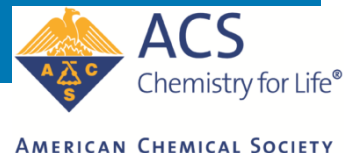
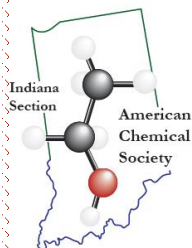


The Accelerator

INDIANA SECTION OF THE AMERICAN CHEMICAL SOCIETY



DECEMBER 2017

2017 Chair's Corner *by Tom Xiao*

Indiana Local Section:

Greetings! As 2017 ends, I would like to take this opportunity to thank each of you for the hard work and dedication you have demonstrated to our local section this year. Together we persevered and delivered some amazing accomplishments for our members and our local community.



As outgoing Chair, this will serve as my final Chair's Corner. As you know, the various successes we have shared all year demonstrate our strength and potential in our local section. Together we have won the prestigious ACS Local Section award of the large sections, which is indeed something we should be proud of ourselves!

We have prepared and formed our National ACS meeting 2023 strategic planning committee and have kicked off the strategic planning. We've formed our first ever Young Chemists, Public Relations and Membership Affairs committees, which were aimed to more resourcefully engage our members and boost our membership enrollment.

One of our area high school students, Brendan Yap, won one of four gold metals representing the USA team at the World Chemistry Olympiads. Our "Music and Chemistry in Perfect Harmony" event team won the IPG grant for the second year in a row and the event became another highlight of the year.

Our chemistry focused events, including, but not limited to, SEED, CSI, NCW, Science Day etc., have continued to serve as our ways to promote chemistry both locally and nationally. As promised, we are planning to host a networking/member appreciation event on Jan. 9th, 2018 to thank you all for being a part of our section's history. We are looking forward to seeing you all at this special event.

Congratulations to our newly elected 2018 Executive committee members! I'm excited to transition into 2018 when Lisa Buchholtz will serve as your new Chair. She holds some amazing credentials and I am very confident that 2018 will be an even better year for our Local Section under her great leadership and all your continued strong support!

Thank you all for allowing me to serve as your Chair in 2017; it has been a privilege, an amazing and fulfilling experience that I will never forget! Happy New Year!

| Articles: December 2017 Edition | Page |
|---|-------------|
| Chairs Corner | 1 |
| A Note from the Editors | 2 |
| Welcome to Our New 2018 Executive Committee | 4 |
| IMPORTANT Deadline Information for TEACHERS | 6 |
| ACS Members Rock on IndyStyle WISH-TV 8 | 7 |
| NCW Community Outreach Program Celebrates its 30 th Year Anniversary | 8 |
| NCW 2018 ACS Illustrated “Rocky” Poem Contest | 9 |
| ACS -sponsored AACT booth Celebrates Science and Teachers! | 13 |
| Volcanos and Sand and Geodes – Oh My! The ACS Booth at CSI | 15 |
| Music + Chemistry in Perfect Harmony Part II: Peter Banks!! | 16 |
| Local Recipients of National ACS Organic Division Awards | 16 |
| Obituary for Dr. James Robert Kuszewski (Aug 10, 1936-Sept 4, 2017) | 17 |
| Newfields’ (IMA) Lab wins the ACS Axial Contest for Best Lab! | 18 |
| Upcoming Q1 ACS Events and Activities | 21 |
| Other Non-ACS STEM Fun in Indy | 22 |
| Calendar of Events | 22 |

A Note from the Editors:

We have a favor to ask of Accelerator readers. It’s been brought to the Executive Committee’s attention that not all Local Section members receive the newsletter. We’re not sure if we need to update our email list or if the newsletter may be getting delivered to a junk mail box.

After you receive this edition, would you be so kind as to talk to your colleagues to see if they received it? We know that not everyone will want to receive the Accelerator in their email, but if they didn’t and would like to we want to be sure they do receive it! Please ask those interested to check their junk mail box, and if they haven’t received the newsletter or would like to be added to our mailing list, contact us at acsaccelerator@gmail.com. We sincerely appreciate your help!

The goal of the Accelerator is to inform the Local Section members about the ACS events in our area, provide opportunities to network and get involved, and to recognize outstanding accomplishments within our community. Also, we always welcome feedback from you on content, format, or anything else you can think of that would make the newsletter more interesting or informative.

With that said, the Editors would like to wish everyone:

Happy Holidays and Safe Travels!!!

Julie Holland Austin and Andrea Moberly

The Executive Committee meets the second Tuesday of each month at 6:00 pm at The Center (6320 Intech Way, Indianapolis, IN 46278). All Local Section members are encouraged to come and join us to learn about the programs and events our section sponsors. Meetings usually last for 2 hours. Dinner is provided before the meeting. Please let us know if you plan to attend so we have a headcount. You can contact our 2018 Chair, Lisa Buchholz, at imbuchholz@dow.com.

