

The
North American Catalysis Society
NEWSLETTER

January, 2001

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2001 Emmett, Houdry and Burwell Awards

Donna Blackmond, 2001 Emmett Award. The Paul H. Emmett Award in Fundamental Catalysis, sponsored by the Davison Chemical Division of W.R. Grace and Company and administered by The North American Catalysis Society, is given to recognize and encourage individual contributions in the field of catalysis with emphasis on discovery and understanding of catalytic phenomena, proposal of catalytic reaction mechanisms and identification of and description of catalytic sites and species. This year the recipient is Donna G. Blackmond of the University of Hull, UK. Prof. Blackmond's major contribution has been the demonstration of the importance of kinetic influences on enantioselectivity in asymmetric catalytic reactions. Particularly noteworthy is her detailed analysis of the kinetic contributions to nonlinear effects of catalyst enantiopurity on enantioselectivity. This work is quantitative support to the observation by Prof. Noyori that kinetics is the "fourth dimension" of asymmetric catalysis, taken in conjunction with stereochemical considerations in these reactions. This work has had wide impact in both heterogeneous and homogeneous catalysis at both the mechanistic and practical levels. Prof. Blackmond has shown a particular talent in making important connections in her research. Her work has helped to show relationships between heterogeneous and homogeneous catalysis and links between fundamental and applied research. Her accomplishments working in both academic and industrial research environments reflect an interest in and understanding of the broad scope of research in catalytic technology in the emerging area of pharmaceuticals and fine chemicals.

Leo Manzer, 2001 Houdry Award. The Eugene J. Houdry Award in Applied Catalysis, sponsored by Süd-Chemie, Inc and administered by The North American Catalysis Society, is given to recognize and encourage individual contributions in the field of catalysis with emphasis on the development of new and improved catalysts and processes representing outstanding advances in their useful application. This year the recipient is Leo E. Manzer of the DuPont Co. Leo is highly regarded in the catalysis community and has contributed greatly to the promotion of catalysis within DuPont and internationally. He has received several prestigious awards, including the 1995 ACS Earle Barnes Award for Creative Leadership in R&D Management, the 1997 Philadelphia Catalysis Club Award and the 1998 Cross-Canada Lecture Tour Award. He has over 60 issued or allowed US patents, over 80 publications and has delivered more than 130 invited lectures in over 25 countries. During his 27 years with DuPont, Leo has been actively involved in catalysis research, catalysis management and the commercial development of catalytic processes, resulting in hundreds of millions of dollars of revenue to DuPont. His most significant achievement in DuPont was to form the Corporate Catalysis Center in 1987, when catalysis was at a low point in industry and the country. He directed this Center until 1995 and had a staff of over 165 Ph.D. scientists and engineers at its peak. The Catalysis Center had a major financial impact for DuPont. The most widely recognized effort was the development of ozone-friendly replacements for chlorofluorocarbons (CFC's). More recently he was co-inventor of new catalysts for the production of phosgene from CO/Cl₂ that produce very low levels of the ozone depleting byproduct, CCl₄, thereby solving a significant environmental issue at a New Jersey plant. Leo and his team received the 1997 ACS Heroes of Chemistry award and the two DuPont Awards for Engineering Excellence and Safety, Health and Environment in 1997 for this work.

