

Wednesday, Nov. 14, 2007



the man

Edwin Vedejs

Biography

- Born 1941, Riga Latvia
- 1950, Moved to United States
- B.S. 1962, University of Michigan
- Ph. D. 1966, University of Wisconsin (H. Muxfeldt)
- Postdoctoral Fellow 1966-67, Harvard (E.J. Corey)
- University of Wisconsin faculty 1967-1998
- University of Michigan 1999 - present



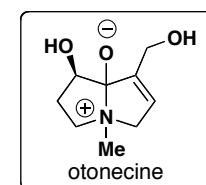
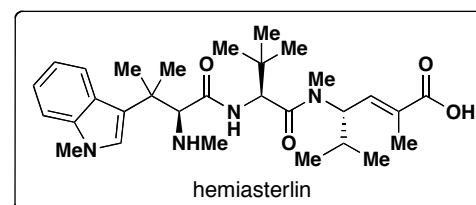
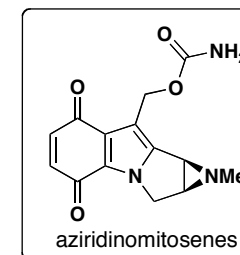
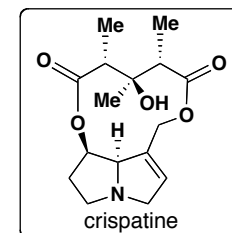
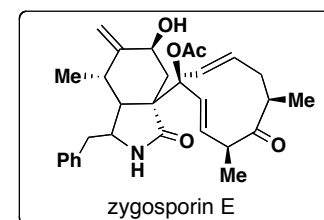
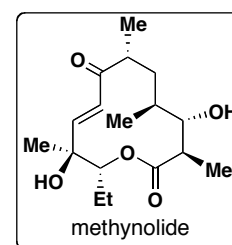
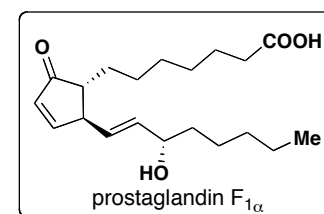
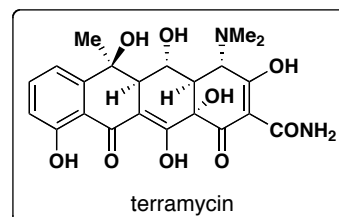
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Honors and Awards

- NSF Fellow 1962-1966
- AFOSR Postdoctoral Fellow, 1966-67
- Lilly Grantee 1970-71
- Sloan Fellow, 1971-1973
- University of Wisconsin Romnes Fellow, 1984
- Alexander von Humboldt Senior Scientist Award, 1984
- Professore a Contratto, University of Bologna, Italy, 1988
- Helfaer Professor, 1991-1996
- Pharmacia & Upjohn Teaching Award, 1996 (Chemistry Dept. UW)
- Robert M. Bock Professor, 1997-98
- Paul Walden Medal, Riga Technical University 1997
- Moses Gomberg Professor of Chemistry, University of Michigan, 1999-
- Chair, ACS Organic Division, 2003
- H. C. Brown Award for Creative Research in Synthetic Methods, 2004
- Grand Medal of the Latvian Academy of Sciences, 2005

