Special Issue

Sustainable Catalytic Processes for the Conversion of Lignocellulosic Biomass

Message from the Guest Editor

The challenge of using renewable lignocellulosic biomass to replace petroleum-based chemicals from fossil resources is currently of great interest and importance. The integrated (multi-product) biorefinery concept of lignocellulosic biomass conversion into fuel, chemicals, and materials is currently seen as the most prospective path to a sustainable carbon-neutral circular bio-economy. The development of efficient catalytic processes for the selective and eco-clean (green) fractionation and upgrading of major biomass components is critical for viable biorefining technology. In recent years, significant progress has been achieved in the development and application of sustainable catalytic systems (both homogeneous and heterogeneous) in lignocellulosic biomass conversion technology. This Special Issue welcomes original research papers, short communications and review papers covering all aspects of homogeneous or heterogeneous catalysis regarding the chemical conversion/biorefinery of lignocellulosic biomass and isolated biomass components. Dr. Anatoly Shatalov

Guest Editor

Dr. Anatoly A. Shatalov

Forest Research Center (CEF), School of Agriculture, University of Lisbon, Tapada da Ajuda, 1349-017 Lisbon, Portugal

Deadline for manuscript submissions

20 September 2025

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/229807

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 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).

MDPI