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Synergistic Catalysis: Enantioselective Addition of Alkylbenzoxazoles to Enals

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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.

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.

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

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