



## Wintertime Urban Photochemical Air Pollution in Asia

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Deadline for manuscript  
submissions:

**closed (31 December 2021)**

### Message from the Guest Editor

Dear Colleagues,

Urban air quality is subject to local effects such as heavy traffic, complex topography, local circulation, etc., as well as synoptic circulation and regional transport. If the city is located along a coast and large point sources are situated nearby, things become more complicated. Under this circumstance, three-dimensional observation and simulation are required to characterize its air pollution. For instance, a plume from a coastal stack can be driven inland by sea-breeze circulation, sometimes fumigating into the ground, or passing over it. Air pollution, especially in winter, seems less complex than other seasons, as it has the least photochemistry. However, contrary to our expectation, significant secondary PM<sub>2.5</sub> species have been occasionally found at winter haze events. Thus, understanding wintertime urban photochemical air pollution is of importance for air quality management and eventually public health. Any kind of remote sensing (e.g., satellite, Pandora Spectrometer Instrument, MAX-DOAS, sunphotometer, LIDAR) and high-resolution simulation is recommended in this 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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