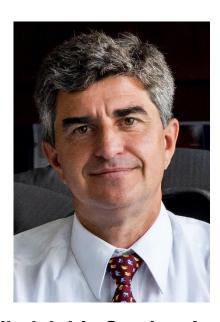


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October 2020 Volume 105, No. 9



Philadelphia Section Award Dr. Yury Gogotsi Drexel University

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ADVANCE NOTICE

NOVEMBER MEETING

Monday, November 9, 2020 via Zoom

The ACS Philadelphia Section and the Chemistry Department of the University of Pennsylvania present

THE 2020 EDGAR FAHS SMITH MEMORIAL LECTURE
Barbara Imperiali, PhD
Class of 1922 Professor of Chemistry and Biology
Massachusetts Institute of Technology

See the November issue of *the Catalyst* for details, call the Section Office at (267) 485-1792 or email PhilaACS@gmail.com.

ACS Philadelphia Section

Founded April 15, 1899

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Comments From the Chair



Joe Martino III

COVID-19 UPDATE

I am saddened to report that the Ullyot Committee, co-chaired by the new Science History Institute President Dr. David Cole and our Section's Chair-Elect, Dr. Christine McInnis, has recently made the decision to postpone the 2020 Ullyot Public Affairs Lecture to 2021. This very understandable decision was made because of COVID-19 restrictions as well as a desire to hold this prestigious lecture in an in-

person format. More details on the re-scheduling of this Lecture will be announced as soon as they are available.

Outside of this most recent event postponement, there is no change to the approach of the ACS Philadelphia Section with regards to our events. Any Section event for the remainder of 2020 will continue to be planned for virtual presentation through our Zoom platform. Considering the impact of COVID-19 on Section programming and operations for this year, let us take no change as a positive sign, and hope that things turn around to a more normal mode of operation soon.

2020 CHAIR'S REPORT

Continuing with the precedent established last year by my immediate predecessor, Dr. James K. Murray, Jr., I presented the 2020 Chair's Report of the State of the ACS Philadelphia Section to our Board of Directors this past September 2nd. I'll summarize my report in this manner: Despite the novel problems of global pestilence we face, the dedicated and devoted volunteers of the ACS Philadelphia Section tackled these issues head-on, used their creativity to position the Section in a strong direction, and the Section is poised for growth in the brighter and better days ahead of us post-pandemic. My gratitude to all our Section volunteers for making the ACS Philadelphia Section the time-honored, historic and justly famous Local Section that it is!

A VISIT FROM THE CEO

Last September 9th, Dr. Thomas M. Connelly, Jr., the Chief Executive Officer of the American Chemical Society, visited the ACS Philadelphia Section virtually and gave an excellent overview of the Society's activities, its response to the challenge of COVID-19 and its efforts toward diversity and increasing ACS Membership. Dr. Connelly was very gracious in acknowledging our Section's volunteers, especially those who were involved in the planning of the March 2020 Spring National Meeting that was to be held here in Philadelphia. He also highlighted many of our Local Section efforts such as the Student Scholastic Achievement Awards, the March Special Edition of *the Catalyst*, our May LinkedIn Event featuring Coach Ron Nash, our new consortium of Younger Chemists Committees in the Eastern portion of the United States, and our August Virtual Beer Tasting Event.

Before Dr. Connelly's talk, Ms. Taylor Keller of our Section's Program Planning Committee and Philly YCC, moderated a fun game of Networking Bingo, with the theme "Quarantined as a Chemist." After Dr. Connelly's talk, some of us stayed on-line to network with each other as well.

I would like to thank Dr. Connelly for taking the time to visit us. I would also like to acknowledge the efforts of Dr. Keith Wing, the Chair of the Chemical Consultants Network (CCN), Ms. Taylor Keller and Dr. Gangotri Dey of the Section's Program Planning Committee for their efforts in making this successful event a reality.

ACS PHILADELPHIA SECTION AWARD AND TEACHING AWARDS

On behalf of the ACS Philadelphia Section Board of Directors, I would like to extend our heart-felt congratulations to Professor Yury Gogotsi of Drexel University on being named the recipient of the 2020 ACS Philadelphia Section Award, which will be awarded to him virtually on October 7th. Dr. Gogotsi is being recognized for his work in nanomaterials, and you will find the abstract for his talk along with his biography as well as more details about this event in this edition of *the Catalyst*.

