



CO₂ Sequestration, Capture and Utilization

Guest Editors:

Prof. Dr. Qingjie Guo

Dr. Yongzhuo Liu

Dr. Man Wu

Prof. Dr. Guojie Zhang

Deadline for manuscript
submissions:
closed (6 January 2023)

Message from the Guest Editors

Dear Colleagues,

Carbon Capture, Storage and Utilization (CCUS) technology can absorb, fix and utilize the emitted CO₂, which means that the released CO₂ can be separated from the emission sources such as industrial exhaust and be stored or reused for a long time. Therefore, CCUS technology can be very effective in reducing CO₂ emissions and can greatly mitigate the greenhouse effect.

This Special Issue focuses on reviews and research papers related to CO₂ capture, storage and utilization technologies, including the following research topics:

- Design, development or optimization of CO₂ capture, storage and utilization processes;
- New CO₂ adsorption materials (e.g., activated carbon, molecular sieves, MOFs, etc.);
- Novel catalysts for CO₂ utilization (e.g., photocatalysts, electrocatalysts or thermocatalysts);
- Novel CO₂ separation materials (e.g., membrane materials, ionic solutions, etc.);
- New CO₂ sequestration technology;
- CO₂ reduction policies.

Guest Editors





an Open Access Journal by MDPI

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

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!

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)*)

Contact Us

Atmosphere Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/atmosphere
atmosphere@mdpi.com
[X@Atmosphere_MDPI](https://twitter.com/Atmosphere_MDPI)