

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

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APRIL 2016 NEWSLETTER TOPICS

- The Future of Water: California and Beyond
- Connect with Chemists
- Chair's Message
- April Dinner Seminar
- April Monterey Bay ACS Dinner Seminar
- Chemistry Quiz
- 2016 Synopsys Championship Science Fair
- Speed-Networking Event of the Younger Chemist Committee
- Volunteers Needed for the 2016 Chemistry Olympiad
- New Members for February
- New Bipartisan Congressional Chemistry Caucus
- Chemploment Abstracts

Connect with Chemists

Meet fellow local chemists for an early morning coffee.

Look for Ean at a table with molecular models.

Thursday, April 14, 2016, at 7 a.m.

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

Chair's Message

Jane Frommer



Chances are high that you, the reader of this article, are located somewhere between San Francisco and San Jose. According to ACS membership records, ~90% of the

Santa Clara Valley section's 3,000 members live or work in that region. However, that geography is dwarfed by the area south of San Jose that is also included in our local section – Monterey, Santa Cruz, and San Benito

Counties. ACS records indicate ~5% of the section's members live or work in zip codes bounded by Santa Cruz, Salinas, Hollister, and Monterey. A graphic of these boundaries can be seen on this ACS map:

<http://www.acs.org/content/dam/acsorg/membership/ls/acs-local-section-map.pdf>

The focus of my column this month is this region of the "5%".

Why bring attention to an area that represents such a small fraction of our membership?

The ACS is not just about membership. It's about providing a forum for contact between scientists and it's about outreach to non-scientists. Major sectors of the Monterey Bay

continued on next page

April Dinner Seminar

The Future of Water: California and Beyond

Dr. Peter Gleick



Abstract

Water is tied to many of the most important global and local challenges we face, from the production of food and energy, to human and environmental health, to basic human and industrial needs. The hydrologic cycle is so closely tied to weather and climate systems that some of the most serious social challenges around human-induced climate changes are water-related: effects on water supply and demand, changes in extreme events, and impacts on the extensive infrastructure society has built to provide needed water services. Dr. Peter Gleick will present an overview of current and future water challenges associated with growing economies, rising populations, and a changing climate. He will address the severe California/western drought, links between extreme events and water conflicts, "peak wa-

ter," the "soft path for water," and innovative solutions to our water problems around the world.

Biography

Dr. Peter Gleick is renowned the world over as a leading expert, innovator and communicator on water and climate issues. He co-founded and



continued on next page

April Dinner Seminar

Date: **Wednesday, April 20, 2016**

Time: 6:00 Social Hour

7:00 Dinner

8:00 Presentation

Speaker: Dr. Peter Gleick, Pacific Institute
The Future of Water: California and Beyond

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

Cost: \$30.00 regular/\$15.00 students
Chicken with Marsala, Crab and shrimp cannelloni, or Vegetarian:
grilled vegetable brochette

No cost for lecture only (still need to register for sufficient seating)

Reservations: www.scvacs.org

Reservations should be made by April 15

The Future of Water, continued from front page

leads the Pacific Institute, an innovative and independent science-based organization that creates and advances solutions to the world's water challenges.

Gleick's work has redefined water from the realm of engineers to the world of social justice, sustainability, human rights and integrated thinking. His influence on the field of water has been long and deep: he developed the first analysis of climate change impacts on water resources, the earliest comprehensive work on water and conflict and defined basic human needs for water and the human right to water.

Gleick received the prestigious MacArthur "genius" Fellowship. He received his BS from Yale University and an MS and PhD from the University of California, Berkeley.

Gleick serves on the boards of numerous journals and organizations and is the author of many scientific papers and nine books, including the influential series "The World's Water" and "Bottled and Sold: The Story Behind Our Obsession with Bottled Water," as well as the 2012 release "A Twenty-First Century US Water Policy."



Chair's Message, continued from front page

area economy are based on the technical areas of marine and agricultural and environmental science. Chemistry is central to these sectors, yet the ACS has had little presence in the area. Next month we hope to change that.

