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SCALACS

January/February 2014

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



**Section Meeting
Tour of the Los Angeles
Environmental Learning Center
at the Hyperion Treatment Plant**

January 31, 2014

12:30 pm

See Page 3

**Women Chemists Night Out!
Barney's Beanery, Pasadena
February 6, 2014**

See Page 5

San Gorgonio Section

**Dr. Ernie Simpson
"The Chemistry of Wine "
Friday, February 21, 2014
3:00 –5:00 pm**

See Page 12

**Ballot Issue
Don't forget to Vote!**

See Page 9

Ballot is on Page 11

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

Volume LXVII January/February 2014 Number 1

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Chair: Yumei Lin
Chair Elect: Veronica Jaramillo
Secretary/Treasurer: Barbara Belmont
Councilors: Rita Boggs, Bob de Groot, Tom LeBon, Virgil Lee, Eleanor Siebert, Barbara Sitzman

SAN GORGONIO SECTION 2013 OFFICERS

Chair: Eileen DiMauro
Chair-Elect:
Secretary: David Srulevitch
Treasurer: Dennis Pederson
Councilors: Jim Hammond, Ernie Simpson

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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

Southern California Section

Chair's Message



Happy New Year! I hope that you had a wonderful holiday season and spent joyful time with your family and friends.

I am excited to write my first Chair's message. I look forward having another busy and exciting year ahead of us. Last year we had many great programs and also accomplished so many things. We began with a dinner meeting in January with a presentation on patent law and ended our year with a high note to honor Bob de Groot as the Outreach Volunteer of the Year, Rita Boggs as the winner of Ann Nalley Award, Michael Morgan as the High School Teacher of the Year, and Barbara Belmont, Carlos Gutierrez, and Charles Knobler as the new ACS Fellows. We also had Ray Schmidt to give a presentation on "Understanding Scientific Realities and the Risks at the Policy/Politics and Public Interfaces" that stimulated a lot of great discussions. I would like to extend my personal thanks to my processor, Brian Brady, SCALACS committee members and many local volunteers. Because of their energy and devotion, we were able to accomplish so much last year.

Last year many students attended our programs. This year I would like to continue to focus on students, reach out to members and recruit new members. We will kick off our 2014 program with visiting the Los Angeles Environmental Learning Center at Hyperion Treatment Plant in Playa Del Rey (near LAX) on January 31. The Environmental Learning Center is operated by the City of Los Angeles Bureau of Sanitation and provides free tours to the public, especially students, to learn more about sustainable practices and management. I hope that I will see you there. We can discover how we can protect our Earth together! We also have two Women Chemists Committee events coming up. Please see page 5 for more information.

Another great event in this year is Intel ISEF (International Science and Engineering Fair) May 13-16. Intel ISEF is the world's largest international pre-college science fair. Many students will showcase and compete with their research projects. This is a great opportunity to meet and interact with so many bright future chemists. Currently, we are looking for volunteers like you to help out with this event. If you are interested, please let us know.

You will notice that we have a new column in SCALACS. Keith Orso is writing a column on IP Law. You will find it on Page 7.

I am thrilled to have this opportunity to serve you. I would like to hear from you. If you have any suggestion for our section events or like to help out with planning or volunteering your time, please do not hesitate to contact me.

- Yumei Lin, Chair
Yumei.lin@amway.com

Southern California Section

Section Meeting

Friday, January 31, 2014

Los Angeles Environmental Learning Center at the Hyperion Treatment Plant

1200 Vista Del Mar
Playa Del Rey, CA 90293

**Join us for a tour demonstrating and teaching
sustainable water resources management**

**Meet at 12:30 p.m.
Tour Begins at 1:00 p.m.**

The Los Angeles Environmental Learning Center at Hyperion Treatment Plant is a 20,000-square foot facility that features interpretive exhibits with an auditorium and learning lab classrooms for the general public. It is a free event! Please join us on **January 31 at 12:30 pm** to discover more about clean water and watershed protection and sustainable practices, For more information about the facility, please check http://eng.lacity.org/projects/laelc/la_elc.pdf.

