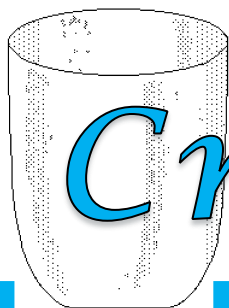




# The Crucible



Volume CIV, No. 4

December 2018

## 2018 NCW Illustrated Poem Contest Winning entries

The Pittsburgh Section of the American Chemical Society's (ACS) sponsored an illustrated poem contest for students in grades K-12 in support of the 2018 National Chemistry Week (NCW) program. Students could pick topics related to the 2018 NCW theme "Chemistry is Out of This World." First and second place winners were selected from four grade categories: K-2<sup>nd</sup>, 3<sup>rd</sup>-5<sup>th</sup>, 6<sup>th</sup>-8<sup>th</sup>, and 9<sup>th</sup>-12<sup>th</sup>. Poems could be any style (free verse, limerick, haiku, etc.). Entries were judged based upon relevance to and incorporation of the theme, word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.

Each 1<sup>st</sup> place winner will receive a check for \$50 and their poem entered into a national contest where they will compete against entries from 188 ACS local sections from across the United States. Each 2<sup>nd</sup> place winner will receive a check for \$25.

And the winners of the Pittsburgh Section ACS's NCW 2018 Illustrated Poem contest are:

### K-2<sup>nd</sup> Grade

**1<sup>st</sup> Place:** Mina H., Penn Hills Elementary; Teacher – Mrs. Johnson

**2<sup>nd</sup> Place:** Holden K., McKnight Elementary; Teacher – Mr. Conway

### 3<sup>rd</sup>-5<sup>th</sup> Grade

**1<sup>st</sup> Place:** Aiden J., Boyce Middle; Teacher – Mrs. Fleckenstein

**2<sup>nd</sup> Place:** Layla O., North Star Middle School; Teacher – Mrs. Walker

### 6<sup>th</sup>-8<sup>th</sup> Grade

**1<sup>st</sup> Place:** Leah C., Moon Area Middle; Teacher – Mr. Todd

**2<sup>nd</sup> Place:** Addison B., Burgettstown Middle; Teacher – Mrs. O'Brien

### 9<sup>th</sup>-12<sup>th</sup> Grade

**1<sup>st</sup> Place:** Rita U., Ringgold High; Teacher – Mrs. Leasure

**2<sup>nd</sup> Place:** Rachel B., North Allegheny Intermediate; Teacher – Mr. Bockoven

See first place entries on [pages 9-12](#). Congratulations to all our local contest winners!

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AMERICAN CHEMICAL SOCIETY  
PITTSBURGH SECTION  
AWARD BANQUET

*Honoring*

2018 PITTSBURGH AWARD RECIPIENT  
**Dr. Steven R. Little**

2018 DISTINGUISHED SERVICE AWARD WINNER  
**Dr. Guy C. Berry**

THURSDAY, DECEMBER 6, 2018

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Grand Concourse  
100 West Station Square Dr.  
Pittsburgh, PA 15219

Social Hour: 6:00 Cash Bar  
Dinner: 6:45  
Award Presentation: 7:45

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**DINNER REGISTRATION**

Registration must be submitted by Monday, November 26, 2018: \$43.00; Student or Post-Doc \$21.50

Parking is not included in the cost but is available in lots adjacent to Station Square or through valet at the Grand Concourse.

To officially register for the event, payment must be received. Please make checks payable to ACS Pittsburgh Section and mail to Bradley Davis, 51 W. College St., Waynesburg, PA 15370. Include the following information along with your check:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

EMAIL \_\_\_\_\_

AFFILIATION \_\_\_\_\_

**MEAL CHOICE (Please choose one):**

SIRLOIN STEAK WITH WARM BLUE CHEESE BUTTER

SALMON ROCKEFELLER WITH SPINACH, CRAB MEAT, BACON, BÉARNAISE

VEGETARIAN (TO BE ANNOUNCED)

## National Chemistry Week 2018

For the 20<sup>th</sup> consecutive year the Pittsburgh Section's National Chemistry Week (NCW) celebration was held at the Carnegie Science Center. The event was held on Friday and Saturday, October 26-27 and featured the theme "Chemistry Is Out Of This World!" Major sponsors for the event included the Society for Analytical Chemists of Pittsburgh (SACP), the Spectroscopy Society of Pittsburgh (SSP), PPG Science Education Council (PPG SEC), and the PPG Foundation.

