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Metal Catalysts for Heterogeneous Catalytic Reactions

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Message from the Guest Editors

Hydrogen energy is known as the next generation of secondary clean energy, but the cost of hydrogen preparation has always been a bottleneck hindering the large-scale application of hydrogen energy, especially green hydrogen production.

At present, the universal catalyst for hydrogen production in electrolyzed water is Pt/C, but its cost is high and it is difficult to apply on a large scale. Preparing high-performance, high-stability catalysts with inexpensive non-precious-metal catalysts is a challenge. Aiming at the major strategic goals of energy and the environment, it is necessary to deeply explore the relationship between the structure and performance of heterogeneous metal catalysts to develop new catalytic materials, from exploring key scientific issues to solving practical application problems. For this Special Issue of *Metals*, we welcome reviews and articles on the principles, theoretical calculation, material preparation and characterization, and applications of hydrogen metal catalysts.

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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.

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