

THE VORTEX

AMERICAN CHEMICAL SOCIETY
VOLUME LXXIX NUMBER 5

CALIFORNIA SECTION
MAY 2017



2017 PETERSEN AWARD RECIPIENT,
MARK FRISHBERG

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*California Section
American Chemical Society
Annual Awards Luncheon & Presentation
Honoring 50, 60, and 70 Year Members of the American Chemical Society,
Walter B. Petersen Award Presentation, Lloyd Ryland High School Teacher
Award, & P3 Award*

Date: Saturday, May 06, 2017

Time: 11:45 -12:30, no-host social; 12:30 – 1:45 pm, lunch; 1:45 pm, award presentations

Place: Scott's Seafood Restaurant, 1333 N. California Blvd., Walnut Creek, CA

Lunch: Cost \$35, includes entrée, dessert and coffee or tea

Choice of entrée: Salmon Alla Bella, Chicken Piccata or Pasta Primavera (pick one)

Reservations: RSVP no later than Tuesday, April 25, 2017, to the California Section office by e-mail to office@calacs.org or call (510) 351-9922.

Please pay by PayPal by going to <http://www.paypal.com> > Send Money> Send Money Online > To: office@calacs.org and follow the instructions.

The American Chemical Society honors those members who attain 50, 60 and 70 years of membership. The list of those in the California Section who have attained these honors this year includes:

50	60	70
James F. Ambrose	Robert Bacskai	Judson E. Goodrich
John A. Apps	George H. Batchelder	Andrew Streitwieser, Jr.
John H. Birely	Ronald G. Buttery	Allan Zalkin
Leonard F. Bjeldanes	George G. Cocks	
Mark D. Frishberg	Robert S. Crowder	
Heinz W. Gschwend	Harold L. Helwig	
Carl F. Hanken	Patrick H. Hess	
James S. Johnson	C. Judson King, III	
Michael C. Kavanaugh	Gilbert E. Klingman	
Carl W. Langhorst	John R. Lai	
Dennis K. Mitchell	Nathan Lewin	
John W. Muzatko	Donald D. Marshall	
Allan F. Rose	Rolf H. Muller	
Allen D. Sherman	Attila E. Pavlath	
Martin D. Shetlar	John J. Shook	
Orrin D. Sparkman	Gabor A. Somorjai	
Peter M. Stonebraker	Jacquelyn Joy James Stearns	
Anne Kuhlmann Taylor	Madeline Shen Toy	
Paul F. Vartanian	Mathias Van Thiel	
John P. Walters	Judson E. Goodrich	
Lewis D. Williams	Andrew Streitwieser, Jr.	
Charles R. Wilson	Allan Zalkin	
Ernest W. Yankee		

THE VORTEX

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Chair's Message

One of the celebrations in our Section this month is the dedication of the Mars



InfraRed Spectrometer (IRS) as National Chemical Landmark. The instruments flew past Mars in 1969 aboard Mariner 6 and 7. Developed at UC Berkeley by George C. Pimentel, Kenneth Herr, and their team,

the instruments set a new standard for spectroscopic studies of our solar system. A ceremony on the Berkeley campus on May 15 will mark this contribution from the California Section and add to the other similar monuments: Room 307 of Gilman Hall at UCB (commemorating the discovery of plutonium by Glenn T. Seaborg and his coworkers); the Lawrence Berkeley National Laboratory (site of the development/discovery of many trans-uranium elements); and two at the USDA's Agricultural Research Service Western Research Center in Albany (one for its research on the quality and stability of frozen foods and another for research in the area of flavor chemistry and advances in analytical chemistry.)

This had me thinking about history, particularly the history of the ACS itself and of the California Section. The Society was organized in 1876 (when Ulysses S. Grant

was president.) At the recent ACS meeting in San Francisco it was mentioned that the ACS was incorporated under a Federal Charter (signed by Franklin Roosevelt) putting it in a rather exclusive company of organizations, including the Boy Scouts of America, the Red Cross, and the National Academy of Science. You can read about the history of the ACS at <https://www.acs.org/content/acs/en/about/history.html>.

