



SCALACS

November/December 2014

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



**Southern California Section Meeting
Tour of Nutrilite Health Institute
Center for Optimal Health
Friday, November 14, 2014 at 1:00 p.m.**

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San Gorgonio Section

**Annual Meeting Celebrating 65 Years
Reflecting on the Past—Looking Forward to the
Future**

Wednesday, November 19, 2014

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SCALACS

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

Volume LXVII November/December 2014 Number 7

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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 2014 OFFICERS

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

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Southern California Section

Chair's Message



I can't imagine that time flies so fast and this is my last Chair's message. I want to thank you for letting me to serve you this year. I also would like to thank all the committee members and volunteers for planning and assisting with all the events. Without their time, effort and dedication, we wouldn't have so many great events this year. Thank you all!

We have more activities planned for the rest of year. On November 1, we will have the High School Chemistry Teachers Meeting at Occidental College. We will also have a tour of the Nutrilite Health Institute Center on November 14th. We hope that we will see you there. Please check out our website (www.scalacs.org) or follow our Facebook, LinkedIn or Twitter (SCALACS@scalacs1) for more information regarding our events.

You should have received this year's election ballots via email. We are very excited to have our first electronic election! Please read the statements carefully and select the most qualified candidate. Our section relies on your involvement to keep it active and progress. Also, if you are interested in helping out or considering running for office next year, please let us know by filling out the Member Survey at the end of the ballot.

Finally, the holidays are approaching. I hope you have a joyful holiday season.

Best,
- Yumei Lin, Chair
yumei.lin@Amway.com

Southern California Section

Southern California Section Meeting

Tour of Nutrilite Health Institute Center for Optimal Health

5600 Beach Boulevard
Buena Park, California 90622-5940

Friday, November 14, 2014
1:00—2:30 p.m.

Nutrilite is a world leader in nutrition research, development and innovation in the area of vitamin, mineral, and dietary supplement products. More than 100 scientists work on behalf of Nutrilite products, many who are located in the state-of-the-art R&D and Manufacturing facility in Buena Park, CA. Formulation scientists and engineers develop new products and optimize processes for large scale soft-gel preparation, powder blending, compression, and coating operations. Come join us for this informative tour.

Registration: Please call or email Nancy Paradiso (310 327-1216 or office@scalacs.org) by November 7th to attend. **The tour is limited to 25 people; registration is based on first come, first served basis.**

Directions: A map and directions are available at: <http://www.nutrilite.com/en-us/Science/NHI/COH/map.aspx>

Missing Issues of SCALACS

The Southern California Section Office is looking for specific copies of SCALACS to be included in an archival book. We are looking for:

January and November 1980

February 1982

September 1984

March, April and May, 1994

January, September, October and November/December 1995

If anyone has these copies and doesn't mind parting with them, please contact Nancy Paradiso in the Section Office at 310 327-1216 or office@scalasc.org. We appreciate your help!

Southern California Section

Thanks to all 2014 Volunteers

The many programs and services that your Section provides are accomplished by the volunteers of the various committees. We would like to acknowledge and thank all of you who volunteered your time and talents during this year.

Chair: Yumei Lin

Chair Elect: Veronica Jaramillo

Secretary/Treasurer: Barbara Belmont

Elected Members of

Executive Committee:

Alexander Alschuler

Tina Choe

Bill Harter

Veronica Jaramillo

April Jewell

Michael Morgan

Heather Mott

Brian Sullivan

Bruce Weiller

Councilors:

Rita Boggs

Bob de Groot

Tom LeBon

Virgil Lee

Eleanor Siebert

Barbara Sitzman

Alternate Councilors:

Henry Abrash

Brian Brady

Joe Khoury

Derek Marin

Sofia Pappatheodorou

Jodye Selco

Boy Scout Expo

Derek Marin and Gerald Delker—Coordinators

Alexander Alschuler

Annet Blom

Oral Caglar

John Carpenter

Sylvia Chow

Shaun Dunnick

John Ernest

Juan Garcia

Linda Geddes

Denise Gruenfelder

Michael Morgan

Julia Ramos

Argus Sun

Winston Vuong

Ron Weiner

Kimo Yap

Bylaws Committee

Virgil Lee

Expanding

Your Horizons

Eleanor Siebert,
Coordinator

Jessica Amaya

Claudia Benitez

Alyssa Castillo

Deniz Cizmeciyan

Dr. Sylvine Deprère

Diana Esparza

Danica Manalo

Andrea Martinez

Taylor Montano

Jennifer Perdomo

Andrea Perez

Mari Jo Ramirez

Bernadette Robert

Educational Affairs—

High School Teacher of the Year

Michael Morgan, Chair

Richard Erdman

Peter Shin

Larry Walker

Chemistry Bowl

Veronica Jaramillo,
Coordinator

PCC Chemistry Club

Dr. Brian Brady

Richard Erdman

Keith Frogue

Dr. Gayane Godjoian

Prof. Kerrin Huber

Natalie Martinez

Michael Morgan

Dr. Kholoud Sweimeh

High School Olympiad

Gerald Delker, Chair

Henry Abrash

Barbara Belmont

Bob de Groot

Paul Groves

Derek Marin

Michael Morgan

Eleanor Siebert

Barbara Sitzman

Teacher's Meeting

Michael Morgan, Chair

Richard Erdman

Chris Craney

(Continued on Page 5)

