Thursday, September 9

**NOBCChE ConneXions Poster Competition**

A multidisciplinary session covering various specialties of the sciences and engineering where research is presented by students and professionals. The poster session is an excellent opportunity to see and discuss some of the outstanding research being done across the country.

Thank you to our division Sponsors:

- **Pfizer**
- **CORNING**
- **Incyte**
- **abbvie**

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**Pre-Conference**

**Thursday, September 9**

**2:00 PM - 3:00 PM**

**Translating Practice to Scholarship: Understanding Interventions that Broaden Participation in Engineering**

*Dr. Anthony DePass, President, DePass Academic Consulting*

Participants will gain familiarity with methodology relevant to design, implementation and assessment training programs in STEM and Engineering. This will be in the context of understanding the roles of theories, as well as theoretical and conceptual frames in utilizing and generating scholarship for dissemination and grant funding.

**3:00 PM - 5:00 PM**

**Putting Your Best Foot Forward: Strategies for job searching and developing the best CV and resume**

*Dr. James Fells, Associate Principal Scientist in the Computational Structural Chemistry group, Merck & Co.; Dr. Lamont Terrell, Team Leader, Flexible Discovery Unit Medicinal Chemistry Center of Excellence, GSK; Dr. Meghan Woodward, Global Technology Talent Access Strategy Leader, DuPont; Dr. Phil Rathosky, Senior University Relations Specialist, Merck*

This workshop is geared towards students who are interested in an industry position. Students will learn how to effectively...
target industry positions by highlighting their accomplishments, structuring a winning CV and cover letter, and showcasing their knowledge and experiences. Discussions in the session will cover creating an effective communication strategy that will encompass your attributes and align them with the hiring manager/committee. This workshop will be useful for scientists on the job search now, as well as for those who want to get things in order for future years.

**September 10**

<table>
<thead>
<tr>
<th>3:00 PM - 4:00 PM</th>
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<tr>
<td>Harnessing Opportunities for International Students and Professionals.</td>
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<tr>
<td>Dr. Fidelis Ndombela, Study Lead Scientist, Greenfield site, Indiana, BioPharm CMC, Covance Laboratories Inc. USA</td>
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This session will provide international students with information on how to leverage opportunities (jobs, fellowships, conferences, etc.) during and after grad school to become equipped for their chosen careers.

**Sunday, September 12 and Tuesday, September 14**

<table>
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<tr>
<th>2:00 PM - 6:00 PM (each day)</th>
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<td>Resume Roundup</td>
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Looking for a professional review of your resume? Sign up to meet with one of our reviewers from top organizations in our field.

By appointment.

**September 10**

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<th>1:00 PM - 4:00 PM</th>
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<tr>
<td>The American Chemical Society: Managing Your Career: Your Vision/Your Success</td>
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<tr>
<td>Mahalia Randle, ACS Scholars Program Manager and Project SEED Scholarship Manager; Leah Martinez, ACS Bridge Program Project Manager; Bryan Tweedy, Senior Portfolio Manager, ACS Education; Tom Halleran, Program Specialist, ACS Membership</td>
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It’s been a challenging couple of years, and we have all had to make quite a few unexpected adjustments, but now it’s time to re-focus on career goals. The path you take in your career depends a great deal on your resiliency and access to the information and resources you need to move forward in your journey.

Do you need funding for education, guidance on how to ace an interview, develop an impressive professional resume, get career questions answered in real time and the like???

Look no more...you’ve come to the right place!

**1:00pm-2:00pm ACS Scholars Program** - A walk through the application process and the requirements. **ACS Bridge Program** - Specific topics include eligibility for and application to the ACS Bridge Program, benefits, program components, upcoming application cycles, resources, and a brief period for Q&A.

