

A review: carbon dioxide capture: biomass-derived-biochar and its applications

ABSTRACT

The changes in global temperatures as a result of carbon dioxide (CO₂) emissions has suggested that cumulative CO₂ emissions will continue to increase over time. Many countries are looking for ways to reduce or alter the amount of CO₂ harming our environment; therefore, this review is a compilation of CO₂ adsorption on biomass-derived-biochar (BDB). This suggests that effective measures to mitigate the risk of dangerous climate change will need to limit cumulative emissions of CO₂. Further, if cumulative CO₂ emissions overshoot acceptable limits, it will become necessary to remove CO₂ from the air, that is, the so-called "negative emissions." In this review, we discuss the definitions and classes of technologies for capturing CO₂ from the air and the application of biochar in the improvement of soil fertility. We also discuss the economic tradeoff between biochar and bio-oil, agricultural nutrient leaching, the novel magnetic property of biochar and its durability.

Keyword: Biomass derived biochar; CO₂ capturing; Magnetic property of biochar; Soil fertility