

Silicon Valley Chemist

Santa Clara Valley Section

American Chemical Society

Volume 24 No.11

Chair's Message

At the time of this writing, we have yet to celebrate National Chemistry Week, so you'll have to wait for December's newsletter to see how things went. This month's dinner meeting speaker is James P. Collman, the George A. and Hilda M. Daubert Professor of Chemistry at Stanford. Prof. Collman will speak on the topic of his book, *Naturally Dangerous: Surprising Facts About Food, Health and the Environment* (for more information on the book see www.uscibooks.com, and for an informative review see www.stanford.edu/dept/news/report/news/september26/dangerous-926.html). The book aims to dispel the myth that "all natural" means safe. The talk will be Thursday, November 21 at the Biltmore Hotel. For more information and reservations, see the "meetings" page at our web site: www.scvacs.org.

I just read the cover story in the Autumn edition of the ACS newspaper *Chemistry* (<http://chemistry.org/Chemistry>). It's entitled "Building a Better Battery," and chronicles the development of and recent advances in battery technology. It reminded me of the days when the Handbook of

Batteries & Fuel Cells sat within reach on my desk. I was a post doc working on the fuel cell Holy Grail: a catalyst that would lower the overpotential for methanol oxidation. In theory, methanol should be oxidized at a potential very close to where hydrogen is oxidized. A catalyst that could make theory reality would allow for a direct methanol fuel cell. This would be a fuel cell where the fuel itself is oxidized, instead of being reformed into hydrogen. Such a fuel cell could be small, light, and inexpensive to produce. But it all depends on having the right catalyst. We didn't make that catalyst, and I'm not sure we were meant to. The promise of a direct methanol fuel cell stimulated the research and the funding, but the science was basic science. Nevertheless, the promise of a wildly efficient, simple fuel cell kept me day dreaming of a future of silent cars, where methanol stations replaced gasoline stations, and where the United States was free from its dependence on foreign oil. Now I'm not so sure that a direct methanol fuel cell would usher in a problem free future.

Time has given me perspective on some of the difficulties that would

Reminder

November Dinner Meeting

On Thursday, November 21st Dr. Collman will speaking on his recently published book, "Naturally Dangerous, Surprising Facts About Food, Health, and the Environment". The dinner and the lecture will be held at the Biltmore Hotel and Suites in Santa Clara. Social hour will start at 6:00 pm.

Please join us! Register by November 18th, using the section's website (www.scvacs.org) or by contacting Shirley Radding (408-246-2564, 408-296-8625 FAX).

accompany large-scale implementation of such a power plant. It's hard enough to remediate leaks and spills of gasoline, imagine the clean up issues of a water-soluble molecule. A gleaming new age methanol station, while friendly to the air, could do damage to the water. We have certainly seen the difficulties involved in removing MTBE from contaminated water sources. Come to think of it, while the byproducts of methanol oxidation would probably be less of an air pollution hazard than gasoline's combustion products, methanol itself

continued on next page

Call for Volunteer Judges and Assistants

Dr. George Washington Carver Recognition Day Science Fair and Carver Kidvention

Date: Saturday, January 4, 2003

Time: 8:00 am - 1:30 pm

Place: Santa Clara Convention Center

(includes continental breakfast/coffee and lunch)

The local section has assisted these important events for the past four years; now, you can too! If you can help, please contact Dr. Howard Peters as soon as possible for more information (peters4pa@aol.com or 650-324-1677 x3).

The Santa Clara Valley Section of the American Chemical Society is the copyright owner of all material published in *The Silicon Valley Chemist*. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without advance permission in writing from the editor, particularly for commercial purposes. Authorization to photocopy items for limited internal or personal use, or the limited internal or personal use of specific clients, is granted by the Executive Committee of the Santa Clara Valley Section of the American Chemical Society.

