

Special Issue

Catalysts in Chemical Looping Technology for Energy Storage and Carbon Emission Reduction

Message from the Guest Editors

Chemical looping technology has emerged as a versatile and effective platform for energy storage and the production of value-added chemicals. The closed reaction cycle composed of multiple redox processes can potentially lower the reaction barrier, improve the yield of chemicals, and help to avoid some complicated separation processes. Recent years have seen great progress in the utilization of such technology in various reactions, including power generation, hydrocarbon conversion, ammonia synthesis, H₂O/CO₂ splitting, and so on. Additionally, numerous efforts have also been dedicated to reactor design, process engineering, and numerical simulations. In view of the prosperity in the area, this Special issue will focus on recent advances in redox materials, kinetics, mechanism, reactor design, and process analysis for chemical looping applications. Original research papers, review articles, and short communications are all welcome to this Special Issue.

Guest Editors

Dr. Chuande Huang

Dr. Bo Jiang

Dr. Xin Tian

Dr. Jiawei Hu

Deadline for manuscript submissions

closed (30 November 2022)



Catalysts

an Open Access Journal
by MDPI

Impact Factor 4.0
CiteScore 8.3



mdpi.com/si/89036

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 8.3



[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).