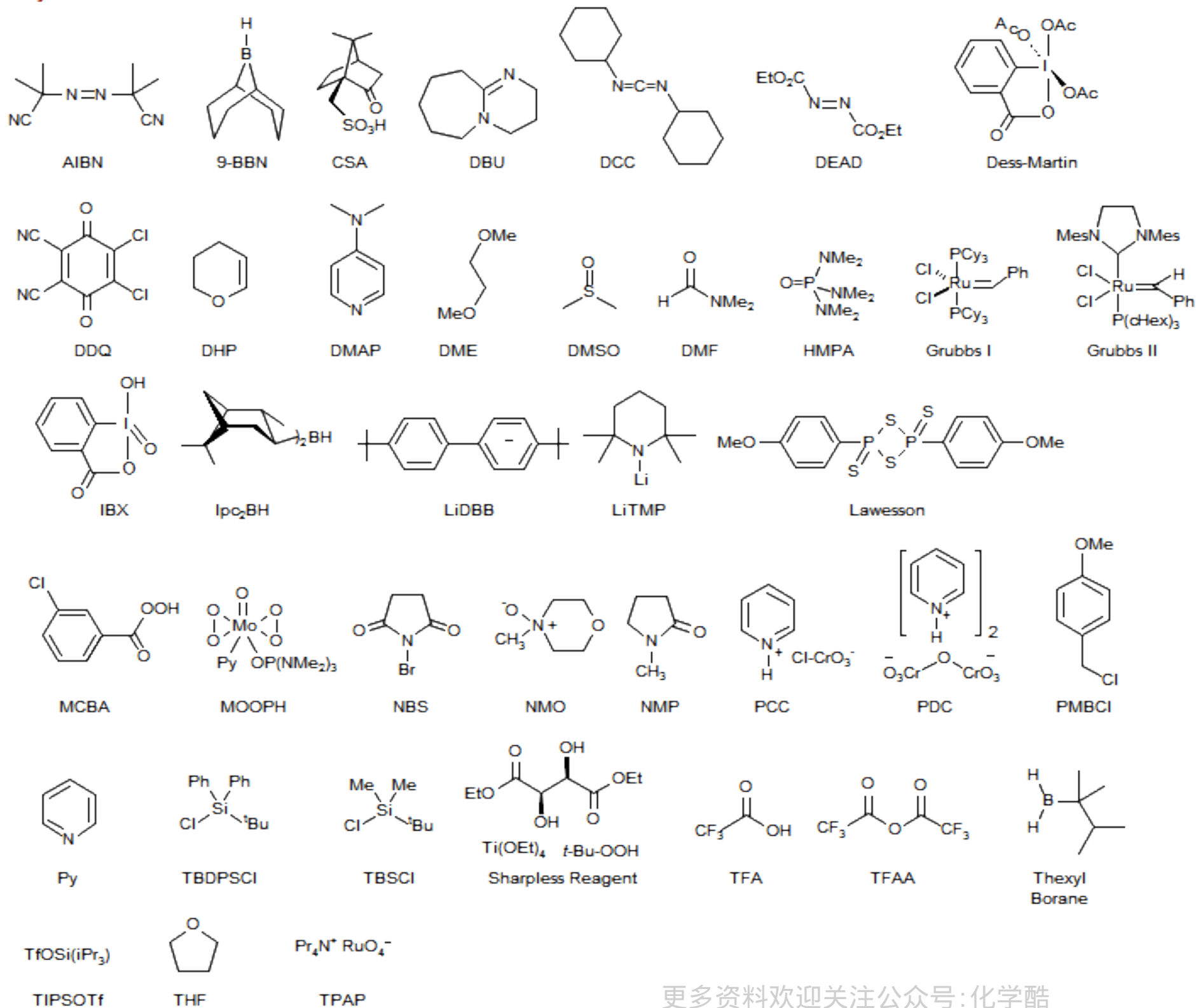
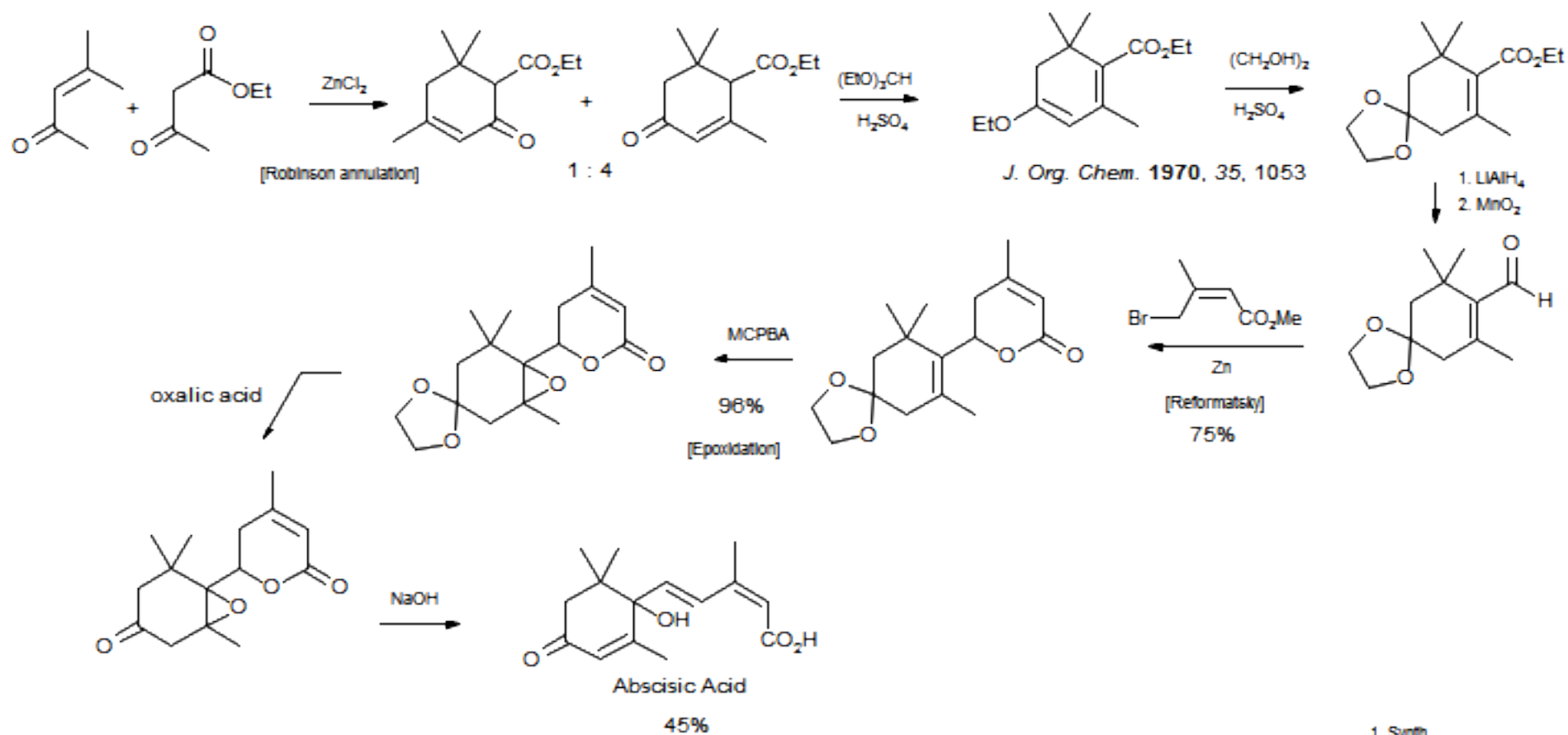


-Acronyms Used



Abscisic Acid

Constantino, M. G.; Losco, P.; Castellano, E. E. *J. Org. Chem.* 1989, 54, 681

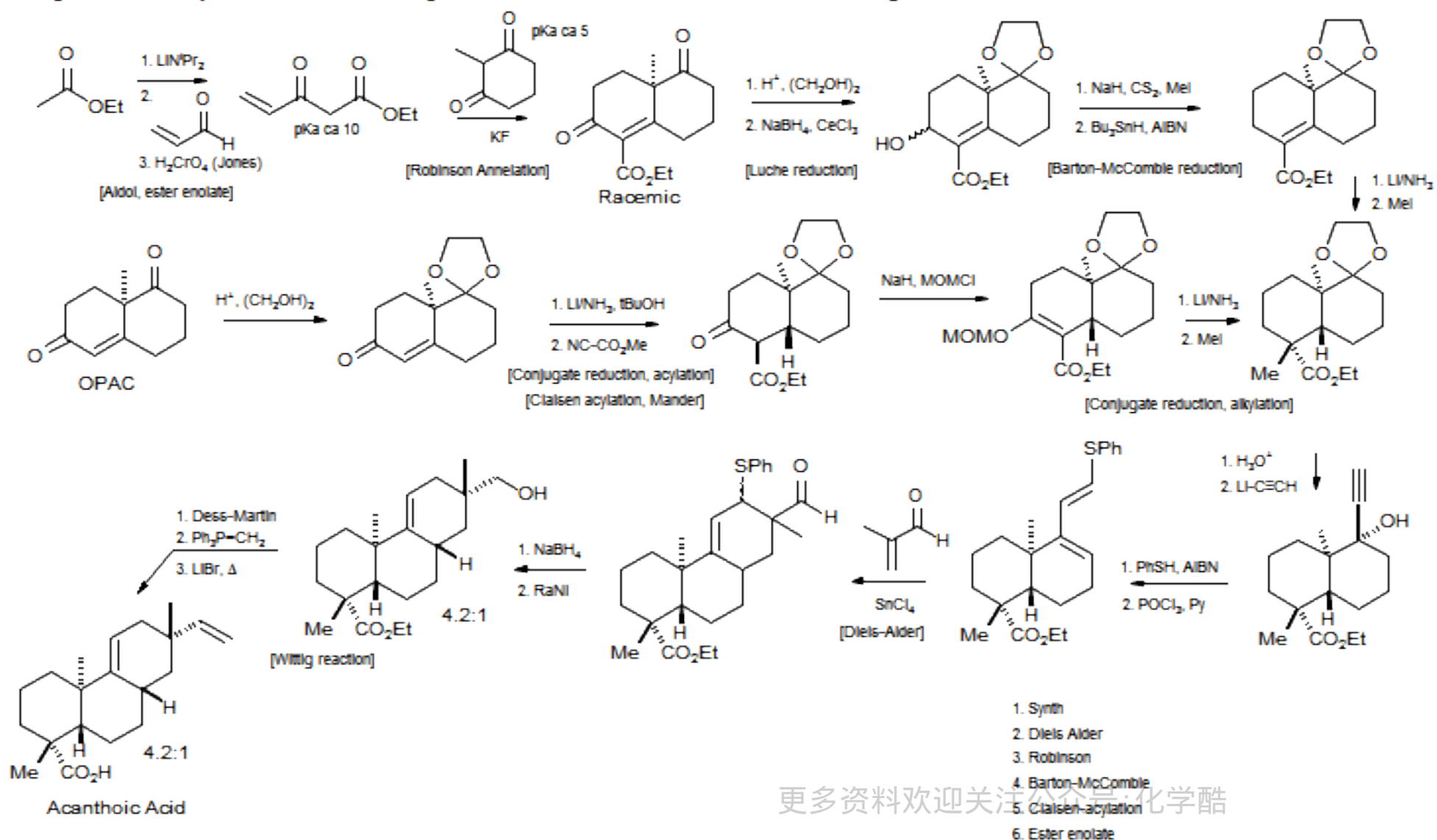


1. Synth
2. Reformatsky
3. Robinson
4. Chem 547 Problem

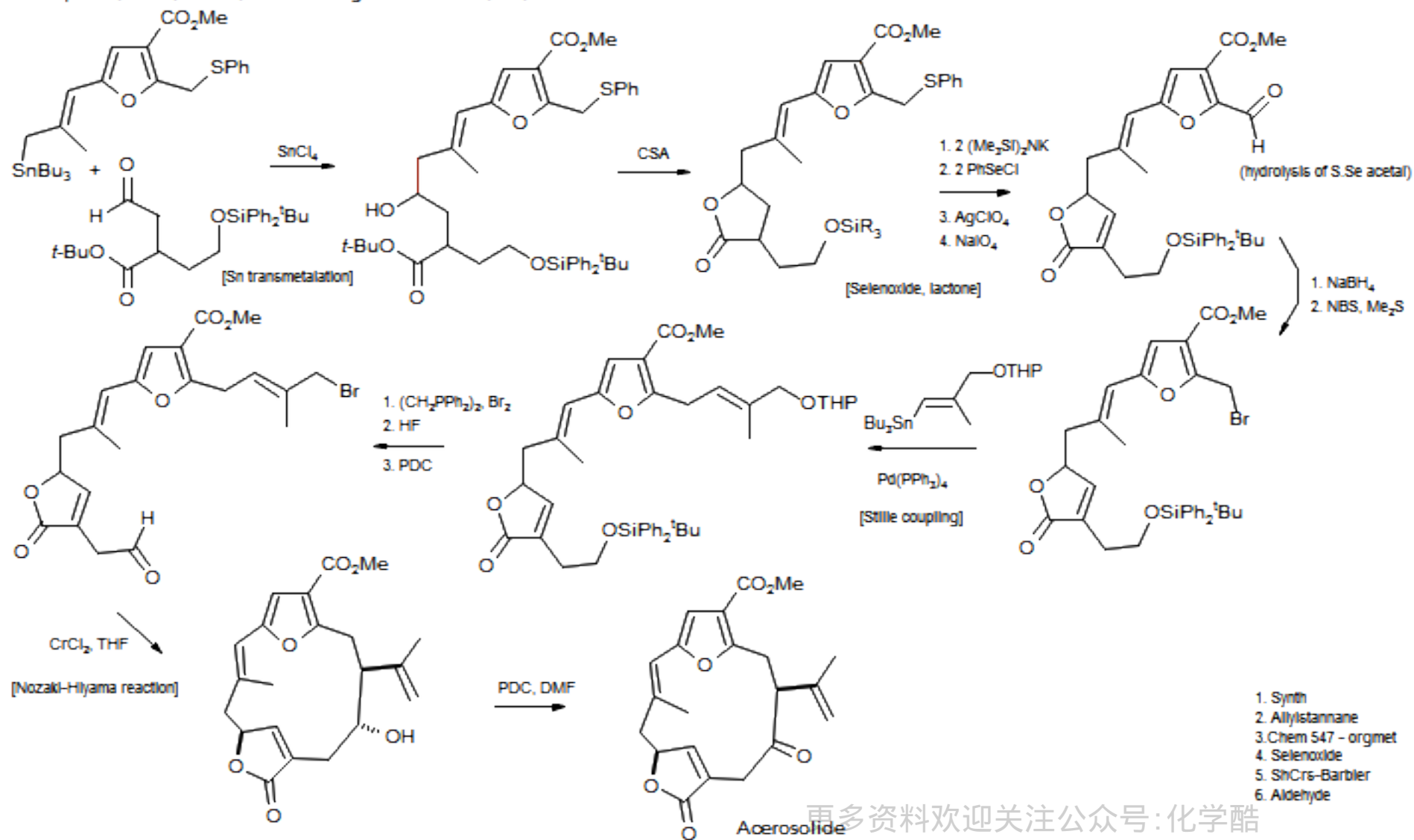
Acanthoic Acid

Ling, T.; Chowdhury, C.; Kramer, B. A.; Vong, B. G.; Palladino, M. A.; Theodorakis, E. A. *J. Org. Chem.* 2001, 66, 8843

01-12



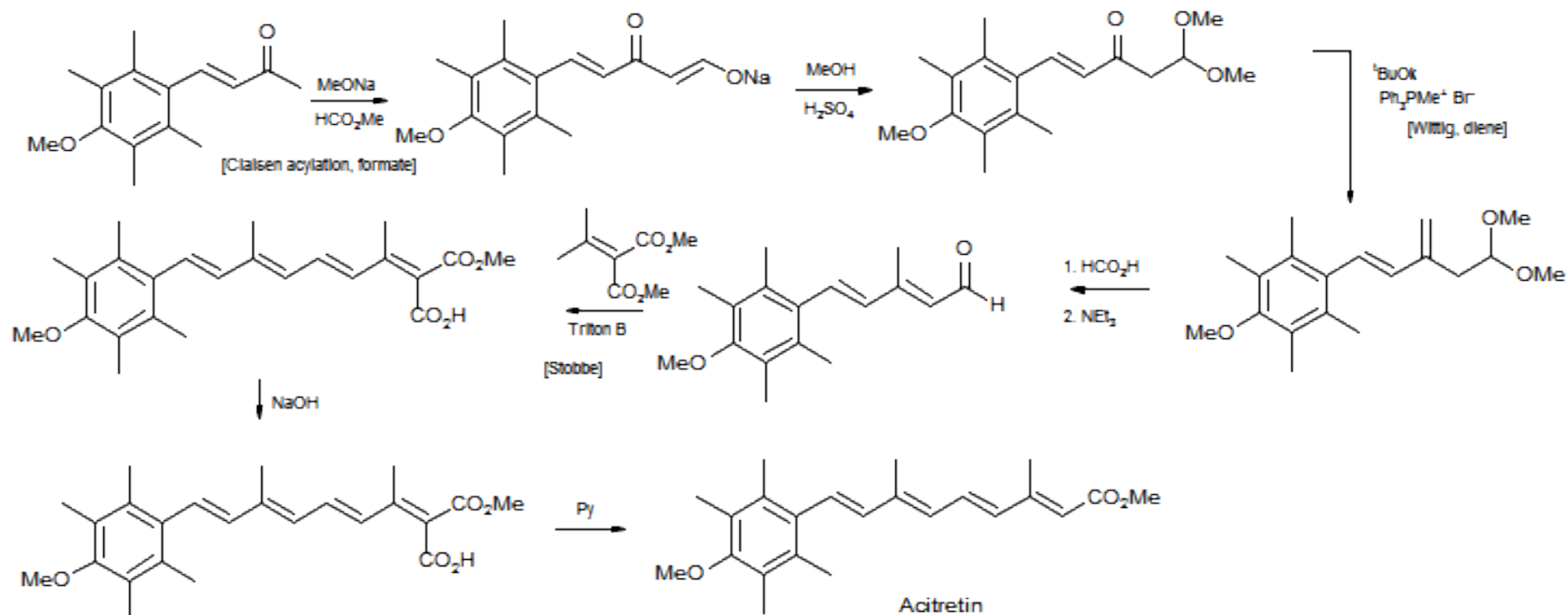
Paquette, L. A.; Astles, P. C. *J. Org. Chem.* 1993, 58, 165-169.



Acitretin

Andriamialisoa, Z.; Valla, A.; Cartier, D.; Labia, R. *Helv. Chim. Acta* 2002, 85, 2926

02-19

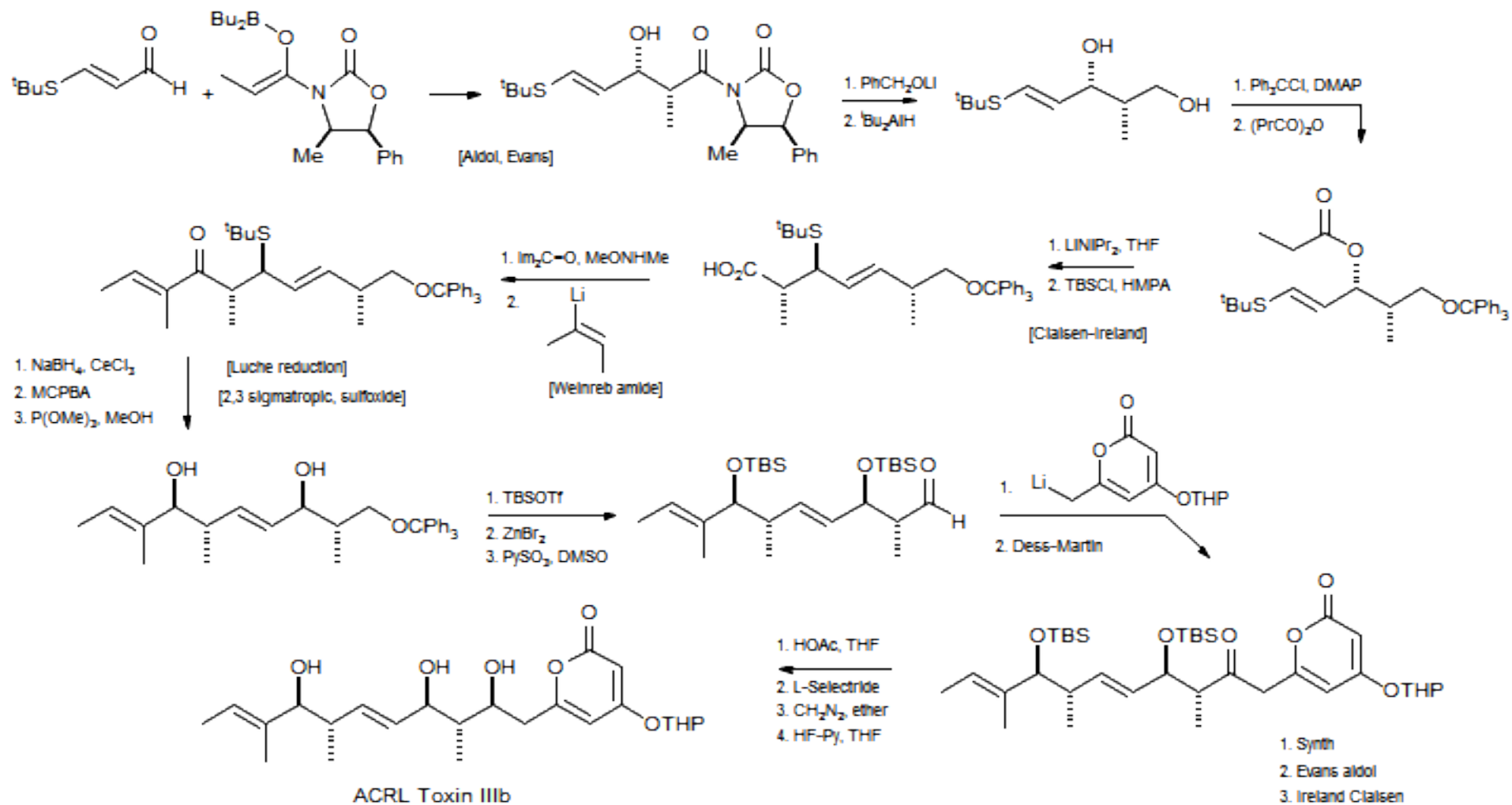


1. Synth
2. Claisen
3. Stobbe
4. Triene

ACRL Toxin IIIb

Munchhof, M. J.; Heathcock, C. H. *J. Org. Chem.* 1994, 59, 7566

94-16



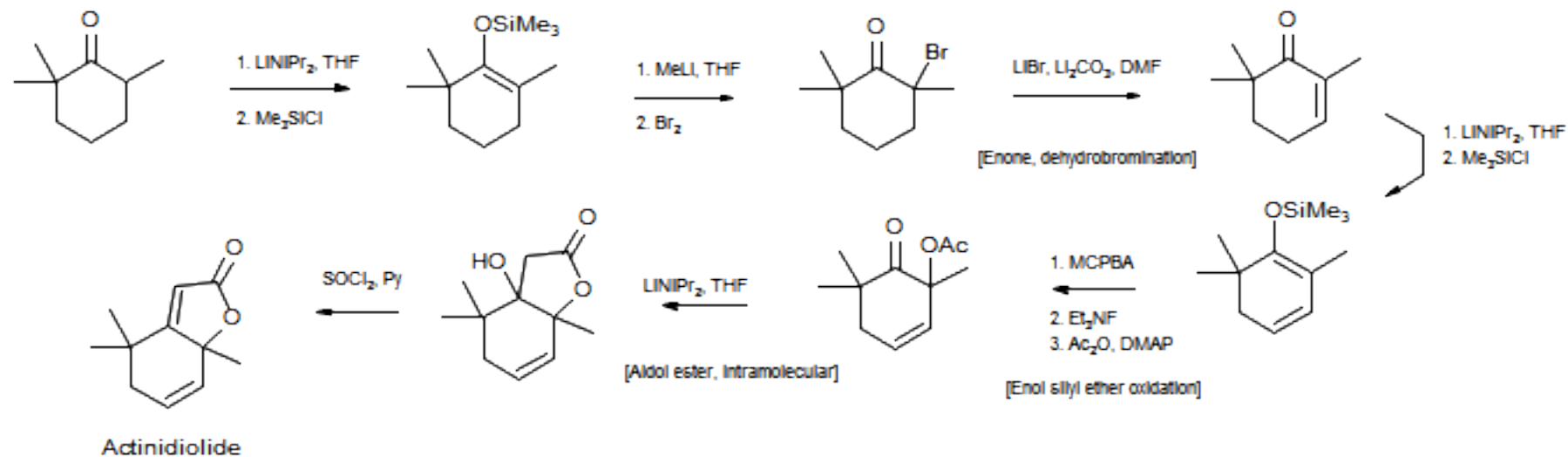
1. Synth
2. Evans aldol
3. Ireland Claisen
4. [2,3]sigmatropic
5. VinylLi
6. Weinreb

更多资料欢迎关注公众号: 化学微

Actinidiolide

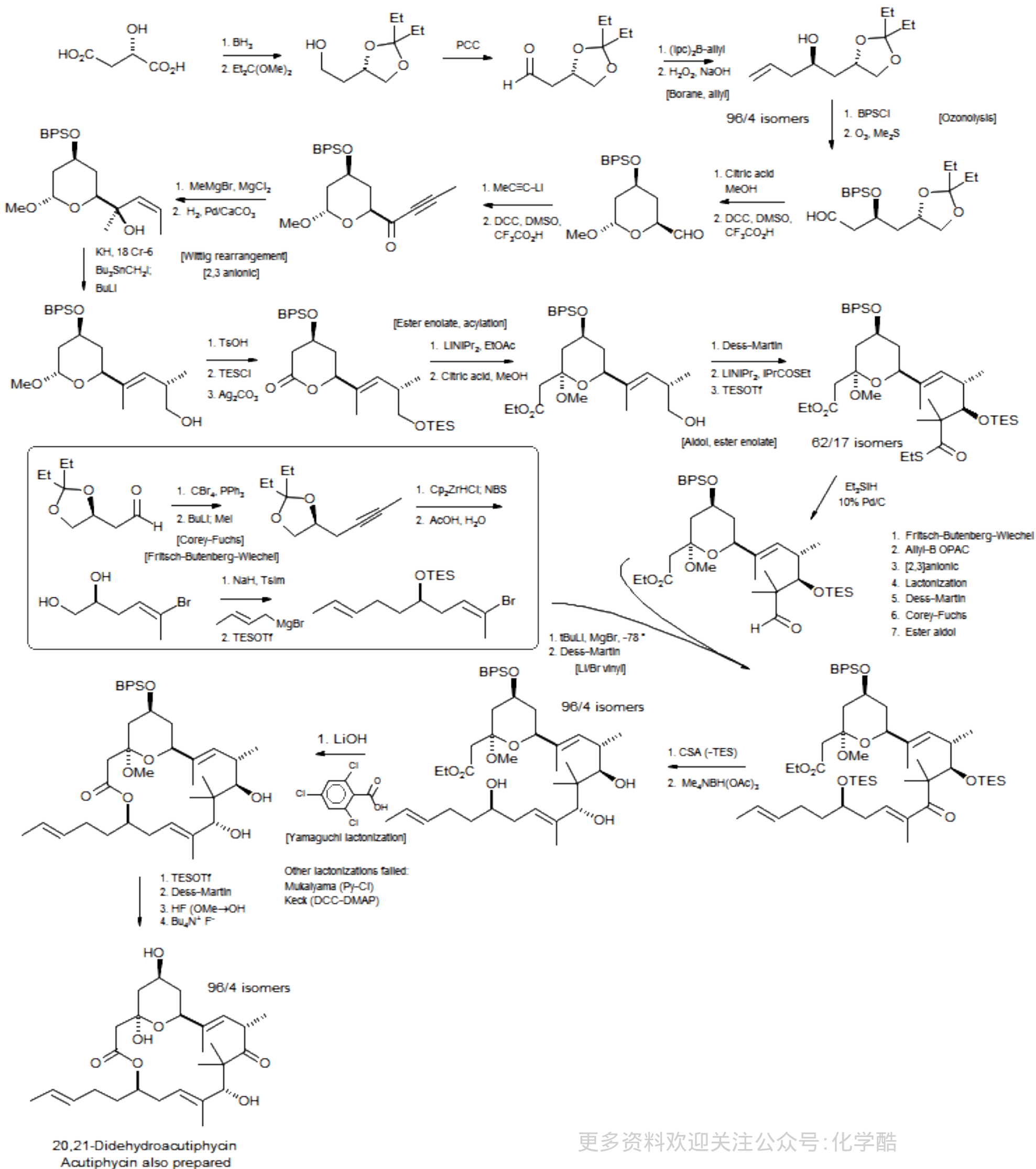
Rubottom, G. M.; Juve, H. D. Jr. *J. Org. Chem.* 1983, 48, 422

83-06



1. Synth
2. Enone
3. ON-1-OL
- 5-ringO
6. Aldol

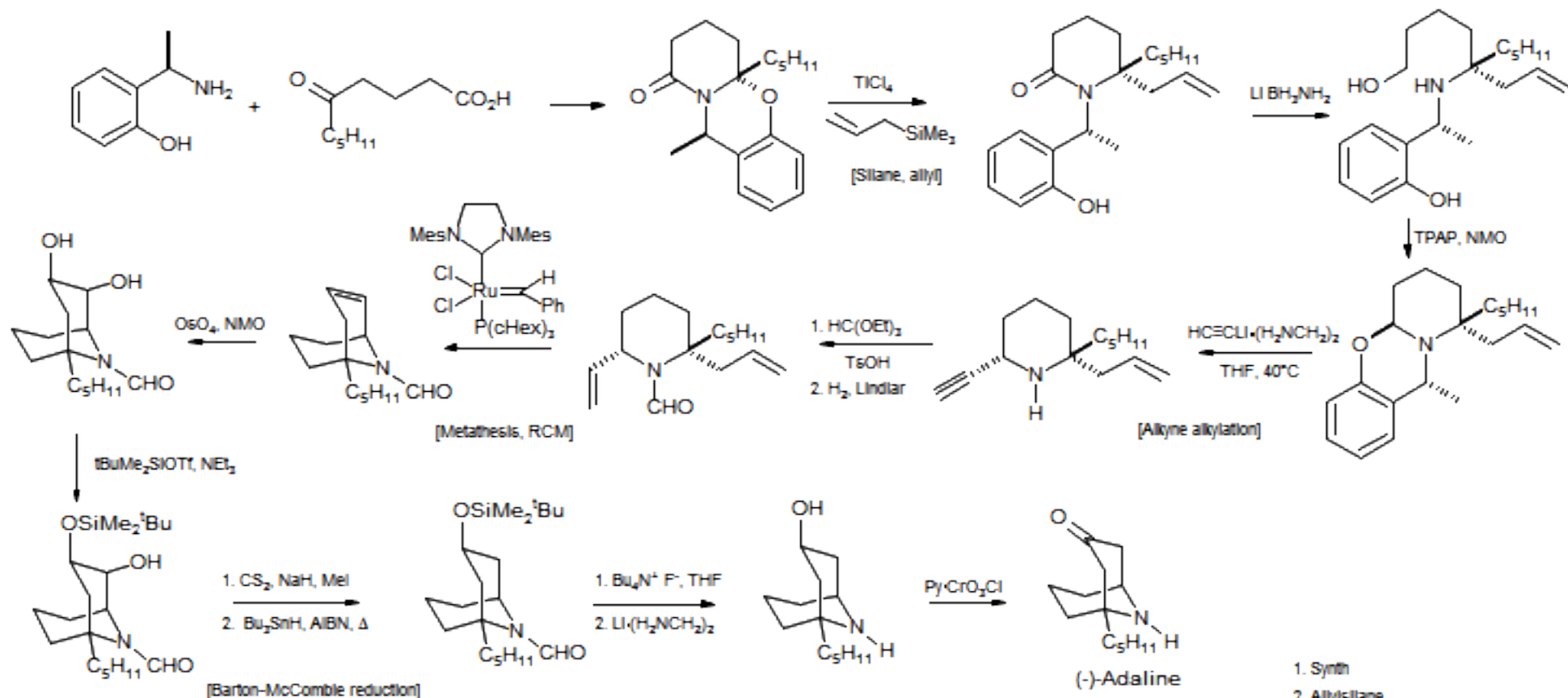
Smith, A. B.; Chen, S. S.-Y.; Nelsom, F.; Reichert, J. M.; Salvatore, B. A. *J. Am. Chem. Soc.* **1997**, *119*, 10935.



Adaline

Itoh, T.; Yamazaki, N.; Kibayashi, C. *Org. Lett.* 2002, 4, 2469

02-04

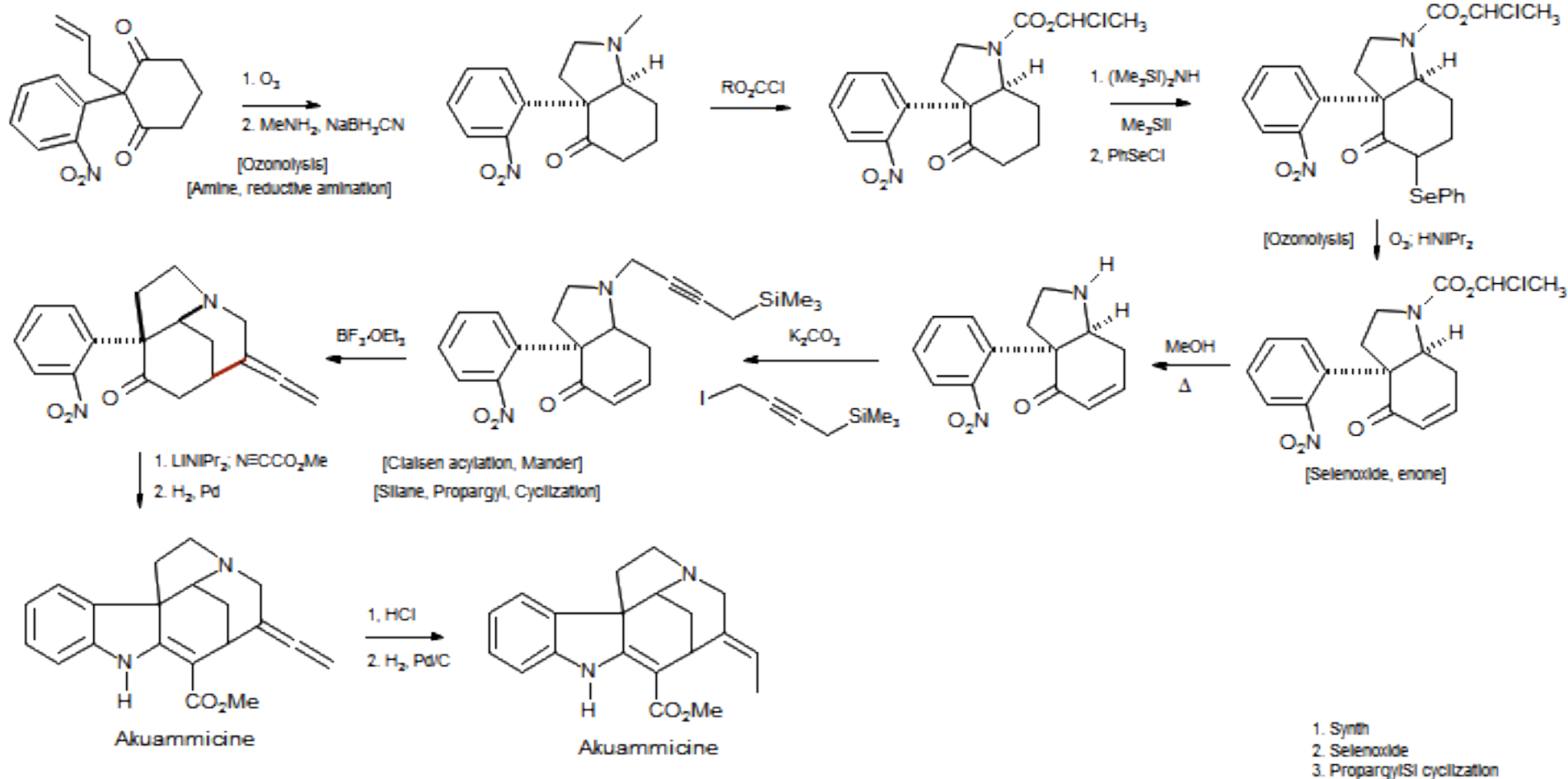


1. Synth
2. Allylsilane
3. AcetyleneLi
4. ShCr
5. RCM
6. Barton-McCombie

Akuammicine

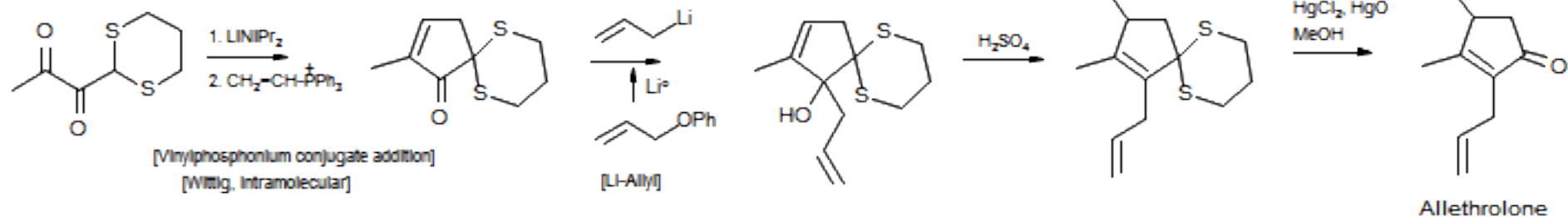
Bonjoch, J.; Sole, D.; Garcia-Rubio, S.; Bosch, J. *J. Am. Chem. Soc.* **1997**, *119*, 7230

97-17



Allethrolone

Kawamoto, I.; Muramatsu, S.; Yura, Y. *Synth. Comm.* 1975, 5, 185.

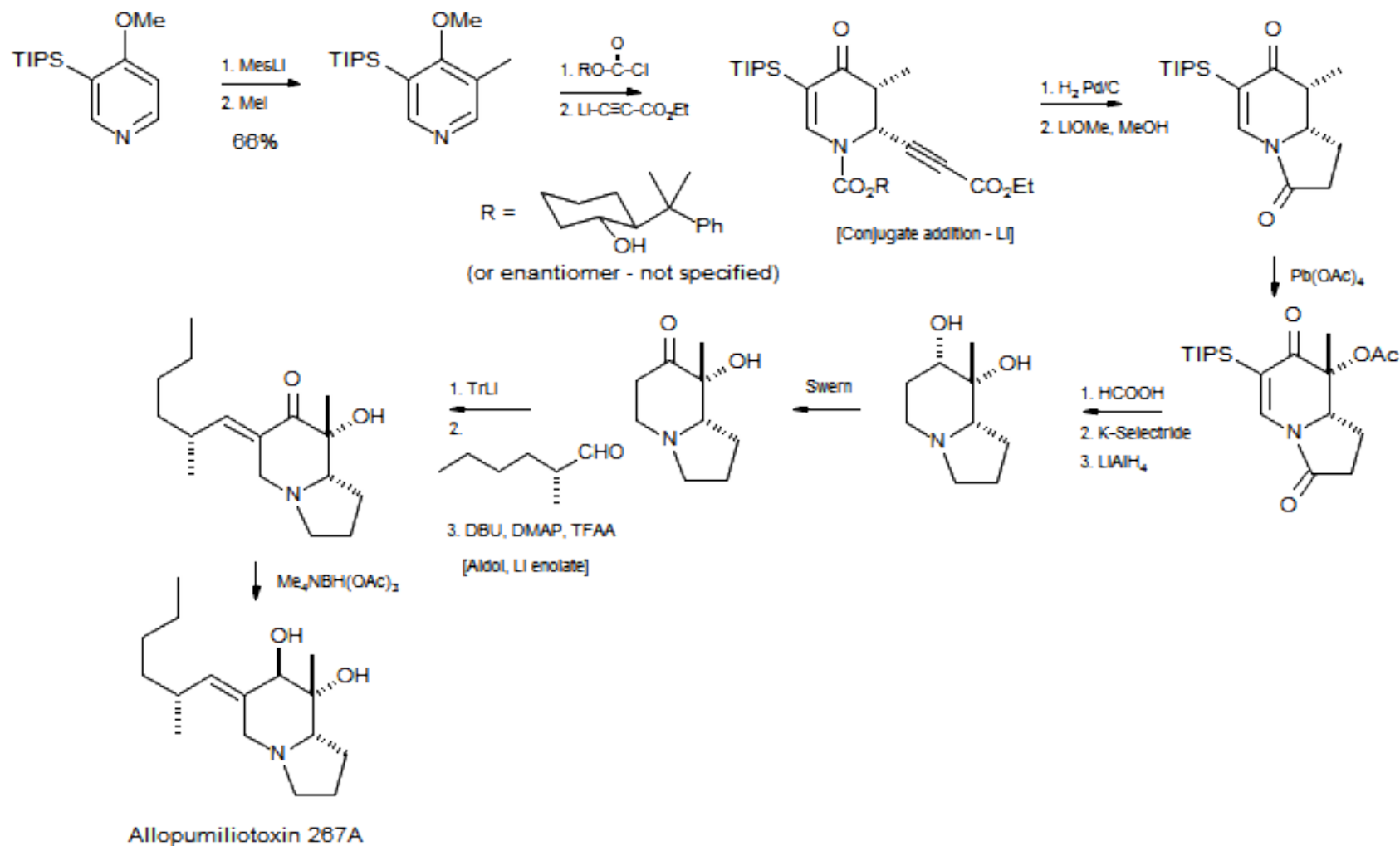


1. Synth
2. Michael
3. 5-Ring
4. Enone
5. Vinyl-P

Allopumiliotoxin 267A

01-03

Comins, D. L.; Huand, S.; McArdle, C. L.; Ingalls, C. L. *Org. Lett.* **2001**, *3*, 469.

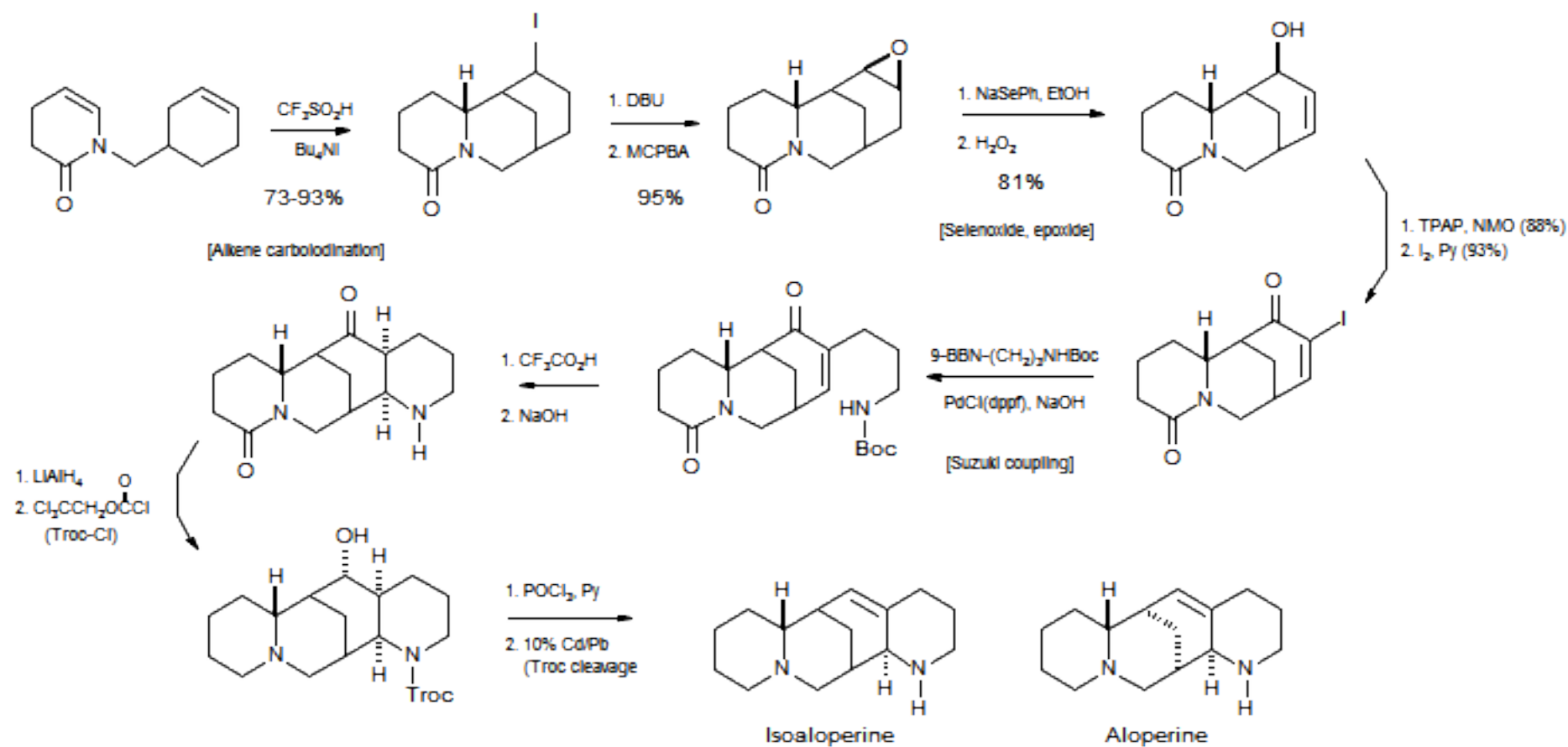


1. Synth
2. PyLi
3. Pb(OAc)_4
4. Aldol

Aloperine (iso)

Brosius, A. D.; Overman, L. E. *J. Org. Chem.* 1997, 62, 440

97-10

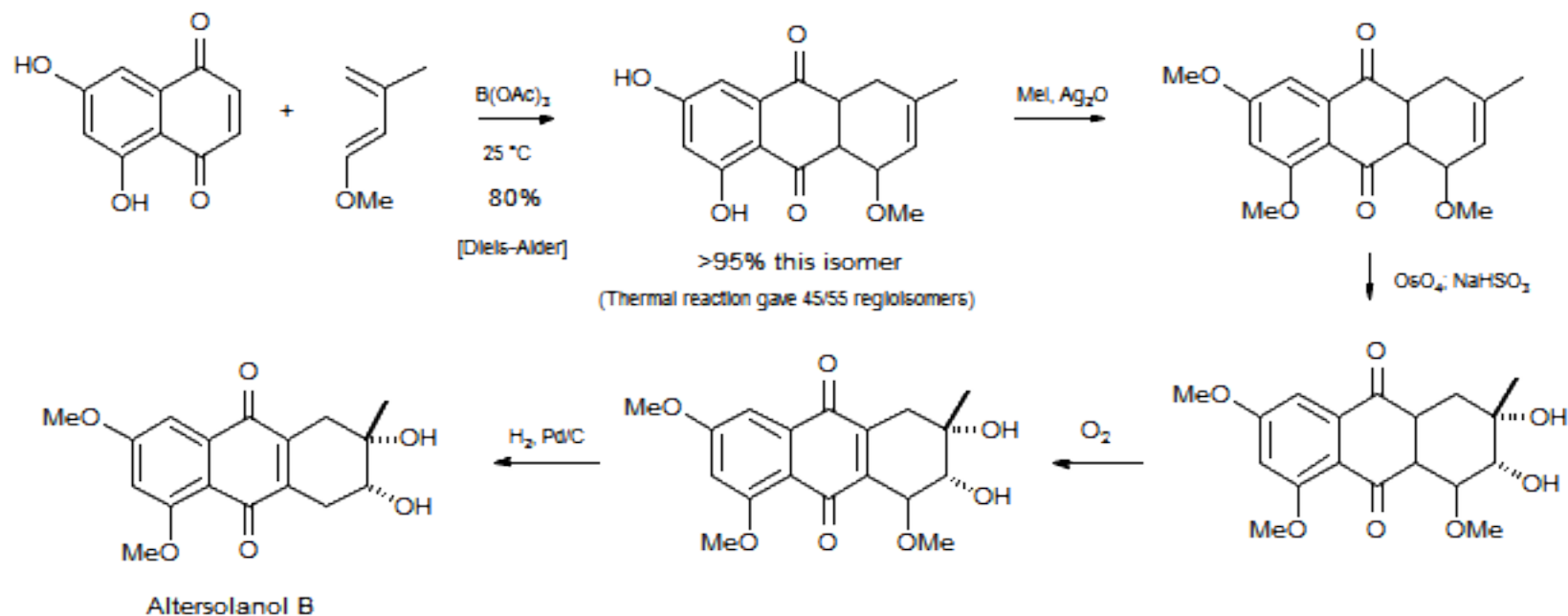


1. Synth
2. Suzuki
3. Selenox E₂ ShCrs (In)
4. Iminium

Altersolanol B

78-43

Kelly, T. R.; Montury, M. *Tetrahedron Lett.* 1978, 19, 4309

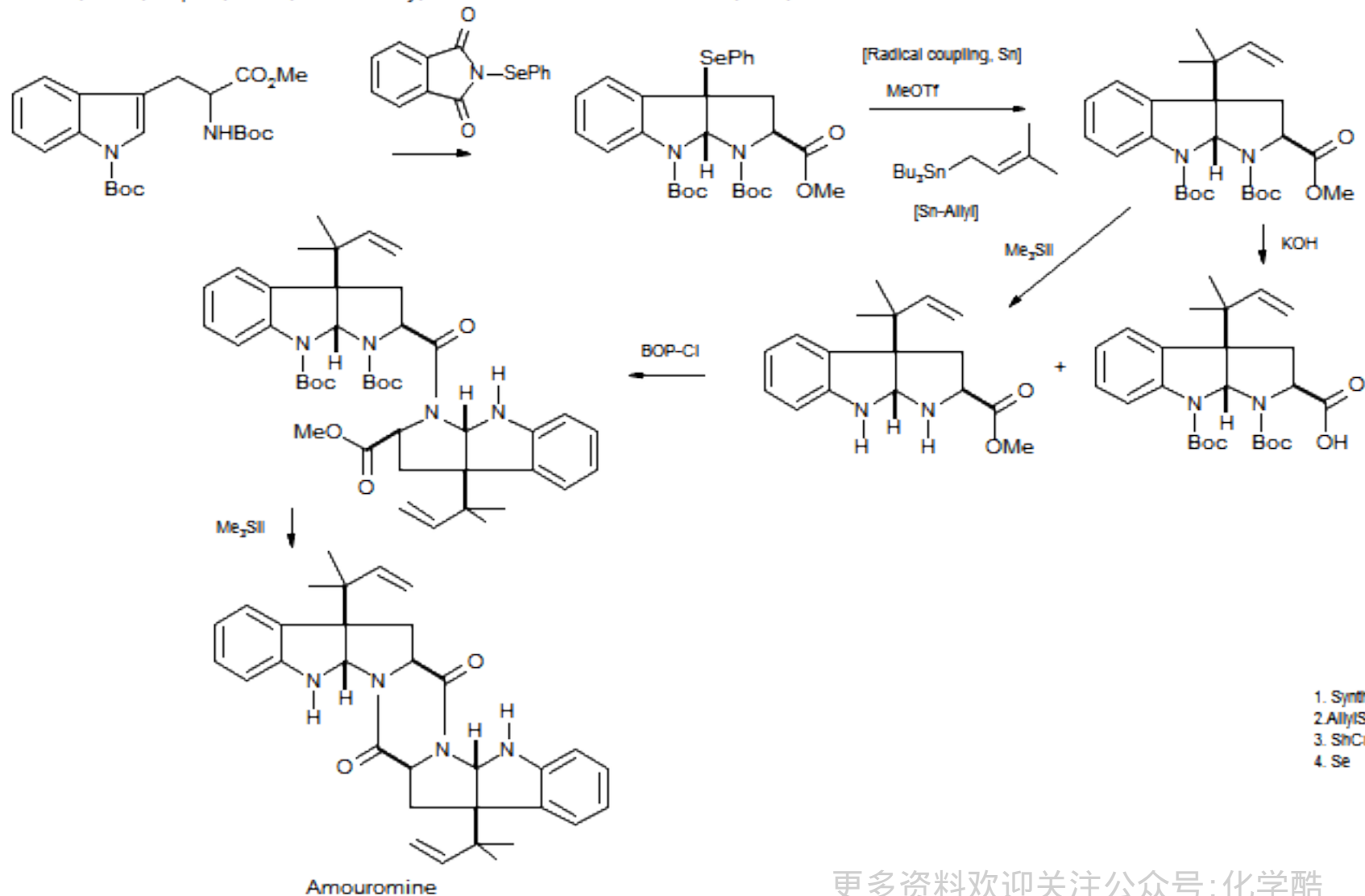


1. Synth
2. Diels-Alder
3. OsO_4
4. Quinone

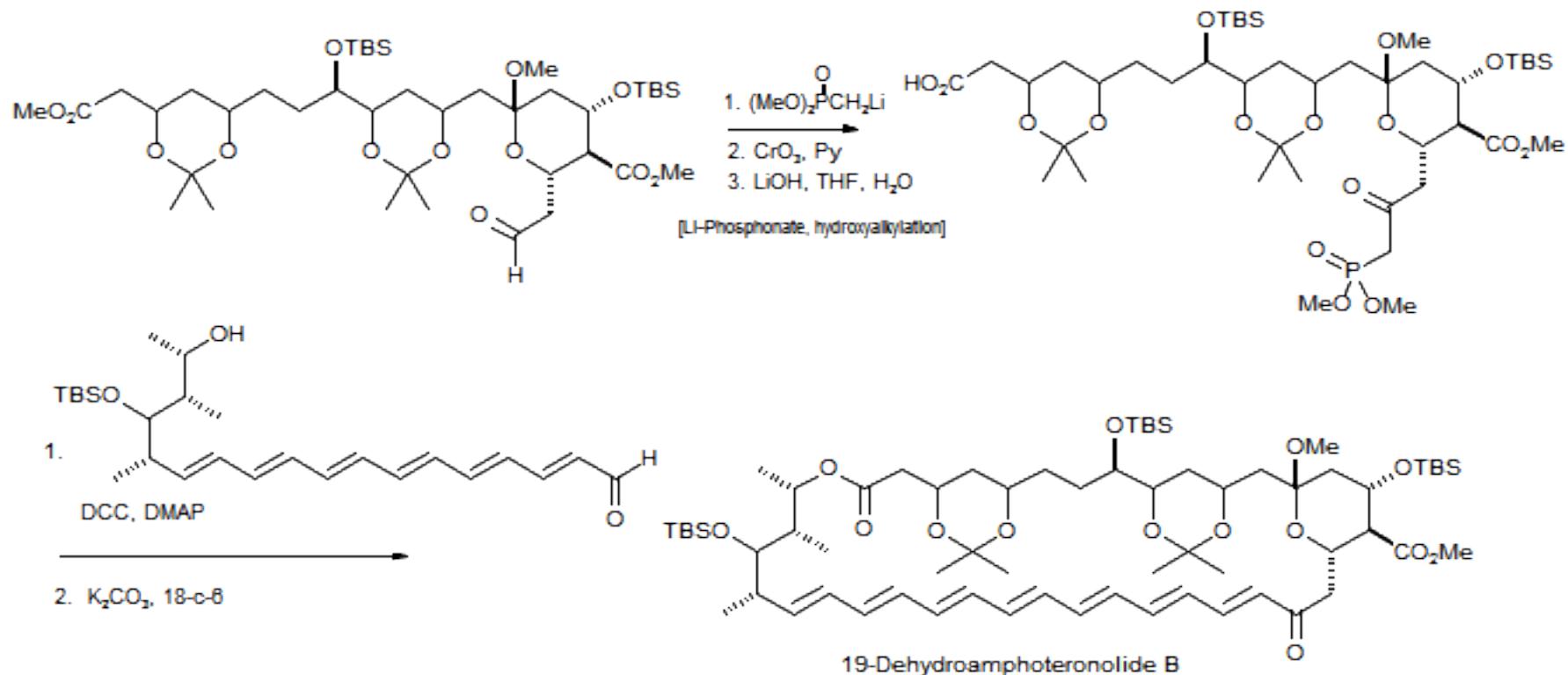
Amouromine

Marsden, S. P.; Depew, K. M.; Danishefsky, S. J. *J. Am. Chem. Soc.* 1994, 116, 11143

94-07



Amphoteronolide B

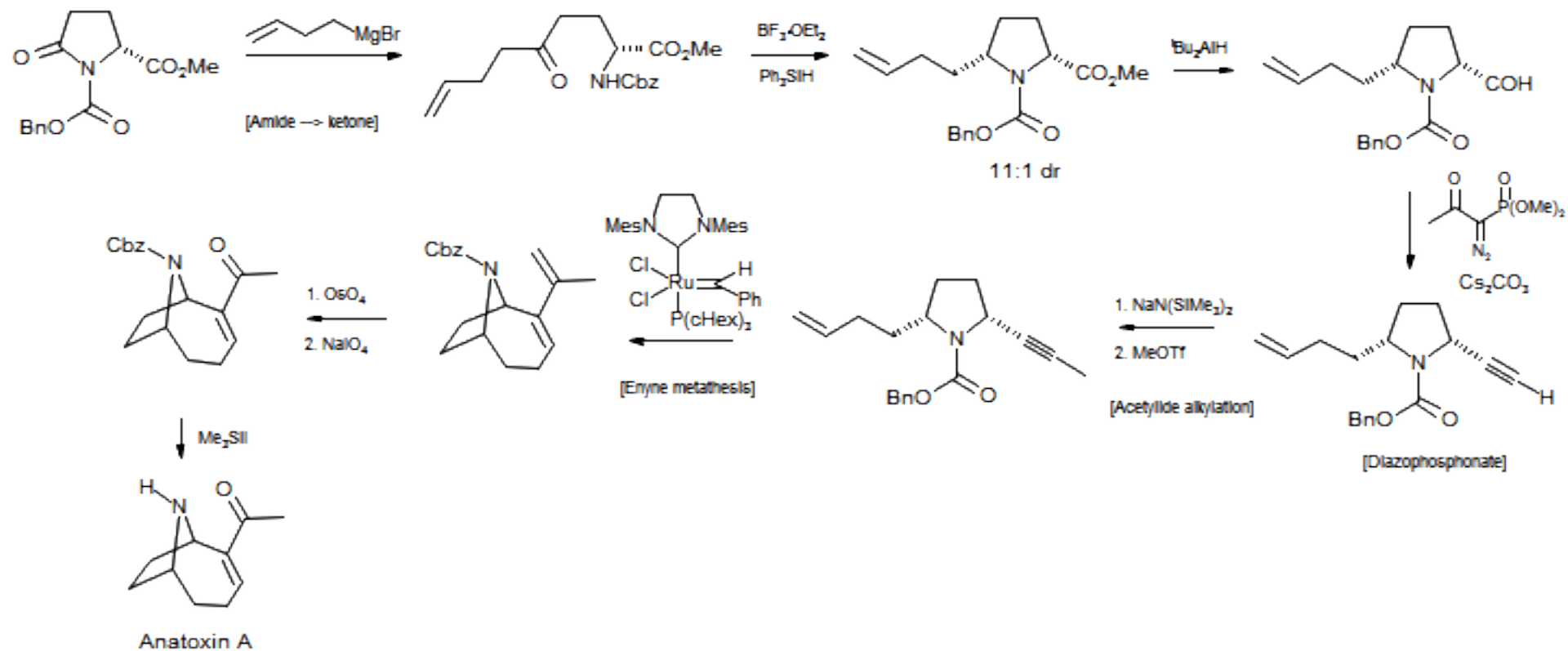
Masamune et al *Tetrahedron Lett.* 1988, 29, 451

1. Synth
2. LiCH_2P
3. Horner-Emmons

Anatoxin A

Brenneman, G. B.; Martin, S. F. *Org. Lett.* 2004, 6, 1329

04-04



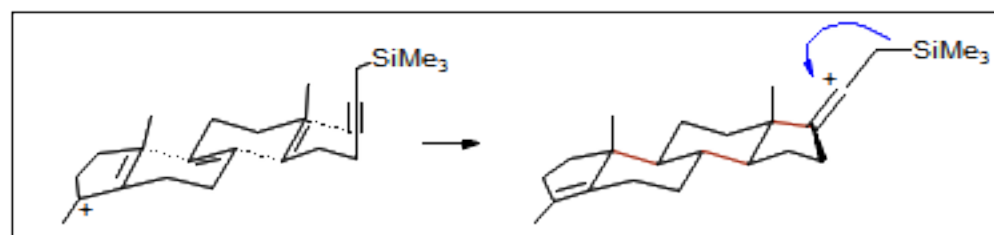
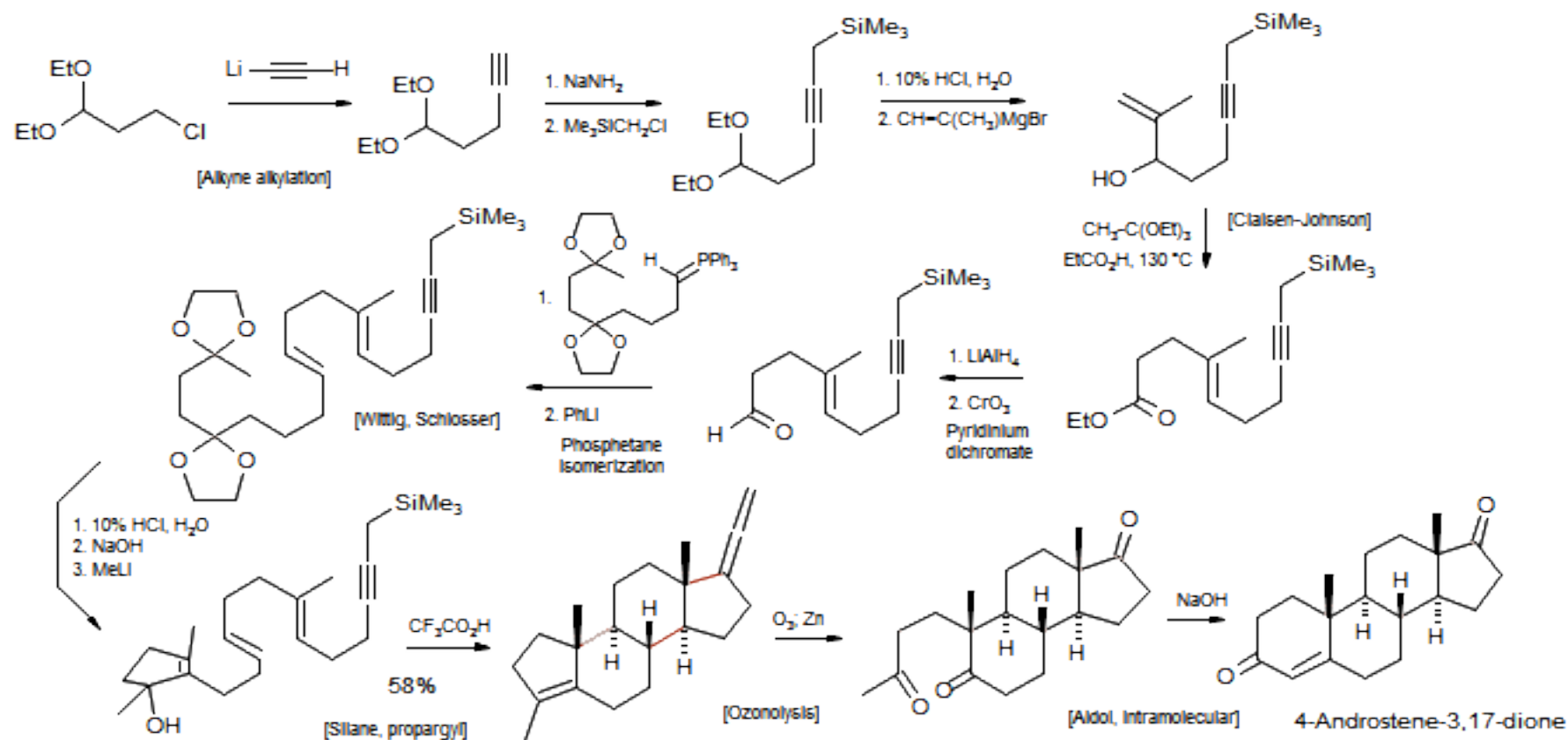
1. Synth
2. SilylH reduct
3. DibalH
4. enyne metathesis
5. Acetylene f. aldehyde

Androstene-3,17-dione, 4-

80-7

Comm

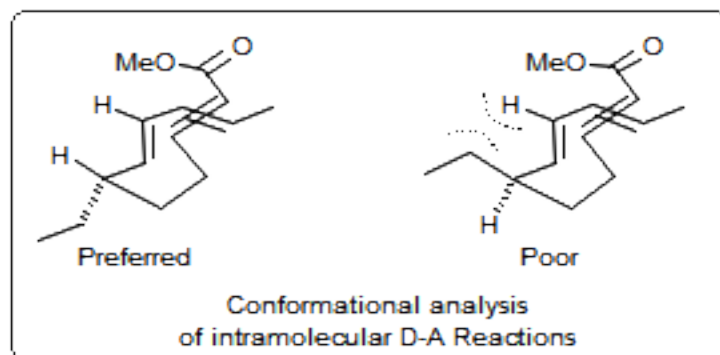
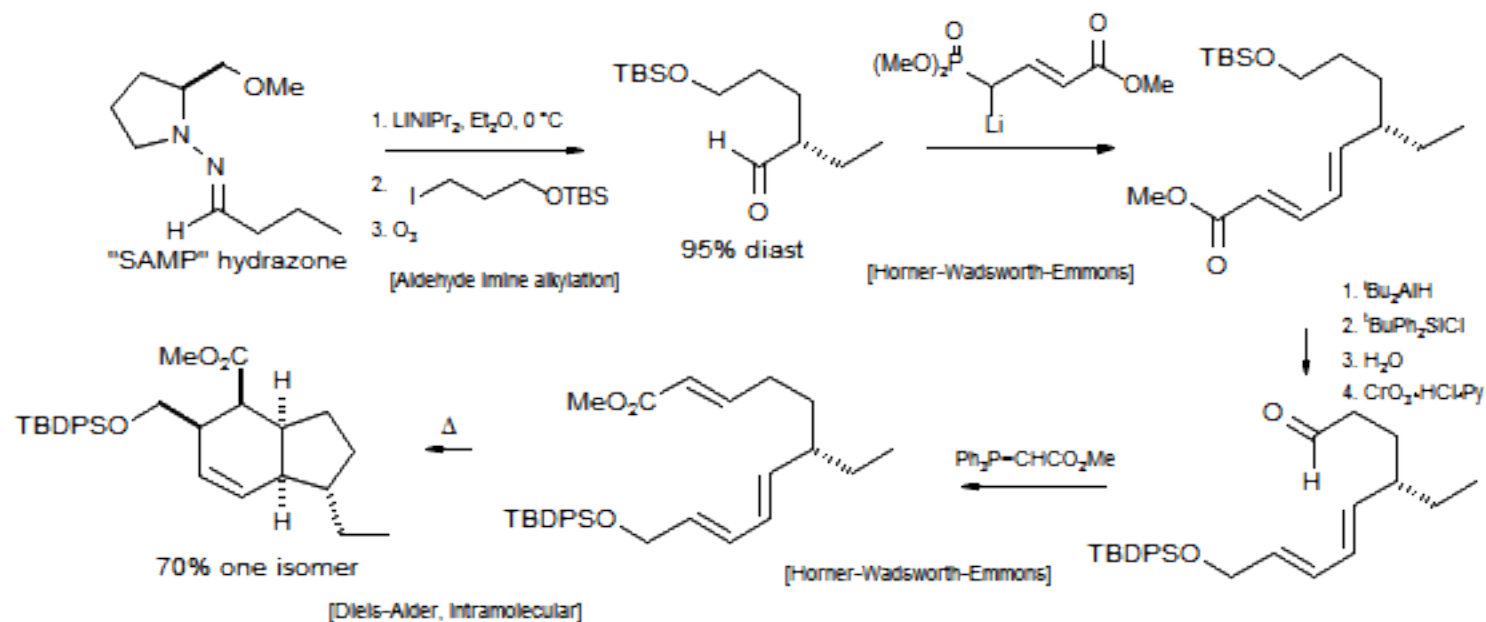
Schmidt, R.; Huesmann, P. L.; Johnson, W. S. *J. Am. Chem. Soc.* **1980**, *102*, 5122.



Efficient termination of
cationic cyclization

更多资料欢迎关注公众号: 化学微

1. Synth
2. Propargylsilane
3. Cationic Cyclization
4. [3,3] Claisen
5. Wittig - trans
6. Acetylene
7. Si-Chem

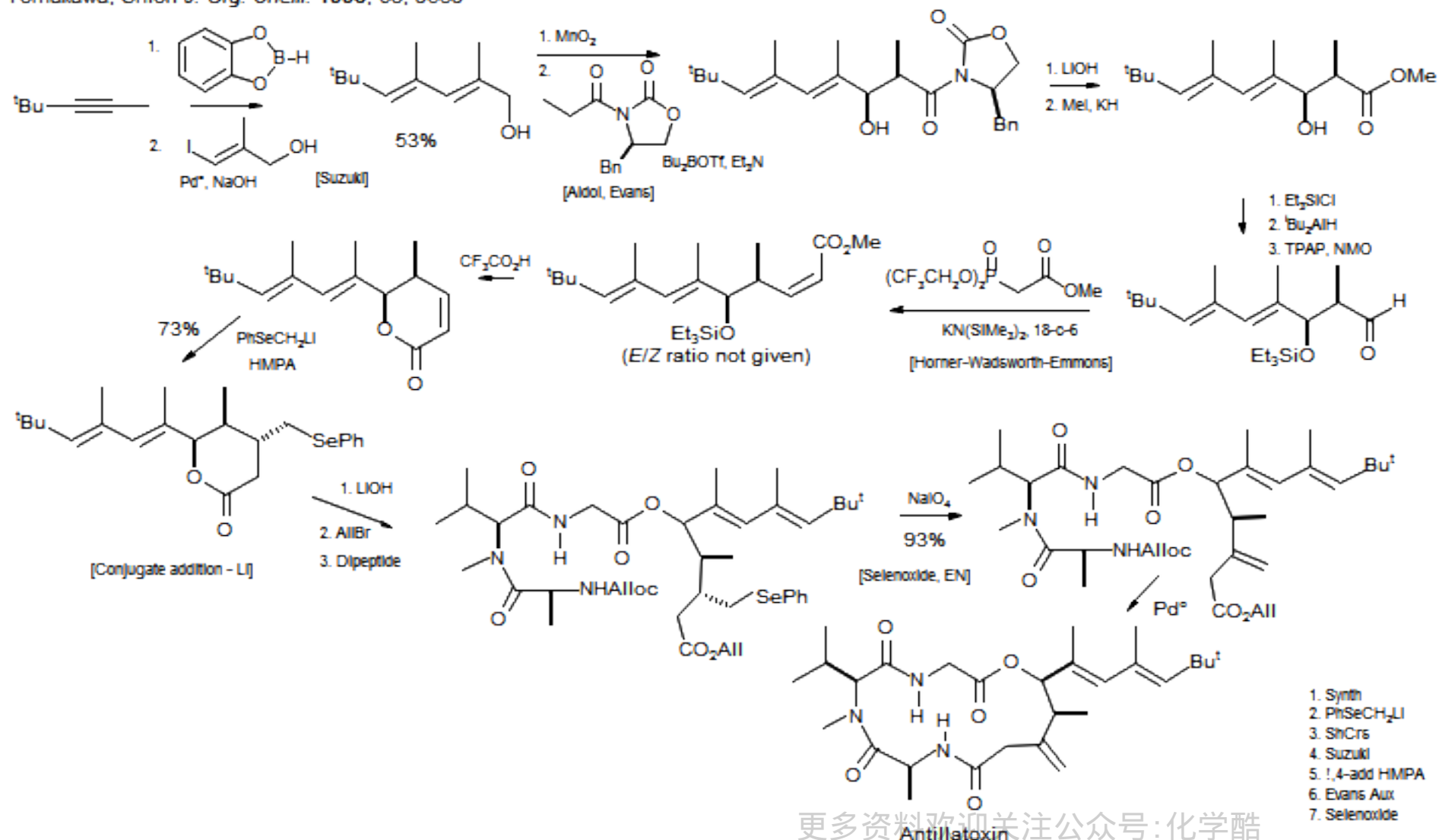
Nicolaou, Papahatjis, Claremon, Dolle *J. Am. Chem. Soc.* 1981, 103, 6967

1. Synth
2. Intra D-A
3. Horner-Wadsworth-Emmons
4. Hydrazone Alkyl

Antillatoxin Isomer

98-06

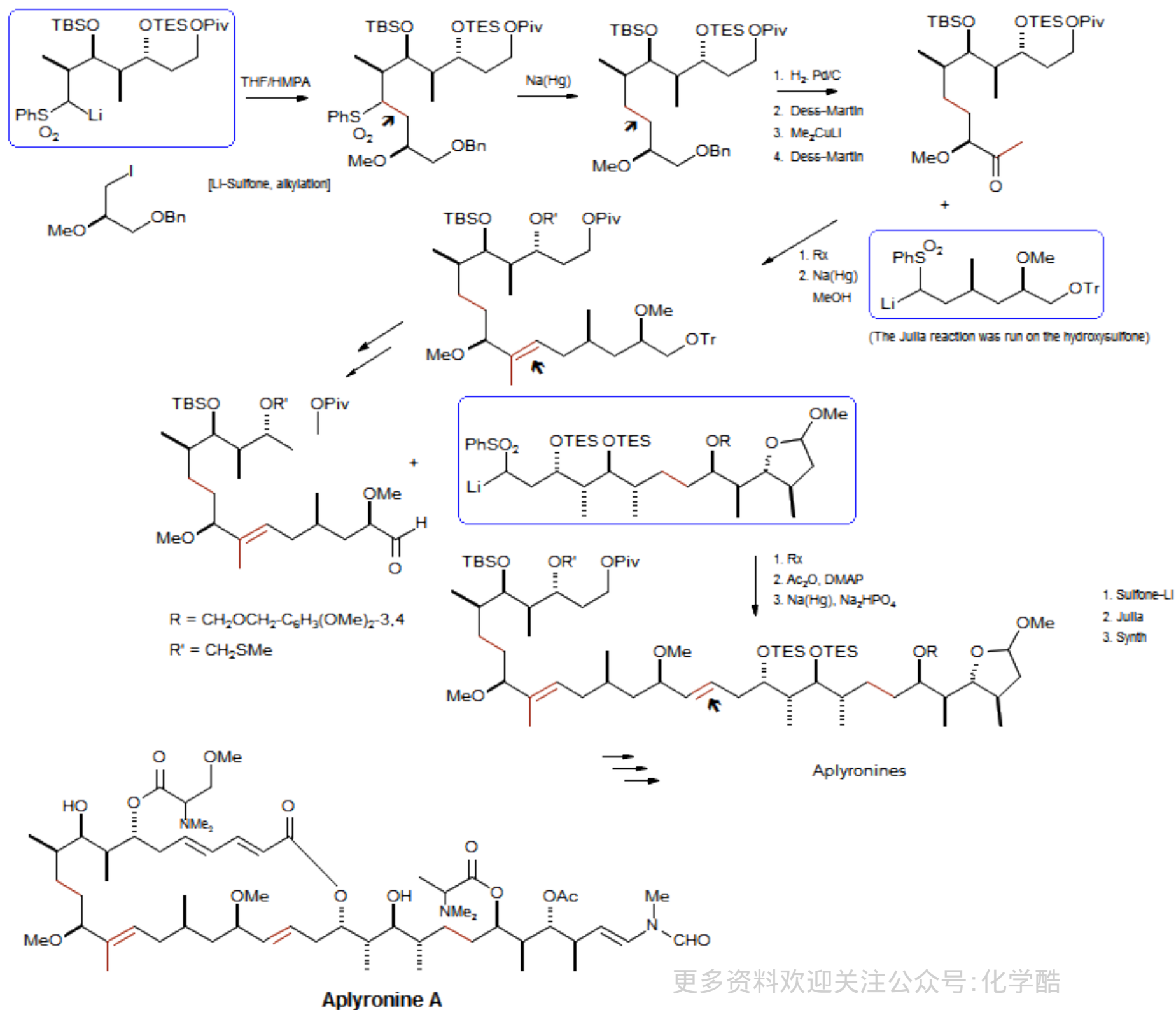
Yomakawa, Shiori *J. Org. Chem.* **1998**, *63*, 8638



1. Synth
2. PhSeCH₂Li
3. ShCrs
4. Suzuki
5. 1,4-add HMPA
6. Evans Aux
7. Selenoxide

Yamada, et al. *J. Org. Chem.* 1996, 61, 5326

Organometallic C-C bond forming steps in the Synthesis of Aplyronines

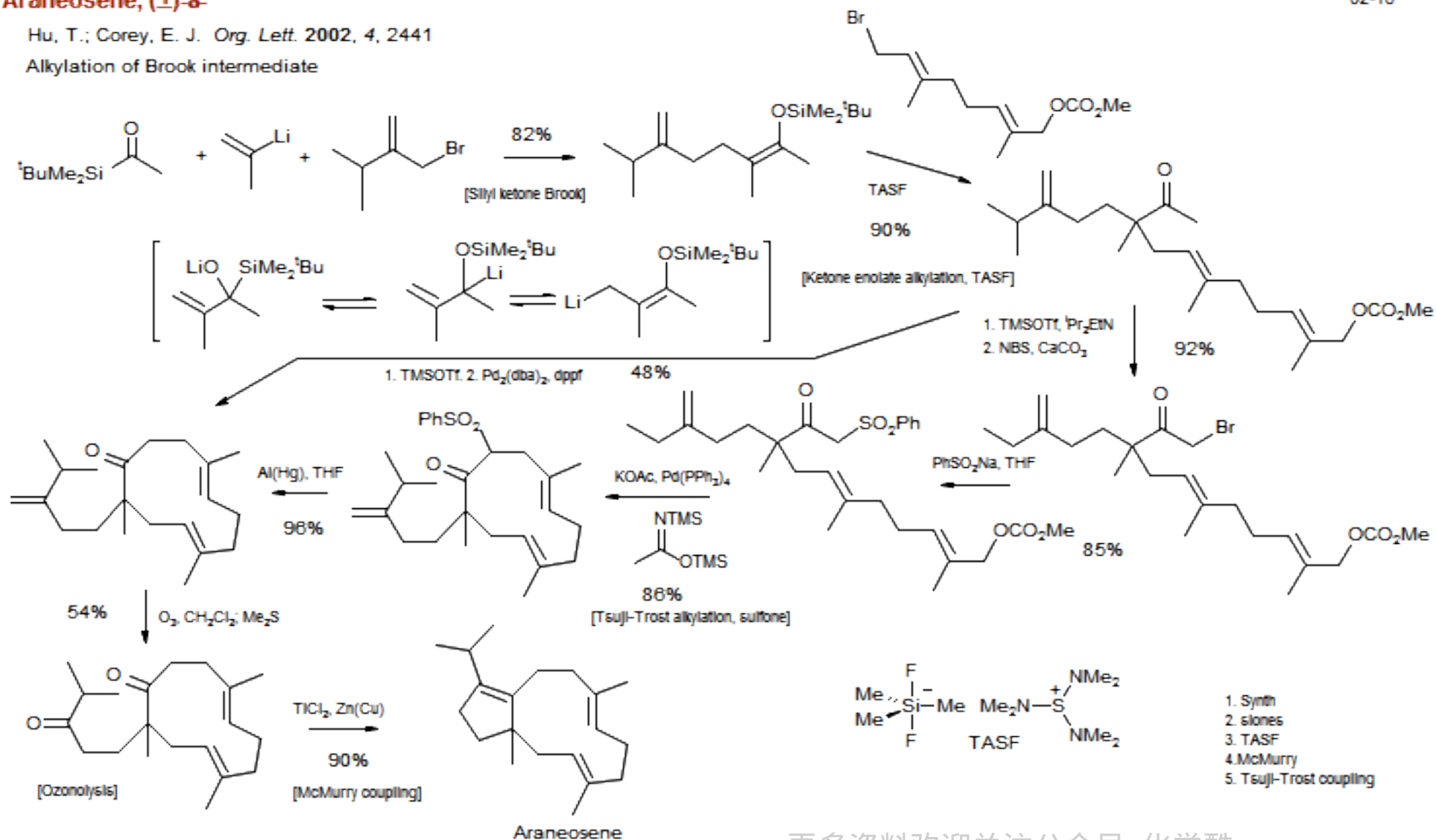


Araneosene, (±)-8-

02-16

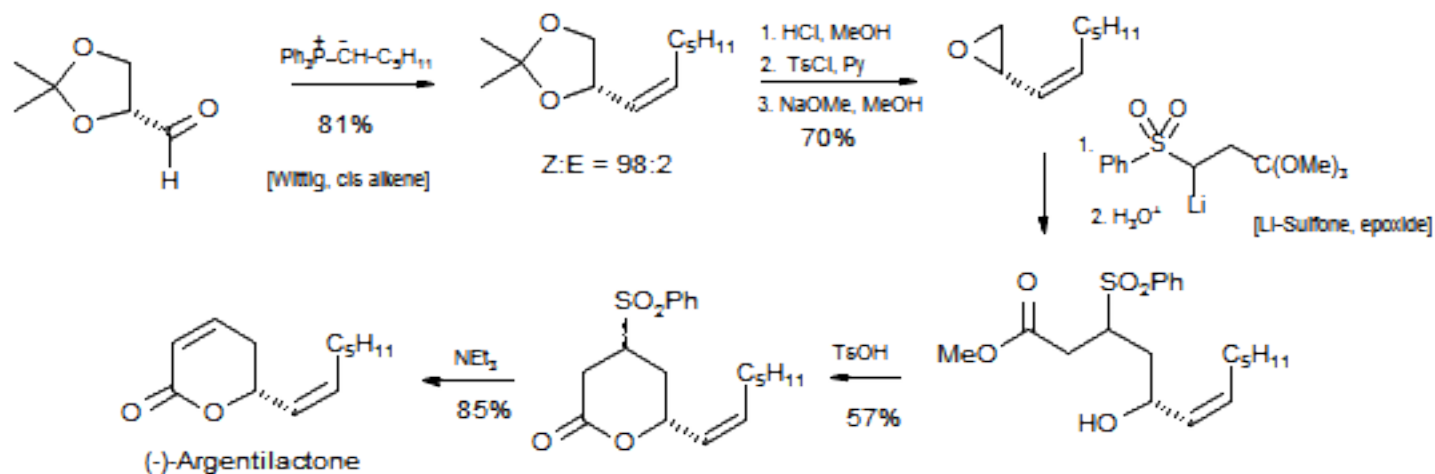
Hu, T.; Corey, E. J. *Org. Lett.* 2002, 4, 2441

Alkylation of Brook intermediate

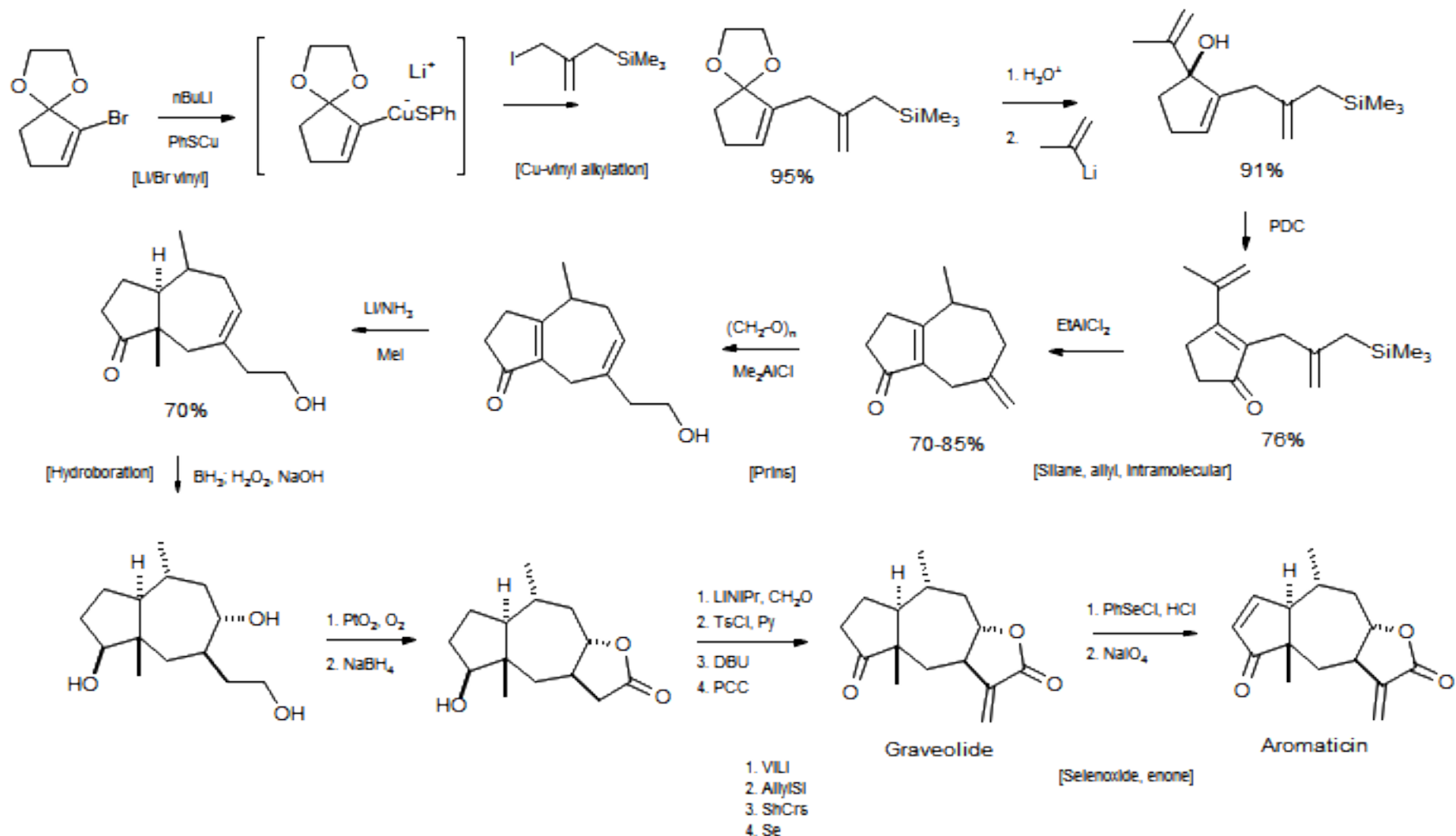


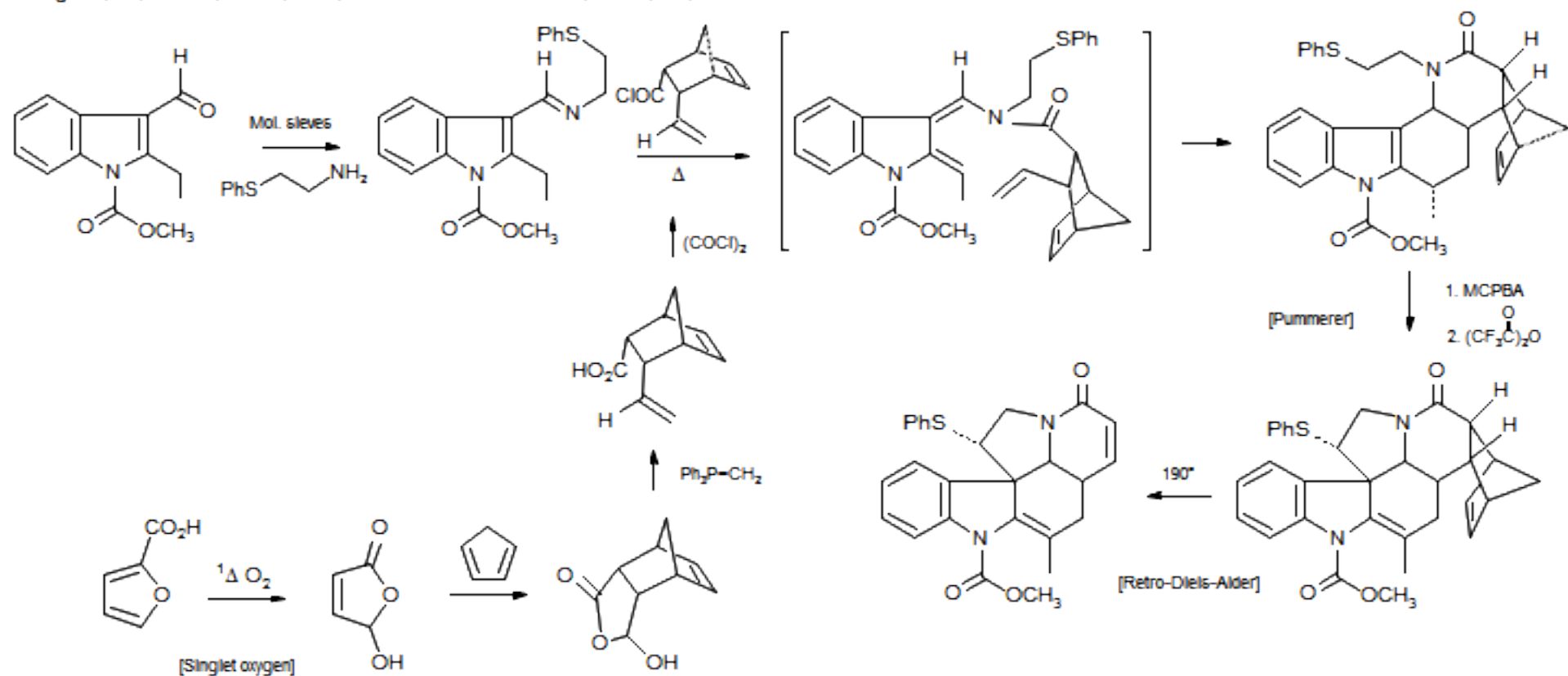
Argentilactone, (-)-

Carretero, J. J.; Ghosez, L. *Tetrahedron Lett.* 1988, 29, 2059



1. Synth
2. Li-sulfone
3. Epoxide-RLi
4. Wittig

Majetich, G.; Song, J. S.; Leigh, A. J.; Condon, S. M. *J. Org. Chem.* 1993, 58, 1030.

Magnus, P.; Cairns, P. M.; Kim, C. S. *Tetrahedron Lett.*, 1985, 26, 1963.

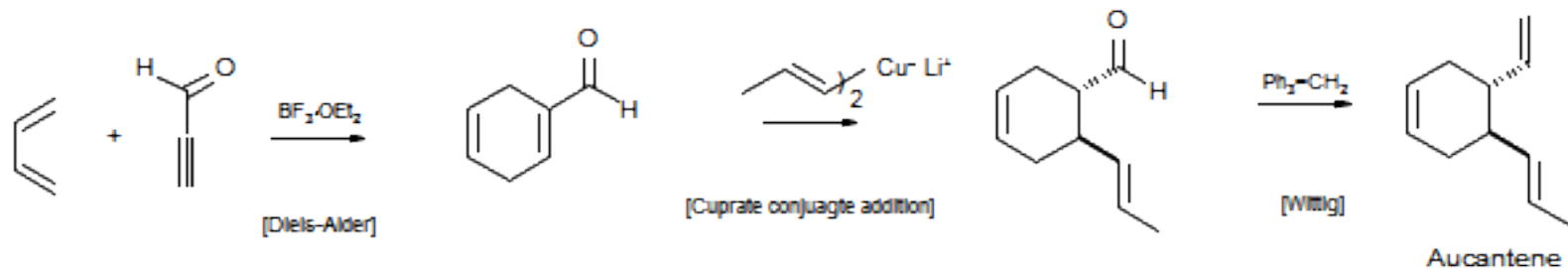
1. Synth
2. DA
3. Retro-DA
4. Pummerer
5. Singlet oxygen

Aucantene

Liu, H. J. ?? *Can. J. Chem.* 1978, 56, 308

78-55

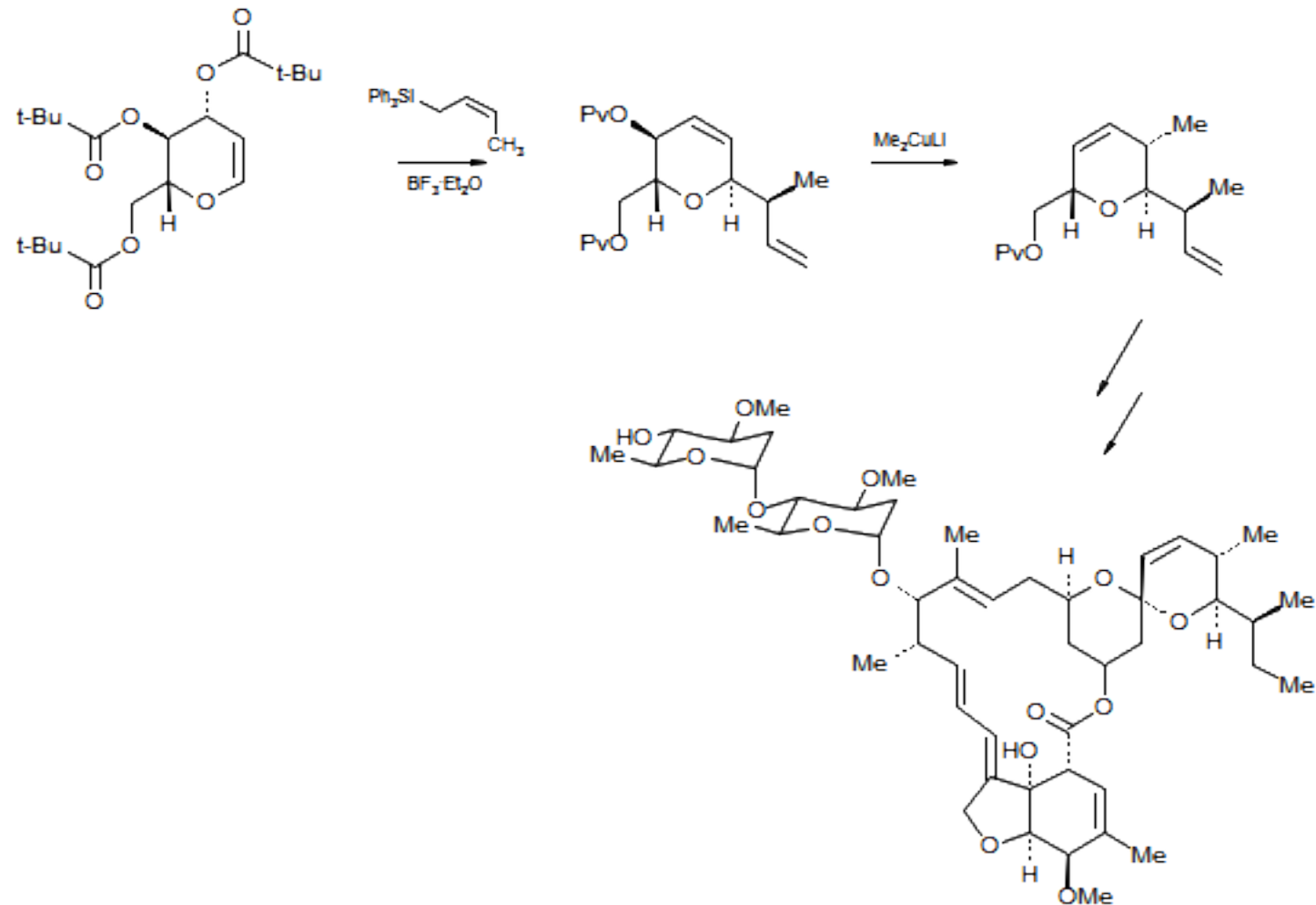
EXP



Avermectin A_{1a}

Danishefsky, S.J.; et. al. *J. Am. Chem. Soc.*, 1989, 111, 2967.

89-16

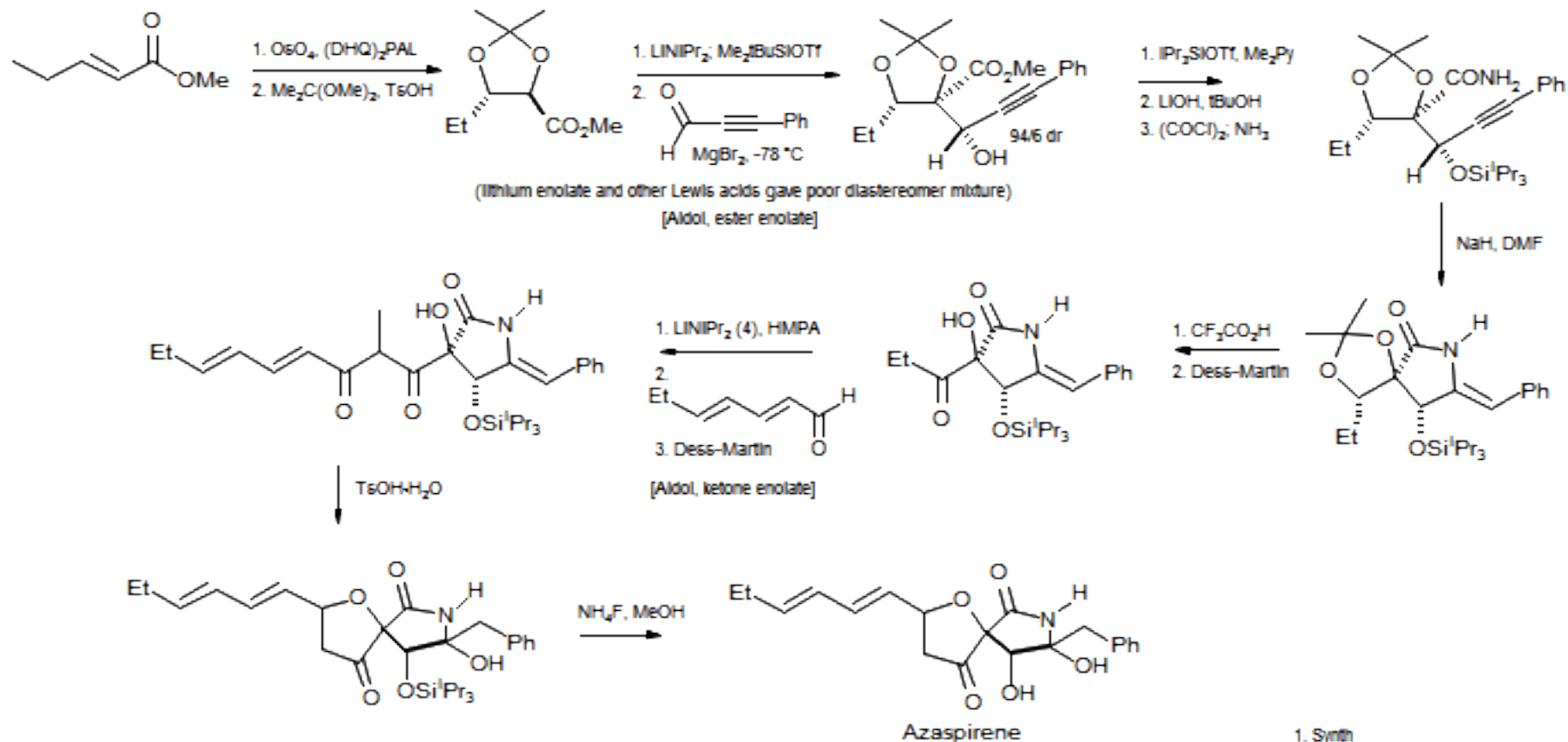


1. Synth
2. Allyl silane
3. Cu

更多资料欢迎关注公众号:化学酷

Azaspirene

02-08

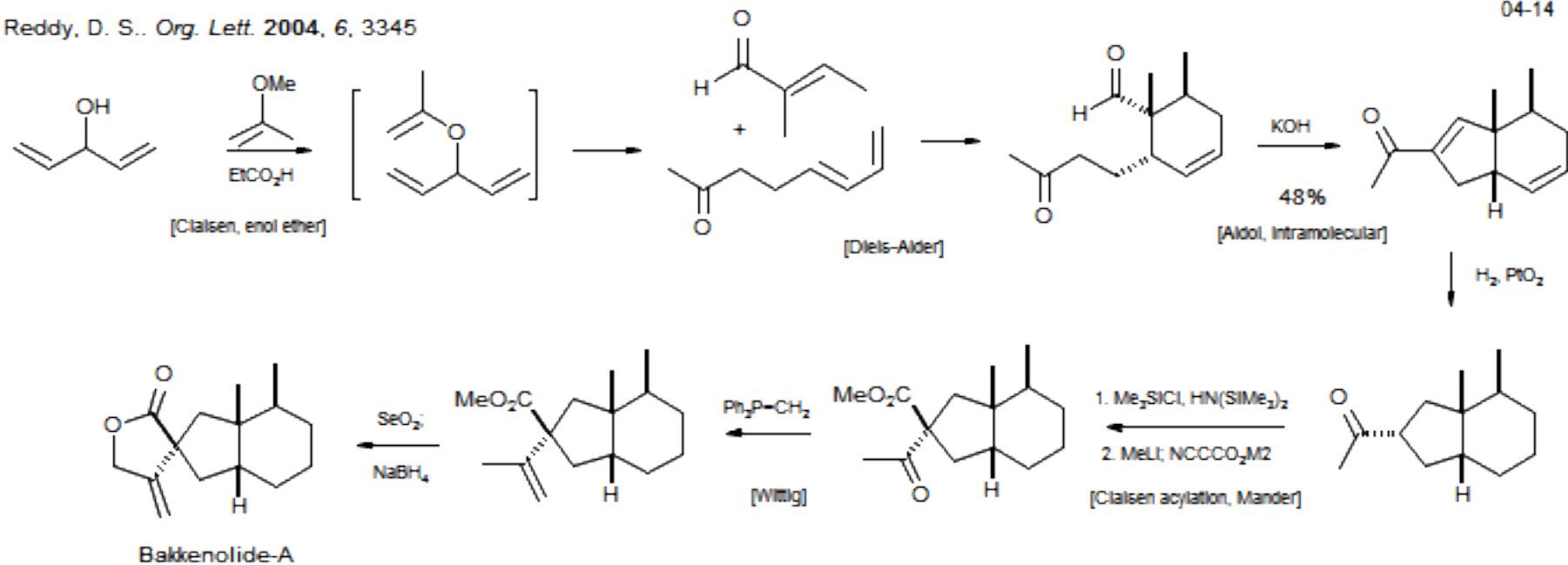
Hayashi, Y.; et al.. *J. Am. Chem. Soc.* 2002, 124, 12078 (Angiogenesis inhibitor)

1. Synth
2. Aldol-ketone acetal
3. ShCrS
4. Enamine
5. β -Alkoxy ester enolate

Bakkenolide-A

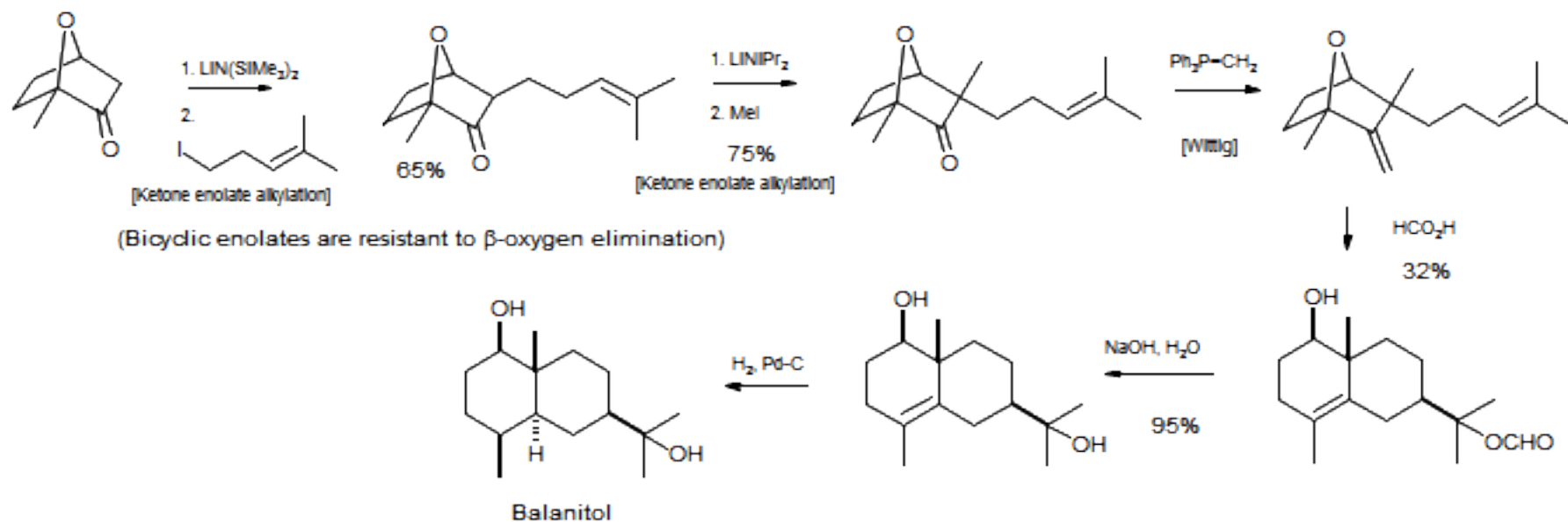
Reddy, D. S.. *Org. Lett.* 2004, 6, 3345

04-14

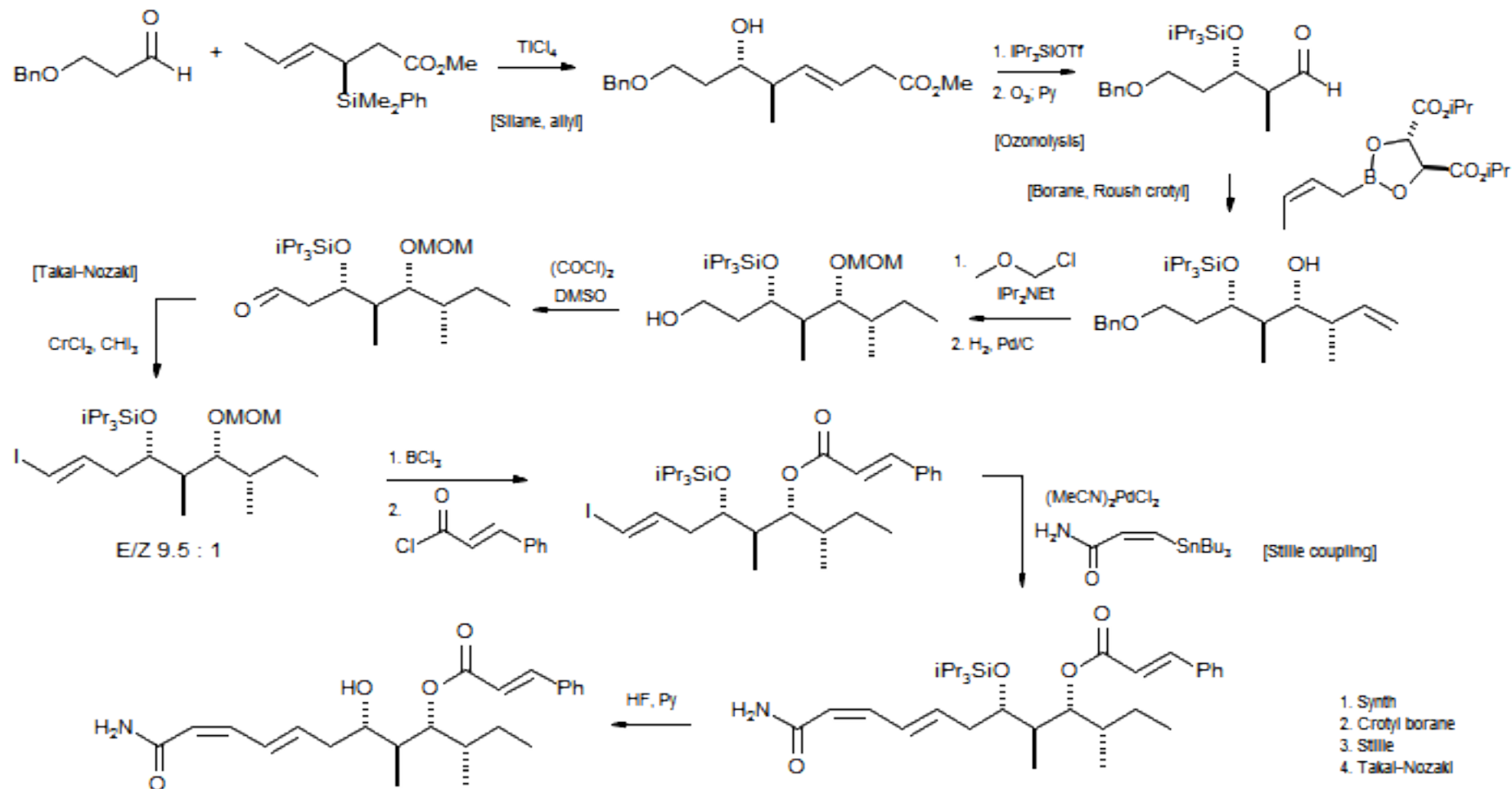


1. Synth
2. Diels-Alder
3. Claisen
4. Aldol-enone
5. SeO₂

Zhang, Z.; Li, W.-D. X.; Li, Y. *Org. Lett.* 2001, 3, 2555



1. Synth
2. Cationic cyclization
3. Ketone enolate alkyl

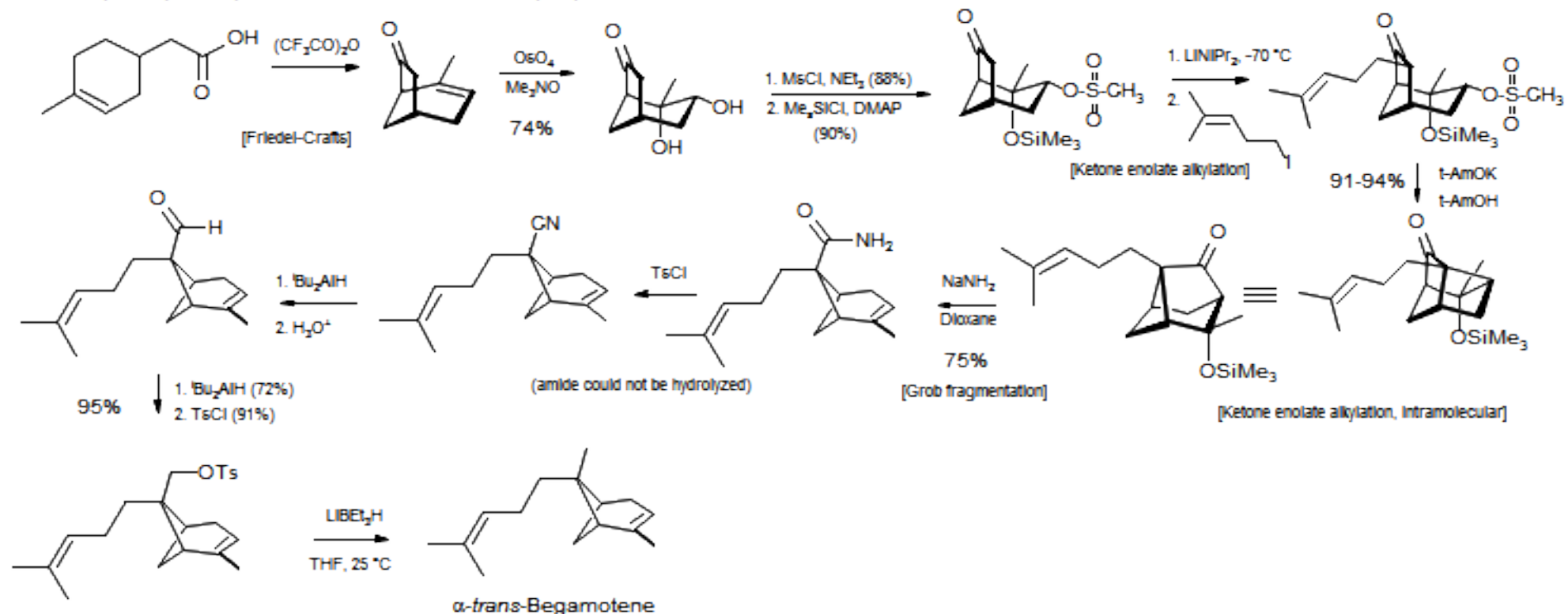
Lipomi, D. J.; Langille, N. F.; Panek, J. S. *Org. Lett.* 2004, 6, 3533

Bergamotene, α -trans

Larson, S. D.; Monti, S. A. *J. Am. Chem. Soc.* 1977, 99, 8015.

