Total Synthesis of (-)-lasonolide A

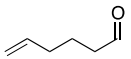
Julia Liu

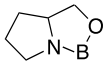
Synthesis Plan for (-)-Lasonolide A

Scheme 1. Devised synthesis plan

Synthesis of subtarget

Synthesis of subtarget 2





Weinreb amide synthesis and Grignard addition

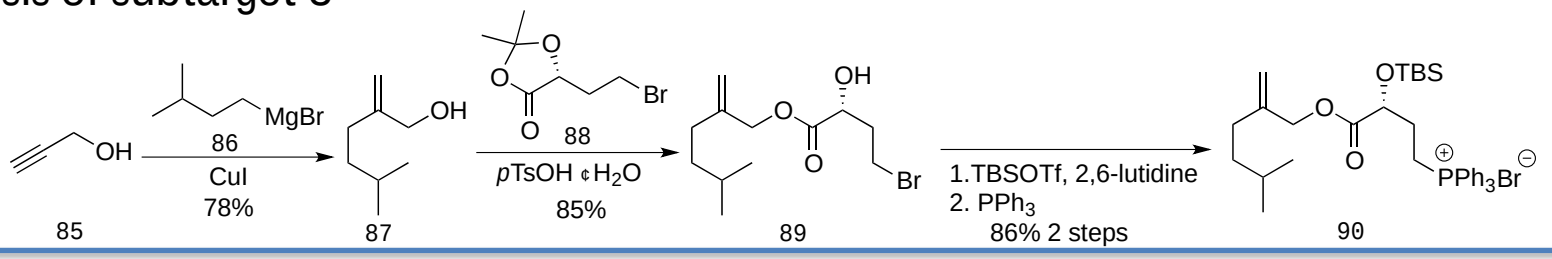
(S)-CBS reduction

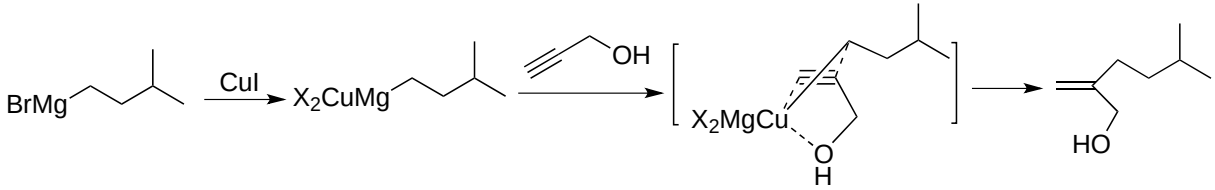
Synthesis of subtarget 2

Allyic oxidation with MnO_2

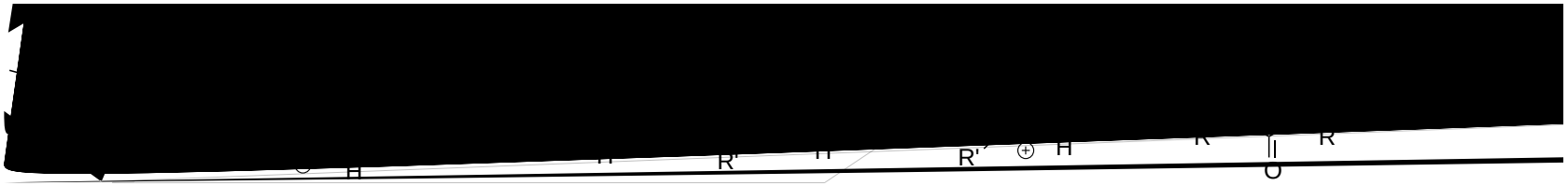
HWE reaction

Synthesis of subtarget 3





Carbometallation of propargyl alcohol



Acid-catalyzed ester formation

Phosphonium halides formation

Synthesis of subtarget 3

NaH, THF

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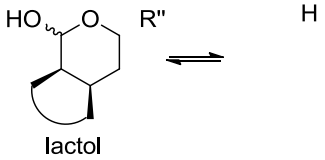
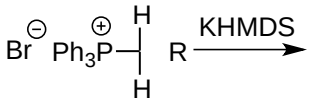


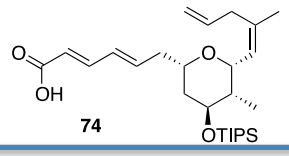
HWE rxn

Ester reduction



Wittig rxn

Synthesis of (-)-Lasonolide A



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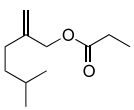
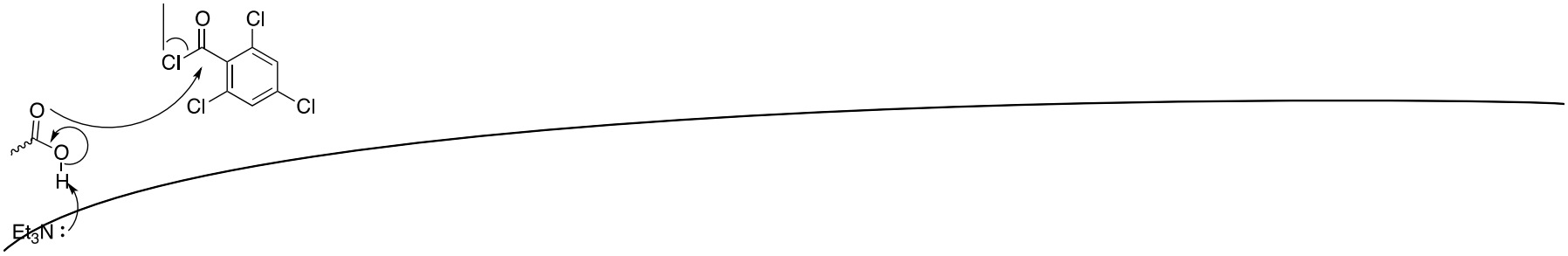
Ru-catalyzed alkene-alkyne coupling

Synthesis of (-)-Lasonolide A





Yamagushi macrolactonization