SEPTEMBER MEETING NOTICE

● TEACHER AWARDS ●

Friday, September 30, 2022

NOTE: This will be a virtual meeting. You may participate via Zoom. See instructions on pages 4 and 5.

PRE-MEETING SESSION: 6:30 p.m.

PROGRAM: 7:00 p.m.

HOST: Dr. Jack D. Brown, Chair Elect - orgchem1954@gmail.com

SPEAKER: Dr. Gopal Sirasani, TCG GreenChem, Inc.

TOPIC: “Natural Products Inspired Drug Discovery and an Insight on Accelerating Drug Development”

PRESENTATION OF TEACHER AWARDS

Dr. Gopal Sirasani

Dr. Gopal Sirasani is the Director of Technical Operations and Business Development at TCG GreenChem Inc. TCG GreenChem is a leading global contract research and manufacturing services company in the area of drug discovery, development and commercialization. They support pharmaceutical R&D in the United States, Asia, and Europe.

Dr. Sirasani received his bachelors in Chemical Technology, masters in Drugs and Pharmaceuticals, and a Post Graduate Diploma in Chemical Analysis and Quality Management in India. He obtained his Ph.D. under the guidance of Prof. Rodrigo B. Andrade at Temple University where he developed and applied novel synthetic methodologies towards the step-economic, asymmetric syntheses of biologically active and
complex natural products and analogs thereof (SAR). He then did post-doctoral work with Prof. Emily P. Balskus at Harvard University in developing biocompatible organic reactions utilizing microbially generated reagents to realize transition metal catalysis in the presence of microbes. He has over 15 years of research experience in the academic and pharmaceutical arenas with extensive knowledge and experience in drug discovery and process chemistry. He worked to integrate synthetic organic chemistry and structure-based drug design (SBDD) to address important medicinal chemistry problems using natural and un-natural products. Dr. Sirasani has received several prestigious awards, including a Daniel Swern Fellowship, Outstanding Research by a Graduate Student, a Francis H. Case Fellowship (at Temple University) and a Horst Witzel Fellowship from Cephalon, Inc. He has developed and applied novel reactions towards the step-economic, asymmetric syntheses of biologically active natural products and analogs thereof (SAR). He is a reviewer for several important chemical journals and has authored numerous publications.

“Natural Products Inspired Drug Discovery and an Insight on Accelerating Drug Development”

A novel method to access the ABCE tetracyclic framework of the Strychnos alkaloids has been developed and was showcased in concise racemic total syntheses of akuammicine and strychnine in six and thirteen operations, respectively. Key steps include (1) the vinylogous Mannich reaction; (2) our sequential one-pot spirocyclization/intramolecular aza-Baylis-Hillman reaction; and (3) a Heck cyclization. We have also utilized our method to prepare other biologically active Strychnos alkaloids (-)-akuammicine, (-)-leuconicines A and B, (-)-norfluorocurarine, (-)-dehydrotubifoline, (-)-dihydroakuammicine, (-)-tubifoline and (-)-valparicine in a concise, asymmetric manner. Some of the key findings toward the above-mentioned syntheses will be discussed. Using microbially generated reagents toward a synthetic organic transformation will be discussed and an insight toward accelerated drug development will be touched upon.

THE DISTINGUISHED ELEMENTARY SCHOOL SCIENCE TEACHING AWARD

Valerie Schwarz
Mary Munford Elementary School, Richmond City

Valerie Schwarz grew up in a small town in New Jersey called Upper Saddle River, outside New York City. Valerie is a third-generation teacher on her maternal-side. Her father was a physician and instilled in her a love of nature, conservation, and an interest in science from a young age. She credits her parents with modeling a no-quit work ethic. Valerie discovered as a teen, through babysitting and teaching swim lessons, the intrinsic motivation and joy that come from working with children.

She graduated from the University of Richmond with degrees in Business Administration and Spanish. Richmond has been her home ever since. Soon after graduating college, she earned her Master’s in Teaching from Virginia Commonwealth University. For twenty-five years Valerie has taught in Richmond City Public Schools. She has spent twenty-two years at Mary Munford Elementary School, her home away from home, mostly teaching fourth grade. She teaches language arts, math, science, and social studies, but science and math are the subjects she enjoys most.
Valerie fosters an inclusive classroom where all students regardless of their learning differences can thrive. She encourages collaborative learning, academic discourse, and hands-on activities. Her classroom has structure, high-standards, and just the right amount of scaffolding. She develops relationships with her students, not only inside the classroom, but also out at recess. She can regularly be found playing class games with her students. She also may be found watching her students’ soccer or baseball games in the evening or on the weekend.

