



The Bulletin
of the
Virginia Section
AMERICAN CHEMICAL SOCIETY

APRIL MEETING NOTICE

University of Virginia
Charlottesville, Virginia

Friday, April 8, 2011

POSTER SESSION: 6:00 - 7:00 p.m.
(*STUDENT RESEARCH*) Lobby
Chemistry Building

DINNER: 6:00 - 7:00 p.m.
Lobby
Chemistry Building

PROGRAM: 7:00 p.m.
Room 304
Chemistry Building

MENU: Pizza (many varieties), Soft Drinks

DINNER RESERVATIONS: Please make reservations by calling Cindy Knight at **(434) 924-7995** or e-mail **csk3a @ virginia.edu** by **NOON** on Wednesday, April 6.

PRICE: \$8.00 - members, guests, college students; \$4.00 - high school students

HOST: Dr. James Demas - (434) 924-3343, demas @ virginia.edu

SPEAKER: **Dr. William A. Mattson, Randolph College**

TOPIC: **“Creative Problem Solving in Chemical Research”**

APRIL 2011

S M T W T F S

1 2

3 4 5 6 7 8 9

reservations meeting

10 11 12 13 14 15 16

17 18 19 20 21 22 23

24 25 26 27 28 29 30

Dr. William A. Mattson

Bill Mattson has participated in six ACS Speaker's weeklong Tours. In addition, he has been invited to speak for several local sections, was invited to be the 27th Annual Harold Hammond Garretson Speaker at Lynchburg College, and has been invited back dozens of times for talks on problem solving in research to undergraduate students at the University of Virginia. In each case, the audience response was quite positive, reflecting both their improved insights and abilities in problem solving and the entertaining nature of the talk.



He is a professor of analytical chemistry at Randolph College in Lynchburg, Virginia. He earned a B.S. and a Ph.D. from the University of Virginia and an M.S. from American University. A sampling of some of his other activities includes teaching some nonchemistry courses (first year seminar: Exploration, Discovery, and Problem Solving; Creative and Critical Problem Solving, the Use of Spreadsheets, Freshman Colloquium); developing a campus computer allocation model; and spending 20 of the last 22 summers teaching or doing research at the University of Virginia, James Madison University, the University of North Carolina, and the University of Tennessee. He has been a senior reviewer charged with helping to audit all AP[®] chemistry courses in the nation, a consultant for the South Carolina Course Alignment Project, a question writer for the American Dental Exam, an Educational Testing Service Chemistry AP Reader; a National Science Foundation panel member for grant evaluation, director of the Central Virginia Regional Science Fair, and a master of ceremonies for a high school Academic Competition for Excellence program. Bill has dozens of papers and publications. He has taken students to regional and national ACS meetings to present their research. He has done experimental research in such areas as molecular absorption spectrophotometry, mass spectrometry, the standard addition method, chemical equilibrium, and acid/base indicators. However, he sees himself more as an educator and a generalist, having publications and papers in education in such areas as chemical equilibrium, exploring in the laboratory, experiencing the skills of scientific practice, computer interfacing, solving simultaneous equations in multiequilibria problems, and creative problem solving in research.

“Creative Problem Solving in Chemical Research”

Enjoy an interactive presentation while strengthening an important skill--problem solving. In the day-to-day work environments of chemists and others, it is desirable to be able to solve problems creatively. Such problems might involve obtaining new research ideas; improving processes and production in industry; dealing with problems that arise during research; and even solving personal problems. Oftentimes people apply a random process rather than something more directed. Results are often poor. This presentation will focus on providing insights that will allow you to improve your creative problem solving abilities. The speaker has been teaching creative problem solving for many years. Past responses from numerous audiences suggest that regardless of whether or not you are a chemist this interactive presentation will be worthy of your time for both its value and its thought provoking and entertaining elements.

