



# THE FILTER PRESS

Newsletter of the Georgia Section of the American Chemical Society

Volume 19, Number 6

August 2009

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## Special Georgia ACS August activity for the kids:

The “magic” and wonder of chemistry

Bryan Hearn, Georgia Local Section Member

**Fernbank Science Center**

Saturday, August 22, 2009

Bring your favorite 5-10 year old(s) for some hands-on science! Let them experience some of the “magic” and the wonder of chemistry. Free chemistry mini kits for each participant. Bryan Hearn, from our local ACS section, will be hosting this chemistry activity at Fernbank Science Center on Saturday, August 22<sup>nd</sup> from 10:30-11:45 am.

For the adults, coffee and donuts will be available in the conference room next to the chemistry lab. Students will get snacks, too!

Handouts with resources and suggestions for hands-on chemistry activities you can do at home will also be available.

Note this activity will be at the **Fernbank Science Center** (not the Natural History

Museum). Directions are available at <http://www.fernbank.edu/directions.htm>, and are printed on page 5.

**Only 20 spaces are available.** First come, first served. You must make reservations to David Gottfried by phone to 404-894-0479 or by email to [david.gottfried@mirc.gatech.edu](mailto:david.gottfried@mirc.gatech.edu) by August 15<sup>th</sup>. See you there!





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## The Filter Press went **GREEN!**

The Executive Committee voted that beginning with the April 2009 Filter Press, and coincident with *Chemists Celebrate Earth Day*, the Filter Press will only be distributed electronically.

If you do not have access to email, kindly provide the mailing address that you wish to be used to the editor, Lissa Dulany, 201A 5th St NE, Atlanta, GA 30308 (or by email to lissa@dgmfgmt.com) and a Local Section Volunteer will continue to mail a paper copy to you.

If you DO wish to have an electronic copy of the Filter Press, but are not currently receiving email from the Georgia Section, or wish to change the electronic address at which you are contacted, please send your preferred email address by email to hernandez@gatech.edu.



## Georgia ACS Local Section Officer Elections for the 2010 Calendar Year

Elections will be done electronically this year, with paper ballots to all who request these. A postcard will be mailed to the entire local section membership to announce this change. Candidate biographies and the voting procedures will be published in the September edition of the Filter Press.

The slate of candidates are as follows:

Chair Elect – Deanna Morrow Hall - Corporate Information Resources, Inc.  
Lou Milakofsky - Emeritus Professor Chemistry, Penn State University

Treasurer – Susan Hornbuckle – Clayton State University

Councilor – Joe Stoner – Dekalb Habitat for Humanity  
Terry Say – Say Consulting LLC.

## THE FILTER PRESS

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**From the Chair**

Fellow chemists,

The members of the executive committee and the Herty75 organizing committee have been hard at work this summer preparing for a landmark Fall 2009 for Georgia Chemists. Our fall season opens with an outreach activity for students age 5-10 in association with **The Fernbank Science Center** on Saturday 8/22. Details for registering your favorite student (and their favorite friend!) for a fun morning of chemistry are available on page one of this newsletter.

Our plans for the 75<sup>th</sup> awarding of the **Herty Medal** in September are almost complete. Please join us in honoring Craig Hill, Goodrich C. White Professor of Inorganic Chemistry, Emory University, as he accepts the 75<sup>th</sup> Herty Medal at the awards dinner on **Thursday September 17<sup>th</sup>**, AND in recognizing the 12 past Herty medalists who will return to share in this landmark celebration. Details about the banquet and all affiliated outreach events are now available at the Herty75 web site, <http://chemistry.gsu.edu/ACS/Herty75/>. More volunteers are always welcome!

We are also delighted to welcome two chemists with international reputations for excellence in science, policy and educational issues as our fall speakers. **Prof. Mostafa El-Sayed**, Julius Brown Chair and Regents Professor; and Director, Laser Dynamics Laboratory at Georgia Tech will address our dinner meeting on **Wednesday, October 7<sup>th</sup>**. **Prof. Melanie Cooper**, Alumni Distinguished Professor, Chemistry Education, Clemson University will speak at our dinner meeting on **Tuesday, November 17<sup>th</sup>**. Mark your calendars, invite your friends and check future newsletters for details about these exciting opportunities to meet two more outstanding chemists to follow-up on the Herty75 events.

