



ACS Newsletter

The Newsletter of the Southern Arizona Section of
the American Chemical Society

Spring 2016



2016 Section Officers and Committee Chairpersons

Chair:

Pat Schumann

Chair Elect:

Amy Graham

Immediate Past Chair:

Charles Weidner

Councilor and Memberships:

Steve Brown

Alternate Councilor:

Brooke Massani

Secretary:

Simon Bilodeau

Treasurer:

Pedro Flores-Gallardo

Archives and History and Internet:

Phil Keller

Community Activities:

Grazyna Zreda and Pat Schumann

Education Group:

Stacey Jones-Willy

Awards and Grants Chair:

CJ Pommier

Public Relations :

Brooke Massani

Womens Chemistry Group:

Sharon Gardlund

Publications:

Tom Selegue

Letter from the Chair

Dear ACS Members,

Your Southern Arizona Local Section of the American Chemical Society (SAZACS) has been busy as usual this past spring. Within the pages of this newsletter, you can find a number of activities that groups within the local section were involved in. For more information, photos, and upcoming events, please visit the SAZACS website: <http://sazacs.sites.acs.org>. Also check out our Facebook page (Southern Arizona ACS) and give us a like! Thanks to Brooke Massani for maintaining our social media presence. A special thank you is certainly also in order for those who volunteered and/or organized community or outreach activities. To all of the members of the executive committee and local section volunteers, thank you.

The Younger Chemists Committee (YCC) has been very active under the tutelage of Pedro Flores, hosting several events you can read about below. If any younger chemists in the area are interested in the activities of the YCC, please contact Pedro at pefloresgallardo@pima.edu. There are networking and career development activities were held throughout the year, and the local section even has a grant for younger chemists to travel to scientific meetings. Please check it out on our website and Facebook page. The local student affiliates at both U of A and PCC have been hosting a number of community outreach events, highlighted on our Facebook page with pics and videos of smoke and fire and all the rest of the cool chemistry demos they do. Also, see the reports from the Education Committee and Community Outreach Committee. One of the participants in the Chemist Celebrate Earth Day (CCED) art contest placed second nationally- way to go Andrew! I can't forget to give kudos to CJ Pommier for her fine job of organizing the Awards reception in April, providing a chance to recognize the amazing teachers and volunteers right here in Tucson. In 2015, the SAZACS section was nominated as a finalist in the ChemLuminary award for best small to mid-size section, and we were runners-up! This is entirely a reflection of the quality volunteers we have working within the section- way to go!!

In the first half of 2015, the section hosted two dinner meetings. The first was a talk by U of A Professor Dr. Jeff Pyun entitled From Garbage to Plastic to Energy on his group's research into polymeric sulfur for use in high energy density S/Li batteries.

The second spring dinner meeting was a talk from a local forensics scientist at the Tucson Police Department- Mr. William Loomis. His talk, Science in the Courtroom: TPD Crime Lab & Forensic Toxicology gave all of us an inside look at some of the chemistry used in forensics work. Mr. Loomis is a graduate of the U of A chemistry department, having been taught by some of our local section volunteers.

Follow us on



Letter from the Chair (cont'd)

Our fall dinner meetings started with Prof. Joe Vinson from the University of Scranton, who did a tour of four Southwest local sections (Central NM, Southern AZ, Central AZ, and Southern NV). Prof Vinson's talk The Chemistry and Biochemistry of Marijuana in Humans, was well attended and generated substantial discussion around the topic.

The second meeting in the fall involved a tour of Biosphere II, followed by a dinner and talks by two U of A scientists involved in research using the new Landscape Evolution Observatory (LEO) platform at the Biosphere. It was amazing to learn about these 30 meter by 11 meter trays containing a million pounds of soil each, and how the high tech sensors are monitoring water, carbon and energy-cycling processes. One thing I noticed about this event was that it attracted an entirely different audience than our normal dinner meetings. It's good to see new members taking advantage of the programs we offer!

The third dinner meeting was Oct 30 at Viva Caribe and Dr. Krishna Parameswaran presented a talk entitled Sustainable Mining- An Oxymoron or Prescription for the Future? The well attended talk attracted a wide audience including some U of A environmental science students who had some interesting questions.

