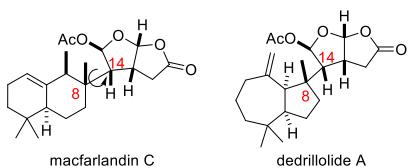
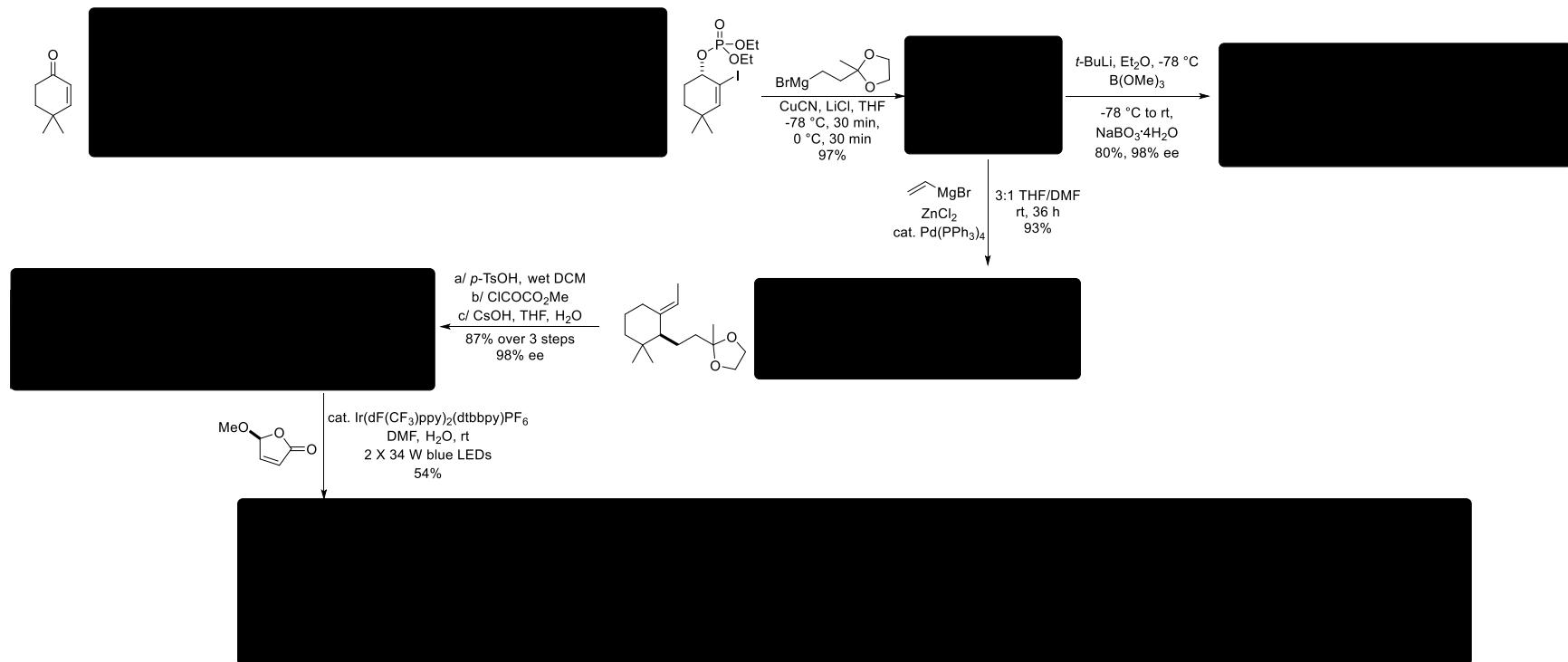


