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Nota di contenuto	Introduction -- Mathematical Modelling -- Model Analysis of Single Population Single Chamber MFC -- Robust Control design of SPSC Microbial Fuel Cell with norm bounded uncertainty -- Introduction to Adaptive Control. .
Sommario/riassunto	This book addresses a range of solutions and effective control techniques for Microbial Fuel Cells (MFCs), intended as a response to the increased energy consumption and wastewater production stemming from globalization. It describes the fundamentals of MFCs and control-oriented mathematical models, and provides detailed information on uncertain parameters. Various control techniques like robust control with LMI, adaptive backstepping control, and exact linearization control are developed for different mathematical models. In turn, the book elaborates on the basics of adaptive control, presenting several methods in detail. It also demonstrates how MFCs

can be developed at the laboratory level, equipping readers to develop their own MFCs for experimental purposes. In closing, it develops a transfer function model for MFCs by combining a system identification technique and model reference adaptive control techniques. By addressing one of the most promising sources of clean and renewable energy, this book provides a viable solution for meeting the world's increasing energy demands.
