

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

### **ABSTRACT**

The changes in global temperatures as a result of carbon dioxide (CO<sub>2</sub>) emissions has suggested that cumulative CO<sub>2</sub> emissions will continue to increase over time. Many countries are looking for ways to reduce or alter the amount of CO<sub>2</sub> harming our environment; therefore, this review is a compilation of CO<sub>2</sub> 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 CO<sub>2</sub>. Further, if cumulative CO<sub>2</sub> emissions overshoot acceptable limits, it will become necessary to remove CO<sub>2</sub> from the air, that is, the so-called ~~the~~ negative emissions. ~~the~~ In this review, we discuss the definitions and classes of technologies for capturing CO<sub>2</sub> 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; CO<sub>2</sub> capturing; Magnetic property of biochar; Soil fertility