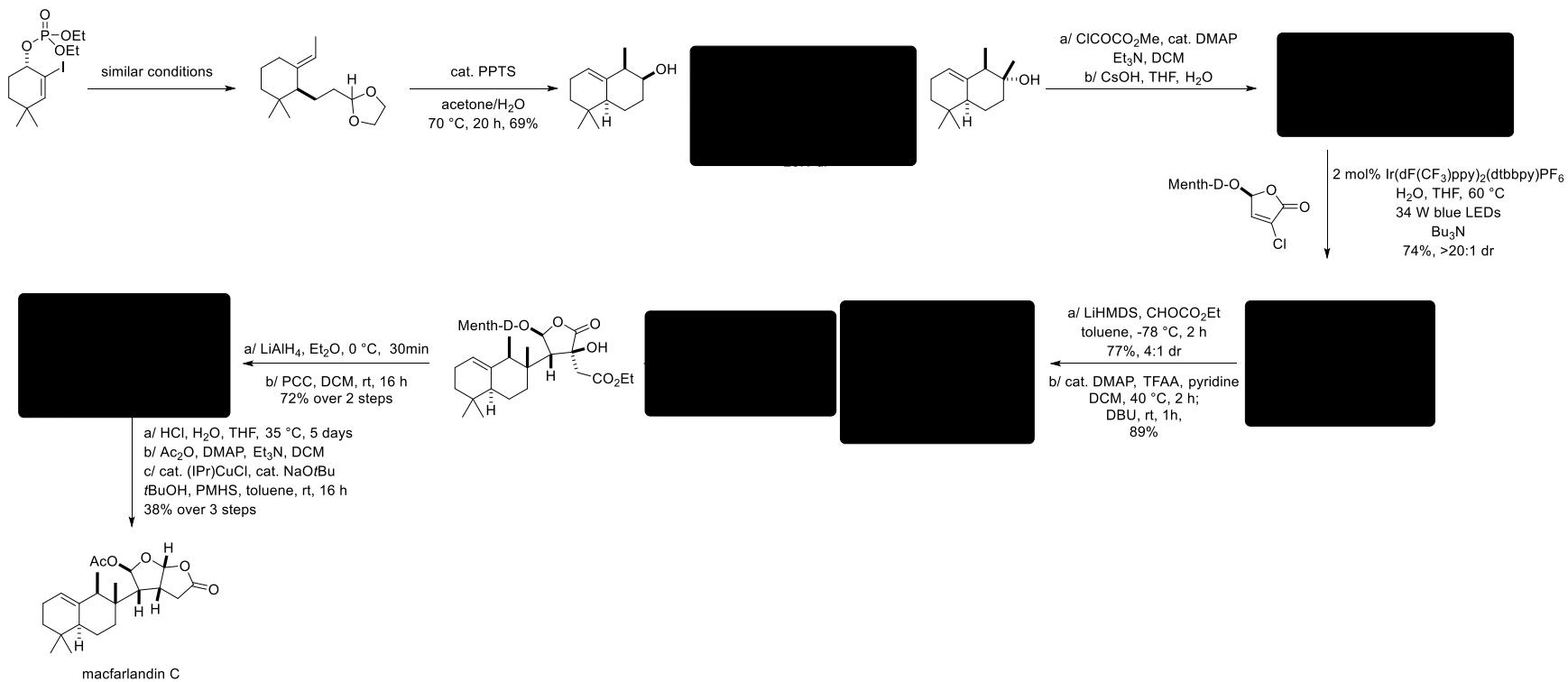
Enantioselective Total Syntheses of Macfarlandin C

Allred, T. K.; Dieskau, A. P.; Zhao, P.; Lackner, G. L.; Overman, L. E. *J. Org. Chem.* ASAP DOI: 10.1021/acs.joc.0c02273