As you may recall, we typically present the Section's Excellence in Teaching in Pre-College Chemistry and Excellence in Undergraduate Teaching in the Chemical Sciences Awards in the Spring, with this year's presentation to have been held in April. With the COVID-19 pandemic, we unfortunately had to postpone these awards until now. On behalf of the ACS Philadelphia Section, I would like to congratulate Dr. Jean Mihelcic of Conestoga High School in Berwyn, Pennsylvania as the 2020 recipient of the ACS Philadelphia Section Excellence in Pre-College Teaching Award. I would also like to extend congratulations to Dr. Jared Paul, Associate Professor of Chemistry at Villanova University, as the 2020 recipient of the ACS Philadelphia Section Excellence in Undergraduate Teaching in the Chemical Sciences Award. The Section will be taking time to recognize Dr. Mihelcic and Dr. Paul during our presentation of the ACS Philadelphia Section Award. Details of the timing and format of this event will also be included in this month's edition of *the Catalyst*.

Our Section's Awards are decided upon by the Section's Awards Committee, which is chaired by our Section's Chair-Elect, Dr. Christine McInnis. I would like to thank Christie for her leadership of the Awards Committee as well as the members of this important Section Committee for their work, especially during the difficult times that we have faced during this year.

THE REMAINDER OF THE YEAR

As I mentioned last month, the Edgar Fahs Smith Memorial Lecture traditionally held in March of every year has been postponed to the Fall. This month, I am pleased to announce with gratitude that Professor Barbara Imperiali of MIT has agreed to present the Lecture on November 9, 2020. This will be done virtually, and details on the exact time and format of this first-time vir-

tual presentation of this historic lecture series will be forthcoming. Again, I would like to extend my gratitude to Dr. David Christianson, Chair of the Chemistry Department at the University of Pennsylvania, and Mr. Christopher Jeffrey of the Chemistry Department at the University of Pennsylvania, for their support and assistance with continuing to make this event possible under the circumstances of this pandemic.

Our Section's by-laws require the ACS Philadelphia Section to hold 10 Regular Meetings of the ACS Philadelphia Section. With the postponement of the Ullyot Lecture, our Board of Directors passed a resolution allowing the subtraction of one Regular Meeting from the 2020 schedule due to the COVID-19 pandemic. This resolution does not forbid the Section from holding a tenth event if we are able to do so but gives us some needed flexibility as the end of the year draws near.

Taking this flexibility in mind, one of the issues that I have heard during the year in commiseration with our volunteers and members is that the situation of this COVID-19 pandemic has introduced to us in various degrees a sense of isolation. We simply are not able to connect with our family, friends, and co-workers in the same way since before the pandemic occurred. We have now been introduced into a more virtual world, and business travel has been curtailed. Quite frankly, I think many of us would agree that 2020 has been a year of nightmares in many ways and wish it would come to a swift conclusion!

For our last meeting of the year, the Section would like to present something different to break apart some of this isolation that we may be experiencing – a virtual happy hour where our members can come together at home with your favorite adult beverage in hand (or coffee, tea, soda or water if you prefer) and toast this year away! While we do this and as a way to facilitate conversation, let's take an opportunity to discuss what we think about this new-found virtual world, too, as a way to share best practices and, if necessary, to even vent about it. We will dispense with the formalities of our traditional Regular Meetings and keep this conversation very informal, just as we've done with our well-received events in May featuring Coach Ron Nash and in August with our beer-tasting event. More details on this to come – stay tuned!

Next month's edition of *the Catalyst* will be the last edition for the year, and, in turn, will feature my last column as Chair of the Section. Please keep an eye on your email and the Section's LinkedIn group as well as our website – https://phillyacs.org – for the latest updates on our events.

In the meantime, enjoy the Fall, and we will chat some more next month!

NEWS ATOMS—Alan Warren

Yury Gogotsi, professor of materials science and engineering at Drexel University, will receive the ACS award in the chemistry of materials in 2021.

DEATHS

Cassandra R. Burcham, information scientist, at age 85. She was president of Service is Our Business and focused on pharmaceutical patent searching and Markush patent searching. Sandy was the Philadelphia Section chair in 1996.

