

1992

- international space year (UN)
- space shuttle *Endeavour* first launched in May
- first confirmed detection of extrasolar planet
- Rudolph A. Marcus won the Nobel prize in Chemistry for ET theory

overview: JACS-1992 (Vol. 114)

- 11209 pages
- 1332 articles, 835 commu.
- ca. 57 total synthesis

★ the article of the year

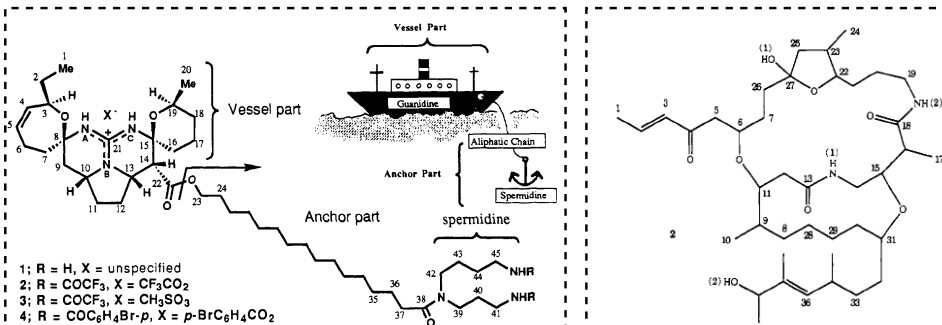
a new family of mesoporous molecular sieves prepared with liquid-crystal templates

Beck, Vartuli, Roth, Leonowicz,
Kresge et al. 10934-10843

time cited **6311** (web of science),
rank **4th** JACS most cited of all
time (01/13/2012)

publication record (total syn.)

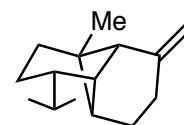
Nicolaou, 12 (5)
Trost, 12 (1)
Smith III, 11 (5)
Paquette, 9 (2)
Danishefsky, 8 (2)
Magnus, 8 (0)
Evans, 6 (2)
Grubbs, 6 (0)
Myers, 6 (0)
Corey, 5 (1)
Schreiber, 4 (2)
Boger, 3 (1)
Kishi, 2 (2)
Yamamoto, 2 (0)
Sharpless, 2 (0)



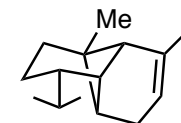
structure determination: ptilomycalin A
Kusumi, Kashman et al. 8472-8479

revision: bistramide A
Ireland et al. 1110-1111

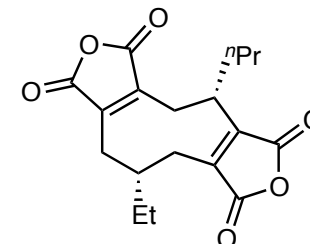
syntheses partly or fully discussed



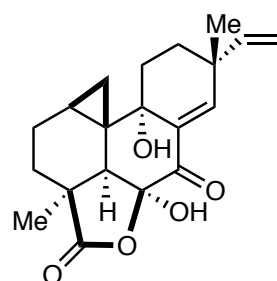
(±)-β-copaene



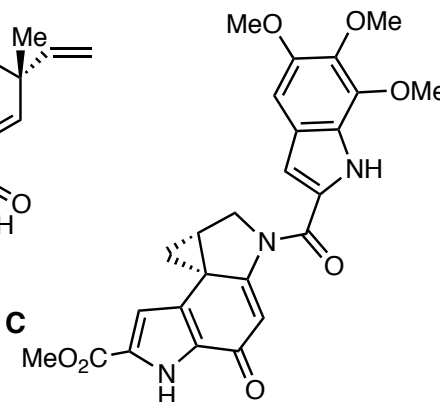
(±)-α-copaene



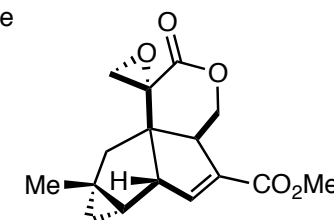
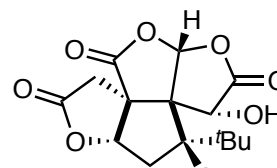
(±)-byssochlamic acid



