



ACS
Chemistry for Life™

SCALACS

September 2017

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

Southern California Section

Luncheon Honoring our 50, 60, 70 and 75 Year Members

With a Special Presentation by Our
Project SEED Students



Photo courtesy of Mount Saint Mary's University

**Saturday,
September 16, 2017
Doheny Mansion
Mount Saint Mary's
University
See Page 3**

San Geronio Section

**Save the Dates!
October 21, 2017
50, 55, 60, 65, and 70 Year Member Luncheon**

**October 28, 2017
Family Science Festival at MSAC
See Page 12**

Mass-Vac Vacuum Pump Oil Mist Eliminators

- **PROTECT** your lab environment
- **PROTECT** your co-workers
- **PROTECT** yourself

from the oil mist coming from your vacuum pump exhaust port.



Visi-Mist

Features a low resistance microfiberglass coalescing element and a transparent sump to monitor element condition.



Midi-Mist

Features a low resistance microfiberglass coalescing element, stainless steel construction that resists corrosion, and a bottom drain plug for recovering pump fluids.



PRODUCTS

A Division of Mass-Vac, Inc.

Mass-Vac, Inc.
247 Rangeway Road
PO Box 359
North Billerica, MA 01862

978 667 2393
sales@massvac.com
www.massvac.com





ACS
Chemistry for Life™

SCALACS

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

Volume LXXII

September 2017

Number 5

SOUTHERN CALIFORNIA SECTION 2017 OFFICERS

Chair: Armando Rivera

Chair Elect: Bob de Groot

Secretary/Treasurer: Barbara
Belmont

Councilors: Brian Brady, Robert de
Groot, Virgil Lee, Sofia
Pappatheodorou, Eleanor Siebert,
Barbara Sitzman

SAN GORGONIO SECTION 2017 OFFICERS

Chair: Dennis Pederson

Chair-Elect: Bruce Liu

Secretary: David Srulevitch

Treasurer:

Councilors: Eileen DiMauro, Ernie
Simpson

TABLE OF CONTENTS

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

SCALACS (ISSN) 0044-7595 is published monthly March through May, September and October; and Bi-monthly January/February and November/December. 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



Welcome back SCALACS members!

We hope you found some time for rest and relaxation over the summer. We're glad you're back!



2017 marks the 30th anniversary of National Chemistry Week. NCW reaches the public with positive messages about chemistry and promotes a positive change in the public's impression of chemistry. During this special occasion we would like to share a bit of the history of NCW.

National Chemistry Day was the result of the vision of Dr. George C. Pimentel (1922–1989) who served as ACS president in 1986. Pimentel was born to French parents near Fresno and his family moved to Los Angeles during the Great Depression. As an undergraduate at UCLA his interests shifted from civil to chemical engineering and then to physical chemistry and undergraduate research with J. B. Ramsey. In 1946 he started graduate studies at UC Berkeley in infrared spectroscopy with Kenneth Pitzer. Upon earning his Ph.D. in 1949 he joined the Berkeley faculty as an instructor and became an assistant professor in 1951 and remained an active faculty member there until his passing.

The first National Chemistry Day was celebrated on November 6th 1987, it became NCW in 1989, and NCW became an annual event in 1993. In a 1986 message to the ACS Board Pimentel said:

“National Chemistry Day is a bold and exciting undertaking for us. Its success will be measured, in the short term, by the number of people reached by our efforts. Over the long term, we will measure our success by the continued use of chemistry to solve societal problems and to improve the quality of life for us all.”

As a local section we think we have embodied the NCW motto: **Solutions for the Future**. Being co-chair and chair of SCALACS is very rewarding because we have colleagues who, in addition to advancing chemistry, they are empowering others to join the effort. Join us in celebrating NCW 2017 (October 22–28): “Chemistry Rocks!”

