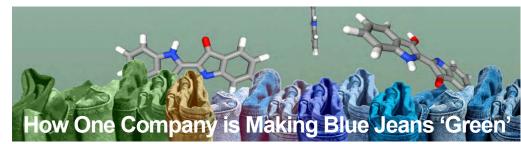


# SILICON VALLEY CHEMIST

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August 19, 2021 @ 7pm, Online via Zoom, Free, Registration required

How can engineered bacteria make indigo synthesis and dyeing blue jeans more ecofriendly?

Dr. Tammy Hsu, the Chief Scientific Officer and co-founder of Huue, discusses making sustainable indigo blue for the denim industry so that your favorite piece of clothing can be planet friendly. The indigo blue currently used



to dye jeans, giving them their iconic look, is highly polluting to the environment and made with toxic ingredients. Biosynthetic indigo has five times less toxicity potential and is as effective and easy for jeans-makers to implement.

Huue is working to make biosynthetic indigo the new gold standard for environmentally friendly indigo dye, revolutionizing the color industry with microbe-produced dyes and pigments.

Join us as Dr. Hsu tells us about sustainable



Download and share the flyer!

textile dyeing and entrepreneurship.

# Chair's Message



service awards were presented, filling us with gratitude for our volunteers. Grace Baysinger was awarded the Ottenberg Award for her incredible work and dedication in championing our website

It's hard to believe that it is

already August. The summer is rushing

by as it so often does. We had the

SVACS annual picnic in-person on 17

July 2021. The weather was perfect,

the venue was beautiful, the wines,

beer and food were fantastic, and the

company was great as always. Several

renovation. Please visit *https://www. siliconvalleyacs.org/* to check out the new website - fast, easy to navigate, and user-friendly. Natalie McClure was recognized with the Shirley Radding Award. The Radding Award was established in 1994 by our local ACS section to recognize demonstrated,

dedicated, unselfish leadership, service and significant contributions, over a sustained period of time, to industrial, applied, or academic chemistry and to the ACS at local, regional and national levels. Natalie personifies these qualities excellently. Redwood City Librarian Pam Evans was presented the Salute to Excellence Award for her phenomenal work engaging children during the COVID-19 pandemic by fostering Pop-Up Chemistry at the Redwood City Library. We also heard from Joe Lowry about his career in chemistry. Joe is one of the twenty-seven 50-, 60-, and, 70-year members recognized this year! I would like to thank section members Peter Rusch, Sally Peters, Matt Greaney and Stephanie Benight for making this picnic a huge success.

With autumn a month away, we enter 2021's continued on next page

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#### Chair's Message, continuned from front page

homestretch. Some roles on our leadership team are beginning to shift toward next year's responsibilities. For example, monthly events are now arranged by our chair-elect, Stephanie Benight. She has been working tirelessly to put a program together. Keep an eye on our website as the details emerge. If you have a suggestion for a dinner speaker, let the Program Committee Chair know (*chair@svacs.org*).

Another shift is underway in preparations for SVACS's 2021 election of members for its 2022 leadership team. We are excited to have a ballot this year with multiple candidates for our leadership positions. A number of members and newcomers to SVACS have stepped up to fuel a surge of interest in rejuvenating our section. Step up and contact us if you would like to take part in this transformation. Open positions include Secretary, Chair-elect, Councilors and Alternate Councilors, described on our website, *https://www.siliconvalleyacs.org/about/executivecommittee*.

By the way, did you know that a worldwide survey reveals that blue is the most popular color in 10 countries across four continents? Blue is a predominant color on earth due to the sky and ocean, but in nature, blue is quite rare. There isn't really a blue pigment in nature, and flora and fauna in fact make use of tricks to appear blue. Plants commonly use a red pigment called anthocyanins whose appearance changes with varying acidity. Animals, on the other hand, use structural effects, such as iridescence and selective reflection to achieve the brilliant blue hues. If blue pigment is so rare, how do scientists at Huue Inc. engineer microbes to basically produce our favorite blue jean color? I look forward to hearing from Dr. Tammy Tsu, the CSO & co-founder at Huue Inc, about their biobased clean color platform. Don't forget to register for what promises to be an exciting talk on August 19, https://www.siliconvalleyacs.org/ event/how-one-company-is-making-blue-jeans-green/.

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.