As if this weren't enough, we will also hold our first **Green Elections** this fall. We are working with the Survey Monkey web site to design a secure election process. You will be able to vote for the 2010 Section Officers without wasting paper or spending postage-

## Celebrating 75 years of "Chemistry for Life in the Southeast" The Herty75 Events

On September 17, 2009, the ACS Georgia Local Section will award the 75th Herty Medal to Prof. Craig Hill from Emory University. To mark this milestone, the section is staging several events. The 75th Herty Medal Symposium at the Wardlaw Center in Georgia Tech on the afternoon of Sept. 17th will feature past Medalists speaking on human health and energy/sustainability. Prof. Hill will deliver a lecture at the Georgia Tech Alumni House as part of the annual section banquet and Herty medal presentation on the night of September 17th.

Several Future Medalists Symposia will be held throughout the Atlanta area during the morning of September 18th. These will be targeted to high schools students and will feature chemistry demonstrations and presentations by past medalists. The Future Medalists Symposia will be held at Emory University, Georgia Gwinnett College, Georgia State University and Kennesaw State University.

The Herty Medal Undergraduate Research Symposium (HMURS) will be held at Morehouse College during the afternoon of September 18th. All of these events celebrate the role of chemistry in improving our lives, and the exciting roles that scientists in the Southeast are playing in advancing our understanding of chemistry. Please join us in the celebration!

For more information go to the main website: <http://chemistry.gsu.edu/ACS/Herty75/>

To register, go to [TinyURL.com/herty75](http://TinyURL.com/herty75)

we hope most of the membership will take advantage of this convenience! Details for the election process and timetable will be included in the September Filter Press.

Of course, if you prefer a traditional **paper ballot**, we will provide one to you. Please contact our Newsletter coordinator, Lissa Dulany, 201A 5th St NE, Atlanta, GA 30308 (or by email to [lissa@dgmfgmt.com](mailto:lissa@dgmfgmt.com)) before 9/5/09 to request your paper ballot.

We are also continuing to plan for a number of **National Chemistry Week** events to take chemistry to students and the public. If you have questions about how to get involved, or an idea for a great outreach event, please contact me. I am always happy to hear good ideas.

Thanks for some of your summertime,  
Debbie Sauder ([dsauder@ggc.usg.edu](mailto:dsauder@ggc.usg.edu))

### Women Chemists Committee Event

On Tuesday, June 2<sup>nd</sup> the WCC had a fun filled evening event! The evening started with hors d'oeuvres and drinks at Toulouse restaurant and was followed by Shirley Corriher, a biochemist and author of *CookWise: The Hows and Whys of Successful Cooking* speaking to the group of 25. She spoke about the differences of using baking soda versus baking powder as well as the acidity of ingredients in baking. The floor was then open for questions and afterwards each participant had the opportunity to have their copy of *BakeWise: The Hows and Whys of Successful Baking* signed by Shirley. We were honored to have had Shirley and her husband Arch join our group for the evening!



Standing, happy guest, and seated, Shirley Corriher, biochemist and author.

### ChemLuminary x 4, Again!

For the second year in a row, the Georgia Section has been selected as a finalist for **FOUR** National ACS ChemLuminary Awards! The specific categories are:

- **NCW (National Chemistry Week) Best High School Event**
- **Outstanding Local Section Career Program (Large to Very Large Category)**
- **Best New Public Relations Program of a Local Section**
- **Outstanding Performance by a Local Section (Large Size Category)**

Recipients will be announced and the presentation of awards will occur at the 238<sup>th</sup> ACS National Meeting in Washington, DC on **Tuesday, August 18**.

**Congratulations to all the section members responsible for these outstanding events!**

WASHINGTON, May 6, 2009 – Congressman Phil Gingrey (R-GA) was named as one of three recipients of the American Chemical Society's 2009 Public Service Award for his vision and leadership in science and engineering policy. The awards were presented at a Capitol Hill ceremony, where ACS President Thomas H. Lane, Ph.D. said, "Our nation is facing an unprecedented series of complex challenges that require innovative discoveries and highly-skilled workers. Sustainable solutions will not come without an unwavering commitment to science education, research and technology development. Our awardees have been tireless champions of that commitment, and in making clear the connection between a strong scientific foundation and future economic vitality. "We thank you for your leadership, your vision, and for promoting science and technology as the means to a higher standard of living and a sustainable planet for us all."