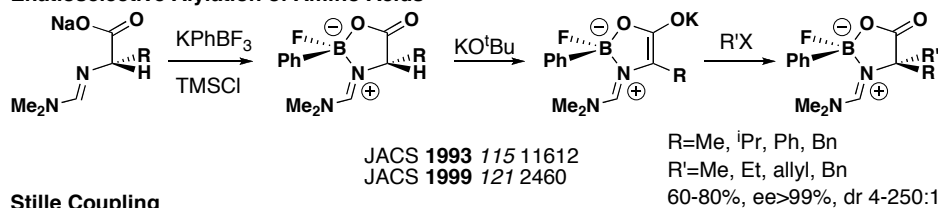


c.v. courtesy of BOS 2006

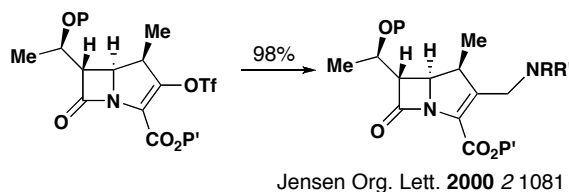
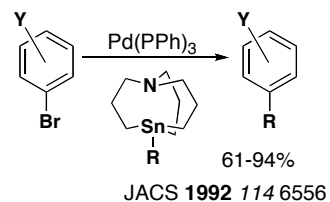


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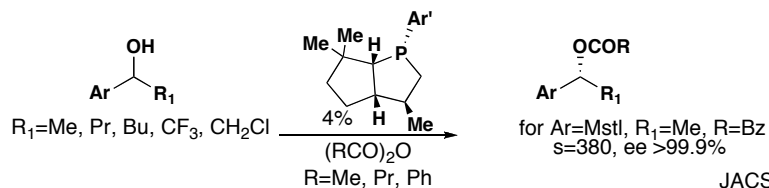
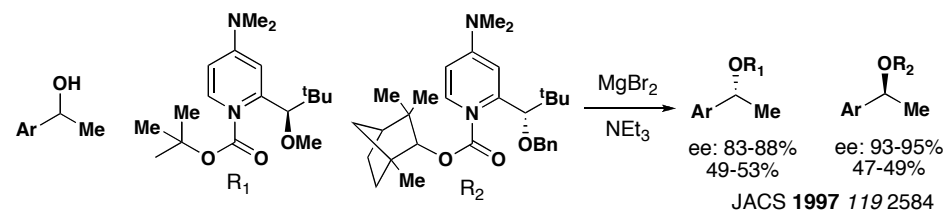
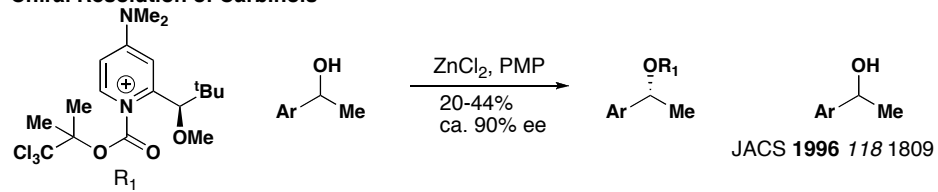
Enantioselective Alkylation of Amino Acids



