

# The Syracuse Chemist

Volume 104/Issue 4



September 2012

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## ChemLuminary Award Winners- 3<sup>rd</sup> Year in a Row!

For the third year in a row, our Syracuse Section won ChemLuminary Awards for our National Chemistry Week activities. At the 14<sup>th</sup> ChemLuminary Awards Celebration during the ACS National Meeting in Philadelphia this past August we received ChemLuminary Awards for Best Chemistry Club National Chemistry Week Event and Best Local Section Partnership. Congratulations to our proud section volunteers!



Celebrating National Chemistry Week last October, the Syracuse Section joined the Carol M. Baldwin Foundation's 'A Run for THEIR Life' fundraising event for breast cancer research. Over 1,000 runners, their families and friends were presented with health-themed demonstrations, activities, and information guides after the race.

Section Past-Chair Sally Mitchell and Section Councilor Alyssa Thomas were on hand to present our Section's activities and to accept our awards. Thank you to everyone in the Section who made this achievement possible.

Join us this year with the team Syracuse Section ACS for the Carol Baldwin's "A Run for Their Life" on Sunday, October 14, 2012 at Manley Field House. If you are interested in walking or running 5K or 15 K, please register at <http://www.cmbarunfortheirlife.com/> and sign up during the registration to represent the Syracuse Section ACS.

# Education Night - One Last “Water Lecture”

*Jamie Cucinotta and Sally Mitchell*

This past June the Syracuse Section of the American Chemical Society and several of Dr. Benjamin P Burttt’s former students honored his over 50 years of dedication to teaching at Syracuse University by re-enacting his famous “Water Lecture”. Dr. Burttt was the freshman chemistry professor for 47 years. At the end of each year before the final exam he would begin his last lecture about water and, at first, the naïve students would take notes, but soon they would realize he was joking. However, students needed to understand chemistry to ‘get it’. For the many decades he taught, students would return again and again to listen in to his humor.

Sally Mitchell contacted Ben Burttt, Jr, of Star Wars fame, to re-digitize one of his father’s lectures. Dr. Michael Sponsler, Syracuse University chemistry professor, inherited the glassware and directions to Dr. Burttt’s lecture many years ago. Through weeks of practice and preparation, the Water Lecture was re-enacted through the generous support and time from Gary Bonomo. In the same auditorium Dr. Burttt lectured at during his career, Dr. Sponsler acted out Burttt’s hysterical performance while a video of Burttt himself was projected above.



Dr. Burttt taught tens of thousands of students over the decades. Some of these students became teachers and influenced thousands more. His legacy of having fun with Chemistry continues to this day. The ACS education night has been renamed the ‘Benjamin P Burttt, PhD Memorial Chemical Education Lecture Series’.

The evening began with a welcome from the section chair, Bill Ayling. He honored our members, Dr. Paul Bertan, Dr. Gershon Vincow and Dr. Peter Juby for 50 years of service and also Mr. William Gottstein for 60 years of service.

Dr. Alyssa Thomas gave out the ACS Section Awards to: Andrew Woodford: SUNY-ESF, Caitlyn Moccaldi: Utica College, Emma D-Ambro: Le Moyne College and Cathleen Trespasz: Fayetteville-Manlius High School.

## Education Night, Continued from page 2.

Joy Logan, Education Chair, and Dr. Neal Abrams awarded certificates and Merck Indexes to the Chemistry Olympiad winners. 1<sup>st</sup> Christopher Brenon - East Syracuse Minoa High School, 2<sup>nd</sup> Kunal Sangani - Fayetteville-Manlius High School, 3<sup>rd</sup> Daniel Hanggi - Chittenango High School, 4<sup>th</sup> Alex Zhang - Fayetteville-Manlius High School, 5<sup>th</sup> Daniel Loh - Fayetteville-Manlius High School, 6<sup>th</sup> Aaron Chen - Jamesville-Dewitt High School, 7<sup>th</sup> Alec Beaton - East Syracuse Minoa High School, 8<sup>th</sup> Thomas Hays - Jamesville-Dewitt High School, 9<sup>th</sup> and 10<sup>th</sup> (tied) Collin Barber and Parker Harris - both from Fayetteville-Manlius High School.



