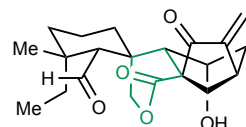
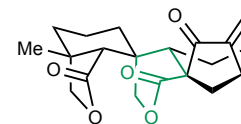


## Maeocrystal Z:

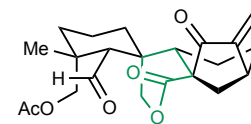
- Rearranged 6,7-*seco-ent*-kauranoid diterpene
- Tetracyclic ring system
- Six vicinal stereocenters
  - Two all-carbon
- Isolated from *Isodon eriocalyx* in 2006
- Only synthesis of maeocrystal Z - Reisman in 2011
- Numerous syntheses of maeocrystal V



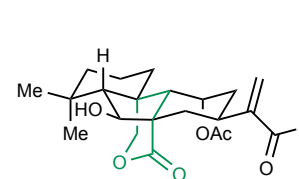
trichorabdal A



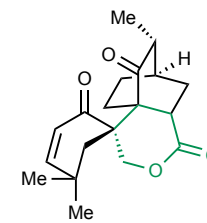
longirabdolactone



effusin



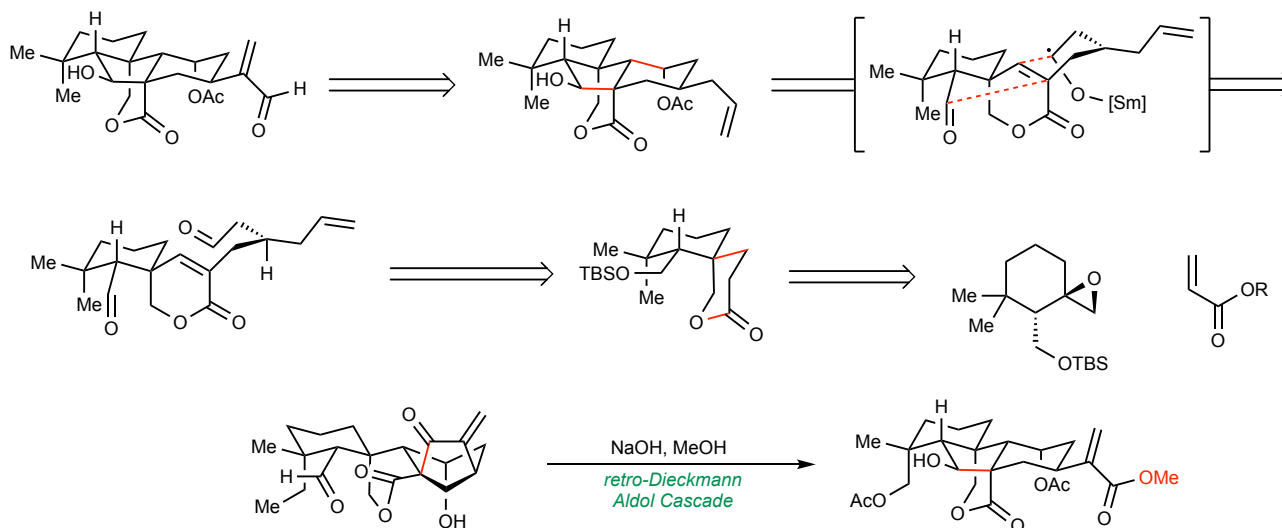
maeocrystal Z



maeocrystal V

See SOTW, Bingham, 8/10/18

<https://www.sarlahgroup.com/synthesis-of-the-week>



