

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

Volume 35 No. 11

NOVEMBER 2013 NEWSLETTER TOPICS

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November Dinner and Seminar

Date: Thursday, November 14, 2013

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

Speakers: Nadia Drake and Peter Aldhous

Location: Basque Cultural Center
599 Railroad Avenue
South San Francisco, CA

www.sfbcc.us/content2.asp?id=13

Cost: \$28.00, Duck Legs Confit or Breast of Chicken Chasseur or Vegetarian Pasta

Reservations: www.scvacs.org
or Sally Peters 650-854-4614

Reservations should be made by November 7th stating your name, address, company/school affiliation, number of people in party. Watch the web site for more information. If you are unable to honor your reservation and do not cancel by Monday, Nov. 11th, you will be invoiced following the dinner meeting.

Reminder November 14th Dinner and Seminar Reminder

Nadia Drake and Peter Aldhous

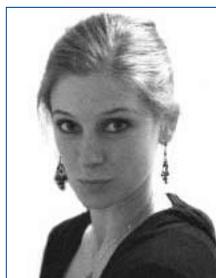
The Metamorphosis: Turning Science into News in a Changing Media Landscape

Abstract:

Most research isn't born being "news" – that transition requires work from both scientists and journalists. As an omnivorous science reporter who's been assigned to cover several, completely unrelated beats, I've found that some scientific fields seem to spawn news much more easily than others. So, what does it take to transform an elegant experiment into an accurate, engaging news story?

Biography:

Nadia Drake is a science journalist at WIRED, reporting on materials science, marine mammals, and mega-spiders. Before that, she covered astronomy for Science News, based in Washington, DC. She has written news and features for Nature, New



Scientist, Nature Medicine, Proceedings of the National Academy of Sciences, the San Jose Mercury News, and the Santa Cruz Sentinel. In 2012, she won the D.C. Science Writers Association's Newsbrief Award. Nadia is a 2011 graduate of the UC Santa Cruz Science Communication program, and earned her PhD in genetics from Cornell University. She loves reporting from the field, and has traveled to such places as China, Alaska, the Channel Islands, and California's redwood forests in pursuit of stories. Her favorite moon is Iapetus. See her articles at www.wired.com/wiredscience/author/nadiadrake/.

The Best of Times; the Worst of Times: Science Journalism in an Era of Media Turmoil

Abstract:

Much has changed since I started writing about science as a PhD student in the late 1980s. Technology has opened a world of possibilities for multimedia journalism, and science provides rich material. At the same time, the cozy business models of

continued on next page

Chair Elect's Message



Ean Warren

The 44th Western Regional Meeting (WRM) was held on October 3 to 5, 2013 in Santa Clara, California. A joint venture between the Santa Clara Valley and California sections, the meeting featured 42 sessions on topics from analytical chemistry to solar chemistry. Almost 730 scientists from around the world presented almost 400 talks over the 3 days. In addition, there were 63 exhibitors and 150 middle and high school students. I sat in on talks on environmental and geochemistry, chemistry and the law, ethnobotany, entrepreneurs, and chemical education and enjoyed each and every one of them. The titles of all the talks can still be found on the WRM website (www.wrm2013.org).

The meeting was not all technical talks. There were 4 workshops on lab safety and career development and one on small molecules. A special poster session was held for

continued on next page

print journalism have collapsed. I'll talk about the opportunities and challenges, from the point of view of a old-school science journalist who's embracing new skills including web development, and a teacher preparing science communication students to enter a fast-changing working environment.

Biography:

Peter Aldhous is San Francisco bureau chief with New Scientist magazine and reports on biology, medicine, social sciences and the environment — from genetics and stem cells, through ecology and conservation, to psychology and psychiatry. He also teaches in the Science Writing Program at the University of California, Santa Cruz. He is especially interested in investigative



and computer-assisted reporting, and he's fascinated by data visualization. See his website at www.peteraldhous.com for articles and his data images.

Peter got his break in journalism in 1989 as a reporter for Nature in London, fresh from a PhD in animal behavior. Later he worked as European correspondent for Science and as news editor for New Scientist. Prior to moving to California in October 2005, he spent five years as chief news and features editor with Nature. His articles have won awards from the Association of British Science Writers, the Association of Health Care Journalists, the UK Guild of Health Writers, the Society of Environmental Journalists, the Royal Statistical Society and the Wistar Institute. When the opportunity arises, he loves to combine work with travel. Over the years he's reported from countries including Cameroon, Cambodia, China, Indonesia, Mexico, Russia and Vietnam.

