CONCISE SYNTHESIS OF ALL-*CIS*-3,4,5-SUBSTITUTED PIPERIDINES THROUGH CASCADE RADICAL CYCLISATION INITIATED BY VISIBLE LIGHT-PROMOTED HYDROSILYLATION OF ALKENES

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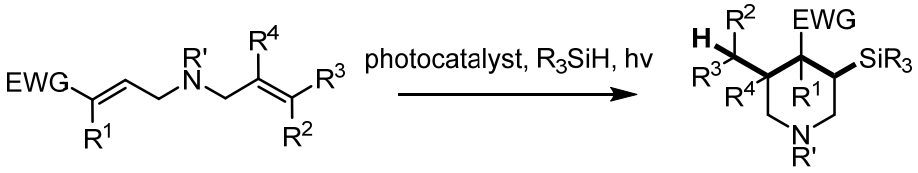
The piperidine structural motif is widely present in numerous natural alkaloids and marketed pharmaceuticals,[1] and numerous methodologies have been reported to synthesize various types of piperidines. However, synthesis of all-*cis*-multisubstituted piperidines keeps a challenge with current protocols yet. In recent years, several methods on visible light-initiated hydrosilylation of alkenes and alkynes were developed by our group.[2-3] Herein, we wish to report a concise one-step synthesis of all-*cis*-3,4,5-substituted piperidines through cascade radical cyclisation initiated by the visible light-promoted hydrosilylation of alkenes.[4]



[1] R. Vardanyan, Piperidine-Based Drug Discovery, Elsevier Inc., **2018**.

[2] J. Zhu, W.-C. Cui, S. Wang, Z.-J. Yao, *Organic Letters* **2018**, *20*, 3174-3178.

[3] J. Zhu, W.-C. Cui, S. Wang, Z.-J. Yao, *J. Org. Chem.* **2018**, *83*, 14600−14609.

[4] W.-C. Cui, J. Zhu, S. Wang, Z.-J. Yao, unpublished work, **2019**.