2001 Emmett, Houdry and Burwell Awards (cont.)

Tobin Marks, 2001 Burwell Lectureship. The Robert Burwell Lectureship in Catalysis is sponsored and administered by The North American Catalysis Society. The award is given in recognition of substantial contributions to one or more areas in the field of catalysis with emphasis on discovery and understanding of catalytic phenomena, catalytic reaction mechanisms and identification and description of catalytic sites and species. This year the recipient is Tobin J. Marks of Northwestern University. In a relatively short but remarkably productive career, Tobin Marks has demonstrated exceptional originality, breadth, and insight. His research has had a major impact on contemporary catalytic science with seminal work on organo-f-element homogeneous catalysis, metallocene polymerization, metal-ligand bonding energetics, and supported organometallic catalysts being the centerpieces. Tobin's style embodies discriminating choice of problem, elegant chemical synthesis, incisive elucidation of reaction mechanism, and decisive application of an awesome array of physical techniques. His published results are scholarly investigations of the highest quality, meticulously researched, and presented with great clarity. For 1981-1997, Tobin was the second most cited catalytic chemist and the second most cited inorganic chemist worldwide. In September he was named Vladimir N. Ipatieff Professor at Northwestern after a worldwide search and recently was awarded the ACS Award in the Chemistry of Materials. Tobin's dedication is tempered with civility, genuine concern for the welfare of students and colleagues, and unflagging attention to the progress of our discipline. For example, Tobin has thrown tremendous energy into organizing NSF, DOE, and NRC workshops on problems related to catalysis, two NATO Institutes, a Gordon Conference, and ACS symposia. He has served tirelessly as Associate Editor of *Organometallics*, and recently as chair of the ACS Division of Inorganic Chemistry. Tobin has also served on numerous governmental and industrial advisory committees and has mentored over 65 Ph.D. students and nearly as many postdoctoral fellows. They hold academic, industrial, and government positions worldwide. Professor Marks may be invited by the local Clubs and Societies to visit and lecture: Professor Tobin J. Marks, Dept of Chemistry, Northwestern University, Evanston, Illinois 60208-3113, t-marks@nwu.edu. (847) 491-5658.

Election of Directors-At-Large

Ballots and an addressed envelope for the election of 4 directors-at-large of the North American Catalysis Society have been included with this newsletter. Please vote for **four** of the eight candidates, sign the outside of the return envelope and mail as soon as possible. Deadline for receipt of the ballots is March 1, 2001. The candidates are: John Armor, Air Products & Chemicals; Steven Chuang, University of Akron; Robert Davis, University of Virginia; Bruce Gates, University of California, Davis; Gary Haller, Yale University; Gary McVicker, ExxonMobil; Jerry Spivey, North Carolina State University; Kathleen Taylor, General Motors.

Club/Society News

(An updated Directory of Local Clubs and Societies may be found at www.dupont.com/nacs/clubs.html)

The *Catalysis Club of Philadelphia* announced that its May 9 Spring Symposium at the University of Delaware will be presented in honor of **Ted Koch**, in recognition of his achievements and commitments to the Club. Ted Koch was one of the earliest members of the Catalysis Club of Philadelphia in the 1950's and continues to be one of its most active members. He was the recipient of the Catalysis Club of Philadelphia Award in 1994 and the

DuPont Lavoisier Award in 1998. Ted recently resigned from DuPont to pursue other interests. Contact Jennifer Jewson, Lyondell, jennifer.jewson@lyondell.com, (610) 359-4645.

The Michigan Catalysis Society invites nominations for the 2001 Giuseppe Parravano Memorial Award for Excellence in Catalysis Research. The Award will be made at the Nineteenth Annual Spring

Symposium of the Michigan Catalysis Society, in May of 2001. The award winner will be invited to present an award address at the meeting. The award is given biennially to an individual from North America to recognize outstanding contributions to catalytic science and technology. The award consists of a medal and prize of \$500. The award is sponsored by the Memorial Trust Fund for Professor Giuseppe

Parravano and is administered by the Michigan Catalysis Society. Letters of nomination and supporting documentation must be received by March 9, 2001 and should be sent to: John M. Gohndrone, Mail Stop 500, Dow Corning Corporation, P.O. Box 994 Midland, MI 48686-0994, (517) 496-6921 (Ph) (517) 496-6278 (fax) j.gohndrone@dowcorning.com

The Catalysis Division, The Canadian Society.

The 16th Canadian Catalysis Symposium, held in the Banff Park Lodge from May 23 to 26, was a great success, attended by 135 scientific delegates representing 21 countries. The scientific program, arranged by Program Chair Abdel Sayari (Laval) included invited speakers J.R. Grace (U.B.C.), E. Iglesia (Berkeley), J. Stevens (Dow Chemicals), J. Weitkamp (Stuttgart), S. Scott (Ottawa), and T. Ziegler (Calgary). A total of fifty-four oral presentations and seventy-four posters were included in the program. The conference also featured a special topic, Multiphase Catalytic Reactor Engineering, organized by Sayari and Co-Chaired by Faiçal Larachi (Laval). Garry Rempel (Waterloo) gave the Canadian Catalysis Award Lecture.

