

CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

October, 2013
Vol. 51 No. 2

Section Calendar Upcoming Events

NCW Outreach	Oct 20-26
Oesper Symposium, Richard Eisenberg Harry Gray dinner speaker U. of Cincinnati	Oct. 25
Joint meeting with NOBCChE, Xavier Univ Dr. Stefan France	Dec. 11

Oesper Symposium and Award Banquet

University of Cincinnati

Friday, October 25, 2013

Reception begins at 5:30 PM

Register Now for October Oesper Banquet!

The University of Cincinnati Department of Chemistry and the Cincinnati Section of the American Chemical Society are pleased to announce the 2013 Oesper Award Winner, Richard Eisenberg, the Tracy Harris Professor Emeritus and Professor (Research) at the University of Rochester.

The Oesper Symposium and Awards Banquet will be held on Friday, October 25, at the Tangeman University Center (TUC) at the University of Cincinnati.

A poster session and reception will begin at 5:30 PM. Dinner will follow at 7 PM and the evening ends with the award presentation and a presentation by Harry Gray, California Institute of Technology, entitled "Fifty Years with Rich".

The Symposium is open to the public, but reservations are required for the Award Banquet. Please click registration link above to pre-register. The deadline for registration is Friday, October 18 at noon.

Directions to UC's main campus and a detailed campus map are available on the section website. Hourly rate parking can be found north of the Tangeman University Center at the Clifton Court Garage (321 Clifton Ct) and Woodside Garage (2913 Woodside Dr), or south of the Center at the CCM Garage (270 CCM Blvd).

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THE CINTACS NEWSLETTER**Vol. 51, No. 2 October, 2013**

Editor.....Adam Bange

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Adam Bange
Xavier University
3800 Victory Parkway
Mail Location 4221
Cincinnati, Ohio 45207-4221
Tel.: (513) 745-3950
Fax: (513) 745-3695
E-mail: Bangea1@xavier.edu

ACS Cincinnati Section**Chair:**

Diana McGill
mcgill@nku.edu

1st Vice Chair & Chair-**Elect:**

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kea0@cdc.gov

2nd Vice Chair:

Gloria Story
story.gm@pg.com

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thomas.jb.1@pg.com

Treasurer:

Keith Walters
walterske@nku.edu

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Letter from the chair:

Well, we are already to October and having a great start to our year. We had absolutely perfect weather for our annual picnic at Germania Park. Many of us followed the Bengal's game on the radio while Cincinnati Circus provided carnival games, face painting and balloon animals for our pre-meal entertainment. Hammann's Catering and many talented chefs of our section provided delicious picnic fare. And George Rizzi very generously gave of his time and talents to entertain the young and the young at heart with a great array of chemistry demos to close out the afternoon.

Preparations for National Chemistry Week are well underway. Our training session on September 25 at NKU was well attended as Ed Escudero impressed us all with many demonstrations that could be used with this year's theme: Energy Now and Forever. Thanks to all our local chemists who contributed ideas for us to use at our demos, but in particular huge thanks go to Jackie Thomas, Hong Zhang, Gloria Story and Patrick Hare for helping to make "demo night" so successful. National Chemistry Week, October 20-26, will be here before we know it; in addition to the Cincinnati Museum Center, we have a very long list of libraries to cover as well as. So please sign up to volunteer to help with the libraries as your schedules allow.

This year, National Chemistry Week comes to an exciting close with the Oesper Symposium on October 25. The line-up of symposium speakers is quite impressive, so if you can skip out of work for part of the day, you could hear the likes of James Mayer from the University of Washington, Marcetta Darensbourg from Texas A&M, and Daniel Nocera from Harvard University, among others. The entire symposium schedule can be found [here](#). In the early evening, the Cincinnati Section meeting begins with the graduate and undergraduate poster session and reception, followed by the banquet and award presentations to this year's Oesper Award Winner, Dr. Richard Eisenberg. He will be announced by Dr. Harry Gray who will deliver what will no doubt be an entertaining after dinner talk honoring Dr. Eisenberg.

