عنوان مقاله:

Pd Immobilized on a Nano Worm-like Silica Network Catalyzed Coupling reactions

محل انتشار:

بیستمین کنگره شیمی ایران (سال: 1397)

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خلاصه مقاله:

Palladium-catalyzed cross-coupling reactions are one of the most important tools for the C-X (X: N, S, O, ...) bond formation. The point of Pd catalysis was highlighted bythe award of the 2010 Nobel Prize to Heck, Negishi and Suzuki for their remarkable work in this field [1]. Several challenges like the limited availability and high price andenvironmental attention make it vital to improve Pd catalysts with the notable properties including the highly active site with excellent recyclability and little metal leaching to reduce the costs and pollutions [2]. Herein, a highly active and stable Pd nano-catalyst was prepared and characterized. Initially, a novel nano worm-like silica network was successfully prepared by a simple sol-gel protocol, then was functionalized by designed ligands and finally palladium immobilized on acceptor bed by a simple method for the first time. The nano-catalyst showed great activities in CS bond formation reaction. Extraordinary simplicity, mild reaction condition, excellent yields were some advantages of this protocol. More importantly, this catalytic system is capable to use for the gram-scale synthesis of the desired products (figure 1).

کلمات کلیدی:

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