

# THE OCTAGON



Volume 93, No. 1, January 2010

Lehigh Valley Section of the American Chemical Society

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## *813<sup>th</sup> Meeting of the LVACS*

**Thursday, January 28th.**

*Penn State University*

*Lehigh Valley Campus*

**Reception:** 5:30 PM

**Dinner:** 6:00 PM

**Business Meeting & Talk:** At the conclusion of dinner

**Menu:** Salad, rolls and butter, corn and glazed carrots, and country chicken, with a dessert of chocolate mousse. Vegetarian option available upon request.

**Cost:** \$25 per person, so lets set the regular cost at \$25, with students and retirees at 1/2 price

**Contact:** Reservations should be made no later than Friday, January 22nd at 4:00 PM with Marie Handwerk by phone (610-285-5000) or email <mam48@psu.edu>

**Directions:** available on the web <http://www.lv.psu.edu/Information/directions.htm?cn716>

**Please note that Penn State Lehigh Valley Campus has moved to a new location!**

**Speaker:** Michael De Rosa, Professor of Chemistry, Penn State Brandywine. Ph.D. in Organic Chemistry from Brooklyn College of the City University of New York. Michael De Rosa has extensive experience in supervising undergraduate research; first at Universidad Simon Bolivar (Venezuela) and now at Penn State Brandywine. At Penn State Brandywine he has supervised the research of 39 undergraduates. Their results have appeared in a number of publications with undergraduate co-authors, presentations at the National Conference of Undergraduate Research (NCUR) and at other disciplinary conferences. This work has been supported by five grants from the National Science Foundation, with additional support from Penn State and industry. For his work with undergraduates he has received the Distinguished Service Award of the Eberly College of Science Alumni Society (2005) and Commonwealth College Outstanding Research Accomplishment Award (2002-03). He was a Fulbright Scholar at Matej Bel University in Banska Bystrica, Slovakia (2005-06) and also at the University of Ghana, Legon (1997-98).

**Talk:** 2-AMINOPYRROLES: SYNTHESIS, REACTIONS AND TAUTOMERISM

**Abstract:** Reaction of 1-substituted pyrroles with *N*-chlorophthalimide gave *N*-(1-substituent-1*H*-pyrrol-2-yl)phthalimides. Cleavage of these derivatives gave the corresponding 2-aminopyrrole without substitution on the ring. The unstable 2-aminopyrrole derivatives can be isolated as tetraphenylborate salts. Reaction of the

salt with triethylamine can be used to generate the 2-aminopyrrole *in situ*. Similarly *N*-chloro-2-nitrobenzenesulfonamides reacted with 1-methylpyrrole to form derivatives in which the sulfonamide group was incorporated at C-2 of the pyrrole ring. The sulfonamide group was removed using a solid-phase thiophenolate reagent. Simple 2-(alkylamino)-pyrroles (alkyl = methyl, *i*-propyl, *n*-butyl and *t*-butyl) were thus obtained in DMF.

Diels-Alder reactions of 2-aminopyrroles with DMAD were attempted. Michael addition products were observed instead of cycloadducts. The inverse electron Diels-Alder (IEDDA) reaction of 2-aminopyrroles with six symmetrical 1,3,5-triazines (CO<sub>2</sub>Et, CF<sub>3</sub>, Cl, OCH<sub>3</sub>, Ph and H) was studied. Pyrrolo[2,3-*d*]pyrimidines were formed only when the triazine substituents were either the CO<sub>2</sub>Et or CF<sub>3</sub> group. A multi-nuclear NMR study (<sup>1</sup>H, <sup>13</sup>C, <sup>19</sup>F and <sup>15</sup>N) of the reaction of 2-amino-1-*t*-butylpyrrole with 2,4,6-tris(trifluoromethyl)-1,3,5-triazine in THF<sub>48</sub> indicated the presence of five intermediates. A zwitterion was the first intermediate detected and it cyclized to a tricyclic adduct and its conjugate acid. It also gave a neutral imine *via* a proton switch. The tricyclic adduct underwent a retro Diels-Alder reaction but the expected CF<sub>3</sub>CN was not detected. NMR indicated that the amino group of the 2-aminopyrrole was bonded to the CF<sub>3</sub>CN to form a trifluoroacetoamidinium ion. The products of the retro Diels-Alder reaction reacted rapidly with each other to give the final intermediate observed. Acid catalyzed loss of an amidine gave the final aromatic product. This is the first study in which direct experimental evidence for the order of steps, of the IEDDA cascade reaction of 1,3,5-triazines with amino containing dienophiles, has been obtained. This study, and analogous 1,3-dipolar cycloaddition reactions in which zwitterions have been detected or proposed, have two factors in common: electronic effects that stabilize the zwitterions and steric effects that inhibit their cyclization.

