

#### **MARCH 2024** VOLUME 47 NO. 3

# **SILICON VALLEY CHEMIST**

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#### **Register Today!**

"Approximately 7,200 job openings for chemists are projected each year over the next decade.

On Thursday, March 7th at 12:00 pm ET the American Chemical Society presents a Virtual Office Hour event: "LinkedIn Profiles for Chemists."

During this free virtual career guidance session, ACS Certified Career Consultant Katie Leach will provide insight into optimizing your LinkedIn profile and strategies to attract new career opportunities in the chemical sciences. LinkedIn has approximately 830 million users. What to expect:

#### ACS CAREER CONSULTANT VIRTUAL OFFICE HOURS

## LinkedIn **Profiles for** Chemists

Thurs., March 7 • 12 pm ET

- Tips for creating an impactful LinkedIn profile tailored for chemists.
- Guidance on using LinkedIn to expand your professional network and attract the attention of potential employers.
- Small group networking opportunities led by ACS Career Consultants to connect with industry experts and receive personalized career advice.

Meet the Presenter: Dr. Kathryn (Katie) Leach, Independent Contractor, McGraw-Hill

Katie graduated from the University of Rochester with a Ph.D. in physical chemistry (focus:

continued on next page



## Silicon Valley IP Forum

This event is free and open to the public. Register here

Sponsored by Stanford Program in Law, Science & Technology

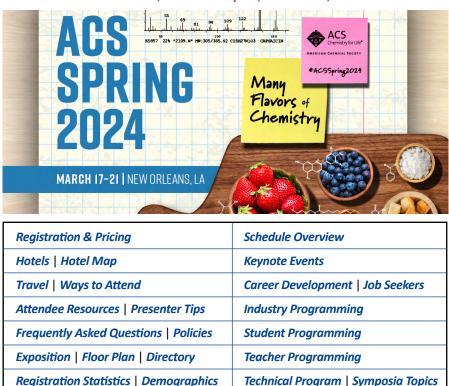
March 28 from 8:30 am-5:00 pm at Munger Complex, Paul Brest Hall, 555 Salvatierra Walk, Stanford

#### View map

Silicon Valley IP Forum fosters discussion and collaboration among IP professionals in the Silicon Valley area and beyond. The conference will feature discussions among judges, law firms, in-house counsel, and academics who practice at the forefront of IP

## ACS National Spring Meeting 2024 Many Flavors of Chemistry

https://www.acs.org/meetings/acs-meetings/spring.html New Orleans, Louisiana & Hybrid, March 17-21, 2024



#### ACS Offers Complimentary Childcare: Preregistration is required by March 8th. *Register now*

ACS Kids Camp welcomes children ages 3 years - 14 years. All children must be fully potty-trained. Children will participate in ageappropriate activities including arts and crafts projects, active games and much more in a safe, nurturing environment at an ACS official property. The location will be sent after your registration is reviewed. Breakfast and lunch will be provided. This service is provided free of charge for all registered ACS meeting attendees.

#### First-time Attendee Orientation Webinar on March 8 from 11:00 am-Noon. *Registration required*

Is it your first time at an ACS Meeting & Expo? We're excited to have you! Hear from the Meetings and Expositions Committee members as they offer valuable tips and insights to first-time attendees. Learn how to navigate your meeting experience via the mobile app – your go-to for all meeting resources, networking opportunities, and all the excellent activities and information available in the Expo featuring Career Navigator Live!

## Global Virtual Symposia: New for Spring 2024 *Learn more*

Global Virtual Symposia is a new programming

opportunity for presenters and audiences to participate in ACS Meetings & Expositions virtually and across many time zones. While in-person participants and general programming will be set to local time in New Orleans, LA (CT, GMT-5), select symposia will be set to daytime hours in Asia, Africa, Europe, the Middle East, and Latin America. Global Reach, Local Time.



#### Register Here

#### ACS Kids Zone

ACS Kids Zones are free public events featuring themed facilitator-supported activities, for children and their families. ACS members, including local chemists, college chemistry students, in addition

#### LinkedIn for Chemists, continued from front page



nanomaterials) and then began working in industry as a Research Scientist for an environmental lab, where she developed carbon nanotube sensors to detect trace amounts of warfare

agents. Her next position as a Visiting Assistant Professor at Valparaiso University arose from a networking event at an ACS national meeting. During her time at Valparaiso, she helped with numerous hiring committees as the Chemistry Department nearly doubled in size.

