Methanol-to-Olefin conversion over H-MCM-22 and H-ITQ-2

민형기, 박민범, 홍석봉*
포항공과대학교
(sbhong@postech.ac.kr*)

The catalytic properties of H-MCM-22 and its delaminated zeolite (i.e., H-ITQ-2) for the methanol-to-olefin conversion are compared with those obtained from H-ZSM-5 and H-SAPO-34. The catalytic activity was measured at 400 °C and 4.0 h^{-1} WHSV. The ex situ GC-MS analysis of the used catalysts reveals that the cylindrical supercages of H-MCM-22 play a more crucial role in the desired product formation than the two-dimensional sinusoidal 10-ring channels or the external 12-ring pockets, whose overall catalytic action is dominated by the hydrocarbon pool mechanism.