



# THE DAYTON SECTION

*Fostering scientific education and research, and promoting public understanding of science.*

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http://DaytonACS.org

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**NATIONAL CHEMISTRY WEEK COORDINATOR**

Dr. Joy Haley (nee, Rogers)  
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**BULLETIN****Electrifying Election Edition 2008****Meetings and Events**

**Oct. 25:** National Chemistry Week Event #1

**Nov. 1 & 2:** National Chemistry Week Event #2

**Nov. 18:** Professional Practices Meeting

**Section News and Other Stuff**

- **Section Elections!**
  - ◇ A Past Chair gets all mavericky as he seeks a second term.
  - ◇ Despite almost a total lack of experience, an unknown candidate for Treasurer bursts forth from obscurity to energize the Section's base.
- **Section members bid farewell to summer — page 4**
- **Report from Council — pages 6-7**
- **ACS Careers Industry Forum — page 7**
- **Alzheimer's Avoidance Therapy — page 8**
- **AAT-2: Su Doku for Chemists — page 8**

DATE D MATERIAL - MEETING ANNOUNCEMENT - DO NOT DELAY

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American Chemical Society  
Dayton Section  
Eugene M. Kettinger Center  
140 East Monument Avenue  
Dayton, OH 45402-1267

# NATIONAL CHEMISTRY WEEK ACTIVITIES

## HAVING A BALL WITH CHEMISTRY!

Come celebrate National Chemistry Week (October 19–25) with us at the Centerville Library or at the Boonshoft Museum of Discovery, where we will highlight this year's theme "Having a Ball with Chemistry." 2008 is an Olympic Year and many of us witnessed new records set by elite athletes. Did you know that the study of chemistry has improved the way that athletes train, the sports they play, and the equipment they use? Thanks to discoveries by chemists, engineers, and other scientists, today's athletes have a definite advantage over ancient Olympians. We will explore a few of these discoveries during both events.

### EVENT #1:

**Date:** Saturday, October 25<sup>th</sup>  
**Time:** 10 AM – 2 PM  
**Venue:** Centerville Library 111 W. Spring Valley Road, Centerville (see map at right)  
**Cost:** FREE!

### EVENT #2:

**Date:** Saturday and Sunday, November 1<sup>st</sup> and 2<sup>nd</sup>  
**Time:** Noon – 4 PM (both days)  
**Venue:** Boonshoft Museum of Discovery 2600 DeWeese Parkway, Dayton (Please see <http://www.boonshoftmuseum.org> for directions)  
**Cost:** Admission to museum is required: \$7 per child (ages 2–12), \$8.50 for adults, and \$7.00 for seniors (children under 2 are free)



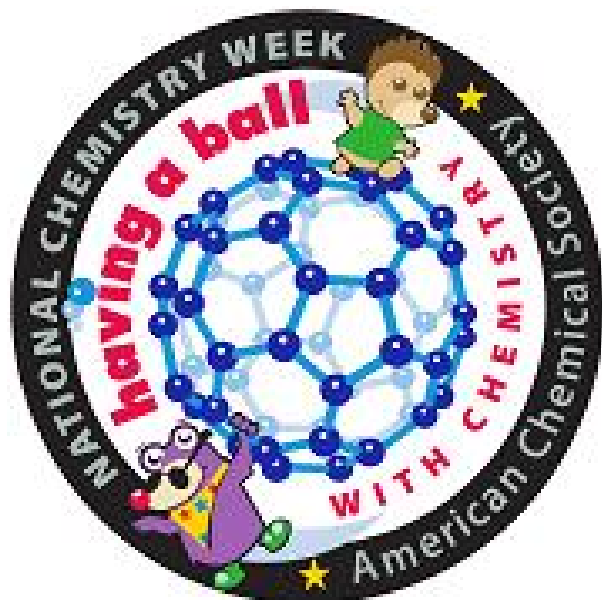
Our NCW Coordinator, Joy Haley, needs volunteers to assist with either event. If you are interested in helping out, please call her at:

(937) 255-9718

or e-mail her at:

[Joy.Haley@wpafb.af.mil](mailto:Joy.Haley@wpafb.af.mil)

to let Joy know which day you are available and a time frame.



