

Suzuki-Miyaura cross-coupling of phenylboronic acid with aryl halides catalyzed by palladium and nickel species supported on alumina-based oxides.

Autorzy

Andrzej Gniewek

Rok wydania

2016

Czasopismo

Journal of Organometallic
Chemistry

Numer woluminu

823

Strony

90-96

DOI

10.1016/j.jorganchem.2016.09.018

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Two different kinds of $\text{Al}_2\text{O}_3\text{-ZrO}_2$ have been prepared by the alkoxide sol-gel process: bulky-shaped and formed into spherical granules with the diameter of 2–3 mm. The catalysts have been obtained either by impregnating the support with the metal precursor (Pd or Ni salt solution) or by simultaneous addition of the precursor during synthesis of the support (the co-precipitation technique). The catalysts have been characterized structurally with scanning electron microscopy (SEM), transmission electron microscopy (TEM), nitrogen adsorption-desorption studies and successfully applied in the Suzuki-Miyaura cross-coupling of phenylboronic acid with different kinds of aryl halides (2-bromotoluene, 4-bromotoluene, 4-bromoanisole or 4-iodoanisole). Our experiments have shown that nickel species supported on $\text{Al}_2\text{O}_3\text{-ZrO}_2$ can be successfully employed as the catalyst in the Suzuki-Miyaura process.

Słowa kluczowe

C-C coupling, Suzuki reaction, Sol-gel, palladium, nickel,
Alumina

Adres publiczny

<http://dx.doi.org/10.1016/j.jorganchem.2016.09.018>

Strona internetowa wydawcy

<http://www.elsevier.com>