Substitution by addition-elimination was observed when 1-alkyl-2-aminopyrroles reacted with 2,4,5,6-tetrachloropyrimidine. When a good leaving group was present in the heteroaromatic azadiene, reaction

with 2-aminopyrroles occurred by addition-elimination instead of cycloaddition.

All previous experimental and theoretical studies of amino/imino tautomerism in 2-aminopyrroles have been carried out with compounds with primary amino groups. Amino/imino tautomerism was observed in secondary 2-aminopyrroles when an electron-withdrawing group (a trichloropyrimidine substituent) was on the exo amino group. No imino tautomer was detected by <sup>1</sup>H NMR when the heteroaryl substituent was on C-3, C-5 or the exo amino substituent was an alkyl group. This would seem to suggest that conjugation of the exo nitrogen with the trichloropyrimidine ring was necessary to observe tautomerism. The amino tautomer was favored in solvents that were hydrogen bond acceptors.

### *2010 LVACS Meetings*

**February- Albright College**

**March- TBA**

**April- Moravian College**

**May- TBA**

### *This Month in Chemical History*

Reprinted with permission. Harold Goldwhite, California State University, Los Angeles  
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#### **Part I**

Among the sources I often consult for subjects for my columns is the book "Essays in Historical Chemistry" by Sir Edward Thorpe; my copy is dated 1911 and was published by Macmillan in London. As I was looking it over it occurred to me that I knew nothing about the author himself. A little research led me to the obituary notices of the Royal Society, and this sketch of Edward Thorpe's distinguished career is drawn from information in the "Obituary Notices of Fellows Deceased" of the Royal Society for 1925.

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Thorpe was born in December 1845 in a small town near Manchester, England where his father was a cotton merchant. He attended Hulme Grammar School and then Owens College, which developed into Manchester University. (Personal note: I was on the faculty of the University of Manchester Institute of Science and Technology from 1958 to 1962, and we always referred to the central facility of the University, which was situated a couple of miles away, as "Owens". At Owens Thorpe worked with the distinguished inorganic chemist Henry Roscoe on photochemistry and on the chemistry of vanadium. There followed the almost obligatory pilgrimage to Germany. At Heidelberg, under the tutelage of Bunsen, he worked on the remarkable liquid alloy of sodium and potassium, the subject of his Ph.D. thesis. He lodged in the same building as Victor Meyer, who was also working with Bunsen, and they became close friends.

From Heidelberg he moved to Bonn to work with Kekule and they published in 1869 a paper on ethylbenzoic acid. Returning to Manchester he continued to collaborate with Roscoe and they jointly published two papers on photochemistry in 1870. As an up-and-coming young chemist it was not surprising that Thorpe was chosen for the Professorship in Chemistry at the Andersonian College of Glasgow, Scotland in 1870 and in that same eventful year he married Caroline Emma Watts. At Glasgow Thorpe published several papers: on a new oxychloride of chromium; on phosphorus chlorides; on the constitution of paraffin; and on the interaction between carbon tetrachloride and phosphorus pentasulfide. His work on chemical effects of light led to his going on an expedition to observe a total eclipse of the sun in Sicily to be observed on December 22, 1870. Sadly the ship was wrecked on the voyage from Naples to Sicily on December 15, but without loss of life.

Thorpe was "called" to the Professorship of Chemistry at the Yorkshire College of Science in Leeds (later Leeds University) in 1874 and worked there for 11 years. He turned to physico-chemical research on specific volumes of related liquid compounds and was elected a Fellow of the Royal

Society in 1876. He made a successful trip to Colorado in July 1878 to observe the solar eclipse, and then began a series of magnetic observations, in collaboration with a physics colleague at Leeds, Professor Arthur Rucker. These included measurements along the 40th. parallel of the U.S. from the East Coast to the Great Salt Lake; in the Azores; and then a complete survey of terrestrial magnetism in the British Isles which was eventually published as a complete volume of *Philosophical Transactions* in 1896.

