## 练习二 (Reactions of carbonyl groups)

1. Draw the transition states of the following two reduction reactions and analyze their diastereoselectivity.

2. Explain the products of the reaction of cyclohexanone with the following carbon nucleophiles.

3. Propose a mechanism for the reaction below.

## 4. Propose a mechanism for the reaction below.

OSiMe<sub>3</sub> O OH + PhCHO 
$$Bu_4NF$$
 Ph

## 5. Propose a mechanism for the reaction below.

## 7. Propose a mechanism for the reaction below.