77-24

EXP

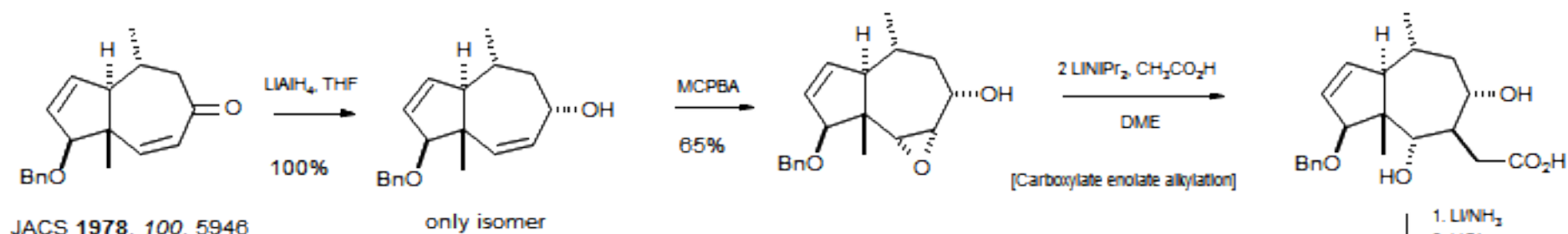


1. Synth
2. OsO_4
3. Baldwin
4. Grob
5. Ketone alk
6. AL
7. DIBAL

Bigelovin

Grieco, P. A.; Ohfuné, Y.; Majetich, G. *J. Org. Chem.* **1979**, *44*, 3092

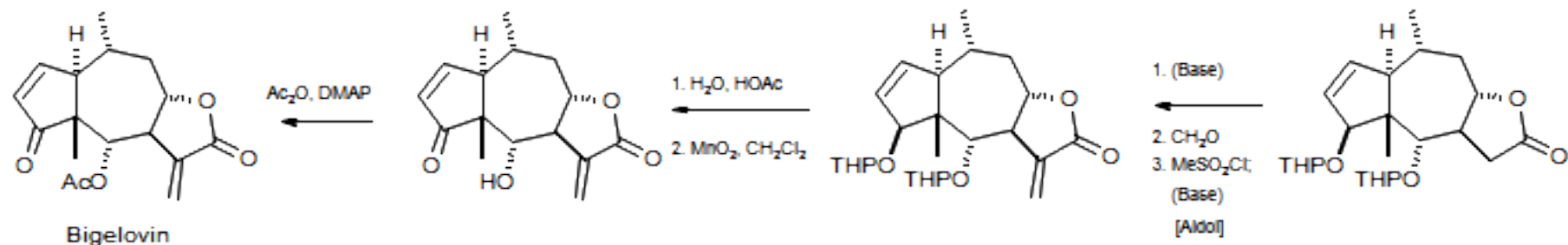
79-01



JACS **1978**, *100*, 5948

only isomer

1. LiNH_2
2. HCl
3. THP, H^+



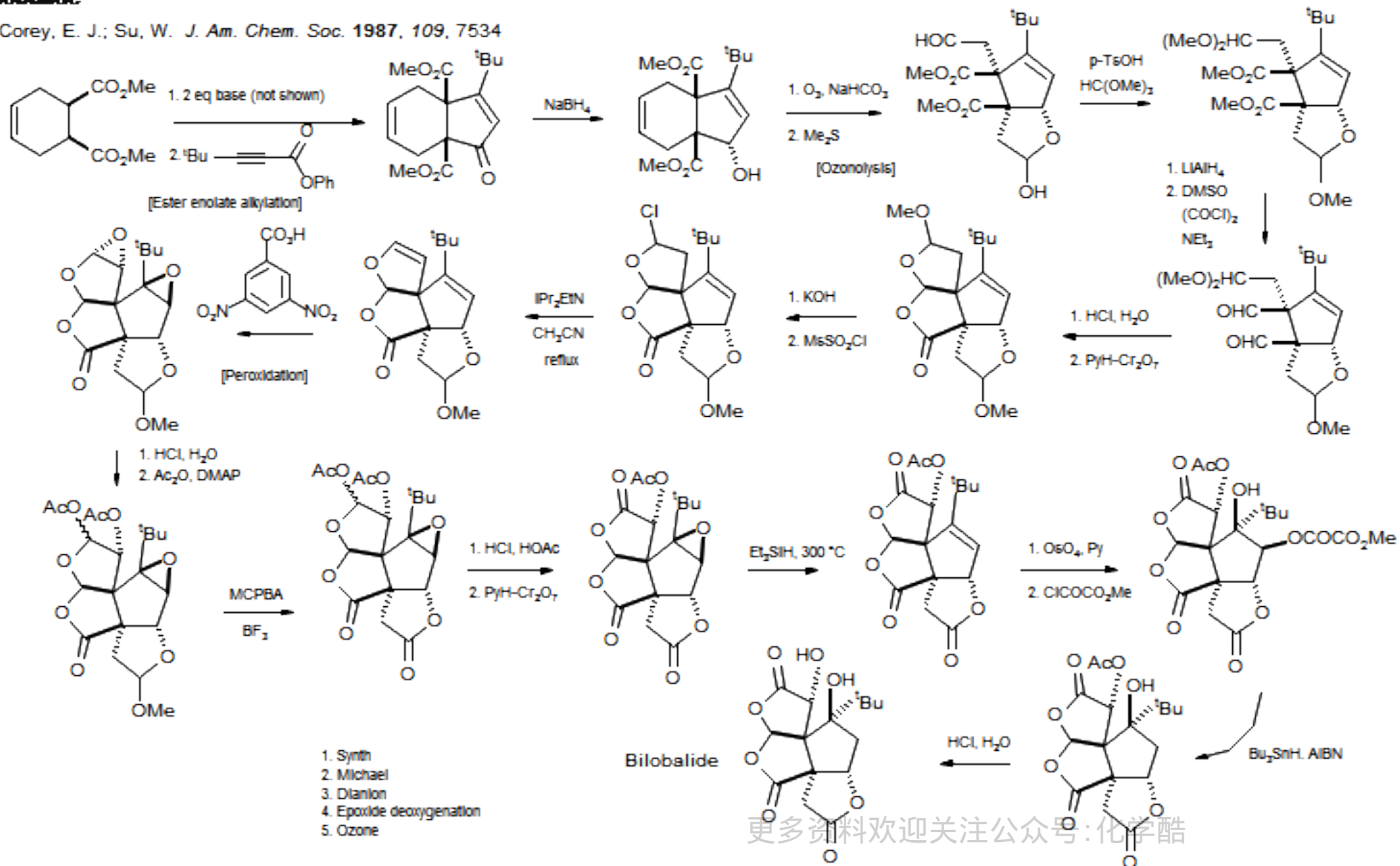
Bigelovin

1. Synth
2. Enone
3. Alcohol/epoxide open
4. Alcohol/reduct
5. Carboxylate/Enolate

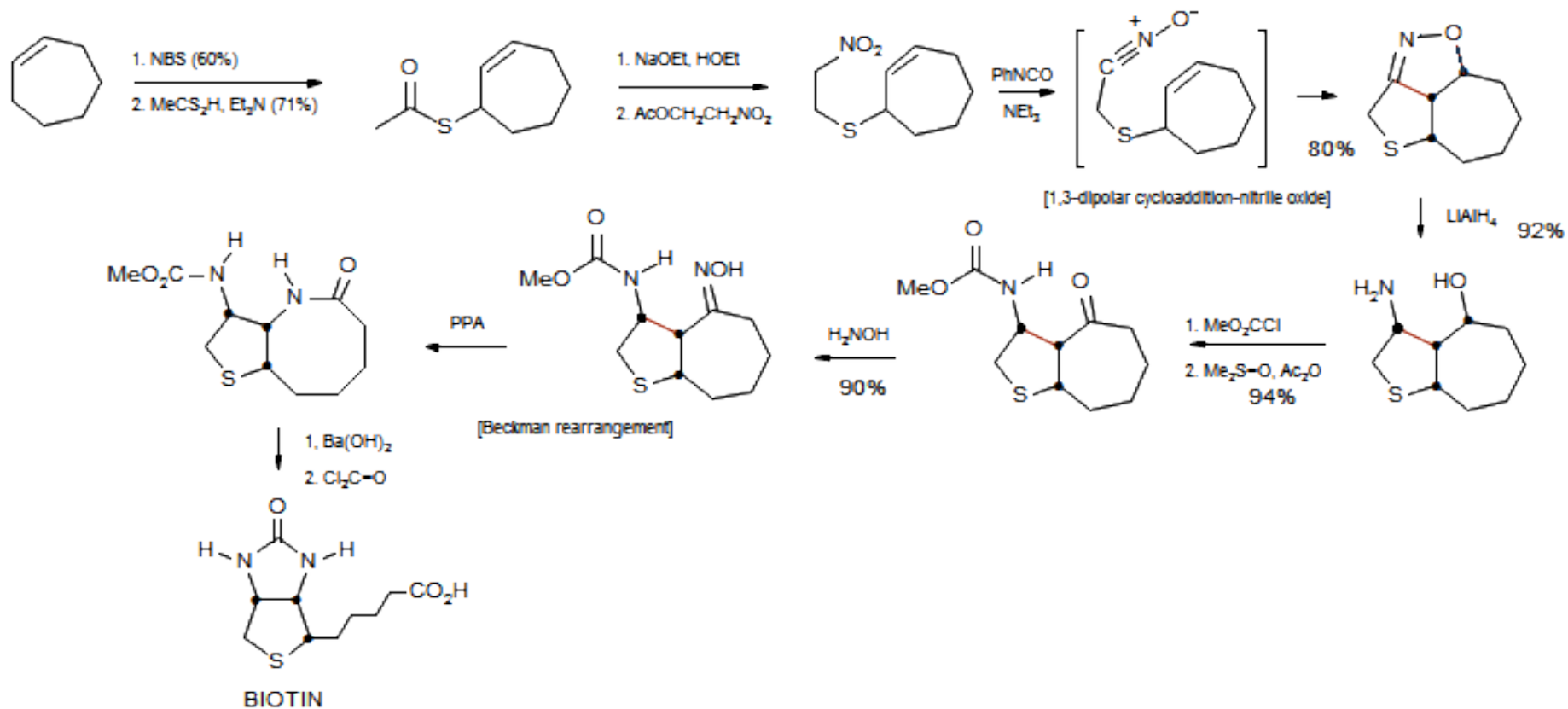
Bilobalide

87-08

Corey, E. J.; Su, W. *J. Am. Chem. Soc.* 1987, 109, 7534

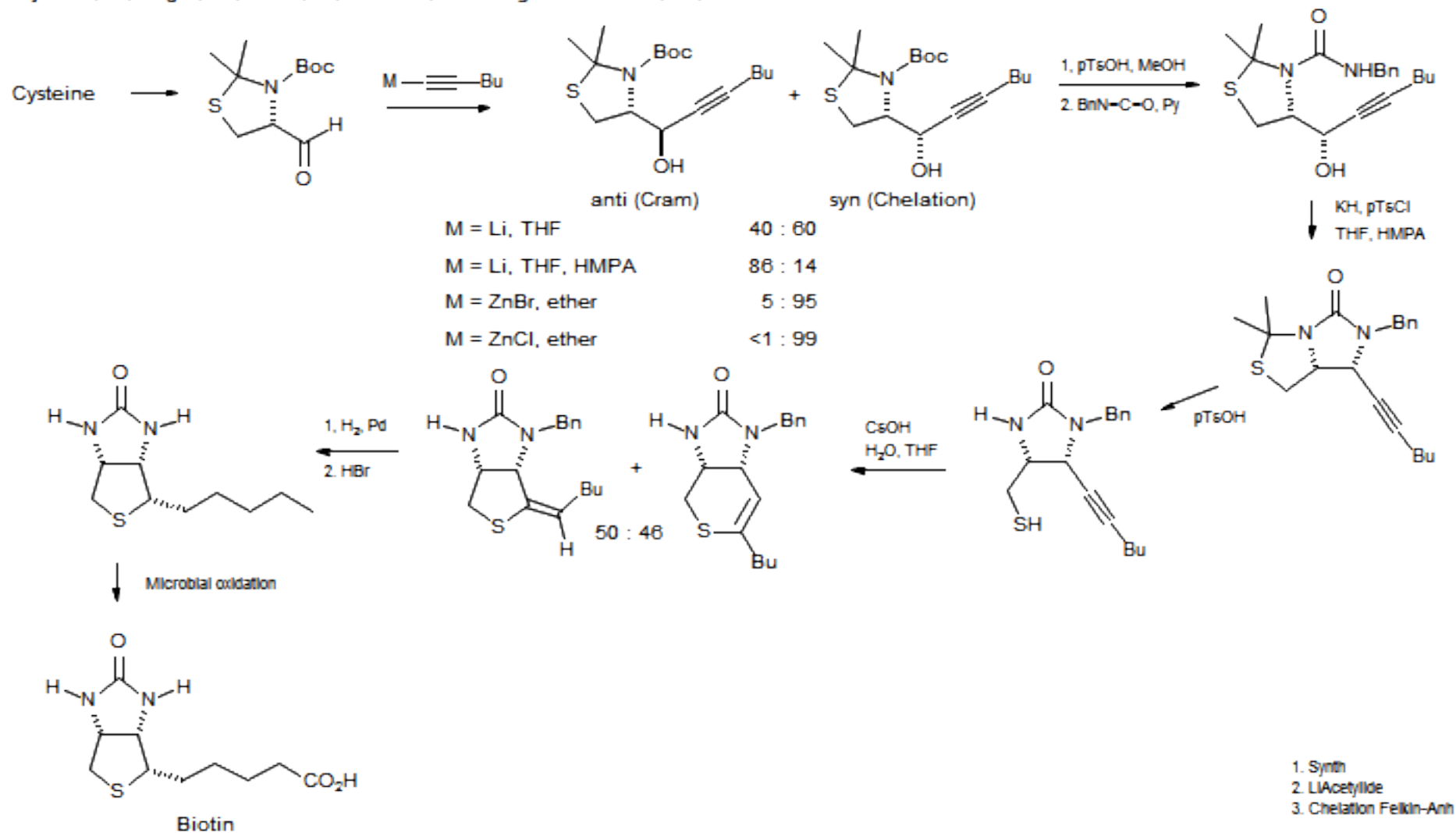


Confalone, P. N.; Lollar, E. D.; Pizzolato, G.; Uskokovic, M. R. *J. Am. Chem. Soc.*, 1978, 100, 6291.



1. Synth
2. 1,3-dipolar
3. Nitrile oxide
4. Moffat

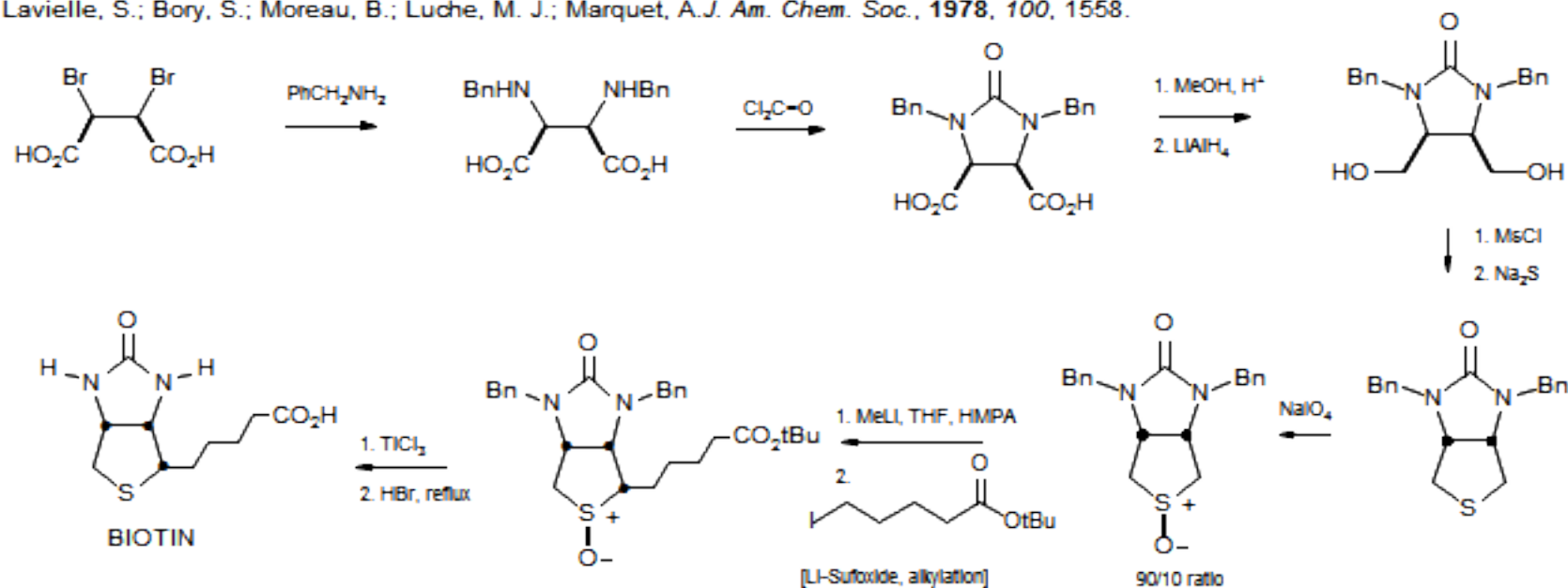
Fujisawa, T.; Nagai, M.; Koike, Y.; Shimizu, M. *J. Org. Chem.* **1994**, *59*, 5865



Biotin

78-07
EXP

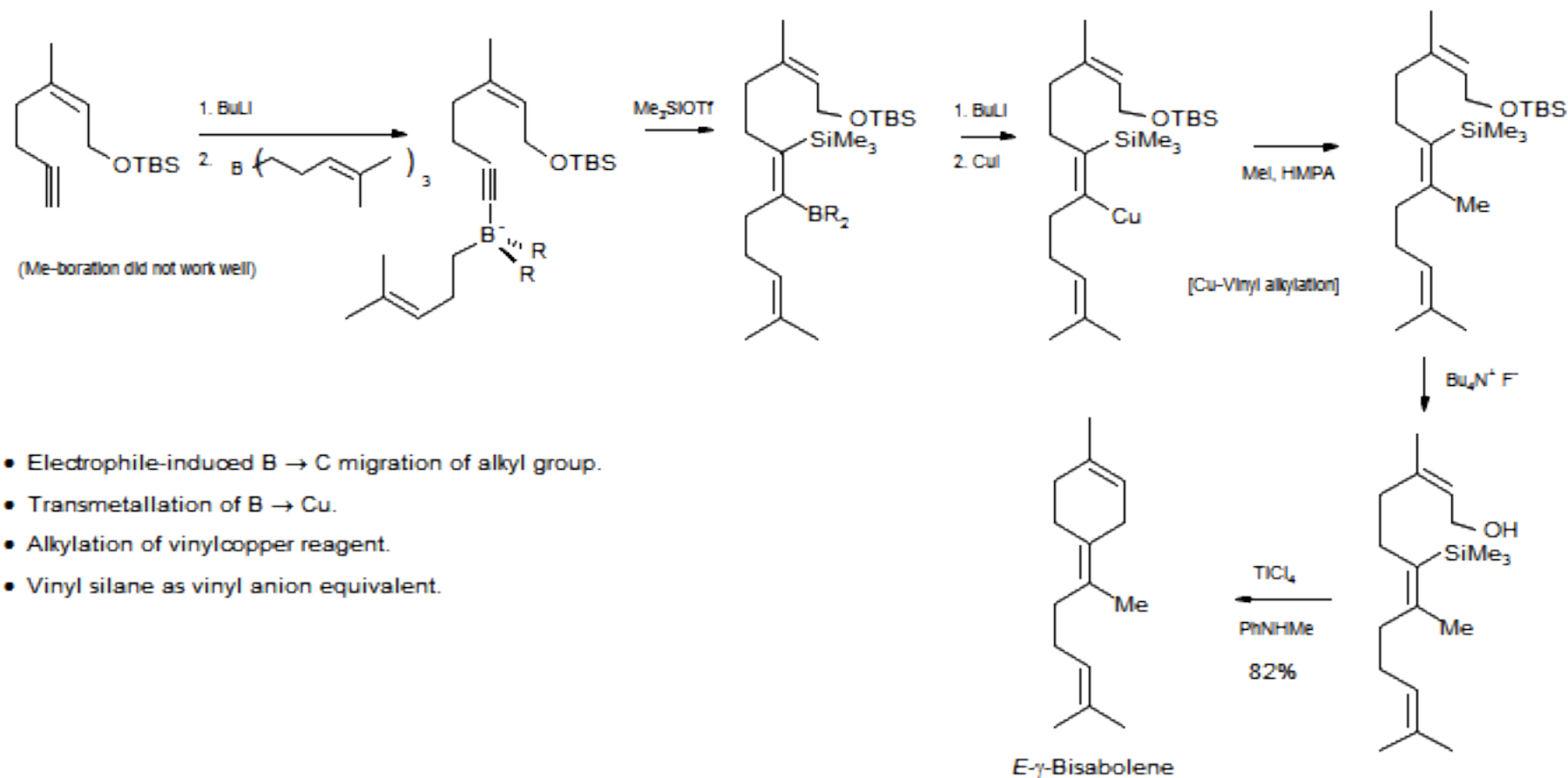
Lavielle, S.; Bory, S.; Moreau, B.; Luche, M. J.; Marquet, A. *J. Am. Chem. Soc.*, 1978, 100, 1558.



1. Synth
2. LiSulfox
3. 5-ring S

Bisabolene, *E*-(γ)-

86-03

Corey, E. J.; Seibel, W. L. *Tetrahedron Lett.*, 1986, 27, 905.

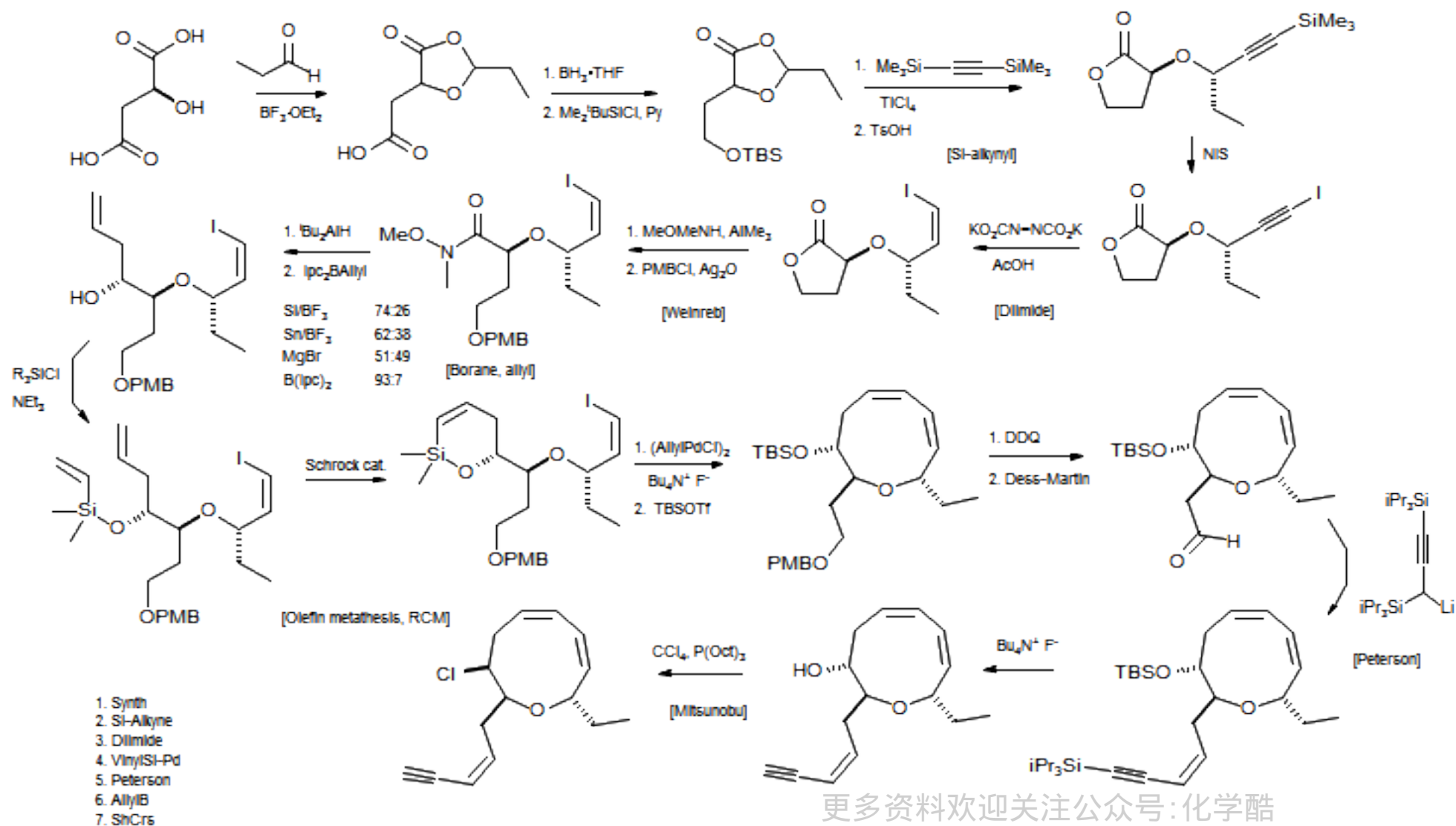
- Electrophile-induced B \rightarrow C migration of alkyl group.
- Transmetallation of B \rightarrow Cu.
- Alkylation of vinylcopper reagent.
- Vinyl silane as vinyl anion equivalent.

1. Synth
2. Boron
3. Cu-Alkyl
4. Olefin
5. VinylSi CC
6. Shors

Brasilenyne

Denmark, S.; Yang, S. M. *J. Am. Chem. Soc.* 2004, 126, 12432.

04-06

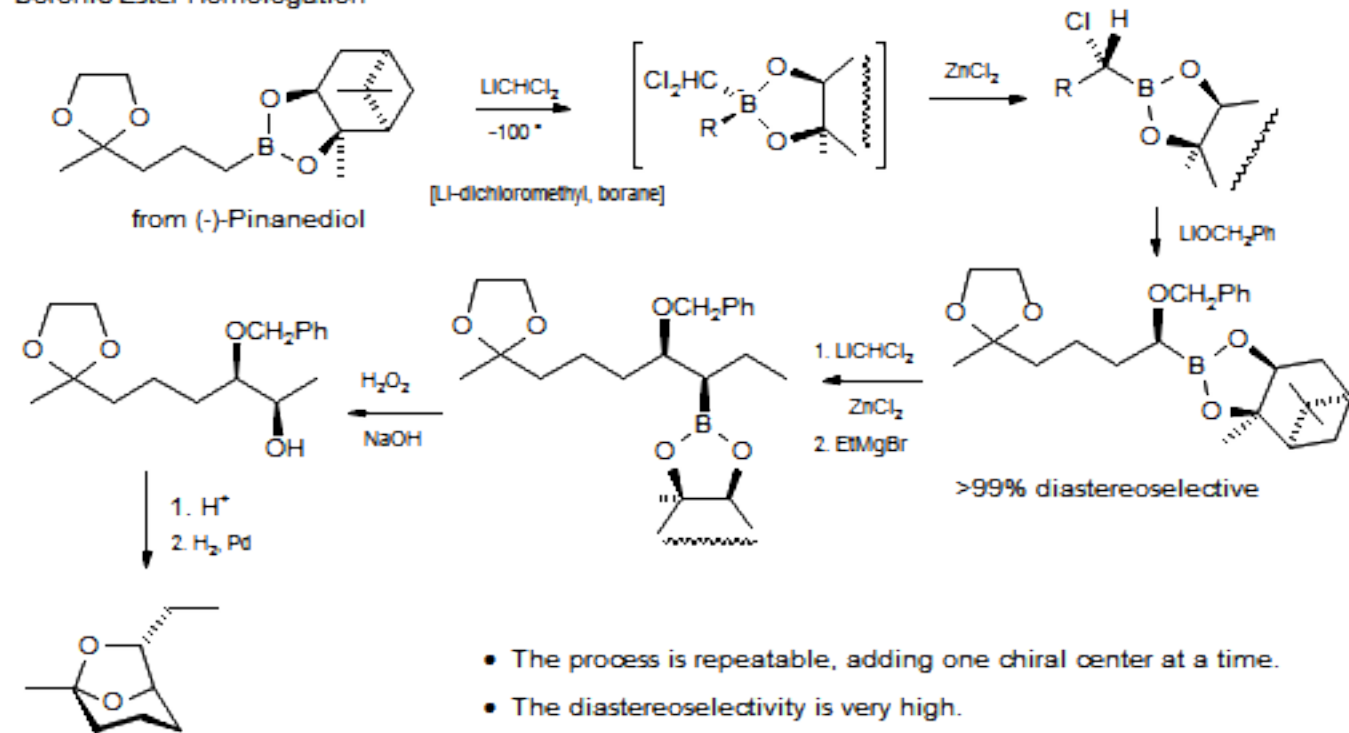


更多资料欢迎关注公众号:化学酷

Brevicomins, exo

Matteson, D. S.; Sadhu, K. M. *J. Am. Chem. Soc.* **1983**, *105*, 2077.

Boronic Ester Homologation

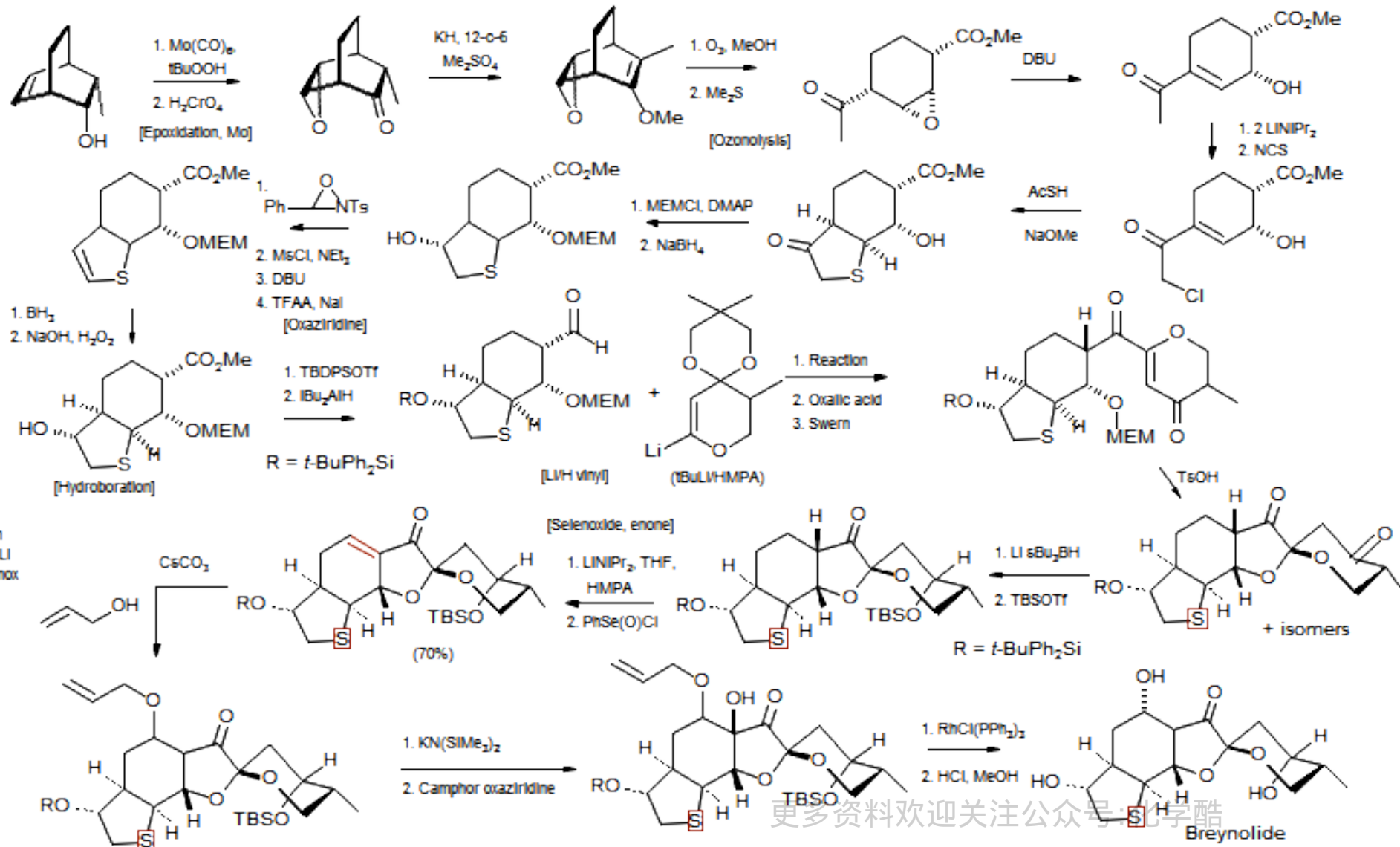


exo-BREVICOMIN

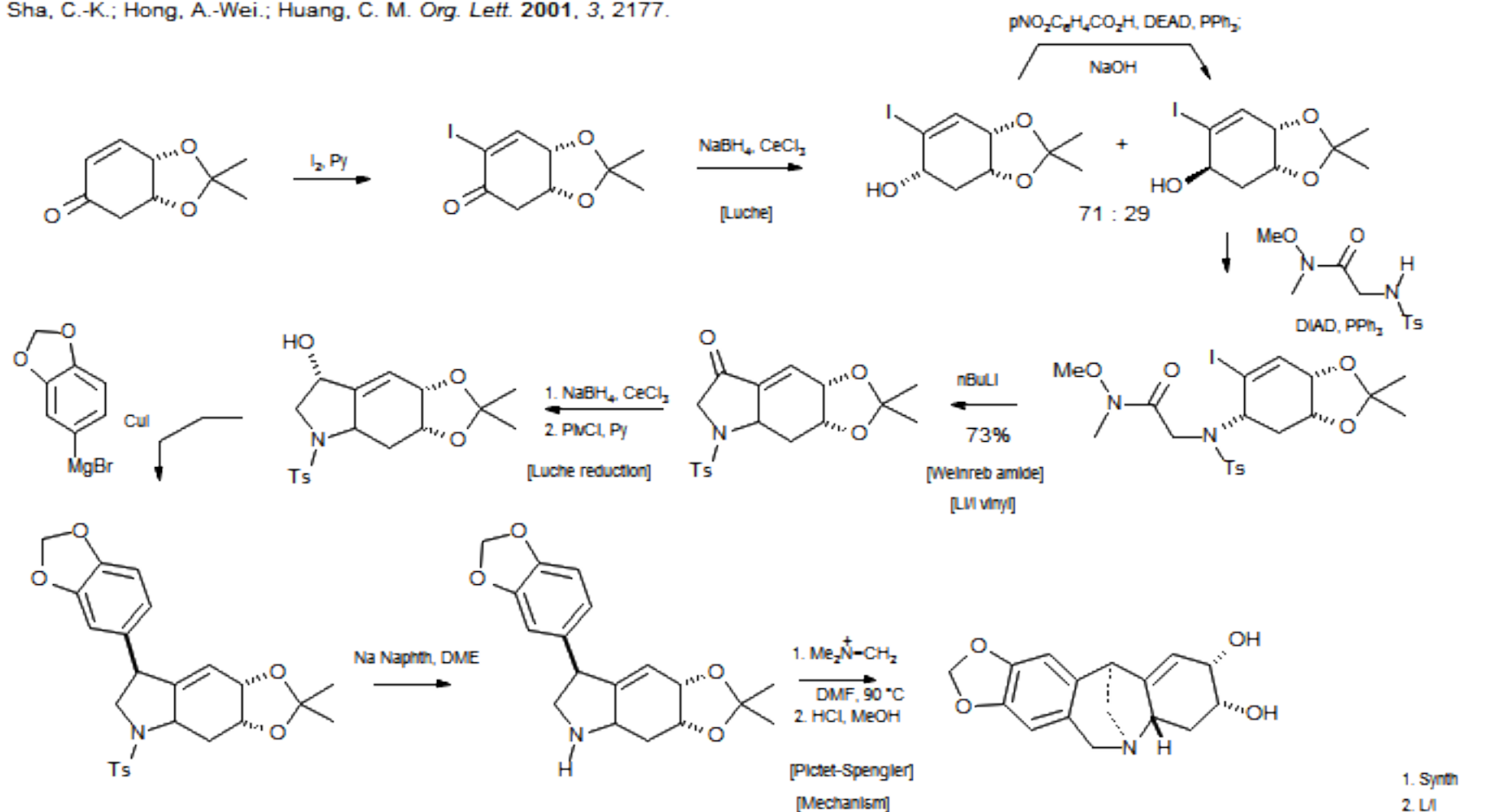
- The process is repeatable, adding one chiral center at a time.
- The diastereoselectivity is very high.

For a recent example see: Maurer, Armstrong, *J. Org. Chem.* **1996**, *61*, 3106 (Tautomycin synthesis)

Smith, A. B. III; Empfield, J. R.; Rivero, R. A.; Vaccaro, H. A. *J. Am. Chem. Soc.*, 1991, 113, 4037.



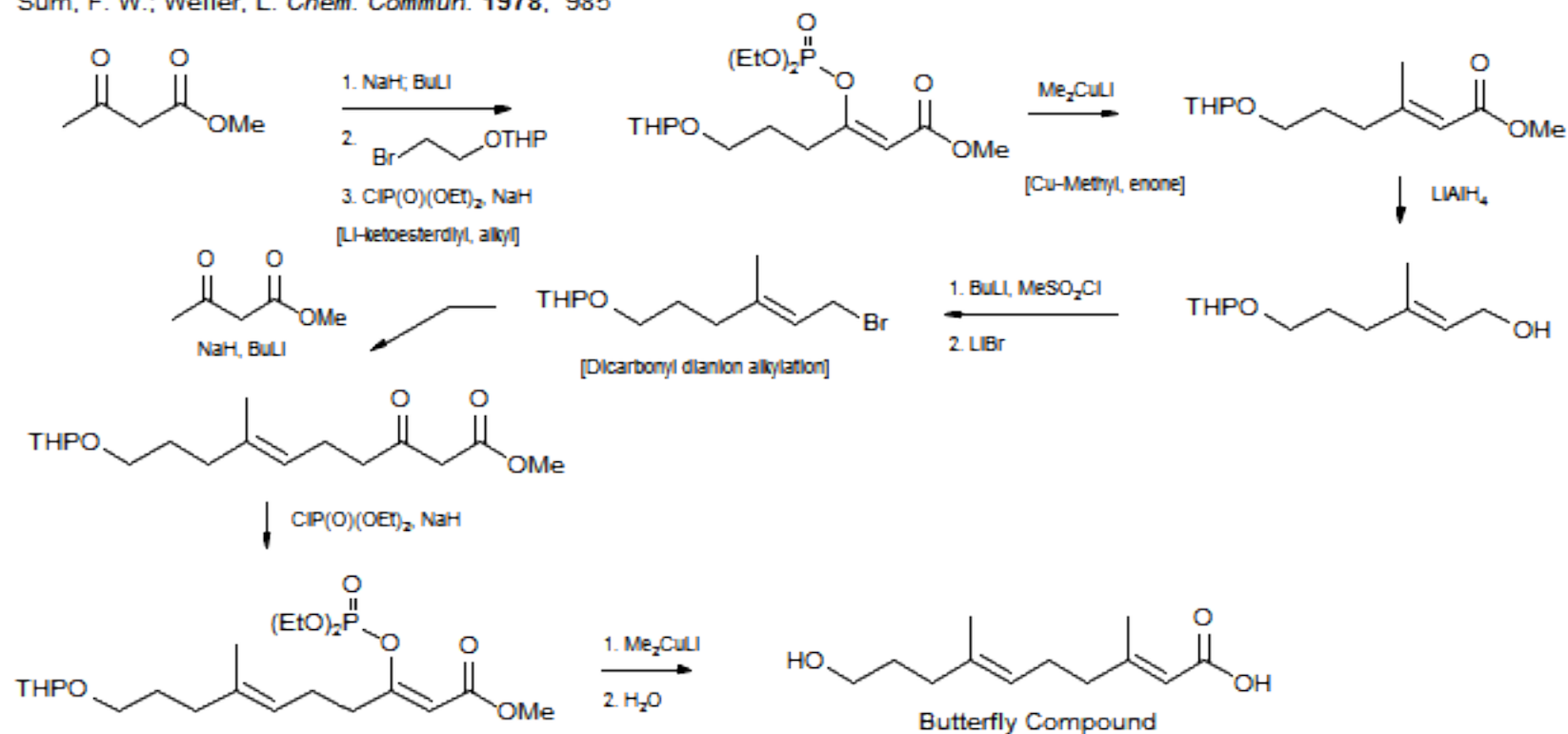
Sha, C.-K.; Hong, A.-Wei.; Huang, C. M. *Org. Lett.* 2001, 3, 2177.



1. Synth
2. Li
3. Weinreb
4. Mitsunobu
5. Mechanism

Butterfly Compound

78-44

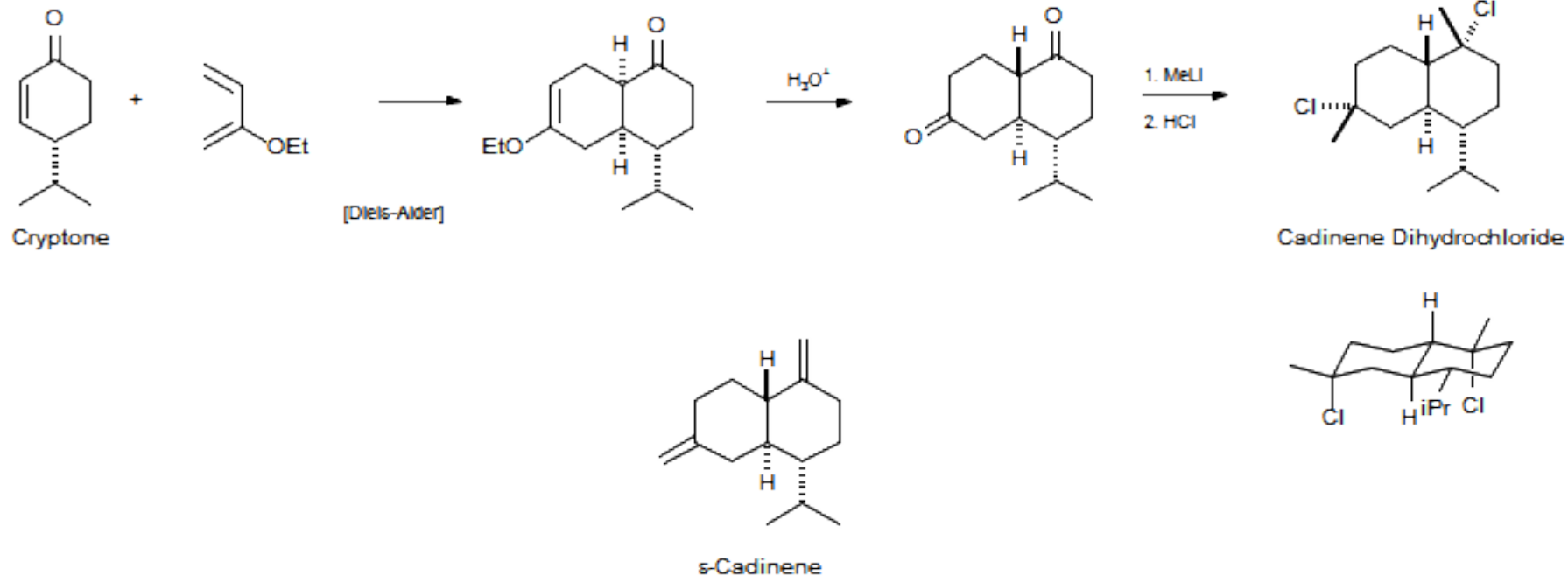
Sum, F. W.; Weiler, L. *Chem. Commun.* 1978, 985

1. Synth
2. Dianion
3. Enonoate ester
4. Ketone
5. Alcohol a,

Cadinene Dihydrochloride

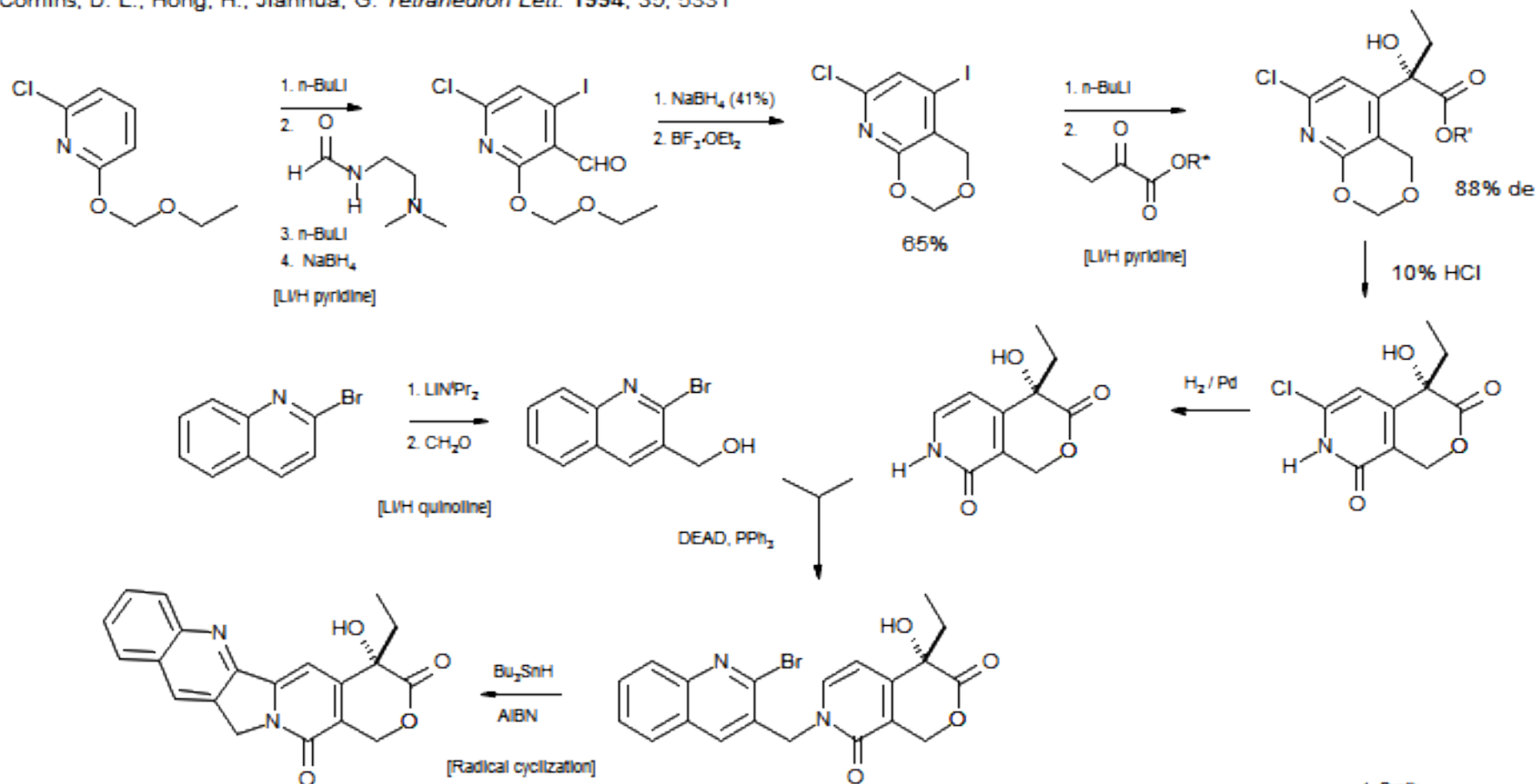
63-02

COMM

Soffer, M. D.; Gunay, G. E.; Korman, O.; Adams, M. B. *Tetrahedron Lett.* 1963, 389.

See: TL 1965, 1355

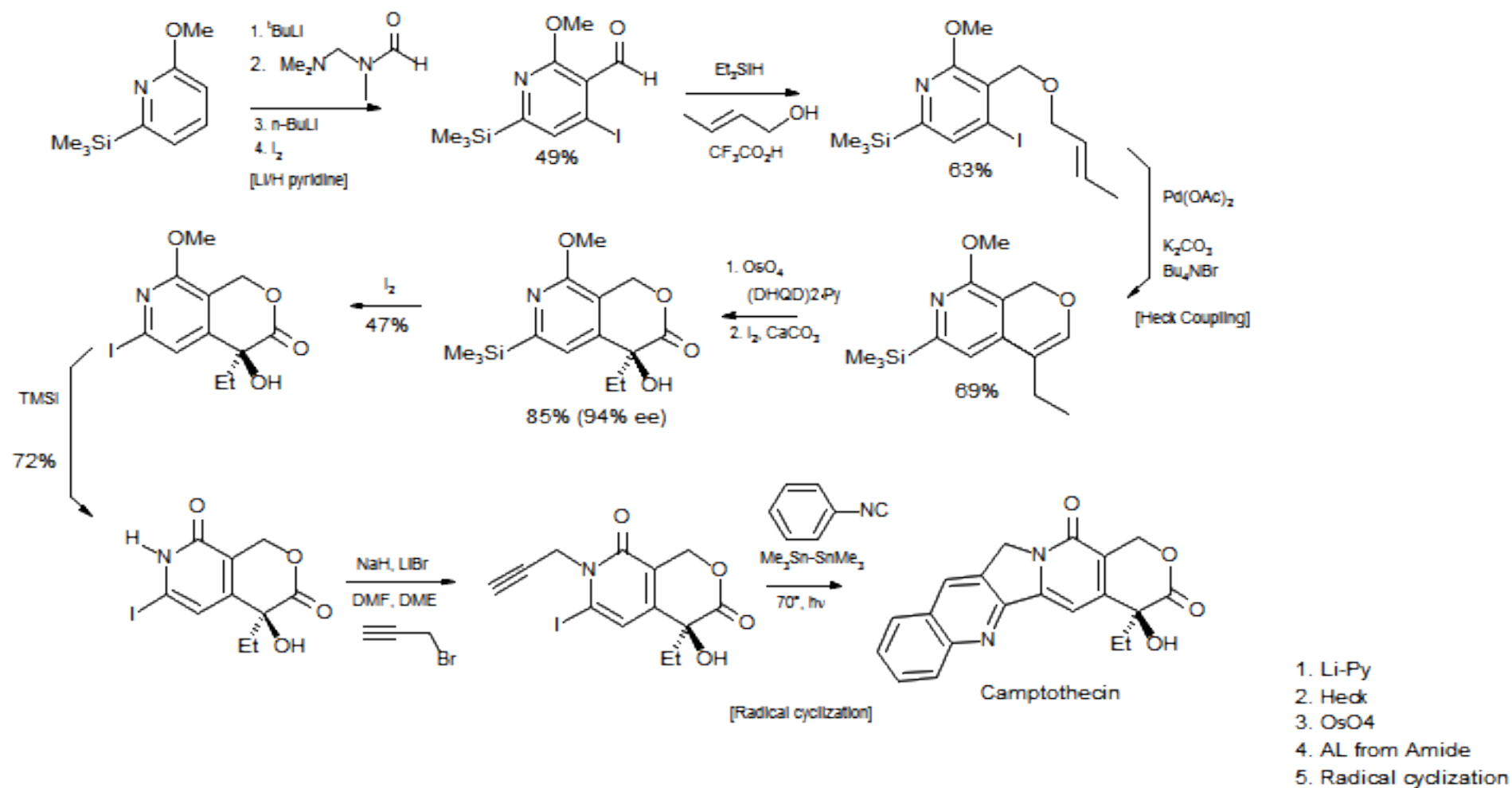
1. Synth
2. DA

Comins, D. L.; Hong, H.; Jianhua, G. *Tetrahedron Lett.* 1994, 35, 5331

1. Synth
2. LI-Py
3. ShCrS
4. LI-Quinoline
5. Bu_2SnH

Camptothecin

Curran, D. P.; Ko, S. B.; Josien, H. *Angew. Chem., Int. Ed. Engl.* 1995, 34, 2683.

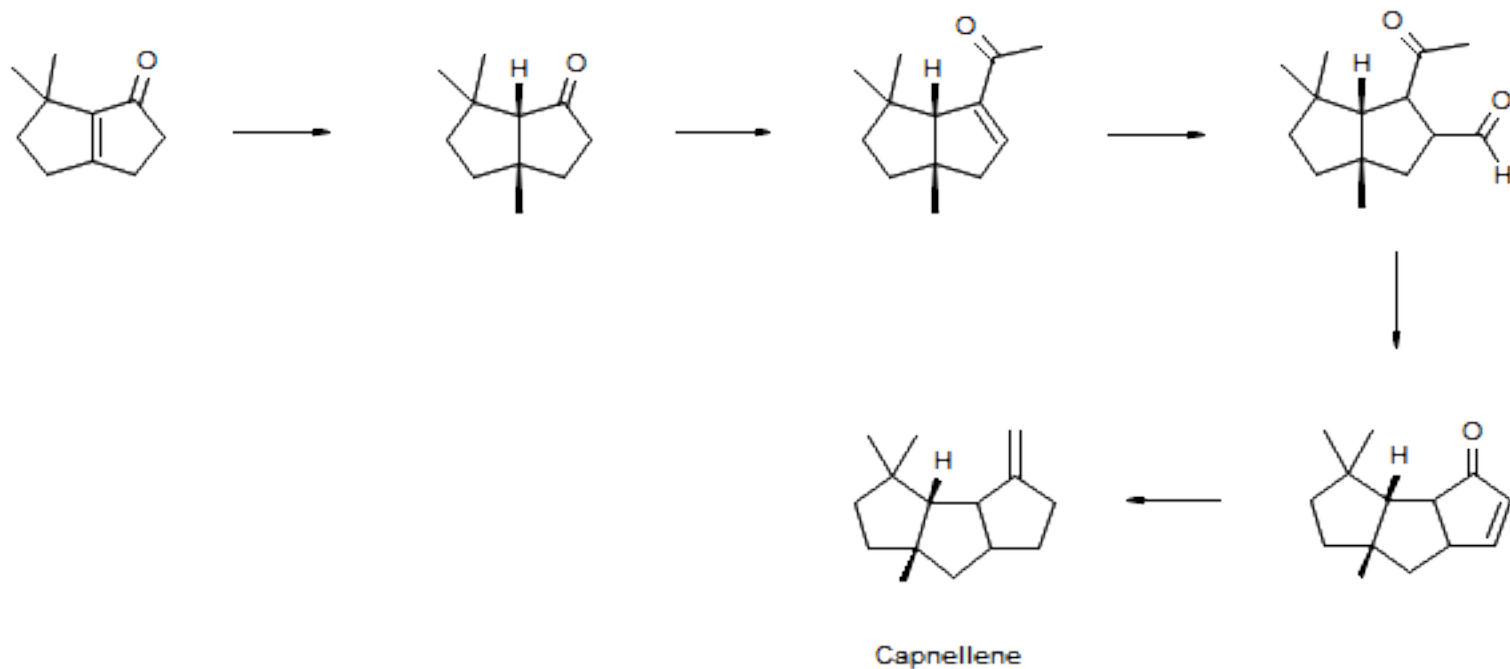


Capnellene

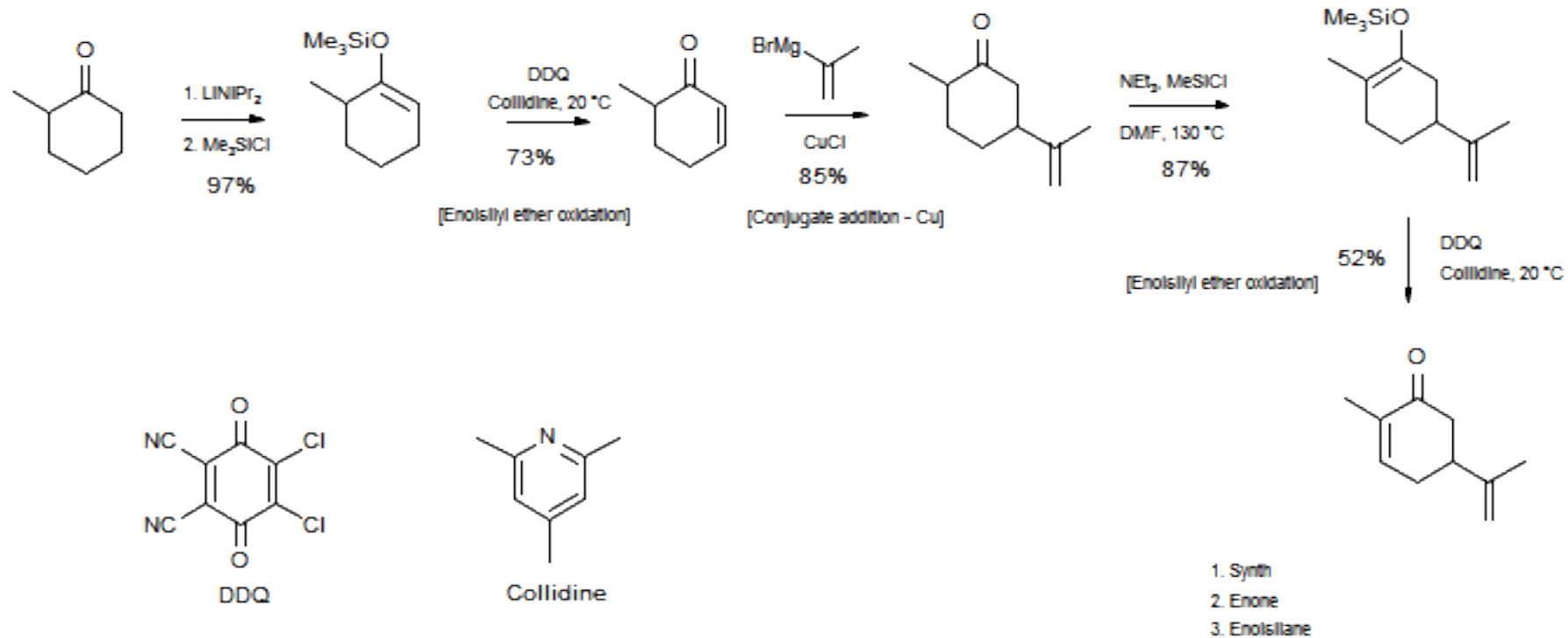
Paquette, L. A.; Stevens, K. E. *Can. J. Chem.* 1984, 62, 2415

84-25

EXP



1. Synth
- 2.
3. Enone
4. Aldehyde
- 5.

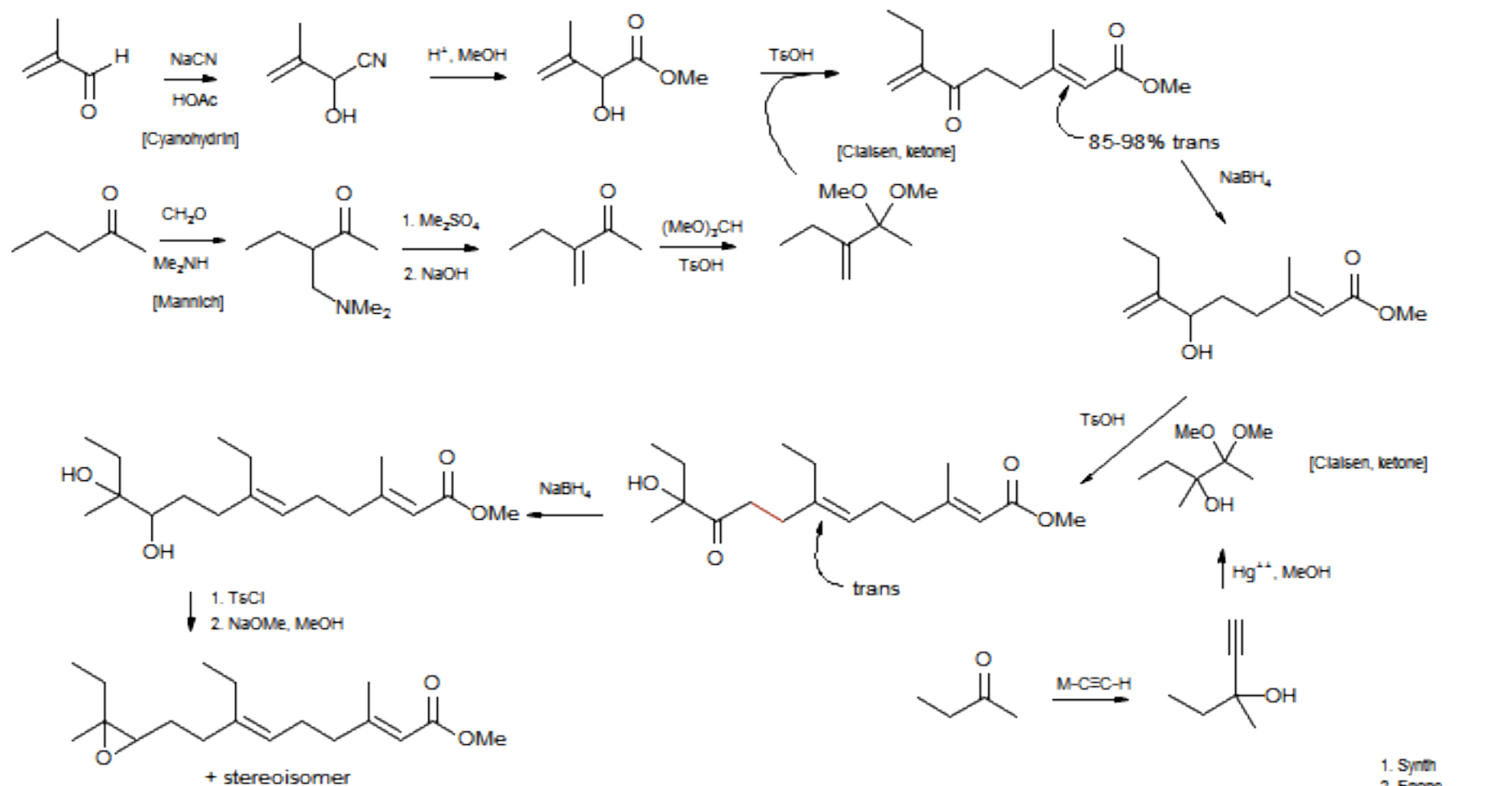
Fleming, I.; Paterson, I. *Synthesis* 1979, 738

Cecropia Juvenile Hormone

Faulkner, D. J.; Peterson, M. R. *J. Am. Chem. Soc.* 1973, 95, 553

73-10

EXP

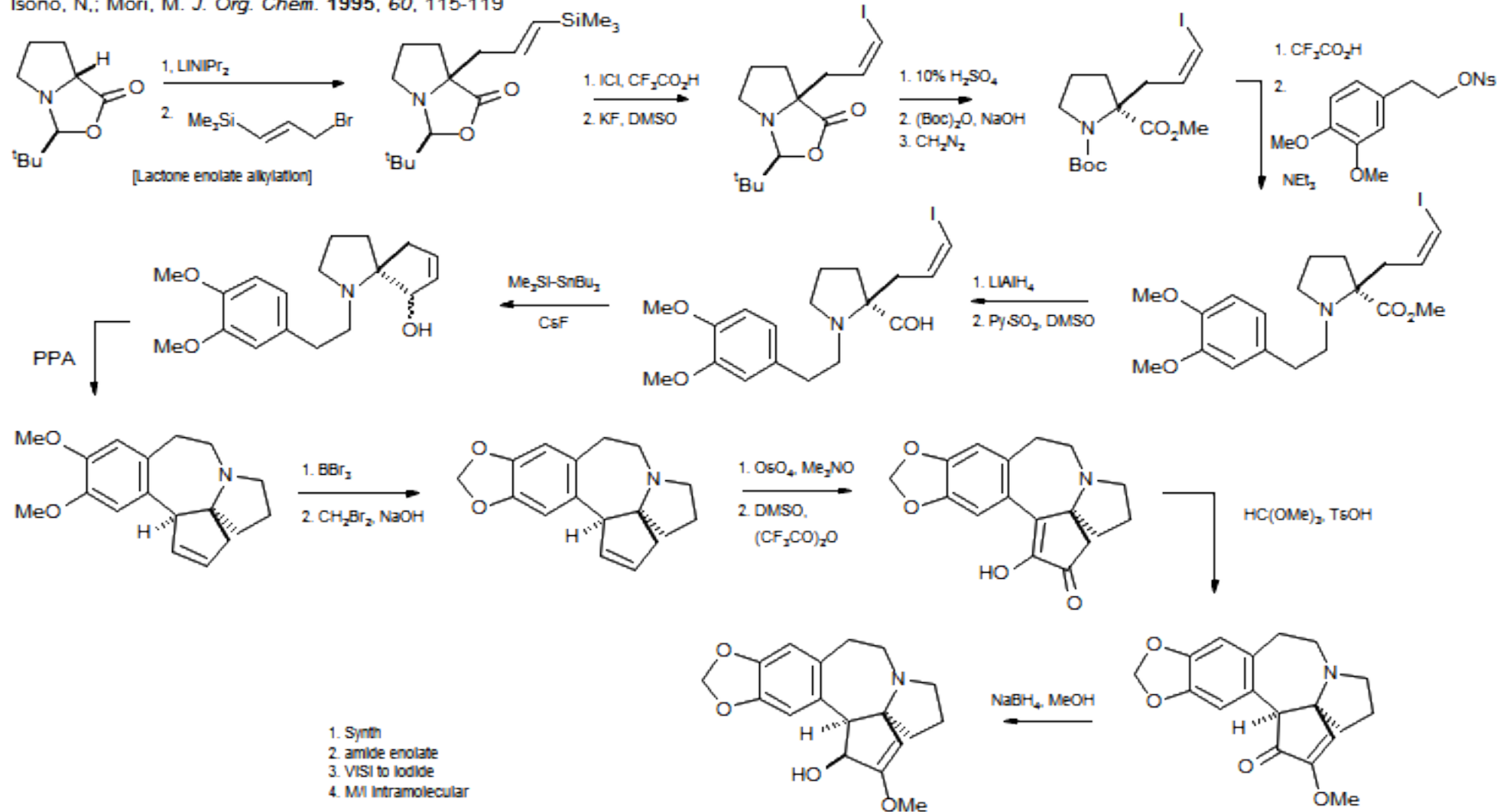


1. Synth
2. Enone
3. Claisen-Ketone
4. Mannich
5. Ketal

更多资料欢迎关注公众号:化学酷

Cephalotaxine

Isono, N.; Mori, M. *J. Org. Chem.* 1995, 60, 115-119



1. Synth
2. amide enolate
3. VISI to iodide
4. MI Intramolecular

(-)-Cephalotaxine

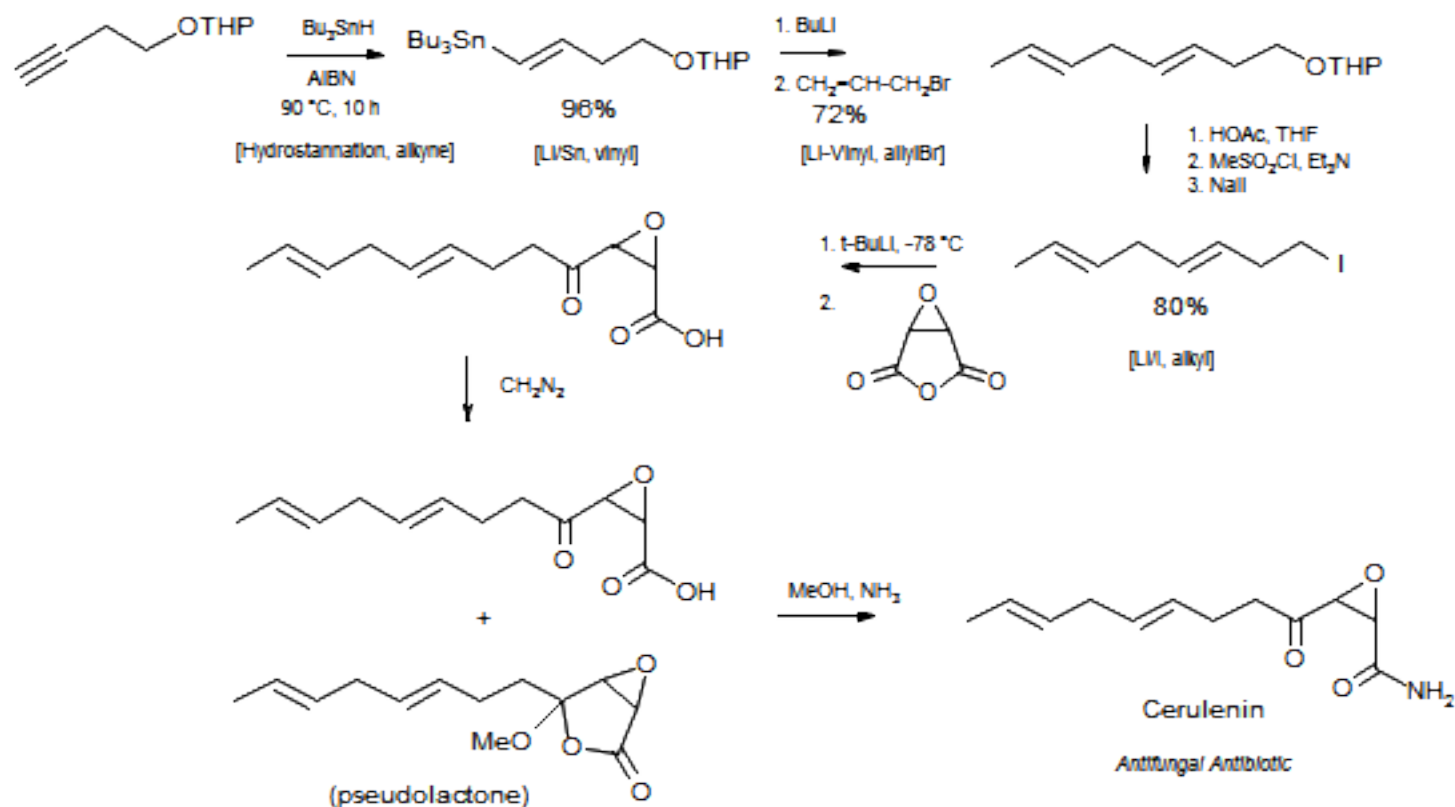
更多资料欢迎关注公众号:化学酷

Cerulenin

Corey, E. J.; Williams, D. R. *Tetrahedron Lett.*, 1977, 3847.

77-27

COMM

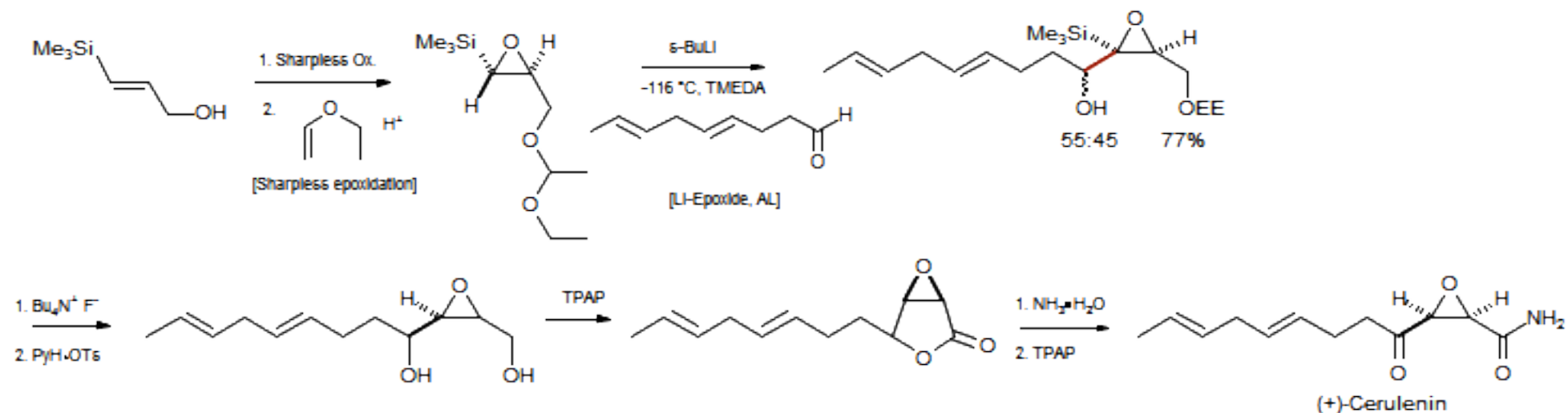


1. Synth
2. VI-Li
3. Sn
4. AlkylLi
5. Ketone

Cerulenin

Mani, N. S.; Townsend, C. A. *J. Org. Chem.* **1997**, *62*, 636

97-08

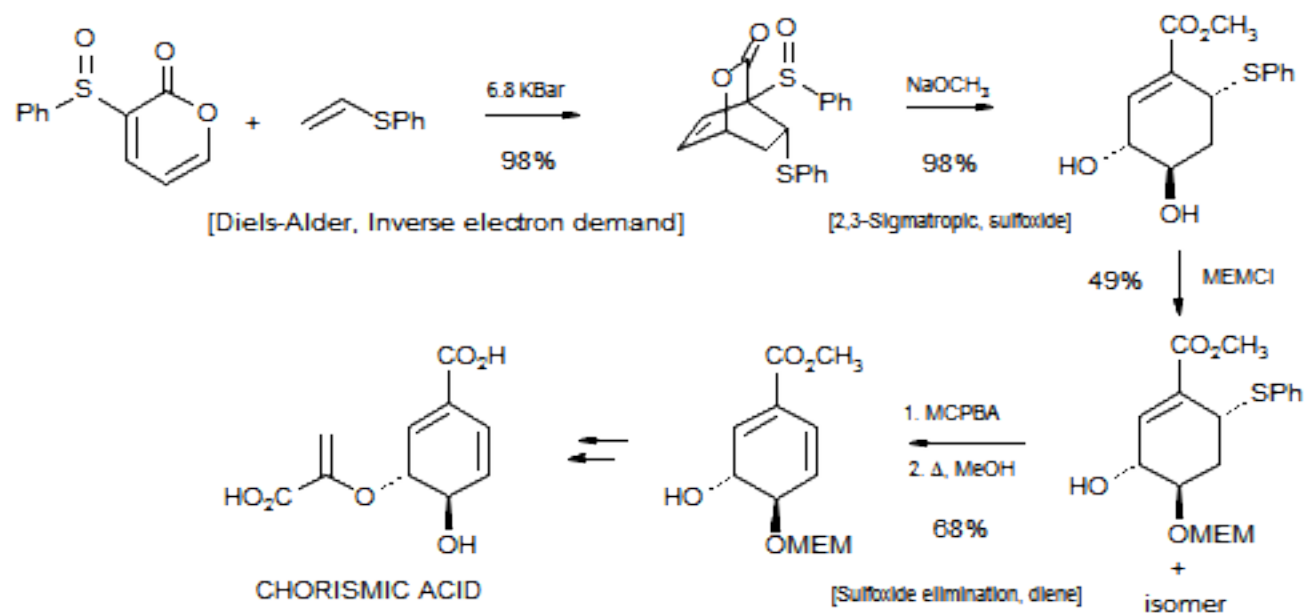


1. Synth
2. Sharpless
3. Lithio epoxide

Chorismic Acid

Posner, *JOC*, 1987, 52, 4836.

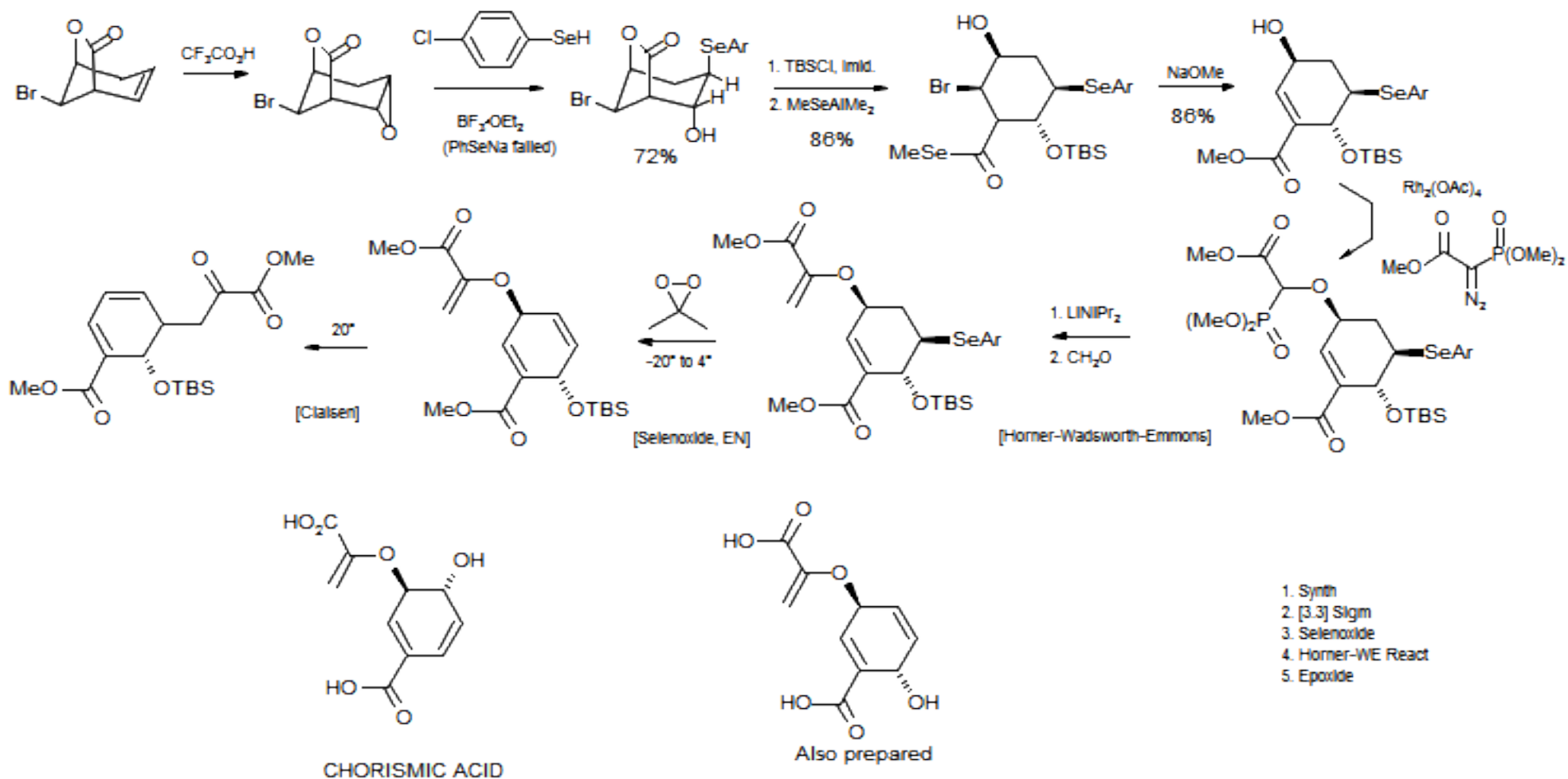
87-01



1. Synth
2. Diels-Alder inverse
3. Sulfoxide [2,3]
4. High pressure

Chorismic Acid Analog

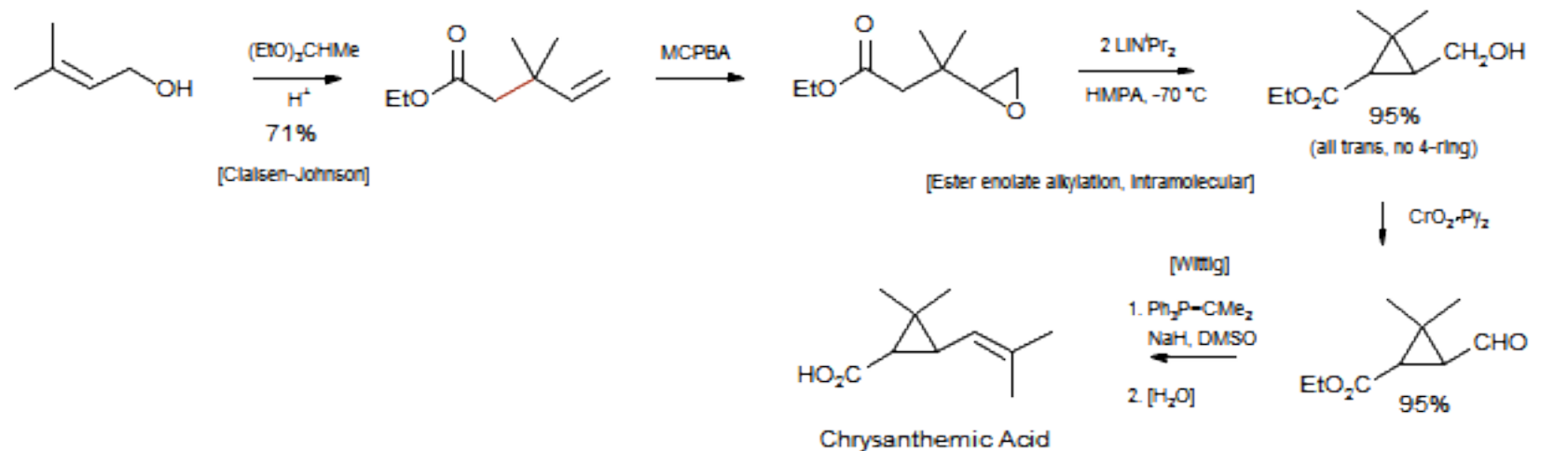
94-01

Mattia, K. M.; Ganem, B. *J. Org. Chem.* 1994, 59, 720.

Chrysanthemic Acid

Babler, J. H.; Tortorello, A. J. *J. Org. Chem.* **1976**, *41*, 885.

78-30

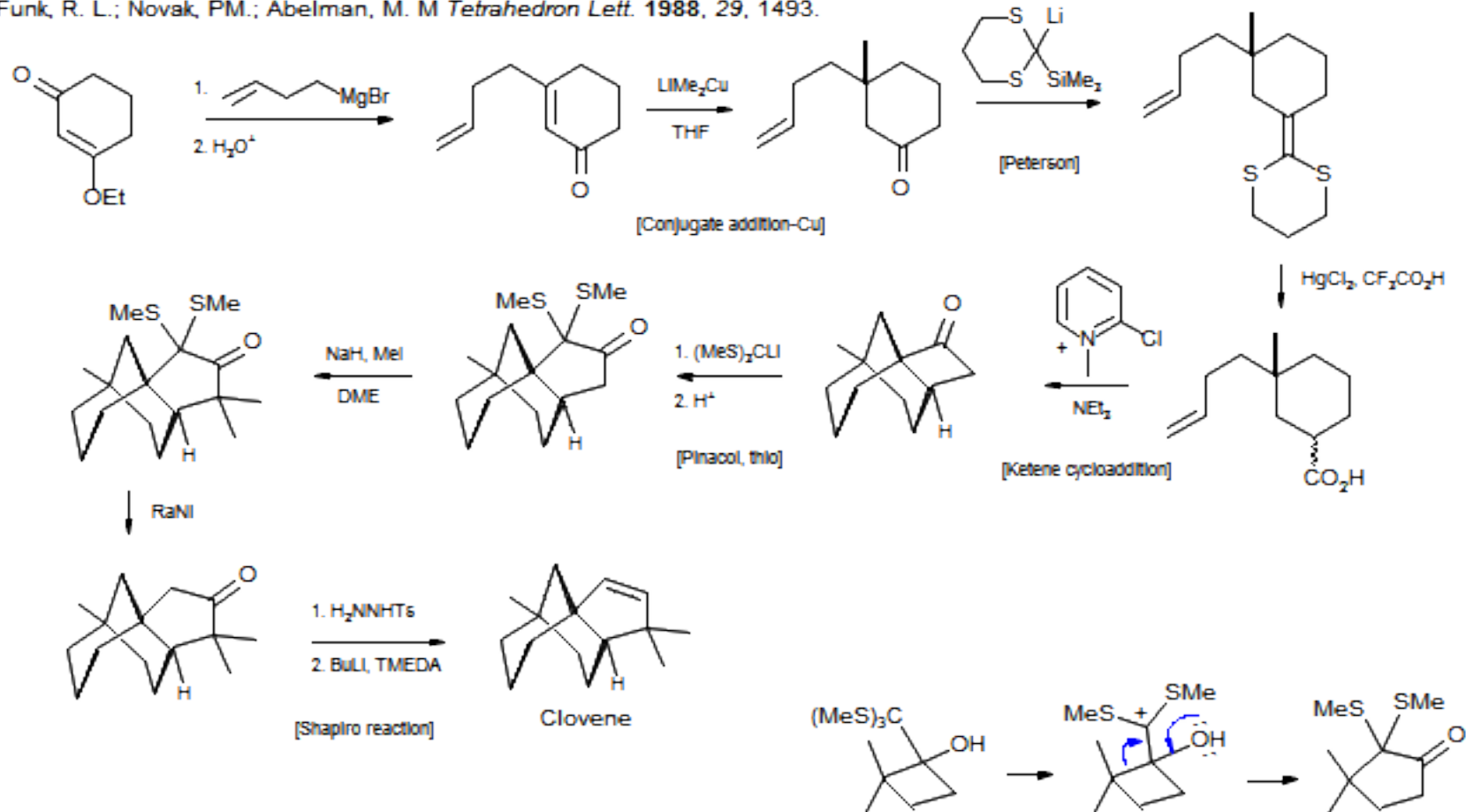


1. Synth
2. Wittig
3. Johnson Claisen
4. Epoxide alkylation ester enolate

Clovene

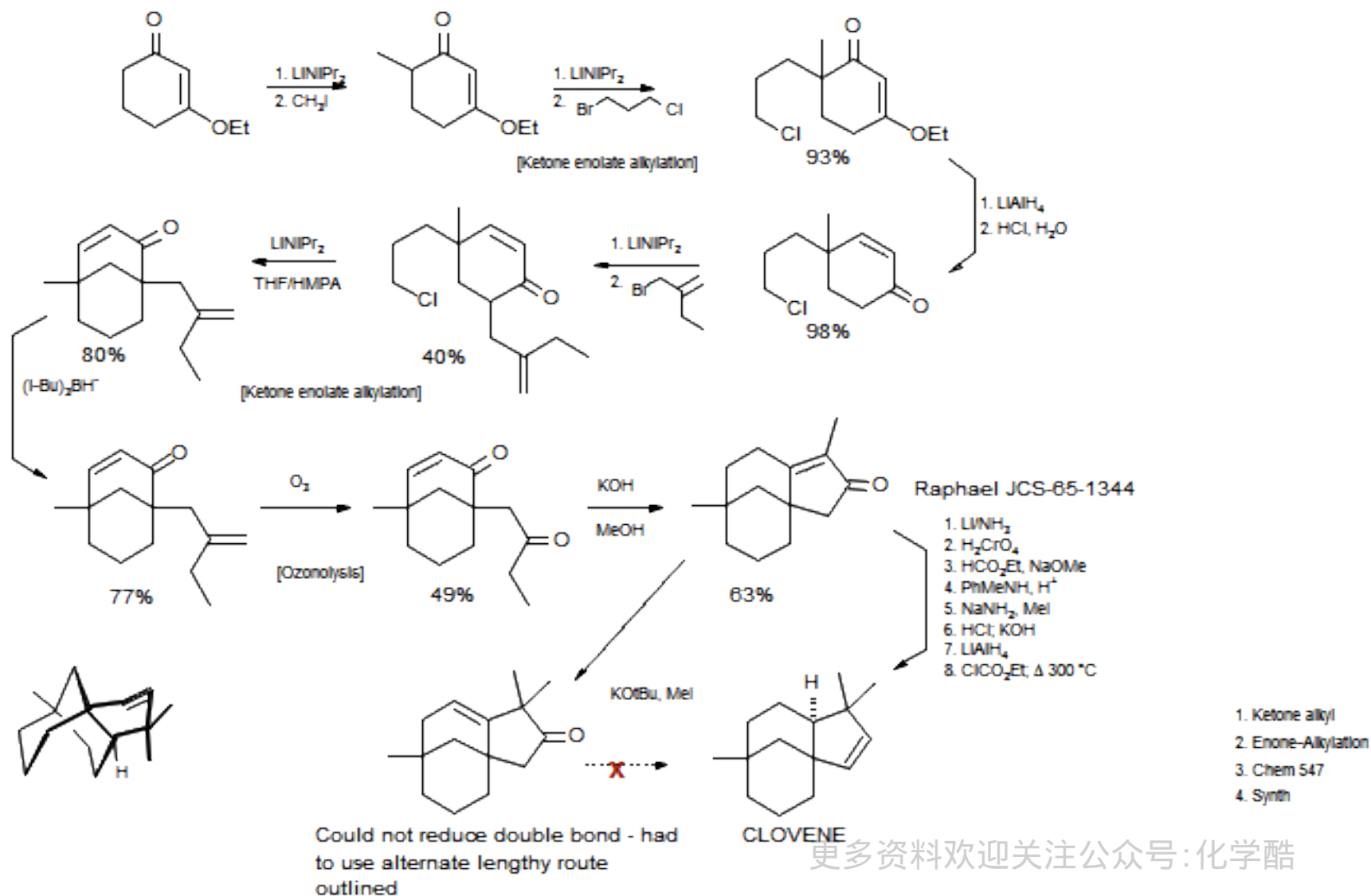
Funk, R. L.; Novak, P.M.; Abelman, M. M *Tetrahedron Lett.* 1988, 29, 1493.

88-01



1. Synth
2. Carboxylic
3. Ketene
4. Pinacol

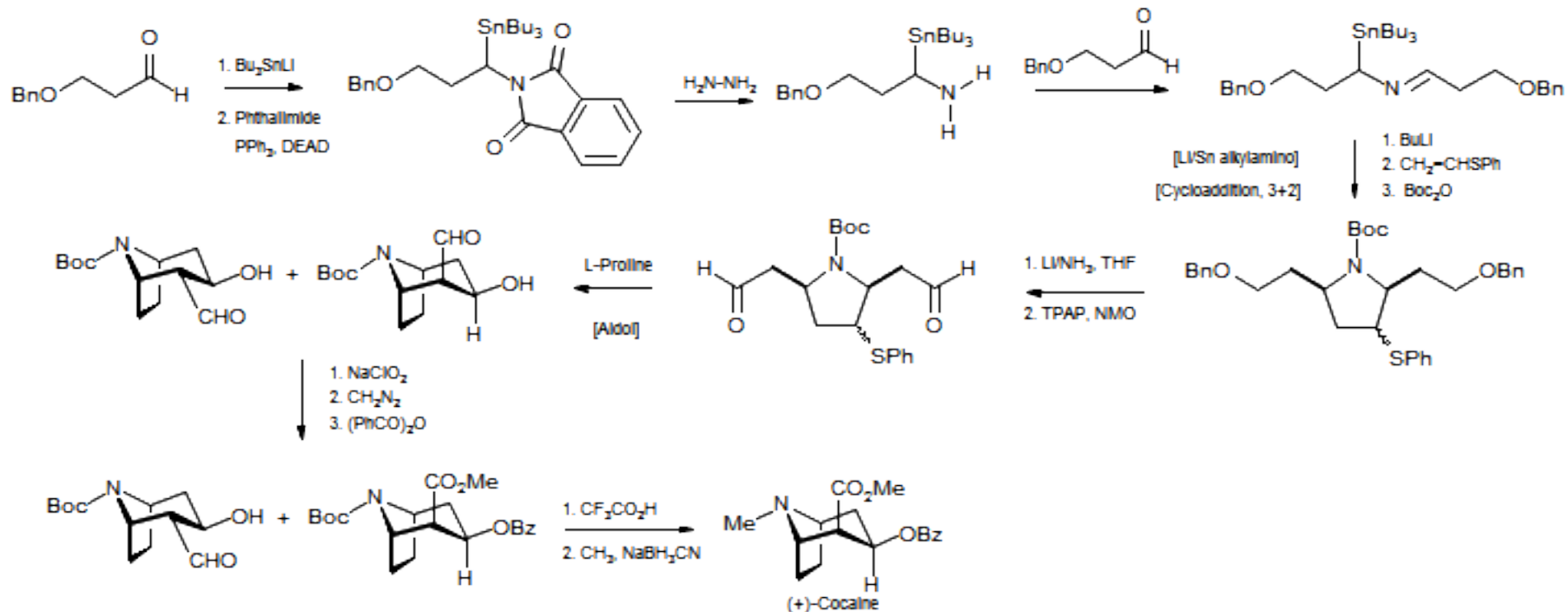
更多资料欢迎关注公众号:化学酷

Schultz, A. G.; Dittani, J. P. *J. Org. Chem.*, 1983, 48, 2318.

Cocaine

Mans, D. M.; Pearson, W. H. *Org. Lett.* 2004, 6, 3305

04-13



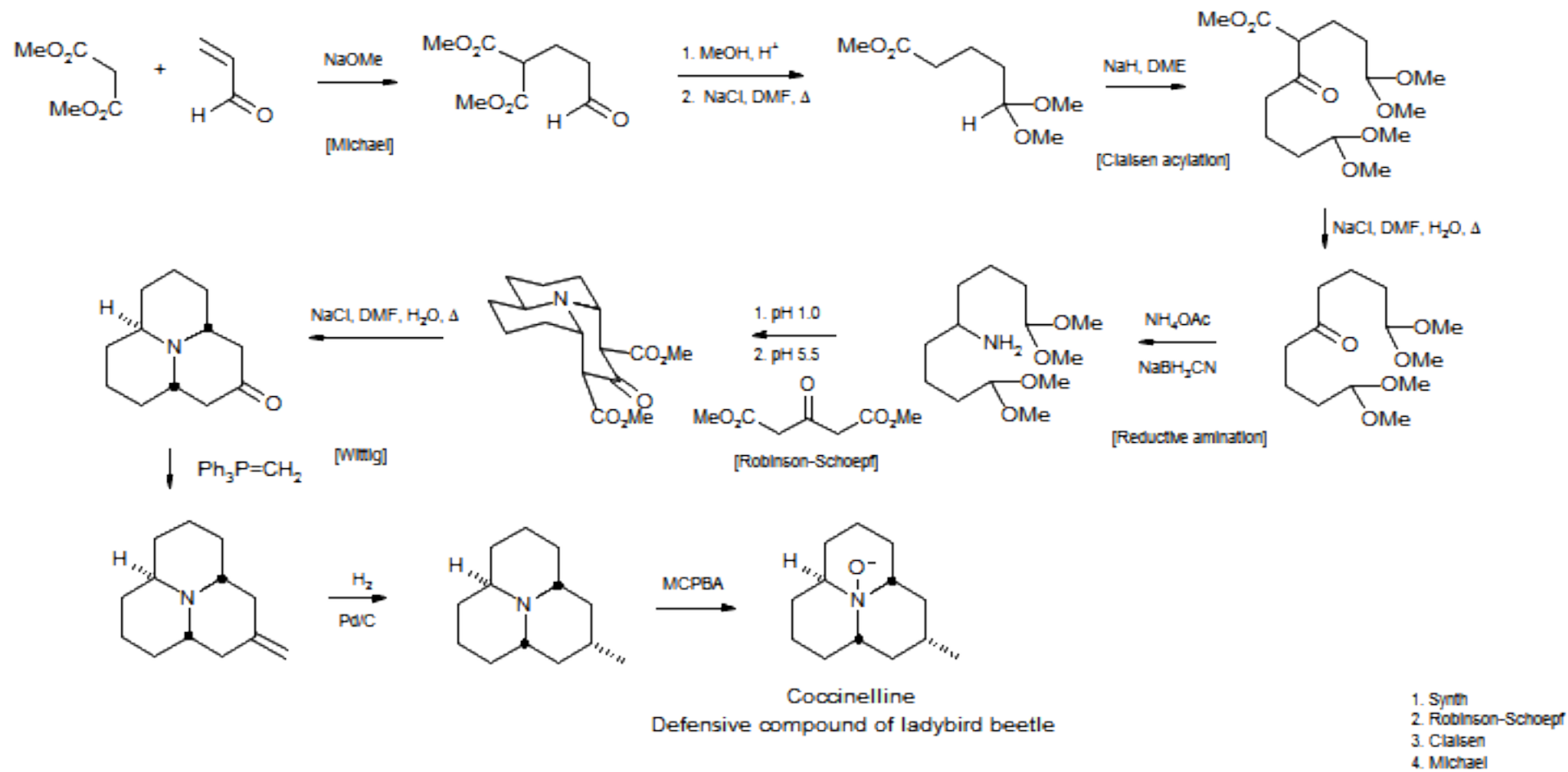
1. Synth
2. 3+2 cycloadd
3. Li/Sn
4. Aldol

Coccinelline

Stevens, R. V.; Lee, A. W. N. *J. Am. Chem. Soc.* **1979**, *101*, 7032

79-11

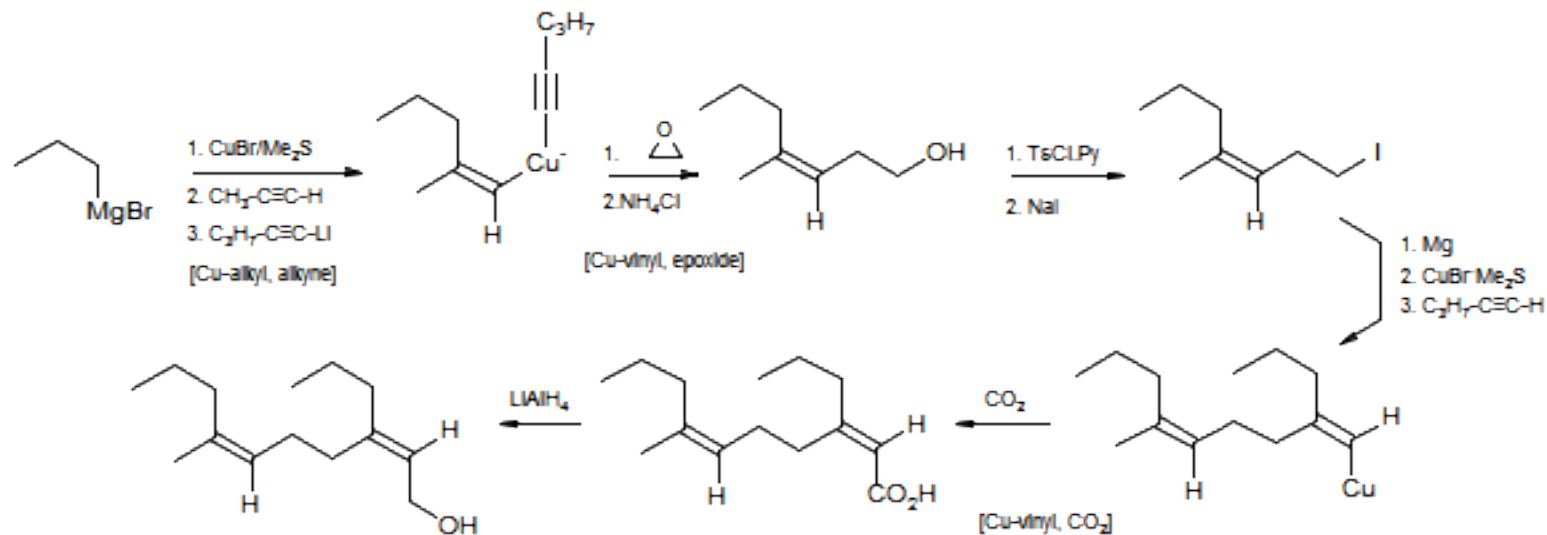
EXP



Coding Moth Compound

Marfat, A.; McGuirk, P. R.; Helquist, P. *J. Org. Chem.*, 1979, 44, 1345, 3888 (Carbocupration of acetylenes).

79-27

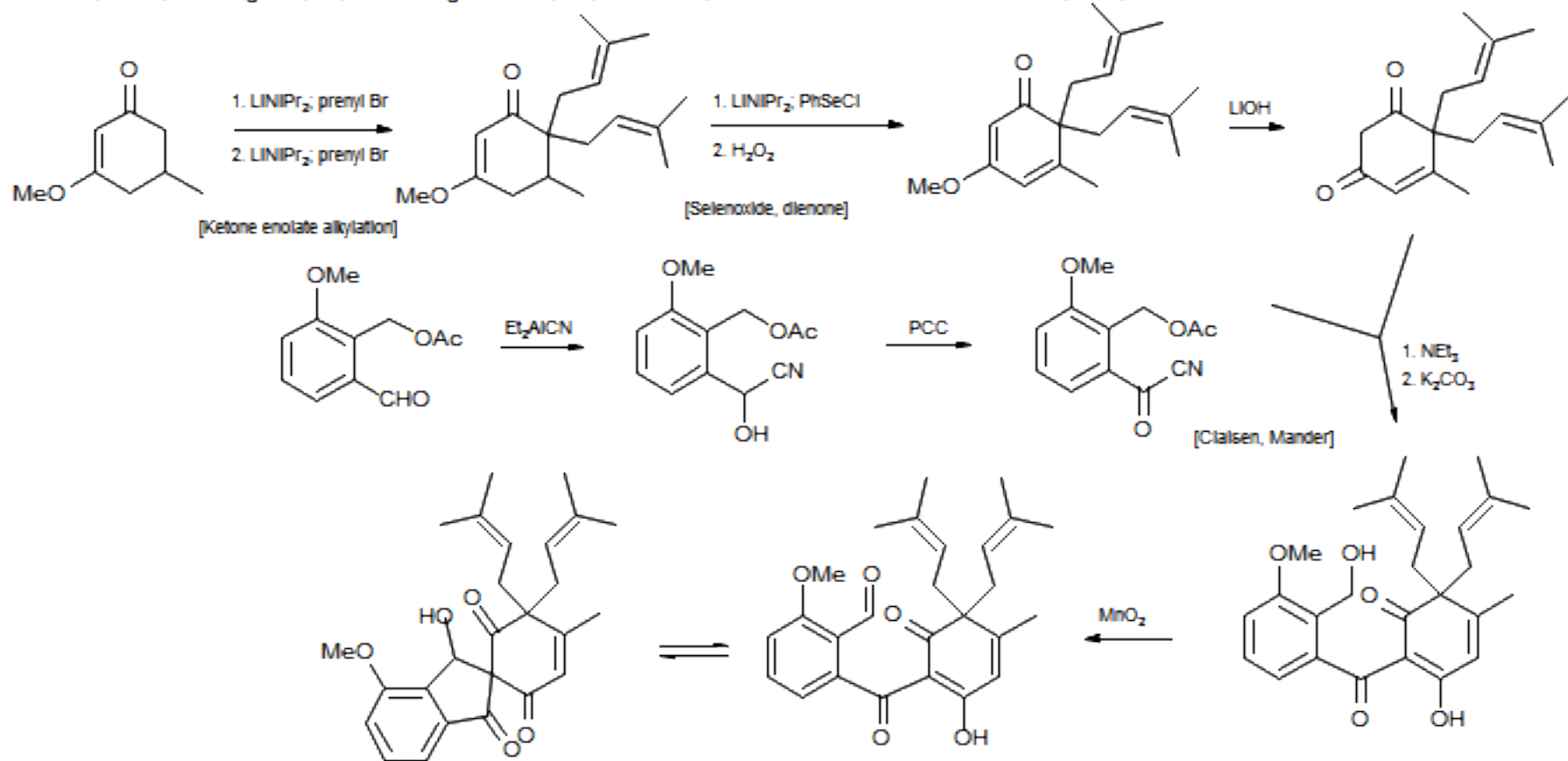


1. Synth
2. VI-Cu
3. OL - Epoxide
4. Carbofunc
5. ShCrs

Coleophomone D

Nicolaou, K. C.; Montagnon, T.; Vassilikogiannakis, G.; Mathison, C. J. N. *J. Am. Chem. Soc.* **2005**, *127*, 8872

05-04

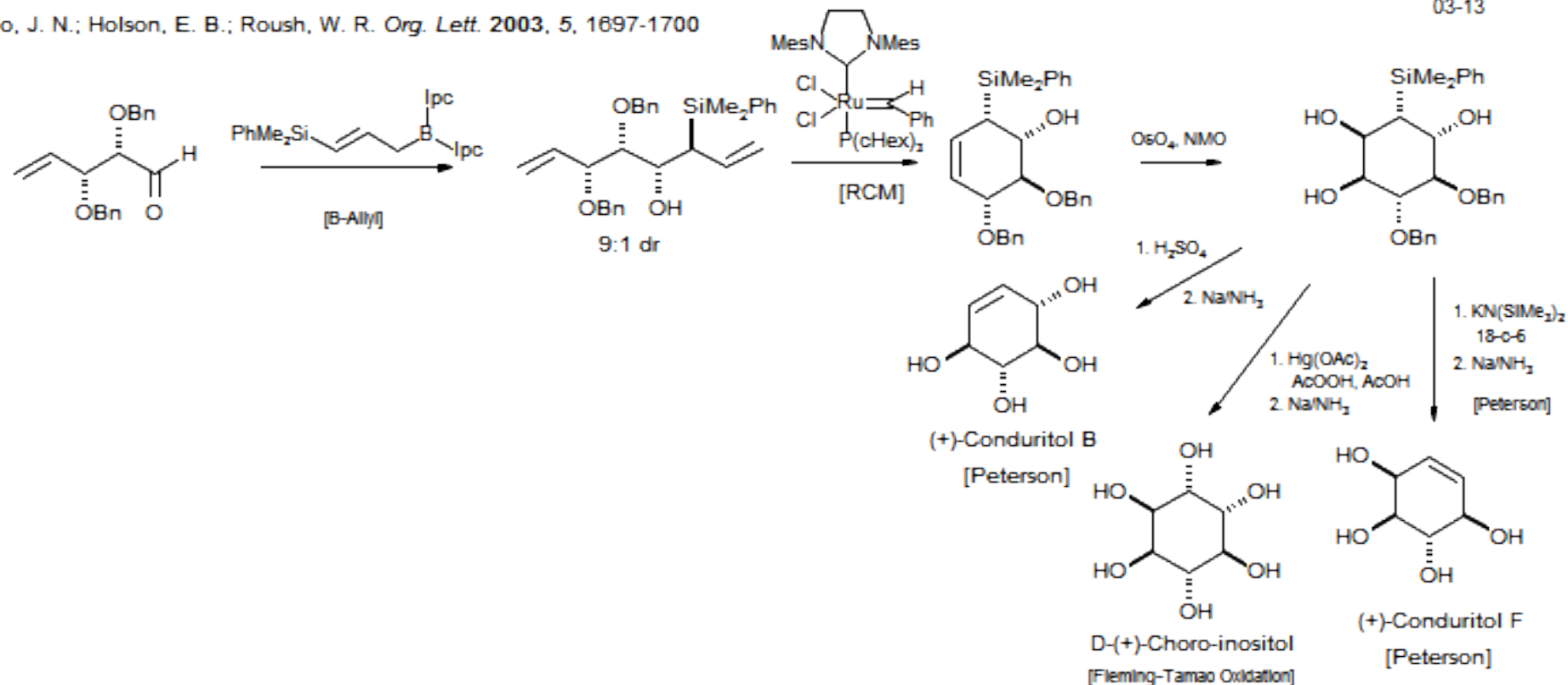


1. Synth
2. Enone alkylation
3. Mander
4. Selenox

Conduritol B, F

Heo, J. N.; Holson, E. B.; Roush, W. R. *Org. Lett.* 2003, 5, 1697-1700

03-13

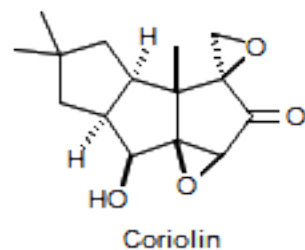
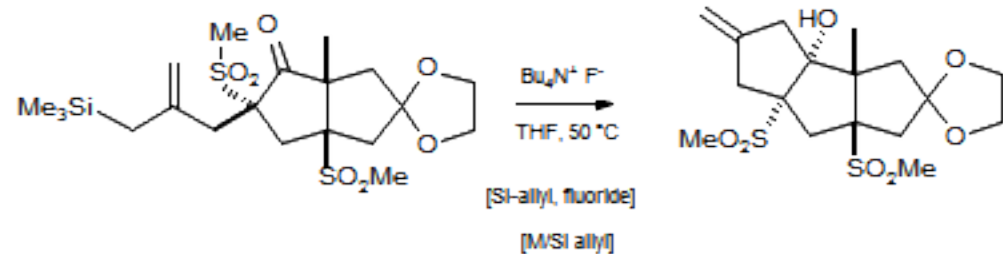


1. Synth
2. Allyl borane
3. Peterson
4. OsO₄

Coriolin

Trost, B. M.; Curran, D. P. *J. Am. Chem. Soc.* **1981**, *103*, 7380

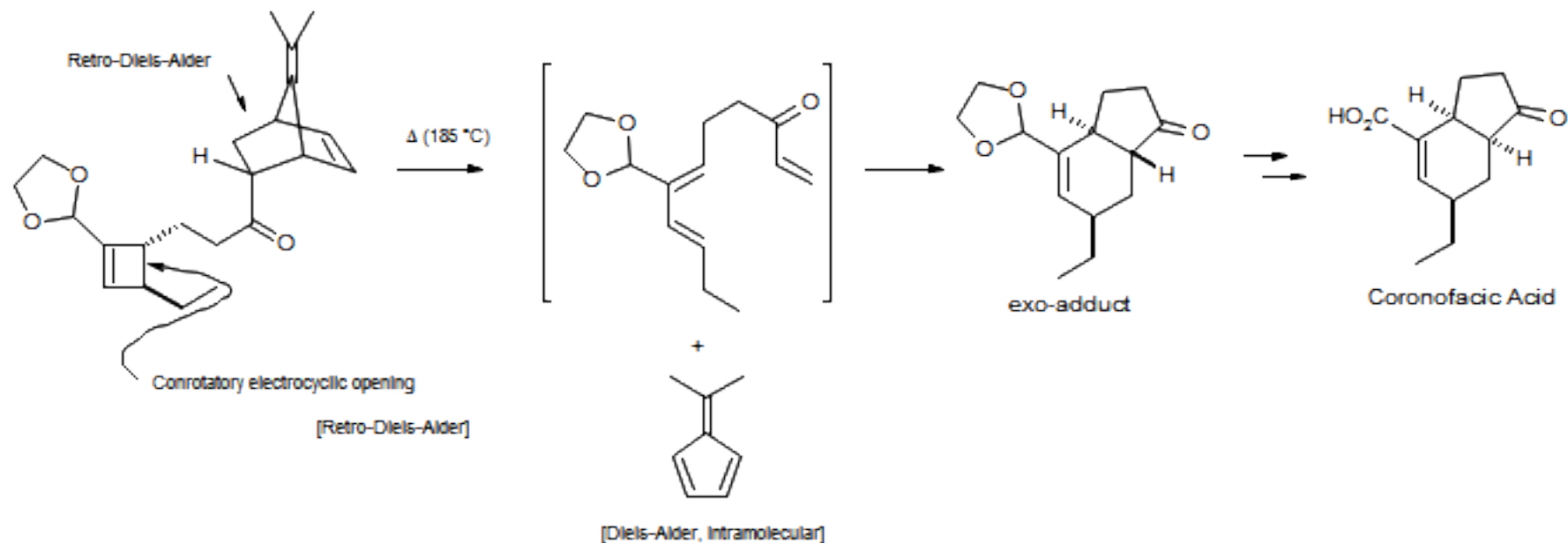
81-14



Coronofacic Acid

80-26

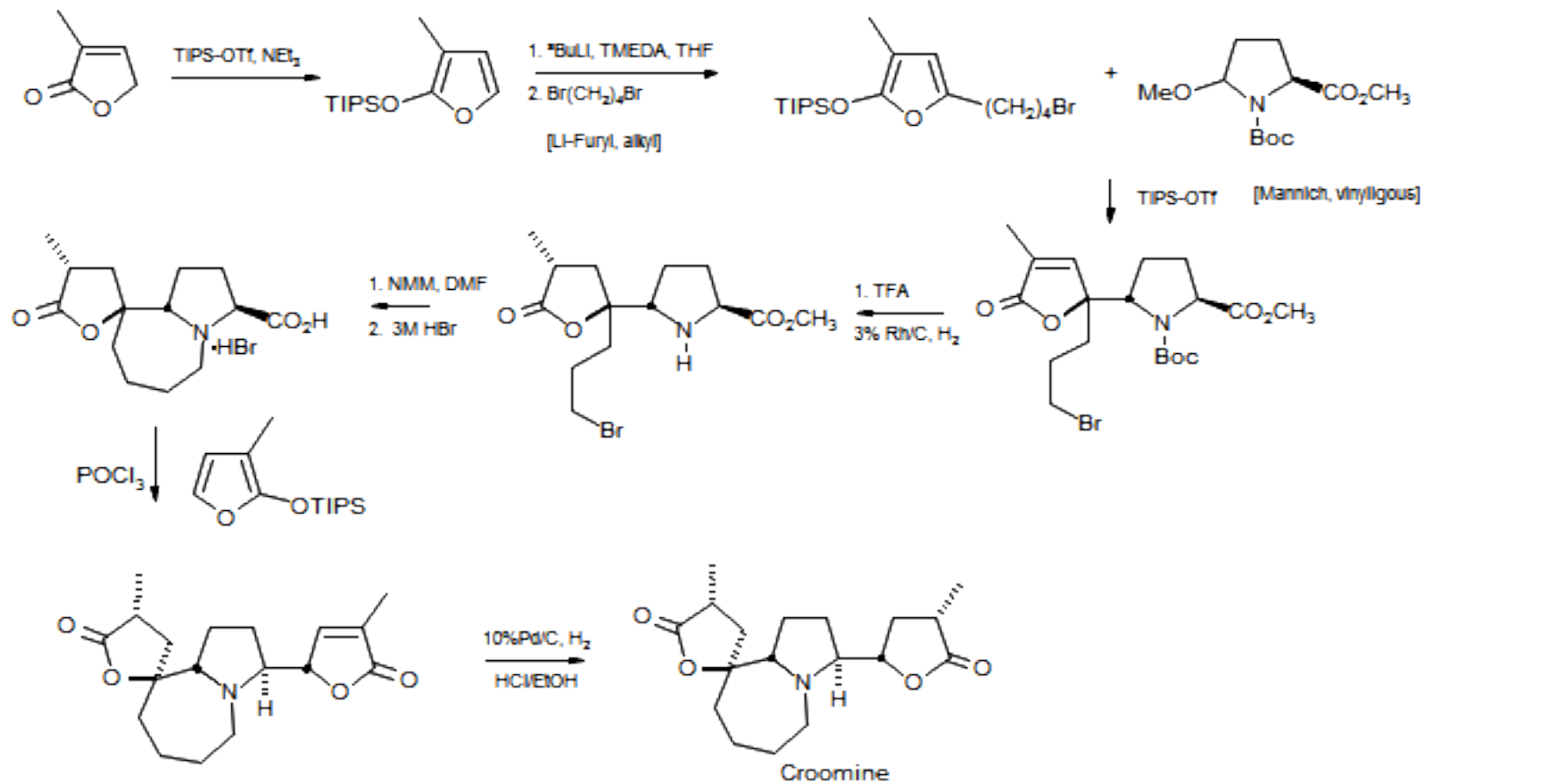
Ichihara, A.; Kimura, R.; Yamada, S.; Sakamura, S. *J. Am. Chem. Soc.* 1980, 102, 6353.



1. Synth
2. Diels-Alder
3. Retro-Diels-Alder
4. Aldolc
5. Electrocyclic
6. Aldehyde

Martin, S. F.; Barr, K. J. *J. Am. Chem. Soc.* **1996**, *118*, 3299

Mannich Condensation of Dienyl Silyl Ethers



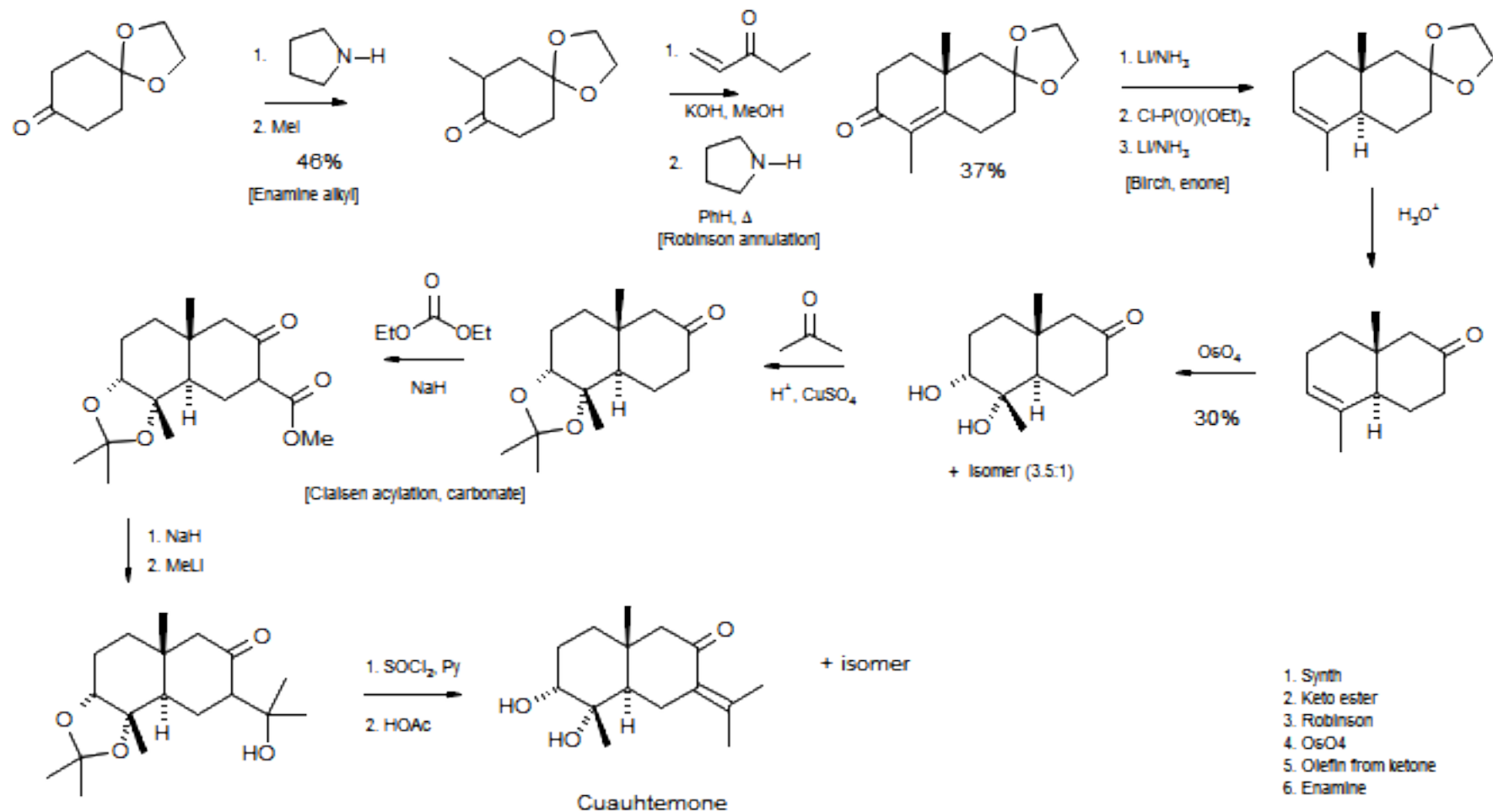
1. Furyl-Li
2. Synth
3. Amine

Cuauhtemone

Goldsmith, D. J.; Sakano, I. *J. Org. Chem.* 1976, 41, 2095.

