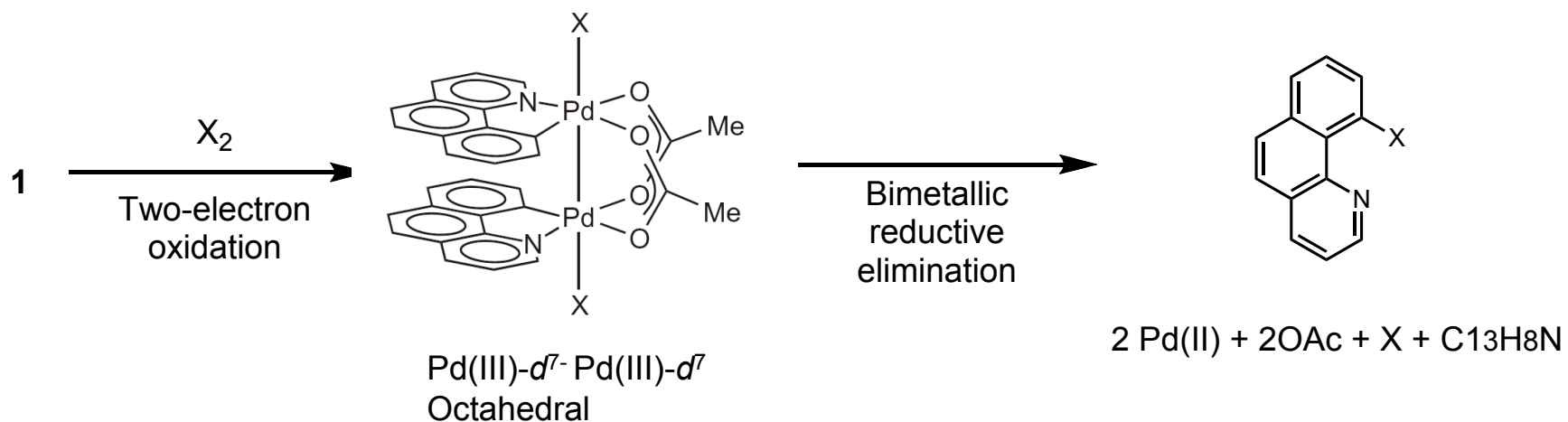
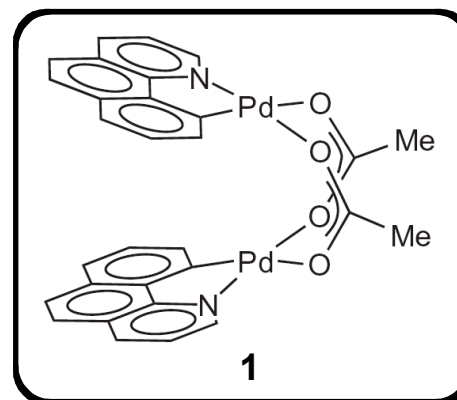
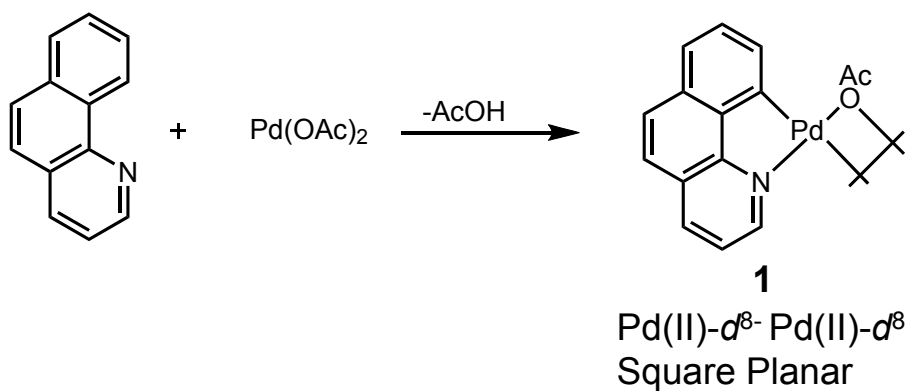


Bimetallic Pd(III) Complexes in Palladium-Catalysed Carbon- Heteroatom Bond Formation