Chair Message, continued from front page

would certainly pose an air pollution hazard. Maybe the promise of a direct methanol fuel cell isn't as perfect as I remember, but that doesn't mean that achieving one is not a worthwhile goal. In fact, a quick Google search appears to show that JPL has developed "a micro direct methanol fuel cell" for running portable electronic devices (www.jpl.nasa.gov/releases/2002/release_2002_94.html).

At the time I started the project, the U.S. had just started the bombing campaign in the Gulf War. Energy independence was just as attractive then as it is now. Maybe we can achieve this with alternative fuels and new fuel cell technology. The less sexy approaches would probably help to: conservation plus building and buying cars with greater fuel economy.

PATENT TRUTHS Wills, Gifts, Trust and Estate

1. Much as been made in the business news recently concerning the Hershey Chocolate Company and the fabulously wealthy trust that still owns and controls the largest chunk of the voting stock. One of A Kind Milton S. Hershey, a local German Mennonite, was originally considered a ne'er-do-well who finally focused and created a caramel candy company. He sold out this candy company in Lancaster, PA about 1898 for about \$1 million. These funds were used to create the Hershey Chocolate Company in Hershey, PA in 1903. At about age 40, he married Catharine (Kitty) Sweeney. To the surprise of everyone, she was a fun-loving vivacious Irish-American Roman Catholic girl from New York State - and probably a diabetic. They had no children and together they created the Hershey Industrial School in Hershey for homeless boys. She died in 1915 and, soon thereafter, Hershey transferred most of his ownership of the stock to the Trust for the Industrial School. He never remarried. During World War II he single-handedly made a Hershey bar a part every Allied soldier's daily C-rations - and created a very loyal following. He died still running Hershey in 1945 at age 88. The School

and the Trust continued to prosper.

About 1960, the State of Pennsylvania took the trust to court charging that they were not spending the trust income fast enough. The Trust complied and created the Milton S. Hershey Medical School and Center with a \$50 million gift in Hershey, which is now operated by Penn State University. After the recent news events, I think we will soon see the State go again to the Trust to distribute another large part of its \$5,000,000,000 endowment.

Milton Hershey had one U.S. Patent No. 1,740,693. If you can understand it, then you are a better patent attorney than I. He preferred trade secrets to protect his chocolate products. Remember this is the same man who refused to advertise and said, "Why advertise? Doesn't everyone see our candy wrappers on the ground?"

2. Gordon Battelle's will in the 1920's left significant funds to improve

the welfare of the citizens of Columbus and Ohio. The trustees in 1925 created Battelle Memorial Institute (BMI) in Columbus to provide technology, jobs, etc. - very important during the 30's. By 1950s, Battelle had joined a risky commercial development effort with Chester Carlson and Haloid, a small Rochester NY printing firm to automate dry ink copying. The project was a huge success and the company changed its name to XEROX. At one point in time, Battelle was the single largest holder of XEROX stock. It was such a burden the State of Ohio stepped forward in the courts to reinterpret Battelle's will - the welfare of the citizens of Columbus needed to be more improved. The \$80,000,000 Columbus Convention Center was built almost entirely with XEROX stock proceeds. Battelle continues to prosper as a non-profit research institute (www.battelle.org).

Copyright 2002. Howard Peters

Division of Business Development and Management

The Technical Division of Business Development and Management (BMGT- we know, the acronym isn't obvious to us either) is one of two business-focused divisions in the ACS (the other is the Division of Small Chemical Business) and is the only one to address general business issues. Its mission is straightforward: to champion improved business development and management of the chemical enterprise.

BMGT traces its roots back over 50 years. In the early 1940s, a group of chemical engineers formed the Technical Service Group of the Chemical Industry (later the Commercial Chemical Development Association). During 1946, members of the Technical Service Group tried to get the membership requirements lowered to bring in younger people working in field service and chemical marketing. The move failed, but the interested members then explored the possibility of setting up a parallel group in the ACS, with the Technical Service Group to provide guidance. The result was the formation, in 1947, of the chemical marketing section of the ACS Division of Industrial & Engineering Chemistry. The section became a subdivision of the I&EC division in 1950. Membership grew and the ACS Division of Chemical Marketing and Economics was formed in September 1952 becoming today's BMGT.

