

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

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SEPTEMBER 2016 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, September 8, 2016, at 7 a.m.
Coupa Café, 538 Ramona Street, Palo Alto
(a half a block off from University Avenue)

October Seminar Announcement

– Flavors of Chemistry –

The Chemistry of Wine and Cheese including wine and cheese tastings

October 1, 2016 2 - 6 p.m. Activities and Recreation Center, UC Davis Campus

We are pleased to announce the return of a very popular event from last year: our Flavors of Chemistry event. Professor Moshe Rosenberg, Professor and Specialist in Dairy Engineering and Technology in the Food Science and Technology Department at UC Davis, will speak on the topic of "The Chemistry of Cheese." He will be followed by Professor Andrew Waterhouse, Professor of Enology in the Department of Viticulture and Enology at UC Davis, speaking about "The Chemistry of Wine." Their talks will be followed by a selection



of wine and cheese pairings.

This event will bring together members of four ACS Local Sections: Santa Clara Valley, California, Sierra Nevada, and Sacramento.

The District VI Director of ACS, Dr. Paul Jagodzinski, will attend and also briefly address the attendees.



**Flavors of Chemistry:
The Chemistry of Wine and Cheese
including wine and cheese tastings**

Date: October 1, 2016

Time: 2 - 6 p.m.

Location: Activities and Recreation Center
UC Davis Campus

Parking is free on campus on weekends

Tickets available now.

Chair's Message

Jane Frommer



At the ACS national meeting in Philadelphia last month there was an abundance of technical presentations in the fertile interdisciplinary zones between chemistry and bio/agro/medicine. Examples included symposia on Controlling Zika Vector Mosquitos, The Chemistry, Safety & Technology of GMO Foods, and Chemical Neurotransmission: What Are We Thinking?

You can hear and view *directly* the authors speaking about these interdisciplinary advances with the ACS pressroom's posting of *video interviews*. Some examples follow.

In a symposium on how chemists are involved in the Obama administration's BRAIN program - Brain Research through Advancing Innovating Neurotechnologies - *Watching Thoughts and Addiction Form in the Brain* describes cell-based brain-implanted detectors of neurotransmitter release. The detectors - optical biosensors that emit light that is captured with two-photon microscopy - distinguish between norepinephrine and dopamine.

Combining the topics of energy and diagnostics, *Batteries You Can Swallow to*

Enable Future Edible Medical Devices describes batteries made with nontoxic melanin pigment to someday power ingestible devices for diagnostics and therapy.

Addressing the need to distinguish viable pharmaceutical products from falsified or degraded counterparts, a paper card was displayed containing sets of reagents that detect materials or functional groups found in active pharmaceutical ingredients, degradation products or common fillers. *Paper-based Detection of Falsified or Degraded Drugs* demonstrates the card's chromatographic activity, coupled with visual indicators, in differentiating between degraded and viable antibiotics.

In a refreshing event to boost the careers

continued on next page

Chair's Message, continued from front page

of younger scientists, C&ENews hosted the symposium *The Talented 12: Twelve Young Chemical Scientists Whose Next Moves You Won't Want to Miss*.

The twelve each took the podium and described their science under colorfully named monikers such as 'proteomics

provocateur', 'contaminant catcher', 'molecule machinist', and 'image interrogator'.

In case this sounds familiar, *the August 22, 2016 edition* of C&E News featured many aspects of these twelve young scientists' lives.



Become a Science Coach

The ACS Science Coaches program pairs chemists with teachers in elementary, middle, and high schools. Teachers accepted into the program have the opportunity to form a valuable relationship with a chemist who volunteers in their classroom or interacts with them through a digital forum.

What is an ACS Science Coach?

ACS Science Coaches are **chemists** who **volunteer** with a teacher for one school year. Chemists can serve as a Science Coach in two ways:

• Science Coaches One-on-One:

A chemist and teacher partner for one school year. The Science Coach and teacher select one another and apply together to the program. Or, a chemist or teacher apply individually and are matched with a nearby participant (note: this does not guarantee a One-on-One partnership). Partners interact a minimum of **six** times in one school year. A **\$500 donation** to enhance science education is made to the schools of teachers in Science Coaches One-on-One.

