



ACS Newsletter

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

Spring 2014



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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>. A special thank you is certainly in order for those who volunteered and/or organized community or outreach activities. Another special thank you goes to Dr. Philip Keller who maintains the website and keeps the website current. To all of you, thank you.

As you page through this newsletter, you will find the activities that the Women's Chemistry Group, Education Group, Community Activities Group and the University of Arizona Student Affiliates of ACS have been involved with. Noteworthy is the appearance of the Pima College Student Affiliates of ACS. This group is quite new within the local section (Fall 2013). Like the University of Arizona Student Affiliates of ACS, the Pima College Student Affiliates of ACS have held a number of activities as well as attending the Spring 2014 National ACS meeting in Dallas. In particular, I want to highlight the emergence of a "Younger Chemists Group" within your local section. I certainly want to encourage members of the ACS that are under 40 to become involved in this group; please contact Pedro Flores Gallardo at pfloresgallardo@pima.edu. Those over 40, such as myself, have plenty of options for becoming involved with your local section. Opportunities for being involved in your local section follow.

Cont'd on page 2



The ACS Network, the social platform of the American Chemical Society, allows you to network with others and to collaborate with colleagues in a safe and secure environment.

<https://communities.acs.org/>

Letter from the Chair (cont'd)

This newsletter also documents two dinner meetings that the local section held this spring. The first dinner meeting took place at Thunder Canyon Brewery where the head brew master Mr. Kyle Ratcliff provided a tour of the brewery complete with the details of the brewing process. The second dinner meeting took place at Metropolitan Grill where Dr. Gary Kordosky informed us about the economics and chemistry of copper extraction; this is an important industry for Arizona. Two more dinner meetings will be scheduled for fall-winter 2014.

A reminder, this fall the nominations committee will be looking for names of ACS members who are interested in becoming an officer in the local section. Please email lburkel@pima.edu if you would like to serve. For those of you interested in being a part of a group or committee email me as well.

Committees within your local section can be found on the website for the local section i.e., <http://sazacs.sites.acs.org/organization.htm>.

Last, comments are always welcome, so please email me at lburkel@pima.edu and thank you for being an ACS member, attending our dinner meetings and community events, as well as taking an interest in our newsletter.

Lonnie Burke Chair, SAZACS

Younger Chemists Committee (YCC)

We are putting together a Younger Chemists Committee in the Southern Arizona Section of ACS. Our objectives are to provide networking and community outreach opportunities and to promote involvement in our local section activities. We plan to have job fairs with STEM companies and industries from the Tucson area as well as speakers from different fields. This YCC group is looking for recent graduate undergrad/graduate students, post-docs and professionals not yet established who are 40 years of age or younger. However, anybody is welcome to provide any input. We have written a starter grant to have our first big event this fall.

Also, as part of our recent activities, I was invited as younger chemist informal consultant to the meeting of the Board of Trustees for the ACS Insurance Program that took place on Saturday, May 3 here in Tucson. I was able to provide insight about what a younger professional is looking for and ideas on how to reach out to them. I was invited to attend their next meeting which will be in San Francisco during the Fall ACS National Meeting.

If you would like to get involved and start being part of a professional organization, this would be a good place to start. You can contact me with your questions, ideas and interests at pefloresgallardo@pima.edu

The Younger Chemists Committee is part of the American Chemical Society advocating and providing resources to early-career chemists and professional in the chemical sciences and related fields. To learn more about YCC visit ycc.sites.acs.org

Pedro Flores Gallardo, Chair, Younger Chemists Committee SAZACS

Who inspired you to work in the chemistry field?

Remember them by [making a gift](#) in their honor to the ACS Scholars Program and their name will be listed in the ACS Annual Report. Your gift combined with the devoted attention of mentors will help ACS Scholars reach for their dreams in chemistry. Make a gift in honor at www.acs.org/giving.