This is a great networking opportunity for those of you who are looking to get more involved!

| 2017 Executive Committee | |
|---|---|
| Chair | Tom Xiao |
| Chair-Elect | Lisa Buchholz |
| Secretary | Tamiko Porter |
| Councilors | Robert Pribush, Brian Mathes, Robert Sammelson, Beth Lorsbach |
| Alternate Councilors | Amy DeBaillie, Sibel Selcuk, Tony Trullinger, Erin Dotlich |
| Past Chair | Linda Osborn |
| Treasurer | Paul Morgan |
| Member-at-Large | Maria Alvin-Gaston, Mark Pobanz, Anne Wilson |
| 2023 NMLT Strategic Planning | Frederique Deiss |
| Art and Chemistry | Gregory Dale Smith |
| Awards | Katherine Stickney |
| Celebrate Science | Julie Holland Austin |
| Chemists Celebrate Earth Day | Paul Ridenour |
| Education and Olympiad | Bob Pribush |
| Election | Mathew Gardlik |
| Grants | Ann Cutler |
| K12 Outreach | Erica Posthuma Adams |
| Kids in Chemistry | Brian Mathes |
| Membership Affairs Committee | Rebekah Dickenson, Jordan Knotts |
| National Chemistry Week | Belgin Canturk, Gregory Smith |
| Newsletter Design | Julie Holland Austin, Andrea Moberly |
| Newsletter Editor | Julie Holland Austin |
| Project Seed | Elmer Sanders |
| Project Seed Co-Chair | Josh Taylor |
| Public Relations | Kerrm Yau |
| Science Day | Ryan Jeske |
| Social Media | Erica Posthuma Adams |
| Trustees | David Mitchell, Dawn Brooks, Ann Hunt |
| Webmaster | Matt Gardlik |
| Women Chemists | Amy DeBaillie |
| Younger Chemists Committee Chair | Tejas Shah |

Welcome to Our New 2018 Executive Committee

By Julie Holland Austin

The results are in: Lisa Buchholz will be our 2018 Chair, Tamiko Porter is our Chair-elect and Cathy Peacock is the new secretary!

Other changes include the addition of Linda Osborn as an Alternate Councilor and we are still waiting to confirm that our additional Member at Large, Greg Smith may be added.

| 2018 | |
|----------------------------|--|
| Chair | Lisa Buchholz |
| Chair-elect | Tamiko Porter |
| Secretary | Cathy Peacock |
| Treasurer | Paul Morgan |
| Councilor | Beth Lorschach Brian Mathes Robert Pribush Robert Sammelson |
| Alternate Councilor | Erin Dotlich Linda Osborn Sibel Selcuk Tony Trullinger |
| Member at Large | Maria Alvin-Gaston Mark Pobanz Anne Wilson |
| Past Chair | Tom Xiao |

In addition to our elected committee members, we have many volunteers who help to organize, plan and host the events brought to you throughout each year. Although many of the 2017 volunteers have also volunteered to Chair the same event for 2018, we do 1 volunteer Chair open for Earth Day.

Also, many of the Chairs would like you to volunteer, please contact imbuchholz@dow.com

| | 2018 |
|--|---|
| 2023 NMLT Strategic Planning | Frederique Deiss |
| Chemistry + Music (Art) | Ann Wilson (formerly Greg Smith) |
| Awards | Katherine Stickney |
| Celebrate Science | Julie Holland Austin |
| Chemists Celebrate Earth Day | Open position |
| Education and Olympiad | Bob Pribush |
| Education and Olympiad Co-Chair | Jianping Huang |

| | |
|---|----------------------------------|
| Election | Matt Gardlik |
| Grants | Ann Cutler |
| K12 Outreach | Erica Posthuma Adams |
| Kids in Chemistry | Brian Mathes |
| Membership Affairs Committee | Rebekah Dickenson, Jordan Knotts |
| National Chemistry Week | Belgin Canturk, Tom Xaio |
| Newsletter Design and Editor | Julie Holland Austin |
| Newsletter Co-Design and Co-Editor | Andrea Moberly |
| Project Seed | Elmer Sanders |
| Project Seed Co-Chair | Josh Taylor |
| Public Relations Chair | Quanbo Xiong |
| Public Relations co-Chair | Norm Sesi co-chair |
| Science Day | Ryan Jeske |
| Social Media | Erica Posthuma Adams |
| Trustees | Ann Hunt |
| Webmaster | Abraham Hantz |
| Women Chemists | Amy DeBaillie |
| Younger Chemists Committee Chair | Tejas Shaw |

Congratulations and thank you to our 2018 Executive Committee and Committee Chair Volunteers.

We hope of our fellow ACS colleagues are looking forward to 2018 with more fun filled events brought to you by the Local Section ACS!

Very special Thank You to our 2017 Corporate Sponsors:



*****IMPORTANT Deadline Information for TEACHERS*******Deadline for US National Olympiad Exam...**

The 2018 United States National Chemistry Olympiad begins with the Indiana local section exam on Saturday, March 3, 2018 at Brebeuf Jesuit Preparatory High School. Last year, **five** Indiana Section ACS students finished in the national top 20! Of these, one made the U.S. team and won a gold medal in the international competition.

Deadline for receipt of your registration list of students taking the exam is **Friday, February 16, 2018**. There is no limit to the number of students that you may send to the exam.



Remember that every school that sends at least three students to the exam will be awarded a perpetual plaque with the name of the top-scoring student displayed. The five top scoring schools in each exam category receive a one-year membership to the American Association of Chemistry teachers (AAPT) for one teacher in each top scoring school.

For more information, please contact the following for registration information and practice exams!

Robert A. Pribush, Ph.D.
Co-chair, Indiana Section USNCO
317-989-6799
rpribush@butler.edu

Jianping Huang
Co-chair, Indiana Section USNCO
317-433-1675
Huang_jianping@lilly.com

... and the Deadline for Project Seed 2018!!!

This year, Project Seed will be celebrating its 45th year in the Indianapolis area. If you know any students who excel in science, have 1 year of high school chemistry as a sophomore, and whose family qualifies for the \$2,500 stipend, please recommend them to be a summer research intern for Project SEED. The deadline for registration this year is **April 1, 2018**. A program like Project SEED can provide a world of opportunity to young men and women interested in STEM. With companies and universities like IUPUI, Eli Lilly, Dow AgroSciences, Mays Chemical, and AIT Laboratories participating, these students can get a head start on education. Many past students who have excelled in the program have been offered generous scholarships.



