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Applied Catalysis in Chemical Industry: Synthesis, Catalyst Design, and Evaluation

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Message from the Guest Editors

This Special Issue is devoted to the design and characterization of heterogeneous catalytic systems for industrial inorganic chemical processes. The aim is to collect the current state of knowledge, indicate areas requiring further research, and show the direction of ongoing development work. The main attention will be focused on comprehensive experimental studies of synthesis, characterization, and evaluation of catalyst performance in industrial processes such as, but not limited to, methane conversion, water–gas–shift reaction, ammonia synthesis, ammonia decomposition, carbon oxide methanation, selective catalytic reduction of nitrogen oxides, high-temperature N_2O decomposition, and low-temperature N_2O decomposition.

The scope also includes an investigation of catalysts under conditions close to the industrial ones, a comparison of the studied catalytic systems with the currently operating commercial systems, and a demonstration of the validity of their application in a given chemical process.