Special Issue

Biotechnological Potential of Extreme Microbial Cell Factories for Sustainable Process

Message from the Guest Editors

Extreme microorganisms are deeply specialized forms of life that colonize peculiar environmental niches. Those areas seem incompatible with life because they are affected by hostile physicochemical parameters. High pressure, absence of oxygen, extreme pH and temperature, salt saturation and their concomitant presence are just a few examples of stress conditions that can be found in habitats where extremophiles and poly-extremophiles proliferate. The stability of nucleic acids, cellular structures and metabolic pathways, together with the targeted synthesis of molecules, make these organisms perfectly adapted to such environments. Microbial technologies exploit cells and their biomolecules to improve industrial processes, with the purpose of making them more efficient, economical and sustainable. The aim of this Special Issue is to collect reviews and research papers emphasising the value added by extremophilic microorganisms and their products, in order to set up eco-compatible and health-safe production processes.

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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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.2 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).

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