Spring Doings: Women's Chemistry Group 2014

The Women's Chemistry Group brought a productive and enjoyable spring season to a close on Friday evening May 2, as the ladies gathered for their annual May Happy Hour at Casa Molina del Norte, sponsored by the SAZACS section. Contributions of gently used professional clothing for Your Sister's Closet (a YWCA outreach) and toiletries for Primavera were made at the event.

The highlight of our spring activities was the presentation of exhibits at the Tucson Botanical Gardens, 9:30-1 PM, April 11-12, which attracted a very steady stream of interested visitors and participants. This has been an annual event for the WCG since 2009, designed to provide chemistry related information and outreach for the influx of people coming in for the "Butterfly Magic" Event. Recurring themes for three TBG demonstration tables have been: "Plants as Indicators" (WCG member Shirley Bemis uses red cabbage extract saturated in strips of coffee filter paper for hands-on household staple acid/base testing); "Plants as Dyes" (started as Easter Egg dyeing, now silly putty sample making, colored with natural or commercial dyes) and "Plants as Energy Sources" (working models of orange juice and potato clocks on display). 3' by 4' poster boards provide background information on each of these activities, and handouts are distributed.



A discussion with a traditional rug maker and WCG member Ellen Caldwell on tour with the Southern Arizona Symphony in Oaxaca, Mexico last summer led to a new exhibit focus. Her meeting inspired the design of a fourth table, highlighting a dye produced by a local "critter" found all around town in a white fuzzy substance which can be spotted on many prickly pear paddles: the cochineal beetle.

The ancient Aztecs of Mexico discovered that dried cochineal masses from cactus paddles provided a marvelous crimson dye, which conquistador Cortez immediately introduced to Europe, where red dye sources of the time paled in comparison. It immediately became the dye of choice for British officers' redcoats, Roman Cardinal's robes, and high society outfittings. This same dye has continued in use to modern times, although superseded by the chemical dyes developed in the 1850's from coal tar. It is used in cosmetics and food colorings, leading to a furor over being used for coloring in Starbuck's strawberry frappuccino (non vegan, non Kosher!).

Cont'd on page 4

Women's Chemistry Group 2014 (cont'd)

For our exhibit we utilized a paddle dotted with cochineal nestings, samples of a dried cochineal mass mixed with lemon juice (crimson) and baking soda solution (purple), plus a historical background handout, and a 3' x 4' poster on the history of red pigments and their sources.

Other Spring 2014 WCG activities included breakfast "planning and socializing" meetings at Beyond Bread on Campbell, first Friday in Jan, Feb, and April, and a lunch meeting in March at Mosaic Café.



The WCG participated in sponsored judging at the Southern Arizona Science and Engineering Fair (SARSEF) at the TCC on March 11, in which 6 members judged K-5 exhibits and passed out letters of commendation, Barnes and Nobles gift certificates (courtesy of SAZACS) and certificates of merit suitable for framing to best projects done by young ladies at each grade level.

Tucson Earth Day Festival 2014

The Southern Arizona Section participated in the Tucson Earth Day Festival for the 10th consecutive year. The festival was held at Reid Park on April 12th. Twenty volunteers from the University of Arizona, Pima Community College and Tanque Verde High School performed demonstrations and hands on activities exploring the Wonders of Water, this years ACS theme for Chemists Celebrate Earth Day. Activities included exploring of surface tension and natural filtration systems. The event which included many other organizations and vendors promoting earth friendly items and ideas.



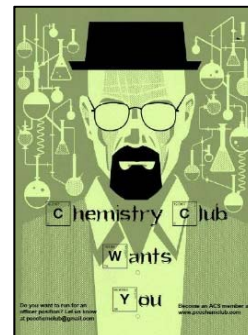
Pictures provided by Grazyna Zreda

Pima Community College Chemistry Club

The Pima Community College Chemistry Club has been very active during its first year. Our student affiliates have been part of many activities which include community outreach, events on different PCC campuses, field-trips, outings and attending their first ACS national meeting in Dallas, TX.



