



Advances in Microbial Electrochemical Technology

Guest Editors:

Dr. Rusen Zou

Department of Environmental Engineering, Water Technology & Processes, Technical University of Denmark, Lyngby, Denmark

Dr. Zhiyong Zhang

School of Environment, Tsinghua University, Beijing 100084, China

Deadline for manuscript submissions:

30 December 2024

Message from the Guest Editors

Dear Colleagues,

Microbial electrochemistry, a burgeoning field characterized by the interaction between microorganisms and electrochemical systems, has paved the way for innovative applications in energy production, environmental remediation, and chemical synthesis. Microbial fuel cells (MFCs), microbial electrolysis cells (MECs), and microbial electrosynthesis (MES) are at the forefront of this research, offering sustainable solutions for energy generation and bioproduct synthesis. These systems leverage the unique capabilities of microorganisms to catalyze a wide range of reactions, including wastewater treatment, CO₂ reduction, and the production of valuable chemicals.

Keywords: microbial fuel cells (MFCs); microbial electrolysis cells (MECs); microbial electrosynthesis (MES); electron transfer mechanisms; electrode materials and designs; microbial community engineering; in situ and in operando techniques; wastewater treatment; CO₂ and N₂ fixation; theoretical modeling; biofilm dynamics; integration with renewable energy sources; scale-up and commercialization





an Open Access Journal by MDPI

Editor-in-Chief

Dr. Badal C. Saha

Retired, National Center for
Agricultural Utilization Research,
USDA-ARS, Peoria, IL, USA

Message from the Editor-in-Chief

Welcome to a new open access journal, Fermentation, which meets the growing need for a high quality peerreviewed international journal with easy access to all researchers globally. We hope that you will share our enthusiasm for this new journal and look forward to working with you to make Fermentation a leader in its field. Your contributions are vital for the success of this new journal. Proposals for editing a special issue for a particular topical area are always welcome.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubAg, FSTA, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (*Biotechnology and Applied Microbiology*) / CiteScore - Q2 (*Plant Science*)

Contact Us

Fermentation Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/fermentation
fermentation@mdpi.com
X@Ferment_MDPI