

SILICON VALLEY CHEMIST

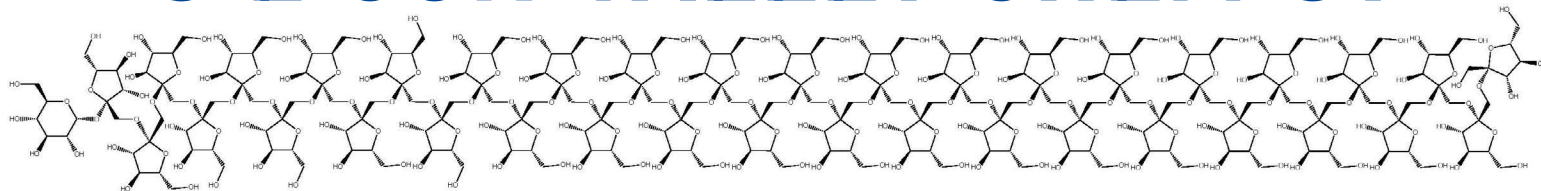


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Silicon Valley ACS Featured October Event

Polymers in Coatings, Inks, and 3D Printing: The Basics of UV and EB Curing

Dr. Mike J. Idacavage, Radical Curing LLC.

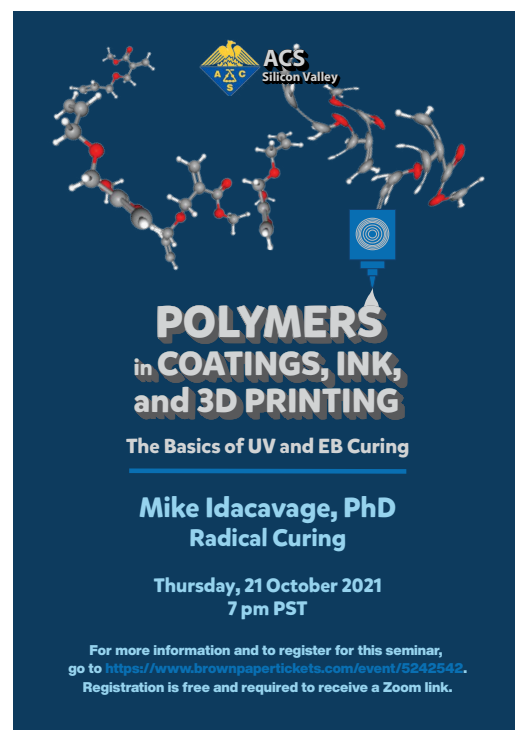
October 21, 2021 7-8pm, Online via Zoom, Free, [Registration required](#)

Abstract:

The Energy Curable industry has grown tremendously since its beginnings in the early 1970s. The use of light or low energy electrons as the energy source for curing coatings is very attractive from a sustainability point of view. However, the main driving force for this technology has been the ability to lower process time and costs along with the ability to prepare coatings with unique properties. This seminar will present an introduction to photopolymerizations, otherwise known as UV and EB curing. In addition to the basic chemistry, an overview of various aspects of applications for UV coatings along with the equipment that is used will be covered.

Bio:

Dr. Mike J. Idacavage received his Ph.D. from Syracuse University in 1979. Mike's work in the area of energy curing started at Eastman Chemicals with the establishment of a

ACS Silicon Valley

POLYMERS
in COATINGS, INK,
and 3D PRINTING

The Basics of UV and EB Curing

Mike Idacavage, PhD
Radical Curing

Thursday, 21 October 2021
7 pm PST

For more information and to register for this seminar, go to <https://www.brownpapertickets.com/event/5242542>. Registration is free and required to receive a Zoom link.

Click [here](#) to download and share the flyer

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Chair's Message

Jigisha Shah

As I write this (mid-September), we have been back in school now for four weeks and are fortunate that our students have been present in person and there have been very few setbacks. Everyone is masking and we have already surpassed the expectations of most people in continuing to meet face-to-face.

Soon the autumn season will coax its way into our backyards! Some of us will be able to witness nature putting on a brilliant show of yellow and



orange thanks to *carotenoids and anthocyanins*. Trees will shed their leaves so they can conserve water and nature will yet again make way for new growth with grace and beauty.

I ask all members (especially ones reading this letter!) to take a minute to vote in the 2021 SVACS elections.

This is your chance to have a say in who represents you in leading your local section. The section is run by an Executive Committee (ExComm) consisting of 5 officers (Chair, Chair Elect,

Past Chair, Treasurer, and Secretary), 7 Councilors and 7 Alternate Councilors. We have nominated a phenomenal slate of candidates described on pages 4-6 of this newsletter. Petition candidates have also been welcomed to involve new faces in the local section activities. You needn't be a member of the ExComm to attend *our monthly meetings*. All of our monthly meetings are open to the public and we encourage you to attend, participate, and speak up!

Our section strives in many ways to support science teachers, especially important under the current conditions of shifting teaching modes.

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Featured Event, continued from front page

photopolymer lab in 1985. In 2003, Mike received the President's Award for Outstanding Achievements in the Radiation Curing Industry from RadTech North America. He was also the President of RadTech North America for

the 2009 to 2010 term. Currently, Mike is an advisor to RadTech and several companies in addition to being an Adjunct Associate Professor at SUNY-ESF in Syracuse, NY teaching courses in UV and EB curing technology.

Chair's Message, continued from front page

One program is the **Bubble Grant** that provides K-12 teachers with funds for teaching science in their classrooms. Teachers are dealing with issues related to the COVID-19 pandemic this year, so we have extended the deadline for submission of proposals to November 1st. A flyer is available on page 12 in this newsletter. Please share the flyer with your friends, family, and colleagues in K-12 science education, and encourage them to apply for funds to support classroom activity that helps catch up after the lost year.

In October and November, we join chemists across the country in sharing chemistry with the public via National Chemistry week (NCW). NCW occurs annually and is the biggest ACS community outreach event. We will be running a program at Redwood City Public Library on 13 November. This year's theme is "**Fast or Slow ... Chemistry Makes It Go!**". 2021 NCW activity revolves around the exciting world of reaction rates, including how temperature, pressure, concentration, the presence of a catalyst, and more parameters affect how fast or slow a reaction happens.

We are working on bringing back our super popular '**Teach the Teachers**' program. This Saturday workshop for middle school science teachers elaborates on the NCW theme and provides teachers with the materials and practice for running a series of experiments in their classrooms. This has normally been an in-person, hands-on workshop, and, hard to believe, was our section's last in-person event before we went into shelter-in-place in 2020! Seems like such a long time ago... We are figuring out a safe format for reinitiating the popular workshop, not losing sight of our goal of doing our best to support teachers and bring science to students.

Also by popular demand, we are making a limited number of classroom-size kits available to teachers who are interested in bringing our **Water**

Quality Citizen Science program to their schools. Please feel free to reach out to me at jssheth@syr.edu for more details.