Stille Coupling



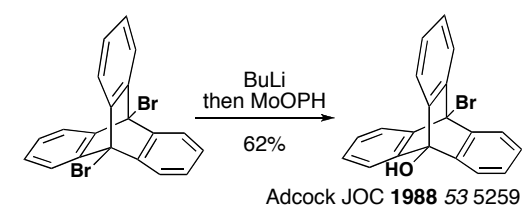
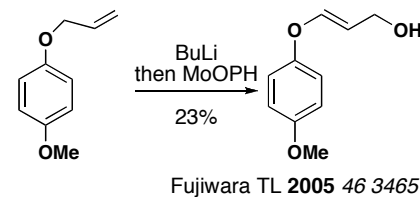
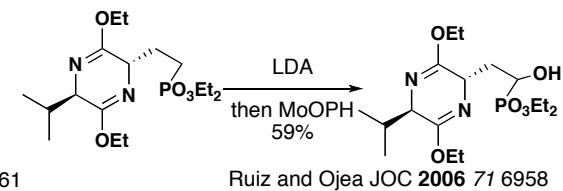
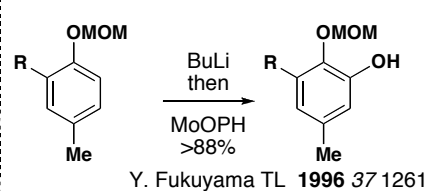
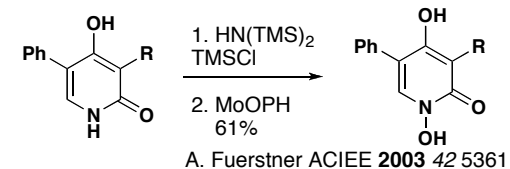
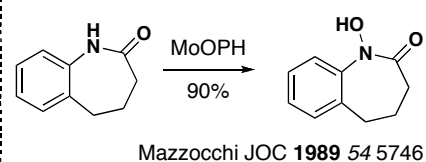
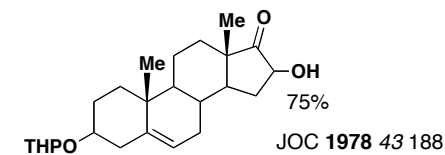
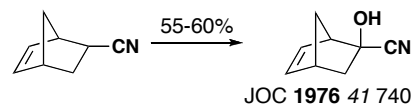
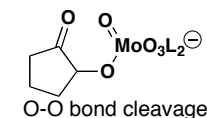
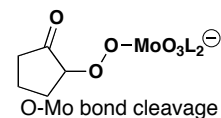
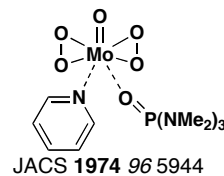
Chiral Resolution of Carbinols



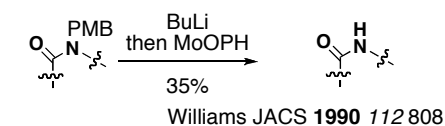
Using PBU₃: JACS 1993 115 3358

"to pronounce this abbreviation correctly, one must recall that there are five O's in MoOPH"
- E. Vedejs

MoOPH

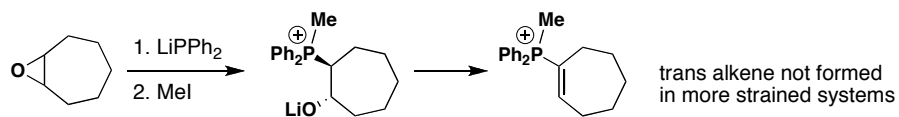
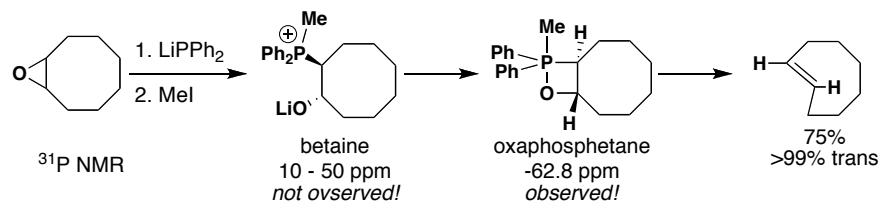


"Additional attempts to deprotect...by dissolving metal reduction, catalytic hydrogenation, acidic solvolysis, boron tribromide, boron trichloride, DDQ oxidation, and photooxidation all met with complete failure to provide even a trace of the desired deprotected compounds."

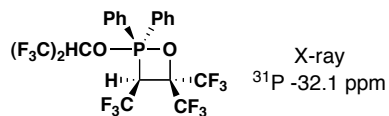


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Olefin Inversion by the Phosphorus Betaine Method



JACS 93 4070 (1971)
 JACS 95 822 (1973)
 JOC 38 1178 (1973)

