

THE OCTAGON

September Lehigh Valley Section Meeting

Ben Franklin [TechVentures](#) Innovation Center
116 Research Drive, Bethlehem, PA 18015

Thursday, September 15th, 5-8pm

“Adhesives at the Beach: Characterization, Synthetic Mimics, and Commercialization of Marine Biological Materials”



Speaker: Jonathan Wilker, Purdue University

<https://www.chem.purdue.edu/wilker/>



Co-host: Mussel Polymers, Inc.
5:00 Exhibits/Social/Networking
6:00 Dinner/Meeting/Awards
7:00 Presentation/Discussion

Tickets: \$20

Students/retirees \$10

<https://www.eventbrite.com/e/lvacs-september-meeting-co-hosted-by-mussel-polymers-inc-registration-405867238837>



The oceans are home to a diverse collection of animals producing intriguing materials. Mussels, barnacles, and oysters are examples of the many organisms generating adhesive matrices for affixing themselves to the sea floor. Our laboratory is characterizing these biological materials, designing synthetic polymer mimics, and developing applications. Characterization efforts include experiments with live animals, extracted proteins, and peptide models. Synthetic mimics of bioadhesives begin with the chemistry learned from characterization studies and incorporate the findings into polymers. For example, we can mimic the cross-linking of DOPA-containing adhesive proteins by placing monomers with pendant catechols into various polymer backbones. Adhesion strengths of these new polymers rival those of cyanoacrylate “super glues.” Substantial underwater bonding is also now possible. Long-term efforts include development of sustainably sourced materials to solve several environmental problems as well as creating a new generation of biomedical adhesives.

CONTACT: Nigel Sanders, nigel53.sanders@gmail.com

LVACS Events Calendar

September 2022

September Section Meeting

Ben Franklin [TechVentures](#)

116 Research Drive,
Bethlehem, PA 18015

Thursday, September 15th, 5-8pm

Speaker: Jonathan Wilker, Purdue U.

<https://www.chem.purdue.edu/wilker/>

"Adhesives at the Beach: Characterization, Synthetic Mimics, and Commercialization of Marine Biological Materials"
Co-hosted by Mussel Polymers, Inc.

CONTACT: Nigel Sanders, nigel53.sanders@gmail.com

Registration: <https://www.eventbrite.com/e/lvacs-september-meeting-registration-405867238837>



October 2022

October Section Meeting

[Albright College](#)

1621 N 13th St, Reading, PA 19604

Wednesday, October 5th, 5:30-9pm

Speaker: Kathryn Riley, Swarthmore

<https://rileylab.weebly.com/home.html>

"Advances in Nanometrology: From Engineered to Incidental Nanomaterials"

5:30 Social/Networking;

6:15 Dinner; 7:30 Meeting;

8:00 Presentation

CONTACT: Matt Sonntag, msonntag@albright.edu



National Chemistry Week

October 16-22

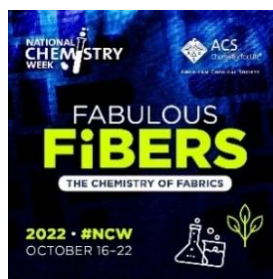
["Fabulous Fibers: The Chemistry of Fabrics"](#)

Mole Day Event: **Thursday, October 20th**

'Bioinspired Materials for Medicine'

Speaker: Crystal Chu, Lehigh University
Community Outreach Events being planned

How can YOU play a role this year?



November 2022

November Section Meeting/Career Event

[Penn State / Lehigh Valley](#)

2809 Saucon Valley Road, Center Valley, Pennsylvania 18034

Thursday, November 17th, 5:30-9:00pm

Career Night at PSU/LV's New Charles W. Dent STEM Wing

5:30 Social; 6:00 Dinner/Meeting; 7:30 Career Exploration Event

CONTACT: Roger Egolf, rae4@psu.edu



Also In This Issue...

3. **October 6th Section Meeting is at Albright College: Nanometrology**

4. **July 16 Social Event Report and ChemLuminary Award Record Win.**

5-6. **LVACS Awards: Foundation in Chemistry; HS Teacher of the Year; Chemagination; Olympiad.**

7. **National Chemistry Week 2022 activities plan: "Fabulous Fibers: The Chemistry of Fabrics".**

8. **Senior Chemists Page: Mary Virginia Orna.**

9-10. **Career Page: Virtual Office Hour "Skydiving into Retirement" with Bill Carroll October 6th.**

11. **ACS Spring 2023 Meeting Abstracts due; Molecules Special Issue edited by Lee Silverberg.**

12. **Delaware Section Announces 2021 Carothers Award winner; 1st Annual STEM Symposium includes LVACS SEED students.**

13. **2022 Executive Committee.**



CONTACT: Nigel Sanders, LVACS secretary and newsletter editor, nigel53.sanders@gmail.com

OCTOBER SECTION MEETING IS AT ALBRIGHT COLLEGE



[Albright College](#)

