

On Ligand-free Palladium Cluster Catalysed Suzuki-Miyaura Reaction

K. S. S. V. Prasad Reddy and Parag A. Deshpande*

Quantum and Molecular Engineering Laboratory, Department of Chemical Engineering,
Indian Institute of Technology Kharagpur, Kharagpur 721302, India.

Supporting Information

* Corresponding author, E-mail: parag@che.iitkgp.ac.in, Phone.: (+91) 3222-283916.

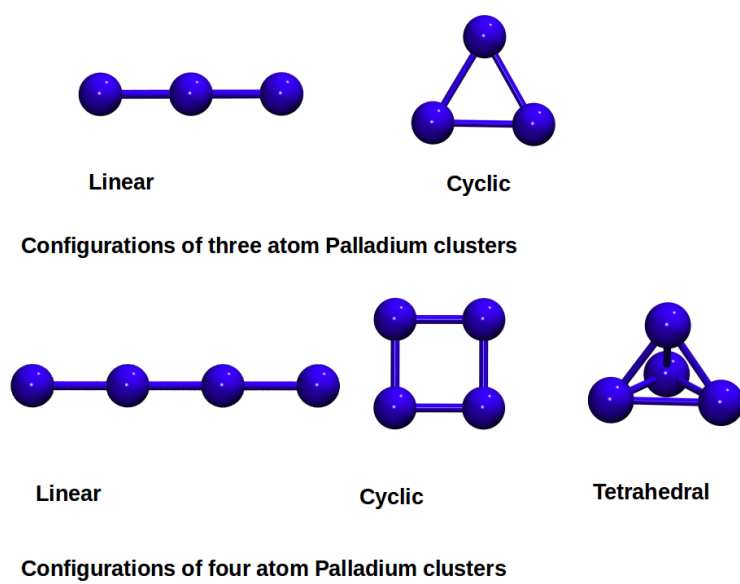


Figure S1: Different configurations for three- and four-atom palladium clusters

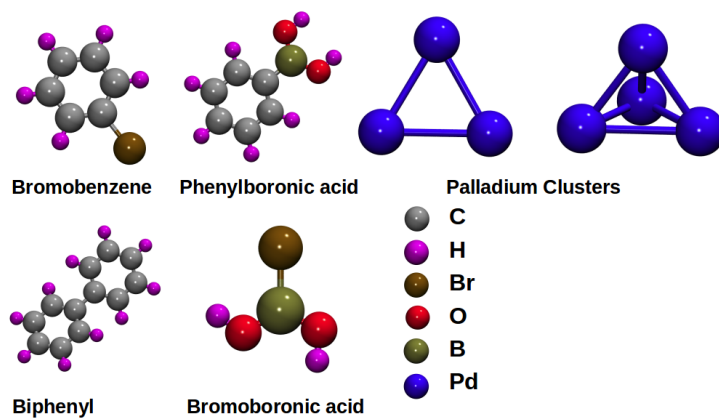


Figure S2: DFT optimised structures of reactants, products and catalysts reported in this study

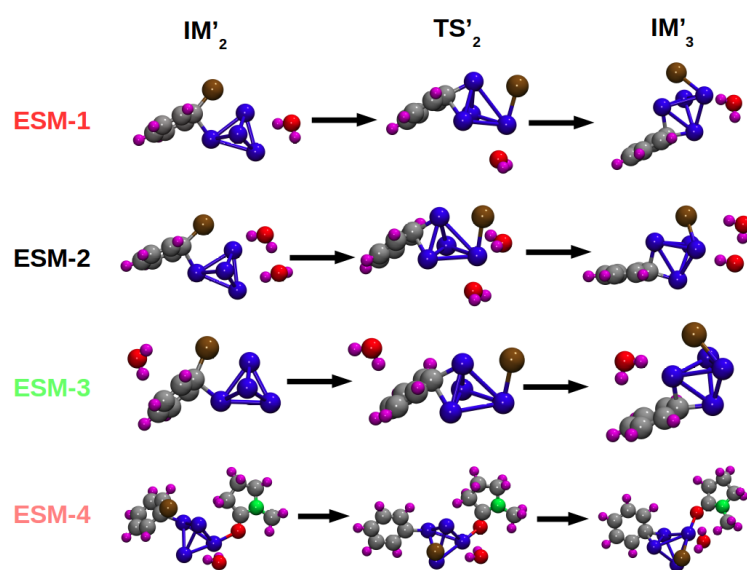


Figure S3: DFT optimised structures of rate limiting oxidative addition complexes over Pd_4 cluster in the presence of explicit solvents, water and N-Methyl-2-pyrrolidone