She currently serves as an independent contractor for McGraw-Hill, where she works on projects that support the online chemistry homework sales and marketing teams.

Katie has perspective on working in both industry and academia and has had two experiences where she pursued new opportunities she never expected to pursue after being laid off. She shares her insights about the higher education landscape, the application portfolio, familycareer balance, and the hiring process, especially networking and conducting career research."

to volunteer chemists of the ACS Committee on Community Activities (CCA), support interactive investigations, so children can experiment with actual chemists.

#### ACS Spring 2024 Kids Zone

On Saturday, March 16th, ACS President Mary K. Carroll will sponsor a free public event at Xavier University's Convocation Center. Participants will enjoy hands-on science activities, the opportunity to meet real chemists, and educational giveaways! Here are the planned activities:

- **Build-A-Battery Workshop**: Make a voltaic pile powerful enough to light a small LED bulb.
- *Explore Electrolytes*: Experiment and learn which beverage makes the best battery.
- **Pencil Electrolysis**: Use a battery to start a couple of colorful chemical reactions, to find out which bubbles are made of hydrogen, and which are made of oxygen.
- *Make-and-Take Paper Battery*: Made of only paper, foil, and saltwater, this small battery really works!
- Soccer Ball Chemistry: Experiment with a deconstructed soccer ball to get the inside story on how it's made.
- *Hand it to Chemistry!*: Let your hands reveal whether you and a special someone have chemistry.

#### Silicon Valley IP Forum, continued from front page

law. The keynote address will be given by Kathi Vidal, Director of the United States Patent and Trademark Office. *See the agenda*.

The Stanford Program in Law, Science & Technology (LST) combines the resources of Stanford Law School—including renowned faculty experts, alumni practicing on the cutting edge of technology law, technologically savvy and enthusiastic students, and a location in the heart of Silicon Valley—to address the many questions arising from the increasingly prominent role that science and technology play in both national and global arenas. The program helps students, legal professionals, business people, government officials, and the public at large identify questions and find innovative answers.

## Are ammonia engines the way of the future?



#### Watch on YouTube

"Could ammonia engines power the cars of the future? Carmakers like Toyota are working to make this a reality. Ammonia is combustible and holds promise as a relatively low-effort way to decarbonize the internal combustion engine — but the devil is in the details. Join George as he discovers at least one of those details by burning stuff in his basement."