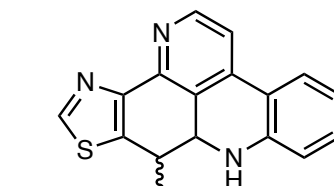
myrocin C



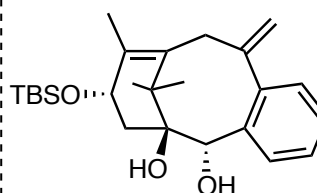
(+)duocarmycin SA

pentalenolactone P
methyl ester

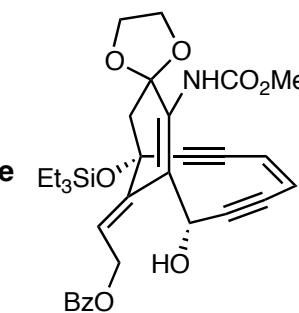
(±)-bilobalide



kuanoniamine D

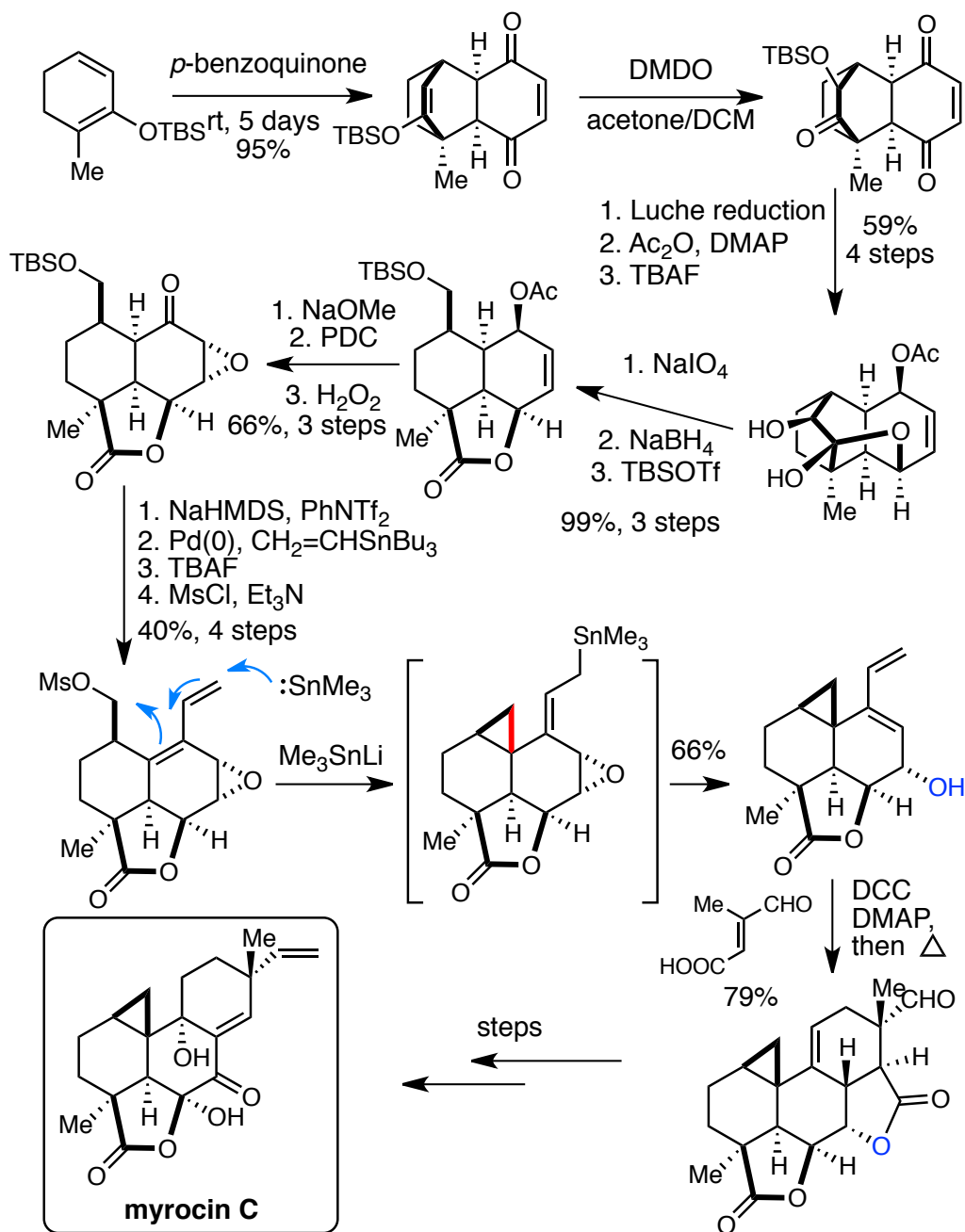


a vitamin D metabolite

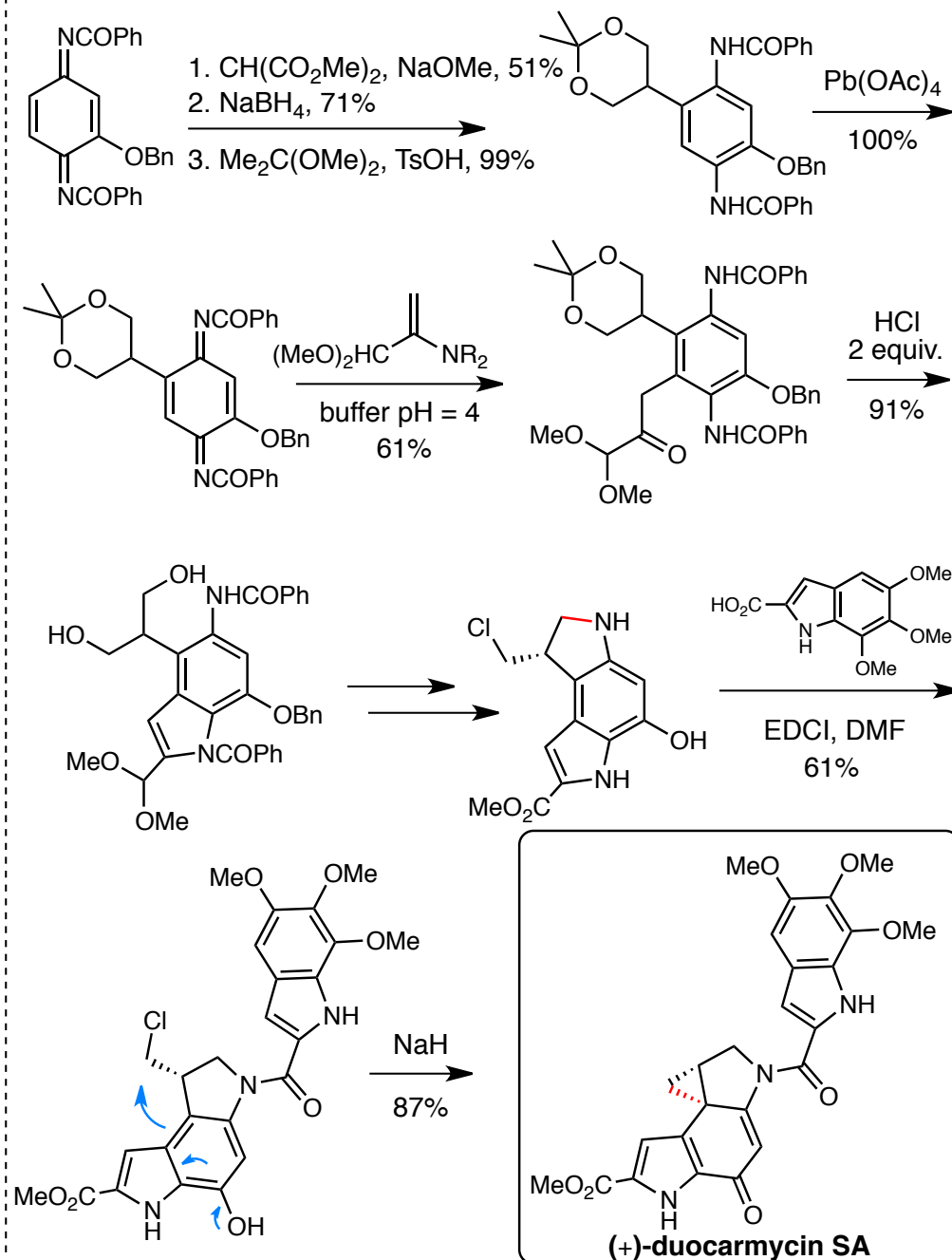


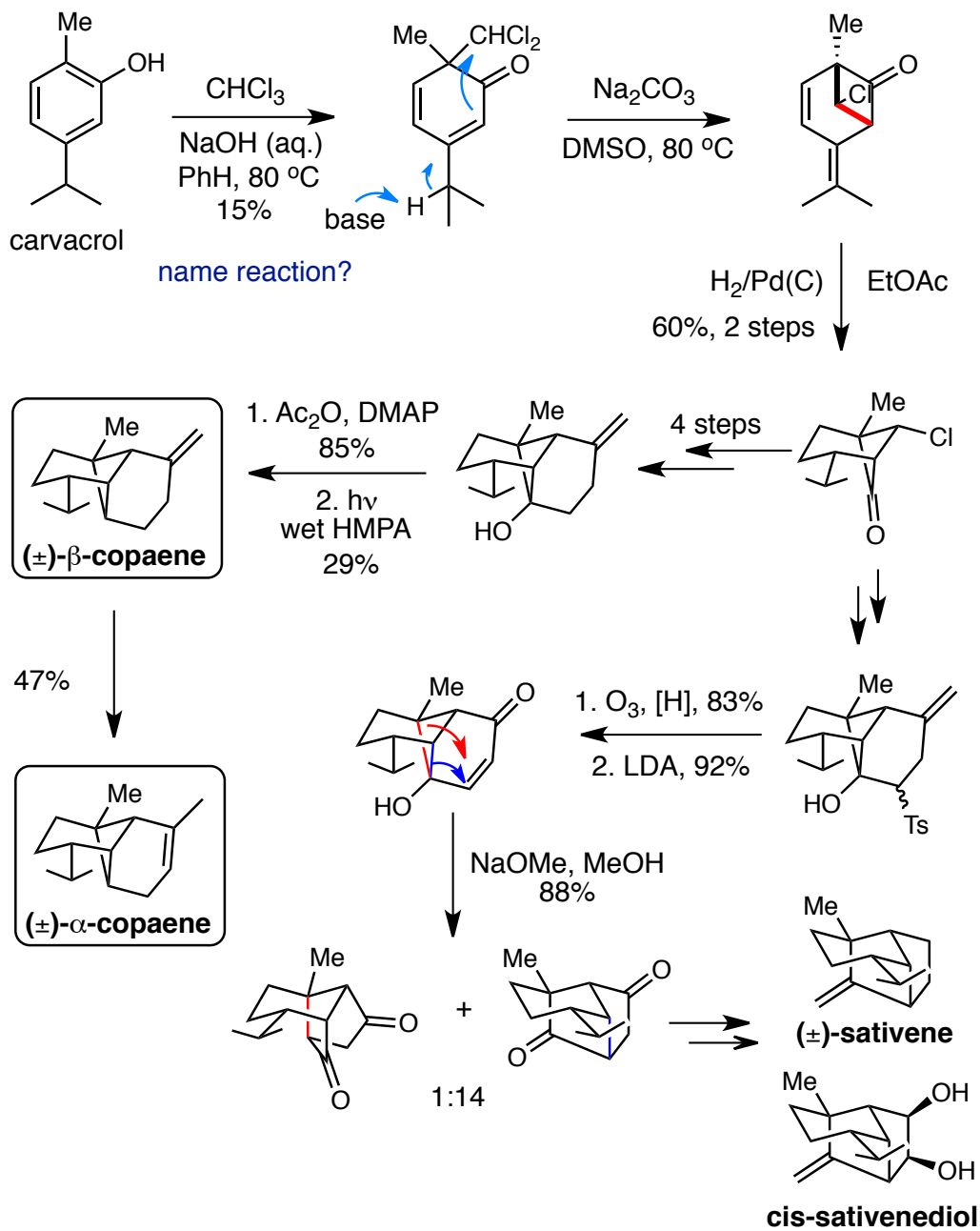
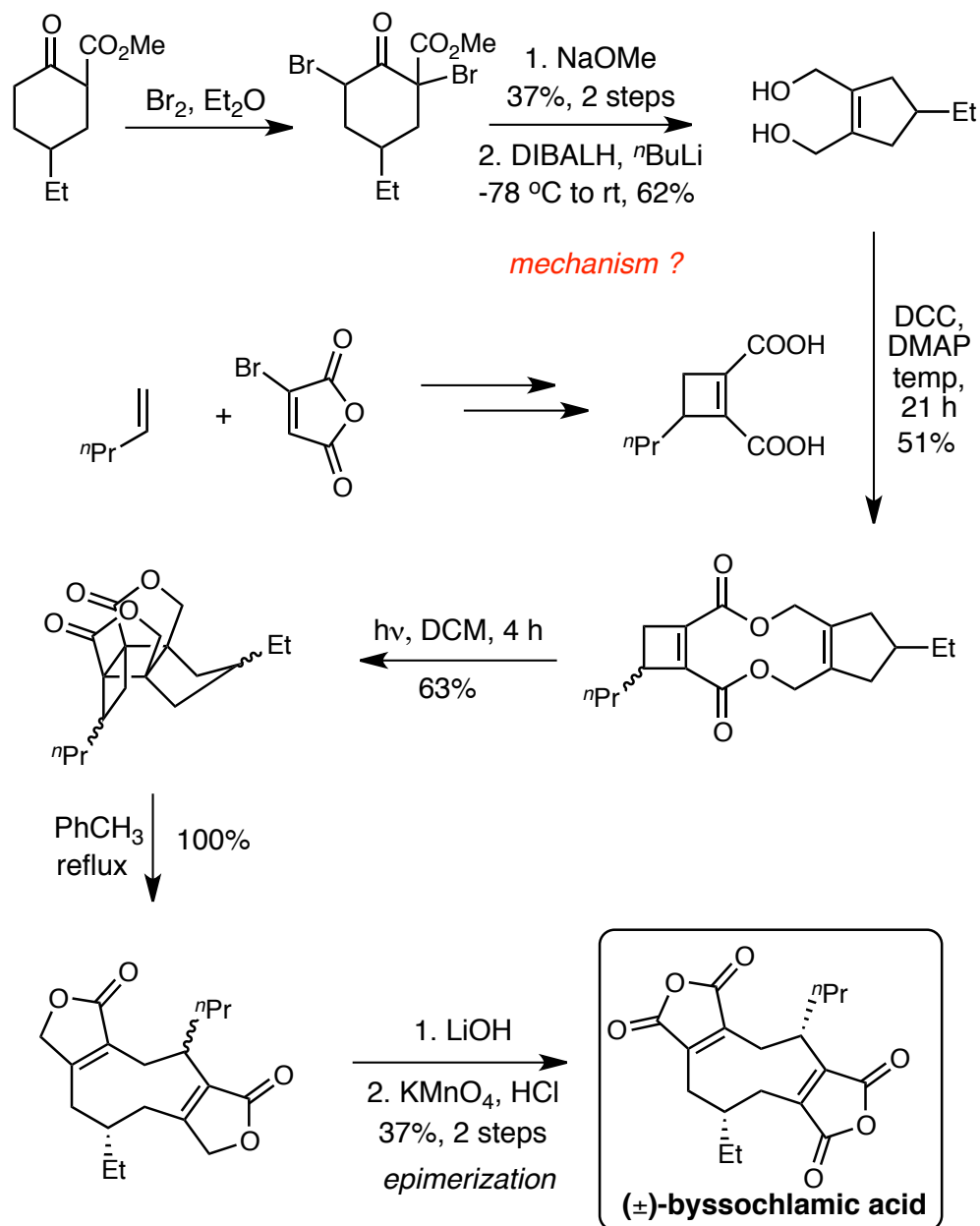
(-)-calichaemicinone