Certificates were then awarded to the Illustrated Poem Contest winners for National Chemistry Week and Chemists Celebrate Earth Day. Winners were James DeAngelo Jr., Huntington Elementary, Abigail Herrington, Fremont Elementary, Holly Babcock, East Syracuse Minoa HS, Katherine Babcock, East Syracuse Minoa HS, Maura Leib, Fremont Elementary School and Bradley Herrington, Fremont Elementary School.

Over 300 people attended the lecture, many traveling the distance to come and be entertained one last time by Dr. Burt. After the presentation, the crowd enjoyed appetizers, periodic table cupcakes and N-ice cream. Many thanks to the education committee: Chair: Joy Logan  
Committee Members: Jamie Cucinotta, Sally Mitchell, Carmen Giunta, Bob Stankavage, Neal Abrams, and Alyssa Thomas.

## NERM 2012 in Rochester: September 30 - October 3<sup>rd</sup>

In the past we have partnered with the Rochester Section for joint events, which makes it even more exciting that this year's North East Regional Meeting of the ACS (NERM) is being hosted by our neighbor. The theme for the 38<sup>th</sup> NERM is 100 Years of Creating a Better Future Through Chemistry. An opening session of "Surface Modification Chemistries for Nanoparticles and Interfaces" is planned for Sunday, September 30<sup>th</sup>. An exciting addition to NERM, and something that is a must for anyone looking to be on the job market soon, is an all-day career seminar presented by Syracuse Section's own Ray O'Donnell. This session, scheduled for Monday, October 1<sup>st</sup>, is part of the Division of Professional Relations. There will be sessions on resume writing, networking, and how best to run your job search. Our section is lucky to be home to one of the architects of this valuable program, and this event is one you won't want to miss!

Details on NERM, including registration and technical programs, can be found at: <http://nerm.sites.acs.org/> We look forward to seeing you there!

# Councilor's Corner

*Alyssa Thomas*

Hello everyone! I would like to update you on events happening at the national level after the recent national meeting in Philadelphia, August 19-23, 2012. What I want to share with you in my report here are the top five items that concern you or our section the most. I would be happy to provide you with the full report upon request, just send an e-mail to [acthomas@utic.edu](mailto:acthomas@utic.edu); subject heading: ACS Councilor Report or check out our website. Please feel free to e-mail me with any thoughts, concerns, or comments at [acthomas@utica.edu](mailto:acthomas@utica.edu). Congratulations to all that presented their work at the national meeting and good luck to those presenting at NERM 2012 in Rochester! -

## Top Five Items from the 244<sup>th</sup> ACS National Meeting

- 1) Reminder that national 2012 elections are coming up for President-Elect 2013, Directors-at-Large 2013-2015, and District 1 Director 2013-2015. More information about the candidates for each position can be found by going to [www.acs.org](http://www.acs.org), clicking on Governance at the top, then Elections under the Related Information.
- 2) On the recommendation of the Committee on Budget and Finance (B&F), the Board voted to approve an advance member registration fee of \$370 for national meetings next year as well as to reauthorize funding inclusion in the 2013 proposed budget the ACS Science Coaches program. I know a number of our section members have participated in the Science Coaches program and have had wonderful experiences. It is great to see this program's funding extended.
- 3) One of the Society's long-time concerns has been the decline in the number of domestic Regular Members, that is, members paying full dues. The impact of this decline has been offset, as we have reached record membership levels, by increases in the number of international Regular Members, and the 2009 addition of Student Member Undergraduates. Membership Affairs Committee (MAC) is hoping to soon begin tests for market data collection to target specific groups. These may include new renewal incentives as well as strategically increasing benefits for high school teacher memberships to be more competitive with the National Science Teachers Association (NSTA).
- 4) 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. Next, the Board of Directors must vote on whether to establish the committee, which previously had been acting as a Senior Chemist Task Force. The committee would be aimed primarily at members over 60 years of age.
- 5) Current ACS President Bassam Shakhashiri moderated a discussion on "What major efforts should ACS pursue to help alleviate water and other global challenges?" This discussion focused primarily on the crisis of available water suitable for drinking, agriculture and industry. I invite you to send me your opinions, concerns, or comments on the topic for further discussion.

