

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

Volume 34 No. 5

MAY 2012 NEWSLETTER TOPICS

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May Dinner Meeting

The Clean Oceans Project

Nick Drobac and Captain Jim "Homer" Holm

Abstract

A "gyre" is a large-scale circular feature made up of ocean currents that spiral around a central point creating a whirlpool effect that pushes water and marine plastic debris to its center. As plastic enters the marine environment, currents like the Kuroshio off the coast of Japan, collect and transport it like a giant ocean conveyor belt laden with garbage bound for the North Pacific Gyre.

Estimates vary widely as to the size of this gyre - some research suggests that there are literally millions of tons of marine plastic debris distributed over 5 million square miles of ocean - but regardless of the exact size and mass of the garbage patch, one thing is clear; plastic garbage does not belong in our oceans.

The Clean Oceans Project (TCOP) is

an environmental non-profit organization formed in 2008 in Santa Cruz, California, by a group of concerned scientists, educators, activists, and business professionals out of a shared sense of urgency that plastic accumulations in the world's oceans are threatening the lives of millions of marine mammals, birds and fish.

Biographies**Nick Drobac**

TCOP Founder and Executive Director

Nick was born and raised on the central coast of California in the small beach town of Santa Cruz. He has



continued on next page

Chair's Message

In April, we observed Earth Day. Within the ACS, we have the Chemists Celebrate Earth Day program. This year, ACS held a poetry contest for students as a part of this celebration. Third graders and Eighth graders from San Carlos schools submitted their poems and our local winners' poems are featured elsewhere in this newsletter. We all hope that they will win some National recognition.

By the time this article is published, we will have held the first local poster session modeled after the National SciMix session. We have 12 people signed up to present their research and Amgen has agreed to open their facility in South San Francisco to host the poster session. This should be an excellent networking opportunity and



should provide a bridge between the excellent academic research being conducted locally and the very vibrant industrial research groups.

Last month, I wrote about our program to provide chemistry programs for children in homeless shelters.

There are 4 homeless shelters in San Mateo County that house families with children. Some of these shelters have up to 80 children at any given week. The shelters offer after school programs, mostly arts and literature. We plan on taking our various hands-on science experiments to these shelters. Our goal is to offer some fun science to this underserved group and make them aware that anyone can do sci-

continued on next page

May Dinner Meeting

Date: Thursday, May 17, 2012

Time: 6:00 p.m. Social Hour
7:00 p.m. Dinner
8:00 p.m. Presentation

Speakers: Nick Drobac and Captain Jim "Homer" Holm
The Clean Oceans Project

Location: Biltmore Hotel & Suites
2151 Laurelwood Boulevard
Santa Clara, CA 95054

Cost: \$26, Greek chicken or cheese ravioli

Reservations: www.scvac.org
Sally Peters 650-854-4614

Reservations should be made by May 14th stating your name, address, company/school affiliation, number of people in party. Watch the web site for more information. If you are unable to honor your reservation and do not cancel by Wednesday, May 16th, you will be invoiced following the dinner meeting.

The Clean Oceans Project, continued

spent most of his life diving in or sailing across the Monterey and San Francisco Bays, as well as the Adriatic, Mediterranean, and Caribbean seas. As a result, he developed a deep connection with the marine environment which in large part has been the driving force in creating The Clean Oceans Project.

Growing up in the 60's and 70's in a progressive community like Santa Cruz, Nick was exposed to issues of environmental and social justice at an early age. As a child, and long before the green movement ushered in the era of curbside pick-ups, Nick's mom taught him about recycling. Each month, when the piles in the garage got too high, he and his brother would help her tie bundles of newspaper and crush aluminum and tin cans, and together they would drive across town to deliver their cargo to the one recycling center in the county.

Prior to forming The Clean Oceans Project with his partner Captain Jim "Homer" Holm, Nick worked in project management and sales in the construction industry.

Nick holds a BA in English Literature and a JD from Santa Clara University.



Captain Jim "Homer" Holm TCOP Founder and Operations Director

Captain Jim "Homer" Holm has been U.S. Coast Guard licensed since



1979, working for over 30 years in the maritime trades on various configurations of sail and motor craft including private luxury yachts, grand prix racing sailboats, marine research vessels, square-rigged training ships and fast rescue boats.