Valerie is a National Board-Certified Teacher, a former Teacher of the Year for her school, and a two-time R.E.B. award finalist. Recently she completed a Math Specialist Endorsement. She is a life-long learner who thrives on professional development.

Singapore math, Scratch coding, and robotics are some of topics that interest her, but her passion is the professional development work she does with the Yale National Initiative. She has been a National Fellow and the school district’s City Representative for the Yale National Initiative for more than a decade. She recruits, coordinates, and supports other teachers from her school district who participate in the Yale National Initiative. She also leads the effort to establish a local Teachers Institute so that many more teachers can benefit. She spends two weeks every summer at Yale University in New Haven, Connecticut, where she participates in seminars, researches cutting-edge topics, and develops curriculum units to bring back to her students. Some of the science curriculum units she has developed include the following: the Chesapeake Bay, endangered species and manipulating biology, Design Thinking and the loss of bees, health effects of vaping, and microbes in the soil.

She appreciates the investment in her and her school, which will allow her to continue sharing her lifelong love of science with the next generation.

THE DISTINGUISHED MIDDLE SCHOOL SCIENCE TEACHING AWARD

Traci Fletcher
Thornburg Middle School, Spotsylvania County

Traci Fletcher grew up in a military family, so she spent much of her time moving from place to place while growing up. One of her favorite places to live was Okinawa, Japan. While there, the DODDS teachers inspired her to become a teacher. For the past twenty years, Ms. Fletcher has resided in Spotsylvania County. She is currently engaged to be married and enjoys spending time with her family and friends.

Ms. Fletcher attended Longwood College and earned a Bachelor of Science in Liberal Studies. She recently completed her 20th year of teaching at Thornburg Middle School in Spotsylvania, Virginia. There, she has spent much of her 20 year career teaching various levels of middle school Science. Throughout her time at Thornburg, she has served as a Science Resource Teacher, mentor teacher, and currently serves as head of the Science Department. She has enjoyed traveling with students to give them hands-on science experiences. Her most recent field trip was to Florida.

Each year students in the science department have the opportunity to participate in the NSTAR program (Naval Research-Science and Technology for America’s Readiness). Students build and program robots to complete different missions. She has served as a mentor to these budding engineering students during summer programs to continue with the NSTAR program at the Naval Base located in Dahlgren, Virginia.

Fletcher is honored to be the recipient of the Distinguished Middle School Science Teacher Award and would like to thank everyone who has given her support in her career. She is hoping to use her education and enthusiasm for teaching to not only support students, but to help future teachers follow their passion.
THE FRANKLIN D. KIZER DISTINGUISHED HIGH SCHOOL CHEMISTRY TEACHING AWARD

Megan Lee
Gar-Field High School, Prince William County

Megan Lee grew up in Redmond, Washington. Her parents valued education as they were both the first in their respective families to graduate college. While at University, Megan studied both European History and Chemistry, while still completing her Pre-Med requirements. Megan Lee matriculated to the University of Washington School of Medicine; however, during her second semester she became very ill and spent too much time in the hospital as a patient, instead of as a medical student. Although she was able to complete her first term, her health required that she take a leave of absence.

After recovering for a few years, Megan chose to pursue a different career. She still wanted to work with people and apply her interest in science so she decided to study Education. She earned her Master of Arts in Teaching with endorsements in Social Studies, Chemistry and History. Her first job was at Foss High School in Tacoma, Washington, teaching Chemistry and IB HL (International Baccalaureate Higher Level) Chemistry. After three years in Tacoma, Megan moved to Virginia where she has now finished her 16th year teaching at Gar-Field High School in Woodbridge, Virginia. During her time at Gar-Field, Megan has taught General Chemistry, IB MYP (Middle Years) Chemistry, IB SL (Standard Level) Chemistry and IB HL (Higher Level) Chemistry.

