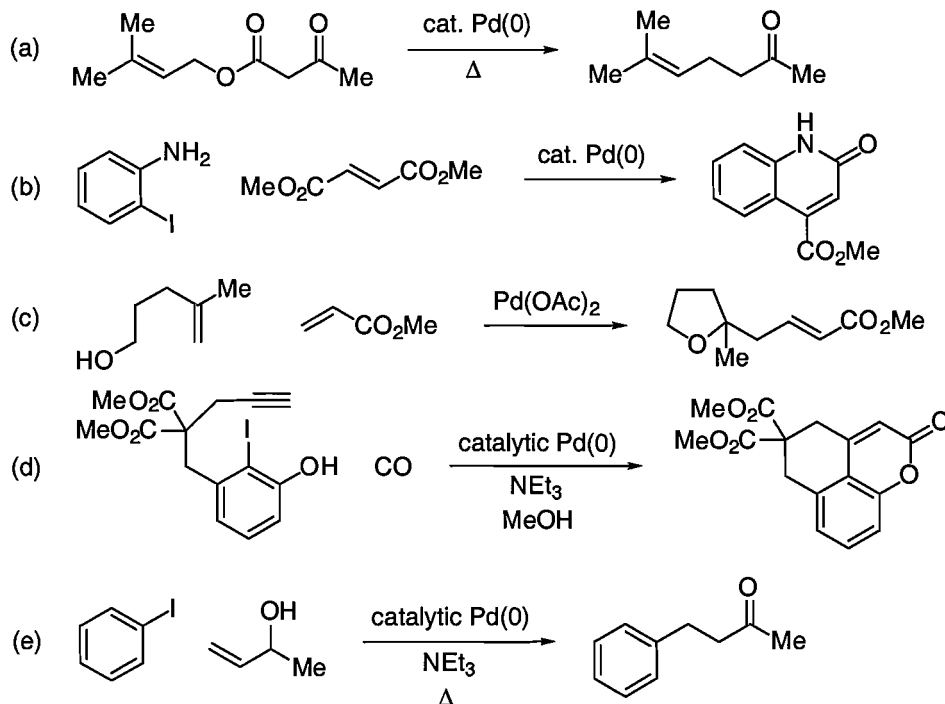


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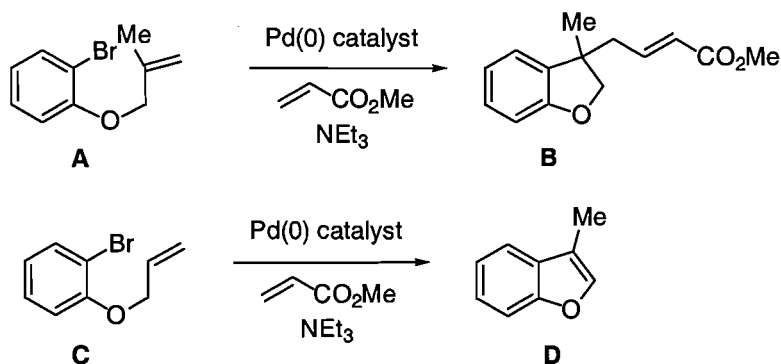
5.44: Organometallic Chemistry

Practice Problems

(1) Provide a mechanism for each of the following reactions. Please name each elementary step (e.g., oxidative addition, reductive elimination...).



(2) When **A** is treated with a Pd(0) catalyst and methyl acrylate, **B** is formed. When **C** is treated with a Pd(0) catalyst and methyl acrylate, **D** is formed. Please provide a mechanism for each reaction, and explain the difference in the reaction pathways.



(3) Provide two mechanisms for the illustrated transformation. In one mechanism, HOAc oxidatively adds to Pd(0) to generate a palladium hydride; in the other mechanism, HOAc simply serves as the solvent (it is not involved in the mechanism).

