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SCALACS

October 2017

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

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October 28, 2017
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SCALACS

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

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Southern California Section

Chair's Message



Hello SCALACS Family! I hope you are enjoying Southern California's Fall weather, while preparing to celebrate National Chemistry Week... **"Chemistry Rocks!"**



As part of our year-long celebration of Chemistry Rocks, we had a great hike on August 27 at the LACCD Gold Creek Natural Reserve hosted by Dr. Rob West, Geologist at East LA College. Now we are getting ready to celebrate the National Chemistry Week theme of Chemistry Rocks! During the week of October 22nd to the 28th. Henry Abrash will be at the California Science Center the weekend of October 28-29 with volunteers to do NCW activities. In addition, through a collaboration between the ACS Student Chapters at Pasadena City College and East LA College, we will be developing and coordinating activities to engage all ages at both campuses! Please visit the SCALCS website, www.scalacs.org, for information on these activities.

In September we celebrated our members with 50, 60 70 and 75 years of membership. We had the opportunity to celebrate many of you who have reached this milestone at the Doheny Mansion on the campus of Mount Saint Mary's University. During the celebration, four Project SEED students joined us and presented their summer research projects. Much thanks goes to Frank Gomez from CSULA for organizing Project SEED and the students' presentations! Once again, I want to congratulate all of you who, in many ways, have served and continue to serve SCALACS!

I want to close this month's note by hoping all your families, friends, and colleagues in academia, laboratories, and the many places that chemistry reaches are well. From devastating earthquakes in Mexico, hurricanes in the U.S., Caribbean and Puerto Rico, to wild fires here in Southern California, the power of science and chemistry will be there to help in unison with the good will of humankind!

Happy National Chemistry Week... !

Armando and Bob

Southern California Section

2017 Occidental College High School Chemistry Teachers Meeting

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

October 28, 2017

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:

**Ben Ku, Paul Groves, Caroline Morgan, Michael Morgan,
Rebecca Poliner, Hamid Saadzoï, Evan Thomson, 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.

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. The registration form is available on our website, www.scalacs.org. Questions about the program or to volunteer to give a presentation, contact Michael A. Morgan (Program Chair) at mmorgan@lausd.net.

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

Southern California Section



NATIONAL CHEMISTRY WEEK (NCW)

CHEMISTRY ROCKS!

OCTOBER 22-28, 2017

Outreach and National Chemistry Week Activities

The 2017 NCW theme is: Chemistry Rocks!

Saturday, October 28 and Sunday, October 29, 2017: 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.

ACS Student Chapters at Pasadena City College and East LA College will collaborate on NCW events on both campuses. See our website, www.scalacs.org for more information.

Letter to the Editor

I recently became aware of Dr. Richard Keys passing away (SCALACS latest issue September 2017). I can not tell you how much the news saddened me. It felt as a part of my life disappearing. I remember as a young adult (20 years old, 1977) joining Professor Keys laboratory under a NSF grant to conduct experiments with Arsenic radicals and EPR analysis. A wonderful experience with a sense of freedom to learn and communicate with outstanding educators such as Professor Keys and Professor Harold Goldwhite. It always has been a source of pride, and emotionally I never lost touch with the work, Professor Richard Keys and Professor Harold Goldwhite. Men of the caliber of Professor Keys are hard to find always, his memory will linger, and he will never will be forgotten.

Dr. Ivan A. Gargurevich
San Gorgonio Section

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.** Note that signed documents that have been scanned are acceptable.

The deadline for nominations is **November 15th, 2017**. Please feel free to contact Michael Morgan of the Educational Affairs Committee at mmorgan@lausd.net if you have any questions.

