

New catalytic “decorative” protocols of arenes

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The catalytic functionalization of arenes is at forefront of the modern organic chemistry, due to the ubiquitous presence of aromatic motifs in functional organic materials.[1]

Over the past decade, our group has contributed to the area by developing a range of catalytic synthetic methodologies based on metals (Au(I), Pd(II), Ni(II)) and metal-free approaches (i.e Brønsted acid) for the chemical “decoration” of privileged arenes such as indoles, phenols, naphthols and thiophenes. Among them, dearomative strategies are worthy of mention, since they allow the direct realization of chemical diversity/complexity in the 3D-chemical space (i.e. polycyclic fused molecular structures), starting from readily accessible and cheap 2D congeners.[2] Much recently, we expanded our research focuses also to emerging and “hot-topic” areas such as photo- and carbocatalysis.[3]

In this communication, an overview of our latest findings in the field will be presented (Figure 1).

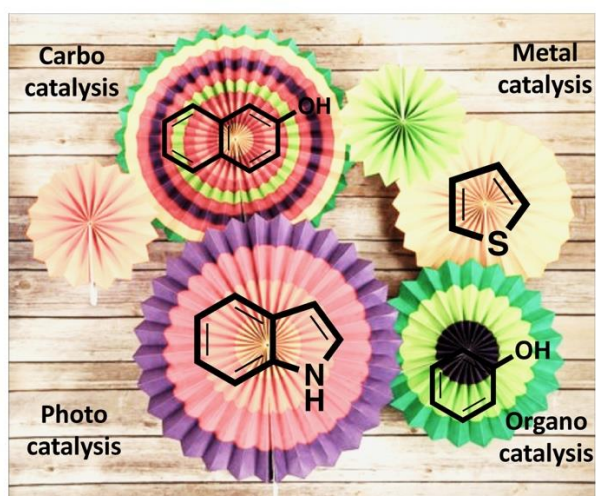


Figure 1

Reference

1. *Arene Chemistry: Reaction Mechanisms and Methods for Aromatic Compounds* (Ed. Mortier, J.), **2016** John Wiley & Sons.
2. *Asymmetric Dearomatization Reactions* (Ed. You, S.-L.) Wiley-VCH, **2016**.
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