

Supporting Information

Construction of a novel electrochemical sensor based on biomass material nanocellulose and its detection of acetaminophen

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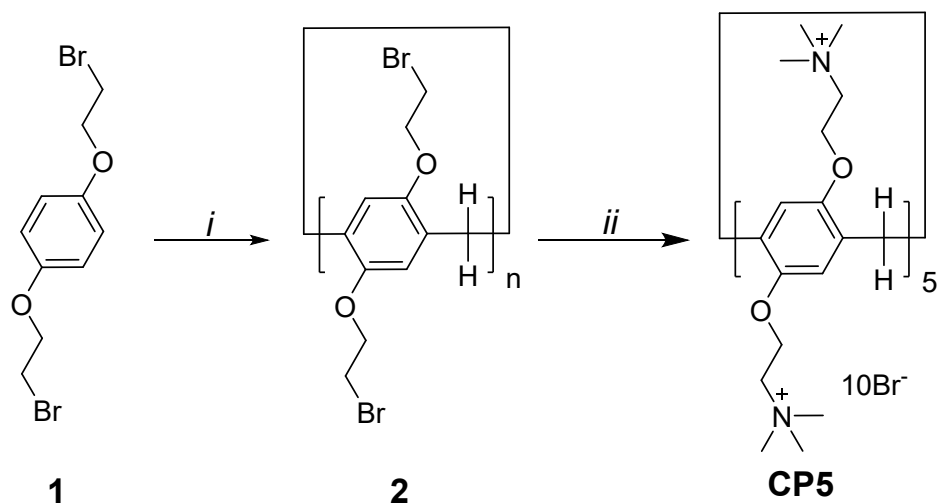


Fig.S1 The synthetic route of CP5.

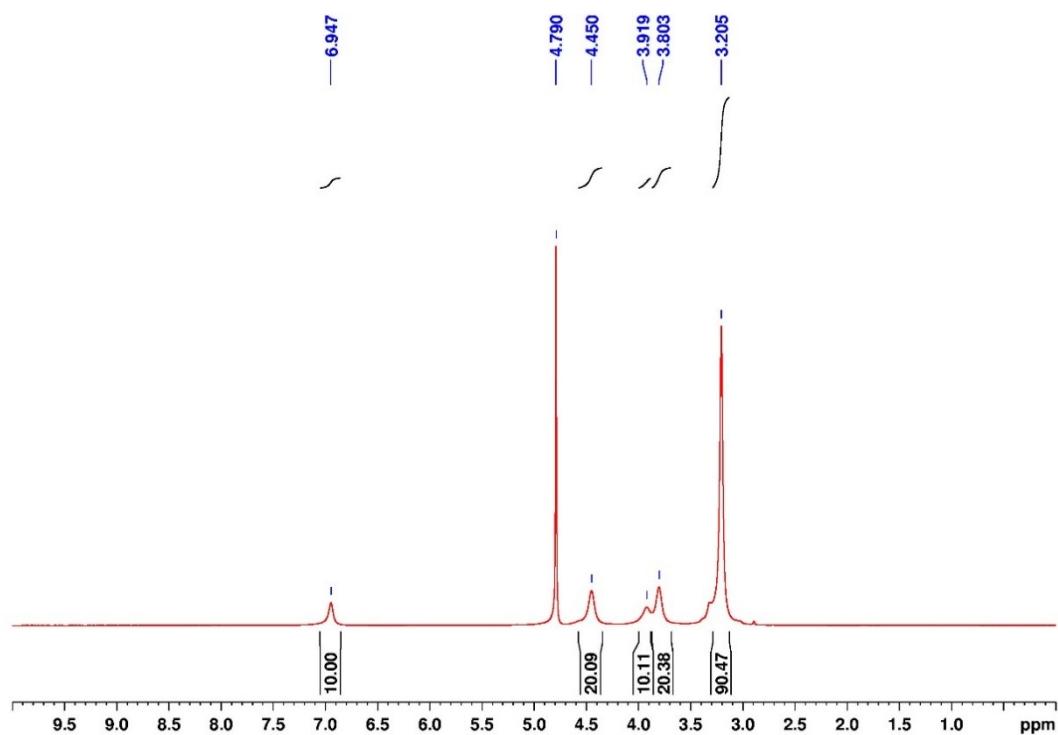


Fig.S2 ^1H NMR spectrum (400 MHz, D_2O , rt) of CP5.