The California Section, originally encompassing the whole state of California, also has a fascinating history since its founding in 1901.

If you share my interest in history, you might want to look into the ACS's Division of the History of Chemistry (<http://calacs.org/about-2/history>.) Taken together, these sites may give you ideas for your summer vacation plans: you may wish to detour to a few National Chemical Landmarks.



SAVE THE DATE

Prof. Teresa Head-Gordon from UC Berkeley will present a talk on the Molecular Sciences Software Institute and the new degree being proposed at UC Berkeley at our Section meeting on Wed., May 31 in the evening at the Chevron auditorium in Richmond.

Mark Frishberg, recipient of the 2017 Petersen Award

This award honors the memory of Walter B. Petersen by recognizing a person who has made significant contributions over a period of years to the well-being of the California Section.

Walter B. Petersen was noted for his many years of outstanding service to the Section. He held numerous section offices and was Chair of the California Section in 1969. He authored a popular column in the VORTEX entitled "Personals by Petersen"

Thus, it is in his honor, with recollection of his high standards of service, that we recognize others who have given significantly to the advancement of the California Section. This award was established in 1982 and is supported by the California Section.

This year's recipient is Mark Frishberg. Mark has been a member of ACS since 1968. A California Section Chair in 2014; Councilor, 2015-17, 2007-11; Alternate Councilor, and 2012-14, 2006. Included in his background are positions of Councilor and Membership Chair for the Rochester Section, and Chair, Secretary, Treasurer, Newsletter Editor, Alternate Councilor, and Kids in Chemistry demonstrator for the

Northeast Tennessee Section. Mark has been instrumental in the various career counseling services conducted by CalACS, participating in resume review and instructions and as an Interview Coach to undergraduate and graduate students, and is an ACS Career Consultant and Workshop Presenter.

He has been active on the National level since 1978 as a member of six committees; Younger Chemists (Chair), Local Sections, Membership Affairs, Public Relations and Communications, Constitution & Bylaws, and currently Divisional Activities. He is a long time member of five ACS Divisions.

As a synthetic organic chemist and business development professional, with a PhD from Carnegie-Mellon and a BS from Case Tech, Mark spent 28 years with Eastman Kodak and Eastman Chemical Company, and eight years as President of Seres Laboratories in Santa Rosa, and now as an Independent Custom Synthesis Consultant and VP Business Development, JenKem Technology USA.

A well deserved award for outstanding service to Chemistry and the California Section.



Bob Fabini, recipient of the Ryland Award

The Lloyd Ryland Award is presented annually to a high school chemistry teacher who has demonstrated an excellent ability to teach and inspire students to pursue careers in science.

The California Section of the American Chemical Society will present the winner with a certificate and a check for \$500. In addition, the winner's chemistry department will receive a check for \$500 for supplies.

The recipient of the 2017 Lloyd Ryland Outstanding High School Chemistry Teacher Award is Bob Fabini. Bob has been involved for decades as part of the Bay Area Science Fair and the local science fair at Contra Costa Community College. In both venues, he has been a leader and managed the events smoothly so that hundreds of student projects are evaluated by multiple teams of judges in about 3 hours.

Over the years, Bob has worked with the

USDA Albany labs and sent his students to the weekly after school program hosted by USDA scientists. For this effort, Bob won a USDA award.

He has also nominated many students to the California Section SEED program from his El Cerrito High School chemistry classes. His dedication to teaching and to his students is illustrated by recognizing an individual student's performance in the physics class which Bob also teaches. The foreign born student had not taken any chemistry class in the US, but Bob recognized his talent and potential and nominated him as a Project SEED student to work in the one of the chemistry labs at Chevron Research. The student's mentor at Chevron was able to do more work than he could have done without him and commended him highly.



