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Energy Harvesting from Sediment Microbial Fuel Cell Using Different Electrodes

Jeetendra Prasad* and Ramesh Kumar Tripathi

Department of Electrical Engineering, MNNIT Allahabad, Uttar Pradesh 211004, India

Abstract:The consumption rate of energy around the world is rising on each successive day. In this result, Non-renewable sources of energy are ended at a fast rate. Sediment Microbial fuel cell (SMFC) aimed to deliver opportunities to generate pollution-free, cost-effective sustainable energy from sediment. The potential generated by the SMFC, microbes existing in the sediment. In this research, test the different electrode material in SMFC and here find the zinc and copper is the best material for SMFC which generate the maximum voltage across the electrode. Here maximum generated voltage and current of SMFC for steady state operating condition, with a copper anode and zinc cathode were 1.160V and 0.301mA and maximum power was 3.491mW. SMFC is gifted for long-term operation, sustainable low-cost green electricity harvest and stable power generation. SMFC can be used as a renewable power source as a remote environmental monitoring.

Keywords:Sediment microbial fuel cell, Energy harvesting, Voltage, Copper, Zinc, Graphite.

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