

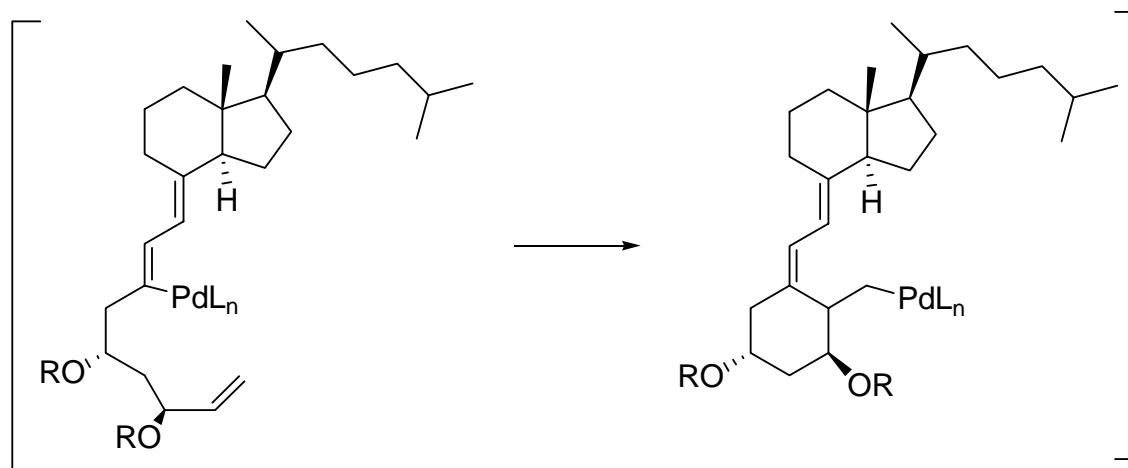
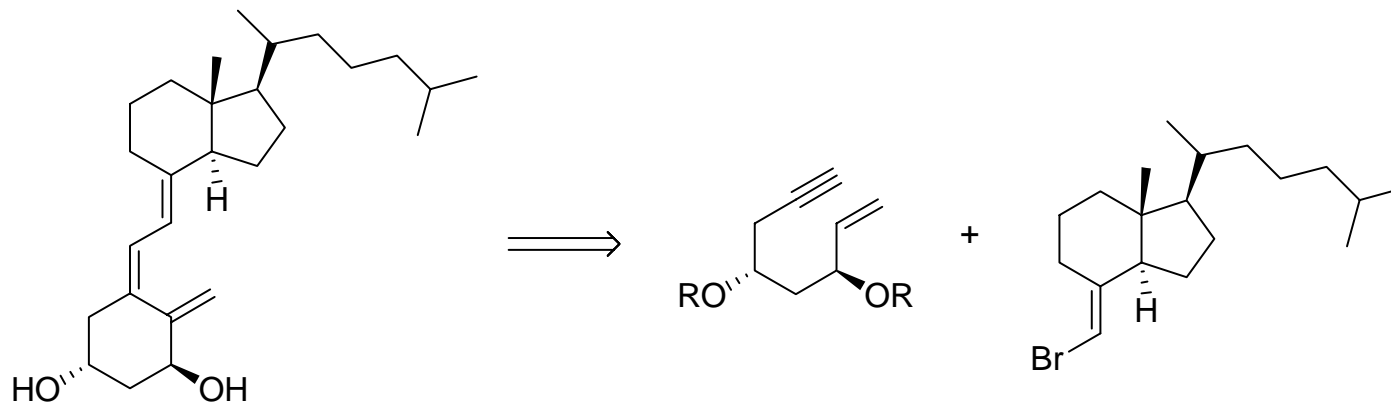
# Highlights from JACS 1992

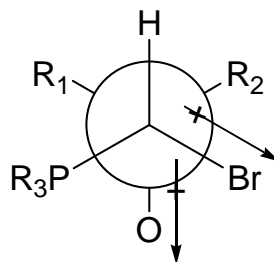
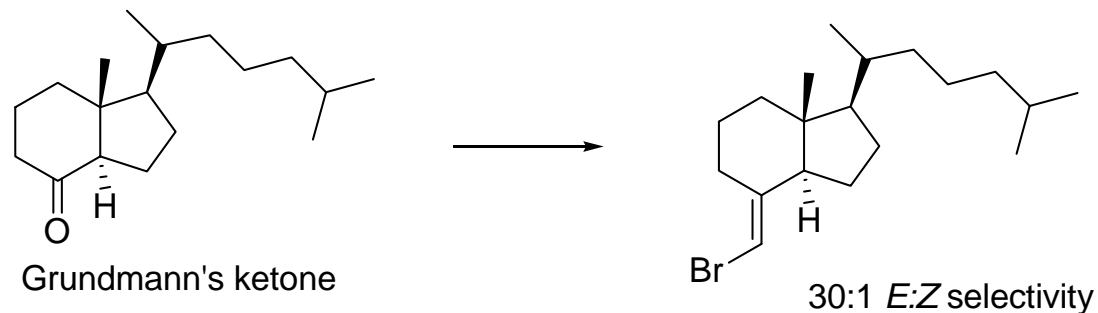
Jenny M. Baxter

