

# CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

October, 2012  
Vol. 50 No. 2

## Section Calendar

Oct 12	Oesper Symposium, UC
Oct 21-27	NCW Outreach
Nov 7	Dr. Stephen Musson, USEPA @ Cooper Creek, Blue Ash
Nov 26	Dr. Stephen Hanessian, UC-Irvine, 2012 Guenther Award Winner, @ Givaudan
Dec 12	Dr. Ioana Pavel, Wright State @Xavier Univ.
Jan 16	Cincinnati Westin
Feb 13	Chemist of the Year, MBC
Feb 15	Deadline for 2012 ChemLuminary Nominations
Mar 13	Joint meeting with Dayton, Marriott North
Apr 7-11	National ACS meeting, New Orleans
Apr 20	Chemists Celebrate Earth Day
Apr 24	Dr. Ariel Fenster, & Teacher / Student Awards @NKU
May 17	Party Night

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## Oesper Symposium and Award Banquet University of Cincinnati Friday, October 12, 2012

Reception begins at 5:30 PM

*Registration extends through Monday, October 8*

The University of Cincinnati Department of Chemistry and the Cincinnati Section of the American Chemical Society are pleased to announce the 2012 Oesper Award Winner, Gary M. Hieftje, a Distinguished Professor and Mann Chair of Chemistry at Indiana University.

The Oesper Symposium and Awards Banquet will be held on, Friday, October 12, 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 Steven Ray, Indiana University, entitled "Inspiration, Innovation, Imagination, and Instrumentation".

The complete Oesper Symposium program is available [here](#).

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 *Thursday, October 4 at noon Monday, October 8, at midnight*.

Directions to UC's main campus and a detailed campus map are available. 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)

**THE CINTACS NEWSLETTER****Vol. 50, No. 2 October, 2012**

Editor.....Adam Bange  
 Advertising.....Dan Esterline

CINTACS is published eight times a year (September through May) by the Cincinnati Section of the American Chemical Society. The submission deadline will be approximately September 15 for the October 2012 issue. Electronic submission is strongly preferred. All materials should be sent to:

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**From the Chair**

Dear Cincinnati ACS Members,

It seems like the theme for the month of October is "Impressive". We have several events and activities that claim this attribute in some manner. I am very thankful that our 2012 Friends and Family picnic had sunny skies and low wind! We had a perfect day to gather at Germania Park with ~80 friends, family, and members in attendance. It was great to see the student affiliates present, and that goes with having passionate advisors who encourage and facilitate participation. George Rizzi once again dazzled with demos, and I'm still smiling at the enthusiasm kids have to crush flowers (or anything) frozen in liquid nitrogen. I met several people who were attending their very first Cinci ACS section meeting – yea! Mother Nature, Liquid Nitrogen, New Members, and Interest in Chemistry – all impressive!

The Lloyd Library and Museum celebrated the opening of their "The George Rieveschl, Jr., History of Pharmaceutical Chemistry" exhibit, along with an impressive display of historical texts on Alchemy and early chemistry experimentation. Guest speaker, Dr. Mansukh Wani, Research Triangle Institute, recounted the interesting history of how Taxol was developed, and the many obstacles encountered in bringing this anti-tumor drug to market. From its initial extraction from the Pacific Yew tree bark in extremely low yields (0.004%), to an allergic reaction to the carrier in Phase II clinical trials (solved with Benadryl), his story elucidated how important keen observation, perseverance, and passion are to scientific progress.

This October marks the 25<sup>th</sup> year for the American Chemical Society to celebrate National Chemistry Week (impressive). Preparations are in full swing to highlight Nanotechnology and all things Nano with chemistry demos and scientific programs for the public at 31 area libraries and the Museum Center. Any volunteers who miss the October 5 training at the P&G GYM can connect with Jackie Thomas to get handouts and updates to the program. The complete list of venues and dates are listed on our website <http://www.acscincinnati.org/main/> – this is a wonderful opportunity to plant a 'science' seed to grow future chemists!

