

Special Issue

Processes and Technological Innovations for CO₂

Separation, Utilization and Management

Message from the Guest Editors

Decarbonization of industrial processes requires the development of innovative, efficient and cost-effective solutions. In this context this Special Issue aims to collect novel contributions addressing CO₂ separation, utilization and management. The emerging CO₂ market is expected to introduce new paradigms where carbon dioxide is no longer considered solely as a waste stream but also as a valuable resource. This transition calls for advanced approaches capable of improving process performance, enhancing system integration and ensuring economic viability. This Special Issue welcomes original research articles and reviews covering following topics:

- CO₂ capture technologies based on chemical, thermochemical and hybrid pathways;
- CO₂ utilization and conversion processes (fuels, chemicals and materials);
- Process design, optimization and integration of CCUS systems;
- CO₂ transport, storage and infrastructure development;
- Techno-economic analyses, life cycle assessment and policy-related studies.

Guest Editors

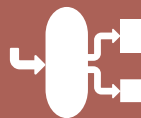
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