

### New type of Hierarchical TS -1 prepared by H<sub>2</sub>O<sub>2</sub> under Microwave

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TS -1 catalytic systems are widely been used in industrial oxidation process. In this work, Hierarchical TS -1 zeolites consisting of the typical micropores and an additional Supermicroporosity(1 -1.5nm) have been synthesized using post synthetic Hydrogen Peroxide treatment under Microwave irradiations. Synthesized samples were characterized by X-ray diffraction(XRD), Brunauer–Emmett–Teller (BET), Fouriertransform-Infrared spectroscopy(FT -IR), Ultraviolet -visible light spectroscopy(UV -VIS). Scanning electron microscopy(SEM) and Transmission electron microscopy(TEM). The obtained Hierarchical TS -1 exhibited enhanced textural properties, due to the formation of an additional porosity within Micro and supermicroporous range. Thus incorporation of micropore and supermicropore is expected to exhibit higher catalytic activity by providing a larger Nano -cavity for catalytic transformations.