



The Bulletin
of the
Virginia Section
AMERICAN CHEMICAL SOCIETY

SUMMER 2015 ISSUE



THE 100th ANNIVERSARY GALA

On October 24, 2015, the Virginia Section of The American Chemical Society will celebrate its 100th anniversary with a gala dinner and program featuring Dr. Diane Grob Schmidt, President of the ACS. There will be a pre-dinner social, special awards and recognition, historical recollections, displays, and a grand anniversary cake! Mark your calendar now and plan to be present as we celebrate the achievements of the Virginia Section during the past 100 years.

Saturday, October 24, 5:30 p.m.

DoubleTree by Hilton
1021 Koger Center Boulevard
Richmond, Virginia 23235

Look for more information in the September Bulletin and on the Section website:
<http://virginia.sites.acs.org/>.



Diane Grob Schmidt
2015 President
American Chemical Society

VIRGINIA SECTION MEETING
FRIDAY, SEPTEMBER 18, 2015
VIRGINIA COMMONWEALTH UNIVERSITY
RICHMOND, VIRGINIA

Dr. Kate Yu, Waters Corporation,
“Detecting the Unnatural in
Natural Products: Adulteration of
Herbal and Dietary Supplements (HDS)”

Presentation of Teacher Awards



The September meeting will feature the presentation of the Section’s annual awards to outstanding teachers. Here are the 2015 recipients:



**The Franklin D. Kizer Distinguished High School
Chemistry Teacher Award:**

Paul Parker

Midlothian High School, Chesterfield County

The Distinguished Middle School Science Teacher Award:

Carrie Reardon

Manassas Park Middle School, Manassas Park



**The Distinguished Elementary School Science
Teacher Award:**

LoriAnn Pawlik

Penn Elementary School, Prince William County

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

R. GERALD BASS NAMED ACS FELLOW



Dr. R. Gerald (Jerry) Bass has been named a new ACS Fellow. He will be formally recognized at the fall meeting of the society, to be held in August in Boston. The Fellows program is a way to recognize and honor ACS members for outstanding achievements in and contributions to science, the profession, and ACS. The program began in 2009. In announcing the new Fellows, Dr. Diane Grob Schmidt, President of the ACS, said "I would like to thank the 2015 ACS Fellows for their service to the society and to chemistry. Their dedication has strengthened our field as well as our society, and their enthusiasm serves as an inspiration to other ACS members."



Jerry has been a member of the Virginia Section for over 57 years. He served on the Executive Committee for the Section from 1975 until his retirement at the end of 2013. Some of his contributions to the Section are listed below.

- Member of Organizing Committee for SERMACS 2011
- Co-Chair of Steering Committee for SERMACS 1991
- Chair of Registration Committee and Secretary for 1969 Southeastern Regional Meeting
- Councilor for Virginia Section - 1991-2013
- Section Chair (1972), Chair-Elect (1971), Vice Chair (1970), Secretary (1969), Treasurer (1968)
- Distinguished Service Award - 1979
- Other Section committees - Nominating, Entertainment, Hospitality



1968



1971



1985



1991



2005

ACS FELLOWS

The ACS Fellows program began in 2009 as a way to recognize and honor members for outstanding achievements and contributions to science, the profession, and ACS. The 78 members of the class of 2015 will be celebrated in a ceremony at the upcoming ACS national meeting in Boston. This will bring the total number of ACS Fellows to 937. Dr. R. Gerald Bass (see previous article) and Dr. Carol Parish from the Virginia Section will be among the new Fellows to be recognized in Boston. Their selection brings the total number of Fellows from the Virginia Section to seven. ACS fellows from the Section include:

Robert G. Bass - Department of Chemistry, Virginia Commonwealth University (2015)

Erik J. Fernandez - Department of Chemical Engineering, University of Virginia (2011)

Raphael M. Ottenbrite - Department of Chemistry, Virginia Commonwealth University (2013)

Carol A. Parish - Department of Chemistry, University of Richmond (2015)

Jeffrey I. Seeman - Department of Chemistry, University of Richmond (2011)

Linette M. Watkins - Department of Chemistry & Biochemistry, James Madison University (2014)

Kenneth J. Wynne - Department of Chemical and Life Sciences Engineering, Virginia Commonwealth University (2009)