Thorpe was picked to succeed Sir Edward Frankland in 1885 as Professor of Chemistry at what was then the Normal School of Science and Royal School of Mines in South Kensington, London – later known as Imperial College of Science and Technology of the University of London. In the next column I will complete my discussion of the career of this distinguished chemist.

## ***Part II***

In my last column I described the beginning of the career of the chemist – and chemical historian – Edward Thorpe. In 1885 he was picked to succeed Sir Edward Frankland as Professor of Chemistry at what was then the Normal School of Science and Royal School of Mines in South Kensington, London – later known as Imperial College of Science and Technology of the University of London. He resumed work on inorganic chemistry discovering diphosphorus tetroxide in 1886; and later phosphorus (III) oxide, a volatile low-melting reactive crystalline solid. It was this oxide which was responsible for the horrible necrosis of the jaw observed among female workers in the early years of the match industry. His continuing interest in photochemical determinations of light intensity led to expeditions to solar eclipses in the West Indies in August 1886 and in French Senegal in Africa in April 1893. Meanwhile inorganic chemistry prospered with investigations on atomic weights of titanium and gold; the composition of the spa waters of Cheltenham; manganese trioxide; phosphoryl trifluoride; thiophosphoryl trifluoride; fluosulphonic acid; vapor density of HF at different temperatures; and the decomposition of carbon disulfide by shock.

Thorpe also worked both at Leeds and in London on the causes of coal-dust explosions in mines.

Thorpe's penultimate position, which he held from 1894 to 1909, was as Director of the Government Laboratory. He helped design the laboratory's new buildings in central London. This laboratory was heavily involved in analytical chemistry related to industry and Thorpe published papers on the determination of ethanol content of medicinals; on lead content of ceramics; on the occurrence of paraffin hydrocarbons in plants; and on a more precise determination of the atomic weight of radium. He returned to Imperial College from 1909 to 1912 where he helped develop plans for its new buildings which were completed under his successor, William Tilden.

Edward Thorpe's great accomplishments led to many honors. After he retired from the Government Laboratory he received a knighthood and was an advisor to the Government during the first World War. He was Vice President of the Royal Society in 1894-95; President of the Society of Chemical Industry in 1895; President of the Chemical Society from 1899-1901; and President of the British Association for the Advancement of Science in 1921. His honorary degrees included doctorates from Dublin University, and the Universities of Manchester, Leeds, Glasgow, and Edinburgh. He had many European friends including Victor Meyer and Mendeleef who stayed with him when they came to England.

Thorpe was a prolific author of textbooks and reference works. His multi-volume "Dictionary of Applied Chemistry" was first published in 1890 and went through several subsequent editions. His texts on inorganic chemistry, quantitative analysis, and qualitative analysis were standard works in their time. (I have a number of Thorpe's works in my personal library). And in the area of history of chemistry, in addition to the "Essays" referred to in my first column on Thorpe he published a history of chemistry (1909) and biographies of Humphry Davy, Priestley, and Roscoe. Thorpe was also a keen yachtsman; he maintained yachts at Salcombe estuary and wrote two guides for sailors – to the Dutch waterways and to the River Seine. Sir Edward Thorpe died at Salcombe in Devon, England, in February 1925.

### *Science Café at Barnes & Nobel*

As part of the Section's outreach efforts to the general public, the Section will be sponsoring Science Cafés at Barnes and Noble in the Southmont Center off of Route 33. The topic for the first Science Café will be "Chocolate," with a presentation by Professor Michelle C. Geoffrion-Vinci of Lafayette College. The full details for this event, tentatively scheduled for February 25 at 7pm, will be published in the February Octagon. If you have any ideas for topics and/or speakers for the Science Cafés, please contact Bill Miles (milesw@lafayette.edu). We hope to make the Science Cafés an enduring and highly visible outreach effort of the Lehigh Valley Section of the ACS.

### *News From National ACS*

**ACS Fellowship Available** - Experience Science Policy in Washington DC

For more than 30 years the American Chemical Society (ACS) has sponsored Public Policy Fellowships to work on Capitol Hill and in the ACS Office of Public Affairs. The 2009–2010 fellows worked for Senators Ben Cardin (D-MD) and Claire McCaskill (D-MO).

Fellows provide science expertise to Washington, D.C. policymakers on issues such as homeland security, national security, water resources and containment, climate change, science education, and much more.