June 23, 2006

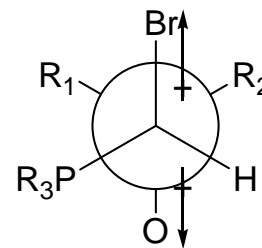
## Total Syntheses

### Trost (Stanford)-1- $\alpha$ -hydroxyvitamin D analogues (p. 1924)

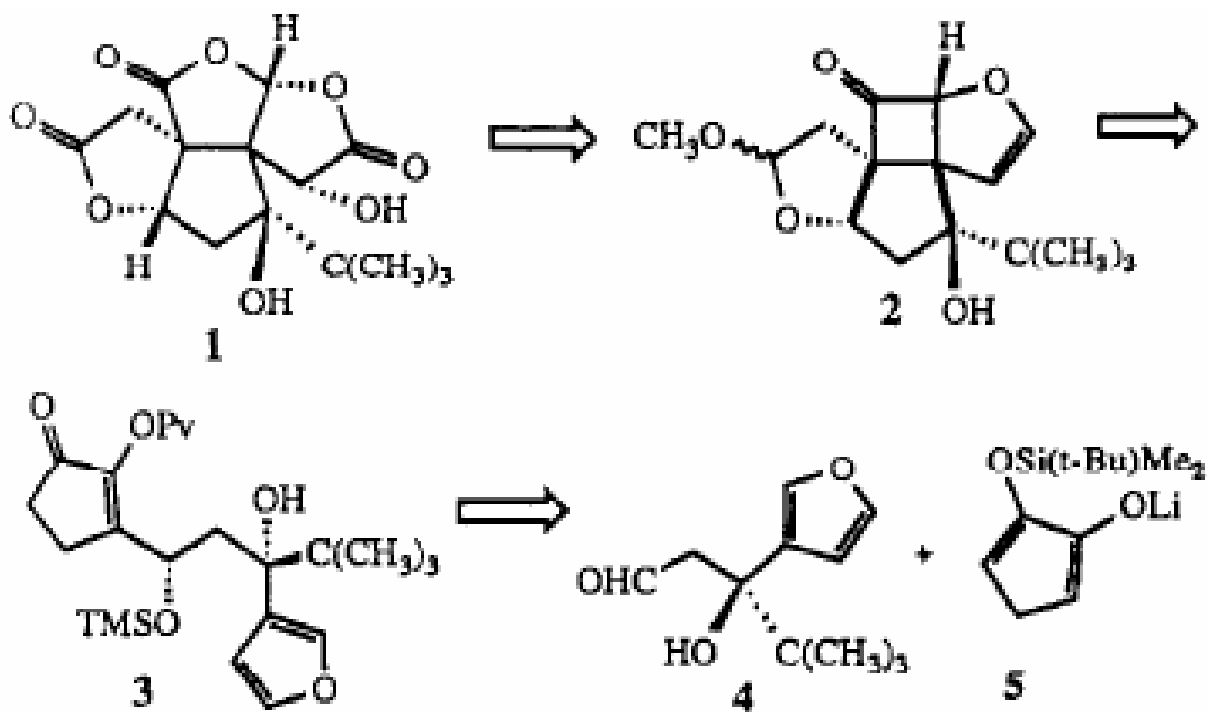


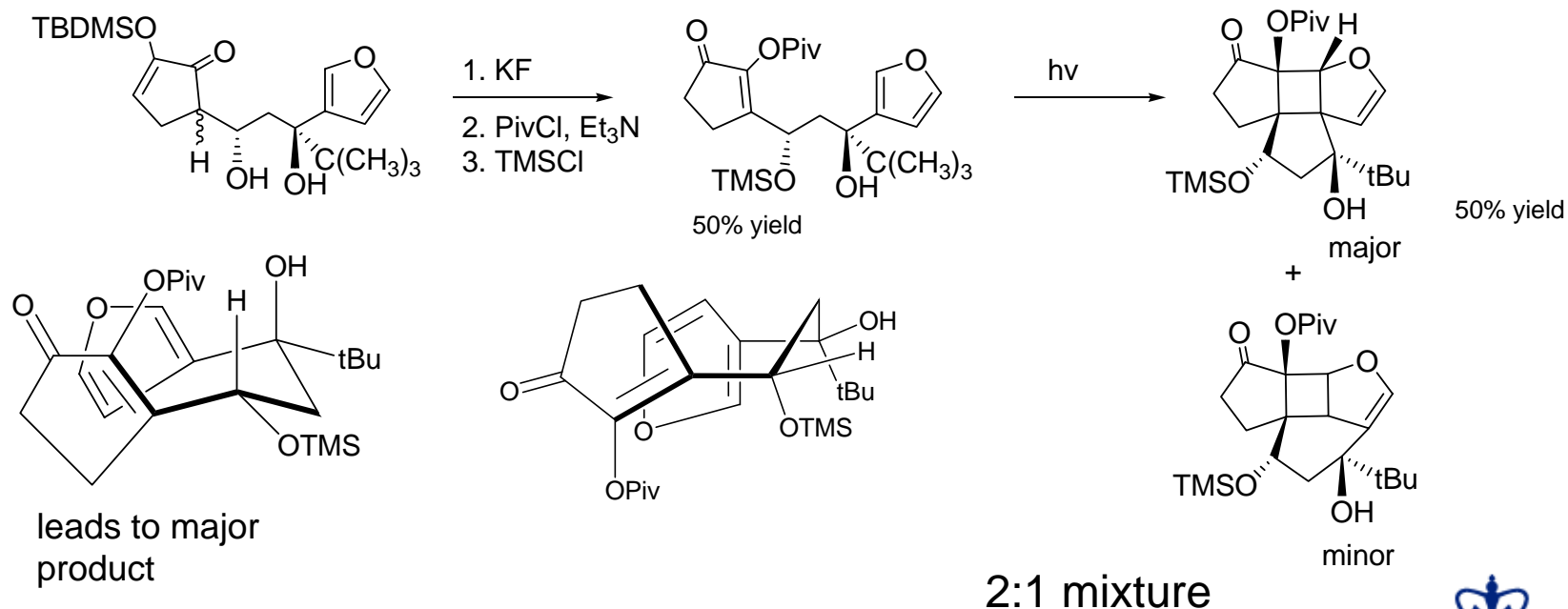
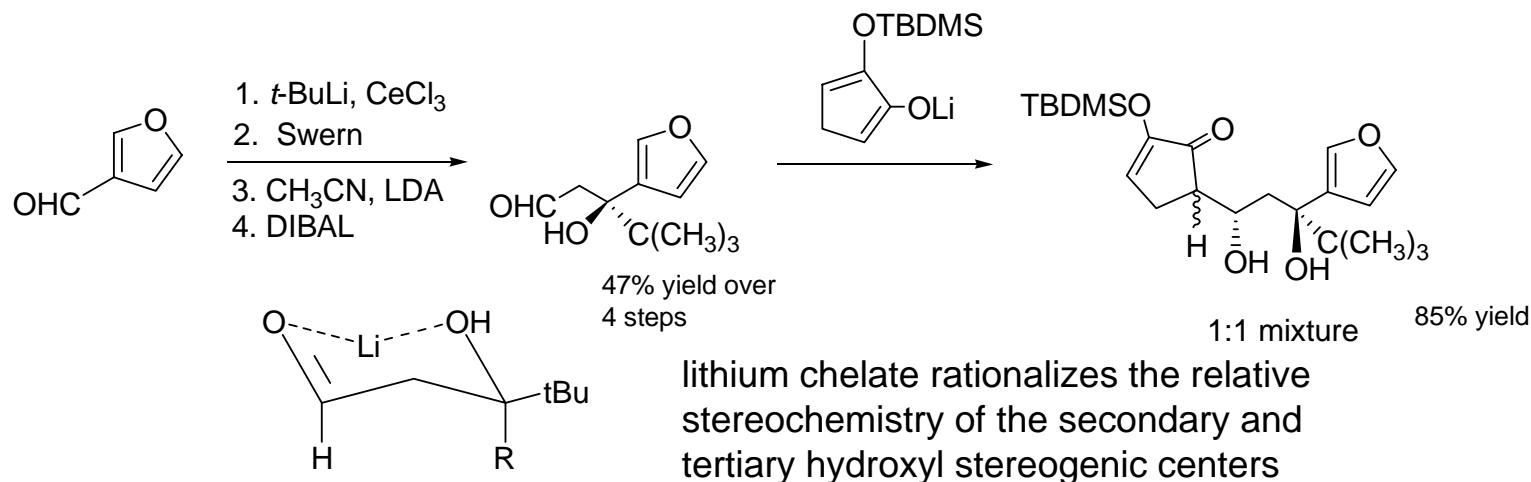


