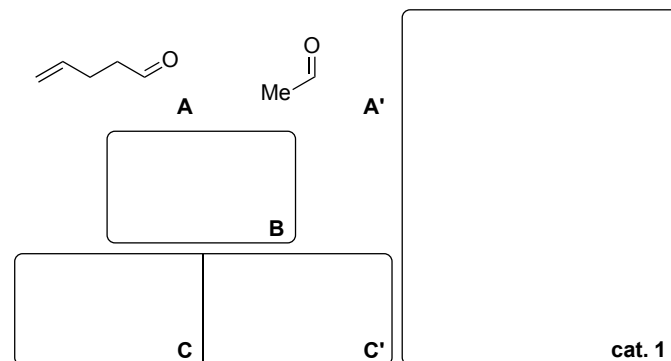
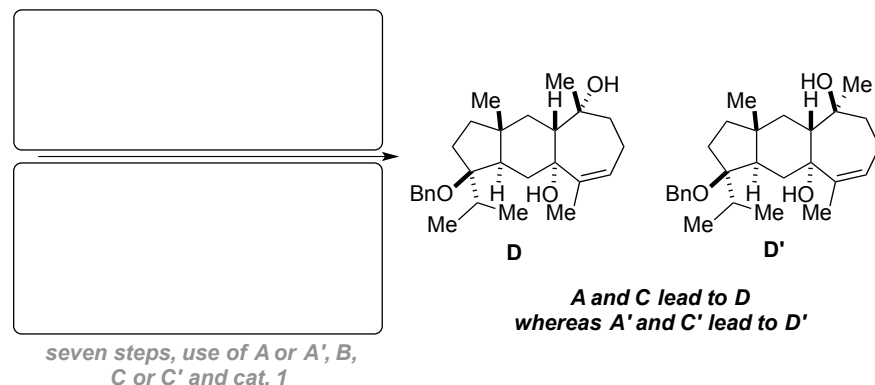
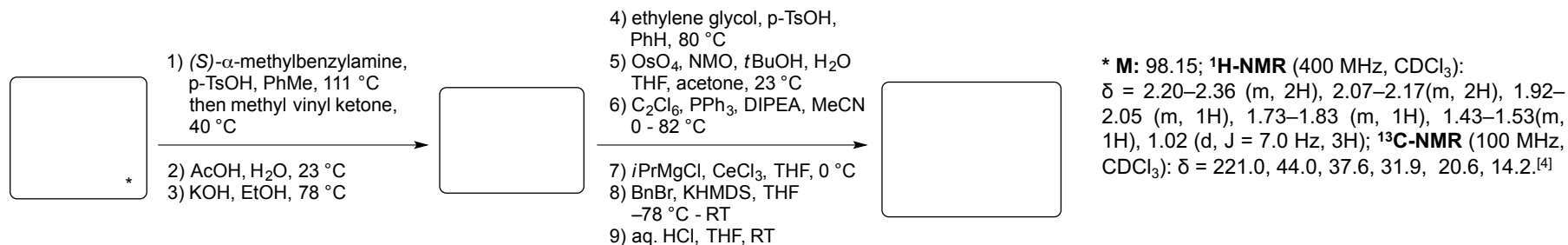
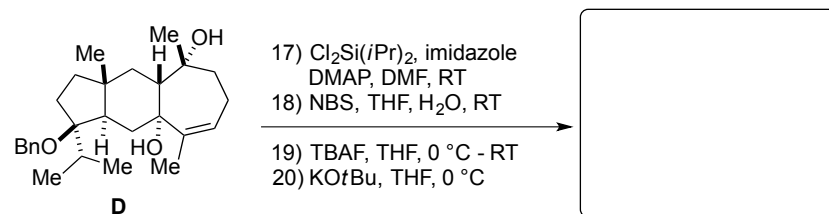


E43: Total Synthesis of (+)-Dictyoxetane, (+)-Dolabellane V and Tetra-*epi*-Dictyoxetane^[1-3]



Continuing with D to attempt the synthesis of dictyoxetane:



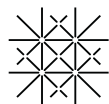
- Among terpenoids, the largest class of natural products, only few contain an oxetane moiety. The heterocycle, most prominently present in the anticancer agent Taxol, is an attractive structural motif in drug discovery.
- The group of Magauer has investigated the dioxatricyclic structures in a *trans*-hydrindane scaffold and exploited their chemistry in great detail.

^[1] C. L. Hugelshofer, T. Magauer *J. Am. Chem. Soc.* **2016**, *138*, 6420.

