

# THE VORTEX

AMERICAN CHEMICAL SOCIETY  
VOLUME LXXVII NUMBER 5

CALIFORNIA SECTION  
MAY 2016



Dr. Margarita (Greti) Sequin, recipient of the 2016 Petersen Award.  
(see page 2 for details on the May Awards Luncheon)

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*California Section  
American Chemical Society  
May 12 2016 Section Meeting*

**Speaker:** Jyllian Kemsley C&EN Senior Editor, San Francisco

**Topic:** From the Safety Beat: The UCLA Fatality and Beyond

**Date:** Thursday May 12, 2016. 5:30 – 6:45 PM Social Hour, 7:00-8:00 PM Presentation.

**Place:** USDA, 800 Buchanan St., Albany, CA 94706

**Cost:** \$10.00 members and guests. No charge for students and retired members., Light snacks, sandwiches, and drinks

**Reservations:** Please register by Monday May 9, for meal or for talk only by email to office@calacs.org, or by phone 510.351.9922. If mailing a check in advance, please make payable to "California Section ACS" and send to CalACS Office, 2950 Merced Street #225, San Leandro, CA 94577.

**Directions:** •From Oakland: Take I-80 North, exit Buchanan Street, turn right onto Buchanan Street, continue east one block, turn right into USDA driveway.

•From Vallejo: Take I-80 South, exit Albany, turn left onto Cleveland Avenue (S), left on Solano Avenue (E), right on Taylor Street (S), cross Buchanan into USDA driveway.

**Summary:** The death of researcher Sheharbano (Sheri) Sangji in 2009 from injuries sustained in a chemistry lab fire at the UCLA shocked the chemistry and laboratory safety communities. C&EN Senior Editor Jyllian Kemsley will review details of the incident and discuss its cultural and legal aftermath. She'll also review what can be learned from other notable demo and lab incidents, their common themes, and institutional responses.

**Biography:** Jyllian Kemsley went to Amherst College thinking that she would

become a lawyer but was lured to chemistry by some excellent teachers. After getting her bachelor's degree, she spent two years as an analytical chemist at Merck before escaping the "Garden State" for the "Golden State" and graduate studies at Stanford University. Toward the end of her time at Stanford, she was contemplating her career options when a friend introduced her to the concept of "science writer." She retooled her skills in the science communication program at the University of California, Santa Cruz, and then freelanced for several

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*California Section American Chemical Society May 14, 2016  
Awards Luncheon Honoring 50, 60 and 70 Year Members  
of the American Chemical Society, Walter B. Petersen Award  
Presentation, Ryland Teacher Awards, and P3 Salute to  
Excellence*

**Date:** Saturday, May 14, 2016

**Time:** 11:45 -12:30, social; 12:30 pm, lunch; 1:45 pm, award presentations:

**Cost:** \$33, Buffet Style luncheon will be served which includes, several entrees, Mixed Green Salad, Sautéed Seasonal Vegetables, Roasted Red Mashed Potatoes & Gravy.

**Place:** Scott's Restaurant Street in Walnut Creek, Parking on street (meter in effect until 6:00 pm) or various (pay) lots in area.

**Reservations:** RSVP by Friday May 6, 2016 to the Section office by e-mail to office@calacs.org or call (510) 351-9922 To pre-pay: Please mail checks made out to "California Section ACS" to the Cal Section office, 2950 Merced St. #225, San Leandro CA 94577, postmarked no later than Friday May 6, 2016

# THE VORTEX

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## *Chair's Message*

It is not unusual for chemists to have little or no formal training in biology; but it can be a distinct disadvantage today with the explosion of research in biological sciences. Being one of those chemists I found it difficult to fully appreciate the presentation by Dr. Justin Siegel, the speaker at our April Section Meeting. The title of the presentation "Molecular models of novel enzymes and the startup of PvP to produce therapeutics to treat food allergies" did not foretell the broad implications and scope of the perfect storm of low cost computational power, "omic" analysis, and synthesis of proteins from DNA sequences. My point is that if I had not attended in person, I would have missed the significance of the work and also not heard about some of the future projects.

