



Pittsburgh Section of the American Chemical Society
Volume CX, No. 7
February 2024

Contents

Get to know: Heather Juzwa	1-2
Last Call for Symposium Ideas: CERM Technical Sessions	3
Environmental Lectures: Microplastic Pollution, not just an issue for marine organisms	4
Global Women's Breakfast	5
CERM 2024: Call for Award Nominations	6
Pittsburgh and Distinguished Service Awards: Call for Nominations	7
Obituaries: David M. Hercules and Robert "Bob" Witkowski	8-10
March SACP/SSP Monthly Meeting	11-12
Business Page	13



Get to Know A Member – Heather Juzwa



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

Senior Field Sales Engineer, Shimadzu Scientific Instruments, Inc.
ACS Pittsburgh Section Director

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

24 years

3. What is the biggest benefit of ACS Membership?

The ACS has been a huge blessing to my life. I've met remarkable people, made cherished friends, and gotten to hone skillsets I don't normally get to use in my career.

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

I was convinced I'd be a teacher. I used to make lesson plans for the summer and make my little sister go to "basement school" every day. Poor girl!

5. What made you fall in love with Chemistry?

My 10th grade Chemistry Teacher, Mrs. Roscoe, made me fall in love with chemistry. She made Chemistry exciting, and when she did her stoichiometry lesson, magic happened for me!

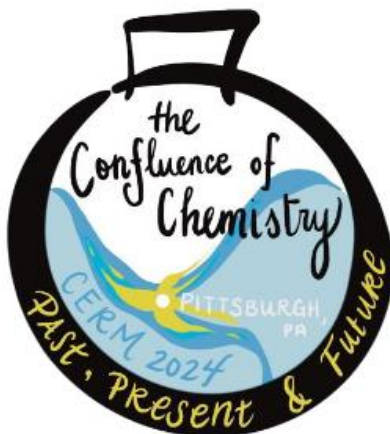
6. How did you get into your current position?

As a Senior at Pitt, I was a student aide working in the Employment Bureau at Pittcon. At that time, everything was paper, and all the HR representatives were telling me to be in sales as I shuffled resumes and scheduling cards around the bureau. I was adamantly against this because sales reps annoy me. But here I am, almost 25 years later, still a sales rep. The difference with me is that I don't feel like a sales rep at all. I feel like a problem solver, a customer advocate, and a vessel to promote science anywhere I can!

Do you want to be our featured member? Please email hjuzwa@shimadzu.com to get onto the schedule!

7. What is your favorite book and why?

I love Simon Sinek's Start with Why (How Great Leaders Inspire Everyone to Take Action). I love being inspired by people and studying what inspires others to achieve.



ACS Central Regional Meeting

Last Call for Symposium Ideas

The Pittsburgh ACS local section will be hosting the Central Regional Meeting (CERM) in the fall of 2024. The dates have been finalized (Nov 6th - 9th) and this is our last call for technical sessions. Please include a name for the session and possible symposium organizers and send an email to Kevin Noonan (noonan@andrew.cmu.edu).

For those who have already submitted symposia ideas, thank you! We will be reaching out to you to confirm your session and whether your session is invited speakers only or open to contributed talks through abstract submission.

Thanks in advance and we look forward to seeing your sessions.

Kim Woznack and Kevin Noonan, CERM 2024 Program Co-Chairs

Microplastic Pollution, Not Just an Issue for Marine Organisms

February 7, 2024, 12:00-1:00pm (EST)



Rob Hale, Ph.D.
Professor
Ecosystem Health Section,
Virginia Institute of Marine Science
William & Mary

Abstract: Over the last 70 years plastics have become integral to modern society. Their manufacture and loss to the environment are increasing. Plastic composition and properties vary widely. Hence treatment as a homogeneous class of pollutants is problematic. Microplastics are defined as particles <5 mm; those <1 um as nanoplastics. Both derive mostly from degradation products of larger plastics. Their fate is affected by their chemical composition and surrounding environment. While microplastics in the oceans have received much attention, it is increasingly recognized that other environments are contaminated to varying degrees. Indeed, most plastic debris originates in the terrestrial “built” environment and can then be transported to other systems. The characteristics of plastic debris (e.g., shape, size, chemical composition (polymer and additive content) can be modified over time and space. These influence their fate and toxicological consequences. Analytical methods to detect microplastics are evolving but presently are inadequate. Therefore, most concentration estimates in environmental samples are incorrect. Human health impacts may be driven not just what we consume via water and food, but also by our personal environment (e.g., we spend >90% of our lives indoors). Microplastic (and associated chemical additive) effects may be affected by coincident stressors such as infectious agents.

