



The Crucible www.pittsburghacs.org

Volume: CIII No. 8 April 2018

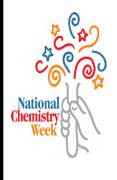
Pittsburgh ACS "ON THE ROAD" MILDRED PERRY MEMORIAL LECTURE on February 12 was a Huge Success

Thank you to California University of Pennsylvania for hosting nearly 50 people at the "On the Road" Lecture on February 12.

This was the second trip to Pittsburgh for speaker Amanda C. Bryant-Friedrich in just a couple of years. We celebrated with her at CERM 2014, where she won the esteemed Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences!



On February 12, Amanda gave a great presentation entitled: "The Elucidation of the Internal Exposome." A reception followed her talk.



National Chemistry Week 2018 will be celebrated the week of October 21-27, 2018 with the theme, "Chemistry is Out of This World" and will focus on chemistry of and in outer space. Here in Pittsburgh we will celebrate our 20th anniversary of NCW celebrations at the Carnegie Science Center on Friday and Saturday, October 26-27. Look for more details in the fall issues of The Crucible.

Contents ...

Pittsburgh ACS "ON THE ROAD:	1
MILDRED PERRY MEMORIAL	
LECTURE was a Huge Success	
2018 Chemists Celebrate Earth	2
Day Illustrated Poem Contest	
WCC Call for Nominations	3
2018 Tripartite Symposium	4
2018 Tripartite Symposium ACS	6
Student Affiliate Event	
SACP and SSP Continuing	7
Education Symposium	
ACS Energy Technology Group with	8
the Pittsburgh AIChE April Meeting	
Spectroscopy Society of Pittsburgh	9
April Meeting	
Pittsburgh ACS Travel Grant	11
Travel Grant Application	12
Calendar	15





2018 Chemists Celebrate Earth Week (CCEW) Illustrated Poem Contest **Dive into Marine Chemistry**

The Pittsburgh Section of the American Chemical Society (ACS) is sponsoring an illustrated poem contest for students in Kindergarten - 12th grade. Contest is open only to students who live in the following Pennsylvania, West Virginia, and Ohio counties:

Ohio: Jefferson; Pennsylvania: Allegheny, Armstrong, Beaver, Butler, Cambria, Clarion, Fayette, Greene, Indiana, Jefferson, Somerset, Venango, Washington, & Westmorland; West Virginia: Brooke, Hancock, & Ohio

Contest Deadline: Entries must be received at the address below by Thursday, May 3, 2018.

Prizes: \$50 1st Place in each of 4 grade categories: K-2nd, 3rd-5th, 6th-8th and 9th-12th.

Winners of the Pittsburgh Section ACS illustrated poem contest will advance to the ACS National Illustrated Poem Contest for a chance to be featured on the ACS website and to win prizes!

Mail entries to: Michael Mautino, 3485 Frye Ave, Finleyville, PA 15332. Questions? Contact us at CCEW@pittsburghacs.org

Write and illustrate a poem using the CCEW theme, "Dive into Marine 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 marine chemistry include:

Alginate Coral Bioluminescence Brine Salinity Seaweed Thermal Vents Oil Spill

Entries will be judged based upon:

Artistic Merit - use of color, quality of drawing, design & 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:

- Poems must conform to a particular style. No poem may be longer than 40 words.
- The topic of the poem and the illustration must be related to the yearly CCEW theme.
- All entries must be original works without aid from others.
- Each poem must be submitted and illustrated on an unlined sheet of paper (of any type) not larger than 11" x 14". The illustration must be created by hand using crayons, watercolors, other types of paint, colored pencils, or markers. The text of the poem should be easy to read and may be printed with a computer before the hand-drawn 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.
- Only one enter per student will be accepted.
- All entries must include an entry form placed on back of poem and is to include: student name, grade, school name, teacher's name, phone number, and e-mail address. For home school students please use parent/guardian information in place of teacher.
- All illustrated poems and/or digital representations of the poems become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners' names, likenesses, and entries for editorial, advertising, and publicity purposes.

The Greater Pittsburgh Area Women Chemists Committee is pleased to announce two awards to recognize distinguished service in the field of chemistry.