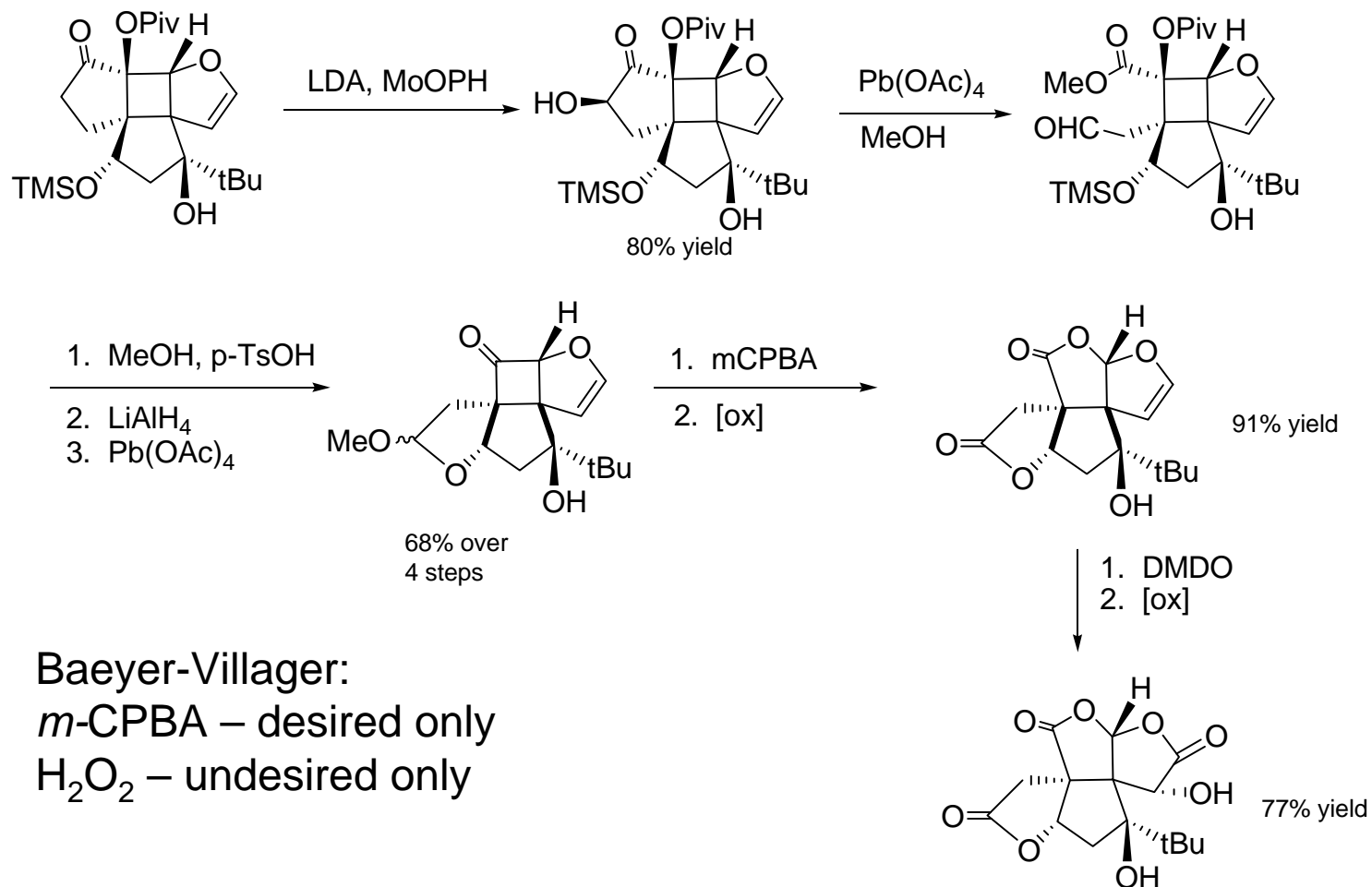
VS



“...this surprisingly high *E* selectivity derives from a dipole-dipole effect...”

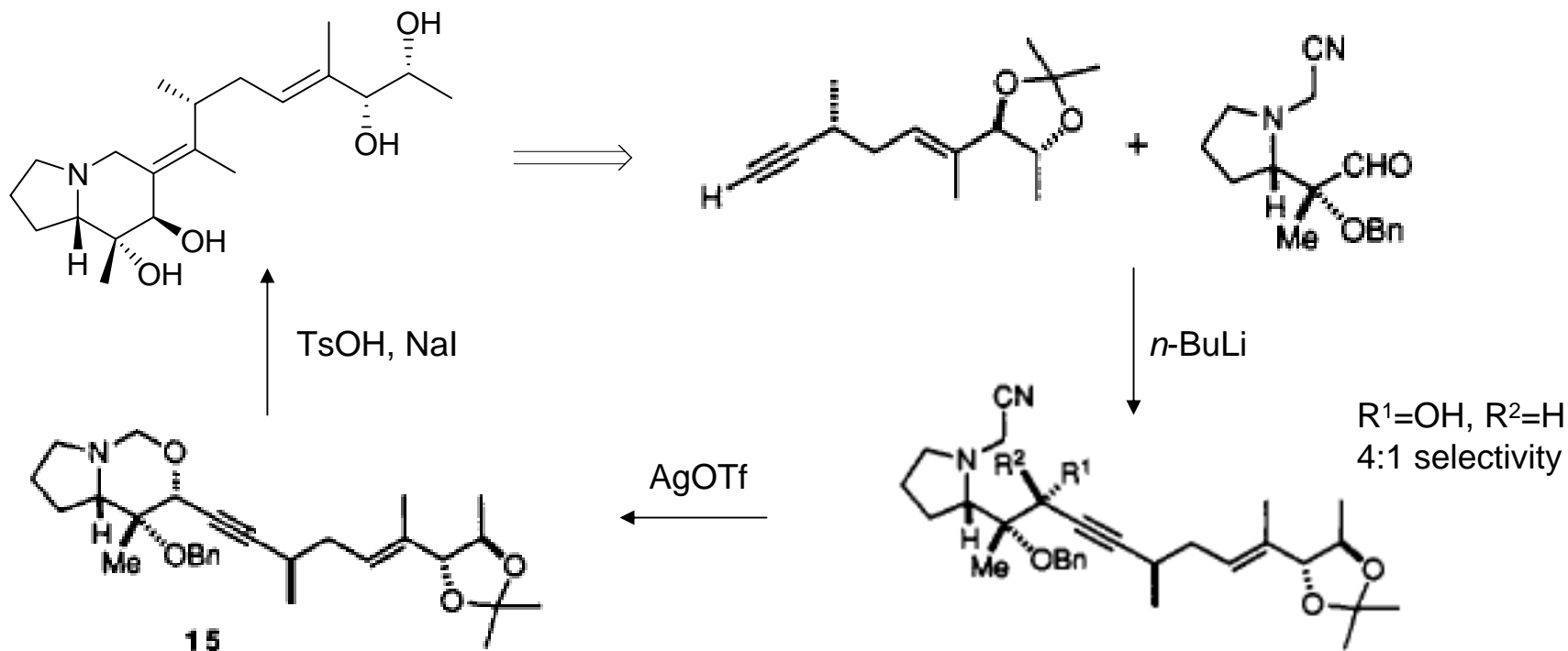
**Crimmins (UNC-Chapel Hill) Bilobalide (p. 5445)**



