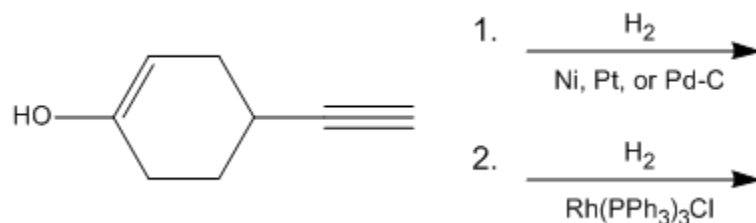


CONCEPT: HYDROGENATION OF ALKYNES

There are three methods commonly used to saturate double and triple bonds. They differ in the degree of saturation they provide and in the stereochemistry of their reactions.

Catalytic Hydrogenation or Wilkinson's Catalyst: Full Saturation

Stereochemistry: Syn Addition



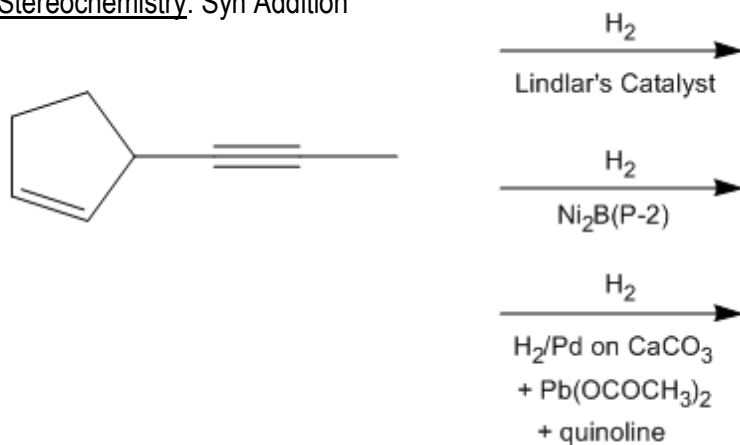
Dissolving Metal Reduction: Partial Saturation

Stereochemistry: Anti Addition

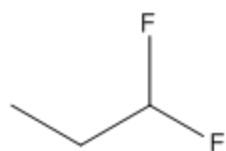


Lindlar's Catalyst: Partial Saturation

Stereochemistry: Syn Addition



PRACTICE: Predict the product of the following multi-step synthesis:



1. NaH (excess)
-
2. C₆H₅CH₂Br
 3. Liq. Na, NH₃