Captain Holm has crossed the Atlantic Ocean, sailed into the Mediterranean, North and Caribbean Seas, transited the Panama Canal, crossed the Pacific Ocean from California to Hawaii and back numerous times, and voyaged among many Pacific islands including Hawaii, French Polynesia, Fiji, Vanuatu, Australia, New Zealand and the Marshall Islands.

Captain Holm's management experience includes developing and operating acclaimed non-profit marine education programs for clients including O'Neill International and the Monterey Bay Aquarium, serving over 50,000 kids and 5,000 adults over the last fourteen

years. He has also been a successful fundraiser for people with Autism.

As Co-founder and Director of Operations for "The Clean Oceans Project", Captain Holm is tasked with identifying and developing the technologies that will play a key role in removing destructive plastic marine debris from the world's oceans.

Captain Holm feels extremely fortunate to reside on the beautiful central coast of California where an abundance of marine education resources and an awareness of environmental issues has provided him the perfect platform to share his knowledge and passion for the health of the sea. He is excited to discuss marine environmental and educational issues and invites inquiries through your favorite medium.

Chair's Message, continued from front page

ence experiments often using inexpensive, readily available household items. We received a \$2250 grant from National ACS to support this program. Bonnie Charpentier is leading these efforts. Please let her know if you would like to help. This could be a program where we really make a difference.

The May dinner meeting will return to our standard format and will feature an interesting presentation on The Clean Oceans Project. This is a Santa Cruz based organization dedicated to find solutions to remove the plastic debris from the oceans. This should be a fascinating talk.



Welcome to the Santa Clara Valley Section of ACS

Each month the section receives a spreadsheet from national ACS with the names of members new to our section. The members are either new to ACS, have transferred in from other areas, or are the newest members -- students. To welcome you to the section and get to know you, the Executive Committee offers new members a free dinner!! To encourage you to attend a monthly section dinner meeting, we would like you to be our guest. When you register, make certain to mention that you are a new member and you and a spouse (or friend) will be our

guests. The dinner meetings are often the 3rd Thursday of the month at a local spot, somewhat convenient to the entire section. If you are unable to attend in the evening, perhaps you would join us for an outreach event, like judging a science fair, participating in the Chemistry Olympiad, or a National Chemistry Week event in October. Then, there is our annual wine tasting and awards picnic in July. The local section is a volunteer organization. Please attend an event, volunteer to help, and get to know your local fellow chemists. Welcome!!

New Members List for April

Dr. Manickam Adhimoolum
Arunagirinathan
Gino Bautista
Jesus Benitez
Adam Berger
Dr. Ion Bitá
Dr. Marian C. Bryan
Yongjing Chen
Dr. Yeo-Myoung Cho
James Cuenca
Artem A. Dyachenko
Jay Fitzgerald
Prof. Curtis Woodrow Frank
Prema Gangadhara IV
Jeff Gardina
John B. Gary
Bijee George
Merid Haile
Zachary Benjamin Hill
Helen Holder

Gary Hopkins
Dr. Kelly Huggins
Dr. Susan M. Janes
Stefan Jenkins
Erik Johnson
Dr. Henry B. Johnson
Laura Camille Jones
Matthew Kanan
Ann P. Kich
Yihong Li
Gregory R. Luedtke
Dr. Eisuke Murakami
Deepa Nadarajah
Masayoshi Nagaya
Servando Gregorio Ponce Jr.
Daniel Prudhomme
Dr. Vivek K. Rajwanshi
Mark Robert Sanford
Dr. Marcelo Saraiva
Dr. Michael Schelle

Bonggeun Shong
Dr. Rick St. John
Jimmy Sugahara
Thomas Edward Tarara
Jose Emilio Villarreal
Dr. Kuangjen Wu
Junpeng Xiao
Akira Yamamoto
Hao Yan
Hong Yang
Hong Yang
Nuoya Yang
Shuhai Zhao
Kai Zheng
Dr. Xiaolin Zheng
Kevin Zhou
Jiang Zhu
Yuan Zhuang

Councilor Talking Points

by Sally Peters

The 243rd Spring ACS Meeting in San Diego went smoothly last month. Attendance was high, symposia were especially good, the exhibition was well attended, and the weather was beautiful! Although some Easterners bragged their weather was warmer than that in San Diego!