Southern California Section

Thank You List (Continued from Page 4)

**Community Activities:
NCW, CCED & others**

Robert de Groot, Chair
Henry Abrash
Michael Afzali
Alexander Alschuler
Barbara Belmont
Brian Brady
Chris Craney
Gerald Delker
Keith Frogue
Rida Harmeen
Andrea G. Hsu
Veronica Jaramillo
Juanita Juarez (CSC)
Yumei Lin
Ben MacDonald
Derek Marin
Michael Morgan
Sofia Papatheodorou
Alexandr Pikelný
Armando Rivera-Figueroa
Eleanor Siebert
Barbara Sitzman
Winston Vuong
Ron Weiner

Organizations

Supporting Section

Community Activities:

- Student Chapter at El Camino College
-ACS Student Chapter at Pasadena City College

**Organizations
(Continued)**

- WISH Organization at Mount St. Mary's College
- Science Society—Cal. State Dominguez Hills
- Priory of Biology & Chemistry at ELAC
-ACS Office of Public Affairs
- ACS Office of Volunteer Support
- California Science Center
- East Los Angeles College Chemistry Department
- Pasadena City College
- Occidental College, Department of Chemistry

Project SEED

Frank Gomez, Chair

Nominations & Elections

Barbara Belmont
Brian Brady

Publication Committee

Harold Goldwhite
Eileen DiMauro, SG
Keith Orso
Eleanor Siebert

Social Media

Heather Mott, Chair

Tolman Award

Dr. Travis Williams, Chair. Confidential committee, but you know who you are!

**Undergraduate
Research
Conference**

Henry Abrash, Chair
Grace Chong, Student President
Lindsay Kane-Barnese
John Kenny, Concordia University

Webmaster

Barbara Belmont

**Women Chemists
Committee**

Veronica Jaramillo, Chair

Younger Chemists

Alexander Alschuler, Chair

As you can see, it takes a lot of people's time and efforts to make our programs work. We as a Section, and the community at large, sincerely appreciate the dedication of these people and invite you to participate if you haven't already! This Section would be nothing without your volunteer efforts.

We tried to get everyone on the list, if we missed you, please accept our thanks for a job well done!

Southern California Section

Second Call for Nominations 2014 Richard C. Tolman Medal

The Tolman Medal is awarded each year by the Southern California Section of the American Chemical Society in recognition of outstanding contributions to chemistry. These contributions may include achievements in fundamental studies; achievements in chemical technology; significant contributions to chemical education; or outstanding leadership in science on a national level. The nominee need not be a Southern California resident; however, most of the award-related accomplishments must have been made in this area.

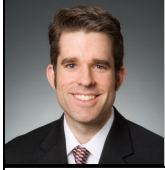
The Southern California Section of the American Chemical Society and the Tolman Award Committee are now seeking nominations for the 2014 award. There is no official nominating form for this award; nominations are accepted from any member of this Section or of cooperating Sections. The nomination package should include:

- an up-to-date curriculum vitae or resume of the candidate
- letters of support from colleagues in the profession describing the candidate's major achievements
- if the candidate is being considered for outstanding teaching, letters of support from former students should be included.

Please submit nomination packages electronically to the Chair of the Tolman Committee at office@scalacs.org. Rather than submitting copies of publications, a list of representative publications would suffice. **The deadline for receipt of nominations is December 15, 2014.** Inquiries should be directed to the Chairperson at (310) 327-1216 or via e-mail at office@scalacs.org.

Second Call for Nominations OUTSTANDING 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. **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 may be submitted via email to office@scalacs.org.** The deadline for nominations is **November 17th, 2014.** Please feel free to contact Michael Morgan of the Educational Affairs Committee at mmorgan@lausd.net if you have any questions.



Insights Into IP Law

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

Continuing our series on inventorship, the Patent Act states that when an invention is made by two or more persons jointly, they shall apply for a patent jointly. At a high level, joint invention is the product of a collaboration between two or more persons working together to solve the problem addressed. Because conception is the touchstone of inventorship, as discussed in previous installments of this column, joint inventors each must contribute to conception. However, people may be joint inventors even though (1) they did not physically work together or at the same time; (2) each did not make the same type or amount of contribution, or (3) each did not make a contribution to the subject matter of every claim of a patent. Each of these circumstances is addressed below in turn.

