Special Issue

Current Trends in Dry (CO_2) Reforming Catalysis

Message from the Guest Editors

It is well-established that CO2 reforming of methane (in absence of steam: “dry” reforming of methane, DRM), or —more generally—of natural gas, represents a viable process to generate useful synthesis gas (H2 and CO). Beside the industrially ubiquitous steam reforming process, DRM thus represents an additional, effectively CO2-utilizing route toward added-value products and synfuels. Ongoing catalyst design focuses on the optimization of equally active and coking-resistant (bi)metal components, on the suppression of nucleation and growth of unreactive graphitic species, as well as on the efficient formation and conversion of reactive carbonaceous intermediates. Development of supports and promoters focusses on efficient CO2 activation, on promotional (bi)metal-support interactions, and on optimization of (bi)metallic dispersion and particle size. Acid-base properties, oxygen storage capacity, reducibility, porosity, and surface area of the supporting (mixed) oxides represent further key optimization factors. The current Special Issue is dedicated to the representation of contemporary trends of DRM catalyst design.

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