Second Annual Networking for Young Chemical

From entrepreneurship to finding an internship or permanent position at a company, relationships are among the most valuable assets a professional can have in the early stages of a career. Facilitating a connection between young chemists with those who are already established in their careers is rewarding for both parties. The YCC and ACS at Berkeley are dedicated to building these relationships. This Spring, UC Berkeley students and professionals from around the Bay met at the second annual networking event, exposing aspiring chemistry-related undergraduates to the possibilities available after graduation. With more than 20 professionals representing Chevron, Clorox, and many other firms, the event attracted more than 70 people. Attendees were asked to start off in one-on-one student-professional pairs for introductions, creating an environment in which all guests were able to break the ice and become more comfortable with each other. Rotations were urged every three

minutes for a total of ten introductions before a period of open mixing and conversation, giving students the opportunity to seek out those professionals they felt the strongest connection with. Both students and professionals found the event to be a rewarding experience, creating friendships amongst chemists and engineers.

The California section of YCC supported the Berkeley student chapters of ACS and the American Institute of Chemical Engineers (AIChE) in hosting this event, playing a key role in connecting the ACS professional network to students at UC Berkeley, generating the continued success of this event. With increasing ACS presence and involvement in campus events through the newly formed student chapter, Berkeley students and local young professionals will continue to benefit from this collaboration in the coming months.

Zoe Adams, YCC Undergraduate
Events Coordinator, ACS at Berkeley
Vice President, Navid Jawad, ACS at
Berkeley President

UC Berkeley students launch new boardgame product for learning organic chemistry

Organic chemistry is a leading reason students avoid STEM careers – from medicine to bioengineering to chemistry. Nationally, an estimated 30,000 would-be doctors do not get accepted to medical school, many because of organic chemistry. In fact, at UCB, organic chemistry has twice the fail rate compared to other courses.

In their organic chemistry classes, UCB undergraduates Prerak Juthani and Billal Ahmed saw hundreds of overwhelmed and stressed students. As UCB organic chemistry tutors, they helped many puzzled students by making problem solving a game. That is why they created React! React! is a revolutionary multiplayer game that can help anyone learn college-level organic chemistry.

Developed by 13 UCB Chemistry and Biology students, React! makes learning organic chemistry fun by turning it into a challenging, yet rewarding puzzle, instead of having to memorize an overwhelming amount of facts. Out of 320 international submissions, business leaders chose React! as one-of-six finalists for the Big Ideas startup competition.

React! has hundreds of student volunteers – from UCB to CSU Chico to UC Davis – playtesting the React! board game and the response is overwhelming. “Fun game!” says the Director of Undergraduate Chemistry at UCB, Dr. Anne Baranger. “Super engaging,” says UCB Chemistry professor, Dr. Pete Marsden. This May 1, React! will launch a Kickstarter campaign to raise money to make the game an app and board game that can be used by millions of students each year. “Our game is the rocket,” says React! Founder, Prerak Juthani, “We need your fuel. Help us launch!”





Celebrating Concrete (Revisited)

Bill Motzer

In my articles on concrete (see *Celebrating Concrete – Part 1, June 2008 Vortex*), I described

the composition of Portland cement, which contains up to 5% gypsum ($\text{CaSO}_4 \cdot n\text{H}_2\text{O}$ – see Table 1 in that article). One of my colleagues recently asked me if the added gypsum might dissolve away, causing concrete degradation. In rereading my paper, what I hadn't discussed was the reaction chemistry of the cement when it's hydrated. Concrete, of course, is a mixture of cement and aggregate and when water is added the dry cement (now called a "paste") undergoes an exothermic reaction. Under ordinary conditions, as it hardens (sets) or cures the paste may generate an almost immediate heat rise in tens of °C. This is not a problem for small concrete pours such as a small building foundation or patio, but may present significant problems for much larger structures.

