Special Issue

Integrated Forming, Treatment and Modelling of Lightweight Alloys

Message from the Guest Editors

Lightweight alloys, including aluminum (Al), titanium (Ti), and magnesium (Mg) alloys, play a vital role in modern engineering applications. However, the processing and forming of these alloys remain highly challenging. In this Special Issue of *JMMP*, we invite original research articles on novel processing and post-treatment technologies for lightweight alloys. Topics of interest include, but are not limited to, the following:

- Severe plastic deformation techniques (e.g., HPT, HPS, ECAP, ARB);
- Surface treatment methods (e.g., laser processing, shot peening);
- Surface modification methods (e.g., plasma nitriding, MAO);
- Advanced forming strategies including torsional processing and cryogenic forming;
- Innovative bonding and joining technologies for dissimilar materials;
- Multi-physics-assisted forming approaches utilizing thermal, electric, and magnetic fields;
- The computational, analytical, and machine learning-driven modeling of forming and treatment processes.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Journal of Manufacturing and Materials Processing (*JMMP*)(ISSN 2504-4494) is a new MDPI peer-reviewed, open access venue with a focus on the scientific fundamentals and engineering methodologies of manufacturing and materials processing. We offer an online platform facilitating effective exchange of innovative scientific and engineering ideas and the dissemination of recent, original, and significant research and developmental findings. On behalf of the Editorial Board, I extend an invitation to our scientific and engineering colleagues to contribute high-quality, innovative, and ground-breaking research articles to *JMMP.*

Editor-in-Chief

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