

عنوان مقاله:

Synthesis and characterization of some transition metal complexes with pyridinium ylide and application of its palladium (II) complex in Suzuki-Miyaura coupling reaction

محل انتشار:

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خلاصه مقاله:

Pyridinium ylides are able to form stable complexes and could be characterized by spectroscopic techniques. They can behave as ambidentate ligands because the carbanion located at the C α of the ylide is able to donate electron density to a transition metal. This work reports the synthesis and catalytic properties of new palladium complex which prepared by reaction of new pyridinium ylides (Y) and PdCl₂. The reaction of pyridine with 2-Bromo-4-fluoro acetophenone in dry chloroform produces new pyridinium salt (S). The action of Na₂CO₃ on S compound leads to a new type of stable ylide. The reaction of Y with palladium (II) Chloride in dry methanol as a solvent led to the formation of C-coordinated dimeric complex [PdY₂Cl₂]. Characterization of the Pd(II) complex was Optimized by IR, ¹H and ¹³C NMR spectroscopy confirmed coordination of the ylide to the metal through the carbon atom. Also this complex has been found to act as efficient catalysts for the Suzuki cross-coupling reaction. Various aryl bromides were coupled with aryl boronic acids in DMF, under air, in the presence of 0.2 mol% of the catalyst to afford [corresponding cross-coupled products in good to excellent yields. [1-3

کلمات کلیدی:

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