

Special Issue

Innovative Tools for Tailored Microbial Cell Factories

Message from the Guest Editor

Innovative tools for tailored microbial cell factories span genome editing, DNA assembly, metabolic engineering, and AI-driven optimization. Collectively, these tools enable the rapid design, optimization, and industrial translation of microbial cell factories—with applications ranging from biopharmaceuticals to sustainable materials. Over the past decade, innovative tools in synthetic biology have driven rapid advances in microbial cell factories, empowering efficient editing of organisms' genetic systems and “reprogramming” of key biological elements—including genes, circuits, pathways, and networks—within organisms. Here, we seek to compile manuscripts that highlight the latest significant advances and perspectives involving innovative tools for microbial cell factories.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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