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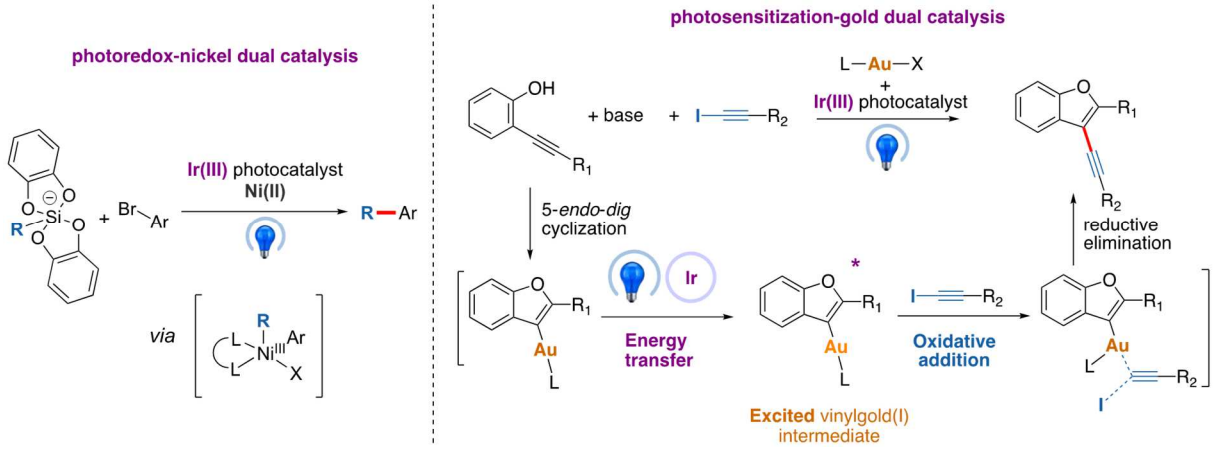
Photocatalysis for Promoting New Synthetic Pathways

Over the last decade, we have been involved in the implementation of organometallic catalysis to the development of sustainable radical chemistry. We have introduced bis-catecholato silicates as versatile sources of alkyl radicals upon photocatalysis.[1] Using Ir(III) or organic photocatalysts, alkyl radicals can be engaged in intermolecular reactions. This process can also be merged with Ni-catalyzed C_{sp2}-C_{sp3} cross-coupling reactions. In parallel, and following our interest in gold catalysis, our recent efforts in photoredox/gold dual catalysis will also be presented.[2] We have notably evidenced the first examples of photosensitized oxidation additive to a gold(I) complex leading to C_{sp2}-C_{sp} cross-couplings.[3,4]



These recent developments and other peripheral chemical adventures will be presented.

References

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2. Xia, Z.; Khaled, O.; Mouriès-Mansuy, V.; Ollivier, C.; Fensterbank, L. *J. Org. Chem.* **2016**, *81*, 7182-7190.
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