DIRECTIONS

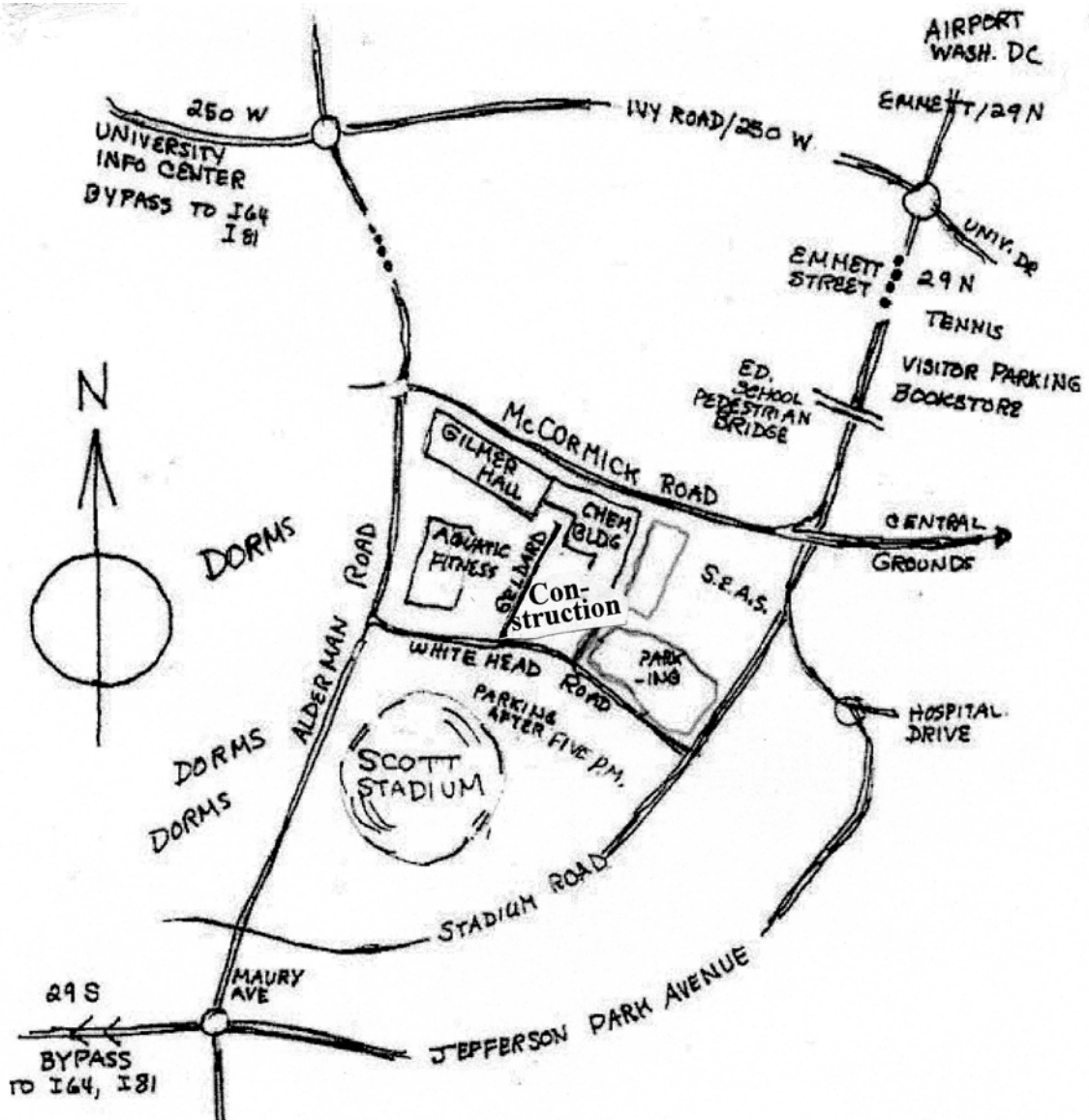
From 29N. Come straight into town past the Cavalier Inn (on your right), pass under two overhead bridges, and then bear right immediately afterwards. Turn right at the top of the hill at Whitehead Road. Parking is primarily on the left with limited parking on the right (due to construction, there is no longer a chemistry parking lot).

From I-64. Turn north on 29 at Exit 118. Immediately turn right at the Charlottesville/29 Business off ramp. Turn right to go into town, then turn left at the second light. Turn right immediately after the stadium on Whitehead Road. This brings you to the back or new wing of the chemistry building. Parking is on the right and left.

