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September 2011

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

**Southern California Section Luncheon
Honoring our 50, 60 and 70 Year Members
With a Special Presentation by Our
Project SEED Students
At Stevens Steakhouse**

Saturday, September 24, 2011

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**San Gorgonio Section
Science Café**

**The Art of Craft Beer
Brewing**

**Speaker: Kevin Wright
Head Brewer, Hangar 24
Craft Brewery**

Wednesday, September 21, 2011

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Southern California Section



Chair's Message

SCALACS welcomes you back and hopes that you had an enjoyable summer. "I was working all summer!" you say? So were we—it's only this newsletter that took a vacation. Members of our section were busy planning the Western Regional Meeting coming to Pasadena November 10-12. Please visit wrmacs.org and check back periodically for updates.

At least the school-aged kids had a summer vacation? Not Joe Tung of Gretchen A. Whitney High School in Cerritos, CA. On July 18th he was in Ankara, Turkey winning a GOLD MEDAL for the U.S. team at the 43rd International Chemistry Olympiad. You can read more about that later in this issue, but here I want to congratulate all the science teachers at Whitney High, especially Paul Bender. WHS was the top overall school of the 39 high schools participating in our local competition last spring. Is it a coincidence that Joe came from that school? No one can reach great heights on their own. Is your local high school participating in this? Why not?

Joe and the other International Olympiad participants weren't the only high school kids who sacrificed their halcyon days of summer in exchange for a transformative experience. Four high school students were busy doing laboratory research under the auspices of Project SEED, and this month they will present their work at a not-to-be missed poster session in conjunction with the 50/60/70 year members luncheon. I was blown away by the poise, the knowledge, the eloquence, and the enthusiasm of last year's students, and look forward to what this year will bring. Congratulations to Prof. Frank Gomez, of Cal State LA, who volunteers his time to coordinate this program. And many thanks go to the Avery Dennison Foundation whose generous donation (matched by ACS) made this possible.

All of this is one of the brighter facets of "Better living through chemistry." With the active participation of individuals and institutions, our local section becomes an arena in which our powers to improve lives are multiplied in unified action. As more people participate in these local enterprises, the greater will be the positive influence we have on our neighbors, our community, and ourselves. There is plenty of room for growth in both of these programs. All it takes is time and money—and if you have the passion, you will find the time.

Finally, ACS has a way of recognizing folks who have been doing this for years. Please join me in welcoming Professors Eleanor Siebert and Joan Valentine to the distinguished ranks of the ACS Fellows for "outstanding achievements in and contributions to Science, the Profession, and the Society."

What will you do on your next summer vacation?

- Joe Khoury, Chair
JKhoury@lacs.org

Southern California Section

September Luncheon Meeting

**Honoring our 50, 60 and 70 Year Members
With a Special Presentation by
Our Project SEED Students**

on

Saturday, September 24, 2011

at

Stevens Steakhouse

5332 Stevens Place

Los Angeles, CA 90040

11:30 a.m. Check-in and Student's Poster Session

12:30 p.m. Luncheon

We are celebrating our 50, 60 and 70 year members and having our Project SEED students present a poster of the research they completed this summer. Project SEED takes kids and puts them in a laboratory environment to provide them an opportunity to engage in an authentic research experience. We hope our veteran members will enjoy hearing about their research.

Our 50 year members are:

Kyle D. Bayes	Tom J. Maricich
Karl O. Christie	Sofia Papatheodorou
Dennis C. Gehri	Alan L. Peterofsky
Norbert A. Heinly	Leo Roos
Margaret Holzer	Stuart Salot
Bruce E. Kaplan	Kenneth L. Servis
T. Joseph Lin	

Our 60 Year Members are:

Norman Bilow	Frank J. Marasa
Barbara T. Coleberd	H. Leroy Nyquist
Stig Erlander	John H. Richards
Elvin Greene	Robert W. Sprague

Our 70 Year Members are:

Kenneth R. Evans	Howard Reiss
Henry Freiser	John D. Roberts
Ernest L. Neu	Burton Werbel
A. George Reifman	

(Continued on Page 4)

Southern California Section

50/60/70 Year Member Luncheon (Continued from Page 3)

The students who took part in our Project SEED Program this summer are Rodrigo Aguilar, Oscar Rendon-Perez, Catalina Verduzco, and Angel Yanes. There will be a poster session of their research prior to lunch.

