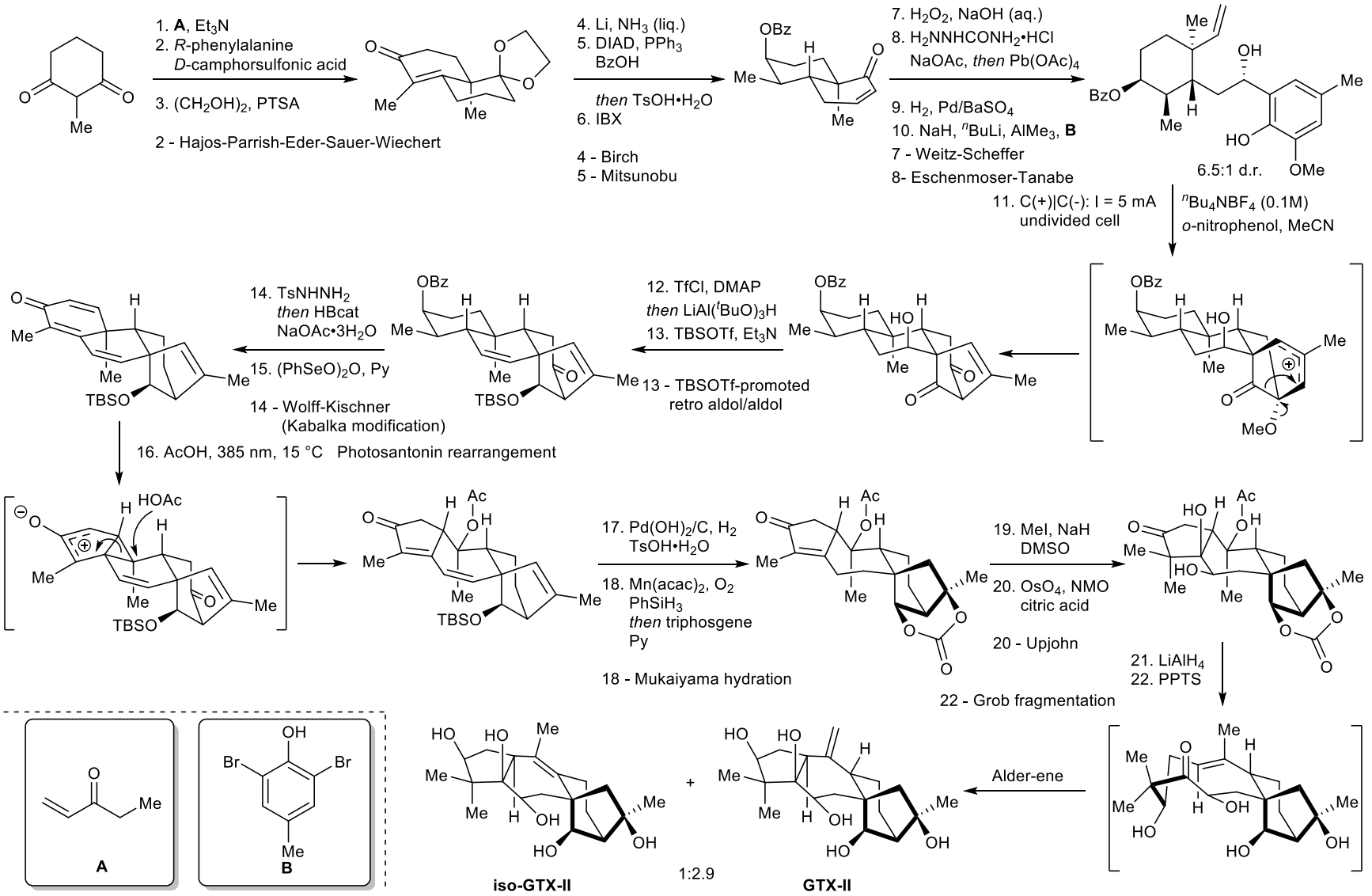
E276: Total synthesis of GTX-II and Auriculatol A



