

American Chemical Society - Pittsburgh Section Volume CIX, No. 1 August 2022

Contents

CCEW Illustrated Poetry Contest Winners Announced	1-2
Pittsburgh Section Nominated for ChemLuminary Awards	3
Call for Nominations – Pittsburgh and Distinguished Service Awards	4
ACS/SSP/SACP Awards Banquet Recap	5-6
Pittsburgh Section Awards Banquet Recap	7-8
September SSP/SACP Meeting and Tentative Meeting Schedule	9-10
Councilor's Corner – Haitao Liu	11
2022 On the Road Announcement	12
Meeting Registration and Travel Grant Application	13-15
Business Page	16



Pittsburgh Local Section CCEW Poetry Contest Winner Takes National Award (again!)

As part of <u>Chemists Celebrate Earth Week</u> (CCEW) 2022, which took place April 17-23, students from grades K-12 were invited to share their interpretation of this year's theme, "**The Buzz About Bugs: Insect Chemistry**", in the form of illustrated poems.

Each first-place winning entry received a check for \$50, and their winning poem was entered into the national contest. A total of 82 entries from 10 schools were submitted to the Pittsburgh Local Section.

The winners of the Pittsburgh Section contest are:

K-2nd Grade Chase L. (2nd grade), Ingomar Elementary School

3rd-5th Grade Andrew K. (5th grade), North Star Middle School

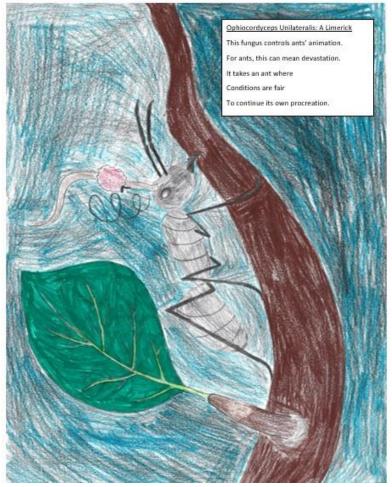
6th-8th Grade Aiden Q. (8th grade), Linton Middle School

9th-12th Grade Thomas P. (12th grade), Homeschool

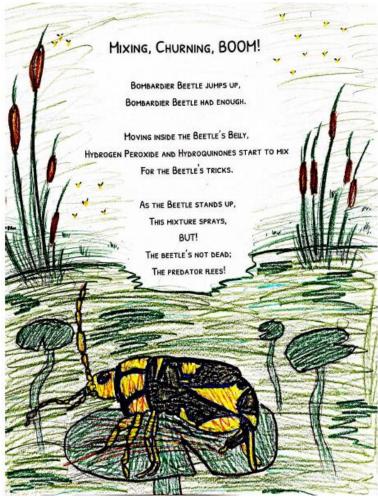
The Pittsburgh Local Section 9-12 winner took **second place in the national competition!**Congratulations, Thomas! See their winning entries below - congrats to all!



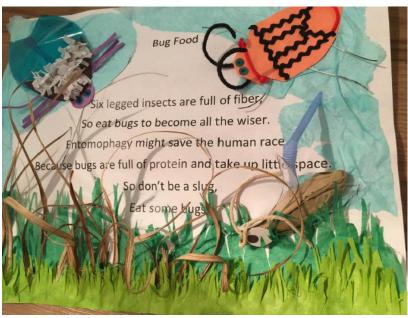
Chase L. 2nd Grade, Ingomar Elementary School



Aiden Q. 8th Grade, Linton Middle School



Andrew K. 5th Grade, North Star Middle School



Thomas P. 12th Grade, Homeschool



Congratulations to the Pittsburgh Local Section of the ACS for being finalists in two categories for the 2022 ChemLuminary Awards! We are finalists in the following two categories:

- Outstanding Ongoing NCW Event
- Outstanding Performance by a Local Section Medium Large Size Category

A huge thank you to all of our Pittsburgh Local Section volunteers who do such great work for the location section! If you are attending the Fall 2022 ACS meeting in Chicago in person or if you are attending virtually, we would love for you to cheer us on when the winners are announced live.

Excerpt from ACS Officer Insights newsletter:

"You are invited to the 24th Annual ChemLuminary Awards ceremony, which will be held at the Hyatt Regency Chicago, Grand Ballroom A-F, Tuesday, August 23 at 8 p.m. CT. The ceremony will include a keynote address by Amber Hinkle, recipient of the 2022 Award for Volunteer Service to the American Chemical Society, and presentations of awards given by 18 committees of the Society. This year's theme, "ACS Volunteers – Sustained Excellence," honors the work of our volunteers to continue to improve all people's lives through the transforming power of chemistry. This event is open to all meeting registrants. www.acs.org/chemluminary."

