Special Issue

Hydrogenation Catalysis

Message from the Guest Editor

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.

Guest Editor

Dr. Zhijun Li

Joint International Research Laboratory of Advanced Chemical Catalytic Materials & Surface Science, College of Chemistry and Chemical Engineering, Northeast Petroleum University, Daqing 163318, China

Deadline for manuscript submissions

closed (25 September 2023)

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/143699

Crystals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
crystals@mdpi.com

mdpi.com/journal/crystals

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/journal/crystals

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.

Editor-in-Chief

Prof. Dr. Alessandra Toncelli
Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Crystallography) / CiteScore - Q2 (Condensed Matter Physics)