Reservations: There is a choice of King Salmon or Prime Rib for luncheon. The cost of the luncheon is \$23 per person including tax, tip, and wine with luncheon; cash or check at the door. Please call Nancy Paradiso in the Section Office at 310 327-1216 or email office@scalacs.org by Monday, September 19, 2011 for reservations.

Directions: To access Google maps from their website, go to http://www.stevenssteakhouse.com/home/driving_directions. From the 5 Fwy. Northbound, exit Atlantic South. Make a right turn off exit. Stay in the middle lane and go under the bridge. Stay in the left lane and Stevens will be on your right. From the 5 Fwy. Southbound, exit Atlantic-Eastern Avenue. The restaurant is straight ahead off the exit. From the 710 Long Beach Fwy. North, exit Atlantic North. Continue north on Atlantic. Pass Washington Blvd., go 3 lights. The next street is Stevens Place. Turn right to Stevens. There is free parking in the rear of the building.

Congratulations to our ACS Fellows!

There are those special people, rare elements all, who are the epitome of our science and dedication to ACS. This year, two Southern California Section members and one San Geronio Section member were named as part of the ACS Fellows Program. We would like to congratulate:

Joan Valentine, University of California, Los Angeles
Cynthia K. Larive, University of California, Riverside

and our esteemed Executive Committee colleague:

Eleanor Siebert, Mount St. Mary's College

Congratulations to all on a fine achievement.

- Joe Khoury, Chair,
On behalf of the Executive Committee of the
Southern California Section

Southern California Section

Whitney High School Student Wins Gold in International Chemistry Olympiad

Joe Tung of Whitney High School in Cerritos and three US teammates all came home with medals from the International Chemistry Olympiad (IChO) in Ankara, Turkey in July.

A total of 273 students representing national teams from 70 countries gathered for the competition. Testing consisted of one day of laboratory work and a second day of written exams. Once judging was complete, gold medals were awarded to contestants who had the top 33 scores. Placing 24th in the overall ranking, Mr. Tung was also one of three students selected to give welcome addresses at the IChO opening ceremonies.

Joe Tung tied for first place in this year's local competition, in which 1346 students representing 32 high schools in Los Angeles County took the local exam. The National Olympiad Exam was given to the 17 top Los Angeles students in April. From the approximately 940 students that competed in the National Exam, 20 won places at the US team training camp in Colorado Springs. Four finalists and two alternates were selected from that group.

This is Mr. Tung's second trip to the international event – last year he was one of two alternates at the IChO competition in Tokyo and this year marked his third time attending the US finalists' training camp in Colorado Springs. Timothy Lee of Arcadia High School was also a US competition finalist and attended the training camp in Colorado in June. Dr. Gerald Delker of SCALACS, U.S. Chemistry Olympiad organizer for the Southern California Section, invites any teacher or student who would like to participate in next year's competition to contact him at Delker@earthlink.net, or for more information go to www.scalacs.org.



From left: **Tayyab Shah, Elmer Tan, Joe Tung, and Konstantin Borisov**
(Cecelia Hernandez, C&E News)

Southern California Section



Celebrating 100 Years of Outstanding Chemistry in Southern California!

43rd Western Regional Meeting

November 10-12, 2011

Pasadena Westin Hotel, Pasadena, CA

Sponsored by the Southern California Section

www.wrmacs.org

Legacy of Arnold Beckman Symposium (Thursday evening)

Our celebration of Arnold Beckman's lasting impact on chemistry begins on the Caltech campus near the Beckman pH Meter National Chemical Historic Landmark. With generous support from the Arnold and Mabel Beckman Foundation, WRM2011 and Caltech's Beckman Institute invite you to a complimentary reception and buffet, followed by a historical overview by Gerald Gallwas and a report on the latest progress toward personalized medicine by Leroy Hood (Inst. Systems Biology)

Technical Program and Special Events (Thursday afternoon through Saturday)

- Symposia and technical sessions will span all areas of chemistry, ranging from protein structures, to novel materials, atmospheric chemistry of several planets including our own, and retrospectives on the remarkable achievements of Southern California chemists since 1911.
- Plenary lectures by David Tirrell (Caltech) and Mark Thompson (USC)
- Undergraduate Program including career advising, research posters and a graduate school fair
- Symposium on computational chemistry led by Kendall Houk, 2010 Cope Award Recipient

SCALACS Centennial Banquet (Friday Evening)

Help celebrate the Southern California Section's first one hundred years. A panel of distinguished scientists will share their experiences of people, projects and institutions in the region involved in ground-breaking science and technology.