The fellowships applications are due December 31

while the actual fellowships run for one year, generally from September to September. If you are interested in learning more about these fellowship programs, please visit <http://www.acs.org/policy> or call (202) 872-4386 for more information.

### **Travel Budget Cut But You Still Need Training? Try out an ACS Webcast!**

Few companies are immune from the economic hardships in the headlines and many budgets have been trimmed. But it is still crucial to your career to engage in continuing education to expand your skills and stay abreast of new topics.

Join the ACS Webcast mailing list at [www.proed.acs.org/emai](http://www.proed.acs.org/emai) to be the first to hear about the 2010 schedule, try out new courses for free, and receive discounts not available to the general public! Save your time and money and take a look at the courses available online through ACS.

ACS Webcast Short Courses provide the same quality training that ACS has long been known for, but, because the courses are presented over the Internet, they offer added convenience and flexibility.

- Economical: Most ACS Webcasts cost less than \$100 an hour, which is far less than most technical training.

- Easy: Our technology is easy to use and works with all typical computer systems so virtually anyone can easily take a webcast from the comfort of their home, office, or lab.

- Convenient: Class attendance is NOT required. If you miss a class, simply use your on-demand access to the session recording so you can catch up on your own time.

- Informative: All class materials are available for download and you can email the instructor anytime.

There are expanded course offerings in analytical, organic, pharmacology, engineering, instrumentation, and other areas. For the full list of Webcast Short Courses and more information on available discounts,

visit [www.proed.acs.org](http://www.proed.acs.org).

### **Call to action - Working Together for a Sustainable Future**

The ACS Board of Directors and the Sustainability Stakeholders Steering group (S3G) are putting forth a CALL to action. The CALL is the means by which the Society will engage our members and stakeholders to Collaborate, Advance, Learn and Lead on the issue of sustainability.

Goal 3 of the ACS Strategic Plan for 2009 and Beyond states how the Society is focused on “Addressing Global Challenges” through chemistry. The sustainability CALL to action is a roadmap of seven avenues that chemists, chemistry, and the American Chemical Society can use to address the global challenges of sustainability. We aspire to achieve the following through the CALL to action at <https://communities.acs.org/message/3726> :

- \*Green Operations
- \*Advance the Science
- \*Inform our Members
- \*Educate the Public
- \*Prepare Future Chemists
- \*Policy Advocacy
- \*Recognize Best Practices

The Society has begun to work in each of these areas, but much more needs to be done. The spring 2010 ACS National Meeting in San Francisco will have the theme of “Chemistry for a Sustainable World.” In addition to attending symposia and listening to technical presentations, you will be able to participate in identifying and building new initiatives through a wide-ranging engagement event and forum.

ACS looks forward to working with you to achieve our vision of “Improving people’s lives through the transforming power of chemistry”. Join the ACS Network at [www.acs.org/network](http://www.acs.org/network) or log into the group at <https://communities.acs.org/sustainability-stakeholders-group> to learn more about the initiative and to answer the CALL to action.



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## ACS Directory of Graduate Research

The ACS Directory of Graduate Research (DGR) and DGRweb, the searchable online version of the DGR, is the premier source of information on faculty and their research interests in chemistry and chemistry-related programs. The Directory facilitates research collaborations and enables networking across chemical subdisciplines, providing the most comprehensive information on graduate research and researchers at universities in North America.

The 2009 print edition of the DGR provides information on:

\*675 academic departments

\*9,981 faculty members

\*64,331 publication citations

The DGRweb features include: Improved faculty search using multiple keywords for specific research interests;

New "Print PDF" feature, which allows users to print individual department listings formatted as in the hardcover DGR; and access to the complete databases from 1999 through 2007. As in the previous edition, DGRweb continues to be available free of charge at [www.acs.org/dgrweb](http://www.acs.org/dgrweb). Copies of the print edition may be ordered by calling 1-800-227-5558, or online at [www.acs.org/dgrweb](http://www.acs.org/dgrweb). For more information about the DGR or DGRweb, please contact the Office of Professional Training at [dgr@acs.org](mailto:dgr@acs.org).

Chemists Celebrate Earth Day 2010: "Plants – The Green Machines!"

