# Special Issue

# Advanced Laser Processing of Alloys

## Message from the Guest Editor

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.

#### **Guest Editor**

Prof. Dr. Anne Mertens

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## Deadline for manuscript submissions

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## **About the Journal**

## Message from the Editor-in-Chief

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.

#### Editor-in-Chief

## Prof. Dr. Yong Zhang

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

