


SILICON VALLEY CHEMIST



April Featured Events

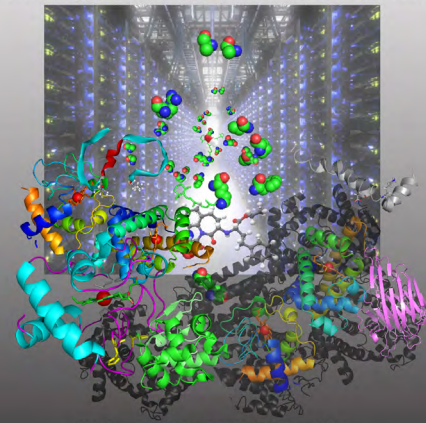
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Stephen Boyer PhD
Collabra, Inc.

Curating Worldwide Scientific Content



Wednesday, 12 April 2023 | 7:00pm PDT
For more information and to register for this seminar, go to <https://www.siliconvalleyacs.org/event/curating-worldwide-scientific-content/>
Registration is free and required to receive a Zoom link.

[Download and share the flyer](#)



University of California, Santa Cruz
Chemistry & Biochemistry Department's
Annual Bunnett Symposium

April 28, 2023, 4:30pm
John C. Warner

Together with Paul Anastas, John has defined the field of Green Chemistry and created the 12 Principles of Green Chemistry. He has spent his life working to change the field of chemistry and the education of future chemists to ensure that all practicing chemists will one day have the necessary skills to invent truly sustainable technologies. He has co-founded the non-profit "Beyond Benign," which provides educators with the tools, training and support to make green chemistry an integral part of chemistry education, and asks University chemistry programs to incorporate the principles of green chemistry into their required curriculums.

For more information, please go to our website, www.science.ucsc.edu/bunnett-symposium-2023/.

[Learn more](#)

Chair's Message

Natalie McClure



The ACS just completed the Spring National meeting in Indianapolis. It was a very successful meeting that drew more than 12,000 participants. The vast majority (over 10,000) attended the meeting in person. The convention center location in Indianapolis is a very nice one. The hotels and the convention center are adjacent to each other which makes it easy to go from one session to the next and to connect with colleagues. A full report of the meeting will be included in next month's newsletter.

The public outreach program for this month is "Chemists Celebrate Earth Week (CCEW)".

The theme for the 2023 CCEW is "The Curious Chemistry of Amazing Algae". Our section will host several events for local students and will participate in the **CCEW illustrated poetry contest**. The **Celebrating Chemistry magazine** includes engaging articles for middle school students and trivia facts for all or us. Here's

a quick quiz:

Which of the following foods contain algae?

Ice Cream • Cherry Pie • Sushi Roll • Spirulina Drink
• Icing • Candy

The answer is possibly all of these foods.

continued on next page

Chair's Message, continued from front page

Agar and carrageenan are two very common gelling/thickening agents that are found in many of the foods we eat. Many of the "green drinks" contain spirulina, a blue-green algae that provides a natural blue color for food products. It is an important source of vitamin B12, especially for people who avoid animal products.

One new program that ACS has established is a revamped Speaker Directory (see the flyer in this newsletter). This is a great resource for local sections and others who might be looking for a speaker for an upcoming event. The directory is searchable by name, topic and geography. This directory is intended to give chemists an opportunity to share their expertise and to build their engagement resume. If you would like to



be considered as a speaker for an ACS or other event, you are encouraged to list your name, topic and contact information in the directory. You do need to be an ACS member and log into the ACS Network to access the directory, but this easy to set up.

If you are interested in the Speaker Directory or want more information on the CCEW and algae, please **contact us**. We are always delighted to hear from you and to have new volunteers.

April 12, 2023

Curating Worldwide Scientific Content

Stephen K. Boyer, PhD., Collabra, Inc.

Sponsored by the *Silicon Valley* and the *Puget Sound* Sections of ACS
7:00-8:00pm, Online via Zoom, Free, **Registration required**

Abstract

Chemical informatics technology is improving access to the text and images of patents and scientific literature through computer-curation. For example, annotated data is produced from the patents of ~138 countries translated from ~58 languages as well as from Google Scholar and Books in a collaboration between a team of computer scientists at Google Patents and chemical informaticians at Ontochem. The annotators identify chemical names, diseases, proteins, and genes, then post-process them into machine-readable formats before assigning them unique identifiers (OCIDs). Name-to-structure and image-to-structure programs convert chemical names and images into associated metadata, e.g., SMILES strings, InChIs, and InChIKeys. As a result, molecular entities become findable by structure-substructure searching.

The output of non-copyrighted data of >54 billion scientific and related entities is donated to NIH and made available in PubChem and in Google Big Query. These collaborative efforts provide researchers access to previously unavailable resources, relevant in the areas of pharmaceuticals, publishing, health care, and environmental science. Integration of this data with massive amounts of publicly available



scientific information in the Big Query environment provides a rich resource for machine-learning and AI of value for the worldwide scientific community.