Los Angeles Environmental Learning Center at Hyperion Treatment Plant is located in Playa Del Rey just south of LAX, immediately across from Dockweiler Beach. Take the 105 Freeway west. It ends and continues west as Imperial Hwy. Follow Imperial until it ends at Vista Del Mar. Turn left on Vista Del Mar and left again at next signal (Hyperion-Gate C). We will meet at the Visitors Center and then check in with the guard at Gate C. The Environmental Learning Center is just south of the entry gate. Due to limited number of parking spaces available, carpooling is encouraged. There is a maximum of 40 people attending so make your reservation today. **Please contact Nancy Paradiso at office@scalacs.org to reserve your space. It is a secure site, so we need the names of people attending by January 20th. Please be sure to wear closed toe shoes (tennis shoes are fine).**

Southern California Section

Election Results

Thanks to everyone who voted! The people who were chosen in the election follows. Their terms of office begin in January, 2014.

Chair-elect: Veronica Jaramillo

Secretary: Barbara Belmont

Members of the Executive Committee: Alexander Alschuler, April Jewell and Bruce Weiller

Councilors: Rita Boggs and Barbara Sitzman

Alternate Councilors: Sofia Papatheodorou

Congratulations to those who won the election and thanks to those others who were willing to be candidates. We hope that many more of our members will become involved with the Section in the near future. Please contact our Section Office (office@scalacs.org) to ask how you can participate.

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Southern California Section

Join the **Women Chemists Committee** for a night out on
February 5, 2014
7:00-9:00 p.m.
At Barney's Beanery
99 E. Colorado Boulevard
Pasadena, CA 91101

We have a room reserved with pool tables. Get to know your fellow women chemists. Join us for no host cocktails, bar-fare and great conversation!

Save the Date!
Women Chemists Committee Dinner Meeting
March 6th 2014
Brookside Golf Club

1133 Rosemont Avenue, Pasadena, CA 91103

“New Enzymes by Evolution: Expanding Genetically Encoded Chemistry”

Professor Frances Arnold
Division of Chemistry & Chemical Engineering
California Institute of Technology

More information in the March issue of SCALACS and on our website, www.scalacs.org

In Memoriam **MURRAY GELLER, 1934 - 2013**

Murray Geller, 79, passed away peacefully November 27, 2013, at St. Rose Hospital. "Mo," as he was affectionately known, was born in Brooklyn, N.Y. on April 26, 1934. He graduated magna cum laude with honors in mathematics and chemistry from Brooklyn College (where he was Phi Beta Kappa), and attended graduate school at Northwestern University, where he earned his Ph.D. in theoretical chemistry at age 24. Early in his career, Mo joined the staff of the Jet Propulsion Laboratory/Caltech in Pasadena, California. He remained at JPL doing research in theoretical chemistry, quantum mechanics, spectroscopy and mathematics for the remainder of his career, over 35 years. Mo will be remembered as a brilliant physicist, a lovable curmudgeon and a very dear, albeit eccentric, father, brother, husband and friend, and we will all sorely miss him.



Insights Into IP Law
Keith Orso*, Irell & Manella LLP
KOrso@irell.com

Can you patent a Pourbaix diagram, copyright a chemical, or trademark a titration curve? Do trade secret or trade dress laws cover such things? There exist several different legal mechanisms for protecting intellectual property, and they are not all interchangeable. It is important to understand the various mechanisms and what they apply to.

Patents come in three flavors: utility patents, design patents, and plant patents. **Utility patents** are most common. They are used to protect new and useful processes, machines, articles of manufacture, or compositions of matter, along with new and useful improvements to the same. **Design patents** protect new, original, and ornamental designs embodied in, or applied to, an article of manufacture. **Plant patents** generally protect new and distinct, asexually reproduced plants, including cultivated sports, mutants, hybrids, and newly found seedlings, but not tuber-propagated plants or plants found in an uncultivated state. So can you patent a Pourbaix diagram? No. A Pourbaix diagram itself does not fit within any of the categories of patent protection.

