

**Synthesis of manganese-oxide and palladium nanoparticles co-decorated polypyrrole/graphene oxide (MnO<sub>2</sub>@Pd@PPy/GO) nanocomposites for anti-cancer**

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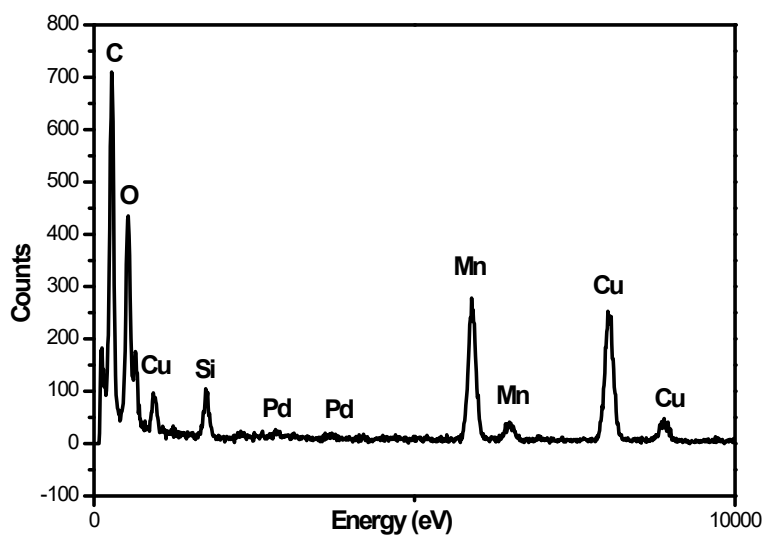
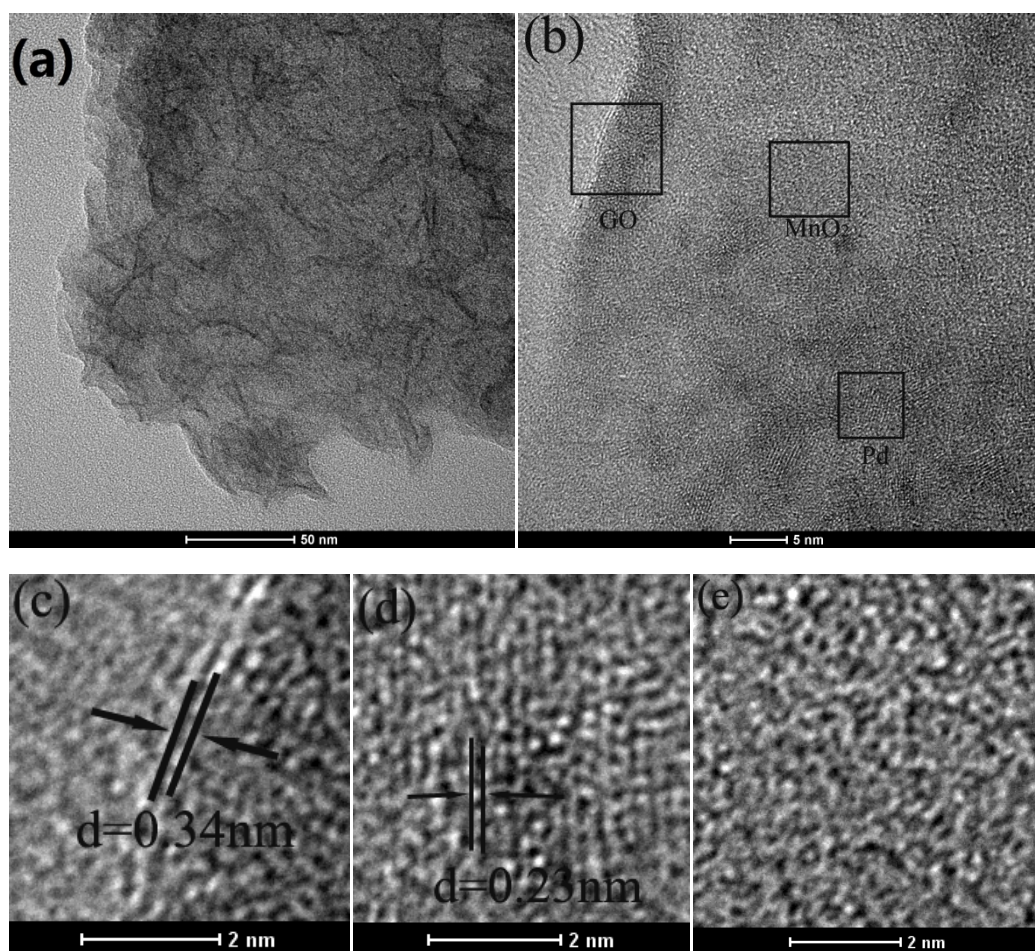


