

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

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MARCH 2011 NEWSLETTER TOPICS

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Shirley B. Radding

1922-2011

Our Shirley passed away on January 17. Her obituary appeared in the San Jose Mercury News on February 7. A private memorial service was held on Feb. 10 at Temple Emanuel in San Jose.



An additional notice will appear soon in Chemical and Engineering News.

Shirley was born in Detroit, where she grew up and was taught high school chemistry by the mother of famed aviator Charles Lindbergh. She graduated from Wayne State University in 1944 with a Bachelor's degree in chemistry. She worked for a Detroit pharmaceutical house for a short time until her father was hired by the Navy and the family moved to San Francisco. There, she worked briefly at the Navy's Hunter's Point chemistry lab and then began her long career as a

chemist at the Stanford Research Institute (now SRI International) in Menlo Park. After 40 years at SRI, Shirley retired and became a consultant, doing, among other things, literature searches.

She joined the national ACS in 1945, and remained active for over 65 years. The photo of her was taken at the 2009 picnic, when she was honored as a 65-year

continued on next page

April Dinner Meeting

Joint Meeting
with California Section

Date: Thursday, April 28, 2011

Time: 6:30 Networking and beer tasting
7:00 Dinner
7:30 Presentation

Location: Devil's Canyon Brewing Company
111 Industrial Road, #7
Belmont, CA 94002
www.devilscanyon.com

Speaker: Dr. Charles Bamforth,
Anheuser-Busch
Professor of Brewing
University of California, Davis
Beer: The Great Scientific Medium

Cost: \$27.00

Bar style buffet with sliders, wings, quesadillas, salad, beer, and dessert

Reservations: www.scvacs.org

Sally Peters 650-812-4994

Reservations MUST be made by Sunday, April 24th stating your name, address, company affiliation, and number of people in your party. Watch the web site for more information. If you are unable to honor your reservation and do not cancel by Tuesday, April 26th, you will be invoiced following the dinner meeting.

April Dinner Meeting Beer: The Great Scientific Medium

Dr. Charles Bamforth

Abstract

Beer: the most complex and fascinating of beverages when considered from a chemistry perspective. Which means that it is harder to make than any other drink. Brewers don't mess about with hyped rhetoric about their chosen specialty. They just get on and make a liquid that delights and does you good. And there is a beer for pretty much every occasion. Every drop a vintage.



Shirley B. Redding, continued from front page member. In 1954, she was a founding member of the Santa Clara Valley Section when it became independent of the California Section and she was a long-time Councilor for our Section. She served it in many other capacities, including being the Chair twice. For many years, the Section's dinner meetings and lectures were held at SRI. Shirley and her mother, Rose, would sit at the registration table and greet attending ACS members, collect the dinner money, and issue plastic name badges. After the talk, she would be seen at one of the auditorium exits, collecting the badges for re-use. Shirley sent welcoming letters to new members of the Section, welcoming them and helping them to feel at home. She hosted many meetings of the SCV Executive Committee at her home in Santa Clara. After the business and discussions were done, members and guests would enjoy coffee or tea, and cookies she had baked for the occasion. For years, she was in charge of the Section's Chememployment program, organizing and placing ads in the Silicon Valley Chemist for employment opportunities for the benefit of Section members. She continued supporting the program until her last days.

In 1994, the Section established the Shirley B. Redding Award, and Shirley was its first winner. It has been presented annually ever since, and will continue to be. It is one of the very few chemistry awards made throughout the ACS named for a woman chemist.

About 1999, Shirley received a special award from the ACS Fuels Division to recognize her contributions with organizing and sending out their meeting preprints. A charter member of the ACS Division of Chemistry and the Law, she served as its chair and in many other functions. In 2000, she received the Division's Lifetime Achievement Award. In 2009, Shirley's contributions to ACS were recognized by her election as a member of the first class of national ACS Fellows.

We have lost a great and generous lady, and a great friend of the ACS and of the Santa Clara Valley Section. Members are invited to make a tax deductible donation in Shirley's memory to the Monterey Bay Aquarium (or alternatively to the Santa Clara Valley Local Section for the Redding Award endowment fund).



