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**October 2018**

A Joint Publication of the Southern California and  
San Gorgonio Sections of the American Chemical Society

**Southern California  
Section**



**Nano Western Regional  
Meeting  
Saturday, October 27,  
2018**

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**High School Chemistry Teachers Meeting  
November 3, 2018  
Occidental College**

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**San Gorgonio Section**

**Senior Chemistry Meeting  
Eddie's Italian Eatery in Claremont**

**Saturday, October 20, 2018**

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SECTION 2018 OFFICERS**

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**Chair Elect:** Krishna Kallury

**Secretary/Treasurer:** Barbara  
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# Southern California Section

## Chair's Message

Greetings So. Cal. Members, Happy Fall! We have many interesting and exciting events planned in the last few months of 2018. On October 27<sup>th</sup>



SCALACS and the California Los Padres Local Section are cohosting the 2018 Western Regional Meeting at Caltech. The meeting theme is: "Chemistry is Out of This World!" and will feature talks about space chemistry, hands-on break out sessions on space chemistry topics, a student poster session, and much more. Please join us! More information is found in this issue of SCALACS.

Other events of note are National Chemistry Week events at the California Science Center organized by Henry Abrash, and our annual High School Chemistry Teacher's Meeting at Occidental College (November 3<sup>rd</sup>) organized by Michael Morgan. Please visit [SCALACS.org](http://SCALACS.org) for additional activities including specific dates for NCW activities.

Our election results are in and I would like to extend appreciation to all those who put their hat in the ring. All were outstanding candidates. I'd like to recognize the next two members in the Section Chair succession Krishna Kallury (2019) and Brian Brady (2020). I know both Krishna and Brian will do great things and I look forward to working with them. The rest of the election results are on page 6.

Finally, I would like to mention how much I enjoyed the 50/60/70/75 year member and Project SEED luncheon on September 15<sup>th</sup>. Hats off to Frank Gomez for his many years of amazing results and dedication to this indispensable program. I was inspired by the thoughts adventures shared by SEED students Yasmine, Ruby, Kevin, and Stephany (pictured above). I know they will all have a role in Improving People's Lives Through the Transforming Power of Chemistry! I really benefitted from the words of wisdom and experience from the eight 50/60/70/75 year members in attendance. Even though he was unable to join us, I would like to extend my warm congratulations to 75-year member Richard D. Oppenheim. At the rate I am going I won't be a 75-year member until 2068!

See you at the Western Regional Meeting on Oct 27<sup>th</sup>!

- Bob  
[rdegroot@oxy.edu](mailto:rdegroot@oxy.edu)



**Join us for the 2018 Nano Western Regional Meeting  
October 27, 2018**

**California Institute of Technology, Pasadena, CA**

<http://acswrm.org/wrm2018/registration.html>

**Poster Abstract Deadline:** October 5; Abstracts will be reviewed as they are received starting September 14. Abstracts can be submitted to: <http://acswrm.org/wrm2018/posters.html>

**Registration Deadlines:** October 7 (early), October 19 (regular)

**This nWRM is designed around the National Chemistry Week Theme of "Chemistry is Out of This World!", however, abstracts do not have to be space related.** Our goal is to engage students and provide a place for undergraduate and graduate students to display their research. We also will focus on chemical education for High School teachers. We have three exciting speakers:

**Dr. Brian Brady, Aerospace Corporation**  
Propellant Chemistry

**Dr. Lawrence Wade, JPL**  
The Mars 2020 mission and the micro-XRF instrument PIXL

**Dr. Maria Drout, University of Toronto**  
Astronomical Alchemy: The Origin of the Elements

Morning breakout sessions will include **Tom Traeger** of Duarte High School on Solar Chemistry, **Sarah Marcotte** from JPL on the Amazing Chemistry of Planets, and **Michael Morgan** of Francisco Bravo Medical Magnet High School on ACS Resources for Chemical Teaching, **with more to come!**