On September 16th at Mount Saint Mary's University we honor our 50, 60, 70, and 75 year ACS members. These folks are the ones who got us to where we are today! Our good friend **Norm Juster** has been an ACS
(Continued on Page 7)

Southern California Section



September Luncheon Meeting
Saturday, September 16, 2017
Honoring our 50, 60, 70 and
75 Year Members

With a Special Presentation by
Our Project SEED Students

At

The Doheny Mansion
Mount Saint Mary's University

10 Chester Place
Los Angeles, CA 90007

11:30 a.m. Check-in and Students' Reports

12:15 p.m. Luncheon

Presentation of Certificates immediately following luncheon

We are celebrating our 50, 60, 70 and 75 year members with a luncheon and inviting them to share a little something about themselves, their careers in chemistry or a particular reminiscence of being a chemist. We are also having our Project SEED students give a short talk about the research they completed this summer. Project SEED takes high school students and places 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:

Rita R. Boggs
Michael F. Brady
Peter B. Dervan
Edward L. Docks
Roger C. Helgeson
Yong Jai Lee
Kathrine J. Lewis

(Continued on Page 4)

Southern California Section

50/60/70/75 Year Member Luncheon

(Continued from Page 3)

Our 60 Year Members

Henry I. Abrash
Roy C. De Selms
William F. Harrison
Paul Francis Helfrey
Anthony J. Kolk, Jr.
Laurence B. Marantz
Elizabeth F. Neufeld
Ruth R. Sherman

Our 70 Year Members

Lawrence H. Hershenson
Howard H. Rogers

Our 75 Year Members

Bernard J. Cagan
Norman J. Juster
Eugene Roberts
Darwin L. Mayfield

The students who took part in our Project SEED Program this summer are Jesus Arroyo, Adrix Reyes Rivera, Paola Ramirez and Jacqueline Ramirez. There will be a presentation of their research prior to lunch.

Reservations: The luncheon entrée is Chicken Piccata, pounded chicken breast with lemon caper sauce over rice pilaf and baby asparagus. The cost of the luncheon is \$25 per person including tax and tip; cash or check at the door. Please call Nancy Paradiso in the Section Office at 310 327-1216 or email office@scalacs.org by **Wednesday, September 6, 2017** for reservations.

Directions: The meeting will take place in the Doheny Mansion on the Doheny Campus. For directions, please go to <http://www.msmc.la.edu/about-msmc/our-campuses/driving-instructions.asp>.

*Photos courtesy of Mount Saint Mary's University

Southern California Section

Call for Nominations: 2017 Agnes Ann Green Award for Distinguished Service

The Agnes Ann Green Distinguished Service Award is given to a member of the Southern California Section of the American Chemical Society in recognition of his/her outstanding service and commitment to the Section. It is not necessarily given each year, as it is reserved for those members who have set an example of their devotion of time and effort to the well being and goals of the Section and its relationship to the National ACS. The Executive Committee has determined that the recipient of the Agnes Ann Green Award shall be in the pool of Section nominees for ACS Fellow.

The Southern California Section is now soliciting nominations for the Agnes Ann Green Award. The award, named in honor of its first recipient, is based on the following criteria:

- The recipient shall have an outstanding record of major service to the Southern California Section.
- The recipient shall have made one or more identifiable major contributions to the Section, or to the National ACS through work at the Section level.
- It is preferable that the recipient be or have been an officer of the Section.

Nominators are asked to supply letters of nomination outlining the service of the nominee to the Section. **Nominations should be submitted via email to office@scalacs.org by Monday, October 2, 2017.**

Previous Award Winners:

1988 Agnes Ann Green	2000 Henry Abrash
1989 Arthur Adamson	2001 Thomas Payne
1990 Stanley Pine	2002 Heather Kinney
1991 Yoshie Kadota	2003 Michael Geis
1992 Rita Boggs	2004 Harold Goldwhite
1993 Sandra Lamb	2005 Gerald Delker
1994 Eleanor Siebert	2006 Sofia Papatheodorou
1995 Norman Juster	2007 No Awardee
1996 Eugene Kleber	2008 Thomas LeBon
1997 Herbert Kaesz	2009 Gil Mislant
1998 Barbara Belmont	2010 Bob DeGroot
1999 Peter Baine	2011-2016 No Awardees

Southern California Section

Call for Nominations

The Nominations, Elections and Awards Committee of the Southern California Section is soliciting nominations for the election of 2018 Section officers (Chair-Elect and Secretary), Members-at-Large of the Executive Committee, and Councilors.

If you wish to propose names (including your own) for consideration, send them to Nancy Paradiso in the Section Office at office@scalacs.org by **September 15, 2017**.

