

SILICON VALLEY CHEMIST

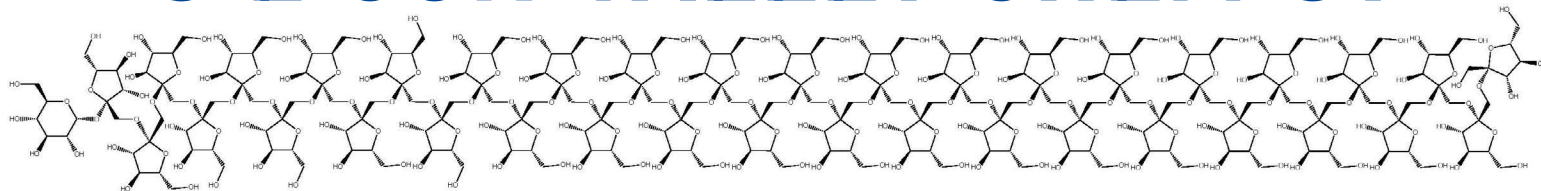


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"Picture a Scientist" Weekend Movie Screening

Viewers will have online access for 48 hours to this 95-minute documentary film: **Saturday, October 17 12:00am to Sunday, October 18 11:59pm.**

- The event is FREE and open to all. However, any amount of donation is appreciated. No amount is too small! All donations will go towards an award/scholarship for women in science.

[Download the flyer.](#)

- Co-sponsored by the [ACS California Section](#), [ACS Silicon Valley Section](#), and [Association of Women in Science East Bay Chapter](#).

- RSVP required** (link will be shared with registrants the day before the event).

PICTURE A SCIENTIST chronicles the groundswell of researchers who are writing a new chapter for women scientists. **Three women scientists**, biologist Nancy Hopkins, chemist Raychelle Burks, and geologist Jane Willenbring lead viewers on a journey deep into their own



[View PICTURE A SCIENTIST – trailer](#)

experiences in the sciences, ranging from brutal harassment to years of subtle slights. Along the way, from cramped laboratories to spectacular field stations, we encounter scientific luminaries – including social scientists, neuroscientists, and psychologists - who provide new perspectives on how to make science itself more diverse, equitable, and open to all.

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Chair's Message

Matt Greaney



Happy Autumn! This has been a crazy year, but it seems like we're rounding the corner. Several COVID-19 vaccines are in late phase trials, and the wildfire smoke is clearing. That said, we still have three months and an election to go, so we're not completely out of the woods. Your Silicon Valley ACS section Executive Committee has been working on programs that can be held in a socially distanced

manner. Chair-elect Jigisha Shah is finalizing plans for virtual events in October and November. For example, on October 29 we're invited to a tour of the Silicon Valley Advanced Water Purification Center tailored to chemists. She has also been working closely with the leadership of the California local ACS section on several events including a work-life balance discussion October 19 and a documentary screening the weekend of October 18-19. These events are colorfully described in this October newsletter. Councilor Natalie McClure has formed a partnership between the Redwood City Library and SVACS to put on 'STEAM at the Library' - a month of fun and safe hands-on scientific activity for the general public in October. They'll cover solar-powered motors, recycling plastics, and forensic analysis. Detailed information about these events and others in the pipeline are on the [SVACS website](#) and in this

continued on next page

UPCOMING EVENTS

- Every Wed. & Thurs. in October** **Pop Up Chemistry for Ages 9-12**
Co-sponsored by the Redwood City Library and ACS Silicon Valley Section for the general public. Pick up kits Wednesday 3:00-5:00pm at Redwood City Downtown Library, 1044 Middlefield Road. Attend online workshop on Thursdays from 3:30-4:30pm, Free, [More details and workshop registration](#)
- Oct 8** **ACS Webinar: Meet the National ACS President-Elect Candidates for 2021**
Mary K. Carroll, Union College, and Angela K. Wilson, Michigan State University
Co-produced with the ACS Younger Chemists Committee
11:00am-Noon, Free, [Registration required](#)
- Oct 8** **Flavors of Chemistry 2020: Investigating Plant Terpene Metabolism for Agricultural and Bioproduct Applications**
Dr. Philipp Zerbe, Dept. of Plant Biology, UC Davis
Sponsored by the ACS Sacramento Section
2:30-3:00pm, Networking, 3:00-4:00pm Presentation, online via Zoom, Free, [Registration required](#)

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Picture a Scientist, continued from front page

PICTURE A SCIENTIST was an official selection of the 2020 Tribeca Film Festival, postponed due to the COVID-19 pandemic. The film's virtual theatrical run reached 47 theaters across the USA in June 2020 and raised money for two organizations advancing women of color in STEM.

Chair's Message, continued from front page

newsletter.