Dr. Siegel's research started with undergraduate students who used sophisticated, but rapidly learned, software called Foldit to manipulate the structure of proteins. The students generated new protein structures by changing amino acid sequences and generally predicted properties. Enzymes with higher activities were designed by searching the database of proteins with similar structures to an enzyme of interest. They found that enzymes with widely different structures from the initial enzyme of interest could have the potential of higher activity. With the resources of those companies that can synthesize and provide, within a week, proteins and enzymes of

known structures for \$50-100 each, Dr. Siegel's group designed experiments using established chemical reactions and found the most active enzymes. This is like finding a needle in a haystack in months rather than years. This procedure is applicable to a vast number of projects, saving an immense amount of time and money, and providing a realistic career pathway.

Our program committee has been focusing on scientists in the Bay Area, whose innovative research has generated intellectual property leading to startups to commercialize a product. Please feel free to offer additional recommendations or comments for future meetings.

Tuesday, May 3, is the Executive Committee Meeting and the opportunity to provide, in person, suggestions on the Section's programs and activities. One of the discussions that often takes place is where in the Bay Area should the meetings be held? Are Saturdays, lunch time, a good meeting time? Is having a sit down meal an important part of the program.? Your in-person comment or email is valued.

Thursday, May 12, Jyllian Kemsley, Senior Editor for Chemical & Engineering News, will talk about her career path from research to writing and will provide insights into the cause of laboratory accidents, the chemistry behind the accidents, and what was learned from the accidents. Her presentation

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*REPORT FROM THE ACS  
NATIONAL MEETING  
San Diego, CA, March 13-17,*

**Highlights from the San Diego Meeting**

San Diego is one of the ACS' four primary rotating locations (along with San Francisco, Boston, and Philadelphia). Attendance is usually high when it is the site of the spring meeting because members back east are looking forward to some sunshine and escape from the cold. This year's meeting did not disappoint, as you will see from the meeting statistics later in this report, as attendance was over two thousand more than either meeting last year, including Boston last summer.

The convention center has hotels on either side or across the street or a few blocks away, so rarely is there a need for a shuttle bus. This was the first time that ACS used the new Hilton Bay Front Hotel as the primary governance hotel. Even though it is a relatively straight line along the bay, it must be close to a mile from that hotel to the opposite end of the convention center – or at least it seemed that way.

For the California Local Section attendees, this was a pretty routine meeting, although the first time our former Councilor and Chair, Lee Latimer, attended as a newly elected Director-At-Large to the ACS Board, and Councilor Eileen Nottoli took over as 2016 Chair of the Western Division Caucus. Also, Chair-Elect and Alternate Councilor, Jim Postma attended Council in place of Alex Madonik, and local YCC Chair Stephanie Malone attended her first Council meeting as a CalACS Councilor.

Prior to the start of the ACS meeting, a Presidential Public Outreach event: Exploring Our World Through Chemistry, which has become a feature on the Saturday preceding National meetings, was held at the San Diego Central Library, with over 400 people attending, including CalACS Councilors Sheila Kanodia and Alex Madonik, who are on the organizing committee for these events.

The overall theme of the San Diego meeting was "Computers in Chemistry" As usual, a plenary session on Sunday afternoon

highlighted and introduced the overall theme, while Division programs related to the theme continued throughout the week. Over 7000 papers and posters were presented. Presidential Events included "Discussions with the President's Task Force on Employment," for which CalACS member and ACS Past President, Attila Pavlath, was the Task Force Chair. Two other CalACS members also serve on the current ACS President Donna Nelson's Presidential Task Force – Councilor Bryan Balazs and Past ACS President Marinda Wu—both giving oral presentations and posters on "Supply and Demand Factors in the Chemical Workforce" and "Global Factors influencing USA Employment," respectively. Evening poster sessions on Sunday and on Monday at Sci-Mix included anonymous comments on the same topic and on how to foster diversity in the chemical sciences.

The popular Kavli Foundation Lecture series continued on Monday afternoon, with the Emerging Leader Lecture given by Dr. Rommie Amaro, UC-San Diego, on "Computing Cures: Enabling Chemical Discovery" and the main Innovations in Chemistry lecture given by Dr. Emily Carter, Princeton University, entitled "Quantum Solutions for a Sustainable Energy Future."

