

American Chemical Society

Form: Part II - Annual Narrative Report
Organization: Georgia
Year: 2007

A. Activities

Please describe and rank up to ten of your section's activities during 2007. Provide (a) the title of the activity, (b) a one paragraph description of the activity, and (c) an indication if this activity was new in 2007. If you wish to provide details beyond these paragraphs, please do so in Appendix 1.

Activity #1

a) Title: Science Café Public Outreach

The Georgia Section, in partnership with the Sigma Xi Chapter of the Centers for Disease Control and Prevention, hosted a Science Café in order to highlight the National Chemistry Week theme "The Many Faces of Chemistry". The event took place at the Starbucks coffee house within the Barnes and Noble bookstore at Georgia Tech in Atlanta on the evening of October 23. Significant pre-event publicity was achieved with underwriting advertisements on the local NPR radio station (WABE, 90.1 FM) and with wide distribution of posters and fliers at many of the local colleges and universities. The topic of discussion, "The Origin of Life, It's Just Chemistry," was stimulated by Prof. David Lynn of Emory University and Prof. Nick Hud of Georgia Tech, who are the recent recipients of a research grant to investigate the chemistry leading to the formation of life on Earth. The Science Café's casual meeting place, plain language, and inclusive conversation created a welcoming and comfortable atmosphere for people with minimal science background. According to Lynn, "Experiments in outreach venues are critical for science to better connect with the public in this time of rapid technological change." Estimated attendance at the event was 50, although 75% of attendees appeared

Description
(Please limit to
b) one paragraph):

to have some connection with the Section or Sigma Xi or other sciences. Free \$5 Starbucks giftcards were given to the first twenty attendees. Pictures are available.

c) This activity was new in 2007

Activity #2

a) Title: Minority Outreach

The Section's five significant 2007 minority outreach activities included (1) February Black History Month activities, (2) conducting our annual undergraduate symposium at an HBCU college, (3) renewal of the Minority Affairs Committee (MAC), (4) having a designated minority reach-out Section meeting jointly planned by our MAC, and (5) selecting by pure happenstance a Herty Medal awardee who has a minority group heritage (for only the 2nd time in award

history). Three of our 8 monthly meetings had a strong minority outreach character since two had outstanding minority speakers while a 3rd meeting was designated for minority reaching out. A fourth half-day undergraduate research symposium meeting was sponsored at Atlanta's historically black Morehouse College.

(1) During Black History Month in February we conducted our monthly meeting at historically black Spelman College in Atlanta. Dr. Willie Pearson, a black professor of history and the sociology of science, was the speaker at this event scheduled as close as possible to the time of release of the NOVA/PBS TV film on the life of the outstanding black chemist Percy Julien (see the February Filter Press newsletter URL in the Appendix). Dr. Pearson appeared in the film and worked with NOVA/PBS on its publication. About 90 were in attendance, with perhaps half being minority students. We also did extensive advertising of the Julien film via our newsletter and extensive email member contact list, and a nice article about the film appeared in the Atlanta Journal & Constitution newspaper.

(2) This year our very successful annual Herty Medal Undergraduate Research Symposium, held the day after the Medalist speaks to the Section, was located at historically black Morehouse College (see activities #4 and #8).

(3 and 4) The Georgia Section renewed its Minority Affairs Committee in 2007. Lead by committee chair Vernita Lockhart, its focus for this year and next is to increase participation of minority chemical professionals in our local section meetings and activities. Our approach included a REACHING OUT DESIGNATED DINNER MEETING where Section members were encouraged to invite and accompany a minority chemical professional to our local meeting at two-for-one dinner pricing; preparation of a Benefits of Membership brochure for all members; working with current black/Hispanic members and HBCU faculty to plan sponsorship of a networking event (Paschal's restaurant) which would include a brief formal presentation by influential members/faculty to welcome attendees, highlights benefits of membership and encourages post event contact, and provides ACS brochures for distribution at event. The Section has also begun working on the following items for 2008: creation of a section hospitality group to seek out and make welcome any new attendees, ask them to tell the group their name and affiliation, and to formally welcome them back at end of meeting; personal telephone calls to black/Hispanic high school/middle school science faculty to encourage participation at Section sponsored activities; joint activity with other technical organizations interested in achieving diversity; partnering with Georgia Tech's ACS Scholars program to expose minorities to the benefits and networking opportunities of our local section.

