New Materials

Session Co-Chairs: Yong Xiang, University of Electronic Science and Technology of China, and LaShanda Korley, University of Delaware

Materials are the building blocks for societal advances, from computing miniaturization to smart, energy-efficient homes. Underlying these technological advancements is the development of new materials, inspired by natural systems, motivated by synthetic and manufacturing innovations, and driven by sustainability concerns. One example is the illumination strategy of the beetle, which has inspired the design of light scattering pigments from sustainable materials.[1] Another avenue of new materials development is the design of inorganic-organic hybrids and multifunctional systems that enable sensing, signaling, and processing in interconnected environments. In this *New Materials* session, advances and opportunity are overviewed that connect relevant materials development in the context of sustainable materials, biomimetic materials, quantum materials, and complex materials for additive manufacturing.

Reference

(1) Adv. Mater. 2018, 30, 1704050

Speaker

1) *Additive Manufacturing of Complex Materials*
   Speaker (US): Elizabeth Crosgriff-Hernandez

2) *A General Method for Producing Flexible Metamaterials*
   Speaker (China): Feng Tian, Phomera Metamaterials, Inc.

3) *Biomimetic Underwater Adhesives*
   Speaker (US): Christopher Bettinger, Carnegie Mellon University

4) *Interfacial Solar Vapor Generations: Physics, Materials and Applications*
   Speaker (China): Jia Zhu