Bio: Stephen K Boyer, PhD, Collabra Inc

<https://www.linkedin.com/in/stephen-k-boyer-15529>

Steve Boyer works in the interdisciplinary space of chemistry and computer science. By automating the curation of patents and the scientific literature, his goal is to expand the scientific community's understanding and use of published information in chemistry, the physical sciences, medicine and intellectual property.

His professional history combines ten years of synthesis and scale-up in the pharmaceutical industry (Ciba-Geigy/Novartis) with 25 years in technical roles at IBM Research. He has participated in several start-ups and currently serves as a science advisor at Google, Digital-Science, OntoChem and several other cheminformatics enterprises. He played a major role in getting patent information publicly available in the early days of the internet.

Steve holds a BA from Temple University in Philadelphia and a PhD in synthetic organic chemistry from Tufts University. His publications and patents range from new drug syntheses to text+image analytics. <https://bit.ly/3Ky5XSU>

Interested in serving on an ACS National Committee?



Examples of ACS National Committees include Chemists with Disabilities, Community Activities, Economic and Professional Affairs, Chemistry and Government (Public Affairs), Environmental Improvement, Ethics, International Activities, Minority Affairs, National Historic Chemical Landmarks, Senior Chemists, Technician Affairs, and Younger Chemists.

A more comprehensive list

ACS Members interested in being appointed to serve on a National ACS Committee should submit their committee assignment preferences on the **online committee preference form** between April 15 and July 15, 2023.

Please submit the committee preference form only if you are committed to attend and actively participate in committee meetings either virtually or in-person.

Your ACS membership must be in good standing to complete your committee preferences.

Learn more

CALENDAR OF EVENTS <https://www.siliconvalleyacs.org/events/>

- April 2023 -

Apr 11 **Polymeric Bioactives: Polymers from Bioactives and as Bioactives**
Prof. Kathryn E. Uhrich, University of California at Riverside
Sponsored by the Golden Gate Polymer Forum (GGPF)
6-7pm, Online via Zoom, Free/\$5 Donation, [Registration required](#)
(Registration deadline: April 10th at 1pm)

Apr 12 **Belonging: The Science of Creating Connection and Bridging Divides**
Sponsored by Stanford Digital Education
1-2pm, Free, Online via Zoom, [Registration required](#)

Apr 12 **Curating Worldwide Scientific Content**
Stephen Boyer, PhD, Collabra, Inc.
Sponsored by the Silicon Valley and Puget Sound Sections of ACS
7:00-8:00pm, Online via Zoom, Free, [Registration required](#)

Apr 13 **Engineering Polymers that Prevent Rejection of Gene Therapy and 3-D Printed Implants**
Sponsored by ACS Webinars and the ACS Polymer Chemistry Division
11am-Noon, Online via Zoom, Free, [Registration required](#)

Apr 13 **RAMP [Recognize, Assess, Minimize, and Prepare] in the Research Lab Workshop**
Sponsored by ACS Division of Chemical Health & Safety
Noon-3:00pm, Online via Zoom, \$25, [Registration required](#)

Apr 16-22 **Chemists Celebrate Earth Week**
Theme: The Curious Chemistry of Amazing Algae
[Learn more](#)

Apr 17 **Towards an Integrated Algae Biorefinery: Extraction, Fractionation, Purification, and Transformations in Green Solvents**
Sponsored by ACS Webinars, ACS Green Chemistry Institute, and ACS Publications
10-11am, Online via Zoom, Free, [Registration required](#)

Apr 19 **CAS SciFinder-n Live: What's New and Upcoming**
11am-Noon, Online, Free, [Registration required](#)

Apr 22 **John Muir Birthday – Earth Day Celebration**
Sponsored by California ACS Section
10am-4pm, Free, The John Muir National Historic Site, 4202 Alhambra Avenue Martinez CA, [Learn more and register](#)

Apr 24 **Energy Seminar - Breakthroughs Related to Fusion**
Chris Young, Lawrence Livermore National Laboratory
Sponsored by Stanford Precourt Institute of Energy
4:30-5:20pm, Online, Free, [Registration required](#)

Apr 27 **Paving The Path Virtual Career Panel**
Community College Student to Successful Scientist
Sponsored by the Silicon Valley ACS
6-8pm, Online via Zoom, Free, all are welcomed, [Registration required](#)

Apr 28 **21st Annual Bunnett Symposium, UC Santa Cruz Department of Chemistry and Biochemistry**
Featured lecturer Dr. John Warner, co-founder of the field of Green Chemistry
4:30–5:15PM check-in, poster session
5:30–6:45PM award presentations and keynote lecture
6:45–8:30PM strolling dinner (\$35)
[For more info about the symposium and to register](#)

- May 2023 and Beyond -

May 4 **Biomedical 3D Printing: Research Landscape, Applications, and New Innovative Materials**
Sponsored by ACS Webinars and CAS
11am-Noon, Online via Zoom, Free, [Registration required](#)

