



**ACS**  
Chemistry for Life™

***SCALACS***

**October 2019**

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

## **Southern California Section**

**Science Café Seminars  
Los Angeles City College  
Saturday, October 26, 2019  
See Page 3**

**Franco-American Leadership Tour  
Monday, October 28, 2019  
See Page 6**

**Congratulations to ACS Award Winners:  
Michael Morgan, James Bryant Conant Award  
Dennis Dougherty, Arthur C. Cope Award  
Sarah Reisman, Elias J. Corey Award  
See Page 5**

## **San Gorgonio Section**

**San Gorgonio Section National Chemistry Week Events  
Cal Baptist Celebrates NCW  
Saturday, October 26, 2019  
See Page 12**

**Mt. San Antonio College Family Science Festival  
November 2, 2019  
See Page 13**



**In stock in Gardena, CA**



**Spectrum has your lab covered**

- Chemicals
- Laboratory Equipment & Supplies
- Glassware & Plasticware
- Gloves & More!

**spectrum®**  
CHEMICAL MFG CORP  
Trusted Since 1971

800.772.8786  
SpectrumChemical.com

in f



**ACS**  
Chemistry for Life™

**SCALACS**

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

Volume LXXIV

October 2019

Number 6

**SOUTHERN CALIFORNIA  
SECTION 2019 OFFICERS**

**Chair:** Krishna Kallury  
**Chair Elect:** Brian Brady  
**Secretary/Treasurer:** Barbara Belmont  
**Councilors:** Brian Brady, Robert de Groot, Virgil Lee, Sofia Pappatheodorou, Eleanor Siebert, Barbara Sitzman

**SAN GORGONIO SECTION  
2019 OFFICERS**

**Chair:** Ernie Simpson  
**Chair-Elect:** Ralph Riggin  
**Secretary:** David Srullevitch  
**Treasurer:** Dennis Pederson  
**Councilors:** Eileen DiMauro, Ernie Simpson

**TABLE OF CONTENTS**

So. Cal. Chair's Message	2
So. Cal. Meetings & Information	3-7
This Month in Chemical History	8-9
Insights Into IP Law	10
S. G. Chair's Message	11
S. G. Meeting Notices	12-13
Index to Advertisers	12
Chemists' Calendar	bc

SCALACS (ISSN) 0044-7595 is published monthly March through May, September and October; and Bi-monthly January/February and November/December along with a special ballot issue once a year. Published by the Southern California Section of the American Chemical Society at 14934 South Figueroa Street, Gardena CA 90248. Subscription price is \$12.00/year. Make checks payable to Southern California Section, ACS. Second Class postage paid at Gardena, CA 90247, email: office@scalacs.org.

ADVERTISERS: Advertising rates on application. Mail COPY, CONTRACTS and CHECKS to Southern California Section, ACS, 14934 South Figueroa Street, Gardena, CA 90248.

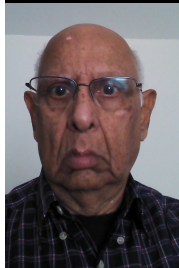
CONTRIBUTORS: Send all copy to Editor, SCALACS, 14934 South Figueroa Street, Gardena, CA 90248, email: editor@scalacs.org.

POSTMASTER: Send change of address to SCALACS, 14934 South Figueroa Street, Gardena, CA 90248.

**Website address: [www.scalacs.org](http://www.scalacs.org)**

# Southern California Section

## Chair's Message



Hello Fellow Members of the SCALACS

Our SCALACS Executive Committee elections are around the corner. Look for your ballot in your email soon. The deadline to return your ballot is October 31. Hope each of you will participate in the same and also offer suggestions for enhancing the quality of our service to the community at large. We will be looking forward to your continued support and participation in the planned events.

Included in our October Newsletter is a notification relating to Science Café seminars celebrating the 150<sup>th</sup> anniversary of the discovery of the periodic table of elements. This event is made possible through a Science Café Mini Grant from the ACS National Awards Committee. The details regarding the venue, date and times are on Page 3. We also have a Franco-American Leadership Tour Speaker coming to Pasadena City College on October 28th.

