

The Syracuse Chemist



Upcoming Events

This fall will be a busy one for the local section. First, in August, is the Philadelphia ACS meeting, then in September we plan to have a dinner meeting as well as a Science Café. October is a time to celebrate by joining the fun outside the MOST at a **FREE** National Chemistry Week celebration or at a local stream clean-up event. In addition, through a grant from National, monthly teaching seminars for chemistry teachers will be held. In November and December please nominate people for offices and vote so the great momentum that has started under our current leadership can continue! Details follow and we all hope you will join us for a great Fall! Look for the Help Needed notes for places where you can get involved and get connected to other science professionals in the area.

August

Central New York papers and posters at the 236th ACS National Meeting

Individuals and institutions of the Syracuse Section will be represented in several areas of programming at the 236th ACS National Meeting scheduled for mid-August in Philadelphia. Not surprisingly, most of the contributions from the Syracuse Section

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reflect work done at the institutions that have Ph.D. programs in chemistry and related areas, namely Syracuse University and the SUNY College of Environmental Science and Forestry. Investigators from the Syracuse Bristol-Myers Squibb facility have also contributed several papers. Other contributors include faculty and students of Hamilton College, Le Moyne College, SUNY Oswego, SUNY Upstate Medical University, and Utica College as well as the Syracuse Center of Excellence in Environmental and Energy Systems.

The divisions of Biochemical

Technology, Chemical Education, and Inorganic Chemistry will be the venues for the largest number of Central New York researchers. Other area chemists will make presentations in the divisions of Biological Chemistry, Colloid and Surface Chemistry, Computers in Chemistry, Fuel Chemistry, History of Chemistry, Organic Chemistry, Physical Chemistry, and Polymer Chemistry.

Authors, titles, and area affiliations are listed on the pages 5 and 6. (Note: in some cases, the order of authors was changed in order to list Central New York contributors first.) If there are omissions from this list, please contact Carmen Giunta (giunta@lemoyne.edu) so that those contributions can be listed in a future newsletter. In addition, at least three section members will be presiding at sessions. Carmen Giunta (Le Moyne College) will preside at a symposium he organized on 200 years of atoms in chemistry. Nicole Snyder (Hamilton College) will preside at the general papers symposium in chemical education, which she organized. Michael Sponsler will preside at a session in the inorganic chemistry division's symposium on organometallic chemistry.

Abstracts of these and all other presentations scheduled for the upcoming national meeting can be found on the ACS website at:

<http://portal.acs.org:80/portal/PublicWebSite/meetings/national/fall2008/index.htm>; follow the links to the full technical program.

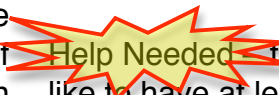
September

Dinner Meeting – September 8, 2008

The September Dinner meeting will be held at the Best Western Airport Inn. The speaker is Erich Blosser from Rollins College and he will be speaking about Protein Folding. Please see the abstract, meeting poster and about the speaker for more information on page 4.

Science Café – September 18th, 6-8 PM

Our first Science Café will be held on September 18th, in Oswego at the McCrobie Civic Center from 6-8PM. The center is right on the lake and the admission is free. The discussion topic is The Great Lakes – Global Warming – Energy. Dr. Gregory Boyer, the Director of the Great Lakes Research Consortium and SUNY-ESF Professor, is our guest speaker. We would like to have more volunteers and discussion facilitators (one per table). Snacks, coffee and deserts will be provided. We hope to see you in Oswego for this exciting evening of great conversation and debate! For more information please contact Venera Jouraeva (vajourae@gmail.com, 315-560-8525) or Kestas Bendinskus (bendinsk@oswego.edu, 315-312-2696)

 Help Needed – for the science café we would like to have at least one facilitator per table, if you would like to be a discussion leader, again please contact Venera or Kestas.

October


Adopt a Stream (10/4 at 10:00 AM)

Students from SUNY-ESF will again be hitting the streams with Project Watershed to clean-up and do stream health assessments. This is a new group of students being trained by last Spring's winners of the Chemist's Celebrate Earth Day. If you would like to join them this fall, they will be on Chittenango Creek at 10:00AM on October 4th. This creek has been in the news for a repeat dumping problem. Two weeks after the students cleaned up in April, a new batch of trash was found. The more attention that is paid to the area will hopefully mean that residents of the area will find ways of curbing the chronic dumping problem.

