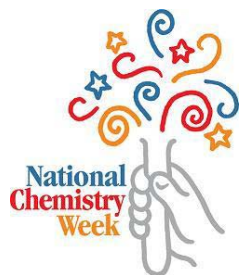


The Blue Ridge Chemist

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Virginia Tech Hosts the October Meeting

<http://www.acs-vbrs.org>

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VIRGINIA BLUE RIDGE SECTION

AMERICAN CHEMICAL SOCIETY

696th SECTION MEETING
Virginia Tech, Blacksburg VA

Monday, October 22, 2018

**Celebration of National Chemistry Week
“Chemistry is Out of This World”**

5:30 PM – Social Time – Hahn Hall South Atrium

6:00 PM to 7:00 PM – Dinner in the HHS Atrium

7:00 PM – Lecture – Davidson Hall Room 281

The theme of National Chemistry Week for 2018 is “Chemistry is Out of This World.” Our speaker will be Dr. Sarah B. Hiza, VP for Missile and Reentry Programs at Lockheed Martin.

The social time and the dinner will take place in Hahn Hall South Atrium. A barbecue buffet dinner (with vegetarian entree option) is offered by Professional Catering of Blacksburg. The dinner is \$15.00, with students and retired ACS members at half price. The lecture will be presented in nearby Davidson Hall Room 281.

Reservations for the dinner must be made by Wednesday Oct 17, five days before the meeting, by contacting Paul Deck at 540-231-3493, or by e-mail to pdeck@vt.edu.

Front Cover: The Trident II D5 is a three-stage, solid-propellant, inertial-guided fleet ballistic missile (FBM) developed by Lockheed Martin for submarine launch (SLBM). The missile, which is 13.4 meters in length and weighs 65 tons, can carry multiple independently-targeted reentry bodies for a maximum range of ca. 7500 km. Cruising speeds can reach 6 km per second. The use of graphite-epoxy composites has resulted in significant weight savings and increased range compared to the missile’s predecessor, the Trident I C4. An Ohio-class submarine (US Navy) can carry 24 of these Trident II missiles.



Sarah B. Hiza, PhD

VP for Missile and Reentry Programs
Lockheed Martin (Fleet Ballistic Missile)

Sarah serves as Lockheed Martin's Vice President of Missile and Reentry Programs for Fleet Ballistic Missile (FBM). Previously, she was FBM's Director for Propulsion, Structures, Ordnance & Controls. Prior to joining Lockheed Martin in 2015, she worked at ATK (now Northrop Grumman Innovation Systems) for 11 years. Her previous career positions include Lead Scientist in Research & Development, Director of Research Operations, Chief Engineer for Strategic Programs, and Senior Director of Safety & Mission Assurance. Sarah's education includes a Bachelor's in Chemistry from Virginia Tech and a Ph.D. in Polymer Science from The University of Akron.

Sarah's technical expertise includes polymers and energetic materials such as explosives and rocket propellants. She has authored numerous proposals, presentations and reports for Department of Defense & NASA; she holds 1 patent and has 7 national publications.

Recognition of Sarah's contributions includes 2016's honoree of Silicon Valley's YWCA's Tribute to Women Award, 2011's Technology Innovator Award by the Women Tech Council, and a 2010 finalist for the Rising Star Award of the Women Tech Council.

Sarah currently serves as the Executive Advisor for the Lockheed Martin Leadership Association – Bay Area Chapter, as the Co-chair for Lockheed Martin's Inclusion Council, and as the Co-chair for the NOLS Advisory Council. In her free time, she enjoys traveling, hiking/backpacking, skiing, photography, and amateur astronomy.

Lecture Summary

“The Critical Chemistry of Why”

Understanding “why” inspires many chemists, scientists and engineers to pursue an education and ultimately to enter their respective career fields. In the career field of aerospace and defense, nationally critical programs, such as space exploration and defense programs, cannot move forward until a thorough investigation is conducted to understand “why”, so that national assets are not put in unnecessary jeopardy. Real examples of critical chemistry questions and related troubleshooting from the aerospace and defense sector will be presented, with emphasis in the areas of redox chemistry, activation energies, nanomaterials, and polymer science. In these cases, the criticality will be equally as intriguing as the chemistry.



Upcoming VBRS Meetings

November 15, 2018 – Ferrum College

February 2019 – Hollins College

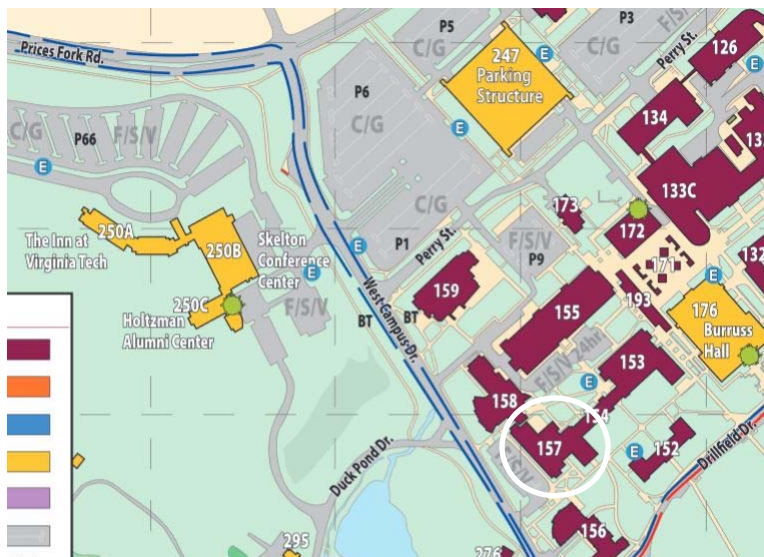
March 2019 – Roanoke Valley Governor's School

April 2019 – Radford University – Poster Session & Awards!

Directions to the Virginia Tech Chemistry Department

From I-81 follow US-460 West to Price's Fork Road and turn right, toward Downtown Blacksburg. Follow Price's Fork Road to West Campus Drive and turn right. The second, third, and fourth buildings on the left, about 1/4 mile down the hill, facing West Campus Drive are Hahn North and Hahn South, and Davidson. Maps of campus and a parking map may be found at www.maps.vt.edu. Guests may park without a permit after 5 PM in C/G or F/S lots as long as they are not marked "24 hours." (Angle parking along Drillfield Drive is "24 hour" parking.) The closest useable parking lots (see the "Parking Map" at the above link) are the Hahn Lot F/S, Davidson Lot F/S, Wright House Lot F/S, and the large C/G lot between Price's Fork Road and Perry Street. The social hour and the dinner will be in Hahn Hall South (157, circled) and the presentation will be in Davidson 281 (156).

Map of Virginia Tech Showing Chemistry Buildings



The 70th Southeastern Regional Meeting of the American Chemical Society will be held at the Augusta Convention Center in Augusta Georgia from October 31 to November 03. Details at sermacs2018.org.



The October meeting is generously supported by financial contributions from the Chemistry Department and the College of Science at Virginia Tech.