Special Issue

Carbon Dioxide Capture and Utilisation

Message from the Guest Editor

The current global economic growth requires extensive energy consumption, particularly the combustion of carbon-containing fuels, resulting in the release of large amounts of carbon dioxide. This leads to greenhouse effects on the atmosphere, with a subsequent impact on the global climate. A reduction in CO2 emissions can be accomplished through different methods, such as improving the efficiency of energy consumption, capturing and storing carbon dioxide, and recycling carbon dioxide into fuels and useful value-added chemicals. There are various recycling methods that eliminate, the release of carbon dioxide into the atmosphere by converting it into value-added products prior to discharge. However, these processes for carbon dioxide reduction are endothermic ones, leading to energy consumption and possibly affecting the atmosphere via additional amounts of carbon dioxide. The recent achievements in chemical catalysis, electrochemistry, bio-electrochemistry, and photo-catalysis are important. Discussion on the feasibility of these methods compared to traditional technologies will be considered.

Guest Editor

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Deadline for manuscript submissions

closed (20 May 2026)

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/262130

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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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