



The Bulletin
of the
Virginia Section
AMERICAN CHEMICAL SOCIETY

JANUARY MEETING NOTICE

SCIENCE MUSEUM OF VIRGINIA

Richmond, Virginia

Friday, January 22, 2010

RECEPTION: **6:00 p.m.**
R. F. & P. Forum
Science Museum of
Virginia
2500 W. Broad Street

DINNER: **6:30 p.m.**
R. F. & P. Forum

PROGRAM: **7:30 p.m.**
R. F. & P. Forum

MENU: Chicken, Beef, and Vegetarian Grilled Teriyaki Kabobs, Rice Pilaf, Salad, Bread, Carrot or German Chocolate Cake, Coffee and Iced Tea

PRICE: Members/Guests - \$17.00; Students and High School Teachers - \$8.00;
Retired ACS Members/Spouses, Retired Teachers/ Spouses - \$12.00

DINNER RESERVATIONS: Please make reservations for the dinner by **NOON on Tuesday, January 19** by calling (804) 788-5280 or by e-mail to [stephanie.mabry @ aftonchemical.com](mailto:stephanie.mabry@aftonchemical.com)

HOST: Dr. Stephanie Mabry, (804) 788-5280; [stephanie.mabry @ aftonchemical.com](mailto:stephanie.mabry@aftonchemical.com)

SPEAKER: **Dr. Foster A. Agblevor, Virginia Tech**

TOPIC: **“Thermochemical Conversion of Biomass to Fuels and Chemicals: Advances in Pyrolysis”**

JANUARY 2010

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
	<i>reservations</i>				<i>meeting</i>	
24	25	26	27	28	29	30
31						

Dr. Foster A. Agblevor

Dr. Foster Agblevor is an Associate Professor in the Department of Biological Systems Engineering at Virginia Tech in Blacksburg. He is also an Adjunct Professor in the Department of Chemical Engineering at the Kwame Nkrumah University of Science and Technology in Ghana and the Coordinator of the Bioprocess Engineering program. He received a B.S. in Chemical Engineering from the Kwame Nkrumah University of Science and Technology in Kumasi, Ghana; an M.S. in Chemical Engineering and Applied Chemistry from the University of Toronto; and a Ph.D. in Chemical Engineering and Applied Chemistry from the University of Toronto. He did postdoctoral work at the Hawaii Natural Energy Institute of the University of Hawaii.



Prior to his employment at Virginia Tech in 1996, Dr. Agblevor was on the staff of the National Renewable Energy Laboratory in Golden, Colorado. His awards and recognitions include the Virginia Tech College of Agriculture and Life Sciences Excellence in Basic Research Award (2008); the Dean's Award for Excellence in Research (2008); Best Presenter of the Year Award from the National Renewable Energy Laboratory (1991); two Best Paper Awards at Gordon Conferences (1991, 1993); and a U.S. Department of Energy Special Achievement Award (1991). His research involves the thermochemical and biochemical conversion of biomass to fuels and chemicals. He is currently working on the fractional catalytic pyrolysis of energy crops and agricultural residues such as poultry litter in order to produce biooils. Dr. Agblevor has numerous publications and holds eight patents on biomass conversion.

“Thermochemical Conversion of Biomass to Fuels and Chemicals: Advances in Pyrolysis”