# Chemistry and ...History

*Daniel Barr*

At the recent ACS national meeting in Philadelphia, I had the opportunity to visit the Chemical Heritage Foundation, a wonderful treasure of artifacts and books that document the story of chemistry from its alchemical origins to all its modern glory. While we may tend to think of history as the stuff of museums, a discipline that belongs to white-haired professors with thick glasses and tweed jackets, my recent visit to the CHF reminds me that elements of our history have a profound impact on the lives we live in the present. As the new semester starts and I've begun taking a new class on a journey through the history of the atom and into the periodic table, I'm trying to make sure to connect 21<sup>st</sup> century chemistry teaching with the chemical ideas and practices that trace back thousands of years.

Take alchemy, for example: many of the techniques (evaporation, filtration, distillation, and many more) that we teach our new chemistry students have changed little if at all from their use hundreds (if not thousands) of years ago. These techniques have been responsible for the discovery of new elements, the synthesis and purification of novel compounds, and the fame and fortunes of countless men, women, and children around the world. So why is it that our chemistry labs can seem so tedious and (dare I say it?!) boring? I'm certainly not trying to claim that taking a melting point or running column chromatography are thrilling in and of themselves (in fact, in most cases where I've had to do those things, I'd probably have found it more exciting to watch the proverbial paint dry). However, what I think we CAN do with our students is to put the techniques and experiments in context; to help the students see their place in a long and distinguished line of chemists that traces back to the earliest human civilizations.

So this semester, when you or your students are starting to get bored during a tedious experiment, why not read or tell them about William Ramsay patiently distilling gases from liquid air to isolate the "noble gases"? Or about Louis Pasteur separating enantiomers of sodium ammonium tartrate by hand using a pair of tweezers? Or even about generations of alchemists who spent centuries boiling urine in their quest for the philosopher's stone? After all, even though they never found exactly what they were looking for, their study of the natural world launched the discipline of chemistry that still holds such a special place in our hearts and lives today.

**Want up-to-the-minute information about the section?  
Bookmark <http://syracusesection.sites.acs.org> to get all the  
latest news and events!**

# Science Coach Program Continues to be a Success!

*Sally Mitchell*

The Science Coach program has been funded again for the next school year. A chemist can pair up with a school teacher and receive \$500 to work with the teacher and bring science to the classroom. Arden Zipp worked with Katherine Mittiga at East Syracuse Minoa High School, Bill Ayling worked with Deborah Jeneault at Donlin Drive Elementary School in the Liverpool Central School District, Robert Doyle worked with Maggie Estlinbaum at Jordan Elbridge High School and Neal Abrams worked with Sally Mitchell at East Syracuse Minoa High School (pictured). A link to an ACS video about the program can be found at: <http://vimeo.com/47666396>.



## Molecule of the Month Puzzle

*Daniel Barr*

In tribute to the great Americans who signed some very important documents only a few blocks from the site of this fall's national ACS meeting, the first letters from each of the clues below will give the type of the ink that was likely used to sign the Declaration of Independence and the American Constitution. [2] (Numbers in brackets indicate the number of words in the response).



