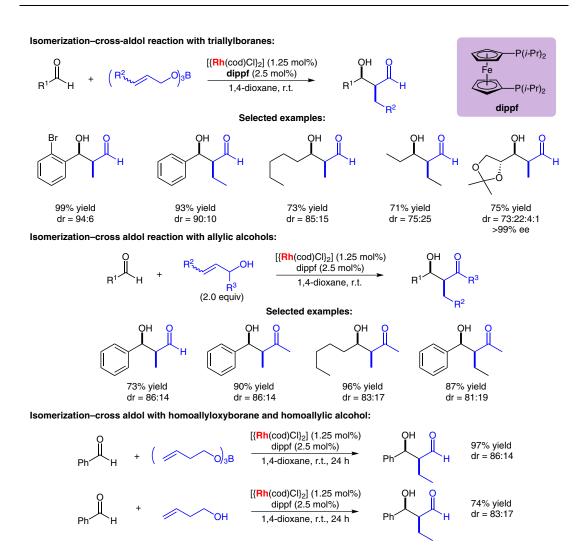
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Rhodium-Catalyzed Cross-Aldol Reaction: In Situ Aldehyde-Enolate Formation from Allyloxyboranes and Primary Allylic Alcohols

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In Situ Aldehyde Enolate Formation by Rhodium-Catalyzed Isomerization



Significance: Aldol reactions in which the aldol donor is derived from an aldehyde, are particularly challenging. This report describes a strategy in which aldehyde enolates are generated in situ by rhodium-catalyzed isomerization of triallylboroxanes. High *syn*-selectivity is obtained for a variety of aldehyde-donor and -acceptor partners.

Comment: Remarkably, the use of triallyloxyboranes is not required; simple primary and secondary allylic alcohols also undergo the isomerization—cross-aldol sequence with similar levels of reactivity and selectivity, presumably through a rhodiumenolate or -enol mechanism.

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Category

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Key words

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