Fernandez

Ottenbrite

Parish

Seeman

Watkins

Wynne

For more information on the ACS Fellows and for nominating information, check the ACS website <http://www.acs.org/content/acs/en/funding-and-awards/fellows.html> or send an email communication to fellows@acs.org

OUTSTANDING CHEMISTRY GRADUATES

At the April meeting, the Virginia Section recognized graduating seniors from colleges and universities within the Section. Schools in the Virginia Section were invited to nominate senior chemistry majors for this honor. Each student received a Certificate of Recognition and a copy of Sam Kean's book, *The Disappearing Spoon*. The outstanding students for the year 2015:

College/University

Bridgewater College
College of William & Mary
Eastern Mennonite College
Hampden-Sydney College
James Madison University
Longwood University
Mary Baldwin College

Student

Carrie Carter
Catherine F. Wise
Isaac King
Russell Lee Ayscue III
Joshua Temple
Savannah Barnett
Sophia Stone

Randolph-Macon College
 Shenandoah University
 University of Mary Washington
 University of Richmond
 University of Virginia
 Virginia Commonwealth University
 Virginia State University
 Virginia Union University

Henry Castillo
 Chad Smith
 Brook A. Andrews
 Katie Loundsbury
 Ziyi Fan
 Hannah Rodriguez
 Imani Wood
 Ernesto Blay

DR. SALLY HUNNICUTT RECEIVES AWARD

Dr. Sally Hunnicutt, Associate Professor and Associate Chair of the Department of Chemistry at Virginia Commonwealth University, has been selected to receive the VCU Distinguished Teaching Award for 2015. She will be honored at the Annual Faculty Convocation on August 18. Her chemical education research interests relate to the creation, use, and impacts of guided inquiry in different classroom environments. She is currently focusing on revising physical chemistry laboratory experiments to incorporate guided inquiry and examining the effects of those changes on faculty and students. The project is titled POGIL-PCL, Process Oriented Guided Inquiry Learning® – Physical Chemistry Laboratory. New experiments are developed collaboratively with physical chemistry faculty from across the United States at workshops, which take place at VCU. Dr. Hunnicutt received the Procter & Gamble ACS Division of Physical Chemistry Award in 1989 and the VCU College of Humanities & Sciences Teaching Award in 2012.



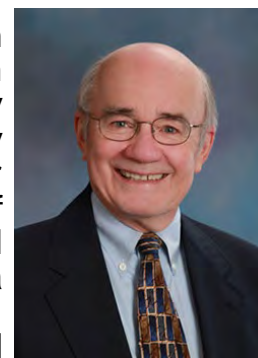
EVONIK INDUSTRIES OPENS RESEARCH CENTER



Evonik Industries, a German-based chemicals maker, has opened a new research and development center in Chesterfield County. The company has invested more than \$15 million to renovate a building in the Chesterfield Airport Industrial Park. The new business and innovation center now employs about 125 persons. Evonik makes speciality chemicals such as surfactants and additives for herbicides, fungicides, coatings, and paint. The company has a manufacturing plant in Hopewell.

GARDEN NAMED FOR BRIAN MOORES

Randolph-Macon College in Ashland has dedicated a native plant garden in honor of Dr. Brian Moores, Chemistry Professor Emeritus at R-MC. The Brian Wesley Moores Native Plant Garden, located at the corner of Smith and Henry Streets, was dedicated on April 26. At the dedication ceremony, Biology Professor Charles Gowan stated that “the garden is a fitting way to honor Brian, whose dedication to the stewardship of our Earth led to the creation of the Environmental Studies program at Randolph-Macon.” Dr. Moores joined the faculty at R-MC in 1971 and he has been an active member of the Virginia Section for over 40 years. He has given three talks at Section meetings, on topics as diverse as the Shroud of Turin, chemical demonstrations, and chemistry in the kitchen.





“Chemistry Colors our World!” An ACS Student Affiliate YouTube Video Contest

1st prize = \$150 2nd prize = \$100 3rd Prize = \$50

An ACS Student Affiliate Contest

The Product:

A YouTube video produced by an ACS student affiliate member communicating the relevance of chemistry in society using the theme of National Chemistry Week, “Chemistry Colors Our World.”

The Rules:

Eligibility: An ACS student affiliate member (no group videos) enrolled in a college located in the Virginia, Tidewater or Blue Ridge section as of fall 2015.

