



Colin Hughes

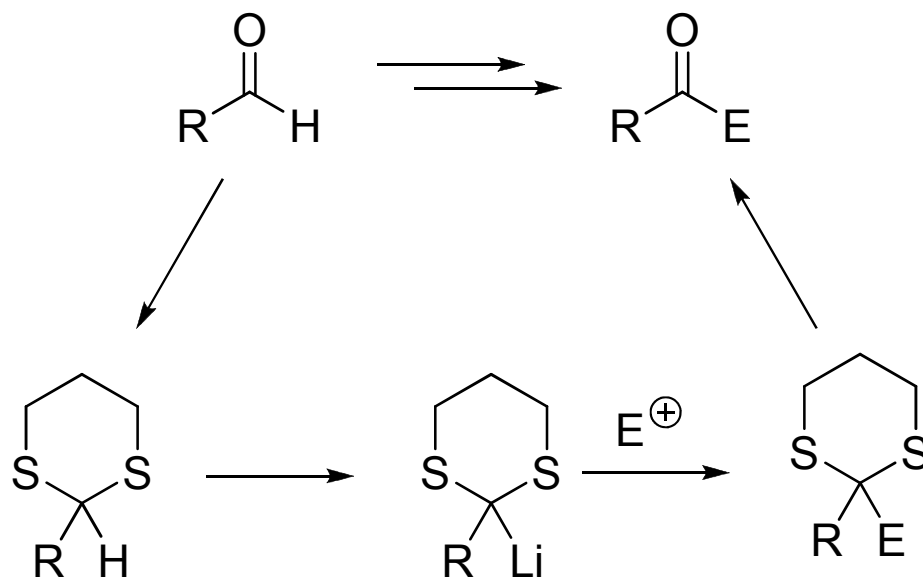


“Everything you
always wanted to know
about S6 *

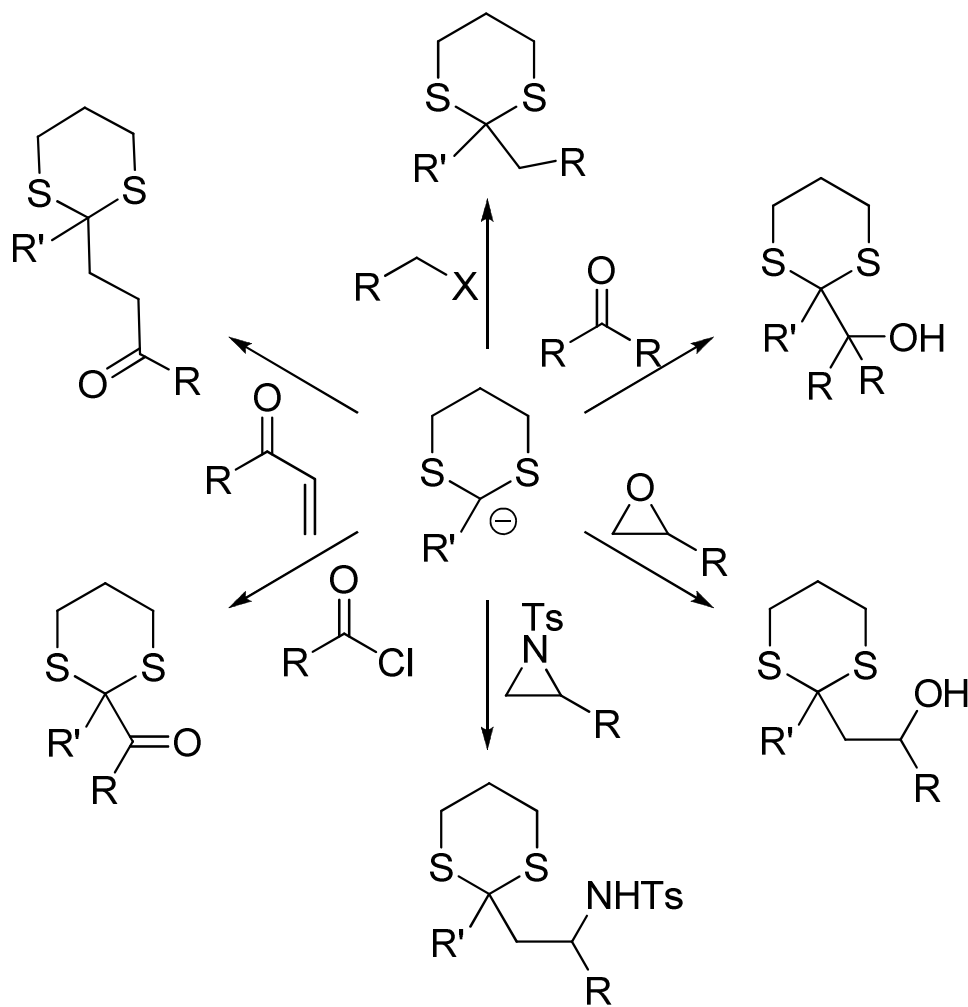
* But were afraid to ask”



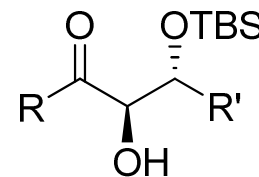
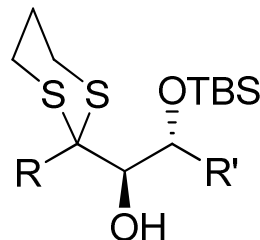
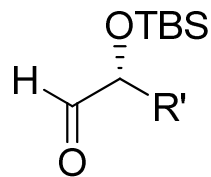
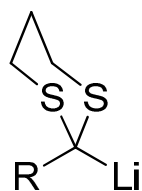
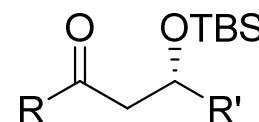
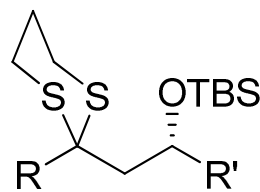
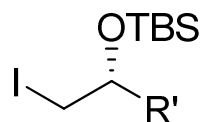
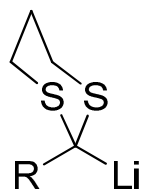
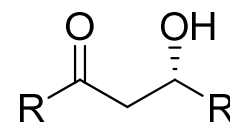
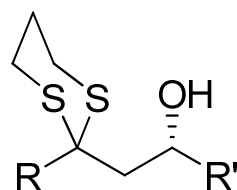
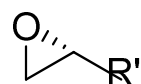
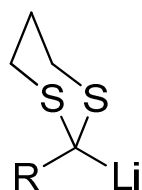
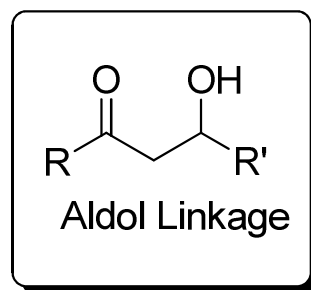
Corey-Seebach Alkylation



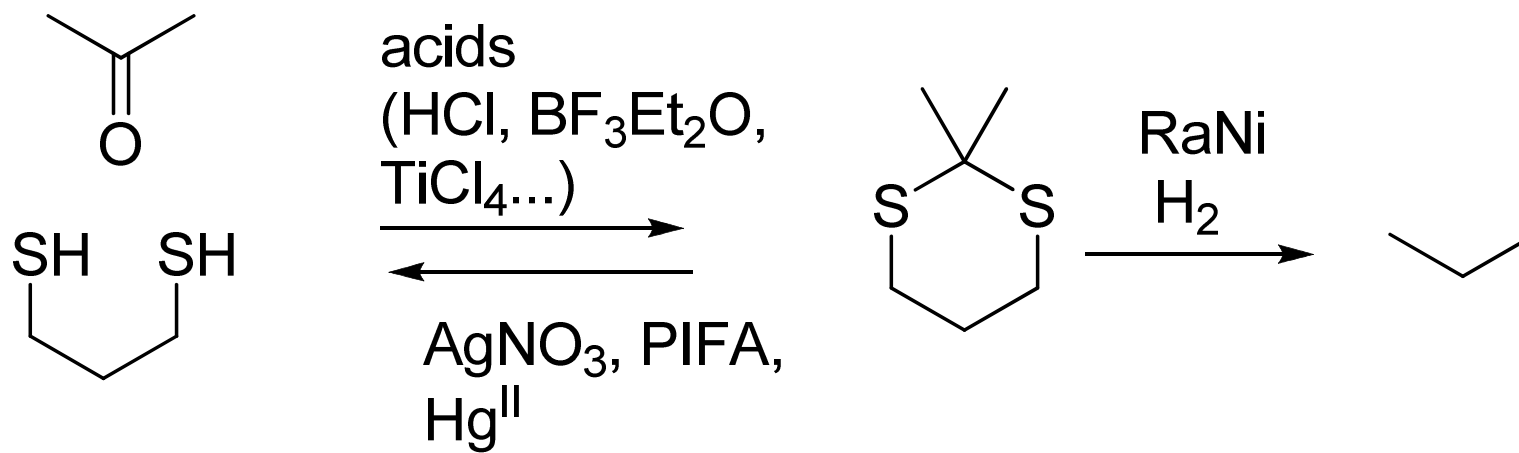
Dithianes Can Add to Several Electrophiles