^1H NMR (400 MHz, D_2O , rt) δ (ppm): 6.947 (s, 10H, 10ArH), 4.450 (s, 20H, 10ArOCH₂), 3.919 (s, 10H, 5ArCH₂Ar), 3.803 (s, 20H, 10ArOCH₂), 3.205 (s, 90H, 30NCH₃).

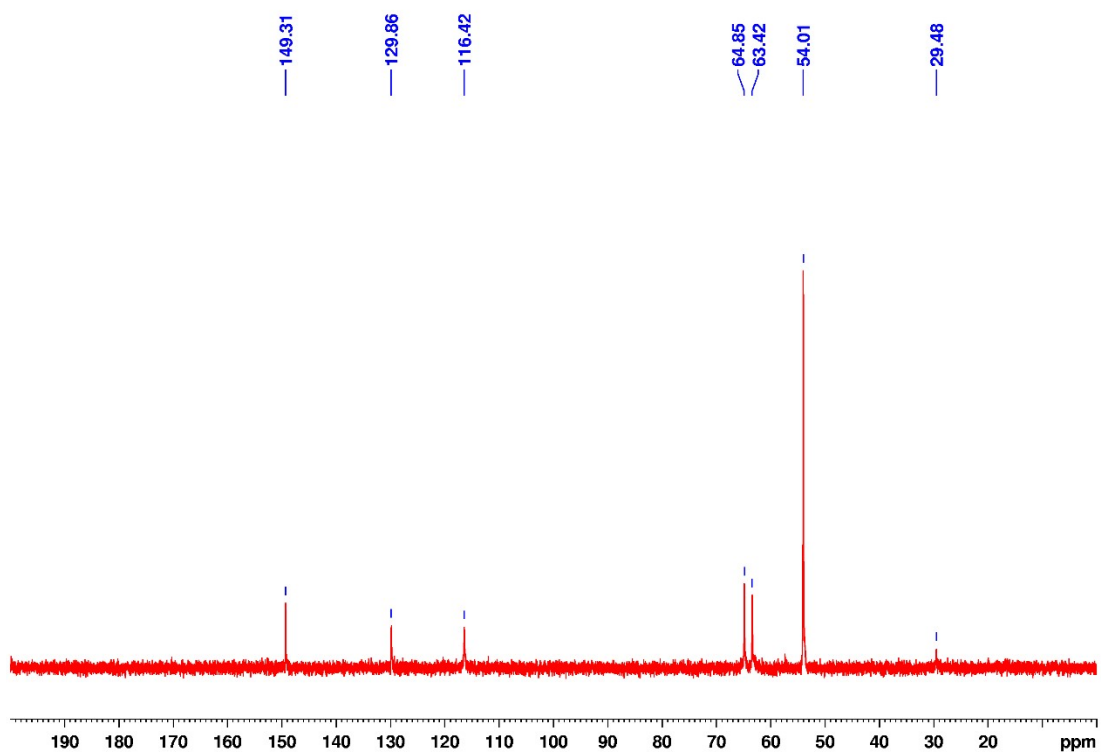


Fig.S3 ^{13}C NMR spectrum (100 MHz, D_2O , rt) of CP5.

^{13}C NMR (100 MHz, D_2O , rt) δ (ppm): 149.31, 129.86, 116.42, 64.85, 63.42, 54.01.