Thanks to all of the speakers as well as attendees for generating some buzz about the local chemistry community. I know my successor, Pat Schumann, will have an active agenda of dinner meeting for 2016. Look for the announcements of future dinner meetings in your email. We also appreciate comments regarding the meetings, both good and bad. It's one of the ways we can make sure the meetings are interesting and informative for you. Send any comments to chuck.weidner@gmail.com.

Once again, we had our Holiday reception at the Doubletree and it was very well attended. Grazyna Zreda had the NCW poem contest entries on display.

Our 2016 elections were held for chair, chair-elect, secretary, treasurer and councilors, with the results listed below. With the section in such good hands it is easy for me to transition into my role as past chair.

Chair-elect: Amy Graham	Treasurer: Pedro Flores-Gallardo
Chair: Pat Schumann	Councilor (1 yr): Steve Brown
Secretary: Simon Bilodeau	Alt. Councilor (1 yr): Brooke Massani

For those of you interested in being a part of a group or committee email the committee chair or myself- we will put your time to good use! Committees within your local section can be found on the website for the local section- <http://sazacs.sites.acs.org/organization.htm>.

Finally, I'd like to thank all of the members of the SAZACS section for letting me serve as your chair this past year. It has been a pleasure to work with the volunteers to bring quality activities to our members over the past year, and I look forward to the same in 2016!

Charles Weidner
2015 Chair, Southern Arizona ACS section
chuck.weidner@gmail.com

News from the Education Committee

On April 17th thirteen educators from local high schools, Pima College and UA met with Dr. Edward E. Prather an Associate Professor at Steward Observatory, and the Department of Astronomy, Executive Director, Center for Astronomy Education at the University of Arizona. Dr. Prather led a discussion of his research and experience involving college instructors (from all disciplines) on active learning strategies and how to implement these in lecture, lab or discussions. The discussion was quite lively with the desire to continue the discussion and apply the active learning techniques to chemical lessons. The plan is to meet again prior to fall semester.

In addition, members of the Education Committee- Stacey Jones-Willy, Steve Brown and Pollyanna Wikrent met at Pima downtown campus to pilot a list serve for Chemical Educators to share information. We are still working on the list serve.

Early in 2016 the committee is planning on a spring semester meeting to discuss changes in AP chemistry, an update of the U of A critical thinking project and a discussion about Pima students success at the U of A.

2015 Southern Arizona ACS Section Awards

50 year Members:

Dr. Ronald Brown
Dr. Sheldon Clare
Dr. David Comfort
Mr. Ronald Duncan
Dr. Henry Goldstein

Dr. Judith Kintner Gilmartin
Dr. Craig Marken
Mr. David Shade
Dr. Marvin Tanzer



60 year Members:

Dr. Vernon Feil
Dr. Richard Hansen
Dr. John Schaefer
Mr. Harold Vincent
Mr. Alan Williams
Dr. James Woodbrey

2015 Outreach Volunteer of the Year

Ms. Patricia Schumann

High School Chemistry Teacher of the Year:

Mr. Bernie Diffin Catalina Magnet High School

Craig Aspinwall Undergraduate Travel Award

Ms. Tiffany Bledsoe Pima Community College

Chemistry Olympiad National Qualifiers

Liam Donovan Catalina Foothills High School
Sean Moore and Alec Camp Tanque Verde High School
Chris Bohlman and Joshua Smith Empire High School

In appreciation for volunteer service:

Brooke Beam	Steve Brown	Lonnie Burke	Pedro Flores Gallardo	Stacey Jones-Willy
Phil Keller	Silvia Kolchens	Anne Padias	CJ Pommier	Pat Schumann
Tom Selegue	Daekyu Sun	Chuck Weidner	Pollyanna Wikrent	Grazyna Zreda

Ellen Caldwell, Sharon Gardlund, Shirley Bemis and the many other volunteers and members of WCG

SMACS (Ivan Garcia and all the other student members)

Pima CC Chemistry group (Jasper Bloodsworth and all other student volunteers)

News from the University of Arizona Student Affiliates

Chemistry Club (SMACS) at the University of Arizona has had a successful year. Fall semester brought in an influx of freshman ready to dive into the world of chemistry. Several presenters, including Taylor Szyszka (a graduate student from the University of Sydney in Australia), spoke about the importance of undergraduate research and what the next years hold in store for the incoming freshman.