(5) The outstanding southeastern chemist selected to receive the Section's 75th Anniversary Herty Medal had, by pure unplanned coincidence, a minority group heritage (see activity #8). The recipient Dr. Luis Echegoyen spoke at a Section monthly meeting, and was also the featured speaker the next day at our annual

Description
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undergraduate symposium at Morehouse College.

b) to one paragraph): (Pictures are available).

c) This activity was new in 2007

Activity #3

a) Title Mini-Grants and Awards for Outreach

Two new types of grant/award programs were introduced in 2007 for public relations and outreach:

(1) The Georgia Section sponsored and presented five special chemistry awards at the 2007 Georgia Science and Engineering Fair hosted at the University of Georgia in Athens. The awards carry the name of The Georgia Section of the American Chemical Society Award in (special wording) Chemistry. Section Chair Holly Davis presented three awards in the senior division and two in the junior division. In addition to receiving ribbons, monetary awards were given in the amounts of \$100, \$50, and \$25 for the seniors and \$50 and \$25 for the juniors. Section Alternate Councilor David Gottfried served as judge for this special Section award. This was in addition to serving as a judge for the fair for the third year in a row along with several other member representatives from the Section. This will be a continuing program of the Section in future years.

(2) The Section also implemented a new mini-grant program where members or member-sponsored individuals can apply for a grant of up to \$1000 to conduct outreach and PR via imaginative projects in many venues and during NCW, CCED, or throughout the year. This project will be continued in 2008. Three grants ranging from \$990 to \$1000 were approved in 2007. All applications were reviewed by a committee of three Section Committee members. Of the three mini-grants approved this year one was to a High School to develop an innovative teaching program (ongoing impact of 20/year), one was to a college for a public NCW event (impact estimate 200-250), and one was to an individual for public NCW events focused on K-8 age students and parents (impact estimate 220). A copy of the reviewers Mini-Grant Application Evaluation Form is included in the appendices. The criteria for approving a mini-grant are as follows:

a. Project Description: Is it clear and coherent? Does it accomplish our Section's goal of "enabling activities that improve public understanding of chemistry and the work of its practitioners in the region"?

b. Creativity and Uniqueness: General level of creativity and innovative nature of the activities proposed? Is it unique? Is it being done by other groups/schools? Are other mini-grant proposals similar?

c. Number of persons impacted: Is the proposed number of persons impacted realistic? Is there a potential for impact in future years?

d. Other Comments: What is the background or experience of the applicant? Anything else?

Description
(Please limit

b) to one paragraph):

c) This activity was new in 2007

Activity #4

a) Title: Annual Undergraduate Research Symposium

The 2nd annual Herty Medal Undergraduate Research Symposium (HMURS) was held on the Morehouse College campus on Friday, March 30, 2007. For the second year, it was co-organized by Rigoberto Hernandez (Georgia Tech), John Hall (Morehouse College), and Cam Tyson (Georgia Tech.) Hernandez, Section Councilor and chair of the Herty Award committee and Holly Davis, 2007 Chair, were instrumental in founding HMURS in 2006 using Section funds and an ACS Innovative Project Grant. The 2007 Herty Medalist, Dr. Luis Echegoyen, delivered the keynote address. Drs. Julia Kubanek (Georgia Tech) and David Lynn (Emory) also gave invited lectures. The participants included undergraduates, mentors and ACS members, and numbered over forty. Of these approximately 10 undergraduate research posters were presented. Two of the the students were selected as Grand Prize poster presenters, and awarded \$500 travel grants to attend an ACS National Meeting, and a one-year membership to the ACS. Three other students were selected as Alternate Prize Poster presenters. Both students and mentors report that the impact of the event on the participating undergraduate researchers was extraordinary. Equally importantly, the students came from several schools, including Georgia Tech, Emory, Georgia State, Georgia Perimeter College, Georgia Southern, and Morehouse. Mentors have reported that the students returned to their institutions and spread the excitement back to their friends. We therefore believe that the impact was amplified, and we look forward to the growth of HMURS as we prepare for the third symposium to be held on March 28th of 2007 at Morehouse college. Each year this event enables us to contact, for ACS PR and outreach purposes, several hundred undergraduates and faculty members at area colleges. Pictures are available.

Description
(Please limit

b) to one paragraph):

c) This activity was new in 2007

Activity #5

a) Title: Extensive K-12 Science Teacher Outreach

In order to reach more science teachers in the Atlanta area, most of which are not ACS members, the Section created a very extensive K-12 science teacher contact list. Holly Davis, Section Chair, compiled the contact information for the Science Department Chairs for every high school located in the city of Atlanta and four of the most populated surrounding county school systems. This was accomplished by extensive study of each school's website or by numerous phone calls to the schools. Also included on the list were the County Science "coordinators" and the Georgia Science Teachers Association District Directors for the Atlanta area.

A letter was sent via email to all of the contacts on the list in September 2007 informing them about several

free educational outreach services (speakers, materials, etc.) that we can provide to them. Details of upcoming activities and events in the Section were included along with an invitation to participate. We were pleased to receive responses from over 18% of the contacts requesting more information, or expressing an interest in our services. Deborah Sauder, Section Volunteer Coordinator, was contacted to meet the immediate needs of the teachers, including requests for speakers to present to classes and money for supplies. Some were directed to our newly initiated Mini-Grant application process. Every effort was made to correct contact information for emails that "bounced back." The Chemistry Olympiad Coordinators also used the contact list late in 2007 in order to reach more than twice as many teachers (than last year) for participation in the upcoming Chemistry Olympiad.

