

Synthesis of hierarchical MFI zeolite by nanocasting with plate type mesoporous silica

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Hierarchical Zeolites have been studied by many researchers for few decades. In this present work, Hierarchical MFI type zeolites (ZSM-5, Silicalite-1) have been synthesized by nanocasting with ICN-2(plate type mesoporous silica) under microwave irradiation. The obtained hierarchical zeolite expects to have much better textural properties than conventional MFI type zeolite due to formation of hierarchical structure by nanocasting. To confirm hierarchical structure and physico-chemical properties, the obtained samples are characterized by X-Ray Diffraction (XRD), Scanning electron microscope (SEM), Brunauer - Emmett - Teller(BET), Infrared spectroscopy(IR).