

SILICON VALLEY CHEMIST

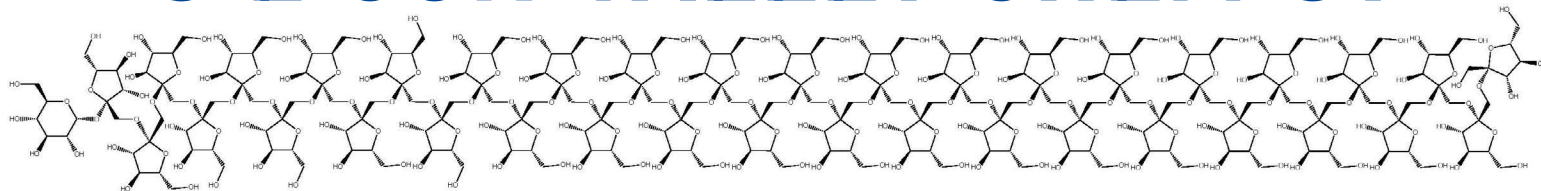


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A Muggle's Guide to Harry Potter's Chemistry

Professor Rebecca Lai, University of Nebraska–Lincoln

Sponsored by ACS Silicon Valley

Thursday, June 17, 2021

6-7pm, Online via Zoom, Free

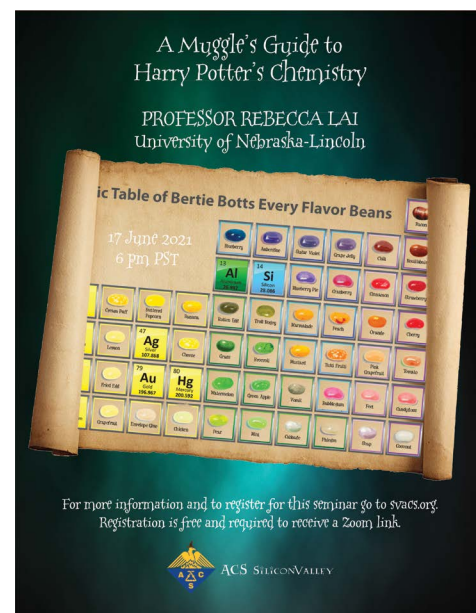
Registration required

In 2011, University of Nebraska–Lincoln Chemistry Professor Rebecca Lai was contemplating how to attract more students to



the sciences. She had just reread the entire Harry Potter series and it occurred to her: What if she designed a course around the books' potions and spells? Thus was born the honors class — A Muggle's

continued on next page



Click [here](#) to download poster

Chair's Message

Jigisha Shah

This is the sixth Chair's Message I've written during the pandemic. Hopefully, we are seeing the light at the end of the tunnel. As the Bay Area slowly reopens, it is critical for everyone to get vaccinated and do their part to practice safe, responsible behavior so we don't jeopardize the health and safety of others. The conditions in some other countries are a stark reminder that the balance we have achieved is delicate and we will have to continue working on keeping the pandemic at bay. Last year, around this time, the Silicon Valley ACS local section cancelled all in-person activity, including our annual awards picnic. This year, Peter Rusch, Grace Baysinger and Sally Peters are diligently putting together an



in-person event to honor the SVACS Radding Award recipient and our 50-, 60- and 70-year ACS members. More details on page 3.

While we work on providing safe in-person events for the future, we are moving ahead in virtual mode with several events in June.

Our annual joint meeting with the Golden Gate Polymer Forum features a presentation from Dr. David Breslauer, the CEO and co-founder of Bolt Threads. Dr. Breslauer will describe Bolt Threads' technology for their commercial products of recombinant spider silk fibers for apparel (Microsilk™), spider silk protein-based personal care ingredients (B-silk™), and a mycelium-based leather alternative (Mylo™). The virtual event on

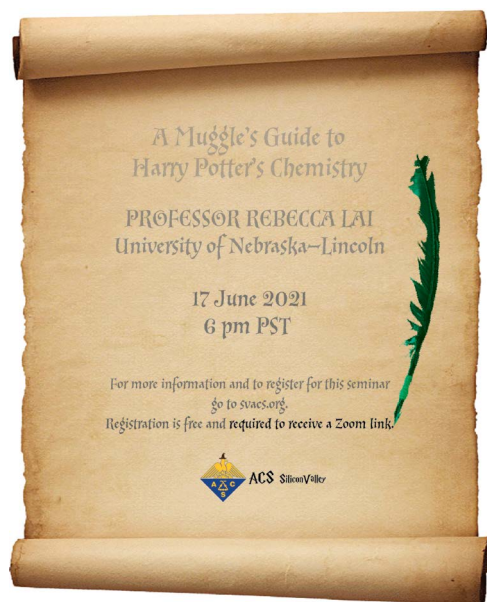
Wednesday, June 9 at 6:30pm is free and requires **registration**. Another event in June to share with your friends and family is Professor Rebecca Lai's talk about how she **melds magic and Harry Potter into chemistry lessons!** This zoominar will be held on Thursday, June 17, at 6:00 pm PST.

