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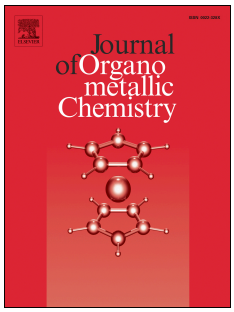

Bonding and structural features of metal-metal bonded homo- and hetero-dinuclear complexes supported by unsaturated hydrocarbon ligands

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Bonding and Structural Features of Metal-metal Bonded Homo- and Hetero-dinuclear Complexes Supported by Unsaturated Hydrocarbon Ligands

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ABSTRACT: Dinuclear complexes with a metal-metal interaction have been extensively investigated as minimum entities of metal clusters. Hydrocarbon-bridged dinuclear complexes are one of the most important class of the dinuclear complexes for exploring any transformations of the unsaturated hydrocarbons at the dinuclear core. In this review, we summarize the dinuclear complexes with metal-metal interaction supported by unsaturated hydrocarbons such as alkyne, dienes, and aromatic compounds resulting in 3—6 membered metallacycles, and briefly discuss the structural characteristics based on the different metallacycle structures and coordination mode of the unsaturated hydrocarbons in the dinuclear complexes.

KEY WORDS: Homodinuclear complex; Heterodinuclear complex; Metallacycle; Metal-metal bond; π-Coordination; Hydrocarbon;