**Report from the Council Meeting and other Society governance activities**

CalACS was represented at Council by our full contingent of eight Councilors or Alternate Councilors, our two Past ACS Presidents and current Director-At-Large to the ACS Board. Information on some of the activities of the committees to which they are affiliated can be found below. A copy of the 2016 "Chemists Celebrate Earth Day" pamphlet was placed on all of the seats at Council and contained three contributions from CalACS Councilor, Alex Madonik.

The San Diego Council meeting was a quiet and efficient one. The escalated member dues renewal rate to \$166 (from \$162) for

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2017, per the inflation adjusted bylaws formula, passed without discussion. There was some mumbling about the increased early meeting registration fees for 2017 at \$440 (up from \$415). There was also some complaining about the \$10 advanced and \$20 on-site charges for a hard copy of the meeting program, that has always been included in the registration fee at no extra charge – another cost saving measure done to encourage use of the online/downloadable program and app, and also to reduce waste of unused copies.

The new meeting abstracts submission system (MAPS), which replaced PACS and was initiated for the Denver meeting last year, seems to be working better, as this was not a subject of derision as it was last year.

In other actions of note, Council voted to approve a petition to extend the dues waiver for unemployed members from two to three years.

With a light schedule, ACS President, Dr. Donna Nelson, added a discussion topic to the Council agenda soliciting comments on the state of US employment of chemists. Last year she appointed a Task Force, chaired by Attila Pavlath, ACS Past President, to propose recommendations for solving the problems. The Task Force had a symposium at the meeting reporting on the problems and possible causes. Attila will submit a separate request to the members of the section for input.

**Affiliations/comments from our Councilors, Past ACS Presidents, and current Director-At-Large**

Bryan Balazs –Committee Associate, Budget and Finance (B&F), Undergraduate Program Advisory Board.

B&F reviewed the financial performance of the ACS through 2015, and the outlook for 2016. The year 2015 ended on a positive financial note, and the projections are for 2016 to continue this trend.

The Undergraduate Program Advisory Board reviewed the undergraduate events for San Diego and those planned for the Fall National Meeting in Philadelphia.

Mark Frishberg – Divisional Activities Committee (DAC), ACS Career Consultant

– Career Fair

DAC funded 12 out of 13 submitted new Innovative Project Grants totaling \$68,980, with the maximum grant set at \$7500. More proposals will be considered at the Philadelphia meeting in August, with a July 1st deadline for submissions. Discussions continue on how to help Divisions attract new members and retain those that they have - very much in tune with similar local section issues – and how Divisions might grow relationships with Local Sections.

In ACS Career Fair related activities, the four-hour workshop “Finding Your Path” was taught on Tuesday morning, as well as performing 17 mock interviews on Sunday and Monday.

Sheila Kanodia – Committee on Community Activities (CCA)

Participated in two theme team meetings: Chemists celebrate NCW: Solving Mysteries through Chemistry (2016)

Chemists celebrate Earth Day (2017): Agriculture (to be refined in Philly)

Member of a new theme team for Chemists celebrate Earth Day (2018).

Lee Latimer – Director-At-Large, Western Region Board Chair

The regional board accepted the Sierra Nevada Section as a new member and updated the Bylaws. Bids are needed by sections to host the next meeting. The WRM2015 in San Marcos, CA showed a modest surplus at an exciting location in northern San Diego County.

Alex Madonik – Committee on Community Affairs (CCA)

The NCW 2016 theme will be “Solving Mysteries Through Chemistry.” Madonik is chairing the Earth Day 2016 Theme Team, with the theme “The Great Indoors – Your Home’s Ecosystem.” This event will look at air and water quality – what comes in, what goes out, and what we do to keep the indoor environment clean and safe.