## **UPCOMING MEETING**

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### **PROFESSIONAL PRACTICES**

**Date:** Tuesday, November 18<sup>th</sup>

**Venue:** Wellington Grille, 2450 Dayton Xenia Road, Beavercreek, (937) 426-4600

**Program: Social:** 6:00 PM

**Dinner:** 6:30 PM

**Keynote:** 7:30 PM

It has become the tradition of the Dayton Section at the Professional Practices Meeting to honor those members, who, during the past year, have attained 50 or 60 years of ACS membership. This year, our 50-year members are Dr. Daniel Carfagno and Dr. George Hess; and our 60-year members are Dr. Harold Rosenberg and Dr. Jack Kwiatek. All section members with more than 50 years of ACS membership are invited as guests of the Dayton Section. Of course, all other members of the Dayton Section are welcome to attend, as well.

We will also announce the results of the section elections, so please join us to welcome our newly elected officers, say goodbye (and good riddance) to outgoing officers, and see what's new for 2009.

In addition, this year an added highlight will be a keynote address from Dr. R. Paul Philp from the School of Geology and Geophysics, University of Oklahoma, who will present a short but informative and entertaining lecture entitled "The Environmental Hot-Buttons Over the Last Fifty Years," which is quite appropriate given the evening's main objective.

#### **Abstract**

The last few decades have witnessed a number of chemicals, such as DDTs in the 60s, Dioxin in the 70s and PCBs in the 80s, become notorious for their long term effects on the environment and, in some cases, the health of humans and animals. Added to this list is MTBE (methyl-t-butylether) which is rapidly gaining the "superstar" status attached to these chemicals. MTBE is added to gasoline as required by government regulations to increase oxygen content and ensure complete combustion. However, very little was known about the properties of the compound and its effect on the environment when this was mandated. Relatively little is known about its toxicity even now. MTBE, besides entering the atmosphere through car exhausts, is also known to leak from underground storage tanks and enter ground water. MTBE is water soluble and is quite resistant to biodegradation. Many major ground water drinking supplies have become contaminated with MTBE. There are many problems arising from MTBE contamination, in addition to the fact that the ground water cannot be used for drinking purposes. All these issues and possible answers will be discussed, not the least of which will answer the question as to why corn farmers of Iowa are so excited that MTBE is becoming the bad guy on the block!

#### **About the Speaker**

Prof. Paul Philp graduated with a Ph.D. in Organic Chemistry from the University of Sydney (Australia) in 1972 and more recently received a D.Sc from the same university in 1998. He was a post-doctoral fellow with Prof. G. Eglinton at the University of Bristol (England) in organic geochemistry and followed it up, as a research associate, with 4 years of directing the organic geochemistry research group of Prof. Melvin Calvin at the University of California, Berkeley. He returned to Sydney in 1977 to join the Fuel Geoscience Unit of CSIRO where he served as a Principal Research Scientist in the area of Petroleum Geochemistry. He joined the faculty at the University of Oklahoma in 1984 and, for several years, has been directing research in the application of organic chemistry to fossil fuel research besides evolving analytical techniques to the characterization of source rocks, coals and oil shales. He has also been very active in the area of environmental science investigating the use of stable carbon isotopes as a means of monitoring and tracking pollutants in the environment. His professional activities include Associate Editor of Chem. Geol., and Chairman of the Geochemistry Division of the American Chemical Society.

**Reservations:** Contact Venkat by November 5<sup>th</sup> at (937) 255-9116, (937) 255-9117 or at narayanan.venkat@wpafb.af.mil.