Difficulties: bulky hydrocarbon fragment on the concave face

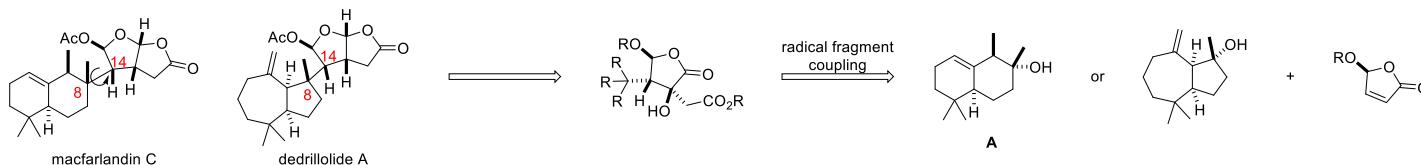




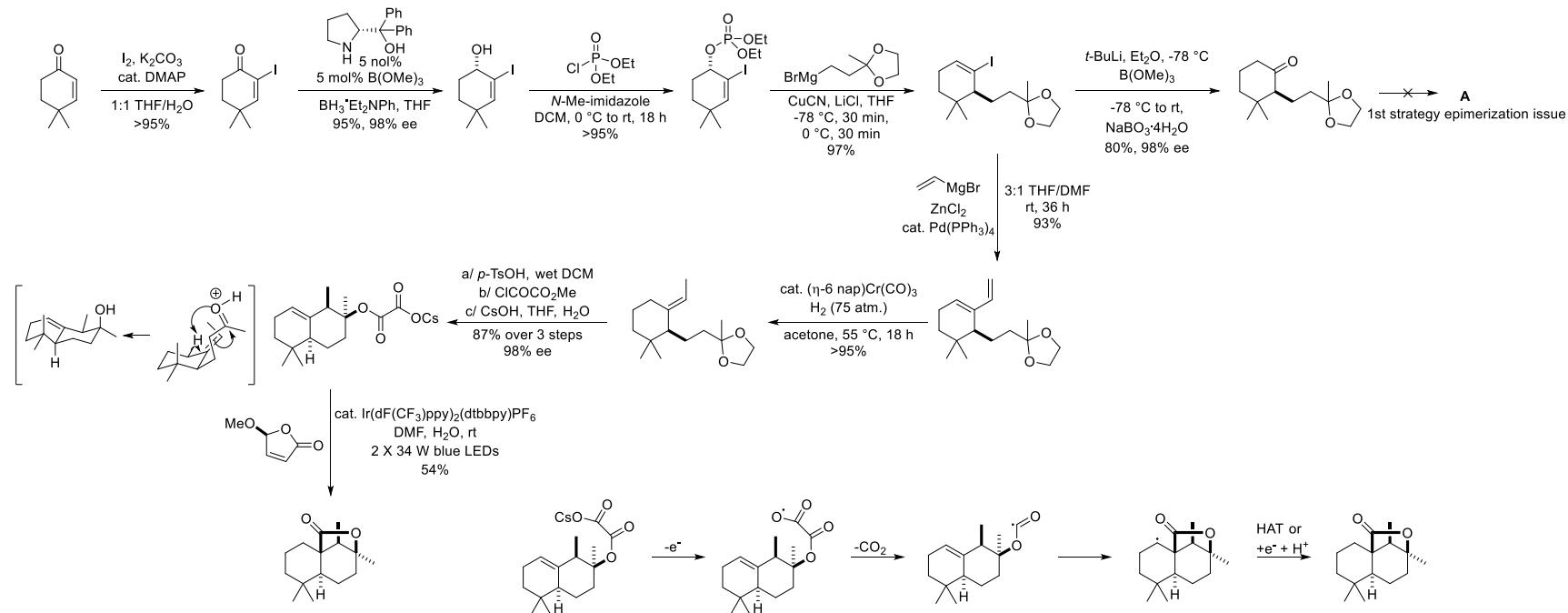