1621 N 13th St, Reading, PA 19604

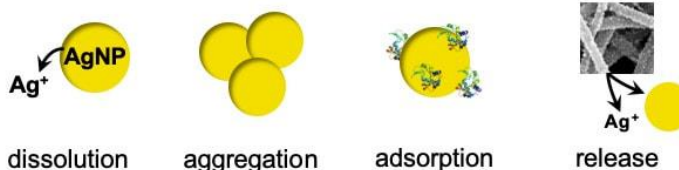


Wednesday, October 5th, 5:30-9:00pm

5:30 Social/Networking; 6:15 Dinner; 7:30 Meeting; 8:00 Presentation

CONTACT: Matt Sonntag, msonntag@albright.edu

Quantifying AgNP transformations in the Riley Lab



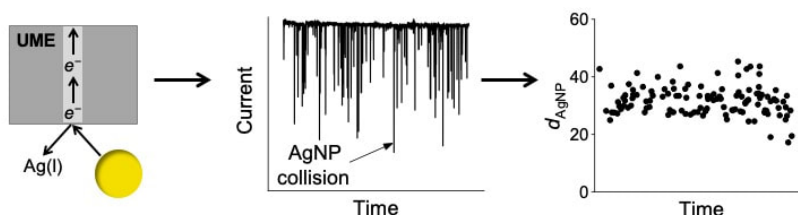
Advances in Nanometrology: From Engineered to Incidental Nanomaterials Speaker: Kathryn Riley, Swarthmore, <https://rileylab.weebly.com/home.html>

Abstract: The unique properties of engineered nanomaterials (ENMs) have enabled their increased use for a range of environmental, medicinal, and commercial applications. However, the uncontrolled release of ENMs into the environment (e.g., through human waste repositories) can have detrimental impacts. Beyond direct release of NMs, incidental NMs can form through degradation of bulk materials that are released into the environment. For example, nano- and microscale plastic particles are formed from macroscale sources (e.g., plastic water bottles and plastic bags). To understand the impact of engineered and incidental NMs on human and environmental health, *in situ* and quantitative analytical tools are needed, which our group works to address. However, the analysis of NMs in relevant matrices is complicated by the dynamic physicochemical transformations that NMs undergo in environmental and biological matrices (e.g., dissolution, aggregation, adsorption of small molecules, etc.). This talk will explore the development and application of several *in situ* analytical techniques, including capillary electrophoresis and electrochemistry, for the analysis of engineered and incidental NMs and their physicochemical transformations.

Bio: Dr. Kathryn Riley is an Assistant Professor in the Department of Chemistry and Biochemistry at Swarthmore College. She received her Ph.D. from Wake Forest University in 2014 and was a National Research Council (NRC) postdoctoral fellow at the National Institute of Standards and Technology (NIST) from 2015-2016. Before her current appointment, she was a Consortium for Faculty Diversity (CFD) postdoctoral fellow at Swarthmore from 2016-2018. Dr. Riley's research involves the development of analytical techniques for the characterization of nanomaterials (NMs) and their dynamic physical and chemical transformations in biological and environmental matrices. Her research group specifically aims to broaden participation in the field by developing techniques that provide new quantitative insights in less time and at a reduced cost when compared to more commonly employed methods. Projects in her group span the analysis of engineered NMs (metal and metal oxide NMs, DNA origami) and incidental NMs (nano and microplastics).

Monitoring Silver Nanoparticle (AgNP)
Aggregation Using
Particle Impact Voltammetry

<https://rileylab.weebly.com/research.html>





2022 LVACS Summer Social

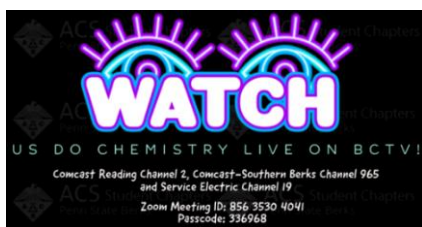
A small but vibrant LVACS group sampled the wines of Sorrenti Family Estates in Saylorsburg, PA on July 16th to celebrate summer and the 95th Anniversary of the Women Chemists Committee. Hopefully, we'll all feel more like socializing when we put nagging viruses to rest. Many thanks to LVACS WCC Chair Lorena Tribe for Organizing and to Terri Pez for taking the picture!



Amber Hinkle, well-known to LVACS through her role as facilitator of our strategic planning process, was the recipient of the 2022 Award for Volunteer Service to the American Chemical Society delivered the keynote address. This year's theme, "ACS Volunteers – Sustained Excellence," honors the work of our volunteers to continue to improve all people's lives through the transforming power of chemistry.

Lehigh Valley Section Strikes ChemLuminary Gold (Au): Not Once but 4 Times!!