The heat of hydration occurs because Portland cement (largely a mixture of calcium oxide and calcium silicates) generally contains small amounts of tricalcium aluminate ($\text{Ca}_3\text{Al}_2\text{O}_6$) and its reaction, when water is added, produces a violent amount of heat and almost immediate stiffening of the paste. This is known as a "flash set," which is not good for structural integrity, and to prevent this from occurring and allow the cement to "cure" or set more slowly, gypsum is added to the dry clinker. Thus, when water is added, the gypsum reacts with the tricalcium aluminate resulting in formation of insoluble calcium sulphoaluminate [$\text{Ca}_4(\text{Al}_6\text{O}_{12})\text{SO}_4$ or CSA], with the eventual formation of tricalcium aluminate hydrate. Calcium sulphoaluminate is insoluble, but with other reactions occurring, the sulfate content of the curing cement continues to decrease over time. There are other complex reactions involved, but the end product is that when gypsum is added, it aids in controlling the heat of hydration. However, the amount of gypsum added

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to the cement clinker must be carefully maintained because an excess of gypsum can result in the expansion and disruption of the cement paste. (Note: there are CSA cements which are alternatives to Portland cement. CSA cements are desirable if the structure requires a rapid setting time such as tunnel supports or highway repair.)

But even with added gypsum to moderate the flash set, a considerable amount of heat may still be generated when Portland cement-based concrete is poured in very large structures. A modern example is Hoover Dam on the Colorado River between Nevada and Arizona (Figure 1). This massive concrete arch-gravity dam was constructed from 1933 to 1935. Design engineers had calculated that if the dam was one continuous concrete pour, it would take about 125 years to cool and the resulting stresses would cause the cement to crack and crumble, with subsequent dam failure. Therefore, the final design had the concrete poured in 15 m^2 by 1.5 m high blocks with insertion of 25 mm diameter steel pipes into which cool river water was first circulated followed by ice-cold water from a refrigeration plant. When an individual block had cured and had stopped contracting, the pipes and adjacent seams were subsequently filled with grout and the next block set was then poured.

By May 29, 1935, 2,480,000 m^3 of concrete had been poured in the main dam with placement of 37 km of cooling pipes. The design was so good that in 1995, concrete cores removed and tested showed that the concrete had slowly gained strength over time exceeding the range typically found in such large concrete masses. Finally, the dam's concrete has not been subject to alkali-



Figure 1: Hoover Dam and Lake Mead on the Colorado River. Photo by Robert Cameron—Stone/Getty Images. <https://www.britannica.com/topic/Hoover-Dam>

silica reactions (ASR) because a nonreactive aggregate was used and the subject of ASR chemistry will be discussed in a future article.



Report From The ACS San Francisco National Meeting

San Francisco is one of the ACS' four primary rotating locations (along with San Diego, Boston, and Philadelphia) and attendance is usually high when it is the site of the Spring meeting when members back east and mid-west are looking forward to some sunshine and escape from the cold. This year's meeting did not disappoint and actually set a record for attendance, as you will see from the meeting statistics later in this report.

For those of you who have not been down to the Moscone Center area recently, meeting attendees had to negotiate a major construction zone as Howard Street between Moscone North and South is torn up and there appears to be multiple levels being added to a portion of Moscone South. Since ACS meeting sites are normally set about ten years in advance, it is unlikely that this situation was anticipated but there did not appear to be much grumbling, because the weather, for San Francisco, was great. As usual there were the newcomers to San Francisco heard to say: "Boy, if the weather is this good in the beginning of April, we will have to come back in the summer." Hopefully, all members of CALACS who heard this refrain stepped into the conversation and alerted the newcomers that this weather was the best it gets. Those out of town visitors who attended the last San Francisco National meeting in the summer of 2014 appear to have learned their lesson, having encountered dreary weather with temperatures in the 50's, versus clear skies and highs in the 60's and low 70's this Spring.