For more information go to: <http://www.indyprojectseed.org/> or contact Elmer Sanders at: elmer.sanders@yahoo.com

High school students who do not financially qualify for Project Seed but who are still interested in summer research may be interested in the sister program Project STEM. More information on this program can be found at <http://www.indyprojectstem.org/application/>

ACS Members Rock on IndyStyle WISH-TV 8

By Linda Osborn

Tracy Forner and **Amber Hankins**, co-hosts of Indy Style on WISH-TV, were gracious hosts while we promoted Celebrate Science Indiana, the super cool and fun side of science, which aired on October 2, 2017. The show's producer, **Janine Garner**, has been outstanding the last few years helping us arrange this promotional entertainment. For the first segment, seasoned CSI veteran **Rick Crosslin**, a science teacher in MSD Wayne Township and host of Indiana Expeditions of PBS science program for children, "Rick Crosslin Science" YouTube Channel with over 250 science videos, focused on some exciting STEM activities that visitors can make, do, and test...such as things that fly. He made a FPG9 paper airplane, tied to a small fishing pole and had Tracy fly it around the studio while demonstrating a vertical wind tunnel.



Next, **Alyssa Heffren**, a recent Marian University graduate and current research chemist at Heritage Research Group (HRG) was a natural, having been a show choir performer! During this segment, Tracy asked her questions while she demonstrated a simple engineering activity that the kids seem to thoroughly enjoy at Celebrate Science Indiana; i.e. stacking cups. She had Tracy add some cups to the high stacks in hopes that he would knock them down. When that didn't happen, she pointed to a cup

in the middle of the stack and had him pull one cup out. You can imagine what happened – but it didn't! Magically, he was able to pluck a cup out of the middle and left the rest standing. Unbelievable, especially in light of the fact that while I was helping Alyssa set up the cups prior to the airing of this segment in the background of another live segment – I made them all come tumbling down. See it for yourself if you like (link below)!



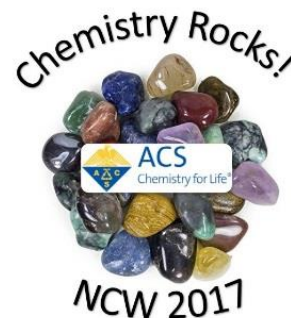
During the final segment, **Andrea Moberly**, chemist at HRG and photographer at Ardea Photo, and **Julie Holland Austin**, research chemist at HRG, formerly chemist with Great Lakes Solution (Chemtura), and yes, your editor of this newsletter, combined their chemistry knowledge with acting abilities while talking with Amber Hankins about Bernoulli Bags and Geodes, demonstrating two of the many hands-on activities that were available at the event on October 7th.



<http://wishtv.com/2017/10/02/celebrating-science-fun-with-bernoulli-bags-and-stem-things-that-fly/>

National Chemistry Week Community Outreach Program Celebrates its 30th Year Anniversary *by Belgin Canturk*

National Chemistry Week (NCW) is a community based outreach program. The mission of the program is to reach the public, particularly elementary and secondary school children, to promote positive messages about chemistry and demonstrate the crucial role that chemistry plays in everyday life. At 30 years, this annual event is the longest-running program of the ACS. The local ACS Indiana Section has been participating in this event for the past 25 years thanks to the great partnership with the Children's Museum of Indianapolis.



This year, the local ACS section held its NCW "Chemistry Day" event at the Children's Museum of Indianapolis on Saturday, November 4th from 10:00 AM-3:00 PM. This event was led by co-chairs Belgin Canturk (Dow AgroSciences) and Gregory Dale Smith (Newfields/IMA). This year's NCW theme was "Chemistry Rocks!" which covered geological topics on the chemistry of rocks. We had a total of 13 booth demonstrations and 106 volunteers. All the volunteers received a free t-shirt designed by local high school senior, Victor Xiao, who was also the 2017 NCW Illustrated Poem contest winner for the 9-12th grade category. At the ACS booth, we displayed a huge geode, loaned to us by ACS member Ben Woodworth, for the visitors to see, "Chemistry Rocks" themed raffle prizes for nine excited children, ACS

booklets about the Chemistry of Rocks, and each child received a stress ball with a logo that read "Chemistry Rocks!" Next to the ACS booth, we displayed all of the local Illustrated Poem contest winners.

The pictures below showcase the kids' fascination with the demonstrations and the fun that they had with the hands-on activities (pictures taken by Tom Xiao).





We are grateful to our local organizations, industries, and universities for their continued support and participation in this outreach event including the Children's Museum of Indianapolis, Indiana State Museum, Indy Science Fun, Dow AgroSciences, AIChE, Heritage Research Group, and Eli Lilly Ball State University, Purdue University, Indiana University, IUPUI, Butler University, University of Indianapolis.

On behalf of the local ACS section, we are thankful for all the volunteers who helped for this incredible outreach community event. We are looking forward to participating in next year's NCW event! Mark your calendars for November 3, 2018!