<http://www.acs.org/content/dam/acsorg/membership/ls/acs-local-section-map.pdf>

Video: The video provide must be a minimum of 5 minutes and a maximum of 10 minutes long using YouTube and providing the link as specified below by October 31st, 2015 at midnight.

Other Requirements: Students must provide their ACS ID number (to validate their student affiliate status) and a signed and scanned PDF copy of a release form. Student membership dues are \$27 without C&E news <http://www.acs.org/content/acs/en/membership-and-networks/acs/join/categoriesprocess.html>

Posting of Link and Documents: To share your YouTube video on our Facebook page, search: "Virginia Younger Chemists Committee - American Chemical Society." At the top in the "Write Post" section, copy and paste your *YouTube* video link. Message your ACS member ID and a scanned signed copy of your release form. The PDF release form file can be attached to your message by clicking "Add files." If you have any trouble posting to the *Facebook* page or any questions, please contact Kathleen Sink at kms2uu@virginia.edu.

Judging Criteria: (1) Connection to Theme (2) Scientific Accuracy (3) Simplicity to Communicate (4) Creativity

NEW FIFTY-YEAR MEMBERS OF THE ACS

Congratulations to these members of the Virginia Section who have been active in the American Chemical Society for fifty years:

FIFTY-YEAR ACS MEMBER	LOCATION
Dr. Donna S. Amenta	Harrisonburg
Dr. Leo A. Bares	Staunton
Dr. James D. Beck	Petersburg
Mr. Lee W. Chambers	Ashland
Dr. Jan F. Chlebowski	Richmond
Dr. Stewart E. Gloyer	Richmond
Dr. Jon D. Hartzler	Midlothian
Mr. Webster R. Hudgins	Prince George
Mr. John P. Huntington	Spotsylvania
Dr. Homan B. Kinsley, Jr.	Mobjack
Mr. Lance K. Knowles, II	Chester
Dr. Maurice H. Maxwell, Jr.	Farmville
Dr. Timothy F. Merkel	Winchester
Dr. Donald M. Plautz	Palmyra
Dr. Ralph J. Spohn	Williamsburg
Dr. David W. Thompson	Williamsburg
Mr. Gene C. Weedon	Richmond
Mr. Larry H. White	Harrisonburg
Dr. Jung W. Woo	Manassas

NEW SIXTY-YEAR MEMBERS OF THE ACS

Congratulations to these members of the Virginia Section who have been active in the American Chemical Society for sixty years:

SIXTY-YEAR ACS MEMBER	LOCATION
Dr. Basil C. Doumas	Fredericksburg
Dr. W. H. Starnes, Jr.	Williamsburg

EMERITUS MEMBERSHIP IN ACS

Emeritus membership is available to ACS members with 35 years or more of paid membership who are at least 70 years old and are retired from full-time employment. Emeritus members receive free ACS membership and other benefits, including *CEN*. Emeritus membership must be renewed each year. To renew your membership or apply for emeritus status, contact Member Services at (800) 333-9511 or (614) 447-3776 or by e-mail to service@acs.org. Or go online to www.renew.acs.org.

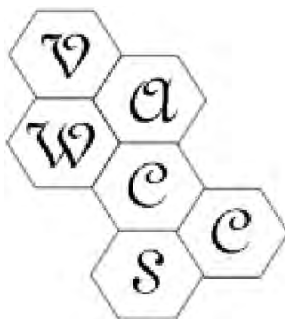
NIST DIRECTOR WILLIE E. MAY



The cover story in the June 15 issue of *CEN* featured **Dr. Willie E. May**, Director of the National Institute of Standards & Technology (NIST). He is also the undersecretary of commerce for standards and technology and is the highest-ranking chemist in the federal government. In 1971, he started work as an intern at the National Bureau of Standards in Gaithersburg, Maryland. He worked his way through the ranks at NIST, eventually leading the Material Measurement Laboratory, then becoming deputy director in 2001.

Dr. May addressed the Virginia Section of the ACS on December 5, 1997 in a meeting held at Virginia State University in Petersburg. His topic was "STANDARDS R US: NIST's Role in Providing a National Measurement System." At that time, he was Chief of the Analytical Chemistry Division at the Chemical Science and Technology Laboratory of NIST.