An **Awards Banquet** will be held following the meeting to honor recipients of the E. Ann Nalley Volunteer Award, the Stan Israel Award for Advancing Diversity and the DivCHED Award for Excellence in High School Teaching

***Sponsored by California Los Padres and Southern California Sections***

## **Southern California Section**

### **2018 Occidental College High School Chemistry Teachers Meeting**

**This is a meeting for Chemistry Teachers  
by Chemistry Teachers!**

**November 3, 2018**

**Occidental College**  
1600 Campus Road  
Los Angeles, CA 90041  
Mosher Room 1

**Registration opens at 8 AM, Program 9 AM to 3 PM,  
Lunch Included  
Free parking on campus**

**Featuring presentations by:  
Steve Sogo from Laguna Hills High School, Mario Martinez from  
SOCES and Michael Morgan from Bravo High School  
and more...**

We are still accepting abstracts for possible presentations. Come and share your favorite demonstration, lab or lesson! Please send your abstracts to Michael A. Morgan (Program Chair) at [mmorgan@lausd.net](mailto:mmorgan@lausd.net).

The fee is \$30 (nonrefundable) payable to SCALACS. Pre-service teachers can attend for just \$5! Paypal registration is now available. To register and pay by Paypal, please go to <https://goo.gl/forms/xcYxZU1XiYVgFJsV2>. Please remember that your registration is not complete until you pay. You will receive a confirmation from Paypal.

Reservations can be made via email to Nancy Paradiso at [office@scalacs.org](mailto:office@scalacs.org). The registration link is available on our website, [www.scalacs.org](http://www.scalacs.org). Questions about the program or to volunteer to give a presentation, contact Michael A. Morgan (Education Chair) at [mmorgan@lausd.net](mailto:mmorgan@lausd.net).

**Sponsored by the Southern California Section of the  
American Chemical Society and the  
Occidental College Department of Chemistry**

## Southern California Section

### Call for Nominations Paul Shin Memorial High School Chemistry Teacher of the Year Award

If you know of a local high school chemistry teacher who is making a difference, please make the effort to show how important his/her work is to you and the students. Self-nominations from those who feel they fit the requirements are accepted as well. It's teachers like the recipients of this award who make learning chemistry rewarding. Plus, there is a financial component of \$500. The \$500 will be an unrestricted award directly to the teacher. The winner of the Section Award will also be entered at the National ACS level for the James Conant Bryant Award and the Western Regional High School Teacher of the Year Award. Having won a previous award does not necessarily exclude a nominee; however, the nomination would need to be based on different criteria than the first award.

**Nomination Package should include:** Biographical sketch of nominee with date of birth, list of any publications, statement (no more than 1,000 words) of nominee's achievements as a high school chemistry teacher including quality of teaching, effective methods, nominee's ability to challenge and inspire students, extracurricular work (science fairs, clubs, etc.). Seconding letters are not essential, but up to five may be included. **Nominating documents should be submitted via email to [office@scalacs.org](mailto:office@scalacs.org).** Note that signed documents that have been scanned are acceptable.

The deadline for nominations is **November 15th, 2018**. Please feel free to contact Michael Morgan of the Educational Affairs Committee at [mmorgan@lausd.net](mailto:mmorgan@lausd.net) if you have any questions.

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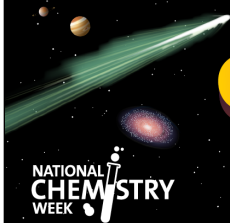
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## Southern California Section



**CHEMISTRY**  
IS OUT OF  
**THIS WORLD**



### Outreach and National Chemistry Week Activities

**The 2018 NCW theme is: Chemistry Is Out Of This World!**

**Saturday, October 20, 2018: National Chemistry Week Activities at the California Science Center**, 700 Exposition Park Drive, Los Angeles, CA 90037. Join volunteers for NCW activities. For more information, or if you would like to volunteer, please contact Henry Abrash at: [abrash8@aol.com](mailto:abrash8@aol.com).

