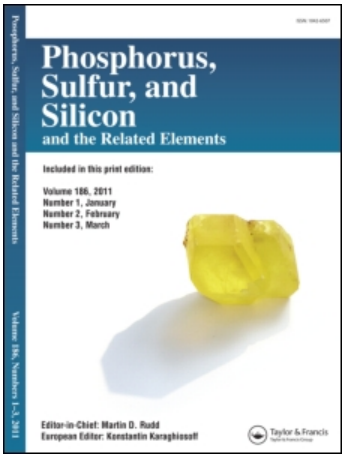


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# REACTIONS OF SULPHUR MONOXIDE WITH ORGANIC SUBSTRATES

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# REACTIONS OF SULPHUR MONOXIDE WITH ORGANIC SUBSTRATES

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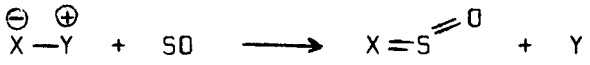
Sulphur monoxide, generated in situ from mild thermolysis of aryl substituted thiiran 1-oxides, reacts with organic substrates of type (I) according to the scheme



The validity of the proposed scheme has been checked for:

a) diazoalkanes ($X = R_2C$, $Y = N_2$)
b) phosphonium ylids ($X = R_2C$, $Y = PPh_3$)
c) sulphonium ylids ($X = R_2C$, $Y = SR_2$)
d) pyridinium ylids ($X = R_2C$, $Y = C_5H_5N$)
e) azides ($X = RN$, $Y = N_2$)
f) aromatic N-oxides ($X = O$, $Y$ = heterocyclic base)

Diazoalkanes and ylids lead to thiocarbonyl S-oxides; aliphatic and aromatic azides give rise to N-sulphinylamines. The reactions of sulphur monoxide with pyridine or quinoline N-oxides represent an alternative method for the deoxygenation under mild conditions of such substrates.