

Special Issue

Advances in CO₂ Capture and Absorption

Message from the Guest Editor

The unexpected amount of CO₂ emissions caused by anthropogenic activities is the main reason behind global warming. Carbon capture, utilization and storage (CCUS) is considered an effective technology to curb CO₂ emissions in industry. The most used CO₂ absorption method in the industry is the alkanolamine-based scrubbing process. However, the alkanolamine-based scrubbing process suffers from several inherent drawbacks. Therefore, it is highly desirable to develop and create new methods for efficient CO₂ capture and absorption. The aim of this Special Issue, entitled “Advances in CO₂ Capture and Absorption”, is to showcase the recent research results related to efficient carbon capture technology. In this Special Issue, experimental and theoretical investigations that explore economically and ecologically methods related to carbon capture are welcome. Submissions to this Special Issue might include, but are not limited to, the following topics: the capture of carbon dioxide using liquid solvents; the capture of carbon dioxide using solid materials; the separation of carbon dioxide via membrane; carbon storage; and carbon utilization.

Guest Editor

Dr. Dezhong Yang
School of Science, China University of Geosciences, Beijing 100083,
China

Deadline for manuscript submissions

closed (28 August 2024)



Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



mdpi.com/si/180508

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

[mdpi.com/journal/
atmosphere](https://mdpi.com/journal/atmosphere)





Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



[mdpi.com/journal/
atmosphere](https://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))