



American Chemical Society - Pittsburgh Section  
Volume CVII, No. 7  
February 2021

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## Congratulations to National Chemistry Week Chair Evonne Baldauff – Featured in Chemical and Engineering News

The December 14/21, 2020 issue of Chemical and Engineering News featured an article about the 2020 Virtual National Chemistry Week. Congratulations to our Committee Chair, Dr. Evonne Baldauff from Waynesburg University for all of her hard work! Read the article [here](#).

The Pittsburgh Section got a shout out on page 3! Here it is:

*“The **Pittsburgh Section** partnered with the Carnegie Science Center to host Virtual ChemFest, which broadcast chemistry demonstrations and career talks directly into classrooms. The local section raised \$13,000 to cover the costs of all participating schools and educators. The event reached more than 4,800 students.”*



## The Pittsburgh Local Section wins the 2020 ChemLuminary Award for Outstanding Ongoing NCW Event

Each year the ACS recognizes the outstanding work of Local Sections, Technical Divisions, International Chapters, and Regional Meetings via the ChemLuminary Awards program. These ACS units apply for these awards during the submission of their Annual Reports, during the range of November 1<sup>st</sup> to February 15<sup>th</sup>.

The ChemLuminary Awards Ceremony typically takes place on the Tuesday evening of the ACS Fall National Meeting. There is usually a very big poster session and reception prior to the event. There is a big ceremony open to all ACS conferees with a big after-party with dancing afterwards. To learn more about the ACS ChemLuminary program please visit their website at: <https://www.acs.org/content/acs/en/funding-and-awards/awards/community/chemluminary.html> The Fall ACS national meeting, originally slated for San Francisco, was pivoted to an all virtual meeting, and this did not include a ChemLuminary portion. ACS decided to postpone the ChemLuminary Awards until later in the year.

The Pittsburgh section was announced as a finalist in the category of **Outstanding Ongoing NCW event** for their 2019 National Chemistry Week (NCW) program during October 2020. The other local sections nominated for this award were the Cincinnati and Northeastern local sections. The ACS planned a pre-recorded awards ceremony, which took place on Wednesday, December 9<sup>th</sup>, 2020. The Pittsburgh local section officers planned a watch-party via Zoom. We were ecstatic when they announced that the local section in fact won!

A big congratulations goes out to Evonne Baldauff (Waynesburg University) and all of her team for all of the hard work on the 2019 event! This was the 21<sup>st</sup> consecutive year that Pittsburgh has participated. We also need to thank Michael Mautino for all of his hard work on the NCW program for 20 previous years!

The recording of the 2020 ChemLuminary Awards can be found here:

<https://vimeo.com/483705362>

Look for our award around the 1 hour 3-minute mark.



# Spectroscopy Society of Pittsburgh Society for Analytical Chemists of Pittsburgh



February Virtual Meeting

**Wednesday, February 10, 2021**

***Technology Forum – 6:00 pm***

***Business Meeting – 6:45 pm***

***Technical Program – 7:15 pm (Immediately Following Business Meeting)***

## **SSP TECHNOLOGY FORUM**

Jeanette Schnars, PhD, Regional Science Consortium  
“Acute Decompression Sickness in Yellow Perch”



Economic impact of fishing is \$28-36 million annually to Erie County, with over 38,300 Yellow Perch anglers. As waters increase in temperature during the summer, Yellow Perch migrate to deeper waters and are vulnerable to acute decompression sicknesses (barotrauma), resulting in mortality when released. Release rates are >97,000 fish annually. Catch-release mortality is a management concern to PA Fish and Boat Commission since fishery models assume no mortality of released fish, resulting in models overestimating the population size. This study identified various means of catch/release mortalities, thereby providing insight on survivorship and mortality, as well as unexpected information on the

impacts and recovery of barotrauma.

