عنوان مقاله:

Hydrogenation of dimethyl-nitrobenzene to dimethyl-aniline in a three-phase Reactor

محل انتشار:

ششمین کنگره بین المللی مهندسی شیمی (سال: 1388)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

The liquid-phase catalytic hydrogenation of dimethyl-nitrobenzene (DN) to Dimethyl-aniline (DA) was carried out in ethanol using 5% Pd/C as a catalyst. The effects of hydrogen partial pressure (400–1000 kPa), reaction temperature (343–403 K), speed of stirring range (200-800 rpm) and dimethyl-nitrobenzene concentration (0.12–0.75 mol/lit) on the hydrogenation of dimethyl-nitrobenzene and the yield of Dimethyl-aniline have been studied. Dimethyl-aniline was the only reaction product, generated through the hydrogenation of the Nitro group of dimethyl-nitrobenzene.Conventional Arrhenius behavior was exhibited by catalyst, Pd/C showed activation energies of 614 .J/mol. A simple power law model was used for analysis of the reaction kinetic data

کلمات کلیدی:

Liquid-phase hydrogenation; Pd/C catalysts; dimethyl-nitrobenzene; dimethyl-aniline; operation condition :