

Propylene epoxidation using TS-1 and Ti-MCM-22 as oxidation catalysts

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

Propylene epoxidation by H_2O_2 (30 % aqueous) as oxidant was studied in a semi-batch reactor using TS-1 catalyst : Effects of reaction temperature, time, pressure, solvent, catalyst and H_2O_2 concentration on H_2O_2 conversion(limiting reagent) and product distribution were investigated. Potential inhibition by propylene oxide on the epoxidation rate was also examined. Ti-MCM-22 with MWW zeolytic structure was found to exhibit better performance than TS-1 with MFI structure, provide that a proper choice of solvent(acetonitrile) is made.