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Porous Catalytic Materials: Synthesis, Characterization and Applications

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Deadline for manuscript submissions:
closed (30 December 2021)

Message from the Guest Editors

In the last years, many efforts have been focused on a deeper knowledge in porous materials, in order to better understand how porosity and chemical nature may influence their final properties and performances in heterogeneous catalysis.

The development of new catalysts and improvement of existing ones for complex processes given both productive and ecological catalysis is based on the purposeful design of spatially organized structures with given functional characteristics. The most effective catalysts for these processes are characterized by an optimum combination of functional sites on the surface. The realization of such complex processes requires the presence of various types of active sites, in particular oxidation–reduction and acid–base sites. Porous materials are widely used as model catalysts for investigation of surface acid-base properties on their activity.

Research paper or reviews related to the most relevant results regarding the sustainable aspects of the porous materials, including synthesis, treatment, and catalytic application, are welcome to this Special Issue.