The Lehigh Valley Local Section won FOUR (4) Chemluminary Awards at the ACS Fall 2022 Meeting in Chicago! This was a clean sweep of the categories for which LVACS was a finalist (as summarized in a [Summer 2022 Octagon article](#)). No cakewalk this - we were up against some stiff competition from larger sections (Midland, Silicon Valley, et al). The activities/events awarded are representative of the breadth of media/formats LVACS uses to engage its members and the community. JOIN US! All it takes is a love of Chemistry and a few hours of your time. CONTACT Nigel Sanders, LVACS Secretary, nigel53.sanders@gmail.com



**SIGN LANGUAGE
IN STEM**

March 18th 7 pm on zoom (link will be sent out closer to event)
Email: ccc.signs@lehigh.edu
Facebook: CCC Signs Instagram: [ccc.signs](#)

LVACS Awards 2022 Chemistry Achievements

In 2022 the Lehigh Valley Section continues to get back on track with our annual awards program. The Undergraduate Senior scholastic excellence awards were awarded at the April meeting and reported in the May issue and the Organic Chemistry Award recipients appeared in the Summer issue. This time, we highlight the Foundation in Chemistry scholarship for a Lehigh Valley Area High School senior, High School Teacher of the Year, Chemagination competition for High School chemistry students and the National Chemistry Olympiad. *LVACS thanks John Freeman, Awards Committee Chair and Gail Marsella, Olympiad Coordinator, for their guidance of these activities!*

Foundation in Chemistry Scholarship Award

This Year's Foundation in Chemistry Award winner is **Lauren Conrad of Brandywine Heights High School** in Mertztown, PA. She graduated Summa Cum Laude with a 4.72 GPA and had further distinctions as a dual-enrolled student at both Reading CC and Penn State and a selected participant in the Berks Career and Technology Center's Medical Health Professions Program. Lauren has also been recognized by the Reading branch of the AAUW as the highest-ranking 2022 senior woman from Brandywine Heights HS. She will be attending Penn State/Berks this fall, majoring in biochemistry and molecular biology with a chemistry minor and is already looking forward to obtaining a PhD in organic chemistry or medicinal chemistry/molecular pharmacology. Her goal is to work as a medicinal chemist. Lauren says that chemistry first sparked her interest during freshman year honors biology class when she learned about macromolecules. Inspecting molecular formulas to differentiate among proteins, lipids, carbohydrates and nucleic acids, Lauren was fascinated by how carbon and hydrogen atoms gave rise to such vital structures in our bodies. That summer, she was hired as a laboratory technician at F.M. Brown's Sons, Inc. Flour Milling Division where she saw chemistry in action. Meticulously performing and learning the science behind enzyme-linked immunosorbent assays and falling number tests, Lauren says she would come home and gush about how the alpha-amylase enzyme directly affects the quality of a wheat sample! Great dinner table conversation, Lauren: sounds like you'll have a 'home' at LVACS meetings!

High School Teacher of the Year Award

The LVACS High School Teacher of the Year Award is given to recognize, encourage, and stimulate outstanding teachers of high school chemistry within the Lehigh Valley Section's seven county area. This year's awardee, **Dr. Deanna Quay of Northern Lehigh HS**, Slatington, PA, received letters of support from a wide spectrum of colleagues: peers, former students and parents. Deanna teaches using a problem-solving approach with lab work being central. Her students engage in critical thinking methods where informed decision-making using facts and data is the goal. Her ability to challenge and inspire her students is best exemplified by the support letter from a former student, now an engineer at ExxonMobil, who mentions challenge specifically as a strong point ('pushing her students to learn more and never quit') and the constant referencing of chemistry to real life situations. Deanna's outreach commitments include Northern Lehigh Science Club advisor; Hillside and LV Christian school science fairs judging; many outside organizations as science advisor; college adjunct and Lehigh University visiting scientist (Deanna holds a PhD in Analytical Chemistry from Lehigh with Jim Roberts and John Larsen). She embraces life-long learning through continually adapting new teaching methods, especially helpful during the past two pandemic years, and improving her own chemistry knowledge, such as through attending the 2019 ASM Teacher Camp in Materials Science. Deanna has been Project Director, DOE College and Career Transitions Program for several years and is a long-time AACT and ACS member (Analytical and Education Divisions). LVACS heartily congratulates Dr. Quay on her achievements and devoted service to chemistry teaching!



LVACS Awards 2022 Chemistry Achievements

Chemagination Competition and Awards

Chemagination is a great learning experience for students. High school students are asked to imagine that they are living 25 years in the future, 2047 and are writing for ChemMatters, a magazine for high school students that focuses on the role of chemistry in everyday life. The editor chooses them to write the cover article for the next issue of the magazine describing a recent breakthrough or innovation in chemistry and its applications that improve the lives of those living in 2047 and design the magazine's cover. The subject of the article is: "Describe a recent breakthrough or innovation in chemistry (and/or its applications) that has improved the quality of people's lives today." The article must be written to fit in one of four categories: Alternative Energy, Environment, Medicine/Health, or New Materials. Students from Muhlenberg HS in Reading took this on as a class assignment with a real futurist's fervor! With guidance from chemistry teacher Audrey Smeltzer Schwab, they covered the four subject areas brilliantly with stories from new material "Glasphene" by Matthias Maftai to Health innovation "The NeuroPen" by Yahfrelyn Alvarado, Dalhendji Henly and Jeslee Ruiz. All four of our first-place entries won 1st or 2nd place at the MARM competition (see table below).