Last year, the Pittsburgh Local Section won the ChemLuminary award given the by Local Section Activities Committee (LSAC) for Outstanding Performance by a Local Section Award for Local Section in the Medium-Large Category. For more information on ChemLuminary awards see the link to the ACS website above.



Call for Nominations

Pittsburgh Section of the ACS 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.

https://pittsburghacs.org/wp-content/uploads/2022/05/pittsburgh award 2022 EZ.pdf

The 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.

 $\underline{http://www.pittsburghacs.org/wp\text{-}content/uploads/2017/08/Dist\text{-}Service\text{-}Award\text{-}Nom\text{-}Form\text{-}Generic.pdf}$

Nominations for both awards are solicited from the membership of the Pittsburgh Section. Please include your contact information, the nominee's contact information, any supporting letters, and the nominee's CV. More information about the awards, including information on past winners can be found on the ACS website:

https://pittsburghacs.org/awards/

Please send all nominations (or questions about nomination process) to Pittsburgh Section Chair-Elect, Edward P. Zovinka, ezovinka@francis.edu. Nominations are due no later than **Tuesday**, **September 6, 2022**.



Duquesne University Power Center May 25, 2022



On May 25, 2022, the Pittsburgh Section celebrated another great programming year with the Spectroscopy Society of Pittsburgh and the Society for Analytical Chemists of Pittsburgh. Nearly 100 people came to see the following awards presented! Congratulations to all our winners!

Awards to Pittsburgh Section ACS Student Chapters

Each year the <u>Society Committee on Education</u> identifies <u>ACS Student Chapters</u> to receive awards in recognition of their programs and activities. The awards are based on submitted chapter reports.

Successful student chapters can win outstanding, commendable, honorable mention, and/or green chemistry awards. Chapters that do not qualify for these awards may receive a certificate of achievement for meritorious service.

For the 2021-2022 academic year, ACS honored 48 outstanding, 73 commendable, and 88 honorable mention chapters. In addition, 25 student chapters successfully earned a green chemistry award for completing green chemistry activities throughout the year.

Certificate of Achievement

California University of Pennsylvania

Honorable Mention

Indiana University of Pennsylvania Slippery Rock University of Pennsylvania University of Pittsburgh Washington & Jefferson College

Commendable Award

Clarion University of Pennsylvania Seton Hill University University of Pittsburgh at Johnstown

Outstanding Award

Duquesne University St. Francis University Waynesburg University





ACS Pittsburgh Section Nominees to the United States National Chemistry Olympiad

The Pittsburgh Section of the American Chemical Society has sponsored a program to select nominees to the United States Chemistry Olympiad for the last thirty-five years. Each participating high school could nominate two students who then took the Pittsburgh Section's Annual Chemistry Contest exam for second-year students of chemistry. The test results were then used to select students who took the National ACS Olympiad Exam at Carnegie Mellon University on April 30, 2022. From the National Exam, twenty students are invited to a Study Camp in June at the U.S. Air Force Academy in Colorado. The top four students at the study camp travelled to Tianjin, China from July 10-18, 2022 to compete in the International Chemistry Olympiad (IChO).

For 2022, the Pittsburgh Section selected the following nominees for the National Exam. The nominees and their teachers are now being recognized for participating in the National Exam program.

Claire Zheng from North Allegheny Senior High School (Teacher Mr. Daniel Long) Grace Wang from North Allegheny Senior High School (Teacher Mr. Daniel Long) Alex Sun from Upper St. Clair High School (Teacher (Mrs. Laura Marks)



2022 ACS Pittsburgh Section Awards Banquet

On June 16, 2022, the Pittsburgh Section celebrated the 2020 and 2021 Pittsburgh Award recipients, Ms. Leigh-Ann Humbert and Mr. W. Richard Howe, and the 2021 Distinguished Service Award recipient, Dr. Evonne Baldauff.

The recipients were joined by family, friends, and fellow ACS Pittsburgh members at the Grand Concourse for dinner and an awards presentation.

See below for photos of the event, courtesy of Roy Engelbrecht!









