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THE EFFECT OF Si/Al RATIO ON PROPANE AROMATIZATION OVER H-ZSM5 CATALYSTS

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Abstract

Aromatization of propane has been investigated over H-ZSM5 catalysts with Si/Al ratios of 23, 50, 80 and 280. The physicochemical properties of catalysts were determined by nitrogen physisorption, pyridine adsorbed FTIR and X-ray Diffraction techniques. The reaction was carried out by continuous flow reactor at 723 – 923 K under oxygen atmosphere. The products of BTX (benzene, toluene and xylene) were analyzed by FID Gas Chromatography. The conversion of propane reached to 70, 63, 62 and 21 % for H-ZSM5 with Si/Al ratio of 23, 50, 80, and 280, respectively.