First, joint inventors need not physically work together or even at the same time. Indeed, there can be joint inventorship where one person reads a report prepared earlier by another person and builds upon it, or where a person works off of another person's suggestion heard at a meeting, for example. What is required is that there is some quantum of collaboration or connection. A group of people cannot be joint inventors if each person in the group is completely ignorant of what others in the group have done until years after their independent, individual efforts.

Second, joint inventors need not make the same type or amount of contribution to the invention. If a first person contributes 90% to the conception of an invention, a second person contributes 9%, and a third person contributes 1%, all three are joint inventors. In that circumstance, the first person might consider whether his or her 90% of the subject matter might constitute a patentable invention in and of itself. If so, that person might be able to file a separate patent application on the 90% as sole inventor, followed by a joint application with the others on 100% of the subject matter.

Third, although inventorship is evaluated on a claim-by-claim basis, a patent has only a single list of inventors--even if it has multiple claims. A person who contributes to the conception of even a single claim of a patent is listed as a joint inventor for the entire patent. Please email me at korso@irell.com with topics you would like to see addressed in the future.

* The author earned engineering and chemical engineering under-graduate 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 share a December birthday with a group of distinguished scientists. I was a Christmas Day baby, as was Isaac Newton (no comparison intended, by the way.) An American Nobel Laureate was also a December child. Willard Libby was born on December 17, 1908, in Colorado. His education began in a small town school there, but while he was still in elementary school his family moved to Sebastopol in California. After high school he entered the University of California, Berkeley in 1927 where he first enrolled in mining engineering, but then moved to chemistry earning his bachelor's and doctorate degrees working in the fairly new area of radioactivity. His mentors were Gilbert Lewis and Wendell Latimer. Libby built an improved Geiger counter as a graduate student and he made more and more sensitive instruments during his career. He joined the Berkeley faculty in 1933 moving through the ranks from instructor to Associate Professor. In 1941 Libby was holding a Guggenheim fellowship at Princeton, on leave from Berkeley, and as soon as World War II came to the U.S. he moved to the so-called Metallurgical Laboratory at the University of Chicago to join the team on the Manhattan Project. He stayed in Chicago until 1945 working with Urey, who was at Columbia University in New York, on the gas diffusion process for separating uranium isotopes.

In late 1945 Libby joined the Chicago faculty as the youngest Full Professor in the Department. He showed how tritium was produced by cosmic radiation in the upper atmosphere and developed a method of dating water samples by determining their tritium content. This led to the dating of water from various sources – and even to the dating of wines! In the late 1930s Kamen and Rubin had discovered the radioactive isotope carbon-14 and estimated its half life as over 1000 years. In 1946, with a much better estimate of the half life (about 5730 years) Libby had the “wild” idea that he could make estimates of the age of carbon-containing materials by determining the activity of the residual carbon-14. As the Chair of the Nobel Prize Committee put it in 1960: “The idea you had 13 years ago of trying to determine the age of biological materials by measuring their C-14 activity was a brilliant impulse. Thanks to your great experimental skill, acquired during many years devoted to the study of weakly radioactive substances, you have succeeded in developing a method that is indispensable [sic] for
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This Month in Chemical History

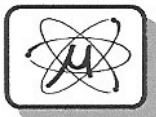
(Continued from Page 8)

research work in many fields and in many institutes throughout the world. Archaeologists, geologists, geophysicists, and other scientists are greatly indebted to you for the valuable support you have given them in their work.”

Libby became a member of the U.S. Atomic Energy Commission in 1954, and was controversial for his opinions minimizing the effects of radioactive fallout. He served on the Commission for 5 years and then left Chicago for UCLA in 1959 becoming Professor of Chemistry. His Nobel Prize came in 1960. Libby allied himself with Edward Teller and others opposing Linus Pauling’s position on banning nuclear tests in the atmosphere – but Pauling eventually prevailed and the Nuclear Test Ban Treaty was enacted. Pauling received the Nobel Peace Prize for his efforts. Libby became Director of the Institute for Geophysics and Planetary Physics at UCLA. He retired in 1976 and died at age 71. His pioneering work on carbon dating has revolutionized studies in areas ranging from archaeology, to art – and even to religion.

Two personal announcements:

- I am a co-author with Cathy Cobb and Monty Fetterolf of a new book “The Chemistry of Alchemy: From Dragon’s Blood to Donkey Dung; How Chemistry was Forged” published by Prometheus Books in July 2014; it is available both as a hardback and an ebook.
- I will be teaching Chemistry 480: History of Chemistry (4 quarter units) at Cal. State, Los Angeles in Winter Quarter 2015, starting in early January. The course will be offered from 6 to 8 p.m. on Monday and Wednesday evenings for 10 weeks. Get in touch by email for further details.