For the California Local Section attendees, this was a relatively routine meeting, except for CALACS Councilor, Mark Frishberg, who was one of the four nominees for ACS President-Elect, although he was not voted into one of the top two candidate positions by the ACS Council, those being selected being Bonnie Charpentier, former ACS Board Chair and our neighbor from the Santa Clara Valley Local Section (now renamed upon their petition to Council as the Silicon Valley Local Section), and Willie May, the recently retired Director of

NIST and the highest ranking chemist in the US Government.

Prior to the start of the ACS meeting, a Presidential Public Outreach event: Exploring Our World Through Chemistry, which has become a feature on the Saturday preceding National meetings, was held at the Exploratorium, with hands on activities for the over 250 children attending, along with their parents including CALACS Councilors Alex Madonik, who is on the organizing committee for these events, and Sheila Kanodia. The attendance at this event was likely limited as the Exploratorium charged its full prices to enter.

This meeting was co-hosted by the California Local Section (organized by Charles Gluchowski) and the Santa Clara Valley Local Section, who staffed the host hospitality booth in the lower level of Moscone North. Our collection of posters celebrating eminent Bay Area chemists was prominently displayed nearby.

The overall theme of the San Francisco meeting was "Advanced Materials, Technologies, Systems, & Processes." As usual, a plenary session on Sunday afternoon highlighted and introduced the overall theme, while Division programs related to the theme continued throughout the week. Over 14,500 papers and nearly 5700 posters were presented. Presidential Events included "Holy Grails in Chemistry: Celebrating the 50th Anniversary of Accounts of Chemical Research Journal;" "Science for a Sustainable Energy Future;" and "LGBT Graduate & Postdoctoral Student Research Symposium." Another highlighted symposium was "Nanoscience & Nanotechnology for Advanced Materials & Technologies."

The popular Kavli Foundation Lecture series continued on Monday afternoon, with the Emerging Leader Lecture given by Dr. Bradley Olsen of MIT entitled, "Classical Challenges in the Physical Chemistry of Polymer Systems," and the main Innovations in Chemistry lecture given by Dr. Jennifer Doudna of UC

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Berkeley entitled “ CRISPR Systems: Nature’s Toolkit for Genome Engineering.”

Report from the Council Meeting and other Society governance activities

CalACS was represented at Council by our full contingent of eight Councilors or Alternate Councilors, our two Past ACS Presidents and current Director-At-Large to the ACS Board. Information on some of the activities of the committees to which they are affiliated can be found below.

The San Francisco Council meeting was a quiet and efficient one. The escalated member dues renewal rate to \$171 (from \$166) for 2018, per the inflation adjusted bylaws formula, passed without discussion.

In actions of note, Council voted to continue the current distribution formula of funds to Divisions and the \$15 per new member incentive test market for new International members; approved the petition on the rights of ACS affiliates, and the charter bylaws for International Chapters. The petition for the removal of Officers and Councilors failed to get the two-thirds approval needed.

With a light schedule, ACS President, Dr. Allison Campbell added a discussion topic to the Council agenda soliciting comments on the ACS Governing Structure and whether the current form, which has existed for a very long time, is still the best one for ACS as it looks to the future. A Task Force with this charge, headed by ACS Board Chair, Pat Confalone, is seeking input into this subject.

Affiliations & comments from Past ACS Presidents, and our Councilors

Bryan Balazs – Society Committee on Budget and Finance (B&F), Undergraduate Program Advisory Board (UPAB), ACS Career Consultant B&F reviewed the ACS’ financial performance for 2016, which continued on a sound footing with revenues of \$526.8M and expenses of \$503M. The difference, or Net from Operations will be added to

the reserve fund, which is still somewhat underfunded from the desired guideline of 50% of operating expenses. No financial issues are foreseen for 2017 and CAS and Publications are expected to continue to perform very well. UPAB reviewed the effectiveness of the undergraduate programs at the Fall 2016 National meeting in Philadelphia, made last minute preparations for the current San Francisco meeting, and looked ahead to the Fall meeting in Washington, DC. Student attendance continues to increase at National meetings, now over 6000. All of the undergraduate events were monitored in San Francisco to make notes for potential improvements and assist as needed. Also as an ACS Career Consultant, workshops were presented on Finding Your Career Pathway and Networking.