The Section plans to update the contact letter every year and send it at the beginning of the new school year. Teachers from another populous metro Atlanta county school system will be added to the contact list in 2008. Anecdotal evidence (i.e. hearing from teachers not on the list) suggests we reached many more teachers than the contacts on the list.

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b) to one paragraph):

c) This activity was new in 2007

Activity #6

a) Title: Women, Younger, Future Chemists Outreach

The Section had new and continuing 2007 outreach efforts aimed at women chemists, younger chemists, and future chemists. For example, the Section renewed its Women Chemist Committee by holding a brainstorming social on June 12th at the Park Tavern (in Midtown Atlanta at Piedmont Park). Appetizers and drinks were provided for the twenty-one attendees. In addition to recruiting Lynn Sullivan to act as committee chair, ideas for future WCC events were discussed to include networking opportunities, charitable events and educational growth.

On November 1st, the 2nd meeting was held at the Atlanta Wine School. Seventeen attended "Wine: An Ancient Art and A Modern Science." It was a fun-filled evening with wine tasting and hors d'oeuvres as well as an opportunity to learn more about the chemistry of wine. Our host was Paul Kelly Wheeler CSW, CS whose background started in the Sciences. A survey was given to the attendees to find common interests for future events. From the survey, the majority of women that attended currently work in Industry. Half of the women had either never attended a local ACS meeting or it had been over a year since last attending. Future events that were of highest interest included educational activities and networking opportunities. Everyone was excited to have the WCC renewed in 2007 and are looking forward to events held in 2008.

Our Younger Chemist Committee was also restarted in 2007. Vicky Vasquez was recruited to be the YCC committee chair at the WCC brainstorming social in June! Brainstorming for a YCC Spring activity has begun.

The Section also sponsored two continuing outreach activities aimed at future chemists.

(1) A Northwest Georgia Council Girl Scout Event was held at Southern Polytechnic State University (SPSU) to celebrate National Chemistry Week. The event used a CSI (crime scene investigation) format, and was entitled "The Case of the Kidnapped Cookies." Volunteers from Southern Polytechnical State University-SPSU (6), Georgia Tech (6 ACS Student Affiliates), Berry College (1), and Girl Scout Troop 20202 (8) assisted 78 Junior Girl Scouts in piecing together clues found at the crime scene to eventually determine who had kidnapped the Cookie Dad and the Girl Scout cookies. Among other things, the girls identified an unknown powder, ran chromatography experiments on lipstick, and classified dirt in order to solve the crime. After solving the crime, the girls were treated to a liquid nitrogen demonstration, including how to make liquid nitrogen ice cream, and then snacked on both the ice cream and the kidnapped cookies. Goodie bags were given to all participants, and included NCW stickers, "Celebrating Chemistry", The Periodic Table of the Elephants, frisbees, and pencils or flashlights. This is the fourth CSI-type science event that has been sponsored by the Georgia Section ACS, SPSU, Cytex (provides scientific supplies and goodies), and the Girl Scouts. Publicity for the event was through the Girl Scout Event Calendar.

(2) Since 2005, the Georgia Section has sponsored the efforts of former Section chair Lillian Johnston Butterworth to promote K-8 education in chemistry and science via the model pedagogy of after-school Green Thumb Garden Clubs and related efforts in the science of horticulture. These Garden Clubs have been established in several elementary and middle schools in the two greater metropolitan Atlanta areas of Peachtree City and more rural Putnam County. The clubs meet every 2nd and 4th Thursday at schools from 3-4 p.m., with middle school students located at a different place from lower elementary students. Master gardeners, such as Lillian Butterworth, teach the students who use 4 x 2.5 x 160 ft raised beds where they plant and grow and harvest their own winter and summer flowers, bulbs, and vegetables. Students with a broad range of academic abilities are taught the underlying scientific principles of horticulture, including plant physiology, morphology, and pathology. The children learn about the importance of chemistry as they study thermometer scales and how temperature affects chemical reactions, the chemical composition and uses of fertilizer, plant dyes, plant pH indicators, the water cycle, and the use of mulch to regulate soil properties, soil, and soil nutrients. They gain a rudimentary understanding of soil cation exchange capacity and pH and the Hydrogen ion concentrations in soil. They also learn that plants

produce CHEMICALS that use energy from the sun, and how others regulate plant growth and development and have a role in stimulating root production. Students study basic math applied to horticulture, heritage plant history and take field trips to arboretums, commercial growers, and historic gardens. This Green Thumb Garden Club effort has evolved into the Junior Master Gardener Certification Program. The project has raised \$150,000 from DOE, the Georgia State Legislature, and local businesses to fund the program and greenhouses have been built at three elementary-middle schools and one high school. Now in its 3rd year, the clubs have grown from 30 students and 1 school to 90-100 students and 3 schools involved. This program has received several regional recognitions including both the J. C. Penny State and National 4-H After School Programming Awards, the Natural Resources and Environmental Education-Team State Award, and was a National Finalist for the latter award. (Pictures are available)

