



Special Issue Reprint

Zeolites as Catalysts: Applications in Chemical Engineering, Energy Sources and Environmental Protection

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Zeolites are crystalline aluminosilicates possessing a 3D network structure. They are widely considered to have been the leading materials of the last few decades in the fields of chemical engineering, energy sources, and environmental protection. Zeolites with various pore sizes can be obtained with different ratios of SiO₂ and Al₂O₃, demonstrating large specific areas and strong gas adsorption. Therefore, they are commonly used for various processes, such as dehydration, gas separation and synthesis, air pollution control (H₂S, SO₂, and NO_x decontamination), fuel conversion (electrolyte film), petroleum cracking, and others, playing the roles of a membrane, catalyst, and support.

This Special Issue is dedicated to novel research and discussions on zeolites, with a focus on, but not limited to, the following: (1) Fundamental research on mechanisms of the formation of pores for zeolites; (2) Zeolites used as the membrane, catalyst, and support; (3) Theoretical simulation and machine learning research for zeolites; (4) Novel applications for zeolites; (5) Related porous materials



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