

# The Syracuse Chemist

Volume 106/Issue 1



April 2014

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## Celebrating a great year and looking ahead: thoughts from your past chair

This year went by so quickly, but that was probably due to all the great events and activities. From debuting the ACS Webinar program to a new Innovative Projects Grant and other awards, we have had a very successful year. Attendance at our meetings was incredibly high and I look forward to seeing all of your faces again at this year's great lineup of meetings and events. Led by an amazing Education Committee, our annual Education Night was a great success as were all of the NCW-related activities. Still want one of those fantastic Evolution of Energy t-shirts? Stay tuned for more info!

I am honored to be among such great partners in science such as TACNY, the MOST, the Ying TRSEF, and those who organize science events like Science Olympiad, the Environmental Challenge, and the CNYSEF. It is fantastic time learning how the ACS can contribute to keeping CNY a vibrant place for learning and doing science! There are challenges ahead, but I have learned one very important thing about our section - there are always experts and volunteers ready to participate and contribute in every way possible. Please keep the ACS in mind in your everyday activities and see how we can help one another; from chemistry demo shows to Earth Day activities and stream cleanups to water quality testing, the CNY ACS always has something to offer.

In closing, I am indebted to Bill Ayling (Past Chair) and Sally Mitchell (Past Past Chair) as they guided me through the year as Chair. In much the same way, I am excited to welcome Jeff Schneider on board as he takes the reigns as Chair for the inauguration of the newly minted Central New York Section. Here's to another great year!

Thanks,  
Neal Abrams, Past-Chair

### 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](mailto: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 15<sup>th</sup>**.

## Meet Your Executive Committee

### 2014 CNY Section - Executive Committee

Chair: Jeff Schneider  
Past-Chair: Neal Abrams  
Chair-Elect: Vacant\*  
Treasurer: Bob Fleischman  
Secretary: Anna O'Brien  
Councilor: Alyssa Thomas  
Delegate-at-Large: Sally Mitchell  
Delegate-at-Large: Joe Mullins  
Delegate Outside of Onondaga County: Vacant\*  
Delegate Outside of Onondaga County: Vacant\*  
Education Chair: Joy Logan

\*We received recommendations from the electorate for possible candidates to fill vacant positions. The Section leadership is currently verifying interest and eligibility of possible candidates. If you are interested in any vacant positions, please contact a member of your executive committee and volunteer to serve!

### *Greetings from your chair:*

Hello everyone. My name is Jeff Schneider and I am the newly elected chair of the Central New York Section of the ACS. For those of you who don't know me, I am an Assistant Professor of Environmental/Analytical/Physical Chemistry at SUNY Oswego where I have taught a multitude of courses since 1994. I would like to thank each and everyone one of you who had enough faith in my abilities and voted for me. To those of you who voted for someone else or chose to write in a name other than mine, thank you for exercising your right to vote and I would encourage you to consider running for office yourself or nominating others. And to those who chose not to vote, please realize that every vote matters. Everyone's voice should be heard and you are important to the health of the section. Please consider taking the time to vote in our next elections.

Never did I think that I would ever be able to chair our great section. But now that I am chair, I'm sure we'll have a great year. We have a lot of events coming up, including numerous science fairs, Education night, and some great Earth Day activities. For the fall, I'm hoping to arrange some planetarium shows in the new \$118 million Shineman Science Complex on the SUNY Oswego campus, so stay tuned for that.

Finally, I'd like to say that I think the future of our section and the ACS, is highly dependent on new blood. To me that means more student members and more student participation in our events. My number one goal is to visit all of our student affiliate groups, to listen to any ideas and concerns they might have, and to personally invite them to participate. Additionally, I would like to visit any unaffiliated chemistry clubs in the section and encourage them to join us, as well.

In closing, I humbly thank you and I look forward to a great year.

Jeff Schneider

# Central New York Science and Engineering Fair

By: Bob Fleischman

The Milton J. Rubenstein Museum of Science and Technology (MOST) hosted the 35th annual Central New York Science and Engineering Fair on Sunday, March 30, 2014 at the SRC Arena on the campus of Onondaga Community College.



The CNYSEF is the museum's longest running program, consisting of science, technology and engineering exhibits from public, private and home schooled students in grades 4<sup>th</sup> to 12<sup>th</sup> located in Cayuga, Cortland, Madison, Onondaga and Oswego counties. Dave Eichorn meteorologist with WSYR TV and Adjunct Professor at SUNY ESF was the Master of Ceremonies. The Keynote Speaker was Dr. Julie Hasenewinkel, an Associate Professor of Biomedical and Chemical Engineering at Syracuse University.

