

## TODAY'S TOPICS

-Green–Davies–Mingos rules  
-Metal–olefin general features  
-Wacker oxidation  
-Mizoroki–Heck reaction

## CHEMIST OF THE DAY



name?  
institution  
known for?

## QUOTE OF THE DAY

"We want to make the best for  
the most for the least."

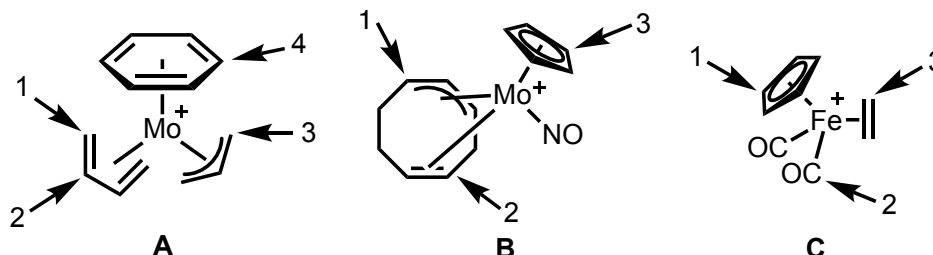
-Ray and Charles Eames

## READING

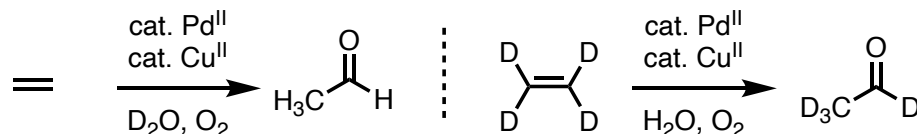
Hartwig: Ch. 11.5, 16.6, 19.2.9  
Crabtree: Ch. 8.3–8.4, 14.1

## PROBLEMS OF THE DAY

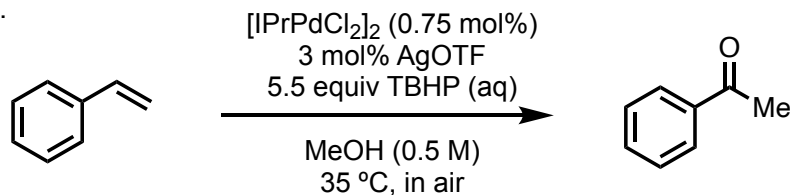
**#1** Consider the following results following three complexes **A**, **B**, and **C**. Predict the site of nucleophilic attack.



**#2** Consider the following results from deuterium labeling experiments. Propose a mechanism that is consistent with these results.



**#3** Consider the Cu-free protocol below to perform Wacker-type oxidation of styrenes, a traditionally challenging substrate class.



**A.** Design one or more experiments to determine the O-atom source in the product

**B.** Following oxypalladation two limiting mechanistic scenarios can be envisioned to lead to product. Draw these pathways and design an experiment to distinguish between them.

**#4** For the reaction below, predict the product and propose a mechanism.

