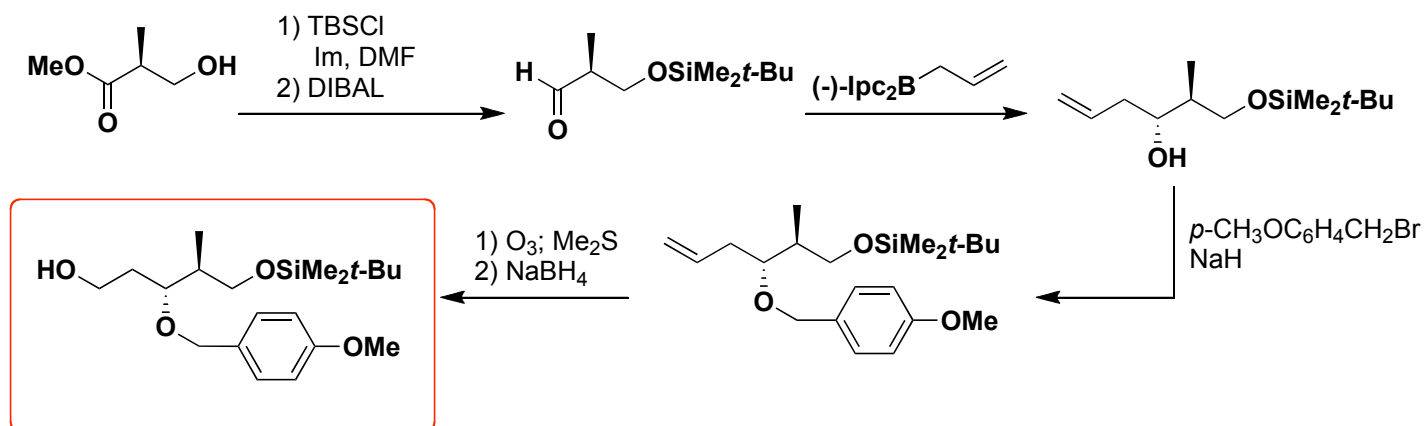


Massachusetts Institute of Technology Organic Chemistry 5.511

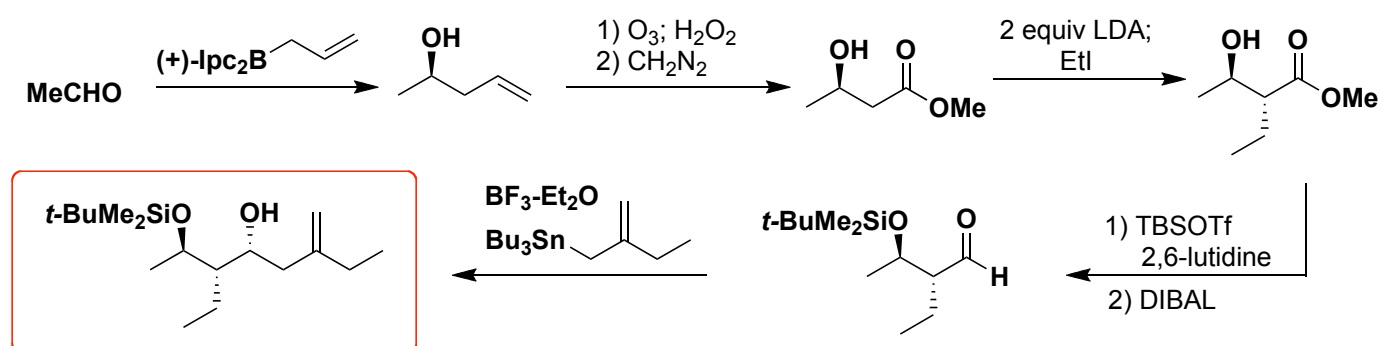
Dec. 1, 2007

Problem Set 9 Solutions Stereocontrolled Addition of Allylmetal Compounds