Bio: Dr. Rob Hale is a Professor at VIMS, W&M. Prior to arriving there in 1987, he served for 3 years as a Research Env. Chemist at the Mobil Corporate Environ. Health Sciences Lab (Princeton, NJ). He received a PhD from W&M (1983) and a BS in Biology and BA in Chemistry from Wayne State U. (1979). His research interests include the sources, fate and effects of organic pollutants and microplastics in diverse environments (including marine, freshwater, terrestrial and built systems). He has published approximately 110 articles and book chapters. These have received about 11,000 citations. He was recognized with a W&M Plumeri Award for Faculty Excellence (2019), W. Taylor Reveley Interdisciplinary Faculty Fellowship (2019-2021), and Exceptional Reviewer Awards from J. Environ.Toxicol. Chem. (2013) and Environ. Sci. Technol. (2009). He lives near Williamsburg, VA with his wife Karen, 10 horses, 10 llamas, 3 dogs, 2 cats and 2 rescued green Macaw parrots..

[Click here to register](#)

Or scan to
register



Any questions, contact dr.Ronghong.lin@gmail.com

2024 IUPAC Global Women's Breakfast

"Catalyzing Diversity in Science"



February 24, 2024
11 am-1 pm

Seton Hill University, Boyle 167A
1 Seton Hill Dr
Greensburg, PA 15601

Organizer: ACS Pittsburgh Women Chemists Committee



Dr. Susan Yochum
Provost, Professor of Chemistry
Seton Hill University

Speakers



Faith Hays
Southeast Regional Manager
Shimadzu Scientific Instruments

Breakfast Provided!

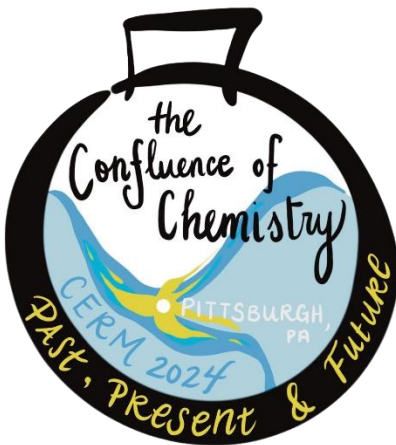
Register by Friday, February 16
Registration Fee \$5 (refundable upon attendance)

<https://pittsburghacs.org/event/wcc-2024-global-womens-breakfast/>



ACS Local Section
Pittsburgh





2024 ACS Central Regional Meeting Call for Award Nominations

Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences

The purpose of this award is to recognize individuals and/or institutions who have advanced diversity in the chemical sciences and significantly stimulated or fostered activities that promote inclusiveness within the region.

E. Ann Nalley CERM Region Award for Volunteer Service to the American Chemical Society

The purpose of this award is to recognize the volunteer efforts of individuals who have served the American Chemical Society, contributing significantly to the goals and objectives of the Society through their Regional Activities.

DivCHED High School Teaching Award

The purpose of this award is to recognize, encourage, and stimulate outstanding teachers of high school chemistry in the Central Region.

All applications are due by August 1, 2024. More information about each award, including application instructions, can be found at acscerm2024.org.

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.

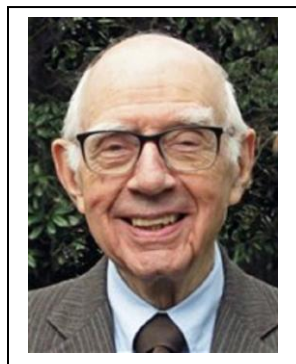
Distinguished Service Award

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, Samuel Leung, sleung@berkeley.edu.

David M. Hercules



It is with heavy heart that I share the sad news of the passing of David M. Hercules, Centennial Professor Emeritus at Vanderbilt University, on Saturday, January 20 at the age of 91. Dave was a long time member of the SACP, SSP, Pittsburgh Section ACS, and the Pittcon Organizing Committee. This past year, he volunteered to serve on the SACP Waters Symposium Committee and he was co-organizing, with Steve Weber, the 2024 Waters Symposium to be presented at Pittcon 2024, on a topic that he first suggested to the Committee for approval.

