

SYNFACTS Highlights in Current Synthetic Organic Chemistry

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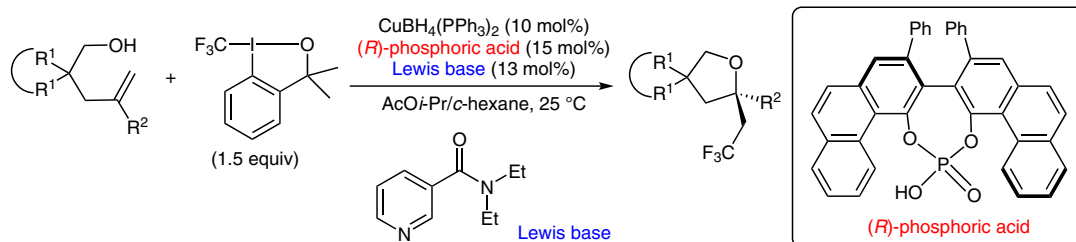
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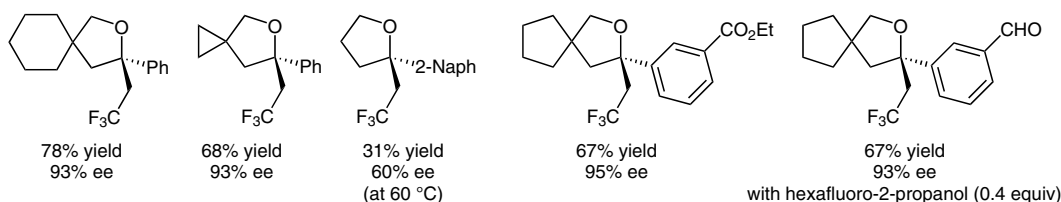
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Achiral Pyridine Ligand-Enabled Enantioselective Radical Oxytrifluoromethylation of Alkenes with Alcohols
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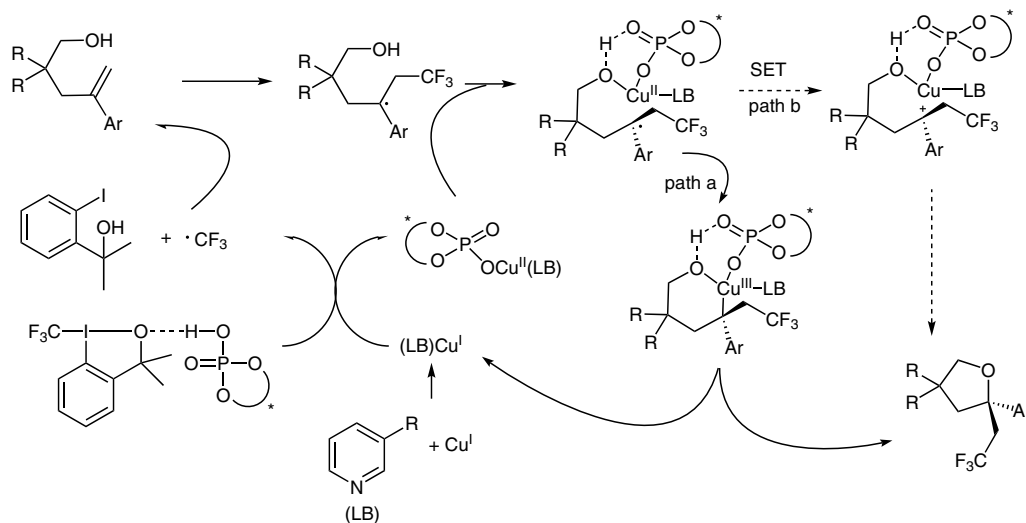
Enantioselective Oxytrifluoromethylation of Alkenes



Selected examples:



Proposed reaction mechanism:



Significance: A highly enantioselective copper-catalyzed radical oxytrifluoromethylation of alkenes, affording CF₃-substituted furans, is described. Interestingly, an achiral pyridine ligand increased the enantioselectivity as a consequence of the stabilization of high-valent copper species.

Comment: On the basis of mechanistic experiments, the authors suggest that the F₃C[•] radical is generated from Togni's reagent through activation by the chiral phosphoric acid. Various functional groups are tolerated under the reaction conditions.

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