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Laser-Assisted Processing of Metals and Alloys

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Deadline for manuscript submissions:
closed (28 February 2023)

Message from the Guest Editors

Dear Colleagues,

We start from the premise that any material could be melted/vaporized under high intensity laser irradiation by either pulses or continuous beam. New top industrial applications can be envisaged and designed on this basis. Thus, one can tune the melting process to develop high-performance cutting, welding, marking or additive manufacturing technologies.

On the other hand, laser beams can hardly process thick metal sheets because of the mandatory removal of large amounts of molten material from the irradiation site, and the inherent geometrical difficulties.

New industrial challenges were proposed in recent years via various laser-assisted processes. This Special Issue is opened to specialists in materials science and metallurgy, where lasers stand for a processing tool of metallic materials. High quality, novel and original research papers or reviews that highlight the latest trends in laser-assisted processing of metallic materials will be welcomed to this Special Issue.

Waiting for your important contributions and wishing you prolific scientific achievements under these hard pandemic times!

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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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