Cross-coupling of 4,5,6,7-tetrahydroindole with functionalized haloacetylenes on active surfaces of metal oxides and salts.

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Streszczenie

Screening was performed of metal oxides (MgO, CaO, ZnO, BaO, Al2O3, TiO2, ZrO2) and salts (CaCO3, K2CO3, ZrSiO4) as active surfaces for the reaction of ethynylation of 4,5,6,7-tetrahydroindole with ethyl bromopropynoate and bromobenzoylacetylene. It was established that Ca, Mg, Zn, and Ba oxides assist the ethynylation of 4,5,6,7-tetrahydroindole, and their activity in the reaction with ethyl bromopropynoate considerably exceeds that of aluminum oxide. The ethynylation is accompanied with the formation of intermediate E-2-(1-bromoethenyl)-4,5,6,7-tetrahydroindole and side 1,1-di(4,5,6,7-tetrahydroindol-2-yl)ethenes and 1,1-di(4,5,6,7-tetrahydroindol-2-yl)bromoethanes.

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