

Recent Perspective of organic waste treatment and anaerobic digestion in Korea

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Abstract

Carbon-free clean fuel bio-H₂ via biochemical dark fermentation (DF) represents a promising alternative carrier of energy in the future which leads to sustainable energy systems, owing to its social, economic as well as environmental recommendations especially in the aspect of its ultimate by-products of combustion is water molecules only. Successful continuous hydrogen production has been reported with the energy productivity higher than other bioenergy production such as 2nd generation bioethanol and anaerobic digestion. This presentation introduces the current status and perspective of dark fermentation for hydrogen production.

Keywords: Biohydrogen; Immobilization; High-rate bioenergy production; Organic waste; Lignocellulosic biomass; Algal biomass