

SYNTHESIS AND SOME REACTIONS OF 2,4-BENZODIAZEPINES

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We have already reported the first photochemical syntheses of fully unsaturated 1,2-, 1,3-, and 2,3-benzodiazepines and related fused diazepines condensed with aromatic heterocyclic rings. As part of our continuous studies on benzodiazepines, we now report the synthesis of 2,4-benzodiazepines and some of their thermal and photochemical reactions.

Irradiation of the 4-azidoisoquinolines (1) in the presence of bases such as sodium methoxide resulted in the ring-expansion to give the corresponding 2,4-benzodiazepines (2) or (3) via nitrene and azirine intermediates. The structures of the diazepines thus obtained were confirmed by the spectral data and the results of various chemical studies; some of them are shown below.

Suschitzky *et al.* have also reported the synthesis of the diazepine (2a) by the similar method. However, the melting point and spectral data (IR and $^1\text{H-NMR}$) of 2a obtained by us are quite different from those described in their report (*J. Chem. Soc. Parkin I*, 1982, 431).

