



materials



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Microstructures and Mechanical Properties of Metals and Alloys

Guest Editor:

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Deadline for manuscript submissions:

closed (20 June 2023)

Message from the Guest Editor

Current trends in research surrounding the mechanical properties of materials are primarily focused on controlling microstructures with micro–nanoscale dimensionalities.

For this Special Issue, we welcome papers which address the functional interactions between the external parameters of plastic deformations (temperature, deformation, and deformation rates) and their internal structural characteristics (recrystallization, precipitation, and phase transformation).

Submitted research should provide a description of the influence of the chosen approach on grain refinement and the final mechanical properties of the material in question. Other research addressing approaches for refining structures and for determining mechanical properties will also be considered for publication.

Finally, research on the structural and property refinement of all bulk and powder metal materials, their alloys, and their treatment methods (e.g., additive manufacturing and cryo deformation) will be considered for publication.



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Special issue



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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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