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Design of Catalysts for Site-Selective and Enantioselective Functionalization of Non-activated Primary C–H Bonds
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Enantioselective Functionalization of Primary C–H Bonds

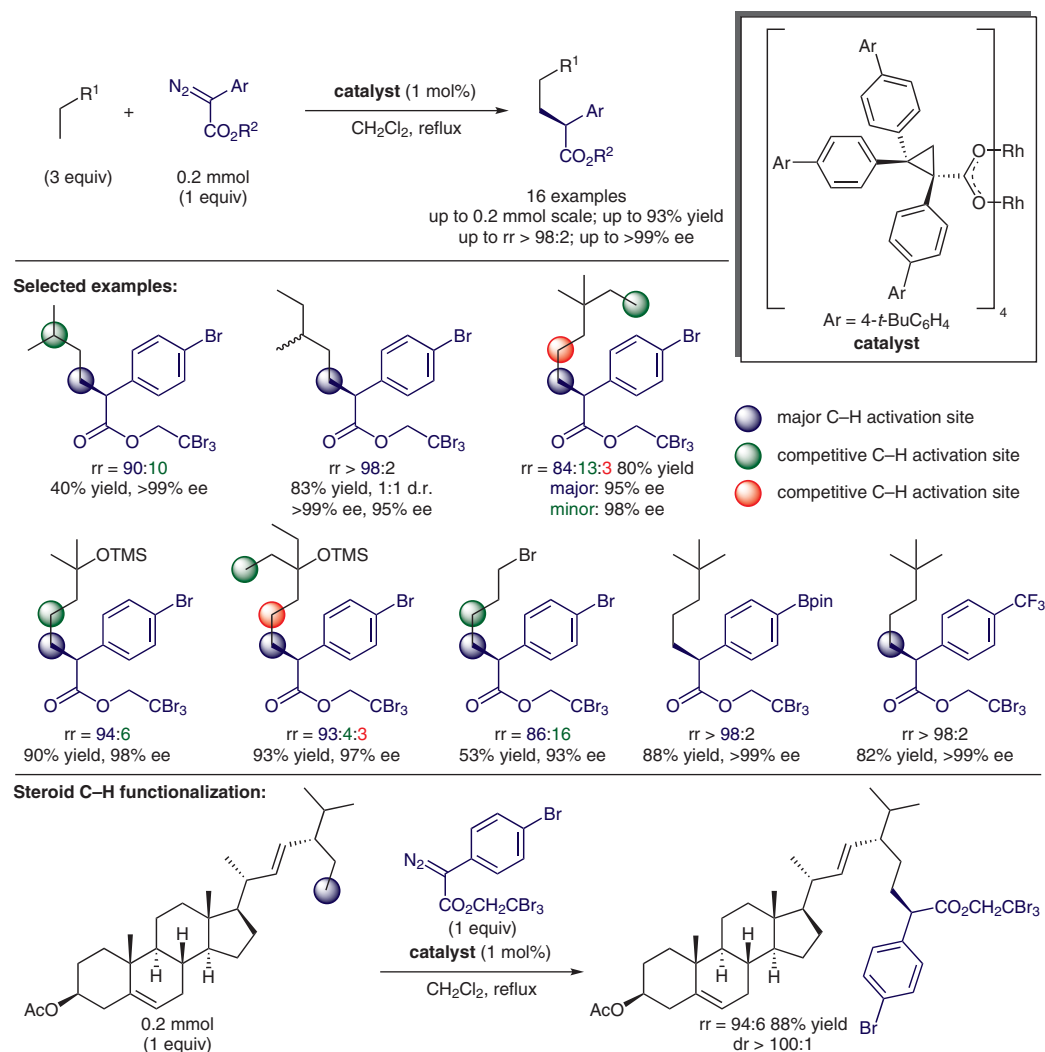
Category

**Metal-Catalyzed
Asymmetric
Synthesis and
Stereoselective
Reactions**

Key words

rhodium catalysis
C–H activation
carbenes

Synfact
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Significance: The authors previously described Rh-catalyzed functionalizations of secondary or tertiary C–H bonds (Liao et al. *Nature* **2016**, 533, 230; Liao et al. *Nature* **2017**, 551, 609). By tuning the catalyst, non-activated primary C–H bonds are functionalized with excellent site and enantioselectivities.

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Comment: Subjecting chiral substrates to the reaction conditions allows access to either set of diastereomeric products when the appropriate catalyst enantiomer is employed. Stigmasteryl acetate could be selectively functionalized at its most sterically accessible primary C–H bond.