Special Issue

Biomass Combustion and Energy Production Processes

Message from the Guest Editors

Interest in biomass utilization has increased due to limited reserves and environmental problems (e.g., greenhouse gases and smog) of conventional fossil fuels. The performance of biomass combustion systems depends on the operating conditions (e.g., air/fuel ratios, excess air ratios) and fuel properties (e.g., ultimate analysis, proximate analysis). In addition, heat exchangers and Stirling engines can be integrated into combustion systems to convert residual heat into energy (e.g., hot water and electricity) during biomass combustion. This Special Issue aims to highlight both the latest theoretical and environmental advances in biomass combustion and energy production processes, including, but not to limited to, the following topics:

- Characterization and analysis of biomass fuel properties;
- Investigation and evaluation of gas emissions (e.g., NOx, SO2, particulate matter, CO, HCl) and performance during the biomass combustion process;
- Integration of heat exchanger and Stirling engine with biomass combustion system;
- Analysis of energy production from the biomass utilization.

Guest Editors

Dr. Xuejun Qian

Great Lakes Bioenergy Research Center, University of Wisconsin–Madison, Madison, WI 53726, USA

Prof. Dr. Seong W. Lee

Industrial and Systems Engineering Department, Morgan State University, 1700 East Cold Spring Lane, Baltimore, MD 21251, USA

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Processes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
processes@mdpi.com

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Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, Italy

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