Mark Frishberg – Divisional Activities Committee (DAC), ACS Career Consultant – Career Fair DAC funded 9 new Innovative Project Grants totaling \$63,000, with the maximum grant set at \$7500. More proposals will be considered at the Washington, DC meeting in August, with a July 1st deadline for submissions. Discussions continue on how to help Divisions attract new members and retain those that they have - very much in tune with similar local section issues. Mark was appointed co-Chair of the DAC subcommittee on Technical Programming and Collaboration. he participated in the Town Hall question and answer session for Presidential-Elect Nominees on Sunday afternoon. In ACS Career Fair related activities, resume reviews were performed on Sunday, Monday, and Tuesday.

Sheila Kanodia – Committee on Ethics There will be a new ChemLuminary award for programming/education on Ethics and a fund may be made available through local sections to implement/execute programs related to ethics.

Alex Madonik – Committee on Community Affairs (CCA) - Currently chairs the Chemists Celebrate Earth

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Week team for 2018, meeting in SF to develop articles and activities for Celebrating Chemistry. Our theme is, "Dive into Marine Chemistry."Serves on the Program Development (PDP) subcommittee of CCA. Met to review progress of the NCW and CCEW theme teams. This year's NCW theme will be, "Chemistry Rocks" (geology) and next year's theme will be, "Chemistry: It's Out of This World" (chemistry of outer space). CCA is rebranding its spring outreach program as, "Chemists Celebrate Earth Week," with special attention to next year's 15th anniversary celebration. NCW will celebrate its 30th anniversary this year. Each program will have new logos. At the open CCA/LSAC meeting on Tuesday afternoon, LSAC promised improvements in response to the many complaints about the process for final submission of Local Section annual reports in the online FORMS system.

Eileen Nottoli – Committee on Environmental Improvement (CEI) The High School Program on Sunday was excellent. Jenelle Ball, our 2010 Outstanding High School Chemistry Teacher and the 2015 James Bryant Conant Award for High School Chemistry Teaching, organized the event. Two other of our past Outstanding Teachers, Julie Hubbard (2015, Liberty High School) and Michelle Wynn (2014, St. Ignatius High School) gave presentations that were very well received.

Attila Pavlath – International Activities Committee (IAC) IAC approved the petition to remove financial restrictions on the International Chemical Science Chapters, which will come before Council for a vote in Washington in August. IAC also received a request for the formation of a new Chapter, the 20th. This will be in Qatar, the third in the Mid-East. IAC is working on bringing all International chapters in close contact with the Society to allow cooperation with Local Sections and Divisions. While growth in domestic ACS membership is flat, the number of International ACS members actually increased.

Marinda Wu – Committee on Budget and Finance (B&F), ACS Career Consultant – Career Fair, work with International Activities Office (IAO), Board member for Chinese American Chemical Society (CACS) with Attila Pavlath, being the only two living Past ACS Presidents from the California Local Section helping to host this National meeting, surprised members attending the ACS Board Dinner with a special after dinner treat in the form of a professional opera singer who delivered the following two familiar songs that delighted the audience: "Consider yourself at home" from the musical "Oliver" and Tony Bennett's famous song "I left my heart in San Francisco." The California Section has long had a proud history for innovation and doing the unexpected (thanks to Attila for this idea and the opera singer he knows!). At the Career Fair, presented two workshops on Interview Techniques and also helped with resume reviews. Helped to emcee another successful and well attended CACS Banquet in San Francisco's famous Chinatown. The President of ACS Publications attended as well as some ACS Board members and many others to hear our Keynote speaker, Professor Peidong Yang from UC Berkeley.