Saturday Program

- Teaching chemistry at the elementary through college/university level
- "So You Want to Start a Company?"
- Intellectual property and business law workshops (continuing legal ed credit for attorneys)
- Vendor workshops
- Survey of NSF-sponsored undergraduate research programs

(Continued on Page 7)

Southern California Section

Western Regional Meeting (Continued from Page 6)

***Make your plans now—a meeting like this comes
once a century!***

www.wrmacs.org

Early registration ends October 21:

(<http://www.xpressreg.net/eReg/?ShowCode=RDWE111>),

Hotel reservations: <http://www.starwoodmeeting.com/Book/ACSMMeeting2011>
(group rates available through October 14)

Please visit the PACS website (<http://abstracts.acs.org>)
for online abstract submissions through September 12, 2011.

Exhibitors/Workshop Presenters:

<http://www.wrmacs.org/exhibitors&workshops.html>

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<http://www.wrmacs.org/sponsorship.html>

- Chris Brazier and Bob de Groot,
Co-chairs of the 2011 Western Regional Meeting



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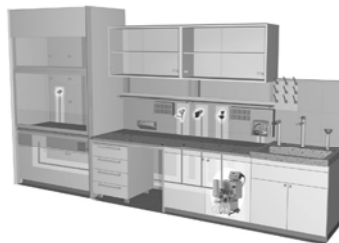
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Southern California Section

Section History Project Part Four: Recent Years (1981-2001)

The flower children of the late 60's and early 70's mature for the job market of the early 1980's, just in time for a recession, chemical manufacturing migration out of California, and multiple job terminations. Nevertheless, the marvelous "This Month in Chemical History" debuts in 1982. In that same year, the Section resurrects the Undergraduate Research Conference in Chemistry and Biochemistry from years gone by. SCALACS, previously a collaboration of the Orange County, San Geronio, and Southern California Sections, becomes solely supported by the Southern California Section in 1983, due to financial constraints of the other two sections. By the mid-1980's, the Southern California Section has used up most of its savings to support the cost of program and SCALACS overexpenditure, and is considered by National ACS to be a "section in trouble."

During the introspection of the resulting austerity, section leadership realizes that it has been blessed with devoted volunteers, and decides to create an Award for Distinguished Service to the Section. The Whittier earthquake demolishes the Calstate LA chemistry lab in 1987, days before the Section kicks off its first ever National Chemistry Day Celebration. The following year, the first Award for Distinguished Service is given to Agnes Ann Green in 1988, the year the National ACS Convention is hosted by Southern California. That same year, UCLA's Donald Cram is awarded the Nobel Prize in chemistry.

Southern Californians finally realize that they need a better public transportation system (like the one forsaken back in 1960), and Los Angeles opens the Blue Line, the first leg of a network of light rail public transportation, in 1990. As commuters get used to the possibilities of transportation mode change, the Southern California Section undergoes a big change that results in a relocation of the Section Office, an entry into the computer age, and fiscal recovery. The 1990's are tumultuous and socially twisted times in Los Angeles with a series of major earthquakes interspersed with the Rodney King riots, the consolidation/migration of the aerospace industry, the conviction of the Menendez brothers, the acquittal of OJ (so he can search for the real killer), and the strongest El Nino season of record. In 1996, the California Los Padres Section forms from the part of the Southern California Section that encompasses Ventura County north through Central California. Despite the social and structural upheaval, it is a decade of pride for the chemists of Southern California: our own Rudy Marcus, George Olah, Paul Boyer, and Ahmed Zewail are recipients of the Nobel Prize in Chemistry in 1992, 1994, 1997, and 1999, respectively.

