

GORDON RESEARCH CONFERENCE ON INORGANIC CHEMISTRY

New England College, Henniker, New Hampshire,
21-26 July, 1996

David L. Thorn (DuPont), Chair; **Andrew Barron** (Rice University), Vice-Chair

Sunday evening, 21 July 1996,

7:30 Welcome; introductory remarks

Coordination Chemistry, part 1: A Celebration of Varied Coordination Environments

Nadine de Vries (DuPont), Discussion Leader

Frank Feher (University of California, Irvine): "Coordination Chemistry of Silsesquioxanes: The Good, the Bad, and the Ugly"

Heimut Schwarz (Berlin): "Bond Activation by 'Bare' Transition Metal Ions: An Intersection of Theory and Experiment"

Kit Cummins (Massachusetts Institute of Technology): "New Bond Cleavage and Atom Transfer Reactions of Low-Coordinate Complexes"

Monday morning, 22 July

9:00 Main-group and Cluster Chemistry

Peter Dorhout (Colorado State), Discussion Leader

Steve Strauss (Colorado State University): "Fluorinated Polyhedral Heteroboranes as Weakly Coordinating Anions"

Richard Holm (Harvard University): "Metal Clusters in Biology"

Mercouri Kanatzidis (Michigan State University): "Recent Developments in the Solid State Chemistry of Metal Chalcogenides"

Moungi Bawendi (Massachusetts Institute of Technology): "Semiconductor nanocrystallites: from isolated quantum dots to complex structures"

Monday evening, 22 July 1996

7:30 Catalysis and Catalysts

Jerry Ebner (Monsanto), Discussion Leader

Richard Kemp (Shell): "Recent Work in Polyolefin Catalysis"

Elisabeth Bordes (Compiègne): "Heterogeneous Catalysis in Selective Oxidation of Hydrocarbons: from Bulk, Crystalline to Supported, Monolayered Catalysts"

Jo Ann Canich (Exxon): "Single-Site Catalysts for Olefin Polymerization"

Tuesday morning, 23 July 1996

9:00 Surfaces, Particles, and More Clusters

Norm Herron (DuPont): "Molecular Precursors to Functional Materials"

Mike Sailor (University of California, San Diego): "Surface Chemistry of Luminescent Porous Silicon"

Ken Klabunde (Kansas State University): "Unique Surface Chemistry of Nanoparticles of Metal Oxides and Layered Metal Oxides"

Terry Turney (CSIRO, Australia): "Mechanical Activation of Chemical Processes"

Tuesday evening

7:30 Deposition Chemistry

Andrew Barron (Rice University), Discussion Leader

Wayne Gladfelter (University of Minnesota): "Chemical Vapor Deposition of Metallic Compounds"

Chuck Winter (Wayne State University): "Chemistry of Precursors to Metal Nitride Films"

Tony Jones (Epichem LTD, U.K.): "Developments in Metalorganic Precursors for Vapour Phase Epitaxy"

Wednesday morning, 24 July 1996

9:00 Coordination Chemistry, part 2: Electrons, Photons, and Radicals

Kim Dunbar (Michigan State University), Discussion Leader

Dan Nocera (Michigan State University): "Optical Supramolecules"

Dave Tyler (University of Oregon): "Cage Effects in Inorganic Radical Chemistry"

Arne Vogler (Regensburg): "Charge Transfer Excited States of Transition Metal Complexes and Implications for Bioinorganic Chemistry and Catalysis"

Chuck Grissom (University of Utah): "The Role of Magnetic Spin in B-12 Dependent Enzymatic and Photochemical Reactions"

Wednesday evening

7:30 Inorganic Chemistry in Biological Systems

Jacqueline Barton (California Institute of Technology): "DNA-mediated Electron Transfer with Metallo Intercalators"

Julie Kovacs (University of Washington): "Structure and Reactivity of Models for Sulfur-Ligated Sites of Metalloenzymes"

Scott Cunningham (DuPont): "Phytoremediation of Soils Contaminated with Heavy Metals"