Our local ACS section is planning an inaugural dinner seminar meeting centrally located to Monterey Bay, supported by a grant

from ACS National. An organizing team of representatives from the region's colleges has met to choose a date, venue, topic and speaker: Likely date: Thursday evening, April 14, 5:30 PM- 9:00 PM

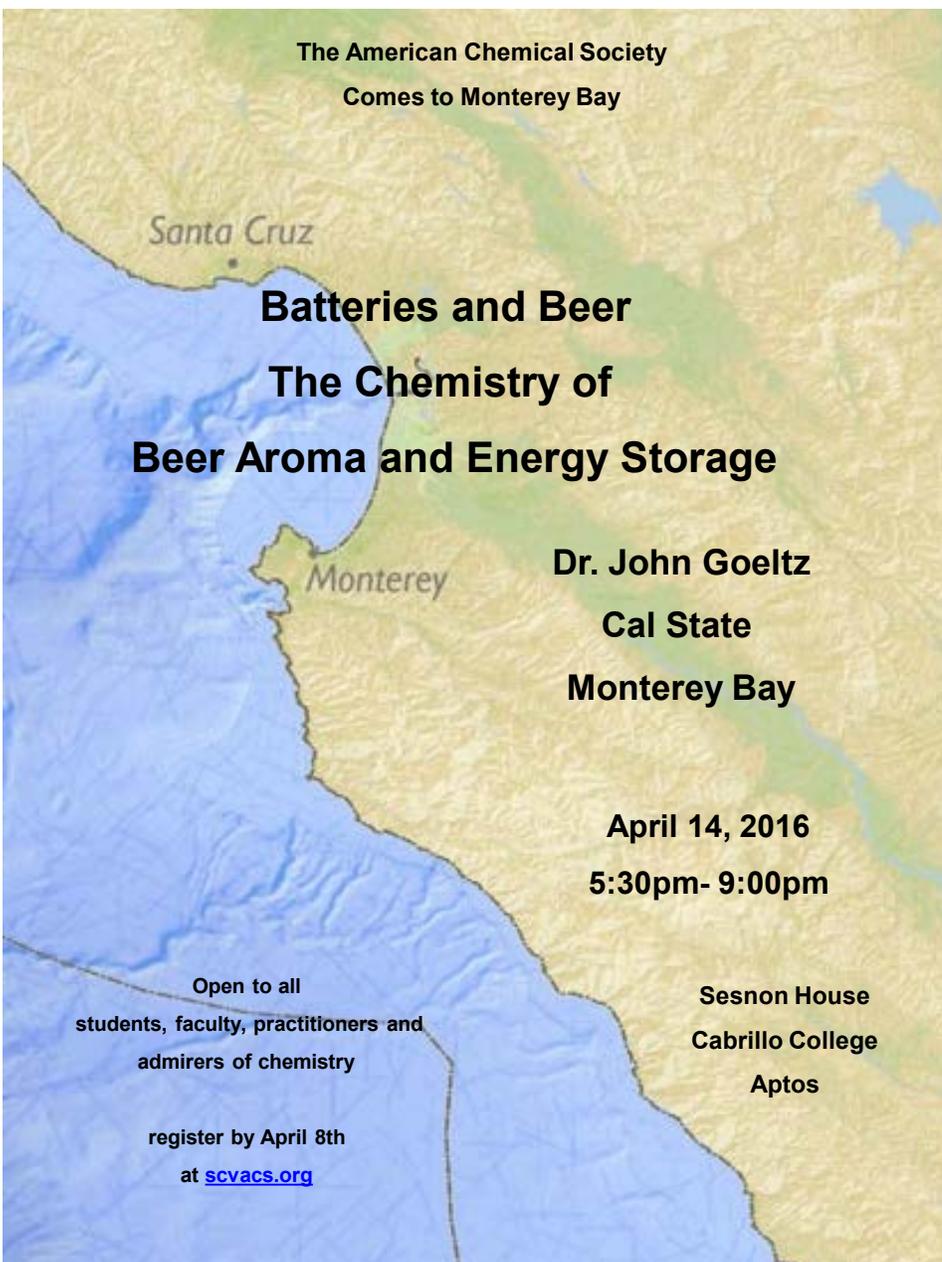
Likely location: Cabrillo College's Sesnon House, Aptos

Who will attend? Judging by the enthusiastic response so far, we can expect students, teachers, and researchers from Monterey Peninsula College, Cabrillo College, Hartnell College, Cal State Monterey Bay, UC Santa Cruz, Monterey Bay Aquarium Research Institute (MBARI) and Moss Landing Marine Labs (MLML). Several local chemistry-related businesses are also interested in participating.