A few days ago, I got in touch with Shelley Geehr, Director, Roy Eddleman Institute, an Outreach Arm of the Science History Institute, Philadelphia. The Eddleman Institute is the operational home of the museum, public programming, marketing, communications, and online publication entitled ***Distillations***. Staff members work with their colleagues across the organization to create exhibitions, public programs, videos, and other materials that use our research and collections to reveal the role science and technology have played in shaping our world. Shelley has kindly offered to collaborate with our SCALACS in future in organizing events relating to the History of Science.

Krishna Kallury, Chair ,  
([kkallury@socal.rr.com](mailto:kkallury@socal.rr.com))

# **Southern California Section**

## **Science Café Seminars**

**Saturday, October 26, 2019**

**Los Angeles City College**

Room Chem 3

855 N. Vermont Avenue

Los Angeles, CA 90029

### **Seminar 1**

**10:00 am -11:00 am**

**Beyond Oil and Gas: The Methanol Economy<sup>R</sup>  
(Focusing on Carbon)**

**Prof. G. K. Surya Prakash**

**Loker Hydrocarbon Research Institute, USC**

### **Seminar 2**

**11:00 am—12:00 noon**

**Did Mendeleev Drink Tap Water?**

**Paul A. Rochelle, Ph.D.**

**Metropolitan Water District of Southern California**

**Lunch: Free Pizza 12:00 noon to 1:00 pm**

#### **Seminar 1: Prof. G. K. Surya Prakash**

**Abstract:** Methanol, a liquid at ambient temperature, is preferable to low volumetric energy density hydrogen gas for energy storage and transportation. It is also an excellent drop in fuel for internal combustion (gasoline) and auto-ignition (diesel) engines. It is an excellent fuel for direct oxidation fuel cells. Dimethyl ether (DME) derived from methanol is a high cetane diesel substitute and also could replace liquefied natural gas (LNG) and liquefied petroleum gas (LPG). Methanol is a convenient feedstock to produce ethylene and propylene that can be converted to synthetic petrochemical products. Chemical recycling of excess carbon dioxide formed from human activities, natural and industrial sources, or even from the air can be converted to methanol via capture followed by reductive conversion with hydrogen. Any available energy source (preferably alternative energies such as solar, wind, geothermal, atomic, etc.) can provide the needed energy for generating hydrogen. Direct electrochemical reduction of CO<sub>2</sub> is also possible. Methanol, presently produced from fossil fuel-based syngas (mixture of CO and H<sub>2</sub>), can also be made by direct oxidative conversion of natural gas or other methane sources. Even coal and biomass can be converted to  
*(Continued on Page 4)*

## Southern California Section

### Prof. G. K. Surya Prakash Abstract (Continued from Page 3)

methanol through syngas. The Methanol Economy concept that was jointly developed with the late Nobel Laureate colleague, George A. Olah, is expected to solve the energy and material problems of the world in the long run and at the same time address the issue of global warming due to increased CO<sub>2</sub> emissions by excessive fossil fuel use by efficient “Carbon Neutral Energy Cycles.” If carbon is the problem, carbon has to be the solution!

#### Seminar 2: Paul A. Rochelle, Ph.D.

**Abstract:** Mendeleev was born in a small village close to the Tobol and Irtysh Rivers in Siberia. These rivers are the lifeblood of a vast region, serving the transport, economic, and drinking water needs of millions of people. They are impacted by industrialization, pollution, diversion, damming for hydroelectric power, and a changing climate that alters rainfall patterns. These same stressors have and continue to impact major rivers in the western United States. But state and federal regulations, and water industry practices in the U.S. provide protection for sources of drinking water, ensure adequate treatment to remove contaminants, and prepare for future threats to the quality of drinking water.

Mendeleev published his first periodic table in 1869 and many of the issues that occupy water quality professionals today are represented by elements that appeared on that first table- calcium, carbon, chlorine, lead, manganese, oxygen, and even uranium. Coincidentally, 1869 also marked the birth of Mary Mallon, later to be known as “Typhoid Mary”. The microbe she carried, *Salmonella typhi*, was responsible for thousands of deaths from contaminated drinking water prior to the introduction of routine disinfection with chlorine- Group VII on Mendeleev’s 1871 version of his periodic table.

This presentation will review the links between a variety of chemical elements and the quality of drinking water, the impacts of elements and their compounds on source waters, and speculate on the water that Mendeleev was probably drinking.