#### Grace Baysinger Receives 2021 Ottenberg Award



The 2021 Abraham Ottenberg Award was presented to our newsletter co-editor, Grace Baysinger, at the Annual Picnic and Awards Presentation on July 17. Established in 1973, this annual award recognizes outstanding service to our local section. Grace is the forty-first recipient of the

award. In this time of increased electronic communication during the pandemic, she was nominated for her recent work on re-vitalizing both the monthly newsletter and the local section website. Her vision of strong storytelling, vivid imagery and bold design has resulted in a web page that provides a clear and colorful experience. In keeping with long tradition, the recipient was known only to the Ottenberg Committee until the moment of the award presentation.

#### **UPCOMING EVENTS**

Aug 4	Intentional Leadership: A Conversation with Claudia Graham & Matthew Lynch				
	Chevron Downstream & Technology General Manager				
	Jointly sponsored by the ACS California Section and Association for				
	Women in Science-East Bay				
	5:30-6:30pm, Online via Zoom, Free (Donations to AWIS East Bay				
	encouraged), Registration required				
August 19	How One Company is Making Blue Jeans 'Green'				
	Dr. Tammy Hsu, Chief Scientific Officer and co-founder of Huue				
	Sponsored by the ACS Silicon Valley Section				
	7-8pm, Online via Zoom, Free, <i>Registration required</i>				
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				
Aug 25	Fast Stereolithography Printing of Large-Scale Biocompatible Hydrogels				
	Professor Ruogang Zhao, University at Buffalo, SUNY				
	Sponsored by the Golden Gate Polymer Forum				
	6-7pm, Online via Zoom, \$5 donation/free, <i>Registration required</i>				
Sep 16	Rob McGinnis, Ph.D., Founder, CEO at Prometheus <i>Title: To be announced</i>				
	Sponsored by the ACS Silicon Valley Section				
	Save the date!				
Oct 21	Photopolymers in Coatings, Inks, and 3D Printing				
	Mike Idacavage, Ph.D., Radical Curing				
	Sponsored by the ACS Silicon Valley Section				
	Save the date!				
Oct 26-27	Adhesion Science Principles+Practice 3-day virtual short course				
and 29	Prof. T. Long, ASU; Prof. D. Dillard, Prof. M. Bortner, Virginia Tech;				
	Dr. G. Dillingham, BTG Labs				
	Sponsored by the Golden Gate Polymer Forum Early registration \$400 (ending July 16 at 5pm Pacific Time), Regular				
	registration \$500 (until October 4 at 5pm Pacific time). <i>Learn</i>				
	more and register				
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				
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!				

### Silicon Valley ACS Annual Picnic and Awards

Our first in-person event for 2021 was the Annual Picnic and Awards. Held on Saturday, July 17, 2021, at Cuesta Park in Mountain View, we celebrated together with wine- and beer-tasting, and food from Armadillo Willy's. Awards and honors included recognizing 50, 60, and 70-year members of ACS, the 2021 Radding Award Recipient (Natalie McClure), the 2021 Ottenberg Award Recipient (Grace Baysinger), plus an ACS Salute to Excellence (Pam Evans, Redwood City Librarian).



Past and present SVACS Radding Award recipients at the 2021 Summer Picnic. L-R: Howard Peters, Sally Peters, Bonnie Charpentier, Natalie McClure, and Lee Latimer.



2021 Radding Award presented to Natalie McClure by Heddie Nichols.



The 2021 Ottenberg Service Award is presented to Grace Baysinger by Peter Rusch.



Pam Evans from Redwood City Library was presented the Salute to Excellence by Jigisha Shah. The plaque was awarded to Pam for fostering the Pop-Up Chemistry Events and creating an excellent learning environment for curious middle school children.



Old friends and new faces: Jane Frommer, Stephanie Benight (incoming chair), Joe (50th year member), Jigisha Shah



Megan, Joe and baby!

#### Coronavirus Variants: The Delta Variant and the Future Impact of Viral Mutations



"If you are fully vaccinated, should you be worried about the impact of COVID-19 variants? No, in fact, vaccines have been shown to be highly effective at preventing hospitalizations and deaths from these SARS-CoV-2 variants. While the infamous Delta variant has now been detected in 98 countries and all 50 states, 99% of all COVID-19 deaths and hospitalization cases are unvaccinated, according to a recent study analyzing government data.

What about the additional variants? In June 2021, The World Health Organization (WHO) introduced a naming strategy that uses Greek alphabet nomenclature (Alpha, Beta, Gamma, etc.) to simplify discussion of SARS-CoV-2 variants with non-scientific audiences. This article summarizes the attributes of these variants and their future impact to our global health."

Read the *full text* of this article from the CAS Blog that was published July 7, 2021.