Stephanie Malone – first ACS National meeting representing CalACS as a Councilor  
Eileen Nottoli – Committee on Environmental Improvement (CEI)

CEI awarded grants of \$500 to two local sections for sustainability projects and is working on the following policy statements:

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## Volcanic Violence (Part 4)

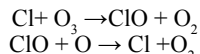
Bill Motzer

Each May 18<sup>th</sup> marks the anniversary of a cataclysmic event that I experienced while living in the Pacific Northwest – the eruption of Mount St. Helens – the only volcanic eruptive episode that I experienced on a scientific and personal level (see May 2013 Vortex: Volcanic Violence –Part 1). In Part 3 (May 2014 Vortex), I discussed the Yellowstone supereruption. Most “small” volcanic eruptions such as Mount St. Helens and Mount Etna (Figure 1), and supereruptions such as Yellowstone are essentially physical “heat engines”, but they are also “chemical engines” in the gases that they exude (see Volcanic Violence – Part 2, May 2014 Vortex). However, these eruptions pale in comparison to prehistoric volcanic eruptions known as large igneous provinces (LIPs) that may have been responsible for mass extinctions in the geologic past.

Large Igneous Provinces (LIPs) were originally classified as areas of eruptive volcanics covering an area greater than 1.0 x 105 km<sup>2</sup> and representing massive crustal emplacements of mostly mafic (Mg- and Fe-rich) extrusive and intrusive rock. The original definition included continental flood basalts (CFB), oceanic plateaus, large dike swarms (the eroded roots of a volcanic province), and volcanic rifted margins. Most LIPs consist of basalt, but some LIPs contain large volumes of associated rhyolite – rocks with much more silicic compositions. Those LIPs, typified by continental CFB provinces, are relatively short-lived, generally erupting within or less than 5.0 million years (Myr), with high volcanic eruption rates (0.1 to >1.0 km<sup>3</sup>/yr) and large volumes (~106 km<sup>3</sup>) of mafic magma (Figure 2). However, many LIPs are emplaced in less than 1.0 Myr resulting in considerable world-wide ecological stress. This occurs by the massive outpouring of CO<sub>2</sub>, SO<sub>2</sub>, and halogens (largely HF and HCl) causing worldwide anoxic events leading to mass extinctions on land and sea.

One such mass extinction as a result of a LIP is believed to have occurred at the end

of the Permian Period ~252 million years ago (Ma). These volcanic eruptions are known as The Siberian Traps – one of the largest known CFB provinces. The end-Permian mass extinction is considered to be the most severe of all known biotic extinctions with more than 90% of marine and 75% of terrestrial species (e.g., the amphibians) wiped out within a period of 61,000 years. One study has noted the occurrence of extensive magma water interactions; these resulted in what are called phreatomagmatic explosions generating tall water-rich eruptive columns, simultaneously adding considerable amounts of SO<sub>2</sub> and volcanic ash to the upper atmosphere, and resulting in short term global cooling. However, other halogen-rich eruptions that reached the tropopause may have destroyed the ozone layer:



Finally, the large amounts of erupted CO<sub>2</sub> resulted in global warming, acid rain, ocean acidification, widespread oceanic anaerobic or anoxic events (e.g., formation of H<sub>2</sub>S), and perhaps release of oceanic methane hydrate deposits causing profound geochemical and ecological changes. These caused the destruction of marine life with subsequent destruction of land life from the possible toxic release of oceanic derived H<sub>2</sub>S and CH<sub>4</sub> to the atmosphere.

Perhaps as much as 24,000 gigatons (Gt) of carbon were injected into the atmosphere over only 10,000 years: a rate of 2.4 Gt per year, with most being dissolved in the oceans. (As of 2015, the rate of largely anthropogenic carbon entering the atmosphere is about 10 Gt/yr.) Other researchers, using boron-11 to boron-10 isotope ratios in end-Permian marine sedimentary rocks, have determined an isotopic ratio drop corresponding to a decrease of 0.6 to 0.7 pH units, which is considered a significant seawater chemistry change. (The current oceanic pH = 8.1.) It's worth noting that biotic recovery did not begin until the early Triassic Period (following the Permian) about 4 to 5 million years later and the Triassic had some of the highest average global temperatures (~28 °C) and most extensive worldwide deserts. After

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(Motzer continued from page 6)

passage of 187 Myr another LIP in India, coupled with an asteroid impact, resulted in the dinosaur's demise; but that is another tale!



