



# Microbial Fuel Cells

*Bruce E. Logan*

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## **Microbial Fuel Cells** Bruce E. Logan

The theory, design, construction, and operation of microbial fuel cells

Microbial fuel cells (MFCs), devices in which bacteria create electrical power by oxidizing simple compounds such as glucose or complex organic matter in wastewater, represent a new and promising approach for generating power. Not only do MFCs clean wastewater, but they also convert organics in these wastewaters into usable energy. Given the world's limited supply of fossil fuels and fossil fuels' impact on climate change, MFC technology's ability to create renewable, carbon-neutral energy has generated tremendous interest around the world.

This timely book is the first dedicated to MFCs. It not only serves as an introduction to the theory underlying the development and functioning of MFCs, it also serves as a manual for ongoing research. In addition, author Bruce Logan, a leading pioneer in MFC research and development, provides practical guidance for the effective design and operation of MFCs based on his own firsthand experience.

This reference covers everything you need to fully understand MFCs, including:

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Key topics such as voltage and power generation, MFC materials and architecture, mass transfer to bacteria and biofilms, bioreactor design, and fundamentals of electron transfer

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Applications across a wide variety of scales, from power generation in the laboratory to approaches for using MFCs for wastewater treatment

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The role of MFCs in the climate change debate

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Detailed illustrations of bacterial and electrochemical concepts

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Charts, graphs, and tables summarizing key design and operation variables

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Practice problems and step-by-step examples

Microbial Fuel Cells, with its easy-to-follow explanations, is recommended as both a textbook for students and professionals interested in entering the field and as a complete reference for more experienced practitioners.

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Exactly why? Because this Microbial Fuel Cells is an unordinary book that the inside of the book waiting for you to snap the idea but latter it will jolt you with the secret this inside. Reading this book close to it was fantastic author who else write the book in such amazing way makes the content on the inside easier to understand, entertaining approach but still convey the meaning entirely. So , it is good for you because of not hesitating having this ever again or you going to regret it. This phenomenal book will give you a lot of advantages than the other book include such as help improving your expertise and your critical thinking method. So , still want to delay having that book? If I were being you I will go to the e-book store hurriedly.

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Playing with family within a park, coming to see the marine world or hanging out with buddies is thing that usually you have done when you have spare time, then why you don't try issue that really opposite from that. One particular activity that make you not sensation tired but still relaxing, trilling like on roller coaster you have been ride on and with addition details. Even you love Microbial Fuel Cells, you can enjoy both. It is great combination right, you still desire to miss it? What kind of hang-out type is it? Oh can occur its mind hangout men. What? Still don't get it, oh come on its named reading friends.

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