A Pourbaix diagram cannot be patented, but it is subject to copyright protection. **Copyright** protection subsists in original works of authorship fixed in any tangible medium of expression from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. This includes everything from literary works, pictures, sound recordings, and even pantomimes. Copyright covers both published and unpublished works, but does not extend to ideas, procedures, processes, systems, methods of operation, concepts, principles, or discoveries. Thus, you cannot copyright a chemical, but a depiction of the chemical's molecular structure, for example, is subject to copyright protection.

Trademark protection is reserved for words, symbols, phrases, and designs – alone or in combination – that are used to identify the source of a good or service, and to distinguish that good or service from the goods and services of others. Take Teflon®, for example. Many companies make polytetrafluoroethylene (PTFE), but the name Teflon® refers to PTFE made by DuPont. **Trade dress** is like trademark protection for aspects of the good itself, or its packaging. Trade dress cannot be functional (e.g., the utilitarian shape of an Erlenmeyer flask). A Pourbaix diagram or a titration curve could conceivably appear on packaging as trade dress, but it is difficult to see how a chemical itself could indicate the origin of goods (although its scent might).

(Continued on Page 8)



This Month in Chemical History

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

When I started teaching general chemistry many decades ago publishers often produced, along with the main text, a series of short monographs on particular subjects. A few that I still have on my campus bookshelves include Leonard Nash's "Stoichiometry" (1966); Glenn Seaborg's "Man-Made Transuranium Elements" (1963); William Jolly's "The Chemistry of the Non-Metals" (1966); and Gordon Barrow's "The Structure of Molecules"(1963). I was reminded of this when, browsing my home library bookshelves, I came across a slim volume in the Longmans, Green and Co. series "Text Books of Physical Chemistry", edited by the Nobel Laureate Sir William Ramsey, titled "The Theory of Valency" by J. Newton Friend D.Sc. (Birmingham); Ph.D. (Wurtzburg). My Second Edition was published in 1915, slightly revised from the 1908 First Edition.

The dates are significant and provide context. The electron was "discovered" by Thomson in 1897 and when Friend's first edition was published Lewis was sketching cubic octets of electrons in his notebook. Lewis doesn't warrant an entry in Friend's "Names" index. The Preface to Friend's First Edition notes that: "It seems rather remarkable that no treatise should be extant in our own language on such an important subject as valency" . I would echo that since the concept of valency, though couched in somewhat different language, derives from the work of the English organometallic chemist Frankland.

I haven't so far found out much about J. Newton Friend, who describes himself as a Carnegie Gold Medallist, and Headmaster of the Victoria Institute Science and Technical Schools, Worcester. Friend was awarded a Carnegie Research Fellowship in 1907 for work on the metallurgy of iron and steel. This research led to the medal award in 1912. He wrote a number of other textbooks including a multi-volume work on inorganic chemistry; the corrosion of iron and steel; the chemistry of linseed oil; domestic chemistry; and the chemistry of paints. In 1920 he became head of the Birmingham Municipal Technical School.

Friend's textbook on valency covers the history of chemical combination and of the periodic table. His chapter on carbon pays attention to the fairly recent work of Gomberg on the triphenylmethyl radicle (Friend's spelling) and the apparent trivalent character of carbon in this species. The Chapter on Group 0, the noble gases, summarizes the interesting early work on failed attempts to produce their compounds by vigorous reactions including electric discharges. A discussion on Group I concludes that since hydrogen is exclusively monovalent the formula for the compound KHF₂ must involve the atomic arrangement KFFH.

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This Month in Chemical History

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Friend outlines Werner's comparatively new ideas (1905) on valency in inorganic complexes involving what we now call oxidation states and coordination numbers, theories that work admirably in coordination chemistry, but leave something to be desired in the chemistry of ammonia.

In his final chapters Friend describes electrochemical theories beginning with Humphry Davy and Berzelius; moving through Helmholtz; to J.J.Thomson. He describes the complex way in which Thomson suggests that the corpuscles are arranged in atoms. Friend has his own theory of valency that includes three different types exhibited by various elements. It is interesting to read in this text how chemists and physicists of the early 20th. century are searching for theories that encompass the wide range of chemical combinations. Textbooks of this period make us aware of the ingenuity and imagination of our predecessors, qualities that we must endeavor to find in ourselves and inspire in our students.