As a chemistry teacher Megan Lee puts a strong focus on using inquiry and practicing lab skills. This also means that she puts a strong emphasis on Lab Safety throughout her class. As part of her emphasis on safety, Megan serves as the Safety Liaison for her high school and for the feeder middle and elementary schools for Gar-Field High School. As part of this role, she provides yearly visits to each of these schools to discuss safety in the laboratory and reads each proposed Lab Assignment throughout the year to check that safety protocols are being followed. Under Megan’s guidance Gar-Field High School was the first high school in Prince William County to have a fully automated Chemical Inventory. Megan also served on the ACS Safety Committee in 2017 where High School teachers provided real life advice about how chemicals and safety protocols are followed.

The focus on inquiry is only one reason why Megan enjoys teaching in the IB program so much. Over the course of the two-year course, the IB students develop the critical reasoning skills to choose their own research questions, complete their own research and write a 12-page research paper based on their own lab-bench research. To increase her own skills and be a better advocate for her students, Megan served on the International IB Committee in 2014-2015 that wrote the new curriculum for the IB Chemistry course 2016-2025. She also trained to be an IB examiner in 2016.

INSTRUCTIONS FOR ACCESSING THE SEPTEMBER 30 MEETING USING ZOOM

The online presentation of the September 30 meeting will use the Zoom format. Dr. Jack Brown is the meeting host and Dr. Julian Bobb is the Zoom coordinator.

Topic: Virginia Section of the American Chemical Society (ACS) - September Meeting 2022

Presentation of Teaching Awards, Talk by Dr. Gopal Sirasani
You are invited to a Zoom meeting – September 30, 2022  06:30 PM Eastern Time

Use this link to register in advance for this meeting:  
https://american-chemical-society.zoom.us/meeting/register/tZwvde2trjwsHtKvMay6Wlt6FBwdXAGdyh1x

After registering, you will receive a confirmation email containing information about joining the meeting. If you have problems registering, contact Dr. Julian Bobb at bobbja@vcu.edu, (804) 908-8623.

PRE-PROGRAM SESSION

The 6:30-7:00 pm period on September 30 will be a time for members to socialize. Also, there will be a slide show on Virginia Section teacher awards with information on the three teachers who will be receiving awards. The awards will be presented at 7:00, followed by the talk by Dr. Sirasani.

*** VIRGINIA SECTION NEWS ***

NATIONAL CHEMISTRY WEEK (NCW)

National Chemistry Week (NCW) is a public awareness campaign that promotes the value of chemistry in everyday life. ACS members and chemistry enthusiasts celebrate NCW by coordinating events and communicating the importance of chemistry. NCW is a community-based program of the American Chemical Society (ACS). This annual program unites ACS local sections, student chapters, technical divisions, businesses, schools, and individuals in communicating the importance of chemistry to our quality of life.

Celebrate National Chemistry Week 2022 the week of October 16–22, 2022. The topic this year is Fibers with the theme, "Fabulous Fibers: The Chemistry of Fabrics".

The Virginia Section is planning an event at the Science Museum of Virginia for National Chemistry Week, scheduled for 5-8 pm on October 21, as part of their Spooky Science Event. Contact Dr. Kristine Smetana, Chair of the Community Activities for the Section, if you would like to participate in this activity. Ideas for other ways to celebrate NCW are welcome. Volunteers are needed to help with the outreach event at the Science Museum. Dr. Smetana can be reached at kristine.smetana@southside.edu. Last year the Virginia Section hosted a very successful National Chemistry Week event at the Science Museum. There were numerous hands-on activities for children and bags were distributed with information on some safe and fun science activities. The 2021 NCW theme was “Fast or Slow...Chemistry Makes It Go!” Activities this year will include a mix of fabric chemistry and materials chemistry. A record number of visitors is expected at the Science Museum!
The Bulletin

REPORT ON THE APRIL SECTION MEETING

The annual poster session and undergraduate awards meeting was held at the University of Virginia in Charlottesville on Friday, April 15, 2022. Forty undergraduate research posters were presented by students from eight colleges and universities within or near the Virginia Section. This marked the 34th year of the Poster Session that highlights undergraduate student research. As usual, the University of Virginia topped the list, with twelve posters this year, followed by Bridgewater College with nine, the University of Mary Washington with five, and Longwood University and Hampden-Sydney College with four each. Students from Virginia Tech, Virginia Commonwealth University, and James Madison University also presented papers. Pizza and soft drinks were served during the Poster Session.

