

# SYNTHESIS OF QUINOXALINES UTILIZING ARYL DIAZONIUM SALTS

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The reactions of 1 and 2 with aryl diazonium salts gave the hydrazones 3a-c and 4a-c, and the reactions of 3a-c with hydrazine hydrate afforded the hydrazides 5a-c. The reactions of 5a-c with nitrous acid resulted in the Curtius rearrangement to provide the 1-aryl-3-quinoxaliny-1,2,4-triazol-5-ones 6a-c. On the other hand, the reactions of 5a-c with orthoesters produced the 1,3,4-oxadiazoles 7. Chlorination of 4a (o-Cl) with  $\text{POCl}_3$  afforded the dichloride 8, whose reactions with methylhydrazine and with DBU/DMF provided the 1-substituted 1H-pyrazolo[3,4-b]-quinoxalines 9a,b.

