Category

Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

Key words

palladium

organocatalysis

synergistic catalysis M. MEAZZA, V. CEBAN, M. B. PITAK, S. J. COLES, R. RIOS* (UNIVERSITY OF SOUTHAMPTON, UK)

 $Synergistic\ Catalysis:\ Enantioselective\ Addition\ of\ Alkylbenzox azoles\ to\ Enals$

Chem. Eur. J. 2014, 20, 16853–16857.

Enantioselective Palladium/Organo-Catalyzed Additions to Unsaturated Aldehydes

Significance: Synergistic catalysis has recently been gaining attention because the two separate catalysts can be optimized independently (see Review below). The authors present a palladium/chiral secondary amine catalyzed reaction between azaarenes and unsaturated aldehydes.

Review: A. E. Allen, D. W. C. MacMillan *Chem. Sci.* **2012**, *3*, 633–658.

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 Synfacts 2015, 11(1), 0066
 Published online: 15.12.2014

 DOI: 10.1055/s-0034-1379691;
 Reg-No.: L15714SF

Comment: Although diastereoselectivity was poor (highest ratio 2.7:1), good enantioselectivities were observed for both major and minor isomers. The palladium acts as a Lewis acid to activate the azaarene, whereas the proline-derived organocatalyst activates the aldehyde towards 1,4-addition.