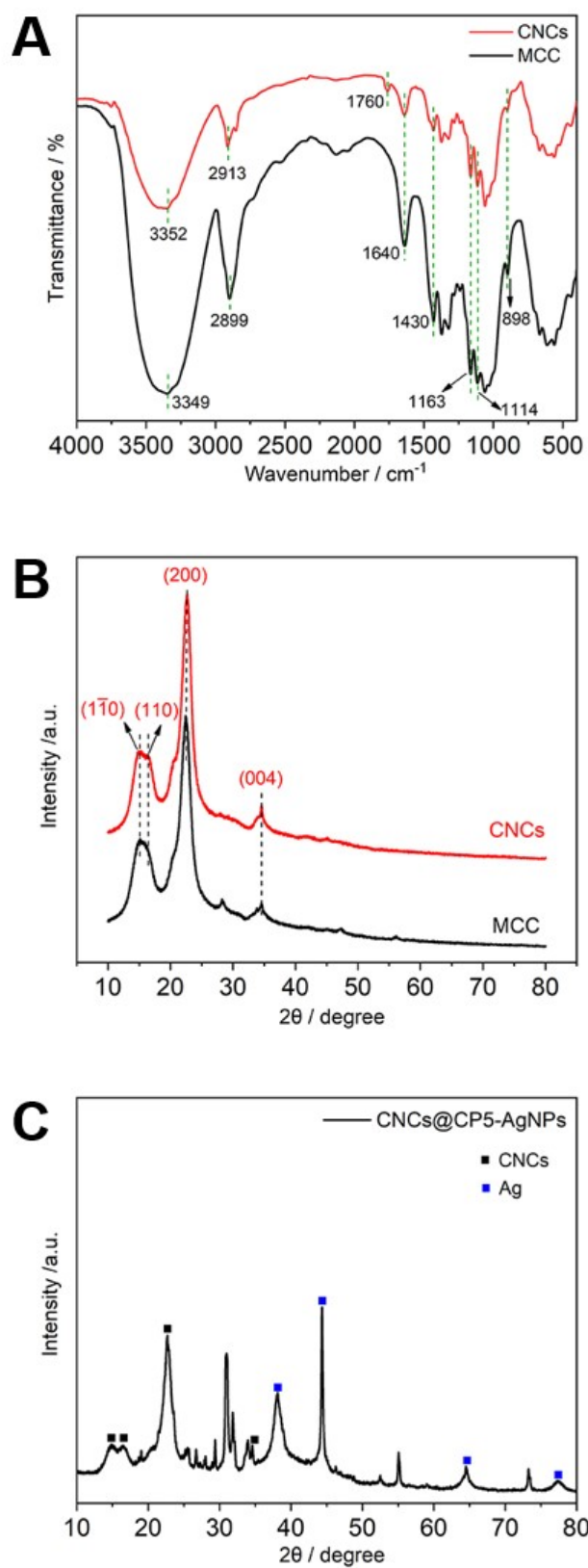


Fig.S4 (A) FT-IR of CNCs and MCC; XRD spectrum of (B) CNCs, MCC; (C) CNCs@CP5-AgNPs.