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c) This activity was new in 2007

Activity #7

a) Title: Regional & National Public Outreach

Last year (2006) the Section distributed 5000 free chemistry promoting magnetic car/bumper signs to area high school teachers, 200-400 Section members, and 4300 of the chemists nationwide who attended the 2006 Atlanta ACS meeting. These popular easy apply or remove car stickers said either "Its All Chemistry" or "Chemists Innovate" or "Chemists-R-Essential-2-U." They were displayed during the ACS meeting, CCED, NCW, and even all year by some chemists. For a cost of a penny per 1-2 viewers, we estimated that this "grassroots" 2006 PR program reached 500,000 persons nationwide if displayed for 2-3 weeks. At the 2007 Boston ACS Meeting, this unique activity garnered two Chemluminary PR Awards plus public recognition before several hundred ACS members attending the Office of Government and Legislative Affairs reception. Because of its popularity, we continued the project in 2007 and distributed 2500 more of these same car/bumper stickers. NEW THIS YEAR WAS DISTRIBUTION OF 1800 OF THE FREE CAR SIGNS AS SOUVENIRS AT A REGIONAL MEETING DURING NCW (i.e. the 2007 Southeastern Regional Meeting of ACS). The other 700 stickers were taken to the 2007 Boston ACS Meeting where they were snapped up in 45 minutes at 4 key locations. We estimate this regional-national car sticker project reached another 300,000 persons in 2007, which makes a combined total of at least 800,000 during 2006 and 2007. But an ACS Director, who (like numerous Councilors) has displayed the magnetic signs on her car for over a year, says our estimates are likely too low and 1,000,000 or more is a better number! And who are we to argue with an ACS Director? While designing this project we remembered some quotations including "Modesty Does Not Become Us"(C&EN Editor M. Jacobs), "We must educate each new generation...to explain why chemistry matters" (President Bush's Science Advisor Jack Marburger),

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and "Protect [American] Innovation...keep U.S. research and development strong" (ACS Executive Director M. Jacobs). We want to expand and keep this PUBLIC EDUCATION project going if we can just find a little more money! We might reach 10-12 million souls for only \$100,000 - \$150,000? (Pictures are available.)

c) This activity was new in 2007

Activity #8

a) Title: Herty Medal Award Outreach To Chemists

For 75 years since 1933 the Georgia Section has reached out to hundreds of Southeastern USA chemists each year and presented the Herty Medal Award to encourage and publicize their scientific achievements and professional service. As the 3rd oldest national or multi-state regional award presented annually by ACS or any of its units, it honors the many contributions of Georgia chemist Dr. Charles Holmes Herty to both chemistry and society. The historical record shows that Dr. Herty was 1915-16 ACS President and an outstanding university professor, created two major U.S. industries and personally saved a third, twice saved U.S. forests, conceived and started NIH, started the ACS News Service that soon published C&EN, instigated and served as first President of SOCMA, was a spell-binding speaker and arguably the best ever one-man PR machine for chemistry, and received a 1932 national award in New York City for being the chemist who was most responsible for establishing the huge U.S. chemical industry that soon became the world's largest. Puerto Rico native Dr. Luis Echegoyen, Professor and Chemistry Department Chair at Clemson University, was presented the 2007 Herty Medal for his seminal contributions to supramolecular chemistry, surface science, electrochemistry, and photophysics. Dr. Echegoyen was the featured speaker at both the Georgia Section's annual Herty Award Presentation Meeting, and also at the Section's now annual Herty Undergraduate Research Symposium held in 2007 at Morehouse College in his honor. At the gala Herty Award meeting held March 29 at the Georgia Tech Conference Center, Alternate Councilor Dr. Don Hicks also recognized and presented certificates to five fifty year ACS members and six sixty year ACS members. Dr. Rigoberto Hernandez of Georgia Tech, chair of the Herty Award selection committee and developer of the new online nomination process, presented the gold medal and introduced the medalist. Other Section members serving on the selection committee were Lihong D'Angelo (Coca Cola Company), Dabney Dixon (Georgia State University), John Hall (Morehouse College), Lili Harvey (Agnes Scott College), David Lynn (Emory University), and R. Scott Pyron (Research Corporation). Pictures are available.