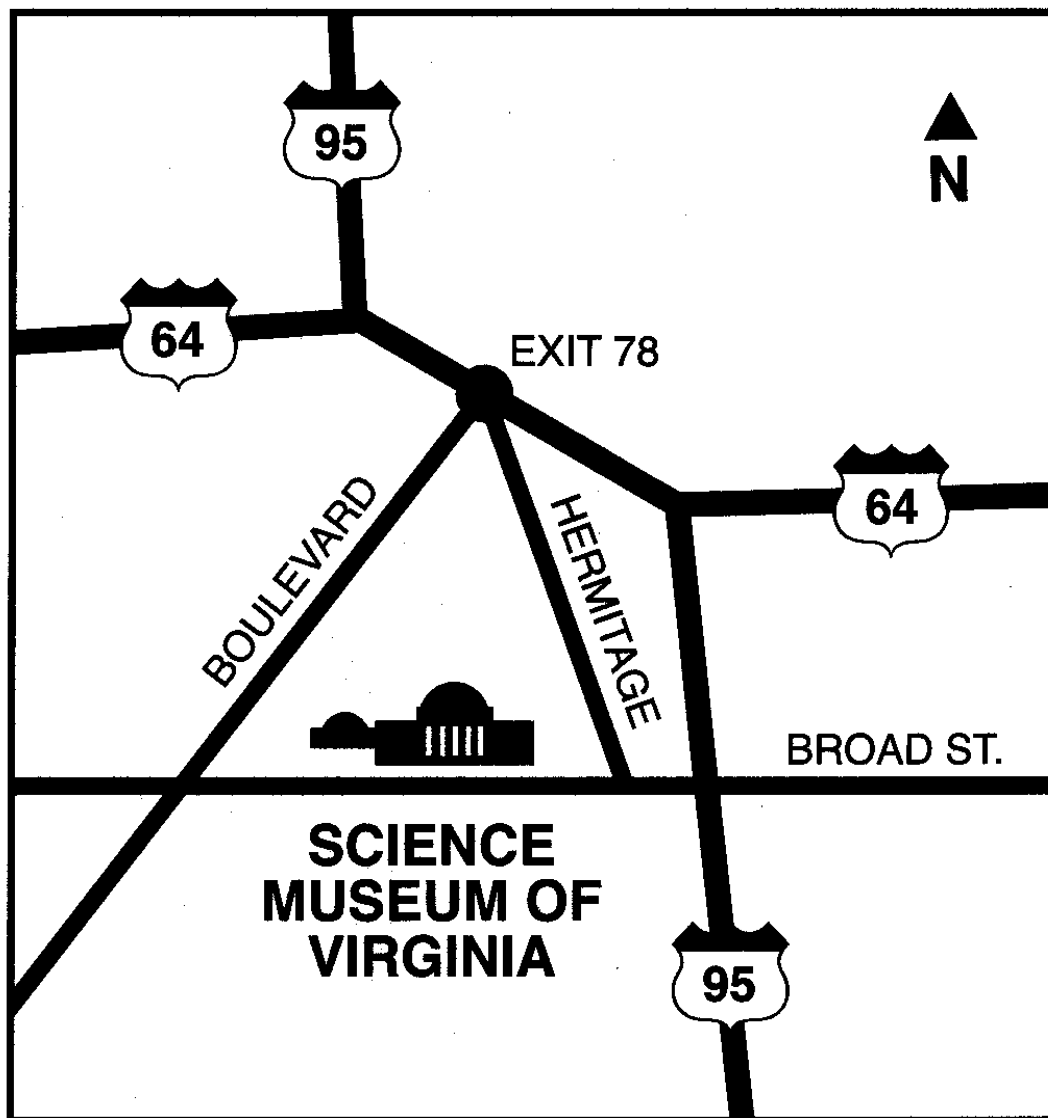
Fast pyrolysis of biomass is one of the promising technologies being researched worldwide for renewable fuels and chemicals production. Pyrolysis is a thermal treatment process in the absence of oxygen, either in vacuum or non-oxidizing gas atmosphere. This technology has been studied extensively for the conversion of biomass feedstocks into liquid, solid, and gaseous products. The traditional slow and low temperature biomass pyrolysis is used for charcoal production. For gas production, pyrolysis temperatures are very high, the process is slow and either steam or low fraction of air is introduced in the reactor to aid in the gasification process.

For the generation of liquid products the pyrolysis process has been modified to avoid thermal cracking of the primary biomass decomposition products. These modifications involve mostly reactor configurations, which result in different residence times of the pyrolysis vapors in the high temperature zones and thus minimizing the cracking of the products. Most liquid production processes are termed rapid pyrolysis because the residence time of the pyrolysis vapors in the reaction zone is less than five seconds. The liquid products from this conversion process are called bio-oils, biocrude oils or pyrolysis oils. The major reactor types include bubbling fluidized bed reactor, entrained flow reactor, vortex reactor, vacuum pyrolysis reactor and recently the rotating cone reactor. Each of these reactors produces pyrolysis oils with distinctive properties.