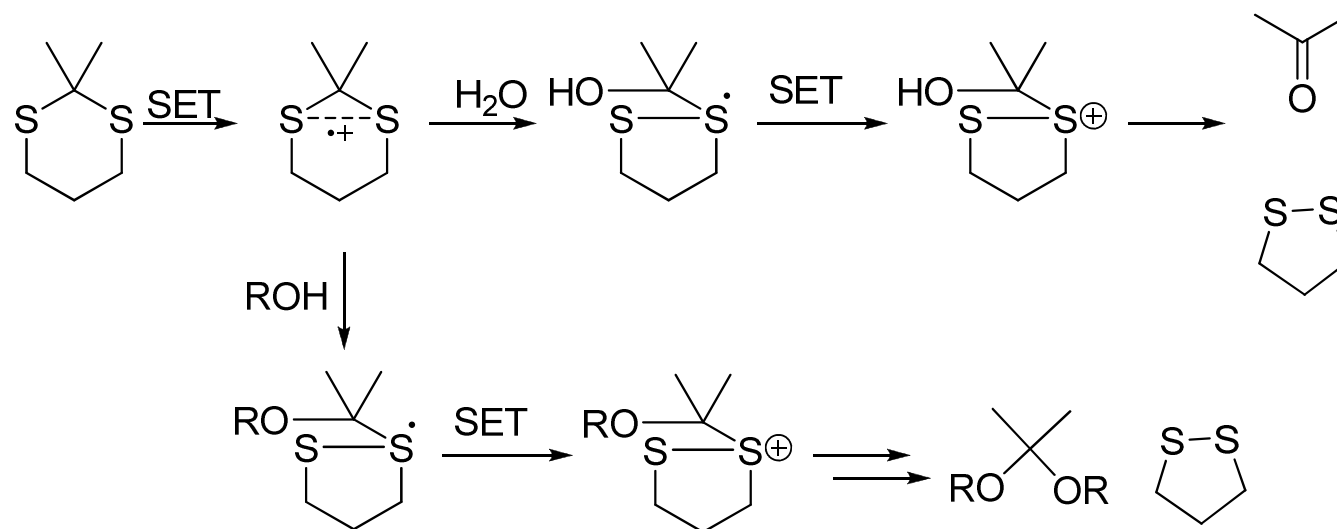
Can Make Aldol-Like Fragments



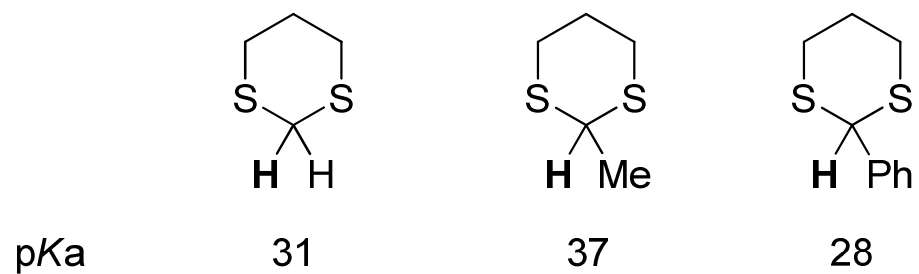
Formed and Unmasked



Oxidative Removal

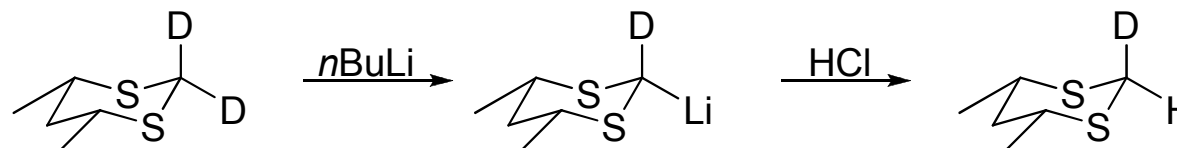
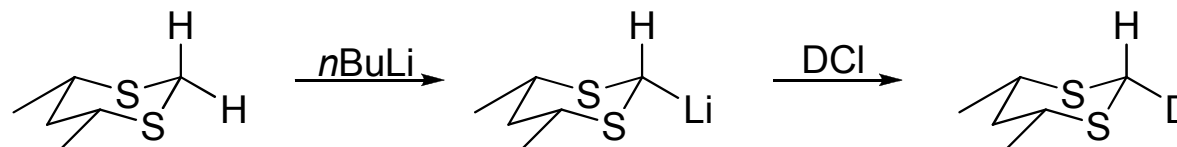