In Memoriam Richard T. Keys

Dr. Richard T. Keys, a Professor Emeritus of Chemistry at California State University, Los Angeles, passed away of natural causes on April 19, 2017 in Pasadena. Dr. Keys received a Bachelor's Degree in Chemistry from Harvard University and his Doctorate in Chemistry from Iowa State University. He then undertook a postdoctoral fellowship at California Institute of Technology. He joined the faculty at California State University, Los Angeles in 1960 teaching analytical chemistry and physical chemistry to many generations of undergraduate and graduate students. He rose through the ranks from Assistant Professor to Professor.

Dr. Keys was known as a superb teacher, specializing in courses in general, analytical and physical chemistry, and quantum mechanics. He was very active in academic governance, serving on committees from the department to university level, including the Academic Senate, and the university committee on professional ethics. He also had an active research program, supported by a number of grants, and training students in studies using electron spin resonance spectroscopy.

Dr. Keys has been an active member of the Southern California Section since 1954.

Southern California Section

In Memoriam Joe Evans

Joe Evans, Jr. died March 16, 2017 from a heart attack brought on by a previous stroke. Joe was a long term member of the LASCT.

Joe was born in Oklahoma in 1943 and graduated with his BS in Chemistry from California State Fullerton in 1967. He spent most of his career as Senior Chemist at Trail Chemical Corporation and retired as Chief Chemist at Specialty Coatings & Chemicals Inc. in 2016 after the merger of the two paint companies.

Joe is survived by his wife, Florine and his daughters Catherine and Caroline.

Chair's Message (Continued from Page 2)

member for 75 years! **Henry Abrash**, a 60 year member, is still active on the SCALACS executive committee and volunteers at the California Science Center. Henry has been coordinating our annual NCW event there for nearly 20 years. **Rita Boggs** is a 50 year member and has been a long-time councilor for the Section. At this event our honorees are joined by the 2017 Project SEED summer research students. Capably led by Frank Gomez this program is ensuring the future of chemistry is in good hands. Please find the complete list of 50/60/70/75 year members and Project SEED students including details about the event in this issue.

Our future is bright and it is time to elect the next group of SCALACS leaders. Our Nominations and Elections team is assembling an outstanding list of nominees for our local section election. Your vote in local section elections is a very important part of your commitment as an ACS member.

Read on or visit us online and find out ways to get involved with the section.

Happy NCW30!

Bob and Armando



This Month in Chemical History

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

About 25 years ago I was invited to contribute a couple of articles to a new collection. I was pleased to do so. The book was “Women in Chemistry and Physics: A Bibliographic Sourcebook” edited by Louise S. Grinstein, Rose K. Rose, and Miriam H. Rafailovich (Greenwood Press, 1993). In this and a number of following columns I plan to mine the resources of this sourcebook and introduce my readers to the lives and careers of excellent scientists, who may be under-appreciated by our community, and who happened to be women.

Ruth Rogan was born in New Orleans in January 1912 to a civil engineer father and a mother she later described as a “truly liberated woman”. Ruth was a gifted student who graduated from high school at age 14 and entered Newcomb College, the women’s college of Tulane University, at age 15. (Followers of the Antiques Roadshow will recall Newcomb ceramics.) She graduated in 1935 with a degree in chemistry, physics and mathematics, and did one year of graduate work at Bryn Mawr. Back at Newcomb she taught chemistry and took night classes at Tulane for a Master’s degree. She earned her Ph.D. at the University of Chicago in 1948 working in physical chemistry. In 1950 she married Frank Benerito and became known thereafter as Ruth Rogan Benerito. (Her husband died in 1970). In 1953 she left her faculty position at Newcomb to join the U.S. Department of Agriculture’s research center in New Orleans. It was in this position that she made discoveries that have affected all our lives!

Initially she worked in the Intravenous Fat Program and steadily rose through the ranks at the center becoming in succession a project leader, acting head of the Colloid Cotton Laboratory, and leader of the physical chemistry group. She took a postdoctoral year off in 1972 at Tulane, and was a continuing lecturer at both Tulane and the University of New Orleans. At the research center she focused on the applications of the physical chemistry of colloids and surfaces to practical problems. She eventually was granted 55 patents in one particular area: the modification of the surface of cotton by the application of certain organic acid chlorides. Her work led to the production of wrinkle-resistant fabrics – the wash-and-wear with
(Continued on Page 9)

This Month in Chemical History

(Continued from Page 9)

which we are all familiar, and for which we are all grateful – except the makers of electric irons. In this area she acknowledged the work of others:

“I don’t like it to be said that I invented wash-wear, because there were any number of people working on it, and there are various processes by which you give cotton those properties,” she said. “No one person discovered it or was responsible for it. But I contributed to new processes of doing it.”

