

Metal-metal interaction through CH₂-CN bridge: Synthesis and characterization of [CpM(L₂)NCCH₂Fc]PF₆ complexes (Fc = ferrocenyl; L = 1/2 dppe, PPh₃; M = Fe, Ru)

Díaz,

Izquierdo,

Valenzuela,

Yutronic,

The new complexes [CpM(L₂)NCCH₂Fc]PF₆ (M = Fe 1, Ru 2; Fc = ferrocenyl), have been prepared from reaction of CpM(L₂)X and the ligand Fc-CH₂CN 3 in methanol and in the presence of NH₄PF₆.

The compounds were characterized by elemental analysis as well as spectroscopic methods.

Electrochemical as well as near-IR measurements suggest a weak metal-metal interaction for the Fe(II)-Fe(III) complex. Hush parameters for this mixed-valence complex suggest a class II

Robin-Day type with a moderate metal-metal interaction similar to that observed in the related pyridine bridged systems (η⁵-C₅H₅)Fe-η⁵-C₅H₄-C₅H₄N-ML(n). The unusual electron transfer

through a insulating CH₂ group is the first such example for an asymmetric binuclear system. (C)

2000 Elsevier Science S.A.