## A glimpse into the microbial fuel cells for wastewater treatment with energy generation

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## ABSTRACT

Energy and water storage are a global challenge due to various factors such as ecological changes, increasing population, increasing demand for energy at both commercial/domestic level, and high material cost. To overcome these problems, microbial fuel cells (MFCs) is considered as an emerging novel technology where one side it can generate electricity and on the other hand it also exhibits better removal efficiency of different pollutants from wastewater. In this technology, MFCs can use natural waste materials to produce energy and is also efficient in wastewater treatment. This review covers the basics of the technology around MFCs, focusing on the mechanism of energy production along with wastewater treatment. Some current challenges regarding the MFCs approach (especially electrode play a vital role in the field of MFCs) and some future perspectives are also addressed in this article. Moreover, electrodes constitute a significant component of this technique in deciding the working efficiency of MFCs during wastewater treatment. Hence, the selection of the electrode is a great challenge to make MFCs more prolific and commercial. Therefore, this review addressed these issues along with the concept of electro microbiology.

Keywords: Microbial fuel cells; Pollutants; Electricity; Wastewater; Electrodes

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