

The Syracuse Chemist

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April 2012

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Chemistry and Art

Daniel Barr

We often tend to think of science and art as lying on opposite ends of a continuum of professional disciplines. The apparent rational, logical, steady march of science seems largely unrelated to the seemingly haphazard, unstructured creativity of art. And yet, some of the most successful scientists talk about the creative insight that led to a remarkable discovery; at the same time, many artists discuss the benefits of a structured, rational thought process for creating their artwork. Fascinatingly, many of the world's best scientists have also been artists or musicians: Leonardo da Vinci stands out as a master of both artistic talent and scientific/technology innovation, Albert Einstein was not only a brilliant physicist but also an accomplished violinist. The list could go on and on. Somehow, it seems, art and science are not as opposite as we might at first be inclined to think.

This interplay between art and science is being highlighted by several recent and upcoming events in our local ACS section. In this issue of the Chemist, the winning art and poems from the Chemists Celebrate Earth Day Contest are published. Additionally, later this spring at Utica College, a Celebration of the Arts Day will include an Art of Science Exhibition. This has been a national trend, with both the ACS and the Biophysical Society sponsoring recent competitions that emphasize the artistic nature of science.

So this spring, take some time to appreciate the splendor of the world around you and stretch your brain a little bit by taking up an artistic project. Not only will this give you a fresh appreciation for the beauty of our world, it might just help you think more creatively in other areas of your work as well!

Mark your calander! May 10th is the next meeting of Green Drinks, 6pm at the Hotel Skyler in Syracuse! Go to <http://tinyurl.com/7c6mgfe> for more details!

A note from the Chair-Elect

I am honored to be chair-elect of the Syracuse Section of the American Chemical Society and look forward to an exciting year of service. I would like to thank our current chair, Bill Ayling for his dedicated leadership to the Section and also for the considerable time that he has spent mentoring me in my new role. It has been both instructive and inspiring to witness his extraordinary competence. I would also like to thank the extraordinary efforts of our immediate past-chair, Sally Mitchell, who encouraged me to become active in the section and follow in the footsteps of some great fellow local chemists. I look forward to learning more about my responsibilities and will do my best to pursue the initiatives launched by my predecessors. In particular, I hope to continue working to resolve some of the challenges faced by our section in the area of Section participation, and to further pursue the efforts of our Executive Committee towards creating specialty events for our members.

A majority of our Section's activity is funded by your voluntary dues contributions, so please let me know if you have suggestions for events and who you know may be able to assist in making them come to fruition. This coming year, I am particularly interested in forming a set of local meeting events based on "best practices" in our fields. These topical events would span academia (K-12 and higher education) as well as corporate, governmental, and non-traditional areas. One example might be best practices in teaching Physical Chemistry, but that is only one idea. Topics on grant writing, chemical research areas, energy, and business would also be very interesting. Think about your professional (or personal!) life and how sharing conversation with fellow local scientists might help you towards your own goals.

If you would like to come to a meeting or join us for an event, please contact me by e-mail at nmabrams@esf.edu or see what is happening through the links on Syracuse Section website at <http://syracusesection.sites.acs.org> as well as on Facebook. We look forward to seeing you soon!

Neal Abrams, Syracuse Section Chair-Elect 2012

Calling all College and University Faculty -

Do you have an exceptional junior or senior who would benefit from having a membership to the American Chemical Society?

If so, please contact our Awards Chair, Alyssa Thomas, who is organizing the Student Affiliate Awards for this year. To nominate a student for the award, send an e-mail with the subject - ACS Syracuse Student Affiliate Awards to acthomas@utica.edu and include the name of the student, the institution, and the student's e-mail address. For more details or any questions, send an e-mail to the above address. Deadline for nominations this year is **May 13th**

The ACS and the GSSSF

Bob Fleischman, John Fleischman and Joy Logan

The Milton J. Rubenstein Museum of Science and Technology hosted the 33rd annual Greater Syracuse Scholastic Science Fair on Sunday, March 25, 2012 at the Oncenter in downtown Syracuse.

