

# Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

Volume 39 No. 7

## JULY 2017 NEWSLETTER TOPICS

- 2017 Shirley B. Radding Awardee
- Connect with Chemists
- Chair's Message
- The Chemistry of Firework Colours
- New SCVACS Members
- ACS Book Club
- Chemistry Quiz
- Molecule of the Week
- The 245th American Chemical Society National Meeting and Exposition
- Chememployment Abstracts

## Connect with Chemists

An early morning chat with fellow chemists

**Thursday, July 20, 2017, at 7 a.m.**

Coupa Café

538 Ramona Street, Palo Alto

Look for Ean at a table with an ACS card.

## 2017 Shirley B. Radding Awardee

**Dr. Gary D. Christian**

*The Radding Award* was established in 1994 by our ACS section to recognize demonstrated, dedicated, unselfish leadership, service, and significant contributions, over a sustained period of time, to industrial or applied chemistry and to the American Chemical Society at local, regional and national levels.

2017 awardee Gary D. Christian was a research analytical chemist at the Walter Reed Army Institute of Research from 1961 to 1967. He joined the University of Kentucky in 1967 and in 1972 moved to the University of Washington, where he was Divisional Dean of Sciences, 1993-2001. He became Professor Emeritus in 2006.

He is the author of more than 300 papers, and has authored books on: Analytical Chemistry; Instrumental Analysis; Atomic Absorption Spectroscopy; Trace Analysis; Problem Solving in Analytical Chemistry; and



Quantitative Calculations in Pharmaceutical Practice and Research. He has been Editor-in-Chief of *Talanta* since 1989.

His service to the ACS includes Chairman of the ACS Division of Analytical Chemistry, Puget Sound Section Chair, Councilor for the Lexington,

KY, and Puget Sound sections, ACS lecture tours, and ACS awards committees. His awards include the ACS Fisher Award in Analytical Chemistry and the ACS Division of Analytical Chemistry Award for Excellence in Teaching. He is an ACS Fellow. He was named to the 2013 Power List, the 100 Most Influential Analytical Scientists in the World, *The Analytical Scientist*.

### Some ACS highlights:

Served as:

- Puget Sound Section Chair (1982-1983), host of 185th national ACS meeting
- Councilor Lexington, KY, Section (1971-1972); Puget Sound Section (2006-present)
- Chair ACS Division of Analytical Chemistry (1989-1990)
- ACS Lecture Tours (2009-2011)
- Numerous ACS awards committees
- 1992 International Chemistry Olympiad (Scientific Board)

### ACS Awards:

- ACS Division of Analytical Chemistry Award for Excellence in Teaching (1988)
- ACS Fisher Award in Analytical Chemistry (1996)
- ACS Fellow (2014)

### Career Highlights:

- B.S., University of Oregon (1959)
- Ph.D., University of Maryland (1964)
- Walter Reed Army Institute of Research (1961-1967)
- University of Kentucky (1967-1972)

## Chair's Message

**Todd Eberspacher**



I would like to start this month's message by congratulating local section members Ean Warren and Grace Baysinger. Ean and Grace are members of the 2017 class of ACS Fellows. Ean was nominated by the local section and works at the US Geological Society. Grace was nominated by the Chemical Information Division of the ACS and is a Librarian at Stanford University.

Also news worthy is a successful application for a Local Section Bridging-the-Gap Mini Grant. This grant was awarded to the local section to assist with membership for

student members.

The Annual Awards Picnic will be held on July 8 at Stanford University in the newly remodeled Science Teaching and Learning Center aka Old Chem. At this meeting we honor the award winners and our 50-, 60-, and 70-year members. Please mark your calendars and plan to bring

the family. As usual we will be having a catered BBQ dinner and wine tasting.

