

SILICON VALLEY CHEMIST

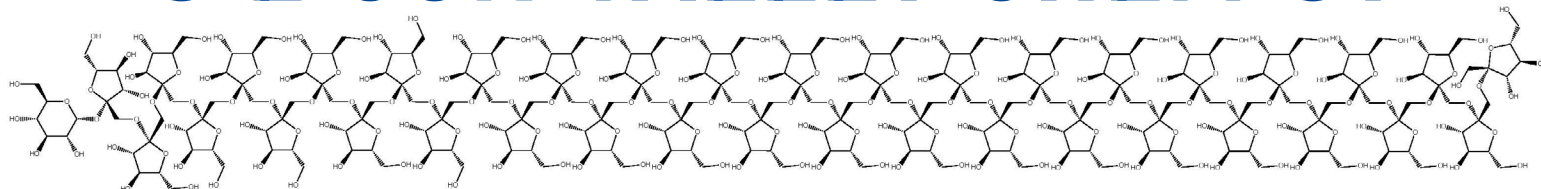


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Election Results 2025 SVACS ExComm

Many thanks to the members who supported the Silicon Valley ACS by voting for its 2025 leadership team, the ExComm (Executive Committee). Your participation as members is appreciated. Voting was open from 9:00am, November 8, 2024, to 11:59pm, November 18, 2024. Total voters for the ballot: 180. This represents 10.5% of 1,707 eligible voting members.

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National Chemistry Week 2024 Extravaganza *Picture Perfect Chemistry!*

By Jigisha Shah

This year, Silicon Valley ACS celebrated National Chemistry Week (NCW) with great pomp and splendor. A variety of chemistry-related hands-on activities and school visits, all aimed at involving the general public in explorations of the different facets of chemistry were a part of this event.

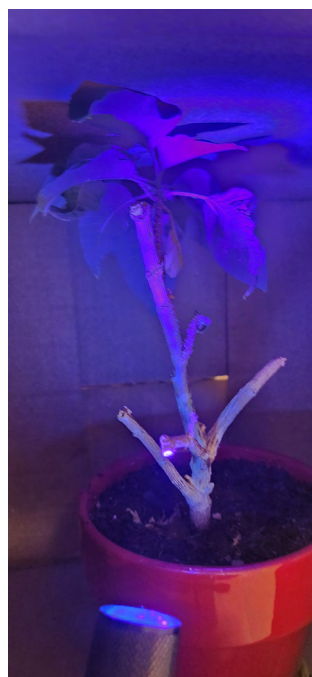
On 19 October 2024, we staged the section's primary NCW public outreach event in the San Jose public library, gathering volunteers from colleges and acquiring materials for hands-on activities for hundreds of youngsters.

- Kids had a lot of fun investigating the fluorescence of a variety of everyday items like fruits, tonic water, vitamins, detergents, olive oil, and highlighters under a black light. Did you know that poinsettia plants glow under black light?

- Younger explorers were captivated with handmade spectrosopes and UV bracelets. They watched different lights with diffraction gratings!
- Puzzle players enjoyed assembling ACS Imagine Imaging flat flexible magnets that feature three different cut-out shapes, a magnetic probe, and a base. When all the pieces are placed face down, you use the magnetic probe to feel the pattern within the magnetic field. Kiddos used this pattern to place the pieces and then flip the puzzle over for visual confirmation.
- A huge favorite this year was the experiment where young scientists made cyanotype images. We used UV flashlights to illuminate Starlight® paper to capture fantastic images using film negatives and stencils.



Cyanotype images



Does your Poinsettia glow?



Imagine Imaging Magnets

continued on next page



Natalie McClure (L) presents Bridget Kowalczyk (R) with a Salute to Excellence Award from SVACS.

- We played with glow-in-the-dark paper and different colored LED lights. Light causes the electrons in the paper to get excited to a higher energy level, and when the electrons fall back down to the ground state, they give off a greenish glow. Red light does not have enough energy to excite the electrons, so you don't get any glow. Blue light has more energy, and it's enough to excite some of the electrons to a higher energy level. Violet light has even more energy, and it can excite just about every electron it comes in contact with, creating a glowing awesomeness.
- Kids got to roll a dice to win some cool science merch!

