

Special Issue

Catalytic Conversion of Carbonaceous Materials to Fuels and Chemicals

Message from the Guest Editors

As the global energy structure is transitioning to a lower-carbon energy system, the utilization of various regulated carbonaceous materials (X) in fuels and chemicals urgently require cleaner technologies. Fischer–Tropsch synthesis (FTS), water–gas shift reaction (WGS), reforming reaction, etc. are catalytic processes to convert X to ultra-clean liquid or hydrogen fuels (XTF) and various chemicals (XTC), and continuously attract significant interest worldwide.

This Special Issue focuses on recent advances in experimental and theoretical research in the XTF/XTC catalysts, catalysis, and chemical reactor technology, including (i) the development of improved catalysts or novel reactor technologies for directly making gasoline, diesel fuels, or chemicals from syngas or hydrogen fuel from steam gas, methane, and oxygenates; (ii) experimental or theoretical studies on catalyst structural characteristics and catalytic performance, reaction mechanisms, and kinetics; (iii) upgrading FTS wax to liquid fuels; and (iv) techno-economic analysis and life-cycle analysis related to the XTF/XTC.

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Editor-in-Chief

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