SSP/SACP Joint Meeting Wednesday, September 14, 2022 Duquesne University

5:00 PM – Social Hour 6:30 PM - Dinner 7:15 PM - Business Meeting (Approx.) 8:00 PM – Technical Program

SSP Technical Program

"Infrared Chemical Imaging for Biomedical Microscopy"

Rohit Bhargava, University of Illinois at Urbana-Champaign 2022 SSP Pittsburgh Spectroscopy Award Recipient

Biography:



Rohit Bhargava is Founder Professor of Engineering and serves as the Director of the Cancer Center at Illinois of the University of Illinois at Urbana-Champaign. Rohit graduated with a dual-degree B.Tech. (1996) from the Indian Institute of Technology, New Delhi and received a doctoral degree from Case Western Reserve University (2000). After a stint at the National Institutes of Health, he has been at Illinois as Assistant (2005-2011), Associate (2011-2012) and Full (2012-) Professor. Rohit is widely recognized for his research on chemical imaging and advances in theory, instrumentation, and applications in cancer pathology. Current work in

chemical imaging in his laboratory focuses on theoretical modeling that can push the limits of speed and quality of infrared spectroscopic imaging as well as its application in several novel areas. In particular, Rohit's group aims to recognize and subtype cancer by its underlying molecular characteristics, by advanced chemical imaging and application of modern machine learning, ultimately allowing for better treatment of patients. He proposed and has served for more than 10 years to develop the Cancer Center at Illinois - a research center at the convergence of technology, engineering and oncology.

Abstract:

Stains, visible colors and human examination of morphology are used to Inform many research, forensic, materials and clinical decisions. An alternative is emerging in which the intrinsic chemical content of tissue is used to provide contrast in images. This approach utilizes information spectroscopy to record the chemical data and computational methods to visualize information within. This knowledge can be parsed by artificial intelligence (AI) methods - making the approach entirely digital and with extensive contrast in a single imaging measurement. We first describe the current state of the technology and its capabilities. Using AI for knowledge extraction, a very powerful modality emerges in which a single recording of data from unperturbed samples can be related to a variety of pathophysiologic states. This opens new opportunities for insight into disease progression that considers the entire tissue as an integrated system. We show how instrumentation, numerical methods, samples and statistics all play inter-related roles in the quality of information obtained and can be optimized for new imaging capabilities. We present case studies of rapid analysis of samples for cancer pathology, in which practical technologies that can be useful for clinical diagnoses and research are becoming apparent.

For complete details and to make a dinner reservation, please visit our society's website. Deadline for dinner reservations Tuesday, September 6, 2022 by noon.

https://chemistryoutreach.org/meeting/

SSP/SACP 2022–2023 MONTHLY MEETING CALENDAR

Technology Forum – 5:30 pm
Business Meeting – 7:15 pm
Technical Program – 8 p.m.
*Note – Different times for September Meeting

*Note – Different times for September Meeting					
Date	Speaker / Institution / Topic	Host			
Sept 14, 2022	6:45 Business Meeting, 8 p.m. Technical Program				
Sept 14, 2022 SSP Technical Program	Dr. Rohit Bhargava, University of Illinois 2022 Pittsburgh Spectroscopy Award Winner Infrared Chemical Imaging for Biomedical Microscopy	SSP			
SSP Technology Forum	TBD TBD				
October 10, 2022 SACP Technical Program	Dr. Steven A. Soper, University of Kansas 2022 Ralph N. Adams Award Winner TBD	SACP			
SSP Technology Forum Nov 9, 2022	Joseph Sbaffoni, JAS Mine Consulting The Rescue of Nine Miners from Quecreek Mine in Somerset County	SSP			
SSP Technical Program	Astrobotic Technology: Pittsburgh Aerospace Company <i>TBD</i>				
Dec. 2022	No MeetingHappy Holidays!				
SSP Technology Forum	TBD TBD				
Jan. 18, 2023 SSP Technical Program	TBD TBD	SACP			
SSP Technology Forum	TBD TBD				
Feb 15, 2023	Dr. Jeff Anker, Clemson TBD	SSP			
SSP Technical Program					
March 17-21, 2023	OPPORTUNITY OPPORTUNITY OPPORTUNITY OPPORTUNITY CONFERENCE & EXPO Atlanta, GA March 5-9, 2022	Jonell Kerkhoff, President			
April 26, 2023	SSP/SACP Former Chair Night TBD	SACP			
SACP Technical Program					
May 24, 2023	Awards Banquets TBD - Duquesne University	SACP, SSP & ACS			

COUNCILOR'S CORNER – Haitao Liu

This is a new way for the ACS Pittsburgh Section Councilors to introduce themselves to the ACS Pittsburgh Section Membership. This will be a monthly edition for *The Crucible*.

I am Haitao Liu, councilor for the Pittsburgh Section. I have been an ACS member since 2005, when I was still a graduate student at Berkeley. My engagement with the Pittsburgh ACS section started in 2018, as the Secretary Elect. I served as an alternate councilor in 2020 and as a councilor since 2021.

