

## Special Issue

# Advanced Carbon Capture and Utilization Technologies

### Message from the Guest Editors

This Special Issue, "Advanced Carbon Capture and Utilization Technologies", focuses on cutting-edge research and technological innovations aimed at addressing global climate challenges through efficient carbon management. It brings together contributions spanning novel capture materials and processes, emerging utilization pathways, and integrated system designs that enhance the economic and environmental viability of CO<sub>2</sub> conversion. Topics of interest for publication include, but are not limited to, the following:

- CO<sub>2</sub> absorption;
- CO<sub>2</sub> adsorption;
- Membrane technologies;
- Oxy-fuel combustion;
- Calcium looping and chemical looping;
- Carbon mineralization;
- Electrochemical and catalytic conversion;
- Energy system integration with CCUS;
- Direct air capture;
- Life cycle analysis of CCUS technologies;
- Techno-economic analysis of CCUS technologies;
- Policy research related to CCUS.

### Guest Editors

Dr. Song He  
Dr. Junyao Wang  
Dr. Fan Sun

### Deadline for manuscript submissions

31 January 2027



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## About the Journal

### Message from the Editor-in-Chief

*Energies* is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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### Editor-in-Chief

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