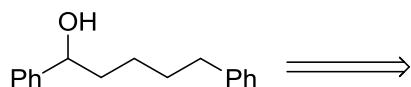


Problem Class – Spivey Group – March 2013

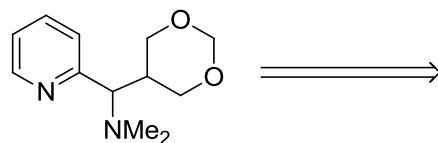
Zsofia Heckenast

1. Retrosynthesis

a) Give four different retrosynthetic analyses, breaking different bonds each time, with or without derivatisation.

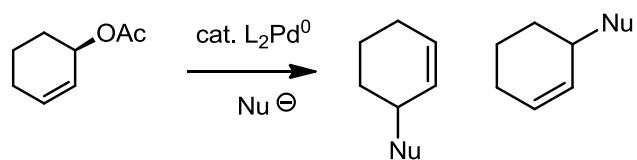


b) retrosynthetic analysis of Doxpicomine

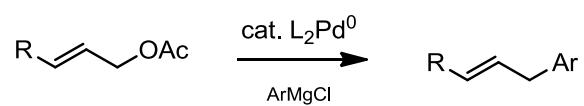


2. Transition Metal Chemistry - Tsuji-Trost reaction

a) Mechanism with Soft Nucleophiles ($pK_a < 25$)

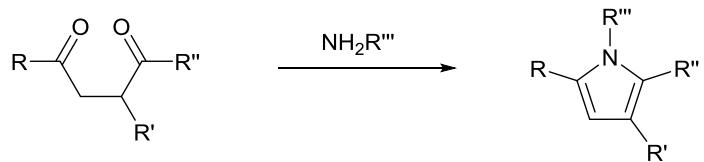


b) Mechanism with Hard Nucleophiles ($pK_a > 25$)

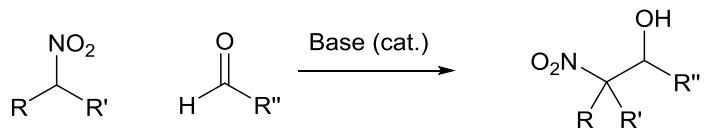


3. Named Reactions

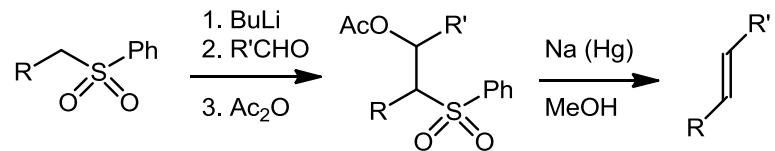
a) Name and mechanism?



b) Name and mechanism?

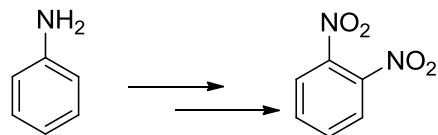


c) Name and mechanism?



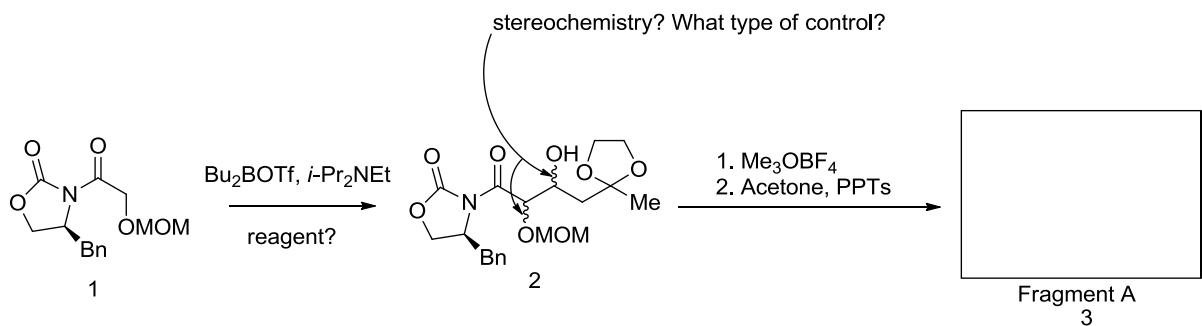
4. Aromatic reactivity - Directing effects:

Synthesis of 1,3-dinitrobenzene?

