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## Alexis Bell Selected for the 2007 Michel Boudart Award



*Professor Alexis Bell has been selected for the 2007 Michel Boudart Award for the*

*Advancement of Catalysis.* The award consists of a plaque and a prize. The Award recognizes and encourages individual contributions to the elucidation of the mechanism and active sites involved in catalytic phenomena and to the development of new methods or concepts that advance the understanding and/or practice of heterogeneous catalysis. The Award selection

process emphasizes accomplishments and contributions published within the five preceding years. Candidates are nominated without any restriction of national origin, thus reflecting the international scope of the career and contributions of Michel Boudart.

Alex Bell has been Professor of Chemical Engineering at the University of California, Berkeley, since 1967. He is a world-class leader in *Continue on page 2*

## Robert Davis selected for the 2007 Paul H. Emmett Award in Fundamental Catalysis



*Professor Robert Davis has been selected for the 2007 Paul H. Emmett Award*

*in Fundamental Catalysis.* The award consists of a plaque and a prize. The purpose of the Award is to recognize and encourage individual contributions (under the age of 45) 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.

Since 2002 Bob has been Professor and Chair of the Department of Chemical Engineering, University of Virginia, Charlottesville, Virginia. Bob has made numerous lasting contributions to the fundamental science of heterogeneous catalysis with exceptional advances in acid, base, bifunctional acid/base, and base-promoted metal catalysis. He is recognized here for his pioneering contributions

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experimental as well as theoretical aspects of catalysis and has made a number of lasting contributions to the elucidation of reaction mechanism, the development of structure property relationships, novel methods for chemical synthesis, and the development and application of theoretical methods for catalytic systems. He has elegantly demonstrated how detailed characterization coupled with well-defined kinetic studies and theory can be used to help identify active sites and elucidate the controlling reaction mechanisms for a number of important catalytic reactions over complex metal, metal oxide and zeolite catalysts. His detailed efforts have provided unique insights into the controlling chemistry for N<sub>2</sub>O decomposition over Fe-ZSM 5, methanol synthesis from CO and CO<sub>2</sub> over Cu/ZrO<sub>2</sub>, the dehydrogenation and selective oxidation of alkanes over vanadium oxides as well as other important catalytic systems. He has demonstrated how the combination of theory and experiment can be exploited to establish the nature of the active sites and thus tailor the design of new materials. Alex recognized the value of in situ methods early in his

career and has had great impact on the development of spectroscopic methods in catalysis.

Although experimental methods have been fundamental to Alex' success, he was one of the first to realize that the identification of plausible reaction intermediates cannot always be made by experimental techniques. Alex and his group have developed a novel biasing transition state search algorithm that can systematically identify multiple pathways, thus eliminating the need for expert intuition. The success of this approach was demonstrated for a wide range of different reaction systems and in particular for reaction paths where other known search strategies have failed. In the isolation of actual transition states, a novel "string" mathematical method was developed that presents a major improvement to the currently-used nudged-elastic band and conjugate gradient methods. The methods have been incorporated into the QChem commercial software code and when used to model catalytic systems will have a lasting impact on homogeneous, heterogeneous and biocatalysis.

In addition to his outstanding research accomplishments, Alex is a leader in educating

students and advancing the field of catalysis and reaction engineering. He is the Editor in Chief of Catalysis Reviews and is on the editorial board of many important journals in catalysis. He has been involved in the organization of many events for the North American Catalysis Society and the International Congress on Catalysis, where he is the current President. In these leadership positions, and as a spokesman for catalysis in the National Academy of Engineering, Alex has had great impact in guiding and focusing the field of catalysis and in helping to set and maintain the standards needed to keep it thriving.

Alex will give a plenary lecture at the 2007 North American Catalysis Society (NACS) meeting in Houston as well as at the meeting of the European Federation of Catalysis Societies (EFCATS) in Turku, Finland. The Boudart Award for the Advancement of Catalysis is sponsored by the Haldor Topsøe Company and is administered jointly by the NACS and the EFCATS. The Award is presented biennially in odd numbered years. More information on this award and the award process can be found in the Awards folder on the NACS home page [www.nacatsoc.org](http://www.nacatsoc.org).

