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Development, Modelling and Simulation of Biocatalytic Processes

Guest Editors:

Dr. Thomas Waluga
Institute of Process Systems Engineering, Hamburg University of Technology, Am Schwarzenberg-Campus 4, 21073 Hamburg, Germany

Dr. Daniel Ohde
Institute of Technical Biocatalysis, Hamburg University of Technology, Denickestr. 15; 21073 Hamburg, Germany

Deadline for manuscript submissions:
closed (25 July 2024)

Message from the Guest Editors

Dear Colleagues,

The development of biocatalytic processes requires a thorough understanding of the underlying reaction mechanisms, as well as the identification and optimization of appropriate reaction conditions and parameters. Mathematical modelling and simulation tools can help predict and optimize process conditions, reduce experimental effort, and facilitate the scale-up of biocatalytic processes from the laboratory to industrial production. However, there are still challenges in accurately modelling these complex systems, such as the lack of reliable kinetic data and the need for sophisticated parameter estimation methods. Overcoming these challenges requires interdisciplinary collaboration between experts in biotechnology, mathematics and engineering. This Special Issue focuses on all aspects of addressing the above challenges, namely:

- Development of enzymatic cascade reactions, including chemo- and electroenzymatic cascades;
- Conventional and novel modelling approaches for biocatalytic processes;
- Simulation and mathematical optimization of biocatalytic processes;
- Intesification of biocatalytical processes.

mdpi.com/si/174343

Special Issue

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Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, Italy

Message from the Editor-in-Chief

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Processes Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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