

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

**Mini-Symposium Title:** Mesoscopic phenomena in functionally and compositionally graded materials

**Organizer:**

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**Description:**

Mesoscopic phenomena span length scales that are considerably larger than atomic-bond distances, but small enough that classical continuum physics operating with averaged materials properties does not apply. In this region, bridging quantum mechanical and macroscopic continuum descriptions,

many materials systems exhibit intriguing behavior with nontrivial dependence on shape, size and geometry that is yet to be fully understood.

In non-metallic compounds, particular areas of interest may include interactions among elastic, polar and magnetic parameters, as well as the effects of layering, composition variation, ionic diffusion and phase separation. This symposium aims to bring together experts from academia, industry, and

national laboratories to discuss the current and future directions in theoretical modeling, synthesis, characterization and processing of mesoscopic compositionally and functionally graded materials.