*Solve the puzzle and submit your answers to our Quizmaster, Dr. Daniel Barr ([dabarr@utica.edu](mailto:dabarr@utica.edu)) - the first person to answer correctly will get a special mention in the next issue of the Chemist!*

1. This element, named after the Greek word for its violet color, has 37 known isotopes, but only one of them is stable. [1]
2. This element was one of the two new elements discovered by Marie and Pierre Curie; the other one they named after their native country. [1]
3. This four-carbon organic compound starts the Citric Acid Cycle by reacting with acetylCoA. [1]
4. This vitamin (also known as vitamin PP) is a derivative of pyridine and is one of the 5 vitamins whose deficiency is associated with a pandemic deficiency disease. [1]
5. Though technically an amino acid, this molecule is not used in protein synthesis but rather serves as one of the most important inhibitory neurotransmitters. [2]
6. This term, often used interchangeably with "base", derives from the Arabic word for calcinated ashes; it also gave potassium its chemical symbol. [1]
7. This 18-carbon unsaturated fatty acid has a double bond between carbons 12-13 and is an essential component of our diet. [2]
8. This group of elements, the first on the periodic table to put electrons into an f subshell, are often collectively known as the "rare earth" elements. [1]

# Call for nominations!

ACS Syracuse needs you! Five officer positions are up for election this year for terms in 2013 and two appointed positions are available for 2013. Please think about running for election and/or nominating someone for a position. Here's how!

## THE ELECTION PROCESS

**Call for Nominations - Now through October 9, 2012.** Send Nominations to: Sally Mitchell [sbmitchell2@gmail.com](mailto:sbmitchell2@gmail.com). Nominations should include the full contact information for the person being nominated and the position for which he/she is being nominated. Upon receipt of the nomination, the Nominations and Elections Committee will solicit biographical information. Self-nomination is welcome and encouraged. Please send your nomination to Sally, and include a brief biography suitable for publication on the Section website in the October Syracuse Chemist. **All Nominations MUST be received by October 9, 2012** in order to give the Nominations and Elections Committee enough time to get biographical information and confirm candidate eligibility and interest. **Nominations Announcement** will appear in the October Chemist. **Elections.** Electronic elections will be initiated on October 23, 2012 with responses due by November 6, 2012. **Election Results** will be reported on Section website by November 20, 2012 and in the December edition of the Chemist

## POSITIONS AVAILABLE FOR 2013

The five elected positions available for 2013 are listed below:

- Chair-Elect (3-year term: would serve as Chair-Elect in 2013, Section Chair in 2014, and Past Chair in 2015)
- Secretary (1-year term)
- Treasurer (1-year term)
- Delegates (2-year terms: 2 positions)

Appointed positions consist of the Education Committee Chair and the Editor of the Syracuse Chemist. Both of these positions are one-year terms.

All of the positions available this year are open to members or student members of ACS. Holders of these positions all become members of the Executive Committee of the Syracuse Section. That committee must meet at least four times during the calendar year to plan activities and carry out the business of the section. Self-nominations (that is, volunteers) are welcome. Nominations of other members are also welcomed. Only candidates who consent to serve shall appear on the ballot. Please send nominations (including self-nominations) to Sally Mitchell [sbmitchell2@gmail.com](mailto:sbmitchell2@gmail.com) by October 9, 2012.

# Upcoming Section Events

## October

38<sup>th</sup> North East Regional Meeting of the ACS (NERM) in Rochester, NY. September 30<sup>th</sup> - October 3<sup>rd</sup>. ACS Career Workshop is scheduled for Monday, October 1<sup>st</sup>. Details can be found at: <http://nerm.sites.acs.org/>.

Joint NYWEA/ACS Meeting: Chemistry and Wastewater Treatment. October 11<sup>th</sup>, 2012 8:30am - 3:30pm at the Rosemont Gifford Zoo. ACS Syracuse Section members Charles Driscoll (SU), David Johnson (ESF), and Robert Santore (HDR) will be presenters at the event. See the flier on page 9 for more details.

Team Syracuse Section ACS will participate in the Carol Baldwin's "A run for their life" on Sunday, October 14, 2012 at Manley Field House. If anyone is interested in walking or running 5K or 15 K, please register at <http://www.cmbarunfortheirlife.com/> and sign up during the registration to represent the Syracuse Section ACS. More NCW activities to follow - watch your e-mail!