Your Silicon Valley ACS section Executive Committee continues to provide an exciting array of programs for the end of the year. Chair-elect Stephanie Benight is finalizing plans for those virtual events. For example, on October 21, Dr. Mike Idacavage of Radical Curing will speak to us about photopolymers in coatings, inks, and 3D printing. Stephanie is also working with **EnCorps** on a presentation of the **EnCorps mission** of facilitating professional scientists to change career direction into K-12 education. Last but not the least, I'm happy to report the 2nd **Bay Area Chemistry Symposium** is planned to take place virtually on 5 November 2021. A huge shout-out to Matt Greaney and his remarkable team for making this happen. The event will feature keynote talks from leading scientists in SF Bay area academia and industry as well as a series of short talks from postdocs, students, and industry scientists that highlight the exciting science happening in the Bay area. Don't forget to register for this event, designed to bring together local scientists and institutions for networking and expanding our outlook!

This Fall, the **ACS ChemLuminary Awards** will be presented at a virtual event during National Chemistry Week. In the past, SVACS has been recognized in numerous ChemLuminary categories for our robust outreach activity. We hope you can attend and cheer on SVACS as a finalist in several 2021 categories, and learn about activity in other ACS sections across the country. More information can be found on page 4 of this newsletter.

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.

Writing Safety Statements in Publications

ACS Professional Development Workshop



Presented by: Sammye Sigmann, Leah McEwen, Daniel Kuespert

Sponsored by the ACS Division of Chemical Health & Safety

October 4th, 10am-2pm, Online via Zoom, \$150, **Registration required**

The ACS now requires that authors include a statement of safety concerns in manuscripts submitted to ACS journals. The 2020 edition of the ACS Guide to Scholarly Communication,

section 1.3 (Communicating Safety Information) provides guidelines to developing appropriate information for scholarly communication, but there are no complete examples provided, only excerpts. Furthermore, the chapter provides only information—it cannot impart the knowledge and skills necessary to carry out the instructions in the section. The purpose of this workshop is to put into practice the guidelines for writing effective safety statements based on the science and the intended audience using risk assessment.

Workshop Goals:

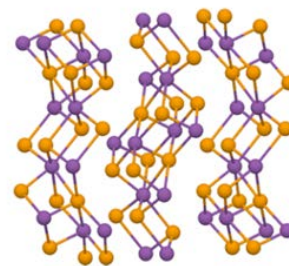
- Familiarize attendees with the safety chapter of the ACS Guide to Scholarly Communication
- Impart the knowledge and skills necessary to carry out these requirements
- Practice the guidelines for writing effective safety statements



CHEMISTRY

Quiz

I'm a nasty compound with new life in photovoltaics. What molecule am I?



Answer

UPCOMING EVENTS

- Oct 4** **Writing Safety Statements in Publications**
ACS Professional Development Workshop
Presented by: Sammye Sigmann, Leah McEwen, Daniel Kuespert
Sponsored by the ACS Division of Chemical Health & Safety
10am-2pm, Online via Zoom, \$150, [Registration required](#)
- Oct 5** **ACS Converge: Conversations on Real-World Applications of Science**
Sponsored by the American Chemical Society
8am-11am (Pacific Time), Online via Zoom, Free, [Learn more and register](#)
- Oct 6** **ACS Webinar: Catalyze the Vote! 2022 ACS President-Elect Candidates**
Co-produced with the ACS Younger Chemists Committee
11am-12pm (Pacific Time), Online via Zoom, Free, [Learn more and register](#)
- Oct 6** **ACS Silicon Valley Executive Committee Meeting**
Sponsored by the ACS Silicon Valley Section
7-9pm, Online via Zoom, Free, [Contact Chair](#) to attend as a guest
- Oct 11** **ACS Spring 2022 National Meeting – Call for Abstracts**
Submit abstracts by October 11th for this hybrid national meeting
[View list of topics and submit an abstract](#)
- Oct 17** **CHAS Workshop: Empowering Academic Researchers to Strengthen Safety Culture**
Sponsored by the ACS Chemical Health and Safety Division
11am-3pm (Pacific Time), Online via Zoom, \$25, [Learn more and register](#)
- Oct 21** **Rheological Characterization of Respiratory Secretions in Severe SARS-CoV-2 (COVID-19) Infections**
Prof. Andrew J. Spakowitz, Depts. of Chemical Engineering and Materials Science & Engineering, Stanford University
Sponsored by the Golden Gate Polymer Forum
6:30-7:30 pm, Online via Zoom, \$5 donation/Free, [Registration required](#) (registration deadline Oct. 19th @ 1pm)
- Oct 21** **Polymers in Coatings, Inks, and 3D Printing: The Basics of UV and EB Curing**
Dr. Mike J. Idacavage, Radical Curing LLC.
[Sponsored by the ACS Silicon Valley Section](#)
7-8pm, Online via Zoom, Free, [Registration required](#)
- Oct 20-23** **Rocky Mountain Regional ACS Meeting (RMRM)**
Sponsored by the ACS Southern Arizona Section
Live, in-person event with virtual attendance and presentation options, [Learn more and register](#)
- Oct 26-27 and 29** **Adhesion Science: Principles and Practice (3-Day Live Virtual Short Course)**
Professor Timothy Long, Arizona State University; Professor David A. Dillard, Virginia Tech; Professor Mike Bortner, Virginia Tech; Dr. Giles Dillingham, BTG Labs
Sponsored by the Golden Gate Polymer Forum
Regular registration \$500 (until October 4 at 5pm Pacific time).
[Learn more and register](#)
- Nov 5** **2nd Annual Bay Area Chemistry Symposium (BACS)**
[Sponsored by the ACS California and ACS Silicon Valley Sections](#)
Online only, [Learn more and register](#)
- Nov 7** **CHAS Workshop: RAMP in the Research Lab**
Sponsored by the ACS Division of Chemical Health & Safety
10am-1pm PT, Online via Zoom, \$25, [Registration required](#)
- Dec 7** Charles Rand, Ph.D., Manager of Materials Science, Checkerspot
Title: To be announced
[Sponsored by the ACS Silicon Valley Section](#)
Save the date!
- Dec 16-21** **Pacifichem 2021: A Creative Vision for the Future**
Sponsored by the International Chemical Congress of Pacific Basin Societies
Hybrid event: Honolulu, Hawaii and virtual
Advanced registration rate available through October 20th,
[Learn more and register](#)

Foundations of Chemical Safety and Risk Management



ON-DEMAND

This online, self-paced course offers education on chemical safety concepts for undergrads.

“The purpose of this course is to offer education on chemical safety concepts for undergraduate students. The course is organized around the R.A.M.P. chemical safety concept:
- Recognize hazards, Assess the risks from the

hazards, Minimize and manage the risks, and Prepare for the unexpected and emergencies.

The intended outcomes of this course are to encourage students to adopt a risk-based lab safety culture and to improve chemical safety awareness.

Who should attend: This course is designed for an undergraduate student with at least two semesters of general chemistry with lab and one semester of organic chemistry with lab. Advanced enrichments are provided as extensions for more mature learners, but these will not be assessed.”