About 40 persons attended the awards meeting that followed the poster session. Dr. Rebecca Rose Pompano, the meeting host, greeted everyone. Ms. Vanessa Lopez, Chair of the Virginia Section, presided. She presented awards and gifts to eight outstanding students from colleges and universities (several other students could not attend the meeting). The students recognized by the section are listed below. Each award winner received a Certificate of Recognition, membership in the American Chemical Society, and a gift card. Thanks to Rebecca Rose Pompano, Jim Demas, Cindy Knight and the University of Virginia for organizing this excellent meeting. Jim Demas has made a set of photos from the meeting available via this sharable link:

https://drive.google.com/drive/folders/1yooCgWUkLfRGKhva09Vn37PCOrJi8LyB?usp=sharing

UNDERGRADUATE RESEARCH POSTER SESSIONS

The 2022 undergraduate research poster session was the 34th that the Virginia Section has held. The first session was at the College of William & Mary in Williamsburg on April 24, 1987 with Dr. Trevor Hill as the host. Twenty-one posters were presented by students from these schools: the College of William & Mary, Longwood College, Mary Washington College, the University of Richmond, and Virginia Commonwealth University. The second session was held at the University of Virginia in Charlottesville on April 22, 1988 when 17 papers were presented by students from five colleges and universities.

The poster sessions were held at the University of Virginia every year from 1988 through 2019. Dr. James Demas hosted all of the UVA meetings. Susan Collins assisted in the arrangements for many years and Cindy Knight has provided invaluable service since 2008.

The April 12, 2019 poster session featured 42 posters by students from ten different schools. The largest number of posters were in 2009 (47) and 2008 (45). The largest number of schools represented was 16 in 2008. There was no poster session in 2020 due to the coronavirus and last year’s session was conducted virtually for the first time. On April 16, 2021, 28 students representing 11 schools presented a total of 21 posters via a Zoom format.

The poster session returned to an in-person format this year when posters were presented on April 15. See below for the titles of this year’s poster presentations.
**VIRGINIA SECTION OFFICERS**

Are you interested in serving on the Executive Committee for the Virginia Section or in being a candidate for one of the Section offices? Or do you know of other Section members who would be willing to serve? If so, contact Vanessa Lopez at vanessa.f.lopez@altria.com, (804) 920-3558. The Executive Committee meets twice a year to set general policy and direction for the Section and to develop the Section’s budget. The Section is soliciting candidates for the offices of Treasurer, Secretary, and Vice Chair and for the positions of Councilor, Alternate Councilor, and Trustee. Volunteers are needed to keep the Section strong and active.

**JULIAN BOBB ATTENDS ACS LEADERSHIP INSTITUTE**

In May, 2022, Dr. Julian Bobb attended the 2022 ACS Leadership Institute and participated in the Local Section Track. This was an in-person event held at the Renaissance Atlanta Waverly Hotel & Convention Center in Atlanta, GA. Julian attended workshops on Planning Successful Activities, Communicating with Your Members, Funding, Using Social Media for Local Sections, and Fostering Innovation: Styles and Process. Also, he participated in social and networking events with fellow ACS leaders while learning how to further develop leadership skills. The photograph shows Julian with Dr. Angela K. Wilson, current ACS President. Ashley Tubbs also attended the Leadership Institute (see article below).

**ASHLEY TUBBS RECOGNIZED AT ACS LEADERSHIP INSTITUTE**

In May of 2022, Ashley Tubbs attended the ACS Leadership Institute in Atlanta, GA as part of the Younger Chemists Committee Leadership Development Award. She attended with several other members of the Eastern U.S. YCC Partnership, of which the Virginia YCC is a member. At the Institute, Ashley advanced her leadership skills, learned new ways to bring chemistry to the public, and networked with current and future leaders in chemistry. She is in charge of event planning for the Virginia Section’s Younger Chemist Committee and does branding and promotion for the Eastern US YCC Partnership. She received the 2022 Outreach Volunteer of the Year Award for the Virginia Section. Ashley is a third-year graduate student in the Chemistry Department at Virginia Commonwealth University.
The 2022-23 Marie Payne Graham Memorial Lecture
Sponsored by the University of Virginia Chemistry Department

featuring

Dr. John M. Butler
Internationally recognized expert in forensic DNA analysis & Fellow and Special Assistant to the Director of Forensic Science
National Institute of Standards and Technology

“Understanding Forensic DNA: Its Background, Capabilities, and Limitations

Friday, October 7
Lecture: 6:00-7:15 PM, CHEM 402

For more information, visit https://chemistry.as.virginia.edu/seminars

This lecture is made possible by a generous endowment created by Dr. Robert L. Graham, retired Professor of Minnesota State University, Mankato, to honor the memory of his wife of 46 years, the former Marie Payne of Staunton, Virginia.

