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Novel Technologies for Carbon Dioxide Sequestration

Guest Editor:

Prof. Dr. Jorge Gabitto

Chemical Engineering
Department, Prairie View A&M
University, Prairie View, TX 77446,
USA.

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Message from the Guest Editor

Greenhouse gases pose a significant threat to human societies all over the planet. The burning of fossil fuels has led to an increase in the atmospheric CO₂ concentration of more than 45% relative to the pre-industrial era. In the USA alone, power plant CO₂ releases comprise 55% of total CO₂ emissions. Until a successful transition to renewal energy sources is accomplished, there is an urgent need for CO₂ capture technologies from concentrated sources. There are also many methods that attempt to capture carbon dioxide from air or even the sea. Process intensification is a technique that reduces operating and capital costs by combining chemical reactions and separation operations, thus significantly increasing the efficiency of the process.

This Special Issue aims to present novel carbon dioxide sequestration technologies that are technically feasible, cost-effective, and environmental friendly; the scope includes, new technologies and significant improvements on existent processes. Articles discussing concentrated sources and direct carbon capture technologies are welcomed, particularly process intensification processes with the potential to reduce capital and operating costs.



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Special Issue



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Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and
Aerospace Engineering,
University of Roma Sapienza, Via
Eudossiana 18, 00184 Roma, Italy

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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Energies Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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