Special Issue

Modeling, Control and Optimization of Food Fermentation Processes

Message from the Guest Editors

This Topic aims to highlight recent advances in the modeling, monitoring, control, and optimization of food fermentation processes. We welcome contributions that explore innovative approaches to improving process efficiency, product quality, and sustainability through mathematical modeling, bioprocess control strategies, data-driven optimization, and the integration of novel analytical tools. We encourage submissions that address the following:

- Kinetic and mechanistic modeling of fermentation systems;
- Process monitoring using sensors, spectroscopy, or omics data;
- Advanced control and automation in fermentation;
- Optimization of microbial performance and product yield;
- Application of artificial intelligence and machine learning in fermentation design and control;
- Sustainable and scalable fermentation strategies for the food industry.

This Topic seeks to connect fundamental research with industrial applications, promoting interdisciplinary perspectives that bridge microbiology, biotechnology, engineering, and data science.

Guest Editors

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Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

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