GORDON RESEARCH CONFERENCE ON ORGANOMETALLIC CHEMISTRY

Final

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Nov 16, 1978

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The Gordon Research Conference on Organometallic Chemistry was held at Andover Academy, New Hampton, N.H., August 13-19, 1978. In attendance were 149 persons, whose names appear on the attached Registration List. This is rather a large number of attendees for Gordon Conference; the previous conferences on Organometallic Chemistry had 117 attendees which is a more typical number for most conferences. The large interest in this specific conference is, we feel, a response to the strong program. While the presence of a large number of participants could have detracted from the informality of the conference this did not happen because the conference succeeded in involving a very large number of people in the program.

As is customary at Gordon Research Conferences, the major portion of the program contained a series of primary speakers (Program attached). Thirteen such sessions spanned three general areas: 1) Carbon Ligands Including Reactions of Coordinated CO (Schrock, MIT; Bercaw, Cal. Tech; Pruett, Union Carbide), 2) Main Group Chemistry (Reich, U. of Wisconsin; Norman, U. of Paris, France; Ashby, Georgia Tech; Eisch, SUNY-Binghamton, and Halasa, Firestone) and 3) Inorganic and Organic Chemistry of Complexes of the Platinum Group Metals (Stone, Bristol, England; Stille, Colorado State U.; Maitlis, Sheffield, England; Heck, U. of Delaware; and Green, Bristol, England). In constructing this program effort was made to draw the most active people from the U.S. and abroad to participate in this conference. In addition, we were pleased to be able to integrate industrial speakers into the program. This had been our intention since a substantial fraction of the conference attendees are from industrial laboratories. Of course this grant from the AFOSR was instrumental in allowing us to get the foreign speakers who participated and greatly strengthened the program.
There were ten short research papers interspersed in the program. The persons enlisted in this part of the program may be identified as some of the more outstanding young organometallic chemists. In addition we solicited and received twenty-eight papers for two poster sessions which were held in the late afternoons during the week. These sessions generated a lot of interest as they generally were on recent unpublished work, and often were on topics outside of the topics chosen for the major addresses.

In all over 70 persons participated as speakers, as discussion leaders, or as contributors in the Poster Sessions. This means a high fraction of attendees were active participants in the program, which contributed to the favorable overall atmosphere of the conference.

Signature
Principal Investigator
November 16, 1978
PROGRAM
GORDON RESEARCH CONFERENCES
ORGANOMETALLIC CHEMISTRY
August 14-18, 1978
Proctor Academy, Andover, New Hampshire

P. H. Treichel, Chairman
H. D. Kaez, Vice Chairman

Monday, August 14

Mono and Bis Alkylidene Complexes of Niobium and Tantalum, and Reactions Involving Olefins

J. Labinger, Discussion Leader
University of Notre Dame

R. R. Schrock
M.I.T.

G. Doyle, Discussion Leader
Exxon Research

J. E. Bercaw
California Inst. of Technol

J. Gladysz, Discussion Leader
U.C.L.A.

Homogeneous Activation of Carbon Monoxide

Catalysis of Carbon Monoxide-Hydrogen Reactions

R. Pruett
Union Carbide Corporation

H. Alper, Session Chairman
U. of Ottawa

Short Papers

Reactions of the Cationic Carbene Complex \( \text{L}^2 \text{P} \text{Fe} = \text{Cl} \text{Ph} \text{H} + \) with Alkenes and Alkynes

M. Brookhart
U. of North Carolina

H. Rager
U. of South Carolina

Molybdenum Perfluorocarbene Complexes

Reduction of Coordinated CO by Trialkylborohydrides; Synthesis of Transition Metal Formyls, Hydroxyalkyls, and Anions

J. Gladysz
Tuesday, August 15

Selenium and Silicon in Organic Synthesis

R. Larock, Discussion Leader
Iowa State University

H. J. Reich
U. of Wisconsin - Madison

G. Posner, Discussion Leader
Johns Hopkins University

Recent Developments in the Catalytic or Stoichiometric Use of Copper Salts in Organic Synthesis

J. F. Normant
University of Paris

D. Bergbreiter, Discussion Leader
Texas A & M

Concerning the Question of Distinguishing Polar from Single Electron Transfer Reactions in Main Group Metal Chemistry

E. C. Ashby
Georgia Tech.

Short Paper

A Short, Simple, Stereocontrolled Steroid Total Synthesis Using Organocopper Reagents

