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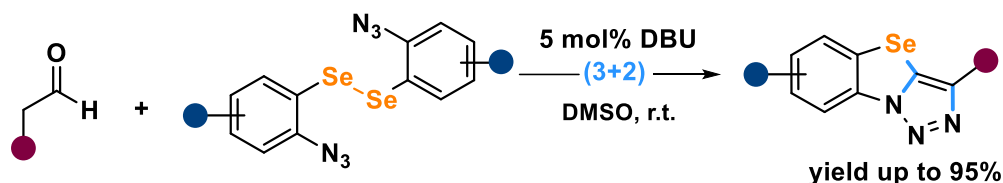
## Multisite-Sequential Cyclization to Construct 1,2,3-Triazole-Based Se,N-Fused Heterocyclics

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### ABSTRACT

The construction of complex polyheterocyclic molecules, such as pharmaceuticals, polymers, agrochemicals and dyes, which are integrated into everyday life, has been in the spotlight of organic synthesis.<sup>[1]</sup> Cascade reactions offer an ideal and efficient approach to constructing such compounds, building molecular complexity in a single transformation.<sup>[2]</sup> In particular, 1,2,3-triazoles fused with heterocycles at the 1,5-positions represent a ubiquitous type of core substructure that has attracted enormous interest since they have been frequently found in synthetic molecules, biologically active substances, and pharmaceutical targets. Among the established strategies,<sup>[3]</sup> the interrupted version of copper(I)-catalyzed azide-alkyne cycloaddition (CuAAC) stands out as one of the most direct and straightforward synthetic approaches for accessing 1,2,3-triazoles fused at the 1,5-positions with different heterocyclic moieties. In the last few decades, organocatalysis has emerged as a powerful tool for synthesizing diversely functionalized 1,2,3-triazoles that are inaccessible by other means.<sup>[4]</sup> Based on our continuing interests in developing elegant approaches for constructing 1,2,3-triazoles and on the organoselenium compounds chemistry, we reported here a novel method for constructing selenium-cycle-fused 1,2,3-triazoles by combining the organocatalyzed (3+2)-cycloaddition of aldehydes with 1,2-bis(2-azidoaryl)diselenides followed by an intramolecular cyclization reaction (Scheme 1).



#### Features:

- cascade reaction;
- metal-free;
- three new bonds C-N, C-N, C-Se;
- mild reaction;
- broad scope;

Scheme 1.

### ACKNOWLEDGEMENTS

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