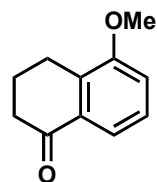


# Total Synthesis of (±)-Atropurpuran



1) LiHMDS, THF, -78°C,  
then 4-pentenyl chloride  
2) TMS-EBX, TBAF, THF, -20°C

**A**

3) Grubbs-II cat., DCM;  
then BBr<sub>3</sub>, -78°C;  
then AlCl<sub>3</sub>/LAH

**B**

4) PhI(OAc)<sub>2</sub>, r. t., 5 h, MeOH;  
then BHT, mesitylene, 160°C

**C**

5) Crabtree's cat., H<sub>2</sub>, DCM;  
then TPAP, NMO

**D**

6) KHMDS, PhNTf<sub>2</sub>, THF

**E**

7) Pd(PPh<sub>3</sub>)<sub>4</sub>, CO, *n*Bu<sub>3</sub>SnH, THF;  
then DIBAL  
8) TFAA, DMSO, DCM, Et<sub>3</sub>N

**F**

9) Crabtree's cat., H<sub>2</sub>, DCM;  
then DMP

**G**

10) *t*BuOK, *t*BuOH, MeI  
*dr* = 3:1

**H**

11) SmI<sub>2</sub>, THF, MeOH  
12) TMMN, Ac<sub>2</sub>O, DMF, 95°C

**I**

13) NaBH(OMe)<sub>3</sub>, THF, MeOH

