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