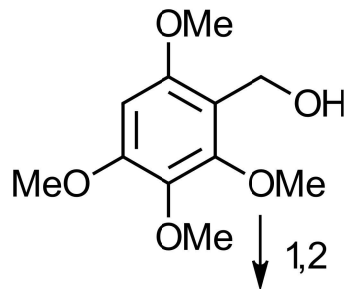
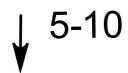


## Synthesis Challenge #76

AG Wegner  
20.09.2018



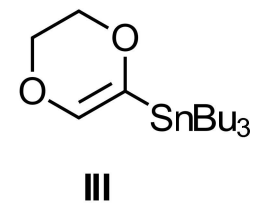
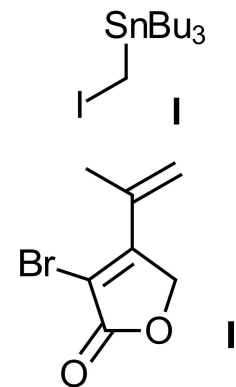
A



- 1) *t*-BuOK (1.2 equiv), DMF, 50 °C, then **I** (1.1 equiv)
- 2) **II**, Pd(PPh<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>, dioxane

- 3) (NH<sub>4</sub>)<sub>2</sub>Ce(NO<sub>3</sub>)<sub>6</sub>, MeCN/H<sub>2</sub>O
- 4) Blue LEDs, PhH

- 5) OsO<sub>4</sub> (cat.), NMO, CH<sub>2</sub>Cl<sub>2</sub>, then Pb(OAc)<sub>4</sub>, CH<sub>2</sub>Cl<sub>2</sub>
- 6) *o*-phenyl chlorothionoformate, NEt<sub>3</sub>, DMAP (cat.)
- 7) AIBN (cat.), Bu<sub>3</sub>SnH, PhMe, 80 °C
- 8) LDA (1.05 equiv), then PhNTf<sub>2</sub>, THF/HMPA, -78 °C
- 9) **III**, Pd(PPh<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub> (cat.), dioxane
- 10) TFA, CH<sub>2</sub>Cl<sub>2</sub>



↓ 11,12



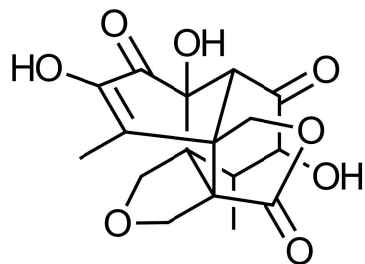
11) (chloromethyl)dimethylchlorosilane,  
NEt<sub>3</sub>, DMAP (cat.), CH<sub>2</sub>Cl<sub>2</sub>, 25 °C  
12) NaI (14 equiv), butanone, 80 °C

↓ 13,14



13) SmI<sub>2</sub> (2.1 equiv), THF, -78 °C  
to 25 °C, then aq. HCl  
14) TBHP, DBU, DCE, 25 °C,  
then HCl, BuOH, 110 °C

↓ 15,16



15) NaI (20 equiv), butanone, 80 °C  
16) Zn (20 equiv), EtOH/HOAc, 55 °C

Please, provide as many  
representations of the final  
product as possible