



**Pittsburgh Section of the American Chemical Society**  
**Volume CIX, No. 8**  
**March 2023**

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## Get to Know A Member – Niharika Krishna Botcha, Ph.D.



### 1. What is your work and ACS (if applicable) title?

ACS Pittsburgh section 2023 Treasurer-elect, Webmaster and soon to be Newsletter Editor. Special Lecturer in the department of chemistry at Carnegie Mellon University

### 2. How many years have you been in the ACS?

6 years

### 3. What is the biggest benefit of ACS Membership?

Getting to meet people from all walks of chemistry and life. ACS also played an instrumental role when I was a graduate student providing me with much needed help and resources.

### 4. What did you want to be when you were a child?

A teacher

### 5. What made you fall in love with Chemistry?

The periodic table in eighth grade! When my after school chemistry teacher introduced the periodic table and asked us to memorize it, I was at once surprised and fascinated. That was the start of my love affair with chemistry and I hope it never ends.

### 6. How did you get into your current position?

I came to Pittsburgh and Carnegie Mellon as a postdoc in 2021 and when they had an opening for a teaching position I took the chance to transition. Teaching chemistry to curious students is my dream job so I'm totally in love with my current job and position.

### 7. What is your favorite book and why?

Tough question! Too many to choose from but I'll go with my all time favorite and top choice, Pride and Prejudice by Jane Austen.

Do you want to be our featured member? Please email [hljuzwa@shimadzu.com](mailto:hljuzwa@shimadzu.com) to get onto the schedule!



## Call for Nominations

### **Pittsburgh Award**

The Pittsburgh Award was established in 1932 by the Pittsburgh Section of ACS to recognize outstanding leadership in chemical affairs in the local and larger professional community. This Award symbolizes the honor and appreciation accorded to those who have rendered distinguished service to the field of chemistry. The Award consists of a plaque presented annually at a section dinner. Members of the Pittsburgh Section, or in exceptional cases, nonmembers, who have done work worthy of recognition toward increasing chemical knowledge, promoting the chemical industry, benefiting humanity, or advancing the Pittsburgh Section, are eligible for consideration.

### **Distinguished Service Award**

The Distinguished Service Award was established in 2007 by the Pittsburgh Section of the ACS to expand and replace the predecessor Chairman's Award of the section. Both recognize outstanding volunteer service to the Section. The Award, consisting of a plaque, is presented annually at a Section dinner, which is open to the public. Members of the Pittsburgh Section, past or present, who have provided outstanding service in advancing the Pittsburgh Section, are eligible for consideration.

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Nominations for both awards are solicited from the membership of the Pittsburgh Section. Nomination packets and more information about the awards, including information on past winners, can be found on the Pittsburgh ACS website: <https://pittsburghacs.org/awards/>

Please send all nominations (or questions about nomination process) to Pittsburgh Section Chair-Elect, Alysia Mandato, [atm75@pitt.edu](mailto:atm75@pitt.edu). Nominations are due no later than **Tuesday, August 15, 2023**.



## 2023 CCEW Illustrated Poem Contest The Curious Chemistry of Amazing Algae

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

**Contest Deadline:** Sunday, April 30, 2023, at 11:59 PM ET

**Prizes:** \$50 for 1<sup>st</sup> place in each of four grade categories: K-2<sup>nd</sup>, 3<sup>rd</sup>-5<sup>th</sup>, 6<sup>th</sup>-8<sup>th</sup>, and 9<sup>th</sup>-12<sup>th</sup>

**Contact:** Alysia Mandato, CCEW coordinator, [ccew@pittsburghacs.org](mailto:ccew@pittsburghacs.org)

**Submissions:** <https://forms.gle/HKchkBF3ruDcLxS8>

Winners of the Pittsburgh 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!

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Write and illustrate a poem using the CCEW theme, "**The Curious Chemistry of Amazing Algae.**" 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:

- Seaweed
- Micro- or macro- algae
- Photosynthesis
- Bioluminescent algae
- Algae as food & habitat for animals
- Consumer products from algae
- Oxygen from algae
- Biofuels from algae

### 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 CCEW 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. Poems may be submitted by hand on an unlined sheet of paper not larger than 11" by 14" or scanned and sent via email. 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.
- 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.
- Acceptance of prizes constitutes consent to use winners' first name and last initial, along with the name of the ACS Local Section, on the ACS web pages and in the magazine, Chemical & Engineering News



# Call for Symposia Sessions for 2024 Central Regional Meeting (CERM)



The Pittsburgh ACS Local Section will be hosting the Central Regional Meeting (CERM) in the fall of 2024. We are finalizing our dates with ACS National, but we anticipate the conference will be late October or early November 2024.

We are seeking proposals for technical sessions at this time including names of possible symposium organizers.

