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### THE PREPARATION OF SULPHIDES AND POLYSULPHIDES FROM $\beta$ -KETO-ESTERS AND 1,3-DIKETONES

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# THE PREPARATION OF SULPHIDES AND POLYSULPHIDES FROM $\beta$ -KETO-ESTERS AND 1,3-DIKETONES

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We have found that the treatment of certain  $\beta$ -keto-esters or 1,3-diketones with thionyl chloride gives either a sulphide or a sulphonyl chloride together with the chloro-compound depending on the structure of the active methylene compound. In certain cases cyclisation of sulphide provides a useful route to a 1,4-oxathiin.

The treatment of certain 1,3-diketones with sulphur monochloride leads to the production of the disulphide or trisulphide depending both on the structure of the starting material and the reaction conditions.

Thus for example

