

## Special Issue

# Metal Alloy Nanoparticles for Synergistic Photocatalytic Degradations of Pollutants

### Message from the Guest Editor

We invite researchers to submit cutting-edge studies on the use of metal alloy nanoparticles for the synergistic photocatalytic degradation of pollutants in liquids. We welcome work exploring high-entropy alloys, single-atom or multiple-atom metal in a host nanoparticle matrix, and innovative metal-to-metal oxide or nitride combinations with unique structural and electronic properties that enhance photocatalytic efficiency. We are particularly interested in submissions addressing the degradation of harmful bacteria and organic pollutants. Studies should focus on light-activated photocatalysis in the liquid phase, examining how these metal alloy nanoparticles promote the generation of reactive species under various wavelengths and conditions, accelerating the breakdown of pollutants. Research that dives into the synthesis, characterization, and mechanism of action of metal alloy nanoparticles, and explores their role in sustainable water purification and pollution control, is highly encouraged.

- metal alloys
- single atom
- entropy alloys
- water remediation
- pollutant removal
- plasmonic
- heterojunction

### Guest Editor

Dr. Joel Y. Y. Loh

The Photon Science Institute, University of Manchester, Manchester M13 9PY, UK

### Deadline for manuscript submissions

closed (10 May 2025)



## Catalysts

an Open Access Journal  
by MDPI

Impact Factor 4.0  
CiteScore 7.6



[mdpi.com/si/222106](https://mdpi.com/si/222106)

*Catalysts*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[catalysts@mdpi.com](mailto: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 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).