We presented the Salute to Excellence award to Bridget Kowalczyk for championing and fostering the National Chemistry Week and Chemists Celebrate Earth Day events in collaboration with SVACS. She works tirelessly at the SJSU library to create an excellent learning environment for curious children.

As a part of the NCW celebration, we also collaborated with the Redwood City Library to have middle school scientists explore 'Picture Perfect Chemistry' and 'Chemistry of Fluorescence' at the library Makerspace on 5 October and 11 November 2024.

Lastly and most importantly, I would like to express my utmost gratitude to volunteers who donate their time and expertise. These programs are the result of the hard work of many dedicated and talented volunteers. It all starts with our local section's enthusiastic members. They recommend, test, and review experiments; collect supplies and materials; prepare the kits with the help of undergraduate students from colleges around us; recruit sponsors and volunteers; contact venues; and make these amazing events happen. I would especially like to thank Natalie McClure, Avni Gandhi, Amanda Nelson, Karan Dikshit, NV and Melody Esfandiari. Additional credit goes to students from San Jose State University who gave up their Saturdays to help assemble materials, lead demonstrations and activities with super enthusiastic kids. Without you all, National Chemistry Week would not be so successful!

Election Results, continued from front page

We thank all the candidates who ran for office and look forward to an exciting and eventful 2025.

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 serving as a resource for fundamental, innovative, exciting, and fun chemistry to our diverse broader community through education and outreach."**

Chair-Elect (178 voters indicated a choice on this ballot; vote for 1):

Votes	Name	%					
178	Natalie McClure	100.0%	████████████████████				
0	Write-in	0.0%					

Secretary 2025-2026 (177 voters indicated a choice on this ballot; vote for 1):

Votes	Name	%					
177	Jigisha Shah	100.0%	████████████████████				
0	Write-in	0.0%					

Councilor 2025-2027 (178 voters indicated a choice on this ballot; vote for 2):

Votes	Name	%					
163	Linda Brunauer	91.6%	████████████████████				
162	Jane Frommer	91.0%	████████████████████				
3	Write-in A	1.7%					
1	Write-in B	0.6%					
4	Write-ins						

Alternate Councilor 2025-2027 (177 voters indicated a choice on this ballot; vote for 2):

Votes	Name	%					
165	Eefie Chen	93.2%	████████████████████				
165	Jose Ramirez	93.2%	████████████████████				
1	Write-in A	0.6%					
0	Write-in B	0.0%					
1	Write-ins						

Protein Data Bank in Europe (PDBe) Team Introduces New Ligand Pages



"The Protein Data Bank in Europe team is excited to announce the release of its **enhanced PDBe-KB Ligand Pages**, an upgraded version of the **PDBeChem service** featuring new and improved features.

These updated PDBeChem pages provide a comprehensive view of small molecule data, including ligand descriptions, physicochemical properties, ligand-protein complexes, and their functional roles in these complexes. The pages also offer binding interaction statistics, related ligands, and cross-links to other databases. This integrated information is presented to enable researchers to identify patterns in ligand interactions and to explore their biological significance."

[Learn more](#)

CALENDAR OF EVENTS

<https://www.siliconvalleyacs.org/events/>

- December 2024 -

Dec 11 Clean Water Summit: Putting Chemistry to Work for Clean Water

Sponsored by ACS Office of Sustainability
8:00-11:30 am, Online, Free, [Learn more and register](#)

Dec 11 Sustainability at Exponent: Webinar and In-person Tour

Tiny Fibers, Big Problems: An Introduction to the Contributors, Environmental Impact, & Regulation of Microplastics
Sponsored by SPE Golden Gate Section
12:00 - 2:30PM, Menlo Park, [Learn more and register](#)

Dec 12 Better Ion Transport Through Polymer Chemistry: Polymer Electrolytes and Ion-conducting Membranes (REBROADCAST)