Total attendance for the two-day event was 4,680 (2,346 on Friday, 2,334 on Saturday). Average attendance at the annual event for the past 5 years has been 4,600.

Thanks go to the over 40 organizations that conducted hands-on experiments and demos, event programming, or helped manage event activities. There were a total of 357 volunteers who participated in the 2018 celebration. Of the 357 volunteers, 177 (50%) were ACS members.

The NCW Committee would like to take this opportunity to thank everyone for your support of the NCW program. It took 357 individuals working together to make this event a success!

In addition, this event would not be possible without the help of our partners the SACP, SSP, PPG SEC, PPG Foundation and our host the Carnegie Science Center!



NCW Co-Chairs Evonne Bauldaff and Michael Mautino



McKnight Elementary students with Michael Mautino, and Nancy Lambing, Darcy Mautino (McKnight Librarian), Alice Hakos, Sharon Mautino

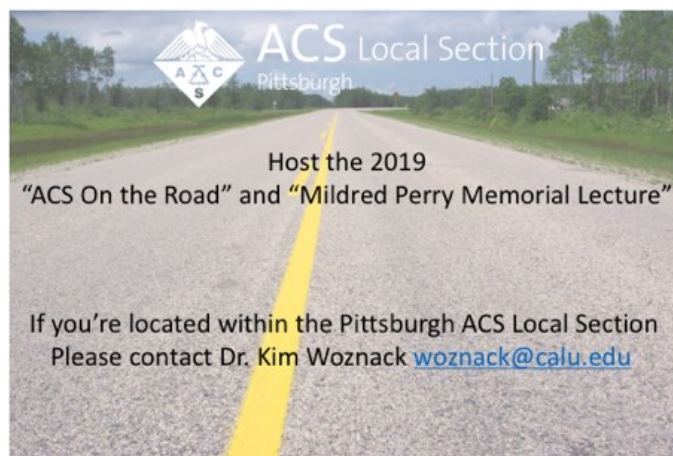


Volunteers: Mautino family – Lindsey, Tyler, Michael, Sharon, Darcy, and Nancy Lambing

## Pittsburgh Section National Chemistry Week Committee Presents an ACS "Salutes to Excellence" Award to Debbie Wallace

The Pittsburgh Section National Chemistry Week Committee presented an ACS "Salutes to Excellence" award to Debbie Wallace from Bayer Corporation for her 20 years of organizing Bayer's participation in NCW! Of the over 100 organizations that have participated in the Section's annual NCW event, Debbie is the only group organizer to have participated every year for the past 20 years!

Thank you Debbie for your 20 year commitment to community outreach!



**Are you interested in hosting the 2019 "ACS On the Road" and "Mildred Perry Memorial Lecture" event at your campus?**

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 to local section chemists to visit your site or campus. The organizers choose the speaker and program details and many past organizers would be happy to share our experience and websites if the host location is interested. This event was hosted by California University of Pennsylvania in 2018 and featured Dr. Amanda Bryant-Friedrich from the University of Toledo. If your institution is located in the Pittsburgh Local Section and you'd like to host the 2019 ACS "On the Road" event please contact Kim Woznack ([woznack@calu.edu](mailto:woznack@calu.edu)).



## Pittsburgh Mass Spec Discussion Group

# Practical Problem Solving with LC/MS – The Real World *A Pittcon Quality Course in our Backyard*

**Tuesday, March 5, 2019**

**Duquesne University – Power Center (8<sup>th</sup> Floor)**

600 Forbes Ave, Pittsburgh PA 15282

### Prerequisite and Target Audience

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Recommended for Analysts who have used LCMS previously or who want to see real world problems solved with the use of LCMS. Anyone using HPLC now and considering adding an LCMS detector to see what it will add to their lab, anyone doing chemical research, pharmaceutical analysis, food chemistry, organic synthesis, environmental analysis, QC, structural analysis, etc. will benefit from this course.