May 6 **Northern California ACS Undergraduate Research Symposium**
8:30am-12:30pm, Free, Saint Mary's College of California, 1928 Saint Mary's Rd, Moraga, CA
Abstract Submission Deadline: April 24th, [Learn more and register](#)

May 17 **Molecular-Scale Engineering of Stimuli-Responsive Polymer Hydrogels**
Prof. Danielle Mai, Stanford University Chemical Engineering
Sponsored by the Golden Gate Polymer Forum (GGPF)
6:30pm, Online via Zoom, Free/\$5 Donation
Registration details TBA; see www.GGPF.org for updates

Jul 28-30 **Postdoc to Faculty Workshop**
Sponsored by ACS
Held in Chicago, Illinois ([Learn more and register](#))



European Union's Ban on Tattoo Ink: Breaking Down the Chemistry

A ban by the European Union on a number of pigments used in tattoo inks has sparked a conversation around their composition and safety. In this video, we dive into the science of these inks, explore the new ban and investigate how new pigments from the research world might expand the possibilities of tattoos from art to medical devices. [Watch video on YouTube](#)

Brief Summary of the Spring 2023 ACS Council Meeting

- **ACS Meeting Attendance:** The spring 2023 meeting was held at the ACS National meeting in Indianapolis in a hybrid manner from March 26-30. As of March 29, there were 12,623 registrations (10,792 in-person and 1,831 virtual).
- **ACS Speaker Directory:** ACS launched a Speaker Directory for Local Sections and planners to use. Currently, the Directory has over 300 speakers in it and includes people at different stages of their careers. If you would like to be added to this Directory, please go to <https://www.acs.org/speakerdirectory> (ACS ID required).
- **Membership Schedule Changes for 2024:** a disability waiver will be available to people who have a long-term disability and have been a member of ACS for one year; affiliate members will be able to select either the Premium or Standard Membership package; and emeritus eligibility will require 35 years of membership and being retired from full-time work. See pages 71-72 of the [Council Agenda](#) book for more details.
- **Serving on an ACS National Committee:** ACS Members interested in being appointed to serve on an ACS Committee should submit their committee assignment preferences to the online committee preference form. Please note that your ACS membership must be in good standing to complete your committee preferences. The [online committee preference form](#) is open April 15 through July 15, 2022. [Learn more](#). View the [Committees](#) page to learn more about individual committees. View pages 69-106 of the [Council Agenda](#) book for reports about recent activities.
- **Reports from ACS Officers:** Reports from the

President, President-Elect, Immediate Past-President, Chair of Board of Directors, and Chief Executive Officer are available on pages 36-53 of the [Council Agenda](#) book.

- **ACS President-Elect Candidates for 2024:** The two candidates for 2024 president-elect are Dorothy Phillips, retired from Waters, and Florian Schattenmann, chief technology officer at Cargill. The winner will serve a 3-year term on the board as a member of the presidential succession. See pages 19-25 of the [Council Agenda](#) book for their statements and qualifications.



Credit Portrait Simple Studio/Courtesy of Florian Schattenmann

Call for Nominations Shirley B. Radding Award Deadline: May 1, 2023

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 and national levels. The award is named for Shirley B. Radding, who was a charter member and long-time supporter of this Section. It currently 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, 2023 to:

Heddie Nichols, Chair, Radding Award Committee
Silicon Valley Section, American Chemical Society
P.O. Box 395, Palo Alto, CA 94302-0395
or email: hnichols105@gmail.com

Past recipients:

1994 Shirley B. Radding	1995 Agnes Ann Green	1996 John C. "Jack" Riley
1997 Howard M. Peters	1998 Alan C. Nixon	1999 Valerie J. Kuck
2000 Halley A. Merrell	2001 Norman A. LeBel	2002 Paul H. L. Walter
2003 Jean'ne M. Shreeve	2004 Maureen Chan	2005 Glenn Fuller
2006 Janan Hayes	2007 Merle Eiss	2008 Dorothy Phillips
2009 Bryan Balazs	2010 Herb Silber	2011 Carol A. Duane
2012 Bonnie A. Charpentier	2013 Mamie W. Moy	2014 Lee H. Latimer
2015 Connie Murphy	2016 Sally Peters	2017 Gary D. Christian
2018 Peter Rusch	2019 Mary Virginia Orna	2020 Thomas R. Beattie
2021 Natalie McClure	2022 Marinda Li Wu	

- **Board of Directors Candidates for District VI:** The candidates for District VI director are Janet L. Bryant, retired from Pacific Northwest National Laboratory, and Jeanette M. Van Emon, retired from the US Environmental Protection Agency. See pages 26-30 of the [Council Agenda](#) book for more details.

- **Petition to Add International Representation on the Board of Directors:** The Board of Directors shall be composed of the President, the President-Elect, the most recent Past President (all ex officio), six District Directors, one elected from each of six geographical Districts by the membership of the Districts from which they are to serve, one International Director elected by SOCIETY members residing outside of the United States and Canada who are not members of a Local Section, and six five Directors-at-Large elected by the Council. The Chief Executive Officer shall be a nonvoting ex officio member of the Board of Directors. See pages 79-85 of the [Council Agenda](#) book for more details.

