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Catalytic Pyrolysis

Guest Editor:

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Deadline for manuscript submissions:
closed (30 September 2018)

Message from the Guest Editor

Pyrolysis is an efficient and eco-friendly process for the production of fuels, chemicals and hydrogen from different types of biomasses and wastes (e.g., plastics and waste tyres). However, the commercial success of pyrolysis is restricted by the products' poor quality and the process's limited selectivity. Within this scenario, catalytic pyrolysis is a feasible alternative to overcome the limitations of thermal pyrolysis. The incorporation of acid catalysts into pyrolysis processes has proven to be a key factor for the production of fuels and chemicals, such as light olefins and aromatics. Furthermore, the use of reforming catalysts allows developing alternative routes for hydrogen production. In spite of the interest in catalytic pyrolysis, there are challenges that must be addressed prior to its large-scale implementation, such as improving catalyst design, studies with real wastes, in-depth deactivation and regeneration studies, and the optimization of product distribution to enhance the production of high value-added products.

Detailed information in

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