

Chem 41c Quiz 1

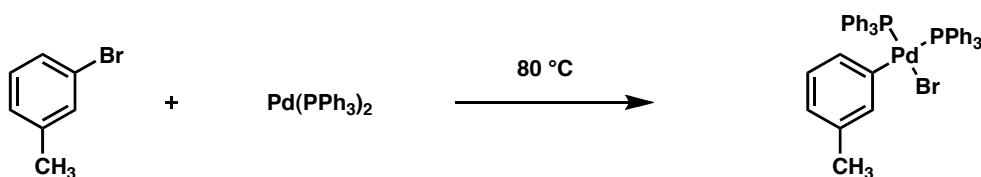
Stoltz, Spring 2009

April 10, 2009

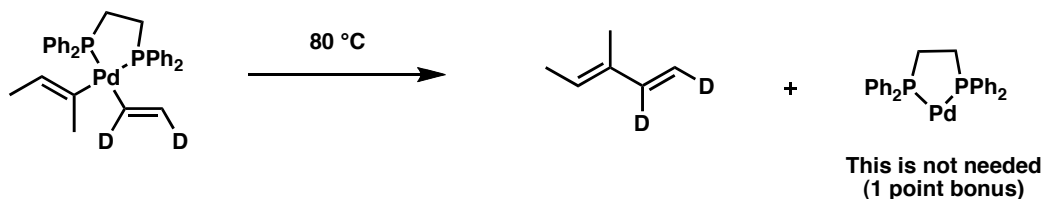
You have 25 min to take this quiz. It is closed note, closed book, and no collaboration is allowed. Please do not discuss the quiz with anyone until you receive it back graded. Place a box around your answers. There is no partial credit.

Predict the products (if any) of the following reactions: (5 points each)

1.

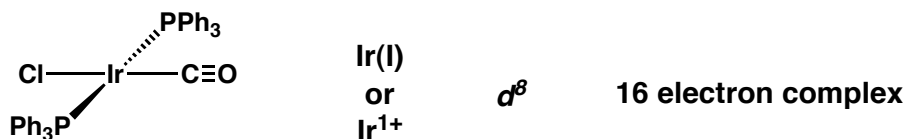


2.

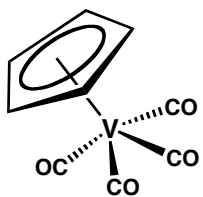


3. In the following complexes, what is the formal oxidation state of the metal, the d^n description, and the electron count? Feel free to use the periodic table in the room (no partial credit). (5 points each)

a.



b.



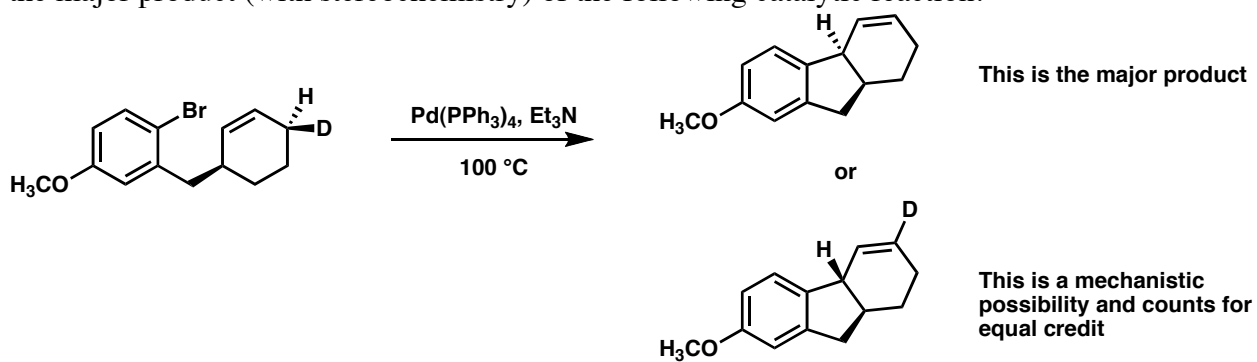
V(I)
or
V¹⁺

d^4

18 electron complex

Bonus (5 points)

Predict the major product (with stereochemistry) of the following catalytic reaction.



either answer is fine

<http://www.ktf-split.hr/periodni/en/>

(1) Pure Appl. Chem., 73, No. 4, 667-683 (2001)

Relative atomic mass is shown with two significant figures. For elements having no stable nuclides, the value enclosed in brackets indicates the mass number of the longest-lived isotope of the element.

However three such elements (Th, Pa, and U) do have a characteristic terrestrial isotopic composition, and for these an atomic weight is tabulated.

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