[Learn more about ACS Council and view previous agendas.](#)



Member News: Sally Peters

Below is a *partial reprint* of news published in March by Geneva College.



Geneva College: Life G Award Recipients 2023

Geneva College is proud to announce the recipients of this year's Life G Award. The Life G Award is given to Geneva College alumni who have displayed a service above self and embodies the principles the College stands for. Each year the recipients have led a life of exemplary accomplishments and service to their communities and nation. Sally A. (Brown) Peters '64 and Betty Sue (Carter) Schaugency '55 PhD are the recipients of this year's awards and have demonstrated an unwavering commitment to service-leadership in their field of work.

Sally A. (Brown) Peters '64

Sally Peters earned her bachelor's degree in chemistry at Geneva College in 1964 and went on to receive 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, California for more than 28 years. Earlier in her career, she conducted virus research at Stanford under the direction of Hubert Loring, PhD, 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 has been active in ACS for more than 30 years and has served the American Chemical Society (ACS) at the national, division, regional, and local section levels.

Sally Peters was the 2022 recipient of the ACS Western Regional E. Ann Nalley Award, recognizing the volunteer efforts of individuals who have served the ACS, contributing significantly to the goals and objectives of the Society through their regional activities. Sally and her husband, Howard '62, a couple known as "Mr. and Mrs. Chocolate" because of their use of the delectable sweet to explain the wonders of chemistry to non-scientists, toured the United States sharing their signature presentation, "Chocolate — Food of the Gods," which explores the history and chemistry of one of America's favorite treats.

They also have been scientist-author lecturers on Cunard's Queen Mary 2 and on Princess Cruise ships. Other venues have included churches, science clubs, children's museums, and schools. Through these activities, they say they have reached out to virtually every demographic, including underrepresented groups in science.

In addition to their chocolate presentations,

the couple has for years supported the ACS International Chemistry Olympiad, the Intel International Science & Engineering Fair, and KIDvention, a program that encourages teams of children from underprivileged backgrounds to try inventing devices using common household items.



Science Teacher-Training Program



EnCorps
IGNITE A PASSION FOR STEM

Educational Equity Makes an Impact

Share your STEM expertise to give students in under-resourced communities equitable access to a high-quality STEM education.

Explore Teaching Middle or High School
Volunteer to Tutor Middle School Math

Explore Becoming a Teacher

EnCorps provides STEM professionals with the support, resources and classroom experience needed to fully explore the option of embarking on a life-changing STEM teaching career.

Discover the Joy of Tutoring

EnCorps offers STEM professionals the opportunity to volunteer as virtual math tutors for middle school students in under-resourced schools.

For more information: <https://encorps.org/>

Call for Nominations

2023 Abraham Ottenberg Service Award Silicon Valley ACS Local Section

Deadline: June 1, 2023

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

Nominations include 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, 2023 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



Paving the Path

Silicon Valley American Chemical Society

REGISTER NOW

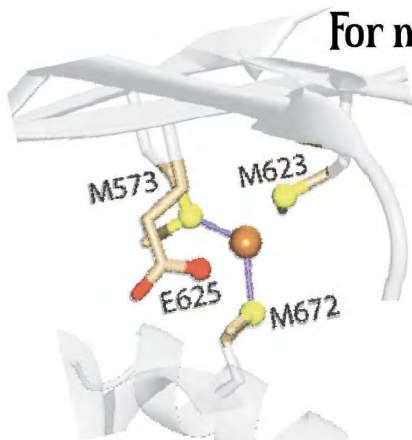
Calling all community college and transfer students with an interest in **chemistry** for a

VIRTUAL CAREER PANEL

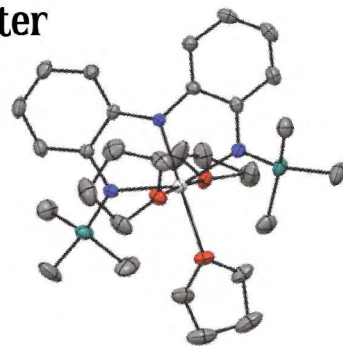
with 4 scientists who started their higher education journeys at a community college **just like you!**

Thursday, April 27, 2023 | 6 – 8 pm PDT

For more information and to register



Scan me!



PANELISTS

Joel Bruegger

Kelly Chacón

Andro Rios

Victoria Tafuri

This event is part of the SVACS Paving the Path program that supports community college students majoring in chemistry-related fields and who are planning to transfer to 4-year colleges.

P.I.E.F.E.S.T. 2023



[Watch video on YouTube](#)

On Saturday, March 11th, the [LEMO Foundation](#) partnered with P.I.E.F.E.S.T. (Pacific Islanders encouraging fun, ENgineering, Science & Technology) for the 2nd Annual Bay Area Pasifika STEM Fair hosted on the LEMO campus! P.I.E.F.E.S.T. is a non-profit organization that was founded in South San Francisco by Pacific Islander parents in search of a community within STEM (Science, Technology, Engineering and Math). Several hundred students attended.

