

The Chemical Bulletin

<http://chicagoacs.org>

OCTOBER • 2012

CHICAGO SECTION AMERICAN CHEMICAL SOCIETY JOINT MEETING WITH THE NORTHWESTERN UNIVERSITY DEPARTMENT OF CHEMISTRY

Basolo Medal Award Lecture, Dinner and Presentation Friday, October 19, 2012

BASOLO MEDAL LECTURE

Northwestern University
Technological Institute
2145 Sheridan Road
Evanston, IL
Lecture Room 3

DIRECTIONS TO THE TECHNOLOGICAL INSTITUTE

From the city: Take Lake Shore Drive North to Sheridan Road into Evanston. Continue on Sheridan Road to the Tech Institute at Noyes Street.

From the west: Take I-88 east to I-294 north to Dempster east. Proceed east on Dempster into Evanston. Turn left onto Chicago Ave. and proceed to Sheridan Road. Take Sheridan Road north to the Tech Institute. The Technological Institute is at the intersection of Sheridan Road and Noyes Street.

To those attending the Basolo Medal lecture, parking after 4:00 p.m. is available in the lot across from the Technological Institute at the corner of Noyes Street and Sheridan Road. Parking is also available on the side streets just west of this lot; however, observe the posted signs.

Lecture room 3 is on the first floor of the Technological Institute and is most easily reached by entering through the main doors facing Sheridan Road. The lecture room is clearly marked and there will be signs at the entrance to guide you to the room.

Basolo Medal Lecture: 4:30 P.M.

The Medalist Lecture is open to the public and admission is free to all those wishing to attend.

2012 Fred Basolo Medalist



**Dr. Richard Eisenberg, Tracy Harris
Professor of Chemistry, University of
Rochester, Rochester, New York**

**Title: "The Reductive Side of Water
Splitting: Recent Progress in the
Photo-driven Generation of Hydrogen
from Water"**

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Abstract: 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 include metal complexes with triplet charge transfer (CT) excited states, organic dyes and very recently, 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. These molecular catalysts are composed only of earth abundant elements. Studies are described to provide clues to initial charge transfer steps and sources of system instability.

Biography: Richard Eisenberg is Tracy Harris Professor of Chemistry 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 1991-1994 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 is the Editor-in-Chief of *Inorganic Chemistry*, the leading journal in its field. He has also

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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.

NEW HIGH SCHOOL CHEMISTRY TEACHING GUIDELINES

Just in time for back to school, ACS has released the latest edition of ACS Guidelines and Recommendations for Teaching High School Chemistry. Featuring strategies and considerations for teaching high school chemistry in the 21st century to all students, the new Guidelines are a useful resource for strengthening high school chemistry programs. This timely and comprehensive document provides guidance on the classroom and laboratory environments, safety, the big ideas in chemistry, strategies and technologies for teaching diverse learners, the professional responsibilities of chemistry teachers, and more. Visit www.acs.org/hsguidelines for more information.

NOTICE TO ILLINOIS TEACHERS

The Chicago Section ACS is an ISBE provider for professional development units for Illinois teachers. Teachers who register for this month's meeting will have the opportunity to earn CPDU's.

ARE YOU AN INDUSTRY PROFESSIONAL WHO WANTS TO BE MORE INVOLVED WITH ACS?

The American Chemical Society is launching a new program based in two topic areas: Toxicology for the Scientist and Separation Science, and needs your content. ACS is looking for the best and brightest as well as the new and hypothetical. If you have authored an impressive paper, article or lecture slide set, or created a high-quality image, graphic, animation, illustration or video in either of these topic areas, ACS wants to see it. Contact us at sci-mind@acslearning.org with your ideas.

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"CHEM SHORTS" For Kids

The Elementary Education Committee of the Chicago Section ACS presents this column. They hope that it will reach young children and help increase their interest in science. Please print it out and pass it on to your children, grandchildren, or elementary school teachers. Teachers are encouraged to incorporate the projects in this column into their lesson plans.

Newspaper Nails

Kids, how did your friend get that newspaper text printed on her fingernails? Here you will learn how to do it and why it works. This activity gives new meaning to having the latest information at your fingertips! You will need: pieces of newspaper, top coat and base coat nail polish, grey or light colored nail polish, rubbing alcohol (isopropyl alcohol), cotton swabs, and nail polish remover.

Apply a solid base coat to protect your nails and let it dry thoroughly. Paint your nails with the grey or light colored nail polish and again make sure they dry thoroughly. Pour rubbing alcohol into the bottle's cap or into a small jar. Dip a small piece of newspaper print into the rubbing alcohol for about 5 seconds. Press it firmly on your nail for a few seconds. Peel it off carefully. You'll find that the ink from the newspaper will be left behind. Use a cotton swab and some nail polish remover to clean up your nails. Now apply a top coat to your nails because, without it, the newspaper will rub off. See the video in the reference below for an on-line tutorial.

Tips: You can also use the comics section, or the horoscope symbols, anything printed on newsprint will work the same. Press the newspaper firmly on to your nail; otherwise, the ink will not be completely transferred onto your nails. Be careful, and consider doing your nails over a newspaper, sink, or towel.

