Catalytic activity of Pd(II) complexes with triphenylphosphito ligands in the sonogashira reaction in ionic liquid media.

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The reactivity of palladacycle dimeric complexes with substituted triarylphosphito ligands P(OR)3 (R=Ph, m-MeC6H4, o-MeC6H4, C6H3-2,4-tBu2) as well as their non-orthometallated analogues PdCl2[P(OR)3]2 was tested in a copper-free Sonogashira reaction with iodobenzene and phenylacetylene as substrates and imidazolium ionic liquids as the reaction medium. The ionic liquids [bmim][PF6], [bmim][BF4] and [emim][SO4Et] were chosen. The palladium complexes studied showed high activity, and the yield of diphenylacetylene ranged from 31 to 98% in 1h. The best results were obtained in [bmim][PF6] for PdCl2[P(O-m-MeC6H4)3]2 (84%) and for orthopalladated dimer with the same phosphite (98%).

Słowa kluczowe

palladium, Orthometallation, Sonogashira, Ionic liquids

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