

## Special Issue

# Advanced Exploration of Microstructure Evolution, Mechanical Properties, and Design of Metal Matrix Composites and Alloys

### Message from the Guest Editor

Metal matrix composites (MMCs) combine a metal matrix with reinforcing elements such as ceramics or metals and offer an exceptional strength-to-weight ratio and wear resistance, which are crucial for the aerospace and automotive industries, among others. High-performance alloys also achieve excellent mechanical properties for demanding applications through precise composition and processing. This Special Issue, entitled “Advanced Exploration of Microstructure Evolution, Mechanical Properties, and Design of Metal Matrix Composites and Alloys”, examines the intricate relationships between microstructure and performance and investigates the ways in which cutting-edge fabrication techniques, characterization methods, and design strategies can improve MMCs and alloys.

We invite researchers to submit articles that address important challenges, such as achieving uniform reinforcement in MMCs, optimizing alloy compositions, and developing innovative manufacturing processes. Studies on design and simulation for real-world applications are highly encouraged to advance the next generation of high-performance materials.

### Guest Editor

Dr. Behzad Sadeghi

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### Deadline for manuscript submissions

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## Materials

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## About the Journal

### 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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### Editor-in-Chief

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