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Research of catalytic properties of metallic nanotubes

The development of methods for the synthesis of complex nitrogen-containing molecules is of great importance, since the vast majority of natural compounds, including proteins, nucleic acids and most biologically active compounds, contain nitrogen. One such species, such as aminoalcohols, peptides, lactams, etc., is Mannich's reaction. Initially, this reaction gives ß-aminocarbonyl compounds from three components: amine, aldehyde and ketone.

We investigated the Mannich reactions occurring in the presence of catalysts. This interaction of acetophenone, benzaldehyde and aniline, as well as the reaction of indole, diethylamine, formaldehyde.

The Mannich reaction is characteristic not only for indole and other p-excess heterocycles, but also for many CH-active compounds, for example ketones. Catalytic activity was also studied using the example of the aminomethylation reaction of acetophenone.

Thus, the prospects of further studies of copper nanotubes as effective catalysts for the reaction of aminomethylation by Mannich were demonstrated.

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