Description:
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b) one paragraph):

c) This activity was new in 2007

Activity #9

a) Title: NCW and CCED Public Outreach

The Georgia Section has participated in National Chemistry Week community PR and outreach each year since NCW began in the mid-1980s. We initiated some NEW NCW activities in 2007 such as a Science Cafe (see activity #1) and Library displays (see below). In addition to continuing our 2006 award-winning Girl Scout CSI event(see activity #6) and members displaying our 2006 award-winning magnetic car bumper stickers, some examples of other activities are described below:

Fernbank Chemistry Day: As done many times in previous years, the Section helped sponsor "Chemistry Day" at the Fernbank Science Center during National Chemistry Week 2007. The approximately 200 attendees were treated to chemical magic shows, and experienced hands-on science activities. Students from Georgia Tech and Emory Student Affiliate chapters (six volunteers), along with high school students from Fernbank's AP Chemistry and Forensic Science classes and DeKalb County 9th grade science students (twenty-five volunteers), hosted all of the events. It was an exciting day for all ages.

Library Display: A NEW type of NCW publicity event for the Section involved the organization of a display at Kemp Memorial Library in Western Cobb County during the week of NCW. This display included a cabinet showing common household items and the chemicals in them, the Celebrating Chemistry newsletter, posters, a selection of chemistry literature recommended by the NCW Book List, and our 2006 award-winning ITS ALL CHEMISTRY car bumper stickers. In future years, we hope to expand this approach to other main and branch libraries.

Neighborhood Chemistry Demonstration: One of the Section's new initiatives in 2007 involved the creation of a mini-grant program. In an effort to expand its mission to encourage and advance chemistry in all its branches and to promote scientific interests and inquiry, the Section invited any interested parties to submit proposals for activities intended to improve public understanding, appreciation and knowledge of chemistry and the chemical sciences in the greater Atlanta region. Three such grants of up to \$1000 were awarded to section members during 2007. One grant was awarded to Bryan Hearn for creation of a chemistry demonstration program called "The Magic of Chemistry." This program was presented as part of NCW on October 21 at the neighborhood Fall Festival in Sugar Hill, GA. Approximately 30 children and 25 adults saw the magic bubble globe, acid-base color changes, combustion reactions, and other demonstrations.

Georgia Gwinnett College: Another outreach mini grant was awarded to chemistry professors Chulsung Kim and Mai Yin Tsoi for development and presentation of Georgia Gwinnett College NCW activities. In celebration of National Chemistry Week, students and

professors from the department used liquid nitrogen to make vanilla ice cream in a public demonstration, providing the results of their "experiment" to passersby on the college campus.

Agnes Scott College: The Student Affiliates at this local college hosted an open house one evening (Thursday, 10/25) for the entire campus in which about 15 student volunteers led 50-60 visitors (almost exclusively campus students) through hands-on activities.

Kennesaw State University: On Mole Day (October 23, 2007), Kennesaw State University kicked off their National Chemistry Week celebration with a seminar entitled "The Chemistry behind a Bottle of Coke" presented by Section councilor Dr. Lihong D'Angelo, Senior Innovation Leader at The Coca-Cola Company. Approximately 40 faculty, staff and students attended the presentation. Dr. D'Angelo gave a lively demonstration and discussion on how chemists at Coke use their knowledge of the chemistry of taste and smell to formulate the best tasting beverages for consumers worldwide. Later in the week, the ACS Student Affiliates sold cupcakes, 3 different chemistry themed t-shirts, and ACS study guides. The cupcakes were \$1 each or free with the purchase of a shirt or study guide. The cupcakes had elements written in icing and were often custom made with whatever chemical formula the customer desired.

Midvale Elementary School (DeKalb County): Local Section member Leon Venable visited this elementary school and provided a chemistry show for all three 3rd grade classes along with the special needs students, about 75 students and 5 teachers. The show was an introduction to what types of things chemists do and what they look for in a chemical reaction. Two items in particular were tied to classroom activities that continued over the following weeks. In particular, Leon worked with the schools art teacher to design an activity involving the recycling of Styrofoam, in which window sun catchers were created using acetone-softened Styrofoam. Leon also created a classroom hands-on activity involving the corrosion of common substances. Students exposed pennies to a corrosive solution (commercial vinegar and salt) and observed the different effects on pennies depending on the length of exposure and the presence or absence of a Zn core in the penny. Printed NCW materials and souvenirs were shared with both the third and fourth grade classes at Midvale. They particularly liked the newspaper items because of the stories about the many different career activities that were chemistry based. In addition, the scratch-and-sniff stickers were tied to an up-coming classroom activity in which students are required to identify odors of various spices associated with the spice trades and European exploration.

