Dear ACS Members and Friends,

September is the first month of autumn or the fall season which means we are approaching the end of summer. I hope that everyone had a relaxing and productive summer. Schools are ready to roll with new academic sessions. We are also back to our normal monthly meeting schedule. Our section has prepared several activities to offer to our fellow chemists.

In August, we published a special summer bulletin honoring our milestone 50-, 60-, and 70-year section members for their service and engagement with the ACS. I had the opportunity to meet a couple of these members and was thrilled to see their passion for science and society. If you missed this summer bulletin, I strongly suggest that you spare some time to read it. Their stories are truly inspiring.

Moving forward, we will be organizing the 2021 Delaware Section Award Ceremony Program on September 13 where Dr. Donald Watson from the University of Delaware will be recognized for his contributions to chemistry. He will share his work on the development and discovery of novel cross coupling reactions using heteroatomic electrophiles. In addition, the evening will feature the presentation of the Tillmanns-Skolnik Award for service to the section to Norm Henry, as well as the recognition of
the recipients of college student awards and scholarships. The award ceremony and talk will take place from 7 to 8:30 PM. However, a reception at 5 PM and dinner at 6 PM will offer an opportunity for all members and participants to network. See details below in the bulletin, and do not forget to make your reservation.

Next, the prestigious 2021 Carothers Award will be presented on October 11, at the DuPont Country Club, Wilmington, DE. Dr. Trefonas, a recently retired DuPont Fellow, worked in R&D supporting their electronics and imaging business group, will be awarded for his strong contributions. He will graciously share his work on enabling the information age with chemistry. The section is working with the Carothers Award committee and our sponsors to finalize the details of the program. A registration link will be shared soon on our website and social media. Stay tuned.

Don't miss the fun, stay in touch with our section's website for all the upcoming events and activities. I encourage all fellow chemists to connect with the section, make your contribution, and make full use of the opportunities the section offers. Please do not hesitate to contact me or other executive committee members listed in the contact information. Your support is critical to the success of the programs of the section for fellow chemists. Thank you for your continuous support and readership.

— Anuj

The new website for Delaware ACS has launched!

delawareacs.org
The 2022 Section Award will be presented to Dr. Stephen F. McCann of FMC for his outstanding work in agricultural chemistry. An award banquet and lecture will be planned for spring 2023. Please watch for more information.

2021 Delaware Section Award Address

**The Development and Discovery of Novel Cross Coupling Reactions Using Heteroatomic Electrophiles**

Dr. Donald Watson, University of Delaware

Tuesday, September 13, 2022
Deerfield Country Club, Newark, DE
Abstract: Over the past several years, our group has become interested in the development of new transition metal-catalyzed cross-coupling reactions that involve heteroatomic electrophiles as one of the coupling partners. Mechanistically, these reactions represent an *umpolung* strategy compared to the classic cross-coupling manifolds, and the transformations have proven to be useful in the introduction of heteroatoms and the construction of heterocycles in complex organic molecules. In this lecture, I will highlight some of the reactions that we have discovered and/or developed in this area, including silyl-, boryl-, and aza-Heck reactions and related transformations, discuss our current mechanistic understanding of the reactions, and describe some of the directions that we are currently pursuing in these areas.

Biography: Donald A. Watson received his BS in Chemistry from UC San Diego in 1998. He completed his PhD in Organic Chemistry at UC Irvine in 2004, working with Professor Larry E. Overman on stereochemical problems in palladium-catalyzed transformations. From 2004 to 2006 he was a NIH Postdoctoral Fellow with Professor Robert G. Bergman at UC Berkeley and developed zirconium-based catalysts for asymmetric intramolecular hydroaminations. He then moved to the Massachusetts Institute of Technology as a Postdoctoral Associate with Professor Stephen L. Buchwald, where he studied metal catalyzed processes the construction of fluorinated aromatic groups.

He joined the Chemistry and Biochemistry faculty at the University of Delaware as an Assistant Professor in July 2009. In 2015 he was promoted to Associate Professor, and in 2018 he was promoted to Professor. His research focuses on the development of new chemical methods for preparing organic molecules and structures, with a particular interest in the development transition-metal based catalytic reactions and in the construction of carbon-heteroatom bonds.
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

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 to 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.
DE ACS Poster at MARM
The Delaware Section was well-represented in both technical sessions and governance meetings at the MARM meeting at the College of New Jersey from June 1-4, 2022. Here, Andrea Martin (left) and Martha Hollomon (right) present the Delaware Section’s informational poster. The poster will be displayed at the Delaware Section Award banquet on Sept. 13 and the Carothers Banquet on Oct. 11 so members can get a first-hand look at it!