Phil Gingrey (left) and Tom Lane (right)

Credit: Peter Cutts Photography

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## DRIVING DIRECTIONS to Fernbank Science Center

### From Downtown Atlanta

Go east on North Avenue to Piedmont. Make a left. Go one block north and make a right on Ponce De Leon Avenue. Stay on Ponce approximately 4 1/2 miles. At the traffic light just approaching a stone arch overhead railroad bridge take a left onto Artwood Road. At the first street make a right on Heaton Park Drive. Fernbank Science Center will be on the left (across from Fernbank Elementary School).

### From Kennesaw, Marietta, Smyrna

Take I-75 south to I-285 east (follow signs off 75 towards Greenville). Follow I-285 to exit 39A Decatur/Highway 78. Highway 78 will turn into Lawrenceville Highway and then change to Scott Boulevard. Scott merges with Ponce de Leon Avenue at a traffic light just before an overhead bridge. Pass under the bridge and turn right onto Artwood Road. At the first street make a right on Heaton Park Drive. Fernbank Science Center will be on the left (across from Fernbank Elementary School). Or Take I-75 south to exit 249D (North Avenue). Make a left onto North Avenue. Go east on North Avenue to Piedmont. Make a left. Go one block north and make a right on Ponce De Leon Avenue. Stay on Ponce approximately 2 1/2 miles. At the traffic light just before an overhead bridge, take a left onto Artwood Road. At the first street make a right on Heaton Park Drive. Fernbank Science Center will be on the left (across from Fernbank Elementary School).

### From North Atlanta, Sandy Springs, Roswell

Take I-285 East to exit 39A Decatur/Highway 78. Highway 78 will turn into Lawrenceville Highway and then change name to Scott Boulevard. Scott merges with Ponce de Leon Avenue at a traffic light just before an overhead bridge. Pass under the bridge and turn right onto Artwood Road. At the first street make a right on Heaton Park Drive. Fernbank Science Center will be on the left (across from Fernbank Elementary School).

### From Norcross, Athens, Lawrenceville, Gainesville, Duluth

Take I-85 south to I-285 east/south. Follow I-285 to exit 39A Decatur/Highway 78. Highway 78 will turn into Lawrenceville Highway and then change name to Scott Boulevard. Scott merges with Ponce de Leon Avenue at a traffic light just before an overhead bridge. Pass under the bridge and turn right onto Artwood Road. At the first street make a right on Heaton Park Drive. Fernbank Science Center will be on the left (across from Fernbank Elementary School).

### From South Atlanta, Airport

Go north on I-75 and/or I-85 to I-20 East to Moreland Avenue (exit 60B). Take Moreland north to Ponce De Leon Avenue. Turn right onto Ponce de Leon. Stay on Ponce approximately 2 1/2 miles. At the traffic light just before an overhead bridge, take a left onto Artwood Road. At the first street make a right on Heaton Park Drive. Fernbank Science Center will be on the left (across from Fernbank Elementary School).

### Fernbank Science Center

156 Heaton Park Dr. Atlanta, GA 30307

Phone: 678-874-7102 Fax: 678-874-7110

[fernbankmail@fc.dekalb.k12.ga.us](mailto:fernbankmail@fc.dekalb.k12.ga.us)



## 2009 International Chemistry Olympiad— Georgia Student Brian Seifried Wins a Silver Medal at Cambridge, England

**Brian Seifried**, a senior level student at **Chamblee Charter High School in Dekalb County**, was chosen as one of four students to represent the United States in the International Chemistry Olympiad competition in Cambridge, England from July 18 through 27. To earn this distinction Brian competed at three different levels. First, he competed among 374 chemistry students from Northwest Georgia to on a written exam to earn placement for the national exam. On April 25<sup>th</sup>, Brian travelled to Kennesaw State University to take the national exam, a three part four and a half hour exam that includes performing a lab portion where students conduct a chemistry experiment and report their results. Brian was selected among the top twenty in the nation based on his performance on the national exam and as a result was invited to the Olympiad Study Camp from June 3 to 18 in Colorado Springs. During the two week Study Camp, Brian worked with a group of chemistry teachers from around the country who served as mentors in practice problems and ultimately who selected the four students to represent the United States in the International Competition.