Sponsored by ACS Webinars and ACS Division of Polymer Chemistry
11:00am-12:30pm, Online, Free, [Registration required](#)

Dec 14 Kid Makers: Pop Up Chemistry

Sponsored by Silicon Valley ACS & Redwood City Public Library (RCPL)
2:00-3:00 pm, In person for ages 9-12, RCPL Downtown Location, 1044 Middlefield Road, Redwood City, Free, [Learn more](#)

Dec 18 The Higher Education Landscape: A Career Pathways Virtual Workshop

Sponsored by ACS Careers
9:00am-10:30am, Online, Free, [Registration required](#)

Dec 18 Diverse Careers in Science Policy

Sponsored by ACS Webinars and ACS Government Affairs
11:00am-Noon, Online, Free, [Registration required](#)

Dec 19 Eating Dangerously: How a Chemist's "Poison Squad" Won the Battle for Food Safety in the US (Rebroadcast)

Sponsored by ACS Webinars and ACS Division of the History of Chemistry
11:00am-Noon, Online, Free, [Registration required](#)

- January & February 2025 -

Jan 16 Professor Samanvaya Srivastava, UCLA Chemical & Biomolecular Engineering

Sponsored by the Golden Gate Polymer Forum (GGPF)
Details TBA, check back at <http://www.ggpf.org>

Feb 12 CHIPS-funded Program for Advanced Metrology of Semiconductor Packaging Materials

Stian Romberg, PhD, Materials Science and Engineering Division, National Institute of Standards and Technology
Sponsored by the Golden Gate Polymer Forum (GGPF)
Details TBA, check back at <http://www.ggpf.org>

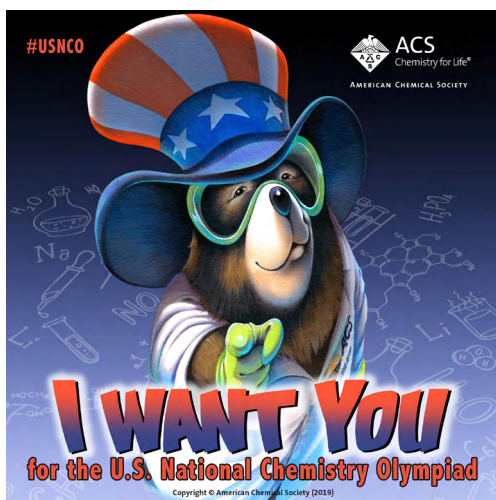
ACS Funding and Award Opportunities

Deadlines: December 2024-January 2025

Name of Grant or Award	Recipient	Amount	Deadline
Green Chemistry Challenge Award	Industry, Chemistry Professional	Variable	December 13, 2024
ACS Student Communities Professional Meeting Grant	Student, International	Up to \$2,000	December 15, 2024
Outreach Volunteer of the Year Award	Volunteer	\$0, Award recognition	December 15, 2024
Women Chemists Committee/Eli Lilly Travel Award	Student	Variable	December 15, 2024
Global Innovation Imperatives (Gii)	Volunteer, International	Up to \$25,000	December 23, 2024
ACS Public Policy Fellowships	Student, Chemistry Professional, Early Career	Fellowship	January 8, 2025
Global Innovation Grant	Student, Volunteer, International	Up to \$5,000	January 10, 2025
ACS Bridge Travel & Professional Development Award	Student	Up to \$1,000 expenses	January 10, 2025
Local Section Innovative Project Grant	Volunteer	Up to \$3,500	January 15, 2025
Irving S. Sigal Global Mobility Award Program	Student, International	\$3,000	January 15, 2025
ACS-Hach Professional Development Grant	K-12 Teacher	Up to \$2,500	January 21, 2025

