



Building Superheroes for 2050: The Future of Chemistry and Chemical Engineering

PUBLIC AGENDA

October 29, 2025

1:00 PM

(All times are US EASTERN time.)

This webinar will explore potential advances in education and workforce development for the chemical sciences as the community navigates the challenges and opportunities ahead in 2050.

Each panelist will have 10 to 15 minutes to present their background and current initiatives in advancing chemical sciences education and career pathways, highlighting how these efforts can lead to exciting new careers and opportunities. The presentations will be followed by a Q&A session with the moderator, roundtable members, and public attendees.

1:00 – 1:05 pm	Welcome by Michael Janicke , Director of the Chemical Sciences Roundtable
1:05 – 1:10 pm	Opening Remarks lead by Jennifer Heemstra Charles Allen Thomas Professor and Chair at Washington University in St. Louis
1:10 – 1:20 pm	Pamela Leggett-Robinson Founder and Executive Director of PLR Consulting
1:20 – 1:30 pm	Anthony Palmiotto Director of Higher Education at OpenStax

1:30 – 1:40 pm

Kelly Weiler

Chemical Laboratory Technician Program Director at Bidwell
Training Center

1:30 – 1:40 pm

David A. Laviska

Portfolio Manager for Green Chemistry and Sustainability in
Education, ACS Green Chemistry Institute

1:40 – 2:10 pm	Panel Discussion with Moderator
2:10 – 2:50 pm	Questions and Answers with Attendees (questions can be submitted via Q&A feature in the Zoom application)
2:50 – 3:00 pm	Concluding Remarks from Panelists

BIOGRAPHIES

Pamela Leggett-Robinson

Founder and Executive Director of PLR Consulting, bringing over 15 years of higher education experience in STEM academic programming, institutional strategic planning, data analytics, and program evaluation. Her diverse expertise stems from roles as an academic administrator, project manager, principal investigator for STEM initiatives, high school teacher, and K-20 science funding lobbyist on Capitol Hill. She has received multiple awards for STEM service and secured funding from both NIH and NSF for educational programs supporting students and women of color in STEM professions.

Pamela holds a B.S. in Chemistry from Georgia State University, an M.S. in Bio-Organic Chemistry from Tennessee Technological University, and a Ph.D. in Physical Organic Chemistry from Georgia State University. As a Certified Associate in Project Management, she brings exceptional enthusiasm and nuanced perspective to STEM education initiatives. Her latest publications, *Demystifying Promotion & Tenure* and *Overcoming Barriers for Women of Color in STEM Fields*, provide resources to assist Black women along their STEM journey.



Anthony Palmiotto

Director of higher education at OpenStax. OpenStax is the world's largest publisher of open education resources (OER), a provider of integrated learning technologies and education research for high school and college, and a global nonprofit founded at Rice University by Richard Baraniuk. Anthony collaborates with faculty, students, instructional designers, OER advocates, and OpenStax's internal team to understand

and support educational needs. He focuses on improving educational equity and deepening student belonging through meaningful and memorable learning experiences. Before OpenStax, Anthony worked with colleges and publishers to develop research-driven instructional methods and technologies. He loves to be a learner, particularly by trying things he's bad at.



Kelly Weiler

Kelly Weiler is the Director of the Chemical Laboratory Technician Program at Bidwell Training Center in Pittsburgh, Pennsylvania, overseeing training programs that prepare adults for careers in the chemical laboratory and working to address workforce shortages and accessibility challenges in the industry. Weiler collaborates closely with industry partners to foster diversity and inclusion in the chemistry field and to create pathways for underrepresented populations to enter and thrive in chemistry careers.

Before joining Bidwell, Weiler worked as a Research Scientist at Alcoa and Arconic, experience she now uses to bring a practical, industry-informed approach to chemical technician training. She was named “Outstanding Educator” in 2025 by the Mid-Atlantic Association of Career Schools (MAACS) and serves as the founding faculty advisor for the Bidwell Training Center ACS Student Chapter and the founding secretary and treasurer of the Greater Pittsburgh Workforce Chapter of NOBCCChE.

Weiler holds a Ph.D. in Physical Inorganic Chemistry from the University of Washington and a B.S. in Chemistry from the University of Pittsburgh. She is passionate about expanding opportunities in STEM fields, breaking down systemic barriers, and helping students recognize chemistry as a viable and rewarding career path.



David A. Laviska

Portfolio Manager for Green Chemistry and Sustainability in Education. Prior to joining the ACS Green Chemistry Institute, David was an Assistant Professor at Seton Hall University where he is co-director of the Academy for Green Chemistry, Stewardship, and Sustainability. As a pedagogical innovator, he led the effort to incorporate the principles of Green Chemistry throughout the Organic and General Chemistry curricula and was recognized by the College of Arts and Sciences as “Professor of the Year” in 2020. As a first-generation college student and member of the LGBTQIA+ community, he took leading roles in working with undergraduate STEM students from across the spectrum of underrepresented groups. His research focuses on green(er) synthesis and characterization of late transition metal complexes with unique optical properties and hetero- and homogeneous catalysis. His research students also develop and pilot green(er) experimental protocols for use in undergraduate teaching labs. Prior to his second career in academia, Dr. Laviska worked for more than a decade as an Environmental/Analytical Specialist with the EPA (Region II) and earned degrees in chemistry from Rutgers University (Ph.D.), University of Washington (M.S.), and Cornell University (B.A.).



Jennifer Heemstra

Chair of the Department of Chemistry in Arts & Sciences at Washington University in St. Louis. Her lab is focused on harnessing the capabilities of proteins and nucleic acids to address unmet needs in biomedicine and the environment. Research in the Heemstra lab is highly interdisciplinary, drawing upon techniques from molecular and cellular biology, organic synthesis, analytical chemistry and materials science.

Heemstra is a fellow of the American Association for the Advancement of Science, one of the most distinct honors in the scientific community. She has been the recipient of the Army Research Office Young Investigator Award, the National Science Foundation CAREER award, the Cottrell Scholar Award and the American Chemical Society Women Chemists Committee Rising Star Award.

She is also a passionate advocate for mentoring and diversity, equity and inclusion. Heemstra engages the



broader academic community around these topics via her social media presence and professional development seminars and workshops.