



Bioenergy and Environment

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Energy crisis and climate change is a worldwide concern. Development of renewable energy as an alternative to fossil fuel attract more attention in recent years. According to report published by REN21, renewable energy contributed 19.2% to human's global energy consumption in 2016, and 8.9% was from traditional biomass. Bioenergy has its unique advantages, such as C-neutral property, the only renewable energy able to convert into the forms of liquid, gas and solid products. The utilization of biomass can fulfill the strong need of both energy and environment.

The complex structure of biomass, as of cellulose, semi-cellulose and lignin has posed a great challenge to researchers about how to convert it with high efficiency and high quality products. Recent developments on accurate analysis device (Marco-TGA, PY-GC/MS, Synchrotron VUV Photoionization Mass Spectrometry), new catalysts, new reactors and assistant technologies (microwave, ultrasonic wave, plasma etc.) may bring the opportunity to these concerns.

On the other hand, the utilization of biomass may lead to the environmental pollutions (PAH, Dioxin, etc.). future work needs to identify an integration of resource utilization and benefit to the environment as well.

Therefore, this Special Issue will address recent research advances in Bioenergy and Environment interaction studies on waste utilization and conversion, biofuel production, pollution control and remediation. However, we have done many pieces of research, but this was not the end of the story. There is various other information that researchers need to seek more to clean bioenergy and less environmental/ecosystem impacted.

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