

Special Issue

Smart Monitoring of Air Pollution Across Environments and Lifespans: Linking Exposure, Biomarkers, and Policy

Message from the Guest Editor

This Special Issue aims to provide a comprehensive, interdisciplinary platform to examine the full spectrum of air pollution exposure, spanning outdoor and indoor environments, and to assess their cumulative, interactive, and context-specific health effects.

Emphasis will be placed on **applied research**, including the integration of **biomonitoring data** with **indoor air quality assessments**, particularly in **sensitive settings**.

Key topics include, but are not limited to, the following:

- Characterization of outdoor and indoor air pollutants;
- Integrated exposure assessment, personal monitoring, and sensor-based technologies;
- Linking biomonitoring data with air quality data in real-world and high-risk environments;
- Health effects across life stages and biological systems;
- Exposure scenarios in sensitive environments;
- Vulnerable populations and occupational risk assessments;
- Chronic low-dose exposure, cumulative risk, and exposome-informed frameworks;
- Interactions with climatic, socio-economic, and psychosocial determinants;
- Data analytics, machine learning, and predictive exposure–health modeling;
- Public health interventions, evidence-based policy, and communication strategies.

Guest Editor

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About the Journal

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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