Award for Encouraging Women into the Chemical Sciences

This award recognizes significant accomplishments by individuals, male or female, who have stimulated or fostered the interest of women in chemistry, promoting their professional developments as chemists or chemical engineers. Nominees for the award may come from any professional setting in the greater Pittsburgh area: academia, industry, government, clinical, or other independent facility. Nominees need not be a member of the WCC or the ACS.

Award for Excellence in the Chemical Sciences

This award recognizes the achievements of female chemists and chemical engineers in the greater Pittsburgh area who have a record of accomplishment in their field. Nominees for the award may come from any professional setting in the greater Pittsburgh area: academia, industry, government, clinical, or other independent facility. Nominees need not be a member of the WCC or the ACS.



Call for Nominations Deadline: April 6th

Nomination packets should include a minimum of two supporting letters, an up-todate copy of the nominee's CV/resume, your full contact information, and contact information for the nominee.

Please submit your packet (hard copy or electronic pdf) to: Dr. Michelle Ward at Room 107 / 219 Parkman Ave. / Pgh PA 15260 or michelle.ward@pitt.edu

Our mission is to be leaders to be leaders in attracting, developing, and promoting women in the chemical sciences.

2018 Tripartite Symposium







Molecular Gastronomy – Science You Can Eat and Drink!

Featuring an Iron (Fe) Chef competition among ACS Groups

Saturday, April 7th, 2018 8:30 a.m. – 2:00 p.m.

OPEN TO THE PUBLIC

(registration required, see below)

Carlow University - A.J. Palumbo Hall of Science and Technology

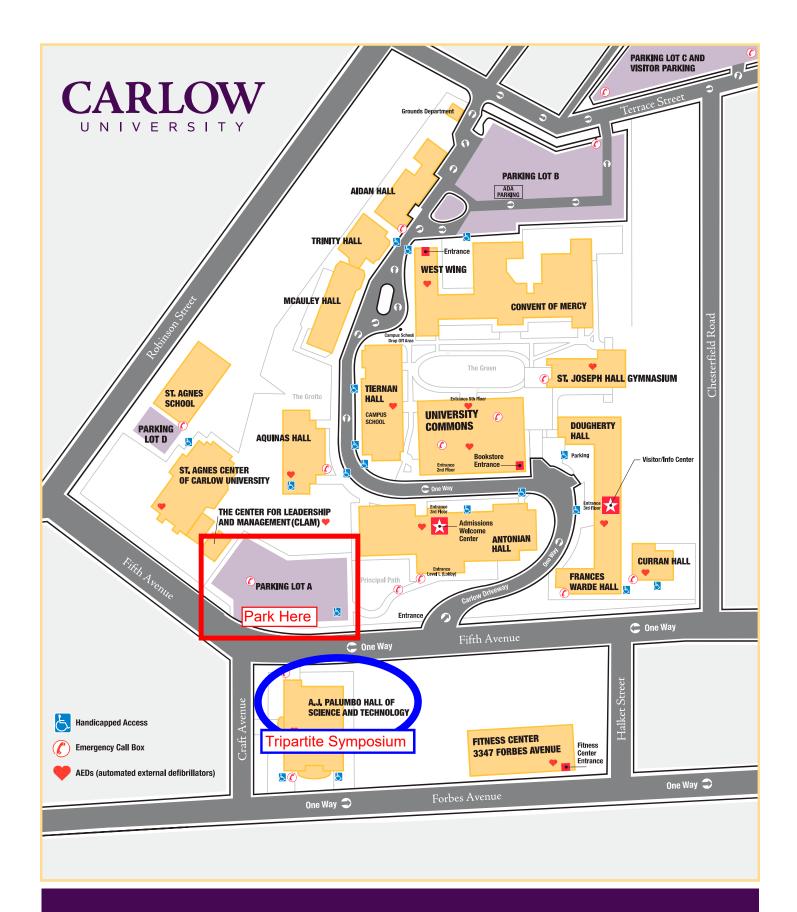
3333 Fifth Avenue, Pittsburgh, PA, 15213 (between Fifth and Forbes Aveues on corner of Craft Ave – see map on reverse)

