

Special Issue

Research Progress in Carbon Dioxide Capture and Utilization Technology

Message from the Guest Editors

As the main gas causing the greenhouse effect, the increase in carbon dioxide is leading to serious climate change issues. Carbon dioxide capture and utilization refers to a range of applications through which CO₂ is captured and used either directly or indirectly in various products. This process is not simply storage, but effectively realizes the recycling and reuse of CO₂. This technology can recycle CO₂ and generate economic benefits. This Special Issue seeks new ideas and high-quality works focusing on the latest novel advances and, if possible, sustainable and environmental-friendly CO₂ capture and utilization technologies. The topics of interest include, but are not limited to: Advances in CO₂ capture technologies, including adsorption, absorption, membrane separation, cryogenic separation, microbial technology, etc.; Novel CO₂ utilization technologies, including biological utilization, chemical utilization, mineral utilization and physical utilization; Sustainable and environmental-friendly CO₂ capture and utilization technologies; New utilization pathways in the production of CO₂-based synthetic fuels, chemicals and building aggregates.

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