



The Bulletin
of the
Virginia Section
AMERICAN CHEMICAL SOCIETY

SEPTEMBER MEETING NOTICE

● **AWARDS MEETING** ●

Virginia Commonwealth University
Richmond, Virginia

Friday, September 16, 2011

RECEPTION: **6:00 p.m.**
Rodney's
Shafer Court Dining Center
810 Cathedral Place

PROGRAM: **7:00 p.m.**
Room 203
Hibbs Hall
900 Park Avenue

MENU: Heavy Hors-d'oeuvres, Soft Drinks, Beer, and Wine

PRICE: Members/Guests - \$16.00; Students, High School Teachers and Spouses - \$8.00; Retired ACS Members and Spouses, Retired Teachers and Spouses - \$11.00

RESERVATIONS: Please make reservations by **4:00 p.m. on Monday, September 12** by calling Monica Atkinson at (804) 827-0352 or by e-mail to atkinsonml@vcu.edu

HOSTS: Dr. Sally Hunnicutt and Dr. Scott Gronert, (804) 828-1298, chemistry@vcu.edu

PROGRAM: **DISTINGUISHED SERVICE AWARD: Dr. Fred M. Hawkrigde**
INDUSTRIAL INNOVATOR AWARD: Dr. Jack D. Brown

SEPTEMBER 2011

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	reservations due				meeting	
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DISTINGUISHED SERVICE AWARD

Dr. Fred M. Hawkrige



Dr. Fred Hawkrige received his B.S. in chemistry from the University of Georgia in 1966 and his Ph.D. in analytical chemistry from the University of Kentucky in 1971. He was a postdoctoral fellow in Professor Theodore Kuwana's laboratory at Case Western Reserve University and the Ohio State University from 1971-1972. In 1972, Fred accepted an assistant professorship at the University of Southern Mississippi. In 1976 he joined the faculty in the Department of Chemistry at Virginia Commonwealth University and he was promoted to Professor in 1981. He was department chair 1998-2005, Executive Associate Dean for Research and Graduate Affairs in the College of Humanities and Sciences 2005-2008 and Interim Dean 2008 until his retirement June 2011. Fred is distinguished in service as evidenced by the numerous offices that he has held. He has served as a Program Officer in the Analytical and Surface Chemistry Division at the National Science Foundation, the U.S. Editor of *Mikrochimica Acta*, Treasurer of the Analytical Division of the American Chemical Society, member of the Board of Directors for the Society of Electroanalytical Chemistry, chair of the Organic and Biological Division of The Electroanalytical Society, and member of the editorial board for the *Journal of*

Electroanalytical Chemistry. Fred received an honorary Ph.D. degree from St. Petersburg University, Russia, in 1993, the Benedetti Pichler Award from the American Microchemical Society in 2002, and the ACS Division of Analytical Chemistry Award for Distinguished Service in the Advancement of Analytical Chemistry in 2003. In October 2010 he received the Distinguished Alumni Award from the Department of Chemistry at the University of Georgia.

Dr. Hawkrige's research group worked on the electron transfer and ligand binding reactions of heme proteins found in mammalian organisms. Of particular interest was cytochrome c oxidase, the terminal site of oxygen reduction. One method developed by his research group used quartz crystal microbalance electrodes to control self-assembly bilayer membrane chemistry with a dialysis process to yield an active oxidase enzyme immobilized on the surface of an electrode. This assembly mimics the native configuration of the enzyme and allows direct communication between the enzyme and the electrode. This makes it possible to use the enzymatic reaction selectivity to characterize its electron transfer reactions and practical applications were developed in sensing toxins such as cyanide and metabolites such as breath acetone.

“Virginia is a Great Place for a Career in Chemistry”

When I moved to VCU in 1976, I was really excited to start in a young and growing department. What I didn't fully appreciate is why being in Virginia would be so important to me over the next 35 years, professionally and the personally. Richmond, Virginia is a great location for its proximity to so many academic, industrial and governmental institutions where chemistry is supported and done. Collaborations are easy to develop and my research and teaching benefitted greatly from these unanticipated opportunities. I won't walk through the brief talk that I intend to present here, but I hope that some will learn new things about chemistry in Virginia, *e.g.*, that the first President of the American Chemical Society was a faculty member at Hampden Sydney, and there are other equally interesting and exciting examples that should be the envy of those who do chemistry elsewhere.