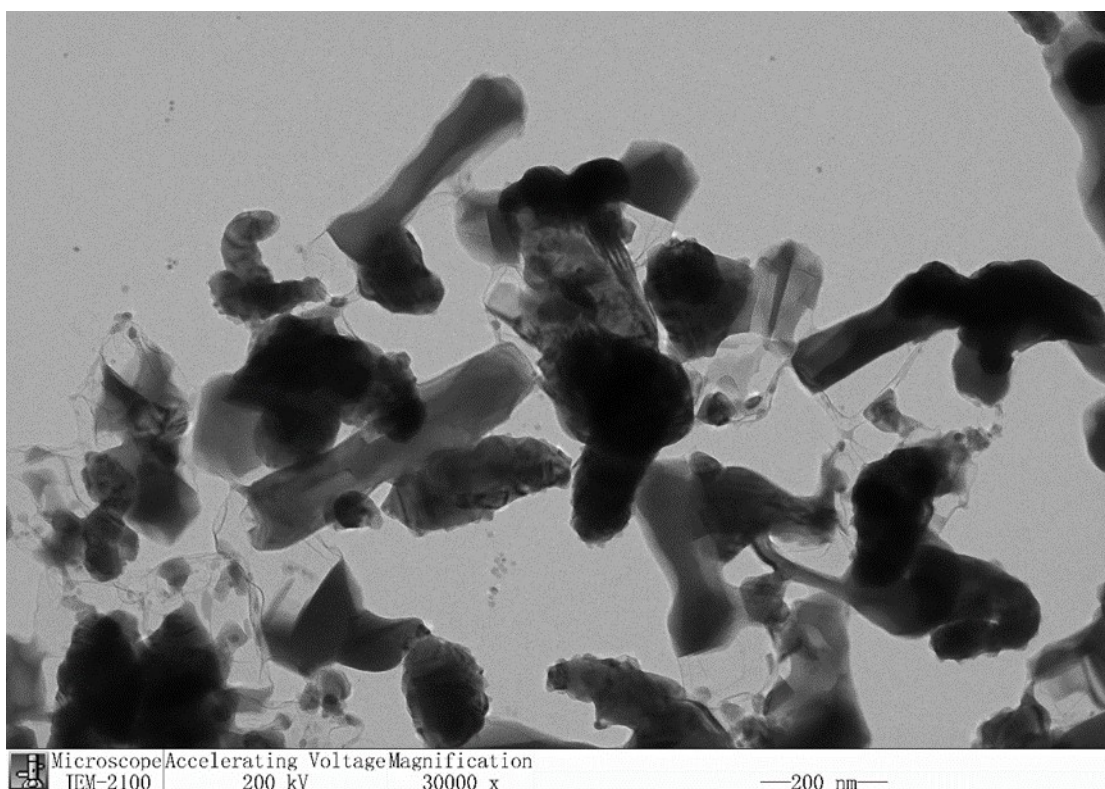


Fig S5 The TEM image of AgNPs was prepared in the absence of CP5.

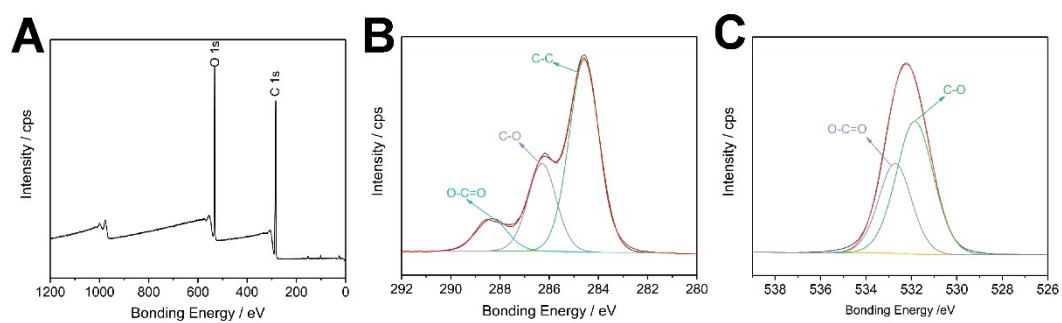


Fig S6 (A) XPS spectrum of CNCs; high-resolution XPS of (B) C 1s; (C) O 1s.