Career Corner

CAREER OPPORTUNITIES IN CHEMISTRY

View available job opportunities at ACS Delaware Section and apply online.

https://delawareacs.org/about/#jobs

TEMPORARY LABORATORY INSTRUCTORS
University of Delaware
Newark, DE US

The Department of Chemistry and Biochemistry at the University of Delaware is seeking several qualified individuals to serve as temporary laboratory instructors during the Fall 2022 semester, who will work under the direction of the person overseeing the course. A person should minimally have a degree in chemistry or biochemistry and be willing to work with students, specifically in the general chemistry laboratories. There is a possibility for these temporary positions to be extended through future semesters for particularly motivated individuals. If you are interested in such a work arrangement, please contact Professor Cecil Dybowski by email at dybowski@udel.edu promptly.

APPLY HERE
Engineer I - ERSS
Recruitment #060722-MFBC01-400400
Department of Natural Resources and Environmental Control
DNREC/Div of WHS-Emer. Response & Strat. Service
391 Lukens Drive, New Castle, DE, 19720

Apply Here

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Chemical Consultants Network ZOOM MEETING
SEPTEMBER 14, 2022
CONSULTING: THE BUSINESS THAT GENERATES MEGA DOLLARS AND PUTS YOU IN CONTROL OF YOUR FINANCIAL FUTURE
Marc Kramer – Angel Venture Fair
DATE & TIME: Wednesday, September 14, 2022 at 6:30 pm

Click here to register

Location: Online via Zoom! (Registration required, see below)

Biography: Marc Kramer, a Pennsylvania native, is an American serial entrepreneur of six companies, author of six books, and journalist. Marc has founded the country's first formally organized investor angel network, the Pennsylvania Private Investors Group and the country's first cyber bank insurance product for small businesses, Commercial Deposit Insurance. He couches startup entrepreneurs and provides management, leadership, marketing, consulting training and innovation advice for startup companies. Currently, Kramer is the executive director of the Angel Venture Fair which brings together entrepreneurs and investors from around the world to meet for business investment opportunities. He is the host and founder of The Best Business Minds which attracts listeners from 62 countries. He received the 2022 Communicator Awards Distinction Series-Business for Podcasts. Marc is the author of “Consulting: The Business That Generates Mega Dollars and Puts You in Control of Your Financial Future” (https://en.wikipedia.org/wiki/Marc_Kramer)

Abstract: In this webinar, Marc will offer his insight and advice for the following:
- Should you become a consultant?
- What is the profile of your potential clients?
- Is there a market for your expertise?
- What it takes to get clients?
- Is your spouse or significant other on board?
• What is the initial cost for starting your consultancy?
• What are the organizations where you can meet other consultants?

Click here to register to attend the event. This session is FREE.

CONSULTANTS - OPPORTUNITY HERE!
PLEASE VISIT http://www.chemconsultants.org/

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THE CHEMICAL CONSULTANTS NETWORK PROVIDES VALUABLE TOOLS FOR MEMBERS BEYOND THE MEETINGS AND NETWORKING. CHECK OUT OUR:
• Valuable past presentations – Consultants’ Directory – Blogs – Resources
• Join! Most valuable – post your consulting practice information – and have greater visibility!
• If you’d like to speak with one of our members, come to a CCN meeting

Chemical Consultants Network ZOOM MEETING
OCTOBER 12, 2022
START A CHEMICAL ENGINEERING CONSULTANCY FIRM: 10 TIPS TO KNOW
Angela Blackwell – Peer Reviewer to the Academy of Management

DATE & TIME: Wednesday, October 12, 2022 at 6:30 pm

Click here to register

Location: Online via Zoom! (Registration required, see below)

Biography: Angela Blackwell is a peer reviewer of the Academy of Management (NY), an energetic and persuasive business advisor at the Central Indiana SBDC, where she advises and assists entrepreneurs seeking to grow and improve their businesses. She held various senior and executive positions across several industries and sectors before joining the Indiana SBDC. She is an accountant and entrepreneur, IndyTABS (Tax, Accounting, and Business Solutions), serving the greater Indianapolis area for over a decade. Angela holds an MBA in Finance. Currently, she is a doctoral candidate at Franklin University working on her Doctoral dissertation of Business Administration.

Abstract: In this webinar, Angela will offer her insights on how to start a Chemical Engineering Consultancy Firm. 10 Tips are offered with examples about certain key issues from the view of both sides: consultant vs client who hires consultant. A 30-minute Q&A would follow. We hope this will be beneficial for young chemists and new consultants who just joined the consulting business.

