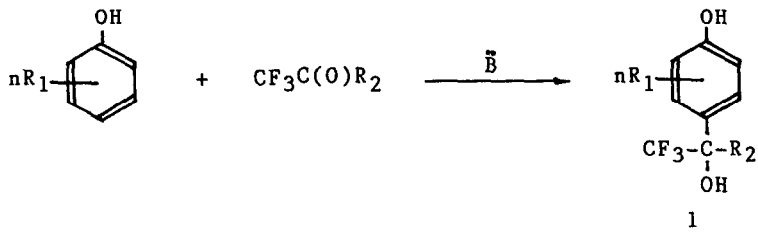
NUCLEOPHILIC CATALYSIS IN THE REACTIONS OF POLYFLUOROCARBONYL COMPOUNDS WITH PHENOLS

V.I. Dyachenko, A.F. Kolomietz and A.V. Fokin

Nesmeyanov Institute of Organo-Element Compounds, U.S.S.R. Academy of Sciences, 28, Vavilov St., 117813 Moscow, V-334 (U.S.S.R.)

The thermal C-alkylation of phenols by means of polyfluoroketones under acidic catalytic conditions was studied earlier [1]. These reactions have been shown to proceed under ordinary conditions affording good yields (80-100%) of para-alkylated products (1) when nucleophilic catalysis is employed.



1

n = 0, 1, 2

R_1= OCH_3, CH_3, iso-C_3H_7, tert-C_4H_9, F, Cl, Br

R_2= CF_3, $COOCH_3$, $COOC_2H_5$

If para-position is not accessible ortho-alkylation proceeds. The features of these reactions arising from the nature of the catalyst, the solvent and reagents used are discussed.

1 Farah B.S., Gilbert E.E., Morton Litt. et al. J. Org. Chem., 30 1004 (1965).