myrocin C, Chu-Moyer and Danishefsky, 8333-8334

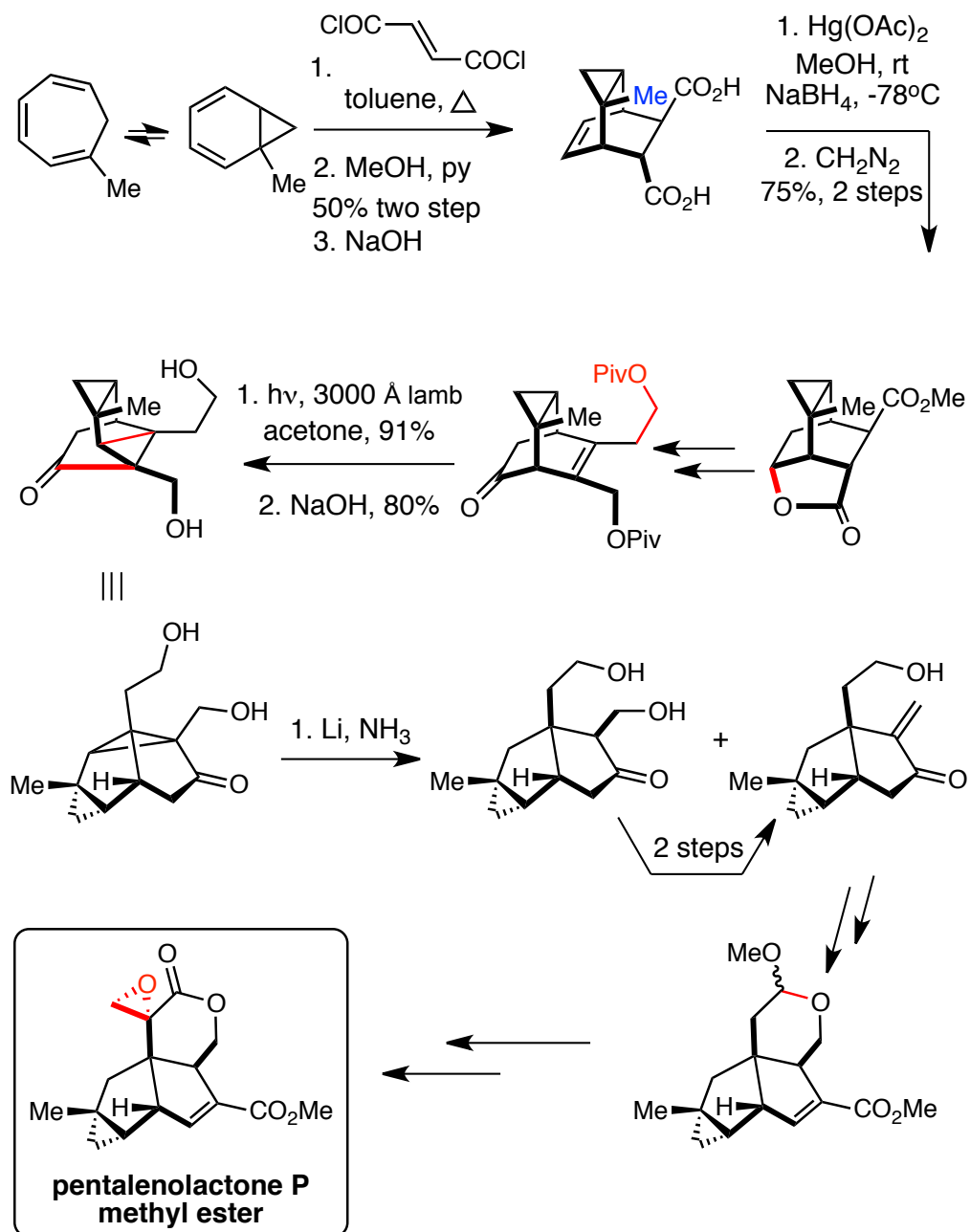


(+)-duocarmycin SA, Boger, 10056-10058

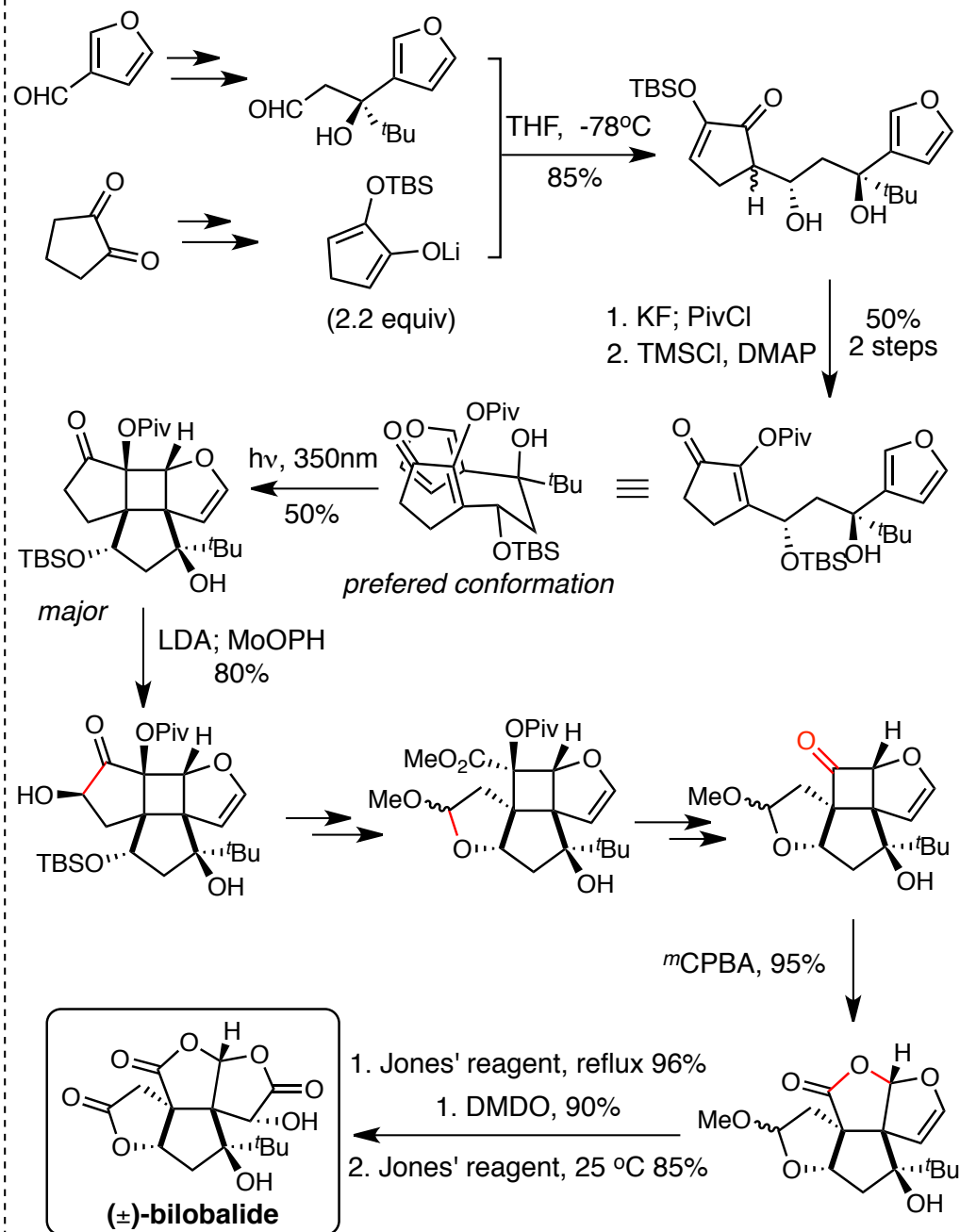


(±)-α/β-copaene, and related compounds, Wenkert, 644-654**(±)-byssochlamic acid**, White, 9673-9674

