

# AMERICAN CHEMICAL SOCIETY

# PITTSBURGH

# THE CRUCIBLE

MIRROR MIRROR  
EDITION

CX I No. 6

JANUARY 2025



## ACS Pittsburgh Section Welcomes 2025 Chair, Samuel Leung

Dear Pittsburgh Local Section,

Happy New Year! As we usher in what I'm sure will be a fantastic year, I am honored to serve as your local section chair. I look forward to supporting you and the local community to the best of my abilities in 2025. I want to extend a warm welcome to our new officers and any new members of the section.

I have been part of the Pittsburgh Local Section since 2022 and have had many opportunities to meet many of you. For those I have not yet met, please feel free to reach out to me at any time! By way of a brief introduction, I am a chemical engineer currently employed at Braskem America as an R&D catalyst scientist. I previously served as the local section secretary in 2023 and as chair-elect in 2024. It has been a privilege to work alongside the incredible individuals in our local section and executive committee.

This year, my primary goal is to focus on the future of our local section, ensuring that it continues to thrive as a valuable resource for all chemists in our community. I aim to expand our outreach efforts and strengthen our social media presence with the continued support of local students. I am also committed to fostering a more diverse representation within our section, bringing together individuals from a wide range of backgrounds and experiences. Additionally, I will evaluate and refresh our existing programs to ensure their continued success in the future.

To achieve these goals, I welcome your suggestions and invite volunteers to get involved. Opportunities range from leading committees to assisting with events like our annual picnic. I also plan to host at least one in-person meeting each quarter to gather perspectives from the community and encourage your participation in these discussions.

Finally, I want to express my gratitude to the outgoing officers for their service in 2024 and to congratulate everyone who contributed to making CERM 2024 such a resounding success. I'm happy to share that the conference exceeded all expectations, and we are already looking forward to hosting this fantastic event again in the future.

I welcome any comments or feedback you may have for me or the committee. You can always reach me via email at [sleung@berkeley.edu](mailto:sleung@berkeley.edu).

Thank you once again, and best wishes for a fantastic 2025!

Warm regards,

Sam

**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)

**SSP/SACP Joint Meeting  
Wednesday, February 5, 2025  
Duquesne University Power Center**



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

**SSP Technical Program**

**“The Case to Scale Proteoform Measurement and Biology to The Entire Human Proteome”**

**Dr. Neil L. Kelleher, Walter and Mary Glass Professor of Molecular Biosciences and Professor of Chemistry, Weinberg College of Arts and Sciences  
Northwestern University**



**Biography:**

Neil L. Kelleher, PhD is the Walter and Mary Glass Professor of Molecular Biosciences and professor of chemistry in the Weinberg College of Arts and Sciences. He also is director of the 50-person Proteomics Center of Excellence, Director of the Chemistry of Life Processes and a member of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. His research is focused in the areas of top-down proteomics, natural products discovery, and cancer biology. With >450 papers, Dr. Kelleher is a cross-disciplinary investigator with international impact in proteomics (the study of proteins). Together with colleagues in a research consortium (<https://www.topdownproteomics.org/>), this emerging approach to measure proteins with complete molecular specificity is being advanced to improve the detection and assignment of function to protein modifications and complexes. Now with an H-index of 90, Kelleher has mentored over 52 Ph.D. students, >200 postdoctoral scholars, and >200

undergraduates. After a breakthrough Nature paper in 2011, Kelleher has continued to push the boundaries of proteomics, most recently culminating in a publication in Science (2022, 375: 411-418). Perspectives published by Kelleher and a consortium of like-minded researchers over the last decade articulating the value of proteoforms and a landmark project to map all proteoforms in the human body (Sci. Adv. 2021, 7: eabk0734) typify their thought leadership in a field seeing a new crescendo of interest and activity in the 2020s. This “domestication” of the human proteome via precise compositional mapping will improve the efficiency of basic and clinical research and therefore enhance diverse goals for the 21st Century, including designer organs, personalized medicine, and early detection of human disease.

**Abstract:**

For over twenty years, the Kelleher Group has invented new methods to discover the exact forms of protein molecules in human cells. The world has come to call these “proteoforms” and Kelleher uses so-called “Top-Down” Proteomics to discover, characterize and assign function to them with increasing efficiency. With >350 papers, Dr. Kelleher is a cross-disciplinary investigator with international impact in proteomics (the study of proteins). Together with colleagues in a research consortium (<https://www.topdownproteomics.org/>), this emerging approach to measure proteins with complete molecular specificity is being advanced to improve the detection and assignment of function to protein modifications and complexes. Kelleher has mentored 52 Ph.D. students, >200 postdoctoral scholars, and >200 undergraduates. After a breakthrough Nature paper in 2011, Kelleher has continued to push the boundaries of proteomics and is currently advancing a compositional map of proteins in all cell types of the human body. This “domestication” of the human proteome via precise compositional mapping will improve the efficiency of basic and clinical research and therefore enhance diverse goals for the 21st Century, including designer organs, personalized medicine, and early detection of human disease. A recent article in Science (2022, 375: 411-418) typifies the promise and crescendo of activity in the area of proteomics, advanced consistently by Kelleher over the past 25 years.

For complete details and to make a dinner reservation, please visit our society’s website. Deadline for dinner reservations is Wednesday, January 22, 2025 by noon.

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



## 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.

Editor: Sarah Scrivener, [crucible@pittsburghacs.org](mailto:crucible@pittsburghacs.org)

## 2024 Pittsburgh Section Officers

<b>Chair</b>	Alysia Mandato <a href="mailto:atm75@pitt.edu">atm75@pitt.edu</a>
<b>Chair-Elect</b>	Samuel Leung <a href="mailto:samuel.leung@braskem.com">samuel.leung@braskem.com</a>
<b>Secretary</b>	Ronghong Lin <a href="mailto:dr.ronghong.lin@gmail.com">dr.ronghong.lin@gmail.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>	Heather Juzwa Evonne Baldauff Logan Miller Toby Chapman Ronghong Lin
<b>Councilors</b>	Kim Woznack Rich Danchik Haitao Liu Kristin Nuzzio

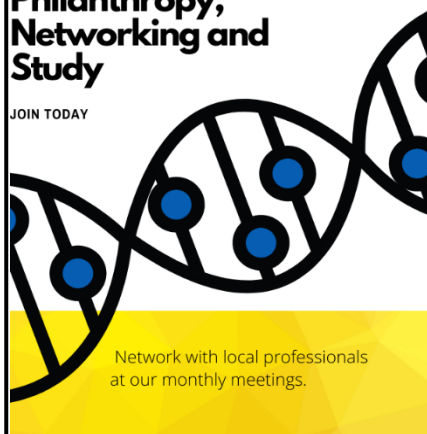
### Spectroscopy Society of Pittsburgh



[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 2024 issue must be to the editor by January 25<sup>th</sup>, 2024.

## ACS Regional Awards – Apply Today!

More information can be found [here](#)



**COVER** molecule  
(mirror-image) cyclodextrin

