B. Z. LU,* F. JIN, Y. ZHANG, X. WU, S. A. WALD, C. H. SENANAYAKE* (PROCESS R&D, SEPRACOR, INC., USA)

New General Sulfinylating Process for Asymmetric Synthesis of Enantiopure Sulfinates and Sulfoxides
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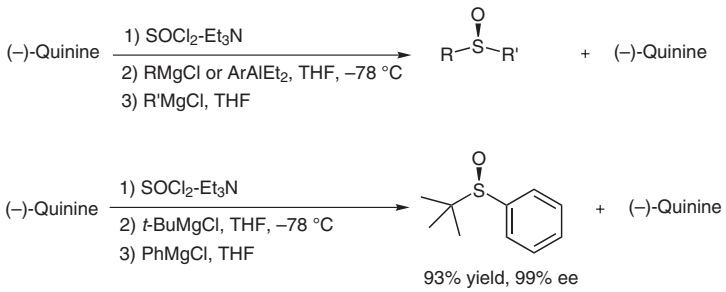
Category

Metal-Mediated Synthesis

Key Words

chiral sulfoxides
organomagnesium reagents
sulfinates

A General Process for Synthesis of Enantiopure Sulfinates and Sulfoxides



Significance: Among various methods, developed for the synthesis of enantiopure sulfoxides, the use of naturally occurring quinine as a chiral auxiliary has a lot of advantages: all the reagents are easily available, cheap, the one-pot procedure is very simple to perform and the auxiliary can be readily recovered. The procedure gives in all reported cases practically enantiopure products.

Comment: In most syntheses of enantiopure sulfoxides from organometallic species, the enantioselectivity is based on the difference between two S–Y (Y = O or N) enantiotopic bonds. The originality of this approach relays on the formation of a *non-covalent* S–N bond as enantiotopic for an easily available quinine derivate, that allowed practically complete stereocontrol in the reaction with organometallic reagents.

SYNFACTS Contributors: Paul Knochel, Andrei Gavryushin
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