[Learn how to enroll](#)

Also see: [New critical lab safety instruction available through the ACS Institute](#). ACS Press release, September 16, 2021.

Crochet Enantiomers



“If you know how to crochet, here’s a project for you: crocheted enantiomers! This brilliant pair now perching on my bookshelf were sent across to me by Natalie Fey, who has posted [instructions on how to make your own](#) on the Picture It... Chemistry website.”

Reprinted from [The Compound Interest Newsletter - Issue #1, September 2, 2021](#)

ACS VOLUNTEERS CATALYZE CHANGE

THURSDAY, OCTOBER 21, 2021 | 4:00 P.M. EASTERN TIME

Celebrate ACS Volunteers Catalyzing Change and National Chemistry Week on October 21! Keynote Address by Mary K. Engelman, recipient of the 2021 Award for Volunteer Service to the American Chemical Society. Don't miss the exciting live announcement for all ChemLuminary Award winners during this virtual event! Registration is complimentary. Visit www.acs.org/chemluminary. Attendees will receive an access code to enter the event.

23rd Annual
ChemLuminary
Awards



AMERICAN CHEMICAL SOCIETY
MEETINGS & EVENTS



We are a ChemLuminary Finalist!

The Silicon Valley Local Section has been selected as a finalist for the following ChemLuminary Award(s):

- Most Creative & Innovative Use of the CCEW Theme
- Most Innovative New Activity or Program
- Outstanding Virtual Event for CCEW or NCW

The 23rd Annual ChemLuminary Awards ceremony virtually during National Chemistry Week (October 17–23, 2021) on **Thursday, October 21 at 4 pm ET / 1 pm PT**

The ceremony will include a keynote address by Mary K. Engelman, recipient of the 2021 Award for Volunteer Service to the American Chemical Society, and presentations of awards given by 18 committees of the Society will follow. This year's theme is "ACS Volunteers Catalyze Change," which honors the work of our volunteers to continue to improve people's lives.

Registration is complimentary. Attendees will receive an access code to enter the event.

For more details, please see the [ChemLuminary page](#) on ACS' website.

2021 Election of Officers, Councilors, Alternate Councilors for 2022

Voting Period: October 22 to November 14, 2021

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

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 the nomination is seconded by another member or affiliate. Nominations 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 SVACS section secretary, Prasad Raut, prsdraut@gmail.com. You may also contact Prasad 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, 2021, to the SVACS Secretary.

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 2022, Chair in 2023, and Immediate Past Chair in 2024) VOTE for ONE (1)

- Natalie McClure
 Write-in _____

Treasurer (2-year term)

- Ihab Darwish
 Write-in _____

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

- Linda Brunauer
 Ihab Darwish
 Jane Frommer
 Sally Peters
 Write-in _____

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

- Megan Brophy
 Anais Nguyen
 Write-in _____

Biographies

Chair-Elect

3-year term, Chair-Elect (2022), Chair (2023), Immediate Past Chair (2024). VOTE for ONE (1).

- Natalie McClure



Biography: Natalie McClure is a regulatory affairs consultant with extensive experience in drug development, regulatory affairs and quality assurance. 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 as a process development chemist at Syntex Research, and transitioned to Regulatory Affairs in 1989. 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: I am running for section chair-elect again so that the Silicon Valley local section has some continuity in governance. Next year will hopefully be the year when we can return to something more resembling life before the pandemic, but we need to adjust both to the changing environment and to incorporate any positive experiences garnered from the past many months. One theme for my next term as chair-elect and then chair will be to continue to involve more people. ACS and the Silicon Valley local section is only as good as its members and volunteers. We have a constant need to maintain our membership and make sure that we are meeting their needs. 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 plan 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.



Treasurer

2-year term (2022 - 2023). VOTE for ONE (1).

- Ihab Darwish



Biography: Ihab S. Darwish received his BS degree in chemistry from SUNY at Old Westbury and his MS and PhD degrees in Organic Chemistry from Princeton University. After a two-year postdoctoral appointment with Professor Marvin J. Miller, he joined Pathogenesis Corporation, a startup biotech company in Seattle focusing on chronic infectious diseases. Shortly thereafter, he joined Darwin Molecular, Inc., which was acquired by UK-based Chiroscience Group, plc., three years later. Approximately three years after that, Chiroscience merged with a second major British biotech company, Celltech, plc. In 2002, Dr. Darwish moved to the Bay Area and joined Rigel Pharmaceuticals, Inc. where he has since worked as a medicinal chemist focusing on the development of novel, small molecule therapeutics for the treatment of viral diseases, metabolic disorders, immunoncology as well as cancer. Dr. Darwish joined the Santa Clara Valley Section upon moving to the Bay Area and accepted an appointment as an Alternate Councilor in August of 2005. In 2006 and

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Election, continued from previous page

again in 2009, he was elected to three-year terms as an Alternate Councilor and was appointed Treasurer of the Santa Clara Valley Section in June of 2009. In 2010, Dr. Darwish was elected as the Section Treasurer and has served in that capacity since then.

Candidate Statement: I joined the American Chemical Society early on in my career and have enjoyed the various benefits the Society offers. As Treasurer, I have continued to ensure our Local Section has the funds to carry out the Section's stated goals and objectives. I will continue to support existing programs and explore new policies that would enhance our Local Section's efficiency and help navigate our Section through various economic cycles. I am pleased with my record of service and appreciate your support.



Councilor

3 open positions: the three candidates with the most votes will fill 3-year positions (2022-2024).

VOTE for THREE (3).

Linda Brunauer



Biography: Linda Brunauer received the B.S. degree in Chemistry with an emphasis in Biochemistry from San Jose State University and the Ph.D. degree in Biochemistry from the University of California, Los Angeles. Following graduate school, she was an NIH Postdoctoral Fellow in the Department of Chemistry, Stanford University. In 1988 she joined the faculty of the Department of Chemistry and Biochemistry, Santa Clara University where she is currently an Associate Professor. In 1989 she was instrumental in the creation of the Northern California Undergraduate Research Symposium (NCURS) and has helped to nurture this annual regional conference where undergraduate chemistry and biochemistry majors gather to present the results of their independent research projects in a supportive environment. In 1996 she was named Faculty Advisor of the Year at Santa Clara University for her work with the SCU Chemistry Club and in 1999 she received the Ottenberg Award for Outstanding Service to the Section. In 1999 she was awarded an Excellence in Teaching Award for her work in Santa Clara University's summer school program and in 2003 she received Santa Clara University's highest award

for teaching, the Brutocao Award for Teaching Excellence. In 2013 she received an ACS Salute to Excellence Award for her efforts supporting regional testing of the National Chemistry Olympiad. She is a passionate advocate of science education, publishing articles in the Journal of Chemical Education and, since 2007, has served as a volunteer at the Bio-Link Depot in Oakland, helping numerous high school, community college and university STEM educators in the Bay Area secure free laboratory supplies and equipment for their classroom instruction. She is active in the Silicon Valley Section of the ACS and has served as a member of the Executive Committee as Student Affairs Chairperson (1989-present) and Councilor (1998-present).

