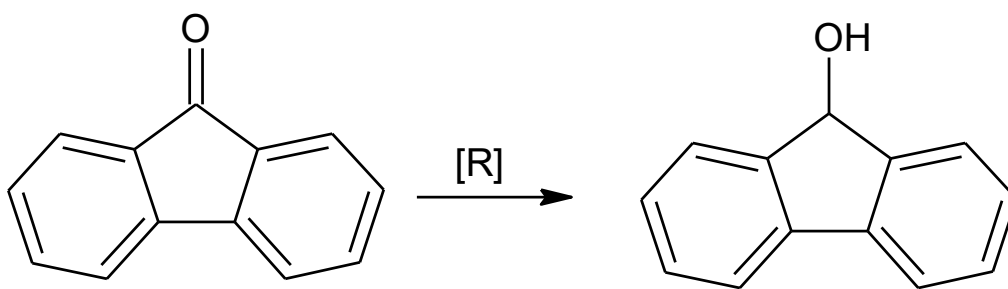


Reduction of 9-Fluorenone

220C

7/20/24



1. catalytic hydrogenation
2. Reducing Agent

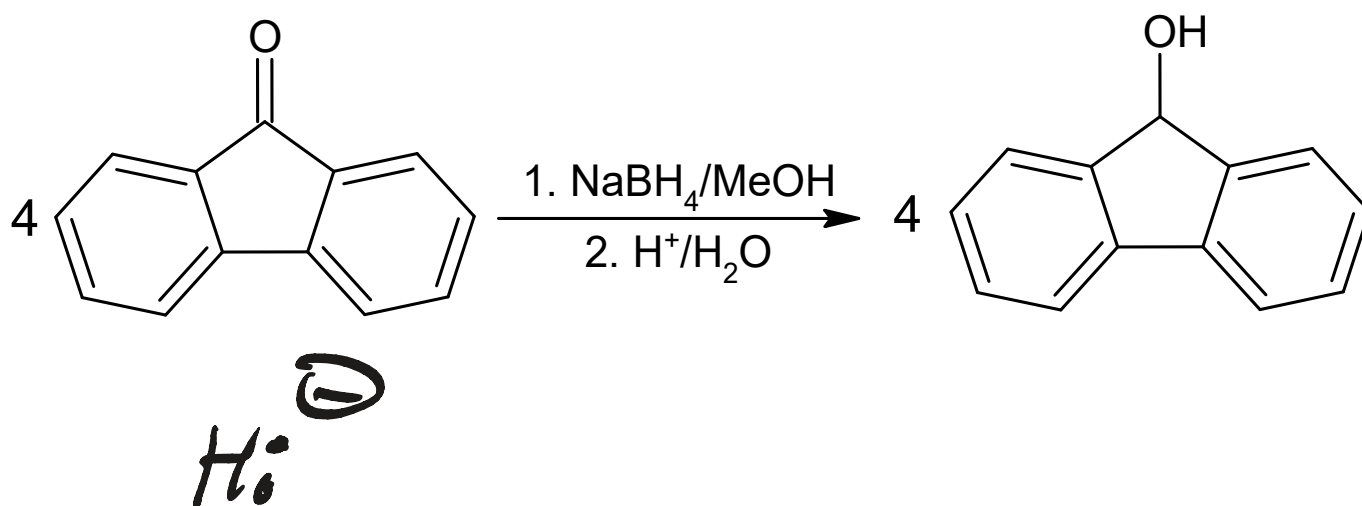
Ni, H₂

Hydride

H:[⊖] H[⊕]

LiAlH₄

NaBH₄



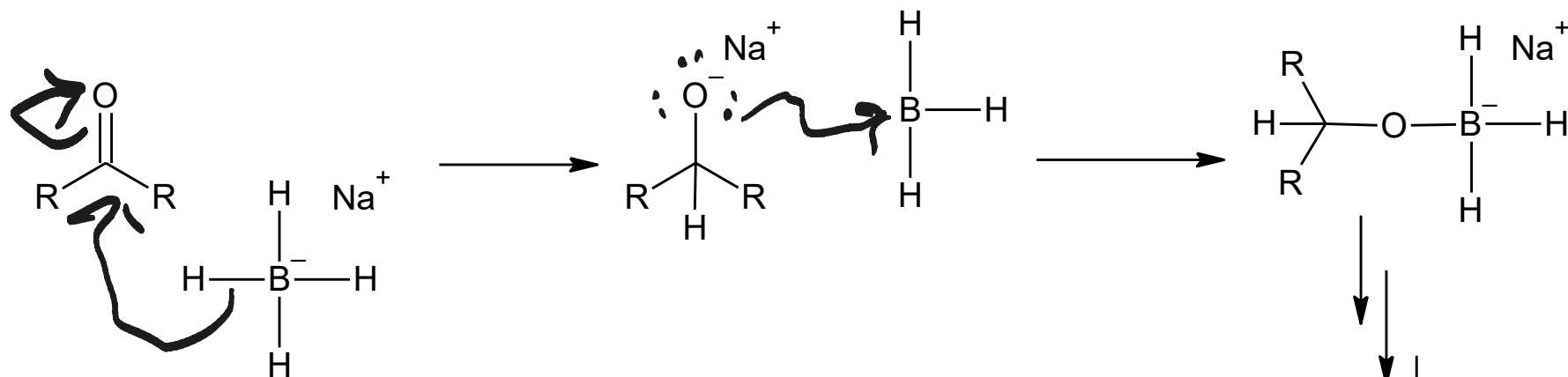
Comparison of Electronegativity Differences of Hydride Reducing Agents

Hydride Reducing Agent	Metal Electronegativity	Difference with Hydrogen*
LiH	0.98	1.1
CaH_2	1.0	1.1
LiAlH_4	1.5	0.6
NaBH_4	2.0	0.1

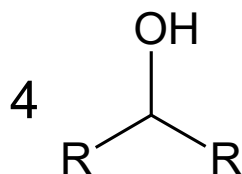
* Hydrogen Electronegativity is 2.1



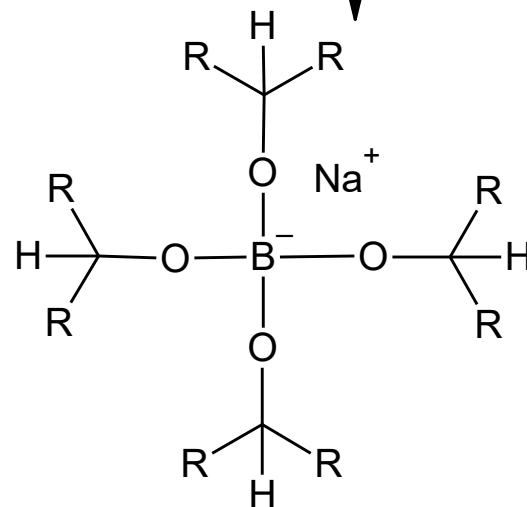
H: 



4 eq.



H^+/H_2O



mp, % yield, IR

65

30-40