In general, most biomass pyrolysis oils are acidic and corrosive and are composed of a complex mixture of organic compounds. Because of this complexity, these oils do not lend themselves readily to traditional petrochemical processing methods such as cracking, distillation, hydrogenation, fractionation and many others. These oils require specialized processing methods to convert them into high value products.

Recent advances in biomass pyrolysis include the introduction hot gas filtration technology which helps in improving the stability of some oils. In other cases, the alcohols have been used to reduce viscosity and stabilize the oils. We have developed new innovations such as fractional catalytic pyrolysis which fractionates the biomass pyrolysis vapors in situ. The above rapid biomass pyrolysis technologies and applications of pyrolysis oils will be discussed in this presentation. In addition, emphasis will be laid on the new frontiers in the development of pyrolysis oils and their future potential in the global energy equation.

MAP AND DIRECTIONS



The Science Museum of Virginia is located in mid-town Richmond, Virginia, at 2500 West Broad Street in the historic Broad Street Station designed by renowned architect John Russell Pope. The Science Museum of Virginia is easily reached via Interstate 95 and Interstate 64.

From the north or west: Take I-95 South or I-64 East to Richmond (I-95 and I-64 run together through Richmond). From I-95, take the Boulevard exit (# 78), bear right onto Boulevard. Take Boulevard to West Broad Street (US 250) (4th traffic light). Turn left onto West Broad Street and go two blocks. The Science Museum is on your left.

From the south or east: Take I-95 North or I-64 West to Richmond (I-95 and I-64 run together through Richmond). From I-95, take the Boulevard exit (# 78) and bear left onto Hermitage Rd. Take Hermitage south for 1.3 miles to West Broad Street (US 250). Turn right onto West Broad St. and proceed for one half mile. The Science Museum is on your right.

There is ample free parking adjacent to the museum.

VIRGINIA SECTION NEWS

FUTURE MEETINGS

DATE: February 26, 2010
LOCATION: University of Richmond
 Richmond, VA
HOST: Dr. Raymond Dominey
PHONE: (804) 289-8761
E-MAIL: rdominey @ richmond.edu
SPEAKER: **Dr. Kenneth H. Pearce**
TOPIC: "Chemical-Biological Interfaces
 in Endocrinology: Nuclear
 Receptors, Modulating Ligands,
 and Drug Discovery"
(POWELL LECTURESHIP)

DATE: March 26, 2010
LOCATION: James Madison University
 Harrisonburg, VA
HOST: Dr. Barbara Reisner
PHONE: (540) 568-3460
E-MAIL: reisneba @ jmu.edu
SPEAKER: **Dr. Dan Rabinovitz**
TOPIC: "Chemistry in Stamps"

DATE: April 23, 2009
LOCATION: University of Virginia
 Charlottesville, VA
HOST: Dr. James Demas
PHONE: (434) 924-3343
E-MAIL: demas @ virginia.edu
SPEAKER: **Dr. Charles Grisham**
TOPIC: "Bizarre Biochemistry"

EXECUTIVE COMMITTEE MEETING

The Virginia Section Executive Committee will meet at 6:00 p.m. on Friday, January 29 at the Downtown Campus of J. Sargeant Reynolds Community College, 7th and Leigh Streets in Richmond. The meeting will be in Room 662. A light dinner will be served prior to the business meeting. See the Section website for full directions and the meeting agenda—<http://membership.acs.org/V/VA/>. Additional information on the Executive Committee and on the meeting can be obtained from the Section Chair, Dr. Yezdi B. Pithawalla, (804) 335-2301; yezdi.b.pithawalla @ altria.com. Officers and committee chairs are reminded to bring 40 copies of their reports for distribution and to e-mail electronic versions of their reports to Ann Sullivan at asullivan @ reynolds.edu. The meeting is open—members of the Section are invited to attend.

