

**Electronic Supplementary Information for**

**In-situ growth of ZIF-8 on gold nanoparticles/magnetic carbon  
nanotubes for electrochemical detection of bisphenol A**

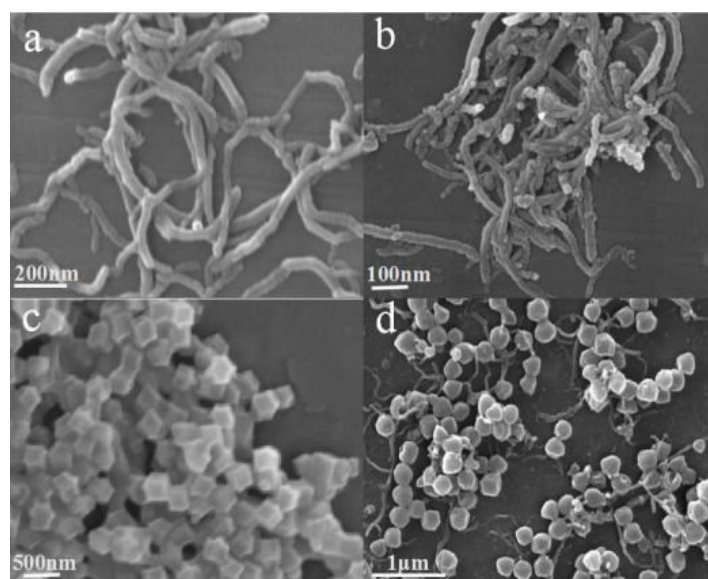
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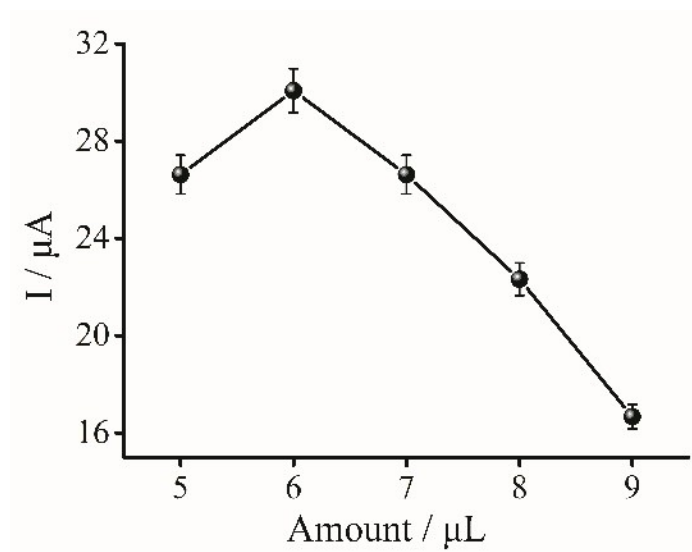
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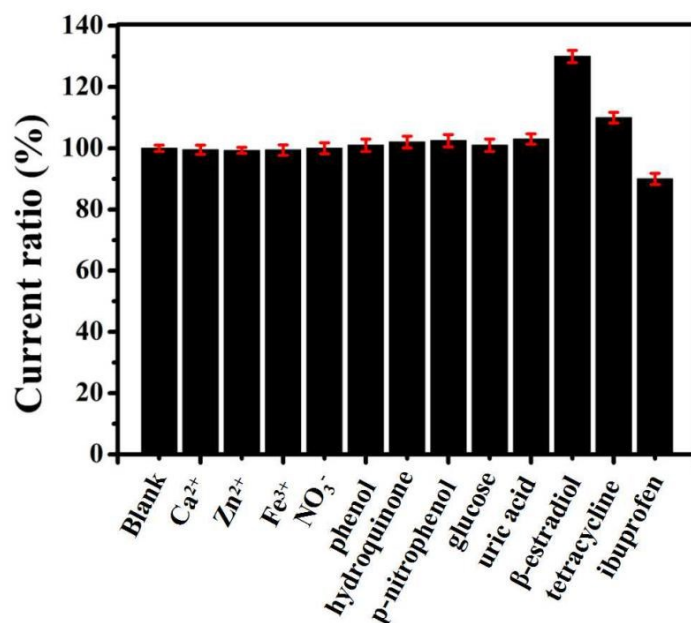
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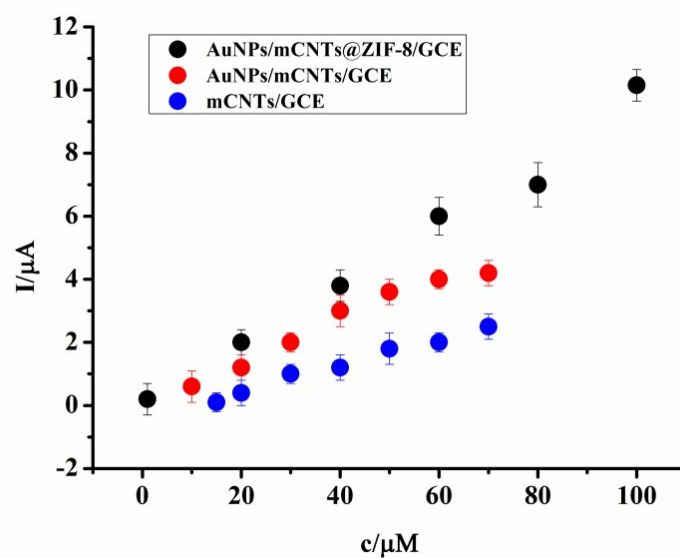
**Fig. S1** SEM of mCNTs (a), AuNPs/mCNTs (b), ZIF-8 (c), AuNPs/mCNTs@ZIF-8 (d)