Why does this work? Newspaper ink is made up mostly of soybean oil and carbon black. The isopropyl alcohol dissolves the ink so that it can transfer easily. The isopropyl alcohol dries quickly, and sealing the ink between layers of polish keeps it from rubbing off.

References:

<http://www.wikihow.com/Make-Newspaper-Nails>

Thanks to Elizabeth Neis for submitting this idea.

DR. KATHLEEN CARRADO GREGAR

To view all past "ChemShorts for Kids" go to:

<http://www.chicagoacs.net/ChmShort/kidindex.html>

**REGISTER ONLINE for
Chicago Section
monthly meetings
www.ChicagoACS.org**

DINNER MEETING LOCATION

**Hilton Orrington/Evanston
1710 Orrington Ave.
Evanston, IL 60201**

DIRECTIONS TO THE HILTON ORRINGTON

From the Northwestern Technological Institute:

The hotel is about one mile south of the Institute. Take Sheridan Road south to Chicago Ave. Stay on Chicago Ave. to Davis St. Turn right onto Davis St. and take the first right onto Orrington Ave. The hotel is on the left. Note that the streets around the hotel are one-way.

PARKING: Valet parking is available; vouchers will be distributed.

**Reception for
Dr. Richard Eisenberg 6:00 P.M.**
Complementary wine, soft drinks, and hors d'oeuvres

Dinner 7:00 P.M.

Dinner reservations are required and should be received in the Section Office via phone (847-391-9091), email (chicagoacs@ameritech.net) or website (<http://chicagoacs.org>) by noon on Tuesday October 16. PLEASE HONOR YOUR RESERVATIONS. The Section must pay for all dinner orders. No-shows will be billed.

The dinner cost is \$35 to Section members who have paid their local section dues, members' families, and visiting ACS members. The cost to members who have NOT paid their local section dues and to non-members is \$37. The cost to students and unemployed members is \$20.

- **Menu:** Flower Salad – Baby Field Greens, Herb Croutons, Cucumbers, Cherry Tomatoes and Balsamic Vinaigrette
- Choice of:
 - o Potato Horseradish Crusted Salmon with Chive Cream Herb Risotto and Broccoli
 - o Rosemary and Panko Crusted Chicken Breast With Dijon Demi Glace with Cream
 - o Mushroom Forestiere Ravioli with Braised Rapini Roasted Roma Tomatoes and Parmesan Broth
- Individual Cheesecake with Berries

General Meeting 8:00 P.M.

- Opening remarks and announcements: **Avrom Litin**, Chair, Chicago Section American Chemical Society
- Presentation of the 2012 Basolo Medal
- Acceptance: **Dr. Richard Eisenberg**, 2012 Basolo Medalist for Outstanding Research in Inorganic Chemistry
- Closing Remarks: **Avrom Litin**

CHICAGO SECTION 2012 ELECTION – NOTE THE FORMAT CHANGE!!

Information has been sent to all section members regarding changing to an **electronic voting format** this year. The election will be held online and instructions for accessing your personal voting ballot have been sent to you.

Voting opened on September 1, 2012 and ends on October 19, 2012 at noon. To vote, please visit <https://www.associationvoting.com/acschicago2012> and log in with your ACS member ID number and your special election password that was mailed to you on a postcard.

The results of the election will be announced at the October 19 dinner meeting.

The following slate of candidates was put together by the Nominating Committee for the 2012 Section Election. New officers will take office January 2013.

CHAIR

Josh Kurutz
Katie Leach

VICE-CHAIR

Herb Golinkin
Charles Cannon

SECRETARY

Theresa Collins
Margaret (Peggy) Schott

TREASURER

Mark Kaiser
Amber Arzadon

DIRECTORS

Louis DeFilippi
Frank Jarzembowski
Carmen Marquez
Dave Crumrine*
Inessa Miller
Fran Kravitz*
Cherlyn Bradley
Ahmad Audi
Barb Moriarty

COUNCILORS

Dave Crumrine*
Ken Fivizzani
Fran Kravitz*
Inessa Miller
Milt Levenberg*

ALTERNATE COUNCILORS

Avrom Litin*
Margaret Levenberg
Amber Arzadon

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DUTIES OF SECTION COUNCILORS EXPLAINED

This is a reprint of an article appearing in the April 1997 issue of the Chemical Bulletin. The article is updated annually to help you with your decisions in electing councilors and alternate councilors in the upcoming Chicago Section election. Remember to cast your vote.

Have you ever wondered who and what ACS councilors and alternate councilors are and what they do for you and the Chicago Section? The two major structural components of the Society besides your national officers and Board of Directors are local sections and divisions. ACS local sections and divisions not only elect their own officers, but also elect representatives to the ACS Council, the deliberative body of the Society. This is your opportunity to have a voice in Society's governance.

The Council consists of the President, the President-Elect, the Directors, the Past Presidents, the Executive Director, the Secretary, and more than 400 voting Councilors representing Local Sections and Divisions. The Council convenes twice a year at the Society's national meetings.

Councilors provide the principal contact between local section members and governance leaders in setting policies for the ACS that directly or indirectly affect you. Councilors are elected to serve a three-year term. Alternate Councilors represent the section when a Councilor is unable to attend a Council meeting.