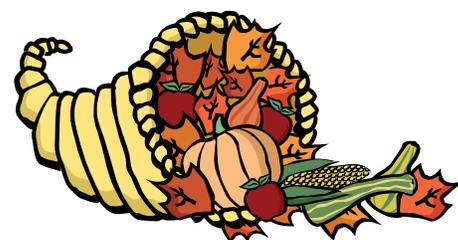
middle and high school students in which they were asked to investigate and present on an element of their choice. 150 students registered to present 100 posters on 62 different elements. In addition, the Santa Clara Valley Section held a Teach the Teachers workshop for pre-college teachers.

Lunch brought the opportunity to provide feedback to the ACS Board of Directors, hear a talk by ACS President Marinda Wu, or listen in on a panel discussion on STEM education and National and California State legislative activities. Evening activities included talks by Charles Bamforth on beer, Richard Zare on why James Bond might prefer shaken over stirred martinis, and Shirley Corriher and Sara Risch on food. All in all, some tasty chemistry! (See photos on page 4)

A lot of people spent countless hours working on this meeting. As co-chairs, Natalie McClure and Lee Latimer (Lee is from the California Section) worked tirelessly on all aspects of the meeting. Co-program chairs Bonnie Charpentier and Janet Gunzner (Janet is also from the California Section) ensured that all the sessions ran smoothly. Numerous other people stepped up and provided assistance to make this meeting run smoothly. Thank you all!

On a personal note, I thoroughly enjoyed the meeting. Not only were the talks informative and interesting, the small, limited venue provided me an opportunity to talk with colleagues and other ACS members in a casual setting.

On different note, congratulations to Michael Levitt (Stanford University), Martin Karplus (Harvard University), and Arieh Warshel (University of Southern California) for winning the Nobel Prize (www.nobel.se) in chemistry. As you may already know, they won the Prize for their work in "the development of multiscale models for complex chemical systems."



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 dinner 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 dinner 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 List for October

- | | | |
|-----------------------------|----------------------|------------------------------|
| Paul S. Albertus | Callista Ann Jerman | Gordana Seizovic |
| A'Lester Allen | Christopher Kalnmals | Badri Shyam |
| Kristin Black | Sidney Liang | Xinming Tong |
| Dr. Christopher Tyler Brown | Ali Mani | Loan Trac |
| Jennifer Carlson | Adam Miller | Tracy Santos Tumbale |
| Dr. Nathan Collins | Rena Mizrahi | Matthijs Pepijn van den Berg |
| Loan K. Dinh | Benjamin Moore | Amanda Van Epps |
| Andrew J. Farley | Joseph Nelson | Ryan Andrew Walke |
| Karen E. Flick | Mark Newman | Lan Wang |
| Phillip M. Hernandez | Dr. Priscilla Paul | Dr. Will Todd Wipke |
| Hsiao-Tieh Hsu | Dr. Yam Poudel | Dr. Mingin Wu |
| Dennis Xiao Hu | Dr. Richard Rairden | Gregory Kyle Young |
| Dr. Adam D. Hughes | Dr. David M. Rice | Xiaoyu Zang |
| Sofia Izmailov | | |

SCV Teach the Teachers Event

by Howard Peters

The Santa Clara Valley Section came together for its long-running Teach the Teachers event for sixteen local middle school science teachers. It was held at Mission College in Santa Clara on Saturday, October 5, 2013. The theme was concerned with the many sources of Energy around us – all which could be discussed and easily demonstrated by classroom experiment. Our usual leader, Juanita Ryan, was brilliant, showing that the materials needed for the experiments were available off the shelf, and many were recycled materials. She was backed up well by Haima Aczon.

One experiment was to construct a simple solar oven using a reflecting aluminum foil. S'mores were then prepared. Another experiment was the use of a large black plastic bag which, when filled with air and sealed, soon floated as the air inside warmed up in the bright sunshine. The teachers had a short tour of the Science building and facilities, and then participated in a drawing for many scientific give-away



laboratory materials. Each attendee carried away at least three bags of these materials.

