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Advanced Catalysts for the Production of Methanol from CO_2

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Message from the Guest Editor

Dear Colleagues,

Global warming caused by increasing atmospheric carbon dioxide concentration and depletion of fossil fuels is becoming the focus of worldwide attention. Recently, the catalytic conversion of CO_2 has attracted considerable attention because it can also provide useful chemicals such as methanol which can be transformed into other high-volume-based chemicals.

The main types of methanol are grey methanol derived from natural gas, blue methanol derived from natural gas combined with carbon capture and storage, and e-methanol derived from renewable electricity and captured CO_2. The latter two fuels can be considered “green methanol”.

Submissions to this Special Issue may take the form of original research papers and short reviews which reflect state-of-the-art research on the conversion of CO_2 to methanol through thermocatalytic, photocatalytic, and electrocatalytic routes on the following topics:CO_2 hydrogenation catalyst research and development, catalyst deactivation, CO_2 hydrogenation reaction mechanisms, kinetics and modeling, and structure–functional relationships in CO_2 hydrogenation catalysts.