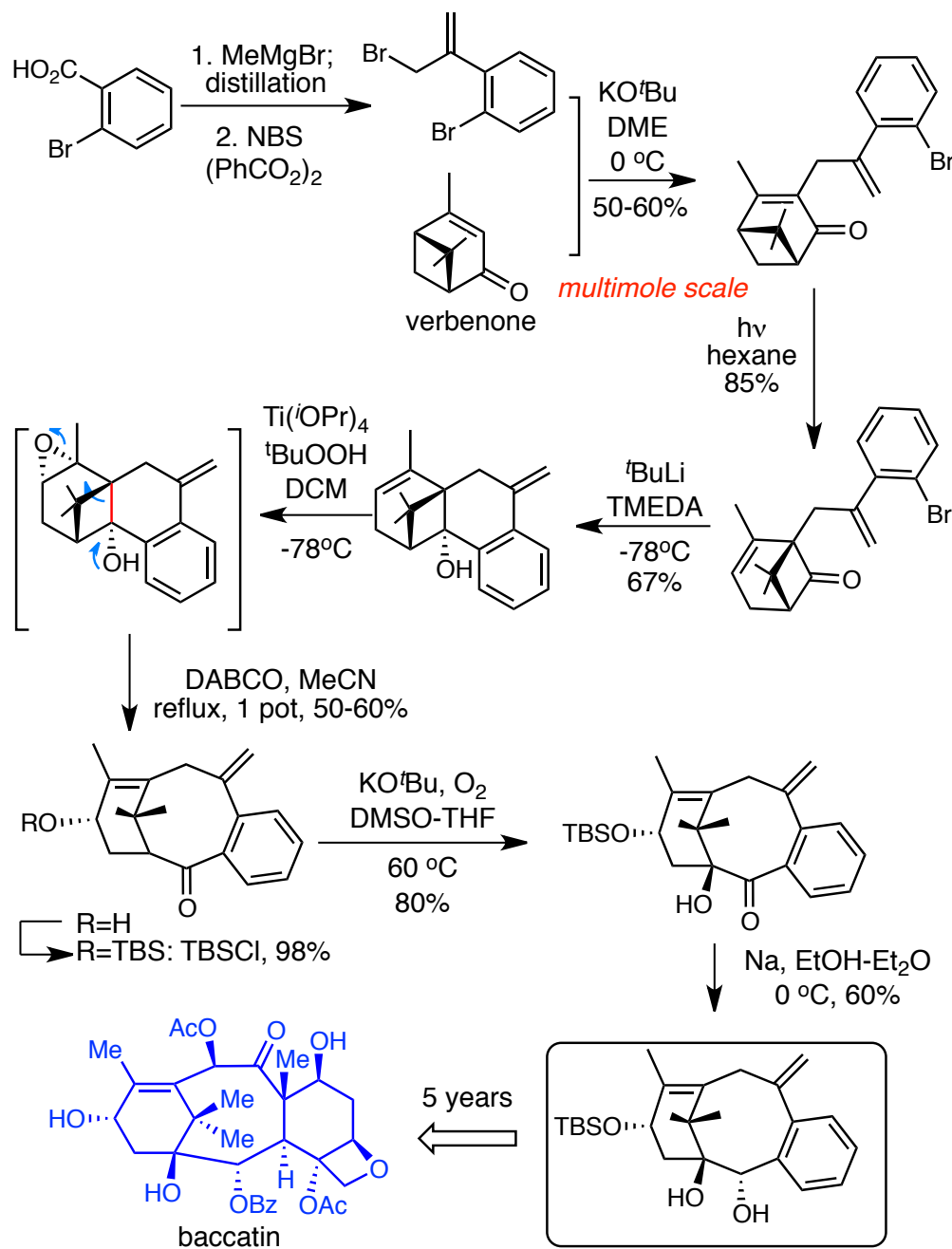
pentalenolactone P, Paquette, 7387-7395



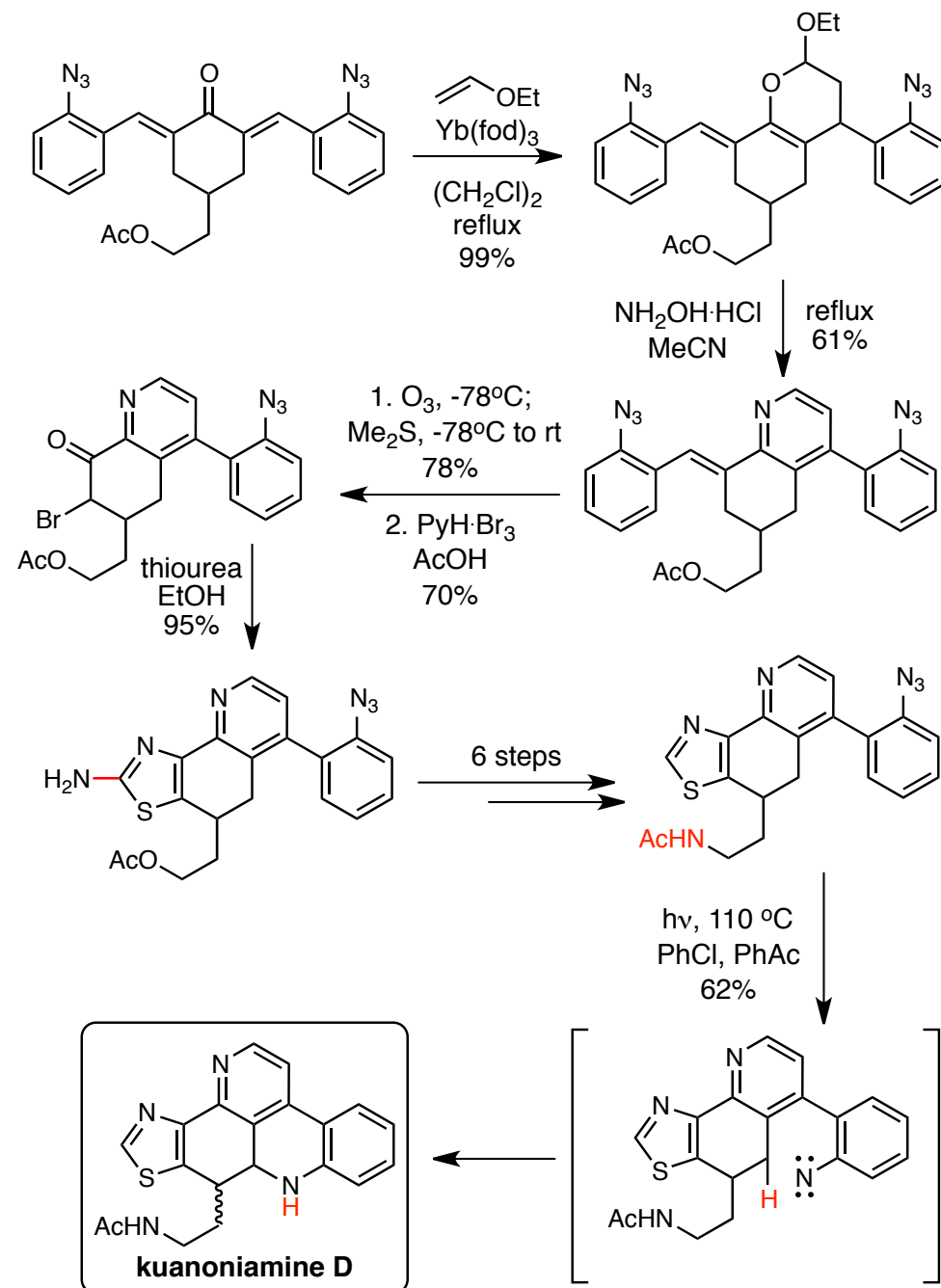
(±)-bilobalide, Crimmins, 5445-5447

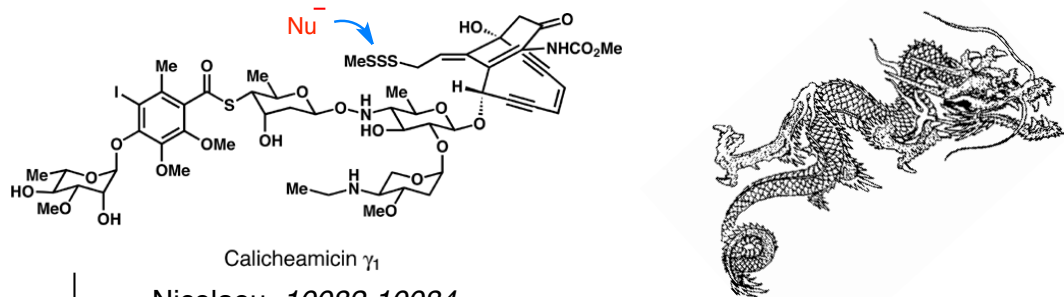


the pinene path toward Taxol, Wender, 5878-5879



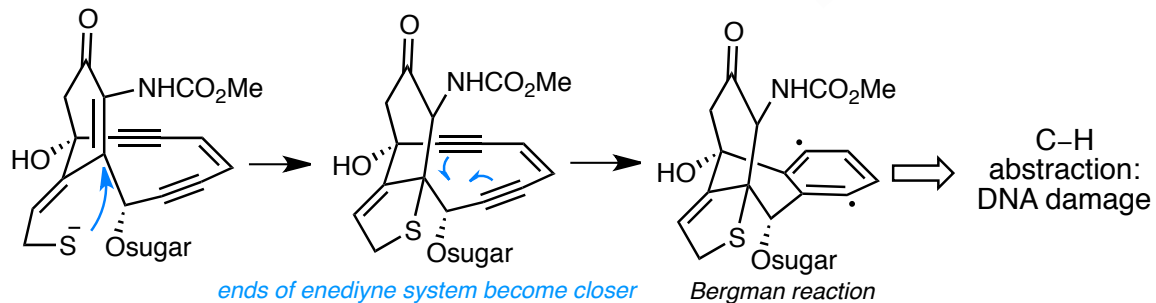
kuanoniamine D, Ciufolini, 10081-10082



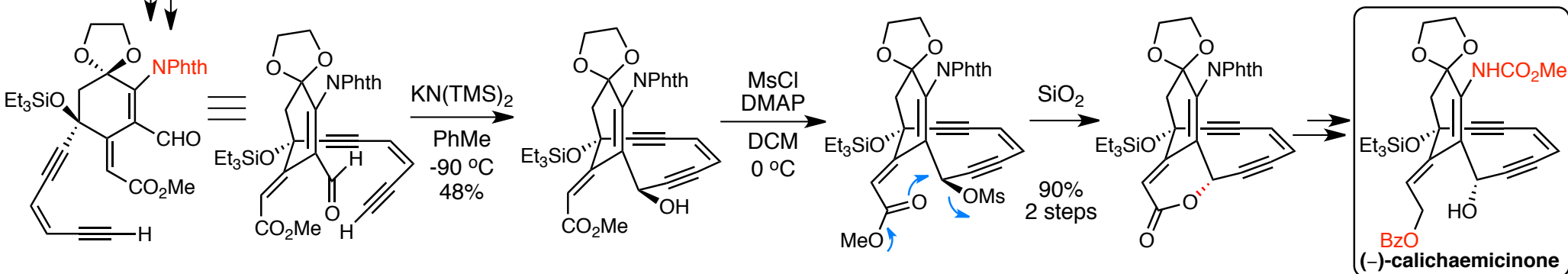
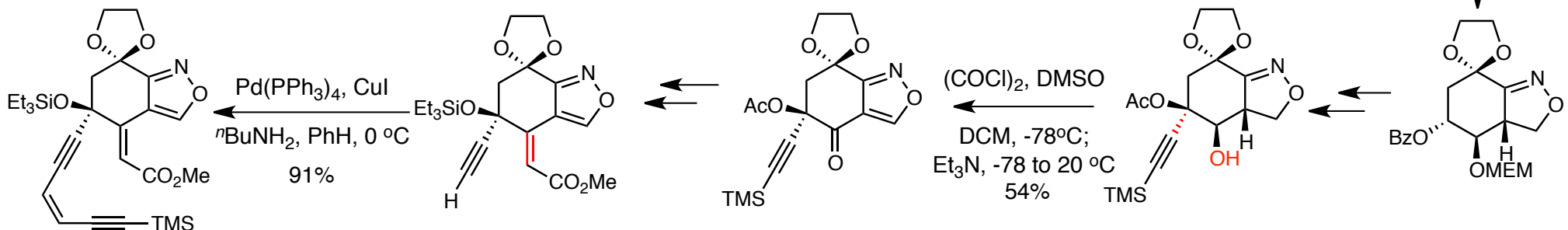
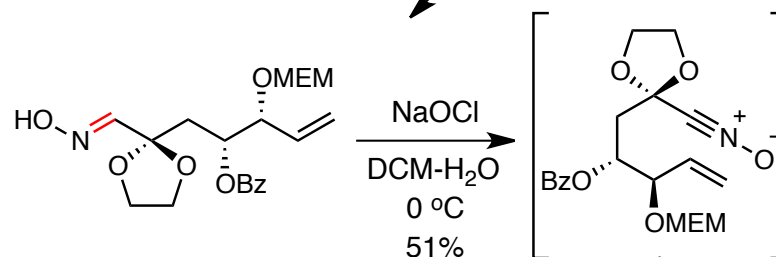
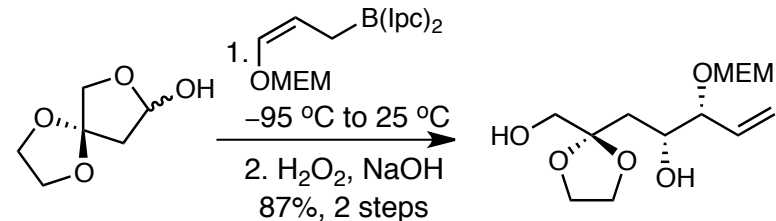


Nicolaou, 10082-10084

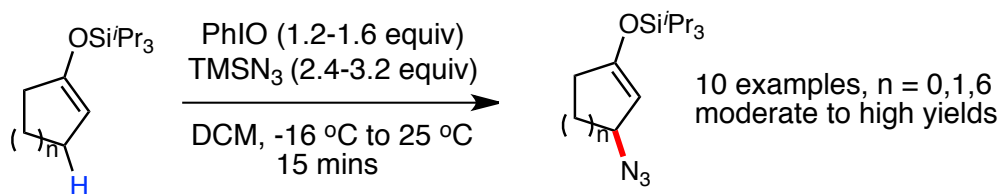
mechanism of action