## PAST MEETING

### 4<sup>TH</sup> ANNUAL SECTION PICNIC OF THE NEW ERA

On September 13<sup>th</sup>, a couple dozen or so chemists and family members convened at John Bryan State Park to partake in the time-honored tradition of cooking animal flesh over an open fire and consuming it in mass quantities by tearing into it with their canines, eschewing utensils. Kind of like Vulcans before they embarked on a culture based purely on logic. Of course, there were also plenty of simple carbohydrates to go around. There was some Tai food, too. What was *that* all about?

We were also pleased to welcome to the section two new faculty members at Wright State University's Chemistry Department — Professors Ioana Pavel and Rachel Aga. Holy guacamole, Batman; these two ladies can really chow down!

The Section is grateful for the efforts of Rajiv Berry for doing all the shopping, to Steve T for doing all the grilling, and especially to our new Chair of the Committee for Lab Safety and Mishap Re-enactment, Holden McGroin.



A more lovely site I shall never see than our banner wrapped 'round a walnut tree (especially after driving around for an hour looking for the damned picnic area!)



Even though several section members prayed for rain, it turned out to be a great day. There was just one victim of a stray lightning strike, which, by all accounts, markedly improved Rajiv's personality.



With the absence of the Family Koerner, there were fewer athletic activities like Frisbee, lawn darts, and soccer, so instead we talked about them behind their backs.



Rajiv and Gary stared intensely at the meat on the grill until it was ready to be consumed.

# **2008 Dayton Section Elections: Candidate Biographies & Statements**

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**Office:** Chair-Elect

**Candidate:** Dr. Hilmar Koerner

**Position Title & Place of Employment:**

Research Scientist at University of Dayton Research Institute since August 2001

**Education Information (Degrees, Institutions, Fields of Study and Corresponding Dates):**

- Visiting Scientist, Materials Science and Engineering Dept, Cornell University, Chemistry and Physics of Advanced Photoresists for 157nm Lithography. 2000-2001
- University Assistant, Institute of Polymeric Materials, University of Leoben, Austria, Surface Chemistry and Molecular Modeling of Filled Polymeric Materials. 1998-2000
- Postdoctoral Associate, Materials Science and Engineering Dept, Cornell University, Physics and Chemistry of Polymeric Materials (Liquid Crystals, Thermosets, Block Copolymers). 1994-1998
- PhD in Chemistry, Institute of Physical Chemistry, Technical University of Clausthal, Germany. Thesis Title: Structure investigation of crystalline and liquid crystalline side-group polymers. 1992 - 1994
- Diplom Chemist, Institute of Physical Chemistry, Technical University of Clausthal, Germany. Thesis Title: Synthesis and characterization of liquid crystalline polymers with azobenzene side-groups and low molecular weight model compounds. 1990-1992
- Chemistry at Technical University of Clausthal. 1984-1990

**Professional Society Affiliations (Offices held, Dates, Services to ACS):**

- American Chemical Society
  - Dayton Section Chair-Elect, Chair, Immediate Past Chair, 2005-2007
  - Dayton Section Webmaster, 2006-present
- American Physical Society
- Materials Research Society

**Statement:**

I will take steps to improve section communications by expanding interactions between the Dayton Section Board, younger members, and students with the public, and by enhancing public outreach via events and meetings. I will also endeavor to convince the general public of the importance of chemists and chemistry in our daily lives. My section experience over the past four years as chair-elect, chair, immediate past chair, and webmaster has made me very familiar with the workings of this position.



**Office:** Treasurer

**Candidate:** Aaron T. Sellinger

**Position Title and Place of Employment:**

National Research Council Postdoctoral Associate, Air Force Research Laboratory, Materials and Manufacturing Directorate, Wright-Patterson Air Force Base

**Education:**

- Ph.D., Materials Science and Engineering, University of Virginia, 2008
- M.S., Nanoscale Science, University at Albany, SUNY, 2004
- B.S., Mathematics, University at Albany, SUNY, 2002

**Professional Society Affiliations:**

- Materials Research Society
- American Vacuum Society
- Dayton Section of the American Chemical Society

**Statement:**

None.

