SYNFACTS

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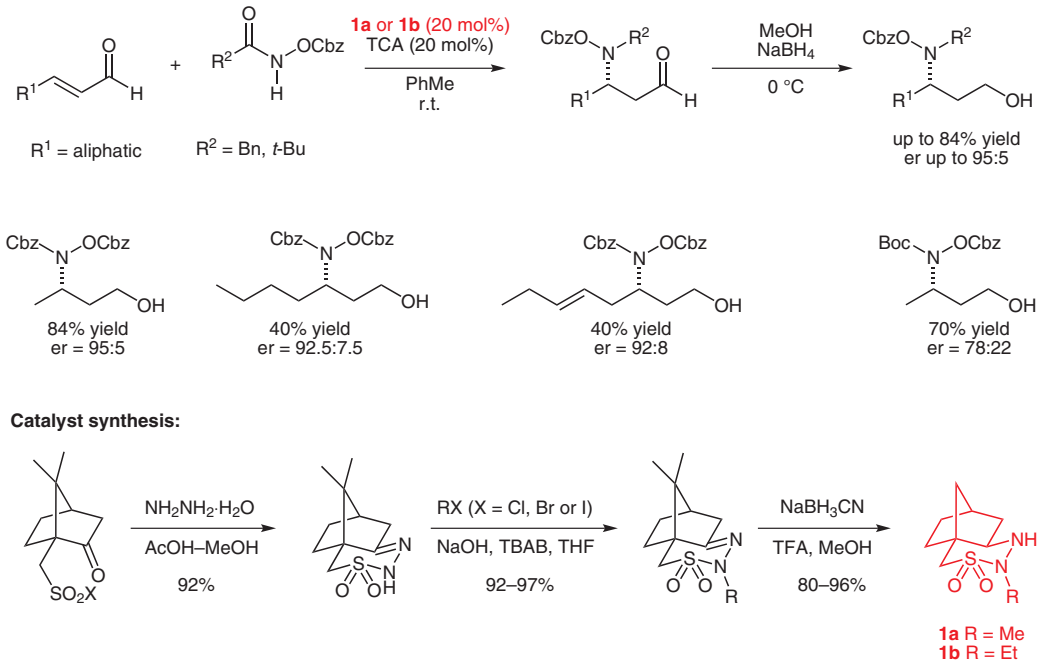
Sulfonyl Hydrazine as New Functionality in Organocatalysis: Camphorsulfonyl Hydrazine Catalyzed Enantioselective Aza-Michael Addition

Synthesis **2009**, 1573-1577.

Aza-Michael Addition Catalyzed by Camphorsulfonyl Hydrazines



Significance: Lee and coworker report an enantioselective aza-Michael addition catalyzed by sulfonyl hydrazines **1** and TCA as an additive. The addition products were then reduced to the corresponding alcohol. Using aliphatic aldehydes good to moderate yields and enantioselectivities were achieved, whereas aromatic aldehydes were unreactive under these conditions.

Comment: In iminium catalysis which uses primary or secondary amines many catalysts are derived from amino acids. Sulfonyl hydrazines are a new class of iminium catalysts. Camphorsulfonyl hydrazines as organocatalysts were recently discovered by Lee and Langlois at the same time (*Org. Lett.* **2008**, *10*, 2421; *Tetrahedron Lett.* **2008**, *49*, 5576). Here Lee et al. broaden the scope of these new and easily available Lewis base catalysts. The products are valuable intermediates for β-amino acid synthesis. Other transformations catalyzed by camphorsulfonyl hydrazines can be expected.

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