### Election Results

Thanks to everyone who voted in our electronic election. We've gotten a lot of good response about how easy it is to vote. We'd also like to congratulate our newly elected members. Their terms of office begin January 1, 2019. Note that we had to elect a new Chair for 2019. Our previous 2018 Chair-Elect moved.

**Chair 2019:** Krishna Kallury

**Chair-elect 2019:** Brian Brady

**Secretary/Treasurer:** Barbara Belmont

**Members of the Executive Committee:**

Henry Abrash, Thomas Mathew and Michael Morgan

**Councilors:**

Bob de Groot and Eleanor Siebert

**Alternate Councilors:**

Veronica Jaramillo and Armando Rivera

We want to thank those members who were willing to serve as candidates in this election. It's not too early to start thinking about nominating a candidate for our next cohort of section leaders. Get involved!





## Insights Into IP Law

**Keith Orso\***, Irell & Manella LLP  
KOrso@irell.com

The Patent Statute states that “[a] person shall be entitled to a patent unless— (1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.” Previous editions of this column have addressed what constitutes a patent or printed publication, and have discussed the effective filing date (generally, the earliest application in which the claimed invention is described). This column begins to address the “public use” category of prior art.

It seems intuitive that publicly using an invention before filing a patent application would render the subject matter of the invention “prior art” in the public’s possession—at least to the extent the invention is exposed to public view during such use. But what if the invention is a small element concealed, by its nature, in a larger article? Is use of a concealed invention a “public use” under the Patent Statute?

In the mid-1800s, Samuel Barnes designed an improved “corset steel,” used to stiffen a woman’s corset, after overhearing two women complain that their corset steels kept breaking. Barnes later presented one of the women with a pair of the new corset steels that he had made. The woman wore these corset steels for a long time. When the corset in which the steels were used wore out, the woman ripped open the corset, removed the steels, and put the steels in a new corset. This occurred several times. Barnes did not place any restrictions on the woman’s use of the corset steels, and did not file a patent application on his corset steels, which he called “corset springs,” until eleven years after the woman first put his invention into use.

A patent infringement lawsuit was filed and the defendant alleged invalidity based on public use. The case went all the way to the Supreme Court, which ruled that there had been a public use even though the corset steels were concealed in an undergarment when they were used. The Court noted that some inventions are by their very characters only capable of being used where they cannot be seen or observed by the public eye. “An invention may consist of a lever or spring, hidden in the running gear of a watch, or of a ratchet, shaft, or cog-wheel covered from view in the recesses of a machine for spinning or weaving.” Nevertheless, the Court stated, if an inventor allows his or her invention to be used by another, without restriction of any kind, the use is a public one. This result may seem counterintuitive, but it is consistent with the the patent law policy of encouraging inventors to file their patent applications quickly.

\* The author earned engineering and chemical engineering undergraduate and graduate degrees, and is a patent attorney and partner at the law firm of Irell & Manella LLP. This column does not constitute legal advice and does not necessarily reflect the views of the firm or its clients.



## **This Month in Chemical History**

Harold Goldwhite, California State University,  
Los Angeles  
hgoldwh@calstatela.edu

In a recent column I mentioned my recent purchase of a textbook, "Kane's Chemistry edited by Draper" published in 1845. I also described the careers of these two eminent mid-19<sup>th</sup>. century scientists. In this column I will begin the examination of chemistry in 1845 as described in the 700 pages of small print in this comprehensive text. But first a little context. Putting ourselves into the mid-19<sup>th</sup>. century we recall that it is only 40 years since Dalton proposed his new idea of the chemical atom with its important property of mass. It is also about the same time since Avogadro proposed his hypothesis. While Dalton's ideas permeate this text Avogadro is not mentioned. It would be about another 20 years, after Cannizzaro's masterly exposition of the use of Avogadro's hypothesis in assigning atomic weights at the Karlsruhe conference of 1860, before chemists began to pay attention to these novel ideas.