I ask all members (especially ones reading this letter!) to take a minute to vote in the 2020 SVACS elections. Councilor Madalyn Radlauer and Todd Eberspacher are Co-Chairs of the Elections Committee. Madalyn, Todd, and the other members of this committee have put together an excellent list of candidates for several open positions, and this is your chance to have a say in who represents you in leading your local section. I'd also like to remind any interested members that our October Executive Committee meeting will double as our annual meeting to conduct section business. This is usually done at our July awards picnic and BBQ, and it is mandated in the SVACS bylaws. This will be a virtual meeting via Zoom, so please contact myself or another member of the Executive Committee if you would like to attend. In the interest of security, we are only sharing meeting login credentials by request.

Finally, I'm happy to report the 2nd Bay Area Chemistry Symposium is still planned to be held in person at Gilead Sciences on Friday, April 16, 2021. A lot can happen between now and then, but we are currently planning this to be an in-person event and will update you in the coming months. As always, please do not hesitate to reach out to myself or any of your other SVACS representatives with questions, comments, or requests. We love hearing from our members and strive to best serve your needs.

Matt Greaney

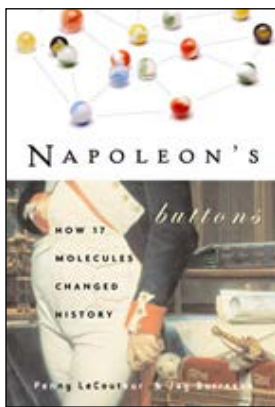
2020 SVACS Chair

2020-2022 SVACS Councilor

ACS Committee on Economic and Professional Affairs member

Silicon Valley ACS Book Club

By Greg Braggin and Natalie McClure



The Silicon Valley ACS Book Club is excited to re-initiate activity in early November with *'Napoleon's Buttons: 17 Molecules That Changed History'* by Penny Le Couteur and Jay Burren. While the title hints at a book about molecules that have had a seminal impact on society, each chapter merits a careful read to appreciate the full impact these molecules have had on society. For example, the chapter on isoprene discusses the structure/property relationship of the molecule and how that governs its usage. The sport of surfing in most spots around the world would not be

fully possible without the advent of the wetsuit, composed of a form of isoprene. Chapter 17 Molecules Versus Malaria explains how chloroquine and quinine structures help protect against malaria. As you might have heard, hydroxychloroquine, which can be useful against malaria, is not proven to be useful for combating COVID-19!

The work of Le Couteur and Burren in *'Napoleon's Buttons'* is a worthwhile read because each chapter is uniquely different. Think about all of the chemicals and molecules that we rely upon on a daily basis—from dyes and cellulose to rubber and caffeine. The average human is exposed to plenty of the book's mentioned molecules during their lifespan. *'Napoleon's Buttons'*

UPCOMING EVENTS (continued)

- Oct 13** **Annual Business Meeting and Executive Committee Meeting for the ACS Silicon Valley Section**
7:00-7:30pm Business Meeting, 7:30-9:00pm Executive Committee Meeting
Open to all SVACS members, online via Zoom, Free, [Registration required](#)
- Oct 14** **ACS Publications Symposium: 1st Virtual Symposium on the new open access JACS Au**
Meet the Editor-in-Chief, Associate Editors, and learn more about open access publishing
Sponsored by ACS Publications
7:00-9:00am, online via Zoom, Free, [Registration required](#)
- Oct 14** **Thermally Integrated EMI Shielding Materials, Systems, and Approaches for Optimal Performance**
Mark Hansen and Merima Trako, Vanguard Products Corporation
Sponsored by the Golden Gate Polymer Forum (GGPF)
6:30-9:00pm, online via Zoom; Free or \$5 donation, [Registration required](#)
- Oct 17–** **“Picture a Scientist” Weekend Movie Screening**
Oct 18 Co-sponsored by ACS California Section, ACS Silicon Valley Section, and Association of Women in Science East Bay Chapter
Oct 17th 12:00am – Oct 18th 11:59pm, online via Zoom, Free but donations appreciated, [Registration required](#)
- Oct 19** **Healthy Workplaces During COVID-19: Work-Life Balance**
Dr. Christina Banks, Director of the Interdisciplinary Center for Healthy Workplaces at UC Berkeley
Webinar co-sponsored by ACS California Section and ACS Silicon Valley Section
5:00-6:30pm, online via Zoom, Free, [Registration required](#)
- Oct 29** **Silicon Valley Advanced Water Purification Center, A Virtual Tour for Chemists**
5:30-6:30pm, online via Zoom, Free, [Registration required](#)
- Nov 12** **From Plant Scents to Perfumes**
Dr. Margareta (Greti) Séquin
Webinar sponsored by the ACS Silicon Valley Section
6:00-7:30pm, online via Zoom, Free, [Registration required](#)
- Dec 10** **Art as Evidence: The technical study and scientific examination of works of art at the Getty**
Karen Trentelman, Getty Conservation Institute
Webinar sponsored by the ACS Silicon Valley Section
6:00-8:00pm, online via Zoom, Free, [Registration required](#)

inspired us to think more deeply about molecules not mentioned in the book, such as xantham gum or various surfactants.

