**Chair's Message**

The New Year is underway. I hope that it will be a good year for you, especially for those of you who have lost jobs or have had your salaries reduced. We do need an uptick in the economy.

Our next Section meeting will be on Wednesday, February 17 at the Biltmore. Please note that the meeting will be held on a Wednesday instead of a Thursday this month. Our guest will be Dr. Valery Uhl who will tell us about how toxic can be healthy!

The next national ACS meeting will be March 21-25 in San Francisco.

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**March Dinner Meeting**

**Energetic Molecules and Russian Spies**

Dr. Joseph A. Castellano

**Abstract:**

This talk will discuss some of the government classified research on the synthesis and properties of nitrogen-fluorine compounds that was performed in the early 1960s at the Thiokol Chemical Company in Denville, New Jersey. Some of the reactions involving difluoramine (HNF₂), tetrafluorohydrazine (N₂F₄), and perfluoroguanidine (PFG) with various substances will be described. The objective of the research was to synthesize organic compounds with a large number of difluoramino (NF₂) groups for use in rocket propellant formulations. The higher the number of these groups per molecule, the more “energetic” the material. Formulas and samples of some of these materials were given to a Soviet KGB agent by one of our coworkers, code named “Cook,” by the KGB. The story of this espionage activity and the ultimate fate of Cook as well as his KGB “handler” will also be related. Finally, some possible future uses for nitrogen-fluorine compounds will be proposed.

**Biography:**

Joseph A. Castellano was born in

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**March Dinner Meeting**

**Date:** Thursday, March 18, 2010

**Time:**

- 6:00 Social Hour
- 7:00 Dinner
- 8:00 Presentation

**Location:** Biltmore Hotel & Suites

2151 Laurelwood Blvd.
Santa Clara, CA 95054

**Speakers:**

Dr. Joseph Castellano
Energy Molecules and Russian Spies

**Cost:** $27.00 with a choice of:
- Greek Chicken with olives and feta cheese
- Vegetarian Crepes

**Reservations:**

- www.scvacs.org
- Shirley Radding 408-246-2564
- 408-296-8625 Fax

Reservations should be made by March 15th stating your name, address, company affiliation, number of people in party, and menu selection. If you are unable to honor your reservation and do not cancel by Tuesday, March 16th, you will be invoiced following the dinner meeting.

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**See the Future of Sustainability through Chemistry**

Spring is the season for science fairs, which give students the opportunity to create experiments and report their results. Please consider becoming a judge for some of these fairs; it is a good way to meet students and give them some guidance.

Sciencepalooza, February 27, Santa Clara County fairgrounds

Synopsis Championship, March 16-17, San Jose Convention Center

Intel ISEF, May 9-14, San Jose Convention Center

See you at the Biltmore on the 17th!
Manhattan and raised in Brooklyn. He received his B.S. from the City College of New York (CCNY) and a Master of Science and Ph.D. from the Polytechnic Institute of New York University (formerly the Polytechnic Institute of Brooklyn).

Castellano began his professional career in 1959 with the Witco Chemical Company in Paterson, New Jersey developing analytical methods for industrial chemical manufacturing. In 1962, he joined Thiokol Chemical Company, Denville, New Jersey, where he performed classified rocket fuel research under contract to the U.S. Naval Research Laboratory. Castellano joined RCA Laboratories in Princeton, New Jersey in 1965 and performed pioneering research in liquid crystal materials and electronic displays. He was a member of the team that developed the world’s first liquid crystal display (LCD). In 1976, he founded Stanford Resources in San Jose, California and as CEO helped grow the company into a world leader in market research and analysis of the electronic display industry. He retired in 2003 following the merger of Stanford Resources with iSuppli Corporation.

Castellano has authored or co-authored more than 60 scientific/technical papers and two books. and he is the holder of 12 U.S. patents. He continues to be active in several international scientific associations and helps teach eighth-grade physical science as a volunteer in the RESEED Silicon Valley program.

Abstract:
Chemists know that simple alcohols are poisonous compounds. Ethanol is just the least toxic to humans. Many “toxic” compounds are beneficial to humans in small doses. After defining “moderate alcohol consumption” and explaining the “French Paradox,” Dr. Uhl will discuss the health benefits of moderate alcohol consumption. The talk will cover the health benefits of wine and will contrast wine being part of a meal or not part of a meal. Some of the compounds of wine that might be responsible for its beneficial nature will be discussed.

Biography:
Dr. Uhl is the Chief Judge and Director of the “North of the Gate” Wine Competition for the Sonoma-Marin Fair in Petaluma, California. She also judges for the San Francisco International Wine Competition, the Pacific Rim International Wine Competition, the Grand Harvest Awards, the National Women’s Wine Competition, the West Coast Wine Competition, the El Dorado County Fair Wine Competition, the International Japan Wine Challenge, the Mid American Wine Competition and multiple others.