National Chemistry Week (10/25, 11AM-5PM)

This year's event will be held outside the

MOST under tents with no admission fee to the Chemistry Under the Tents event on October 25th from 11AM-5PM. Committee planners are looking to have a festival feel for the day with live demonstrations, the chemistry of popcorn, cotton candy and liquid Nitrogen Ice cream (and free samples too!). The event will feature giveaways and hands-on-activities for all ages. With at least five local chemistry clubs involved and activities like non-Newtonian liquid to play with, the day is bound to be a fun event for everyone.

 If you know of someone who would like to man a table at the event for your company, your local high school's chemistry club or other group, please contact Kelley Donaghy at kdonaghy@esf.edu (315-470-6826), industry and other groups are especially encouraged to join us for a fun-filled day celebrating National Chemistry Week.

Remember there is also a poster contest through the National Section that can be entered by anyone in K-12. See the September issue for more details!

College/High School Teaching Seminars - On Going throughout the Fall and Spring

Sally Mitchell and Kelley Donaghy plan to hold six seminars this year to introduce teachers to new labs, new teaching techniques, service learning, new instrumentation and more generally to promote the teaching of chemistry across the high school and college curriculum. It is anticipated that these seminars will be held in the Chemistry teaching laboratories at various locations throughout the Syracuse area such as SUNY-ESF, Syracuse University and Le Moyne College. Small grants will be made available to help defray the cost of traveling to the events. If you are interested in more information, please contact either Kelley Donaghy at kdonaghy@esf.edu or Sally Mitchell at sbmitchell@aol.com. Plans are underway to have events on the following dates in the fall, September 20th and October 18th and two more

are being organized for November with the rest in the spring.

Report on the July Meeting

Dr. Thomas Amidon spoke about the chemicals that can be harvested from New York State hardwoods. He spoke about the economics of harvesting ethanol and acetic acid from wood chips that are left over after the "good" parts of the tree have been harvested. Many excellent questions and points were raised. Attendance was high with about 25 undergraduate students and an equal number of professionals attending.



Call for Nominations

In accordance with our section bylaws, the Committee on Nominations and Elections is soliciting nominees for

- (1) Chair-elect
- (2) Secretary
- (3) Treasurer
- (4) Delegates from each of the four districts
- (5) Councilor
- (6) Members of the following Committees:
Nominations and Elections, Awards, Public Relations, Program 2009, Education

You may nominate yourself or any member of the local section, subject to the restrictions below for district delegate. For positions (1)-(5), we require a brief statement about the nominee. Please submit name, address and phone number and email address of nominee to the chair of the Nomination and Elections Committee at: con't page 4

Send Nominations to:

American Chemical Society
 PO Box 262
 Syracuse, New York 13214
 Phone: 315-633-9508
 e-mail: stanky@twcny.rr.com

To Serve as **District Delegate** your ACS mailing address should fall in one of the following District definitions:

District 1: Seneca and Cayuga Counties and the Southern part of Oswego County including Fulton, Phoenix, Minetto, Pennellville, Central Square, West Munroe and Cleveland.

District 2: Cortland and Madison Counties

District 3: The northern and central parts of Oswego county, including Oswego, Pulaski, Mexico and Lycoming and the northern part of Oneida county, including Barneveld, Camden, Oriskany, Oriskany Falls, Remsen, Rome, Whitesboro, Sherrill, Verona and Woodgate

District 4: The southern part of Oneida County, including Utica, Clinton, New Hartford, Deansboro, Clayville, New York Mills and Waterville.

September 8th Dinner Meeting

“Protein Folding with Polymeric Thiols; Or where did I park my car?”

Dr. Erich Blossey
 Rollins College

Abstract

Many diseases are thought to be initiated in some way by misfolded proteins, such as Alzheimer's, Mad Cow (bovine spongiform encephalopathy), Creutzfeldt-Jakob disease, Parkinson's disease, diabetes mellitus (Type II diabetes), as well as problems associated with biotechnologically produced products like insulin. This talk will first describe protein structure and how newly formed proteins are correctly folded into their native and active state (includes enzymes). The involvement of molecular chaperones and other folding aids will be compared with polymeric reagents. The literature is replete with studies on the use of thiols that direct folding/unfolding. We will discuss recent advances, including our own work with polymer-supported aryl thiols.