76-23

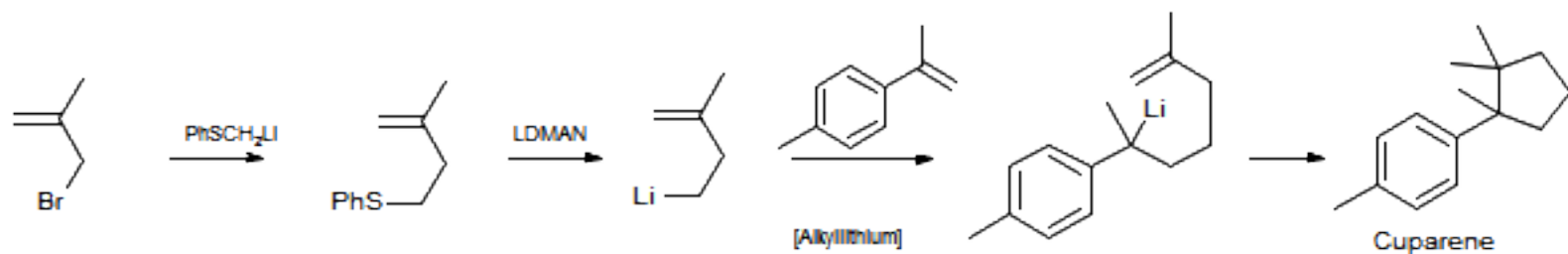
EXP



Cuparene

Cohen, T.; Kreethadungrongdat, T.; Liu, X.; Kulkarni, V. *J. Am. Chem. Soc.* **2001**, *123*, 3478

01-16

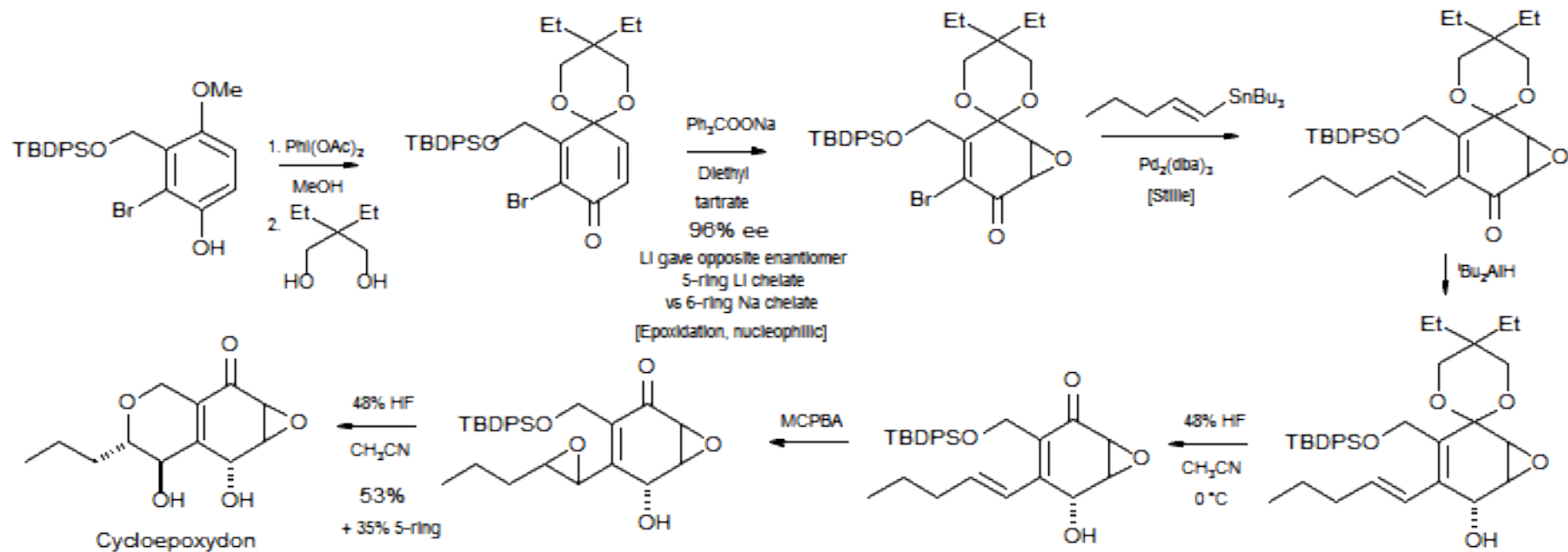


1. Synth
2. AlkLi
3. RLi-Olefin add

Cycloepoxydon

Li, C.; Pace, E. A.; Liang, M.-C.; Lobkovsky, E.; Gilmore, T. D. Porco, J. A. *J. Am. Chem. Soc.* **2001**, *123*, 11308

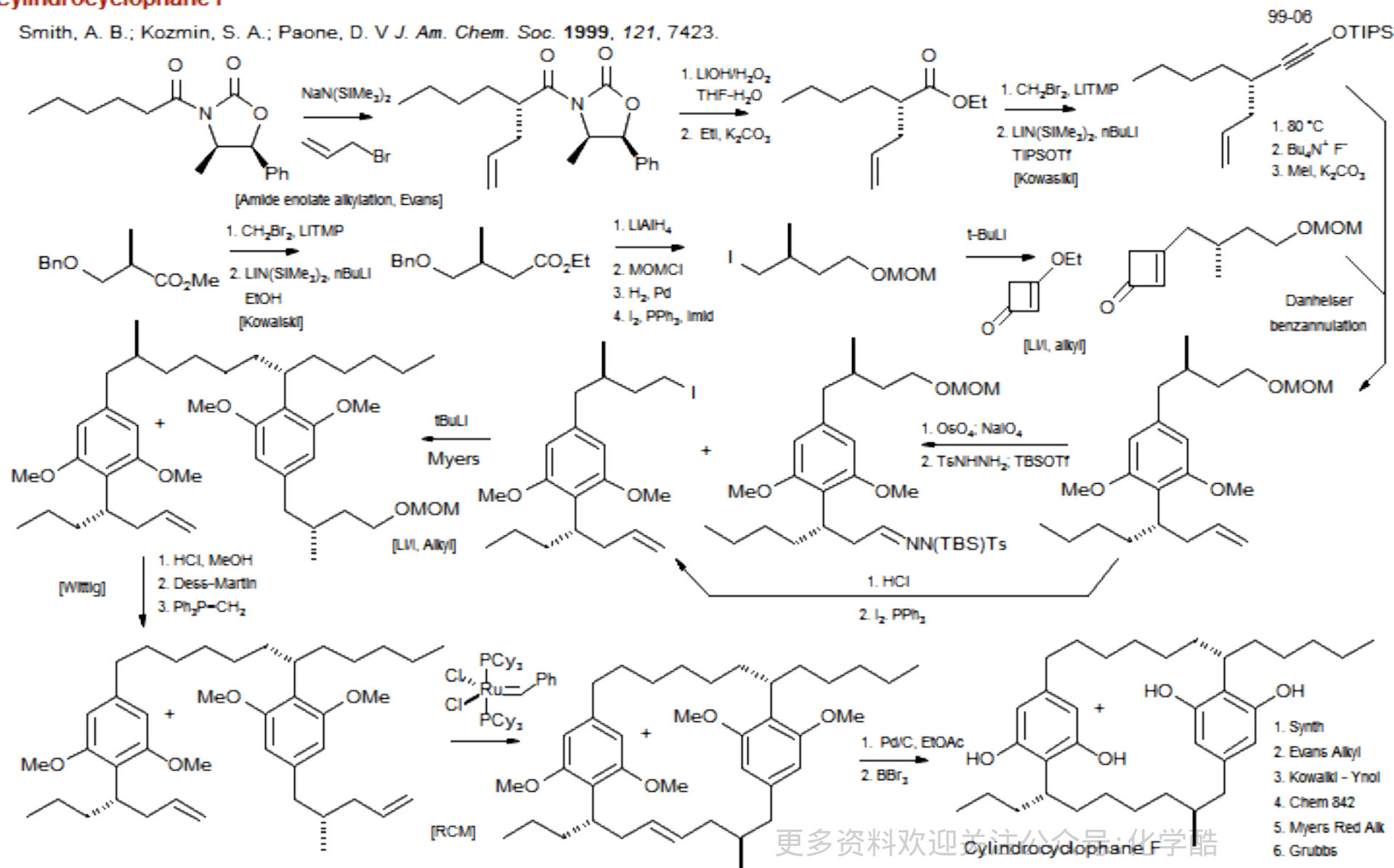
01-21



1. Synth
2. Asym Nucl. epoxyd
3. Stille
4. Chelation
5. DIBAL-stereoch

Cylindrocyclophane F

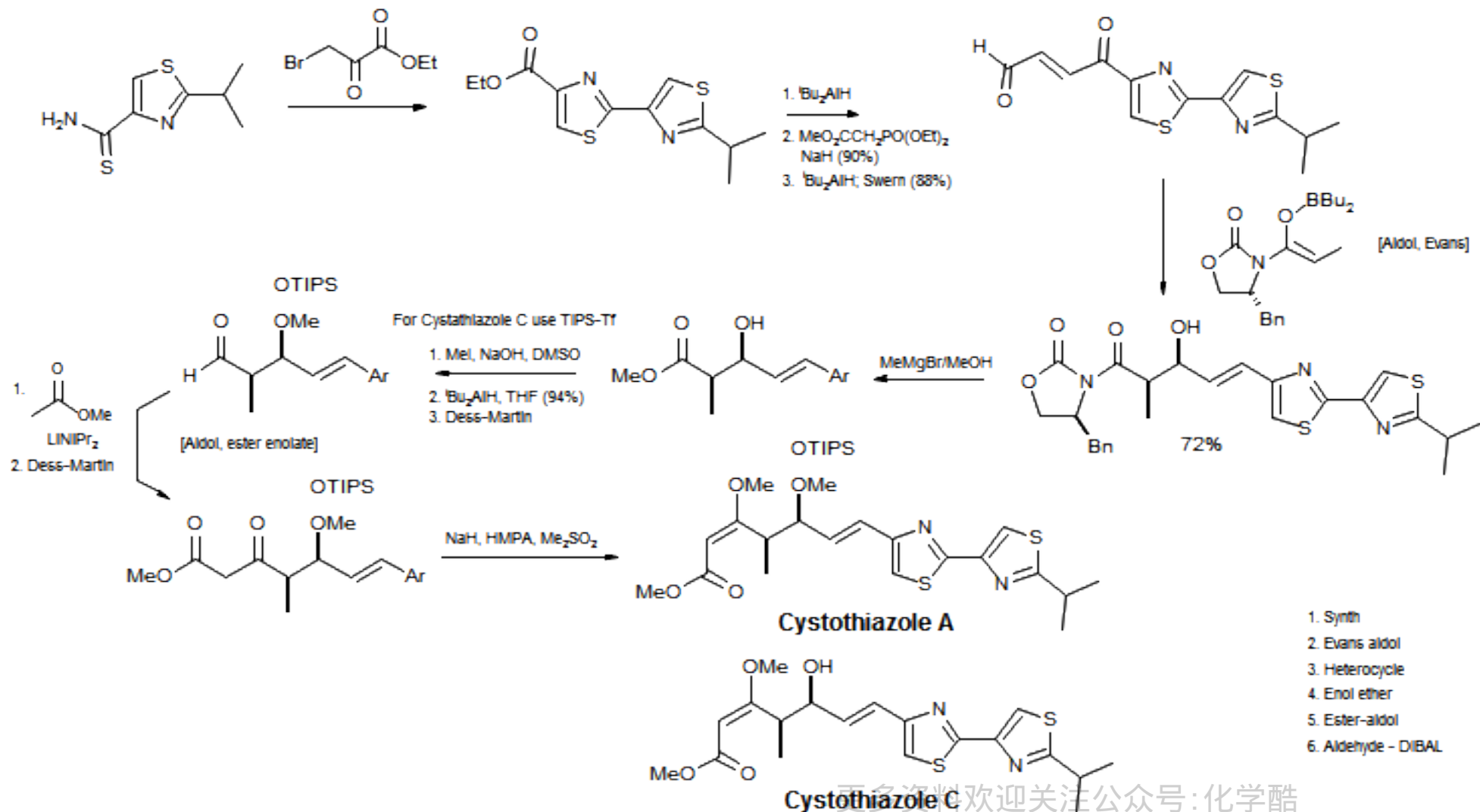
Smith, A. B.; Kozmin, S. A.; Paone, D. V *J. Am. Chem. Soc.* **1999**, *121*, 7423.



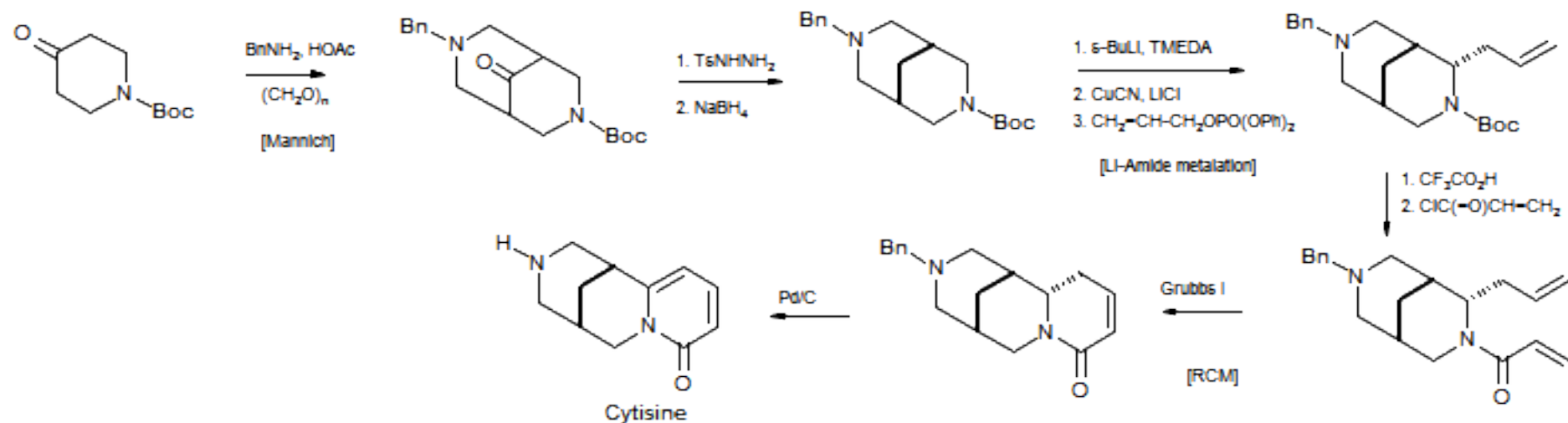
Cystothiazole A, C

Williams, D. R.; Patnaik, S.; Clark, M. P. *J. Org. Chem.* **2001**, *66*, 8463

01-11



Stead, D.; O'Brien, P.; Sanderson, A. J. *Org. Lett.* 2005, 7, 4459-4462



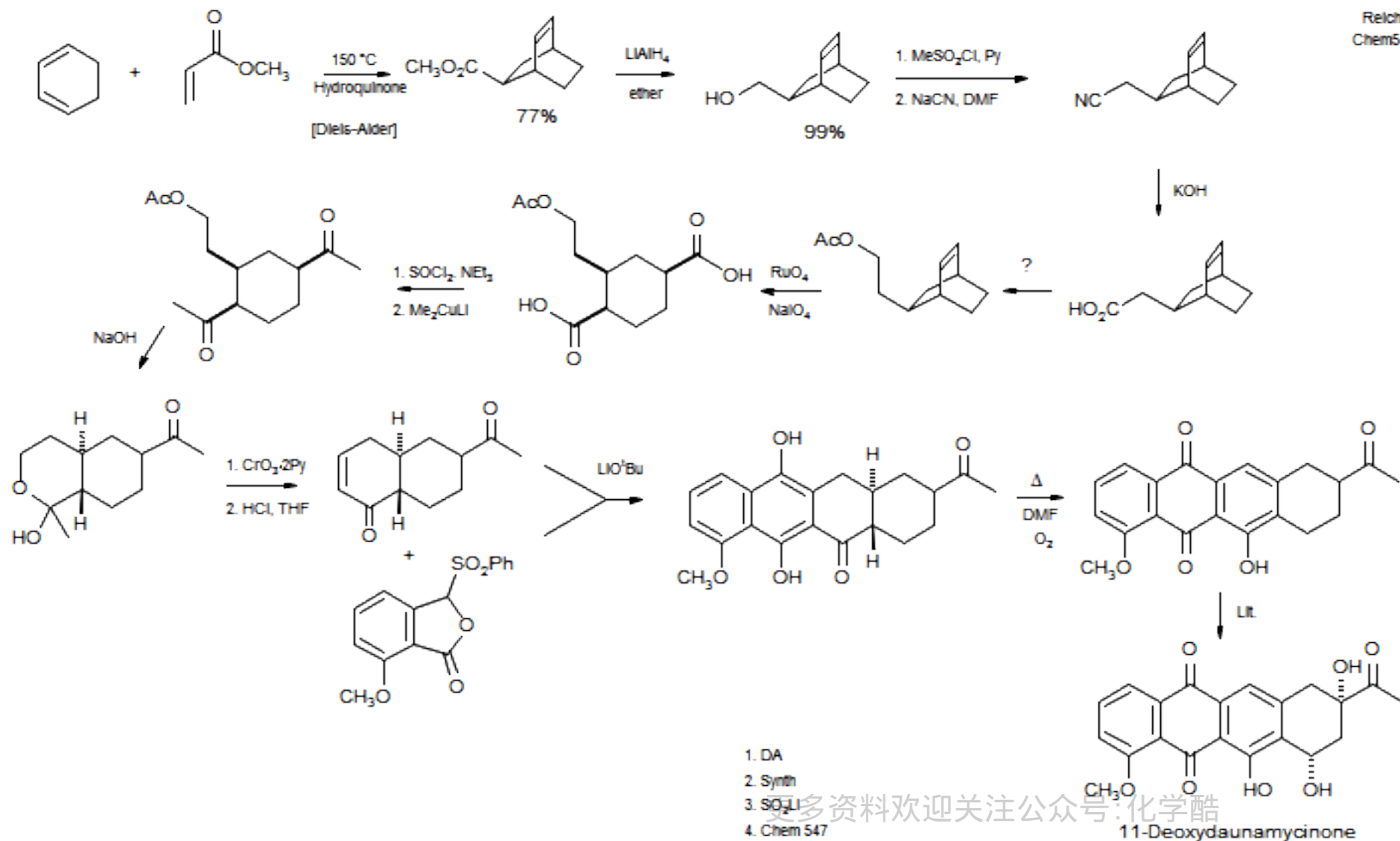
1. Synth
2. Mannich
3. Ketone reduct
4. RCM
5. Li-C-N

Daunamycinone, 11-deoxy

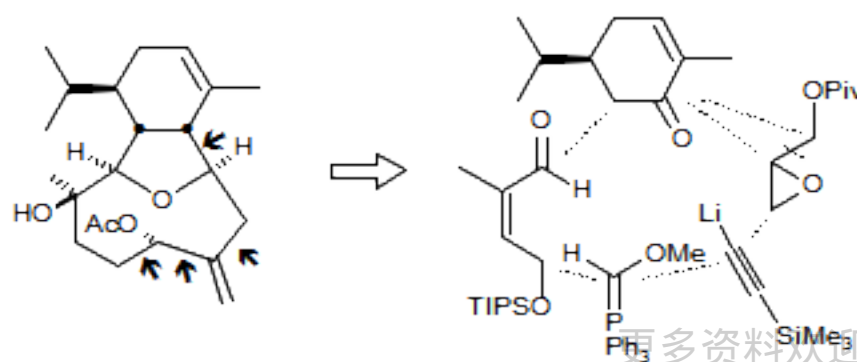
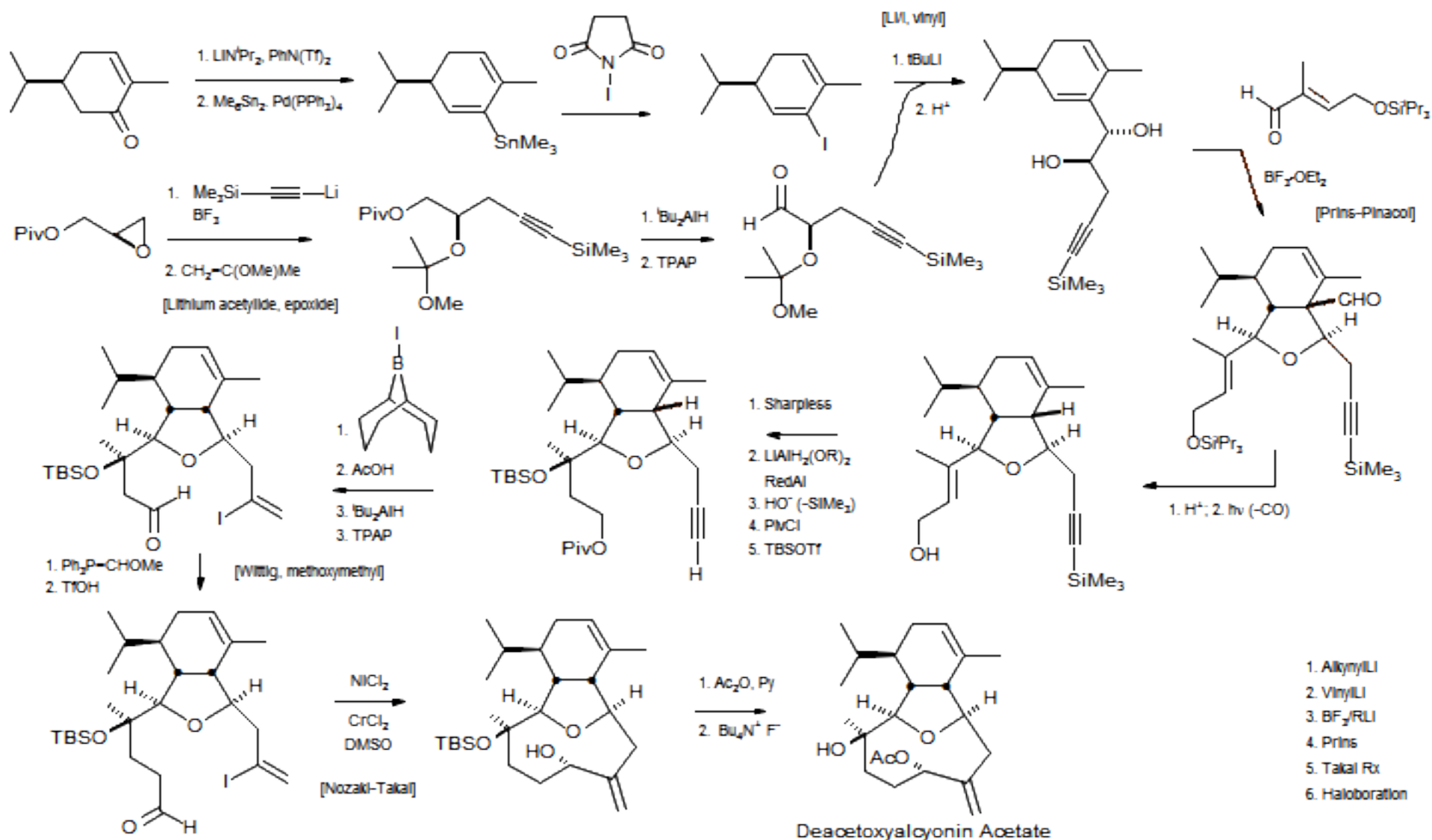
Hauser, F. M.; Mal, D. *J. Am. Chem. Soc.*, 1983, 105, 5688.

83-17
EXP

Reich
Chem547



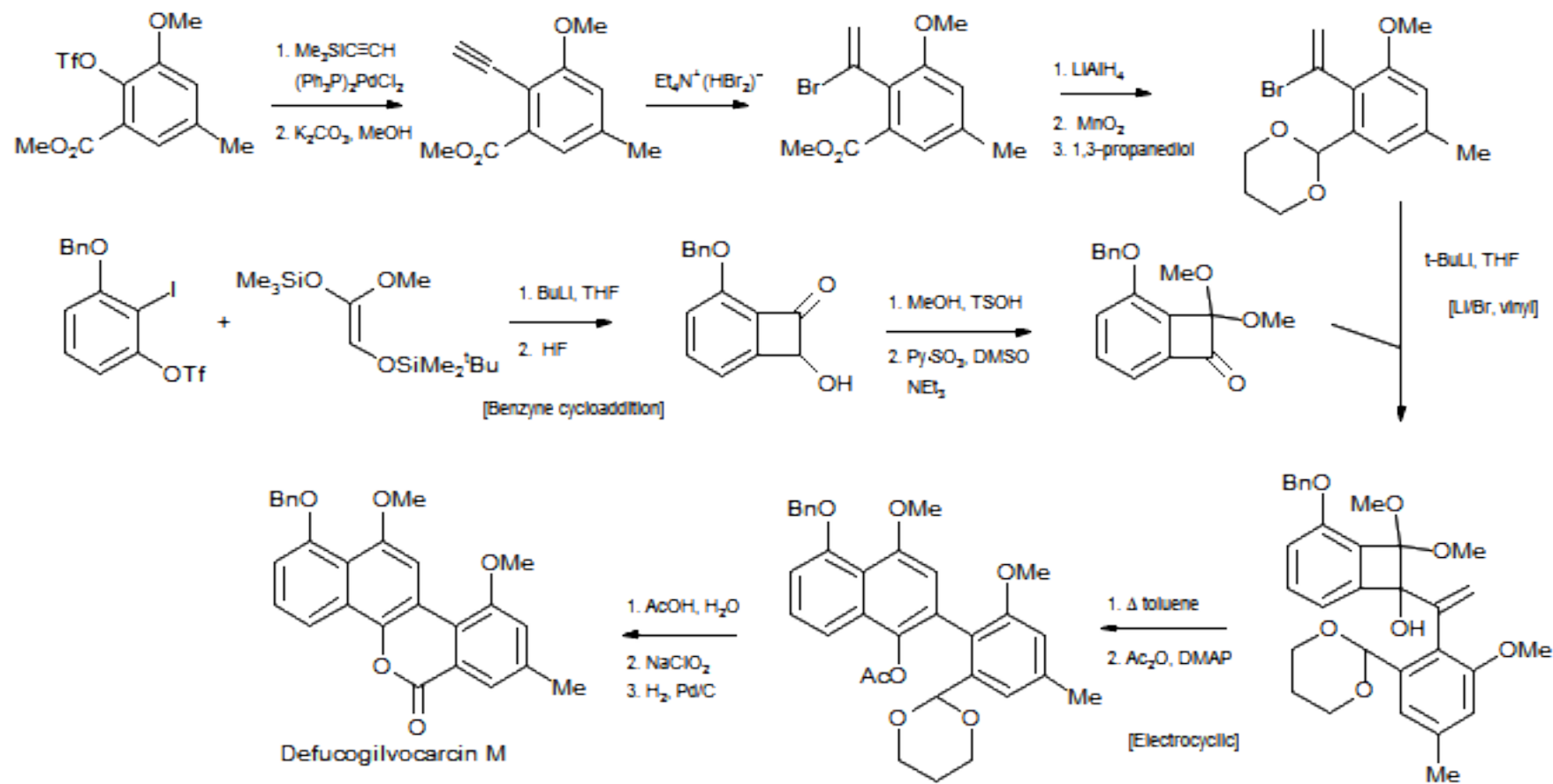
MacMillan, D. W. C.; Overman, L. E. *J. Am. Chem. Soc.* **1995**, *117*, 10391.



Defucogilvocarcin M

04-09

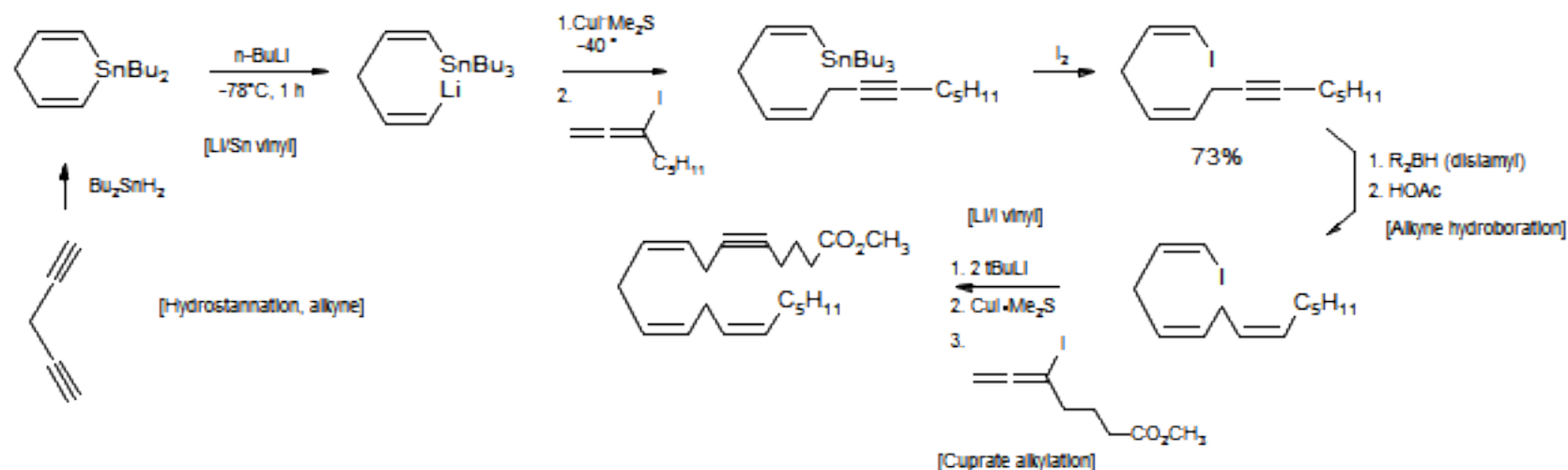
Takemura, I.; Imura, K.; Matsumoto, T.; Suzuki, K. *Org. Lett.* 2004, 6, 2503.



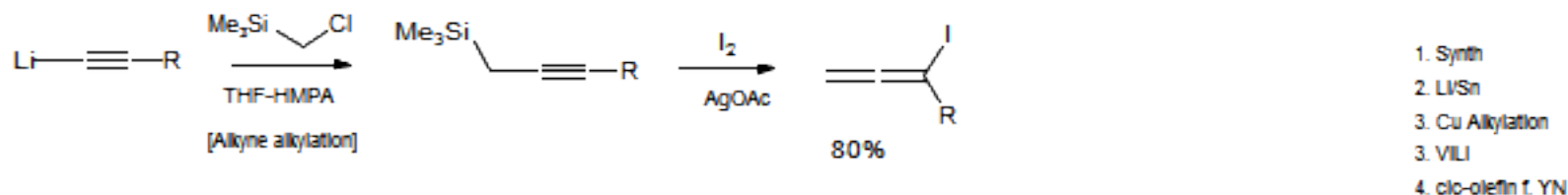
1. Synth
2. Carbene
3. Electrocyclic benzocyclobutene
4. LiBr

Dehydroarachidonic Acid.

Corey, E. J.; Kang, J. *Tetrahedron Lett.*, 1982, 23, 2651.



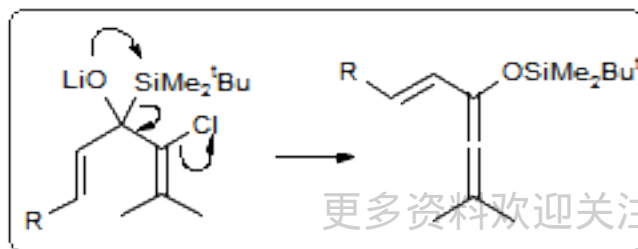
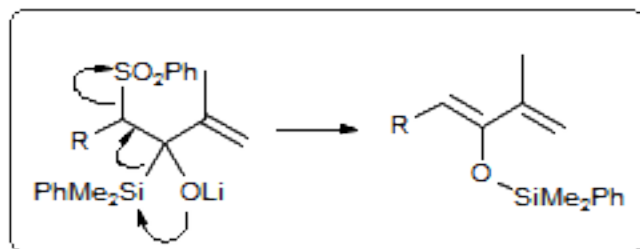
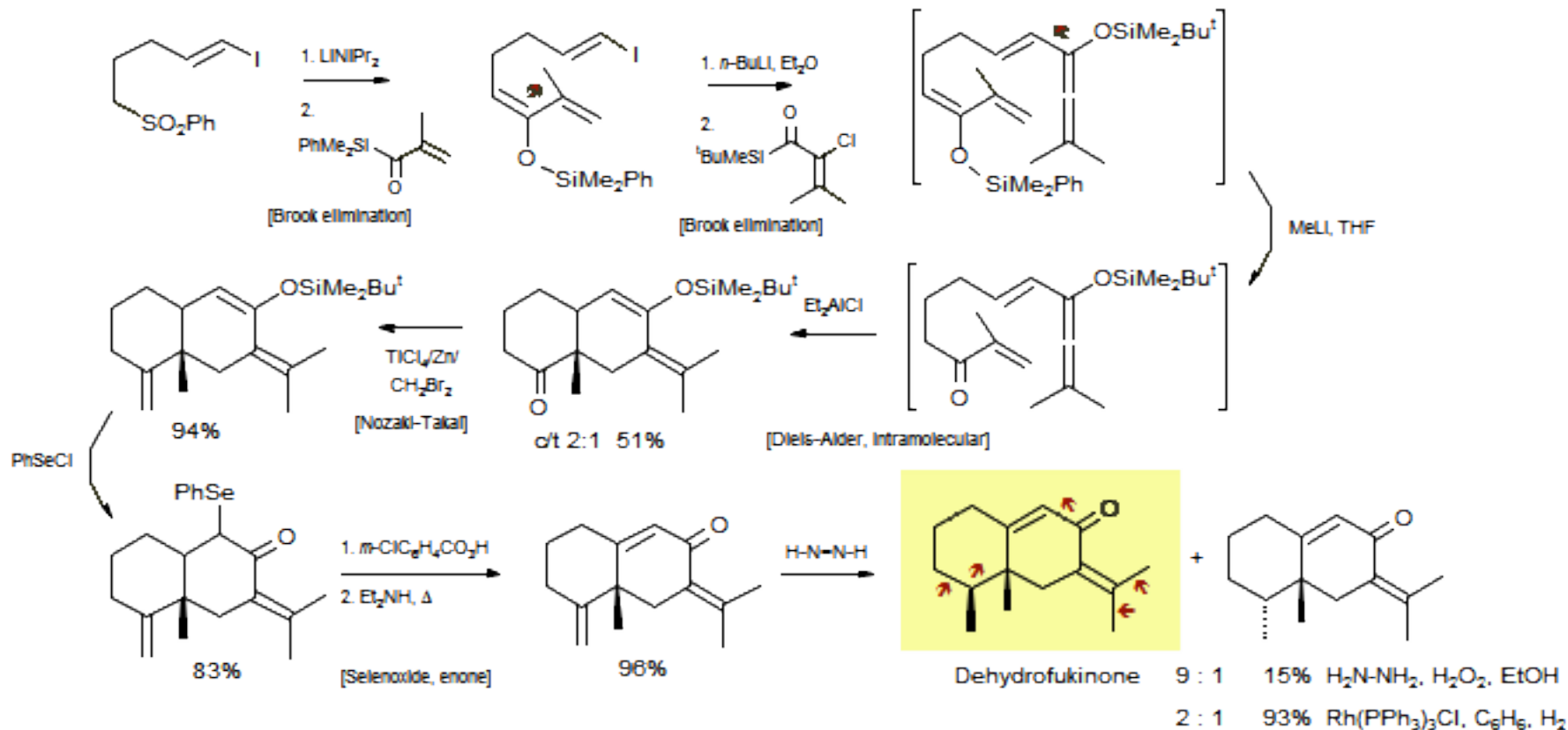
Preparation of allenyl iodide:



Dehydrofukinone

88-15

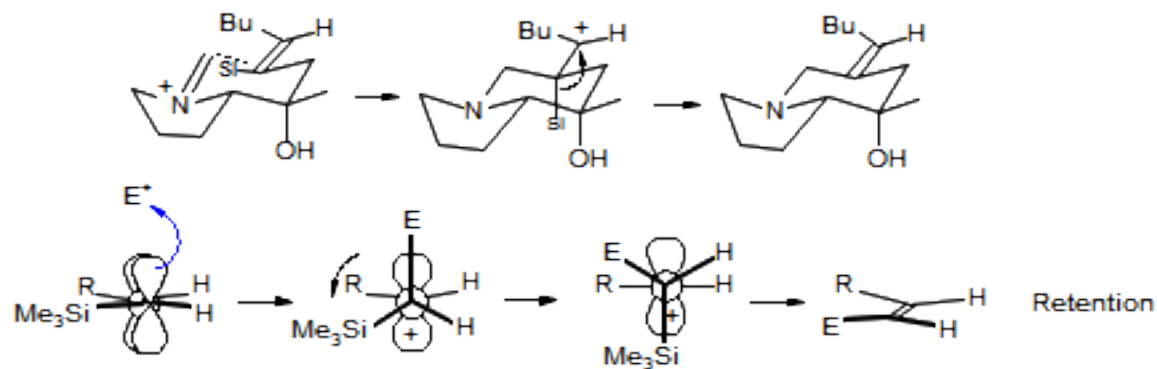
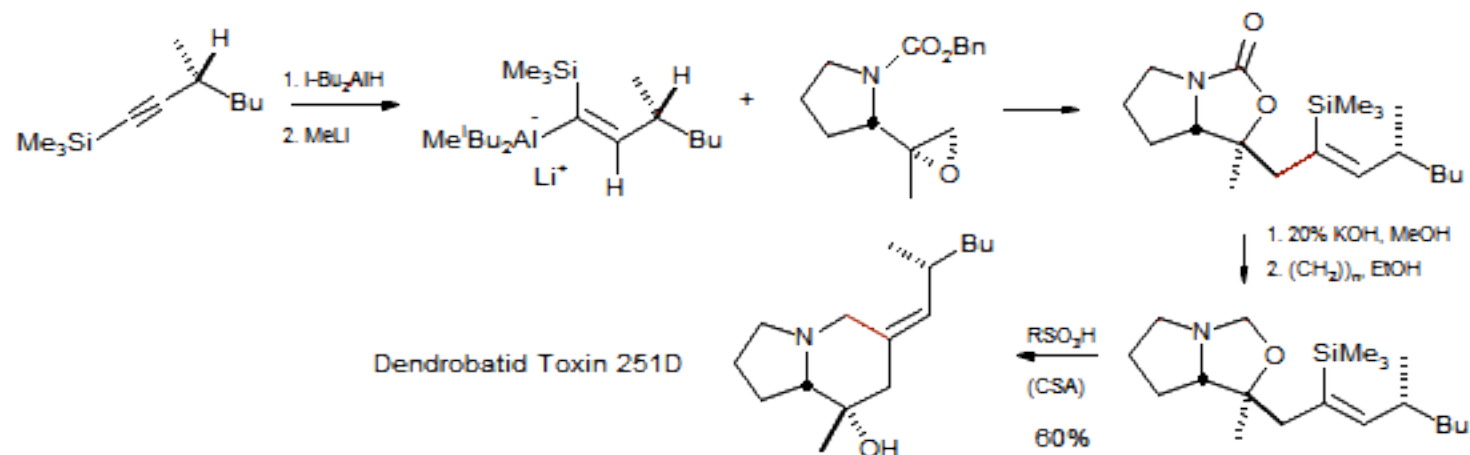
Reich, H. J.; Eisenhart, E. K.; Olson, R. E.; Kelly, M. J. *J. Am. Chem. Soc.* 1986, 108, 7791.



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1. Synth
2. Silyl ketone
3. Selenoxide E2
4. Diimide
5. VinylLi
6. Nozaki-Takai
7. Diels-Alder

Overman, Bell *J. Am. Chem. Soc.* 1981, 103, 1851. (Vinyl Silane Alkylation with Imonium Salt)

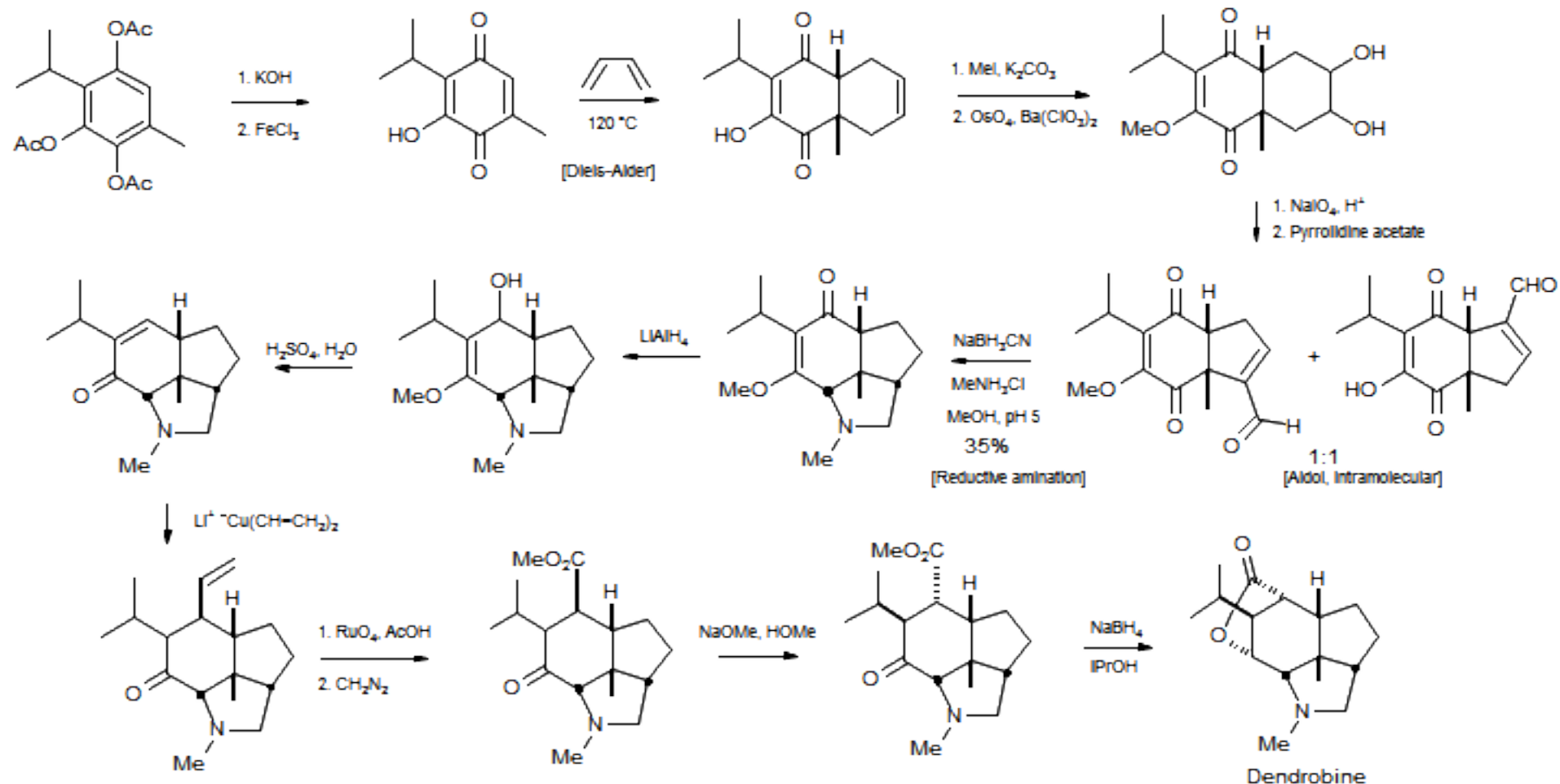


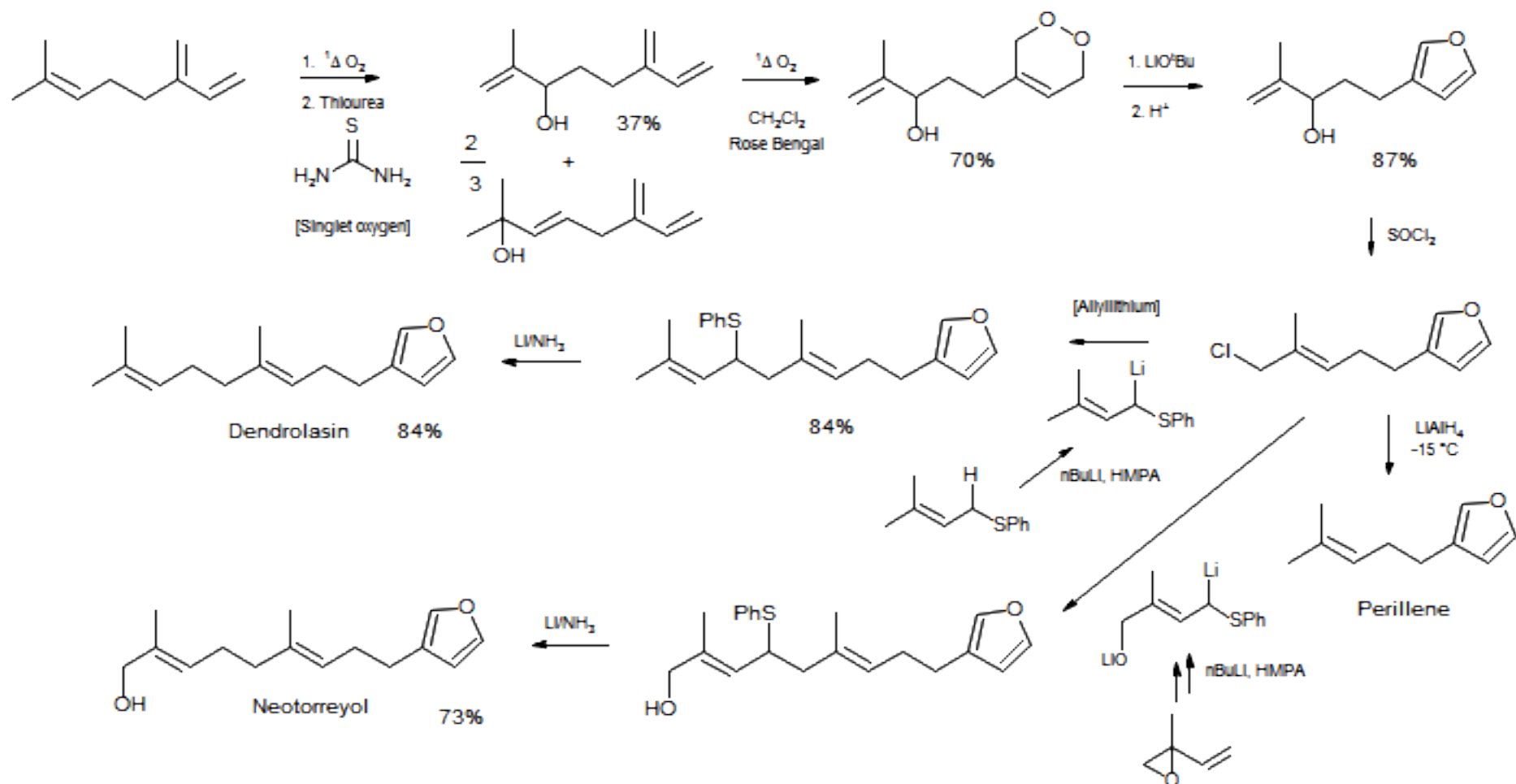
1. Synth
2. VinylSi
3. Alane
4. Epoxide-Cu
5. Cu-Alkylation

Dendrobine

74-08

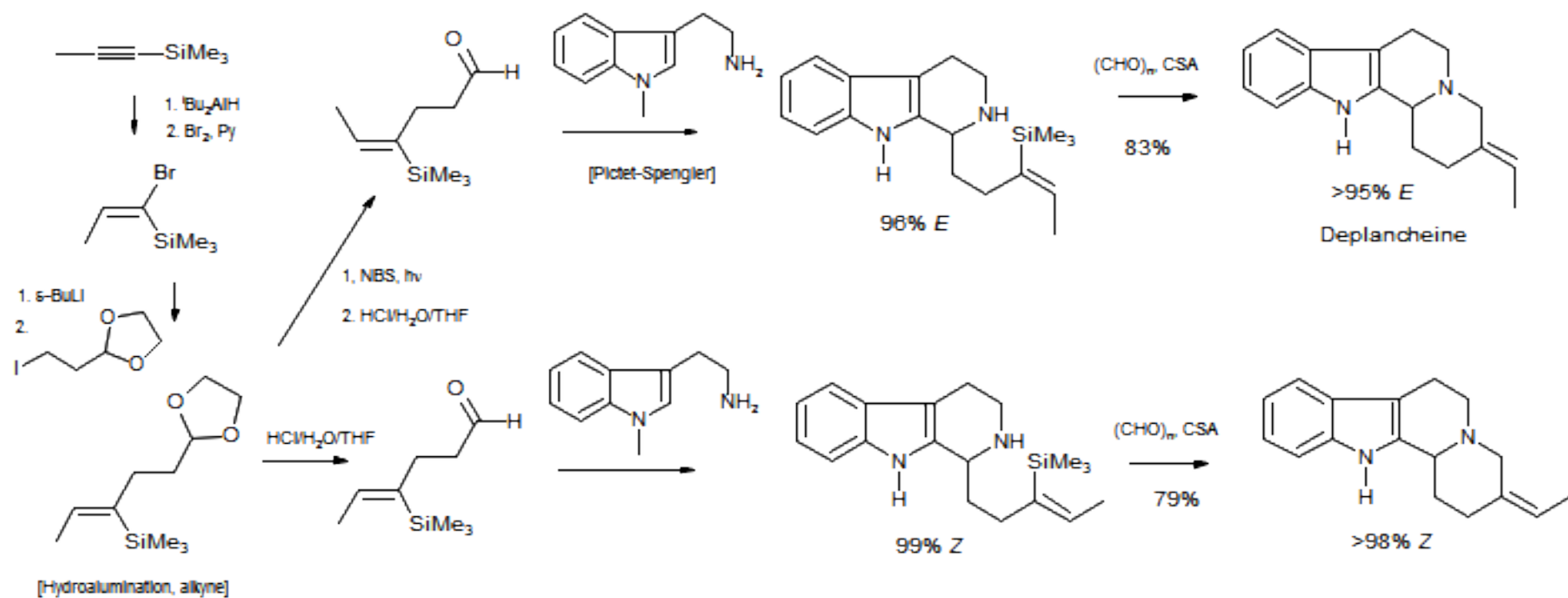
COMM

Kende, A. S.; Bentley, T. J.; Mader, R. A.; Ridge, D. J. *Am. Chem. Soc.* 1974, 96, 4332-4334

Kondo, K.; Matsumoto, M. *Tetrahedron Lett.* 1976, 391

Deplancheine

82-22

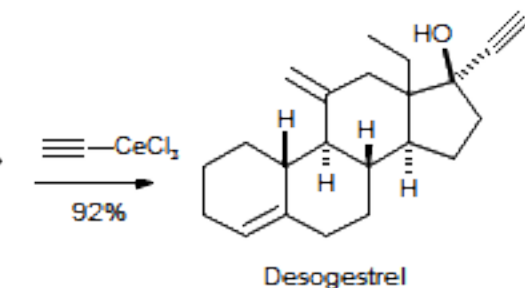
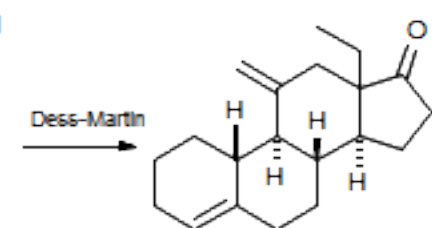
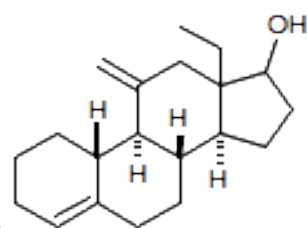
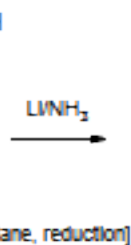
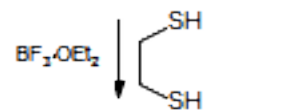
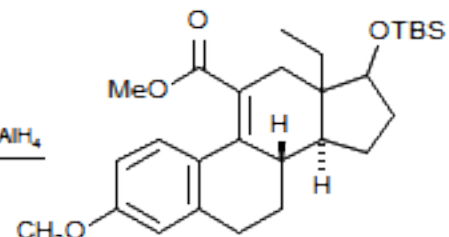
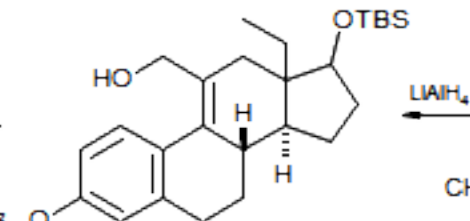
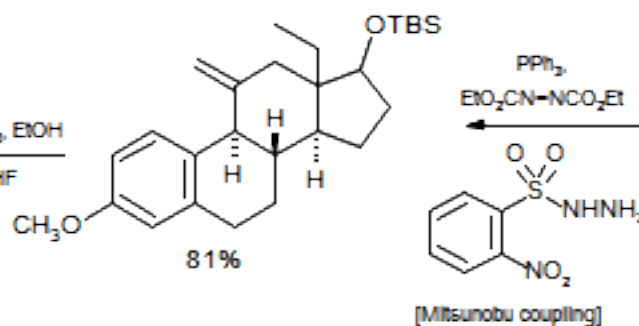
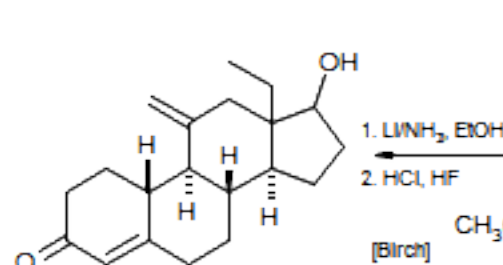
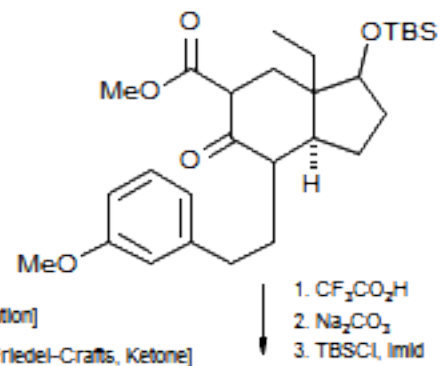
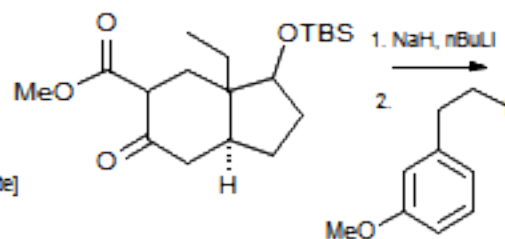
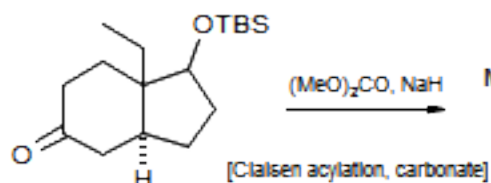
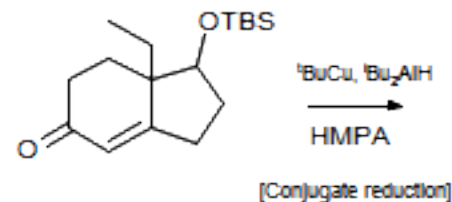
Overman, L. E.; Malone, T. C. *J. Org. Chem.* 1982, 47, 5297.

1. Synth
2. Pictet-Spengler name
3. Vin-silane
4. Cationic Cycl.
5. DIBAL

Desogestrel

Corey, E. J.; Huang, A. X. *J. Am. Chem. Soc.* **1999**, *121*, 710

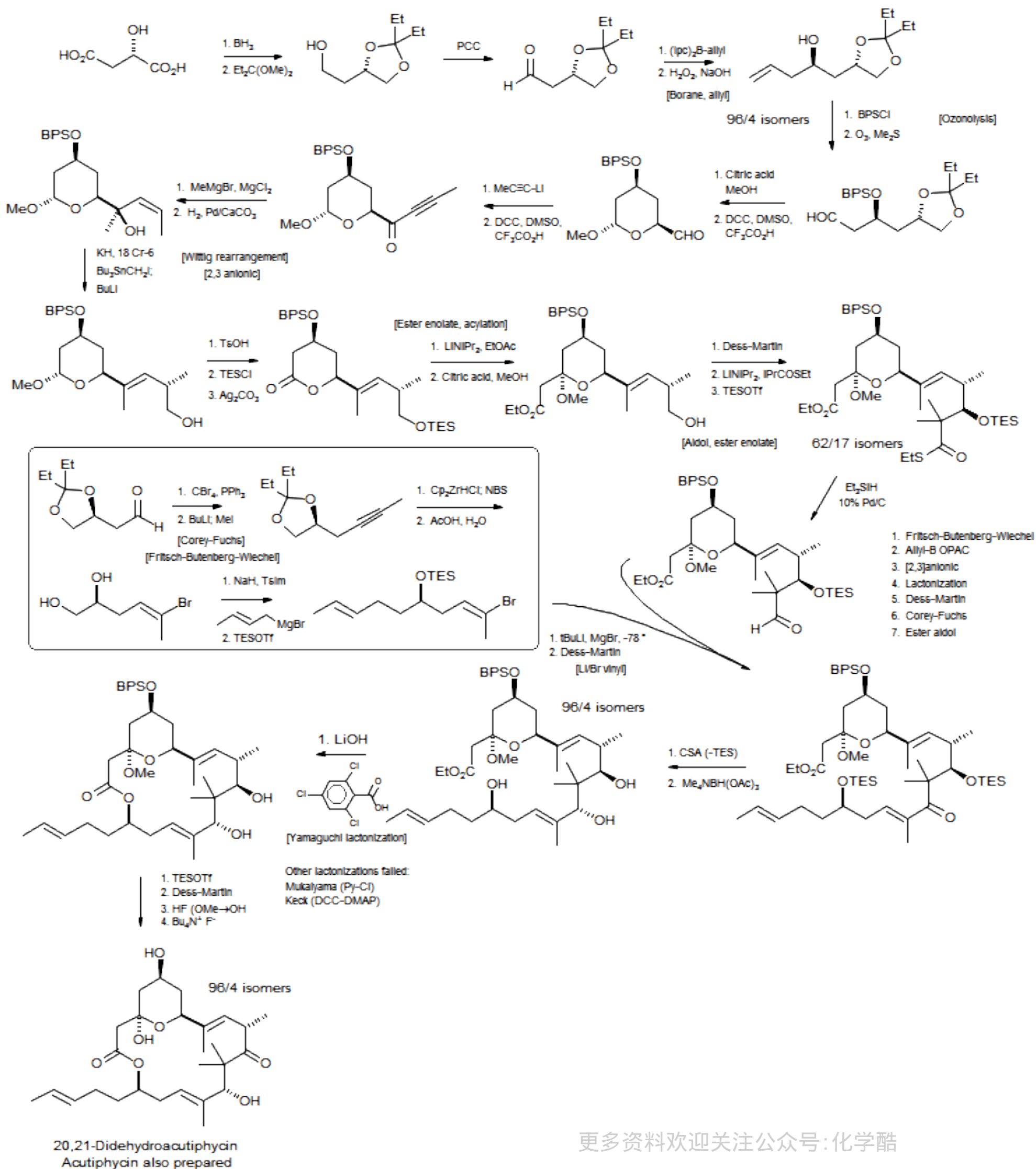
99-07



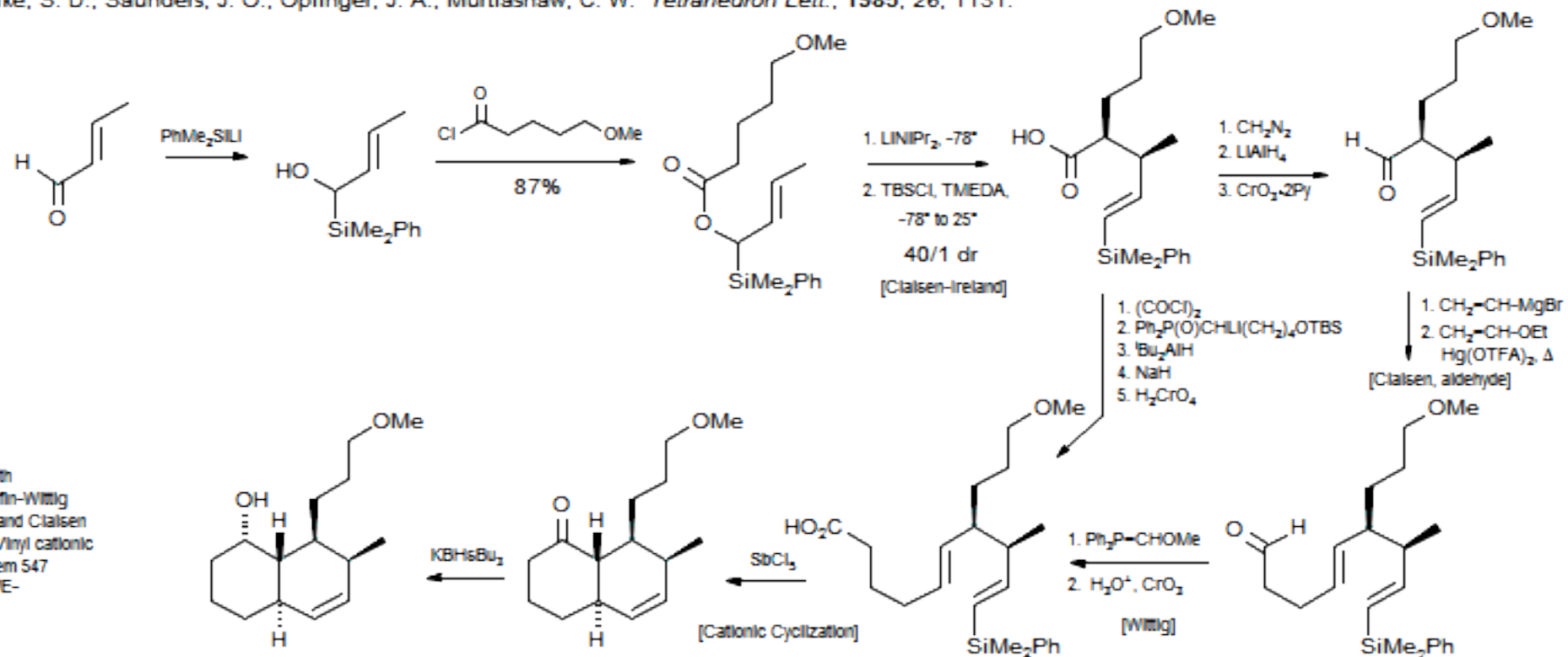
1. Synth
2. Ketoester dianion
3. Cationic Cycliz
4. Diazene reduction
5. Deoxygenation

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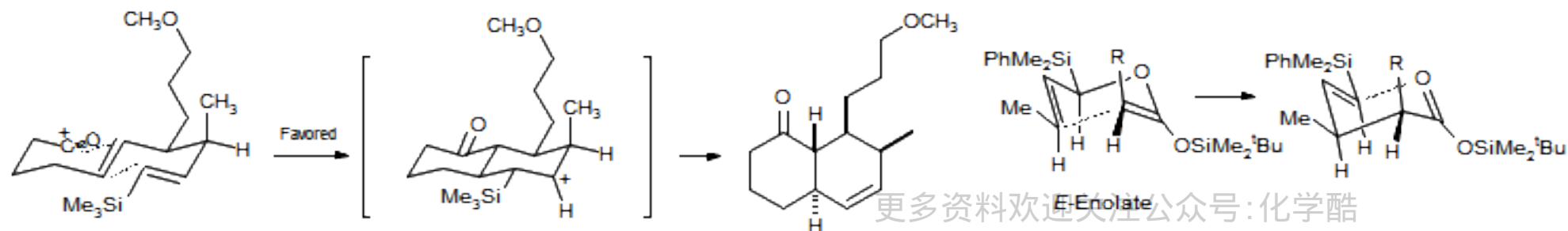
Smith, A. B.; Chen, S. S.-Y.; Nelsom, F.; Reichert, J. M.; Salvatore, B. A. *J. Am. Chem. Soc.* **1997**, *119*, 10935.



Burke, S. D., Saunders, J. O.; Oplinger, J. A.; Murtiashaw, C. W. *Tetrahedron Lett.*, 1985, 26, 1131.

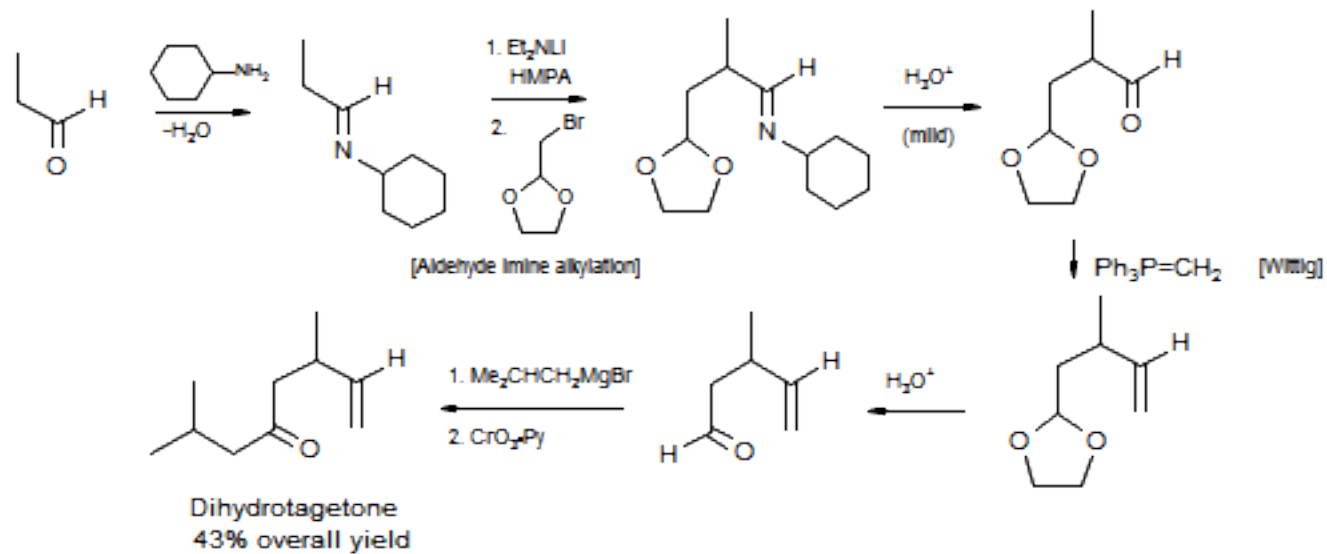


1. Synth
2. Olefin-Wittig
3. Ireland Claisen
4. Si-Vinyl cationic
5. Chem 547
6. HWE-



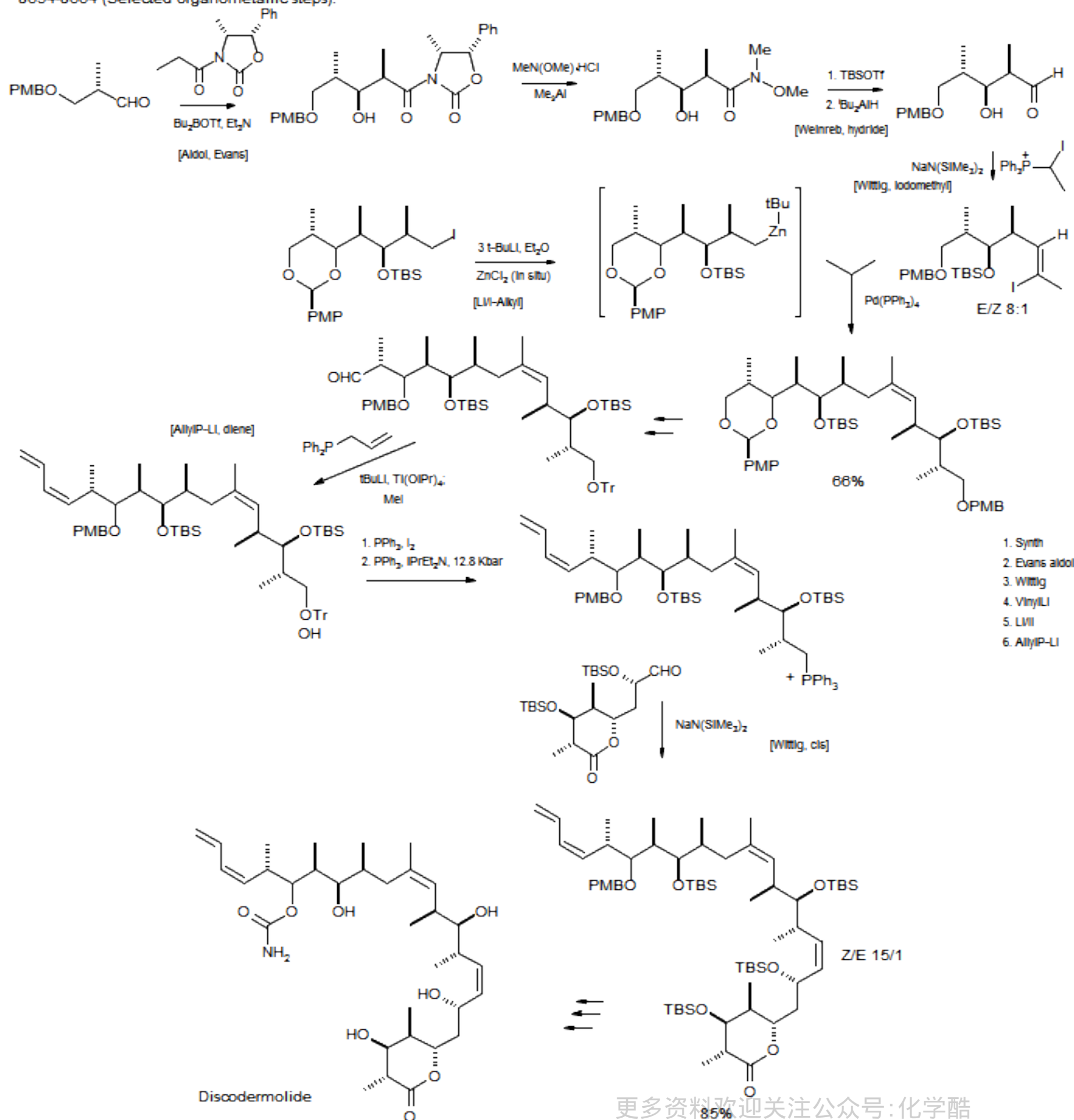
Dihydrotagetone

Normant *Tetrahedron Lett.*, 1976, 1379.



Discodermolide "Gram Scale Synthesis"

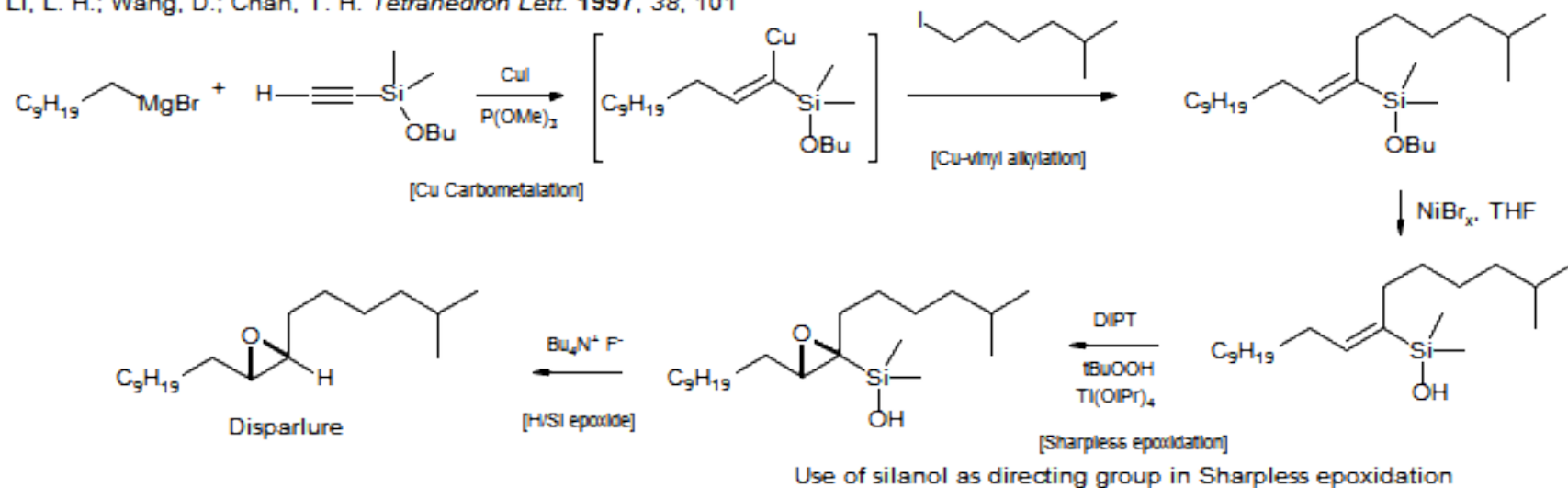
Smith, A. B. III; Beauchamp, T. J.; LaMarche, M. J.; Kaufman, M. D.; Qiu, Y.; Arimoto, H.; Jones, D. R.; Kobayashi, K. *J. Am. Chem. Soc.* **2000**, *122*, 8654-8664 (Selected organometallic steps).



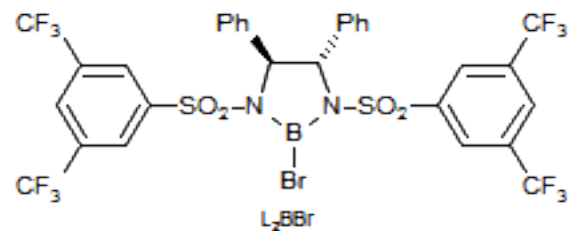
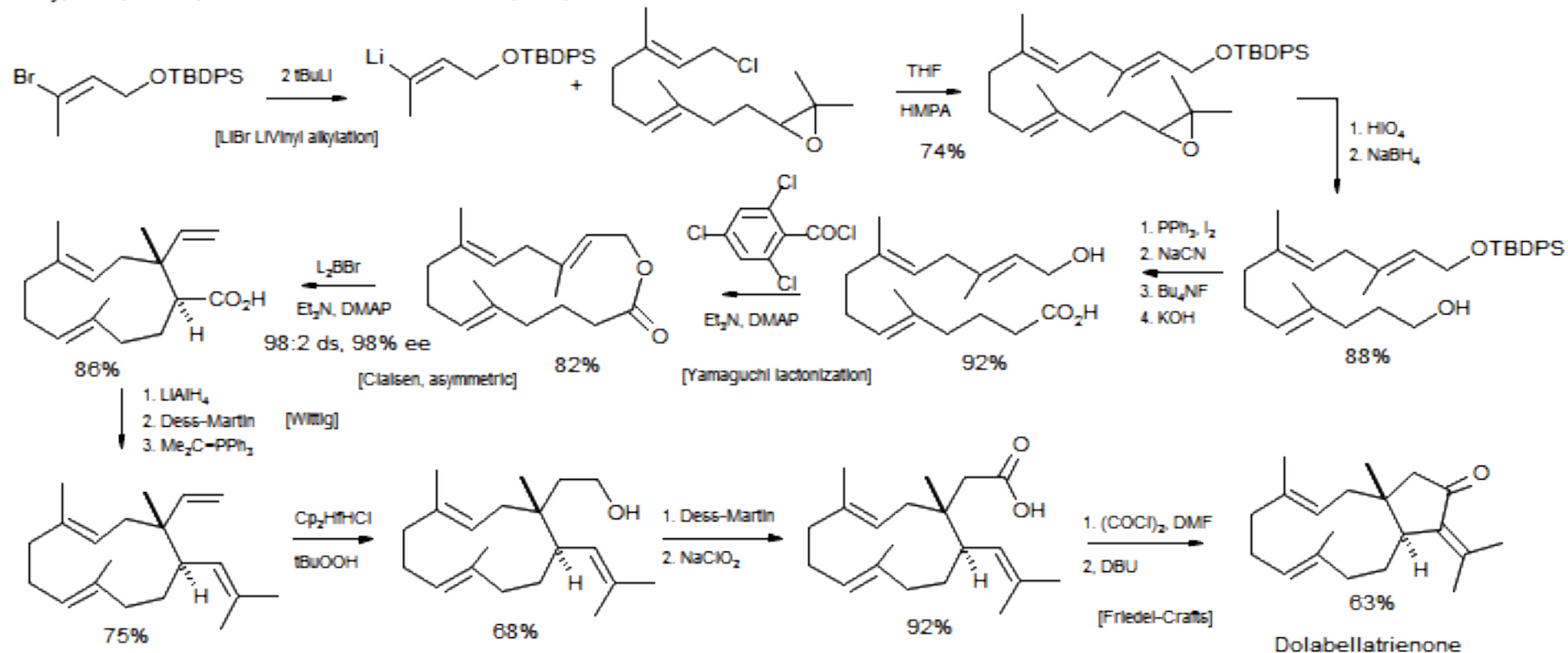
Disparlure

Li, L. H.; Wang, D.; Chan, T. H. *Tetrahedron Lett.* **1997**, *38*, 101

97-03



1. Synth
2. Si - fat proton
3. Epoxide
4. Cu Chem

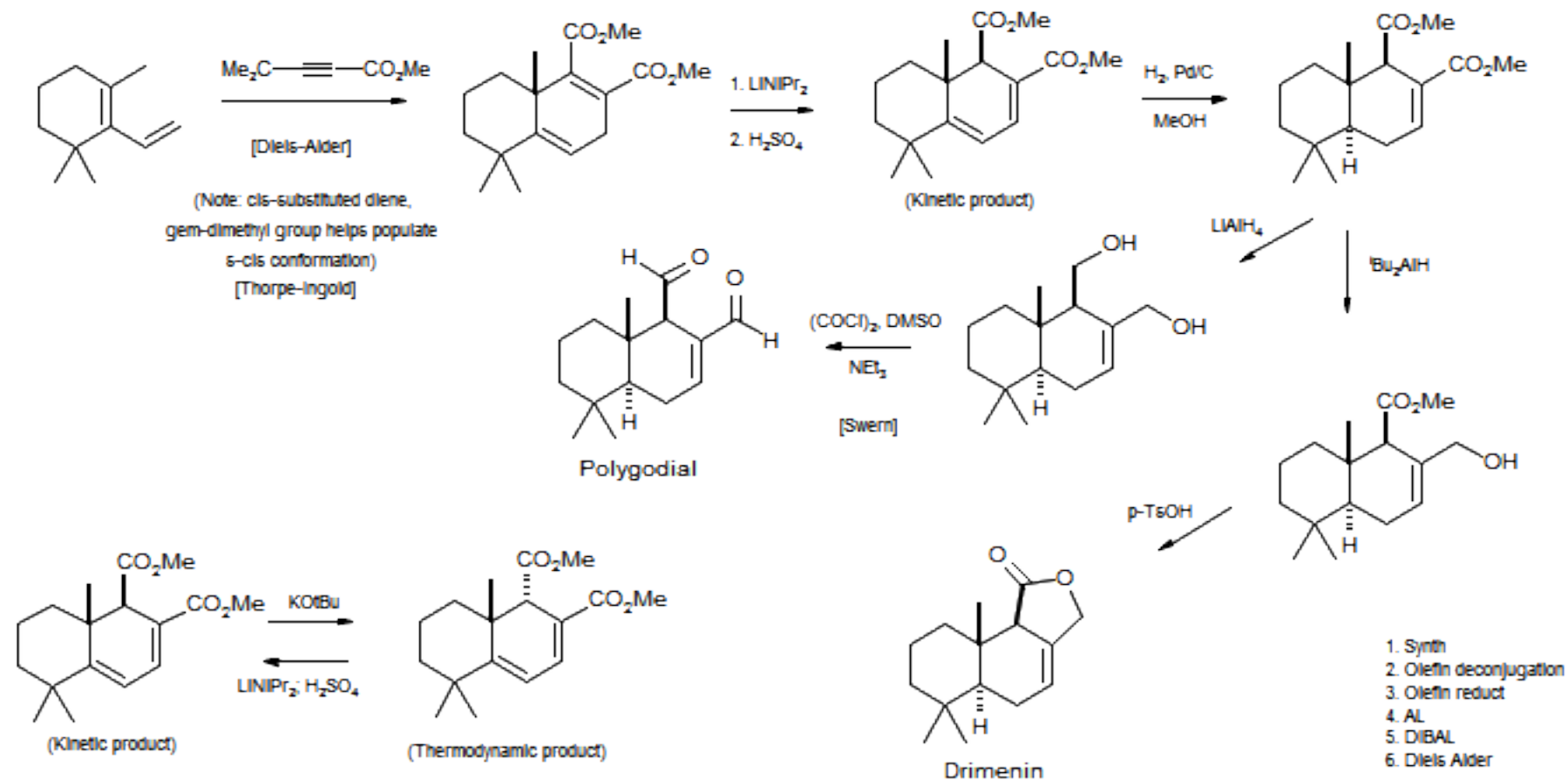
Corey, E. J.; Kania, R. S. *J. Am. Chem. Soc.* **1996**, *118*, 1230

1. Synth
2. Claisen
3. Chem 547

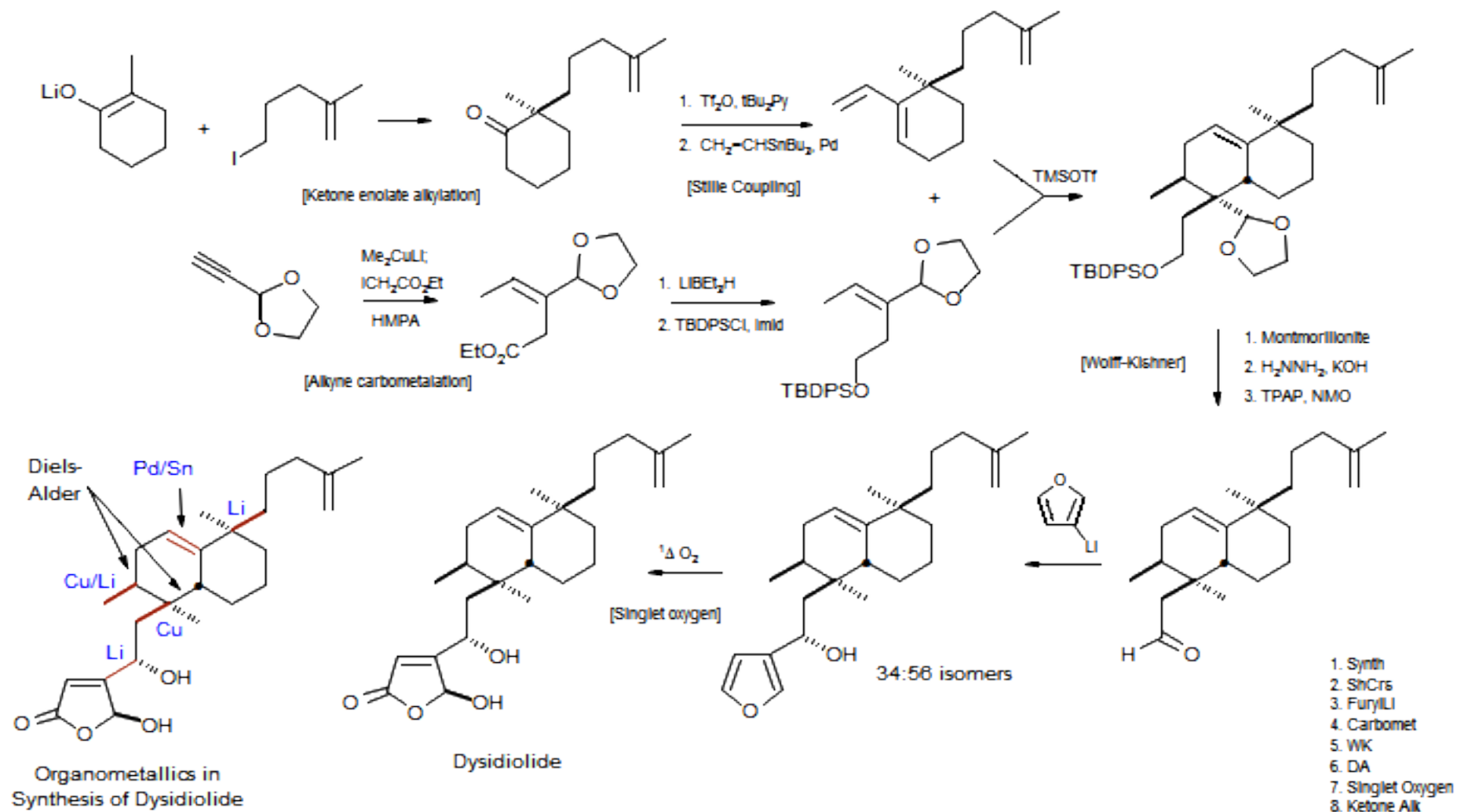
Polygodial Drimenin

Lallemand, J. Y.; et al. *Tetrahedron Lett.* 1981, 22, 2995 (Insect antifeedant)

87-18



Madnuson, S. R.; Sepp-Lorenzino, L.; Rosen, N.; Danishefsky, S. J. *J. Am. Chem. Soc.* **1998**, *120*, 1615.

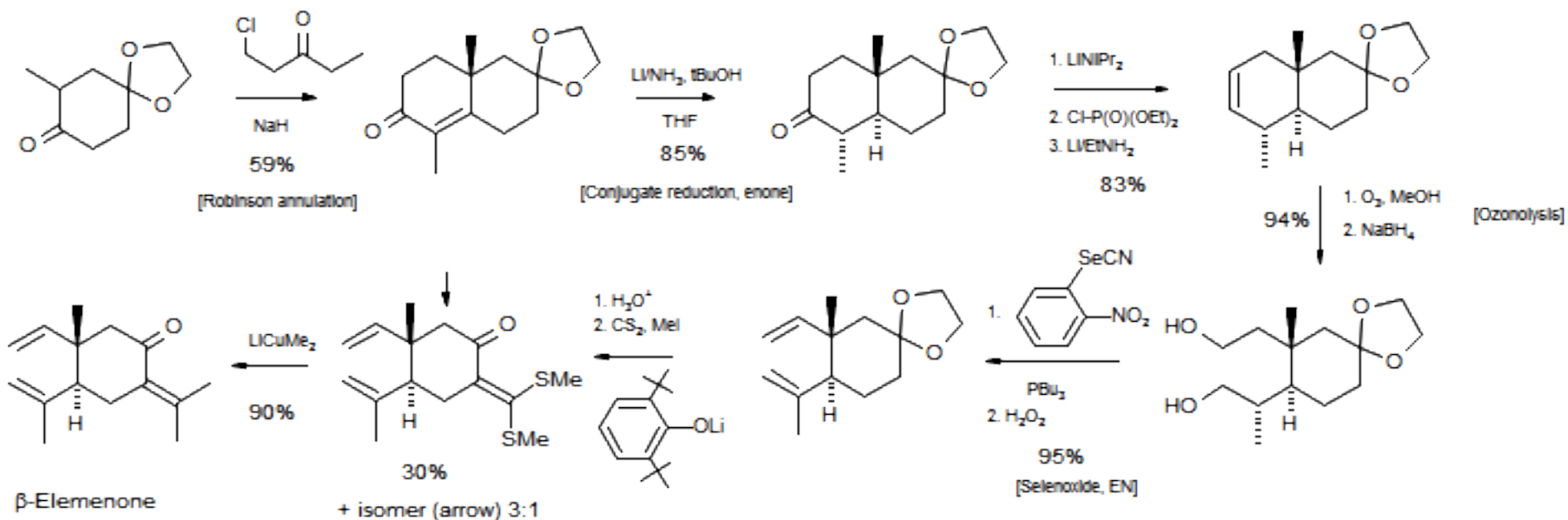
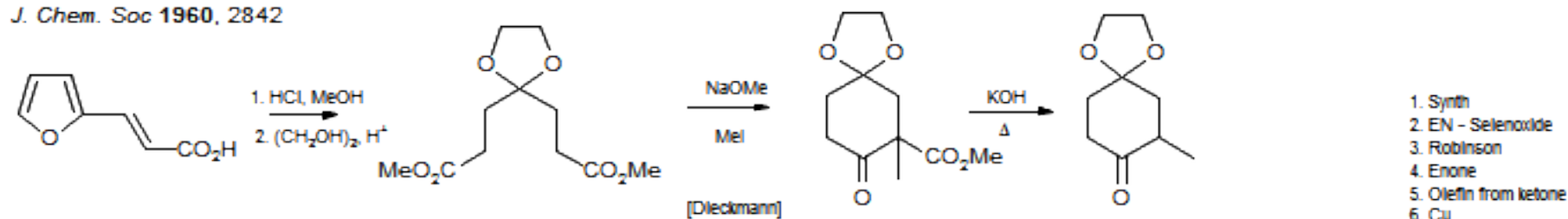


Elemenone, β -

77-32

Majetich, G.; Grieco, P. A.; Nishizawa, N. *J. Org. Chem.* **1977**, *42*, 2327.

EXP

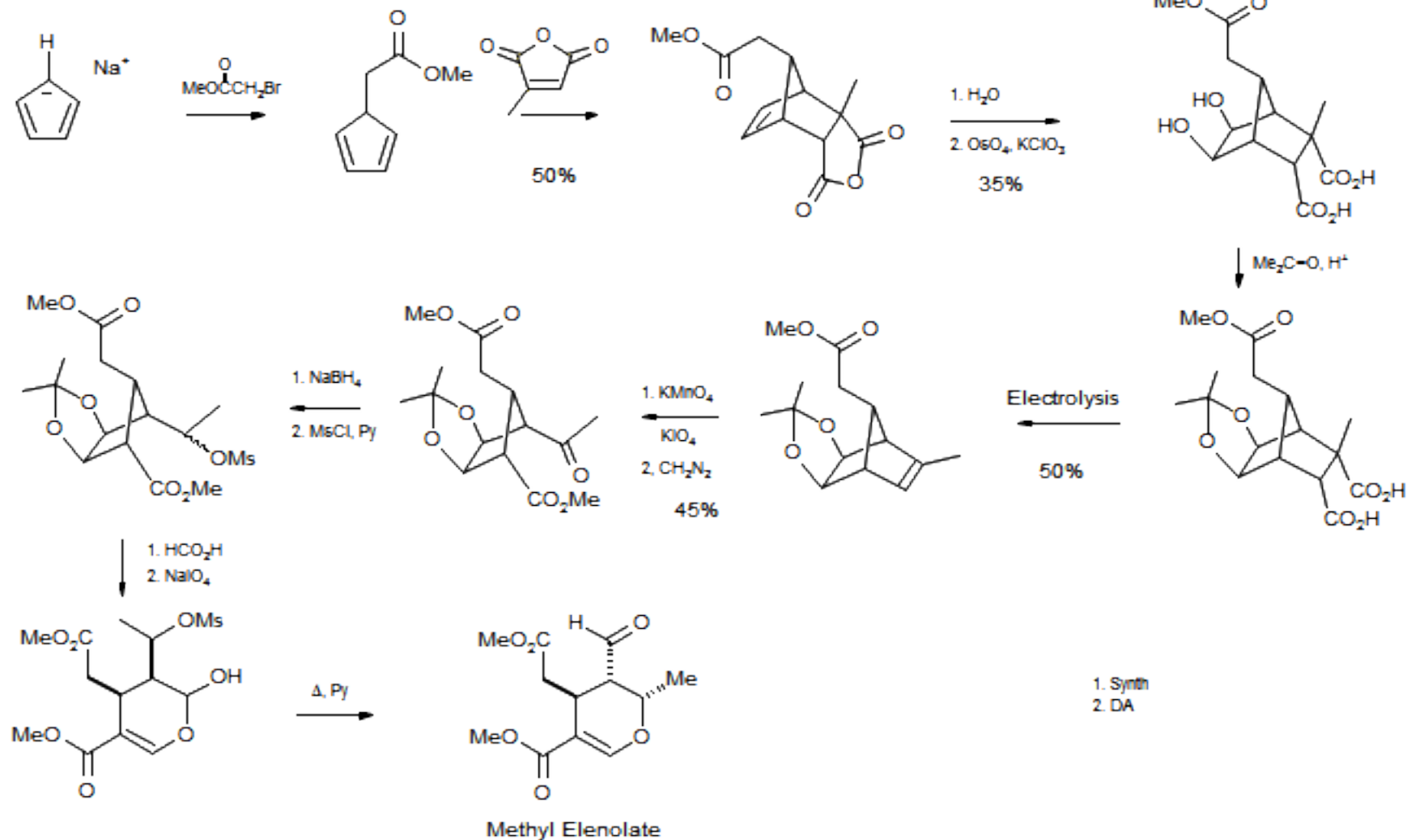
*J. Chem. Soc.* **1960**, 2842

Elenolate, Methyl

Kelly, R. C.; Schletter, I. *J. Am. Chem. Soc.* 1973, 95, 7158

73-02

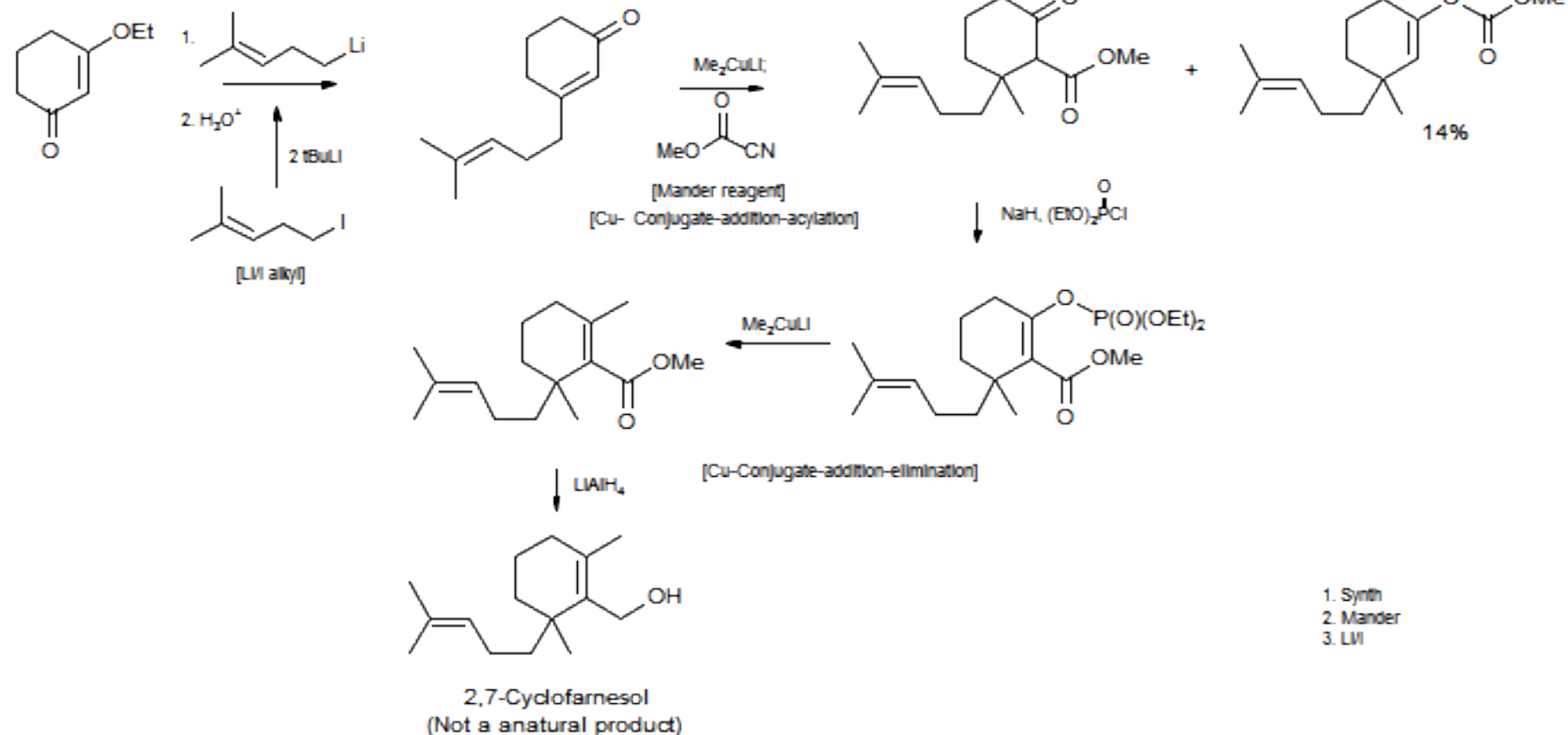
COMM



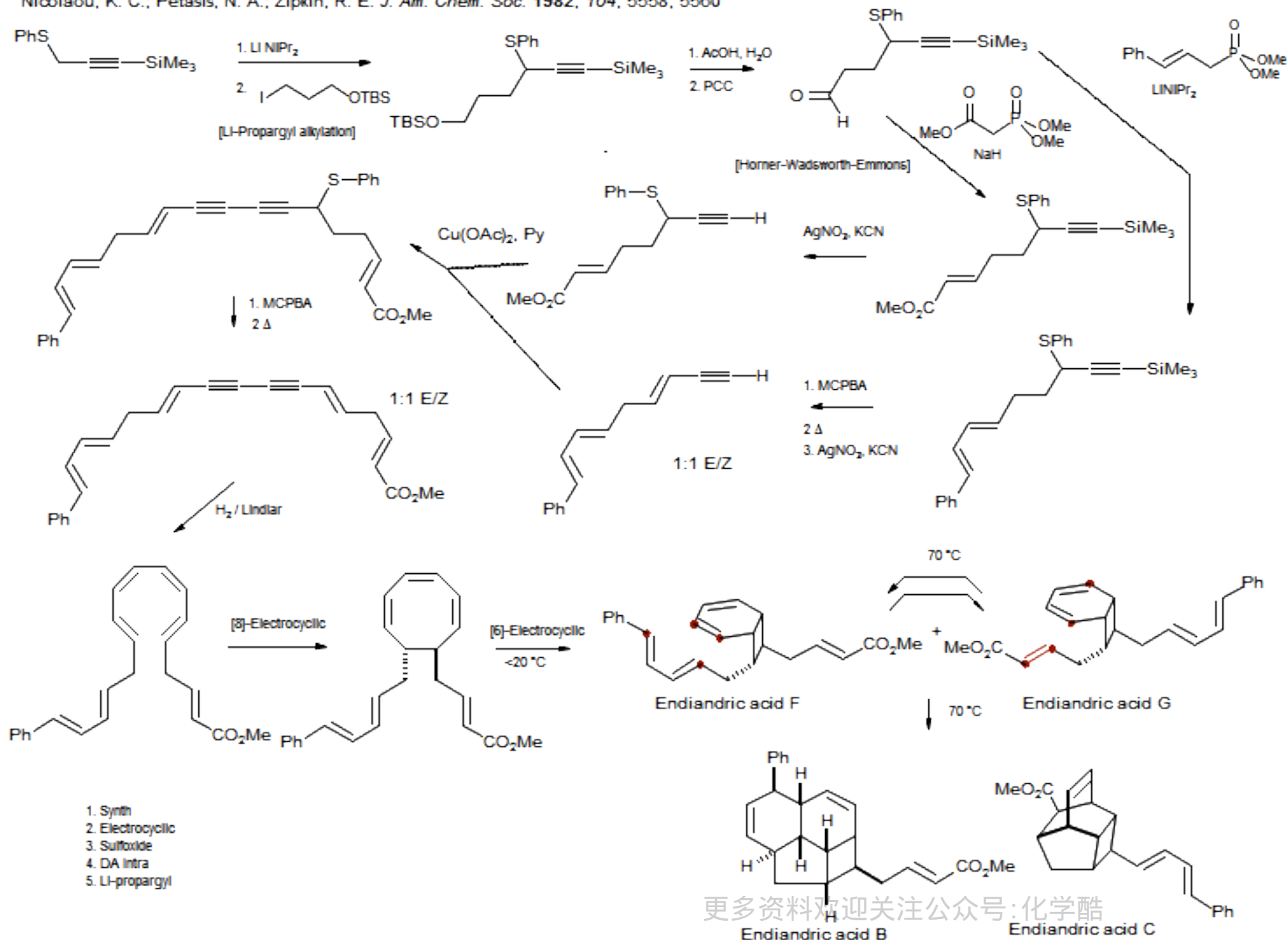
Farnesol, 2,7-cyclo

Coates, R. M.; Jin, A. Q. *J. Org. Chem.* 1997, 62, 7475

97-18
EXP



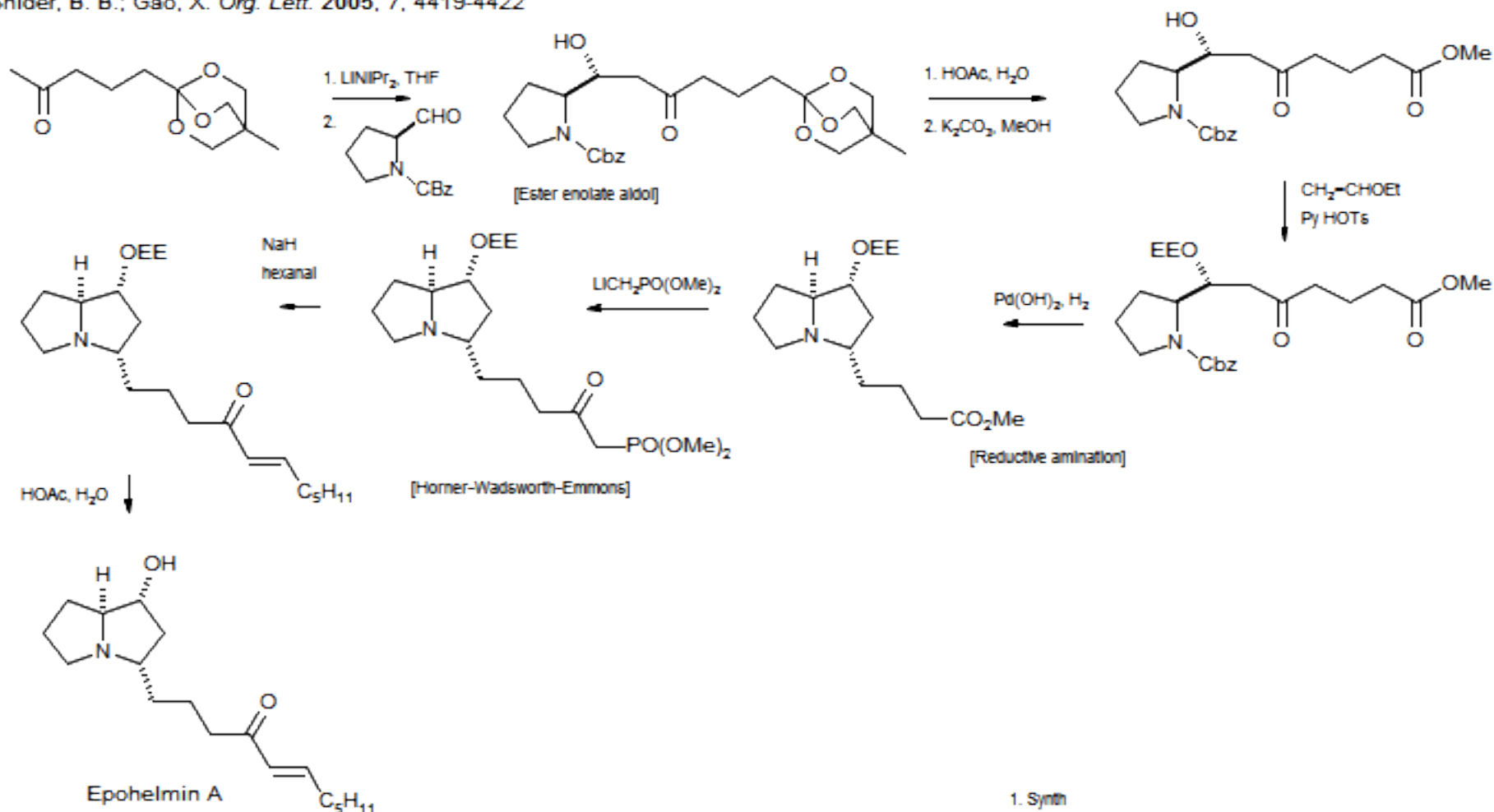
Nicolaou, K. C.; Petasis, N. A.; Zipkin, R. E. *J. Am. Chem. Soc.* 1982, 104, 5558, 5560



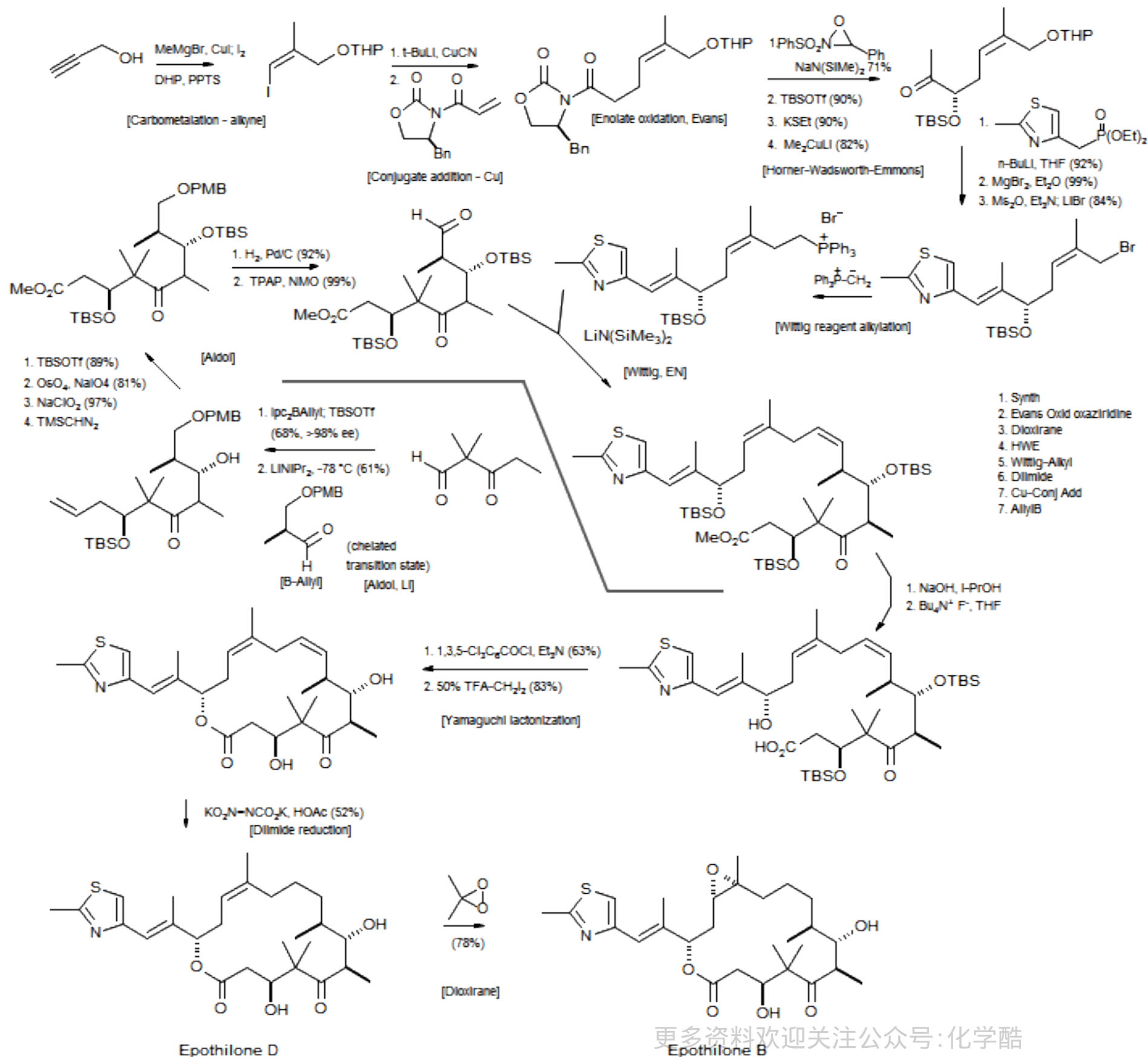
Epohelmin A

Snider, B. B.; Gao, X. *Org. Lett.* 2005, 7, 4419-4422

05-08
Comm



1. Synth
2. Ester aldol
3. reduct amin
4. HWE

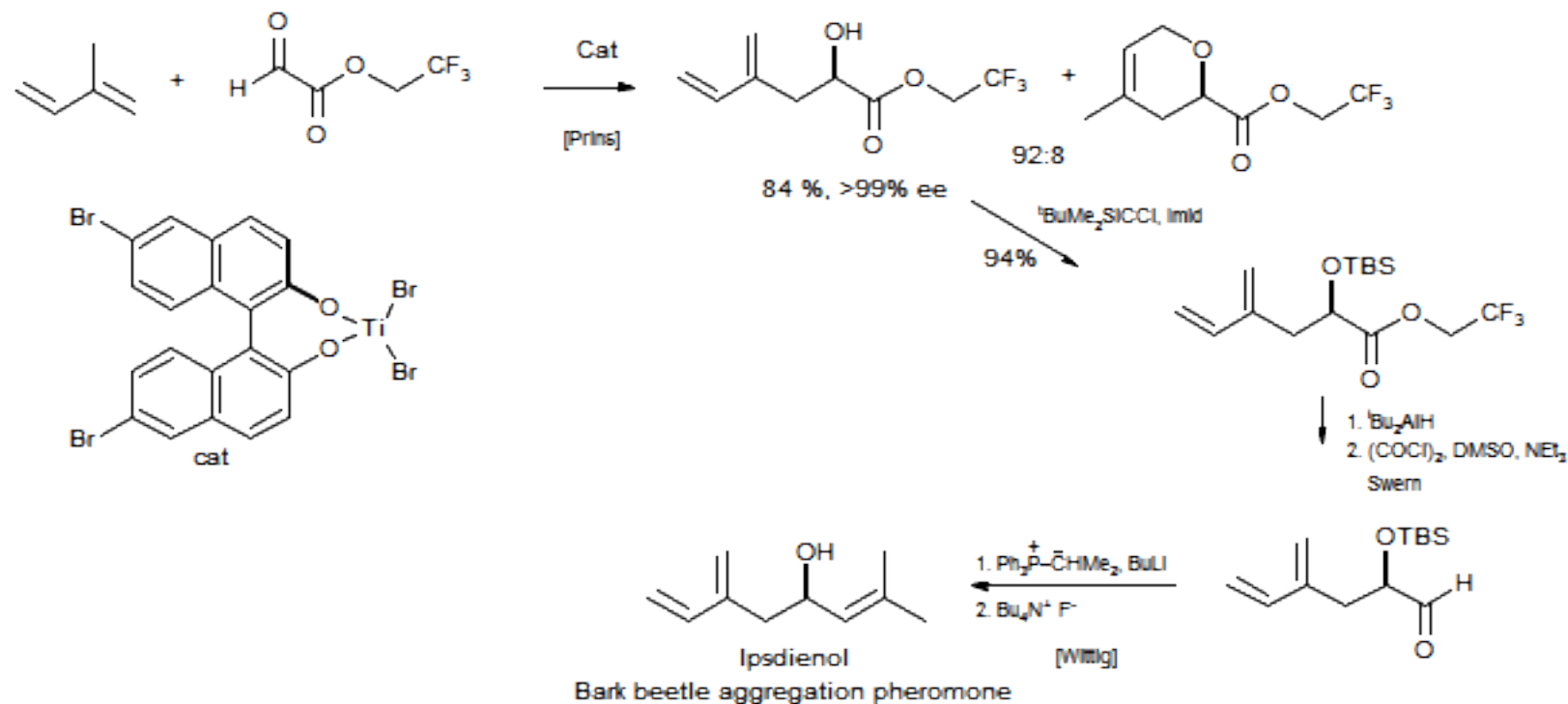
White, J. D.; Carter, R. G.; Sundermann, K. F.; Wartmann, M. *J. Am. Chem. Soc.* 2001, 123, 5407.