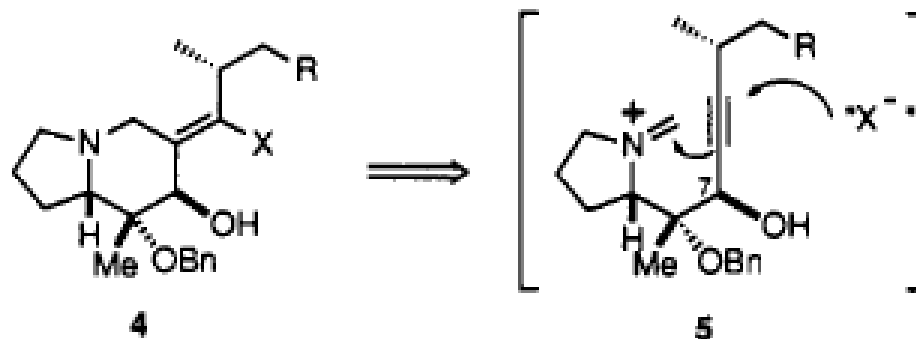


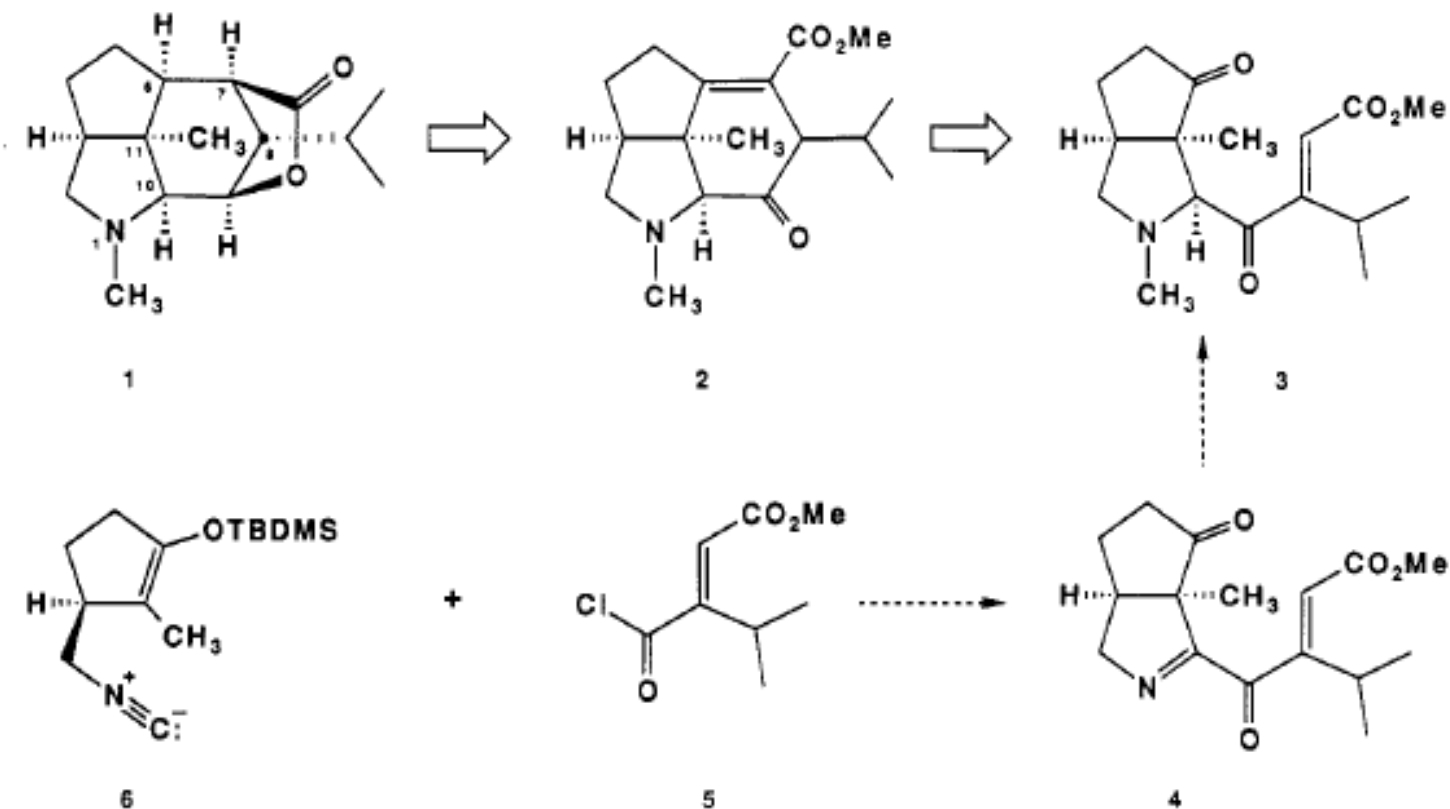
## Overman-(UC-Irvine)-Allopumilioxtoxin