Please complete the [Google Form](#) to submit your ideas to us by **March 31<sup>st</sup>** for full consideration.

Please contact Kim Woznack and Kevin Noonan, CERM 2024 Program Co-Chairs, with any questions.

# Volunteers Needed!

Do you want to become more involved in the Pittsburgh ACS?

We have positions that need to be filled! Contact 2023 Chair-Elect Alysia Mandato with your interest or with any questions at [atm75@pitt.edu](mailto:atm75@pitt.edu).

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## Webmaster

Responsibilities:	Update the <a href="#">Pittsburgh ACS website</a> with upcoming events and information from <i>The Crucible</i> .
Time commitment:	Less than 1 hour per week
Skills needed:	Familiarity with WordPress, attention to detail, responsive to email communications

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## Chair of History and Landmarks Committee

The [ACS National Chemical Historical Landmarks program](#) grants Landmark status to seminal achievements in the history of the chemical sciences and provides records of their contributions to chemistry and society in the US. The Pittsburgh Section has worked with ACS National in the past to select Landmarks in the region. Some of these Pittsburgh Landmarks were dedicated at [Alcoa Inc. \(2001\)](#), the [U.S. Steel Tower \(2009\)](#), [Chatham University \(2012\)](#), and the [Mellon Institute \(2013\)](#).

Responsibilities:	Recruit members for the committee, hold meetings, select regional chemical contributions for recognition as a Landmark, complete nomination processes
Time commitment:	1 hour per month (estimated)
Skills needed:	Interest and/or knowledge in the chemical history of the Pittsburgh region, effective communication

## **Chair of Pittsburgh ACS Polymer Group**

The Polymer Group has been inactive in recent years, and we are looking for someone to get this group started again. [Read more](#) about the Polymer Group. This will be a self-driven position, but the ACS executive committee will advise and support in any way needed.

Responsibilities: Recruit members, hold meetings, plan events  
Time commitment: 4 hours per month (estimated)  
Skills needed: Interest and knowledge in the field of polymers, connections with the polymer community in the Pittsburgh region

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## **Chair of Pittsburgh ACS Energy Technology Group**

The ETG has been inactive in recent years, and we are looking for someone to get this group started again. [Read more](#) about the ETG. This will be a self-driven position, but the ACS executive committee will advise and support in any way needed.

Responsibilities: Recruit members, hold meetings, plan events  
Time commitment: 4 hours per month (estimated)  
Skills needed: Interest and knowledge in the field of energy production and use, connections with the energy community in the Pittsburgh region

## ACS Pittsburgh Annual Awards Dinner



On February 7, 2023, at the Grand Concourse in Pittsburgh, we celebrated the 2022 recipients of our annual awards. The Pittsburgh Award recipient, Dennis Simpson, the Distinguished Service Award recipient, Matthew Price, and the Volunteer of the Year Award recipient, Evonne Baldauff, received their awards after a lovely dinner with colleagues, friends, and family.

Special thanks to Ed Zovinka for planning the event and to Samuel Leung for taking photos during the event. See the next page for photos!





**SSP/SACP Joint Meeting  
Former Chair Night  
Wednesday, April 26, 2023  
Duquesne University**



5:30 PM – Social Hour  
6:30 PM – Dinner  
7:15 PM – Business Meeting &  
Recognition of Former Chairs  
8:00 PM – Technical Program

**SACP Technical Program**

**“Green Liquid Chromatography - An Unexpected Journey”**

**Dr. Milton Lee, Brigham Young University**



**Biography:**

Milton L. Lee received a B.A. Degree in Chemistry from the University of Utah and a Ph.D. in Analytical Chemistry from Indiana University. He was a postdoctoral researcher at MIT before accepting a faculty position at Brigham Young University. Dr. Lee's research centers on capillary separation techniques and mass spectrometry detection. He has co-authored over 600 publications and has received various awards including the ACS Award in Chromatography, ACS Award in Chemical Instrumentation, Pittsburgh Analytical Chemistry Award, ACS Award in Separations Science and Technology both LCGC Europe and North America Lifetime Achievement Awards, and the 2019 ACS Award in Analytical Chemistry. Dr. Lee has mentored over 100 graduate students and post-doctoral researchers. Professor Lee is also an entrepreneur and has been involved in transferring technology from his university research laboratory to the private sector, co-founding four analytical instrument companies. He was named five times on the *Analytical Scientist* Power List, the latest in 2021.

**Abstract:**

The global high performance liquid chromatography (HPLC) market is the largest among the chromatographic techniques currently over \$4 billion USD annually with additional mobile phase solvent purchase/handling/disposal costs approaching \$1 billion USD. From a “green” perspective, reduction in use of solvents and electrical power by chromatographers is necessary to do our part to protect the environment and conserve our natural resources as the HPLC market continues to grow.