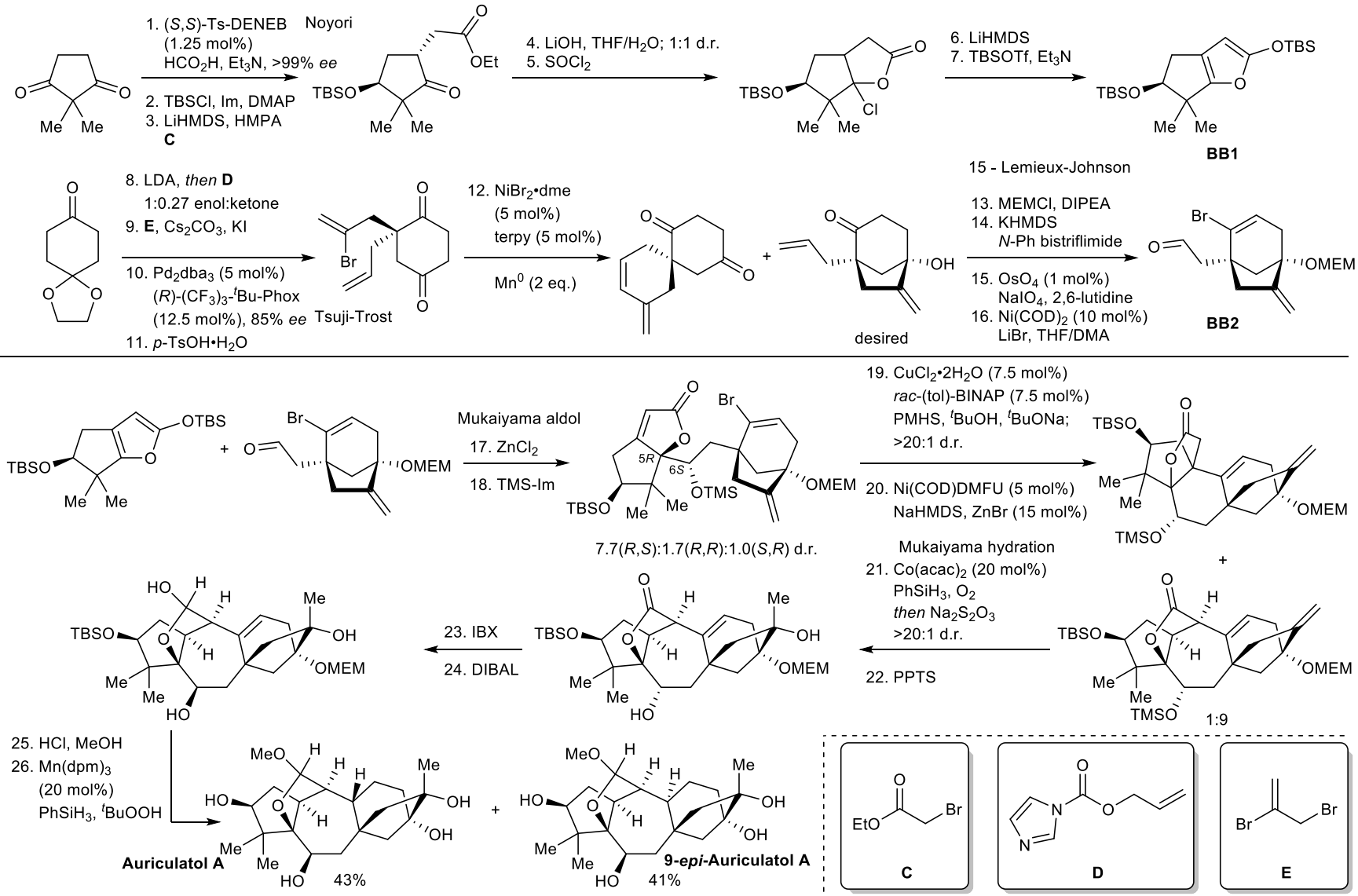
A. Zhu, Y. Lyu, Q. Xia, Y. Wu, D. Tang, C. He, G. Zheng, Y. Feng, Y. Wang, G. Yao and H. Ding, *J. Am. Chem. Soc.*, **2023**, *145*, 8540–8549.

J. K. Thompson, K. C. Youngblood, Y. H. S. Teh, C. M. Farley, Z. Zhang, S. C. Virgil and S. E. Reisman, *J. Am. Chem. Soc.*, **2025**, DOI:10.1021/jacs.5c17269.

