

Special Issue

Process Simulations and Experimental Studies of CO₂ Capture

Message from the Guest Editor

A great decarbonization of electricity-generating and industrial sectors is needed by 2050 to moderate climate change to a maximum of 1.5 °C. Currently, more than 80% of global primary energy use is fossil-based. Power plants are still the major CO₂ emitters, but they are gradually being replaced or supplemented with renewable energy sources, while many industrial processes do not have a credible alternative to operate without fossil fuels. In this context, CCUS should play an essential role to drastically reduce greenhouse gas emissions. CO₂ capture has sparked higher interest among the scientific community due to its inherent multidisciplinary nature and urgent need for developing feasible processes. The use of captured CO₂ as feedstock to produce value-added products offers a tremendous opportunity for the exploration of novel catalytic applications, synthesis of chemical products or sustainable fuels production.

This Special Issue will compile innovative publications elaborated by prominent researchers from different disciplines, which will provide a substantial advance in the state-of-the-art in the field of the CO₂ capture technologies.

Guest Editor

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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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