

Isopropylbenzene Disproportionation over Large-Pore Zeolites

차승혁, 이경환, 변영철, 홍석봉[†]

포항공과대학교

(sbhong@postech.ac.kr[†])

While isopropylbenzene disproportionation is one of the potential technologies for diisopropylbenzene production, its reaction intermediates have not been experimentally observed yet. Here we present GC-MS evidence that not only mono-isopropylated diphenylisopropane derivatives but also one mono-isopropenylated diphenylisopropanes are serving as one of key reaction intermediates of this disproportionation reaction over large-pore zeolites (H-Y, H-beta, and H-mordenite). We also propose a new bimolecular diphenylpropane-mediated reaction pathway for the formation of diisopropylbenzenes and benzene over large-pore zeolites based on the GC-MS results obtained.