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BIO, NANO AND MICRO MECHANICS AND MATERIALS

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ABSTRACT

Simulation-Based Engineering Science (SBES) is playing an increasingly important role in the evolution of global economy. In particular, computational efforts in bio nano and micro mechanics and materials have found their way into biomedical and modern engineering applications, such as MEMS devices and energetic composite systems for alternative energy sources. The new generation of bio materials has unique structures and properties, and could revolutionize not only the medical practice in particular but also the life science and engineering in general. Understanding the behavior of bio, nano and micro systems is of great scientific interest and technological importance, which requires concurrent development of experiments, theory, modeling, and simulation. The aim of this mini-symposium is to provide an exposition of the current state of the art on model-based simulation of diverse responses of bio, nano and micro systems. We particularly welcome contributions highlighting the integration of modeling, simulations, and experiments in bio, nano and micro mechanics and materials with applications. Presentations are solicited in all the subtopics related to bio, nano and micro mechanics and materials in SBES.