#### Exploring Knowledge Graphs for COVID-19 Drug Discovery - Accelerating Opportunities for New COVID-19 Therapeutics



"Today, there are only a few therapies approved to treat COVID-19, but while novel therapies can take decades and billions of dollars to develop, are there opportunities to repurpose existing drugs for new therapies? Our latest whitepaper showcases how CAS Knowledge Graphs reveal new connections and insights that identify drugs to potentially repurpose.

Drug repurposing is critical for faster development of therapies. However, assembling all the critical information and connections around new proteins, viruses, targets, pathways, and clinical information can be challenging. This demonstrates how CAS Knowledge Graphs can identify top clinical candidates to repurpose for COVID-19 therapies."

Read the *full-text* of this blog article and the white paper that was published by CAS on July 29, 2021/

#### Growing Sign Language's Scientific Vocabulary

Deaf scientists are creating more signs for scientific terms to break down communication barriers for deaf people

"American Sign Language (ASL), which many deaf people in the US use to communicate, has a limited number of signs for advanced scientific terms. When people need to say something in ASL and there isn't a sign for it, they often must spell the term out letter by letter or use a sign that isn't quite right conceptually. The lack of signs for advanced scientific terms significantly hinders deaf people's entry into the sciences, and it isolates deaf scientists from their hearing peers. Groups of deaf scientists want to remove these obstacles by developing conceptually accurate ASL signs for scientific terms. But these groups are small and understaffed. As a result, new signs spread slowly."

Read the *full-text* of the article that was published in Chemical & Engineering News (online July 11, 2021, print: July 23, 2021).

Also see *ASLCore*, a website that was developed by a group of deaf students to develop signs for specific disciplines (e.g. *Organic Chemistry*).



#### New Reactions Videos

*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 on Twitter @ACSReactions.

### How chemistry makes carbon dioxide removal possible

### *Read the news release and watch the video* (published July 12, 2021)



How does sunscreen work? Can it really prevent wrinkles and cancer?

*Read the news release and watch the video* (published July 26, 2021)



#### What Chemists Need to Know About Career-Planning and Mentorship

**By Jesse Stanchak** 



"Creating a successful chemistry career is about more than just your skills in the lab. It's also about networking, communication, planning, and perseverance. These skills are often gained through personal experience, but they can also be passed down from established chemists who have already walked this road. As part of the "Changing the Culture of Chemistry" webinar series, a panel of distinguished researchers got together to discuss ways chemists can take their careers to the next level.

This one-hour program featured a panel of engaging speakers, including:

 Professor Brandi M. Cossairt of the University of Washington, who discussed the importance of mentorship, ways to find a potential mentor, and how to get the most out of that relationship.

- Professor Jennifer M. Heemstra of Emory University, who talked about some of the considerations-importance of flexibility in career planning, the advantages of diverse career experiences.
- Professor Robert J. Gilliard, Jr. of the University of Virginia, who discussed his own career path and the approaches that helped him get to where he is today.

The session closed with a question-andanswer session moderated by Joerg Schlatterer, Senior Manager of the ACS Student & Postdoctoral

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!

#### **NEW ACS MEMBERS**

Lakshmi B. Akella Joy Cooke Andrews Justin L. Anglin Neal Brook Jennifer Brophy Carlos Cienfuegos Garcia An Doan Ana Escalante Nicole Escorcia Scott Fendorf Sean S. Feng Shichen Fu Thomas P. Graycar Meng Jia Jiancheng Lai Nicholas J. Licato H Todd Miles Mira Milic Varun Mohan Hannah Nguyen Madison Pearson Carla Marie Peralta Jacob B. Schwarz Megan Elizabeth Screen

Jessica C. Stark Rayan Taghizadeh John Tellis William Carey Thomas Sean Toenjes My Tran David H. Upchurch Siyu Wang Helen J. Zeng Qinghua Zhao Yu Zheng

Sharon Sikora

Scholars Office, where all three panelists were able to share more tips and advice." Source: Reprinted from *ACS Axial, March 31, 2021* 

#### California Approves \$115 Million Investment in Zero Textbook Cost Degrees and Open Educational Resources

"California Governor Gavin Newsom signed into law an unprecedented \$115 million investment in the expansion of Zero Textbook Cost degrees and open educational resources at the state's community colleges. Building on a successful pilot that concluded in 2019, the funding will support the development of degree and certificate pathways that students can complete without spending a single dollar on textbooks. The program will be administered through the California Community College Chancellor's Office and marks the single largest state investment in open educational resources to date." Source: *SPARC Open News, July 28, 2021.* 



Zero-Textbook-Cost Degree Grant Program

#### IBM Research Europe and Science of Synthesis/Thieme Chemistry Collaboration Accelerates Discovery in Organic Chemistry

#### IBM RXN for Chemistry The free AI Tool in the Cloud for Digital Chemistry Language Models for converting Experimental Procedures, predicting Chemical Reactions or Retrosynthesis Pathways and automating Chemical Synthesis.

