BIO POWER THROUGH LITTER USING SOFC

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ABSTRACT

The fuels which we use now a days are about to extinct, so we need a new way of producing the electricity from a non-conventional energy source. In this paper we will know about a non-conventional fuel through which we can extract electricity. This paper deals with chicken litter to produce electricity using Solid Oxide Fuel Cell (SOFC). This process is economical and efficient as the byproduct of gasification of litter is used by the fuel cell. Gasification is a process that converts organic or fossil based carbonaceous materials into carbon monoxide, hydrogen and carbon dioxide. In this process we go for incomplete combustion of biomass which results hydrogen as byproduct and gives out heat, fuel and electricity. The poultry farms depend on this heat for heating boiler houses where next generation of poultry are grown. India known for its largest production of poultry is now facing the problem of disposing poultry waste, due to high phosphorous content it cannot be disposed on land. So, here we use our fuel cell to provide electricity which in turn gives effective way of disposing the poultry waste on land. This will meet the growing power demand and provides an effective way of disposing the poultry waste.

KEYWORDS: Solid Oxide Fuel Cell (SOFC), Poultry Litter Management, Renewable Energy, Waste Management; Gasification