Electronic Supplementary Material (ESI) for RSC Advances.

Supporting information

Bio-AgNPs-based electrochemical nanosensor for sensitive determination of 4-nitrophenol in tomato samples: Role of natural plant extracts on physicochemical parameters and sensing performance

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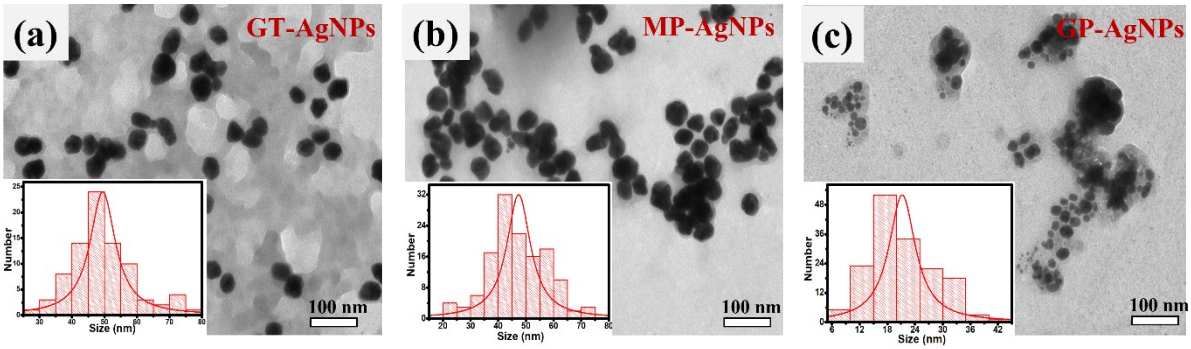

Figure S1: TEM image of bio-AgNPs synthesized using different extracts, (a) GT-AgNPs ; (b) MP-AgNPs ; (c) GP-AgNPs