Reminder

March Dinner Meeting

Reminder

Making Chemical Testing Relevant to Breast Cancer

Dr. Megan R. Schwarzman

Abstract

Although breast cancer is one of the leading causes of cancer and death in women, even the small numbers of chemicals that undergo safety testing are not routinely evaluated for their impacts on mammary (breast) tissue. Likewise, there is no well-established set of tests for screening chemicals for their ability to raise the risk of breast cancer.

In 2010, Dr. Schwarzman served as Principal Investigator of a project to tackle this issue. The Breast Cancer and Chemicals Policy project, supported by a grant from the California Breast Cancer Research Program, convened a panel of 20 scientists and policy experts to review the biological mechanisms associated with breast cancer and propose a strategy for screening and identifying chemicals that could increase the risk of the disease.



The panel followed a unique "disease endpoint" model, working backwards from a disease to identify the changes caused by chemicals that could serve as early indicators of toxicity. While this approach was recommended by the National Academy of Sciences in their report

"Toxicity Testing in the 21st Century", this is the first time it has been implemented for any disease, including breast cancer.

The Breast Cancer and Chemicals Policy project model is intended to dovetail with the State of California's Green Chemistry Initiative, as well as ongoing efforts by federal scientific agencies working to create new and more effective comprehensive chemical testing approaches to better protect human health.

March Dinner Meeting Joint Meeting with Palo Alto AWIS

Date: TUESDAY, March 22, 2011

Time: 7:00 Networking Dinner
7:30-7:45 Announcements
7:45-9:00 Presentation

Location: Xerox PARC
3333 Coyote Hill Road
Palo Alto, CA 94304

Speaker: Dr. Megan Schwarzman
UC Berkeley, School of Public Health
Making Chemical Testing
Relevant to Breast Cancer

Cost: \$10.00 Light dinner buffet

Reservations: www.scvacs.org
Sally Peters 650-812-4994

Reservations MUST be made by Sunday, March 20th, stating your name, address, company affiliation, and 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 Tuesday, March 22nd, you will be invoiced following the dinner meeting.

Call for Science Fair Judges

The next annual Synopsys Silicon Valley Science and Technology Championship will take place on Wednesday, March 9, 2011, at the San Jose McEnery Convention Center. Again, we anticipate a large turnout from grades 6 through 12 participating and at this time what they really need from our readers is some of their expertise. In other words, what they need are JUDGES! (especially in the botany, biology, biochemistry, chemistry, microbiology and behavioral/social sciences sectors). The interaction between judges and students is the heart of a science fair and this scientist-to-student encouragement, critiquing, and interest in their work are an integral part of the Championship. All the students benefit, not just the winners.

For returning judges, please register at: <https://www.science-fair.org/database/judge.php>. If you are a first-time judge, please request that they register at: <https://www.science-fair.org/database/judge.php?new>

Chair's Message

I recently took my dusty skis in for a tune-up and the young ski shop employee declared they are "old school". Not only did that make me feel ancient when I realized the



skis were possibly older than he was, it also started me thinking about ski technology and, naturally, what role new chemistry may have played in making my skis relatively ancient. A quick internet search brought up lots of information about ski technology and one especially good video on the making of alpine skis at <http://science.discovery.com/videos/how-its-made-alpine-skis.html>. It turns out the core of skis has not changed much—an ash log is still the best core, but the epoxy glues, graphite-fortified polyethylene and fiberglass layers

with infused glues were pioneered during my lifetime. In the end, my old school skis served me well during a recent trip to the Sierra Nevada Mountains and I felt a bit like my gold-mining forerunners that undoubtedly skied 'old school' before they pioneered the use of ski wax during the 1860's in California.

From skiing to spring...we're looking forward to a fantastic March dinner meeting - a special joint program with the Palo Alto Association for Women in Science. This intrepid non-profit group was founded in 1983 as a local version of the national AWIS that was founded in 1971. Relative to the ACS that was founded in 1876, this association is "new school", and yet their mission of providing networking opportunities for their members and raising public awareness of science and technology aligns nicely with our ACS goals. This is a great opportunity for you to network with new colleagues, learn about our neighboring PA-AWIS group and to hear a great talk by Dr. Meg Schwartzman

from the Breast Cancer and Chemicals Policy Project and UC Berkeley.