If you miss the first off ramp after I-64, turn right at the next exit (UVA information), proceed into town, turn right at the second light (Alderman Rd.), go through the first light, then make a left at Whitehead Road. Parking is primarily on the right.

Until 5:00 p.m., all parking around the Chemistry Building is restricted and you will be ticketed. Please time your arrival so that you park after 5:00. With the construction, it is most convenient to come around the new Nanotech building on the east side.

MAP



***** VIRGINIA SECTION NEWS *******FUTURE MEETINGS****VIRGINIA SECTION
EXECUTIVE COMMITTEE MEETING**

Friday, May 20 - 6:00 p.m.
Downtown Campus
J. Sargeant Reynolds Community College

WCC LUNCHEON

June 10 - noon
City Dogs in the Fan
1309 West Main Street
Richmond, Virginia

VIRGINIA ACADEMY OF SCIENCE MEETING

May 25-27
University of Richmond
Richmond, Virginia

SECTION PICNIC

date to be announced
Dragonfly Farms
6259 Trainham Road
Beaverdam, Virginia

POSTER SESSION

The Virginia Section will hold its annual poster session at the April 8 meeting at the University of Virginia in Charlottesville. The emphasis is on student research, especially work done by undergraduates. This is an excellent informal, low-stress environment for students to make research presentations. If you have a student who wishes to present a poster, please contact Cindy Knight at (434) 924-7995; csk3a @ virginia.edu. More information can be found on this website: <http://people.virginia.edu/~jnd/11ACS/ACS2011.htm>. The deadline for registering a poster is April 1. We invite everyone to come early for the UVA meeting and to support these young researchers. Outstanding college and university chemistry majors will also be recognized at this meeting.

**VIRGINIA ACADEMY OF SCIENCE
ANNUAL MEETING**

University of Richmond
May 25-27, 2011



The 89th Annual meeting of the Academy will be held at the University of Richmond on **May 25-27**. Persons interested in the Chemistry Section program should contact Dr. J. Ellis Bell at the University of Richmond, (804) 289-8244, jbelle@richmond.edu, or Dr. Thomas DeVore at James Madison University, (540) 568-6672; devoretc@jmu.edu. More information on the VAS meeting can be found at <http://www.vacadsci.org/meetings.htm>.

EXECUTIVE COMMITTEE MEETING

The second Executive Committee Meeting of the year will be held at J. Sargeant Reynolds Community College, Downtown Campus, 700 East Jackson Street in Richmond, at 6:00 p.m. on **Friday, May 20**. A light dinner will be provided. Directions and the meeting agenda can be found on the Section website - <http://www.virginia.sites.acs.org/>. All members of the section are invited to attend. For questions regarding the agenda and meeting, contact the Chair of the Virginia Section, Stephanie Mabry, at (804) 788-5280 or stephanie.mabry@aftonchemical.com.

WCC LUNCHEON MEETING

Can You Do it All? - WCC Networking Lunch – Friday June 10, 2011

The Women Chemists Committee of the Virginia Section will be holding a networking lunch on Friday, June 10, 2011 at 12 noon at City Dogs in the Fan, 1309 West Main Street, Richmond, VA. The topic for discussion will be "The Superwoman Myth - Can You Do It All?" Also, plans will be made for the WCC luncheon at SERMACS 2011. Please RSVP by **Wednesday June 8** to Helene Haczynski at helene.haczynski@aftonchemical.com or by phone at 804-788-5353. For more information, visit the WCC webpage at <http://membership.acs.org/VVA/WCC/>.

THE CHAIR'S CORNER

If you have never been to the April section meeting before, I strongly encourage you to attend this year's meeting on Friday, April 8. There are five great reasons why this meeting is very worthwhile.

First, the meeting will be held at University of Virginia in Charlottesville and the beautiful Blue Ridge Mountains. Now that winter is over and spring is here, it is a good time to get out and take a scenic drive.

Second, the annual undergraduate student poster session is held prior to the meeting and it always draws a crowd. The poster session is a great way to see the diversity of chemical research being carried out in Virginia, and talking to these young chemists about their work and enthusiasm for chemistry is energizing and will make you remember why you studied chemistry.

