

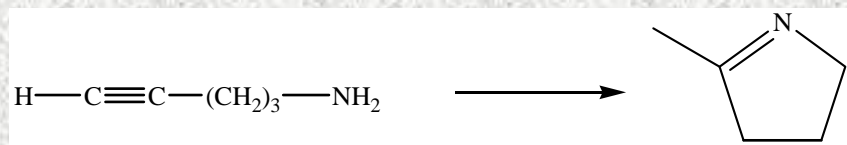
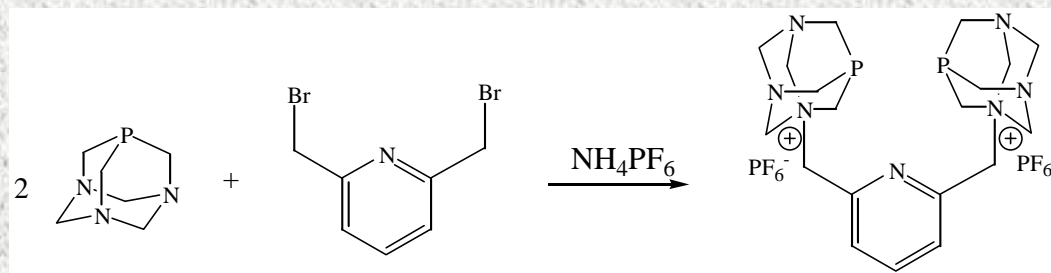
The Development of Binuclear Au, Pd, and Pt Complexes for Aqueous Phase Hydroamination Catalysis

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Binuclear Complexes as Catalysts: Multinuclear metal complexes have shown great promise as organic transformation catalysts.

Presently, there is a need to prepare “green” water-soluble analogs of these systems and to utilize their catalytic potential. Therefore, we have used

bis-phosphines that contain two PTA moieties to prepare bimetallic, water-soluble catalysts. Initial



studies of the Au, Pd, and Pt complexes indicated that the multinuclear species exhibit enhanced catalytic activity for the intramolecular hydroamination reaction in water when compared to their monometallic analogs. Additionally, it was shown for the first time that Au may be a superior choice for this important aqueous phase C-N bond formation reaction.