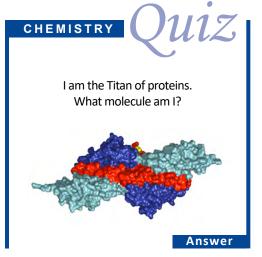


# SILICON VALLEY CHEMIST



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## Stanford Chemistry Professor to Receive Mosher Award

The *Harry and Carol Mosher Award* of the Silicon Valley local
ACS section (siliconvalleyacs.org)
has been awarded for over 40 years
recognizing individuals who advance
the chemistry profession, contribute
scientifically and support ACS in their
outreach efforts to explain chemistry
to the general public.

The 2022 Mosher Award recipient is Dr. Richard Zare, Professor

of Chemistry at Stanford University. This award honors Dr. Zare's remarkable breadth of scientific achievements, commitment to education and the advancement and communication of chemistry, and broad service to the American Chemical Society. Among Professor Zare's many scientific contributions, laser spectroscopy stands out in particular. He introduced laser-induced



fluorescence (LIF) as a method for studying reaction dynamics and as a sensitive detection method for analytical chemistry. As just one example, laser-induced fluorescence was the detection technique used to sequence the human genome. In addition, he has inspired, engaged, stimulated, encouraged, and propelled students at every level to reach if not exceed apparent limits of

their intellectual capabilities. Dr. Zare received the 2010 Priestley Medal - the highest award of the national ACS.

The Mosher Award includes an engraved ACS plaque, a \$2000 honorarium, and a Mosher Lecture on Chemistry which will be held in February, 2023. *Keep an eye on the SVACS website for updates*.

## **Chair's Message**

Stephanie Benight

Happy Holidays to everyone! Wrapping up the year, we had some great events held virtually as well as our first in-person events in some time. Many members gathered for the Annual Picnic in Mountain View at Cuesta Park in July and last month we resumed our dinner events, kicking it off with speaker Dr. Fatma Kaplan, CEO and co-founder of *Pheronym*.

She presented her research and start-up mission in "Nematodes and Pheromone Extracts as Boosters for Controlling Agricultural Pests in the Soil." In addition, thanks to Padraic O'Reilly, this past year we increased our social media presence to get the word out on our events to more people. Follow us on *Twitter* and *LinkedIn*.

The third annual *Bay Area Chemistry Symposium (BACS)* took place last month on the UC Berkeley campus. This successful series is jointly organized by the Silicon Valley and California local



ACS sections, together with a team from local academia and industry. The one-day symposium featured keynote addresses from professors and industrial chemists in the SF Bay area and showcased research talks from graduate students, post-doctoral fellows, and industry researchers on synthesis and design in medicinal, process, biological, and computational

chemistry.

Looking ahead, our esteemed annual *Mosher Award* will be presented to Professor Dick Zare of Stanford Chemistry in February, 2023. Read more about Professor Zare and the award in this month's newsletter. More seminars, dinners, and outreach events will fill 2023, including a joint event with the ACS Puget Sound section.

Also in this month's newsletter are the election results for next year's ExComm, the SVACS

continued on next page

#### Chair's Message, continued from previous page

leadership group. I would like to thank departing ExComm members Heddie Nichols and Avni Gandhi for their years of service, and welcome new members Megan Tichy, Amanda Nelson, and Kristin Schmidt to the SVACS leadership group. I would also like to single out departing ExComm members Jigisha Shah and Matt Greaney. Both Matt and Jigisha have served SVACS as Chairs in the past several years, reinvigorating our section. Our local ACS activity would not happen without the dedication of this group. You are all welcomed to join us in any role - as a member, organizer, participant, or simply as an attendee in our appreciative public.

Wishing you and your family a very merry set of holidays and a fantastic start to the new year in 2023. It has been a pleasure to serve as your Chair this past year and to hand over the reins to our Chair-Elect, Natalie McClure, a familiar face in the Silicon Valley ACS.

As always, feel free to reach out to us with feedback, questions, or suggestions at chair@ siliconvalleyacs.org.

## **American Chemical Society announces new CEO:** Albert G. Horvath

The American Chemical Society (ACS) Board of Directors has selected Albert G. Horvath, Treasurer and Chief Financial Officer (CFO) at ACS, as the Society's next CEO, effective Jan. 1, 2023. He succeeds Thomas Connelly Jr., who is retiring after nearly eight years with ACS. Al brings to the position a vast experience with financial,

business and administrative activities, and a full summary of his background can be found here.