G. Posner
Johns Hopkins University

Wednesday, August 16

Organometallic Metallocycles in Bonding and Mechanistic Studies

J. J. Eisch
SUNY - Binghamton

R. P. Hughes, Discussion Leader
Dartmouth College

Organolithium Catalysis of Olefin and Diene Polymerization: A Fruitful Area for Research

A. Halasa
Firestone, Akron Ohio

R. Keiter, Session Chairman

Short Papers

Hydrogen Transfer in Diene Iron tris-Phosphite Complexes

S. Ittel
E. I. duPont deNemours & Co
Yet Another Unexpected Radical Pathway in an Organometallic Reaction

J. Labinger
U. of Notre Dame

K. Barnett, Discussion Leader
U. of Missouri, St. Louis

Synthesis via Ligand Free Platinum Complexes

F. G. A. Stone
The University, Bristol, Engl.

Thursday, August 17

Transition Metal Catalyzed Organic Syntheses

T. Whitesides, Discussion Leader
Eastman Kodak Co.

J. K. Stille
Colorado State University

D. Reger, Discussion Leader
U. of South Carolina

New Types of Homogeneous Catalysts and the Hydrogenation of Aromatics
P. M. Haitlis
The University, Sheffield

Short Papers

New Applications of Organomercury, -palladium, and -rhodium Compounds in Organic Synthesis
R. Larock

Palladium Catalyzed Allylic Alkylation of Olefins
L. Hegedus
Colorado State University

An Improved Catalyst for Methylene Lactone Synthesis as a Result of Mechanistic Study
J. Norton
Princeton University

Calorimetric Studies of Reactions of Rhodium or Iridium Complexes
D. Blake
U. of Texas, Arlington

Friday, August 18

Palladium Catalyzed Reactions of Vinylic Halides with Amines and Olefins

L. Hegedus, Discussion Leader
Colorado State University
Reactions of Co-ordinated Alkenes and Acetylenes

M. Green
The University, Bristol
England
Schedule for Poster Displays

(Authors of poster displays are requested to be available in the vicinity of their display to answer questions from 5:15 to 5:45 p.m. on the days that their display is scheduled.)

Monday and Tuesday, August 14, 15 (Papers No. 1 through 13)


2. J.W. Suggs, Bell Labs "Catalytic Hydroacylation."

3. P.R. Jones and J.G. Shelnutt, University of New Hampshire "Para-Products from meta-Aryl Cadmium Reagents: A cine-Substitution"

   *Argonne National Laboratory, +University of Illinois, E.I. duPont, Massachusetts Institute of Technology
   "Structural Models for C-H Bond Scission. Neutron Diffraction Studies of an Aliphatic C-H 'Fe Interaction and an Unusual Ta-Alkylidene Complex."


6. K.W. Barnett*, D.J. Blument, T.L. Brown*, "University of Missouri-St. Louis, University of Illinois-Urbana
   "Trimethylamine N-Oxide Promoted Substitution in Metal Carbonyls."

7. L.H. Pignolat and D. Doughty, University of Minnesota "Catalytic Decarbonylation of Aldehydes Using Rh(I) Complexes of Chelating Diphosphine Ligands."

8. V.P. Kurkov and R.G. Wall, Chevron Research Company "Catalytic Rearrangement of Vinyloxiranes to 2,5-Dihydrofuranes."

9. P. McArdle and T. Higgins, University College Galway (Ireland) "Selective Isomerization of 4-Vinylcyclohexene by Iron Carbonyl Complexes."

    *Yale University, ICSN, CNRS (Gif-sur-Yvette, France)
    "A Trinuclear Iridium Cluster Complex Containing a Tricoordinate Hydrogen Atom."

11. R.J. McKinney and D.A. Pensak, Central Research and Development Du Pont "Application of Molecular Orbital Theory to Transition Metal Complex Calculations of the Change in Enthalpy for Some Dissociative Process."
"Cobalt-Complexed Propargyl Cations as Intermediates in Organic
Synthesis."

13. A. Eisenstadt, Tel-Aviv University
"A Novel C-Assisted π-Organotransition Metal Cation: The Protonation
of 1-substituted-2,2,7,7-tetramethyl-3,5-cycloheptadiene Irontricar-
bonyl Complexes."

Wednesday and Thursday, August 16, 17. (Papers Nos. 14 through

14. R.D. Kerber and T. Chiang, State University of New York at
Stony Brook
"η-(Triphenylcyclopropenyl)tricarbonylcobalt."

15. P.D. Frisch and G.P. Khare, University of Maine at Orono
"Oxidative Addition Reactions of RhCl(CO)(PR₃)₃ and the Cyclopropen
Ions C₃R₃⁺, R=Ph, Cl."