The ACS's Green Chemistry Institute has prepared an on-line Analytical Method Greenness Score (AMGS) calculator for LC. Using this calculator and comparing solvent waste reduction plus instrument energy reduction between conventional LC and capillary LC, the AMGS score for capillary LC is over 150 times greener. Considering the number of liquid chromatographs worldwide, switching to more compact LC instrumentation would be a significant contribution to the protection of the environment and conservation of valuable non-renewable resources.

Using capillary columns with small diameter (<0.3 mm i.d.), LC mobile phase flow rates are much lower, pumps are smaller, and the overall instrument size and cost can be significantly

reduced. Recently, I have been involved in the development of a novel compact capillary LC that has a small footprint, weighs only 5.4 kg, produces consistent nL to  $\mu$ L flowrates at pressures up to 1500 bar, utilizes on-column or miniature flow cell optical UV detection, and is very easy to operate. Compactness allows the LC instrument to be easily moved to wherever it is needed, such as to a sample source, to a bench in the laboratory next door, or to another analytical instrument for easy interfacing.

For complete details and to make a dinner reservation, please visit our society's website. Deadline for dinner reservations is Wednesday, April 19, 2023 by noon.

<https://chemistryoutreach.org/meeting/>



## SACP/SSP Continuing Education Symposium

### *Consequences of Climate Change and the Challenge for Pennsylvania*

Sponsored by

Society for Analytical Chemists of Pittsburgh ([www.chemistryoutreach.org](http://www.chemistryoutreach.org))

Spectroscopy Society of Pittsburgh ([www.chemistryoutreach.org](http://www.chemistryoutreach.org))

April 22, 2023—RJ Lee Group Bldg., 800 Presque Isle Dr, Pgh, PA 15239.

**Registration Starts at 8:15 AM and continues until 9:00, There will  
be one recess and lunch should begin at about 12:30**

Although this symposium will present different ramifications and general information of climate change, it will focus on how Pennsylvania is and will be affected and what is being done about climate change now and what is planned for the future.

The presenters include the following:

**Dr. Josef Werne Professor & Chair, Geology & Environmental Science, University of Pittsburgh**

**Dr. Roger A. Pielke Sr., Professor Emeritus, Colorado State University (Virtual presentation)**

**Dr. Maureen Lichtveld (MD, MPH), Dean School of Public Health, University of Pittsburgh**

**Mr. Jeff Jumper, EM Program Manager – Resiliency, PA Emergency Management Agency**

COST: \$11 – for in-person attendance which includes parking, refreshments and lunch.  
To attend virtually there is \$0 cost.

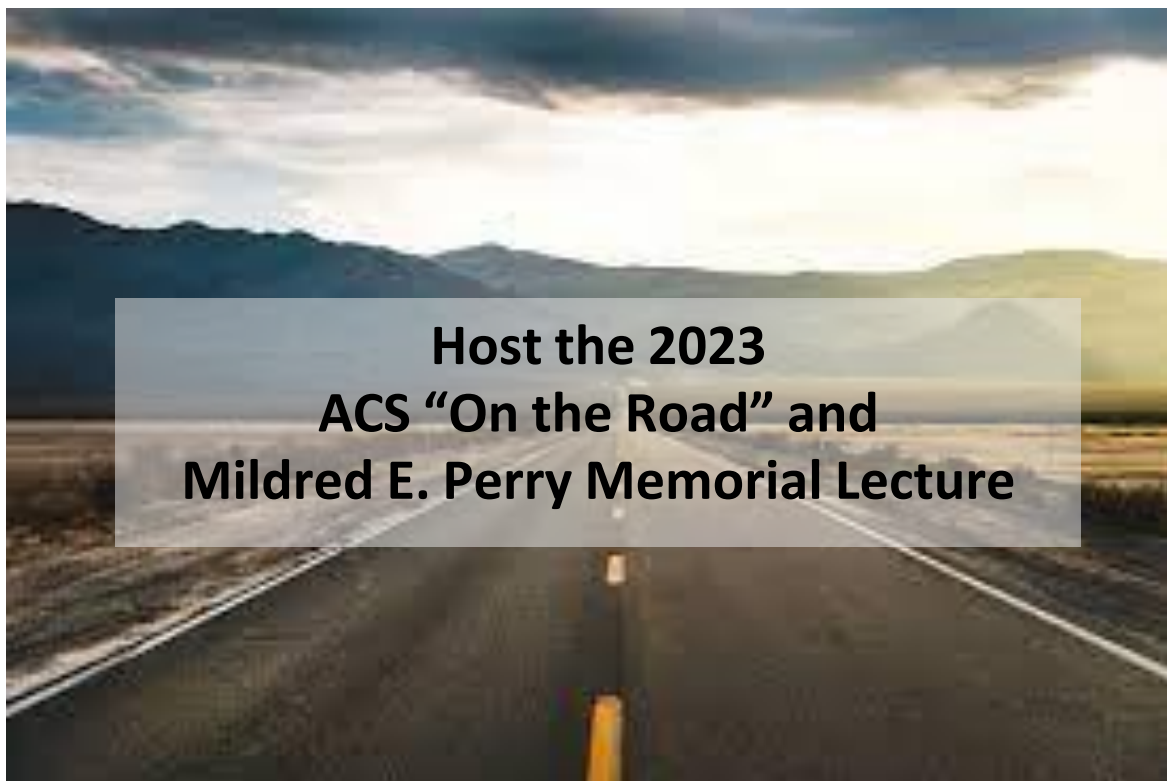
To register and to find out more information about the speakers and presentations go to