Locally, October means the Oesper Symposium, Poster Session, Award and Banquet. The University of Cincinnati Chemistry

*(Continued on page 3)*

department consistently puts together an impressive list of speakers for the Symposium, and our scientific community certainly benefits from the largesse of Ralph and Helen Oesper. Prof. Gary Heiftje, Indiana University, is the 32<sup>nd</sup> honoree of this award. Dr. Steven Ray, IU, will be the after dinner speaker, his presentation is titled "Inspiration, Innovation, Imagination, and Instrumentation". Registration closes on Oct 4<sup>th</sup>, please contact me if you would like to attend, but miss the deadline.

October 23 is "Mole Day" – officially the 12 hour period between 6:02am and 6:02pm, commemorating Avogadro's number  $6.02 \times 10^{23}$ . For me, the equation of  $\text{mol} = \text{g}/\text{FW}$  is as basic as "carbon has 4 bonds". I would like to share a comparison posted on the National Mole Day Foundation's website, provided by Bob Everson, Animal Disease Diagnostic Lab at Purdue Univ. Bob supplies the following:

*It is difficult to imagine such a large number as Avogadro's number. Some idea of its magnitude is given by the following calculation. Let us suppose that the entire state of Texas, with an area of 262,000 square miles, were covered with a layer of fine sand 50 feet thick, each grain of sand being 1/100 of an inch in diameter. There would then be Avogadro's number of sand particles in this immense sandpile. There would be the same number of molecules of water in one mole of water -- 18g, 1/25 of a pint. (Ref. <http://www.moleday.org/htdocs/numhist.html>)*

Wow – Impressive! The theme for this year's Mole Day is "Molar Eclipse", and you can check out more fun info for students at [www.moleday.org](http://www.moleday.org).

And, if any of you were wondering what more could happen in October, on Wednes-

day, October 10, we will learn who has been awarded one of the most impressive awards in Chemistry, the Nobel Prize! Looking forward to November, we will continue the NCW Nano topic with the presentation, "Nanomaterials: Are These Small Particles a Large Health & Safety Issue?" given by Dr. Stephen Musson of the US EPA on November 8. Dr. Musson will share the latest discoveries of how nano particles are behaving in our environment. And, Nov. 26, Givaudan will host Dr. Stephen Hanessian, the 2012 Ernest Guenther Award winner, and invites section members to attend the planned reception and lecture.

I think October is my favorite month! I hope to see you at one of these events.

Sincerely,

Beth

## 2012 Oesper Symposium Schedule Friday, October 12, 2012, 400-B TUC

**9:00-9:10 a.m.** William Heineman, Head, Dept. of Chemistry  
Welcome and Introductory Remarks

**Session Chairs:**

*Pat Limbach and Bill Heineman*

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*Pat Limbach and Bill Heineman*

9:10-9:50 a.m. Alan Marshall, Florida State University

*"Petroleomics: Chemistry of the Underworld"*

9:50-10:30 a.m. Mark Wightman, University of North Carolina at Chapel Hill

*"Monitoring Chemical Neurotransmission in the Brain with Cyclic Voltammetry"*

**Break (10:30-10:50 a.m.)**

**Break (10:30-10:50 a.m.)**

**Session Chairs:**

*Tom Chester and Denise McClenathan*

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*Tom Chester and Denise McClenathan*

10:50-11:30 a.m. Jim Jorgenson, University of North Carolina at Chapel Hill

*"Capillary Liquid Chromatography at Ultra-High Pressures"*

11:30-12:10 p.m. Mike Ramsey, University of North Carolina at Chapel Hill

*"Making Big Measurements with Small Devices"*

**Break for lunch (12:10-2:00 p.m.)**

Registration Closed - Capacity Reached

**Break for lunch (12:10-2:00 p.m.)**

Registration Closed - Capacity Reached

**Session Chairs:**

*Peng Zhang, Tom Ridgway, and Bill Wetzel*

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2:20-2:40 p.m. John Olesik, Ohio State University

*"The Life and Times of Droplets, Nanoparticles and Molecules in Inductively Coupled Plasmas: Implications for Accurate Measurements"*

2:40-3:20 p.m. Frank Bright, University of Buffalo, SUNY

*"Xerogel-Nanocrystallite Hybrids for Optical Sensing"*

3:20-4:00 p.m. Jake Shelley, University of Munster

*"Ambient Desorption/Ionization, Small Mass Spectrometers, and the Future of Analytical Chemistry"*

**Break (4:00-4:20 p.m.)**

**Break (4:00-4:20 p.m.)**

*Introduction of Oesper Awardee: Joe Caruso*      *Introduction of Oesper Awardee: Joe Caruso*