About the Speaker

Dr. Blossey received a B. S. degree in chemistry from Ohio State University in 1957 (mentor: Michael Cava), a M. S. of degree in organic chemistry from Iowa State University (1959, mentor: Ernest Wenkert), and a Ph.D. degree in 1963 under the direction of Mordecai Rubin from Carnegie Institute of Technology (Carnegie-Mellon University). A postdoctoral fellowship from NIH was taken at Stanford University with Professor Carl Djerassi (1962-1963), and an industrial postdoctoral fellowship at Syntex, S. A. in Mexico City, Mexico (1963-1964). After obtaining a Kettering-Great Lakes Colleges Internship at Wabash College (1964-1965), Dr. Blossey joined the faculty of Rollins College in the fall of 1965. After attaining the rank of professor (1975), sabbatical research studies took place at University of New Mexico (with Professor Douglas Neckers, 1974-1975), Oklahoma State University (1984-1985, with Professor Warren Ford), and Harvard University (1991-1992, with Mallinkrodt Professor of Chemistry, George Whitesides).

Fall Event Schedule

- | | |
|-------------|---|
| Aug. 17-21 | Philadelphia National Meeting |
| Sept. 8 | Dinner Meeting – Erich Blossey |
| Sept. 18 | Science Café in Oswego |
| Oct. 4 | Adopt a Stream Event at Chittenango Creek |
| Oct. 6 | Dinner Meeting – Dr. Finkenstadt |
| Oct. 25 | Free National Chemistry Week Event outside the MOST |
| Sept. – May | Teacher Seminars – September 18 is the first one! |

List of Central New York papers and posters

- Susan Abu-Absi, Patrick Thompson, Liying Yang, Megan Newhouse, Momina Andrabi, Bernhard Schilling, Abhinav A Shukla, and Steven S Lee (Bristol-Myers Squibb): BIOT 89 - Quality by Design characterization of a fed-batch cell culture process from vial thaw to harvest.
- Scott J Anderson, Christopher M Devito, and Kelley J Donaghy (SUNY College of Environmental Science and Forestry): CHED 189 - Which is more effective: Guided inquiry or traditional lecture?
- Robert E. Birdsall, Kestas G. Bendinskas, James Mackenzie, and Brooks B. Gump (SUNY Oswego): BIOL 11 - Proteomic study of lead, mercury, and cadmium exposure in children
- Sarah L. Bolton, Alejandra Elizabeth Aviles, Joseph E Williams, and Michael B. Sponsler (Syracuse University): INOR 45 - Alteration of ligand sphere in ruthenium metathesis catalysts with compact ligands.
- Thomas A. Cutler, David J. Lubin, Stewart N. Loh (SUNY Upstate Medical University); Brandon M. Mills and Lillian T. Chong (University of Pittsburgh): COMP 273 - Atomistic simulations of a two-domain protein switch: Mechanically-induced unfolding of one domain by the other.
- Linda S. Dake (Utica College); Orlando M. Cabarcos and David L. Allara (Pennsylvania State University); Andrey Shaporenko, Tobias Weidner, and Michael Zharnikov (Heidelberg University); and Sundararajan Uppili (ConocoPhillips): COLL 15 - Physical and electronic structure effects of embedded dipoles in self-assembled monolayers.
- David M. Didio, Xuankuo Xu, John L. Hickey, Steven S. Lee, and Sanchayita Ghose (Bristol-Myers Squibb): BIOT 286 - Use of chaotropic agents to recover functional protein from aggregates using Protein A chromatography.
- Kelley J Donaghy (SUNY College of Environmental Science and Forestry): CHED 18
Biodiesel and beyond: Life at an environmental college
- Kelley J Donaghy (SUNY College of Environmental Science and Forestry): CHED 315 - Using POGIL activities in a large lecture hall: Here's how we do it
- Kelley J Donaghy (SUNY College of Environmental Science and Forestry): CHED 352 - Using guided inquiry to teach inorganic chemistry
- Sandra Jayne Downey (Syracuse Center of Excellence in Environmental and Energy Systems): CHED 135 - Successful academic-industry collaboration in green technologies through the federation model.
- Robert Patrick Doyle (Syracuse University): INOR 96 - Drug targeting and delivery through vitamin pathways.
- Carmen J. Giunta (Le Moyne College): HIST 22 - Atoms are divisible: Pieces have pieces.
- Patrick M. Hakey, Matthew R. Hudson, and Timothy M. Korter (Syracuse University), and Damian G. Allis (Nanorex, Inc.): PHYS 430 - Cryogenic terahertz spectroscopy and solid-state modeling of illicit drugs.
- Matthew R. Hudson and B. S. Hudson (Syracuse University); Paula M. B. Piccoli and Arthur J. Schultz (Argonne National Laboratory): PHYS 421 - Single crystal neutron diffraction and inelastic neutron scattering spectroscopy of proton conductor lithium hydrazinium sulfate.
- Canping Jiang, Sunitha Kandula, Saley Harou-Kouka, Michael Rubacha, Daniel Dempsey, Steven S Lee, and Abhinav A Shukla (Bristol-Myers Squibb): BIOT 62 - A tiered approach for process characterization of biopharmaceutical downstream processes
- Canping Jiang, Steven S Lee, and Abhinav A Shukla (Bristol-Myers Squibb) and Jing Liu (University of Washington): BIOT 49 - Mechanisms for Protein A resin binding capacity decay and solutions for resin lifetime improvement.
- Matthew M. Jobbins, Mandy E. Freeman, and Kelley J Donaghy (SUNY College of Environmental Science and Forestry): CHED 222 - Synthesis, characterization and further reactions of 1-(3-hydroxypropyl)-dicarborane and 1,2-bis(2-hydroxyethyl)-dicarborane.
- Camille Y. Jones, Nicholas J. Berry, Sarah K. Cryer, Fallon Chipidza, Thomas J. Nevers (Hamilton College); Vijay T. John (Tulane University); Stephen J. Obrey and Robert P. Currier (Los Alamos National Laboratory): FUEL 19 - Guest molecule storage in semiclathrates
- Camille Y. Jones, Kevin McCarthy, Keigo Shimura, and Divij Mathew (Hamilton College): FUEL 22 - Investigations of clathrate hydrate-forming binary solutions.
- Sunitha Kandula, Sudha Babu, Steven S Lee, and Abhinav A Shukla (Bristol-Myers Squibb): BIOT 219 - Design and optimization of a filter train for precipitate removal
- Sarwat F. Khattak, Steven S. Lee, Aiqing He, Isaac M. Neuhaus, Paul S. Kayne, and Vishal Patel (Bristol-Myers Squibb); Susan T. Sharfstein, Duan Shen, Thomas R. Kiehl (Rensselaer Polytechnic Institute): BIOT 449 - Hyperosmotic stress responses in mammalian cells: A comparative microarray study of hybridoma and CHO cell responses.