Figure 1: The December 4, 2015 ash plume eruption from Mount Etna's crater; view from Cesarò, Messina. Photo by G. Famiani in EOS February 23, 2016, v.97, doi:10.1029/2016EO046523

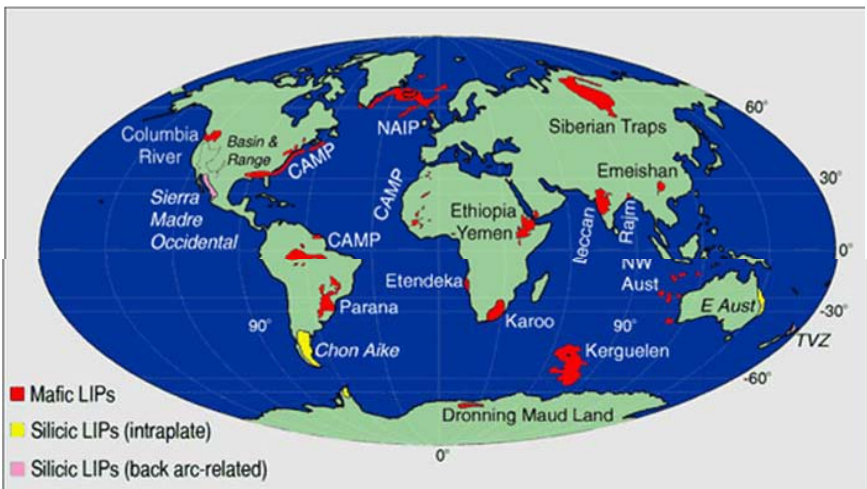


Figure 2: Location of worldwide LIPs (from <http://www.mantleplumes.org/SLIPs.html>)

*(Continued from page 5)*

Biomonitoring, Chemical Risk Assessment and Regulatory Decision Making, and Climate. CEI is evaluating several toolkits on the ACS website including Climate Change, Energy, and Water.

Attila Pavlath – International Activities Committee (IAC)

There is increasing interest by ACS members in foreign countries, especially in Asia. Fifteen years ago there were only two ACS International Science Chapters and presently there are 14, which will most probably increase to 19 by the Philadelphia Meeting. IAC started to develop a plan to provide help to these Chapters, which represent major links between the ACS and the corresponding international chemical societies. We have a good opportunity to be involved in bringing these chapters, especially those on the Pacific Rim, into close cooperation with the ACS. Plans are to provide financial support for various activities.

James Postma – Alternate Councilor – substituted for Alex Madonik at the Council meeting

Paul Vartanian – Committee on Constitution and By-Laws (C&B) Will report later on C&B when official minutes are approved.

Marinda Wu – Committee on Budget and Finance (B&F). ACS Career Consultant – Career Fair and work with International Activities Office (IAO)

Serving on the B&F Subcommittee on Program Funding Requests for the last several years, the subcommittee learned that it will be very busy considering several 2017 New Program Funding and Reauthorization requests. This may be due to none being submitted in 2015, during the initial year introducing the new SPPM (Society Program Portfolio Management ) process which replaced the old PRAG (Program Review Advisory Group) process.

Volunteered a full day at the ACS Career Fair doing a full morning of resume reviews followed by teaching a four-hour workshop on “Working in Industry.”

Also worked with the ACS International Activities Office and met with representatives visiting from the Chinese Chemical Society

to help plan and co-chair a historic joint ACS-CCS Presidential Symposium for the next national ACS meeting in Philadelphia this August.

Elaine Yamaguchi – Local Section Activities Committee (LSAC) and Project SEED

For LSAC, on the Grants and Awards Subcommittee, currently evaluating dozens of ChemLuminary Nominations for several award categories, as well as seven Annual reports from 2015.

Project Seed – from Open Meeting - The estimated 2016 budget is \$1.4 M, including scholarships. Selection Subcommittee received 451 SEED project proposals, and 448 have been approved, with 3 projects pending. There are 328 SEED I and 120 SEED II approved 2016 projects. Scholarship Subcommittee reported that 52 applications for SEED freshman year \$5000 college scholarships were received, and 32 scholarships were awarded. Twenty of those 32 scholarships were funded by the Badgers. New timelines will be in place for the 2016 scholarship application period, consisting of an August 1 – November 1 application acceptance period, with supporting documents accepted up to December 1. Winners will be announced about February 2017.

