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Smart Electro-Catalysts for Fuel Cells Sustainable Development

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

In the current conjuncture of clean energy sources diversification, energy security issues and the current political drive to reduce carbon emissions, fuel cell energy systems are critical in a distributed energy development structure and offer a credible and flexible solution for economic and environmental sustainability. Cost-effective electro-catalysts with high sorption reactivity and stability are currently the most demanded subject for innovative research and the main technological obstacle for fuel cell power sources to becoming an attractive and competitive alternative.

The aim of this Special Issue is to look at recent progress and trends in fuel cell research with respect to the design and synthesis of enhanced catalyst materials, structure-property, and nano-porous high surface area substrate to increase transport/kinetics properties, energy conversion performance, and durability of fuel cells. Areas of interest range from fundamental research and advanced in-situ catalyst characterization studies to the development of new nanostructured redox catalysts and growth formulations and computer modelling.