# **REPORT FROM COUNCIL**

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The feelings of déjà vu that I experienced during Council at the 236<sup>th</sup> ACS National Meeting in Philadelphia, PA, made me think that perhaps it's time to quit this gig but then I realized that most Councilors present didn't even know what city they were in. They did, however, focus on what was really important – that tables were provided for their complimentary breakfast. Afterward, there were ballots to cast for candidates of various committees; I voted for the people I know, unless I don't like them (or they don't like me). Council also voted to create a new Division – Catalysis Science and Technology. A detailed description is provided below.

## **Election Results**

The Committee on Nominations and Elections presented to the Council the following slate of nominees for membership on the Committee on Committees beginning in 2009: George M. Bodner, Cherlynlavaughn Bradley, Rigoberto Hernandez, Roland F. Hirsch, Ann H. Hunt, James M. Landis, Carol B. Libby, Roger A. Parker, Howard M. Peters, and Sara J. Risch. By written ballot, the Council elected Cherlynlavaughn Bradley, Rigoberto Hernandez, James M. Landis, Howard M. Peters, and Sara J. Risch for the 2009-2011 term.

The Committee on Nominations and Elections presented to the Council the following slate of nominees for membership on the Council Policy Committee beginning in 2009: R. Gerald Bass, Ray A. Dickie, Alan M. Ehrlich, Joseph A. Heppert, Pamela D. Kistler, Bonnie A. Lawlor, Mamie W. Moy and Eleanor D. Siebert. By written ballot, the Council elected Ray A. Dickie, Bonnie A. Lawlor, Mamie W. Moy, and Eleanor D. Siebert for the 2009-2011 term.

The Council Policy Committee presented to the Council the following slate of nominees for membership on the Committee on Nominations and Elections: V. Dean Adams, Roger F. Bartholomew, W. H. (Jack) Breazeale, Jr., Donald J. Burton, Kenneth G. Caulton, Dwight W. Chasar, Peter K. Dorhout, Catherine C. Fenselau, Morton Z. Hoffman, Peter C. Jurs, William R. Oliver, Robert A. Pribush, Andrea B. Twiss-Brooks, and Angela K. Wilson. By written ballot, the Council elected W. H. (Jack) Breazeale, Jr., Peter K. Dorhout, Catherine C. Fenselau, Peter C. Jurs, and Andrea B. Twiss-Brooks for the 2009-2011 term; Angela K. Wilson for the 2009-2010 term; and Dwight W. Chasar for the remainder of a 2007-2009 term.

## **Candidates for President-Elect and Board of Directors**

The candidates for the fall 2008 ACS national election were announced as follows:

### President-Elect 2009

Joseph S. Francisco, Purdue University, West Lafayette, IN

Josef Michl, University of Colorado-Boulder, Boulder, CO

### Directors-at-Large – 2009-2011

William F. Carroll, Jr., Occidental Chemical Corporation, Dallas, TX

Richard L. Deming, California State University- Fullerton, Fullerton, CA

Thomas R. Gilbert, Northeastern University, Boston, MA

Marinda Li Wu, Science is Fun! Orinda, CA

### Director, District III 2009-2011

Pat N. Confalone, DuPont, Wilmington, DE

Alan B. Cooper, Schering-Plough Research Institute, Kenilworth, NJ

### Director, District VI 2009-2011

Bonnie A. Charpentier, Metabolex, Inc., Hayward, CA

Gary D. Christian, University of Washington, Seattle, WA

## **Petition**

The Council VOTED to accept the Petition on Society Affiliate Dues. The petition raises Society Affiliate dues to be equal to the (full) membership dues, while specifying that Society Affiliates are not subject to any of the discounts otherwise applicable to membership dues. To be valid, the petition next must be confirmed by the Board of Directors within 90 days, and will become effective five months following confirmation.

