

**Regioselective and reductive cleavage of allyl ethers by NaBH<sub>4</sub>-HOAc**

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$\beta$ -Enaminals were successfully synthesized in good to excellent yields by the reaction of C2-formylglycals with primary amines. Subsequent reaction with NaBH<sub>4</sub> in HOAc led to unexpected reductive cleavage of allyl ether, i.e., the hydrodealkoxylation took place to produce the corresponding 3-deoxy- $\beta$ -enaminals. In contrast, the reaction of  $\beta$ -enaminals with Zn/HOAc performed H4-elimination to afford a diene product. The result was attributed to the formation of a common eniminium ion intermediate, and the different reduction reactivity.