

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

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OCTOBER 2015 NEWSLETTER TOPICS

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Connect with Chemists

Meet fellow local chemists
for an early morning coffee.

Look for Ean at a table with molecular models.

Thursday, October 29th, 2015 at 7a.m.

Coupa Café, 538 Ramona Street, Palo Alto
(a half a block off from University Avenue)

Chair's Message

Ashley Piekarski



We had a very successful collaboration with the California and Sacramento ACS sections at UC Davis on September 12th. The talks given by UC Davis Faculty

were extremely informative and a tasty adventure as well! Dr. Moshe Rosenberg gave an excellent talk about cheese along with the cheese selections which paired nicely with Dr. Andrew Waterhouse's delicious wine tastings! Dr. Selina Wang wrapped up the event with a presentation and tasting of olive oil. Based on her presentation, I will be more careful

October Seminar Dinner Meeting

W. E. Moerner, 2014 Chemistry Nobel Laureate

"The Story of Light and Single Molecules, From Early Spectroscopy in Solids to Super-Resolution Nanoscopy in Cells and Beyond"



Professor W.E. Moerner

Harry S. Mosher Professor, Department of Chemistry
Biophysics Program and Molecular Imaging Program
Stanford University

Stanford Professor W.E. Moerner was awarded the Nobel Prize in Chemistry in 2014 for his work in super-resolution fluorescence microscopy. The three winners of the 2014 prize – Moerner, Eric Betzig of the Howard Hughes Medical Institute, and Stefan Hell of the Max Planck Institute – pioneered techniques that capture optical images on the nanometer scale.

Moerner established himself early in the field of super-resolution spectroscopy at the start of his career in another research institution in the Santa Clara Valley ACS area – the IBM Almaden Research Center. In 1989, he and his IBM group reported measuring the light absorption of a single molecule.

His group at Stanford has extended the 2D and 3D super-resolution imaging into cells, capturing the motion of cellular components in three dimensions in real time. They also study the photodynamics of single trapped biomolecules in solution.

Professor Moerner will speak about the road to the Nobel Prize, how it arose out of spectroscopy at an industrial lab, and the impact of where it is leading.

Date: **Tuesday, October 27, 2015**

Time: 6:00 p.m. Social Hour
7:00 p.m. Dinner
8:00 p.m. Presentation

Location: Michael's at Shoreline
2960 N Shoreline Blvd.
Mountain View, CA

Cost : \$30 early registration
Half price for unemployed/retired/
student
Free to attend just lecture at 8pm,
but must register for headcount

Registration: www.scvacs.org

Register by Tuesday, October 21st.

about which extra virgin olive oil I purchase at the store! Overall, it was a very lovely event. We will consider hosting another event in the future due to the popularity!

I wanted to notify you all of an exciting event I have been helping out for the past couple of years. The event is called the "Teach the Teachers" workshop which is organized by Juanita Ryan at RAFT (<http://www.raft.net>) and sponsored by Gilead Sciences (<http://www.gilead.com>). The event is scheduled for Saturday, November 14th at Mission College (<http://www.missioncollege.edu>). The theme

this year is based on the National Chemistry Week theme: Chemistry Colors our World! (www.acs.org/content/acs/en/education/outreach/ncw.html) Juanita and her team at RAFT come up with a plethora of experiments for K-12 teachers to learn and take back to their classrooms. Each year, teachers sign up for this workshop which is an all-day event. The money goes toward buying supplies for the classrooms! We need volunteers for this event on Friday (November 13th) and Saturday (November 14th). ACS volunteers help

continued on next page

Chair's Message, continued from front page
set-up and work with the teachers on the day of the event to explain any difficult chemistry concepts. One of the best parts is having lunch with the teachers. They are always excited to meet scientists! If you are interested in volunteering for this event please email me at ashley@scvacs.org. I hope to see you there!

Dr. Lisa Balbes Wins Howard & Sally Peters Award



Lisa Balbes, a councilor for the ACS St. Louis Section, received the Howard & Sally Peters Award, given by the ACS Division of Chemistry and the Law.

The award was presented at the August 2015 ACS national meeting in Boston in recognition of her achievements in addressing non-traditional careers for chemists.

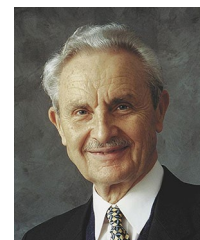
Balbes, founder of Balbes Consultants, is author of the book, *Nontraditional Careers for Chemists: New Formulas in Chemistry*. She has also served as a career consultant and international workshop presenter for more than 20 years.