THE AMERICAN INSTITUTE OF CHEMICAL ENGINEERS

The January 22 meeting of the Virginia Section of the American Chemical Society will be a joint meeting with the Tidewater Virginia Section of the American Institute of Chemical Engineers (AIChE). The AIChE was founded in 1908; it is a professional association of more than 40,000 members that provides leadership in advancing the chemical engineering profession. Its members are creative problem solvers who use their scientific and technical knowledge to develop processes and design and operate plants to make useful products at a reasonable cost. Chemical engineers are also at the forefront of research to assure the safe and environmentally-sound manufacture, use, and disposal of chemical products. AIChE fosters and disseminates chemical engineering knowledge, supports the professional and personal growth of its members, and applies the expertise of its members to address societal needs throughout the world. The national AIChE website is www.aiche.org.

The mission of the AIChE is to:

promote excellence in chemical engineering

- education and global practice;
- advance the development and exchange of relevant knowledge;
- uphold and advance the profession's standards, ethics and diversity;
- enhance the lifelong career development and financial security of chemical engineers through products, services, networking, and advocacy;
- stimulate collaborative efforts among industry, universities, government, and professional societies;
- encourage other engineering and scientific professionals to participate in AIChE activities;
- advocate public policy that embraces sound technical and economic information and that represents the interest of chemical engineers;
- facilitate public understanding of technical issues; and
- achieve excellence in operations of the Institute.



The Tidewater Virginia section of the AIChE covers the eastern portion of Virginia from just west of Richmond to the Atlantic Ocean and from Fredericksburg to the North Carolina state line. Formed in 1953, it currently has about 100 dues-paying members. The Tidewater website is www.aicheva.org and is hosted by the Virginia Commonwealth University School of Engineering: www.engineering.vcu.edu/twvaiche. For more information on the AIChE, contact any of the officers who are listed on contact page of the website. The current president of the Tidewater AIChE Section is Stan Sebastian: [Stan.Sebastian @ boeringer-ingelheim.com](mailto:Stan.Sebastian@boeringer-ingelheim.com).



Happy New Year!



A LOOK BACK BY THE PAST-CHAIR

Looking back on my year as Virginia Section Chair, I am disappointed that I did not accomplish much of what I wished to do. I expected to have more time to devote to Section business than I could muster. Most Past-Chairs probably have similar regrets. Yet, the Section had great accomplishments. We completed our 25th year of Chemistry Olympiad participation. National Chemistry Week was celebrated in grand fashion at the Virginia Science Museum. We gave awards to accomplished researchers and educators. We received outstanding newsletters, as usual. We traveled around our area for effectively conducted and informative Section meetings. We made admirable progress in preparing for SERMACS 2011.



All the above was accomplished by our outstanding volunteers serving as committee chairs, most of whom work year after year at their Section jobs with little acknowledgment except when things go wrong, which seldom happens. These volunteers need your help. Most would appreciate having an individual who could serve as an assistant preparing to take over the job. Several need many aides at program presentation time. A new volunteer may have some difficulty finding the right niche and may need to explore a variety of possibilities. Be persistent. The rewards may be direct and immediate, such as the surprise of a child and a parent over the demonstration of a chemical reaction. Or you may gain new skills that will help on your present or future work. Contact the appropriate committee chair or an officer for the initial contact. If the first contacts do not work out satisfactorily, try again. The opportunities are many.

Thanks for reading and considering the opportunities.

...Ken Chapman
Past-Chair, ACS Virginia Section

REPORT ON THE NOVEMBER SECTION MEETING

On November 13, 2009, the Virginia Section meeting was held in the Jepson Science Center at the University of Mary Washington in Fredericksburg. Dr. Catherine Fenselau of the University of Maryland spoke on "New Methods for Proteomics." Dr. Fenselau was introduced by the President of the ACS Student Affiliate Chapter at UMW. Thanks to Dr. Roy Gratz and his colleagues and students at the University of Mary Washington for organizing and hosting this meeting of the Section.

2010 CHEMISTRY OLYMPIAD

The Virginia Section will host the 2010 Chemistry Olympiad for all high school chemistry teachers and students who are interested in participating. The Local Section competition will involve first and second year chemistry examinations given during March. The students who do well in the Local competition will be nominated to take the National Examination on April 24 and to compete for 20 positions in the study camp at the US Air Force Academy in Colorado. The five member International Chemistry Olympiad (IChO) team will be chosen from these 20 students and will compete in the IChO, to be held in Tokyo, Japan, July 19-29, 2010. For more information and the application forms, either hard copy or on-line, go to the Virginia Section Chemistry Olympiad site at <http://membership.acs.org/VVA/olympiad/default.htm>. Dr. Ann Sullivan is the coordinator for the Chemistry Olympiad in the Virginia Section. Note that **February 22, 2010** is the deadline to register students for the Examination Locations.

