Electronic Supplementary Material (ESI) for Analytical Methods.

A novel bisphenol A electrochemical sensor based on molecularly imprinted polymer/carbon nanotubes-Au nanoparticles/boron-doped ordered mesoporous carbon composite

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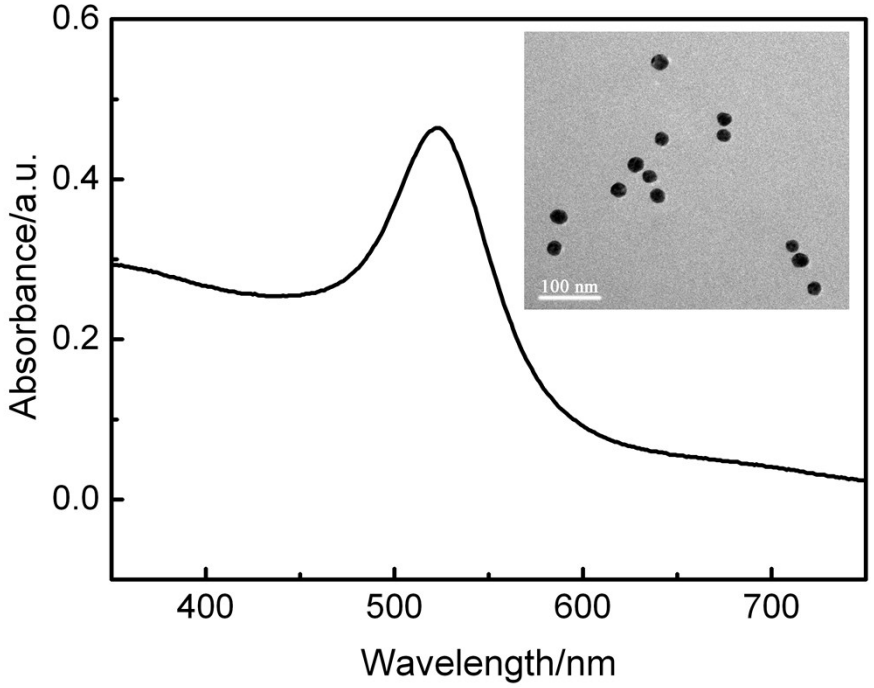

Fig. S1. The UV-vis absorption spectrum and the TEM image of the prepared Au NPs.