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Insights Into IP Law

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

Last month, this column explored whether a poster displayed at a scientific conference might qualify as “printed publication” prior art against which the subject matter of a patent claim could be compared in order to determine whether that subject matter is patentable. In patent law, “printed publications” are generally documents that have been disseminated or otherwise made publicly available to the extent that persons interested and ordinarily skilled in the subject matter of the art, exercising reasonable diligence, can locate them. This generally includes documents such as journal articles, books, user manuals, specification sheets, etc. And, as discussed last month, it can include a poster displayed at a scientific conference.

While on the topic of scientific conferences, suppose a researcher who is exploring microscopic beads suitable for culturing mammalian cells prepares a paper but delivers it **orally** at a meeting of the First International Cell Culture Congress. The researcher does not use slides. The meeting is attended by 50 to 500 cell culturists. The oral presentation is unaccompanied by any disclaimer or notice to the audience prohibiting note-taking. Would the presentation be a printed publication?

One court has indicated that without question, the answer would be “no.” Indeed, there is nothing “printed” to point to, even under a liberal interpretation of “printed.” But what if before delivering the paper orally, the same researcher provided a copy of the paper to the head of the conference, and distributed copies of the paper after the meeting, upon request, to six people without any restrictions? Is a copy of the paper that was presented orally a printed publication?

In a case with similar facts, one court has answered “yes” because between 50 and 500 people interested in the subject matter were actually told of the existence of the paper, and were informed of its contents via the oral presentation. Moreover, the document itself was actually disseminated thereafter without restriction to half a dozen people.

Did the composition of the audience at the meeting matter? What if the paper was delivered orally to a group of people who were not particularly interested or skilled in the subject matter (assuming they would stick around long enough to actually listen)? In that case, the paper likely would not qualify as a “printed publication.” A printed publication must have been publicly available to persons interested and ordinarily skilled in the art. Tune in next time for further examples of potential printed publications.

* 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

I have begun a series of columns about distinguished chemists who happened to be female. I am drawing on the resources in "Women in Chemistry and Physics: A Biobibliographic Sourcebook", L.S.Grinstein, R.K.Rose, and M.H. Rafailovich, eds. Greenwood Press, 1993. My subject for this column is Pauline Beery Mack. Pauline Beery was born in Missouri in December 1891. Her career entitles her to many descriptors: chemist; teacher; nutritionist; editor; administrator; etc.

She did her undergraduate work at Missouri State University where she had her first taste of research. She majored in chemistry and minored in biology for her A.B. For 6 years after graduating she was a high school science teacher and chair of science at several Missouri high schools. She resumed research at Columbia University earning an A.M. in 1919. She then taught chemistry at Pennsylvania State University for 15 years. She met Warren Mack, a horticulturist and printmaker, and they married in 1923. While at Penn State Mack began actively to promote science education for youngsters. She founded a new science magazine, Chemistry Leaflet, for that audience in 1927 and edited it for 17 years. She also authored a laboratory manual for general chemistry and an article supporting the use of the Journal of Chemical Education in the classroom. Meanwhile she earned a Ph.D. in 1932 from Penn State for work on effects of radiation on bone formation and growth. She began to direct graduate students in topics ranging from human nutrition to fabric treatments. This led to the founding of an institute: Pennsylvania Mass Studies in Human Nutrition, which she directed for the next 17 years. At its start the institute had only a few people involved in its studies; by 1950 its personnel numbered over 60.

At the institute some of her most significant early researches were in bone development and bone density in human subjects. She set up a study involving 100 families in each of two different environments: one urban, and one rural. The measurements on the family members were made in part by X-ray studies (known at the time as roentgengrams). Her group also monitored diets of the two groups and hemoglobin levels. In 1942 she and her colleagues, concerned about appropriate nutrition in wartime, published a widely distributed pamphlet "Family Nutrition", which included discussions of balanced diets, the dietary values of foods, and fitness.