8:30 a.m.	Registration w/ Continental Breakfast
9:00 a.m.	Welcome and Opening Remarks & Review of Program
9:05 a.m.	Subha Das, Ph.D. – Associate Professor of Chemistry – Molecular Gastronomy
10:00 a.m.	Kevin Sousa – Executive Chef at Superior Motors
10:45 a.m.	Break Intermission
11:00 a.m.	Wigle Wiskey Presentation
11:30 a.m.	Casey Renee – Pastry Chef at Ace Hotel
12:00 p.m.	Adam Henry – Mixologist at Hidden Harbor
12:30 p.m.	Lunch
1:00 p.m.	Introduction to Fe Chef Competition/ Student ACS Group Presentations to Judges
2:00 p.m.	Awards Ceremony w/ Closing Remarks

Please register by Tuesday, April 3rd, 2018

Registration Fee \$10 – Reception & Parking (lot at 3333 Fifth Ave) – see map on reverse Mail Registration (below) to: Dr. Monique Hockman, Symposium Chair, 2502 Hilltop Road, Presto, PA 15142

2018 Tripartite Symposium - Molecular Gastronomy & Fe Chef Competition				ef Competition	Saturday, April 7 th , 2018		
Name of Person(s) A	ttending:						
Total Atendees:							
Email address to ser	nd registra	ition confi	mation:				
Registration Fee	e (\$10/pers	on) – casł	or check a	ccepted (mal	ke check payable	to ACS Pittsburgh Section)	
Total Amount Enclos	sed:			_			
Affliliation (circle):	ACS	SSP	SACP	Carlow	Student ACS	Other:	



CAMPUS MAP DIRECTORY ON REVERSE

2018 Tripartite Symposium

ACS Student Affiliate Event







Molecular Gastronomy – Science You can Eat and Drink! and Fe Chef ACS Student Affiliate Group Competition

Trade in your lab coat and goggles for an apron and toque and try a new kind of experimentation!

Saturday, April 7, 2018 9:00 a.m. – 2:00 p.m Carlow University, Department of Chemistry

3333 5th Avenue, A.J. Palumbo Hall of Science and Technology

We are looking for ACS-SA chapters to participate in an "Fe Chef" competition competing against one another using the techniques of Molecular Gastronomy!

Competition will be limited to the first FOUR chapters to respond indicating their interest in participating.

ALL CHAPTERS are welcome to attend the symposium to hear:

Dr. Subha Das, Associate Professor of Chemistry, Carnegie Mellon University **Mr. Kevin Sousa**, Executive Chef and Owner, Superior Motors **Distillers** from Wigle Whiskey Distillery And others!

Learn about the science behind food and beverage!

Meet and network with other ACS chapters from local colleges and universities!

Become a member of the ACS Pittsburgh Local Section (professional development)

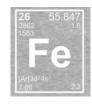
Win prizes and giveaways!

Sample offerings from local restaurants!

To reserve a spot in the Fe Chef Competition portion, please see the instructions on the following page.

May the best Student Chapter Win!











2018 Continuing Education Symposium





Medical Cannabis Symposium

Saturday, April 14, 2018, 8:30 am – 11:30 pm Old Town Buffet

860 Saw Mill Run Blvd. Pittsburgh, PA 15226

- 8:30 Registration and Opening Remarks
- 9:00 Analytical Instruments Utilized in Cannabis Testing
 Bob Clifford, Ph.D. General Manager, Shimadzu Scientific Instruments, Inc.
- 9:45 A Voyage into the Captivating Realm of Cannabis Science and its Regulation Jason Lupoi, Ph.D. Consulting Scientist and Analytical Chemist, RJ Lee Group
- 10:30 Break
- 10:40 A Day in the Life of a Medical Cannabis SampleKelly Greenland, Ph.D. Chief Scientific Officer, Keystone State Testing
- 11:30 Luncheon and Discussion

OPEN TO THE PUBLIC

Please register by Wednesday April 11, 2018

Registration Fee: \$10 - Lunch & Parking Included

Please make check payable to SSP and mail the Registration Form below to: Amy Bovino, SSP Continuing Education 300 Penn Center Blvd Pittsburgh, PA 15235



