JACS Year in Review: 1978

Laura Schacherer

Statistics for *JACS* 1978

Total Number of Papers: **1,947**

Most Cited Paper: p.3686 (**cited 1396x!** Ammeter et al **“Counterintuitive orbital mixing in semi-empirical and ab initio molecular-orbital calculations.**”)

Top 25 Authors:

24: Michl J

16: Paquette LA

12: Cotton FA, Dewar MJS

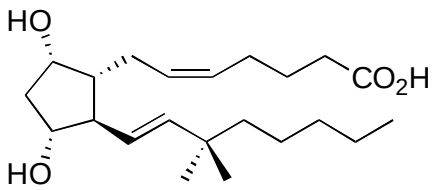
10: Arnett EM, Chisholm MH, Houk KN, Roberts JD, Seff K, Turro NJ

9: Epiotis ND, Hoffmann R, Ibers JA

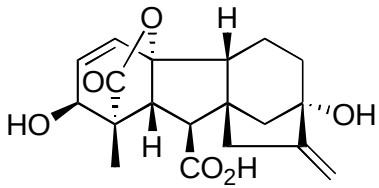
8: Schrock RR, Streitwieser A, Trost B,

7: Bard AJ, Beuchamp JL, Brauman JI, Corey EJ, Hayakawa Y, Noyori R, Olah GA, Radom L, Rzepa HS

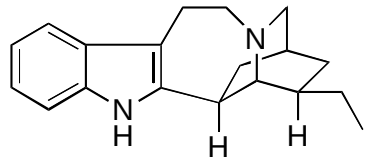
Some Synthetic Achievements in 1978:



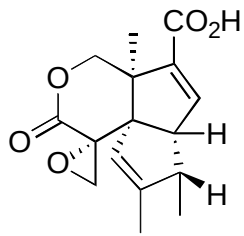
Prostaglandin F2α: Stork, 8272



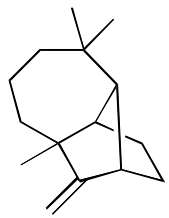
Gibberellic Acid: Corey, 8034



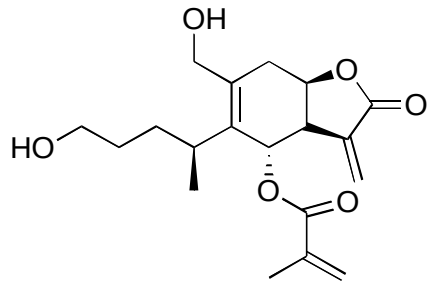
Ibogamine: Trost, 3930



dl-Pentalenolactone: Danishefsky, 6536

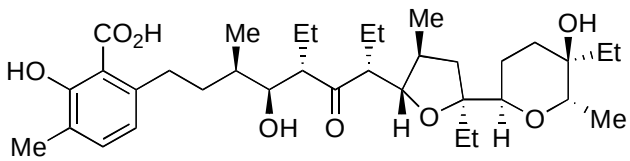


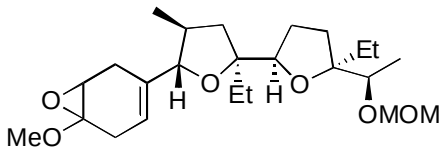
Longifolene: Oppolzer, 2583



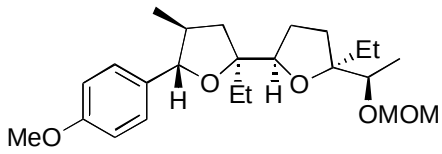
Eriolanin: Grieco, 1616

Lasolocid A: Kishi, 2933

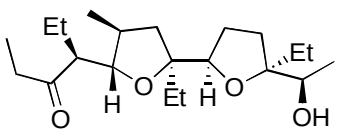




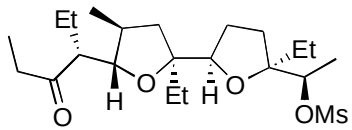
Li, EtOH, NH_3
MCPBA, $NaHCO_3$



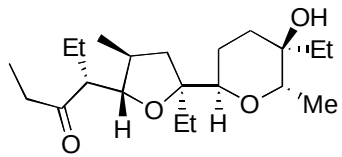
HIO_4, aq. dioxane
LAH
TsCl, pyr.
LAH
B_2H_6, THF
Jones Ox.
$TrBF_4$, DCM



