



## Advanced Functional Materials for Air Quality Management

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### Message from the Guest Editors

The unbridled industrial expansion and modernization have dramatically increased both outdoor and indoor air pollution. Gaseous species-driven global climate change also remains a significant challenge needing immediate tackling. In this regard, carcinogenic volatile organic compounds (e.g., formaldehyde and aromatic/aliphatic hydrocarbons), carbon monoxide/dioxide, hydrogen sulfide, ammonia, halogens, nitrogen oxides, sulfur oxide, and particulate matter remain the primary targets for capture and removal. Advanced functional materials can be utilized as superior media towards effective removal of various gaseous pollutants, with the mechanisms of interactions to include physical or/and reactive adsorption, along with thermo-, photo-, and photothermal catalysis. Other synergistic mechanistic combinations can also be explored. In recognition of the need to develop functional materials with unique physicochemical features capable of maintaining appreciable performance even under harsh real-world conditions, the open-access journal *Atmosphere* is hosting a Special Issue to showcase the most recent findings related to air quality management using advanced functional materials.





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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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