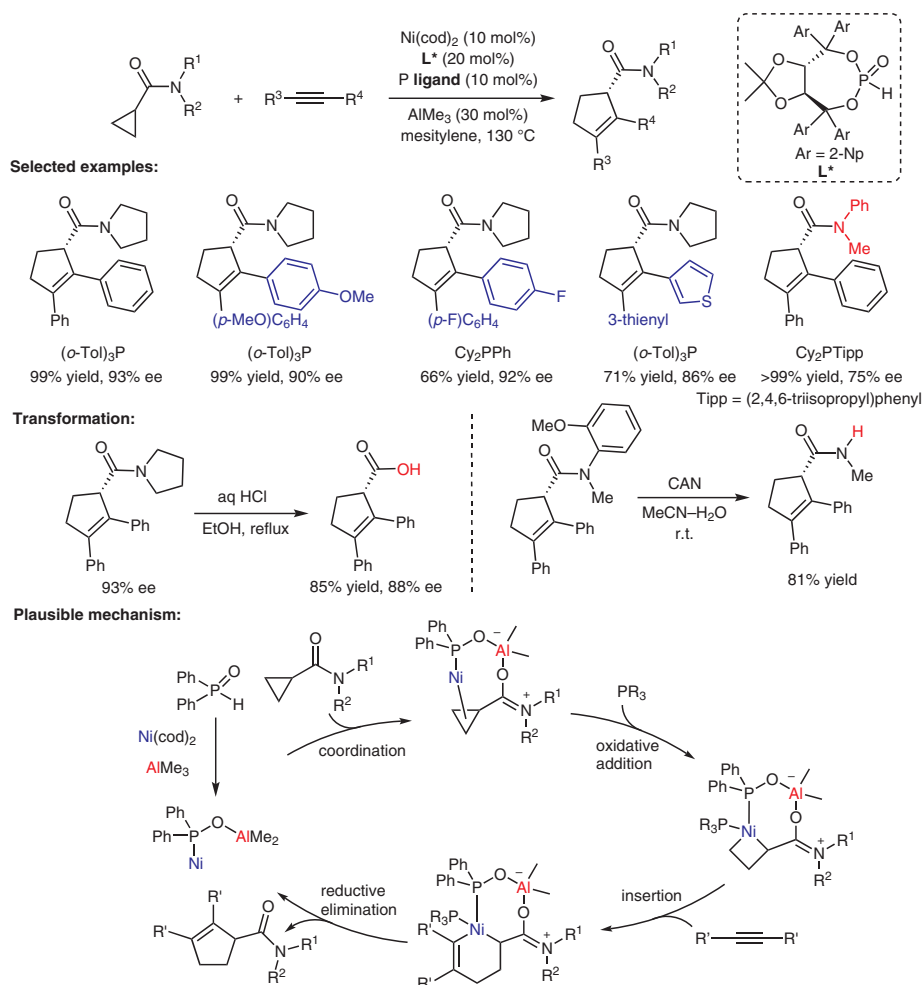


Q.-S. LIU, D.-Y. WANG, Z.-J. YANG, Y.-X. LUAN, J.-F. YANG, J.-F. LI, Y.-G. PU, M. YE\*  
 (NANKAI UNIVERSITY, TIANJIN, P. R. OF CHINA)  
 Ni–Al Bimetallic Catalyzed Enantioselective Cycloaddition of Cyclopropyl Carboxamide with Alkyne  
*J. Am. Chem. Soc.* **2017**, *139*, 18150–18153.

# Enantioselective Cycloaddition of Cyclopropylcarboxamides to Alkynes



**Significance:** Transition-metal-catalyzed cycloaddition of cyclopropanes to  $\pi$ -unsaturated compounds is a useful method for the formation of cyclic compounds that has been studied over recent decades. However, the reaction with cyclopropylcarboxamides remains challenging due to their relatively low reactivity. The authors have developed a Ni–Al bimetallic system that facilitates the cycloaddition reaction of cyclopropylcarboxamides to alkynes.

**SYNFACTS Contributors:** Hisashi Yamamoto, Takahiro Sawano  
 Synfacts 2018, 14(03), 0259 Published online: 15.02.2018  
 DOI: 10.1055/s-0037-1609264; Reg-No.: H01018SF

**Comment:** Whereas a nonenantioselective reaction was achieved by using Ph<sub>2</sub>P(O)H as a bifunctional ligand, a TADDOL-derived chiral ligand realized highly enantioselective cycloaddition reactions.

Category

Metal-Catalyzed  
 Asymmetric  
 Synthesis and  
 Stereoselective  
 Reactions

Key words

nickel catalysis

aluminum catalysis

cycloaddition

cyclopropylcarbox-  
 amides

alkynes

Synfact  
 of the month