



Wood-Based Bioenergy and Byproducts

Guest Editor:

Dr. Zhiyong Cai

Forest Products Laboratory,
USDA Forest Service, Madison, WI
53726, USA

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Message from the Guest Editor

Bioenergy derived from wood is among the most important renewable energy options. Wood-based bioenergy is established on two main conversion routes: thermochemical and biochemical conversion. The first route is the biochemical process by which cellulose and hemicellulose in the wood are converted to ethanol, butanol, and platform chemicals; however, the fermentation process always leaves about 15–30% of the input biomass mass as unconverted lignin. Lignin poses either a potential disposal liability or a byproduct opportunity. Thermochemical conversion technology can be routed to gasification and pyrolysis processes. Both gasification and pyrolysis processes produce biochar as their byproducts. Like other carbonaceous solid fuels, lignin and biochar can be sources for energy and fuels. Thus, the valorization of lignin/biochar is also a subject of intense research in the field of energies. This Special Issue aims to address the new trends in the use of wood for bioenergy through thermochemical and biochemical conversion, specifically the utilization of bioenergy byproducts—lignin and biochar for chemicals, energy/fuels, and materials.





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Prof. Dr. Enrico Sciubba

Department of Mechanical and
Aerospace Engineering,
University of Roma Sapienza, Via
Eudossiana 18, 00184 Roma, Italy

Message from the Editor-in-Chief

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