk, Vancouver, Canada
Masanobu Hidai, Tokyo, Japan
Barry E. Smith, Norwich, UK

The Sulfur Geobiochemical Cycle

Antonio V. Xavier, Lisbon, Portugal

Activation of Small Molecules by Iron Centers

Isabelle Artaud, Paris, France
Richard Cammack, London, UK
Isao Morishima, Kyoto, Japan
Hans Toftlund, Odense, Denmark

Speciation

Peter May, Murdoch, Australia
Rudi van Eldik, Erlangen, Germany
David R. Williams, Cardiff, UK

Carbon Dioxide Activation and Functionalization

Michele Aresta, Bari, Italy
Marcetta Y. Darensbourg, College Station, TX, USA
Etsuko Fujita, Brookhaven Nat. Lab., NY, USA
Dorothy H. Gibson, Louisville, KY, USA
Joelle Mascetti, Bordeaux, France

Session Lecturers

William DeW. Horrocks, Jr., PennStateUniversity, PA, USA
Geoffrey A. Sykes, Newcastle, UK