# Special Issue

# $CO_2$ Utilization Technologies: Advanced Materials Development & Process System Analysis

## Message from the Guest Editors

In this special, we aim to collect cutting-edge findings on different CO2 utilization technologies, both through modelling and experimental analysis. We welcome contributions on CO2 utilization technologies in the form of research papers and reviews, but not limited to, the following topic areas:

- Catalyst and electrode materials for CO2 reduction;
- Reaction kinetics and mechanism;
- Electrochemical conversion of CO2;
- Catalytic thermal conversion of CO2;
- Reactor design;
- CO2 mineralization;
- CO2 for polymers;
- CO2 for fuels;
- CO2 activation;
- BECCUS;
- Negative CO2 emissions;
- Process design, integration, and control;
- Economic evaluation;
- Thermodynamic analysis;
- Environmental impact analysis;
- Molecular simulation;
- Artificial intelligence algorithms and models.

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## Deadline for manuscript submissions

closed (31 July 2025)

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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.

## Editor-in-Chief

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