Councilors also serve on National committees that meet during National meetings. Councilors are appointed to these committees by the President of the Society and are eligible to serve only three consecutive terms on the same committee. A councilor who accepts an appointment to a committee accepts an obligation to work year-round throughout that term. The Councilor is expected to attend meetings of the committee, and be willing to undertake special assignments that require time between meetings.

Committees of the Council are: 1) Standing Committees: Constitution and Bylaws, Divisional Activities, Local Section Activities, Meetings and Expositions, Membership Affairs, and Economic and Professional Affairs; 2) Society Committees: Budget and Finance, and Education; 3) Joint Board-Council Committees: Chemical Abstracts Service, Chemistry and Public Affairs, Chemists with Disabilities, Community Activities, Environmental Improvement, International Activities, Patents and Related matters, Professional Training, Public Relations and Communications, Publications, Science, Minority Affairs, Chemical Safety, Women Chemists, and Younger Chemists; 4) Other Committees of the Council: Analytical Reagents, Ethics, Nomenclature, Project SEED, and Technician Affairs; and 5) Elected Committees: Council Policy, Nominations and Elections, and Committee on Committees.

The Chicago Section is currently represented by 10 councilors elected by you. Most of your councilors are members or associates on National ACS committees. Your Chicago Section Councilors and their current committee appointments are: **Cherlyn Bradley** (Meetings and Expositions), **Charles E. Cannon** (Economic and Professional Affairs), **David S. Crumrine** (Chemical Safety), **Herbert S. Golinkin** (Constitution and Bylaws), **Russell W. Johnson** (Chemistry and Public Affairs), **Fran K. Kravitz** (Local Section Activities), **Milt Levenberg** (Public Relations and Communications), **Inessa Miller**, **Barbara E. Moriarty** (Professional Relations Divisional Representative on Science; Great Lakes Regional Board Chair), and **Susan Shih** (Education).

Alternate Councilors for the Chicago Section and their current committee appointments are: **Irene Cesa**, **Thomas Higgins** (Education), **Frank Jarzembowski**, **Mark Kaiser**, **Kathryn Leach** (Younger Chemists), **Laura Li**, **Avrom Litin** (Community Activities), **Paul Young**, and **Robin Zavod**.

Some of our Councilors are also involved in other activities related to the National Meetings. **Fran Kravitz**, **Charles Cannon**, and **Herb Golinkin** are career consultants who do resume reviews during each National meeting. **Fran Kravitz** and **Charles Cannon** are also career workshop instructors.

Your Councilors and Alternate Councilors ask for your help in providing your opinions about the Society and issues relating to the Society. This will help Councilors better represent you during Council.

CHERLYN BRADLEY

“NANOTECHNOLOGY – THE SMALLEST BIG IDEA IN SCIENCE”

Chemistry Day

Saturday, October 27, 2012

University of Illinois Chicago

Please join us!

Do you remember the first time you realized that chemistry was special? If the answer is yes, then we need your help! The ACS Chicago Section invites all local ACS members to join in the celebration of *National Chemistry Week* by volunteering to participate in *Chemistry Day* on Saturday, October 27 at UIC. *National Chemistry Week* celebrates its 25th anniversary this year.

Chemistry Day is an annual, day-long event open to all students ages 10–16. It is always an exciting and popular occasion. ACS volunteers are the vital link in this highly successful community outreach program. Featured activities for students and their parents, teachers, guardians, as well community leaders, include magic demonstrations, hands-on chemistry lab experiments, and interactive exhibits.

We need your help! Share your love of chemistry by meeting and greeting participants, supervising hands-on lab activities with students, sharing exhibit materials, and performing demonstrations.

The theme of *National Chemistry Week for 2012* is “*Nanotechnology – The Smallest Big Idea in Science*”.

We hope you will join with your ACS friends and colleagues to continue this unforgettable tradition. Please e-mail your Community Affairs Committee co-chairs listed below to sign up now!

IRENE CESA	icesa@flinnsci.com
DAVID CRUMRINE	dcrumri@luc.edu
AVROM LITIN	alitin@comcast.net

BASOLO MEDAL

The Fred Basolo Medal is given for outstanding research in inorganic chemistry. It was established by the former students of Dr. Fred Basolo in appreciation of his contributions to inorganic chemistry at Northwestern University.

Fred Basolo was born in Coello, Illinois in 1920 and received a B.Ed. at Southern Illinois Normal University. He then went to the University of Illinois where he received a Ph.D. with John C. Bailar, Jr. in 1943. After working on a classified military research project during WWII, he joined the faculty at Northwestern in 1946. In 1980, the University honored him with the Charles E. and Emma H. Morrison Professorship of Chemistry.

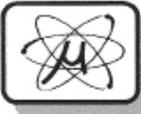
Internationally recognized for his original contributions to the syntheses and reaction mechanisms of transition-metal Werner complexes, Basolo did some of the seminal work in the developing fields of organometallic and bioinorganic chemistry. He was also a truly gifted teacher. Many of his former students occupy prominent academic and industrial positions. Basolo influenced students worldwide to study inorganic chemistry and received the 1992 ACS Pimentel Award in Chemical Education. He published 400 scientific publications and four books before his death in 2007.