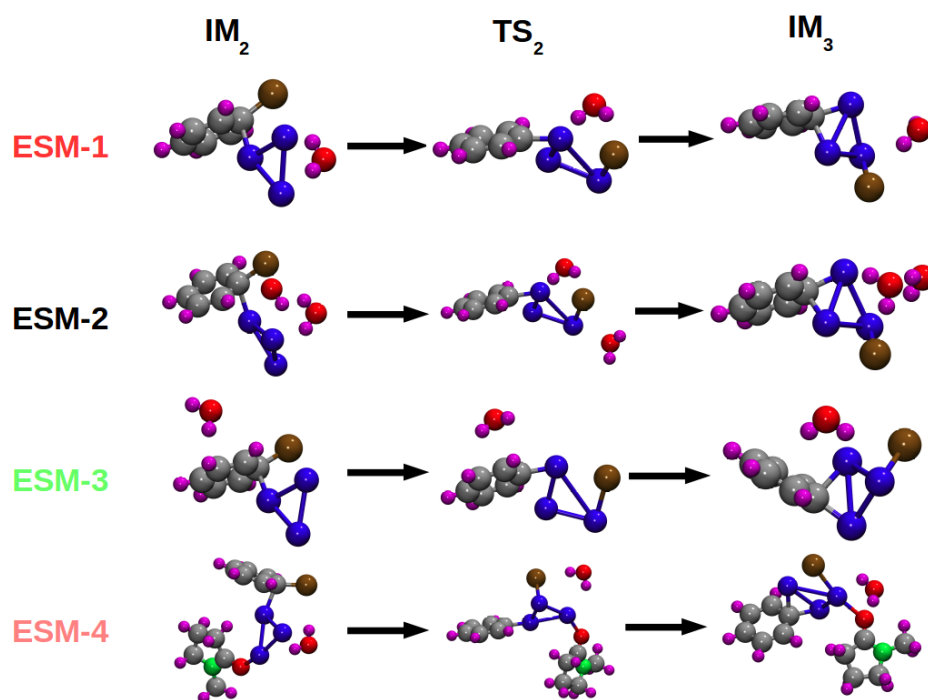


Figure S4: DFT optimised structures of rate limiting oxidative addition complexes over Pd₃ cluster in the presence of explicit solvents, water and N-Methyl-2-pyrrolidone

