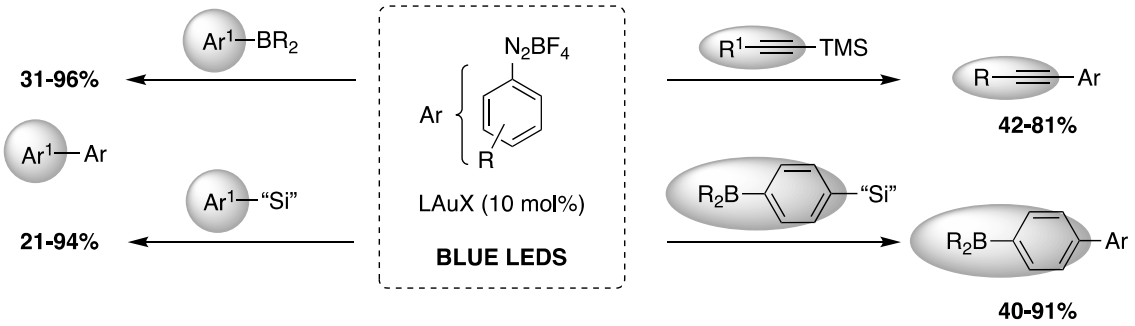
RECENT ADVANCES IN "ONLY" GOLD-CATALYZED PHOTOCHEMISTRY

Sina Witzel[a], Jin Xie[b], and A. Stephen K. Hashmi[a]

[a]Institute of Organic Chemistry, Heidelberg University, Im Neuenheimer Feld 270, 69120 Heidelberg, Germany
[b]School of Chemistry and Chemical Engineering, Nanjing University, Hankou Road 22, 210093 Nanjing, China

The chemistry of UV and visible light-mediated photoredox gold(I/III) catalysis has received great interest in the last years and already novel methods addressing the synthesis of highly useful synthetic building blocks were developed. We have focused our efforts on designing alternative photo-induced methodologies only mediated by a gold catalyst and thus expanding the applicability by exploring new transmetalation reagents [1-5].



[1] L. Huang, M. Rudolph, F. Rominger, A. S. K. Hashmi, *Angew. Chem. Int. Ed.* **2016**, *55*, 4808-4813.

[2] L. Huang, F. Rominger, M. Rudolph, A. S. K. Hashmi, *Chem. Commun*. **2016**, *52*, 6435-6438.

[3] S. Witzel, J. Xie, M. Rudolph, A. S. K. Hashmi, *Adv. Synth. Catal*. **2017**, *359*, 1522-1528.

[4] J. Xie, K. Sekine, S. Witzel, P. Krämer, M. Rudolph, A. S. K. Hashmi, *Angew. Chem. Int. Ed.* **2018**, *57*, 16648-16653.

[5] S. Witzel, K. Sekine, M. Rudolph, A. S. K. Hashmi, *Chem. Commun.* **2018**, *54*, 13802-13804.