

SILICON VALLEY CHEMIST

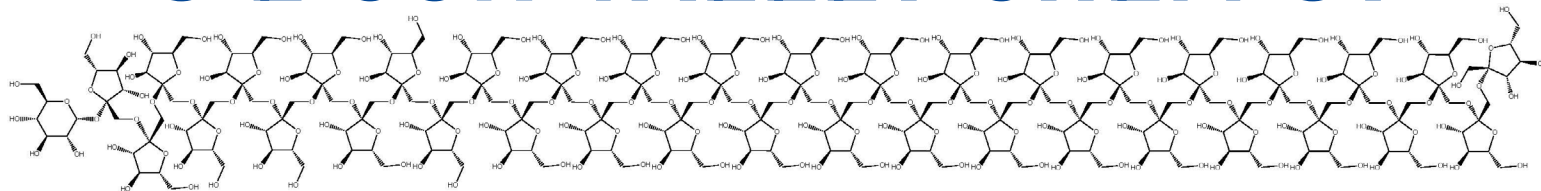


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Chair's Message

Natalie McClure



Hello Fellow Chemists,

I am writing as Acting Chair while Stephanie Benight is enjoying time with her new baby. Our by-laws dictate that under these circumstances the Chair Elect serves as Acting Chair. So I will be supporting the section until Stephanie's return.

The section is working on a series of monthly "dinner" meeting seminars. However, due to the

Mosher Award Presentation March 3, 2022, 7PM, via Zoom, [Registration](#) **Exploring the Use of Models and Animations to Teach Chemical Principles**

Resa M. Kelly, Ph.D., San José State University

Abstract:

One challenge in chemistry learning is developing an understanding of chemical processes at an atomic level. The use of animations and visualizations has repeatedly been reported to be an effective method for helping students make sense of atomic level reaction processes; however, students often fail to deeply engage with these models. It is necessary to help students learn how to compare animations rather than accept them as "truth." In her talk, Dr. Kelly will characterize the nature of the thought processes that students engage as they construct atomic level models in the example of a neutralization reaction. She will then describe how the modeling exercise affects students' emotional responses to ideas presented in conflicting animation models of the same reaction, and how students ultimately decide which animation is most scientifically accurate.

Each year the Silicon Valley ACS local section presents the Harry and Carol Mosher Award to an ACS member in recognition of outstanding work in chemistry, advancement of chemistry as a profession, and service to the ACS. The 2021 award winner is Dr. Resa Kelly of San Jose



State University. Professor Kelly will present a summary of her research at the SVACS Mosher Award presentation ceremony on March 3, 2022.

Biography:

Professor Kelly is in her 16th year on the faculty of San José State University where she has achieved the rank of full professor. She is

the Chair and Director of Science Education and teaches General Chemistry as well as graduate courses in Science Education. Professor Kelly's research interests involve studying how students learn and modify their understanding of chemistry concepts and mechanisms through molecular visualizations. She uses animations and activities to enhance students' understanding of chemical reactions.

Dr. Kelly's work in chemical education research has garnered her an international reputation for excellence. Her service at the national level of the American Chemical Society has involved serving as Secretary and Councilor for the Division of Chemical Education. She has also served as a member of the Membership Affairs Committee and currently is a member of the International Activities Committee.

continuing COVID pandemic, these meetings will involve dinner at the place of your choosing and a seminar presented over Zoom. While it is disappointing that we can't meet to exchange ideas and have the social interactions that we had pre-COVID, the Zoom seminars have been popular and actually usually draw a larger attendance than we got in person. They allow both speakers and attendees to participate across the country. It is nice to skip the traffic hassles! Please join us at the virtual Mosher Award

ceremony to be held on March 3, and check the Upcoming Events column in this newsletter for other interesting seminars.

