Special Issue

Atmospheric Aerosols: How Are They Emitted, Generated, Transported, Aged, and Deposited?

Message from the Guest Editors

About 150 years ago, John Aitken published the seminal article “On the Number of Dust Particles in the Atmosphere”, marking the birth of atmospheric aerosol science. Despite significant advancements over the past century and a half, the field continues to grapple with foundational assumptions that, although once necessary due to limited theoretical frameworks and experimental tools, may now prove physically untenable. For instance, can Eulerian observations reliably confirm that the decrease in reactants is stoichiometrically matched by the increase in products, in accordance with the law of mass conservation? The answer is decidedly negative. In light of these challenges, this Special Issue invites contributions that critically reassess the fundamental issues in atmospheric aerosol science. We welcome papers that reexamine the origins, processes, and eventual fate of aerosols, as well as those that propose innovative paradigms for future research.

Guest Editors

Prof. Dr. Xiaohong Yao

Key Laboratory of Marine Environment and Ecology, Ministry of Education, Ocean University of China, Qingdao 266100, China

Dr. Xiaohuan Liu

Key Laboratory of Marine Environment and Ecology, Ministry of Education, Ocean University of China, Qingdao 266100, China

Deadline for manuscript submissions

30 September 2025

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/231704

Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

mdpi.com/journal/atmosphere

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/journal/atmosphere

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

Dr. Daniele Contini
Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, Inspec, CAPlus / SciFinder, Astrophysics Data System, and other databases.

Journal Rank:

CiteScore - Q2 (Environmental Science (miscellaneous))

MDPI