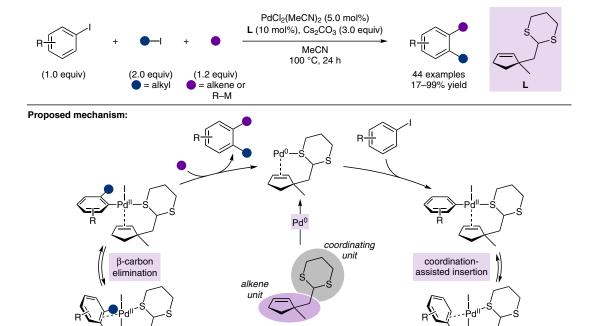
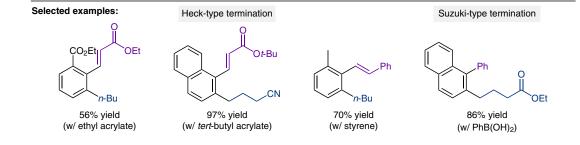
Y.-X. ZHENG, L. JIAO* (TSINGHUA UNIVERSITY, BEIJING, P. R. OF CHINA)

Hybrid Cycloolefin Ligands for Palladium-Olefin Cooperative Catalysis

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An Alternative to Norbornene: Unstrained Alkene Ligands with a Coordination Site for Catellani Reactions





Significance: A new ligand design for cooperative palladium-olefin catalysis is disclosed. The combination of an unstrained cycloolefin ligand with a dithiane donor enables palladium-catalyzed Catellani-type reactions with unprecedented reactivity without the need for the norbornene scaffold.

Comment: Various alkyl iodides were employed as coupling partners, demonstrating the broad functional group tolerance of this method. The reaction can be terminated by a Heck reaction or by cross-coupling with organometallic reagents, resulting in vicinal difunctionalization of the aryl iodide.

Base + L

Base•HI

Category

Metals in Synthesis

Key words

alkene ligands Catellani reaction dithiane palladium catalysis



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