



## Chemical Looping Combustion Reactor and Its Applications

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Deadline for manuscript submissions:

**closed (30 April 2022)**

### Message from the Guest Editors

Chemical looping combustion (CLC) is a representative technology for CO<sub>2</sub> capture and is regarded as one of the most promising methods due to its inherent CO<sub>2</sub> separation. In CLC, one key challenge is to develop a suitable chemical looping combustion reactor ensuring a high CO<sub>2</sub> yield, combustion efficiency, and carbon capture efficiency. Various kinds of reactors with special configurations are applied to enhance the performance of chemical looping combustion reactors. The visualization and understanding provided by modeling and simulation, the immeasurable information (gas–solid phase flow, unconverted gas distribution, gas leakage routes) assist investigators in upgrading the design of the reactors, optimizing the operation parameters, scaling up the reactors, etc.

This Special Issue will focus on Chemical Looping Combustion Reactor and Its Applications. Topics of interest for publication include but are not limited to:

- Chemical looping combustion reactor design and operation;
- Modeling and simulation of chemical looping process;
- Pilot plants and microreactors;
- Novel chemical looping technologies reactors;
- Technoeconomic analysis on the CLC system.





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## Message from the Editor-in-Chief

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