



The Crucible

Volume CV, No. 2

October 2019



NATIONAL CHEMISTRY WEEK IS COMING!

Join the Pittsburgh Section of the American Chemical Society as we celebrate 21 years of NCW/ChemFest at the Carnegie Science Center!

Where: Carnegie Science Center

When: Friday, October 25th (9 AM to 3 PM)
Saturday, October 26th (10 AM to 4 PM)

Over 25 tables of hands-on experiments, activities, demonstrations, and special programming to accompany the theme "Marvelous Metals"

The ACS Pittsburgh Section can use your help to make this year's NCW celebration a success!

Do you have an organization that would like to conduct a hands-on activity at the event?

Are you interested as an individual in volunteering to help during the event?

If you, or your organization, are interested in participating please contact Evonne Baldauff at ebaldauf@waynesburg.edu or 724-852-7617.

For more information about the NCW celebration in Pittsburgh, visit the Pittsburgh Local Section's website at

http://www.pittsburghacs.org/outreach/national-chemistry-week/

or look us up on Facebook at Pittsburgh ACS NCW.

You can also find additional information about NCW on the ACS National's website at https://www.acs.org/content/acs/en/education/outreach/ncw.html

The Pittsburgh Section's 2019 NCW activities are sponsored in part by The Society for Analytical Chemists of Pittsburgh, The Spectroscopy Society of Pittsburgh, PPG Science Education Council, and the PPG Foundation.

Contents...

National Chemistry Week is	<u>1</u>
Coming!	
NCW Participant Event	<u>2</u>
Information	
NCW Illustrated Poem Contest	<u>3</u>
Women Chemists Committee	<u>4</u>
Breast Cancer Awareness	
Fundraiser	
Councilors' Report	<u>5</u>
Two Pittsburgh Section	<u>7</u>
Members Win Awards in	
San Diego	
SACP & SSP October Meeting	<u>8</u>
Travel Award Recipient Karoline	<u>10</u>
Eckhart ACS National Meeting	
Report	
Pittsburgh Section ACS Travel	<u>11</u>
Award Information	
Pittsburgh Section ACS	<u>12</u>
Travel Award Application	
Calendar	<u>15</u>



National Chemistry Week/ChemFest 2019

Event Information

Where: Carnegie Science Center
When: Friday, October 25th (9 AM to 3 PM)
Saturday, October 26th (10 AM to 4 PM)

The ACS Pittsburgh Section will provide:

- One (1) six-foot table with table cloth and two (2) chairs (additional table and chairs available upon request).
- A table sign with your organization's name.
- A National Chemistry Week logo sticker and name badge that serves as "general admission" to the Carnegie Science Center during the two-day event for each volunteer.
- An \$8 lunch voucher for the Carnegie Science Center's River View Café for each volunteer.
- Free parking for NCW volunteers at Carnegie Science Center.

Your organization will need to provide:

- Safety Goggles and any other safety equipment to protect both your volunteers and the general public participating in your activity – this is a must!
- AV Equipment, Easels, Extension Cords and Power Strips, etc.
- Volunteers and all materials related to your hands-on activity or demonstration. When purchasing supplies keep in mind average attendance is 2,200 on Friday and 1,800 on Saturday.

Special Note:

Due to health and safety issues with allergies, etc. please do not hand out or give away candy or any other edible items to visitors.

Available Set-Up Times:

- Thursday, October 24 (4:00 PM 6:00 PM)
- Friday, October 25 (8:00 AM 9:00 AM)
- Saturday, October 26 (9:00 AM 10:00 AM)

Volunteering Information:

We recommend that you divide up your volunteers to work two half-day (3 hour) shifts each day, as tables must be staffed at all times. All volunteers are to report to the NCW Registration Table (1st floor lobby, next to the main entrance) prior to the start of their shift, to register and receive their name badge, lunch voucher, parking voucher, etc.