The GSSSF consisted of science, technology and engineering exhibits from public, private and home schooled students in grades 5 - 12 located in Onondaga, Madison, Oswego, Cayuga, and Cortland counties.

This year, the Syracuse Section's Best Chemistry Awards, which consisted of a certificate and \$15, \$20 or \$30 Barnes and Noble Bookstore gift cards, were given to the following students:

STUDENT NAME	SCHOOL	TOPIC	AWARD
Tessa Brown	Homer	Ocean Acidification	\$15
Amina Kilpatrick	Manlius-Pebble Hill School	Edible Conductor	\$20
Olivia Vought	Edward Smith Elementary	Evaluating Ice Melt Products	\$30
Kaitlin Dunning Emily Green	Camillus Middle School	The Secrets of Alchemy	\$15
Alisson Purty	Skaneateles Middle School	Rusting Out: How Acids change the rate of Corrosion	\$20
Dylan Reahr	LaFayette Junior-Senior High School	Consistency in Cookie Calorie Claims	\$20
Matthew Shampine	Syracuse Academy of Charter School	Methane Diffusion into Water During Hydraulic Fracturing	\$30
Samantha Turnquest Courtney Chavis	Syracuse Academy of Charter School	The Effect of Bioremediation of Soil with Fishbone on the Amount of Polycyclic Aromatic Hydrocarbons	\$30

Dylan Reahr was also the recipient of the SUNY Cortland Excellence in Chemistry Award and awarded a copy of Theo Gray's book "*Theo Gray's Mad Science: Experiments You Can Do at Home - But Probably Shouldn't*".



John Fleischman (right) with Dylan Reahr (left) discussing the making of his homemade bomb calorimeter used in his experiments.

Joy Logan (below left) with Olivia Vought (below right) talking about her use of dry ice in her experiments.



John Fleischman has been a member of the Syracuse section for 27 years and has judged at the Science fair for several years. Currently one of the District Delegates for Syracuse Section, John is a graduate of LeMoyne College with degrees in Chemistry and Biology. He has been with Pall Corporation since 1992 and is a Senior Research Scientist at their Cortland facility.

Joy Logan, an ACS member since 2010, is the current Education Chair for the local ACS section. She is a graduate of SUNY Oswego with Bachelor's in Chemistry and completing a Master's in Chemistry also at SUNY Oswego. She has been employed by SUNY ESF since February 2011 as the General Chemistry Lab Coordinator.

Bob Fleischman, an ACS member since 1986, has been judging the GSSSF for the past seven years acting as a junior level judge and recently became a special awards judge for the American Chemical Society Awards. Bob will continue to serve as the GSSSF special awards coordinator for the Syracuse Local Section. Bob is a graduate of LeMoyne College with a Bachelors of Science in Chemistry with a minor in Biology. He has been employed by EMD Millipore for over 14 years as a Field Engineer.

The Greater Syracuse Scholastic Science Fair is always looking for people willing to serve as judges. The only requirements are an enthusiasm for science and technology and a willingness to share that enthusiasm with the student participants.

If you would like more information regarding the Greater Syracuse Scholastic Science Fair, or would like to participate as judge, please contact Bob Fleischman at robert.fleischman@merckgroup.com.

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. 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.

Want to know more about what you need to do in these positions? Read on!

So you are interested in being an officer? Here's what they do!!

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 by October 9, 2012. Descriptions of the terms and duties of these positions follow.

Description of Positions

The Board of Directors is responsible for strategic planning of the Section and consists of the Chair-Elect, Chair, Past-Chair, Secretary, and Treasurer as officers of the Executive Committee.

The **Chair-Elect** serves the Section for three years: one year as Chair Elect (2013), the next year as Chair (2014), and the following year as immediate Past Chair (2015).

- As **Chair-Elect (2013)**, this person has an opportunity in January 2013 to attend (at ACS expense) a weekend ACS Leadership institute with other section officers from around the country. The Chair Elect also plans section activities for his or her Chair year.
- As **Chair (2014)** this person calls meetings of the Executive Committee, runs meetings of the section (dinner meetings or other programs), appoints members to other committees, and coordinates Section activities. The Chair is also responsible to draft an annual report for the Councilor to submit to national ACS staff on Section activities completed during his or her year as Chair. Both the Chair Elect and Past Chair assist the Chair in coordinating Section activities.
- As **Past-Chair (2015)** this person provides support to the Chair and Chair-Elect and also serves as Chair of the Awards, and Nominations and Elections committees for 2015.

