Additive Manufacturing of Ceramics

With the advancement of AM technologies and processes, complex designed ceramics components with good mechanical performance (with appropriate post processing) becomes a reality. AM ceramic components has already been applied in many areas such as biomedical, aerospace and even satellite components. As AM Technical Ceramics becomes more pervasive, many more applications will be developed and implemented.

This symposium covers the following topics for AM of ceramics:
- New materials development
- Review on existing AM technology and ceramic materials available
- Post processing challenges and requirements in AM ceramics
- Commercial value in AM of ceramics in different application
- Process and design dependent mechanical performance and evaluation

ORGANIZERS
- Christophe Chaput, 3D Ceram, France
- Sean Looi, Creatz3D Ceramics, Singapore

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Session 4  
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8:00 a.m. Invited Talk: 3D printed ceramic parts with high optical transparency
Sean Looi, Creatz3D Pte Ltd

8:30 a.m. Invited Talk: Alumina Microlattices Fabricated by Stereolithography 3D Printing: Mechanical Response, Controlling Factors and Application Perspectives
DU Zehui, Temasek Laboratories, Nanyang Technological University

9:00 a.m. Invited Talk: All-Digital, Printed Ceramic Parts Enable Hot Fire of AF-M315E Green Propellant
Jason C. Jones, Moog Inc.

9:30 a.m. Regular Talk: Zetamix: 3D Printing of Dense Ceramics by Fused Filament Fabrication
Julien Sourice, Nanoe

10:30 a.m. Invited Talk: Ceramic 3D printing for space applications
Cindy Schick, 3DCERAM

11:00 a.m. Regular Talk: Correlation of fracture properties in 3D printed ceramics to feedstock properties and processing variables through use of X-Ray tomography
Corson L. Cramer, Oak Ridge National Laboratory

11:20 a.m. Invited Talk: Relating Ceramic Mechanical Properties Standards to Advanced Ceramics Produced by Lithography-based Additive Manufacturing
Johannes Homa, Lithoz America, LLC

9:50 BREAK  |  11:50 SESSION ENDS