

## Synthesis and characterization of B- or Ti-substituted MCM-22, 36 and ITQ-2

이규용, 안화승\*  
인하대학교 화학공학과  
(whasahn@inha.ac.kr\*)

MCM-22 precursor (MCM-22(P)) was prepared using either hexamethyleneimine or piperidine as Structure Directing Agent (SDA). MCM-22 (P) is consisted of a number of lamellar type layers that has both 10-membered ring channels and 12-membered ring pocket pores. Subsequently, MCM-22, MCM-36 and ITQ-2 type zeolites were synthesized after either calcination, swelling-pillaring process, or swelling-ultrasonic treatment with MCM-22 (P), respectively. In addition, properties of these materials were modified by isomorphous substitution of boron or titanium for aluminum in the standard materials. The resultant materials were characterized by various instrumental techniques and by applying an appropriate probe reaction.