Special Issue

CO2 Sequestration, Capture and Utilization

Message from the Guest Editors

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

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Deadline for manuscript submissions

closed (6 January 2023)

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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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