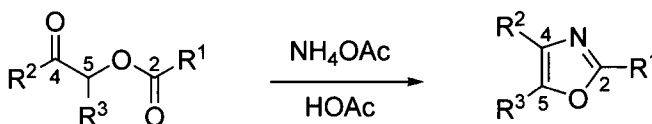


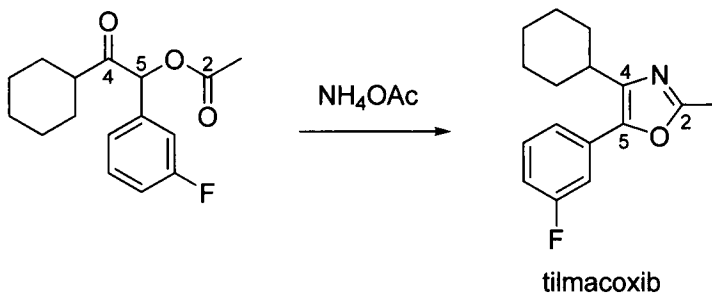
Davidson oxazole synthesis

The Davidson oxazole synthesis is the reaction of an acylated α -hydroxy carbonyl with an ammonium cation, typically ammonium acetate to yield oxazoles.²¹ The Davidson synthesis is also linear, as all three substituents are contained in the precursor. The reaction is most efficient in preparing 2,4,5-trisubstituted oxazoles, where C5 is aryl substituted. Yields suffer when preparing a 2,4-disubstituted or a mono-substituted oxazole.²² The COX-2 inhibitor tilmacoxib was prepared by Haruta in this manner.²²

The Davidson Oxazole Synthesis



Haruta's Application:



Wipf-Williams oxazole synthesis

Wipf and Williams recently reported a one-pot synthesis of oxazoles from β -hydroxy amides.²³ Similar to other dehydrative methods, these groups expanded on the use of electrophilic fluoride reagents,^{24,25} namely diethylaminosulfur trifluoride (DAST) and bis(2-methoxyethyl)aminosulfur trifluoride (Deoxo-Fluor), by demonstrating the high functional group tolerance of this system. The high functional group tolerance is demonstrated by the oxazole synthesis in the presence of a chemically labile epoxide.