CHEMMATTERS MAY 2047



Alternate Energy Category

First Place - "Wave Toward Clean Energy and Water", Omar Alghondakly, Marta Rzeszutko and Paula Wasik, *Wallington High School*

Second Place - "Mushroom Turbines", Sophia Castiglioni and Kayla Yoder, *Muhlenberg High School*

Environment Category

First Place - "The O-Fish-Ally Perfect Nanotechnological Fishing Line", Matthew LaSusa and Natalia Pszeniczny, *General Douglas MacArthur High School*

Second Place - "Artificialis Florae", Jairo Alcaraz, Samson Evans and Nathan Ramkissoon, *Muhlenberg High School*

Medicine/Health Category

First Place - "CROCDROPS", Stephen Jones and Anushka Pandya, *Half Hollow Hills High School West*

Second Place - "The NeuroPen", Yahfrelyn Alvarado, Dalhendji Henly and Jeslee Ruiz, *Muhlenberg High School*

New Materials Category

First Place - "Glasphene: The Future of Glass", Matthias Maftai, *Muhlenberg High School*



MARM First Place Winner
New Materials
Matthias Maftai,
Muhlenberg High School

2022 Chemistry Olympiad

This year's entrants for our local exam were Benjamin Bauman, Reva Gandhi, Abigail Graham, Veda Vundela from Parkland, Zachary Conzaman, Colby Snyder, Owen Fick, Rachel Roberts, Sindura Sridhar from Wilson, Natalya Ding from Southern Lehigh and Sienna Walenciak from Easton. The finalists for the National Exam were Benjamin Bauman and Reva Gandhi from Parkland, Zachary Conzaman and Colby Snyder from Wilson and Natalya Ding from Southern Lehigh. Zach received an 'Honors' grade from ACS/USNCO. Much thanks to their chemistry teachers, Patricia Metz of Parkland, Beth Levan of Wilson, Rachel Saber of Southern Lehigh and Rachel Peters of Easton, and to our graduate student tutor, Aarshi Singh of Lehigh, for sponsoring and tutoring these students!





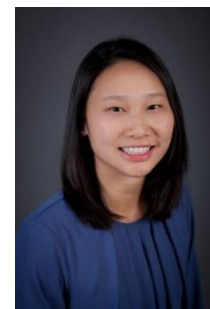
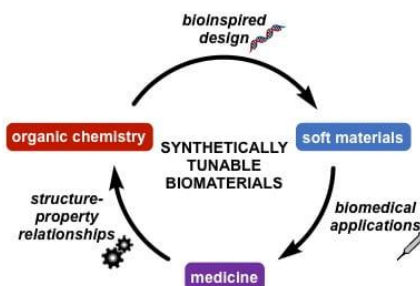
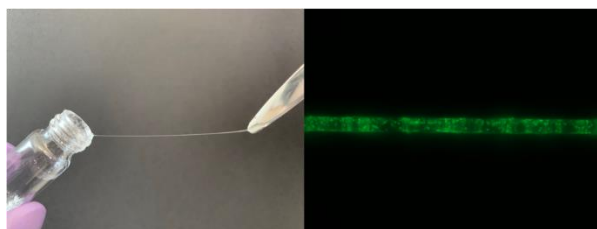
It's Almost Time for National Chemistry Week!

The Theme for 2022 NCW is “**FABULOUS FiBERS: The Chemistry of Fabrics**” and will take place the week of **October 16-22**. <https://www.acs.org/content/acs/en/education/outreach/ncw.html>
Some of the activities suggested that demonstrate the importance of chemistry to textiles include hydrophobicity of and liquid wicking in fibers, resistance of fabric structures to transmission of particles (e.g. SARS-CoV2!), dyeing of fabrics and forensic science of fibers. Consult the accompanying issue of Celebrating Chemistry and the ACS links for ideas to use in your Outreach Events. <https://www.acs.org/content/acs/en/education/outreach/celebrating-chemistry-editions.html>
Copies of this issue will be available through LVACS – just ask. nigel53.sanders@gmail.com

National Chemistry Week AACT Lesson Plan Contest

Fabulous Fibers: The Chemistry of Fabrics

AACT is excited to offer a content writing opportunity for K-12 teachers of chemistry. The contest is open to current AACT members. Participants will submit their idea for an exciting and unique National Chemistry Week (NCW) themed lesson plan. The 2022 topic is Fabulous Fibers, and the theme is, "The Chemistry of Fabrics." AACT will select one winning lesson plan for the K-8 grade level, and one winning lesson plan for the high school grade level. Both winning lessons will be published in the AACT Classroom Resource Library and featured on social media. Participants will each earn \$250 and a NCW goody bag for their participation! **DEADLINE: September 12th**. For details see: <https://fs11.formsite.com/AACT/NCWContest2022/index.html>



SAVE THE DATE!!