"I am pleased that a person with Al Horvath's skill will be the next CEO of ACS," says Paul W. Jagodzinski, chair of the ACS Board of Directors. "His dedication to the mission and core values of ACS, coupled with his experience in member and



public-serving organizations, position him well to lead the Society as we move forward."

"I am honored and humbled to have been selected for this role and greatly appreciative to the Board for its confidence in me," says Horvath. "I have developed a deep commitment to ACS, and I look forward to working with our

talented team in serving our members, customers, and the entire chemistry enterprise. Together with our volunteers, I am confident that we will achieve the Society's bold vision."

Source: ACS News Release published on November 28, 2022.

Photo Credit: Peter Cutts Photography

## CALENDAR OF EVENTS https://www.siliconvalleyacs.org/events/

#### - December 2022 -

#### Dec 8 Trade Secrets and Economic Espionage in the 21st Century

Bill Leckrone, Special Agent, Federal Bureau of Investigation (FBI) Co-sponsored by ACS Webinars, ACS Advocacy, and ACS Industry Member Programs

11am-Noon, Online via Zoom, Free, Registration required

#### Dec 12 New Science, Persistent Problems: What the World Needs Now from Universities

Co-sponsored by Stanford Impact Labs and the White House 10:30am-Noon, Online via Zoom, Free, Registration required

#### Dec 13 **Optimizing Pharmaceutical Powder Characterization: 5 Key** Techniques

Brian Rodenhausen, Ph.D., Anton Paar Co-sponsored by C&EN Webinars and Anton Paar 10am-11am, Online via Zoom, Free, Registration required

#### Dec 14 **Executive Committee Meeting of the Silicon Valley ACS**

7:30-9pm, Online via Zoom, Free, Contact *Chair* to attend as a guest

#### Dec 15 Chemistry and the Economy: Break In Case of Emergency!

Paul Hodges, New Normal Consulting, and Bill Carroll, Carroll Applied

Co-sponsored by ACS Webinars, ACS Business Development & Management Division, and ACS Industry Member Programs 11am-Noon, Online via Zoom, Free, Registration required

#### Dec 16 From Picking Stones in Sand to Inventing Skin-like Electronics that will Change the Future of Electronics: A Conversation with Professor Zhenan Bao

Sponsored by Stanford Center on China's Economy and Institutions 5-6pm, Online via Zoom, Free, Registration required

#### - January 2023 and Beyond -

#### Rescheduled - Meet Chemistry Superstars: Creating Tomorrow's Jan 18 **Technologies**

Prof. Zhenan Bao, Stanford University, and Prof. Peidong Yang, UC

Sponsored by Chinese American Chemical Society, Northern California Chapter

4:15pm Check-in, 4:30-5:30 Program, 5:30pm Reception. All are welcome, seating is limited. Free. Stanford University, Paul G. Allen Building (Allen 101X Auditorium, 330 Jane Stanford Way). Parking: Via Ortega Garage, 498 Via Ortega or Parking Structure 5, 295 Campus Drive (free campus parking after 4pm)

Registration required View flyer

#### Jan 18 Methods for the Detection and Monitoring of Microplastics in the **Environment**

Steven M Barnett, Soar Optics Sponsored by the Golden Gate Polymer Forum (GGPF) 6:30 PM Online via Zoom, Registration required. Learn more and

#### Feb 16 Persistent Micelle Templates for Single-Variable Series of Porous **Nanomaterials**

Prof. Morgan Stefic, Chemistry and Biochemistry Dept., University of South Carolina

Sponsored by the Golden Gate Polymer Forum (GGPF) 6:30 PM Online via Zoom, Registration required. Learn more and

#### Feb 21 or 24 Mosher Award Winner Richard Zare Reception and Lecture

Sponsored by Silicon Valley ACS

5pm-5:30pm wine tasting, 5:30-7:00 pm heavy hors d'oeuvres and networking, 7pm-8pm lecture and award presentation. Learn more



## **Meet Chemistry Superstars**

Creating Tomorrow's Technologies



Prof. Zhenan Bao Stanford University Skin-inspired Organic Electronics



Prof. Peidong Yang
UC Berkeley
Artificial Photosynthesis

Please register and join us for the inaugural program of the new Northern California Chapter of the **Chinese American Chemical Society (CACS)** 

- · CACS overview and awards
- Talks from awardees Profs. Zhenan Bao and Peidong Yang
- · Great networking & light refreshments

