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TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV

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IXth INTERNATIONAL CHEMISTRY CONFERENCE "KYIV-TOULOUSE" DEDICATED TO THE 100TH ANNIVERSARY OF FEDIR BABICHEV

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MATERIALS OF REPORTS AND PERFORMANCES

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TELLUROCYCLIZATION OF *N*-ALKENYL THIOUREAS BY *p*-ALKOXYPHENYLTELLURIUM TRICLORIDE

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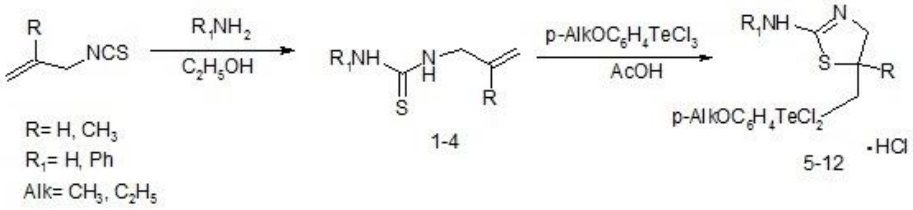
Reactions of unsaturated compounds, namely, electrophilic addition with subsequent intramolecular cyclization, are widely used for the synthesis of various heterocyclic systems. Tellurium-containing electrophiles, especially aryltellurium trihalides, are not sufficiently studied in those reactions. In the literature, we have found the data about usage of aryltellurium trichlorides with donor substituents in reactions with unsaturated alcohols, phenols and acids; the products of heterocyclization have exhibited high biological activity [1]. The aim of our study is tellurocyclization of *N*-alkenyl thioureas **1–4**. The reaction of thioureas **1–4** with *p*-alkoxyphenyltellurium chlorides was carried out in chloroform medium; thiazolines **5–12** were obtained with good yields. Obviously, there is an addition step of the tellurium electrophile to alkenyl moiety of thiourea prior heterocyclization, with formation of adducts, which then undergo intramolecular cyclisation at the sulfur atom.



The composition and structure of the obtained compounds were studied by elemental analysis and spectroscopic methods (IR, ^{1}H NMR, ^{13}C NMR). It should be noted that in the IR spectra of hydrochlorides **5–12**, there is no C=S absorption band, which confirms participation of the sulfur atom in heterocyclization.

1. Cunha R.L.O.R.; Urano, M.E.; Chagas, J.R.; Almeida, P.C.; Bincoletto, C.; Tersariolb, I.L.S.; Comasseto, J.V. *Bioorg. Med. Chem. Lett.*, **2005**, 15, 755–760.