Dr. Uhl has a degree in Viticulture Management, and graduated Cum Laude from U.C. Davis where she was a Taster for the U.C. Davis Enology and Food Science Departments. Her family owns gold medal Pinot Noir vineyards in the Green Valley sub-appellation of the Russian River AVA.

She has written papers and given lectures around the country on the health benefits of wine. She also educates various Bay Area clubs on wine and food pairings.
An Outreach Event for the ACS National Meeting

ACS President Joseph Francisco and the Committee on Community Activities will be hosting an outreach event for the San Francisco community on the day before the start of the upcoming 239th ACS national meeting, which will be March 21-25.

The event, called "Hands-on Sustainability: An Outreach Event of the American Chemical Society" will be held on Saturday, March 20th, 11:00 am to 2:00 pm at the California Academy of Sciences (CAS), 55 Music Concourse Drive, Golden Gate Park, San Francisco, CA 94118. The East Garden has been reserved, and if the weather prohibits an outdoor meeting, it will be held inside.

This outreach event will feature 12-18 hands-on demonstration stations where children will have the ability to learn about a variety of chemical properties and to explore chemistry in a fun and exciting environment. Members of the Santa Clara Valley and California Sections who would be able to assist with several pre-event and on-site key functions are invited and urged to volunteer. Contact Natalie McClure (nmcculre@drugregulatoryaffairs.com) or Paul Vartanian (pfvartanian@gmail.com).

1. Site visit: meet with the event planner at the CAS to discuss the set-up for the day (a diagram will be provided, and there will be a conference call with the volunteer prior to his or her meeting with the Academy staff).

2. Purchase supplies: we have found that it is more economical for local ACS members to purchase the items for the event in bulk and deliver to the site the morning of the event. A shopping list will be provided and shoppers will be reimbursed.

3. A runner: In the event that we need additional supplies on-site, someone will be needed to be available to go to the store to restock on the day of the event.

4. TENTATIVE: Approximately 25 easels for the signs will be needed.

5. TENTATIVE: Does the section have access to goggles?

6. Volunteer: we need volunteers to assist with all aspects of the event: set-up, help with activities, restock stations, goggle police (make sure the attendees are following safety procedures), etc.

If you are interested in assisting with any of these tasks or know someone who is, please let us know by January 29th. I encourage you to share this information with others.

Thanks in advance for your assistance.
Local Science Fairs in 2010

Contact: Howard Peters, peters4pa@sbcglobal.net
January to June of each year is the time for intense effort for IMPORTANT science and engineering fair competitions at the local, regional, state and international levels.

San Francisco Area Science Fairs - ISEF affiliate
San Mateo County students eligible
Judges needed: Thursday, March 25, 2010
Location: San Francisco County Fair Ground Building - Golden Gate Park
Contact: Greta Mayfield (925)842-3047 or Greta.Mayfield@chevron.com
For more information, visit www.usc.edu/CSSF/Fairs/300.html

San Mateo County Science, Math and Technology Fair
Date: February 1-4
Judges Needed: February 2, 2010
Location: Hiller Aviation Museum, San Carlos
www.biller.org/upcoming-events.shtml
Contact: Christine or Gary Nakagiri (650) 802-5337 or cjoy@smcoe.k12.ca.us
For more information, visit www.usc.edu/CSSF/Fairs/400.html

Sciencepalooza
East Side Union High School for first time science fair participants
Date: Saturday, February 27, 2010
Location: Santa Clara County Fair Grounds, San Jose.
For more information, visit www.outreach-foundation.org/judges.html

Monterey County Science and Engineering Fair
County High School students
Judges needed: Saturday, March 6, 2010
Location: California State University, Monterey Bay.
For more information, visit www.montereycountysciencefair.com/

Santa Cruz Science Fair
Santa Cruz County high school students
Date: Saturday, March 13, 2010
Location: Santa Cruz Civic Auditorium, Santa Cruz
For more information, visit www.sciencesantacruz.k12.ca.us/links.html

Synopsys Championship (aka Santa Clara Valley Science and Engineering Fair)
Date: Wednesday, March 17, 2010
Location: San Jose Convention Center, San Jose
For more information, visit www.outreach-foundation.org/judges.html

Tri-Valley Science and Engineering Fair
Date: March 30-April 2, 2010
Location: Livermore CA
For more information, visit: https://tvsf.llnl.gov

Intel International Science and Engineering Fair (ISEF) World Class Competition
Date: Sun-Fri May 9-14;
JUDGING Tues-Wed, May 11, 2010 5pm to 8pm and
May 12, 2010 from 8am to 6pm.
Location: San Jose Convention Center, San Jose CA
Contact: Dr. Howard Peters at peters4pa@sbcglobal.net
or Dr. Roy Okuda, SJSU at okuda@sjsu.edu.
For more information, visit: www.sciserv.org/isef or
www.isef2010sunjose.org/judges.html

California State Science Fair
Date: Monday-Tuesday, May 17-18, 2009
Location: California Science Center, LA.
For information, visit: www.usc.edu/CSSF/
For other affiliated U.S. Science Fairs, please visit: www.societyforscience.org/

SEE the Future of Sustainability through Chemistry

The global challenges of providing sufficient and secure energy, clean drinking water, and adequate food, housing, and medical care will require the creative input of all of the planet’s scientists. To address these challenges, ACS will host an innovative Sustainability Engagement Event (SEE) during the spring national meeting in San Francisco (www.acs.org/sustainability).