Everyone is welcome, limited seating
Register now for free www.cacshq.org/superstars or scan QR code



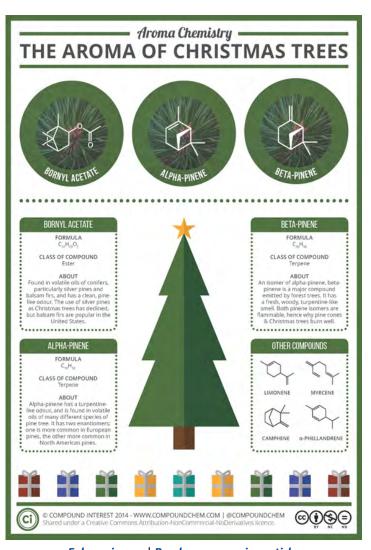
Wednesday, January 18, 2023

4:15 pm Check-In 4:30 pm Program 5:30 pm Reception

Stanford University, Paul G. Allen Building (Allen 101X Auditorium, 330 Jane Stanford Way)

Parking: Via Ortega Garage, 498 Via Ortega or Parking Structure 5, 295 Campus Drive

(Free campus parking after 4 pm)



Enlarge image | Read accompanying article

## Welcome to the Silicon 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 new members to the section, the Executive Committee offers new members a free dinner at a monthly SVACS seminar meeting. Come join us at our in-person dinner meetings! To register as our guest for an in-person dinner event, *contact us* directly to receive complimentary admission for you and a friend.

We hope you will also join us for an outreach event, like judging a science fair, proctoring the high school Chemistry Olympiad, or participating in a National Chemistry Week hands-on experiment event. The local section is a volunteer organization. Attend an event, volunteer to help, and get to know your local fellow chemists. Welcome!

#### **NEW ACS MEMBERS**

David L. Byrum Yongju Cho Christopher Ciccarino Robin D. Clark Nikhil Dhabarde Andres E. Dulcey Diptarka Hait Anex Jose Calton Kong Jennifer D. Lee Yangjie Li Matthew Liu Felix Minami Melanie Rodriguez Sanzeeda Baig Shuchi Heiner Sussner

## **Photos from the Latest PopUp Chemistry Event**

On November 19, 2022, SVACS volunteers Stanford Chemistry & Chemical Engineering Librarian, Dr. Amanda Nelson, and undergrad Matthew turned the Redwood City Public Library Makerspace Room into a PopUp Chemistry lab! One of the experiments was on water absorption

and release from acrylate polymers (diapers). About 20 kids participated

in this event. Many thanks to Pam Evans for being a great host. A big THANK YOU to Amanda and Matthew for making this event a success!

The next PopUp Chemistry event at RPCL is scheduled for January 14, 2023. To learn more about previous PopUp Chemistry events (includes videos), please see Silicon Valley ACS' Outreach page.





### **Election Results for SVACS 2023 ExComm**

Many thanks to the members who supported the Silicon Valley ACS by voting for its 2023 leadership team, the ExComm (Executive Committee). Your participation as members is appreciated and vital!

Voting was open from 12:01am, October 25, 2022, to 11:59pm, November 14, 2022. Total voters for the ballot: 115 (6.3% of 1,824 eligible voting members) as of 10:07pm on Sunday, November 27, 2022 (U.S. Pacific). We thank all the candidates who ran for office and look forward to an exciting and eventful 2023.

Please consider ways to participate and to support the ACS, the Silicon Valley Local Section, and the various committees that accomplish our MISSION: "Engaging the chemistry community by providing professional development, educational opportunities, networking, and recognition; and by sharing innovative, exciting, and fun chemistry with our diverse broader community through education and outreach."

Chair-Elect (114 voters indicated a choice on this ballot; vote for 1):										
Votes	Name	%	I	I	П		Т	Τ		
113	Todd Eberspacher	99.1%								
1	Write-in	0.9%	1							
1	1 Write-ins									
Secretary (113 voters indicated a choice on this ballot; vote for 1):										
Votes	Name	%	1	I	- 1		1	I		
113	Megan Tichy	100.0%								
0	Write-in	0.0%	ı	Q.						
Councilor (115 voters indicated a choice on this ballot; vote for 2):										
Votes	Name	%	1	I	Т		T	I		
111	Madalyn Radiauer	96.5%	П							
111	lhab Darwish	96.5%	П							
0	Write-in A	0.0%								
0	Write-in B	0.0%								
	Alternate Councilor (111 voters	indicated	а	choice o	n th	is t	ballot;	vote fo	or 3):	
Votes	Name	%	I	I	Т		1	Ι		
107	Amanda Nelson	96.4%								
92	Laura Yeager	82.9%								
76	Kristin Schmidt	68.5%	П							
47	Tim Erdmann	42.3%	П							
0	Write-in A	0.0%								
0	Write-in B	0.0%								
0	Write-in C	0.0%	П							