The number of molecules influencing our daily lives is substantial!

Should you be interested in joining the SVACS Book Club, sign up for e-mail alerts at svacs-book-club@googlegroups.com where you can expect to receive a poll in the coming weeks about a date for our first meeting. We hereby welcome all to the SVACS Book Club!

Flyers for Upcoming Events

REDWOOD CITY PUBLIC LIBRARY AND
SILICON VALLEY ACS
PRESENT

POP UP CHEMISTRY

AGES 9 THROUGH 12

Every Thursday at 3:30 pm in October

SHOW EVERYONE WHAT YOU'VE GOT! GET THOSE
GLASS RODS STIRRING AND THOSE FLASKS
BUBBLING FOR THIS YEAR'S CHEMISTRY
EXTRAVAGANZA!

ACS
Chemistry for Life®

REDWOOD CITY PUBLIC
library

[Click to enlarge](#)

CALIFORNIA &
SILICON VALLEY SECTIONS
PRESENT

Healthy Workplaces During COVID-19

By
Cristina Banks, PhD
Director of the
**Interdisciplinary Center for
Healthy Workplaces at
UC Berkeley**

Join us as Dr. Banks responds to
our questions and concerns
regarding family complications
with working from home,
theories of human nature and
motivation, and how we can be
more effective.

Date - 19 October 2020
Time - 17:00 - 18:30

This is a zoom meeting and is
free for all to attend

Register Here!

Email aliciaataylor@gmail.com or jssheth@syr.edu for
more information

[Click to enlarge](#)

ACS Local Section
Silicon Valley

siliconvalley
ADVANCED WATER
PURIFICATION CENTER

Silicon Valley Advanced Water Purification Center, A Virtual Tour for Chemists

Join us for a an in-depth tour of the SVAWPC and how
they purify wastewater for the sake of recycled
water usage.

This tour also highlights our SVAWPC's efforts to use
recycled water as a source of potable (drinkable)
water for the Santa Clara County.

This is a Virtual Event
Thursday, 29 October 2020
@ 5:30 pm
Free For All to Attend

Register Here

Visit us at svacs.org or email us at jssheth@syr.edu for more
information

[Click to enlarge](#)

ACS Local Section
Silicon Valley

FROM PLANT SCENTS TO PERFUMES

Join us as we look at the compositions of some
familiar plant scents, including their functions,
and at typical structures of some of the
compounds that compose them.

From plant scents we'll continue on to fragrances
that people today use in their daily lives, as part
of shampoos, soaps - or expensive "perfumes".
This will include a look at synthetic compounds
and mixtures that are used nowadays.

SEE YOU THERE!
6 PM, 12 November
on Zoom

We look forward to
seeing you

REGISTER HERE

Register at <https://gretisequins@svacs.brownpapertickets.com/> or
Email jssheth@syr.edu for more information

[Click to enlarge](#)

2020 Election of Officers, Councilors, Alternate Councilors for 2021

Voting Period: October 23 to November 15, 2020

Members will receive an email notification to cast their vote online. To help you be more informed when you receive this notification, the ballot along with biographies and candidate statements are shown below.

How to Petition to be on the Ballot

According to Section VI of our [ByLaws](#), prior to October 15th any member or affiliate of the Section may, in writing or from the floor at a meeting to conduct governance business, nominate additional candidates for office, provided that the candidates are members of the Section and if the nomination is seconded by another member or affiliate. Nominations so made shall be equally valid as those from the Nomination Committee. All candidates nominated shall have indicated willingness to serve if elected. Written petitions can be sent to the attention of the SVACS section secretary, Laura Yeager, laura.yeager123@gmail.com. You may also contact Laura with questions.

A petition must include the following: name of the proposed candidate, the proposed position, and the name and ACS membership numbers for the candidate and the person who is seconding the nomination. All petitions must be submitted by October 14, 2020 to the SVACS Secretary.

All candidates must be members of the ACS Silicon Valley Section and must be willing to serve. According to ACS bylaws, affiliate members may not participate in the election. Student members may vote and sign petitions, but they may not run for office.

– SAMPLE BALLOT –

Chair-Elect (3 year commitment, will be Chair-elect 2021, Chair in 2022, and Immediate Past Chair in 2023) **VOTE for ONE (1)**

Stephanie Benight

Write-in _____

Secretary (2 year term)

Prasad Raut

Write-in _____

Councilor

2 open positions; the two candidates with the most votes will fill 3-year positions. Vote for two (2)

Grace Baysinger

Natalie McClure

Write-in _____

Alternate Councilor

2 open positions: the two candidates with the most votes will fill the 3-year positions. Vote for two (2)

Dipti Shingnapurkar

Howard Peters

Write-in _____

– BIOGRAPHIES –

Chair-Elect

(3 year commitment, will be Chair-elect 2021, Chair in 2022, and Immediate Past Chair in 2023)

VOTE for ONE (1).