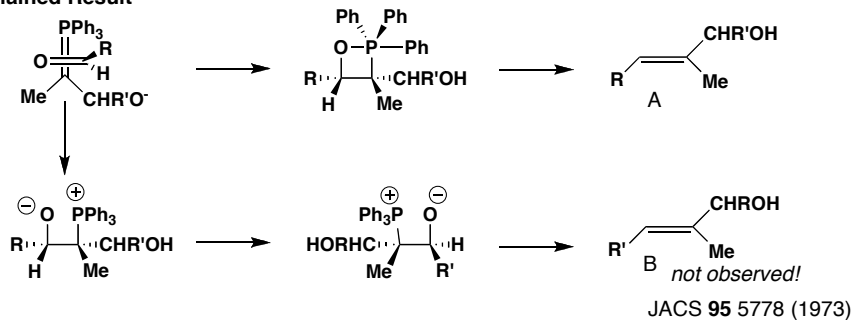


F. Ramirez, *et al.* JACS 90, 6726 (1968)

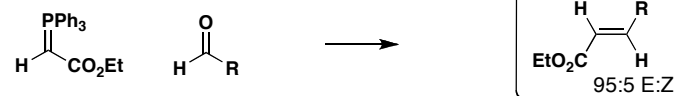
absence of solvent polarity effects on the cis: trans ratio

food for thought:
 why does the addition of lithium halide salts decrease *cis* selectivity in the Wittig?

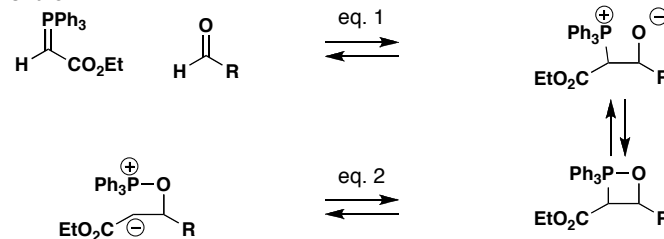
Unexplained Result



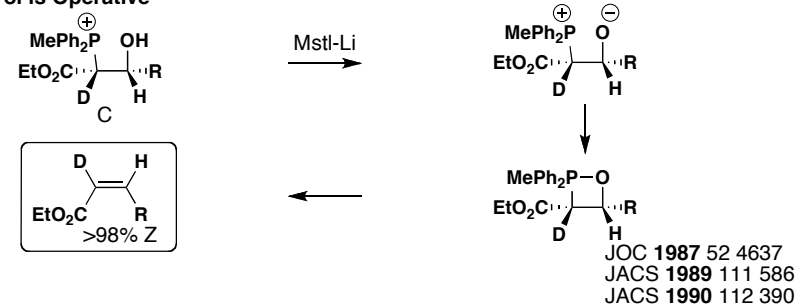
Consider the Wittig Reaction:



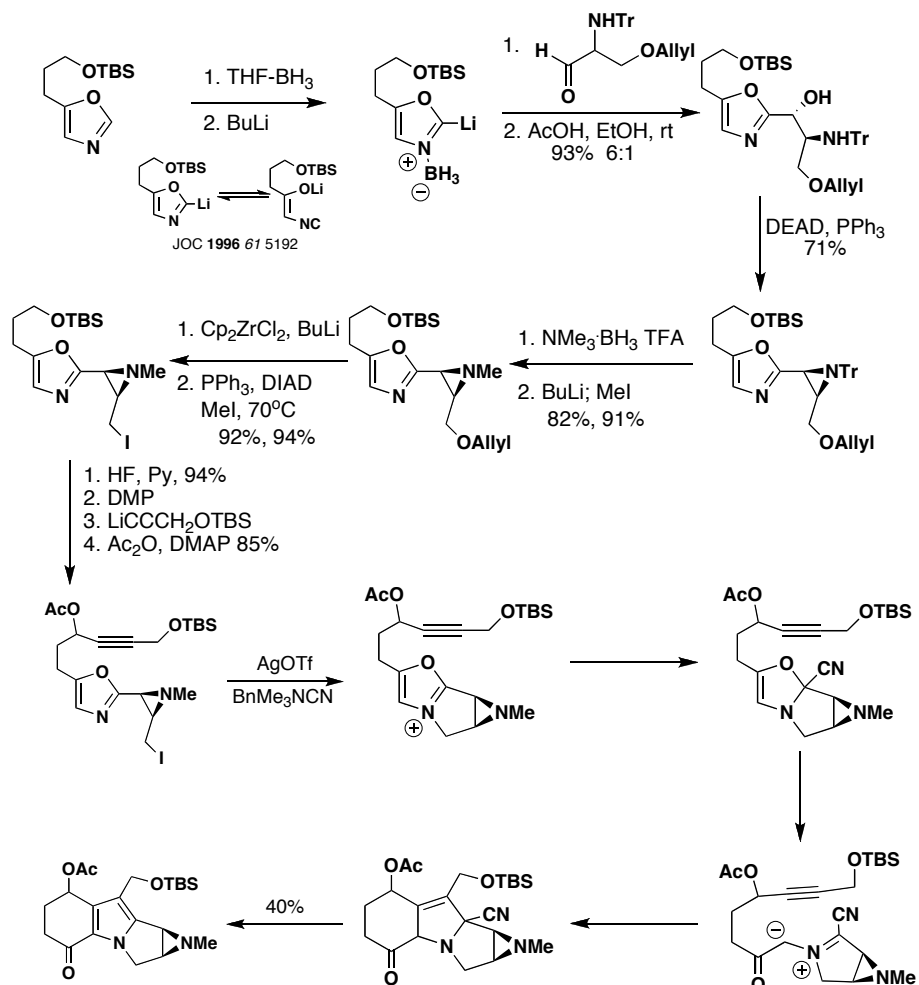
Initial Rationale



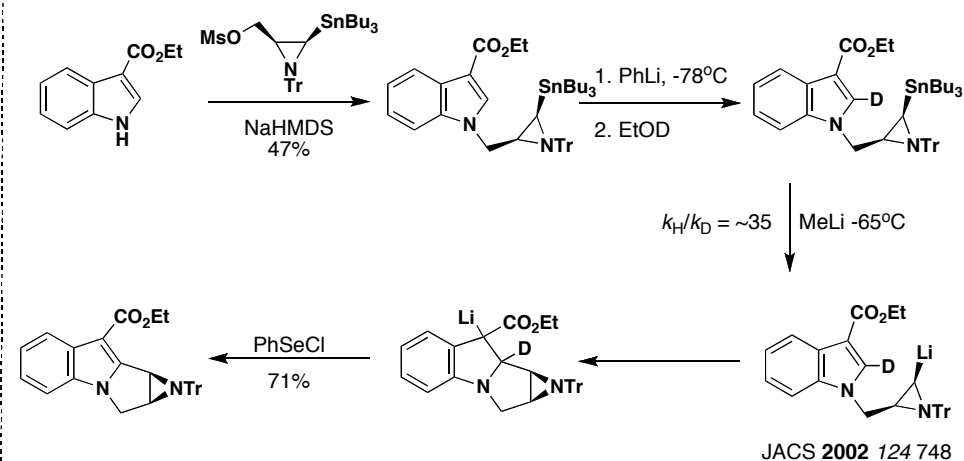
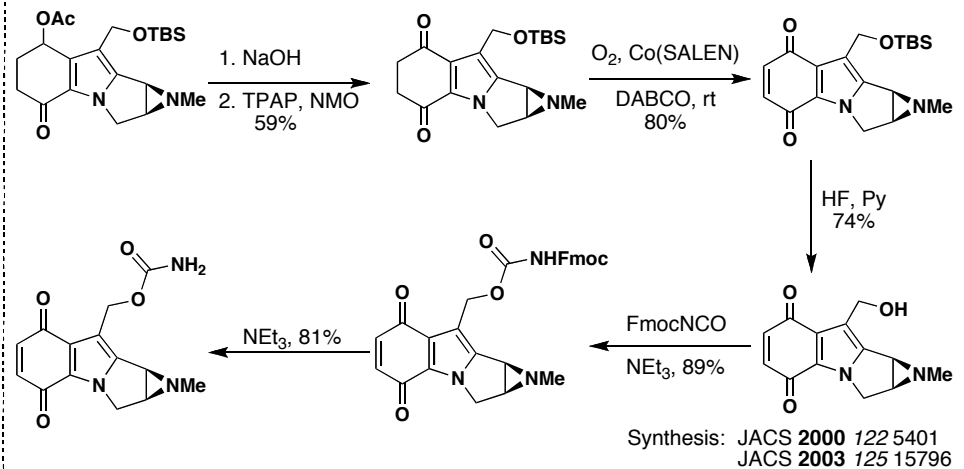
Kinetic Control is Operative



