

Special Issue

Additive Manufacturing of Metals with Lasers

Message from the Guest Editor

As you know, an exponentially growing interest in both the industrial and academic communities regarding additive manufacturing (AM) has arisen in the last 5 years following more than a decade of technical proofs of concept and improvements in laser-based AM techniques. Since then, many scientific fields have been addressed in detail in the literature, including (1) the physics of laser–powder (or wire)–melt pool interaction, (2) the optimization of process parameters to ensure optimum densification of parts, (3) the microstructures of as-built or thermally treated AM materials and, of course, (4) the mechanical or corrosion properties of manufactured parts. Experimental, analytical, or numerical means have been used to fulfill the requirements of AM developments. However, on all of these topics, a tremendous amount of work is still required to improve our global understanding of existing processes (direct energy deposition, powder bed laser fusion, metal binder jetting, etc.), develop novel processes, address modified or complex alloys (e.g., hot cracking sensitivity) or provide a more precise analysis of AM microstructures and their resulting properties.

Guest Editor

Prof. Dr. Patrice Peyre

PIMM-Laboratory of Processes and Engineering in Mechanics and Materials, French National Centre for Scientific Research, 75016 Paris, France

Deadline for manuscript submissions

closed (30 June 2020)



Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/33286

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

[mdpi.com/journal/
metals](https://mdpi.com/journal/metals)





Metals

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



[mdpi.com/journal/
metals](https://mdpi.com/journal/metals)



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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q1 (Metals and Alloys)

Rapid Publication:

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).