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Synthesis of 4-(Phenylchalcogenyl)tetrazolo[1,5-a]quinolines: A Novel Bicyclization Approach

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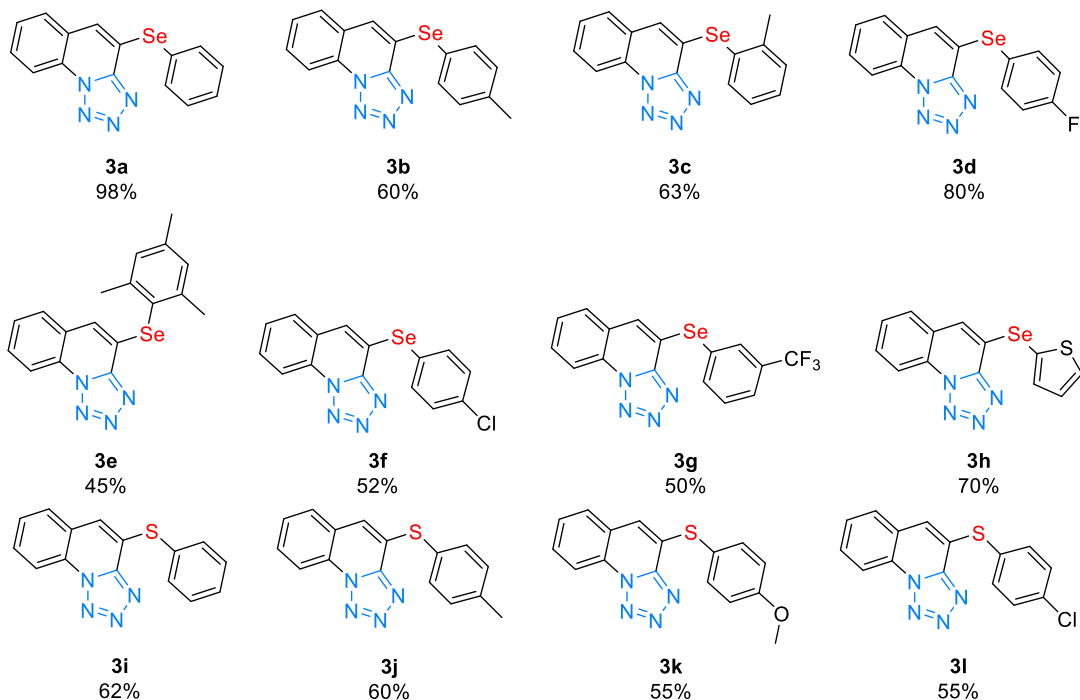
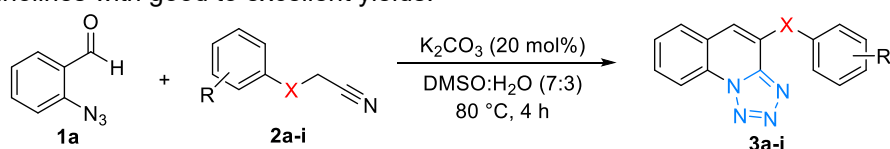
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ABSTRACT

Tetrazoles are a kind of azaheterocycles characterized by a five-membered ring containing four nitrogen atoms and one carbon atom. Quinoline, on the other hand, consists of a benzene ring fused to a pyridine ring. The combination of these two structures leads to tetrazoloquinolines, molecules that have garnered significant attention due to their biological activities and synthetic utility. Incorporating an organochalcogen group into the tetrazoloquinoline nucleus becomes noteworthy. Selenium and sulfur play crucial roles in metabolic pathways, and interest in the chemistry and pharmacology of these compounds has intensified over the years. Herein we describe a satisfactory and environmentally friendly strategy to prepare 4-(arylselanyl) and 4-(arylythio)tetrazoloquinolines with good to excellent yields.



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