Special Issue

Molecular Physiology and Synthetic Biology of Bioenergy-Related Microorganisms

Message from the Guest Editor

The biological production of fuels and chemicals is a key process to achieving a circular economy and sustainable development for our world. Many bacteria, microalgae, fungi, etc. have become practical or potential biofuel producers due to their unique physiological and metabolic processes. Most of the naturally isolated microorganisms cannot directly meet the needs of production and need to be further engineered and improved. Understanding the molecular physiological mechanism of these microorganisms can provide new targets and solutions for the engineering of these microorganisms to improve biofuel production. Therefore, the research on the molecular physiological mechanism of bioenergy-related microorganisms is an important basis for their application, and the development of synthetic biology based on this knowledge will generate biofuel production strains. This special issue will provide a platform to display the latest results, progress, and summary of the molecular physiology research of various bioenergy-related microorganisms and the strain development by synthetic biology.

Guest Editor

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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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