WCC SUMMER NETWORKING EVENT



The Women's Chemists Committee (WCC) of the Virginia Section hosted a summer networking event at the Ardent Brewery in Richmond Virginia on June 5, 2015. This event provided an opportunity for members to learn more about the craft brewing process as well as to network with others in the section. The group was given a tour of the brewery by co-founder Kevin O'Leary. Mr. O'Leary provided an overview of the brewery's inception as well as the process they use to craft their beer. The participants had a chance to ask questions as well as sample six of the brewery's beers. The event was fun and educational and a great way for the ACS to engage with small businesses in the Richmond community.



VIRGINIA SECTION AWARDS

Over the years, the Virginia Section has received a number of national awards, including Phoenix and ChemLuminary awards. We would like to have a display of these awards for the Anniversary Gala on October 24. If you are in possession of one or more of these awards or know where we can locate some of them, please contact Jim Beck at (804) 733-5286; beckid1977@comcast.net. Also, we would like to display some of the awards that the Section has presented to its members. These would include Distinguished Service Awards, awards to teachers, industrial awards, Jefferson cups, certificates to students, Chemical Olympiad awards, and special awards. Let us know if you have any of these that you could share with us on October 24.

CALL FOR PAPERS - 2015 JOINT SOUTHEAST & SOUTHWEST REGIONAL MEETING



The 2015 Joint Southeast & Southwest Regional Meeting of the ACS will be held November 4-7 at the Memphis-Cook Convention Center-Sheraton Hotel in Memphis, Tennessee. Planned symposia include Analytical, Biological, Computational, Inorganic, Medicinal, Organic, Physical, and Polymer Chemistry and Chemical Education. The deadline for abstract submission is **August 10**. Full meeting information can be accessed at <http://www.2015sermacs-swrm.com>.

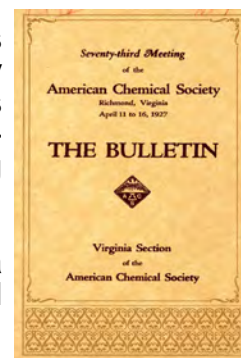
ETHICS AND RESPONSIBLE CONDUCT OF RESEARCH

The journal *Accountability in Research* has published a special open-access issue on "Ethics and Responsible Conduct of Research within the Chemical Community. Ideas and Experiences Worth Sharing." Dr. Jeffrey I. Seeman, Visiting Senior Research Scholar at the University of Richmond, was the Guest Editor for this issue (Volume 22, Issue 6, 2015). He wrote the Preface for the special issue and co-authored one of the papers (with Mark C. House). Other articles were contributed by Jeffrey Kovac, Roald Hoffmann, William G. Schulz, and Ashutosh S. Jogalekar. Sandra Titus of the Office of Research Integrity of the National Institutes of Health wrote the Foreword. The special issue is intended to serve as a free resource for the federally-mandated requirements to teach ethics and responsible conduct of research at all institutions that receive federal funding for research. The full content can be accessed at <http://www.tandfonline.com/toc/gacr20/current#.VaA6lfVhBc>. The American Chemical Society provided funds through the Innovative Grant Program to make this issue permanently open-access. Dr. Seeman received the Distinguished Service Award from the Virginia Section in 2007 and has presented talks at five of our Section meetings.



QUESTIONS FROM THE PAST

This question was asked in the April Bulletin: One national meeting of the ACS has been held in Virginia. The Seventy-third meeting of the American Chemical Society was held in Richmond. Mr. William Clift, Chairman of the Virginia Section, served as chairman of the Executive Committee for the national meeting with Edwin Cox as Vice-Chairman. **When was the 73rd national meeting held in Richmond?** The meeting was held **April 11 to 16, 1927**.



A new question from the past: In addition to the national meeting in 1927, the Virginia Section has hosted several regional meetings. **How many southeastern regional meetings has the Virginia Section hosted and in what years?**

CAN YOU IDENTIFY THESE PERSONS?



The photograph of this husband and wife team is from 1997. The two subjects were both on the chemistry faculty at Virginia Commonwealth University. One was the author of two chemistry textbooks. The other was an expert on lanthanide complexes and luminescence. One received the Distinguished Service Award from the Virginia Section and presented talks at four meetings of the Section. One portrayed Christopher Columbus at various community events. Yes, they were both of Italian descent!