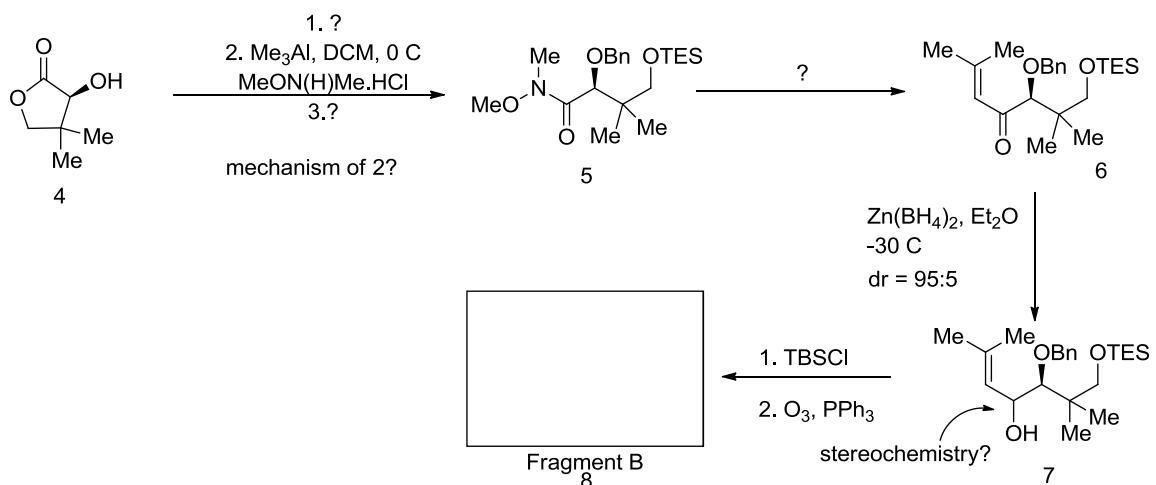


5. Total synthesis of (+)-Peluroside A

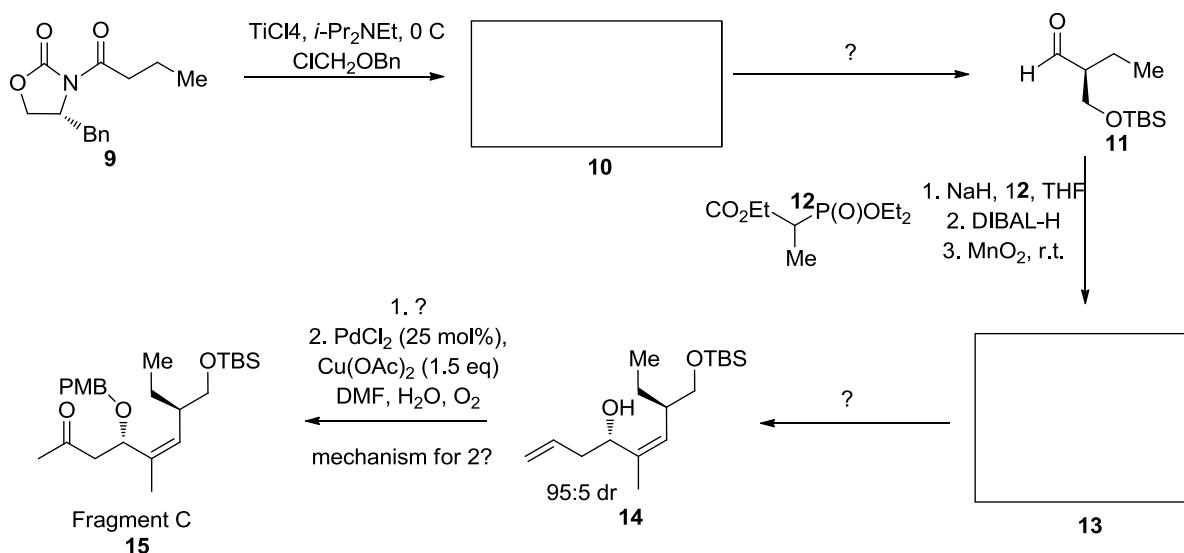
Fragment A



Fragment B



Fragment C



Fragment Assembly

