

Silicon Valley Chemist

Silicon Valley Section

American Chemical Society

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DECEMBER 2018 NEWSLETTER TOPICS

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Connect with Chemists

An early morning chat with fellow chemists

Thursday, December 20, 2018, at 7 a.m.

Coupa Café

538 Ramona Street, Palo Alto

Contact Ean Warren (ewarren@scvacs.org)

for more information

or ask for ACS at Coupa.

Chair's Message

Melody Esfandiari



Hope you had a relaxing Thanksgiving break and enjoyed the clear skies. Last month was heart-breaking to see how our California skies were covered with smoke from the devastating fires. This is my last Chair message. It has been an honor being the Chair of the Silicon Valley ACS section, and it's been fun connecting with you with these Chair messages. I was fairly new to the section when I ran for the Chair-elect position, and I have been amazed by how much

our officers and volunteers do for our community. We have a very active section, filled with many enthusiastic individuals holding several dinner meetings, teach the teachers workshops, award ceremonies, bringing the No Belles performances to 4 local universities, brewing competition, and hosting different events for the national chemistry week are just a few examples from memory. If you get a chance, I hope to see you at our future events.

I would like to point out a couple of upcoming events for 2019. Our Harry and Carol Mosher Award dinner will be on January 24th at Santa Clara Biltmore Hotel. Prof. Gary Molander from the University of Pennsylvania will be talking about "Single Electron Processes Enabling Organic

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National Chemistry Week Extravaganza Chemistry is Out of the World!

by Jigisha Shah

This year, Silicon Valley ACS celebrated National Chemistry Week with great pomp and splendor. A variety of chemistry-related activities was offered to involve the general public in exploring the many different facets of chemistry: hands-on activities, workshops, school visits, and live demonstrations of experiments.

We kicked off the festival season with 'Teach the Teachers' (TtT), our popular event that provides teachers with materials to lead an entire classroom through an array of activities related to chemistry in outer space. An eager group of elementary, middle school and homeschool teachers joined us on October 13, 2018 for a fun day of scientific demonstrations aligned with the 'Chemistry is Out of the World' theme of National Chemistry Week. Topics included splitting water (as is done in space stations), making spectrosopes, plane polarized light and ultraviolet beads. All the teachers left with huge bags of goodies to

replicate these activities in their own classrooms. The highlight of the day was Dr. Scott Sanford's talk about samples brought back from space missions. He was a team member on the Stardust comet and Hayabusa and OSIRIS-REx asteroid sample return missions.

Dr. Sanford is an astronomer and NASA space scientist who has used the combined techniques of infrared astronomy and laboratory astrophysics to judge a number of new molecular species in space, many of which are of interest to exobiology. He is also a co-investigator on several sample return missions. It was an extremely engaging talk and he included a number of animations and 3D images (some of which were animated!)

On October 20, 2018, Abby Kennedy staged the section's primary NCW public outreach event at the San Jose Martin Luther King Public Library, gathering volunteers from colleges, acquiring materials for hands-on demos for hundreds of youngsters. This

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New Website URL for our Section

To reflect our new section name, Silicon Valley ACS, we purchased and moved our site from scvacs.org to <http://svacs.org>. You can now access all our events, programs, awards, newsletters, and other information at the new site. In addition, we have added a calendar to make it easier to find activities and events that might interest you. The old site continues to be active and will redirect your browser to the new site.

National Chemistry Week, continued from front page

year, scientists from NASA participated in the celebration as well. Kids watched different lights with diffraction gratings, made UV beads bracelets, learned about chromatography and made slime! Kids also spun the Wheel of Chemistry Fortune to win prizes and played with kid-favorite “Boo bubbles” (opaque bubbles filled with CO₂ gas). This also happens to be my son Krishiv’s favorite event of the year and I have watched him learn about DNA, geodes, slime and spectra over the last few years!

We ended the celebrations with a splash – Bay Area Science Festival (BASF) in AT&T park. For its eighth year running, the free event drew record crowds of curious kids and their families. Kids made their own spectrometers and UV beads bracelets. They also made glitter slime. Glitter represented stars and slime represented the expanding universe! Students from Stanford University’s chemistry club, led by Anna Ellman, spent hours helping families through these activities. We had several little ones up to their elbows in slime and at least one kid left in tears at 4:30 pm because he didn’t want to stop making slime!

Lastly and most importantly, I would like to express my utmost gratitude to volunteers who donate their time and expertise. This



Slime Customers

MLK library program, TtT and BASF are the result of the hard work of many dedicated and talented volunteers. It all starts with our local section’s enthusiastic members. They recommend, test, and review experiments; collect supplies and materials; prepare the kits with the help of undergraduate students from colleges around us; recruit sponsors and volunteers; contact venues; and make these amazing events happen. I would especially like to thank Abby Kennedy, Alex Klevay, Anna Ellman, Linda Brunauer, Natalie McClure and Sogol Teschler. Additional credit goes to students from Santa Clara University, San Jose State University and Stanford who gave up their Saturdays to help assemble the material, lead demonstrations and participate in activities to super enthusiastic kids. Without you all, National Chemistry Week would never be as successful!