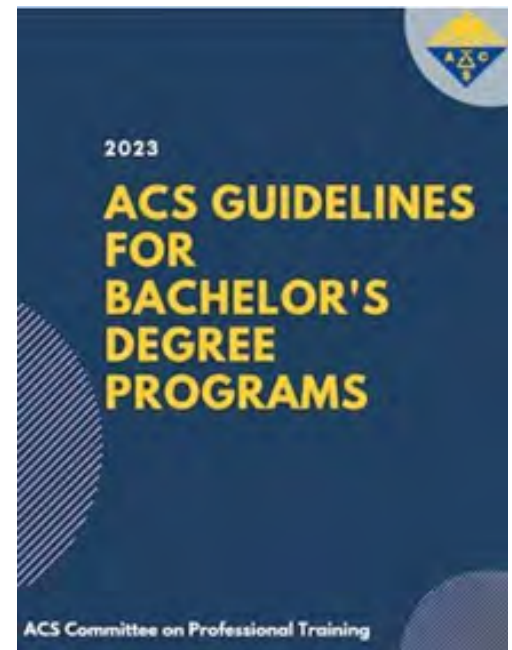
Silicon Valley ACS also participated in this event by having a table that was staffed by Kristin Schmidt, Jigisha, Karan Dikshit and Natalie McClure. Two hands-on experiments were available for students to explore -- "Colors on the Mooove" and "Know by the Glow" (from the [2023 CCEW book](#)).



The LEMO family extends their sincerest gratitude and appreciation for all PIEFEST leadership, volunteers, and attendees where their 43,000 square foot home was transformed into an area for education, amusement, music, exploration, and FUN!
[Learn more about the LEMO foundation](#)



2023 ACS Guidelines for Bachelor's Degree Programs



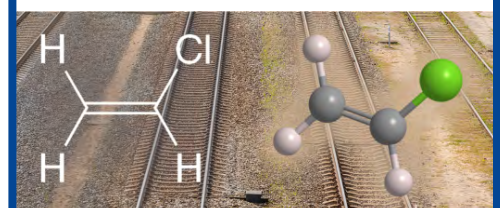
The 2023 Guidelines for Bachelor's Degree Programs were approved by the ACS Committee on Professional Training (CPT) in January 2023. These guidelines will be used for program review starting in 2023.

[View 2023 Approved Guidelines](#)
[Learn more about CPT](#)

CHEMISTRY

Quiz

I made news recently, and it wasn't good.
What molecule am I?



Answer

ATTENTION:

Chemists looking for opportunities to share your expertise and to build your speaking engagement résumé – The ACS Speaker Directory was built for you!

Advantages of creating a profile:

- Gain visibility on an international level
- Share your proficiency
- Grow your professional network

This new resource will provide members of the directory with even more opportunities to share their knowledge with other chemists.

Create your profile at:



Questions? Email lsac@acs.org

#ACSSpeakerDirectory

<https://www.acs.org/speakerdirectory> (ACS ID required)

Thanks for Reading: Remembering Rudy Baum and Living His Legacy

A Symposium at the 2023 Spring ACS National Meeting, Indianapolis



“As C&EN celebrates its 100th anniversary in 2023, it is appropriate to pay tribute at *this symposium* to arguably C&EN’s most influential editor-in-chief, Rudy M. Baum.”

[Symposium Details](#)

[Symposium Video](#)

[About Rudy Baum](#)

Local Science Fairs in 2023

by Susan Hines

The results from the March 9, 2023, SVACS Synopsys Championship judging teams are in! In its 64th year, this regional competition showcased and celebrated our local 6th-12th graders’ extracurricular science projects. These students will become our future scientists, engineers, technologists, and mathematicians. Whether or not they were selected for the SVACS awards, other organizations’ sponsored awards, or the Synopsys Championship’s category or grand prize awards, they are all winners. And kudos to the fair’s board of directors for the in-person judging experience.

Our SVACS-sponsored award teams judged the Middle School Dave Parker Awards and the High School Excellence in Chemistry Awards. Dr. Howard Peters, Dr. Natalie McClure, and Mr. Mike Lepisto judged for the former award, and Dr. Owen Gooding, Dr. Karan Dikshit, and Ms. Susan Hines judged for the latter. Of all the incredible 156 chemistry and chemistry-related projects at the fair, we selected the following winners:

SVACS Dave Parker Middle School Award for Excellence in Chemistry:

First place (\$250 and framed certificate): Mridula Rajagopalan for “Water as Energy Source: On-demand electricity using H_2 from electrochemical electrolysis of water using GaAl electrodes”

Second place (\$125 and framed certificate): Cynthia Wang for “What is the effect of different temperatures and different chemicals on the setting time of concrete?”