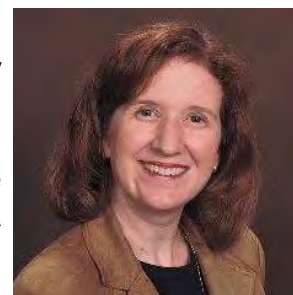
Third, we will be honoring outstanding undergraduate students selected from the chemistry departments at the colleges and universities in the Virginia Section. These students are chosen by their departments for their achievements and each will be presented with a copy of the current *Merck Index* and a paid membership in the ACS.

Fourth, the speaker at the April meeting is Dr. William Mattson from Randolph College who will be speaking on a topic which is very important to all chemists, "Creative Problem Solving in Research."

And the final reason, Pizza!

Hope to see you all there.

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



AWARDS TO COLLEGE SENIORS

Outstanding senior chemistry majors from colleges and universities in the Virginia Section will be honored at the April 8 Section meeting in Charlottesville. Each school has been asked to select a student to receive the Virginia Section award for undergraduate achievement. The awardees will be the guests of the Section at the meeting on April 8 and will receive a free membership in the ACS, a *Merck Index*, and a certificate of recognition. Chemistry departments must inform Chair Stephanie Mabry of their nominees and an ACS membership application form must be completed by each nominee. If you have not submitted the name of your outstanding senior chemistry student, please contact Dr. Stephanie Mabry at (804) 639-6991; stephanie.mabry@aftonchemical.com.

COME EARLY ON APRIL 8 TO SEE THE UNDERGRADUATE RESEARCH POSTERS

JUDGES FOR THE VIRGINIA JUNIOR ACADEMY OF SCIENCE

Judges and meeting chairs are needed for the 70th annual meeting of the Virginia Junior Academy of Science (VJAS), to be held at the University of Richmond on May 25, 2011. About 750 students from grades seven through twelve will present papers and report on original research work. If you would like to contribute to this celebration of science by young persons, please contact Susan Booth, VJAS Director, at susanscience@msn.com or at (757) 874-3349. Judges are needed in Agriculture & Animal Science, Animal Behavior, Botany, Chemistry, Computer Science, Consumer Science, Earth & Space Science, Engineering, Environmental Science, Genetics & Cellular Biology, Mathematics, Medicine & Health, Microbiology, Physical Science, Physics, Psychology, Statistics, and Zoology. General information on the VJAS meeting can be found at the Virginia Junior Academy of Science website: www.vjas.org.

CHEMISTS CELEBRATE EARTH DAY (CCED)

The ACS will be participating in Earth Day through the Chemists Celebrate Earth Day (CCED) program. This will be the eighth year for CCED. The theme this International Year of Chemistry is "Energy". The Virginia Section will participate with a celebration on Saturday, April 9 at the "Fool for Art!" event on the Midlothian campus of John Tyler Community College, 800 Charter Colony Parkway, Midlothian, Virginia. There will be a Celebrate the Earth tent filled with fun activities relating to the Earth. Events will also be held in the Richmond schools. Dr. Kristine Smetana will coordinate the CCED programs. Contact her for more information and to volunteer your support and assistance: kmetana@jtcc.edu. General information on CCED can be found at

www.acs.org/earthday.





CHEMISTRY SEMINARS AT THE UNIVERSITY OF VIRGINIA

- April 1 - **Dr. Cherie V. Miller**, U. S. Geological Survey, "Monitoring and Modeling Techniques to Evaluate Chemistry in Streams with Focus on Continuous Water Quality that Provide Insights into Urban Stream Processes on Short Temporal Scales" (**JEFFERSON LECTURE**)
- April 8 - **Professor Karen Goldberg**, University of Washington, "Reactions of Late Transition Metal Alkyl and Hydride Complexes with Molecular Oxygen"
- April 15 - **Professor Steve Benkovic**, Pennsylvania State University, "The Purinosome, Biochemistry in the Cell" (**HECHT LECTURE**)
- April 29 - **Professor Richard Brennan**, Duke University, "How Bugs Escape Drugs"

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

- April 5 - **Laura Shirtcliff**, Oklahoma State University
- April 14 - **Felicia Etzkorn**, Virginia Tech
- April 21 - **Professor Daniel Nocera**, Massachusetts Institute of Technology (**Mary Kapp Lecture**)
- April 28 - **John C. Poutsma**, College of William & Mary
- May 3 - **Dr. Adam Matzger**, University of Michigan

The 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 in Richmond. For more information, call (804) 828-1298.