## Interesting and Cool Science In the News

9 out of 10 scientists hate their lab coat (Chemistry World, November 10, 2022)

Al 4 Science Discovery Network - Al4SD Conference 2022 Report (University of Southampton Institutional Repository, November 4, 2022)

Ammonium nitrate: making it safer today for a better tomorrow (CAS Insights, November 23, 2022)

Artificial intelligence deciphers detector "clouds" to accelerate materials research (SLAC News, November 7, 2022)

Beer hops compounds could help protect against Alzheimer's disease (ACS News Release, November 7, 2022)

*The cleanest drinking water is recycled* (Stanford Engineering, November 10, 2022)

Clear window coating could cool buildings without using energy (ACS News Release, November 2, 2022)

COP27: How to reduce emissions and still feed the world (Stanford News, November 21, 2022)

CRISPR tools found in thousands of viruses could boost gene editing (Nature News, November 23, 2022)

Cytokine storm warning: The critical role of cytokines in immunity and infection (CAS Insights, November 11, 2022)

**Designing better water filters with AI** (ACS News Release, November 30, 2022)

The evolving exosome: from small player to rising star (CAS Insights, December 2, 2022)

Food Packaging is (Naturally) Getting Smarter (ACS Axial, November 18, 2022)

**Generating electricity from tacky tape** (ACS News Release, November 21, 2022)

Gorgeous rainbow-colored, stretchy film for distinguishing sugars (video) (ACS News Release, November 30, 2022)

*Greener Methods for Cleaner Water* (ACS Axial, November 21, 2022)

*Highly Cited Researchers in 2022* (Clarivate, November 15, 2022)

Microscopy and simulation unite to improve new-age polymers (Stanford Engineering, November 11, 2022)

**New Stanford chip-scale laser isolator could transform photonics** (Stanford News, December 1, 2022)

Pairing Up for the Party Season: The Chemistry Behind the Perfect Food and Wine Pairings (ACS Axial, November 22, 2022)



## 2023 ACS CAS Future Leaders

Apply by January 29, 2023

Join a group of elite Ph.D. students and postdoctoral scholars from around the world to take the next steps in your leadership journey. Learn how to apply and submit your application for the 2023 ACS *CAS Future Leaders program* by Sunday, January 29, 2023!

#### Why you should apply

- Advance your career and make meaningful impacts in science: The ACS CAS Future Leaders program
  awards early-career scientists with leadership training and a trip to an ACS National Meeting &
  Exposition, one of the most respected scientific meetings in the world.
- Connections: Invaluable networking opportunities with peer scientists and renowned leaders.
- **Perspectives:** Inspiration from science-industry thought leaders, entrepreneurs and professional communicators.
- Insights: Exclusive leadership training and access to the expertise behind CAS SciFindern, the world's
  premier scientific information solution.

#### 2023 Program Benefits

Expense-paid trip to ACS CAS Headquarters in Columbus, Ohio **August 7-12, 2023** 

Expense-paid trip to ACS Fall 2023 National Meeting in San Francisco, CA

August 13-17, 2023

\$1,000 USD

3-year ACS membership

Profile featured in C&EN (see the 2018, 2019, and 2022 C&EN articles)

Complimentary registration for the National Meeting

Opportunity to present your research at the National Meeting

Complimentary registration for an ACS Professional and Leadership Development course at the National Meeting

Lifetime membership in the CAS Future Leaders Alumni Community

Putting the brakes on lithium-ion batteries to prevent fires (ACS News Release, November 14, 2022)

Semiconductors: The Building Blocks of Modern Technology (ACS Axial, November 7, 2022)

Shining a new light on oil-slick rainbows and other thin-layer physics (SLAC News, November 30, 2022)

**Sparking Interest in New Firework Colors** (ACS Axial, November 3, 2022)

Surprisingly, these microRNAs boost — rather

**than dampen** — **protein expression** (ACS News Release, November 9, 2022)

The therapeutic potential of nanotechnology beyond COVID-19 (CAS Insights, November 18, 2022)