Ipsdienol

Terada, M.; Mikami, K. *Chem. Commun.* 1995, 2391

95-03

COMM

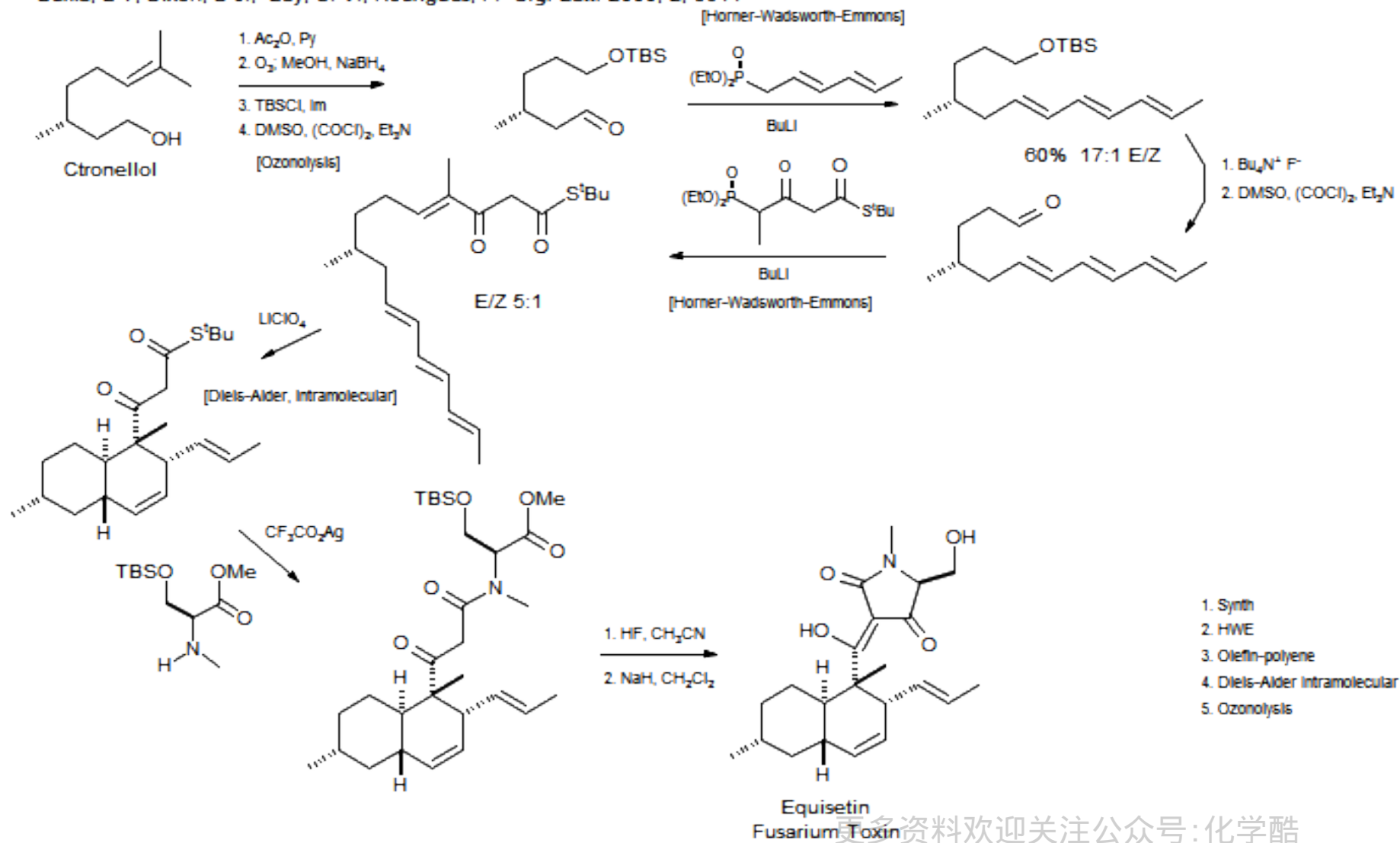


1. Synth
2. Chem 547
3. Prins

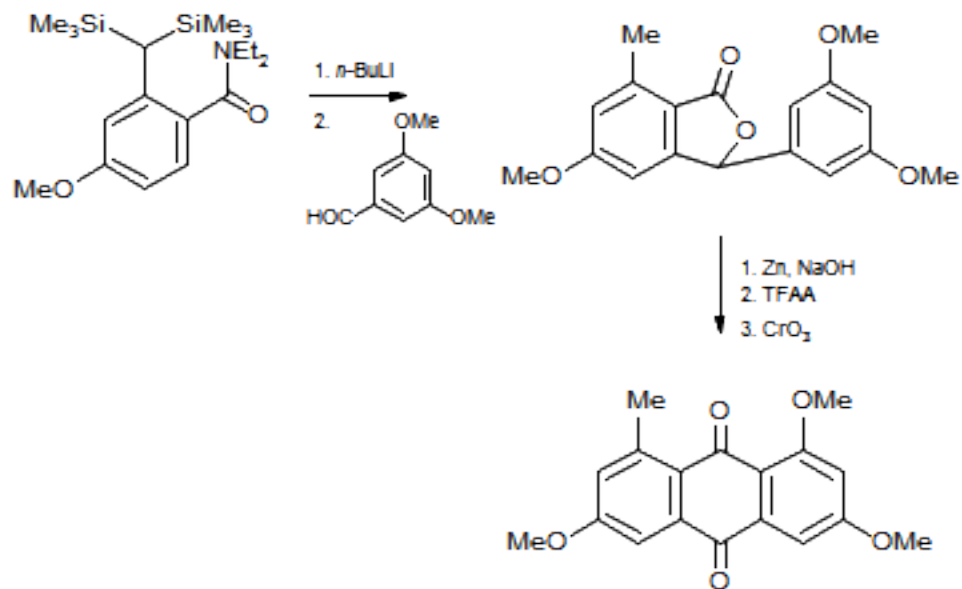
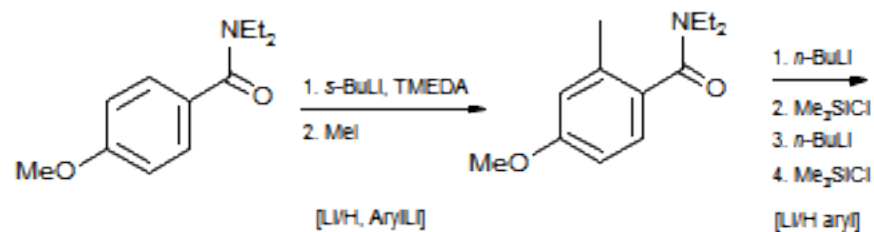
Equisetin

Burke, L T; Dixon, D J.; Ley, S. V.; Rodrigues, F. *Org. Lett.* **2000**, *2*, 3811

00-11



Mills, R. J.; Snieckus, V. *Tetrahedron Let.* 1984, 25, 479



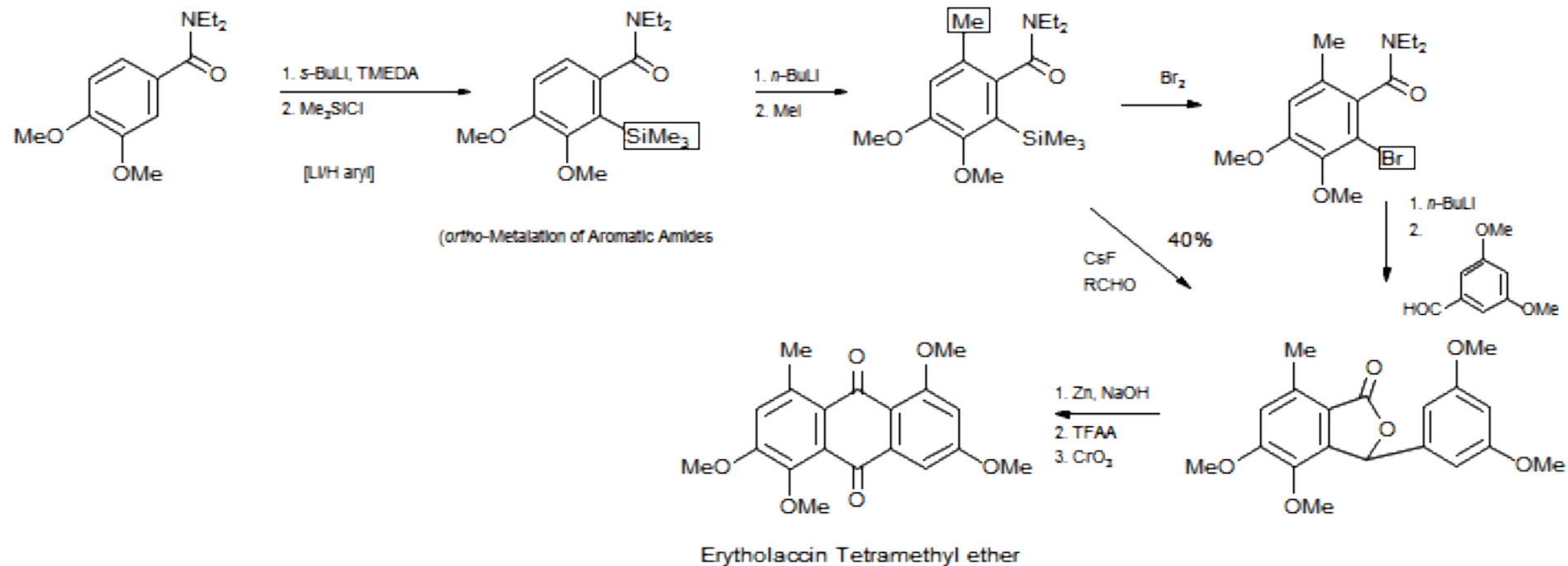
Desoxyerytholaccin Trimethyl ether

1. Synth
2. MLI
3. ArLi
4. ShCrs-SI
5. Anthraquinone

Erythrolaccin

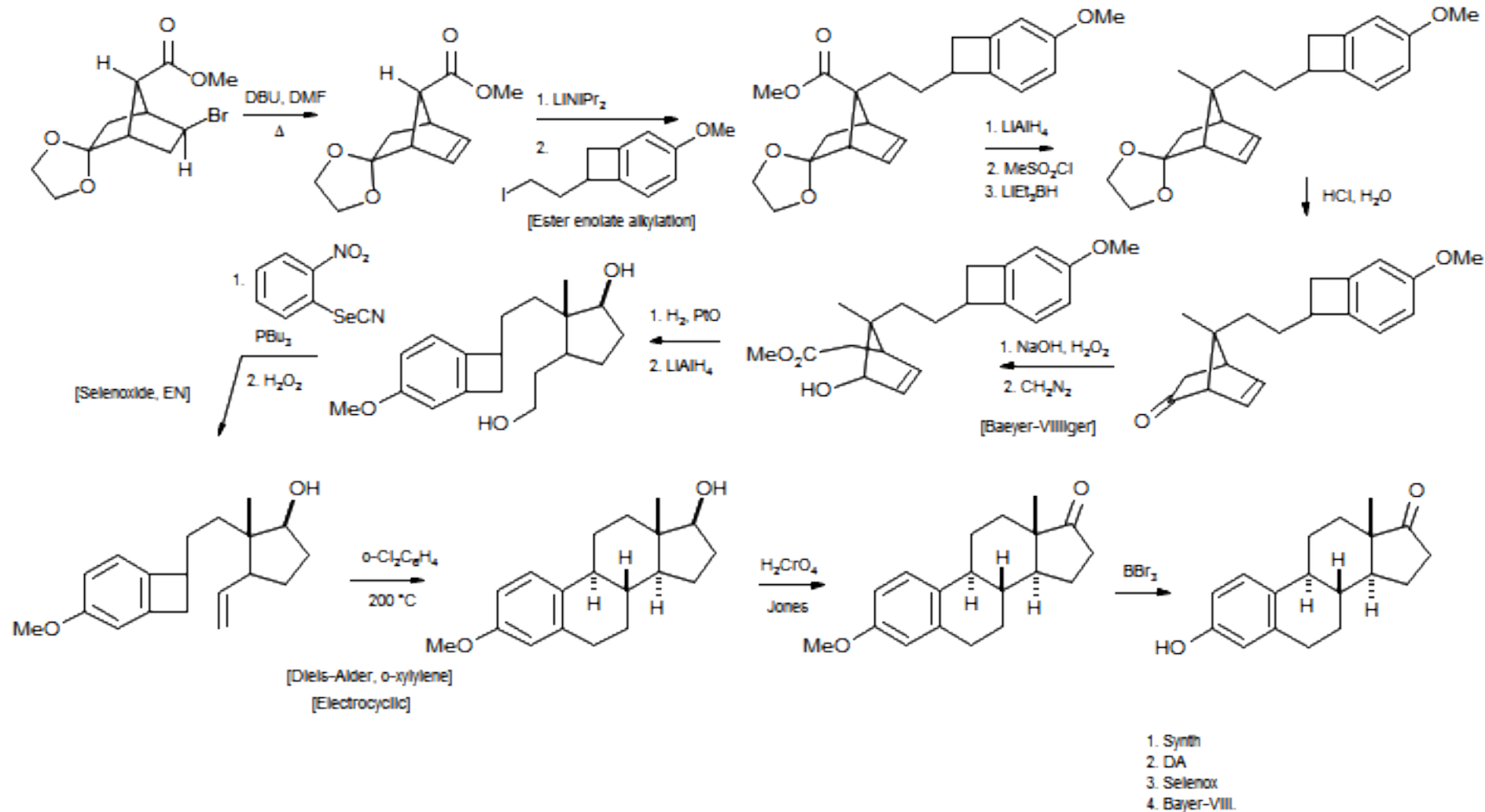
84-2

Mills, R. J.; Snieckus, V. *Tetrahedron Let.* 1984, 25, 483.



1. Synth
2. MLI
3. ArLi
4. ShCrs-Si(75. Anthraquinone

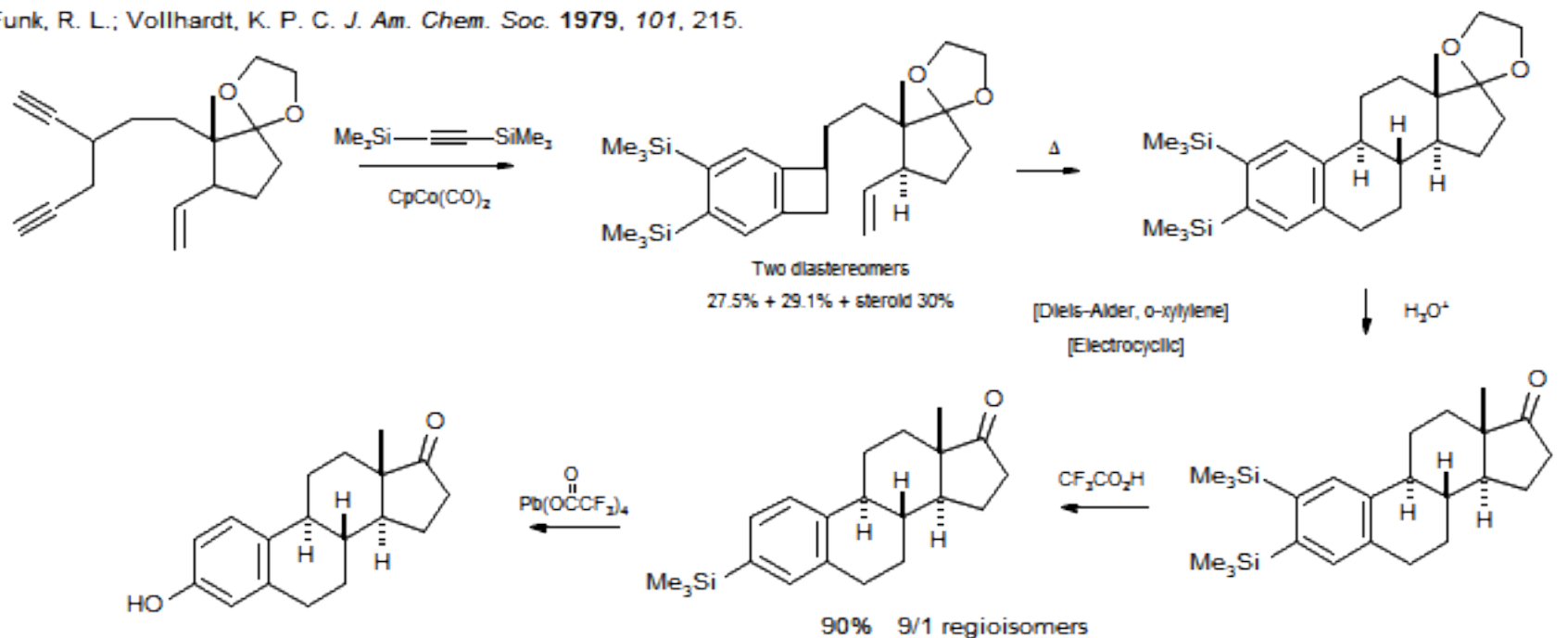
更多资料欢迎关注公众号:化学酷

Grieco, P. A.; Takigawa, T.; Schillinger, W. J. *J. Org. Chem.* 1980, 45, 2247

Estrone

Funk, R. L.; Vollhardt, K. P. C. *J. Am. Chem. Soc.* **1979**, *101*, 215.

79-03
COMM



1. Synth
2. Phenol
3. DA
4. LTA
5. Si

For other syntheses see:

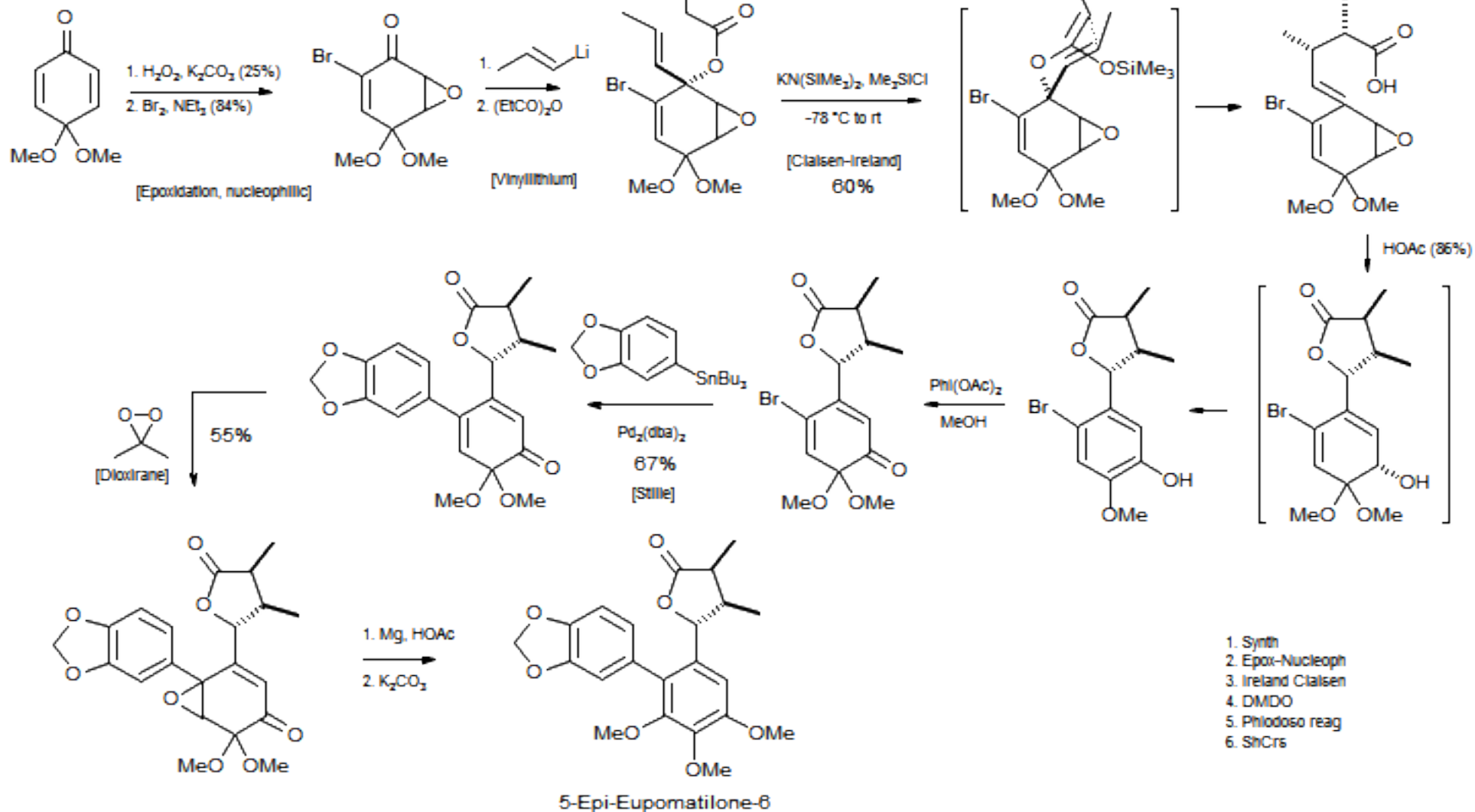
Grieco 80-03

Quinkert 80-05

更多资料欢迎关注公众号:化学酷

Eupomatilone-6 (5-epi)

Hong, S.; McIntosh, M. C. *Org. Lett.* 2002, 4, 19

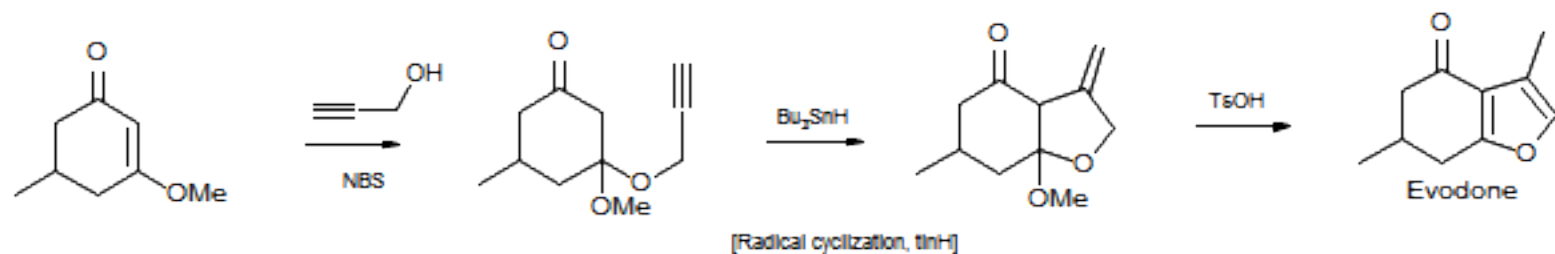


Evodone

Srikrishna, A.; Krishnan, K. *Tetrahedron Lett.* 1988, 29, 4995.

88-06

COMM

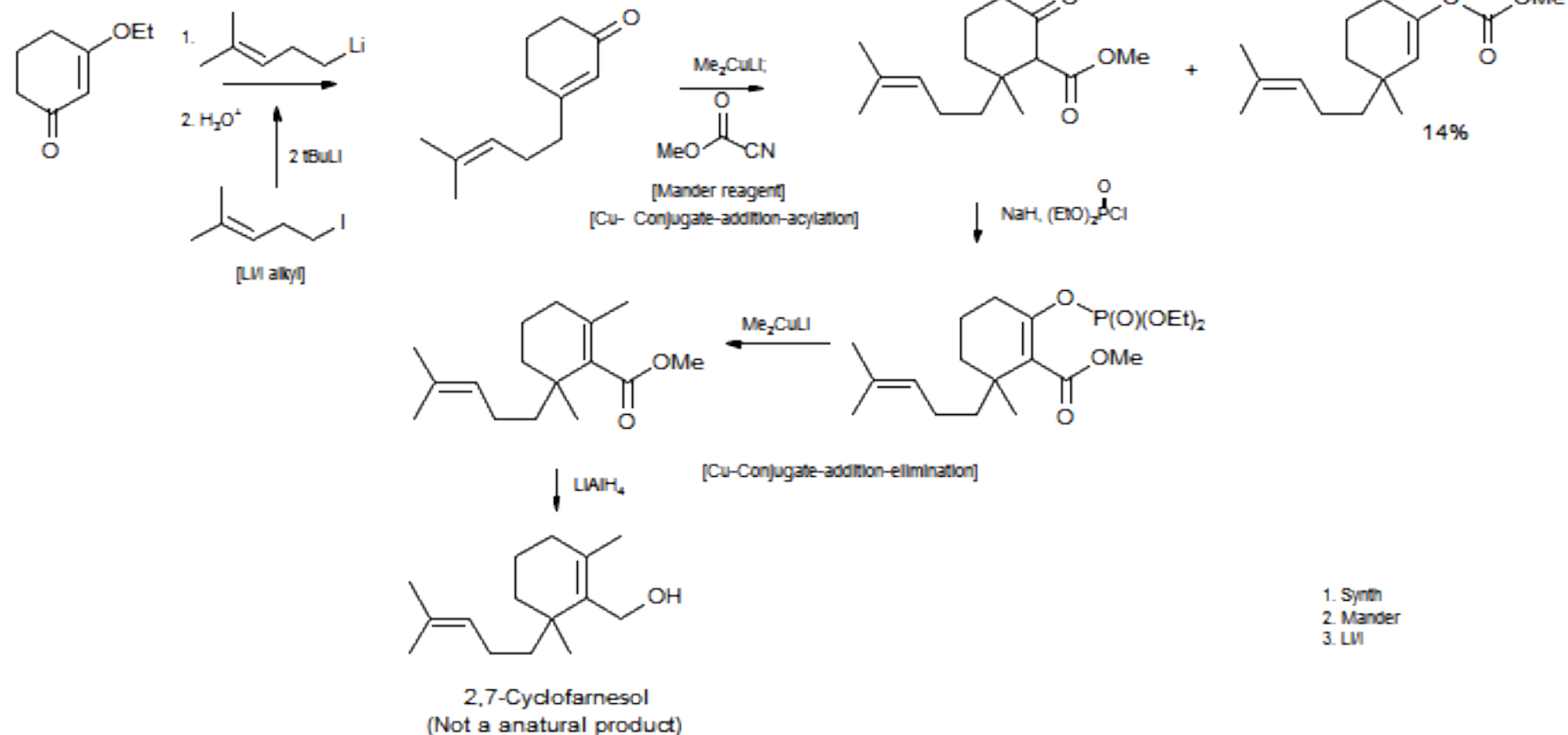


1. Synth
2. Furan
3. Radical cyclization

Farnesol, 2,7-cyclo

Coates, R. M.; Jin, A. Q. *J. Org. Chem.* 1997, 62, 7475

97-18
EXP

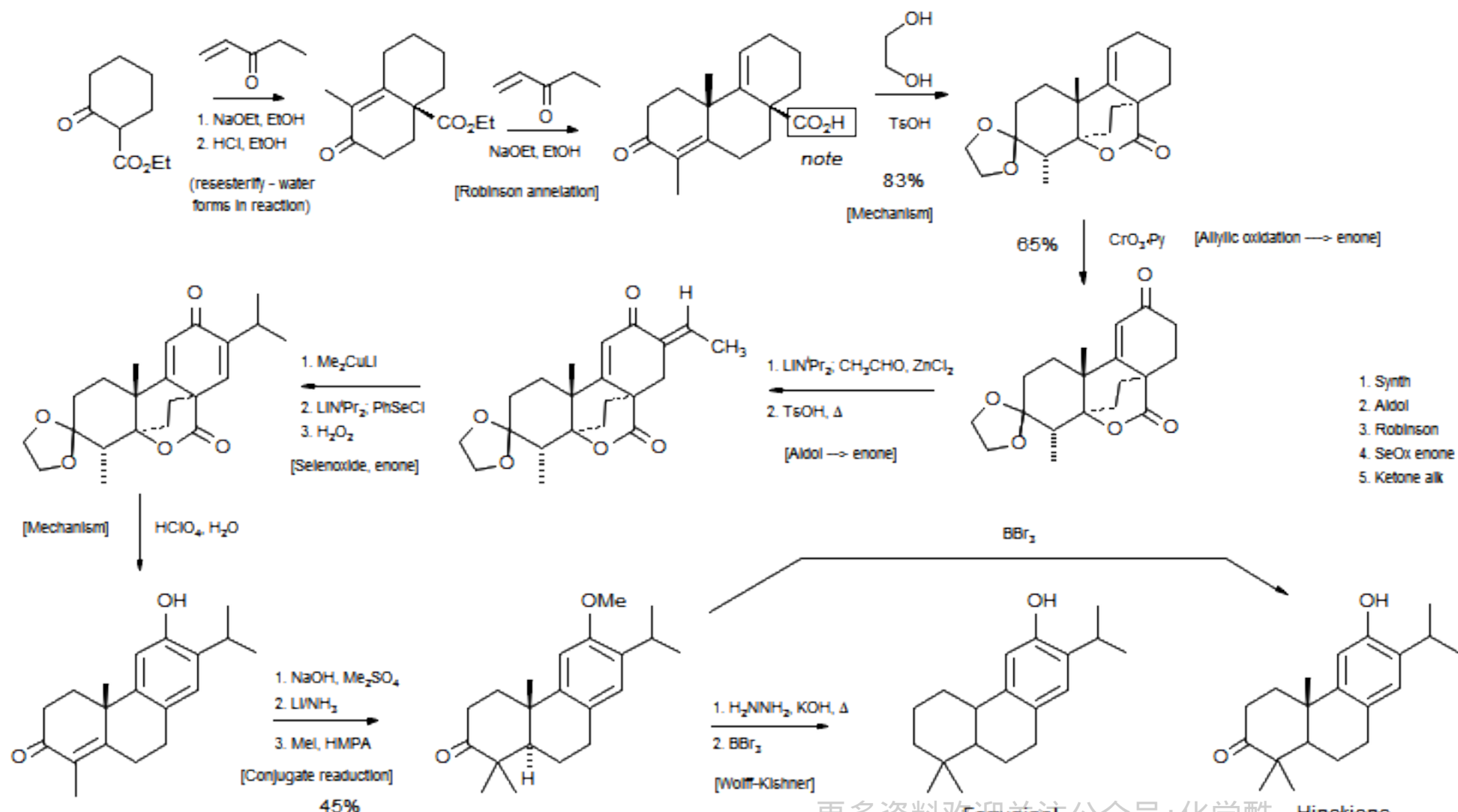


Ferruginol Hinckione

78-46

EXP

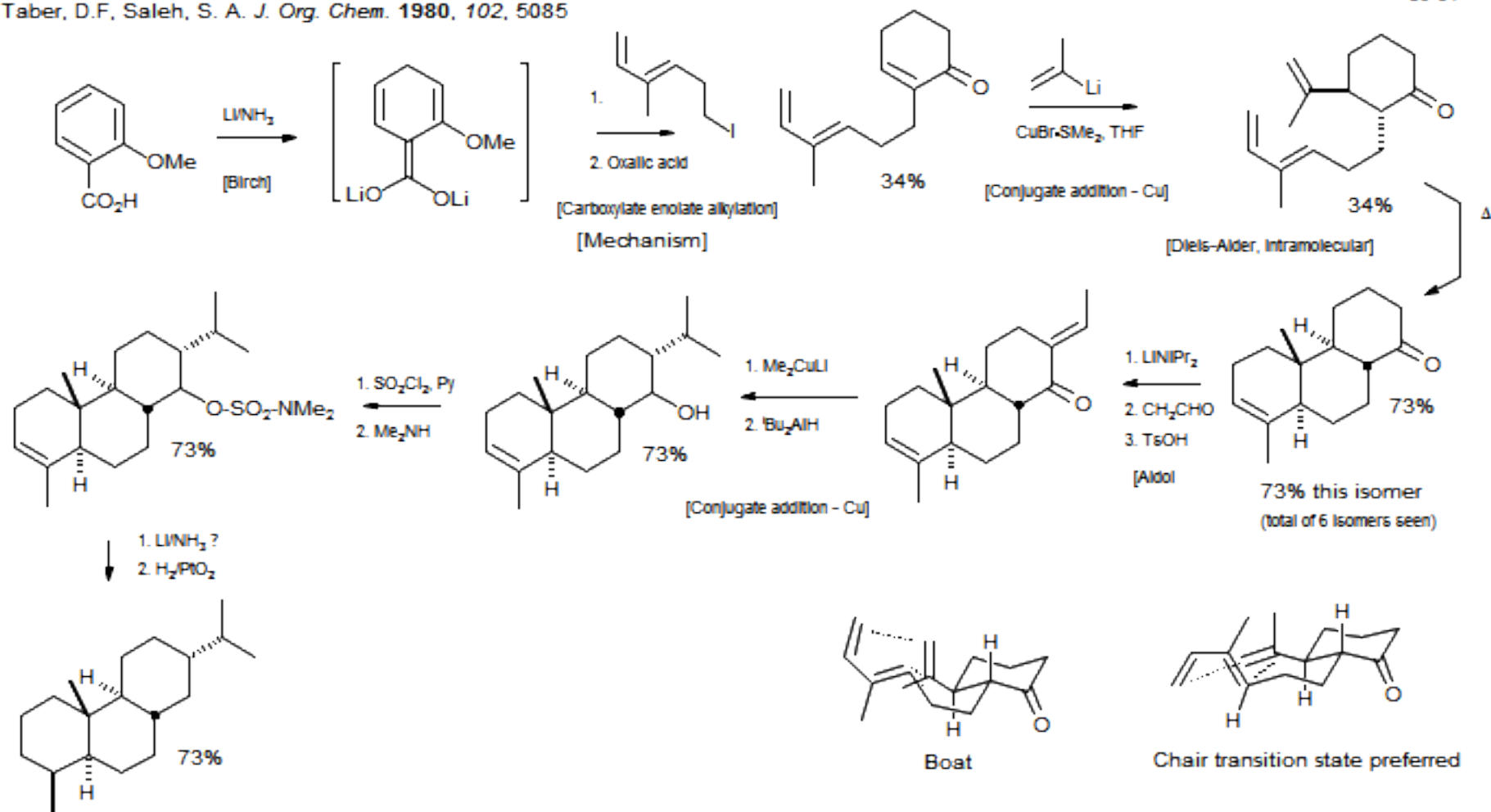
Snitman, D. L.; Himmelsbach, R. J.; Watt, D. S. *J. Org. Chem.*, 1978, 43, 4758.



Fichtelite

Taber, D.F., Saleh, S. A. *J. Org. Chem.* 1980, 102, 5085

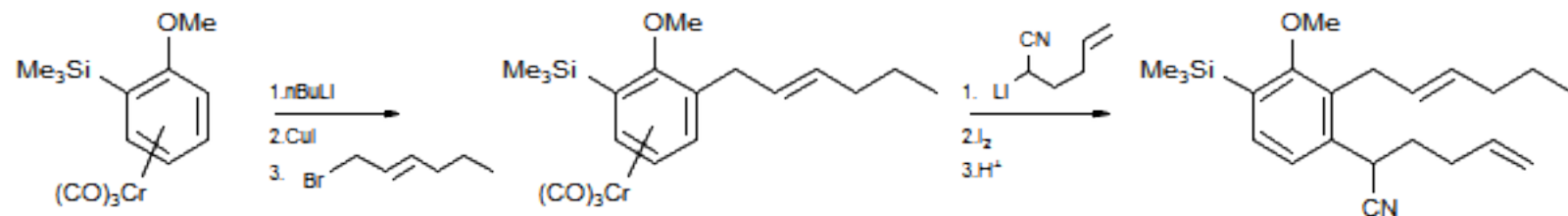
80-31



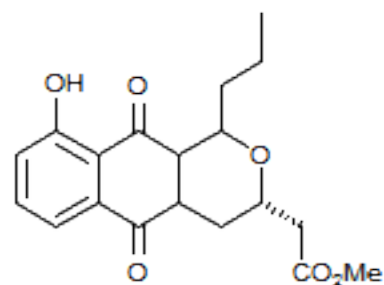
1. Synth
2. Carbox alkyl
3. Enone
4. DA-Intram.
5. Alkene

更多资料欢迎关注公众号: 化学酷

M.F.Semmelhack, A.Zask, *J. Am. Chem. Soc.*, 1983, 105, 2034.



Preparation of polysubstituted aromatics using organochromium reagents

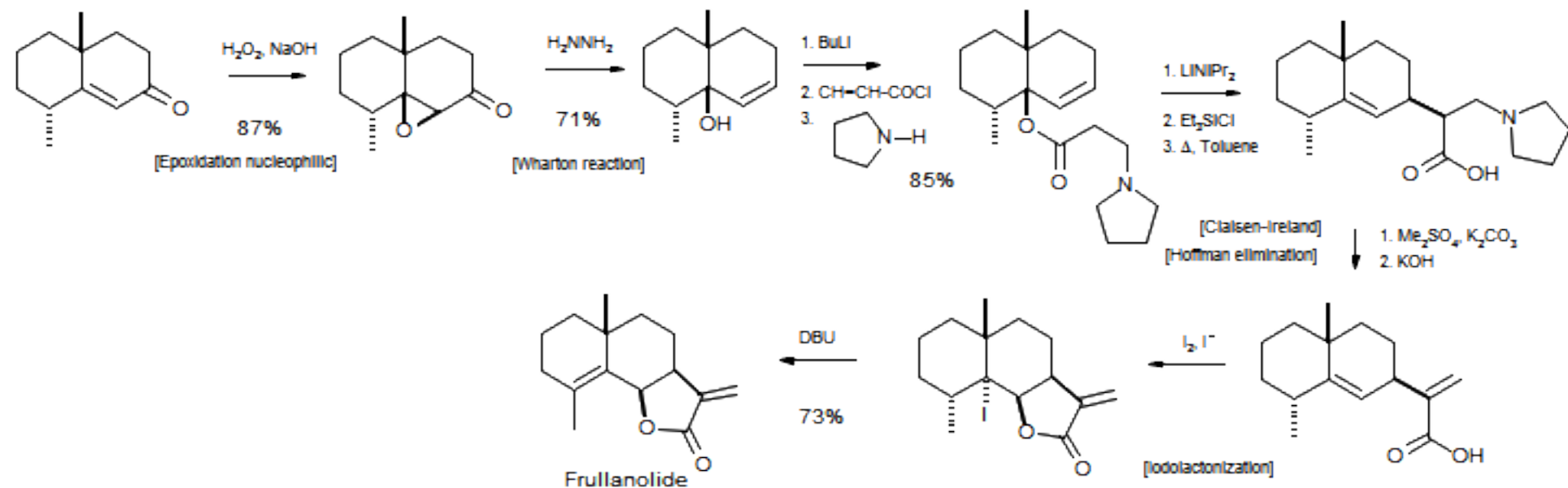


Desoxyfrenolicin

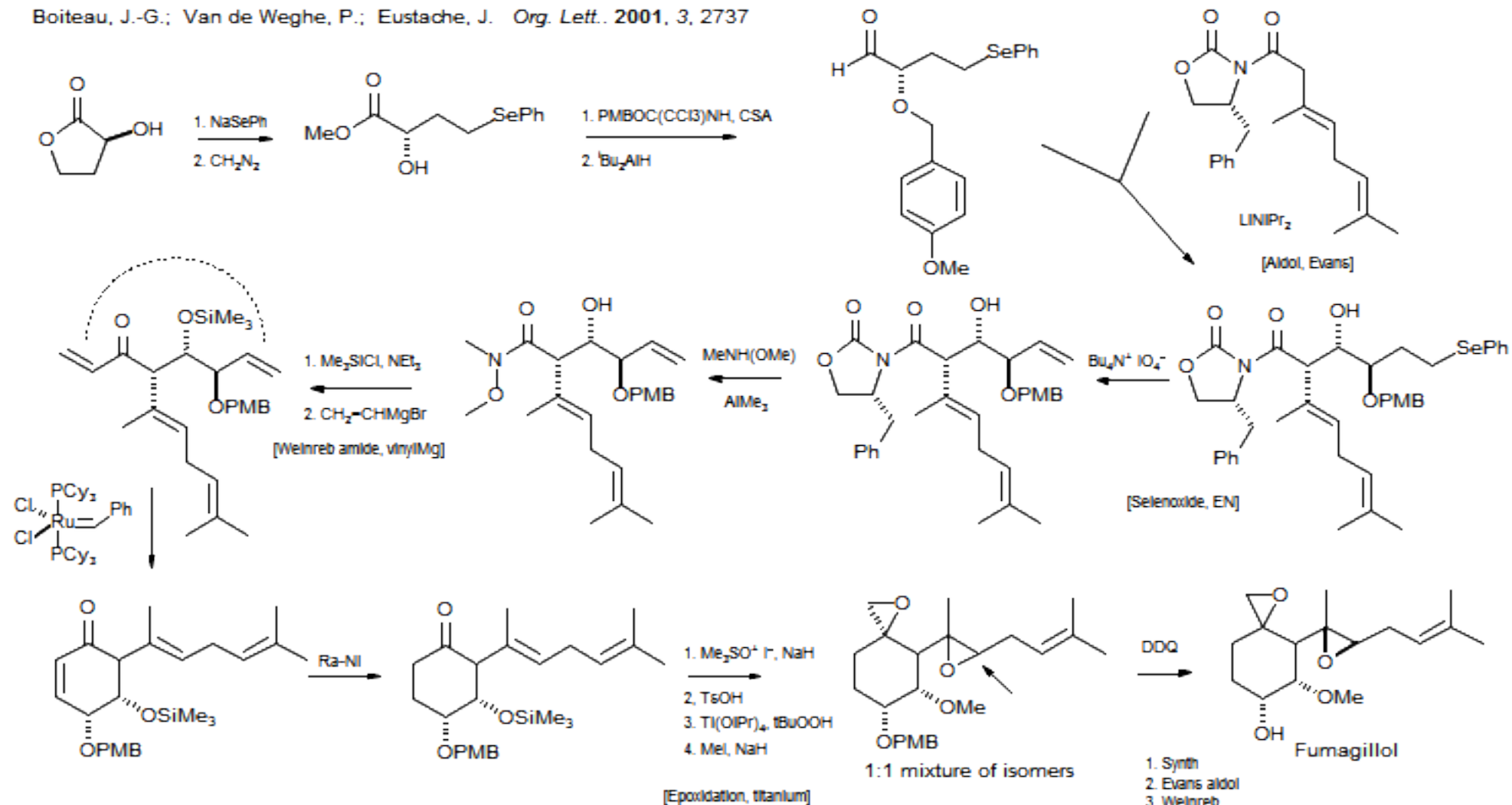
Frullanolide

Still, W. C.; Schneider, M. J. *J. Am. Chem. Soc.* 1977, 99, 948

77-38
COMM



1. Synth
2. Enolate - elim
3. [3.3]
4. Enone

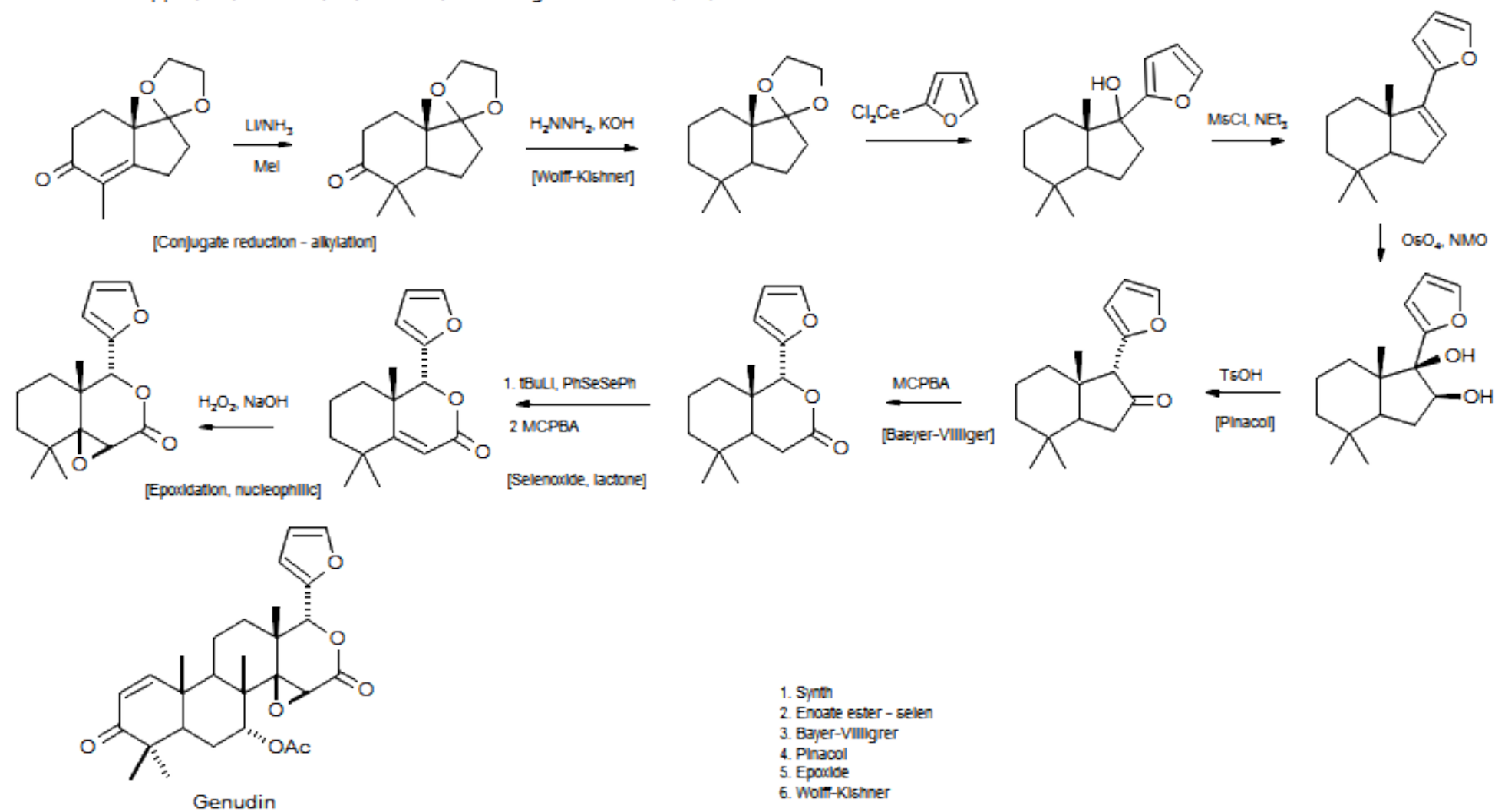
Boiteau, J.-G.; Van de Weghe, P.; Eustache, J. *Org. Lett.* **2001**, *3*, 2737

1. Synthesis
2. Evans aldol
3. Weinreb
4. Selenoxide E2
5. Olefin RCM
6. Oxosulfonium methide

Genudin Model

Renoud-Grappin, M.; Vanucci, C.; Lhomet, G. *J. Org. Chem.* **1994**, *59*, 3902. Insect Antifeedant.

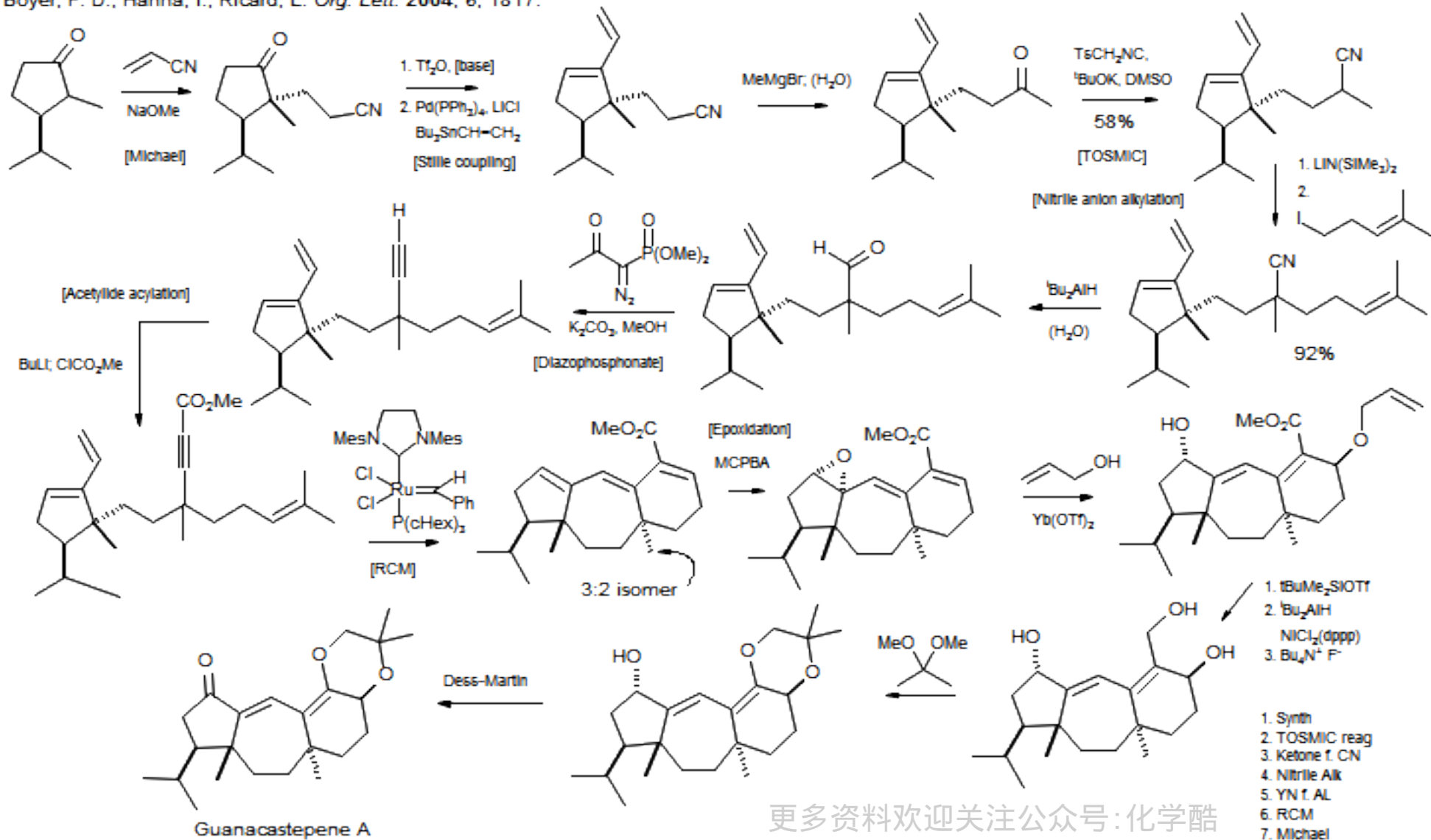
94-17



Guanacastepene A

Boyer, F. D.; Hanna, I.; Ricard, L. *Org. Lett.* 2004, 6, 1817.

04-05



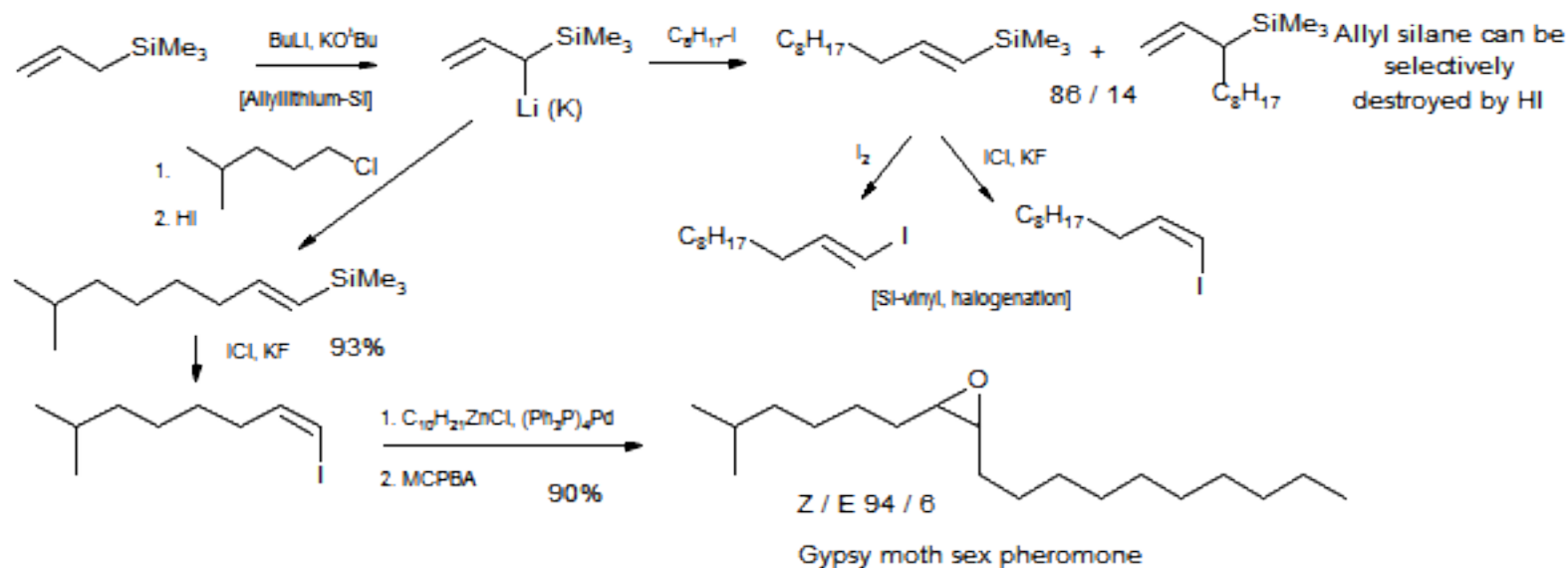
更多资料欢迎关注公众号:化学酷

1. Synth
2. TOSMIC reagent
3. Ketone f. CN
4. Nitrile Alk
5. YN f. AL
6. RCM
7. Michael

Gypsy moth sex pheromone

Koumaglo, K.; Chan, T. H. *Tetrahedron Lett.* 1984, 25, 717

84-04

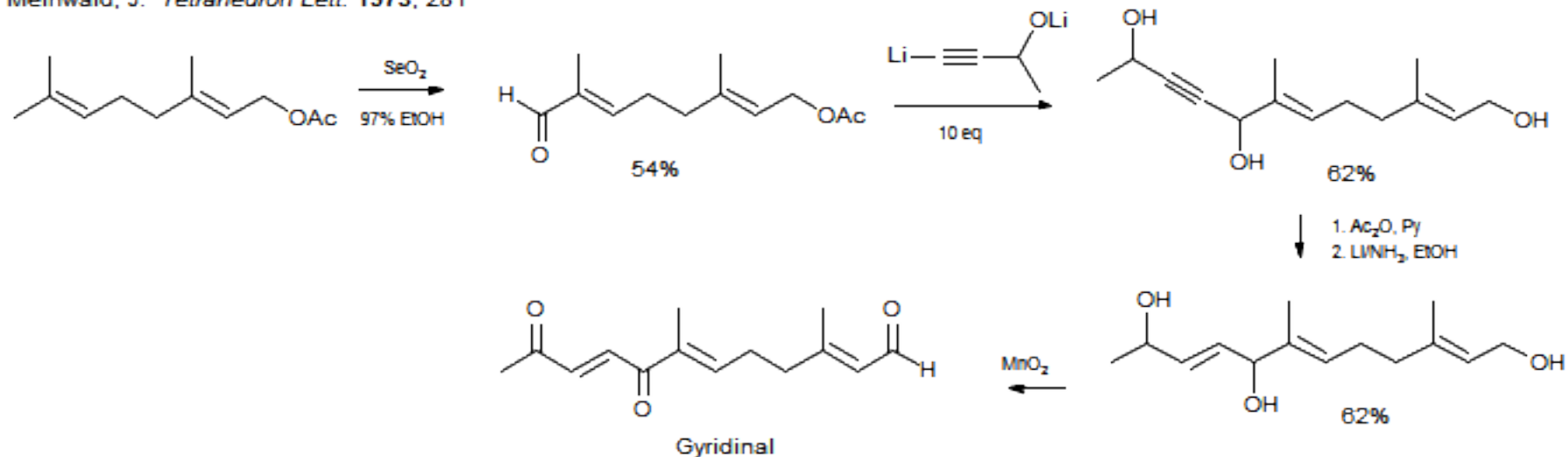


1. Synth
2. ALL/SI
3. Vinyl-I
4. Vinyl-SI
5. Shitcrs

Gyridinal

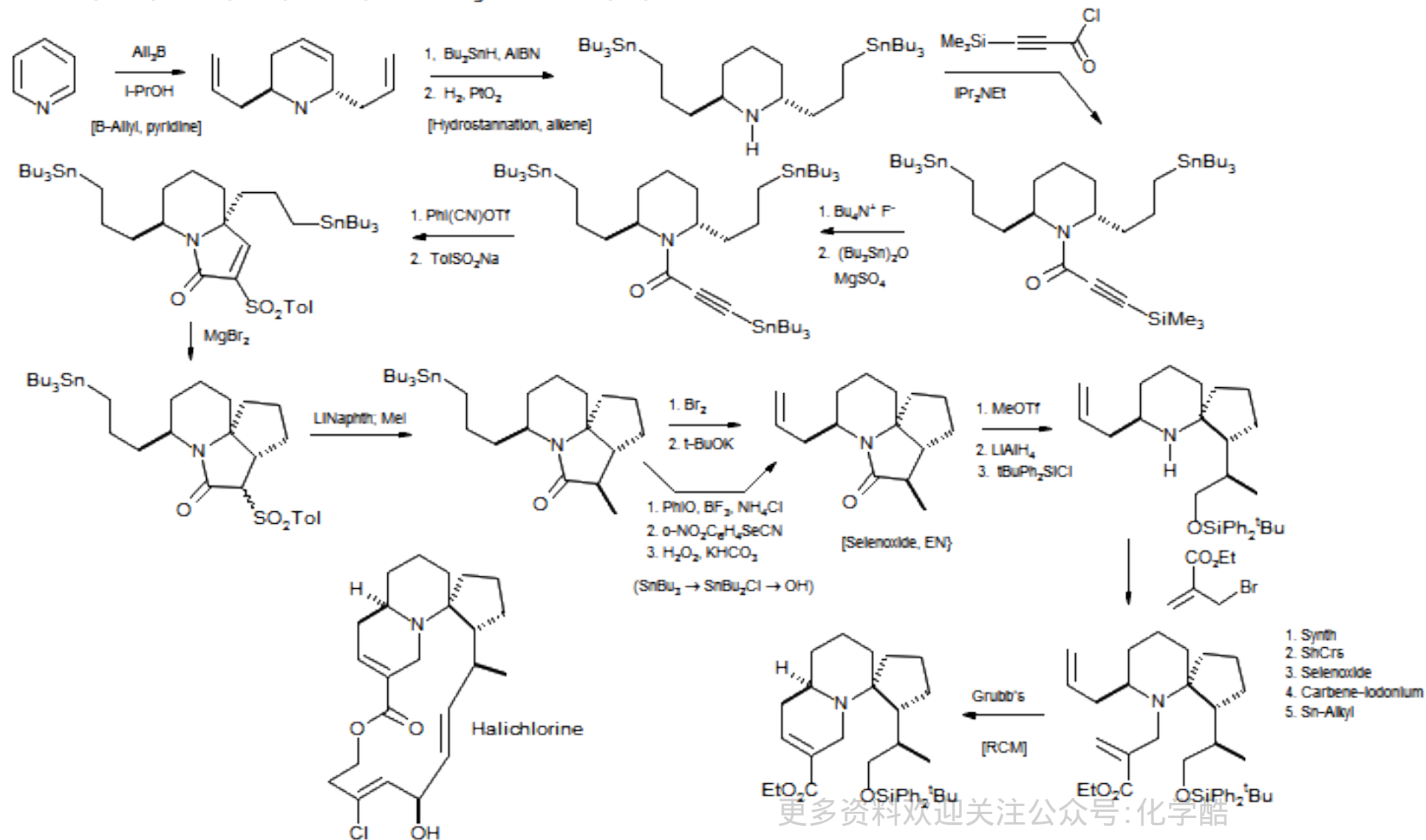
Meinwald, J. *Tetrahedron Lett.* 1973, 281

73-01



Powerful feeding deterrent of large-mouth bass

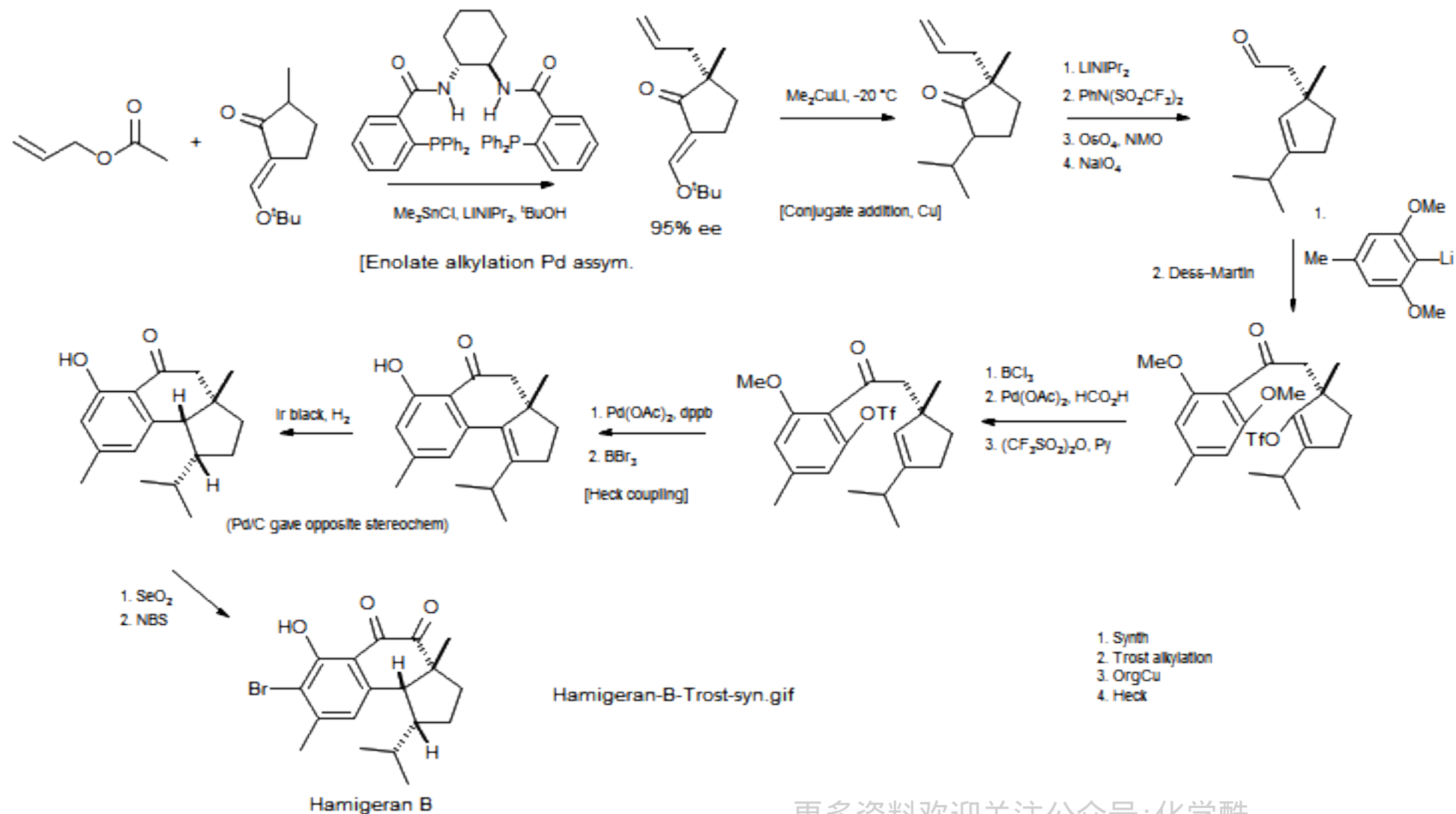
1. Synth
2. SeO₂
3. AlkynylLi
4. Olefin - YN reduction
5. MnO₂

Feldman, K. S.; Perkins, A. L.; Masters, K. M. *J. Org. Chem.* 2004, 69, 7928

Hamigeran B

Trost, B. M.; Pissot-Soldermann, C.; Chen, I.; Schroeder, G. M. *J. Am. Chem. Soc.* 2004, 126, 4480

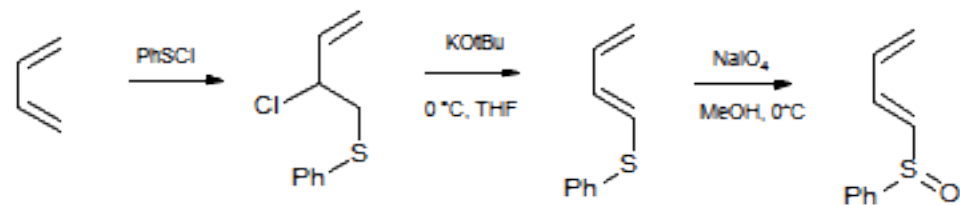
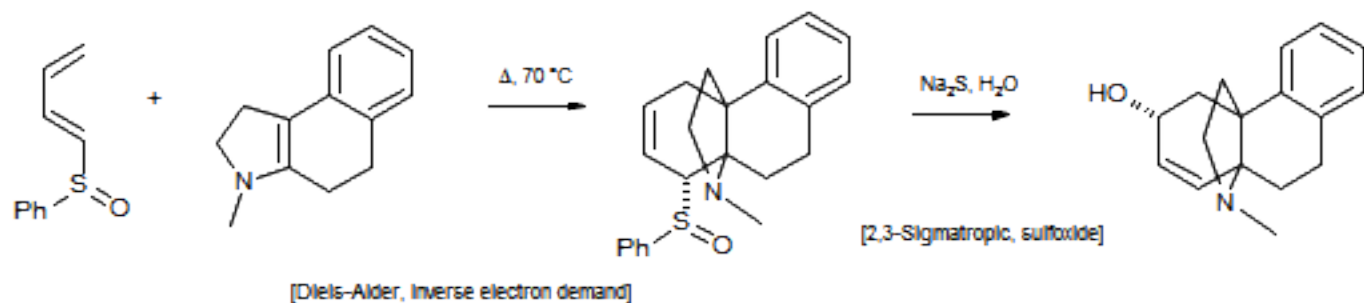
04-07



Hasubanan Alkaloid

Evans, D. A.; Bryan, C. A.; Sims, C. L.; *J. Am. Chem. Soc.* **1972**, *94*, 2891

72-12

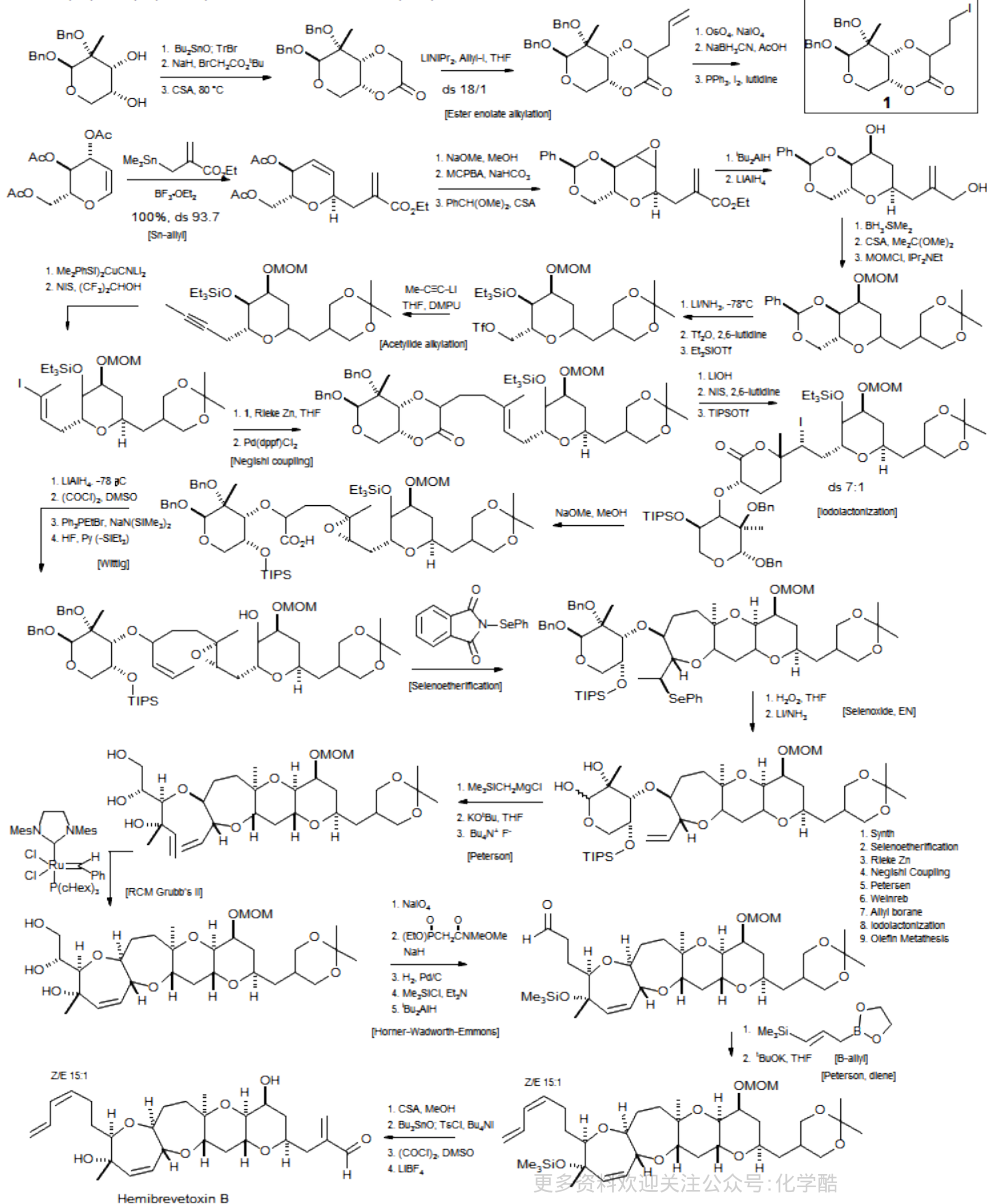


1. Synth
2. Diene-PhS
3. Enamine
4. [2,3]sigmatropic

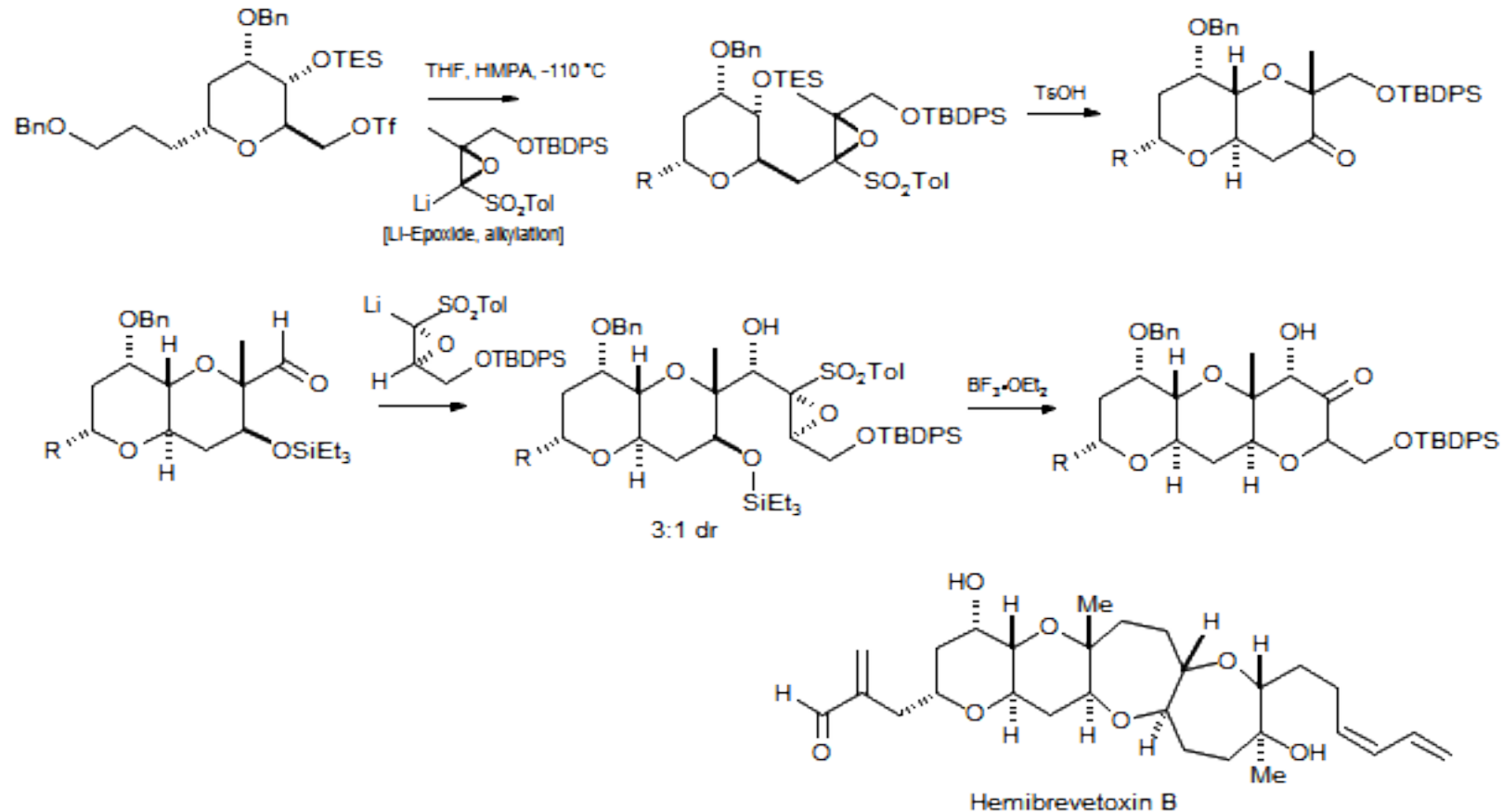
Hemibrevetoxin B

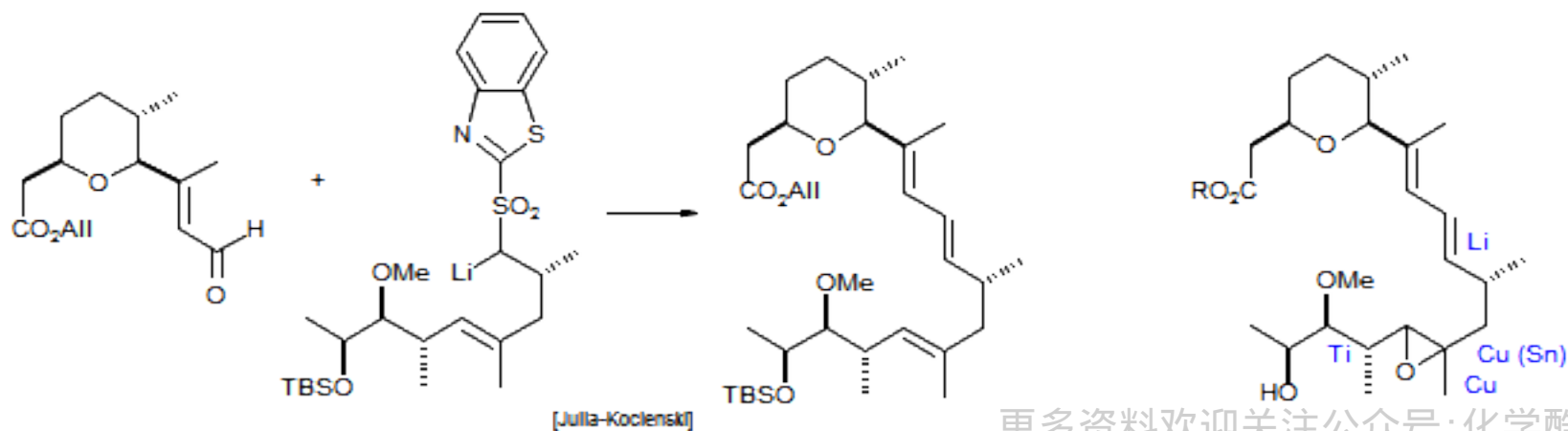
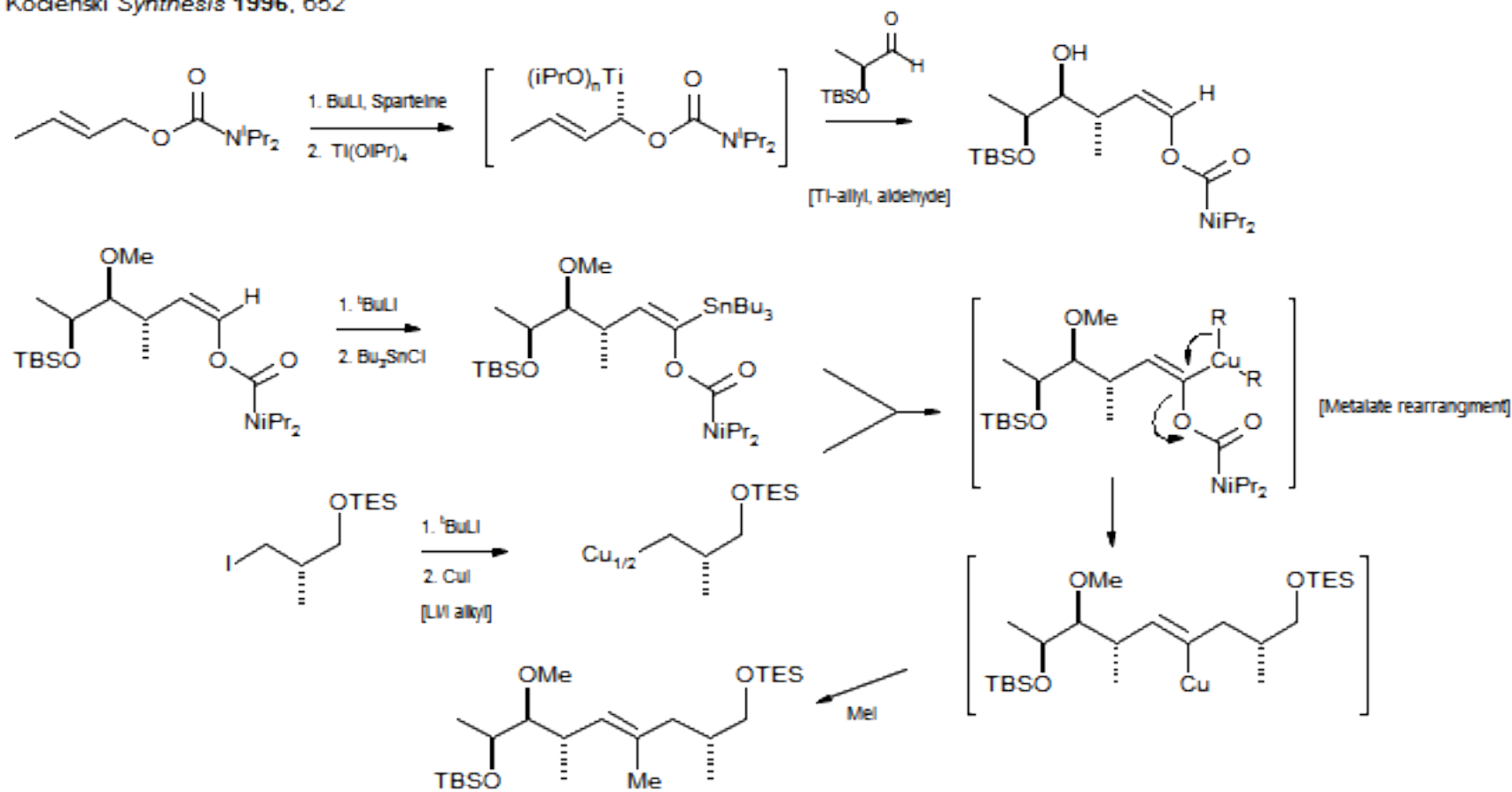
Zakarian, A.; Batch, A.; Holton, R. A. *J. Am. Chem. Soc.* 2003, 125, 7822-7823

03-12



Mori, Y.; Yaegashi, K.; Furukawa, H. *J. Am. Chem. Soc.* **1997**, *119*, 4557.

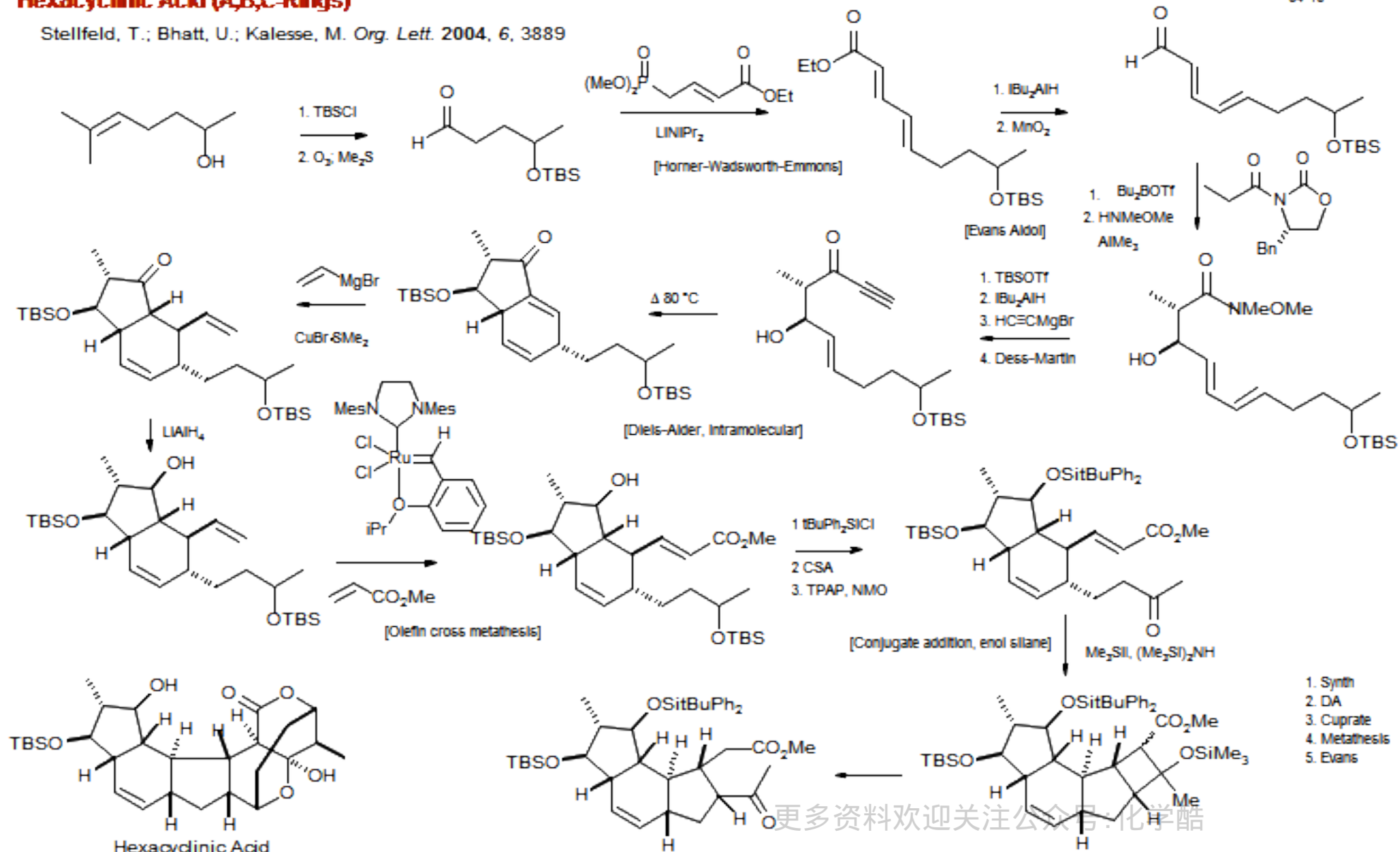


Kocienski *Synthesis* 1996, 652

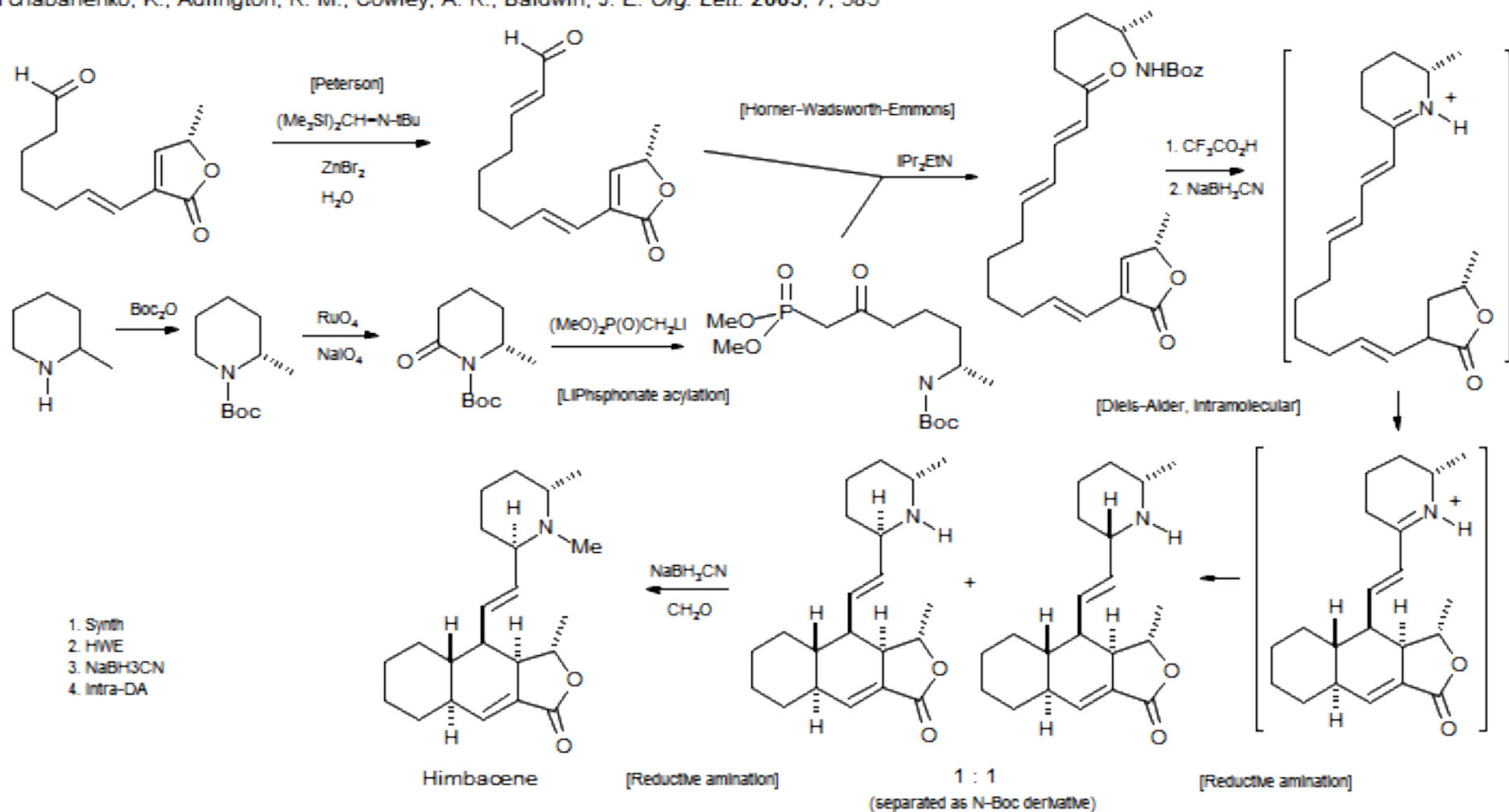
1. Synth
2. Olefin - Julia
3. ShScrs
4. Allyl Li/Ti
5. Li/Sn

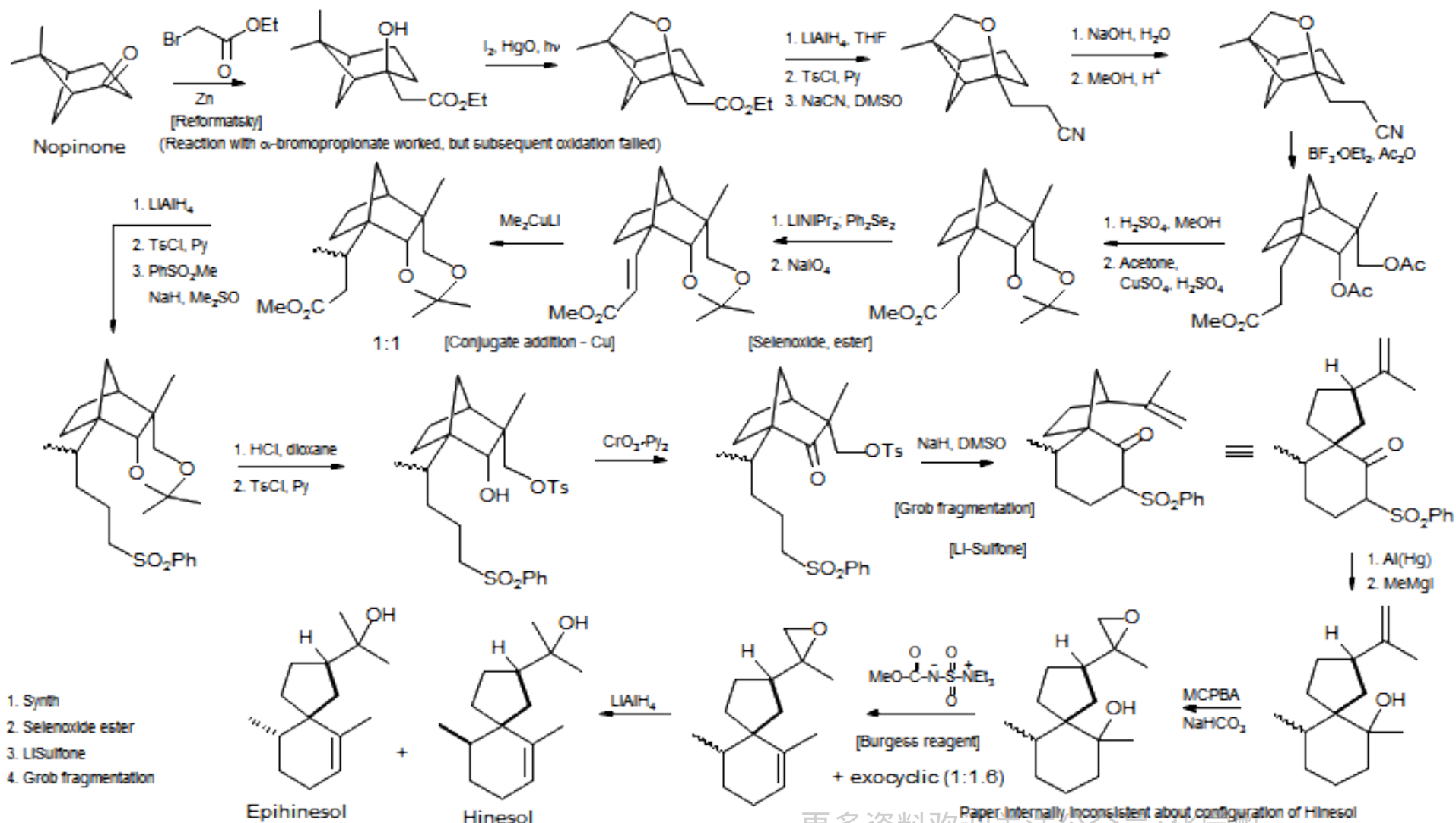
Hexacyclinic Acid (A,B,C-Rings)

04-16

Stellfeld, T.; Bhatt, U.; Kalesse, M. *Org. Lett.* 2004, 6, 3889

Tchababenko, K.; Adlington, R. M.; Cowley, A. R.; Baldwin, J. E. *Org. Lett.* 2005, 7, 585



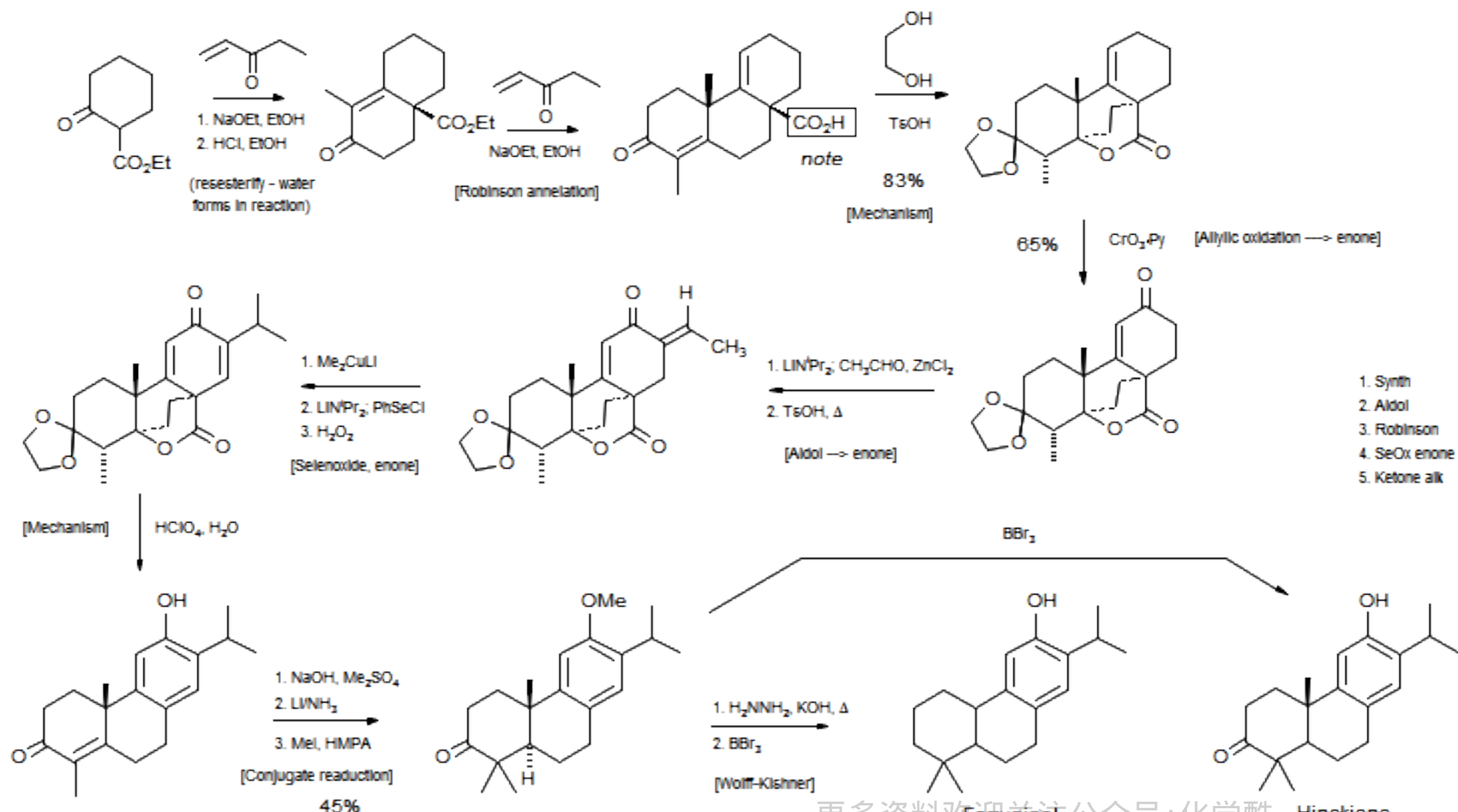
Chass, D. A.; Buddhasukh, D.; Magnus, P. D. *J. Org. Chem.* 1978, 43, 1750

Ferruginol Hinckione

78-46

EXP

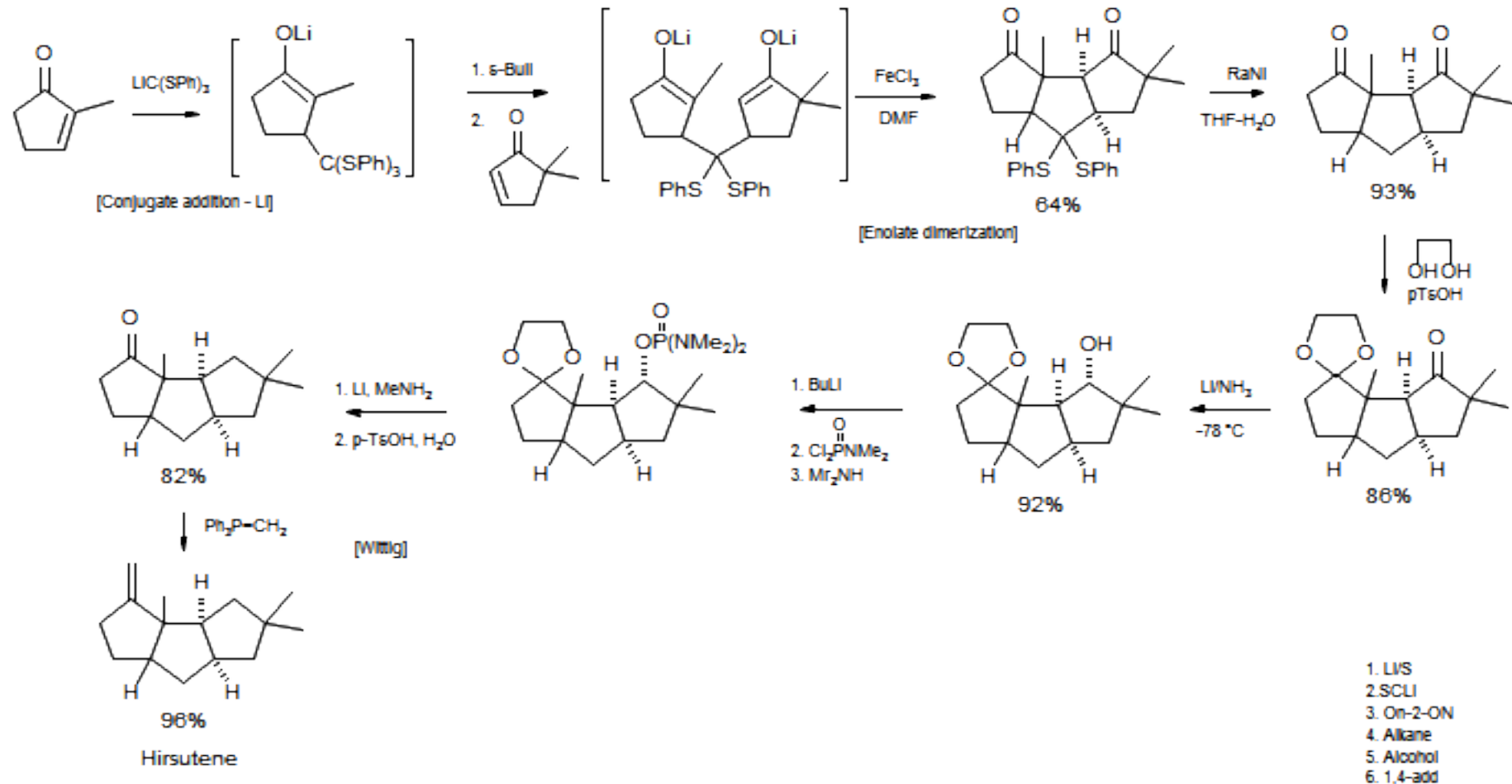
Snitman, D. L.; Himmelsbach, R. J.; Watt, D. S. *J. Org. Chem.*, 1978, 43, 4758.



Hirsutene

Ramig, K.; Kuzemko, M. A.; McNamara, K.; Cohen, T. *J. Org. Chem.* 1992, 57, 1968.

92-04

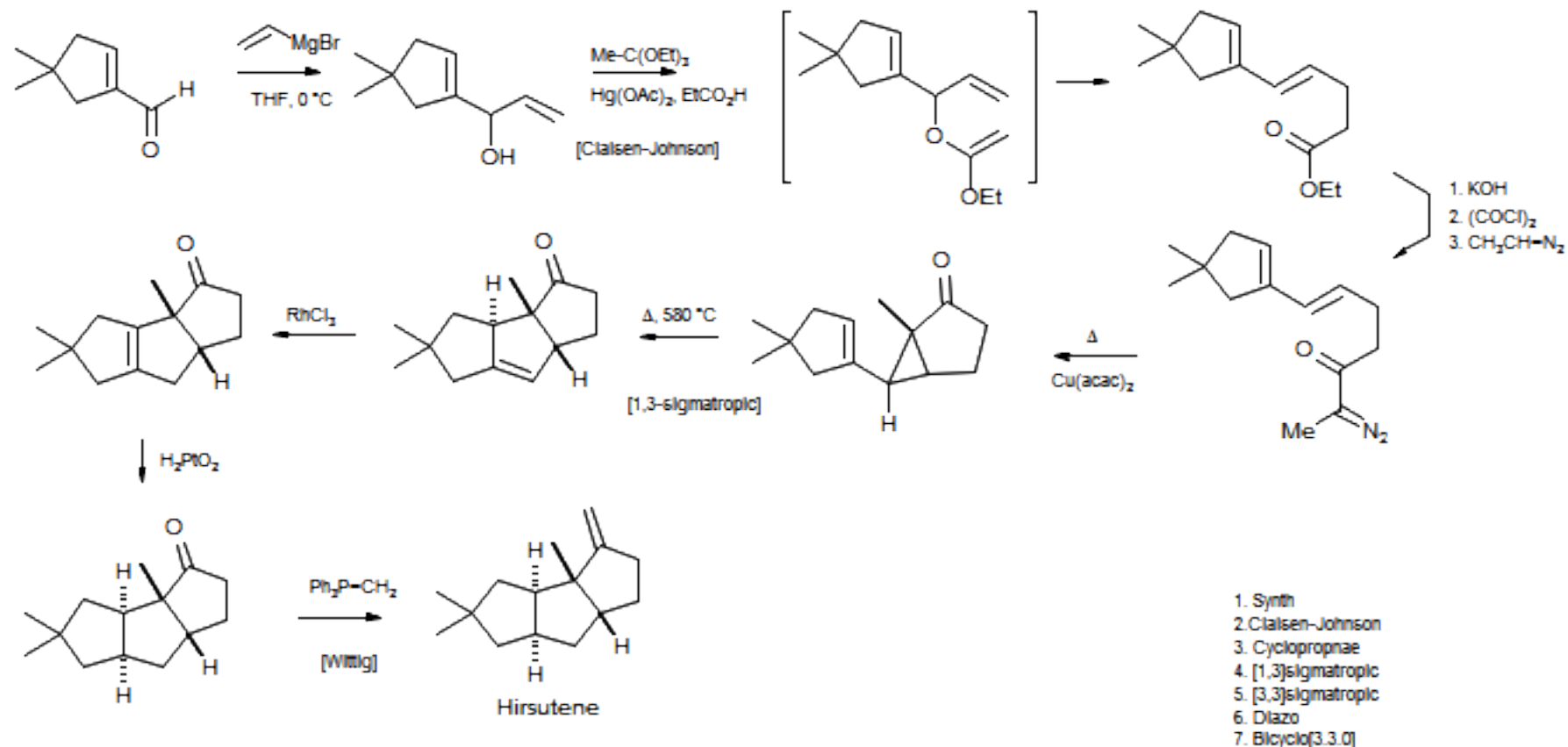


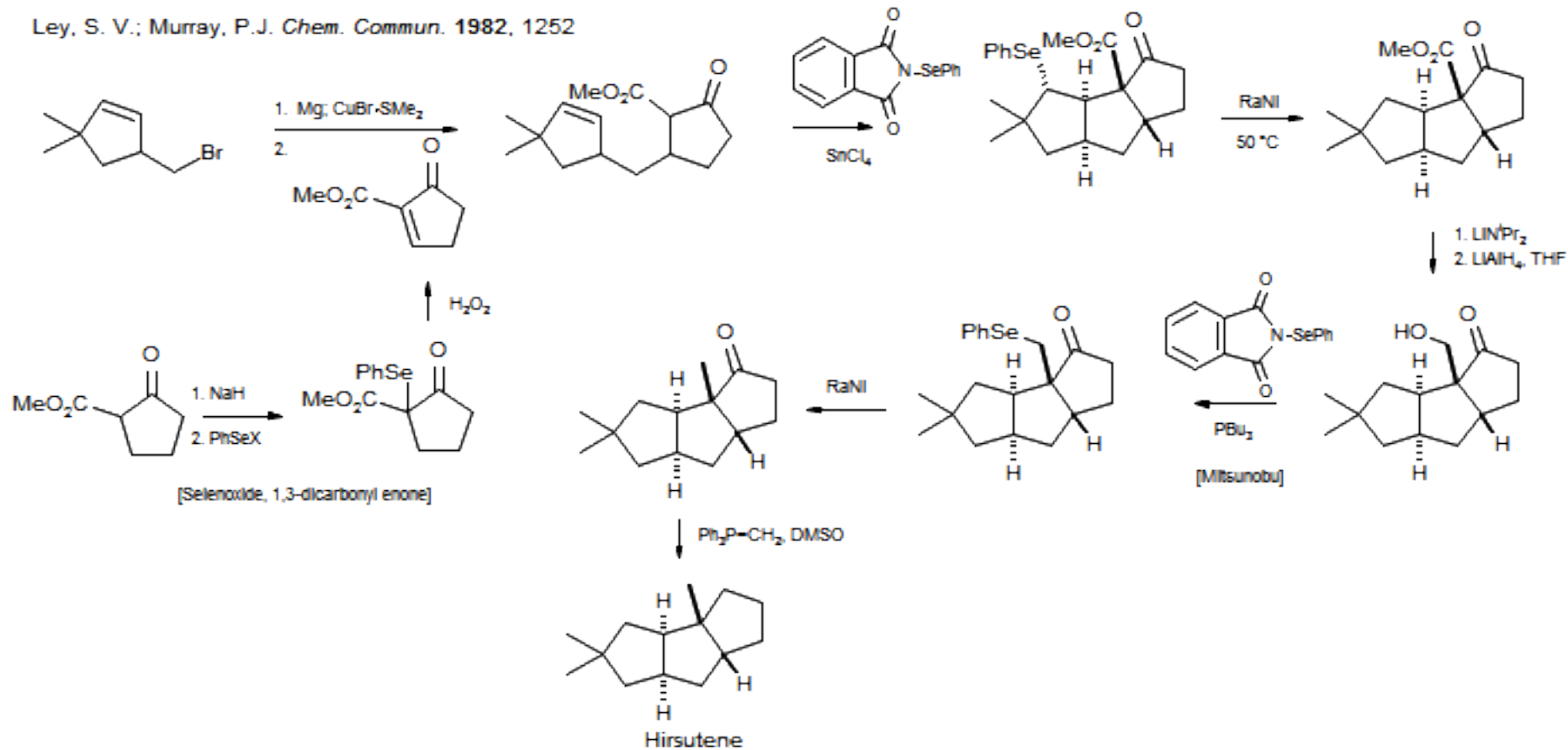
Hirsutene

Hudlidy, T.; Kutchan, T. M.; Wilson, S. R.; Mao, D. T. *J. Am. Chem. Soc.* **1980**, *102*, 6351.

80-10

COMM

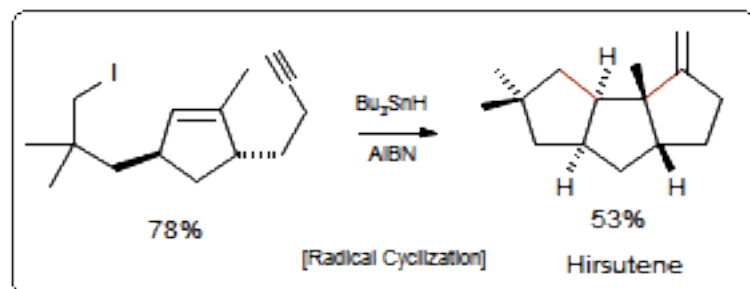
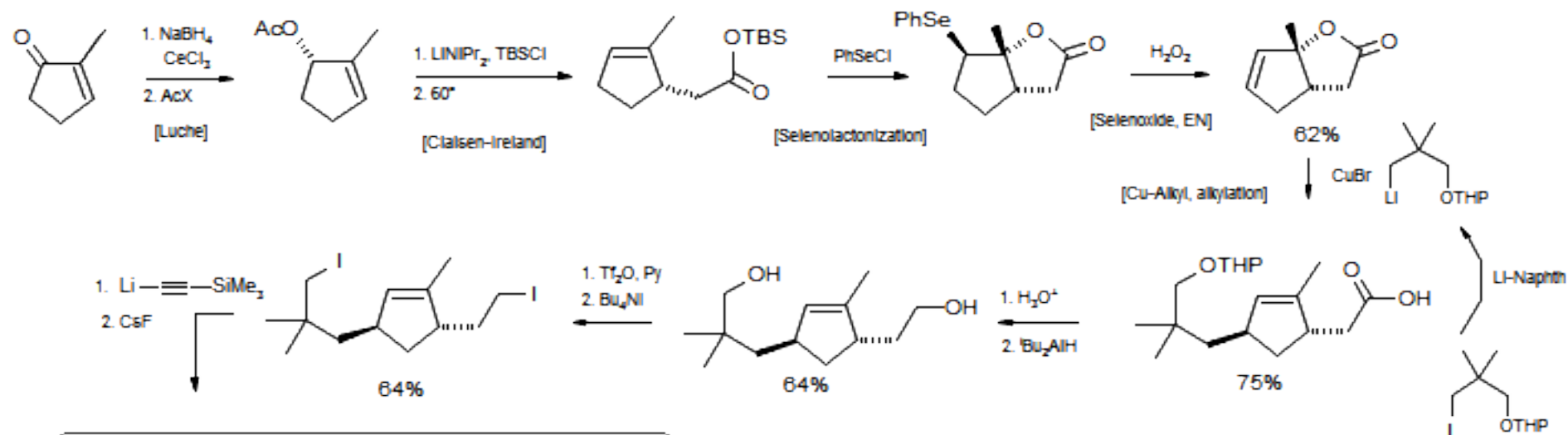


Ley, S. V.; Murray, P.J. *Chem. Commun.* 1982, 1252

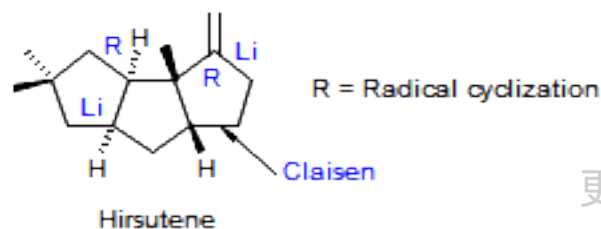
1. Synth
2. Se-olefin cycl
3. Carbox \rightarrow OL
4. PhSe \rightarrow H RaNi

Hirsutene

Gurran, D. P.; Rakiewicz, D. M. *J. Am. Chem. Soc.*, 1985, 107, 1448.



[Acetylide alkylation]

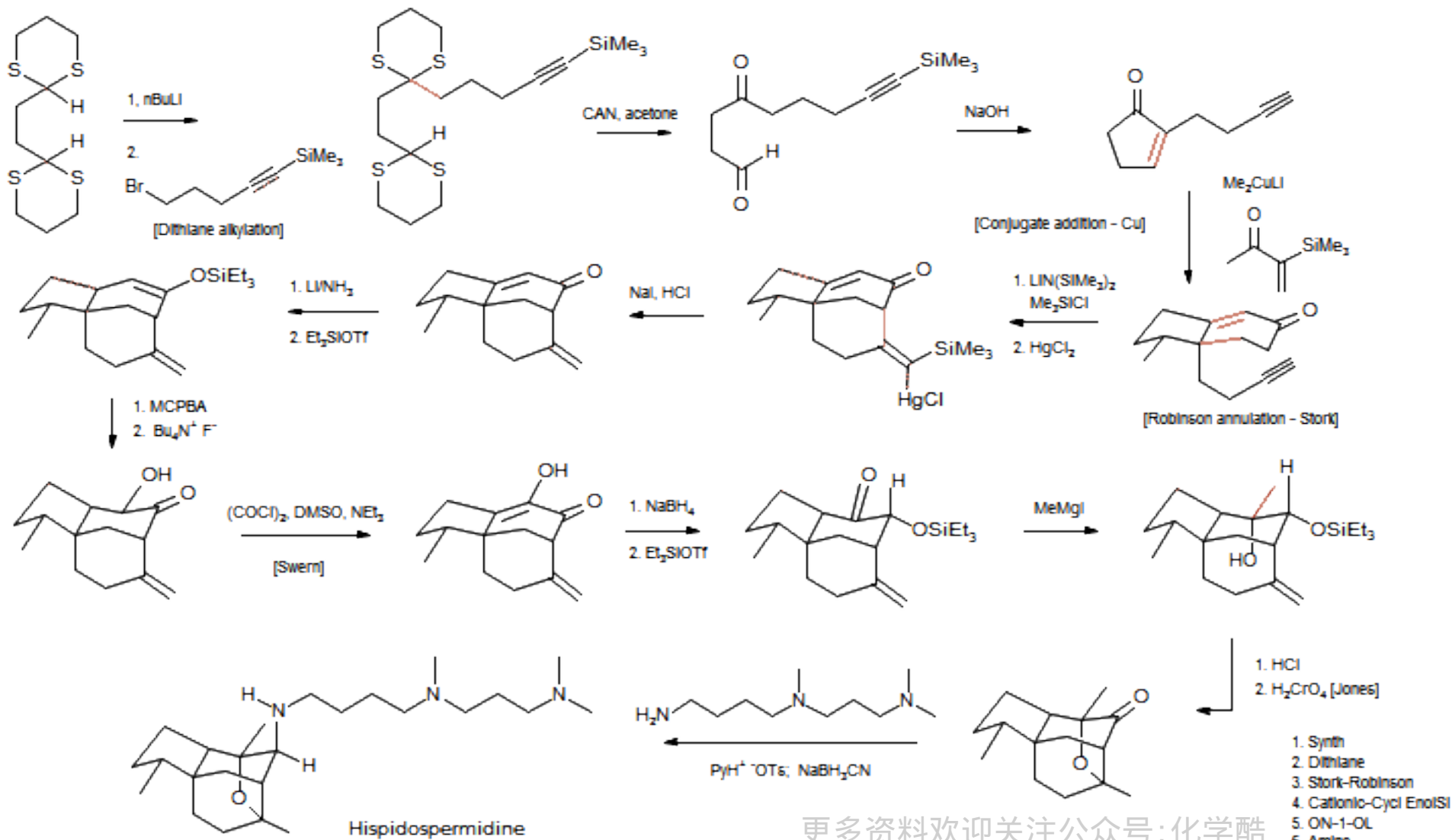


1. Alkene-Se
2. Selenox
3. AlkylLi
4. Halide
5. Radical Cycl
6. Reag-Bu₂SnH
7. Synth
8. AlkylLi
9. AlkylCu

Hispidospermidine

00-14

Frontier, A. J.; Raghavan, S.; Danishevsky, S. J. *J. Am. Chem. Soc.* **2000**, *122*, 6151.

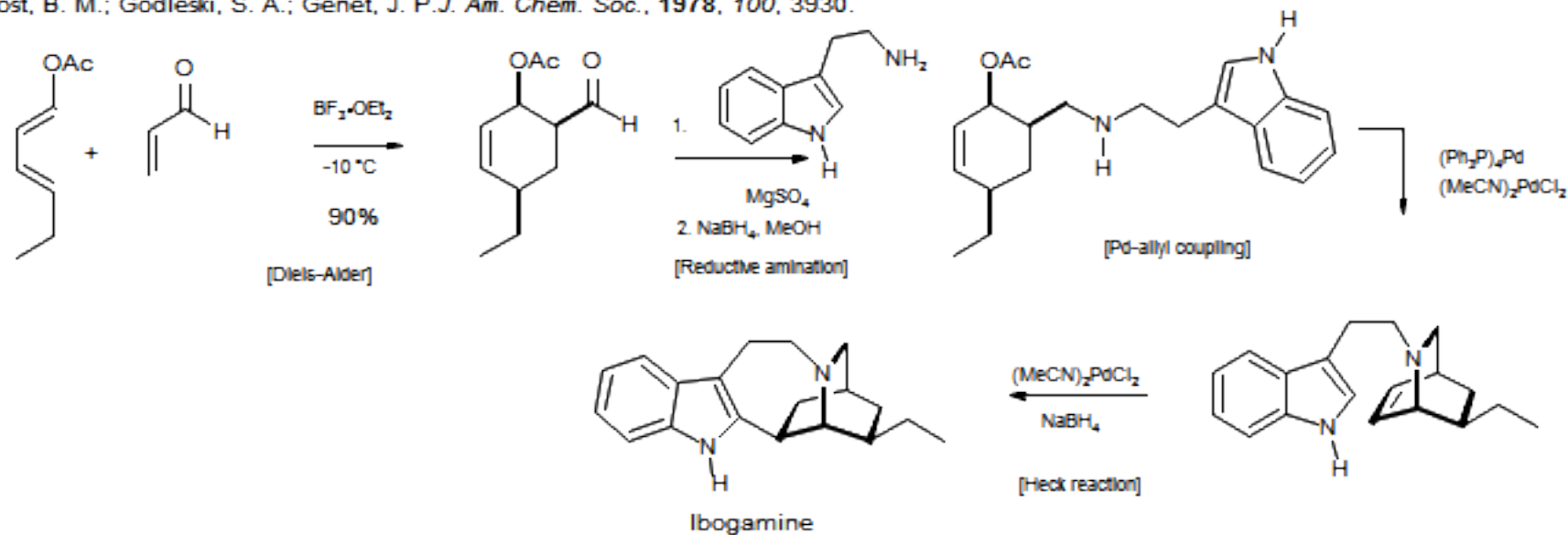


1. Synth
2. Dithiane
3. Stork-Robinson
4. Cationic-Cycl EnolSI
5. ON-1-OL
6. Amine

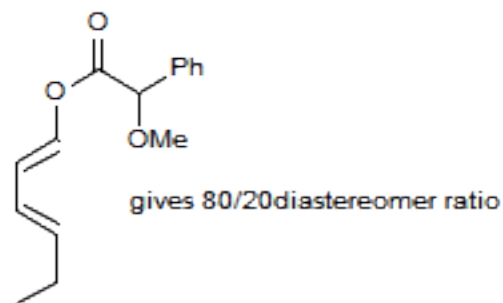
Ibogamine

Trost, B. M.; Godleski, S. A.; Genet, J. P. *J. Am. Chem. Soc.*, 1978, 100, 3930.

