

Wednesday, January 9

Thin Film Metallurgy from the Metals Supplier's Point of View

Daniel R. Marx, Ph.D.
Praxair MRC

Jan 9 is ASMI-SCV Fellows Night! See Page 2!

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: Chicken Piccata, Chef's Salmon, or Vegetarian

RESERVATIONS REQUIRED:
Janine Kardokus at (408) 986-7568 or janine_kardokus@amat.com
\$2 late fee after noon on Monday, Jan 7

January Meeting Sponsor:  **unaxis**
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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 Moffet 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.**

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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

Thin Film Metallurgy from the Metals Supplier's Point of View

This talk will present an overview of the application of metallurgical technology to the production of the source materials for thin film metallization in the IC fabrication industry. The presentation will discuss sputtering target technology as well as other metals deposition techniques, with particular emphasis on the challenges faced by the materials supplier to meet the increasing demands of sub- $\frac{1}{4}$ μm IC technology. From purification, microstructure control, texture, alloy development to interactions with plasma environments, the materials supplier must understand the structure/property/performance interactions. Samples of materials will be presented to illustrate the discussion.

About the Speaker

Daniel R. Marx, Ph.D., Praxair MRC

Dr. Marx is the Director of Technical Marketing for Semiconductors at Praxair MRC (the former materials division of Materials Research Corporation). At MRC, he has held positions in Marketing, Quality and Technology management. With more than twenty years experience in the field of electronic materials, his experience spans from wafer fabrication technology through chip packaging and printed circuit board technology. A graduate of Temple University (BA Chemistry) and of the Pennsylvania State University (MS, Ph.D. Metallurgy), Dr. Marx is the holder of 6 US patents and several publications.

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ASMI-SCV would like to thank Unaxis Materials for sponsoring our January meeting. Unaxis Materials is a leading supplier of sputtering targets and evaporation materials for the thin film industry. Unaxis offers an extensive line of high quality coating materials, including all current thin film applications for data storage, large area coatings, optics, displays, electronic, wear, and deco coating segments. We appreciate their support, which enables us to provide quality technical programming to our membership at a reasonable cost.

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ASMI-SCV Fellows to be Honored at January Meeting

Each year ASM International honors a group of distinguished materials technologists for their career achievements by awarding them the title of ASM Fellow. These are individuals who have made great scientific and engineering contributions to their companies and universities, and their advancements have been a benefit to the technological community in general. Each year we at ASMI-SCV express our appreciation of their accomplishments by inviting them to be our guests at the January meeting. This is our way of thanking them for their inspiration and hard work, and for their willingness to share their expertise with their colleagues in the local community.

This year we are especially proud to acknowledge a newly-elected Santa Clara Valley Fellow: Terry R. McNelley, Professor and Chairman, Department of Mechanical Engineering, Naval Postgraduate School, Monterey. Professor McNelley was honored for outstanding contributions to the understanding of superplasticity and grain refinement in aluminum alloys, and to the development of materials education programs.

The Santa Clara Valley Chapter Fellows (along with their year of induction) are:

Edmund C. Burke	1970	Anthony T. Cape	1981	Richard E. Lewis	1991
Robert I. Jaffee	1970	Joseph C. Danko	1983	John C. Shyne	1991
Oleg D. Sherby	1970	Alfred Goldberg	1983	Elliott Willner	1991
Gerald M. Gordon	1975	Roger H. Richman	1983	Joshi Anne	1992
Walter E. Littman	1975	William C. Coons	1984	Tai-Gang Nieh	1992
Raymond W. Fenn	1976	Charles A. Rau	1985	Kenneth Challenger	1993
Claus G. Goetzel	1976	Ramaswamy Viswanathan	1986	Donald A. Shockey	1993
Thomas E. Tietz	1976	Prodyot Roy	1987	Alvin J. Jacobs	1997
Roger A. Perkins	1977	Jeffrey Wadsworth	1988	Donald R. Leseur	1997
Frank A. Crossley	1978	Elliot H. Rennhack	1988	John Stringer	1998
William D. Nix	1978	C. Sheldon Roberts	1989	Terry R. McNelley	2001
Howard G. Nelson	1980	Charles M. Packer	1980		