## November

Syracuse Biomaterials Institute, November 8<sup>th</sup> 2012. Brett Zani will be delivering a lecture entitled *Hearts, Airways, and Bridges: A Story of Cell Communication*.

Abstract: Cell-to-cell communication is the basis of all biology in multi-cellular organisms, allowing evolution of complex forms and viability in dynamic environments. Through biochemical and physical interactions, cells direct all physiology from development and tissue homeostasis to disease and injury, and in turn, tissue repair and regeneration. This talk will cover three research areas with a common foundation in cell communication.

Dr. Zani is currently the head of Applied Sciences at Concord Biomedical Sciences and Emerging Technologies in Lexington, MA.

Room and times to follow in a separate flier.

## December

State of the Section Dinner Meeting on Friday, December 7<sup>th</sup> at Utica College. Featured speaker Alyssa Thomas will present a lecture around this year's National Chemistry Week theme: Nanotechnology, the Smallest Big Idea. Details to follow.

Want up-to-the-minute information about the section?  
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latest news and events.

# WHAT: Chemistry and Wastewater Treatment

Hosted by the Central Chapter of the New York Water Environment Association and the Syracuse Section of the American Chemical Society



**WHERE: Rosamond Gifford Zoo, Syracuse, NY**

Directions: <http://www.rosamondgiffordzoo.org/directions>

Events held at the Zoo support its mission.

**WHEN: Thursday, October 11, 2012, 8:30 AM to 3:30 PM.**

Preregister for the event through October 5, 2012

The vital role of chemistry in wastewater treatment will be the highlight of this meeting of NYWEA/ACS members, students and the public. The meeting will feature local experts that will discuss the challenges of nutrient (phosphorus) removal from sewage, renewable energy, and applications for environmental modeling and real-time remote sensing related to wastewater treatment plants and the impacts of treated effluents. The lessons learned from phosphorus removal at the Syracuse METRO wastewater treatment plant will be discussed as a case study that can be applied to other wastewater treatment plants.

A full agenda for the event will be available at the NYWEA Central Chapter website

(<http://www.cnywea.wildapricot.org/>) and ACS Syracuse Section website

(<http://syracusesection.sites.acs.org/>).

The meeting will be approved for continuing education units (CEU) for wastewater treatment plant operators and professional development hours (PDH) for professional engineers.

**COST:**

ACS/NYWEA Members: \$35 Preregistration or \$40 Registration at the event.

Students (High School and College): \$0 Preregistration or \$10 Registration at the event.

All Others: \$45 Preregistration or \$50 Registration at the event.



## Syracuse Chemist

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### Deadline for material:

Chemists will be published every other month beginning in January. The deadline for submitted materials will be the 15<sup>th</sup> of every even numbered month (Ex. 2/15 for the March issue). Please submit print ready materials to Michelle Boucher mboucher@utica.edu

Founded in 1908, The Syracuse Chemist (ISSN 0039-792X) is the American Chemical Society's Oldest Section publication issued monthly (except July and August) by the Syracuse Section of the Society. It is distributed free to members of the Syracuse Section – and to others for \$0.25 per copy or \$2.00 per year.

The American Chemical Society, the Syracuse Section thereof, and The Syracuse Chemist assume no responsibility for the opinions or statements expressed by contributors and do not necessarily subscribe thereunto. Permission to reprint is hereby granted to all ACS publications.

Organized as the Syracuse Chemical Society in 1902 and chartered as a section of the American Chemical Society in 1907, the Syracuse Section now includes Central New York counties of Cayuga, Cortland, Madison, Oneida, Onondaga, Oswego and Seneca.

### Advertising Rates

Full Page	\$70.00
Half Page	\$50.00
Quarter Page	\$25.00
One-eighth Page	\$20.00
Circulation	525

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