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Advances in Processing and Mechanical Behavior in Lightweight Metals and Alloys

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Deadline for manuscript submissions:
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Message from the Guest Editor

Lightweight metals and alloys have represented for many years the most suitable solution for many high-tech applications, including sport equipment and automotive components where alternate movements required low inertia. Aerospace has probably been the sector where most of the potential of aluminum and titanium resides. The term light alloy is focused on materials based on aluminum, titanium, and magnesium systems, including the intermetallic-reinforced matrices.

Thanks to researchers' creativity, new processes have been invented based on complex forming steps, i.e., gas–superplastic diffusion bonding, or hot isostatic postprocessing to overcome this drawback and obtain net-shape or near-net shape components.

This Special Issue is intended to provide a wide set of articles on various aspects of light alloy processing innovation and characterization. The idea is to collect a wide range of articles focused on light alloy characterization, including innovative metallurgy solution correlated with mechanical property effects. Innovation on production methods, including those based on powder metallurgy and performance in final products, is desired.

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Message from the Editorial Board

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.

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