The Blue Ridge Chemist

Since 1947 the Official Local Section Publication of the Virginia Blue Ridge Section, American Chemical Society

Volume 79	Number 1	April 2026

Radford University Hosts the April Meeting

- High school & undergraduate posters!
- James Lewis Howe Awards!
- High School Teacher Award
- Keynote Lecture: "Einstein Was Right – God Doesn't Play Dice; He Plays Jazz"

VIRGINIA BLUE RIDGE SECTION

AMERICAN CHEMICAL SOCIETY

720th SECTION MEETING

Radford University

Friday, April 17, 2026

PROGRAM

5:00 to 5:30 PM Poster Setup, Center for the Sciences, Main Lobby

5:30 to 6:45 PM Social Hour & Poster Session, Center for the Sciences, Main Lobby

7:00 to 7:15 PM Awards Ceremony, Center for the Sciences, Room M73

7:15 to 8:15 PM Keynote Lecture featuring Tim Fuhrer, Room M73

The Virginia Blue Ridge Section proudly announces its flagship event – the annual awards celebration and student poster session!

The social hour and poster session will take place in the lobby at Main Street level in Center for the Sciences. The awards recognition and keynote presentation will take place in the adjacent auditorium, Room M73, in Center for the Sciences.

Heavy hors d'oeuvres will be served during the social hour in place of a sit-down dinner.

To enable planning, an RSVP is requested by Friday, April 10, **seven days** before the meeting by emailing Laura Angell at langell@radford.edu or calling her at (540) 831-5515.

Maps and directions are on the last page of this Newsletter.

Are you – or one of your students – presenting a poster?
Instructions and a poster-session registration form are on p. 15.

Keynote Speaker: Dr. Tim Fuhrer

Tim Fuhrer is a physical chemist at Radford University. He received his PhD in 2013 working with Harry Dorn on computational modeling of fullerenes and endohedral metallofullerenes. His research interests continue to include modeling of fullerenes (as well as fluorinated aromatic compounds), but now also cavity quantum electrodynamics and green synthesis of rare sugars. Tim is also a saxophonist having picked the instrument up again a few years ago after 30 years away from it. His recent study of music led partially to the ideas in the talk he will give tonight."

Presentation Abstract:

Einstein was right: God doesn't play dice, he plays jazz.

In a 1926 letter to Max Born on the subject of quantum mechanics, Albert Einstein once wrote, "I, at any rate, am convinced that [God] does not throw dice" [Jedenfalls bin ich überzeugt, daß der nicht würfelt.] Einstein strongly objected to the probabilistic nature and observer dependence of quantum mechanics and insisted that there must be a deterministic, observer independent way of describing all of physics. In this talk, I will show that Einstein was correct in that statement, but probably not in the manner in which he – or anyone else – intended! I will show that the construction of the universe can be likened to the construction of jazz music, with a deterministic framework symbolized by the written form of sheet music/charts but combined with the probabilistic framework jazz musicians associate with improvisation. Beginning to think of the universe in this way may make quantum mechanics and other difficult topics in chemistry more relatable to students, as similar thought processes have made advanced concepts more reachable even for the scientists who discovered them.

James Lewis Howe

James Lewis Howe was for many years Professor of Chemistry and Head of the Department at Washington and Lee University. As one of the most distinguished chemists in the Virginia Blue Ridge Section, we have chosen to name our annual awards to outstanding college seniors in his memory.

Howe was born in Newburyport, Massachusetts in 1859 – the birth year of Svante Arrhenius. During Howe's career he came to know many famous early chemists, such as Liebig, Wohler, Bunsen, and others. He attended Amherst College, where he pursued his favorite subjects of chemistry, German, and religion. He delivered the commencement address on the subject of "The Scientific Method and Religion".

Howe earned his M.S. and Ph.D. degrees at the University of Gottingen and published his first scientific papers on the subject of aromatic carbon chemistry. He then began an intensive literature search of the platinum metals, beginning a bibliography for which he was to become world-famous. He decided that the most interesting and least known metal of the group was ruthenium.

In 1883 Howe married Henrietta Leavenworth Marvine of Scranton, Pennsylvania. This marked the beginning of a marriage of 60 years. The Howes became the parents of two daughters and a son (who was also a chemist). After Mrs. Howe's death in 1944, one daughter, Guendolen Howe, became her father's constant companion.