## **Committee Review**

As part of a regular review, the Council VOTED to continue the Committee on Chemistry and Public Affairs, and the Committee on Patents and Related Matters. The Committee on Chemistry and Public Affairs is responsible for advice and recommendations for ACS action on public policy matters involving the chemical sciences and technologies. The Committee on Patents and Related Matters considers patents and other related items insofar as such consideration and possible action are appropriate under the Society's Charter.

## **Registration Report and 2009 National Meeting Registration Fee**

As of August 20, 2008, the ACS fall national meeting had attracted 13,800 registrants. Totals in select categories are as follows: Regular attendees 8,196; Students 3,087; Guests 481; Exhibit Only 546; and Exhibitors 1,490. In keeping with the objective of the National Meeting Long Range Financial Plan, previously approved by the Board of Directors and Council, the Meetings and Expositions Committee voted to support an increase of \$10 for the 2009 national meetings advance registration fee.

## **Membership Activity**

In 2007, the number of paid new members nominated by current ACS members was 1,559. Currently, there are 988 paid new member applications. The Society's Member-Get-a-Member program is on track to have its best year ever.

## **Professional Employment Guidelines**

The Committee on Economic and Professional Affairs submitted its latest version of the Professional Employment Guidelines for consideration. These guidelines offer a broad spectrum of recommended practices in employment for professional scientists and their employers. The Council will vote on the Professional Employment Guidelines at the 2009 spring meeting in Salt Lake City.

## **Revision of the Division Funding Formula and Formation of a New Division**

After a motion to recommit failed, the Council VOTED, as recommended by the Divisional Activities Committee (DAC), to accept a revised division funding (allocation) formula. DAC reported that the formula improves clarity, offers simplicity, and rewards collaborative programming between divisions. The change will take effect in 2009 for 2008 activities.

The Council also VOTED to approve the formation of the Probationary Division of Catalysis Science and Technology. The primary objective of this probationary division is to provide a "home" for the chemical science of catalysis within the ACS in a way that will also insure a continual connection between this science and the essential chemical technology of catalysis.

## **Special Discussion Item**

A special discussion item was put on the Council agenda by President Bruce Bursten. The discussion focused on Achieving Sustainability (e.g., Energy, Water, Food): What can/should ACS do to address this key global scientific challenge? To kick off the discussion, ACS Board Chair Judy Benham invited Council to participate in identifying the challenges and developing solutions. She highlighted new and ongoing activities, such as the Global Challenges/Chemistry Solutions podcasts and related information, available online at [www.acs.org/globalchallenges](http://www.acs.org/globalchallenges). She also sought Council input on member involvement and ACS programming in support of Goal #3 of the Strategic Plan: "ACS will be a global leader in enlisting the world's scientific professionals to address, through chemistry, the challenges facing our world." Councilors engaged in a robust exchange, offering several useful comments and suggestions to address how the Society might develop initiatives to address sustainability of the world's resources, including energy, water, and food. Thirty-five councilors offered a wide variety of suggestions, which will be studied. Councilors and others who have ideas should send them to [strategicplan@acs.org](mailto:strategicplan@acs.org).

*Your faithful Councilor, Steve Trohalaki*

## **ACS Careers Industry Forum**

### **Monthly Teleconferences featuring Luminaries in the Chemical Sciences.**

The ACS is working hard to keep you up to date on cutting edge industrial issues affecting your current and future employment needs. Make informed decisions about your career and take control of your career path.

Please participate on the 2<sup>nd</sup> Thursday of each month from 2 to 3 PM to discuss economic and employment trends with top industry executives in the chemical sciences. Register by going to [www.acs.org/careers](http://www.acs.org/careers) and look for the "register" link after the description of the Industry Forum. You can also register from [acscareers.wordpress.com/industry-forum/](http://acscareers.wordpress.com/industry-forum/).