78-13
COMM



Asymmetric synthesis:



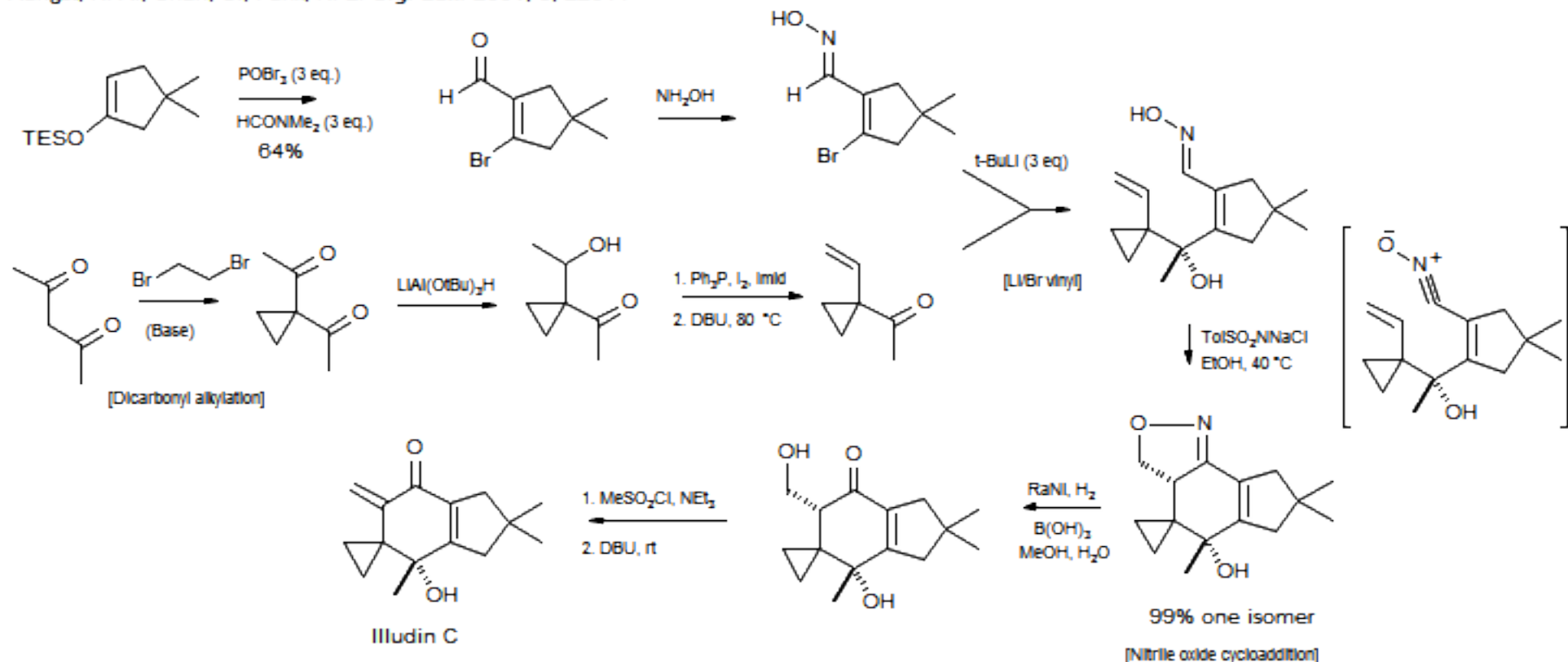
1. Synth
2. Pd
3. DA-cat

更多资料欢迎关注公众号:化学酷

Illudin C

Aungst, R. A.; Chan, C.; Funk, R. L. *Org. Lett.* **2001**, *3*, 22811

01-14

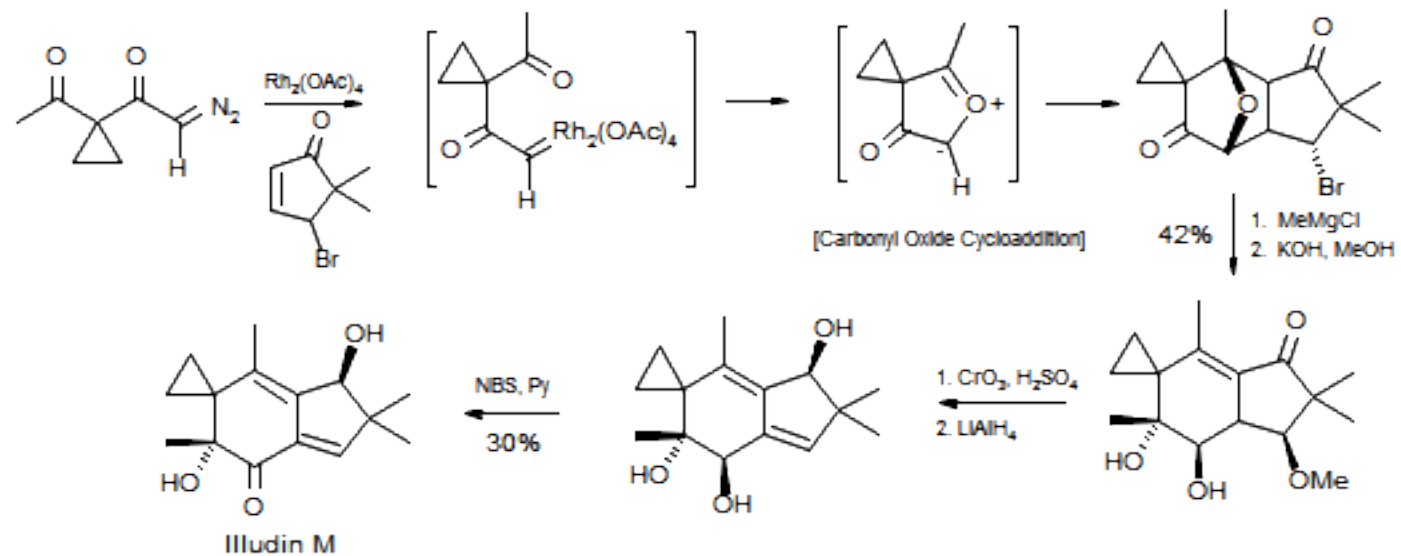


1. Synth
2. Nitrile oxide cycloadd
3. Aldehyde
4. VinylLi

Illudin M

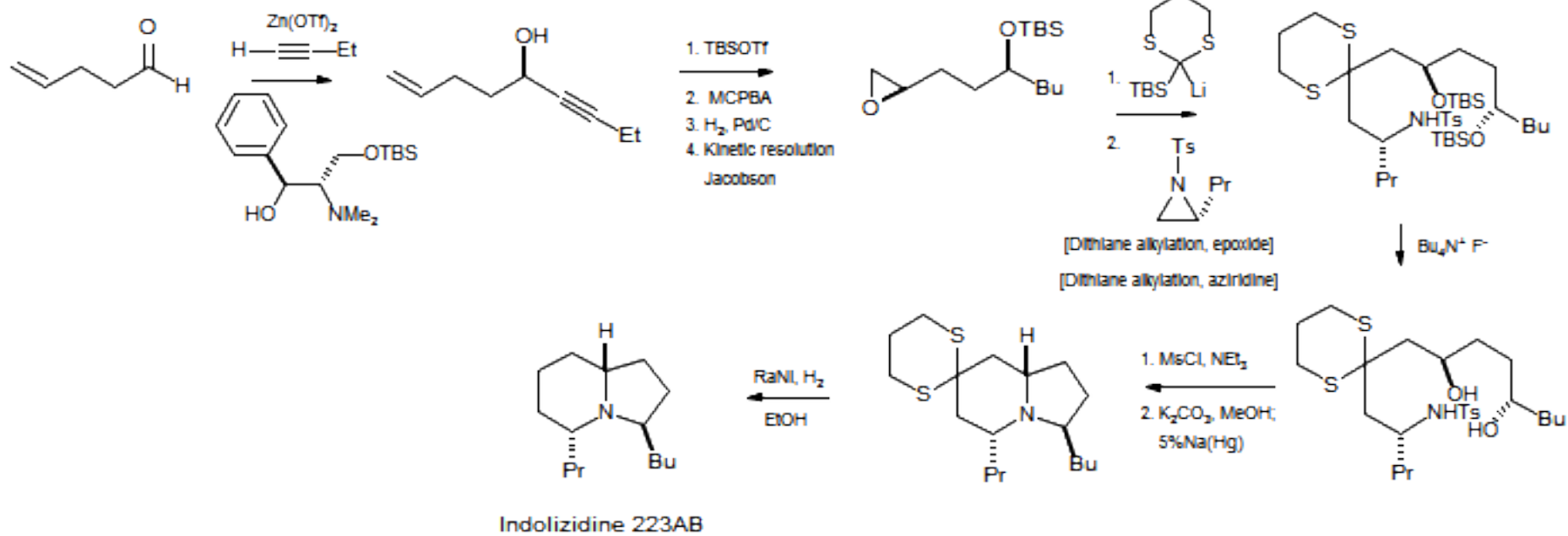
Kinder, F. R.; Bair, K. W. *J. Org. Chem.* 1994, 59, 6965

94-10



Indolizidine 223AB

Smith, A. B. III; Kim, D.-S. *Org. Lett.* 2004, 6, 1493



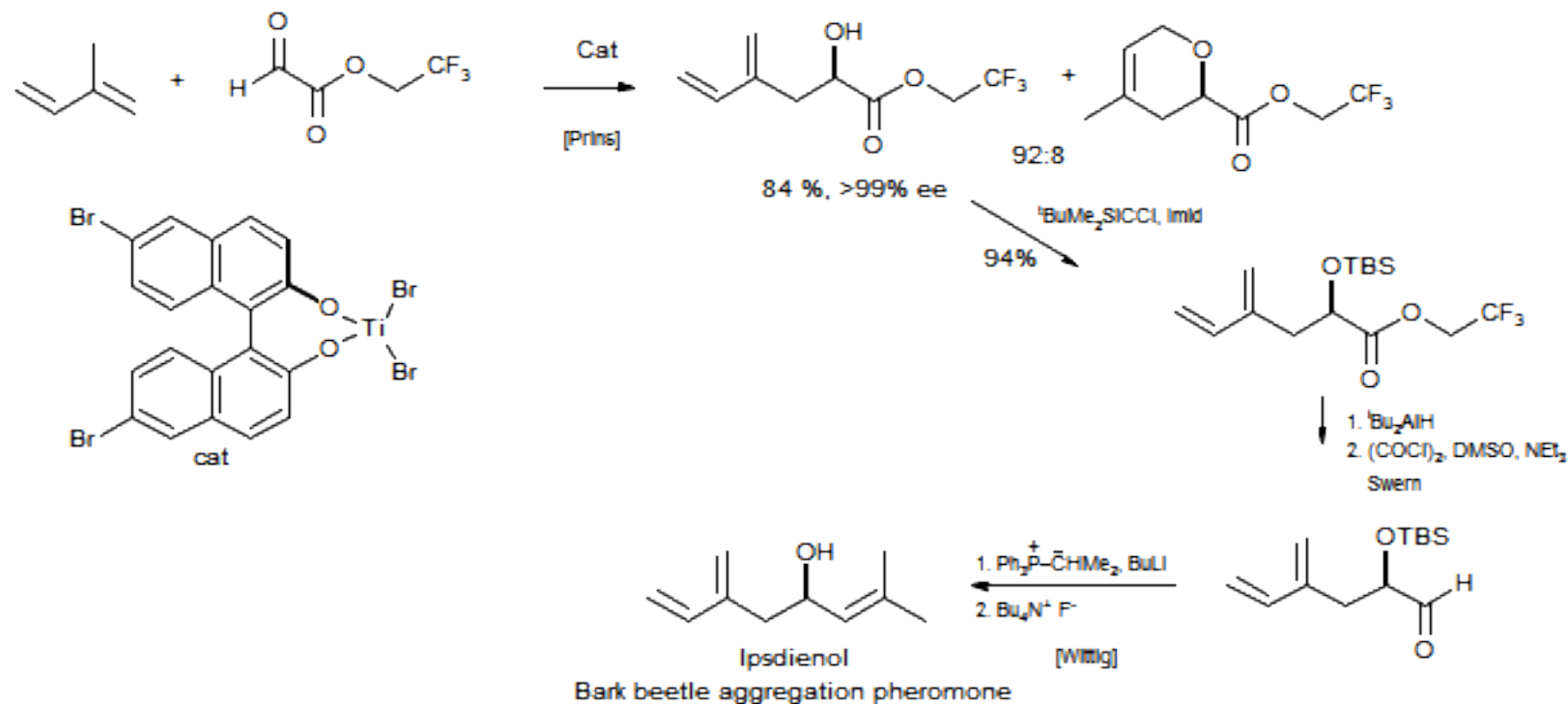
- 04-03
1. Synth
 2. Zn-Acetylide
 3. Li-Dithiane
 4. Aziridine

Ipsdienol

Terada, M.; Mikami, K. *Chem. Commun.* 1995, 2391

95-03

COMM



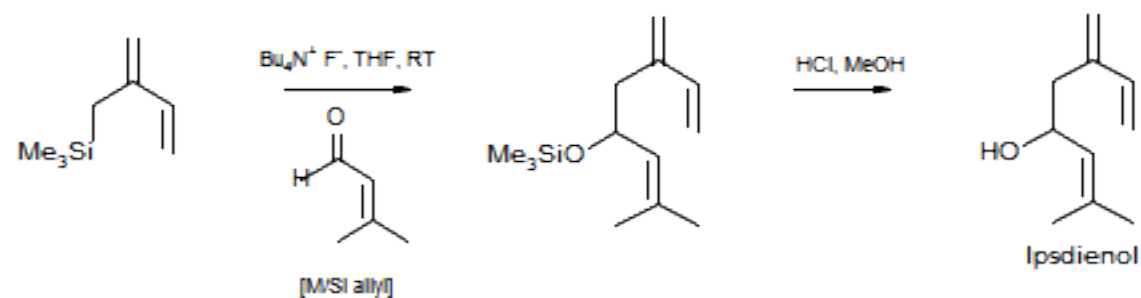
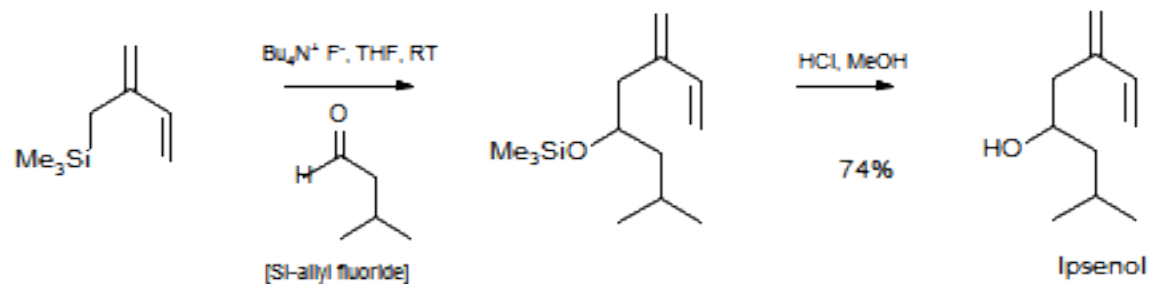
1. Synth
2. Chem 547
3. Prins

Ipsenol

Hosomi, A.; Araki, Y.; Sakurai, H. *J. Org. Chem.* 1983, 48, 3122.

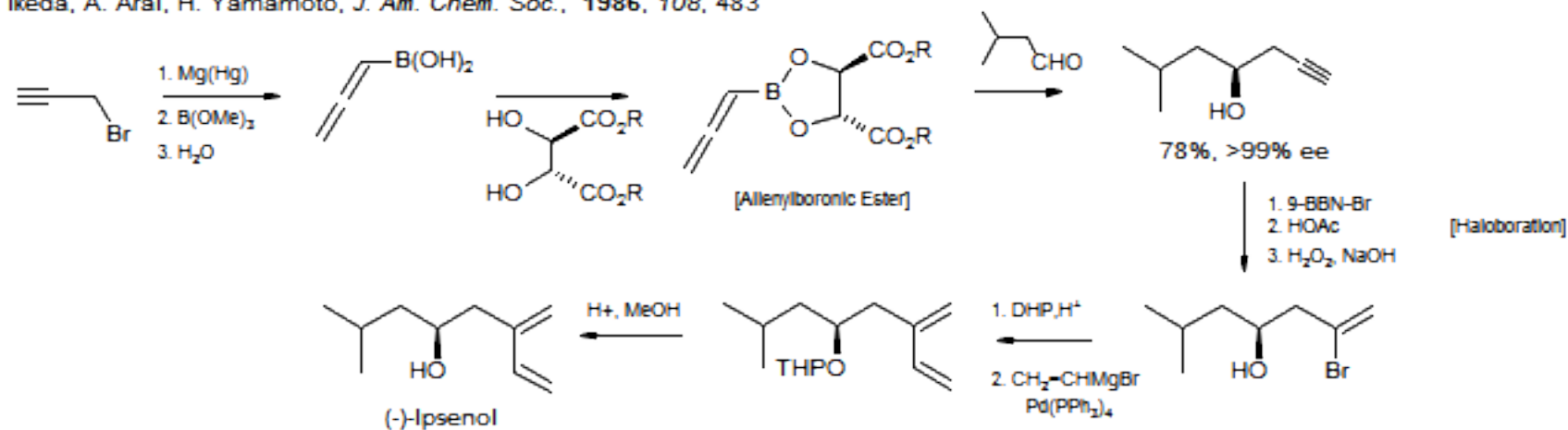
83-12

EXP



1. Synth
2. AllylSi
3. Li/Si
4. Diene

Ipsenol, (-)-

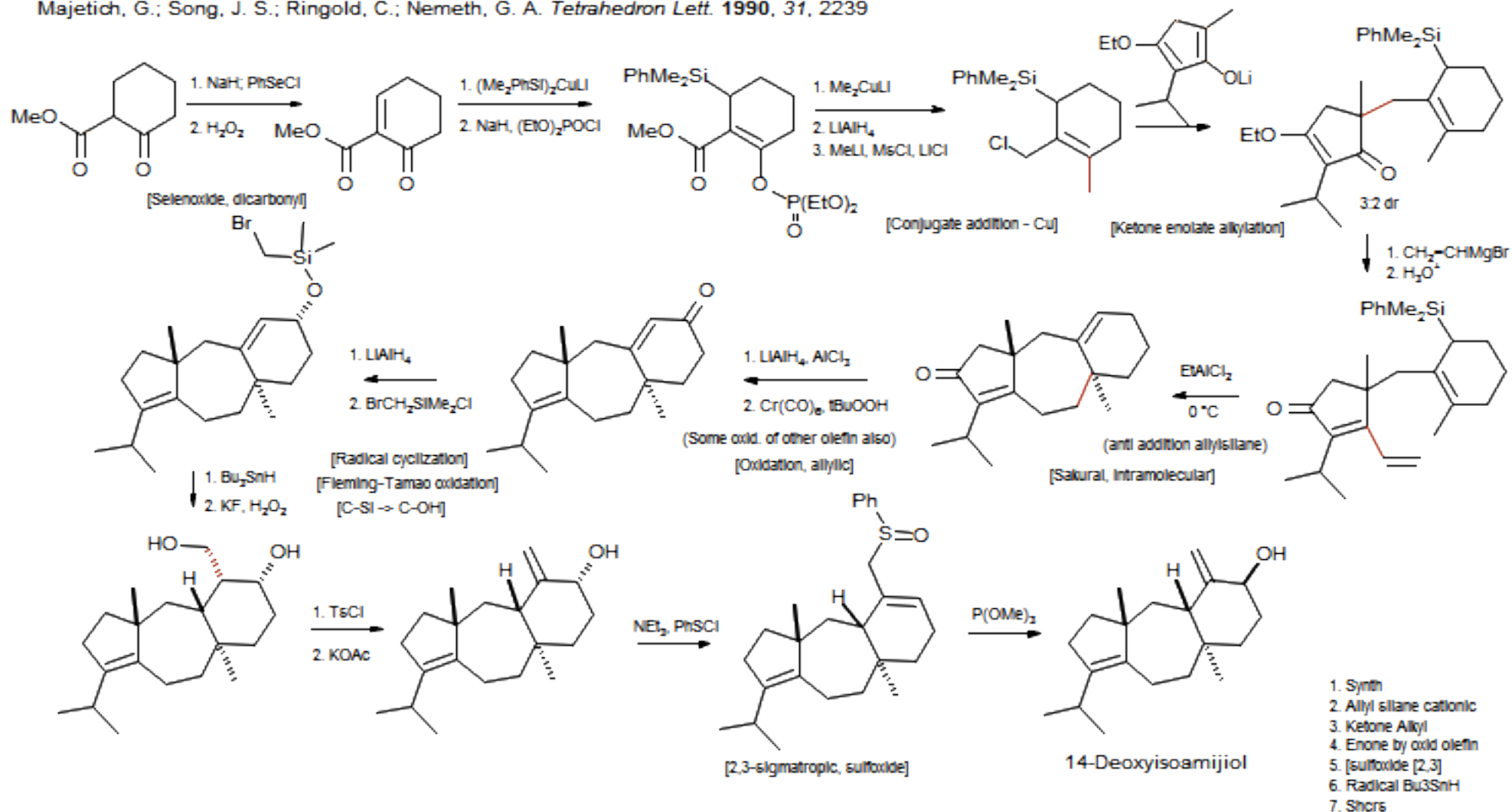
N. Ikeda, A. Arai, H. Yamamoto, *J. Am. Chem. Soc.*, 1986, 108, 483

1. Synth
2. Chem 547
3. Shcrs
4. AllenIM
5. Diene/5. AsymSynth

Isoamijiol, 14-deoxy

90-08
COMM

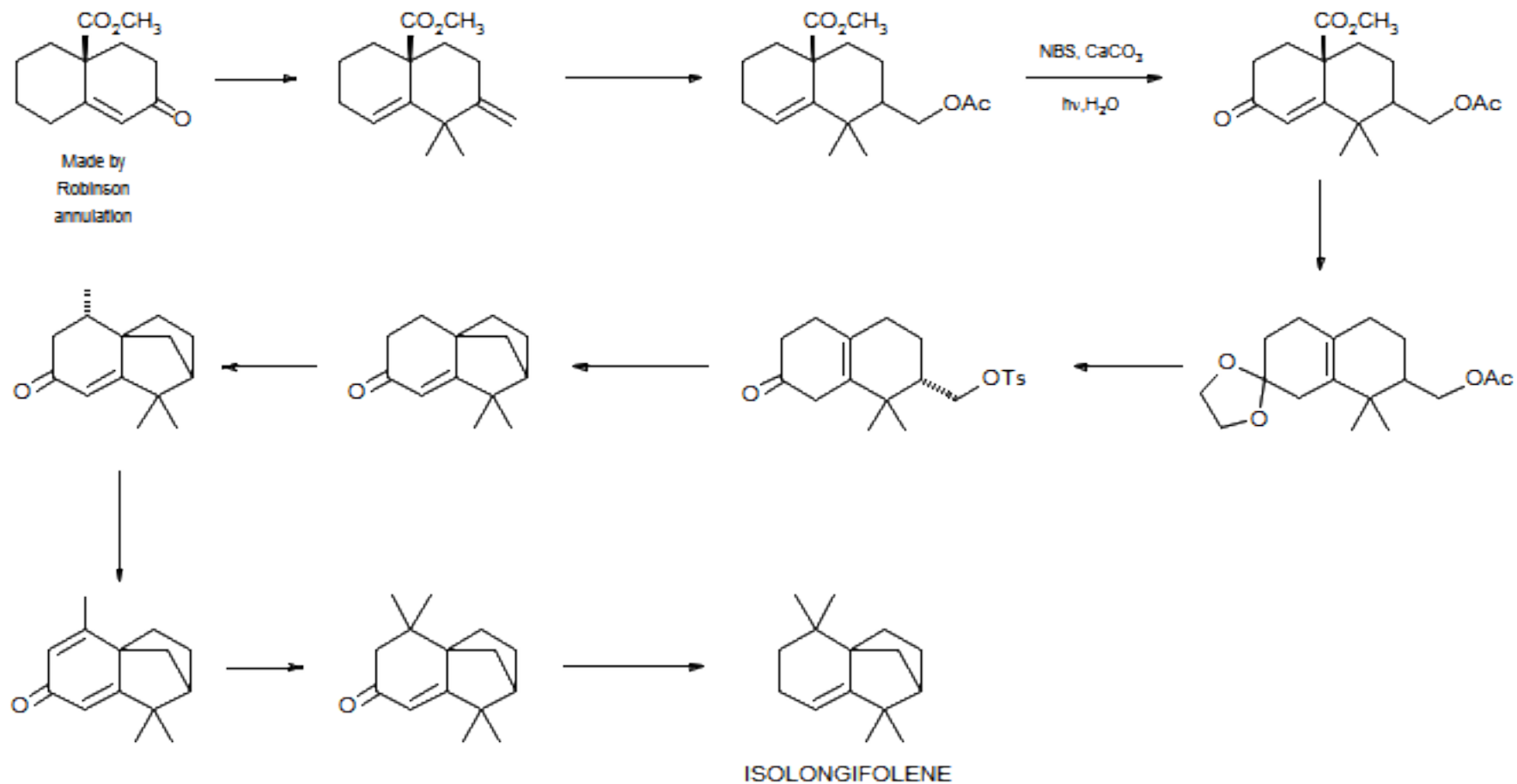
Majetich, G.; Song, J. S.; Ringold, C.; Nemeth, G. A. *Tetrahedron Lett.* 1990, 31, 2239



Isolongifolene

79-10

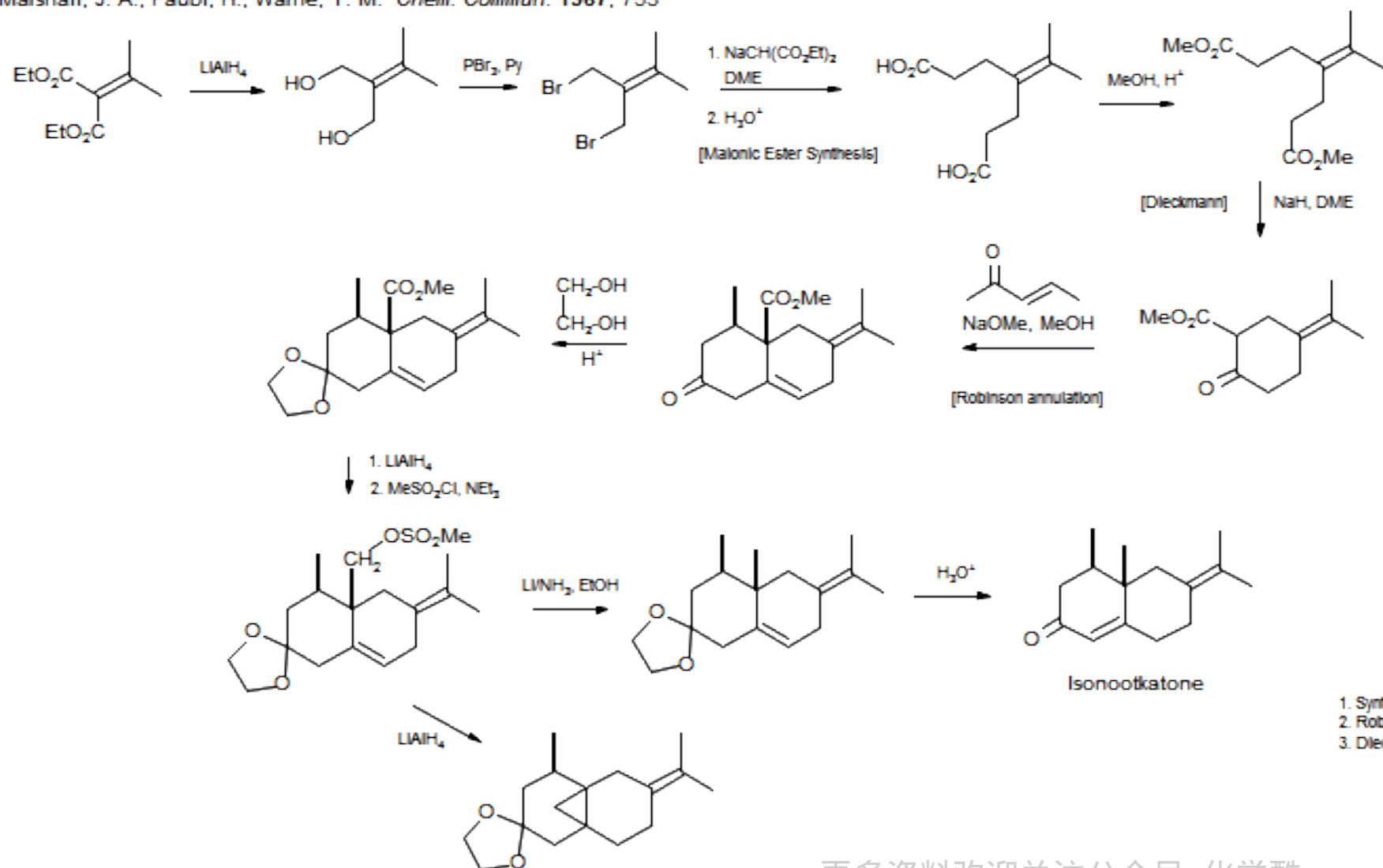
Piers, E.; Zbozny, M. *Can. J. Chem.*, 1979, 57, 2249.



Provide missing reagents.

更多资料欢迎关注公众号:化学酷

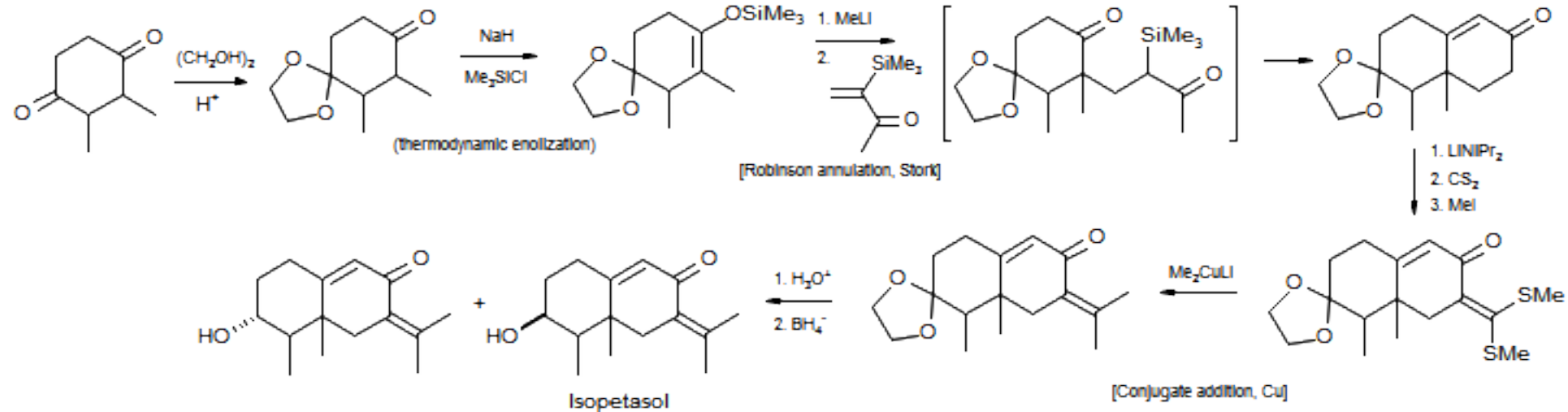
Marshall, J. A.; Faubl, H.; Warne, T. M. *Chem. Commun.* 1967, 753



Isopetasol

Bohlmann, F.; Otto, W. *Ann. Chem.* 1982, 186

82-18



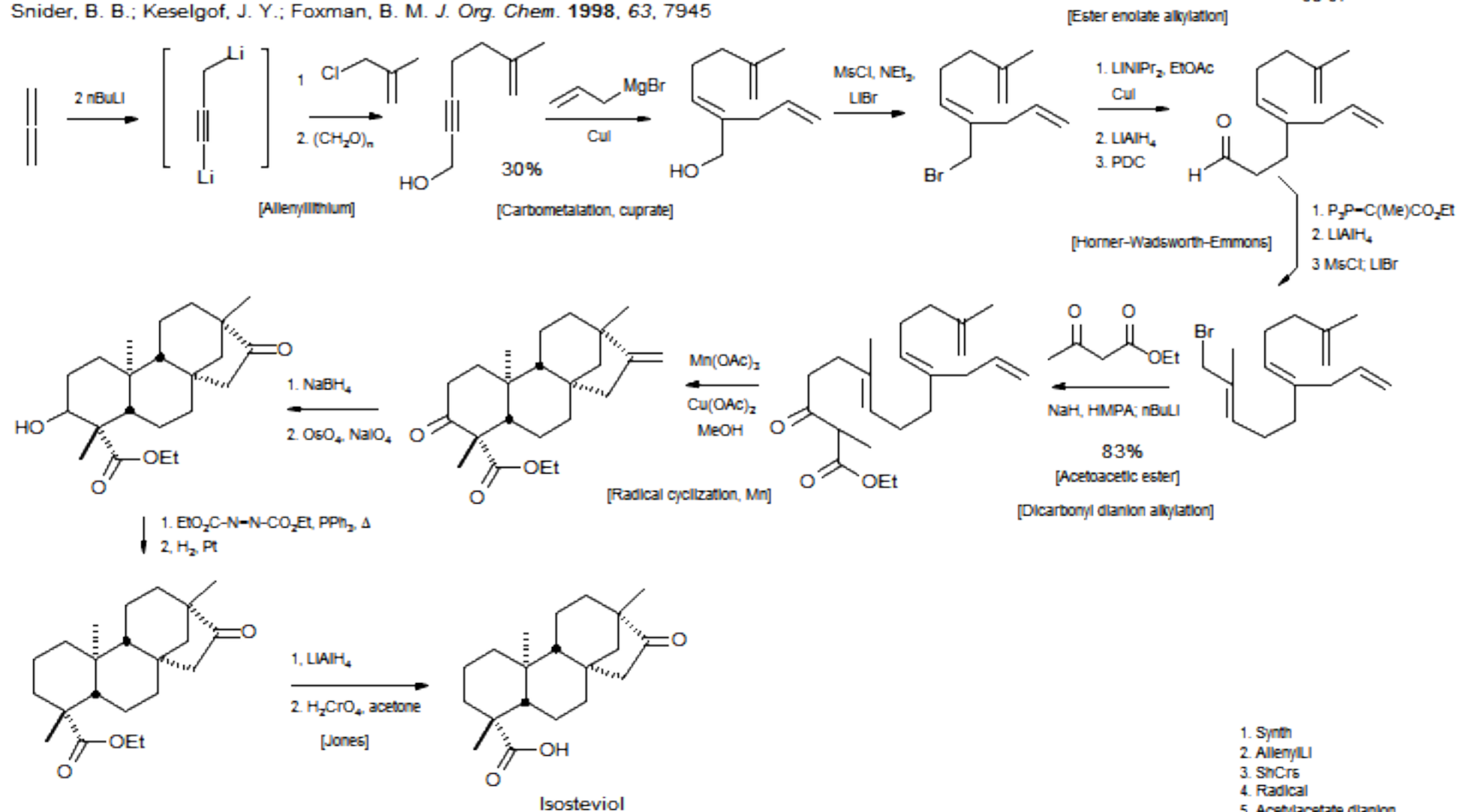
1. Synth
2. Stork-MVK
3. Robinson
4. Enone

更多资料欢迎关注公众号:化学酷

Isosteviol

Snider, B. B.; Keselgof, J. Y.; Foxman, B. M. *J. Org. Chem.* 1998, 63, 7945

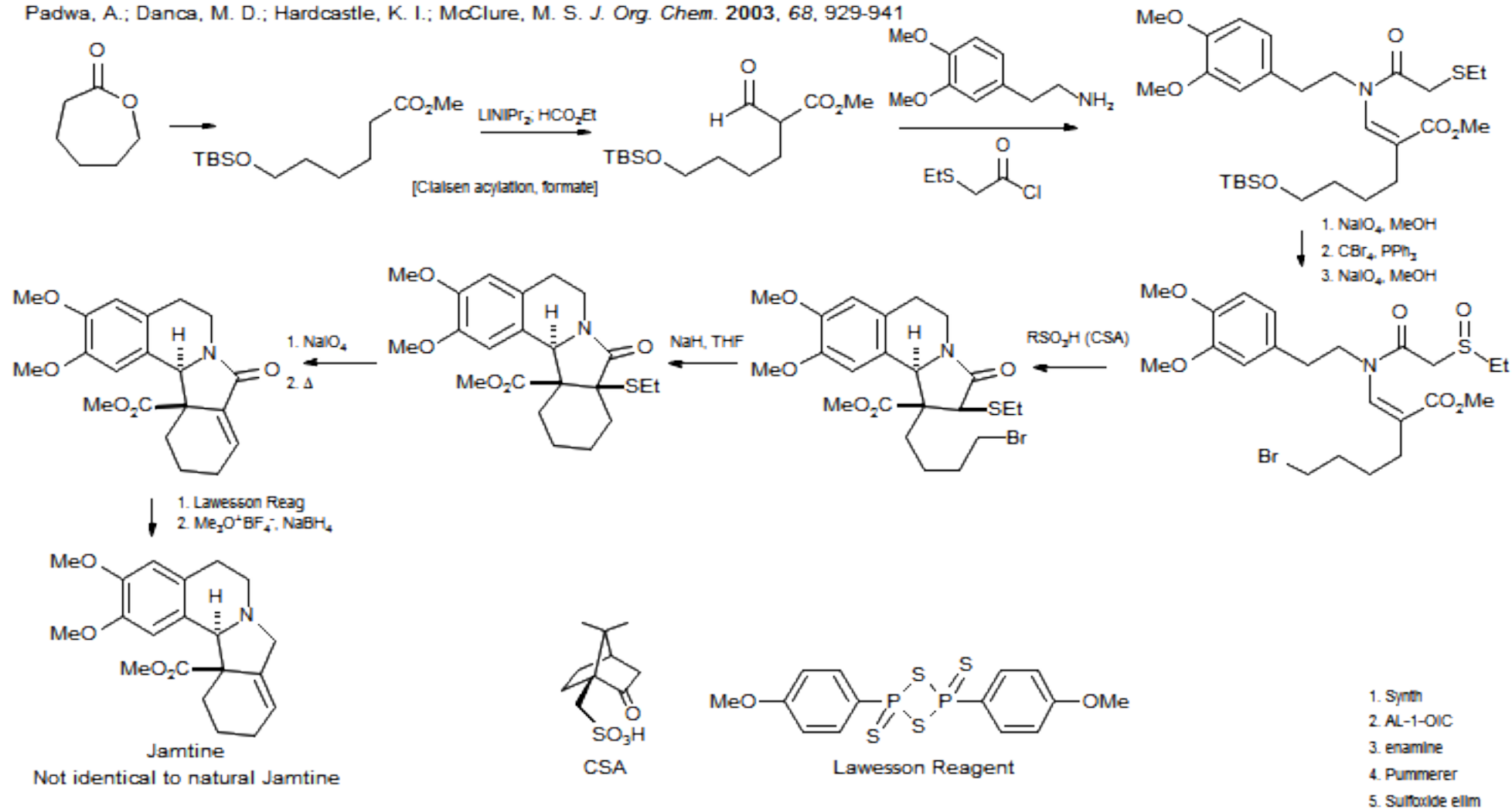
98-07

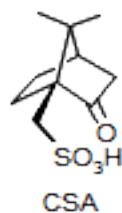
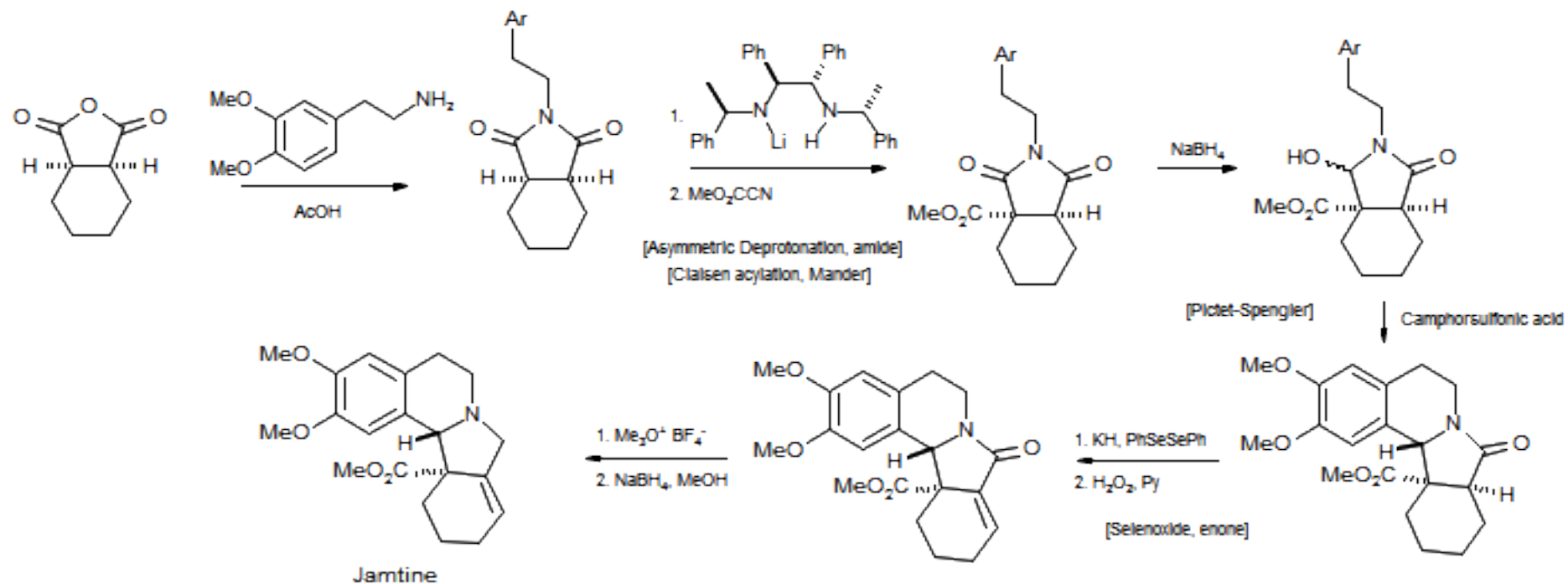


Jamintine

03-09

Padwa, A.; Danca, M. D.; Hardcastle, K. I.; McClure, M. S. *J. Org. Chem.* 2003, 68, 929-941



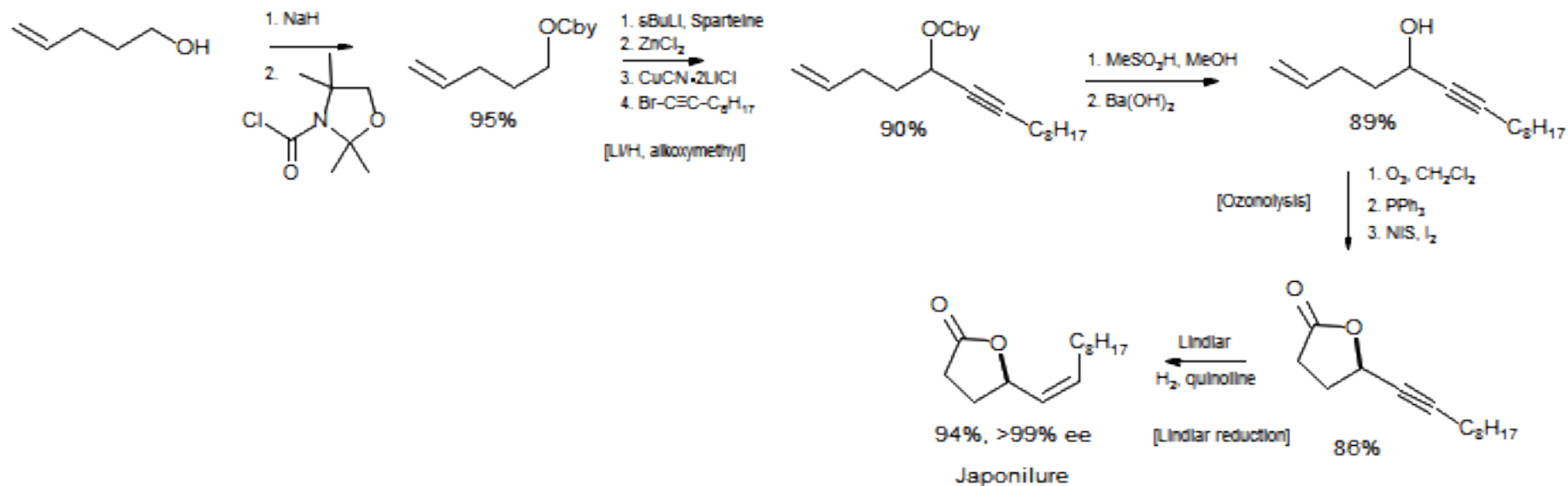
Simpkins, N. S.; Gill, C. D. . *Org. Lett.* 2003, 5, 535

1. Synth
2. Asym Deprot
3. ShCrs
4. Selenox-Amide
5. EnolicAmide to ene

Japonilure

Papillon, J. P. N.; Taylor, R. J. K. *Org. Lett.* **2002**, *4*, 119 (Japanese beetle sex pheromone)

02-10



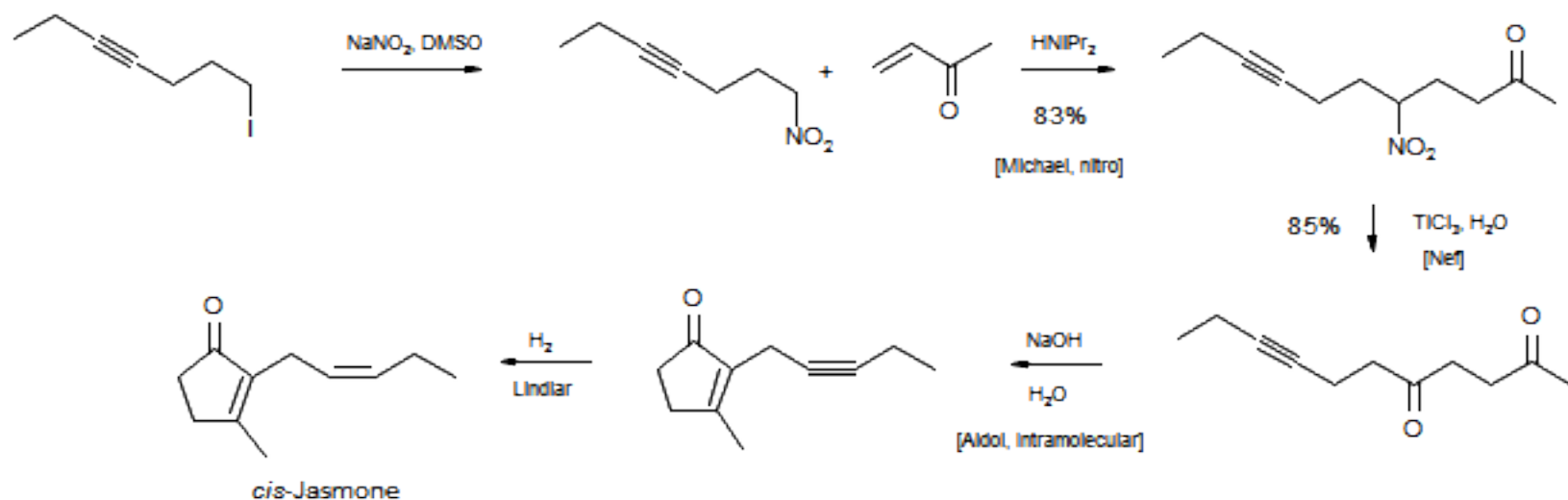
1. Synth
2. LI-OR - OPAC
3. OrgCu
4. ShCrs
5. Lactone

Jasmone, cis

McMurry, J. E.; Melton, J. J. *Am. Chem. Soc.* 1971, 93, 5309

71-04

COMM

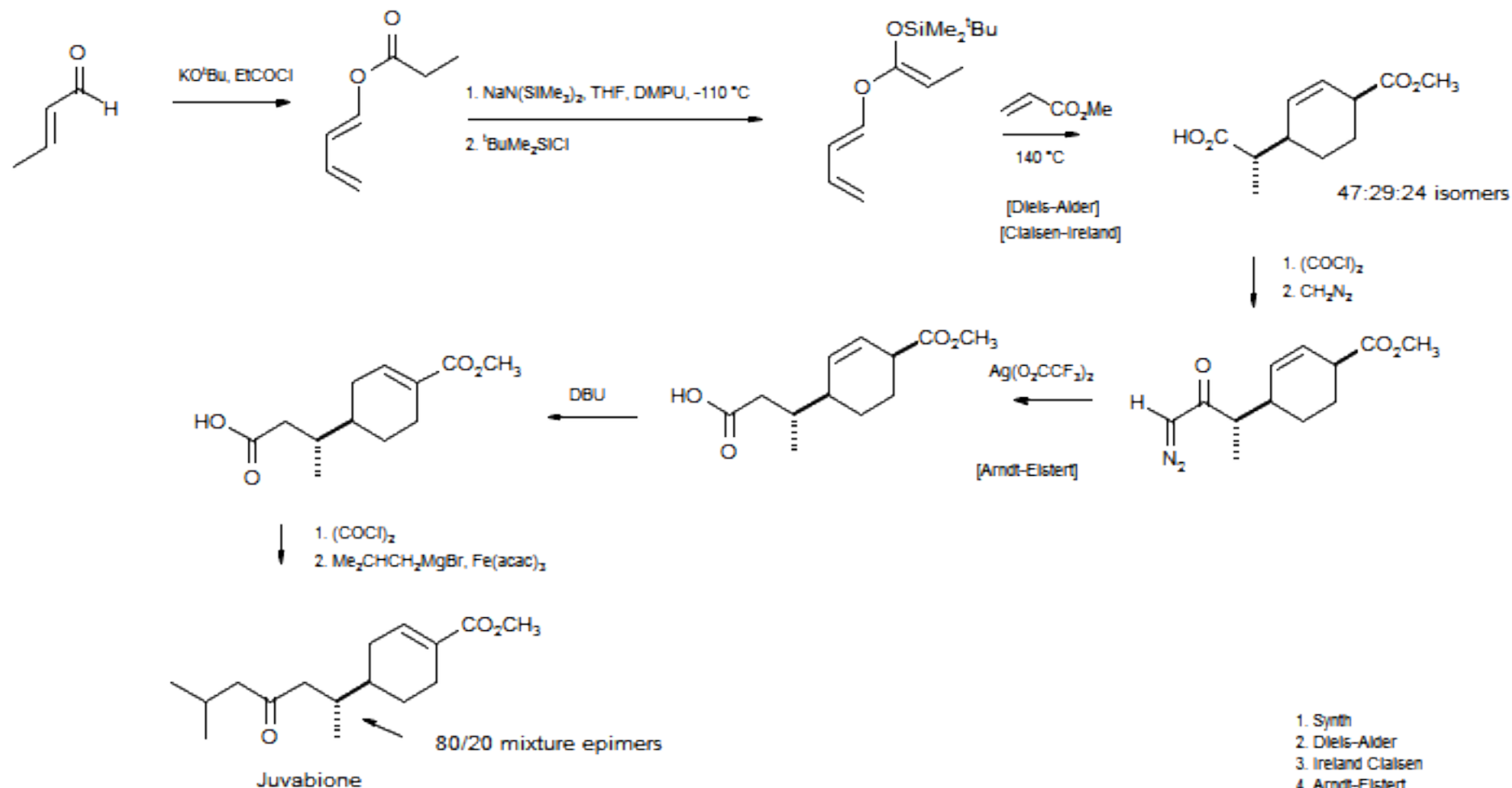


1. Synth
2. TI
3. Michael
4. 5-ring

Juvabione

Soldermann, N.; Velker, J.; Vallet, O.; Stoekli-Evans, H.; Neier, R. *Helv. Chim. Acta* 2000, 83, 2268.

00-13

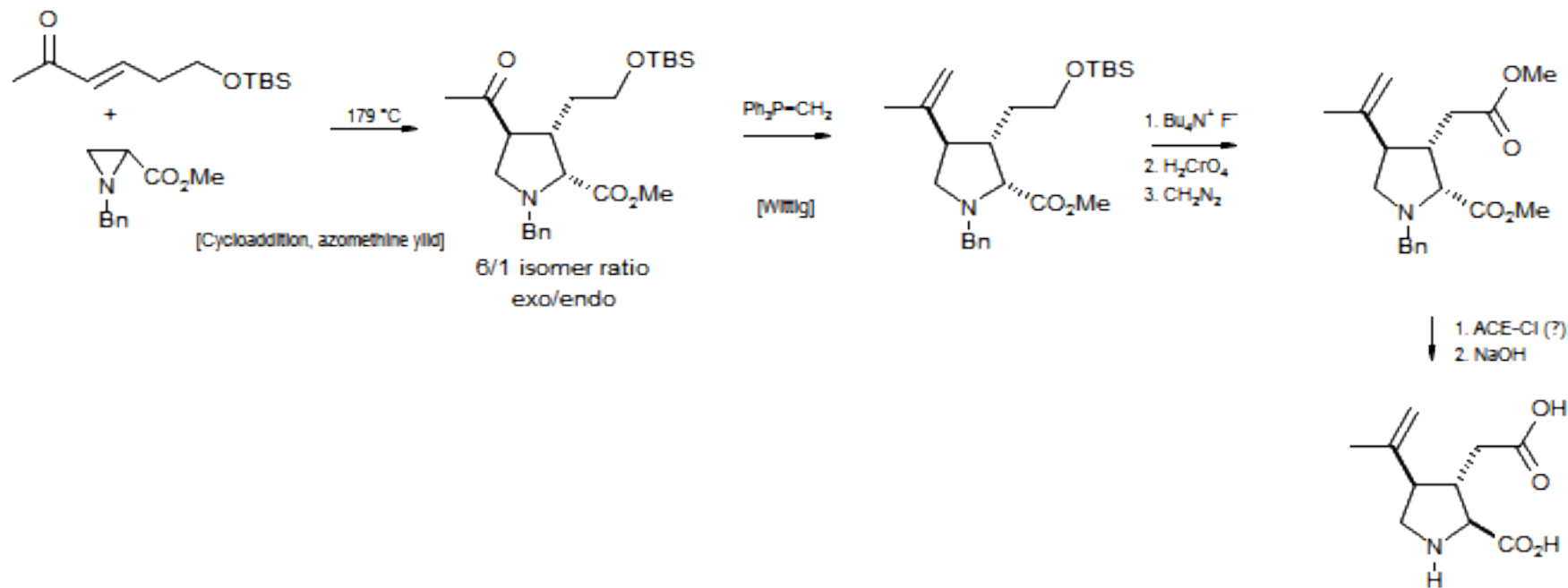


1. Synth
2. Diels-Alder
3. Ireland Claisen
4. Arndt-Eistert
5. Fe-catalyzed RMgX

Kainic Acid, allo-

DeShong, P.; Kell, D. A. *Tetrahedron Lett.* 1986, 27, 3979

88-16

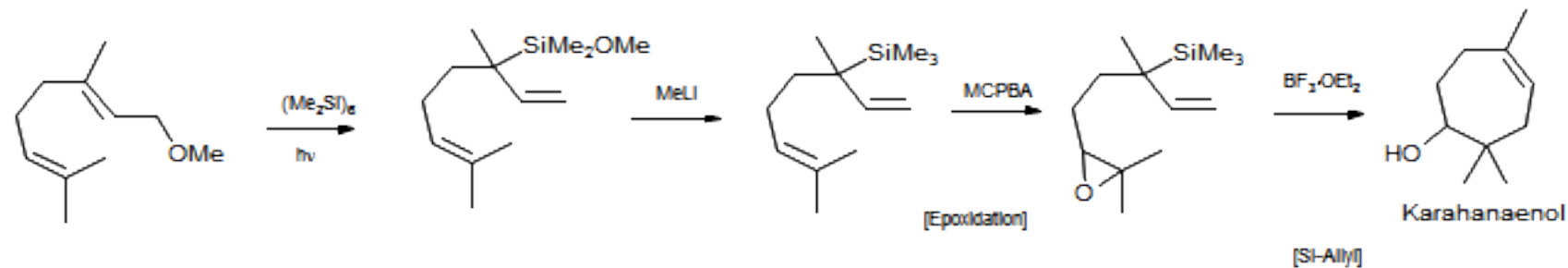


1. Synth
2. 1,3-dipolar-azomethine ylid
3. Wittig

Karahanaenol

Wang, D.; Chan, T. H. *Chem. Commun.* 1984, 1273

84-17

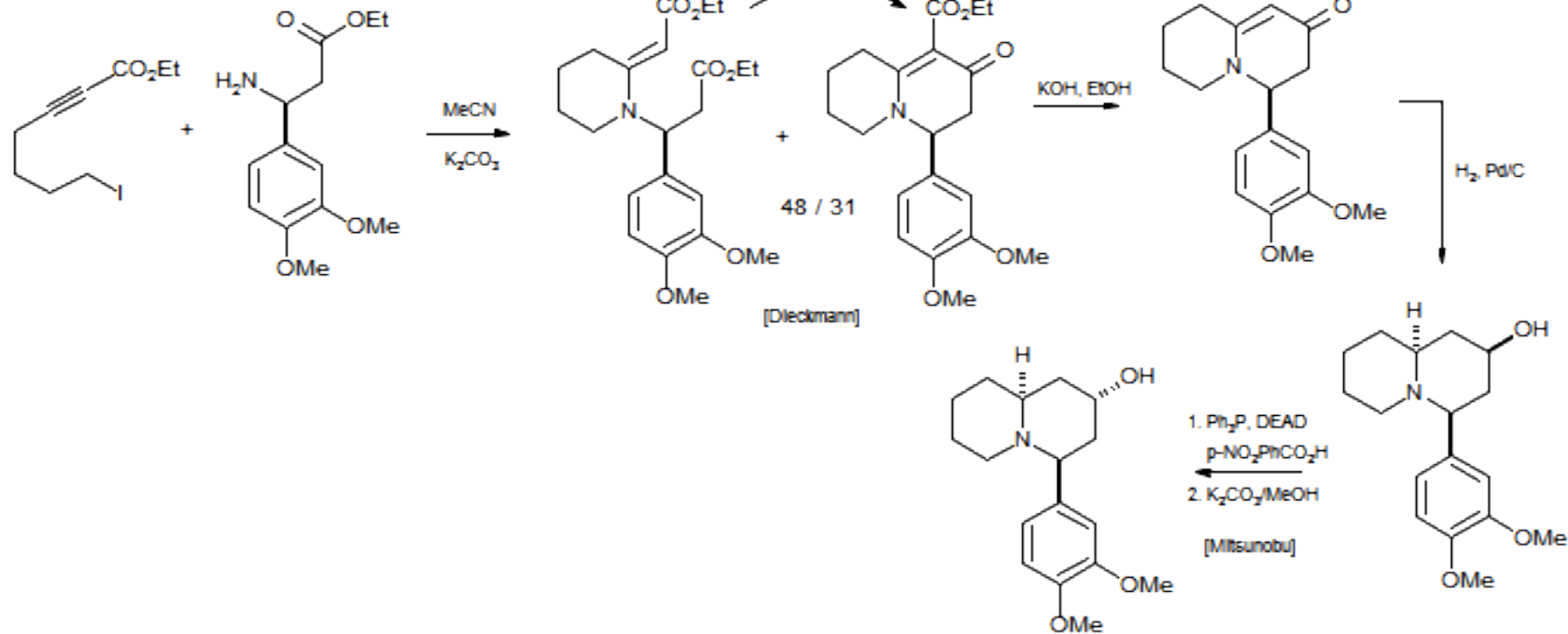


1. Synth
2. AllylSilane
3. MCPBA
4. Problem

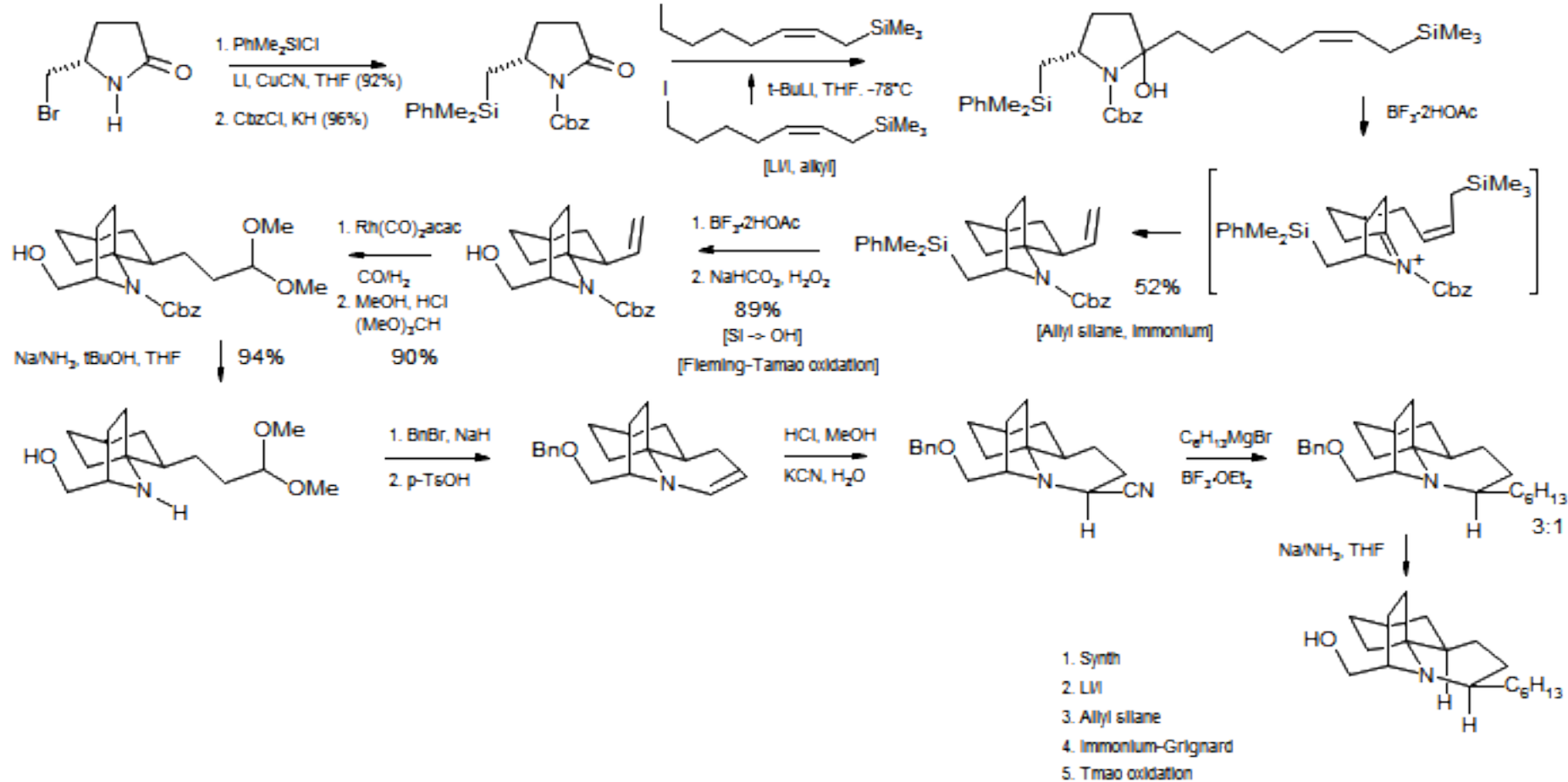
Lasubine II

01-17

Ma, D.; Zhu, W. *Org. Lett.* 2001, 3, 3927



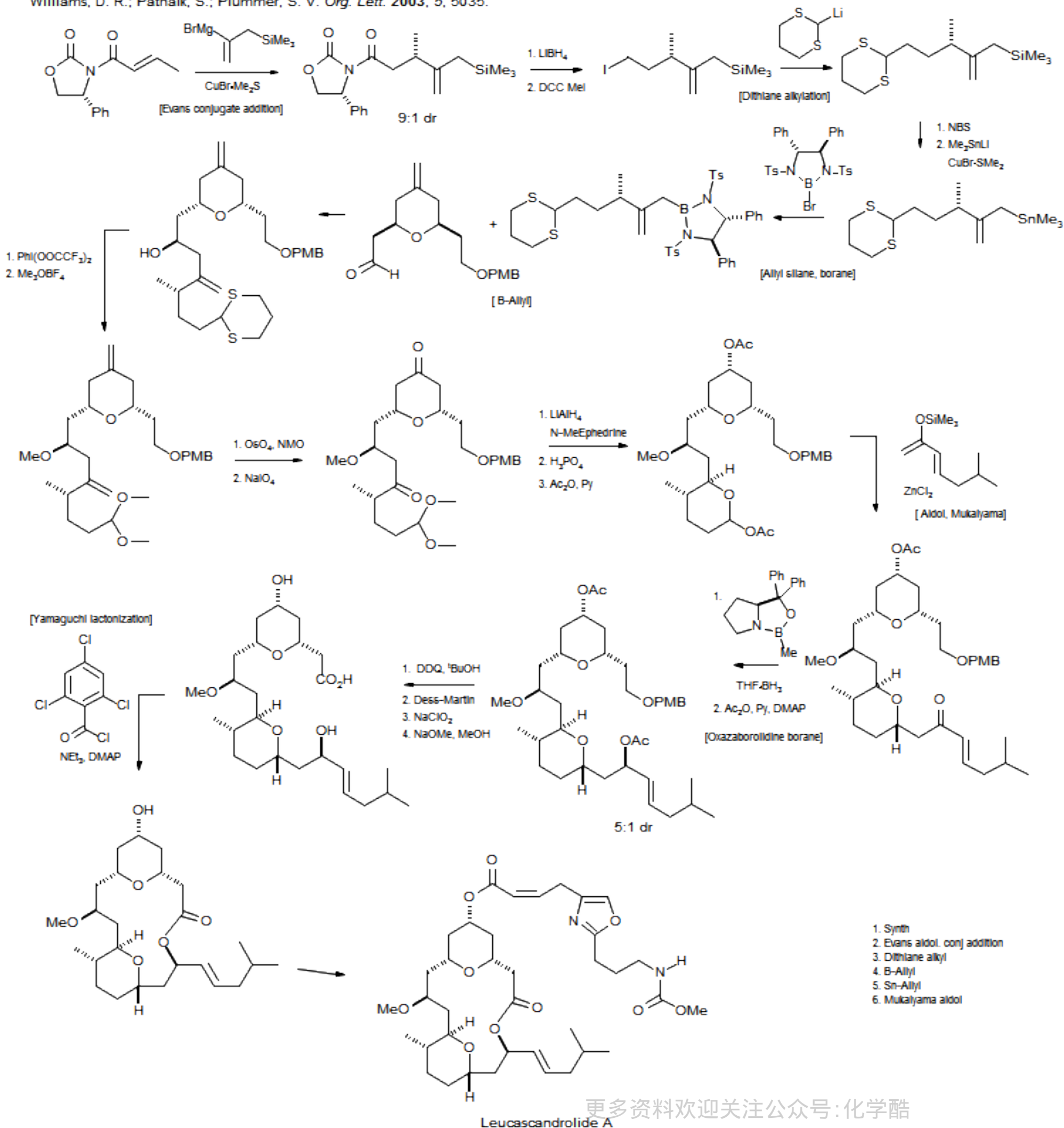
1. Synth
2. Problem - 547
3. Mitsunobu
4. Michael

Sun, P.; Sun, C.; Weinreb, S. M. *J. Org. Chem.* 2002, 67, 4337

Leucascandrolide A

Williams, D. R.; Patnaik, S.; Plummer, S. V. *Org. Lett.* 2003, 5, 5035.

03-15

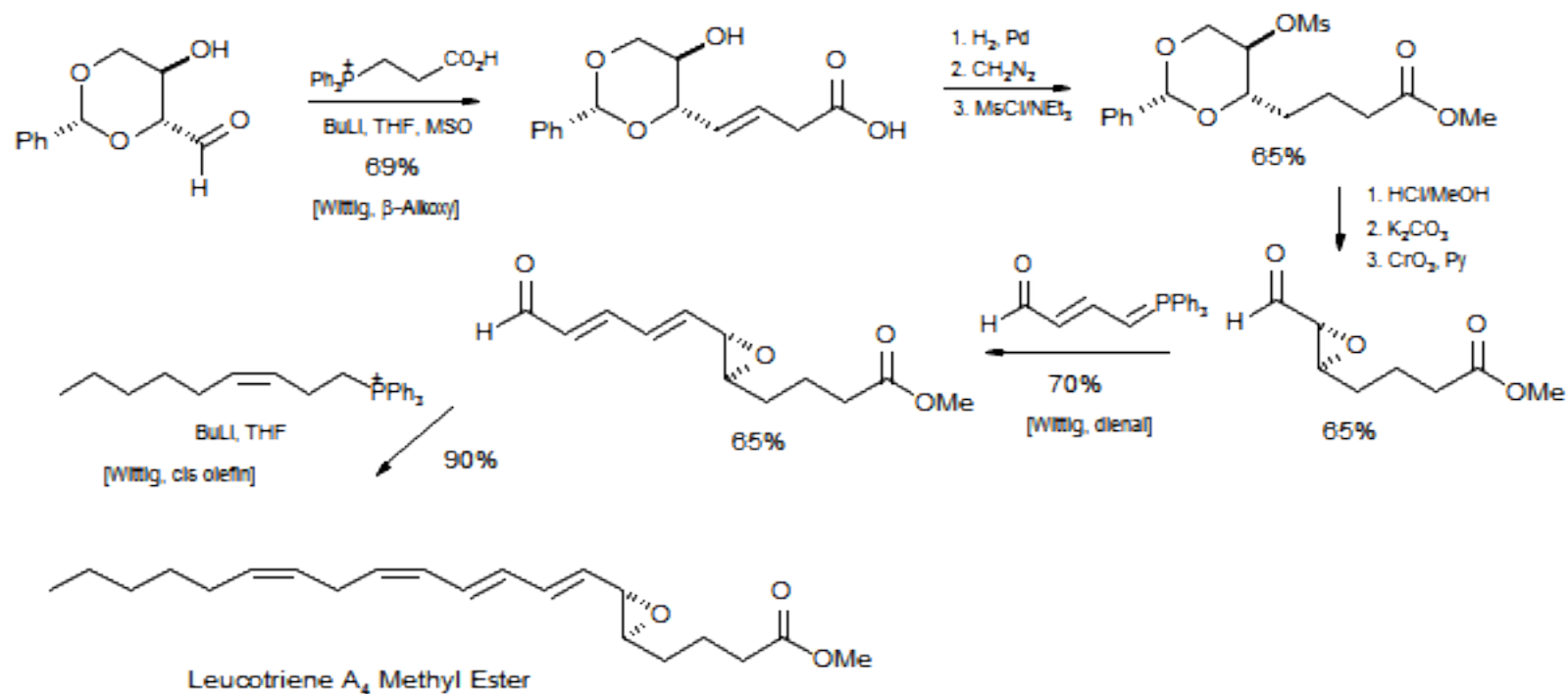


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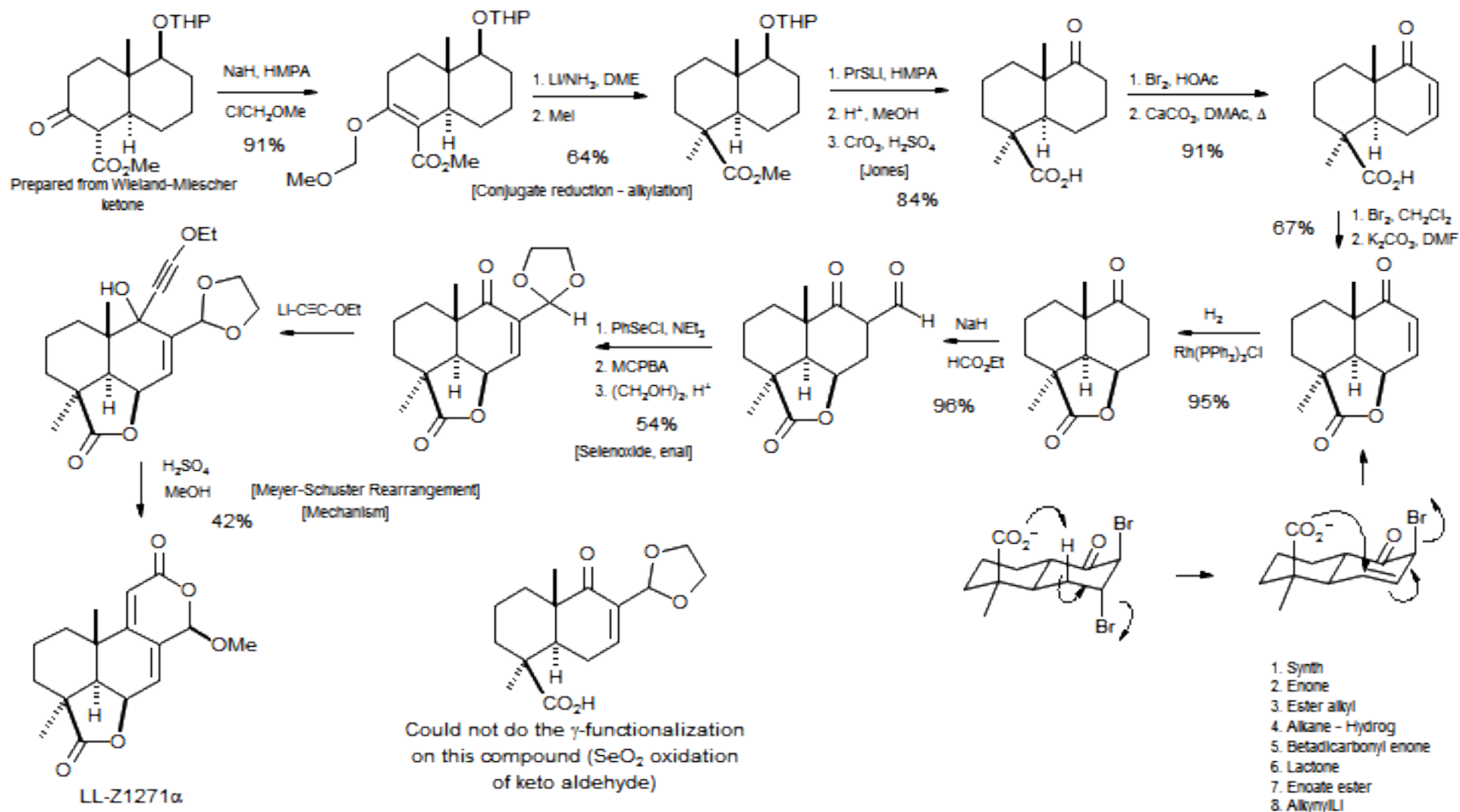
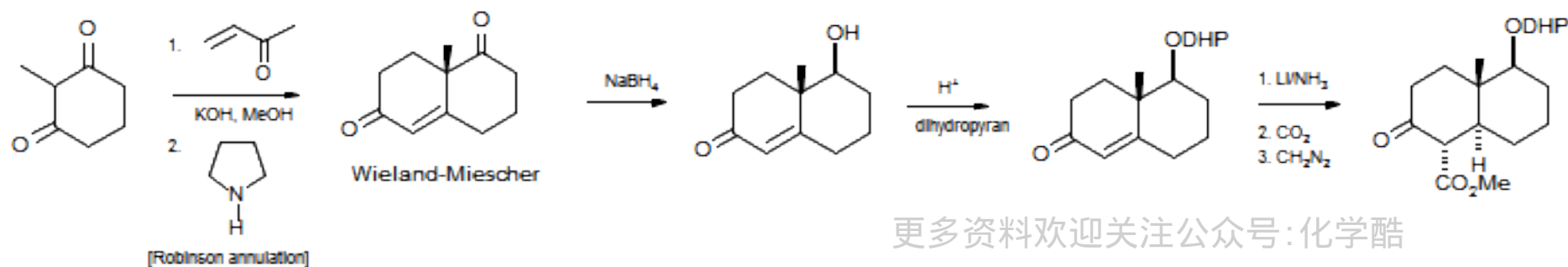
Leucascandrolide A

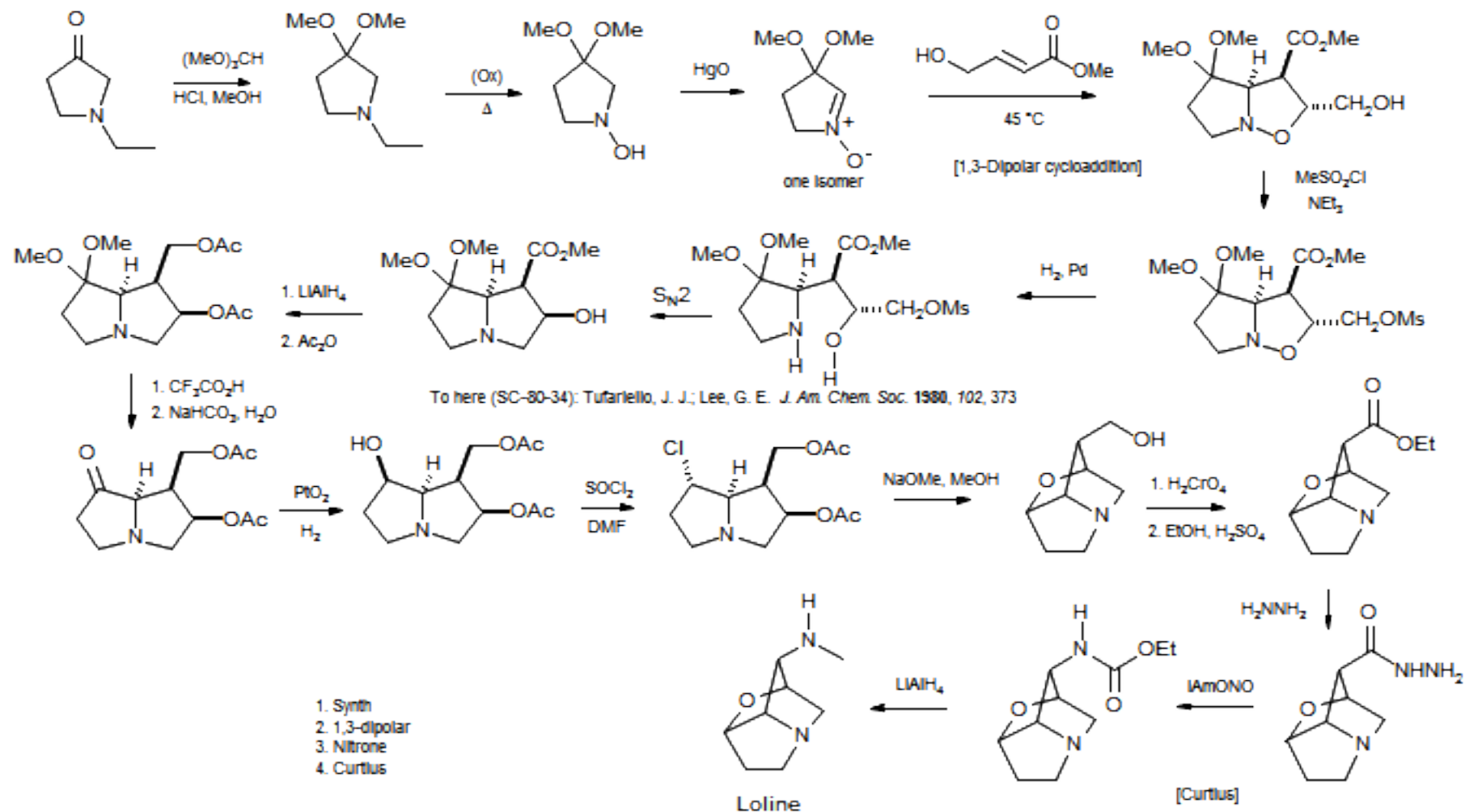
Leucotriene A₄ Methyl Ester

Baker, S. R.; Clissoid, D. W.; McKillop, A. *Tetrahedron Lett.* 1988, 29, 991.

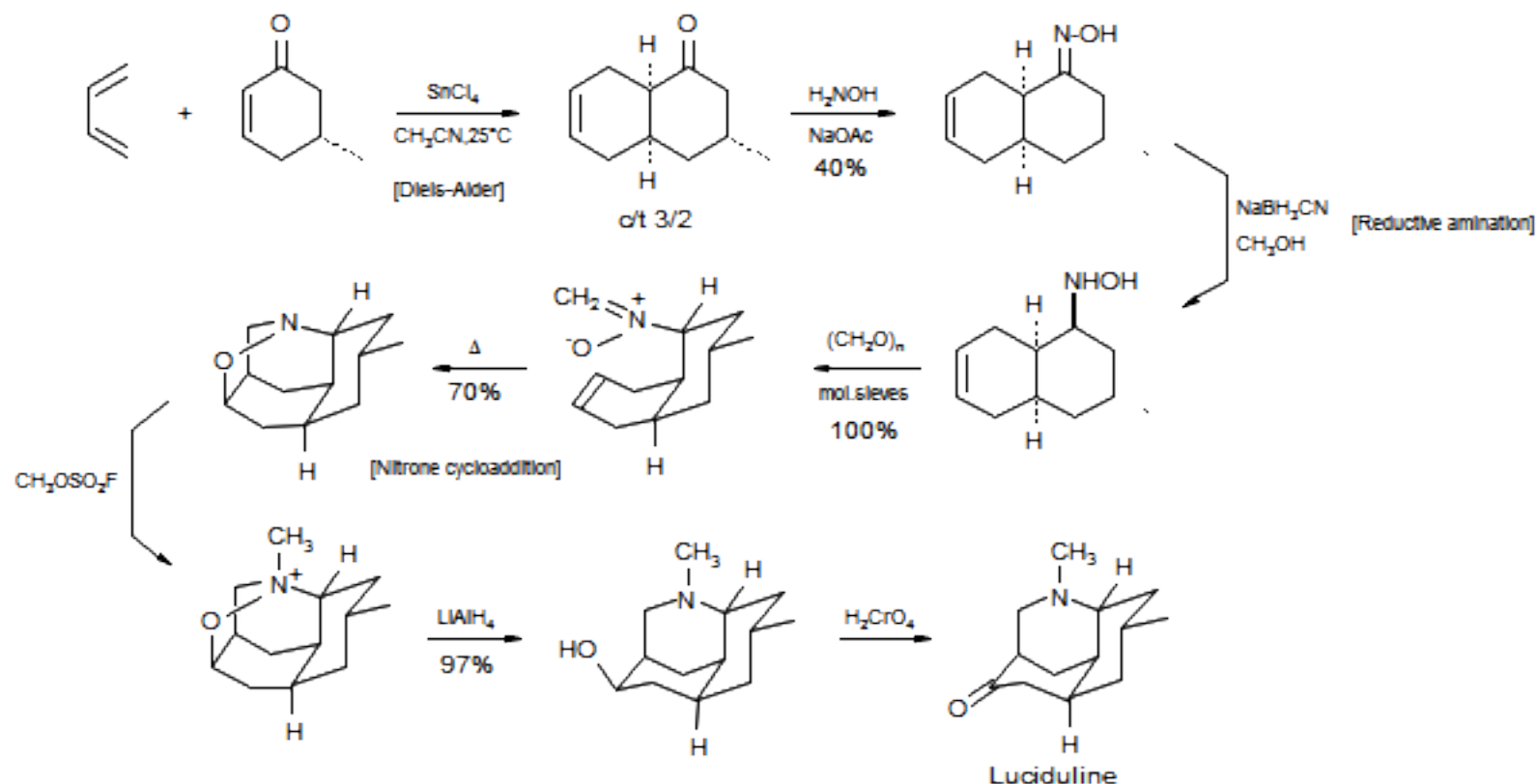


1. Synth
2. Enal
3. Wittig
4. Chem 547

Spencer, T. A. *J. Org. Chem.* 1968, 33, 712

Tufariello, J. J.; Medkler, H.; Winzenberg, K. *J. Org. Chem.* **1986**, *51*, 3556

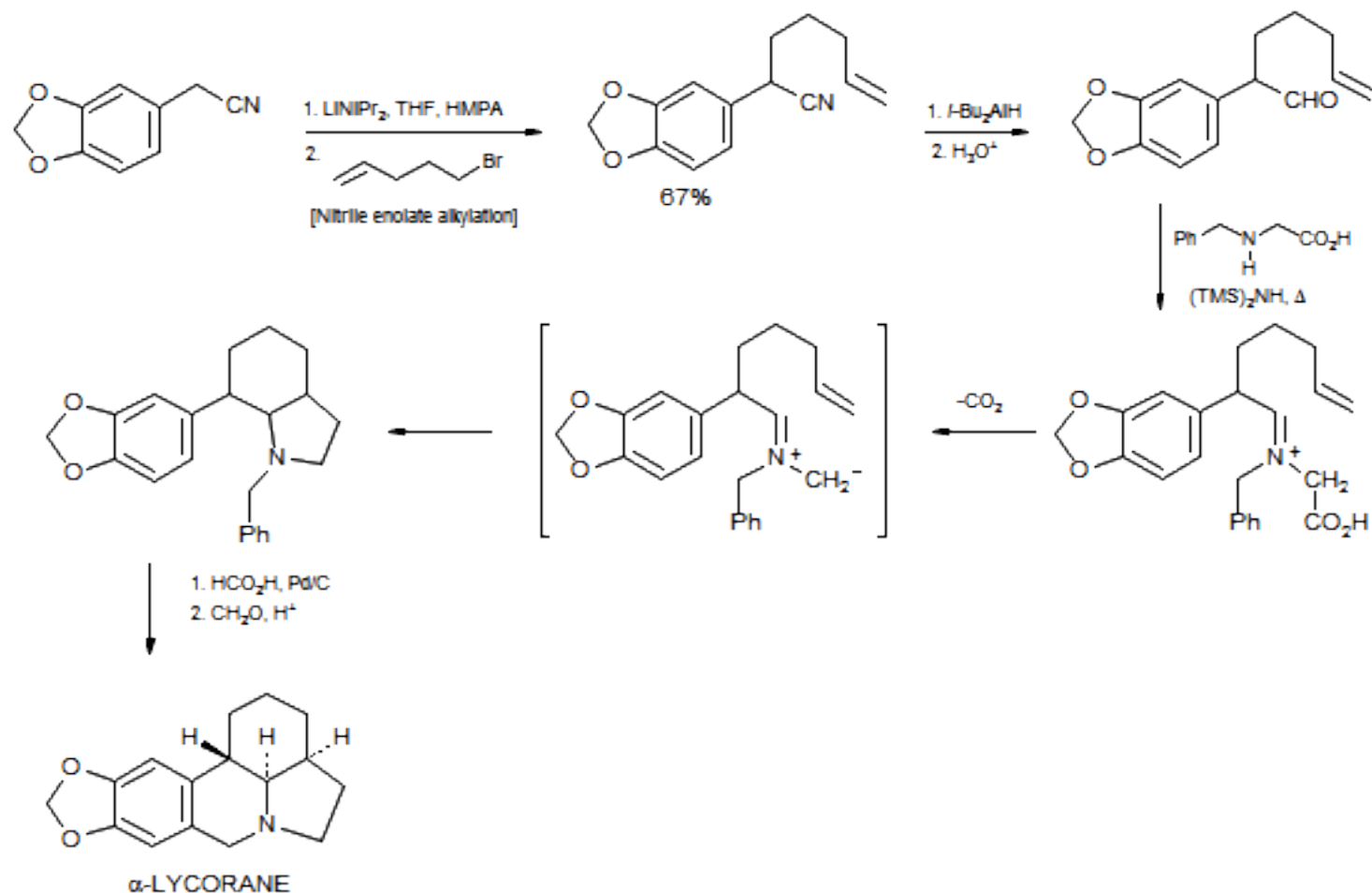
Oppolzer, W.; Petrzilka, M. *J. Am. Chem. Soc.*, 1976, 98, 6722



1. Synth
2. Diels-Alder
3. Nitrene 2+3
4. Amine

Lycorane, α -

Wang, C. L.; Ripka, W. C.; Confalone, P. N. *Tetrahedron Lett.*, 1984, 25, 4613 (Azomethine Ylid Cycloaddition).



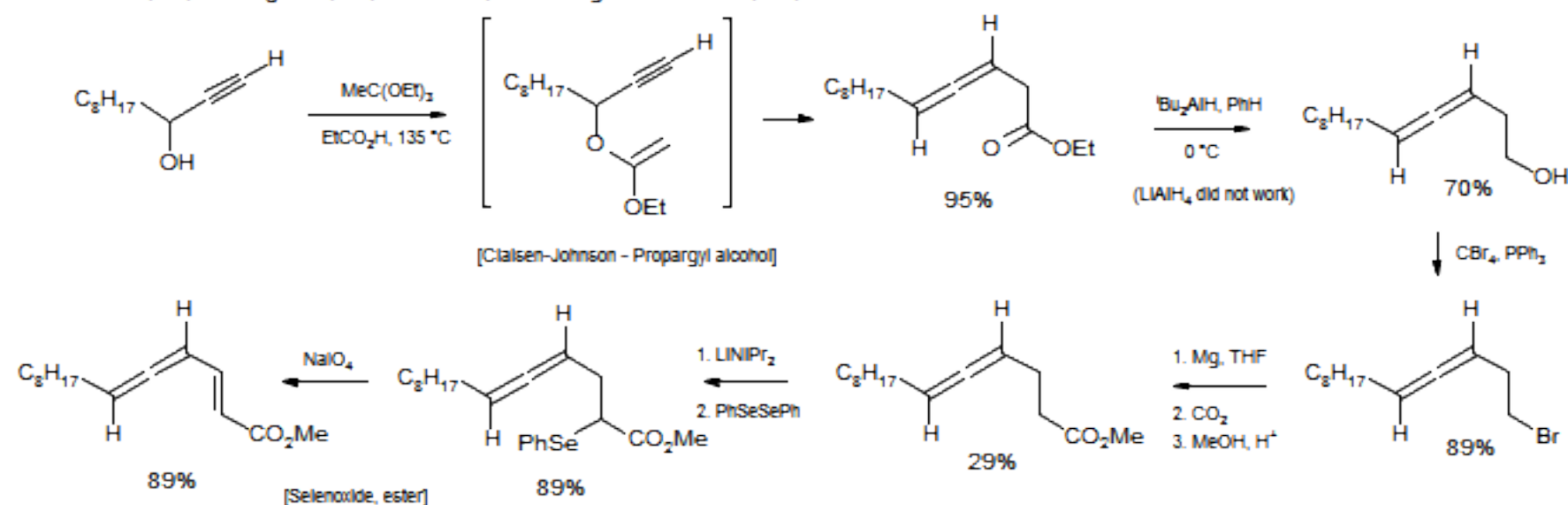
1. Synth
2. Nitrile Alk
3. Ylid Cycloadd
4. DIBAL Al f. CYAN

Male Dried Bean Beetle Sex Pheromone

77-36

Kocienski, P.; Cernogliaro, G.; Feldstein, G. *J. Org. Chem.* **1977**, *42*, 353

EXP

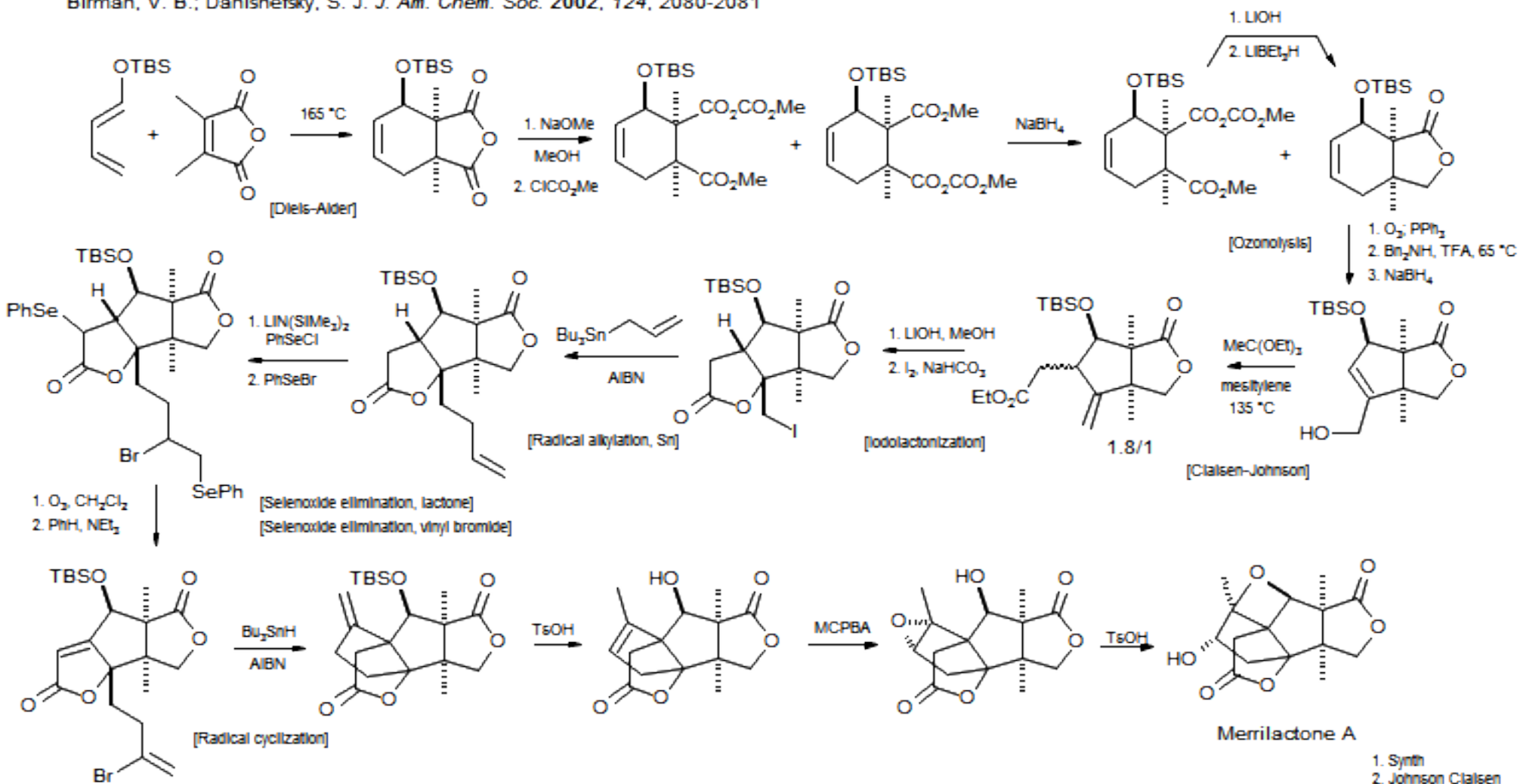


1. Synth
2. Alcohol
3. [3.3]Claisen
4. Bromide
5. Allene
6. Selenoxide Elim

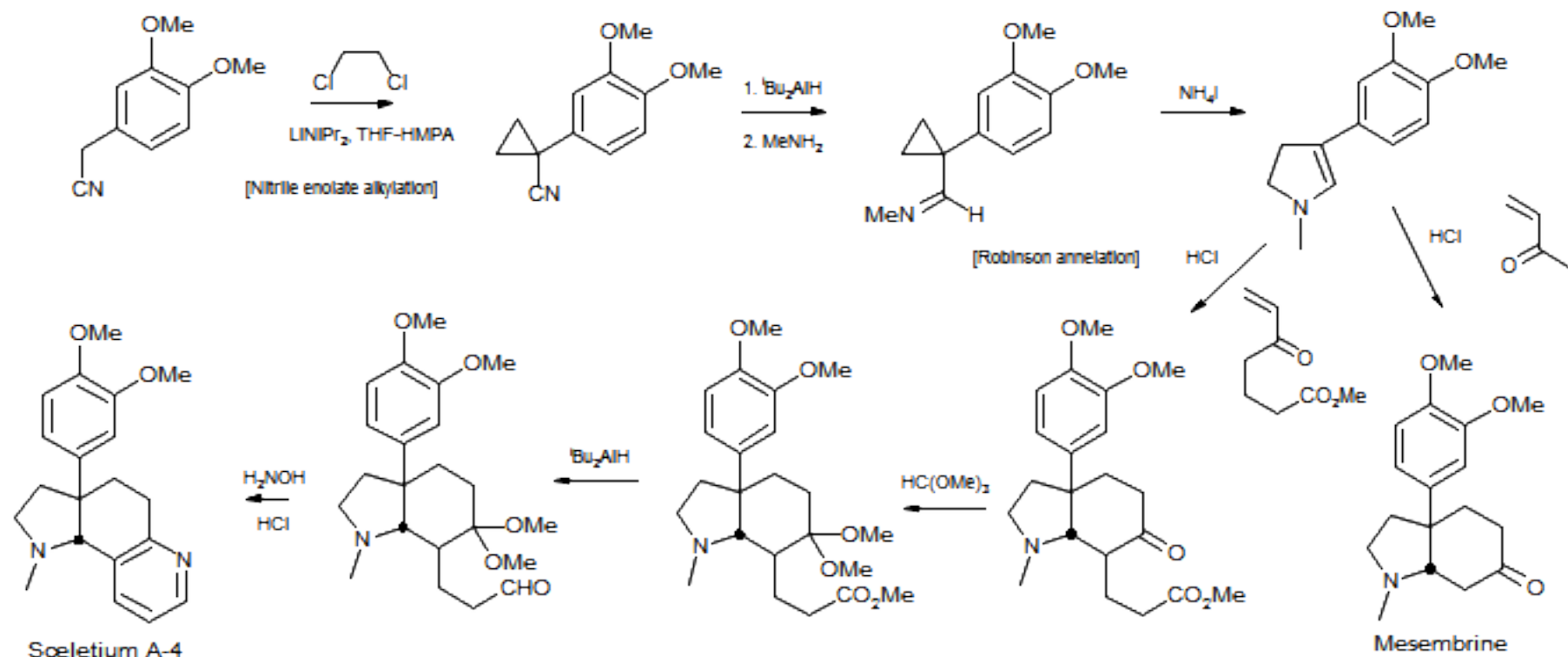
Merrilactone

Birman, V. B.; Danishefsky, S. J. *J. Am. Chem. Soc.* 2002, 124, 2080-2081

02-14



1. Synth
2. Johnson Claisen
3. Selenoxide
4. Diels-Alder
5. Iodolactonization
6. Chem 547



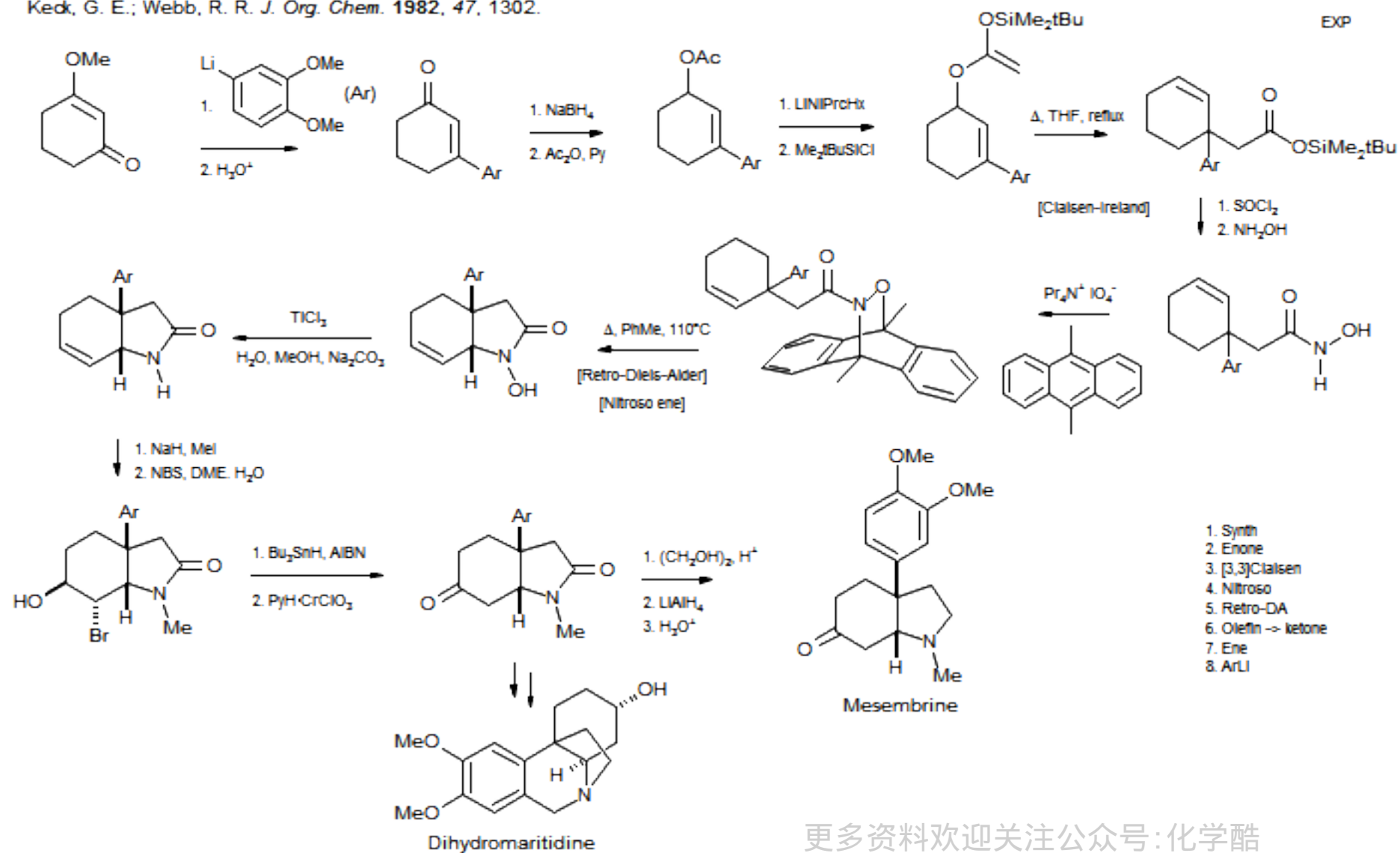
1. Synth
2. Cyclopropane
3. Robinson
4. DIBAL

Mesembrine

Ked, G. E.; Webb, R. R. *J. Org. Chem.* 1982, 47, 1302.

82-03

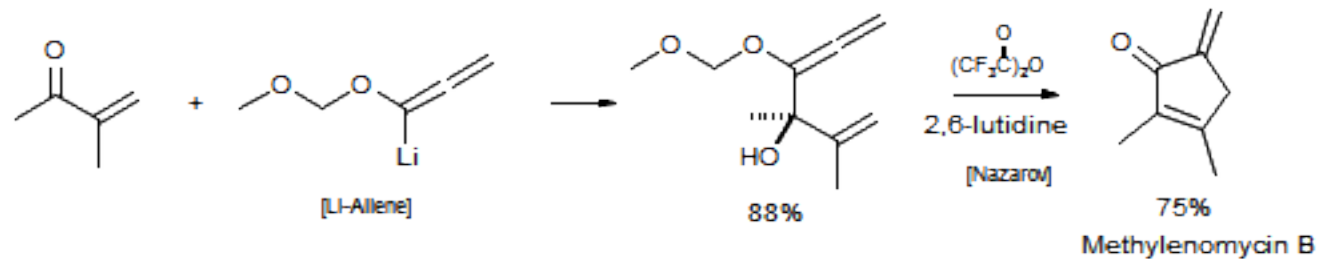
EXP



Methylenomycin B

Tius, M. A.; Astrab, D. P.; Fauq, A. H.; Ousset, J.-B.; Trehan, S. *J. Am. Chem. Soc.* **1986**, *108*, 3438-3442.

88-17



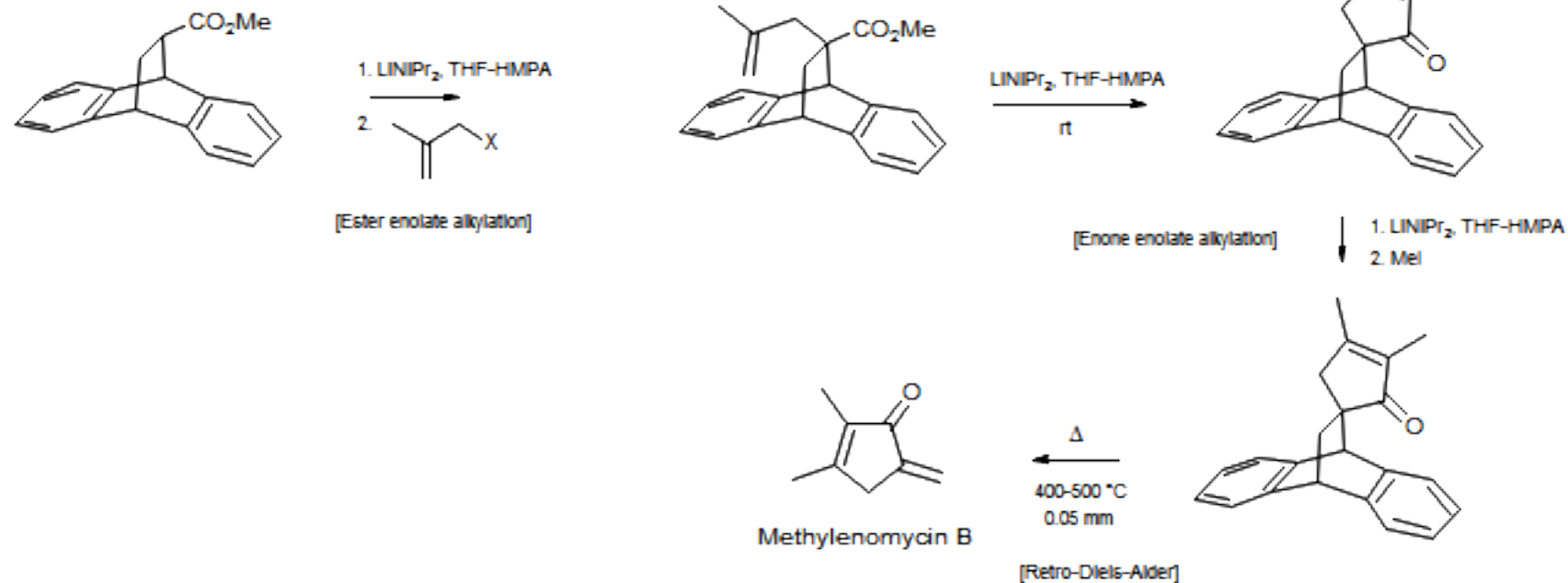
1. Synth
2. Nazarov
3. Allenyl Li

Methylenomycin B

Siwapinyoyos, T.; Thebtaranonth, Y. *J. Org. Chem.* 1982, 47, 598.

82-16

Comm

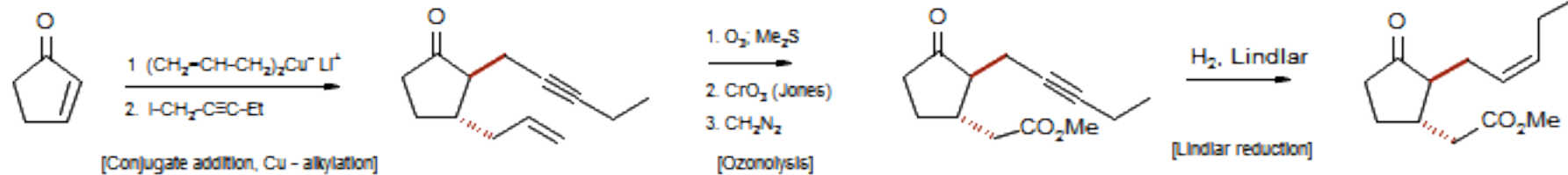


1. Retro-DA
2. 5-ring
3. Enone
4. Synth
5. Baldwin

Methyl Jasmonate

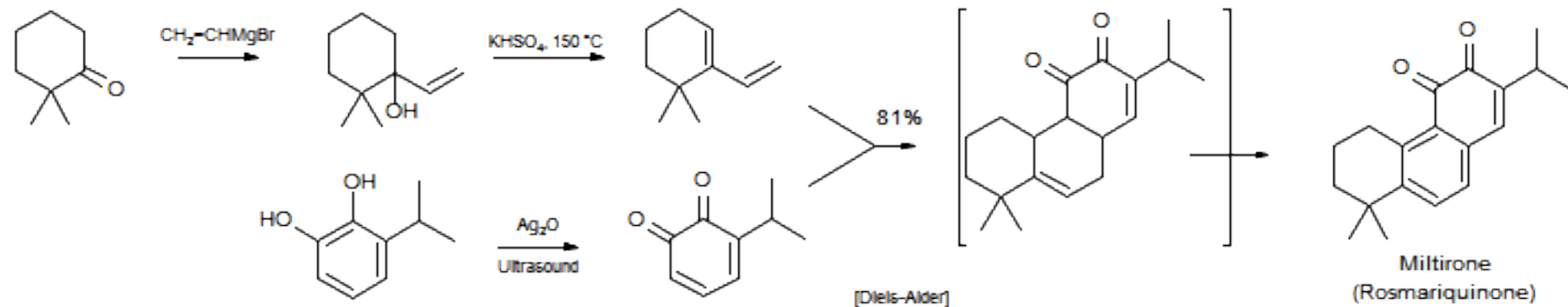
78-17

Green, Crabbé, *Tetrahedron Lett.* 1976, 4867.