Dithiane Acidities

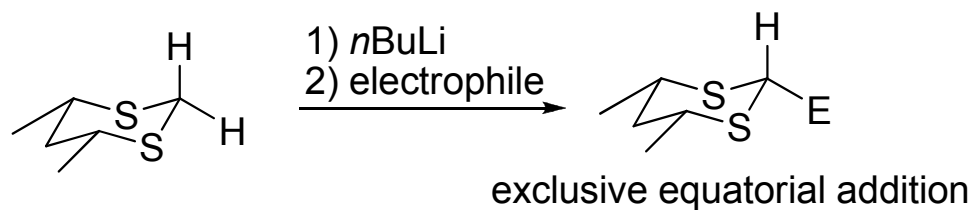


Most 2-substituted dithianes in the 36-38 range

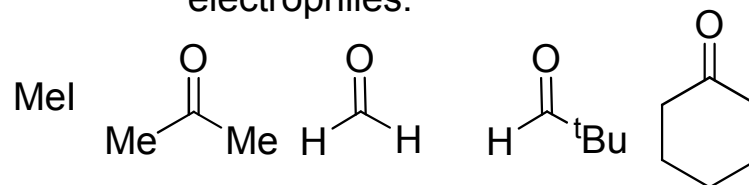
Equatorial Addition



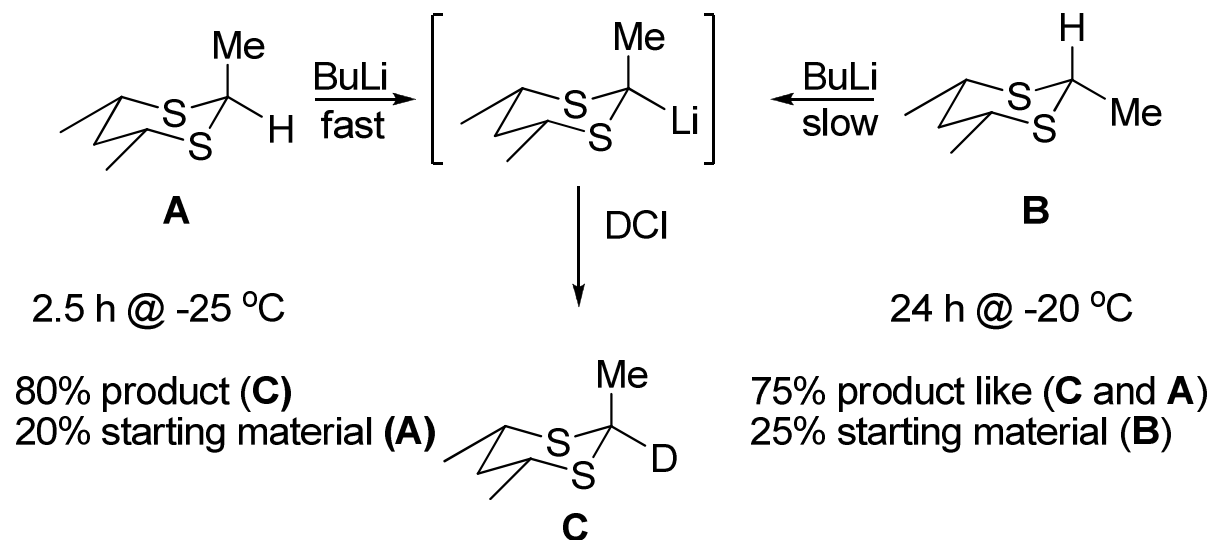
both >100:1



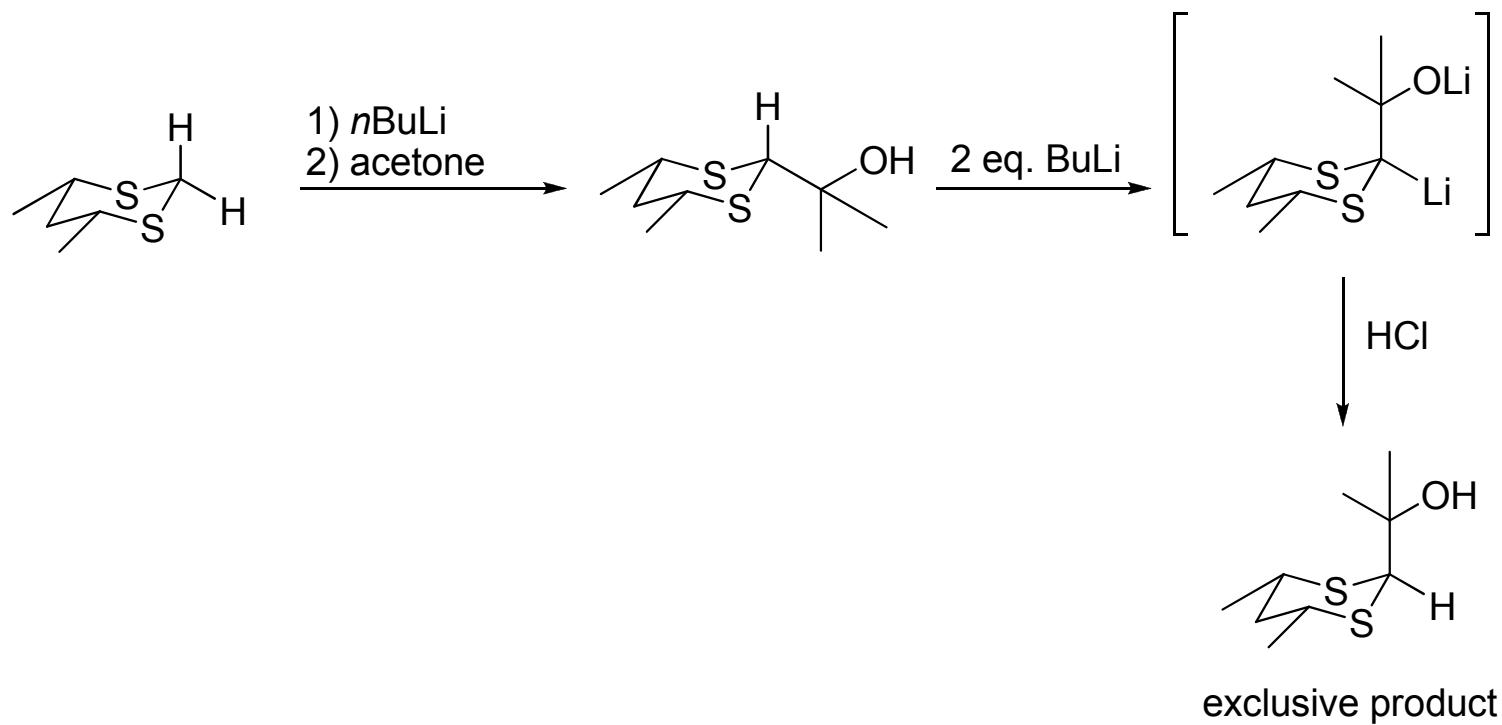
electrophiles:



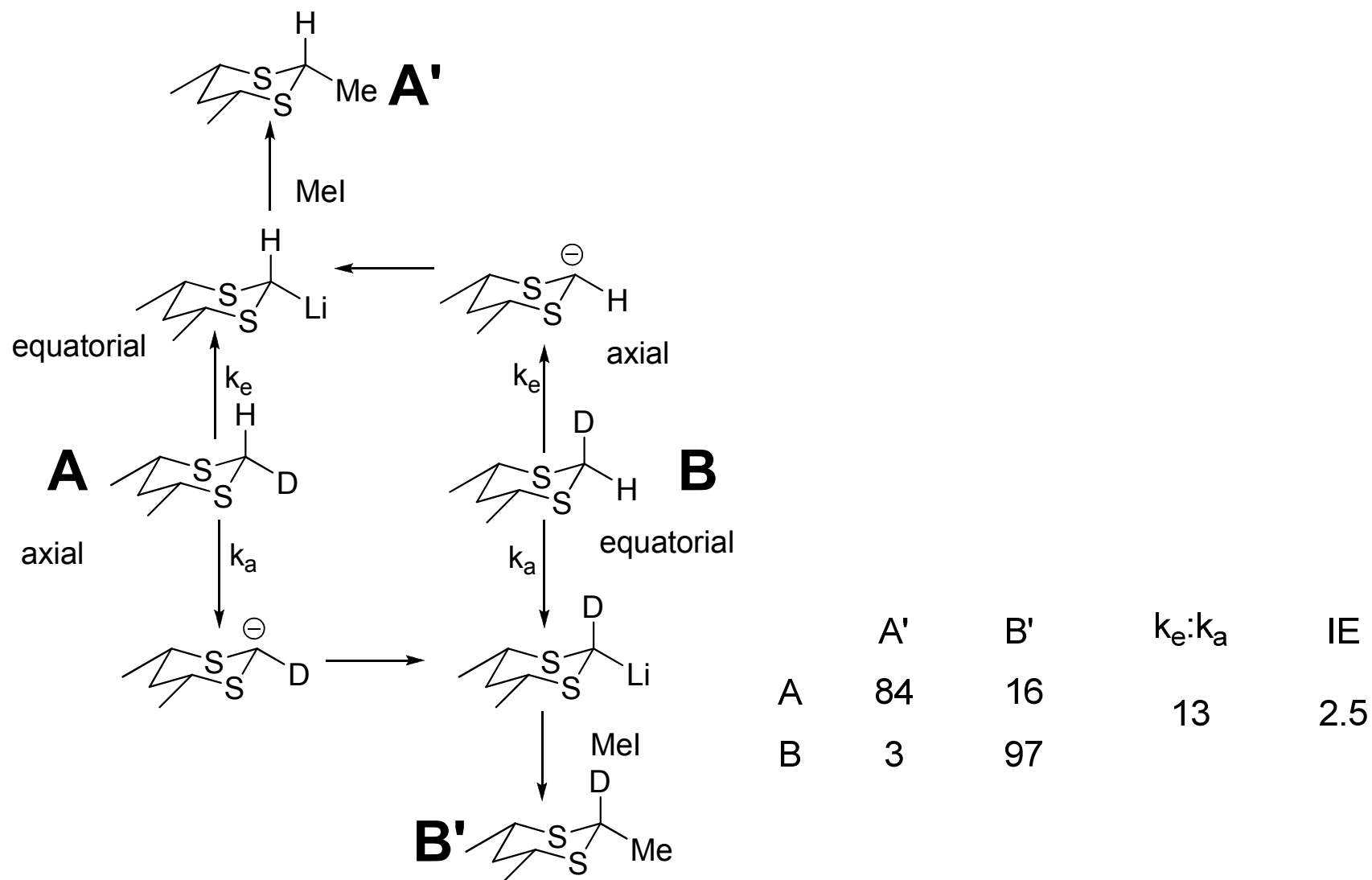
Equatorial Addition



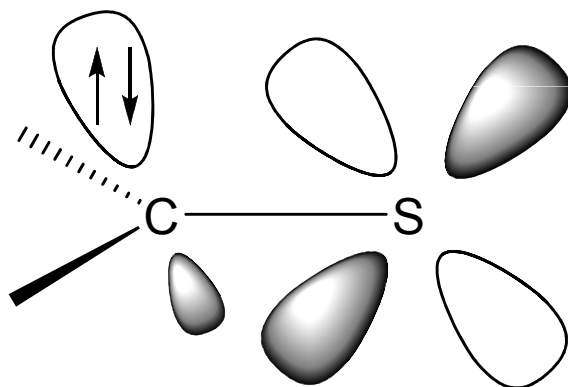
(Equatorial Attack)*2



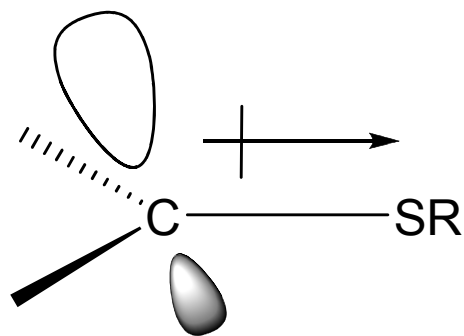
Thermo or Kinetic?