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San Gorgonio Section

Chair's Message

San Gorgonio Annual Election (And a New Method of Ballot Distribution)

It's time for the annual election of San Gorgonio Executive Board members for 2015. The open positions are; Chair Elect, Treasurer, Councilor (1 of 2 positions) and Alternate Councilor (1 of 2 positions).

The first and most important step in conducting the election is to assemble a slate of candidates. Anyone wishing to serve in one of the extremely rewarding positions mentioned above, working with a fantastic group of volunteers should contact the Section Secretary, David Srulevitch (dsrulevitch@mtsac.edu). Nominations for open positions will also be accepted at the annual meeting (see the meeting announcement in this issue). After nominations close, the Secretary will finalize the ballot for distribution.

The Executive Board has explored a variety of methods of distributing ballots with an eye on reducing the cost associated with printing and mailing approximately eight hundred paper ballots and maximizing participating of members. The first attempt to streamline the process, used for the last two years, was to include the ballot in SCALACS. This decreased the cost, but did not increase participation.

The bylaws were recently updated to permit the distribution of ballots by email. In an effort to increase the participation and keep the cost low, the Board will be trying something new this year. Ballots will be distributed to all San Gorgonio Section members by email. The election **will not** be conducted electronically. The emailed ballots will still need to be downloaded, printed and mailed back to the secretary by the member. Members may request a paper ballot by contacting Eileen DiMauro (edimauro@mtsac.edu).

- Eileen DiMauro
Chair

San Gorgonio Section

Annual Meeting Celebrating 65 Years Reflecting on the Past—Looking Forward to the Future

Wednesday, November 19, 2014
7:00 p.m.

Chemical Sciences Bldg, Room 231
University of California, Riverside
900 University Avenue
Riverside, CA 92521

Come help celebrate the 65th anniversary of the San Gorgonio Section. We will review the history of the Section from its start in 1949 until today and brainstorm plans for the Section's future. Katherine Gonzales, our Project SEED participant this year, will describe her project and we will discuss ways to expand this successful program. The upcoming election for 2015 officers will be discussed and nominations solicited. We will also learn what is new at UCR. Food (sandwiches, fruit, cheeses, water, and soda) will be provided. There will also be drawings for a variety of door prizes.

Meeting Agenda: Door prize drawings throughout the evening!

- Welcome
- What's New at UCR
- Katherine Gonzales, Project SEED participant
- History of the San Gorgonio Section
- Overview of planned 2015 Section activities
 - High School National Chemistry Olympiad
 - Chemistry Day at the Museum
 - Project SEED
 - National Chemistry Week
- Brainstorming: Future directions of the Section
- Upcoming election of officers for 2015
- Adjournment

Special Request: As we mark the 65th year of the San Gorgonio Section the members of the Executive Board are putting together a retrospective of the past 65 years in chemistry to be exhibited at the November meeting. We are looking for original historical pictures and articles related to people and events that were significant between 1949 and the present. Items that are associated with the events and people in the San Gorgonio Section would be particularly appreciated. Anyone who would like to contribute a picture or item should
(Continued on Page 12)

San Gorgonio Section

Annual Meeting (Continued from Page 11)

contact Laurie Starkey by email at lsstarkey@csupomona.edu, by phone (909 869-3670) or by mail (Department of Chemistry & Biochemistry, California State Polytechnic University, Pomona, 3801 West Temple Ave., Pomona, CA 91768).

Reservations: Please RSVP to edimauro@mtsac.edu or dpedersn@csusb.edu, **no later than** Friday, November 14. There is no cost, but we need to know how much food to buy! We must also submit names of anyone who will need a parking pass for the meeting.

Parking: The UCR Chemistry Department will pick up the parking cost for participants at this meeting; THANK YOU. Carpools are encouraged. Get to the campus and go to the main information kiosk at the main entrance on West Campus Drive. Tell the parking person that you are a participant in the ACS meeting in the Chemical Sciences Bldg and obtain a parking permit and directions to the meeting site, the Parking Lot where you are to park, and a campus map.

Directions: UCR is located off the 215/60 freeways in Riverside at the University Avenue exit. Consult the campus website for a detailed area map, showing various ways of getting to the campus. <http://campusmap.ucr.edu/imap/index.html>.

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November/December 2014

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**SOUTHERN CALIFORNIA SECTION
AMERICAN CHEMICAL SOCIETY**

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***IMPORTANT
Do Not Delay!***

Contains Dated Meeting Announcement

PERIODICAL

Chemists' Calendar

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

November

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- 14 SC Tour of Nutrilite Health Institute Center for Optimal Health—
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nominations—see page 5
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December

- 15 Deadline for SC Tolman Award nominations—see page 6

We wish you a very Happy Holiday Season!