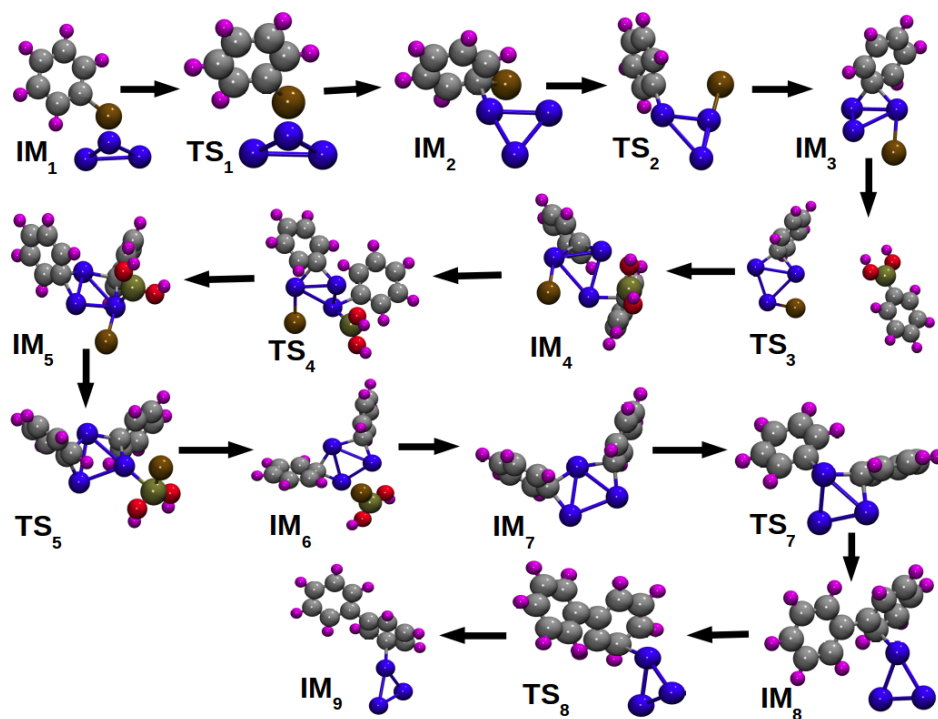


Figure S5: DFT optimised structures of transmetalation complexes over Pd_3 cluster

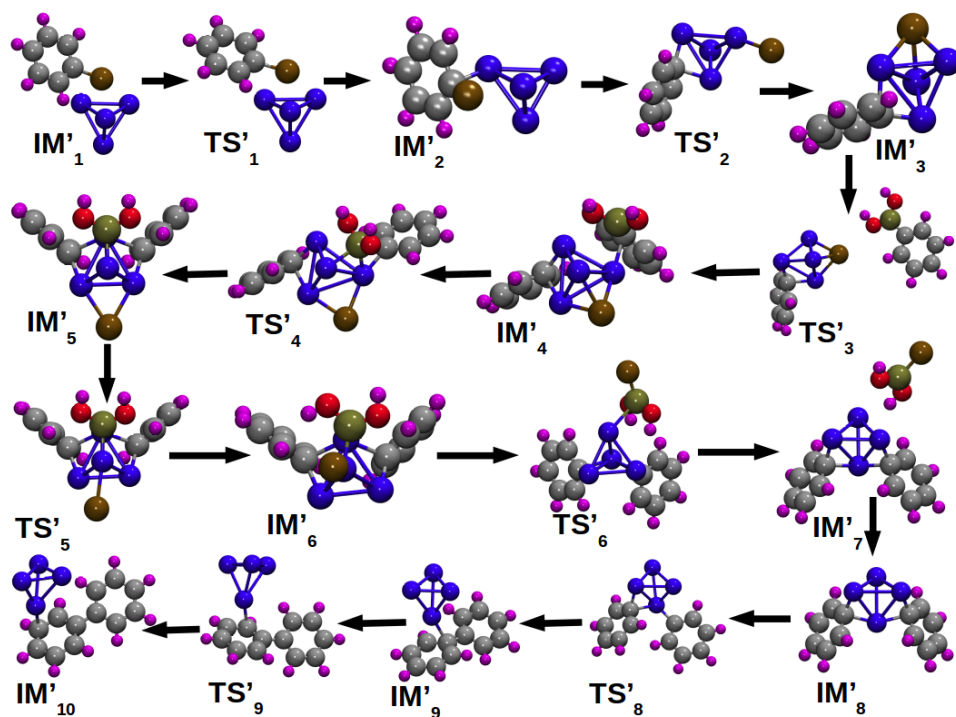


Figure S6: DFT optimised structures of transmetalation complexes over Pd_4 cluster