SVACS 2024 in Review

When	What	SVACS newsletter coverage	Read more
January	<i>Kid Makers: Pop Up Chemistry</i> <i>Mosher Award presented to Drs. Cynthia & Bruce Maryanoff</i>	<i>January 2024</i>	<i>Photos & write-up</i>
February	<i>Kid Makers: Pop Up Chemistry</i>		
March	<i>Synopsys Championship Science Fair and SVACS Awards</i> <i>P.I.E.F.E.S.T. 3rd Annual Pasifika STEM Fair</i>	<i>March 2024</i> <i>April 2024</i>	<i>Science Fair Awards</i> <i>Photos</i>
April	<i>Hartnell College Spring 2024 Career & Resource Fair</i> <i>Chemists Celebrate Earth Week - Martin Luther King Library</i> <i>Chemists Celebrate Earth Week - Salinas Community Workshop</i> <i>High School Chemistry Olympiad National Exam</i> <i>Chemists Celebrate Earth Week Illustrated Poem Contest</i>	<i>May 2024</i> <i>April 2024</i> <i>June 2024</i> <i>June 2024</i>	<i>Photos</i> <i>Photos</i> <i>Illustrated Poem</i>
June	<i>Silicon Valley ACS & Golden Gate Polymer Forum Annual Joint Seminar</i> <i>Kid Makers: Pop Up Chemistry</i>	<i>June 2024</i>	<i>Innovations in Materials</i> <i>Design for Kidney Dialysis,</i> <i>from Lab Bench to Patient</i>
July	<i>Tech Trek</i> <i>Annual ACS Silicon Valley Picnic and Awards</i> <i>The 2024 Ottenberg Award to Madalyn Radlauer</i>	<i>June 2024</i> <i>July 2024</i> <i>August 2024</i>	<i>Photos</i> <i>Photos</i>
August	<i>SVACS Wins ChemLuminary Award at ACS National Meeting in Denver</i> <i>David Parker Award for Excellence Recipients Celebrated at Santa Clara Fire Dept.</i>	<i>September 2024</i> <i>October 2024</i>	<i>Nomination</i>
September	<i>Kid Makers: Pop Up Chemistry for Middle School Scientists</i>		
October	<i>Paving the Path Career Panel: Community College Student to Successful Scientist</i> <i>National Chemistry Week, Salinas Community Science Center, Salinas</i> <i>National Chemistry Week, Martin Luther King Library</i> <i>National Chemistry Week Illustrated Poem Contest</i> <i>SVACS Salute to Excellence Award to Bridget Kowalczyk</i> <i>Bay Area Chemistry Symposium</i>	<i>October 2024</i> <i>December 2024</i> <i>October 2024</i> <i>December 2024</i> <i>October 2024</i>	<i>Photos & write-up</i> <i>Write-up</i> <i>Picture Perfect Chemistry</i> <i>5th Annual BACS</i>
November	<i>Kid Makers: Pop Up Chemistry for Middle School Scientists</i>		
December	<i>Kid Makers: Pop Up Chemistry for Middle School Scientists</i>		



