



## Atmospheric Aerosols: Source Apportionment, Characterizations, and Impacts

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### Message from the Guest Editors

Atmospheric aerosols play important roles in regional air quality, as well as in Earth's climate. They can impact Earth's radiation budget, cloud properties, hydrological cycle, atmospheric chemistry and land run-off. New knowledge of aerosol physical, combined with chemical characteristics gained from observational and modeling studies, can provide process-level insights and greatly improve model performance. Due to the importance of atmospheric aerosols, knowing their relative contributions from different source regions is also useful for mitigating climate change.

Topics of interest include, but are not limited to, the following:

- Source attribution of anthropogenic aerosols and their climate impact on populated and/or polluted receptor regions, as well as on remote regions.
- Quantification and understanding of source sector contributions of anthropogenic aerosols to populated and/or polluted regions.
- Source attribution of mineral dust and its radiative forcing to understand the transport across the Pacific and Atlantic to remote regions.
- Observational and modeling studies of aerosol physical and chemical characteristics.





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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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