STUDIES ON QUINOLIZINES AND INDOLIZINES. IX.

REACTION OF α-BISMETHYLTHIOMETHYLENE-2-PYRIDINEACETONITRILES

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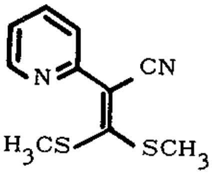
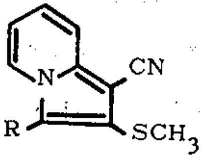
Reaction of α-(bismethylthio)methylene-2-pyridineacetonitrile and α-halo carbonyl compounds(ethyl bromoacetate, bromoacetone and α-bromoacetophenone) and ethyl γ-bromocrotonate using triethylamine afforded indolizine derivatives with the corresponding substituent in the 3-position(IIa,b,c,d). Similarly, reaction of *dimethyl(2-pyridyl)dithiocarbimidate*(III) and halo carbonyl compounds afforded azaindolizine derivatives(IVa,b,c,d). Reaction of I and nitromethane using potassium carbonate afforded 1-cyano-2-methylthio-3-nitrosoindolizine (V).

Cycl[3,2,2]azine derivative(VII), dimethyl 1-cyano-2-*methylthiocycl*[3,2,2]*azine*-3,4-dicarboxylate, was synthesized by application of dimethyl acetylenedicarboxylate and indolizine derivative(VI), which was obtained by decarboxylation of IIa using sulfuric acid in the presence of palladium-on-charcoal catalyst.

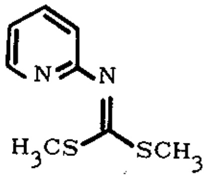


(I)

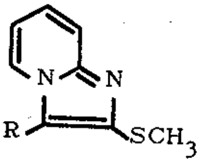


(IIa,b,c,d)

(a) R=$COOCH_2CH_3$
(b) R=$COCH_3$
(c) R=COC_6H_5
(d) R=$CH{=}CH{-}COOCH_2CH_3$

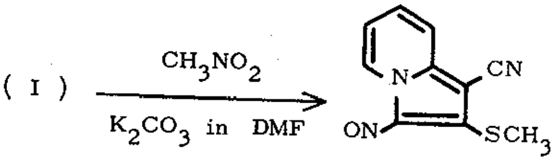


(III)

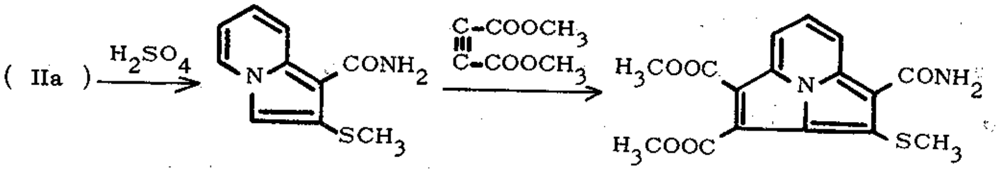


(IVa,b,c,d)

(a) R=$COOCH_2CH_3$
(b) R=$COCH_3$
(c) R=COC_6H_5
(d) R=$CH{=}CH{-}COOCH_2CH_3$



(V)



(VI)

(VII)