### **BIOGRAPHY**

Dr. Jeanette Schnars has been the Executive Director of the Regional Science Consortium at Presque Isle located in the Research Wing of the Tom Ridge Centers since 2007. She received her B.S. degree in Biology from The Pennsylvania State University with a Minor in Marine Science. After working for the U.S. Geological Survey on researching sea turtle populations at Padre Island National Seashore, TX, she continued her education at the State University of New York – College at Buffalo earning a M.S. degree in Biology researching the migrations of sea turtles in Costa Rica. While working as an Instructor in the Biology Department of Penn State – Erie, in 2008 she earned her Ph.D. from The Pennsylvania State University in Wildlife and Fisheries Science researching the effects of contaminants on the common snapping turtle. Dr. Schnars continues to conduct research on fisheries, contaminants, and water quality in Lake Erie, in addition to being an active board member and chairing many committees.

## **SACP TECHNICAL PROGRAM**

Paul Cremer, PhD, Penn State University  
“The Behavior of Supported Lipid Membranes”



Phosphatidylinositol 4,5-bisphosphate, PI(4,5)P<sub>2</sub> is one of the most negatively charged lipids in the plasma membrane of living cells with a net charge ranging from -3 to -5 near physiological pH. The phosphate moieties on this lipid bind tightly to divalent metal cations including Ca<sup>2+</sup> and Mg<sup>2+</sup>. Herein, we use sum frequency generation (SFG) vibrational spectroscopy and a novel bilayer unzipping assay to investigate the behavior of PI(4,5)P<sub>2</sub>. For example, it can be shown by SFG that Ca<sup>2+</sup> has a far larger influence on the orientation of the inositol ring compared to Mg<sup>2+</sup>. This is the case because Ca<sup>2+</sup> can shed its inner hydration shell to bind directly to the negatively charged phosphate moieties and

link them together. Moreover, PI(4,5)P<sub>2</sub> has a strong influence on interfacial water structure. Several biological mechanisms involving this lipid will be discussed. These will include its role as a second messenger<sup>1</sup> as well as its ability to aid cytoskeletal.

### **BIOGRAPHY**

Paul S. Cremer is the J. Lloyd Huck Chair in Natural Sciences at Penn State University, where he holds appointments in both the Department of Chemistry and the Department of Biochemistry and Molecular Biology. Prof. Cremer received his bachelor's degree from the University of Wisconsin – Madison (1990) and his Ph.D. from the University of California - Berkeley (1996) working with Prof. Gabor A. Somorjai as his thesis advisor. He spent two years as the Irving S. Sigal Postdoctoral Fellow at Stanford University in the laboratory of Steven G. Boxer before starting his independent research career at Texas A&M University in 1998. He stayed at A&M for over 14 years, where he was named Distinguished Professor in 2012. The following year his laboratory moved to Penn State. He is a fellow of the American Association for the Advancement of Science as well as of the American Chemical Society. In 2017, he was named a Langmuir Lecturer by the ACS. His group works at the cross-roads of analytical chemistry, physical chemistry, biological chemistry and materials science.

