

Connecting the global minerals, metals, and materials community.



Plan Now to Attend:

Advanced Materials and Reservoir Engineering for Extreme Oil & Gas Environments II

With the accelerating development of high-pressure high-temperature (HPHT) reservoirs (pressure > 20kpsi, temperature > 350°F), the Oil & Gas industry faces not only new materials-related challenges but also questions regarding reservoir characteristics, resulting in the increased use of costly and more exotic materials. Nanostructured and advanced materials potentially offer new possibilities in drilling, exploration, and production.

Both academia and industry are invited to discuss and review the topic of extreme environment as an input to the design of novel materials for oil and gas applications. This symposium will cover the following topics:

- Nanostructured, UFG and advanced oilfield materials for structural and functional applications
- Emerging technologies in the advancements in UFG/nc-materials
- Carbon nano-tube, graphene, and nano-reinforced materials
- Corrosion, environmentally-assisted cracking and materials degradation
- Processing and property-enhancement by severe plastic deformation (SPD)
- Properties: physical, mechanical including deformation mechanisms
- Multifunctional nano-scale coatings and surface treatments
- High-temperature electronic materials
- Advanced non-metallic materials, including polymers and cements
- Reliability and materials failures
- Computational and analytical modeling
- Reservoir characteristics, phase behavior and challenges for hostile Oil & Gas reservoirs

Selected papers will be published in a special issue of a leading journal based on a rigorous peer review procedure.

Awards: AMREE Oil & Gas II will host a Young Scientist Session for students or post-docs within three years of their Ph.D. Up to two Gold Medals and three Silver Medals will be presented for best oral presentation. Awards will also be given for best poster (one Gold Medal and a Silver Medal). *If you would like to be considered for the Young Scientist Session, please indicate this on your submitted abstract.*

Sponsored by:

- TMS Materials Processing & Manufacturing Division
- Nanomechanical Materials Behavior Committee

Organized by:

Indranil Roy, Schlumberger (USA)

Xinghang Zhang, Texas A&M University (USA)

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Greg Kusinski, Chevron (USA)

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Hani Elshahawi, Shell Exploration & Production, Co. (USA)

For more information on how to participate, visit:

www.tms.org/TMS2015

Questions? Contact programming@tms.org