## EARTH DAY is April 22

The ACS Office of Community Activities (OCA) would like to remind you that Chemists Celebrate Earth Day (CCED) will be celebrated on April 22! The CCED theme for 2010 is "Plants - The Green Machines!" Hopefully you are planning to celebrate on campus anytime during the week of April 22nd. The 2010 CCED edition of Celebrating Chemistry will be available online through the CCED home page in late January. It will contain hands-on activities and articles geared for students in grades 4–6. The CCED Order Forms will also be primed and ready to receive your orders in early January. Email updates regarding the order form and other relevant CCED information will be on the way soon. So get a head start on planning your activities for Chemists Celebrate Earth

Day 2010! Stay tuned to [www.acs.org/earthday](http://www.acs.org/earthday) for updates and the latest information as CCED is soon approaching!

## Apply by February 1 for Two Student Awards in Green Chemistry

The Joseph Breen Memorial Fellowship sponsors young international green chemistry scholars to participate in an international green chemistry technical meeting, conference, or training program of their choosing. "Young" international scholar is defined as undergraduate students, graduate students, and post-docs. This award is sponsored by a fund that commemorates the commitment and accomplishments of Joe Breen for the advancement of green chemistry.

The Kenneth G. Hancock Memorial Award honors outstanding student contributions to furthering the goals of green chemistry through research or education. The award is a one-time cash award in the amount of \$1,000 (USD) and is open to all undergraduate and graduate students. The award is sponsored by the ACS Division of Environmental Chemistry and the U.S. Department of Commerce, National Institute of Standards & Technology.

Please help the ACS Green Chemistry Institute® spread the word about these awards to students and young scholars. There is no limit on the number of applications that can be submitted from any one academic institution or project advisor, and students may apply for both awards. For details on how to apply for the awards, go to: [www.acs.org/greenchemistry](http://www.acs.org/greenchemistry) > Green Chemistry Awards.

## Chemistry for a Sustainable World at the San Francisco National Meeting

The Thematic Programming on Chemistry for a Sustainable World at the San Francisco ACS meeting in March will embrace the complete spectrum of ACS activities. The theme kick off features a Sunday afternoon plenary symposium of sustainability thought leaders from academics, industry, and government.

On Monday, March 22nd, we will celebrate the United Nations' World Water Day through a symposium on Global Water Sustainability. Other major thematic

symposium topics will include Sustainable Energy, Green Chemistry, and Chemistry in the Developing World. The keynote address will be late Monday afternoon.

Major sub-themes embraced by multiple Divisions reflect the breadth of our members' interest in sustainability including Sustainable Energy, Sustainable Water, Sustainable Food, and Green Chemistry. The theme will extend to the Undergraduate Program with sessions on green jobs and solar fuel as well as to the High School Program for area teachers and to a Community event at the California Academy of Sciences on Saturday before the meeting starts.

The second offering in an Environmental Film Festival will feature the film, "One Water," and the Sustainability in Action symposium will highlight some of the many efforts throughout the ACS to become a more sustainable organization.

The CALL to action event will additionally allow members to engage issues of sustainability directly. All members are invited to participate in this multidimensional and timely theme.

For more information and updates, please visit [www.acs.org/sanfran2010sustainability](http://www.acs.org/sanfran2010sustainability)

### **Save the Dates for Green Chemistry: June 21-24!**

The 14th Annual Green Chemistry & Engineering Conference returns to downtown Washington, DC on June 21-24, 2010. With the theme "Innovation and Application" and with one of the renowned founders of green chemistry, Dr. John Warner (President and CTO, Warner Babcock Institute for Green Chemistry) as the chair, this conference is shaping up to be one you won't want to miss! The tentative schedule for the week begins with a Student Workshop, Roundtable Meetings, and the Presidential Green Chemistry Challenge Awards Ceremony on Monday, June 21, followed by technical programming on June 22-24. Please visit the conference website, [www.gcandc.org](http://www.gcandc.org) where more details will be posted as they become available.

### **ACS offers special benefits for unemployed members**

During these tough economic times it's more important than ever to belong to the American Chemical Society. Unemployed members can tap into a host of valuable benefits and services that help them get back in the workforce. And, members in good standing may qualify for an unemployed member dues waiver, allowing them to renew their memberships and keep their member benefits at no cost. Contact ACS at [service@acs.org](mailto:service@acs.org), 800-333-9511 or 614-447-3776 for complete details.

Other valuable benefits that help unemployed ACS member get back in the workforce include:

- \*Free registration at ACS National Meetings and greatly reduced registration fees at Regional Meetings.

