## **SUPPORTING INFORMATION**

Layer-By-Layer Assembly Of Tetra-Mn-Containing 30-Tungsto-4-Phosphate,  $[M_4(H_2O)_2(P_2W_{15}O_{56})_2]^{n-}$  (M = Mn<sup>II</sup> and Mn<sup>III</sup>) With AuNps-MWCNT: Electrochemical Detection Of Iodate

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**Figure S1**. (a) Cyclic voltammetry of the [AuNps-MWCNT/Mn<sup>II</sup><sub>4</sub>(P<sub>2</sub>W<sub>15</sub>)<sub>2</sub>]<sub>4</sub> film at different concentrations, i.e., i.e., 0.2, 0.4, 0.6, 0.8, 1, 1.2, 1.4, 1.6, 1.8, and 2.0 mM NaIO<sub>3</sub> in pH 2 buffer solution at the scan rate of 100 mV/s. (b) The relationship between the I<sub>cat</sub> and the different concentration of the iodate.



**Figure S2**. (a) Cyclic voltammetry of the [AuNps-MWCNT/Mn<sup>III</sup><sub>4</sub>( $P_2W_{15}$ )<sub>2</sub>]<sub>4</sub> film at different concentrations, i.e., i.e., 0.2, 0.4, 0.6, 0.8, 1, 1.2, 1.4, 1.6, 1.8, and 2.0 mM NaIO<sub>3</sub> in pH 2 buffer solution at the scan rate of 100 mV/s. (b) The relationship between the I<sub>cat</sub> and the different concentrations of the iodate.



Figure S3. AFM images of a)  $[AuNps-MWCNT/Mn^{II}_4(P_2W_{15})_2]_4$  and b)  $[AuNps-MWCNT/Mn^{III}_4(P_2W_{15})_2]_4$ .



Figure S4. FT-IR spectrum of a)  $[AuNps-MWCNT/Mn^{II}_4(P_2W_{15})_2]_4$  and b)  $[AuNps-MWCNT/Mn^{III}_4(P_2W_{15})_2]_4$ .