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*Special Issue Reprint*

## **Biomass and Waste Conversion: Latest Advances and Prospects**

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The natural environment can no longer sustain human development; non-renewable resources must be preserved and used wisely. More recently, a number of intensive environmental problems have arisen, and many natural boundaries have been crossed due to our actions. Global warming and the depletion of natural resources are becoming a reality. Pollution and climate change are important factors enforcing our society to change their habits and move toward process circularity. The huge energy demand, both thermal and electrical, is obvious; however, it is no longer guaranteed. To maintain stability, we must move toward more eco-friendly solutions and replace fossil fuels with more heterogeneous and dynamic fuels such as biomass, especially agricultural biomass, refuse-derived fuels, and municipal waste. The thermochemical processing of waste fuels and biomass includes, but is not limited to: torrefaction, pyrolysis, liquefaction, gasification, hydrothermal carbonization and co-combustion, and direct combustion. At present, not only is the efficiency of the process the main challenge but waste generation and further utilization of the products to close the material loop are important issues as well. One of the major concerns is the quality of the materials generated; product cleaning and upgrading to enhance their properties provide significant research opportunities. The following Special Issue presents recent findings in biomass and waste conversion technologies, raw material analysis, and further upgrading and utilization of thermal processing products according to the circular economy concept.



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