### Questions Answered

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- √ What sensitivity is possible/expected? What causes sensitivity loss? What can be done to improve sensitivity?
- √ Which is the better mobile phase for LCMS, Methanol or Acetonitrile? How long can a mobile phase be used?
- √ What additives can I use and what are the best? How much does concentration of additives/buffers matter?
- √ What is the best HPLC column for LCMS?
- √ How can I make more ions? How can I minimize multiply charged ions?
- √ How can I determine the best settings for collision energy or voltages?
- √ How can I improve quantitation reproducibility?
- √ Is it better to have more resolution or more mass accuracy? What is spectral accuracy?
- √ Does nitrogen purity matter?
- √ What are the limitations of my current hardware?
- √ What software can I use to mine my data more effectively? How do I incorporate data-dependent experiments into my projects?

### Cost

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Professionals: \$25.00

Students: \$15.00

Parking not included. Coffee and buffet lunch included.

**Registration is limited to the first 50 people.**

**Please RSVP by Tuesday, February 26, 2019.**

Make check payable to SSP and mail the registration form below to:  
Heather Juzwa, Chair 2018-2019 SSP MSDG, 321 Winners Circle, Canonsburg, PA 15317



Name: \_\_\_\_\_ Affiliation: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

MS Instrumentation and software currently utilized: \_\_\_\_\_

Please indicate dietary restrictions.

# Practical Problem Solving with LC/MS – The Real World

*A Pittcon Quality Course in our Backyard*

**Tuesday, March 5, 2019**

**Duquesne University – Power Center (8<sup>th</sup> Floor)**

600 Forbes Ave, Pittsburgh PA 15282

9:00 AM – 4:00 PM

## **Abstract**

---

This is a course in LCMS for people who have done some LCMS previously. It focuses on the practical aspects of LCMS. The key understanding will be the 'what, where, why and how' of LCMS including real world examples at each step. The course will pose various problems that people have and then show ways to solve each question. For example, one of the questions will be 'Why are my results changing when I haven't changed anything?' or 'How much can I improve my sensitivity without having to buy new hardware?'

Numerous practical applications will be used to illustrate key points such as how different classes of molecules ionize or how simple changes in chemistry affects sensitivity. It thoroughly explores how to avoid the pitfalls and problems most common for users of LCMS such as how to prepare a sample for LCMS analysis and how to develop LCMS friendly methods. The course will show how to deal with complex samples, improve sensitivity, and speed up analyses. Identification of common impurities and artifacts will also be covered. It will also explore specific application areas including data mining software.

## **About our Trainers**

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The presenters have more than 50 years combined expertise with mass spectrometry. They teach these very course concepts at Pittcon and other conferences.

Bob Classon has several decades of experience with applications for both HPLC and LCMS, having worked at Waters Corporation and Shimadzu Scientific Instruments, Inc.. His focus is on getting better results from your existing instrumentation and improving sensitivity. He has delivered numerous talks, short courses and publications on chromatography and mass spectrometry.

Ross Willoughby has Pittsburgh roots and did his undergrad at the University of Pittsburgh. He was formerly the Vice President of R&D for Extrel, and is a pioneer in hardware design for mass spec. He is co-inventor of Particle Beam LC/MS, and has built LC/MS instruments. Ross has over 50 patents issued on mass spectrometer technology, and is also co-author of the popular book "A Global View of LC/MS."