### Key Steps:

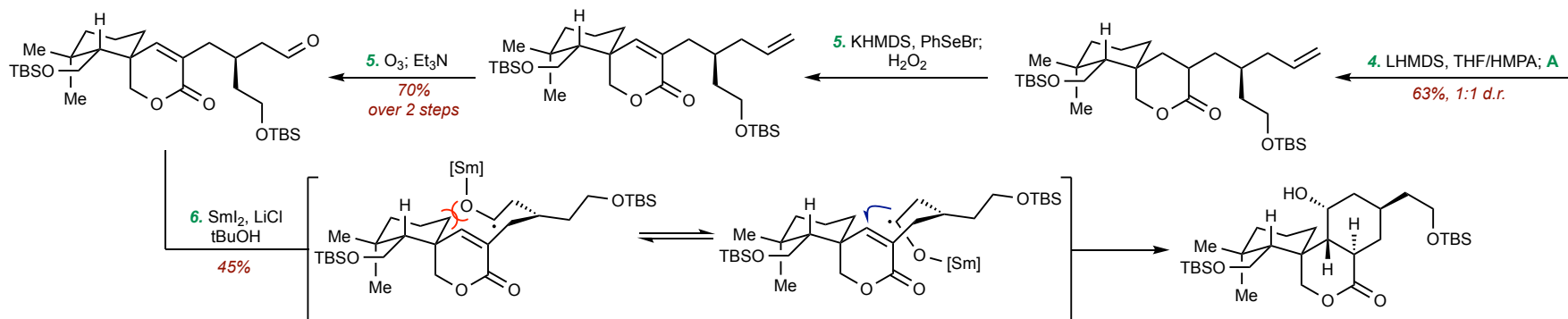
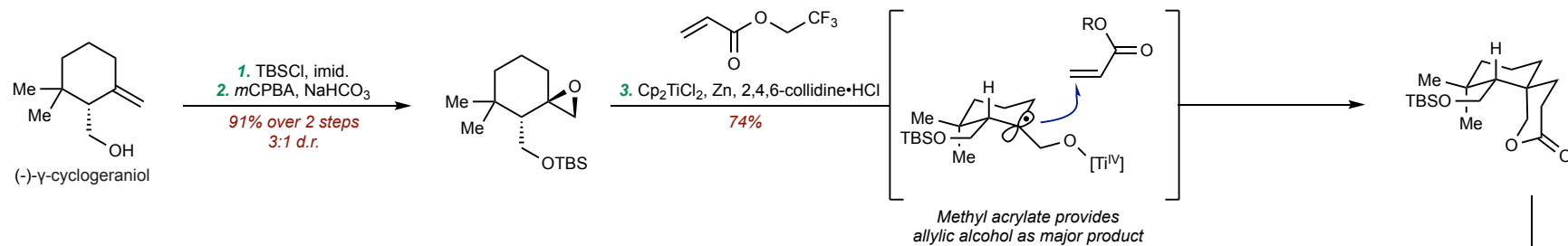
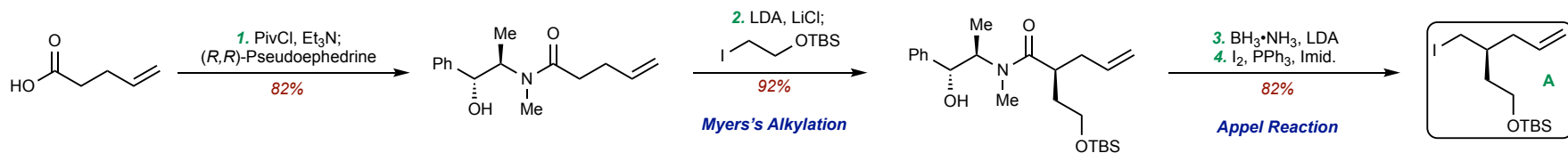
Ti<sup>III</sup>-mediated reductive epoxide coupling  
Sm<sup>II</sup>-mediated reductive cascade cyclization

Known degradation of trichorabdal under basic conditions inspired Samarium bicyclization

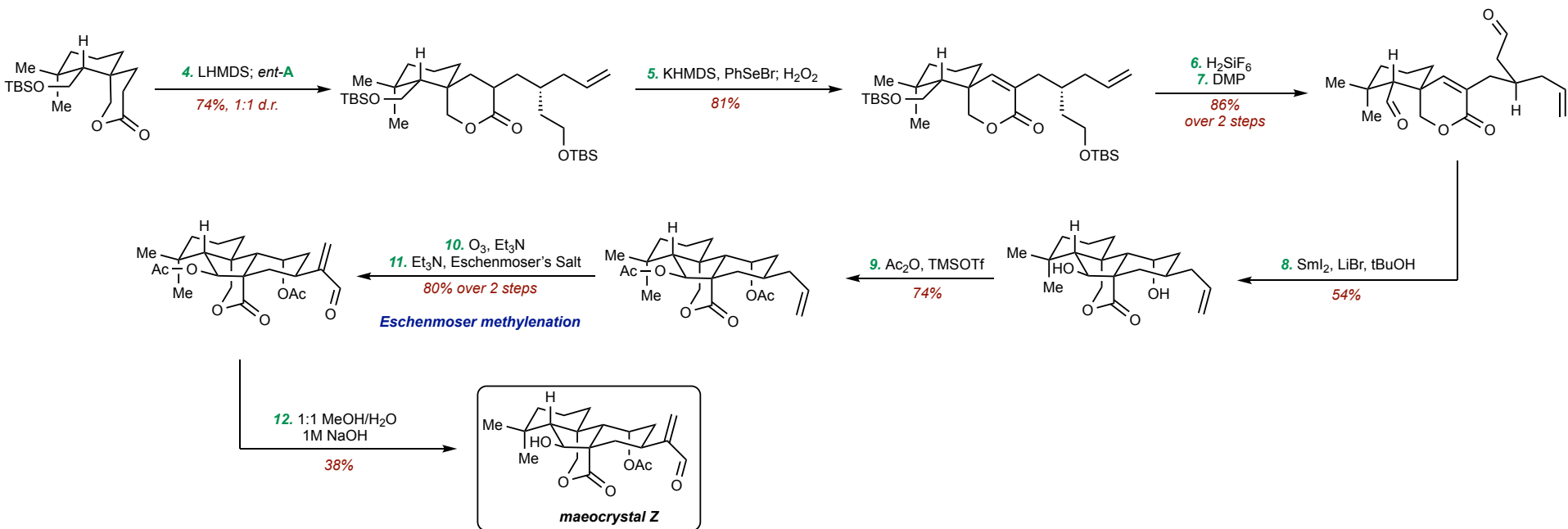
*J. Am. Chem. Soc.* 2011, **133**, 14964  
<https://doi.org/10.1021/ja2073356>

*Tetrahedron* 2014, **70**, 4070  
<https://doi.org/10.1016/j.tet.2014.03.071>

**Radical Monocyclization:**



**Radical Bicyclization & Completion of the Synthesis:**



**A Surprise Bonus Natural Product!**