Walter G. Grot, research fellow at DuPont, retired after 39 years' service. He discovered NafionTM, a fluoropolymer-copolymer used in fuel cells, metal-ion recovery, water electrolysis, surface treatment and plating, batteries and many other applications. He was a 60-year member of ACS.

Darrel L. Muck, physical organic chemist, at age 82. He was employed as a business manager at PQ Corporation from 1980-1989, director of commercial development at FMC 1989-2001, and was owner of ChemPlast, Inc.

Frederick Peter Obst, retired industrial chemist, March 24, 2020 at 87. He worked for Gilbert Spruance Company and then joined Rohm and Haas where he was involved with furniture finishes. After retirement he ran his own consulting service, Environtech.

John Sebring Taylor, 70-year member of ACS formerly with FMC Corp.

John M. Walts, 50-year member of ACS.

Richard Y.C. Wang, 50-year member of ACS, at age 78.

Lester Weintraub, employed by Permeable Technologies, was a 70-year member of ACS, at age 96.

Richard Paul Shank, retired biochemist, September 3 at 79. He was employed by Johnson & Johnson from 1984 to 2007 in pharmaceutical research. He received the Johnson Medal in 1997 for development of the anti-epileptic drug topiramate. Shank authored or co-authored over a hundred technical papers.

ACS CAREER CONSULTANTS

Would you like to speak to a local ACS Career Consultant? The Philadelphia Section career consultants can provide one-on-one career advice, resume reviews, or mock interviews. Please send an email request to acsphillycareerservices@gmail.com to set up an appointment.



OCTOBER MEETING

THE ACS PHILADELPHIA SECTION PRESENTS

THE 2020 ACS PHILADELPHIA SECTION AWARD

honoring

Professor Yury Gogotsi

Distinguished University and Charles T. and Ruth M. Bach Professor of Materials Science and Engineering, Drexel University

THE 2020 ACS PHILADELPHIA SECTION EXCELLENCE IN UNDERGRADUATE TEACHING IN THE CHEMICAL SCIENCES AWARD

honoring

Professor Jared J. Paul Associate Professor of Chemistry, Villanova University and

THE 2020 ACS PHILADELPHIA SECTION EXCELLENCE IN PRE-COLLEGE TEACHING AWARD

honoring
Dr. Jean Mihelcic
Conestoga High School, Wayne, PA

Wednesday, October 7, 2020 6:30 PM to 8:30 PM via Zoom

To register for this event, please visit https://bit.ly/3kd4lNV
Once registered, you will receive a confirmation email containing instructions on how to join the meeting.

ACS Philadelphia Section Board of Directors Meeting

The ACS Philadelphia Section Board of Directors will hold their October Meeting on Thursday, October 22, 2020 at 7:00 PM on the Zoom platform. All ACS Philadelphia Section Board of Directors Meetings are open to the public. To access the meeting, please use the following information:

By Internet: By Phone (all Toll-Free):

URL: https://bit.ly/2ZSz4rZ (833) 548-0282 Meeting ID: 921 3142 1575 (877) 853 5247 Password: 595194 (888) 788 0099

(833) 548 0276

Meeting ID: 921 3142 1575; Password: 595194



THE 2020 ACS PHILADELPHIA SECTION AWARD

Dr. Yury Gogotsi

Charles T. and Ruth M. Bach Distinguished University Professor Director, A.J. Drexel Nanomaterials Institute Drexel University, Department of Materials Science and Engineering

Discovery and Chemistry of Two-Dimensional Carbides and Nitrides (MXenes)

Abstract: Discovery of new materials provides moments of inspiration and shifts in understanding, shaping the dynamic field of materials chemistry. Following the graphene breakthrough, many other 2D materials emerged. Although many of them remain subjects of purely academic interest, others have jumped into the limelight due to their attractive properties, which have led to practical applications. Among the latter are 2D carbides and nitrides of transition metals known as MXenes. The family of MXenes has been expanding rapidly since the discovery of Ti₃C₂ in 2011. More than 30 different stoichiometric MXenes have been synthesized, and the structure and properties of numerous other MXenes have been predicted. Moreover, the availability of solid solutions on M and X sites, control of surface terminations, and the discovery of ordered double-M MXenes (e.g., Mo₂TiC₂), i-MAX phases and their MXenes offer a potential for producing dozens of new distinct structures. The versatile chemistry of the MXene family renders their properties tunable for a large variety of applications. In particular, the interaction of MXenes with electromagnetic waves can be controlled via their composition and structure. Oxygen or hydroxyl-terminated MXenes, such as Ti₃C₂O₂ or Ti₃CNO₂ offer high electronic conductivity and outstanding electromagnetic interference shielding. They can also be used in telecommunication, electrochemical energy storage, electrocatalysis, sensing, medical and electronic device applications.