In closing, I'll be sure to thank the Awards Committee of the Virginia Section of the American Chemical Society for this award; I am honored to be included with those who have been so recognized in the past.

INDUSTRIAL INNOVATOR AWARD

Dr. Jack D. Brown



Dr. Jack Brown is Associate Director, Process Chemistry, at Boehringer Ingelheim Chemicals, Inc. in Petersburg, Virginia. He is responsible for process validation, regulatory updates, process safety, the process chemistry laboratories, technology transfer, and the chemical hygiene plan. He was the team leader for a number of projects, including the implementation of the Viracept process from laboratory scale to production.

A native of Idaho, Dr. Brown received a B.S. in Chemistry from Utah State University and a Ph.D. from Utah State University where he worked with Professor D. L. Comins. He did postdoctoral work with Dr. A. I. Meyers at Colorado State University.

Prior to joining Boehringer Ingelheim in 2002, Dr. Brown worked as a research chemist at Roche Colorado Corporation and at Syntex Chemicals. At Boehringer Ingelheim, he served as Manager of Process Optimization and Development, Senior Manager of Scale-up and Transfer, Director of Technical Operations, and Senior Manager of Process Chemistry. He has over 15 publications and six patents. In 2006, he received the Boehringer Ingelheim Team Award.

Dr. Brown enjoys both mountain and road cycling, snow skiing, rock climbing, and photography. He is a certified *Six-Sigma* Black Belt.

“Use of Design of Experiments to Solve Complex Chemical Problems”

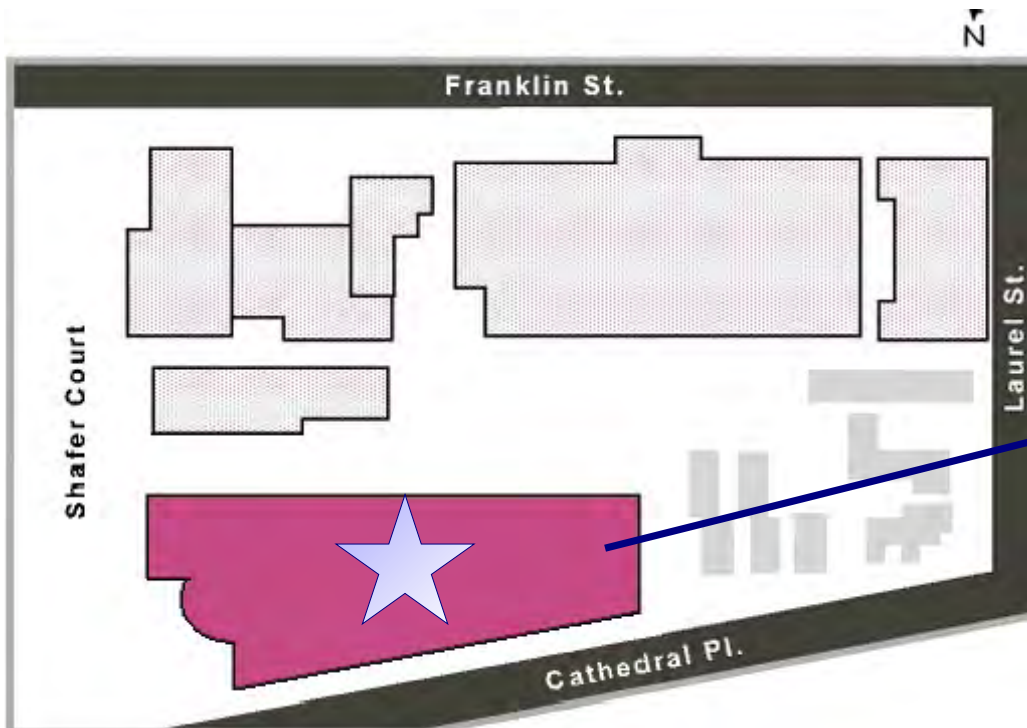
The pharmaceutical industry over the past twenty years has evolved from an industry focused on small molecules treating large populations of people to an industry developing small and large molecules, targeting more specific disease states, and treating many types of patient population. As a result of these changes, the uses of less traditional tools for development are evolving as well. The use of the principles for quality by design (QbD) is becoming integral to both chemical development and to manufacturing support. The application of this tool can be used to solve very complex problems while minimizing resources. A demonstration of using one of the tools will be the focus of this talk.

