

Catalytic activity of palladium complexes, PdCl₂(COD) and PdCl₂(P(OPh)₃)₂, in methoxycarbonylation of iodobenzene.

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The methoxycarbonylation of iodobenzene with PdCl₂(COD) and PdCl₂(P(OPh)₃)₂ (at 40 °C, 1 atm of CO, in methanol solution) produced benzoic acid methyl ester with the yield of 14% and 17%, respectively. The low yield of that reaction is caused by partial reduction of palladium to not active palladium black. It was found, that the addition of ammonium salt, prevents palladium reduction to inactive Pd(0) form and increases the activity of the system. In reaction catalyzed by PdCl₂(COD) at 40 °C and 1 atm of CO in methanol the yield of ester increased from 14% to 52% when was added. The yield of ester equal 96% was obtained with the same catalyst in molten at 80 °C and 5 atm of CO.

Słowa kluczowe

Carbonylation, Iodobenzene, Palladium catalyst, Molten salt

Adres publiczny

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