**Biographies:** Please see our website, [www.scalacs.org/](http://www.scalacs.org/) for full biographies and titles for each of our speakers.

**RSVP:** This event and the pizza are free but we do need a head count for pizza. Please RSVP by October 24th to Nancy in the Section Office at [office@scalacs.org](mailto:office@scalacs.org).

**Directions:** Please park in Lot 4 off of Heliotrope Drive. A campus map and directions can be found at <https://www.lacitycollege.edu/About-LACC/Campus-Maps-Parking/Campus-Map>.

## Southern California Section

### **Congratulations to the Southern California Section ACS 2020 National Award Winners**

**Michael A. Morgan**

Francisco Bravo Medical Magnet High School

**James Bryant Conant Award in  
High School Chemistry Teaching**

**Dennis A. Dougherty**

California Institute of Technology

**Arthur C. Cope Award**

**Sarah E. Reisman**

California Institute of Technology

**Elias J. Corey Award for Outstanding Original Contribution in  
Organic Synthesis by a  
Young Investigator**

### **SCALACS Election**

The Southern California Section ballot is being handled by Vote-Now. You will be receiving an email from them with your ballot by October 1st. Please take the time to cast your vote for 2020 Executive Committee members. Here are the candidates:

**Chair:** Thomas Mathew, Ph.D.

**Secretary/Treasurer:** Barbara Belmont

**Members-at-Large:** Alexandra Aloia

Derek Marin

Edye Udell

Rama Viswanathan

**Councilors:** Veronica Jaramillo

Krishna Kallury

Sofia Pappatheodorou

Barbara Sitzman

Chandrashekhar Sonwane

## **Southern California Section**

### **Franco American Leadership Tour**

**October 28, 2019**

### **Porous Silicon, A Biodegradable Semiconductor for Nanomedicine**

**Frédérique Cunin**

Institut Charles Gerhardt Montpellier

**Pasadena City College  
E Building, Room E 220**

1570 E. Colorado Blvd.  
Pasadena, CA 91106

6:00 pm Pizza and soft drinks

7:00 pm Lecture

The Franco-American Lectureship Prize is a joint endeavor between ACS and the French Chemical Society (SCF), awarded on a rotating basis to an American or French chemist. This year, the French recipient was selected by the ACS Committee on International Activities, with the SCF selecting an American chemist next year. As part of her prize, Cunin is conducting a lecture tour at ACS local sections and universities in the U.S. We invite you to join us for pizza followed by this interesting lecture.

**Abstract:** The application of nanotechnologies into medicine promises to offer solutions when applied to health challenges such as cancer. In particular the development of local therapies will reduce side effects associated with systemic administration of chemotherapy drugs, and will allow preservation or limited resection of organs with small size tumors. Local therapy is also indicated to overcome the intrinsic biological resistance of certain incurable malignancies, leading to failure of conventional treatment approaches. Our research projects aim to develop biodegradable multifunctional anti-cancer materials based on mesoporous silicon to be used for the local treatment of cancer. Porous silicon nanostructures are bioresorbable in vivo. In addition they can be excited by near infrared excitation light offering possibilities for phototherapies, and for light triggered treatment. The development of photoactive porous silicon nanostructures functionalized with organic ligands for applications in imaging, drug delivery and photo-activated therapies, as well as for tissue engineering will be presented.

(Continued on Page 7)



## Southern California Section

### Franco American Leadership Tour (Continued from 6)

**Biography:** Frédérique Cunin, Ph.D., is the winner of the 2019 Franco-American Lectureship Prize. The prize honors chemists and chemical engineers who have contributed significantly to research cooperation between the United States and France.

Cunin is a materials science researcher at the Institut Charles Gerhardt Montpellier in Montpellier, France, where she focuses on the development and fundamental properties of porous silicon particles. In particular, her research has applications in nanomedicine, targeted anti-cancer therapies, gene-based therapies and tissue engineering. Cunin has long-established ties to the U.S. research community, including spending time as a postdoctoral researcher in the laboratory of Michael Sailor, Ph.D. of the University of California, San Diego. She has worked extensively to build bridges between French and American chemistry practitioners and has served as an organizer for several cross-cultural research conferences. Notably, Cunin served as a co-principal investigator on a joint National Science Foundation/Centre national de la recherche scientifique grant, Materials World Network: Cooperative Activity in Materials Research Between US Investigators and their Counterparts Abroad.

