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Microbial Methane Production and Oxidation

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Deadline for manuscript submissions:
closed (15 May 2024)

Message from the Guest Editors

Dear Colleagues,

Methane is the second most important greenhouse gas after carbon dioxide. Knowing their metabolism and ecology is important for us to better understand their impacts on global carbon cycles and climate change.

Recent research progress has reshaped our view of methanogenesis by increasing discoveries of nontraditional novel methanogenic archaea. In recent years, groundbreaking knowledge has also been acquired on methanotrophic processes, especially on the anaerobic oxidation of methane and anaerobic methanotrophic archaea.

The aim of this Special Issue of *Microorganisms* is to present a collection of articles that provide a current snapshot of the research in the field of methane microbiology. Manuscripts covering all aspects of research relating to microbial methane production and oxidation, including fundamental questions relating to the physiology, biology, biochemistry of methanogens and methanotrophs, and the ecological dynamics and geochemical diversity of methanogenic and methanotrophic processes in natural environments are welcome. Studies on the microbial ecology of both processes in engineering systems are also welcomed.

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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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