Dr. Howe's teaching career began at Brooks Military Academy in Cleveland, Ohio. From there he went to Central University in Richmond, Kentucky, where he was Professor of Chemistry (and later Physics and Geology as well). In 1894 he accepted the Chair of Chemistry at Washington and Lee University, and for almost half a century he was at that institution.

It was at W&L that Howe began his intensive bibliographic study of the platinum group and his outstanding research on ruthenium. In 1917 he was appointed chairman of a special subcommittee on platinum of the National Research Council. His work led to the development of platinum alloys, and averted a potentially crucial shortage in platinum, threatening our efforts during World War I. He later received several presidential commissions dealing with the platinum metals.

Dr. Howe was beloved by his students and colleagues at W&L. For the first fifteen years he was a one- person department. His lectures were informal, but completely up to date. He was known for his extreme congeniality, charming personality, mild manner, and even temper. He was unceasingly helpful and believed that more could be learned in the laboratory than from lectures.

Dr. Howe's unflagging energy found him serving in many capacities outside the scientific field. He was an Elder of the Lexington Presbyterian Church, an active Mason, and held positions in the Town Council in Lexington and the People's National Bank of Lexington.

Howe Awardees 2026

	**Anna Newman –** Ferrum College **Hometown**: Haw River, North Carolina **Degree**: BS in Biological Chemistry, May 2026 **Honors**: Boone Honors Program, Ferrum College Outstanding Student in Biological Chemistry, 2026.
	**Olivia "Ari" Cogswell –** Hollins University **Hometown**: Charlottesville, Virginia **Degree**: BS in Chemistry, Biochemistry Concentration, May 2026 **Honors**: Ella Faith Mode Research Award; Judith Gregory Smith Award for Excellence in the Natural Sciences; Undergraduate Research Award Finalist; ACS Analytical Chemistry Undergraduate Award, Dean's List, NSF-REU placement at Virginia Tech. Member of Omicron Delta Kappa, Sigma Xi, Phi Beta Kappa, and ACS.
	**Nadia Costescu –** Liberty University **Hometown**: Alexandria, Virginia **Degree**: BS in Chemistry, May 2026 **Honors**: Dean's List all semesters; Liberty University Honors College. Member of ACS.
	**Hassan Al-Qattan –** Radford University **Hometown**: Roanoke, Virginia **Degree**: BS in Chemistry, May 2026 **Honors**: Dean's List all semesters; Highlander Honors Scholar. Member of American Society of Biochemistry and Molecular Biology.

Howe Awardees 2026, Continued

	**Greg Wietrzykowski –** Randolph College **Hometown**: Rockingham, Virginia **Degree**: BS in Chemistry and BS in Mathematics, May 2026 **Honors**: General Chemistry Award, Outstanding First-Year Student in Mathematics, Dean's List every semester. Member of Alpha Alpha Alpha, ACS; American Physical Society; Sigma Pi Sigma; National Society of Physics Students.
	**Hays Edmunds –** Roanoke College **Hometown**: Boulder, Colorado **Degree**: BS in Chemistry with Honors, May 2026 **Honors**: Roanoke College Inorganic Chemistry Award; Ronald R. Oetgen Organic Chemistry Award; ACS Student Affiliate Award; Dean's List. Member of Phi Beta Kappa and Omicron Delta Kappa.
	**Margaret Rife –** Sweet Briar College **Hometown**: Daniel, West Virginia **Degree**: BS in Chemistry, May 2026 **Honors**: Member of Alpha Lambda Delta and Iota Sigma Pi.
	**Sarah Woosley –** Virginia Military Institute **Hometown**: Louisville, Kentucky **Degree**: BS in Chemistry, May 2026 **Honors**: Francis H. Smith Award; Faculty Merit Scholarship; Biochemistry Award; Herbert E. Ritchey Third Class Award for Organic Chemistry. Warrior Ethos ROTC Award; German Armed Forces Badge. Member of Omicron Delta Kappa and Gamma Sigma Epsilon

Howe Awardees 2026, continued

Leela Ohri – Virginia Tech Department of Biochemistry

Hometown: Alexandria, Virginia

Degree: BS in Biochemistry and BA in National Security and Foreign Affairs, May 2026

Honors: Virginia Tech Department of Political Science Outstanding Senior, Dean's List, Virginia Tech Honors College Annual Scholarship, Phi Beta Kappa; Phi Sigma Biological Sciences Honor Society; Phi Sigma Alpha Political Sciences Honor Society. Member of International Association for Food Protection and American Society for Biochemists and Molecular Biologists.

