

## Syntheses of ZSM-5 and TS-1 Zeolites with Bimodal Micro/Mesoscopic Structures

김수현, 김상한, 박동화, 김건중\*  
인하대학교  
(kingj@inha.ac.kr\*)

A route to synthesize ZSM-5 and TS-1 crystals with a bimodal micro/mesoscopic pore system has been developed in this study; the successful incorporation of the mesopores within the ZSM-5 structure was performed using tetrapropylammonium hydroxide(TPAOH)-impregnated mesoporous materials containing polystyrene-divinylbenzene nanotubes in the pores, which were encapsulated in the ZSM-5 crystals during a solid rearrangement process within the framework. Such mesoporous ZSM-5 zeolites can be readily obtain as powders, thin films, or monoliths.