



The Materials Information Society

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Santa Clara Valley Chapter

Apr 2003

Volume 46, Number 8

Wednesday, April 9

An Introduction to Nitinol Stents

Dr. Alan R. Pelton
Nitinol Devices & Components

Please remember to indicate a meal selection when you sign up!

5:30 pm Social/Networking.....6:15 pm Dinner.....7:30 pm Speaker

Meeting Location:
WYNDHAM GARDEN HOTEL
1300 Chesapeake Terrace
Sunnyvale
(408)747-0999

Dinner Cost: ASM Members \$18, Students \$8, Guests \$20
Meal Choices: Beef, Fish, or Chef's Vegetarian

RESERVATIONS REQUIRED:
Stacy Ewert at (408) 742-2521 or stacy.s.ewert@lmco.com
Reservation deadline is noon on Monday, Apr 7



The Materials Information Society

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Meeting Directions

From points south: north on Lawrence Expressway, pass over 237, make the first left (Moffett Park Drive/Baylands Park), then the first left onto Chesapeake Terrace. From points east or west: Caribbean Drive (Lawrence Expressway North) exit off 237, first left at Moffett Park Drive/Baylands Park, then left on Chesapeake Terrace. In either case, once you are on Chesapeake, simply proceed to the end where you'll find The Wyndham Garden Hotel.

RETURN SERVICE REQUESTED

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Have You Moved Recently?

If so, please remember to correct your address by logging onto the national website, www.asminternational.org, where you can review and update your membership record.

About the Topic

An Introduction to Nitinol Stents

Due to its unique mechanical properties and biocompatibility, Nitinol is currently the material of choice for stenting vascular and non-vascular vessels. This talk will give a brief overview of the basic shape memory and superelastic properties of Nitinol. The presentation will include a discussion of the manufacturing and testing of stents, and the effects of processing on properties and corrosion resistance. Fatigue behavior and FEA (Finite Element Analysis) modeling will also be addressed. Various stent designs will be discussed, including those made from laser-cut microtubing, as well as wire-based stents.

About the Speaker

Alan R. Pelton

Nitinol Devices & Components

Alan R. Pelton completed his Ph.D. in Materials Science and Engineering at the University of California, Berkeley in 1982. He then conducted research on phase transformations and microstructures of bulk and thin-film Nitinol alloys at Stanford University. From 1983-1989 he was a faculty member and conducted research in the Departments of Materials Science and Engineering at Iowa State University and the University of Notre Dame. He then accepted a position as Research Manager for shape memory alloys at Raychem Corporation. In 1993 he joined Nitinol Devices and Components and is currently a Research Fellow and Director of Nitinol Research. His current interests include corrosion fatigue of Nitinol medical devices. He has 80 publications in the field of shape memory alloys, and co-edited Images of Materials and the Proceedings of SMST-94, SMST-97, and SMST-2000. He co-founded SMST (Shape Memory and Superelastic Technologies) in 1993, chaired SMST-2000, and is secretary of the SMST Society.

Sponsor a Meeting!

Would you like to sponsor the May meeting? Contact Gabriel Toea at gtoea@yahoo.com or (650)474-0160.

ASMI/SAMPE Scholarships Awarded

Each year the local chapters of ASMI and SAMPE (Society for the Advancement of Material and Process Engineering) award scholarships to two local university students. This year's awards went to **Jodi Iwata** and **Kelly McCarrie**. Jodi already has a B.A. in Business from the University of Washington, and is currently pursuing a B.S. in Materials Engineering from San Jose State University. Kelly already has a B.A. in U.S. History from Cal State Hayward, and is currently pursuing a B.S. in Chemical Engineering at San Jose State University. Both Jodi and Kelly attended the award ceremony, which was held during the March 12th Joint ASMI/SAMPE meeting.

The scholarship recipients were selected by a committee comprised of representatives from both ASMI and SAMPE chapters. The committee's selections reflect a careful consideration of the applicants' demonstrated accomplishments, potential, and seriousness of purpose relative to a Materials Technology career.

The ASMI/SAMPE Joint Student Scholarship award was created to encourage undergraduate and graduate students to further their career in Materials Science or Engineering. Last year the chapters decided to raise the scholarship to \$2,000 per student (from \$1,000 in previous years) in order to demonstrate their strong commitment to education in materials

Congratulations Jodi and Kelly!

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Upcoming Events

Apr 3: SAE, "The Path to the Emission-Free Vehicle Through the Use of Hydrogen as a Fuel". Visit www.norcalsae.org

Apr 8: ISA, "Smart Transmitters". Visit www.isanorcal.org/south_bay_meeting.html

Apr 9: IEEE-CPMT, "Mfg.InfoWeb - Information Web Service for Global Manufacturing". Visit cpmt.org/scv/meetings/cpmt0304.html

Apr 15: ASCE, "Recent Research in Seismic Hazard Evaluation". Visit www.asce-sf.org/events.html

Apr 16: ASQ, "Auditing to ISO 9001:2000 The Process Approach". Visit www.asq-silicon-valley.org

Apr 21: PMI, "Team Essentials and Project Management". Visit www.pmisv.org/evening.htm

Apr 24: ACS, "Student Affiliates of the American Chemical Society". Visit www.scvacs.org/Local_Folder/din_mtg.html

Apr 29: AIChE, "Emerging Trends in Biotechnology". Visit www.aiche-norcal.org/symposium.html

