An efficient synthesis of functional stilbenes in Hiyama coupling reaction catalysed by H-spirophosphorane palladium complex.

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Streszczenie

An efficient Hiyama cross-coupling reaction of functionalised styrylsilanes with iodo- and bromobenzene has been performed using complex [$PdCl_2P(OCH_2CMe_2NH)$ $OCH_2CMe_2NH_2$] as precatalyst. The styrylsilanes underwent cross-coupling reactions with excellent selectivity and yield, up to 99%, of the corresponding *E*-stilbenes. When (*E*)-[1-(4-bromophenyl)-2-(1,1,3,3,3-pentamethyldisiloxy)]ethene was used as a source of the silane, a homocoupling reaction took place and polymeric compound containing 0.77% of palladium in the form of Pd(0) nanoparticles was obtained. This material used as a catalyst made it possible to obtain 40% and 38% of the Hiyama cross-coupling product in two subsequent runs.

Słowa kluczowe

Cross-coupling, Hiyama coupling, Palladium catalyst, Stilbenes, Vinylsiloxanes

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