

Effect of V content, support on the propane dehydrogenation over V/MCM-41 catalysts :
Comparing with Pt catalyst

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The lately studies for the alkane dehydrogenation catalyst are focused on vanadia catalysts supported on non-porous (SiO_2), microporous (silicalite), mesoporous (MCM-41, HMS, SBA-15) and ultra-large mesoporous (MCF) silicate materials. Vanadia supported on oxides with low surface area, such as alumina, titania, magnesia, silica, have been reported to be active catalysts for the oxidative dehydrogenation (ODH) of short-chain alkanes towards the production of the respective alkenes. In this study, propane dehydrogenation on V-MCM-41 was performed. V/MCM-41 catalysts were prepared by incipient wetness impregnation method. Activity of produced V/MCM-41 catalyst is compared with V content, Pt/ Al_2O_3 and V/ Al_2O_3 . The effect of activity by V/MCM-41 catalyst for propane dehydrogenation to propylene have been investigated by reaction test and some physicochemical characterization like X-ray diffraction(XRD), N_2 adsorption-desorption(BET).