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Metal Oxides /Metal Catalysts

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Deadline for manuscript submissions:
closed (20 November 2023)

Message from the Guest Editors

Metals, oxides and their composite nanomaterials are the focus of nanocatalysts, which have garnered the widespread attention of researchers. With the development of nanosynthesis, a large number of zero-dimensional (quantum dots, nanocrystals, etc.), one-dimensional (nanowires, nanoribbons, nanorods, nanofibers, etc.), two-dimensional (nanosheets, nanomembranes, etc.), and three-dimensional (aerogel, hydrogel, etc.) metal oxide nanomaterials have emerged. Moreover, fine surface structures and/or secondary structures have been constructed on nanomaterials, promoted application as nanocatalysts. However, the difficulty in continuous and massive production is still an important bottleneck restricting the lab-to-fab transition. The complexity and dynamics of the real reaction conditions bring great challenges–activity relationship of nanocatalysts. New research paradigms such as in situ imaging, theoretical computation and high-throughput screening may help facilitate customized development of nanomaterials. The present Special Issue on “Metal Oxides/Metal Catalysts” may become a status report summarizing the progress achieved in the last five years.

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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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Journal Rank: JCR - Q2 (*Crystallography*) / CiteScore - Q2 (*Condensed Matter Physics*)

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