

Special Issue

Fungal-Bacterial Diversity in Wood Decomposition

Message from the Guest Editor

Wood decomposition is a fundamental ecological process driven by a complex interplay of fungi and bacteria. These microorganisms break down lignocellulosic materials, recycling nutrients and contributing to carbon cycling in forest ecosystems. White-rot fungi fully decompose lignin, whereas brown-rot fungi selectively remove cellulose and hemicellulose, leaving behind lignin-rich residues. Environmental factors such as temperature, moisture, and wood chemistry influence fungal-bacterial diversity and activity. Studying these microbial interactions is essential for understanding forest ecosystem functioning, carbon sequestration, and applications in biotechnology, such as biofuel production and bioremediation. Therefore, advances in metagenomics and bioinformatics will help us reveal the complexity of these microbial communities, providing new insights into their ecological roles and potential applications.

Guest Editor

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"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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