

SEDIMENT MICROBIAL FUEL CELL AS SUSTAINABLE POWER RESOURCE

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Abstract

Power shortage and environmental degradation are two main challenges faced by the present generation. Affordable, accessible as well as environmentally-friendly energy sources are crucial for the future economy. One such exciting technology is the 'Microbial Fuel Cell' (MFC). In recent years, researchers have shown that MFCs can be used to produce electricity from organic matter. MFCs are devices that convert chemical energy into electrical energy, this conversion is carried out by the microorganisms present in the organic matter. This study involves the construction and analysis of the sediment MFC. A number of MFC units were assembled using different combination of electrodes. The results illustrate that the combination I (anode-Carbon, cathode-Zinc), producing a voltage of 1.45 V, was the most successful combination in this study. After further refining, this particular combination can be used as a model to develop a large-scale microbial fuel facility which can potentially be helpful in tackling the future energy demands.