Dave was born in 1932 in Somerset, PA and did his undergraduate studies in Chemistry at Juniata College (B.S. 1954), followed by his Ph.D. in Analytical Chemistry at MIT under the direction of Professor Lockhart “Buck” Rodgers (Ph.D. 1957). Following completion of his graduate degree, he worked as a Professor at: Juniata College, MIT, Lehigh University, University of Georgia, University of Pittsburgh, and Vanderbilt University. He served as the Chairman of the Pitt Chemistry Department from 1980-1989 and his enormous influence on the Department and Faculty is still felt to this day. Dave mentored more than 130 graduate students and post-docs during his academic career. At the time of his death, he was still advising and mentoring undergraduate and graduate students at Vanderbilt University.

Dave’s impact and the significance of his work on the fields of analytical chemistry, applied spectroscopy, and applied surface science are immeasurable, particularly in the areas of electron spectroscopy and mass spectrometry. He had more than 500 publications with almost 17,000 citations and several patents. His many prestigious awards include, among others: the 1981 Lester W. Strock Medal from the SAS, the 1986 ACS Award in Analytical Chemistry, the 1989 Eastern Analytical Symposium Award, the 1993 ACS Adamson Award in Surface Chemistry, the 1996 Pittsburgh Spectroscopy Award from the SSP, and the 1997 Pittsburgh Award from the Pittsburgh Section ACS. He once told me that the Award that meant the most to him was the SSP Pittsburgh Spectroscopy Award because it came from the people who knew him best.

The Pittsburgh and Nashville scientific communities have lost a great and irreplaceable scientist, advisor, mentor, teacher, and friend. An official obituary and details on any planned Memorial Service will be shared when available. Godspeed, Dave!

Brian Strohmeier
Pittcon 2027 President-Elect Designate

Robert "Bob" Witkowski



Dr. Robert "Bob" Witkowski, a cherished father, grandfather, brother, uncle, and pioneering scientist, passed away suddenly on January 28, 2024, in West Mifflin, at the age of 83. Born in Glassport on January 9, 1941, to the late Edward and Helen (Orzcowski) Witkowski, Bob's inquisitive mind and boundless enthusiasm for learning shaped a life rich with accomplishment and service. Bob's academic journey was a testament to his dedication to science.

He earned his Bachelor of Science in Chemistry in 1962, followed by a Master's in Chemistry in 1973, and ultimately a Ph.D. in Planetary Science in 1988, all from the University of Pittsburgh. His career began at the Mellon Institute's Micro Analytical Laboratory under the guidance of Dr. William G. Fately and Dr. Foil Miller. He subsequently joined Westinghouse Electric Corporation in their Liquid Metals Laboratory. Later in his career at Westinghouse, he was instrumental in establishing the Microwave Plasma Enhanced Chemical Vapor Deposition Facility. His innovative work on creating diamond-thin films for commercial applications positioned him as a leader in his field. Bob retired from Westinghouse in 1995, leaving behind a legacy of ingenuity and excellence.

Bob's professional contributions were widely recognized. In 1972, he served as President of the Spectroscopy Society of Pittsburgh (SSP). His collaborative efforts with Dr. Chris Bagnall earned them the Best Technical Paper at the International Metallographic Society annual meeting in 1977 and the prestigious Pierre Jacquet Gold Medal for Excellence in Metallography in 1978. His adventurous spirit led him to Antarctica in 1984, where he collected air samples at the South Pole Station for his Planetary Science Research Project. Bob also held positions of leadership, such as Chairman of the American Chemical Society (ACS) Pittsburgh Section in 1985, and received numerous accolades, including a distinguished service award from ACS in 2007 and a 50-year recognition of service in 2010. In 2013 he received 50 Year of service SSP award. In 1996 he was elected to the University of Pittsburgh's Sigma Xi Chapter. He contributed significantly to Pittsburgh's scientific community.

Beyond his professional achievements, Bob was a beacon of knowledge and support in his community. He was actively involved in teaching high school science teachers through the SSP Focus in Spectroscopy Workshops and contributed his time and expertise to numerous Pittsburgh Conference meetings. An advocate for education and exploration, he was a licensed geologist in Pennsylvania and a passionate member of the Monongahela Rockhounds.

Bob's personal interests were as diverse as his professional ones. A devoted father, he supported Boy Scouts of America Troop #31 and cherished time spent with his family at the beach. His hobbies included attending mineral shows, collecting stamps, rocks and

minerals, knives, Roman coins, antique radio equipment, microscopes, and Bunsen Burners. His zest for life and curiosity were infectious, leaving a lasting impression on everyone he met.