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## Burwell Nominations now open- Due date April 1, 2007

The **Robert Burwell Lectureship in Catalysis** is sponsored by Johnson Matthey Catalysts Division and administered by The North American Catalysis Society. It is to be awarded biennially in odd-numbered years. The award consists of a plaque and an honorarium of \$5,000. An additional \$4,500 is available to cover traveling expenses in North America. The awardee is expected to lecture at many of the local catalysis clubs.

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. The Awardee will be selected on the basis of his/her contributions to the catalytic literature and the current timeliness of these research contributions. The recipient may be invited to (1) visit and lecture to each of the affiliated Clubs/Societies with which mutually satisfactory arrangements can be made and (2) prepare a review paper(s) for publication covering these lectures. Publication

will be in an appropriate periodical.

Selection of the Award winner will be made by a committee of renowned scientists and engineers appointed by the President of The North American Catalysis Society. Selection shall be made without regard for age, sex, nationality or affiliation. Posthumous awards will be made only when knowledge of the awardee's death is received after announcement of the Award Committee's decision. Nomination packages should indicate the nominee's qualifications, accomplishments, a nominating letter, a seconding letter and a biography of the nominee. A critical evaluation of the significance of candidate's qualifications should be made as well as a statement of the particular contribution(s) on which the nomination is based. Nomination packages for the Award must be received by on 1 April 1 2007.

All nomination packages (one ELECTRONIC COPY) for the Burwell Award should be sent to John Armor, President, North American Catalysis Society; at [jnagcat@verizon.net](mailto:jnagcat@verizon.net). Email confirmation will be sent to each nominator.

### Davis, from page 1

to the use of in-situ spectroscopic methods coupled with both steady-state and transient kinetic methods to elucidate how oxide supports and basic promoters alter the active catalytic sites for a variety of reactions, including the selective oxidation of hydrocarbons, acid/base conversions, and ammonia synthesis. A distinguishing characteristic of Bob's research is its integration of multiple experimental techniques for characterizing heterogeneous catalysts and the kinetics of reactions occurring on their surfaces. Bob has employed a comprehensive set of spectroscopic tools including extended X-ray

absorption fine structure, X-ray absorption near-edge structure, infrared, Raman, nuclear magnetic and electron spin resonance, adsorption microcalorimetry, electron microscopy together with steady state as well as transient kinetic analyses to determine the local electronic and geometric structure of the active site(s), the influence local environment, and the reactivity of novel supported catalysts under working conditions. This wide array of tools has enabled him to discover the fundamental features that control a wide range of important catalytic systems.

In addition to his outstanding research accomplishments, Bob has proven to be a leader in

educating students and advancing the field of catalysis and reaction engineering. He is the co-author of a relatively new undergraduate/graduate textbook "Fundamentals of Chemical Reaction Engineering" published by McGraw-Hill. His leadership has also been well recognized by the field as Bob has chosen to lead the programming efforts for Catalysis in the Division of Catalysis and Reaction Engineering of the American Institute of Chemical Engineers and currently serves as a Division Director. He has also organized and participated in a number of workshops to promote catalysis in Asia, South America and Africa for the National Science Foundation. He is one of

the founders as well as the past President of the Southeastern Catalysis Society. He also recently chaired the 2006 Gordon Conference on Catalysis.

Bob will give a plenary lecture and be recognized at the 2007 North American Catalysis Society meeting in Houston. The Paul H. Emmett Award in Fundamental Catalysis is sponsored by the Davison Chemical Division of W.R. Grace and Company. It is administered by The North American Catalysis Society and is awarded biennially in odd numbered years. More information on this award, the awards process, and previous awardees can be found inside the Awards folder on the NACS home page:

[www.nacatsoc.org](http://www.nacatsoc.org)