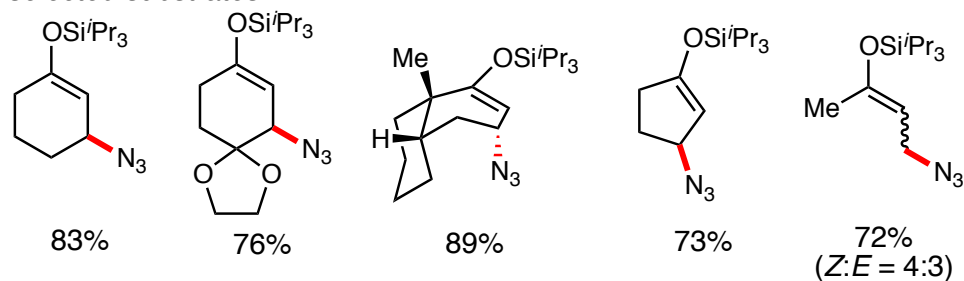
(-)-calichaemicinone, Nicolaou, 3134-3136



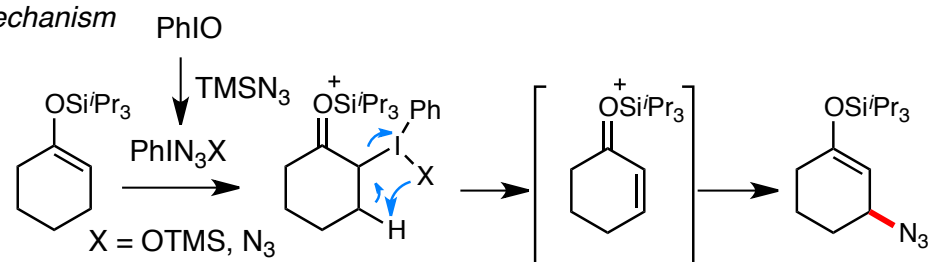
direct β -azido functionalization of triisopropylsilyl enol ethers,
Magnus, 767-769, and 3993-3994 (transformation to other functions)



selected substrates

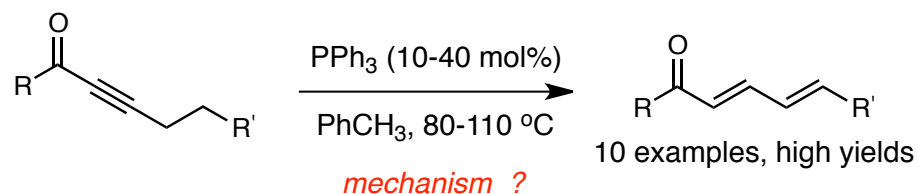


mechanism



internal redox catalyzed by PPh_3

Trost, 7933-7935

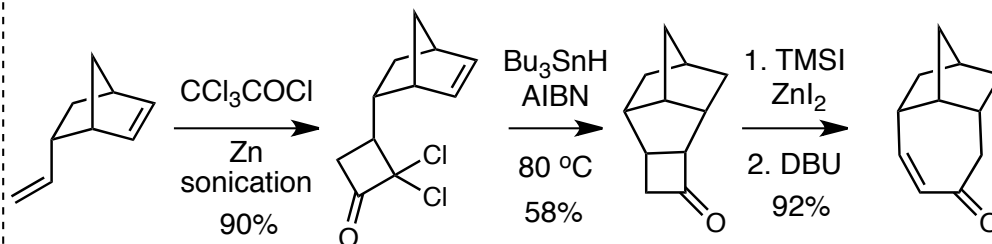


reactivity: ketone > ester > amide

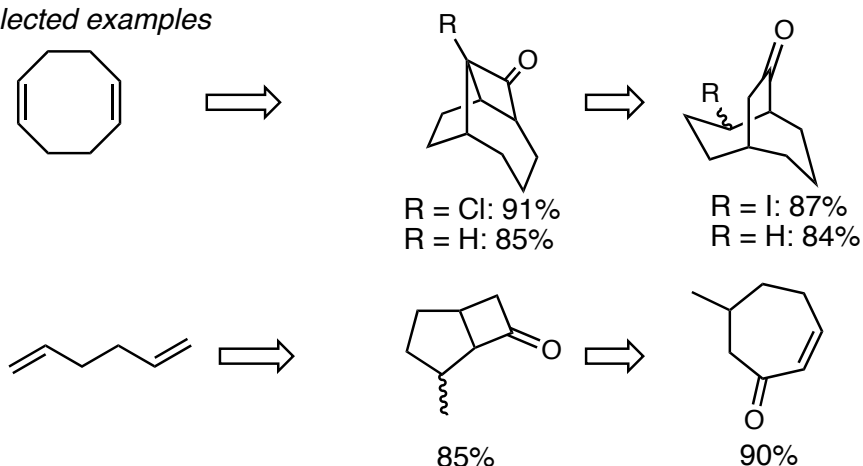
acetic acid as additive (50 mol%) in cases of esters and amides