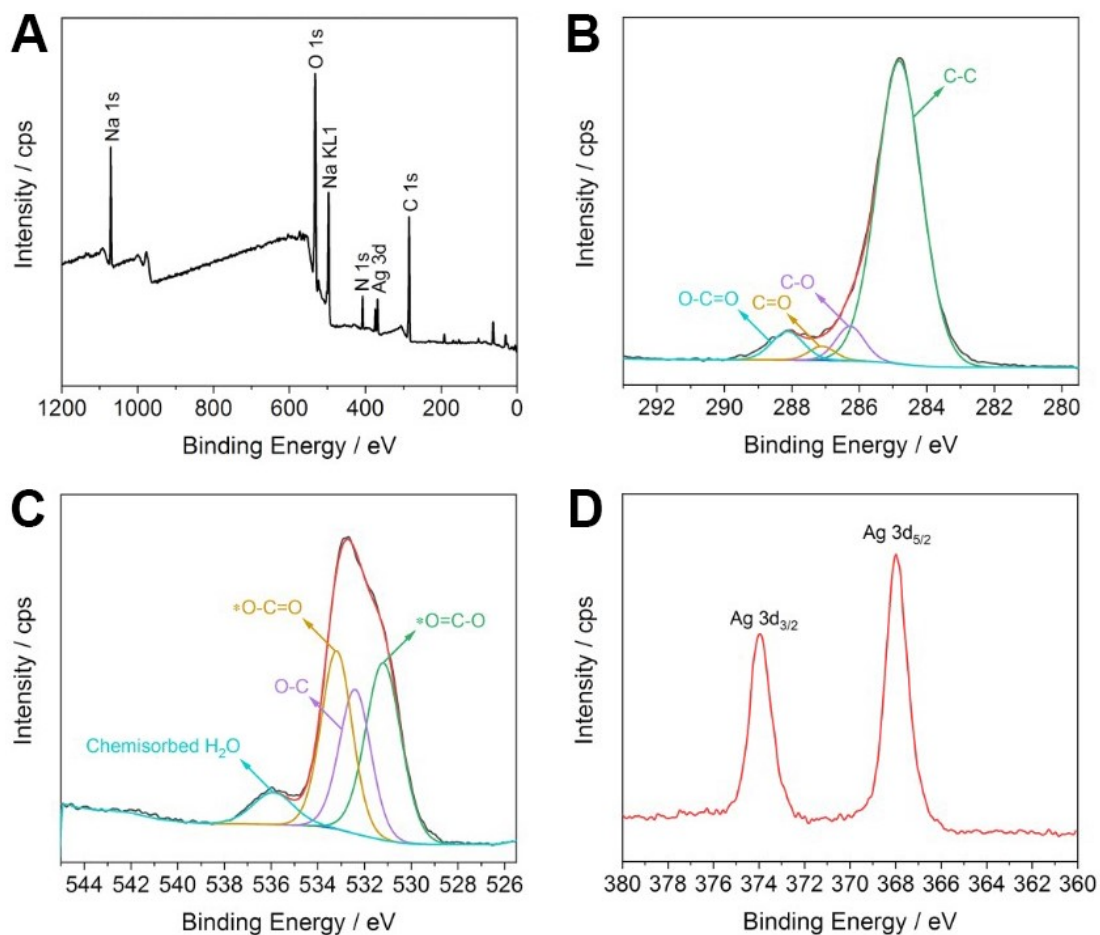


Fig S7 (A) XPS spectrum of CP5-AgNPs; high-resolution XPS of (B) C 1s; (C) O 1s; (D) Ag 3d.

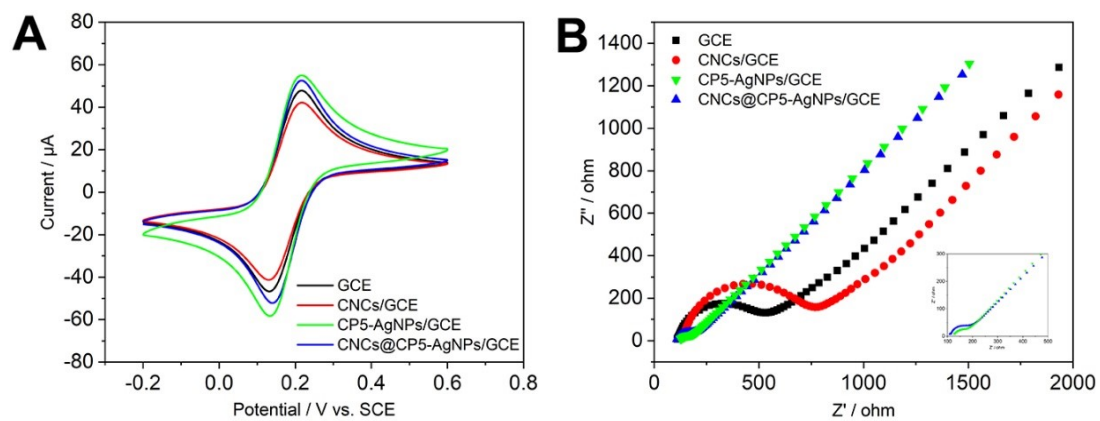


Fig.S8 CV curves of different electrodes in 2 mM [Fe(CN)₆]^{3-/4-} solution(A), EIS spectrum(B).