Biography: Dr. Yury Gogotsi is Distinguished University Professor and Charles T. and Ruth M. Bach Professor of Materials Science and Engineering at Drexel University. He also serves as Director of the A.J. Drexel Nanomaterials Institute. He received his MS (1984) and PhD (1986) from Kiev Polytechnic and a DSc degree from the Ukrainian Academy of Sciences in 1995. His research group works on 2D carbides and nitrides (MXenes), nanostructured carbons, and other nanomaterials for energy, water and biomedical applications. He has co-authored 2 books, more than 600 papers in peer-reviewed journals and edited 14 books. He is recognized as a Highly Cited Researcher in Chemistry and Materials Science, and a Citations Laureate by Clarivate Analytics.

He has received numerous awards for his research including the ACS Award in the Chemistry of Materials, International Nanotechnology Prize (RUSNANOPrize), Ceramic Prize from the World Academy of Ceramics, European Carbon Association Award, S. Somiya Award from the

International Union of Materials Research Societies, Nano Energy award from Elsevier, R&D 100 Award from R&D Magazine (twice) and two Nano 50 Awards from NASA Nanotech Briefs. He has been elected a Fellow of the American Association for Advancement of Science (AAAS), Materials Research Society, American Ceramic Society, the Electrochemical Society, the International Society of Electrochemistry, Royal Society of Chemistry, the World Academy of Ceramics and the European Academy of Sciences. He also served on the MRS Board of Directors, serves on editorial boards of more than a dozen of journals and is acting as Associate Editor of *ACS Nano*.

THE 2020 ACS PHILADELPHIA SECTION EX-CELLENCE IN UNDERGRADUATE TEACHING IN THE CHEMICAL SCIENCES AWARD

Dr. Jared J. Paul
Associate Professor of Chemistry, Villanova University

The ACS Philadelphia Section Awards Committee has selected Dr. Jared Paul, Associate Professor of Chemistry at Villanova University, as the recipient of the 2020 ACS Philadelphia Section Excellence in Undergraduate Teaching in the Chemical Sciences Award. Congratulations to Dr. Paul on this significant recognition!



Biography: Jared Paul grew up in Buffalo, NY, earning his BS in Chemistry with Honors at Canisius College in 2000. As an undergraduate student he carried out undergraduate research under the supervision of Professor Mariusz Kozik. Their work focused on the reduction of carbon dioxide using polyoxometalate catalysts. Jared attended the University of North Carolina at Chapel Hill and earned his PhD in Inorganic Chemistry in 2005. He studied the metal-assisted inhibition of serine proteases under the direction of Dr. H. Holden Thorp. Jared transitioned to studying photo-induced proton coupled electron transfer as a Postdoctoral Associate of Professor Thomas J. Meyer at

the University of North Carolina from 2005 to 2008. In 2008, Jared was hired as an Assistant Professor at Villanova University and promoted to Associate Professor in 2014. His work focuses on photochemistry and electrochemistry of metal complexes with ligands capable of proton coupled electron transfer. This work is currently funded by a National Science Foundation grant in collaboration with Professor Russell Schmehl at Tulane University. Believing in the teacher/scholar model, Jared has worked with over 30 students in his research laboratory since coming to Villanova University with many of the students presenting at ACS meetings and publishing in peer-reviewed journals. When not teaching and working in the laboratory, Jared loves to spend time with his wife, Heather and son, Joey at their home in Eagleville, PA.