Insights Into IP Law

(Continued from Page 6)

On the other hand, a Pourbaix diagram, a chemical, and a titration curve could each be a trade secret. **Trade secret** protection extends to information, including a formula, pattern, compilation, program, device, method, technique, or process that satisfies certain criteria. In California, the information must derive independent economic value, actual or potential, from not being generally known to the public or to people who can obtain economic value from its disclosure or use, and must be the subject of efforts to maintain its secrecy that are reasonable under the circumstances.

Future columns will focus on particular topics relating to these legal mechanisms for intellectual property protection. Please email me at korso@irell.com with any questions or issues that you would like to see addressed.

* The author earned engineering and chemical engineering degrees from Harvey Mudd College (undergraduate) and the University of Texas at Austin (graduate), before attending law school at UCLA. He is a registered patent attorney and a 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

Chair's Message

Hello San Gorgonio Section Members!

It's time for the annual election of officers. Printing and mailing the ballots has become a major expense. In an attempt to reduce this cost, the ballot will be available on the San Gorgonio Section website (<http://sangorgonio.sites.acs.org>) for those who wish to download it. We realize that many Section members will still prefer to have a paper ballot, so the biographical information and ballot are included in this Chair's message. You may either tear out the page or photocopy it. All ballots must be signed and mailed to the Section secretary, whether you use this one or you download a ballot from the website.

Ballot for local section officers for the San Gorgonio Section of the ACS for 2014.

Candidates are listed below with biographical information and a personal statement. Please check the box next to each candidate for whom you wish to vote, and return the ballot to the address listed on the bottom of the page no later than **January 18th, 2014**.

Chair-elect (one year term):

Eileen DiMauro has served as the Chair of the San Gorgonio Section for the past three years. She has a Bachelor's degree from UC Santa Barbara in Pharmacology and a Masters degree from UC Irvine in Biochemistry/Molecular Biology. She has been involved in the field of chemistry since 1976 - as a laboratory technician in the pharmaceutical industry for five years and then as a chemistry teacher. She has been a professor of chemistry at Mt. San Antonio College since 1984, including seven years as Department Chairperson. She is a 20-year member of ACS. As a member of the Executive board of the San Gorgonio Section, she will continue the tradition of providing local access to interesting programs, activities and events for anyone interested in chemistry.

Secretary (two year term):

David B. Srulevitch has been secretary of the San Gorgonio Section for the past four years. Academic record: BS (1972), MS (1975) in Chemistry from California State Polytechnic University, Pomona. PhD (1987) in Pharmaceutical Sciences from University of Southern California, School of Pharmacy.

Professional positions: Mt. San Antonio College, Chemistry Department, adjunct professor of chemistry, 2006 to present; California State University, Fullerton, Chemistry and Biochemistry Department, lecturer 2007 to present; DBST Consulting, Inc., pharmaceutical formulations consultant, 2005 to present; Truett Laboratories, Inc. vice-president, research and development/quality control, 1981-2004.

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San Gorgonio Section

BALLOT- 2014 San Gorgonio Section ACS Elections

2014 Chair-elect (vote for one)

- Eileen DiMauro
- Other

Secretary (vote for one)

- David B. Srulevitch
- Other

Councilor

- Ernie Simpson
- Other

Note: Treasurer Dennis Pederson, councilor James Hammond and alternate councilor Laurie Starkey will serve the remainder of their terms.

After making your selections please sign your ballot, place in an envelope, put on a stamp. Return your ballot to: **Dennis Pederson, 2939 N. Stoddard Ave. San Bernardino, CA 92405-3443.**

Signature:

Due Date: January 18th, 2014

San Gorgonio Section

Section Meeting

Dr. Ernie Simpson
“The Chemistry of Wine”
Friday, February 21, 2014
3:00 –5:00 pm

Collins College of Hospitality Management
Bldg # 79A, Wine Lecture Auditorium, Room # 1263
California State Polytechnic University, Pomona
3801 West Temple Avenue
Pomona, CA 91768-2557

See the San Gorgonio Section website (<http://sangorgonio.sites.acs.org>) for complete details and registration form

Dr. Simpson's lecture will include an overview of wine and wine making as well as detailed descriptions of the chemical composition of grapes and wine, laboratory methods for analysis of grapes and wines, sensory and organoleptic methods used for wine, the role of tannin and other phenolic compounds in wine and some potential health aspects of wine. Integrated with the talk will be wine samples to demonstrate the different components of wine and wine varieties. To illustrate how wine ages and to help celebrate the 65th anniversary of the San Gorgonio ACS Section and the 75th anniversary of Cal Poly Pomona, there will be special wines from six (6) "decades" available for tasting (extra fee) and an auction to raise money for the Dr. and Mrs. Simpson Collins College Scholarship.

