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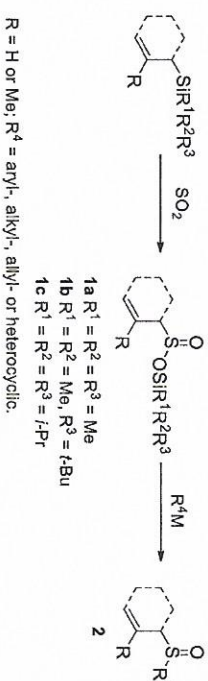


## APPLICATION OF SILA-ENE REACTION IN ALLYLSULFOXIDE SYNTHESIS

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Ene-reaction of allyltrialkyltin, allylgermanes, allylsilanes and enoxysilanes with sulfur dioxide are well known.<sup>1</sup> Our research is focused on application of silyl sulfinate **1** in the synthesis of functionalized sulfoxides **2** (Scheme 1). Application of silyl sulfinate **1** in organic chemistry has been demonstrated in different fields, including their transformation into sulfones, sulfonamides, sulfonic esters,<sup>1</sup> in total synthesis of polypropionate antibiotics<sup>2</sup> and as silylation reagents for GC-MS quantitative analysis.<sup>3</sup> Traditional synthesis of sulfoxides **2** includes oxidation of sulfides and C-S bond formation with nucleophilic substitution.<sup>4</sup> Various silyl transfer agents have been used for C-S bond creation, but silyl sulfinate **1** provide a new approach towards sulfoxide **2** synthesis. In order to optimize the reaction conditions for sulfoxide **2** synthesis we investigated influence of solvent, temperature, organometallic reagent and Lewis acid additive on sulfoxide **2** yield. We have also diversified silyl moiety in sulfinate **1** structure, examining trimethylsilyl- (**1a**), *tert*-butyldimethylsilyl- (**1b**) and triisopropylsilyl sulfinate (**1c**) in order to increase the yields of sulfoxides **2**. The optimal reaction conditions will be discussed and the scope of the method will be demonstrated on aryl-, alkyl-, allyl- and heterocyclic organometallic reagents.



Scheme 1. Strategy of sulfoxide **2** synthesis.

### References:

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