The arrangement of Kane's "Chemistry" will seem unusual to those of us used to current introductory general chemistry books. After 2 pages on the origin and objects of chemistry (rather short shrift to this chemical historian!) the initial chapter is on gravity and cohesive forces and includes a discussion of crystals and crystallization. Chapter II is on "the properties of light as characterizing chemical substances" and includes a discussion of polarized light. The text comes down firmly on the theory of light being the vibrations of an exceedingly attenuated medium, the luminiferous ether. In view of Draper's later work in photography it is interesting that the text discusses briefly the way in which light can decompose certain classes of chemical substances including the salts of silver, gold, platinum, and mercury.

Chapter III is on "Heat Considered as Characterizing Chemical Substances" and is entirely about physical changes associated with heat including expansion; specific heat; liquefaction ; vaporization; and conduction. This chapter includes a discussion of infrared radiation (though not named as such) as a form of heat including the observation that infrared radiation exhibits double refraction in some crystals, just like visible light. Chapter IV on "Electricity Considered as Characterizing Chemical Substances" covers static and current electricity including galvanic batteries and their  
*(Continued on Page 9)*

## This Month in Chemical History

*(Continued from Page 8)*

construction. Other than copper plating there is no discussion of electrochemistry in this chapter! Humphrey Davy's work on the isolation of the alkali metals is mentioned later in the discussion of the metals themselves. I must quote, in fairness, some of the closing sentences of this chapter. "To the chemist, therefore, the most useful property of electricity is the power which it possesses of modifying, annulling, or superseding chemical affinity.....the question whether electrical influence and affinity are identical, or what are their exact relations,.....still remain."

Chapter V is the inevitable description of chemical nomenclature. The table of elements included in this chapter has 55 entries; the period following the discovery of electrochemistry saw a rapid expansion in the discovery of new elements. Beryllium is still called glucinum (symbol G) at this time. The authors credit Lavoisier and Guyton (but fail to add Berthollet and Fourcroy; all 4 were the authors of the "New Method of Chemical Nomenclature") for reforming nomenclature into the basis of the system we use today in inorganic chemistry. They also discuss the name of oxygen, mistakenly given to the element by Lavoisier who believed that all acids contain oxygen, which means acid-former. Citing the work of Davy who showed that "oxymuriatic acid" contains no oxygen they embrace the new name of hydrochloric acid as more correct.

I plan to conclude my discussion of this most interesting glance at mid-19<sup>th</sup>. century chemistry in a future column.



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## San Gorgonio Section

### Chair's Message



October will be a busy month for chemists in our section. We will recognize our seasoned chemists at our Senior Chemistry Meeting on October 20 at Eddie's Italian Eatery in Claremont. They will share their interesting stories through almost 90 years. It will be a great opportunity for young chemists to learn from and interact with them. The National Chemistry Week this year from October 21 to 27 will feature a theme of "Chemistry is out of this World". Several events will be organized in our section. If you are a chemistry club officer, please feel free to contact us for support. You can also check [www.acs.org/ncm](http://www.acs.org/ncm) to plan, participate, and get involved.

The biggest event in our region will be the ACS Nano Western Regional Meeting on October 27 at Caltech. It will include fantastic technical programs, intertwined with poster sessions and networking opportunities with people from many chemical related fields. The day will end with an award gala and banquet. Please make sure to register prior to October 5 to get the early bird rate.

The major events for the rest of year are summarized below:

- Senior Chemistry Meeting, October 20 at Eddie's Italian Eatery in Claremont
- National Chemistry Week, October 21-27
- ACS Nano Western Regional Meeting, October 27 at Caltech
- Annual Section Meeting, late November or early December

Please follow our social media sites for updates.

- LinkedIn Group: <https://www.linkedin.com/groups/13509132>
- Facebook Page: <https://www.facebook.com/SGSACS/>
- Facebook Group: <https://www.facebook.com/groups/306580863196707/>

If you have any ideas or would like to volunteer in our section, please feel to contact me (cell: 515-306-6855, email: [bruce@acbscitech.com](mailto:bruce@acbscitech.com)).