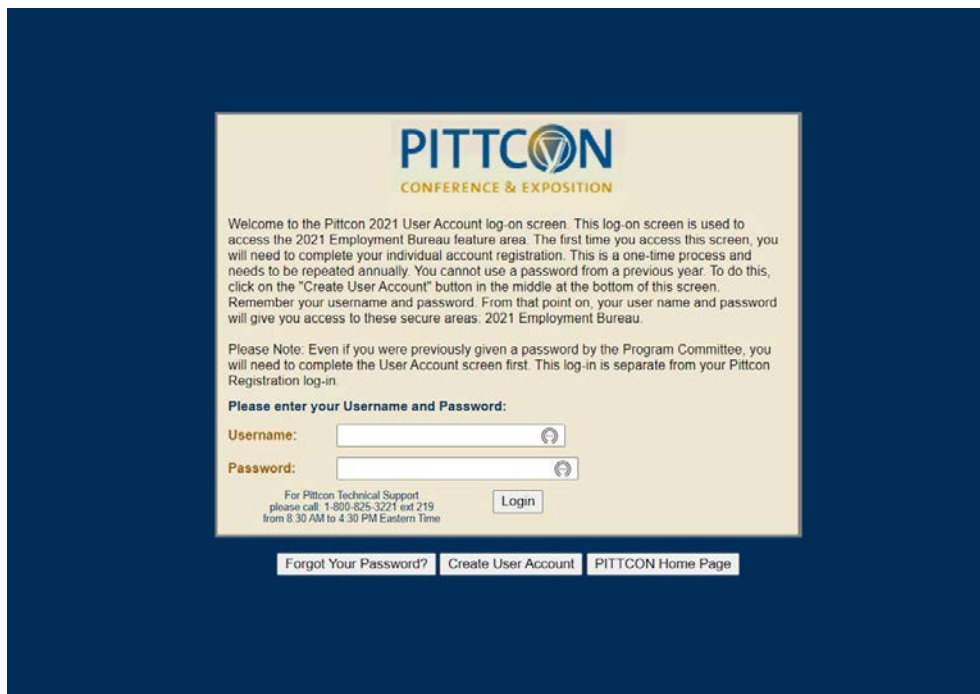
***To register or find out more information, please visit your society's website below:***

<http://sacp.org/meeting/>

<http://www.ssp-pgh.org/meeting/>

## Pittcon Employment Bureau

Pittcon's complimentary Employment Bureau (EB) started accepting resumes and job positions last month. The EB is a premier career exchange for laboratory scientists and related fields, and will provide a searchable database for registered candidates and employers. Employers and candidates are able to upload resumes and job positions, then online searching will begin on Saturday, March 6th and run until Monday, March 29th. Please note, there is no separate fee to participate in EB, but you must be a registered attendee or exhibitor of the Pittcon 2021 Virtual Conference. Visit [pittcon.org/employment/](http://pittcon.org/employment/) to get started.



**PITTCON**  
CONFERENCE & EXPOSITION

Welcome to the Pittcon 2021 User Account log-on screen. This log-on screen is used to access the 2021 Employment Bureau feature area. The first time you access this screen, you will need to complete your individual account registration. This is a one-time process and needs to be repeated annually. You cannot use a password from a previous year. To do this, click on the "Create User Account" button in the middle at the bottom of this screen. Remember your username and password. From that point on, your user name and password will give you access to these secure areas: 2021 Employment Bureau.

Please Note: Even if you were previously given a password by the Program Committee, you will need to complete the User Account screen first. This log-in is separate from your Pittcon Registration log-in.

Please enter your Username and Password:

Username:

Password:

For Pittcon Technical Support  
please call: 1-800-826-3221 ext 219  
from 9:30 AM to 4:30 PM Eastern Time

Login

[Forgot Your Password?](#) [Create User Account](#) [PITTCON Home Page](#)

## Call for Nominations for the 2022 Awards

We are pleased to announce the call for nominations for four prestigious annual awards that will be presented during Pittcon 2022 in Atlanta, Georgia (March 5-9, 2022). For complete requirements, guidelines and submission instructions for all of the awards, please visit [www.pittcon.org/call-for-nominations](http://www.pittcon.org/call-for-nominations).

### SSP Call for Nominations

The Pittsburgh Spectroscopy Award is in recognition of an individual's outstanding contributions in the field of applied spectroscopy. Nomination deadline is April 29, 2021

The Ralph N. Adams Award in Bioanalytical Chemistry recognizes noteworthy contributions to the field of bioanalytical chemistry, broadly defined. The recipient will have introduced a significant technique, theory, instrument or application important to the life sciences and provided an exceptional environment to educate bioanalytical chemists. Nomination deadline is May 2, 2021.

### SACP Call for Nominations

The Pittsburgh Analytical Chemistry Award honors an individual's impact to the field of analytical chemistry including the introduction of a substantial technique, theory or instrument or providing exceptional training or a fertile environment for progress in analytical chemistry. Nomination deadline is April 29, 2021.