VIRGINIA SECTION OFFICERS FOR 2010

CHAIR:	Dr. Yezdi B. Pithawalla Altria Client Services 4203 Commerce Road Richmond, VA 23284	(804) 335-2301 FAX: (804) 274-2755 yezdi.b.pithawalla @ altria.com
CHAIR-ELECT:	Dr. Stephanie Mabry Afton Chemical 500 Spring Street Richmond, VA 23219	(804) 639-6991 stephanie.mabry @ verizon.net
VICE CHAIR:	Dr. Karen Carter Commonwealth Biotechnologies, Inc. 601 Biotech Drive Richmond, VA 23235	(804) 521-7369 kcarter @ cbi-biotech.com
SECRETARY:	Trish Lauck 7801 Halyard Court Chesterfield, VA 23832	(804) 504-8593 trish.lauck @ gmail.com
TREASURER:	Dr. Bradley K. Norwood Arista Laboratories 1941 Reymet Road Richmond, VA 23237	(804) 271-5572 ext. 307 brad.norwood @ aristalabs.com

The term for each of the officers listed above is one year. **Dr. Patrick Barber** was elected to a three-year term as a Councilor; **Dr. Kristine Smetana** was elected to a three-year term as Alternate Councilor; and **Dr. William Welstead** was re-elected as Trustee for another three-year term. The new officers began their terms on January 1, 2010.

QUESTIONS FROM THE PAST

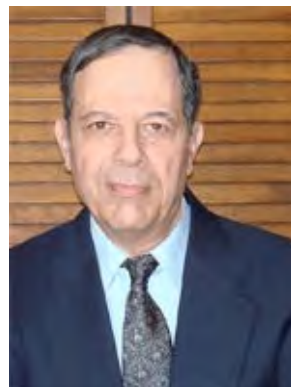
This question was asked in the December Bulletin: The Virginia Section has recently created a new Project SEED Committee. The Section has been involved in Project SEED before. The first Project SEED Committee was established in 1971 as a Subcommittee on the Education and Employment of the Disadvantaged. They conducted a pilot program involving six industries and the Richmond Public Schools. Seven persons represented the Section and the industries in conducting twelve meetings at Richmond high schools. Sixty-six students and twelve teachers participated in the program. **Who was the Chair of that first Project SEED committee?** Franklin D. Kizer was Chair of the Subcommittee on the Education and Employment of the Disadvantaged in 1971. Frank was the Chair of the Virginia Section in 1976 and received its Distinguished Service Award in 1978. He was the first person to be awarded both the Distinguished Service Award (1978) and the Distinguished Service Award for High School Chemistry Teaching (1955). Frank and his wife Helen reside in Lancaster County.



A new question: Dr. Roger Adams was the President of the American Chemical Society when he spoke to the Virginia Section in a meeting held on January 21 at the Medical College of Virginia. That same month, Dr. Harold C. Urey was the speaker at another meeting that was held at the Richmond Academy of Medicine. **In what year did these two distinguished chemists visit the Virginia Section?**

ANTHONY BIMBO RECEIVES AWARD

Mr. Anthony Bimbo has been selected to receive the 2009 Industry Excellence Award from the Global Organization for EPA and DHA Omega-3s (GOED). The GOED Board of Directors is honoring Mr. Bimbo for his more than 47 years of experience in fish oils and for his unparalleled impact on the industry. He has worked as a consultant for many years, primarily dealing with manufacturers of omega-3s and other lipids. He worked for Zapata (now known as Omega Protein) for over 33 years and helped establish one of the first fish oil refineries in the United States in Reedville, Virginia. He has been active in many industry associations, including IFOMA, which is now part of IFFO (International Fishmeal and Fish Oil Organization). He was co-chairman of the U.S. Menhaden Task Force that obtained GRAS affirmation for menhaden oil from the U.S. FDA. Mr. Bimbo has co-authored more than 35 technical articles and 11 book chapters. He has been a member of the ACS for more than 43 years and lives in Kilmarnock, Virginia.