1. Synth
2. OrgCu
3. Ketone Alkyl
4. Carbox acid

Lee, J.; Mei, H. S.; Snyder, J. K. *J. Org. Chem.* **1990**, *55*, 5013 (see also *J. Org. Chem.* **1985**, *50*, 4996)



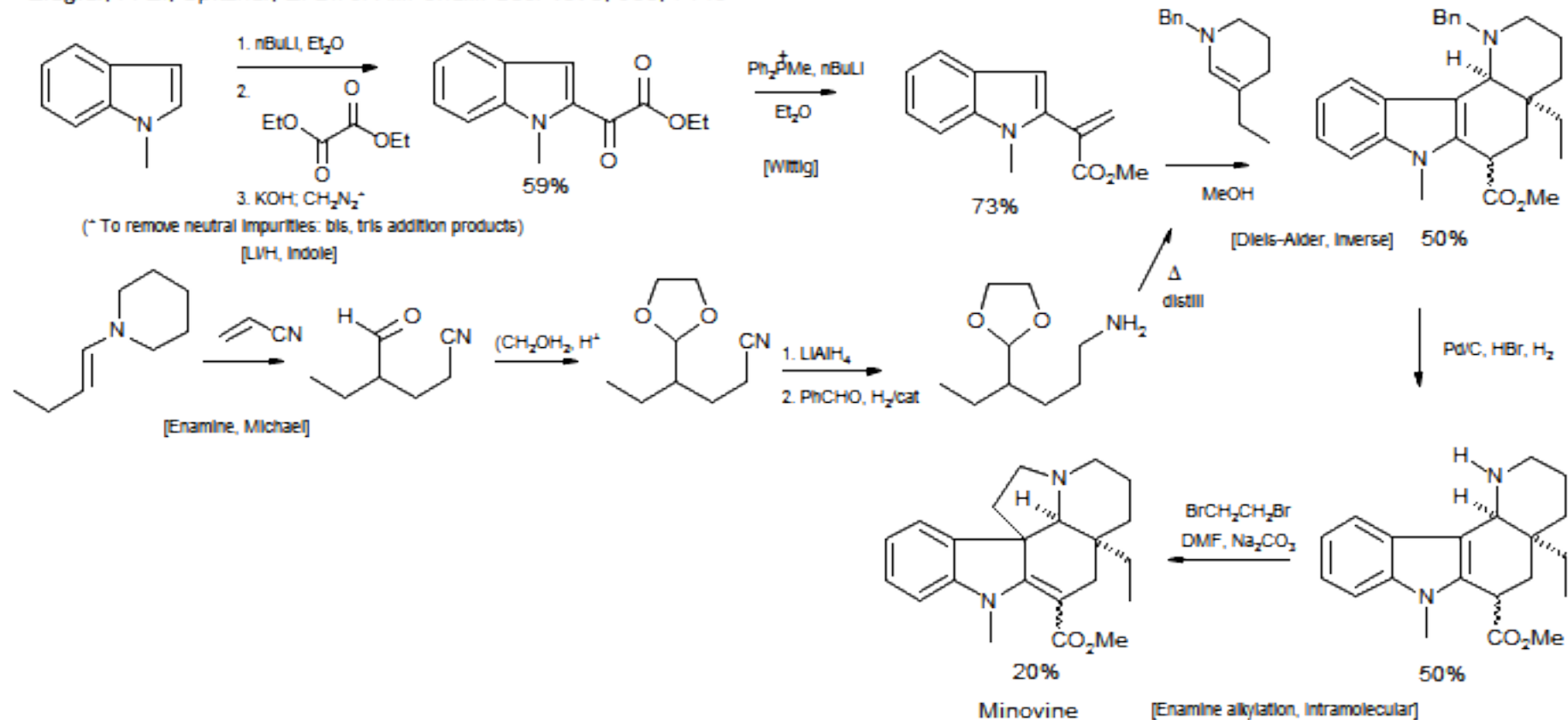
1. Synth
2. o-Quinone
3. Diels-Alder
4. Diene

Minovine

73-15

EXP

Ziegler, F. E.; Spitzner, E. B. *J. Am. Chem. Soc.* 1973, 955, 7148

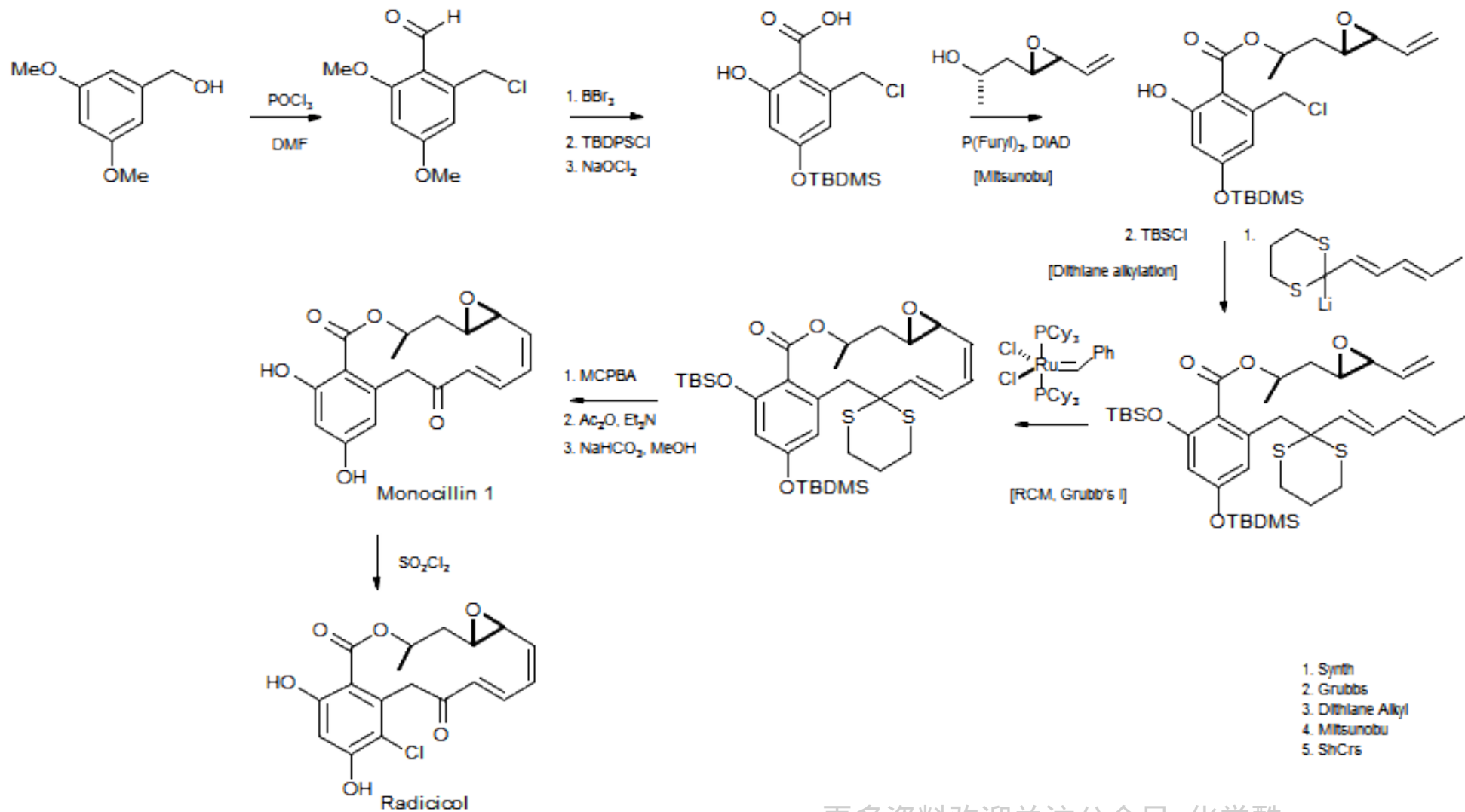


1. Synth
2. Diels-Alder
3. Wittig
4. ArLi
5. Dibromoethane alkyl

Monicillin I

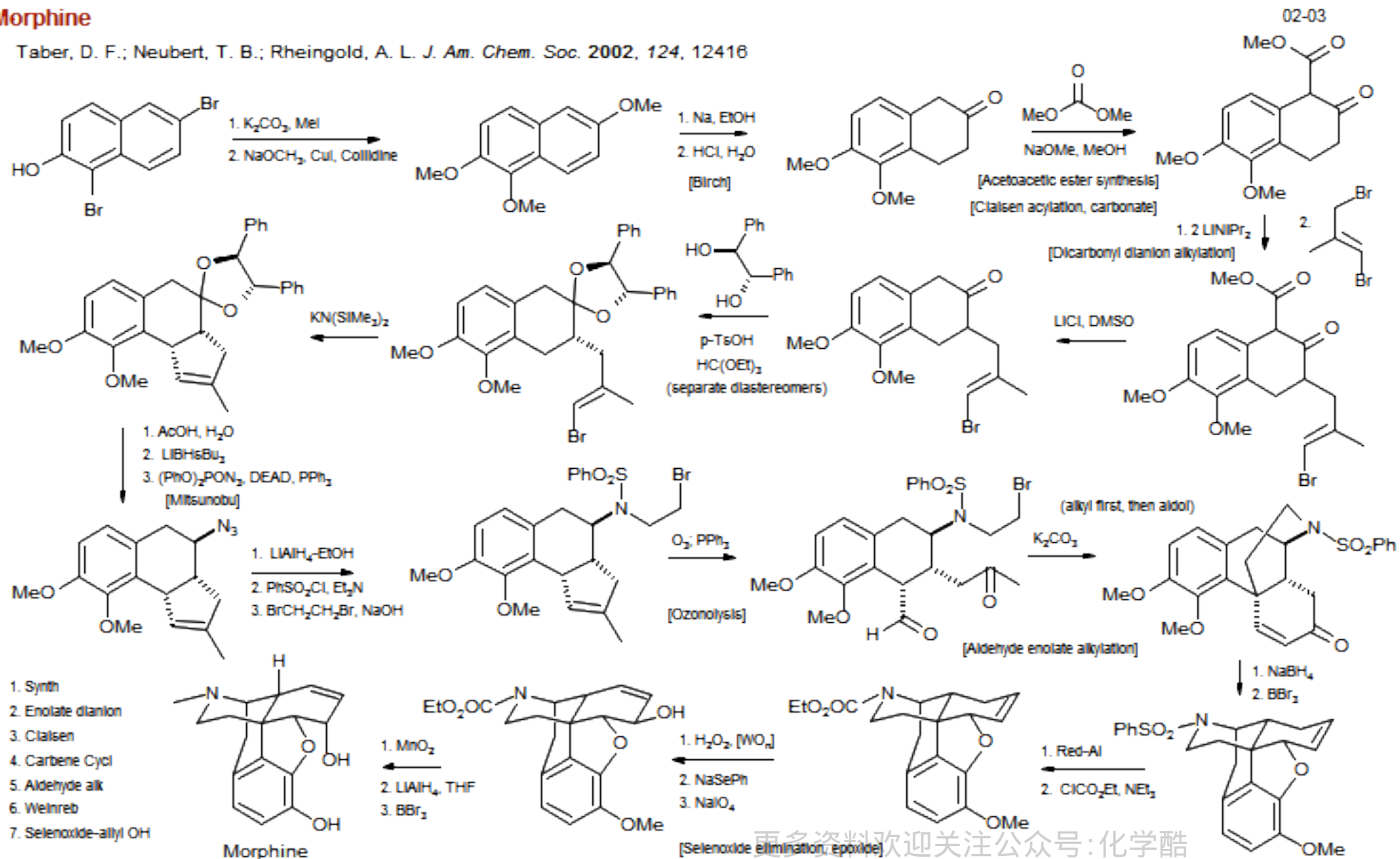
Garbaccio, R. M.; Stachel, S. J.; Baeschlin, D. K.; Danishefsky, S. J. *J. Am. Chem. Soc.* 2001, 123, 10903-10908

01-19
EXP



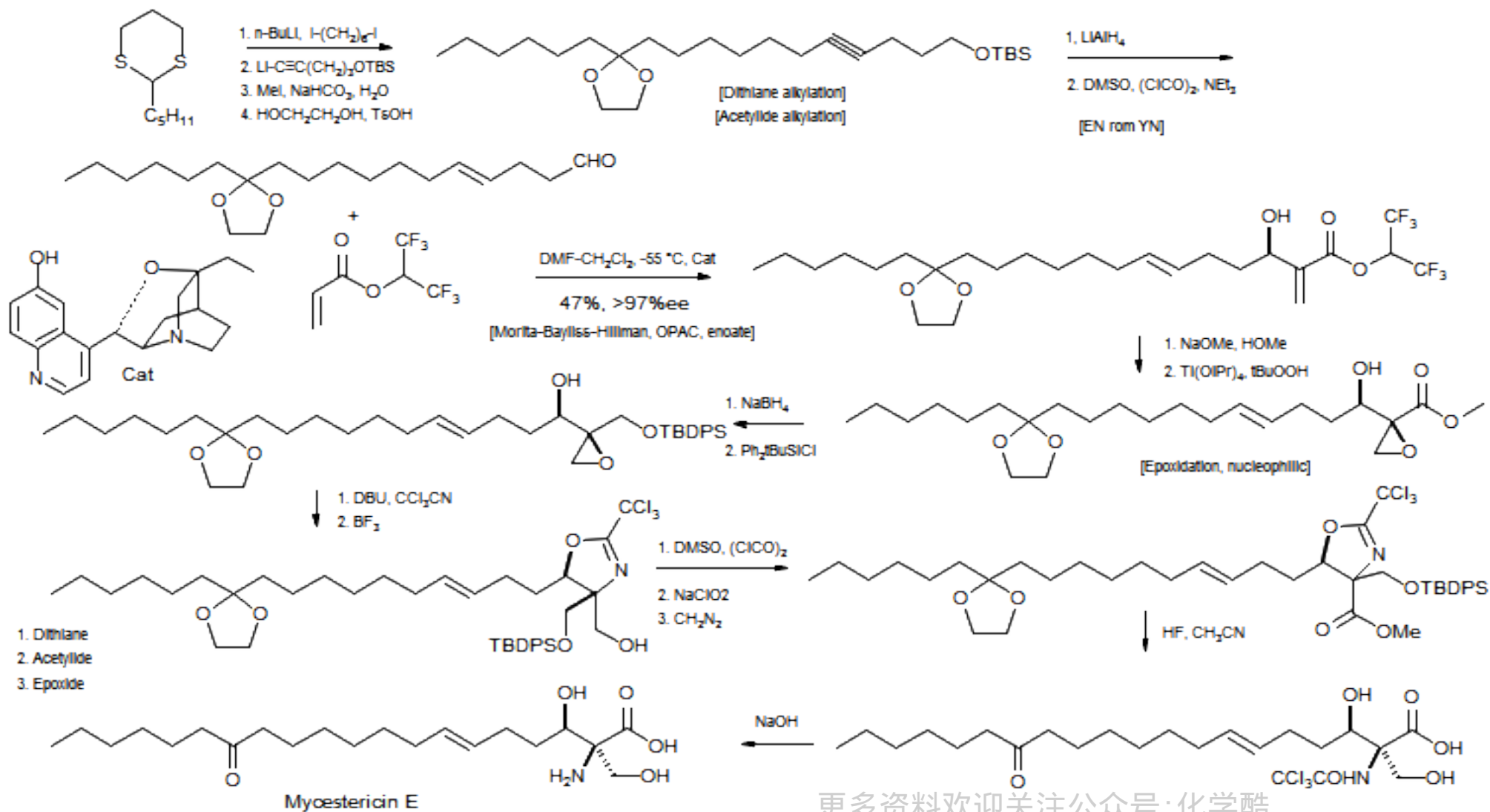
Morphine

Taber, D. F.; Neubert, T. B.; Rheingold, A. L. *J. Am. Chem. Soc.* **2002**, *124*, 12416



Mycestericin E

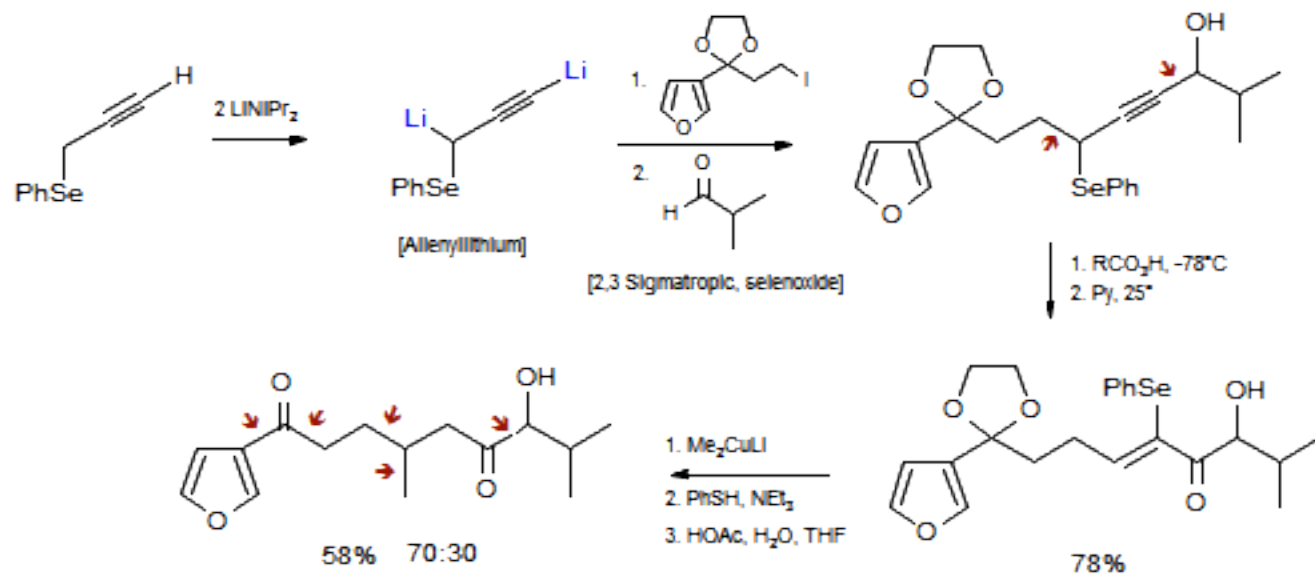
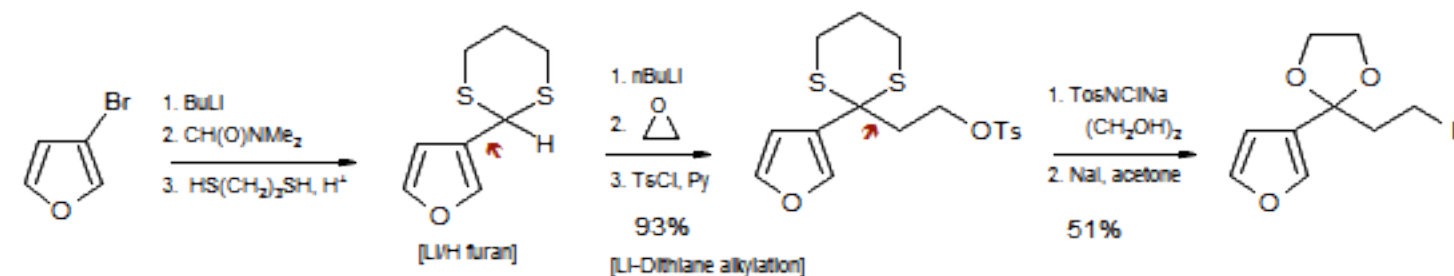
Iwabuchi, Y.; Furukawa, M.; Esumi, T.; Hatakeyama, S. *Chem. Commun.* 2001, 2030.



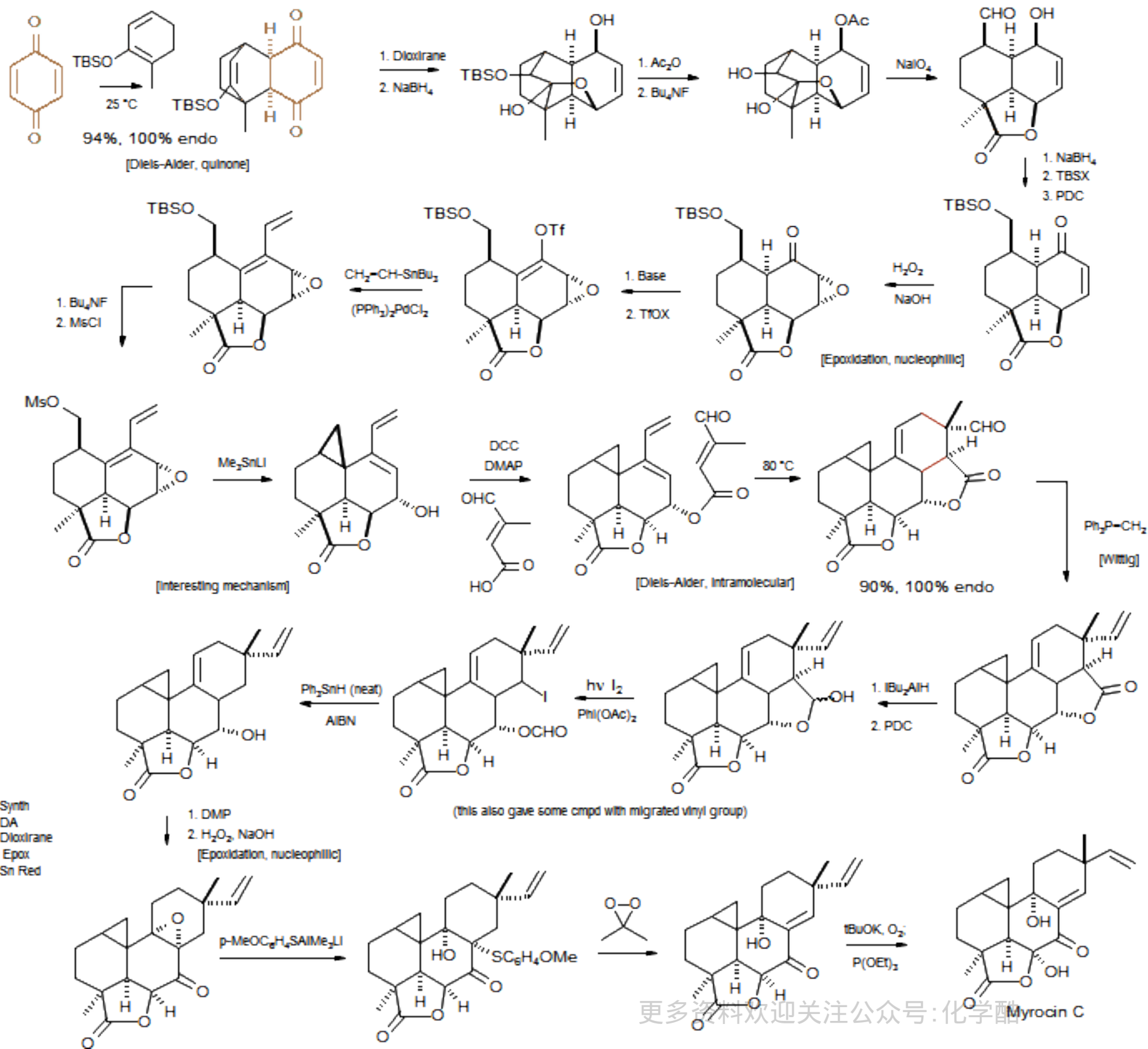
Myoporone, 7-Hydroxy

Reich, H. J.; Shah, S. K.; Gold, P. M.; Olson, R. E. *J. Am. Chem. Soc.*, 1981, 103, 3112.

81-28



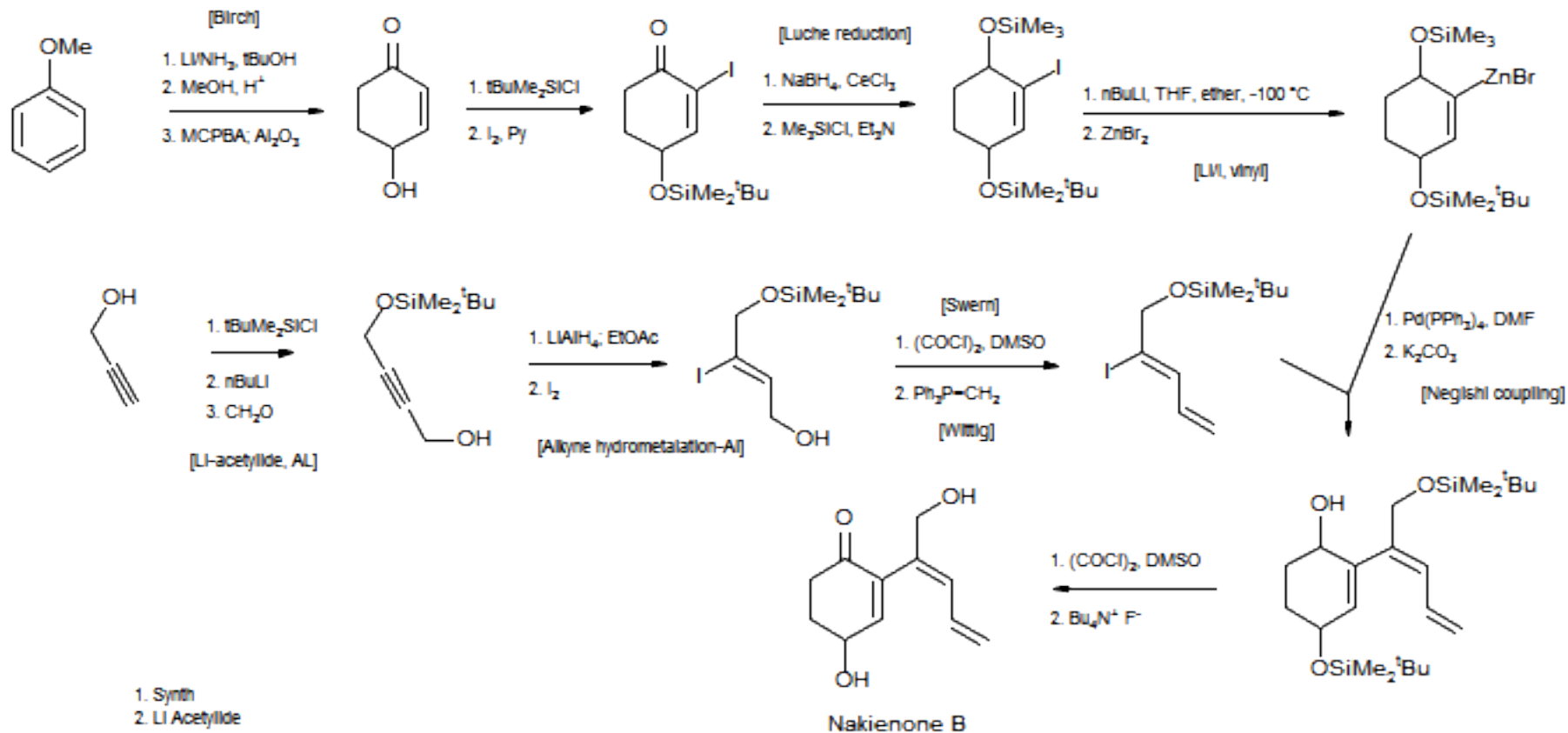
1. Synth
2. dithiane
3. Propargyl LI E2
4. Cu



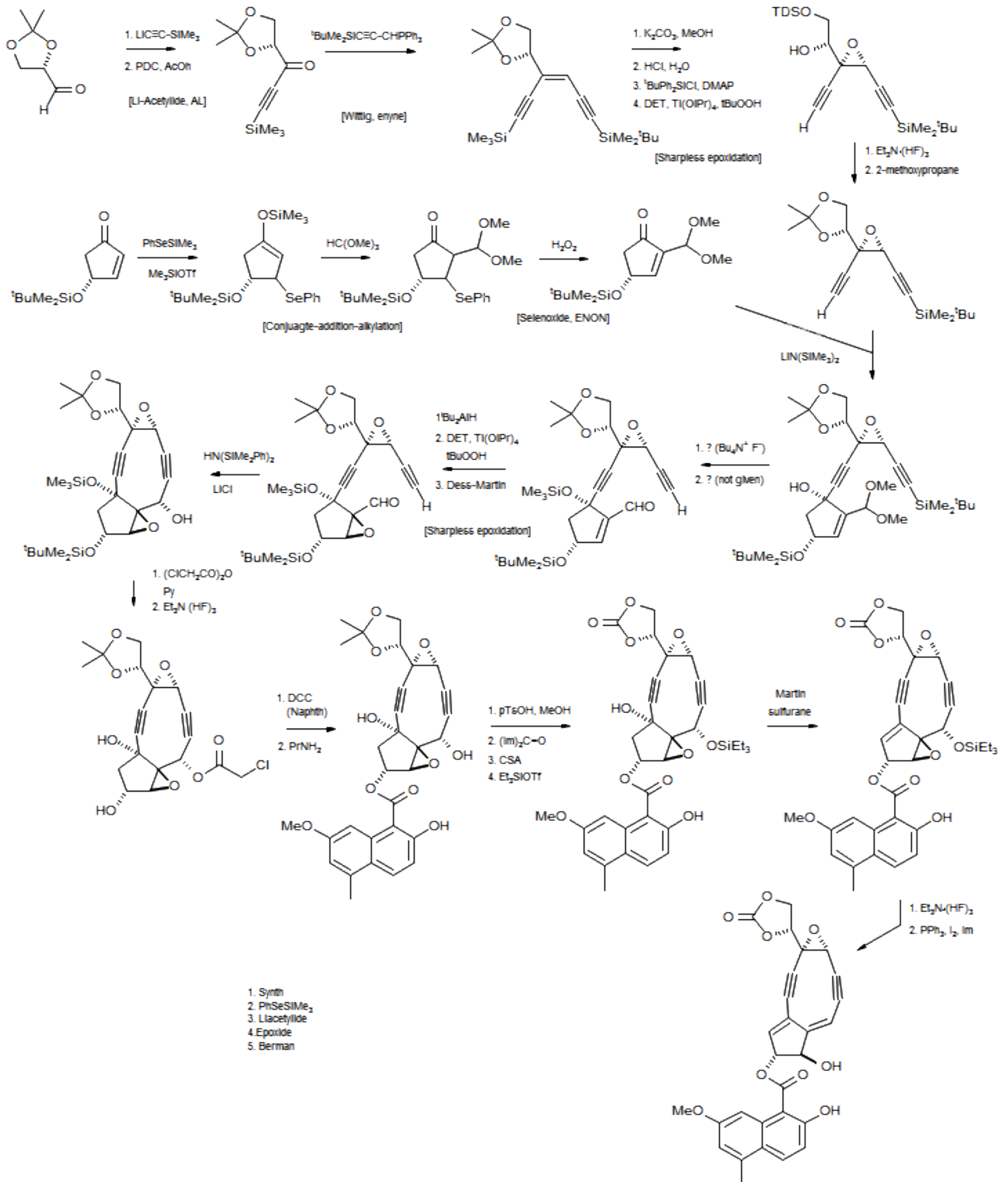
Nakienone B

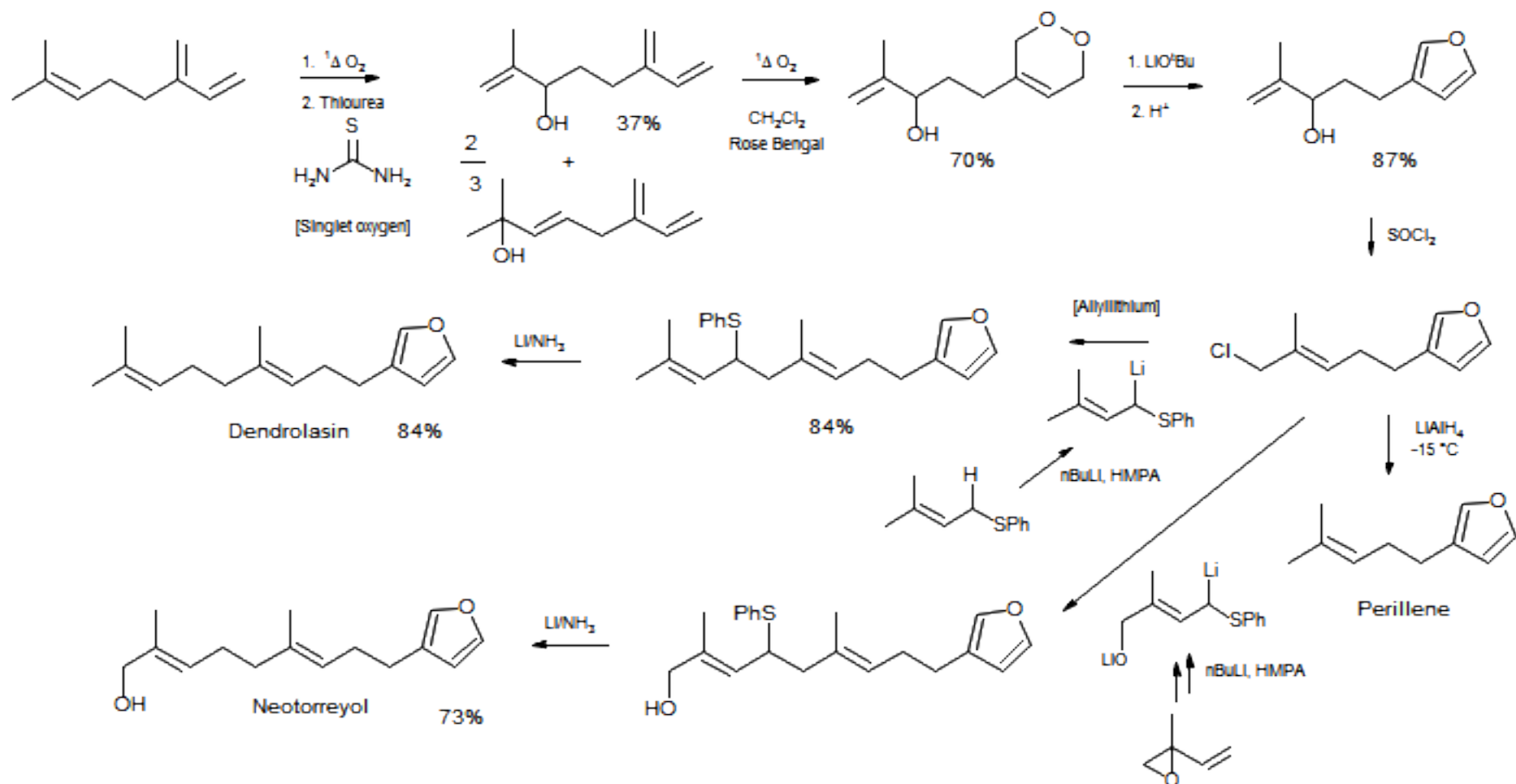
Pour, M.; Negishi, E. *Tetrahedron Lett.* 1996, 37, 4679

96-07



1. Synth
2. Li Acetylide
3. VinylLi
4. Diene
5. Negishi Coupl
6. Birch
7. Wittig
8. Zn

Myers, A. G. et al. *J. Am. Chem. Soc.* 2002, 124, 5382.

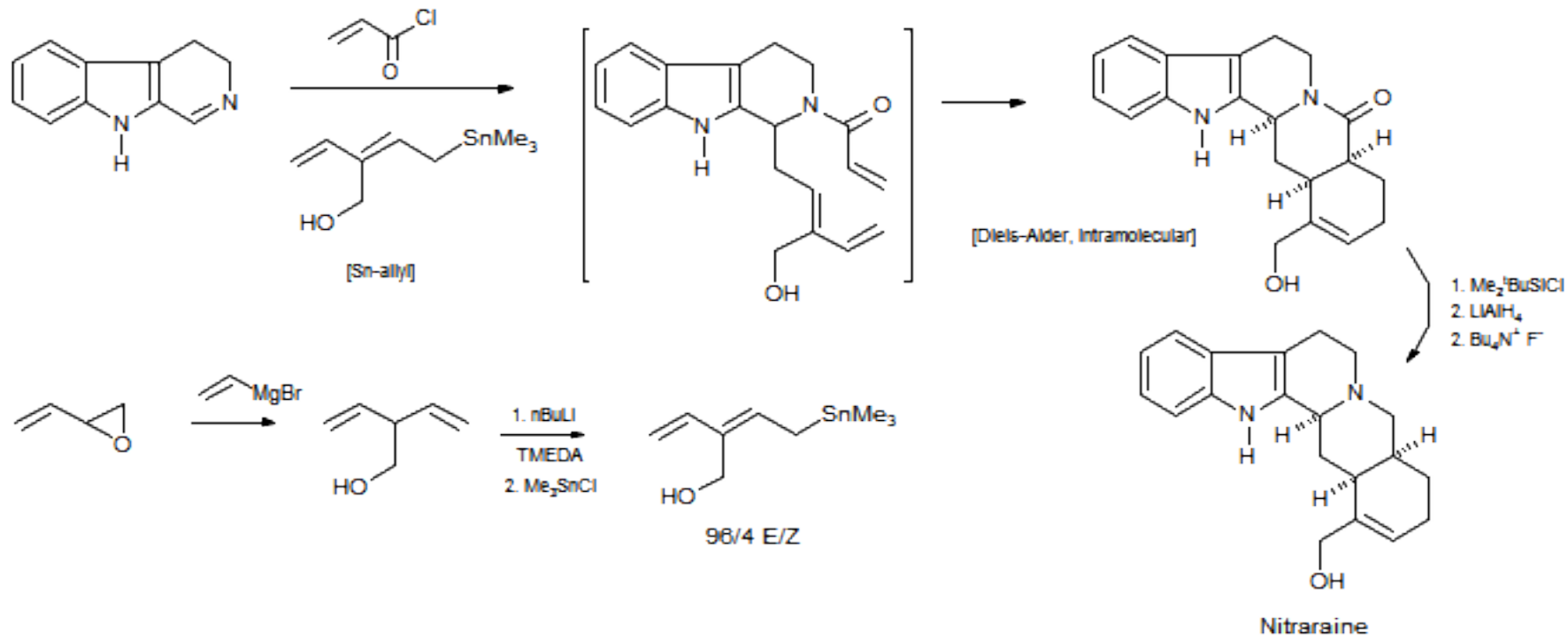
Kondo, K.; Matsumoto, M. *Tetrahedron Lett.* 1976, 391

1. AllylLiSulfide
2. Furan
3. Alkane
4. Singlet O_2

Nitrarine

Yamaguchi, R.; Hamasaki, T.; Sasaki, T.; Ohta, T. Utimoto, K.; Kozima, S.; Takaya, S. *J. Org. Chem.* 1993, 58, 1136

93-18

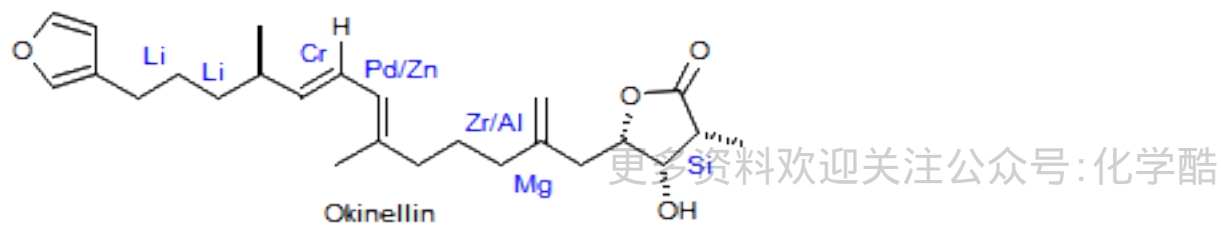
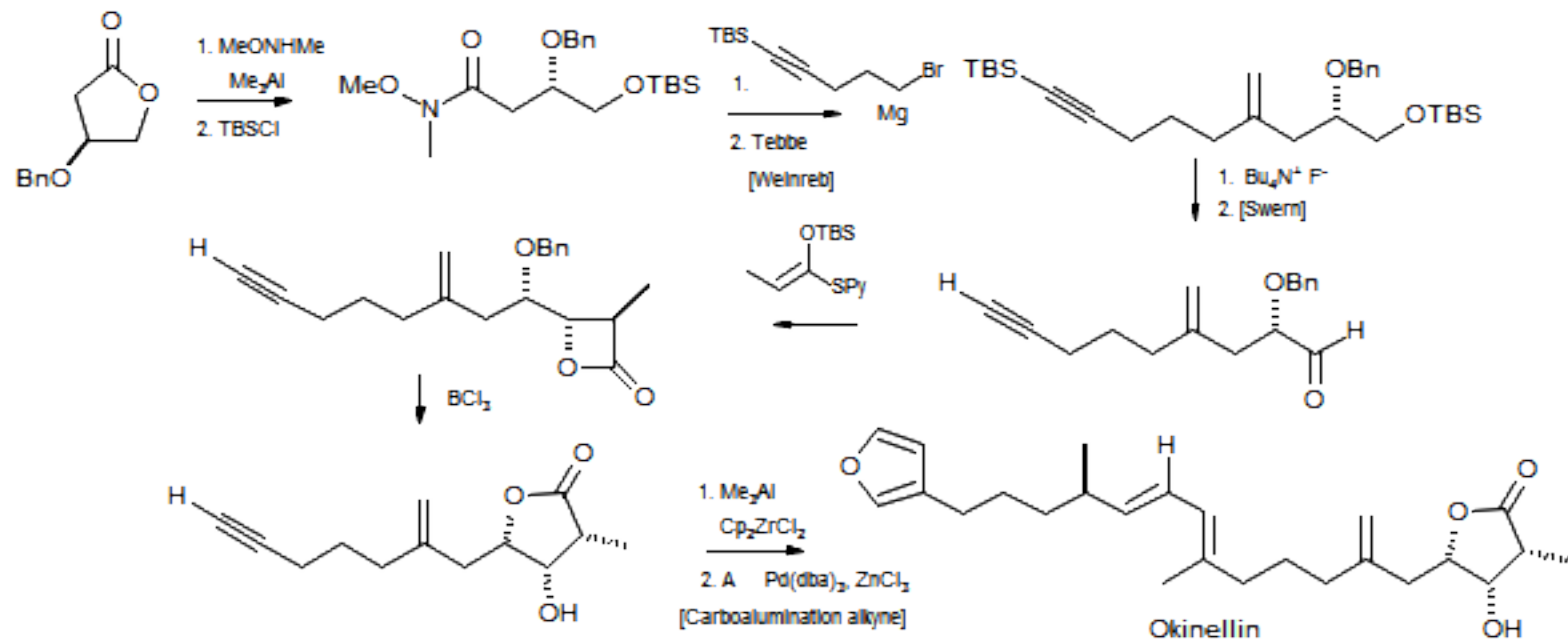
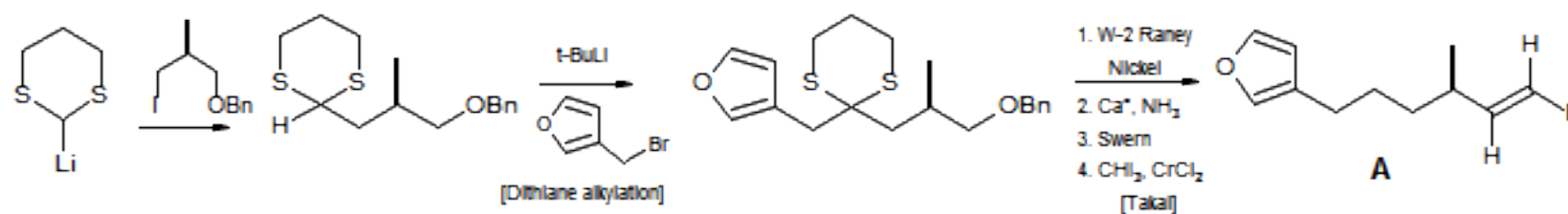


1. Synth
2. AllylSn
3. Diels-Alder

Okinellin B

98-01

Schmitz, W. D.; Messerschmidt, N. B. *J. Org. Chem.* 1998, 63, 2058

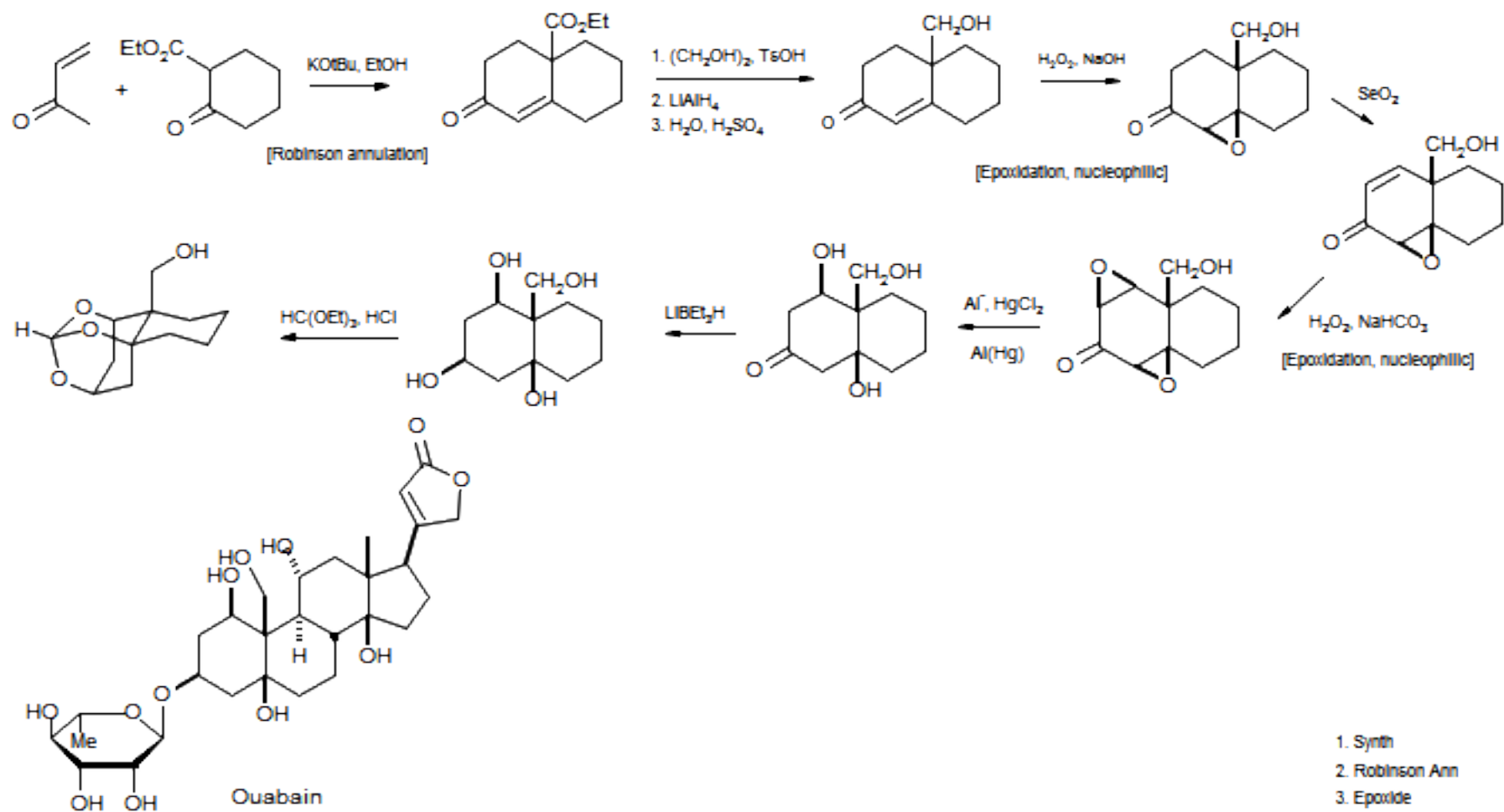


1. Synth
2. Weinreb
3. ShCrs
4. Dithiane
5. Tebbe
6. Negishi-Pd

Ouabain Model

03-05

Jung, M. E.; Pizzi, G. *Org. Lett.* 2003, 5, 137

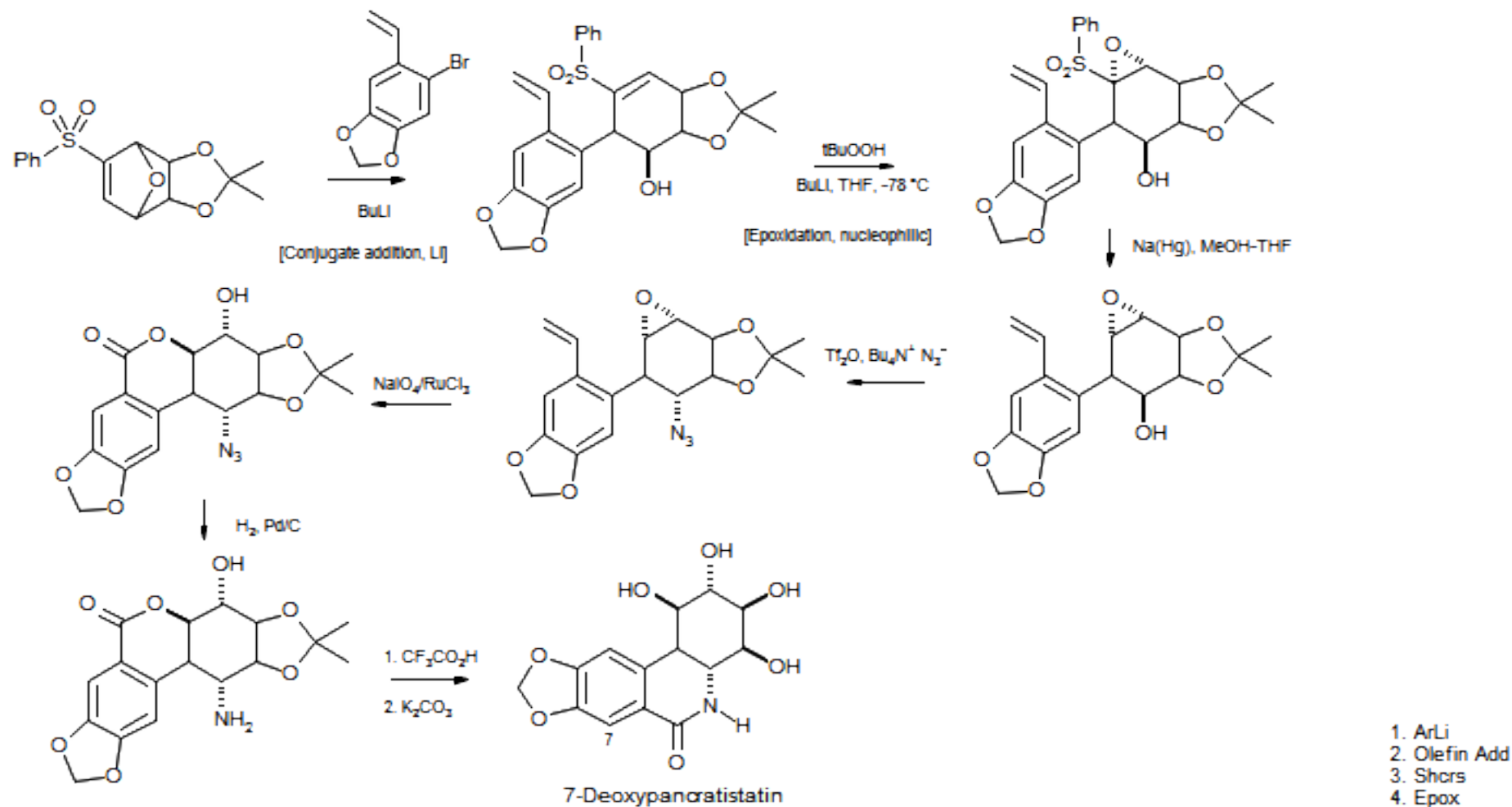


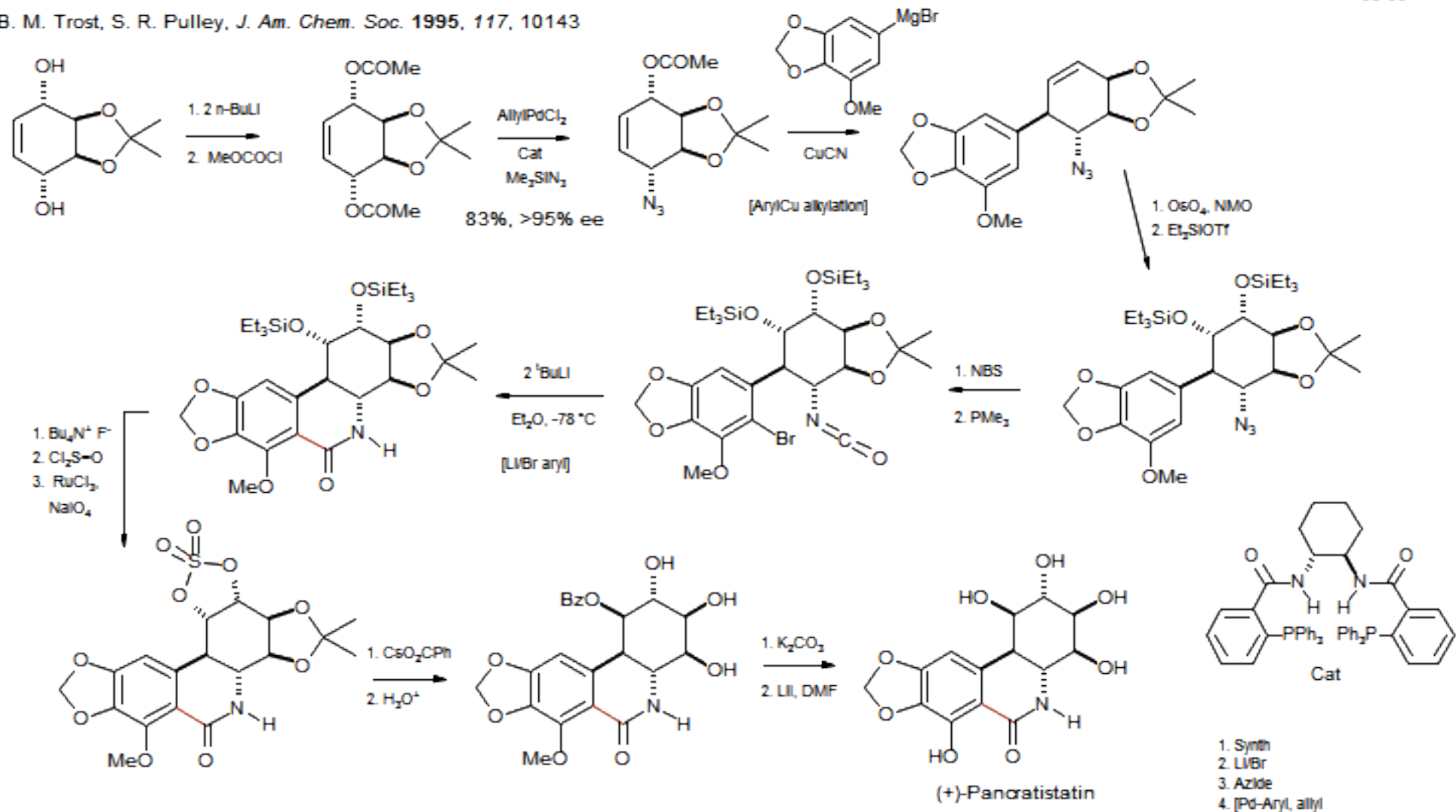
1. Synth
2. Robinson Ann
3. Epoxide
4. SeO_2
5. ON-2-OL - epox-reduct

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Pancratistatin-Deoxy

00-10

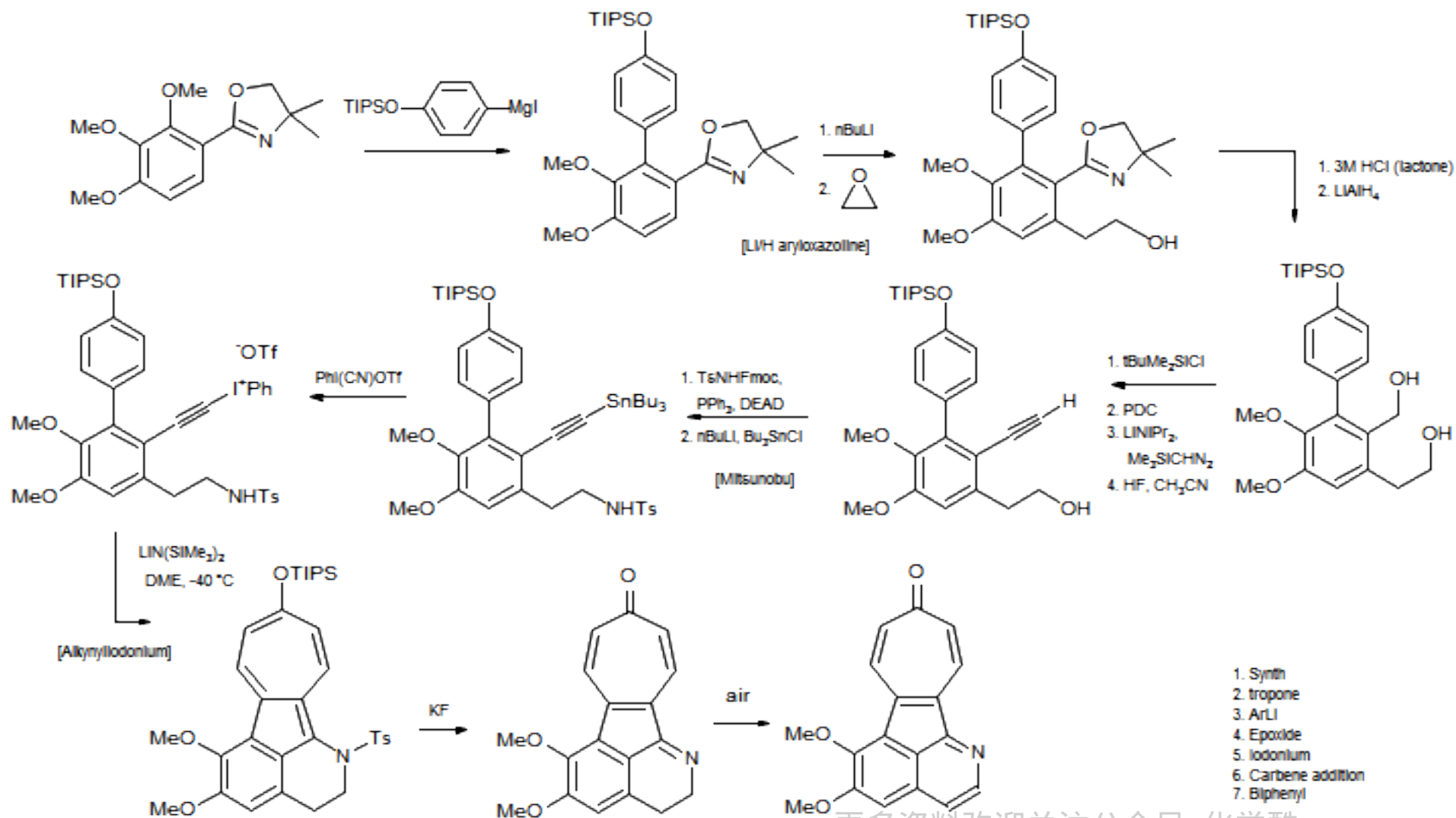
Avena, J. L.; Arjona, O.; Leon, L.; Plumet, J. *Org. Lett.* **2000**, *2*, 3683-3688.

B. M. Trost, S. R. Pulley, *J. Am. Chem. Soc.* 1995, 117, 10143

Pareitropone

Feldman, K. S.; Cutarelli, T. D. *J. Am. Chem. Soc.* 2002, 124, 11600 (tropoloisoquinoline alkaloid - anti-tumour)

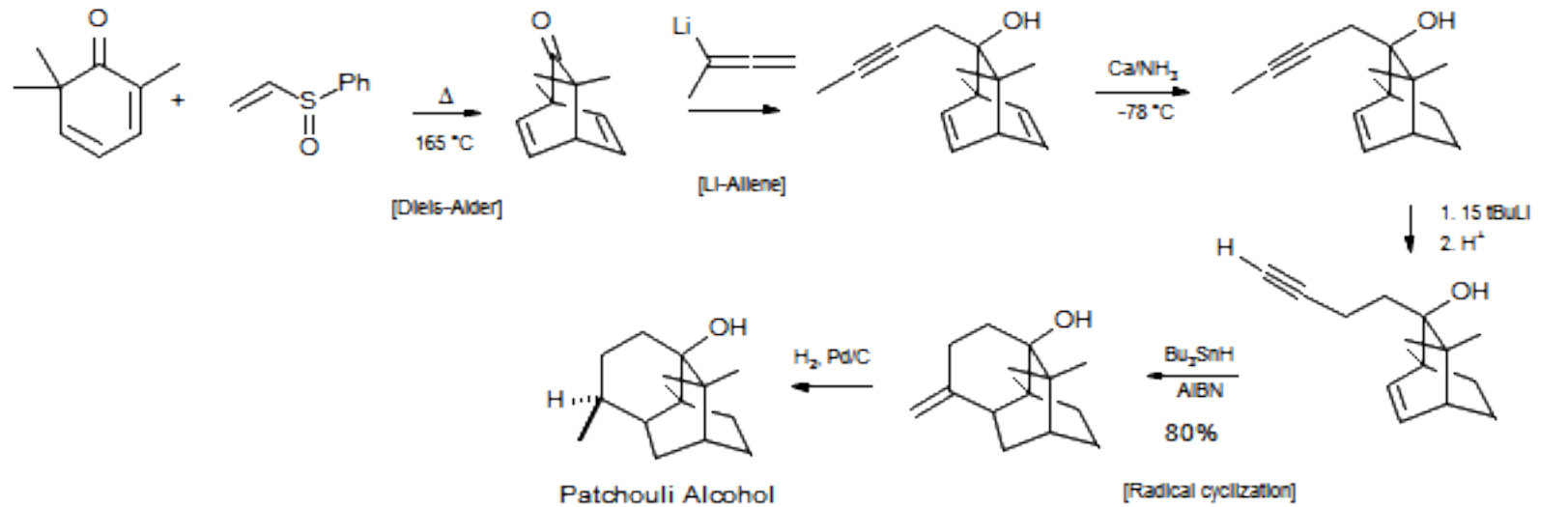
02-11



Patchouli Alcohol

Magee, T. V.; Stork, G.; Fludzinski, P. *Tet. Lett.* 1995, 36, 7607

95-08

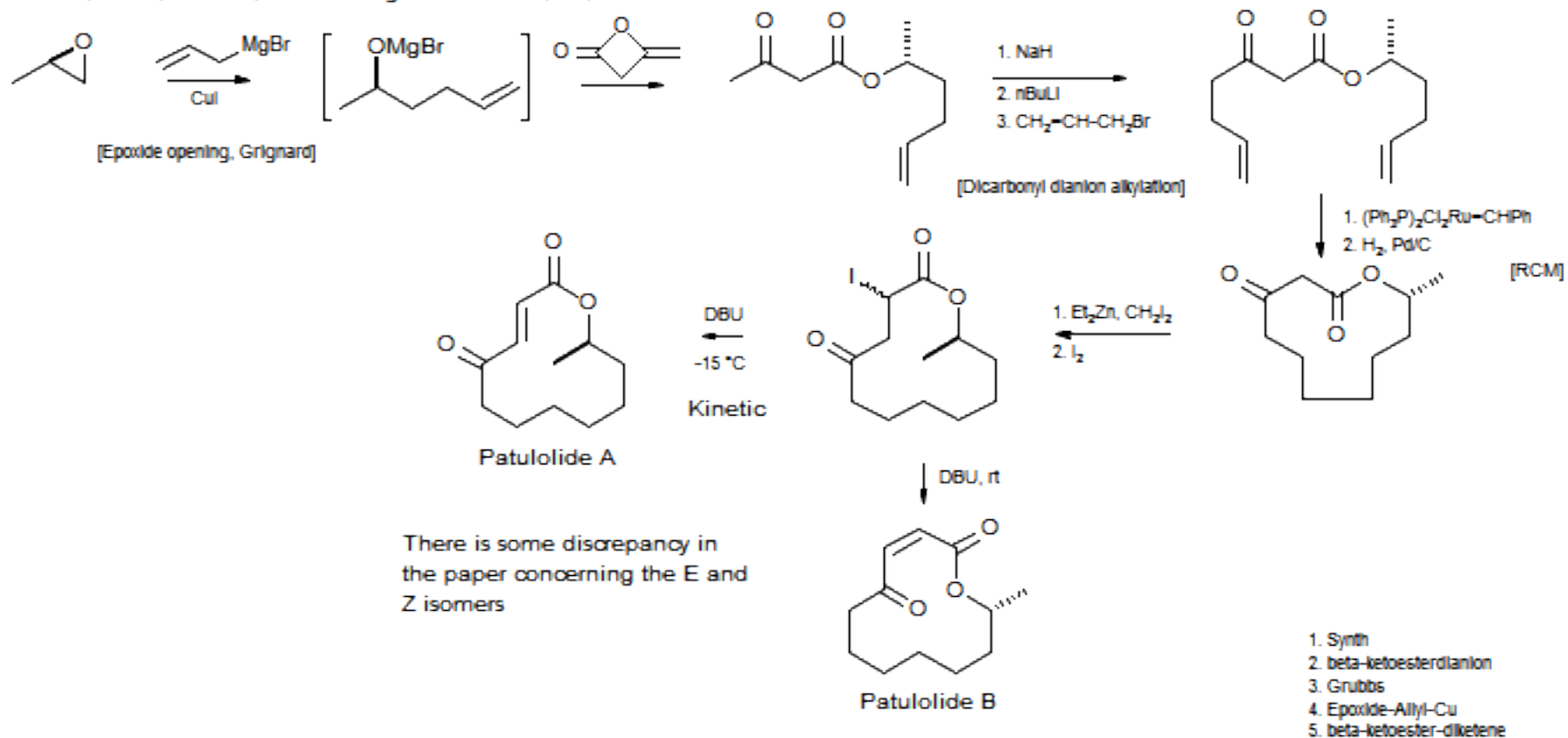


1. Vinyl sulfoxide DA
2. Synth
3. AllenylLi
4. Radical Cycl

Patulolide

Ronsheim, M. D.; Zercher, C. K. *J. Org. Chem.* 2003, 68, 1878

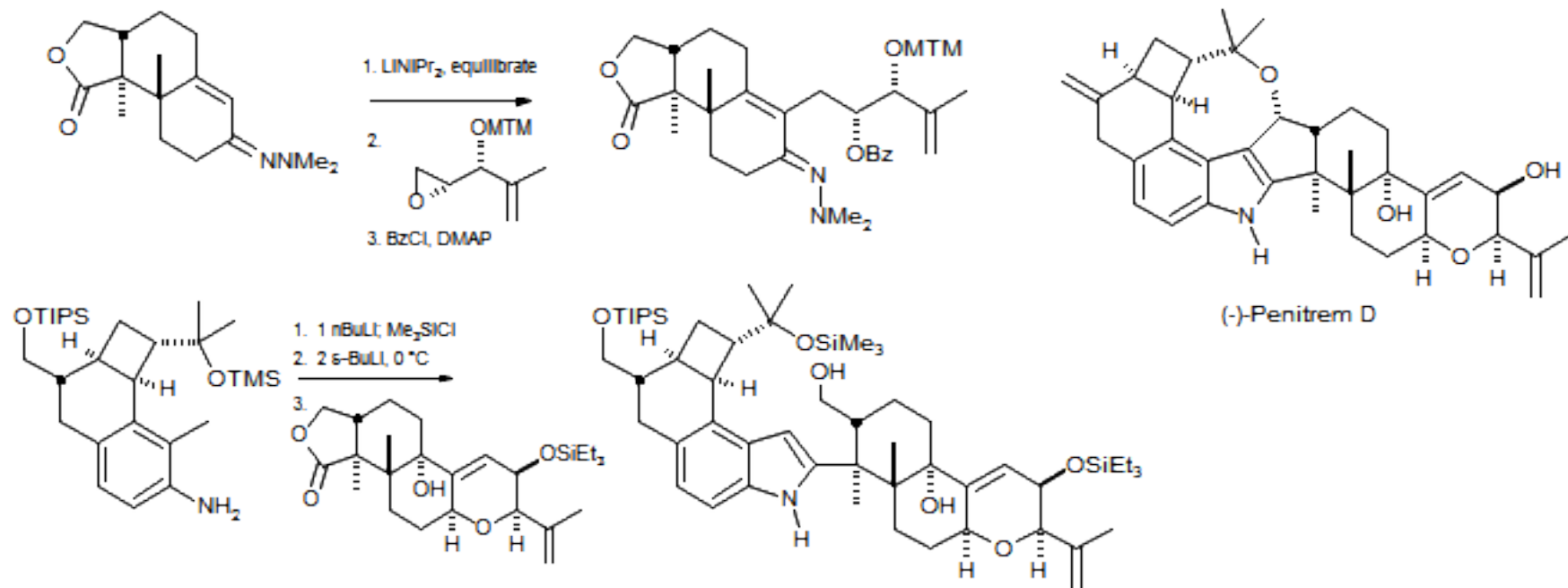
03-08



Penitrem D.

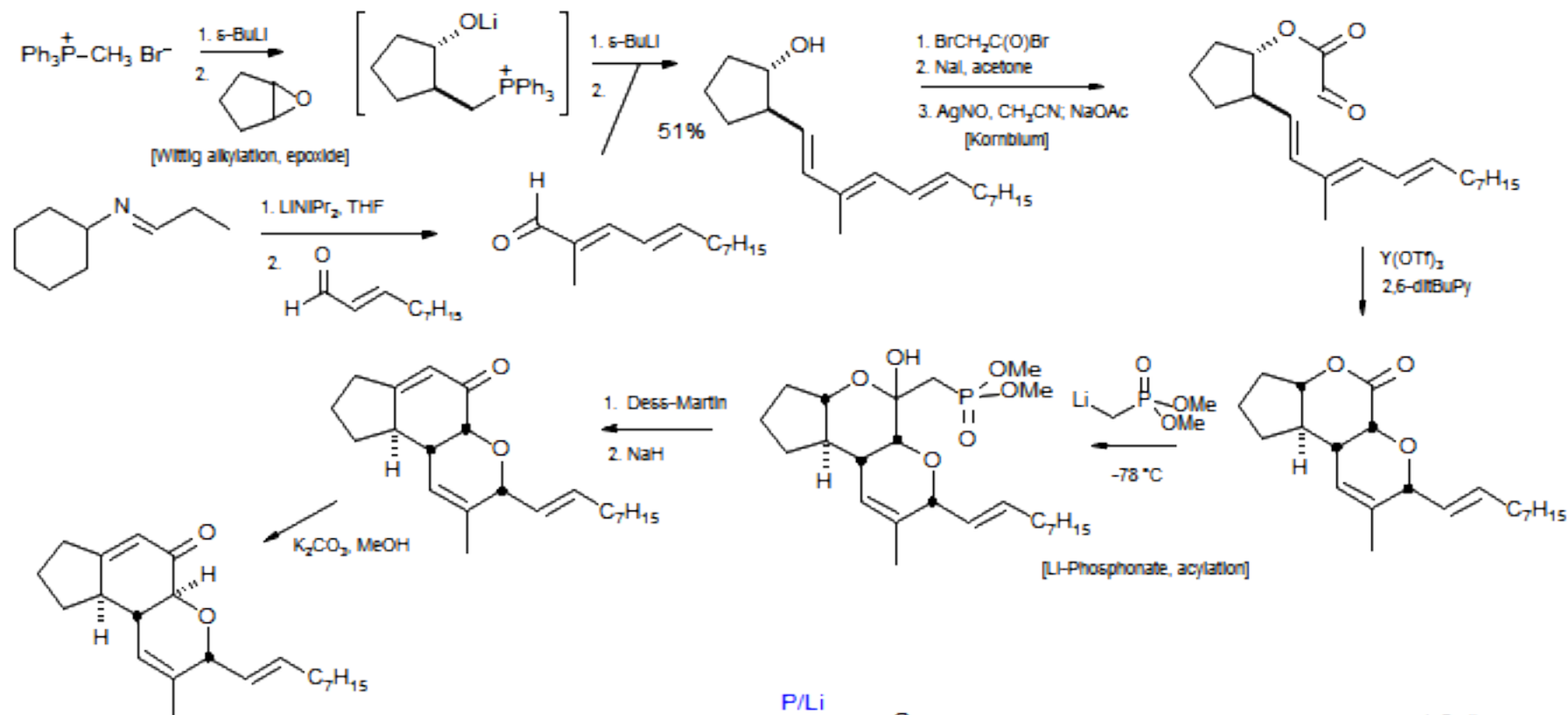
00-08

Smith, A. B., III; Kanoh, N.; Ishiyama, H.; Hartz, R. A. *J. Am. Chem. Soc.* **2000**, *122*, 11254.

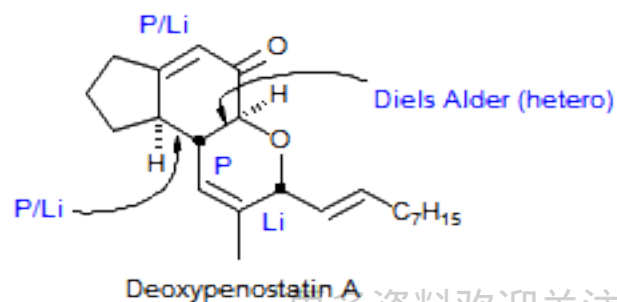
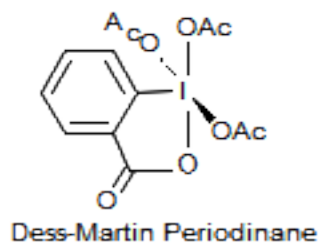


1. Synth
2. Epoxide/enolate
3. BuLi
4. Indole
5. Shirots

更多资料欢迎关注公众号:化学酷

Snider, B. B.; Liu, T. *J. Org. Chem.* 2000, 65, 8490-8498.

Deoxypenostatin A

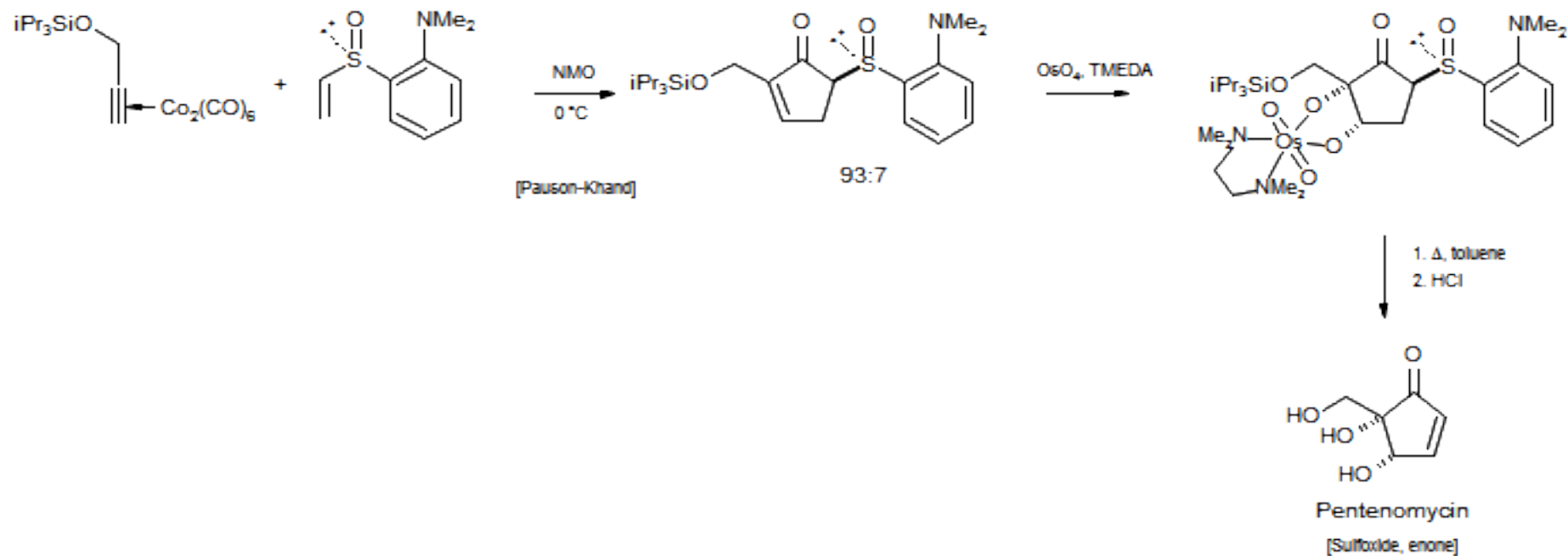


1. Synth
2. Horner-W-E
3. Wittig
4. Epoxide
5. Metalloenamine
6. Dess-Martin
7. Hetro-Diels-Alder

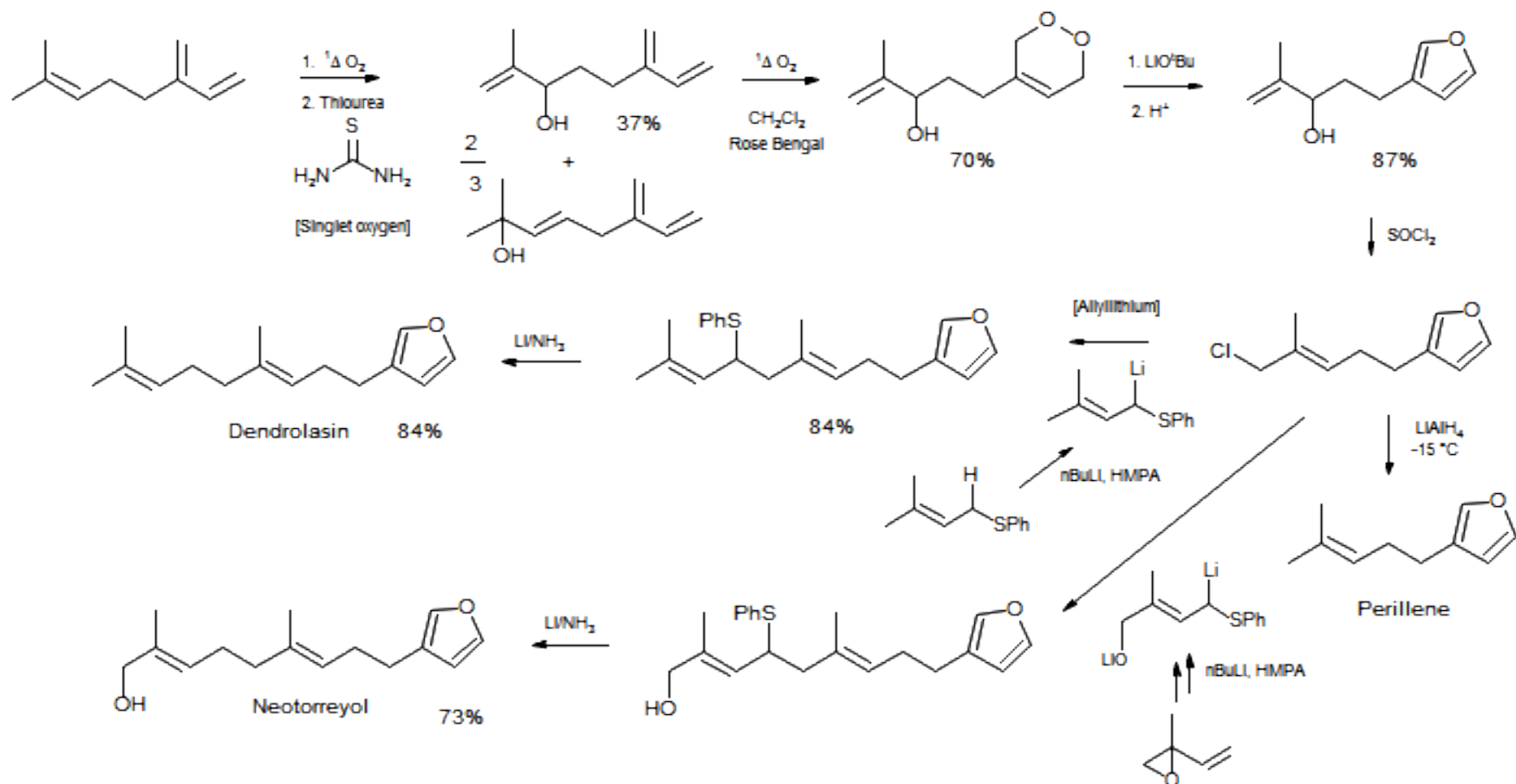
Pentenomycin

Rodríguez Rivero, M.; de la Rosa, J. C.; Carretero, J. C. *J. Am. Chem. Soc.* 2003, 125, 14992-14993.

o3-16



1. Synth
2. Pauson-Khand
3. Sulfonamide-Chiral
4. Sulfonamide E2

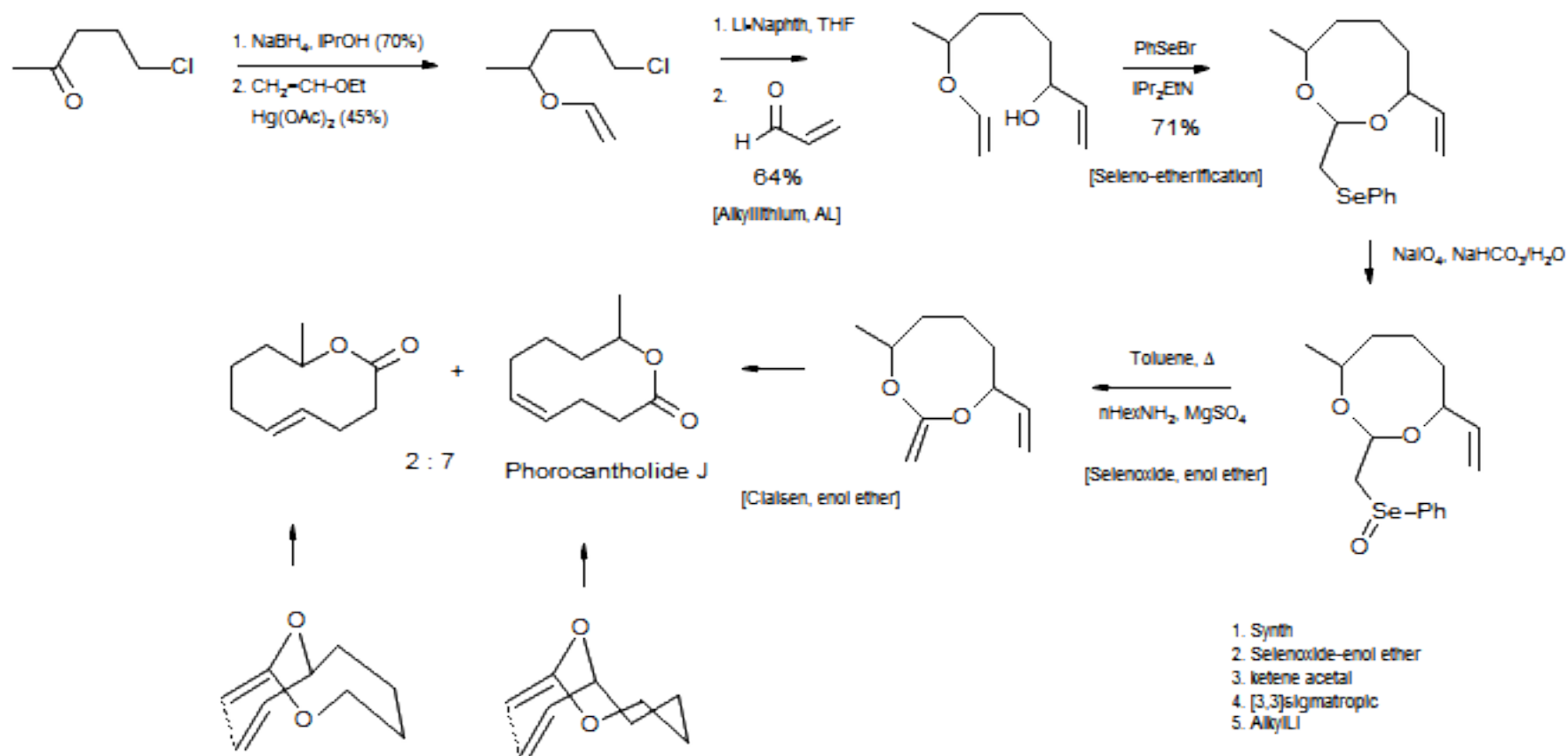
Kondo, K.; Matsumoto, M. *Tetrahedron Lett.* 1976, 391

1. AllylLiSulfide
2. Furan
3. Alkane
4. Singlet O_2

Phorocantholide J

Petrzilkka, M. *Helv. Chim. Acta* 1978, 61, 3075

78-17

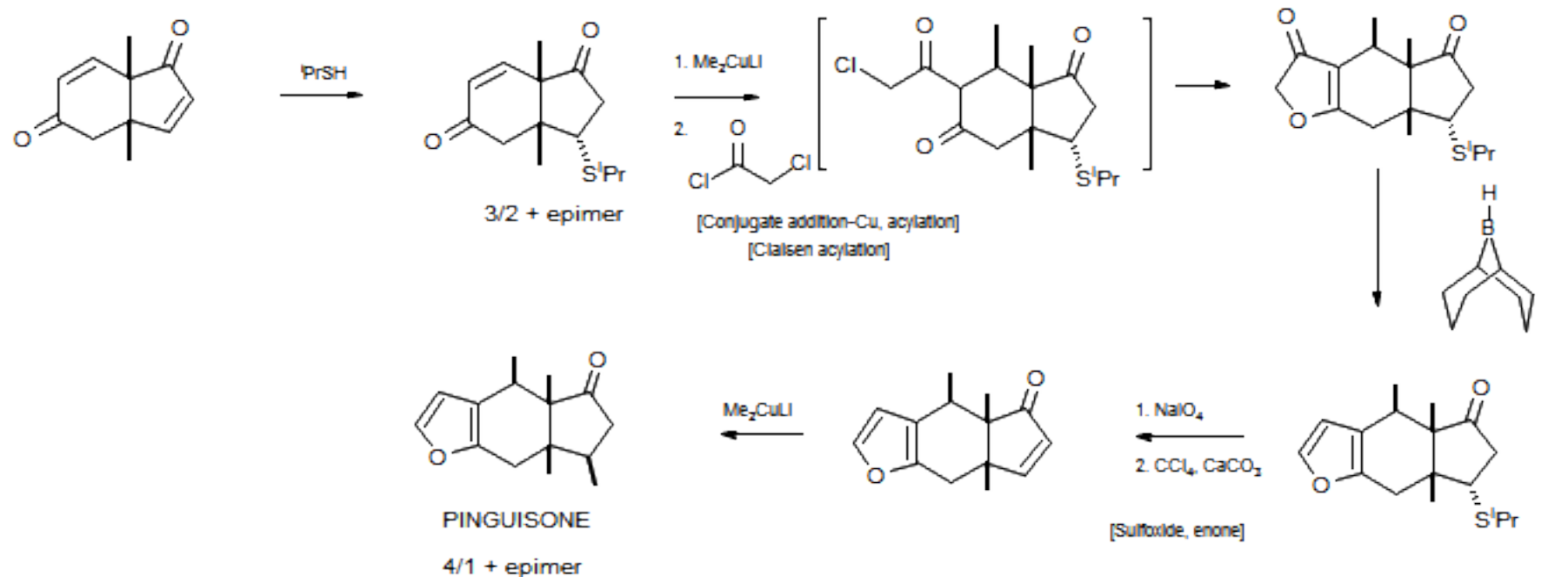


Major component of the metasternal gland secretion of the eucalypt longicorn beetle
Phoracantha synonyma

Pinguisone

Bernasconi, S.; Gariboldi, P.; Jommi, G.; Sisti, M.; *J. C. S., Perk. Trans. I* **1981**, 2394.

81-25

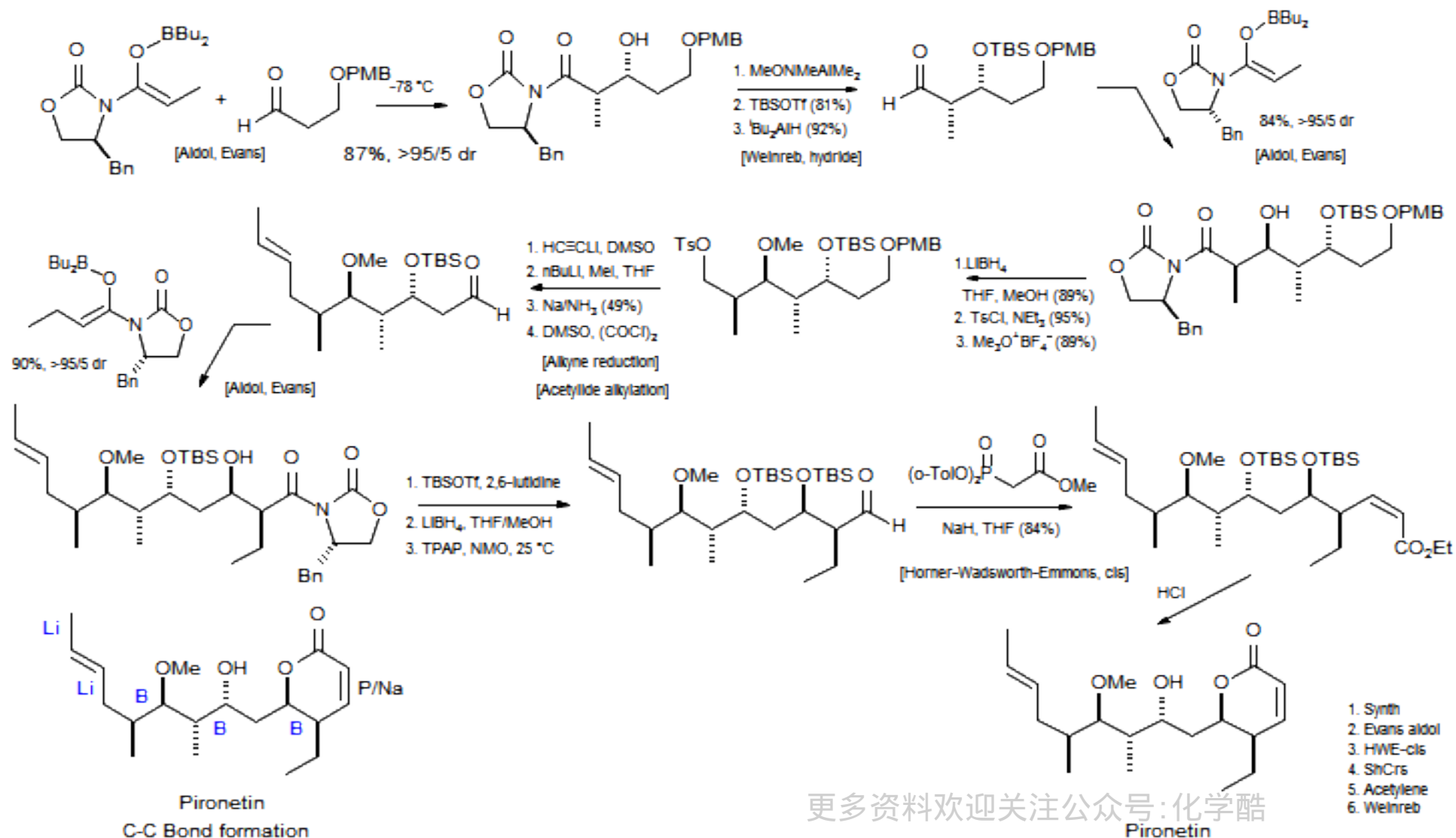


1. Synth
2. Furan
3. sulfide - enone
4. Con]. add acylation

Pironetin

Dias, L. C.; Oliveira, L. G.; Sousa, M. A. *Org. Lett.* **2003**, *5*, 285

03-02



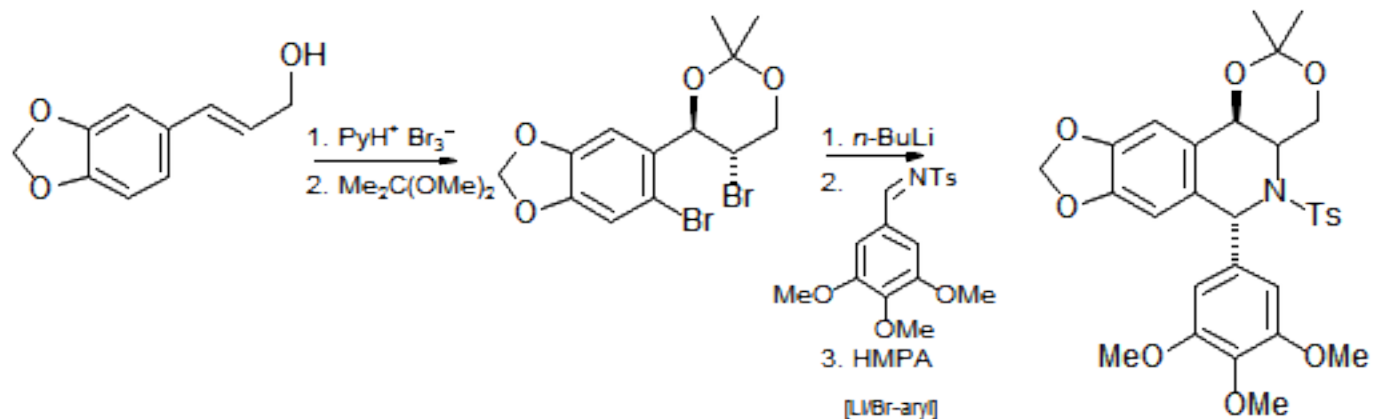
更多资料欢迎关注公众号:化学酷

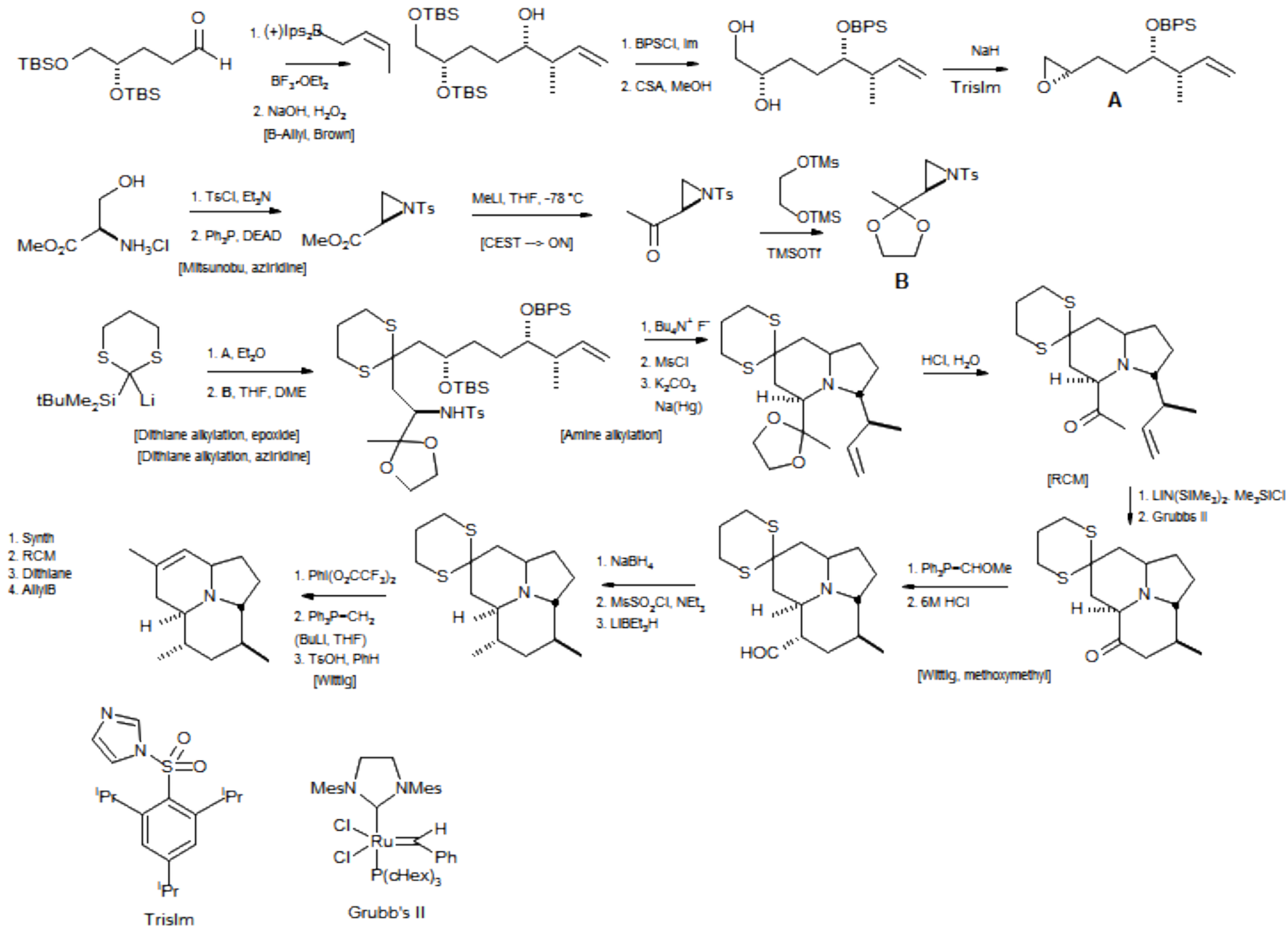
Podophyllotoxin Analog

Pearce H. L.; Back, N. J.; Cramer, T. L. *Tetrahedron Lett.* **1989**, 30, 907.

89-15

Functionalized Aryllithium reagents

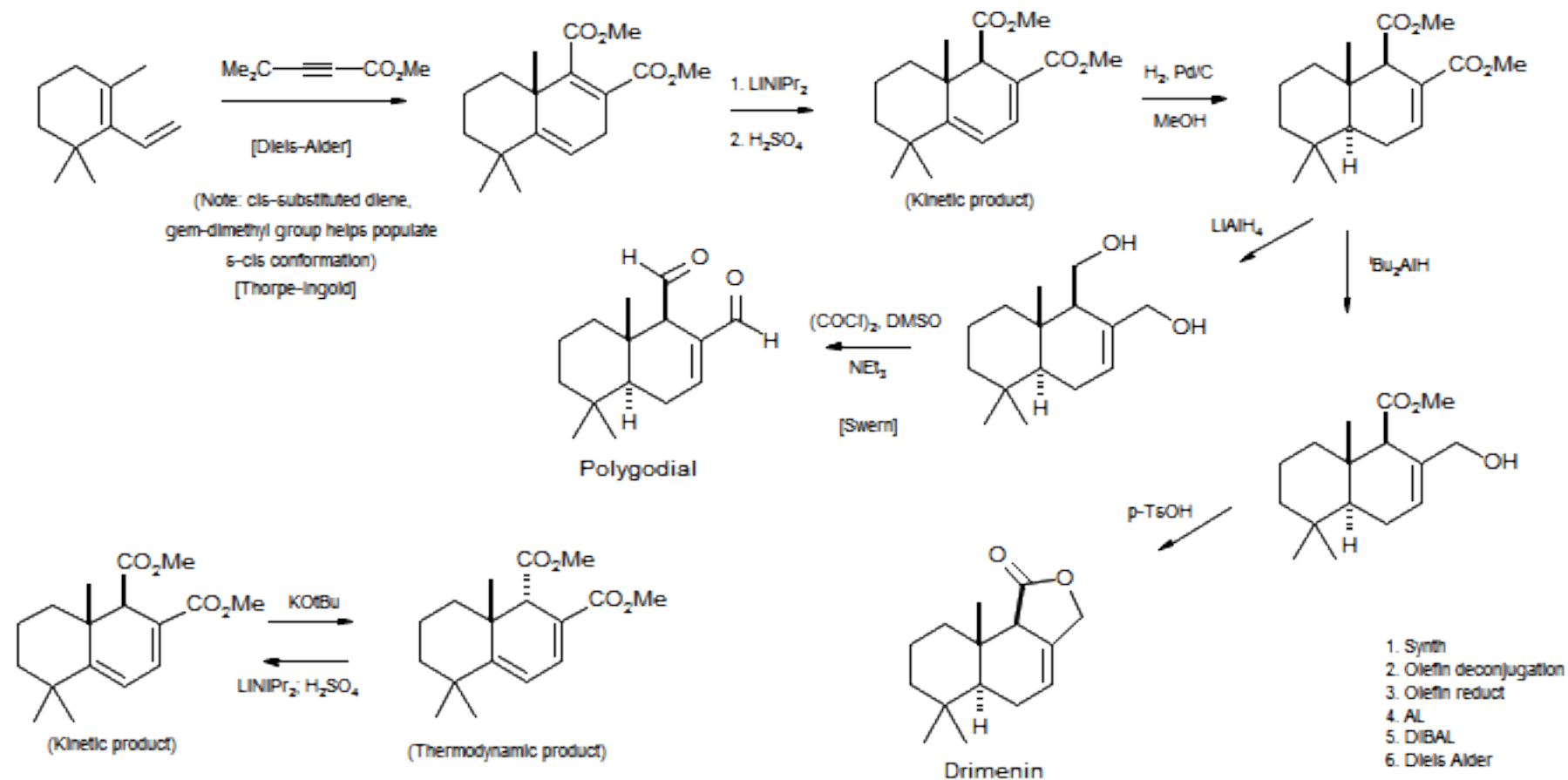




Polygodial Drimenin

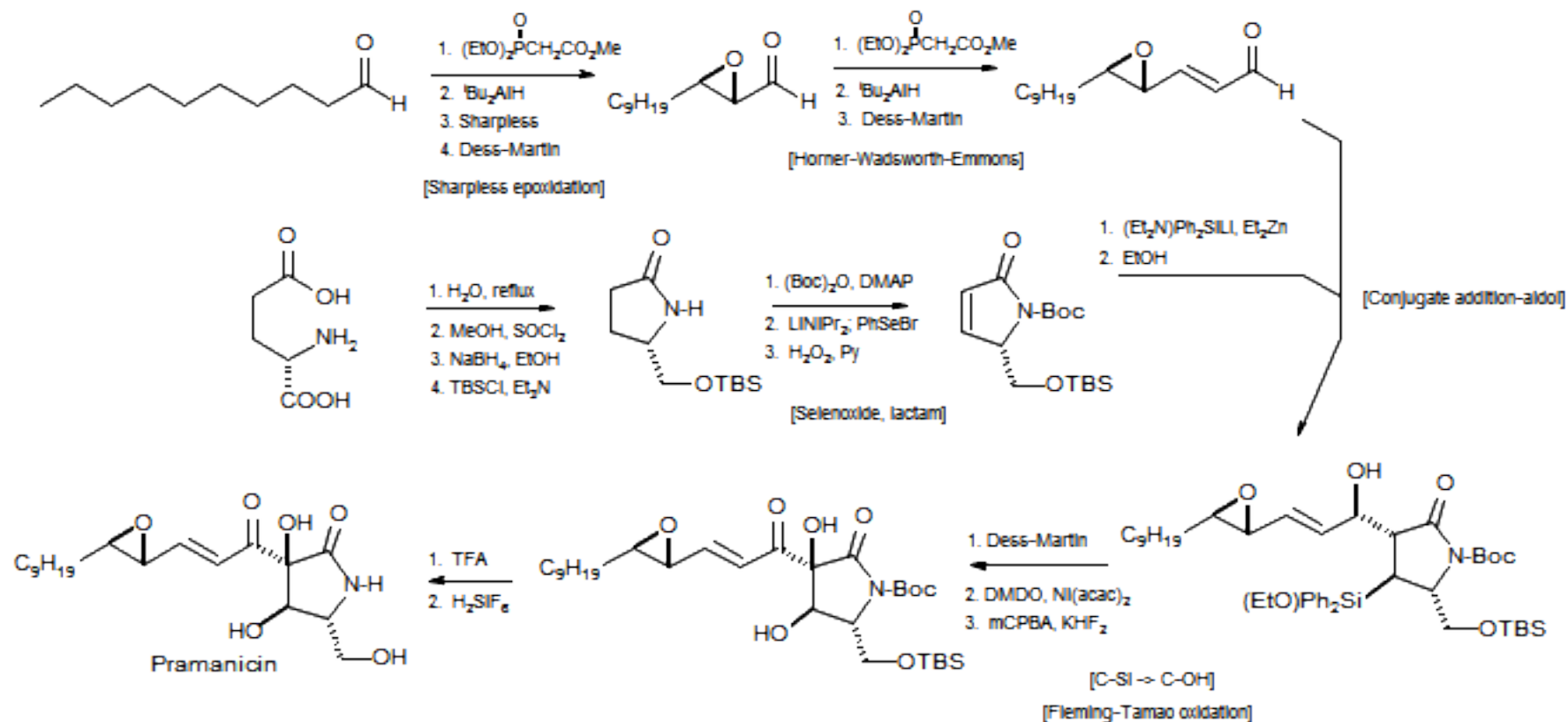
Lallemand, J. Y.; et al. *Tetrahedron Lett.* 1981, 22, 2995 (Insect antifeedant)

87-18



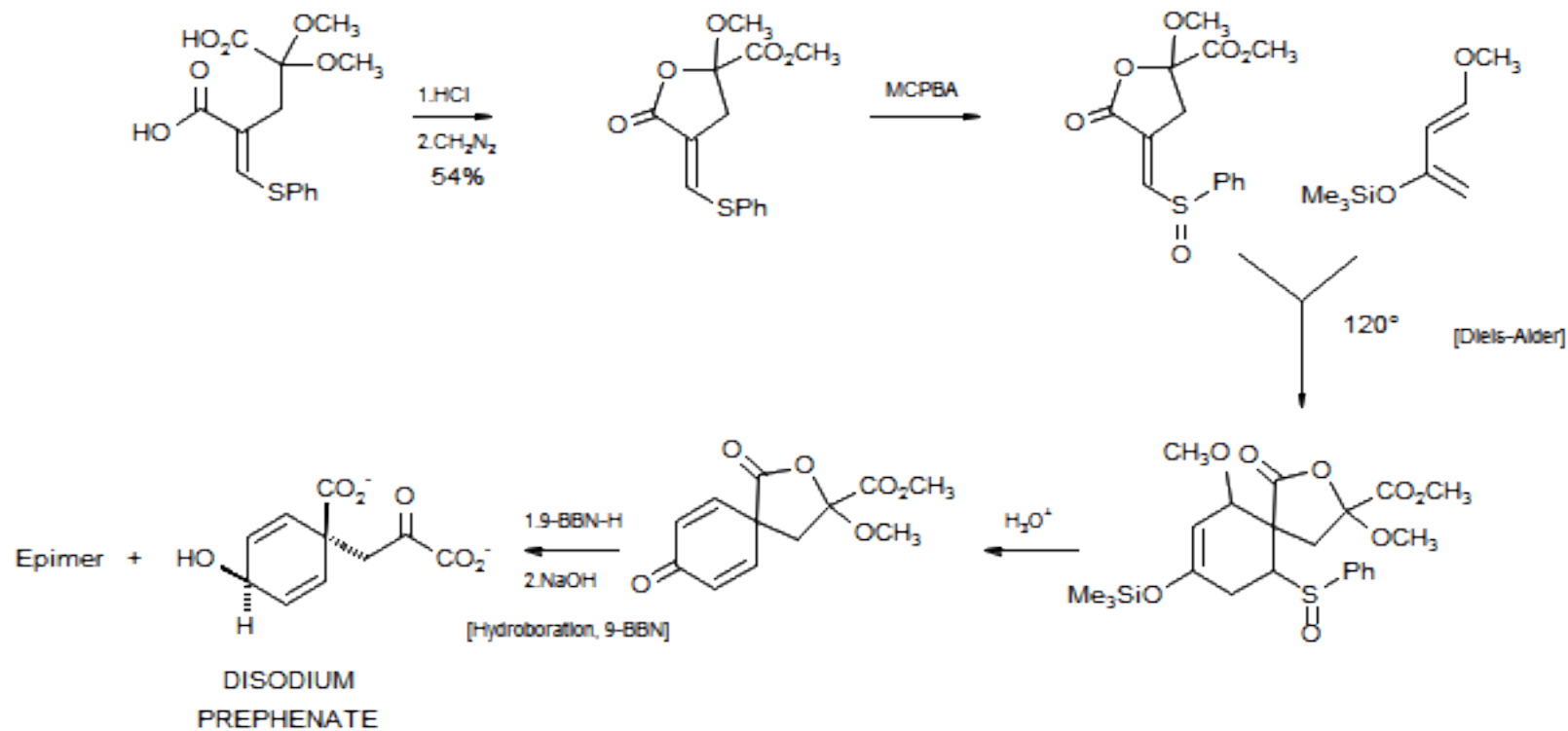
Pramanicin

A. G. M. Barrett, et. al *J. Org. Chem.* 1999, 64, 6005.



1. Synth
2. SILI
3. DMDO
4. HWE
5. SI \rightarrow OH

更多资料欢迎关注公众号:化学酷

Danishefsky, S.; Hirama, M. *J. Am. Chem. Soc.* **1977**, *99*, 7740.

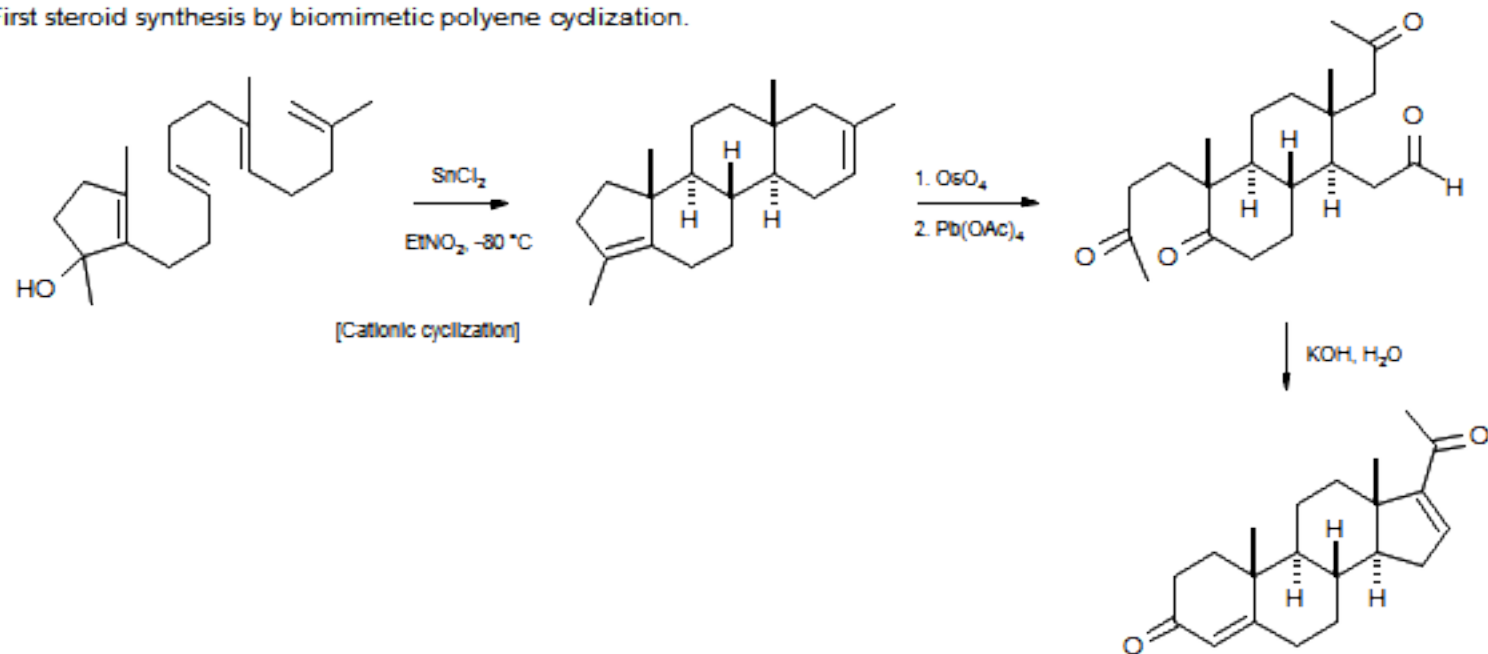
1. Synth
2. Diels-Alder
3. Sulfoxide
4. Shors

Progesterone, 16,17-dehydro

88-17

Johnson, W. S.; Semmelhack, M. F.; Sultanbawa, M. U. S.; Dolak, L. A. *J. Am. Chem. Soc.* **1968**, *90*, 2994-2998.

First steroid synthesis by biomimetic polyene cyclization.

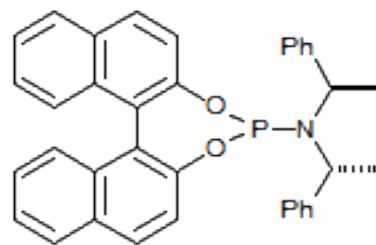
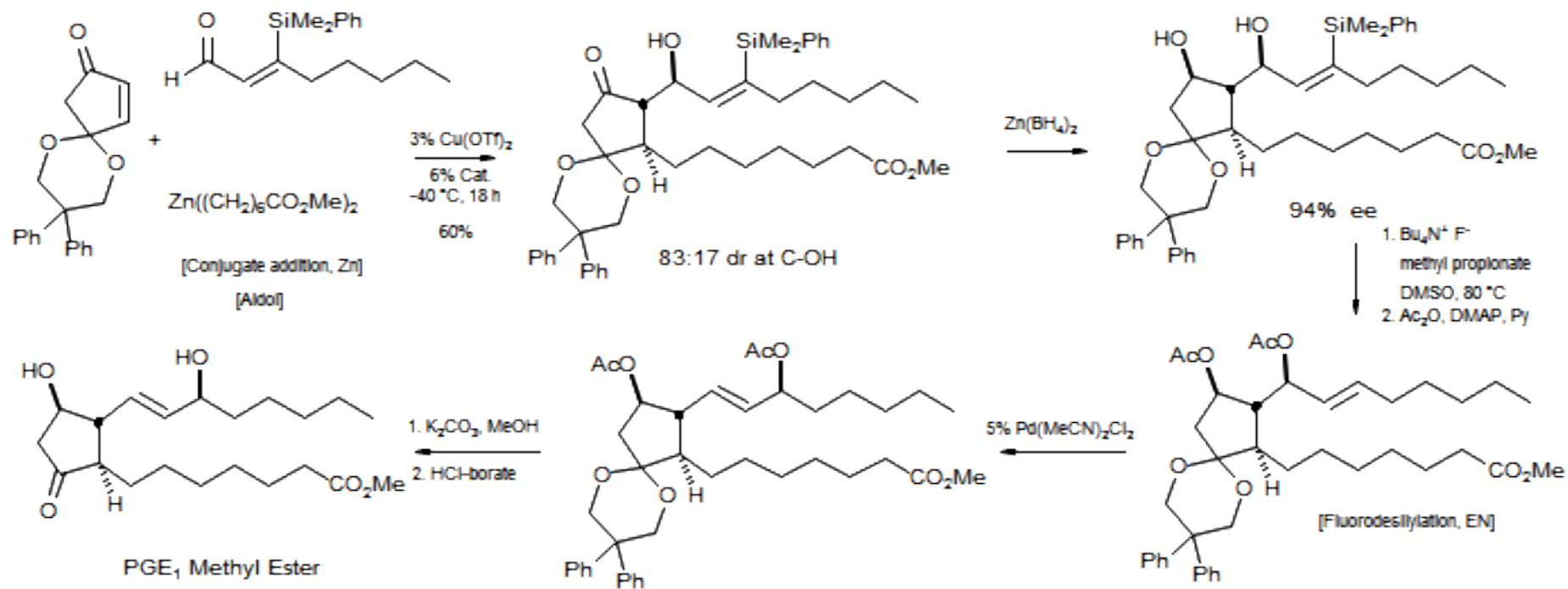


1. Synth
2. Cationic cyclization

Prostaglandin PGE₁ Methyl Ester

Arnold, L. A.; Naasz, R.; Minnaard, A. J.; Feringa, B. L. *J. Am. Chem. Soc.* 2001, 123, 5841

01-09
Comm



Cat.

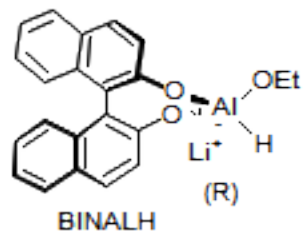
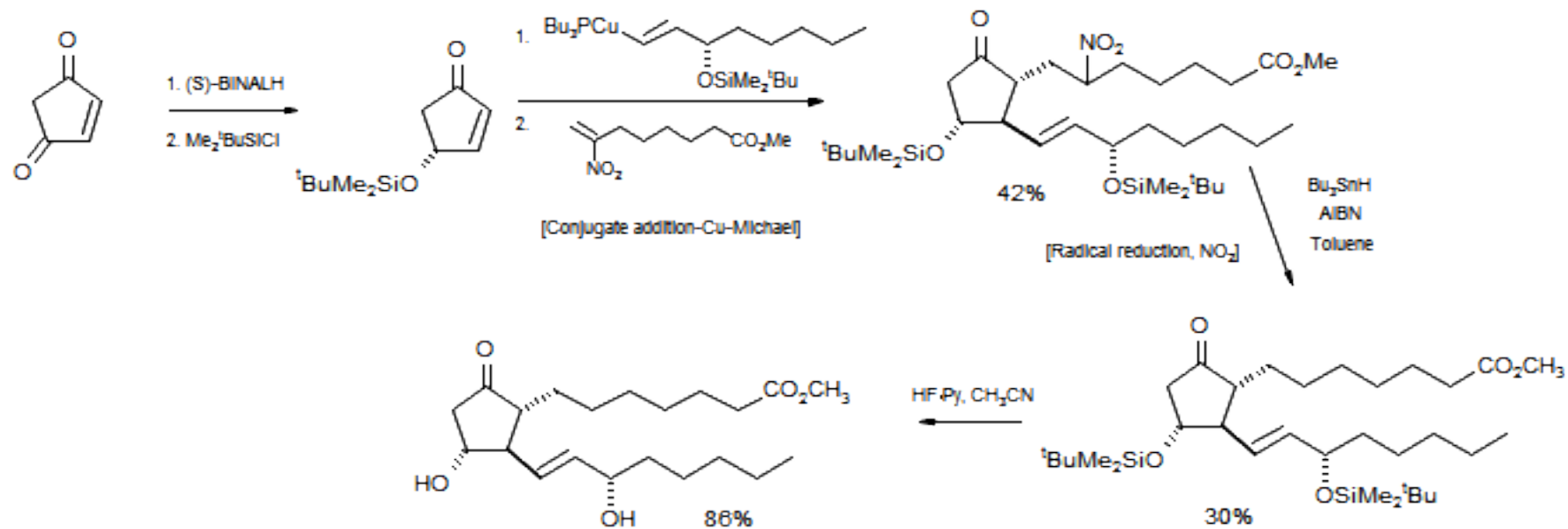
1. Synth
2. Zn
3. 1,4-add asym
4. ShCrs
5. Si-Fat proton

更多资料欢迎关注公众号:化学酷

Prostaglandin E₁

Tanaka, T.; Toru, T.; Okamura, N.; Hazato, A.; Sugiura, S.; Manabe, K.; Kurozumi, S.; Suzuki, M.; Kawagishi T.; Noyori, R.
Tetrahedron Lett. 1983, 24, 4103-4104.