Reactions: Chemistry Science Videos - Uncover the Chemistry in Everyday Life

## CALENDAR OF EVENTS

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

#### - March 2024 -

Mar 7	LinkedIn Profiles for Chemists (ACS Virtual Office Hours) Sponsored by ACS Career Services 9:00-10:30 am, Online via Zoom, Free, <i>Registration required</i>   <i>Learn more</i>	Mar 28	Silicon Valley IP Forum Keynote address: Kathi Vidal, Director of the United States Patent and Trademark Office	
Mar 7	<b>The Art of Self-Reinvention: How to Future Proof Yourself</b> Sponsored by ACS Webinars and ACS Women Chemists Committee 11:00 am-Noon, Online via Zoom, Free, <i>Registration required</i>		Sponsored by Stanford Program in Law, Science & Technology 8:30 am-5:00 pm, Free and Open to the Public, <i>Registration requir</i> In-person event held at: Munger Complex, Paul Brest Hall, 555 Salvatierra Walk, Stanford, CA 94305	
Mar 8	ACS Meeting & Expo: First-time Attendee Orientation Webinar Sponsored by ACS Meetings & Expositions Committee 11:00 am-Noon, Online via Zoom, Free, <i>Registration required</i>	Apr 4	- April 2024 and Beyond - Is Grad School Right for Me? (ACS Virtual Office Hours)	
Mar 9	P.I.E.F.E.S.T. 3rd Annual Pasifika STEM Fair Sponsored by Pacific Islanders Encouraging Fun, Engineering, Science		Sponsored by ACS Career Services 9:00-10:30 am, Online via Zoom, Free, <i>Registration required</i>   <i>Learn more</i>	
Mar 13	and Technology (P.I.E.F.E.S.T.) 1:00-5:00 pm, Redwood City, <i>Save the date</i> Fungal Foes: Understanding the Challenges of Fungal Infections and	Apr 4	Kid Makers: Celebrate Earth Day! Sponsored by ACS Silicon Valley and Redwood City Public Library (RCPL) 2:00-3:00 pm, RCPL Downtown Location, 1044 Middlefield Road,	
	New Treatment Options Sponsored by ACS Webinars and ACS Publications 8:00-9:30 am, Online via Zoom, Free, <i>Registration required</i>	Apr 10	Redwood City, Free, <i>Learn more</i> See What's New in CAS SciFinder-n Sponsored by CAS	
Mar 14	<b>Powering the Future: The Latest Battery Technologies</b> Sponsored by ACS Webinars and the Science History Institute 10:00-11:15 am, Online via Zoom, Free, <i>Registration required</i>	Apr 11	11 am-Noon, Online via Zoom, Free, <i>Registration required</i> Is ChatGPT for Me? Sponsored by American Association of Chemistry Teachers (AACT)	
Mar 17-21	ACS Spring 2024 National Meeting: Many Flavors of Chemistry New Orleans, Louisiana & Hybrid Registration & Housing Reservations are open	Apr 12	Webinars 4:00-5:00 pm, Online via Zoom, Free, <i>Registration required</i> Accelerating Discovery with Al: Self-Driving Laboratories	
Mar 26	Rheological Considerations for Materials and Process Design in Dense Suspension 3D Printing		Sponsored by ACS Webinars and the ACS Committee on Science 11:00 am-Noon, Online via Zoom, Free, <i>Registration required</i>	
	Prof. Michael J. Bortner, Dept. of Chemical Engineering, Virginia Tech Sponsored by the Golden Gate Polymer Forum 6:00-7:00 pm, Online via Zoom, Free/\$5 donation <i>Registration required</i> by March 25th at 1:00 pm	Jun 3-5	<b>28th Annual Green Chemistry and Engineering Conference</b> Sponsored by the ACS Green Chemistry Institute Theme: AI-Enabled Green Chemistry. Atlanta, Georgia. Early Registration Closes on April 30th. <i>Learn more</i>	

## **Judges Needed for Local** Science Fairs in March 2024

**Please Volunteer Now!** 

#### by Susan Hines

There is still room for you to join us on both the Dave Parker (middle school) and SVACS (high school) Synopsys Championship special award judging teams. Additionally, category awards judges are desperately needed for all of our local county science fairs. 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 in person.

The following science fairs need category awards judges, especially in the areas of programming, botany, biology, chemistry, microbiology, software, and behavioral science. All of them are qualifiers for the California State Science Fair and either the Broadcom Masters (middle schoolers) or the International Science and Engineering Fair, ISEF (high schoolers).

To join our special award team of dedicated chemists for the Synopsys Championship on March 14, 2024, contact Susan Hines at svseidr@gmail. com.

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

- Santa Cruz County STEAM Expo: March 9, 2024, Santa Cruz County Fairgrounds
- San Mateo County Office of Education STEM Fair: March 9, 2024, virtual format
- Synopsys Championship: March 14, 2024, San Jose Convention Center
- Alameda County Science and Engineering Fair: March 16, 2024, Chabot College, Hayward Campus
- Golden Gate STEM Fair: March 18, 2024, virtual format

## Guest Speakers "Mr. & Mrs. Chocolate" at Prof. Zare's Stanford Chemistry of Cooking Class



For at least the past three years, Dr. Richard Zare, Chemistry Professor at Stanford (and Silicon Valley ACS' 2022 Harry and Carol Mosher Award recipient), has taught a class in Kitchen Chemistry for incoming non-science major freshman. The course covers aspects of how chemistry interconnects with and governs much of the food we eat.

On Feb 20, 2024, local "Mr. & Mrs. Chocolate" (aka Howard and Sally Peters, 2009 Mosher Award recipients and 2016 ACS Helen M. Free Award recipients) were again guest lecturers presenting their fun lecture on "Chocolate - Food of the Gods."