On a separate note, we are pleased to share with you Silicon Valley ACS's Strategic Plan! It is a succinct, yet exciting and ambitious plan that provides a framework for the section to meet the needs of our community and deliver higher levels of service. The plan not only captures the wide array of programs we offer, but it also helps us identify gaps or areas where we can do better. This includes intentional and deliberate work we plan to do to support members interested in career transitions and strengthening connections with other professional societies and communities.

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Harry Potter's Chemistry, continued from front page

Guide to Harry Potter's Chemistry. This presentation will cover various elements in our world that are also in Harry Potter's world, including gold (Au), silver (Ag), mercury (Hg), aluminum (Al), and silicon (Si). The focus will be on the use of these elements in the wizarding world when compared to our world.



Click [here](#) to download poster

Chair's Message, continued from front page

This strategic plan will enable us to function from an intentional and active place, not just a reactive one. It will help streamline decision-making and will act as a road map for realizing the section's vision of 'Building connections through chemistry in Silicon Valley.' The goals and projects in this plan will improve services by providing professional development, educational opportunities, networking, and recognition. We wish to offer a safe space where sharing innovative, exciting, and fun chemistry with our diverse broader community through education and outreach is strongly encouraged. Please turn to page 5 to see the SVACS strategic plan.

Drafting the strategic plan has been a long process drawing on a lot of effort, with many people assisting and contributing. I would particularly like to thank Madalyn Radlauer for the clear vision and generous time she put into leading the process of creating the plan.

This strategic plan is intended to be a living document, providing a continuing touchstone for us yet flexible enough to change as our community evolves. We are here to serve our community. If you have any thoughts or ideas, we'd love to hear from you! You can email us at chair@svacs.org. I'm looking forward to celebrating this milestone with everyone in our community!

UPCOMING EVENTS

- Jun 2** **Paving the Path: Career Panel and Networking Event**
Co-hosted by ACS Silicon Valley Section's Younger Chemists Committee and Paving the Path Program
7-9pm, Online via Zoom, Free, [Registration required](#)
- Jun 5** **ACS CHAS Workshop: Empowering Academic Researchers to Strengthen Safety Culture ([Learn more](#))**
Sponsored by ACS Division of Chemical Health and Safety (CHAS)
11am-3pm, Online via Zoom, \$25/participant, [Registration required](#)
- Jun 9** **Bolt Threads: From Recombinant Silk to Mycelium Leather**
Dr. David Breslauer, Chief Scientific Officer and Co-Founder of Bolt
Sponsored by the Golden Gate Polymer Forum and the ACS Silicon Valley Section
6:30-7:30pm, Online via Zoom, \$5 donation/free, [Registration required](#)
- Jun 12** **Navigating Chemical Space, Career and Family**
Professor Ryan Shenvi, Scripps Research, La Jolla
Sponsored by the ACS San Diego Section
7-8pm, Online via Zoom, Free, [Registration required](#)
- Jun 14** **Structural and Biophysical Characterization of Function and Aggregation in the Extremely Long-Lived Proteins of the Eye Lens**
Professor Rachel Martin, University of California at Irvine
Sponsored by the ACS California Section
5-6pm, Online via Zoom, Free, [Registration required](#)
- Jun 14-18** **25th Annual Green Chemistry & Engineering Conference: Virtual Conference ([Learn more](#))**
Sponsored by the ACS Green Chemistry Institute
Online via Zoom, \$25 Students, \$75 General, [Registration required](#)
- Jun 17** **A Muggle's Guide to Harry Potter's Chemistry**
Professor Rebecca Lai, University of Nebraska-Lincoln
Sponsored by the ACS Silicon Valley Section
6-7pm, Online via Zoom, Free, [Registration required](#)
- Jul 17** **Silicon Valley ACS Annual Picnic and Awards**
Sponsored by the ACS Silicon Valley Section
4-6pm, Location TBD, [Advanced Registration Required](#) by July 14th
- Aug 19** **How One Company is Making Blue Jeans 'Green'**
Dr. Tammy Hsu, Chief Scientific Officer and co-founder of Huee
Sponsored by the ACS Silicon Valley Section
7-8pm, Online via Zoom, Free, [Registration required](#)
- Aug 22-26** **ACS Fall 2021 National Meeting: Resilience of Chemistry**
Sponsored by the American Chemical Society
Atlanta, Georgia and Virtual, [Learn more, register, and book hotel](#)
- Nov 5** **2nd Annual Bay Area Chemistry Symposium ([Learn more](#))**
Sponsored by the ACS California and ACS Silicon Valley Sections
Location: Gilead Sciences, 333 Lakeside Drive, Foster City, CA





