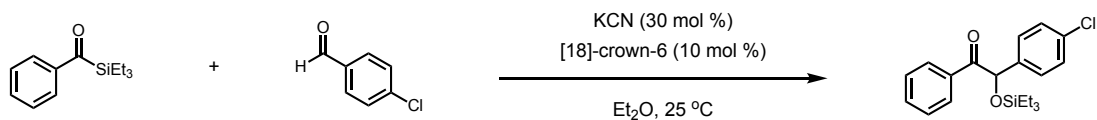


Problem Set 07/09/2021

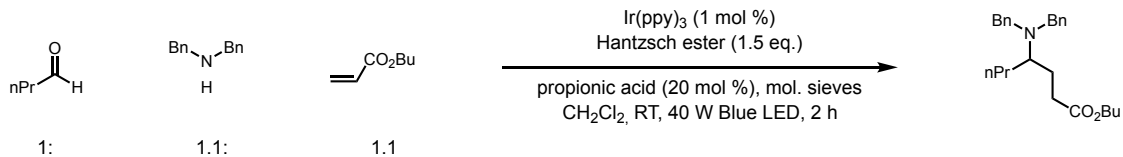
1.



Angew. Chem. Int. Ed. **2003**, 42, 2534-2536.

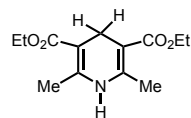
82%

2.



Nature. **2018**, 561, 522-527.

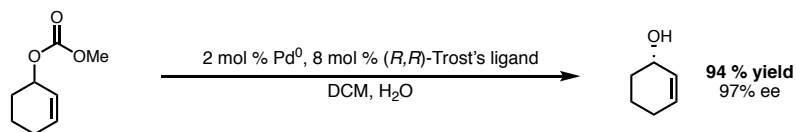
84%



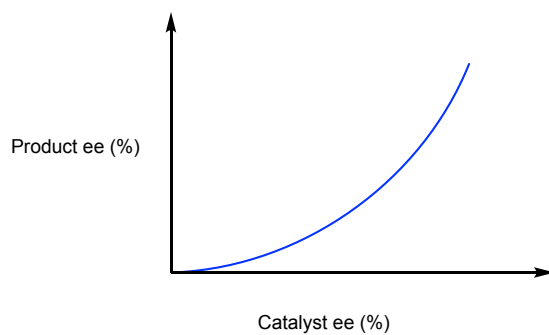
3.

Credit: Chem 532 Problem Set, Fall 2017

Consider the enantioconvergent synthesis of allylic alcohols from racemic allyl carbonates shown below,



A negative nonlinear effect is evident from product ee vs ligand ee plot. Provide a rationalization for this behavior (it has nothing to do with catalytic intermediate having two or more ligands). If you did want to probe the potential of catalyst aggregation to influence ee in this reaction, what simple change could you make to the reaction parameters to minimize the interference from the nonlinear effect phenomenon?



J. Am. Chem. Soc. **2017**, 139, 4225-4229.