



Development, Evaluation, and Applications of Online Coupled Meteorology–Chemistry Models

Guest Editor:

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Message from the Guest Editor

Meteorological and chemical processes are not independent, but they are coupled in the real atmosphere. Meteorology affects the transport of chemical pollutants through the wind and turbulence, while clouds and precipitation influence air quality through wet scavenging processes. At the same time, chemical processes affect meteorology, for example, through aerosols' direct and indirect effects. In the last decade, many online coupled meteorology–chemistry models have been developed in order to simulate the complex interaction between meteorological and chemical processes. The key uncertainties in simulating the meteorology–chemistry feedback arise from the treatment of direct and indirect effects.

Manuscripts presenting developments, improvements, and evaluations of coupled models, and their applications from weather and short-term predictions to climate simulations are welcome for this Special Issue.





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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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