

Special Issue

Advances in Biomass Pyrolysis Processes

Message from the Guest Editors

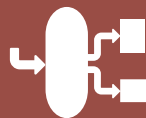
This Special Issue aims to highlight cutting-edge developments in pyrolysis technology, emphasizing the transition from laboratory-scale innovations to industrial applications. It will cover recent advancements in reactor engineering, including novel configurations and autothermal systems designed for enhanced heat transfer and process intensification. Contributions exploring the optimization of process parameters—temperature, heating rate, and residence time—through advanced control systems and process integration are encouraged. The issue will also feature studies involving in and ex situ catalytic pyrolysis, reactive catalytic pyrolysis, catalytic hydrolysis and bio-oil hydrodeoxygenation for reducing the content of oxygenates in resulting bio-oils, along with the development of novel catalysts tailored to specific biomass and/or bio-oil compositions. The goal is to foster deeper insights into the complexities of pyrolysis systems, supporting the industrial scale-up of efficient, low-emission biomass valorization pathways.

Guest Editors

Dr. Güray Yildiz
Dr. Jiawei Wang
Dr. Gartzten Lopez

Deadline for manuscript submissions

closed (15 December 2025)



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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
processes@mdpi.com

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Editor-in-Chief

Prof. Dr. Giancarlo Cravotto

Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, Italy

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