SYNFACTS
Highlights in Chemical Synthesis

Publishing House and Copyright:
© 2024 by
Georg Thieme Verlag KG
Rüdigerstraße 14
70469 Stuttgart
ISSN 1861-1958

Thieme

Category

Metals in Synthesis

Key words

alkenes

aminative difunctionalization

azodicarboxylates

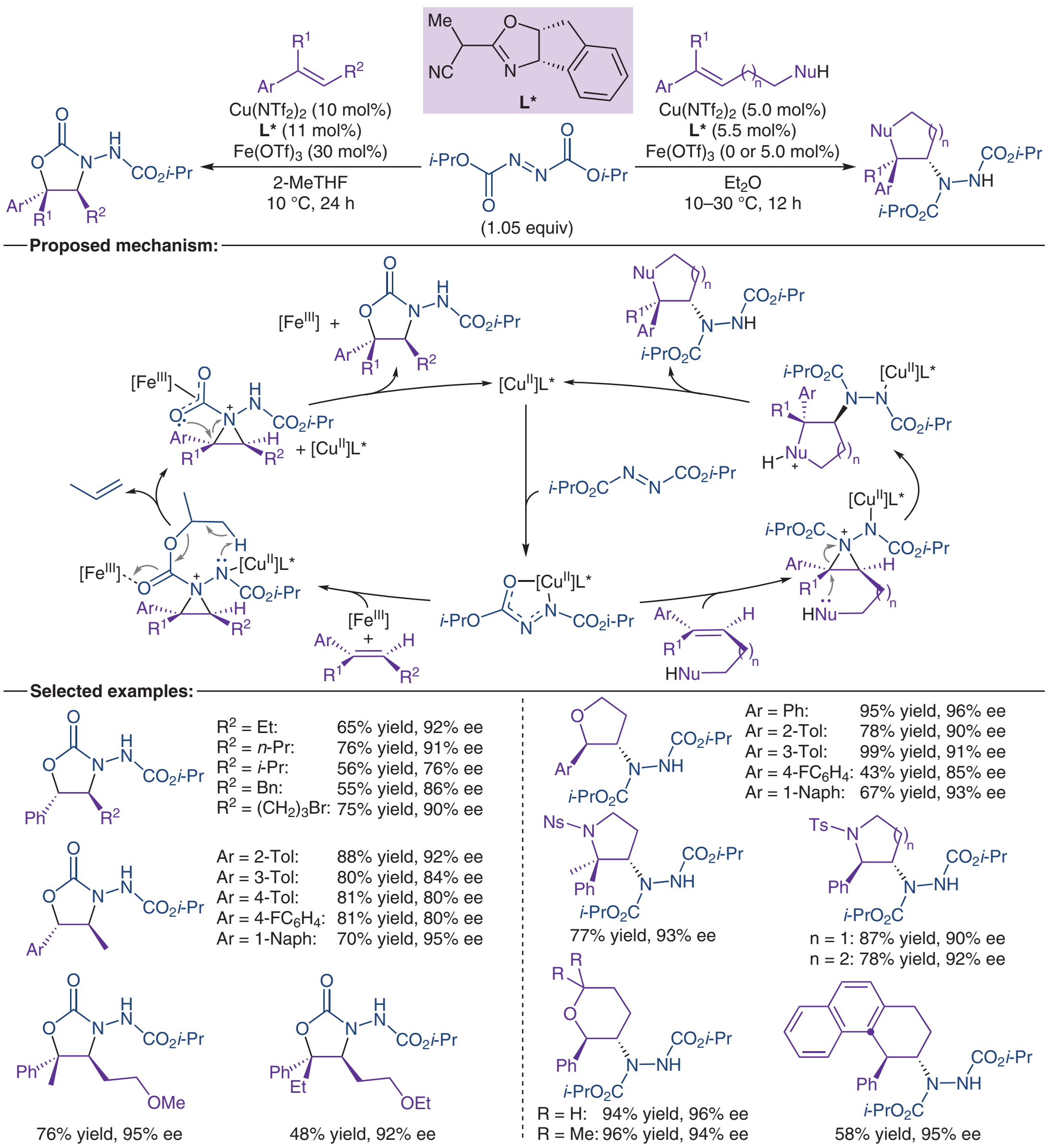
copper catalysis

hydrazines

N. HUANG, J. LUO, L. LIAO, X. ZHAO* (SUN YAT-SEN UNIVERSITY, GUANGZHOU, P. R. OF CHINA)

Catalytic Enantioselective Aminative Difunctionalization of Alkenes
J. Am. Chem. Soc. **2024**, *146*, 7029–7038, DOI: 10.1021/jacs.4c00307.

Copper-Catalyzed Asymmetric Aminative Difunctionalization of Alkenes with Azodicarboxylates



Significance: Two copper-catalyzed protocols for the asymmetric aminative difunctionalization of alkenes using dialkyl azodicarboxylates are reported. After formation of a chiral aziridinium ion intermediate, either [3+2]-cycloaddition or intramolecular cyclization with an internal nucleophile is possible.

Comment: A new chiral cyano oxazoline ligand was developed for this transformation. Its ability to isomerize via a tautomeric form was shown to be crucial for enantioenduction. Thus, a diastereomeric mixture of the ligand can be used for the reaction.

SYNFACTS Contributors: Martin Oestreich, Hendrik F. T. Klare, Emilio Acuña Bolomey
Synfacts 2024, 20(06), 0606 Published online: 14.05.2024
DOI: 10.1055/s-0043-1773283; **Reg-No.:** M06824SF