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Copper-Catalyzed γ-Selective and Stereospecific Allylic Alkylation of Ketene Silyl Acetals
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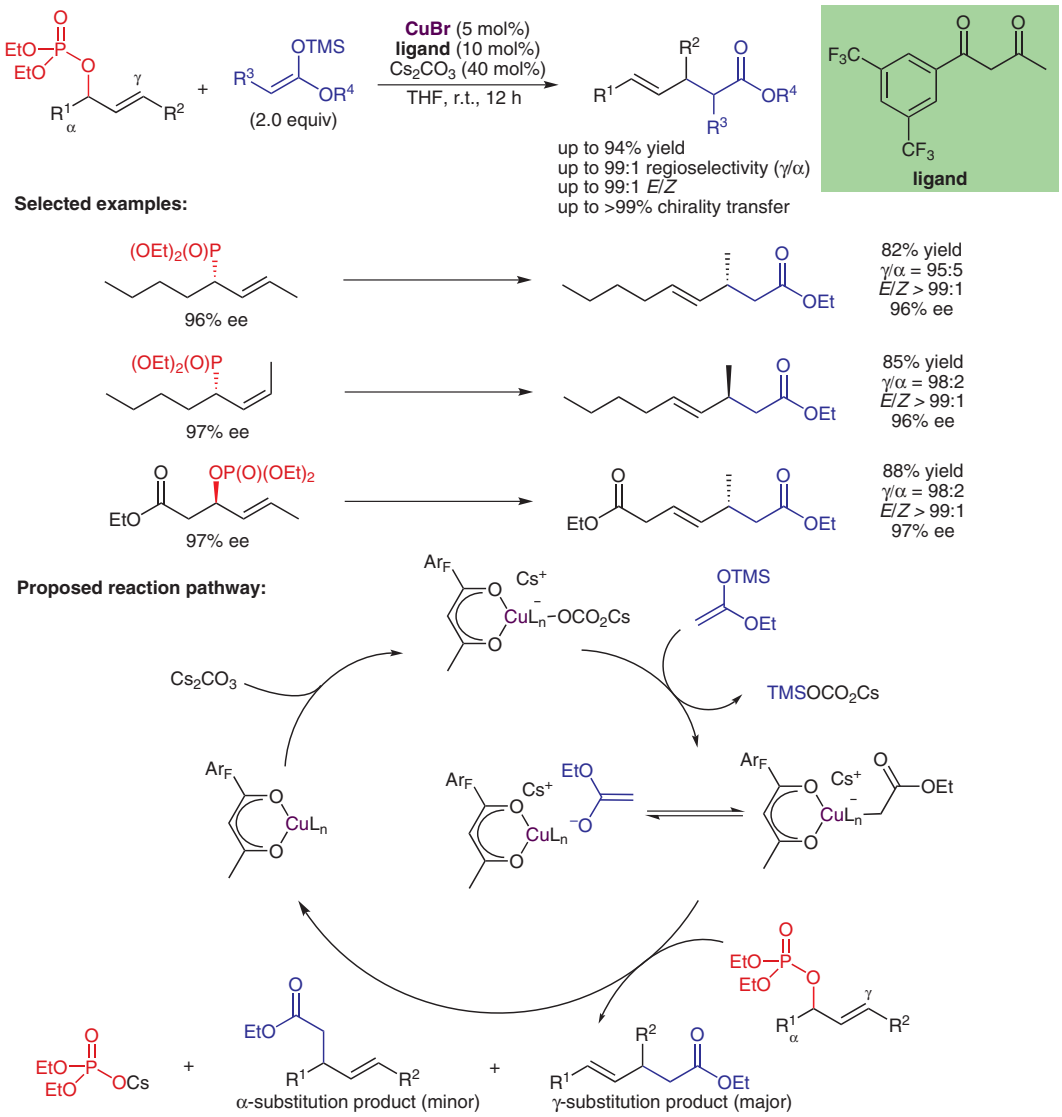
Copper-Catalyzed Stereospecific Allylic Alkylation of Ketene Silyl Acetals



Significance: Allylic alkylation of enolates is an important transformation in organic synthesis. The copper-catalyzed method described employs unsymmetrical internal allylic phosphates as electrophiles, which react with excellent γ-regioselectivity and excellent *Z*-diastereoselectivity.

Comment: The γ-selective allylic alkylation of chiral allylic phosphates proceeds with efficient 1,3-*anti* α-to-γ chirality transfer. The stereochemical outcome of the product is dependent on the *E*/*Z* geometry of the allylic phosphate. The authors propose the reaction pathway shown above, invoking an allyl copper(III) intermediate.

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Category

Metal-Catalyzed Asymmetric Synthesis and Stereoselective Reactions

Key words

allylic alkylation
copper
regioselectivity

SYNFACT of the month