4:30-5:20 p.m. Gary M. Hieftje, Indiana University

*"Models, Methods, and Machines for Chemical Measurements"*

5:30-7 p.m. Poster Session & Reception (see Call for Submissions)

TUC Great Hall

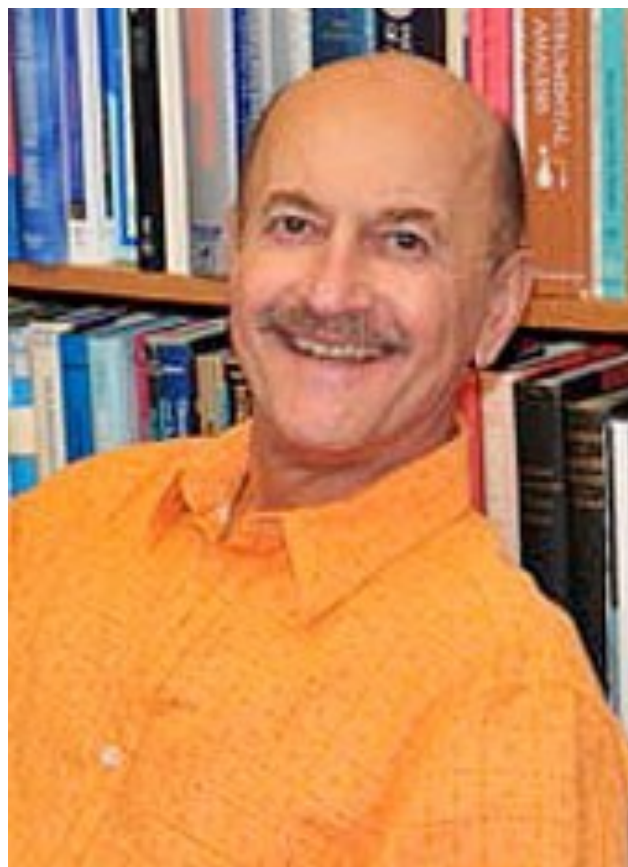
7-8 p.m. ACS Banquet (Reservations are required)

TUC Great Hall

8 p.m. **Award Presentation, Announcements & After-dinner Speaker,** Steven Ray, Indiana University

*"Inspiration, Innovation, Imagination, and Instrumentation"*

## 2012 Oesper Awardee Gary M. Hieftje



**Gary M. Hieftje** is Distinguished Professor and Mann Chair of Chemistry at Indiana University in Bloomington, Indiana. His research interests include the investigation of basic mechanisms in atomic emission, absorption, fluorescence and mass spectrometric analysis, and the development of instrumentation and techniques for atomic and molecular methods of analysis. He is interested also in the on-line computer control of chemical instrumentation and experiments, the use of time-resolved luminescence processes for analysis, the application of information theory to analytical chemistry, analytical mass spectrometry, near-infrared reflectance analysis, metallomics, and the use of stochastic processes to extract basic and kinetic chemical information. He has won numerous awards in the fields of analytical chemistry, chemical instrumentation, and spectroscopy, has held major offices in several scientific societies, has delivered many named lectures, and has served on the editorial boards of many major journals. He is the author of over 550 publications, 10 books, and 18 patents. More than 65 students have received doctorates under his direction; many others have received M.S. degrees, and scores of undergraduates and visiting scientists have performed research in his laboratories.



## Steven Ray

Indiana University

Steven Ray is currently a Scientist in the Department of Chemistry at Indiana University, where he works in the Laboratory for Spectrochemistry under the direction of Professor Gary M. Hieftje. He has published over 50 manuscripts, book chapters, and patents, and currently serves on the editorial advisory boards of *Spectrochimica Acta*, Part B and the *Journal of Analytical Atomic Spectrometry*. His research interests involve novel aspects of analytical instrumentation, including atomic spectroscopy, plasma spectrochemistry, and mass spectrometry.