Questions? Contact the NCW Coordinator: Evonne Baldauff <u>ebaldauf@wavnesburg.edu</u> 724-852-7617

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2019 NCW Illustrated Poem Contest Marvelous Metals

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

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

Contest Deadline: Friday, November 1, 2019

Prizes: \$50 1st Place and \$25 2nd Place in each of 4 grade categories: K-2nd, 3rd-5th, 6th-8th and 9th-12th grades.

Contact: Mail illustrated poem and entry form to Evonne Baldauff, 51 W. College St., Waynesburg, PA 15370. It is highly encouraged to e-mail entries to NCW@pittsburghacs.org.

Winners of this regional 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 NCW theme, "Marvelous Metals." Your poem must be <u>no more</u> than 40 words and in the following styles to be considered:

HAIKU - LIMERICK - ODE - ABC POEM - FREE VERSE - END RHYME - BLANK VERSE

Entries will be judged based upon:

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

- 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 NCW 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.
- 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.



2019 NCW Illustrated Poem Contest Marvelous Metals ENTRY FORM

Please fill out this form and attach it after the poem. All fields are required. Incomplete forms will invalidate the entry.

The deadline for the Pittsburgh Section Contest is Friday, November 2, 2019.

Parent/Guardian information may be left blank if Teacher contact information is provided.

Student and Organization Information Student Name: Student Grade: Parent/Guardian Name: Parent/Guardian Email: Parent/Guardian Address: Parent/Guardian City: State: Zip: School or Sponsoring Group (e.g. Boys and Girls Club or Scout Troop, 4-H, Homeschool, etc.): Teacher Name: Teacher Email: School Address: School Address 2: School City: State: Zip: Please send any follow up for the student to the parent address. Check one. or school Illustration Type (Check one) Hand-drawn art Digitally created art If the poem was digitally created, please name the software used in the box below: Judging Category by Grade (Check one) K-2 3-5 6-8 9-12 FOR LOCAL SECTION USE ONLY Local Section Name: Pittsburgh NCW Coordinator Name: Evonne Baldauff NCW Coordinator Email/Phone: NCW@pittsburghacs.org



Join the Greater Pittsburgh Area Women Chemists Committee in raising funds for Breast Cancer Awareness...

In years past we were able to donate over \$2000 to the Young Women's Breast Cancer Awareness Foundation at Magee Hospital thanks to the generosity of those participating in our fundraising events and sales.

Due to popular demand, we are selling our t-shirts again – with all net proceeds donated! The t-shirts will have the logo shown below.

Orders will be taken through October 1st.



Receive a free "Save the TaTaS" tote with every 2 shirts purchased while supplies last.

Please make check payable to WCC and mail along with this order form to:

Dr. Michelle Ward / Room 107 / 219 Parkman Avenue / Pittsburgh, PA 15260.

You can also use the online form and link available on our website: www.pghwcc.org.

(You will be contacted when shirts are ready for pick-up or for delivery information.)

Name:			
Email:		Phone:	
# small:	# XL:		
# medium:	# 2XL:		
# large:	# shirts shipped:		total enclosed: \$

ACS Fall National Meeting

Councilors' Report

Recently, Kimberly Woznack, Rich Danchik, and Rob Mathers attended the 258th National Meeting of the ACS in San Diego as Councilors for the Pittsburgh Section. The following report summarizes some items of interest.

Actions of the Council

Elections: During the meeting, a series of elections were held. First, the Council elected Anne M. Gaffney, Lydia E. M. Hines, Will E. Lynch, Sally B. Peters, and Dee Ann Casteel to the Council Policy Committee (CPC). Then, the Council voted Michelle V. Buchannan, Charles E. Cannon, Alan A. Hazari, Amber S. Hinkle, and Thomas H. Lane to serve on the Committee on Nominations and Elections (N&E). Afterwards, the Council elected Lisa M. Balbes, D. Richard Cobb, Emilio X. Esposito, Jason E. Ritchie, and Stephanie J. Watson to 3-year terms the Committee on Committees (ConC).

