A NEW METHOD FOR THE PREPARATION OF [3,4;5,6]BIS(INDENO)PYRYLIUM SALTS

D. V. Pruchkin, E. V. Kuznetsov, and G. N. Dorofeenko

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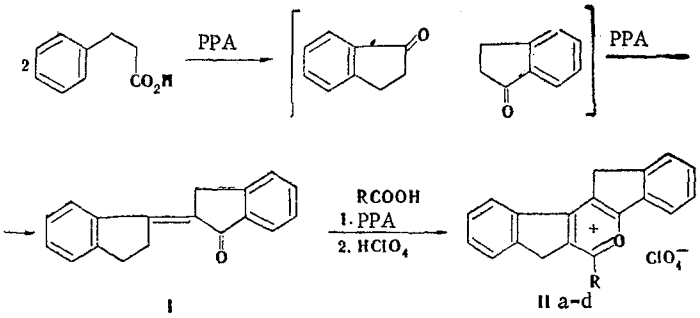
We have established that an indanone dimerization product — 2-(indanylidene)indan-1-one (I) — is formed in higher than 70% yield when hydrocinnamic acid is heated at 130-140°C for 1 h.



I

II a-d

II a R=CH_3; b R=C_6H_5; c R=*p*-$CH_3OC_6H_4$; d R=$CH_2C_6H_5$

When equimolar amounts of carboxylic acids are added to the reaction mixture, it is possible, without isolation of the intermediate I, to obtain bis(indeno)pyrylium salts (II) in up to 50% yields. The physical and spectral characteristics of pyrylium salt IIa were identical to those of the compound obtained by the method in [1]. Salt IIb was obtained as green crystals with mp 304°C (from glacial acetic acid). Found: C 69.8; H 4.2; Cl 8.1%. $C_{25}H_{17}ClO_5$. Calculated: C 69.4; H 3.9; Cl 8.2%. Salt IIc was obtained as brown crystals with mp 241°C. Found: C 67.9; H 4.4; Cl 7.7%. $C_{26}H_{19}ClO_6$. Calculated: C 67.7; H 4.1; Cl 7.7%. Salt IId was obtained as black crystals with mp 274°C. Found: C 70.4; H 3.7; Cl 8.2%. $C_{26}H_{19}ClO_5$. Calculated: C 70.0; H 3.8; Cl 7.9%.

LITERATURE CITED

1. Yu. A. Zhdanov, G. N. Dorofeenko, and V. A. Palchkov, Zh. Obshch. Khim., 35, 827 (1964).

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