Medical Cannabis Continuing Education, April 14, 2018

REGISTRATION FORM

Name:	Affiliation:
Mailing Address:	
Empail:	Dhomas
Email:	Phone:

_____ I am attending the luncheon.

AIChE Pittsburgh and ACS Pittsburgh Energy Technology Group present:

Building the First "Steamship" in History

by John Laurence Busch

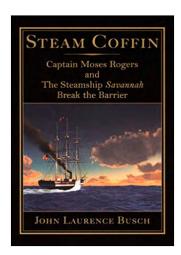
Wednesday, April 18, 2018, Bravo Cucina Italiana Robinson

211 Summit Park Drive, Pittsburgh, Pa. 15275.

Gathering begins at 6 PM, dinner at 6:30 PM and the talk begins at 7:30 PM.

Dinner cost to be determined (see AIChE Pittsburgh web site).

Registration required for the dinner and presentation available through the AIChE Pittsburgh web site: http://www.aichepgh.org/



In 1807, a brilliant, creative, and controversial American by the name of Robert Fulton declared his intent to build an experimental "steamboat," which would be used to initiate a continuous passenger service between New York City and Albany, New York. With the success of his North River Steam Boat, Fulton showed that it was possible to use an artificial power to alter a person's location and the amount of time it took to change it. In so doing, he also broke through the enormous psychological barrier that had existed in people's minds; it was, in fact, possible to overcome Nature to practical effect. It took time for many people to accept Robert Fulton's triumph as the truth. One man who did not need to be convinced was a sloop captain named Moses Rogers. He had witnessed the first successful runs of the North River Steam Boat to Albany, and the experience gave him the fever--steamboat fever. Moses soon became one of the first steamboat captains in history, taking command of one of Fulton's first rivals, the Phoenix. In his new profession, Moses learned not only the technicalities of this revolutionary invention, but the peculiarities of a traveling public just getting used to this new mode of transport. In the years immediately following Fulton's success, running these steamboats on rivers, lakes and bays became a

normal and accepted part of American life. But taking such a vessel on a voyage across the ocean was a different proposition altogether. Experienced mariners didn't think it could be done. These early steamboats, they declared, were just too flimsy and unwieldy to withstand the dangers of the deep. But Moses believed otherwise. Combining his knowledge of the old mode of transport (sail) with the new mode of transport (steam), he set out to design a vessel that was capable of overcoming the many dangers of the sea. This craft would be not a steamboat, but a "steamship," the first of its kind. She was named Savannah. This Chemical Engineers Presentation will show how Captain Rogers designed and built this revolutionary vessel -- from a chemical engineer's perspective -- nearly two centuries ago!

John Laurence Busch is an independent historian who focuses upon the interaction between humanity and technology, specializing in the first generation of steam-powered vessels. He has devoted years of research to discovering the true story of Captain Moses Rogers and the steamship Savannah. The result is STEAM COFFIN, described by numerous book reviewers as the definitive account of what truly is America's sea saga.

STEAM COFFIN has received positive book reviews from more than two dozen periodicals in the United States, Canada, the United Kingdom and Australia.

John has made over 300 presentations on Captain Rogers and the Savannah to a wide variety of audiences, stretching from Maine to Puerto Rico to California, and across the Atlantic Ocean to Europe. For additional background, visit www.steamcoffin.com.



Spectroscopy Society of Pittsburgh April Meeting Wednesday, April 18, 2018



held at Duquesne University

5:30 PM Technology Forum Speaker's Presentation – Power Center Ballroom Section C

5:30 PM Social Hour – Power Center Fides Shepperson Suite 6:45 PM Dinner – Power Center Ballroom Section C

8:00 PM Business Meeting - Power Center Ballroom Section C

8:15 PM Technical Program Speaker's Presentation – Power Center Ballroom Section C

Dinner Reservations:

Please register on-line at http://www.ssp-pgh.org to make dinner reservations NO LATER THAN March 29, 2018 at noon. Dinner will cost \$10 (\$5 for students) and checks must be made payable to the SSP. This month's Main Entrée: Beef Wellington (prepared Medium Well) Vegetarian Entrée: Roasted Vegetable Wellington w/ Roasted Tomato Coulis. If you have any dietary restrictions, please indicate them when you RSVP.

