

Special Issue

Mechanism/Kinetic Modeling Study of Catalytic Reactions

Message from the Guest Editors

Catalytical reactions are of fundamental importance in industry and biochemical systems. The knowledge of catalytic reaction mechanisms is crucial in understanding the functioning of catalysts equally in homogeneous, heterogeneous, and enzymatic catalysis. In many technological or biological processes, the specific reaction mechanisms are not fully understood and are still widely discussed. The knowledge of reaction mechanisms can help to design better catalysts or effective drugs. Experimental kinetic research and simulations of catalytic reaction dynamics are crucial for understanding their mechanisms and comprehension of the observed reaction efficiencies. The use of advanced experimental techniques and modern theoretical methods is applied to elucidate catalytic mechanisms. This Special Issue is devoted to the mechanisms and kinetics of homogeneous, heterogeneous, and enzymatic catalytic reactions. Articles focused on research with both experimental and computational methods are welcome. Short communications are also encouraged.

Guest Editors

Prof. Dr. Maria Jaworska

Institute of Chemistry, University of Silesia in Katowice, Katowice, Poland

Dr. Piotr Lodowski

Institute of Chemistry, University of Silesia in Katowice, Katowice, Poland

Deadline for manuscript submissions

closed (15 January 2023)



Catalysts

an Open Access Journal
by MDPI

Impact Factor 4.0
CiteScore 7.6



mdpi.com/si/71834

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).