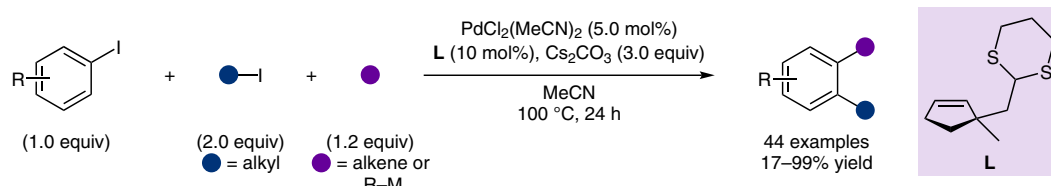
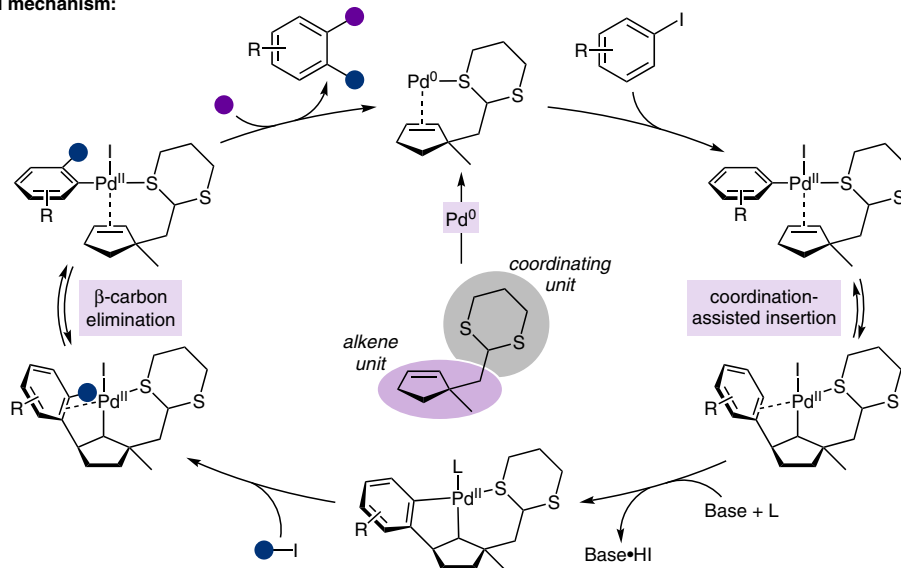


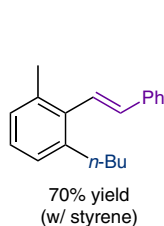
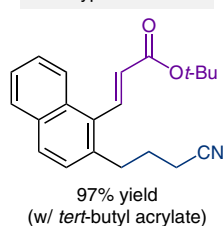
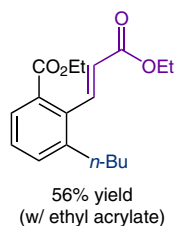
An Alternative to Norbornene: Unstrained Alkene Ligands with a Coordination Site for Catellani Reactions



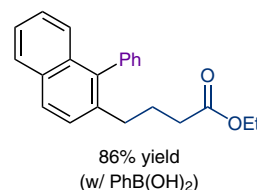
Proposed mechanism:



Selected examples:



Suzuki-type termination



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.