Special Issue

Computational Tools for Predicting Mechanical Properties of Materials

Message from the Guest Editors

- Parameter estimation is a necessary component of any modeling activity, but it is particularly critical in computational mechanics, wherein constitutive properties and force dictate behavior from the mesoscales up to the continuum. These parameters can be measured, empirically deduced, or inferred/calculated, and the latter method is the focus of this Special Issue.
- The broad scope of this Special Issue is designed to attract papers at the intersection between applied mathematics and computational mechanics. Topics of interest include data assimilation; inverse methods; optimization; verification, validation, and uncertainty quantification; design of experiments for large parametric sweeps; and numerical simulations conducted to infer material behavior.
- This Special Issue aims to present the latest advances in computational tools for predicting material properties. Articles may include original research, reviews, case studies, and analyses that highlight the practical value of computational tools in materials mechanics.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. Materials provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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