

## Abstract

New complexes derived from the reaction of Mo (NO) Tp\*Cl<sub>2</sub>; Tp\* = tris(3,5-dimethylpyrazolyl) borate with a series of manganese(II) Schiff bases have been synthesized. Characterization by UV, IR, MS and elemental analysis support their formulations. Cyclic and differential pulse voltammograms of manganese (II) Schiff base monometallic complexes exhibit one reduction peak which may be associated with the reduction of the manganese (II) center. In CH<sub>3</sub>CN solutions, the molybdenum (II)-manganese (II) bimetallic complexes showed two reversible reduction peaks which are associated with the reduction of the molybdenum and manganese centers. In CH<sub>2</sub>Cl<sub>2</sub>, only the reduction of molybdenum (II) center exhibited reversibility while the reduction of manganese (II) center was irreversible. These observations demonstrate that reduction potentials for bimetallic complexes are solvent dependent.