NCW 2018 ACS Illustrated "Rocky" Poem Contest

By Linda Osborn

As part of NCW 2017, local area students from grades K-12 were invited to share their interpretation of this year's theme - "Chemistry Rocks!" - in the form of illustrated poems. Much to the chagrin of the volunteer judges, we received 100 poems as compared to 22 poems in 2016! The ten ACS member judges

did an amazing job: a special thanks to Ben Woodworth, Tamiko Porter, Rob Sammelson, Rachel Bel, Rebekah Dickerson, Andrea Moberly, Sibel Selcuk, Frederique Deiss, Jordan Knotts, and Lisa Buchholz. All winners are listed below. First place winning illustrated poems are included for your enjoyment!

| | First | Last | School | Teacher | |
|-------|-----------|------------|-------------------------|-------------------|-------|
| K-2 | Zeke | Smith | St. Joan of Arc | Miss Heinekamp | AWARD |
| G3-5 | Ava | Burton | Bridgeport Elementary | Kieth Ramsey | 1st |
| | Andrew | Lao | Eagle Elementary | Kathryn Werner | 2nd |
| | Katherine | Rodriguez | Garden City Elementary | Stephanie Donovan | 3rd |
| | Jennifer | Sanchez | Garden City Elementary | Stephanie Donovan | 3rd |
| | Juan | Morales Jr | Garden City Elementary | Stephanie Donovan | HM |
| G6-8 | Vanessa | Xiao | Park Tudor School | Susan Taylor | 1st |
| | Brad | Cline | Homeschool | Michele Cline | 2nd |
| | Macy | Cline | Homeschool | Michele Cline | 3rd |
| | David | Cline | Homeschool | Michele Cline | HM |
| | Lucy | Knoderer | St. Richard's Episcopal | Ann Papachronis | HN |
| | Marcus | Sherrod | St. Richard's Episcopal | Ann Papachronis | HN |
| G9-12 | Victor | Xiao | Park Tudor | Kristin Chun | 1st |
| | Ana | Gaston | Fishers HS | Nathan Warnecke | 2nd |
| | Lao | James | Zionsville HS | Steven Cripe | 3rd |

FIRST PLACE

Grade K-2

Superheroes Rock

Superman came from Krypton.
 The name Krypton came from a gas.
 The gas does not react
 But Kryptonite does *attack!*
 Superman loses his power
 When Kryptonite showers.
 People with powers can sometimes tower
 But others are sometimes cowards.



Zeke Smith
 St. Joan of Arc
 Grade 2

Teacher: Miss Heinekamp

FIRST PLACE

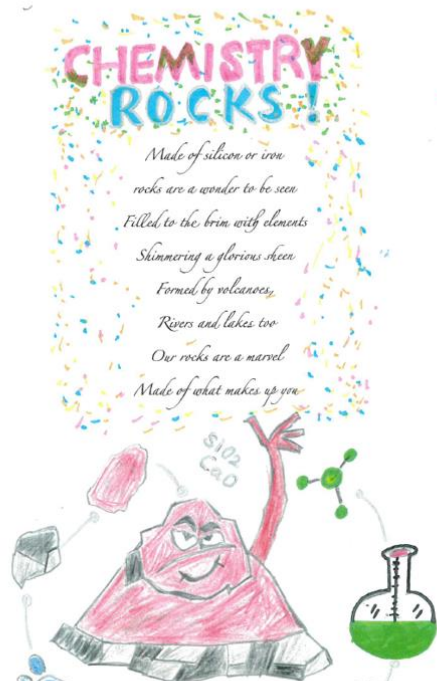
Grade 3-5

Rocks and minerals are so fine
 Some are dull and some do shine.
 Gravel, silt, or sand
 Are all over our land.
 Their base includes the earth's elements
 In many forms like marbles, jewels and sediments



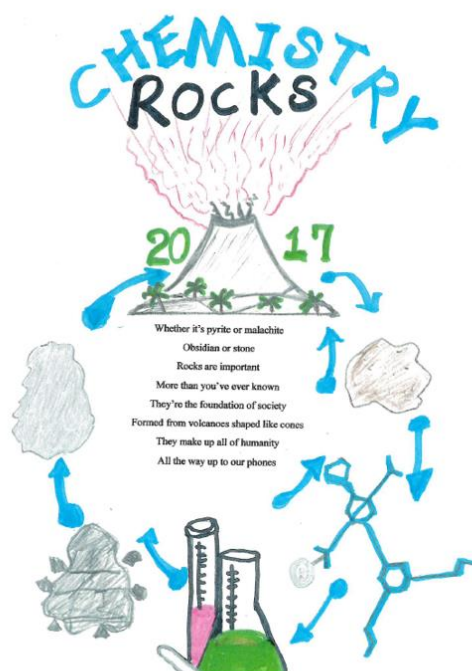
Ava Burton
 Bridgeport Elementary School
 Grade 5

Teacher: Keith Ramsey

FIRST PLACE**Grade 6-8**

Vanessa Xiao
Park Tudor
Grade 8

Teacher: Susan Taylor

FIRST PLACE**Grade 9-12**

Victor Xiao
Park Tudor
Grade 12

Teacher: Kristin Chun

All 100 poems were displayed at Celebrate Science Indiana on October 7th on the walls at the Indiana State Fairgrounds. First second and third place winning poems were grouped together as shown in the picture where one of the 1st place winners poses for her Mom.



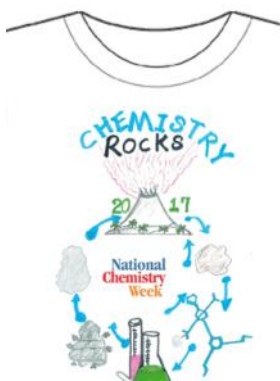
In addition to this recognition, we had a special awards ceremony on stage for all the winners at Chemistry Day at the Children's Museum of Indianapolis.



All who attended read their poems using a microphone and showed the audience an enlarged copy of their artwork which they got to keep. Recognized were 1st, 2nd, 3rd, and honorable mentions in addition to two honorary readings; one written by Mac Smith, and one written by Ana Gaston. Ana couldn't be there, but her poem was eloquently read by Dr. Gregory Dale Smith. Three

of the students were honored to have Stephanie Donovan, their teacher, show up for the awards ceremony.















In addition to ranking these illustrated poems, the judges were asked to select one of the poems that would be used for our NCW volunteer t-shirts! Victor Xiao's design was selected for the t-shirts! Congratulations to Victor Xiao for this recognition. Each winner enjoyed receiving the cash prizes of \$100 (1st), \$50 (2nd), \$25 (3rd), and \$10 (honorable mention).

