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Enantioselective 1,6-Conjugate Addition of Dialkylzinc Reagents to Acyclic Dienones Catalyzed by Cu-DiPPAM Complex—Extension to Asymmetric Sequential 1,6/1,4-Conjugate Addition
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Cu-Catalyzed Asymmetric 1,6-Conjugate Addition of Dialkylzinc

Significance: The authors reported the asymmetric 1,6-conjugate addition of dialkylzinc to acyclic dienones catalyzed by copper/phosphinoazomethine salt (DiPPAM). After the isomerization of the conjugate adducts, stereoselective sequential 1,4-conjugate addition of diethylzinc was also demonstrated.

Comment: The control of regioselectivity of the 1,6-conjugate addition is difficult due to many parameters. Using copper and the DiPPAM ligand, a highly enantio- and regioselective 1,6-conjugate addition was achieved. With the BINAP ligand, unprecedented highly stereoselective induction is noteworthy.

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