The ACS Spring National meeting will be held March 20-24 in San Diego. The theme for the meeting is "Bonding Through Chemistry". The Opening Session on Sunday March 20 will focus on how the theory of chemical bonding can take on a fresh 'spin' and impact the rapidly rising field of quantum information science (QIS)

continued on next page

Chair's Message, continued from front page

with presentations by Professor Alexandrova (UCLA), Professor Freedman (MIT), and Professor McQueen (Johns Hopkins). There are many ways to participate in this meeting: in person, with COVID safety protocols; at hybrid sessions

with both in-person and virtual presentations; or from a distance by accessing on-demand live presentations. The on-demand presentations will be available 24 hours after the live presentations and remain available until April 8 for all registrants. The ACS National governance

meetings will be held virtually. San Diego is a great venue for the meetings—good weather, nice convention center, lots to do when you aren't at the meeting. It should be a great meeting if you are able to attend whether in person or over the internet. Maybe I'll see you there.

UPCOMING EVENTS

- Feb 9** **Zebros or Horses? A False Sense of Security Can Lead to Lab Accidents**
Mary Beth Mulcahy, ACS Chemical Health & Safety (Moderator: Ralph Stuart, Keene State College)
Sponsored by ACS Webinars
11am-Noon PT, Online via Zoom, Free, [Registration required](#)
- Feb 12** **The Stories We Tell as Women in Chemistry**
Fanny Frausto, PhD, Clorox Company
Sponsored by the ACS California Section, Women's Chemist Committee
10:30am-Noon, Online via Zoom, Free, [Registration required](#)
- Feb 16** **ACS Celebrates the IUPAC Global Women's Breakfast**
Sponsored by ACS and IUPAC (International Union of Pure and Applied Chemistry)
7am-8am PT (Panel Discussion), Online via Zoom, Free, [Registration Required](#)
Networking Session 1: 8am-9am PT ([register](#))
Networking Session 2: 1pm-2pm PT ([register](#))
- Feb 16** **Applications of Coupled Rheology–FTIR to Polymer Analyses**
Sara Reynaud (Arkema) & Dana Garcia (consultant)
Sponsored by the Golden Gate Polymer Forum
5–6pm, Online via Zoom, Free/\$5 Donation, [Registration required](#)
- Feb 17** **10 Tips for Creating Abstracts with Substance and Style**
Osvaldo Oliveira Jr., ACS Applied Materials & Interfaces and University of São Paulo, Brazil (Moderator: Regiane Bracchi, ACS Publications)
Sponsored by ACS Webinars
11am-Noon PT, Online via Zoom, Free, [Registration Required](#)
- Feb 18** **The 2022 State of the Valley Conference: Silicon Valley's Annual Town Hall Meeting**
Sponsored by Joint Venture Silicon Valley
9am-Noon, hybrid event taking place at Stanford University, McCaw Hall, Arrillaga Alumni Center and simultaneously broadcast via Brandlive, \$35, [Registration required](#)
- Feb 21** **ORCID Workshop for Researchers**
Sponsored by ORCID (Open Researcher and Contributor ID) US Community Events
11am-Noon, Online via Zoom, Free, [More info and registration](#)
- Feb 23** **Why You Need to Care About Ethics**
Kelly Elkins, Towson University and Susan Schelble, Metropolitan State University of Denver (Moderator: Judith Currano, UPenn)
Sponsored by ACS Webinars
11am-Noon PT, Online via Zoom, Free, [Registration Required](#)
- Feb 24** **ACS SF Bay Area COMP Together Winter Zoom meeting**
Presentations and discussion from computational chemists from the San Francisco Bay Area
[Details](#), Sponsored by ACS Division of Computers in Chemistry
5:30pm-7pm PT, Online via [Zoom](#)
- Feb 26** **Building a Safety Culture in Your Lab (CHAS Workshop)**
Ralph Stuart and Taysir Bader
Sponsored by the ACS Division of Chemical Health and Safety (CHAS)
10am-1pm PT, Online via Zoom, \$25, [Registration Required](#)
- Mar 2** **Essentials of Pharmacokinetics for Drug Development**
Terry Kenakin, UNC School of Medicine (Moderator: Bryan Tweedy, ACS)
Sponsored by ACS Webinars
11am-Noon PT, Online via Zoom, Free, [Registration Required](#)
- Mar 3** **Harry and Carol Mosher Award presentation**
The Use of Models & Animations to Teach Chemical Principles
Professor Resa Kelly, San Jose State University
Sponsored by the Silicon Valley ACS
7:00-8:30pm, online via Zoom, Free, [Registration required](#)
- Mar 7** **Women in Data Science (WiDS) Worldwide Conference**
Sponsored by the Stanford Institute for Computational and Mathematical Engineering
8am-6pm, Francis C. Arrillaga Alumni Center, Price varies (\$75-\$400), [Learn more and register](#)
- Mar 8** **Launch Point: The Hidden Key to Taking Your Career to the Next Level**
Katherine Lee, Pfizer and Kathryn McHugh, Mclean Hospital and Harvard Medical School (Moderator: Danniebelle Haase, Dow)
Sponsored by ACS Webinars
11am-Noon PT, Online via Zoom, Free, [Registration Required](#)
- Mar 20** **Empowering Academic Researchers to Strengthen Safety Culture (CHAS Workshop)**
Rachel Wiley, University of Memphis and Omar Leon Ruiz, UCLA
Sponsored by the ACS Division of Chemical Health and Safety (CHAS)
10am-2pm PT, Online via Zoom, \$25, [Registration Required](#)
- Mar 20-24** **ACS Spring National Meeting 2022 (In-Person & Virtual)**
San Diego, California
[Learn more and register](#)
- Jun 6-8** **Green Chemistry & Engineering Conference**
Sponsored by the ACS Green Chemistry Institute
Hybrid and in-person (Reston, Virginia)
Submit an abstract by February 14, 2022. [Learn more](#)



