

Sulfo*ni*Sil

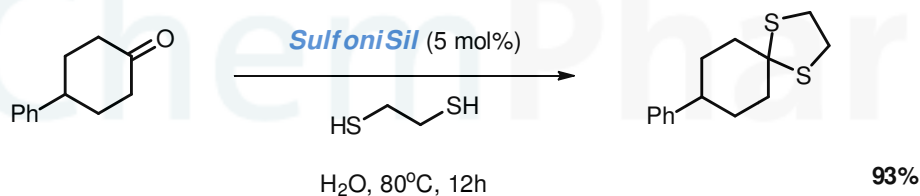
Here at AF ChemPharm we have had a growing interest in polymer supported acid-catalysis in recent years. This was sparked by an appreciation of the potential environmental impact of typical acid-catalysed transformations, as well as the financial costs associated with materials and time.

To this end, AF ChemPharm are pleased to announce a new addition to our product line: a sulfonic acid functionalised, highly ordered, microporous silicate we call *Sulfo*niSil. This recyclable catalyst exhibits high loading (approx 1.6mmol/g), excellent stability both thermally (up to 240°C) and mechanically, and has a uniform nanostructure, making it ideal for use as a catalyst in a variety of chemical transformations.

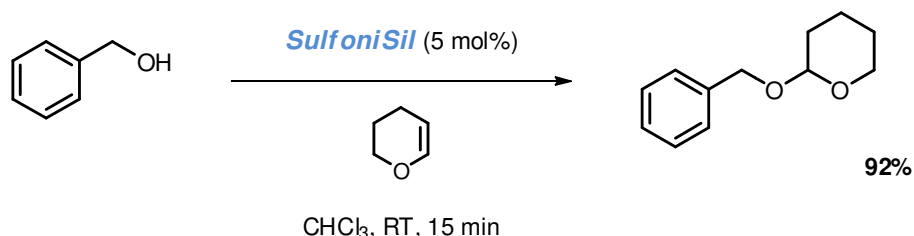
*Sulfo*niSil is an interphase material, providing highly mobile reactive centres similar to those found in homogeneous catalysts, as well incorporating the advantages of heterogeneous catalysts; e.g. simple work-up procedures and the ability to re-use recovered material directly.

Some of the potential applications for *Sulfo*niSil are illustrated below:

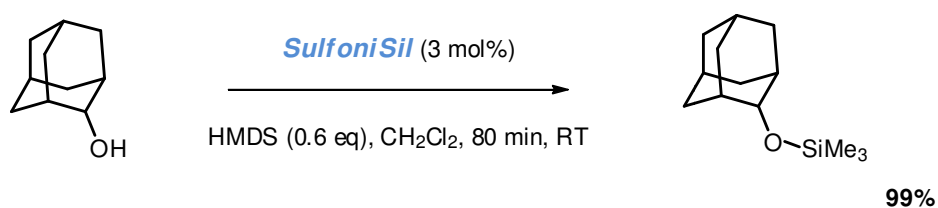
- *Thioacetalisation of carbonyl compounds*



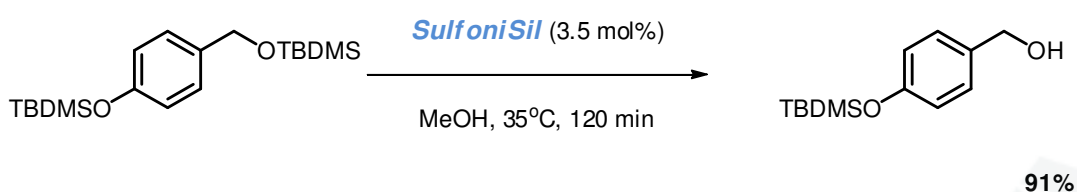
- *Tetrahydropyranylation of alcohols and phenols*



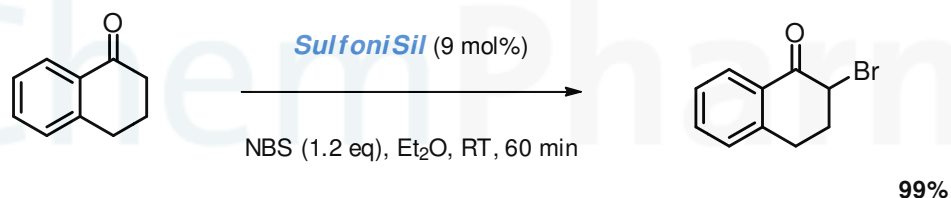
- *Trimethylsilylation of alcohols*



- *Deprotection of silyl ethers*



- *α -Bromination of carbonyl compounds*



In conclusion, *SulfonylSil* is a cheap and reusable catalyst which has been shown to be an improved reagent for common acid-catalysed organic reactions, allowing shorter reaction times and milder conditions (e.g. running at room temperature, in some cases in water). In the examples described above, it negates the use of expensive, moisture-sensitive and unrecoverable reagents, which can require awkward or harsh reaction conditions (e.g. anhydrous solvents, high temperature, long reaction times, tedious work-ups) and can lead to side reactions.

SulfonylSil allows straightforward and routine recovery and re-use of the catalyst, and remains relevant as a process is scaled from bench to plant.

For more information, or to purchase *SulfonylSil*, please contact AF ChemPharm on: enquiries@afchempharm.co.uk