Biography: Dr. Simpson joined the Chemistry Department at Cal Poly Pomona in 1968 after completing his BS, MS and Ph.D. (Organic Chemistry) at the University of New Mexico and spending one year as a visiting professor at Pomona College. In 1973/74 he was on leave as a visiting Research Associate in the Department of Enology and Viticulture at UC Davis. He is an active member of the American Society for Enology and Viticulture and has served on the editorial board of the society's journal. He has published a California Wine Guide. He is a member of the Society of Wine Educators and the American Wine Society. Dr. Simpson was named as an ACS Fellow in 2012 and in 2013 received the Provost's Award for Excellence in Service at Cal Poly Pomona.

Wine Tasting: All lecture attendees must be 21 years of age or older.
(Continued on Page 12)

San Gorgonio Section

Wine Tasting (Continued from Page 11)

Reservations: Strongly recommended as space is limited to the first 75 who register. Download registration form from San Gorgonio Section website. Reservations must be prepaid in cash or check and mailed to **Dr. J. Ernest Simpson; 226 Cucamonga Avenue; Claremont, CA 91711-5015.** Reservations must be received no later than February 14, 2014.

Cost: \$15.00 donation (proceeds to fund Simpson Collins College Scholarship). Special "Decades of Wines" will be available also for tasting and/or auction for additional donation(s) as will be explained on February 21st. Make checks payable to: Cal Poly Pomona Foundation. On the note line add: fund Simpson Collins College Scholarship.

Directions: From Interstate 10, take the Kellogg Drive exit. Heading south on Kellogg Drive, stay on the right lane and curve right onto University Drive. Stay on University Drive past 3 stop signs, then turn at the first left (Center Circle Road) up the hill to Kellogg West. **From I-57,** exit Temple Ave. Go north/west following Cal Poly signs past the lights at Valley Blvd. Turn right onto University Drive. Take the third right (Center Circle Road) up the hill to Kellogg West and the Collins College for Hospitality Management at the south end of the parking lot. A campus map can be found at www.kelloggwest.org, go to locations and points of interest and click on campus map.

Chair's Message (Continued from Page 9)

Councilor (three year term):

Ernie Simpson has served as San Gorgonio Councilor for the past three years and as Alternate Councilor before that. He was one of a few people who about five years ago stepped up their activity in the section and helped revive and get the section off the national ACS "section at risk" list. He serves on the ACS Local Section Activities Committee and has been an ACS Local Section Tour Speaker since 1988 on the "Chemistry of Wine". During his active teaching years at CPP (1968-2008) he taught organic chemistry, developed its industrial chemistry track, and headed up its highly successful Cooperative Education/paid internship program. He earned his BS, MS, and Ph.D. from the University of New Mexico in organic chemistry. He was named an ACS Fellow in 2012 and in 2013 received the Provost Award for Excellence in Service at Cal Poly Pomona.

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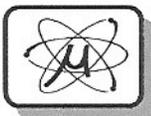
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Contains Dated Meeting Announcement

PERIODICAL

Bi-Section Chemists' Calendar

For more information on these events, please check our website at
www.scalacs.org

January

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Hyperion Treatment Plant—see page 3

February

- 6 SC Women Chemists Night Out, Barney's Beanery—see page 5
21 SG Meeting—"The Chemistry of Wine" with Dr. Ernie Simpson at
Cal. Poly. Pomona—see page 11

March

- 6 Save the date! Women Chemists Committee Dinner Meeting
featuring Prof. Frances Arnold at Brookside Country Club—see
page 5