FF

SERMACS 2011
OCTOBER 26 - 29
RICHMOND, VIRGINIA

DIRECTIONS

The Reception will be held in **Rodney's Restaurant**, located in the **Shafer Court Dining Center** at Virginia Commonwealth University. The Shafer Court Dining Center is at 810 Cathedral Place in Richmond, just behind the Sacred Heart Cathedral. This is just northeast of the Chemistry Department which is housed in Oliver Hall, 1001 W. Main Street. Note that Main Street is one-way west and Cary Street is one-way east, and that you cannot turn left from Main Street on to Linden. There is parking on the streets around the Shafer Court Dining Center (mainly on Franklin Street) and in the Main Street Parking Deck, 801 W. Main Street (enter from Cherry or Laurel Streets). Rodney's is on the left after you enter the Shafer Dining Center. The Awards Program will be held in Room 203 on the second floor of **Hibbs Hall**, 900 Park Avenue. Hibbs Hall is just a block northwest of the Shafer Court Dining Center. See maps below.



Shafer Court Dining Center
810 Cathedral Place



Hibbs Hall
900 Park Avenue

***** VIRGINIA SECTION NEWS *****

FUTURE MEETINGS OF THE SECTION

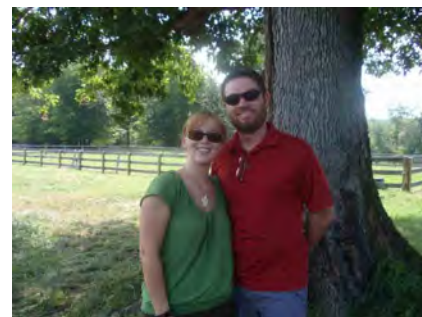
**SERMACS 2011
Omni Hotel, Richmond
October 26-29, 2011**

DATE: October 27, 2011
LOCATION: **Science Museum of Virginia**
Richmond, Va.
HOST: Dr. Karen Carter
PHONE: (804) 521-7369
E-MAIL: kcarter@aibiotech.com
EVENT: SERMACS Mixer

DATE: December 2, 2011
LOCATION: **Virginia Union University**
Richmond, Va.
HOST: Dr. Dorothy Eseonu
PHONE: (804) 257-5615
E-MAIL: [dneseonu @ vuu.edu](mailto:dneseonu@vuu.edu)
SPEAKER: Dr. C. Marvin Lang
TOPIC: "Chemical Demonstrations"
Presentation of Teaching Awards

REPORT ON THE SECTION PICNIC

The summer picnic for the Virginia Section was held at Dragonfly Farms on Sunday, July 31. Guests arrived at the end of a dirt road to be met by several chickens patrolling the farm for bugs. About 40 ACS members and their families gathered under two beautiful shade trees on the 55 acre farm. It was apparent the chickens did their job well—insect bites were not an issue as guests enjoyed lunch. The hamburgers and bratwurst were provided by Dragonfly farms from sustainably raised grass-fed belted Galloway cows. They were yummy indeed! After lunch, Katherine and Bruce gave a tour of their 55- acre farm. We saw several beautiful horses, which are boarded at the farm; the children chased the bleating goats; and we met the "oreo" belted Galloway cows grazing on grass. Katherine told us how all of the animals on the farm are treated sustainably, and that means no artificial hormones, pesticides, or antibiotics. ACS members were able to see first-hand that nature's own chemicals can indeed raise healthy animals! Thanks to Karen Carter for making the arrangements for the picnic and to Katherine and Bruce Johnson for providing the ideal location. For more photos of the picnic, check out the Virginia Section Facebook page:



THE CHAIR'S CORNER



This spring I was able to personally meet with several of the chemistry department chairs at the Section's colleges and universities to find out how the local section of ACS is currently viewed on campuses and how involvement in the ACS can be made more attractive to faculty, staff and students.

In general the ACS and the Virginia Section are viewed favorably on campuses but there is still a lack of awareness of the Section's event and activities. Many faculty members are overwhelmed with department activities and personal responsibilities and students are best reached by social media and direct contact. Some of the other feedback that I received:

- A survey of the membership of the section could be done to see what changes, if any, they would prefer in meetings, i.e., different meeting night, daycare provided, type of meal.
- In meeting announcements, the focus may need to be placed more on the speaker program and less on the dinner details to emphasize to members and students that the meal is optional.
- Outreach to graduate students could include working with graduate student associations or Alpha Chi Sigma groups and/or starting an award for graduate students. The Section currently honors only undergraduate students.
- Methods for facilitating two-way communication between the section, the student affiliate groups, and other local chemistry clubs need to be better developed. Students operate on a semester time frame, and to get them more involved with volunteer activities such as NCW, more advance notice is needed.
- The section currently has teaching awards for elementary through high school. It was suggested that we consider honoring members for outstanding college chemistry teaching.