Quinn Smith – Virginia Tech Department of Chemistry

Hometown: Ashburn, Virginia

Degree: BS in Chemistry and BS in Chemical Engineering, May 2026

Honors: College of Science Student Ambassador, Sigma Phi Epsilon, AIChE, Outdoor Club, Phi Beta Kappa, Newman Community, Co-op at ExxonMobil, Intern at NASA Glenn Research Center, ACS IRES Scholar at Heinrich-Heine University in Germany; Creator of the *Unqualified Curiosity* Podcast, Chem-E-Car Battery Team, Sigma Epsilon Philanthropy Chair, Ronald Lohr Scholarship, Julius P. Bilisoly Scholarship, Astronaut Scholarship Finalist, Churchill Scholarship Alternate, Donald Cox Scholarship, ACS Analytical Chemistry Undergraduate Award, William Poorbaugh Scholarship, Phi Beta Kappa, President's List All Semesters.

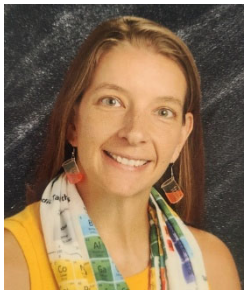
Abigail Grace Leo – Washington and Lee University

Hometown: Norton, Massachusetts

Degree: BS in Biochemistry with Honors, May 2026

Honors: Johnson Scholarship, James D. Davidson Memorial Scholarship, President's List, Phi Beta Kappa, and Omicron Delta Kappa

VBRS-ACS Outstanding High School Chemistry Teacher Award 2026



Melissa J. Carr is a Roanoke native with a passion for the outdoors, running (especially OCR – obstacle course racing), crafting and embroidery, travel, singing, supporting local culture and art, and gardening.

Melissa has been teaching for 20 years in Roanoke. She teaches at the Roanoke Valley Governor's School –Chemistry and Applied Chemical Research. Previously, at William Byrd High School in Vinton, Virginia, she taught Advanced Chemistry, AP Chemistry, oversaw the Science Fair program, and was department chair for a number of years. Melissa is passionate about making Chemistry approachable, relatable, a jumping off point for exploration, and just plain fun! She pride herself on not only inspiring students to like chemistry, but also in being a mentor and role model for her students, and encouraging them to be the best versions of themselves.

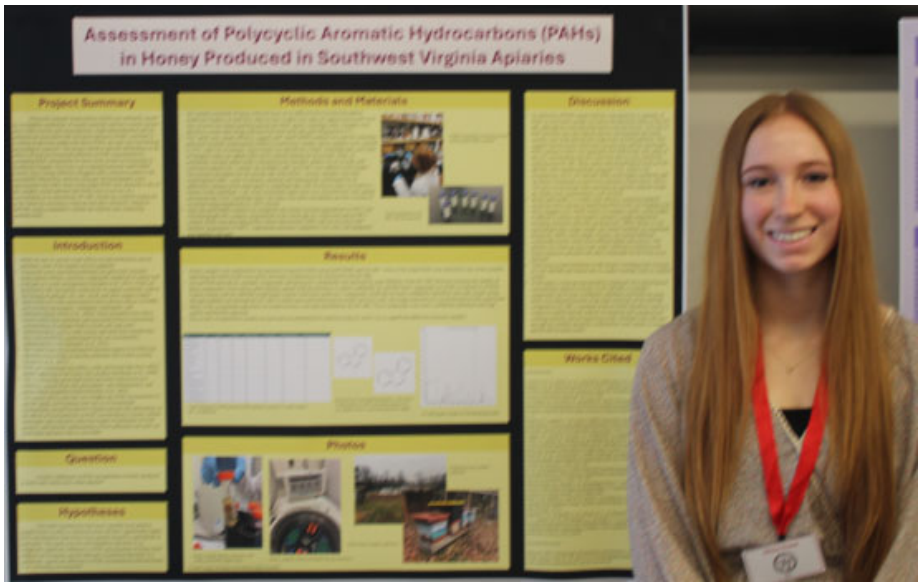
Melissa has always been involved in mentoring students with science research and science fairs, but at RVGS, she feels that she can help students not only take ownership of their research, but she can provide designated time in the school day to conduct research. In her Applied Chemical Research course, students exercise agency over the use of their in-class time in preparing, planning, seeking approval and execution of a scientific experiment that culminates in poster presentation and can lead to competitive fairs.