The ACS Division of Chemistry and the Law (CHAL) established the Peters Award to recognize contributions to non-traditional careers in chemistry in honor of chemists Howard and Sally Peters – long-term members of the Santa Clara Valley Local Section. For more information on the Peters Award, see the inaugural award announcement in the Silicon Valley Chemist www.scvacs.org/newsletter/news1212.pdf

Harry and Carol Mosher Award to Dr. Atilla Pavlath

Atilla Pavlath is the winner of the 2015 Harry and Carol Mosher Award, awarded annually by the ACS Santa Clara Valley Section to recognize and encourage outstanding work in chemistry, advancing chemistry as a profession, and service to ACS. The award consists of an engraved plaque, travel expenses and an honorarium.

Dr. Pavlath served as ACS president in 2001. He has also served ACS as a member of the Board of Directors and twice chair of the ACS California Section.



The Award will be presented at a joint dinner meeting with the ACS California Local Section on Thursday January 21, 2016 at the Basque Cultural Center in South San Francisco. Further details will appear in our December newsletter.

The Mosher Award is named for Harry S. Mosher, a late professor of chemistry at Stanford University, and Carol W. Mosher of SRI International. The husband-and-wife chemists were founding members of the Santa Clara Valley Section.

http://www.acs.org/content/acs/en/funding-and-awards/awards/acs-local-section-awards/awards-santa-clara-valley/santa-clara-valley_hary-carol-mosher-award.html. and http://www.scvacs.org/Local_Folder/Awards.html#Mosher

Applications Being Accepted for the Younger Chemist Leadership Development Award

Each year, the Younger Chemists Committee (YCC) organizes a Leadership Development Workshop that is geared toward younger chemists and is held in conjunction with the ACS Annual Leaders' Conference as part of the ACS Leadership Development system. The Leadership Development Workshop is designed to help young chemists develop into highly skilled leaders in the Society and in their chosen profession by:

- Developing leadership skills that will be useful to members at work and in their volunteer roles.
- Identifying the value and benefits of being an ACS volunteer leader to leaders and their employers.
- Acquiring knowledge and share best practices through networking with other ACS leaders, governance and staff, and
- Having fun through engaging and interactive sessions throughout the conference.

The YCC grants 15 Younger Chemist Leadership Development Awards that support ACS members who are less than 35 years of age to travel to and participate in the annual ACS Leadership Institute and the Leadership Development Workshop. Fifteen award winners are selected annually.

Applications for the Younger Chemist Leadership Development Award will be accepted between August 1st and November 1st. All application material must be received by November 1st for consideration. For more details visit the YCC website.

Call for Nominations Petitions

By Karl Marhenke, SCVACS Secretary and Ashley Piekarski, SCVACS Chair

It's nearly time for our annual election, as mandated by our bylaws, to elect or re-elect a Secretary, a Treasurer, and a Chair Elect. Of our Section's 7 Councilors and 7 Alternate Councilors, three of each have terms which expire at the end of 2015. All of these people must be re-elected, or replaced.

All of the present office holders except those in the Chair Elect, Chair, and Immediate Past Chair can choose to run for re-election, and doing that has become the norm. This often results in a ballot with no contested races, e.g., two names on the ballot and directions to vote for no more than two.

We ask for your help to change this often (and justifiably) criticized situation: nominate yourself or a friend or colleague for one of the above positions. All we need is a petition, consisting of a sheet of paper with:

- The name of the office
- The name of the proposed candidate
- The signatures and printed names (so that we can read them and verify their eligibility to sign) of 15 or more Section members.

The proposed candidate may be one of the signers, so, if you want to run for one of the open positions, you only need 14 more signatures. Please send petitions to: *Ashley*

Piekarski, 3000 Mission College Blvd. MS #17, Santa Clara, CA 95054. Petitions must be received by Saturday, October 31, 2015.

Section Affiliates cannot participate in the election in any way. Student Members cannot run for office, but they may sign petitions and they may vote.

The qualifications for running for office are:

1. Membership in the Santa Clara Valley Section (except as noted above)
2. Agree to serve if elected

If you are interested, please do not hesitate to contact Ashley Piekarski by email (ashley@scvacs.org) and mailing your petition!

The Peters Farewell Chocolate Tour



Howard and Sally Peters (aka Mr. and Mrs. Chocolate) have just completed their farewell chocolate tour. The Peters are well-known throughout California and the ACS for their years of entertaining talks on "Chocolate - Food of the Gods".

On their 2015 farewell tour, the Peters presented five chocolate talks - with samples and prizes - in five days to five ACS local sections near New York City.

