A RING DESTRUCTION APPROACH TO NOVEL FUSED AZECINE AND AND AZONINE DERIVATIVES FROM BRIDGEHEAD AMINES

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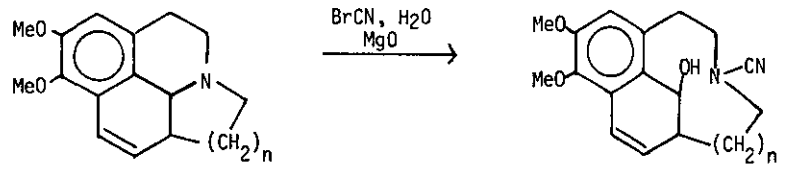
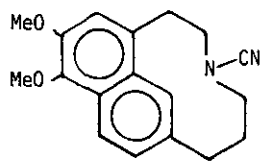
Reaction of (1a) with cyanogen bromide in the presence of water gave the new fused azonine carbonitrile (2a) in 95% yield, while (1b) afforded the corresponding hydroxy azecine (2b) in low yield together with another major product, assigned as the 1,7-bridged naphthalene derivative (3) on present evidence. Analogous products were obtained from the indole-fused derivatives (4a-b). It is probable that these medium-ring derivatives arise in each case from N-cyanoammonium bromide salt intermediates.

Structural assignments for (1a-b) and (4a-b), and for the medium-ring compounds will be discussed, together with the use of chloroformate esters in place of cyanogen bromide in the ring-opening reactions.

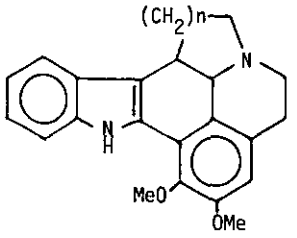


1 a, n = 1
b, n = 2

2 a, n = 1
b, n = 2



3



4 a, n = 1
b, n = 2