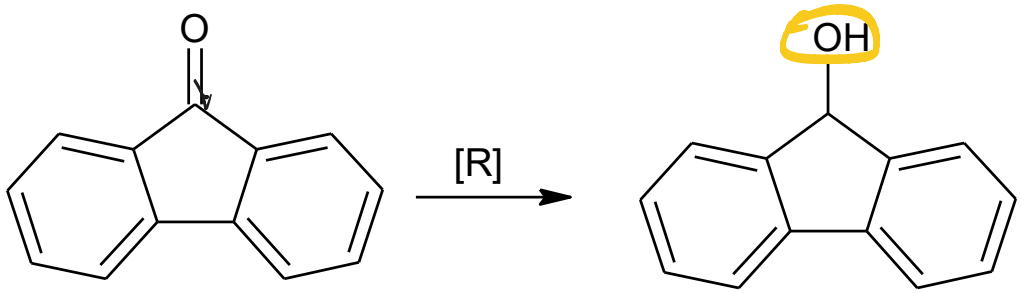
Reduction of 9-Fluorenone

220C

10/26/14



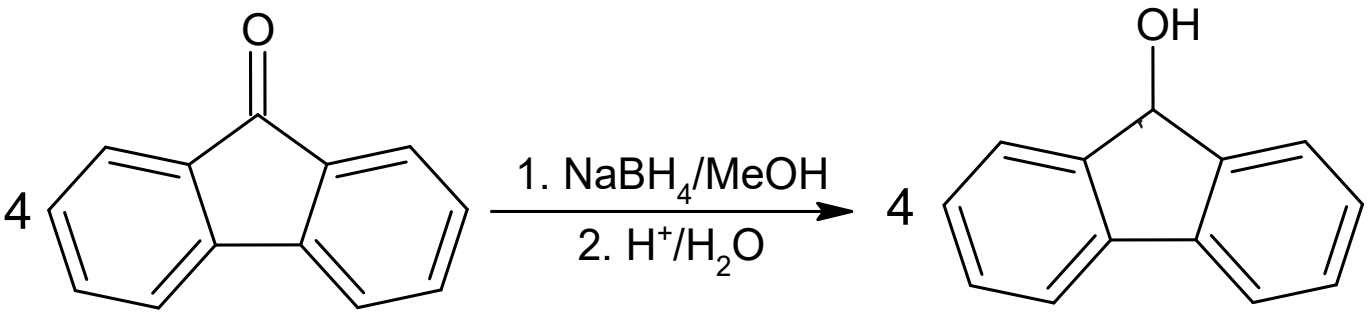
1. Catalytic hydrogenation
   Ni, H_2, Δ
2. Reducing agents

Hydride Reducing agents

$H:^{\ominus}$ $H^{\oplus}$

$LiAlH_4$ $NaBH_4$

solvent dry
aprotic



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



1. Solvent
2. Selectivity

mp, % yield 70% 30-80 IR