16 steps; 15% overall yield

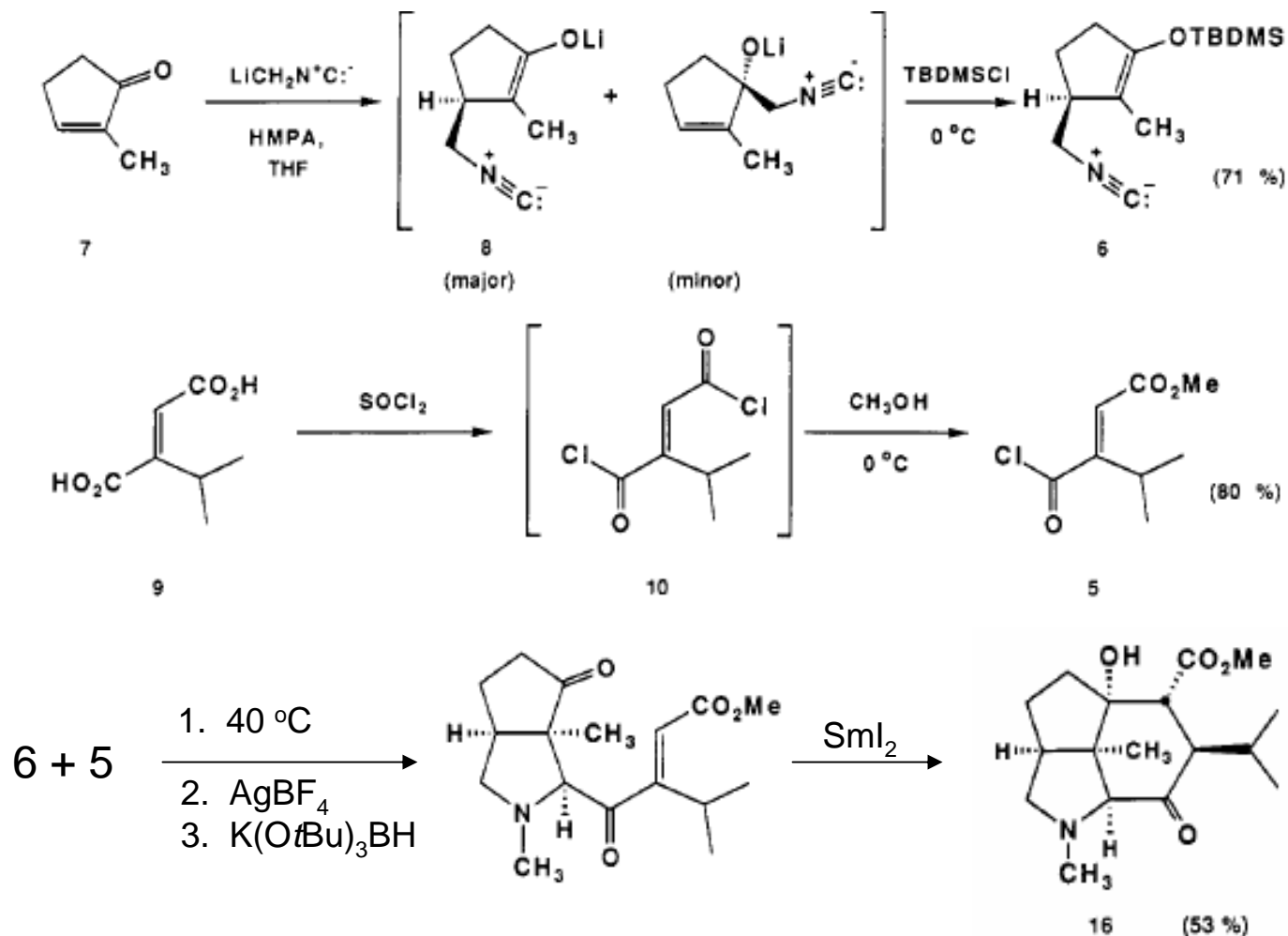


mechanism:

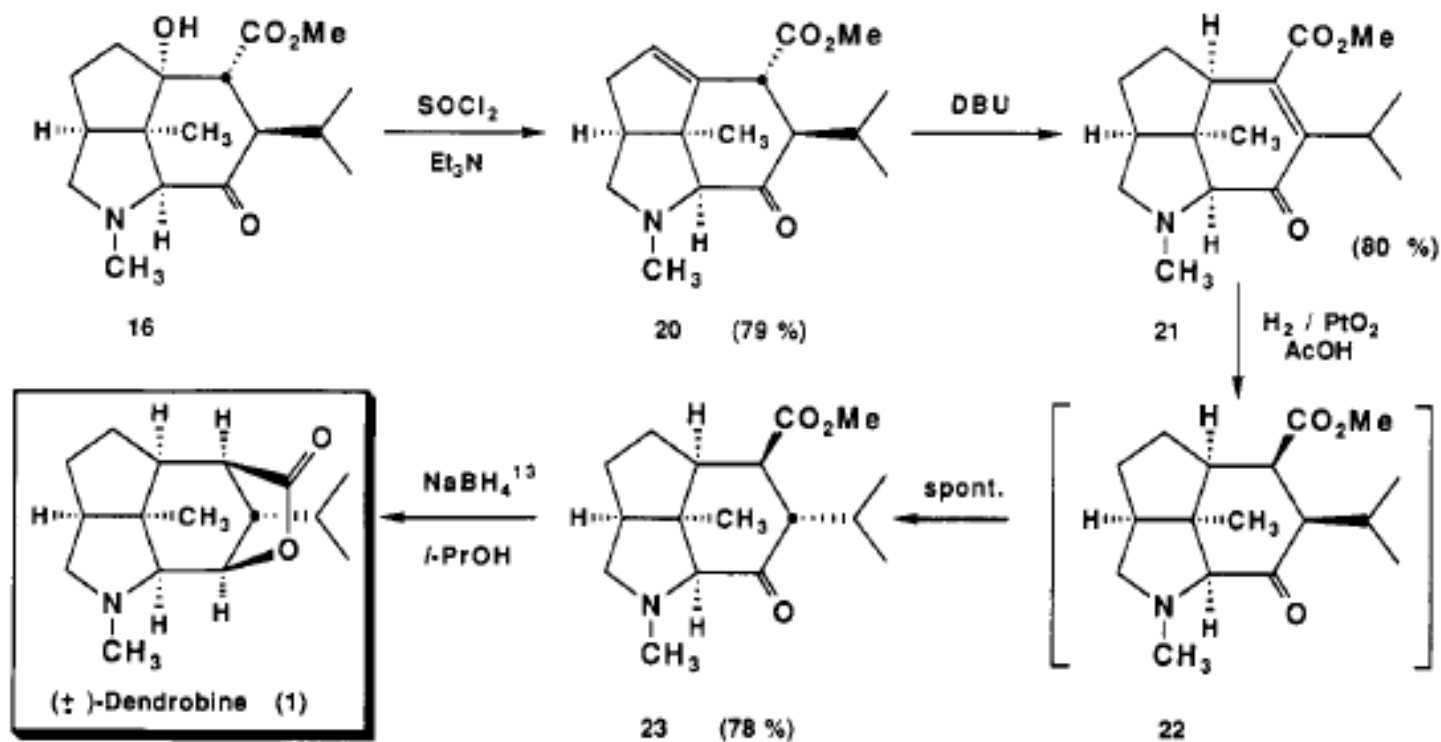


**Livinghouse (Montana State)-Dendrobine**

## Dendrobine cont'd



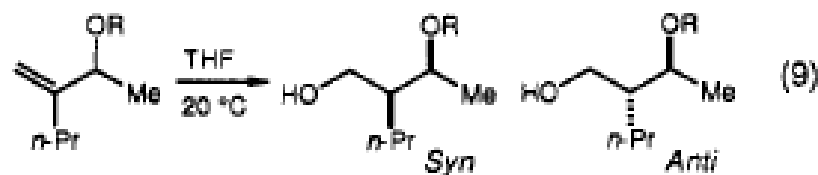
## Dendrobine cont'd



## Methodologies:

Evans, Fu, (Harvard)-metal catalyzed hydroboration (p. 6671, 6679)

Uncatalyzed and catalyzed hydroborations are complimentary methods

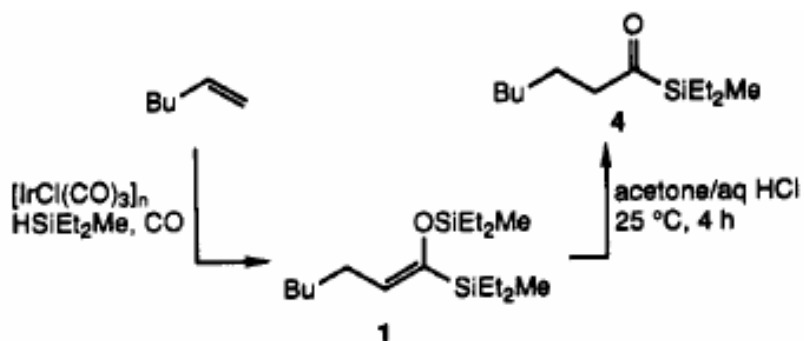


R	entry	conditions <sup>a</sup>	syn:anti <sup>b</sup>	yield (%)
H	1	A	17:83	91
	2	B	81:19	79
	3	C	50:50	60
CH <sub>2</sub> Ph	4	A	25:75	82
	5	B	80:20	63
	6	C	50:50	81
Si( <i>t</i> -Bu)Me <sub>2</sub>	7	A	13:87	85
	8	B	93:7	79
	9	C	60:40	54