If successful, additional career, social, and educational events will follow, possibly leading to a regular series of gatherings of chemists from around the Monterey Bay on college campuses, in business settings, and at MBARI and MLML.

If you are reading this article in the Monterey Bay area, then join us at the inaugural event on April 14th. A registration page will appear soon on the Santa Clara Valley ACS website, www.scvacs.org or contact me directly at chair@scvacs.org.

The event is open to all – members and non-members – and even to those in the 90% who live north of Santa Cruz!



**The American Chemical Society
Comes to Monterey Bay**

Santa Cruz

**Batteries and Beer
The Chemistry of
Beer Aroma and Energy Storage**

Monterey

**Dr. John Goeltz
Cal State
Monterey Bay**

**April 14, 2016
5:30pm- 9:00pm**

Open to all
students, faculty, practitioners and
admirers of chemistry

Sesnon House
Cabrillo College
Aptos

register by April 8th
at scvacs.org

Chemistry Quiz

Which company was the largest producer of chemicals, by sales volume, in 2015 for the 9th year in a row?

Last Month's Quiz

Who was the first African American to receive a Ph.D. degree in chemistry in the United States? What institution conferred his degree?

St. Elmo Brady was the first African American to obtain a Ph.D. degree in chemistry in the United States. He received the Ph.D. in Chemistry at the University of Illinois in 1916 for work done in Noyes Laboratory.

http://www.chemistry.illinois.edu/about/illini_chemists/brady.html

2016 Synopsys Championship Science Fair

By Susan Oldham-Fritts

The 56th annual Santa Clara Valley Science and Engineering Fair, the Synopsys Championship, was held Thursday, March 17, at the San Jose Convention Center (www.science-fair.org). As our regional competition, it showcased and celebrated approximately 1100 local 6th-12th grade students who will become our future scientists, engineers, technologists, and mathematicians. While these students were supported by their parents, teachers/mentors, and schools, they performed and presented independent research that exceeded the bounds of their normal classroom studies. So, whether or not they were selected for the SCV-ACS awards or to represent Santa Clara County at the California State or Intel International Science and Engineering Fairs, they were all winners.

The SCV-ACS special award team of Dr. Sreeja Nag, Dr. Gary Bullard, Dr. Owen Gooding, Dr. Toby Astill, and Susan Oldham-Fritts (chair), judged 225 incredible projects to select the winners of our three section awards:

\$500 First Place Individual Award:

Amy C. Dunphy, 10th grade, Harker School-Upper Campus, for *Preventing Urushiol (Poison Oak)-Induced Dermatitis by Deactivating the Allergen*

\$200 Second Place Individual Award:

Shivek Narang, 7th grade, BASIS Indepen-

dent Silicon Valley School, for *The Effect of Salt on *Saccharomyces cerevisiae**

\$300 Team Award: Michelle Melody Nazareth and Andrew Basil Nazareth, 8th grade, Chaboya School, for *Bacteria Battles: Effects of antimicrobial efficacy using antibiotics and an essential oil to combat anti-bacterial resistance using *E. coli* and *S. epidermidis* biofilm formations*

In addition, our team judged for the Promethium Chapter of Iota Sigma Pi, the national honor society of women in chemistry. We selected:

Alya Samsudin, 6th grade, and her teacher, Christine Koltermann, Magnolia Science Academy of Santa Clara, for *The*

Effect of Cooking Method on the Vitamin C Content of Vegetables, as recipients of their student and teacher book awards.

We would like to thank the many SCV-ACS members that were category, grand prize, and other special award judges for volunteering their time and expertise. Additionally, we extend our thanks to Dr. Aart de Geus, chairman and CEO of Synopsys, and Gary Robinson and Heidi Black of the Synopsys Outreach Foundation for their continuing generous support of local science students and their teachers. Science fairs don't happen without these committed students, teachers, judges, and sponsors.

Join us in 2017 as part of our SCV-ACS judging team or as a category judge at your local science fair.