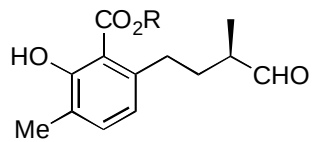
NaOH
MsCl, pyr.



Ag_2CO_3,
aq. acetone

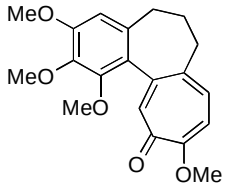


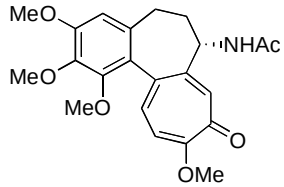
LDA, then $ZnCl_2$

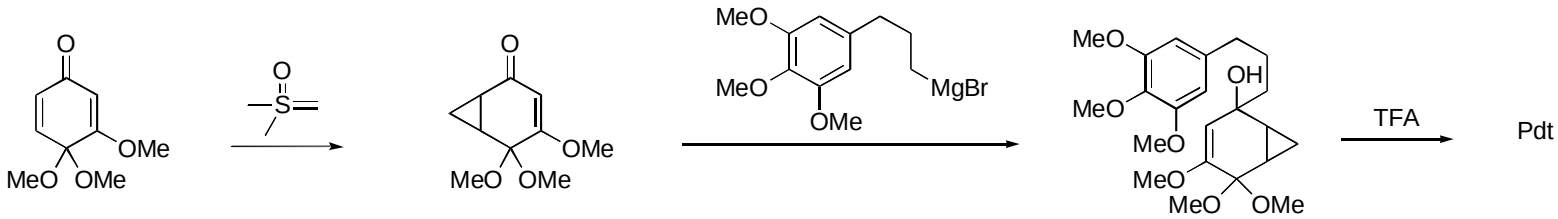


then hydrogenolysis

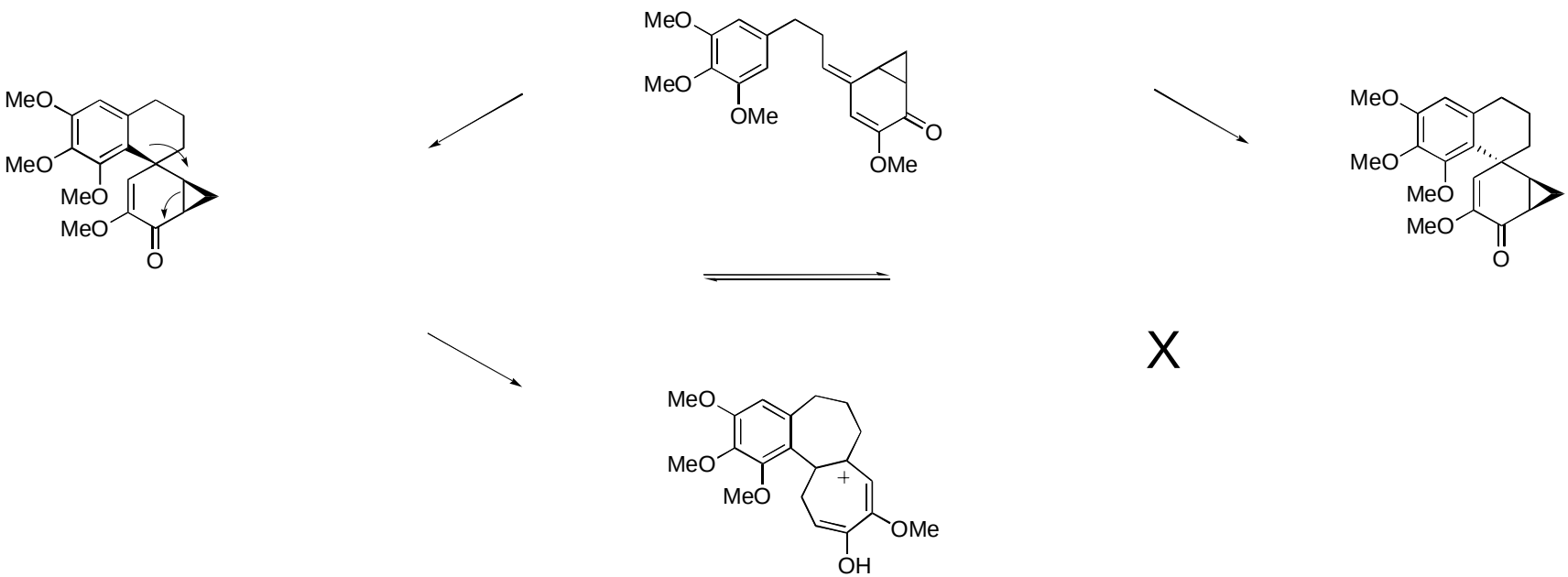
Colchicine: Evans, 4593



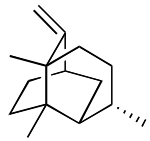


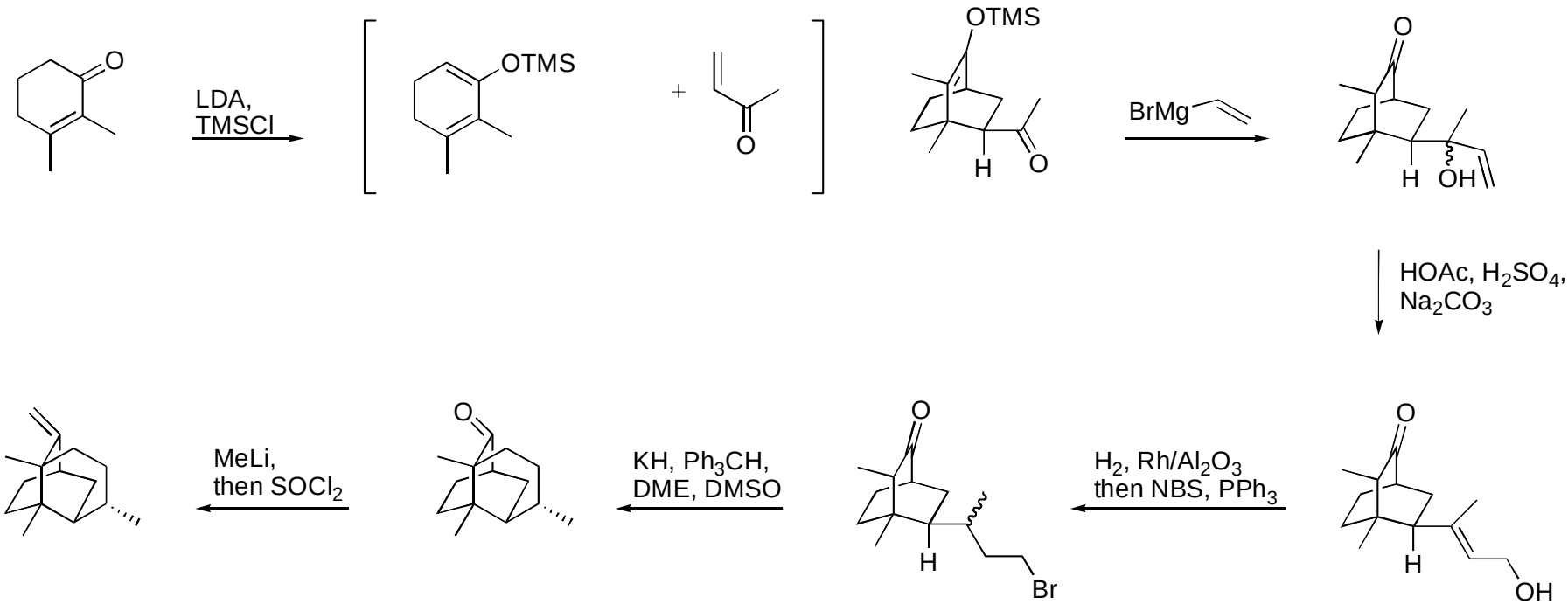


Via:

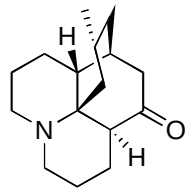


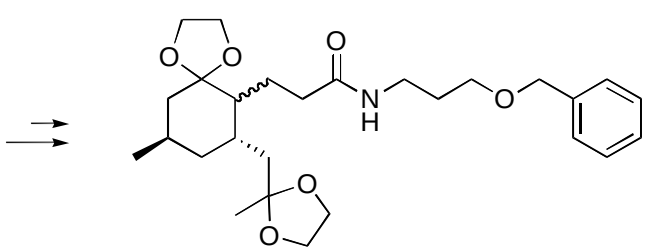
Seychellene: Jung, 5207



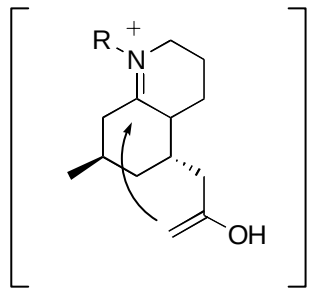


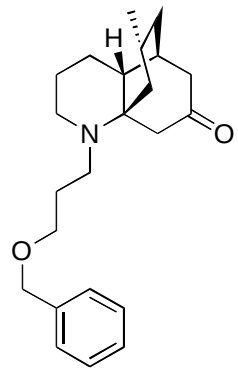
Lycopodine: Heathcock



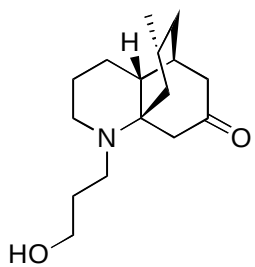


LAH,
then HCl, 2 wks!





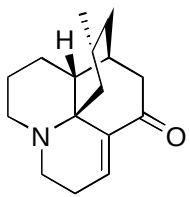
H_2, Pd, EtOH, HCl



Oppenauer Oxidation:

