Reactivity of [Mo(NHNPH2)(NNPH2)Br2(acac)] toward di-imines. X-ray crystal structure of [Mo(NNPH2)2Br2(o-phen)]

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Complex [Mo(NHNPh2)(NNPh2)Br2(acac)], acac=acetylacetonate, reacts in acetonitrile with 1,10-phenanthroline, o-phen, and 2,2?-bipyridine, bpy, to afford complexes [Mo(NNPh2)2Br2(o-phen)], I, and [Mo(NNPh2)2Br2(bpy)], II. These complexes have been characterized by IR, UV-vis and 1H NMR spectroscopies, and elemental analysis. The structure of complex I was solved by single crystal X-ray diffraction. The metal center has a distorted octahedral environment in which the diphenylhydrazido(2-) ligands occupy mutually cis positions but trans to the nitrogen atoms of the o-phen ligand. The bromo ligands occupy mutually trans positions.