Join us for NCW and the Oesper Symposium as we celebrate an exciting month of October!

Sincerely,
Diana



Richard Eisenberg

University of Rochester

Richard Eisenberg is Tracy Harris Professor Emeritus and Professor (Research) at the University of Rochester. A native New Yorker, he received his undergraduate and graduate degrees from Columbia University. In 1973, he joined the faculty of the University of Rochester after six years as Assistant and Associate Professor at Brown University in Providence, RI. He served as Chair of the UR Chemistry Department from 1991–'94 and was named to the Harris Chair in 1996. Eisenberg's research interests are in inorganic and organometallic chemistry, photochemistry relating to solar energy conversion, and catalysis. Some of Eisenberg's specific research activities include the photogeneration of hydrogen from water, luminescent square planar complexes and their incorporation into molecular assemblies for photoinduced charge separation, the development of parahydrogen induced polarization for hydrogen addition reactions, luminescent gold and copper complexes for application in electroluminescent devices, and the design of new electrophilic catalysts for electrocyclizations and tandem organic transformations.

He has mentored more than eighty Ph.D. and postdoctoral research students. Foremost among his activities in the chemistry community, Eisenberg was the Editor-in-Chief of *Inorganic Chemistry* for twelve years, stepping down at the end of 2012. He has also served as Chair of the Inorganic Division, Chair of the Organometallic Subdivision, Chair of the Gordon Research Conference on Organometallic Chemistry and as a member of the editorial advisory boards of the *Journal of the American Chemical Society*, *Inorganic Chemistry*, *Organometallics* and *Accounts of Chemical Research*. He has been the recipient of a number of awards including the 2003 ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry and shared the 2011 ACS Nobel Laureate Signature Award in Graduate Education with his student Ping-wu Du. In 2010, he received the Lifetime Achievement Award for Graduate Education from the University of Rochester. Eisenberg was elected a Fellow of the American Association for the Advancement of Science in 2005, a Fellow of the American Academy of Arts and Sciences in 2009, and a Member of the U. S. National Academy of Sciences in 2010. He has recently become an Associate Editor for the *Proceedings of the National Academy of Sciences*.

Fuel from Water: The Light-Driven Generation of Hydrogen

This century's greatest technological challenge is the conversion of sunlight into usable energy in a sustainable, environmentally benign and carbon-neutral way on a global scale. For light to chemical energy conversion in a designed photosynthetic system, the splitting of water into its constituent elements is the key energy-storing reaction. As with natural photosynthesis, such a system relies on light absorption, charge separation, and catalysis. Recent efforts in the Eisenberg laboratory are described that focus on different components and system compatibility for the reductive side of the water splitting reaction and the visible light-driven generation of hydrogen from aqueous protons. The light absorbers in recent systems include strongly absorbing organic dyes and water-solubilized semiconductor nanoparticles. As catalysts for the generation of hydrogen, different sets of metal complexes have been investigated, including previously unstudied systems that exhibit high activity. Both the light absorbers and the hydrogen-forming catalysts are composed only of earth abundant elements. Studies are described to provide clues to initial charge transfer steps, mechanisms of H₂ generation and sources of system instability.



Harry Gray

California Institute of Technology

Harry Gray is the Arnold O. Beckman Professor of Chemistry and the Founding Director of the Beckman Institute at the California Institute of Technology. In 1961, after graduate work in inorganic chemistry at Northwestern University and postdoctoral research at the University of Copenhagen, he joined the chemistry faculty at Columbia University, where he investigated the electronic structures and reactions of inorganic complexes. In 1966, he moved to Caltech, where for over 40 years he has been working on problems in biological inorganic chemistry and in organic photochemistry. Awards for his work include: the National Medal of Science in 1986; the Priestley Medal in 1991; the National Academy of Sciences Award in Chemical Sciences in 2003; the Benjamin Franklin Medal in Chemistry and the Wolf Prize in Chemistry in 2004; and the Welch Award in Chemistry in 2009. He is a member of the National Academy of Sciences; the American Academy of Arts and Sciences; the American Philosophical Society; a foreign member of the Royal Danish Academy of Sciences and Letters; the Royal Swedish Academy of Sciences; the Royal Society of Great Britain; and the Academia Nazionale dei Lincei.

