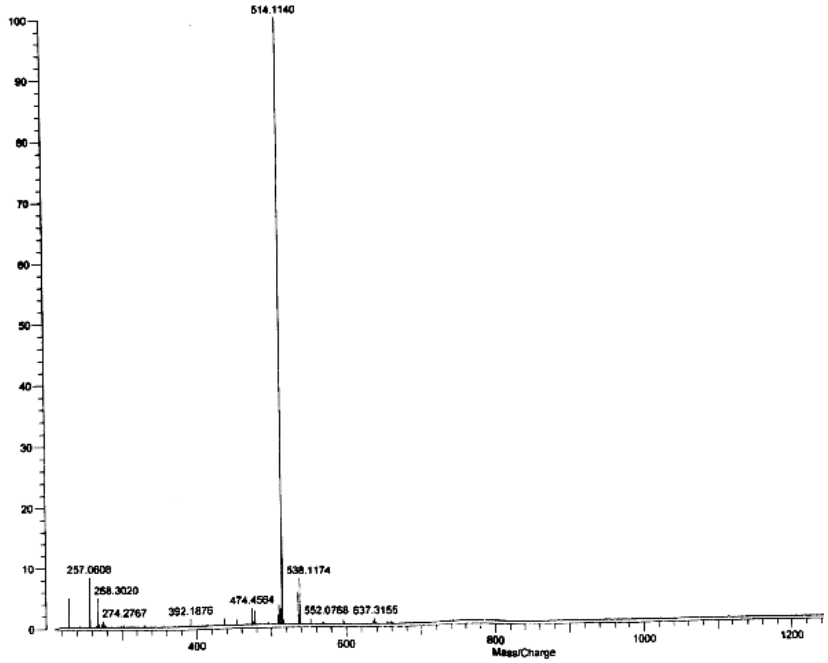

Figure S1 Electrospray mass spectra and the isotope distribution patterns for **1**. Attributions: m/z 514.1 corresponding to the ion $[Mn^{III}Mn^{IV}\mathbf{L}_2(\mu\text{-}O)_2]^+$ (**2**)

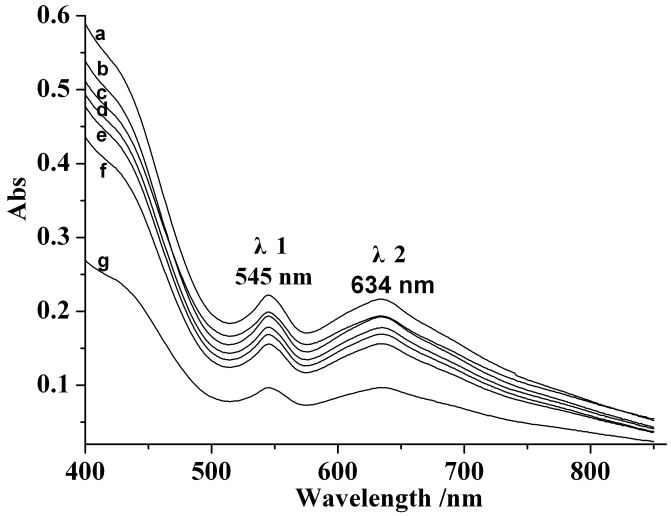

Figure S2 Electronic spectra of $[Mn^{III}Mn^{IV}\mathbf{L}_2(\mu\text{-}O)_2]^+$ (5.2×10^{-4} M, 4.8×10^{-4} M, 4.4×10^{-4} M, 4.0×10^{-4} M, 3.6×10^{-4} M, 3.2×10^{-4} M, 2.2×10^{-4} M, respectively) at room temperature (28 °C), incubation time 4 h: (a) in H_2O, pH 7.0, (b) + 60 μM pBR322 DNA in Tris-HCl/NaCl buffer, pH 7.4, (c) + 28 μM BSA in Tris-HCl/NaCl buffer, pH 7.4, (d) + 200 Unit/ml SOD in Tris-HCl/NaCl buffer, pH 7.4, (e) + 200 Unit/ml catalase in Tris-HCl/NaCl buffer, pH 7.4, (f) + 2 mM NaN_3 in Tris-HCl/NaCl buffer, pH 7.4, (g) in Tris-HCl/NaCl buffer, pH 7.4.

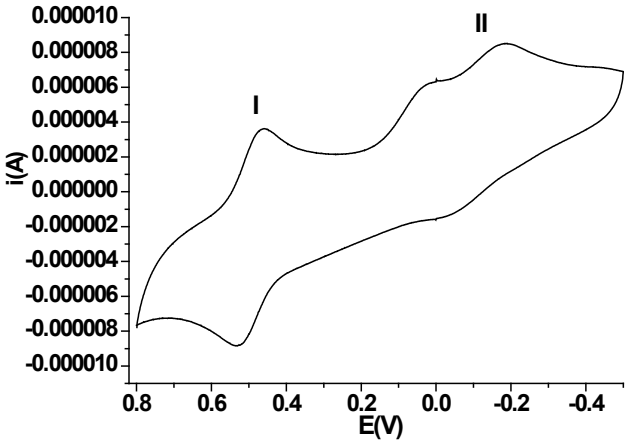

Figure S3 Cyclic voltammogram at GCE of 1 mM $[Mn^{III}Mn^{IV}\mathbf{L}_2(\mu\text{-}O)_2]^+$ in H_2O + 0.1 M KCl, pH 7.0, scan rate v = 30m Vs^{-1}, *vs*. SCE, T = 293 K.

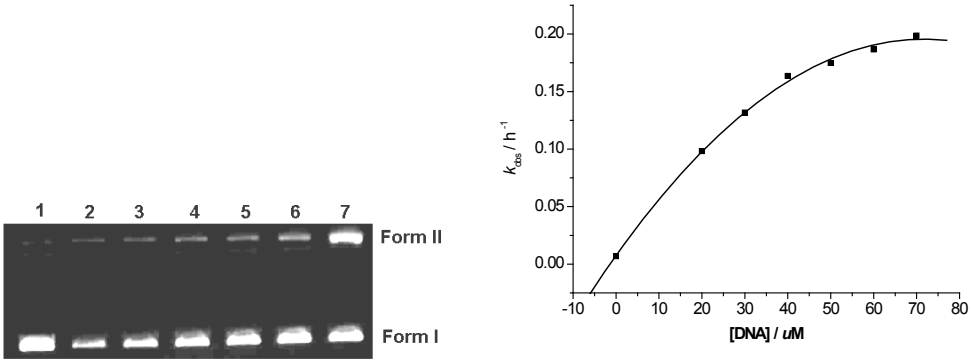

Figure S4 Cleavage of plasmid pBR322 DNA using 20 μM complex **2** with different concentrations of plasmid pBR322 DNA at 37 °C in Tris-HCl/NaCl buffer (pH 7.4). Lane 1: DNA control (70 μM); Lane 2-7: complex **2** + DNA (20 μM; 30 μM; 40 μM; 50 μM; 60 μM; 70 μM) (3 h), respectively.