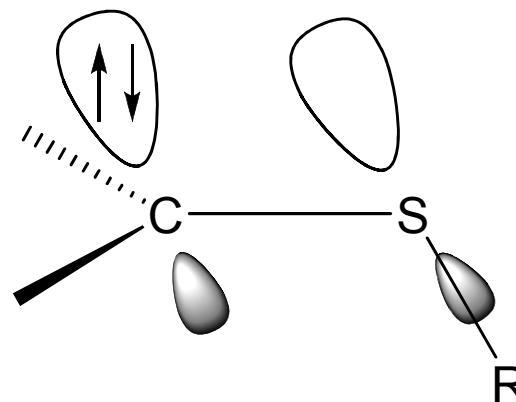
Potential Reason for Equatorial Lithiation



LP-d overlap

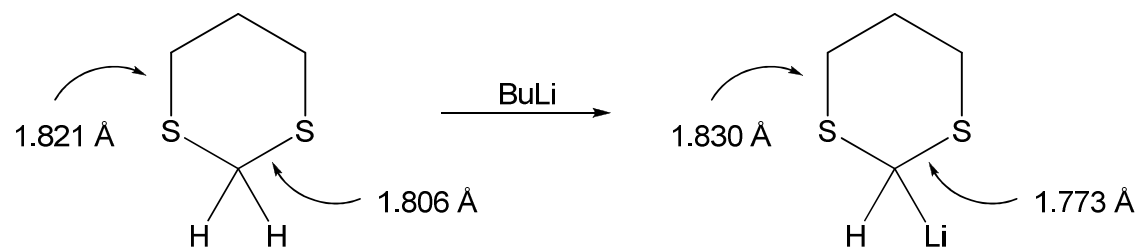


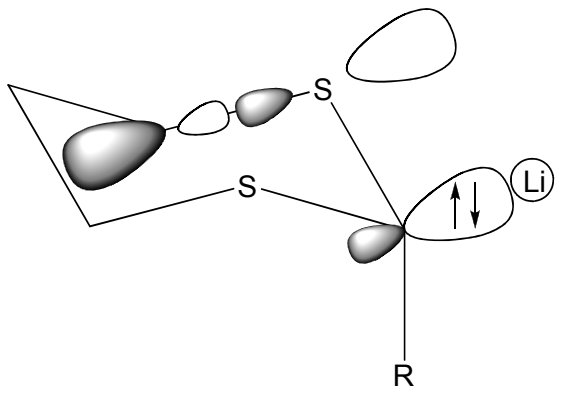
polarization



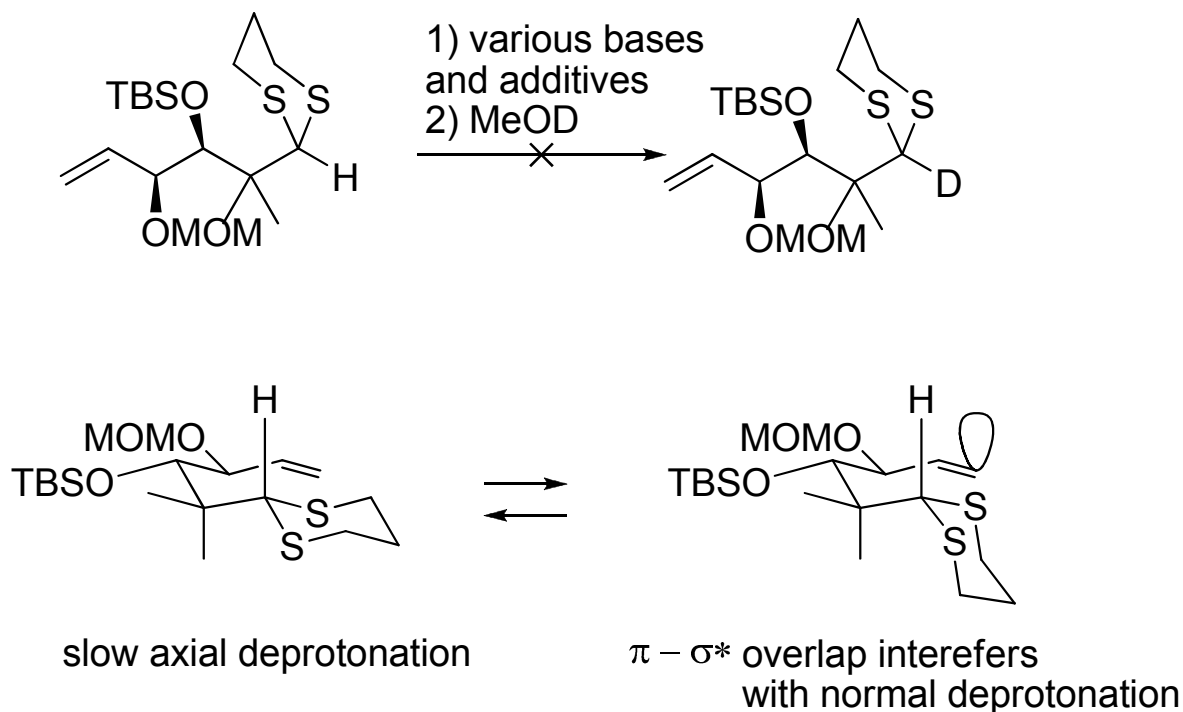
LP- σ^* overlap

X-ray Analysis

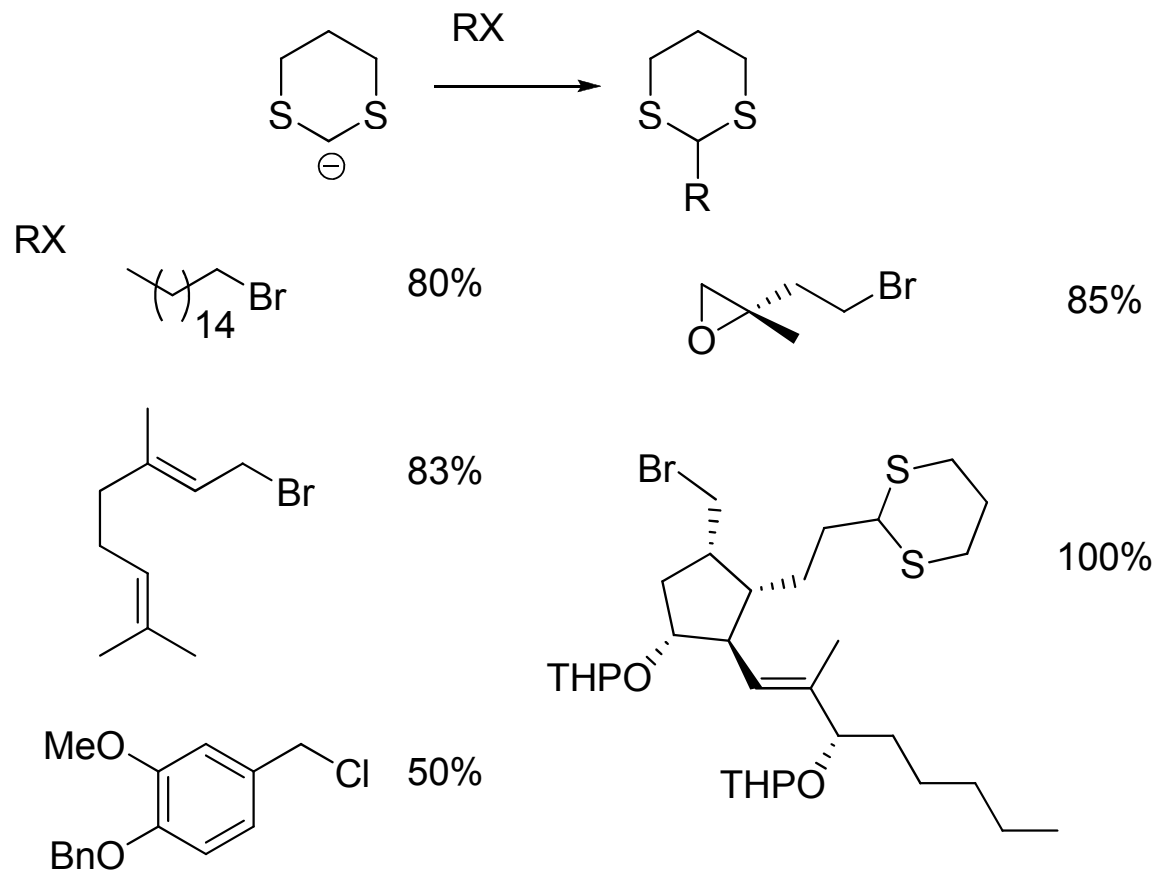




Knowledge in Action

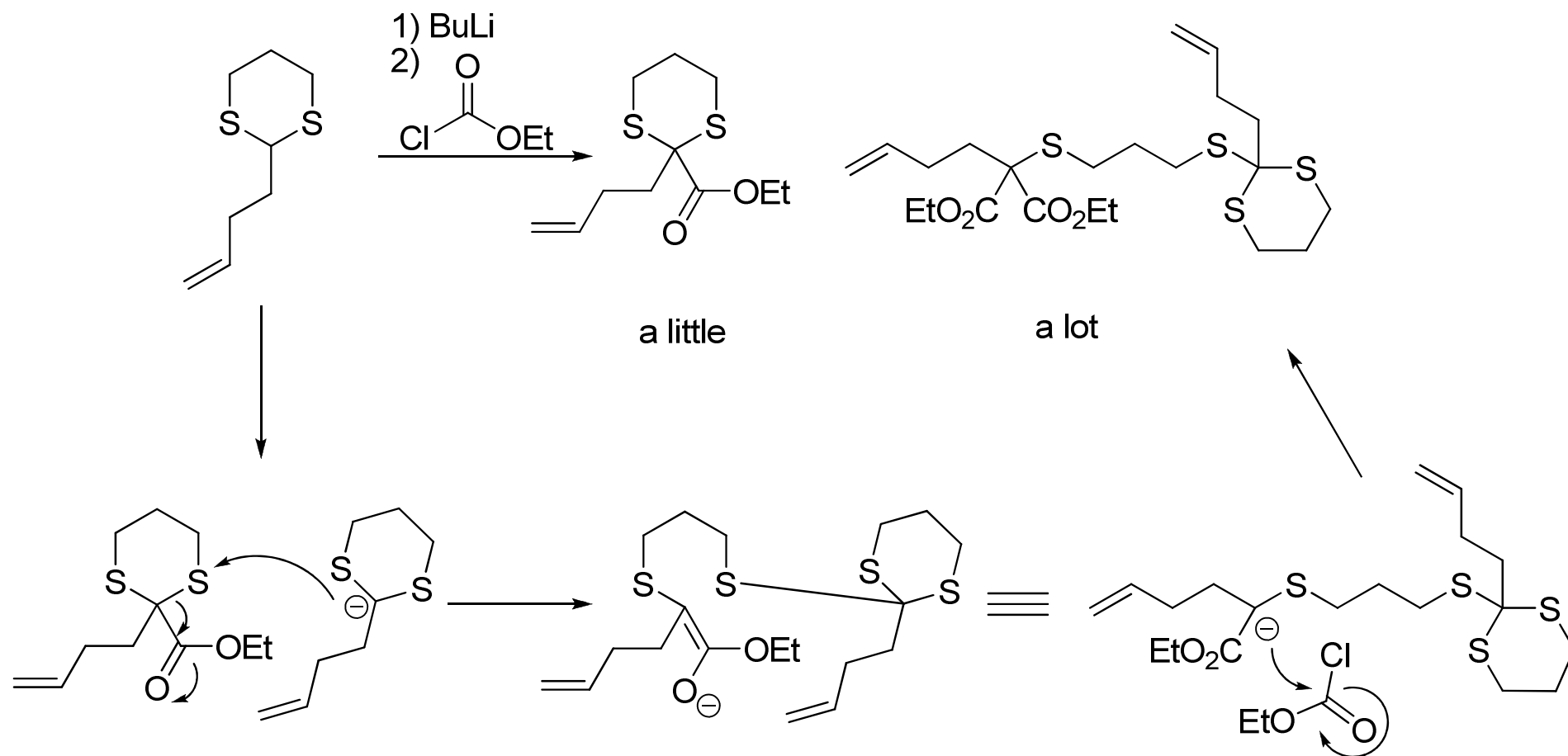


Alkyl Halides

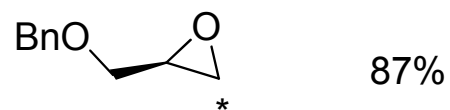
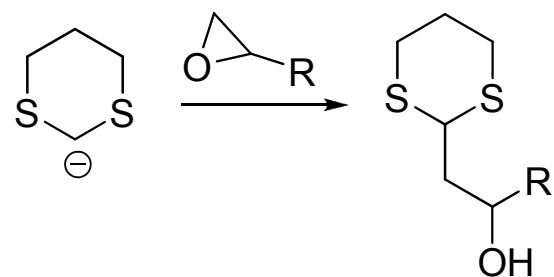