**Unwrapping ancient Egyptian chemistry** (Chemistry World, November 21, 2022)

*Update on ACS Publications' Name Change Policy: Two Years Later* (ACS Axial, November 15, 2022)

### **Local Science Fairs in 2023**

by Susan Hines

Haven't decided on a New Year's resolution yet? How about encouraging middle and high school students to participate in the world of STEM – science, engineering, math, and science? It takes just one day of your time to judge at a local science fair – and all but two (Golden Gate and San Mateo STEM Fairs) are fully in person this year! The following science fairs need category awards judges, especially in the areas of botany, biology, chemistry, microbiology, and behavioral science. Other than the South Valley Science and Engineering Fair (a feeder fair to the Synopsys Championship) and Sciencepalooza!, all of them are qualifiers for Broadcom Masters, the California State Science Fair, and the International Science and Engineering Fair, ISEF.

Please contact me at *svsefmgr@gmail.com* to join our special award team of dedicated chemists for the South Valley Science and Engineering Fair on February 9, 2023, and/or the Synopsys Championship on March 9, 2023.

So, no matter which fair(s) you choose, please volunteer now!

- South Valley Science and Engineering Fair\*: February 9, 2023, visit website
- Sam Mateo County Office of Education STEM Fair, March 4, 2023, virtual format, visit website
- Synopsys Championship: March 9-10, 2023, visit website
- Santa Cruz County STEAM Expo: March 11, 2023, visit website
- Golden Gate STEM Fair: March 13, 2023, hybrid format, visit website
- Alameda County Science and Engineering Fair: March 25, 2023, visit website
- Sciencepalooza!\*: April 22, 2023, visit website
- $^st$ Many students at this competition are first time science fair participants and particularly benefit from your enthusiasm for science.









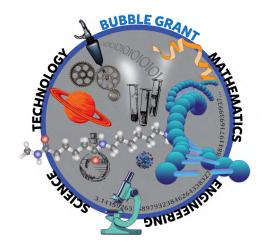








# **El Camino High School**

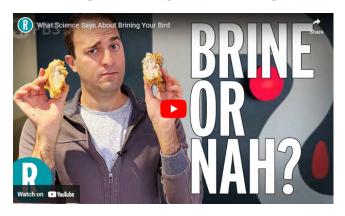


The Silicon Valley ACS supports local science teachers with an annual **BUBBLE Grant** of up to \$1,000 to acquire teaching equipment in their classrooms.

The winner of the **2022 Bubble Grant Award** is Po Yin Bowie Lee, a chemistry teacher at El Camino High School in South San Francisco. The grant will be used to purchase hot plates with stirrers for classroom laboratory use. According to Po Yin Bowie Lee, this will help students study the rates of chemical reactions. This will also give students the additional tools and flexibility to design and carry out experiments, enhancing the overall laboratory experience in the chemistry classroom.

The BUBBLE Grant is awarded annually. Encourage your K-12 teaching colleagues to apply!

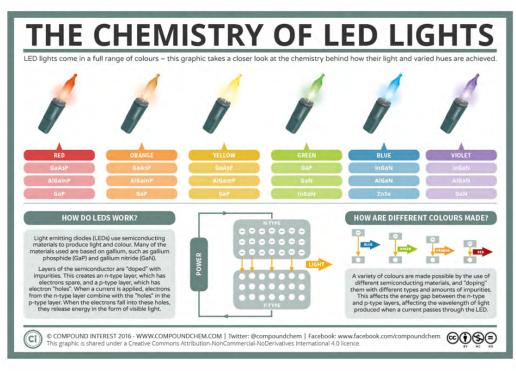
## **Brining Poultry: Cooking with Chemistry or Hot Nonsense? (video)**



"The chemistry behind brining meat is well established — but is this decades-old technique just foodie smoke-and-mirrors, or does it really make meat taste better? Two Reactions hosts and a producer square off to find the answer ... and find it they do! *Watch video on YouTube* 

Reactions is a video series produced by the American Chemical Society and PBS Digital Studios. Subscribe to Reactions at <a href="http://bit.ly/ACSReactions">http://bit.ly/ACSReactions</a> and follow us on Twitter @ACSReactions."

Source: https://www.acs.org/content/acs/en/pressroom/newsreleases/ 2022/november/brining-poultry-cooking-with-chemistry-or-hot-nonsensevideo.html





206-604-3163 sbenight@gmail.com

Stephanie Benight

#### **2022 Section Officers**

Chair

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