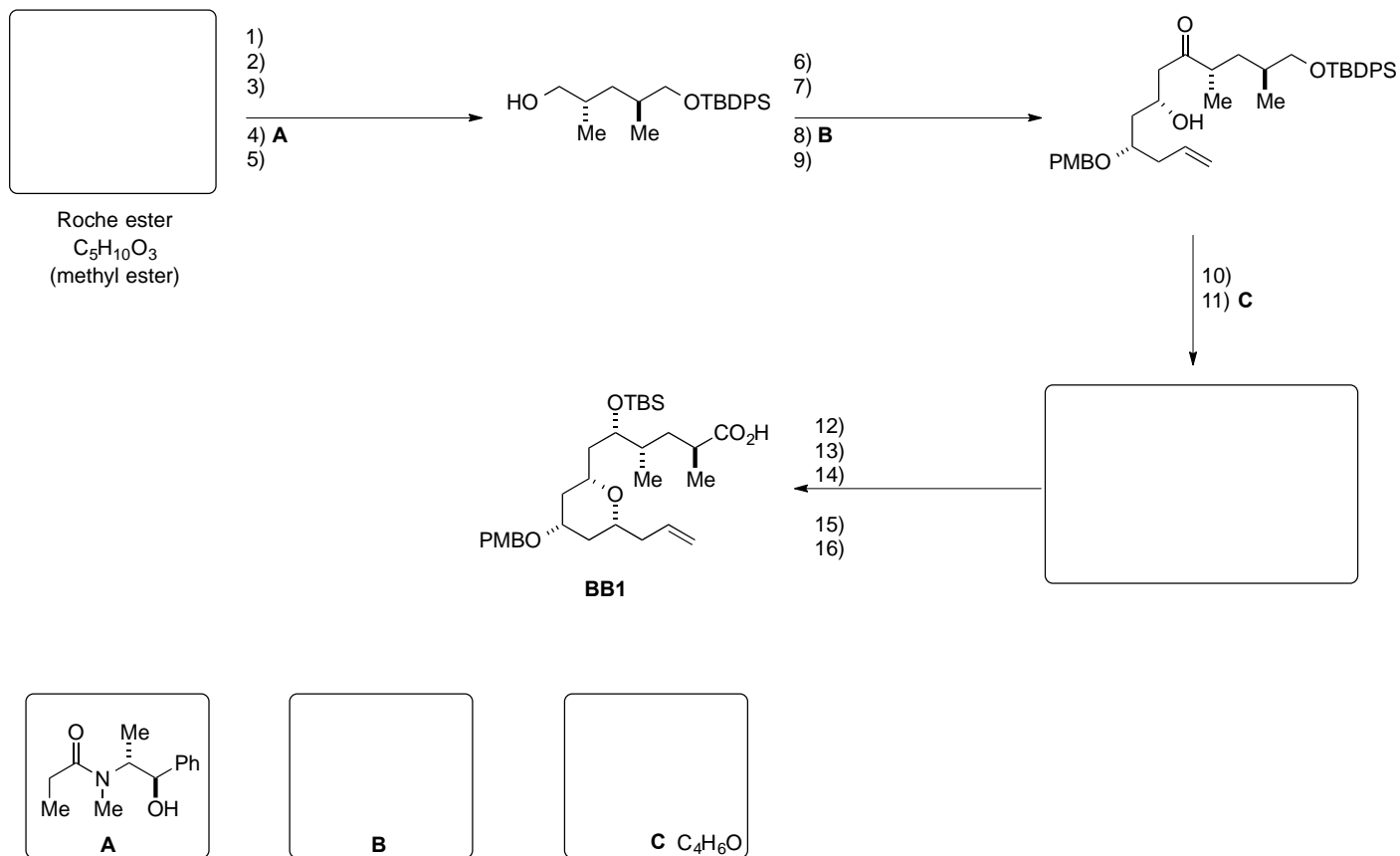
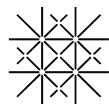