$\text{Et}_3\text{N} : \text{NR}$

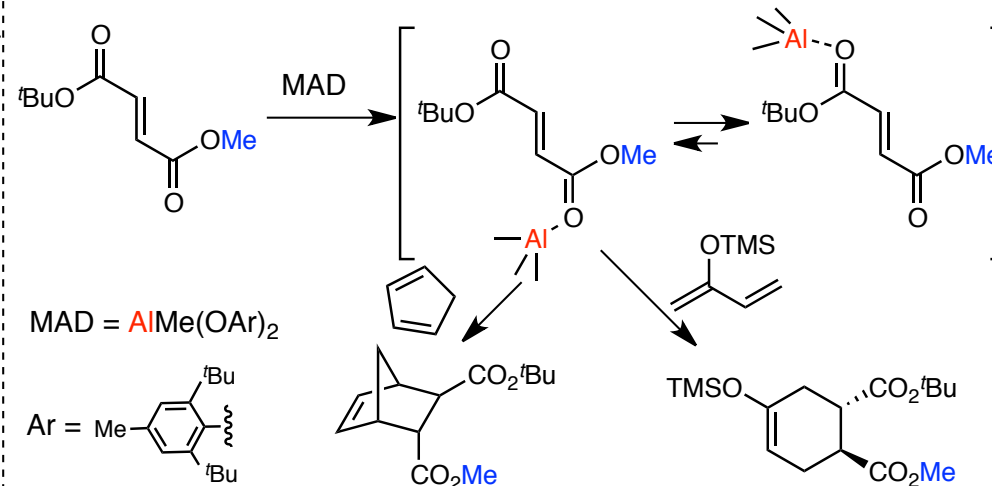
novel free radical ring-forming reaction of dichlorocyclobutanones and sequential ring expansion, Dowd, 10084-10085