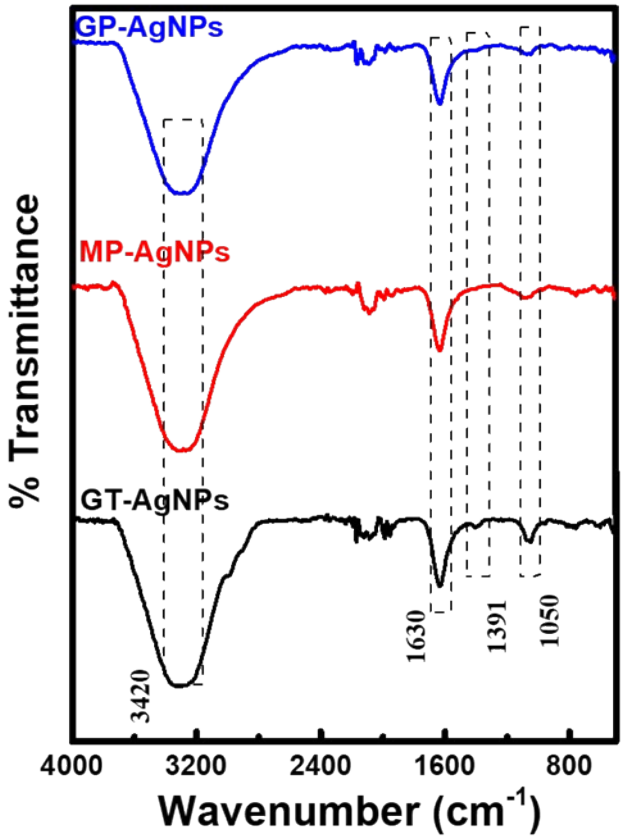

Figure S2: FTIR spectrum of of GT-AgNPs; MP-AgNPs; GP-AgNPs, respectively

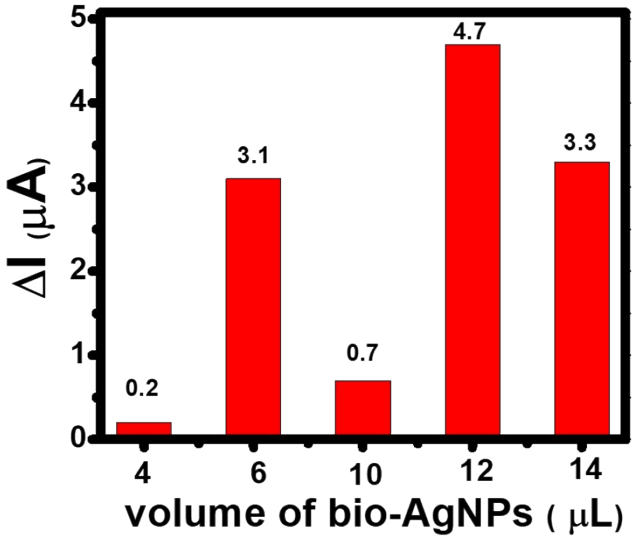

Figure S3: Effect of modifier amounts on the MP-AgNPs/SPE towards 4-NP detection

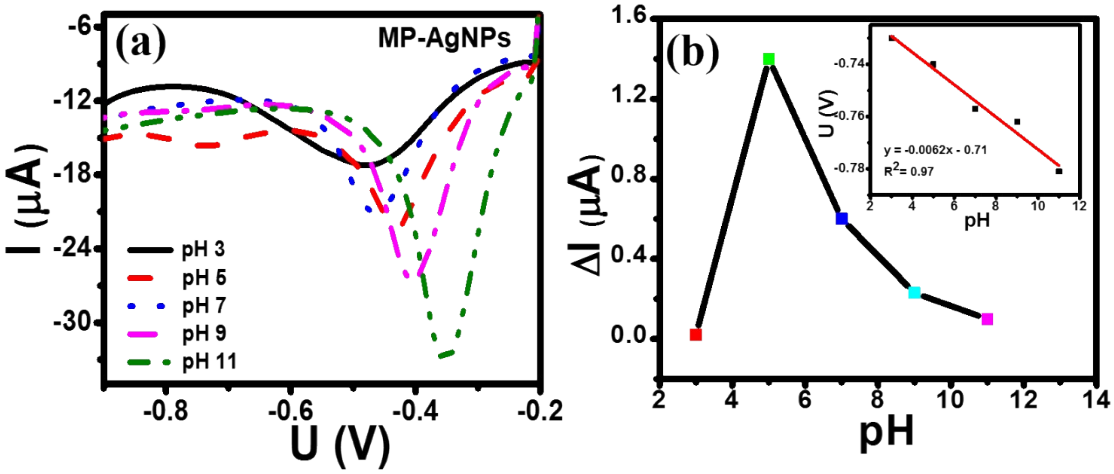

Figure S4: (a) DPV curves of the MP-AgNPs sample in 10 μM 4-NP at various pH values, corresponding to the plots of peak current *vs*. pH with error bars (b), respectively. Scan rate of 50 mV s^{-1}