Representing the Section as judges were Joy Logan, Sally Mitchell and Bob Fleischman.

The Section's Best Chemistry Award recognizes the understanding or implementation of Chemistry Principles. The award consisted of a certificate and a Barnes and Noble Bookstore gift card for \$15, \$20 or \$30. The awards were presented to the following students by Neal Abrams from SUNY ESF and past Chair of the CNY section.

STUDENT NAME	SCHOOL	GRADE	TOPIC	AWARD
Katelyn Jasmin	Bolivar Road Elementary	4	Rock Candy	\$15
Hannah Goldberg	Syracuse Hebrew Day School	5	Helping Frozen Toes: Effect of Catalyst on Exothermic Reaction	\$20
Ryan Hindshaw	Syracuse Hebrew	5	Lincoln's wash	\$30
Olivia Sheppard	Manlius-Pebble Hill	11	Reduction of Circulating Tumor Cells By Induction of Apoptosis via a TRAIL-Functionalized, Nanostructured Shunt Device	\$30

Olivia also received SUNY Cortland's Chemistry Award which recognizes excellence in Chemistry research. This year's award was a hard copy of Theo Gray's *"Mad Science: Experiments you can do at Home - - But Probably Shouldn't"*.



Hanna Goldberg was this year's recipient of the chemistry award from the local chapter of Alpha Chi Sigma, A professional co-educational fraternity at Syracuse University and SUNY ESF. The award recognizes outstanding accomplishments in fundamental or applied chemical engineering research. This year's award was a medallion and the book "*The Elements: A Visual Exploration*".

Sally Mitchell, an ACS member since 1981 and an Alpha Chi Sigma member, is the current delegate-at-large for the local ACS

section and member of the education committee. She is a graduate of Syracuse University with Bachelor of Science degrees in chemistry and biology and a Master of Science degree in Chemistry Education. She has been employed by East Syracuse Minoa High School since 1999 when she moved back to the Syracuse area.

Neal Abrams, an ACS member since 2004, is the current Past Chair for the local ACS Section. He is an Associate Professor at SUNY ESF and has been there since 2007. He is an inorganic chemist and teaches courses in general chemistry and energy. His outreach activities extend from science fairs to leading professional development courses for teachers.

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, is the current Treasurer for the local section and has been judging the Science Fair for over 10 years holding various positions as Junior, Senior and Special Awards judge. 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 15 years as a Field Engineer.



The Central New York Science & Engineering 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 CNYESF, or would like to participate as judge, please contact Bob Fleischman at [robert.fleischman@emdmillipore.com](mailto:robert.fleischman@emdmillipore.com).

# CHEMISTS CELEBRATE EARTH DAY - CLIMATE AWARENESS AND ACTION

*By: Bill Ayling, 2012 Chair*

Since the 1970s, Earth Day has been an annual reminder of our collective obligation to protect the planet that provides for our wellbeing. There is no better time than Earth Day to revisit that message. In his 2010 TED presentation, [Let the Environment Guide Our Development](#), Johan Rockström, Director of the Stockholm Resilience Center clearly laid out the range of current environmental challenges for our global community, including climate change. How can anyone look at the consistency of the trends that Rockström identifies, and ask whether humans are causing these changes? With specific regard to climate change, the better question would be how could it not be related? His work has provided the basis for a better understanding of the environmental stresses that humans place on the planet. Undoubtedly, chemists will need to play a large role in helping to resolve these issues with stronger links between research and the branches that support a systems perspective including biochemistry, environmental chemistry, green chemistry, and toxicology.

Attention to climate change is an urgent need and there are two pieces to the issue - awareness and action. Several years ago ACS issued the [ACS Climate Change Public Policy Statement](#) and it was a year and a half ago that ACS president [Bassam Shakhshiri](#) asked that ACS members help to engage the public in the discussion about climate change. In 2012, ACS provided the [ACS Climate Change tool kit](#) for members to do just that. Within ACS, the [ACS public affairs committee](#) also endorses member efforts that support well-being of society.

More information to support awareness and action are discussed in separate sections below.