Candidate Statement: It has been an honor to serve the Section as a member of the Executive Committee. Over the past 20+ years, I have endeavored to increase the level of communication between the local section and the various student member chapters. During this time I have worked to foster student participation in a variety of SCVACS activities such as National Chemistry Week, the National Chemistry Olympiad, the section's "Teach the Teachers Workshops," and the annual Northern California Undergraduate Research Symposium. As a Councilor I have served the section by participation at ACS National meetings and have served on the Women Chemists Committee. Although the past year was certainly a challenge, it did provide new opportunities to encourage members (including our student members!) to engage with the section using Zoom-linked activities such as online chemistry trivia games and allowed for greater participation in local section monthly meetings. In the coming year I hope to foster these and other innovations, blending them with more traditional activities, to offer a greater variety of avenues for members to interact with the ACS.



Ihab Darwish



Biography: Ihab S. Darwish received his BS degree in chemistry from SUNY at Old Westbury and his MS and PhD degrees in Organic Chemistry from Princeton University. After a two-year postdoctoral appointment with Professor Marvin J. Miller, he joined Pathogenesis Corporation, a startup

biotech company in Seattle focusing on chronic infectious diseases. Shortly thereafter, he joined Darwin Molecular, Inc., which was acquired by UK-based Chiroscience Group, plc., three years later. Approximately three years after that, Chiroscience merged with a second major British biotech company, Celltech, plc. In 2002, Dr. Darwish moved to the Bay Area and joined Rigel Pharmaceuticals, Inc. where he has since worked as a medicinal chemist focusing on the development of novel, small molecule therapeutics for the treatment of viral diseases, metabolic disorders, immunoncology as well as cancer. Dr. Darwish joined the Santa Clara Valley Section upon moving to the Bay Area and accepted an appointment as an Alternate Councilor in August of 2005. In 2006 and again in 2009, he was elected to three-year terms as an Alternate Councilor and was appointed Treasurer of the Santa Clara Valley Section in June of 2009. In 2010, Dr. Darwish was elected as the Section Treasurer and has served in that capacity since then.

Candidate Statement: I joined the American Chemical Society early on in my career and have enjoyed the various benefits the Society offers. As Treasurer, I have continued to ensure our Local Section has the funds to carry out the Section's stated goals and objectives. I will continue to support existing programs and explore new policies that would enhance our Local Section's efficiency and help navigate our Section through various economic cycles. I am pleased with my record of service and appreciate your support.



Jane Frommer



Biography: As a senior research staff member at the IBM Almaden Research labs, my atomic force laboratory was involved in a variety of collaborative academic and industrial programs in materials research including 3D nanoprinting, lithography, polymers, magnetics and biological nanostructures. My roles in the scientific community include: National Science Foundation panels and advisory boards in government and academia; guest professor on university faculties internationally; associate editor of the Beilstein Journal of Nanotechnology; founder of STEM internship programs at IBM Research for

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Election, continued from previous page

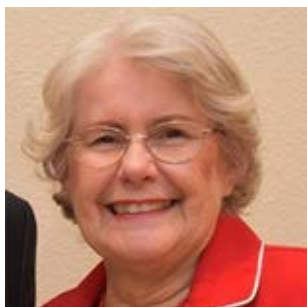
California's central valley community colleges and Brazilian universities; mentor of young scientists. I currently serve as a scientific advisor to Google. BS Chemistry, Tufts University with biochemical research at MIT and Mass General Hospital. PhD Organometallic chemistry, Caltech. A Fellow of the ACS and the recipient of the 2017 ACS National Industrial Chemist Award. In 2021 I was honored with the Perkin Medal in recognition of lifetime achievement in applied chemistry.

Candidate Statement: The rejuvenation of the Silicon Valley ACS has been a driving interest in the past several years of my participation as Chair and Councilor. Newcomers to the leadership of our section bring an infusion of fresh energy and ideas. They have stepped up and recognize the value of in-person and local community. I see my role as supporting and inspiring their efforts to foster an organization relevant to the next generations. SVACS now reflects a broader cross-section of interests - a robust Younger Chemists Committee for early-career professionals and grad students, recognition of the networking needs of mid-career scientists, a Monterey Bay Area ACS subsection within reach of colleges and chemistry interests in Santa Cruz and Monterey Counties, and partnering with other local groups to broaden contacts as in the annual joint meeting with the Golden Gate Polymer Forum.

As Councilor, I will continue to foster the rejuvenation of the Silicon Valley ACS in its mission to serve a twenty-first century membership and community, and to use our success in transformation to serve as a model for the ACS at the national level.

My motivation: use science to do public good.

❖ ❖ ❖
 Sally Peters



Biography: Sally Peters earned her bachelor's degree in chemistry at Geneva College and received a master's degree in library and information science from San Jose State University. She was an information specialist at Xerox PARC in Palo Alto, California, for more than 28 years. Earlier in her career, she conducted virus research at Stanford under the direction of Hubert Loring, Ph.D., the chemist who first crystallized the polio virus, which was later used by Jonas Salk to create

the first effective vaccine for the disease. Sally has served as an ACS councilor for more than 20 years. She has been a member of the ACS for more than 35 years and have been active in our section for more than 25 years. The ACS is the largest professional society in the world and an important aspect of its size is the variety of activities it offers for chemists interested in nontraditional careers, such as; computers, law, health and safety, regulatory affairs, and information, as well as, a wide variety of other areas. Our local section mirrors those facets and could be the 'poster child' for alternative careers!

Candidate Statement: The backbone of the national Society is the local section. The Silicon Valley has a healthy and active local section, and I will continue to work to keep it that way. I am a past chair and have been a counselor for over 20 years. I continue to serve the section at local and national levels. As a national counselor currently I am an elected member of the Council Policy Committee, which serves as the executive committee of the Council. I have also served on the Local Section Activities Committee, the Committee on Meetings and Expositions, and the Committee on Community Affairs. In the Santa Clara Valley/Silicon Valley section I was chair of the local Chemistry Olympiad Committee for 20 years and been on the Hospitality and Membership Committees. I am also a member of the Program Committee, which organizes and plans our monthly meetings.

I firmly believe that our elected officers should be active in the section, attend local meetings, and serve on local committees, as well as represent us at the national level.

❖ ❖ ❖
Alternate Councilor

2 open positions: the two candidates with the most votes will fill the 3-year positions (2022-2024). **VOTE for TWO (2).**

Megan Brophy



Biography: I am currently a full-time member of the Chemistry department faculty at De Anza College in Cupertino. I grew up on the Oregon Coast and received my BA in Chemistry at Reed College, where I worked on crystallography of bacterial manganese-responsive transcriptional regulators. My doctoral work at MIT focused on

the manganese- and zinc-binding properties of S100 proteins, and I spent two years as a postdoc researcher at UC Berkeley. I have been teaching a variety of chemistry classes— including transfer-level classes for science majors, general education classes, and surveys of organic and biochemistry for health sciences majors— at De Anza College since the fall of 2017. I have been attending chapter events regularly since moving to Silicon Valley. I have particularly enjoyed the annual picnic and the home brew competition sponsored by the YCC.