# E75: Synthesis of (-)-enigmazole [1-4]

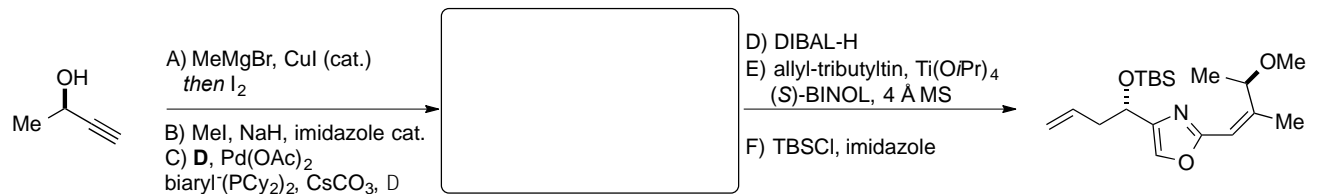


[1] K. Sakurai, M. Sasaki, H. Fuwa, *Angew. Chem. Int. Ed.* **2018**, *57*, 5143–5146 (orig. synthesis); [2] N. Oku, K. Takada, R. W. Fuller, J. A. Wilson, M. L. Peach, L. K. Pannell, J. B. McMahon, K. R. Gustafson, *J. Am. Chem. Soc.* **2010**, *132*, 10278–10285 (isolation); [3] Y. Ai, M. V. Kozytzka, Y. Zou, A. S. Khartulyari, A. B. Smith III. *J. Am. Chem. Soc.* **2015**, *137*, 15426–15429 (precursor synthesis) [4] C. Kibayashi, S. Aoyagi, *J. Organomet. Chem.* **2002**, *653*, 229–233.(precursor synthesis)



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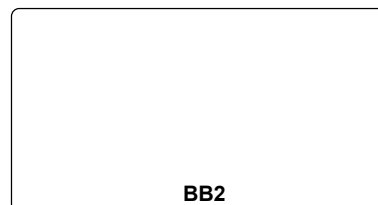
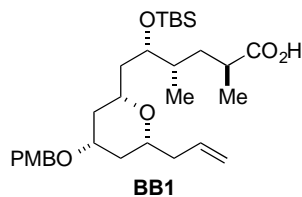
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 19.09.2018  
 Felix Raps



G) OsO<sub>4</sub>, NMO  
 H) NaIO<sub>4</sub>  
 I) CBr<sub>4</sub>, PPh<sub>3</sub>, Et<sub>3</sub>N  
 J) *n*BuLi



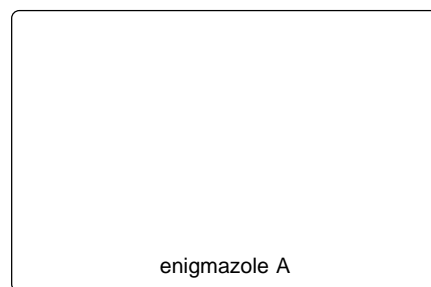
K) *n*BuLi, CH<sub>3</sub>CHO  
 L) BzCl, pyridine, DMAP  
 M) TBAF, AcOH



i) 2,4,6-Cl<sub>3</sub>C<sub>6</sub>H<sub>2</sub>COCl  
 Et<sub>3</sub>N *then* DMAP  
 ii) IPrAuCl, AgSbF<sub>6</sub>  
 THF/H<sub>2</sub>O (10:1), MW  
 iii) Grubbs-II  
 iv) H<sub>2</sub>, RhCl(PPh<sub>3</sub>)<sub>3</sub>



v) L-Selectride  
 vi) Ac<sub>2</sub>O, pyridine  
 vii) DDQ  
 viii) DMP  
 ix) Zn, TiCl<sub>4</sub>, CH<sub>2</sub>Br<sub>2</sub>



x) aq. HF  
 xi) *i*Pr<sub>2</sub>NP(OFm)<sub>2</sub>  
 tetrazole-1*H*  
*then* aq. H<sub>2</sub>O<sub>2</sub>  
 xii) K<sub>2</sub>CO<sub>3</sub>, MeOH/H<sub>2</sub>O

