



Advanced Modeling of Biomanufacturing Processes

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Message from the Guest Editors

The aim of this special issue of Processes is to attract high-quality original research contributions and review articles in the field of advanced bioprocess modeling of bio-based manufacturing processes. The objective is to demonstrate the significance of existing and novel simulation tools to qualitatively comprehend and describe complex biochemical and biological mechanisms and quantitatively predict and optimize the production of valuable chemicals, proteins or enzymes. Specific topics for the special issue include but are not limited to:

- Modeling and intensification of microbial, mammalian, algal and enzymatic production processes.
- Upstream and downstream bioprocess simulation, control and optimization.
- Innovative concepts for integrating multiple models at different scales.
- Advanced numerical methods for model calibration and simulation of complex bio-based systems.
- Analysis and validation of multi-scale models and simulations.
- Integrated multi-scale simulation platforms for whole-process sustainability analysis.





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Message from the Editor-in-Chief

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