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APPLICATIONS OF SILYL SULFINATES IN ORGANIC ANALYSIS AND SYNTHESIS

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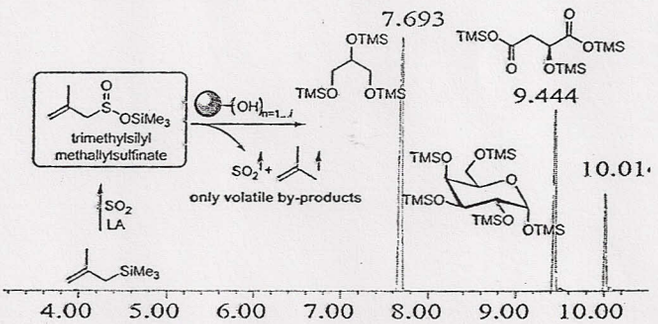
In 2002, Vogel *et al.* reported synthesis of trimethylsilyl 2-methylprop-2-ene-1-sulfinate in a Lewis acid catalyzed sila–*ene* reaction between methallylsilane and sulfur dioxide.[1] Also simple isobutene reacts with SO_2 in the presence of BCl_3 and provides the same target product.[2] It was found that this reagent easily transfers the silyl group to alcohols.[3]

In our hands the aforementioned reagent has been successfully applied in the user-friendly silylation procedure of alcohols, polyols, carboxylic and hydroxycarboxylic acids and mixtures of different polyhydroxy compounds and their subsequent gas chromatographic analysis. A typical experimental procedure involves simple mixing of the aforementioned reagent with the selected analyte in MeCN or THF directly before injection in a gas chromatograph.

In the case of persilylated monosaccharides the developed technique can be further coupled with the glycosidation techniques. This and the reactions of silyl sulfinates with organometallic reagents providing a direct entry in sulfoxide synthesis will be discussed.



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