



## Atmospheric Dispersion and Chemistry Models: Advances and Applications

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### Message from the Guest Editor

Atmospheric dispersion models are a key tool in atmospheric chemistry and environmental sciences. From urban air pollution modeling to ozone depletion, these models give us a picture, at different scales, of species concentrations' distribution and pollutant deposition rates, among other relevant quantities, thus helping us to interpret the measurements, which are in some cases sparse and incomplete, and predict complex scenarios.

Many dispersion models have been developed to date, each mostly focused on a particular spatial scale and application. Their usefulness is not only constrained to scientific research, but also in support of environmental decision making. Thus, the characterization of model uncertainties and model validation play a central role in the development applications for such models.

This Special Issue aims to publish papers related to all aspects involved in the development of atmospheric dispersion models, such as the implementation of new physical and chemical schemes, the coupling with weather models, application studies related to atmospheric transport and chemistry, urban air quality assessments, and model evaluation.





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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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