

**a:** YbCl<sub>3</sub> (2.0 eq), dioxane, 100 °C, 1 hr

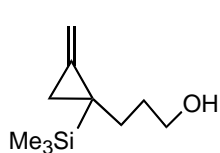
**b:** Yb(OTf)<sub>3</sub> (0.2 eq), chlorobenzene, 130 °C, 0.5 hr

Murakami, M; Kadowaki, S.; Fujimoto, A.; Ishibashi, M.; Matsuda, T.

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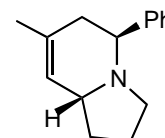
1) MsCl, Et<sub>3</sub>N

2) NaCN, DMSO, 60°C

3) LiAlH<sub>4</sub>, Et<sub>2</sub>O

4) PhCHO, MS

5) BF<sub>3</sub>-Et<sub>2</sub>O, CH<sub>2</sub>Cl<sub>2</sub>, -778°C 40%



S. Rajamaki and J.D. Kilburn, *Chem. Commun.*, 2005, 1637.