May 14: IEEE-CPMT, "Modeling and Characterization of Electronic Packaging Materials and Reliability of Products". Visit cpmt.org/scv/meetings/cpmt0305.html

May 19: PMI, "Tools of Understanding and Influence". Visit www.pmisv.org/evening.htm

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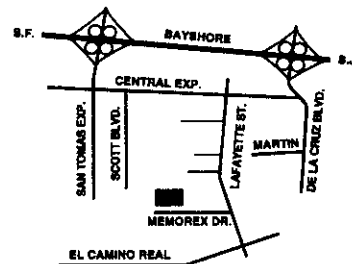
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Chapter Information & Upcoming Activities

Officers

Chair:

Good luck Janine!...HuiHui Lin is Acting Chair

Vice Chair:

HuiHui Lin (408)256-1072

Treasurer:

Stacy Ewert (408)742-2521

Secretary:

Jacques Matteau (650)591-7787

Executive Committee

Richard Chung (408)924-3927

Paul Fojas (650)361-2969

Dave Himmelblau (408)743-7893

James Knowles (650)728-3786

Alfred Kwong (408)248-1916

Mingwei Li (650)966-5735

Leonard Migliore (650)967-0977

Ramas Raman (408)295-8976

John Stringer (650)855-2472

Gabriel Toea (650)474-0160

Lou Wirtz (408)756-0621

Special Positions

SVEC Rep:

Ed Kaminski (408)241-4842

Newsletter Editor:

Scott Dickerson (408)584-1013

Thanks to our ASMI-SCV Sustaining Members:

Evans Analytical Group	Charles Evans, Jr.	San Mateo
CSU—Fresno	Henry Madden	Fresno
R.L. Engineering	Richard Lund	Placerville
Vivid Incorporated	John H. Comeau	Santa Clara

Would your company like to support the chapter by being a sustaining member? To find out more, contact HuiHui Lin at (408)256-1072.

Executive Committee Meetings: ASM-SCV Executive Committee meetings are held in September, October, January, March and May. Any member can attend! Call HuiHui Lin at (408)256-1072 for meeting times and locations, and to reserve a seat at the table.

Thanks Janine!

As some of you may already know, our Chapter Chair, Janine Kardokus, has left the Bay Area for better vistas. We thank Janine for her service to the Chapter in the roles of active member, Treasurer, and Chair. We wish Janine the best of luck in her new endeavors!

Fortunately, Janine's term is nearly completed. For the remaining 2 months of the Chapter year, our Vice Chair, HuiHui Lin, will fill in as Acting Chair. Thanks to both Janine and HuiHui!

Don't forget to bookmark www.ASM-SCV.org

2003-2004 Election Slate

April is traditionally the month when we announce the candidate slate for our annual election of Chapter Officers and Executive Committee members. This year the Nominating Committee presented this slate, which is a mixture of new and seasoned faces. Voting will be done in person at the May meeting, or by mail-in ballots which will be printed in the May newsletter.

	Officers	Executive Committee
Chair:	HuiHui Lin	Ed Francis
Vice Chair:	Jacques Matteau	Al Kwong
Treasurer:	Richard Chung	Fred Landry
Secretary:	Stacy Ewert	Stephanie Patterson
		Shari Yokota

Next Month's Meeting: May 14 - Laser Shock Peening, Dr. Lloyd Hackel, Lawrence Livermore National Laboratories.
May 14 is also Awards and Elections Night!

Science Fair Report

Each year ASMI-SCV and the local SAMPE chapter field a team of Special Judges to the *Synopsis Silicon Valley Science and Technology Championship*. This year the team examined 150 possible materials and process related projects. As usual, the judging team was impressed by the research and hard work done by the students. The quality of the projects was very high, and several rounds of voting were necessary to make the difficult judging decisions. We'd like to thank **Bob Elliott** for coordinating the ASMI/SAMPE judging effort, as well as the ASMI members who gave their time and expertise to assist with the judging: **Mark Alexander, Richard Chung, Paul DeCarli, Paul Flowers, Gary Holmquist** (also representing SAMPE), **Jim Knowles, Al Kwong, Jamie Sandoz, Chuck Schmidt, Bob Wallace, and Lou Wirtz**. We'd also like to thank **Lenny Migliore** for preparing the award certificates. Above all, we'd like to congratulate the winners! The ASMI Special Award winners are as follows:

1st (\$100) - Jonathan Kwan (Miller Middle School) - *How Quenching Affects the Corrosion Resistance of Carbon Steel*

2nd (\$75) - Salman Ahmed (Granada Islamic School) - *Sound: The Not So Silent Killer*

3rd (\$50) - Carrie Garibotti (Notre Dame High School) - *Major Motor Oil Brands*

4th (\$25 ea) - Brian Gee/Paul Nguyen/Tuan Pham (Oak Grove High School) - *Artificial Photosynthesis by Nanocrystalline Dye Sensitized Cell*

Honorable Mentions (Magazine subscription and certificate of achievement):

Serrell Davis (Bernal Intermediate School) - *The Heating Deflection and Discoloration of Metals*

Tanya Von Essen (Leigh High School) - *Solar Absorption Relative to the Color of a Surface*

John Vidovic (Leigh High School) - *The Strength of a Soda Can*

Cynthia Zhang (Leigh high School) - *Frequency as a Function of Density*

A formal awards ceremony was held on March 30 at Great America Park in Santa Clara. The ASMI awards were presented to the winners by Bob Elliott and Al Kwong.