Special Issue

New Challenges in Carbon Capture, Utilization and Storage

Message from the Guest Editors

This Special Issue seeks to consolidate cutting-edge research, policy insights and practical innovations in CCUS, fostering interdisciplinary dialogue to address technical, economic, and societal challenges. By bridging gaps between academia, industry, and policymakers, we aim to catalyze actionable strategies that scale CCUS from pilot project to global deployment. We invite original research, reviews, case studies, and policy analyses addressing:

- Technological innovations: novel capture methods (e.g., Advanced solvents, membranes, DAC), utilization pathways, (eg. CO2- to chemicals, mineralization, and advanced materials), and secure storage solutions (e.g., saline aquifers, enhanced oil recovery).
- Economic and policy frameworks: carbon pricing mechanisms, subsidy models, risk assessment, and international collaboration strategies.
- Environmental and social considerations: lifecycle analysis, public acceptance, and integrating CCUS with circular economy principles.
- Cross section integration: CCUS application in power generation, heavy industries, hydrogen production and bioenergy with caron capture.

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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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