### **Inspiration, Innovation, Imagination, and Instrumentation**

As the 'measurement science', Analytical Chemistry occupies a central and pivotal role in our scientific pursuits; it is both an enabling influence that often makes new science possible and the source of the accurate and precise scientific data on which our interpretation and hypotheses rest. The process of designing an insightful experiment or the instrument to accomplish it requires an understanding of the scientific goals, parameters, and boundaries, as well as an appreciation of randomness, and error. More times than not, however, it also requires something else—a moment of invention that changes our perception and offers the prospect of a new scientific insight. In this presentation, a critical view of these 'aha' moments will be undertaken with examples from the experience of the author, and elsewhere, in an attempt to discover: Where do those great ideas come from?

**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 14, 2012**. The Chemist of the Year should hold a terminal degree and must be a member of the Cincinnati Section. 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. ACS membership is not a requirement. Nomination requires a letter of recommendation. CV and additional documentation are optional, but appreciated.

Nomination materials should be sent to:

Philip A. Christenson  
12020 Antietam Dr.  
Loveland, OH 45140  
Electronic submission is encouraged.  
e:mail: Phil.christenson01@gmail.com

## **ACS Project SEED Program**

### **Summer Research Internship Program for Economically Disadvantaged High School Students**

The ACS Project SEED summer research program opens new doors for economically disadvantaged students to experience what it's like to be a chemist. Students entering their junior or senior year in high school are given a rare chance to work alongside scientist-mentors on research projects in industrial, academic, and federal laboratories, discovering new career paths as they approach critical turning points in their lives. [More about Project SEED](#)

### **Summer Programs**

#### **Summer I**

For first-time participants, students conduct research in chemistry or a related field supervised by a scientist mentor and receive a fellowship award of \$2,500.

#### **Summer II**

Summer I students get a second opportunity to continue working on their Summer I project or beginning a new one. Students receive a \$3,000 fellowship award and may be eligible for a travel grant to present research at an ACS or other scientific meeting.

## National Chemistry Week 2012 - Call for Volunteers!!!!

This years theme is "*Nanotechnology - the Smallest BIG Idea in Science!*" Its not too late to get involved this year, we are always looking for more volunteers!

### **Chem Demo Practice**

Mark your calendars - demo practice will be held on Friday October 5th from 5-7pm. We will be located at the GYM - P&G facility (address and direction to come in separate email)!! More details to come in upcoming weeks - Ed E. plans to lead practice again this year, we will be distributing the Celebrating Chem magazines, and other NCW goodies! Please let me know if you will be able to attend. Thank you Ed V. for helping us secure the GYM!!!

### **Cincinnati Public Libraries:**

We already have a big requests list for demos at the Cincinnati Public Library - I will be contacting volunteers individually (here shortly) who have done libraries in the past to see if you are available to do libraries again. If you did not have a library last year, but would like to do one this year, please send me an email letting me know you are interested! Thank you to all Cincy Library volunteers!

### **Libraries outside Cincinnati:**

For those of you who coordinate libraries outside Cincinnati, now is the time to start making those calls. Once you have made arrangements with your library/venue of choice please let me know the agreed time/date. I will need to add this information to our flyer and I will be uploading this info along with all other venues to national ACS website for to help people locate NCW events. Thank you for reaching out to your communities and setting these demos up!

### **Cincinnati Museum Center (CMC):**

If you would like to help out at the CMC please contact Gloria Story ([story.gm@pg.com](mailto:story.gm@pg.com)). This is a great venue to celebrate chemistry and reaches so many children! Thank you to the CMC volunteers!



## Report from Council at the Philadelphia ACS National Meeting

**August, 2012**

Bruce Ault, Kathy Gibboney and Roger Parker, Councilors

### **National Committee Election Results**

Council elected the following individuals for membership on the **Committee on Committees**: G. Bryan Balazs, Dawn A. Brooks, Michelle V. Buchanan, Alan B. Cooper, and Ingrid Montes for the 2013-2015 term; and Spiro D. Alexandratos and Judith Currano for the remainder of a two-year (2013-2014) term.

Council elected the following individuals for membership on the **Council Policy Committee**: Frank D. Blum, Mary K. Carroll, Lee H. Latimer, and Carolyn Ribes for the 2013-2015 term.

Council elected the following individuals for membership on the **Committee on Nominations and Elections**: Cherlynlavaughn Bradley, Milagros Delgado, Carol B. Libby, Les W. McQuire and Donivan R. Porterfield for the 2013-2015 term.

