The structure of II was confirmed by the PMR spectral data and the results of x-ray diffraction analysis. The vicinal chlorine atoms in II are trans-oriented. The mechanism and possibilities of the use of this unusual transformation are under investigation.

trans-6-tert-Butyl-4,5-dihydro-4,5-dichloro-3-ethyl-2,1-benzisoxazole (II, $C_{13}H_{17}Cl_2NO$). A 2.2-g (0.01 mole) sample of (4-tert-butyl-2-nitrophenyl)cyclopropane (I) was added slowly at −35°C to 8 ml of concentrated H_2SO_4, after which the reaction mixture was stirred for 1 h at the same temperature. It was then poured into 50 ml of concentrated HCl cooled to −20°C to −25°C, and the reaction products were extracted with $CHCl_3$. The extract was washed successively with water and sodium carbonate solution and dried with $MgSO_4$. The solvent was evaporated, and the residue was recrystallized from alcohol to give 1.79 g (65%) of II with mp 101-103°C. PMR spectrum (in $CDCl_3$): δ 1.21 (s, 9H), 1.32 (t, 3H), 2.92 (q, 2H), 4.92 (d, 1H, J = 3.0 Hz), 5.31 (d, 1H, J = 3.0 Hz), 6.82 ppm (s, 1H).

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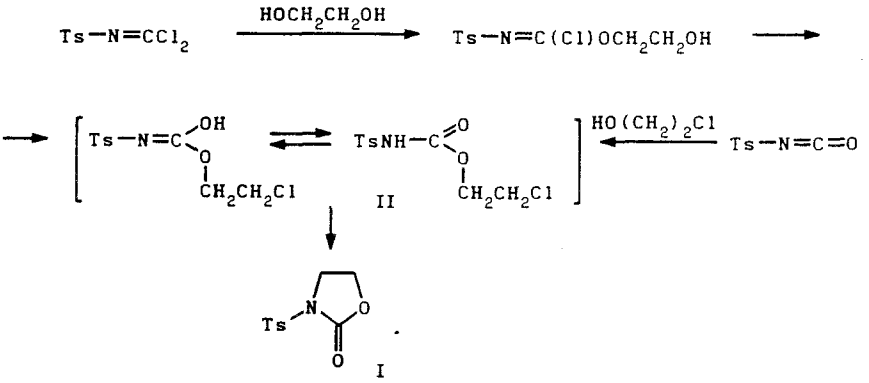
ANOMALOUS REACTION OF PHOSGENE TOSYLIMINE WITH ETHYLENE GLYCOL

N. Yu. Kol'tsov and A. V. Prosyanik

It is known that arylsulfonyliminocarbonic acid esters are formed in the reaction of phosgene arylsulfonylimines with sodium alkoxides [1, 2].

We have established that the reaction of phosgene tosylimine in the presence of triethylamine in acetonitrile unexpectedly leads to 3-tosyl-2-oxazolidinone (I). Its formation cannot be due to rearrangement of the hypothetical tosyliminocarbonate, since such processes are possible under considerably more severe conditions [1]. Oxazolidinone I is evidently formed through the intermediate 2-chloroethyl N-tosylcarbamate (II), the intramolecular alkylation of which leads to the formation of the oxazolidine ring:



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In fact, carbamate II obtained by an alternative method is readily cyclized to oxazolidinone I by refluxing with triethylamine in acetonitrile.

3-Tosyl-2-oxazolidinone (I). **A.** A solution of 2.52 g (10 mmole) of phosgene tosylimine [3] in 15 ml of acetonitrile was added with stirring to a solution of 0.62 g (10 mmole) of ethylene glycol and 2.02 g (20 mmole) of triethylamine in 7 ml of absolute acetonitrile, after which the reaction mixture was stirred for 12 h at 20°C. The solvent was then removed in vacuo, the residue was extracted with hot benzene, and the extract was filtered. The solvent was removed by distillation, and the residue was recrystallized from ethanol to give 0.8 g (33%) of I with mp 189-190°C. The melting point and IR and PMR spectra were in agreement with the data presented in [4].

B. A solution of 0.97 g (12 mmole) of ethylene chlorohydrin in 5 ml of acetonitrile was added with stirring to a solution of 1.97 g (10 mmole) of tosyl isocyanate [5] in 20 ml of absolute acetonitrile, after which the reaction mixture was maintained at 20°C for 1 h. It was then treated with 1.01 g (10 mmole) of triethylamine, and the resulting mixture was refluxed for 1 h, cooled, and poured into water. The reaction product was removed by filtration, washed with water, dried, and recrystallized from ethanol to give 2.04 g (85%) of a product with mp 190-192°C.

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SYNTHESIS OF SPIROSELENAPYRANS WITH A CONDENSED QUINOLINE FRAGMENT

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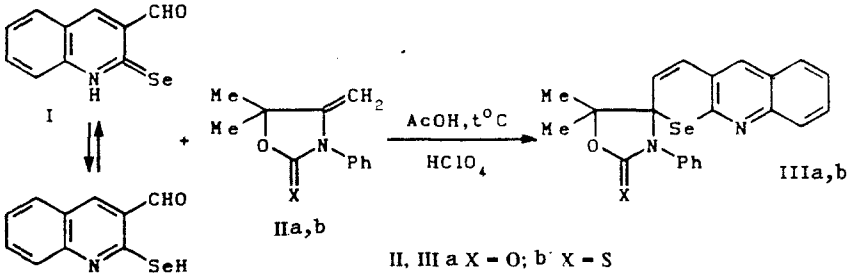
Standard methods of synthesis based on the condensation of methylene bases or their precursors with heterocyclic o-hydroxy aldehydes lead to the formation of only noncyclic isomers of the merocyanine type [1].

The production of spiropyrans of the indoline series that include 2H-thiapyran and 2H-selenapyran rings condensed with a heterocyclic pyrazole ring has been accomplished only as a result of isomerization during thermal vacuum sputtering of their merocyanines on a solid support (quartz, glass, KBr plates) [2].

We were able to obtain new spiroselenapyrans III, which include a heterocyclic quinoline fragment condensed with a selenopyran ring, by refluxing 3-formyl-2-(1H)quinolineselenone (I) [3] and methylene bases II [4, 5] in glacial acetic acid in the presence of catalytic amounts of perchloric acid:



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