#### Topics in their talk included:

- Chocolate has been a part of our New World culture for thousands of years.
- High points of the ancient history of chocolate and its production from the Mayan, Olmec,

and Aztec cultures up to the present.

- Aspects of the growing, processing, fermenting, drying, conching, tempering, blending, and finishing of the cocoa pod, bean, and pulp.
- Some chemistry, biochemistry and biology of chocolate and its active ingredients: Theobroma cacao, Caffeine, Theophylline, Flavonoids, Polyphenols, and other antioxidants, showing that this exotic processed food is good for you.
- Trivia connections with chocolate.
- Chocolate samples for attendees, and at the "bitter" end, there is a raffle for free chocolate.

Serendipitously, an article about chocolate appeared in the Stanford Daily on February 21, 2024, called "The cocoa craze: Experts spill the beans on the science of chocolate." \*

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About the speakers:



Howard Peters, Ph.D., earned his bachelor's degree in chemistry at Geneva College in Beaver Falls, Pennsylvania, and his doctorate at Stanford University. He received his law degree from Santa Clara University in California. As a chemist, he led research projects on volatile anesthetics. organic fluorine compounds, herbicides, and high explosives. Following his career in the lab (becoming a co-inventor on seven U.S. patents), he was a patent attorney in Silicon Valley for more than 30 years. He has been an ACS member for more than 50 years and served on the Society's Board of Directors from 2005 to 2007. Currently, he is an Alternate Councilor for the Silicon Valley ACS Section.

Sally Peters earned her bachelor's degree in chemistry at Geneva College and received a master's degree in library and information science from San Jose State University. She was an information specialist at Xerox PARC in Palo Alto for more than 28 years. Earlier in her career, she conducted virus research at Stanford under the direction of Hubert Loring, Ph.D., the chemist who first crystallized the polio virus, which was later used by Jonas Salk to create the first effective vaccine for the disease. Sally served as an ACS councilor for more than two decades and led the SVACS high school Chemistry Olympiad program for years.

## **Call for Nominations** Shirley B. Radding Award

#### Deadline: May 1, 2024

The Radding Award was established in 1994 by our ACS local section to recognize demonstrated, dedicated, unselfish leadership, service and significant contributions, over a sustained period of time, to industrial, academic, or applied chemistry and to the American Chemical Society at local, regional or national levels. The award is named for Shirley B. Radding, a charter member and long-time supporter of this Section. It consists of an engraved plaque and a check for \$1000.

Award recipients selected on the following criteria:

- Member of the American Chemical Society for more than 20 years
- Demonstrated dedicated and unselfish service to ACS members over a sustained period of time
- Provided leadership through elected and appointed ACS positions at local, regional, and national levels
- Made significant contributions to industrial, academic, or applied chemistry • Please submit nomination dossier with CV and two letters of recommendation by May 1, 2024, to: Chair, Radding Award Committee

Silicon Valley Section, American Chemical Society, P.O. Box 395, Palo Alto, CA 94302-0395 or email Natalie McClure at nmcclure@drugregulatoryaffairs.com

- Past recipients: 1994 Shirley B. Radding
  - 1997 Howard M. Peters 2000 Halley A. Merrell 2003 Jean'ne M. Shreeve 2006 Janan Hayes 2009 Brvan Balazs 2012 Bonnie A. Charpentier 2013 Mamie W. Moy 2015 Connie Murphy 2018 Peter Rusch 2021 Natalie McClure

1995 Agnes Ann Green 1998 Alan C. Nixon 2001 Norman A. LeBel 2004 Maureen Chan 2007 Merle Eiss 2010 Herb Silber 2016 Sally Peters 2019 Mary Virginia Orna 2022 Marinda Li Wu

1996 John C. "Jack" Rilev 1999 Valerie J. Kuck 2002 Paul H. L. Walter 2005 Glenn Fuller 2008 Dorothy Phillips 2011 Carol A. Duane 2014 Lee H. Latimer 2017 Garv D. Christian 2020 Thomas R. Beattie 2023 Not awarded



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.

