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## Reagent Controlled Synthesis of 1,2-cis-Oligosaccharides

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## Propositions

### Reagent Controlled Synthesis of 1,2-*cis*-Oligosaccharides

1. An efficient glycosylation method is characterized not only by a high yield and good stereoselectivity, but also by the use of small amounts of reagents and applicability on large scale.  
X. Zhu and R. R. Schmidt, *Angew. Chem. Int. Ed. Engl.* **2009**, *48*, 1900-1934.
2. The use of nucleophilic additives in glycosylation reactions allows one to control the stereoselectivity of the reactions, regardless of the structures of the donor and acceptor.  
H. Yao, M. D. Vu and X.-W. Liu, *Carbohydr. Res.* **2019**, *473*, 72-81.
3. An important advantage of exogenous nucleophile-controlled glycosylation reactions is that simplified protecting group schemes can be used, making the preparation of glycosyl building blocks more straightforward.  
S. K. Mulani, W.-C. Hung, A. B. Ingle, K.-S. Shiau and K.-K. T. Mong, *Org. Biomol. Chem.* **2014**, *12*, 1184-1197; and *This thesis*.
4. The use of exogenous nucleophiles (“additives”) to modulate glycosylation reaction stereoselectivity has opened up a new avenue for the assembly of oligosaccharides.  
*This thesis*.
5. The nature of the adduct, formed from an activated glycosyl donors and a nucleophilic additive, is all important for the outcome of the glycosylation reaction in which they partake.  
*This thesis*.
6. The conception of an “additive toolbox” with modulators of known reactivity to match the reactivity of both the donor and acceptor in a predictable manner will streamline the assembly of (complex) oligosaccharides.  
*This thesis*.
7. The glycosylation of unusual acceptors continuously pushes the limits of well-established glycosylation methods.  
B. Yu, *Acc. Chem. Res.* **2018**, *51*, 507–516.
8. Understanding and harnessing the reactivity of glycosyl acceptors is crucial for the development of more general glycosylation methodology.  
S. van der Vorm, T. Hansen, J. M. A. van Hengst, H. S. Overkleeft, G. A. van der Marel and J. D. C. Codée, *Chem. Soc. Rev.* **2019**, *48*, 4688-4706.
9. Solitude can drive one to excellence (独处使人优秀).