University of Basel

Sparr Group Seminar
12.11.2025
Anton Budeev

E276: Total synthesis of GTX-II and Auriculatol A



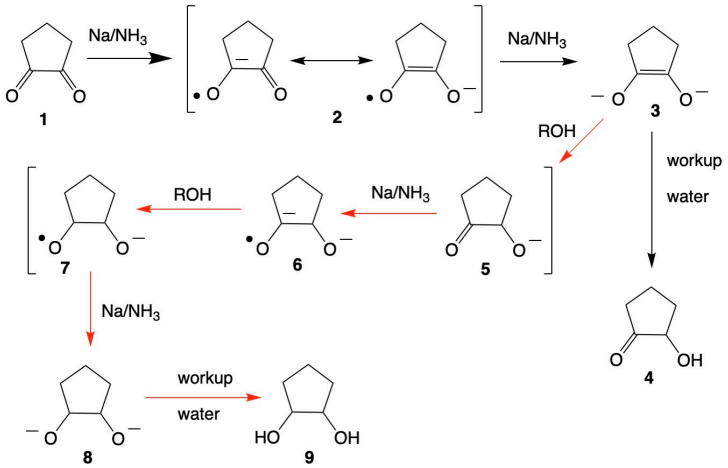
A. Zhu, Y. Lyu, Q. Xia, Y. Wu, D. Tang, C. He, G. Zheng, Y. Feng, Y. Wang, G. Yao and H. Ding, *J. Am. Chem. Soc.*, **2023**, *145*, 8540–8549.

J. K. Thompson, K. C. Youngblood, Y. H. S. Teh, C. M. Farley, Z. Zhang, S. C. Virgil and S. E. Reisman, *J. Am. Chem. Soc.*, **2025**, DOI:10.1021/jacs.5c17269.

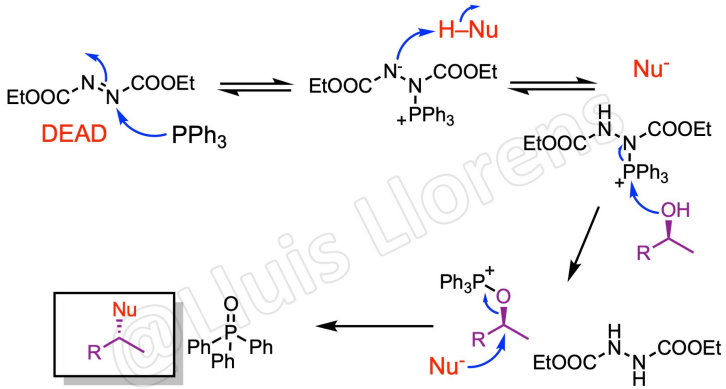
University of Basel

Sparr Group Seminar
12.11.2025
Anton Budeev

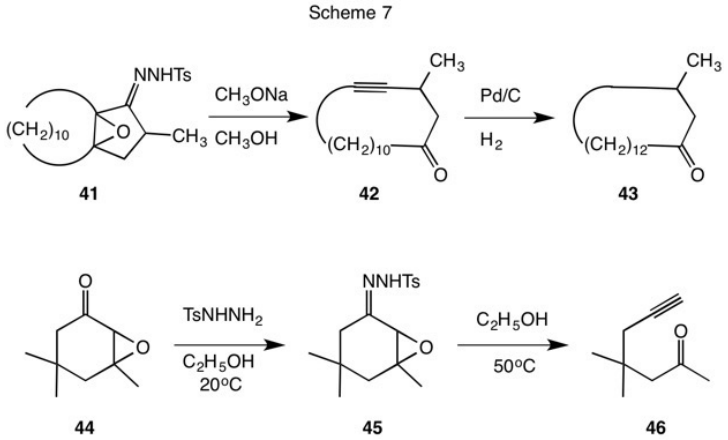
Birch reduction of ketones:

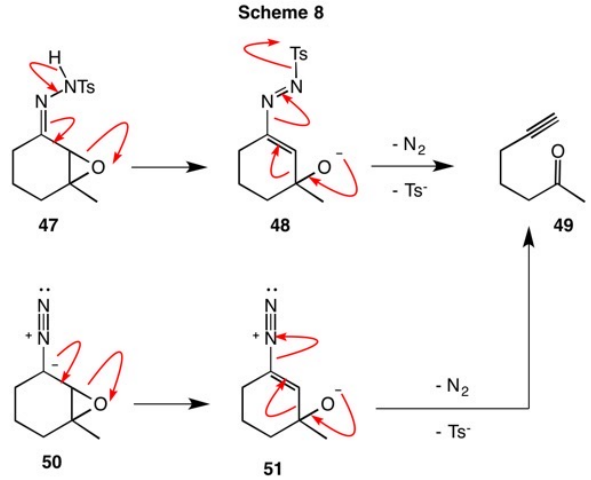


Mitsunobu reaction:

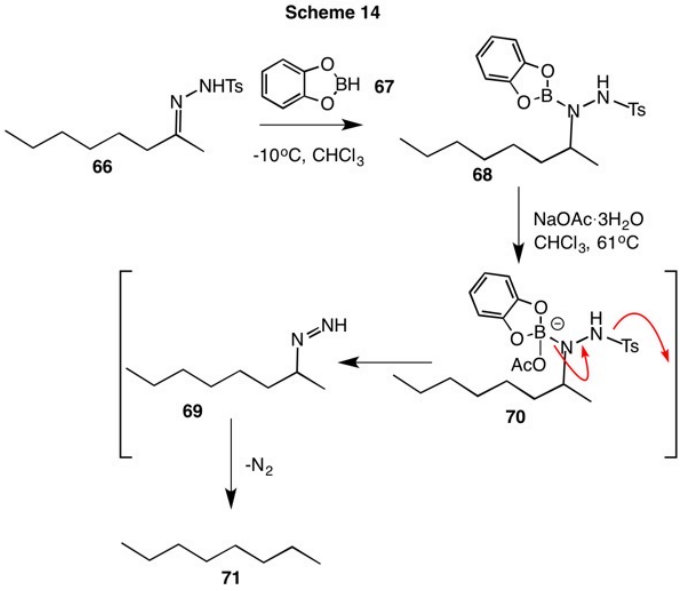


Eschenmoser-Tanabe reaction:

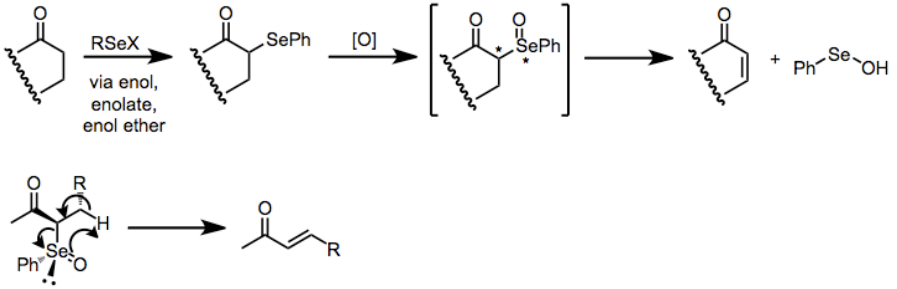




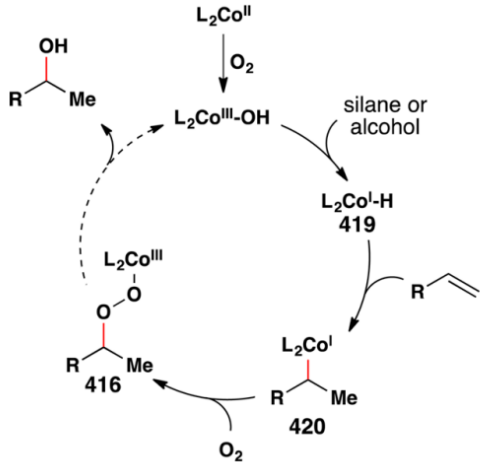
Wolff-Kischner reaction (Kabalka modification):



