

**Visible-light-driven C-H bond oxidation/cyclization cascade for construction of azaisoindolinones**Dong-Mei Yan, Jia-Rong Chen,\* and Wen-Jing Xiao\*  
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Sunlight is a unique natural resource. It is an inexpensive, nonpolluting, abundant and endlessly renewable source of clean energy. Recently, photoredox catalysis using visible light has emerged as a powerful tool to initiate organic transformations. Visible light-driven cascade reaction has recently found widespread applications in the field of heterocycle synthesis.<sup>1</sup> As part of our ongoing program on the photoredox-catalyzed heterocycle synthesis,<sup>3-5</sup> we recently developed a visible-light-driven C-H bond oxidation/cyclization cascade for the construction of valuable azaisoindolinones. This mild protocol shows broad substrate scope and high functional group tolerance, giving the corresponding products in generally good yields.<sup>6</sup> Acknowledgement: we are grateful to the NNSFC (21472058, 21472057, 21622201, and 21232003), the Distinguished Youth Foundation of Hubei Province (2016CFA050), CCNU (CCNU16JCZX02 and CCNU17TS0011), Huabo Project of CCNU, and the Program of Introducing Talents of Discipline to Universities of China (111 Program, B17019) for support of this research.

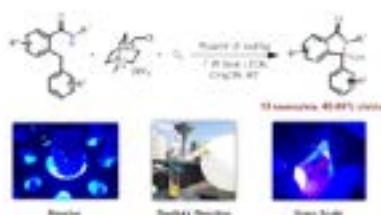


Figure: Visible-light-driven C-H bond oxidation/cyclization cascade for construction of azaisoindolinones

**Recent Publications**

- Schultz, D. M.; Yoon, T. P. *Science* **2014**, *343*, 985-994.
- Chen, J.-R.; Yan, D.-M.; Wei, Q.; Xiao, W.-J. *ChemPhotoChem* **2017**, *1*, 148-158.
- Chen, J.-R.; Hu, X.-Q.; Lu, L.-Q.; Xiao, W.-J. *Acc. Chem. Res.* **2016**, *49*, 1911-1923.
- Hu, X.-Q.; Chen, J.; Chen, J.-R.; Yan, D.-M.; Xiao, W.-J. *Chem. Eur. J.* **2016**, *22*, 14141-14146.
- Zhao, Q.-Q.; Chen, J.; Yan, D.-M.; Chen, J.-R.; Xiao, W.-J. *Org. Lett.* **2017**, *19*, 3620-3623.
- Yan, D.-M.; Chen, J.-R.; Xiao, W.-J. Manuscript in preparation.

**Biography**

Dong-Mei Yan was born in 1994. She received her B.S. from Central China Normal University (CCNU) in 2016. Subsequently, she joined Prof. Wen-Jing Xiao's group under the supervision of Prof. Jia-Rong Chen and Wen-Jing Xiao at Central China Normal University (CCNU) to begin her Ph.D. studies. Her research interests include visible light photoredox catalysis and heterocycle synthesis

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