Stephanie Benight



Biography: Dr. Stephanie Benight is President and Principal Scientist at Tactile Materials Solutions where she assists clients in overall strategy and technical analysis related to polymers and advanced materials used in a variety of different industries (e.g. additive manufacturing, medical device, construction, and consumer products, etc.). Given her technical background in chemistry, materials characterization and demonstrated track record in business development and strategic partnerships, Dr. Benight brings a unique, informed approach to solving complex problems. Dr. Benight was formerly Director of Materials at Origin and Managing Scientist at Exponent, a scientific and engineering consulting firm. While at Origin, she forged an open material network of partners developing UV-enabled resins for 3D printing technology. Her work resulted in the launch of three partnerships, each with an available resin product, in less than one year. Dr. Benight also has performed research in the areas of liquid crystals, photonics, electro-optic materials, organic electronics (e.g. sensors, transistors), reliability of plastics and adhesives, accelerated aging of polymer-based materials, semiconductors, next generation computing (e.g. optical computing), additive manufacturing (3D printing), and photopolymers. Dr. Benight also holds a Visiting Scientist Appointment at the University of Washington. In her spare time, she enjoys gardening and walking dogs as a volunteer at the Humane Society.

Candidate Statement: Hello to the ACS Silicon Valley community! I'm grateful to have the opportunity to be considered for the Chair Elect position. I've been an ACS member for 10 years. Being able to make a difference and be more involved on the local level, especially when there is so much going on in the macroscopic world, is exciting to me. I am Founder and Principal Scientist at Tactile Materials Solutions, a boutique consulting firm focused on supporting clients with issues related to polymers and advanced materials. As a Stanford Chemistry major, I worked in Bob Waymouth's lab, and after completing a Ph.D. at the University of Washington, I was fortunate enough to boomerang back to the Bay Area and work in the lab of Prof. Zhenan Bao at Stanford. While there, I pioneered some of the first stretchable semiconducting polymers for electronic skin. I've been back in the Bay Area now for close to 9 years.

One of the things I'm most excited about in taking more of an active role in our local ACS section is being part of the community. I'll work hard to get interesting

and diverse speakers for events and promote panel discussions on thought-provoking topics the ACS community cares about. I'd love to see if we can initiate virtual seminars and events as well as networking opportunities with other local and regional sections of the ACS – something that may be the new normal for quite some time. I look forward to exploring other initiatives, representing our chapter on the national level, and to serving you in the community!



Secretary

(2 year term (2021 - 2022)) **VOTE for ONE (1).**

Prasad Raut



Biography: Prasad Raut is currently working as New Product Development Engineer at nVent's Thermal Management division. He has over four years of industrial experience working in polymer research, product development, characterization and failure analysis. Prasad holds Ph.D. in Polymer Engineering from The University of Akron, Ohio, along with undergraduate and master's degree in Chemical Engineering. His recent experiences involve conductive polymer development, filled polymeric composites/blends, and interfacial phenomena in materials with prior experience in filled elastomers, composite electrolyte membranes, and aerogels. Outside work, Prasad actively engages in professional volunteer activities for scientific societies such as Society of Plastic Engineering (SPE), American Chemical Society (ACS) and their local chapters.

Candidate Statement: Joining SVACS would allow me to get involved with the local professional community in supporting the efforts of outreach and education of new talent. By joining the board, I would engage in local professional activities and networking. Also, looking forward to learning about new/existing technologies and keep up to date with industry developments.



Councilor

2 open positions (2020-2022); the two candidates with the most votes will fill 3-year positions.

VOTE for TWO (2).

Grace Baysinger



Biography: Grace's academic degrees include an Associate in Science from Kalamazoo Valley Community College, Michigan, plus a Bachelor's degree in Botany and a Master's degree in Library Science from the University of Michigan in Ann Arbor.

After graduating, Grace worked in the University of

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Michigan Libraries for a decade as a Natural Sciences Librarian and as Head of the Chemistry Library. In 1989, she was recruited by Stanford for the Chemistry and Chemical Engineering Librarian position which she has held since 1989. Current professional activities include serving on Journal of Chemical Education's Editorial Advisory Board, the Advisory Board for Science of Synthesis, ACS Publications Academic Roundtable Group, and as a co-editor for the ACS Guide to Scholarly Communication.

