



Recent Advances in the Investigations of Primary and Secondary Organic Aerosols in Atmosphere

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Message from the Guest Editor

Given the increased drive towards cleaner air and zero-carbon emissions, the intricate interactions between anthropogenic and biogenic emissions and the plethora of diverse sources (biomass burning, vegetation, industrial emissions, etc.), the composition of the atmosphere has been constantly changing. This makes investigating the lifecycle and chemistry of organic aerosols particularly challenging, due to the dependence of the underlying mechanisms on a multitude of factors, from NO_x levels to liquid water content and acidity. Most of our knowledge concerning the above comes from field campaigns and chamber studies, which is then adapted for use in regulatory modeling. Air quality models still tend to underpredict organic aerosols, albeit at an increasingly reduced rate compared to past years, which highlights the fact that there are still gaps in our understanding that need to be filled.

This Special Issue is devoted to recent advances in our understanding of organic aerosols emission/formation, chemistry and lifecycle, either in a measurement or modeling context.





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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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