The mystery person in the April Bulletin is **Elizabeth Ann Nalley**. She was president of the ACS in 2006 and named an ACS Fellow in 2009. She has also received the Henry Hill Award from the ACS.



**STUDENT POSTER PRESENTATIONS
APRIL 17, 2015
UNIVERSITY OF VIRGINIA**

Ibrahim Y. AbuNada and Sara H. Fitzgerald Department of Chemistry, Bridgewater College
An update to Diversity Space and an examination of its utility for library optimization after a high-throughput screen

Hina Afaq, Hassan Adabi, Jannah Babasa Department of Chemistry, University of Virginia
Jinman Cai, Parker Campanella, Michael Lingelbach, Eric Moseley, So Hee Son, Jason Kuhn, Carol Price, Linda Columbus, and Cameron Mura
Conversion of the promiscuous aromatic aminotransferase TMaroAT to an aspartate aminotransferase via the L278K mutation

Mariela Alas and Peter Ruiz-Haas Department of Chemistry and Physics, Mary Baldwin College
The Degradation of Bisphenol-S in Water by TiC₂ Photocatalysis

Badr Alsayab, Alexis Chernish, **Joshua Corbin, Ziyi Fan,** Ankita Sridhar, **Elaine Wu,** Marissa Kieber, Carol Price, and Linda Columbus Department of Chemistry, University of Virginia
The effect of an I38A mutation on the substrate specificity of TMAAT from *Thermotoga maritima*

M.B. Altamura, C.A. Bailey, K.P. Daily, J.L. Johnson, R.L. Kolkmeyer, E.A. Rajadhyaksha, Matthew Cline, and Carol Price Department of Chemistry, University of Virginia
Understanding TMAAT specificity through site directed mutagenesis and enzyme kinetic analysis

Brooke Andrews, Sandrine Ly, and K. Nicole Crowder Department of Chemistry, University of Mary Washington
Surface modification for electrocatalytic reduction of carbon dioxide

Adriana Bailey, Mary Kate Bradley, **Soonhong Choi, Morgan Matson,** Steven Mills, **Michael Pender, Alex Reed,** Thushani Nilaweera, and Carol Price Department of Chemistry, University of Virginia
Kinetic studies of aminotransferase specificity in wild-type and V40A TmAroAT from *Thermotoga maritima*

Savannah Barnett and Alceo Macchioni Department of Chemistry and Physics, Longwood University
An Organoiridium Catalyst as a Functional Mimic of both Oxygen Evolving Complex and Hydrogenase

Jonathan Beitsch, Tim McCoy and Andrew Yeagley Department of Chemistry and Physics, Longwood University
Preparing and Screening Brominated Phenols: An Organic Laboratory Experience

- Ernesto Blay** and Karl T. Jackson
Department of Chemistry, Virginia Union University
Gas Sorption Analysis of Mesoporous Metal Organic Framework, UMCM-1
- Brant D. Boucher** and Herbert J. Sipe, Jr.
Department of Chemistry, Hampden-Sydney College
ESR Studies of Free Radical Intermediates in the Chemical Oxidation of Phenols by Cerium (IV)
- Celine Brooks**, Karl Zachary,
and Maria Craig
Department of Chemistry and Physics, Mary Baldwin College
Cucurbiturils as Inhibitors of Complex Formation between LL-37 and DNA
- Carrie L. Carter** and Ellen M. Mitchell
Department of Chemistry, Bridgewater College
Synthesis of symmetric and asymmetric porphyrins
- Jawad Chaudhry, Katherine Cunningham,
Vikrant Khare, Farhan Qureshi, Chad Wolfe, Jessica Yoo, Marissa Kieber, Carol Price,
Cameron Mura, and Linda Columbus
Department of Chemistry, University of Virginia
Effects of a Point Mutation on Substrate Specificity in an Alanine Aminotransferase from *T. maritima*
- Isabel Coronel, Morgan Dodson, Emily Tonks,
Daniel Tate, Amanda Gingras, Elizabeth Hill,
Ellen Schleckman, David Nyenhuis, and Carol Price
Department of Chemistry, University of Virginia
TMAST W123F: The Impact of a Point Mutation on the Substrate Specificity of an Aspartate Aminotransferase from *Thermatoga maritima*.
- Patrick Crossland**, Jessica Armstrong, Matt
Van Dongen, and William McNamara
Department of Chemistry, The College of William and Mary
Cobalt Complexes for the Reduction of Protons to Hydrogen at Low Overpotentials
- Kevin M. Dunn, **Matthew Chapman, Mitch Owens**, and **Jefferson Thompson**
Department of Chemistry, Hampden-Sydney College
An Analysis of Soap Alkalinity
- Gabriel Faura**, Eric Yu, Raymond N.
Dominey, and Emma W. Goldman
Department of Chemistry, University of Richmond
Experimental pKa Measurements of "Bocarsly" Catalysts for Electrochemical Reduction of Carbon Dioxide
- Sharde Harbor** and Karl T. Jackson
Department of Chemistry, Virginia Union University
UV Spectrophotometric Determination of Pb(II) and Ni(II) in Aqueous Solutions Using Natural Plant Extract, Cyanidin
- Lonnie Harris** and David Oldham
Department of Chemistry, University of Mary Washington
Enzymatic resolution of the enantiomers of 2-ethyl-1-hexanol