GOLDEN GATE POLYMER FORUM

Wednesday, February 16, 2022, 5:00 PM

Webinar: Applications of Coupled Rheology-FTIR to Polymer Analyses

Speakers: Dr. Sara Reynaud, Arkema and Dr. Dana Garcia, consultant

Abstract:

The advancement of coupled rheological spectroscopic techniques opens opportunities to study in-situ structure-property-processing-performance relationships of polymers under dynamic conditions. Combined Rheo-IR will be described in studies of mechanisms behind phenomena such as shear instability, preferential crystallization pathways, and structural changes under processing conditions.

Examples will include mechanisms of internal lubrication and migration on addition of polymer process aids (PPAs), commercial fluoropolymer-based polymer processing additives, correlation of transient viscosity with the evolution of infrared bands in presence of PPA, diffusion of PPA droplets across the polymer matrix, and effect on shear rate processing in pipe and cable extrusion.

Speaker Backgrounds:

Dr. Sara Reynaud joined Arkema in 2012, where she is a Senior Research Scientist. She leads research projects on rheological behavior

and mechanical properties of polymers, and works on the implementation of new analytical methodologies. Sara is a co-author of 30+ technical publications including a highly cited review paper on boron carbide, a book chapter on carbon nanotubes; and 3 patents. Prior to joining Arkema, Sara was a postdoctoral associate at the Center for Ceramic Research at Rutgers University. She holds a Ph.D. degree in Material Science and Engineering from Rutgers and a combined BS/MS degree from the University of Naples in Italy. She has been actively involved with ASTM International where she is second vice-chairman of E37. Dr. Reynaud is a NATAS Fellow and is currently serving as the 2022 NATAS President.

Dr. Dana Garcia received her BS degree in chemistry from Stockton State University (NJ) and her Ph.D. in physical-organic chemistry from Brandeis University (MA). Dana retired in Dec. 2021 from Arkema Inc., where she was a Principal Scientist at the Arkema King of Prussia (PA) Research Center, responsible for the vibrational spectroscopy laboratory. Prior to joining Arkema in 1987 she held industrial positions in the areas of polymer crystallization & nucleation and adhesive & composite characterization using FTIR, thermal, and rheological techniques. Dr. Garcia is a Fellow of the American Chemical Society.