Si( <i>t</i> -Bu)Ph <sub>2</sub>	10	A	15:85	84
	11	B	93:7	82
	12	C	79:21	63

<sup>a</sup> A, 3 equiv of 9-BBN; B, 3 equiv of CB and 3% Rh(PPh<sub>3</sub>)<sub>3</sub>Cl; C, 3 equiv of CB and 3% [Rh(nbd)(diphos-4)]BF<sub>4</sub>. <sup>b</sup> Ratios were determined by GC.

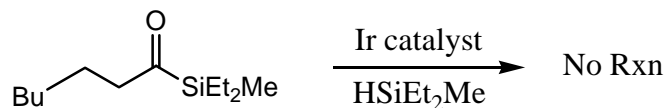


## Silylformylation-Murai (Osaka) p. 9710



regioisomer not observed

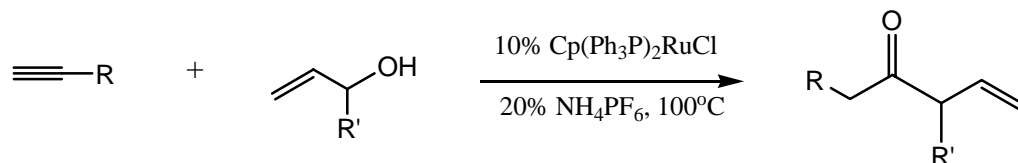
mechanism??



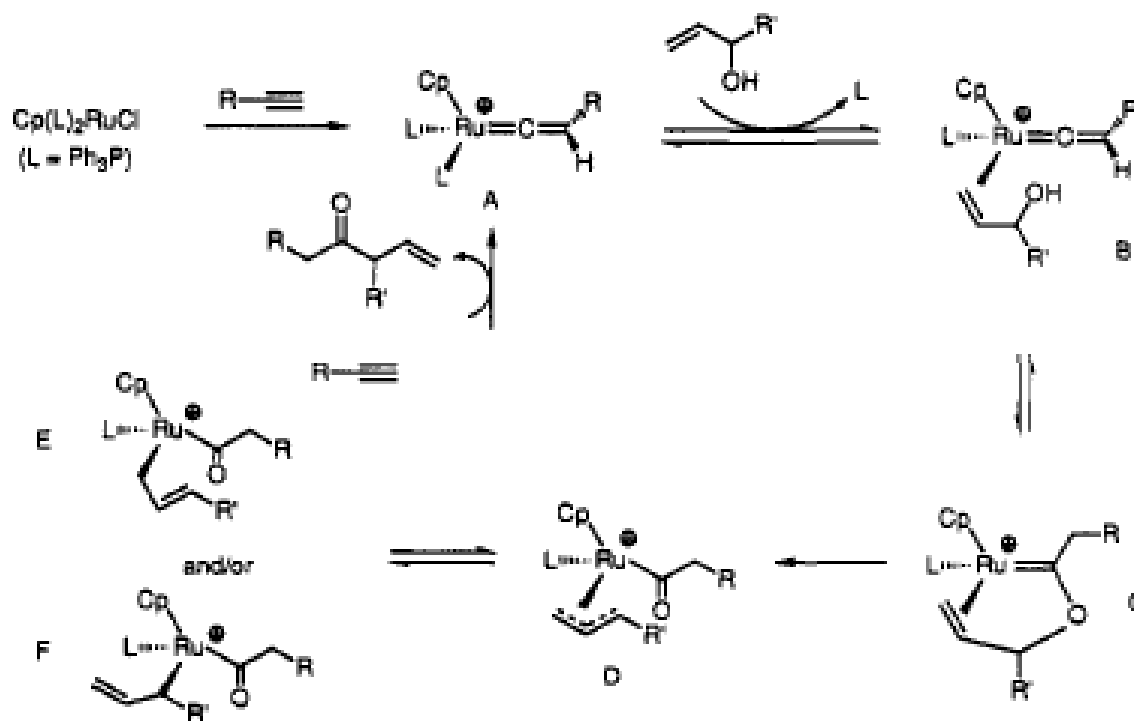
alkene	product	yield, % <sup>b</sup>	E/Z ratio <sup>c</sup>
		(50) <sup>d</sup>	72 / 28
		67	57 / 43
		73	73 / 27
		75	68 / 32
		53	79 / 21
		67	67 / 33



