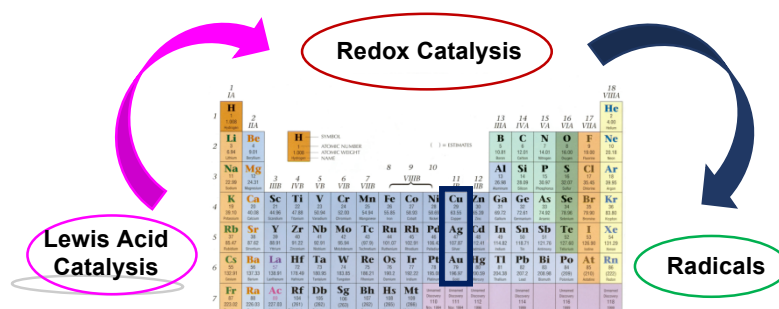


SURPRISES IN METAL CATALYZED REACTIONS

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Alkenes and alkynes are privileged building blocks in synthetic organic chemistry, allowing the simultaneous introduction of different functional groups via addition of two different functional groups across the π -system.¹ Late transition metals play a prominent role in these transformations. Here, we present Au, Ag and Cu-catalyzed reactions accomplishing the functionalization of these simple building blocks. Both, oxidative cross-coupling as well as, radical mediated reactions have been discovered as valuable tool to access densely functionalized structures.²



- 1) For example: B. B. Snider, *Handbook of C-H Transformations: Applications in Organic Synthesis*, Ed. G. Dyker, Wiley-VCH:Weinheim, **2005**, vol. 2, pp. 371.
- 2) a) W. Kong, M. Casimiro, E. Merino, C. Nevado, *J. Am. Chem. Soc.* **2013**, 135, 14480; b) W. Kong, M. Casimiro, N. Fuentes, E. Merino, C. Nevado, *Angew. Chem. Int. Ed.* **2013**, 52, 13086; c) W. Kong, E. Merino, C. Nevado, *Angew. Chem. Int. Ed.* **2014**, 53, 5078; d) W. Kong, N. Fuentes, A. García-Domínguez; E. Merino, C. Nevado, *Angew. Chem. Int. Ed.* **2014**, 53, 5078; e) N. Fuentes, A. García-Domínguez; E. Merino, C. Nevado, *J. Am. Chem. Soc.* **2015**, 137, 964; f) Z. Dong, A. García-Domínguez, C. Nevado *J. Am. Chem. Soc.* **2015**, 137, 11610.