U.S. National Olympiad: Key Dates

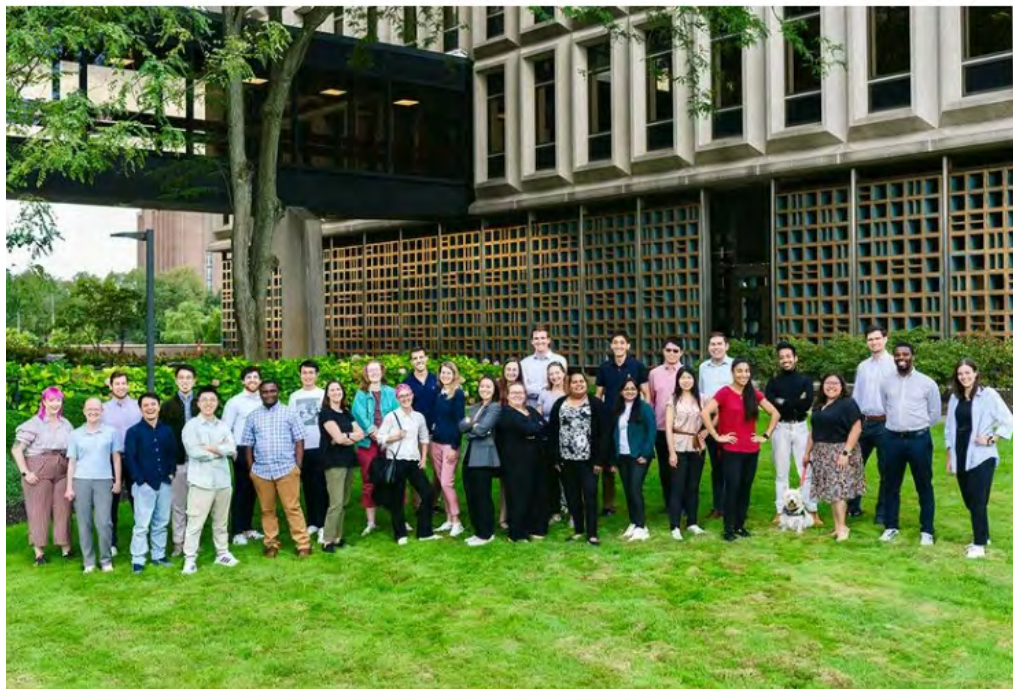
The *U.S. National Chemistry Olympiad (USNCO)* program is a multi-tiered chemistry competition for high school students. ACS has sponsored the program since 1984. To be eligible for participation, all students must register before January 17. Nominees for the National Exam will be selected based on their results of their local competition. See ACS USNCO website for study aids and past exams.

Key Dates:

December 16, 2024
January 17, 2025
 March 1-23, 2025
 March 15, 2025
 April 5, 2025
 June 1-14, 2025
 July 5-14, 2025

USNCO Coaching - Student Application | [Application Form](#)
 Student Registration Closes | [Registration Form](#)
 Local Qualifying exam period in schools
 Exam for students whose schools don't offer the program
 National Exam, Las Positas Community College
 Study Camp
 International Chemistry Olympiad

CAS Future Leaders Call for Applications



CAS Future Leaders for 2024

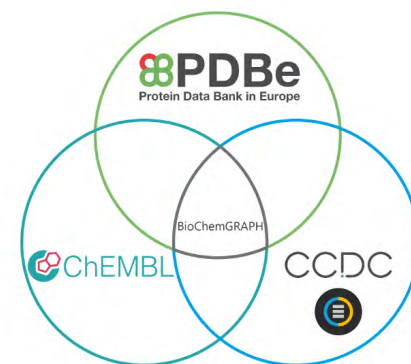
Join a group of exceptional Ph.D. students and postdoctoral scholars from around the world to take the next steps in your leadership journey. [Learn how to apply](#) and submit your application for the 2025 CAS Future Leaders program by **Sunday, January 26, 2025 at 9:00pm Pacific Time**.

Why you should apply

- **Advance your career and make meaningful impacts in science:** The CAS Future Leaders program supports the growth of science leadership among early-career scientists. Since 2010, the program has awarded Ph.D. students and postdoctoral scholars opportunities to learn leadership skills, engage in scientific discourse, and connect with peer scientists and innovators from around the world.
- **Learn:** Get exclusive leadership training from industry experts and learn how CAS connects the world's scientific knowledge.
- **Engage:** Share your latest discoveries to advance scientific knowledge at the American Chemical Society fall meeting.
- **Connections:** Network to make meaningful connections with peer scientists and innovators from around the world.

2025 Program Benefits

Expense-paid trip to ACS CAS Headquarters in Columbus, Ohio August 11-16, 2025
Expense-paid trip to ACS Fall 2025 National Meeting in Washington, D. C. August 17-21, 2025
\$1,000 USD
3-year ACS membership
Profile featured in C&EN (see the 2018 , 2019 , 2022 , 2023 , and 2024 articles)
Complimentary registration for the ACS meeting
Opportunity to present your research at the ACS meeting
Complimentary registration for an ACS Professional and Leadership Development course at the ACS meeting
Lifetime membership in the CAS Future Leaders Alumni Community



ChEMBL Brings Drug Bioactivity Data to the Protein Data Bank in Europe

“In the quest to develop new drugs, understanding the 3D structure of molecules is crucial. Resources like the Protein Data Bank in Europe (PDBe) and the Cambridge Structural Database (CSD) provide these 3D blueprints for many biological molecules. However, researchers also need to know how these molecules interact with their biological target – their bioactivity.

