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TMS2024
153rd Annual Meeting & Exhibition

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HYATT REGENCY ORLANDO
ORLANDO, FLORIDA, USA
#TMSAnnualMeeting



SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:

BIOMATERIALS

Mechanics and Physiological Adaptation of Hard and Soft Biomaterials and Biological Tissues

Biological tissues and materials self-assembled in nature have complex, hierarchical structures that can result in unique properties. These structure-property relationships are a wealth of information for materials scientists to explore for inspiration in designing the next generation of materials. Biological tissues and materials are, however, not always static entities. Often the dynamic structure is growing and/or adapting to the local biological or mechanical environment.

Materials science investigations can offer great insight into how features in the multi-scale structure sense mechanical forces and biochemically promote adaptation. Materials-specific characterization techniques are then essential in quantifying the structure and related properties particularly for disease-related structural and functional modifications.

Topics that will be addressed:

- Mechanics and physiological adaptation of soft and hard tissues
- Role of the multi-scale structure in soft and hard tissue mechanics and adaptation
- Mechanobiology in tissues adaptation
- Mechanochemically active synthetic biomaterials
- Design of biomaterials to interact with tissue growth and adaptation

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SYMPOSIUM SPONSORS

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