Special Issue

Catalysis: Where We Are and Where We Go

Message from the Guest Editor

Catalysis has been defined in various ways, gaining paradigmatic importance due to its relevance within all transformational processes, including life. Its application has been extensively studied since its definition, by J.J. Berzelius in 1836. Later, the actions of catalysts in chemical processes, defining the improved activity, the enhanced selectivity, the milder operative conditions, its stability, and finally the cost, have been described. This Special Issue wants to examine the actual intersection of the heterogenous catalysis with the recently affirmed field of nanomaterials, taking into consideration the awareness of the methods and the techniques that join the two disciplines. In addition, combined technologies, such as photocatalysis, electrocatalysis, and plasmacatalysis, require more focus, offering novel routes to difficult reactions, such as CO2 reduction. Papers, short communications, and reviews regarding catalytic processes both at and far from the thermodynamic equilibrium are welcomed, as well as the progress of refining, petrochemical processes, environmental protection, and biomass conversion.

Guest Editor

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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