What do you think? Send me an email (stephanie.mabry@aftonchemical.com) or post a comment on the blog on the Virginia Section's website at <http://virginia.sites.acs.org/apps/blog/>.

My thanks to Chris Abelt at College of William & Mary, David Cafiso at University of Virginia, Kevin Dunn at Hampden-Sydney College, Scott Gronert at Virginia Commonwealth University, Melissa Rhoten at Longwood University, Serge Schreiner at Randolph-Macon College, and Rik van Antwerpen at Virginia Union University for taking the time out their schedules to meet and for sharing their input.

...Stephanie Mabry, Chair, Virginia Section; stephanie.mabry@aftonchemical.com

TEACHER AWARDS

The Virginia Section is soliciting nominees for three teaching awards: the **Outstanding High School Chemistry Teacher Award**, the **Outstanding Middle School Science Teacher Award**, and the **Outstanding Elementary School Science Teaching Award**. If you would like to nominate persons for these awards, contact Eileen Downey, eileendowney@gmail.com. Each award consists of a plaque and a check for \$300.00. The teacher awards are sponsored by Boehringer Ingelheim Chemicals; the 2011 awards will be presented at the December 2 Section meeting, to be held at Virginia Union University in Richmond.

POSITIONS AVAILABLE

A contract analytical laboratory located in Richmond has openings for analytical chemists (BS/MS) with 0-4 years experience to assist with routine testing in GC and LC analyses. Experience with Chemstation and Empower software is required. Knowledge of GC/MS, ICP/MS or other instrumental techniques is beneficial. Local candidates only. Please submit resume to jhenry@aristalabs.com.

SERMACS 2011 CALL FOR PAPERS

The 63rd Southeastern Regional Meeting (**SERMACS 2011**), hosted by the Virginia Section of the American Chemical Society, will take place on Oct. 26-29 at the Omni Hotel in Richmond. The theme for the meeting is "Charting Chemical Connections." Information on the meeting program and schedule of events as well as details about transportation and lodging can be found at <http://sermacs2011.org>.

Program cochairs are Fred M. Hawkridge of Virginia Commonwealth University and Ann M. Sullivan of J. Sargeant Reynolds Community College. Joseph M. Pompano of Arista Laboratories is the general chair.



Meeting presenters must submit an abstract for each presentation through ACS's Program & Abstract Creation System at abstracts.acs.org. Meeting symposia will focus on analytical, biological, environmental, inorganic, medicinal, organic, physical, and polymer chemistry; chemical education; chemical health and safety; chemical information; chemical toxicology; biotechnology; nanotechnology; and forensics. Sessions and symposia scheduled to date include "Flavor Chemistry," "Sustainability in Packaging," and "Computers in Chemistry." Poster sessions and one or more general sessions will be included in the program.

Manfred Psiorz, chief executive officer of Boehringer Ingelheim Chemicals and honorary general cochair of SERMACS 2011, will open the meeting with a plenary talk on Wednesday afternoon. Technical sessions will begin after his lecture.

On Thursday evening, a symposium and reception at the Science Museum of Virginia will celebrate the International Year of Chemistry. Winners of the Stanley C. Israel Award for Advancing Diversity in the Chemical Sciences and the E. Ann Nalley Southeastern Regional Award for Volunteer Service to ACS will be honored during the reception.

The section of the program organized for undergraduates—"Chemical Minds: The Application of Forensics"—will emphasize career building. It will include traditional resume and career-related sessions, informal mock interviews, a graduate school fair, a forensics-inspired scavenger hunt, a poster session, a pizza party and karaoke event, and an awards breakfast with forensics expert and Virginia Commonwealth University professor Marilyn Miller.