ChEMBL is a treasure trove of bioactivity data for countless drug-like molecules. It tells us how strongly a molecule binds to a target, how it affects a biological process, and even how it might be metabolized. But here's the catch: while ChEMBL provides extensive information on a molecule's activity and cross references to other data sources, it doesn't always tell us if a 3D structure is available for a specific drug-target complex. This can be a roadblock for researchers who need that structural information to design effective drugs. Therefore, connecting ChEMBL data with resources like PDBe and CSD is essential to accelerate drug discovery.

The **BioChemGraph (BCG) project** tackles the challenge of linking diverse data in biology by creating a resource that integrates data from the PDBe, ChEMBL, and the CSD. This project builds upon the PDBeKnowledge Base (PDBe-KB) resource and combines structural, functional, and biochemical information for small molecules and their targets. By using common data standards and providing easy access through APIs and files, BioChemGraph promotes interoperability and opens up new research opportunities by improving the findability and accessibility of small molecule data.”

[Read more](#)

[Learn more about BioChemGraph project](#)

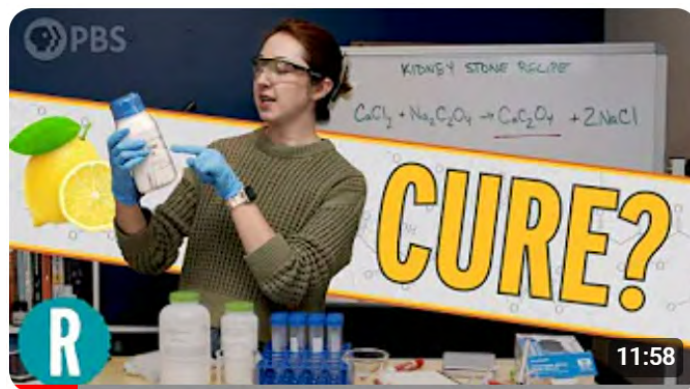
Reactions Videos – Yule Log for Nerds & Preventing Kidney Stones

Produced by ACS *Reactions*, a web series about the chemistry that surrounds you every day.



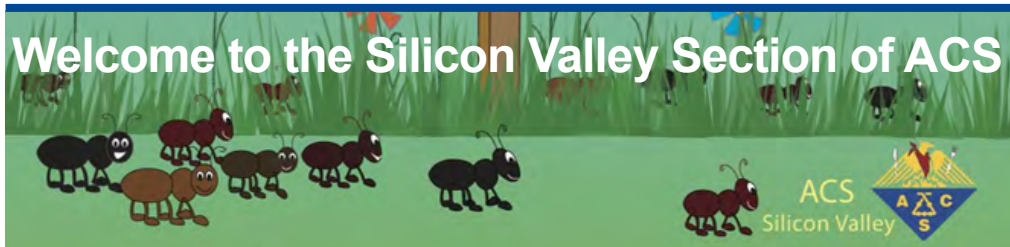
[Watch Video on YouTube](#)

Yule Log Chemistry Trivia - 4 Hours of Cozy Fireplace for Your Nerdy Holiday Parties “Ready to kick back and relax by the fire this holiday season? We’ve got you covered. Enjoy our chemistry-themed yule log trivia with a cup of hot cocoa at home, in the background at work, or at this year’s annual ugly sweater party.”



[Watch Video on YouTube](#) | [View Sources](#)

“Kidney stones are the worst, so Reactions host Alex Dainis made some at home and tested supposed prevention methods to keep them at bay. Doctors recommend citrate to ward them off, but how is a little lemon in your water going to stop them from forming? And are all citrus juices the same, or does orange juice prevent kidney stones more than lemon juice or even grapefruit juice? This week Alex gets the answers.”



