

Special Issue

Multiscale Mechanics of Biomaterials

Message from the Guest Editors

A comprehensive understanding of the multiscale mechanics of biomaterials is essential for revealing their complex behavior, understanding the pathological mechanisms of specific diseases, and facilitating biomaterial fabrication and tissue engineering.

Mechanical behaviors at different scales have been characterized using various experimental methods, including atomic force microscopy, nanoindentation, and uniaxial or biaxial tension/compression testing. The development of advanced testing techniques at the micro and nano scales, along with progress in computational modeling and machine learning methods, offers new opportunities to explore and better understand the complex mechanical behavior of biomaterials across scales. This Special Issue aims to attract original research papers focusing on mechanical characterization of biomaterials across multiple length scales using innovative experimental, simulation, and machine learning techniques, as well as their application in biomedical engineering, such as early diagnosis of diseases, biomaterial fabrication, and tissue engineering.

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Editor-in-Chief

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