

Ethylene Oligomerization over Nanoporous Nickel Phosphate VSB-5

이 석, 이영훈, 이익모, 이동환, 박상언*

인하대학교 화학과

(separk@inha.ac.kr*)

Recently Ferey-Cheetham-Park et al have firstly described the discovery of open-framework nickel phosphate, VSB-1 and VSB-5 (Versailles/Santa Barbara), whose thermal stability and porosity can be readily accessed. Isomorphous incorporation of transition-metal ions into the frameworks of porous materials such as zeolites and AlPO-n is very important because these molecular sieves contain atomically dispersed metal species and such sites impart important catalytic properties.

In this work, we report new results of the investigation on nanoporous nickel phosphate VSB-5 and iron incorporated VSB-5 framework, for its interesting catalytic property for the oligomerization of ethylene.

This hybrid material behaves as an effective heterogeneous catalyst for the dimerization / oligomerization of alkenes. Further studies are in progress to explore the catalytic properties of iron substituted Nickel Phosphate, Fe-VSB-5.