Megan Hoerner, **Katie Lounsbury**, Michael Kimmel, Jon Patteson, Scott Yeudall, Will Curry, Sichong Zhou, Ellis Huff, Nakul Telang, and John Gupton

Department of Chemistry, University of Richmond

Ortho Group Activation of Suzuki Cross-coupling Reactions of a Bromopyrrole Ester

Caitlyn Holzknicht, Sheena Clift and Marty May

Department of Biochemistry and Molecular Genetics, University of Virginia

MEK and BET Inhibitors and a Novel Combinatorial Therapy for Pancreatic Adenocarcinoma

Tyler Kern¹, Farhana Sakloth¹, Rakesh Vekariya¹, John S. Partilla², Michael H. Baumann², and Richard A. Glennon¹

¹Department of Medicinal Chemistry, School of Pharmacy, Virginia Commonwealth University and ²Designer Drug Research Unit, Intramural Research Program, National Institute of Drug Abuse, National Institutes of Health

A preliminary investigation of structural features that contribute towards selectivity at dopamine, serotonin and norepinephrine transporters

Juliana Laszakovits and Charles Sharpless

Department of Chemistry, University of Mary Washington

A polychromatic method to determine the wavelength dependence of singlet oxygen quantum yields for natural and effluent organic matter

Nhat Le, **Ernesto Blay**, **Corshai Williams**, and Karl T. Jackson

Department of Chemistry, Virginia Union University

Analysis of Student Energy Consumption as a Result of Real-Time Data Feedback and Incentives: A Focus on Data Analysis

James Massie and Kathryn Cole

Department of Chemistry, Christopher Newport University

Hydrolase activity in BC0361, a putative polysaccharide deacetylase

Kelly McDaniel, Davis Oldham, and Lonnie Harris

Department of Chemistry, University of Mary Washington

Synthesis of the Persistent Organic Pollutant DEHP and its Metabolites

Miesca A. McFarland and Ian J. McNeil

Department of Chemistry, Bridgewater College

Investigating the Influence of Lithium Intercalation on Dispersive Electron Mobility Kinetics in Dye-Sensitized Solar Cells

Mwazomela Mbewe, **Jennifer Jin**, and Peter Ruiz-Haas

Department of Chemistry and Physics, Mary Baldwin College

Photolysis and UV/H₂O₂ advanced oxidation processes of bisphenol-s in water

Sebastien Ortiz, **Samantha Clark**, **Annie Yang**, **Arsalan Bhatti**, **Felicia White**, **Irina Bushmanova**, **Duncan Cannon**, Carol Price, Linda Columbus, and Cameron Mura

Department of Chemistry, University of Virginia

An I38G point mutation of alanine aminotransferase TM1698 lowers alanine affinity