Shreiner Academy: Local Section member Jo Ann Arceneaux helped celebrate National Chemistry Week at this school where she performed liquid nitrogen experiments for approximately 40 3rd through 8th grade

students. Included in the experiments was the perennial favorite, making and eating ice cream. Students were provided with NCW stickers and the "Celebrating Chemistry" publication. In addition, older students received a copy of "ChemMatters" (as did the science teacher).

KIPP South Fulton Academy: Local Section member David Gottfried visited and spoke to two 8th grade classes (regular and honors, 40 students) about nanotechnology, careers, and minorities in chemistry. Examples of microelectronic devices were shown and live web cam images of the Georgia Tech cleanroom were observed. The classes/school is nearly 100% minority (African-American and Hispanic). A lively question and answer session followed, and entries for the NCW poster contest were chosen.

High Meadows School (Roswell): Copies of "Celebrating Chemistry" were provided to grade 4 & 5 students at this school.

The Section also participated in Chemists Celebrate Earth Day (CCED) by hosting a booth at the Georgia Tech Earth Day celebration (www.earthday.gatech.edu) on Friday, April 20, 2007. More than 60 booths representing a variety of organizations from recycling, environmental activists, and vegetarians presented displays, demonstrations, and information to THOUSANDS of visitors from the Georgia Tech campus and the local community.

The Georgia Section ACS booth, manned by ten volunteers from Georgia Tech (including 8 ACS student affiliates and 2 local section members), highlighted the ACS theme for this years Earth Day ("Recycling - Chemistry Can!") and used the opportunity to educate the public on the positive role chemistry plays in the world. An interactive demonstration of plastic classification by density and a quiz related to environmental and recycling themes was offered, along with printed material and Earth Day souvenirs. Large crowds appeared when "liquid nitrogen ice cream" was made and dispensed. Our efforts were rewarded with a citation as "Most Creative Booth" at the 10th annual Georgia Tech Earth Day celebration. (Pictures are available)

Description:

(Please limit to

b) one paragraph):

c) This activity was new in 2007

Activity #10

a) Title: Chemistry Olympiad HS Student Outreach

In January 2007, Janet Shaw and Scott Lewis became co-coordinators for the United States National Chemistry Olympiad (USNCO) for the Georgia Section. The USNCO is a tiered chemistry competition for high school students. First, a timeline was established for review sessions, and local and national exams. Second, as many high school chemistry teachers were contacted as was possible to encourage participation in the USNCO. Toward this goal e-mails were sent to

48 county science supervisors asking for them to inform chemistry teachers in the district. A website was also created with details about the Georgia Section of the Chemistry Olympiad, which was linked to on the Georgia Section and the Georgia Science Teacher Association websites. Finally, the chemistry teachers at the Cobb County high schools were emailed to inform them of the Chemistry Olympiad. Our efforts were directed toward making the Olympiad representative of the Georgia Local section, but most of the fifteen participating teachers were in the immediate northwest Georgia or Atlanta area. Broadening Olympiad participation will be a long term goal for this project.

Next, review sessions were scheduled to be held at KSU in late February 2007. Review sessions were conducted on two consecutive Saturdays and were mostly led by faculty volunteers. To prepare faculty for the review sessions we assigned topics relevant to the Olympiad and provided questions from past Olympiad exams that fit each topic. The review sessions were a moderate success; the first review session had 20 students from four different high schools attending. The second review session had a slight reduction in attendance. The location of the review sessions at KSU seemed to pose a problem for high school students, many of whom had limited transportation availability, since the bulk of students attending the review sessions were from the local area. If review sessions are to be offered in future years they may be more successful if they could be offered at multiple locations throughout the region.

The local ACS Olympiad exam was administered in late March 2007. The majority of local exams were mailed to high school chemistry teachers to administer. 246 local exams were mailed to teachers and over 200 answer sheets were returned to us to grade. We also offered the local exam at KSU though only two students took advantage of this. We graded the answer sheets and selected the thirteen candidates for the national exam. Students and teachers were notified of their selection and invited to take the national exam. An e-mail was sent out with study tips for the thirteen students based on our review of past exams along with links to the past exams. The national exam was administered on April 28, 2007 at KSU.

During the Chemistry Olympiad we continued to brainstorm on evaluating the process. One noticeable shortcoming in the 2007 Olympiad was a failure to make the competition truly inclusive of the entire Georgia Local Section. As mentioned nearly all of the participating teachers were from the local area or the Atlanta area. Ideas on expanding the scope of the Olympiad have already been put into place. We have passed fliers out at teacher workshops and hope to continue this practice as we lead up to the 2008 exam. One teacher workshop that we are particularly hopeful for is an AP chemistry teacher training session held at the University of Georgia on June 24th, 2007.

