

Catalytic Cycloaminomethylation of Aminobenzamides with 1,3-Bis[dimethylamino(methoxy)methyl]thiourea

R. R. Khairullina^{a*}, T. V. Tyumkina^a, A. R. Geniyatova^a,
M. F. Abdullin^b, and A. G. Ibragimov^a

^a *Institute of Petrochemistry and Catalysis of the Russian Academy of Sciences,
pr. Oktyabrya 141, Ufa, 450075 Russia
e-mail: ink@anrb.ru

^b *Ufa Institute of Chemistry of the Russian Academy of Sciences,
pr. Oktyabrya 71, Ufa, 450054 Russia*

Received October 18, 2018; revised October 18, 2018; accepted October 25, 2018

Abstract—Efficient methods of the synthesis of cyclophanes containing the thiourea moiety via the reaction of *o*-, *m*-, and *p*-aminobenzamides with 1,3-bis(dimethylaminomethyl)thiourea or 1,3-bis(methoxymethyl)thiourea using NiCl₂·6H₂O and SmCl₃·6H₂O as catalysts have been developed.

Keywords: cycloaminomethylation; aminobenzamides; bis(*N,N*-dimethylamino)methane; thiourea; cyclophanes

DOI: 10.1134/S1070363219030022