GOED is an association of the world's finest processors, refiners, manufacturers, distributors, marketers, retailers, and supporters of products containing Eicosapentaenoic Acid (EPA) and Docosahexaenoic Acid (DHA) Omega-3 Fatty Acids. For more information on GOED and on Mr. Bimbo's award, visit the GOED website: www.goedomega3.com.

BOEHRINGER INGELHEIM SPONSORS TEACHER AWARDS

The Virginia Section's 2009 awards to outstanding teachers were sponsored by Boehringer Ingelheim. The Section gratefully acknowledges their financial support. BI Chemicals has a large production facility in Petersburg and other facilities in both Petersburg and Richmond. Dr. Joseph Pompano, Senior Analytical Chemist at Boehringer Ingelheim Chemicals in Petersburg and Mr. Charles (Trey) Gregory, a Chemist in the Quality Control Division at BI Chemicals, are both Past Chairs of the Virginia Section. Dr. Kai O. Donsbach of Boehringer Ingelheim Chemicals received an Outstanding Innovation Award from the Virginia Section in September, 2007 and the BI Chemicals CAPIC Synthesis Team received the Section's Industrial Innovation Award in 2002.

WORDS OF WISDOM FOR JANUARY : **“If You
Have Hope, You Have Everything”**

REPORT ON DECEMBER SECTION MEETING

The December, 2009 meeting of the Virginia Section was held at Virginia Union University in Richmond on December 4. Mr. Ken Chapman, 2009 Chair of the Section, presided. He introduced Dr. Ann Sullivan, Director of the Chemistry Olympiad for the Virginia Section, who presented the group awards for the 2009 Olympiad. For the first-year examination, St. Stephen's and St. Agnes' School won in the small school category and Maggie Walker Governor's School took first place in the large school category. The awards for the second-year examination went to the Collegiate School (small school category) and to Albemarle High School (large school category). Susan Foumess received the plaque for the Collegiate School and Marvin Curry accepted the award for Albemarle High School.

Dr. William Rademaker, Chair of the Teacher Awards Committee, presented the recipients of the 2009 awards for excellence in science teaching. The Distinguished High School Chemistry Teacher Award was given to Mr. Wesley James who teaches chemistry at Washington & Lee High School in Westmoreland County. Mr. James was introduced by Dr. Joseph Pisani, Principal of Washington & Lee. Ms. Denise Yvette Stanton received the Distinguished Middle School Science Teacher Award. She teaches science at Elkhardt Middle School in Richmond. Ms. Stanton was introduced by Mr. Eric Jones, Principal at Elkhardt School. Each teacher award recipient received a plaque and a check for \$300.

The featured speaker was Dr. Thomas H. Epps, III of the University of Delaware. Dr. Epps spoke on "Using Block Copolymers to Create Functional Nanomaterials." He was introduced by Dr. James Beck, Editor of the Virginia Section Bulletin. Dr. Beck noted that Dr. Epps grew up in Chesterfield County where he attended Manchester High School before attending the Massachusetts Institute of Technology and the University of Minnesota. Dr. Epps' parents were also recognized. Dr. Thomas Epps, Jr. is a retired Professor of Chemistry from Virginia State University and Dr. Ruth Epps is a Professor of Accounting at Virginia Commonwealth University.



The Virginia Section extends sincere thanks to Dr. Dorothy Eseonu and her students and colleagues at Virginia Union University for hosting this excellent meeting.



Mr. Wesley James
Ms. Denise Stanton



Dr. Ann Sullivan
Ms. Susan Foumess



Dr. Ann Sullivan
Mr. Marvin Curry



Dr. Thomas Epps, Jr.
Dr. Thomas Epps, III
Dr. Ruth Epps



The Science Museum of Virginia (in Richmond) has, since 1977, occupied the building that opened in 1919 as a railroad station for use by several railroads. The current mission of the SMV is:



- to deepen our understanding of man and his environment;
- to promote a knowledge of the scientific method and thus encourage objectivity in the everyday affairs of man;
- to engage in instruction and research in the sciences in order to educate citizens of all ages in the concepts and principles of science and how these concepts and principles form the foundation upon which rests our technological society and its economy;
- to use, subject to the approval of the accredited educational facilities concerned, Museum personnel in educational programs;
- to motivate and stimulate young people to seek careers in science;
- to encourage an understanding of the history of scientific endeavor;
- to provide special facilities and collections for the study of Virginia's natural resources; and,
- to foster a love of nature and a concern for its preservation.

