



## Impacts of Toner-Handling on Health

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### Message from the Guest Editors

Toner is a particulate matter 5-10  $\mu\text{m}$  in diameter that is used in copiers and laser printers to form images and text printed on paper. The toner itself is a micron-sized powder, not a nano-sized particle, but industrial nanomaterials are used as its constituents.

Cases of siderocycloicosis due to toner exposure were first reported in 1994, and since then case reports of sarcoidosis, allergic rhinitis, asthma, etc., associated with toner exposure have been published. These reports raise concerns about the health effects associated with toner exposure and the use of copiers and printers. Recent studies show that office equipment such as printers and copiers emit particulate matter (PM) when used, which can increase indoor air pollution.. The health effects of toner exposure and the health effects of PM released from office equipment should be assessed separately.

This Special Issue aims to gather high-quality and innovative manuscripts concerning environmental research findings, such as the content of toner particles in the air, as well as research concerning the health effects of various toner particles.





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## Editor-in-Chief

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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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