Candidate Statement: By joining the Silicon Valley ACS as an alternate councilor, I hope to increase outreach to the local community college systems and offer support and encouragement to our chemistry students, instructors, and staff.

❖ ❖ ❖
 Anais Nguyen



Biography: As a lead environmental engineer with IBM Global Real Estate based at Almaden Research Labs I have responsibility for approval of chemical used in research and manufactured materials through end of life product life. This includes review of potential environmental toxicity, persistence, and potential recoverability of raw material and final product. I provide an oversight role for environmental assessment of current and acquired properties in the IBM portfolio.

My additional roles include: management of IBM's open space, maintaining certification of Corporate Lands with the Wildlife Habitat Council, membership on IBM's Corporate Sustainability Zero Waste Committee, supporting IBM's global efforts to implement UN Sustainability Goals, and membership on IBM's Corporate Greenhouse Gas and Ozone Depleting Chemical Elimination Committee. Education: BS Environmental Health & Safety, California State University, San Diego

Candidate Statement: To approach Green Chemistry as a philosophy that applies to all areas of chemistry, not a single discipline of chemistry. To explore green chemistry which has already produced many tangible victories for the environment.

Change is inevitable. Growth is optional. I want to grow.

❖ ❖ ❖

ACS SPRING
BONDING THROUGH CHEMISTRY **2022** #ACSSpring2022
In-Person & Virtual - March 20-24
Call for abstracts is now open

Submit Your Abstracts by October 11, 2021 for ACS Spring 2022 National Meeting

Submit your abstracts for oral and poster presentations for ACS Spring 2022. The theme, "Bonding Through Chemistry," will be at the core of programming. Sessions for the hybrid meeting (in-person and virtual) will be held in San Diego, CA, and virtually from March 20-24, 2022.

Although ACS Spring 2022 is planned as a hybrid event, we continue to carefully monitor the situation relative to the COVID-19 pandemic and its potential impacts on the meeting. ACS will provide additional updates about the meeting as they become available.

Visit the meeting website to find a list of the [programming divisions and planned symposia](#) open for submissions. Those who wish to submit an abstract will have the option of selecting a virtual or in-person abstract submission. The deadline to submit abstracts is Monday, October 11.

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

Abeer Altawil
Lawrence Berg
Nathan Bowman
G. Leslie Burnett
Craig Ciesla
Christian Dewey
Jasenka Eminovic
Nathanael S. Gray
Edmund I. Graziani
Will R. Henderson
Sara Howard
Rachel Huang
Mohamed Ibrahim

Robert Jenkins
Chakrapani Kalyanaraman
Jessica Kernaghan
Jacqueline Koenig
Srinivas Kolluru
Seung-Hwa Kwak
Dun Lin
Klaus Lindpaintner
Maritza Martin
Kaile Maske
Natira Gnat Matthews
Chasen Mock
Tram Nguyen

Setareh Niknezhad
Monica Sadek
Glenn E. Schweitzer
Anuska Shrestha
Genevieve Smith
Nicholas Allan Strange
Bhargavi Subramanian
Kenta Suzue
Lynn Trahey
Alice Wong
Gage Wright
Hayriye Merve Yurdacan
Yuyuan Zhang

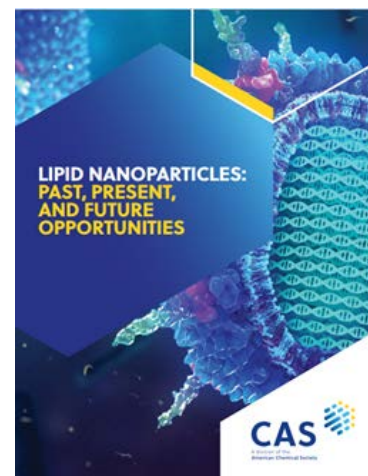


Call for Senior Volunteers Attending Rocky Mountain Regional Meeting

The Younger Chemists Committee (YCC) is looking to partner with the Senior Chemists Committee (SCC) for a networking event during the [Rocky Mountain Regional Meeting](#) from October 20-23, 2021, in Tucson, Arizona. The YCC is hosting a mini networking event, where younger chemists can practice their interviewing skills, and have the senior chemists interview them!

They are currently looking for senior chemist volunteers who could attend the event and hold mini interviews for the YCC and provide them with feedback. If you are planning on attending RMRM 2021 in person and are interested in volunteering, please email Abbie Shepard at abbieshepard018@gmail.com.

Lipid Nanoparticles: Past, Present, and Future Opportunities



"Lipid nanoparticles were propelled into the global spotlight for their role in two approved COVID mRNA vaccines. However, lipid nanoparticles aren't unique, in fact their development started decades ago as liposomes and as critical drug delivery vehicles. Only now, has more and more opportunities for advancement and applications emerged.

Learn more about the past, present, and future opportunities for lipid nanoparticles by [downloading CAS' latest whitepaper](#)."

Source: [CAS > Resources > Whitepapers](#) (posted September 9, 2021)



ACS Guide to Scholarly Communication

New Chapter and New Feature Available

“Patents can be powerful tools, yet any scientist who has experience with them knows how difficult patents can be to create. A patent’s legal requirements, detailed descriptions, claims, and drawing sections can present a daunting challenge for those used to communicating their work through research articles.

Creating Effective Patents is the most recent chapter published in the *ACS Guide to Scholarly Communication*. This chapter serves as a useful starting point for scientists and inventors with patentable ideas, demystifying the process through relevant real-world examples, definitions, infographics, and links to useful resources.

Authored by Xavier Pillai, J.D., Ph.D., an experienced scientist, patent attorney, and inventor, the chapter offers readers an introduction into the complex world of patents, whether they are interested in searching, reading, or getting started with writing one of their own.” [Read the rest of this article](#) by Alison Kreckmann that was published in *ACS Axial*, August 31, 2021. The table

of contents for this chapter is shown below.

1.9	Creating Effective Patents
1.9.1	Introduction
1.9.2	Types of Patents
1.9.3	Filing a Utility Patent Application
1.9.4	Contents of a Patent Application
1.9.5	Patent Searching
1.9.6	Examination of the Patent Application
1.9.7	Legal Requirements to Obtain Utility Patents
1.9.8	Information Disclosure Statement
1.9.9	Conclusion

New Feature in the ACS Guide: The [Reference Index](#), a tab located next to the Table of Contents, enables users to do quick look ups for reference styles from any chapter in the work. For example, if you look at the first section of the [Open Access](#) chapter which is available to everyone, the [Reference Index](#) is on the right side. The [Reference Index](#) is an index to reference format recommendations and accompanying examples. The [Quick Guide to ACS Style](#), the first link shown in the list and is openly accessible to everyone, has examples for some of the most commonly cited types of resources.