paving the Path

Career Panel and Networking Event

Calling all community college chemistry and natural science students!

Hear from a panel of chemistry professionals who started their higher education journey at community colleges, just like you! Learn about their professional journeys and get answers to your questions in a moderated discussion. Then join breakout rooms with panel members for continued conversation – a great opportunity to network. Though this event highlights the experience of transfer students, anyone interested is welcome to attend.

This virtual event is hosted by the Younger Chemists Committee (YCC) of the Silicon Valley ACS. It is part of a newly launched Paving the Path program designed to support community college students majoring in chemistry and related fields who are planning to transfer to 4-year universities.

Wednesday, June 2, 7-9 pm
Register for the free Zoom link
Silicon Valley American Chemical Society

SVACS Annual Picnic and Awards Ceremony



- Date:** Saturday, July 17, 2021
Time: 4:00-6:00 pm
4:00-4:40 pm: Beer and Wine Tasting
4:40-5:20 pm: Dinner Catered by Armadillo Willy's
5:20-6:00 pm: Awards for Long-time Members and the Radding Award Winner
- Location:** TBD
- Cost:** Adult: \$15.00, Student: \$10.00, Children under age 12: \$5.00
- Registration:** **Advanced Registration required**; deadline is July 14, 2021

Your safety is our priority. After careful consideration, CDC guidelines, scientific advice, and the ongoing issue of variants, we request all attendees self-certify their vaccine status and

encourage all attendees to wear face coverings during the event while not eating or drinking. Meals will be packaged individually.

This event will be held completely out of

doors for two hours so some changes to our traditions will be required. We will need to keep the awards recognition for 50-, 60-, and 70- year members brief and will not have the ability to share experiences and stories except over wine and dinner. The Radding Award presentation will also be abbreviated.

We are looking forward to meeting in person again. As the situation evolves, so will our approach to keeping you safe. We thank you for your patience and flexibility as we manage this and keep you updated.



2021 United States National Chemistry Olympiad update for the Silicon Valley Local Section

It gives me great pleasure to write this article for the first time about the Chemistry Olympiad.

After successfully coordinating Chemistry Olympiad exams multiple times, Sally Peters decided to transfer her role this year, so I agreed to share the responsibility as the new coordinator with Natalie McClure. Despite the challenges and chaos created by the pandemic, Silicon Valley Local Section thought it was important to offer this opportunity to encourage chemistry and science among our local students and decided to go ahead with the announcement and let them have a chance to showcase their talent.

We were not sure how many students would register and were surprised to get a response from almost 300 students from 30 different schools when we reached out to the teachers to enroll their interested students.

The pattern for the National Chemistry Olympiad was different this year. The local qualifying exam, which was previously conducted within the schools, was replaced by a qualifying regional exam conducted online on March 27. The laboratory practice was replaced by an additional online exam which focused on problem solving, rather than multiple choice. This year, 3400 students in the US took the regional exam and 180 (out of 300 that registered) were in Silicon Valley. The nationwide average score was 30/60 and our section's average was 32/60.

It was challenging to arrange online proctors. We reached out to the high school chemistry teachers to request their time and expertise for online proctoring and many graciously agreed. With additional friends and colleagues agreeing to proctor, we held a mock session just for the proctors a week before the exam. We are grateful to all the proctors who took time from their busy schedules to contribute to the success of the Olympiad.

On the day of the exam, Natalie McClure efficiently and patiently handled the humongous task of accommodating 30 proctors and 180 students in one Zoom meeting and sending them into breakout rooms in a

matter of few minutes.

The 15 top-scoring students on the regional exam were then offered a chance to participate in the National exams which occurred in two parts on April 17 and April 24. Two students from our section scored nearly perfect scores on Part 1 of the National exam. The 200 top-scoring students on Part 1 from across the country advanced to Part 2. 12 students from our section qualified. The median nationwide for the second exam was 29/60. Our section's median was 43.

