

Volume 52 Issue 1

Chapter website: http://www.matscieng.sunysb.edu/asm/

Welcome to the 2010-2011 Year

First Meeting Wednesday, September 15, 2010

Where Sonoma Grill, Restaurant and Bar, Holbrook, NY

Topic: Characterization of CZT Radiation Detectors at NSLS Speaker: Dr. Guiseppe Camarda, BNL

Social hour ... 6:00 pm Dinner ... 7:00 pm Meeting ... 8:00 pm. Members ... \$22 Guests ... \$25 ASM 25 years ... \$20 Students ... \$12 (New and recently transferred-in members free!) Reservations appreciated - call Peter Indrigo (631-730-2606)

WELCOME TO THE CHAPTER!

Jonathan Brown, Curtiss-WrightKrishan Garg, Dayton T. BrownAtul Gokhake, Dayton T. BrownDayanand Sukadhare, Sulzer-MetcoRobert F. Waite, Valley Stream

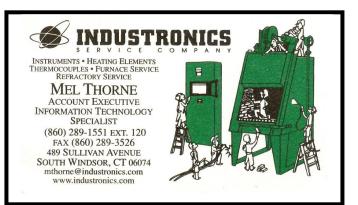
All new members, including those who have transferred in from another Chapter, are invited to dine free at a regular meeting of their choice. Please take us up on this offer - come along to the meeting and introduce yourself. This is an excellent way to meet with other Chapter members and to establish new business and social relationships in the area.

OUR SPEAKER

Giuseppe Camarda received his *Laurea* from the University of Palermo in July 2001. One year later, in July 2002 he moved to the Brookhaven National Laboratory (BNL) and started working at the National Synchrotron Light Source (NSLS) in the development of Cadmium Zinc Telluride (CZT) detectors for synchrotron radiation applications. In 2004 he joined the Nonproliferation and National Security Department where he continues to work (in the Advanced Radiation Detection Group) as a research engineer on CZT radiation detectors. He has authored over 30 scientific technical papers related to the development and material characterizations of these detectors. He has won two R&D 100 awards: in 2005 for "CZT Frisch-grid gamma detectors" and in 2009 for "Compact Gamma Camera for Highresolution Imaging of Prostate Cancer".

HIS TOPIC

CZT is the most promising high-Z semiconductor material for high-resolution, room-temperature gamma radiation spectrometers for use in nuclear-detection applications. The availability of large-volume and low-cost CZT crystals is the primary problem that limits their deployment. The root cause is the state of material perfection of the CZT crystals. At BNL we seek to understand the material issues limiting the device performance and provide feedback to the crystal growers and fabricators, who in turn apply the necessary changes to achieve better material quality. Many CZT samples are characterized as part of this feedback-and-improvement process. One of the main tools used in the device and material characterization is collimated synchrotron X-ray radiation provided by the NSLS. Data from the NSLS has helped to elucidate the roles of non-uniformity and extended defects in CZT.







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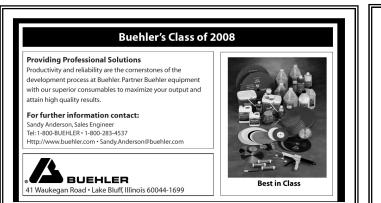
DIRECTIONS TO THE SONOMA GRILL RESTAURANT & BAR

The restaurant's address is 5745 Sunrise Highway, Holbrook, their phone number is (631) 218-3888, and they have a website – <u>http://www.sonomagrill.com</u>.

If you're travelling from the northern part of the Island, take the LIE (I495) to Exit 62 (Nicolls Road). Go south on CR 97 (Blue Point). Take the exit to Route 27 West (New York). Continue on the service road to cross Broadway Avenue and turn right into the parking lot of the Stop'n'Shop/Sun Lakes shopping center. The restaurant is between the Stop'n'Shop and the Seaman's furniture store.

If you're coming from the southern part of the Island, get onto the Sunrise Highway (Route 27). Travelling eastward, take Exit 50 (Broadway Avenue), go left to cross over Sunrise, then left again onto the westbound service road. The restaurant is on your right, between the Stop'n'Shop supermarket and the Seaman's furniture store. If you're travelling westward on the Sunrise, take Exit 51 and continue on the service road to the stoplight at Broadway Avenue. Cross Broadway Avenue and turn right into the parking lot of the Stop'n'Shop/Sun Lakes shopping center.

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Long Island Chapter Meeting Schedule

- Oct. 20, 2010 Place: Mauricio's, St. James Speaker: Dr. Yizhi Meng, SBU **Topic: Biomaterials**
- Nov. 17, 2010 **Place: Stony Brook University Speakers: Senior Students Topic: Design Projects and Feedback**
- Dec. 9, 2919 Place: Mauricio's, St. James Speaker: Silvia Centeno, MMOA **Topic: Art and Materials**

Metro NY-NJ Chapter

(website http://www.asm.nynj.org/) (contact: Rich Lynch @ 201-891-8399)

No meeting information available at present time

Long Island Metal Workers Society (website http://www.limws.org)

(contact: Jamie Swan @ 631-754-1457)

Oct. 13, 2010 Plant Tour: Fluid Metering Inc.

LINITRON

Peter D. Indrigo Senior Vice President

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