Registration:

Registration required at <https://ggpf.org/events/?ee=293>

Free of charge; donations (\$5) accepted

Contact: rbruceprime@gmail.com



ACS SF BAY AREA COMP TOGETHER

Chemistry for Life®

ACS Bay Area COMP Together
Winter Zoom meeting

Thursday, February 24, 2022 5:30-7 pm PT

Join computational chemists from the San Francisco Bay Area for an evening of science and lively discussions.

Three talks, each followed by Q&A:

Guosheng Wu (Pharmaron)

Overcoming the Electrostatic Repulsion in Molecular Modeling

Chris Williams (Chemical Computing Group)

Applications of Reverse Fingerprinting

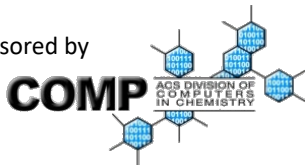
Fiorella Ruggiu (insitro)

Leveraging DNA-encoded Library Data with Machine Learning on IL-17

[Zoom link](#)

Questions? [COMP Together Organizers](#)

Sponsored by



EnCorps

STEM TEACHERS PROGRAM

EXPLORE A CAREER IN TEACHING!

We are looking for STEM professionals:

- Interested in learning more about teaching in the classroom
- Considering a career transition

Requirements for the Fellowship:

- 1 or more years of research or work experience OR possess an advanced degree in a STEM field
- Bachelors Degree
- Not currently hold a teaching credential

Interested in virtually tutoring & mentoring a middle school student? Consider joining our STEMx Tutor program!

Learn more at www.encorps.org/volunteer-programs

SUBMIT YOUR APPLICATION!

www.encorps.org/apply

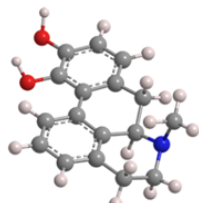
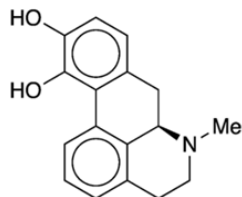
Connect With Us

leah.rodriquez@encorps.org



Watch this [5-minute video](#) about making a difference, exploring a career in education and becoming an EnCorps Fellow or STEMx Tutor.

I'm an opioid, but don't take me for pain.
What molecule am I?



Answer

The State of U.S. Science and Engineering 2022

A report from the National Science Foundation & National Science Board

"The United States has a key position in the global science and engineering (S&E) enterprise. As S&E capacity has increased globally, the U.S. position has changed despite increases in the absolute amount of S&E activity in the United States. Although the United States was key in the rapid development of COVID-19 vaccines, the data in this report show the U.S. S&E enterprise could be strengthened. The data reveal capacity-building areas in the U.S. S&E enterprise in the STEM education system and STEM workforce, R&D investment, and innovation activities." *(publisher's description)*



[View the report](#)

International Day of Women & Girls in Science: The Women of the Periodic Table

"February 11 is the *International Day of Women and Girls in Science*. To mark the occasion, this graphic looks at the contributions of women to the periodic table. The table highlights element discoveries women have been involved in and the two elements named after women."

View the [article](#) which includes links to each of the scientists featured in the graphic below.

[Enlarge image](#)

THE WOMEN OF THE PERIODIC TABLE



MARIE CURIE

Co-discoverer of polonium and radium. Curium is named after her and Pierre Curie.



IDA NODDACK

Co-discovered rhenium; made an unproven claim for the discovery of technetium.



YVETTE CAUCHOIS

Contributed to the discovery of astatine, identifying one of its natural isotopes.



DARLEANE HOFFMAN

Helped confirm the discoveries of seaborgium, livermorium and oganesson.



HARRIET BROOKS

Working with Ernest Rutherford, she identified a radioactive gas that later work confirmed as the element radon.



CLARICE PHELPS

Part of the team that discovered tennessine. The first African-American woman to be involved with the discovery of an element.



MARGUERITE PEREY

Discovered francium – the only element discovered solely by a woman.



LISE MEITNER

Co-discovered protactinium. Meitnerium is named after her.



DAWN SHAUGHNESSY

Part of a team involved in the discovery and confirmation of elements 113-118.