Fifty years with Rich

A twenty second per year tribute to my great friend and Oesper Medalist Rich Eisenberg.

Oesper Poster Session Announcement

It is that time of year again to start thinking about submitting abstracts for the Oesper poster session that will be held October 25th from 5:30 -7:00 at the Great Hall in TUC. If you want to be in the poster session please submit an abstract to Amie Norton at nortonai@mail.uc.edu. Abstracts need to contain a title, list of authors and the abstract itself (The word limit this year has been increased to 200 words). Please submit as a word document. You will receive an e-mail confirmation from me that will serve as your reservation for the poster session. **The deadline for submitting an abstract is going to be October 18, 2013**, so please plan accordingly.

Ralph & Helen Oesper Symposium

Friday, October 25, 2013
400-B/C Tangeman University Center

9:00-9:10	Anna D. Gudmundsdottir , Head, Dept. of Chemistry Welcome and Introductory Remarks
<i>Session Chair:</i>	
9:15-10:00	James M. Mayer , University of Washington <i>Proton-Coupled Electron Transfer: from Hydrogen Atom Transfer and Marcus Theory to Electrocatalysis to Nanoparticles"</i>
Break (10:00-10:15 a.m)	
<i>Session Chair:</i>	
10:15-11:00	Marcetta Y. Darensbourg , Texas A&M University <i>Crossroads of Organometallic and Coordination Chemistry: Synthetic Analogues of the Hydrogenase Active Sites"</i>
11:00-11:45	Harry Gray , California Institute of Technology <i>Fifty Years of Metal-Oxos"</i>
Break for lunch (11:45 – 1:15 p.m.) Lunch Reservation is Required – Buffet Lunch https://www.surveymonkey.com/s/3KQQLRN	
<i>Session Chair:</i>	
1:15 – 2:00	Clifford P. Kubiak , University of California, San Diego <i>Carbon Dioxide Reduction by Rhenium and Manganese Bipyridyl Complexes: Mechanistic Insights"</i>
2:00-2:45	Daniel G. Nocera , Harvard University <i>The Artificial Leaf"</i>
Break (2:45–3:00 p.m)	

<i>Session Chair:</i>	
3:00-3:45	Vivian W.W. Yam , The University of Hong Kong <i>From Simple Discrete Metal Complexes to Supramolecular Assemblies and Structures"</i>
Break (3:45–4:05 p.m)	
<i>Introduction of Oesper Awardee:</i> <i>Bill Connick</i>	
4:10	Richard Eisenberg , University of Rochester <i>Fuel from Water: The Light-Driven Generation of Hydrogen"</i>
5:30-7:00	Poster Session & Reception TUC Great Hall
7:00-8:00	ACS Banquet (Reservations are required) TUC Great Hall www.acscincinnati.org/oesper
8:00	Award Presentation, Announcements & After-dinner Speaker, Harry Gray , California Institute of Technology, <i>"Fifty Years with Rich"</i>

Visit the Oesper website for more information: <http://www.artsci.uc.edu/departments/chemistry/alumni-and-community/the-oesper-award-program-and-symposium.html>

Nominations for Cincinnati Chemist of the Year and Research Associate of the Year

Recognize your colleagues and co-workers for their outstanding contributions to our field. Please submit a nomination for Cincinnati Chemist of the Year or Research Associate of the Year. The nomination deadline is Friday, December 20.

The Chemist of Year should hold a terminal degree and must be a member of the Cincinnati section of the ACS. A nomination requires two letters of recommendation and the nominee's CV. The Research Associate of the Year must be or have been a practitioner within the chemical discipline, but ACS membership is not a requirement. A nomination requires a letter of recommendation; CV and additional documentation are optional, but appreciated. Electronic submission is greatly preferred.

Nomination materials should be sent to:

Phil Christenson
513-948-4942
phil.christenson@givaudan.com
Givaudan Flavors
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Xavier University
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