SVACS High School Award for Excellence in Chemistry:

1st place (\$500 and framed certificate): Saanchi Kapoor for “A novel aqueous approach for the synthesis of palladium nanoparticles”

2nd place (\$200 and framed certificate): Angely Vargas for “Synthesizing a mGluR5 negative allosteric modulator to minimize the frequency of bulimic tendencies”

Team award (\$150 and framed certificate each): Sarah Su and Alexandra Chatwin for “Accessible Synthesis of the Tricyclic Core of Forskolin as an Adenylyl Cyclase Activator against Cellular Senescence”

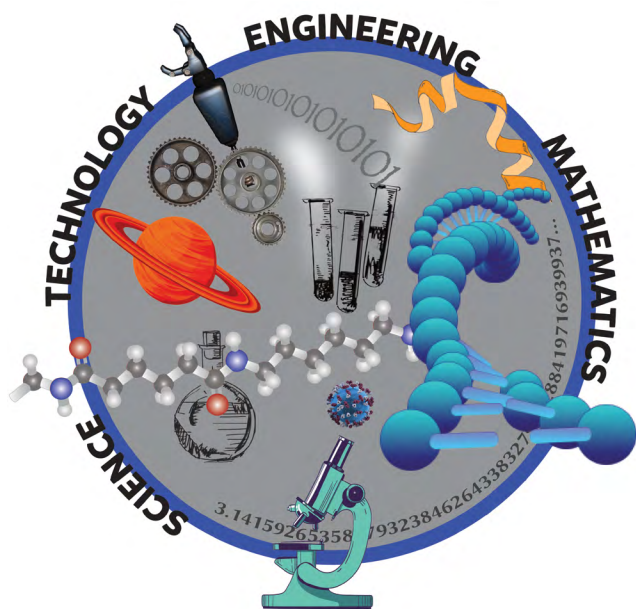
We would like to thank the many SVACS members who judged for category, grand prize, and other sponsored awards. Their selfless volunteering of time and expertise promotes our next generations of scientists. Additionally, we extend our thanks to Dr. Aart de Ges, chairman and CEO of Synopsys, and Lauren Foote of the Synopsys Outreach Foundation for their continuing and generous support of local science students and their teachers. Science fairs don’t happen without these committed students, teachers, sponsors, and judges.



K-12 Science Educators - get a BUBBLE Grant for your classroom.

The SVACS BUBBLE Grant supports

K-12 teachers with funds to facilitate teaching science.



For submission guidelines and project description go to
<http://www.siliconvalleyacs.org/awards-funding/bubble-grant>

Applications being accepted between April 1, 2023 and November 1, 2023

Invitation to Participate in the ACS CCEW Illustrated Poem Contest

Deadline, April 30, 2023, by 8:59pm Pacific Time



Each year as part of Chemists Celebrate Earth Week (CCEW), ACS sponsors an *illustrated poem contest* for K-12 students. Please read below for the rules, deadlines, and submission information.

To enter the illustrated poem contest, students must submit their illustrated poems directly to chair@siliconvalleyacs.org along with a *CCEW Illustrated Poem Contest Entry Form* by Sunday, April 30, 2023, by 8:59 PM Pacific Time.

Rules

- All poems must be no more than 40 words, and in one of the following styles to be considered: Haiku, Limerick, Ode, ABC poem, Free verse, End rhyme, and Blank verse.
- Entries are judged based upon relevance to and incorporation of the yearly theme (The Curious Chemistry of Amazing Algae), word choice and imagery, colorful artwork, adherence to poem style, originality and creativity, and overall presentation.
- All entries must be original works without aid from others. Physical drawings may be scanned or captured via camera and submitted to the online form. Illustrations may be created using crayons, watercolors, other types of paint, colored pencils, or markers.
- The illustration may also be electronically created by using a digital painting and drawing app on a computer, tablet, or mobile device. If the illustration is created using a digital painting or drawing app, the name of the program must be included on the entry form.
- The text of the poem should be easy to read and may be typed before the hand-drawn or digital illustration is added, or the poem may be written on lined paper, which is cut out and

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. As a welcoming gesture, the SVACS Executive Committee offers new members a free dinner at a 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

Lina Basal	Naomi Lynn Goodman	Christina Schroeder
Lilliana Brandao	Joscelyn Huynh	Xiaohan Shao
Melissa Cendejas	James Kammert	Avni Singhal
Eefei Chen	Farah Khatri	Grace Stokes
Elizabeth R. Corson	Dwight Lillie	Sarathkrishna Swaminathan
Gerald R. Crabtree	Ruben Yiqi Luo	Moni Tautu
Neha Dharwadkar	Brooke Ottum	Ching-Ting Tsai
Melissa Fleury	Feng Pan	Neelam Vaidya
Charmaine Fong	Manu Pillai	Ge Yu
Dianne Whittier Foote	Sreenivas Punna	Johannes Zolck

pasted onto the unlined paper with the illustration.

- No clipart or unoriginal images can be used.
- Only one entry per student will be accepted.
- Students must be sponsored by a school or another sponsoring group (e.g. Homeschool Association, Boys and Girls Club, Scout Troop, 4-H, etc.).

All poem submissions will first be judged at the local level to be considered for the national contest. Local winners advance to the national contest for a chance to win cash prizes. ACS will award \$300 to first-place and \$150 to second-place national contest winners in each grade category! National contest winners will be announced in May.