SERMACS 2011 will also include career programs on "Planning a Job Search," "Resume Preparation," and "Interviewing Skills." The meeting will feature workshops for chemistry educators at the precollege and undergraduate levels as well as a high school chemistry workshop on chemical safety and a chemical demonstration show presented by Brian Moores of Randolph-Macon College. Special events will include an opportunity to meet with ACS governance at a complimentary ice cream social hosted by the ACS Board of Directors and a Women Chemists Committee workshop and luncheon. An awards dinner will be held on Friday to honor the winner of the ACS Division of Chemical Education's Southeastern Regional Award for Excellence in High School Teaching.

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Attendees can register for SERMACS 2011 at www.acs.org. Early registration will close on **September 20**. Registrations or payments received after that date will be processed at standard registration rates, which will be in effect through October 29.

Vendors and other organizations wishing to connect with SERMACS attendees will be provided exhibition space in a central, highly visible area during the meeting. Details are available on the meeting website. Vendor inquiries should be directed to Mark Mabry of Pfizer Consumer Healthcare at SERMACS2011exhibits@gmail.com.

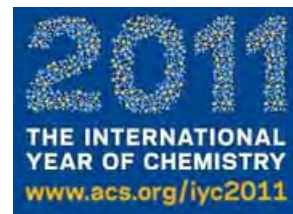
SERMACS 2011 has a block of rooms reserved at the Omni Hotel. Reservations can be made through the meeting website.

NATIONAL CHEMISTRY WEEK



The Virginia Section will be celebrating **National Chemistry Week on Saturday, October 22** with a day of exhibits and activities at the Science Museum of Virginia in Richmond. The theme for 2011 is "Chemistry—Our Health, Our Future!" Dr. Kristine Smetana will be coordinating the event for the Virginia Section. She can be reached at (804) 706-5143; kmetana@jtcc.edu. **Volunteers are needed!** The ACS is also sponsoring an illustrated poem contest for NCW and the International Year of Chemistry (IYC).

Prizes will be given to students in grades K through 12. Illustrated poems must use the NCW theme and are limited to 40 words. More information about the contest can be found on the ACS website (ACS.org, search for NCW) or from the ACS Department of Volunteer Support, (800) 227-5558; outreach@acs.org.



Some photographs from NCW 2010, courtesy of Dr. Kristine Smetana:



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SERMACS 2011

October 26 - 29

Richmond, Virginia

**“Charting Chemical
Connections”**



CHEMISTRY SEMINARS AT THE UNIVERSITY OF VIRGINIA

September 9 - **Professor Roger Wartell**, Georgia Institute of Technology, "How Does the Bacterial Hfq Protein Interact with Small Regulatory sRNAs and Facilitate sRNA-mRNA Pairing?"

September 23 - **Professor Gil Nathanson**, University of Wisconsin, "How Does HCl Dissolve in Protic Liquids? A Molecular Beam Journey into Salty Water and Glycerol"

September 30 - **Professor Webster Santos**, Virginia Tech, "Copper-catalyzed Borylation and Inhibition of Protein-RNA Interactions"

October 7 - **Professor Mostafa El-Sayed**, Georgia Institute of Technology

October 14 - **Professor Dale Poulter**, University of Utah (IRELAND LECTURE)

October 21 - **Professor Mark Thompson**, University of Southern California, "Energy Management in Organic Solar Cells"

November 4 - **Professor Alex Nevzorov**, North Carolina State University, "Structure Determination of Membrane Proteins by Solid State NMR: Sensitivity Enhancement, Spectroscopic Assignment and Structure Calculations"

November 11 - **Professor Lukas Tamm**, University of Virginia

Chemistry colloquia are held at 4:00 p.m. in Room 304 of the Chemistry Building. The complete colloquium schedule is on-line at <http://chem.virginia.edu/events-seminars/>.

SEMINARS AT VIRGINIA COMMONWEALTH UNIVERSITY

August 25 - **Dr. Bilal Kaadarani**, American University of Beirut, "Exploring Novel Pyrene-Based Materials for Electronic, Optoelectronic, and Sensing Applications"

September 15 - **Dr. Vladimiro Mujica**, Arizona State University, "Series of Molecule-Semiconductor Nanoparticles Hybrids: Theory and Experiments"

September 20 - **Dr. Zhihao Zhuang**, University of Delaware

September 22 - **Dr. Robert Whetten**, Georgia Institute of Technology

October 25 - **Dr. Marie-Christine Daniel-Onuta**, University of Maryland-BC

November 3 - **Dr. Felicia Etzkorn**, Virginia Tech

Seminars are held at 3:30 p.m. in the Kapp Lecture Hall, Room 1024, in the Mary E. Kapp Wing of Oliver Hall, 1001 West Main Street, Richmond. For more information, call (804) 828-1298.