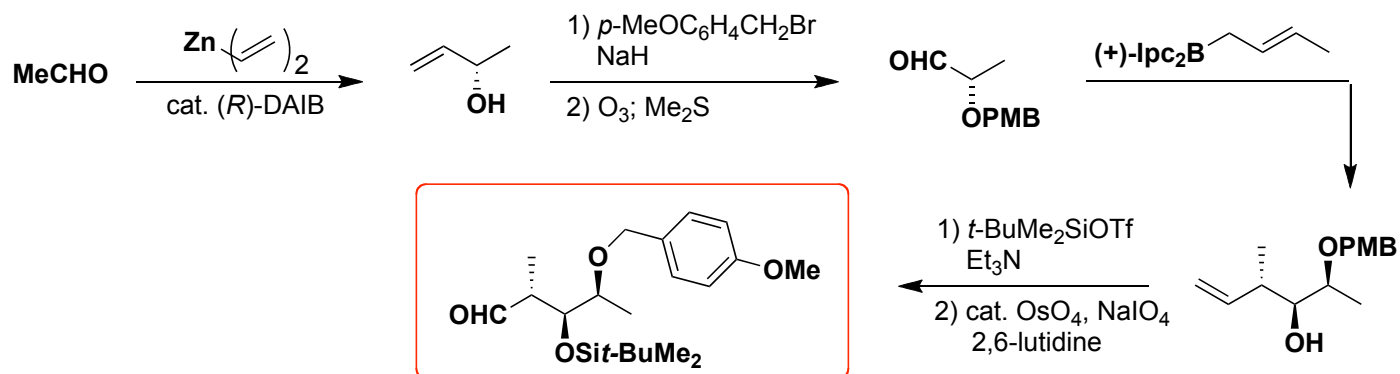
(1) See also K. Buzek. *J. Am. Chem. Soc.* **1994**, 116, 5511.



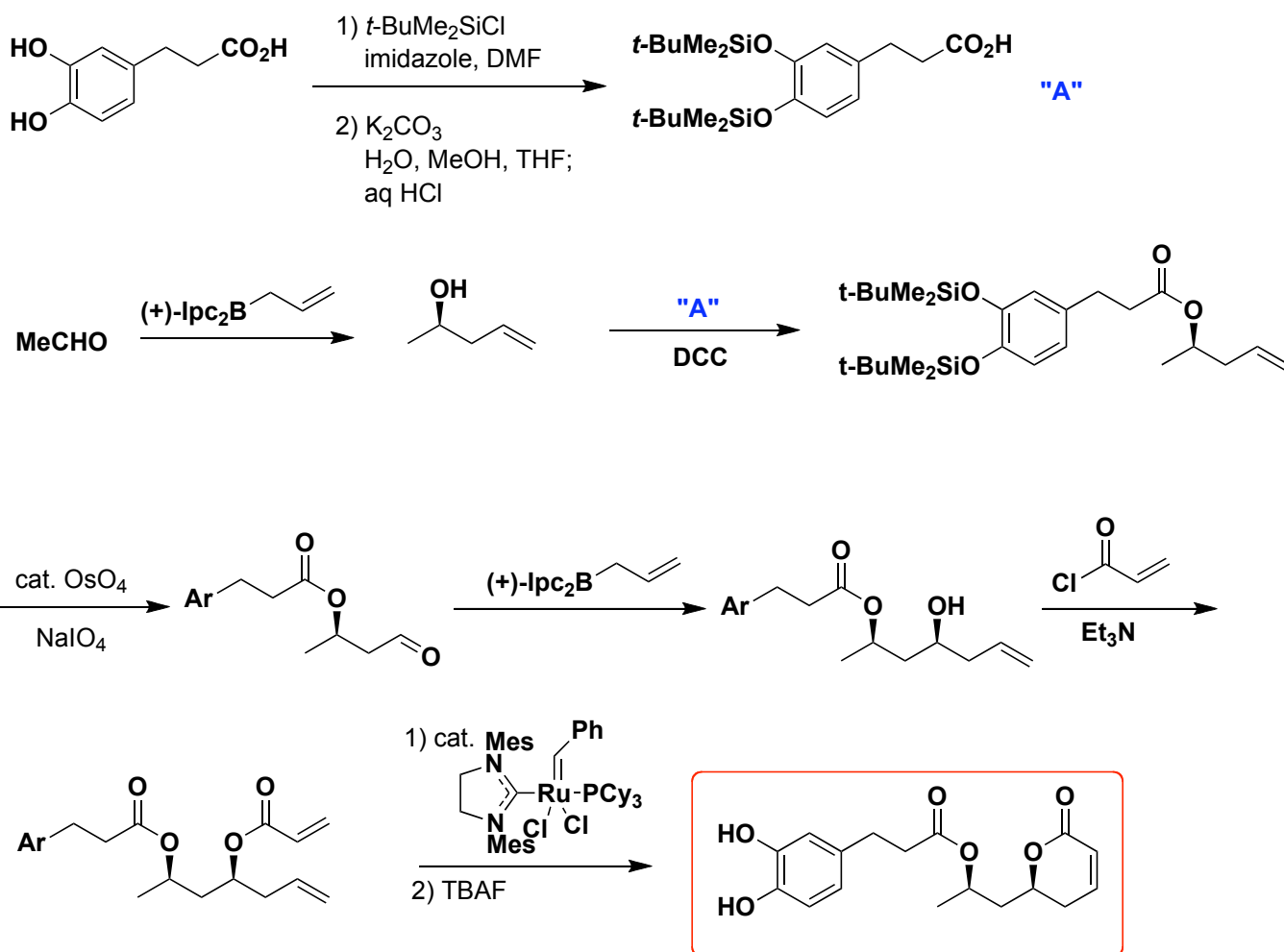
(2) See D. A. Evans. *J. Org. Chem.* **1997**, 62, 454.