Parking:

The Duquesne University Parking Garage is located on Forbes Avenue. Upon entering the garage, receive parking ticket and drive to upper floors. Pick up a parking chit at the dinner or meeting.

TECHNOLOGY FORUM - 5:30 PM

Dr. Andre Samuel, Director of the Citizen Science Lab

"Teaching for the Future"



Andre Samuel grew up in Washington, DC, and graduated from the University of the District of Columbia with a degree in Biology. Following graduate study at the George Washington University in Genomics and Bioinformatics, he received his PhD in Biology from Duquesne University. At Duquesne, his research focused on studying the structure and function of the cold shock related proteins in *E. coli*. As a Ph.D. candidate, Dr. Samuel founded the S.I.G.M.A Science Mentorship Initiative, a summer study program designed to introduce diverse ninth graders to the University's lab with the long-term goal of encouraging the pursuit of careers in scientific research. Dr. Samuel's research experience includes studying toxicology and carcinogenicity effects of novel drugs, hookworm vaccine development and tuberculosis reactivation in non-human primates. Dr. Samuel has a passion for STEM education and life science research. He believes that creating fun engaging and hands on lab experiences for people is the best pathway to an interest in STEM.

TECHNICAL PROGRAM - 8:15 PM

Dr. Edward Solomon, Stanford University

"Bioinorganic Spectroscopy: Activating Metal Sites for Biological Electron Transfer"



Edward I Solomon, Stanford University, is the 2017 Pittsburgh Spectroscopy Awardee. This award was established in 1957 to honor individuals who have made outstanding contributions toward the development and understanding of spectroscopy.

Edward I Solomon received his Ph.D. at Princeton, and was a postdoctoral fellow at the Ørsted Institute in Denmark and then at Caltech. He was a Professor at the Massachusetts Institute of Technology until 1982, when he joined the faculty at Stanford University, where he is now the Monroe E. Spaght Professor of Chemistry and Professor of Photon Science at SLAC National Accelerator Laboratory. He was inducted as a member the National Academy of Sciences in 2005.

Professor Solomon's research is in the fields of Physical–Inorganic and Bioinorganic Chemistry with emphasis on the application of a wide range of spectroscopic methods combined with QM calculations to elucidate the electronic structure of transition metal sites and its contribution to physical properties and reactivity.

Metal ions play critical roles in biological function and malfunction. The focus of this half day symposium is on the application of transition metal ion centered methods in defining structure/function correlations over metal sites in biology. Emphasis is both on a wide range of spectroscopies and on new structural methods that determine the geometric and electronic structures of metalloenzyme active sites, their reactivities in function and their dynamics in regulation. The techniques presented include spectroscopies extending over ten orders of magnitude in photon energy, single molecular microscopy and ultrafast x-ray crystallography.



Section's Website: www.pittsburghacs.org

Facebook Page: Pittsburgh Section of the American Chemical Society

Linked In:Pittsburgh Section of the American Chemical Society

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 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.

The Travel Award Application can be found on pages 9-10 in this issue.

Job Opportunity

The Asher Group at the University of Pittsburgh is seeking a scientist, engineer, postdoctoral researcher to work in the areas of UV resonance Raman spectroscopy instrumentation development and explosives detection. Areas of interest include analytical and physical chemistry and chemometrics with experience in areas such as Raman spectroscopy, photonic crystal materials, and laser instrumentation development, etc. We are developing standoff Raman detection instrumentation and methodologies and pioneering methods for hyperspectral imaging in the deep UV. Expect to have exciting scientific adventures, within an interdisciplinary research environment.

