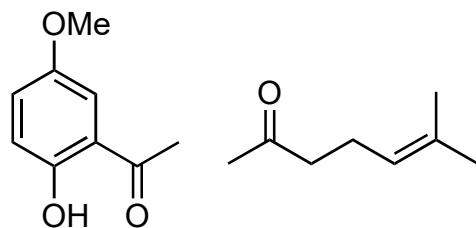
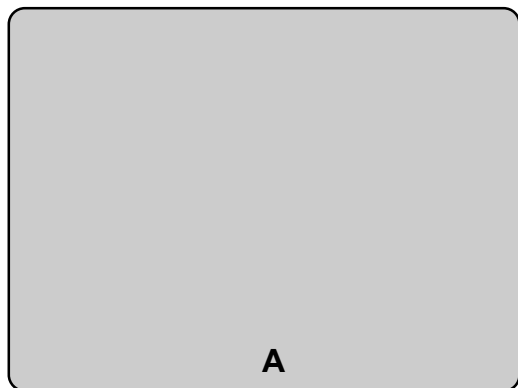


Total Synthesis of (+)-Cochlearol B by an Approach Based on a Catellani Reaction and Visible-Light-Enabled [2+2] Cycloaddition

Richardson, A. D.; Trenton, R. V; Traficante, E. F.; Glover, K. J.; Schindler, C. S.
DOI: 10.1002/anie.202201213.



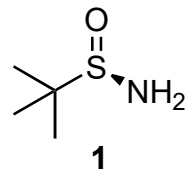
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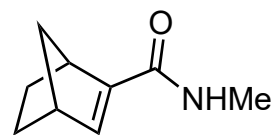
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6-8

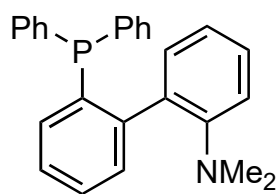
- 1) pyrrolidine, butyric acid
- 2) **1**, Ti(OEt)₄
- 3) HCl, MeOH
- 4) NaHMDS, Comins' reagent
- 5) **2**, 5-iodo-1-pentene, Pd(cod)Cl₂, **3**, Cs₂CO₃, **4**



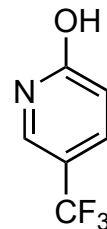
1



2



Ph-Dave-Phos 3

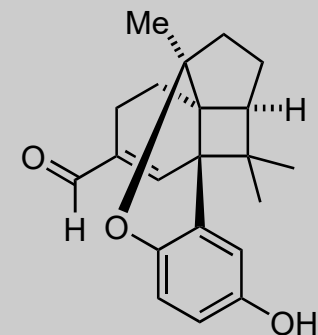


4

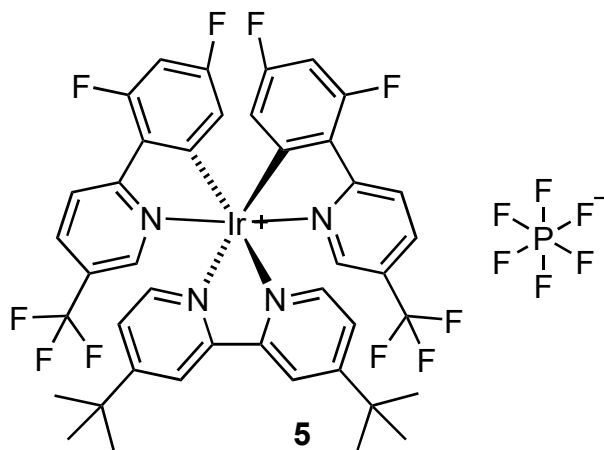
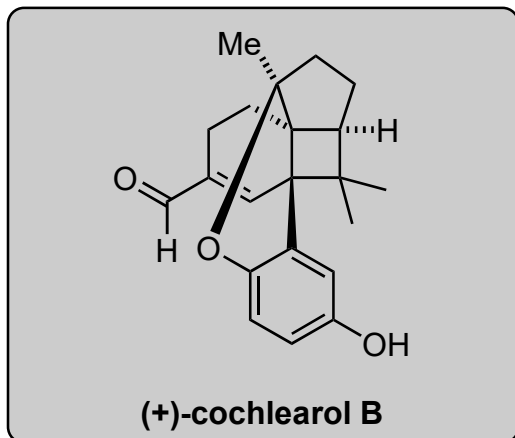
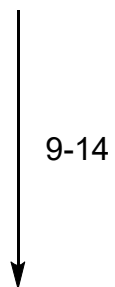
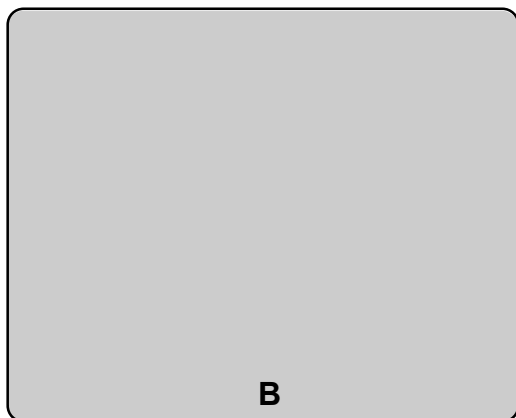
- 6) **5**, 427 nm light
- 7) OsO₄, NMO, citric acid
- 8) NaIO₄

- 1) Name or reaction/ heterocycle
- 2/3) hint: for chiral resolution

- 5) Name the reaction, what is the role of **4**



(+)-cochlearol B



- 9) *N,N*-dimethylformamide dimethyl acetal
- 10) Tf_2O , 2,6-lutidine
- 11) $\text{Pd}(\text{PPh}_3)_4$, Et_3N , HCO_2H
- 12) NaBH_4 , MeOH
- 13) MeMgI
- 14) (COCl_2) , DMSO , Et_3N

14) Name the reaction