

## Special Issue

# Current Progress in Fermentation Technology and Microbial Biotechnology: A Comprehensive Overview of Recent Developments and Innovations

### Message from the Guest Editors

In the ever-evolving landscape of biotechnology, the synergy between fermentation technology and microbial biotechnology continues to pave the way for groundbreaking advancements. This Special Issue delves into the latest developments in fermentation technology and microbial biotechnology, shedding light on the transformative strides that researchers and experts have made in these fields. Modern fermentation processes have evolved with advanced monitoring and control systems. Real-time data analytics, artificial intelligence, and automation optimize conditions, enhancing yields, reducing production times, and improving product quality. Moreover, microbial biotechnology utilizes microorganisms for various processes and has undergone significant advancements. Genetic engineering and synthetic biology enable the customization of microorganisms for specific industrial applications. This has led to improved productivity and resilience and the synthesis of desired compounds, impacting bioprocessing, healthcare, agriculture, and environmental management. Recent developments in fermentation technology and microbial biotechnology mark an exciting phase in biotechnological progress.

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### Guest Editors

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Prof. Dr. Gianluigi Mauriello

Prof. Dr. Katleen Raes

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### Deadline for manuscript submissions

closed (31 January 2026)



## Applied Sciences

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

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