From their performance on Part 2 of the national exam, 20 students nationwide were selected to attend the virtual study camp. Alexander Gu from Gunn High School was among them. This will be further narrowed down to 4 students to comprise the US team for the International Chemistry Olympiad.

Here is the link to the exam that these students aced. Check if you can match their scores!

<https://www.acs.org/content/acs/en/education/students/highschool/olympiad/pastexams.html>

Find the list of the top 20 finalists and the USNCO participants who earned high honors, honors, and honorable mentions here:

<https://www.acs.org/content/acs/en/education/students/highschool/olympiad.html>

The 12 students from our section who qualified for both exams are listed here, together with their schools and their teachers:

Alexander Gu, Gunn High School, (Heather Mellows)
Gilford Ting, Cupertino High School, (Amanda Slowikowski)
Aditya Udgaonkar, BASIS Independent Silicon Valley, (Ilona Davies)
Jonathan Huang, Lynbrook High School, (Lester Leung)
Rishab Parthasarathy, The Harker School, (Mala Raghavan/Robbie Korin)
Eric Wu, Mountain View High School, (Ning Xu)
Benedict Song, Homestead High School, (Christopher Nafrada)
Dong Jun Shin, Mountain View High School, (Ning Xu)
Jack Zhang, BASIS Independent Silicon Valley (Ilona Davies)
Arushi Agastwar, Monta Vista High School, (Kavita Gupta /Julie Choi)
Angela Jiao, Lynbrook High School, (Lester Leung)
Michael Eng, The Harker School, (Mala Raghavan/Robbie Korin)

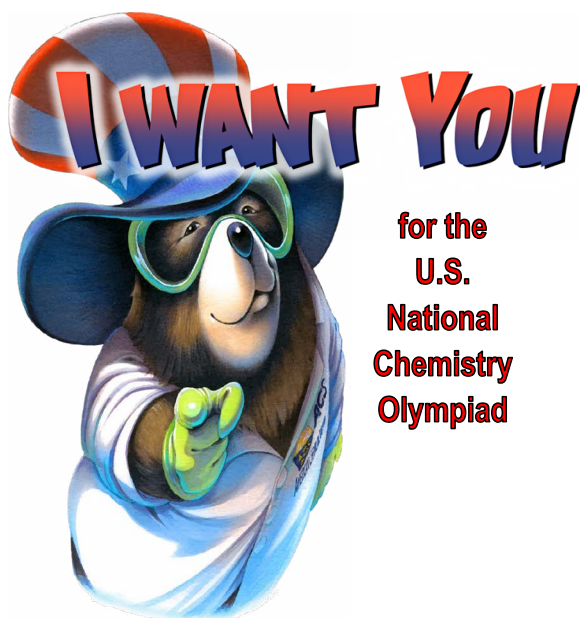
Special thanks to Natalie McClure for her unconditional support throughout the whole process this year and to Sally Peters for her guidance.

The tremendous support that we received from all the teachers is highly commendable. Administering the National Chemistry Olympiad exams would not have been possible without their efforts and hard work in striving for the best for their students.

Last but not the least, a huge round of applause for the students who have consistently studied and excelled in chemistry and have made the Silicon Valley proud. Kudos to them. In-person or virtual, our students shine with outstanding performances year after year. The sacrifices that they and their parents make to excel is exemplary.

Dipti Shingnapurkar
Chemistry Olympiad Coordinator

See also: [2021 Chemistry Olympiad virtual study camp students named](#)



Silicon Valley Section's Strategic Plan Update

Over the past several months we have been developing a Strategic Plan for our Section that has now been approved by the vote of the Executive Committee. This plan not only lays out our Vision, Mission, Goals, and Strategies, but it is also intended to help us share our section's activities and goals with our members. In addition to what we have pictured below, we have adopted the

Core Values of ACS National which can be found in their Strategic Plan (<https://www.acs.org/content/acs/en/about/strategicplan.html>). If you are looking to get more involved in the Section, we hope that you will read over the Strategic Plan and look for Strategies that excite you.

Acronyms in plan: SVACS = Silicon Valley American Chemical Society; STEM = Science,

Technology, Engineering, and Math; BACS = Bay Area Chemistry Symposium; YCC = Younger Chemists Committee; CCEW = Chemists Celebrate Earth Week; NCW = National Chemistry Week; BASF = Bay Area Science Festival; NCURS = Northern California Undergraduate Research Symposium; SEED = Summer Experiences for the Economically Disadvantaged

Silicon Valley ACS' Strategic Plan

VISION:

Building connections through chemistry in Silicon Valley

MISSION:

Engaging the chemistry community by providing professional development, educational opportunities, networking, and recognition; and by sharing innovative, exciting, and fun chemistry with our diverse broader community through education and outreach.

