

Landfill Leachate: A Promising Substrate for Microbial Fuel Cells

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Abstract : Landfill leachate emerges as a promising feedstock for microbial fuel cells (MFCs). In the present investigation, direct air-breathing cathode-based MFCs are fabricated to investigate the potential of landfill leachate. Three MFCs that have different cathode areas are fabricated and investigated for 17 days under open circuit conditions. The maximum open circuit voltage (OCV) is observed to be as high as 1.29 V. The maximum cathode area specific power density achieved in the reactor is 1513 mW m⁻². Further studies are under progress to understand the origin of high OCV obtained from landfill leachate-based MFCs.

Keywords : microbial fuel cells, landfill leachate, air-breathing cathode, performance study

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