CHEMISTRY AT VIRGINIA COMMONWEALTH UNIVERSITY

The Virginia Commonwealth University Department of Chemistry has 29 faculty members, approximately 75 graduate students and 300 undergraduate chemistry majors. The department brings in more than \$4 million annually in research and educational grants. The department offers full-time undergraduate programs leading to the Bachelor of Science. The degree concentrations allow students to focus on different aspects of chemistry, depending on their specific interests. The concentrations include chemical science, professional chemist, professional chemist with honors, chemical modeling and biochemistry.



The department also offers full- and part-time graduate programs leading to the Master of Science and Doctor of Philosophy degrees in analytical, inorganic, organic, and physical chemistry and to the doctoral degree in chemical physics. A wide range of graduate courses is offered; the classes are small in size and personal in nature. The recent addition of new faculty, new laboratories and the acquisition of new instrumentation provide a firm basis for continued excellence in both teaching and research. A program of studies is tailored to the individual student and is designed to provide a sound background in all areas of chemistry, with emphasis on the student's area of research. The low student-to-faculty ratio ensures that each student receives personal attention.

An important and distinctive feature of the department is close interaction between faculty and students. This interaction, in an active and friendly environment, is designed to promote scholarship, develop experimental ability, and stimulate creative thought. Students work side by side with faculty members in small research groups. They are encouraged to present the results of their research at regional and national meetings of the American Chemical Society and other professional organizations.

The department is committed to excellence in both research and teaching. The faculty actively conduct research in the areas of analytical, inorganic, organic, physical, and polymer chemistry and, in cooperation with the Department of Physics, chemical physics. Faculty members have received training and experience at leading universities, industrial laboratories, and national research laboratories. Their excellent and diverse backgrounds ensure a graduate program of quality and balance, one that can meet the varied needs of future professionals. John B. Fenn, Nobel Laureate 2002, was a member of the Department of Chemistry faculty.

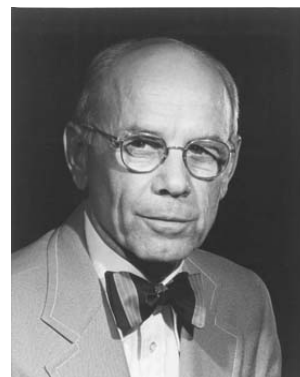
State-of-the-art instrumentation used by faculty, graduate students, and undergraduate students in courses and research includes magnetic resonance spectroscopy, infrared, uv-vis, and fluorescence spectroscopy, mass spectrometry, and liquid and gas chromatography.

A weekly seminar program brings distinguished speakers to the department from academia and industry. Arrangements are made for the speakers to meet with students to discuss research and other topics. The program results in graduates who are well-prepared for careers in industry, academics, and national research laboratories. In addition to the regular seminar program, the annual Mary E. Kapp Lecture in Chemistry brings a chemist of international reputation to the department for a two-day visit. This lecture honors Kapp, the first chairman of the department, who guided the department through its formative years. Kapp established an endowment for the department from her estate. This endowment, in excess of \$3.5 million, was established specifically to support the graduate program in chemistry. It is currently used to fund the seminar program, assistantships for doctoral candidates, and graduate student travel to scientific meetings where they present papers.

WORDS OF WISDOM FOR SEPTEMBER : "A Problem Well
Put Is Half Solved"

QUESTIONS FROM THE PAST

This question was asked in the Summer Bulletin: On December 14, 1990, the Virginia Section heard a presentation on "The Virginia Section's First Seventy-Five Years." **Who was the speaker and where was that meeting held?** Dr. Russell Rowlett spoke to the Section meeting that was held at Virginia State University in Ettrick. Dr. Rowlett was chair of the Virginia Section in 1966 and received a special Distinguished Service Award at the Dec. 14, 1990 meeting.



A new question from the past: Helen Kizer presented the Section with an envelope with the chemistry stamp that was issued by the U.S. Postal Service to commemorate the celebration of the centennial of the ACS. The envelope is canceled in New York City as a "First Day of Issue." **What was the date on which this 13¢ stamp was issued?**

CAN YOU IDENTIFY THIS PERSON?



