

Special Issue

Applied Mechanics in Metallic Material Engineering

Message from the Guest Editor

In modern engineering practice, a wide range of metals and high-performance materials are extensively employed. These materials play a critical role in various fields such as aerospace, the automotive industry, and maritime engineering, driving continuous technological advancements. The performance and applications of different materials are closely intertwined, making in-depth research into material properties, processing methods, and deformation mechanisms crucial to meet the demands of modern engineering practice. This includes the emergence of new materials, such as high-entropy alloys and nanomaterials. It encompasses various scales, from the microscopic to the macroscopic, involving aspects like micro-deformation mechanisms, lattice slip, dislocation movement, and phase transformations. The primary objective of this Special Issue is to enhance our understanding of the mechanical properties, processing techniques, and deformation mechanisms of diverse materials. We encourage researchers to share their findings, fostering collaboration and knowledge exchange across different material domains, ultimately driving the advancement of modern engineering practice.

Guest Editor

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Deadline for manuscript submissions

closed (20 June 2024)



Materials

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Impact Factor 3.1
CiteScore 5.8
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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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