The awards picnic marks the midpoint of the year for SCVACS social and meeting events. The Program Committee has begun

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Radding Awardee, continued from front page

- University of Washington (1972-2006, Professor Emeritus 2006) (Divisional Dean of Sciences, 1993-2001)
- Editor-in-Chief, Talanta (1989-present)
- Textbook "Analytical Chemistry", 7th Edition 2013 (Wiley)
- 2013 Power List, the 100 Most Influential Analytical Scientists in the World, The Analytical Scientist

Chair's Message, continued from front page

the task of setting up the events for the upcoming year. If you have a suggestion for a speaker or event please contact them at [programming@scvacs.org](mailto:programming@scvacs.org) with your ideas. One of the first events this Fall will be a beer brewing competition. This will be hosted jointly with the YCC groups from SCVACS and CalACS sections. Look for an announcement on how you can participate as a brewer or judge.

Are you interested in being an officer, councilor, or in another way? We still need a member or two to serve on the nomination committee. Committee work not for you? How about running for a position? Please contact me ([chair@scvacs.org](mailto:chair@scvacs.org)). Experience not necessary and on the job training available. I welcome any inquiries and I am available to discuss duties and expectations with anyone interested.

## ACS Book Club

The Santa Clara Valley ACS Section is starting a book club. We will read and discuss books at the intersection of science, society, politics, history, law, art, etc. The goal is to foster interest in science beyond research and learn more about society's issues. In addition, we hope the book club encourages people to meet and talk and possibly become more involved in their community. We plan to have the book club one Saturday for a couple of hours in September or October at a Stanford University library.

Our first step is to identify a book. Here is where you can help! Have you read a good book? Some suggestions are "Pandora's Lab: Seven Stories of Science Gone Wrong," "The Immortal Life of Henrietta Lacks," and "The Invention of Nature: Alexander von Humboldt's New World."

Let me know what you think: Which book would you recommend and would you be interested in participating? Email me (Ean Warren) at [ewarren@scvacs.org](mailto:ewarren@scvacs.org).

## Welcome to the Santa Clara 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! To encourage you to attend a monthly section seminar meeting, we would like you to be our guest. When you register, make certain to mention that you are a new member and you and a friend will be our guests. The seminar meetings are held at a number of local venues. If you are unable to attend in the evening, perhaps you would 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. Then, there is our annual wine tasting and awards picnic in July. The local section is a volunteer organization. Please attend an event, volunteer to help and get to know your local fellow chemists. Welcome!

## New SCVACS Members

Darin Arthur Allen	Zhentao Lin	Dr. Ali Uddin Shaikh
Sreenivasulu Angitapalli	Katherine Liu	Dr. Gareth Shannon
Victor James Aniebok	Tristan Horst Maschmeyer	Paul Slagle
Dr. Catherine M. Cho	Dr. Danny Chung-Yin Ng	Dr. Richard Stephenson
Demetri Giokas	Dana Pinson	Dr. Shibing Tang
Dr. Jagath Reddy Junutula	John J. Rajasekaran	Dr. Deniz Tuna
Erina Kamiya	Neil Rao	Bill Van Orsdel
Joseph Kulusich	Todd Renshaw	Malia B. Wenny
Guannan Li	Dr. Antonio Romero	Dr. Yu Zhang

## Chemistry Quiz

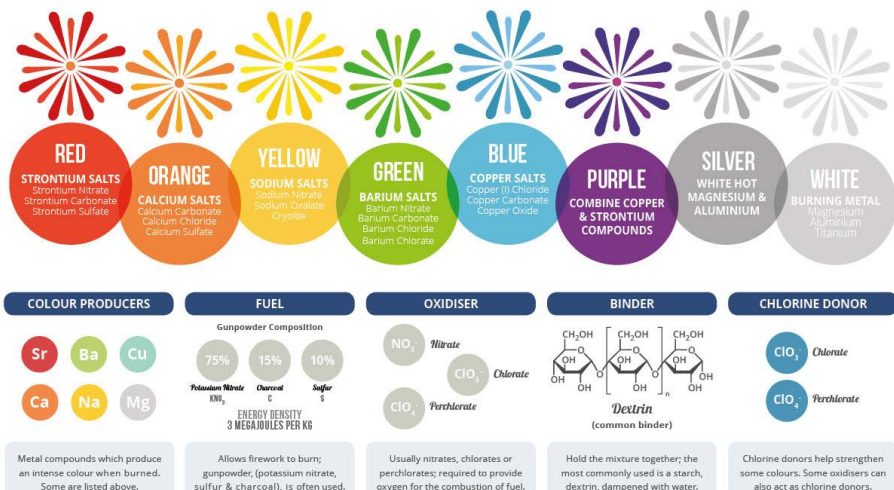
The final four remaining elements in the seventh period of the periodic table have been discovered. Where were elements 113, 115, 117 and 118 discovered?