**Directions and Parking:** Please see the campus map for directions and parking information: <https://pasadena.edu/about/campus-maps.php>.

**RSVP:** This event and the pizza are free but we do need a head count for pizza. Please RSVP by October 24th to Nancy in the Section Office at [office@scalacs.org](mailto:office@scalacs.org).

### Save the Date!

#### High School Teachers Meeting at Occidental College Saturday, November 9, 2019

The Southern California Sections of the ACS is once again proud to host the annual "Update for High School Chemistry Teachers Conference" at Occidental College on November 9th 2019. We are now asking for teachers to submit proposals for talks ranging from 10 minutes to 45 minutes. No formal abstracts are needed. Please contact Michael Morgan at [mmorgan@lausd.net](mailto:mmorgan@lausd.net) for further details.

The registration page will be up and running soon. The cost is \$30 for teachers and \$5 for inservice teachers including lunch. The deadline for registration will be October 31, 2019. Please watch our website, [www.scalacs.org](http://www.scalacs.org) for the registration information.



## **This Month in Chemical History**

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

You must have noticed that this year our community is celebrating the 150<sup>th</sup>. anniversary of the publication of Mendeleev's version of the periodic table, that most iconic of all symbols of chemistry. (I have a tea-towel version, on fine linen, prominently displayed in my home.) There have been many excellent short articles about the genesis and history of the Table this year, and my UCLA colleague, Eric Scerri, has written a superb book on the topic: "The Periodic Table: Its Story and Its Significance", 2006. Surprisingly one of the best articles on the subject published this year that I have read appeared in the March 2<sup>nd</sup>. 2019 issue of "The Economist" in the Science and Technology Section. The uncredited 4 page article, entitled "The periodic table: The heart of the matter" is adorned with a long-form Table; a copy in Russian of Mendeleev's original table: a splendid portrait of Mendeleev with a sly reference to the immortal song of Tom Lehrer (There's antimony, arsenic, aluminum, selenium ...); and a pictorial rendering of s, p, d, and f orbitals!

The article starts with Lavoisier who, in his 1789 textbook of chemistry, published the first comprehensive list of chemical substances. The fact that this list included caloric (heat) and light does not diminish its significance. Following a mention of Proust's view of constancy of composition and Dalton's atomic theory reinforced and symbolized by Berzelius, the proliferation of new elements in the early 19<sup>th</sup>. Century, due in large measure to electrochemistry, almost demanded some way of organizing this profusion. Dobereiner in 1829 noted some remarkable numerical relationships among chemically similar elements like sulfur, selenium, and tellurium; or chlorine, bromine, and iodine. And in 1864 poor John Newlands, an English analytical chemist, almost invented the periodic table with his Law of Octaves (similar chemistry periodically for every eighth element). Poor, because he was scorned and ridiculed by his chemical colleagues and for a while withdrew from the fray. Many years later the Royal Society honored both Mendeleev and Newlands simultaneously with the award of medals.

And so to Mendeleev. Surprisingly, for this is on the whole a really good review of the history of the table, there is no mention in it, or in a number of other articles I have read this year, of the virtually simultaneous  
*(Continued on Page 9)*

## This Month in Chemical History

*(Continued from Page 8)*

inventor of the Table, Lothar Meyer. Mendeleev and Meyer have some striking similarities in their careers. Both young chemists worked in Bunsen's laboratory, one of the foremost research laboratories in the world. Both attended the Karlsruhe Congress of 1860, the first international gathering of chemists. Both apparently heard Cannizzarro's lecture on how to rationalize atomic weights by adhering to Avogadro's Law – something Cannizzarro developed as he planned his own chemistry teaching. Both returned to teaching positions determined to find a logical way to organize their presentations on the chemistry of the elements. Mendeleev published first, while at the same time Meyer shared his Table with only a few colleagues and published subsequently. So often fame depends on getting there first! Meyer's publications had some unique features, for example an illustration of periodicity in some physical properties of the elements, such as atomic volume.

