



Leaf to Ecosystem: The Latest in Measuring Bio-Atmospheric Integrations at Multiple Scales

Guest Editor:

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Deadline for manuscript submissions:

closed (31 July 2019)

Message from the Guest Editor

Measurements of greenhouse gas (GHG) exchange, related processes, and indicators are essential for understanding the drivers of global climate change, the short- and long-term consequences of the ecosystem and agrosystem management, and related changes on multiple scales.

Such information is important for two reasons. It contributes to the identification and prediction of physical and physiological processes underlying ongoing and future environmental changes that affect the health and resilience of ecosystems, and the sustainability and productivity of agrosystems. Furthermore, it helps influence important decisions on their mitigation, such as local and global policies.

Although the measurements of GHG fluxes and key related processes and indicators are conducted on a variety of scales, from a single leaf to a large region, many research projects focus on one single scale, while actual physical and physiological processes are happening over a continuum of multiple scales.

This Special Issue seeks the latest developments that help bridge research efforts and measurement techniques at all scales into more vertically integrated approaches.





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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!

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Journal Rank: CiteScore - Q2 (*Environmental Science (miscellaneous)*)

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