THE 2023 W. ALLAN POWELL LECTURESHP

The 2023 W. Allan Powell Lectureship will be held at the University of Richmond on February 24, 2023. The Powell Lecturer will be Professor Nathan (Nate) S. Lewis, the George L. Argyros Professor of Chemistry at the California Institute of Technology (Caltech). Dr. Lewis specialises in the functionalization of silicon and other semiconductor surfaces, chemical sensing using chemiresistive sensor arrays, and alternative energy and artificial photosynthesis. Use this link for more information on the Powell Lectureship: https://facultystaff.richmond.edu/~rdominey/seminar/index.html.

THE ACS CHEMLUMINARY AWARDS

ChemLuminary Awards recognize volunteer efforts by the society’s local sections and technical divisions. This year was the 24th time that the ACS has presented ChemLuminary Awards. The awards for 2022 were presented at a special ceremony during the Fall meeting of the national ACS, held in Chicago in August. The Virginia Section was awarded two
ChemLuminary Awards in 2022, giving the section a total of 28 awards during the 24 years that they have been presented by the national ACS. Also, the Section has received three Phoenix Awards (the predecessors of the ChemLuminary awards) and two “Best Local Section” awards (1969 and 1988). This year’s Virginia Section awards:

- **Outstanding Continuing Public Relations or Communications Program of a Local Section Award (Day in the Life of a Chemist Series)**, shared with the Eastern New York, Northern New York, Rochester, and Philadelphia Local Sections.

- **Outstanding or Creative Local Section Younger Chemists Committee Event Award (Eastern US YCC Symposium and Chemistry Career Expo)**, shared with the Eastern New York, Northern New York, Philadelphia, St. Louis, Rochester, Nashville, North Carolina, Indiana, Chicago, Puerto Rico, and the Connecticut Valley Local Sections.

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**THE YOUNGER CHEMISTS COMMITTEE OF THE VIRGINIA SECTION**

**Vision Statement**: Younger leaders transforming the world through chemistry.

**Mission Statement**: Advocate for, develop, and support rising chemists to positively impact their careers, the ACS, and the future of chemistry.

**Chair of the Younger Chemists Committee of the Virginia Section**: Dr. Julian Bobb, Department of Chemical and Life Science Engineering at Virginia Commonwealth University

**Website**: [http://acsva.org/younger-chemists/](http://acsva.org/younger-chemists/)

**Facebook**: @ACSVAYCC

**Instagram**: @ACSVA_YCC

**Twitter**: @ACSVirginiaYCC

**Email**: vayoungerchemistscommittee@gmail.com

**YouTube Channel**: [www.youtube.com/channel/UCEJgX28mFQPEGW4eNH6Wvgw](http://www.youtube.com/channel/UCEJgX28mFQPEGW4eNH6Wvgw)

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**ACTIVITIES OF THE YOUNGER CHEMISTS COMMITTEE**

At the August 27 meeting of the Executive Committee of the Virginia Section, Dr. Julian Bobb, Chair of the Younger Chemists Committee (YCC) for the Section, provided some information on activities of the Committee and of the Eastern U.S. Younger Chemists Committee Partnership. Here are some excerpts from his report.

- **ChemLuminary Awards** The Virginia Section shared in two ChemLuminary Awards for 2022 (see above for more information on these awards)
The VA ACS YCC / NE NOBCChE DEIR Workshop was a two-day, virtual event spanning five hours across two consecutive Saturdays in early April of 2022. These workshops aimed to provide awareness and open dialogue about diversity and inclusivity in school and the workplace, especially in the field of STEM. It provided insight on creating positive, inclusive environments and offered tips and skills for professional development. The discussions included crafting a CV/resume employers will love and strategies to leverage during job hunting while maintaining a focus on diversity, equity, inclusion, and respect in the workplace. Keynote speakers Elissia Franklin and Darryl Boyd discussed their personal and professional journeys, sharing insights that resonated deeply with the audience members. A mixed panel of ACS and NOBCChE members, including Drs. Dorothy Phillips, Kimberly Agnew-Heard, Natalie LaFranzo, Victoria Parker, Kevin Ileka, Julian Bobb, and Ms. LaKesha Perry also shared their experiences in a guided panel discussion. Following the panel discussion, breakout rooms were utilized to provide participants with an interactive space to engage with panel members. The panelists moved to breakout rooms throughout the session to allow participants an opportunity to interact with all panel members. About 65 people attended. This event was attended by a more diverse group of STEM professionals than is typical for VA ACS YCC events. The workshop achieved its aim of reaching minority groups (Black, LatinX, South Asian, women) in STEM to promote their professional development. About 90% of participants ranked the event as excellent and indicated that they would be interested in attending future VA ACS YCC events focused on DEIR, professional development, networking, and self-care.