selected examples

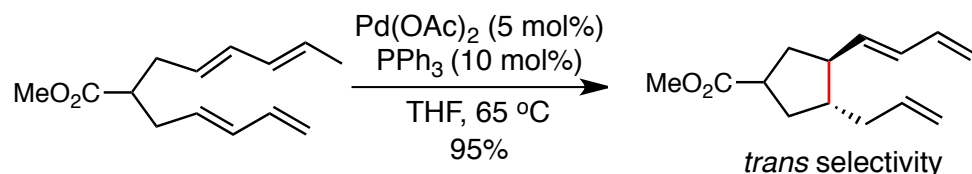


discrimination of two different ester carbonyls, Yamamoto, 1089-1090

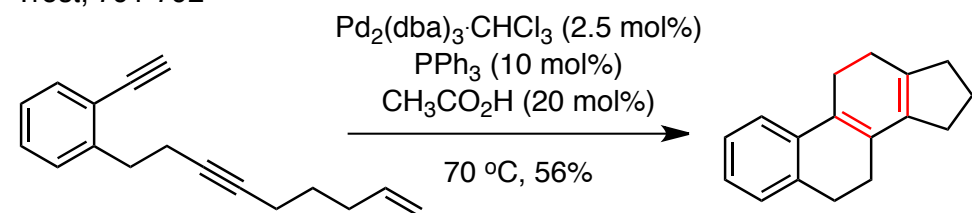


palladium catalyzed cyclization

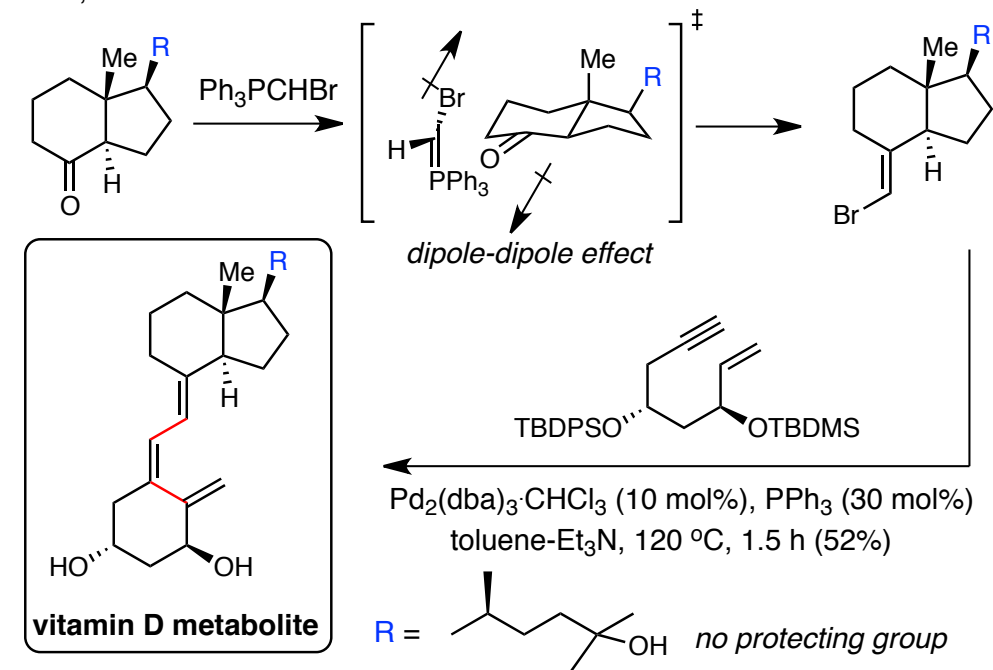
Takacs, 773-774



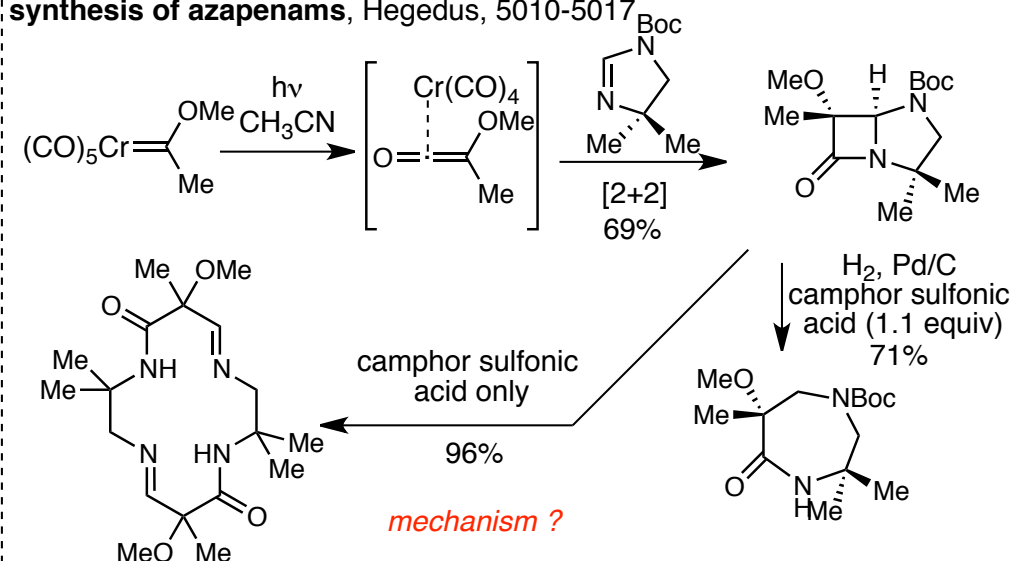
Trost, 791-792



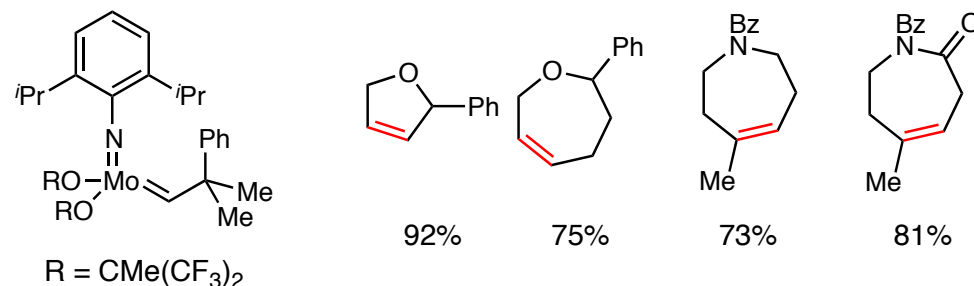
Trost, 1924-1925



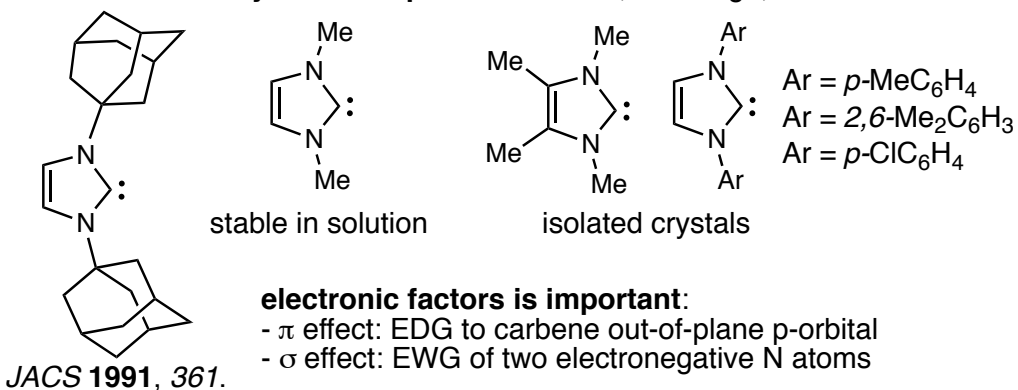
synthesis of azapenams, Hegedus, 5010-5017



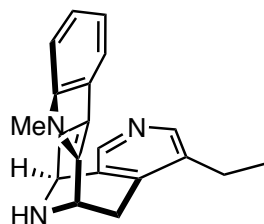
olefin metathesis, Grubbs and Fu, 5426-5427 and 7324-7325



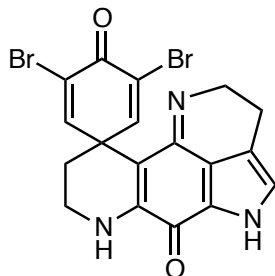
electronic stability of nucleophilic carbenes, Arduengo, 5530-5534



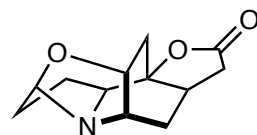
list of some other interesting molecules (not covered)



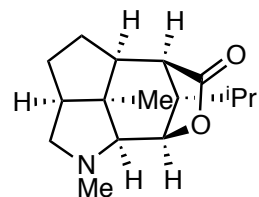
(-)-suaveoline
Cook, 6910-6912



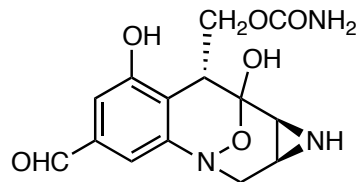
discorhabdin C
Kita, 2175-2180



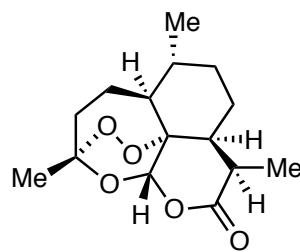
nirurine
Magnus, 382-383



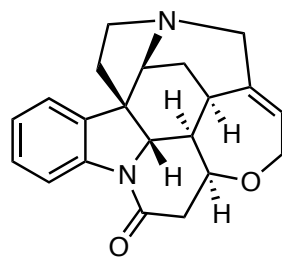
dendrobine
Livinghouse, 4089-4095



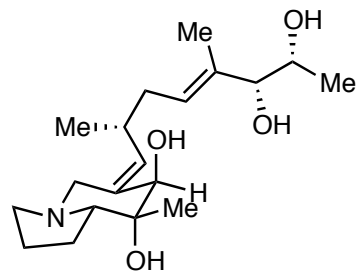
(±)-FR-900482
Fukuyama, 383-385



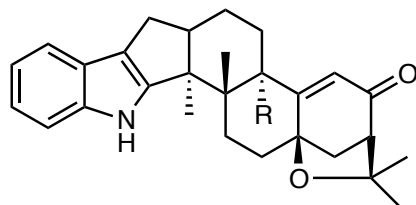
(+)-artemisinin (qinghaosu)
Avery, 974-979



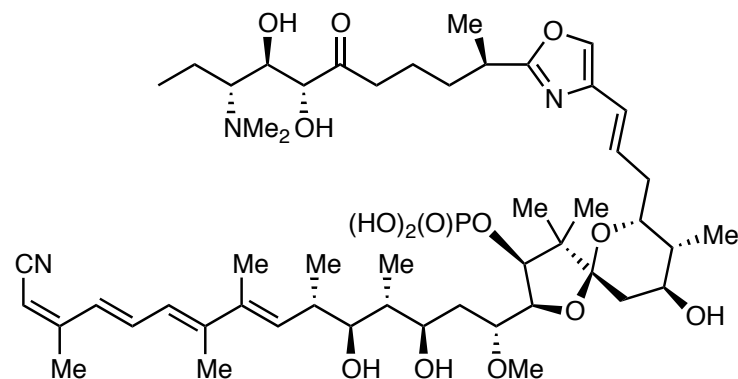
strychnine
Magnus, 4403-4405



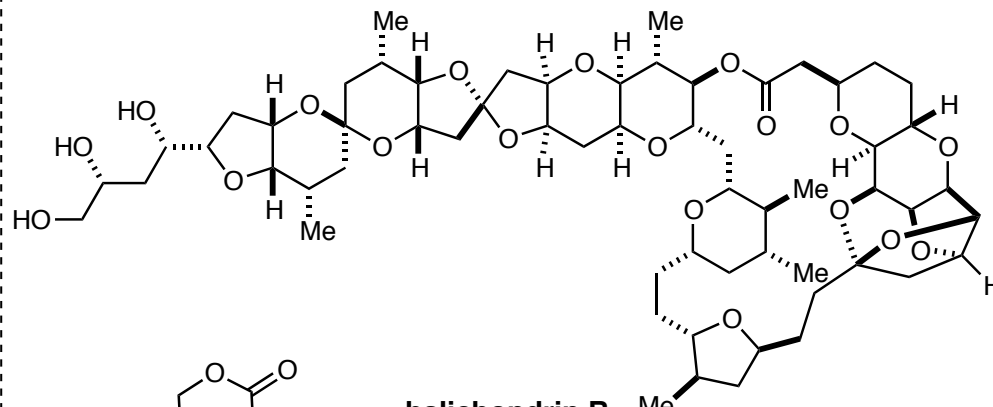
(+)-allopumiliotoxin 339A
Overman, 368-369



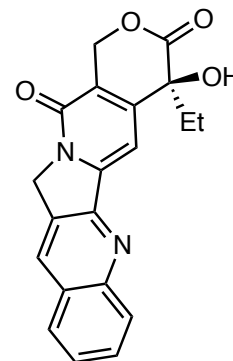
R = H **(+)-paspalicine**
R = OH **(+)-paspalinine**
Smith III, 1438-1449



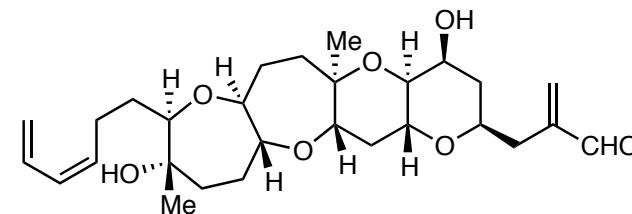
(+)-calyculin A
Evans, 9424-9453



halichondrin B
Kishi, 3162-3164



camptothecin
Curran, 5863-5864
Comins, 10971-10972



hemibrevetoxin B
Nicolaou, 7935-7936