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**

- Aaron Abrams Nathan Chong Xiaoling Gao Wesley Heim Liam Kai Herndon Kyle Hinaga Madison Huynh
- Rebecca Johnson Aadithya Kannan Christopher Lew Caleesi Li Massimo Merighi Chris Miller **Eleanor Oates**

Amnahir Pena-Alcantara Joe Seiwert III Kaushik Seshadri Keisuke Tsukamoto Jakub Vaith Daniele Vinella Hsien-Wei Yeh

## Call for Nominations Abraham Ottenberg **Service Award** Silicon Valley ACS Local Section

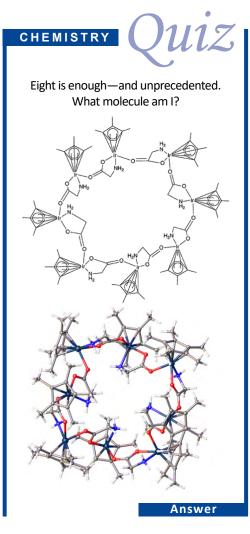
Deadline: June 1, 2024

The Ottenberg Award is presented annually to a member of our local section for outstanding service to the section.

include Nominations the nominee's biography, description of the service(s) for which the member is nominated, and a discussion or evaluation of the service to be recognized by the award. Nominations are not retained for subsequent years, but re-nominations are accepted for consideration. Previous recipients are not eligible to receive it again.

Please send your nomination before June 1. 2024, by e-mail to *PFRusch@aol.com* or by fax (650-961-8120) or by postal mail to:

Chair, Ottenberg Award Selection Committee Silicon Valley Section American Chemical Society P.O. Box 395, Palo Alto, CA 94302-0395



## Interested in serving on an ACS National Committee?



ACS Committees need you! ACS welcomes all members on Standard and Premium packages to serve on national committees. Learn more about how ACS Committees fit into the Society's governance structure and how YOU can become involved.

ACS Committees have an important role in representing the perspective of our core membership. Committees contribute to Governance decisions in the areas they represent. By joining a Committee, you will also experience benefits such as career and networking opportunities.

ACS National Committees include:

Chemical Safety	National Historic Chemical Landmarks
Chemists with Disabilities	Patents and Related Matters
Community Activities	Professional and Member Relations
Economic and Professional Affairs	Publications
Education	Science
Environment and Sustainability	Senior Chemists
Ethics	Technician Affairs
International Activities	Women Chemists
Minority Affairs	Younger Chemists

View all ACS Committees and frequently asked questions.

ACS Members interested in serving on an ACS Committee should submit their committee assignment preferences to the online committee preference form between March 1st to July 1st.

## P.I.E.F.E.S.T. Bay Area Pasifika STEM Fair 2024

Saturday, March 9th from 1-5pm

LEMO University Campus, 2575 E. Bayshore Road, Redwood City, CA 94063



The P.I.E.F.E.S.T. (Pacific Islanders encouraging fun, Engineering, Science & Technology) Bay Area Pasifika STEM Fair is a fun and engaging STEM experience designed to spark interest in STEM fields for youth. This event improves access to STEM for underserved communities by bridging the gaps between children, youth, families, and Bay Area STEM learning providers. The Bay Area Pasifika STEM Fair creates a culturally nurturing experience and presents STEM through a Pacific Islander lens.

Like last year, the Silicon Valley ACS will participate in this event with a table where students do hands-on chemistry experiments. Please contact us to help at this event.

Learn more about P.I.E.F.E.S.T. Learn more about the LEMO foundation

Please submit the committee preference form only if you are committed to attending and actively participating in committee meetings either virtually or in person. Please note that your ACS membership must be in good standing in order to complete your committee preferences.

Read more about *committee preferences* and the appointment process.

Review the Responsibilities of Committee Members section of the Committees FAQ for more details.

"Under the hood:" Committee Information from the ACS Committee on Committees

**Call for Nominations** ACS Fellows Program Deadline: April 1, 2024



"The American Chemical Society (ACS) Fellows Program was created by the ACS Board of Directors in December 2008 to recognize members of ACS for outstanding achievements in and contributions to science, the profession, and the Society."

Nominations for the 2024 Class of ACS Fellows are open from February 1 to April 1, 2024. Learn more and submit a nomination.

The 2024 ACS Fellows will be recognized by an award ceremony and reception at ACS Fall 2024 in Denver, CO.



