

Proposed Session on Sustainability for 239th ACS Conference, March 21-25, San Francisco, CA

Energy Sustainability of the Water Infrastructure Using Microbial Fuel Cell Based Technologies

The water infrastructure in the USA requires ~3-5% of our annual electricity production, with ~1.5% of the electricity used for wastewater treatment. Microbial fuel cell (MFC) based technologies offer the potential not only for recovery energy from wastewaters, but also to make wastewater treatment plants net energy producers. Bioenergy can be obtained using MFC technologies in several forms, including electricity, hydrogen and methane gases. The purpose of this session will be to explore advances in different types of MFCs, microbial electrolysis cells, and other bioelectrochemical and membrane technologies that show promise for energy recovery from wastewaters, waste biomass such as cellulosic materials, salinity gradients, and waste heat.

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