Special Issue

Catalysts: New Preparation Methods and Advanced Characterization

Message from the Guest Editor

The synthesis of well-defined heterogeneous catalysts is important for the achievement of selectivity in catalytic substrate conversion. A clear structure–function relation is a prerequisite for the understanding of key catalytic steps and for the future improvement of catalyst performance. Traditional catalyst preparation techniques such as impregnation, deposition–precipitation, or chemical vapor decomposition (CVD) lead to mixtures of surface species, which notably complicate the gain of mechanistic information. Hence, new synthesis approaches are needed to obtain heterogeneous catalytically active materials, characterized by well-defined surface catalytic sites, which promote specific catalytic reactions and thus notably increase the selectivity of catalytic processes. Obviously, new catalytically active materials need to be characterized by physical methods which allow for an in depth analysis of the number of catalytically active sites and their specific, selectivity steering, chemical environment.

Guest Editor

Dr. Werner Oberhauser

Istituto di Chimica dei Composti Organometallici (CNR-ICCOM), Via Madonna del Piano 10, 50019 Sesto Fiorentino, Italy

Deadline for manuscript submissions

closed (31 December 2025)

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/230785

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

mdpi.com/journal/catalysts

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/journal/catalysts

MDPI

About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan, KS, USA

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q2 (Chemistry, Physical) / CiteScore - Q1 (General Environmental Science)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.9 days after submission; acceptance to publication is undertaken in 3.5 days (median values for papers published in this journal in the second half of 2025).