Tour and Tasting Richmond Blue Bee Cider

On June 24, the YCC hosted a Tour and Tasting at Blue Bee Cider in Richmond. About 21 people attended this event, including chemistry and chemical engineering students from various schools (VCU, UVA, Mary Washington, RMC, etc.) along with some early career professionals. This was a great networking event.

Day in the Life of a Chemist Series by the Eastern US YCC Partnership

About 20 persons have been joining the sessions of this series which is also available on YouTube:

Chemistry Entrepreneur (46 views on YouTube),
Synthetic Chemist (138 views),
Analytical Chemist (65 views),
Crime Scene Chemist (33 views),
Crystallographer (29 views),
Remote Chemist (27 views)

CHEMISTRY SEMINARS AT THE UNIVERSITY OF VIRGINIA

September 30 - Dr. Caleb Martin, Baylor University

October 7 - Dr. John M. Butler, National Institute of Standards and Technology, “Understanding Forensic DNA: Its Background, Capabilities, and Limitations” (Graham Lecture)

October 14 - Dr. Robin T. Garrod, University of Virginia

October 21 - Dr. Jeff Myers, Davidson College
October 28 - Dr. Jordy Bouwman, University of Colorado at Boulder
November 4 - Dr. Kevin Welsher, Duke University
November 11 - Dr. Cassandra Fraser, University of Virginia, “tranSci Lab for Real World Chemistry and Creative Communication”
November 18 - Dr. Mitch Smith, Michigan State University

For 2022-2023, the Department plans to return primarily to in-person seminars. Unless otherwise indicated, Friday seminars will be at 3:30 pm in Olsson 120. For more information, contact the Department of Chemistry at (434) 924-3344; chem@virginia.edu, https://chemistry.as.virginia.edu

CHEMISTRY SEMINARS AT VIRGINIA COMMONWEALTH UNIVERSITY

October 6 - Dr. Sen Zhang, University of Virginia
October 13 - Dr. Nathan Wittenberg, Lehigh University
October 27 - Dr. Yirong Mo, University of North Carolina at Greensboro
November 3 - Dr. Linda Columbus, University of Virginia
November 10 - Dr. Webster Santos, Virginia Tech
November 17 - Dr. Jinwoo Lee, University of Maryland

All seminars are held via Zoom at 4:00 PM, unless otherwise noted. For more information, contact the Department of Chemistry at (804) 828-1298; chemistry@vcu.edu

CHEMISTS CELEBRATE EARTH WEEK

In April, the Virginia Section held its annual Chemists Celebrate Earth Week (CCEW) event at the Science Museum of Virginia during the Science After Dark event. There were over 700 attendees. The theme was the Buzz about Bugs--Insect Chemistry. Activities included making LED firefly wands, Slug Slime, natural selection, eating bugs, sustainable bugs are the future, how bees produce honey, what do insects see, cool blue glow, Gastubes, heat sensitivity, water cycle bracelets, the life cycle of a butterfly, nanobug races, and more. Bug species and displays were lent by Professor Martha Reed from Southside Virginia Community College. Volunteers were from area universities, high schools, and industry. The event was a huge success! Dr. Kristine Smetana, Chair of the Community Activities Committee for the Virginia Section, coordinated the CCEW event. The Virginia Section’s activities were included in an article that appeared in the June 27, 2022 issue of C&EN. One of the photos shown below was in the article.
STUDENT AWARD WINNERS