Each month, our Silicon Valley local ACS 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. As a welcoming gesture, the SVACS Executive Committee offers new members free attendance at a catered SVACS event. Come join us at our in-person gatherings! To register as our guest for a catered event, [contact us](#) directly to receive complimentary admission for you and a friend. This month’s picnic is one such opportunity to meet us. See page 1 for details.

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.

New SVACS Members

Masahito Abe
Samantha Bunke
Zhe Chen
Crystal Chu
Andres Contreras
Amanda Dewyer
Kari A. Fossier
Carlos Garcia Guerrero
Beatrice Gomberg
Alexandre Goyon
Nicholai Grombchevsky

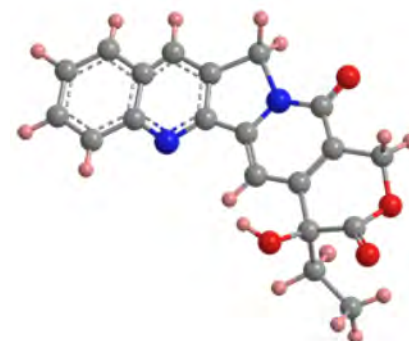
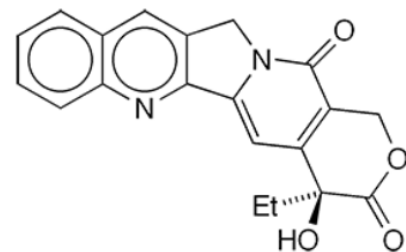
Colin Patrick Johnson
Omid Karkouti
Sarah Maria Landig
Eshton Liu
Robert S. H. Liu
Melissa Mendez
Ishita Patel
Edward Bay Pimentel
Masa Podunavac
Shailabh Rauniyar
Kyana Sanders

Jacob Morales Schekman
Jiahong Shen
Da Shi
Leslie Silva-Herrera
Nicholas Sizemore
Arthur L. Thomas
Adam Weiss
Chenggang Xi
Pinchen Xie
Stephanus Yang
Isaac Yu

CHEMISTRY

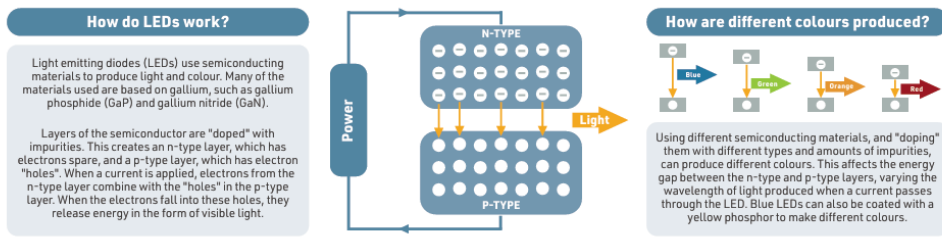
Quiz

I’m a natural product that gave birth to cancer chemotherapies.
What molecule am I?



Answer

How do LED lights work?



www.compoundchem.com

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ACS Local Section
Silicon Valley

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Silicon Valley ACS Executive Committee

2023 Section Officers	Chair	2024	Todd Eberspacher	
	Chair-Elect	2024	Amanda Nelson	
	Past-Chair	2024	Natalie McClure	
	Secretary	2023-2024	vacant	
	Treasurer	2024-2025	Ihab Darwish	
Councilors	2022-2024	Linda Brunauer	2022-2024	Jane Frommer
	2023-2025	Ihab Darwish	2023-2025	Madalyn Radlauer
	2024-2026	Grace Baysinger	2024-2026	Natalie McClure
Alternate Councilors	2022-2024	Megan Brophy	2022-2024	Anais Nguyen
	2023-2025	Kristin Schmidt	2023-2025	Laura Yeager
	2024-2026	Karan Dikshit	2024-2026	Howard Peters
Newsletter	Editor	Grace Baysinger	Assoc. Editor	Jane Frommer

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