Fig.S1. EDS spectrum of GOPPMns.

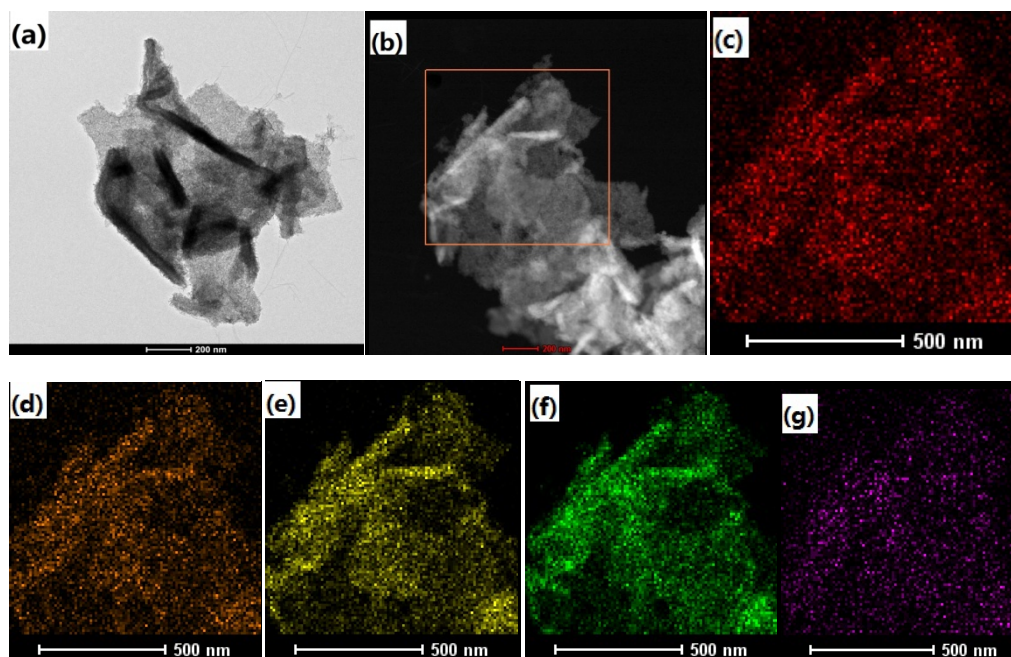


**Fig.S2.** (a, b) High magnification transmission electron microscope images of GOPPMs and interplanar distance of (c) GO, (d) Pd and (e) MnO<sub>2</sub>.



GO    GOPs    GOPPs    GOPPMns

**Fig.S3.** The images of enzyme-like catalytic reaction of the as-prepared nanocomposites (GO, GOPs, GOPPs and GOPPMns) on TMB after 30 min (nanocomposites,  $30 \mu\text{g}\cdot\text{mL}^{-1}$ ; TMB 1 mM;  $\text{H}_2\text{O}_2$ , 0.1mM; pH 5.0).



**Fig.S4.** TEM(a), HAADF images (b) and EDS mapping images (c-g) of GOPPMNs after six months of synthesis (carbon-red, oxygen-orange, nitrogen-yellow, manganese-green, and palladium-purple).