Special Issue

Syngas Production by Chemical Looping Gasification

Message from the Guest Editors

Chemical looping gasification is a promising technology that utilizes lattice oxygen within oxygen carriers instead of molecular oxygen as a gasifying agent to produce syngas. Syngas, primarily consisting of H2 and CO, has been employed as a versatile platform for generating various desired products, such as electric power, heat, hydrogen, methane, methanol, dimethyl ether, Fischer–Tropsch (FT) liquids, and ammonia. The aim of this Special Issue is to provide recent advances in the field of syngas production by chemical looping gasification. Original results from chemical looping gasification from coal, biomass, methane, solid waste, etc., are all welcome contributions. With the recent expansion of research showing that oxygen carriers play important roles in the chemical looping process, this Special Issue is also an appropriate venue for papers that deal with the design of oxygen carriers, process development and optimization, reactor design, reaction mechanisms, reaction kinetics, pollution control, and CO2 capture research.

Guest Editors

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Deadline for manuscript submissions

closed (30 November 2022)

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Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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