Special Issue

Microbial Electrolysis Cells and Microbial Fuel Cells

Message from the Guest Editor

Microbial electrolysis cells (MECs) and microbial fuel cells (MFCs) are the main bioelectrochemical systems with significant potential for energy recovery, wastewater treatment, and pollutant removal. These technologies harness electroactive microbes to drive key environmental and energy-related processes. Recent advancements in electrode materials, system design, and microbial interactions have improved their performance and broadened their applications. This Special Issue focuses on advancing MECs and MFCs for sustainable energy production, wastewater treatment, and environmental remediation. We invite studies discussing microbial interactions, electrode materials, system optimization, life cycle assessment, and large-scale applications. Special attention will be given to emerging areas such as microplastic removal, resource recovery, and hybrid system integration. By gathering up-to-date research, this Issue aims to foster insightful collaboration and accelerate the practical application of MEC and MFC technologies. We welcome original research, reviews, and perspectives that contribute to the development of these innovative bioelectrochemical systems.

Guest Editor

Dr. Shuyao Wang

Bioresource Engineering, Faculty of Agricultural and Environmental Sciences, McGill University, 21111 Lakeshore Road, Sainte-Anne-de-Bellevue, QC H9X 3V9, Canada

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Microorganisms
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
microorganisms@mdpi.com

mdpi.com/journal/microorganisms

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About the Journal

Message from the Editor-in-Chief

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

Editor-in-Chief

Dr. Nico Jehmlich
Department of Molecular Toxicology, UFZ-Helmholtz Centre for Environmental Research, 04318 Leipzig, Germany

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