THE 2020 ACS PHILADELPHIA SECTION EXCELLENCE IN PRE-COLLEGE TEACHING AWARD

Dr. Jean M. Mihelcic, Ph.D.
Chemistry Teacher, Conestoga High School, Berwyn, PA

The ACS Philadelphia Section Awards Committee has selected Dr. Jean Mihelcic of Conestoga High School in Berwyn, PA as the recipient of the 2020 ACS Philadelphia Section Excellence in Pre-College Teaching Award. Congratulations to Dr. Mihelcic on this significant recognition!



Biography: I received my bachelor's degree in Chemistry from Bryn Mawr College magna cum laude with Honors in Chemistry. While at Bryn Mawr, I conducted independent research on inorganic complexes under the direction of Dr. Joseph Varimbi.

I received my master's and doctorate degrees in Chemistry from Yale University. While at Yale, I was a teaching assistant for the introductory Chemistry class and for the introductory Chemistry laboratory. My thesis research on new iridium dehydrogenation catalysts was under the direction of Dr. Robert Crabtree.

After receiving my PhD, I worked for DuPont in research, product development, and managerial roles in the electronics and nylon businesses. I then received my certification to teach high school chemistry from Immaculata College.

I have been a high-school teacher of Chemistry at Conestoga High School in Berwyn, PA for 20 years. In this time, I have taught both Chemistry at the Academic, Accelerated, Honors and AP levels and the Introduction to Chemistry, Physics, and the Environment course. To keep current in my field, I like to attend conferences and courses during the summer. For extracurricular activities at Conestoga, I enjoy serving as the Chemistry Club advisor. I have been awarded two American Chemical Society Hach Grants to fund the study of molecular gastronomy by the Chemistry Club.

I am a member of the American Chemical Society, the AACT and PSTA. I have been awarded two American Chemical Society-Hach Professional Development Grants and have helped assess new grant proposals for the ACS. I also have been a member of the Education and Outreach Committee for the Philadelphia Section, helping to judge entries for NCW and Earth Day.



Chemical Consultants Network ZOOM MEETING OCTOBER 14, 2020

FUNDING YOUR POST-CORPORATE CAREER WITH TECHNICAL EXPERT CONSULTING

Sam Waltz - CECON.com LLC

DATE & TIME: Wednesday, October 14, 2020 at 6:30 PM

Click here to register

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

Abstract: CECON Expert Network was founded 1985 in Wilmington, DE by the first group of engineers and scientists to leave the DuPont Company in corporate downsizing. Today, CECON has more than 1,500 technical consultants, scientists, engineers and other experts in all 50 USA states and 20 countries. CECON is regarded as a leader in Technical Consulting. About one half of its projects annually are process- and product-related technical assignments and the other half are expert witness consulting. CECON is adding business consulting, including technology and cyber-security, to the offering mix. During his talk, Waltz will address issues from business practice (incorporation, insurance, banking, etc.) to business growth (marketing, specialization), as well as working with third-party platform providers in membership, arbitrage and subscription models. Members with specific questions or topics they'd like to have addressed may contact Waltz at SamWaltz@SamWaltz.com, or 302-777-7774.

Biography: Sam Waltz is Managing Director and principal at CECON.com. Waltz graduated with BS '71 and MS '73 degrees from the University of Illinois at Urbana-Champaign, but he is not an engineer or a scientist. Rather, his academic and professional background is in public affairs, public policy, journalism, issues management and business. When he took an "early-out" from the DuPont Company's External Affairs leadership role, he founded SamWaltz.com Strategic Capital & Business Counsel in 1993, and he's consulted full-time, working in three major areas: (1) Strategic Business Advisory / Planning; (2) Strategic Capital Services, including M&A (Merger & Acquisition) and Capital-Finding, and (3) Public Affairs / Reputation Management / Issues & Crisis Management.

<u>Click here to register to attend the event</u>. This session is **FREE**. Please register by **Monday, October 12, 2020**.





2020 NCW Illustrated Poem Contest Sticking with Chemistry

The Philadelphia Local Section of the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in Kindergarten through 12th grade.

Contest Deadline: Sunday, October 25 by 11:59 PM Eastern

Prizes: \$50.00 for the winner of each grade category (grades K-2 / grades 3-5 / grades 6-8 / grades 9-12) Each student who enters will receive a certificate

Submission: ACS is accepting poem submissions using a new online submission form this year. E-mail Tom Umile (thomas.umile@villanova.edu) for instructions and links to the submission form.