Election Results

- The councilors selected (by electronic ballot) Dr. Thomas Barton of Iowa State University and Dr. Luis Echegoyen of the University of Texas, El Paso, to be candidates for President-elect, 2013.
- The Committee on Nominations and Elections announced the selection of the following candidates for Directors-at-Large for a 2013-2015 term: Carol A. Duane, Valerie J. Kuck, Helen (Bonnie) A. Lawlor, and Ingrid Montes. All four women are very capable candidates, who have served the society in many roles for many years. Carol Duane and Valerie Kuch are both recipients of our section's Radding Award. The member election of the President-elect and two Directors-at-Large will occur this Fall.

The Society's Finances

- Despite the sluggish economy, the ACS generated strong operating results in 2011. Total revenue was \$472.0 million, up 1.8% over 2010. The net from Operations was \$20.9 million, or \$7.7 million favorable to budget. This result was attributable to better-than-expected performance by the ACS Publications Division and careful expense management across the Society. While operating results were favorable, Unrestricted Net Assets declined from \$130.5 million to \$102 million. The decline was primarily due to a sizable accounting charge related to the Society's closed postretirement benefit plans. The ACS ended the year in compliance with four of the five Board-established financial guidelines.
- Member dues are creeping up another dollar to \$151 for 2013. The council voted again in support of the inflation-adjustment formula in the ACS Constitution and Bylaws.

Member Statistics

- The Society ended 2011 with 164,215 members – the highest number in Society history. 24,249 new members were elected into the Society. Increases in undergraduate

student members and international members accounted for much of the growth. Unfortunately, for the same period about 20,000 members did not renew their membership. The Committee on Membership Affairs (MAC) is especially focused on efforts to retain current ACS members.

- The Committee on Education reported that the Society now has more than 16,500 student members.

ACS vs. Leadscope Litigation

- The General Counsel report included a briefing on the ACS versus Leadscope litigation.

As previously reported, the ACS has appealed to the Ohio Supreme Court, and the Court agreed to hear the case. Briefs have been filed in support of our position by several prestigious organizations, including the Ohio Attorney General, the Ohio Chamber of Commerce, the Ohio Manufacturers Association and the Ohio State Bar Association. On September 7, the Supreme Court heard oral arguments in the case, and a link to the arguments can be found on acs.org. A ruling has not been issued but could come at any time. A more detailed report appears in the most recent edition of the Councilor Bulletin. Please contact the national Office of the Secretary if you would like a copy.

Special Discussion Item

- A special discussion item was put on the Council agenda for this meeting. ACS President Bassam Shakhshiri presented and moderated a discussion on "What is your reaction to the proposed topics for the ACS Climate Science Toolkit?" President Shakhshiri's working group on ACS Climate Science has developed a preliminary web-based toolkit that ACS members can use as a resource for understanding and communicating basic climate science. Following the presentation, Councilors engaged in a robust discussion on the proposed toolkit, and offered numerous suggestions for consideration.

Meeting Attendance

- As of March 28, the ACS spring national meeting had 16,921 registrants including 8,974 regular attendees and 5,742 student members. The only national meetings with higher attendance are those that were held in San Francisco. This was a very high

number of new student members!

- 11,716 papers were presented.
- The exhibition contained 408 booths and generated money for the meeting.
- The Committee on Economic and Professional Affairs (CEPA) reported that the unemployment rate for ACS chemists was at 4.6%. Thirty-one employers were registered at the Career Center with 85 jobs open for interviews.

Etc., etc., etc., or Better Known as Additional Information

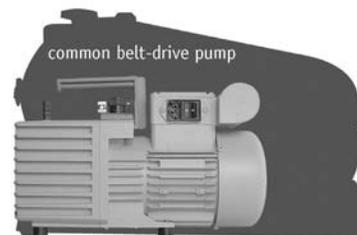
- The ACS received a \$2.5 million grant from the Dow Chemical Company to become the sole sponsor of the 2012 International Chemistry Olympiad, which will be held with the ACS as the host in July at the University of Maryland and Washington, D.C. The ICO has not been held in the U.S. since 1992. We hope to have a SCV student participant!
- The following is a list of URLs and email addresses presented on slides at the Council meeting. You will find the information

continued on next page

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info@vacuubrand.net 888-882-6730

Councilor Talking Points, continued

noted on these sites helpful.

