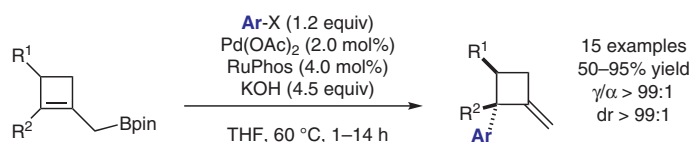
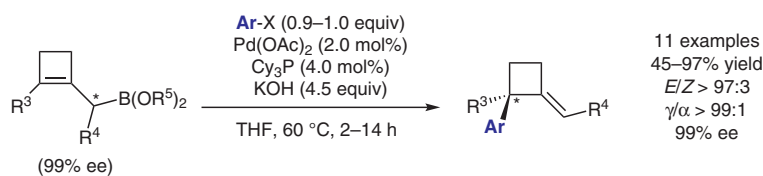
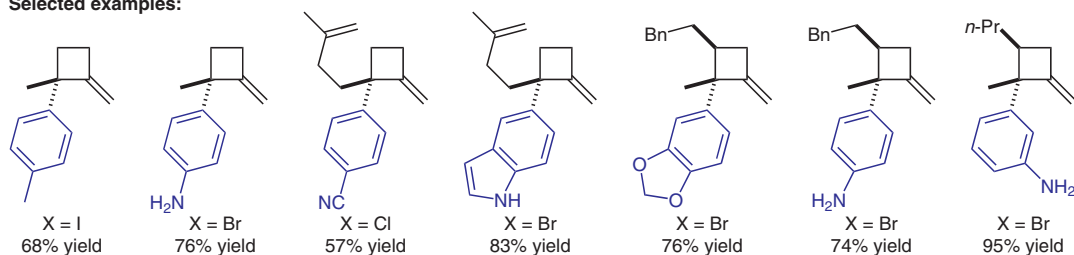


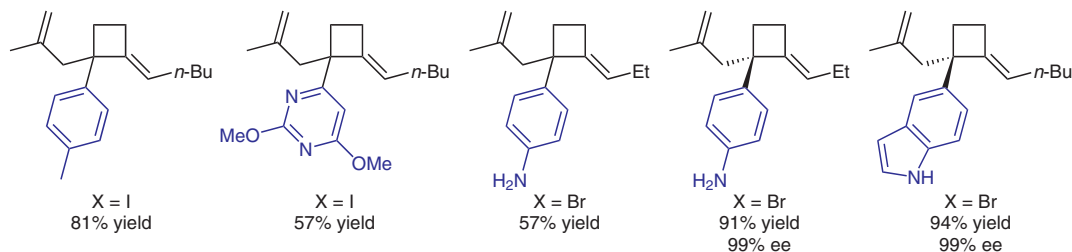
# Palladium-Catalyzed Synthesis of Alkylidenecyclobutanes



## Selected examples:



## Selected examples:



**Significance:** Alkylidenecyclobutanes are useful strained building blocks that can also be found in a number of natural compounds. In this work, the authors disclose the use of a  $\gamma$ -selective Suzuki–Miyaura cross-coupling for the synthesis of this class of compounds containing a quaternary stereocenter.

**Comment:** Achiral cyclobutenylmethylboronic esters reacted with aryl halides in the presence of a palladium catalyst and potassium hydroxide. The corresponding products were obtained in moderate to excellent yields and essentially with perfect  $\gamma$ -selectivity. In the case of  $\delta$ -substituted substrates, high levels of diastereoselectivity were obtained. The use of (chiral)  $\alpha$ -substituted starting materials generated the corresponding products containing a trisubstituted double bond functionality in high stereoselectivity (and enantioselectivity).