

The Role of MCM-22 (P) in the N,N,N,N',N',N'-hexamethyl-1,5-pentanediammonium mediated Synthesis of Zeolites

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The role of MCM-22 (P) as an intermediate phase in zeolite syntheses using N,N,N,N',N',N'-hexamethyl-1,5-pentanediammonium as an organic SDA has been studied. In the presence of Na⁺ ions the obtained MCM-22 (P) zeolite was found to transform into the denser EU-1 (EUO) structure with prolonged time in the crystallization medium. However, when K⁺ ions were instead of Na⁺ ions, no significant phase transformation was detected during 4 weeks of crystallization. The powder materials are characterized by using X-ray diffraction, scanning electron microscopy and solid state NMR.