Special Issue

Carbon-Based Catalysts to Address Environmental Challenges

Message from the Guest Editors

The potential of carbons as an alternative to the more conventional materials used in catalysis has been recently recognized. Carbon materials with the *graphenic* structure can be prepared from a wide range of precursors, and can be used as catalyst supports or as catalysts on their own. Structural defects and edges offer reactive sites where different functional groups can be attached; in addition, carbon atoms in the graphite lattice can be replaced by heteroatoms such as N, B, P or S. Functionalization and doping are methodologies that can be used for tuning the properties of these carbon materials, allowing the design of custom-made catalysts for specific applications. In this Special Issue, we will focus on challenging environmental applications for carbon-based catalysts, such as the production of chemicals and fuels from biomass and carbon dioxide, including photo and electrocatalysis; energy storage and conversion; and the replacement of industrial catalysts that are based on scarce elements. The application of carbon-based catalysts in pollution abatement is also within the scope of the Special Issue.

Guest Editors

Dr. Raquel Pinto Rocha

Laboratory of Separation and Reaction Engineering—Laboratory of Catalysis and Materials (LSRE-LCM), Department of Chemical Engineering, Faculty of Engineering, University of Porto, 4200-465 Porto, Portugal

Prof. Dr. José L. Figueiredo

Associate Laboratory LSRE-LCM, Chemical Engineering Dept., Faculty of Engineering, University of Porto, 4200-465 Porto, Portugal

Deadline for manuscript submissions

closed (31 March 2025)

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/207141

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

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).