Santa Clara Valley ACS judging team at the 2016 Synopsys Championship Science Fair on March 17, 2016

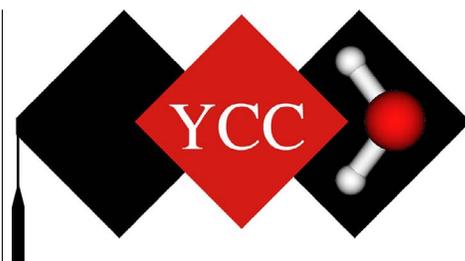
Speed-Networking Event of the Younger Chemist Committee

By Matt Greaney

What do you get when you stir into a roomful of chemistry students and postdocs a couple dozen chemistry professionals, lubricate with refreshments, and ignite lively conversation? A speed-networking event!

On February 29, 2016, the UC Berkeley AICHE chapter and the Santa Clara Valley and California ACS Younger Chemists Committees joined forces to co-host a speed-networking event for students and professionals. The event was well attended with over 60

undergraduate, graduate, and post-doctoral students engaging with over 25 professionals representing local universities, national labs, and businesses. During the initial hour, students cycled through conversations with professionals in two-minute intervals that allowed for brief introductions and a couple of questions. Casual networking between participants followed the speed-networking portion, enlivened with an AICHE coordinated raffle. Students and professionals freely engaged in



conversation, providing a forum for students to ask questions and receive advice about transitioning from academia to industry. The participants took advantage of both portions of the night, as evidenced by a packed house until the end. Feedback was extremely positive, and many expressed their gratitude to the hosts and professionals for bringing this event to fruition.

Sorry you missed this event? To be included in future activity of the local ACS Younger Chemist Committees, contact ycc@calacs.org.



Volunteers Needed for the 2016 Chemistry Olympiad

It is that time of year again when high school students are deep into Olympiads and Science Fairs -- Science, Biology, Computer Science and, yes, Chemistry. The students in our section are very active and very smart! Our section has 26 high schools participating in the regional Chemistry Olympiad exam during the month of March. The schools administer the qualifying test that the ACS provides. Of that group, the top 17 students then will compete at the national level.

The national exam is given to about 1,000 students across the United States on the same weekend in April. Until Friday, March 4, 2016, the outcome for the regional exam would have been different from past years. The United States had chosen not to participate in the International Chemistry Olympiad. The IChO was to have been held

in Pakistan and the U.S. government does not permit our citizens to travel there. National ACS also chose not to hold the study camp at the Air Force Academy. Instead, the top 20 students out of the 1,000 would have received plaques and medals. BUT, in late January, the Pakistan government withdrew its support for the 48th Chemistry Olympiad. On March 1st, the country of Georgia offered and was approved to host the 48th International Chemistry Olympiad in its capital, Tbilisi. So, the 2016 study camp at the Air Force Academy will take place. The top 20 U.S. students will attend the study camp in June and 4 students will be chosen to represent the U.S.A. in Georgia in July!

Local section members are needed to register the students and proctor the exams for the national exam. There will be plenty

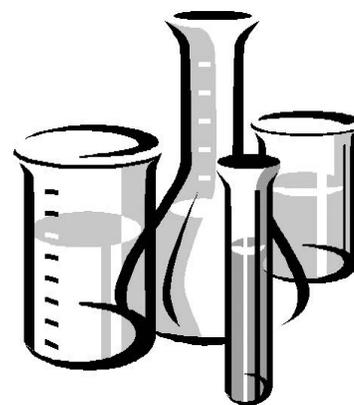
of pizza for everyone! This year, the exam will be held at Las Positas College in Livermore on Saturday, April 23rd. The California ACS section is hosting our Santa Clara Valley section's top 17 students and their own top students for a day of testing and pizza eating! This is also an especially great time for members who live in the East Bay to volunteer. The national exam consists of a multiple choice section, a problem set section and a lab section. We need proctors for all 3 sections. We will begin at 8:30AM and end by 3:30PM. Helping all day or part of the day would be great.

Also needed is access to a good color printer/scanner to customize the ACS student certificates that each participant receives before the end of the school year. There are usually about 150 certificates to be customized. Please contact me if you can access a color printer for this job: sallybrownpeters@gmail.com

If you have some time to spare, please help your local ACS section with the 2016 Chemistry Olympiad. We want the Santa Clara Valley section to be represented at the study camp and in Georgia! Contact me by email or telephone.