5 Black Chemists Who Made a Difference

African-Americans have been making major advances in the chemical sciences for more than 170 years.



St. Elmo Brady

St. Elmo Brady (1884-1966) was the first African-American to receive a Ph.D. in chemistry in the U.S. After receiving his doctoral degree from the University of Illinois at Urbana-Champaign in 1916, Brady taught and held leadership roles at historically black universities and colleges, including Tuskegee Institute, Howard University, Fisk University, and Tougaloo College, leaving an impressive teaching legacy of strong undergraduate and graduate chemistry programs.

Photo: University of Illinois Archives



Mae Jemison

The first African-American woman to fly in space, **Mae Jemison** (1956-) holds a B.S. in chemical engineering. In 1992, she served on an eight-day Space Shuttle mission that conducted microgravity investigations in materials and life sciences while orbiting Earth 127 times. Jemison was a co-investigator on the bone cell research experiment flown on the mission. She was also the first astronaut to appear on Star Trek. 🙌

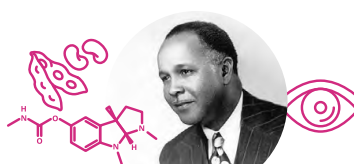
Photo: NASA



George Washington Carver

George Washington Carver (1865-1943) was born a slave. He worked hard to gain an education and become a scientist. He taught at Tuskegee Institute and became the "Peanut Man" who discovered myriad uses for the "lowly" legume. He developed hundreds of new uses for Southern agricultural crops and taught poor Southern farmers methods of soil improvement.

Photo: Library of Congress



Percy L. Julian

In 1935, in Minshall Laboratory, DePauw alumnus **Percy L. Julian** (1899-1975) first synthesized the drug physostigmine, previously only available from its natural source, the calabar bean. His pioneering research led to the process that made physostigmine readily available for the treatment of glaucoma. It was the first of Julian's lifetime of achievements in the chemical synthesis of commercially important natural products.

Photo: DePauw University Archives



Norbert Rillieux

Norbert Rillieux (1806-1894), widely considered to be one of the earliest chemical engineers, revolutionized sugar processing with the invention of the multiple effect evaporator under vacuum. The discovery, patented in 1846, enabled production of better-quality sugar at lower cost. Rillieux's invention is widely recognized as the best method for lowering the temperature of evaporation in other industries and for saving large quantities of fuel.

Photo: Louisiana State Museum



St. Elmo Brady—A National Historic Chemical Landmark

The American Chemical Society (ACS) has honored the achievements of several African-American chemists, including George Washington Carver, Percy L. Julian, Norbert Rillieux and, most recently, St. Elmo Brady, with the designation of a National Historic Chemical Landmark. The Landmarks program (www.acs.org/Landmarks) recognizes major advances in the chemical sciences.

Local Science Fairs in 2022

by Susan Hines



While chocolates and flowers are high on many people's Valentine list, how about a gift that keeps on giving? While the cost is minimal (a day of your time judging at the local science fair), the return is great - encouraging middle and high school students to participate in the world of STEM – science, engineering, math, and science.

Due to the pandemic, all but two of the following fairs will be held virtually, so it's now easy to become part of both the March 9-10 SVACS-sponsored Synopsis Championship 2022 special award judging team and be a category judge at one or more of the other fairs, all from the convenience of your computer. These science fairs need category awards judges, especially in the areas of botany, biology, chemistry, microbiology, and behavioral science. All but Sciencepalooza! are qualifiers for the International Science and Engineering Fair, ISEF.

Please contact me at svsefmgr@gmail.com to join our SVACS special award team of dedicated chemists for the Synopsis Championship on March 9-10, 2022.

