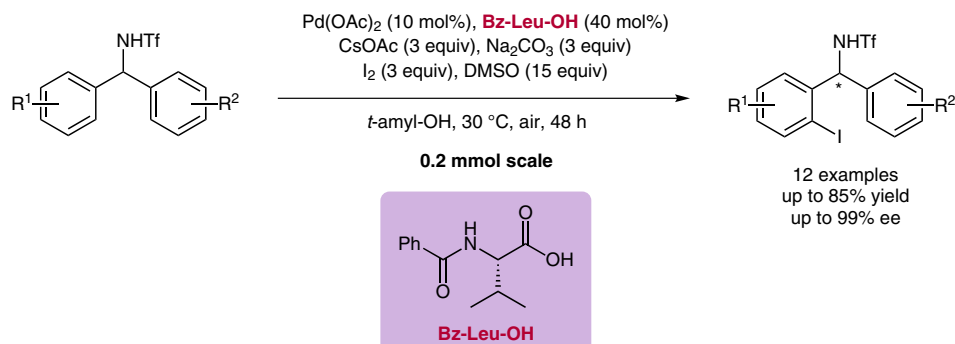


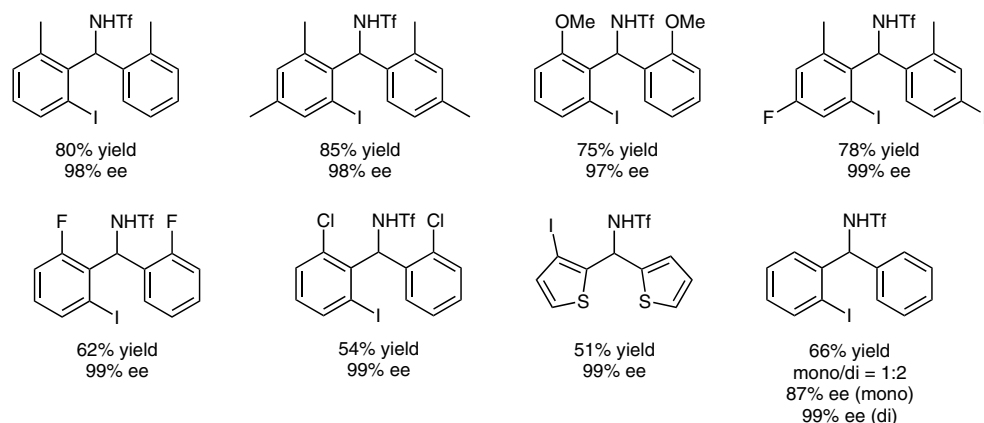
L. CHU, X.-C. WANG, C. E. MOORE, A. L. RHEINGOLD, J.-Q. YU* (THE SCRIPPS RESEARCH INSTITUTE, LA JOLLA AND THE UNIVERSITY OF CALIFORNIA, SAN DIEGO, LA JOLLA, USA)

Pd-Catalyzed Enantioselective C–H Iodination: Asymmetric Synthesis of Chiral Diarylmethylamines
J. Am. Chem. Soc. **2013**, *135*, 16344–16347.

Palladium-Catalyzed Enantioselective C–H Iodination



Selected examples:



Significance: The diarylmethylamine motif is present in a range of biologically active compounds. Methods aimed at the enantioselective synthesis of diarylmethylamines include 1,2-addition of organometallic species to aldimines (see Review) and asymmetric hydrogenation of the corresponding imines (*J. Am. Chem. Soc.* **2010**, *132*, 2124). Here, the authors report the asymmetric synthesis of diarylmethylamines via palladium-catalyzed desymmetrizing C–H iodination. This report is the first example of an asymmetric C–H iodination in the absence of a chiral auxiliary.

Comment: The iodination of *ortho*-substituted substrates proceeds with good yields and excellent enantioselectivities. However, in the absence of *ortho* substituents, a significant amount of the diiodinated product is obtained. Interestingly, the enantioselectivity of the di-iodinated product remains consistently higher than that of the mono-iodinated product.

Review: M. T. Robak, M. A. Herbage, J. A. Ellman
Chem. Rev. **2010**, *110*, 3600–3740.

SYNFACTS Contributors: Mark Lautens, Christine M. Le
Synfacts 2014, 10(1), 0046 Published online: 13.12.2013
DOI: 10.1055/s-0033-1340453; **Reg-No.:** L16313SF

2014 © THIEME STUTTGART • NEW YORK