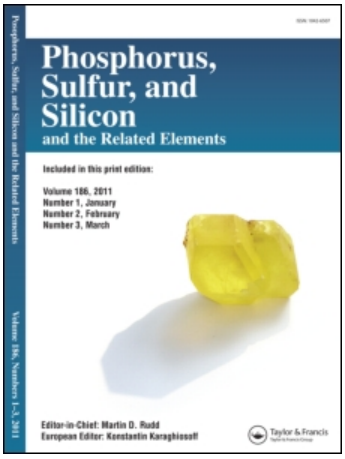


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# RINGCLOSURE REACTIONS WITH CARBON SUBSULFIDE

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# RINGCLOSURE REACTIONS WITH CARBON SUBSULFIDE

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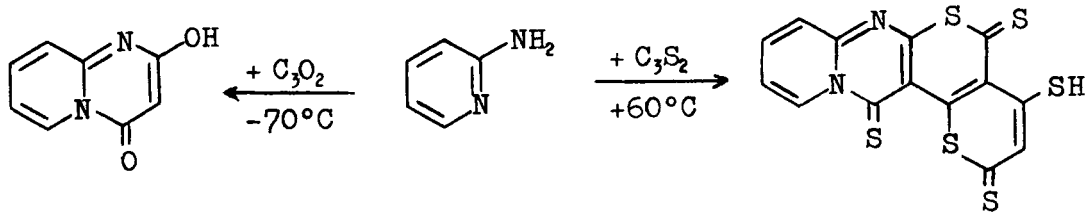
Carbon suboxide has been used frequently in organic synthesis,[1] especially in the synthesis of heterocyclic compounds not obtainable by other routes. Although carbon subsulfide is known for more than 80 years, until recently only a few simple derivatives such as dithiomalonamides were prepared. The reason for this situation arises from the difficulties encountered in the preparation of $C_3S_2$. We have recently described a modification of the known preparation procedures, taking advantage of commercially available glassware (Quickfitt).[2]
We have now started a study in which the behaviour of $C_3S_2$ as a 1,3-bielectrophile is compared with that of $C_3O_2$. From our experiments the following conclusions can be drawn: a) $C_3S_2$ is less reactive than $C_3O_2$. b) Ringclosure reactions with $C_3S_2$ usually will not stop at the 1:1 adduct, and polythiopyrono compounds are obtained. The reaction with 2-aminopyridine may serve as an example:




Examples with other 1,3-binucleophilic substrates such as amidines, thioamides and enols will be presented.

[1] T. Kappe, E. Ziegler, Angew.Chem.Int.Ed.Engl. 13, 491 (1974).

[2] W. Stadlbauer, T. Kappe, Chemiker-Ztg. 101, 137 (1977).