

Synthesis of zeolite UZM-8 and its catalytic properties for cumene synthesis.

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Zeolite UZM-8 is claimed to comprising a disordered collection of MCM-22 monolayers in the arrangement of “house of cards”. Here we describe the synthesis and characterization of this medium-pore zeolite with a large external surface area at different oxide compositions, and its catalytic properties for cumene synthesis with those observed with related materials such as ITQ-2, MCM-22, and MCM-56. Cumene synthesis has been selected as a test reaction to examine the effects of the degree of disordered arrangement of this series of MWW-type zeolites. It was found that the catalytic performance of H-UZM-8 is slightly higher than that of the zeolites employed in this work.