**2:00pm – 3:00pm Promoting and Advocating for Your Career** - Find out why it’s important!

**3:00pm – 4:00pm ACS Career Consultants** - This presentation will provide an overview of how working with an ACS Career Consultant will help you identify skills and opportunities, develop career.
plans, and more. **ACS Career Navigator** - No matter where you are in your career—in college, just starting a new job, changing jobs, or preparing for retirement, the ACS Career Navigator™ can help you succeed. This presentation will provide an overview of the products and services that make up the ACS Career Navigator—the ACS home to all its career services.

Don't wait one more minute! ACS can help you with your career concerns and provide support along the way!

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### Monday, September 13

**4:00 PM - 5:00 PM**

**NSF Industrial Innovation and Partnerships (IIP) Invention to Impact Keynote**

*Dr. Diane Hickey, Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Director, NSF*

Innovation programs at the National Science Foundation (NSF) advance ideas from the laboratory to the marketplace to strengthen America's economy, health, and security. The Division of Industrial Innovation and Partnerships (IIP) in the Engineering Directorate leads several programs to translate fundamental research into market solutions. IIP supports and trains researchers with promising technologies, as well as funding high-tech startups. Learn about the NSF’s central role in accelerating the growth of the national ecosystem and hear about specific funding opportunities.

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### Tuesday, September 14

**4:00 PM - 6:00 PM**

**Conversations with the National Science Foundation Chemistry Division**

*Dr. Colby Foss, NSF Chemical Structure, Dynamics and Mechanisms A Program Director; NSF Program Director in the Division of Molecular and Cellular Biosciences in the Directorate for Biological Sciences; Dr. David Alexander Roccliffe, NSF Program Director in the Division of Molecular and Cellular Biosciences in the Directorate for Biological Sciences; Dr. Nora Savage, NSF Program Director for the Nanoscale Interactions Program within the Chemical, Bioengineering, Environmental and Transport Systems Division of the Engineering Directorate; Dr. Rebecca Peebles, NSF Program Director in the Division of Chemistry; Dr. Tingyu Li, NSF Program Director of the Chemical Structure, Dynamic & Mechanism B program*

If you are an undergrad/grad/PhD student or faculty member seeking information regarding a fellowship or funding opportunities, please stop by and speak with us. Allow our friendly team of Program Directors to assist you in succeeding!
Join us for our Science Communication Competition on Twitter.

Undergraduate and graduate students will have the opportunity to upload a 280 character tweet (not limited to audio, visual, and videos) containing a creative description of their research and the official competition hashtag to participate in the competition. Participants must sign up in advance. The official competition hashtag is #nobcchescicom21

Sign Up Here

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**Wednesday, September 15**

**4:15 PM - 5:15 PM**

**Welcome and Conference Kickoff**

*Dr. Reña Robinson, Associate Professor of Chemistry, Dorothy J. Wingfield Phillips Chancellor’s Faculty Fellow, Vanderbilt University, NOBCChE President; Dr. Bridgette Shannon, Application Development Engineer, 3M Abrasive Systems Division*

Tiyumba, an African drum and dance company, will kickoff the celebration of building a Legacy of Resilience and Excellence in Chemistry followed by greetings and remarks by NOBCChE Leadership.

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**6:30 PM - 7:30 PM**

**Networking Session**

Join your friends and colleagues to network by scientific discipline.
Thursday, September 16

10:00 AM - 12:00 PM

Career Fair: Corporate/Government Expo

The Career Fair provides the landscape to expand your network and learn about professional opportunities including summer undergraduate research programs, MS and PhD graduate programs, fellowships, and career positions in government agencies, industry, and academia.

12:30 PM - 1:30 PM

REU Power Hour

In the REU Power Hour, students will get a brief overview of NSF’s Research Experiences for Undergraduates (REU), and information about where students can find information on what REU programs are available for application. In addition, REU Partners will talk about their REU programs including location, types of research, where information on the opportunity can be found, summer research in academia, etc. Participating partners do not necessarily have a NSF-sponsored REU.

