



Carbon Capture and Utilisation: Process Simulation, Modelling and Economics

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Message from the Guest Editor

Dear Colleagues,

Further development of less energy-intensive CO₂ capture and separation processes is essential. Importantly, these processes should not only focus on decarbonisation of a particular industry but should also form a foundation for the creation of new business models, considering the utilisation of CO₂ as a route for its permanent storage. This Special Issue focuses on, but is not limited to:

- CO₂ capture—low-cost technologies for CO₂ separation from flue gases, syngas and direct air capture;
- CO₂ utilisation—competitive technologies for CO₂ utilisation as feedstock;
- Industrial decarbonisation—low-carbon process for cement, steel, chemicals production;
- Polygeneration of clean energy and chemicals—technologies for combined energy and chemicals production;
- Techno-economic analysis—novel approaches to assessing the techno-economic feasibility of the technologies across the CCUS chain.

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Guest Editor



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