Basolo's contributions to the profession of chemistry were equally outstanding. He served as President of the American Chemical Society in 1983 and as Chairman of the Chemistry Section of AAAS in 1979. He was a member of the Board of Trustees of the Gordon Research Conferences and its chairman in 1976. Some of the many honors received by Basolo include membership in the National Academy of Sciences, the American Academy of Arts and Sciences, foreign membership in the Italian Academy of Sciences Lincei, as well as the ACS Awards for Research and for Service in Inorganic Chemistry. He received the first Joseph Chatt Medal, the 1996 Willard Gibbs Medal, and was the 2001 Priestley Medalist of the ACS.

The ACS Chicago Section is proud to have had Fred Basolo as a member.

Previous Basolo Medalists:

Ralph G. Pearson	1991
Henry Taube	1992
Jack Halpern	1993
Harry Gray	1994
Lawrence Dahl	1995
Richard H. Holm	1996
Kenneth N. Raymond	1997
Malcolm Green	1998
Thomas J. Meyer	1999
James P. Collman	2000
M. Frederick Hawthorne	2001
Stephen J. Lippard	2002
Daryle H. Busch	2003
Malcolm H. Chisholm	2004
John E. Bercaw	2005
Ivano Bertini	2006
Richard R. Schrock	2007
Robert H. Grubbs	2008
Peter J. Stang	2009
Roald Hoffmann	2010
Gregory J. Kubas	2011



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ANNOUNCEMENT

PLEASE VOTE in the Section's online election when you receive your postcard with your special election password in the mail

MEMBERSHIP APPEAL - COMMITTEE ON MINORITY AFFAIRS

The Committee on Minority Affairs (CMA) supports the claim that ACS places high priority on active involvement of minorities. The objective of the committee is to cause change in institutional culture and obtain the goal of full participation and expression of intellectual and creative capacity of these minorities.

A list of what CMA is expected to do is included on the parent organization's webpage. Included are the promotion and recognition of the professional accomplishments of Minorities; attraction of minority students to the chemical professions; identify minority-friendly education institutions and businesses; increased involvement of minorities at local, regional and national levels; provision of mentoring to minority students; compilation of best practices for recruitment, retention, career development, and evaluation of programs for the advancement of minorities.

Our Local Section has a Committee on Minority Affairs. Ongoing efforts are being made to attract members to join this committee. Past committee activities included involvement of minority students matriculating at local institutions by extending invitations to participate in a section meeting such as the educational night monthly dinner meeting. The committee has a modest budget from which the students' dinners are sponsored. Ideas are welcomed from potential volunteers as well as members. Tapping into the America Chemical Society's new initiative to assist unemployed chemist in networking and finding employment the local CMA has a great opportunity to add this to the list of "things to get more involved in" now. I appeal to you, fellow members of the section to step forward and assist in strengthening and building a vibrant Committee on Minority Affairs.

CHARLES CANNON
Chair, Chicago Section CMA

CHICAGO'S SPECIALTY CHEMICAL COMPANY PIONEERS (PART 2) by Edward A. Knaggs

This historical documentary that started last month with the Best Foods Company continues this month with the Emulsol Corporation.

Emulsol Corporation (1935-1955)

Best Foods expert on mayonnaise oil-in-water emulsions, Albert K. Epstein, left in 1935 to establish and became president of Emulsol Corporation, headquartered at 59 E. Madison Street in downtown Chicago. Several of his Best Foods associates joined him, including Benjamin R. Harris, Morris Katzman, Frank J. Cahn, and John J. Morrisroe. Herbert I. Berstein also joined their research team (9).

During the early 1930's: most surface active agents were based on natural fat and oil feedstocks. Emulsol extended their expertise in mayonnaise emulsions, emulsion technology and business to include other interfacial modifying agents for other dressings, edible oils, fats and egg products. Emulsol published a book in 1937 on mayonnaise (10). They established a manufacturing facility in Chicago's southwest industrial area.

While the synthetic organic chemical business had been in its infancy, as new organic chemical intermediates became available, Emulsol's research group would actively research new products and new processes. These efforts allowed Emulsol to expand their emulsion expertise into non-food industrial markets including ore flotation, textiles, paints, rubber, cosmetics, quarternizing germicides, and plasticizers. In many instances, they were able to find and patent new derivatives and new applications.

While working at Best Foods on their own free time, Katzman and Epstein obtained a patent on certain condensation products of fatty acids with alkylamines (11). New enhanced oil-

in-water emulsifying agents were developed at Emulsol based on citric acid derivatives of polymerized alkylolamine triglyceride reaction products (12). They secured a patent on the reaction products between halogenated sulfoacetic acid and fatty acid derivatives (13), and on fatty acid esters of alkylolamine hydrochloric acid derivatives (14). Their work was successful in securing a patent on producing stable oil-in-water emulsions using high molecular weight alcohol sulfates and/or "turkey red oil" (sulfated castor oil) blended with condensation products of fatty acid amides of hydroxy ethanolamines (15). Studies on ore-flotation agents resulted in a number of patents (16, 17, 18).

