

## Special Issue

# Catalysis and Catalytic Processes for CO<sub>2</sub> Conversion toward NetZero

### Message from the Guest Editors

Achieving the NetZero goal across the world is beyond necessary—it is absolutely pivotal at this point. CCUS plays a significant role in this, and new approaches to CO<sub>2</sub> conversion must be considered. There are, however, several obstacles to the commercialization of CO<sub>2</sub> conversion processes. This will lead to the processing of energy that emits CO<sub>2</sub> not being as big an issue for LCA analysis anymore, being replaced by the amount of electrification required in the process, which will be considered for both LCA and TEA. Carbon-based products in a NetZero society should be manufactured mainly via CO<sub>2</sub> conversion technology. Clearly, power plants and chemical processes using fossil fuels can be maintained as long as CCUS can supply carbon-based products while simultaneously respecting the NetZero rule. This Special Issue aims to cover recent progress and advances in both catalysts and processes in the field of CO<sub>2</sub> conversion: (1) CO<sub>2</sub> hydrogenation, (2) monomer and polymer synthesis from CO<sub>2</sub>, (3) electrochemical CO<sub>2</sub> reduction, (4) biomass utilization from green algae, (5) photoelectrochemical CO<sub>2</sub> reduction, and (6) enzyme and microbial electrosynthesis from CO<sub>2</sub>.

### Guest Editors

Dr. Kwang-Deog Jung

Clean Energy Research Center, Korea Institute of Science and Technology, Seoul, Korea Division of Energy Environment Technology, University of Science and Technology, Seoul, Republic of Korea

Prof. Dr. Jihun Oh

Department of Materials Science and Engineering, KAIST, Daejeon, Korea

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Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[catalysts@mdpi.com](mailto:catalysts@mdpi.com)

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