Dithianes formed at -20°C , electrophiles added at -78°C , allowed to warm to rt

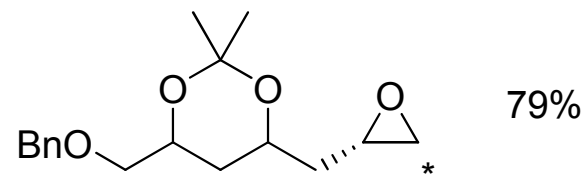
Unwanted Side Reaction



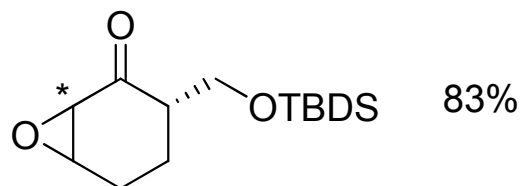
Addition to Epoxides



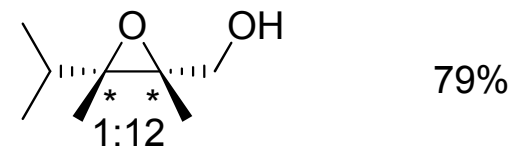
87%



79%

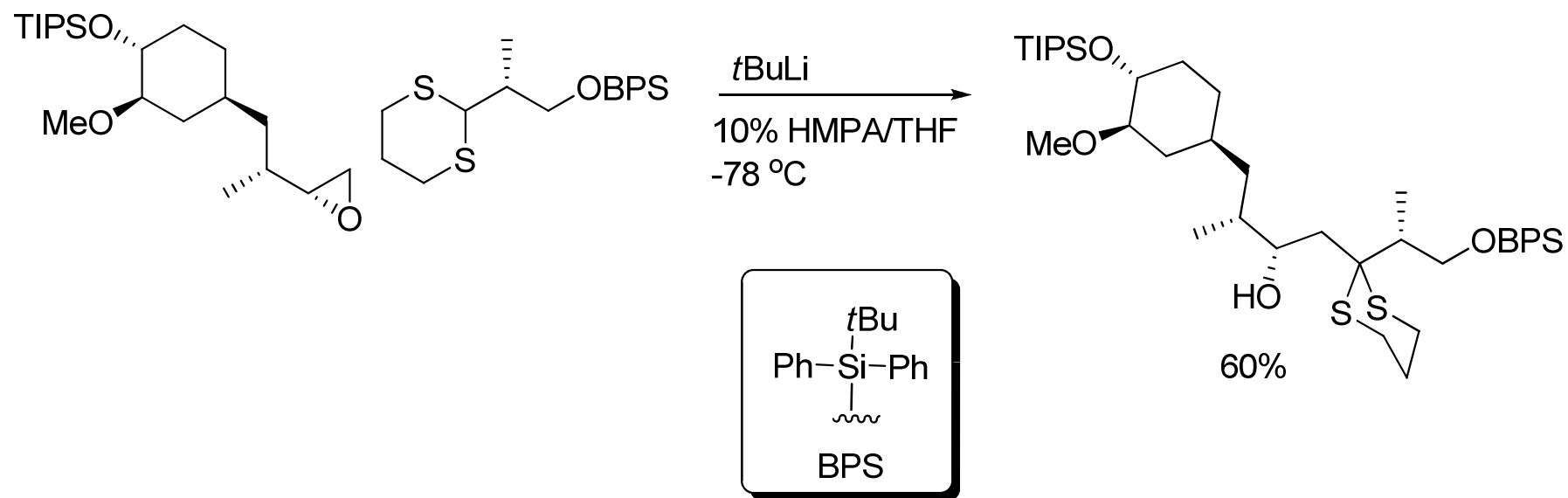


83%

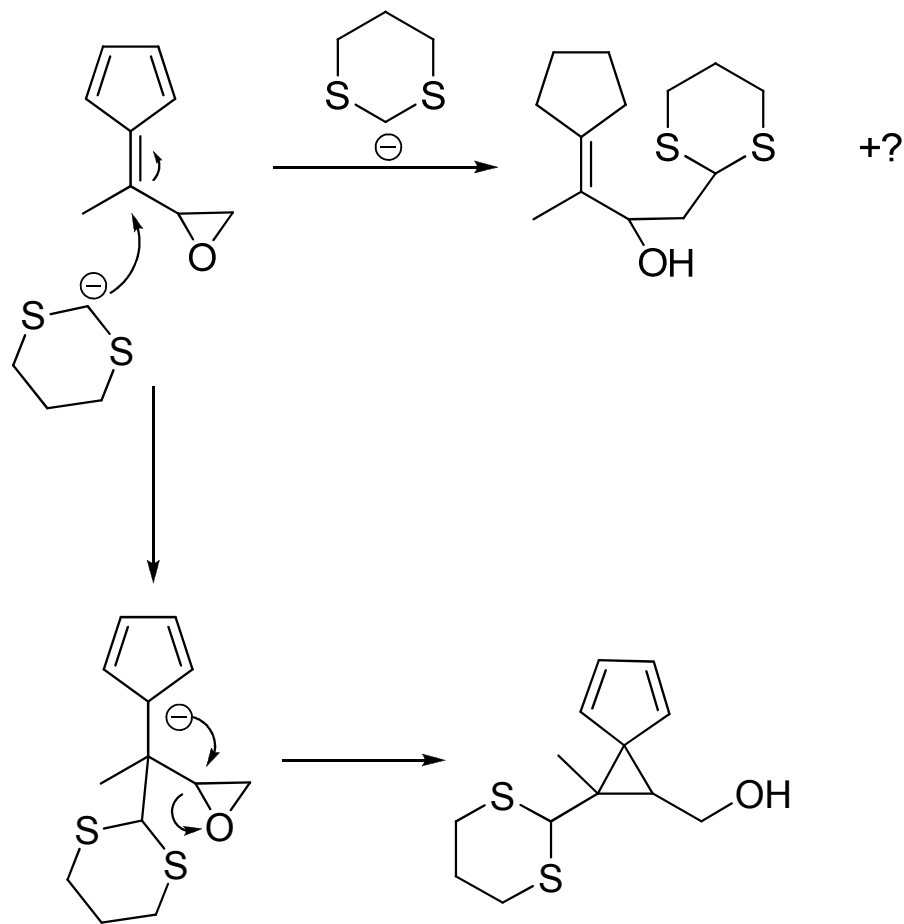


79%

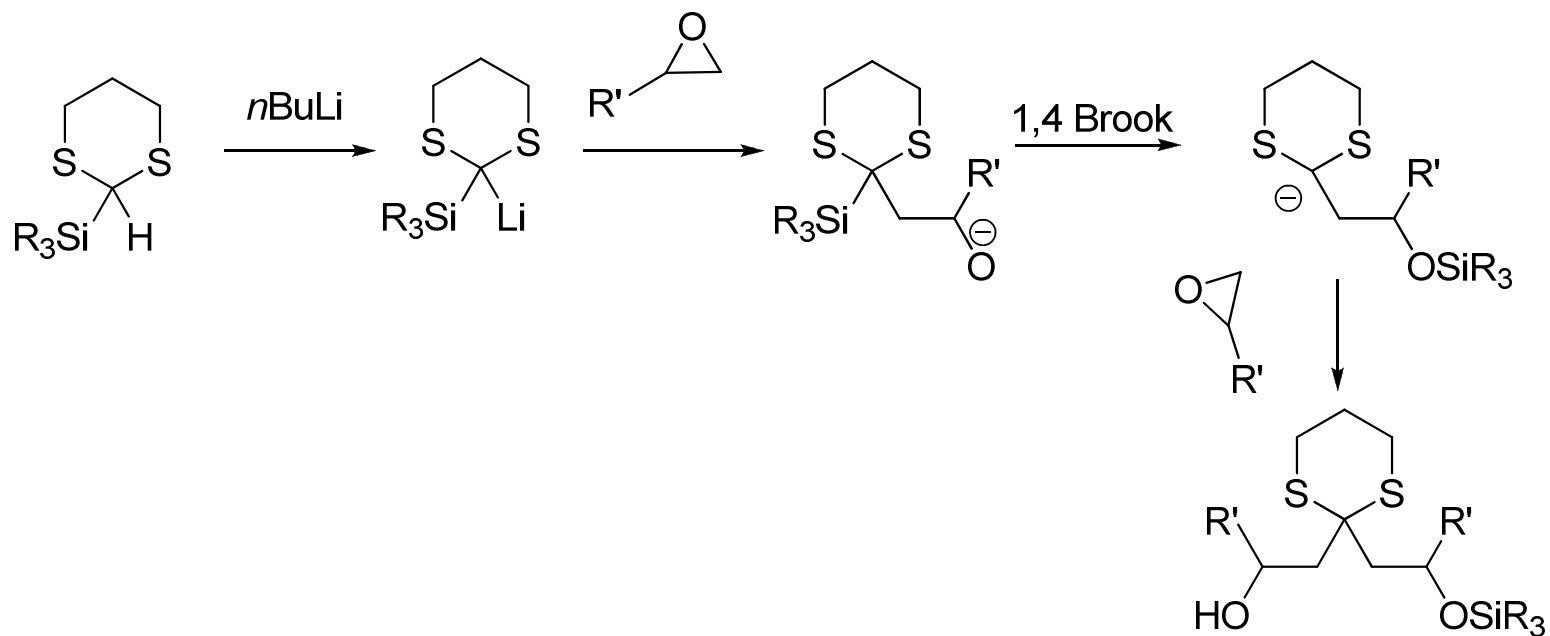
Premixing Possible



Surprising Fulvene Reactivity?



Smith-Tietze Dithiane Linchpin Coupling





define: linchpin

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Web

Definitions of **linchpin** on the Web:

- anchor: a central cohesive source of support and stability; "faith is his anchor"; "the keystone of campaign reform was the ban on soft money ...
wordnetweb.princeton.edu/perl/webwn
- "Linchpin" is a single by musical act Fear Factory from their album Digimortal.
[en.wikipedia.org/wiki/Linchpin_\(song\)](http://en.wikipedia.org/wiki/Linchpin_(song))
- A linchpin, also spelled linch pin, lynchpin, or lynch pin, is a fastener used to prevent a wheel or other rotating part from sliding off the axle it is riding on. ...
en.wikipedia.org/wiki/Linchpin