In the early 1950's, Emulsol developed and marketed oil-in-water emulsifiers for the fledgling pesticide market based on sodium petroleum sulfonate nonionic blends (19). Competitor Ninol Laboratories developed and patented the use of calcium alkylbenzene sulfonate (made with SO₃) nonionic blends exhibiting superior self-emulsification properties suitable in all types of waters (20) requiring Emulsol to develop a similar batch SO₃ sulfonation process, and finding ways to eventually circumvent Ninol's emulsifier patent (21).

By 1955 Emulsol's sales were about \$10 million, marketing emulsifiers and other surface-active agents to makers of food products, detergents, drugs, cosmetics, agricultural products, and to other chemical companies.

In 1955 Emulsol was acquired by Witco, thus increasing their combined sales to \$35 million. This move broadened Witco's carbon black, asphaltic and metal stearate product lines to include Emulsol's significant multi-market specialty surfactant products.

(9) National Research Laboratories, Callie Hoop Publisher, 1946.

(10) Epstein, A. K. and Harries, B. R. Mayonnaise & other Salad Dressings; Emulsol Corporation: Chicago, 1937.

(11) Katzmann, M. B.; Epstein, A. K. U.S. Patent 2,173,448, July 3, 1934, (re-issued July 31, 1934).

(12) Katzmann, M. B.; Epstein, A. K. U.S. Patent 2,248,089, July 15, 1941.

(13) Harris, B. R.; Chan, F. J. U.S. Patent 2,251,932, August 8, 1941.

(14) Epstein, A. K.; Katzmann, M. B. U.S. Patent 2,268,208, January 30, 1945.

(15) Harris, B. R.; Cahn, F. J. U.S. Patent 2,259,466, October 21, 1941.

(16) Cahn, F. J. U.S. Patent 2,358,055, September 12, 1944.

(17) Cahn, F. J. U.S. Patent 2,389,763, November 27, 1945.

(18) Cahn, F. J. U.S. Patent 2,445,926, September 21, 1948.

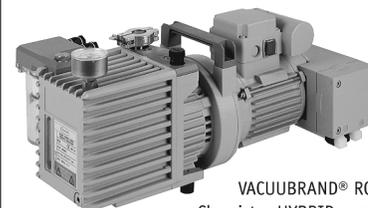
(19) Harris, B. R.; Chan, F. J. U.S. Patent 2,259,466, October 21, 1941.

(20) Sanders, H. L.; Knaggs, E. A.; Nussbaum, M. L. U.S. Patent 2,696,453, December 7, 1957.

(21) Linder, P. L. U.S. Patent 2,898,267, August 4, 1959.

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CONTACT THE CHAIR

Do you have any questions, suggestions, ideas, gripes, or complaints relating to the Chicago Section? Do you want to help with Section programs and activities? Then contact your Chair. Simply log onto the Section's Web Page at <http://www.chicagoacs.net/>, click on the "Contact Us", click on "Contact the Chair", and send me an e-mail. If I can answer your query, I will respond personally. If I can't answer directly, I will forward your e-mail to someone who can, or try to provide you a contact – all in a timely manner. The Section belongs to you and the other 4,546 ACS members residing in the Chicagoland area (including northeast Illinois and northwest Indiana). Only you can make it work for you by being involved. But you can also make it fail by not being involved. I look forward to hearing from you.

AVROM LITIN
CHICAGO SECTION CHAIR

ILLINOIS STATE FAIR PROJECT

We had another successful summer joint project at the Illinois State Fair August 10-19. This was our ninth year of having an exhibitor tent in Conservation World. We had 35 volunteers this year working the time from the pre-fair tent set-up through the actual ten days of the Fair. The planning committee and tent volunteers included members of five of the Illinois sections (Chicago, Decatur-Springfield, Heartland, Illinois-Iowa, and Mark Twain). Among the volunteers were two groups of college students and their advisors from the chemistry clubs at Illinois State University and Illinois Valley Community College.

Over 13,300 people came through the tent during the Fair to enjoy the science demos, science toys and activities for kids, teacher packets, and the free gifts.

We were on a concrete slab for the first time this year and shared a much larger tent with another group. The new location benefitted us greatly as we were able to spread out the activities and have more chairs available for visitors watching the demos.

We again distributed wooden rulers and hand fans with the project's logo and website as the main give-aways throughout each day. Still a popular item for the teachers was a plush toy mole given each day to the first teacher who signed in to receive a special teacher's bag that contains a CD with over 200 experiments for kids and a Cartesian diver kit, among other items. We also had three computers strategically set up, one with the science quiz, one for teacher registration, and one for receiving the visitors' surveys.

Many thanks to our section's volunteers who worked diligently this summer to again make our "chemistry tent" a real attraction at the State Fair.

The Chicago Section's volunteers this year were Richard Boice, Melinda Boice, Cherlyn Bradley, Charles Cannon, Karen Cochran, Chris Cochran-Woods, Robin Fine, Ken Fivizzani, Chantel Kamm, Fran Kravitz, Milt Levenberg, Margy Levenberg, Avrom Litin, Mary Newberg, Steve Newberg, and Christine Schauenberg (a high school junior).