Safety

safety@acs.org – email address for sharing ideas on “How can the ACS best cultivate a culture of safety in US universities and colleges?”

www.acs.org/safety - information on the Committee on Chemical Safety including “Creating Safety Cultures in Academic Institutions”

Employment/Careers

www.acs.org/careers - information on ACS career resources

www.acs.org/ei - information on the ACS Entrepreneurial Initiative (Training and Resources)

Local Section Resources

www.acs.org/getinvolved - grant information, important deadlines, officer resources

www.acs.org/forms - submit annual reports, record meetings, activities and events year round

speakers@acs.org - nominate speakers for the Online Speaker Directory

www.acs.org/strategicplan - information on the new ACS Strategic Plan for 2012 and Beyond

www.acs.org/bulletin5 - location of the Society’s governing documents and unit bylaws, and information on the petition process to amend the Society’s governing documents

bylaws@acs.org - email address for questions to the Committee on Constitution and Bylaws

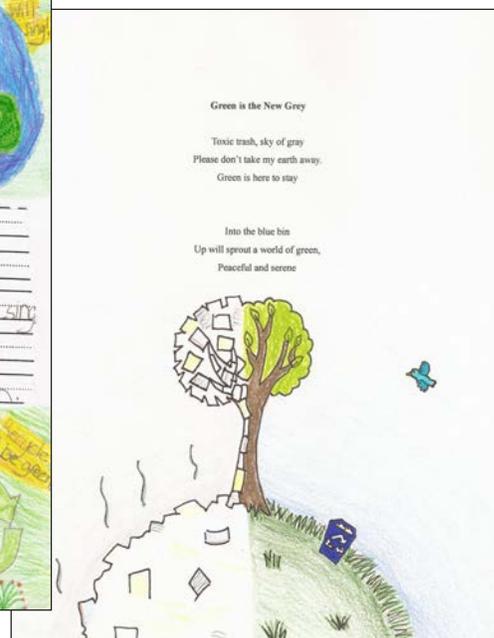
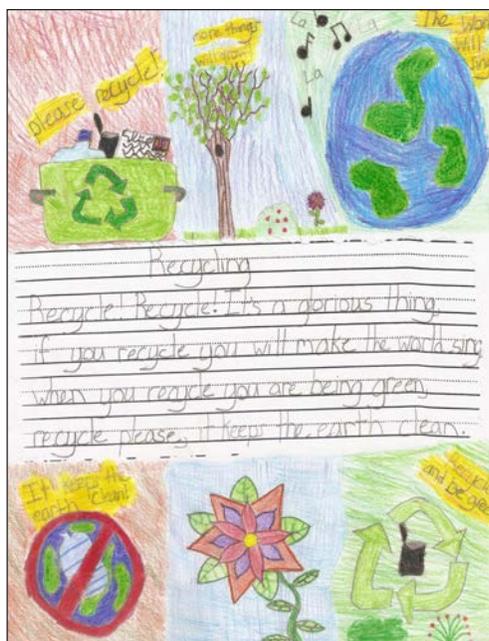
www.acs.org/climatescience - information on the Climate Science Toolkit

2012 Chemists Celebrate Earth Day Activities

by Jeanette Medina

To promote the appreciation for Chemistry in our communities, the Santa Clara Valley ACS joined the National Chemists Celebrate Earth Day Poem contest. This year’s theme was: “Rethinking Recycling – It’s Easy to Be Green!” Jeanette Medina contacted local Elementary schools to promote the poem contest and created awareness of the role of Chemistry in working for a better world through the use of recyclable plastics and the use of cleaner fuel alternatives. Ninety two total entries from the San Carlos Elementary School District were received. The poems were judged by Cañada College students and members of the SCVACS

Executive committee based on word choice, adherence to the theme, poem format, and relevance of the illustration. Ten poems were selected to receive honorable mention. These ten students also received a certificate for free ice cream from a local ice cream shop that uses recyclable and compostable cups, bowls and utensils. One representative poem per grade category was forwarded to the National 2012 CCED poem contest: “Recycling” by Samantha and “Green is the New Grey” by Maddy. Thank you to Mrs. Martin, Mrs. Brenner, Mrs. Mitchell-Ardwan and Mr. Richards for encouraging their students to submit an entry to the poem contest.



