



## Fatigue, Damage, and Life Assessment of Additive Manufacturing Metal Matrix Composite Materials

Guest Editors:

**Dr. Raffaella Sesana**

Dipartimento di Ingegneria  
Meccanica e Aerospaziale,  
Politecnico di Torino, Corso Duca  
degli Abruzzi 24, 10129 Torino,  
Italy

**Matteo Crachi**

Mechanical Engineering,  
Politecnico di Torino, 10129  
Turin, Italy

Deadline for manuscript  
submissions:

**closed (30 June 2023)**

### Message from the Guest Editors

Metallic materials are most frequently used in structural applications. Structural, sustainability, and performance requirements outline the development of a very innovative and interesting class of materials, i.e., metal matrix composites, integrated via a versatile processing technique known as additive manufacturing.

If the indicated class of materials presents promising structural design properties, the indicated processing procedure still contains many critical aspects regarding process control.

This Special Issue is dedicated to the latest advances in experimental trends and results and numerical modeling issues for metal matrix composites processed via additive manufacturing, related both to material and components for any structural application with a special focus on aerospace in harsh and demanding operating conditions.

Contributions on the microstructural description of creep and HC and LC fatigue-related phenomena are welcome. We also encourage the submission of research articles which integrate life assessment models, FEM structural analysis, and material constitutive model calibration procedure description.





an Open Access Journal by MDPI

## 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.

## Author Benefits

**Open Access:** free for readers, with **article processing charges (APC)** paid by authors or their institutions.

**High Visibility:** indexed within **Scopus**, **SCIE (Web of Science)**, **Inspec**, **CAPLUS / SciFinder**, and **other databases**.

**Journal Rank:** JCR - Q2 (*Metallurgy and Metallurgical Engineering*) / CiteScore - Q1 (Metals and Alloys)

## Contact Us

Metals Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/metals](http://mdpi.com/journal/metals)  
[metals@mdpi.com](mailto:metals@mdpi.com)  
[X@Metals\\_MDPI](https://twitter.com/X@Metals_MDPI)