The Chair Elect, Chair, and Past Chair also serve as members of the Nominations and Elections committee.

The **Secretary** takes minutes of Executive Committee meetings, reports election results to the national ACS, and is generally responsible for formal communications on behalf of the Section. The term of the Secretary is one year, and the Secretary may be re-elected. The **Treasurer** is responsible for budgeting, handling the Section's funds, and paying its bills. The term of the Treasurer is one year, and the Treasurer may be re-elected. The **Delegates** represent the Section members and participate as voting members of the Executive Committee in deciding Section business and assist in tasks, as needed. In order to encourage participation from all areas of the Section, two delegates must live or work outside Onondaga County; the other two may be from anywhere in the Section. The delegate is an entry-level position in Section governance and service. Under the Section bylaws, delegate terms are two years (with re-election possible), and two Delegates will be elected each year. In the 2012 election, at least one delegate must be from outside Onondaga County.

Appointed positions are advisory positions of the Executive Committee that do not participate in voting on Section business. The 2013 Section Chair will make official appointments by January 31, 2013.

Chair of the Education Committee is appointed for a one year term and is responsible for organizing and oversee all of the Sections events that are geared toward the youth in the section including but not limited to: National Chemistry Week, Chemists Celebrate Earth Day (April), the Benjamin P. Burt Chemical Education Series (May or June), and National Chemistry Week (October). Since this is an appointed position, self-nominations only will be accepted. The **Editor of the Syracuse Chemist** is an appointed position and is responsible for publishing the Chemist and for communicating directly with the membership. Since this is an appointed position, self-nominations will only be accepted.

From the Nominations and Elections Committee:

- Sally Mitchell, Past Chair, Chair Nominations and Elections Committee
- Neal Abrams, Chair-Elect
- Bill Ayling, Section Chair

CONSIDERATION OF SECTION NAME CHANGE

Also on the ballot for this year's election, will be a poll of members to vote FOR or AGAINST changing the section name from the "Syracuse Section" to the "Central New York Section." The proposed section name change is intended to better represent the geographic region of our members. Approximately 65% of the Syracuse Section members reside or work within the Syracuse metropolitan area. The remaining 35% of the members reside or work outside of the Syracuse metropolitan region in areas of Central New York from Oswego to Ithaca, and Utica to Aurora.

March Dinner Meeting: Iron Chemistry

Sally Mitchell

Dr. Dennis Miller of Cornell University Department of Food Science gave a wonderful talk at Syracuse University on Thursday evening, March 29, 2012 on Iron Chemistry.

The East Syracuse Minoa High School ACS ChemClub secured an International Year of Chemistry grant from ACS to host this talk in collaboration with the student member chapter of ACS at Syracuse University. Ashley Gingeleski and Snigdha Chatterjee wrote the grant with the intention of collaborating with a college group, and at the same time, celebrate the International Year of Chemistry by bringing a topic of global concern to the attention of the general public. Iron Deficiency is an international problem. By 2050, there will be over 9 billion people on the planet to feed and iron deficiency in children is a problem that must be solved.

The evening started out with simple demonstration of total cereal stirred with a magnetic stir-bar in water. In only a few minutes, the elemental iron that is found in total cereal was quickly removed by the magnet. People attending the talk started the evening with appetizers rich in iron and vitamin C. Hummus, deviled eggs, and citrus fruits were served along with vegetables and dip. Dinner consisted of a spinach salad, beef, chicken, ziti, green beans, and potatoes. Dr. Miller's talk discussed the bioavailability of iron in our foods and explained that just because a food is rich in iron, there are other foods such as casein that inhibit the uptake of the iron into our bodies, and yet, vitamin C or ascorbic acid enhances the uptake of the iron into our bodies.