A task force has been established to formulate a proposal to be presented to B&F that will request a gradual rise in SEED student fellowships by 2020.

Plans are underway for the 50th year SEED symposium, led by Joshua Pak.

Elaine will scan and distribute a testimonial letter from a grateful 2015 CA SEED student to the SEED office and the Development office, since there are still many ACS members who have never heard of SEED. It is also hoped that older ACS members who are now planning their estates will consider a bequest to SEED.

**Looking ahead to Philadelphia – August 23-27, 2016**

The overall meeting theme will be “Chemistry of the People, by the People, and for the People” and the primary organizer is Rudy Baum, former editor of C&EN. The timing will be one month after the Democratic National Convention, so

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hopefully the Convention Center and nearby hotels will be back in good shape.

### News you might use

Abstracts of the papers and posters presented at the meeting are archived at [www.acs.org](http://www.acs.org), and those plenary and symposium presentations that were recorded, with sequenced slides, can be found at [www.acs.org/meetingcontent](http://www.acs.org/meetingcontent).

Looking further ahead, the 2017 Spring ACS National Meeting will be in San Francisco, April 2-6.

Any members interested in the latest ACS financial performance can look at [www.acs.org](http://www.acs.org), click on the "About ACS" tab and then "ACS Financial Information."

A new on-line career assessment tool aimed at graduate students and post docs, ChemIDP, can be accessed at [ChemIDP.org](http://ChemIDP.org).

Information regarding grants offered by all ACS committees can be found at [www.acs.org/getinvolved](http://www.acs.org/getinvolved).

The Chemical Professional's Code of Conduct and the Academic Professional Guidelines are both in the process of being updated.

### Interesting Statistics

More than 3077 people have joined the American Association of Chemistry Teachers (AACT) launched by the ACS in 2014, of whom 88% are K-12 chemistry teachers. In 2016, AACT will hold its first conference in conjunction with the Biennial Conference on Chemical Education at the University of Northern Colorado, July 31-August 4.

Attendance at the San Diego meeting as of Tuesday evening was 16,327, with 8398 regular attendees, 5979 students, and 1094 exhibitors exceeded expectations for attendance at this ACS National meeting.

The 2015 New Graduate Survey results show that the unemployment rate for new graduating chemists is back around 14% from its dip to 12.4% last year and remains much higher than traditional levels. Unemployment for experienced members rose from 2.9% to 3.1%, again a reversal from last year.

The ACS Career Fair showed positive growth with 739 job seekers, 30 employers offering 106 positions, and 13 recruitment booths in the Expo. In conjunction with

these activities, as a benefit to members on site, 23 Career workshops were held, along with 360 resume reviews and 217 mock interviews. CalACS members, Mark Frishberg and Marinda Wu, who are ACS Career Consultants and Workshop Presenters, actively participated in these offerings.

ACS membership is holding around 158,000, up 150 from last year, but these numbers do not adequately express the continuing turnover of about 24,000 members per year, necessitating very active recruitment efforts to make up for the losses. The Membership Affairs Committee (MAC) is experimenting with several discount dues categories in order to try to improve member retention.

There were 62 POD shorts filmed at the San Diego meeting, providing 2-3 minute synopses of key presentations by the authors, which can be accessed by members through the ACS website.

Of the 185 ACS Local Sections, 169 participated in NCW in 2015.

The ACS ChemClubs program celebrated its 10th anniversary.

Submitted by Mark Frishberg, CalACS Councilor, with input from our other Councilors, Past ACS Presidents, and current Director-At-Large – April 6, 2016



*Nanalytica 2016 at UCB  
Friday, May 20, 2016 from 8:30  
AM to 6:30 PM*

PerkinElmer and IEEE SF Bay Area Nanotechnology Council are providing an all day forum where academic, government, and industrial researchers and stakeholders can come together to share insights on nanomaterial analytical techniques developed in the areas of advanced materials, life sciences, energy and the environment. Contact Toby Astill with any questions. [Toby.Astill@PerkinElmer.com](mailto:Toby.Astill@PerkinElmer.com)  
Phone: +1 (408) 835-3192

