Special Issue

Nitrogen Emissions in Agricultural and Forest Ecosystems

Message from the Guest Editor

Nitrogen (N) is necessary for living organisms and is a limiting factor in increasing crop yields to feed the world's growing population. The overuse of inorganic fertilizers to overcome the demand for food supplies often causes N losses through several pathways. Since forest and agricultural ecosystems comprise a large portion of nitrogen stocks, global change and fertilizer application might drive its volatilization. However, there is still uncertainty regarding how global change. including climate change and land use change, affects the loss of gaseous N and N leaching in agricultural and forest ecosystems. Meanwhile, soil organic matter (SOM) is viewed as the organic source of C and N for plants and microorganisms, and it is also important for C and N sink in these soils. To obtain a better understanding of N emissions in forest and agricultural ecosystems, one needs to understand the humification, transformations, and chemistry of the various inputs and chemical substrate changes that these materials are subjected to on their path towards N transformation and N gas emissions.

Guest Editor

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Deadline for manuscript submissions

closed (15 December 2023)



an Open Access Journal by MDPI

Impact Factor 2.3 CiteScore 4.9



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Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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