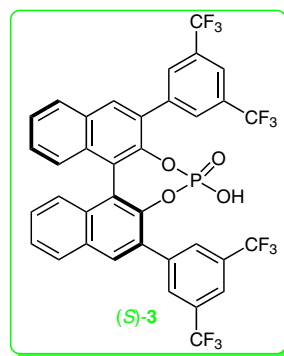
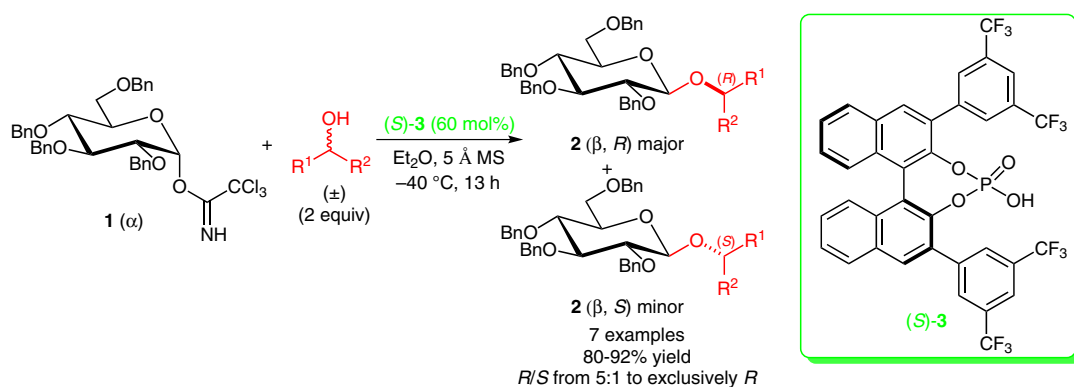
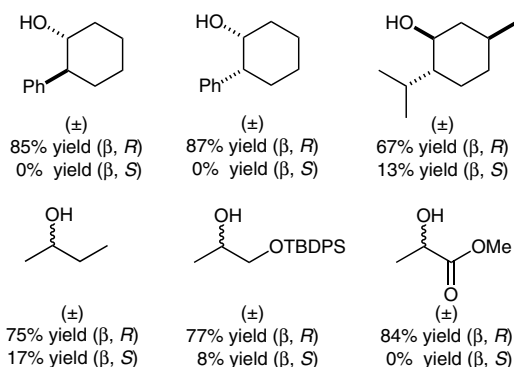


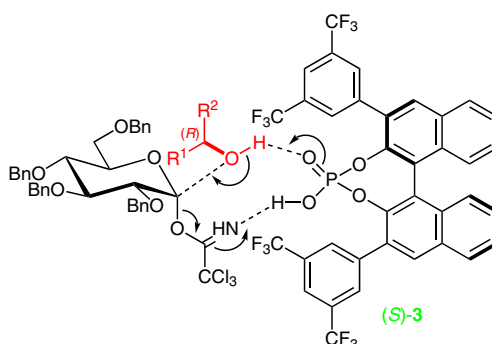
# Phosphoric Acid Mediated Glycosylation and Alcohol-Chirality Recognition



## Selected examples:



## Reaction pathway:



**Significance:** Toshima and co-workers report a highly  $\beta$ -selective glycosylation of  $\alpha$ -trichloroacetimidates **1a** with various secondary alcohols. The diastereoselectivity is moderate to excellent, and the reaction is mediated by the phosphoric acid (*S*)-**3**. According to mechanistic studies, the exclusive  $\beta$ -selectivities are obtained through a (*S*)-**3**-mediated  $\text{S}_{\text{N}}2$  reaction pathway. The methodology was also applied to the total synthesis of a natural flavan glycoside using a racemic aglycone.

**Comment:** Glycosylation is an important synthetic method to construct sugar moiety containing compounds. Here, the authors report a novel Brønsted acid mediated glycosylation, and a kinetic resolution of secondary alcohols occurs during the process at the same time. This methodology provides a straightforward way for the synthesis of sugar-derived products with high stereoselectivity.