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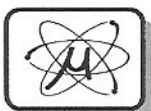
This Month in Chemical History

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In 1949 Mack and her colleagues finally described a standardized method of measuring bone density in humans based on simultaneous X-ray measurements of a calibrated standard and human bone in situ. This work brought her to the attention of NASA in Houston, which was becoming interested in the process of demineralization of astronaut's bones during prolonged space missions. Mack's first studies were on the crew of Gemini IV and were controlled by studies of healthy young people on bed rest for the same period as the Gemini crew. Both groups lost bone mass, but the astronaut's loss was greater. Mack began to develop diets that might be appropriate for astronauts in space, testing her work on macaws. She also developed exercise regimes that could slow muscle atrophy in space.

Back at the institute she continued a program on fabrics, testing various methods of stain removal; the fading of dyes; effects of both laundering and dry-cleaning; and new metal oxide finishes.

Mack's career was marked by many advancements and honors. In 1962 she joined the faculty of Texas Woman's University in Denton as Dean of the College of Household Arts and Science, and Director of the university's Research Institute. In 1970 she was the first woman to receive a "Silver Snoopy" from the American Astronauts. She was recognized by the Distinguished Daughters of Pennsylvania by their most prestigious medal; she was awarded a number of honorary degrees; and in 1950 the ACS awarded her the Garvan Medal for her work on calcium chemistry in bone development. Pauline Beery Mack died in Texas in 1974. She was truly an exceptional scientist.



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San Gorgonio Section

Chair's Message



The arrival of October is signaled by cooler temperatures (thank goodness) and annual events in the San Bernardino area, apple harvest and apple pie in Oak Glen, and the Oktoberfest in Big Bear. For the San Gorgonio Section October means our annual luncheon recognizing many of our senior Section members and events tied to National Chemistry Week. This year we have chosen to expand our senior chemist recognition to add 55-, 65-, 70-, and 75-year members. The luncheon will be held on Saturday, October 21 at Eddie's Italian Eatery in Claremont. Specific details are found on page 11. A key feature of the luncheon will be a Speed Mentoring/Networking session, providing the opportunity for additional sharing between our senior and younger chemists. I would like to thank the ACS Senior Chemists Committee for a mini-grant to help us provide a very reasonably priced meal.

On Saturday, November 4, the annual Family Science Festival will be held at Mt. San Antonio College. Again this year it will be a combined celebration of National Chemistry Week and Mole Day. Among the many activities will be a demonstration of the interactions between minerals and various light sources, an activity particularly relevant to this year's "Chemistry Rocks!" theme. The day will be a wonderful opportunity for both children and adults to see and experience the fantastic world of chemistry. See the complete announcement on page 12 for details

It's election time again for the Section and nominations are open for the positions of Chair-elect, Treasurer, Councilor, and Alternate Councilor. In addition, many other opportunities are available for you to become involved. Two of these are the Chemistry Olympiad and Project SEED. From my own experience I can tell you that these are some of the very rewarding ways we have to foster and encourage high school students to consider a chemistry-related career. Feel free to contact me (dennis.pederson@gmail.com or 909 886-2196) if you are interested in being nominated for any of the positions or would like to be involved in other ways. Even if you feel that you can only offer a few hours of your time during the year I would enjoy hearing from you and discussing the various possibilities.

I would like to close this month with some additional teaching reflections. I recall the multiple times I would use Lewis structures to describe the bonding in chemical compounds and Lewis acid-base (Continued on Page 13)

San Gorgonio Section

San Gorgonio Section October Luncheon Meeting Saturday, October 21, 2017

Recognition of 50-, 55-, 60-, 65-, 70-, and 75-Year ACS Members, 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 years. On a trial basis this year, SGS is planning to recognize our members who are within two years of reaching 55-, 65-, and 75 years of membership. Please join us in celebrating these remarkable accomplishments!