SCV volunteers assisted with gathering materials, preparation and holding the event, along with our hosts at Mission College: Dr. Ashley Piekarski and Jennifer Gile, and a great many of their Mission College students. Susan Oldham-Fritts was the organizer of this long-term event with assistance from Howard Peters and Bonnie Charpentier. Other ACS and SCV members who volunteered to interact with the teachers (including personal career stories at lunch) included Dr. Erik Menke of UC Merced, Margareta Sequin (of SFSU), Lois Durham, George Lechner, Daniel Chan, and Sally Peters.

The topic for next year's National Chemistry Week and event will be The Chemistry of Candy. Watch for the announcement in 2014.



Teacher-Scholar Award for Community College Chemistry Faculty

by Allan Wilcox



The American Chemical Society (ACS) gives awards at local, regional, and national levels for excellent teaching in high schools, colleges, and universities. This annual award, created in 2009 by the ACS Santa Clara Valley (SCV) local section, fills a conspicuous gap. The award was the first in the nation to specifically recognize the contributions

of community college chemistry educators. It goes to a faculty member who has been an excellent chemistry teacher for many years. The winner must have also accomplished independent scholarship or given outstanding support to their students or to the ACS, thus the name Teacher-Scholar Award. The winner receives \$500 and her or his chemistry department receives \$500 to support the needs of the department.

This year, Jose Cabrera has been awarded the fifth annual Teacher-Scholar Award. Professor Cabrera of San Jose City College has received several awards for his involvement with students including "Outstanding Club Advisor" by the SJCC Associated Students in 2010. He is also noted for his work with the SACNAS (Society for the Advancement of Chicanos and Native Americans in Science) with awards which include "Chapter of the Year for Fundraising" in 2011 and "Community College Chapter of the Year" in 2012. Perhaps most telling is Professor Cabrera's recognition as "Faculty of the Year" from the SJCC President in 2012.

Professor Cabrera works with the Peer-Led Team Learning Program, a DOE funded program. He also advises students in research, many of whom present their results at National Conferences, and in so doing empowers students with a wider and richer perspective of the

beauty that is chemistry. He recognizes one never works in a vacuum, and appreciates the opportunity to work with his amazing students and passionate colleagues.

Previous Award Winners:

Cinzia Muzzi, De Anza College (2012)

Accomplishments: Excellent service to ACS; developed novel, cutting-edge laboratory curriculum.

Madeline Adamczeski, San Jose City College (2011)

Accomplishments: Participation and dissemination of teaching innovations; student support.

T.R. Dickson, Cabrillo College (2010)

Accomplishments: Author of numerous chemistry textbooks.

Jeanette Medina, Cañada College (2009)

Accomplishments: New chemical technology program; student recruitment and support.



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WRM Pre-College Poster Session

by Jane Frommer

As part of the Western Regional meeting, a special poster session for middle and high school students took place on Saturday afternoon. Consistent with the meeting's theme - The Many Elements of Chemistry - 150 students from 16 schools in the SF bay area and Las Vegas registered to investigate and report on an element of their choice.

Students were encouraged to be creative in composing their posters by emphasizing societal aspects of their chosen element: political, historical, nutritional, artistic, medical, cultural, social and technological. The intended take-home lesson was that chemistry is all around us, not just in a lab. Pre-college students were provided with a dedicated WRM webpage, well-stocked with links to youth-oriented resources and examples of posters: <http://wrm2013.org/students.html>

150 students registered to present 100 posters on 62 different elements. The three most popular choices? Gold, helium, and mercury. Among reasons given for the students' selections were:

"Palladium is named after a Greek god and is used for dentistry,

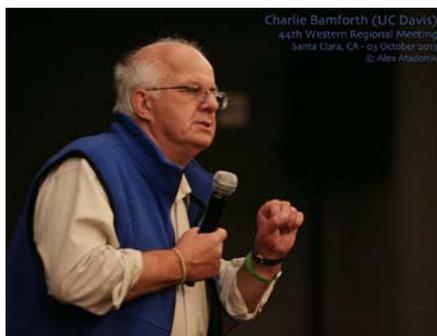
jewelry, and catalytic converters, a reason that cars are stolen."

"Technetium was born in a particle accelerator in 1937 at UC Berkeley as the first man-made element, and every year is used in almost 20 million medical tests in the US."

Many posters were created by teams of students, making this a social activity from creation to presentation. All participants took home ACS kid-friendly items (acquired at the Indianapolis national meeting's ACS store) as a reminder of their GREAT experience at an ACS meeting.