## Awareness

Contrary to what the mainstream media might have us believe, the concept of human induced climate change is not new, as described in the ACS book *Chemistry in Context* (ACS 2009). In the early 1800s, the mathematician Joseph Fourier described the idea that atmospheric gases may trap the Sun's heat. By the late 1800s, Swedish chemist Svante Arrhenius had developed the first model describing the potential consequences of the buildup of CO<sub>2</sub> in the atmosphere (ACS 2009). More recently, the scientific case for human induced climate change continues to build:

- The United Nations Intergovernmental Panel on Climate Change (UNIPCC) has been leading the charge for several years. As reported in the March 30, 2014 [New York Times](#), the latest publication of the UNIPCC, entitled [Climate Change 2014: Impacts, Adaptation, and Vulnerability](#), discusses the nature of risks and states that the world is ill-prepared for climate change.
- On February 27, 2014, the U.S. National Academy of Sciences along with the Royal Society (the UK equivalent of the National Academy of Sciences) released a new publication [Climate Change: Evidence and Causes](#) that is intended to help broad audiences understand climate change.
- The national aeronautics and space administration has issued a [NASA consensus statement](#) that provides a list of agencies and organizations (including ACS) that have issued climate statements.

- National Oceanic and Atmospheric Administration (NOAA) provides additional tools for outreach on the [NOAA climate webpage](#).
- Meanwhile, the USEPA has issued warnings of [ecological affects](#) to help the public understand the extent of potential changes that could occur.

While the scientific case for climate change is well established, the mainstream media still casts doubt.

## Action

In his book *Storms of My Grandchildren* (2009), former head of the NASA Goodard Institute for Space Studies, Dr. James Hansen expressed his natural tendency as a scientist to prefer to present the data and let others decide how to respond to the data. Politics was not something that he was interested in. As time went on, however, he struggled with the thought that his grandchildren might ask him later - if he understood the potential dangers of climate change, why did he not do something about it? I share those same conflicting feelings and understand that others do as well. However, like Dr. Hansen, the thought of not doing anything for the younger generation, including my daughter's future, overrides the natural preference to not get involved. I am also reminded of cultural anthropologist Margaret Meade's comment: *Never believe that a few caring people can't change the world. For, indeed, that's all who ever have.* So, I am compelled to act and invite my ACS colleagues to join the effort.

Locally, for Earth Day the Syracuse Chapter of the [Citizen Climate Lobby](#) and [GreeningUSA](#) are leading advocacy for climate change action.

GreeningUSA is placing a full page ad in the Syracuse Post-Standard and renting billboard(s) space with a climate change message. As of March 31, they were approximately \$700 away from their goal of \$4,400 for these efforts. If you would like to personally contribute to GreeningUSA for this cause, a tax free donation can be made by clicking on [GreeningUSA](#). The deadline is April 9. The Executive Committee of the CNY Section of ACS voted to support the media campaign and the Section will be listed (along with our web address) as a contributor in the Post-Standard Earth Day ad giving us broad visibility as a group that supports community outreach.

In addition, both GreeningUSA and the Syracuse Chapter of the Citizen's Climate Lobby are requesting that for this Earth Day, citizens contact their representatives to show their support for legislative efforts to curb greenhouse gas emissions. Contact information for congressional representatives that serve the central NY region is provided below. In celebration of Earth Day, please contact your representative by email (by clicking on their name) or by phone:

[Dan Maffei](#) (25<sup>th</sup> district): 202-225-3701

[Richard Hanna](#) (24<sup>th</sup> district): 202-225-3665

Make Earth Day 2014 count. Tell your representative that you are a member of the American Chemical Society and that you support legislation to curb greenhouse gas emissions and prevent climate change. Also, thank them for their efforts toward this goal. Please make your call on or before Earth Day, April 22. I can think of no better way for chemists to celebrate Earth Day.

# DR. STEPHEN CANTOR

## UV CURING TECHNOLOGY: A ROUTE TO SOLVENT-FREE ADHESIVES AND COATINGS



State University of New York  
College of Environmental Science and Forestry



ACS  
Chemistry for Life®

### WEDNESDAY, APRIL 9, 2014

- 6:00 p.m. - Light refreshments
- 6:30 p.m. - Presentation by Stephen Cantor
- SUNY-ESF  
Gateway Center, Room C  
1 Forestry Drive  
Syracuse, NY 13210

Have you ever had a chip in your windshield repaired? Have you ever noticed the coating on a computer board or on a book jacket? How does the metal needle used in a syringe bond to the plastic hub or how do you attach a glass base to a goblet to form a wine glass? The answer is the use of ultraviolet/visible technology which requires no solvents and is the "greenest" way to produce adhesive bonds and coatings. Stephen Cantor's presentation of this technology is useful to engineers, chemists and artists. His lecture will describe the chemistry and processes involved.

