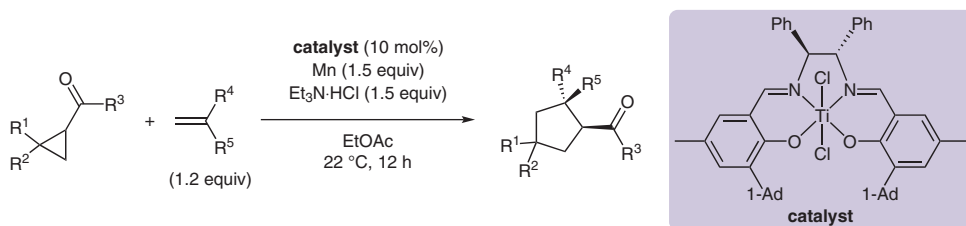
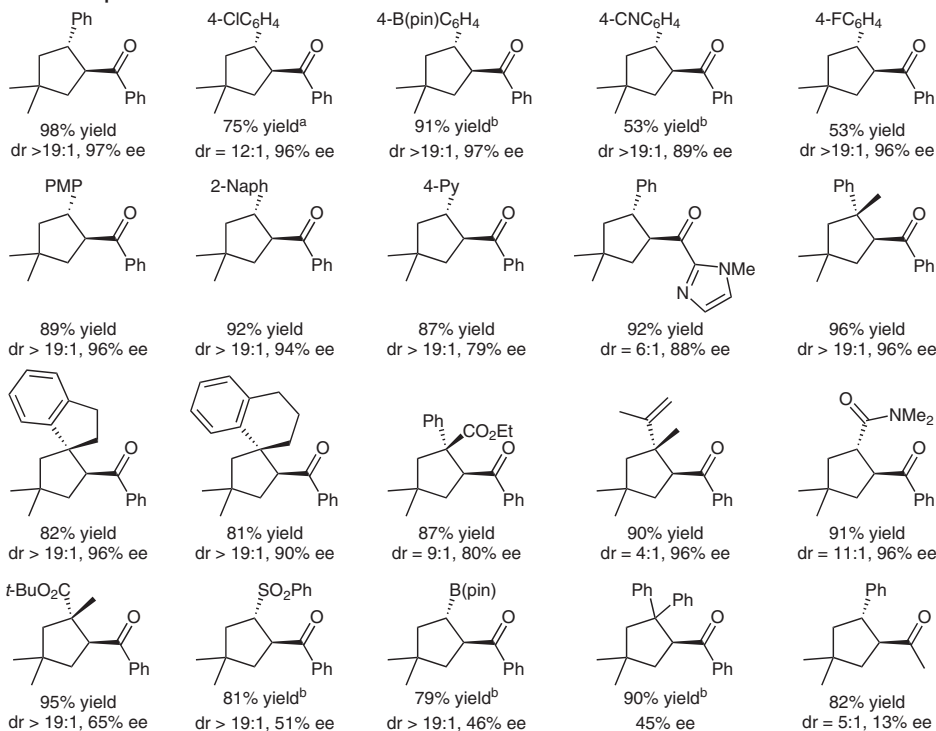


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Diastereo- and Enantioselective Formal [3+2] Cycloaddition of Cyclopropyl Ketones and Alkenes via Ti-Catalyzed Radical Redox Relay
J. Am. Chem. Soc. **2018**, *140*, 3514–3517.

Titanium-Catalyzed Stereoselective Formal [3+2] Cycloaddition



Selected examples:



^a with 5 mol% of catalyst

^b at -25 °C for 48 h

Significance: The discovery of new reactions mediated by organic radical intermediates continues to provide solutions to challenging synthetic problems in conventional two-electron chemistry. The authors have developed a Ti-catalyzed stereoselective formal [3+2] cycloaddition of cyclopropyl ketones and alkenes.

Comment: This catalytic cycloaddition through a radical-redox-relay mechanism provides chiral polysubstituted cyclopentane derivatives containing two contiguous stereogenic centers in high yields and with high diastereo- and enantioselectivities.

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