

Special Issue

Carbon Dioxide Capture and Utilization in Green Chemistry

Message from the Guest Editor

Carbon Capture and Utilization (CCU) for the development of green chemicals and fuels is gaining momentum. In order to evaluate the economic viability, environmental benefits, safety and efficacy of different pathways of conversions and utilization, process and optimization models, in addition to life cycle analysis, are required to underscore the tradeoffs at the system level. This Special Issue aims to cover recent developments on models, algorithms and systemic tools used to evaluate the material performance, unit and process operations, process intensification and value chain. Topics include, but are not limited to:

- Life cycle analysis (LCA) of CO₂ to fuels and chemicals;
- Process modeling and optimization;
- Process intensification;
- System dynamics;
- Molecular dynamics simulations.

Guest Editor

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