

Special Issue

Advances in Manufacturing and Materials: Additive Manufacturing and High-Performance Alloys

Message from the Guest Editors

We are now inviting submissions for a Special Issue focused on cutting-edge developments in additive manufacturing and high-performance light metal materials. With rising demands for lightweight, high-strength components in aerospace, transport, and machinery, advanced manufacturing technologies and novel material systems are essential. This issue highlights solid-state methods such as stirring friction additive manufacturing, which offer advantages over melt-based techniques, including improved structural integrity, lower deformation, and higher efficiency. To meet extreme performance requirements, innovations in both processes and materials—such as new aluminium alloys and metal matrix composites—are crucial. We welcome original research articles and high-quality reviews on a range of topics, including:

- Recent advances in stirring friction and solid-state additive manufacturing
- Multi-material and hybrid additive manufacturing
- F-SPR/FDS technologies
- Liquid and semi-solid metal forming
- Artificial intelligence in manufacturing process optimization
- Development of aluminium alloys and metal matrix composites

Guest Editors

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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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