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Advances in Nanoporous Metallic Materials (2nd Edition)

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Deadline for manuscript submissions:
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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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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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