

Special Issue

Soil Microbial Ecology and Ecosystem Sustainability in a Changing Environment

Message from the Guest Editor

Soil microorganisms are critical components of the micro-food web and play pivotal roles in driving essential soil ecosystem functions. This Special Issue will emphasize recent advancements in deciphering the complexity of soil microbial communities, focusing on their structure, functionality, and interactions with both biotic and abiotic factors. Key areas of interest will include microbial biogeography and diversity patterns across ecosystems, along with the identification of the drivers shaping microbial community assembly. Studies on soil micro-food webs, soil viral ecology and microbial contributions to biogeochemical cycling will be emphasized. Additional areas include the ecological impacts of antibiotic resistance genes in soil ecosystems, the influence of emerging pollutants on soil microbial communities, and the rhizosphere microbiome and its role in plant growth promotion, stress tolerance, and plant-microbe-soil feedback mechanisms. This Special Issue aims to become a cornerstone reference for researchers, policymakers, and practitioners interested in the multifaceted roles of soil microbiomes in sustaining ecosystem services.

Guest Editor

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