SOLUTION

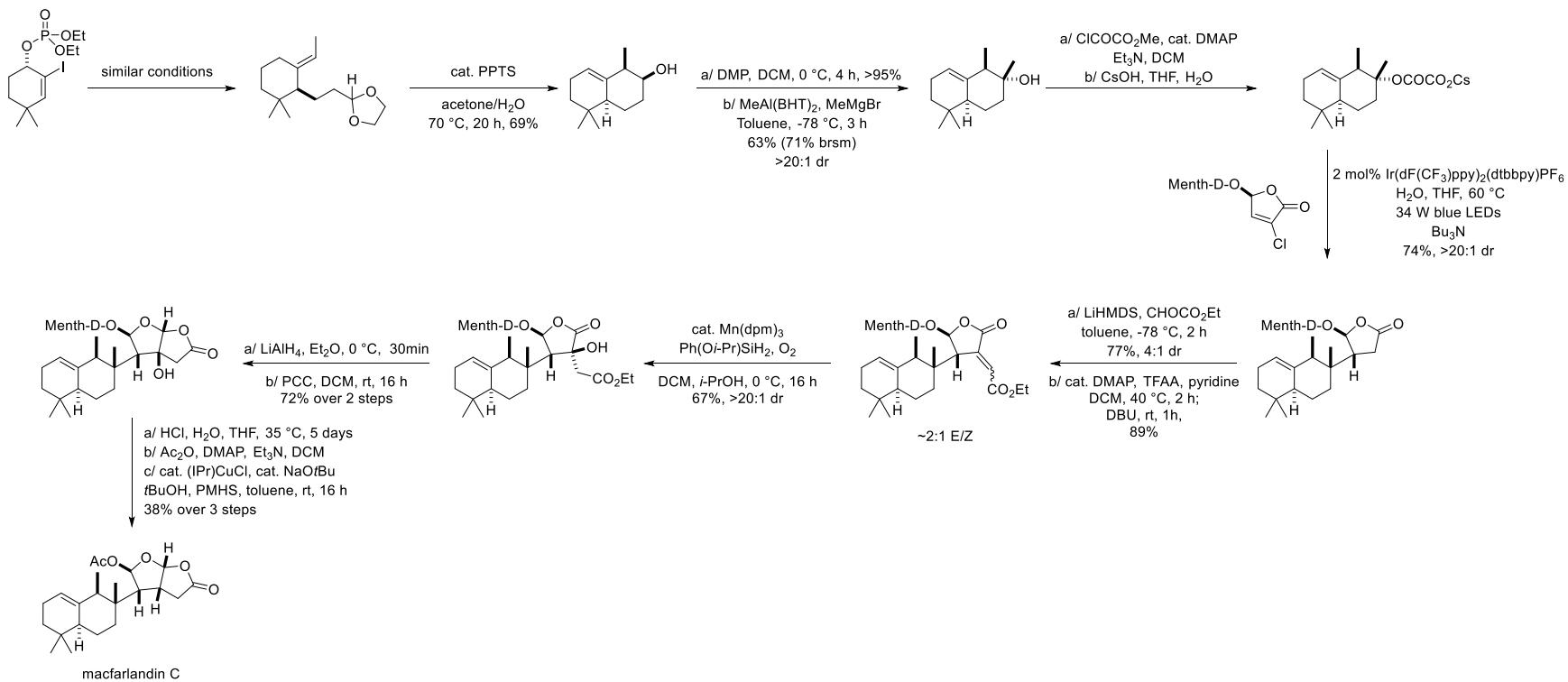
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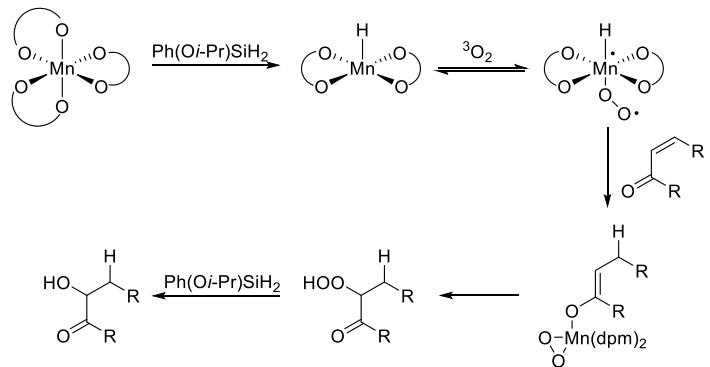