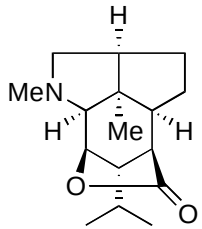
Benzophenone, benzene, Δ

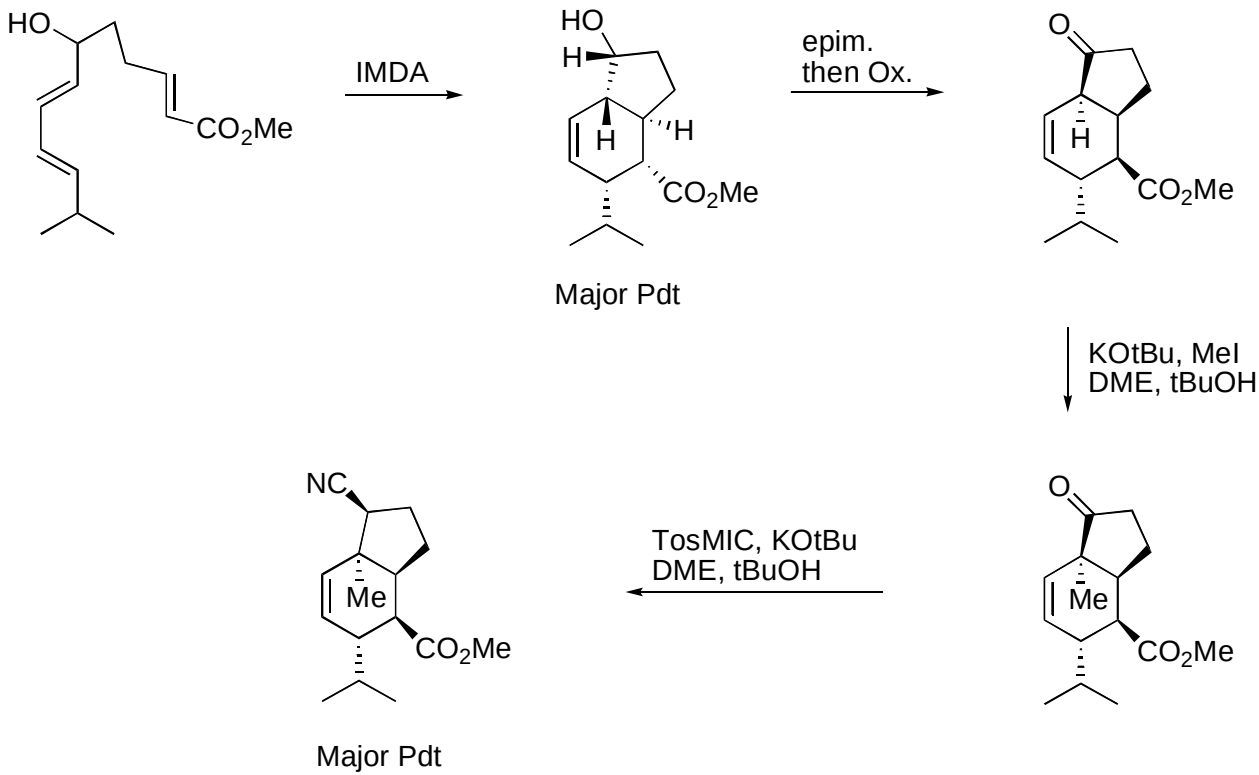
(then intramolecular aldol
and dehydration)



