

RING ENLARGEMENT OF DIAZIRIDINONE

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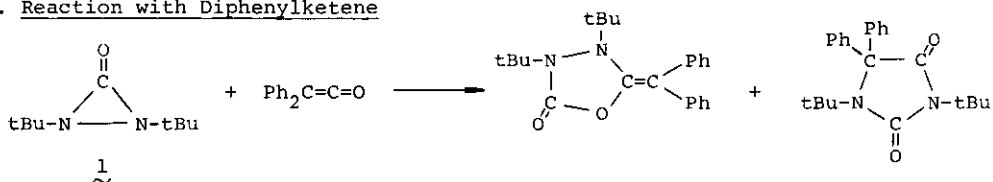
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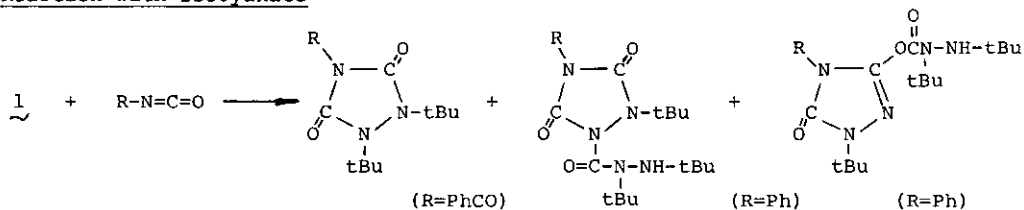
Ring enlargement of three-membered heterocycles provides an effective synthetic route to middle-sized heterocycles. We have studied chemical properties of three-membered heterocycles as an 1,3-dipolar, and found many characteristic ring enlargement reactions.

In this paper we studied the reaction of N,N-di-tert-butyl diaziridinone, a highly strained three-membered heterocycle, with heterocumulene and nitrile to afford a cycloadduct.

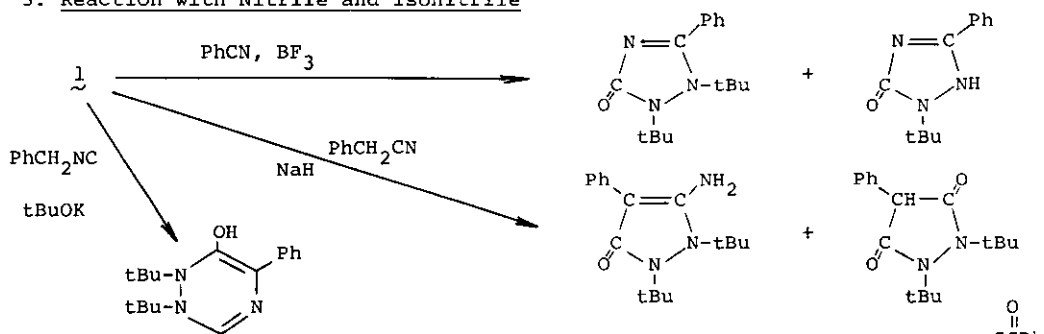
1. Reaction with Diphenylketene



2. Reaction with Isocyanate



3. Reaction with Nitrile and Isonitrile



4. Reaction with Benzoyl Isothiocyanate

In this case, the rearranged product of the 1:1 cycloadduct was obtained.