Stephen Cantor holds a B.S. from Queens College and earned a Ph.D. from the University of Rochester in 1964. He received numerous patents during his career in researching and developing high temperature fibers and coatings. Cantor has worked for the Research Center of U.S. Rubber, the Medical Products Division of American Cyanamid; Pfaltz & Bauer; Dymax Corp. Cantor is a renowned lecturer who has served as an adjunct professor at several universities. He retired in 2011 and remains a consultant for Dymax.

**This event is free and open to the public. For more information, please visit: <http://uv-cnyacs.eventbrite.com>**



Presented by the CNY Section of the American Chemical Society and the State University of New York College of Environmental Science and Forestry

## Chemists Celebrate Earth Day 2014 Illustrated Poem Contest

The **Central New York** Section of the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in Kindergarten -2<sup>nd</sup>, 3-5<sup>th</sup>, 6-8<sup>th</sup> and 9- 12<sup>th</sup> grade.

Contest Deadline: **Wednesday, April 16, 2014**, Send to: **Sally Mitchell, East Syracuse Minoa High School, 6400 Fremont Rd, East Syracuse, NY 13057**

Prizes: **\$25 Local Section winners and poems are entered into the national competition**

Contact Information: **Sally Mitchell, sbmitchell2@gmail.com**

Winners of the **Central New York** illustrated poem contest will advance to the ACS National Illustrated Poem Contest and can win up to \$300.

Write and illustrate a poem using the CCED theme, **"The Wonders of Water"**. Your poem must be **no more** than 40 words, and in the following styles to be considered:

**HAIKU • LIMERICK • ODE • ABC POEM • FREE VERSE • END RHYME • BLANK VERSE**

### Possible topics related to water and chemistry include:

- Fresh water sources
- Water conservation and purification
- Chemical composition of water
- Physical properties of water
- Any other relevant topics

### Entries will be judged based upon:

- Relevance to and incorporation of the theme
- Word choice and imagery
- Colorful artwork
- Various physical properties of water
- Any other relevant topics



### Contest Rules:

- Poems must conform to a particular style. No poem may be longer than 40 words.
- The topic of the poem and the illustration must be related to the CCED 2014 theme, **"The Wonders of Water"**.
- All entries must be original works without aid from others.
- Each poem must be submitted and illustrated on an unlined sheet of paper (of any type) not larger than 11" x 14". The illustration must be created by hand using crayons, watercolors, other types of paint,

- colored pencils or markers. The text of the poem should be easy to read and may be printed with a computer, before the hand-drawn illustration is added, or the poem may be written on lined paper which is cut out and pasted onto the unlined paper with the illustration.
- Only one entry per student will be accepted.
- All entries must include an entry form.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners' names, likenesses and entries for editorial, advertising and publicity purposes.



**Chemists Celebrate Earth Day (CCED) 2014  
"The Wonders of Water"**

**ILLUSTRATED POEM CONTEST ENTRY FORM**

Please fill out this form, print, and attach to the back of the poems. All fields are required. Incomplete forms will invalidate the entry. The receipt deadline for the Central New York **Local Section Contest** is Wednesday, April 16, 2014.

Student's Name							
Grade							
Parent/Guardian							
<b>School or sponsoring group:</b> <i>(e.g. Boys and Girls Club or Scout Troop, 4-H, etc.)</i>							
Teacher's Name							
School Address							
Address Line 2							
City		State		Zip			
<b>Judging Category</b>							
K-2 <sup>nd</sup>	<input type="checkbox"/>	3 <sup>rd</sup> -5 <sup>th</sup>	<input type="checkbox"/>	6 <sup>th</sup> - 8 <sup>th</sup>	<input type="checkbox"/>	9 <sup>th</sup> - 12 <sup>th</sup>	<input type="checkbox"/>
<b>FOR LOCAL SECTION USE ONLY</b>							
Local Section Name (Number)	Central New York 112						
CCED Coordinator Name	Sally Mitchell , East Syracuse Minoa High School, 6400 Fremont Rd., East Syracuse, NY 13057						
Email / Phone	sbmitchell2@gmail.com 315-637-9837						



## Syracuse Chemist

### Editor

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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

## SECTION OFFICERS (2014)

Chair	Jeff Schneider <a href="mailto:Jeffery.Schneider@oswego.edu">Jeffery.Schneider@oswego.edu</a>
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Del. at large	Joe Mullins
Dist. Del. outside Onondaga	Vacant
Dist. Del. outside Onondaga	Vacant

## Committee Chairs

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