

Enantioselective Synthesis of Tertiary
 α -Hydroxy Phosphonates Catalyzed by
Carbohydrate/Cinchona Alkaloid
Thiourea Organocatalysts

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Die Autoren dieser Zuschrift möchten zusätzliche Verweise in Lit. [14] aufführen:

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- [14] For selected examples of quinine **1** or cinchonine **2** organocatalyzed enantioselective reaction, see: a) Z. Y. Wang, X. Y. Sun, S. Q. Ye, W. Z. Wang, B. Wang, J. Wu, *Tetrahedron: Asymmetry* **2008**, 19, 964–969; b) A. Russo, A. Peretto, A. Lattanzi, *Adv. Synth. Catal.* **2009**, 351, 3067–3071; for a review, see: c) M. D. Díaz de Villegas, J. A. Gálvez, P. Etayo, R. Badorrey, P. López-Ram-de-Viu, *Chem. Soc. Rev.* **2011**, 40, 5564–5587. For catalysts **3a** and **3b**, see: d) K. Liu, H. F. Cui, J. Nie, K. Y. Dong, X. J. Li, J. A. Ma, *Org. Lett.* **2007**, 9, 923–925. For Takemoto's thiourea **4**, see: e) T. Okino, Y. Hoashi, Y. Takemoto, *J. Am. Chem. Soc.* **2003**, 125, 12672–12673. For thiourea catalysts of cinchona alkaloids **5a** and **5b**, selected examples: f) A. L. Tillman, J. Ye, D. J. Dixon, *Chem. Commun.* **2006**, 1191–1193; g) J. Ye, D. J. Dixon, P. S. Hynes, *Chem. Commun.* **2005**, 4481–4483; h) S. H. McCooley, S. J. Connon, *Angew. Chem.* **2005**, 117, 6525–6528; *Angew. Chem. Int. Ed.* **2005**, 44, 6367–6370; i) B. Vakulya, S. Varga, A. Csampai, T. Soos, *Org. Lett.* **2005**, 7, 1967–1969; j) T. Marcelli, R. N. S. van der Haas, J. H. van Maarseveen, H. Hiemstra, *Angew. Chem.* **2006**, 118, 943–945; *Angew. Chem. Int. Ed.* **2006**, 45, 929–931; k) J. Song, Y. Wang, L. Deng, *J. Am. Chem. Soc.* **2006**, 128, 6048–6049; l) S. J. Connon, *Chem. Commun.* **2008**, 2499–2510; m) M. Amere, M.-C. Lasne, J. Rouden, *Org. Lett.* **2007**, 9, 2621–2624; n) T. Y. Liu, J. Long, B. J. Li, L. Jiang, R. Li, Y. Wu, L. S. Ding, Y. C. Chen, *Org. Biomol. Chem.* **2006**, 4, 2097–2099.