It was clear by reading the poems that this participation really gets these students thinking about the chemistry in the world around them. It was also clear that some of these teachers do an amazing job of getting their pupils excited about chemistry.

I leave you with Ana Gaston's honorary poem for reflection:

A spoken word on the parts of us... that rock

| | | |
|---|--|---|
|  | Rocks are just like people This I can guarantee Were all made up of many parts Like sedimentary When meeting someone new Who knows what you will find Just like those rocks with minerals Made up of fossils over time Mix some water in the deal I present you with erosion Igneous rocks made up of lava Excess volcanoes after explosion These hot stones will glue together Before they have cooled down And so do friends and family These rocks sure can astound Metamorphic rocks are next Change from heat or under pressure They show change is good And the journey is one to treasure So, in conclusion we can learn That rocks can come alive Through what we do each day And through our attitudes alike |  |
|  | |  |
|  | |  |
|  | |  |
|  | |  |

By: Ana Gaston (Fishers HS - Grade 10)

ACS -sponsored AACT booth Celebrates Science and Teachers!

By Linda Osborn

At our ACS-sponsored AACT booth, we had two hands on science activities for the 4000+ visitors. The first one allowed them to explore simulated reactions that contribute to chemical weathering of certain rocks as it appears in nature. The citric acid in lemon juice was used to react with rocks that contain calcium carbonate. They tried reacting limestone, chalk, and quarts with the lemon juice. Limestone and chalk reacted; the quartz sample did not.

The second activity involved Bernoulli Bags where kids were challenged to blow up an 8-foot long bag using only a few breaths. We explained how to use knowledge of air pressure differences to inflate the bags with minimal effort. Families enjoyed competing to see who could blow up the bags with the largest volume of air using Bernoulli's principle.



Those that visited the booth enjoyed receiving a bag of polished rocks as our give-away. We extend a special thanks to Erica Posthuma-Adams, Lisa Spurlock-Brouwer, Arya Narayanan, Rebekah Dickerson, Jordan Knotts, Denise Durham, Selina Wilson, and Tom Xiao, who graciously volunteered at this booth!

Attracting even more attention, we also celebrated K-12 teachers! AACT stands for American Association of Chemistry Teachers, an organization that we promoted to help teachers utilize the benefits of this organization. In addition to AACT hand-outs & give-aways for all K-12 teachers, they each received a raffle ticket for a chance to win some awesome prizes (see the list below). In honor of teachers' dedication to Indiana students, this was our way of saying thank you for all that they do to influence our children and develop their interest in the wonder of science. Some of the smiling winners are pictured below, expressing extreme gratitude for this perk.



In addition to thanking the teachers, we thank the generous donors of these awesome prizes: The Heritage Group, The Indiana Section of the ACS, Business Furniture, Turn Key, The Indianapolis Colts, Vasey Heating

& Air, Conner Prairie, Fisher Scientific, Lauth, Kerrm Yau, Indianapolis Museum of Art, the Indiana State Museum and Historic Sites, Indianapolis Symphony Orchestra, Kurt Ehrhardt, Flinn Scientific, Inc, Taxman Brewing Co, Elements, PASCO, Indians, McAlister's Deli, City Barbeque, Just Nails, Broken Beaker, Olive Garden and Zoltan & Marguerite Benko.

| Drawing 1 | | Drawing 2 | | Drawing 3 | |
|------------------------------|--------------|-------------------------------|--------------|---|--------------|
| 11:30 AM | Value | 2:00 PM | Value | 4:30 PM | Value |
| Grand Prize \$500 Cash | 500 | Grand Prize \$500 Cash | 500 | Grand Prize \$500 Cash | 500 |
| Steelcase chair | 500 | Turn Key House Cleaning | 500 | Colt's Football (Team Signed) | 400 |
| 2 Colts Tickets | 296 | 2 Colts Tickets | 296 | 2 Colts Tickets | 296 |
| 2 Colts Tickets | 296 | Conner Prairie Gift Basket | 150 | \$100 Visa Gift Card | 100 |
| Indiana State Museum Mmbrshp | 80 | 2 Outback Steakhouse Dinners | 100 | IMA Membership Package | 95 |
| 4 Indians Baseball Tickets | 52 | \$80 Visa Gift Card | 80 | 2 Indianapolis Symphony Orchestra Vchrs | 80 |
| Taxman Gift Package | 50 | Tennis Lesson from Pro | 75 | McAllister Deli Dinner for 5 | 50 |
| Nylon Rope Trick - Fisher | 23 | Just Nails Mani & Pedicure | 40 | 2 Citi BBQ Dinners | 38 |
| Citi BBQ | 20 | Advanced Fossil Collection | 30 | Blue Bottle Reaction Chemical Kit | 31 |
| ChemTopic book from Flinn | 18 | Coffee Liquor - Broken Beaker | 30 | Pasco Temperature Probe | 39 |
| \$15 Olive Garden Gift Card | 15 | Experiment Book - signed (2) | 15 | Disappearing Rainbow \$32.00 | 32 |
| Drawing 1 Total | 1850 | Drawing 2 Total | 1816 | Drawing 3 Total | 1661 |

Total Value of Prizes = \$5,327



Volcanos and Sand and Geodes – Oh My! The ACS Booth at CSI

By Julie Holland Austin

As you can tell, this fall's ACS activities centered on the National Chemistry Week theme "Chemistry Rocks." As Chair of the ACS Celebrate Science Indiana booth this year, I was particularly excited about the theme since I've had a fascination with rocks and the rock cycle since I was a child. Growing up, we didn't have cable TV; however, we did have PBS and a TV show called 3-2-1 Contact which aired at 5 p.m. from 1980-1988. Those were very formative years in my education and one of my early vivid memories of SCIENCE was watching a volcano erupt on that TV show. Again, thinking back to childhood, one of the art projects that I also remember vividly was the papier-mâché volcano we made in second grade. I erupted that volcano until it was a pulpy mass of mushy paper!