Dr. Miller spoke about iron and explained that iron is an essential nutrient for nearly all life forms because it is involved with oxygen transport, energy metabolism, and DNA synthesis. The absorption of dietary iron is a complicated and highly regulated process. Dr. Miller's research

focuses around the food fortificants used in iron supplements and studies the effects of these supplements.



Dennis Miller, Neal Abrams, and Joy Logan

A pamphlet of interesting facts about iron was prepared by the ESM ChemClub and distributed to all that attended the talk. In the flyer, foods rich in iron were listed and helpful tips were discussed about nutrition and the diet along with signs and symptoms of anemia.

The evening concluded with questions and answers, door prizes of "Wooly Willy" were handed out to members and then everyone enjoyed a cupcake or two baked by student members of the ESM ChemClub and also culinary students, before heading home for the night.

Councilor's Corner

Hello everyone! My name is Alyssa Thomas, your newly elected section Councilor. I recently attended my first national meeting on your behalf in San Diego on March 25-29, 2012. It was quite exciting to see the sheer number of chemists that attended (close to 17,000 by the end of the week). 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; subject heading: ACS Councilor Report. I will continue to expand on topics throughout the year in future Chemist issues so look for the Councilor's Corner each addition. Please feel free to e-mail me with any thoughts, concerns, or comments at acthomas@utica.edu.

Top Five Items from the 243rd ACS National Meeting

- 1) Thomas J. Barton and Luis A. Echegoyen have been selected by the council as candidates for 2013 President-Elect. These two candidates, along with any candidates selected via petitions, will stand for election in the Fall National Election.
- 2) Our district will be electing a new Director this coming fall to serve from 2013-2015 on the Board of Directors. As determined by a mail ballot prior to the meeting, Thomas R. Gilbert and Neil D. Jespersen were selected as District I candidates. Ballots will be mailed on or before October 10 to all members in District I and District V for election of a Director from each District.
- 3) Despite the sluggish economy, ACS generated strong operating results in 2011. Total revenue was \$472.0 million, up +1.8% over 2010. The Net from Operations was \$20.9 million, or \$7.7 million favorable to budget. While operating results were favorable, Unrestricted Net Assets declined from \$130.5 million to \$102 million. ACS ended the year in compliance with four of the five Board-established financial guidelines.
- 4) Check out the following website for information on the Strategic Plan for 2012 and Beyond, a comprehensive plan to help guide the Society into the future that includes four major goals: 1) Provide Information, 2) Advance Member Careers, 3) Improve Education, and 4) Communicate Chemistry's Value. For more information visit, www.acs.org/strategicplan.
- 5) The Councilors were put through the paces when ACS President Bassam Shkhashiri gave us a pop quiz on climate science and we failed miserably as a group. This was followed by a lively discussion on the preliminary web-based Climate Science Toolkit developed by President Shkhashiri's working group on ACS Climate Science. Visit the website, www.acs.org/climatescience, for more information and please send me any comments, questions, or concerns on the material.

Chemistry Olympiad

Local high school students take chemistry to an Olympic level

Sally Mitchell

Dedication, intelligence, charisma....and safety goggles? These are just some of the characteristics portrayed among 117 of the top chemistry students from ten area high schools that participated in the local section competition of the Chemistry Olympiad this past March. The Syracuse Section of the American Chemical Society (ACS) organizes the local competition.

The purpose of the local section exam, in addition to identifying students to advance to the United States National Chemistry Olympiad competition (USNCO), is to encourage and recognize promising chemistry students in the Central New York region.

The standardized exam is written by the National Chemistry Olympiad committee. The top eligible students in the local exam will qualify to take the USNCO National exam on Thursday, April 19 held on the SUNY ESF campus. Top students from this exam will be invited to participate in a month-long chemistry study camp this summer, from which a team will be selected to compete in the 44th annual International Chemistry Olympiad in July in Washington, DC.

The schools participating and teachers were: Altmar-Parish-Williamstown (Toni Pugliano), Chittenango (Harold Muller), East Syracuse Minoa (Sally Mitchell), Fayetteville-Manlius (James Morgan), G. Ray Bodley (Fulton)(Robert Morse), Jamesville-Dewitt (Theresa Groman), Jordan-Elbridge (Maggie Estlinbaum) , Syracuse Academy of Science (Mehriban Sirin), Proctor (Utica)(Mary Ann Mazzola) and Vernon-Verona-Sherrill (Susanne Gardner).