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

- Golden Gate STEM Fair: March 7-12, 2022, virtual format, email ggstemfairad@gmail.com for volunteer request

- Synopsis Championship, Santa Clara County: March 9-10, 2022, virtual format, <https://science-fair.org/judges-3/category-judges/judging-registration/> There is particularly strong need for judges in the areas of software engineering; computational biology and bioinformatics; biomedical engineering; chemical and environmental engineering; earth and environmental science. Please encourage your IT colleagues, friends, and neighbors to participate. Graduate students and college upperclassmen in these fields are welcomed as judges.
- Santa Cruz County Science and Engineering Fair: March 14-19, 2022, combination virtual project review and in-person judging at the Santa Cruz County Fairgrounds, <https://ca-scc.zfairs.com/?f=26536937-9f34-4800-94a7-674a1d002137>
- Monterey County Science & Engineering Fair: March 5-19, 2022, virtual format, <https://sites.google.com/csumb.edu/monterey-science-fair/>
- San Mateo STEM Fair: March 15, 2022, in person review and judging at the San Mateo County Event Center, Fiesta Hall, <https://www.stemfair.net/judges-and-volunteers>
- Alameda County Science and Engineering Fair: March 26, 2022, virtual format, <https://acsef.zfairs.com/?f=76d904ca-4a82-4dbe-a703-c6b4477746a5>
- Sciencepalooza! Virtual Fair and Expo*: May 7, 2022, <https://sciencepalooza.zfairs.com/app/user/new/Judge/?f=3ab33e00-9132-4dc1-bb3e-637edd80ba02>

*Many students at this competition are first time science fair participants.

ACS Inclusivity Style Guide

“Have you ever wondered about how to respectfully ask about gender, race, or health conditions in a survey? Could you use some help in putting together demographic questions for your forms? Interested in learning more about personal pronouns? The ACS Inclusivity Style Guide is here to help. It is designed to provide definitions and explanations of terms and comes with references and examples of how to communicate inclusively. Inclusive communication expands your message's reach and helps make ACS a welcoming environment for all. Check it out at acs.org/inclusivityguide. Any questions can be directed to ISG@acs.org. Note that this is the same resource recently added to the ACS Guide to Scholarly Communication but is also accessible on its own website with a slightly different user experience.” (Reprinted

from Resources to Advance Your Career, ACS *Matters* newsletter, posted January 25, 2022.)

Contents:

- Introduction
- General guidelines
- Age
- Disabilities, disorders, and other health conditions
- Gender and sexuality
- Race, ethnicity, and nationality
- Forms
- Diversity and inclusion in images
- Accessibility
- Related resources

See also:

- Learn more about *Advancing ACS' Core Value of Diversity, Equity, Inclusion, and Respect*.
- View the ACS Inclusivity Style Guide chapter

(which is openly accessible to all) in the *ACS Guide to Scholarly Communication* (Part 6.1).

- *Learning to Communicate Inclusively: A New ACS Guide Chapter*, ACS Axial article by Alison Kreckmann and Sabrina J. Ashwell, two of the authors for this chapter (posted December 17, 2021.)

New Hair Dyes Avoid Allergic Reactions



“*Synthesis and Assessment of Non-allergenic Aromatic Amine Hair Dyes as Efficient Alternatives to Paraphenylenediamine*”

ACS Sustainable Chemistry & Engineering

“A bad dye job is bad enough on its own, but an itchy and irritating allergic reaction to it is even worse. And people who become allergic to hair dye can develop reactions to many other common substances, transforming a simple cosmetic treatment into a big problem. Now, researchers reporting in ACS Sustainable Chemistry & Engineering have developed a range of permanent hair dyes that avoid the allergenic properties of traditional formulations.” [Read the full press release.](#)

ACS Publications Updates Ethical Guidelines to Publication of Chemical Research



The ACS Publications' Ethical Guidelines to Publication of Chemical Research sets forth expectations and obligations for the editors, authors, and reviewers engaged with the publication process at ACS journals. The guidelines were recently updated to include new language for authors regarding conflicts of interest when suggesting preferred reviewers.

[Learn more](#)

ACS Bridge Program to Enhance Diversity in the Chemical Sciences

2021-2022 Application Deadline is March 31, 2022



ACS
Chemistry for Life®

Envision a brighter future!

BECOME AN ACS BRIDGE FELLOW

Learn more and apply at
www.ACS.org/BridgeProgram

Diversifying the graduate student population
in the chemical sciences.