• Science Coaches Groups:

A private, virtual forum comprising one chemist who answers questions, contributes to discussions, and provides chemistry advice to three teachers. Teachers and chemists interact in the group at least **once a month**. A donation is unavailable to teachers in a Science Coaches Group.

Participating teachers must be a member of the ACS American Association of Chemistry Teachers (AACT). The Santa Clara Valley ACS supports local educators and volunteers by paying half of their \$50 membership fee, or all of their \$50 membership fee for recruiting two others. The AACT is not just for chemistry teachers. It is full of resources for anyone interested in sharing the wonders of science. Find instructions [here](#) for reimbursement of

membership fees. Click [here](#) for a pdf to share with friends and colleagues.

Visit the American Chemical Society [website](#) for details about participating in Science Coaches as a chemist coach. You do not need to be a member of ACS or AACT in order to participate as a chemist volunteer.

Learn more and apply, please visit www.teachchemistry.org/sciencecoaches.



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 at a local spot, somewhat convenient to the 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 July

Paresh Agarwal
Dr. Geoffrey Barrall
Amy M. Cagulada Sandberg
Scott Campit
Dr. Aesop Cho
Alicia D'Souza
Hanqing Fan
Dr. Elena Ferri
Dr. Robert C. Haushalter
Dr. Li-Chih Hu
Ilan Jen-La Plante
Dr. Satish Kumar

Yan Li
Dr. Ashenafi Damtew Mamuye
Randy Mehlenbacher
John Daniel Merritt
Robert W. Newberry
Byeongtaek Oh
Stacey Pereira
Dr. Pasit Phiasivongsa
Dr. Karen M. Ruble
Daniel Schick
Dr. Parag K. Shah
Emily Shanoski

Russel Shearer
Dr. Allyson K. Sia
Sarah Synnstedt
Jiro Tsukahara
Michael Tycon
Neelam Vaidya
Dr. Punitha Vedantham
David Wang
Sarah White
Kevin S. Williamson
Jordyn Wolfand

– Reminder – September Dinner Seminar The Information Landscape for Chemists at Work and Play Grace Baysinger

Head Librarian and Bibliographer,
Swain Chemistry Library, Stanford University

Date: Wednesday, September 14, 2016

6:00 p.m. Social Hour

7:00 p.m. Dinner

8:00 p.m. Presentation

Location: Michael's at Shoreline
Mountain View, CA

<http://michaelsatshoreline.com/>

Cost: \$30.00

\$15.00 student

Breast of Chicken, Coq au Vin

Mushroom Crepes

Registration: <http://scvacs.org/>

Questions: Sally Peters 650-854-4614

Reservations should be made by September 7th, stating your name, address, company/school affiliation, number of people in party and each one's dinner choice. If you are unable to honor your reservation, please cancel by Monday, September 12th.

National Chemistry Week 2016: Volunteering Opportunities Galore!

Hands-on science experiments for children are among the many activities planned for area residents during this year's celebration of National Chemistry Week, October 16-22. This year's theme is "Solving Mysteries through Chemistry" and will feature the fascinating and varied chemistry of fibers, forensics and more!

National Chemistry Week celebration will kick-off on Saturday, October 15th, 10 a.m. to 1 p.m. at the Dr. Martin Luther King Jr. Library in San Jose (150 E. San Fernando Street) with hands-on science activities for elementary-school children and their parents. We will have an army of college student volunteers to explain the importance of each activity to kids, but we are seeking ACS members to oversee this group of energetic college volunteers. The Chemistry Wheel of Fortune will be spinning for all children to win a prize. Children will make colorful slime in the slime lab, experiment with boo bubbles and solve some mysteries using chemistry. For more information about this free event, visit www.scvacs.org. Bring all your friends, neighbors, students, kids and grandkids!

