Special Issue

Multiscale Characterization and Computational Modeling/Simulation of Metallic Materials

Message from the Guest Editors

Metallic materials have been used in space, transportation, energy production, industry, and other fields. The application potential of engineering materials depends on their properties for the considered use. To deepen the understanding of the relationships between the structure, properties, or functions of materials, multiscale experimental techniques have been developed, including advanced macro-mechanical testing such as tensile, compressive, fatigue, impact, and creep loadings, as well as microstructural characterization. In addition, nano and atomistic approaches, including density functional theory modeling, first-principles modeling, molecular dynamics simulation and finite element simulation, have also been developed to probe the fundamental deformation mechanisms of materials.

This Special Issue aims to cover recent advances and developments in the multiscale characterization and computational modeling/simulation of metallic materials. This issue will collect quality papers providing a sound base in the field for present and future scientists dealing with the enhancement of metallic materials properties for specific high-end applications.

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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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