# Practical Problem Solving with LC/MS – The Real World

## *A Pittcon Quality Course in our Backyard*

**Tuesday, March 5, 2019**

**Duquesne University – Power Center (8<sup>th</sup> Floor)**

600 Forbes Ave, Pittsburgh PA 15282

9:00 AM – 4:00 PM

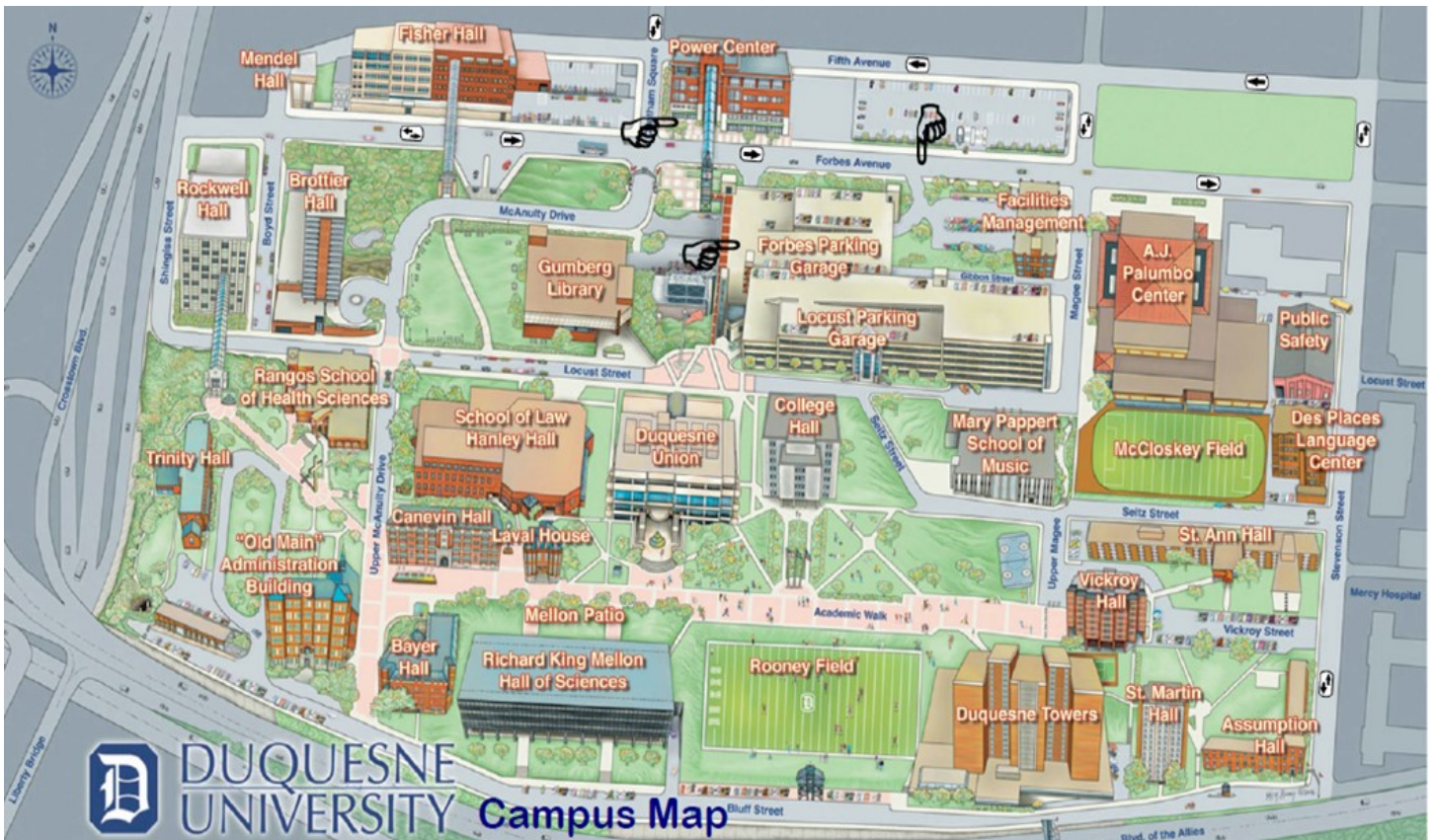
### Finding the Power Center

The Power Center is located at 600 Forbes Avenue, Pittsburgh, PA 15282. There is a parking garage adjacent to the Power Center, also at 600 Forbes Avenue.