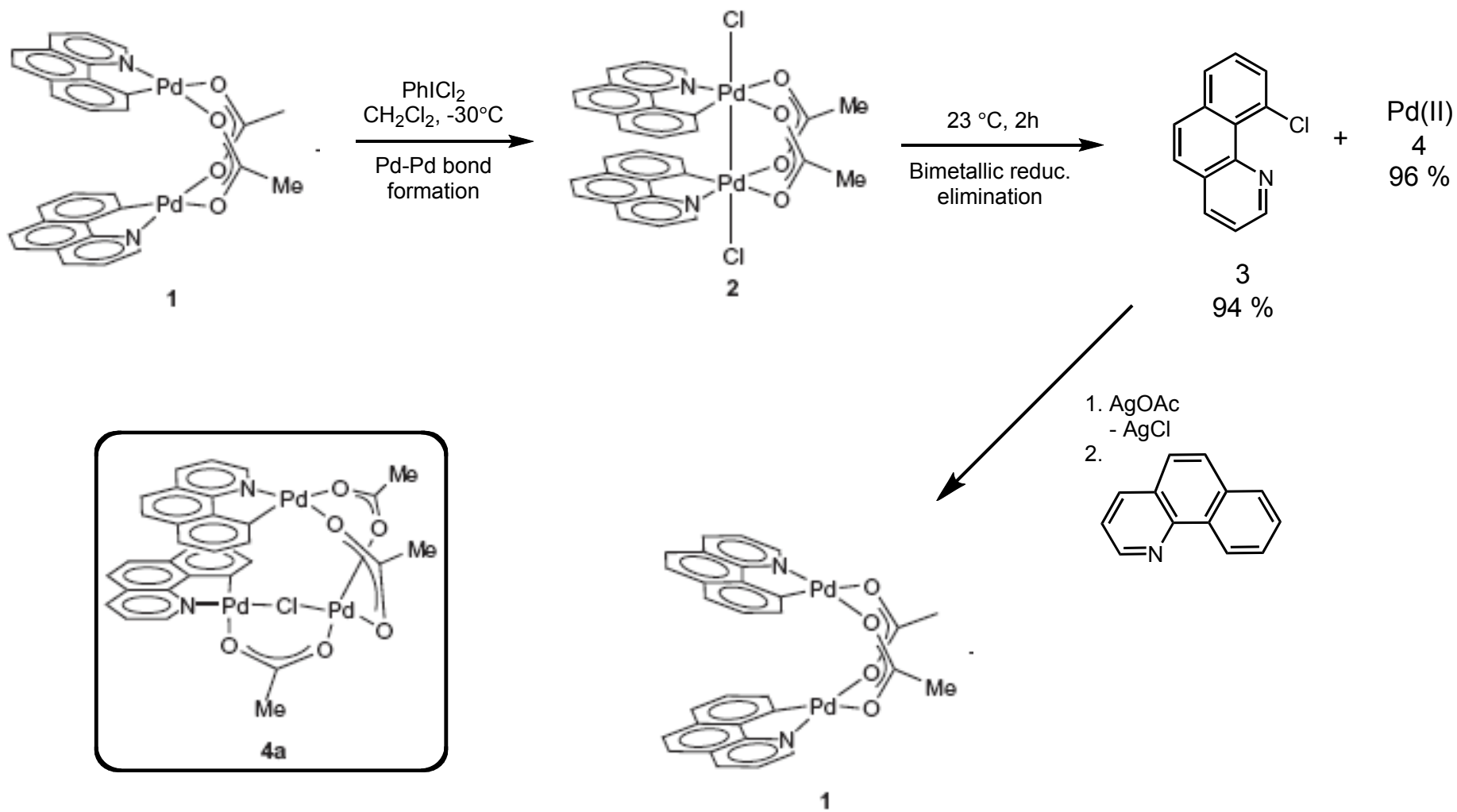
Powers, D. C.; Ritter, T. *nature chem.* **2009**, *1*, 302-309.

Wynter Gilson
Literature Presentation
August 7, 2009

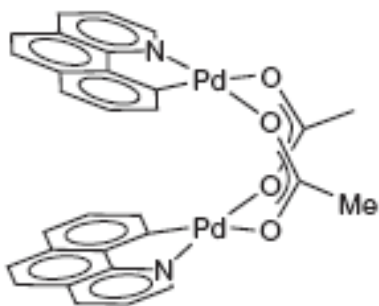
Palladium-Catalysed Carbon-Heteroatom Bond Formation



Pd(III)-Pd(III) Formation Followed by Bimetallic Reductive Elimination



Bond Distances: Pd(II) vs Pd(III)

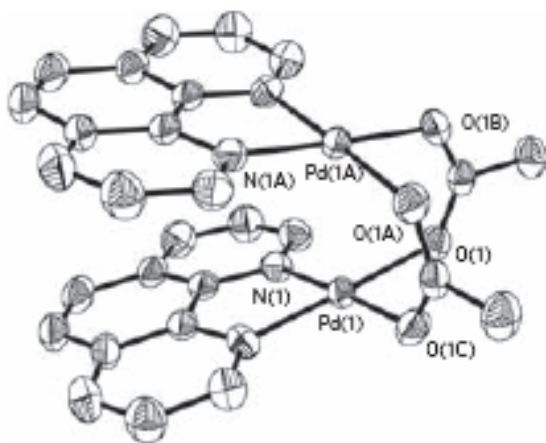


1

Pd (II)