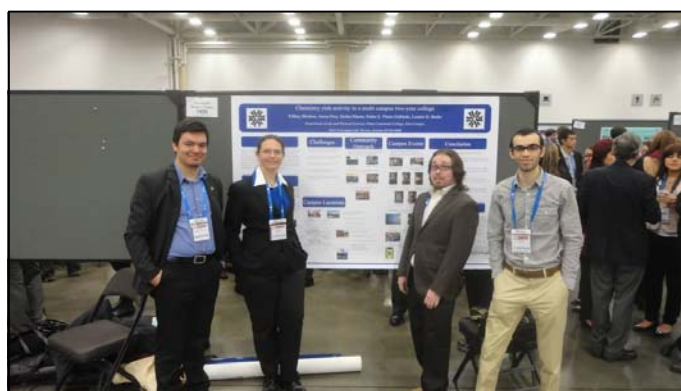
Interesting presentations were planned during their regular meetings. Their first presentation was "The Chemistry behind Breaking Bad: Real or Fiction?"



We started off this semester with the program-in-a-box, which was part of a webinar about the Chemistry of Fragrances. We also set up a table with a demo and a periodic table of goodies.



Like the ACS Local section, our ACS Student Affiliates had a private tour of the Thunder Canyon Brewery.



From March 16-20, three students attended the 247th ACS National Meeting in Dallas, TX. They presented a poster titled "Chemistry Club Activities at a Multi Campus Community College". The poster was well received by the audience with more than 50 people stopping by.



For Earth Day, we joined SAZACS to do a water filtration demo for visitors.



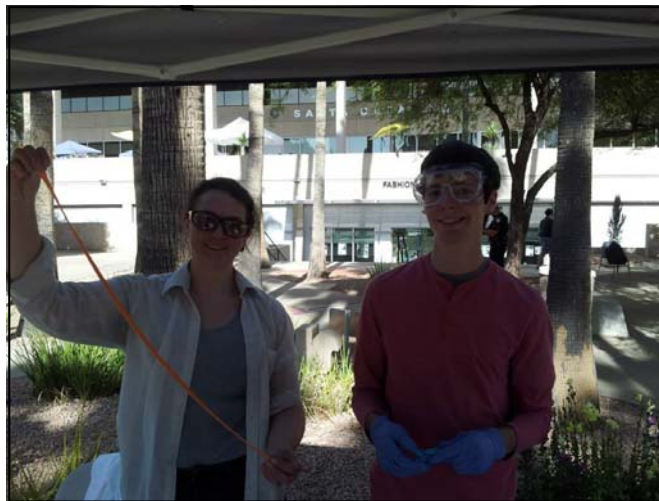
We hosted a speaker from the TPD Crime Lab. Our students had the opportunity to learn more about the science being conducted at TPD to solve cases and about job and internship opportunities.

Pima Community College Chemistry Club (cont'd)



We participated at the 8th Annual Autism Walk/Run and Resource Fair With SAZACS and the University of Arizona. We did chemistry demonstrations for kids at the event.

Our first participation at an official event at another PCC campus was during the Splash Carnival at West Campus. The kids loved making slime.



On Saturday April 19, we had a very successful VIP Science Night for our adopted Dietz K-8 School. We had over 100 people who were able to do hands-on activities in chemistry, biology, astronomy and physics.



We are ending this academic year with a Tour of the Chemistry and Biochemistry Department at the University of Arizona. Later that same day we are having our first Inter-Campus Science Tournament.

This first year has been fun and full of activities. We will continue with more activities next year at the PCC East Campus as well as other PCC campuses. We strive to promote chemistry in the Tucson area.

