

**AMERICAN
CHEMICAL
SOCIETY**

PITTSBURGH

THE CRUCIBLE

**FRAUD
EDITION**

**CXI No. 8
MARCH 2025**



A Letter from our newly appointed Chair, Samuel Leung

Dear Pittsburgh Local Section,

Happy March! First, I want to once again extend my best wishes to everyone in the Pittsburgh Section on behalf of the executive committee. This year, I thought it would be great to introduce a new "Letter from the Chair" segment in *The Crucible* each month to share updates on section activities and executive committee discussions. It has already been an eventful and exciting first couple of months—both in my own life and within the section!

The executive committee has already held two meetings since the start of the year to plan our activities. For those who may not be familiar, the executive committee consists of the chair (myself), co-chair (Dr. Ronghong Lin), treasurer (Dr. Niharika Botcha), treasurer-elect (Dr. Amalene Cooper-Morgan), secretary/secretary-elect (Dr. Kristin Nuzzio), as well as directors and councilors. In these meetings, we discuss event planning for the year (both new and ongoing), proposals and requests for the local section (e.g., sponsorships, activities, student outreach), updates from committees (e.g., local section awards, strategic planning, Chemistry Olympiad, finance), and updates from various interest groups (e.g., Women Chemists Committee, Younger Chemists Committee, Environmental, etc.).

In January, the executive committee reviewed a proposed budget for the year. I'm happy to report that we are in a strong financial position, though we still have work to do to ensure the continued success of the local section. CERM was also a great success, giving us some additional flexibility in funding this year. I'm pleased that we can continue supporting nearly all ongoing programs and groups. In particular, I want to highlight our support of the **IUPAC Global Women's Breakfast 2025**, which this year connected 449 events worldwide. Locally, this event took place at CMU on February 8.

In February, we completed and submitted our annual report (thank you to our past chair, Alysia Mandato!) and voted to approve our proposed budget for the year. We also discussed committee assignments. One key initiative I'm working on is restructuring our programming committee to help review and align our section's programs with our strategic goals.

In other news, Dr. Amalene Cooper-Morgan represented the Pittsburgh Local Section at the annual **ACS Leadership Institute** in Houston. Be sure to check out her insights and key takeaways in this issue of *The Crucible*!

The **ACS Spring Meeting** in San Diego is also coming up soon from March 23 to 27! Several of our councilors (Dr. Kim Woznack, Dr. Richard Danchik, Dr. Haitao Liu, and Dr. Ed Zovinka) will be attending the meeting (both in-person and virtually). If you'll be there, I encourage you to connect with them—they serve as the voice of our section at the national level.

Finally, I am planning on hosting quarterly open in-person executive meetings this year, the first of which will be this month. If you want to meet me and the rest of the local section executive committee and learn about opportunities to participate/volunteer in ACS, I encourage you to attend to one of these meetings! Keep an eye out for the flyer and RSVP information in this issue of *The Crucible*. As always, I welcome any comments or feedback you may have for me or the committee. You can reach me via email at sleung@berkeley.edu.

Warm regards, Sam



ACS Local Section
Pittsburgh



Pittsburgh ACS Kick-off Dinner and Executive Meeting

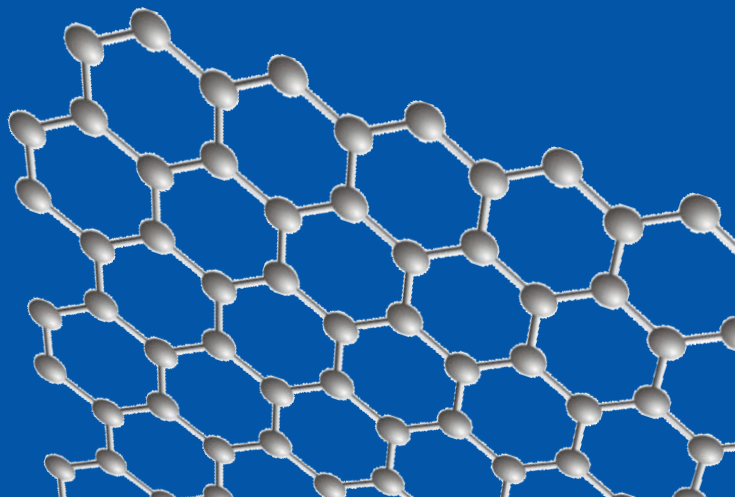
*Come have dinner, learn about opportunities to
volunteer, and meet your executive committee for the
Pittsburgh local section!*

