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Asymmetric Catalysis of the Carbonyl-Amine Condensation: Kinetic Resolution of Primary Amines
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Kinetic Resolution of Primary Amines through Chiral Phosphoric Acid Catalysis

Category

Organo- and
Biocatalysis

Key words

phosphoric acid
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amines
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catalysis
condensation

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of the month

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Selected examples:

Gram-scale reaction:

Significance: The List group reports a kinetic resolution of primary amines by selective condensation with a 1,3-diketone. The reaction is catalyzed by a chiral BINOL-derived phosphoric acid. The method is applicable to both benzylamine derivatives and aliphatic substrates.

Comment: The authors demonstrated an acid-catalyzed enantioselective carbonyl-amine condensation through a kinetic resolution of primary amines. There is great potential of the observed reactivity in many other transformations.

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