Also, a big thank-you to all our sponsors this year: Chicago Section, Mark Twain Section, Heartland Section, Rock River Section, BP retirees group, HNC Products Co., Ingredient Source Corp., NorthStar Credit Union, Northup RTS, Wizardcraft, and individuals. Contributors of materials and/or talents included Avrom Litin, Fran Kravitz, Milt Levenberg, BP Volunteers-Naperville chapter, Continental Cement, Enthone, Flinn Scientific, Fisher Scientific, AAAS, Illinois Dept. of Natural Resources, ISU-Dept. of Chemistry, ISU-Center for Math, Science and Technology, ACS Committee on Chemical Safety, ACS Education Dept., ACS Project SEED.

We are already thinking about next year and hoping that we can continue to be located in the larger tent. The planning committee's wrap-up meeting will be scheduled before the end of this year. Let us know if you would like to help with this fun and worthwhile public outreach project.

For further information about this project, including a description of some of the demonstrations, go to <http://chicagoacs.net/statefair/index.html>

FRAN KRAVITZ AND CHERLYN BRADLEY
CO-CHAIRS, IL STATE FAIR CO-OP PROJECT

CHICAGO SECTION WINS FOUR CHEMLUMINARY AWARDS!

At the annual ChemLuminary Awards presentation for the Fall ACS National Meeting in Philadelphia, the Chicago Section won awards in the following categories:

- **Women Chemists Committee - for our Girl Scout Patch Program** - Thanks to Fran Kravitz for creating and implementing this activity.
- **New Public Relations - for our innovative video interviews with Section members and guest speakers at our monthly meetings** - Thanks to Keith Kostecka for initiating and promoting this activity.
- **Young Chemists Committee - for their overall program** - Thanks to Lisa Fredin for her leadership of YCC in 2011.
- **Local Section /Division Interaction - joint with the History Division for our Gibbs Symposium in Denver** - Thanks to Ken Fivizzani for his leadership in creating this symposium.

Congratulations to everyone that made these programs possible to the Chicago Section for an outstanding year! Thanks to Keith Kostecka, our past Chair, for submitting these nominations with our Annual Report.

SECTION DUES

Members are urged to pay the \$15 Section dues when you get your annual ACS membership dues statement. The Section needs this revenue to help support its many activities.

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Improve science reading skills and help students discover how chemistry works in their everyday lives with this award winning magazine. Subscribe to the print version and access free articles, teacher's guides, videos, and more from the website at <http://tinyurl.com/cpxqr7x>.

THE UN-COMFORT ZONE

with Robert Wilson

KA-BOOM! The Explosive Pain of Shame

Twelve years ago, I phoned a prospective client that I'd been courting for months. The last time we'd spoken, only a few weeks earlier, she expressed interest in my conducting a seminar for her company. This time she said, "I was in the audience at the Fox theatre last week; we won't be needing your services."

My face burned red with shame, as her words forced me to recall the most challenging experience I've ever had as a humorist.

It was my second year working as a presenter when I was hired to serve as the Master of Ceremonies for a landscape design association's award dinner. The job was easy enough, just read a description of what the recipient did to win the award, call them up to the stage, and give them a trophy. Grateful for the opportunity, and wanting to provide additional value to my service, I offered to open the program with a ten minute comedy routine. My client graciously accepted.

On the morning of the program, I woke up with the flu. I had a sore throat, congestion, 103 degree fever, chills and aches. I was miserable. Recalling the adage, "the show must go on," I dosed myself with the maximum allowed quantities of several over-the-counter medications. Throughout the day, I pumped myself up with chicken soup and hot tea. By show time, I was feeling pretty good.

I stepped onto the stage and told my first joke. To my shock no one laughed. So, I moved right onto my next one. Again, no one laughed. I'd never experienced this before and I started to feel a sense of panic. Nevertheless, I forged ahead and told joke number three. Silence! I couldn't understand it, I'd told these jokes dozens of times to dozens of audiences and they always laughed.

Joke number four fell flat. I was now in full panic, and at one point I couldn't even remember my next joke. I didn't know what to do. I didn't know how to recover. I plodded on hoping they would laugh at the next one. They never did. My throat became parched, and I had nothing to drink. With each unlaughed at joke, my throat became dryer and more constricted until I could barely speak. I

skipped to the end, and delivered my very best jokes... still nothing. I finally finished, and received no applause - not that I expected any at that point. The whole thing lasted only five minutes - the longest five minutes of my life.

Remarkably the rest of the program went without a hitch. I read the descriptions, gave out the awards and completed the evening. Needless to say, I never wanted to experience the humiliation of bombing so badly again. On the other hand, I didn't want to give up delivering humorous presentations - the joy of making people laugh is wonderful. I was determined to discover what went wrong, and how I could fix it.

In hindsight, I could see that my timing was off. I could easily blame that on being sick, but the real problem was that I didn't have the experience or know-how to turn it around. The first thing I did was make sure I always had a glass of water. The second thing I did was talk to several comedians and humorists to learn what they did when a joke bombed. Before long I had the answers I needed.

