

Special Issue

Real-Time Detection, Discrimination, and Forecasting of Bioaerosols

Message from the Guest Editors

Biological aerosol, known as bioaerosol, is poorly constrained but has impacts on air quality, climate, and human health. Bioaerosols normally comprise viruses, bacteria, fungi, and pollen. Historically, offline techniques have been utilized to detect different types of bioaerosols and characterize their physical and chemical properties, as well as their environmental toxicity. Knowledge from integrated filter samples sometimes hinders our deep understanding of the release mechanisms of bioaerosols, which is the key for bioaerosol forecasting. With recent advances in fluorescence spectrometers, the detection, discrimination, and forecasting of different bioaerosols in real-time become possible. In this Special Issue, we call for novel papers addressing the detection, discrimination, and forecasting of bioaerosols in real-time. The aim is to introduce recent advances in bioaerosol-related measurement science and data science. These studies include, but are not limited to, field measurement reports, exploring environmental drivers of release mechanisms of bioaerosols, health impacts and interventions of bioaerosols, and data analytics in bioaerosol science.

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Deadline for manuscript submissions

31 March 2025



Atmosphere

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Impact Factor 2.5
CiteScore 4.6



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About the Journal

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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