'Stuttgart, July 29th, 2021 – The RXN for Chemistry cloud platform helps synthetic organic chemists in predicting the outcome of chemical reactions using artificial intelligence (AI) which is trained on data. Thus, a prerequisite for optimal prediction results is high-quality datasets. The cooperation between IBM and Thieme Chemistry aims at improving the prediction outcomes using synthesis data from Thieme's expert curated digital publication source for organic chemistry - Science of Synthesis.

IBM launched RXN for Chemistry in 2018. The cloud platform uses an artificial intelligence model called Molecular Transformer which applies neural machine translation models to predict the outcome of a chemical reaction and thus, improve synthesis planning in organic chemistry.

"The challenge for organic chemists is that there are hundreds of thousands of possible reactions of organic compounds. To address this, we used natural language processing models for all RXN prediction tasks. The RXN models have no built-in chemistry and are not based on codified rules. Every chemical prediction is based on the knowledge learned from the data during training. With AI, cloud and automation, today we can accelerate discovery in organic chemistry by a factor of ten," says Dr. Teodoro Laino, Distinguished Scientist at IBM Research Europe.

## Driving technical innovation with high-quality, diverse, and well-structured data

"Tools for translating from one language to

another are only as good as the data on which the algorithms are trained," says Dr. Alain Vaucher, Research Scientist at IBM. "Our assumption is that this is also true for predicting chemical synthesis results: the results depend very much on the underlying data."

Earlier this year IBM Research and Thieme Chemistry incorporated expert synthesis data from Thieme's expert curated digital publication source on organic chemistry – Science of Synthesis – into RXN for Chemistry and initial results show that Thieme-trained models predict correct reactions twice as often as baseline models when tested on Science of Synthesis chemistry.

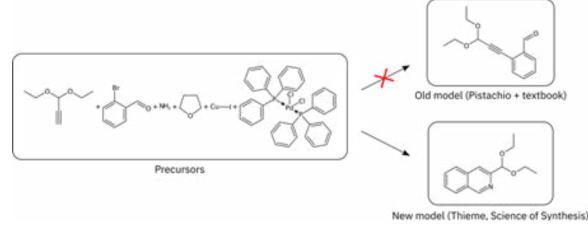
"We are pleased to be directly involved in this innovative project, which is of high importance for the chemistry community," says Dr. M. Fiona Shortt de Hernandez, Senior Director Product Management, Strategic Partnerships and Science of Synthesis at Thieme Chemistry. "Six highlyrenowned organic synthesis experts and their groups have agreed to test the retrained models. Together this collaboration will help drive the development of state-of-the-art custom-fit tools for organic chemists," Shortt affirms.

"The collaboration with Thieme is an important landmark between AI solution providers and domain specific data publishers, with important business opportunities for both," says Laino. "I am very excited to share these preliminary results and curious to see how they will lead in the next months to an improved AI experience for synthetic organic chemists."

Would you be interested in using IBM RXN for Chemistry, trained on Science of Synthesis, as a cloud service if it should become available later? Please contact *ibmrxn@thieme-chemistry.com*.

IBM RXN for Chemistry is available for free at: https://rxn.res.ibm.com"

This article is a reprint of text posted on the CHMINF-L listserv on August 1, 2021. Also see news release from Thieme.



Initial results of forward reaction prediction on reactions from Science of Synthesis

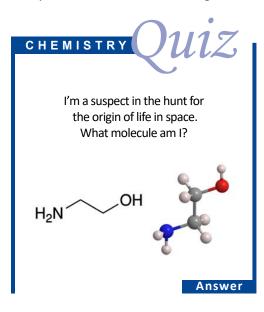


# SLAC partners with national labs and scientific publishing organizations on transgender-inclusive name-change process for published papers

"The process, which also facilitates name changes for religious, marital and other reasons, allows researchers of all genders to own their academic work by updating their names on previous publications.

All 17 U.S. national laboratories, including the Department of Energy's SLAC National Accelerator Laboratory, will be partnering with prominent journals and other scientific publishing organizations to support researchers' requests to change their names on previously published papers. The agreement, *announced today*, will make it easier for researchers to change their names and claim work from all stages of their careers. It specifically addresses the administrative and emotional difficulties some transgender researchers have experienced when requesting such name changes.