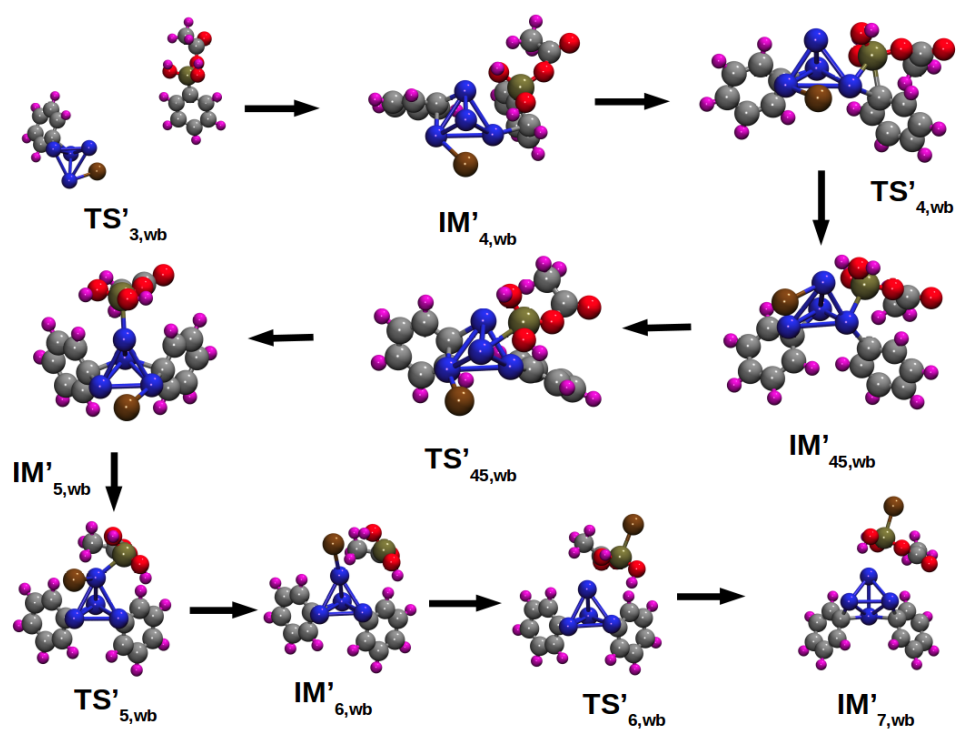


Figure S7: DFT optimised structures of transmetalation complexes over Pd₄ cluster in the presence of CH₃COOK

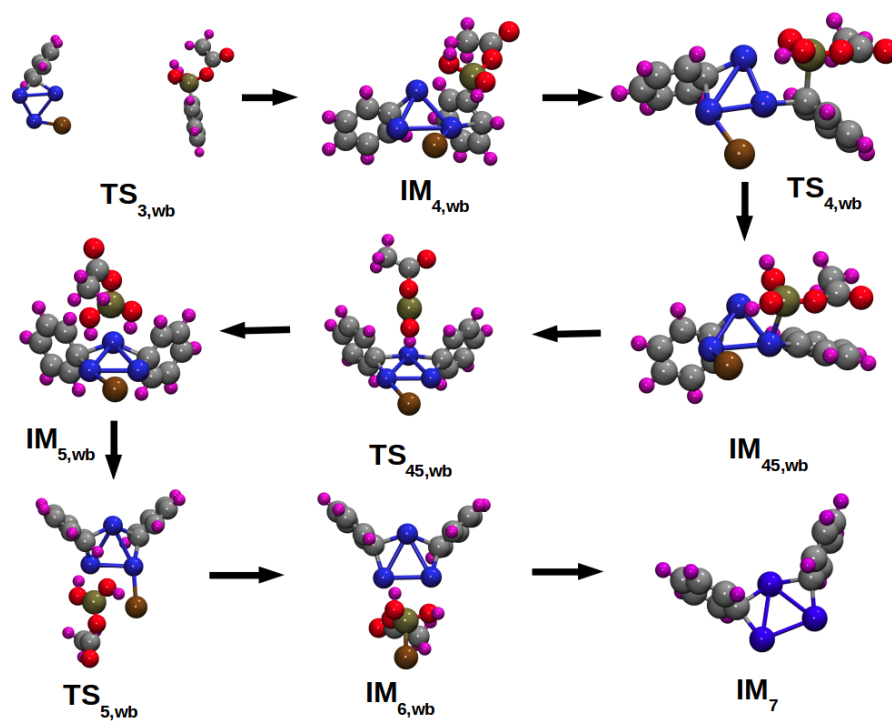


Figure S8: DFT optimised structures of transmetalation complexes over Pd_3 cluster in the presence of CH_3COOK