I received my B.S. degrees in Chemistry and Computer Science from the University of Science and Technology of China in 2001 and my Ph.D. from University of California, Berkeley in 2007. From 2007 to 2010, I conducted postdoctoral research at Columbia University. I joined the University of Pittsburgh in 2010 as an Assistant Professor in chemistry and has since been promoted to Associate and then Full Professor. My academic trainings are a combination of physical chemistry and synthetic inorganic chemistry.

At Pitt, I teach physical chemistry and inorganic chemistry at undergraduate and graduate levels. My current research focuses on two areas: (i) DNA nanotechnology, where we use DNA nanostructures to pattern Si and other substrates with molecular scale precision; and (ii) carbon nanomaterials, where we made an unexpected discovery that many well-known properties of carbon (e.g., that they are hydrophobic) are due to surface contamination from airborne contaminants. My research accomplishment was recognized by an Air Force Office of Scientific Research Young Investigator Award (2013), a Chancellor's Distinguished Research Award (2017), and an Early-Career Award in Experimental Physical Chemistry (ACS, 2019).

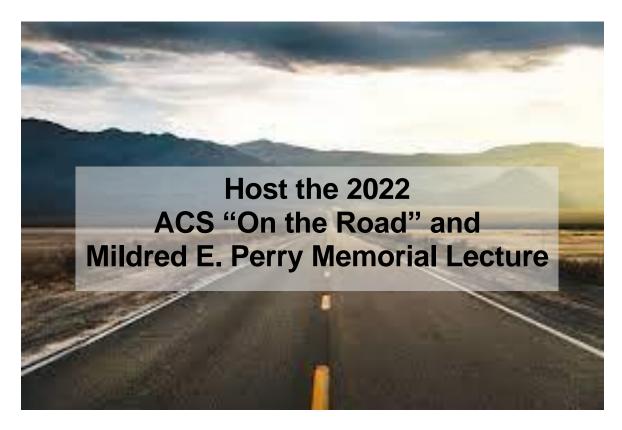
Beyond teaching and research, I serve as the director of graduate studies, responsible for managing the graduate program in the Chemistry Department. I'm also a member of the council of representatives of the Pitt Faculty Union and its Bargaining Committee. I have served as a reviewer for many ACS journals as well as the ACS Petroleum Research Fund. I have organized **9** symposia for ACS and other professional societies.

I have been married to Dr. Lan Deng, Ph.D. in Chemistry since 2002; we are busy parents of two boys, both in middle school. I spend my spare time on programming microcontrollers, gardening, travelling, and target shooting.

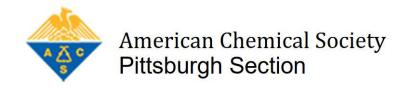
I look forward to continuing my service to the Pittsburgh Section and the National ACS.

Sincerely submitted, Haitao Liu





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. The event was virtual, and we encourage virtual events during these uncertain times. If your institution is located in the Pittsburgh Local Section and you would like to host the 2022 ACS "On the Road" event, please contact ACS Chair, Kim Woznack (woznack@calu.edu).



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 (<u>hljuzwa@shimadzu.com</u> or <u>heather sapko@hotmail.com</u>) 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

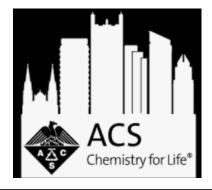


Application Deadline	Travel Completion Date		
December 1	June 30 (subsequent year)		
June 1	December 31 (same year)		

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 <u>hljuzwa@shimadzu.com</u> 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 https://hitzburgh.nih.gov/hit



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

2022 Pittsburgh Section Officers

Chair Kim Woznack

woznack@calu.edu

Chair-Elect Ed Zovinka

zovinka@pittcon.org

Secretary Alysia Mandato

atm75@pitt.edu

Treasurer Matt Price

price@calu.edu

Treasurer- Matt Price

Elect <u>price@calu.edu</u>

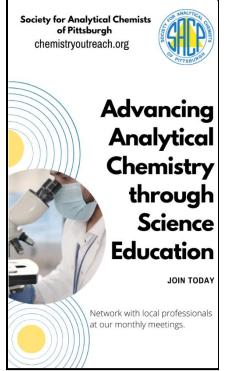
Directors Michael Mautino

Toby Chapman Dave Waldeck Heather Juzwa Evonne Baldauff Logan Miller

Councilors Kim Woznack

Rich Danchik Haitao Liu Kristin Nuzzio





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 25th of the month prior to publication. For example, all items for the September 2022 issue must be to the editor by August 25th, 2022.

ACS Regional Awards – Apply Today!

More information can be found here