Winners of the Philadelphia Local Section's Illustrated Poem Contest will advance to the National Illustrated Poem Contest for a chance to be featured on the ACS website and to win prizes!

Write and illustrate a poem using the NCW theme, "Sticking with Chemistry." Your poem must be **no more** than 40 words and in the following styles to be considered:

HAIKU - LIMERICK - ODE - ABC POEM - FREE VERSE - END RHYME - BLANK VERSE

Possible topics related to the theme include:

Glue Slime Tape Adhesives Geckos Polymers Adhesion Cohesion

Entries will be judged based upon:

- Artistic Merit use of color, quality of drawing, design, and layout
- · Poem Message fun, motivational, inspiring about yearly theme
- Originality Creativity unique, clever and/or creative design
- · Neatness free of spelling and grammatical errors

Contest rules:

- All poems must be no more than 40 words, and in one of the following styles to be considered: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse.
- Entries are judged based upon relevance to and incorporation of the NCW theme, word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.
- All entries must be original works without aid from others. Physical drawings may be scanned or captured via camera and submitted to the online form. Illustrations may be created using crayons, watercolors, other types of paint, colored pencils, or markers. The illustration may also be electronically created by using a digital painting and drawing app on a computer, tablet, or mobile device. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- The text of the poem should be easy to read and may be typed before the hand-drawn or digital illustration is added, or the poem may be written on lined paper, which is cut out and pasted onto the unlined paper with the illustration.
- No clipart or unoriginal images can be used.
- Only one entry per student will be accepted; all entries must include an entry form. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners' names, likenesses, and entries for editorial, advertising, and publicity purposes.



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Being a part of one of our teams can help you develop organiza tional and meeting skills as well as help you to network with people from the largest area companies. Public Relations, such as sending out meeting notices and press releases, can help you to develop a network and help you get noticed!

All committees are looking for new members and several are looking for "take charge" chairs. Some, like the Teller's Committee, involve minimal work-one night per year and pizza provided. Others, like positions on Communications or Social Committees, involve one or two hours per month.

Comittee details can be found at:

www.membership.acs.org/p/philadelphia

or by calling the Philadelphia Section Office (267) 485-1792

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Contact the Section Office at PhilaACS@gmail.com or (267) 485-1792

Put "Volunteer" in the subject line or leave a message including contact information.



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PHILADELPHIA SECTION, ACS CURRENT CALENDAR OF ACTIVITIES

Date and Time	Event	Location/Information
Tuesday, October 6	Delaware Valley Mass Spectrometry Dis-	On-line On-line
2 – 3 PM	cussion Group: Using Cheminformatics Tools in Untargeted MS/MS Analyses: How Confident Are We in the Accuracy of Results? by Oliver Fiehn (UC Davis)	See webpage for details: https://www.dvmsdg.org/#upcoming-events
Wednesday, October 7	ACS Philadelphia Section Award meet-	On-line On-line
6:30 – 8:30 PM	ing: Discovery and Chemistry of Two- Dimensional Carbides and Nitrides (MXenes) by Yury Gogotsi (Drexel University)	See webpage for details: https://bit.lv/3kd4lNV See this issue of <i>the catalyst</i> for details
Tuesday, October 13 1:00 – 2:00 PM	Joseph Priestley Society Meeting, Science History Institute: Building Green: New Advances in Sustainable Homes by Marc Duey (Duce Management), Rob Fleming (Thomas Jefferson University), Louis Padulo (University City Science Center), Edgar Stach (Thomas Jefferson University)	See webpage for details: https://www.sciencehistory.org/event/joseph-priestley-society-202010
Thursday, October 15 7:00– 8:30 PM	Catalysis Club of Philadelphia Meeting: Towards Sustainable Energy and Materials: Carbon Capture, Utilization and Storage (CCUS) by A-H Alissa Park (Columbia University)	See webpage for details: http://catalysisclubphilly.org/current-season-monthly-meetings/
Friday, October 23	ACS Princeton Section 42 nd Fall Organic	See webpage for details;
10 AM – 4:10 PM	Symposium	http://www.pacsfocs.org/wordpress/
Please check the individual websites for additional updated information		
All content submissions are due on the 15 th day of the month prior to publication		