

# **Glycosylations - with and without catalysts**

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While glycosylation chemistry traces its roots back to the Fischer era, several challenges persist. Controlling stereoselectivity remains elusive, prompting the emergence of new methods for achieving more selective reactions in the past decade. Despite the promise shown by novel leaving groups, catalysts, and advanced ligands, their applicability often extends only to specific glycosylation reactions or operates on a limited scale. Our focus lies in catalytic glycosylations using simple reagents, with the aim of making these processes accessible to a broader audience. To identify optimal conditions, we have conducted mechanistic studies. This lecture delves into our discoveries regarding self-promoted glycosylations and the development of highly atom-economic methods.