The Pittsburgh Conference Achievement Award is a tribute to an individual for outstanding achievements in the fields of analytical chemistry and/or applied spectroscopy within 10 years after completion of his/her Ph.D. work. To be eligible for the award, nominees must have completed their Ph.D. no earlier than March 1, 2006. Nomination deadline is April 20, 2021.





ACS Pittsburgh Local Section Proudly Presents  
**2021 Mildred Perry Memorial Lecture**

**Wednesday, February 17, 2021 at 7 PM**

Zoom Meeting ID: 814 472 3373

**Dr. Laura Ritchey**

Department of Chemistry, University of Pittsburgh at Johnstown

**“RNA in Plants, Viruses, and Vaccines: Connections to the COVID Vaccine”**

**Abstract:** I will first briefly discuss my own research on some of the intricate complexities of rRNA in plants. Plants harbor chloroplasts within their cells to harvest energy from the sun. These chloroplasts contain rRNA that is distinct from the rRNA in the bulk of the plant cells. Chloroplast rRNA contains a “hidden break” such that the three-dimensional structure remains intact while the backbone is covalently cleaved. While the purpose of this phenomenon is unknown, results from our studies may help to elucidate mechanisms that allow plant survival under harsh conditions.

Following discussion of my research, I will discuss how RNA relates to the recent pandemic and vaccine development for SARS-CoV-2, the virus that causes Covid-19. The virus is composed of an RNA genome surrounded by a lipid bilayer that contains several proteins including the Spike protein, or S protein. The newly developed mRNA vaccines send instructions to our cells to make the S protein helping our immune system recognize this protein as foreign, producing antibodies to mount an attack against a SARS-COV-2 viral particle.

**Biography:** Laura started her faculty position in the Department of Chemistry at the University of Pittsburgh at Johnstown in August 2018. She received her B.S. in Chemistry with a concentration in biochemistry from Saint Francis University in 2013. She then received her Ph.D. in 2018 in chemistry from Pennsylvania State University under Philip Bevilacqua, where she focused on probing RNA structure genome-wide. At Pitt-Johnstown, Laura teaches the biochemistry sequence as well as general chemistry and enjoys working closely with her students on her research projects.

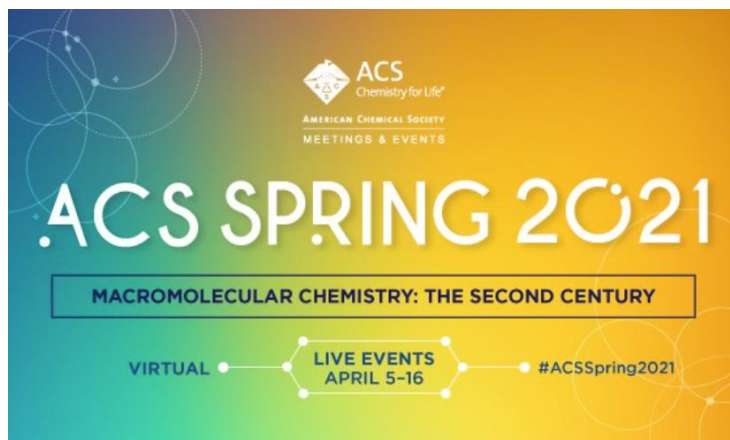




# Attention ACS Student Chapters and Advisors!

Even though the ACS Spring meeting has gone virtual, we still have a full program that undergraduates can attend from the comfort of their own homes or campuses!

For a low **\$25 registration fee**, you can join us on **Friday, April 9<sup>th</sup>** to celebrate creativity, innovation, and entrepreneurship in chemistry.



**Eminent Lecture Series:** Dr. Naomi Halas, Rice University

**A Day in My Life:** Dr. Rigoberto Hernandez, Johns Hopkins University

**Creativity:** “The Little-Known Industry Skill” (presentations from industry including Pittsburgh companies, PPG and Covestro!)

