

Special Issue

Advanced Strategies for Catalyst Design

Message from the Guest Editor

Efficient catalysts are expected to be stable, active, and selective. In the past, the development of new catalysts has mainly depended on trial and error, a laborious and time-consuming approach. Nowadays, the mechanistic details of numerous important chemical reactions have been unraveled, and this information is essential to intelligently design novel catalysts. Thus, all the efforts devoted to a deep understanding of an intricate catalytic mechanism and to the preparation of novel catalysts relying on it are priceless. Chemists must set up adequate strategies, merging experimental and computational knowledge and abilities, to tune the performance of molecules that might be successful in the lab. For this Special Issue, researchers are invited to submit original research papers and review articles related to advanced strategies for catalyst design. Topics of interest include but are not limited to the following: The computer-aided design of catalysts; Weak interactions in catalysis; Bioinspired catalysis; Big data and catalysis; Integrated experimental and theoretical approaches to catalyst design.

Guest Editor

Dr. Laura Orian
Department of Chemical Sciences, University of Padova, Via Marzolo, 1,
35131 Padova, Italy

Deadline for manuscript submissions

closed (31 July 2020)



Catalysts

an Open Access Journal
by MDPI

Impact Factor 4.0
CiteScore 7.6



mdpi.com/si/25329

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

[mdpi.com/journal/
catalysts](https://mdpi.com/journal/catalysts)





Catalysts

an Open Access Journal
by MDPI

Impact Factor 4.0
CiteScore 7.6



[mdpi.com/journal/
catalysts](https://mdpi.com/journal/catalysts)



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).