Article Abstract

Title:	Production of bio-electricity during wastewater treatment using a single chamber microbial fuel cell
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Abstract:	Microbial fuel cells (MFCs) represent a completely new long term, affordable, accessible and ecofriendly approach to waste water treatment with production of sustainable energy. The power generation efficiency in microbial fuel cells (MFCs) is based on bioreactors, which may represent a completely new approach to wastewater treatment. In our experimental test we found that it is possible to generate electricity using bacteria while accomplishing waste water treatment in process based on microbial fuel cell technologies. Tests were conducted using a single chamber microbial fuel cell (SCMFC) containing eight graphite electrodes (anodes) and a single cathode. The prototype SCMFC generated electrical power (maximum18 mWm^{-2}). Power generation in these systems can be increased by using suitable electrodes with the choice of appropriate bioreactor and fuel.
Keywords:	Microbial fuel cells,microbial communities, bio electricity generation ,proton-exchange membrane, electricity-generation, power-generation, bacterial communities, anaerobic-oxidation.