- \*Many meetings offer ACS Career Fairs with on-site interviews.

- \*Special discounts for ACS/Harvard online courses, ACS ProSpectives and Short Courses, and the ACS Leadership Development System.

Membership in the ACS Network, your online resource to connect and communicate with friends, colleagues, and potential employers.

- \*Free Guidance from ACS Career Consultants – ACS mentors offer resume reviews, job search strategies, and interview tips that make you stand out from the rest.

- \*Free access to InterviewStream, an online tool that will sharpen your interview skills

Members-only access to the ACS Salary comparator.

Contact ACS customer service today at [service@acs.org](mailto:service@acs.org), 800-333-9511 or 614-447-3776 today and let us know how we can help.

### **ACS Announces the 2010 Schedule for Short Courses**

Our 2010 Schedule is out – find out which courses are being offered in what cities by visiting [www.proed.acs.org/2010](http://www.proed.acs.org/2010).

**The ACS Office of Professional Education** has dramatically revamped its website and registration system so you can find the courses you're looking for in no time. Bookmark this link today:

<http://www.proed.acs.org>. You can now search our short courses, webcast courses and ProSpectives Conferences by topic area, date, or location and even browse our full instructor list. We are continuously investing in new course development, so if you don't see what you're looking for, just drop us a line at [shortcourses@acs.org](mailto:shortcourses@acs.org) and we'll do our best to serve your technical training needs.



## *Submissions to the Octagon*

**LVACS members, we want to know about what you do!** Please submit pieces of interest to the chemistry community for publication in the Octagon. Articles about chemistry or science in the Lehigh Valley are always welcome. Let us know about upcoming events, educational opportunities or job openings.

The Octagon is published eight times per academic year, September through May. Each issue generally arrives three weeks before a section meeting. Thus the deadline for submissions is generally one week earlier. Please email the editor at [lvacs@ptd.net](mailto:lvacs@ptd.net) for specific questions about deadlines for any issue. Email submissions to [lvacs@ptd.net](mailto:lvacs@ptd.net)

### **A note about formatting:**

Please submit text as simple .txt files, or you may paste the text into an email. If you use later versions of MS word please do not submit documents as .docx files. I cannot always read all content in .docx formatted files. It would be best to use the "save as" option, generally found under the file menu, to save the document as .txt. Also images embedded (pasted) in MS word (particularly later versions) are problematic to extract and put in the newsletter while retaining good image quality. Whenever possible, please submit images in a standard format such as .jpg, .jpeg, .gif, .tiff or .bmp as individual files, rather than embedded within a document. If the placement of images is critical you could submit two versions (one embedded so that I can see where you would like images placed) and the other as separate files so that I may maintain figure resolution.

## *LVACS Officers - 2009*

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## *Estimated 2010 budget for the LVACS*

Submitted by Al Martin, LVACS Treasurer

	Actual 2008	Proposed 2009	Actual 2009	Proposed 2010
Income				
Allotment	\$9,744.00	\$9,750.00	\$10,070.00	\$10,000.00
Dues	\$3,021.00	\$3,000.00	\$2,847.00	\$3,000.00
Meals	\$2,793.00	\$4,000.00	\$2,840.00	\$4,000.00
Councilors Travel	\$3,615.39	\$4,000.00	\$3,978.26	\$4,000.00
Officers Travel	\$0.00	\$300.00	\$300.00	\$500.00
Innovative Grants	\$0.00	\$500.00	\$1,000.00	\$500.00
Interest *	\$0.00	\$0.00	\$0.00	\$0.00
Commissions	\$15.00	\$15.00	\$0.00	\$0.00
Iron Pigs	\$0.00	\$0.00	\$1,000.00	\$1,500.00
Total Income	\$19,188.39	\$21,565.00	\$22,035.26	\$23,500.00
Expenses				
Meals	\$3,622.80	\$7,000.00	\$6,558.33	\$6,000.00
Executive Committee Mtgs	\$90.06	\$200.00	\$194.50	\$200.00
Section Meetings	\$190.00	\$500.00	\$135.64	\$500.00
Octagon	\$4,175.30	\$5,000.00	\$4,000.00	\$4,500.00
Councilors Travel	\$5,348.06	\$6,000.00	\$5,618.48	\$6,000.00
Officers Travel	\$275.00	\$1,000.00	\$886.02	\$1,000.00
PJAS Donation	\$250.00	\$250.00	\$250.00	\$250.00
Chemistry Olympiad	\$116.19	\$125.00	\$156.97	\$200.00
Organic Scholarship	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00
Travel Scholarship	\$0.00	\$250.00	\$302.40	\$500.00
Innovative Grants	\$0.00	\$500.00	\$500.00	\$1,000.00
Misc.	\$500.00	\$2,000.00	\$0.00	\$200.00
H. S. Teachers Notice Pub.		\$0.00	\$121.07	\$100.00
Iron Pigs		\$0.00	\$3,802.13	\$4,000.00
Executive Committee Awards		\$0.00	\$599.29	\$0.00
Total Expenses	\$15,667.41	\$23,925.00	\$24,224.83	\$25,550.00
Net Difference	\$3,520.98	-\$2,360.00	-\$2,189.57	-\$2,050.00

