starting mixture results in an abrupt increase in the rate of the process, and the nitration products (5-nitro- and 3-nitroacenaphthenes in the ratio 90÷93 : 10÷7) are formed in an almost quantitative yield (> 95 %) in ~40 min. According to the kinetic data, the addition of compound **2** increases the initial nitration rate of acenaphthene by more than three orders of magnitude.

If benzene (without $PhNO_2$) is used as the organic phase, the reaction rate decreases, probably due to the lower solubility of **2**. The yield of nitroacenaphthenes under these conditions is ~55 % after 1 h, and 2.5—3 h are required to obtain the nitration products in a quantitative yield. The original compound **2** does not undergo decomposition under the nitration conditions and can be recovered in ~95 % yield after stirring for 1 h at 21 °C with a mixture of benzene and 21.3 % HNO_3 in the presence of $NaNO_2$ and NaCl. Unlike compound **2**, mercuric chloride shows no catalytic activity.

Sodium chloride plays an important role in the reaction, and compound **2** does not catalyze the nitration of acenaphthene if it is absent. It can be assumed that the chloride anions, by coordinating with the Hg atoms of compound **2**, provide the phase transfer of the cationic electrophilic species responsible for the formation of the nitro-derivatives. Probably, the nitrate anions, unlike Cl^-, do not form complexes with compound **2** and are inactive for this reason. It should be noted in this connection that compound **2** can catalyze the transfer of a proton from the hydrochloric aqueous phase to the benzene phase but not from aqueous solutions of nitric or sulfuric acids.

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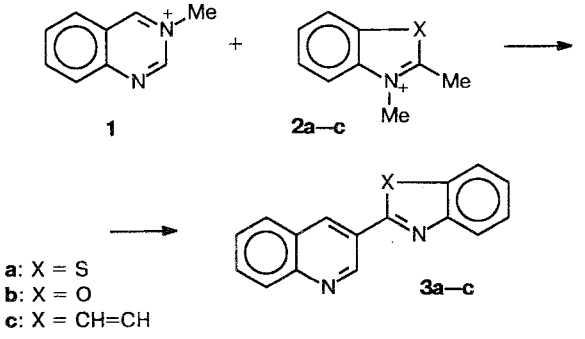
Formation of hetarylquinolines from quinazoline derivatives and quaternary salts of heterocyclic bases

S. P. Gromov* and M. A. Razinkin

N. N. Semenov Institute of Chemical Physics, Russian Academy of Sciences, 4 ul. Kosygina, 117977 Moscow, Russian Federation. Fax: +7 (095) 936 1255

We have found a new reaction of cyclotransformation of the quinazoline bicycle by the reaction of 2(4)-methylquinazolinium salts with quaternary salts of other heterocyclic bases in pyridine to give 3-hetaryl-substituted quinolines. For example, boiling *N*-methylquinazolinium iodide (**1**) with excess quaternary salt (**2**) gives hetarylquinolines (**3**) in up to 55 % yield.



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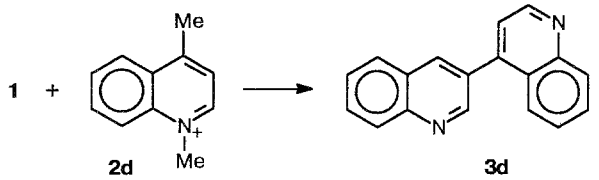
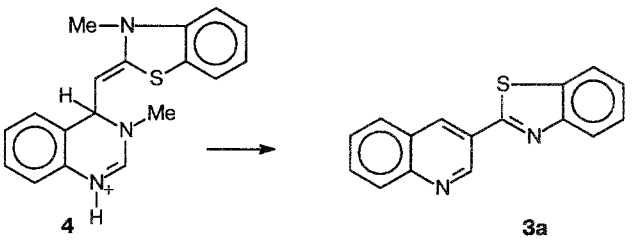
In a similar way, [3,4′]biquinolyl (**3d**) was obtained in 19 % yield from 1,4-dimethylquinolinium iodide (**2d**).



Previously,[1] we have observed the formation of compounds analogous to adduct **4** in the reaction of a quaternary salt of a heterocyclic base with *N*-methylquinazolinium iodide **1** by the action of triethylamine in MeCN. These products then underwent opening of the pyrimidine ring of the quinazoline bicycle. It could be assumed that compound **4**, formed by the nucleophilic attack of position 4 of the quinazoline bicycle of quaternary salt **2a** by the enamine carbon atom of the anhydro base, is one of the possible intermediates in the synthesis of arylquinolines **3**. In fact, boiling adduct **4** in pyridine also gives compound **3a**, although in a low yield (5 %).

The structure of the hetarylquinolines **3** obtained was established by ^{1}H NMR and confirmed by the agreement of the melting points of compounds **3a,c** with the literature data.[2,3]



The reaction studied is a previously unknown type of transformation of the pyrimidine ring by *C*-nucleophiles,[4] which opens up a new way to synthesize luminophores based on di- and polyhetaryls.[5]

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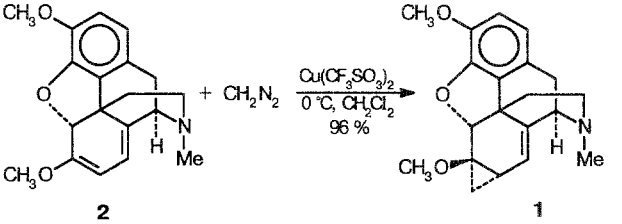
Regio- and stereoselective method for the synthesis of 6α,7α-methylene-6,7-dihydrothebaine

S. Z. Sultanov,[a] V. A. Dokichev,[a] E. E. Shults,[a] U. M. Dzhemilev,[a] G. A. Tolstikov,[a]* and O. M. Nefedov[b]*

[a]Institute of Organic Chemistry, Ufa Scientific Center, Russian Academy of Sciences,
71 prosp. Oktyabrya, 450054 Ufa, Russian Federation.
Fax: +7 (347) 235 6066
[b]N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences,
47 Leninsky prosp., 117913 Moscow, Russian Federation.
Fax: +7 (095) 135 5328

Thebaine and its derivatives are of substantial interest in practical medicine as analgesics.[1—4]

We have elaborated a regio- and stereoselective method for synthesizing a hitherto unknown member of the series of hydrophenanthrene alkaloids, *viz.*, 6α,7α-methylene-6,7-dihydrothebaine (**1**), in 96 % yield from thebaine (**2**) and diazomethane by the action of



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