We have also evaluated the Olympiad through an e-mail survey of the 15 teachers who elected to participate in the 2007 Olympiad. Five surveys were returned. Two of the five had never done the Olympiad before indicating that our efforts to contact teachers likely did reach groups of individuals that had not been reached in the past important in terms of efforts to expand the program. Only one of the five found out about the event via e-mail, but the one was a first time Olympiad participant. Asking for suggestions to spread the answers included: sending e-mails to county science coordinators, sending fliers to each Georgia HS and to present at conferences or workshops particularly those that target AP. Aside from the flier we have done all the other suggested activities. The flier would likely be cost prohibitive given the number of high schools and mailing expenses. All respondents to the survey indicated that they would recommend the Olympiad to fellow teachers.

Based on the 2007 experience some changes may be considered for 2008 to improve statewide participation. One change we are considering is to coordinate with other universities to offer review sessions at multiple locations. We also made an effort to reach the summer teacher conferences and we would also like to have an announcement made at the state ACS meeting (which the survey respondents indicated they belong to). We also used the contact list mentioned in Activity #5 late in 2007 in order to hopefully reach more than twice as many teachers (than previous years) for participation in the upcoming Chemistry Olympiad. Finally, we would like to continue to encourage word of mouth communication among our participating Olympiad teachers in the hopes of a "snowball" effect in broadening participation.

Description:

(Please limit to

b) one paragraph):

c) This activity was new in 2007

B. Summary - Overall Section Activities

Please summarize in *1,000 words or less*, the activities of the section in 2007 which have not been already described. Outstanding events should be described in some detail and appropriate attachments included in Appendix 3. Programs described here may be featured in publications produced by the ACS Membership Division and/or at the Local Section Leadership Conferences.

Two years ago Section members indicated in a major survey that their top preference for new types of programs was outreach to various groups. Thus, outreach played a major role in our 2006 activities and accounted for our receiving 4 Chemluminary Awards of the 7 for which we were finalists. It was also a special honor to be introduced and receive a commendation for our bumper/car sticker project in front of hundreds of chemists attending the ACS OLGA Reception at the 2007 Boston ACS meeting. Because of that 2006 success, OUTREACH WAS AGAIN EMPHASIZED IN 2007 and we were highly motivated to work diligently in order to be considered for various ChemLuminary awards again, including the ACS Award for Outstanding

performance by a Local Section! Indeed, this year's activities were essentially the implementation of a large and comprehensive public relations plan that continued many of the 2006 efforts where appropriate, while adding some new wrinkles. Most of the NEW activities or NEW aspects of continuing programs are described in the Activities part above. Our PR plan reached out to upwards of 300,000 citizens this year including non-science oriented individuals in the southeast and nationwide, minorities, women chemists and future women chemists, K-8 students and teachers, high school students and teachers, college students, academic and industrial chemists and chemical engineers, other professionals, and government legislators. We estimate that our PR and outreach over the last two years has touched over 800,000 persons. One ACS Director, who has displayed our chemistry-promoting magnetic signs on her car for a year, suggested that our evaluations may be too conservative and we probably reached upwards of a million people. After making the nomination we were delighted to learn that a former Section chair, Tom Netzel of Georgia State University, will receive the national 2008 ACS Award for Volunteer Service at the New Orleans ACS Meeting.

A brief summary of NEW activities from our top 10 list include a Science Café for public outreach during NCW, various Minority outreach activities, implementation of our Mini-Grant program and special awards at the GSEF, extensive outreach to high school science teachers, several new NCW events and activities, distributing our award winning bumper/car stickers at a regional ACS meeting, and activities aimed at outreach to Women, Younger, and future chemists.

Even our usual monthly meetings had several new or interesting outreach aspects/variations, in addition to those above. These include having a minority speaker in recognition of Black History month at the February section dinner meeting; hosting a meeting at an art gallery; designating a meeting to be "reaching out" to minorities, offering two-for-one dinner pricing to members who brought first-time minority attendees; varying topics outside of typical "chemistry" focus to include art (held in an art gallery) and astronomy (held at a university with an optional observatory telescope viewing afterwards); and focusing some topics on current environmental issues including green plastics, building an environmentally friendly company, and fuels and chemicals from alternative sources. Half of the speakers at our 8 monthly meetings came from non-traditional chemistry professions such as history and sociology of science, art and architecture, environmental and microbial engineering, and astrophysics. They helped us celebrate diversity with lively discussions on topics of mutual interest to chemists. In keeping with our section's tradition, the September meeting was held jointly with the local AIChE chapter.

Summary of 2007 Georgia Section Meetings:

1. January 17, 2007: Doug Byron, Forensic & Scientific Testing, Inc; "Forensic Fire Debris

Analysis." A demonstration of the role of chemistry in developing evidence from fire debris analysis.

2. February 20, 2007: Dr. Willie Pearson, Jr., Georgia Tech School of History, Technology, and Society; "The Future of Blacks in Science & Technology." An authoritative review of the contributions and status of blacks and other minorities in Science.