Other Council Actions: In order to balance population among ACS districts, the Council voted that the Pittsburgh Local Section transfer from District II to District III.

Based on recommendations of the Committee on International Activities and the Council Policy Committee, the ACS created an International Chemical Sciences Chapter in the Republic of Georgia.

Highlights of Committee Reports

Budget and Finance: During the last year, total revenues were \$338 million and total expenses were \$308 million. Based on this favorable financial performance, the ACS is expected to end the year in compliance with each of the five Board-established financial guidelines. For further information on finances, visit www.acs.org and click on 'About ACS' at the bottom of the page and then click 'Financial'.

The committee reauthorized funding for the *ChemIDP* and the *International Student Chapters Programs*. Subsequently, the Board approved a new funding request for the *Green and Sustainable Chemistry Education Resources* in the 2020 Proposed Budget.

Overview of San Diego Meeting: The theme of the 258th ACS National Meeting was "Chemistry and Water" and focused on a number of topics including water chemistry, sustainability, safety, and environmental stewardship. Within this theme, Rob Mathers, councilor for Pittsburgh Local Section, helped co-organize a symposium on the issue of plastics in the ocean. Attendance for the meeting was 12,409 including 995 exhibitors and 3,095 students.

2019 Career Data: Thirty-one employers interviewed 239 job seekers for 81 open positions. A significant number of Career Pathway registrations (1,180) and Career Consultants (555) also occurred during the meeting.

Continued on Page 7

ACS Fall National Meeting

Councilors' Report Continued from Page 6

Actions of the Board of Directors

Committees: The Board received reports from committees on Budget and Finance, Professional and Member Relations, Strategic Planning, Executive Compensation, Pensions and Investments, ACS Governing Board for Publishing, Task Force on the Future of Meetings, and the Society Programs Globalization Board liaison. During these discussions, the Board voted to adjust registration fees for national meetings for inflation. As a result, advance member registration for 2020 will be \$505.

Executive Director and CEO Report: Updates included activities of Chemical Abstracts Service (CAS) and the ACS Publications Division. Other issues included ACS Core Value of Diversity, Inclusion, and Respect, status of Society membership, ACS financials, and activities associated with the International Year of Periodic Table.

Other Society Business: In order to encourage expansion of international activities and initiatives, the Board liaison for globalization summarized a recent Board survey and conveyed additional feedback from the Board on the globalization vision.

The Board received recommendations from the Committee on Strategic Planning as well as updates from the Task Force on the Future of Meetings. The task force has been reexamining the current portfolio of ACS conferences, evaluating governance, staff support structures, revenue streams, financial goals, and recommending actions to ensure sustainability and future relevance of business models.

The Board also discussed components of the recently signed Chemistry Enterprise Partnership agreement with leadership of the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). Discussions emphasized the shared vision of promoting and achieving diversity in STEM.

Two Pittsburgh Section ACS Members Win National Awards in San Diego

Congratulations to two of our Pittsburgh Local Section Members for winning ACS National Awards at the fall meeting in San Diego.

Angela M. Gronenborn from the University of Pittsburgh won the E. Bright Wilson Award in Spectroscopy which recognizes outstanding accomplishments in fundamental or applied spectroscopy in chemistry.

Anil Kumar from PPG won the ACS Award for Creative Invention which recognizes a single inventor for the successful application of research in chemistry and/or chemical engineering that contributes to the material prosperity and happiness of people.



Society for Analytical Chemists of Pittsburgh Spectroscopy Society of Pittsburgh



October Meeting Wednesday, October 23, 2019 8:00 PM Duquesne University

5:30 PM SSP Technology Forum – Power Center Ballroom 8:00 PM Technical Program – Power Center Ballroom

SSP Technology Forum

"From Pittsburgh to the Moon"

Emily Ruby, Curator, Heinz History Center

Abstract:

This talk focuses on the Destination Moon exhibition that the Heinz History Center hosted in the fall of 2018. A national touring exhibition put together by the Smithsonian Air and Space Museum, this exhibit marked the first time the Command Module Columbia left the Smithsonian since it was installed there in the early 1970s. This talk highlights the important contributions that Western Pennsylvania made to the success of the space program and to the Apollo 11 mission.