This is a free service via conference call. Check it out for future new and innovative career services programs. The ACS want to hear from you, please post comments on our blog at: [www.acs.org/careers](http://www.acs.org/careers).

### **Soft Skills Training: Do you have what Employers want?**

ACS Careers has joined forces with Harvard Business Publishing to deliver 42 online business and professional advancement courses. The course library includes topics such as Career Management, Negotiating, Leading and Motivating, Presentation Skills, Strategic Thinking, Team Leadership, Time Management, and many other high-quality courses.

Look for more information at [www.acs.org/professionaldevelopment](http://www.acs.org/professionaldevelopment).

**Alzheimer's Avoidance Therapy\*** Unscramble the letters to reveal chemical names or concepts. Then, use the circled letters to solve the riddle. Answers next edition!

A E G I M M N R U    ○ ○ ○ □ □ ○ ○ □ □  
 D E F I L O R U    ○ ○ □ ○ □ □ ○ □  
 A C E I N S        ○ □ □ □ □ □

Hurling through space and time, Charlton is ejected from his space capsule through a window of a freshman chemistry laboratory and into Roddy, who is performing an experiment dressed in a smelly monkey suit, in lieu of a lab coat. Charlton exclaims, "Get your



off me you, you damned, dirty ape!"

**Answers from Last Edition**

BORON WATER SUDAN GLYCOL

Vivien, a fickle southern belle with stunning green eyes and a 17-inch waist, completes her arduous trek, returning from a short course on physiological chemistry only to find her home pillaged by Union troops, the fields untended, her mother dead of typhoid, and her father's mind crumbling from the strain of their ordeal. She vows, "As God is my witness, never again will I have LOW BLOOD SUGAR!"

**Quotable Quotes for \$2000, Alex**

"No speech can stain what is noble by nature."

—Sophocles

"Every word is like an unnecessary stain on silence and nothingness."

—Samuel Beckett

"What makes life worth living? Better surely, to yield to the stain of suicide blood in me and seek forgetfulness in the embrace of cold dark death."

—Zane Grey

"The starting point of sanctification is the filthiness, corruption, or stain of sin."

—William Ames

"And that's why, you know, it's players like Randy Moss that unfortunately put a stain on the entire league."

—Boomer Esiason

"You had me sleeping on a pee stained couch?"

—Frank Costanza

**AAT-2 — Su Doku for Chemists!**

Using the following nine alchemical elements:

La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb
----	----	----	----	----	----	----	----	----

fill in the grid below so that each row, column, and 9-element subcell has only one occurrence of each element.

		Nd		La				
Ce			Sm					Tb
	Pr			Pm		Nd		
Pm							Gd	Tb
				Gd		Eu	Pm	
	Sm							
			Nd					Ce
			Eu		Pm		Sm	Pr
	Pm	Pr			Gd	La		

**Answer from Last Edition:**

La	Eu	Sm	Pm	Gd	Ce	Nd	Tb	Pr
Ce	Tb	Pr	La	Sm	Nd	Gd	Eu	Pm
Nd	Pm	Gd	Tb	Eu	Pr	Ce	Sm	La
Pm	Gd	La	Nd	Ce	Eu	Tb	Pr	Sm
Tb	Sm	Eu	Pr	Pm	Gd	La	Nd	Ce
Pr	Ce	Nd	Sm	La	Tb	Eu	Pm	Gd
Eu	La	Pm	Gd	Tb	Sm	Pr	Ce	Nd
Sm	Nd	Ce	Eu	Pr	La	Pm	Gd	Tb
Gd	Pr	Tb	Ce	Nd	Pm	Sm	La	Eu

\*Surveys suggest that that mental exercises, including word puzzles, may delay the progression of Alzheimer's Disease.