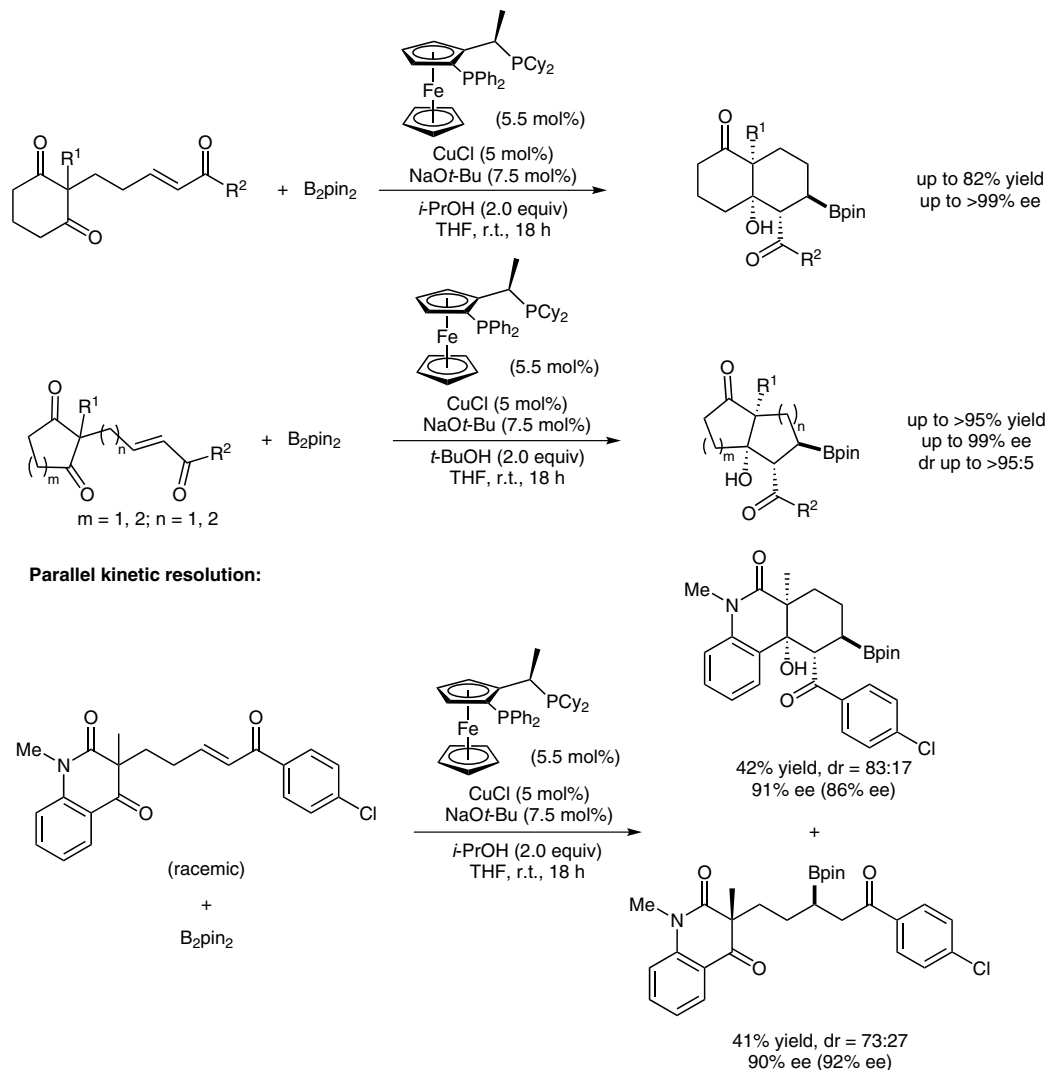


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Enantioselective Copper(I)-Catalyzed Borylative Aldol Cyclizations of Enone Diones

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Enantioselective Copper-Catalyzed Borylative Aldol Cyclizations



Significance: The formation of metal enolates allows for precise enolization, as well as potential enantio- and diastereoselective enolization. In this report, the authors apply this idea to a copper-catalyzed conjugate boration–aldol cyclization sequence to produce enantioenriched decalin-, hydrindane- and diquinone-based products.

Comment: The copper–bisphosphine catalyst system developed, produces decalins as well as [5,6]-, [6,5]-, and [5,5]-bicyclic ring products with high levels of diastereo- and enantioselectivity. Kinetic resolution of a racemic chiral enone also afforded the cyclization product with good diastereo- and enantioselectivity.

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