Biography:

Emily Ruby has been a curator at the Heinz History Center for more than 11 years. She serves as the point of contact for those interested in donating artifacts to the collection as well as curating exhibitions as diverse as Heinz and Destination Moon. Emily is a graduate of the Hagley and Museum Studies programs at the University of Delaware.

SACP Technical Program

"Chemical and Biological Sensors for Improving Food Quality through Sensitive Packaging"

Dr. Silvana Andreescu, Clarkson University

Abstract:

The growing interest in food quality and safety requires the development of sensitive and reliable methods of analysis as well as technology for the preservation of freshness and quality of food. Portable and inexpensive biosensing devices show potential for addressing the need for rapid on-site measurements. A key issue in the development of these devices is creating suitable surface chemistry with recognition capabilities for the selective binding of target analytes. This presentation will discuss development, manufacturing, analytical characterization and deployment of portable

Continued on Page 9

SACP/SSP October Meeting

Continued from Page 7

biosensors incorporating receptor molecules and a smart redox active interface for monitoring active and functional ingredients in food, and their possible implementation in smart packaging. To fabricate the sensors, we use nanoparticles that have tunable redox activity, optical and catalytic properties and can transduce and catalytically amplify signals in chemical and biological detection schemes involving biomolecules. Examples of sensors that utilize printable paper as a functional (bio)sensing platform, modification of paper and procedures enabling roll-to-roll fabrication will be discussed. A unique feature of these devices is the built-in detection mechanism with all the sensing components needed for analysis fixed onto the sensing platform, functioning as a fully integrated reagentless biosensing device. The sensors have been interfaced with portable databases and user-friendly signal transduction methods, and have demonstrated excellent performance when used in the field. Several prototypes designed for food freshness, safety and quality monitoring will be discussed, with examples of applications.

Biography:

Silvana Andreescu is the Egon Matijević Chair in Chemistry and Professor of Bioanalytical Chemistry in the Department of Chemistry and Biomolecular Science at Clarkson University in Potsdam, NY. She has received a PhD in Chemistry, specializing in biosensors from the University of Perpignan, France, and University of Bucharest, Romania in 2002, and has been a member of the Clarkson faculty since 2005. Between 2003 and 2005 she was a NSF-NATO postdoctoral fellow at the State University of New York at Binghamton. Her research interests are in analytical and bioanalytical chemistry, bio-nanotechnology, environmental nanotechnology and development of practical biosensors for clinical and environmental monitoring. Recent work involves the use of nano-impact methods to characterize surface properties and reactivity of nanoparticles for environmental and health safety assessment and sensing applications. She is the recipient of a French Government Graduate Fellowship, a NATO-NSF Postdoctoral Fellowship, the NSF-CAREER award, the John W. Graham Faculty Research Award, the Research Excellence Award and a Member of the Million Dollars Club at Clarkson University.

Dinner Reservations:

To make dinner reservations, please complete the online reservation form at http://sacp.org/monthly-meetings/ by, Monday, October 14. 2019. Should you not have internet access, please call 412-825-3220, ext 200. Dinner will cost \$10 (\$5 for students) and checks are to be made out to the SSP. If you have any dietary restrictions, please let us know when you leave a message.

Parking:

Duquesne University Parking Garage entrance is on Forbes Avenue. Upon entering the garage, you will need to get a parking ticket and drive to upper floors. Bring your parking ticket to the dinner or meeting for a validation sticker. Please contact Duquesne University, if any difficulties should arise.

ACS Pittsburgh Travel Grant Recipient Karoline Eckhart ACS National Meeting Trip Report

Attending the American Chemical Society national conference in San Diego provided an opportunity to practice my presentation skills, meet leaders in my field and learn about their research, reconnect with existing colleagues, and recruit for my graduate program at Carnegie Mellon University.