He is survived by his loving sons, Mark (Lorraine) Witkowski and Gregory Witkowski; his adored grandchildren, Abigail, Colin, Patrick, Tara Jean, and Ella Marie; and his sister, Dorothy (the late Dean) Patterson. He also leaves behind his niece, Darlene Patterson. Bob was preceded in death by his beloved wife of 44 years, Anna (Novakowski) Witkowski; his nephew, Darrin Patterson; his niece, Dalene Patterson; and his parents, Edward and Helen (Orzcowski) Witkowski.

In the words of Galileo, "All truths are easy to understand once they are discovered; the point is to discover them. I do not feel obligated to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forgo their use. ..." Bob indeed saw further, and his legacy will continue to inspire those who stand on the foundation of his life's work. He will be dearly missed by all who knew and loved him.

Family and friends are welcome on Thursday, February 1, 2024 from 12 to 2 pm and 4 to 6 pm at the JEFFERSON MEMORIAL FUNERAL HOME, INC., 301 Curry Hollow Road, Pittsburgh.

A Blessing Service will be held in the funeral home's chapel at 6 pm.

**SACP/SSP Joint Meeting
Monday, March 11, 2024
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

“Sifting Through Thousands of “Forever Chemicals” Using Ion Mobility-High Resolution Mass Spectrometry and Total Organofluorine Techniques”

**Dr. Carrie McDonough, Assistant Professor
Department of Chemistry, Carnegie Mellon University**



Biography:

Carrie McDonough is an Assistant Professor in the Department of Chemistry at Carnegie Mellon University. She received her B. Sc. from the Massachusetts Institute of Technology and her Ph.D. from the University of Rhode Island Graduate School of Oceanography. Her research resides at the intersection of environmental analytical chemistry, environmental health engineering, and chemical biology. She is interested in understanding how organic contaminants impact aquatic ecosystems and human health, with an emphasis on chronic

exposures to complex environmentally-relevant mixtures. She is currently working on several projects focused on the toxicokinetics of PFAS mixtures and comprehensive high-resolution mass spectrometry approaches to PFAS biomonitoring.

Abstract:

Humans and all other living things are continuously exposed to mixtures of per/polyfluoroalkyl substances (PFASs) via drinking water, diet, indoor dust, and commercial products (e.g., textiles, food wrappers, and cosmetics). Over time, these exposures have led to widespread accumulation of PFASs in human serum, and in the tissues and fluids of virtually every other animal investigated. Biomonitoring efforts have successfully established the global occurrence of perfluoroalkyl acids (PFAAs) and several other PFASs in human blood. However, despite considerable efforts to expand analyte lists to encompass more of the thousands of known PFASs, studies continue to report a significant gap between total organofluorine and total quantifiable PFASs in human blood. Identifying the PFASs contributing to this unidentified organofluorine (UOF) gap is essential to understand predominant exposure pathways, and will enable a more complete understanding of total body burden and associated health impacts. Here I will discuss progress toward characterizing PFAS mixtures in biological samples, including high-resolution mass spectrometry (HRMS) efforts and bioanalytical approaches for the identification and prioritization of novel PFASs.

For complete details and to make a dinner reservation, please visit our society's website. Deadline for dinner reservations is Monday, March 4, 2024 by noon.

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



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

2024 Pittsburgh Section Officers

Chair	Alysia Mandato atm75@pitt.edu
Chair-Elect	Samuel Leung samuel.leung@braskem.com
Secretary	Ronghong Lin dr.ronghong.lin@gmail.com
Treasurer	Matt Price price@pennwest.edu
Treasurer-Elect	Niharika Botcha nbotcha@andrew.cmu.edu
Directors	Heather Juzwa Evonne Baldauff Logan Miller Toby Chapman Ronghong Lin
Councilors	Kim Woznack Rich Danchik Haitao Liu Kristin Nuzzio

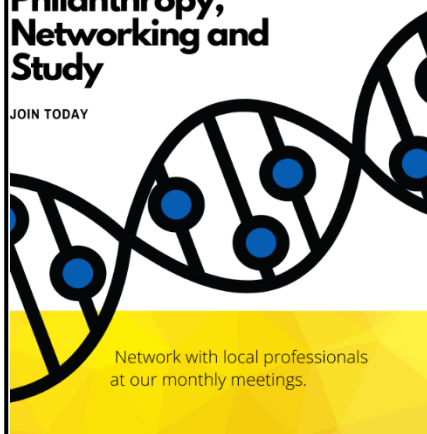
Spectroscopy Society of Pittsburgh



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 25th of the month prior to publication. For example, all items for the February 2024 issue must be to the editor by January 25th, 2024.

ACS Regional Awards – Apply Today!

More information can be found [here](#)