Compound I has satisfactory analytical characteristics. The structures of III-VIII obtained from adduct I were proved by comparison with genuine samples.

The instance of the extreme facile heterolysis of the C—C bond in 1-methyl-2-(3-indolyl)-1,2-dihydroquinoline evidently also explains the previously observed participation of N-acyl derivatives of 2-substituted 1,2-dihydroheteroaromatic compounds as donors of nucleophilic particles in nucleophilic alkylation [2] and transhetarylation [3] reactions.

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DIMERIZATION OF 1-VINYL-4,5,6,7-TETRAHYDROINDOLE UNDER THE INFLUENCE OF THE $NaOH—CHCl_3—C_6H_5CH_2N^+(C_2H_5)_3Cl^-$ SYSTEM

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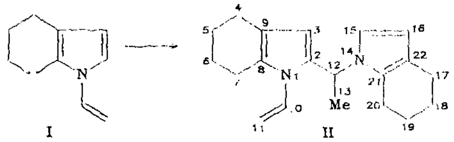
Instead of the expected dichlorocarbenylation product [1], dimer II, which was previously obtained from indole I only under electrophilic conditions [2], is formed by treatment of 1-vinyl-4,5,6,7-tetrahydroindole (I) with the $NaOH—CHCl_3$—triethylbenzylammonium chloride (TEBA) system.



I

II

Dimer II is not formed when $CHCl_3$ or TEBA is excluded from the indicated system.

Thus 8 ml of $CHCl_3$ dissolved in 10 ml of CH_2Cl_2 was added with vigorous stirring at 10°C in the course of 30 min to a mixture of 7.35 g of I, 0.23 g of TEBA, 10 ml of CH_2Cl_2, and 20 ml of 50% aqueous NaOH solution, after which the mixture was stirred at 10°C for 2 h and worked up in the usual way to give 2.57 g (35%) of 1-vinyl-2-[1-(1,4,5,6,7-tetrahydroindolyl)ethyl]-4,5,6,7-tetrahydroindole (II) with mp 114°C (from hexane). The results of elementary analysis were in agreement with the formula. Mass spectrum (m/z): 294 (M^+) and 174 (splitting out of a 4,5,6,7-tetrahydroindolyl radical). ^{13}C NMR spectrum (in $CDCl_3$, with an FX-90Q spectrometer): 130.72 [$C_{(2)}$], 130.13 [$C_{(10)}$], 128.72 [$C_{(21)}$], 126.33 [$C_{(8)}$], 117.88 [$C_{(9)}$], 117.45 [$C_{(22)}$], 116.31 [$C_{(15)}$], 107.97 [$C_{(16)}$], 106.24 [$C_{(3)}$], 105.75 [$C_{(11)}$], 47.40 [$C_{(12)}$], 21.67 [$C_{(13)}$], and 22.11-23.90 ppm [$C_{(4-7,17-20)}$]. The PMR and IR spectra were identical to the spectra previously described for II [2].

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