GOALS

Enhance professional development opportunities

1

Deliver engaging events and outreach

2

Support STEM education

3

Broadly communicate section activities

4

Recognize excellence in science and reward volunteers

5

STRATEGIES

BACS; YCC networking; Career days; Interviewing/Resume Workshops; Dinner meeting networking; Leadership opportunities in local section governance; Support for career transitions

Technical talks; Trivia nights; PopUP chemistry; Book club; CCEW; NCW; BASF; Monterey Bay regional activities; Sustainability projects; STEM-related experiences (performances and tours)

Teach the Teachers; Bubble Grant; NCURS; Paving the Path; Project SEED; Science Fair; David Parker Award for Excellence in Chemistry; US Chemistry Olympiad

Newsletter; Website; ExComm meetings; Social media; Connections with other communities and societies

Mosher, Ottenberg, and Radding Awards; Annual picnic and award ceremony; Teacher Scholar Award; Salute for Excellence; ACS Fellow nominations



Bolt Threads From recombinant silk to mycelium leather

David Breslauer, Ph.D., Bolt Threads Chief Scientific Officer and Co-Founder
June 9, 2021, 6:30 pm

Bolt Threads is a material solutions company. Taking nature as our inspiration, we invent and scale cutting-edge materials that put us on a path towards a more sustainable future. Bolt was founded on technology to produce recombinant spider silk fibers for apparel (Microsilk™) and has since broadened its product portfolio to include (Mylo™), a mycelium-based leather alternative, and (b-silk™), a spider silk protein based personal care ingredient. This seminar will explore the history and evolution of Bolt and its material offerings, as well as other opportunities to use nature to recreate our current materials in a more

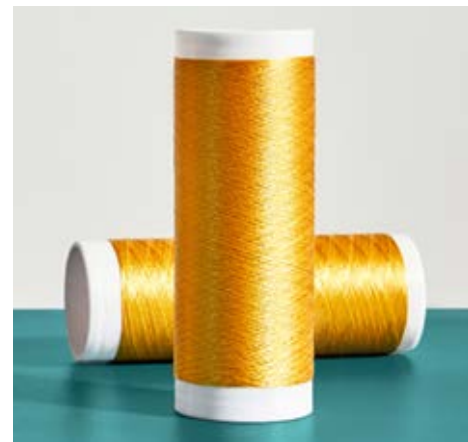
sustainable way.

Speaker Background

David Breslauer leads technology innovation at Bolt, creating and incubating biomaterials for improved consumer products. His passion for biomaterials began with graduate research on spider silk during his Bioengineering Ph.D. at UC Berkeley and UCSF in 2010. He earned a B.S. in Bioengineering from UC San Diego in 2005.

This virtual seminar is jointly sponsored by the Golden Gate Polymer Forum (GGPF) and the Silicon Valley ACS.

Registration is required for the Zoom link.



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 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 meeting stands for new members once we start getting together in person again.