Ray Ramirez, Jacob Woodroof,
Shara Fuller, and Rebecca Pompano

Department of Chemistry, University of Virginia

Cell Viability of Lymph Node Slices

Alana Rister, Nadine Gergel-Hackett,
and Peter Ruiz-Haas

Department of Chemistry and Physics, Mary Baldwin College

**Development of a Portable, Low-cost, Efficient Water Purification
System via Titanium Dioxide Thin Films**

Hannah Rodriguez, Sarah Smith,
and Everett E. Carpenter

Department of Chemistry, Virginia Commonwealth University

**Synthesis of CoNi alloy nanoparticles for use as a catalyst in
the dehydrogenation of ammonia borane**

Felix Siri and Sarah Porter

Department of Chemistry and Physics, Longwood University

**Chemometric Analysis of Spectroscopic Data: Applications to
Pharmaceutical Preparations**

Orlando C. Stewart, Jr.¹, Charles M.
Sharpless¹, Christopher Reddy², Bob
Swarthout, and Christoph Aeppli³

¹Department of Chemistry, University of Mary Washington,
²Marine Chemistry and Geochemistry, Woods Hole
Oceanographic Institute, and ³Bigelow Laboratory for
Ocean Sciences

**Effect of Photochemical Weathering on the Composition and Spectroscopic
Properties of Crude Oil**

Ryan Stiltner^{1,2} and Colleen Taylor¹

¹Department of Chemistry and Physics, Virginia State
University and ²Evonik Corporation

Method Development for Si-H Determination using FTIR

Ross Taylor, Kurt Geffken, Katrina Nemri,
Connel Kling, Kevin Quach, Laura Baker,
Jason Kuhn, Linda Columbus, Cameron Mura, and Carol Price

Department of Chemistry, University of Virginia

**Unexpected yet Promising Results from the Mutation of the Aminotransferase
TMHAAT in *Thermotoga maritima***

Joshua Temple and Gina MacDonald Department of Chemistry and Biochemistry, James Madison University
Probing Buffer-Specific Effects on Nucleotide Binding to RecA Using Difference FTIR

Michael Thompson, Imani Wood, Colleen
Taylor¹, and Massimo F. Bertino²

Department of Chemistry and Physics, Virginia State
University and Department of Physics, Virginia
Commonwealth University

Raman Spectroscopy of Lipsticks for Forensic Application

Brenna J. C. Walsh¹, Kirstie Thompson¹,
John N. Marafmo^{1,2}, Kristin McKenna¹, Louis
Damiano¹, Tara M. Gallagher², Matt
Schmachtenberg², Kunny Kou², Mark Wenzel¹,
Kyle Seifert², and Kevin L. Caran¹

¹Department of Chemistry and Biochemistry,
James Madison University and ²Department of
Biology, James Madison University

**Synthesis and Study of Polycationic Amphiphiles as Potent Antiseptics and
Novel Colloids: Exploring Structure Activity Relationships**

Corshai Williams, Ernesto Blay, Nhat Le,
and Karl T. Jackson

Department of Chemistry, Virginia Union University

**Analysis of Student Energy Consumption as a Result of Real-Time Data
Feedback and Incentives: A Focus on Student Awareness**

Stephanie Wilson and Karl T. Jackson

Department of Chemistry, Virginia Union University

**Analysis of Phosphate content in Various Household Products by Molybdenum
Blue using UV-Vis Spectrophotometry**

Catherine F. Wise, Kathryn J. Mayer,
Dan Liu, **Patrick M. Crossland,** and
William R. McNamara

Department of Chemistry, The College of William and Mary

**The electro- and photocatalytic activity of a Ni-NNSS Schiff-base
complex for hydrogen generation**

Jun Ying, **Danny Wang,** Xuedan Wu,
and Lin Pu

Department of Chemistry, University of Virginia

Catalytic Enantioselective Reformatsky Reaction with BINOL-based Ligands

**VIRGINIA ACADEMY OF SCIENCE
FALL UNDERGRADUATE RESEARCH MEETING**

Saturday, October 24, 2015
9:00 am - 3:00 pm

VIRGINIA STATE UNIVERSITY
Petersburg, Virginia

more information: www.vacadsci.org

**NOTE: RESERVATIONS FOR THE 100TH ANNIVERSARY GALA MUST BE MADE
BY SEPTEMBER 25. DETAILS ON THE VIRGINIA SECTION WEBSITE:
[HTTP://WWW.VIRGINIA.SITES.ACS.ORG](http://www.virginia.sites.acs.org)**

OFFICERS OF THE VIRGINIA SECTION OF THE ACS

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Todd Koch

Chair Elect - Dr. Denise Walters (804) 257-2828
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