Throughout the semester, members volunteered with the Household Hazardous Waste Program by sorting potentially dangerous chemicals; helping to keep Tucson clean. Also, members got a lot of hands on experience working with Tucson's youth by attending classrooms throughout Tucson, Spooktacular Science at Flandrau Science Center, and helping Women's Chemistry Group with Funfest.

For chemistry week, Chemistry Club put on a magic show for the public. The next big show will be April 16, 2016. Chemistry Club will be featuring FIRE verses ICE! Two teams, FIRE and ICE, will compete for the people's choice. People of all ages are invited to come out and decide whether FIRE or ICE is better!

Katie Durham

Chair, U of A Student Affiliates

cdurham@email.arizona.edu

SAZACS Community Outreach

2015 Chemists Celebrate Earth Day

This year's theme of CCED was *Climate Science – More Than Just A Weather Report*, exploring climate science and the role chemistry plays in the environment. The local Section participated in the Tucson Earth Day Festival and sponsored the Illustrated Poem Contest for K-12 students. We received 23 poster entries, from which the winners were selected in three age-group categories. Winners received gift certificates from SAZACS and were qualified to compete in the national ACS contest. Andrew Smith, a second grader from Agua Caliente Elementary School in Tucson won 2nd place in the national competition.



On Saturday, April 18 fifteen volunteers manned a booth at the Earth Day festival at Reid Park. Volunteers included members of SAZACS executive committee, representatives from Pima College Chemistry Club, as well as several high school students from Tanque Verde High School. They demonstrated scientific principles while making bracelets with uv-sensitive beads, experiments with acid-base indicators, and a trivia game for the public.



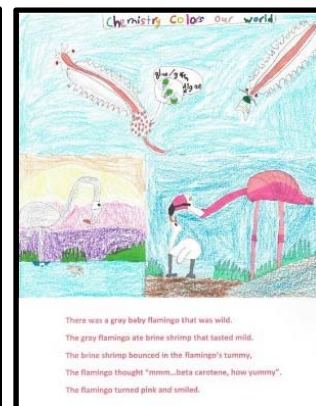
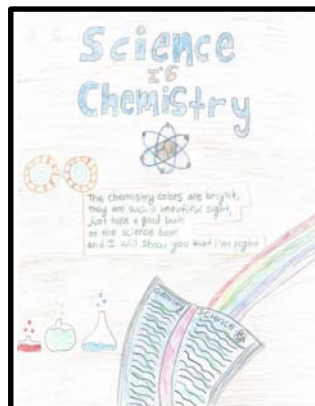
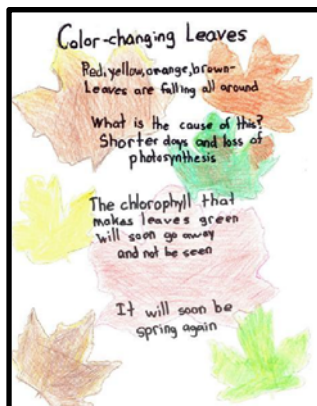
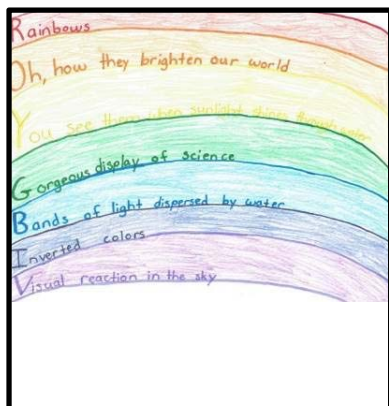
National Chemistry Week

During the 2015 National Chemistry Week SAZACS held an Illustrated Poem Contest for students in grades K-12. This cross-curricular activity linking Science with English Language and Arts inspires students to write and illustrate a poem using the NCW theme "Chemistry Colors Our World". SAZACS received over 80 entries from schools in Tucson area.

- Abby Smith from ACES won 1st place in 6-8 grade category.
- Emma Mullins, also from ACES, won 1st place in 3-5 grade category.

Winners received gift certificates for \$25.00 and their artwork advanced to the National ACS Contest.

- Phedra Kisiel from Kellond Elementary and Andrew Smith from ACES received Honorable Mention for their artwork. Both of them received \$15.00 gift certificates.



Congratulations to all the young artists and their teachers who help us sponsor ACS activities in Southern Arizona!

