TMS2016
145th Annual Meeting & Exhibition

FEBRUARY 14-18 DOWNTOWN NASHVILLE, TENNESSEE MUSIC CITY CENTER

Connecting the Global Minerals, Metals, and Materials Community.

Biological Materials Science Symposium

This symposium will focus on advances in biological materials towards the development of biomaterials and biomimetic materials.

Biological materials comprise the inorganic and organic constituents of biological systems, whereas biomaterials are synthetic materials developed to replace, restore, or augment the functionality of biological materials. Hierarchical structure coupled with built-in redundancy is ubiquitous in biological materials, which is responsible for their unique properties, including the ability to heal. Biological materials are formed under ambient conditions by living and adaptive biological systems for multifunctional performance. Characterizing and modeling responses of these materials are highly challenging due to their complex hierarchical structures, anisotropy and inherent inhomogeneity. Biomimetic materials (or bio-inspired materials) are tailored to replicate the desired structure and properties of biological materials based upon the study of their structure-property relationships. Biomimetic materials often require creative and novel methods of synthesis/processing and microstructural design in order to achieve the desired functionality.

This symposium will encompass the following themes:

- Biological materials (soft and hard tissues, cells, etc.)
- Biomaterials (implants, tissue engineered structures, and devices)
- Modeling and experimental evaluation of mechanical properties of biological and biomaterials
- Biomimetic and bio-inspired materials
- Bio-enabled materials and systems
- Bio-related applications

Organizers include:
Francois Barthelat, McGill University (Canada)
Kalpana S Katti, North Dakota State University (USA)
Paul G. Allison, The University of Alabama (USA)
Rajendra Kasinath, DePuy Synthes Products, LLC (USA)

Learn More at www.tms.org/TMS2016

Join us at TMS2016 in Downtown Nashville, Tennessee, February 14-18!