\* Does not include CD Income

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## ***Candidates Standing for Office -2010***

Editor's note: Biographical information was provided by candidates in response to a questionnaire. The submitted material was edited for consistency and format.

### **Chair Elect:**

#### **Nigel D. Sanders**

Dr. Nigel Sanders is currently Technical Manager, Paper PCC, Specialty Minerals Inc., Bethlehem, PA. He earned his BA in Chemistry from Reed College in 1974, and his PhD in Chemistry from Harvard University in 1974. His area of expertise is in Physical/Inorganic Chemistry focusing on Colloid and Surface Science; Industrial Mineral Products; Additives for Paper and Plastics Manufacturing. Dr. Sanders previous ACS Experience includes being a member since 1986, attendee at LV section and National meetings and co-author of National ACS meeting papers.\* He is interested in this office because he was nominated by Chester Crane, past chair. He has held similar offices with the local (LV) section of the Society of Plastics Engineers (SPE), the Lehigh Nanotechnology Network (LNN) and the member board of the Surface Chemistry Institute (Stockholm)

\*Ali R. Bashey and Nigel D. Sanders, "Surface Energy of Coated Bleached Board," 228th ACS National Meeting, Philadelphia, PA, August 23, 2004, paper COLL 64.

### **Treasurer:**

#### **John Freeman**

Dr. John Freeman is an Assistant Professor at East Stroudsburg University. He earned his BS Chemistry Whitworth College Spokane WA, and his PhD at Arizona State University. His area of interest is Biochemistry and Biophysics. He has previously served as LVACS local section treasurer. He is interested in this office because it is his local section and he has served when there was need in the past.

#### **Al Martin**

Dr. Al Martin is an Associate Professor in the Department of Chemistry at Moravian College. He received his BA from Thiel College in 1968 and his PhD from Kent State University in 1975. His area of interest is Inorganic Chemistry. His previous section

activities include: Treasurer 1985 - 1987, 2009, Chair Elect/Chair/ Past Chair - 1990 - 1992 and CoCoordinator TEACHEM 1984 - 2001. Dr. Martin hopes to keep the section financially solvent and up to date on paying its bills.

### **Secretary:**

#### **Kelly Caflin**

Dr. Kelley Caflin is a chemist and energetics analyst for the Department of Defense in the Reliability Management Branch of the Quality Engineering and System Assurance Directorate of the Armament Research and Development Engineering Center, Picatinny Arsenal, NJ. Kelley is responsible for innovative and unique product evaluation using traditional and new analytical and experimental methods. She designs and executes accelerated test programs to perform predictive aging models. Kelley is an alumnus of Cedar Crest College (B.S. 2003) and Lehigh University (2006 M.S., 2009 PhD). Her PhD research developed a technique for quantitative solid state nuclear magnetic resonance analysis of mixtures utilizing chemometric techniques. Kelley is currently pursuing a master's degree in chemical engineering at New Jersey Institute of Technology. Kelley was a recipient of a National Science Foundation GK-12 Graduate Student Fellowship from 2003-2006. Kelley has been a member of the American Chemical Society since 2003. Kelley is a dedicated chemist with cats named Argon and Beaker.