- a pin inserted through holes at the end of an axle, so as to secure a wheel; a central cohesive source of stability and security; a person or thing that is critical to a system or organisation
en.wiktionary.org/wiki/linchpin

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define: linchpin

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Web

Definitions of linchpin on the Web in all languages:

English

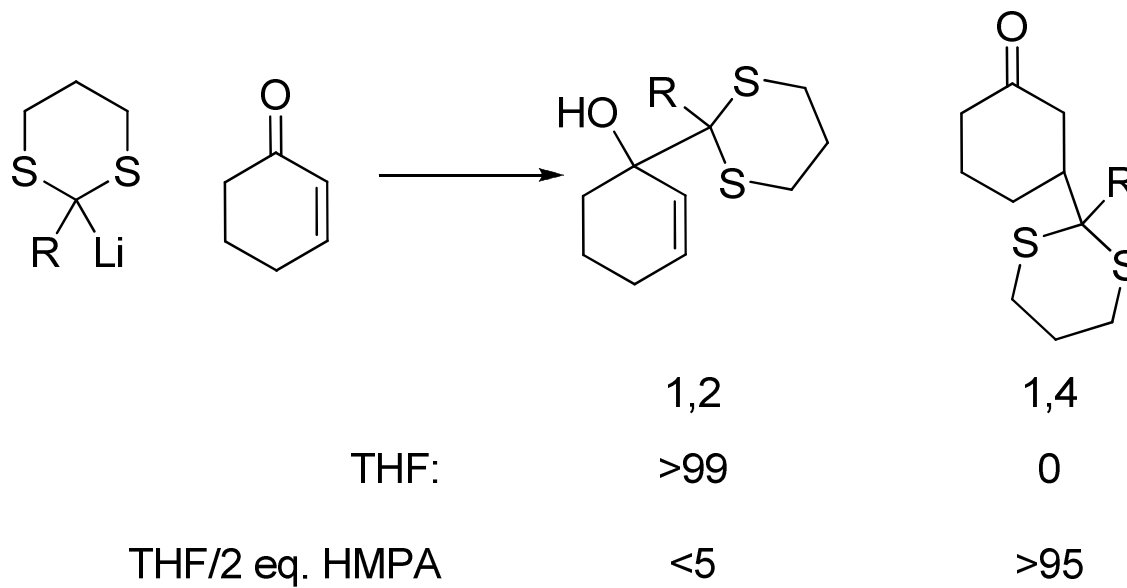
- anchor: a central cohesive source of support and stability; "faith is his anchor"; "the keystone of campaign reform was the ban on soft money ...
- pin inserted through an axletree to hold a wheel on wordnetweb.princeton.edu/perl/webwn
- "Linchpin" is a single by musical act Fear Factory from their album Digimortal. [en.wikipedia.org/wiki/Linchpin_\(song\)](http://en.wikipedia.org/wiki/Linchpin_(song))
- A linchpin, also spelled linch pin, lynchpin, or lynch pin, is a fastener used to prevent a wheel or other rotating part from sliding off the axle it is riding on. ... en.wikipedia.org/wiki/Linchpin
- a pin inserted through holes at the end of an axle, so as to secure a wheel; a central cohesive source of stability and security; a person or thing that is critical to a system or organisation en.wiktionary.org/wiki/linchpin

