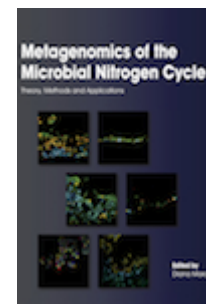


Metagenomics of the Microbial Nitrogen Cycle

Theory, Methods and Applications



Edited by: **Diana Marco**

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The nitrogen (N) cycle is one of the most important nutrient cycles in the earth and many of its steps are performed by microbial organisms. During the cycling process greenhouse gases are formed including nitrous oxide and methane. In addition, the use of nitrogen fertilizers increases freshwater nitrate levels, causing pollution and human health problems. A greater knowledge of the microbial communities involved in nitrogen transformations is necessary to understand and counteract nitrogen pollution.

Written by renowned researchers specialised in the most relevant and emerging topics in the field, this book provides comprehensive information on the new theoretical, methodological and applied aspects of metagenomics and other 'omics' approaches used to study the microbial N cycle.

Recommended for microbiologists, environmental scientists and anyone interested in microbial communities, metagenomics, metatranscriptomics and metaproteomics of the microbial N cycle. This volume provides a thorough account of the contributions of metagenomics to microbial N cycle background theory, reviews state-of-the-art investigative methods and explores new applications in water treatment, agricultural practices and climate change, among others.

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