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State-of-the-Art of Biomass and Municipal Waste into Useful Energy

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Message from the Guest Editor

The finite nature of the fossil fuels, combined with an increasing worry about the concomitant greenhouse effect, has to led research and industry into renewable energy sources (RES). In the immediate future, therefore, the most direct and cheapest way to tackle the problem is to use existing energy sources more efficiently. In any case, the biggest source of renewable energy, apart from solar energy, is biomass and municipal waste. Currently, four main methods of biomass and waste utilization are used: direct combustion, pyrolysis, biodegradation and gasification. Most biomass and waste can be converted into fuel by gasification because the process is generally more efficient and cleaner than direct combustion or pyrolysis and biodegradation. Pyrolysis and biodegradation of biomass from agricultural crops, forestry waste and sewage in order to obtain low-calorie fuel is expensive and sometimes dangerous due to methane explosions. However, the main objective of this issue is to promote new and advanced technology for the thermochemical conversion of biomass and waste for alternative energy production, syngas and even hydrogen H2.

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Message from the Editor-in-Chief

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