## 2016 Alameda County Science and Engineering Fair and San Francisco Bay Area Science Fair Special Awards

The Section participated in both the Alameda County Science and Engineering Fair held March 12, and the San Francisco Bay Area Science Fair held on March 17, by judging entries for special awards. The Section awards are a certificate, \$100, and a subscription to the ACS magazine CHEMMATTERS. One entry from each fair was selected for the Section awards. The awards are made for excellent entries that involve some principle of the chemical sciences. The Section judge was Charles Gluchowski. The awards were presented to the students at each Fair's awards ceremony. We congratulate all the Fair participants.

The two students, their school, and the entry title who received the Section's awards:

### San Francisco Bay Area Science Fair

Isabella Liu, San Anselmo,  
"A (Nano) Particular Conundrum"

### Alameda County Science and Engineering Fair

Shreya Mukherjee, Strafford Fremont Middle,  
"BPA Free Plastics, No Worries at All"

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years. She now reports and writes from the San Francisco Bay area for Chemical & Engineering News. She covers topics ranging from atmospheric chemistry, NMR spectroscopy, and laboratory safety to breast milk composition, marijuana quality control, and lethal injections.



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will include the case of the well known accident resulting in the death of researcher Sheharbano (Sheri) Sangji in 2009 from injuries sustained in a chemistry lab fire at the University of California, Los Angeles.

Saturday, May 14, our annual Awards luncheon honoring our 50, 60, and 70 year ACS members takes place at Scott's Restaurant in Walnut Creek. This is also the time when we present the Lloyd Ryland Outstanding High School Teachers award to a special High school Teacher within our geographical area. The Section is run by volunteers and each year the person who has made significant contributions to the Section over a period of years will be honored.

Friday May 20, the Section and its YCC is supporting "Nanolytical 2016", an all-day free forum sponsored by PerkinElmer on the UC Campus.

Details on any of these functions can be found either in this issue or on our website, I look forward to seeing or hearing from you.

Lou Rigali, lr101898@aol.com



## *Networking for the Next Generation of Chemical Professionals*

Zoe Adams and Liam Berryman YCC Undergraduate Events Coordinator and Undergraduate Lead

Graduating from undergraduate studies and finding a position in the workforce has become increasingly difficult in today's chemistry community. The latest statistics predict that chemistry graduates will outnumber chemistry positions ten to one in the coming decade. Thus, it is more pertinent than ever for chemistry and chemical engineering undergraduates to start early and explore broadly to find their professional path. This spring, the YCC networking event at Berkeley was designed to expose aspiring chemistry-related undergraduates to the possibilities they can encounter after graduation. With more than 25 professionals representing Novartis, Roche, and many more firms, the event attracted more than 70 people. Attendees were asked to start off in one-on-one student-professional pairs for introductions, creating an environment in which all guests were able to break the ice and become more comfortable with each other. Rotations were urged every three minutes for a total of ten introductions before a period of open mixing and conversation, giving students the opportunity to seek out those professionals they felt the strongest connection with. Both students and professionals found the event to be a rewarding experience of creating friendships amongst chemists and engineers.

The California section of YCC co-hosted this event with the Berkeley chapter of the American Institute of Chemical Engineers (AIChE). Like the fall YCC event (Career Panel for Chemists and Chemical Engineers), this networking session was successful thanks to the ACS professional network. YCC is continually bringing this network back into connection with the younger generation of chemists and chemical engineers, and the results have been powerful thus far. There is a clamoring for the reactivation of the ACS student chapter at Berkeley to facilitate a stronger ACS presence on campus through more of the popular events hosted by YCC in the past several months.

# BUSINESS DIRECTORY

## SEARCHING FOR THAT SPECIAL JOB?

There are many companies and organizations searching for chemical and biochemical personnel to fill important jobs in their organizations.

- Companies for laboratory and management positions
- Universities & Colleges for teaching positions and laboratory personnel
- Hospitals for technical and research personnel

There are several web sites that may help you search for these open positions.

- [www.mboservices.net](http://www.mboservices.net)
- <http://www.calacs.org/page.asp?id=22>

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