## The Catalysis Club of Chicago

### Herman Pines Award in Catalysis – Solicitation for Nominations



The **Catalysis Club of Chicago** is soliciting nominations for the Herman Pines Award for outstanding research in the field of catalysis. Herman Pines was an outstanding research scientist, and his work revolutionized the general understanding of organic chemistry, particularly the chemistry of hydrocarbons interacting with strong acids. The award in his honor is sponsored by UOP where Herman began his industrial career in 1930 and amassed 145 US patents over a 23 year period. The award is being co-sponsored by the Catalysis Club of Chicago of which Professor Pines was a founding member. The award will be presented at the 2007 Spring Symposium of the Catalysis Club of Chicago. The recipient will receive a cash award of \$1,000 and reimbursement for travel and lodging as a plenary speaker at the Spring Symposium.

Past winners of the Herman Pines Award have been:

- 1999 - Professor Harold Kung (Northwestern University)
- 2000 - Dr. John Monnier (Eastman Chemical Company)
- 2001 - Professor Lanny Schmidt (University of Minnesota)
- 2002 - Dr. James Brazdil (BP)
- 2003 - Professor James A. Dumesic (University of Wisconsin)
- 2004 - Dr. Alak Bhattacharyya (BP)
- 2005 - Professor Israel Wachs (Lehigh University)
- 2006 - Dr. Jeffrey T. Miller (BP)

The recipient will be chosen based on the following criteria:

- Importance of catalysis research completed in the past five years.
- Alternation of the award between industrial and academic/national laboratory researchers.
- Recipient must be a resident of North America.

For the award to be given in 2006, nominations for either AN ACADEMIC OR NATIONAL LABORATORY RESEARCHER are sought by January 31, 2007. Nominations should describe the specific work for which the nominee should be recognized.

Please send your nomination via email (single PDF file) to:

**Christopher L. Marshall**, President-Catalysis Club of Chicago  
Chemical Engineering Division  
Argonne National Laboratory  
9700 South Cass Avenue  
Argonne, IL 60565  
(630) 252-4310  
(630) 972-4408  
CLMarshall@anl.gov

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[pstair@northwestern.edu](mailto:pstair@northwestern.edu)

### Representative North American Catalysis Society

Professor Harold H. Kung  
Northwestern University  
[hkung@northwestern.edu](mailto:hkung@northwestern.edu)

## Catalysis Society of Metropolitan New York

The Catalysis Society of Metropolitan New York is seeking nominations for its twenty-sixth annual "**Award for Excellence in Catalysis.**" The award, sponsored by ExxonMobil Research and Engineering Company, consists of a plaque and a \$1,500 gift. It is granted to an individual or a research team from North America to recognize outstanding contributions in either applied or basic research in either homogeneous or heterogeneous catalysis. *Particular effort is made to identify worthy individuals or teams who have not received sufficient recognition for their work.*

*This award will bring due recognition to the recipient(s), and we appreciate your help in seeking first-rate candidates. We especially need to fortify our active nomination list! Nominations are solicited from anyone who is currently, or has been previously, active in the field of catalysis. Nominations previously submitted as well as new ones will remain active for a period of three years.*

Those wishing to submit a nomination should write a letter of recommendation for the individual nominee or team, including pertinent biographical information and a specific description of the impact of the nominee's

achievements in catalysis. The maximum length of the letter should be no more than two pages. It may be accompanied by copies of no more than two items presenting important documentation, such as papers or patents.

Deadline for receipt of nominations is **January 31, 2007.**

Nominations for consideration should be sent to:

**Dr. Colin Beswick**  
(Bldg: R&D, Rm: 212)  
BASF Catalysts LLC  
25 Middlesex-Essex Turnpike  
Iselin, NJ 08830  
[colin.beswick@basf.com](mailto:colin.beswick@basf.com)

## 2007 Spring Symposium

### CALL FOR ABSTRACTS

The **Catalysis Society of Metropolitan New York** invites you to submit abstracts of papers for oral or poster presentation at the annual 2007 Spring Symposium. As a heading of the abstract please list the title, author(s) (underline the speaker) and affiliation. The length of the abstract should not exceed one page, single-spaced. Approximately twenty minutes will be allotted for each oral presentation, followed by a short discussion period.