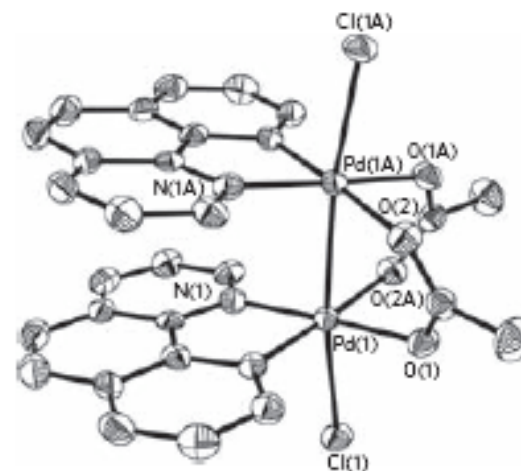


2



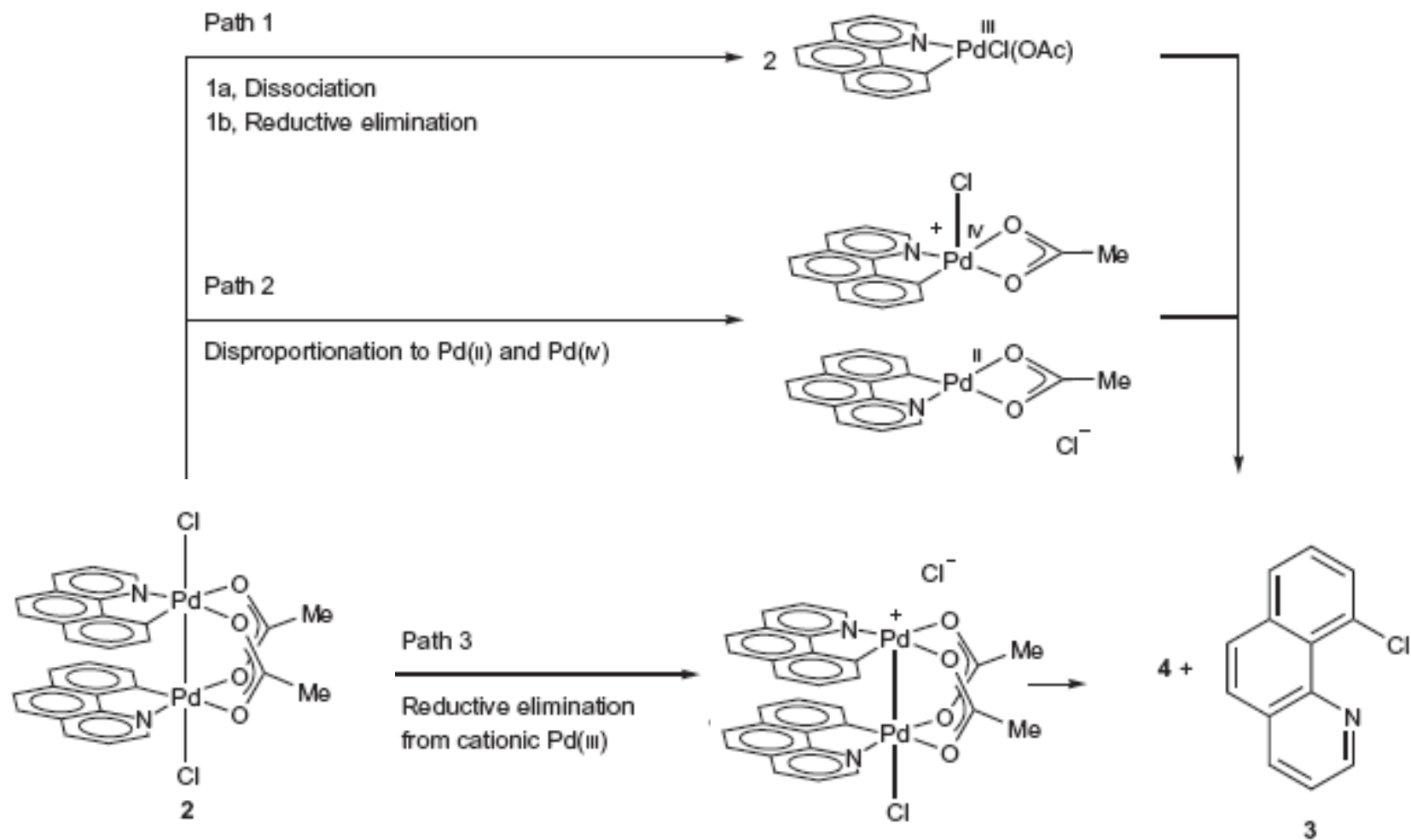
1 Pd-Pd 2.84 Å

Pd (III)

