Crystal Structures of Mo(II) Complexes with 2,2'-Dipyridylamine

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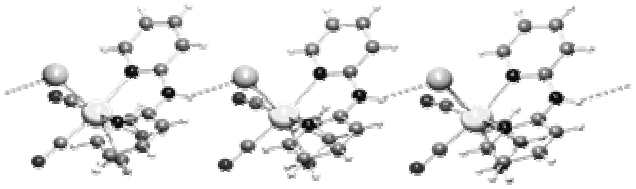
Organometallic complexes are interesting building blocks in the design and synthesis of functional solids. Derivatives of the conical fragment Mo(II)(η^3-C_3H_5)$(CO)_2$ are useful precursors to build solids.

In this work, we describe the synthesis and characterization of new Mo(II) complexes with the 2,2'-dipyridylamine (dipa) ligand, [MoBr(η^3-C_3H_5)$(CO)_2$(dipa)] **1**, [{MoBr(η^3-C_3H_5)$(CO)_2$(dipa)}$_2$(4,4'-bipy)]$(PF_6)_2$ **2**, and [Mo(CH_3CN)(η^3-C_3H_5)$(CO)_2$(dipa)]OTf **3**. The crystal structures of all compounds were determined by single crystal X-ray diffraction. The dipa ligand is always bonded to Mo(II) through the heterocyclic nitrogen atoms. The presence of the NH group in the dipa ligand may lead to intermolecular hydrogen bond interactions, as shown in the figure for complex **1**.



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