Grace Baysinger has been a member of ACS for 26 years. Many of her ACS contributions have been at the National level and include currently serving on the Committee for Chemical Safety; and previously serving on the Community Activities Committee, and as Chair of the Chemical Abstracts Service Committee, the ACS Publications Committee, and the Division of Chemical Information. Grace was elected an ACS Fellow in 2017. Four years ago, Grace decided to become more active in the Local Section, first serving on the Program Committee and then serving as Chair. Currently, she is Past-Chair of the SVACS. It has been great experience to be part of the Local Section's Executive Committee because they are diverse, knowledgeable, and dedicated group.

Candidate Statement: It would be an honor to represent the Silicon Valley Section as a Councilor. Running for Councilor is a way to continue playing a meaningful role in SVACS and to be an advocate and champion for it at the national level. It is also an opportunity to apply my knowledge and experience to help shape governance so that it meets 21st century needs of its members. The best way to ensure that ACS meets current and future needs of its members is to be an active participant in it. Many thanks in advance for your support!

Natalie McClure



Biography: Natalie McClure is a regulatory affairs consultant with extensive experience in drug development, regulatory affairs and quality assurance. She has filed more than 50 INDs, and supervised regulatory affairs and clinical research

for clinical trials in the US, Canada, Western Europe, Eastern Europe, Russia, India, and China. She obtained her PhD in Organic Chemistry from Stanford University in 1979 and BS in Chemistry from the University of Michigan. She started her career at Syntex Research, working in the process development laboratories on new synthetic approaches to prostaglandin and large-scale peptide synthesis and then changed career direction to drug regulatory affairs. Most recently, she led a team who developed, obtained approval and launched Gocovri® (amantadine) extended release capsules, a new drug for treatment of a symptom of Parkinson's disease. Natalie is also an instructor at the UC Berkeley Extension program offering several courses in drug development and regulatory affairs. Natalie also has been very active in ACS Silicon Valley section, serving as chair and councilor. Natalie currently

serves on the LSAC, local sections activities committee, for ACS at the national level. She is passionate about introducing students to the excitement and fun of science.

Candidate Statement: 2020 certainly has been an interesting year. Like all other companies and institutions, ACS has been forced to make changes, both at a National and Local section level. Some of these changes have been very positive (like allowing participation in evening events by zoom, avoiding the Bay area traffic) and others have been less so (I miss the human contact!). I would like to continue to serve as councilor for Silicon Valley section for a second term, to help guide ACS through these changes. I am currently serving on the LSAC (local section activities committee). This is the National ACS committee that administers the local section programs with funding opportunities, shared ideas for novel programs, celebrations at Chemluminary award and provides advice and support for sections that are in disarray. I am also very involved in our local section activities, especially the outreach activities for students and the community. This year, to adapt to the changing requirements, we have had to cancel many of our long-standing events. In their place, we are doing an exciting event with the Redwood City Library to use the NCW Celebrating Chemistry magazine to bring the experiments to the students over zoom. I ask for your vote and support as councilor for the 2020-2023 term.

Alternate Councilor

2 open positions: the two candidates with the most votes will fill the 3-year positions. **Vote for two (2)**

Howard Peters



Biography: 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 while working full-time and studying

entirely at night from Santa Clara University School of Law. As a chemist, he led research projects at Dow Chemical in Midland, MI, and at SRI International (formerly Stanford Research Institute) in Menlo Park 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 and co-author of many publications and presentations), he was a patent attorney with Syntex Corp in Palo Alto and the in private patent law practice in Silicon Valley for more than 30 years. He has been an ACS member for more than 50 years, an ACS Fellow since 2010 and a member of the ACS Council for over 30 years. He served as Director-at-Large on the Society's national Board of Directors from 2005 to 2007 and was a candidate for President of ACS in 2007. He retired from active patent law practice in 2007.

Candidate Statement: You will note that many of the names of this year's ACS-SV candidates are new. My name has been around for a while, and so I provide significant corporate memory for the planning and completion of many SVACS activities. Howard and Sally Peters shared the 2016 Helen M. Free Award for outstanding public outreach from the national American Chemical Society (ACS). For over 20 years, the Peters have 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, we have reached out to virtually every demographic, including underrepresented groups in science.

Dipti Shingnapurkar



Biography: I did my doctorate research in chemistry in the University of Pune, Pune, India from 2002-2007 and worked on targeted drug design by modifying small-molecule drugs to enhance their antimycobacterial activity. I joined the Georgia Institute

of Technology, Atlanta, GA (GeorgiaTech) to pursue my postdoctoral research from 2009-2010 and then moved to the Public Health Research Institute which was then affiliated with the University of Medicine and Dentistry (UMDNJ) in New Jersey till 2011 where I learned to make a knockout mutant in mycobacterium tuberculosis in Bio Safety Lab-3 (BSL-3: specifically designed to handle pathogenic bacteria) and testing whether these mutants survive and replicate during infection. I recently graduated (2017) with MBA-like degree specially designed for scientists - Postdoc Professional Masters (PPM) from Keck Graduate Institute, Claremont, CA, where I studied business development, corporate finance, design of clinical trials, drug and biologics regulations as well as project and marketing management.