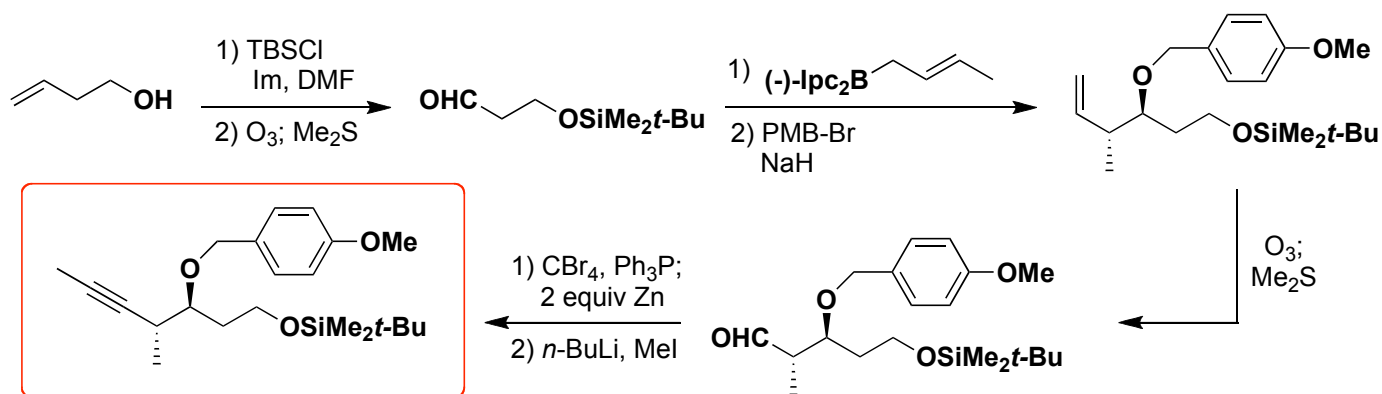
(3) See Z. Jin. *Org. Lett.* **2001**, 3, 1447.



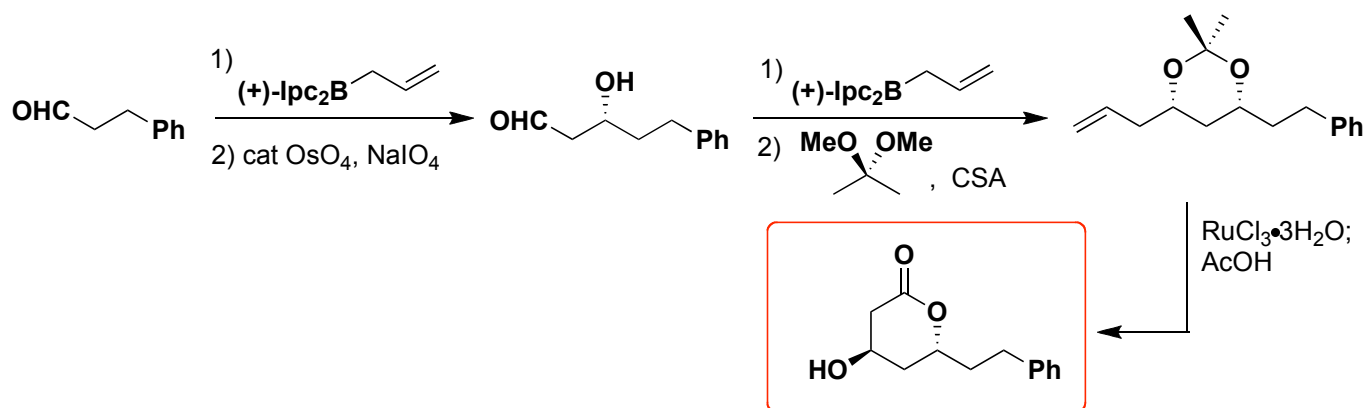
(4) See also P. V. Ramachandran *J. Org. Chem.* **2001**, 66, 2512.