After several dormant years, the division held a planning session in 2000 and began to lay groundwork for revitalization. Officers were elected in 2001, and the Division sponsored programming at both ACS National Meetings in 2002: a section of the Industrial Pavilion in Orlando and both general paper sessions and a Technology Transfer workshop in Boston. There are currently over 1100 members from chemical companies around the world. A new website was established in 2001, as well (www.chemicalenterprise.com). Currently, there are links to sites and articles of interest and discussion boards for members will launched soon. The division is planning its programming for 2003, and is looking for both ideas on topics of interest to ACS members and volunteers to assist with the many activities involved in revitalizing the division. If you are interested, please visit the website, or contact Tom Lenk, our Chair-Elect for 2003 at tenk@prtm.com.



SANTA CLARA VALLEY SECTION
AMERICAN CHEMICAL SOCIETY
P.O. Box 395, Palo Alto, CA 94302

Non-Profit
Organization
U.S. Postage
PAID
Permit No. 344
Palo Alto, CA

NOVEMBER 2002 NEWSLETTER TOPICS:

Chair's Message
Reminder: November Dinner Meeting
Calling for Volunteer Judges and Assistants
Patent Truths
Division of Business Development and Management

CHEMPLOYMENT ABSTRACTS

Visit our web site at:



<http://www.scvacs.org>

SANTA CLARA VALLEY SECTION

2002 Section Officers

Chair: Jon Touster	650-723-4340	touster@leland.stanford.edu
Chair-Elect: Maureen Scharberg	408-924-4966	scharbmg@pacbell.net
Secretary: Karl Marhenke	831-479-6263	karlmar@armory.com
Treasurer: Hong Gao	650-564-5197	hong.gao@alza.com
Past-Chair: Sally Peters	650-812-4994	speters@parc.xerox.com

Councilors

2000-02: Maureen Scharberg	408-924-4966	scharbmg@pacbell.net
2000-02: John F. Riley	650-328-4036	jfriley@atdial.net
2000-02: Ean Warren	650-329-4554	ewarren@scvacs.org
2001-03: Linda Brunauer	408-554-6947	lbrunauer@scu.edu
2001-03: Sally Peters	650-812-4994	speters@parc.xerox.com
2002-04: Bonnie Charpentier	650-948-3931	charpentierbon@yahoo.com
2002-04: Herb Silber	408-924-4954	hbsilber@sjsuvm1.sjsu.edu

Alternate Councilors

2000-02: Roy Okuda	408-924-2525	okuda@sjsu.edu
2000-02: Donna Drogos	408-265-2600	ddrogos@geosyntec.com
2000-02: Lance Wong	650-697-1900	lwong@valentis.com
2001-03: George Lechner	408-226-7262	george.lechner@usa.xerox.com
2001-03: Carol Mosher	650-322-3120	cmosher2@aol.com
2002-04: Peter Rusch	650-941-8120	pfrusch@aol.com
2002-04: Jon Touster	650-723-4340	touster@leland.stanford.edu

Newsletter

Editor: **Laura Jarvis** 650-859-4782 editor@scvacs.org

ChemEmployment Abstracts

Director: **Shirley B. Radding** 408-246-2564 sradding@att.net

FUTURE MEETINGS

Nov 12-13	5th Symposium on Groundwater Contaminants Fresno, CA
Nov 21	SCV Dinner Meeting <i>Dr. Jim Collman</i>
Jan 17	SCV Dinner Meeting <i>Dr. C. Marvin Lang</i> Mosher Awardee
Jan 18	Chemistry Demonstration <i>Dr. C. Marvin Lang</i> University of Santa Clara
Feb 20	SCV Dinner Meeting <i>Juanita Ryan</i> Antarctica Research

For the latest information, please visit
SCV/ACS web site: www.scvacs.org



Printed on
recycled paper.