The world today relies greatly on Chemistry. The general public, however, is still intimidated by it. There are many creative, compelling and inspirational ways of engaging the public. Science festivals like National Chemistry Week is one such way of engaging the public who would rather stay away from science. National Chemistry Week creates a celebratory environment around chemistry and attracts the attention and potential participation of everyone living and working in a community.



Young kids enjoying boo bubbles

Chair’s Message, continued from front page

Synthesis.” The Teacher-Scholar Community College Award Ceremony will be on February 21st at Foothill College. If you have never been to Foothill College campus, this is a great opportunity. They have a gorgeous campus in Los Altos and a team of wonderful faculty. In particular, their science building and facilities are state of the art. Professor Kathleen Armstrong from Foothill College is our Community College Teacher-Scholar Award recipient this year.

I’m sad that I’m finishing up my term as your Chair, but I’m also happy to be passing on the responsibilities to Grace Baysinger, our new Chair. I know that she will do great. I’m pretty certain that our newsletter team will be very happy, as her message will not be submitted two minutes before the deadline.

Lastly, I would like to wish you and your family a wonderful holiday season, a merry Christmas, and a happy new year. I also wanted to share with you one small experience I learned last year. For years, I would pick our Christmas tree based on the price tag (the cheapest tree was the winner), and what annoyed me the most about the holidays was the constant need to vacuum the house. Last year, we got a tree late so our only choice was a Noble Fir, which did not shed at all. This made my holiday season a bit less messy. I hope your holiday season is filled with joy and love. Please remember that you can still connect with me via [our Facebook page](#). The local ACS would love to hear from you.



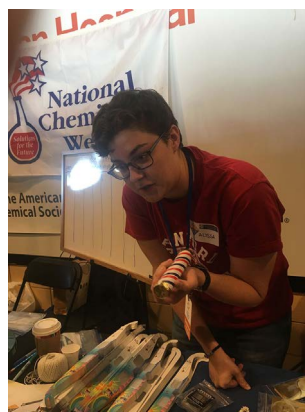
Our volunteers



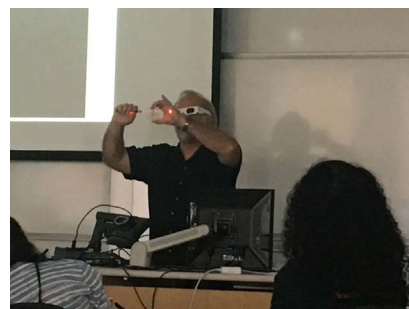
Lara demonstrating expanding universe with glitter slime



Holly demonstrating UV beads



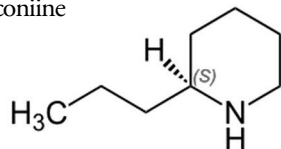
Alyssa making spectrometers



Scott showing off stardust aerogel

Chemistry Quiz

Hemlock (*Conium maculatum*) contains toxic piperidine alkaloids, such as (S)-coniine



What is the molecular target of these alkaloids responsible for toxicity in humans?

The answer will appear in next month's newsletter.

Last Month's Chemistry Quiz

What are the 7 metals of alchemy?

Gold ☉

Silver ☾

Mercury ☿

Copper ♀

Iron ♂

Tin ♃

Lead ♄

Welcome to the Silicon Valley Section of ACS

Each month, the section receives a spreadsheet from national ACS with the names of members new to our section. The members are either new to ACS, have transferred in from other areas, or are the newest members – students. To welcome you to the section and get to know you, the Executive Committee offers new members a free dinner! To encourage you to attend a monthly section seminar meeting, we would like you to be our guest. When you register, make certain to mention that you are a new member and you and a friend will be our guests. The seminar meetings are held at a number of local venues. If you are unable to attend in the evening, perhaps you would join us for an outreach event, like judging a science fair, proctoring the Chemistry Olympiad or participating in a National Chemistry Week event in October. Then, there is our annual wine tasting and awards picnic in July. The local section is a volunteer organization. Please attend an event, volunteer to help and get to know your local fellow chemists. Welcome!