The event will help us to SEE this future. It will focus on collecting, refining, and implementing the ideas of a broad range of stakeholders, and on strengthening their engagement. The goals are to generate excitement about the ACS sustainability efforts; to brainstorm, create, and develop projects that can and will make a difference; and to connect with members of all ages and fields, especially those who are not currently engaged with ACS on a volunteer level.

The varied backgrounds and experiences of chemists inspire us in different ways to offer workable solutions at the local, regional, and global levels. Working together, ACS and chemists can identify the solutions that will help us achieve a sustainable future.

All meeting attendees and ACS members are invited to participate in the event forum. Even if you are not planning to be in San Francisco, you are encouraged to share your ideas at www.acs.org/sustainability. The SEE kickoff will take place on Sunday, March 21 from 6 to 8:30 pm in the Expo Hall, and the forum will be on Tuesday, March 23 from 3 to 5:30 pm. Preregistration is requested for the forum, which is quick and easy at www.acs.org/sustainability.
Water Conservation Efforts

One of our Councilors suggested that an accounting of local efforts at water conservation might be of interest to members of the Section. Here is a description of water conservation activities at San Jose State University (SJSU), written as part of a class project, and originally intended for publication on the SJSU campus:

Are you aware of the water conservation efforts San Jose State University has been practicing? Or will be implementing in the future?

If you are the typical San Jose State University community member you probably have little to no idea what water conservation efforts are being practiced!

The University is currently practicing:
• 20 million gallons of recycled water per year for campus cooling
• 1 million gallons of water saved per year from Spartan Stadium artificial turf
• 20 million gallons of recycled water per year used for athletic fields and irrigation
• Use of low flow fixtures
• Landscaping with drought tolerant and native plants
• Water savings of $100,000 per year

Future University water conservation plans:
• Use of waterless urinals

It is unfortunate that communication regarding such important conservation efforts are not publicized more. The university has every right to be proud of not only their water conservation efforts but all of their conservation efforts. In a time of climate change and loss of biodiversity, the entire community should be proud of the efforts being implemented and the future plans for increased conservation.

Please join in the conservation efforts and do all you can to help conserve water at the university, at your home, and in your city.

And San Jose State University, don’t be afraid to “toot your own horn” and communicate the great conservation practices being implemented. We all want to know, we all want to help, we all want to be proud of our community.

We all are in this together for a better environment!

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 2010 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.

Previous Award Recipients

1994 Shirley B. Radding
1996 John F. “Jack” Riley (deceased)
1998 Alan C. Nixon (deceased)
2000 Halley A. Merrell
2002 Paul H. L. Walter
2004 Maureen G. Chan
2006 Janan M. Hayes
2008 Dorothy J. Phillips

1995 Agnes Ann Green (deceased)
1997 Howard M. Peters
1999 Valerie J. Kuck
2001 Norman A. LeBel (deceased)
2003 Jean’e M. Shreve
2005 Glenn Fuller
2007 Merle I. Eiss
2009 Bryan Balazs

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, 2010, 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 94302-0395

ISEF 2010

The judging for the 2010 Intel International Science and Engineering Fair (ISEF 2010) will be held in San Jose, CA on May 11-12 (Tuesday starting at about 5 pm; Wednesday starting at about 6 pm). There will be a need for an enhanced commitment of our Silicon Valley scientists to volunteer for judges in all judging categories.

REMEMBER - There is always a need for judges for these science fairs. There are many other volunteer and sponsorship opportunities. Please volunteer now!
FUTURE MEETINGS

Feb 17  Dr. Valery Uhl
Wednesday  Benefits of Wine with Dinner
Biltmore Hotel, Santa Clara, CA

Feb 27  SCIENCEPALOOZA
Santa Clara County Fair Grounds
www.outreach-foundation.org

Mar 12-14  Santa Cruz County Science Fair
http://science.santacruz.k12.ca.us

Mar 17  Synopsys Silicon Valley Science
and Technology Championship
San Jose Convention Center
www.outreach-foundation.org

Mar 18  Dr. Joseph Castellano
Energetic Molecules and Russian Spies

Mar 21-25  Spring National Meeting
Chemistry for a Sustainable World
San Francisco, CA

Apr 17  Regional High School
Chemistry Olympiad
Las Positas College, Livermore, CA