Special Issue

Advances in Techniques for Characterization of Non-Stoichiometric Oxides and Their Applications in Catalysis

Message from the Guest Editors

Non-stoichiometric oxides such as ceria-based materials, perovskites of transition metals, or related perovskite structures are important classes of catalysts with applications in the field of energy services, electrochemical devices, and environment depollution. Their surface and bulk physico-chemical properties, the redox behavior, and, consequently, their catalytic activity are controlled by the nature and chemistry of their defects, which, in turn, depend on the treatment history of these oxides and their operating conditions. This Special Issue aims at gathering research papers, mini reviews, and perspective articles that demonstrate the relevance of using advanced techniques of characterization and a multi-analytical approach for relating catalytic and electrocatalytic properties of these oxides to their structure and to specific arrangements of defects.

Guest Editors

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