Silica Based Heterogeneous Photocatalyst for organic reactions

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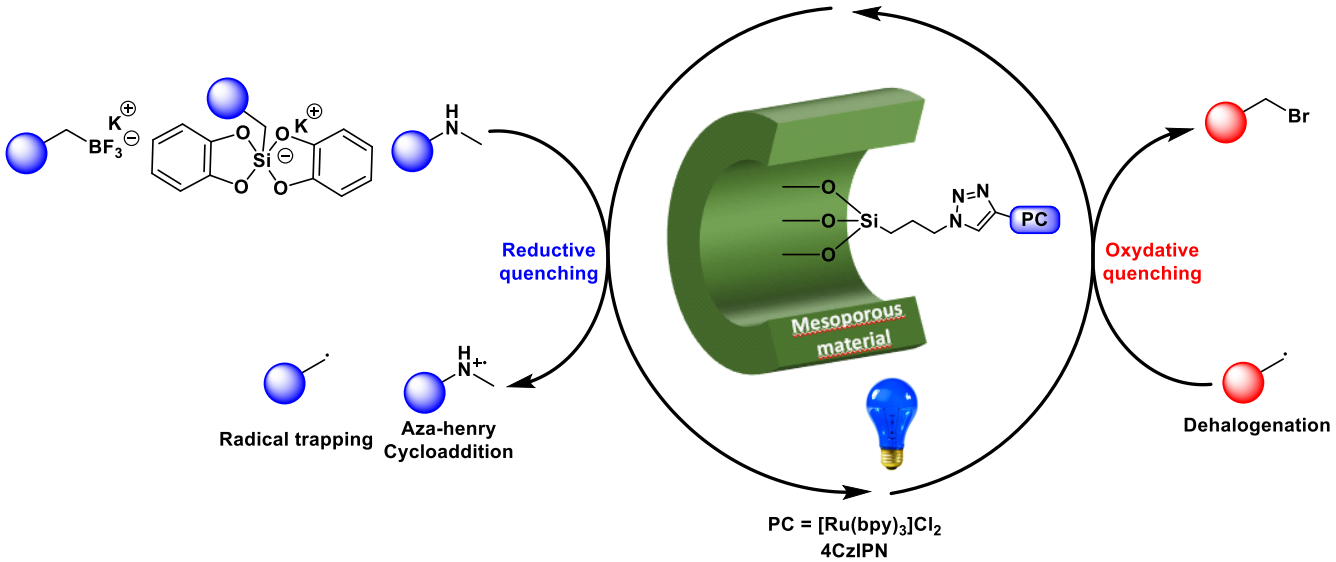
Radical chemistry offers a large synthetic potential due to its unique reactivity. Generation and control of this species in mild conditions remains a major challenge that could be handled by redox photocatalysis[1],[2]. This concept is based on radical species generation by the use of light into visible or near-infrared domains[3] via a photocatalyst (PCat) (organometallic complexes, organic dyes, semi-conductors) able to promote photoinduced electron transfert (PET). Elaborated PCat are now available, they play a key role in the transformation, but their recovery at the end the reaction is still challenging. Heterogenization of PCat appears to be a valuable solution to reach sustainable processes. Rapid and efficient synthesis of new supported photocatalyst is still a remaining challenge and the choice of the support is crucial. Thanks to their stability and versatility, silica-based porous material seems to be an interesting alternative to metal nanoparticles and polymers. The present project aims at preparing a new generation inorganic/organic photocatalysts and evaluate their performances in challenging radical reactions[4,5].



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