

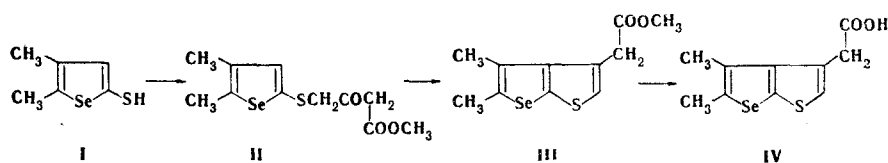
LETTERS TO THE EDITOR

NEW METHOD FOR BUILDING A SELENOPHENOTHIOPHENE SYSTEM

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We found a new method for building the selenophenothiophene system from 2,3-dimethyl-5-selenienylthiol (I) consisting in reacting it with the methyl ester of γ -chloroacetoacetic acid by boiling for 1 h in methanol in the presence of sodium methoxide and heating derivative II obtained with polyphosphoric acid in chlorobenzene for 2 h at 50-60°C. Methyl ester of 4,5-dimethylselenopheno[2,3-b]thiophene-3-acetic acid (III) was thus obtained in a yield of 40%, bp 184-190°C (2 mm).



The hydrolysis of ester III gave 4,5-dimethylselenopheno[2,3-b]thiophene-3-acetic acid (IV) in a yield of 94%, mp 143-144°C (from hexane). PMR spectrum (in CCl₄): 2.27; 2.46 (s, 4-CH₃, 5-CH₃); 3.83 (s 3-CH₂); 7.07 ppm (s, 2-H). IR spectrum: 1705 (C=O), 1425, 1385, 1345, 1240 cm⁻¹. Data of elementary analysis for C, H correspond to the calculated values.

By attaching the thiophene ring to the selenophene ring, effected for the first time, difficultly accessible β -derivatives of selenopheno[2,3-b]thiophene can be prepared.

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