FYI -- David Wang, our local student who traveled to Baku, Azerbaijan, and won a gold medal in 2015, is now studying chemistry at MIT. Stephen Ting, our 2013 international winner, is a junior in the Stanford Chemistry Department!

Sally Peters
Chair of 2016 Chemistry Olympiad
committee of the Santa Clara Valley section
650-854-4614
sallybrownpeters@gmail.com



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 February

Marya Abebe Melkie	Jesse A. Hnatek	Kim Luu
Aanindeeta Banerjee	Delena Hoang	Saira Montermoso
Miss Tam Banh	Fatima Adil Hussain	Tina Nguyen
Stephanie J. Benight	Dr. Kenneth S. Johnson	Carlos Ortuno-Quintana
Mr. Nathan Birtwhistle	Ling Jong	Nathan Park
Miss Grace Chang	Brian E. Kane	Dylan B. Paulsen
Alon Chapovetsky	Farah Khatri	Dr. Ricardo Ruiz
Surendrakumar Chaturvedi	Aleksa Kojcinovic	Barbara J. Sandoval
Xianwen Chen	Ambarish Kulkarni	Perula J. Sandoval
George Cooper	Dr. Asif Ladiwala	John Patrick Sheckelton
Michelia L. Dam	Jessica Victoria Lally	Dr. Rick St. John
Dr. Stephane Jean De Lombaert	Mary Le	Zoltan Stersky
Dr. Luca Di Noto	Nghi B. Le	Darlene Q. Tan
Dustin Dimas	Vicky T. Le	Polo H. Tran
Lisa Dorsey	Irene Lin	Christin Wang
Karim Erhili	David Liu	Alyson Weidmann
Dr. William Harries	Troy Lowe	Michael Whitacre
Evelynn Henry	Henry Bernard Lowman	Joshua Willis

New Bipartisan Congressional Chemistry Caucus

By Heidi Vollmer-Snarr

Do you ever wish that the U.S. government better represented your scientific views and interests? A new bipartisan Congressional Chemistry Caucus endorsed by the ACS and other chemistry organizations is being launched on April 27, 2016. The Chemistry Caucus will provide a direct pipeline from ACS scientists to Congress and ultimately to the Senate to answer scientific questions about pressing scientific issues relating to chemistry. The time following this launch is critical for ACS members to contact members of congress in their districts to persuade them to join the caucus.

We are developing specific talking points about the Chemistry Caucus and how it is relevant to members of Congress from specific districts. We will provide you this information in the next newsletter. In the mean time,

please look up your member of Congress—
<http://www.house.gov/representatives/find/>

— and watch these videos — <http://www.acs.org/content/acs/en/policy/memberadvocacy/planactivities/toolstips.html> — to learn about the most effective way to contact your representatives.

ACS ELECTION



By electronic ballot at the March 2016 ACS National Meeting in San Diego, the Council selected Peter Dorhout (right) and Thomas Gilbert (left) as candidates for 2017 ACS President-Elect. These two candidates, along with any candidates selected via petitions, will stand for election in the ACS Fall 2016 National Election.

CHEMPLOYMENT ABSTRACTS APRIL 2016

CHEMPLOYMENT ABSTRACT 3992

Position Title: Research Associate, Synthetic Organic or Medicinal Chemist.

Job Description: Responsible for the following:

- Develop and implement synthetic routes for production of arrays of synthetic compounds;
- Perform laboratory synthesis of organic molecules and prepare the intermediates for the synthesis of these molecules;
- Apply modern techniques of organic synthesis including a variety of organic reactions at several scales, microwave chemistry, inert atmosphere techniques, LC-MS, HPLC, MS, flash chromatography, recrystallization, and distillation.

QUALIFICATIONS DESIRED:

Education: MS/BS in organic chemistry or related field. The ideal candidate will have educational background and experience in the field of medicinal chemistry.

Experience: We are seeking several M.S./B.S. level synthetic organic or medicinal chemists to join our expanding medicinal chemistry department. Candidates must have a M.S./B.S. in synthetic organic chemistry, medicinal chemistry, or closely related field with 0-5 years of industrial experience involving drug discovery. Strong organizational, communication and interpersonal skills are critical. The successful candidate must have the ability to work on multiple projects and adapt rapidly to new projects, must be a highly motivated, independent, and productive team player. Candidates with a demonstrated record of expertise in modern synthetic organic chemistry methods or medicinal chemistry are preferred.