Celebrate Mole Day with Hydrogel-derived Fibrous Materials for Medical Applications

On **Thursday, October 20th**, Crystal Chu, Assistant Professor of Chemistry at Lehigh University will talk about her work developing bioinspired materials for medical applications, mapping chemical structure to mechanical properties and therapeutic function. Tissue dysfunction can result from injury, aging, and genetic diseases. Therapies that can reverse or repair damage by regenerating the mechanical and biological properties of different tissue types are needed to provide patients with improved treatments. Hydrogels have many characteristics that make them useful for regenerative medicine applications. The Chu group investigates molecular design rules to rationally design new biomaterials using polymer hydrogels and hydrogel-derived fibers. The focus is on structure-property relationships that govern how chemistry affects network dynamics and stability, enhancing biocompatibility and biomimicry. The application of these rules then allows development of potential therapeutics to improve treatment outcomes. Visit the Chu Research Group [website](#) to learn more!

LEHIGH VALLEY ACS SENIOR CHEMISTS' PAGE

March of the Pigments: Writing a Book during COVID-19 Lockdown by Mary Virginia Orna, Emeritus Member

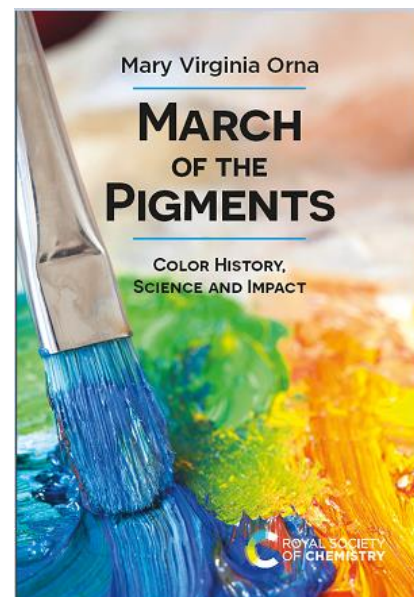
I'd like to tell you about my new book which was published by the Royal Society of Chemistry (RSC) this past May, 2022. Its beginning coincided with the beginnings of COVID-19 in March of 2020. Just as I was cancelling all travel plans for 2020, including the Biennial Conference on Chemical Education in Oregon, the ACS National Meeting in San Francisco, and Pacificchem in Honolulu, an offer from the RSC literally fell on my desk: would I write a book on the history of pigments? Would I? If COVID-19 had not occurred, there would be no question: I have no time. But come the lockdown, I spent the next 16 months crafting the 16 chapters that make up the book.

One seeming difficulty was the concomitant closure of all the libraries to which I would need access, but fortunately, as a member of the New York City Public Library, I had access to an unlimited supply of articles sent to me electronically, a policy initiated due to the lockdown. Later on, the libraries opened partially to allow for the pickup and drop-off of interlibrary loan books, another service I took advantage of.

With helpful advice from ACS colleagues and friends, the chapter outline took a roughly chronological flavor, beginning with the pigments used in the Paleolithic cave paintings and ending with electronic pigments that defy the traditional definition of what a pigment actually is. A lengthy chapter on the most ancient substrate on which pigments were slathered, the human body, touches on cosmetics, ancient and modern, pigment toxicity, hair coloring, cultural usage of body paint, and finally tattooing application and removal. Mummy brown and Egyptian blue open a window onto export practices from that fabled country in ancient times and in the early modern period. Mining for prized pigments like cinnabar exposes the reality of child labor in times past, and the world's oldest color industry, dyeing with Tyrian purple, is faulted as an extreme example of environmental devastation. A mysterious blue color used by the indigenous peoples of the New World reveals pre-Columbian nanotechnology that stumped archaeologists for more than 60 years. Later chapters deal with alchemical and chemical accidents that afforded a rash of new pigments, both organic and inorganic. Pigment usage in the Renaissance and by the Impressionists shows how artists capitalized on chemical creativity. We also see how we've turned waste materials into a whole rainbow of tints and hues to color our clothes, our food, and ourselves, and how with a snip of a genetic scissor, we've harnessed bacteria to gift us with "greener" blue jeans and dazzling dashikis. As part of its publicity, the Royal Society of Chemistry (RSC) says: "Pausing for reflections en route to share stories around pigment use and discoveries informed by history, religion, sociology and human endeavor, this book will have you absorbing science and regaling tales. Jam packed with nuggets of information, March of the Pigments will have the curiously minded and the expert scientist turning pages to discover more."

The book is dedicated to the devoted health professionals who risked their lives to keep us safe and healthy and the scientists who worked around the clock to develop vaccines in record time.