3. March 29, 2007: Dr. Luis Echegoyen, Clemson University and NSF Director of Chemistry, and 2007 Herty Medal Award recipient; "Some Fullerene Science and A Little Science Policy: Fullerene Chemistry and the NSF." An educational review of fullerene nano-materials characteristics plus new discoveries about their chemical and electronic properties.

4. April 18, 2007: Dr. Eugene Stevens, State University of New York-Binghamton; "Green Plastics." A meaningful summary of the chemistry of biodegradable and renewable plastics, their new technologies, and prospects for the future.

5. May 15, 2007: Dr. Mike Bertolucci, Chairman Envirosense Consortium, Inc; "Building An Environmentally Friendly Company." Interesting presentation that it is definitely possible for a company to focus on ecology and operate profitably in an environmentally sustaining manner.

6. Dr. Badal Saha, USDA National Center for Agricultural Utilization Research; "Fuels and Chemicals From Biomass." A timely and comprehensive discussion of the potential to produce ethanol fuel from corn or cellulosic biomass. (Joint with AIChE)

7. October 9, 2007: Professor Harris Dimitropoulos, Georgia Tech College of Architecture; "Artist Michel Chevreul And The Impact Of Chemistry On The Impressionists." A fascinating lecture at an art gallery showing how chemistry was critical to art by impressionist painters.

8. November 28, 2007: Dr. Helene R. Dickel, Astronomy Research Professor Emeritus, University of Illinois; "More To Astronomy Than meets The Eye." A lively description of techniques for the study of matter in space including mention of 142 interstellar molecules containing 2 to 12 atoms.

With the renewal of our Government Affairs, Minority Affairs, Women, and Younger Chemist Committees, we look forward to new and continued public outreach and community involvement with our new and ongoing programs. In addition, we are excited about the Section's plans to implement a new industry/academia forum as well as offering continuing education courses to members for technical training. We hope to carry this momentum into the future years, continuing the Section's strengths in Public Relations and Outreach!

C. Local Section and Chair Goals

2007 Goal Attainment. The Local Section Activities Committee strongly encourages local section planning. As a result, the 2007 local section annual report should follow-up on the attainment of goals. Please list the goals you set at the beginning of your term for your section and yourself, and report on the attainment of the

1. goals.

a) **Local Section Goals and Assessment:**

Successfully implement Section Mini-grant program:
This program was a huge success in 2007 and three grants were awarded as described above in Activity #3.

Several requests for funding this year have been directed to the Mini-Grant application process. We plan for this program to continue as a long-term, unique feature of the Section.

Finish analysis of member survey to make any additional plans based on its results/Reinvigorate some committees such as Government Affairs, Women Chemist, Minority Affairs, and Younger Chemist:

Since the 2005 member survey indicated members' top preference for new types of programs was outreach to various groups, the Section emphasized recruiting members to serve as committee chairs for these four committees, which was successful! The Minority Affairs Committee and the WCC had several events and activities as described above and plans are in the works for Government Affairs and YCC in 2008.

b) **2007 Chair's Goals and Assessment:**

Increase interaction with student affiliates and with K-12 teachers through the development of contact lists:
The student affiliates email addresses were added to the contact list for our newsletter publication, The FilterPress. An extensive contact list was developed for high school science teachers as described above in Activity #5. Those teachers which responded to the letter sent in September 2007 were also added to The FilterPress email distribution.

Continue to host some monthly meetings at colleges to keep student involvement up:

Half of our monthly section dinner meetings were held at local universities. In addition, our undergraduate research symposium, HMURS was also located on a local campus. Plans to further develop relationships with student affiliate chapters and to possibly co-sponsor a meeting with them are in the works for 2008.

2008 Goals. (This section should be completed by the 2008 local section chair.) Please list below at least 2. three goals that you and your local section plan to accomplish during your term as local section chair.

a) **2008 Local Section Goals (Include at least three goals):**

Establish a network of local chemical companies and local high school chemistry departments to promote awareness of the importance of chemistry to society.

Promote the interaction of local industry and local academic institutions.

Develop Continuing Education courses/workshops that meet local member needs.

Continue the promotion of chemistry to the general public, via Science Cafes, NCW activities, etc.

b) 2008 Chair's Goals:

Successfully hold the First Georgia ACS Section Academia/Industry Forum.

Continue to strengthen existing activities such as WCC, YCC, Mini-Grants, Chemistry Olympiad, HUMRS, Minority Affairs Committee, Earth Day/NCW.

Reestablish the local COLGA activities to promote the importance of chemistry to local politicians.

Develop a fully functioning High School/Industry database to promote chemistry.

Increase participation of local section members in local activities.

D. Suggestions/Concerns

List any suggestions you have for the Local Section Activities Committee (LSAC). How can LSAC specifically help your section?