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Hydrogenation Catalysis

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Hydrogenation reactions has been widely applied in academic laboratories and chemical industry. Simple substrates are hydrogenated with Raney nickel, industrial hydrogenations often rely on noble-metal-based catalysts. Comparing with homogeneous catalysts, heterogeneous materials are preferred due to the ease of isolation and recyclability.

Rationally designed high-performance catalyst systems are essential to ensure high selectivity and yield. Crystals provides a forum for the advancement of our understanding of the nucleation, growth, processing, and characterization of crystalline and liquid crystalline materials. In this Special Issue, we will cover a range of hydrogenation reactions based on rationally designed crystalline catalytic materials, with detailed material characterizations through modern techniques for crystal growth, crystalline surface, and structural properties. The hydrogenation reactions include but are not limited to hydrogenation of CO to higher alcohols, Fischer–Tropsch synthesis, hydrogenation of CO2 to higher value-added chemicals, selective hydrogenation of alkynes and aromatic compounds, etc.

Dr. Zhijun Li
Guest Editor

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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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