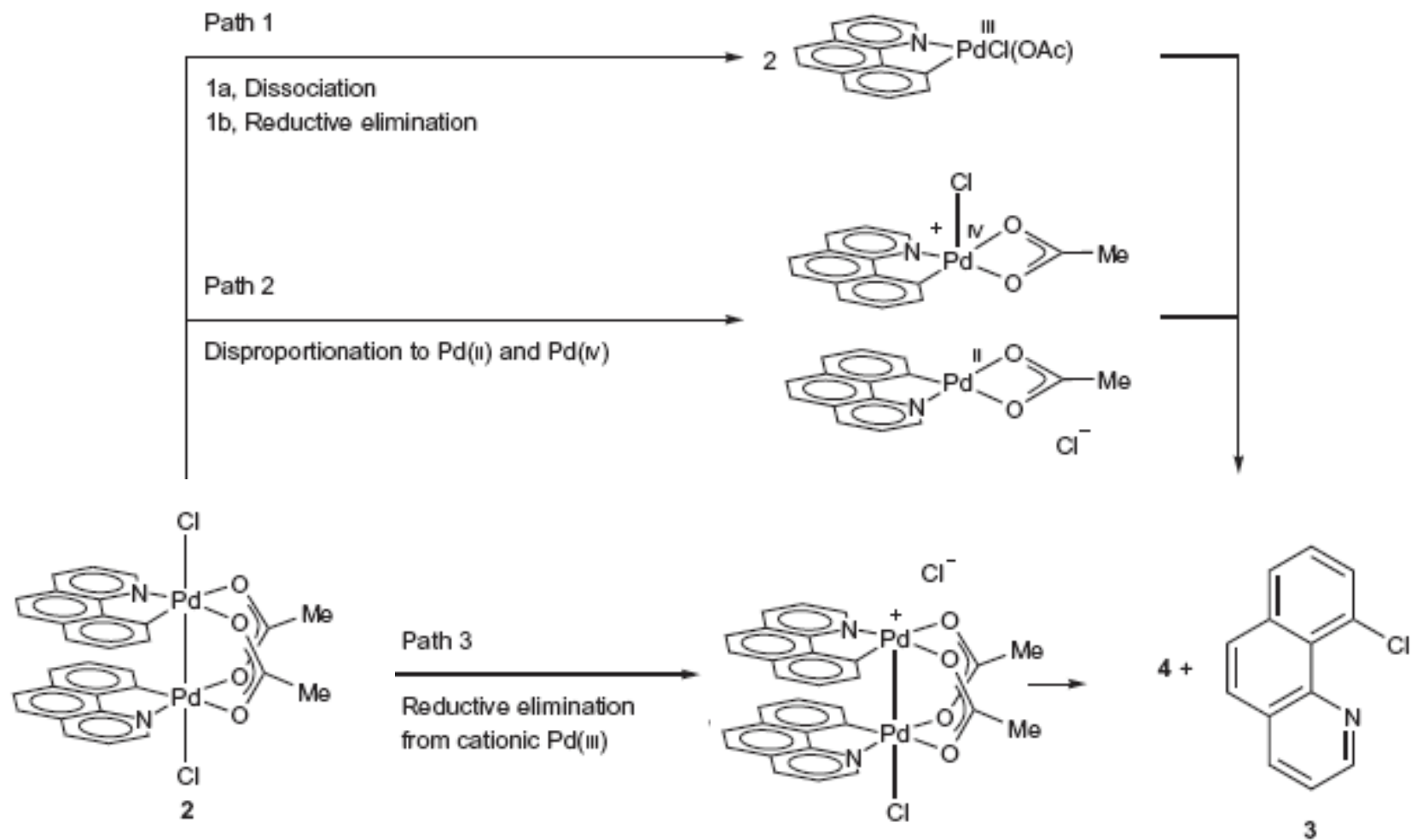


2 Pd-Pd 2.57 Å

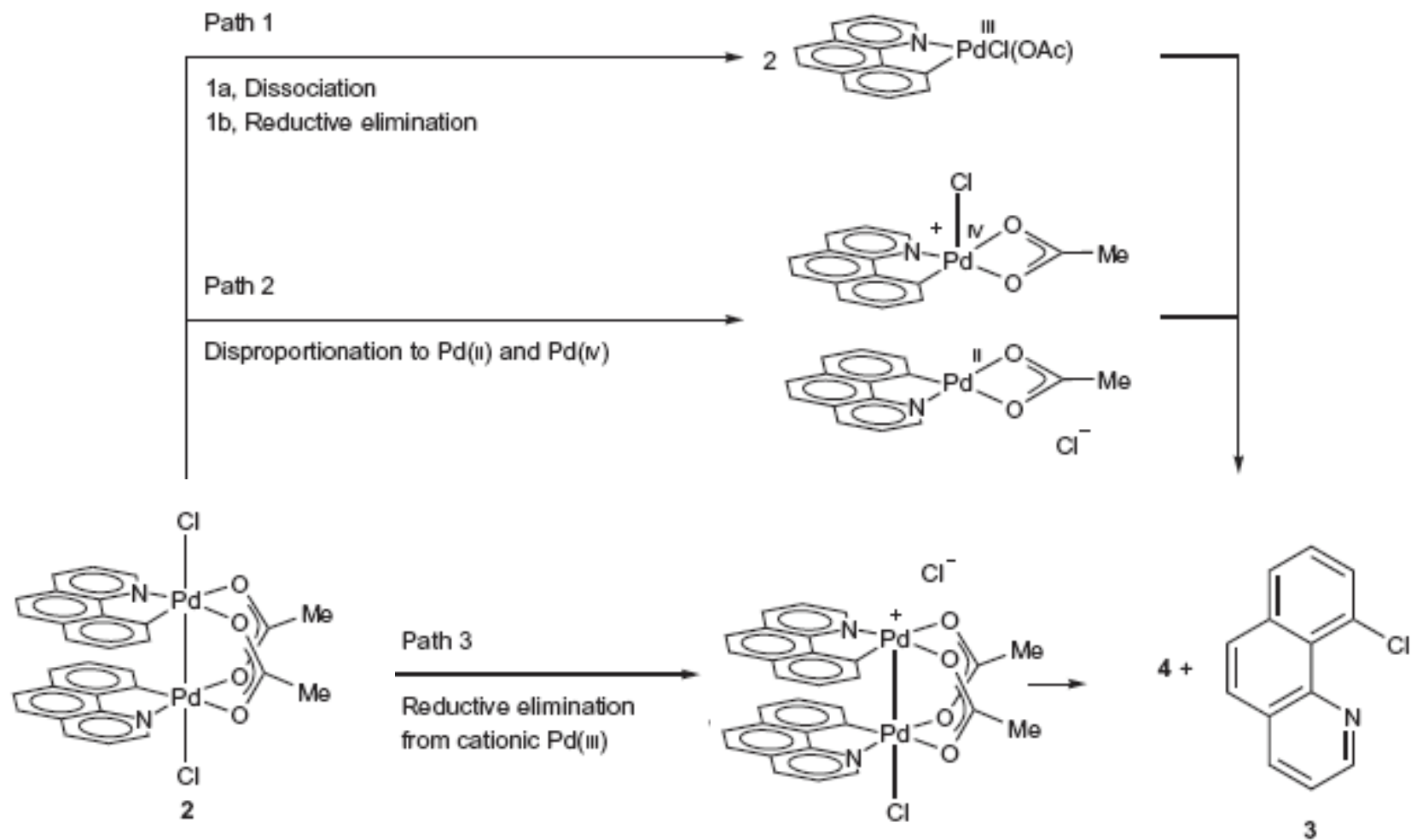
Mechanistic Study