I was a part of the Project Management team at KGI-Team Masters Project with Regulus, La Jolla, CA, where I was involved in creating timelines using Gantt chart, conducting meetings adhering to the agenda and sending minutes in orderly fashion, developing a detailed business plan including budget forecast. I performed my duties as a Business Development Lead at KGI while working on the project Bioscience Strategic Planning with City of Hope, Duarte, CA, and my key responsibilities were conducting and analyzing primary/secondary market research surveys, assisting the client to make and execute the decision, performing as a key liaison with potential collaborators.

Candidate Statement: I thoroughly enjoy volunteering for the Tech Trek held in July for the past couple of years. The enthusiasm and curiosity to learn the science behind simple experiments showed by young kids while I volunteered at the ACS booth for the Palo Alto STEAM

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2020 Election, continued from previous page

event is something I look forward to do. I have also attended meetings for the local section and the annual picnic for the past few years.

I volunteer at two other non-profit organizations—currently I am the CFO at Maharashtra Mandal Bay Area (MMBA) and teach native language at a school to about fifty young kids on weekends for the past six years. I was a member of the organizing team committee at CSG-PhD (Career Support Group for PhD's) during the STEMPEers conference for postdocs in September 2019 at UCSF.

I have really been following ACS and its numerous activities since my PhD days and have always wished to contribute in some or the other way. I would now love to grab this opportunity to be a part of the executive committee as an alternate councilor. I am excited to be able to reach out to millions of science enthusiasts and learn from them. I am a Bay Area resident and can bring together local talent, implement fresh new ideas, and help in successfully continuing with the already existing events/programs/concepts.

I look forward to serve as a volunteer in local section activities and learn along the way. It has given me immense pleasure in volunteering for ACS events so far and I look forward to do so for many more.

Author Name Changes in ACS Published Articles

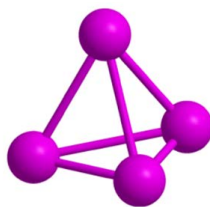
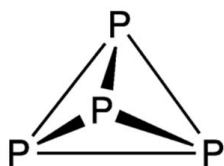
Kim Treanor

ACS Publications *recently announced a new policy* that creates an author-friendly method for authors to change their author name used on a previously published article. Though this policy will benefit anyone who changes their name, ACS was originally motivated to create this new policy in response to a call from the transgender scientific community, since the use of a former name (known as a “deadname”) is particularly painful for transgender persons. *Continue reading this article* that was published in ACS Axial, September 2020.

CHEMISTRY

Quiz

I'm an inflammatory allotrope of phosphorus.



What molecule am I?

Answer

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 a number of 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 October. Plan to be at our annual beer & wine tasting and awards picnic each July on the Stanford campus. The local section is a volunteer organization. Attend an event, volunteer to help, and get to know your local fellow chemists. Welcome!

Please note: in-person events have been suspended during the pandemic but we are meeting virtually. The offer for a free dinner stands for new members once we start getting together in person again.

