Special Issue

Computer-Aided Design and Modeling of Materials at Different Scales

Message from the Guest Editor

Currently, the computer-aided design of an internal structure is a key component in the development of materials with standard or new mechanical, thermophysical, chemical, and other properties. Due to the multiscale structure of materials, structural elements of various spatial scales contribute to their macroscopic response. Computer modeling not only enables better understanding of the advantages and limitations of an existing or proposed design, but also to discover ways to qualitatively change the structure to achieve advanced macroscopic characteristics. In this regard, the development of a methodology for multiscale modeling and design, which allows collating research results at the current scale, to higher structural scales, up to the level of the final product, is highly relevant. Keywords

- computer-aided design
- computer modeling
- advanced materials
- internal structure
- multiscale
- multiphysics
- computational methods

Guest Editor

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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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