Although scientists are currently one of LA's most important products (and assets), Southern California ACS industrial chemists work for very small businesses; they are often one of few or the only chemist. Although many chemists earn their living in conventional chemistry jobs, the manufacturing-unfriendly regulatory environment pushes chemists to the realm of service, consulting, and entrepreneurship (not much different than where this story started). The entrepreneurial chemistry of the new millennium involves green catalysis, biotechnology or nanotechnology.

Los Angeles now enjoys the cleanest air since monitoring started, thanks to stringent emissions regulations, and Southern Californians still love their cars.



This Month in Chemical History

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

In this column I continue discussing the booklet by Jon Eklund of the Department of Science and Technology of the Smithsonian Institution published by the Smithsonian Institution Press in 1975 and titled "The Incomplete Chymist: Being an Essay on the Eighteenth Century Chemist in his Laboratory, with a Dictionary of Obsolete Chemical Terms of the Period". The texts of the time pay much attention to fire and furnaces, the main experimental tools of chemists of the period. At least two furnaces of different sizes were recommended, and for gentle heating the water bath was used. This is called *balneo mariae* in Latin – compare the modern French term *bain marie* – named after the (mythical?) female alchemist Maria the Jewess, often identified as Miriam, the sister of Moses.

Temperatures could by now be measured with some reproducibility thanks to thermometers modeled after those of Daniel Fahrenheit (1686 – 1736). But vessels in which to heat materials under investigation posed challenges. Soft glass was fragile and subject to breakage by thermal shock – and it was expensive in large sizes. There are obvious drawbacks to other materials used for flasks and beakers including metals (reactive), and earthenware (porous and fragile) . So glass was the material of choice for all its drawbacks, and vessels of many different shapes and sizes are illustrated in eighteenth century texts. Some of the most complex and attractive are those designed for distillation, particularly the alembic and pelican. There was, of course, no rubber tubing to connect vessels. They had to be fitted glass to glass and sealed with a material called a lute and there were about as many formulations of lutes as there were chemists! Some were made of strips of cloth soaked in flour paste. Somewhat stronger were strips of animal bladders soaked in water. Clays were also used as lutes though they could dry out and crack after a long exposure to heat. And then there were alchemical-sounding exotics such as "soft cheese, Lime, and Rye flower".

Distillation, mentioned above, and crystallization were widely applied to purification of products, and the techniques are those with which we are familiar. Filters might be made of cheesecloth or, if finer particles were to be separated, of unsized commercial paper.

The second part of Eklund's title promises "a Dictionary of Obsolete Chemical Terms of the Period" and I cannot resist closing with some examples that will help my readers in their struggles with eighteenth century chemical texts. The reform of chemical nomenclature was still in the future, at the end of the eighteenth century, and trivial names held sway.

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This Month in Chemical History

(Continued from Page 9)

ACID AIR: hydrogen chloride gas
ACID OF AMBER: succinic acid
ACID OF APPLES: malic acid
ACID OF BARBERRY: malic acid (are you confused yet?)
ACID OF MILK: lactic acid
ACID OF SORREL: oxalic acid
ACID OF SUGAR: oxalic acid (oh, well!)
ALEXIPHARMIC: remedy or preservative against poison
BERTHOLLET'S SALT: potassium chlorate (which was used in a disastrous trial by Berthollet and Lavoisier to replace potassium nitrate in gunpowder; several workers were killed in the explosion, but Bertlollet and M. and Mme. Lavoisier escaped unhurt.)
BUTTER OF ARSENIC: arsenic trichloride
CAUSTIC PONDEROUS EARTH: hydrated barium hydroxide
HORN SILVER: fused silver chloride
MARTIAL BALLS: a mixture of iron filings and potassium hydrogen tartrate
Etc.

We have to thank De Morveau, Berthollet, Lavoisier and Fourcroy for their publication at the end of the eighteenth century that reformed chemical nomenclature along lines that we still follow.

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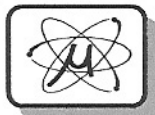
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San Gorgonio Section

Chair's Message



A Request for Help

The San Gorgonio Executive Board is finalizing plans for the rest of this year and proposing meetings and activities for next year. We have found that we need a little help and some input from San Gorgonio Section members. Here is my email address: edimauro@mtsac.edu. Please email me if you are able to help with the following requests:

Want to make a difference in someone's life? We are in need of Project SEED mentors! One of the ACS programs that the San Gorgonio Section has proudly sponsored for the last several years is Project SEED. Several of the high school students who participated in our program are currently in college.