NEW ACS MEMBERS

Hayrensa Ablat	Jinyu Guo	Benjamin Ravetz
Georgios Alachouzou	Lauren Hagler	Maureen Reilly
Eric John Alexy	Alejandro Gabriel Herrera	Sean Roget
John C. Allen	Hailey Hibbard	Sara Ruth
Jaime E. Aviles-Acosta	Sahar Hosseinzadeh	Amr Saleh
Brian Samuel Bacacoa	Jonathan Hsu	Annina Sartor
Mariette R. Bacon	Zhaorui Huang	Devon Schatz
Laura Bald	Eshani Jha	Tracy Hillary Elizabeth Schloemer
Dr. Nicolas Ball-Jones	Zhe Ji	Kyle Jeffrey Seamon
Dr. Patrick Batoon	Paul Joo	Alex Seay
Briley Bourgeois	Dr. Hemamala I. Karunadasa	Neil Shaw
Labiba Boyd	Sang Hyo Kim	Michael D. Slater
Dr. John Joseph Bruno	Ioannis Kipouros	Dr. Frank B. Slezak
Zev Bryant	Dr. Ti-Hsuan Ku	Jenny Stenger-Smith
Beyza Bulutoglu	Ariel Kuhn	Michael Stone
Joseph Buonomo	Arkadeep Kumar	Carl-Mikael Suomivuori
Emma Chant	Danfeng Li	Katherine Sytwu
Gan Chen	Yifan Li	Kyle Tamshen
John Chen	Yolanda Li	Dominique Tartar
Sahil Chhabra	Yi-Rung Lin	Duayne Tokushige
Connie Chi	Dr. Fang Liu	Ezhioghode Uwadiae
Maja Chojnacka	Yan Liu	Deborah Verhoeven
Tamara Kley Contini	Chandrima Majumdar	Dr. Monica Vialpando
Meredith L. Cook	Sahana Mallya	Julian A. Vigil
Christopher Cooper	Amir Shakouri Mansouri	Son Vu
Amy Cordones	Emily Marron	Djordje Vuckovic
David D. Dai	Dr. Paul Matsumoto	Michael Wales
Jacob Edward Dander	Stephen Matthew Meckler	Randy Wallace
Brian David	Kathryn Margaret Messina	Weiran Wang
Sha Ding	Marco Messina	Yanming Wang
Brian Donovan	William Mitch	Harper Wood
Kevin Doyle	Anneke Moeller	Thomas Wynn
Dr. Glenn Eldridge	Shaonpius Mondal	Rui Xu
Mario Escudero	Terence Joshua Moore	Dr. Emir Yasun
Laura Froute	Nazanin Nahrjou	Chien Hung Yeh
Stephen Galdi	Nate Ngerebara	Jung Ho Yu
Victoria M. Ghielmetti	Eleanor Hammer Oates	Anqi Zhang
Gwendolyn Gibbons	Fatemeh Ostadhossein	Jing Zhang
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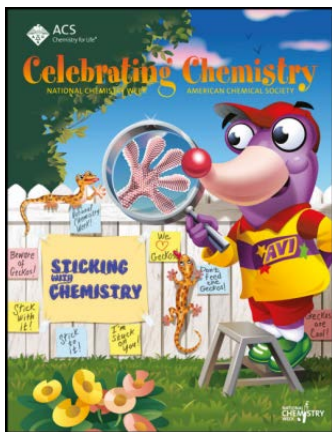
Pop Up Chemistry for Ages 9-12

Natalie McClure and Jigisha Shah

The Redwood City Library (RWC) and the ACS Silicon Valley Section are collaborating to offer a series of science outreach events to middle school students. Since a lot of our other outreach projects were curtailed due to COVID-19 — including Chemists Celebrate Earth Week (CCEW), National Chemistry Week (NCW), and the Bay Area Science Festival Discovery Day — this will be our primary outreach activity this year and is open to all families in our section's area.

The RWC Library has designated October as STEAM month. They will have programs for young kids, for families, and for high school students. Our SVACS chemistry activity will target 4-7th grade students. Every Wednesday in October the library will distribute bags containing a copy of the ACS *Celebrating Chemistry* magazine, supplies for one or two experiments, and assorted other materials (flyers, instructions, and fun stuff like ACS tattoos or mascot Milli Mole). The following Thursday from 3:30 to 4:30, a volunteer SVACS scientist will do a Zoom call from the library, demonstrating the experiments and answering questions real-time. The Zoom calls will be recorded for those who cannot attend the hour live. The Celebrating Chemistry booklets will also be available online so even families who weren't able to pick up the bag of supplies can still participate. In addition, as part of the Bay Area Science Festival on Saturday October 24, a SVACS volunteer team will do a remote "solving mysteries with chemistry" session, targeted for the entire family.

The *Celebrating Chemistry* magazine with a 2020 National Chemistry Week theme of "Sticking with Chemistry" is available on-line in English and Spanish.



This means 5 (!) sessions and experiments. Each week's experiment and video chat session will be led by a member of the SVACS team of volunteers. The RWC Library will distribute 35-40 bags per weekday session, and 50 bags for the Saturday, October 24th session.

More details from the [RWC Library](#).

Schedule of Wednesday/Thursday weekly activity:

- Sept 30/Oct 1: **Energy-Now and Forever (NCW 2013 theme)**

Experiments: a) thermal expansion to blow up a balloon and b) making a solar-powered pinwheel.

- Oct 7/8: **Sustainability (CCEW 2020 theme)**

Experiments: a) Recycling water and b) earth friendly plastics—making "water pods" from calcium lactate and alginate powder

- Oct 14/15: **Adhesives (NCW 2020 theme)**

Experiments: a) how many times can you stick a Post-it note and b) making glue and testing its strength against commercial glue products

- Oct 21/22: **Marine Chemistry (CCEW 2018 theme)**

Experiments: a) seashell-antacids of the seas and b) salt water rainbows

- Oct 24 (family day): **Solving Mysteries through Chemistry**

Experiments: a) hidden messages (goldenrod paper) and b) identifying the unknown powder.

Worth Knowing About

Steve Boyer

Have an interest in keeping informed in the world of drug discovery, or the bio-pharmaceutical industry in general? You are in luck because a local Silicon Valley chemist, Dr. Dennis Hu, created the impressive and useful Drug Hunter website (<https://drug-hunter.com/>). This enterprising scientist keeps the website well-stocked as an informative, educational, and entertaining resource for the scientific public.



