Special Issue

Catalytic Performance of Zeolites and Nanostructured Materials in Bio-Refinery Applications

Message from the Guest Editor

In the recent years, a great deal of attention has been focused on sustainable renewable energy and green chemistry applications. This has already resulted in the conception of the bio-refinery model and the development of several generations of biofuel and platform chemicals from renewable sources. Meeting the challenges posed by varying feedstocks and demanding reaction conditions will require new catalysts with enhanced performance based on improved mass transport, superior activity and selectivity, and high thermal and hydrothermal stability. These may include macro-meso-microporous zeolites, zeotypes and metal oxides, as well as metal–organic frameworks and related nanostructured materials. The scope of this Special Issue includes the preparation, characterisation, application and modelling of zeolites and related nanostructured materials for the production of renewable fuels and platform chemicals in a sustainable way, utilising environmentally friendly technologies related to modern bio-refinery approaches. The contributions invited include original and significant research articles that are of interest to both academic and industrial scientists.

Guest Editor

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Deadline for manuscript submissions

closed (31 March 2021)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/26888

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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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