From the parking garage, take the elevator to the 8<sup>th</sup> floor level. At this level, go to the right and walk through the enclosed Skywalk to the Power Center Ballroom.

Once in the Power Center, you will be on the 5<sup>th</sup> floor where the Ballroom is located.

For driving directions to Duquesne University, please go to their website: [www.duq.edu](http://www.duq.edu), under “About DU” then under Campus Map.



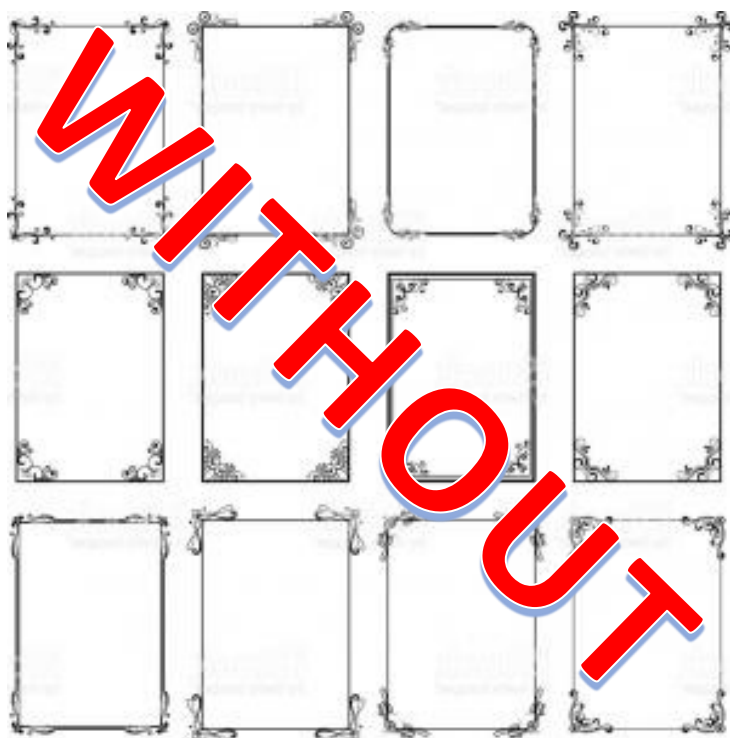
**SAVE THE DATE!!!!!!**

# **2019 Tripartite Symposium**

**Saturday May 18, 2019  
Carlow University – A.J. Palumbo Hall of Science**