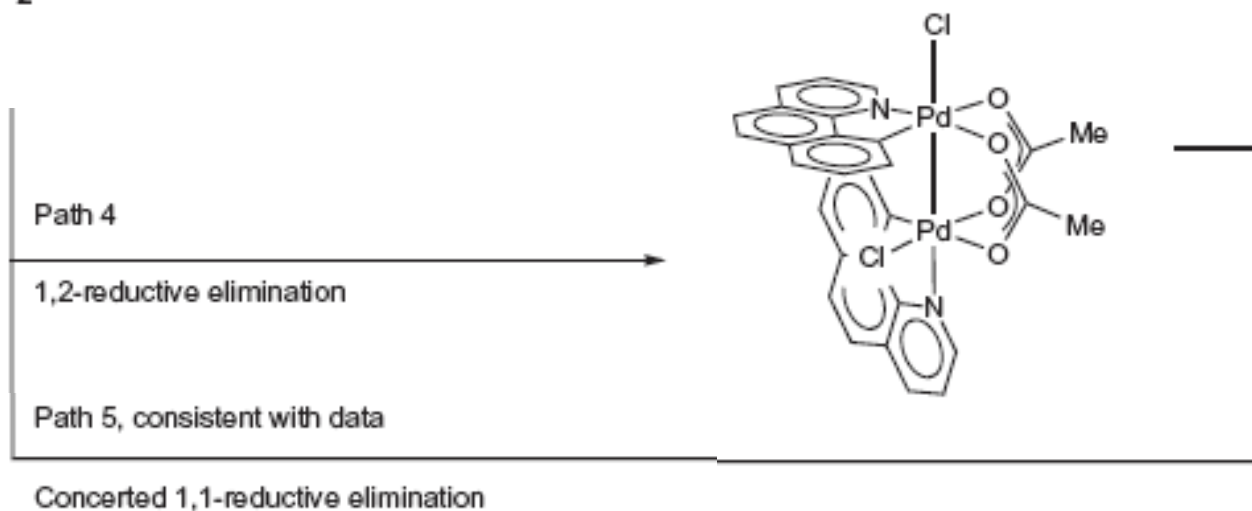
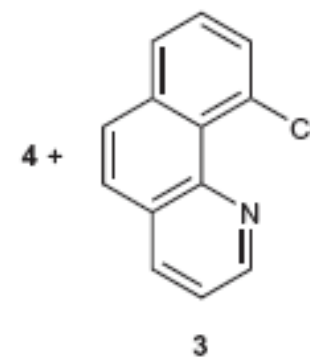
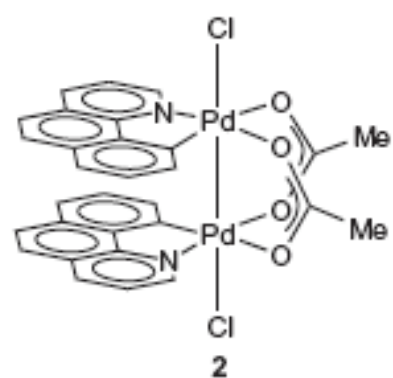
Mechanistic Study



