

SYNFACTS Highlights in Current Synthetic Organic Chemistry

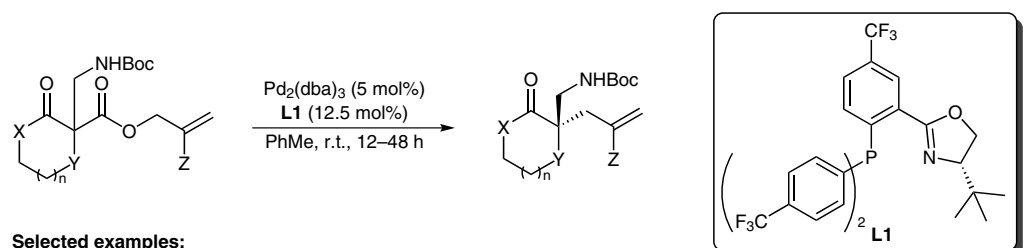
This electronic reprint is provided for non-commercial and personal use only; this reprint may be forwarded to individual colleagues or may be used on the author's homepage. This reprint is not provided for distribution in repositories, including social and scientific networks and platforms.

Publishing House and Copyright:

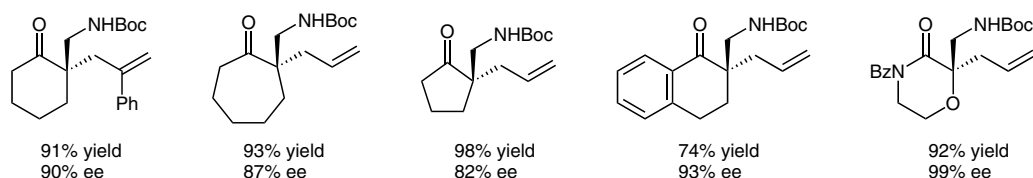
© 2015 by
Georg Thieme Verlag KG
Rüdigerstraße 14
70469 Stuttgart
ISSN 1861-1958

Any further use
only by permission
of the Publishing House

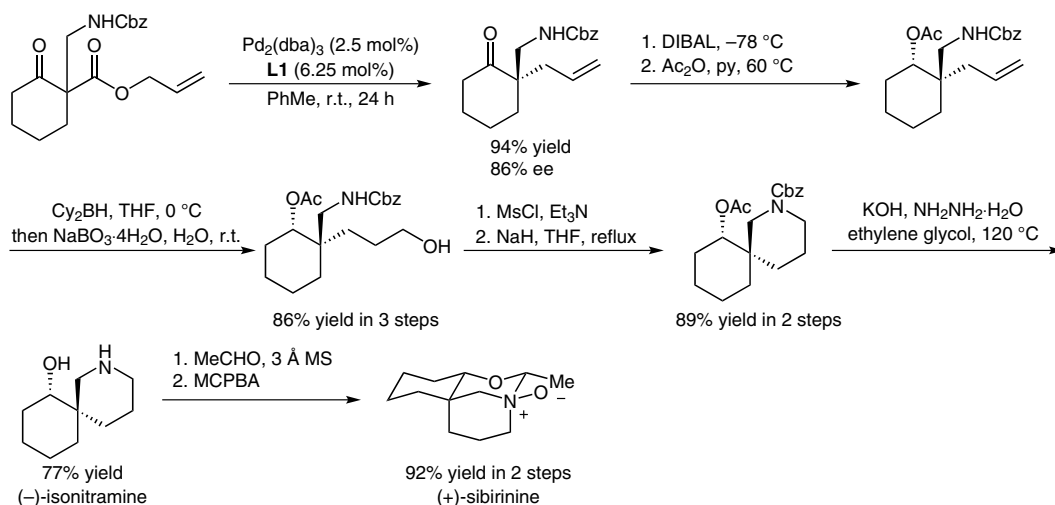
Palladium-Catalyzed Asymmetric Synthesis of α -Quaternary Mannich Products



Selected examples:



Natural product synthesis:



Significance: The authors present a palladium-catalyzed enantioselective decarboxylative allylic alkylation of five-, six-, and seven-membered ketones, lactams, and other heterocyclic systems. A series of α -quaternary Mannich-type products were prepared with excellent yields (up to 99%) and enantioselectivities (up to 99% ee).

Comment: The two-step sequence of (1) Mannich reaction followed by (2) enantioselective decarboxylative allylic alkylation serves as a novel strategy for the facile access to asymmetric Mannich adducts, possessing additional enolizable positions and acidic protons. This method was applied to the total synthesis of (+)-sibirinine.