New SVACS Members

Fadi Almoussa Alibrahim
David Keith Anderson
Avery Baerlin
Dr. Taegon Mark Baik
Dr. Caleb A. Bates
Dr. John E. Blume
Kiana Brewer
Elizabeth Carey
Jada M. Carter
Dr. Eefei Chen
Kari Bianca Christiansen
Alyssa Paige Clay
Christin Cudahy

Alan Culwell
Peter Dahlberg
Kaiyu Fu
Brian D. Gallagher
Dr. Joshua Gober
Deirdre Gonzales
Yibei Gu
Dr. Tara Sue Hiley
Yue Ju
Dr. Matthew Landry
Frank Lee
Ruibin Liang
Morgan MacKenzie

Dr. Essam Metwally
James Mok
Dr. Suzette K. Pangrle
Joshua Pottel
JuanCarlos Rojas
Dr. Georgy Samsonidze
Dr. Jillian Sanzone
Dr. Mike Sekar
Dr. Samantha Elizabeth Shockley
Han Wang
Dr. Haiming Zhang
Roseanna Zia

Upcoming Events at Stanford University

- **Meet the Makers Autumn 2018**
Wednesday, December 12, 2018, 9:30 am
Stanford University, Building 550, Atrium
<https://events.stanford.edu/events/813/81391/>
- **Stanford Bio-X Frontiers in Interdisciplinary Biosciences Seminar: A View into the "Century of Biology" and Agilent**
Tuesday, January 15, 2019, 4:00 pm
Clark Center Seminar Room S361
<https://events.stanford.edu/events/808/80870/>
- **Stanford Bio-X Frontiers in Interdisciplinary Biosciences Seminar, "Beyond Editing: How to Explore and Engineer a Living Genome Using Dead CRISPR Molecules"**
Thursday, January 17, 2019, 4:00 pm
Clark Center Seminar Room S360
<https://events.stanford.edu/events/808/80871/>
- **A Conversation about CRISPR with Jennifer Doudna**
Thursday, January 24, 2019, 7:00 pm
CEMEX Auditorium, Graduate School of Business (tentative)
<https://events.stanford.edu/events/813/81328/>
- **more Bio-x programs**
<https://events.stanford.edu/byOrganization/169/>

CHEMPLOYMENT ABSTRACTS

CHEMPLOYMENT ABSTRACT 4005

Position Title: Inclusive Excellence Postdoctoral Fellow

Job Description: Duties include but are not limited to:

A. The postdoc's research project, supported through NIH and NSF grants, will be the development a microfluidic device for the the sorting and analysis of single cells for cancer research in Dr. Paul Abbyad's Lab. The postdoc will teach a quarter-long undergraduate lecture and lab (or equivalent load) in the Chemistry/Biochemistry Department each year and would mentor undergraduates in the research lab.

B. Fulfilling all responsibilities associated with assigned course.

Specific responsibilities are posted at <https://jobs.scu.edu/postings/7940/>

C. Starting Date: Early 2019

QUALIFICATIONS DESIRED:

Education: Ph.D. in chemistry and biochemistry or closely allied field

Experience: Experience in microfabrication, microfluidics and microscopy Strong commitment to teaching and undergraduate research

LOCATION, SALARY, EMPLOYER:

Job Location: Santa Clara, CA

Salary: \$57,000 annual salary; benefits eligible; sponsorship for work visa application; housing assistance

Description: Santa Clara University is a comprehensive Jesuit, Catholic university located in California's Silicon Valley with an ACS-approved undergraduate program. It is an EO/AA employer committed to excellence through diversity, and welcomes applications from women, persons of color, and members of historically underrepresented groups.

Application Instructions: Submit your application on <https://jobs.scu.edu/postings/7940/>



SILICON VALLEY SECTION
AMERICAN CHEMICAL SOCIETY
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To receive an email when our newsletter
is published on our web site, sign up at:

<http://svacs.org>

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Secretary	Jigisha Shah	315-289-5115	jssheth@syr.edu
Treasurer	Ihab Darwish	650-624-1389	darwishis@yahoo.com

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2018-2020	Natalie McClure	650-906-7831	nmclure@drugregulatoryaffairs.com

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Newsletter

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ChemPloyment Abstracts

Director:	Liang Cao	liang.cao@aol.com
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FUTURE EVENTS 2019

- Jan 24** SVACS Harry and Carol Mosher Award
Single Electron Processes Enabling
Organic Synthesis
Professor Gary Molander
University of Pennsylvania
Location TBD
- Feb 21** SVACS Community College Teacher-Scholar
Award ceremony and reception honoring
Dr. Kathleen Armstrong
Foothill College, Los Altos Hills, CA
- Mar 31** ACS National Meeting
– Apr 4 “Chemistry for New Frontiers”
Orlando, FL
- Apr TBD** Dr. Bonnie Charpentier
President of the American Chemical Society
and active member of our local section
Basque Cultural Center, South San Francisco
- Apr 21-27** Chemists Celebrate Earth Week
SVACS outreach events
This year’s theme: “Take Note: The
Chemistry of Paper”

Click on links for more information or
see this newsletter at <http://svacs.org>