Russian

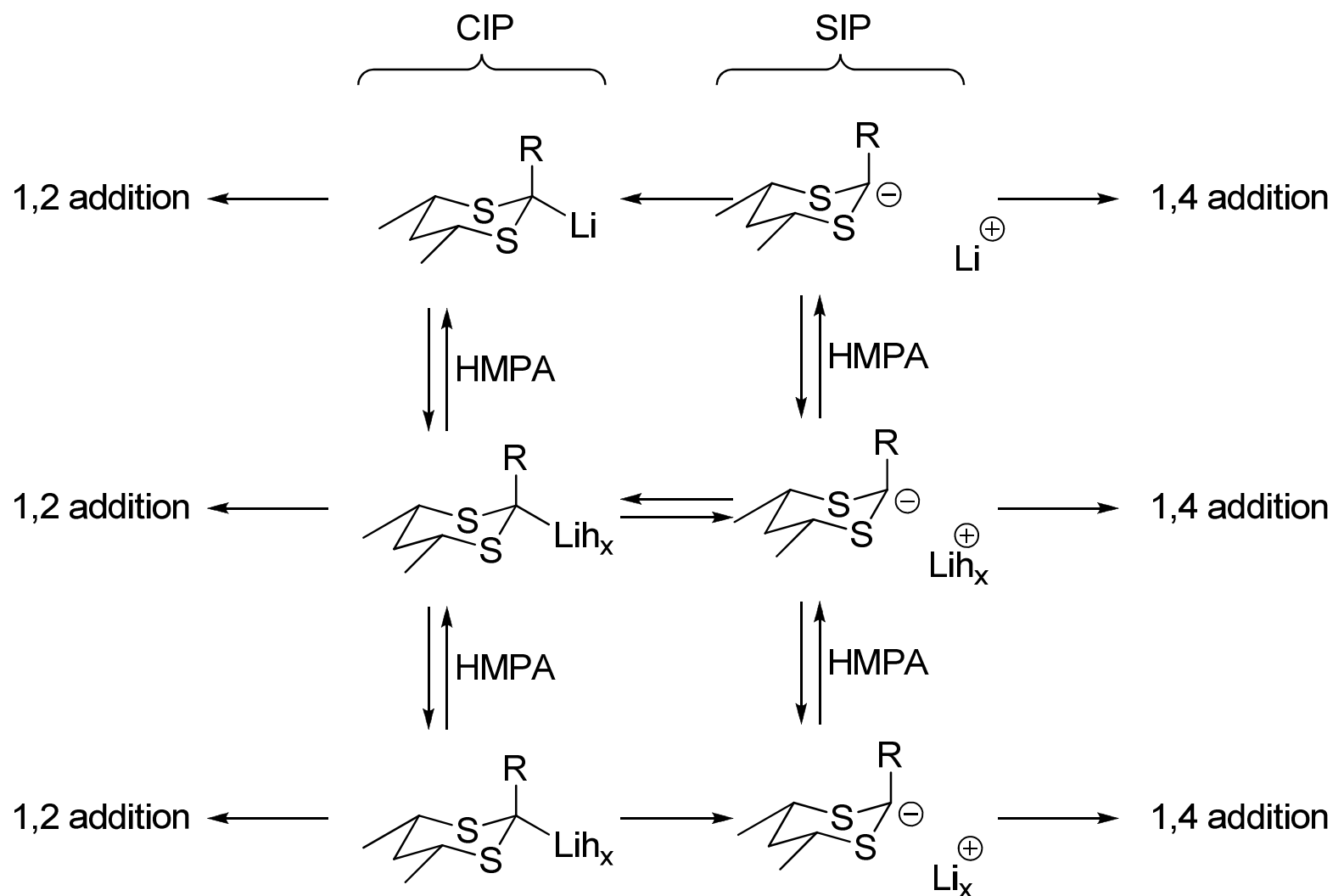
- linchpin noun чека (колеса) Материалы предоставлены проектом Словари и Энциклопедии ... new.5ballov.ru/dictionary/full/455827/33

Find definitions of linchpin in: English Russian all languages

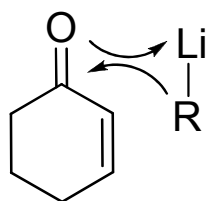
1,2 vs. 1,4 Addition



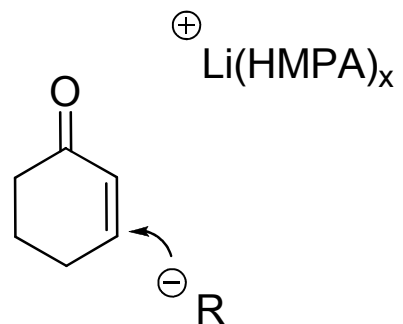
SIPs May Enter into it



LA and SIP Both Matter

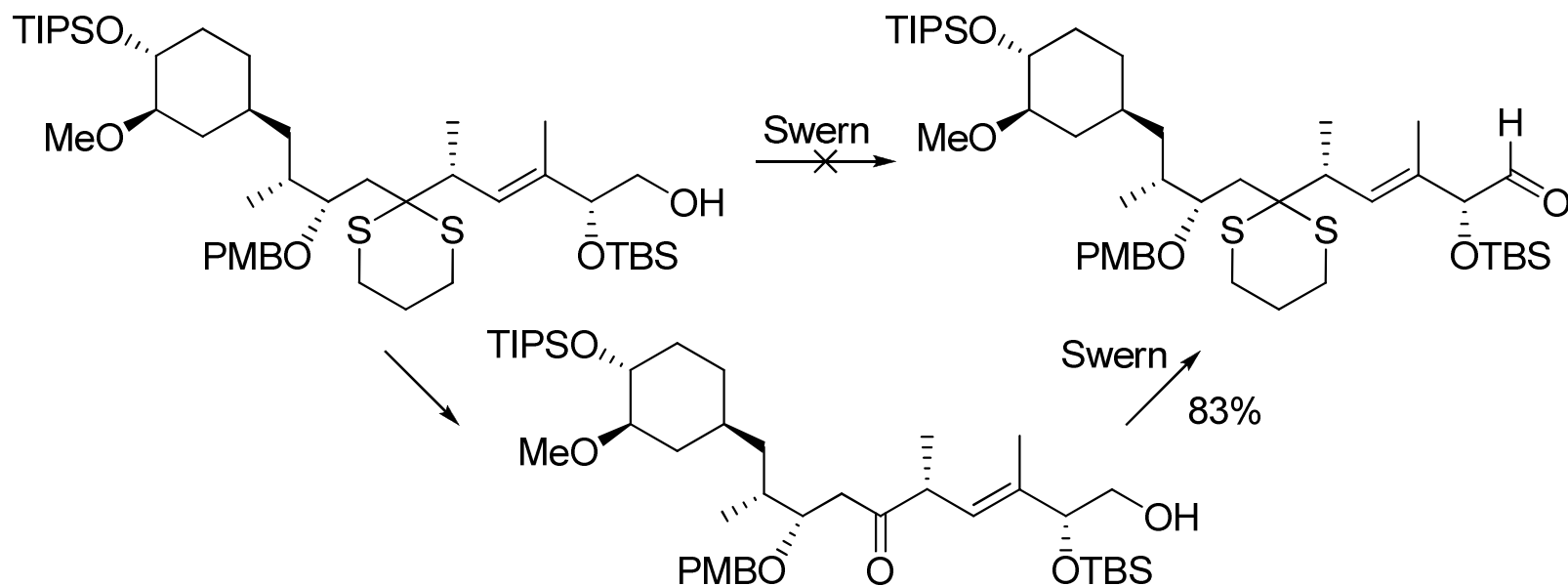
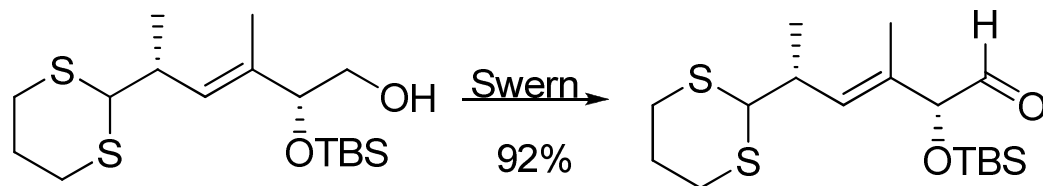
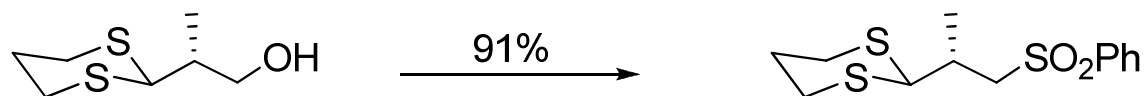
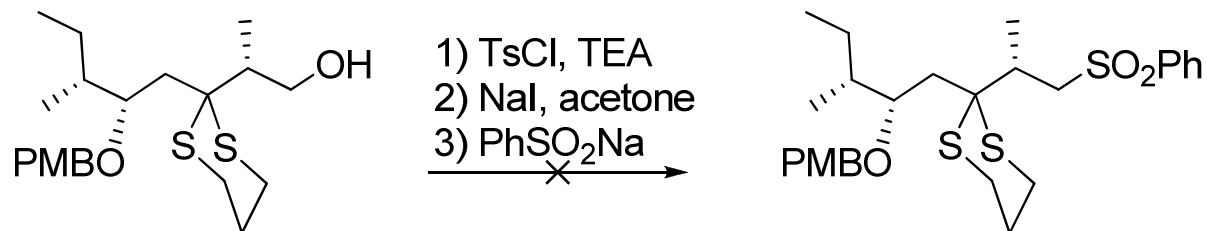


