

Special Issue

Strategies for Optimal Fermentation by Using Modern Tools and Methods, 2nd Edition

Message from the Guest Editor

The optimization of fermentation processes to produce biomass, fuels, and chemicals has always faced challenges. The current state of the art highlights the complexity of achieving success in all areas of fermentation, emphasizing that success cannot be achieved without first applying methods that isolate and identify microorganisms from habitats or communities or improve the function of existing microorganisms.

Notably, special attention will be given to the following:

- Manuscripts on the identification of microorganisms by target amplification methods and nucleic acid sequence analysis;
- Nanoparticles as a tool to enhance mass transfer processes and metabolic control during fermentation;
- Innovative culturing techniques to facilitate fermentation processes;
- The development of subsystem techniques involving microbial kinetics, liquid flow distribution in bioreactors, and heat and mass transfers.

Additionally, manuscripts containing innovative models, response surface analysis, and artificial intelligence-based neural networks to facilitate and improve process design, optimization, control, and large-scale applications are welcome.

Guest Editor

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Deadline for manuscript submissions

closed (15 September 2025)



Fermentation

an Open Access Journal
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Impact Factor 3.3
CiteScore 5.7



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About the Journal

Message from the Editor-in-Chief

Welcome to an open access journal, *Fermentation*, which meets the growing need for a high quality peer-reviewed international journal with easy access to all researchers globally. We hope that you will share our enthusiasm for this 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 journal. Proposals for editing a special issue for a particular topical area are always welcome.

Editor-in-Chief

Prof. Dr. Christian Kennes
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manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.5 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).