



METALLAGRAM

LONG ISLAND CHAPTER



Volume 66 Issue 7

Chapter website: <http://DoL1.eng.sunysb.edu/asm/>

Sustaining Members Night

Next Meeting Wednesday, March 26, 2025

Where: Pollo Rico Latin Bistro, Centereach, NY

Topic: CMAS Resistant TBCs,
Deposited using Plasma Spray

Speaker: Jonathan Gutleber, Oerlikon Metco

Social hour ... 6:00 pm Dinner ... 7:00 pm Meeting ... 8:00 pm

Members ... \$30 Guests ... \$30 Students ... \$15
(New and recently transferred-in members free)

Reservations appreciated – contact Dan Migliorino
at MigliorinoDan@gmail.com or 516-468-9615



Pollo Rico is located at 2435 Middle Country Road (Rte. 25), Centereach. Probably the simplest way to get there from the LIE is to take Exit 62 (Nicolls Road) and go north on CR 97 (towards Stony Brook). Continue north for about 3 miles then take the exit to Rte. 25. At the traffic signals at the end of the ramp go left and head west (Smithtown). The restaurant will appear after about 1.5 miles, on the right side of the highway. Their telephone number is 631-471-0585. Their website is: <http://www.polloricolatinbistro.com/>

Topic

Suspension plasma spray (SPS) thermal barrier coatings have attracted interest as a potentially more cost effective alternative to EB-PVD TBCs since they have strain tolerant column-like microstructure. However, there remain questions about the performance of SPS columnar structure coatings under different engine environmental conditions with one particular area of concern being the CMAS resistance. Conventional TBC compositions of 8YSZ are particularly prone to attack from CMAS, while more recent compositions such as GZO and higher yttrium contents can provide improved resistance to degradation from CMAS attack. Oerlikon Metco has developed a platform, called RAD (Rapid Alloy Design), to identify multi-component oxides, referred to as High Entropy Oxides (HEOs), which can be designed with the criteria required for turbine applications such as low k, toughness and CMAS resistance. Powders and suspension were synthesized of these new compositions and deposited as coatings. The microstructure and performance of these coatings in a laboratory environments were assessed and compared to the 8YSZ baseline. In addition, an overview of the RAD materials design platform will be given.

Speaker

Jonathan Gutleber earned a bachelor of engineering in 1997, a master of materials science and engineering in 1999 from Stony Brook University and continued as research specialist at the Center for Thermal Spray Research until 2003. He then joined MesoScribe Technologies developing Direct Write thermal spray technology for sensors and functional coatings as principal investigator on government and customer funded programs. In 2013, he joined Oerlikon Metco as Senior Project Engineer leading coating and application development projects within the Coating Solutions Centre in Westbury, NY. He is currently Technical Leader – Coating and Materials Development within the Materials R&D group and has over 10 publications and 2 patents relating to coating technology.



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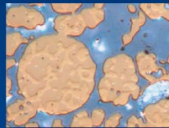
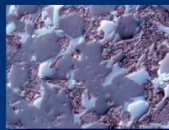
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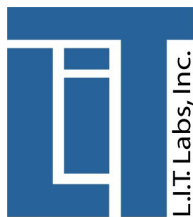
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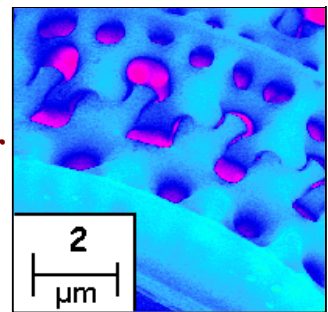
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ON-LINE FORUM

ASM now has an active on-line forum called "ASM Online Member Community". You can join by going to:

<https://www.asminternational.org/communities>

Long Island Chapter Meeting Schedule

- Feb 19, 2025** Rick Schwartzman, RGS Consulting
Electronic Materials and
Quality Assurance
Pollo Rico, Centereach, NY
- Mar 26, 2025** Jonathan Gutleber, Oerlikon Metco
CMAS Resistant Coatings
Pollo Rico, Centereach, NY
- Apr 23, 2025** Student-Nite at Old Field Club

Metro NY-NJ Chapter

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