Special Issue

Air Pollution in the Polar Regions: Levels, Sources and Trends

Message from the Guest Editor

The long-distance transport of contaminants to the remote regions of the planet is a major environmental threat, strongly connected with the atmospheric circulation, and global climate change. Chemicals of concern include greenhouse and ozone-depleting gases, persistent organic pollutants, toxic elements, and radioactive isotopes, but new contaminants are also emerging. These pollutants can accumulate in the environment, contaminating the food chain and having a major impact on health.

Therefore, the aim of this Special Issue is to provide new insights into the levels, possible sources, and temporal trends of air pollutants in the polar regions, covering the following aspects:

- Atmospheric contamination in the polar regions.
- Temporal trends of contaminants.
- Assessment of local and distant sources.
- Impact of local activities (e.g., research stations, maritime traffic, human settlements).
- Transport processes and pathways.
- Emerging contaminants (e.g., nanoparticles, microplastics).
- Emerging local sources due to defrosting.
- Urban pollution in Arctic cities.
- New analytical tools to support these investigations.

Guest Editor

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Deadline for manuscript submissions

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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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