

# Chemical photocatalysis using visible light

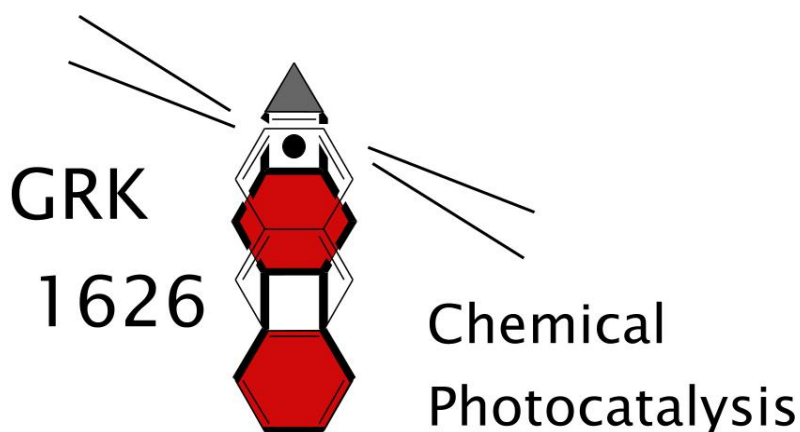
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The use of visible light for organic synthesis is a very old idea: More than 100 years ago the Italian chemist Giacomo Ciamician discovered and promoted the field. Recently, photoredox chemistry mediated by metal complexes, such as ruthenium-trisbipyridine, or organic dyes, such as eosin, gained enormous interest for applications in organic synthesis.

We present some of the recent results<sup>[1]</sup> using photoredox catalysis (PRC) with visible light from our laboratory including photooxidations, oxidative C-C bond formation and photo-Meerwein arylation reactions.



[1] (a) D. P. Hari, B. König, *Chem. Commun.* **2014**, 50, 6688 – 6699; (b) D. P. Hari, T. Hering, B. König, *Angew. Chem. Int. Ed.* **2014**, 53, 725 – 728; (c) P. Schroll, C. Fehl, S. Dankesreiter, B. König, *Org. Biomol. Chem.* **2013**, 11, 6510 – 6514; (d) D. P. Hari, B. König, *Angew. Chem. Int. Ed.* **2013**, 52, 4734 – 4743; (e) T. Hering, D. P. Hari, B. König, *J. Org. Chem.*, **2012**, 77, 10347 – 10352; (f) D. P. Hari, T. Hering, B. König, *Org. Lett.* **2012**, 14, 5334 – 5337; (g) P. Schroll, D. P. Hari, B. König, *ChemistryOpen* **2012**, 1, 130 -133; (h) D. P. Hari, P. Schroll, B. König, *J. Am. Chem. Soc.* **2012**, 134, 2958 – 2961; (i) M. Cherevatskaya, M. Neumann, S. Földner, C. Harlander, S. Kümmel, S. Dankesreiter, A. Pfitzner, K. Zeitler, B. König, *Angew. Chem. Int. Ed.* **2012**, 51, 4062 - 4066