

## 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 hydropyrolysis 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

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### Deadline for manuscript submissions

15 December 2025



## Processes

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### Message from the Editor-in-Chief

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