Over the decades the Periodic Table has faced challenges and prevailed. For many years Mendeleev refused to believe in the existence of the inert gases, He, Ne etc., now called the noble gases after the initial discovery of the chemistry of xenon, because there was apparently no place for them in "his" Table. After Ramsay fleshed out the group with the remaining noble gases a new Group was created for them at the right-hand edge of the Table. The lanthanides, and later the actinides, pose a purely logistical problem to this day. Many publications of modern tables simply append these families at the foot of the table (the short form) with an indicator of their true position. Others prefer the long form and that is the one reproduced in this article. Mendeleev's brilliant and bold predictions of the existence and properties of yet undiscovered elements including germanium and gallium helped acceptance of the Periodic Table. Chemistry textbooks of the 1880s include the Table as an expected part of the curriculum and use it, as both Mendeleev and Meyer had hoped, as a unifying device for teaching the chemistry of the elements.

**American Research and Testing Inc.**

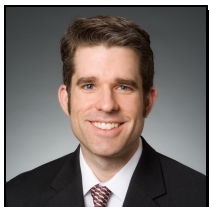
### ***Problem Solving Experts***

Chemical consulting and investigation for failure analysis,  
quality issues, competitive analysis, and litigation support

Rita R. Boggs, Ph.D.  
CEO

Barbara Belmont, M.S.  
President

800.538.1655 [www.americanresearch.com](http://www.americanresearch.com)



## Insights Into IP Law

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

According to the Patent Statute, a person generally “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 explored prior art patents and printed publications, and more recently, prior art public uses. This edition begins to explore the “on sale” category of prior art.

In the early 1800s, the Supreme Court of the United States heard a case involving a patent directed to an improvement in the art of making leather tubes or hose for conveying air, water, and other fluids. The accused infringer prevailed at a jury trial and the patent owner appealed. The issue on appeal was whether the trial court correctly instructed the jury on the law, which at the time stated that a patent could not be granted on subject matter “known or used before the [patent] application.”

The Supreme Court ruled that “known or used” should be interpreted to mean “known or used *by the public*,” including by virtue of commercial sales. Citing the constitutional underpinnings of the United States patent system and the quid pro quo of requiring innovators to disclose their inventions to the public in exchange for the limited monopolies conferred by patents, the Court wrote: “If an inventor should be permitted to hold back from the knowledge of the public the secrets of his invention; if he should for a long period of years retain the monopoly, and make, and sell his invention publicly, and thus gather the whole profits of it, relying upon his superior skill and knowledge of the structure; and then, and then only, when the danger of competition should force him to secure the exclusive right, he should be allowed to take out a patent, and thus exclude the public from any farther use than what should be derived under it during his fourteen years; it would materially retard the progress of science and the useful arts, and give a premium to those who should be least prompt to communicate their discoveries.”

In other words, if inventors were allowed to sell their inventions for a long period of time and later secure patent protection only after others threatened to compete, then they could delay disclosing their inventions to the public and effectively extend the terms of their exclusivities by obtaining later-expiring patents, robbing the public of its right to know about and use the inventions sooner. But how long is too long to be selling an invention before patenting it? The next edition of this column will explore that question.

\* 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.

## San Gorgonio Section



### Celebrating the Section's 70<sup>th</sup> Anniversary

On August 10<sup>th</sup> the ACS San Gorgonio Local Section held a family picnic at the Big Bear Discovery Center as part of the 70<sup>th</sup> anniversary celebration. Approximately 40 people attended this event on a sunny, mildly warm day in the mountains with great views of Big Bear Lake and the San Gorgonio Mountains beyond.

Attendees included two sons and other family members of the founding Section Chair, Dr. Francis Gunther of the Citrus Experimental Station in Riverside (now part of University of California, Riverside). We very much appreciated their attendance.

After lunch the program included three speaker presentations. Eileen DiMauro, Councilor of the San Gorgonio Section, gave an information-filled presentation on the origins of the local section, the role of the citrus industry in its founding, and the notable collaborations between local academic institutions and industry. These collaborations led to very important technical advances, such as creation of the pH meter which was developed by Dr. Arnold Beckman at California Institute of Technology in collaboration with the citrus industry.