Representatives from the following institutions and programs will present:

- Iowa State University
- NSF Centers for Chemical Innovation
- Northeastern University - Biology, Chemistry and Chemical Eng. Depts.
- The Pennsylvania State University
- Princeton University - Dept. of Chemistry
- Stony Brook University, Dept. of Chemistry
- University of Florida, Dept. of Chemistry
- University of Rochester, Dept. of Chemistry

Questions for these presenters? Visit the Exhibit Hall to chat with Sponsor and Exhibitor representatives or Schedule your one-on-one appointment!

1:45 PM - 3:00 PM

Benefits of Graduate School Panel

In the Graduate School Panel, students will get a brief overview of the benefits of graduate school to various career choices (academia, industry, government, and others), and learn more about the pathway of a graduate student. Afterwards, REU Partners participating in the Graduate School Panel will share information about their programs including support for URMs, where students go after graduation, application processes, etc.

Representatives of the following institutions and programs will present:

- NSF Centers for Chemical Innovation
- Northeastern University
- The Pennsylvania State University
- Stony Brook University
- Yale University

3:00 PM - 5:00 PM

Academic Expo

The Academic Expo provides the landscape to expand your network and learn about professional opportunities including summer undergraduate research programs, MS and PhD graduate programs, fellowships, and career positions in academia.
Networking Session: Regional Mixer

Expand your network by connecting with other students and professionals in your region. Compete with your Chapter in our Escape Room Challenge and with your Region in our Trivia Competition. Prizes will be awarded for each competition as well as a door prize for the Chapter with the most participants in attendance.

Friday, September 17

10:00 AM - 11:00 AM

Master Scientist Series: Winifred Burks-Houck Lecture

Dr. Sharon Walker, Dean of Drexel's College of Engineering and Distinguished Professor in the Department of Civil, Architectural and Environmental Engineering

Our Master Scientists, the recipients of NOBCChE awards, will be giving presentations on the research that resulted in their recognition by NOBCChE. Join us for this series!

Winifred Burks-Houck Lecture - From Ideal to Real: Addressing Water and Food Security Issues with Fundamentals of Chemical Engineering

Water and food security are fundamental human needs and major components of the United Nations Sustainable Development Goals. A major threat to water and food security are pathogenic bacteria, which can contaminate water used for consumption or agricultural use and could also affect food supplies through insect vectors. In this presentation, Walker will share how chemical engineering fundamentals can be deployed to investigate these sources of transmission by determining the fate and transport of the bacteria. Examples will be given from her lab group’s recent work in bacterial adhesion and transport in two agricultural systems, the first on human pathogen Escherichia coli O157:H7 in the subsurface, the second on the plant pathogen Xylella fastidiosa and its transport via a sharpshooter insect. A combination of approaches ranging from sand columns, to flow cells, to in silico modeling will be presented as examples of chemical engineering tools and principles employed in addressing the complex challenges of protecting water and food supplies.
DuPont will be hosting a virtual one-day seminar series and oral presentation competition at the 48th National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) Annual Conference. This collaborative initiative supports DuPont’s commitment to a diverse workforce and is the third installment of DuPont’s GOLD (Growth Opportunities Leading in Diversity) program, a platform intended to expose doctoral and post-doctoral scientists from underrepresented groups (African American, Hispanic/Latino, and Native American) to the wide range of career opportunities in industrial research at DuPont.

The theme of this year’s GOLD seminar competition at NOBCChE is “Makers of New: Developing Innovation for Tomorrow”.

1:00 PM - 2:00 PM
State of NOBCChE

Dr. Simon Shannon, Global Business Development Manager, Advanced Materials Division, 3M

NOBCChE Town hall to highlight the state of NOBCChE as an organization, report on major areas in our organization, and especially promote current and upcoming major initiatives.

Concurrent Sessions

Professional Development
2:10 PM - 3:25 PM
Diversity, Equity, and Inclusion: Industry and Academia

Dr. Alveda Williams, Corporate Director of Inclusion and Senior HR Director of Talent Acquisition, DOW; Dr. Rigoberto Hernandez, Gompf Family Professor, Department of Chemistry, Johns Hopkins University

In this session, attendees will learn about the efforts and approaches to DEI in STEM related fields. Representatives from DOW and Johns Hopkins University will discuss the conscious efforts of DEI at their organizations.