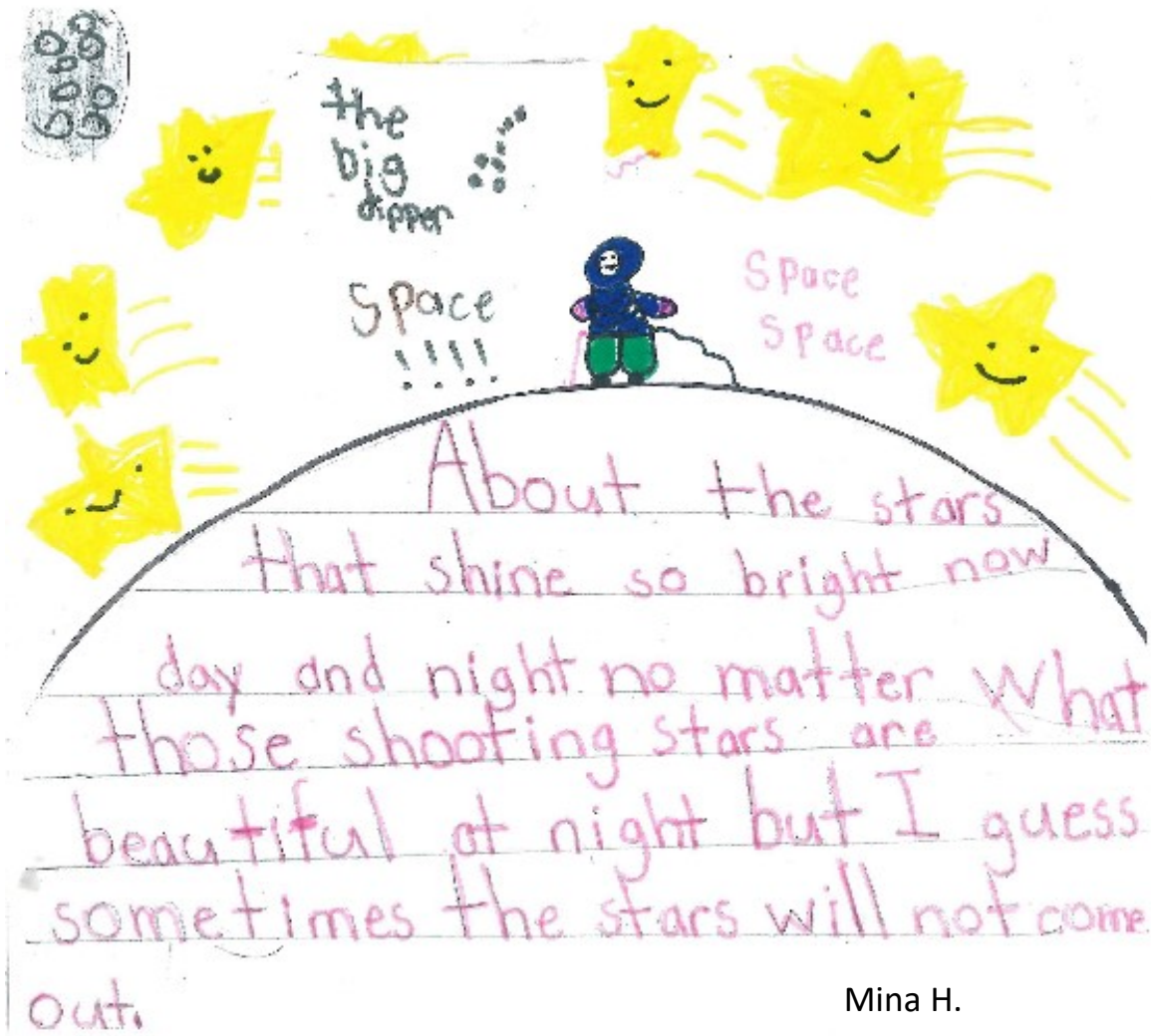
**Can you guess the Tripartite 2019 Theme? Here is a hint:**

CHEMISTS  
CHEMISTS



**Stay tuned for the January issue of The Crucible  
for the biggest hint yet!**





Mina H.

1<sup>st</sup> place K-2<sup>nd</sup> Grade

Stars, Stars in the sky  
they shimmer and shine  
tonight tonight. I look  
up to see the big one,  
Oh Joy! Oh Joy! It is  
the sun! Stars, Stars  
Bright as can be,  
they are my favorite  
thing to see!

Aiden J.