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LEHIGH VALLEY ACS CAREER PAGE

ACS Career Navigator

Professional Education
Short Courses
On Demand
Online Courses
Sci-Mind™

Leadership Development
Online Courses
Facilitated Courses



Careers Services
Career Consulting
Career Fairs
Virtual Career Fairs
Career Pathways

Market Intelligence
Employment Dashboard
Salary Comparator
Employment Reports
Ethics & Professional Guidelines
Chemical Labor Market Tracking

Check out the Career page on our website lvacs.org/careers for a wealth of information on the services provided by LVACS to chemists at all stages of their careers. Online courses, 1-on-1 consulting, professional development grants and the [ACS Career Navigator™](#) package are some of the benefits offered to ACS members to assist in planning and executing your career. Greglynn Gibbs, our local section ACS Career Consultant, would be happy to assist any member seeking more information. greglgibbs@gmail.com

Join ACS for our **ACS Virtual Office Hour - Skydiving into Retirement**
Join the ACS for this free Virtual Office Hour session on **Thursday, October 6, 2022 at 12pm EST**. Open to ACS members and non-members, this virtual session will begin with a presentation "Skydiving into Retirement" with certified retirement and ACS Career Consultant, Dr. William Carroll. This will be followed by the opportunity to network in small groups led by ACS Career Consultants. Register: [here](#)

Senior Surfactants Scientist, Nouryon, Bridgewater, NJ On-site

The Senior Surfactants Scientist will join the Nouryon team and be responsible for the research, development, and evaluation of surfactant ingredients for the home and personal care segments. This may include developments for various sub-segments, such as hard surface cleaners, degreasers, laundry and dish washing products, personal cleansing systems, conditioners, sunscreens, and skin care products. [Apply](#)

Senior Scientist - Bio Materials, Nouryon, Bridgewater, NJ On-site

The applicant should have good multi-tasking, organizational, and communication skills (written and presentation). The successful candidate will interface internally with the marketing, technical service, technology, and manufacturing groups, and externally with customers to fulfill solution needs within targeted home and personal care markets. [Apply](#)

Senior Scientist, AR&T Pigment Concentrates, Evonik Allentown, PA On-site

You will work on exciting and challenging topics together with a team in an ultra-modern, innovative and creative environment. Intensive on-the-job training with expert colleagues guarantees you will quickly become familiar with your duties and perform them independently. Performance related pay and the opportunity for personal and professional development are of course part of the package. Since 2009 Evonik Industries AG has been certified as a family-friendly company by the German Hertie Foundation. [Apply](#)

Senior Consumer Scientist, Church & Dwight Co., Inc., Princeton, NJ

The Senior Consumer Scientist will be the voice of the consumer and own agile research solutions that uncover insights that enhance consumer experience. Leads product and consumer research for designated categories to guide product development/ Innovation R&D. Subject matter expert of consumer and product research methods (qualitative and quantitative methods). Develops/ leverages holistic approaches that capture consumer needs. Ability to connect research solutions to consumer centric needs and lifestyle trends. Collaborates with R&D partners to help formulate project objectives, appropriate action standard for research and recommendation on methods, analyses. Strong story-telling skill to deliver comprehensive view point of consumer experience. Collaborative and willing to 'roll up sleeves' to provide constructive solutions for problem solving are critical leadership qualities for this role. [Apply](#)

Sr Project Manager - R&D, Church & Dwight Co., Inc., Princeton, NJ

The Senior Project Manager has primary responsibility of leading multi-functional teams to successfully execute complex projects by defining, planning and tracking key project deliverables. He/she is responsible for identifying key resources and providing the direction required for meeting the project objectives. He/she may also be tapped to lead large corporate projects related to mergers and plant needs. He/She will also be responsible for Portfolio Management of the SBUs they are responsible for and lead Portfolio Review/Prioritization meetings to ensure effective resource management and project prioritization as needed. As a Sr Manager, he/she will also have one or more Associates supporting him or her. He/she will be responsible for coaching and developing their direct reports and have overall accountability for successful execution of all PMO led projects within their SBUs. He/She will also be responsible for working with the PMO Group Leader to develop and lead PMO process/systems improvements. [Apply](#)

Raw Materials Scientist, Catalent Pharma Solutions, Somerset, NJ, On-site

Catalent Pharma Solutions in Somerset, NJ is hiring a Scientist working in Quality Control and Analytical Product Development. This person will be performing routine analysis of raw materials, excipients, and API testing using laboratory techniques and instrumentation such as HPLC, FTIR, KF, and other wet chemistry techniques. [Apply](#)

LEHIGH VALLEY ACS CAREER PAGE

Plant Process Chemist, SF 158083, Evonik, Allentown, PA, On-site

Provide process chemistry expertise and technical support for the Amines Process Technology manufacturing sites. Utilize advanced chemistry skills to develop practical commercial manufacturing processes for new products. Help drive continuous improvement at manufacturing sites through process optimization. Apply technical skills in troubleshooting efforts and general plant support as needs arise. Provide process chemistry expertise in support of e-MOC, OPHR and technical risk management. [Apply](#)

Measurement/Materials Scientist, Analytical & Measurement Science, Ingredient Incorporated Bridgewater, NJ Hybrid

The Measurement/Materials Scientist will be responsible for providing technical and project leadership in developing characterization techniques necessary for understanding the functional properties of ingredients and systems including proteins, fibers, starches, hydrocolloids. The Measurement/Materials Scientist will use expertise in measurement techniques, including rheology, microscopy, and data analysis and interpretation to enable product, process and formulation development. [Apply](#)

