2. N. I. Mikerova, L. M. Alekseeva, E. K. Panisheva, Yu. N. Sheinker, and V. G. Granik, *Khim. Geterotsikl. Soedin.*, No. 3, 324 (1990).
3. D. Raileanu, M. Palaghita, and C. D. Nenitzescu, *Tetrahedron*, **27**, 5031 (1971).
4. S. S. Kiselev, M. K. Poluevktov, and V. G. Granik, *Khim. Geterotsikl. Soedin.*, No. 12, 1679 (1979).

FORMATION OF 2,3-DIHYDRO-3-CHLOROMETHYLNAPHTHO[1,2-b][1,4]-DITHIANE IN THE REACTION OF ALLYL 1-NAPHTHYL SULFIDE WITH SULFUR DICHLORIDE

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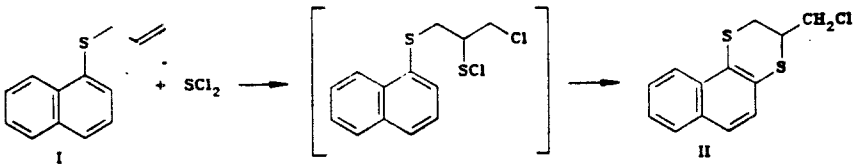
The reaction of 1,5-heterodienes with SCl_2 is one of the methods for synthesizing heterocyclic sulfur compounds that contain two heteroatoms in the ring [1-3]. In order to obtain a hitherto undescribed halosubstituted dithiane we extended this reaction to allyl-1-naphthyl sulfide (I), which represents allyl vinyl sulfide but with the vinyl segment as part of a naphthalene system. We obtained 2,3-dihydro-3-chloromethylnaphtho[1,2-b][1,4]dithiane (II) in 50% yield:



I II

To a solution of 8 g (0.04 mole) of sulfide (I) in 40 ml of dry CH_2Cl_2 at –40°C in an argon atmosphere was added dropwise a solution of 4.15 g (0.04 mole) of freshly distilled SCl_2 in 10 ml of dry CH_2Cl_2. The reaction mixture was stirred for 1 h at –40°C and for 4 h at room temperature. Then it was washed with sodium bicarbonate solution and water. The organic layer was separated and dried with calcined $MgSO_4$. The solvent was distilled off and the residue was separated on a column of Silpearl grade silica gel, with 2:7:1 hexane–CCl_4–CH_2Cl_2 eluent.

Compound II. Yield 50%. PMR spectrum ($CDCl_3$): 2.90 (1H, m, 3-H), 3.32 (2H, m, CH_2Cl), 3.76 (2H, m, 2-H), 7.82 ppm (6H, m, arom.). Mass spectrum, m/z (I_{rel}, %): $[M + 2]^{+\cdot}$ 268 (30), $[M]^{+\cdot}$ 266 (100), $[M - CH_2Cl]^{+\cdot}$ 217 (27), $[C_{10}H_6S_2]^+$ 190 (52), $[C_{10}H_7SCH_2]^+$ 184 (57), $[C_{10}H_7]^+$ 127 (5).

LITERATURE CITED

1. M. Mülstädt, N. Stransky, A. Seifert, E. Kleinpeter, and A. Meinhold, *J. Prakt. Chem.*, **320**, 113 (1978).
2. M. Mülstädt, *Z. Chem.*, **27**, 34 (1987).
3. G. A. Tolstikov, *Zh. Org. Khim.*, **21**, 1915 (1985).

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