So, of course, when I started to think of activities involving rocks, I thought back to the beginning of my love of science and back to the beginning of rocks – the volcano. Luckily, in this modern era of really cool kids' science toys, we were able to find a reusable volcano which was erupted an amazing 200 times over the course of the day! Along with information on the rock cycle and a new-fangled type of Lava Lamp called a "Volcano Lamp," the kids were treated a light show, a chemistry experiment, and learning material on the rock cycle.



(Watch a Volcano Lamp in-motion – it might be a fun Christmas idea for your budding Scientist in the making: <https://www.youtube.com/watch?v=GWZYB-fzcD4>)



The second station at the ACS booth contained a different type of rock: sand. Kids learned the differences between river sand (rock fragments) and beach sand (rock and shell fragments) which are both modified by chemical weathering and mechanical breakdown. We had kinetic sand boxes for the kids to play in with the explanation that kinetic sand is made possible by chemistry – again through modification of an existing product with a binder that allows you to build sand castles with sand that isn't wet!

For the grand finale at the ACS booth, we had a geode breaking station. Over the course of the day, aided by a clamp (which we had to hold down manually since we couldn't bolt it the table), a ball peen hammer, and some shop rags to make sure the rock pieces didn't hit anyone in the face or eyes, the kids broke open 350 geodes. Of course, we did think of the motto in science that we all live by – Safety First. We had both children and adult sized safety glasses which we insisted each geode breaker wear.



I had a lot of fun explaining to interested kids about how geodes form and that southern Indiana is full of them. One of the best things about this station was hearing the reluctance that some of the kids and even

the parents had about wielding a hammer and then seeing the look of surprise and happiness after they succeeded in breaking the geode and finding the beautiful crystals inside! The kids were excited about the hands-on activity and about getting to keep their prize geodes. By the end of the day, I was thoroughly rewarded when several different groups of kids came back to tell me that the geode breaking was their favorite part of the whole day! And for the parents who were interested in more geode breaking, I let them in on a little secret that I was able to buy boxes of 50 geodes for \$60 on Amazon.



All in all, it was a fantastic Celebrate Science Indiana for the ACS booth. And even after breaking hundreds of geodes, I was only hit with the hammer twice! Tamiko Porter, who was my relief for the geode breaking, walked away unscathed, though maybe a little tired!

I'd like to thank Tamiko Porter (IUPUI), Brent Reschke (Heartland Food Product Group), Tom Xiao (Elanco), Belgin Canturk (Dow), Sarah Ryan (Lilly) and Chris Bodurow (Lilly) for all of their help with the ACS booth!

Music + Chemistry in Perfect Harmony Part II: Peter Banks!!

By Julie Holland Austin

Although Part I of the ACS STEAM event Music and Chemistry in Perfect Harmony will have already taken place by the time this newsletter is published, we would like to let you know that we will be doing a Part II of this series in April 2018. The next chapter in this collaboration between the worlds of science and art will feature Peter Banks who is not only a chemistry teacher at Purcell School of Music in Bushey, UK, he is also a musician who has played violin and viola across the world! He uses his background in music to enhance the study of science.



Here's an article that I found interesting regarding his unique teaching methods: <http://www.mixdownmag.com.au/can-music-improve-students-understanding-science>

Please look for more information to come regarding another opportunity to learn more about how science and music interact and impact our lives.

Organic Division Presents Awards

This year, the Indianapolis area had 4 winners recognized by the National ACS for technical achievements in organic chemistry. Thank you to Paul Morgan for notifying the Executive Committee and Accelerator for this reason to congratulate the local area winners!

The following content by Linda Wang

The ACS Division of Organic Chemistry has named the winners of the 2017 Technical Achievements in Organic Chemistry Award, which recognizes outstanding contributions to the field of organic chemistry from bachelor's or master's chemists pursuing careers in industry or government.

The winners are **Ann M. Buyse of Dow AgroSciences**, Kenneth J. DiRico of Pfizer, Junying Fan of Bristol-Myers Squibb, William Farrell of Pfizer, **Pete Johnson of Dow AgroSciences**, Toufike Kanouni of Celgene Quanticel Research, **Ryan Linder of Eli Lilly & Co.**, John C. Murray of Pfizer, Sean Neville of Gilead Sciences, John K. Pratt of Abbvie, Jeffrey G. Varnes of AstraZeneca, Cheng Wang of Merck & Co., and **Leonard L. Winneroski of Eli Lilly & Co.**

Nominations for the 2018 awards are due Jan. 15, 2018. For more information, visit www.organicdivision.org/taoc.

Please send announcements of awards to l_wang@acs.org.

Republished with permission from C&EN News

Volume 95 Issue 46 | p. 35 | Awards

Issue Date: November 20, 2017

Obituary for Dr. James Robert Kuszewski (Aug 10, 1936-Sept 4, 2017)

Published in the Indianapolis Star on Sept. 7, 2017

"With great sadness, the family announce the death of James Kuszewski, at home following a short illness. His first wife Marie pre-deceased him in 2008, and he is survived by his brother, wife, three children and six grandchildren.

James Kuszewski was born in Milwaukee in 1936, the youngest of three children of Joseph and Anna Kuszewski. He attended St. John Cathedral High School. He earned his undergraduate degree at Marquette University and PhD at the [University of Illinois](#) Urbana-Champaign, both in organic chemistry. While an undergraduate, he was the recipient of the Konrad Adenauer scholarship, established by then-Chancellor of West Germany. He also met Marie Krinner, whom he married in 1962.



