

TRIMETHYLSILYLDIAZOMETHANE. A NEW SYNTHON FOR THE PREPARATION
OF AZOLES

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The synthetic utilization of trimethylsilyldiazomethane (1), as a stable and safe substitute for hazardous diazomethane, was examined in the preparation of azoles.

Lithium trimethylsilyldiazomethane (2), easily prepared from 1 and lithium diisopropylamide (LDA), reacted smoothly with various methyl esters of carboxylic acids at 0° to give 2-substituted 5-trimethylsilyltetrazoles (3) in good yields.

Furthermore, we have found that 2 can be used as a synthon for the preparation of 1,2,3-triazoles. For example, the reaction of 2 with benzonitrile afforded 4-phenyl-5-trimethylsilyl-1,2,3-triazole (4) in 93% yield. Other various nitriles also furnished the corresponding 1,2,3-triazoles (4) in excellent yields.