Finally, I'd like to announce the formation of a new committee in SCV-ACS that will be dedicated to awarding grants from a generous local donation in support of K-12 education. Email me at akennedycali2007@yahoo.com if you're interested in learning more. Time commitment is variable and your role will include naming the grant, reading proposals and awarding the grant. If you're interested in improving K-12 education and bringing our golden state school system back to its 'old school', elite status, this committee is for you!

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 -- the 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 Feburay

Eric Altman
Jeffrey William Anthis
Matthew Thomas Berry
Prof. Lynette Cegelski
Senping Cheng
Ryan Cheu
Christopher Corley
Indu Dager
Andrea Devis
Greg J. Duarte I
Stacey Falls
Rachel Frase
Nicholas Giustini
Dr. Peter Harms
Adrienne Haynes
Omar Hernandez
Prof. Angel Islas

Xianyun Jiao
Dr. Gavin O. Jones
Dr. Mark Joseph Karbarz
Fatma S. Kocak
Christopher T. Koppelmaa
Dr. Scott E. Lazerwith
Truc Le
Sandra Lee
Lap Yin Leung
Dr. Mingtao Liu
Jeremiah P. Malerich
Sarah Moore
Dr. Tue Nguyen
Dr. Aleksandr Noy
Olivier Rene
Dr. Gordon Rice
Amanda Schlimmer

Sarah Sherlock
Dr. Zhang Shigang
Alison L. Sikora
Jagbir Singh
Dr. George C. Stafford Jr.
Nie Tang
Dr. Hanafi Tanojo
Ian Faulkner Tenney
Michael Thompson
Ling Tong
Kaitlyn Mariah Trillo
Dustyn Uchiyama
Kristina Vukic
Yangming Wang
Shaun Wong
Hong Ye
Kristin Ziebart

SPLASH is Coming to Stanford

April 16-17, 2011

In 1957, MIT students first started running short educational programs for high school students to explore fun and interesting topics on the MIT campus. It is called Splash! And it is the program that brings high and middle school students from everywhere to Stanford's campus for a two-day learning extravaganza. Classes are taught by Stanford undergraduates, graduate students, and other community members.

See www.stanfordesp.org for more information or contact Howard Peters at peters4pa@sbcglobal.net.



Color Changing Carnations for St. Patrick's Day

Where does the water go when a plant is watered?

This one is in honor of St. Patrick's Day. Your kids can take green flowers to school and amaze their friends.

Where does the water go when a plant is watered? With this experiment, children can discover for themselves how essential the functions of roots and stems are to plant growth. As the colored water is absorbed, students will be able to see how the water is absorbed into the plant and the petals of the carnation change color.

Materials:

- 6 white carnations
- 6 plastic cups
- Food coloring (red, yellow, blue, and green)
- Knife (you'll need an adult helper for this)
- Water

Procedure:

1. Fill each cup half full with water.
2. Add about 20-30 drops of food coloring to each cup of water. In this case, more food coloring is better!
3. Before placing any of the flowers in the colored water, have an adult trim the stem of each flower at an angle to create a fresh cut. For cut flowers, it is important for the stem tubes to be filled with water. If air gets in the tube no water can move up the stem. Many gardeners and florists cut stems under water so no air bubbles can get in to break the tube of water and make the flower wilt.
4. Place one freshly cut white carnation in each of the cups of colored water. Save the remaining two carnations for the next step. Make some predictions: Which color will be soaked up first? How long will it take?
5. This popular trick is called "Split Ends" and it requires some help from an adult. Have your adult helper use a sharp knife to slit the stem straight down the middle.

Put each half of the stem into a cup of different colored water (try positioning the red and blue cups next to each other, for example). Make a few more predictions: Which color will be soaked up? Will the colors mix to make a new color? Just remember to keep the ends of the stem wet at all times and make fresh cuts on the ends.

6. You'll want to check back every few hours to see how things are progressing. It may take as long as 24 hours for the colored water to work its way up to the white petals. At the conclusion of your experiment, remember to examine the whole plant carefully including the stems, leaves, buds, and petals to find every trace of color.

How does it work?