Sr. Research Chemist, Church & Dwight Co., Inc., Princeton, NJ

The Senior Research Chemist will provide technical expertise; lead the development, qualification, and commercialization of new sexual health medical device products. Support the brand on product line extensions, improvements, maintenance, and cost savings initiatives. [Apply](#)

Associate Chemist, Church & Dwight Co., Inc., Princeton, NJ

We currently have an excellent opportunity for an **Associate Chemist** located at our Princeton, NJ location. The candidate for this position will support the Fabric Care Research and Development activities with development of new formulations and product improvements in addition to other R&D work. The Associate Chemist will be under the supervision of an R&D Manager in a manner consistent with the C&D R&D Core Principles of teamwork, consumer and customer focus, personal responsibility and integrity, and ethical behavior and practices. [Apply](#)

Application Development & Technical Service Chemist, Evonik, Allentown, PA, On-site

Evonik has a job opening for a Polyurethane Application Development & Technical Service (ADTS) Chemist. As a Polyurethane ADTS Chemist in the Advanced Polyurethane Materials Product Line organization, the successful candidate will focus on identifying and developing new polyurethane (PU) technologies/products and providing technical service to Sales and customers. He/she will effectively manage multiple projects, ensuring clear alignment of goals and deliverables with business and market needs. A focus for this position will be in surfactants, catalysts, and other additives for high-density PU foam markets, including microcellular and mechanical froth foams. [Apply](#)

Research Chemist, Church & Dwight Co., Inc., Princeton, NJ

The Research Chemist will work with other researchers and multidisciplinary project teams to solve problems using various analytical chemistry techniques. The Research Chemist will use and sometimes develop analytical methodology to solve various technical challenges for product and process development scientists. The Research Chemist will be able to interpret and communicate results to various product and process personnel. The Research Chemist will also provide technical guidance to other chemists and technicians in the department. [Apply](#)

Senior Surfactants Scientist, Nouryon, Bridgewater, NJ

The Senior Surfactants Scientist will join the Nouryon team and be responsible for the research, development, and evaluation of surfactant ingredients for the home and personal care segments. This may include developments for various sub-segments, such as hard surface cleaners, degreasers, laundry and dish washing products, personal cleansing systems, conditioners, sunscreens, and skin care products. [Apply](#)

Senior Scientist, Axalta Coating Systems, Philadelphia, PA

Axalta Coating Systems is seeking a Polymer/Organic Chemist with experience in the synthesis and characterization of polymers. In addition to a synthetic background, the candidate should have a basic understanding of structure-property relationships and polymer physics. Knowledge of statistical methods, such as Six Sigma, is preferred. The ideal candidate would have an interest in raw materials initiatives, such as cost reduction and sustainability, and should be a multi-tasker with a dynamic personality who will interact successfully with multiple key functions within the organization. More information and [Apply](#)

Polymer Chemists, Mussel Polymers, Inc.

Mussel Polymers, Inc. located at 116 Research Dr, Bethlehem, PA 18015 in Bethlehem PA is a biomimetic specialty adhesive and formulations company. We are seeking Polymer Chemists and Adhesion Scientists to join our team while we expand our scientific development and pilot manufacturing. This is an opportunity to join an innovative startup looking to rapidly grow and develop new solutions to previously unsolvable problems. Qualities desired in ideal candidates are: Pilot scale polymerization design and operations experience, Commercial scale specialty polymer production experience, Experience with catechol chemistry, Experience with functional protection/de-protection chemistry, Organic monomer synthesis chemistry experience and cGMP production experience. Interested? CONTACT: letsbond@musselpolymers.com



ACS
Chemistry for Life®

NEWSLETTER OF THE LEHIGH VALLEY SECTION
OF THE AMERICAN CHEMICAL SOCIETY

SEPTEMBER 2022
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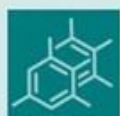
ACS SPRING 2023

Crossroads of Chemistry
Indianapolis, IN & Hybrid
March 26-30

Where thousands of chemistry professionals meet to share ideas and advance scientific and technical knowledge.

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molecules

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IMPACT
FACTOR
4.927

Indexed in:
PubMed

Synthetic Studies Aimed at Heterocyclic
Organic Compounds

Guest Editor

Dr. Lee J. Silverberg

Deadline

31 December 2022

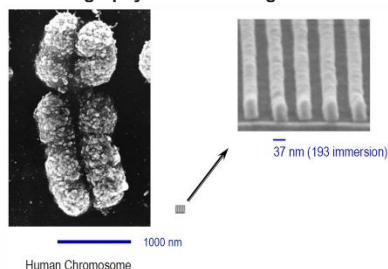
mdpi.com/si/118934

Special Issue

Invitation to submit

Prof. Lee Silverberg of Penn State/Schuylkill is guest editing a special issue of the journal *Molecules*, impact factor 4.927. The topic is "Synthetic Studies Aimed at Heterocyclic Organic Compounds." Papers are welcomed that describe synthesis of specific heterocycles, as well as papers that disclose methods or strategies that could be applied to heterocyclic synthesis. Papers may be Articles, Communications, or Reviews. Open for submissions, I hope you will consider contributing!