Jim's career in chemistry took him to DuPont, Scott Graphics, Keuffel & Esser, GAF, and finally Firestone Building Products, after which he retired in 2001.

He and Marie were active in their community and parish. Jim was a dedicated Fourth Degree Knight of the Knights of Columbus at Our Lady of Mount Carmel Parish in Carmel, IN.

Following Marie's death in 2008, Jim was blessed to meet Mary Fisher of Cincinnati, OH. They married in 2012 and spent five very happy years together. Jim passed away, with Mary and his children at his side, on the evening of September 4, in his 82nd year.

Family and friends will gather on Friday, September 8, 2017 at 10 a.m. in Our Lady of Mt. Carmel Catholic Church with the Mass of Christian Burial at 12 noon.

In lieu of flowers, the family requests donations be given to the Marie and James Kuszewski Memorial Scholarship Fund, PO Box 1687, Lafayette, IN 47902. Please visit www.bussellfamilyfunerals.com to share a memory and sign the guest book. Arrangements entrusted to Bussell Family Funerals, Carmel-Westfield."

Dr. Kuszewski was an ACS member for 57 years. Our condolences to his family and friends.

Newfields' (IMA) Lab wins the ACS Axial Contest for Best Lab!

Reprinted with permission from <http://axial.acs.org/2017/11/17/show-us-your-lab-contest-winner/>

Last month, ACS Axial held a contest asking readers to send in photos of their labs, classrooms, offices or wherever they do their best work. Today I am proud to announce the winner: Dr. Greg D. Smith of the [Conservation Science Lab at Indianapolis Museum of Art at Newfields](#). The 3,000 square-foot state-of-the-art analytical and research laboratory is used for the study of artists' materials.



Dr. Smith wrote in to tell me about the beautiful and unique lab at his workplace:

"Unlike the normal whitewashed, sterile chemistry labs, the art analysis lab at Newfields is decorated in a rich, inviting Arts & Crafts period style, complete with quartered oak cabinetry, hammered copper fittings, and a periodic table carved out of mahogany. The lab is also decorated with prints, tapestry, paintings, ceramics, and sculpture donated by contemporary artists working in the Craftsman tradition, all of which are used to train students in art analysis and technical art history."

Check out a panoramic image of the lab:



Take a closer look at the lab's periodic table:



The table is carved from mahogany, with a frame made of ebonized quarter sawn oak. The table was constructed by one of the lab's master carpenters, Jim Bayes, with other craftsman efforts from paintings conservator Linda Witkowski. Note, the lab was opened in 2010, so the table doesn't reference the elements added in recent years.

Dr. Smith appears as an author on two papers in *Analytical Chemistry*:

Pigment Identification by Spectroscopic Means: Evidence Consistent with the Attribution of the *Painting Young Woman Seated at a Virginal* to Vermeer

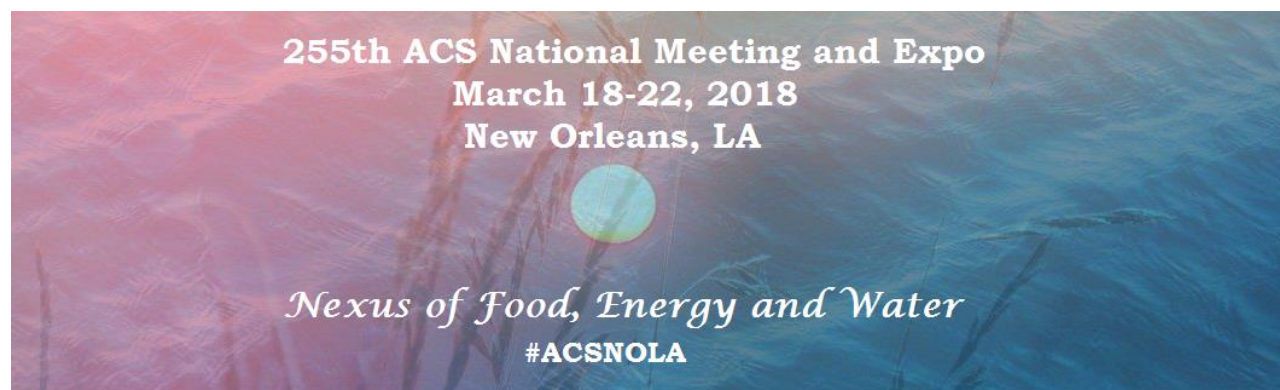
Anal. Chem., 2005, 77 (5), pp 1261–1267

DOI: [10.1021/ac048481i](https://doi.org/10.1021/ac048481i)

The Gutenberg Bibles: Analysis of the Illuminations and Inks Using Raman Spectroscopy*Anal. Chem.*, 2005, 77 (11), pp 3611–3622DOI: [10.1021/ac050346y](https://doi.org/10.1021/ac050346y)

He's also an author on the chapter "What's Wrong with this Picture? The Technical Analysis of a Known Forgery," in the ASC Symposium Series E-Book, "Collaborative Endeavors in the Chemical Analysis of Art and Cultural Heritage Materials."

Congratulations to Dr. Smith and the staff at the Conservation Science Lab at Indianapolis Museum of Art at Newfields on their beautiful lab space.

