



State-of-the-Art Detection and Analysis of Atmospheric Volatile Organic Compounds (VOCs)

Guest Editor:

Dr. Jie Sun

Institute of Atmospheric Physics,
Chinese Academy of Sciences,
Beijing 100191, China

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Message from the Guest Editor

Dear Colleagues,

The photochemical activity and toxicity of VOCs directly affect the environment and human health. High-concentration VOCs are important precursors of secondary organic aerosols and ozone through their photochemical interactions with free radicals, making VOCs some of the primary factors affecting air quality. The toxicity and carcinogenicity of some VOCs have also attracted attention. Understanding the compositional characteristics and source distribution of VOCs, and evaluating their photochemical effects and health risks, is crucial for improving health and environmental safety. This Special Issue aims to collect the latest data and investigate the relationship between environmental emissions of VOCs, air quality, and human health risks through both environmental monitoring and statistical modeling. Topics include, but are not limited to, the following:

1. Study on VOC spectroscopy of typical emission sources;
2. Development of high spatiotemporal resolution dataset for VOCs emission inventories;
3. Coupled VOCs-NO_x-O₃ coupling model of pollution events;
4. Indoor and outdoor air quality human health risk assessment;
5. Air quality prevention and control strategies.





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Editor-in-Chief

Prof. Dr. Ilias Kavouras

Environmental, Occupational,
and Geospatial Health Sciences,
CUNY School of Public Health,
New York, NY 10027, USA

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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Contact Us

Atmosphere Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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