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Smart Homes and Buildings and Indoor Air Quality: Ideas and Solutions

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Message from the Guest Editors

Dear Colleagues,

It is estimated that people spend 85-90% of their time in indoor environments, such as homes, offices, and schools, among others. Moreover, the World Health Organization (WHO) estimates that 99% of the world population is exposed to hazardous levels of air quality. Thus, it becomes increasingly important to understand how indoor air quality (IAQ) impacts lives and how to improve it for cleaner and healthier air.

Currently, with the advances of low-cost sensing technologies, Internet of Things (IoT), Big Data, artificial intelligence (AI), computational modeling, smart solutions, and nature-based approaches/ideas/solutions are being researched and developed to help tackle the challenge of assessing and improving the IAQ of buildings and homes.

Given this context, this Special Issue seeks to find highquality and original research articles that present new insights, approaches, ideas, and solutions that aim to assess and solve or mitigate air quality issues in smart building indoor environments.











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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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