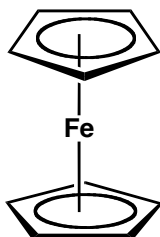


# Chem 41c Quiz 1

Stoltz, Spring 2006  
April 7, 2006

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)

1.



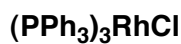
**Fe(II)**

or  
**Fe<sup>2+</sup>**

**$d^6$**

**18 electron complex**

2.



**Rh(I)**

or

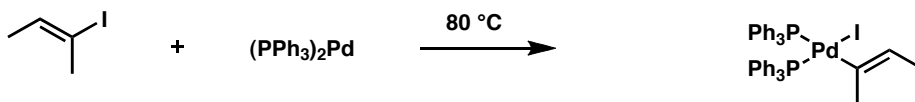
**$d^8$**

**16 electron complex**

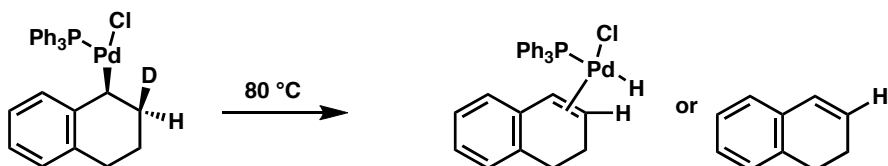
**Rh<sup>1+</sup>**

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

3.

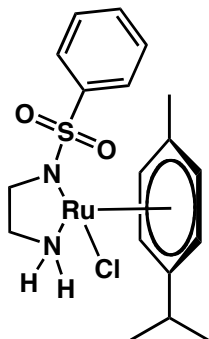


4.



**Bonus (5 points)**

In the following complex, 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)



**Ru(II)**  
or  
**Ru<sup>2+</sup>**

**$d^6$**

**18 electron complex**