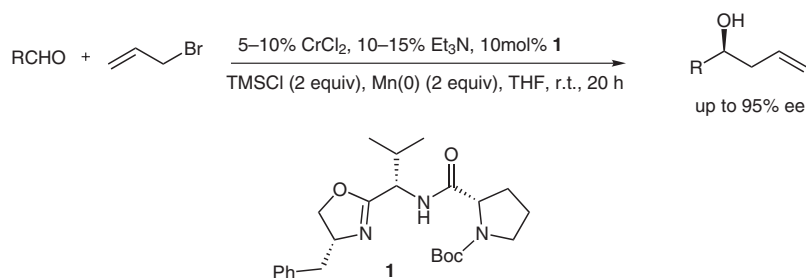


J.-Y. LEE, J. J. MILLER, S. S. HAMILTON, M. S. SIGMAN* (UNIVERSITY OF UTAH, USA)
Stereochemical Diversity in Chiral Ligand Design: Discovery and Optimization of Catalysts for the Enantioselective
Addition of Allylic Halides to Aldehydes
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Modular Catalysts for the Enantioselective Allylation of Aldehydes



Significance: The formerly developed Mn-Cr(II)-mediated allylation of aldehydes for the first time has been performed in an enantioselective variant using a set of modular amino acid-derived ligands. Enantioselectivities of up to 95% were achieved after screening of different catalyst diastereomers.

Comment: A modular approach for the search for new enantioselective ligands is very promising as it offers a rational method for improving the enantioselectivity by changing the building blocks at will. Modular ligands can be developed for most metal-catalyzed reactions, starting usually from available naturally occurring materials, in several simple steps.

SYNFACTS Contributors: Paul Knochel, Andrei Gavryushin
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Category

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Key Words

asymmetric
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