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# Synthesis new hypervalent heterocyclic Tellurium compound containing Te-N bond

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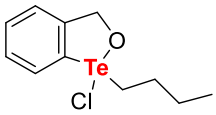
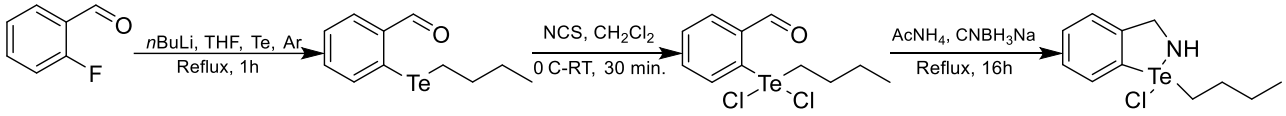
## ABSTRACT

Tellurium compounds are good antioxidants, anti-inflammatory, immuno-modulating with potential antitumor activity[1], and hypervalent ones are known to be powerful cathepsin inhibitors[2]. Organotellurane **1**, for example, has shown good *in vitro* activity toward *L. amazonensis*[3] ($IC_{50}$ = 5,7 μM, SI = 6), which is attributed to cathepsins inhibition. Herein, a method for synthesizing the nitrogenated analog of **1** is described. So, BuTe- moiety was inserted in 2-fluorobenzaldehyde followed by the tellurium oxidation in **2, in** 70% isolated yield, by sulfuryl chloride. Finally, reductive amination of **3**, in 50% isolated yield, led to the desired cyclic tellurane **4** in 5% isolated yield.




**1**




**2** (70%) **3** (50%) **4** (5%)

*Figure 1 – Synthetic route for compound 4.*

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