Location: University of Pittsburgh Chevron Science Center

Date: Saturday, March 15, 2025

Time: 6 – 8 pm

RSVP by March 12 [here](#) or at
<https://shorturl.at/t8Jsq>



**SSP/SACP Joint Meeting
Monday, April 7, 2025
Duquesne University Power Center**



5:00 PM – Social Hour
6:00 PM – Dinner
6:45 PM – Business Meeting
7:15 PM – Technical Program

SACP Technical Program

“Nanoelectronic Detection of Opioids with Carbon Nanotube-based FET Sensors”

Dr. Alexander Star, Professor of Chemistry, Bioengineering, and Clinical and Translational Science, University of Pittsburgh



Biography:

Dr. Alexander Star is a Professor of Chemistry, Bioengineering, and Clinical and Translational Science at the University of Pittsburgh. The primary focus of his Sensor Technology Advanced Research (STAR) laboratory is the development of chemical sensing applications of carbon nanomaterials. Professor Star received his B.Sc. and Ph.D. degrees in chemistry from Tel Aviv University in 1994 and 2000, respectively. After doing a postdoc at UCLA (2000-2002) and serving as Senior Scientist at Nanomix, Inc., he joined the Chemistry Department at the University of Pittsburgh in 2005. During his academic career, Professor Star has co-authored 157 peer-reviewed publications, four book chapters, and was listed as a co-inventor on 15 issued patents. His research has been recognized by various awards including the Intel Award, five

University of Pittsburgh Innovator Awards, Chancellor’s Distinguished Research Award, NSF CAREER Award, and NIEHS Outstanding New Environmental Scientist (ONES) Award.

Abstract:

The opioid crisis, driven largely by synthetic opioids like illicit fentanyl, remains a severe public health challenge, with over 100,000 annual overdose deaths in the U.S., nearly 70% of which are linked to fentanyl. Addressing the urgent need for sensitive, portable detection tools, we have developed single-walled carbon nanotube (SWCNT)-based field-effect transistor (FET) sensors for opioid detection.

SWCNTs, with their one-atom-thick structure and exceptional sensitivity to molecular adsorption, are highly suited for chemical sensing applications. My research group utilizes these properties to design ultrasensitive, low-power, and cost-effective sensors functionalized with metal nanoparticles, metal-organic frameworks (MOFs), and antibodies. By integrating machine learning algorithms with nonspecific sensor arrays and addressing limitations of antibody cross-reactivity, we enhance the

sensitivity, selectivity, and reliability of these sensors for detecting synthetic opioids and their metabolites.

This presentation will detail our progress toward building SWCNT-based sensing platforms, highlighting their potential to transform the detection and monitoring of opioid exposure in the ongoing fight against the opioid crisis.

For complete details and to make a dinner reservation, please visit our society's website. Deadline for dinner reservations is Thursday, March 27, 2025 by noon.

<https://chemistryoutreach.org/events/monthly-meeting/>

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.

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, Dr. Ronghong Lin, at Dr.ronghong.lin@gmail.com, by August 15, 2025.



2025 CCEW Illustrated Poem Contest Hot Topic, Cool Chemistry!

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 27, 2025 by 11:59 PM EST

<https://forms.gle/EzTWb5j8VHPVCq177>

Prizes: \$50 for 1st place winners in each of four grade categories: K-2, 3-5, 6-8, and 9-12

Contact: Alysia Mandato, CCEW Coordinator, ccew@pittsburghacs.org

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!

Write and illustrate a poem using the CCEW theme, **"Hot Topic, Cool 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 glacier theme include:

- | | |
|------------|----------------|
| • Climate | • Preservation |
| • Drill | • Reservoir |
| • Prism | • Fossil Fuels |
| • Ice Core | • Drought |

Entries will be judged based upon:

- Artistic Merit - use of color, quality of drawing, design, and layout
- Poem Message - fun, motivational, and inspiring about the yearly theme
- Originality Creativity - unique, clever, and/or creative design

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 (No AI).
- 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



GLACIERS

HOT TOPIC  **COOL CHEMISTRY**

April 20-26, 2025 | #CCEW

The Pittsburgh Section of the ACS needs **volunteers** to share the chemistry of glaciers with the community during Earth Month! We are collaborating with [Pittsburgh Parks Conservancy at their Earth Month celebration events](#) and the [Carnegie Science Center at their SciTech Day](#).

We will perform demonstrations and host activities for children and the general public!

Saturday, April 5 from 2 PM – 5 PM at Westinghouse Park in the Point Breeze neighborhood

Friday, April 18 from 9 AM – 2 PM at Carnegie Science Center

Saturday, April 19 from 2 PM – 5 PM at McKinley Park in the Beltzhoover neighborhood

All materials and training will be provided. Please contact Chemists Celebrate Earth Week coordinator, Alysia Mandato, at atm75@pitt.edu by **March 28** if you are interested in volunteering.