The Tri-State Catalyst Club. The Spring Symposium is scheduled for April 18-19, 2001 in Lexington KY. Check <http://msnhomepages.talkcity.com/NonProfitBlvd/tscatalysis/index.html> for details. United Catalysts Inc. (UCI) of Louisville, Kentucky, has changed its name to Süd-Chemie Inc., adopting the name of its parent company, Süd-Chemie A.G., of Munich, Germany. Other Süd Chemie Group companies are also taking the Süd Chemie name to clearly communicate that Süd-Chemie is a single company

providing unified services all over the world. Süd-Chemie A.G., a recognized world leader in catalysts, adsorbents and additives, operates more than 60 production and marketing companies throughout the world, providing jobs for 5,200 people on five continents.

The Catalysis Society of Metropolitan New York. The American Chemical Society (ACS) has announced that **John Armor** of the Air Products and Chemicals' Corporate Science and Technology Center has received the prestigious E. V. Murphree Award in Industrial and Engineering Chemistry. This award is presented for outstanding research in the fields of industrial or chemical engineering and is one of the most distinguished international awards in this field. A jury of renowned scientists and engineers selects recipients. Exxon Research and Engineering Company established the Award in 1955, and previous recipients have included nationally recognized scientists and engineers from both academia and the chemical or petrochemical/refining industries.

Western States Catalysis Club announces that The 2001 Annual Meeting of the Western States Catalysis Club will be held February 22-23, 2001 in Provo, Utah at the Provo Marriott Hotel, (801) 377-4700. We plan to host an evening poster session on February 22 and a one-day symposium consisting of 15-18 oral papers. We invite presentations by both professionals and students, with students being eligible for special presentation awards. For abstract submission, conference registration, or further information, please contact: Calvin H. Bartholomew, Pope Professor of Chemical Engineering and Head, BYU Catalysis Laboratory, Department of

Chemical Engineering, 350 CB, Brigham Young University, Provo, Utah 84602, ph (801) 378-4162, fax (801) 378-7799, bartc@byu.edu. **Alex G. Oblad**, Distinguished Professor of Metallurgical and Fuels Engineering at the University of Utah died on Sept, 19, 2000 in his Salt Lake City home. Dr. Oblad was internationally acclaimed for his contributions to the science of heterogeneous catalysis, petroleum refining, synthesis of petroleum-derived chemicals, and the conversion of tar sand bitumen and other fossil fuels to useful products.

The California Catalysis Society
The ACS Award for Creative Research in Homogeneous or Heterogeneous Catalysis sponsored by Shell Oil Foundation, will be awarded to **Alex Bell**, University of California, Berkeley in recognition of his research on relations between structures of catalysts and catalyst performance and advancing the understanding of how to design catalysts of high efficiency and selectivity.

On December 6th, 2000, the ***Mexican Academy of Catalysis*** (ACAT) organized a members Forum to analyze the present state and perspectives of the research in catalysis in Mexico. The presentations of a panel of well recognized researchers from different universities and the Mexican Petroleum Institute gave the starting point for the discussions. Among other points the analysis revealed that most of the well-consolidated research groups in the field are located in the center of the country, in and around Mexico City. The research on catalysis in the different state universities should clearly be promoted by the ACAT.

The Organic Reactions Catalysis Society announces its 19th Conference on Catalysis of Organic Reactions to be held at the Marriott Plaza in San Antonio TX, April 14-18, 2002. Contact Dennis Morrell, Hercules Incorporated, Research Center, 500 Hercules Road, Wilmington DE 19808, 302-995-3446, fax: 302-995-4324, dmorrell@herc.com; www.orcs.org.

