

Special Issue

Structure and Function of Ceria-Based Mixed Metal Oxides and Supported Transition Metal Oxide Catalysts

Message from the Guest Editor

Ceria -based mixed metal oxides constitute a formidable class of oxygen storage and release materials and their structure/function properties are of topical interest. The art of synthesis and preparation of ceria-based mixed metal oxide solid solutions greatly affects the structure and the defect topology of their anionic sublattices that are -in turn- affecting their behavior.

The structure/activity relationships pertaining to supported transition metal oxide catalysts (e.g. VOx, MoOx, WOx, ReOx etc) on oxidic carriers (e.g. TiO₂, Al₂O₃, ZrO₂, SiO₂ as well as mixed carriers) continues to attract focused research interest due to their importance for a great number of industrial processes (environmental catalysis, production of chemical commodities etc). Advanced synthesis routes based on molecular level approaches combined with meticulous structural characterization under controlled conditions have recently marked the dawn of a period with new unprecedented findings on structural and structure/function relationship grounds.

This Special Issue aims to gather a collection of articles highlighting some of the recent progress on the selected subjects addressed above.

Guest Editor

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