- Zhengjian Li (Bristol-Myers Squibb Company); Judith Kadarusman-Pollack, Yonghyun Kim, and Mark R. Marten (University of Maryland, Baltimore County), and Steven Harris (University of Nebraska – Lincoln): BIOT 332 - Role of the putative autophagy protein Atg13 in filamentous fungi during nutrient starvation.
- Yan-Yeung Luk, Erik A Burton, Karen A. Simon, Shuyu Hou, and Dacheng Ren (Syracuse University): BIOL 147 - Mechanistic studies of biofilm formation by using molecular gradients of bioinertness.
- Yan-Yeung Luk, Sri Kamesh Narasimhan, and Karen A. Simon (Syracuse University): CHED 350 - Teaching symmetry with a complete story: Solution to a long-standing problem in stereochemistry.
- Yan-Yeung Luk, Preeti Sejwal, Debjyoti Bandyopadhyay, Erik A Burton, Robert Szkotak, and Dacheng Ren (Syracuse University): COLL 297 - Surfaces and hydrogels that control biofouling: An organic Kosmotrope approach.
- Yan-Yeung Luk, Preeti Sejwa, and Yongbin Hanson (Syracuse University): ORGN 391 - Water-driven chemoselective reactions: Structure that impart chemoselectivity and biological applications.
- Yan-Yeung Luk, Karen A. Simon, and Erik A Burton (Syracuse University): COLL 242 - From water-in-water emulsions to heterogenous biocatalysts: Building living-tissue-like materials by controlling nonamphiphilic interactions in water.
- Patrick T. Mather (Syracuse University); Qiongyu Guo and Pamela T. Knight (Case Western Reserve University): POLY 275 - Novel nanostructured hybrid polyurethanes featuring unique bulk degradation and controllable drug delivery.
- Tanieka L Motley and Timothy M. Korter (Syracuse University): PHYS 441 - Investigation of intermolecular forces in supramolecular ion transport systems.
- Daniel J. Nicholson, Arthur J. Stipanovic, Christopher T. Nomura (SUNY College of Environmental Science and Forestry), and Terry Bluhm (Xerox Corporation): CHED 301 - Progress in biodegradable poly-3-hydroxyalkanoate (PHA) polymer production: Cost reduction investigations
- Wayne Ouellette and Jon Zubieta (Syracuse University); Andrey V. Prosvirin and Kim R. Dunbar (Texas A&M University): INOR 66
Structural chemistry and properties of metal organic frameworks based on polyazaheteroaromatic ligands.
- Erin Rent and James T. Spencer (Syracuse University): INOR 99 - Synthetic steps toward the design of a new class of nonlinear optical materials.
- Erin Rent and James T. Spencer (Syracuse University): INOR 271 - Use of rigid aromatic linkers in new classes of nonlinear optical materials.
- Sharon A. Rivera, Damian G. Allis, and Bruce S. Hudson (Syracuse University): PHYS 474 - Importance of vibrational zero-point energy to relative polymorph energies for hydrogen bonded species.
- Danielle E. Schuehler, Achim Fischereder, and Michael B. Sponsler (Syracuse University): INOR 768 - Relay olefin metathesis for metal incorporation.
- Danielle E. Schuehler, Joseph E Williams, and Michael B. Sponsler (Syracuse University): INOR 183 - Ruthenium functionalized, metathesis-active polyacetylene.
- Karen A. Simon, Erik A Burton, and Yan-Yeung Luk (Syracuse University): AEI 34 and COLL 133 - Heterogeneous biocatalyst built by water-in-water emulsions.
- Karen A. Simon, Erik A Burton, and Yan-Yeung Luk (Syracuse University): COLL 294 - Identification of factors that stabilize water-in-water emulsions: The polymer coating on water droplets and the fabrication of porous biocompatible hydroshells.
- Nicolas Szapiel, Mi Jin, John L. Hickey, Steven Lee, and Sanchayita Ghose (Bristol-Myers Squibb): BIOT 348 - Profiling of host cell proteins by 2-D difference gel electrophoresis (2-D-DIGE): Application in downstream process development.
- Zizhuo Xing, Zheng Jian Li, Kirk Leister, and Steven Lee (Bristol-Myers Squibb), and Nikki Bishop (Rensselaer Polytechnic Institute): BIOT 272 - Development of metabolic kinetic model using MCMC simulation for a large-scale fed-batch CHO cell culture.

