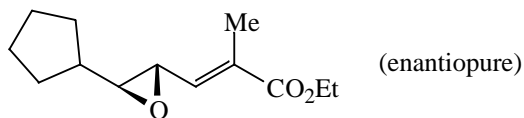


CHE 535, SPRING 2001

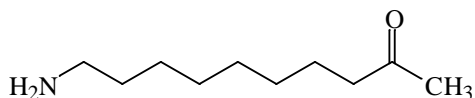
Problem Set 4

Design stereoselective syntheses of each of the following compounds from starting materials that are offered for sale by Lancaster or any other commercial supplier. *Show BOTH your retrosynthetic analysis AND your synthesis in the forward direction.* (If that means you have to draw some structures twice (gasp!), so be it.) Offer literature references for all but the most obvious steps.

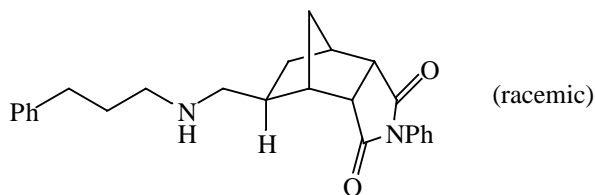
(a)



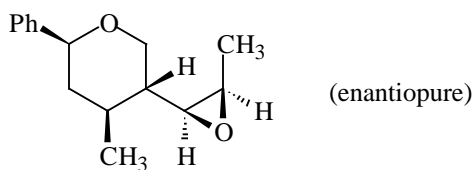
(b)



(c)



(d)



(e) The OH groups are anti in the ring; you know how to make enantiopure 1,2-diols from alkenes, but in syn fashion. How can you retrosynthetically convert the anti diol into a syn diol?