The photograph is from February, 2005. The subject is shown with the Jefferson cup that he received from Section Chair Joe Pompano. At the time, he was Vice Provost for Research and Dean of Graduate Studies at the Georgia Institute of Technology in Atlanta. He was also the Regents' Professor of Chemistry and Chemical Engineering at Georgia Tech. He earned a B.S. degree from Brooklyn College and a Ph.D. from the University of Maryland. In 2004, he and his Georgia Tech colleague Charles Eckert received a Presidential Green Chemistry Challenge Award.



The "mystery person" shown in the Summer Bulletin was Leonard Klein who received the Distinguished High School Chemistry Teaching award in 2003.

2011 CHEMISTRY OLYMPIAD RESULTS

The 2011 Local Chemistry Olympiad was very successful. Fourteen schools asked to participate with nearly 500 students nominated to take either the first-year or the second-year examination. Individual and team awards were presented in various categories. Some of the results are given below; more information and results can be found on the Virginia Section website:

<http://virginia.sites.acs.org/chemistryolympiad.htm>.

Over 20 students were invited to take the National Olympiad exam on April 16 at J. Sargeant Reynolds Community College in Richmond. Eight of the nominated students participated in the National Exam (no more than two students can participate from each school and each student must be a U.S. Citizen to be eligible for the IChO Study Camp). The nominees were

Tim Wersinger*, Aarati Sriram, Gregory Lewis, Sophia Seite, and Damon McIntire -
Albemarle High School

Danny Wang*, Robert Burnham, Yejin Kim, Jenny Huh, Maria Hernan Achah, and
Krishi Sharma - Freedom High School

Austin Angulo* and Adam Chaffin - James River High School

Triet Nguyen*, Tyler Hutcherson, and Parakh Shailaja - J. R. Tucker High School
 Philip Grimes* and Adam Chaffin - Lafayette High School
 Todd (Chris) Moore* and Matt Skinner* - Prince George High School
 Mallory Bell*, Megan McLain, and John Payne - St. Stephens & St. Agnes School
 Minhkhhoa Tran -The Steward School

*took National Examination

Local Examination Student Scores

At each school, the student with the highest score received a National Olympiad or Element pin. The following students were the highest scorers from each participating school. Teachers from each school also received a pin.

School	First Year Exam	Second Year Exam
Albemarle High School	Elise Braatz and Nathaniel Pfund	Timothy Wersinger*
Freedom High School		Danny Wang*
Governor's School of Southside Virginia	William Gay	
Highland Springs High School	Anene Nmelichukwu	
James River High School	Stefan Dibich	Austin Angulo*
J. R. Tucker High School		Triet A. Nguyen*
Kenston Forest School	Clay Huff	
Lafayette High School		Philip Grimes*
Patrick Henry High School	Libby Shoolroy, Pham Duc Giap, Caleb Yeong, Cassidy Moore	Luis Carillo
Prince George High School	Christian Martinez	Matthew Skinner*
St. Stephen's & St. Agnes' School	Syrena Bracey, Brett Williams, Douglas Maggs, Alex Parkhurst, Ilkka Kovanen	Mallory Bell*
The Steward School	Benjamin Campbell	Minhkhhoa Tran

* took National Exam

Local Examination Student Awards

The students with the three highest scores from all participating schools, separated by category and by test, received a \$50 gift certificate for first place, a \$25 gift certificate for second place, and a \$10 gift certificate for third place. Those students who were nominated for the National Exam also received a \$50 gift certificate. The following students had the highest scores within the Virginia Section:

First Year Chemistry Olympiad Local Examination

1. Small School/Governor's School Category

First Place (\$50 gift certificate) - **Syrena M. Bracey** and **Brett L. Williams** – St. Stephen's and St. Agnes' School; **William A. Gay** – The Governor's School of Southside Virginia
 Second Place (\$25) - **Douglas T. Maggs** and **Alex Parkhurst** – St. Stephen's and St. Agnes' School; **Krista D. Boyce** and **Anthony C. Polakievicz** – The Governor's School of Southside Virginia

2. Large School Category

First Place (\$50 gift certificate) - **Elsie M. Braatz** – Albemarle High School
 Second Place (\$25) - **Stefan Dibich** – James River High School
 Third Place (\$10) - **Shane Wilson** – James River High School

Second Year Chemistry Olympiad Local Examination

1. Small School/Governor's School Category

First Place (\$50 gift certificate) - **Minhkhhoa Tran** – The Steward School
 Second Place (\$25) - **Mallory Bell** – St. Stephen's & St. Agnes' School
 Third Place (\$10) - **Megan K. McLean** and **John Michael Payne** – St. Stephen's & St. Agnes' School