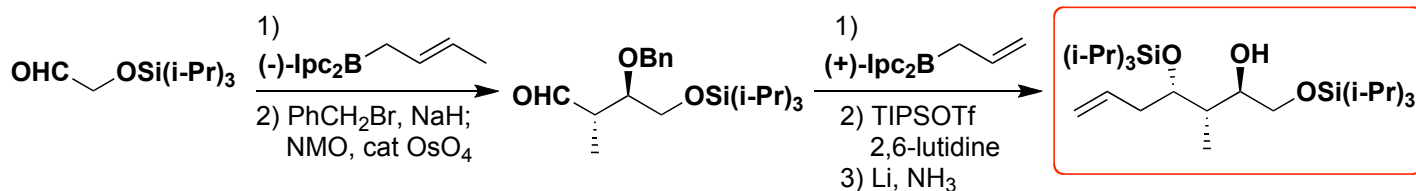
(5) See K. C. Nicolaou. *J. Chem. Soc., Chem. Commun.* **1993**, 7, 619.



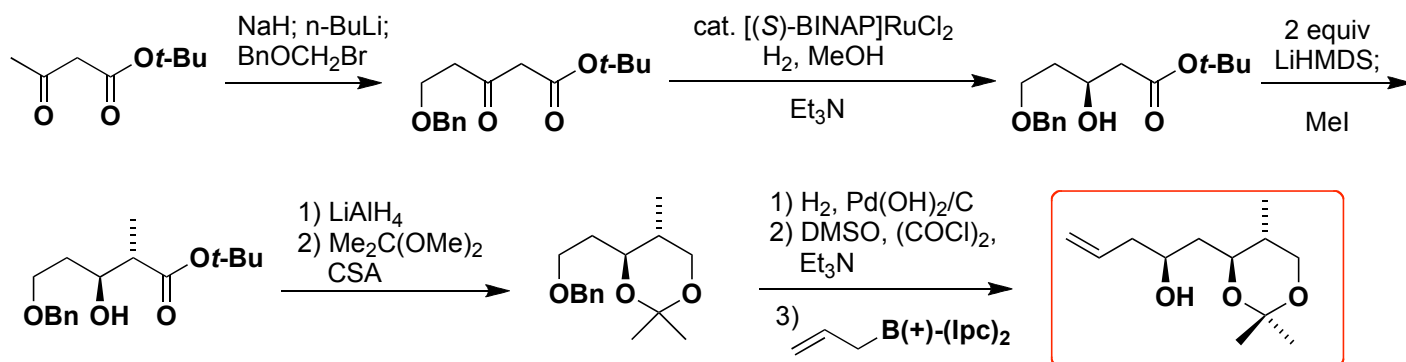
(6) See J. Cossy. *Tetrahedron Lett.* **2000**, 41, 3363.



(7) See Y. Kishi. *Angew. Chem. Int. Ed.* **1998**, 37, 190.