Pima Community College Chemistry Club

The Pima Community College Chemistry Club continued through its second year having many successful activities that brought in large amounts of attendance.

We had many noteworthy events for the club in the Spring 2015 and Fall 2015 Semesters.

Included in this was our second Science Night in which Dietz K-8 brought in many students into the college where we were able to show many demonstrations and help promote the studies of Chemistry to the children and their parents.

In March the club brought several members to the ACS Spring Meeting in order to display the poster titled Fostering Student Success: Advanced Research Topics and Research at a Community College. We were also able to receive the Commendable Award that was given for the previous work of the club in the 2013-2014 semester.



Science Night .Taft giving a demonstration



Denver Spring Meeting

Towards the end of the semester we were able to host our Second Annual Science Tournament that brought in roughly 20 students. This event served as a farewell to the Spring 2015 semester and allowed students to participate in a fun event.

The Fall 2015 started off with great news for the club. The Pima Community College Chemistry Club will receive the Outstanding Award! This award means a lot to us as there have been many great contributors that have helped this club receive this distinction.

In October the Club had a successful showing at the Boo Bash, demonstrating many spooky experiments for children. During this event several hundred children were served and were able to learn about the interesting aspects of Chemistry. Also during October the club went to Dietz and participated in the United Way's Days of Caring.

The 2015 year had many more events throughout the year that helped promote Chemistry toward students and future students.



2015 Fall BooBash

Jasper Bloodworth
Chair, PCC Student Affiliates
jbloodworth@mail.pima.edu



Second Annual Science Tournament

Volunteer Opportunity: Help Translate Outreach Materials into Other Languages

Translate ACS outreach materials into your native language so that the activities can be made available on the ACS website in a variety of languages. Email outreach@acs.org to volunteer.

Women's Chemist Committee (WCC)

The Women's Chemistry Group brought their 2015 spring season to a close on Friday evening May 29, as 11 of the ladies gathered for our annual May Happy Hour at Casa Molina del Norte, sponsored by the SAZACS section. A good carload of gently used professional clothing for Your Sister's Closet (a YWCA outreach) and toiletries for Primavera were donated at the event.

Spring 2015 WCG activities included monthly breakfast "planning and socializing" meetings at Beyond Bread on Campbell, Jan-April, early 1st Friday mornings. Sara Herman and Taylor Szyszka, UA class of 2015 and leaders of the UA SMACS club joined us in March to say goodbye. They were recruiters and suppliers of many volunteers from UA for our Silly Putty booths at the annual fall SCITECH FUNFEST in 2013 and the AZ STEM Adventure in 2014. Their help and enthusiasm will be sorely missed!

We were happy to add two new active members to our ranks, Kathy Feuling, who retired from her long held PCC East Campus chemistry faculty position in May, and Yvonne Levenson, who retired last fall from Raytheon.

WCG members Ellen Caldwell, Merita Clark, Sharon Gardlund, Judy Gilmartin, Elaine Mackenzie and Anne Padias participated in judging at the Southern Arizona Science and Engineering Fair (SARSEF) at the TCC on March 10. Letters of commendation, Barnes and Nobles gift certificates (courtesy of SAZACS) and certificates of merit were awarded to best project done by young ladies at each grade level K to 5. The awards reflected emphasis on solutions to environmental problems, the theme for 2015. Helped by an increased emphasis on STEM in the elementary grades, an exceptionally large number of projects awaited us, especially in the 4-5 grade level; overall close to 400 projects!

Meanwhile, members are working on exhibit upgrades, especially our "Red Dyes" exhibit pictured opposite. To be added: actual dyed fibers done using the red obtained from the cochineal beetle (the prickly pear "cactus bug") by Judy Gilmartin.

The "Silly Putty" event presented at the Arizona STEM Adventure at PCC Northwest Campus on Nov 13 was the focus of the WCG Fall '15 agenda, including readjusting our presentation to fit an excellent new venue, a large PCC laboratory classroom, which proved perfect for our needs. Eight WCG members enlisted the help of 10 UA SMACS members, 5 outreach minded ladies from Oro Valley, and one spouse to aid in this endeavor, and we were joined by a member of the PCC NW lab staff and 4 PCC students. In this our 8th annual staging of this activity we sent over 720 students home with their own self produced and highly colored bag of "polymer" and an excitement about "doing chemistry"!