Previously, individual researchers shouldered the burden of initiating name change requests with each publisher of their past papers. Although many publishers have already been updating their own policies to address an increasing number



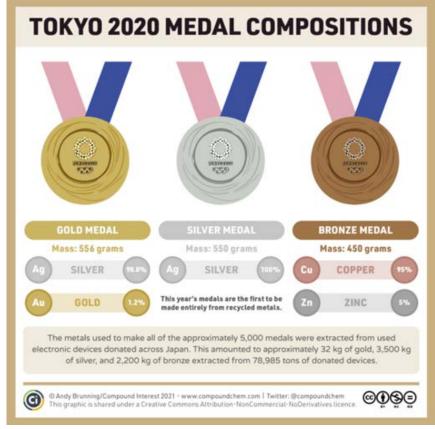
of name change requests, the new partnership streamlines these processes and enables researchers to ask their respective institutions to pursue name changes on their behalf with

publishers and journals."

Read the *full-text* of this article that was published by the SLAC National Laboratory on July 28, 2021.

#### What are the Tokyo 2020 Olympic medals made of?

"The delayed 2020 Olympics are currently taking place in Tokyo and setting a number of firsts. Obviously, it's the first Olympics to take place without a public audience in the stadiums to watch the events. However, it's also the first Olympics at which the medals are made entirely from recycled metals. This graphic takes a closer look at their composition and how the metals to make them were amassed."



Click *here* to enlarge image. Read the *full text* of the accompanying article.



Register for free on the ACS Webinars page

# Industry's Continuing Efforts to Diversify the Workforce



Date: Wednesday, August 4, 2021 @ 2-3pm ET Speakers: Andre Argenton, Dow / Scott Collick, DuPont Mobility & Materials / Adwoa Baah-Dwomoh, W.L. Gore & Associates Moderator: Rebekah Paul, American Chemical Society

# Think Like a CEO What Can Business Acumen Do For You?



**Date:** Thursday, August 5, 2021 @ 2-3pm ET **Speaker:** Patricia Simpson, Game Changing Etiquette and the University of Illinois at Urbana-Champaign **Moderator:** Matt Grandbois, DuPont Electronics & Industrial



Date: Tuesday, August 31, 2021 @ 1-2pm ET Speakers: Bill Carroll, Carroll Applied Science / Isiah Warner, Louisiana State University / Rajendrani Mukhopadhyay, ACS Office of DEIR / Trinity Horton Hale, Celanese Moderator: Arlene Garrison, ACS Senior Chemists Comm

# Starting a Company



How to Organize Your New Firm

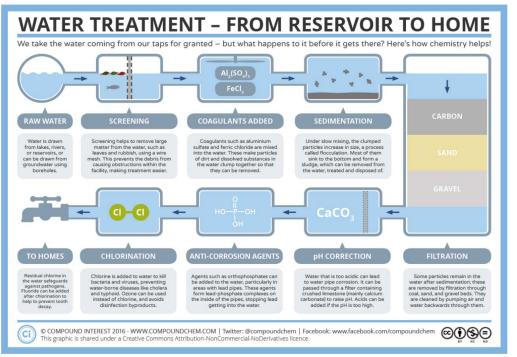
ACS President H.N. Cheng Presents the Entrepreneurship Series: Date: Wednesday, August 11, 2021 @ 2-3pm ET

Speakers: Jim Skinner, Terregena Inc. and ACS SCHB and H.N. Cheng, 2021 ACS President and US Department of Agriculture Moderator: Diane Grob Schmidt, 2015 ACS President

ACS Publications Begins Retracting "Paper Mill" Articles By Erin Celentano

"Over the past several months, ACS Publications editorial staff has been working diligently to identify articles resulting from "paper mill" schemes and has begun retracting these fraudulent articles as individual investigations conclude. As disclosed earlier this year, ACS Publications is one of many scholarly publishers targeted by these unethical operations. To ensure that we remain the most trusted source for chemistry articles, ACS Publications is committed to protecting the integrity of the content we publish by both identifying and properly addressing any and all violations of publication ethics."

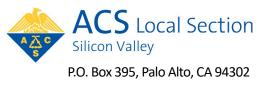
Read the *full text* of this article that was published in ACS Axial on July 23, 2021.



Click here to enlarge image. Learn more The Chemistry Behind Your Home's Water Supply

#### 2021 Section Officers

2021 Section Onices	3					
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	prsraut@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	nmcclure@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			
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ChemPloyment Abstracts						
Director	Liang Cao		Dr.LiangCao@gmail.com			





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