Special Issue

Numerical Simulation of Aerosol Microphysical Processes (2nd Edition)

Message from the Guest Editors

Aerosol microphysical processes are simulated in a wide variety of numerical models. The performance of the simulation largely quantifies the modeled properties of aerosols. These properties define the impact of aerosols on a broad range of issues related to human health, air quality, and climate through their influences on atmospheric chemistry, radiative forcing, cloud formation, and the hydrological cycle. We encourage the submission of manuscripts about innovations of simulations at the process level, including, but not limited to, emission of aerosols and precursor gases, nucleation/new particle formation, secondary formation of organics/inorganics aerosols, aging of preexisting aerosols, cloud droplet activation, wet scavenging, and dry deposition. The numerical models of interest include, but are not limited to, aerosol dynamical models, cloud-resolving models, air quality models, chemical transport models, weather prediction models, and regional/global climate models. We also welcome the submission of research on the linkage of aerosol microphysical properties to environmental and climatic impacts through the use of numerical models.

Guest Editors

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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!

Editor-in-Chief

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