

TODAY'S TOPICS

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

CHEMIST OF THE DAY



name?
known for?

QUOTE OF THE DAY

"There is no greater thing you can do with your life and your work than follow your passions—in a way that serves the world and you."

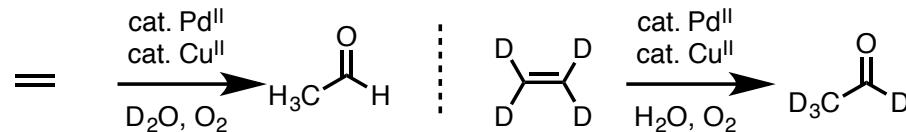
-Sir Richard Branson

READING

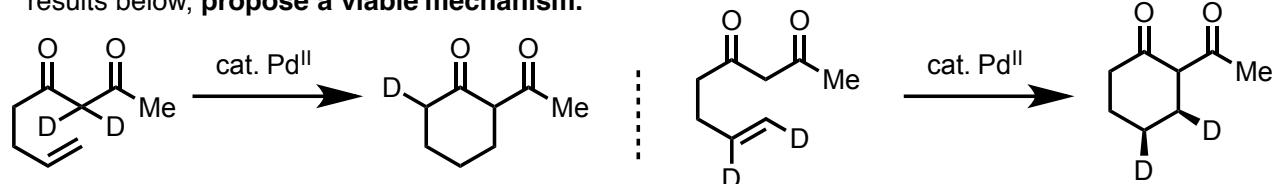
Hartwig: Ch. 11.5, 16.6, 19.2.9
Crabtree: Ch. 8.3–8.4, 14.1

PROBLEMS OF THE DAY

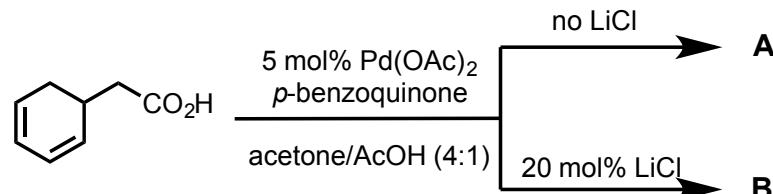
#1 Consider the following results from deuterium labeling experiments. **Propose a mechanism that is consistent with these results.**



#2 Widenhoefer performed several deuterium labeling experiments to elucidate the mechanism of a palladium(II)-catalyzed intramolecular hydroalkylation (*JACS* 2001, 123, 11290; *JACS* 2003, 125, 2056). Based on the results below, **propose a viable mechanism**.



#3 The following catalytic system was found to give divergent outcomes in the presence or absence of LiCl (*JOC* 1993, 58, 5445). **Predict the structures for products A and B, propose the mechanisms that account for product formation, and, explain the origin of the observed selectivity.**



#4 During studies towards the total synthesis of *Strychnos* alkaloids, Rawal obtained the unexpected product below from an intramolecular Heck cyclization (*JOC* 1993, 58, 5583). **Propose a plausible mechanism for its formation.**

