

Special Issue

Mechanical Alloying 2021

Message from the Guest Editor

Mechanical alloying was selected as the most appropriate processing method to produce oxide dispersion strengthened (ODS) alloys that can be used in high-temperature and radiation resistance applications. In recent years, the MA technique has been widely used in the fabrication of high-entropy alloys. This Special Issue will include all aspects of the theory, methods, materials, and applications of mechanical alloying. Contributions in the following topics are encouraged:

- New materials: High-entropy alloys, metallic glass amorphous alloys, oxide dispersion strengthened (ODS) alloys, superalloys, refractory metals, and nanocomposites;
- Synthesis and processing in solid-state science and technology: high-energy milling, severe plastic deformation of materials (SPD), and reaction milling;
- Structural characterization: mechanically induced structural changes in materials (point defects, dislocations, clusters, precipitates, grain boundaries), surfaces, and interfaces in activated solids;
- New equipment and procedures: milling equipment based on improved milling dynamics, processing optimization, and milling contamination.

Guest Editor

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Deadline for manuscript submissions

closed (31 March 2022)



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About the Journal

Message from the Editor-in-Chief

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editor-in-Chief

Prof. Dr. Yong Zhang

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.7 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).