

Reaction of 2-trifluoroacetyl-1,8-bis(dimethylamino)naphthalene with strong organic bases: deprotonation of 1-NMe₂ group resulting in the formation of benzo[g]indole derivatives versus nucleophilic addition to C=O group.

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A novel approach to pyrrole ring closure in 2-trifluoroacetyl- and 2-ethoxycarbonyl-1,8-bis(dimethylamino)naphthalenes via treatment with 2-lithium-1,8-bis(dimethylamino)naphthalene producing the corresponding benzo[g]indole derivatives, was examined with different alkyl- and aryllithium compounds as well as with LDA. It was found that the highest yields of benzo[g]indoles (up to 70%) are obtained with aryllithium reagents when they contain NMe₂ group in *ortho*-position to the carbanionic centre. In all other cases the formation of acyclic alcohol arising from ordinary intermolecular addition of the carbanion to the CO group strongly prevails. The dramatic facilitation of deprotonation of the N-Me group in substrate followed by pyrrolic cyclization in the case of 2-lithium-N,N-dimethylanilines was explained through a specific structure of the reaction transition state.

Słowa kluczowe

indole, proton sponge, organolithiums, alcohol, fluorine

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