“Influencing science through #scicomm”

“ACS Student Chapters Get Creative

Watch for extra workshop announcements including a Graduate School Presentation and a Diversity & Inclusion Panel. The formal schedule will be announced in March.

Find out more and register at <https://www.acs.org/content/acs/en/meetings/acs-meetings.html>



## The 2021 Leadership Institute Experience

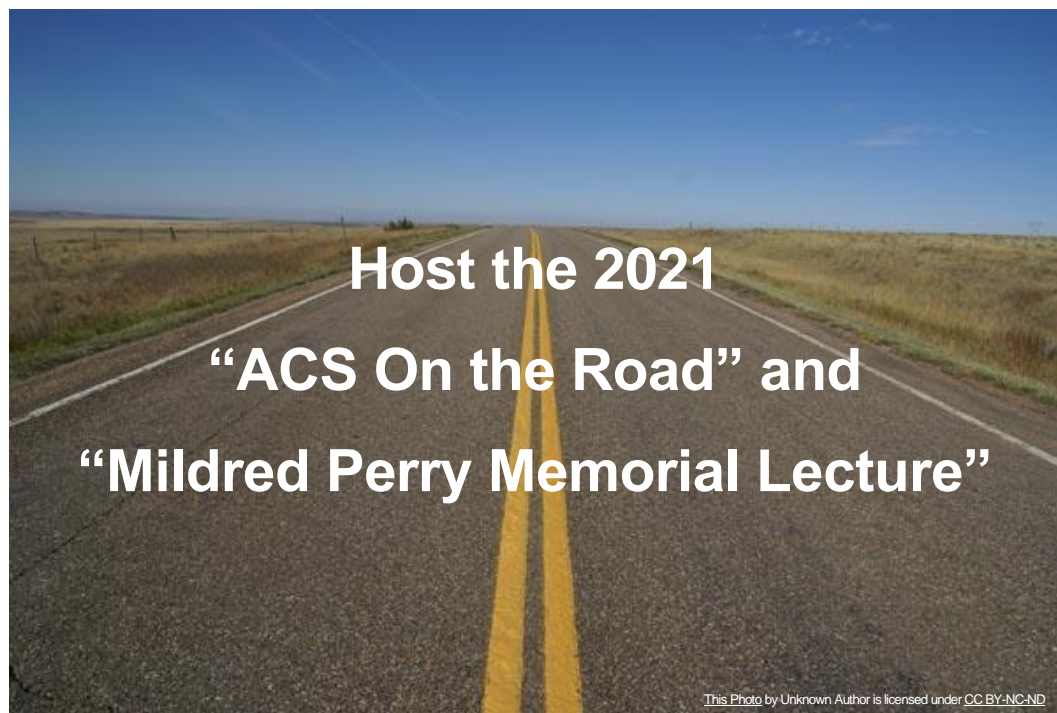
By Kim Woznack

As Chair-elect, I was invited to participate in the 2021 ACS Leadership Institute Experience. For many, many years, ACS has offered the Leadership Development Institute (LDI) taking place during a weekend each January. The LDI offers tracks for various ACS leaders, especially those starting in a new volunteer role. Tracks include: Local Section Leaders, Division Leaders, New National Committee Chairs, Younger Chemists, and Student Leaders. As with every other aspect of our lives, the global pandemic has necessitated changes to the way long-running programs have been delivered and the LDI was no exception. This year they dubbed this the Leadership Institute Experience. The ACS modified this rewarding face-to-face experience to take place virtually.

The full experience kicked-off on Saturday, January 9<sup>th</sup> with a keynote featuring ACS Executive Director and CEO Dr. Tom Connelly. Tom described a brand-new ACS Goal adopted by the Board of Directors in December 2020. In addition to the updated existing 4 goals, the board added a 5<sup>th</sup> goal: "Embrace and Advance Inclusion in Chemistry". Other portions of the program included a Meet and Greet with the ACS Board of Directors, a Plenary session on "Harassment-Free Meetings", a Social Media session, and an ACS Resource Fair. Additionally, participants in the Leadership Institute Experience had the opportunity to opt into a variety of the ACS Leadership Development courses, such as "Leading Without Authority", "Strategic Planning", and "Communication Strategies" to name a few. I was grateful for the chance to participate, and I recommend this program for any emerging ACS leaders when the opportunity arises.