2. Large School Category

First Place (\$50 gift certificate) - **Timothy Wersinger*** – Albemarle High School
 Second Place (\$25) - **Triet Nguyen*** – J. R. Tucker High School
 Third Place (\$10) - **Aarati Sriram** – Albemarle High School

* These students took the National Examination and each received a \$50 gift certificate

Team Awards

A Team Award is given to the school having the highest combined total for three students, separated by category and year. Each of the following schools will be invited to attend the December Meeting of the Virginia Section. These schools will receive a plaque to show they won the team award.

First year Examination

Category	School
Small School	St. Stephen's and St. Agnes' School
Large School	Albemarle High School

Second Year Examination

Category	School
Small School	St. Stephen's and St. Agnes' School
Large School	Albemarle High School

INTERNATIONAL CHEMISTRY OLYMPIAD



The 43rd International Chemistry Olympiad was held in Ankara, Turkey in July, 2011. The U.S. team did well, earning two gold medals and two silver medals. Tayyab Shah from New York and Elmer Tan of New Jersey won silver medals while Joe Tung from California and Konstantin Borisov of Pennsylvania received gold medals. **Dr. Kelli Slunt**, Professor of Chemistry at the University of Mary Washington, was one of two mentors for the U.S. team. Next year's International Olympiad will be held at the University of Maryland when the U.S. hosts the 44th Olympiad.

UNDERGRADUATE RESEARCH POSTERS UNIVERSITY OF VIRGINIA - APRIL 8, 2011

Justin Hagerman, Leigh Matano, and Yanjie Zhang

Department of Chemistry and Biochemistry,
James Madison University

Synthesis and Characterization of Amino Acid Surfactants

Scott Allen Hull and Sarah E. G. Porter

Department of Chemistry, Longwood University

Separation of the Active Ingredients in Over-The-Counter Cough and Cold Preparations by HPLC

Andrea Irby and Sarah E. G. Porter

Department of Chemistry, Longwood University

Detecting Counterfeit Anti-Malarials Using High-Performance Liquid Chromatography

Dr. Tappy H. Jones, Andrew W. Jeter, and
Dr. Rachelle M. M. Adams

Department of Chemistry, Virginia Military Institute and the
National Museum of Natural History, Smithsonian Institution

The Exocrine Chemistry of Some Trachymyrmex Species

Ashley Keller and Linda Columbus

Department of Chemistry, University of Virginia

Structural Investigations of Inclusion Membrane Protein A (IncA) of Chlamydia trachomatis

Corinne Lariviere and Henry D. Schreibe

Department of Chemistry, Virginia Military Institute

Metal Induced Bluing of Hydrangea Macrophylla

Chelsea M. Loy, Heidi R. Beemer, and Daren J.
Timmons

Department of Chemistry, Virginia Military Institute

Liquid Crystals from Flavones

Oksana A. Mikutin and Joseph M. Crockett

Department of Chemistry, Bridgewater College

Reduction of Sterically Hindered Ketones

L. Avery Moncure and Kevin M. Dunn

Department of Chemistry, Hampden-Sydney College

Investigations Concerning the Stability of an Evolving Quaternary System of the Type Oil/Water/NaOH/Surfactant

Brandon H. Ogles, Jerry L. Hickey, and Darren
J. Timmons

Department of Chemistry, Virginia Military Institute

A New Class of Liquid Crystal Materials

Melissa Palmer, Justin Hagerman, Leigh
Matano and Yanjie Zhang

Department of Chemistry and Biochemistry,
James Madison University

Chiral Interactions at the Air-Water Interface

Basil A. Panton, Lindsay R. Comstock, and
Rajsekhar Guddneppanavar

Departments of Chemistry, Hampden-Sydney College
and Wake Forest University

*Synthesis of an Aziridinium-Based S-Adenosyl-L-Methionine (SAM) Mimic
as a Tool for Probing DNA Methylation*

Bradford D. Plasha and Rebecca R. Michelsen

Department of Chemistry, Randolph-Macon College

*Measuring the Equilibrium Constants for Aqueous Forms of Methylglyoxal in
Water, Sulfuric Acid, and Sodium Sulfate Solutions*

(the remaining poster titles will be published in the October issue of the Bulletin)

THE BULLETIN

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