Special Issue

Advanced Biomass Analysis and Conversion Technology

Message from the Guest Editor

As an environmentally sustainable alternative to petroleum resources, biomass can produce diverse platform chemicals and realize a circular economy. Thermochemical recycling replaces the need for landfills and incineration by utilizing the carbon resources of biomass as carbon-neutral targets. The optimization of biomass conversion focuses on improving energy yields, enhancing product quality, and reducing environmental impacts. Furthermore, optimized utilization of biomass-derived products, such as biochar for soil amendment and biofuels for energy, supports carbon sequestration and the circular economy. With global interest in reducing carbon footprints and fostering renewable energy sources, the optimization of biomass conversion and pyrolysis is crucial for achieving climate goals and enhancing resource efficiency. This Special Issue seeks high-quality works on topics including, but not limited to, the following:

- Pyrolysis and gasification of biomass;
- Process integration and optimization;
- Biofuel production and biochar utilization;
- Carbon capture, utilization and storage;
- Environment–energy–economy analysis.

Guest Editor

Dr. Shengyu Xie
School of Energy and Mechanical Engineering, Nanjing Normal University, Nanjing 210023, China

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Processes
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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