Agenda

1. Prepare for an entrepreneurial career
2. Beyond the technical skills
3. What type of entrepreneur are you?
4. Areas of specialization
5. Develop a business model
6. Learn from your competition
7. Know what you need
8. Business plan
9. Determine your legal structure, and set up the business
10. Your administrative prowess

Click here to register to attend the event. This session is FREE.

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PLEASE VISIT http://www.chemconsultants.org/
Are You Getting the Benefits of CCN Membership or Event Participation?
The Chemical Consultants Network provides valuable tools for members beyond the meetings and networking. Check out our:
- Valuable past presentations
- Consultants’ Directory
- Blogs
- Resources
- Join! Most valuable - post your consulting practice information - and have greater visibility!
- If you’d like to speak with one of our members, come to a CCN meeting

Save the Date! October 14, 2022
Delaware Math Equity Annual Conference (Virtual)
STATEWIDE IN-SERVICE: DELAWARE EQUITY SUMMIT

Free Professional Learning Dedicated to Equity in Math
“Cultivating and Promoting Equitable Climates of Learning”

Conference sessions include a range of highly relevant topics and addressing systemic challenges of equity in education and the community.

Featured speakers include Tanji Reed Marshall (Ed Trust), Jo Boaler (Stanford University), Pamela Jones Seda (Co-author of "Choosing to See: A Framework for Equity in the Math Classroom"), Beth Herbel-Eisenmann (MSU), Eli Luberoff (Desmos), Mandy Jansen (UD), and many other inspiring leaders of math reform!

Please join hosts Delaware Mathematics Coalition, Delaware Department of Education, Delaware Foundation for Science and Mathematics Education, Delaware STEM Council, and FAME.

For info or to register for the Oct. 14 Math Equity Conference, click here.
To sponsor and support the event, click here.
Save the Date! October 15, 2022
FREE! Delaware STEM Equity Conference (Virtual)
“What Does STEM Equity Success Look Like?”

Leaders of Delaware’s STEM Council, Delaware Foundation for Science and Mathematics Education, Delaware Mathematics Coalition, and Forum for the Advancement of Minorities in Engineering (FAME) are committed to building structures and systems that eliminate barriers to success in mathematics. The October 15th DE STEM Equity Conference engages PK20 educators, policy makers, and business leaders in meaningful learning experiences that are designed to leverage their capacity as agents of change.

Sessions leaders include highly respected local and national STEM leaders who will engage participants in conversations and learning focused on positively influencing and impacting classroom and systems level equity challenges in STEM.

Hosted By Delaware Mathematics Coalition, Delaware Department of Education, Delaware Foundation for Science and Mathematics Education, Delaware STEM Council, and FAME.

Contributor’s Corner

By Al Denio

A Busy Fall

Lots to Do – The Delaware Section has a meeting on September 13. This will be followed by three events at the Hagley Museum and Library. Elections come along in November, after National Chemistry Week. Before you know it, you will be buying a Christmas tree!

Hagley Museum and Library – This is one of the most historic sites in Delaware, where the DuPont powder works came to life in 1802. The Union Army depended heavily on this gun powder during the Civil War.
I was employed in the Textile Fibers Department at Chestnut Run when the Hagley Museum first opened during the summer of 1957. I was truly impressed! The museum has expanded greatly over the years, and I was happy to attend the 50th anniversary in 2007. Yes, I have been a member for years.

Last Year, during Hurricane Ida the Brandywine River went on a rampage and overflowed its banks, doing great damage to the lower museum area. Luckily the DuPont family home and buildings on the upper level survived the flood.

The lower parts of the property sustained heavy damage and forced closing of the site for major repairs. The great news is the opening of the “Nation of Inventors” exhibit in the Visitors Center, on October 8. This is preceded by the Hagley Car Show on September 18. Finally, the Hagley Craft Fair will be October 15 and 16.

**The Chemistry Nobel Passover Party** – The event this year will be held on October 5 at Skipjacks Restaurant in the Louviers Shopping Center on Paper Mill Road. Happy Hour begins at 5pm, dinner is at 6pm, followed by the Nobel Program. We hope to have a member of the Department of Chemistry and Biochemistry at U.D. discuss the award. Sorry you were overlooked yet again, but you need to cope along with fellow chemists. This event is sponsored by the Delaware Academy of Chemical Sciences.

Please call Skipjacks at (302)456-1800 to make a dinner reservation. I hope to see you there.

