Special Issue

State-of-the-Art Metallic and Bimetallic Nanoparticles and Their Catalytic Properties

Message from the Guest Editors

Catalyst fabrication has significantly advanced in terms of manipulating the composition, size, and shape of nanoparticles. One of the primary objectives of industrial catalysis is to attain the best catalytic performance and selectivity of a single target product, while retaining a robust stability to avoid the deactivation process. Metallic nanoparticle catalysts are fabricated for this purpose using various synthetic approaches, and research on several catalytic processes shows that the appropriate nanoparticle shape and size improves its performance and selectivity. On the other hand, by combining two metals, bimetallic nanoparticle catalysts develop unique chemical and catalytic characteristics that their pristine single-metal nanoparticles do not exhibit. The research topics of this Special Issue include (but are not restricted to) the following:

- The fabrication approaches of metallic and bimetallic nanoparticles and their composite catalysts
- Metallic and bimetallic-catalyzed reactions
- Organic transformation reactions
- Coupling reactions
- Catalytic oxidation

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About the Journal

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

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