Benerito also carried out pioneering work in other areas: on the modification of textile surfaces with polyfluoro organic acids that led to fabrics that shrugged off both oil and water and that are widely used in rain-repellant garments; and in treatments of cotton to reduce flammability. In all she had hundreds of publications, and made presentations all over the world. Her honors included the Garvan Medal of the ACS in 1970; several ACS local section awards; the USDA Distinguished Service Award; and the Federal Women’s Award. She was awarded an honorary degree by Tulane in 1981 and was inducted into the National Inventors Hall of Fame in 2008. She died in 2013 at the age of 97.

American Research and Testing Inc.

Problem Solving Experts

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

Rita R. Boggs, Ph.D.
CEO

Barbara Belmont, M.S.
President

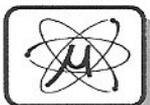
800.538.1655 www.americanresearch.com

*** NMR Service 500 MHz**

***MASS *Elemental Analysis**
Fast Turnaround / Accurate Results

NuMega Resonance Labs.

(858) 793-6057 Fax (858) 793-2607



Micron Analytical Services

COMPLETE MATERIALS CHARACTERIZATION

MORPHOLOGY CHEMISTRY STRUCTURE

SEM/EDXA , EPA/WDXA, XRD, XRF, ESCA, AUGER, FTIR, DSC/TGA

3815 Lancaster Pike Wilmington DE. 19805
E-Mail micronanalytical@compuserve.com

Voice 302-998-1184, Fax 302-998-1836
Web Page: www.micronanalytical.com



Insights Into IP Law

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

The previous edition of this column addressed various categories of "prior art," including prior art "printed publications." As discussed, "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.

Is a poster that is displayed at a scientific conference a "printed publication"? Suppose a group of researchers prepare a fourteen-slide presentation relating to the enhancement of cholesterol-lowering activity of dietary fibers by extrusion processing. They paste printouts of each slide onto poster boards. They display the poster boards continuously for two and a half days at a meeting of the American Association of Cereal Chemists ("AACC"). Later, they display the same poster boards at an Agricultural Experiment Station at Kansas State University. No copies of the slides are disseminated at either event. And at neither event is there a disclaimer or notice to the intended audience prohibiting note-taking or copying of the presentation. Is the poster a printed publication?

In one case with similar facts, a court answered "yes." The court considered the following factors: the length of time the display was exhibited, the expertise of the target audience, the existence (or lack thereof) of reasonable expectations that the material displayed would not be copied, and the simplicity with which the material displayed could have been copied.

The court characterized as "extensive" the "three cumulative days" that the poster was exhibited, and emphasized that the poster was shown to a wide variety of viewers, a large subsection of whom possessed ordinary skill in the art of cereal chemistry and agriculture. The court noted that the poster was shown with no stated expectation that the information would not be copied or reproduced by those viewing it, and that members of the public could even have taken photographs of the poster. The court also found that copying the information would have been a relatively simple undertaking—particularly given the amount of time the information was on display and the lack of restrictions regarding the content. The court concluded that the poster was made sufficiently publicly accessible to count as a "printed publication." And based on the content of the poster, a patent application was rejected. The next editions of this column will address further examples of printed-publication analyses.

* 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.

Chair's Message



Summer is rapidly drawing to a close and this provides me the opportunity to highlight a few of our activities over the past months. The May High School Recognition Dinner went very well and it was a true pleasure to acknowledge the performance of the outstanding high school students and to recognize their teachers. This year we continued the theme of highlighting a few of the possible career directions for someone with a passion for chemistry. I extend personal thanks to the program presenters, Dr. Zhijie Liu (Allergan Pharmaceuticals), Dr. Changhui Liu (Moravek Biochemicals), Dr. Bruce Liu (ACB Sci. Tech), and Dr. Jeffrey Wang (Western University College of Pharmacy) who enlightened all regarding some of the many career options in the interface between pharmacy and chemistry. This summer our Project SEED student, Jose Benitez, has been working in the laboratory of Professor Jingsong Zhang at the University of California, Riverside. This is the fourth year that Professor Zhang has provided this opportunity for Project SEED students and I thank him very much for his participation in this valuable program. Each year the Section awards five college scholarships. This year's winners were announced in my May Message.

