

RING FISSION OF CONDENSED PYRIDAZINES

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In the preceeding paper, we reported that the reaction of condensed pyridazines with some nucleophiles results in a ring fission of the pyridazine portion.

In this paper, we summarized the ring fission based on the results of our recent studies as well as the reported results.

1) Treatment of 7-(methylsulfonyl)-1-phenyl-1H-1,2,3-triazolo[4,5-d]pyridazine (I) with primary amine (IVa,b) yielded VIIa,b, and that with secondary amine (Va-d) yielded IXa-c or Xb,d. Also in the case of 7-(methylsulfonyl)-1-phenyl-1H-pyrazolo-[3,4-d]pyridazine (II), the similar fission took place. (Chart 1)

2) Compound I reacted with enamine (VIa) to give a fused tricyclic compound (XI), with ynamine (VIb) to give XIIa and XIIb. XIIb was easily convertible to XIIa by loss of N₂. (Chart 2)

3) The reaction of 1-phenylphthalazine 3-oxide (III) with ethyl cyanoacetate (VIIa) and malononitrile (VIIb) in the presence of sodium methoxide gave XIII and XV respectively. (Chart 3)