50 Year Members

Mr. John Gute
Dr. Judy Okamura
Dr. William Van Willis

55 Year Members

Dr. Fred Abramson
Dr. Nancy Adin
Dr. Peter Blickensderfer
Mr. Donald Chambers
Mr. Mark Cliath
Dr. Vasu Dev
Dr. James Espenson
Dr. Edward Faeder
Dr. Walter Farmer
Mr. Sam Haywood
Mr. Myung K. Hong
Dr. Mitsuru Kubota
Dr. George Lessard
Dr. Paul Levy

55 Year Members (cont.)

Mr. Don Long
Dr. Ted McKinney
Mr. Earl Miner
Dr. Dennis Nelson
Dr. William Okamura
Dr. Robert Pinnell
Ms. Joan Pleasants
Dr. Julian Roberts
Dr. Jerome Schultz
Dr. James Sims
Dr. Gerald Van Hecke
Mr. Jamil Wakim
Dr. John Watson
Dr. Joseoh Wilczynski
Dr. Kuen Yen

60 Year Members

Dr. Alfred Celiano
Dr. Leland Y. Wilson

65 Year Members

Dr. Freeman Allen
Dr. James Hammond
Dr. Albert Leo
Dr. David Roller
Dr. Hartland Schmidt

70 Year Members

Mr. Alfred L. Andersen
Dr. Charles White

75 Year Members

Dr. Frank Lambert
Mr. J.W. Mohlman
Dr. Leland Lutz

(Continued on Page 11)

San Gorgonio Section

Member Recognition Luncheon (Continued from Page 10)

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!

There is over 3000 years of chemical experience and information in the above list of honorees! Our event will culminate in 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 a mini-grant received from the ACS Senior Chemists Committee. 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. Desert (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 at the door. Please make your reservations no later than **Tuesday, October 17 by 12:00 noon** by contacting Ernie Simpson (jesimpson@cpc.edu or 909 762-9169). Include your contact information (phone and email) 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 Avenue 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 or call (909) 398-1985.

San Gorgonio Section



NATIONAL CHEMISTRY WEEK (NCW)

CHEMISTRY ROCKS!

OCTOBER 22-28, 2017

The Mount San Antonio College Chemistry Department

Invites you to

A Family Science Festival

Celebrating

National Chemistry Week

Theme: "Chemistry Rocks!"

Saturday, November 4, 2017

10:00 a.m.—2:00 p.m.

Science Activities, games and crafts for children and adults.
Hands-on experiments and Chemistry demonstrations

Where: Mount San Antonio College

Natural Science Complex (Bldg. 7, 60, 61)

1100 N. Grand Avenue

Walnut, CA 91789

For directions and map, visit: <http://www.mtsac.edu/about/location.html>

Cost: FREE Public Event

Parking: Park in Lot D. Purchase a daily permit (\$4) from the dispenser

Questions: Contact Eileen DiMauro, edimauro@mtsac.edu or 909-274-4471

Sponsors: Mt. Sac Chemistry Department Chemistry Club,
Association of Pre-Pharmacy Learners and Educators (APPLE)
Club, San Gorgonio Section of the American Chemical Society

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Chair's Message (Continued from Page 9)

theory to expand the field of acids. For me the latter was especially useful to explain the important roles played by transition metal ions in biological reactions. In graduate school I took a Chemical Thermodynamics course and the text used was by Lewis and Randall. All of this points to the profound effects G. N. Lewis, born in October, 1875, had on chemistry. Although he was nominated 41 times, he never won the Nobel Prize in Chemistry, an oversight apparently due to chemistry politics.

Now enjoy October, have a slice of apple pie, perhaps quaff a beer, and celebrate Chemistry.

Dennis Pederson, Chair

**SOUTHERN CALIFORNIA SECTION
AMERICAN CHEMICAL SOCIETY**

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***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

October

- 21 SG 50, 55, 60, 65 and 70 Year Member Luncheon—see page 10
22-28 National Chemistry Week—2017 Theme: "Chemistry Rocks!"
28-29 SC NCW Activities at the California Science Center—see page 4
28 SC High School Chemistry Teachers Meeting at Occidental
College—see page 3

November

- 4 SG Family Science Festival at Mt. San Antonio Community
College—see page 12