Please respond with a CV and three letters of reference to:

Professor Sanford A. Asher Department of Chemistry University of Pittsburgh 219 Parkman Avenue Pittsburgh, PA 15260

Email: asher@pitt.edu

12



Application Deadline	Travel Completion Date
December 1 st	June 30 th (subsequent year)
June 1 st	December 31 st (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@s	<u>himadzu.com</u> to receiv	e it by ema	il.
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	d:		

Purpose of grant:
Other funding sources (if any):
D
Personal Statement of anticipated benefits of meeting attendance
Has the applicant received a travel grant from the ACS Pittsburgh Section in the past? Yes N
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:
Date:
Sand completed hard conventions and supporting decumentation to
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.

Business Directory

Services

Services

Services

PITTSBURGH SECTION OFFICERS

Chair

Kristi Kauffman 4325 Rosanna Drive Allison Park, PA 15101 412-492-5412 kristi.kauffman@ppg.com

Chair-Elect

Brad Davis 814-931-1290 bdavis@waynesburg.edu

Secretary

Matt Baker
5626 Beacon Street
Pittsburgh, PA 15217
mbaker1@andrew.cmu.edu

Treasurer

Amy Rupert 350 Sunset Rd. Pittsburgh, PA 15237 treasurer@pittsburghacs.org

Volunteers Needed!

There are a number of volunteer opportunities in the Pittsburgh ACS section! If you are interested in volunteering, please contact Heather Juzwa at hljuzwa@shimadzu.com!

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 May 2018 issue must be to the editor by April 15, 2018.

The Crucible

The Crucible is published monthly, August through May. Circulation, 2,500 copies per month. Subscription price, six dollars per year. 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: Traci Johnsen 124 Moffett Run Rd. Aliquippa, PA 15001 Phone: 724-378-9334 tracijohnsen@comcast.net

Society for Analytical Chemists of Pittsburgh Calling New Members

Dues Only \$20.00, Call the SACP Administrative Assistant at 412-825-3220 Ext. 212 **Right Now!**

Spectroscopy Society of Pittsburgh

- Professional Networking within the Spectroscopy Community
- Monthly Symposia by Prominent Researchers
- Promoting Science Education

To Join Call Amy: 412-825-3220 ext 212

Get Connected!

Stay up-to-date on all the happenings of the Pittsburgh Section ACS

Section's Website:

www.pittsburghacs.org

Facebook Page:

Pittsburgh Section of the American Chemical Society

Linked In:

Pittsburgh Section of the American Chemical Society



A newsletter of the Pittsburgh Section of the American Chemical Society

124 Moffett Run Rd. Aliquippa, PA 15001

Change of Address

If you move, notify the American Chemical Society, 1155 Sixteenth Street, N.W., Washington, D.C. 20036.

To avoid interruption in delivery of your CRUCIBLE, please send your new address to Traci Johnsen, 124 Moffett Run Rd., Aliquippa, PA 15001. Allow two months for the change to become effective.

Pittsburgh Area Calendar

Saturday, April 7

2018 Tripartite Symposium

"Molecular Gastronomy - Science You Can Eat and Drink"

Carlow University, A.J. Palumbo Hall of Science and Technology, 3333 Fifth Ave., Pittsburgh, PA

Saturday, April 7

2018 Tripartite Symposium ACS Student Affiliate Event

Carlow University, A.J. Palumbo Hall of Science and Technology, 3333 Fifth Ave., Pittsburgh, PA

Saturday, April 14

The Society for Analytical Chemists of Pittsburgh and The Spectroscopy Society of Pittsburgh Continuing Education Symposium

"Medical Cannibus Symposium"

Old Town Buffet, 860 Saw Mill Run Blvd, Pittsburgh, PA

Wednesday, April 18

The ACS Pittsburgh Energy Technology Group with the AIChE Pittsburgh

"Building the First 'Steamship' in History"

John Laurence Busch

Bravo Cucina Italiana Robinson, 211 Summit Park Dr., Pittsburgh, PA

Wednesday, April 18

The Spectroscopy Society of Pittsburgh

Technology Forum

"Teaching for the Future"

Dr. Andre Samuel, Director of the Citizen Science Lab

Technical Program

"Bioinorganic Spectroscopy: Activating Metal Sites for Biological Electron Transfer"

Dr. Edward Solomon, Stanford University

Duquesne University, Pittsburgh, PA