This will be followed closely by the

annual STEM Day at Mountain View High School, on October 18. We are seeking ACS member volunteers to again oversee the efforts of the local college volunteer crew who will run a hands-on experiment with these high school scientists. Last year we helped over 250 students make their own ice cream through freezing point depression. We need help during set-up (late morning), then the activity occurs over the high school lunch

hour, then brief clean up by 2 p.m. If you are interested in volunteering for either of these events, please email Abby Kennedy akennedycali2007@yahoo.com.

Finally, again this year our section will participate in the ACS National Poster and Poem contest. For details, rules and deadlines, please visit www.scvacs.org. And please pass this information along to any teachers, scout troops or children that you may know.

Make Science Fun! Volunteers Needed to Facilitate Science Activities with Children

Make a difference — show students that science is fun, fascinating, and relevant with Science is Elementary!

Volunteer for two hours a month to do simple, hands-on science experiments with children. All lessons will be led by a Science is Elementary staff member, and volunteers are integral to the small-group, relationship-based concept.

Email for questions, and sign up today! Training session in September, date to be determined.

Volunteer Locations: Mountain View, Santa Clara, or Redwood City elementary schools



CHEMPLOYMENT ABSTRACTS SEPTEMBER 2016

CHEMPLOYMENT ABSTRACT 3994

Position Title: Tenure Track Assistant Faculty

Job Description: The successful candidate is expected to establish a vigorous and productive undergraduate research program in the broadly defined area of biochemistry, pursue external funding for research objectives, and excel in teaching biochemistry, general chemistry, and special topics courses in their area of expertise.

QUALIFICATIONS DESIRED:

Education: Ph.D.

Experience: Postdoctoral experience in biochemistry or a closely allied field is required, along with a strong commitment to teaching and undergraduate research. College teaching experience of a diverse student body is desirable.

LOCATION, SALARY, EMPLOYER:

Job Location: Santa Clara, CA, in the heart of Silicon Valley

Salary: Competitive salary, benefits package and housing assistance program

Description: Santa Clara University is a private, Jesuit Catholic university committed to promoting social justice; and as an Equal Opportunity/Affirmative Action employer, is committed to excellence through diversity and inclusion, and, in this spirit, particularly welcomes applications from women, persons of color, and members of historically underrepresented groups

Application Instructions: Completed applications must be received by October 14, 2016.

For complete job description and instructions for submission of materials, visit

<https://www.scu.edu/hr/prospective-employees/employment-opportunities/>

Chemistry Quiz

Vermilion is a brilliant red pigment that was used in ancient Rome, illuminated manuscripts of the Middle Ages, and lacquerware of China from the 16th century B.C.E. onward. What is the inorganic compound that gives vermilion its color?

Last Month's Quiz

From the Swedish word for heavy stone, this metal was discovered as the oxide in 1781 by Carl Wilhelm Scheele. In 1783, José and Fausto Elhuyar discovered the same oxide and successfully converted it to the pure metal later that same year.

Tungsten



SANTA CLARA VALLEY SECTION
AMERICAN CHEMICAL SOCIETY
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is published on our web site, sign up at:

http://scvacs.org/?page_id=99

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Newsletter

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ChemPloyment Abstracts

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FUTURE EVENTS

- Sep 14** *SCVACS September Dinner Seminar*
The Information Landscape for Chemists
at Work and Play
Grace Baysinger, Head Librarian and
Bibliographer, Swain Chemistry Library
Michael's at Shoreline, Mountain View
- Sep 18** *Fall Free Day at the Exploratorium*
San Francisco, CA
- Oct 1** *ACS Combined Local Section Event*
The Flavors of Chemistry: Wine and Cheese
UC Davis Activities and Recreation Center
Ballroom
Davis, CA
- Oct 14** *William S. Johnson Symposium*
Stanford University
- Oct 15** ACS National Chemistry Week Celebration
Dr. Martin Luther King Library
San Jose, CA
Volunteers needed! chair@scvacs.org
- Oct 18** STEM Day
Mountain View High School
Volunteers needed! chair@scvacs.org
- Click on links for more information or
see this newsletter at http://scvacs.org/?page_id=99