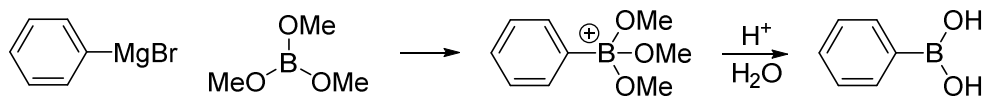


Experiment 39

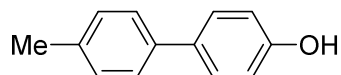
Palladium Coupling: The Suzuki-Miyaura Reaction

Study Questions

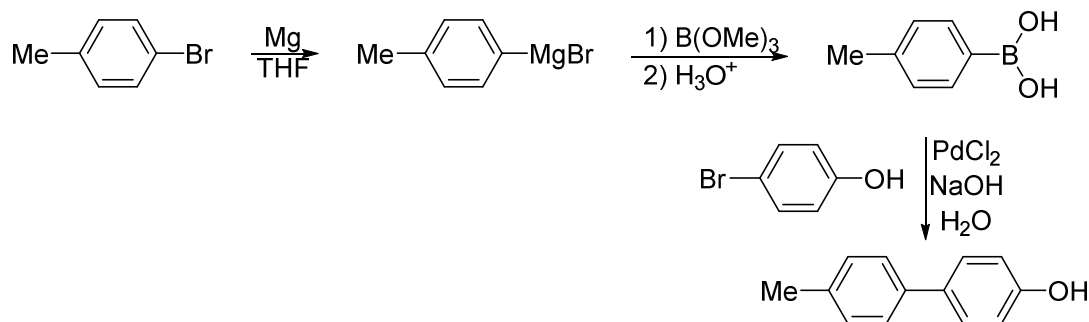
- 1) Arylboronic acids are usually synthesized by reacting the corresponding Grignard with trimethyl borate, then performing an aqueous workup.



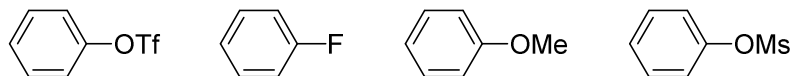
With this in mind, propose a synthesis of 4-hydroxy-4'-methylbiphenyl, starting with any aryl halides of your choice.



Answer: Since one half of the molecule contains an OH group, this side cannot exist as a Grignard.



- 2) Which of the following molecules are capable of undergoing the Suzuki reaction?



Answer: The first molecule and the last molecule should both be able to undergo Suzuki coupling, since they both have reasonably good leaving groups. (The mesityl group, OMs, is roughly equivalent to an alkyl bromide.)