83-11
COMM



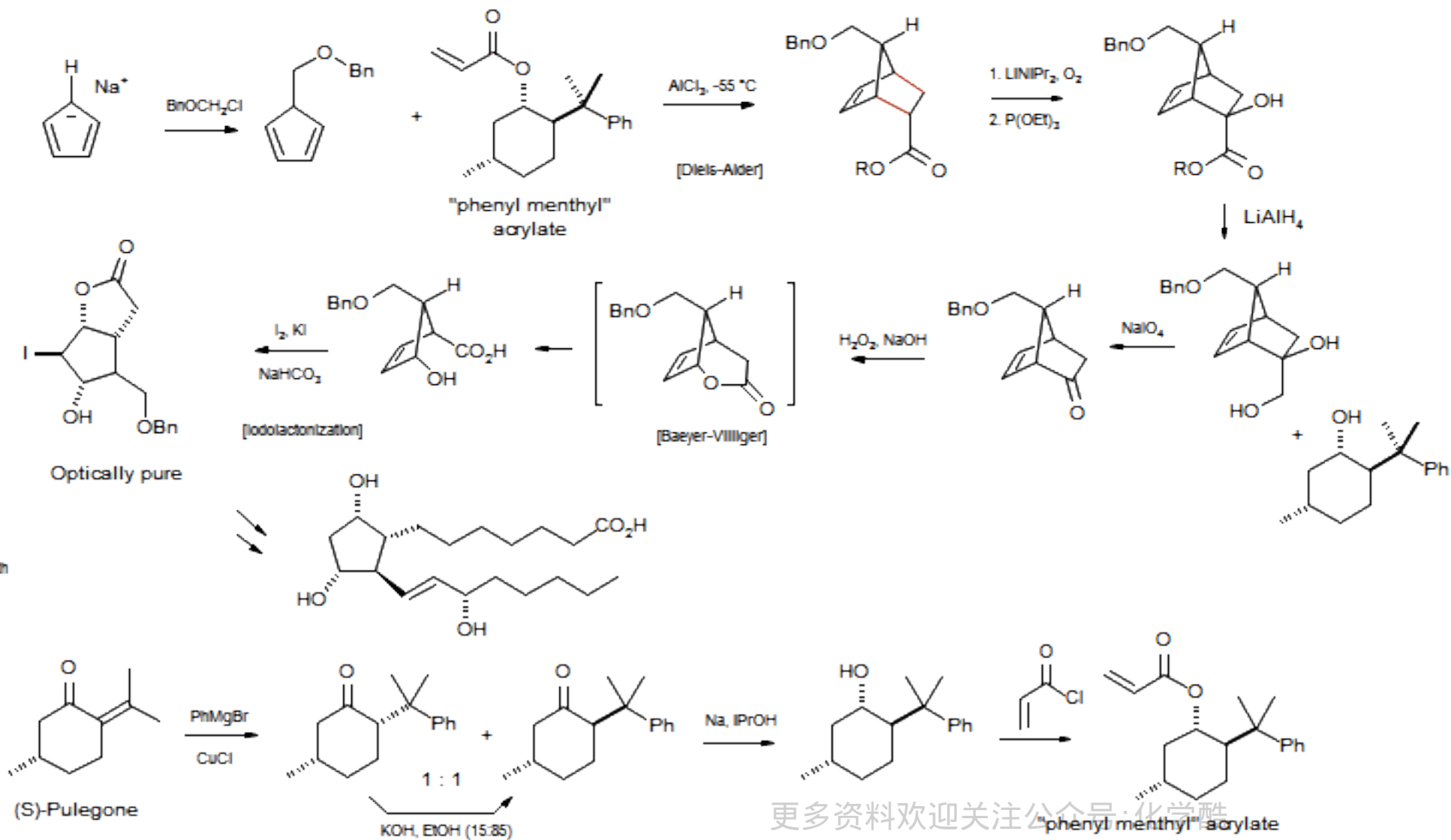
Noyori, *JACS* 1979, 101, 3129;

Prostaglandin Fragment

Corey, E. J.; Ensley, H. E. *J. Am. Chem. Soc.* 1975, 97, 6908

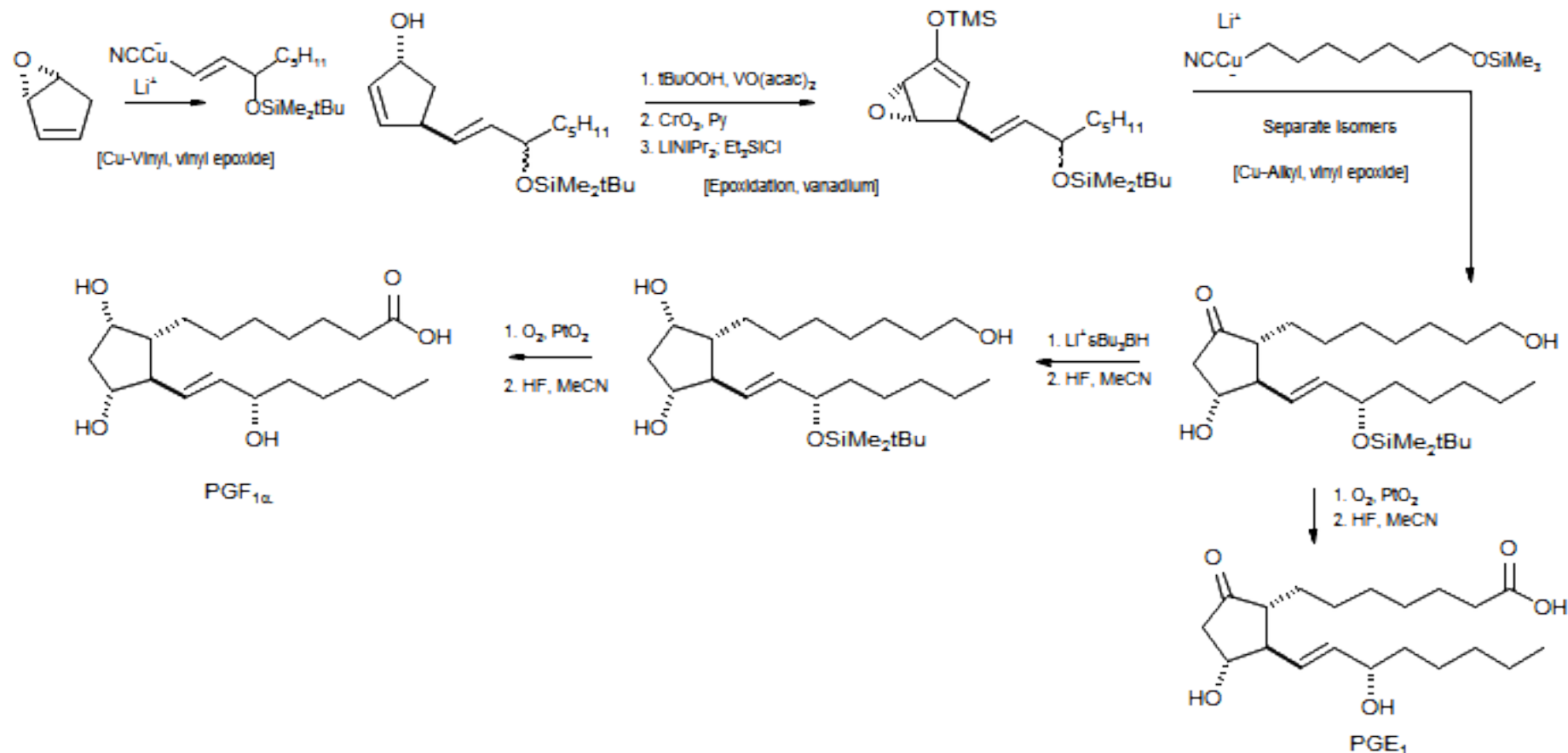
75-21

COMM



Prostaglandin-PGF_{1α}

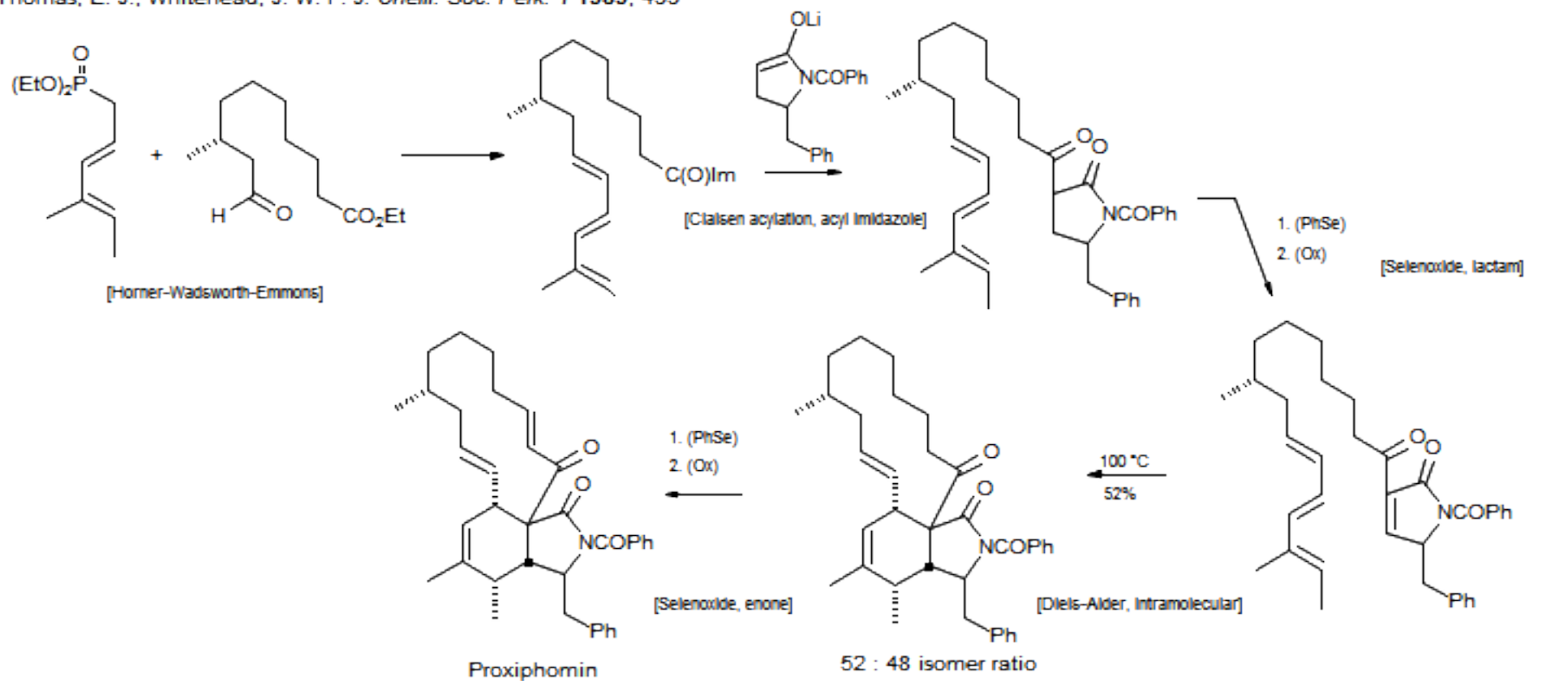
87-07

Marino, J. P.; Pradilla, R. F.; Laborde, E. *J. Org. Chem.* 1987, 52, 4898

1. Synth
2. OrgCu
3. CO₂H - Pt-O₂
4. Epoxide

Proxiphomin

Thomas, E. J.; Whitehead, J. W. F. *J. Chem. Soc. Perkin 1* 1989, 499



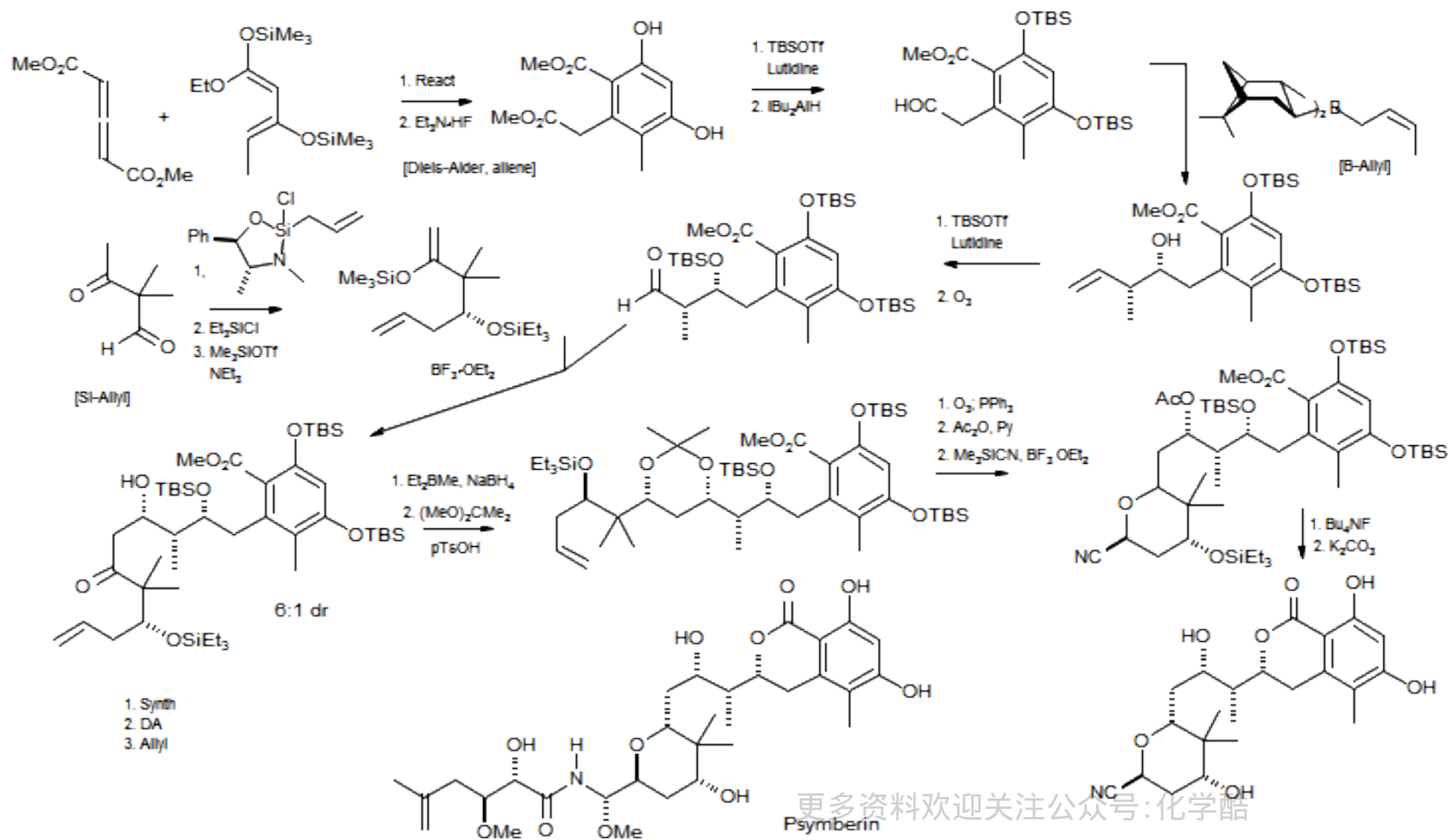
1. Synth
2. Horner-Wadsworth-Emmons
3. Intra-DA
4. Claisen

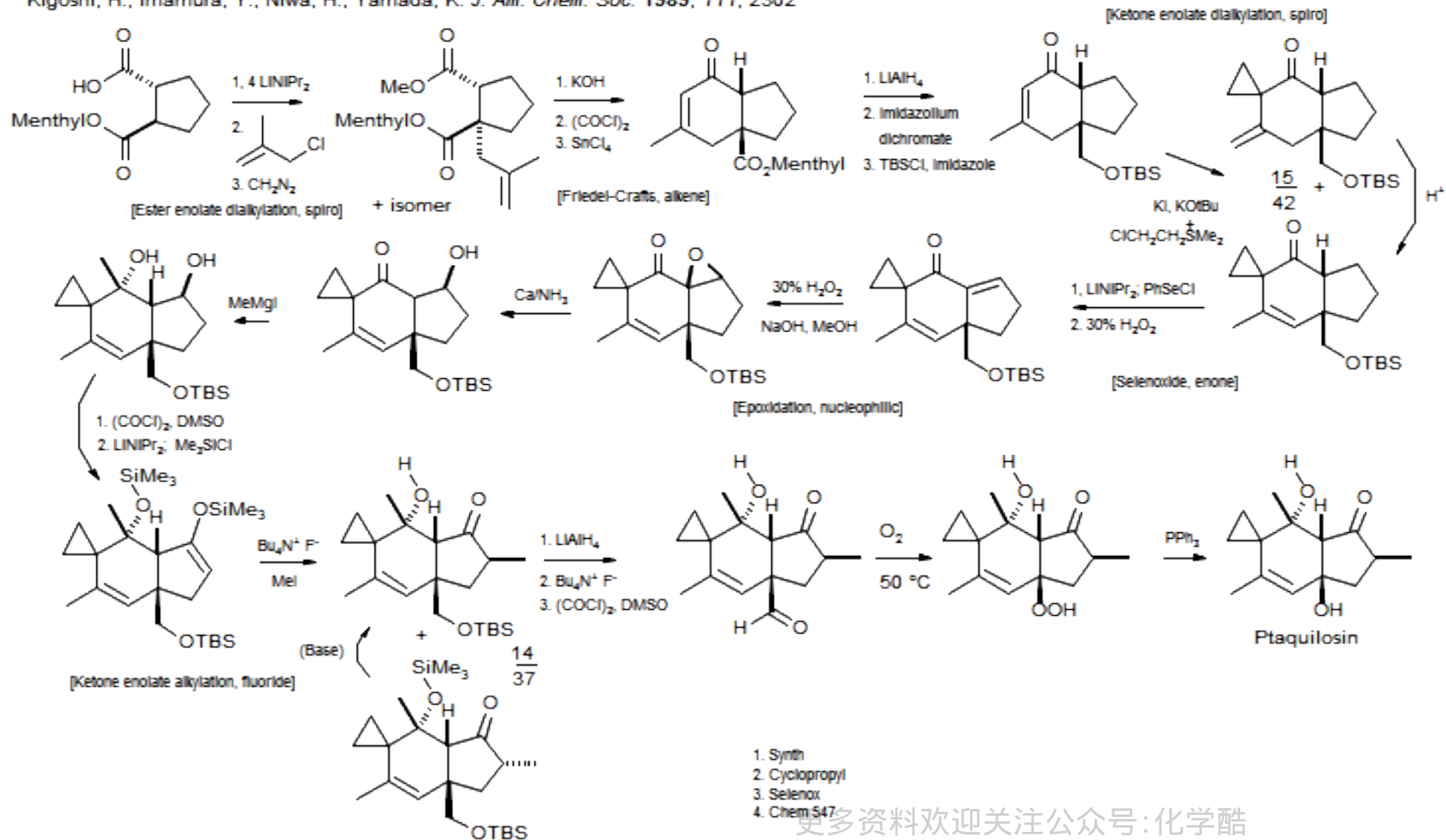
Psymberin (Part)

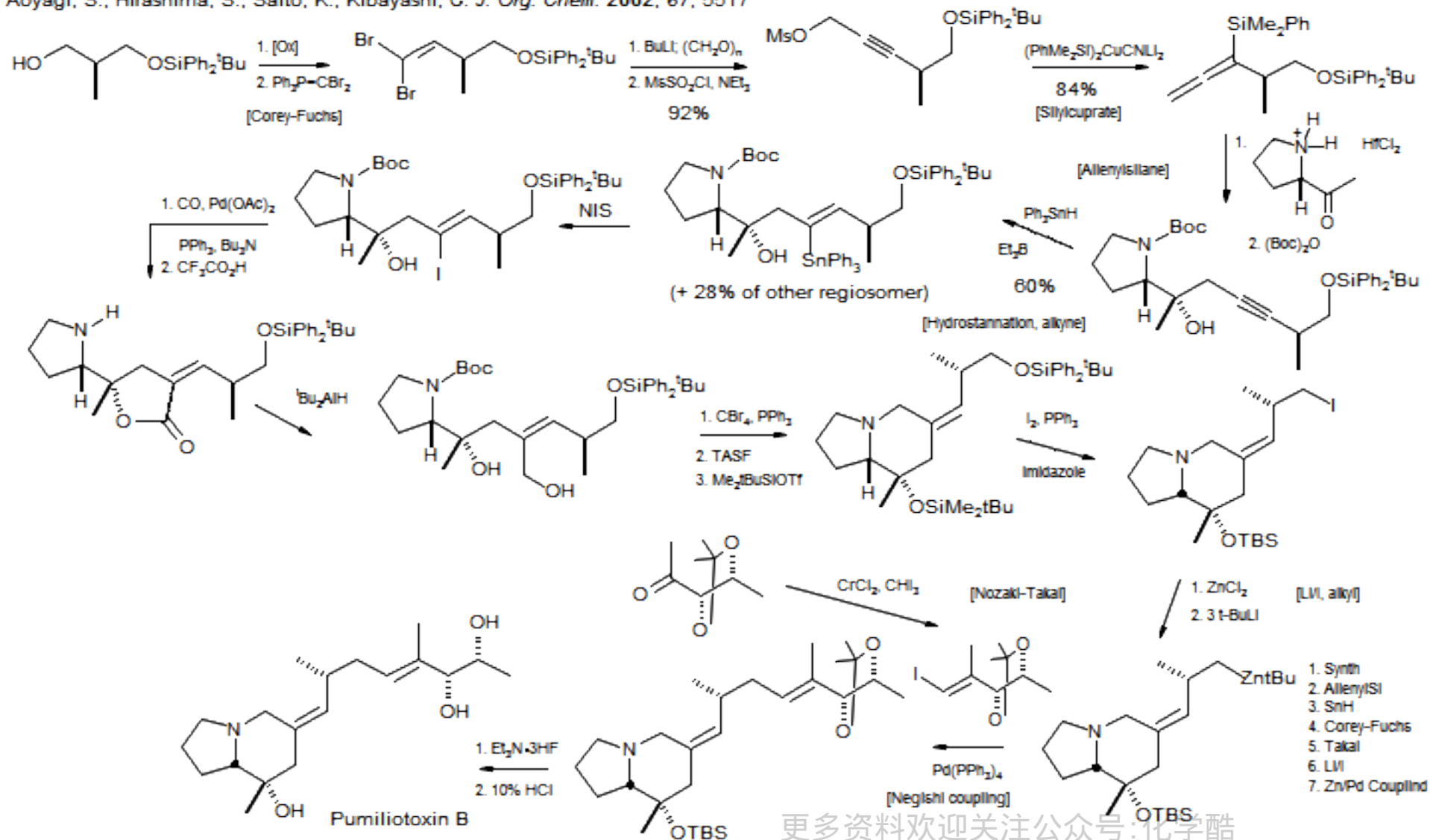
Rech, J. C.; Florenaci, P. E. *Org. Lett.* 2005, 7, 5175-5178

05-06

COMM



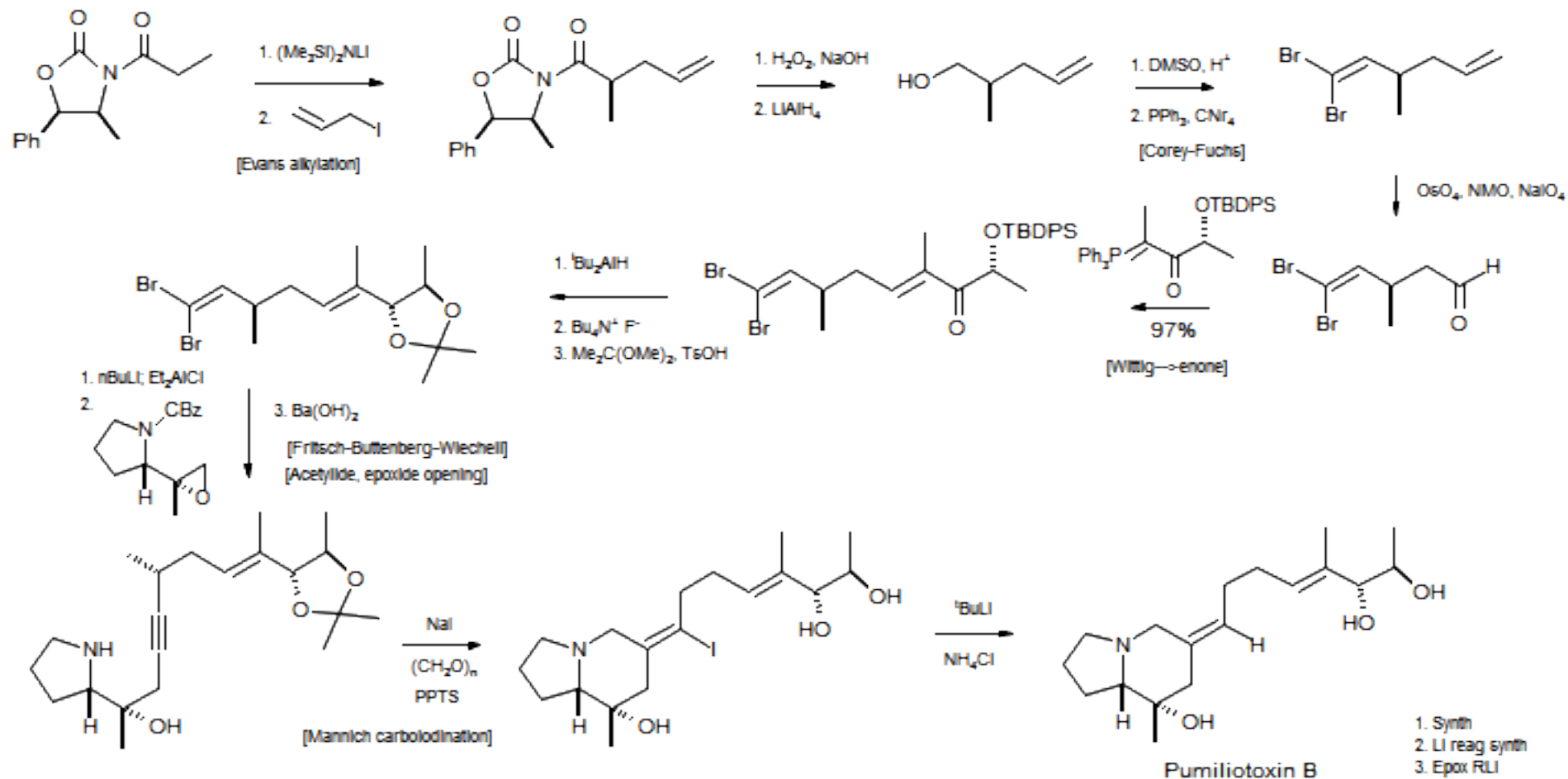
Kigoshi, H.; Imamura, Y.; Niwa, H.; Yamada, K. *J. Am. Chem. Soc.* 1989, 111, 2302

Aoyagi, S.; Hirashima, S.; Saito, K.; Kibayashi, G. *J. Org. Chem.* 2002, 67, 5517

Pumiliotoxin B

96-10

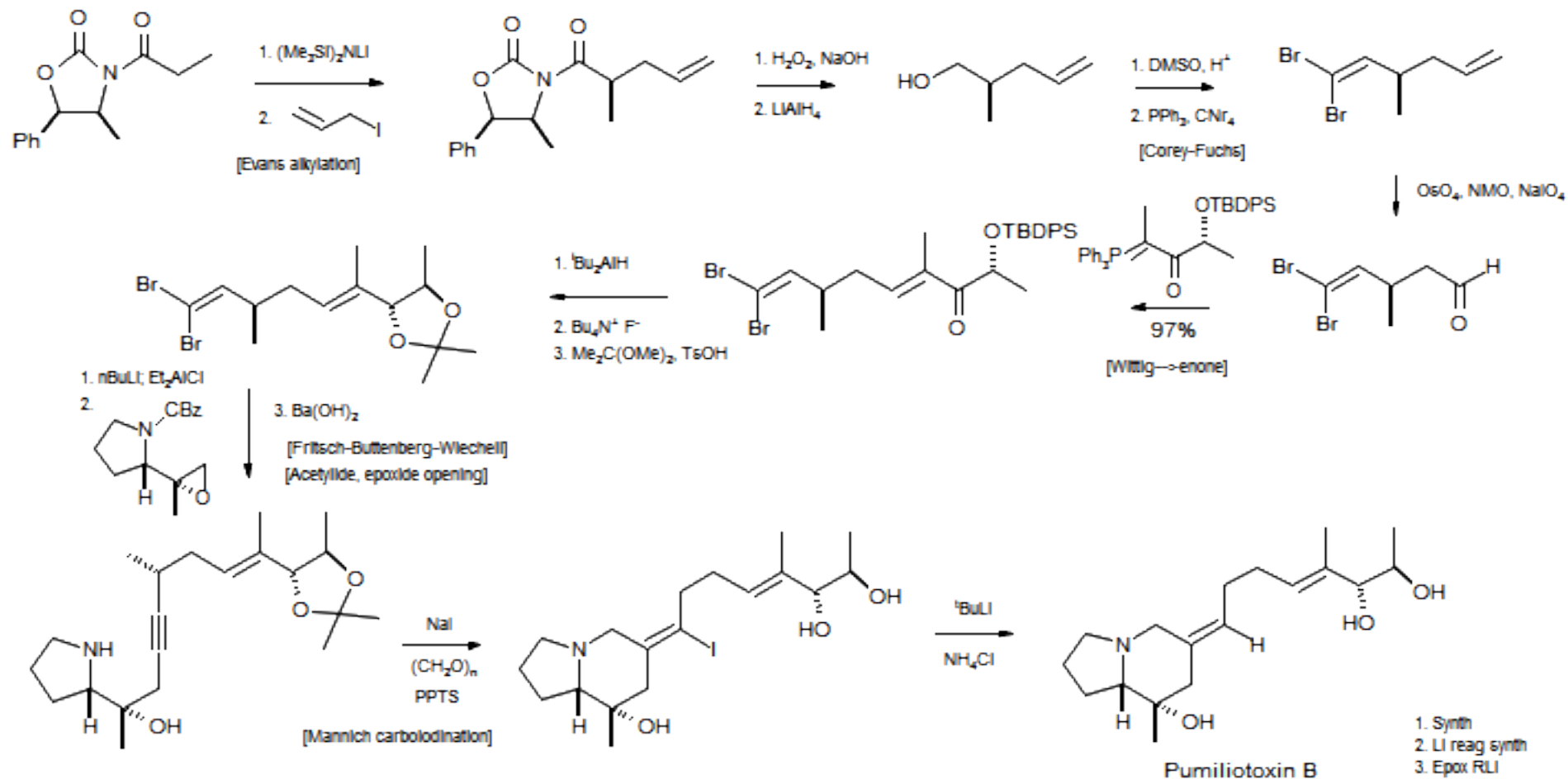
Overman, L. E. *J. Am. Chem. Soc.* 1996, 118, 9062



Pumiliotoxin B

96-10

Overman, L. E. *J. Am. Chem. Soc.* 1996, 118, 9062

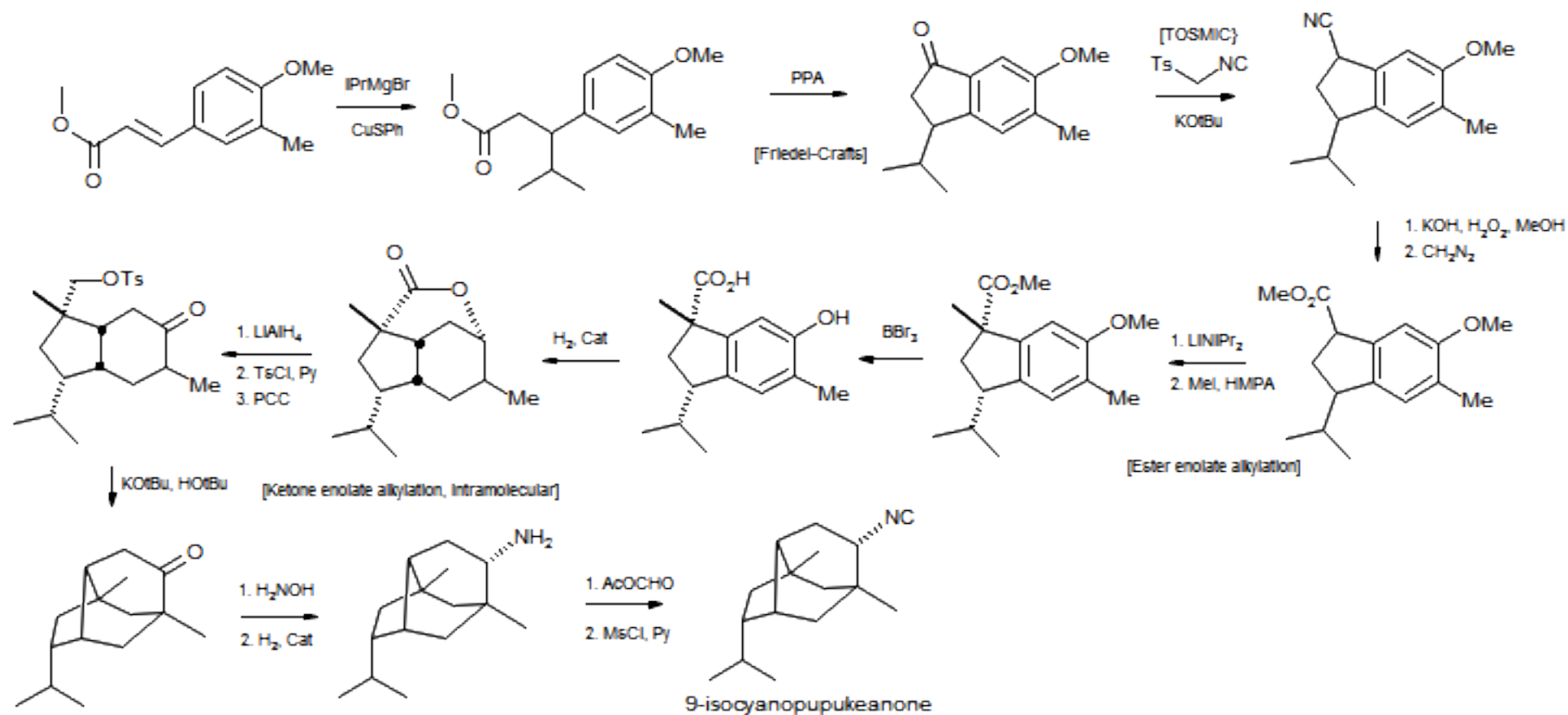


Pupukeanone, 9-isocyano

79-28

Corey, E. J.; Behforouz, M.; Ishiguro, M. *J. Am. Chem. Soc.* **1979**, *101*, 1608.

COMM



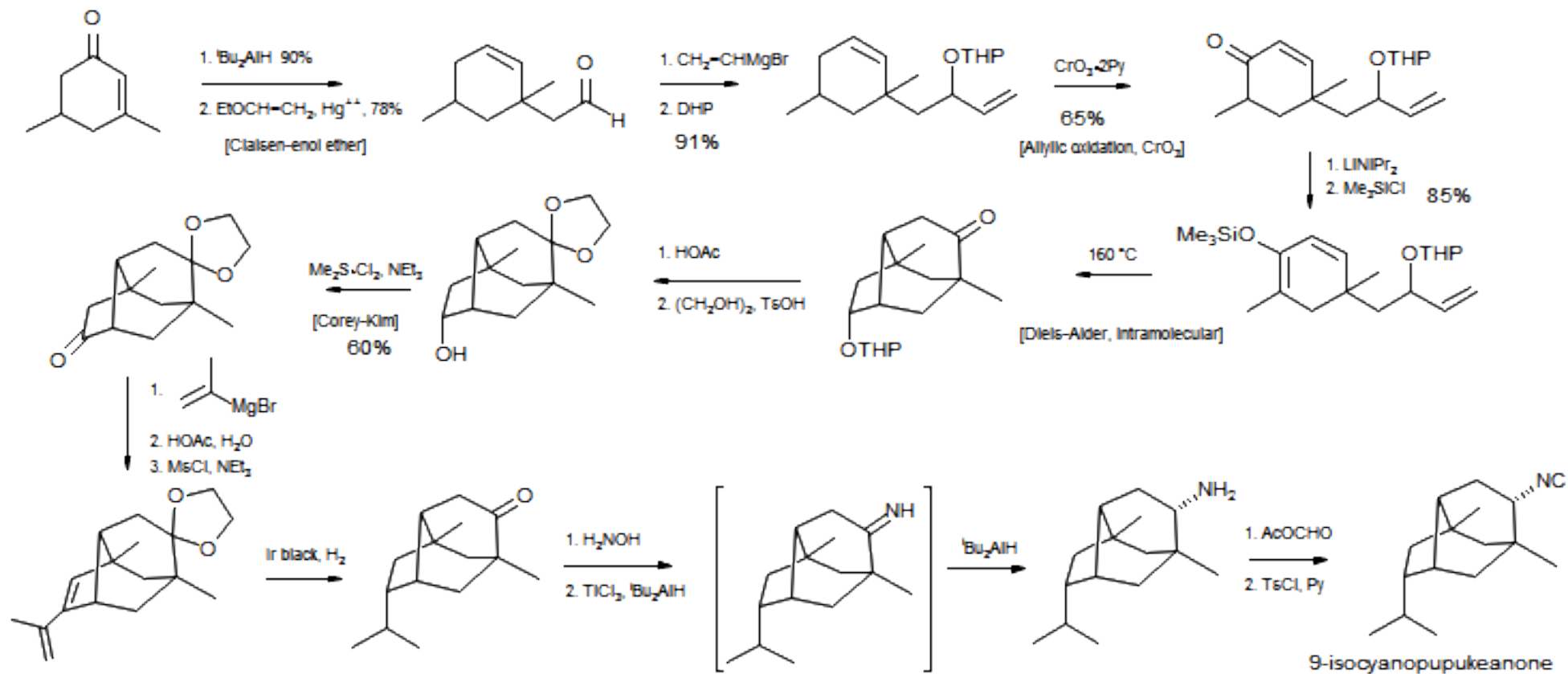
1. Synth
2. Ketone alk
3. Nazarov

Pupukeanone, 9-isocyano

79-19

Yamamoto, H.; Sham, H. L. *J. Am. Chem. Soc.* **1979**, *101*, 1609. See also Corey, p 1608

COMM



1. Synth
2. Diels-Alder
3. Claisen
4. Enone

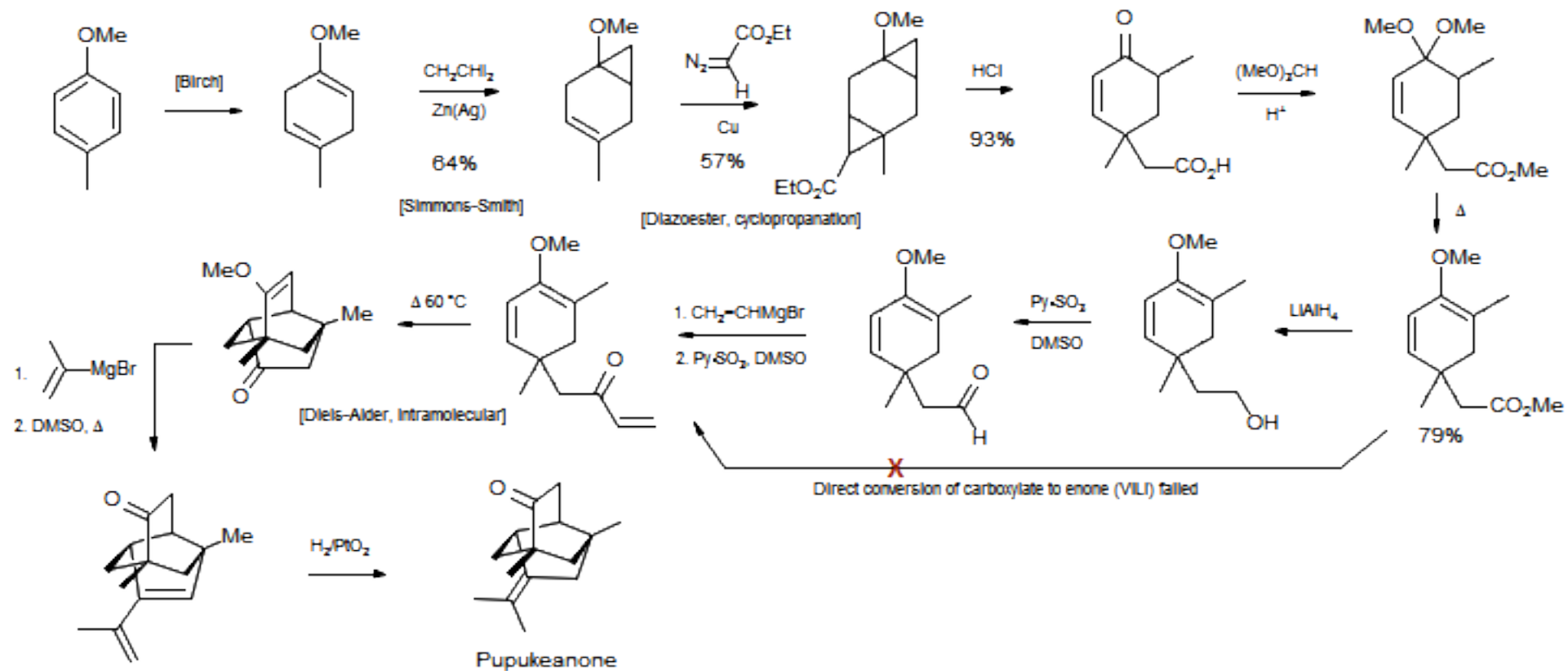
更多资料欢迎关注公众号:化学酷

Pupukeanone

Schiehser, G. H.; White, J. D. *J. Org. Chem.* 1980, 45, 1864

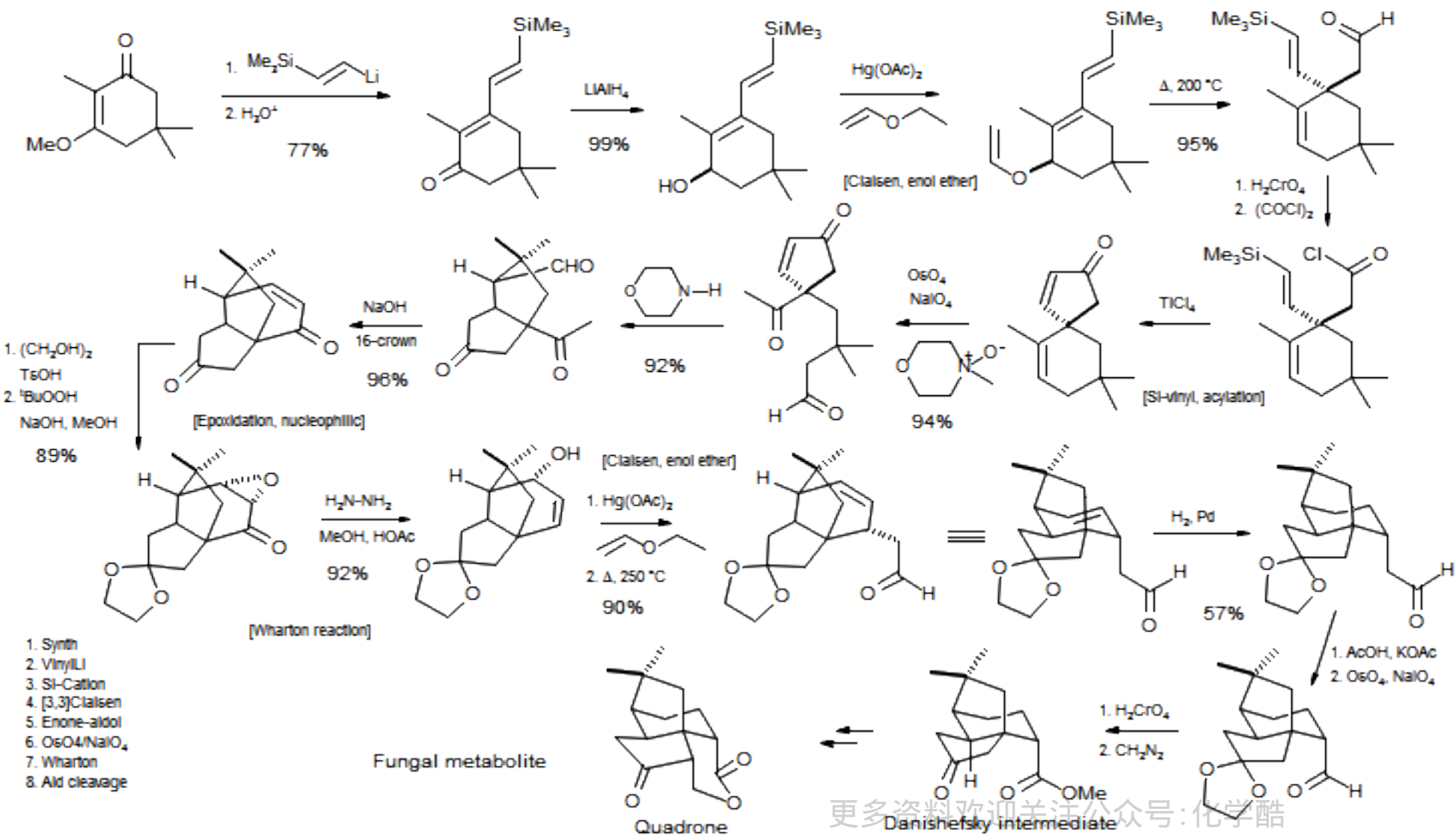
80-15

EXP

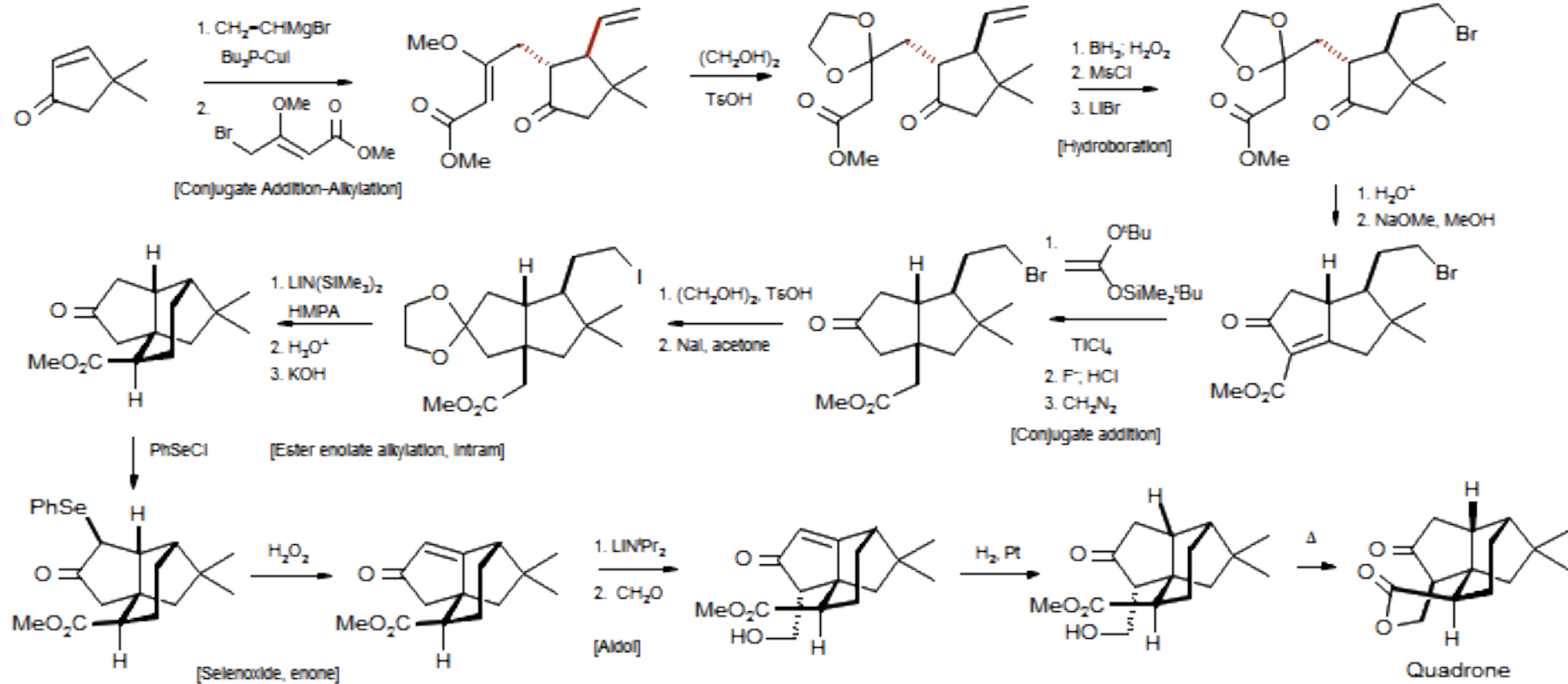


Burke, S. D.; Murtiashaw, C. W.; Saunders, J. O.; Dike, M. S. *J. Am. Chem. Soc.* 1982, 104, 872.

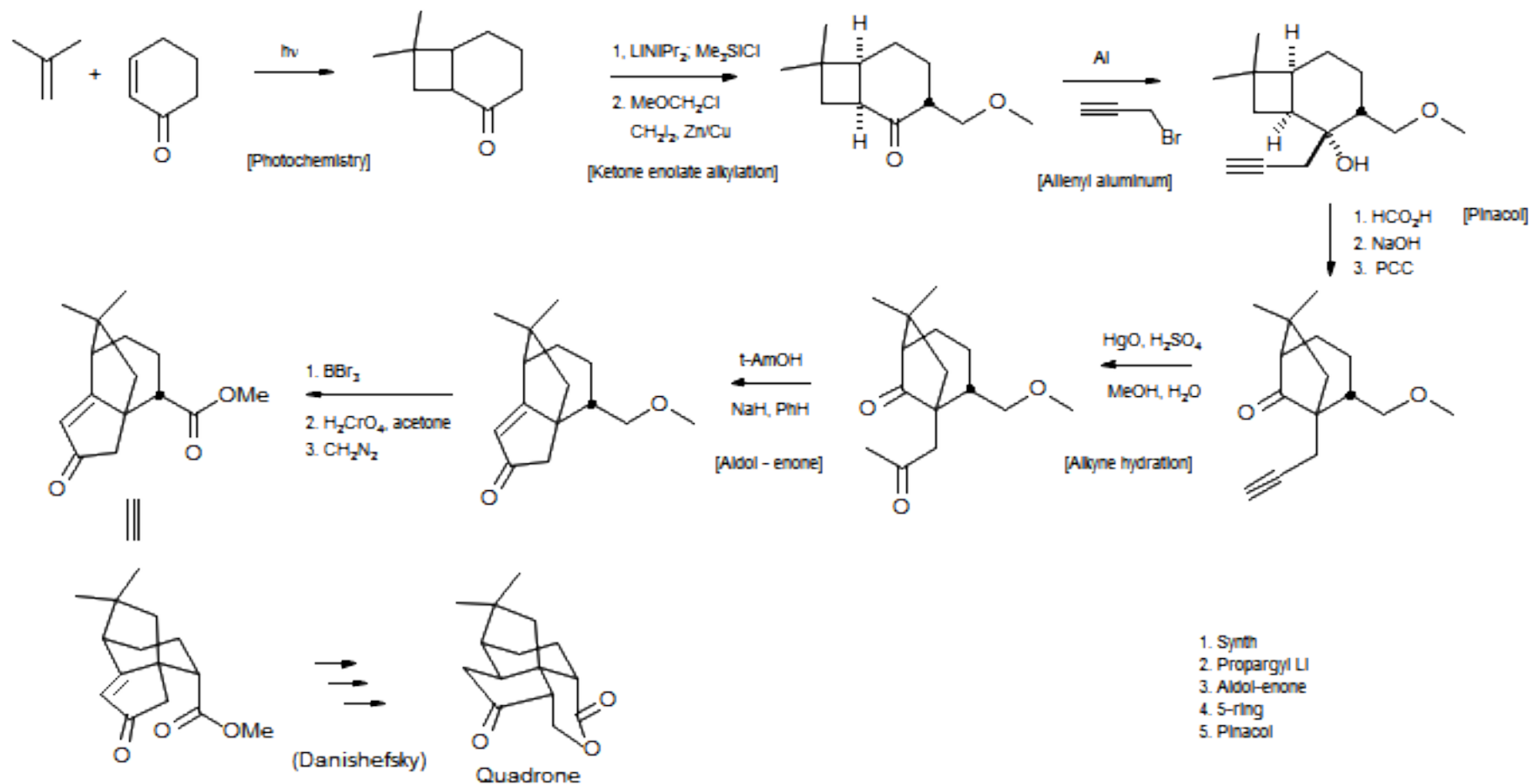
comm



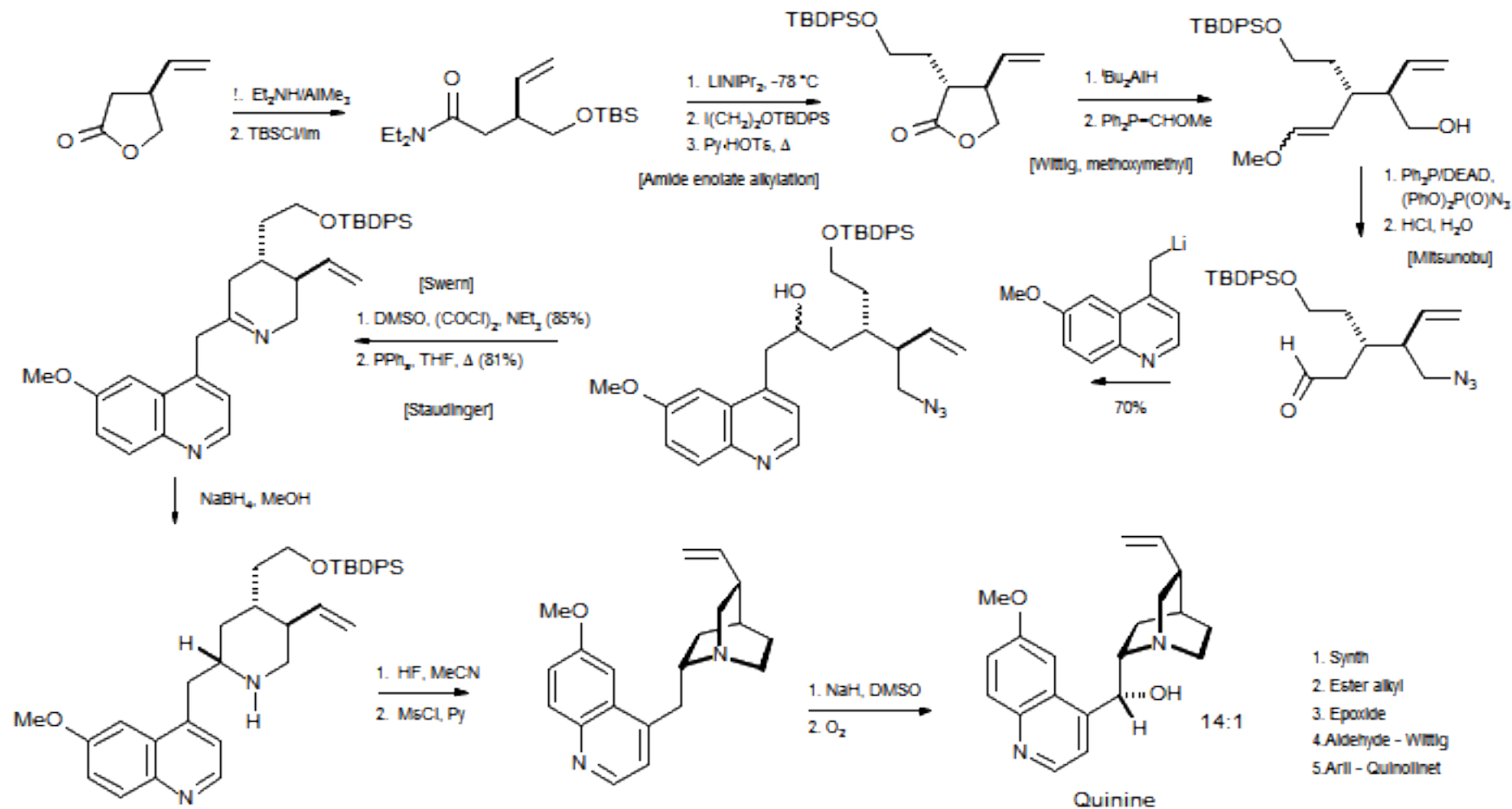
Danishefsky, S.; Vaughan, K.; Gadwood, R. C.; Tsuzuki, K. *J. Am. Chem. Soc.* **1981**, *103*, 4136.



1. Synth
2. Furan
3. sulfoxide - enone
4. Conj. add alkylation

Takeda, K.; Shimono, Y.; Yoshii, E. *J. Am. Chem. Soc.* 1983, 105, 583.

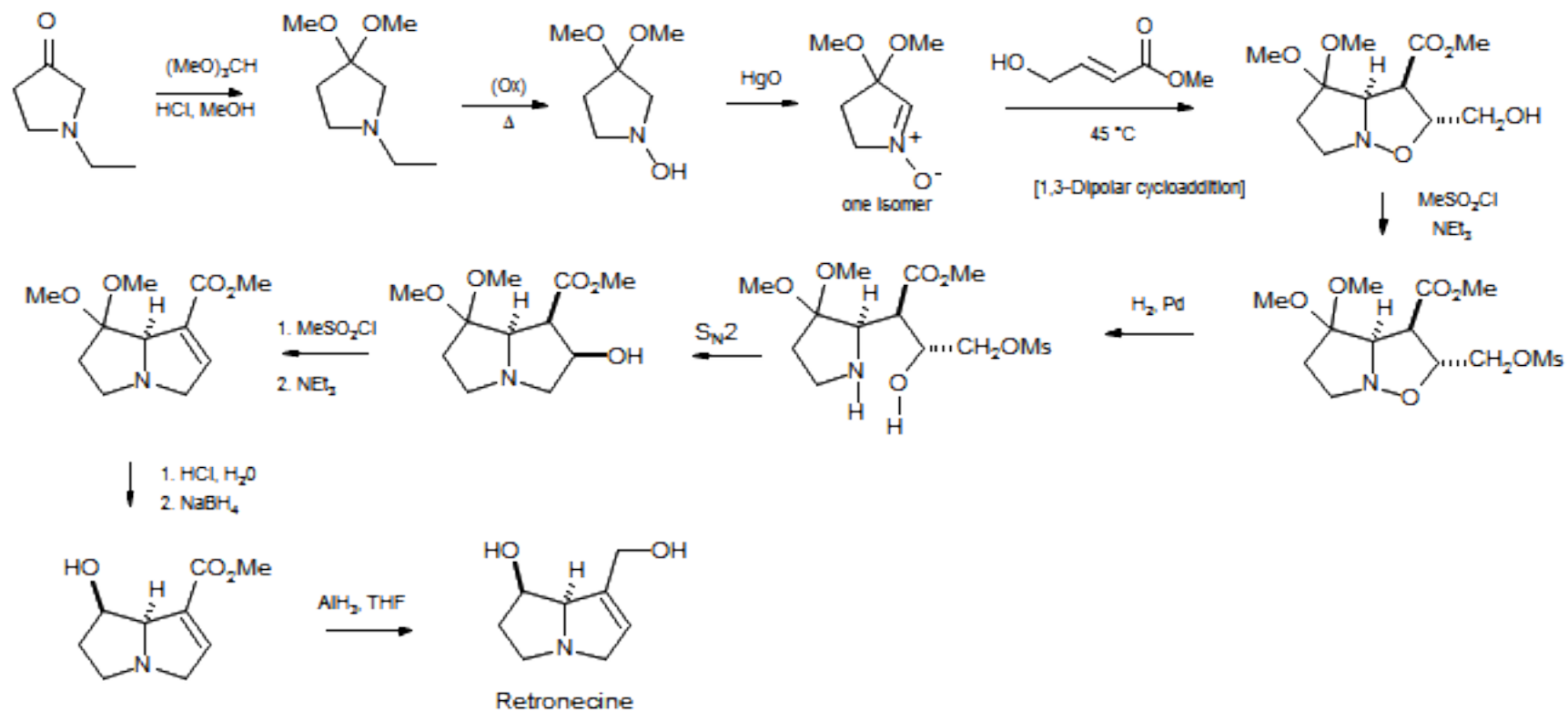
Stork, G.; Niu, D.; Fujimoto, A.; Koft, E. R.; Balkovec, J. M.; Tata, J. R.; Dake, G. R. *J. Am. Chem. Soc.* **2001**, *123*, 2139.



Retronecine

Tufariello, J. J.; Lee, G. E. *J. Am. Chem. Soc.* **1980**, *102*, 373

80-34
COMM

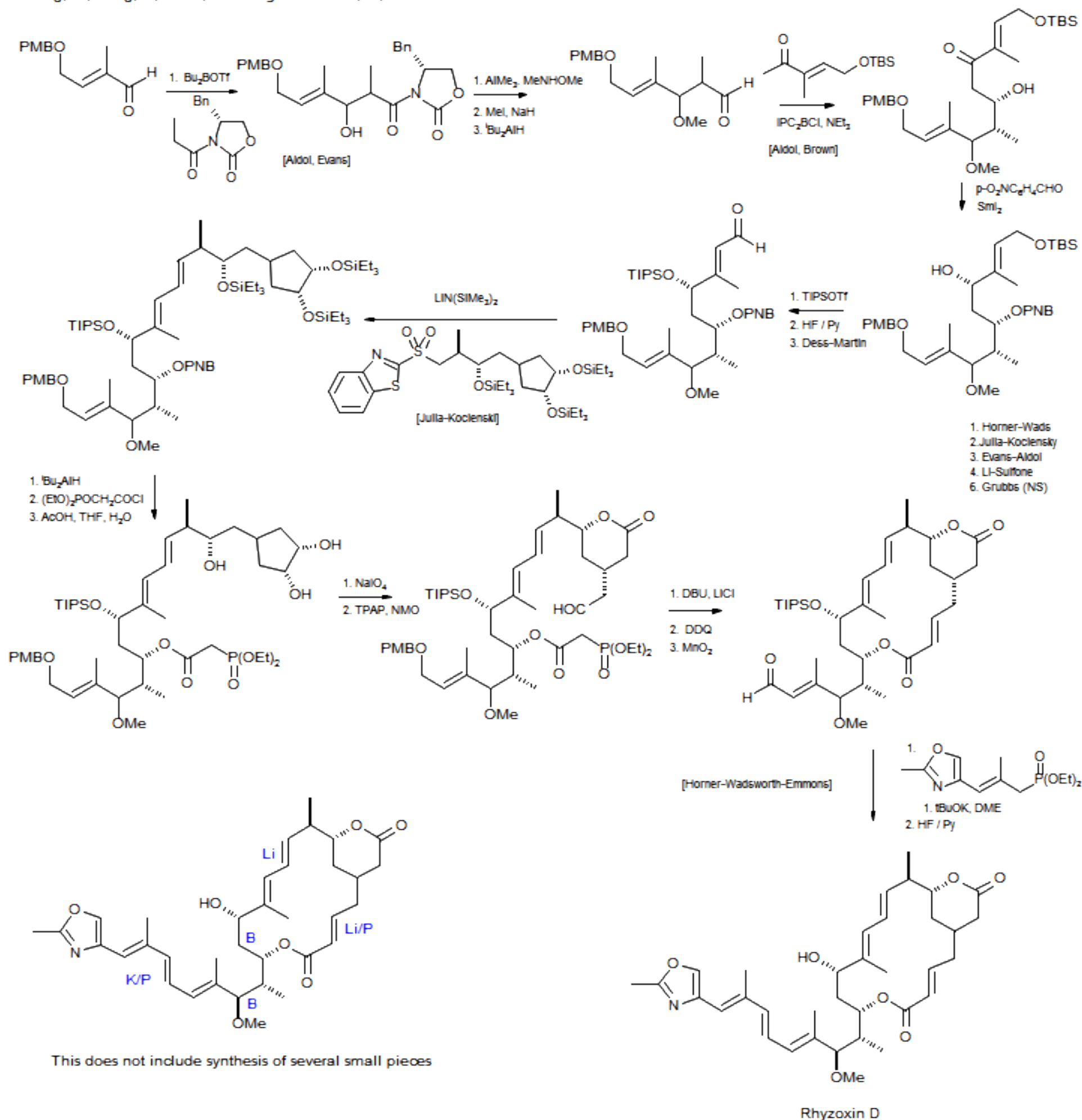


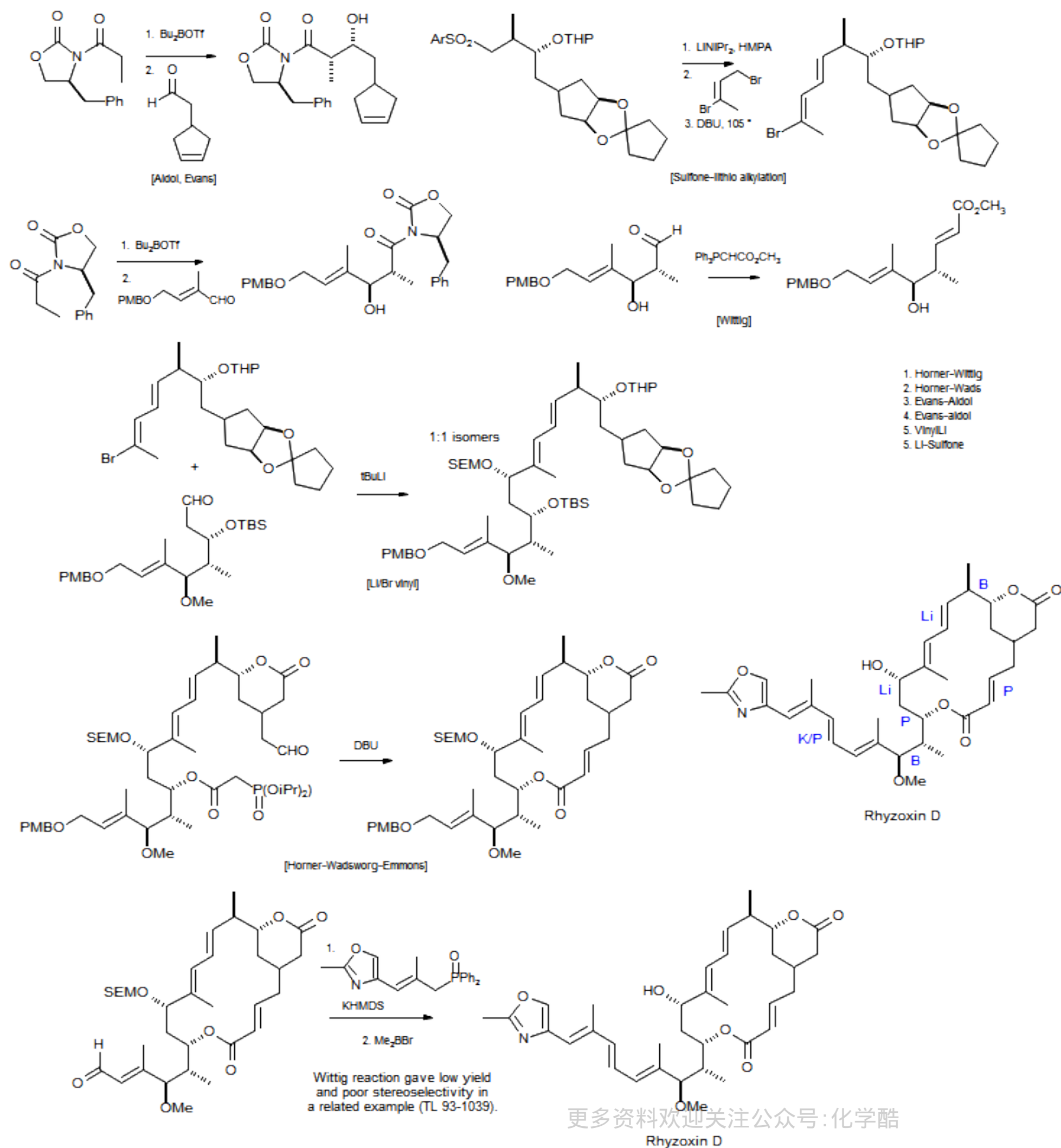
1. Synth
2. 1,3-dipolar
3. Nitron

Rhizoxin D

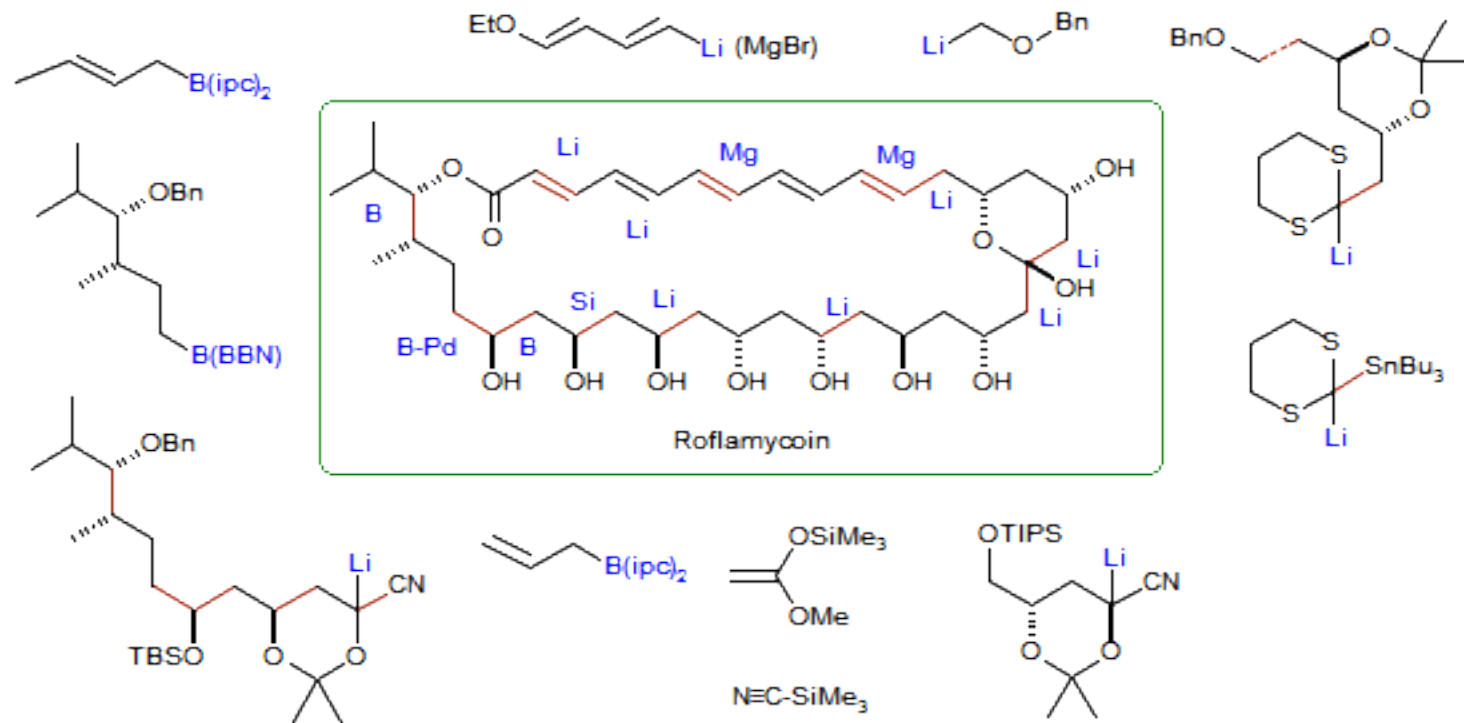
04-02

Jiang, Y.; Hong, J.; Burke, S. D. *Org. Lett.* 2004, 6, 1445

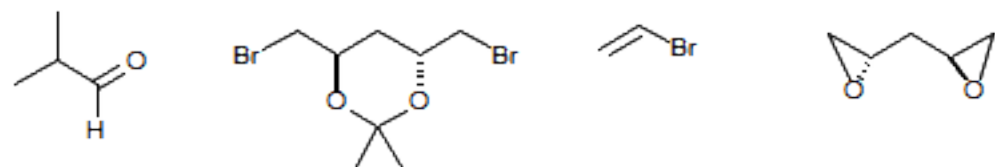


Williams, D. R.; Werner, K. M.; Feng, B. *Tetrahedron Lett.* 1997, 38, 6825

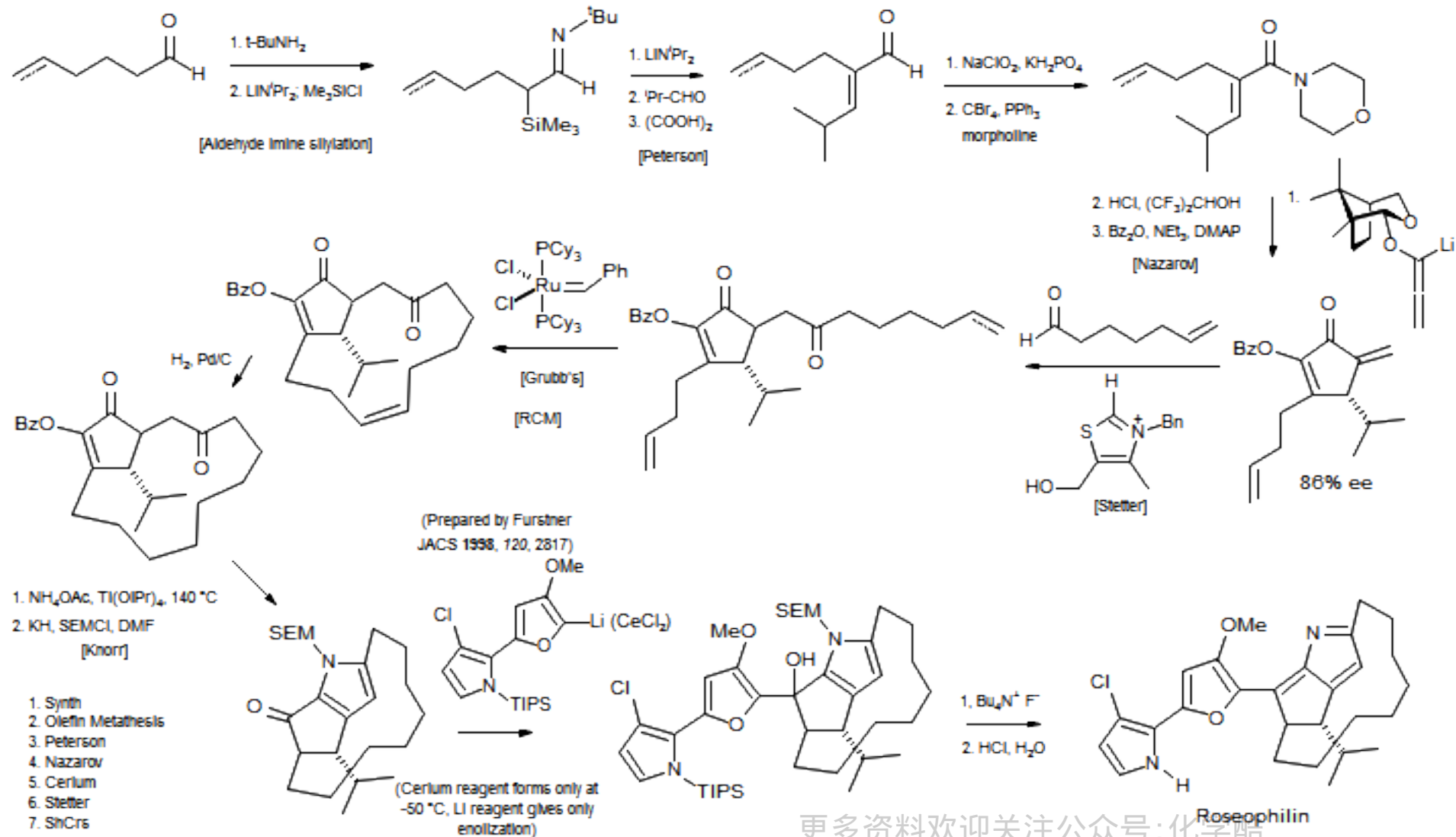
Rychnovsky, S. D.; Khire, U. R.; Yang, G. *J. Am. Chem. Soc.* **1997**, *119*, 2058



Some Electrophiles Used:



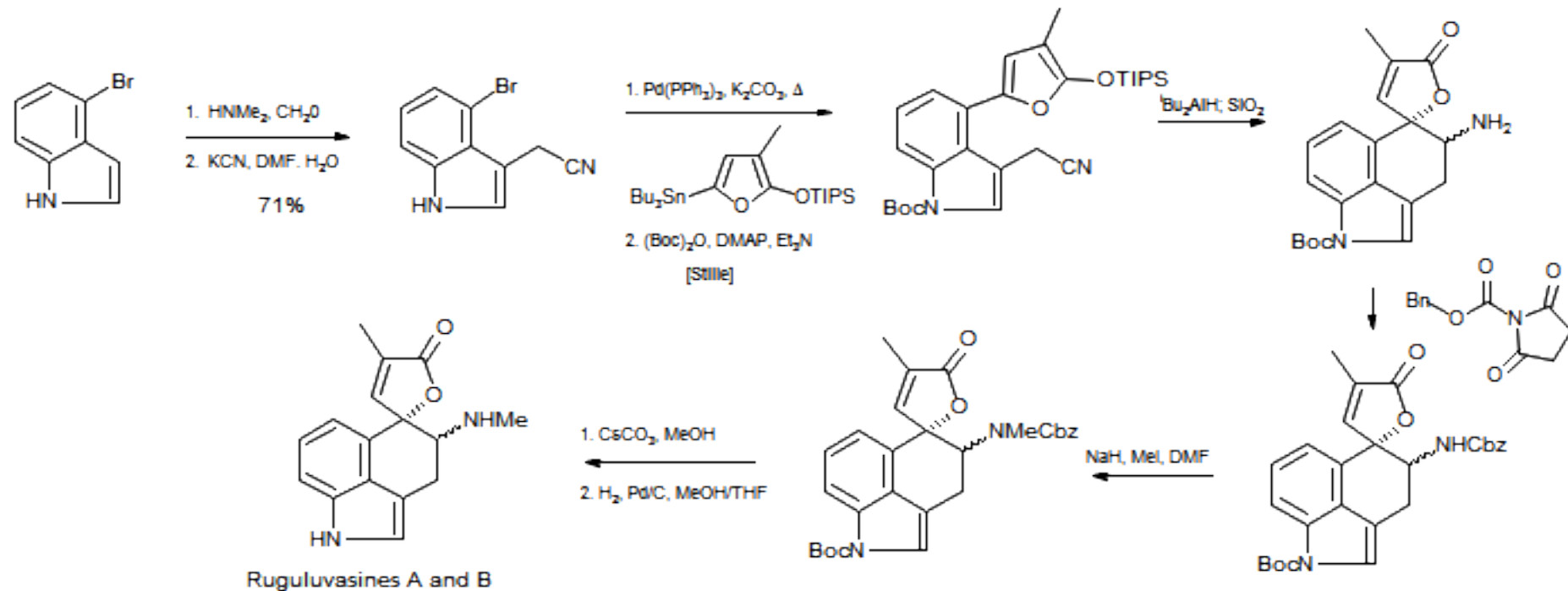
1. Synth
2. Li-Dithiane
3. Li-CH₂-OR
4. SnCrs
5. B-Allyl

Harrington, P. E.; Tius, M. A. *J. Am. Chem. Soc.* **2001**, *123*, 8509-8514

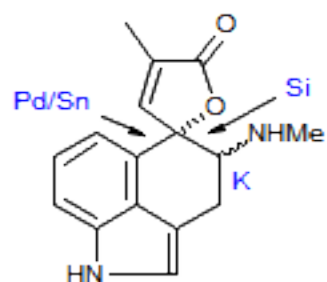
Rugulovasines A and B

Liras, S.; Lynch, C. L.; Fryer, A. M.; Vu, B. T.; Martin, S. F. *J. Am. Chem. Soc.* 2001, 123, 5918.

01-10



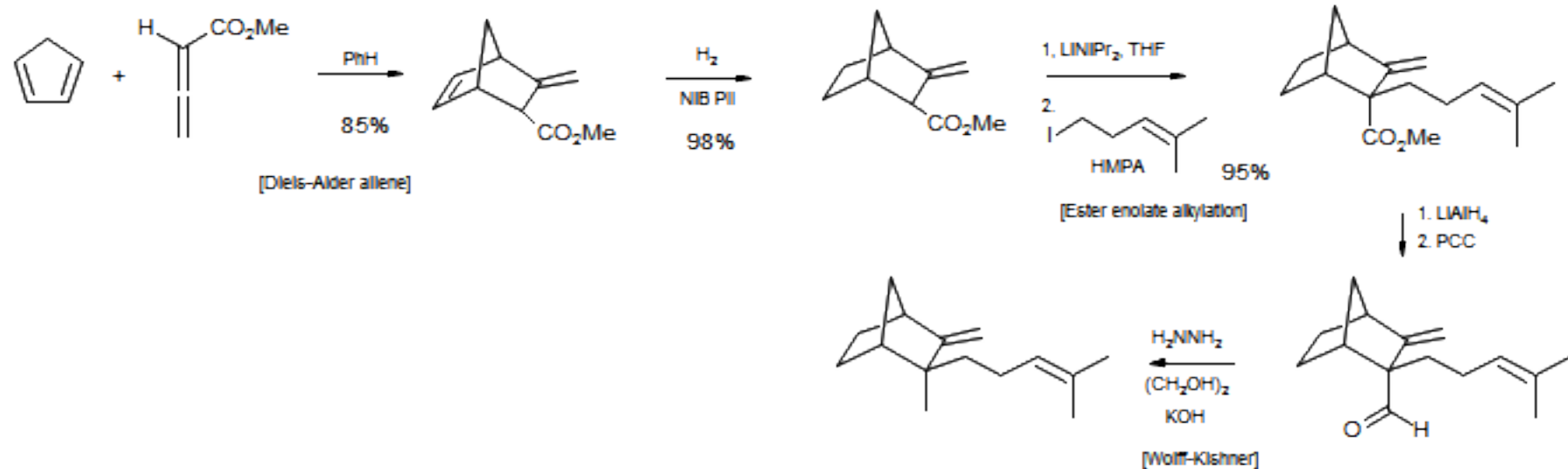
Rugulovasines A and B



Rugulovasines A and B
C-C bond formation

1. Synth
2. Enol silane
3. Problem
4. Mannich-vinyllogous
5. Stille

更多资料欢迎关注公众号: 化学酷

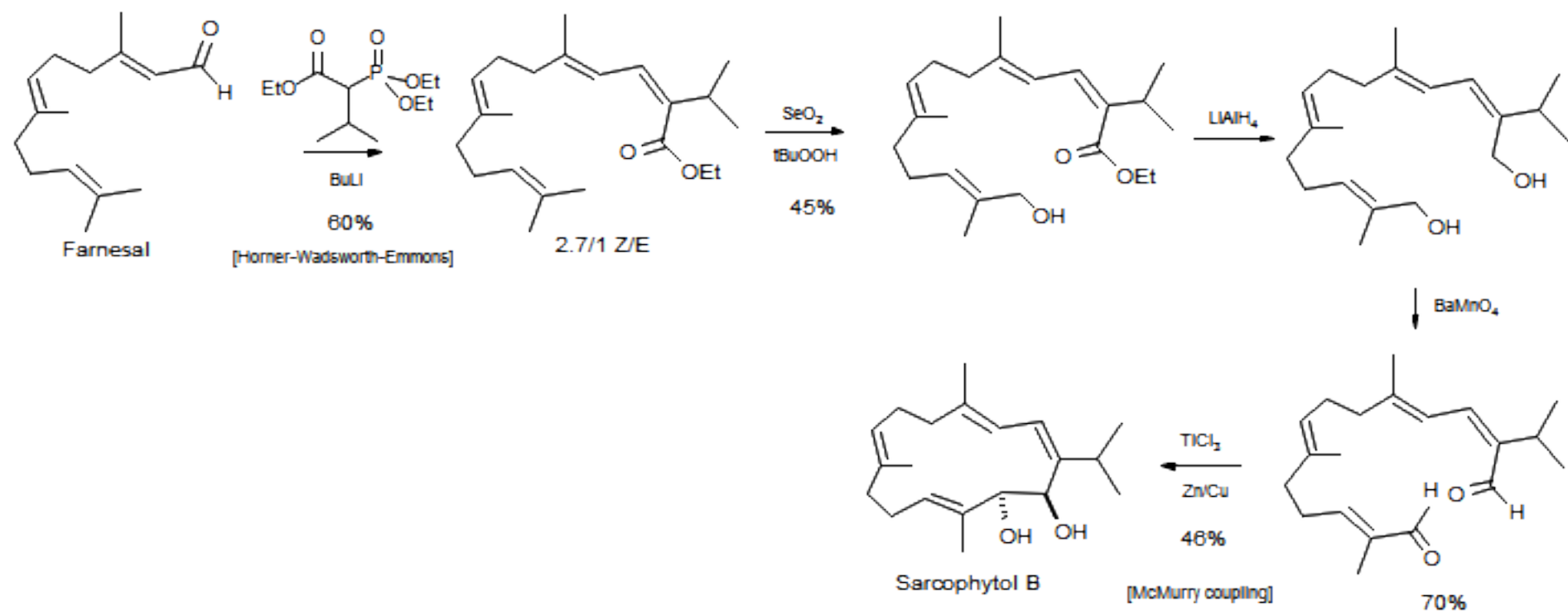
Bertrand, M.; Monti, H.; Huong, K. C. *Tetrahedron Lett.* 1979, 15.

1. Synth
2. DA
3. Allene
4. WK
5. Ester alk

Sarcophytol B

89-17

McMurry, J. E.; Rico, J. G.; Shih, Y. *Tetrahedron Lett.*, 1989, 30, 1173.

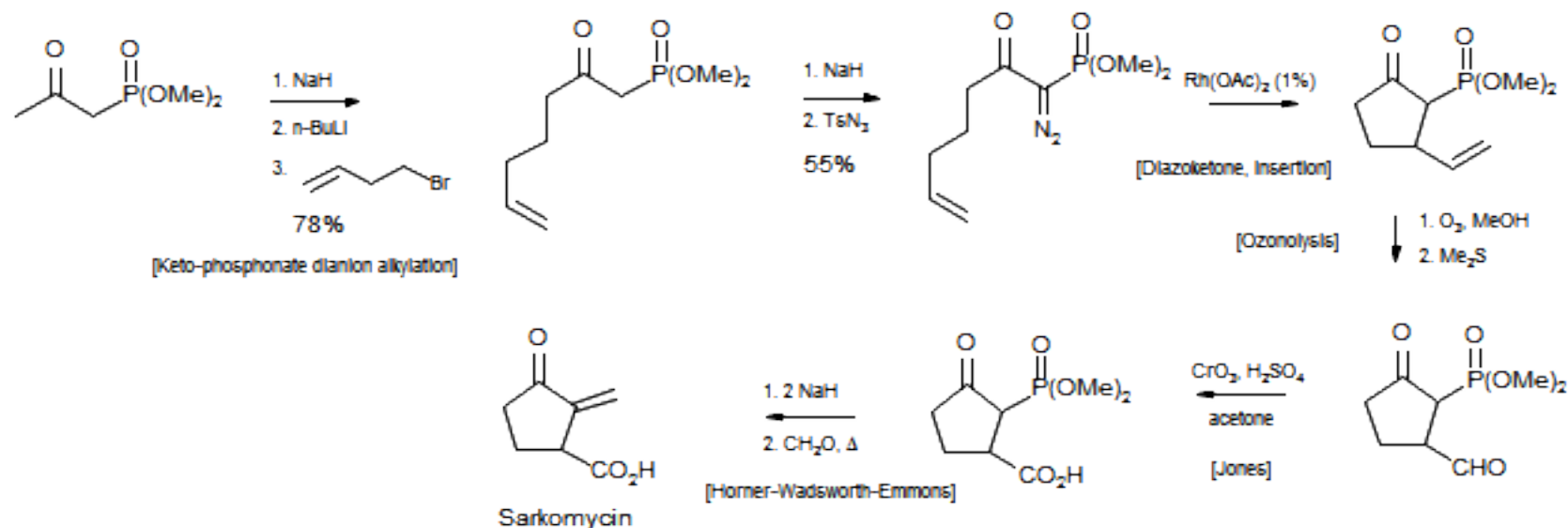


1. Synth
2. SeO₂
3. McMurry
4. HWE

Sarkomycin

Mikolajczyk, M.; Zurawinski, R.; Kielbasinski, P. *Tet. Lett.* **1989**, *30*, 1143

89-02

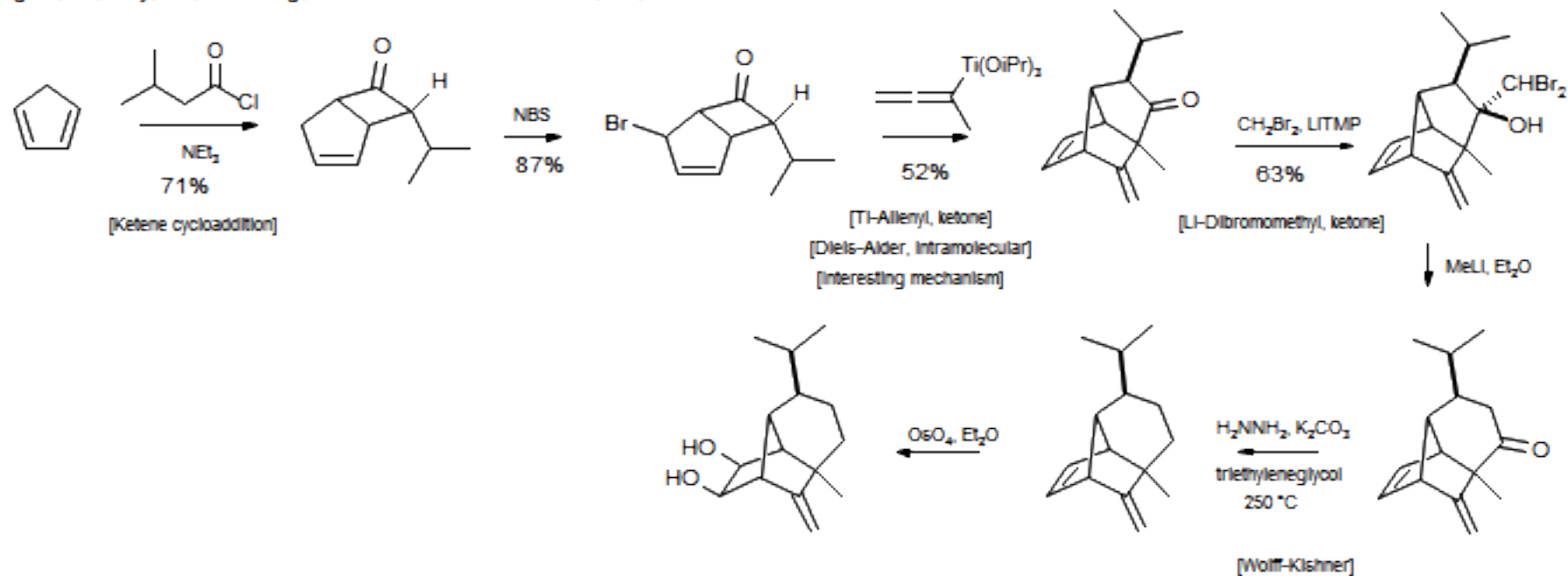


1. Synth
2. Phosphonate chem
3. Enone
4. Carbenoid
5. HWE React

Sativen Sativenediol

Sigrist, R.; Rey, M.; Dreiding, A. *Helv. Chem. Acta* 1988, 71, 788.

88-16

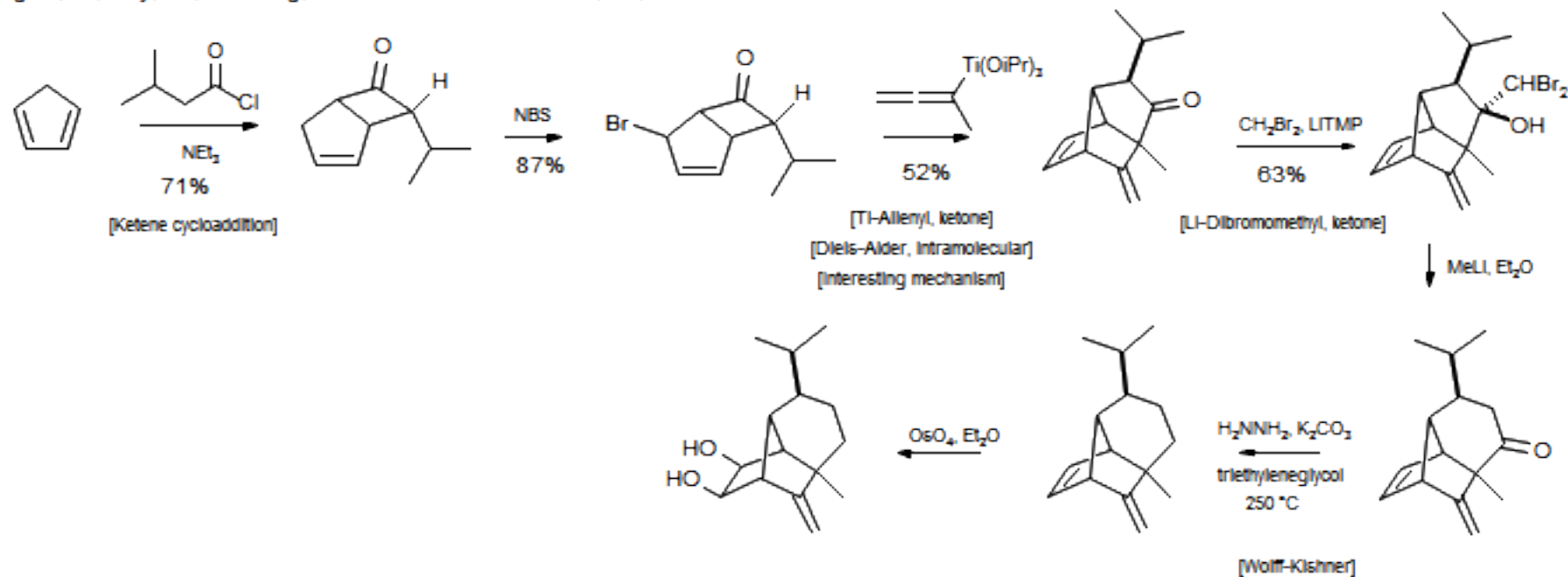


1. Synth
2. Problem
3. 2+2
4. Diels-Alder
5. Wolff-Kishner
6. Grob Fragm
7. Allenyl-M

Sativen Sativenediol

Sigrist, R.; Rey, M.; Dreiding, A. *Helv. Chem. Acta* 1988, 71, 788.

88-16

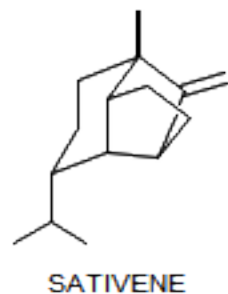
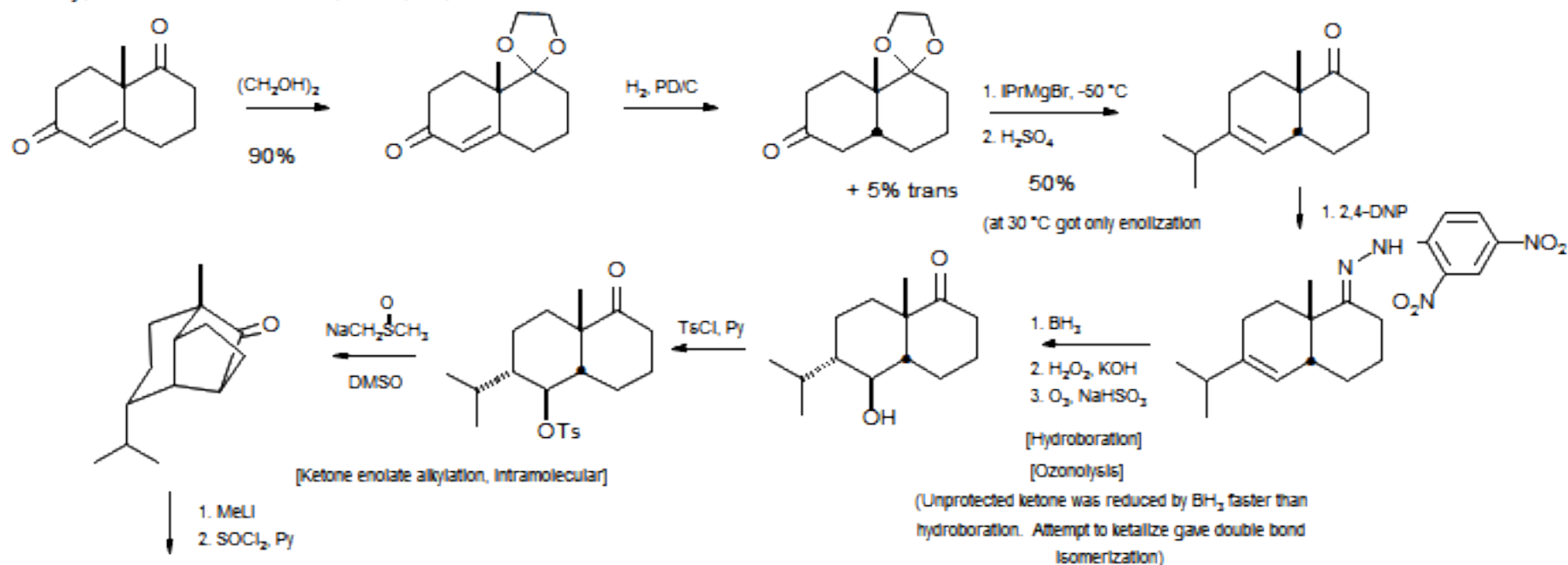


1. Synth
2. Problem
3. 2+2
4. Diels-Alder
5. Wolff-Kishner
6. Grob Fragm
7. Allenyl-M

Sativene, (±)

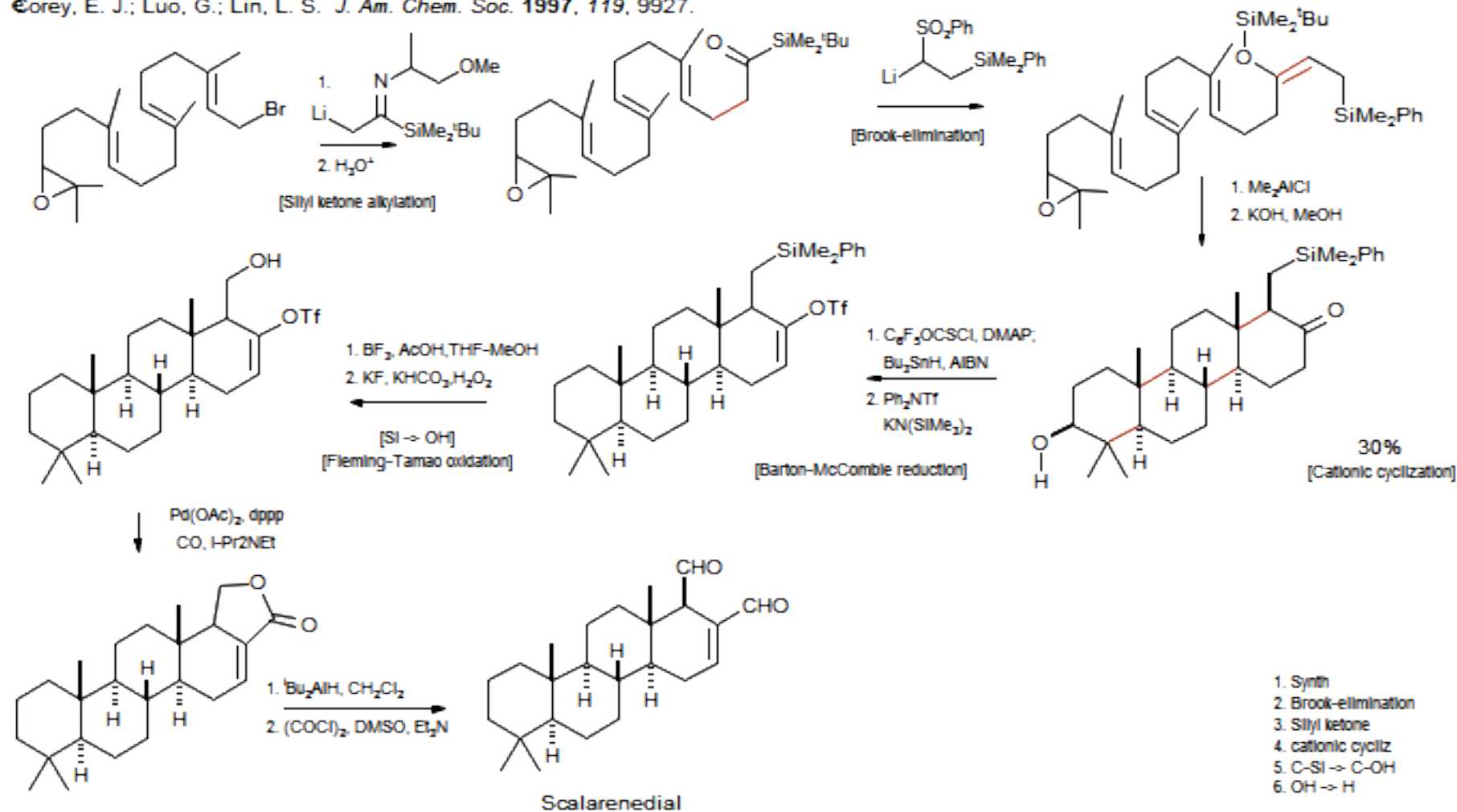
McMurry, J.E. *J. Am. Chem. Soc.*, 1968, 90, 6821.

68-02
EXP



1. Synth
2. Ketone alk.
3. Bicyclo[4.4.0]
4. Alcohol= BH_3

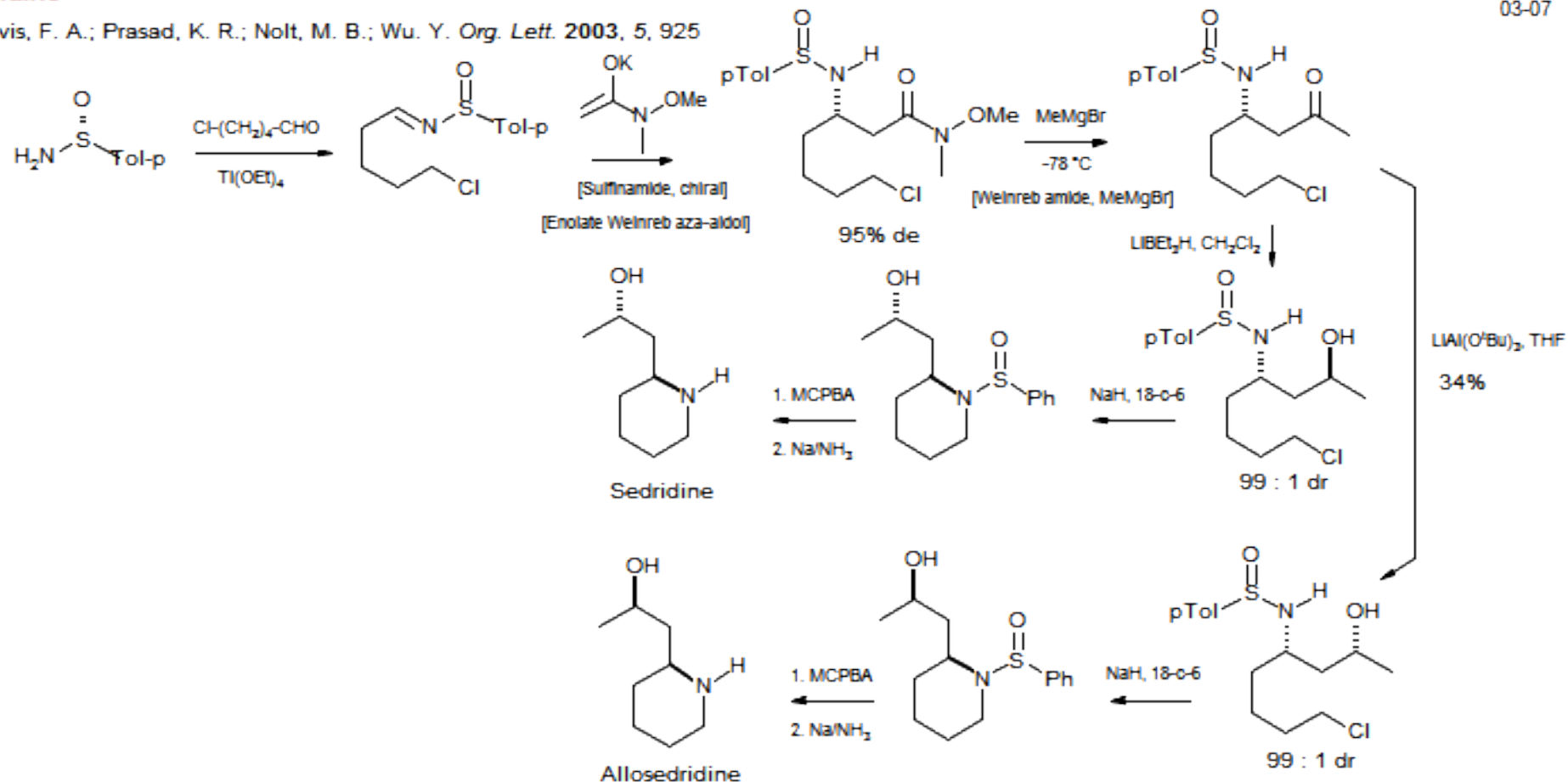
C Corey, E. J.; Luo, G.; Lin, L. S. *J. Am. Chem. Soc.* **1997**, *119*, 9927.



Sedridine

Davis, F. A.; Prasad, K. R.; Nolt, M. B.; Wu, Y. *Org. Lett.* 2003, 5, 925

03-07



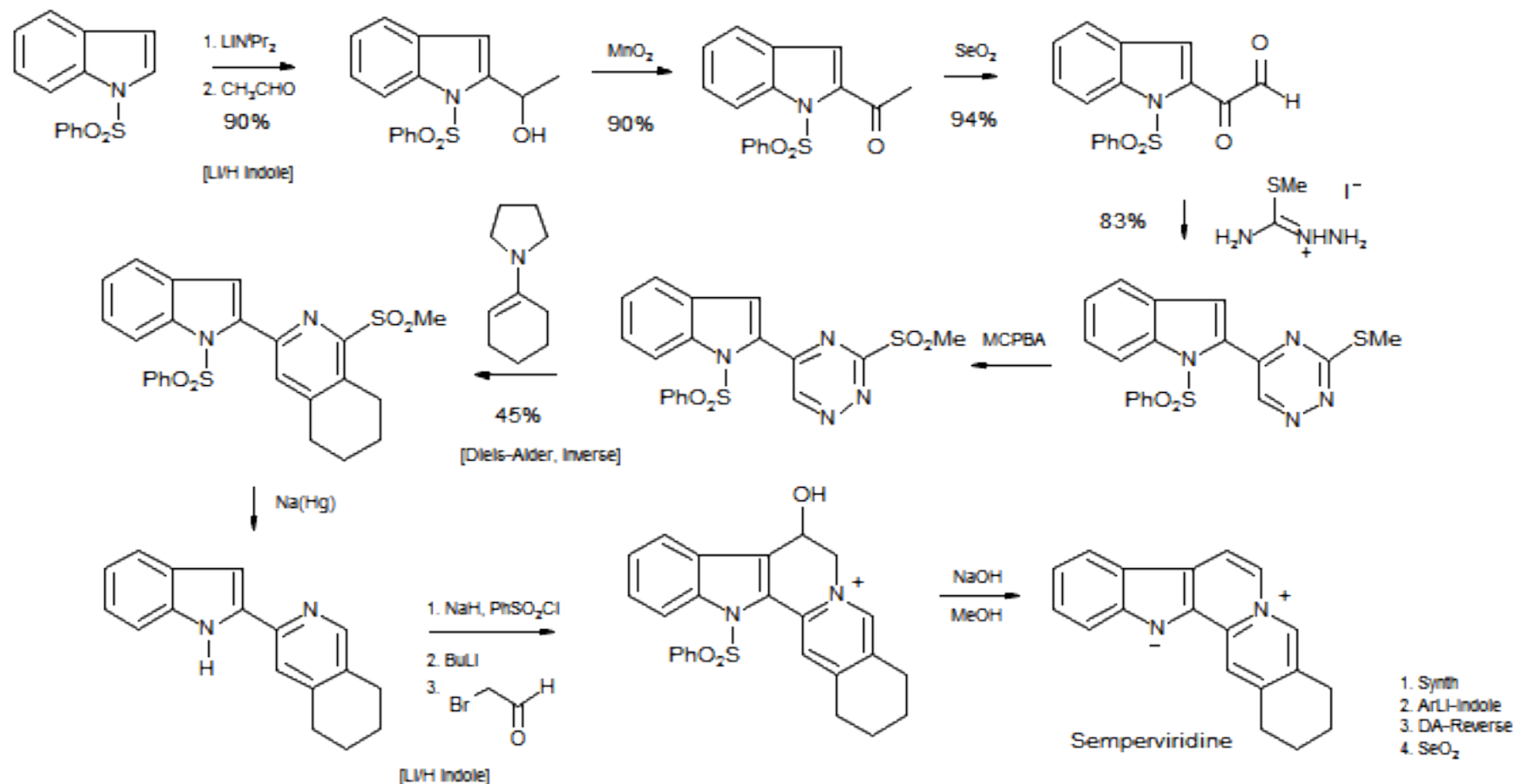
1. Synth
2. Ketone reduct stereochem
3. Weinreb enolate
4. Imine addition
4. Sulfonamide, chiral

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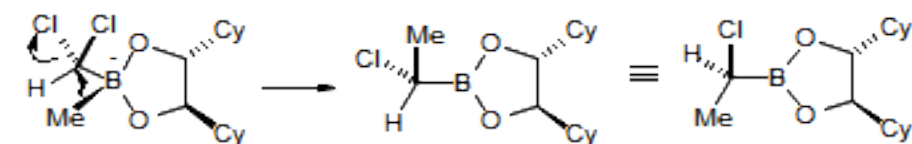
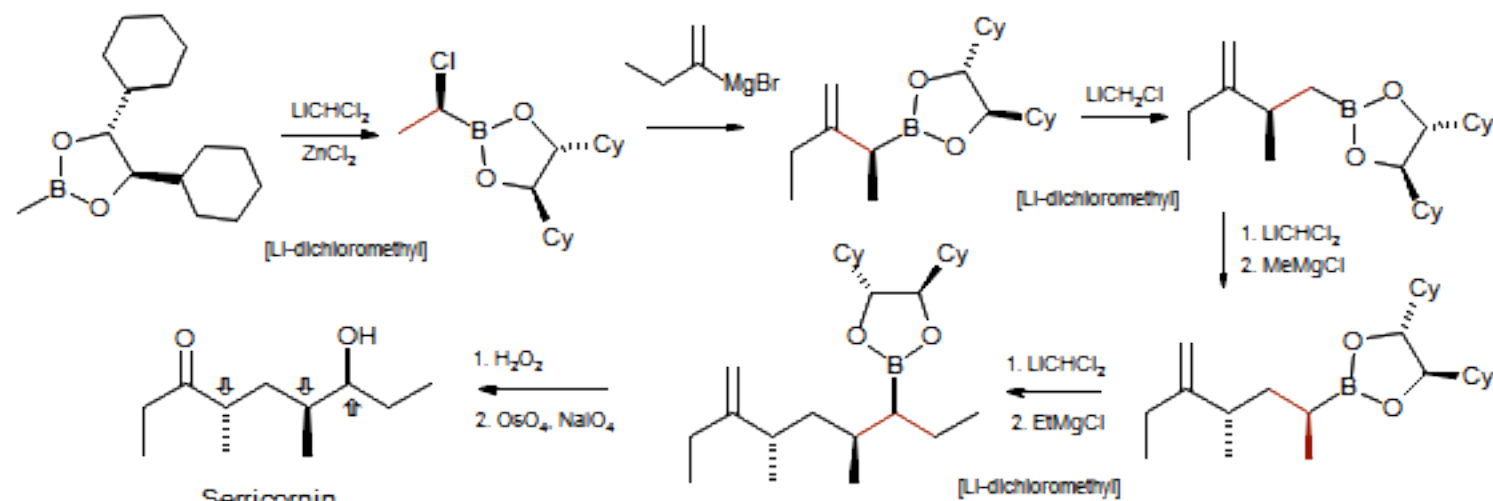
Semperviridine

Gribble, G. W.; Barden, T. C.; Johnson, D. A. *Tetrahedron Lett.* 1988, 44, 1988

88-07



Matteson, D. S.; Singh, R. P. *J. Org. Chem.* **1998**, *63*, 4467



- The process is repeatable, adding one chiral center at a time.
- The diastereoselectivity is very high.

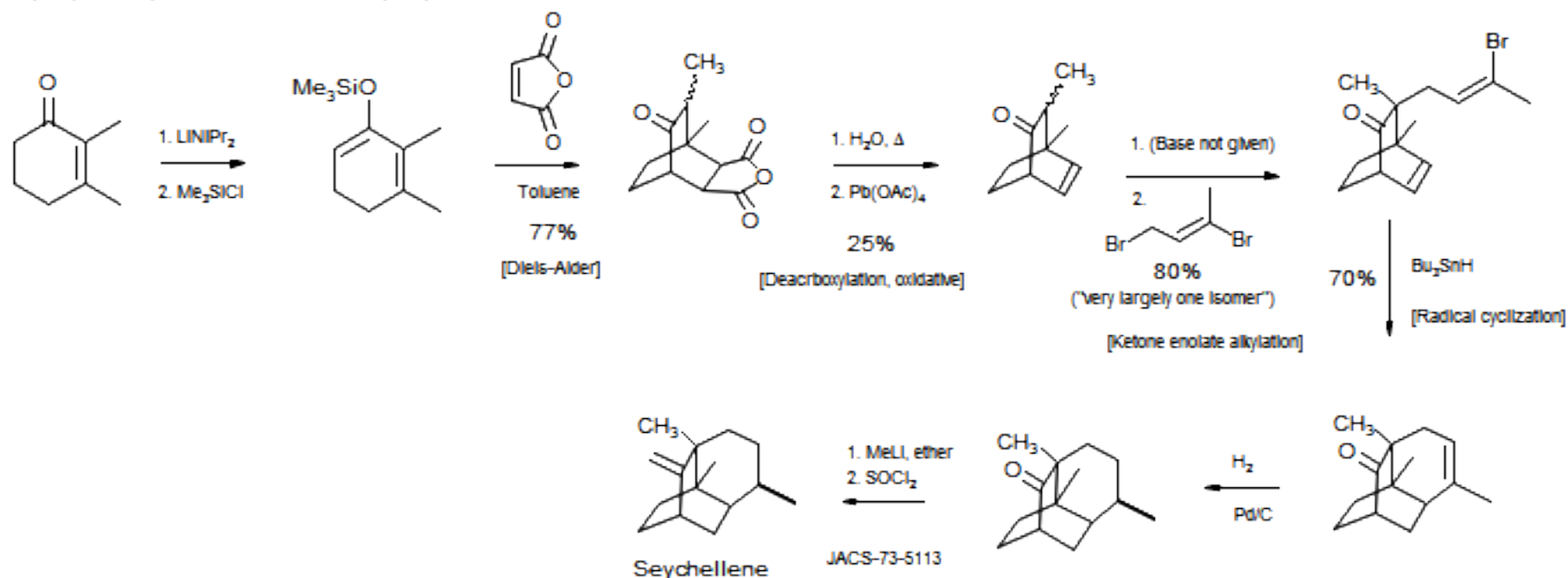
For other examples see:

Matteson, D. S.; Sadhu, K. M. *J. Am. Chem. Soc.* **1983**, *105*, 2077 (Brevicornin synthesis).

Maurer, Armstrong, *J. Org. Chem.* **1996**, *61*, 3106 (Tautomycin synthesis)

Matteson, D. S.; Man, H.-W.; Ho, O. C. *J. Am. Chem. Soc.* **1996**, *118*, 4560 (Stegobinone synthesis).

