

SYNTHESES OF NITROGEN-CONTAINING HETEROCYCLIC COMPOUNDS  
BY THE USE OF CYCLOPROPENIUM SALT

Shigeo Yoneda, Hideo Hirai, Yoshio Katsuro and Zen-ichi Yoshida  
Department of Synthetic Chemistry, Kyoto University  
Yoshida, Kyoto 606, Japan

We have reported the syntheses of various heterocycles by the ring expansion reaction of trialkylthiocyclopropenium salt (I) with nucleophiles. We report here new syntheses of benzoimidazole and benzodiazepine derivatives by the reaction of I with o-phenylenediamine. The solvent effect was shown from the result that the former was obtained in 77% yield in methanol, whilst the latter in 63% in DMF. Benzooxazole derivatives was similarly prepared from I and o-aminophenol.