Y.-Q. WANG, C.-B. YU, D.-W. WANG, X.-B. WANG, Y.-G. ZHOU* (DALIAN INSTITUTE OF CHEMICAL PHYSICS AND SHANGHAI INSTITUTE OF ORGANIC CHEMISTRY, P. R. OF CHINA)

Enantioselective Synthesis of Cyclic Sulfamidates via Pd-Catalyzed Hydrogenation


Chiral Sulfamidates Preparation by Enantioselective Hydrogenation

Significance: Sulfamidates are generally prepared in many steps from the parent amino alcohols. An imine hydrogenation strategy makes access to chiral sulfamidates much simpler. The reaction was shown to tolerate a wide range of substituents. The cyclic imines substrates are readily prepared by condensation the corresponding hydroxy ketones with ClSO₂NH₂. The free amines can be generated by reduction with LiAlH₄.

Comment: The hydrogenation of the activated imines expands the method developed previously by the same group with sulfonylimines (J. Org. Chem. 2007, 72, 3729). The present approach is more attractive from a synthetic point of view, because of the versatility of the 1,2- and 1,3-cyclic sulfimidates products.


SYNFACS Contributors: Mark Lautens, Frédéric Ménard

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