A promotional poster for Sermacs 2011. The background is yellow with a blue and white graphic of a stylized atom or molecular structure. Text includes: "The Virginia Section Hosts...", "SERMACS2011", "Richmond, Virginia", "October 26-29, 2011", "Charting Chemical Connections", "ACS Chemistry for Life", "Rich in History", "Rich in Science", "Rich in Chemistry", "www.sermacs2011.org", "www.virginia.sites.acs.org", and "International Year of CHEMISTRY 2011".

ACS
Chemistry for Life

The Virginia Section Hosts...

Rich in History

Rich in Science

Rich in Chemistry

SERMACS2011

Richmond, Virginia

October 26-29, 2011

Charting Chemical Connections

www.sermacs2011.org
www.virginia.sites.acs.org

International Year of CHEMISTRY 2011

CHEMISTRY AT THE UNIVERSITY OF VIRGINIA

The University of Virginia Department of Chemistry is of medium size, combining outstanding physical facilities with a close-knit community of scholars. With a faculty size of 25, a graduate student body of about 95, and about 30 research associates, a stimulating atmosphere strongly encouraging interactive association has been created. Faculty research areas span a wide range offering a varied program of courses and research problems. Our 25 faculty members include professors who are nationally and internationally recognized in their fields. The list of recent honors received by faculty members includes the Distinguished Achievement Award in Proteomics from the Human Proteome Organization, the American Chemical Society's Award for Creative Work in Synthetic Organic Chemistry; Dreyfus Teacher-Scholar Awards for excellence in both teaching and research; Virginia Scientist of the Year awards, a Sloan Foundation Award, Alexander von Humboldt Research Prizes, an Analytical Chemistry Award in Chemical Instrumentation, a Presidential Early Career Award for Scientists and Engineers, a Coblentz Award, and a MacArthur Genius Award. Recent graduate student national fellowship awards include the Cognis Corporation Research Fellowship in Colloid and Surface Chemistry, the ACS Division of Medicinal Chemistry Predoctoral Fellowship Award, The Lilly Foundation Graduate Fellowship, The Science Application International Corporation Award and the Achievement Reward for College Scientists.

The goal of graduate study in chemistry is to develop outstanding young scientists able to make significant contributions in their chosen fields. A graduate student can expect to have considerable input in both the design of his or her own degree program as well as in matters pertaining to the operation of the Department as a whole. Emphasis is placed on research that contributes to our fundamental body of knowledge. Also important is the exceptional opportunity to interact not only with fellow graduate students, research associates and faculty, but also with outstanding scientists from all parts of the country and world. This participation in the forefront of scientific discovery prepares the student for the role of independent contributor to the scientific community.



Teaching and research in the Department of Chemistry have been considerably strengthened in recent years by a number of interdisciplinary centers and programs including Molecular Biophysics, Structural Genomics, Chemical Physics, Membrane Bound Proteins, Microfluidics, Biomedical Engineering, Neurosciences and Chemistry of the Universe. These programs, along with ongoing research in analytical methods, synthetic inorganic and organic chemistry, spectroscopy and other areas of physical chemistry, provide the student with a choice of strong research areas over a broad range of the chemical sciences. The faculty attracts more than \$11 million yearly in outside funding to support these programs, an indicator of the vigor of research being carried out in the Department.

The graduate program is further supported by an extensive library system. The Barksdale Chemistry Library, established by private gifts provides fundamental references and resources. Most major journals and data bases are available on line. Graduate students are entitled to keys to the building and to the library for research and reading. Alderman Library has more than 1.6 million books as well as extensive collections of manuscripts, maps, prints, and microfilms. The Science and Engineering Library, the large library of the Medical School, and the Physics Library contain numerous additional books and journals in chemistry and allied fields.