Walter Roth from the San Gorgonio Wilderness Association, presented an illustrated history of the region from the time of the early Native American inhabitants, the Spanish settlements, the gold rush and its aftermath, up to the region's current status as a protected area within the San Bernardino National Forest. He also described the topography, vegetation, and climate of the region as well as how these aspects have been impacted by human activity over time.

Dr. Doug Yule, Professor of Geological Sciences at California State University at Northridge, presented a detailed description of the geology of the region and the unique positioning of San Gorgonio Pass relative to the San Andreas and other associated fault lines. Much of the discussion was based on his own group's research in determining the nature and timing of seismic events in this area. The talk was well-illustrated using various contour maps and included a discussion of the methodologies used to date seismic events occurring thousands to millions of years ago.

*(Continued on Page 13)*

## San Gorgonio Section



#NCW

www.acs.org/ncw

## San Gorgonio Section National Chemistry Week Events

### Cal Baptist Celebrates National Chemistry Week!

**Saturday, October 26, 2019**

**10:00 am—2:00 pm**

### Cal Baptist University

8432 Magnolia Ave, Riverside, CA 92504

Campus Front Lawn (on Magnolia Ave.)

Free hands-on science activities and demonstrations for the entire family.

For more information contact Dr. Jenifer N. Nalbandian, Assistant Professor of Chemistry, [jnalbandian@calbaptist.edu](mailto:jnalbandian@calbaptist.edu). For parking Information, please see: <https://calbaptist.edu/about/map-directions>.

Sponsored by CBU Chemical Sciences Department, CBU Chemistry Club, CBU ACS Student Chapter, and ACS San Gorgonio Local Section

### INDEX TO ADVERTISERS

American Research & Testing\_\_\_\_\_9

Spectrum Chemical\_\_\_\_\_ifc

**Let our advertisers know you saw their ad in SCALACS!**

## **San Gorgonio Section**

**Mt. San Antonio College Family Science Festival**  
**Saturday, November 2, 2019**  
**10:00 am to 1:00 pm**

**Mt. San Antonio College, Natural Science Complex**  
1100 N. Grand Avenue  
Walnut, CA 91789

Free science activities, games and crafts for children & adults. Hands-on experiments and chemistry demonstrations for all ages.

For parking information, see <https://www.mtsac.edu/maps/>

For more information contact Jenny Leung; [jleung@mtsac.edu](mailto:jleung@mtsac.edu) .

Sponsored by Mt. SAC Chemistry Department and ACS San Gorgonio Local Section.

### **Chair's Message (Continued from Page 11)**

All three presentations were outstanding as evidenced by the lively audience participation following the presentations. The section very much appreciates the speakers' willingness to participate and provide such an outstanding scientific program.

At the conclusion of the meeting a few hardy souls, including Dr. Dennis Pedersen, treasurer of the section and Dr. Jenifer Nalbandian from California Baptist University, hiked the nearby Cougar Crest Trail to the Pacific Crest Trail, a hike of approximately 5 miles with 900 feet elevation gain. This hike provided great views of the Big Bear Lake and the San Gorgonio Mountains.

The section very much appreciates the contributions of all the participants and encourages participation in a variety of future gatherings to celebrate our 70<sup>th</sup> anniversary as a local section of the ACS.

Ernie Simpson, Chair  
Ralph Riggan, Chair-Elect

**SOUTHERN CALIFORNIA SECTION  
AMERICAN CHEMICAL SOCIETY**

14934 S. FIGUEROA STREET  
GARDENA, CA 90248

***IMPORTANT  
Do Not Delay!***

Contains Dated Meeting Announcement

**PERIODICAL**

**Bi-Section Chemists' Calendar**

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

**October**

- 26 SC Science Café Seminars at LACC—see page 3
- 26 SG Cal. Baptist Celebrates NCW—see page 12
- 28 Franco-American Leadership Tour Speaker Frederique Cunin—see page 6
- 20-26 National Chemistry Week—The Chemistry of Metals

**November**

- 2 SG Mt. SAC Family Science Festival—see page 13
- 9 High School Chemistry Teachers Meeting at Occidental College—see page 7

Check our websites for activities:  
[www.scalacs.org](http://www.scalacs.org)  
[www.sangorgonio.sites.acs.org](http://www.sangorgonio.sites.acs.org)