

On the delamination of layered MCM-22 precursors

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MCM-22 precursors (MCM-22(P)), thermally converted into MCM-22 zeolites, have a layered-structure. The intra-layers in MCM-22(P) are condensed during the thermal calcination and then, the new inter-layers are generated in-between, resulting in the synthesis of MCM-22. So far, the limited accessibility toward the 12 membered-ring pockets in MCM-22 has been overcome through the pillaring or delamination of MCM-22. Up to now, a combination of swelling and sonication is well known for an effective protocol to obtain the delaminated MCM-22 (ITQ-2). In this presentation, we would like to address the rigorous analysis on the delamination process of MCM-22(P) and provide an insight into the process through providing a new technique. Based on that, a preliminary result will be presented.