

OC-13: Alkyne Functionalization Catalyzed by Osmium Complexes

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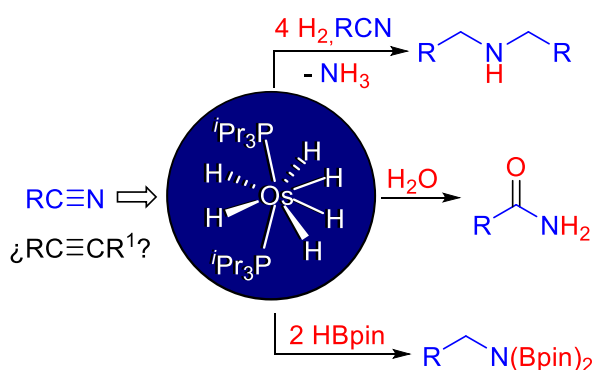
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Alkenyl functionalized compounds are widely found in natural and synthetic products. Moreover, they have a stablished synthetic importance as building blocks in widely employed transformations, particularly organoboron reagents. Functionalization of alkynes promoted by transition-metal complexes is the most straightforward and atom-economical process of generating functional olefins in synthetic organic chemistry.^[1]

Although the catalytic properties of osmium derivatives have been much less studied than those of complexes of other platinum metals, its polyhydride derivatives are reaching great relevance.^[2] Among them $\text{OsH}_6(\text{P}^i\text{Pr}_3)_2$ occupies a privileged position due to its ability to carry out a wide variety of stoichiometric transformations. The catalytic properties of this hexahydride complex have been explored recently, discovering that it is an efficient catalyst for the hydrogenation, hydration, and hydroboration of nitriles.^[3] These studies involving organic molecules with multiple bonds prompted us to explore the performance of this polyhydride with alkynes.

Herein, we present novel osmium-hydride complexes which efficiently promote the hydroboration of alkynes and the study of the mechanism of those transformations.

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**References**

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