Special Issue

Nanoparticles for Photocatalytic Water and Air Remediation

Message from the Guest Editor

Photocatalysis, discovered in the early 20th century, has seen a major research surge for several decades now, leading to advancements in mechanisms, materials, and applications such as biomass valorization, microorganism inactivation, and hydrogen production. Despite extensive studies, photocatalysis remains crucial for addressing key challenges, such as environmental pollution (CECs, PPCPs, and microplastics), public health crises (e.g., COVID-19), and energy crises. Further progress is needed to optimize surface and optical properties, enhance charge separation, and expand UV–visible absorption. This necessitates the development of advanced nanomaterials and nanocatalysts. Although water treatment was one of the first applications of photocatalysis and numerous catalysts have since been developed, more than 5000 international publications on this topic are recorded each year.

- nanophotocatalyst
- photocatalyst
- water treatment
- semiconductor
- environmental remediation
- advanced oxidation technology
- heterogeneous catalysis

Guest Editor

Dr. Didier Robert

Institut de Chimie et Procédés pour l'Energie, l'Environnement et la Santé (UMR7515-CNRS), Université de Strasbourg, Site de Saint-Avold-Université de Lorraine, 25 Rue Becquerel, 67087 Strasbourg, France

Deadline for manuscript submissions

20 November 2025

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/235168

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

mdpi.com/journal/catalysts

MDPI

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).