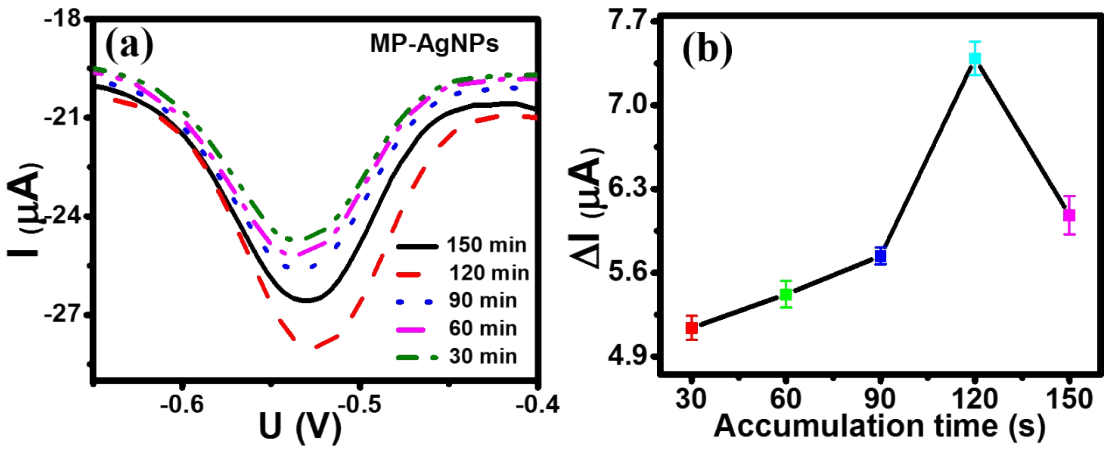

Figure S5: DPVs recorded on the MP-AgNPs modified electrodes with various reaction times using in 0.1M PBS (pH 5) containing 50 µM 4-NP and the plots of peak current *vs*. reaction time with error bars. Scan rate of 50 mV s^{-1}.

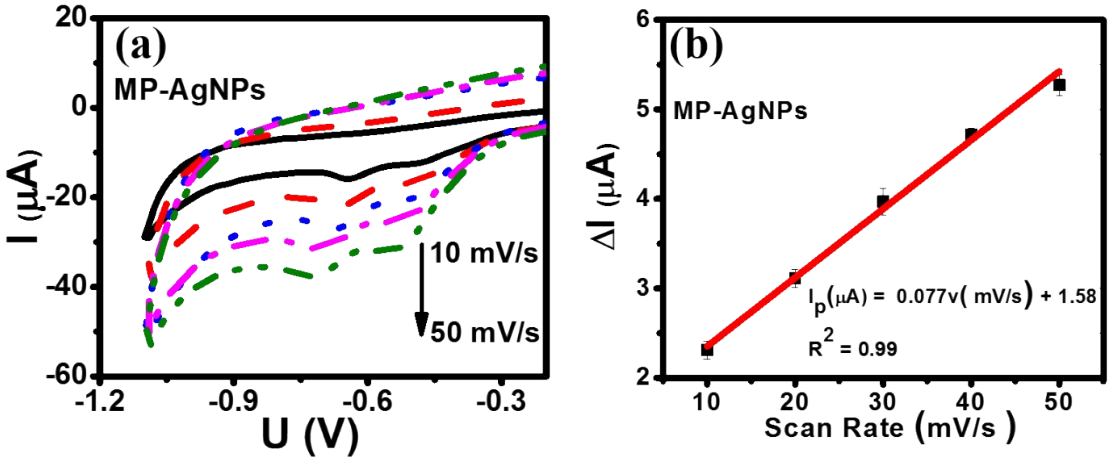

Figure S6: CV response recorded of 50 µM 4-NP in 0.1 M PBS (pH 5) on MP-AgNPs modified electrodes (a) with various scan rates from 10 to 50 mV s^{-1}. Insert shows the corresponding calibration plots of peak current response *vs*. scan rate (b) with error bars

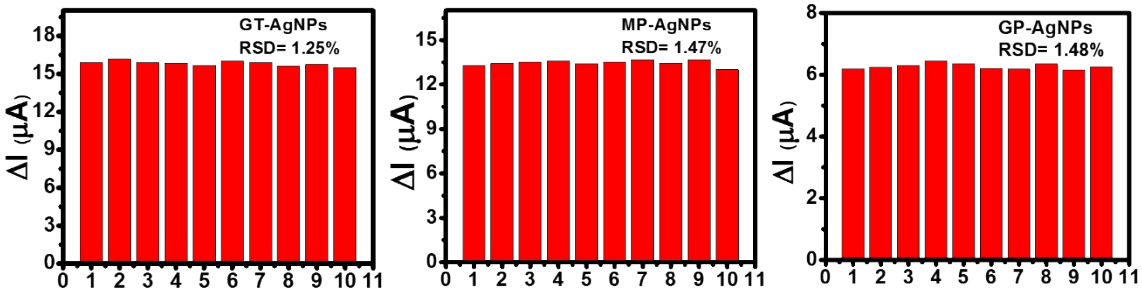

Figure S7: Repeatability of (a) GT-AgNPs; (b) MP-AgNPs; and (c) GP-AgNP- modified electrodes in 50 µM 4-NP using CV measurements