Brian was interviewed for the Filter Press by Scott Lewis, the Georgia Section Olympiad Coordinator (prior to his winning the Silver Medal):

1) Tell us about your background: where are you from and who are your biggest influences? I was born in Atlanta

and have lived here my entire life. My parents have been my biggest influence. While they are both very supportive of me - my mom stresses the importance of detail while my dad encourages me to “reach for the stars”.

2) Please describe the study camp and your daily routine at the camp. The study camp was intense. Everyday breakfast would be at 7, and then there would be lectures from 8-12. The lectures covered material at incredible speeds, for example a whole year’s worth of organic chemistry was covered in 8 hours. At noon, there would be an hour for lunch, then from 1-5 there would be two or three labs. The labs were designed to barely fit into the 4 hour period, if and only if the labs were done simultaneously. There would be dinner until 7ish, and then the rest of the evening was yours, asides from a brief meeting at 8 where tests or labs

would be discussed. Personally, I studied for the rest of the evening until 11, the mandatory lights out time. Essentially it totaled up to about 12 hours of studying/chemistry work a day.

3) Do you have any information on how students were selected from the study camp. This is what I heard, so I can make no guarantees about its accuracy. Kids are selected for the study camp as follows: All of the multiple choices from the national tests are scanned by computer. The top 100 are selected, and then the matching free response portions are pulled out. From there the top 15 or so free responses are graded and put in the camp. For the last 5 or so, the lab portions are the decided factor. So essentially, the lab portions are worth very little.

The top 6 of the camp are selected almost purely objectively. Every lab is ‘evaluated’ for quality of sample, correct responses to the question, and general organizational skills. Points would be taken off if additional materials are required or if glassware is broken. The labs were graded on a graduated scale, the first couple of labs are worth very little, but the later the lab, the more it was worth, until the final lab practical exams, where the mentors give absolutely zero help. The labs were worth about 40% of the final grade. Then there were three exams that made up the theoretical portion of the camp. The first one was a 2.5 hour exam purely on organic chemistry, which was given the day after the final organic lecture, which was the third day of camp. Then there was a 2 hour midterm exam, this comprised of organic chemistry, physical chemistry, biochemistry, analytical chemistry, and a little bit of general chemistry. Finally there was a 4 hour final exam, covering everything discussed in the camp and more. The theoretical was worth about 60% of the final grade. So from there the top 6 grades were chosen, and that determined the top 6.

The travel team (top 4) is where it becomes a bit more subjective. There are 3 more graded labs, and two nightly quizzes that last approximately 2 hours each in the last 3 days of camp. Those are factored in, but not weighed very heavily. The mentors essentially consult with the professors about the students and make the final decisions based on a combination of consistency of results, creativity, lab skills, personality, character traits, team spirit, and maturity.

4) What do you look forward to about the international competition? I am looking forward to representing the United States and to test my skills against some of the best chemistry minds in the world. I am really excited

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(cont. from p. 6) about going to Cambridge because of its academic reputation. I'm also looking forward to meeting new people from other countries and for the opportunity to do some sightseeing in England when the competition is over.

5) What are you concerned about regarding the international competition? Knowing that the level of competition will be intense, I will need to do my very best to be prepared and to focus and use my ability to think when the competition begins. Hopefully this will help me achieve my goal of either a gold or silver medal.

6) Where do you plan to attend college and what would you like to study? I am going to be attending Georgia Tech this fall, and plan on majoring in either chemical or electrical engineering.

7) How long have you been studying chemistry? My first real exposure to chemistry was when I was a junior in high school. I took an AP chemistry class and participated in a Science Olympiad Chem Lab competition. From these experiences, I found that my ability and interest were in sync so I was very excited when my science teacher offered me the opportunity to participate in the Chemistry Olympiad this year. To prepare for this competition - I studied for about an hour a day for the local exam. Once I qualified to take the national exam I started studying 2-3 hours a day. Once I found I made study camp, I increased my studying to 3-5 hours a day and visited Kennesaw State University (KSU) several times for help from several of the Chemistry professors. Finally at the camp, it shot up to about 12 hours a day. Now it's gone back down to 3-5 hours a day to prepare for the International Chemistry Olympiad.