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SYNFACTS Highlights in Current Synthetic Organic Chemistry

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Asymmetric Synthesis of Tertiary Alcohols and Thiols via Nonstabilized Tertiary α-Oxy- and α-Thio-Substituted Organolithium Species
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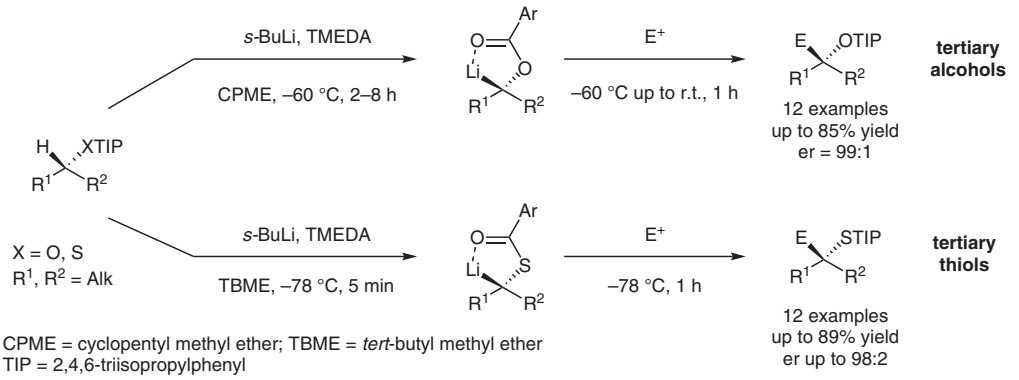
Category
Metal-Mediated Synthesis

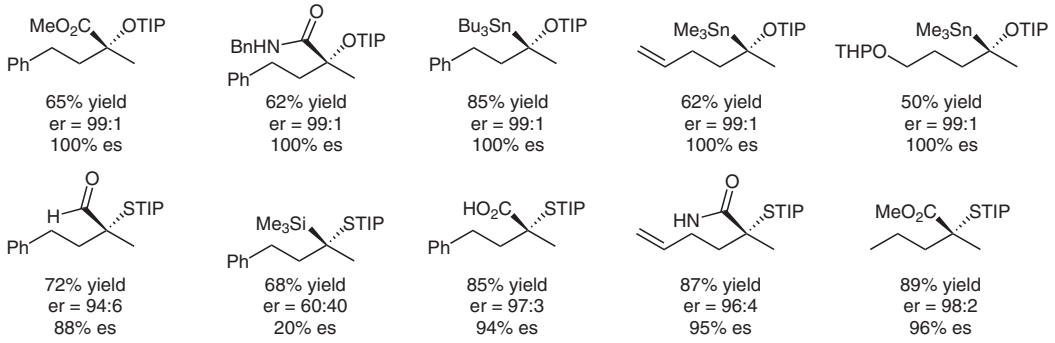
Key words
organolithium compounds
tertiary alcohols
asymmetric synthesis

Asymmetric Synthesis of Tertiary Alcohols and Thiols



CPME = cyclopentyl methyl ether; TBME = *tert*-butyl methyl ether
TIP = 2,4,6-triisopropylphenyl

Selected examples:



Significance: Aggarwal and co-workers developed an asymmetric synthesis of tertiary alcohols or thiols via nonstabilized tertiary α-oxy- or α-thio-substituted organolithium species.

Comment: Key to success for the configurational stability was the use of less-coordinating solvents together with TMEDA to enable deprotonation and, in the case of α-*S*-organolithium species, short reaction times.

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