In 2022, in the Grades 6-8 category, we had a student (7th grader from Harker School) take 2nd place in the National Contest. See the image below.

[View more winners of the 2022 CCEW Illustrated Poem Contest](#)



Introducing the 2023 CAS Future Leaders

CAS (Chem Abstract Service) is excited to announce the 2023 CAS Future Leaders! This group of elite Ph.D. students and postdoctoral scholars from around the world will blaze a trail toward science leadership this August in Columbus, Ohio and San Francisco, California. [Learn more](#)

Interesting and Cool Science in the News

[2023 State of AI in 14 Charts](#) (Stanford Human-Centered Artificial Intelligence, April 3, 2023)

[‘Astonishing’ molecular syringe ferries proteins into human cells](#) (Nature news, March 29, 2023)

[Businesses Invested \\$32.5 Billion in Assets to Support Their R&D Activities in the United States in 2020](#) (NSF’s National Center for Science and Engineering Statistics, March 17, 2023)

[Cans or bottles: What’s better for a fresh, stable beer?](#) (ACS News Release, March 20, 2023)

[The complex chemistry of making paper](#) (Chemistry World, April 4, 2023)

[Composite achieves the virtually impossible – it’s electrically conducting, while thermally insulating](#) (Chemistry World, April 6, 2023)

[Crab shells could help power the next generation of rechargeable batteries](#) (ACS News Release, March 13, 2023)

[Degrading modified proteins could treat Alzheimer’s, other ‘undruggable’ diseases](#) (ACS News Release, March 1, 2023)

[Falling for Psychedelics](#) (Stanford Magazine, March 2023)

[Fermented coffee’s fruity aromas demystified](#) (ACS News Release, March 29, 2023)

[Four ways to reduce unwanted iodized table salt reactions when boiling pasta](#) (ACS News Release, March 1, 2023)

[‘Glow-in-the-dark’ proteins could help diagnose viral diseases](#) (ACS News Release, March 15, 2023)

[Going to the dark\(er\) side: Stanford Medicine study shows how cancer gene tricks immune cells](#) (Stanford Medicine News, March 22, 2023)

[Human cells help researchers understand squid camouflage](#) (ACS News Release, March 27, 2023)

[Insulin development and commercialization earns Historic Chemical Landmark designation](#) (ACS News Release, March 23, 2023)

[Is it COVID-19 or the flu? New sensor could tell you in 10 seconds](#) (ACS News Release, March 28, 2023)

[Large-scale mapping and mutagenesis of human transcriptional effector domains](#) (Nature, April 5, 2023)

[Marijuana-derived compounds could reverse opioid overdoses](#) (ACS News Release, March 28, 2023)

[Modern origami method creates glass shapes by folding](#) (ACS News Release, March 28, 2023)

[New ways to measure curls and kinks could make it easier to care for natural hair](#) (ACS News

Release, March 26, 2023)

[Obesity treatment could offer dramatic weight loss without surgery or nausea](#) (ACS News Release, March 29, 2023)

[A puff of air could deliver your next vaccine \(video\)](#) (ACS News Release, March 27, 2023)

[Pulsing ultrasound waves could someday remove microplastics from waterways](#) (ACS News Release, March 28, 2023)

[Quantum ‘shock absorbers’ allow perovskite to exhibit superfluorescence at room temperature](#) (NSF research news, April 5, 2023)

[R&D Insights: exosomes in drug delivery and diagnostics](#) (CAS Insights, March 8, 2023)

[R&D Insights: sustainable agriculture and fertilizer production](#) (CAS Insights, March 31, 2023)

[Recent advances in space chemistry research](#) (ACS News Release, April 5, 2023)

[Researchers find new molecule that shows promise in slowing SARS-CoV-2](#) (SLAC News, March 28, 2023)

[Researchers invent a tool to create high-resolution maps of gene activity, opening a path to improved diagnostics and therapies](#) (Stanford Institute for Cell Biology & Regenerative Medicine, March 6, 2023)

[RNA medicines: what technologies are investors funding?](#) (CAS Insights, March 10, 2023)

[The science behind dioxins, vinyl chloride, and proven remediations](#) (CAS Insights, March 17, 2023)

[The Science of Skin](#) (Stanford Magazine, March 2023)

[A sensor that might someday enable ‘mind-controlled’ robots](#) (ACS News Release, April 3, 2023)

[Stanford Medicine scientists transform cancer cells into weapons against cancer](#) (Stanford Medicine News, March 1, 2023)

[A technique called Cell Painting could speed drug discovery](#) (MIT Technology Review, March 3, 2023)

[Triggering bitter taste receptors could someday treat asthma, COPD](#) (ACS News Release, March 13, 2023)

[Two meteorites are providing a detailed look into outer space](#) (ACS News Release, March 26, 2023)

[Unexplained increases in five atmospheric CFCs raise concerns](#) (Chemistry World, April 4, 2023)