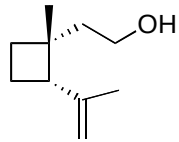
H_2, Pt, EtOH

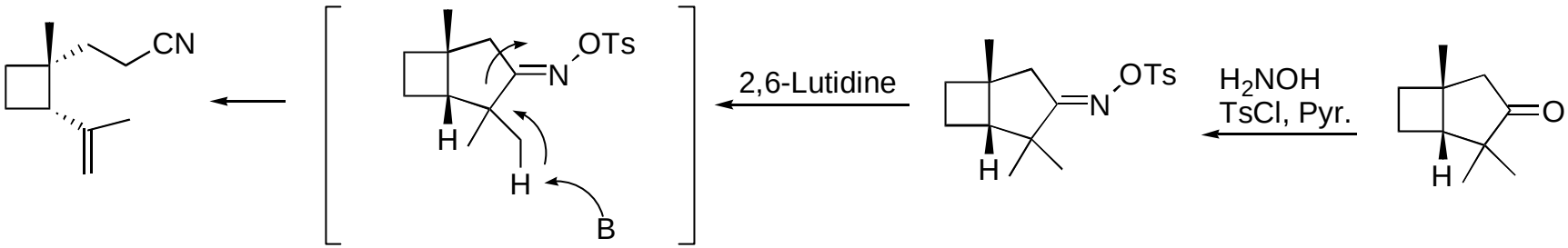
Dendrobine: Rousch



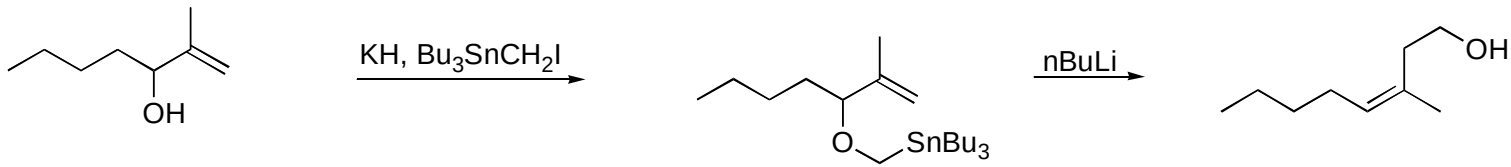


Grandisol : Golob

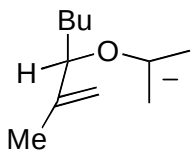


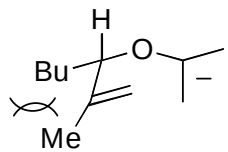


Methodology: Still, 1927

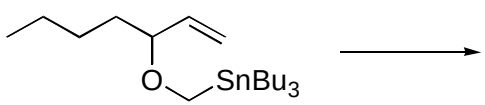


>96% Z: Why?





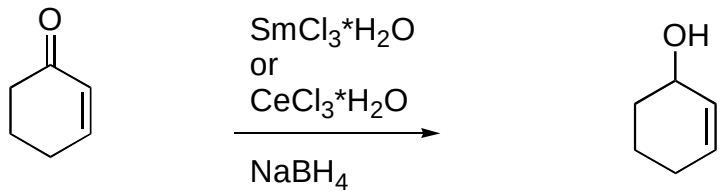
Further evidence:



E:Z

1:1

Methodology: Luche Reduction, 2226

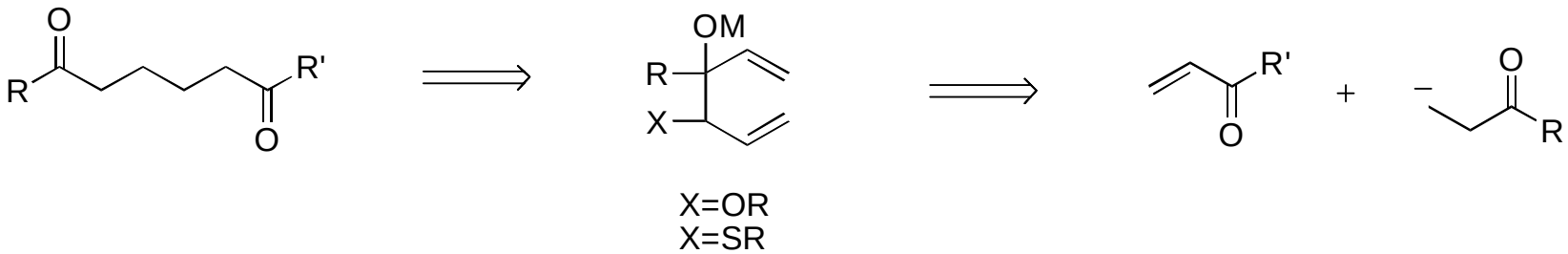


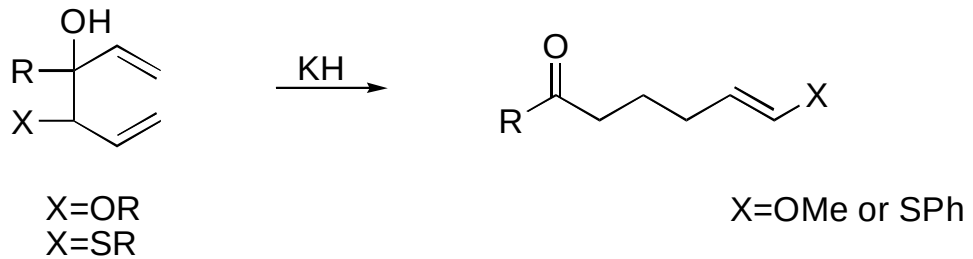
Mechanistic Information:

Catalytic in Lanthanide

Could be Lanthanide hydride formed *in situ*
or
Ketone/Lanthanide Complexation

Methodology: Evans, 2242





Methodology: Tebbe, 3611