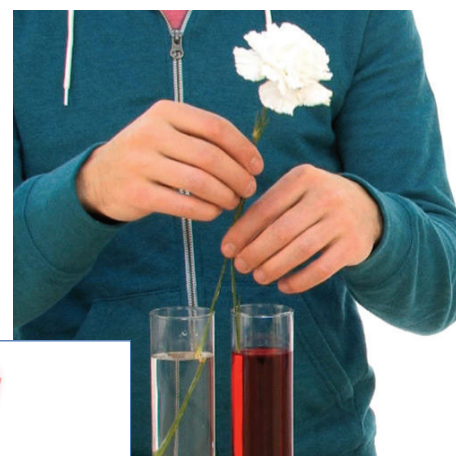
As you probably noticed, most plants have a "drinking" problem. Okay, in this case it's a good problem. Most plants "drink" water from the ground through their roots. The water travels up the stem of the plant into the leaves and flowers where it makes food. When a flower is cut, it no longer has its roots, but the stem of the flower still "drinks" up the water and provides it to the leaves and flowers.

Okay, now it's time to get technical. There are two things that combine to move water through plants -- transpiration and cohesion. Water evaporating from the leaves, buds, and petals (transpiration) pulls water up the stem of the plant. This works in the same way as sucking on a straw. Water that evaporates from the leaves "pulls" other water behind it up to fill the space left by the evaporating water, but instead of your mouth providing the suction (as with a straw) the movement is due to evaporating water. This can happen because water sticks to itself (called water cohesion) and because the tubes in the plant stem are very small (in a part of the

plant called the xylem). This process is called capillary action.

Coloring the water with food coloring does not harm the plant in any way, but it allows you to see the movement of water through the roots to the shoots. Splitting the stem simply proves that the tiny tubes in the stem run all the way from the stem to the petals of the flowers. Our unofficial tests indicated that the blue dye went up the carnations the fastest, followed by the red dye and then the green dye.

Like colored dyes in this experiment, some chemicals that pollute our waters can get into the soil and ground water and contaminate our vegetables and plants growing in the soil. Some chemicals and pollutants, just like the color dyes, may travel up into the plant and affect its health or growth.



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ACS Mobile provides readers with a searchable, multi-journal, up-to-the-minute live stream of new peer-reviewed research content (Articles ASAPSM) published across the Society's preeminent portfolio of scholarly research journals, including the flagship Journal of the American Chemical Society.

The application also includes a "Latest News" feed from Chemical and Engineering News - the Society's industry-leading magazine and preferred source of online news for its more than 161,000 member professionals.

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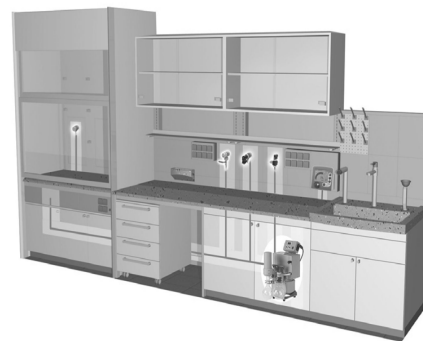
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Female Nobel Laureates and other Famous Women in Chemistry

National Women's History Month

By 1986, 14 states had already declared March as Women's History Month. This momentum and state-by-state action was used as the rationale to lobby Congress to declare the entire month of March 1987 as National Women's History Month. In 1987, Congress declared March as National Women's History Month in perpetuity. A special Presidential Proclamation is issued every year which honors the extraordinary achievements of American women. For more information visit:

<http://www.nwhp.org/whm/history.php>

Of the 159 individuals awarded the Nobel Prize in Chemistry, only four are women. Two of these four women, Marie Curie and Dorothy Crowfoot Hodgkin, were awarded with unshared Chemistry Prizes.

1911 - **Marie Curie** (also awarded the 1903, Nobel Prize in Physics) is considered the most famous of all women scientists. She was the only woman ever to win two Nobel Prizes. By the time she was 16, Marie had already won a gold medal at the Russian lycée in Poland upon the completion of her secondary education. In 1891, almost penniless, she began her education at the Sorbonne in Paris. In 1903 her discovery of radioactivity earned her the Nobel Prize in physics. In 1911, she won it for chemistry.

