Special Issue

Advances in Atmospheric Icing: Predictive Models, Thermodynamics, and Mitigation Strategie

Message from the Guest Editors

Atmospheric icing poses significant challenges in aviation, renewable energy, and infrastructure and addressing these challenges requires advancements in predictive models, our understanding of heat and mass transfer, and mitigation strategies. Recent advancements in predictive modeling have enhanced the ability to forecast icing events; by integrating meteorological data, physical principles, and computational algorithms, these models predict icing likelihood and intensity with greater accuracy. High-resolution weather prediction models, machine learning algorithms, and remote sensing technologies contribute to more reliable forecasts, enabling better preparation and response. In addition, understanding heat and mass transfer during and after icing formation is crucial for developing effective mitigation techniques. Researchers are invited to contribute to this Special Issue by submitting original and review articles offering novel insights and solutions to the challenges of atmospheric icing. Sincerely,

Guest Editors

Dr. Behrouz Mohammadian
Honda R&D Americas, 21001 OH-739, Raymond, OH 43067, USA

Prof. Dr. Zhijin Zhang
School of Electrical Engineering, Chongqing university, Chongqing 400044, China

Deadline for manuscript submissions

31 October 2025

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/214534

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

MDPI

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))