Get access: The new *ACS Guide to Scholarly Communication* covers all instructions from previous editions of the ACS Style Guide – completely updated and modernized and is available to all ACS Members at the special rate of \$65.00 a year. If you are not a current member, you may purchase the ACS Guide when submitting your application for membership. Current members may include the ACS Guide at the time of renewal or by contacting Member Services at service@acs.org or by phone 800-333-9511 (US) 614-447-3776 (outside US). A subscription to the ACS Guide is also available to *institutions*.

Open Science Now: A Follow-Up Interview with ACS Publications President Dr. James Milne



“In February 2020, Dr. James Milne became the President of ACS Publications. He marked that occasion with a [discussion about open science](#), a subject that is both personally important to him, and essential to the future of chemistry. Eighteen months later, a great deal has changed, both in the world at large, and in the world of open access publishing. In this interview, he continues that conversation around the future of open science (see questions below).”

- What are some of the most significant developments in open science this past year and a half?
- What has ACS Publications done to advance open access publishing since our last interview with you in February 2020?
- What effect have these efforts had on the publishing behavior of ACS authors?
- What about open data? What new activities has ACS Publications undertaken in this area?
- How are significant changes in funder mandates, such as the Coalition S Rights Retention Strategy, affecting the publishing business?
- Any predictions for 2022?

[Read the full text of this ACS Axial article](#) written by Jesse Stanchik, September 2, 2021.

Table of Contents **Reference Index** X

Index to reference format recommendations and accompanying examples.

Quick Guide to ACS Style

Blogs & Blog Posts

Books & Book Chapters ▾

Conferences & Proceedings ▾

Data & Datasets

Databases & Repositories

Electronic Mailing Lists

Government Publications & Websites ▾

Images & Figures

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Magazines & Newspapers ▾

Methods & Protocols

Patents

Podcasts

Presentations & Posters

Safety Data Sheets

Software & Program Code ▾

Standards

Technical Reports & Bulletins

Theses & Dissertations

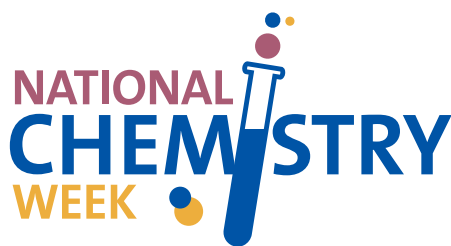
Twitter

Videos & Streaming Media

Websites ▾

Wikipedia Articles

National Chemistry Week 2021



Celebrate **National Chemistry Week 2021** the week of **October 17–23, 2021** with the theme, **“Fast or Slow...Chemistry Makes It Go!”**

National Chemistry Week (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. Multiple resources are available from the ACS to celebrate NCW:



- **Educational resources** – find articles, activities, and videos for younger audiences (in English and Spanish)
- **Gen I interest resources** – find themed resources for college students and adults
- **Buy Chemists Catalyze Change buttons** from the ACS Store



Register for free on the [ACS Webinars](#) page



Date: Wednesday, October 6, 2021 @ 11am-12pm PT

Speakers: Judith Giordan, ecosVC and the Chemical Angel Network and John C. Warner, Zymergen

Moderator: Amber Wilson, Green Analytics, LLC

What You Will Learn: Meet the ACS President-Elect Candidates

Listen as the candidates speak to topics relevant to young chemists. Ask your questions for the candidates.

Co-produced with: ACS Younger Chemists Committee

To view more webinars being held in October, visit the [ACS Webinars website](#).

Reactions: Chemistry Science Videos and Infographics

Uncover the Chemistry in Everyday Life



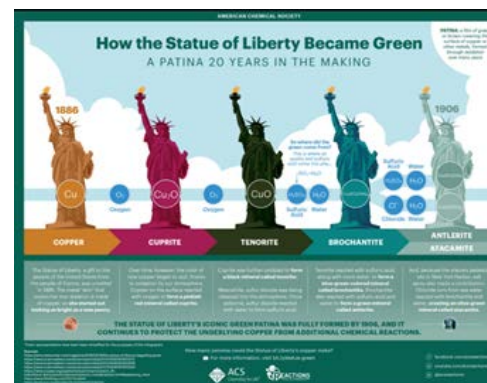
Science of Concrete & the Surfside Condo Collapse ([Watch on YouTube](#))

“Concrete buildings don’t just collapse out of the blue. Even earthquakes aren’t supposed to bring them down. So why did the Champlain Towers South building in Surfside, Florida — a modern structure built in 1981 — fail?” [Learn more](#)



Are we standing on a quadrillion ton of diamonds? ([Watch on YouTube](#))

“There might be a quadrillion tons of diamonds 100 miles below Earth’s surface. But the furthest we’ve traveled is 7 miles down, so how could we know that?” [Learn more](#)



How the Statue of Liberty became green ([View high resolution image](#))

“A patina 20 years in the making.” [Learn more](#)

The Name's Bond, Chemical Bond

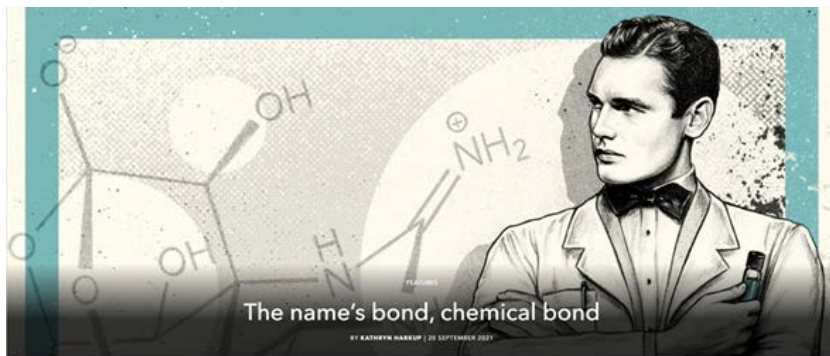


Image credit: [Jennifer Dionisio](#)

Below is an excerpt of [an article](#) published in *Chemistry world*, September 20, 2021. “*Kathryn Harkup explores the poisons – real and fictional – used in Bond films*”

The latest James Bond film, *No Time to Die*, has been postponed twice already and is now due for release in September 2021. The anticipation, as always, has been very high. Every new 007 film has to live up to, if not exceed, its predecessors. Explosions get bigger, stunts get more intricate and plots often get more ridiculous, only to be scaled back to basics and the cycle starts again. To satisfy the audience’s craving for fast-paced entertainment, details such as credibility and accuracy sometimes need to be sacrificed. But this is far from a complaint: I’m not expecting a chemistry lecture. My expectations of a Bond film

are thrilling action sequences, narrow escapes and sinister supervillains, which they deliver in spades.