The experience I will cherish most about this conference was presenting my own work in the Polymeric Materials: Science and Engineering Division. Standing up and explaining my research in front of a crowd of respected and inspiring leaders in my field was an incredible experience. I especially enjoyed answering questions at the end of my talk – this not only gave the a chance to dive deeper into data that I didn't have time to show in the talk, but it also gave me ideas for new experiments to try and aspects of my project I had not thought about before.

I listened to many talks while at ACS and heard about current, even some unpublished, research that some of my favorite labs around the country are involved in. Further, I learned about many groups that I had never heard of, making me eager to read more about their work and keep their future publications on my radar. Learning about other people's research inspired me in my own research and gave me ideas for projects moving forward.

Many of my colleagues, both fellow students and professors, from my undergraduate institution, California Polytechnic State University, attended the conference. Seeing them at this conference gave me a chance to hear about the new research they are involved in and maintain these cross-country connections.

Finally, while at this conference, I hosted a booth at the Graduate

School recruiting fair. This event provided a platform for me to interact with undergraduate students from around the country and world who have interest in going to graduate school. By connecting with these students and giving them information about the chemistry graduate program at CMU, I hope to cultivate interest in our department which will create a pipeline of talented young researchers coming through CMU.

Overall, I am incredibly thankful for the Pittsburgh section of the ACS for playing a role in sending me to the ACS national conference. This conference was an unforgettable experience and an amazing opportunity for growth in my graduate studies and career.





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).

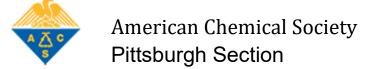
Since 2013, the Pittsburgh Section of the ACS has awarded up to four \$500 grants each year to aid our undergraduate/ graduate student members in presenting papers or posters at ACS Meetings. This is an ongoing program in our Section, and details will be updated on our website, (www.pittsburghACS.org, 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.



Student Travel Grant Application

www.pittsburghacs.org

Application Deadline	Travel Completion Date
December 1st	June 30th (subsequent year)
June 1 st	December 31st (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.
am willing to complete this report: Yes No
nature:
te:
end completed hard-copy applications and supporting documentation to:
Pittsburgh Section ACS Travel Grants

Electronic copies of completed applications should be sent to hljuzwa@shimadzu.com and heartranker.com. Be sure to place "Pittsburgh Section ACS Travel Grants" in the subject line.

Heather Juzwa, 321 Winners Circle, Canonsburg, PA 15317

Business Directory

Services

Services

Services

Pittsburgh Section Officers

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Brad Davis 724-852-3376

bdavis@waynesburg.edu

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mbaker1@andrew.cmu.edu

Treasurer

Amy Rupert 350 Sunset Rd. Pittsburgh, PA 15237

Crucible Deadline

treasurer@pittsburghacs.org

The deadline for items submitted to The Crucible is the 15th of the month prior to publication. For example, all items for the November 2019 issue must be to the editor by October 15, 2019.

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!



Society for Analytical

Chemists of Pittsburgh

CALLING NEW MEMBERS

Dues Only \$10.00, Call the SACP

Administrative Assistant at

412-825-3220 Ext. 200 Right Now!

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.

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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

Spectroscopy Society of Pittsburgh

- Professional Networking within the Spectroscopy Community
- Monthly Symposia by

Prominent Researchers

Promoting Science Education

To Join Call the Administrative Assistant: 412-825-3220 ext 200

The Crucible

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

Wednesday, October 23

Spectroscopy Society of Pittsburgh —Technology Forum

"From Pittsburgh to the Moon"

Emily Ruby, Curator, Heinz History Center

Society for Analytical Chemists of Pittsburgh — Technical Program

"Chemical and Biological Sensors for Improving Food Quality Through Sensitive Packaging"

Dr. Silvan Andreescu, Clarkson University

Duquesne University, Pittsburgh, PA

October 25-26

National Chemistry Week 2019

Carnegie Science Center, Pittsburgh, PA