The *ACS Bridge Program* was developed to increase the number of students from underrepresented (UR) racial and ethnic groups obtaining a Ph.D. in the chemical sciences. ACS-BP assists UR students with getting into and succeeding in graduate school.

As an ACS Bridge Fellow, students enroll in a one- to two-year Bridge Experience that provides research experience, advanced coursework,

mentoring, and coaching to prepare a graduate school application.

Students who have not applied to graduate school, or who have applied but were not accepted, may be offered:

- A free common application that will be shared with *participating departments*
- Resources to strengthen applications
- Connections to faculty and mentors

- Networking opportunities with other ACS-BP students

The deadline to apply is March 31, 2022.

Learn more

The *ACS Bridge Project* is generously supported by the US National Science Foundation through grant NSF-1834545 and by the Genentech Foundation. The *ACS Bridge Project* is in collaboration with the Inclusive Graduate Education Network.

Call for Nominations 2022 Abraham Ottenberg Service Award Silicon Valley ACS Section

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

Nominations should 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, 2022**, by e-mail to PFrusch@aol.com, 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

Shirley B. Radding Award

Call for Nominations Deadline: May 1, 2022

This *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.

The annual award recipient is 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, 2022 to

Heddie Nichols, Chair, Radding Award Committee

Silicon Valley Section, American Chemical Society

P.O. Box 395, Palo Alto, CA 94302-0395

Email: hnichols105@gmail.com

Past recipients:

1994 Shirley B. Radding

1997 Howard M. Peters

2000 Halley A. Merrell

2003 Jean'ne M. Shreeve

2006 Janan Hayes

2009 Bryan Balazs

2012 Bonnie A. Charpentier

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

2013 Mamie W. Moy

2016 Sally Peters

2019 Mary Virginia Orna

1996 John C. "Jack" Riley

1999 Valerie J. Kuck

2002 Paul H. L. Walter

2005 Glenn Fuller

2008 Dorothy Phillips

2011 Carol A. Duane

2014 Lee H. Latimer

2017 Gary D. Christian

2020 Thomas R. Beattie

How is Climate Change Affecting Hibernation?

Reactions - Uncover the Chemistry in
Everyday Life



"Think hibernation is just a nap bears take during the wintertime? It's way more complicated—and climate based. With climate change happening, how will hibernating animals be affected and will animals who don't hibernate now begin to?"

Watch video and view sources on ACS' website or watch video on *YouTube*.

ACS Launches New Science Podcast Series *Tiny Matters*

"The American Chemical Society (ACS) is producing a new, biweekly science podcast called *Tiny Matters*, which is available wherever you listen to podcasts. Head to the ACS website or your favorite platform and subscribe.

In the first episode on January 26, 2022, hosts Sam Jones, Ph.D., and Deboki Chakravarti, Ph.D., chat with experts about the ancient beasts that went extinct 65 million years ago, but whose remains still captivate us today — dinosaurs. Scientists around the world regularly discover new fossils, and that helps piece together the mystery of what dinosaurs and other extinct creatures were like. That information doesn't just inspire movies like "Jurassic Park", it also helps researchers predict Earth's future and could even

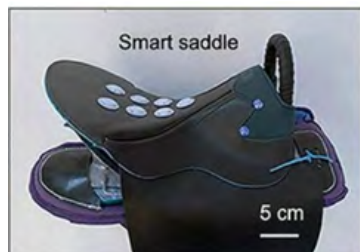


'Smart Saddle' Could Help Equestrians Hit Their Stride (video)

"Self-Rebound Cambered Triboelectric Nanogenerator Array for Self-Powered Sensing in Kinematic Analytics"

ACS Nano

"Skilled equestrians make advanced riding maneuvers, like jumps, spins and piaffes, look effortless. But good riding requires balance and subtle cues to the horse, many of which are given through the rider's posture, seat and legs. Now, researchers reporting in ACS Nano developed a prototype "smart saddle" that could help equestrians improve their biomechanics. Moreover, the self-powered saddle can alert others when a rider takes a fall. [Watch a video of the smart saddle on YouTube.](#)" Read the [full press release](#).