1935 - **Irène Joliot-Curie** was the daughter of Marie Curie. She furthered her mother's work in radioactivity and won the Nobel Prize for discovering that radioactivity could be artificially produced.

1964 - **Dorothy Crowfoot Hodgkin** discovered the structures of penicillin and vitamin B(12). She won the Nobel Prize for determining the structure of biochemical compounds essential to combating pernicious anemia.

2009 - **Ada Yonath** is an Israeli scientist and leading researcher

in the field of structural biology. Yonath shared the prize with Britain's Venkatraman Ramakrishnan and Thomas A. Steitz, an American, for studies of the structure and function of the ribosome.

In addition to the Female Nobel Prize winners, there are a number of very famous women chemists in history. Again, this isn't meant to be a comprehensive list but instead something to spread the word of the amazing work of women chemists in history.

Rosalind Franklin - (Great Britain, 1920–1958) Rosalind Franklin used x-ray crystallography to see the structure of DNA. Watson and Crick used her data to propose the double-stranded helical structure of the DNA molecule. The Nobel Prize could only be awarded to living persons, so she could not be included when Watson and Crick were formally recognized with the 1962 Nobel Prize in medicine or physiology. She also used x-ray crystallography to study the structure of the tobacco mosaic virus.

Ruth Benerito - (USA, born 1916) Ruth Benerito invented wash-and-wear cotton fabric. Chemical treatment of the cotton surface not only reduced wrinkles, but could be used to make it flame resistant and stain resistant.

Ruth Erica Benesch - (1925-2000) Ruth Benesch and her husband Reinhold made a discovery that helped explain how hemoglobin releases oxygen in the body. They learned that carbon dioxide functions as an indicator molecule, causing hemoglobin to release oxygen where car-

bon dioxide concentrations are high.

Carolyn Bertozzi - (USA, born 1966) Carolyn Bertozzi has helped design artificial bones that are less likely to cause reactions or lead to rejection than their predecessors. She has helped create contact lenses that are better-tolerated by the cornea of the eye. She received a MacArthur "genius" award at age 33. This makes her among the youngest scientists to receive this award

Marie Daly - (USA, 1921–2003) In 1947, Marie Daly became the first African American woman to earn a Ph.D. in chemistry. The majority of her career was spent as a college professor. In addition to her research, she developed programs to attract and aid minority students in medical and graduate school.

Edith Flanigen - (USA, born 1929) In the 1960s, Edith Flanigen invented a process for making synthetic emeralds. In addition to their use for making beautiful jewelry, the perfect emeralds made it possible to make powerful microwave lasers. In 1992, Flanigen received the first Perkin Medal ever awarded to a woman, for her work synthesizing zeolites.

Alice Hamilton - (USA, 1869–1970) Alice Hamilton was a chemist and physician who directed the first governmental commission to investigate industrial hazards in the workplace, such as exposure to dangerous chemicals. Because of her work, laws were passed to protect employees from occupational hazards. In 1919 she became the first female faculty member of Harvard Medical School.

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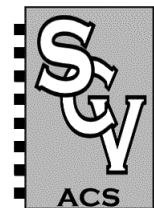
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Call for Nominations Shirley B. Radding Award



The Santa Clara Valley Section of the American Chemical Society (ACS) announces the call for nominations for the 2011 Shirley B. Radding Award.

First awarded in 1994 to its namesake, the Shirley B. Radding Award annually honors someone who has been a member of the ACS for at least 20 years. Nominees must have demonstrated dedicated, unselfish leadership, service and significant contributions over a sustained period of time to industrial, applied or academic chemistry and to the ACS through elected or appointed positions at local, district and national levels.

Award Criteria

- Member of the American Chemical Society for more than twenty (20) years.
- Demonstrated dedicated and unselfish service to ACS and its members over a

sustained period of time.

- Provided leadership through elected and appointed ACS positions at local, district and national levels.
- Made significant contributions to industrial, applied or academic chemistry.

The award consists of an honorarium of \$1,000 and a suitably inscribed memento. Nominations must consist of at least one letter of nomination stating how the nominee's work relates to all aspects of the award. It is strongly recommended that seconding letters accompany the nomination.