1. Synth
2. Halo-Li
3. Boron

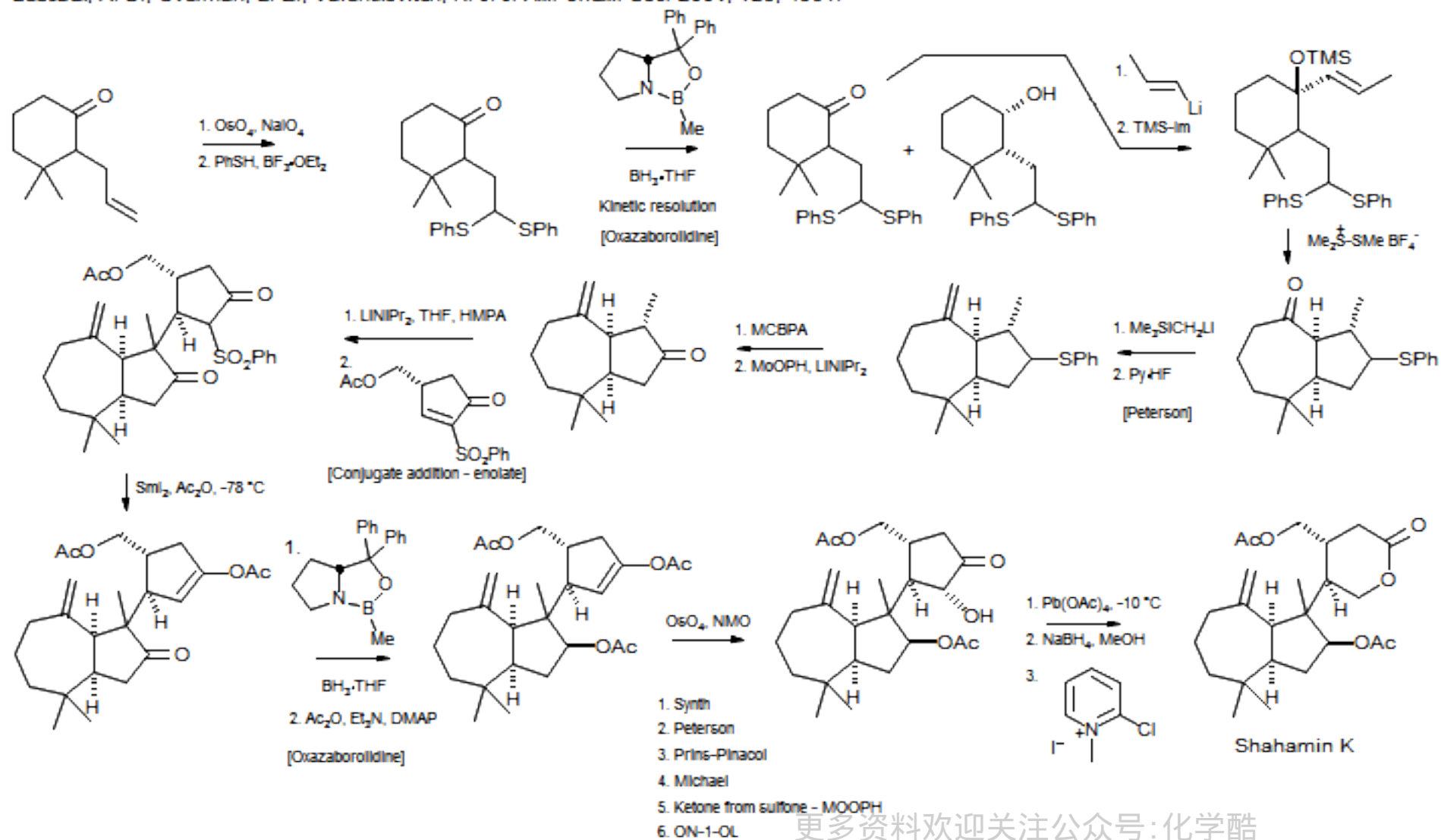
Stork, G.; Baine, N. H. *Tet. Lett.* 1985, 26, 5927

1. Synth
2. Diels-Alder
3. Chem 547
4. Enolate Alk
5. Radical
6. Olefin

Shahamin K

Lebsack, A. D.; Overman, L. E.; Valentkovitch, R. J. *J. Am. Chem. Soc.* **2001**, *123*, 4851.

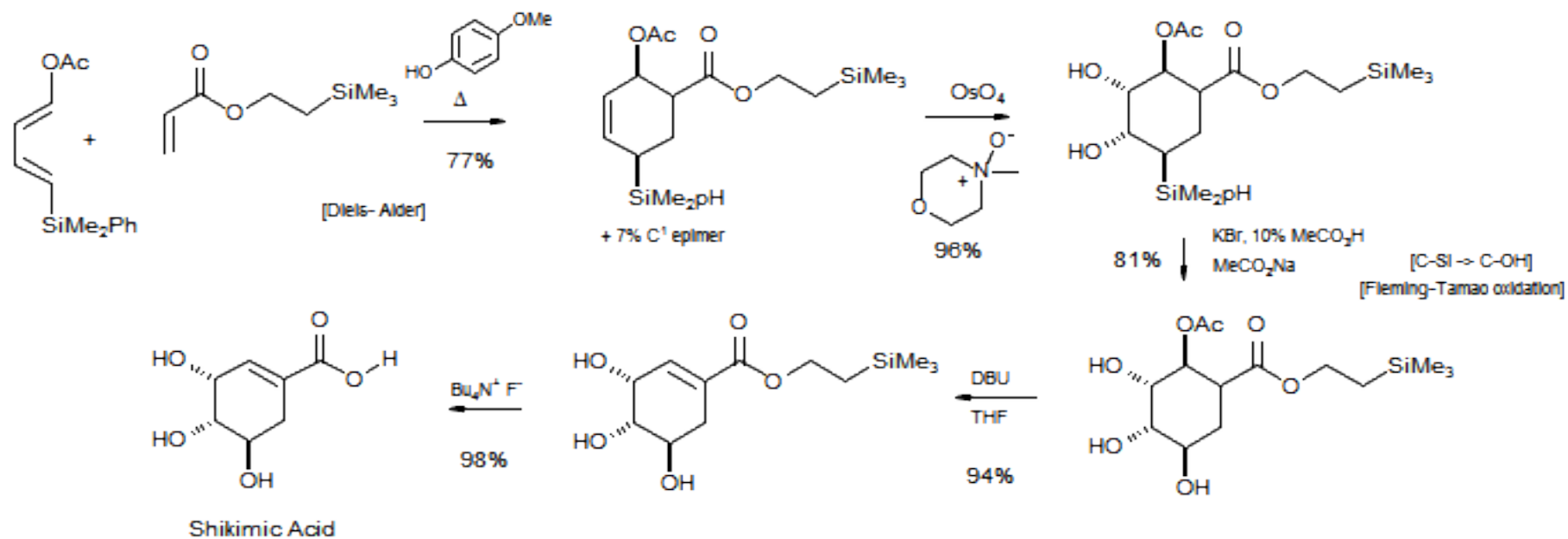
01-08



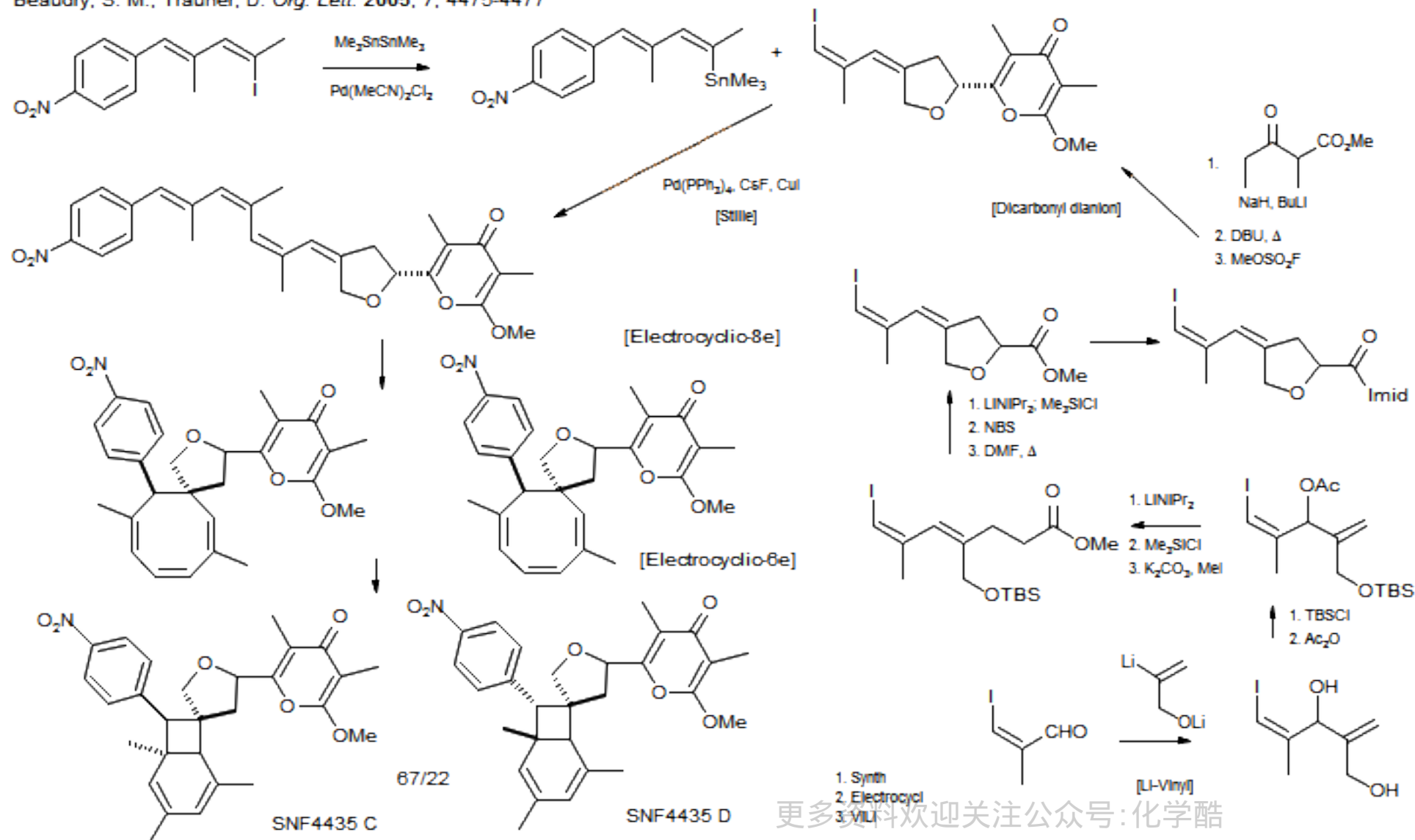
Shikimic Acid

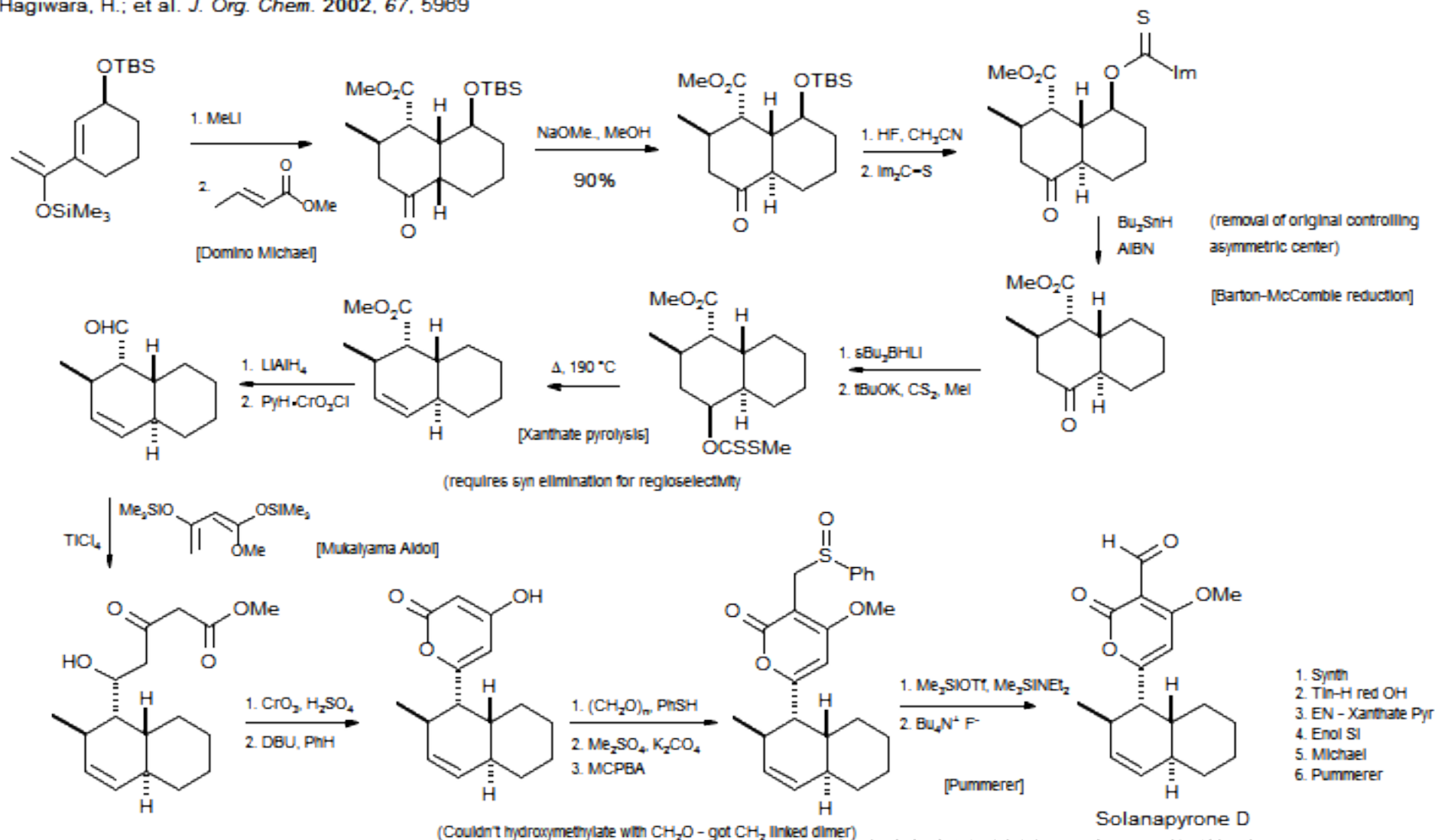
Koreeda, M.; Teng, K.; Morata, T. *Tetrahedron Lett.* 1990, 31, 5997

90-01



1. Synth
2. ShCrs
3. 842
4. DA
5. SI

Beaudry, S. M.; Trauner, D. *Org. Lett.* 2005, 7, 4475-4477

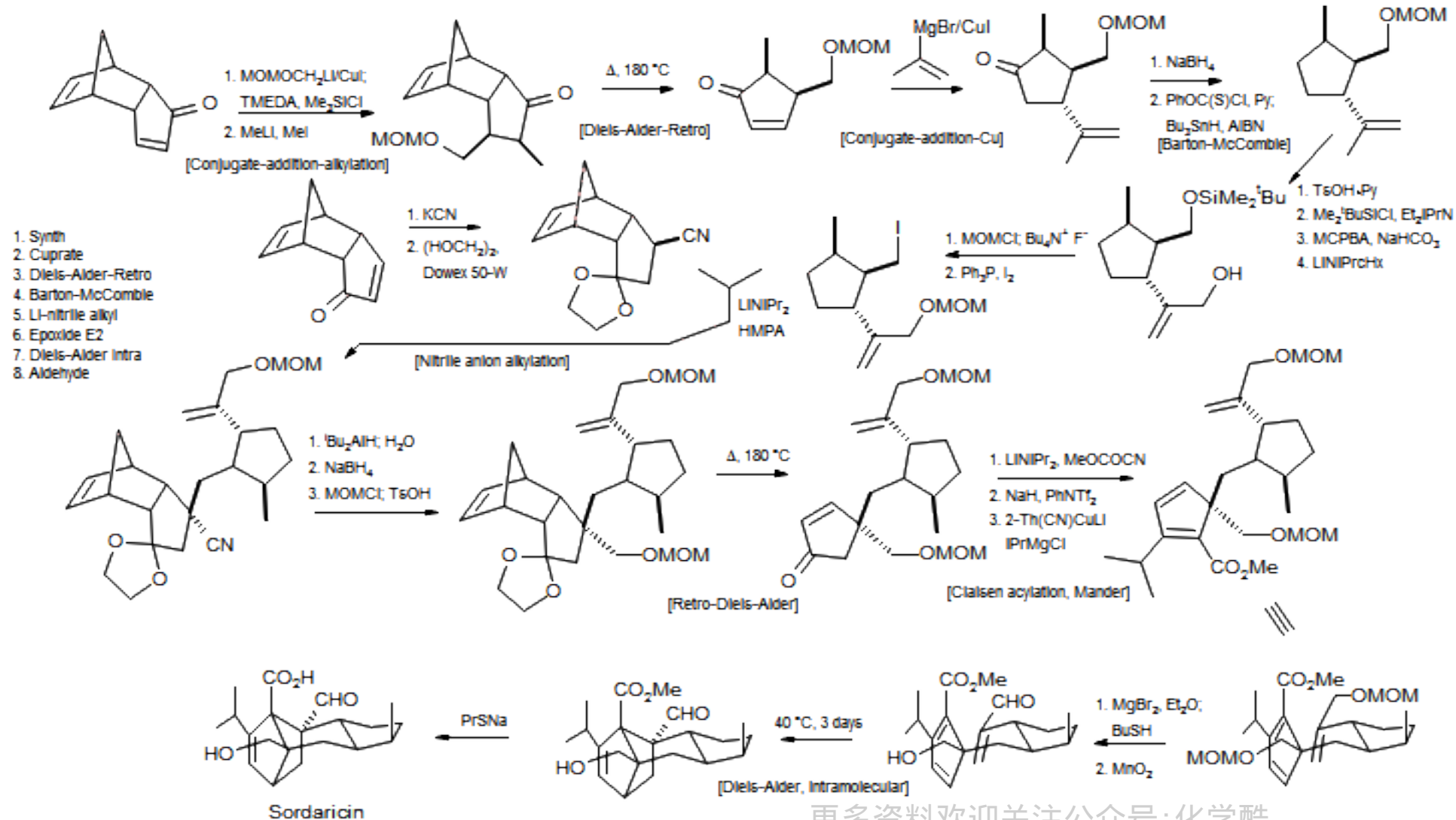
Hagiwara, H.; et al. *J. Org. Chem.* 2002, 67, 5969

1. Synth
2. Tin-H red OH
3. EN - Xanthate Pyr
4. Enol Si
5. Michael
6. Pummerer

Sordaricin

Mander, L. N.; Thomson, R. J. *Org. Lett.* 2003, 5, 1321

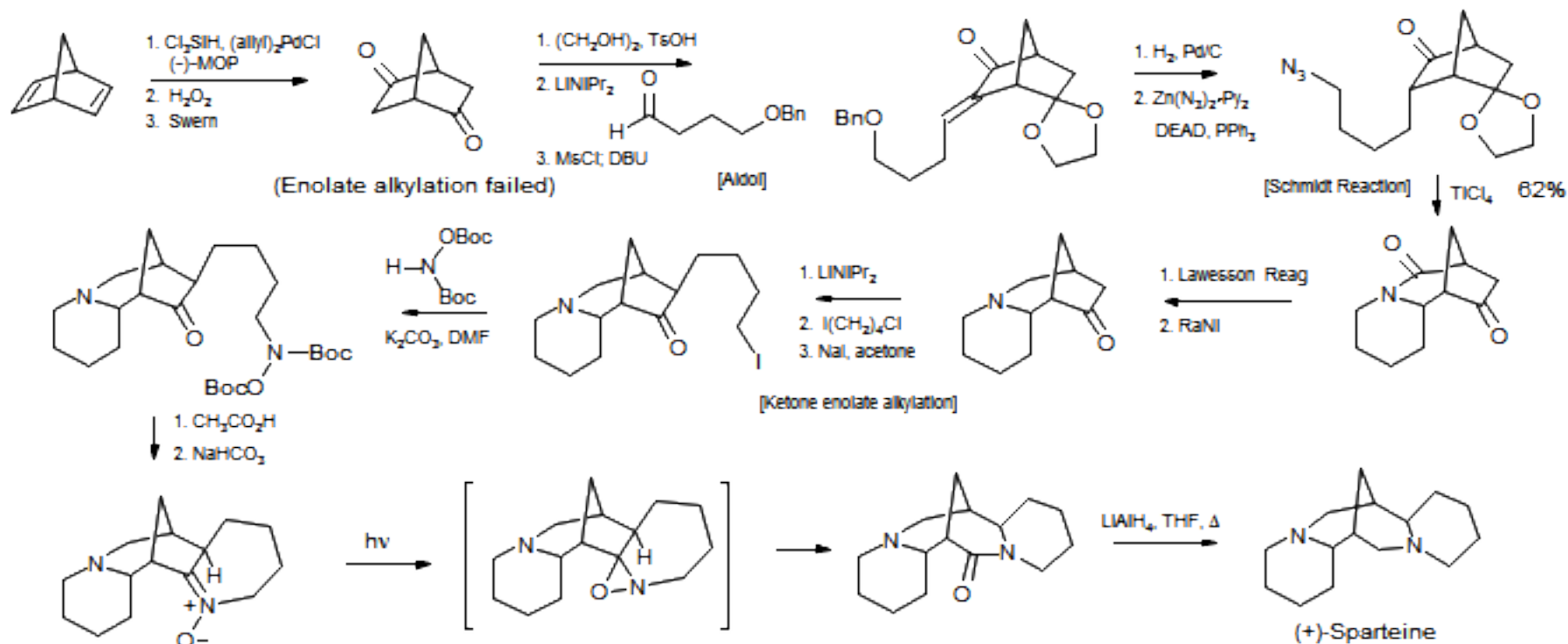
03-11



Sparteine

Smith, B. T.; Wendt, J. A.; Aube, J. *Org. Lett.* 2002, 4, 2577

02-05

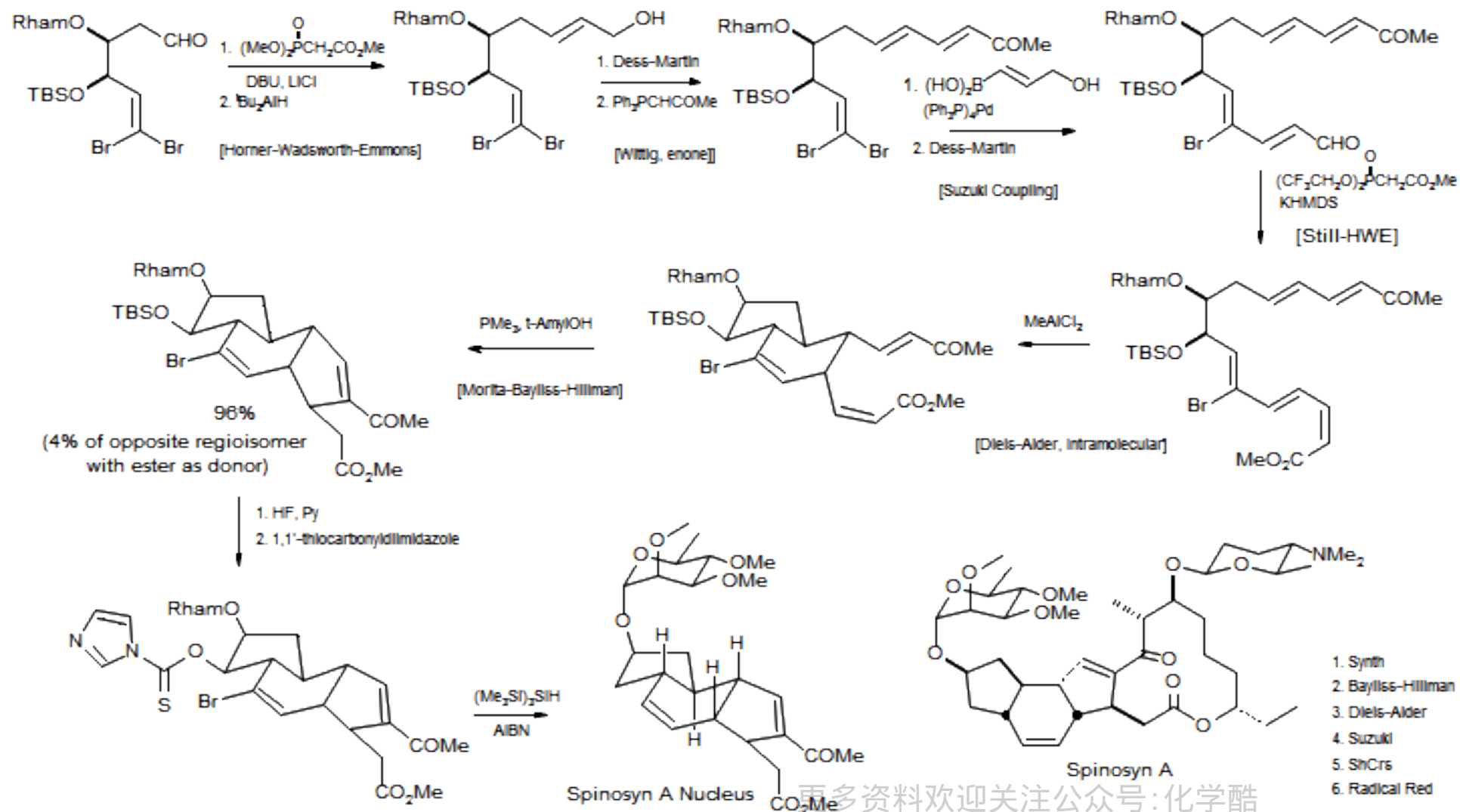


1. Synth
2. Ketone Alkyl
3. Aldol
4. Schmidt React
5. Amine
6. Nitron

Spinosyn A Nucleus

Mergott, D. J.; Frank, S. A.; Rousch, W. R. *Org. Lett.* 2002, 4, 3157

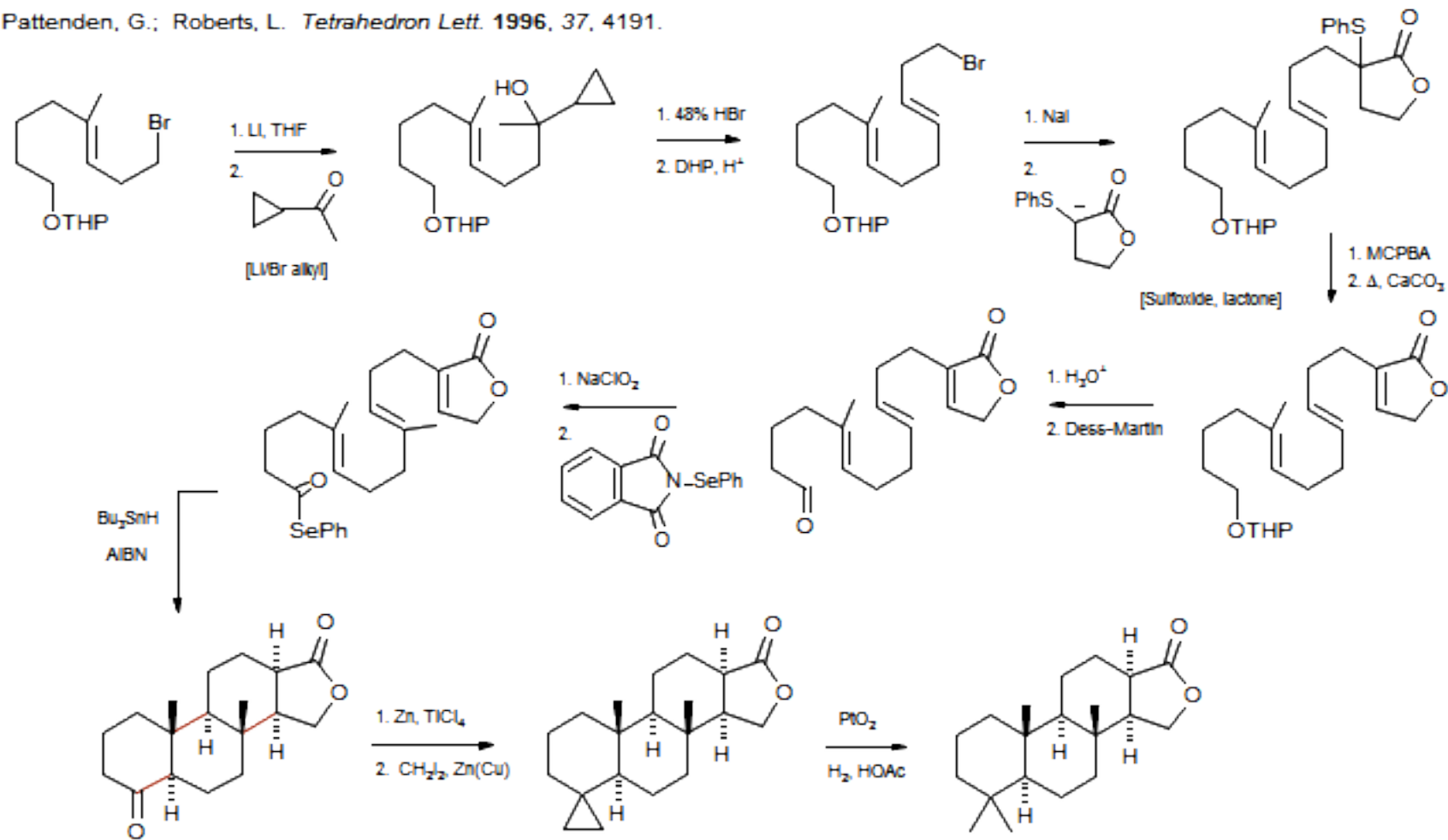
02-08



1. Synth
2. Bayliss-Hillman
3. Diels-Alder
4. Suzuki
5. ShCrS
6. Radical Red

Spongian-16-one

96-06

Pattenden, G.; Roberts, L. *Tetrahedron Lett.* 1996, 37, 4191.

65% yield

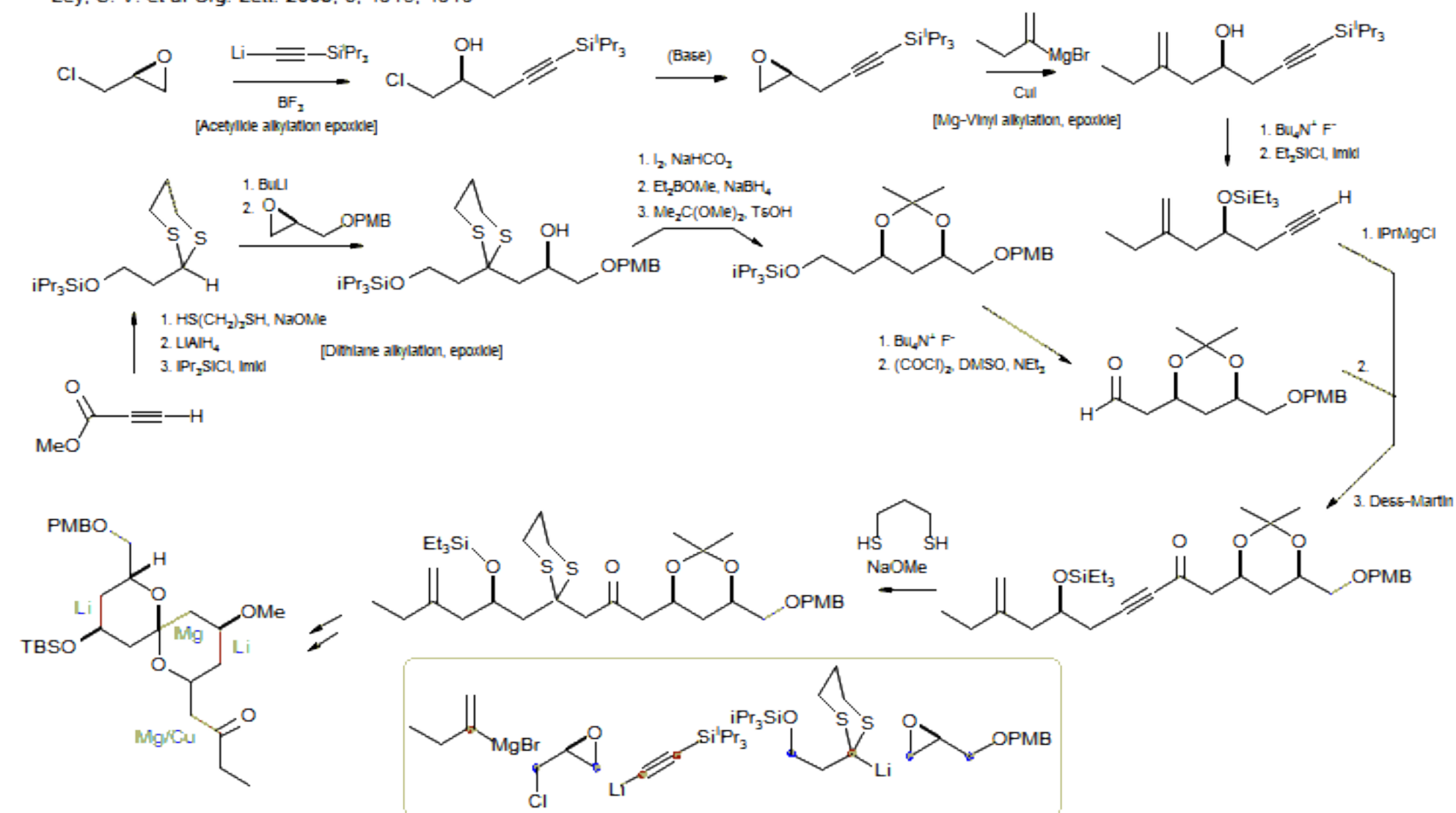
>90% one diastereomer

[Radical cyclization]

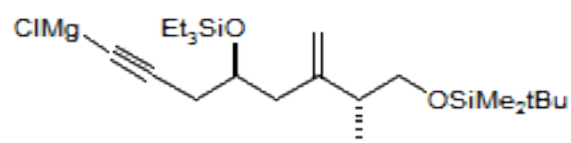
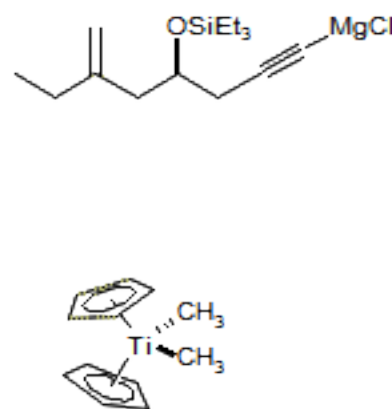
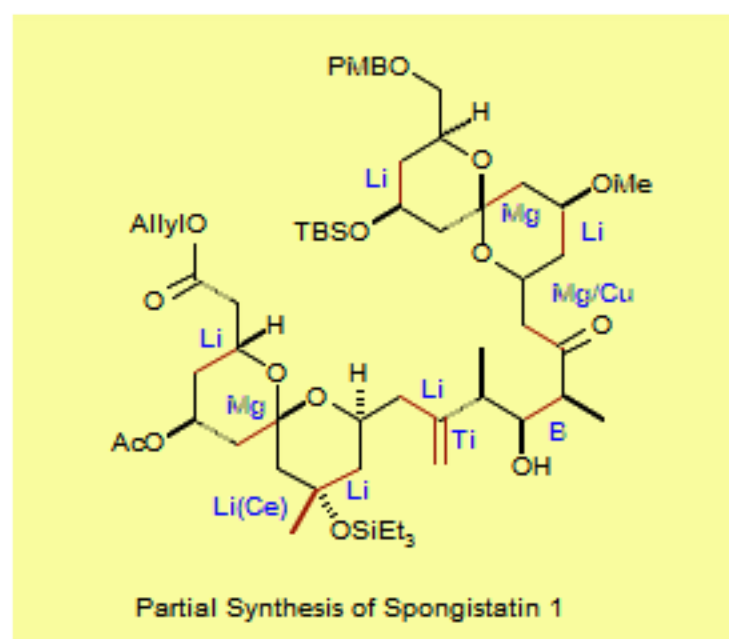
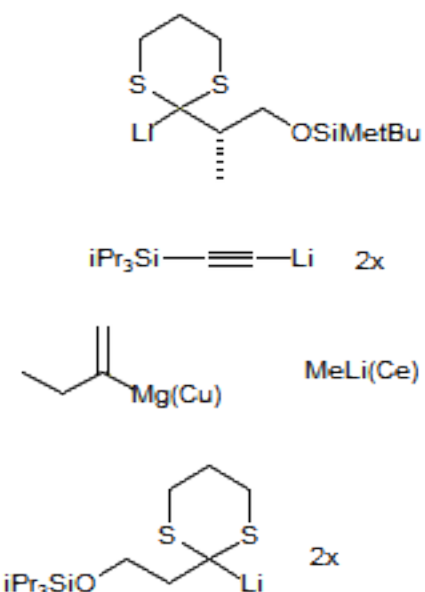
1. Synth
2. Radical
3. SePhth

更多资料欢迎关注公众号:化学酷

Organometallic Reactions in Partial Synthesis of Spongistatin 1

Ley, S. V. et al *Org. Lett.* 2003, 5, 4815, 4819

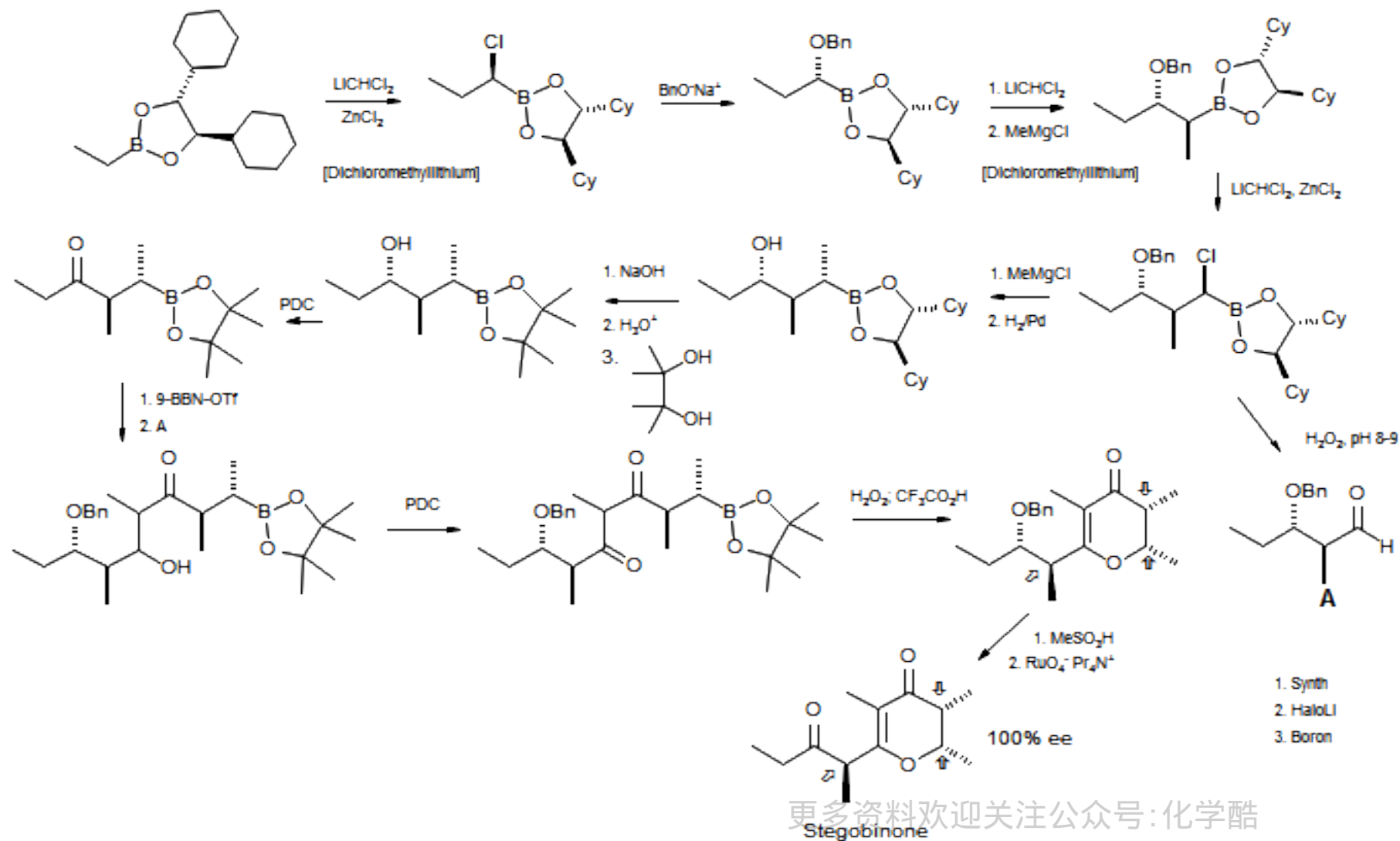
Partial

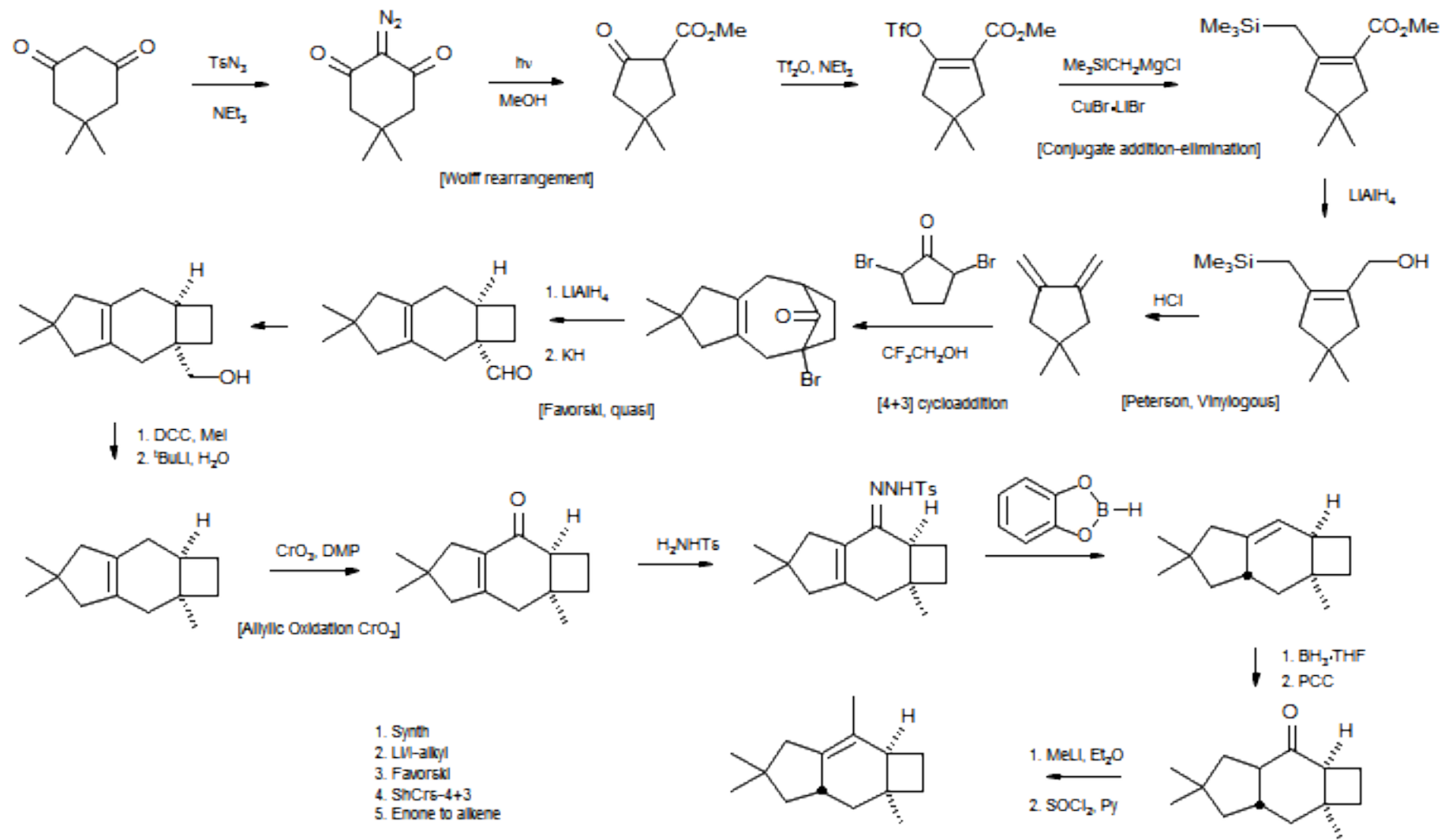


Stegobinone

Matteson, D. S.; Man, H.-W.; Ho, O. C. *J. Am. Chem. Soc.* 1996, 118, 4560

96-12

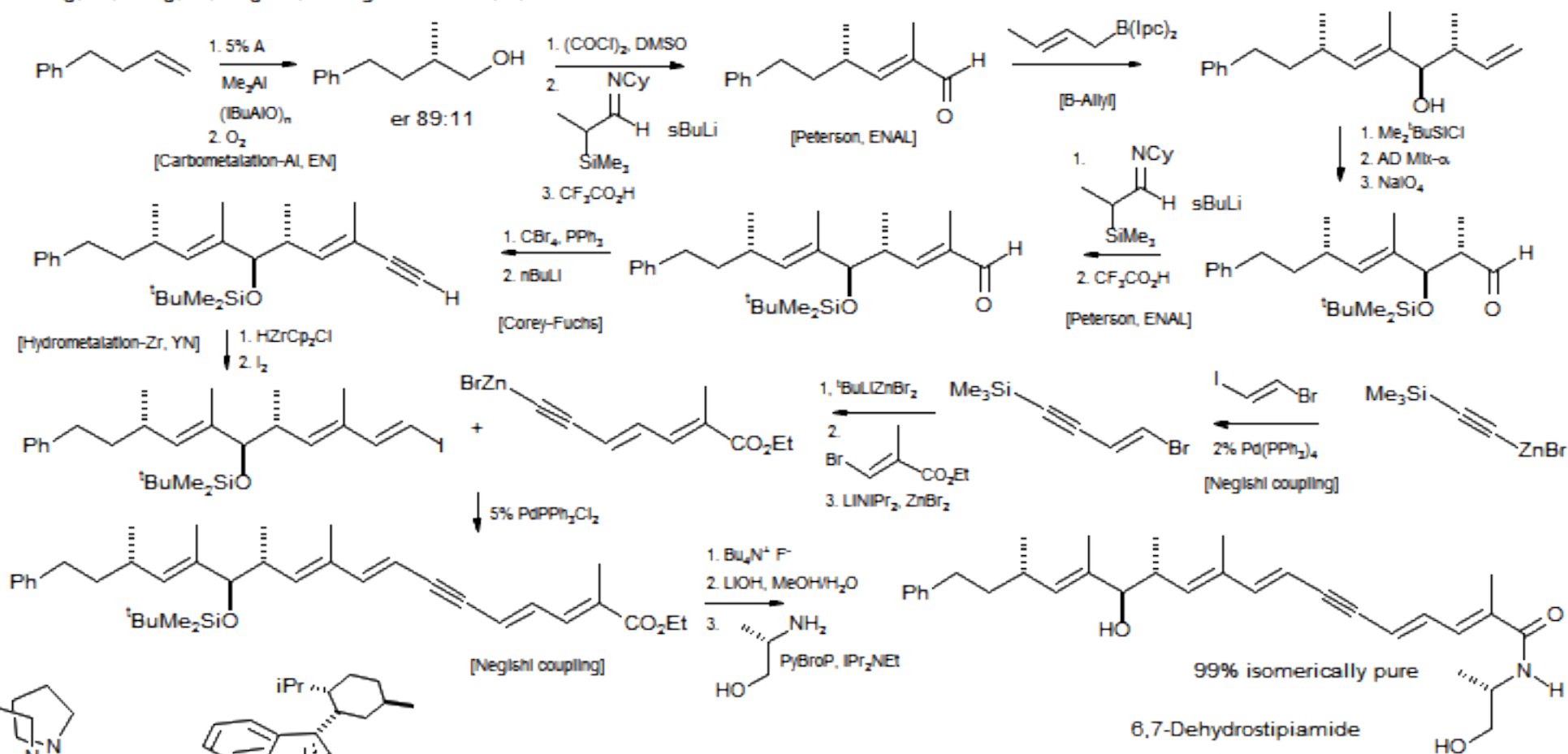


Harmata, M.; Bohnert, G. *J. Org. Lett.* 2003, 5, 59

Stipiamide, 6,7-Dehydro

Zeng, X.; Zeng, F.; Negishi, E. *Org. Lett.* 2004, 6, 3245-3248

04-15



Erker *J. Am. Chem. Soc.* 1993, 115, 4590

99% isomerically pure
6,7-Dehydrostipiamide
Stipiamide is cis alkene

A nonnatural multidrug resistance reversal agent of high potency and low toxicity.

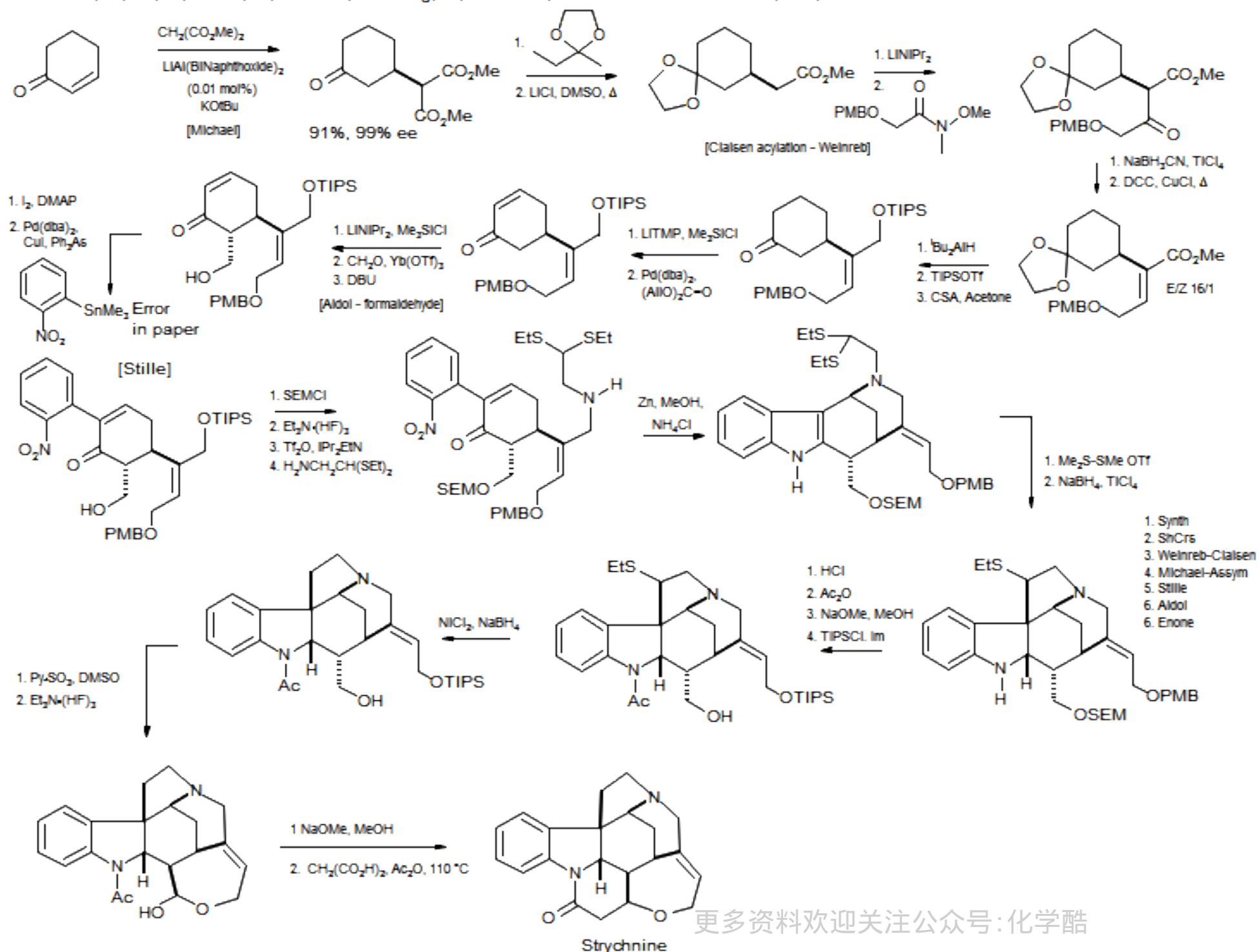
1. Synth
2. AllylBorane
3. Peterson
4. Enal
5. Negishi Coupl
6. Carbometalation

更多资料欢迎关注公众号: 化学酷

Strychnine

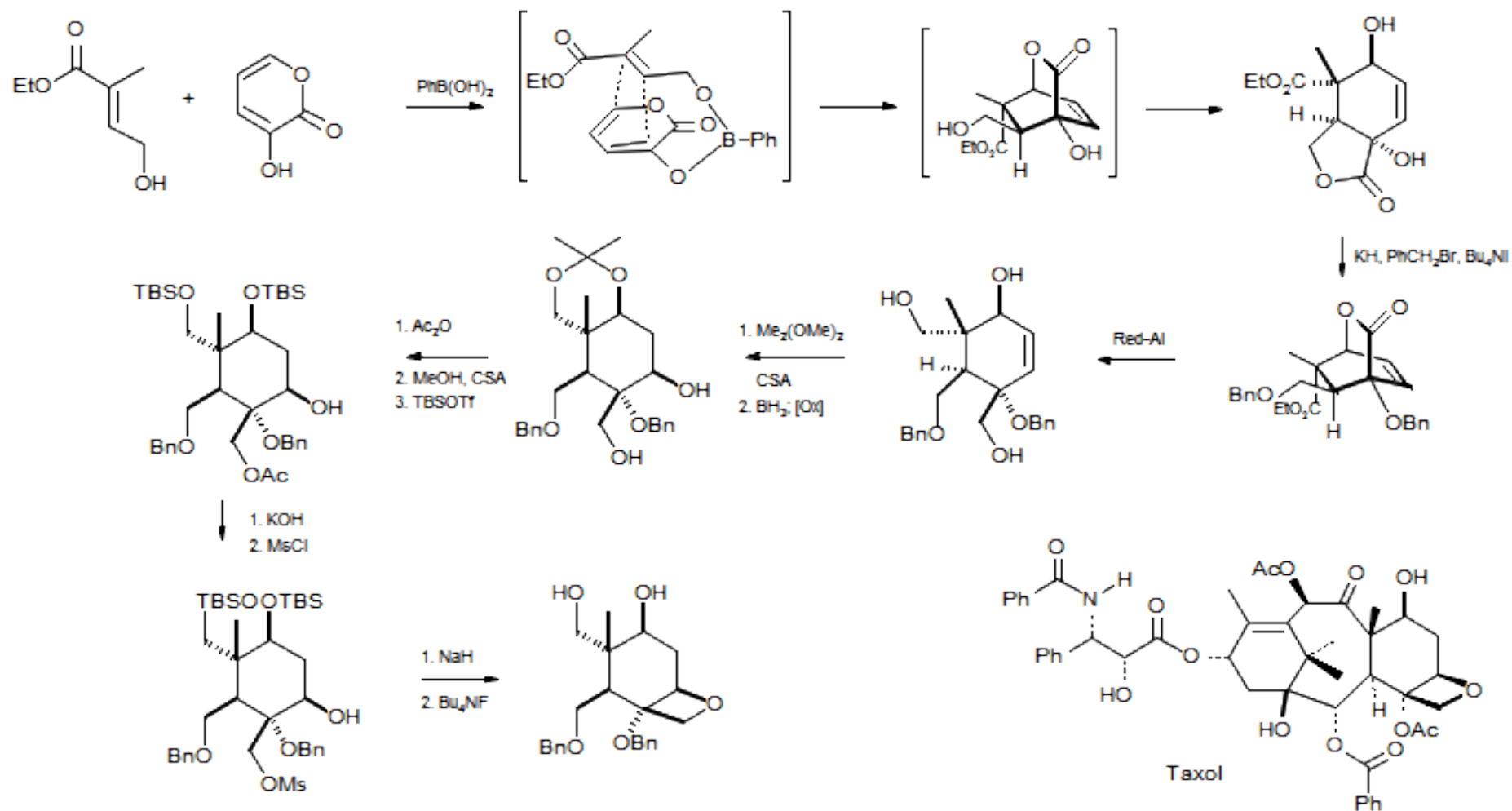
Ohshima, T.; Xu, Y.; Takita, R.; Shimizu, S. Zhong, D.; Shibasaki, M. *J. Am. Chem. Soc.* 2002, 124, 14546-14547

02-13



Nicolaou, K. C.; Liu, J. J.; Hwang, C.-K.; Pai, W. M.; Guy, R. K. *Chem. Commun.* 1992, 1118

COMM



1. Synth

2. DA

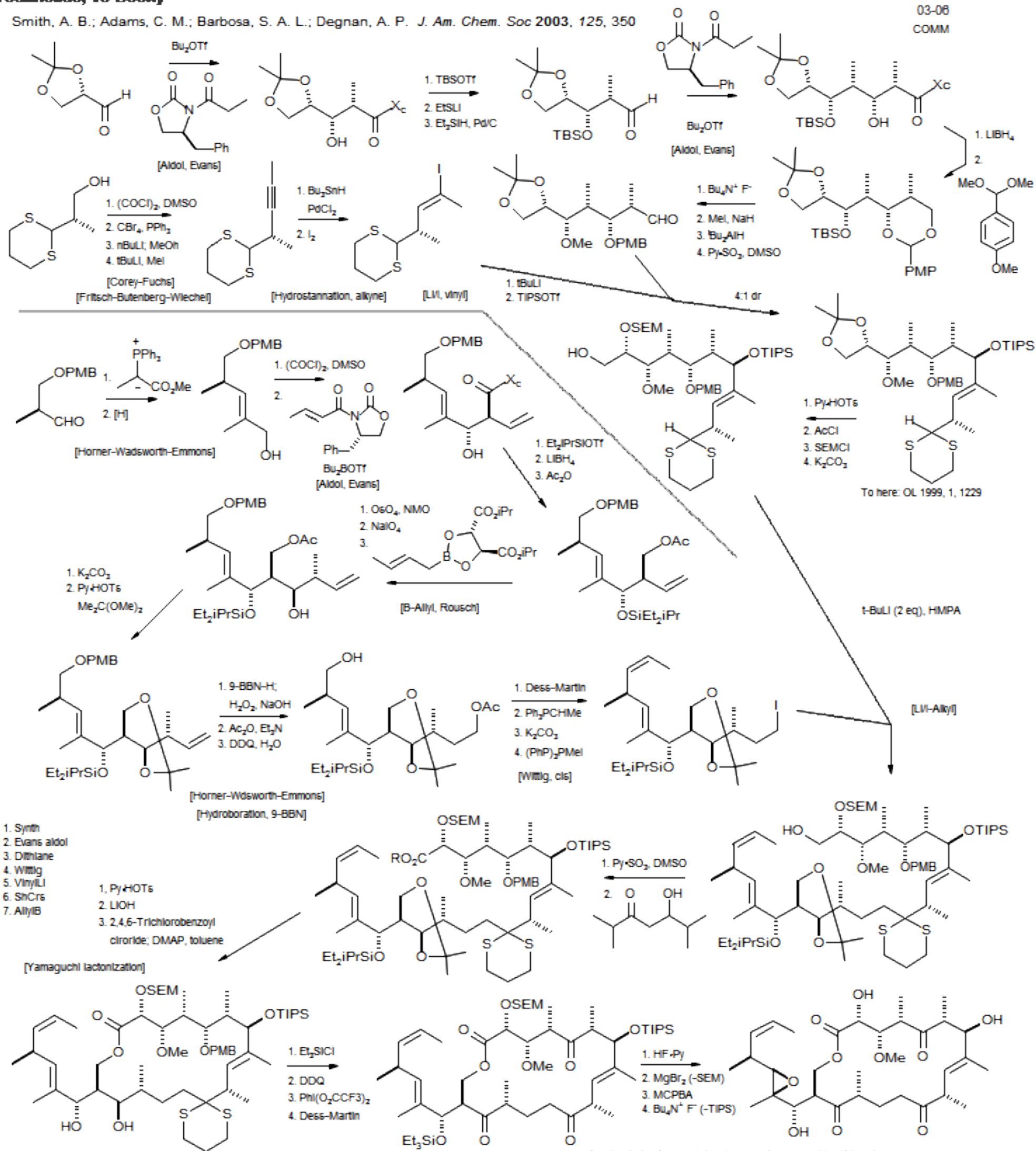
3. Chem 345

更多资料欢迎关注公众号:化学酷

Tedanolide, 13-Deoxy-

Smith, A. B.; Adams, C. M.; Barbosa, S. A. L.; Degnan, A. P. *J. Am. Chem. Soc.* 2003, 125, 350

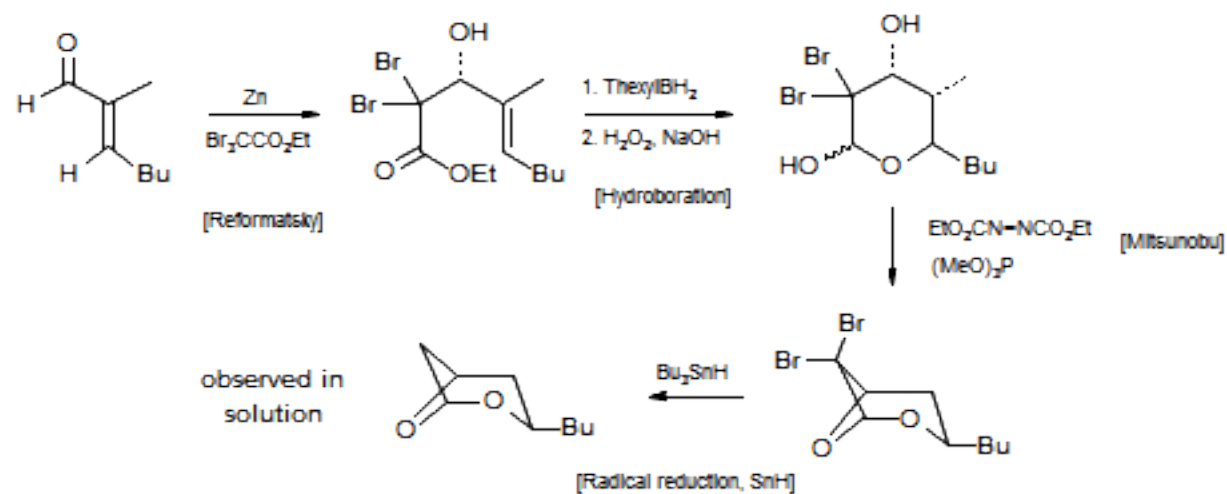
03-08
COMM



Thromboxane A₂ Model

Bhagwat, S. S.; Hamann, P. R.; Still, W. C. *Tetrahedron Lett.*, 1985, 26, 1955.

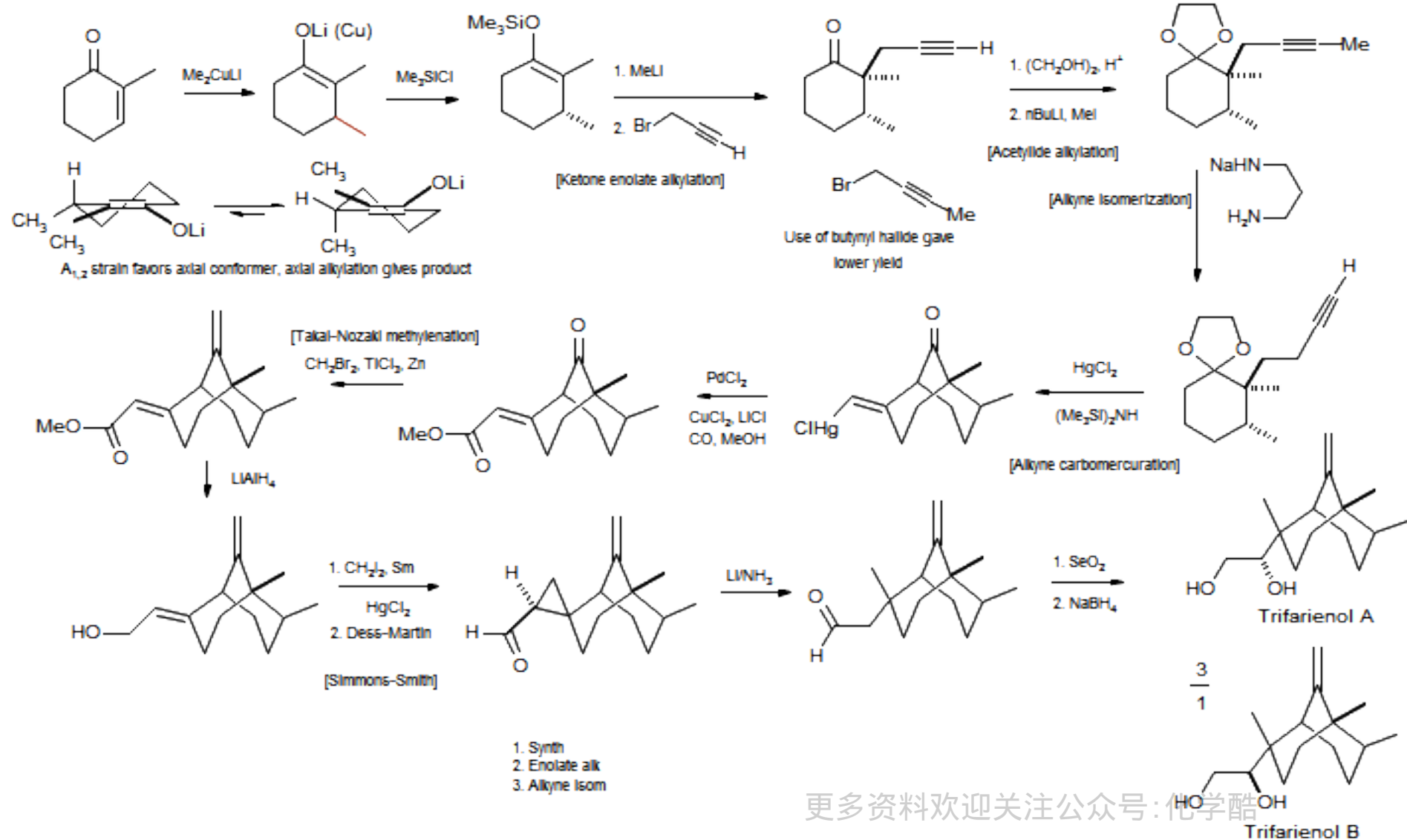
85-03



Trifarienols A, B

Huang, H.; Forsyth, C. J. *J. Org. Chem.* 1995, 60, 5748.

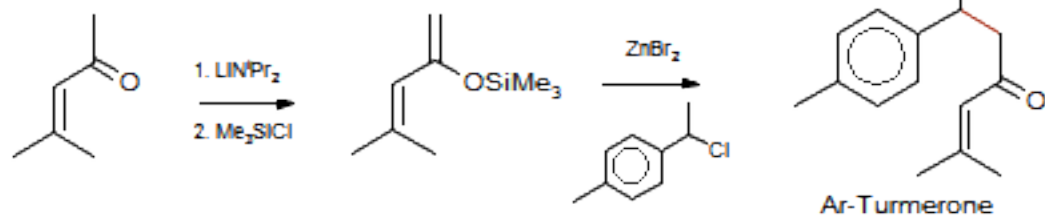
95-05



Turmerone, Ar-

79-26

Patterson, I. *Tetrahedron Lett.*, 1979, 1519.



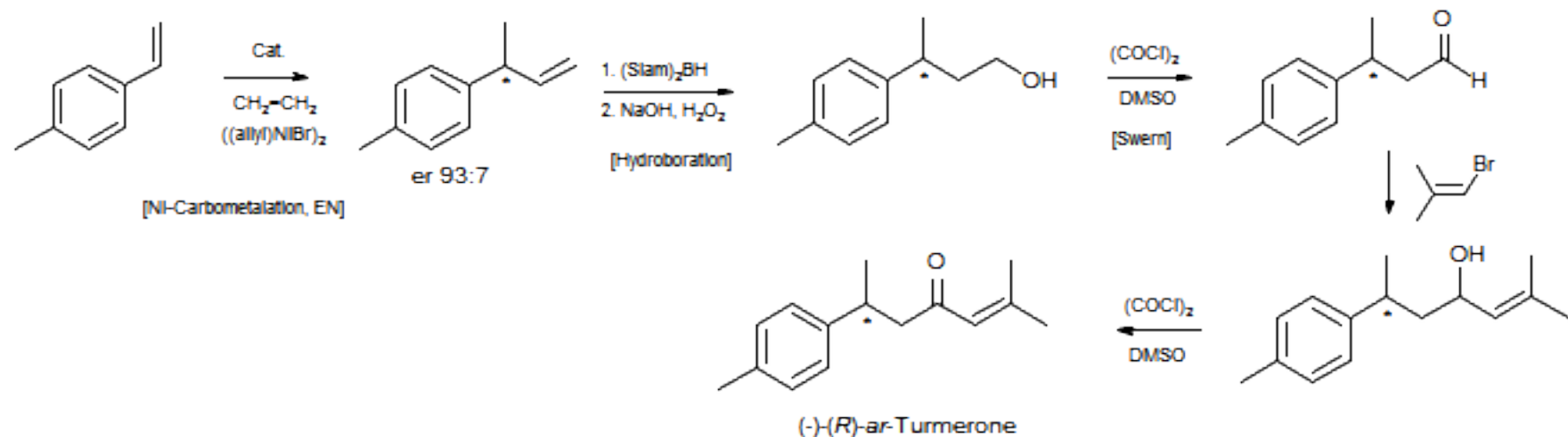
[Enol silyl ether alkylation]

1. Synth
2. EnolSI

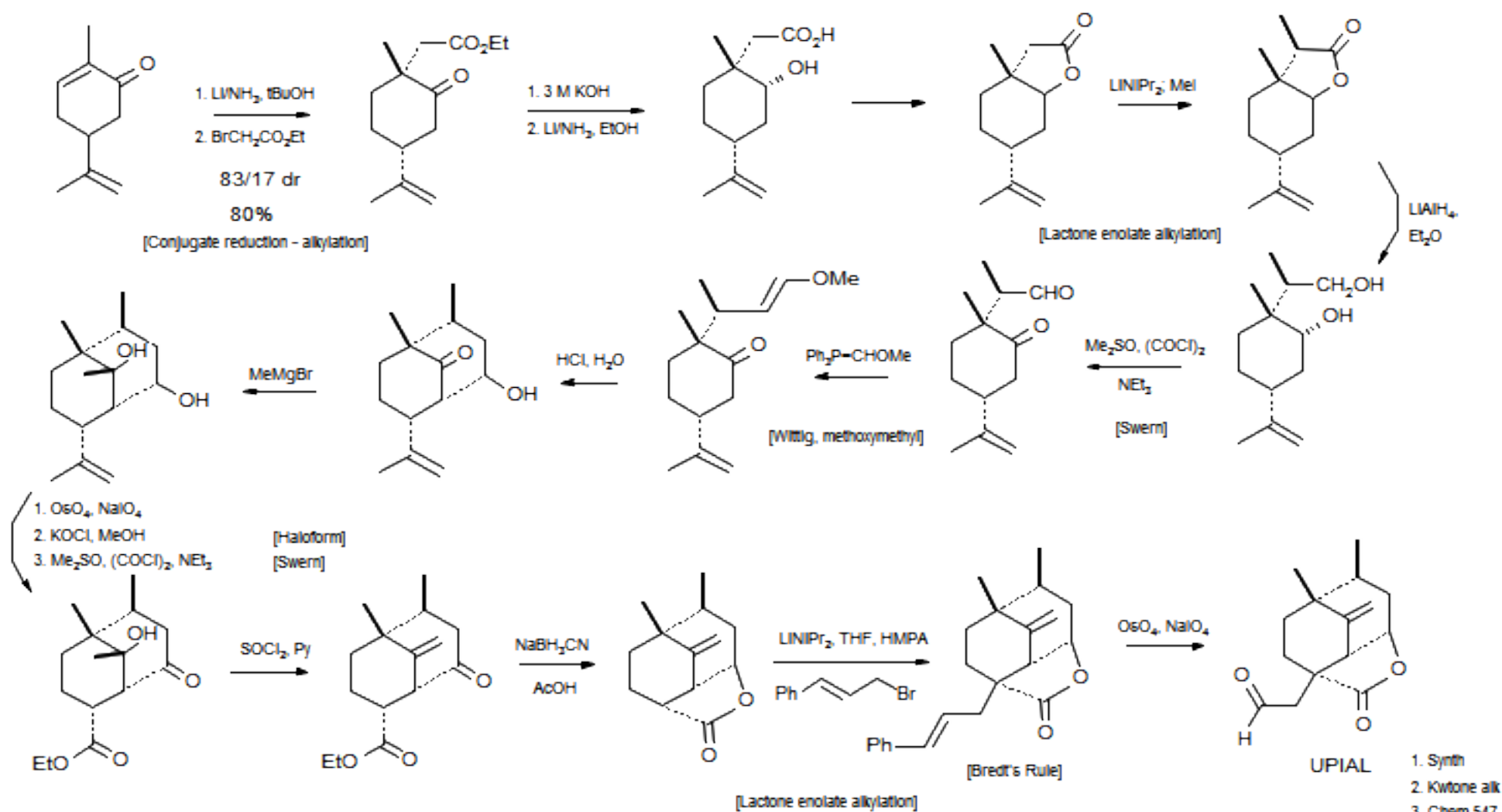
Turmerone, ar

Zhang, A.; RajanBabu, T. V. *Org. Lett.* 2004, 6, 3159.

04-10



1. Synth
2. Hydrovinylation

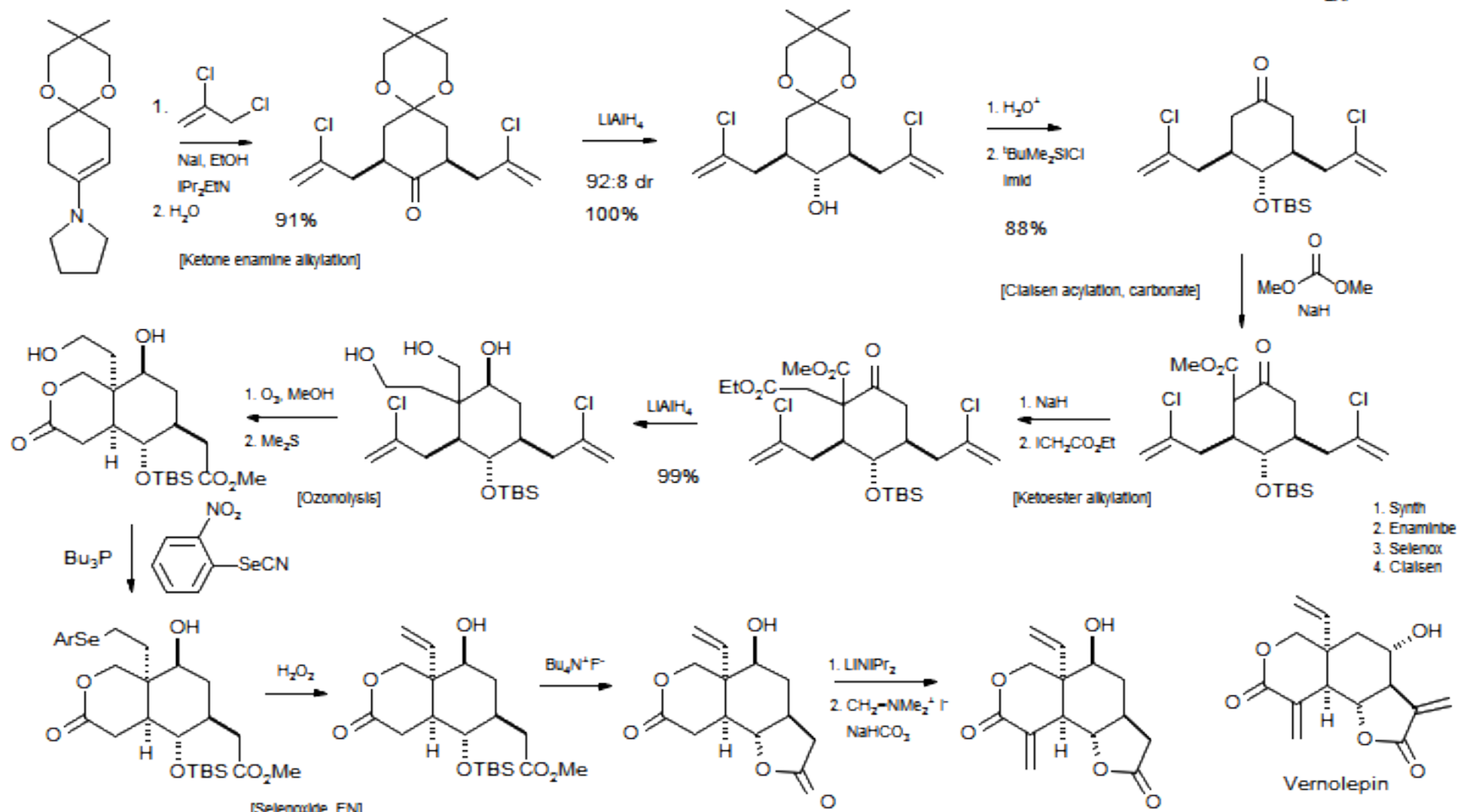


Vernolepin Analog

Marshall, J. A.; Flynn, G. A. *J. Org. Chem.* **1979**, *44*, 1391

79-15

EXP



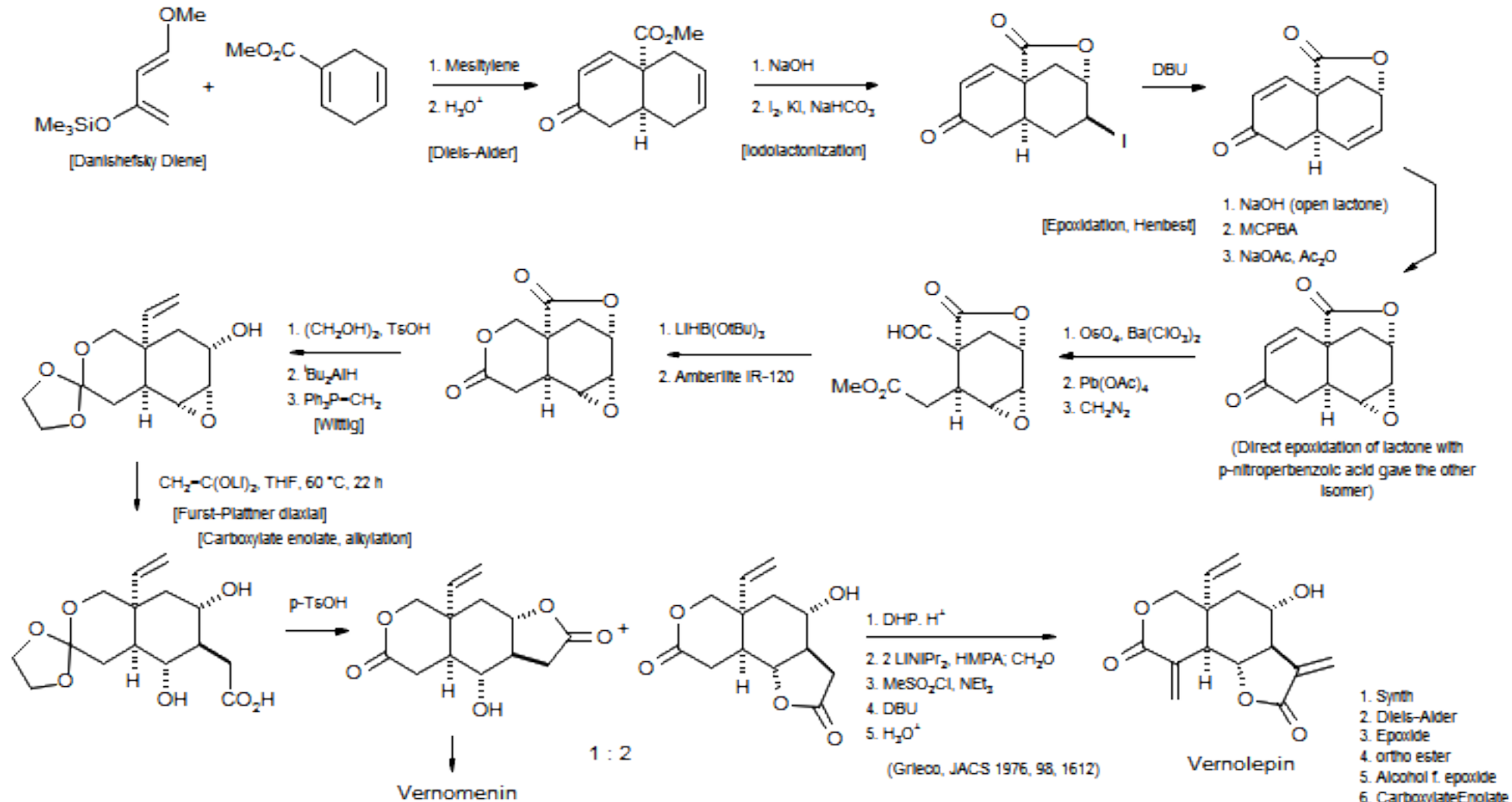
1. Synth
2. Enamine
3. Selenox
4. Claisen

Vernolepin

Danishefsky, S.; Kitahara, T.; Schuda, P. F.; Etheredge, S. J. *J. Am. Chem. Soc.* **1976**, *98*, 3028

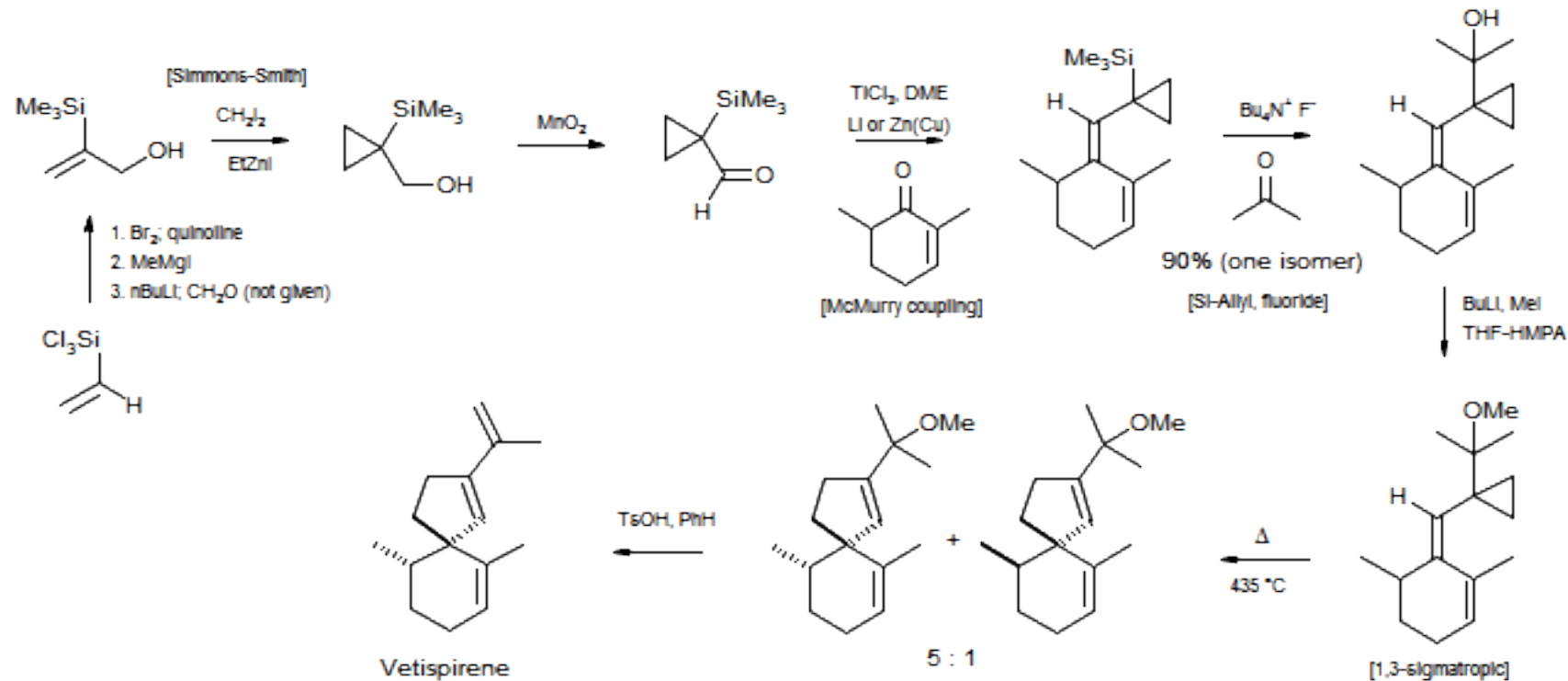
78-32

COMM



更多资料欢迎关注公众号:化学酷

Paquette, L. A.; Yan, T. H. *Tetrahedron Lett.* 1982, 23, 3227



1. Synth
2. AllylSi
3. Li/Si-F
4. Diene
5. [1,3]sigmatropic
6. McMurry coupling

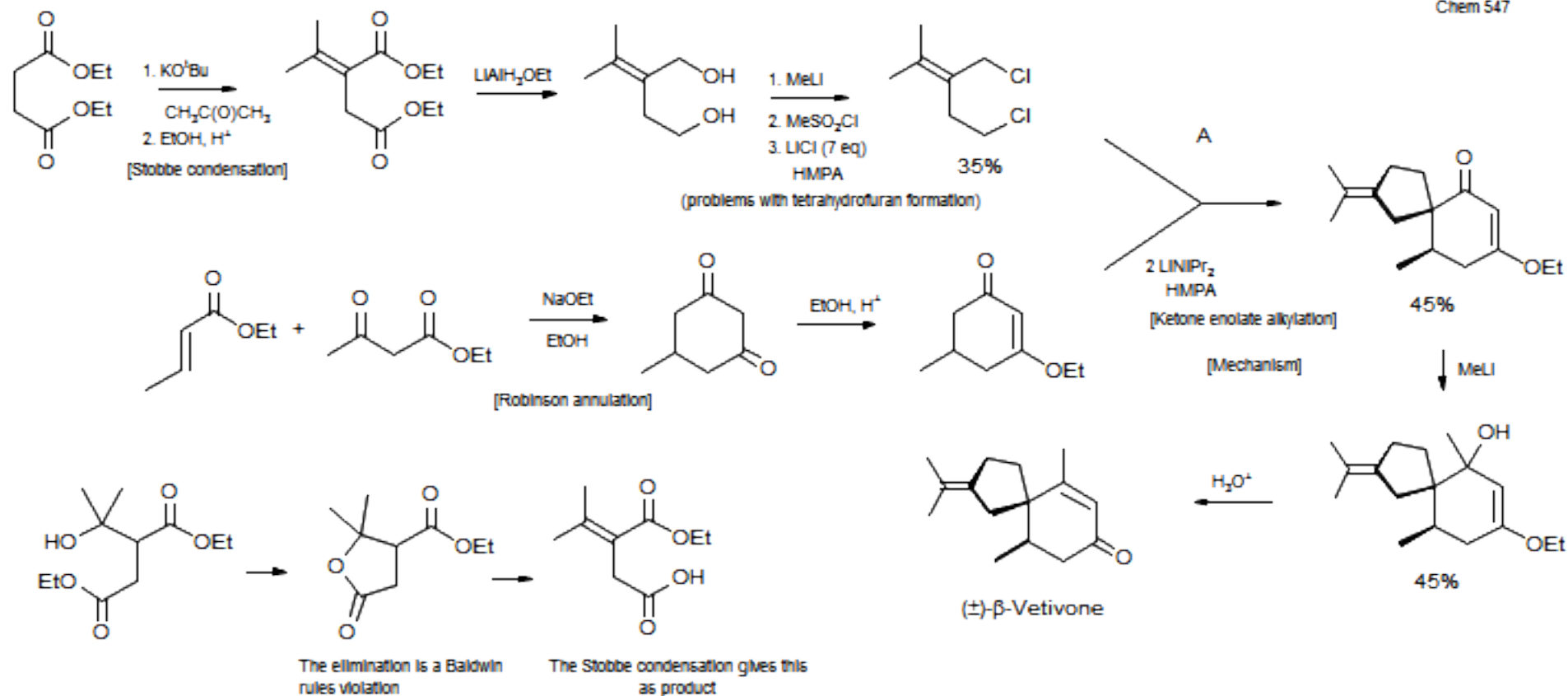
Vetivone, β -

Stork, G.; Danheiser, R.L.; Ganem, B. *J. Am. Chem. Soc.*, 1973, 95, 3414.

73-13

Reich

Chem 547



The β -alkoxy enone Grignard addition-hydrolysis sequence provides a solution to the γ -alkylation of enones problem (dienolates themselves will usually react at the α carbon).



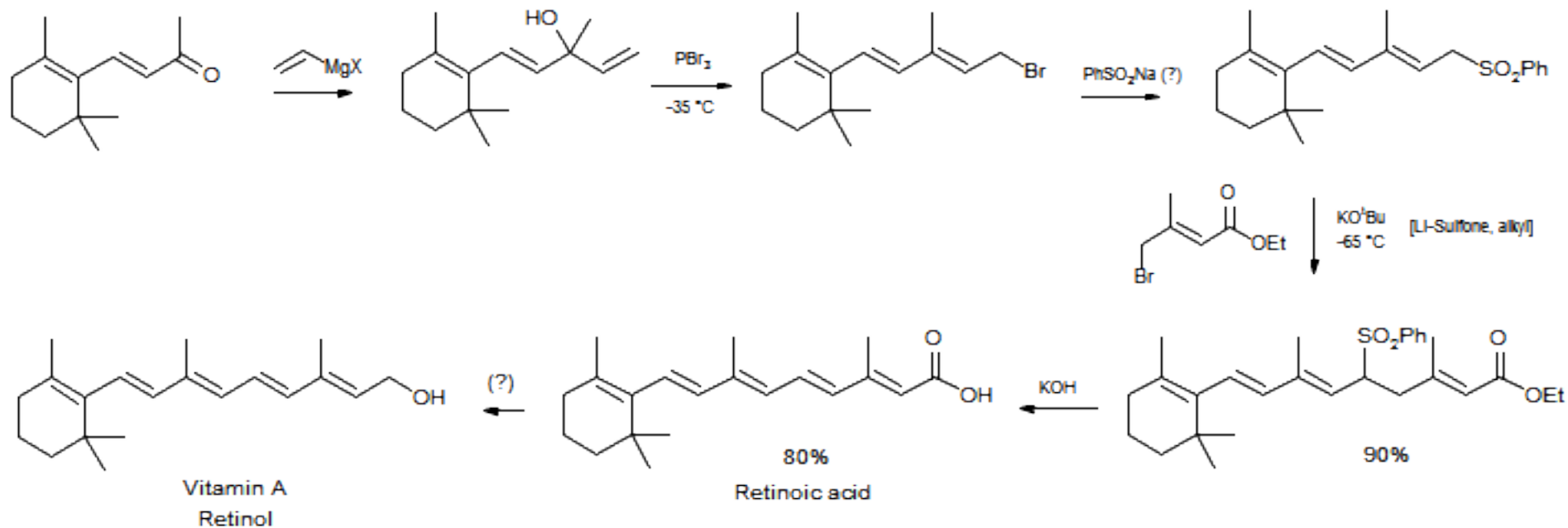
更多资料欢迎关注公众号:化学酷

1. Synth
2. Ketone Alk
3. Enone
4. Robinson Ann.
5. Stobbe

Vitamin A

Julia, M.; Arnould, D. *Bull. Soc. Chim. Fr.* 1973, 748

73-16

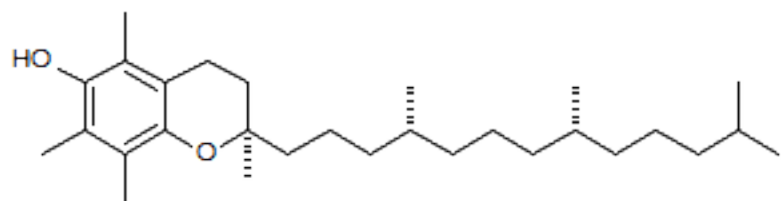
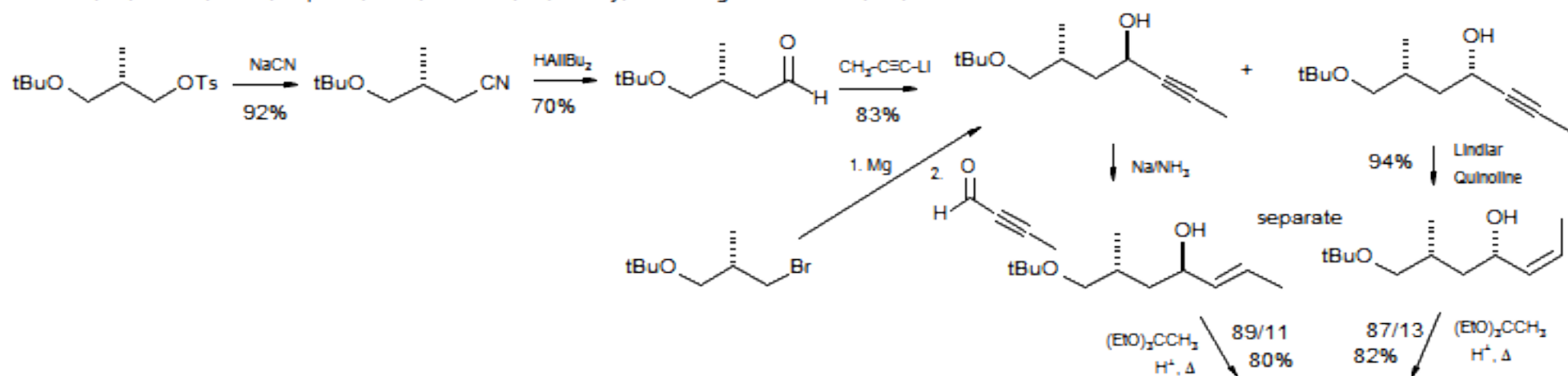


1. AllylLiSulfone

Vitamin E (part)

Cohen, N.; Eichel, W. F.; Lopresti, R. J.; Neukom, C.; Saucy, G. *J. Org. Chem.* **1976**, *41*, 3512

76-16
EXP



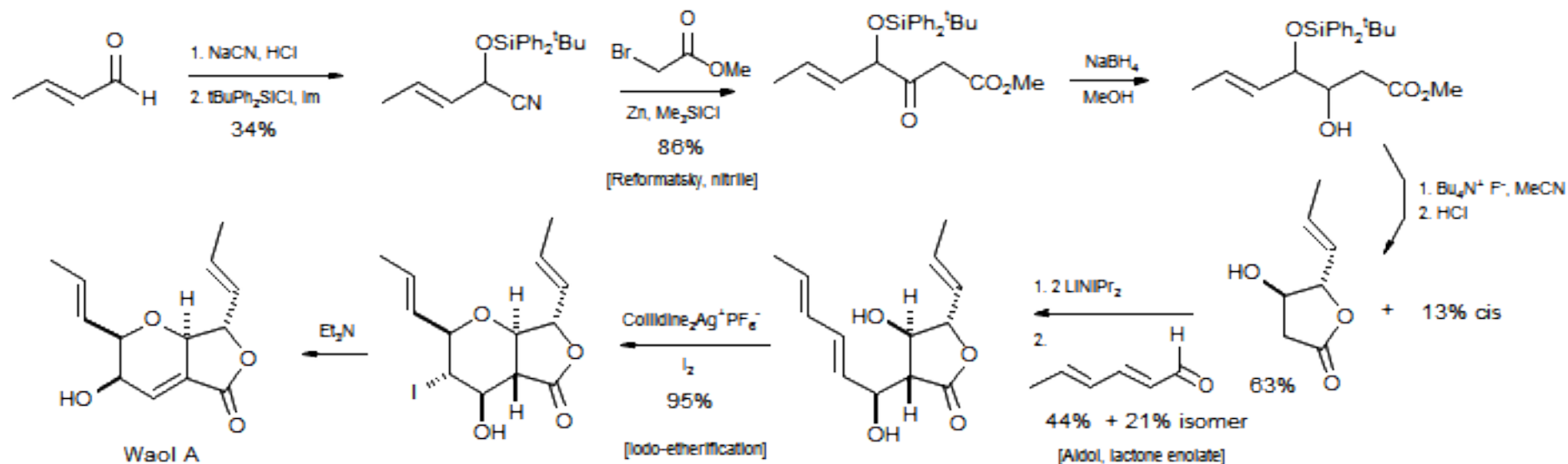
Vitamin E

1. Synth
2. Claisen
3. Acetylene reduc

Waal A

Gao, X.; Nakadai, M.; Snider, B. *Org. Lett.* 2003, 5, 451

03-04

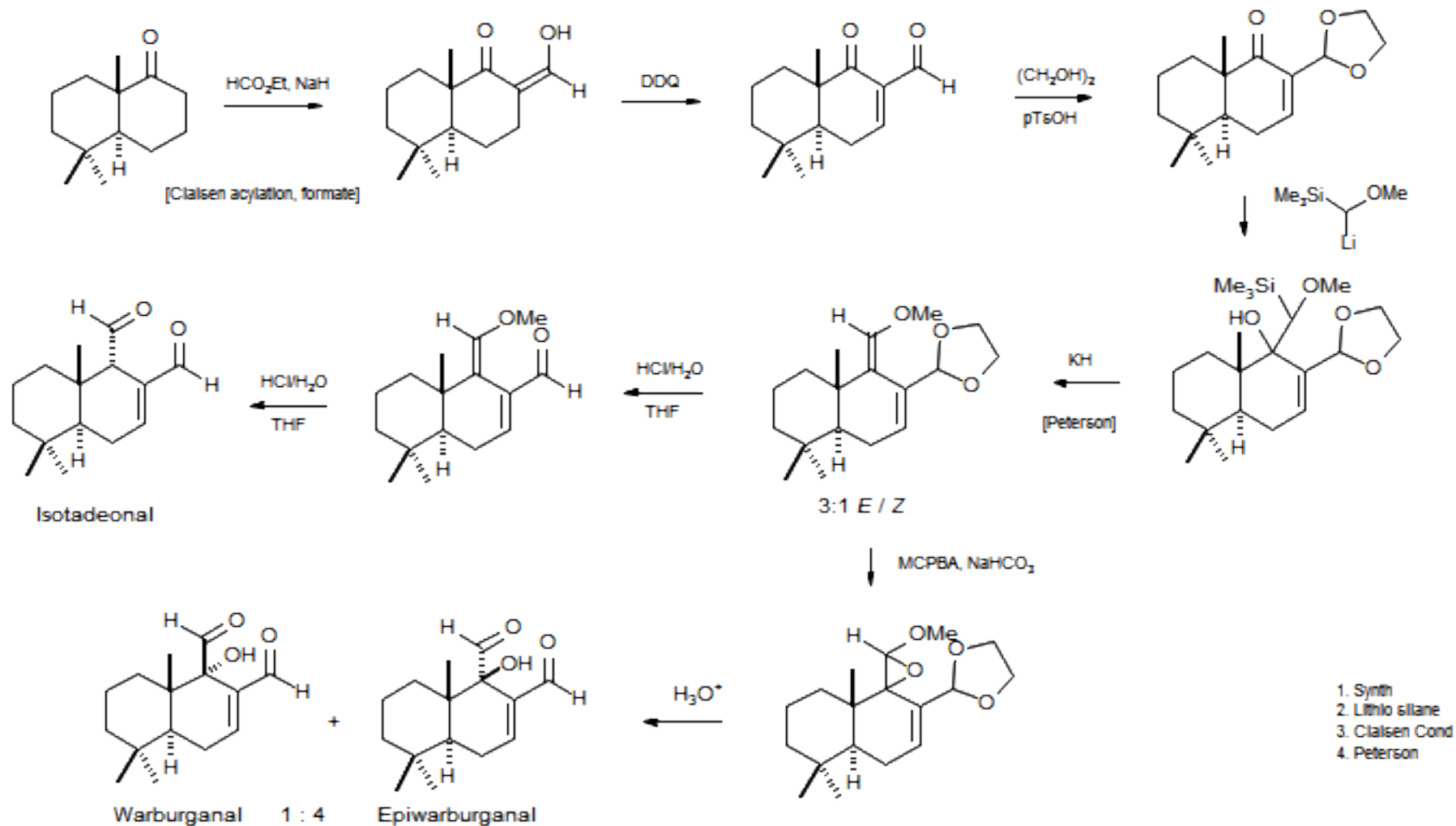


1. Synth
2. Ketone f. nitrile
3. Reformatsky
4. Iodolactoniz
5. Problem

Warburganal

Kende, A. S.; Blaklock, T. J. *Tetrahedron Lett.* 1980, 21, 3119

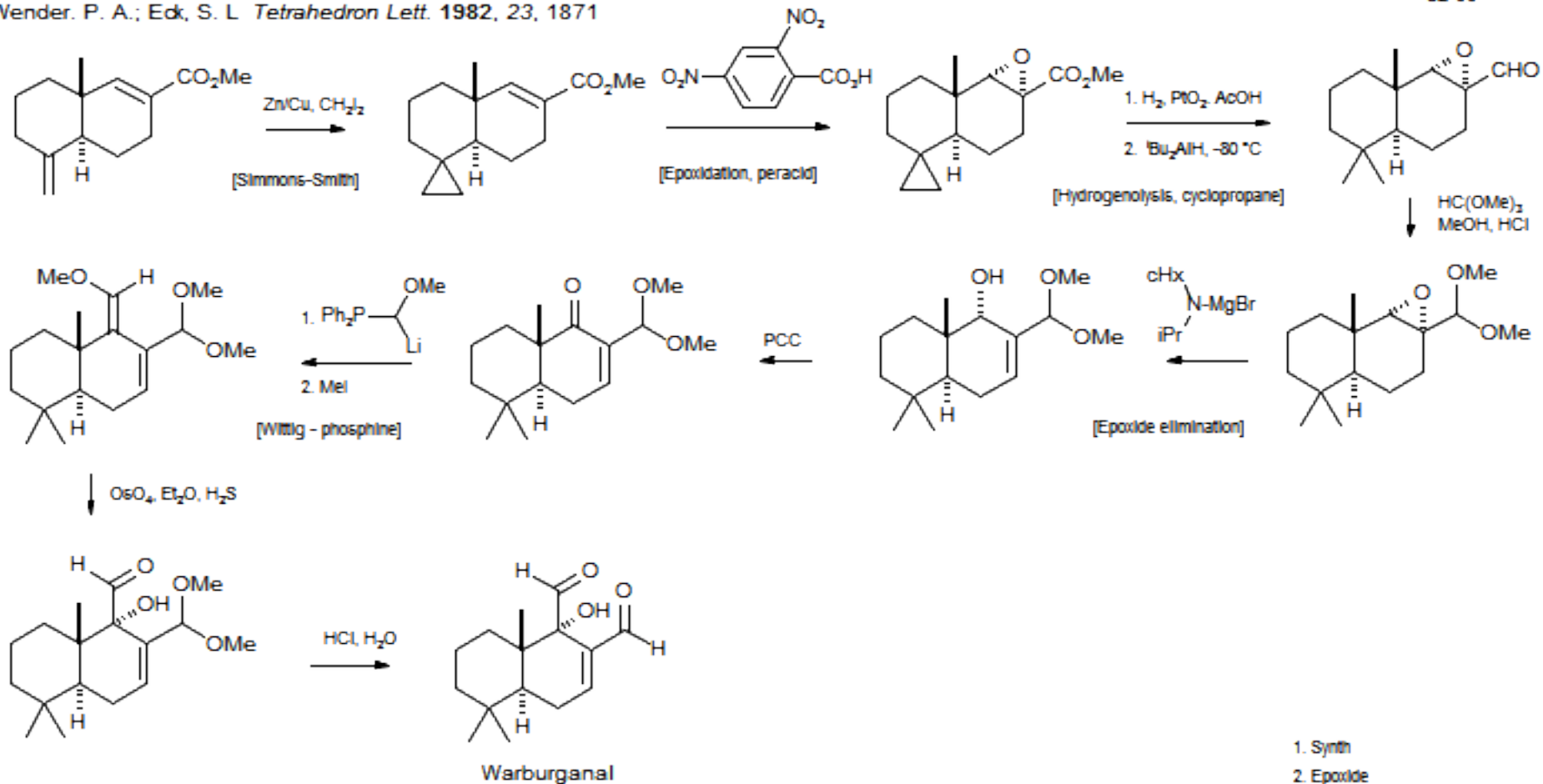
80-33



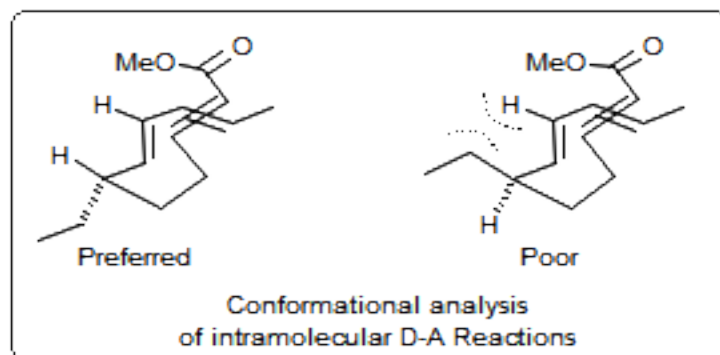
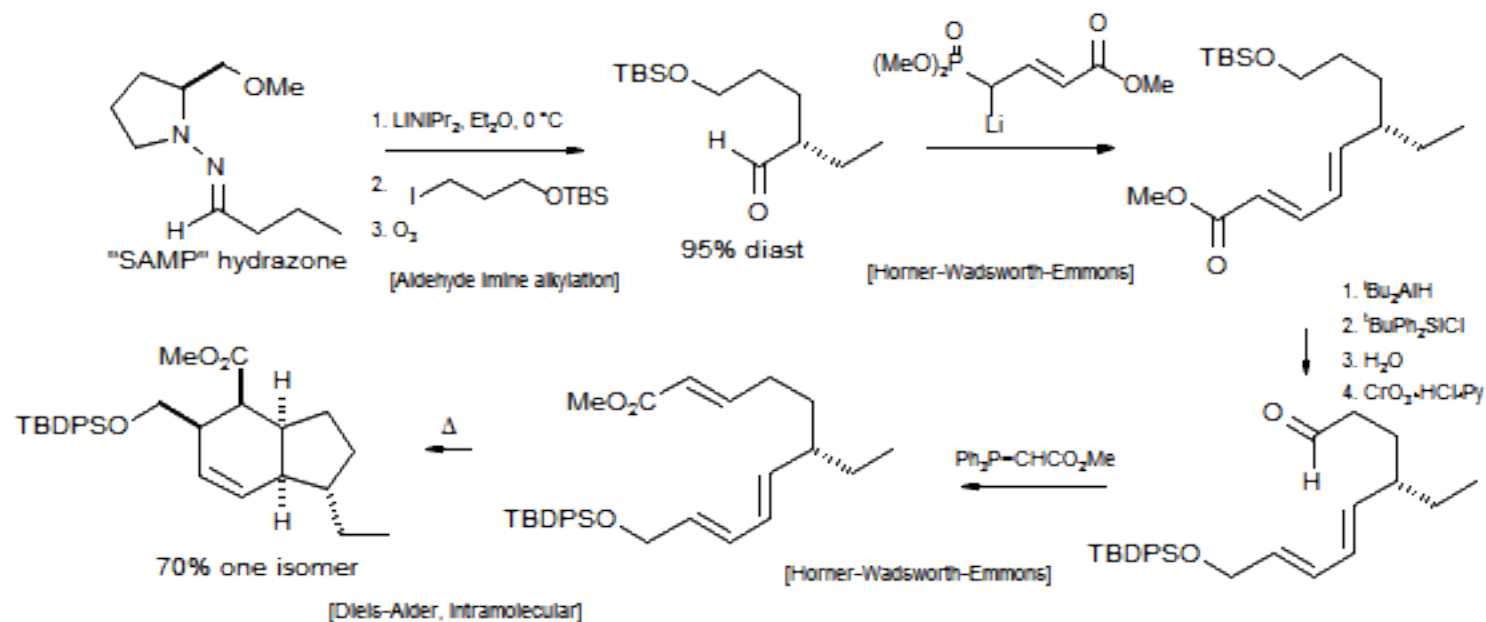
Warburganal

Wender, P. A.; Edk, S. L. *Tetrahedron Lett.* 1982, 23, 1871

82-05



1. Synth
2. Epoxide
3. gem-dimethyl
4. Enone
5. P-C-Li
6. AL 1. OATE DIBAL

Nicolaou, Papahatjis, Claremon, Dolle *J. Am. Chem. Soc.* 1981, 103, 6967

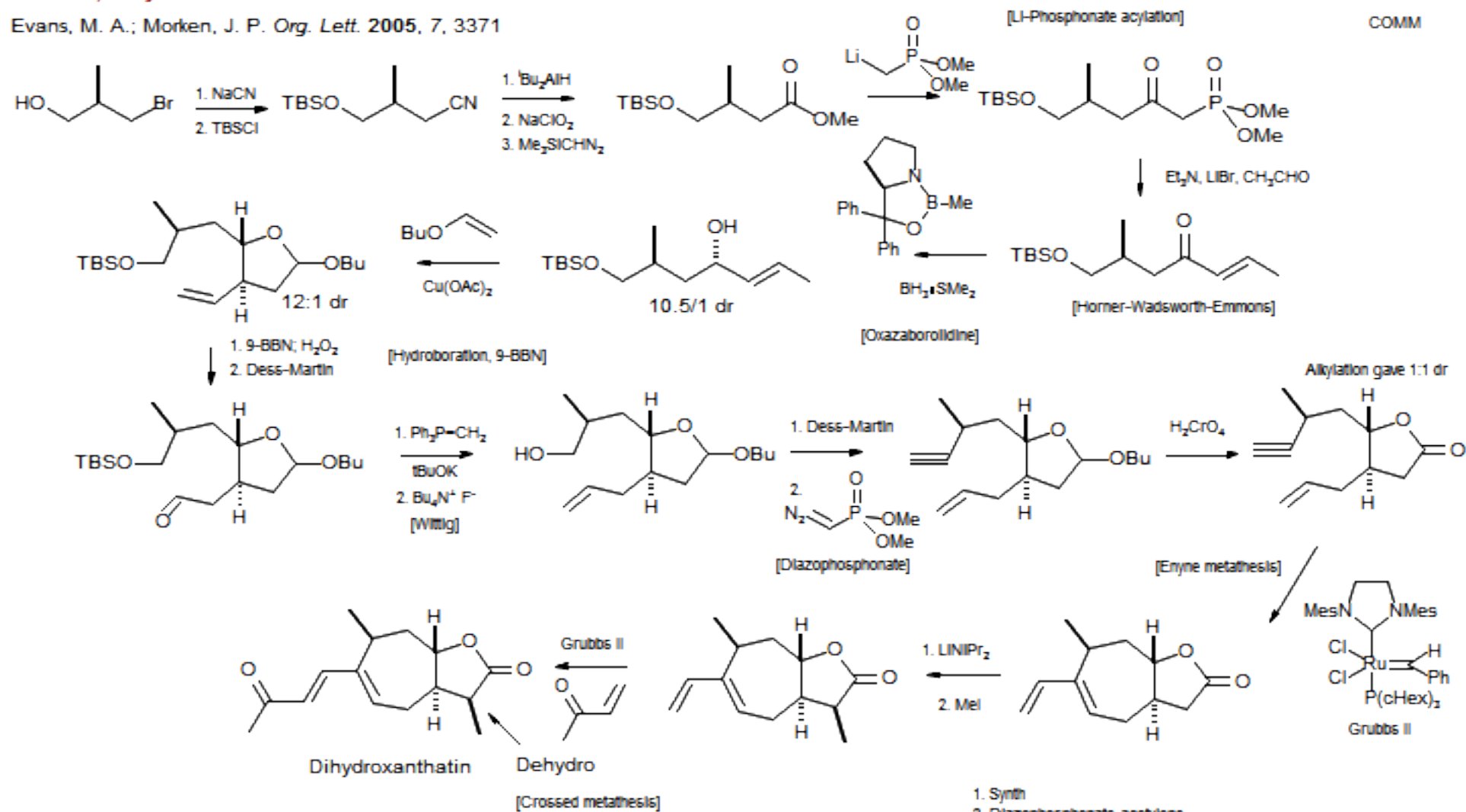
1. Synth
2. Intra D-A
3. Horner-Wadsworth-Emmons
4. Hydrazone Alkyl

Xanthatin, Dihydro

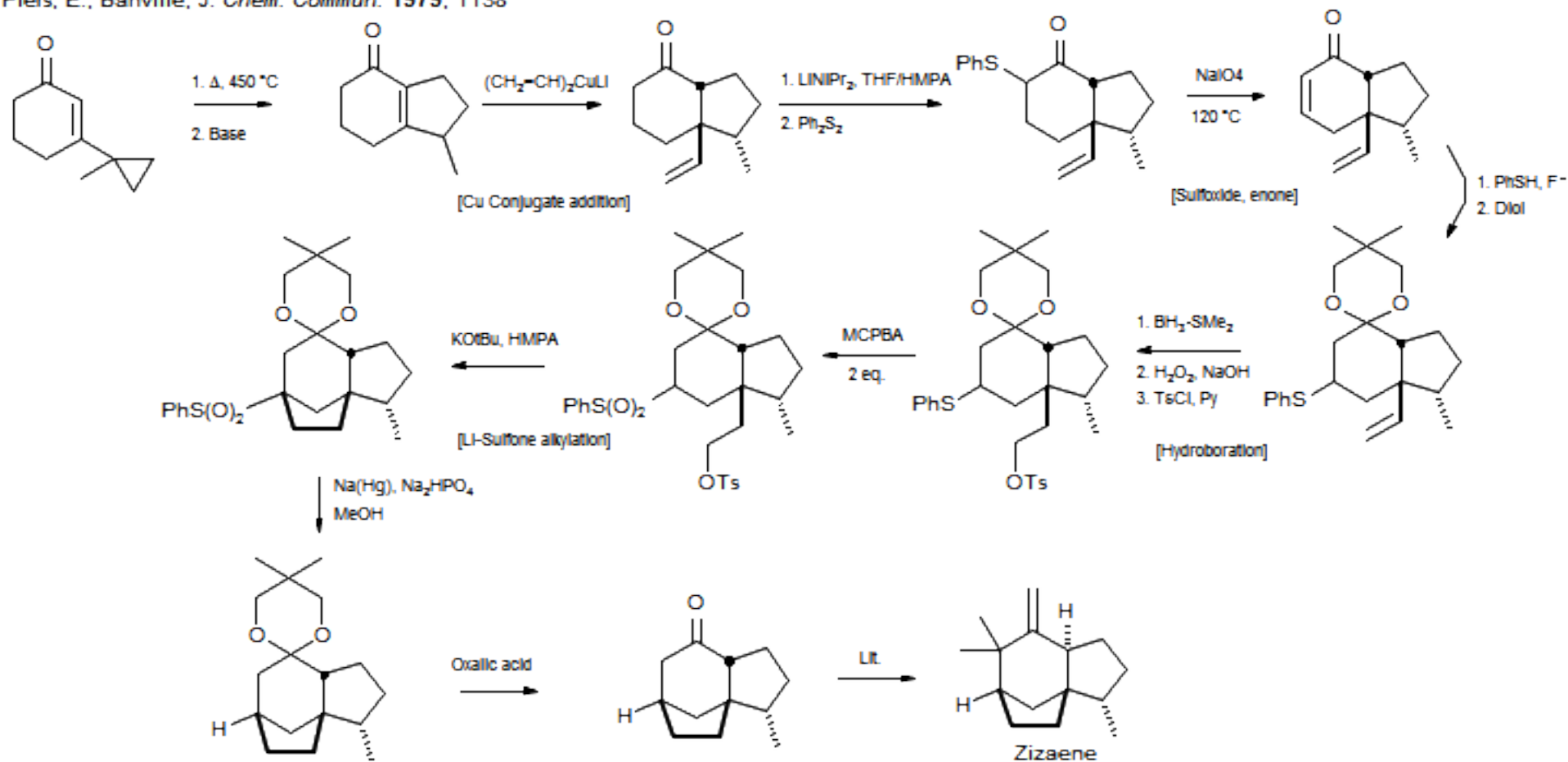
05-03

Evans, M. A.; Morken, J. P. *Org. Lett.* 2005, 7, 3371

COMM



1. Synth
2. Diazophosphonate-acetylene
3. Enyne metathesis
4. crossed metathesis

Piers, E.; Barville, J. *Chem. Commun.* 1979, 1138

1. Synth
2. Enone sulfon
3. Bicyclic 4.3.0
4. LiSulfone