NEW ACS MEMBERS

Emel Adaligil	Nick Johnson	Ona Reiter
Gianna Alyssa August	Elaheh Kamali	Gianna Respicio
Piter Balayan	Sandy Kendall	Stephanie Robinson
Lina Basal	Faheem Khan	Ryan Rodriguez
Thomas Bearrood	Ashvin Khatri	Anton I. Rosenbaum
Alexander Buhse Brady	Alex Kim	Isabella Rusli
Gavin Carr	Sunghee Kim	Smia Sahebi
Amy Chai	Tom Kim	Xiaojing Shen
Julie S. Chai	Yoo Joong Kim	Chunli Sheng
Ian Chan	Mei Fong King	Siddhita Shirsat
Claudine Yumi Chang	Kelly Kishton	Diedra L. Shorty
Dave Chau	Prapaporn Kulphaisal	Ramona L. Solorzano
David Chen	Erin Kusuma	Sehul Soni
Irene Chen	Lauren Kwong	Stephanie Spiteri
Tzu-Ling Chen	Katina Lee	Megan Nichole Stewart
Chang Cheng	Yu Lee	Yuliana Suryani
Nora Chew	Wendy Lei	Crysat Tan
Hishi Chiang	Maojuan Li	Jean Tan
Jing Chien	Norman Lim	Jing Tao
Maria Ching	Wenchun Lin	William Tarpeh
Emily Cole	Yangju Lin	Taylor Thane
Edward Concar	David Liu	Jay Thompson
Althea Contreras	Erica Liu	Cynthia Susanibar Tinoco
Aubert Coran	Gaoxiang Liu	Lesa Tran
Reeta Dabai	Yiquan Liu	Norm Tubman
Min Deng	Yi-Hsien Lu	Myrian Villegas
Tahnee Dening	Erika Lucas	Chengpeng Wang
Janak Devashish	Tom Luong	Han Wang
Bryan Ding	Jenifer MacLean	Jingtao Wang
Simone Ellison	Alan Michael Marmelstein	Ting Wang
Camille Escalona	Lucy Matthew	Yan Wang
Emily Fan	Blaine McCarthy	Yung-Ching Wang
Siyu Feng	Sara Medfisch	Zhang Wang
Alex Galaz	Lijie Mei	Arthur White
Ana Garcia-Garcia	Matt Michels	Kristie Wong
Melissa Griffin	Helen Minnis	Timothy Woods
Tara Grove	Ricardo Morales	Kejia Wu
Stephanie Guthrie	Carey Nakamura	Sam Wu
Wooseok Han	Mithzy Navarro	Quan Xin
Negar Harati	Kim Nguyen Liu	Ping Xu
Farah Hasan	Inna Notkin	Gokay Yamankurt
Robert Herman	Joshawna Kay Nunnery	Nai-Hua Yeh
Stephanie Ho	Judy Ostovic	Honglian Yu
Marites Holper	Nino Panlilio	Feng Zhang
Hui Hong	Mitesh Patel	Li Zheng
Koko Huang	Parth Kailas Patel	Beth Ann Zito
Rueben Ingram		

Was Your Catalytic Converter Stolen? Here's Why.



"Catalytic converters cut down on toxic car emissions, and, according to the U.S. Environmental Protection Agency, they are one of the greatest environmental inventions of all time. Today, catalytic converter theft is on the rise, and that is partly because of their chemistry.

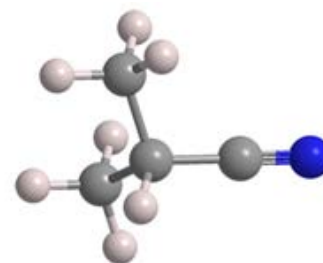
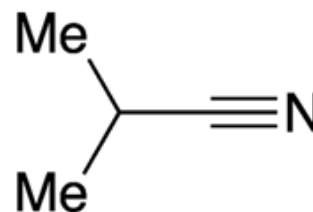
To learn more, [watch this video](#) (5.40 minutes).

Reactions is a video series produced by the American Chemical Society and PBS Digital Studios. Subscribe to Reactions at <http://bit.ly/ACSReactions> and follow us on Twitter [@ACSReactions.](#)"

Source: [ACS Press Release, April 22, 2021.](#)

CHEMISTRY Quiz

I made news when I was found in outer space. What molecule am I?



Answer

ACS Webinars in May 2021

ACS Webinars • Join the ACS Webinars Mailing List



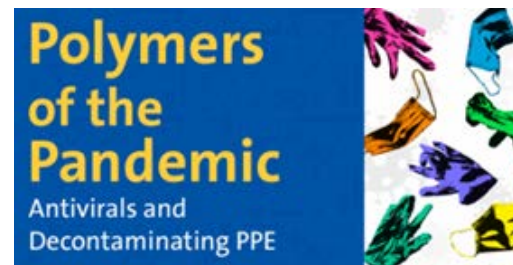
Date: Wednesday, June 2, 2021 @ 2-3pm ET
Speakers: James Collins, MIT / Jürgen Cox, Max Planck Institute of Biochemistry / Yugal Sharma, CAS
Moderator: Angela Zhou, CAS
[Register for free](#)



Date: Wednesday, June 2, 2021 @ 2-3pm ET
Speakers: James Collins, MIT / Jürgen Cox, Max Planck Institute of Biochemistry / Yugal Sharma, CAS
Moderator: Angela Zhou, CAS
[Register for free](#)



Date: Thursday, June 3, 2021 @ 2-3pm ET
Speaker: Paul Hodges, New Normal Consulting
Moderator: Bill Carroll, Caroll Applied Sciercer
[Register for free](#)