Student Programs
2:10 PM - 3:10 PM
Course Correction: It’s Never Too Late

Dr. Pamela Brady, Assistant Professor of Chemistry and Department Chair at Talladega College; Dr. Godwin Nwosu, Chemist; Dr. Robert Hammond, Medical Student - Meharry Medical College; Dr. ChaMarra Saner, Associate Professor of Chemistry at Catawba College; Dr. Nicholas Speller, Research Assistant at Georgia Tech Research Institute; Dr. Ansonia Badgett, Scientist at Proctor & Gamble

Have you ever wondered if it is too late to pursue an opportunity? Have you deviated from your...
original path but still find yourself compelled to pursue your original goals? Did you attempt to accomplish a goal but fell short the first time or find yourself feeling you are too old to achieve a goal? Let’s debunk the myths, because we believe it is never too late to achieve the goals you seek to accomplish. Life may be more complicated now; you may be bit older tomorrow, but that is going to happen anyway so pursue your goals and passions today.

In this session we will discuss the pursuit of higher education and non-traditional paths taken to achieve these goals in a panel format. We may also discuss the pursuit of passions, new ventures and being well rounded.

2:10 PM - 3:25 PM

Considering a Career in Industry? Female Perspective on What it is Really Like.

Lindsay Jones, Associate Research Scientist, Bristol Myers Squibb; Dr. André Morgan, Director, Product Development and Implementation & Support Global Technology and Design (GTeD)-Personal Care, Colgate-Palmolive, CO.; Dr. Caroline Blakemore, Principal Scientist, Medicinal Chemistry, Pfizer; Deborah Isabelle, Product Engineering Specialist, Automotive Aftermarket Division, 3M; Dr. Mary Kamande, Technical and Application Development Leader, DuPont Mobility & Materials; La-Tonya Adams, Senior Scientist, Merck & Co.

In this session, women scientists in industry will engage students with a 25 minute panel discussion in an “AMA” (ask me anything) style. Both pre-selected and audience questions will be used to guide the discussion. We will then breakout into small group discussions with the panelists that will be focused on “a day in the life of a female research scientist in industry.” Scientists will
discuss their educational backgrounds and career pathways, what they enjoy, and don't enjoy(), about their work, and strategies for professional and personal life balance. The session will also touch on being a female in a male-dominated industry, tips and tricks to have your voice heard, and an open question and answer session that will cover any topic.

2:30 PM - 3:15 PM
Dealing with Micro-Aggression in a Field Where We Weren't Meant to Belong

Dr. Jillian Wendt, Associate Professor of Science Education, University of the District of Columbia; Dr. Carrie Graham, Founder of COGLAS; Dr. Zakiya Wilson-Kennedy, Assistant Dean for Diversity and Inclusion - College of Science, Research Associate Professor - Chemical Education, LSU; Dr. Lloyd Munjanja, Assistant Dean of Inclusive Excellence, College of Liberal Arts & Sciences Administration, University of Illinois at Urbana-Champaign

This session will focus on building a sense of belonging in STEM fields through highlighting the disparity and lack of representation that still persists in STEM fields, but more importantly how to bridge those gaps through various types of mentorship and networking opportunities.

2:30 PM - 3:15 PM
GEM GRAD Lab Symposium - Part I

Dr. Howard Adams, Retired; Dr. Shemita Lee, Assistant Dean and Director for the Office of Recruitment, Diversity, and Inclusion for the Graduate School of Virginia Tech; Dr. Marcus Huggans, National GEM Consortium

Have you ever wondered if it is too late to pursue an opportunity? Have you deviated from your original path but still find yourself compelled to pursue your original goals? Did you attempt to accomplish a goal but fell short the first time or find yourself feeling you are too old to achieve a goal? Let’s debunk the myths, because we believe it is never too late to achieve the goals you seek to accomplish. Life may be more complicated now; you may be bit older tomorrow, but that is going to happen anyway so pursue your goals and passions today.