Now, when a joke tanks I make fun of it. First by making a whistling sound of a bomb dropping followed by the sound of explosion, then I say, "Whew, that joke didn't just bomb - it stunk!" I, then, wave the air where I was standing as if to blow away the smell, while stepping away from that spot dramatically as if the area, itself, was contaminated by nuclear fallout. That almost always gets a laugh. It also humanizes me in the eyes of the audience; I'm fallible and can make light of it. Usually the very next joke I tell will get a laugh, if only out of sympathy. I've learned many other techniques and as a result I haven't bombed since.

I was motivated by shame, one of the worst feelings an individual can have. I never wanted to feel that again.

People confuse shame, guilt and embarrassment because they are very similar feelings, but the roots of these feelings are very different. We experience embarrassment, when we accidentally make a mistake such as spilling a drink down the front of our shirts. We suffer guilt, when we do something we know is wrong. Shame, however, is born of ignorance or of not having mastered a concept - such a social behavior - that we think we have mastered.

We feel shame when we are unexpectedly condemned or criticized for something we didn't know is incorrect. The shame comes when we recognize the obviousness of our error. It makes us feel stupid. If we know in advance that it is incorrect, the feeling we experience instead is guilt or embarrassment.

I recall being shamed by my classmates in elementary school when I shared

a belief that women get pregnant by kissing. Hey, I came by it honestly! Remember that little song, "Johnny and Suzy sitting in tree, K-I-S-S-I-N-G. First comes love, then comes marriage, then comes Johnny with a baby carriage."

So, if shame was such an effective motivator for me, would I recommend using it to motivate others? ABSOLUTELY NOT! Shame is extremely motivating when it comes to eliminating unwanted behavior, but at the same time it is also a de-motivator. Shame is so powerful, it can make someone feel worthless and completely shut them down. Shame hits like a fist, and when it comes during childhood, some people spend the rest of their lives trying to recover from it. Motivate instead with understanding and kind explanation.

--

Robert Evans Wilson, Jr. is an author, humorist and innovation consultant. He works with companies that want to be more competitive and with people who want to think like innovators. Robert is also the author of the humorous children's book: *The Annoying Ghost Kid*. For more information on Robert, please visit <http://www.jumpstartyourmeeting.com>

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REPORT OF COUNCIL MEETING IN PHILADELPHIA

The 244th National Meeting of the ACS was held in Philadelphia, PA, from August 19 – 23, 2012. The theme of this meeting was "Materials for Health and Medicine." The Chicago section was represented by Cherlynlavaughn Bradley, Charles Cannon, David Crumrine, Herb Golinkin, Russell Johnson, Fran Kravitz, Avrom Litin, Barbara Moriarty and Susan Shih.

Finances: The Committee on Budget and Finance reported that the Society is expected to end 2012 with \$474.2 million in total expenses and \$491.6 million in total revenue. The Society is meeting four out of the five financial guidelines established by the Board. Programs funding requests were reapproved for the ACS Science Coaches program and the ACS Global Research Experiences, Exchanges, and Training Program (GREET). The Board of Directors voted on the recommendation of the Society Committee on Budget and Finance, to approve an advance member registration fee of \$370 for national meetings held in 2013.

Governance: The Council elected councilors to serve on the Committee on Committees, the Council Policy Committee and the Committee on Nominations. For the Committee on Committees -- Spiro D. Alexandratos, G. Bryan Balazs, Dawn A. Brooks, Michelle V. Buchanan, Alan B. Cooper, Judith Currano and Ingrid Montes were elected. For the Council Policy Committee -- Frank D. Blum, Mary K. Carroll, Lee H. Latimer, and Carolyn Ribes were elected. For the Committee on Nominations and Elections -- Cherlynlavaughn Bradley, Milagros Delgado, Carol B. Libby, Les W. McQuire and Donivan R. Porterfield were elected.

The Council also recognized the service of councilors, including Cherlynlavaughn Bradley, who has represented the Chicago local section for 20 years. In addition, Charles Cannon was recognized as he has served the statutory limit on the Committee on Economic and Professional Affairs.

The candidates for the fall 2012 ACS national election for President-Elect 2012 are Dr. Thomas J. Barton and Dr. Luis A. Echegoyen. Candidates for Division V Director are Dr. John E. Adams and Dr. Peter K. Dorhout, Candidates for Directors-at-Large, who are elected by Council are Ms. Carol A. Duane, Ms. Valerie J. Kuck, Ms. Helen (Bonnie) A. Lawlor and Dr. Ingrid Montes.

The council voted to establish a Joint Board-Council Committee on Senior Chemists whose mission is to enrich the educational, technical, and cultural lives of the ACS Membership by ministering to and employing the talents of senior ACS members. The committee is aimed primarily at members over 60 years of age.

Meetings and Expositions: As of August 22, 2012, the ACS fall national meeting had attracted 13,320 registrants, including 7,817 regular attendees and 3,177 students. In addition, it was reported that the fall ACS meeting had 8157 papers presented.

Committee on Economic and Professional Affairs: The career fair at the meeting had 999 job seekers, 45 employers and 148 jobs posted. In addition, the virtual career fair had an additional 1499 job seekers for 41 jobs posted. The Committee on Economic and Professional Affairs (CEPA) has unveiled six new workshops, as the ACS Career Pathways series. CEPA trained more than 40 volunteer facilitators and the workshops are now available for regional meetings and local sections.

