Organic Functional Group Modified Biochar-Based Composites and Their Applications

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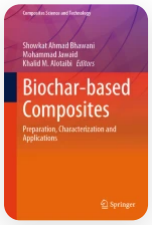

Biochar-based Composites

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Abstract

Biochar composites or carbon rich materials are derived from different feedstocks under thermochemical decomposition of biomass at high temperatures about ≤700 °C in the limited supply of oxygen. Biochar composites may be easily modified through their treatment with alkali, oxidizing-agents, acids, carboniferous materials, metal ions, steam and gas-purging methods. The choice of modification-method for a biochar depends largely on the application-fields. Depending upon physical and chemical

nature, there are different types of biochar composites such as metal-biochar, mineral biochar, layered double hydroxides (LDH)-biochar, microorganism biochar etc. In this chapter, synthesis, characterization of some organic functional group containing biochar composites, and their potential applications has been discussed.