Advances in Chemical Looping Technologies

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Message from the Guest Editors

Chemical looping combustion has been demonstrated to be feasible for carbon separation during the combustion of fossil fuel in MW-scale industrial pilot studies, which has opened up new opportunities in this field. Chemical looping technologies are enjoying a prosperous research era. Additionally, concepts based on chemical looping are being applied to many fields related to energy conversion, utilization and storage.

This Special Issue, entitled "Advances in Chemical Looping Technologies", seeks high-quality studies covering the latest advancements in chemical looping technologies. Topics of interest include, but are not limited to, the following:

- Novel oxygen carrier materials and its reactivity evaluation;
- New application of chemical looping concept;
- Mechanism study of redox reactions in the field of energy;
- AI in chemical looping technologies, such as oxygen carrier synthesis, reactor optimization, system performance prediction, etc.;
- New operation results of chemical looping reactors;
- CFD or process simulations of chemical looping reactor or systems;
- Thermochemical energy storage based on cyclic reactions.

Special Issue

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Message from the Editor-in-Chief

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