

Electronic Supplementary Information (ESI)
for New Journal of Chemistry

**Superior Peroxidase Mimetic Activity of
Carbon dots/Pt Nanocomposites Rely on
Synergistic Effects**

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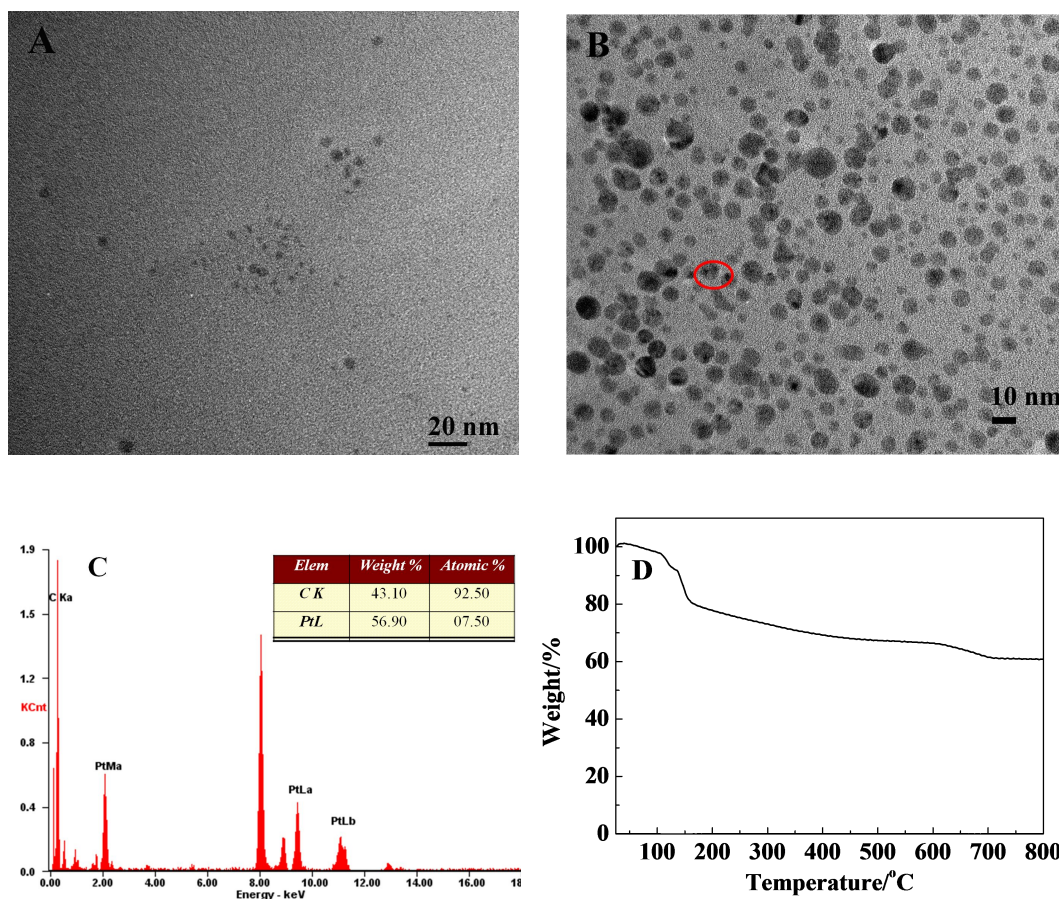


Fig.S1. TEM image of CDs (A) and CDs-Pt(B) compounds and EDX(C) and TG(D) of CDs-Pt compounds.

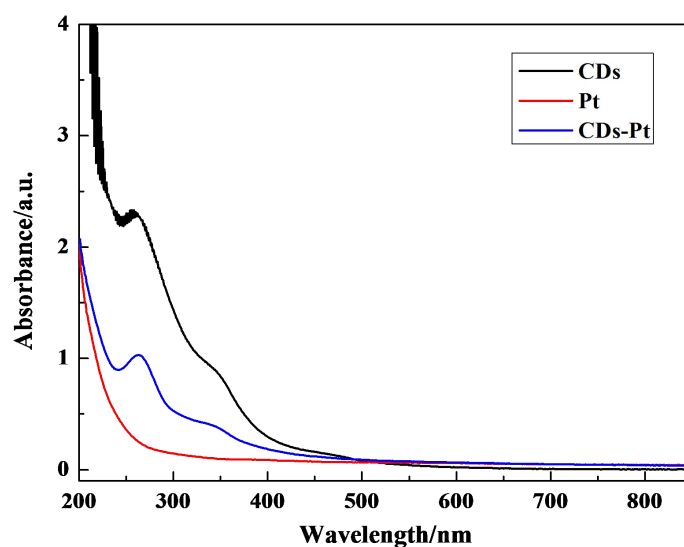


Fig.S2. UV-vis absorption spectra of CDs, Pt and CDs-Pt respectively. Concentration: [CDs-Pt] =0.18 mg/mL, [CDs] =0.015 mg/ml, [Pt] =0.16 mg/ml.