Thursday morning, 25 July 1996

9:00 New Solids

Robert Haushalter (NEC Research): "Hydrothermal Synthesis of Organically Templated Vanadium Oxide and Vanadium Phosphate Solids"

Neil Bartlett (University of California, Berkeley): "The Preparation of Thermodynamically-Unstable Transition Metal Fluorides and their Remarkable Oxidizing Properties"

Mike Whangbo (North Carolina State University): "Surface Analysis with Scanning Tunneling and Atomic Force Microscopy"

David Mitzi (IBM): "Organic-Inorganic Perovskites"

Thursday evening

7:30 Business meeting

Francis Via (Akzo-Nobel): "The Global Research Enterprise: Leveraging Resources"

Jay Labinger (Beckmann Institute - California Institute of Technology): "Science and its Critics"

THE FARG₈O CONFERENCE ON MAI₇N GROU₁₅P CHEMI₁₆STRY

May 30 - June 1, 1996

Center for Main Group Chemistry
Department of Chemistry, North Dakota State University
PO Box 5516, Fargo, ND 58105-5516, USA

GENERAL INFORMATION

The Fargo Conference on Main Group Chemistry will be held at North Dakota State University (NDSU) in Fargo, North Dakota, beginning the evening of Thursday, May 30, and ending the evening of Saturday, June 1, 1996. This two-day conference is dedicated to the many disciplines of chemistry involving the main group (s and p block) elements. This conference is sponsored by the NDSU Center for Main Group Chemistry (CMGC), which cordially invites you to participate in this important multidisciplinary conference.

LOCATION

Fargo, North Dakota is located in the heart of the Red River Valley, one of the world's richest agricultural areas. The affordability and quality of living are reflective of family values, neighborliness, and midwestern hospitality. The "countrypolitan" atmosphere of Fargo combines big city services, attractions, and activities with the frieldliness and affordability of a medium-sized midwestern city.

PLENARY LECTURERS

Alan Cowley, University of Texas, USA
Robert West, University of Wisconsin, USA

INVITED SPEAKERS

Barry Arkles, Gelest, USA
Peter Armentrout, University of Utah, USA
Hans Bock, Universität Frankfurt, Germany
Robert Corriu, Université de Montpellier II, France
Wayne Gladfelter, University of Minnesota, USA
Mark Gordon, Iowa State University, USA
Yoshihiko Ito, Kyoto University, Japan
Joseph Jasinski, IBM, USA
Richard Jones, University of Texas, USA
Joseph Lambert, Northwestern University, USA
Gottfried Märkl, Universität Regensburg, Germany
John Oliver, Wayne State University, USA
Robert Paine, University of New Mexico, USA
Philip Power, University of California-Davis, USA
Krishnan Raghavachari, AT&T Bell Labs, USA
Gregory Robinson, Clemson University, USA
Hideki Sakurai, Tohoku University, Japan
Dietmar Seyferth, Massachusetts Institute of Technology, USA
T. Don Tilley, University of California-Berkeley, USA
Richard Wells, Duke University, USA
Hisashi Yamamoto, Nagoya University, Japan

CONFERENCE ORGANIZERS

Denley Jacobson, Chair, Tel.: + 701 231 8811, e-mail: denjacob@prairie.nodak.edu
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Jill Retzer, Conference Secretary, Tel.: + 701 231 9405, e-mail: cmgc@plains.nodak.edu

CONFERENCE DESCRIPTION

The Scientific Program for the conference includes the following topics:

- Main group elements in organic chemistry
- Reactions and mechanisms involved in chemical vapor deposition
- Structure and reactivity relationships
- Synthesis and characterization of compounds with novel properties
- Low-valent main group complexes and multiple bonding
- Solid state synthesis
- Industrial applications

The conference will consist of two parallel sessions and an afternoon poster session. A plenary lecture (R. West, Friday and A. Cowley, Saturday) will start the meeting each morning, and each session will open with a keynote speaker. There will be eight sessions (two for *Synthesis and characterization of compounds with novel properties* and one each for the other topics). Each session will have between six and seven presentations with 40 minutes allocated for the keynote address. Other presentations will vary from 20-30 minutes. Twenty-three leaders in the subject area have already accepted invitations to speak, and the conference can accommodate 30 additional contributed oral papers. The afternoon poster session can accommodate up to 50 presentations

CONFERENCE FACILITIES

The conference will be held on the campus of North Dakota State University. A majority of the activities will take place in the comfortable conference facilities in the Memorial Union, which is located adjacent to the chemistry building.