## ACS on Campus Resources: Top 10 Tips

One-page PDF flyers on a range of useful topics (view more resources)

- Communication Skills, Collaborations, and Networking
- Creating Abstracts with Substance and Style
- Cultivating Your Scientific Presentation Skills
- Effective Science Writing
- Ethical Authorship
- Lab Safety
- Leveraging Social Media
- Managing Your Data
- Open Access Publishing
- Peer Review
- Poster Presentation Tips
- Preparing Your Manuscript
- Promoting and Advocating for Your Career
- Scholarly Publishing

## ACS 2024 Public Policy Agenda



The American Chemical Society (ACS) anticipates collaborating with the 118th Congress and the Biden administration to

- Support Research Funding
- Elevate STEM Education and Workforce Training
- Support Immigration, Scientific Collaboration and Academic Study
- Advance Sustainability and Climate Change Mitigation
- Ensure Access to High-Quality Science

Read the full text of the ACS News Release (February 5, 2024)

Speak up. Advance Chemistry. Improve People's Lives. *Learn more and get involved* 

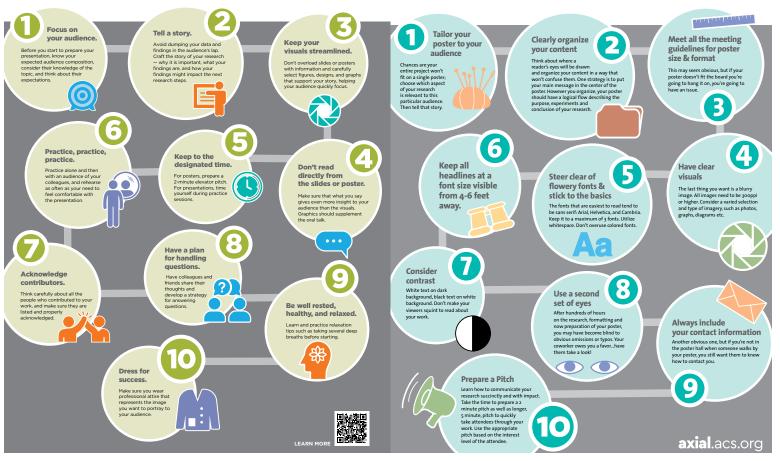
Tips for Cultivating Your Scientific Presentation Skills

During the course of a scientific career, you will be called on many times to present on a scientific topic or to share your latest research findings. Presenting research, whether in person at a poster, a presentation, or by an online format, is one of the primary ways scientists communicate with each other and spread new findings. How can you give effective presentations that engage your audience and shine a light on your research? Follow these ten tips to start on the pathway to becoming a professional presenter.

# TOP Coster Presentation Tips

So you've completed your research paper. Your figures are all correctly formatted, and your citations are everywhere they need to be. Now you just need to make a poster. Easy, right? Well, not always. Putting together a poster isn't just of reformatting your paper. Your poster is more than a printout of each page of your research paper tacked together, fin side by side. Your poster is an asset for your sesarch—It's a continuation of your hard work and therefore worthy

of your attention and time. To help you create a poster that accurately and successfully presents your research findings in a compelling way, here are to tips to creating a knockout poster.



## There is SO Much Interesting and Cool Science in the News

ACS to honor University of Virginia with National Historic Chemical Landmark designation (ACS News Release, February 22, 2024) Also see: Chemical Hearth: A National Historic Chemical Landmark (Dedicated March 1, 2024)

'Artificial tongue' detects and inactivates common mouth bacteria (ACS Press Release, February 26, 2024)

A battery's hopping ions remember where they've been (SLAC News, February 15, 2024)

Blueberries' blue is just skin deep, depending on structure not pigments (Chemistry World, February 16, 2024)

A bright idea for recycling rare-earth phosphors from used fluorescent bulbs (ACS Press Release, February 29, 2024)

A Bright Solution for Detecting Invisible Lead Threats (ACS Axial, February 13, 2024)

Building a Burger with Math (Caltech Magazine, December 13, 2023)

Chemical etching method opens pores for fuel cells and more (Phys.org, March 1, 2024)