Each year, the Virginia Section presents awards to outstanding senior chemistry majors at the four-year colleges and universities within the Virginia Section. The award winners are selected by the chemistry faculty members at the schools and the awards are presented at the April meeting of the Virginia Section. This year, each student received a certificate of recognition, a one-year membership in the American Chemical Society, and a gift card. The students were recognized at the University of Virginia meeting on April 15, 2022; Section Chair Vanessa Lopez presented them with their certificates. Here are the 2022 award recipients:

Ben Hancock — Bridgewater College
Henry Cardwell — College of William and Mary
Daniel Pierce — Hampden-Sydney College
Liv Mumma — James Madison University
Kimia Jahangiri — Longwood University
Ashley Summers — University of Mary Washington
Michael Rodriguez — University of Richmond
David DiMeglio — University of Virginia
Christopher Nguyen — Virginia Commonwealth University
Coral O’Brien — Virginia State University

Section Chair Vanessa Lopez with students who were recognized at the University of Virginia on April 15. They are holding their Certificates of Recognition from the Virginia Section.
The Virginia Section Senior Chemist Committee (SCC) has now been officially launched. Our initial focus will be for retired chemists. As such, we will plan weekday, daytime events starting in the fall. These events can range from learning experiences (visiting museums, university chemistry labs, industrial labs) to helping out younger chemists (college, high school, middle school, etc.). Please contact Rob Davidson (robiradav@aol.com) or Joe Pompano (pompano13220@gmail.com) if you have ideas for events or just want to be involved.

The SCC thought it would be helpful to summarize some of the ACS benefits provided for our senior chemists:

**Retired**

A person who has 30 or more years of paid ACS membership and is retired from full-time professional employment is entitled to a 50% discount on ACS national dues. Retired chemists also are entitled to reduced cost for attending many of our local section meetings.

**Emeritus**

A person who has 35 years or more of paid ACS membership, is retired from full-time professional employment, and is over the age of 70 is entitled to a 100% discount on ACS national dues.

Retired and Emeritus Members receive reduced National and Regional meeting registration fees. Additionally, 50-year members of ACS will continue to be able to register for National and Regional ACS Meetings at no cost.

**COLLABORATION WITH THE SCIENCE MUSEUM OF VIRGINIA**

The Virginia Section of the American Chemical Society has a longstanding relationship with the Science Museum of Virginia that spans many decades. In 1977, the Virginia Section presented the Science Museum of Virginia $1,000 and a copy of the book *Taking Things Apart and Putting Things Together* as part of their Centennial celebration. Since that time, the Science Museum of Virginia has regularly provided the use of their space to host multiple Virginia ACS section meetings, as well as Engineering/Science Career Day, Chemists Celebrate Earth Day and National Chemistry Week events. Many of the Earth Day and National Chemistry Week events held at the Museum received ChemLuminary Awards from the National ACS Committee on Community Activities. In 2011, the Science Museum of Virginia hosted our International Year of Chemistry Reception, continuing our longstanding partnership to teach, recognize and celebrate chemistry in the Commonwealth of Virginia.

In more recent years, the ACS has provided funding to support displays in the Museum’s Periodic Table Café, has co-sponsored a Slime Night event and has provided ACS safety materials for Museum use and as a resource to share with local schools. A recent collaboration was a $1,500 grant to revise the Museum’s “Radical Reactions” presentation. The funds were used to purchase materials for testing 17 different chemical experiments for potential inclusion in their programming. Five of the 17 were selected and given engaging names such as “Flaming Vapor Ramp,” “Extinguisher,” “Moms to the Rescue” and “Testing Orange Juice to Strawberry Float.” Some of the new programming has been included in a demonstration for the public and for visiting school groups as well as during digital outreach programs. This work also provided a foundation for the “Cool Chemistry” Summer Camp last year.
In a current ongoing project, the Section is providing funding for a chemistry workshop for teachers in grades three through five. This year’s event was held at the Science Museum on September 24. The local section is excited to see the expanding chemical education and awareness through these collaborative initiatives. Perhaps the next generation of problem solvers who answer today’s hard challenges will include students inspired through the combined efforts of the Virginia ACS and the Science Museum of Virginia.

Dr. Denise Lowe Walters was recently reappointed by Governor Youngkin to serve on the Science Museum’s Board of Trustees. She is currently the Chair of the Board. Dr. Walters has been an active member of the Virginia Section for many years. She was the Section Chair in 2016 and received the Distinguished Service Award for 2018. She is now an at-large member of the Executive Committee.