Southern Arizona Local Section Awards



60 year Members:

Dr. John Aronson
Dr. Charles Bertsch
Dr. Charles Grabiell
Dr. Boone Owens
Dr. William Remers
Dr. Karl Vorres

50 year Members:

Mr. Kenneth Barratt
Dr. Jack Cole
Dr. John Enemark
Mr. Harry Heimann
Mr. Arnold Martin
Dr. Frank Sheldon
Dr. George Ware



Special Awards:

Volunteer Service and Dedication

Dr. Derek Redmore

High School Chemistry Teacher of the Year:

Dr. Grazyna Zreda, Tanque Verde High School

Past Chair (2012-13):

Dr. Dhanasekaran Muthu, Past Chair

College Educator Excellence in Teaching Award:

Ms. Kathy Feuling, Pima Community College

In Appreciation for their volunteer service:

Brooke Beam

Stacey Jones-Willy

CJ Pommier

Sadiq Shah

Steve Brown

Phil Keller

Derek Redmore

Daekyu Sun

Lonnie Burke

Silvia Kolchens

Joaquin Ruiz

Chuck Weidner

Austin Ellis

Dhanasekaran Muthu

Pat Schumann

Pollyanna Wikrent

Pedro Flores Gallardo

Anne Padias

Tom Selegue

Grazyna Zreda

Ellen Caldwell, Sharon Gardlund, Shirley Bemis and other members of the Women's Chemistry Group
Kevin Cornett and all student members of SMACS

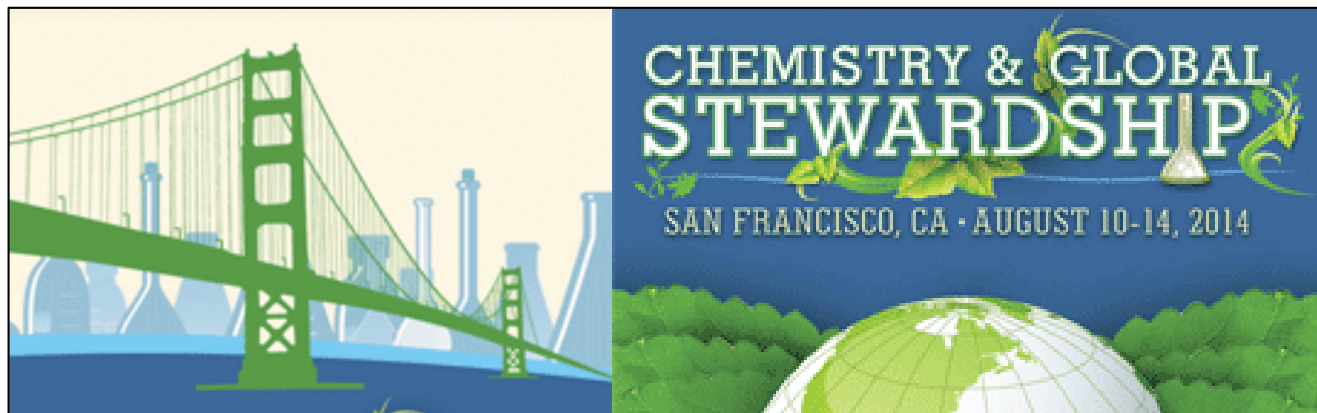
Thanks to the awards selection committee (Stacey Jones-Willy and Anne Padias) for their help

SAACS Education Committee

We have had 2 very successful meetings this semester (Feb 7 and April 4) with chemical educators from the University of Arizona, Pima College and teachers from various high schools in the Tucson area. Both sessions were on a Friday evening to discuss changes in the UA general chemistry program. At the first session Dr. Talanquer presented research supporting a new way of conceptualizing and thinking about chemistry which enhances understanding. At the second meeting Dr. Talanquer presented activities and questions that were used in the pilot program using the new approach. Chemical Instructors were impressed and expressed interest in continuing the discussion with possible plans to use develop curriculum for their classes. The next meeting will be sometime at the end of the summer.

Stacey Jones-Willy Committee chairman

248th National Meeting and Exposition



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the ACS Member and Subscriber
Services Department at
service@acs.org - or telephone
them 8:30 - 5:00 pm ET
at 800-333-9511

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