### Last Month's Chemistry Quiz

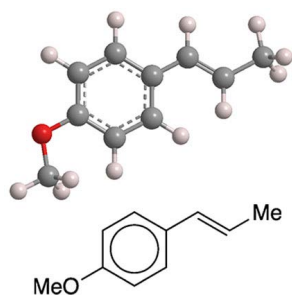
In the Santa Clara Valley in 2015, which two air pollutants exceeded the EPA's National Air Quality Standards most frequently?

The Bay Area Air Quality Management District (BAAQMD) annual reports for 2015 show the most frequent pollutants to surpass federal or state standards are ozone and fine particulate matter (PM<sub>2.5</sub>).

## THE CHEMISTRY OF FIREWORK COLOURS



## Molecule of the Week



**Opal!** You've probably seen me in action.

**What molecule am I?**

Anethole, formally 1-methoxy-4-[(1E)-

prop-1-en-1-yl]benzene, is an anisole derivative that is the major constituent of the oils of anise (*Pimpinella anisum*), star anise (*Illicium verum*), and fennel (*Foeniculum vulgare*).

Also known as "anise camphor", it is used as a flavoring and aroma agent.

Fragrant oils have been extracted from anise and fennel plants since the Renaissance, but not until 1866 did German chemist Emil Erlenmeyer (of the eponymous flask) establish the structure of the primary substance derived from these oils. Most commercial anethole is currently derived from tree extracts such as

turpentine. It is generally recognized as safe (GRAS) for use in foods, cosmetics, and pharmaceuticals.

Anethole is highly hydrophobic but soluble in ethanol, a combination that produces the "ouzo effect". When ouzo and other anise-flavored liqueurs such as absinthe and arak are poured over ice or mixed with water, the mixtures spontaneously form highly stable emulsions. The ouzo effect is a potential mechanism for designing commercial surfactant-free emulsions without the need for expensive high-speed stabilization.

## 245th American Chemical Society National Meeting & Exposition

August 20-24, 2017 Washington, DC



## Chemistry's Impact on the Global Economy

### CHEMPLOYMENT ABSTRACTS JULY 2017

#### CHEMPLOYMENT ABSTRACT 4001

**Position Title:** Quarterly Adjunct Lecturer (Pool)

**Job Description:** Duties include but are not limited to:

- Planning and teaching lecture or laboratory sections for Chem 11, 12, and 13 (General Chemistry), Chem 31, 32, and 33 (Organic Chemistry); and Chem 101 (Bioinorganic Chemistry) lecture only.
- Fulfilling all responsibilities associated with assigned course. Specific responsibilities are posted at <https://jobs.scu.edu/postings/6006/>
- Starting Date: September 1, 2017

**QUALIFICATIONS DESIRED:**

**Education:** Ph.D. in chemistry and biochemistry or closely allied field

**Experience:** College teaching experience is highly desirable, and experience in teaching a diverse student population is preferred.

**LOCATION, SALARY, EMPLOYER:**

**Job Location:** Santa Clara, CA

**Salary:** \$3,960 per lab section and \$6,600 per lecture section; not benefits eligible

**Description:** Santa Clara University is a comprehensive Jesuit, Catholic university located in California's Silicon Valley with an ACS-approved undergraduate program. It is an EO/AA employer committed to excellence through diversity, and welcomes applications from women, persons of color, and members of historically underrepresented groups.