Preparations for this event involved a group glue diluting morning at Shirley Bemis's, a "Prep and Demo" Potluck for all volunteers at Silvia Kolchens, a venue and new restaurant inspection outing, and finally a thank you luncheon for 22 of the volunteers after the event at Ole!, sponsored by the SAZACS.



Ellen Caldwell and Judy Gilmartin working on the SARSEF forms



Women's Chemist Committee (WCC) cont'd



The WCG Fall activities also included three breakfast meetings and a December luncheon at La Parrilla Suiza where we completed assembly of gifts for the Emerge! Center Holiday Store and delivered to the Shelter's headquarters.



Plans for Spring 2016 include three Beyond Bread breakfast meetings, judging at the SARSEF Science Fair at TCC on March 3, a two day exhibit at Tucson Botanical Gardens targeted for April 23-24, and an early evening Happy Hour event May 6 in which we'll gather gently used back-to-work apparel for Your Sister's Closet at the YWCA.

All ACS members are invited to share in these activities and you need not be a chemist to join in, just have an interest in STEM outreach, and a desire to join in the "nosh and nibble" sessions that are an integral part of all our endeavors!

Sharon Gardlund WCG chair
sgardlund@yahoo.com

In Memoriam

We were much saddened to learn of the death of Dr. Elizabeth Willott on May 2, 2015, who succumbed to a short bout with a fast acting cancer.

For the last five years, Elizabeth, an assistant professor in the UA Entomology Department, served as the curator of the Butterfly Magic exhibit at the Tucson Botanical Gardens.

Dr. Willott had earned a PhD in Biochemistry at the U of A in 1989 and after post-doctoral work returned to the U of A in 1996. She contacted the WCG via SAZACS with an invitation to exhibit at Tucson Botanical Gardens in 2009, and had been our sponsor and supporter every year through our last TBG exhibit in Spring 2014.



Younger Chemist Committee (YCC)

The Younger Chemists Committee started its activities this year. In the spring we hosted two program-in-a-box webinars. The first one was about “Chemistry on the Silver Screen” that took place on February 24th at Sullivan’s Steakhouse and the second webinar was more targeted to small chemical businesses and entrepreneurs called “How to Create a Safety Culture while Growing your Business” which took place at North Restaurant on April 28th. Also, we hosted a Chemistry Career Fair for the first time on April 25th. We had a few exhibitors and recruiters as well as a professional resume writer for the attendees. We are hoping to host chemistry career fairs twice a year, the next one happening this fall.

Moreover, on May 23rd, we received notice that we got a grant from national YCC to help with costs for another event of our choice. Also, we have been promoting the Younger Chemists Travel Grant to cover travel costs of up to \$750 to an ACS meeting or workshop. You can apply and learn more about this grant at the local section website.



“How to Create a Safety Culture while Growing your Business” live webinar on April 28th at North Restaurant.



“Chemistry Career Fair” at Pima Community College East Campus on April 25th, 2015.



“Chemistry on the Silver Screen” live webinar on February 24th at Sullivan’s Steakhouse.

The YCC group continued its activities during the second semester of 2015. We hosted a program-in-a-box webinar sponsored by national YCC and Proctor and Gamble. The live webinar “Tales of Lab Safety: How to Avoid Rookie Accidents” took place on October 30th at Sullivan’s Steakhouse. Attendees learned more about safety in the laboratory and engaged in activities and discussions about lab safety while enjoying free appetizers provided by YCC.

We ended our activities for 2015 by hosting the “Fostering Innovation” workshop by the ACS Leadership Development Courses at the University of Arizona on November 14th. This workshop was facilitated by Dr. Frankie Wood-Black. YCC provided free scholarships worth \$125 for registration to each participant. The group was very diverse ranging from professors, high school teachers, chemists, scientists and undergraduate students.

YCC selected Iman Daryaei, PhD candidate student at the University of Arizona, as chair for 2016.



Members enjoying appetizers during the “Tales of Lab Safety” live webinar.

Pedro Flores Gallardo
(pefloresgallardo@pima.edu)
and
Iman Daryaei
(imandaryaei@email.arizona.edu)
Chairs, YCC of Southern Arizona



Members engaging in activities during the “Fostering Innovation” course.

251st National Meeting and Exposition

Computers in Chemistry

March 13-17, 2016 San Diego, CA

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