REPORT ON THE FEBRUARY SECTION MEETING

On February 25, over 80 persons savored a delicious meal and enjoyed an interesting and informative commentary on their repast. The February meeting of the Virginia Section was held at Randolph-Macon College in Ashland. Dr. April Marchetti of the RMC Department of Chemistry hosted the meeting and greeted the visitors. Ms. Jessica Armstrong, a senior chemistry major at Randolph-Macon from King George, Virginia, introduced the speaker, Dr. Brian Moores. Dr. Moores provided commentary before and during the delicious meal that was prepared by Chartwell's, the food service at RMC. He acknowledged Jamie Gulden, the Executive Chef who prepared the meal, and Meloyde Dunlap-Scott, the Director of Catering. Dr. Moores discussed the nature of hot peppers, the baking of bread, caramelization, and chocolate, relating the food science to some of the dishes that were served—roasted peppers, fresh bread, prime rib with caramelized onions, and chocolate pavé. Denise Walters won the food quiz and received a copy of Michael Pollan's book, "In Defense of Food" (Dr. Moores provided the book). At the close of the meeting, two door prizes were awarded. Steven Johnson and John Keller, Jr. Each received a copy of the cookbook "The Secrets of Cooking Revealed, by Shirley O. Corriher. The door prizes were provided by the Randolph-Macon Department of Chemistry.

Dr. Moores states that he was very pleased at the turnout and at the amazing variety of people who attended the talk, including a religious studies faculty member and his wife. Brian says "Everyone loves to talk and hear about food, it seems." He also provided information on local farmer's markets and fresh food co-op services. He works with the Local Roots Food Co-op; another in the area is the Fall Line Farms Co-op. Check this website to join a local co-op or order food:

<http://www.luluslocalfood.com/>. For information on farmer's markets, see www.buylocalvirginia.org.



Roasted Peppers



Stephanie Mabry Presents the Jefferson Cup to Brian Moores



Dr. Moores Samples the Prime Rib



Dr. Moores with Steven Johnson



John Keller, Jr. and Dr. Moores



Denise Walters and Dr. Moores

CAN YOU IDENTIFY THESE PERSONS?



The photo is from 1997 when the mother in this family shot received the Virginia Section's award for Distinguished Service in High School Chemistry Teaching. This may be the only family with two members having received Distinguished Service Awards—the father received the Section's Distinguished Service Award in 1993. In 1997, the high school teacher was teaching chemistry at Powhatan High School. She holds a B.S. degree from Virginia Commonwealth University. The couple have three children, one of whom is shown in the photograph.

The "mystery person" in the February issue was Betsy Ameen who received the Distinguished Middle School Science Teacher Award in 2002.



QUESTIONS FROM THE PAST

This question was asked in the March Bulletin: Dr. Joseph Crockett, Professor of Chemistry and Department Chair at Bridgewater College, is now serving as Vice Chair of the Virginia Section. He held the position of Chair for part of 1990 and for all of 1991. But he was not the first Crockett to serve as Chair of the Virginia Section. **Who was the "other" Crockett and when was he or she the Section Chair?** Dr. W. G. Crockett was the chairman of the Virginia Section in 1930. He was a Professor of Pharmacy at the Medical College of Virginia. His education included Tazewell High School, the Randolph-Macon Academy in Bedford, Hampden-Sydney College, New York University, and Columbia University (Doctor of Pharmacy degree). He worked as a chemist with the Department of Health of the City of New York, at E. R. Squibb and Sons in Brooklyn, and at E.I. duPont in Wilmington. He was a Professor of Pharmacy at Baylor University before joining MCV in 1920. Joe Crockett, Vice Chair of the Section for 2011, does not believe that he is related to W. G. Crockett, but does note that both Crocketts graduated from Hampden-Sydney College.

A new question: The Virginia Section normally gives a half-price subsidy on dinners at meetings for students. This practice began at a meeting held on February 12 at the University of Richmond. **In what year did the student subsidy begin?**

ASSISTANCE NEEDED WITH SECTION COMMUNICATIONS

The Virginia Section provides information to its members through a variety of means, including the Section newsletter (the Bulletin), the Section website (<http://www.sites.virginia.acs.org/>), and e-mail messages. Assistance is needed in providing these and other types of communication services. Please volunteer to help out a few hours a month. We can use help in gathering information, writing articles, editing, proofreading, website development and maintenance, electronic mail, and social and professional networking. Please contact us if you are willing to assist the Section in these important activities: James Beck, 1977 Vesonder Road, Petersburg, VA 23805; (804) 733-5286; beckjd1977@comcast.net.

