



*metals*



an Open Access Journal by MDPI

## Powder Metallurgically Manufactured Cellular Metallic Materials

Guest Editors:

**Dr. Peter Quadbeck**

Fraunhofer-Institute for  
Manufacturing Technology and  
Advanced Materials IFAM, Branch  
Lab Dresden, Bremen, Germany

**Dr. Olaf Andersen**

Fraunhofer-Institute for  
Manufacturing Technology and  
Advanced Materials IFAM, Branch  
Lab Dresden, Bremen, Germany

Deadline for manuscript  
submissions:

**closed (31 December 2021)**

### Message from the Guest Editors

Dear Colleagues,

The class of cellular metallic materials now has a long history and is firmly established in the scientific community. Lately, the rapid development of additive manufacturing methods has proved to be a particular innovation driver for this research field. Here, too, powder metallurgical know-how has played an essential role. It has allowed the realization of a variety of novel geometries and optimizations, such as auxetic materials or topologically optimized components. For the latter, another important driver for this research field is the rapid advancement of simulation tools, which, in combination with the increased availability of computed tomographic measurements, has led to significant property improvements. Finally, it is application-related interests that have led to further advancements. Driven by biomedical, thermal, or catalytic applications or questions of energy conversion and heat storage, a broad diversity of fabrication techniques on the one hand and a high level of application-related understanding on the other hand have emerged.

Dr. Peter Quadbeck

Dr. Olaf Andersen

*Guest Editors*



[mdpi.com/si/77543](https://mdpi.com/si/77543)

# Special Issue



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 & Metallurgical Engineering*) / CiteScore - Q1 (*Metals and Alloys*)

## Contact Us

Metals Editorial Office  
MDPI, St. Alban-Anlage 26  
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)