The top ten student scores were from:

1. Christopher Brenon - East Syracuse Minoa High School
2. Kunal Sangani - Fayetteville-Manlius High School
3. Daniel Hanggi - Chittenango High School
4. Alex Zhang - Fayetteville-Manlius High School
5. Daniel Loh - Fayetteville-Manlius High School
6. Aaron Chen - Jamesville-Dewitt High School
7. Alec Beaton - East Syracuse Minoa High School
8. Thomas Hays - Jamesville-Dewitt High School
9. Tied Collin Barber and Parker Harris - Fayetteville-Manlius High School

Wanted: Candidate to fill vacancy on Executive Committee as Delegate for the remainder of 2012. The position will be filled as an appointment by the Chair of the Executive Committee. Please contact Bill Ayling, Chair (aylingwa@verizon.net or 315-451-3634) if interested in filling the Delegate position.

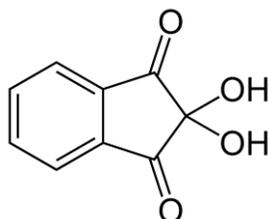
Molecule of the Month Puzzle

Daniel Barr

Molecule of the Month Answer: March 2012 issue. The molecule is ninhydrin. Congratulations to Geoff Beckwith and Curtis Pulliam for being the first to answer correctly (within just a few minutes of each other!).

Answers to individual questions:

1. *nicotine*
2. *isoleucine*
3. *negative*
4. *hydrogen peroxide*
5. *Ytterby*
6. *deuterium*
7. *ricin*
8. *iodoform*
9. *nitrogen*



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

GYNEOX



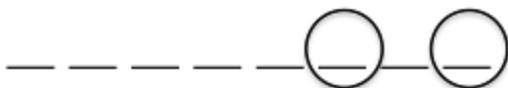
ARBOCN



NEAGSIUMM



EGTNSTNU



HIUMILT



Unscramble the names of the elements, then unscramble the circled letters to find out what Michaelangelo would have painted if he were a chemist:

The _____ Chapel.

Upcoming Section Events

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

MAY

May 10, Green Drinks, 6pm at the Hotel Skyler. Join ACS members and others to socialize. For more information go to: <http://tinyurl.com/7c6mqfe> or contact Bill Ayling (aylingwa@verizon.net).

JUNE

Education Night and Ben Burt Lecture. Details to follow in next issue of the Chemist.

CCED Illustrated Poem Contest

Sally Mitchell

Chemists Celebrate Earth Day 2012 Illustrated Poem Contest
Theme: Rethinking Recycling - It's Easy to Be Green!

Over 450 poems were received for the Chemists Celebrate Earth Day annual Illustrated Poem Contest from eight school districts in the Syracuse Section of American Chemical Society. School districts participating in this wonderful display of art, English, and science were: Bishop Ludden, Cazenovia, Chittenango, East Syracuse Minoa, Fayetteville-Manlius, Jordan-Elbridge, New York Mills, and Whitesboro. The local section winners are invited to the ACS Education Night for recognition and their entries are forwarded to the National Competition.

This year's winners are:

K-2 division: Maura Leib - 2nd grade from Fremont Elementary School, East Syracuse, NY Teacher: Christine Rossignol

3-5 division: Bradley Herrington - 3rd grade from Fremont Elementary School, East Syracuse, NY Teacher: Beth Chavoustie

6-8 division: Holly Babcock - 6th grade from Pine Grove Middle School, East Syracuse, NY Teacher: Rick Moore

9-12 division: Katherine Babcock - 9th grade from East Syracuse Minoa High School, East Syracuse, NY Teacher: Tess McKinney

Thank you to this year's judges: Rob Stankavage, John Fleischman, Eilizabeth Mitchell, Joy Logan, and Alyssa Thomas.



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 15th of every even numbered month (Ex. 2/15 for the March issue). Please submit print ready materials to Michelle Boucher mboucher@utica.edu

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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.

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