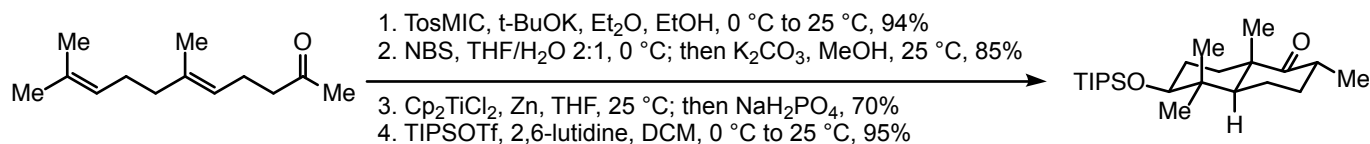
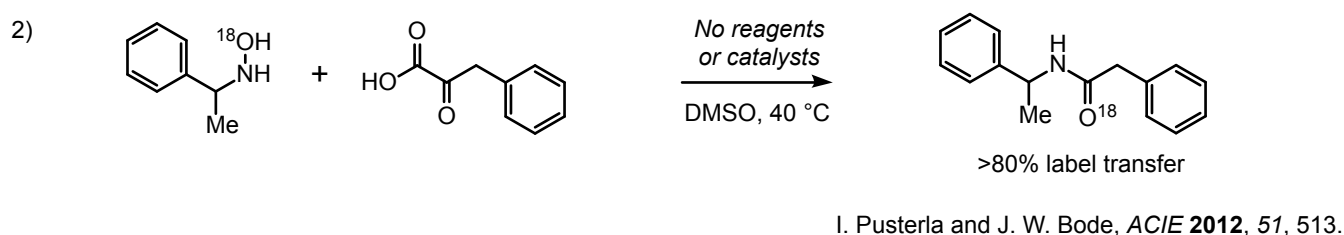
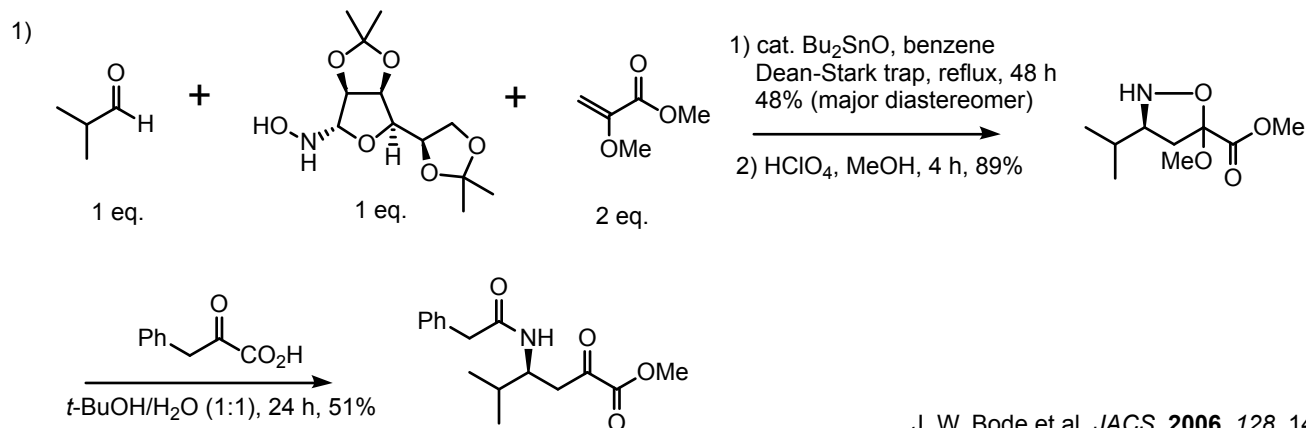


Provide reasonable arrow-pushing mechanisms for the following reactions.



5. LDA, DCM, THF,  $-100\text{ }^\circ\text{C}$  to  $60\text{ }^\circ\text{C}$ ;  
then  $\text{LiClO}_4$ ,  $\text{CaCO}_3$ , DMPU,  $140\text{ }^\circ\text{C}$ , 80% (2:1 r.r.)

6.  $n\text{-BuLi}$ ,  $\text{C}_2\text{H}_2$ , THF,  $-78\text{ }^\circ\text{C}$  to  $-40\text{ }^\circ\text{C}$ ; then PivCl, 25 °C, 95%

7. NCS,  $\text{Au}(\text{PPh}_3)\text{Cl}$  (2.5 mol%),  $\text{AgOTf}$  (2.5 mol%)  
DCM, 25 °C, 65%

