

“A New Catalysis Concept for the Alpha-Functionalization of Ketones”

by

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ABSTRACT

Asymmetric alkylation alpha to a carbonyl stands among the most powerful and highly sought after methods in organic synthesis. While each class of carbonyl derivative presents its own difficulties, ketones can be seen as uniquely challenging due to their steric and electronic stability. Widely used strategies for ketone alpha-alkylation include the hydrazone chiral auxiliary method of Enders or the preformed carbonate method of Trost. Developed herein is an application of the newly disclosed organo-SOMO catalysis platform towards the direct, asymmetric alpha-alkylation of ketones.