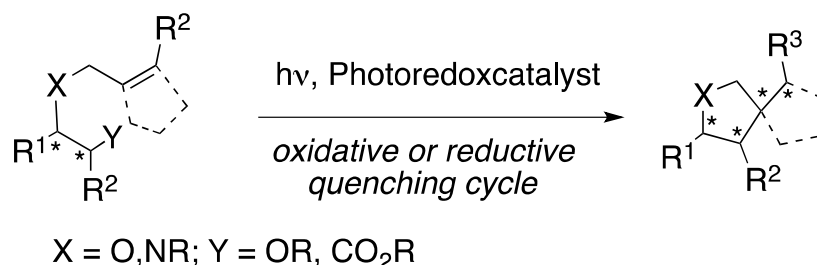


Visible light mediated deoxygenation and decarboxylation as key step for the synthesis of tetrahydrofurans and pyrrolidines.

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Polyols, amino alcohols and amino acids are readily available from renewable resources in enantiomerically pure form. Using such compounds as a starting point, we have developed the synthesis of novel tetrahydrofurans and pyrrolidines utilizing visible light mediated photoredox catalyzed deoxygenations and decarboxylations as key step. The scope and limitation of this strategy in combination with the development of novel photoredox catalysts will be discussed.¹



(1) *Leading references:* (a) D. Rackl, V. Kais, P- Kreitmeier, O. Reiser, *Beilstein J. Org. Chem.* **2014**, *10*, 2157; (b) D. B. Bagal, G. Kachkovskiy, M. Knorn, T. Rawner, B. M. Bhanage, O. Reiser, *Angew. Chem. Int. Ed.* **2015**, *54*, Early View; (c) G. Kachkovskiy, C. Faderl, O. Reiser, *Adv. Synth. Catal.* **2013**, *355*, 2240.