Times will be strictly monitored so as to encourage a thorough discussion. In addition awards will be given to the best posters. Graduate students will be awarded a first prize of \$125, a second prize of \$75 and a third prize of \$50 for their poster presentations.\* Post-doctoral fellows will be awarded a first prize of \$125 for their poster presentation.\* You are all urged to reserve the date and participate in the Spring Symposium.

The deadline for receipt of abstracts is Wednesday, January 31,

2007. You will be notified of consideration for the Symposium by Friday, February 9, 2007.

Those submitting paper(s)/poster(s) for consideration for the Spring Symposium should send or e-mail them to:

Dr. Colin Beswick  
(Bldg: R&D, Rm: 212)  
BASF Catalysts LLC  
25 Middlesex-Essex Turnpike  
Iselin, NJ 08830  
[mcolin.beswick@basf.com](mailto:mcolin.beswick@basf.com)

NOTE: Award value and distribution may change based on the number of poster submissions in each category.

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[tilman.beutel@basf.com](mailto:tilman.beutel@basf.com)



The **22nd Conference on Catalysis of Organic Reactions** will be held at the Jefferson Hotel in Richmond, Virginia. The conference will begin March 30, 2008 and conclude April 3, 2008. Additional conference and registration information will be posted at the web site soon ([www.orcs.org](http://www.orcs.org)). Exhibitors and vendors interested in participating should contact Michael Prunier, the 2008 ORCS Chair ([chairman@orcs.org](mailto:chairman@orcs.org)).



#### Key Dates:

**February 23, 2007** -  
Notice of Acceptance

**April 13, 2007** -  
Deadline for Early  
Registration

Visit us at  
[www.20nam.org](http://www.20nam.org)

## Southeastern Catalysis Society

The **Southeastern Catalysis Society** held its Annual Symposium in Asheville, NC on September 24 and 25. This was the fourth Annual Symposium for the SCS, continuing a tradition started in 2002.

The meeting began on Sunday afternoon with a poster session featuring 17 contributed posters from eight Universities. The award for the winning student poster competition went to Yaritza M. López-DeJesús from the University of South Carolina for her presentation entitled *Synthesis and Characterization of Dendrimer-Derived Ir /  $\gamma$ -*

*Al<sub>2</sub>O<sub>3</sub> Catalysts*. Oleg Alexeev and advisor Chris Williams were co-authors on the poster.

Anna P. Goldstein of University of North Carolina at Asheville was also recognized for her poster on *Dehydrogenation and Partial Oxidation of Ethanol over Rhodium(111): Elucidating the Reaction Mechanism from Periodic Density Functional Theory*, co-authored by advisor Sally Wasileski.

Following the poster session, Stuart Soled of ExxonMobil Research and Engineering, and the 2006 recipient of the NACS F. G.

Ciapetta Lectureship in Catalysis award, presented an after dinner speech entitled *Recent Advances in the Synthesis of Catalytic Materials*.

On Monday, Sept 24, the Symposium continued with 16 oral presentations. Overall there were over 60 attendees from Universities and institutions throughout the Southeastern region.

## The Catalysis Club of Philadelphia

### CCP 2007 Award - Call for Nominations

Each year the **Catalysis Club of Philadelphia** recognizes a person, preferably from the Philadelphia area, who has made an outstanding contribution to the advancement of catalysis. Such advancement can be scientific, technological or in organization leadership. No split Award to two or more persons will be given.

Nomination letters along with supporting materials should be sent to:

#### ***Dr. Istvan Halasz***

Principal Chemist  
Research and  
Development Center  
PQ Corporation  
Conshohocken, PA 19428  
Phone: (610) 651-4696  
Email:  
[istvan.halasz@pqcorp.com](mailto:istvan.halasz@pqcorp.com)

The entire nomination package, including a resume and recommendation letters, should not exceed 10 pages. The deadline for the

receipt of nominations is **April 6, 2007**.

Proposals sent since 2004 will be considered for the 2007 Award. Submitters may want to update the proposals if necessary.

[catalysisclubphilly.org](http://catalysisclubphilly.org)