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Hydrogen Atom Transfer-Driven Enantioselective Minisci Reaction
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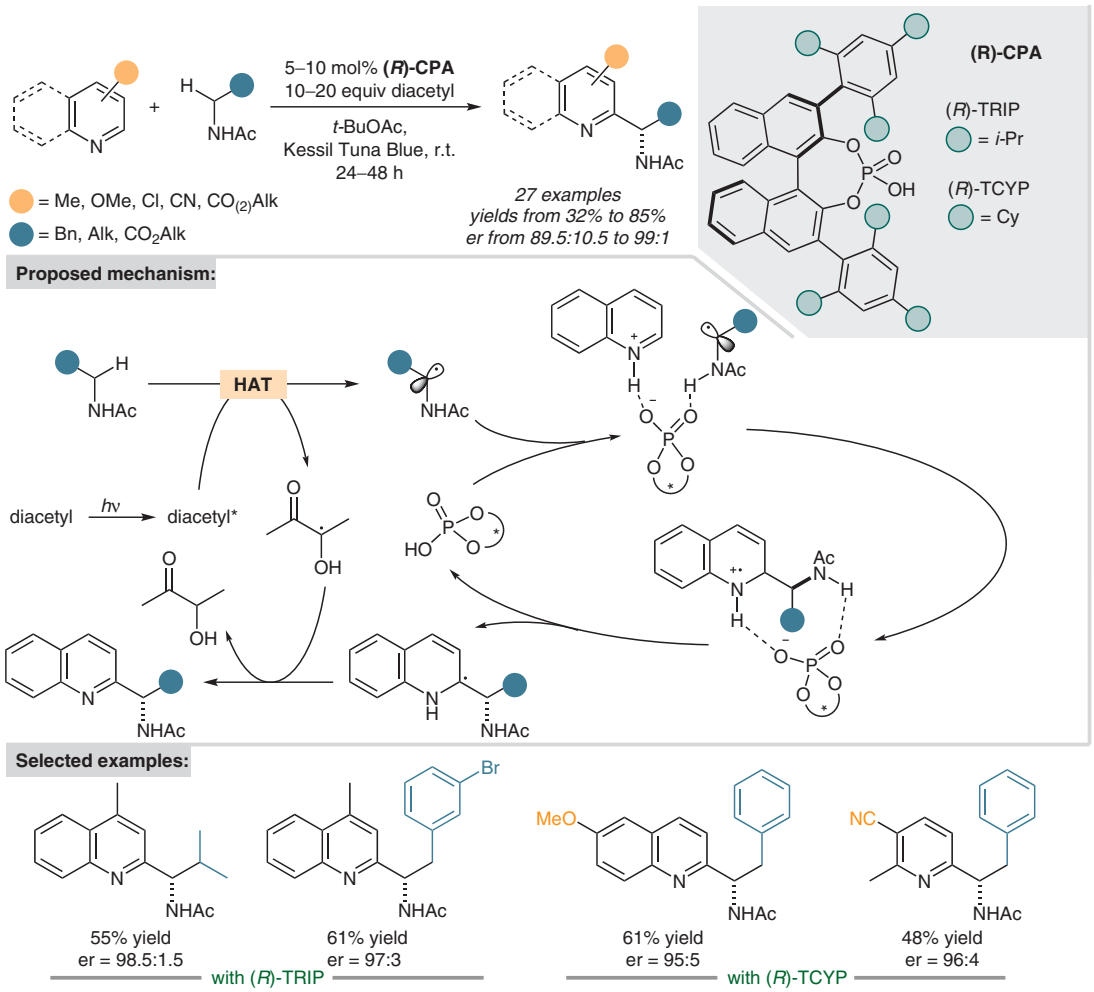
Enantioselective Minisci-Reaction of N-Heterocycles and Amides through Hydrogen-Atom Transfer



Significance: Phipps and co-workers report a photochemical hydrogen-atom transfer (HAT)-driven enantioselective Minisci reaction of N-heterocycles with amides by using one of a series of chiral phosphoric acids as the chromophore and diacetyl as the terminal oxidant. The corresponding C2-substituted products are obtained in moderate to good yields and with good to excellent enantioselectivities.

Comment: On the basis of their recent experimental and theoretical investigations (*J. Am. Chem. Soc.* **2020**, *142*, 21091), the authors address several limitations, including the laborious synthesis of redox-active esters and low-yielding reactions. The successful introduction of easily accessible *N*-acylated primary amines as sources of α-amino radicals led to the establishment of a more generally applicable system with a broad substrate scope, with diacetyl as an inexpensive chromophore and chiral phosphoric acids to induce enantioselectivity.

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Category
Organo- and Biocatalysis

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aza-heterocycles
phosphoric acids

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