1<sup>st</sup> place 3<sup>rd</sup>-5<sup>th</sup> Grade

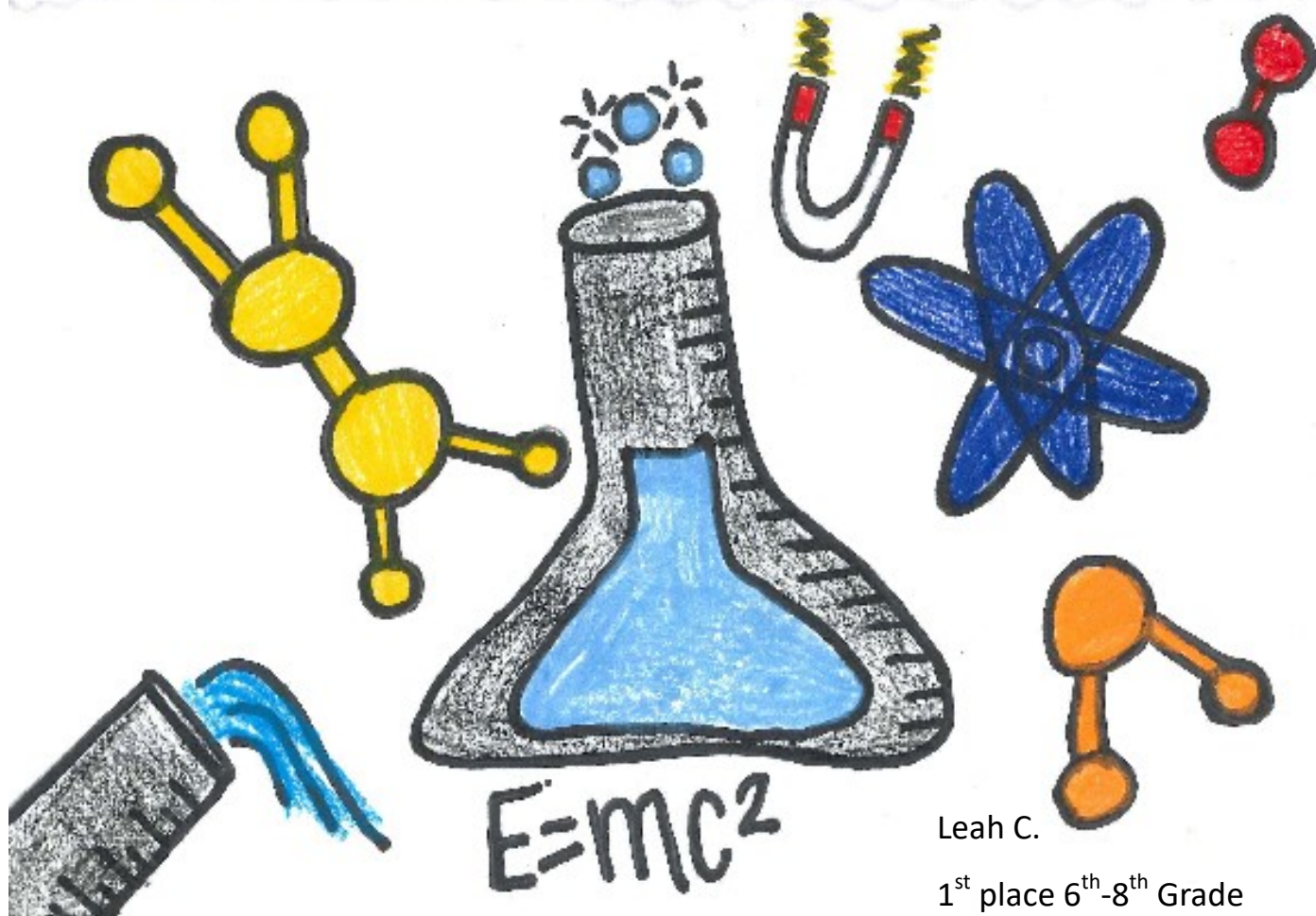
"Chemistry is Out of This World"

10 inches of snow is equal to 1 inch of rain!

Sometimes, two hour delays can be a pain!


The only two non-silvery metals are copper and gold!

If you get a fake, sometimes you can be fooled!



Leah C.

1<sup>st</sup> place 6<sup>th</sup>-8<sup>th</sup> Grade



Look a Shooting Star  
Wow what a gaseous wonder  
Chemistry is grand

Rita U.

1<sup>st</sup> place 9<sup>th</sup>-12<sup>th</sup> Grade



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

([hjuzwa@shimadzu.com](mailto:hjuzwa@shimadzu.com) or [heather\\_sapko@hotmail.com](mailto:heather_sapko@hotmail.com)) or by mailing a hard-copy application (Pittsburgh Section ACS Travel Grants / Heather Juzwa / Center / 321 Winners Circle / Canonsburg, PA 15317).

Since 2013, the Pittsburgh Section of the ACS has awarded up to four \$500 grants each year to aid our undergraduate/graduate student members in presenting papers or posters at ACS Meetings.

This is an ongoing program in our Section, and details will be updated on our website, ([www.pittsburghACS.org](http://www.pittsburghACS.org)), as necessary.