Local Sections: The winners of the Awards for Outstanding local sections were announced. The California local section, along with San Diego, Lehigh Valley, Richland, Savannah River and Southwest Georgia local sections were recognized. Additional Awards were also presented to deserving local sections.

The Council VOTED 58% to 42% (via clicker vote) to shift two local sections in District II (Hampton Roads and Western Maryland) to District III to be in compliance with the Society's bylaws.

A proposal to calculate allotments for local sections for 2013 was removed from consideration.

Petitions: The Council received two petitions for action to the ACS Constitution and Bylaws. The Petition on Candidate Comment in C&EN sought to restrict candidates for election to the Board of Directors from publishing comments in C&EN from May through the balloting period. The Petition on International Chemical Sciences Chapters Funds sought to clarify that the Board of Directors may grant funds to international chapters for specific purposes. Neither petition was approved. A petition to Amend National Election Procedures seeks to shorten the campaign period for candidates for President-Elect is up for consideration at the next ACS national meeting.

Special Discussion Item: "What major efforts should ACS pursue to help alleviate water and other global challenges?" After a brief presentation by President Bassam Shakhshiri, council engaged in a discussion on the question. Many suggestions were expressed by councilors.

If you have any questions and/or comments about the above actions, please contact me or one of your other councilors. You may contact me by email (bmoriarty@nalco.com).

BARBARA MORIARTY

ADVERTISING INDEX

POP TOP RINGS COLLECTION	Company	Page	Telephone	URL/E-Mail
Instead of throwing away those pop top rings from your pop cans, please bring them to the dinner meeting so we can donate them to a program at Ronald McDonald House.	HNC Products Co.	2	217-935-6845	www.massvac.com
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	Vacuubrand, Inc.	7	888-882-6730	www.toxconsultants.com
	Northup RTS	9	847-579-0049	

CALENDAR

October 21-27: National Chemistry Week (NCW); NCW is 25 years old.

October 27: Chemistry Day in Chicago at UIC. See details in this issue.

October 24-27: Midwest ACS Regional Meeting (MWRM), Omaha, NE. For information, go to www.acs.org/meetings/regional.

November 7: Chicago Section ACS Dinner Meeting

November 16: Stieglitz Lecture

December 14: Chicago Section ACS Holiday Party and Dinner Meeting, Fountain Blue Banquets

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OCTOBER HISTORICAL EVENTS IN CHEMISTRY

- October 2, 1907** Alexander R. Todd, who researched the chemistry of nucleotides and coenzymes, was born. He received the Nobel Prize in 1957 for synthesizing nucleic acids.
- October 4, 1918** Kenichi Fukui, who developed the frontier orbital theory of reactivity, was born. He received the Nobel Prize in 1981 with Roald Hoffman for "their theories, developed independently, concerning the course of chemical reactions"
- October 7, 1939** Harold W. Kroto, who researched carbon chain molecules by using a combination of synthesis, spectroscopy, and radioastronomy, was born. He received the Nobel Prize in 1996 with R. F. Curl, Jr., and R. E. Smalley for their discovery of fullerenes.
- October 10, 1930** Ernest O. Lawrence invented the cyclotron.
- October 18, 1955** Emilio Segrè and Owen Chamberlain discover a new subatomic particle, the negative proton or antiproton.
- October 19, 1909** Maguerite Perey discoverer of francium, was born.
- October 26, 1944** Signing of a Trust Agreement by seven major oil companies created the Petroleum Research Fund.
- October 28, 1914** Richard L. M. Synge, discoverer of partition chromatography, was born. He received the Nobel Prize in 1952 with Archer J. P. Martin for their invention of partition chromatography.
- October 29, 1923** Djerassi, researcher in structure elucidation of natural products, synthesis of medicinals, and computer artificial intelligence to chemical problems, was born. He is also an author of novels and plays.
- October 30, 1906** Tishler, an industrial chemist who developed antibiotics, actinomycin and streptomycin and synthesized vitamin A and riboflavin, was born.
- October 31, 1935** A. Pople, who received the Nobel Prize in 1998 for his development of computational methods in quantum chemistry shared with Walter Kohn for his development of the density-functional theory, was born.

LEOPOLD MAY
Professor Emeritus of Chemistry
The Catholic University of America
Washington, DC

Historical events can be found at Dr. May's website, <http://faculty.cua.edu/may/Chemistrycalendar.htm>.

WHEN YOU CHANGE YOUR EMAIL ADDRESS

Please let the section office know what your new email address is so that you will not miss any section information. Contact the office at 847-391-9091 or at chicagoacs@ameritech.net

VIDEO SERIES: WHAT MADE ME BECOME A CHEMIST

Check out Spellbound, a new ACS video series that tells the stories of eight chemists whose childhood curiosity about everyday things helped them launch careers in laboratories, win Nobel Prizes and make other notable achievements. Videos can be downloaded from www.acs.org/Spellbound, www.youtube.com/ACSVideoTheater, iTunes, and on DVD by request from Michael Bernstein (m_bernstein@acs.org) The videos are suitable for classrooms and other audiences of scientists and non—scientists.