Date: Friday, June 11, 2021 @ 1-2pm ET
Speakers: Amy Prieto, Colorado State University and Prieto Battery, Inc. and H.N. Cheng, ACS President
Moderator: Young-Shin Jun, Washington University in St. Louis
[Register for free](#)



Date: Wednesday, June 9, 2021 @ 2-3pm ET
Speaker: Fatima Dainkeh, She+ Geeks Out
Moderator: Paula Christopher, American Chemical Society
[Register for free](#)



Date: Thursday, June 17, 2021 @ 2-3pm ET
Speaker: Lee Polite, Axion Analytical Labs, Inc.
Moderator: Bryan Tweedy, American Chemical Society
[Register for free](#)



Date: Thursday, June 10, 2021 @ 2-3pm ET
Speaker: Siddharth Patwardhan, The University of Sheffield (UK)
Moderator: David Constable, American Chemical Society
[Register for free](#)



Date: Friday, June 25, 2021 @ 2-3:30pm ET
Speaker: Sir Fraser Stoddart, 2016 Nobel Laureate in Chemistry, Board of Trustees Professor of Chemistry, Northwestern University and H.N. Cheng, ACS President
Moderator: Young-Shin Jun, Washington University in St. Louis
[Register for free](#)

“The ACS Institute is a comprehensive and authoritative learning platform supporting the broad chemistry community across the spectrum of learning – foundational education, career expertise, and professional development.

This centralized platform features over **100 educational and training products and programs** from across ACS. This includes a new series of online courses offered by ACS Publications, as well as a suite of new courses from ACS Professional Education. Learning is organized around 7 focus areas which align closely with ACS’ core values and areas of expertise.

All course content has been developed and peer-reviewed by leading subject matter experts. Using an extensive network of scientists, industry leaders, and renowned editors of ACS Publications’ journals, these educational and training opportunities will help learners build mastery, gain confidence, and demonstrate competence.

Organizations and institutions can utilize courses from the ACS Institute to ensure a scalable and uniform rollout of new learning programs

while individually tracking student participation and comprehension.”



Chemistry in Practice
Apply chemical principles across foundational knowledge and practice.



Professional Development
Advance your professional skills.



Lab Safety
RAMP up safety education and enhance compliance.



Scientific Communication
Master the art of scientific communication.



Leadership Development
Learn and develop leadership competencies.



Technical Skills Development
Build and enrich technical skills and expertise.



Volunteer Development
Prepare to make a difference.



CORE

<https://core.ac.uk/>

The world’s largest collection of open access research papers

“CORE’s mission is to aggregate all open access research worldwide and deliver unrestricted access for all. CORE harvests research papers from institutional and subject repositories, and open access and hybrid journals. CORE currently contains 207,255,818 open access articles collected from 10,286 data providers around the world.” [Source: <https://core.ac.uk/about>]



Watch this video (1.21 minutes)

Chemployment Abstract (June 2021)

CHEMEMPLOYMENT ABSTRACT 4008

Position Title: Staff Scientist, Process Chemistry

Job Description: As a Staff Scientist, Process Chemistry at AllAccem, you will be performing multi-step chemistry processes under standard operating procedures (SOP), hands-on synthesis of organic, inorganic and/or organometallic compounds for the production of advanced functional materials, maintaining equipment, and producing final products.

Tasks include: synthesis, purification and identification of important molecular precursors, product molecules, functional material precursors and other tasks to be assigned. Inert atmosphere glovebox and/or Schlenk line techniques will be used to prepare, purify, characterize and manipulate products and key components of the Company chemical technology. Candidate will learn and follow Company SOPs, organize characterization data/procedures, maintain syntheses products and clean/maintain equipment and work areas. Candidate must be ready to work in a team environment assisting in the completion of final products.

Experience in SOP process chemistry, product characterization, and comparison to quality control standards are desired. Candidate must be detail oriented, ready to work in a clean environment and on a production schedule time table.

Key Responsibilities and Duties:

- Carry out SOP chemical reactions on a gram to multi-kilogram scale
- Produce high quality materials that meet required Company product specifications
- Purify starting materials, precursors, and products.
- Record production data of all results in SOP Batch Record forms
- Clean and maintain equipment and production areas
- Perform or prepare materials for routine analytical procedures to validate product requirements (i.e., TLC, NMR, HPLC, Mass Spec)
- Assist in packaging final products using automatic filling, labeling and cartooning machines
- Lift, carry, and/or move production equipment, products and supplies
- Prepare production areas for project initiation or changeover
- Work under industrial safety and quality control guidelines

DESIRED QUALIFICATIONS

Education: B.S. or M.S. in chemistry including organic chemistry coursework

Experience: 2+ years industrial production and scale-up experience in multi-step chemical synthesis is required. Candidate must have industrial organic synthesis experience in air-free manipulation and storage (i.e., Schlenk line equipment and inert atmosphere glovebox). Candidate must be independent and experienced in setting up and maintaining required laboratory equipment for daily operations.