Applicants will be notified via email that their application was received. All efforts will be made to announce awards within two weeks of the application deadline, and all applicants will be notified of the final committee decisions. Our Section is looking forward to helping increase the participation of local students in ACS conferences. If you have any questions, please do not hesitate to contact me.

Sincerely,

Heather Juzwa, ACS Pittsburgh Section Student Travel Grants, Chair  
Senior Field Sales Engineer, Shimadzu Scientific Instruments, Inc.



<i>Application Deadline</i>	<i>Travel Completion Date</i>
December 1 <sup>st</sup>	June 30 <sup>th</sup> (subsequent year)
June 1 <sup>st</sup>	December 31 <sup>st</sup> (same year)

Name of Applicant: \_\_\_\_\_

Name of Institution: \_\_\_\_\_

\_\_\_\_\_ Undergraduate Student / Year

\_\_\_\_\_ Graduate Student / Year

Mailing Address to Receive Payment if Awarded \_\_\_\_\_

Email: \_\_\_\_\_ Phone: \_\_\_\_\_

PI: \_\_\_\_\_

ACS Membership No.\*: \_\_\_\_\_

*\*If you do not know your ACS number, please email [hljuzwa@shimadzu.com](mailto:hljuzwa@shimadzu.com) to receive it by email.*

Meeting Location: \_\_\_\_\_ Meeting Date: \_\_\_\_\_

Project Title: \_\_\_\_\_

\_\_\_\_\_ Paper Presentation      \_\_\_\_\_ Poster Presentation

*\*Please attach a copy of your project abstract to the application.*

Has your project been accepted?      Yes      No

*\*Attach documentation regarding acceptance if received at point of application.*

Will this be your first presentation at an ACS national or regional meeting?      Yes      No

If no, please list conferences at which you have presented: \_\_\_\_\_

Purpose of grant: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Other funding sources (if any):

\_\_\_\_\_

\_\_\_\_\_

Personal Statement of anticipated benefits of meeting attendance

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Has the applicant received a travel grant from the ACS Pittsburgh Section in the past?    Yes    No

If your application was selected, the Pittsburgh Section of the ACS would like you to write a short (one page) description of your activity upon completion of the conference for publication in our monthly newsletter, The Crucible, and on our website. The description is due within 30 days of the meeting attended.

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

# Business Directory

## Services

## Services

## Services

### Pittsburgh Section Officers

#### Chair

Brad Davis

724-852-3376

[bdavis@waynesburg.edu](mailto:bdavis@waynesburg.edu)

#### Secretary

Matt Baker

5626 Beacon Street

Pittsburgh, PA 15217

[mbaker1@andrew.cmu.edu](mailto:mbaker1@andrew.cmu.edu)

#### Treasurer

Amy Rupert

350 Sunset Rd.

Pittsburgh, PA 15237

[treasurer@pittsburghacs.org](mailto:treasurer@pittsburghacs.org)

### Crucible Deadline

The deadline for items submitted to The Crucible is the 15<sup>th</sup> of the month prior to publication. For example, all items for the January 2019 issue must be to the editor by December 15, 2018.

### 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 [hjuzwa@shimadzu.com](mailto:hjuzwa@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. 212 **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.

**Design Editor: Traci Johnsen**

124 Moffett Run Rd.

Aliquippa, PA 15001

Phone: 724-378-9334

[tracijohnsen@comcast.net](mailto:tracijohnsen@comcast.net)

### Get Connected!

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

**Section's Website:**

[www.pittsburghacs.org](http://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 Amy: 412-825-3220 ext 212



# 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

**Thursday, December 6**

**Pittsburgh Section ACS Awards Dinner**

Grand Concourse, 100 West Station Square,  
Pittsburgh, PA

Stay up-to-date on all the happenings of the Pittsburgh Section ACS by visiting the following:

**Section's Website:** [www.pittsburghacs.org](http://www.pittsburghacs.org)

**Facebook Page:** Pittsburgh Section of the American Chemical Society

**Linked In:** Pittsburgh Section of the American Chemical Society

**Snapchat:** Pittsburgh\_acs

**Twitter:** Pittsburgh ACS

**Instagram:** pittsburgh\_acs