T. Q. DAVIES, M. J. TILBY, D. SKOLC, A. HALL, M. C. WILLIS* (UNIVERSITY OF OXFORD, UK)

Primary Sulfonamide Synthesis Using the Sulfinylamine Reagent *N*-Sulfinyl-*O*-(*tert*-butyl)hydroxylamine, *t*-BuONSO
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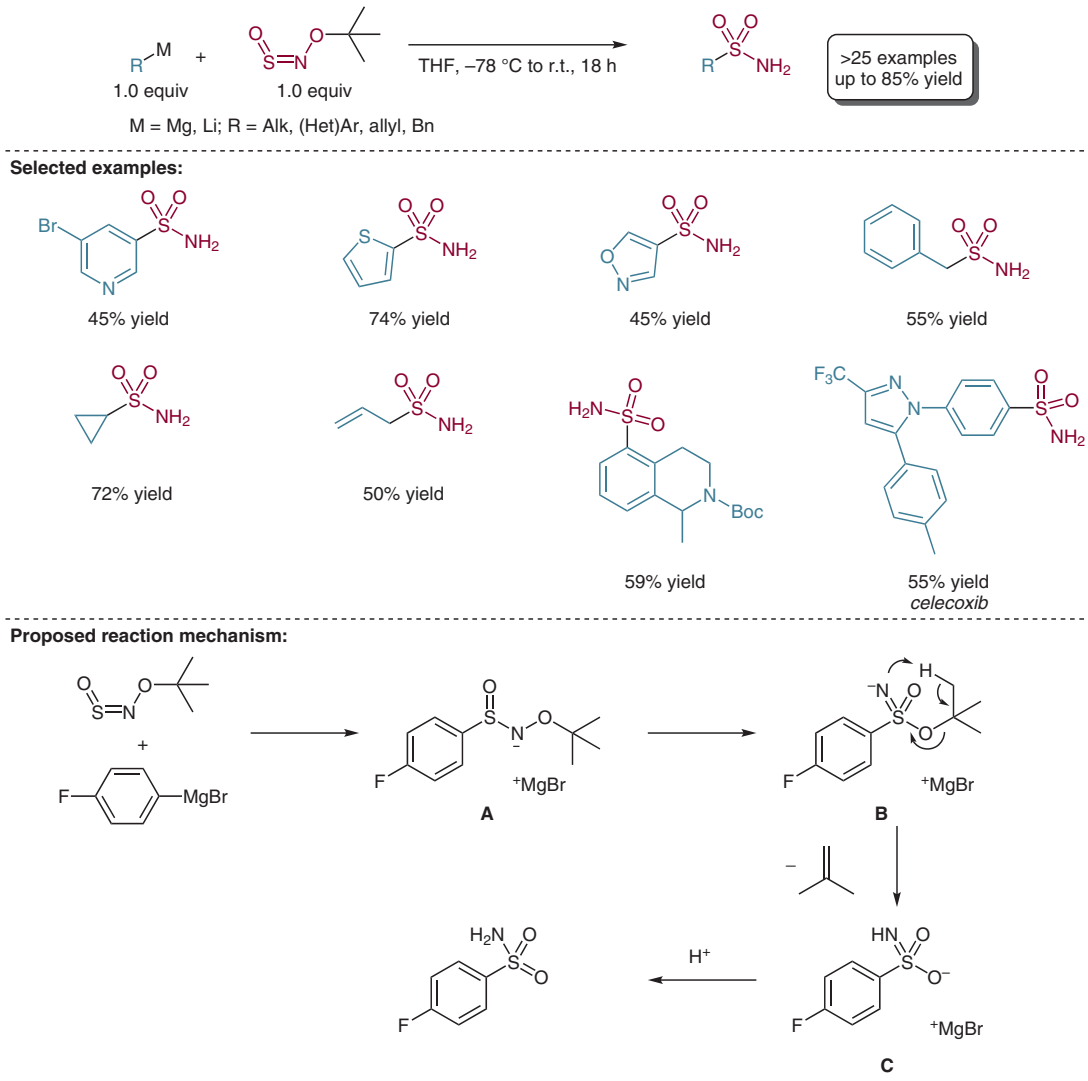
Preparation of Primary Sulfonamides by *t*-BuONSO and Organometallics



Significance: Willis and co-workers report the reaction of readily available organometallic reagents and the novel sulfinylamine reagent *t*-BuONSO [*N*-sulfinyl-*O*-(*tert*-butyl)hydroxylamine] for the direct synthesis of primary sulfonamides in good yields.

Comment: The authors proposed a reaction mechanism in which, after nucleophilic attack of the Grignard reagent, the sulfinamide **A** was formed. This intermediate was converted into **B**, either via a sulfinyl nitrene intermediate or by a concerted N → S O migration. After an intermolecular proton transfer, isobutene was eliminated, giving the anion **C**, which was quenched after work-up to yield the desired sulfonamide.

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Synfact of the Month