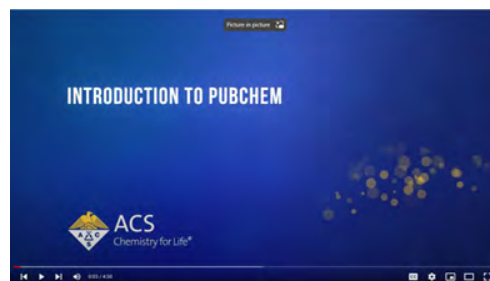
[Wastewater could be key to tracking more](#)

[viruses than just COVID-19](#) (Stanford Engineering, March 23, 2023)

[What do the elements sound like? \(video\)](#) (ACS News Release, March 26, 2023)

[Why are electric vehicle fires so hard to put out? \(video\)](#) (ACS News Release, March 6, 2023)

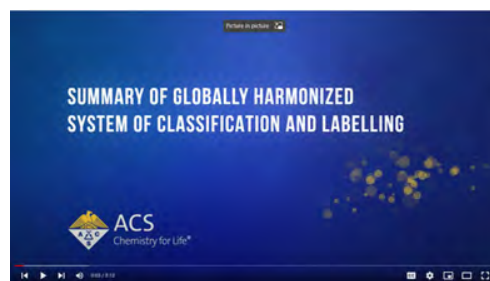
New Safety Information (Videos)



Safety Information: PubChem Database

This video provides the viewer with a short tutorial on how to navigate the National Library of Medicine’s PubChem database to find authoritative chemical safety information available in their Laboratory Chemical Safety Summary (LCSS) Datasheets. The PubChem LCSS can be used to supplement information from a manufacturer Safety Data Sheet (SDS) or help resolve conflicting data from multiple sources.

[Watch video on YouTube](#)



Safety Information: Globally Harmonized System of Classification and Labelling of Chemicals

This video provides the viewer with a short tutorial on the components of the United Nation’s Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The GHS hazard groups, classes, and categories are explained. Utilizing the GHS components to understand the elements of a chemical label is also covered.

[Watch video on YouTube](#)

[Watch more ACS Chemical Safety videos on YouTube](#)

Also see: [RAMP UP Chemical Safety: Resources to Support Laboratory Safety Education and Practice](#)

ACS Portfolio-Wide Diversity & Inclusion Cover Art Series in 2023

The Diversity & Inclusion Cover Art Series seeks to amplify marginalized voices and recognize historically excluded or underrecognized populations of chemists. View an online gallery of the 2022 journal cover art, and submit your own for this year's series! [Learn more](#)



Making molecular sandwiches

PERIODIC GRAPHICS

The discovery of ferrocene revolutionized the field of organometallic chemistry. Here we look at the molecule's origins, the other sandwich compounds that followed, and their applications.

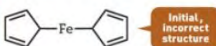
The history of ferrocene

1940s First known synthesis

Researchers at a US chemical company pass cyclopentadiene vapor through an iron pipe, making yellow sludge. Analysis years later shows that the sludge is ferrocene.

1951 Discovery

Two groups of scientists independently discover ferrocene by accident while trying to synthesize other compounds. One group suggests a linear structure.



1952 Determination of structure

Several scientists propose a new structure for ferrocene in which the iron ion is sandwiched between two cyclopentadienyl anions. X-ray crystallography data confirm this structure.

1973 Nobel Prize in Chemistry

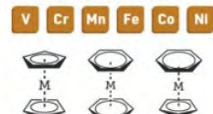
The 1973 Nobel Prize in Chemistry is awarded to Geoffrey Wilkinson and Ernst Otto Fischer for their determination of ferrocene's structure and subsequent research on sandwich compounds.

Other sandwich compounds

Metalloenes and arene sandwiches

Ferrocene is a metallocene: a metal ion sandwiched between two cyclopentadienyl anions. Researchers have synthesized metallocenes with different metals. They have also made sandwich compounds with different arenes.

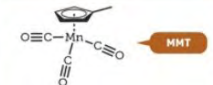
First-row transition metals for which metallocenes are known



Sandwich compounds (M = metal)

Other sandwich compounds

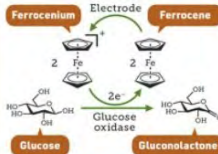
Other types of sandwich compounds include half-sandwich compounds, such as methylcyclopentadienyl manganese tricarbonyl (MMT), and multidecker sandwich compounds.



Sandwich compound uses

Glucose sensors

Electronic devices that measure blood sugar levels use glucose oxidase to oxidize glucose molecules. Electrons from glucose oxidase then reduce ferrocenium cations to ferrocene. Electrodes regenerate the ferrocenium cations, and the device measures the current to determine a blood glucose reading.



Antiknock agents in gasoline

Canada and Australia use MMT as an antiknock agent in gasoline. Antiknock agents prevent uneven combustion by raising the temperature at which fuel ignites.

Other uses

Some ferrocene derivatives catalyze hydrogenation reactions. In medicine, the ferrocene derivative ferroquine underwent trials as an antimalarial drug.

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