The GRAD Lab symposium will focus on providing students a perspective on the benefits of having a graduate degree in engineering or science.
Component 1: Why Graduate School?

Corporate and academic professionals, who hold masters and doctoral degrees in engineering and science and who are from under-represented communities will hold a panel discussion on the benefits of a graduate education. Topics such as financial benefits, expansive career opportunities, information on benefits of a research career, and global competitive trends will be discussed.

Component 2: How to Apply for Graduate School?

This panel session will address these five central questions: Is Graduate School for Me? What is Graduate School like? (What do I expect?) How is Graduate School different from Undergraduate? How do I pay for graduate school given current loans, under-graduate bills, and family economic needs? How do I apply for graduate school?

Component 3: How to Fund Graduate School and the GEM Fellowship program

This section focuses on details of how to finance graduate education through the GEM fellowship program and opportunities within organizations for graduate students through the GEM program.

Component 4: Voices from the field: Real Life Experiences

Professionals from academia, corporate and government agencies will discuss a) their fears as an undergraduate, b) their graduate school experiences, c) their life as compared to colleagues with only an undergraduate degree, d) their work life, day to day experiences, e) their view of their current professional roles, and their career opportunities, f) their salaries, ability to pay off loans, and general quality of life.
3:30 PM - 4:30 PM

The Hunt: Searching, Interviewing, and Negotiating in a Pandemic

Dr. Robert Garbaccio, Vice President, Head of Discovery Chemistry, Merck & Co.; Dr. Brian Mosby, Assistant Professor of Chemistry, Rollins College; Dr. LaRico Treadwell, R&D Chemist and Material Scientist, Sandia National Laboratories

Are you currently on the job market? Do you want to learn more about how you can be more successful interviewing in a pandemic? If these things sound interesting to you then join this session. In this session, several panelists will highlight how the hiring process has changed since the pandemic. They will share the best way for students on the market to navigate this new era with greater success. This session will also include a live Q&A.

5:00 PM

Movie Screening: “The Ball Method” directed by Dagmawi Abebe and Legacy of Black Women in Chemistry Panel

Panelists: Mr. Dagmawi (Dag) Abebe, Film Director; Dr. Reña Robinson, Associate Professor of Chemistry, Dorothy J. Wingfield Phillips Chancellor’s Faculty Fellow, Vanderbilt University, NOBCCChE President; Dr. Dorothy Phillips, Director-at-Large, Board of Directors, American Chemical Society

Movie Screening "The Ball Method" - Alice Ball, a 23-year-old African American chemist living in 1915 Hawaii fights against racial and gender barriers to find an effective treatment for leprosy. An almost forgotten true story of African American genius and contribution to world health.

A panel discussion on the Legacy of Black Women in Chemistry will follow the film as well as a networking session.

Saturday, September 18

10:00 AM - 11:00 AM

Master Scientist Series: Percy Julian Lecture

Malika Jeffires-El, Associate Dean of the Graduate School in Arts and Sciences, Boston University
Our Master Scientists, the recipients of NOBCChE awards, will be giving presentations on the research that resulted in their recognition by NOBCChE. Join us for this series!

Percy Julian Lecture - Taking the Road Less Traveled: My Path to the Ivory Tower

Although African Americans make up approximately 13% of the US population, they are severely underrepresented in advanced degrees awarded in STEM disciplines and within the ranks of the faculty at research institutions. Despite the overwhelming statistics, Dr. Jeffries-EL pursued and completed a doctorate degree in chemistry, obtained and academic job, and then tenure in promotion in due course. She was born in Brooklyn, NY where she lived in public housing and attended public school. Although her situation was less than ideal, she always had a passion for science that her parents encouraged her to pursue. In this talk, Dr. Jeffries-EL will discuss what excites her about science, diversity, equity and inclusion issues and potential solutions woven all within the context of her personal experiences.