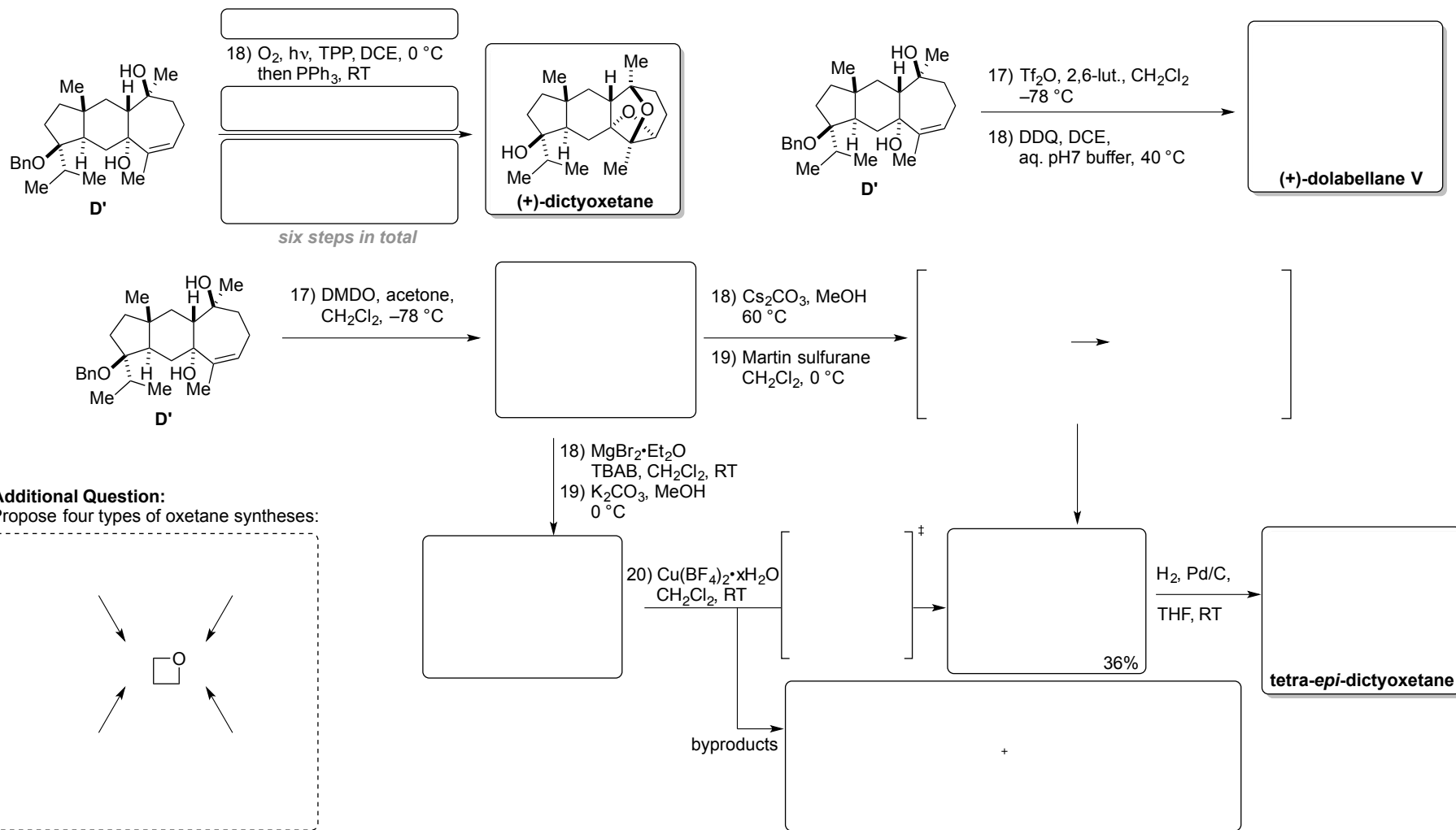
^[2] C. L. Hugelshofer, T. Magauer *Chem. Eur. J.* **2016**, *22*, 15125.

^[3] B. Defaut, T. B. Parsons, N. Spencer, L. Male, B. M. Kariuki, R. S. Grainger *Org. Biomol. Chem.* **2012**, *10*, 4926.

^[4] A. Fryszkowska, H. Toogood, M. Sakuma, J. M. Gardiner, G. M. Stephens, N. S. Scrutton *Adv. Synth. Catal.* **2009**, *351*, 2976.

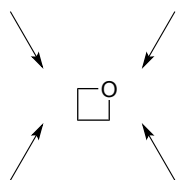


E43: Total Synthesis of (+)-Dictyoxetane, (+)-Dolabellane V and Tetra-*epi*-Dictyoxetane [1-3]



Additional Question:

Propose four types of oxetane syntheses:



[1] C. L. Hugelshofer, T. Magauer *J. Am. Chem. Soc.* **2016**, *138*, 6420.

[2] C. L. Hugelshofer, T. Magauer *Chem. Eur. J.* **2016**, *22*, 15125.

