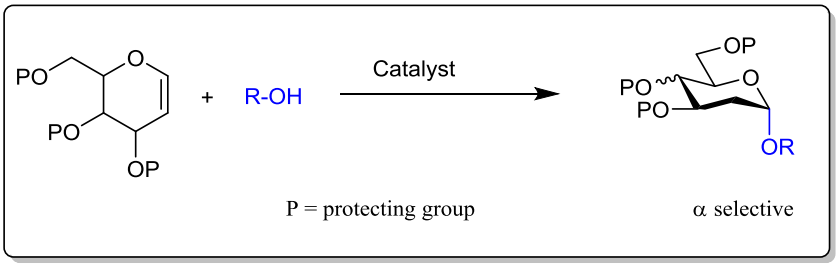
Catalytic Stereoselective Synthesis of Deoxyglycosides

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Oligosaccharides and glycoconjugates have been identified as key components in a wide range of biological processes. New developments in this area have prompted renewed interest in their synthetic preparation, with a predominant focus on the development new stereoselective glycosylation approaches. The chemical synthesis of complex carbohydrates generally involves the coupling of a fully protected glycosyl donor bearing a leaving group at its anomeric center, with a suitably protected glycosyl acceptor (R-OH). In many instances, these reactions lead to a mixture of two stereoisomers. To this day, the stereoselective synthesis of glycosides remains one of the biggest challenges in carbohydrate chemistry. [1,2]

Herein, we will be discussed the development of direct catalytic and practical methods for the α-stereoselective synthesis of deoxyglycosides from glycals using metal and organo catalysis. We have reported the first example of Gold (I) and a non-Π-allyl-mediated Pd(II) catalysed direct and stereoselective glycosylation of glycal enol ethers. The methods are mild and tolerant of a wide range of protecting groups on both the alcohol (primary and secondary) and glycal substrates. Both the reactions are mechanistically different and interesting will also be discussed [3]



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