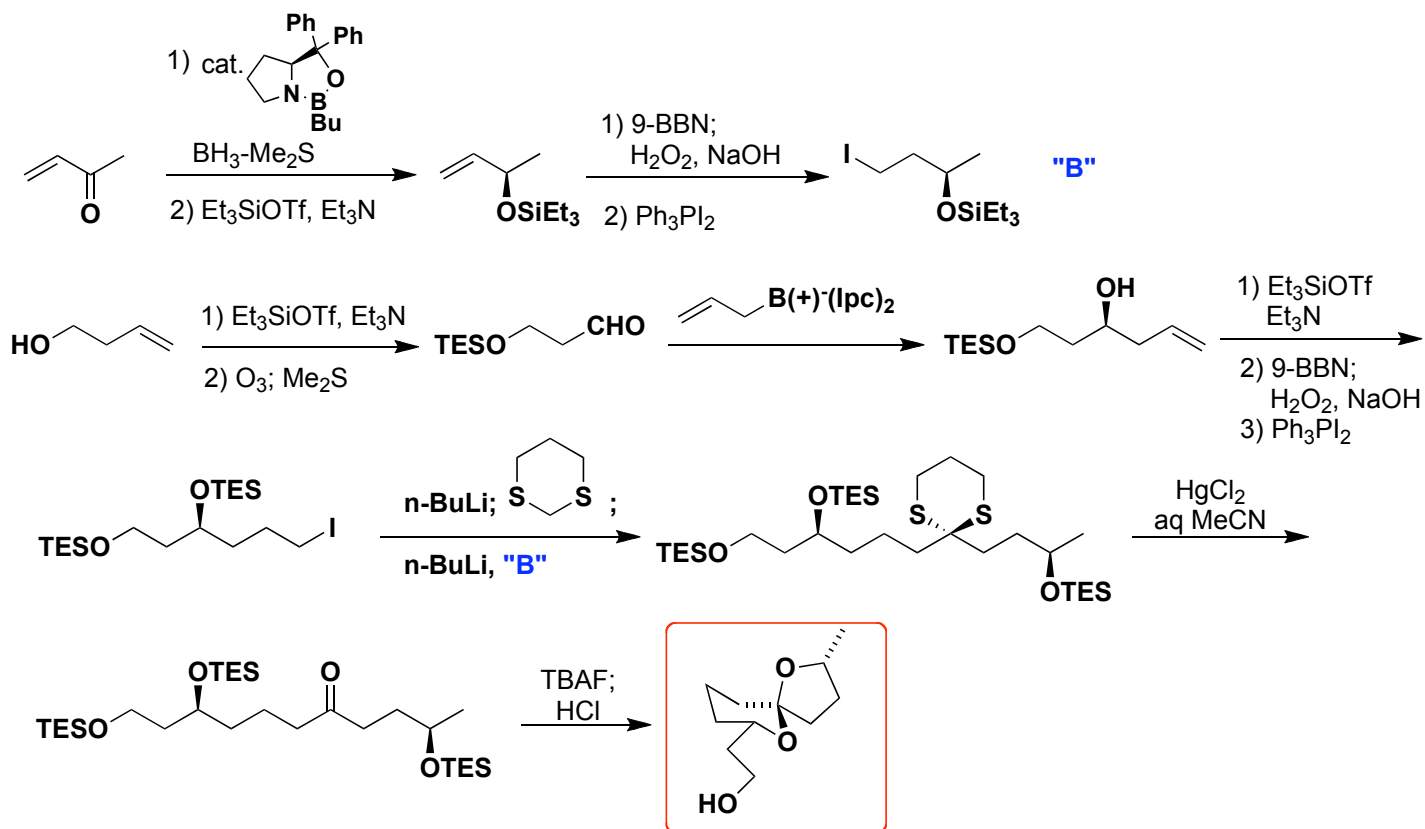


(8) See total synthesis of $(-)$ -roxaticin, S. Rychnovsky *J. Am. Chem. Soc.* **1994**, 116, 1753.

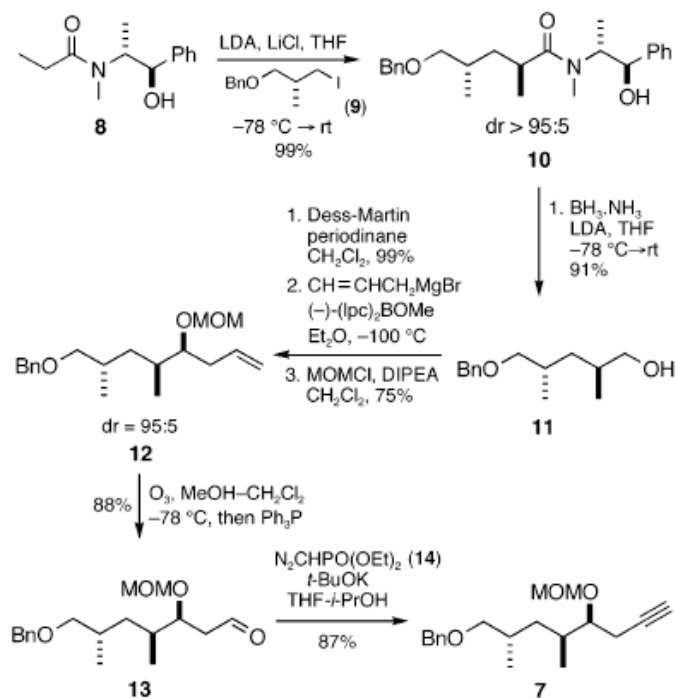


(9) Fragment of (+)-spirolaxin methyl ether.

For a recent total synthesis see M.A. Brimble *Chem. Commun.* **2005**, 1560.



(10) See Synthetic Studies on (-)-kendomycin, White, J.D.; Smits, H. *Org. Lett.* **2005**, 7, 235.



The route employed by White et al. is shown at right. Compound **9** was prepared via an oxazolidone alkylation. There are a number of alternative approaches that work out to be equally efficient.