The films, and the books for that matter, may not be known for their water-tight plots or credible scenarios, but to avoid descending completely into farce they have always had at least a passing acquaintance with reality. The world of James Bond has always been known for its heavy reliance on technology and science, even if this has been in the form of outlandish plots to take over the world or improbable gadgets that allow our hero to defeat the baddies. However, at the heart of it all, there have always been some grains of scientific truth and references to the scientific preoccupations of the age. The fictional films have on occasion paralleled real-life stories of spies being poisoned and global threats from nuclear or

biological weapons. And, although it may not be the first thing that springs to mind when someone mentions 007, chemistry has featured in a lot of the films, and not just in the cocktails that the British spy quaffs at an alarming rate. So just in time for the latest installment, this is a celebration of a few famous chemical moments from the 007 universe.”

Read the [full-text article](#) that was published in *Chemistry World*, September 20, 2021.

While there is no connection to James Bond movies, esteemed Stanford professor Harry Mosher studied another toxin that may be of interest to readers. See: [Mosher, Harry S. 1999. *The saga of tarichatoxin: the deadly California salamander toxin*](#). (Swain Chemistry and Chemical Engineering Library and Grace Baysinger had it scanned so that users would be able to read it online)



<https://coconut.naturalproducts.net/>

Natural Products Online is an open-source project for Natural Products (NPs) storage, search and analysis. The present version hosts COCONUT, the COLleCtion of Open Natural ProdUCtS, one of the biggest and best annotated resources for NPs available free of charge and without any restriction. Developed and maintained by the Steinbeck group at the University Friedrich-Schiller in Jena, Germany.

It gathers data from over 50 open NP resources and is available free of charge and without any restriction. Each entry corresponds to a “flat” NP structure, and is associated, when available, to their known stereochemical forms, literature, organisms that produce them, natural geographical presence and diverse pre-computed molecular properties. There are 406,744 unique natural products in the database (as of 29 August 2021).

Users can search by molecule name, InChI, InChI Key, molecular formula, exact structure, substructure, and similarity structure search in the web interface. Using Rest API, users can perform an exact, simple, or substructure search. It is also possible to search by molecular mass using the API.

For more details, see: Sorokina, M., Merseburger, P., Rajan, K. et al. COCONUT online: Collection of Open Natural Products database. *J Cheminform* 13, 2 (2021).

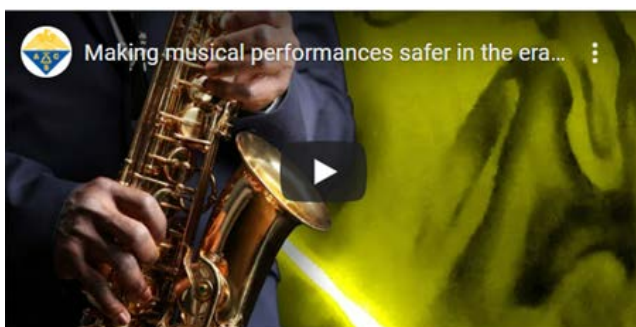
<https://doi.org/10.1186/s13321-020-00478-9>

Making Musical Performances Safer in the Era of COVID-19

“One of the many aspects of “normal” life that SARS-CoV-2 took away was the enjoyment of live musical performances. With the easing of lockdowns and restrictions in many parts of the world, performers can entertain audiences once again, but concerns about spreading the virus remain. Now, researchers reporting in *ACS Environmental Au* have studied aerosol production from playing wind instruments, singing and acting, allowing them to develop recommendations to minimize COVID transmission.”

Read the [full-text](#) of this ACS PressPak news item, posted September 15, 2021.

Read the journal article: “[Measurements and Simulations of Aerosol Released while Singing and Playing Wind Instruments](#)” *ACS Environmental Au*



[Watch the video on YouTube](#) (3:06 minutes, posted September 15, 2021).

High-Energy Shape Memory Polymer Could Someday Help Robots Flex Their Muscles

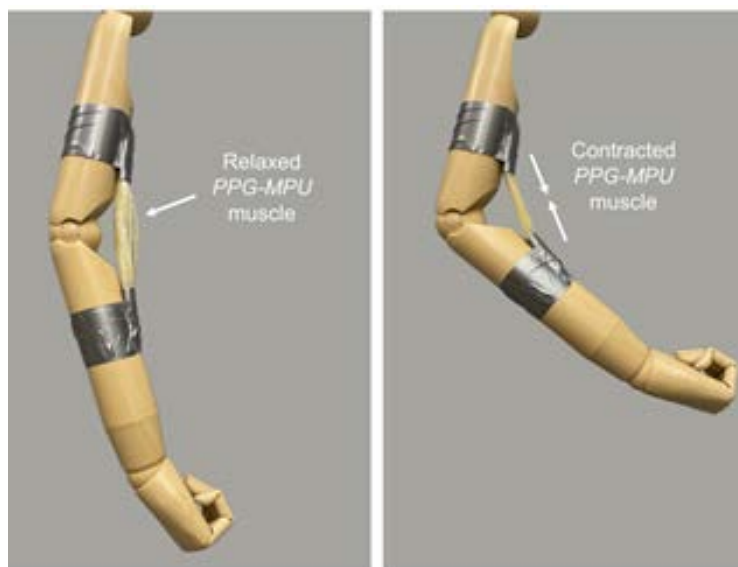
“When stretched or deformed, shape memory polymers return to their original shapes after heat or light is applied. These materials show great promise for soft robotics, smart biomedical devices and deployable space structures, but until now they haven’t been able to store enough energy. Now, researchers reporting in ACS Central Science have developed a shape memory polymer that stores almost six times more energy than previous versions.

Shape memory polymers alternate between an original, undeformed state and a secondary, deformed state. The deformed state is created by stretching the polymer and is held in place by molecular changes, such as dynamic bonding networks or strain-induced crystallization, that are reversed with heat or light. The polymer then returns to its original state through the release of stored entropic energy. But it’s been challenging for scientists to make these polymers perform energy-intensive tasks. Zhenan Bao and colleagues wanted to develop a new type of shape memory polymer that stretches into a stable, highly elongated state, allowing it to release large amounts of energy when returning to its original state.”

Read the [full-text](#) of this ACS Press release which was posted September 8, 2021.

Read the journal article: “[High Energy Density Shape Memory Polymers Using Strain-Induced Supramolecular Nanostructures](#)”

ACS Central Science



An artificial muscle made of a stretched shape memory polymer contracts upon heating, bending a mannequin’s arm. Credit: Adapted from ACS Central Science 2021, DOI: [10.1021/acscentsci.1c00829](https://doi.org/10.1021/acscentsci.1c00829)

[View the image](#)

The Materials Project

“Harnessing the power of supercomputing and state of the art electronic structure methods, the [Materials Project](#) provides open web-based access to computed information on known and predicted materials as well as powerful analysis tools to inspire and design novel materials.

About the Materials Project



Software: By computing properties of all known materials, the Materials Project aims to remove guesswork from materials design in a variety of applications. Experimental research can be targeted to the most promising compounds from computational data sets. Researchers will be able to data-mine scientific trends in materials properties. By providing materials researchers with the information they need to design better, the Materials Project aims to accelerate innovation

in materials research.