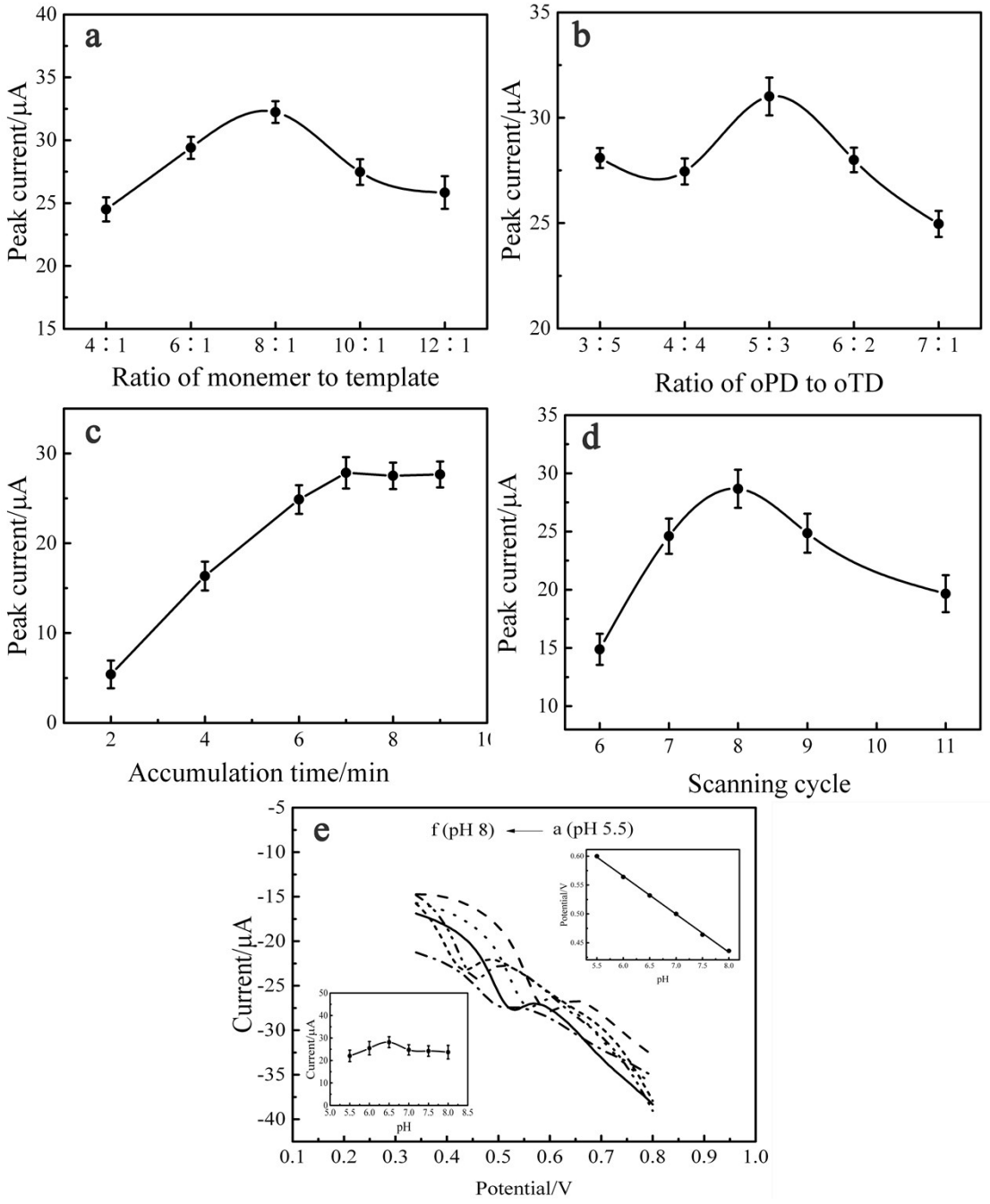

Fig. S2. Effects of differentconditions on the response of the sensor to BPA:(a) molar ratio of monomer to template, (b) molar ratio of oPD to oTD, (c) accumulation time, (d) number of scanning cycle for electropolymerization, (e) solution pH.

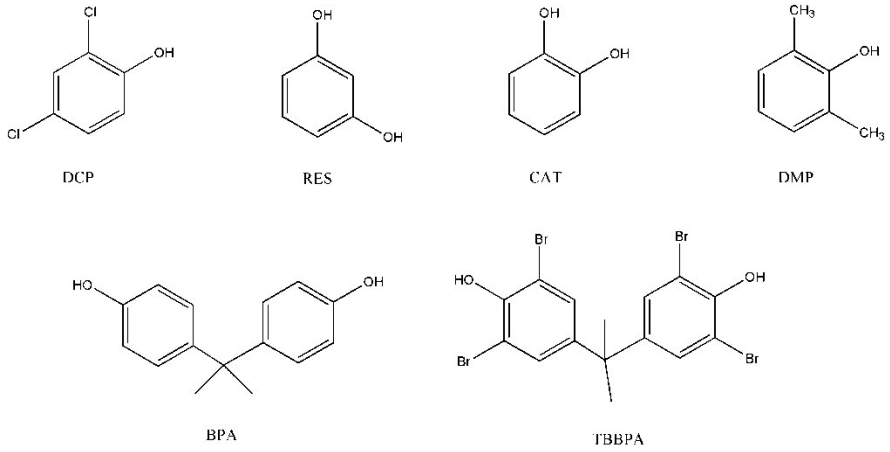

Fig. S3. The chemical structural formulas of BPA and its analogs

Table S1. Comparison of the performance of the BPA sensor with other reported sensors.

Sensors	Linear (μM)	LOD (μM)	Reference
MIPPy/GQDs/GCE	0.1-50	0.04	3
Pt NPs/Gr–CNTs/GCE	0.06-10	0.042	30
Magnetic NPs/rGO /GCE	0.06-11	0.017	31
SBA-15 molecularly imprinted/ GCE	0.1-500	0.032	32
MIPs/ MWCNT paste electrode	0.08-100	0.022	33
MMIPs NPs/CTAB/CPE	0.6-100	0.1	34
MIPs/AuNPs-CNTs-Au NPs/BOMC/GCE	0.01-10	0.005	This work

Note: GCE: glassy carbon electrode; MMIP: magnetic molecularly imprinted nanoparticles; CTAB: cetyltrimethyl ammonium bromide; GQDs: graphene quantum dots; Pt NPs: Pt nanoparticles; Gr–CNTs: graphene–carbon nanotubes; CPE: carbon paste electrode; CNTs: multiwalled carbon nanotubes; rGO:reduced graphene oxide.

Table S2. Determination results of BPA in real samples using the proposed method.

Samples	Added (μM)	BPA detected (μM)	Recovery (%)	RSD (*n*=5) (%)
Milk 1	0	0	—	—
	1	1.07	107	4.6
	7	6.88	98.2	3.9
Milk 2	0	0	—	—
	1	1.02	102	4.4
	7	6.87	98.1	4.2
Milk 3	0	0	—	—
	1	0.98	98	4.9
	7	7.11	101.5	4.8