For the last 13 years, Melissa also has provided students with opportunities for travel for students through educational summer tours. Some are based on a specific learning goal, while others are more exploratory. Her groups have traveled to many destinations including: Italy, Switzerland, Ireland, China, Scotland, Costa Rica, Belize, Iceland, and even the Galapagos Islands.

Melissa has been honored in the recent past by Roanoke County Schools as a recipient of the Golden Apple Teaching Award, recognized as part of the "40 under 40" in *The Roanoker* magazine in 2023, and Claes Nobel Educator of Distinction by NSHSS, among others honors and awards.

VBRS-ACS Award at the 2026 Blue Ridge Highlands Regional Science Fair

Olivia Close received the award in the Senior Division for her project entitled *Assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in Honey Produced in Southwest Virginia Apiaries*. Olivia attends Southwest Virginia Governor's School, and her sponsor is Jared Brown.



Mya Cecchini received the award in the Junior Division for her project entitled, *Stain Pain Hurt Your Brain? The Ultimate Stain Remover Faceoff*. Mya is homeschooled with the Classical Conversations curriculum. Her sponsor is Anna Cecchini.

Virginia Blue Ridge Section of the American Chemical Society

Undergraduate and High School Poster Submission Form

As part of the April 17, 2026, meeting at Radford University, the Virginia Blue Ridge Section of the American Chemical Society is sponsoring the 32nd Annual Undergraduate/High School Poster Session. Note that poster boards will be provided.

If you have a student or students who will be participating, please submit the following information by email to Dr. Christine Hermann (chermann@radford.edu) by April 10, 2026. This is a firm deadline. No submissions will be accepted after this date. All students and faculty will receive email confirmation. If you did not get an email reply, then your submission was not received and you cannot present.

Name of Project _____

_____

Name(s) of Student(s):_____

Mark each student above with his or her class: Freshman (1), Sophomore (2), Junior (3), Senior (4)

Affiliation (name of school or institution): _____

Student(s) email address:_____

Advisor's Name: _____

Advisor's Mailing Address: _____

_____

Advisor's Telephone Number: _____

Advisor's Email Address: _____

48" by 36" poster board on a tripod or on a table will be provided. Please specify what you need.

_____ poster board with tripod _____ table needed

All poster presenters will be included in the list for the meal (heavy hors d'oeuvres will be served during the Social Hour, see below). Please list any other faculty, parents, friends, or other students that will be coming to the poster session as your guest(s). We need to get an accurate count for catering.

_____

_____

Meeting Schedule: 5:00 – 5:30 pm: Poster setup 5:30 – 6:45 pm: Social hour/poster session

7:00 – 7:15 pm: Awards 7:15 – 8:15 pm: Keynote presentation

The poster session will take place in the Main Street Lobby of Center for the Sciences. The awards ceremony and keynote presentation will take place in adjacent Room M73, Center for the Sciences.

If you are scanning this form, please make sure the scan is legible.

Directions to Radford University

Directions: Take I-81 to Exit 109 and follow Route 177 (Tyler Ave) to Main Street. Make a right onto Main Street. Go into the first parking lot on the right in front of McConnell Library, and beside Center for the Sciences (white arrow). The poster session / social hour starts at 5:30 pm in the Center for the Sciences. The talk follows the poster session in Center for the Sciences Room M73, immediately adjacent to the poster area in the main lobby of the building.

No parking pass is needed!!

A campus map is here: https://www.radford.edu/_resources/_documents/campus-map.pdf