A Short Synthesis of Delavatine A Unveils New Insights into Site-Selective Cross-Coupling of 3,5-Dibromo-2-pyrone

Palani, V.; Hugelshofer, C. L.; Kevlishvili, L.; Liu, P.; Sarpong, R.


1) Br₂
2) EtONa
3) O₃
4) LDA, Tf₂O

2) Show the mechanism of step 2. *hint:* A cyclopentane is formed

5) Which by-product must be avoided?

6) Propose two mechanisms?

---

[chemical structures and reactions shown in the diagram]
9) Pd(PPh₃)₄, Cul, B
10) Pd(PPh₃)₄, CuTC, C

9) Give the name of steps 9 and 10
10) Show the structure of CuTC

11) NaCN, then K₂CO₃, Mel

11) Show the mechanism of step 11

12) TBSOTf, Et₃N, then DBU, PhMe, Δ

12) Show the mechanism of step 12

13) LiAlH₄
14) (COCl)₂, DMSO, Et₃N
15) NH₄OAc,

delavatine A