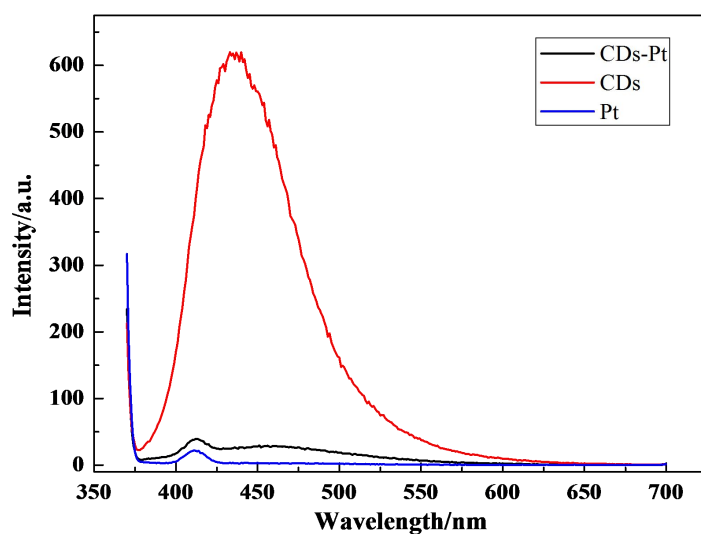


Fig.S3. Fluorescence spectra of CDs, Pt and CDs-Pt respectively (excited at 359 nm). Concentration: [CDs-Pt] =0.18 mg/mL, [CDs] =0.015 mg/ml, [Pt] =0.16 mg/ml.

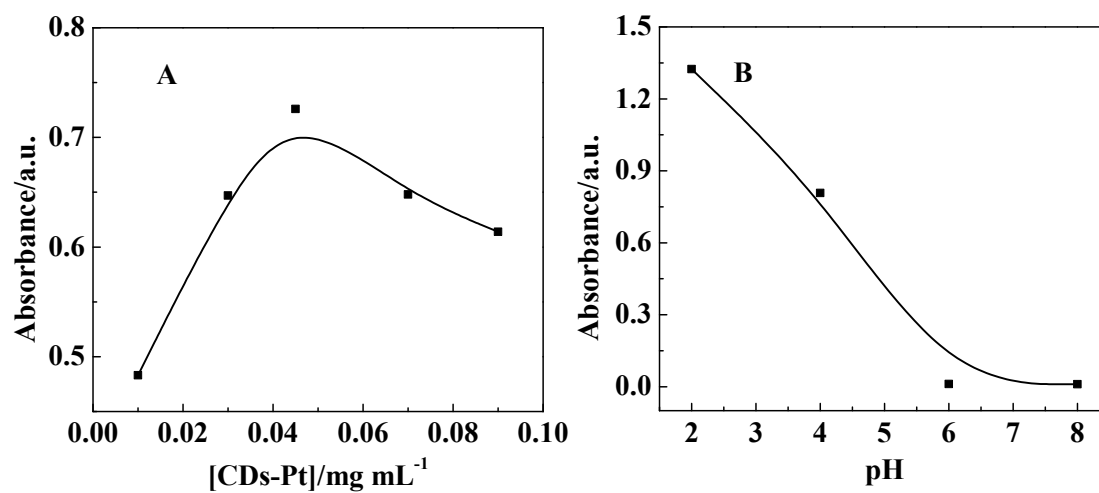


Fig.S4. The absorption intensity dependency of CDs-Pt peroxides-like activity on CDs-Pt concentration (A) and pH (B). Reaction conditions: A: 0.25 mM TMB, 50 mM H₂O₂ in 50 mM HAc-NaAc buffer (pH 4.0) for 10 min. B: 0.25 mM TMB, [CDs-Pt] =0.045 mg/mL, 50 mM H₂O₂ for 10 min.

