



Organometallic Complexes of Transition Metals: Structures and Reactivities

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Recent advances in organo-transition metal chemistry have provided useful synthetic methods in organic chemistry. It has also been proven that some organometallic complexes can be used as the precursors or components for functional molecular materials. In this lecture, we will discuss several fundamental aspects and new topics in organo-transition metal chemistry.

In the first part, we discuss the nature of metal–carbon bonds in organometallic compounds. We will also briefly discuss how several discoveries in synthetic organometallic chemistry have led to great advances in this field. In the second part, some recent topics in the area of organo-transition metal chemistry will be introduced. New aspects of the molecular structures (Figure 1) as well as of the structure-property relationship in organo-palladium chemistry will be discussed.

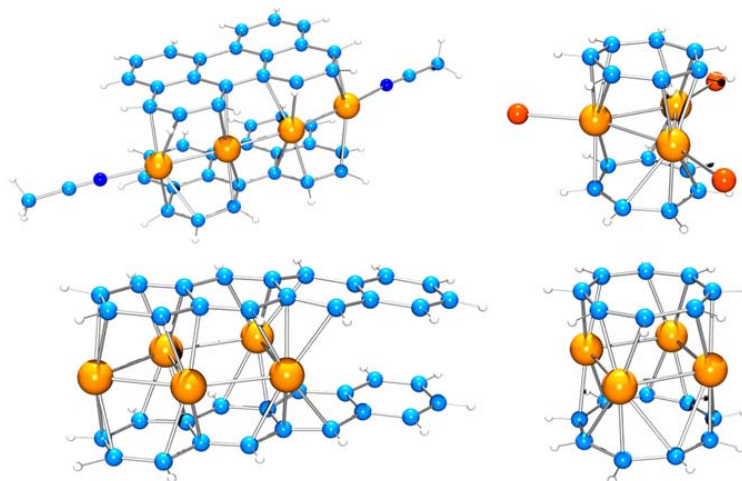


Figure 1. Molecular structures of a new class of organo-palladium complexes (orange balls = Pd, sky blue balls = C, red balls = Cl, white balls = H).¹⁻⁴

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