WORDS OF WISDOM FOR APRIL: "Those Who Have Good Reason To Brag Never Need To"

NOMINATIONS FOR AWARDS

The Virginia Section is soliciting nominations for these awards: Distinguished Service Award, Outstanding High School Chemistry Teacher Award, Outstanding Middle School Science Teacher Award, Outstanding Elementary School Science Teacher Award, Outstanding Industrial Innovator Award. Names of candidates should be forwarded to Yezdi Pithawalla or Sheryl Baldwin, Chairs of the Awards Committee: Sheryl Baldwin, (804) 353-5805, [sdbaldwin @ earthlink.net](mailto:sdbaldwin@earthlink.net); Yezdi Pithawalla, (804) 274-4587, [yezdi.b.pithawalla @ altria.com](mailto:yezdi.b.pithawalla@altria.com).

ACS WEBINAR EVENTS

ACS Webinars is a weekly online event serving to connect ACS members and other scientific professionals with subject matter experts and global thought leaders in chemical sciences, management, and business. Webinars are free to ACS members. The live webinars are held on Tuesdays and Thursdays from 2:00 to 3:00 p.m. E.T. Recordings of past seminars are available online. The schedule of upcoming events can be found at <http://acswebinars.org/events>.

April webinars:

April 5 - **Successfully Working with Recruiters — Do's and Don'ts** - Patrick Ropella

April 7 - **Optimizing the Workplace Across Five Generations of Science** - Tamara Erickson

April 14 - **Me Too Drugs: R&D Innovations or Imitations?** - Joseph DiMasi

April 21 - **Is Being an Entrepreneur/Innovator Your Cup of Tea?** - Judith Giordan

April 28 - **The Chemistry of Wine** - Ariel Fenster

For general information on the ACS webinar program, contact Tanya Fogg, ACS Department of Member Communications, (202) 872-6191; [t_fogg @ acs.org](mailto:t_fogg@acs.org).

ELECTRONIC DELIVERY OF BULLETIN

The Bulletin is available online at the Virginia Section website: <http://www.virginia.sites.acs.org/>. Section members for whom we have a correct e-mail address will receive e-mail notification when the current issue is available for viewing. Be sure that your e-mail address is up-to-date and that any spam filter on your system will not block e-mail from beckjd1977@comcast.net. If you prefer to receive paper copies, please send your current address to James Beck, 1977 Vesonder Road, Petersburg, VA 23805 or by e-mail to beckjd1977@comcast.net.

RECOMMENDED READING ON FOOD

Dr. Brian Moores, who spoke at the February meeting on "Chemistry in the Kitchen," recommends these books:

Food Science: Harold McGee, *On Food and Cooking: The Science and Lore of the Kitchen* (2004)
Healthy Eating: Michael Pollan, *Food Rules: An Eater's Manual* (2009)
Cookbook: Shirley O. Corriher, *Cookwise: The Hows and Whys of Successful Cooking* (1997)

THE BULLETIN

Published eight times a year by the
American Chemical Society
Virginia Section

Science Museum of Virginia
2500 West Broad Street
Richmond, VA 23220
<http://www.virginia.sites.acs.org/>

address service requested

NON-PROFIT ORGN.

**U.S. POSTAGE
PAID**

**Richmond, Virginia
Permit No. 1231**

OFFICERS OF THE VIRGINIA SECTION OF THE ACS

Chair - Dr. Stephanie Mabry (804) 639-6991



**Stephanie
Mabry**

Chair Elect - Dr. Karen Carter (804) 521-7369
Vice Chair - Dr. Joseph Crockett (540) 828-5431
Secretary - Dr. Rob Davidson, (804) 788-6327
Treasurer - Dr. Bradley Norwood (804) 271-5572, ext. 307
Bulletin Editor - Dr. James Beck (804) 733-5286
Bulletin Publisher - Dr. Will Lewis (804) 274-5869