Nominations are due on or before May 1, 2011, and may be sent electronically to Radding-Award@scvacs.org or be mailed to:

Radding Award Committee
Santa Clara Valley Section ACS

Post Office Box 395
Palo Alto, CA 94302



Previous Award Recipients

1994	Shirley B. Radding (deceased)
1995	Agnes Ann Green (deceased)
1996	John F. "Jack" Riley (deceased)
1997	Howard M. Peters
1998	Alan C. Nixon (deceased)
1999	Valerie J. Kuck
2000	Halley A. Merrell
2001	Norman A. LeBel (deceased)
2002	Paul H. L. Walter
2003	Jean'ne M. Shreeve
2004	Maureen G. Chan
2005	Glenn Fuller
2006	Janan M. Hayes
2007	Merle I. Eiss
2008	Dorothy J. Phillips
2009	Bryan Balazs
2010	Herbert B. Silber

Committee on Nomenclature, Terminology and Symbols

As the International Year of Chemistry 2011 opens, the ACS Committee on Nomenclature, Terminology and Symbols will continue to follow the progress of the redefinition of the five SI Base Units: kilogram, Kelvin, ampere, mole, and candela. Definition for the second and the meter (or metre) will remain unchanged.

All SI Base Units are significant in the practice of chemistry and chemical education but the kilogram and the mole are of special interest. Knowing that these re-definitions were progressing, the ACS Committee on Nomenclature, Terminology and Symbols has been monitoring and, to the extent possible, engaging in the discussions surrounding these re-definitions. Our goal has been to keep the ACS membership informed through our previous communications and reports to Council.

A draft resolution containing the proposed new definitions is in preparation by the Consultative Committee on Units (CCU) of the International

Committee of Weights and Measures (CIPM). All of the proposed definitions are in the form of "fixed constant" definitions that rely upon values of constants that are recognized as "invariants of nature." It is anticipated that these recommendations to CIPM will be present-

ed for adoption at the forthcoming General Conference on Weights and Measures to be held in October 2011.

We are grateful to Dr. Ian Mills, President of the CCU, for sharing the following table.

SI Base Unit	Symbol	Reference value used to define the unit		
		In current SI	In the new SI	
second	s	$\Delta\nu(^{133}\text{Cs})_{\text{hfs}}$	$\Delta\nu(^{133}\text{Cs})_{\text{hfs}}$	Cs hyperfine splitting
meter (metre)	m	c	c	Speed of light in vacuum
kilogram	kg	$m(\text{K})$	h	Planck constant
ampere	A	μ_0	e	Elementary charge
Kelvin	K	T_{TPW}	k	Boltzmann constant
Mole	mol	$M(^{12}\text{C})$	N_{A}	Avogadro constant
candela	cd	K_{cd}	K_{cd}	Luminous efficacy of a 540 THz source

Highlights of the January Mosher Award Presentation

Photos courtesy of Lois Durham



Abby Kennedy, Mark Tobin and Carol Mosher



Dr. Tobin Marks



Bob Glemmo and Bruce Raby



Marjorie Balazs and Mark Carmenzind



Yvonne Walbroehl and Mark Kent

CHEMEMPLOYMENT ABSTRACTS MARCH 2011

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

CHEMEMPLOYMENT ABSTRACT 3958

Position Title: Polymer and Plastics Development Process Engineer

Job Description:

- specify and commission equipment
- develop and implement new processes for product development and manufacturing
- support or conduct pilot and small manufacturing trials
- manufacturing support; optimize on-going processes, continuous improvement; maintenance/preventative maintenance
- identify areas for cost control and implementing changes to achieve cost reduction targets

QUALIFICATIONS DESIRED:

Education: M.S. in Engineering or equivalent experience

Experience:

- minimum 5 years industrial experience
- specific process development or manufacturing experience
- experience with a broad range of polymer materials used for coatings, adhesives, and extruded or molded articles
- experiment design and documentation

LOCATION, SALARY, EMPLOYER:

Job Location: Menlo Park, CA

Salary: TBD

Employer: Bay Materials conducts client driven research and development with a focus on product development requiring high performance or unique polymer materials. Bay Materials provides small scale manufacturing capability for scale up or transition of products to full scale manufacturing.

