Special Issue

Porous Metallic Materials for Biomedical Applications

Message from the Guest Editor

Porous metallic materials are multifunctional lightweight materials that have attracted considerable attention for biomedical applications, owing to their large specific surface area, low bulk density, good specific strength, and high mass transfer. Recently, this field has developed rapidly, and porous materials are now being used to treat a variety of ailments. On the one hand, through designing different material systems and developing efficient manufacturing processes, the morphology, porosity, composition, and properties of porous metallic materials can be controlled effectively. On the other hand, combined with other surface treatment technologies (chemical etching, anodization, plasma electrolytic oxidation, electrodeposition, etc.), the biocompatibility of porous metallic materials, as well as their antibacterial and tissue repair properties, are further improved. This Special Issue aims to collect research or review articles on the latest developments in porous metallic materials. The topics will cover, but are not limited to:

- Structural design;
- Manufacturing technologies;
- Microstructure;
- Mechanical properties;
- Biological properties;
- Post-treatment.

Guest Editor

Dr. Guolong Wu

School of Mechanical Engineering, Zhejiang University of Technology, Hangzhou 310014, China

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

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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

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