**2018 Regional Meeting Dates:**

| Regional Meeting | Meeting Dates | Meeting Location |
|--|-------------------------|------------------|
| Northeast (NERM) | June 1 - 3 | Lake Placid, NY |
| Central (CERM) | June 13 - 16 | Toledo, OH |
| Northwest (NORM) | June 24 - 27 | Richland, WA |
| Midwest (MWRM) | October 21 - 23 | Ames, IA |
| Southeastern (SERMACS) | October 31 - November 3 | Augusta, GA |
| Southwest (SWRM) | November 7 - 10 | Little Rock, AR |



Upcoming Q1 ACS Events, Activities and Deadlines

By Julie Austin

Those of us who put together the Accelerator Newsletter like to keep you informed of the myriad of future events, activities and the deadlines for submitting admissions. We are winding down the year now, but in the first quarter of 2018, there are plenty of things to look forward to!

Science Engineering Foundation of Indiana (SEFI) will host the **Central Indiana Regional Science and Engineering Fair** at Marian University on February 24, 2018. This is the first SEFI event for the year. The 30th annual **Hoosier Science and Engineering Fair** will be held March 24th at IUPUI and the 8th Annual **Celebrate Science Indiana** will be held on Saturday, October 6th. For more information, go to: <http://www.sefi.org/>



Conner Prairie's event **Passport to High Tech** is scheduled for Saturday, April 14th. **Passport to Hi-Tech** is an event for girls ages 7 to 12 to learn about careers in STEM. You can expect to find a lot of fun interactive and educational activities in the fields of computers, biochemistry, engineering, aerospace, chemistry, agricultural sciences and manufacturing. For more information, go to: <http://www.connerprairie.org/things-to-do/events/passport-to-hi-tech>

The annual **ACS Awards Banquet** will take place on Tuesday, May 15 at UIndy campus. Look for more information in Edition 1 2018 Accelerator and in your email accounts!



Ball State's Science Day will be April 7th, 2018 on Ball State's campus. Families and science enthusiasts are invited to participate in this annual day of fun and interesting science activities and demonstrations. You can expect representatives from many different organizations on and off campus, including chemistry, biology, physics as well as participation from the local high schools. For more information, go to:

<http://cms.bsu.edu/academics/collegesanddepartments/chemistry/researchcommunity/chemistryinthecommunity/scienceday>

Once again, the Local Section ACS will sponsor a poster session **"Think Like a Molecule"** on Thursday, April 18 at IUPUI. Stay tuned for more information in the spring 2018 Accelerator!



Other Non-ACS STEM Fun in Indy

By Julie Austin

The Children's Museum of Indianapolis' **ScienceWorks** presented by Dow AgroSciences is an interactive exhibit that is fun for kids and adults alike! <https://www.childrensmuseum.org/exhibits/scienceworks>.

There are lots of fun activities at the Indiana State Museum. **Science at Play**, presented by Eli Lilly is an exhibit that runs from now until January 15, 2018. <https://www.indianamuseum.org/science-at-play>. And you still have time to catch the exhibit **The Power of Poison** until February 11th.

Don't miss out on the history of Colonel Eli Lilly with the Indiana Historical Society's exhibit, **You are There: Eli Lilly at the Beginning**. At this exhibit, you can watch re-enactments of Lilly's original laboratory. This exhibit runs until January 20, 2018. <http://www.indianahistory.org/feature-details/you-are-there-eli-lilly-at-the-beginning#.Wc0STWhSyUI>

On January 18, IUPUI brings you another edition of **Science on Tap: Being the Difference**. Andy Harris, a Senior Lecturer in Computer Science will host a brainstorming session on how the School of Science at IUPUI can contribute to education in STEM. The event will take place at Blind Owl Brewing located at 5014 East 2nd Street. 21+ event. <https://science.iupui.edu/SOTjan18>

If you hear of any additional science related lectures, activities, etc. that you believe your fellow colleagues will enjoy, please email the information to ACSaccelerator@gmail.com. The Accelerator is published every 4 months (March, June, September, and December).

| 2018 Calendar of Events (ACS sponsored in bold) | | |
|---|---|---------------------------|
| ACS Volunteer Appreciation for ACS members and Special Guests | Tuesday January 9 th | TBD |
| Central IN Regional Science & Engineering Fair | Saturday February 24 | Marian University |
| Deadline for USNCO First Year Exam USNCO First Year Exam | February 16 Saturday March 3 rd | Brebeuf Jesuit |
| Hoosier Science and Engineering Fair | Saturday March 24 | IUPUI |
| Ball State Science Day | Saturday, April 7 | Ball State Campus, Muncie |
| Passport to High Tech | Saturday, April 14 | Conner Prairie |
| Think Like A Molecule Poster Session | Thursday April 18 | IUPUI |
| Awards Banquet | Tuesday, May 15 | UIndy |
| Music and Chemistry Part II with Peter Banks | April - TBD | Butler University |

| | | |
|--|------------------------|--|
| Annual ACS Baseball Night | July – TBD | Victory Field |
| International Chemistry Olympiad | July 19-29 | Bratislava, Slovakia Prague, Czech Republic |
| Celebrate Science Indiana | Saturday, October 6 | Indiana State Fairgrounds |
| National Chemistry Week | Saturday, November 3 | Indiana Children's Museum |
| | | |
| Science on Tap: Being the Difference | Thursday January 18 | Blind Owl Brewery |
| Science at Play | Until January 15, 2018 | Indiana State Museum |
| You Are There: Eli Lilly at the Beginning | Until January 20, 2018 | Indiana Historical Society |
| ScienceWorks presented by DowAgrosciences | Ongoing | Indiana Children's Museum |

Newsletter Editor and Design
Julie Holland Austin
ACSaccelerator@gmail.com

Design
Andrea Moberly
andrea.moberly@hrglab.com

The Indiana Section of the ACS publishes the Accelerator at least three times a year. The Section is not responsible for statements or opinions printed in this publication. The Editor is responsible for all unsigned and staff articles.

All logos for ACS and affiliates were reprinted with permission. To submit corrections, information, events, stories or anything else, please contact Julie Holland at ACSaccelerator@gmail.com