**UNDERGRADUATE RESEARCH POSTER PRESENTATIONS**

Here are a few of the student presentations from the Virginia Section’s Undergraduate Research Poster Session, held at the University of Virginia on April 15, 2022. More will be included in future issues of the *Bulletin*.

**Afroza Alam** and **Amanda Morris** - Virginia Tech, **Incorporation of Proton-Transfer Sites into Ru-UiO-67 for Increased Catalytic Efficiency**

**Tinsae Alem** and **Benjamin J. Topham** - Longwood University, **Designing Single Molecule Diodes**

**Docia Atanda** and **Sarah Smith** - University of Mary Washington, **Using Additive Manufacturing to Increase Reproducibility in a Packed Bed Column**

**Romi Balasubramanian**, **Jane Hayes**, **Leah Aclin**, **J. Michael McIntosh**, **Paul Whiteaker**, **Darlene H. Brunzell** - 1Department of Chemistry, Virginia Commonwealth University, 2Department of Pharmacology and Toxicology, Virginia Commonwealth University, 3Department of Neuroscience, University of Utah, **Alpha Conotoxin MII-Sensitive Nicotinic Acetylcholine Receptors in the IPN Support Somatic Withdrawal in Long Evan Rats**

**Dana Bassford**, **Andrew Gillikin**, **Conner Hauck**, **Nina Jannatifar**, **Zhiwen Xu**, **Larry Reser**, and **Carol Price** - University of Virginia, **N256S TmGlyDH Exhibits Enhanced Enzyme Activity at the Expense of Substrate Affinity**

**Kaleigh Beale** and **Sarah G. Porter** - Longwood University, **The Analysis and Remediation of Excess Fluoride in Drinking Water in Isle of Wight County, VA**


**Nadia Elkholy**, **Joey Kelly**, and **Carol Price** - University of Virginia, **Reducing the Activity of Thermotoga maritima Glycerol Dehydrogenase (TmGlyDH) with Glycerol Substrate through an F243N Point Mutation**

**Kara Eppard**, **Marshall Ritchie**, and **Barnabas Otoo** - Bridgewater College, **An Aldol Route for the Synthesis of Fluoxetine Analog**
John Erskine, Diana Miskell, Robert Seal, Perry Smith, and Carol Price - University of Virginia, F243V
Point Mutation Reduces Steric Strain Upon Active Site Exerting Increased Catalytic Efficiency in Thermotoga maritima Glycerol Dehydrogenase

Leah Gunnoe, Renna Nouwairi, and James P. Landers - University of Virginia, Ultra-Rapid Microfluidic Instrument for Real-Time PCR and HRM Analysis to Determine DNA Methylation Status

Benjamin Hancock and Ian McNeil - Bridgewater College, Hysteresis of Photocurrent Decay and Growth in Dye-Sensitized Solar Cells Under Intermittent Light

Benjamin Hanks, Jonathan Brubaker, and Ian McNeil, Bridgewater College, Cyclic Step Chronopotentiometry of Dye-Sensitized Solar Cells

Hannah G. Harris and E. Davis Oldham - University of Mary Washington, Optimizing the Alkylation of Carboxylic Acid Derivatives for Use in the Synthesis of the Oxidative Metabolites of DEHP

Nayoung Kim1, Merci Best2, Yunu Lim2, Nina Ferenc2, and George Bloom - 1Department of Chemistry, University of Virginia, 2Department of Biology, University of Virginia, Qualitative Analysis of BetaIV-Spectrin Protein in the Axon Initial Segment

Jesse Lynch, Ellaha Momand, Khudaija Shaukat, Erica Kim, Hamid Noori, Larry Reser, and Carol Price - University of Virginia, Investigating the Role of Surrounding Amino Acids on Active Site Residues by an S239A Point Mutation of a Glycerol Dehydrogenase from Thermotoga maritima (TmGlyGH)

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Thomas Manley1, Xinrui Shi2, Hui Li2,3 - 1Department of Chemistry, University of Virginia, 2Department of Pathology, University of Virginia and 3Department of Biochemistry and Molecular Genetics, University of Virginia, Differential Expression of Chimeric RNA as a Potential Biomarker

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Claire Piczak1 and Hui Li2 - 1Department of Chemistry, University of Virginia, 2Department of Pathology, University of Virginia, Using Random Mutagenesis to Determine the Binding Site of “Drug 92” to the Oncogene, AVIL: Cloning Optimization

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