16. I. Arai, G.D. Daves, Jr., Oregon Graduate Center
"Palladium-Catalyzed Arylation of Enol Ethers and Esters."

17. J.A.K. Howard, J.H. Bassett, G.K. Barker, F.G.A. Stone, and
H. Green, University of Bristol.
"Structural Aspects of Some New Metal Isocyanide Complexes."

18. L.J. Farrugia, J.L. Spencer and F.G.A. Stone, University of Di:
"Syntheses of Reactive Mixed-Metal Clusters."

19. T.A. George, G.E. Bussard, D.C. Busby, S.D.A. Iske, Jr., and
C. Winters, University of Nebraska-Lincoln
"Chemical and Physical Properties of Alkylidiazenido and Alkylhydra-
Derivatives of Molybdenum."

20. D.F. Barton, University of Oklahoma
"Approaches to Unsaturated Lactone Metal Complexes: Propargyl and
Allanyl Alcohols."

de Rennes
"Activation Towards Electrophiles of Carbon Disulfide and Heteroal
by Coordination."

22. W.L. Waltz, O. Hackelberg, L.H. Dorfman and A. Wojcicki, Ohio
State University
"Pulse Radiolysis Studies of Haptic Manganese Carbonyls."

23. P.H. Treichel and W.K. Wong, University of Wisconsin
"Reactions of Coordinated Phosphines: Synthesis of Chelating
Phosphines."

24. Ch. Elschenbroich, J. Heck, R. Höckel and U. Zenneck, Philipps
Universität Marburg
"Novel Dis(2-Arene)Chromium Complexes of Condensed Arenes, Diphenyl
and [2.2]Paracyclopheane."
"Recent Work in Ruthenium Carbide Cluster Chemistry."

26. G.S. Levandos, Central Michigan University
"Silver(I) Catalyzed Deuterium Exchange of Terminal Acetylenes."

27. H.D. Keesz and G.D. Jarvinen, University of California, Los Angeles
"Rate Study of the Cyclometalation of cis-1-methyl(tribenzylphosphine) (tetracarbonyl)manganese."

28. F. Hares, S.E. Jacobson, and R. Tang, Corporate Research, Allied Chemical
"Oxidation of cyclic ketones by Hydrogen Peroxide Catalyzed by Group VI Metal Peroxo Complexes."
# ORGANOMETALLIC CHEMISTRY

August 14-19, 1973  
Proctor Academy  
Andover, New Hampshire

## Registration List

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<tr>
<th>Name</th>
<th>Code</th>
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<tr>
<td>Alper, Howard</td>
<td>24</td>
<td>University of Ottawa</td>
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<tr>
<td>Angelici, Robert</td>
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<td>Iowa State University</td>
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<tr>
<td>Arnott, John</td>
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<td>Dow Chemical USA</td>
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<tr>
<td>Arnold, Mary</td>
<td>9</td>
<td>ANCO Chemical Co.</td>
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<tr>
<td>Arnott, Robert</td>
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<td>Milliken Research Corp.</td>
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<td>Asby, Eugene</td>
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<td>Georgia Tech</td>
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<tr>
<td>Barnett, Kenneth</td>
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<td>Univ. of Missouri</td>
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<td>Bischof, David</td>
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<td>Gulf Research &amp; Develop.</td>
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<td>Belknap, F.D.</td>
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<td>University of Ottawa</td>
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<td>Bell, Robert</td>
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<td>General Electric Company</td>
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<td>Belmont, James</td>
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<td>University of Texas at Arlington</td>
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<td>North Dakota State University</td>
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<td>Bowr, Barton</td>
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<td>Eisenstadt, Amihai</td>
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<td>Elschenbroich, Christoph (and Ellen)</td>
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<td>Engebrecht, Ronald</td>
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<td>Forgione, Peter</td>
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<td>Frankel, Edwin</td>
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<td>Gibson, Thomas (and Chris)</td>
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<td>Goedken, Virgil</td>
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<td>Larock, Richard</td>
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<td>Iowa State University, Dept. of Chemistry, Ames, Iowa 50011</td>
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<td>Central Michigan Univ., Dept. of Chemistry, Mt. Pleasant, MI 48059</td>
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<td>NO 25</td>
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<td>E.I. duPont de Nemours &amp; Co. Central Research, Experimental Station E320/327 CR&amp;S, Wilmington, DE 19890</td>
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<td>Morrell, Dennis</td>
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<td>Union Carbide Corporation, PO Box 8361, S. Charleston, WV 25314</td>
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<td>Ranke, Lillian</td>
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<td>Scheben, J.A.</td>
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