



Advances in Nanoporous Metallic Materials (2nd Edition)

Guest Editors:

Prof. Dr. Zhifeng Wang

School of Materials Science and Engineering, Hebei University of Technology, Tianjin 300401, China

Prof. Dr. Qibo Deng

School of Mechanical Engineering, Hebei University of Technology, Tianjin 300401, China

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Message from the Guest Editors

Dear Colleagues,

Nanoporous metallic materials have been successfully applied in many fields, such as catalysis, actuation, sensor, energy storage and conversion, and surface-enhanced Raman scattering, due to their high specific surface area, unique bicontinuous structure, tunable ligament/pore size, good conductivity, etc. More and more techniques, including dealloying, templating and electrochemical synthesis, have been used to synthesize nanoporous metals. In addition, a growing number of technologies are combining (for instance, 3D printing combined with dealloying and templating combined with selective corrosion) to design and fabricate new porous structures that exhibit excellent physical and chemical properties.

This Special Issue focuses on recent advances of nanoporous metallic materials by different methods from fundamental studies to various applications. Research areas may include, but are not limited to, structural design of nanoporous metals, novel preparation methods, characterization of nanoporous structures, calculation and simulation toward nanoporous metals and different reaction processes, and applications of nanoporous metallic materials in various fields.





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Editor-in-Chief

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 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.

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Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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