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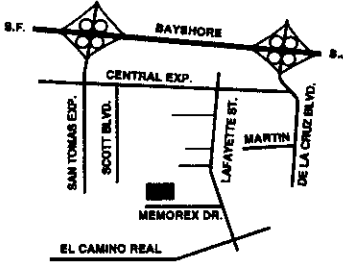
The Yearbook Committee is presently developing a list of potential advertisers for the upcoming edition. If you have a business and might be interested in advertising or know of a company that might be interested, please contact Stacy Ewert at stacy.s.ewert@lmco.com or (408)756-4360. Advertisement in the Chapter yearbook is one of the best ways for companies to target an audience directly involved in the selection and use of materials, processes and testing. Proceeds from the yearbook help towards funding our Chapter's activities that are focused on advancing the knowledge and education of our members.

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Upcoming Events

Jan 9: ASQ Statistics Task Group, "Permutation Tests for Repeated Measurements". Visit www.asq-svc.org/statistics_meeting.html

Jan 16: ASQ, "How Do You Create Award Winning Teams in Your Company?" Visit www.asq-svc.org/future_dinner_meeting.html

Jan 17: ACS, "From Chiral Synthesis to Glaciers and Galaxies, It's All Chemistry". Visit: www.scvacs.org/Local_Folder/din_mtg.html

Jan 22: AIChE, "Genentech Plant Tour". Visit www.aiche-norcal.org/meetings.html

Jan 30: 27th SAMPE Composite Workshop 2002: "Advanced Composites - New Age Applications". Email jack.jew@lmco.com for more information. Preliminary program includes:

- Space Program Projects and Work on the Radomes, (John Regan, Applied Aerospace Structures Corp.)
- Carbon - Carbon Composites Manufacturing Concepts (Bob Lavalle, Hitco)
- Use of Composites in the Infrastructure (Dr. Clem Hiel, Composite Support & Solutions, Inc.)
- Lightweight Aircraft-Small Private High Performance Planes (Andrew Marshall)
- Filament Winding (Stan Peters)

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Executive Committee Meetings: 4th Wednesday of Sep, Nov, Jan, Mar, and May at 6:30 pm, Round Table Pizza at El Camino & 237. Any member can attend! Call Wendy Chung at (408) 256-8614 to confirm the schedule and reserve a seat at the table.

2001-2002 Technical Program

Sept. 12	Materials Issues for Electricity Generation in the Near Future <i>Dr. John Stringer, EPRI, Palo Alto</i>	<i>Past Chair's Night</i>
Oct. 10	Thin Film Materials Science at Stanford <i>Professors W.D. Nix and B.M. Clemens, Stanford University</i>	
Nov. 14	Wafer Level Packaging <i>Luu Nguyen, National Semiconductor</i>	
Dec. 12	Underwriters Laboratories in Santa Clara <i>Martha Martinez, Underwriters Laboratories</i>	<i>Companion's Night</i>
Jan. 9	Thin Film Metallurgy from the Metals Supplier's Point of View <i>Daniel Marx, Praxair MRC</i>	<i>SCV Fellow's Night</i>
Feb. 13	<i>TBD</i>	<i>Joint with ACerS</i>
Mar. 13	Nanotechnology Overview <i>Barbara Jones, IBM Almaden Research</i>	
Apr. 10	Materials Applications for the Airborne Laser Program <i>Al Gegaregian, Lockheed Martin Missiles and Space</i>	<i>Joint with SAMPE</i>
May 8	Update on Battery Technology <i>Fritz Kalhammer, Consultant</i>	<i>Awards Night</i>