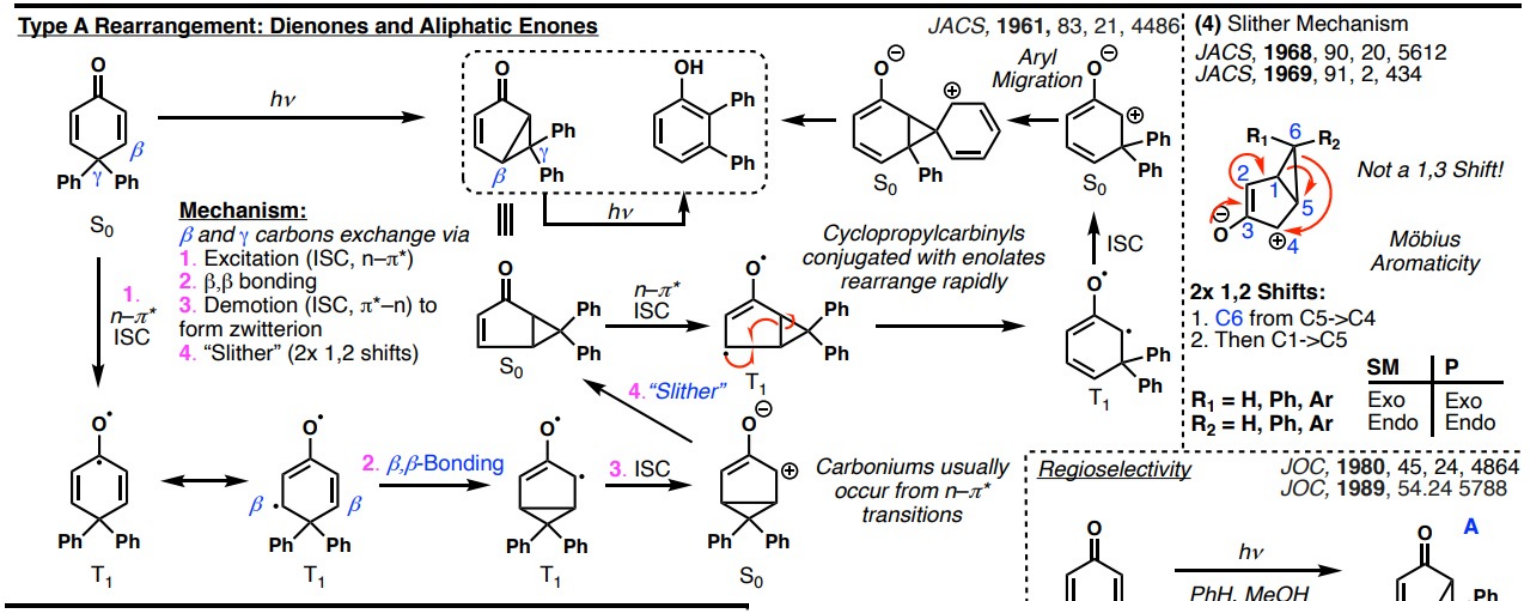
Selenoxide elimination:

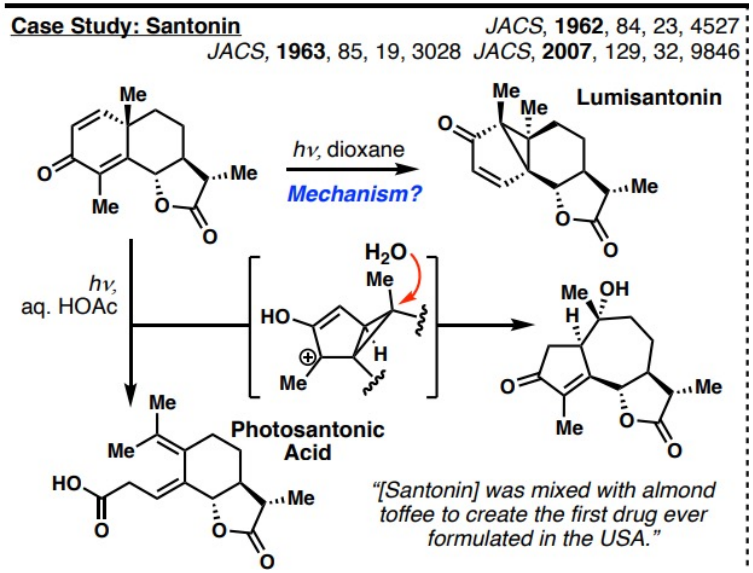


Mukaiyama hydration:



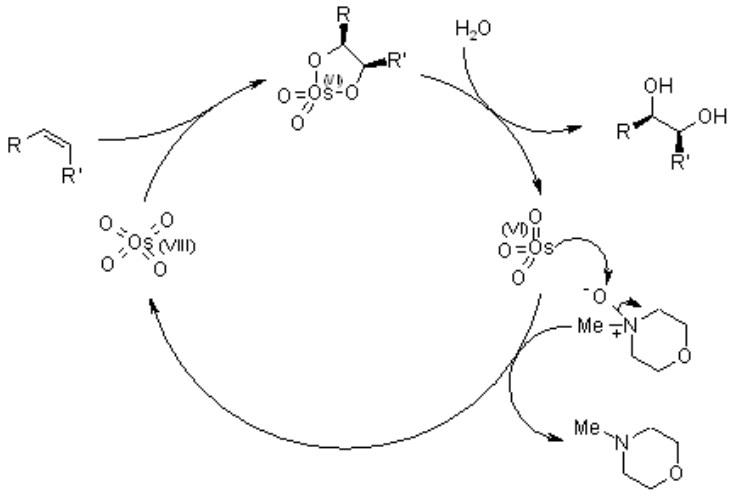
Photosantonin rearrangement:



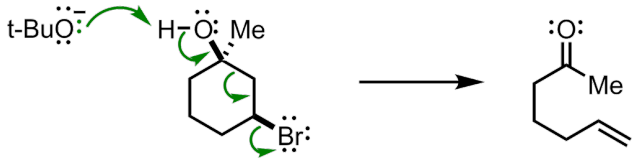


From Baran Lab group meeting 12/12/20, Timothy J. Gallagher

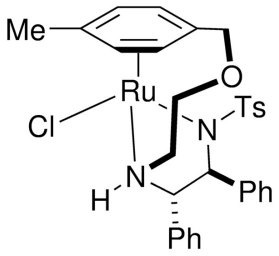
Upjohn dihydroxylation:



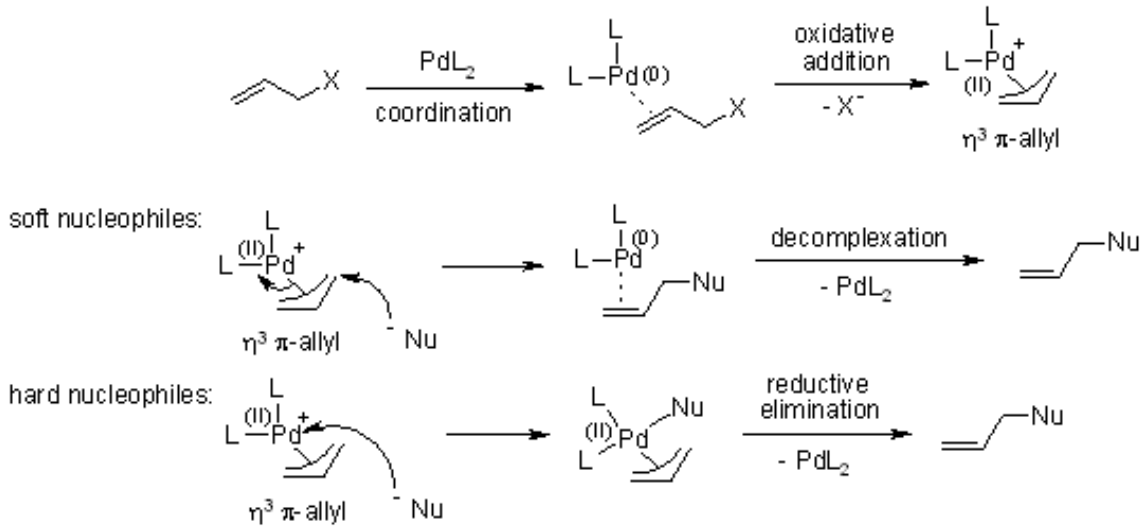
Grob fragmentation (simple example):