Children's drawing and drawing recognition abilities change throughout childhood (Stanford News, February 22, 2024)

Cleaned surfaces may be germ-free, but they're not bare (ACS Press Release, February 8, 2024)

Clever cathode design opens doors to first rechargeable calcium battery (Chemistry World, February 7, 2024)

A Color-Changing Liquid That Can "Hear" Sounds (ACS Axial, February 27, 2024)

Compounds in female ginseng could lead to new osteoporosis treatments (ACS Press Release, February 21, 2024)

Creating reconfigurable fluidic devices from liquid building blocks (Chemistry World, February 21, 2024)

Do your kids want a dog? Science may be on their side (NPR, February 4, 2024)

Double trouble at chromosome ends: New study alters our understanding of telomere biology (Phys.org, February 28, 2024)

Drug limits dangerous reactions to allergy-triggering foods, Stanford Medicine-led study of kids finds (Stanford Medicine News, February 25, 2024)

Engineered enzymes break down silicon-carbon bonds in siloxane, an emerging pollutant (Chemistry World, February 12, 2024)

'Epigenetic' editing cuts cholesterol in mice (Nature, February 28, 2024)

First example of communication in coupled molecular motors (Chemistry World, February 28, 2024)

Five advances that could change heart health monitoring (ACS Press Release, February 1, 2024)

From Love to Lab: Oxytocin's Expanding Role in Health and Science (ACS Axial, February 14, 2024)

The Future of Flight: A Look Into eVTOL Battery Technology (ACS Axial, February 21, 2024)

GPT-3 trained and tuned to predict molecular properties (Chemistry World, February 2, 2024)

Highways through historically redlined areas likely cause air pollution disparities today (ACS Press Release, February 21, 2024)

History's crisis detectives: Using math and data to reveal why societies collapse—and clues about the future (Phys.org, February 19, 2024)

How Can AI Propel Exploration of the Cosmos, the Oceans, and the Earth? (Caltech News, February 6, 2024)

How molecular 'handedness' emerged in early biology (Phys.org, February 28, 2024)

How phase separation is revolutionizing biology (Nature, February 27, 2024)

Human decomposition driven by unique community of microbes (Chemistry World, February 14, 2024)

Improving helmets to reduce impact of concussions (Science Matters, NSF.gov, February 5, 2024)

Iron salts catalyse the creation of carbenes for cyclopropanation (Chemistry World, February 22, 2024)

Is ChatGPT making scientists hyper-productive? The highs and lows of using AI (Nature, February 28, 2024)

It's not only opposites that attract: New study shows like-charged particles can come together (Phys.org, March 1, 2024)

Kinky findings drive crystal growth paradigm shift claim (Chemistry World, February 20, 2024)

Knight-funded research uncovers gene mutations that may prevent Alzheimer's Disease (Stanford Wu Tsai Neurosciences Institute News, February 22, 2024)

Lighting up Alzheimer's-related proteins to allow for earlier disease detection (ACS Press Release, February 5, 2024)

Lithium-ion batteries from drones might find second lives in less 'stressful' devices (ACS Press Release, March 1, 2024)

Live music stimulates the affective brain and emotionally entrains listeners in real time (PNAS, February 26, 2024)

Magnetic effects at the origin of life? It's the spin that makes the difference (Phys.org, February 20, 2024)

Mercury levels in tuna remain nearly unchanged since 1971, study says (ACS Press Release, February 21, 2024)

Mind-reading devices are revealing the brain's secrets (Nature, February 20, 2024)

New Approach Harvests Nuclear Fuel from the Oceans (ACS Axial, February 29, 2024)

New research consortium seeks to help optimize future grid (Stanford Doerr School of Sustainability, February 21, 2024)

A new RNA editing tool could enhance cancer treatment (Stanford News, February 21, 2024)

New software rapidly simulates glycoprotein structures to speed up *drug development* (Phys.org, March 1, 2024) continued on next page

#### Interesting and Cool Science in the News, continued from previous page

*New spray-on dyes can instantly reveal fingerprints at crime scenes* (Chemistry World, February 2, 2024)

*New 'supermolecule' demonstrated for the first time at recordbreaking ultracold temperature* (Chemistry World, February 21, 2024)