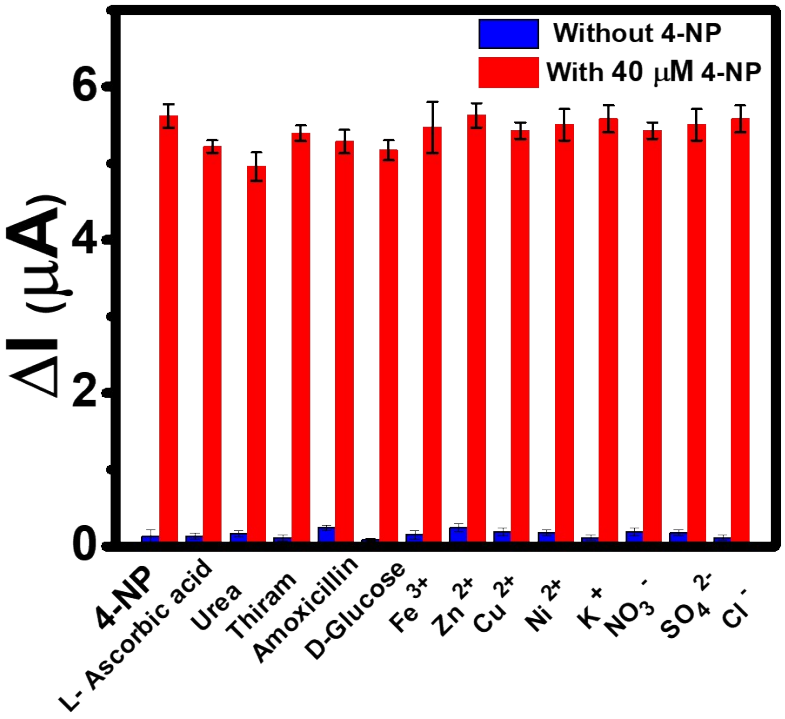

Figure S8: Effect of interference substances on the MP-AgNPs modified electrode in 0.1 M PBS (pH 5) containing 40 μM 4-NP along with 4-fold concentration of interference substances

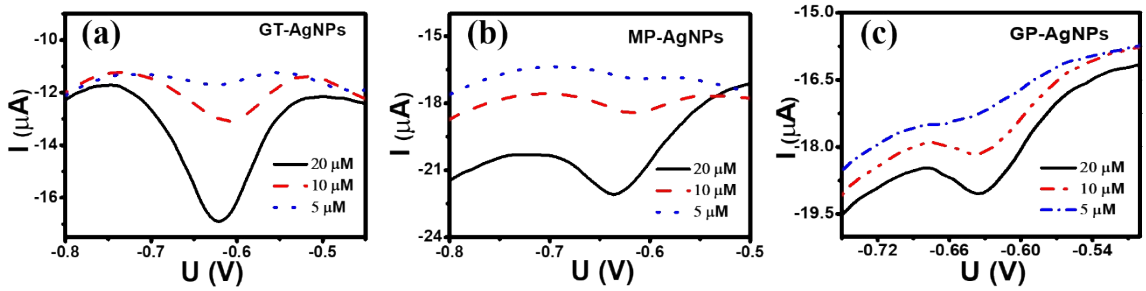

Figure S9: DPV curves of (a) GT-AgNPs; (b) MP-AgNPs; and (c) GP-AgNPs-modified electrodes to detect 4-NP in tomato samples