



Laser-Induced Surface Modification of Light Metal Alloys for Structural Applications

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Message from the Guest Editor

Dear Colleagues,

Due to the ever-increasing prices of fossil fuels, structural applications that use metallic components must further stress the minimization of payloads to save money. As a result, there is a growing demand for light metal alloys to replace components traditionally utilized in structural applications. As the surface of a component is the most exposed part during service, it is essential to improve the surface properties relative to the bulk of a material. Significant advancements in laser systems within recent years have highlighted laser technology as an economical and viable option for the surface treatment of metallic materials. Therefore, the laser processing of light metal alloys is expected to enhance the service performance of fabricated components together with the payload reduction.

This Special Issue of Metals focuses on laser-induced surface modification as a suitable post processing strategy to enhance the surface properties of light metal alloys used in structural applications.





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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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