[www.chemistryoutreach.org](http://www.chemistryoutreach.org) and click on the callout box on the homepage listing the symposium. If you do not see the callout you can navigate to the information by clicking or touching the **Events tab** → **Lectures + Symposia** → **Climate Change**. If you are using a cell phone or tablet you may need to access the information starting from the three horizontal lines in the upper right corner of the homepage.

The deadline for in-person registration is April 14, 2023 or until there is full capacity. For virtual attendance the registration deadline is up to the beginning of the symposium. If you want to attend in- person it is suggested that you register early, because space is limited.



**ACS** Local Section  
Pittsburgh



**Host the 2023  
ACS “On the Road” and  
Mildred E. Perry Memorial Lecture**

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 for 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 experiences and websites if the host location is interested. In 2021, this event was hosted by Saint Francis University and featured Dr. Lan Deng from PPG. We encourage hybrid events if necessary! If your institution is located in the Pittsburgh Local Section and you would like to host the 2023 ACS “On the Road” event, please contact ACS Chair, Ed Zovinka ([ezovinka@francis.edu](mailto:ezovinka@francis.edu)).

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**American Chemical Society Pittsburgh Local Section**

*Engage and inspire members to unite the diverse chemistry community and share knowledge to benefit our region and its people.*  
[www.pittsburghacs.org](http://www.pittsburghacs.org)



## 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.





## 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.

Editors: Alysia Mandato and Niharika Botcha, [crucible@pittsburghacs.org](mailto:crucible@pittsburghacs.org)

## 2023 Pittsburgh Section Officers

<b>Chair</b>	Ed Zovinka <a href="mailto:ezovinka@francis.edu">ezovinka@francis.edu</a>
<b>Chair-Elect</b>	Alysia Mandato <a href="mailto:atm75@pitt.edu">atm75@pitt.edu</a>
<b>Secretary</b>	Samuel Leung <a href="mailto:samuel.leung@braskem.com">samuel.leung@braskem.com</a>
<b>Treasurer</b>	Matt Price <a href="mailto:price@pennwest.edu">price@pennwest.edu</a>
<b>Treasurer-Elect</b>	Niharika Botcha <a href="mailto:nbotcha@andrew.cmu.edu">nbotcha@andrew.cmu.edu</a>
<b>Directors</b>	David Waldeck Heather Juzwa Evonne Baldauff Logan Miller Toby Chapman Ronghong Lin
<b>Councilors</b>	Kim Woznick Rich Danchik Haitao Liu Kristin Nuzzio

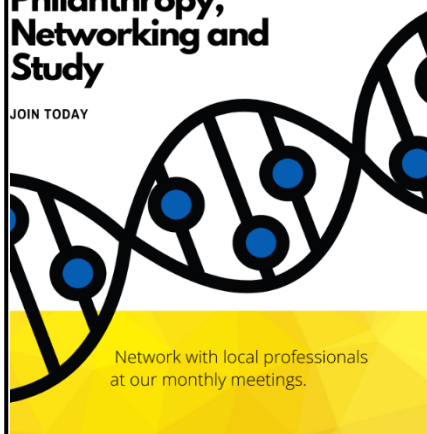
### Spectroscopy Society of Pittsburgh



[chemistryoutreach.org](http://chemistryoutreach.org)

**Science Outreach through Philanthropy, Networking and Study**

JOIN TODAY



Network with local professionals at our monthly meetings.

Society for Analytical Chemists of Pittsburgh  
[chemistryoutreach.org](http://chemistryoutreach.org)



**Advancing Analytical Chemistry through Science Education**

JOIN TODAY



Network with local professionals at our monthly meetings.

## 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

## Volunteer with Us!

We are always looking for new people to join the Pittsburgh Section Executive Committee. Email our Chair to inquire about opportunities.

## The Crucible Deadline

The deadline for items submitted to The Crucible is the 25<sup>th</sup> of the month prior to publication. For example, all items for the February 2023 issue must be to the editor by January 25<sup>th</sup>, 2023.

## ACS Regional Awards – Apply Today!

More information can be found [here](#)