REACTION OF ACETOPHENONE ANIL METHIODIDE WITH ACRIDINE

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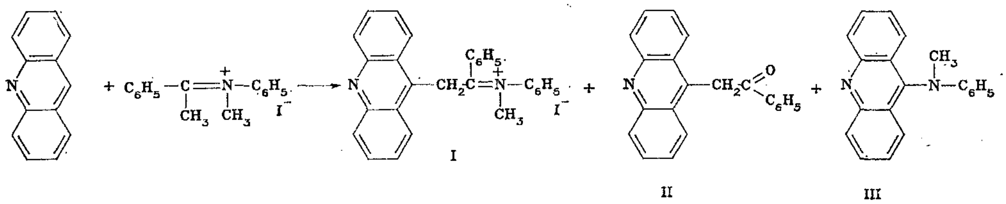
The CH-acid properties of methyl groups bonded in the α or γ position of the pyridine ring are widely known. This has made it possible to incorporate their molecules in the electron-deficient acridine ring [1]. We assumed that a methyl group attached to the carbon atom of the azomethine C=N bond would have similar properties, especially since individual examples of the condensation of quaternary salts of ketimines with p-dimethylaminobenzaldehyde are known [2].



In fact, we have observed that the reaction between acetophenone anil methiodide and acridine in dimethylformamide (DMF) proceeds very readily to give a small amount of I; the principal reaction product is 9-phenacylacridine (II), which is obtained as a result of cleavage of the amine component in salt I. Admixed III was detected in a mass-spectrometric study of a sample of ketone II. Amine III is evidently formed as a result of nucleophilic attack on the acridine molecule by the N-methylaniline that is split out during the reaction.

Compound I is extremely unstable and loses the amine part gradually to give ketone II on prolonged storage or purification. Compound I was obtained in 15% yield and had mp 147-149°C (from ethanol). Compound II was obtained in 68% yield and had mp 240-241°C (from butanol) (mp 240-241°C [3]). The results of elementary analysis were in agreement with the calculated values.

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