The fortunate sections included New York (at Queensborough Community College), Lehigh Valley (at PSU Berks in Reading, PA), Eastern New York (Albany), Mid-Hudson (Culinary Inst. of Am. at Hyde Park) and Connecticut Valley (CCSU at New Britain, CT).

For more information see the 'chocolate articles' in <http://www.scvacs.org/newsletter/news0912.pdf> or Google keywords howard sally peters chocolate chemist.

Share Connect Succeed

American Association of Chemistry Teachers

The Santa Clara Valley Section American Chemical Society

supports local educators by paying

half of the \$50 membership fee

or all of the \$50 membership fee on recruiting two others

Benefits of AACT Membership

- ✦ **Chemistry Solutions** - online resource for and by chemistry teachers
- ✦ AACT resource library, lesson plans, labs
- ✦ **ChemMatters** subscription
- ✦ Common Core & Next Generation activities & teachers' guides

Participate in this offer → http://www.scvacs.org/Local_Folder/AACT.html

Distribute this flyer → http://www.scvacs.org/Local_Folder/AACT_Flyer.pdf



Chemistry Quiz

Digoxin is a cardiac glycoside that has been used to treat various heart conditions, including atrial fibrillation, atrial flutter, and heart failure since the 18th century. What is the common name for the plant from the genus *Digitalis* from which it was isolated?



Last Month's Quiz Chemistry Quiz

Tyrian purple dye was a highly prized pigment in antiquity. The great expense of producing it resulted in purple-dyed garments being symbols of wealth or royalty. What was the source of the primary pigment: 6,6'-dibromoindigo?

Answer: Tyrian purple is a secretion produced by several species of predatory sea snails in the family Muricidae.

November 10, 2015, SCVACS Monthly Meeting Establishing and Protecting Your Intellectual Property



Join us to discover how to properly protect your IP in the early stages of developing your company as well as how to take full advantage of current laws to maximize your IP

coverage for the long run.

The American Chemical Society Industry Member Office offers 'Program in a Box' - an initiative tailored to the needs of small business and industry professionals. The program is

broadcasted live nationwide and attended locally in small groups.

"Establishing and Protecting Your Intellectual Property" is the topic of the second event in this series, taking place on Tuesday, November 10th at 4pm. The first event of the series took place in April on "How to Create a Safety Culture While Growing Your Business". November's speakers include Washington, DC, patent attorneys Robert Koch of Milbank and Justin Hasford of Finnegan.

This event combines a live broadcast and

real-time Q&A with an onsite program hosted locally and simultaneously nationwide. Evans Analytical Group (EAG) generously provides our group a centrally located conference room in their facility at 810 Kifer Road, Sunnyvale. The local Santa Clara Valley ACS chapter provides refreshments, encouraging networking. The event is offered at no cost to attendees as a public service of the ACS to support the small business culture.

Registration is required and opens early October on <http://scvacs.org>.

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There's Life after Cheddar

by George Lechner

On September 12, members of our local section were paired with the California and Sacramento sections to experience the tastes and flavors of cheese, wine and olive oil at the joint meeting held at the Robert Mondavi Institute's Silverado Sensory Theater on the campus of UC Davis. Dr. Moshe Rosenberg, Professor of Dairy Engineering at UC Davis (UCD), gave us an interesting and entertain-



ing talk on "Chemistry of Cheese Diversity". This included information on the origins and 2,000-3,000 varieties of cheeses that have been around for some 12,000 years. Milk from cows, yaks, goats, etc., is processed to produce curd, which then is converted carefully to cheese. There are many types of cheese that can be described as hard, semi-hard, extra hard, soft, odorous, high salt, with "eyes", and moldy. Dr. Rosenberg said "There is Life after Cheddar".

Dr. Andrew Waterhouse, Professor of Enology at UCD, presented us a fascinating discussion of wine chemistry and the effects of



grape vine location, soil conditions, sunlight exposure and genetics that affect the attributes of the final wine product and why a particular variety, pinot noir, for example, will have different qualities depending on geography, soil and shade.

We were treated to several sets of wine/cheese pairings that were delightful and tasty. This was followed by a tour of the LEED Platinum Teaching and Research Winery, where students learn about the chemistry of wine and wine making in a "state of the art"

facility from grape growing, harvest, fermentation and aging to producing a fine wine.

Dr. Selina Wang, Director of Research at UCD Olive Center, talked about the olive droppings from all the olive trees on campus and the efforts to mediate the occurrence of accidents, slips and falls from the slippery mess. The result was the genesis of the Olive Center and research on olive oil. She discussed olive oil chemistry and gave us some samples of tasty and not-so-tasty oils, which are good for salads and cooking to suit your taste.