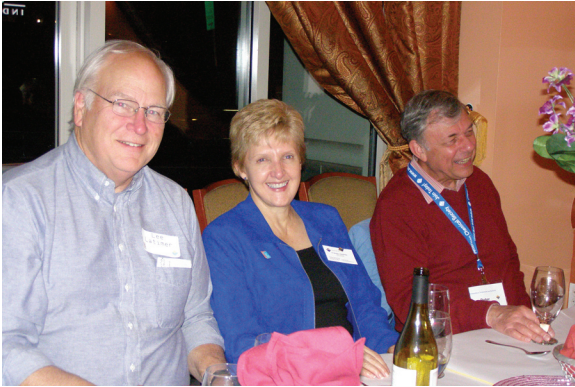
Application Instructions: Please review the Bay Materials web site <http://baymaterials.com> and contact Chris Vogdes for detailed job description. Please contact by E-Mail: cvogdes@baymaterials.com. Bay Area locals only.



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Highlights of the February 17th Dinner Meeting with Susan Kuchinkas

Photos courtesy of Lois Durham



Lee Latimer, Bonnie Charpentier and Peter Rusch



John and Bob Stutz



Susan Kuchinkas, George Packard and Rosa Ubillas



Xenia Leon and Karl Marhenke



Susan Kuchinkas



Abby Kennedy and Rex Maimait



Esther Chan



SANTA CLARA VALLEY SECTION
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SANTA CLARA VALLEY SECTION

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Chair-Elect	Natalie McClure	650-906-7831	nmclure@drugregulatoryaffairs.com
Past Chair	Bruce Raby	408-294-6718	bruceraby@att.net
Secretary	Karl Marhenke	831-688-4959	karlmar@armory.com
Treasurer	Ihab Darwish	650-594-1654	darwishis@yahoo.com

Councilors

2009-2011	Abby Kennedy	209-640-2005	akennedy@exelixis.com
2009-2011	Howard Peters	650-854-4614	peters4pa@sbcglobal.net
2009-2011	Ean Warren	650-329-4554	ewarren@scvacs.org
2010-2012	Linda Brunauer	408-554-6947	lbrunauer@scu.edu
2010-2012	Sally Peters	650-812-4994	Sally.Peters@parc.com
2010-2012	Peter Rusch	650-961-8120	pfrusch@aol.com
2011-2013	George Lechner	408-226-7262	glechner@aol.com
2011-2013	Herb Silber	408-924-4954	hbsilber@science.sjsu.edu

Alternate Councilors

2009-2011	Ihab Darwish	650-594-1654	darwishis@yahoo.com
2009-2011	David Parker	408-615-4961	dparker@santaclaraca.gov
2009-2011	Bruce Raby	408-294-6718	bruceraby@att.net
2010-2012	Lois Durham	650-322-3507	ldurham9398@sbcglobal.net
2010-2012	Natalie McClure	650-906-7831	nmclure@drugregulatoryaffairs.com
2010-2012	Stephanie Gehling	408-429-9681	s_gehling@hotmail.com
2011-2013	Mark Kent	408-736-0989	markkent@yahoo.com
2011-2013	Harry Ungar	831-708-2049	haungar@cruzio.com

Public Relations

Robert Galemmo 650-866-4702 rgalemmo@aol.com

Newsletter

Editor **Aaron Novack** 510-293-8111 aaronnovack@yahoo.com

ChemPloyment Abstracts

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

FUTURE MEETINGS

- Mar 22** Dr. Megan Schwarzman
Joint meeting with Palo Alto AWIS
Palo Alto Research Center
Palo Alto, CA
- Mar 27-31** National Meeting and Exposition
Anaheim, CA
- Apr 4-5** 16th Annual John Stauffer Lectures
Dr. John Bercaw
North Carolina State University
www.stanford.edu/dept/chemistry/events/conf/jstauffer/index.html
- Apr 28** Dr. Charles Bamforth
UC Davis Professor
Joint meeting with California Section
Beer: the Great Scientific Medium
Devil's Canyon Brewing Company
Belmont, CA
- May 19** Dr. Joanna Wysocka
Chemical and Systems Biology,
Stanford University
Place TBD
- Jun 21-23** 15th Annual Green Chemistry and
Engineering Conference
Washington, DC
<http://acswebcontent.acs.org/gcandel/>