Elaine Yamaguchi – Local Section Activities Committee (LSAC) and Project SEED Encouraged local sections to check back with the National office at the end of the year to confirm that all local pledged PROJECT SEED donations had been received. A task force has been established to formulate a proposal to be presented to B&F that will request a gradual rise in SEED student fellowships by 2020. Plans are underway for the 50th year SEED symposium in 2018, led by Joshua Pak. For 2017, SEED Committee expects these expenses: \$900 K for 364 SEED I students; \$384 K for 128 SEED II students; \$135 K for SEED scholarships; and \$35 K for Ciba Scholarships. The SEED Committee sent a survey to SEED Scholarship recipients from years 2001-2016 and got 100 responses: 86% responded that SEED encouraged a science or science-related career; 78% acquired new skills from their mentors; and the most valuable thing SEED

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offers is improving one's research skills.

**Looking ahead to Washington, DC,
August 20-24, 2017**

The overall meeting theme will be "Chemistry's Impact on the Global Economy."

A highlighted workshop/symposium entitled "Speaking with Congress" is being organized, among other special presentations.

News you might use

The theme of the Earth Day celebration on Saturday, April 22nd is "Chemistry Helps Feed the World."

Abstracts of the papers and posters presented at the meeting are archived at www.acs.org, and those plenary and symposium presentations that were recorded, with sequenced slides, can be found at www.acs.org/meetingcontent.

Members are reminded that the ACS is one of the few US Government Chartered institutions, chartered in 1937 by Franklin Delano Roosevelt and in the exclusive company of such other institutions as the National Academy of Sciences, American Red Cross, American Legion, and Boy Scouts of America.

Any members interested in the latest ACS financial performance can look at www.acs.org, click on the "About ACS" tab and then "ACS Financial Information."

A new on-line career assessment tool aimed at graduate students and post docs, ChemIDP, can be accessed at ChemIDP.org.

Information regarding grants offered by all ACS committees can be found at www.acs.org/getinvolved.

Interesting Statistics

More than 4220 people have joined the American Association of Chemistry Teachers (AACT) launched by the ACS in 2014, of whom 88% are K-12 chemistry teachers.

Attendance at the San Francisco meeting as of Wednesday morning, April 5th was

18,850, surpassing earlier predictions and setting a record, including 9797 regular attendees, 6914 students, 1198 exhibitors, and 3356 International members.

The Women Chemists Committee is celebrating its 90th anniversary this year and held a symposium consisting of recollections from previous committee Chairs.

The ACS Career Fair had 457 job seekers, 32 employers offering 145 positions, and 27 recruitment booths in the Expo. In conjunction with these activities, as a benefit to members on site, career workshops were held, along with 351 resume reviews and 150 mock interviews. CalACS members, Bryan Balazs, Mark Frishberg and Marinda Wu, who are ACS Career Consultants and Workshop Presenters, actively participated in these offerings.

The Committee on Economic and Professional Affairs reported that the number of responses to the annual salary and employment survey had fallen so low as to not be statistically useful and other methods for gathering this important information are being studied.

ACS membership is holding around 156,000, including 27,388 International members, although these numbers do not adequately express the continuing turnover of about 24,000 members per year, necessitating very active recruitment efforts to make up for the losses. The Membership Affairs Committee (MAC) is experimenting with several discount dues categories in order to try to improve member retention.

While their numbers are still small (<5 members) there are US Senate and House Chemistry caucuses.

There are 688 colleges and universities offering ACS certified B.S. chemistry degrees.

Submitted by Mark Frishberg, CalACS Councilor, with input from our other Councilors, Past ACS Presidents, and current Director-At-Large.



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- www.mboservices.net
- <http://www.calacs.org/page.asp?id=22>

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