-Bruce Liu, Chair

## **San Gorgonio Section**

### **San Gorgonio Section October Luncheon Meeting Saturday, October 20, 2018**

#### **Recognition of 50-, 60-, 70-, and 75-Year ACS Members and College and University Chemistry Clubs**

##### **Eddie's Italian Eatery**

1065 W. Foothill Blvd.  
Claremont, CA 91711

Check-in and Social: 11:00 -11:30 am

Luncheon: 11:30 am -12:30 pm

Program: 12:30 – 2:00 pm

This gathering showcases American Chemical Society members with the longest and shortest tenures in the ACS. The San Gorgonio Section (SGS) currently has over sixty chemists with fifty or more years of ACS membership. As in the past, ACS and SGS have recognized members who have reached exactly the 50- and 60-year milestones and this year ACS is adding recognition for those who have reached 70 and more years. Please join us in celebrating these remarkable accomplishments and hearing their ACS Stories!

##### **50 Year Members**

Mr. David Flamberg  
Mrs. Sue Magic  
Dr. Michael Mark Midland  
Dr. Chan S. Oh  
Dr. Shaik Abdul Qader

##### **60 Year Members**

Dr. Peter Blickensderfer  
Dr. James Espenson  
Dr. Robert C. Neuman, Jr.  
Dr. Julian Roberts  
Dr. Jerome Schultz

##### **75 Year Members**

Dr. Frank Lambert  
Dr. Leland Lutz  
Mr. John William Mohlman

#### **COLLEGE and UNIVERSITY CHEMISTRY CLUBS**

At the other end of the spectrum, many newer members of ACS have taken advantage of undergraduate and graduate student programs, sometimes through Student ACS clubs. We have invited representatives from the San Gorgonio Section's college and university Chemistry Clubs to share their activities. Please help us welcome our newer members! (Continued on Page12)

## San Gorgonio Section

### 50/60/70/75 Year Member Recognition (Continued from Page 11)

There is over 700 years of chemical experience and information in the above list of honorees ! Our event will emphasize a Speed Mentoring/ Networking activity for all senior chemists (50+), younger chemists (35 years or younger) , and all in between. There will be plenty of great food and beverages at very reasonable prices made possible by the SGS and an anonymous donation by a SGS member. Make your reservations early because space is limited.

**Lunch:** Served family style. Salad, platters of Chicken Parmigiana, Spaghetti Marinara (with/without meat sauce), a variety of one topping pizzas, and housemade bread. Dessert (Spumoni/vanilla ice cream), coffee, iced tea, soda and water are included. Wine and beer are available for purchase.

**Cost and Reservations:** The cost (meal, tax and tip) is \$15.00 members, \$20.00 non-members, \$10 seniors and retirees, \$5 students, FREE for ACS members receiving their 50- thru-75-year certificates. Cash or checks only please, at the door. Please make your reservations no later than **Tuesday, October 16 by 12:00 noon** by contacting Ernie Simpson (jesimpson@cpp.edu or 909 762-9169). Include your contact information (phone number and email address) and names of persons attending. Please be certain to honor your reservation.

**Directions:** Eddie's Italian Eatery is located in the NE quadrant of the intersection of Foothill Blvd. and Towne Ave in Claremont easily accessed from the I-10 or the 210 freeways (Towne Exit). Parking is free in the adjacent Stater Bros lot. See [www.eddieseatery.com](http://www.eddieseatery.com) for more info or call (909) 398-1985.

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**PERIODICAL**

**Bi-Section Chemists' Calendar**

For more information on these events, please check our website at  
[www.scalacs.org](http://www.scalacs.org)

**October**

- 20 SG Senior Chemistry Meeting at Eddies Italian Eatery—see page 12  
27 **Nano Western Regional Meeting at Caltech hosted by SC and  
CALPACS—see page 5**  
21-27 National Chemistry Week Theme: "Chemistry is Out of This  
World!"

**November**

- 3 SC High School Teacher's Meeting at Occidental College—  
see page 4