ACS Award at 2012 Synopsis Science Fair

The ACS prize was divided into a first place, a second place, and a team award. First place is \$500, second place is \$200, and \$300 is divided among the team.

First place – Anjini Karthik, an eighth grader at Challenger School; project - Green Nanotechnology: Novel Environmentally Benign Synthesis of Gold Nanoparticles for Bioapplications.

Second place – Leo Yu, a ninth grader at Harker School, but who performed his research at Schmahl Science Workshop under the direction of Mark Kent; project - The Effects of Rhamnolipid Biosurfactant on Various Concentrations of Hydrocarbons.

Team award – Eesha Khare and Paulomi Bhattacharya, a pair of eleventh graders at Lynbrook High School and Harker School, respectively; project – Synthesis and Characterization of Novel Internal Alkyne-Stabilized Ruthenium Nanoparticles for Molecular Electronics Applications: the Effect of Ligand Structure and Interfacial Bonding on

Optoelectronic Properties.

In addition, the Promethium Chapter of Iota Sigma Pi Prize went to Anjini Karthik.

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CHEMEMPLOYMENT ABSTRACTS MAY 2012

For a complete list of current abstracts, please visit: www.scvacs.org/Local_Folder/abstract.htm

CHEMEMPLOYMENT ABSTRACT 3975

Position Title: Principal Scientist

Job Description: Novartis Pharmaceuticals in San Carlos has an opportunity for a Scientist, who will independently design and perform packaging and device materials chemical analysis studies for combination products. Trace analysis including residual solvents, extractables and leachables methods are primary areas of focus. Duties will involve performing lab work that includes FTIR, Mass Spectrometry, GC, HPLC, and may involve supervising work at contract labs. Data analysis, interpretation and report writing are required.

QUALIFICATIONS DESIRED:

Education: PhD in a scientific discipline is required. Equivalent experience may be accepted.

Experience: A minimum of 2 years work experience in a research and/or development environment is required. Post-doctoral work may serve as experience. Exceptional non-PhDs with demonstrated capabilities and/or significant experience may also be considered. Must be able to demonstrate hands-on technical proficiency with Mass Spectrometry and Chromatography; this includes chemical structure elucidation and troubleshooting. Must also demonstrate scientific creativity, collaboration with others and independent thought. Must have excellent verbal and written communication. Must be able to compose sound written work with no assistance. Strong organizational and problem solving skills are required. Must be able to work as part of a team and demonstrate good interpersonal skills. Good computer skills are required. Working knowledge of MS word, Excel, Power point is expected. Experience working in an FDA regulated environment and knowledge of current GMPs as they apply to laboratory practices are highly desired.

LOCATION, SALARY, EMPLOYER:

Job Location: San Carlos, CA

Salary: DOE

Employer: Novartis was created in 1996 through the merger of Ciba-Geigy and Sandoz, two companies with a rich and diverse corporate history. Throughout the years, Novartis and its predecessor companies have discovered and developed many innovative products for patients and consumers worldwide. We want to discover, develop and successfully market innovative products to prevent and cure diseases, to ease suffering and to enhance the quality of life. We also want to provide a shareholder return that reflects outstanding performance and to adequately reward those who invest ideas and work in our company.

Application Instructions: Please visit our website at www.novartis.com/careers or submit your resume to regina.roodhouse@novartis.com

CHEMEMPLOYMENT ABSTRACT 3978

Position Title: Quarterly Adjunct Lecturer in Organic Chemistry Lab

Job Description: Teach one or more laboratory sections of Chemistry 31 (Organic Chemistry I), during the fall quarter of the 2012-2013 academic year. Re-employment in subsequent quarters of the academic year may be possible. For more details regarding responsibilities, go to <http://www.scu.edu/hr/careers/faculty.cfm?id=3298>

QUALIFICATIONS DESIRED:

Education: M.S. in chemistry (Ph.D. desirable).

Experience: Prior experience teaching organic chemistry laboratory essential. SCU does not sponsor any visa applications for this position. The successful candidate(s) must be able to provide evidence of identity and legal authorization to work in the United States.