The Science Museum features a great variety of continuing exhibits as well as special exhibitions and programs. Live theater is presented in the Carpenter Science Theater, the planetarium shows highlight many night sky events, and outstanding films are shown on the IMAX DOME. The Museum sponsors many programs for all age groups. For more information, including a schedule of events, check out the Museum's website: www.smv.org.

VOLUNTEERING AT THE SCIENCE MUSEUM

Share the excitement of science and technology! Join the volunteer team and help bring the Science Museum of Virginia and the Virginia Aviation Museum to life! High school students to retirees share their time and talents in numerous positions throughout the museums. Volunteers are committed to personal growth and a love of learning. Additional benefits enjoyed include:

- Free admission to exhibits and IMAX@DOME films;
- Free Individual Membership for volunteers who give a minimum of 100 hours per year;
- Invitations to museum special events and adult educational programs;
- Service recognition at annual volunteer recognition awards dinner and presentation;
- Letter of reference.

To become a part of this outstanding group of volunteers, call Beth Voelkel at (804) 864-1511. Adult and student volunteer applications are available on the Museum website: www.smv.org.

ROALD HOFFMAN TO APPEAR AT SCIENCE MUSEUM

Dr. Roald Hoffmann, Nobel-prize winning chemist, playwright, and poet, will present a special show at the Science Museum of Virginia in Richmond on **February 20 and 21**. The "Afternoon with Roald Hoffman" programs will feature readings by Dr. Hoffman from his plays, poetry, and essays; he will answer questions following the performances. Dr. Hoffmann spoke to the Virginia Section at the Powell Lectureship in February, 2008 at U of R.



CAN YOU IDENTIFY THIS PERSON?



The photograph is from 1972 when the subject, whose first name is William, was elected for another term as Councilor of the Virginia Section. He served as Councilor for many years and was chair of the Section in 1964. At the time of this photograph, he was chairman of the Department of Chemistry at the University of Richmond. In addition to his devoted service to the ACS, he was active in the Virginia Academy of Science, Gamma Sigma Epsilon, and Phi Beta Kappa.

The persons in the December 2009 Bulletin were Dr. R. Gerald Bass and Dr. Alfred R. Armstrong. Each received a Distinguished Service Award from the Virginia Section (Armstrong in 1972 and Bass in 1979).



CHANGE IN SECTION WEBSITE

The address for the Section website is expected to change soon. At this time we do not have the new location. Please continue to access the Section at the old site: <http://membership.acs.org/VVA/>. If you are not redirected to the new site, you may be able to find the new url on Ann Sullivan's website: <http://staff.jsr.vccs.edu/asullivan/>. If all else fails, send an e-mail to the Editor: beckjd1977 @ comcast.net.



CHEMISTRY SEMINARS AT THE UNIVERSITY OF VIRGINIA

- Jan. 22 - **Professor Ralf Kaiser**, University of Hawaii, "Reaction Dynamics in Extreme Environments - Titan's Atmosphere as a Case Study"
- Jan. 29 - **Dr. Jim Werner**, Los Alamos National Laboratory, "Confocal, 3D Tracking of Single Quantum Dots: Examination of 3D Cell Membrane Topology"
- Feb. 5 - **Professor Melanie Sanford**, University of Michigan, "Catalytic C-H Functionalization: Interplay Between Catalyst Design and Mechanism"
- Feb. 19 - **Professor Loren Williams**, Georgia Institute of Technology, "RNA: Still Folding After All These Years"

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/>.

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://membership.acs.org/V/VA/>

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. Yezdi Pithawalla (804) 335-2301



***Yezdi
Pithawalla***

Chair-Elect - Dr. Stephanie Mabry (804) 639-6991
Vice Chair - Dr. Karen Carter (804) 521-7369
Secretary - Ms. Trish Lauck (804) 504-8593
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