#### **Danielle Ringhoff**

Dr. Danielle Ringhoff is currently Visiting Faculty at East Stroudsburg University for the Academic Year 2009-2010. She received her BS in Chemistry from Allegheny College, Meadville, PA, in 1996; her MS from East Stroudsburg University in 2004 and her PhD from Lehigh University in 2009. Dr. Ringhoff's area of specialty is Biochemistry, Cancer, Chemical Biology, HAZMAT, and Pharmacology. Her previous ACS experience includes membership since 1995, an attendee at local section meetings and the last National Meeting in Washington, D.C. and a participant with ESU student ACS affiliate while in graduate school at ESU (2003-2004). She is interested in an LVACS position because she was nominated for the position of Secretary by Chester

Crane. She has previously held offices in different organizations including the Society for Chemicals Hazard Communications (SCHC) – Co-Chair of Small Package Labeling Committee 2003 while employed by Mallinckrodt Baker, Inc.; Secretary for the Biological Organization of Graduate Students at Lehigh University; and Team Captain (2007) and Co-Captain (2008) for the Lehigh University Graduate Student American Cancer Society Relay for Life Team-Bethlehem.

#### **Phil Weiser\***

Phil Weiser is a resident of Kutztown PA and a sophomore chemistry major at Moravian College. Mr. Weiser earned a 5 in AP chemistry and participated in the Chemistry Olympiad while in high school. This summer he was awarded a Moravian C. summer research project grant to work with Dr. Carl Salter. He started regularly attending local section meetings last fall as a first-month freshman who wasn't even taking a chemistry course. His peers recognized Phil's leadership ability, electing him president of Moravian's Chem. Club this fall, a job usually reserved for seniors. He tutors (chemistry, zoology, anatomy & physiology) and has organized outreach of the chem club, doing demo's at a local elementary school science festival.

*\*Editors note: bio adopted from nomination letter*

#### **Councilor:**

##### **Carol Baker Libby**

Dr. Carol Baker Libby is currently an adjunct professor at Moravian College. She earned her B.S. in Chemistry and Ph. D. in Organic Chemistry from The Pennsylvania State University. Her interests include advances in chemical education to improve student understanding of chemistry. Enzyme mechanisms and their biotechnological applications. Dr. Libby has been an LVACS, Councilor (2004-09) and Alternate Councilor(2001-03). She has served nationally on the Local Section Activities Committee (2004-present) and the Women Chemists Committee (1990-2000). Dr. Libby is interested in continuing as Councilor to make sure that even in these difficult economic times the ACS continues to provide individual members opportunities for professional growth and service. Also, it's more important than

ever to educate the public, especially children, to appreciate the "transforming power of chemistry" (<http://pubs.acs.org/cen/news/84/i13/8413acsvision.html>). Her recent appointment to the executive committee of the Local Section Activities Committee puts her in a good position to contribute to that objective both at the national level and here in the Lehigh Valley.

#### **T. Michelle Jones-Wilson**

Dr. Michelle Jones-Wilson is an Associate Professor at East Stroudsburg University and Director of the Biological Chemistry Programs. She received her B.S. in Chemistry with Honors from Lafayette College in 1988. She further obtained her M.A. in Chemistry in 1990 and Ph.D. in 1995 in Radiopharmaceutical Chemistry from Washington University in St. Louis. Her areas of interest include biochemistry, physical biochemistry and population genetics (by virtue of living with a population geneticist). She has been a member of the ACS since 1988. She served as secretary, treasurer and chair of the Wooster section of ACS in Ohio. She has also served one term as chair for LVACS and as alternate councilor for many years. She is also currently the webmaster and Octagon editor.

#### ***LVACS Ballot Instructions***

1. Print the ballot on the next page
2. Clearly mark only one candidate for each office.
3. Place and seal your ballot in a plain envelope.
4. Please insert the encased ballot in a second envelope and mail to Dr. William Miles at the address listed below. Please include your name and address currently on file with ACS on the outer envelope return address so that the ballot can be validated.
5. Deadline for receipt of ballots is January 26, 2010. Please allow ample mailing time for your ballot to be received.
6. Results will be announced at the January 2010 LVACS meeting at Penn State Lehigh Valley.

Address: Dr. William Miles  
Department of Chemistry,  
Lafayette College  
Easton, PA 18042

***2010 LVACS OFFICERS  
Ballot***

**Chair Elect**

Dr. Nigel Sanders

**Secretary**

Dr. Kelley Caflin

Dr. Danielle Ringhoff

Mr. Phil Weiser

**Treasurer**

Dr. John Freeman

Dr. Al Martin

**Councilor\***

Dr. Carol Baker Libby

Dr. T. Michelle Jones-Wilson