Difficulties: bulky hydrocarbon fragment on the concave face

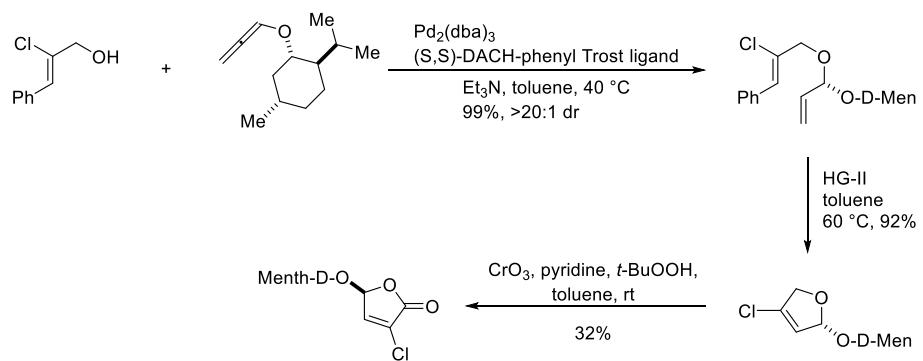




BACKGROUND

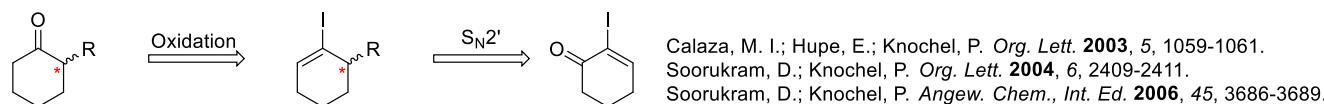


Magnus, P.; Payne, A. H; Waring, M. J; Scott, D. A.; Lynch, V. *Tetrahedron Lett.* **2000**, *41*, 9725

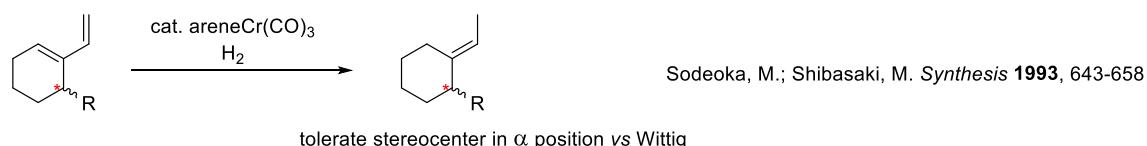


Slutskyy, Y.; Jamison, C. R.; Zhao, P.; Lee, J.; Rhee, Y.-H.; Overman, L. E. *J. Am. Chem. Soc.* **2017**, *139*, 7192-7195

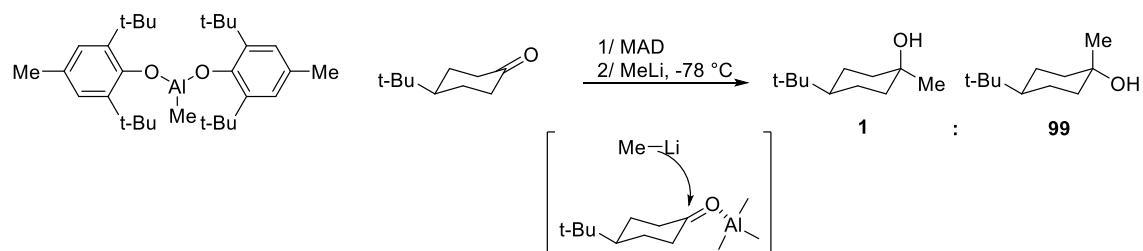
Synthesis of cyclic ketones bearing a stereogenic centers in α position



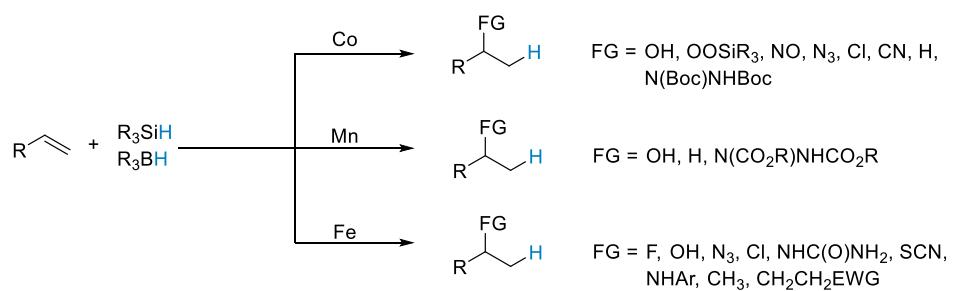
Cr catalyzed 1,4-reduction of diene



Yamamoto: MAD reagent for axial nucleophilic addition on cyclic ketone



Metal catalyzed radical hydrofunctionalization of olefins (Co, Mn, Fe)



Crossley, S. W. M., Obradors, C.; Martinez, R. M.; Shenvi, R. A. *Chem. Rev.* **2016**, 116, 8912-9000