## Trost-Ru catalyzed enone formation (p. 5579)



mechanism:

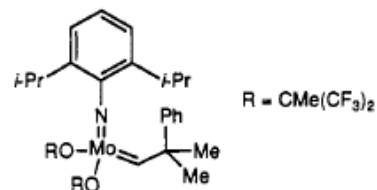


authors believe  
vinylidene-  
ruthenium complex  
serves as catalyst

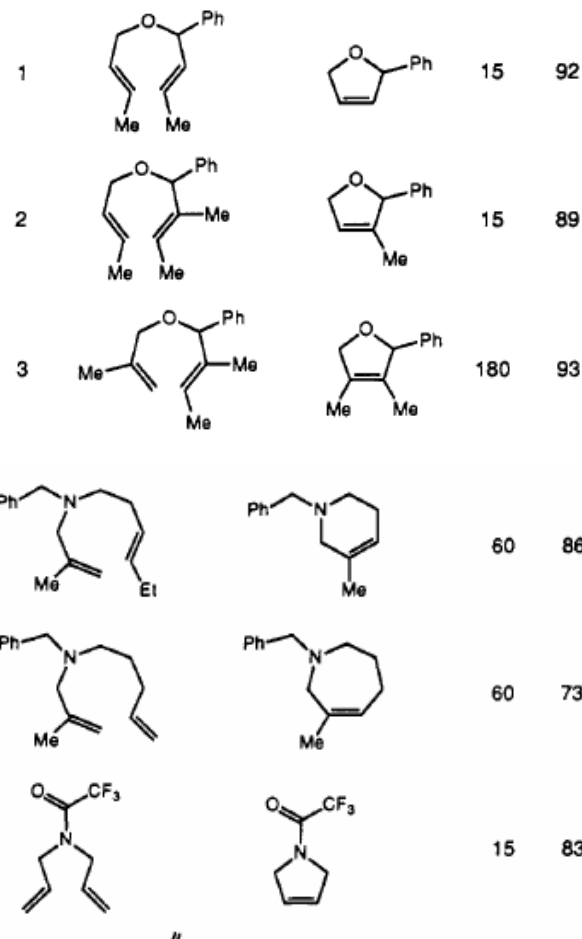
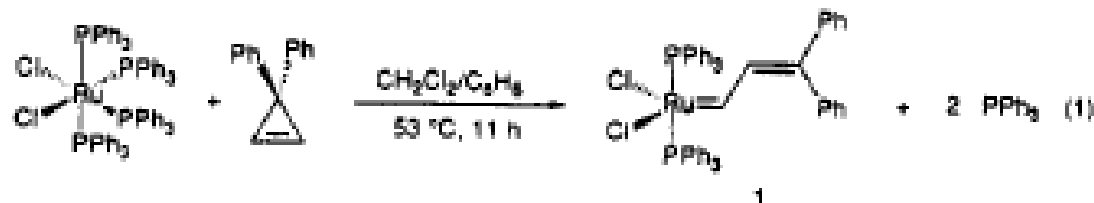
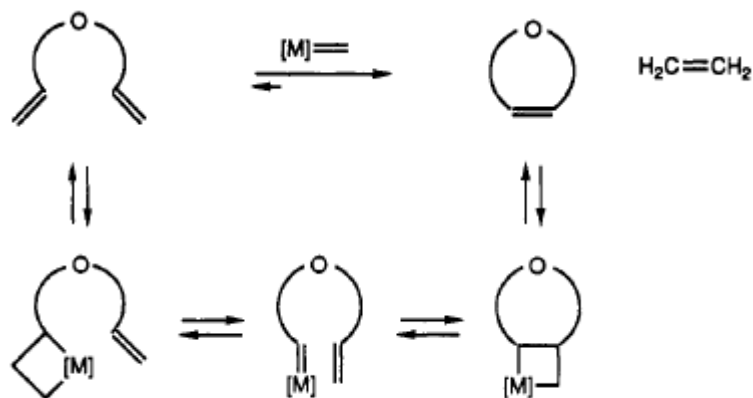


## Grubbs (Caltech)-Olefin Metathesis (p. 5426, 7324)

catalyst:



mechanism:



(p. 3974)

