

عنوان مقاله:

Hydrogenation of nitrobenzene over nano-sized Pd/ γ -Al₂O₃ catalyst

محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Shahram Ghanbari Pakdehi - *Chemistry and Chemical Engineering Department, Faculty of Materials and Manufacturing Technologies, Malek Ashtar University of Technology, Tehran, Iran*

Mahboubeh Salehi Pour - *Imam Khomeini Technical School, Electronics group, Tehran, Iran*

خلاصه مقاله:

Aniline was prepared by catalytic hydrogenation of nitrobenzene (NB) on nano-sized Pd/ γ -Al₂O₃ catalyst synthesized by sol-gel method. The catalyst was characterized by SEM, XRD and TEM. The average size of Pd particles was 36 nm. In this reaction, the hydrogenation rate was zero-order with respect to nitrobenzene concentration and increased with increasing of hydrogen pressure. Compared with commercial Pd/ γ -Al₂O₃, catalytic activity and selectivity of the as-prepared Pd/ γ -Al₂O₃ is superior. The reason proposed for higher catalytic activity of nano-sized Pd is the small particle size and high-density surface defects.

کلمات کلیدی:

Nitrobenzene, Aniline, Nano-sized Pd/ γ -Al₂O₃, Catalytic hydrogenation

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/46345>