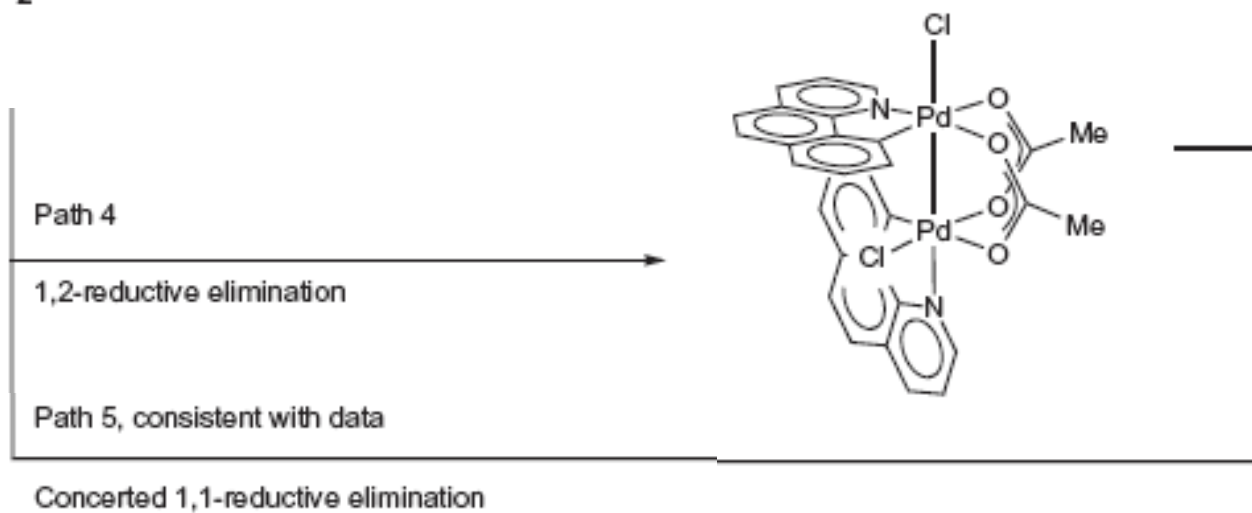
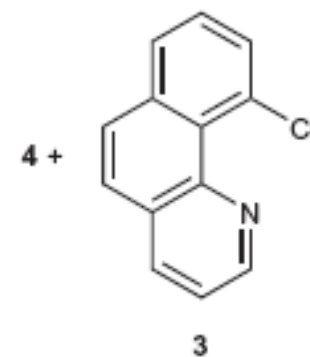
Mechanistic Study



