AMERICAN CHEMICAL SOCIETY

NORTHERN WEST VIRGINIA SECTION

"Members Bring Nonmembers Event" and Lecture on High Temperature Electrolysis Research at NETL

ACS Members, Students, and Invited Guests,

REMINDER: You are invited to join the Northern West Virginia Section of the American Chemical Society (NWVACS) at a Fall 2024 "**Members Bring Nonmembers Event**" and lecture to encourage networking among regional chemistry professionals in academia, government labs, and local industries. The event is partially funded by an ACS Local Section Member Engagement and Enhancement (LS-MEET) grant.

Your help is needed with identifying and inviting potential new members! NWVACS will offer $25 discounts* for a year's standard or premium membership to new members. It will also offer promotional giveaways to attending ACS members. Refreshments will be provided.

DATE:	Monday, October 14, 2024
LOCATION:	West Virginia University Department of Chemistry Clark Hall – 112 (Clark Hall, Morgantown, WV 26506)
PARKING:	Park on your own at metered street parking, Mountainlair Garage, or other suitable location.
AGENDA:	5:30 pm: Meet, socialize, refreshments 6:00 pm: NWVACS remarks and introduction of new members 6:15 pm: Lecture on High Temperature Electrolysis Research at NETL
SPEAKER:	Dr. Harry Abernathy, Technical Portfolio Lead for SOFC, SOEC Research National Energy Technology Laboratory Thermal Sciences Team
PRICE:	Free

Please complete the **RSVP Google Form** to be emailed to ACS members, former members, and invited guests. Feel free to forward this announcement to others along with the Google Form link. Hope to see you there!

Regards,

Ed Wovchko
Chair of Northern West Virginia Section of the ACS

ACS Local Section
Northern West Virginia

*$25 discounts will be made available for up to 20 non-ACS members for a year's standard or premium membership. To receive the $25 discount, the person must provide documentation of new membership and they must join the Northern West Virginia local section. General membership information is available at: https://www.acs.org/membership.html

High Temperature Electrolysis Research at NETL

Dr. Harry Abernathy
Technical Portfolio Lead for SOFC, SOEC research
Thermal Sciences Team

The US Department of Energy's Hydrogen Shot goal aims for a $1/kg price for the production of hydrogen by 2030. In research supported by the DOE's H2NEW national lab consortium on electrolysis and by the Reversible Solid Oxide Fuel Cell (R-SOFC) program, NETL uses its capabilities in systems analysis, electrochemical device performance simulation, and high temperature electrochemistry to determine the technological advances that need to be made to meet the Hydrogen Shot goal using high temperature electrolysis. On the device level, significant reductions in hydrogen production cost can come from making electrolyzers that can operate at higher current densities and can last longer before being replaced. This talk will give examples of research efforts at NETL to produce higher performing and more durable electrodes for high temperature electrolyzers through efforts such as computationally guided materials design, microstructure optimization, and catalyst infiltration. Besides producing hydrogen from steam using electricity, high temperature electrolyzers can also be run as fuel cells, generating electricity from hydrogen or hydrocarbon fuels. The opportunities for and advantages of operating these cells reversibly (switching between fuel cell and electrolysis mode) will also be discussed.