

Abstract :

The benzylation of benzene and substituted benzenes reaction employing benzyl chloride as the alkylating agent on a series of impregnated nickel over mesoporous silicas with different Ni contents has been investigated. These materials (Ni/HMS) have been characterized by elemental analysis, XRD method, N₂ adsorption Measurements (BET and BJH theory), Transmission electron microscopy (TEM) and Temperature programmed reduction (TPR). The mesoporous Nickel-containing materials showed both high activity and high selectivity for benzylation of benzene. More interesting is the observation that this catalyst is always active and selective for large molecules like naphthenic compounds such as methylnaphthalene and he can also be reused in the benzylation of benzene for several times.