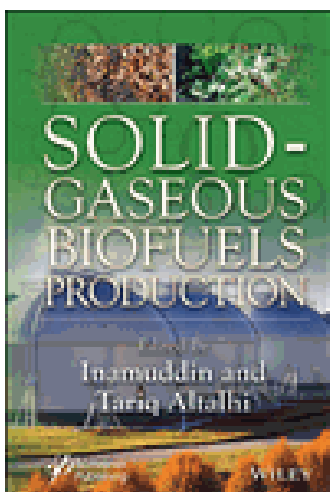


Solid-Gaseous Biofuels Production



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CHAPTER 18

Thermochemical Conversion Products for Solid Biofuels (Pages: 473-486)

J.E. Castanheiro, P.A. Mourão, I. Cansado

Due to the environmental problems, which are associated with the increase of the emissions of gases with the greenhouse effect (CO₂, SO₂, and NO_x), a climatic change, proven by the increase of the Earth Planet temperature, is observed. It is imperative to replace fossil sources, such as natural gas, coal, and petroleum, with renewable raw material for the production of biofuels. Biofuels can be solid, liquid, and gas fuels. Solid biofuels include firewood, wood chips, wood pellets, charcoal, biowaste, sewage sludge, and a diversity of residues from agricultural activities. Bioethanol, biodiesel, and pyrolysis bio-oil are classified as liquid biofuels. Biogas and syngas are considered gas biofuels. This chapter includes a review of the different processes to produce solid biofuels.

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