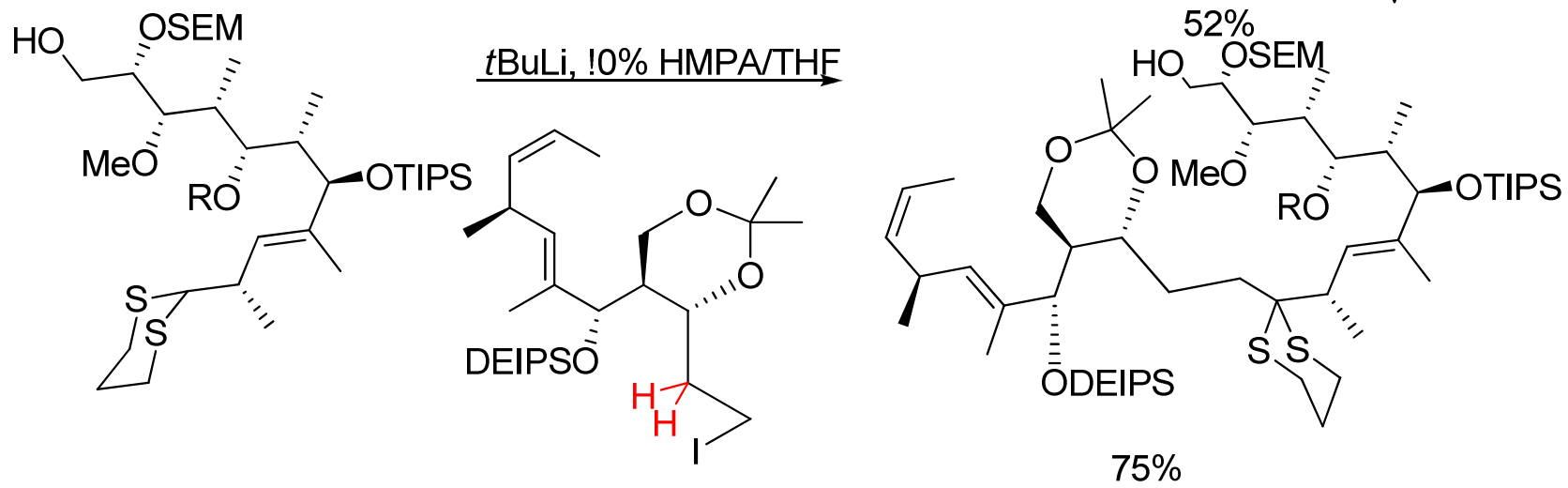
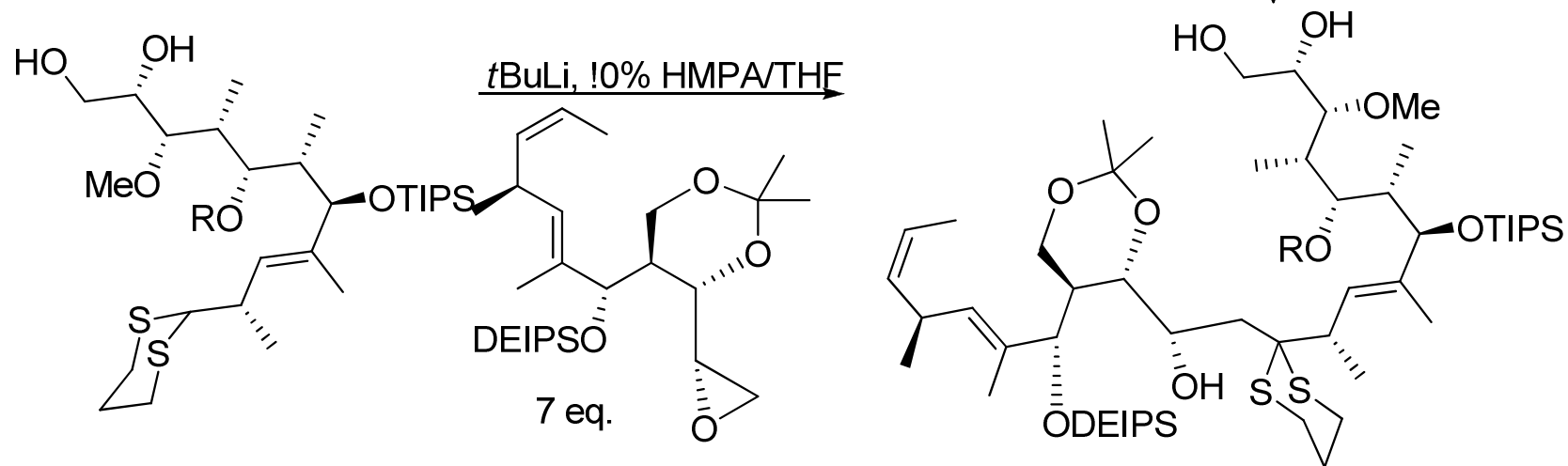
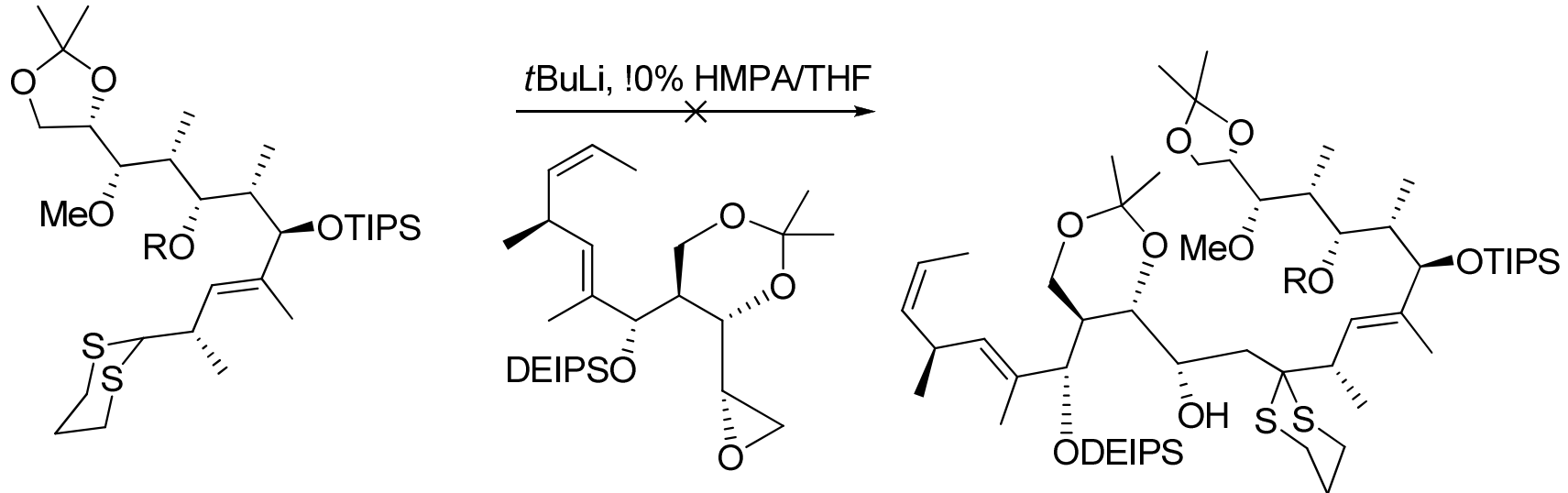
CIP
Li assisted



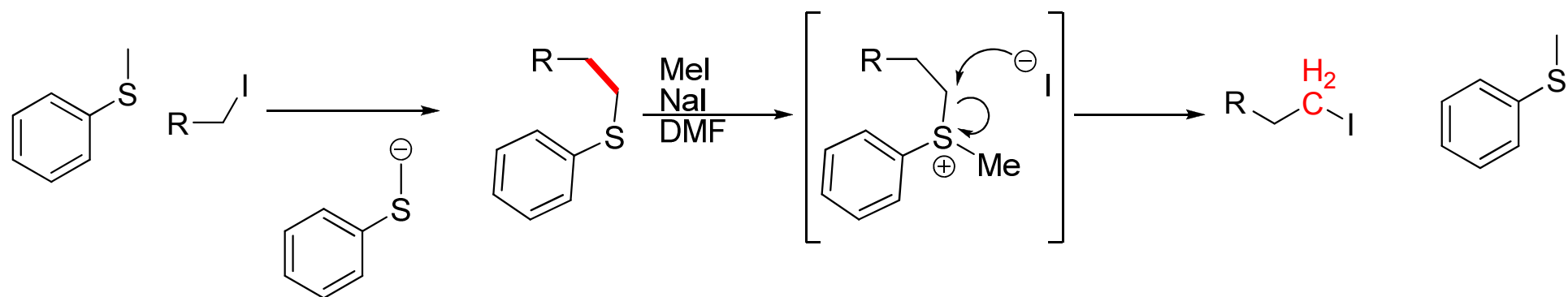
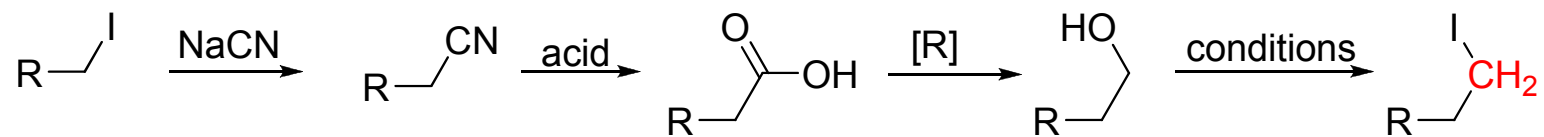
SIP
No Li assistance

Problems with Disubstituted Dithianes





Homologization of Primary Halogens



Tetrahedron Letters, **Volume 9**, Issue 55, 1968, Pages **5787-5788**

E. J. Corey, Manfred Jautelat

Please remember these two bullet points a month from now:

- Lithium lies in the equatorial position
- Lithiated dithianes can be added to many types of electrophiles