**ACS** Local Section  
Pittsburgh



Each year the Pittsburgh local section features an "On the Road" event, which has the "Mildred E. Perry" memorial lecture. This is a great opportunity to local section chemists to visit your site or campus. The organizers choose the speaker and program details. Past organizers would be happy to share our experience and websites if the host location is interested. This event was hosted by Saint Francis University in 2019 and featured Dr. Megan Matthews from the University of Pennsylvania. If your institution is located in the Pittsburgh Local Section and you would like to host the 2021 ACS "On the Road" event please contact ACS Chair, Kevin Noonan ([noonan@andrew.cmu.edu](mailto:noonan@andrew.cmu.edu)).

**American Chemical Society**

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## American Chemical Society Pittsburgh Section

[www.pittsburghacs.org](http://www.pittsburghacs.org)

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Dear Academic ACS Pittsburgh Section Members,

The Pittsburgh Section of the American Chemical Society has budgeted funds to help encourage undergraduate/graduate student participation in national and regional ACS meetings. The awards are intended to help defray meeting registration and travel-related expenses (lodging, transportation, per diem) for eligible students. Awards will be made based on the scientific merit of the paper/poster to be presented, financial need, and preference will be given to ACS members.

To apply for the funds, applicants should complete the attached application and return it by the relevant deadline. The deadlines for receipt of applications are as follows:

- **06/01 (for travel to be completed by 12/31)**
- **12/01 (for travel to be completed by 06/30)**

As noted on the application, students should include an abstract and confirmation (if received) of the paper/poster being accepted for the Meeting. In addition to the application form, applicants should include a recommendation letter from the PI of the project being presented and/or a recommendation letter from another and a personal statement as to the anticipated benefits of meeting attendance.

Applications can be made electronically (*preferred*) by emailing the application to Heather Juzwa ([hljuzwa@shimadzu.com](mailto:hljuzwa@shimadzu.com) or [heather\\_sapko@hotmail.com](mailto:heather_sapko@hotmail.com)) or by mailing a hard-copy application (Pittsburgh Section ACS Travel Grants / Heather Juzwa / Center / 321 Winners Circle / Canonsburg, PA 15317).

Since 2013, the Pittsburgh Section of the ACS has awarded up to four \$500 grants each year to aid our undergraduate/graduate student members in presenting papers or posters at ACS Meetings. This is an ongoing program in our Section, and details will be updated on our website ([www.pittsburghACS.org](http://www.pittsburghACS.org)) as necessary.

Applicants will be notified via email that their application was received. All efforts will be made to announce awards within two weeks of the application deadline, and all applicants will be notified of the final committee decisions. Our Section is looking forward to helping increase the participation of local students in ACS conferences. If you have any questions, please do not hesitate to contact me.

Sincerely,

Heather Juzwa, ACS Pittsburgh Section Student Travel Grants, Chair  
Senior Field Sales Engineer, Shimadzu Scientific Instruments, Inc



American Chemical Society  
Pittsburgh Section

[www.pittsburghacs.org](http://www.pittsburghacs.org)

Application Deadline	Travel Completion Date
December 1	June 30 (subsequent year)
June 1	December 31 (same year)

Name of Applicant: \_\_\_\_\_

Name of Institution: \_\_\_\_\_

\_\_\_\_\_ Undergraduate Student / Year

\_\_\_\_\_ Graduate Student / Year

Mailing Address to Receive Payment if Awarded:

\_\_\_\_\_  
\_\_\_\_\_

Email: \_\_\_\_\_ Phone: \_\_\_\_\_

PI: \_\_\_\_\_

ACS Membership No.\*: \_\_\_\_\_

*\*If you do not know your ACS number, please email [hljuzwa@shimadzu.com](mailto:hljuzwa@shimadzu.com) to receive it by email.*

