L. A. COMBEE, B. RAYA, D. WANG, M. K. HILINSKI* (UNIVERSITY OF VIRGINIA, CHARLOTTESVILLE, USA)
 Organocatalytic Nitrenoid Transfer: Metal-Free Selective Intermolecular C(sp³)-H Amination Catalyzed by an Iminium Salt
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Organocatalytic C(sp³)-H Amination through Nitrenoid Transfer

Category

Organo- and Biocatalysis

Key words

nitrenoid transfer

amination

iminium salt

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of the month

Significance: The Hilinski group reports a C(sp³)-H amination through a nitrenoid transfer catalyzed by iminium salt **A**. The reaction proceeds in moderate to high yields, and the method is applicable to several natural products having other functional groups.

Comment: In contrast to reported nitrenoid-transfer reactions catalyzed by transition metals, the authors developed an organocatalytic variant of the transformation. They proposed the diaziridinium salt as critical intermediate, which is supported by ESI-MS analysis, but not yet fully characterized. A kinetic isotopic effect study suggested C-H cleavage as the rate-determining step.

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