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Porous Materials: Active Phases or Supports in Heterogeneous Catalysis

Guest Editors:

Dr. Angela Martins

Department of Chemical Engineering, Instituto Superior de Engenharia de Lisboa, 1950-007 Lisboa, Portugal

Prof. Dr. Ana Paula Carvalho

Centro de Química Estrutural, Faculdade de Ciências, Universidade de Lisboa, 1749-016 Lisboa, Portugal

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Message from the Guest Editors

Porous materials have attracted a large amount of interest due to their wide range of application in molecular separation, adsorption, and especially as catalysts or catalyst supports. A large set of porous materials such as zeolites and zeotypes, such as SAPOs, ALPOs, among others, metal organic frameworks (MOFs), carbon materials, and mesoporous silicas have in common the presence of a large surface area and pore volume. The micropores can act as microreactors, where the native active sites or introduced species, such as metals, promote the occurrence of catalytic reactions. On the other hand, the larger pores are ideal locations for the anchoring of bulky species such as enzymes or organometallic catalysts, preventing leaching and transforming homogeneous to environmentally friendly and reusable heterogeneous catalysts.

The aim of this Special Issue is to open the discussion concerning the synthesis, modification, and functionalization of porous materials, aiming to prepare innovative and effective catalysts or catalyst supports for heterogeneous catalytic reactions.