JOB LOCATION, SALARY, EMPLOYER

Job Location: San Carlos, CA

Salary: Commensurate with experience

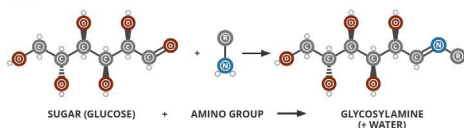
Employer Description: AllAccem, Inc. was founded in 2005. We are a medical device and pharmaceutical company that develops products for veterinary and human health care. The Company manufactures, markets, and sells professional veterinary care products.

Application Instructions: Please apply with resume at careers@allaccem.com

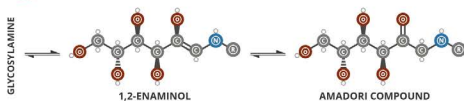
A GUIDE TO THE MAILLARD REACTION

The Maillard reaction occurs during cooking, and it is responsible for the non-enzymatic browning of foods when cooked. It actually consists of a number of reactions, and can occur at room temperature, but is optimal between 140-165°C. The Maillard reaction occurs in three stages, detailed here.

1 The carbonyl group on a sugar reacts with a protein or amino acid's amino group, producing an N-substituted glycosylamine.



2 The glycosylamine compound generated in the first step isomerises, by undergoing Amadori rearrangement, to give a ketosamine.



3 The ketosamine can react in a number of ways to produce a range of different products, which themselves can react further.



Classes of Maillard Reaction Products



The Maillard reaction produces hundreds of products; a small subset of these contribute to flavour and aroma, some groups of which are described below. Melanoidins are also formed, brown, polymeric substances which contribute to the colouration of many cooked foods.



PYRAZINES
cooked
roasted
toasted



PYRROLES
cereal-like
nutty



ALKYLPYRIDINES
bitter
burnt
astringent



ACYLPYRIDINES
cracker-like
cereal



FURANONES
sweet
caramel
burnt



FURANS
meaty
burnt
caramel-like



OXAZOLES
green
nutty
sweet



THIOPHENES
meaty
roasted



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2021 Section Officers

Chair	Jigisha Shah	315-289-5115	jssheth@syr.edu
Chair-Elect	Stephanie Benight	206-604-3163	sbenight@gmail.com
Past-Chair	Matt Greaney	510-410-0195	greaney19@gmail.com
Secretary (2021-2022)	Prasad Raut	330-780-3689	prsrout@gmail.com
Treasurer (2020-2021)	Ihab Darwish	650-624-1389	darwishis@yahoo.com

Councilors

2019-2021	Linda Brunauer	408-554-6947	lbrunauer@scu.edu
2019-2021	Jane Frommer	408-927-2225	jane@collabra.net
2019-2021	Sally Peters	650-447-3027	sallybrownpeters@gmail.com
2020-2022	Matt Greaney	510-410-0195	greaney19@gmail.com
2020-2022	Madalyn Radlauer	408-924-5482	madalyn.radlauer@sjsu.edu
2021-2023	Grace Baysinger	650-725-1039	graceb@stanford.edu
2021-2023	Natalie McClure	650-906-7831	nmclure@drugregulatoryaffairs.com

Alternate Councilors

2019-2021	Sogol Teschler	408-896-2367	sgyahyazadeh@gmail.com
2019-2021	Laura Yeager	626-826-3145	laura.yeager123@gmail.com
2020-2022	Todd Eberspacher	650-723-2505	eberspacher@stanford.edu
2020-2022	Avni Gandhi	626-831-8230	avni.caltech@gmail.com
2020-2022	Heddie Nichols	310-435-2133	hnichols105@gmail.com
2021-2023	Howard Peters	650-447-3027	Peters4pa@sbcglobal.net
2021-2023	Dipti Shingnapurkar	408-242-0674	doc.dipti@yahoo.com

Newsletter

Editor, Interim	Grace Baysinger	650-725-1039	editor@scvacs.org
Assoc. Editor, Interim	Jane Frommer	408-927-2225	jane@collabra.net

ChemPloyment Abstracts

Director	Liang Cao	Dr.LiangCao@gmail.com
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ACS Local Section
Silicon Valley

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

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