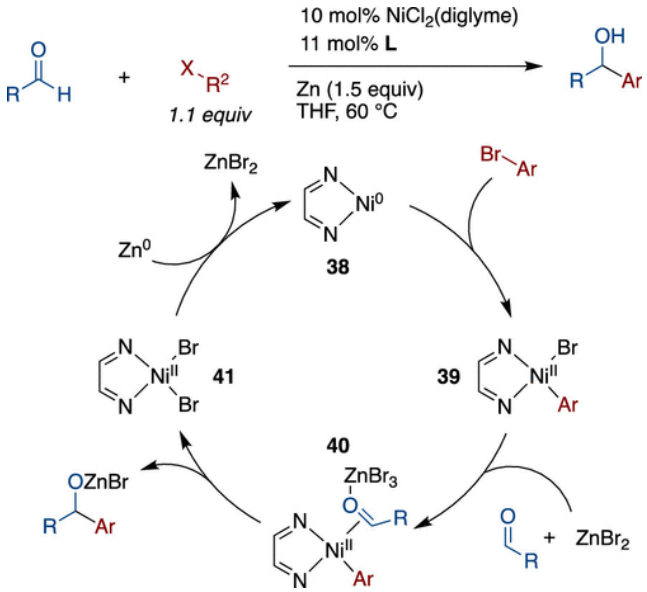
(*S*,*S*)-Ts-DENEB:



Tsuji-Trost reaction:

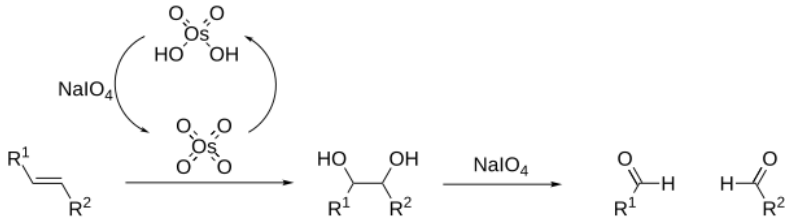


Auriculatol A Step 12:

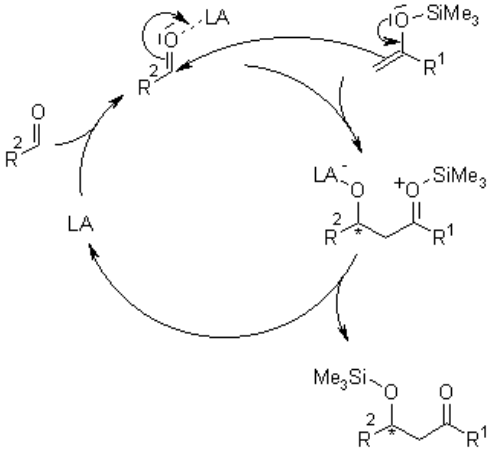


K. J. Garcia, M. M. Gilbert and D. J. Weix, *J. Am. Chem. Soc.*, 2019, **141**, 1823–1827.

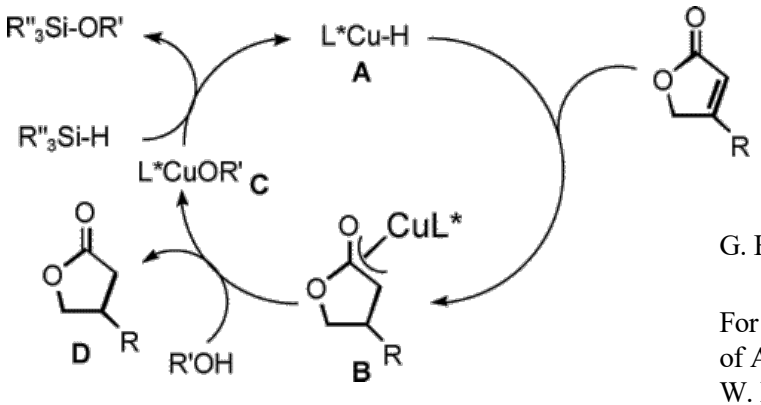
Lemieux-Johnson:



Mukaiyama aldol reaction:



Auriculatol A Step 19:



G. Hughes, M. Kimura and S. L. Buchwald, *J. Am. Chem. Soc.*, 2003, **125**, 11253–11258.

For radical hydrofunctionalizations (Mukaiyama hydration, hydrogenation in step 26 of Auriculatol A synthesis) see:

W. M. Crossley, C. Obradors, R. M. Martinez and R. A. Shenvi, *Chem. Rev.*, 2016, **116**, 8912–9000