

## عنوان مقاله:

Electricity Generation Using Dairy Waste Water in a Microbial Fuel Cell

## محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

تعداد صفحات اصل مقاله: 7

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## خلاصه مقاله:

microorganisms In microbial fuel cell (MFC), form an electrochemical system, which results in electricity production from a diverse group of substrates, ranging from acetate to complex organic wastes to cellulosic biomass. Our work was aimed to use dairy industry wastewater as the feed and investigate the effect of growing active biofilm in a double chamber MFC with a self-made fiber brush anode, where the stainless steel core of the brush was perpendicular to the membrane surface. The voltage, current, resistance, and power density during the experiment were recorded. The results were expressed in form of polarization and power density curves in three time periods from the start of the experiment. The maximum power density of system at the first, second, and third periods were determined to be 16, 158, and 597 mW/m<sup>2</sup>, respectively. The significant progress in the performance of the MFC, highlighted the rule of biofilm formation in this system

## کلمات کلیدی:

Microbial fuel cell, dairy waste water industry, exoelectrogenic bacteria, green electricity

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/341155>

