January Chapter Meeting
Sputtering Targets – Putting Metallurgy to Work
Speaker: Daniel R. Marx, Ph.D
DMarx Consulting

Wednesday, the 14th of Jan, We will be meeting at our usual location: Michael’s at Shoreline 2960 Shoreline Blvd., Mountain View

5:30 pm Social/Networking………………6:15 pm Dinner…………………………7:30 pm Speaker
Buffet Dinner Cost: ASM Members $25……… Students $10………Guests $ 30
Reservations: Contact Al Kwong at (408) 248-1916 or al_kwong_41@yahoo.com
Please sign up by Friday the 9th at 1:00 so we can give Michael's ample time to support us.

Abstract
Sputtering Targets – Putting Metallurgy to Work
This presentation illustrates the role metallurgy plays in the production and performance of high purity sputtering target materials. Metallurgical principles and processes are utilized to generate thin film source materials that exhibit desired microstructures assuring optimized sputtering performance in terms of thin film uniformity, sputtering rate, particle generation while meeting thin film electrical or magnetic performance requirements. The sputtering target engineer faces challenges of alloying dissimilar materials, optimizing alloy compositions, and forming these materials into the desired shapes all the while maintaining cleanliness and purity.

Biosketch
Dr. Marx received his doctorate from Penn State University with an undergraduate degree in Chemistry from Temple University. He has 35 years of experience with thin film materials and has worked with sputtering target materials and equipment since 1986. He has worked with Praxair (and formerly Materials Research Corporation), Sputtered Films, Inc. and Heraeus Materials Technology. Dr. Marx is a consultant to the thin film industry and is currently the Technical Director for Vacuum Engineering and Materials in Santa Clara.

Meeting Sponsor
Crystallume, located in Santa Clara, pioneered the development and application of Chemical Vapor Deposition (CVD) diamond technology. Since then, Crystallume's coating experts have become specialists at solving customer problems with diamond technology. Today, with advancements in technology, customers consider CVD diamond to be a viable and important solution for many cutting tool and hard coating applications. In defense, manufacturing, medicine, computing, and many other areas – from components to systems – diamond helps improve product performance. By applying appropriate types of coating to cutting tools of and
for different materials, Crystallume will enable you to improve your machining efficiency and tool durability. For more information, go to www.crystallume.com.

**Chair’s Address**
From all of us at ASM Santa Clara Valley Chapter, we wish you a Happy New Year! Now is a great time to renew your ASM membership, update your local chapter to Santa Clara Valley if you're new to the area or a former Golden Gate member, or join up if you're not already a member. Some of the perks include:

- Free online access to >10 materials journals and ASM Handbooks Desk Editions
- Points to purchase technical content and articles from ASM online
- Discounted rates for ASM SCV technical meetings
- Discounted rates for ASM conferences, courses, and books

Thanks for being a part of the ASM SCV chapter, and we look forward to seeing you at an upcoming meeting.

Best regards,
Heather Jackson
2014-2015 Chair, ASM Santa Clara Valley Chapter

The Biomedical Engineering Society @ San Jose State University is pleased to announce the 6th Annual Bay Area Biomedical Device Conference, scheduled for Tuesday, March 31st, 2015 in the newly renovated Student Union Ballroom at San Jose State University. The conference will feature presentations from prominent industry speakers, researchers, and entrepreneurs, and will be centered around this year’s theme: The Changing Landscape of the Healthcare Industry.

The conference is intended for anyone who is interested in learning more about the industry, both from the distinguished speakers, and from the research featured during the student research poster session. The wine and cheese reception provides the perfect place for industry professionals, students, and researchers, to reconnect with old friends as well as develop new relationships.

The Bay Area is the most prominent center for advancement in the biomedical industry, and many of the people attending will be those who are shaping the biomedical industry.

For more information about the conference, including registration information, please visit the conference website at www.biomedconference.org. If you have any questions, please do not hesitate to contact info@biomedconference.org.

We look forward to seeing you on campus on March 31, 2015!
SJSU Students Materials Advantage: The engineering students are always seeking available lab time, materials or guidance on projects from our professional members. Department website: http://bcme.sjsu.edu/
Feel free to contact Prof Richard Chung (richard.chung@sjsu.edu) if you wish to lend a hand.

Application for SVEC Education Award: 2015

Application Deadline is February 7, 2015.

The Silicon Valley Engineering Council Engineering Education awards recognize young engineering and technology students for their dedication, focus, and commitment to engineering. Engineering and Technology students graduating from high school or presently enrolled in undergraduate community college or university programs are eligible to apply. Fulltime and part-time students are eligible. Students may receive an SVEC Education award only once. Graduate students are not eligible.

More information on the website http://www.svec.org/scholarship-awards.html

Proposed Season Schedule

<table>
<thead>
<tr>
<th>Meeting Date</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 14, 2015</td>
<td>Daniel Marx, Director of Technology at Vacuum Engineering and Materials</td>
<td>High purity metal sputter target metallurgy</td>
</tr>
<tr>
<td>Feb 11, 2015</td>
<td>Chris Schuh, Chair of MIT Materials Dept/Xtalic Corp.</td>
<td>Nanocrystalline alloy development</td>
</tr>
<tr>
<td>Mar 18, 2015</td>
<td>Giorgio Riga, Riga Labs</td>
<td>Corrosion in microelectronics</td>
</tr>
<tr>
<td>Apr 8, 2015</td>
<td>TBD</td>
<td>SAMPE Joint Meeting</td>
</tr>
<tr>
<td>May 13, 2015</td>
<td>ASM Trustee</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Contact Us!

Any comments, corrections, additions or suggestions will reach us through our email: asm.scv.secretary@gmail.com We will be happy to hear from you.

Other Events of possible interest to the ASMI-SCV audience:

Jan. 16, GGPF Meeting  San Mateo
“Flex Your Tech: Roll-to-Roll Nanotechnology is Ready, Are You?”
Prof. Kenneth R. Carter, Univ. of Massachusetts Amherst
Details and registration on web page, www.GGPF.org
Jan. 21, SAMPE Meeting     at Michael’s Shoreline
“Science and Science Policy – Insider’s Perspective”
Dr. Mahantesh Hiremath, Space Systems Loral, ASME Congressional Fellow 2013-14
Details and registration on web page, http://www.NorCalSAMPE.org

Jan. 22, NTMA Meeting     at Pier 9, SF
“AutoDesk CAM and Machining Difficult Materials”
Details and registration on web page, http://www.sfbanntma.org/

Jan. 28, Northern California STLE Section Meeting     Spenger’s Fresh Fish Grotto, Berkeley
“Friction and Wear Fundamentals: Characterizing the Tribology System & Defining the Tribology Test”
Dr. Steven Jay Shaffer - Senior Applications Scientist, Bruker Nano Surfaces Division
RSVP to: stle.norcal@gmail.com

Feb. 19, Engineers Week Banquet     San Jose Doubletree Hotel
Details and registration on web page, www.SVEC.org

Mar 11, Synopsis Science Fair     San Jose Convention Center
Details and registration on web page, https://science-fair.org/

Chapter Sustaining Members

We would like to thank the following corporations who support our chapter through sustaining