ACCOMMODATIONS

The conference hotel is the Radisson (1 800 333-3333 or 1 701 232 7363. Conference rates are \$62/night. Registration and mixer will be at the Radisson from 6:30 to 10:00 p.m. on Thursday. The conference banquet, held Saturday night, also will be at the Radisson. A shuttle service will operate between the conference site and the conference hotel.

ABSTRACT SUBMISSIONS

Abstracts should be submitted in camera-ready format, typed within an 18 x 12 cm (7 x 5 inch) space. Type the abstract title in capital letters. Follow with authors' names (underline the presenting author) and addresses. The use of figures and diagrams in presenting the abstracts is encouraged. Below your abstract copy, please indicate your session topic and if you prefer an oral or poster presentation. Abstracts should be sent to the Conference Secretary by February 15, 1996. Please include the attached information sheet with your abstract.

REGISTRATION FEES/ SOCIAL ACTIVITIES

Registration fees are \$60 for students and \$120 for non-students. Deadline for pre-registration is May 1, 1996. Included in the registration fees are two lunches, two mixers, a conference banquet held Saturday night, and a Friday night cookout social at Bonanzaville (a historic village and museum). A final registration announcement form will be mailed in early 1996 to those who have asked for it.

International Biometals Symposium

The University of Calgary

August 10 - 14, 1997

ORGANIZING COMMITTEE

Edward J. Laishley, The University of Calgary
Gunther Winkelmann, Universität Tübingen
Larry L. Barton, University of New Mexico

SCIENTIFIC COMMITTEE

Robert Huber, Nobel Laureate, Max-Planck Institut für Biochemie, Planegg, Martinsried
Thressa Stadtman, NIH, Bethesda
Prem Ponka, Jewish General Hospital, Montreal
Volkmar Braun, Universität Tübingen
Simon Silver, University of Illinois, Chicago
Alan Baker, University of Sheffield
Jean Le Gall, University of Georgia
Joseph Coleman, Yale University
Wilfried Rauser, University of Guelph
Kenneth Raymond, University of California, Berkeley
Monica Nordberg, Karolinska Institutet, Stockholm
Dennis Winge, University of Utah

SCIENTIFIC PROGRAMME

The objective of the Congress is to bring together scientists to discuss topics of wide current interest. Throughout, we would like to promote a forum for interdisciplinary participation and exchange of ideas for research and interpretation of results

INTEREST GROUPS

The conference is intended to be of interest to Medical Scientists, Biochemists, Toxicologists, Microbiologists, Environmental Scientists, Physiologists, Chemists, Geneticists, Molecular Biologists, Cell Biologists

SITE AND DATE

The International Biometals Symposium will be held at The University of Calgary, August 10-14, 1997

SECOND CIRCULAR

The second circular will be published in late 1996 and will contain further information about registration, the scientific program, travel arrangements, accommodations and social events. *The second circular* will be sent only to those who ask for it by writing to:

International Biometals Symposium
The University of Calgary, Conference Management Services, Attn: Margaret-Anne Stroh
Olympic Volunteer Centre, 1833 Crowchild Trail NW, Calgary, Alberta T2M 4S7, Canada
Telephone: (403) 220-6229, Fax: (403) 284-4184

SCOPE OF THE CONFERENCE

The following themes are suggested as examples to show the intended breadth of the conference

Iron metabolism and overload in humans
Photoremediation studies
Biochemistry of metals
Metal centres in enzymes
Metals in transcription and translation
Metal complexes of biological interest
Transport and reduction of metal ions
Toxicities due to metals
Special roles of transition elements
Metals and biotechnology