For those of you who are unfamiliar with Project SEED, here is a synopsis from the ACS website, "Project SEED was established in 1968 to help economically disadvantaged high school students expand their education and career outlook. The program provides opportunities for students who historically lack exposure to scientific careers to spend a summer conducting hands-on research with a scientist in academic, industry, and government research laboratories."

High school juniors and seniors are given an opportunity to spend 8 to 10 weeks during the summer working on a project in a research laboratory with a mentor. In order to continue this program, we are in dire need of professionals who can mentor a student. For more information on the Project SEED program, please go to http://portal.acs.org/portal/PublicWebSite/education/students/highschool/seed/CTP_005070 . If you have space in your laboratory and in your heart, please email me.

The other issue we need help with is should the San Gorgonio Section establish subsections?

The San Gorgonio Section covers a very large geographic area – from the eastern end of Los Angeles County to the Nevada border. This makes it very challenging to schedule meetings and offer activities that all members can participate in. We would like to explore the option of establishing subsections, possibly in the Temecula and/or Palm Springs area. We will be asking members to take part in a survey to determine the interest in establishing subsections. If you are interested in helping with the process of establishing a subsection, please email.

- Eileen DiMauro, 2011 Chair

San Geronio Section



**September Meeting: Science Cafe
The Art of Craft Beer Brewing
Wednesday, September 21, 2011**

Hangar 24 Craft Brewery
1710 Sessums Drive
Redlands, CA 92374

Speaker: Kevin Wright
Head Brewer, Hangar 24 Craft Brewery

6:00 pm: Check In
6:15 – 7:00 pm: Beer tasting and food
(sub sandwiches, and beer snacks)
7:00 pm: Presentation by Head Brewer Kevin Wright
7:30 pm: Tour of the Brewery

The Science Café is an informal meeting where a scientific topic of general interest is presented and the public at large is invited to join us. To this end the talk will be geared for the general public with discussion encouraged.

Abstract: The Hangar 24 Craft Brewery made available its first brew in 2008. Since then it has established a reputation for quality and distinctive beers. The hallmark of craft beer and craft brewers is innovation. Craft brewers interpret historic styles with unique twists and develop new styles that have no precedent. Hangar 24 stays true to this tradition with a selection of unusual year-round offerings coupled with seasonal and other special brews. Some of the year-round offerings are Orange Wheat, Alt-Bier, and Chocolate Porter, and some of the special brews are Polycot, Tart Belgian Blond, and Belgian Pale Ale. We will have the opportunity to taste several of the beers (restricted to those 21 years old or older) as well as to learn more about the brewing process from the Head Brewer. We will also have the opportunity to tour the brewery.

Cost and Reservations: The cost will be \$10 (includes the beer tasting) or \$5 (food only). Reservations must be received no later than Wednesday, September 14 and can be made by contacting either Dennis Pederson (909-537-5477, dpedersn@csusb.edu) or Eileen DiMauro (phone 909-594-5611 ext 4533, edimauro@mtsac.edu). There will be a limit of 40 persons so you should make your reservation early.

Directions: From the west, take Interstate 10 to the University Exit. Turn left (north) onto University Street, go under the freeway, and proceed about one mile to Lugonia Ave. Turn right, go about one-half mile to Judson Street, turn left, and proceed about 3/4 mile to Sessums Drive. Turn right and proceed about 3/4 mile. The Brewery will be the right. From the east, take the Cypress Avenue exit, turn left at the bottom of the ramp, take the second right onto University Street, and proceed as described above.

**SOUTHERN CALIFORNIA SECTION
AMERICAN CHEMICAL SOCIETY**

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***IMPORTANT
Do Not Delay!***

Contains Dated Meeting Announcement

PERIODICAL

Bi-Section Chemists' Calendar

September

- 21 SG Science Café "The Art of Craft Beer Brewing" - see page 12
24 SC Luncheon Meeting honoring our 50/60/70 Year Members—
see page 3

November

- 10-12 SC hosting the 43rd Western Regional Meeting at the Westin
Hotel, Pasadena—see page 6

***Make your plans now—a meeting like this comes once a
century!***

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