

Two efficient pathways for the synthesis of aryl ketones catalyzed by phosphorus-free palladium catalysts.

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Streszczenie

Allylic alcohols, 1-buten-3-ol, 1-penten-3-ol and 1-octen-3-ol, reacted with aryl iodides (iodotoluene, 4-iodotoluene, 4-iodophenol and 4-iodanisole) under Heck reaction conditions to form corresponding saturated aryl ketones in one step. The same products were obtained in a two-step tandem reaction consisted of the Heck coupling of allylic alcohols with aryl iodides, followed by hydrogenation. Reactions were catalyzed by phosphorus-free palladium precursors modified with the menthol-substituted imidazolium chlorides. Formation of crystalline palladium nanoparticles, of the diameter up to 65 nm, in the reaction mixture was evidenced by TEM.

Słowa kluczowe

Heck coupling, Allylic alcohols, palladium, ionic liquids, Aryl ketone, isomerization, nanoparticles

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