LOCATION, SALARY, EMPLOYER:

Job Location: Santa Clara, CA

Salary: \$3,300 per laboratory section

Employer: Pending funding, the Department of Chemistry & Biochemistry at Santa Clara University, a Jesuit, Catholic university with an ACS-approved undergraduate program, is accepting applications for quarterly adjunct lecturer in Organic Chemistry.

Application Instructions: Interested applicants should submit the following items to jgilbert@scu.edu on or before May 11, 2012: a curriculum vitae, statement describing applicant's experience or interest in working with people of diverse cultures and identities; copies of undergraduate and graduate transcripts; and two letters of recommendation.

CHEMEMPLOYMENT ABSTRACT 3977

Position Title: Quarterly Adjunct Lecturer in General Chemistry Lab

Job Description: Teach one or more laboratory sections of Chemistry 11, General Chemistry I, during the fall quarter of the 2012-2013 academic year. Re-employment in subsequent quarters in the same academic year may be possible. For more details, go to <http://www.scu.edu/hr/careers/faculty.cfm?id=3297>

QUALIFICATIONS DESIRED:

Education: M.S. in chemistry (Ph.D desirable)

Experience: Prior experience teaching general chemistry laboratory essential. SCU does not sponsor any visa applications for this position. The successful candidate(s) must be able to provide evidence of identity and legal authorization to work in the United States.

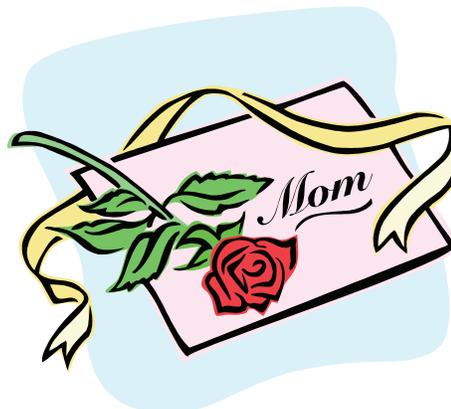
LOCATION, SALARY, EMPLOYER:

Job Location: Santa Clara, CA

Salary: \$3,300 per laboratory section.

Employer: The Department of Chemistry & Biochemistry at Santa Clara University, a Jesuit, Catholic university, is an ACS-approved undergraduate program.

Application Instructions: Interested applicants should submit the following items to jgilbert@scu.edu on or before May 11, 2012: a curriculum vitae, statement describing applicant's experience or interest in working with people of diverse cultures and identities; copies of undergraduate and graduate transcripts; and two letters of recommendation.



Happy Mother's Day



SANTA CLARA VALLEY SECTION
AMERICAN CHEMICAL SOCIETY
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<http://www.scvacs.org>

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Past Chair	Abby Kennedy	209-640-2005	akennedycali2007@yahoo.com
Secretary	Karl Marhenke	831-688-4959	karlmar@cruzio.com
Treasurer	Ihab Darwish	650-594-1654	darwishis@yahoo.com

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2010-2012	Sally Peters	650-854-4614	sallybrownpeters@gmail.com
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2011-2013	George Lechner	408-226-7262	glechner@aol.com
2011-2013	Herb Silber	408-924-4954	hbsilber@science.sjsu.edu
2012-2014	Abby Kennedy	209-640-2005	akennedycali2007@yahoo.com
2012-2014	Ean Warren	650-329-4554	ewarren@scvacs.org

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2010-2012	Stephanie Bachmann	408-429-9681	s_gehling@hotmail.com
2011-2013	Mark Kent	408-736-0989	marklent@yahoo.com
2011-2013	Harry Ungar	831-708-2049	haungar@cruzio.com
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2012-2014	David Parker	408-615-4961	dparker@santaclaraca.gov

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ChemPloyment Abstracts

Director	Charles Sullivan	650-728-7034	cdansullivan@sbcglobal.net
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FUTURE MEETINGS

- May 17** Nick Drobac and
Captain Jim "Homer" Holm
The Clean Oceans Project
Biltmore Hotel
Santa Clara, CA
<http://thecleanoceansproject.org>
- Jun 25-26** Basics of Polymer Structure &
Characterization
Golden Gate polymer Forum
www.ggpf.org
- Jul 14** Annual Picnic and Awards Dinner
Department of Chemistry
Stanford, CA
- Aug 19-23** Fall National ACS Meeting
Philadelphia, PA