## Special Issue

# Catalysts and Plastics: From Degradation to Functional Applications

### Message from the Guest Editors

The accumulation of plastic waste presents a critical global environmental challenge, driving the need for advanced catalytic strategies that not only degrade plastics but also transform them into valuable products. Recent innovations have moved beyond traditional thermal pathways to explore advanced catalytic technologies, including biocatalysis, electrocatalysis, and photocatalysis.

This Special Issue highlights innovative research on advanced catalysts and catalytic processes for plastic depolymerization and upcycling. We invite submissions involving the design and synthesis of novel catalysts (such as single-atom, nanostructured catalysts, or engineered enzymes), the development of novel transformation pathways for synthesizing high-value products (such as chemicals, new polymers, or functional carbon materials), and the construction of innovative catalytic systems, particularly tandem or hybrid processes that synergistically combine different catalytic technologies. Additionally, mechanism studies and advanced characterization of catalytic processes are also welcome.

#### **Guest Editors**

Dr. Xiaoli Zhou

College of Biotechnology and Pharmaceutical Engineering, Nanjing Tech University, Nanjing, China

Prof. Dr. Jing Ding

College of Chemical Engineering, Nanjing Tech University, Nanjing, China

## Deadline for manuscript submissions

31 May 2026



# **Catalysts**

an Open Access Journal by MDPI

Impact Factor 4.0 CiteScore 7.6



mdpi.com/si/261636

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



## **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 16.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).