At least once a month Dennis posts a new entry on topics ranging from descriptions of drug mechanisms, summaries of biotech Initial Public Offerings (IPO's), interviews with senior research scientists, and links to jobs. For example, he uses a format called "Small Molecules of the Month" to summarize highlights of drug discovery articles published in various places during the featured month. These postings clearly and concisely show molecular structures, code names, targets, mode of action, and citations to the original publications. A brief introduction to the month's collection of molecules highlights key features in the mix.

The site also contains a rich collection of educational materials: attractive posters on numerous topics with associated explanations, complete with reading lists. Click through to articles with intriguing titles such as *That Jimmy Carter Drug* - checkpoint inhibitors like pembrolizumab (Keytruda); *Adventures in Atropisomerism: A Case Study from BMS* on a reversible BTK inhibitor with two axial stereocenters; *A Trick to Fluorinate Grignards*; and *The Post-Gleevec Era*, examples taken from [page 7](#) of the website.

It's a pleasure to browse through Dennis' choice of topics. He lowers barriers to following through on Drug Hunter's information with easy-to-understand graphics and copious clickable referencing. Check it out. If you like what you see, subscribe to this wonderful resource. Thank you, Dennis!

National Chemistry Week 2020

Band-Aids, Post-Its, Superglue, oh my!!! Celebrate National Chemistry Week (NCW) this October 18-24, with the theme "Sticking with Chemistry." Due to COVID-19, the celebration has gone fully digital. Instructions for planning virtual events and an updated suite of educational resources are given below.

Learn how to plan [Virtual Demo Events](#) and [Digital Illustrated Poem Contests](#) for K-12 audiences, and [Virtual Teach-Ins](#) for higher education and adult audiences. Amplify the campaign on social media using the hashtags #NCW, #StickyChemistry, and #Chemistry. Help show collective action by adding your virtual events to Facebook and submitting your photos, videos, and screenshots to the [NCW 2020 Photo Album](#).

If you don't have time to plan events, you can still [Spread the Word](#) via social media, share digital [Educational Resources](#) with teachers and parents in need, and

share our new [General Interest Resources](#) with friends in your circles and adults in your community.

Visit the NCW website at www.acs.org/ncw for more information.

About National Chemistry Week (NCW): NCW is a public awareness campaign that promotes the value of chemistry in everyday life. ACS members and chemistry enthusiasts celebrate NCW by coordinating events and communicating the importance of chemistry.



ANTIBODY TESTS PART 1: WHAT THE TESTS TELL US



WHAT ARE ANTIBODIES?

Your body makes antibodies when it detects an infectious agent (an antigen). Antibodies neutralise and destroy antigens.



Variable region of antibody
Different for different diseases

Constant region of antibody
Identical in antibodies of the same type

Once we've recovered from an infection, our immune cells "remember" the antigen. If we are reinfected, antibodies are rapidly made to remove it. This is immunity, it's life-long for some diseases and fades over time for others.

WHAT ANTIBODY TESTS TELL US

Antibody tests usually test for the presence of two different types of antibody: IgM and IgG. IgG is the most common antibody produced in the body in response to an infection.

IgM antibodies

Production starts 5-10 days after infection

Production peaks around 21 days after infection

Remain detectable 2-4 months after infection

IgG antibodies

Production starts 10-14 days after infection

Production peaks 4-8 weeks after infection

Remain detectable for months or years after infection

Antibody tests can tell us if someone has had an infection in the past.

ANTIBODY TEST RESULTS

IgM	IgG	Result
✗	✗	No infection*
✓	✗	Early-stage infection
✓	✓	Active/recent infection
✗	✓	Past infection

*Antibodies don't appear until someone has had an infection for several days, so this doesn't guarantee they're not infected.

Having antibodies against an antigen isn't a guarantee of immunity. Levels of antibodies and their effectiveness are also important.

ANTIBODY TEST ACCURACY

The accuracy of antibody tests is determined by their sensitivity and their specificity. These measures tell us how often a test produces false negative and false positive results.



A false negative is when the test returns a negative result when someone has antibodies against an antigen. A false positive is when the test returns a positive result for someone who doesn't have antibodies against the antigen.

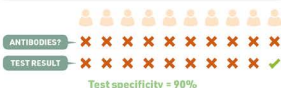
SENSITIVITY

Sensitivity measures the correct production of positive results. The higher the sensitivity, the fewer false negative results are produced.



SPECIFICITY

Specificity measures the correct production of negative results. The higher the specificity, the fewer false positive results are produced.



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Antibody tests, part 1: What can antibody tests tell us? [click to enlarge](#)
See also: [Antibody tests, part 2: How do antibody tests work?](#)

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