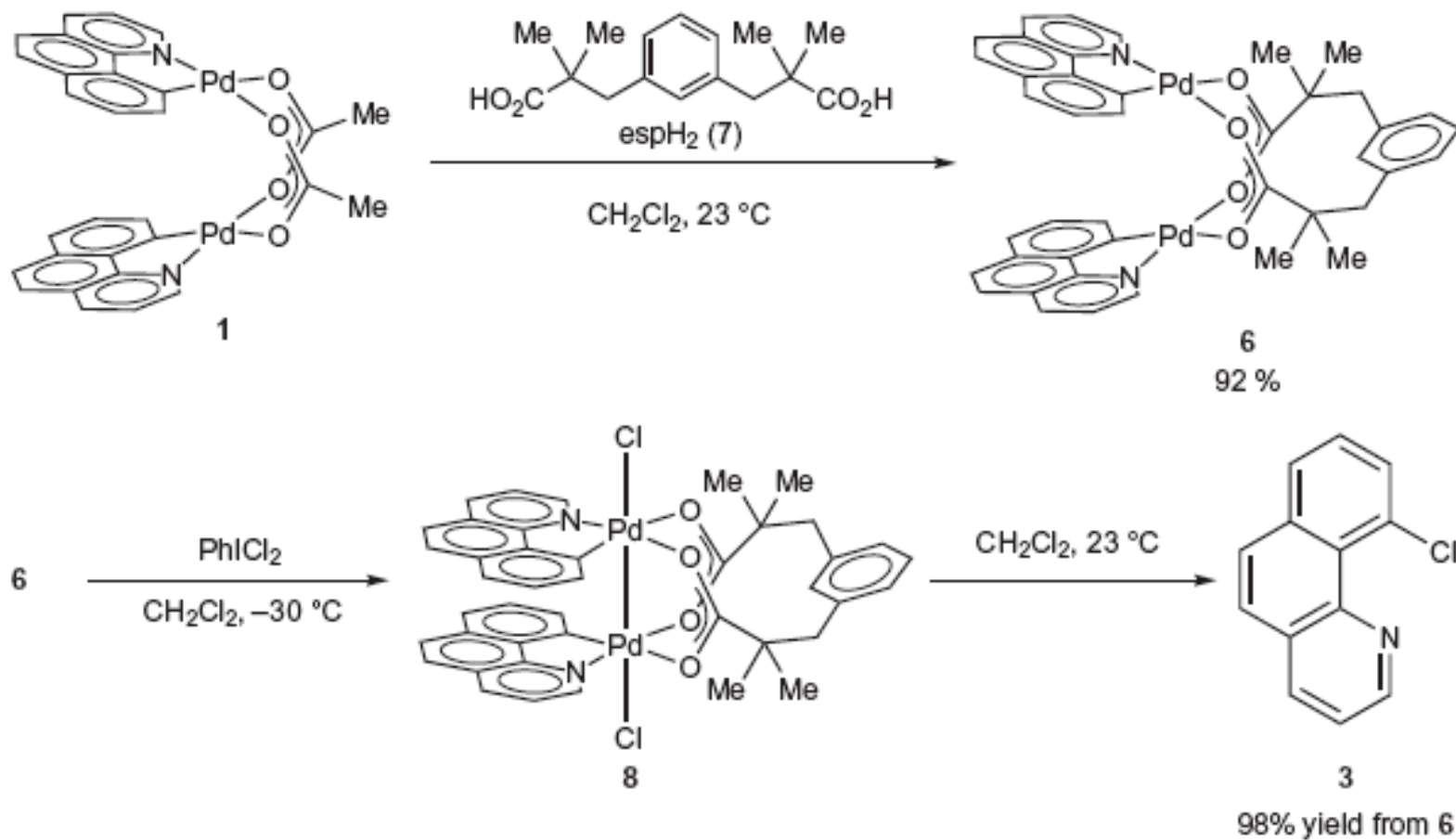
Mechanistic Study



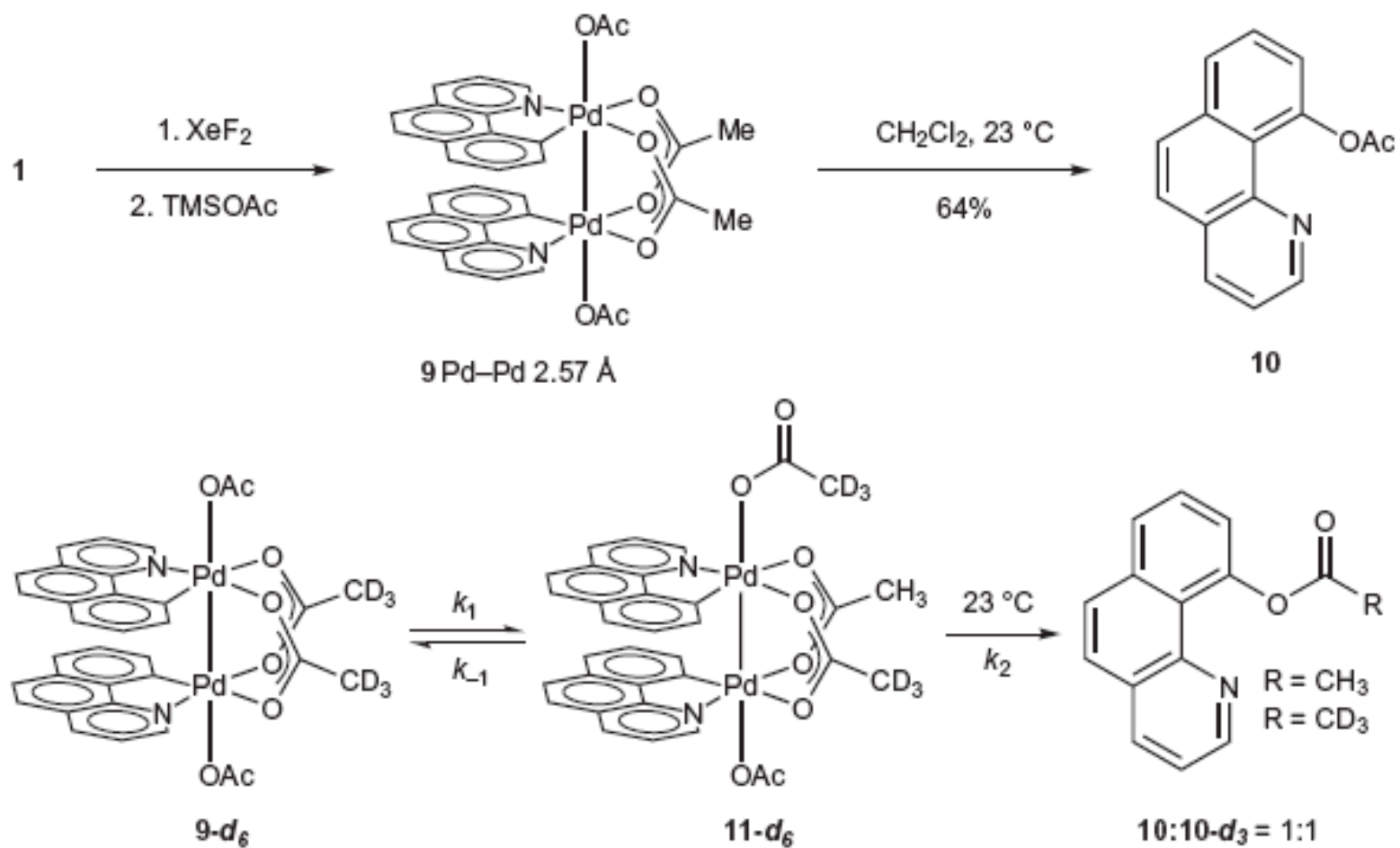
Mechanistic Study



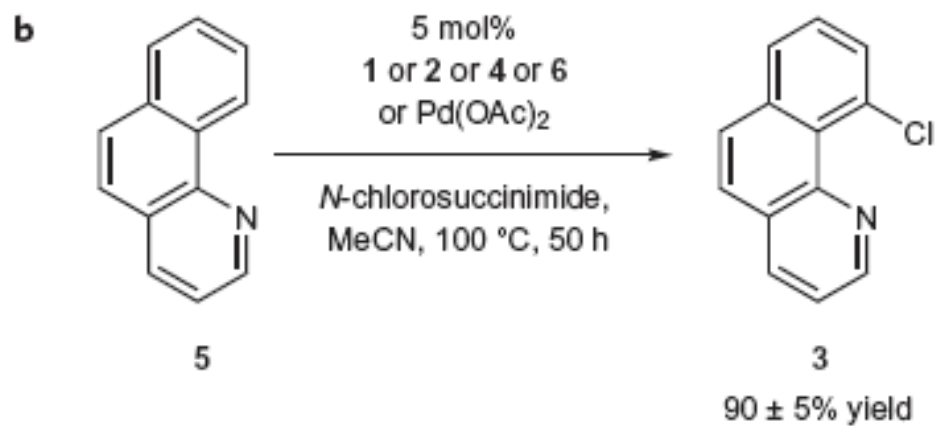
