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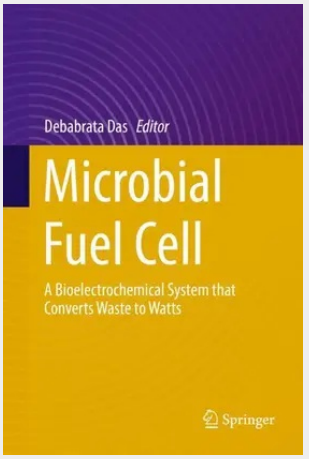
Microbial Fuel Cell

A Bioelectrochemical System that Converts Waste to Watts

This book represents a novel attempt to describe microbial fuel cells (MFCs) as a renewable energy source derived from organic wastes. Bioelectricity is usually produced through MFCs in oxygen-deficient environments, where a series of microorganisms convert the complex wastes into electrons via liquefaction through a cascade of enzymes in a bioelectrochemical process.

The book provides a detailed description of MFC technologies and their applications, along with the theories underlying the electron transfer mechanisms, the biochemistry and the microbiology involved, and the material characteristics of the anode, cathode and separator. It is intended for a broad audience, mainly undergraduates, postgraduates, energy researchers, scientists working in industry and at research organizations, energy specialists, policymakers, and anyone else interested in the latest developments concerning MFCs.

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192,59 €
179,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783319667928
Medium: Buch
ISBN: 978-3-319-66792-8
Verlag: Springer
Erscheinungstermin: 14.12.2017
Sprache(n): Englisch
Auflage: 1. Auflage 2018
Produktform: Gebunden
Gewicht: 1188 g
Seiten: 506
Format (B x H): 160 x 241 mm