Special Issue

Recent Advances in Atmospheric Optics: From Advanced Instrumentation and Techniques to Applications in Aerosol Monitoring

Message from the Guest Editor

This Special Issue presents the latest advances in atmospheric optics, with a focus on applications in aerosol monitoring. The topics covered will address the impact of atmospheric aerosols on air quality, human health, climate, and visibility, as well as their sources and monitoring methods. It covers the following areas of interest:

1. Technological breakthroughs and advances.
· Development of advanced optical instruments and new and improved techniques for investigating atmospheric aerosols;
· Advanced modelling and simulation of light propagation in complex aerosol environments.
2. Applications and impact.
· Air quality monitoring and air pollution;
· Applications in meteorology, telecommunications, and other related fields.
3. Machine learning technologies for analysing atmospheric data.
· Machine learning algorithms for processing and interpreting data from atmospheric optical instruments;
· Development of predictive models to determine trends in atmospheric parameters;
· Identifying complex patterns in atmospheric data using deep learning techniques.

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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