Now it's time to look toward the fall. In October we will have the opportunity to recognize our 50- and 60-year Section ACS members. We shall also be recognizing our 55-, 65-, and 70-year members. It will be time to reminisce, to share experiences with students, and to enjoy an excellent meal. The luncheon will be at Eddie's Italian Eatery in Claremont. A complete announcement will be in the October issue. Please save the date, Saturday, October 21, and join with others in this celebration. Also in October we will participate in National Chemistry Week activities at Mt. SAC College and at the Los Angeles Zoo. In November we will hold the Annual Meeting for the section and this will be the opportunity for us to review the past year, brainstorm about next year, and to hear from our Project SEED student about his summer experience. A busy two months lie ahead.

As the new school year starts I again pause to reflect on various parts of my 45 years teaching chemistry at CSU San Bernardino. Biochemistry was one of my major teaching responsibilities and I often would select a controversial area, assign readings, and have students discuss the topic. One topic was the various proposed mechanisms by which
(Continued on Page 13)

October San Gorgonio Section Events Save the Dates!

Saturday, October 21, 2017

This is the date of our annual luncheon to recognize **50- and 60-year Section ACS members**. This year we are expanding the list of those recognized to include **55-, 65. and 70-year members**. In addition, a special part of the program will be time for these senior chemists to interact with small groups of college and university chemistry students. This will be an invaluable opportunity for the students to gain insight into many of the paths one can take in chemistry. If you have the opportunity, please encourage students to attend. For students, the cost of the luncheon will be only \$5.00.



Saturday, October 28, 2017

This is the date of the **Family Science Festival at Mt. San Antonio Community College**. A special part of this year's activities will be tied to the 2017 National

Chemistry Week Theme, "Chemistry Rocks!". Dr. David Srulevitch will be demonstrating the interactions between minerals and various light sources. Some of us who have toured underground caverns have had the experience first of total darkness when all the lights were turned off, and then saw the hidden beauty when the cave walls were illuminated with black light. This demonstration together with the many other activities will make the day a special one for children of all ages.

INDEX TO ADVERTISERS

American Research & Testing	_9
Mass-Vac, Inc.	_____ifc
Micron Inc.	_____9
NuMega Resonance Labs	_____9
Scientific Bindery	_____13

Please support our advertisers.
Tell them you saw their ad in
SCALACS.
They make our programming
possible.
Thanks!

Protect Your Expensive Lab Work With the Best Research and Development Record Books

Our most popular books are always in
stock ready to ship
**\$16.50 each, FOB Chicago. Quantity
discounts.**

See our website for various styles available.

All books are 8.5 X 11 with hard
extension brown cloth covers and include
an Instruction Sheet and Table of
Contents. All pages open flat.
Personalizing is available.

Custom books are also available,
designed for your specific needs.

Scientific Bindery Productions

Skybind@att.net

847-329-0510

www.scientificbindery88yrs.com

Making Scientific Notebooks for
Teaching and Research since 1912

Chair's Message (Continued from Page 11)

mitochondrial electron transport is used to produce ATP, the major energy currency of cells. I remembered this discussion when I saw Dr. Peter Mitchell among the list of renowned chemists born in September. In 1961 Dr. Mitchell proposed what is termed the chemiosmotic hypothesis, a model where electron transport is used to produce a proton gradient, which in turn is used to drive ATP synthesis. This proposal was met with much skepticism and ultimately led him to establish his own independent research institute in Cornwall. Over the years his work along with that of many others provided experimental confirmation of this model and in 1978 Dr. Mitchell was awarded the Nobel Prize in Chemistry. May this story encourage all of us who have a passion for chemistry and who seek to understand the molecular basis of the world.

Dennis Pederson, Chair

**SOUTHERN CALIFORNIA SECTION
AMERICAN CHEMICAL SOCIETY**

14934 S. FIGUEROA STREET
GARDENA, CA 90248

***IMPORTANT
Do Not Delay!***

Contains Dated Meeting Announcement

PERIODICAL

Bi-Section Chemists' Calendar

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

September

- 16 SC 50/60/70/75 Year Member Luncheon at the Doheny
Mansion—see page 3

October

- 21 SG 50, 55, 60, 65 and 70 Year Member Luncheon—see page 12
22 SG Family Science Festival at Mt. San Antonio Community
College—see page 12
22-28 National Chemistry Week—2017 Theme: “Chemistry Rocks!”