

**16th International Symposium on Functionally Graded Materials
Hartford, Connecticut, USA August 7-10, 2022**

Mini-Symposium Title: Multi-material, Heterogeneous Additive Printing of 3D Materials

Organizer:

SeungYeon Kang, seung_yeon.kang@uconn.edu, University of Connecticut

Description:

As new geometries and materials are being studied for future device applications, the complexity of the device designs increases more and more aggravating the imbalance between theoretical and experimental development. Therefore, new fabrication methods are crucial for actual realization of the devices. Additive printing of 3D printing is a research area of great importance that enables incorporation of multiple materials at multiple scales for fabricating multi-functional structures and devices with unprecedented capabilities. While single-material additive printing of functionally graded materials introduces multi-scale behavior, multi-material additive printing allows addition of unique thermal, mechanical, electrical, chemical properties to the printed structures. This mini-symposium discusses novel 3D fabrication methods for printing multi-material, multi-functional structures including but not limited to:

- Multi-material additive printing methods (multi-material VAT photopolymerization, material-jetting, powder bed fusion, material extrusion, etc)
- Advanced laser processing techniques for 3D printing
- Hybrid manufacturing technologies