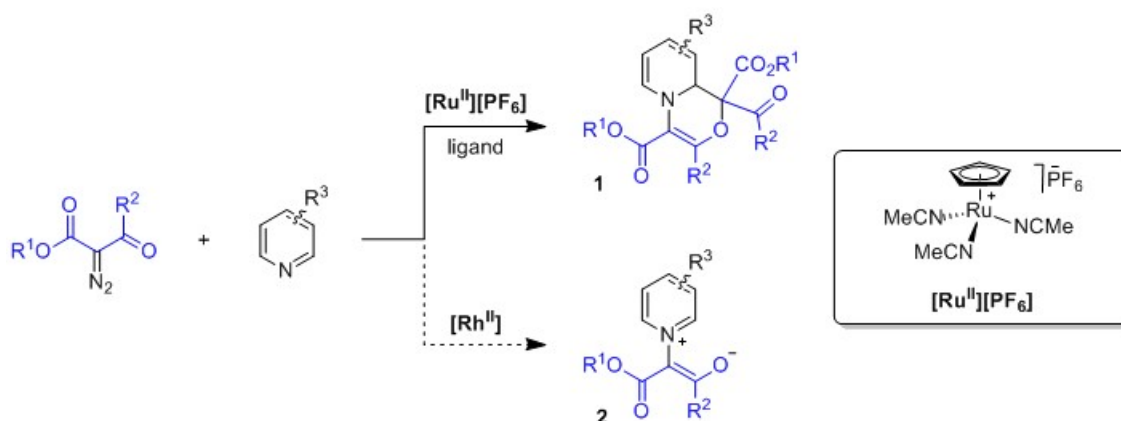


## CpRu-Catalyzed Pyridine Dearomatization Through Double Carbene Insertions

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CpRu complexes are interesting alternatives to copper and dirhodium species for the metal-catalyzed decomposition of diazo compounds.<sup>[1]</sup> In this context, it has been shown that combinations of [CpRu(CH<sub>3</sub>CN)<sub>3</sub>][PF<sub>6</sub>] and diimine ligands react catalytically with  $\alpha$ -diazo- $\beta$ -ketoesters and allow subsequent condensation, OH and 1,3-CH insertion reactions.<sup>[2]</sup> Recently, using this catalytic combination, new dioxene motifs were synthesized by enantiospecific *syn*-opening of epoxides.<sup>[3]</sup>

In a new development that uses electron-poor pyridines and quinolines as substrates, the direct formation of original oxazine moieties **1** is described. Reactions proceed by tandem (double) additions of carbenes and a dearomatization of the azaaromatics. Such a process occurs primarily *via* ruthenium cyclopentadienyle catalysis since, under Rh(II)-mediated reactions, pyridinium ylides **2** are the major adducts.<sup>[4]</sup> Mechanistic insights will be also presented.



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