Supercomputers: Supercomputing clusters at national laboratories provide the infrastructure that enables our computations, data, and algorithms to run at unparalleled speed. We principally use the Lawrence Berkeley National Laboratory’s [NERSC](#) Scientific Computing Center and Computational Research Division, but we are also active with Oak Ridge’s [OLCF](#), Argonne’s [ALCF](#), and San Diego’s [SDSC](#).

Screening: Computational materials science is now powerful enough that it can predict many properties of materials before those materials are ever synthesized in the lab. By scaling materials computations over supercomputing clusters, we have predicted several new battery materials which were made and tested in the lab. Recently, we have also identified new transparent conducting oxides and thermoelectric materials using this approach.”

Database statistics:

144,595
Inorganic Compounds

76,240
Bandstructures

63,876
Molecules

530,243
Nanoporous Materials

14,072
Elastic Tensors

3,402
Piezoelectric Tensors

4,730
Intercalation Electrodes

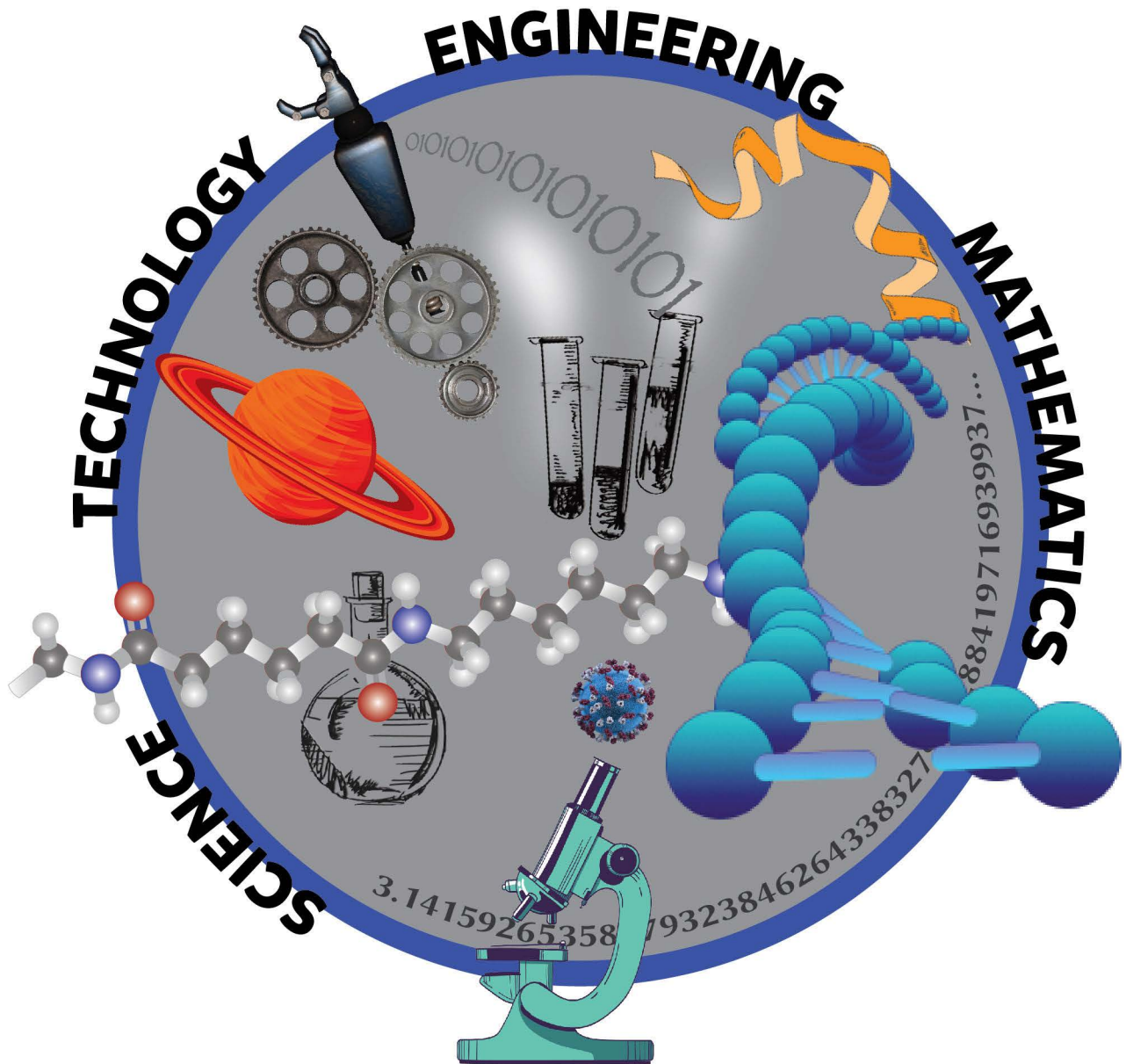
16,128
Conversion Electrodes

Reprinted from the [Home](#) and [About](#) pages of the Materials Project website.



ACS
Silicon Valley

K-12 Science Educators - get a 2021 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 <https://www.siliconvalleyacs.org/awards-funding/bubble-grant>

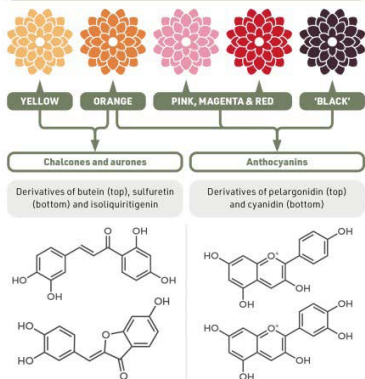
Submission deadline 01 November 2021

THE CHEMISTRY OF DAHLIA FLOWER COLOURS

WHAT CAUSES DIFFERENT COLOUR DAHLIAS?

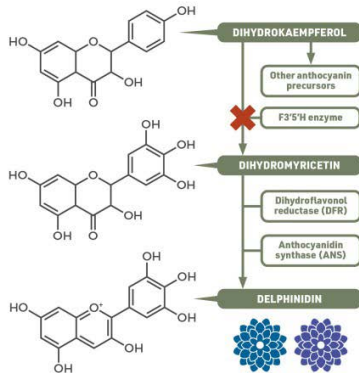
The colours of dahlia flowers are a result of anthocyanin-, chalcone- and aurone- derived pigments. Colourless flavones interact with and stabilise anthocyanin pigments, which also influences dahlia flower colour.

PIGMENTS IN DIFFERENT COLOURED DAHLIAS



WHY DON'T WE SEE BLUE DAHLIAS?

A single enzyme, flavonoid 3'5'H-hydroxylase (F3'5'H), is responsible for generating the precursor to the anthocyanidin delphinidin. Delphinidin-derived anthocyanins give blue colours. Dahlias cannot make the F3'5'H enzyme, so blue dahlias aren't possible.



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Dahlia colour chemistry: Why don't we see blue dahlias? [Article link](#)

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Director	Liang Cao		Dr.LiangCao@gmail.com
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Silicon Valley

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