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Research of Pyrolysis and Conversion of Materials and Thermodynamic Characteristics

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Message from the Guest Editors

Due to reduction in wood resources and environmental protection thermochemical conversion of biomass waste, and agriculture residues is becoming an increasingly important issue. For this reason, biomass and agriculture waste, have become the subject of analyzes in terms of biochar production. The whole field of different biogenic residues engineering is underpinned by thermochemical conversion and more precisely, the pyrolysis process. The most important task is to select the appropriate biomass waste and analyze it in terms of physical and chemical properties, and to determine the properties of the resulting process products. A thorough analysis of solid products can provide space for their use in construction, agriculture, soil improvement or the production of barbecue charcoal. The analysis of the liquid fraction is the basis for obtaining bio-oil, and the gas fraction for obtaining high-caloric gases for the production of heat and electricity. An important scientific aspect is also the thermodynamic analysis, which allows to determine the dynamics of the process, the rate of heating of the bed and fuel particles, the time scales of the pyrolysis process and chemical reactions.



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Special Issue



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Message from the Editor-in-Chief

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