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Advanced Laser Processing of Alloys

Guest Editor:

Prof. Dr. Anne Mertens
Aerospace and Mechanics, Faculty of Applied Science, Université de Liège, Quartier Polytech 1, Allée de la Découverte, 13A, B 4000 Liège, Belgium

Deadline for manuscript submissions:
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Message from the Guest Editor

Dear Colleagues,

Advanced laser processing of alloys encompasses a wide variety of technologies. Indeed, these include not only the complete manufacturing of components by, e.g., laser-based additive manufacturing technologies, but also welding and joining, post-processing, or surface treatments. This large variety of processes provides limitless ways to tailor the microstructures of metallic alloys—in particular by allowing for the synthesis of strongly refined and/or out-of-equilibrium microstructures requiring specific characterization methods—and thus to optimize alloys' usage properties.

This Special Issue of *Metals* welcomes contributions on various topics in relation to advanced laser processing of alloys. Particular attention will be given to microstructures in advanced laser processes, including experimental investigations as well as modeling of the thermal, thermo-mechanical, and thermo-metallurgical aspects of these processes.

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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

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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Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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