

PEPPSI-type complexes with small NHC ligands obtained according to the new method efficiently catalyzed Suzuki-Miyaura reaction.

Autorzy

Wojciech Sikorski

Wojciech Zawartka

Anna M. Trzeciak

Rok wydania

2018

Czasopismo

Journal of Organometallic
Chemistry

Numer woluminu

867

Strony

323-332

DOI

10.1016/j.jorganchem.2018.01.033 <http://doi.org/10.1016/j.jorganchem.2018.01.033>

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

A series of 13 new PEPPSI-type complexes with small NHC ligands and differently substituted imidazoles were prepared using as substrates $[Pd(m-X)X(bmim-y)]_2$ dimer or imidazole complexes $PdCl_2(imidazole)_2$. Improvement of the synthetic method allowed simplification of the purification step. The obtained complexes efficiently catalyzed the Suzuki-Miyaura cross-coupling of substituted bromobenzenes and arylboronic acids in water and *ini*PrOH/water mixture. The observed catalytic activity was significantly better than that of $Pd(OAc)_2$ and similar to that of $Pd(IPr)Cl_2(3-Cl-py)$ in the same conditions. TEM analysis of the post-reaction mixture evidenced formation of Pd NPs of diameter ca. 3 nm, participating in the catalytic process.

Słowa kluczowe

palladium, Suzuki-Miyaura reaction, imidazole, nanoparticles

Adres publiczny

Strona internetowa wydawcy

<http://www.elsevier.com>