

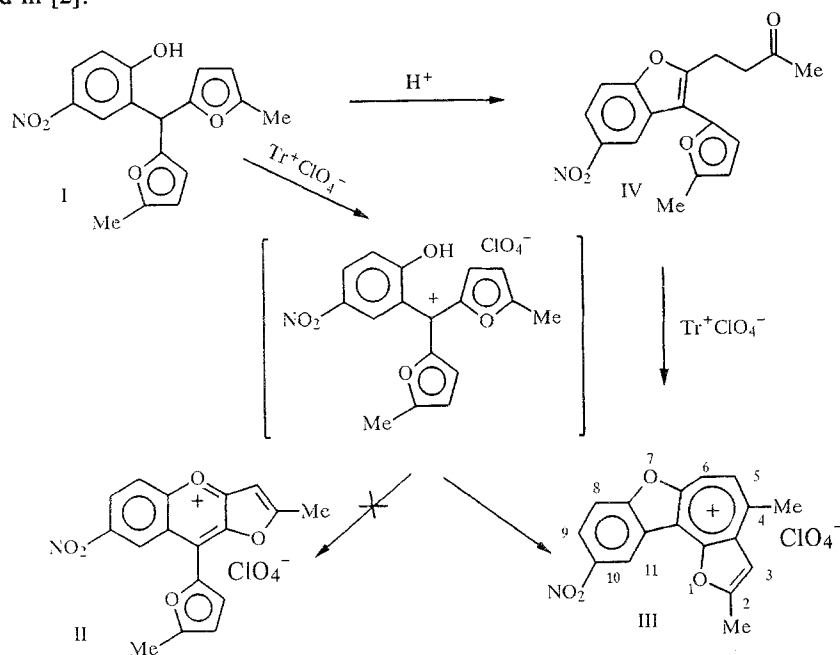
SYNTHESIS OF A NEW HETEROCYCLIC SYSTEM — THE BENZOFURO[2,3-h]-1-OXAAZULENIUM SYSTEM

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It is known that 9-phenylxanthylium perchlorate is formed when 2-hydroxytriphenylmethanol is treated with trityl perchlorate or perchloric acid [1].

Instead of the expected salt II, in the reaction of 5-nitro-2-hydroxyphenylbis(5-methyl-2-furyl)methane (I) [2] with trityl perchlorate we isolated perchlorate III (48% yield), which is probably the product of rearrangement with recyclization of the furan ring of the initially formed difurylarylcarbonium ion.

Tropylium derivative III can be obtained in up to 70% yield by alternative synthesis from benzofuran IV, the synthesis of which was described in [2].



10-Nitro-2,4-dimethylbenzofuro[2,3-h]-1-oxaazulenium Perchlorate (III, $C_{17}H_{12}ClNO_8$). A 2-mmol sample of trityl perchlorate was added to a solution of 2 mmole of I or IV in 4 ml of methylene chloride, and the mixture was allowed to stand for 1 h (at $\approx 20^\circ C$). It was then diluted with ethyl acetate, and the precipitate was removed by filtration and washed with ether. PMR spectrum (CF_3COOH): 2.36 (3H, s, 4- CH_3); 2.88 (3H, s, 2- CH_3); 7.13 (1H, s, 3-H); 7.71 (1H, d, 8-H); 8.41 (1H, d, 5-H); 8.47 (1H, dd, 9-H); 8.68 (1H, d, 6-H); 9.35 ppm (1H, d, 11-H); Spin-spin coupling constants (SSCC): $J_{5,6} = 11.5$; $J_{8,9} = 9.0$; $J_{9,11} = 2.5$ Hz.

The results of elementary analysis of III were in agreement with the calculated values.

REFERENCES

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