**Application Instructions:** Submit your application on <https://jobs.scu.edu/postings/6006>

#### CHEMPLOYMENT ABSTRACT 4002

**Position Title:** Academic Year Lecturer

**Job Description:** Duties include but are not limited to:

- Planning and teaching lecture and/or lab sections of lower division chemistry (general and organic chemistry) courses, bioinorganic chemistry and other courses as assigned.
- Fulfilling all responsibilities associated with assigned course. Specific responsibilities are posted at <https://jobs.scu.edu/postings/6000>

**QUALIFICATIONS DESIRED:**

**Education:** Ph.D. in chemistry or biochemistry or closely allied field

**Experience:** College teaching experience is highly desirable, and experience in teaching a diverse student population is preferred.

**LOCATION, SALARY, EMPLOYER:**

**Job Location:** Santa Clara, CA

**Salary:** \$56,600-59,605 per year; benefits eligible

**Description:** Santa Clara University is a comprehensive Jesuit, Catholic university located in California's Silicon Valley with an ACS-approved undergraduate program. It is an EO/AA employer committed to excellence through diversity, and welcomes applications from women, persons of color, and members of historically underrepresented groups.

**Application Instructions:** Submit your application on <https://jobs.scu.edu/postings/6000>



SANTA CLARA VALLEY SECTION  
AMERICAN CHEMICAL SOCIETY  
P.O. Box 395, Palo Alto, CA 94302



4th of  
July

To receive an email when our newsletter  
is published on our web site, sign up at:

[http://scvacs.org/?page\\_id=99](http://scvacs.org/?page_id=99)

## SANTA CLARA VALLEY SECTION

### 2017 Section Officers

Chair	Todd Eberspacher	650-723-2505	eberspacher@stanford.edu
Chair Elect	Melody Esfandiari	408-924-4973	melody.esfandiari@sjsu.edu
Past Chair	Jane Frommer	408-927-2224	frommer@scvacs.org
Secretary	Richard Bone	650-714-7897	rgb@scvacs.org
Treasurer	Ihab Darwish	650-624-1389	darwishis@yahoo.com

### Councilors

2015-2017	Ean Warren	650-329-4554	ewarren@scvacs.org
2017-2017	Charlie Cox	650-485-1041	ctcox@stanford.edu
2016-2018	Bonnie Charpentier	650-380-5353	charpentierbon@yahoo.com
2016-2018	Linda Brunauer	408-554-6947	lbrunauer@scu.edu
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2017-2019	George Lechner	408-226-7262	glechner@aol.com
2017-2019	Matt Greaney	510-410-0195	greaney19@gmail.com

### Alternate Councilors

2015-2017	David Parker	408-615-4961	drdrparker@comcast.net
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2017-2017	Heddie Nichols	310-435-2133	nichols@scvacs.org
2016-2018	Natalie McClure	650-906-7831	nmclure@drugregulatoryaffairs.com
2016-2018	Heidi Vollmer-Snarr	650-723-9518	hrvsnarr@stanford.edu
2017-2019	Elizabeth Pollom	408-924-5012	elizabeth.pollom@sjsu.edu
2017-2019	Slava Bekker	831-759-6005	sbekker@hartnell.edu

### Newsletter

Editor	Kevin Greenman	408-634-2309	editor@scvacs.org
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### ChemPloyment Abstracts

Director:	Liang Cao	liang.cao@aol.com
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## FUTURE EVENTS

- Jul 8** SCVACS Summer Picnic, Wine Tasting and Awards Ceremony  
Stanford Chemistry Department  
[www.scvacs.org](http://www.scvacs.org)
- Aug 20-24** 254th ACS National Meeting  
Washington, DC  
[www.acs.org/content/acs/en/meetings/fall-2017.html](http://www.acs.org/content/acs/en/meetings/fall-2017.html)
- Sep 16 or 23** SCVACS YCC Home Brew Competition, Judging and Tasting  
Golden State Brewery, Santa Clara  
Joint with the Cal YCC and the Senior Chemists  
Watch the website for more information!
- Sep 30** Flavors of Chemistry  
Davis, CA  
SCVACS joint meeting with the Cal and Sacramento ACS sections
- Oct TBD** Monterey Bay ACS Dinner Lecture  
Cabrillo College, Aptos, CA  
Dr. Claudia Luhrs of the Naval Post Graduate School
- Click on links for more information or see this newsletter at [http://scvacs.org/?page\\_id=99](http://scvacs.org/?page_id=99)