Feedback on the poster session soon followed the meeting from teachers at the represented schools:

"The poster session was great—the students were excited that adults talked to them about their elements and the parents that attended thought it was a great experience. It was the first time the students experienced anything like that, and good preparation for an environmental conference with a poster session that we plan to attend at the Moscone Center."



Charlie Bamforth presents his talk *Pilsner, Porter, Polysaccharides & pH: The Classy Chemistry of Beer*.



Richard Zare's lecture at the awards banquet entitled *Why Shaken, not Stirred!* discussed scientific elements around carbonated drinks and demonstrations illustrating the world of bubbles.



Shirley Corriher and Sara Risch spoke about food chemistry and answered questions from the audience.

Ann Nalley Western Region Award for Volunteer Service



The Ann Nalley Western Region Award for Volunteer Service was presented to Rita Boggs. Dr. Boggs is an emeritus ACS member, a Class of 2010 ACS Fellow, a small chemical business

entrepreneur, a former chemistry teacher, and an extraordinary volunteer. She has advanced the goals of the American Chemical Society through her sustained service at the local, regional, and national ACS levels, through promotion of chemistry education and literacy as a chemistry educator, and as a chemistry ambassador to her local community as a citizen-scientist-activist.

An ACS member since 1968, Rita

became involved as a Southern California local section volunteer after she moved to California in 1979. She is the 1992 recipient of the Agnes Ann Green Distinguished Service Award for her efforts in bringing sound administrative policies to the section and saving it from financial disaster. Rita has served continuously as a Southern California local section Councilor since 1993. As Councilor, she has served on the Task Force on Councilor Reimbursement Policy (1995, 1998), Committee on Nominations and Elections (1999-2004), Council Policy Committee (2004-2007), Local Section Activities Committee, Membership Affairs Committee, and the Senior Chemists Committee. At the regional level, Rita was the Southern California section delegate to the Coordinating Committee of California Sections (1988-2004), a coalition of local California ACS sections that was involved in communicating

to local ACS members California state legislation that affected chemists and the chemical enterprise. Rita also served the Western Region as Registration Chair (1983, 1989) or Exhibits Chair (1992) for three Western Regional meetings.

Now retired from teaching and day-to-day operations at her independent laboratory, American Research and Testing Inc., CEO Rita Boggs focuses her attention to her long-time interest in local civics and community activism in the City of Carson, where she is the voice of scientific thought and reason. As a chemistry ambassador, Rita is an activist-scientist who helps her community understand and confront chemical pollution and safety issues, explaining environmental impact reports, safety/pollution issues, brownfields/superfund properties and other technical matters to the local residents and city officials.

Arthur C. Cope Scholar Award

Sarah Reisman, assistant professor of chemistry at Caltech, is one of 10 winners of 2013 Arthur C. Cope Scholar Award from the American Chemistry Society. Reisman was recognized for her Caltech research group's original contributions to the understanding of complex molecule synthesis and reaction development. The award symposium in honor of Reisman's award was held on Friday afternoon of the Western Regional

Meeting. Ryan Shenvi of the Scripps Research Institute presented a talk on the "Chemical Synthesis of Secondary Metabolites." His talk was followed by Chris Beaudry of Oregon State, speaking about the synthesis of natural products with conformational chirality. Professor John Wood from Baylor University presented "Recent Progress in the Synthesis of Complex Natural Products."

Professor Reisman's talk on natural product synthesis as a platform for chemical discovery concluded the session. She presented several examples where the synthesis of complex molecules was enabled by the development of new methodologies. The Reisman lab has ongoing research programs targeting the chemical syntheses of several natural products, including members of the epidithiodiketopiperazines, the ent-kauranoids, and the acutumine alkaloids. Congratulations to Professor Reisman and her coworkers on the award.



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FUTURE MEETINGS

- Nov 14** Science in the News with editors
from Wired and New Scientist
Basque Cultural Center
South San Francisco, CA
- Nov 20** BioScience Forum
Biltmore Hotel & Suites
Santa Clara, CA
www.biosf.org/programs.htm
- Nov 12, 19, 26** San Jose State University
Chemistry Seminars
www.sjsu.edu/chemistry/Seminars
- Jan 16** Mosher Award Dinner
Biltmore Hotel & Suites
Santa Clara, CA
- Jan 29** Sessler Distinguished Alumni Lecture
<https://chemistry.stanford.edu/events/essler-lectures>
- Mar 16-20** Spring National Meeting
Dallas, TX