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**Deadline for material:
 September 2008 Issue Deadline is August 25, 2008**
All submissions must be sent to
donaghykj@gmail.com

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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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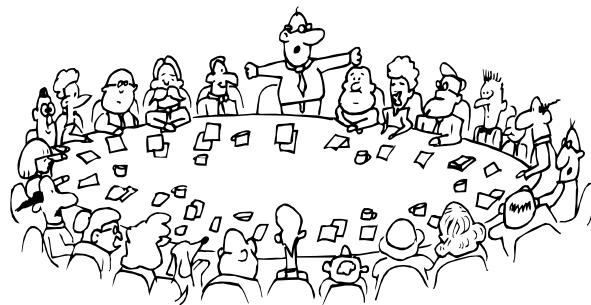
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VISIT OUR WEB-SITE AT www.esf.edu/acssyr



Section Meeting Schedule

Details on locations and the dinners that precede the talks will appear in future newsletters and on the section website, <http://www.esf.edu/acssyr>. As always, the lectures are free and open to the public; typically, there is a charge and reservations are required for the dinner portion

PLEASE POST



American Chemical Society
Syracuse Section

Monday September 8, 2008

**Protein Folding with Polymeric Thiols:
Or Where Did I Park my Car?**

Presented by Erich C. Blossey, Ph.D.
Rollins College

6:00 PM Buffet Dinner

Price: \$ 15 per person for the buffet, \$5 for students.

7: 00 PM Talk (Free and open to the public)

Location: Best Western Syracuse Airport Inn
Syracuse Hancock International Airport

Reservations deadline: 12:00 p.m., Wednesday, September 1.

E-mail: stanky@twcny.rr.com

Phone: Robert Stankavage (315) 633-9508

Directions to Best Western

The Best Western Inn is located at Syracuse Hancock International Airport. If you are traveling on the NYS Thruway (Rte. 90) take exit 36 to Interstate 81 North. Exit Route 81 at exit 27, the Airport Exit. Follow the road to the Airport and the Best Western is on the right side just before Airport parking. The phone number is 315-455-7362.

PLEASE POST



Science Café

The Great Lakes – Global Warming – Energy

Guest Speaker: Dr. Gregory Boyer

State University of New York – College of Environmental Science and Forestry

Where: McCrobie Civic Center Ballroom
41 Lake Street
Oswego, NY

When: September 18, 2008 from 6–8 PM

Cost: FREE!!!

For more information contact: Venera Jouraeva at vajourae@yahoo.com
or Kestas Bendinskus bendinsk@oswego.edu

Directions to McCrobie Civic Center Ballroom: From 481 N, Turn left on W. Utica Street and cross the bridge. Turn right on W. 5th St and go 0.43 miles. At the lake, park and walk up the hill.

The Syracuse Chemist



THE SYRACUSE CHEMIST

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