Chair Message:
Another summer is past. I am proud to be serving ASM Metro NY NJ Chapter as Chairman again, this time for the 2018-2019 Chapter Year. I look forward to an exciting line up (soon to be announced) of speakers for this Chapter Year. Please take a look through our newsletter and photos from our Plant Tour this past May at Custom Alloy. I want to offer our profound thanks at the sponsors and sustaining members and of course the Executive Team for making things happen. Please join us for our October 2018 meeting featuring Dr. Eugenio Garcia-Granados from Center for Thermal Spray Research (CTSR) in Stony Brook University speaking on “Thermal Spray of Environmental Barrier Coatings (EBCs)” at Meson Madrid held in Palisades Park, NJ.

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Our Metro NY-NJ Chapter thanks these companies for their ongoing support.
October Presentation: Thermal Spray of Environmental Barrier Coatings (EBCs)

Speaker: Dr. Eugenio Garcia-Granados  
Postdoctoral Associate  
Center for Thermal Spray Research (CTSR), Stony Brook University

The severe working conditions that must face the engines employed for power generation and aerospace applications to fulfill the increasing demand of efficiency exceed the performance of the traditionally used metallic alloys and ultimately narrows the alternatives to limited high-temperature ceramic matrix composites (CMCs).

Among CMCs, SiC/SiC based are preferred although significant technical challenges related their behavior in the characteristic steam environments developed in combustion engines remain. Water vapor reacts with the SiO2 thermally grown oxidation layer present at SiC/SiC surface forming volatile silicon-hydroxide species which can be easily removed from the component surface by the high-pressure gases, leaving fresh SiC surface ready to be oxidized and then attacked again by water vapor. Thus Si-based CMCs must be protected with the so called Environmental Barrier Coatings.

In this talk will be introduced the Center for Thermal Spray Research (CTSR) at Stony Brook University and the different Thermal Spray Processes employed for producing technical coatings highlighting the preferred for EBCs deposition, continuing with an overview of the advances performed in EBCs in the last two decades and the actual research performed in CTSR on Rare Earth (RE) silicates as candidates for EBCs applications.
811th Technical Meeting:
October 22th 2018, Monday

Program:
6:15 pm Networking
7:00 pm Dinner
8:00 pm Presentation

Cost:
Members: $35.00
Guest: 40.00
Students: 15.00

Location:
Meson Madrid Restaurant
343 Bergen Blvd, Palisades Park, NJ 07650

Website of Meson Madrid:
https://www.mesonmadrid.com

To be continued on page 5

Photo of Plant Tour in Custom Alloys, High Bridge, NJ, May 2018
Speaker Bio: Dr. Eugenio Garcia-Granados

Center for Thermal Spray Research (CTSR), Stony Brook University

Eugenio Garcia-Granados received his Ph.D. degree (2002) in Materials Science and Engineering from University Carlos III of Madrid, Spain, working on properties and corrosion behavior of ceramic materials in combustion environments at the Institute of Ceramics and Glass (ICV-CSIC). Since then, he has enjoyed different postdoctoral fellowships, first at Centre for Advance Coatings Technology of University of Toronto (Canada) (2004-2006) and Institute of Ceramics and Glass (2007-2016) where he focused his research on ceramic materials and coatings produced by thermal spray techniques working in high temperatures and harsh environments. He joined Center for Thermal Spray Research at Stony Brook University in 2017 as Postdoctoral Associate. His current research interests involve the processing and understanding of silicate coatings as Environmental Barrier Coatings for the next generation of ceramic based turbine components. He has published about 40 peer-reviewed scientific papers and is co-inventor of 2 patents.
Photos courtesy of Dr. Richard F. Lynch
Coming Events of ASM Metro NY-NJ Chapter

Chapter Year 2018-2019

2018:
November meeting: No meeting
December: No meeting

2019:
January: No meeting
February meeting: Feb 07 Joint meeting with SAMPE:
Garry Hoffman, 3HTi
“3Dmetal printing”

March meeting: TBA
April meeting:
Dr. Susan Kazan, Metallurgist/Forensic examiner at FBI Lab chemistry unit.
“Forensics of Materials Science”
May Plant Tour: TBA

Meeting locations may be based on easy access for the speakers.

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