Special Issue

Laser-Assisted Processing of Metals and Alloys (Second Edition)

Message from the Guest Editors

We start from the premise that any material can be melted/vaporized under high-intensity laser irradiation through either pulses or a continuous beam. New 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 struggle to 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 and addressed in recent years via various laser-assisted processes. This Special Issue is open to specialists in materials science and metallurgy, where lasers represent a processing tool of metallic materials. High-quality, novel and original research papers or reviews that highlight the latest trends in the laser-assisted processing of metallic materials will be welcomed for submission to this Special Issue. We await your important contributions and wish you success in your scientific endeavors in the future.

Guest Editors

Dr. Andrei C. Popescu

Dr. Liviu Duta

Prof. Dr. Ion N. Mihailescu

Deadline for manuscript submissions

closed (30 April 2024)

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Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

mdpi.com/journal/metals

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About the Journal

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.

Editors-in-Chief

Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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