ACS
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Meet the Pittsburgh ACS Social Media Team!



Madison Martin is currently a junior at the University of Pittsburgh majoring in chemistry (with the bioscience and international studies options) and pursuing a certificate in quantum computing and quantum information. This semester, she is studying abroad at King's College London. At Pitt, she is involved in computational chemistry research in the Jordan lab. She is also a tour guide with the Dietrich Ambassadors, tech wizard for the Pitt ACS chapter, and a leader within Chi Alpha. In her spare time, she loves reading, hiking, and traveling!



Korina Pebley is an undergraduate at the University of Pittsburgh at Johnstown, earning B.S. degrees in Chemistry and Applied Mathematics. Passionate about organic and biochemistry, she is currently preparing for graduate school to further explore these fields. Outside of school, she can be found hiking, spending time with her four cats, or working at a local nonprofit, Heritage Johnstown.

Give us a follow on [Instagram](#), [Facebook](#), or [LinkedIn](#)!
Be on the lookout for our new posts, “Day in the Life of an ACS Member”, and giveaways!

Westminster College is Hiring!

Westminster College invites applications for a tenure-track position at the rank of Assistant Professor in the ACS-approved Department of Biochemistry and Chemistry beginning August 2025.

Candidates who have earned a Ph.D. in Chemistry or a related field before August 2025 are preferred. The primary teaching responsibility for this position will be physical chemistry courses with corresponding labs. The teaching load is three courses per semester (in person) and will include courses in the core curriculum and first-year program. The College also expects research outputs in the relevant field of specialization. Preference will be given to candidates who can teach in at least one other area of chemistry (organic, general, biochemistry, etc.). The successful candidate will also be expected to maintain an active computational or physical chemistry research agenda involving undergraduates and to provide service to the department, Westminster College, and the chemistry community at large.

The College is a nationally recognized liberal arts college, known for its collaborative environment, outstanding experiential learning programs, and focus on student success. Related to the Presbyterian Church (U.S.A.), Westminster was founded in 1852 as one of the first colleges in the country to offer the same degrees to all people, regardless of gender, race, or religion. Westminster has been ranked among the nation's top schools for "Top Colleges Doing the Most for the American Dream" (N.Y. Times), "best value for the money" (College Factual), employment success (Educate to Career Index), graduation rate performance (U.S. News), social mobility (Washington Monthly), women in STEM disciplines (Forbes), service-learning (President's Higher Education Community Service Honor Roll), and other categories. Around 1,200 undergraduate and graduate students benefit from close personal attention from dedicated faculty while choosing from 41 majors, 10 pre-professional programs and 80 organizations. Westminster's historic campus is located in New Wilmington, PA, a beautiful rural setting near Pittsburgh and Cleveland.

Applicants should send a cover letter, curriculum vitae, statement of teaching philosophy, plan for research involving undergraduates, and contact information for three references to Dr. Pete Smith, c/o Ms. Katie Miller millerke@westminster.edu. Applications will be reviewed upon completion until March 14, 2025. Westminster College is an Equal Opportunity Employer.



American Chemical Society Pittsburgh Section

www.pittsburghacs.org

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 or 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) 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

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 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 and 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.

Editor: Hailee Vizyak and Frederick Grinfeld, crucible@pittsburghacs.org

2025 Pittsburgh Section Officers

Chair	Samuel Leung sleung@berkeley.edu
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Secretary	Kristin Nuzzio knuzzio@ppg.com
Treasurer	Niharika Botcha nbotcha@andrew.cmu.edu
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Directors	Toby Chapman Ronghong Lin Heather Juzwa Kevin Noonan Evonne Baldauff Matthew Price
Councilors	Kim Woznick Rich Danchik Haitao Liu Edward Zovinka

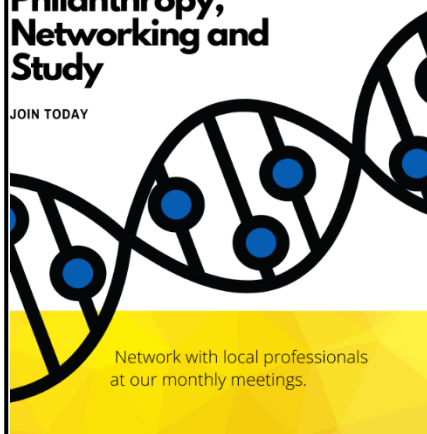
Spectroscopy Society of Pittsburgh



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



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 15th of the month prior to publication. For example, all items for the March 2025 issue must be to the editor by February 15th, 2025.

ACS Regional Awards – Apply Today!

More information can be found [here](#)

COVER image

front cover for “Unreliable” (Csaba Szabo)