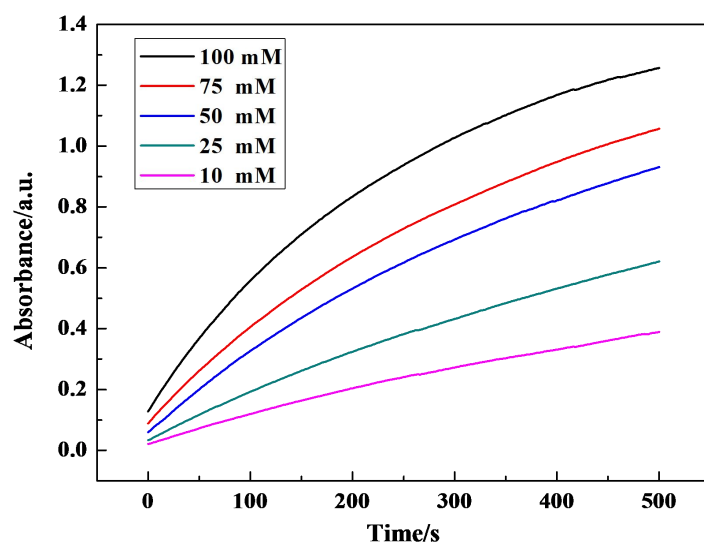


Fig.S5. Effect of hydrogen peroxide concentration on the oxidation of TMB. Reaction conditions: 0.25 mM TMB, [CDs-Pt] = 0.045 mg/mL, in 50 mM HAc-NaAc buffer (pH 4.0).

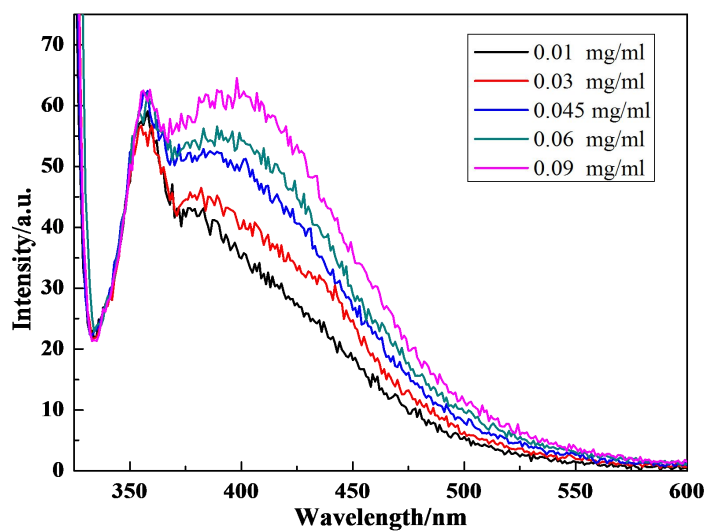


Fig.S6. The fluorescence intensity of CDs-Pt with different concentrations (excited at 315 nm).

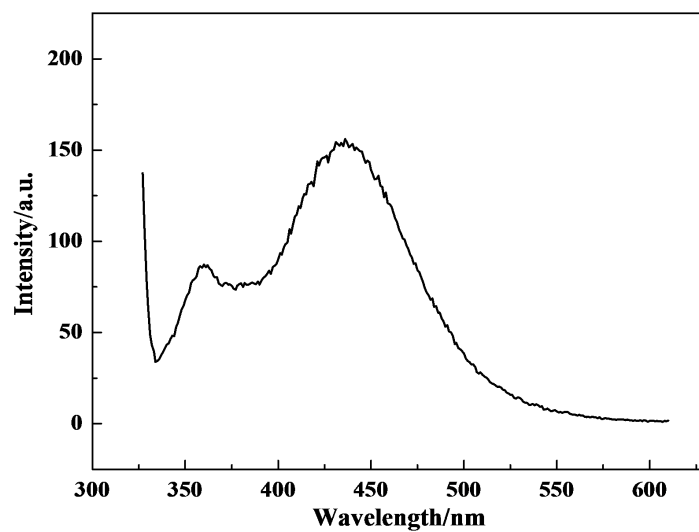


Fig.S7. The fluorescence spectrum of 2-hydroxy terephthalic acid in presence of CDs-Pt and H₂O₂. Reaction conditions: 50 mM H₂O₂, 2.5×10⁻⁴ M terephthalic acid, 0.045 mg/mL CDs-Pt in 50 mM HAc-NaAc buffer (pH 4.0) for 5 min.