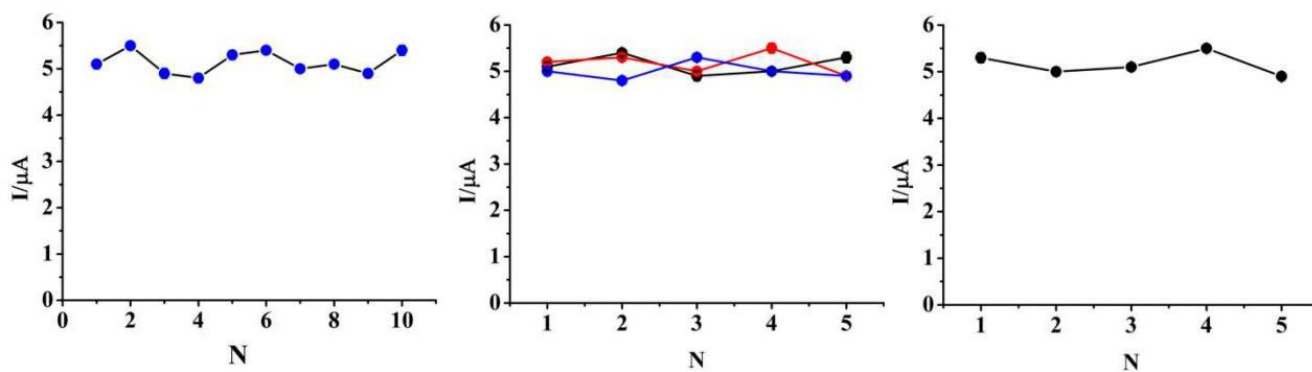
**Fig. S2** Effect of the amounts of AuNPs/mCNTs@ZIF-8 nanocomposites modified on the GCE in 0.1M PB buffer (pH=6) containing 50 μM BPA .



**Fig. S3** Peak currents of possible interfering species in the presence of 50  $\mu\text{M}$  BPA in 0.1 M PB buffer (pH=6).



**Fig. S4** Calibration curves of BPA on bare glassy carbon electrode coated with AuNPs/mCNTs@ZIF-8, AuNPs/mCNTs, mCNTs in the presence of BPA (from 1 to 100  $\mu\text{M}$ ) in 0.1 M PB buffer (pH=6).



**Fig. S5** DPV for 50  $\mu\text{M}$  bisphenol A in 0.10 mol  $\text{L}^{-1}$  phosphate buffer solution (pH 6) on AuNPs/mCNTs@ZIF-8/GCE. Parameters: pulse amplitude 50 mV and scan rate 10  $\text{mV s}^{-1}$ . Ten consecutive experiments made at the same day (a), five consecutive experiments made in three different days (b), five consecutive experiments made in the same day without renewing the surface between the measurements.

**Table S1** Electrochemical parameters of mCNTs/GCE, AuNPs/mCNTs/GCE, AuNPs/mCNTs@ZIF-8/GCE, and bare electrode obtained from the analysis impedance data with the Randle's circuit [R(C[RW])]

Electrode	$R_s$ ( $\Omega$ )	Cdl ( $\mu\text{F}$ )	$R_{ct}$ ( $\Omega$ )	$W$ ( $\mu\text{F}$ )
GCE	362.1	4.84	126.1	1194.2
mCNTs/GCE	361.4	4.91	124.2	1504.63
AuNPs/mCNTs/GCE	360.2	5.67	79.2	417.95
AuNPs/mCNTs@ZIF-8/GCE	362.7	5.03	112.3	997.84

**Table S2** Determinations of BPA in real samples.

Sample	Added ( $\mu\text{M}$ )	Founded ( $\mu\text{M}$ )	Recovery (%)	RSD (%)
Pond water	0	0	-	-
	20	21.5	107.5	4.2
	80	80.8	101.0	1.1
Tap water	0	0	-	-
	20	19.3	96.5	5.8
	80	79.4	99.3	1.8
River water	0	0	-	-
	20	20.6	103.0	3.9
	80	78.9	98.6	1.6