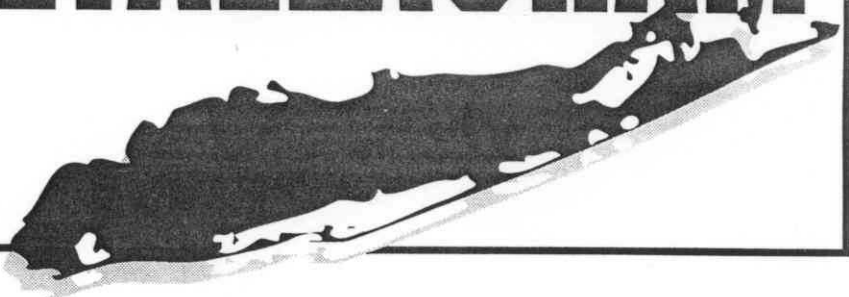


METALLAGRAM



LONG ISLAND CHAPTER

Volume 48 Issue 1

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

Welcome to the 2006-2007 Year

First Meeting: Wednesday, September 13, 2006

Where: Lupton Hall, Farmingdale State University, NY

Topic: New Metallic Bipolar Plates Technology

plus Tour of IRTT Laboratory

Speaker: *Professor Hazem Tawfik, Farmingdale State University*

Meeting Start ... 6 pm Refreshments (pizza & soda) 6-7 pm

Speaker ... 7-7:45 pm; Tour of Laboratory ... 8-9 pm

Members & Guests ... \$10 Students ... \$5

(New and recently transferred-in members free!)

Reservations appreciated - call Peter Indrigo (631-589-6666, ext. 2617)



**The Gang's
(Almost) All Here!**

**The Annual Wine
Tasting and Dinner
at the Martha
Clara Vineyards
May 7, 2006**




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The Topic

Fuel cells are the main pillar of the hydrogen economy as they provide a clean and reliable energy source and maintain a healthy environment. Metallic bipolar plates and membrane electrode assembly are the two most repeated components in the construction of a proton exchange membrane (PEM) power stack, and their durability and fabrication cost must be optimized to allow fuel cells to penetrate the commercial market and compete with other energy sources. The bipolar plates perform as the current conductors between cells, provide conduits for reactant gas flow, and constitute the backbone of the power stack. They are commonly made of graphite for high corrosion resistance and good surface contact resistance. However, their manufacturability, permeability, and durability under conditions of shock and vibration are unfavorable in comparison to metals. Our speaker will describe the development at IRTT of light-weight, durable, high corrosion-resistant metallic bipolar plates for fuel cell power stack, their various applications, and the demonstration for this new technology.

Our Speaker

Dr. Hazem Tawfik obtained his Bachelor's and Master's degrees in Mechanical Engineering from the University of Alexandria, Egypt, in 1968 and 1974, respectively. In 1980 he received his Doctoral degree in Mechanical Engineering from the University of Waterloo, Canada. Since his graduation he has held numerous positions in industry and academia that included Farmingdale and Stony Brook universities, Rensselaer Polytechnic Institute and Massachusetts Institute of Technology, Atomic Energy of Canada, Ontario Hydro, NASA Kennedy and Marshall Space Centers, US Naval Surface Warfare Center. Dr. Tawfik also holds a number of research awards and shares the rights to three patents. Currently he is a Distinguished Professor in Mechanical Engineering Technology is the Director of the Institute for Research and Technology Transfer (IRTT) at Farmingdale State University.

LIASM AWARD WINNERS - 2006

John R. Weeks Scholarship

Michael Grimes, W. T. Clark High School

Long Island Science Congress

(1) Senior Division

Melissa Young, West Islip High School
Christian Morck, Bay Shore High School

(2) Junior Division

Kaela Loriz, Shelter Island School

Kaelyn Lynch, Commack Middle School

Amber Kavanagh, Finley Middle School



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- Teflon
- High Temperature Primers
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- Abrasion Resistant Coatings
- Masking

OTHER PROCESSING

- Stress Relieving
- Conductivity Testing
- High Humidity Testing
- Salt Spray Testing
- Hardness Testing

Directions to Farmingdale State University and Lupton Hall

From the north shore, take the Long Island Expressway to Exit 49 and go south on Route 110. After about 2 miles, on the right hand side you will see the Broad Hollow Bioscience Park. Turn right into the campus at the College sign and follow the road around the campus for about 1 mile, at which point Lupton Hall should be on your left and a parking lot on your right.

From the south shore, take the Southern State Parkway to Exit 32 and go north on Route 110 for about 3 miles. Turn left into the campus at the College sign and follow instructions above

A pdf map of the campus can be found at: http://www.ewh.ieee.org/reg/1/lisat/images/FSUNY_Map.pdf .

Lupton Hall is Bldg. #63, in quadrant B/C-5.

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WELCOME TO THE CHAPTER!

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Christopher Boyle, Flushing
Jeff Brogan, MesoScribe Technologies Inc.
Mikyounng Cun, Brooklyn
Nikhil Gupta, Polytechnic University
Neil Kennedy, Sulzer Metco
Phil Meyer, Sulzer Metco
Scott Raskin, Kemp Metal Products
Sanjeev Rivera, Lee Spring Company
Atin Sharma, Stony Brook University
Yang Tan, Stony Brook University
Brian Taub, Unitron Ltd.
Gregg Welsh, Northrop Grumman

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.

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CHAPTER MEETING SCHEDULE

Long Island Chapter

- Oct. 25, 2006** Tour: Cradle of Aviation
- Nov. 15, 2006** Place: Wang Center, Stony Brook Univ.
Speakers: SBU Senior Students
Topic: Initial design projects, concepts, etc.
- Dec. 13, 2006** Place: TBD
Speaker: Fan Tao
Topic: The Violins of the Future
- Jan. 17, 2007** Place: Brickhouse Brewery, Patchogue
Joint meeting with LIANS
- Feb. 15, 2007** Place: Sitar Restaurant, Huntington
Speaker: Gary Elgort, Con-Ed
Topic: The Metallurgy of Steam Pipes
- Mar. 14, 2007** Place: Mauricio's, St. James
Speaker: Jeff Brogan, Mesoscribe
Topic: The Materials of Mesoscale Sensors
- Apr. 11, 2007** Place: TBD
Speakers: SBU Senior Students
Topic: Final design projects, concepts, etc.
- May 22, 2007** Wine tasting and buffet dinner at Martha Clara Vineyards, Riverhead

Metro NY-NJ Chapter

(contact Rich Lynch @ 201-891-8399)

- Sep. 12, 2006** Place: L’Affaire, Mountainside, NJ
Speaker: Dianne Chong, Boeing Co.
Topic: TBD
- Oct. 17, 2006** Place: L’Affaire, Mountainside, NJ
Speaker: James McHenry, CTC
Topic: Friction Stir Welding
- Nov. 14, 2006** Place: SBU Manhattan
Speaker: Jerry Croopnick
Topic: Liquid Metal Technologies

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- Vacant -

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