Meeting Location: \_\_\_\_\_ Meeting Date: \_\_\_\_\_

Project Title: \_\_\_\_\_

\_\_\_\_\_ Paper Presentation      \_\_\_\_\_ Poster Presentation

*\*Please attach a copy of your project abstract to the application.*

Has your project been accepted?      Yes      No

*\*Attach documentation regarding acceptance if received at point of application.*

Will this be your first presentation at an ACS national or regional meeting?      Yes      No

If no, please list conferences at which you have presented: \_\_\_\_\_

Purpose of grant: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Other funding sources (if any): \_\_\_\_\_

\_\_\_\_\_

Personal Statement of anticipated benefits of meeting attendance: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Has the applicant received a travel grant from the ACS Pittsburgh Section in the past?    Yes                      No

If your application was selected, the Pittsburgh Section of the ACS would like you to write a short (one page) description of your activity upon completion of the conference for publication in our monthly newsletter, The Crucible, and on our website. The description is due within 30 days of the meeting attended. Photos are welcomed and encouraged.

I am willing to complete this report:                      Yes                      No

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Send completed hard-copy applications and supporting documentation to:

Pittsburgh Section ACS Travel Grants

Heather Juzwa, 321 Winners Circle, Canonsburg, PA 15317

Electronic copies of completed applications should be sent to [hljuzwa@shimadzu.com](mailto:hljuzwa@shimadzu.com) and [heather\\_sapko@hotmail.com](mailto:heather_sapko@hotmail.com). Be sure to place "Pittsburgh Section ACS Travel Grants" in the subject line.

## 2021 Pittsburgh Section Officers

### Chair

Kevin Noonan  
[noonan@andrew.cmu.edu](mailto:noonan@andrew.cmu.edu)

### Secretary

Sara Smith  
90 Emerson Ln  
Bridgeville, PA 15017  
[sara.smith@perkinelmer.com](mailto:sara.smith@perkinelmer.com)

### Treasurer

Evonne Baldauff  
51 W. College St.  
Waynesburg, PA 15370  
724-852-7617  
[ebaldauff@waynesburg.edu](mailto:ebaldauff@waynesburg.edu)

## Volunteers Needed!

There are a number of volunteer opportunities in the Pittsburgh ACS Section! If you are interested in volunteering, please contact Heather Juzwa at [hjuzwa@shimadzu.com](mailto:hjuzwa@shimadzu.com)!

## The Crucible Deadline

The deadline for items submitted to The Crucible is the 20<sup>th</sup> of the month prior to publication. For example, all items for the February 2021 issue must be to the editor by January 20<sup>th</sup>, 2021.

## The Crucible

The Crucible is published monthly, August through May. All statements and opinions expressed herein are those of the editors or contributors and do not necessarily reflect the position of the Pittsburgh Section.

Design Editor: Alysia Mandato, [crucible@pittsburghacs.org](mailto:crucible@pittsburghacs.org)



### Spectroscopy Society of Pittsburgh

Professional Networking  
within the Spectroscopy  
Community

Monthly Symposia by  
Prominent Researchers

Promoting Science Education

To join, call 412-825-3220  
Ext. 200



### Society for Analytical Chemists of Pittsburgh

**Calling New Members!**

Dues Only \$10.00

Call the SACP Administrative  
Assistant at 412-825-3220  
Ext. 200 Right Now!

## Advertise in The Crucible

	1X	3X	6X	10X
Full Page	\$120	\$115	\$100	\$75
Half Page	\$75	\$70	\$60	\$45
3.5" x 2"	\$50	\$45	\$25	\$20

## ACS Member-Get-a-Member

Recruit a new member to the American Chemical Society and receive a free 2021 Periodic Table of the Elements blanket!

See [here](#) for more information

## ACS Regional Awards – Apply Today!

More information can be found [here](#)