

Preparation of heterogeneous catalyst for ethylene hydroformylation : Part 1. Rh catalyst supported on mesoporous alumina for the ethylene hydroformylation

김유정, 주지봉, 김우영, 오석일, 김남동, 김휘찬¹, 이종협*
서울대학교; ¹호남석유화학 대덕연구소
(jyi@snu.ac.kr*)

Hydroformylation is an important process for producing oxygenated hydrocarbons such as aldehyde and alcohol. Homogeneous Rh-rigand catalyst has been used in many industrial processes for olefin hydroformylation. Although homogeneous catalysts have high activity and selectivity, it known to be difficult to separate and recycle catalyst from product streams. Therefore, it is necessary to fabricate novel heterogeneous catalyst which overcomes the recycling and separation problems. In this work, Rh catalyst on mesoporous alumina (Rh/MA-s) was prepared by sol-gel method. The prepared Rh catalyst was characterized by TEM, XRD and temperature programmed techniques. The Rh/MA-s catalyst exhibited considerable activity and selectivity in ethylene hydroformylation. Experimental results reveal that the Rh catalyst on mesoporous alumina was considered as potential candidates in olefin hydroformylation