### **Action on Petitions**

The Council received two amendments (petitions) to the ACS Constitution and Bylaws for action. The Council VOTED not to approve the Petition on Candidate Comment in C&EN which sought to restrict candidates for election to the Board of Directors from publishing comments in C&EN from May through the balloting period. The Council also VOTED not to approve the Petition on International Chemical Sciences Chapters Funds. This petition sought to clarify that the Board of Directors may grant funds to international chapters for specific purposes.

### **Committee Review**

As part of a regular performance review, the Council VOTED to continue the Joint Board-Council Committees on Chemists with Disabilities and on Professional Training. Continuation of these two committees also requires Board of Directors concurrence.

### **New Committee Supported**

The Council VOTED to establish a Joint Board-Council Committee on Senior Chemists. The committee is aimed primarily at members over 60 years of age. Next, the Board of Directors must vote on whether to establish the committee.

### **Realignment of Electoral Districts**

The Council VOTED 58% to 42% to shift two local sections in District II (Hampton Roads and Western Maryland) to District III. (The two local sections had agreed to the shift.) The Bylaws mandate rough equality in district populations. The shift meets the specified criteria for redistricting as required by the Bylaws and brings the districts within permissible range. During the discussion, Councilors asked the Committee on Nominations and Elections to conduct a comprehensive review of the optimal alignment of local sections within districts.

**Lloyd Library and Museum**  
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August 1, 2012

J. Edward Hunter, Ph.D.  
ACS—Cincinnati Section  
Xavier University  
Department of Chemistry  
3800 Victory Pkwy.  
Cincinnati, OH 45207

Dear Dr. Hunter:

On behalf of the Lloyd Library and Museum, I write to thank you and the entire Cincinnati Chapter of the American Chemistry Society for your very generous donation in the amount of \$5,000.00. This donation brings us very close to the final estimate for creating our permanent exhibit "George Rieveschl, Jr. History of Pharmaceutical Chemistry Exhibit." This project has been in various planning stages for a number of years and now, thanks to organizations and individuals such as ACS—CS, we have been able to start the project with a completion date sometime in mid-September. The opening reception will be Saturday, September 22, 2012 from 4–7pm. It is my sincere hope that you and many other members of the Cincinnati Section will be able to attend this celebration. Your organization's name will appear on our Donor Plaque honoring those who helped make the exhibit a reality.

I hope that you will please convey the Lloyd's gratitude to your entire membership—maybe someone can arrange for a "thank you" message from us to appear in your online newsletter. I will be happy to write copy for that and send it to whoever edits the newsletter. In particular, I wish to thank Rick Mullins and Beth Reno for their hard work and support of this project. I will be emailing them; however, I did want to acknowledge them formally in this letter of appreciation.

Thank you again; and, I hope to see you on September 22, or any time you may wish to drop by the Lloyd. We will roll out the red carpet and give you a tour of our splendid library if you would like.

Most Sincerely,

A handwritten signature in cursive script that reads "Maggie".

Maggie Heran, MLS  
Executive Director



**National Chemistry Week  
2012 Illustrated Poem Contest:**

**“Nanotechnology: The Smallest BIG Idea in Science”**

The **Cincinnati, Ohio** Section of the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in Kindergarten - 12th grade.

Contest Deadline: **October 23, 2012**

Winners: **First place winner of each category will be invited to attend the ACS Awards presentation with guests held in April 2013 at Northern Kentucky University.**

Submit entries (or questions) to:  
**Jamie Heimkreiter  
Peter Cremer North America**  
  
**3117 Southside Avenue  
Cincinnati, OH 45204  
jheimkreiter@petercremerna.com**



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Sponsors are recognized in all of the eight yearly issues of CINTACS, and by introduction at the sponsored meeting. This "advertisement" is of great value, especially to new companies in the Cincinnati area. In several instances this has led to participation in governance activities in the Section.

Over the past seven years of this successful program, companies, academic departments, retirees, and faculty have been sponsors of monthly meetings. We are always striving to broaden the base of sponsors as this leads to better representation in Section programs and services to the membership.

If you or your employer has an interest in being a sponsor, please contact the undersigned for more details. Beyond these volunteers, we will be making phone calls and letter contacts to reach our goal of eight sponsors. Every effort will be made to align the Sponsor's areas of interest with our monthly topics.

Please contact Ed Hunter at:  
[edhunter@fuse.net](mailto:edhunter@fuse.net)



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