**Climate Change is Here** – Hurricane Ida was a local example of our new scary world. Our world is dealing with huge regions of drought plus serious areas of flooding. Sea level rise is real. If you want to ski in the Swiss Alps, do it this coming winter. Soon these expensive ski resorts will need to find a new use. They could become nursing homes or retirement homes (for the rich).

**My Hydrocarbon Problem** - They keep me warm in the winter and cool in the summer. They cook my food and allow hot showers. They help me get from point A to B. They even power lawn mowers and snow blowers.

The problem is that the combustion process produces carbon dioxide which leads to global warming. And even the simplest hydrocarbon, methane, adds to global warming, even before combustion!

There is some good news out of Congress. In a 51 to 50 vote in the Senate, the Inflation Reduction Act passed. It also survived in the House by a handful of votes. The claim is that this legislation will lead to a 40% cut in emissions! Much more progress will be needed in the future, but this legislation is a good start.
The August DelChem Bulletin - Appeared on August 17 thanks to the efforts of Andrea Martin and Erin Kennedy. It pointed out the achievements of many of our senior members, a very diverse group of scientists. I look forward to meeting some of these gifted people. Thanks for reading.

DE ACS Executive Committee
Meeting Minutes

Delaware Section of the American Chemical Society
Tuesday August 16, • Zoom
Respectfully submitted, Melanie Brennan

Chair, Anuj Kumar, called the meeting to order at 7:33 P.M.

OFFICER REPORTS
Chair’s Report:
Welcome back from summer break, everyone! Our special summer DelChem Bulletin should be coming out soon. A motion was made, seconded and passed to reimburse Anuj for his airfare for the ACS Leadership Institute since he incurred the expense but wasn’t able to attend due to Covid-19.

Chair-Elect’s Report:
No report.

Past-Chair’s Report:
No report.

Secretary’s Report:
We will need to hold an executive committee election for 2023 for one councilor position and our chair-elect position. In our next September meeting we will finalize which positions will be up for election and candidates. We hope to vote for our 2023 elections in October this year.

Treasurer’s Report:
Andi brought up a good point that it is difficult to always request a check be mailed from our treasurer Joe to make payments on behalf of ACS. It would be
much easier if we had an ACS debit card. Our section bylaws do not mention anything about credit cards, but perhaps we can add this information and payment option. Andi also mentioned that we should name an audit committee to ensure we are conducting appropriate audits. We will ask for volunteers in the next bulletin because any ACS Delaware section member can participate.

**Director's Report:**
No report.

**REPORTS OF COMMITTEES & RELATED GROUPS**

**Awards:**
There are many awards in the works right now including the section award (September 13th) and Carothers award (October 11th). Andi will make sure we have the events reported in our upcoming bulletins. We are receiving sponsor donations to support the Carothers Award Banquet. If anyone has any suggestions for potential sponsors to reach out to, please email Andrea Martin the contact information. The banquet for the Carothers award is being planned at the DuPont Country Club. Anuj asked if it would be possible to cover the expenses of the executive committee members to these events, because there are volunteers on the committee who have worked a significant number of hours working on these events. It may not be possible, but we will investigate it. We explored the idea of doing a volunteer appreciation event in January. This idea was well received, so a motion was made, seconded, and the committee voted in favor of such an event. We liked the idea to invite not only current volunteers, but to also invite any others who might be interested in volunteering to support ACS. It would be another type of networking event. Additionally, the 2022 section award is tentatively planned for February of 2023.

**Education:**
Rita has mentioned that there are many science teachers who will need help with their curriculums, and there is a need for mentors. We can put a note in the next DelChem Bulletin and hopefully find some mentors to help these struggling teachers.

Erin noticed that we do not have a Women Chemists Committee group in the Section, and we would like to have one. She has been working in her network in and out of DuPont on forming this committee. This group would include both men and women. Erin has also been working on Project Seed with high school students that gives them work or internship opportunities in labs. This project used to be organized by DuPont years ago, but they no longer participate. We would like to try to revive this project. In the past, there was also a Younger Chemists Committee, so we are looking into interest in reviving this committee.
too for a way to get early career chemists involved.

**Old Business:**
None

**New Business:**
None

The meeting was adjourned at 8:37 P.M.

**Executive Committee Members & Committee Chairs Present:**
Anuj Kumar, Rita Vasta, Melanie Brennan, Erin Kennedy, Martha Hollomon, Andrea Martin, Zhen Yang, Joseph Izzo, and Robert Mishur

**Executive Committee Members & Committee Chairs Absent:**
John Gavenonis, Maggie Schooler, Nora Radu, Jing Qu, and Kim Huynh-Ba