*A new theoretical development clarifies water's electronic structure* (Phys.org, February 26, 2024)

*A new vibrant blue pottery pigment with less cobalt* (ACS Press Release, February 22, 2024)

*NSF, NIH partner on new research to develop RNA-based methods for biotech innovations* (NSF News, February 27, 2024)

*Pesticides to help protect seeds can adversely affect earthworms' health* (ACS Press Release, February 14, 2024)

*Plutonium to carbon double bond a first* (Chemistry World, February 13, 2024)

*Pre-organising antibiotic structure could aid fight against resistance* (Chemistry World, February 20, 2024)

*Prioritizing Mentorship as Scientific Leaders* (ACS Central Science, January 10, 2024)

*Protecting wine from wildfire smoke taint with a nanotech coating* (Chemistry World, February 6, 2024)

*Researchers capture strange behavior of laser-excited gold* (SLAC News, February 15, 2024)

*Researchers find response to ketamine depends on opioid pathways, but varies by sex* (Stanford Medicine News, February 9, 2024)

*Scientists may have found an alternative to blue jean dye* (ABC News, February 27, 2024)

*Scientists stop the motion of atoms to watch electrons move in liquid water* (SLAC News, February 15, 2024)

*Scientists watch gas-phase ions form and transform in real time* (SLAC News, January 29, 2024)

*A Shape-Shifting Plastic With a Flexible Future* (New York Times, February 1, 2024)

*Sitting idle boosts the performance of lithium metal batteries for nextgeneration EVs* (Stanford News, February 7, 2024)

A sleeker facial recognition technology tested on Michelangelo's David (ACS Press Release, February 2, 2024)

*Stanford Medicine study identifies distinct brain organization patterns in women and men* (Stanford Medicine News, February 20, 2024)

*Steering and accelerating electrons at the microchip scale* (Stanford News, February 26, 2024)

*Study reveals molecular mechanisms behind hibernation in mammals* (Phys.org, February 20, 2024)

*This methane-sniffing satellite will leave climate polluters nowhere to hide* (Nature, March 1, 2024)

*Three unexpected foods in alternatives to traditional plastics* (ACS Press Release, February 15, 2024)

*Toward truly compostable plastic* (Knowable Magazine, February 27, 2024)

Tying Knots Inside Lasers (Caltech News, March 1, 2024)

*Upcycling Cardboard into Greener Foam Packaging* (ACS Axial, February 20, 2024)

Vaccinating Against Fentanyl Addiction (ACS Axial, February 9, 2024)

*Want fewer microplastics in your tap water? Try boiling it first* (ACS Press Release, February 28, 2024)

Women might lower their risk for cardiovascular disease by twice the amount as men with exercise (CNN, February 19, 2024)

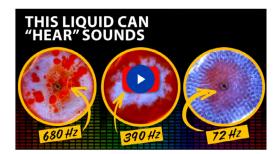
## **Headline Science**

"A video series exploring new research published in ACS journals. *Headline Science* features illuminating research footage along with concise explanations of cutting-edge science."



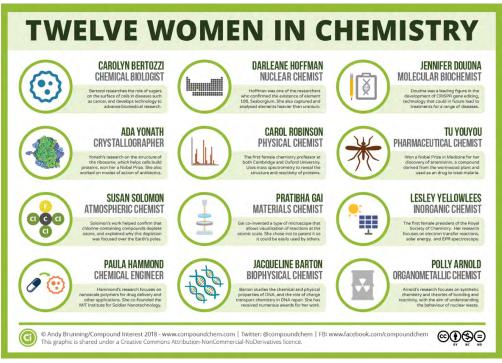
#### Illuminating lead with glowing perovskites Watch on YouTube

A simple spray converts lead contamination into glowing green perovskites, visible under ultraviolet light. Read the paper: *https://doi.* org/10.1021/acs.est.3c06058



This liquid can 'hear' different frequencies of sound | *Watch on YouTube* 

Reporting in The Journal of Physical Chemistry B, researchers were surprised to find that different frequencies of sound produced different patterns in a color-changing liquid. Studying reactions like this could help scientists design chemical computers that can hear and process information. Read the paper: https://doi.org/10.1021/acs. jpcb.3c08429





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