Microlithography: Orders of Magnitude



2021 Carothers Award

“Enabling the Information Age with Chemistry”

Dr. Peter Trefonas (DuPont, retired)

Tuesday, October 11, 2022

DuPont Country Club, Wilmington, DE

Reception 5:30-6:30 pm; Served dinner 6:30 pm

Award presentation and address 7:30 pm

A reservation link will be provided shortly



Abstract: The modern Information Age has transformed the economy, business practices, entertainment, communication and indeed the world culture. Microprocessors, chips that can store massive amounts of data, storage media, miniaturized multilayer circuit boards, fiber optics, batteries, and low power colorful displays are all some of the key technologies of the Information Age. This talk will review the central role of chemistry as the enabler of the key technologies underpinning the blossoming of the Information Age. In particular, we will describe some of the key chemistry inventions that led to the miniaturization of circuitry on computer chips via photolithography. We will cover developments that led to the development of miniaturized integrated circuits for personal computers, and modern developments including using block copolymers which could help with the patterning of the latest nano-scaled chip ‘node’.

Biography: Dr. Trefonas is a recently retired DuPont Fellow, where he had worked in R&D supporting their Electronics & Imaging business group. Dr. Trefonas made major contributions to the development of many successful commercial electronics chemicals products which are used in the production of integrated circuits spanning multiple device design generations from 2 micron to 8 nm node technologies. He is an inventor on 121 granted US patents, and is an author of over 134 journal and technical publications. Pete was recently awarded the 2019 DuPont Lavoisier Award, 2019 Australian Partnership Award, the 2016 Perkin Medal for outstanding contributions to industrial chemistry, the 2014 ACS Heroes of Chemistry Award, the 2014 SPIE Willson Award. He was named a Fellow of The International Society for Optics and Photonics (SPIE) in 2018, and he was elected into the National Academy of Engineering in 2018. Pete’s journey to DuPont followed a pathway of corporate acquisitions and mergers (DowDuPont, Dow, Rohm & Haas, Shipley, Aspect Systems, Monsanto). Prior to graduate school Pete wrote and sold computer games for early microcomputer systems. Pete earned his PhD in Inorganic Chemistry at the University of Wisconsin-Madison in 1985, and his BS in Chemistry at the University of New Orleans in 1980. Originally a native of New Orleans, he has lived with his family in Massachusetts for the last 33 years. Pete’s passions are hiking and exploring wonderful natural places, playing pickleball, and pursuing wherever his curiosity leads.

1st Annual STEM Research Symposium & Celebration - Summer 2022 - August 11, 2022

Steppingstone Scholars In Partnership with Temple University College of Engineering & ACS Project SEED

12:00pm: Lunch for students and guests

12:25pm: Welcome & Introductions-Steppingstone-Temple Engineering HS Research & Mentorship Program and ACS Project SEED Program (Philadelphia & Lehigh Valley regions, Steppingstone-affiliated sites)

12:30pm: Student presentations for Steppingstone-Temple Engineering HS Research & Mentorship Program

- Christopher Sarpong, Violet Brasby, Ali Saial, Jyleem Washington-Hollins (Electrical Engineering Labs of Drs. Bai, Du, & Lu)
- Toga Mohamed, Nate Gauthier (Dr. Hutapea, Composites Lab: Bioinspired Medical Devices)
- Micah Jean-Pierre, Zander Hodgson (Dr. Picone, Neural Engineering Data Consortium)
- Kyhir Young, Elijah Owens (Dr. Liu, Computational Materials Lab)
- Cydney Young;Khary Thomas (Dr. Wang, Mechanobiology Lab)
- Emran Ibrahim, Saboor Bacha (Dr. Dames, Robotics & AI Lab)

1:15pm: Students presentations for American Chemical Society Project SEED

- Victor Udenze; Michael Hawkins (Dr. Yuan, BioNex Lab, Temple Environmental Engineering)
- Sofia Robinson (Drs. Pleshko & Querido, Tissue Imaging & Spectroscopy Lab, Temple Bioengineering)
- Fadila Sore(Dr. Bhatia, Materials Analysis Lab, Phila. Water Dept.)
- Shen Lin (Dr. Dobereiner, Organometallic Chemistry Lab, Temple Chemistry)
- Beatriz Penso (Dr. Kim, Organic Synthesis Lab, Temple Chemistry)
- Journey Barksdale (Dr. Miskin, Nanorobotics Lab, Penn Engineering: GRASP Lab)
- Zoe Lin, Ahnaf Tausif (Dr. Tribe, Computational Surface Chemistry Lab, Penn State)
- Natalya Ding (Dr. Nataro, Organometallic Chemistry Lab, Lafayette College)

Many thanks to Jeremy Heyman, LVACS SEED Coordinator, and SEED Mentors Drs. Lorena Tribe and Chip Nataro!

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