A TENG-powered smart saddle could help equestrians improve their riding, as well as alert others when they fall off their horse.

lead to more sustainable technology.

Tiny Matters is a science podcast about things small in size but big in impact. Every other Wednesday, the hosts will uncover little stuff that

makes big stuff possible. Upcoming episodes will find them answering questions such as "How does our brain form memories?", "Why haven't we terraformed Mars yet?" and "Why isn't there a vaccine for HIV?". Tune in!"

This article is a [reprint of an ACS press release](#) published January 26, 2022.



Celebrate Black History Month by Learning About the Achievements of Black Chemists

Excerpt of article by Jesse Stanchak that was published in ACS Axial on February 1, 2022.

"Black History Month is an opportunity to celebrate the past achievements of Black chemists and chemical engineers. It's also a time to talk about pioneering Black chemists doing exciting work in the chemical sciences today.

In honor of Black History Month, here are a variety of resources from the American Chemical Society for learning about the work of Black chemists past and present." [Read the full-text.](#)

Announcing the ACS Publications Diversity Data Report 2021

This report includes baseline data on the gender, racial, ethnic, and regional representation of authors, reviewers, Editors, and Editorial Advisory Board members in ACS Publications. It supports ACS Publications efforts to identify areas where representation improvements can be made by formulating targeted strategies to address bias in ACS journals. [Read the full report.](#) [Read brief summary](#) published in ACS Axial 12/21/2021.

Welcome to the Silicon Valley Section of ACS

Each month, the section receives a spreadsheet from national ACS with the names of members new to our section. The members are either new to ACS, have transferred in from other areas, or are the newest members – students. To welcome you to the section and get to know you, the Executive Committee offers new members a free dinner at a monthly section seminar meeting, once we return to meeting in person! When you register for the event, make certain to mention that you are a new member and you and a friend will be our guests. The seminar meetings are held at several local venues. We hope you will also join us for an outreach event, like judging a science fair, proctoring the Chemistry Olympiad, or participating in a National Chemistry Week event in the autumn. 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

Christopher Apostol
Seth Byers
Darryl Dixon
Erik Fenster
Liang Hong
Claire F. Komives

Svitlana Kulyk
Oscar Mace
Samantha Amores Martinez
Motoki Osada
Catherine Amelie Randolph
Khadija Shahid

Fangfang Shen
Jasmine R. Singh
Joanne Tan
Christina Mae Throckmorton
Camille Usubelli
Yueshen Wu

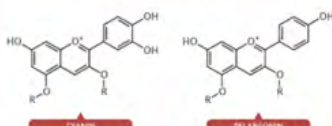
THE COLOUR AND AROMA OF ROSES

THE COLOURS OF ROSES



Other carotenoids include beta-carotene, lycopene, zeaxanthin, and lutein.

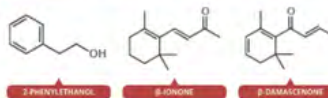
Roses come in a variety of colours, and different chemical pigments are responsible for the different shades. A large variety of carotenoids (above) give yellow and orange hues, while a smaller number of anthocyanins (below) give the more typical reds. Combinations of compounds from the two classes of pigments give the variety of different shades of these colours.



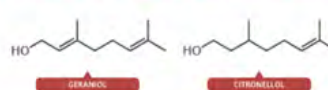
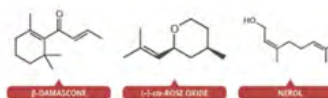
R groups = glucose (in both molecules)



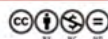
THE AROMA OF ROSES



The aroma of roses is contributed to by a number of different chemical compounds; some key contributors are shown here. Their contribution to the aroma varies and isn't tied to their concentrations; in fact a number of them have very low concentrations! Important contributors are rose ketones (including damascenones, damascones, and ionones) and (-)-cis-rose oxide.



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Learn more about the [Chemistry of Roses](#). [Enlarge image](#)

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