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## Biomass Fast Pyrolysis

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### **Message from the Guest Editors**

The depletion of fossil fuels and the environmental awareness associated with their impact is promoting the development of processes aimed at the production of fuels and chemicals from renewable sources. In this scenario, fast pyrolysis is a promising thermochemical route for the full-scale production of renewable fuels and chemicals from biomass. Moreover, fast pyrolysis allows converting low-density biomass into bio-oil, which is a denser liquid that can be stored and transported. Although great attention has been paid to this process, fundamental aspects, such as reaction mechanism, reactor design, and product final applications, remain unsolved. In fact, the direct utilization of crude bio-oil is hindered by its poor quality (water and oxygen contents, viscosity, low energy content, and corrosiveness). Several strategies have been proposed in order to improve the quality of the products obtained from biomass fast pyrolysis. Thus, catalytic fast pyrolysis (either in situ or in line) is an interesting alternative for enhancing bio-oil quality and selectively produce valuable chemicals (such as aromatics and light olefins).



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