STEM Activities (Middle and High School Students Only)

10:00 AM - 11:00 AM

Polymer Science Demos

The Science Bowl team members will participate in a polymer science demonstration and hands-on activities conducted by polymer chemists.

11:00 PM - 12:00 PM

Careers in Chemistry & Chemical Engineering Panel

The Science Bowl competition team members will meet with chemistry and chemical engineering professionals to learn about the various career opportunities in these fields.

1:00 PM - 3:00 PM

NOBCChE National Science Bowl

A national science bowl in which middle (Junior Division) and high school (Senior Division) students compete as teams of four to test their knowledge of the fields of physical and life science, engineering, mathematics, and Black history in STEM.
11:15 AM - 1:15 PM

**Technical Sessions**

Join us to hear your colleagues discuss their recent research in the categories of Analytical Chemistry, Biochemistry, Biophysics, Chemical Biology, Medicinal Chemistry, Computational Chemistry, Physical Chemistry, Green Chemistry, STEM Education, Inorganic Chemistry, Materials Science, Nanoscience, Organic, Chemistry and Polymer Chemistry. For details on the individual Technical Talks please view the Technical Session Detailed Agendas.

For more information on the individual talks, please view the details sheet for each session.

Organic Division Sponsor:

Inorganic Chemistry and Materials Science/Nanoscience Divisions:

12:00 PM - 2:00 PM

**NOBCChE Regional Leadership Meeting**

This is a special session for chapter officers and advisors to discuss aligning on regional expectations, foster collaborations, and engage in membership enhancement opportunities.

1:30 PM - 2:30 PM

**Am I Potent?: Potency Determination of Biologics**

*Krisna Laroche Moody, Research Scientist, Lilly*

Many of today's modern medicines are produced in cells. By nature, the production of complex macromolecules in cells has intrinsic variability. This is managed through process controls and comprehensive analytical testing to ensure consistent quality. One analytical test and the subject of this session is the cell-based bioassay, a test of potency. This session will describe the development and use of cell-based bioassays in drug commercialization. The goals of this session are to demonstrate to students to how cell biology, molecular biology and statistics come together in the form of a cell-based bioassay for the development of new drugs. The outcome is getting students excited about learning more about STEM and potential careers.
1:30 PM - 3:00 PM

Teach STEM Students How to Learn: Metacognition is the Key!

Dr. Saundra McGuire, Professor Emerita of Chemistry and Director Emerita of the Center for Academic Success, Louisiana State University

Students come to college with varying academic skills and approaches to learning. Students from minoritized populations have the potential to succeed, but often have not acquired the learning strategies required to excel in STEM courses and research. Many students unnecessarily change majors when they have trouble in Introductory STEM courses. This interactive session will focus on the importance of helping students acquire simple and effective learning strategies based on cognitive science. We will engage in reflection activities that allow attendees to experience strategies that can rapidly and significantly improve student success by transforming students’ attitudes about the meaning of learning. This session is recommended for faculty, academic mentors, and administrators.

At the conclusion of our sessions we will announce our 2021 NOBCChE Award Winners and the 2022 conference.

Awards sponsored by:

ppg

We protect and beautify the world™
Post Conference Session

Tuesday, November 9

Time TBA

Pfizer Chemistry Connect
A Virtual Symposium for Organic Chemists, Analytical Chemists, and Chemical Engineers.

Our purpose at Pfizer is clear: Achieving breakthroughs that change patients’ lives. We realize that means not just attracting the best and brightest talent, but also ensuring our colleagues can thrive in an environment and culture where we champion diversity and inclusion every day.

The symposium will include:

• Perspectives on careers at Pfizer from our leaders
• Pfizer science presentations and an interactive career panel discussion
• Connection with scientists, engineers, and leaders at Pfizer

Apply for the opportunity to present your undergraduate, graduate or postdoctoral research and network with Pfizer colleagues.

For more information visit https://www.nobcche.org/pfizer21