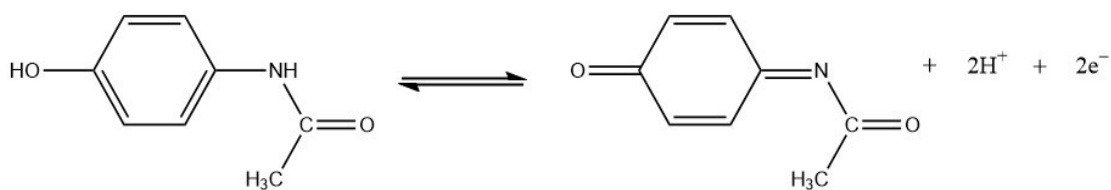


Fig.S9 Reaction mechanism of AP on electrode.

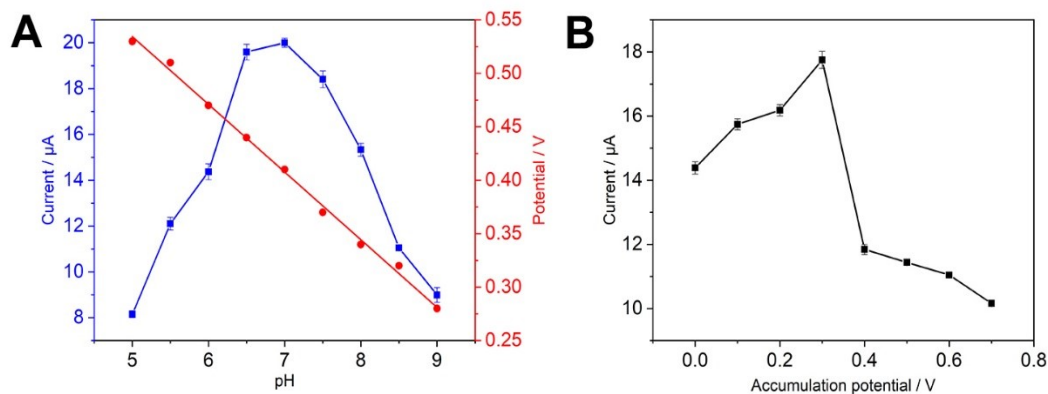


Fig.S10 Effect of pH on peak current and potential of AP(A), effect of accumulation potential on peak current of AP(B).

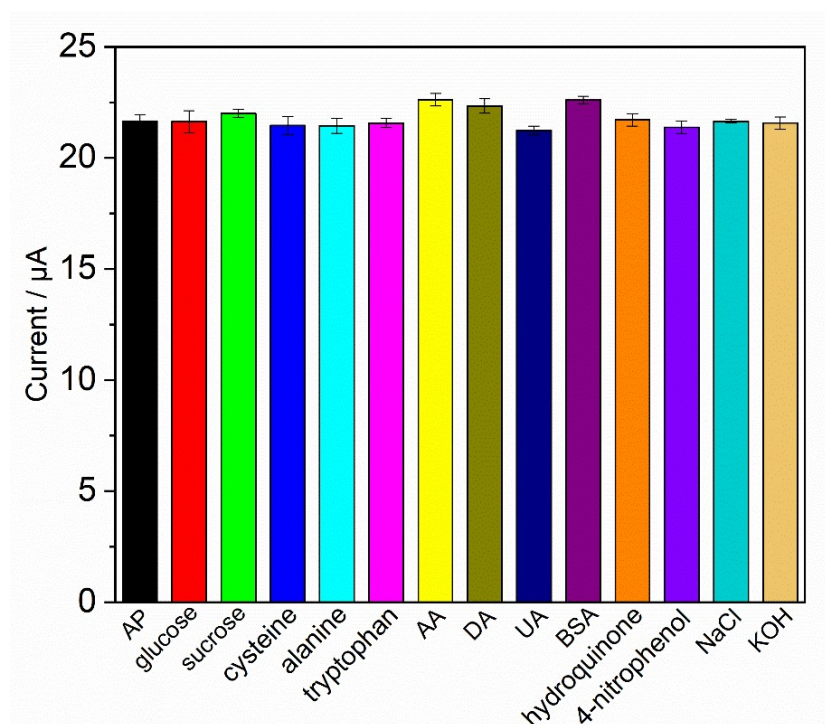


Fig.S11 Selective experiment of AP.