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Review

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Symbiotic relationship between hydrothermal carbonization technology and anaerobic digestion for food waste in China

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ABSTRACT

Food waste (FW) is traditionally disposed through landfills and incineration in China. Nowadays, there are some promising methods, such as anaerobic digestion (AD) or feeding and composting, which are being applied in pilot cities. However, the inherent characteristics of Chinese FW may be regarded as a double-edged sword in the practical applications of these disposal methods. To overcome these challenges, two modes of the hydrothermal carbonization (HTC) process were reviewed as innovative strategies in this article. Meanwhile, the “symbiotic relationship” between Chinese FW and HTC technologies was highlighted. To improve treatment efficiency of FW, we should not only try different methods and develop existing technologies, but also pay more attention to the utilization and “1+1>2” synergistic effect of their combinations, such as the combination of HTC and AD as a co-treatment method for saving on the construction cost and avoiding redistribution of social resources.

Keywords

Food waste; Hydrothermal carbonization; China; Anaerobic digestion

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