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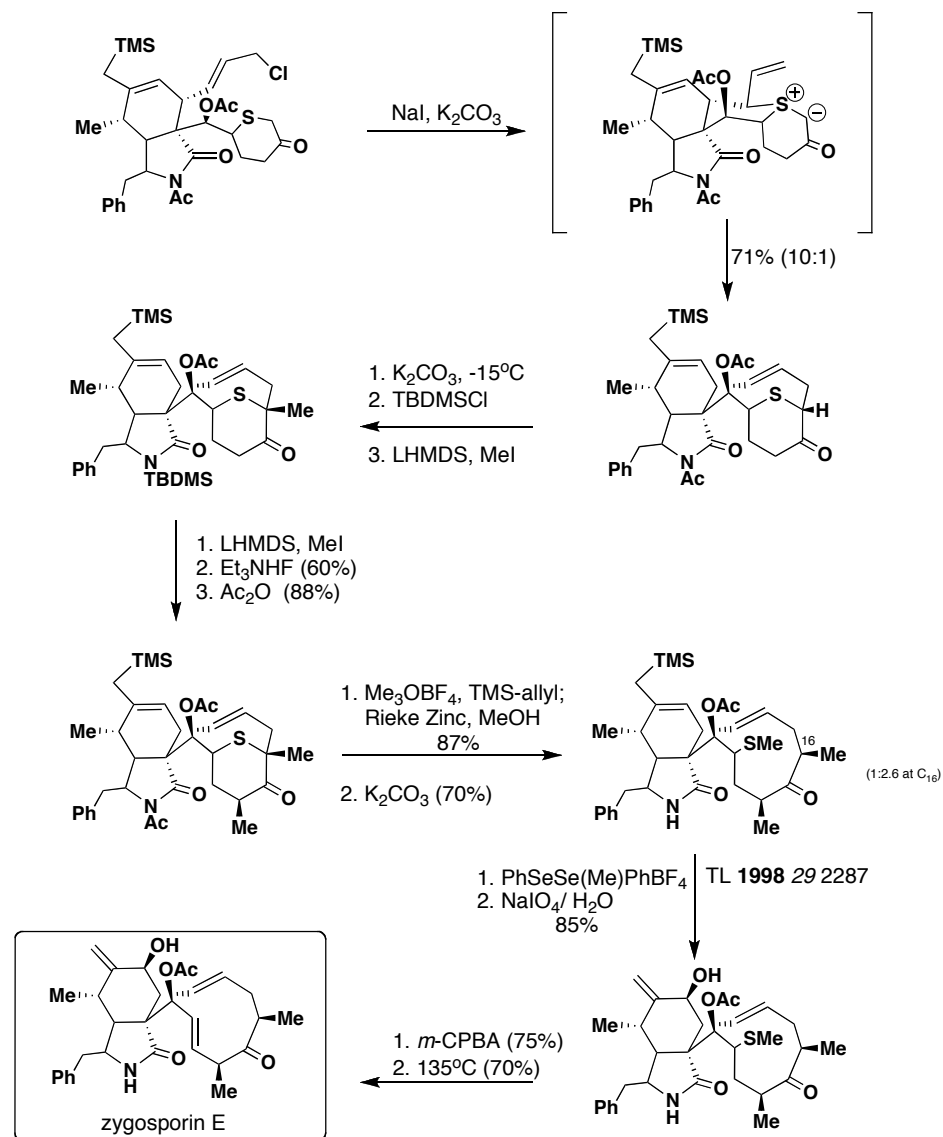
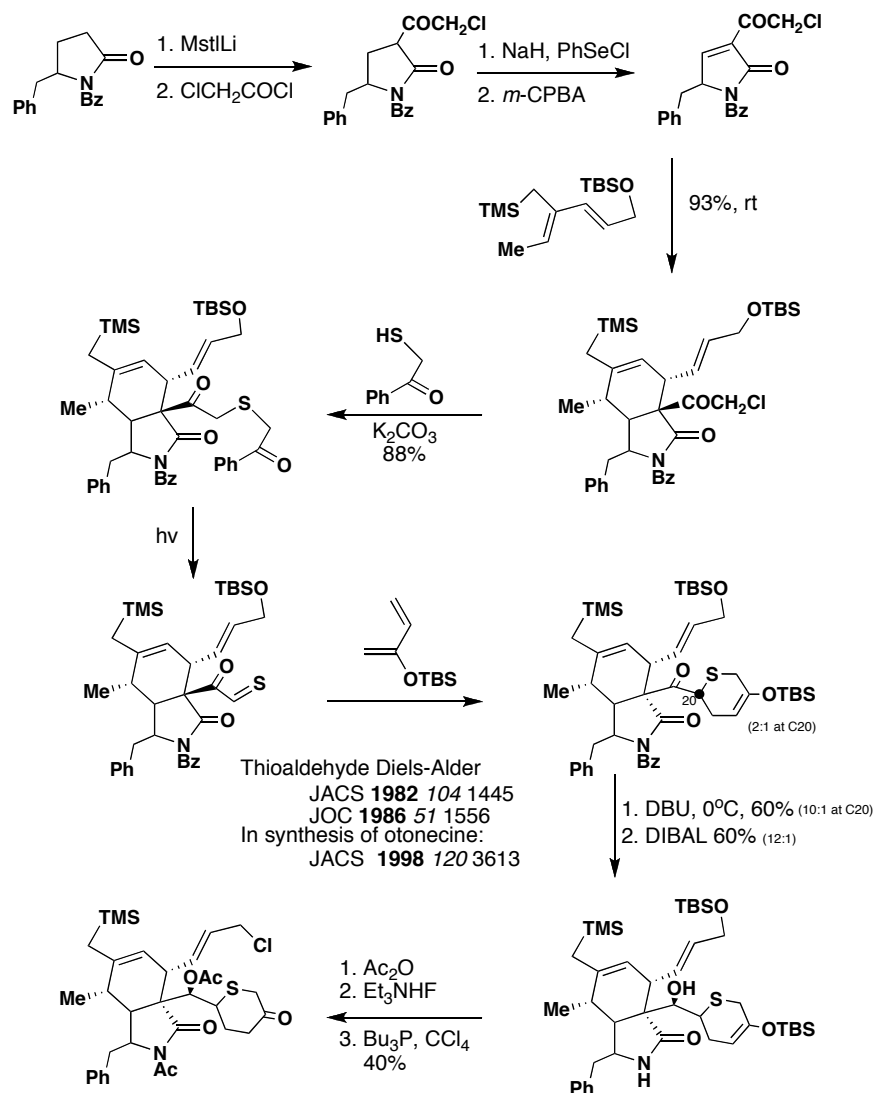


Oxazoline Route to Azomethine Ylides
 JACS 1986 108 6433
 JACS 1988 110 3238



See also Shenvi's 2004 Group Meeting:
 "Deuterium Isotope Effect in Natural Product Synthesis"

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JACS 1984 106 4617
 JOC 1982 47 1534
 JACS 1988 110 4822
 JACS 1990 112 4351, 4357