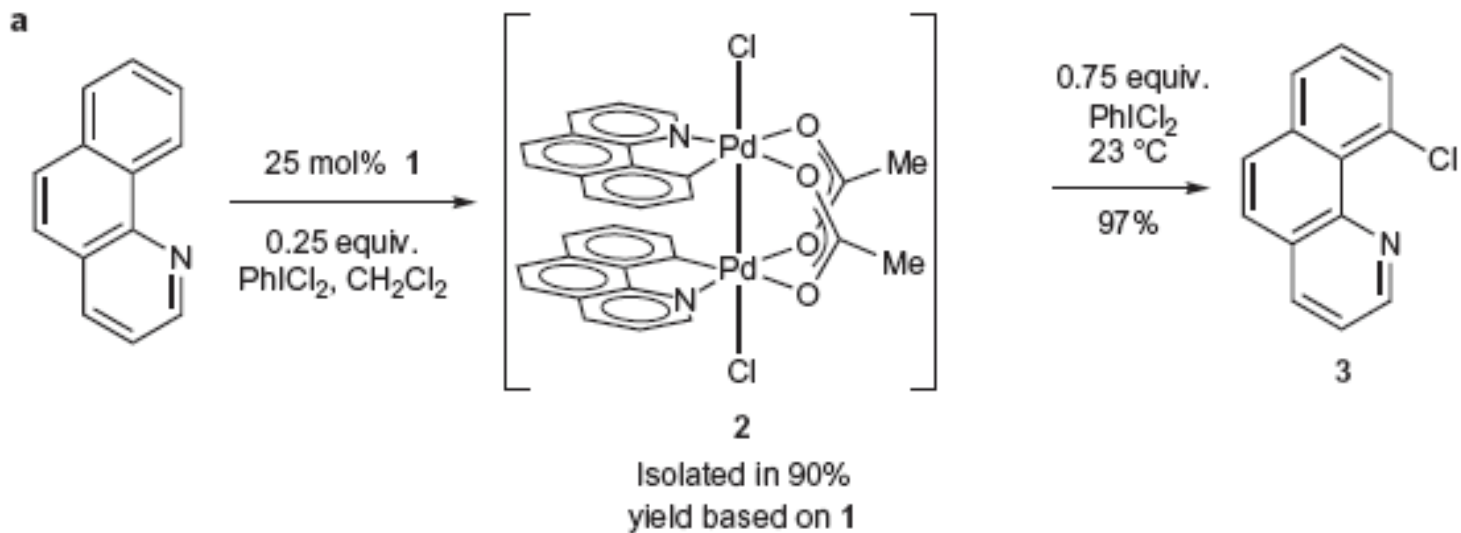
Bridging Acetate Ligand Replaced by Chelating Ligand



Deuterium Study



Palladium-Catalysed Reaction



Proposed Catalytic Cycle

