Special Issue

Light Alloy and Its Application

Message from the Guest Editors

Light alloys usually refer to alloys based on light metals such as Al, Mg, Ti, etc.. Light alloy is the first choice for modern aerospace equipment to break through the limit of bearing capacity of body structure, and the manufacturing capability of high-performance light alloy large integral structural parts determines the functional level and competitiveness of aerospace equipment. Al alloy is generally chosen as the lightweight material of NEVs. Studies have shown that energy consumption can be reduced by 6-8% if the weight of the whole vehicle is reduced by 10%. Mg-Li alloy, as the metal structure material with the lowest density at present, has also been applied in the space field by the USA. China, and other countries. Although light alloy has been successfully applied in various fields, there are still some shortcomings to overcome. Research on light alloy is still in progress. For this Special Issue in Metals, we welcome reviews and articles in the areas of basic research, theoretical calculation, design of novel alloys, material preparation and characterization, and applications of light alloys.

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Deadline for manuscript submissions

closed (30 November 2022)



Metals

an Open Access Journal by MDPI

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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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