Following the lectures and tastings, a reception was held in the lobby with more wine



and networking. There was a presentation to honor the 50- and 60-year members of the Sacramento Section.

All in all, it was a fun event and wonderful opportunity to meet other chemists. Kudos to Ashley Piekarski, our Chair, and to the Sacramento and California local sections. Let's do it again!

Welcome to the Santa Clara 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 spouse (or friend) will be our guests. The seminar meetings are often the 3rd Thursday of the month at a local spot, somewhat convenient to the entire section. If you are unable to attend in the evening, perhaps you would join us for an outreach event, like judging a science fair, participating in the Chemistry Olympiad, or 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!

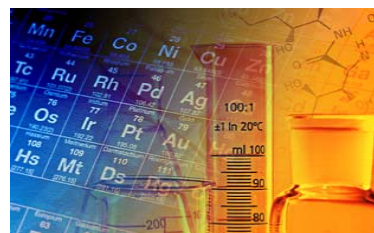
New Members for August

Dr. Dean Antic	Devleena Shivakumar	Matthew Scott Jeffreys
Tina D. Balsara	Justin M. Sturgess	Dr. Justin Kim
Andrew Beharry	Fred Michael Tomlin	Andrew Klein
Claudio Canizares	Dr. Howard Turner	Dr. Vineet Kumar
Lina Chan	Dr. Boaz Vilozny	Zuqin Liu
Jianhua Chao	Dr. Quan Wang	Radu Mihaila
Dehui Deng	Dr. Yingcai Wang	Dr. Marion H. O'Leary
Dr. Irina A. Dotsenko	Dr. Yuko Wasada-Tsutsui	Max Osipov
Denise R. Eubanks	Sarah Weaver	Dr. Senthil Perumal
Dr. Matthew J. Greaney	Elizabeth Webster	Derek Popple
Dr. Natalia Jouravel	Euna Yoo	Dr. Shailise Ross
Amandeep Kaur	Matthew Zhou	Jeffrey Steven Kerr Rossini
Terry Kellar	Dr. Jonathan Brown	Timothy Ruckh
Guy James Laidig	Chelsea Carman	Dr. Zhe Rui
Andrew Lankenau	Dr. Aroop Chandra	Scott Michael Shepard
Dr. Ravi Kumar Laxman	John I Jen Chen	Jigisha Sheth
Nian Liu	Tilani De Costa	Jaskiranjeet Sodhi
Chun-Yaung Lu	John Michael Ellison	Dr. James Su
Hareem Maune	Dr. Eric S. Handberg	David Wang
Julie Newdell	Jeremiah Hong	Dr. Guangyi Wang
Chi Phung	Dr. Mani Jayaraman	Zimeng Wang



Department of Chemistry
Stanford University

30th Annual Johnson Symposium



OCTOBER 9, 2015



David Baker (University of Washington) ♦ Ben Davis (University of Oxford)
Andreas Kirschning (Leibniz University of Hannover)
Kyoko Nozaki (University of Tokyo) ♦ Mike Varney (Genentech)
John Lechleiter (Eli Lilly)

Registration is now open!

johnsonsymposium.stanford.edu

Student, staff, faculty discount available with password.

Please email chemistry-events@stanford.edu for additional details.

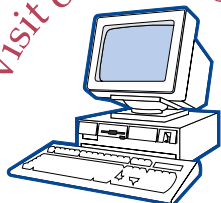
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Director:	Liang Cao	liang.cao@aol.com
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FUTURE EVENTS

- Oct 9** The 30th Annual Johnson Symposium
Stanford University Chemistry Department
<https://johnsonsymposium.stanford.edu/>
- Oct 10** National Chemistry Week, SCVACS-led
hands-on activity open to all children
Martin Luther King Library, San Jose, CA
- Oct 22-Nov 7** 5th Annual Bay Area Science Festival
The largest science festival in the Bay Area
<http://www.bayareascience.org/>
- Oct 27** SCVACS monthly Seminar Dinner Meeting
Dr. W.E. Moerner, Nobel Laureate in
Chemistry
The Story of Light and Single Molecules
Michael's at Shoreline, Mountain View, CA
- Nov 6-8** ACS Western Regional Meeting 2015
California State University, San Marcos
<http://wrm2015.sites.acs.org/>
- Nov 10** SCVACS monthly meeting
With ACS National Program-in-a-Box
Establishing Your Intellectual Property
Evans Analytical (EAG), Sunnyvale
- Nov 14** SCVACS Teach-the-Teachers Workshop
Hands-on workshop for local K-12 teachers
Mission College, Santa Clara