LOCATION, SALARY, EMPLOYER:

Job Location: Santa Clara, CA

Salary: At Nanosyn, we offer a very competitive compensation and benefits package.

Employer Description: Nanosyn is a well-established and growing medicinal chemistry and biological services contract research organization located in the SF Bay Area. We provide made-to-order focused compound libraries, hit-to-lead optimization, medicinal chemistry services, lead identification and profiling, and other innovative solutions to meet the drug discovery needs of our clients.

Application Instructions: For further details and to apply, please visit the careers section at <http://www.nanosyn.com/careers/> or email to careers@nanosyn.com

CHEMPLOYMENT ABSTRACT 3993

Position Title: Ph.D. Medicinal and Synthetic Chemists

Job Description: The successful candidate must be familiar with techniques in synthetic organic chemistry, including but not limited to laboratory skills, data interpretation from various spectroscopic techniques.

QUALIFICATIONS DESIRED:

Education: Candidate must possess a Ph.D. in Organic Chemistry with 1 or greater years industrial experience. Strong organizational, communication and interpersonal skills are critical. Must be a highly motivated independent productive team player.

Experience: We have multiple openings for organic chemists with a Ph.D. degree in synthetic organic chemistry. Applicants must have 1 or greater years of industrial experience, be highly motivated, with good problem solving skills, good organizational skills, ability to work in a disciplined team, good communication skills, methodical and diligent. The successful candidate must have the ability to work on multiple projects and adapt rapidly to new projects. Applicant will work on early stage drug candidates, advance these to lead candidates and to development candidate selection.

LOCATION, SALARY, EMPLOYER:

Job Location: work on early stage drug candidates, advance these to lead candidates and to development candidate We have multiple openings for organic chemists with a Ph.D. degree in synthetic organic chemistry. Applicants must have 1 or greater years of industrial experience, be highly motivated, with good problem solving skills, good organizational skills, ability to work in a disciplined team, good communication skills, methodical and diligent. The successful candidate must have the ability to work on multiple projects and adapt rapidly to new projects. Applicant will selection.

Salary: At Nanosyn, we offer a very competitive compensation and benefits package.

Employer Description: Nanosyn is a well-established and growing medicinal chemistry and biological services contract research organization located in the SF Bay Area. We provide made-to-order focused compound libraries, hit-to-lead optimization, medicinal chemistry services, lead identification and profiling, and other innovative solutions to meet the drug discovery needs of our clients.

Application Instructions: For further details and to apply, please visit the careers section at <http://www.nanosyn.com/careers/> or email to careers@nanosyn.com



SANTA CLARA VALLEY SECTION
AMERICAN CHEMICAL SOCIETY
P.O. Box 395, Palo Alto, CA 94302

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<http://www.scvacs.org>

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<http://www.scvacs.org/newsletter/>

SANTA CLARA VALLEY SECTION

2016 Section Officers

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Past Chair	Ashley Piekarski	408-855-5269	ashley@scvacs.org
Secretary	Richard Bone	650-714-7897	rgab@scvacs.org
Treasurer	Ihab Darwish	650-594-1654	darwishis@yahoo.com

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2016-2018	Bonnie Charpentier	650-380-5353	charpentierbon@yahoo.com
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2016-2018	Sally Peters	650-854-4614	sallybrownpeters@gmail.com

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ChemPloyment Abstracts

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

- Apr 14** Monterey Bay SCVACS dinner meeting
Dr. John Goeltz
Cal State University Monterey Bay
Batteries and Beer: The Chemistry of Beer
Aroma and Energy Storage
Sesnon House, Cabrillo College, Aptos
See Chair's Message and [scvacs.org](http://www.scvacs.org) for details
- Apr 20** SCVACS Dinner Seminar
Dr. Peter Gleick
Pacific Institute for Studies in Development,
Environment and Security
The Future of Water: California and Beyond
Michael's at Shoreline
Mountain View, CA
Registration: http://www.scvacs.org/?page_id=40
- Apr 23** International Chemistry Olympiad
National Exam
Las Positas College, Livermore, CA
Volunteers needed: contact Salley Peters
sallybrownpeters@gmail.com
- May 25** SCVACS Dinner Seminar
Pat Brown
Impossible Foods