Meetings

April 1-5, 2001. Nanotechnology in Catalysis. ACS National Meeting Spring 2001, San Diego. Topics of Symposium: 1. Synthesis of Nanomaterials for Catalysis 2. Characterization Techniques for Nanoscale Materials and Catalysis: Characterization of nanomaterials size & structure, Characterization of surface reactions on nanomaterials 3. Fundamentals and Applications: Kinetics and surface reaction of nanomaterials, Enhancement of activity by nanoparticle catalysts, New applications of nanostructure and nanoporous materials. Featured Speakers: Dr. Hank Foley, Dr. William A. Goddard, III, Dr. Jun Liu, Dr. Gabor A. Somorjai, Dr. Jackie Y. Ying. Contact: Bing Zhou, Hydrocarbon Technologies, Inc., 1501 New York Ave., Lawrenceville, NJ 08648 Tel: (609) 394-3102 ext. 211, fax: (609) 394-9602, email: zhou@htinj.com

ACS International Symposium on Greenhouse Gas Control and Utilization. San Diego. Sponsored by ACS Fuel Chemistry Division. Contact Chunshan Song, Pennsylvania State Univ. 206 Hosler Building University Park, PA 16802-5000, csong@psu.edu, (814) 863-4466.

Catalysis for Fine and Specialty Chemicals. San Diego. This symposium will highlight recent developments in catalytic research and technology for the production of fine and specialty chemicals. Both fundamental and applied studies will be included, as well as overview reports. Contact John Armor, Air Products & Chemicals, (610) 481-5792, armorjn@apci.com.

April 2-5, 2001. Catalytic Gold International Conference. Cape Town, South Africa. Contact Dr Annette Bollmann, Technical Committee, Catalytic Gold, Mintek, Private Bag X3015, Randburg 2125, South Africa. Ph: +27 11 7094573 Fax +27 11 7094480, AnnetteB@mintek.co.za

May 7-12, 2001. Intern'l Symposium on Acid-Base Catalysis IV. Matsuyama, Japan. Contact Tsutomu Yamaguchi, Ehime Univ. yamaguti@en3.echime-u.ac.jp.

Sept, 2001. 5th European Congress on Catalysis. Limerick, Ireland. Contact Julian Ross, University of Limerick. www.ul.ie/~cer/EuropaCatV.html

Oct. 7-10, 2001. 9th Intern'l Symposium on Catalyst Deactivation. Lexington, KY. Contact Burt Davis, CAER, 2540 Research Park Dr, Lexington, KY 40511-8410. (606) 257-0251 fax (606) 257-0302. crtc.caer.uky.edu/iscd/home.htm

This Newsletter is a publication of The North American Catalysis Society, President: Dr. M. Albert Vannice, Penn State University; V. President: Dr. Alexis Bell, Univ. of California, Berkeley; Acting Secretary: Burtron H. Davis, Center for Applied Energy Research., University of Kentucky, 3572 Iron Works Pike, Lexington, KY 40511, davis@alpha.caer.uky.edu; Treasurer: Dr. John N. Armor, Air Products & Chemicals; Past President: Dr. Richard D. Gonzalez, Tulane Univ.; Directors-at-Large: Dr. Bruce Gates, UC, Davis, Dr. Gary Haller, Yale Univ. Dr. Gary McVicker, Exxon, Dr. Kathleen Taylor, General Motors. Club Representatives: California-Dr. E. Iglesia; Canada-Dr. C. A. Mims; Chicago-Dr. G. Antos; Mexico-Dr. G. Diaz; Michigan-Dr. G. Fisher; New England-Dr. W.C. Conner; New York-Dr. J. Byrne; Philadelphia-Dr. A. Gaffney; Pittsburgh/Cleveland-Dr. M. A. Vannice; Organic Reactions-Dr. S. E. Jacobson; Southwest-Dr. R. A. Kemp; Tri-State-Dr. B. D. Davis; Western States-Dr. A. Datye. Contributions for the Newsletter should be directed to the Editor, Dr. Michael B. D'Amore, DuPont Company, P.O. Box 80262, Experimental Station, Wilmington DE 19880-0262, Ph: (302) 695-2488, Fax: (302) 695-8347, E-mail: michael.b.damore@usa.dupont.com. Society Web address www.dupont.com/nacs.