Supplementary Information

Hydrothermal synthesis of NiFe2O4 nanoparticles as an efficient electro catalyst for the electrochemical detection of bisphenol-A

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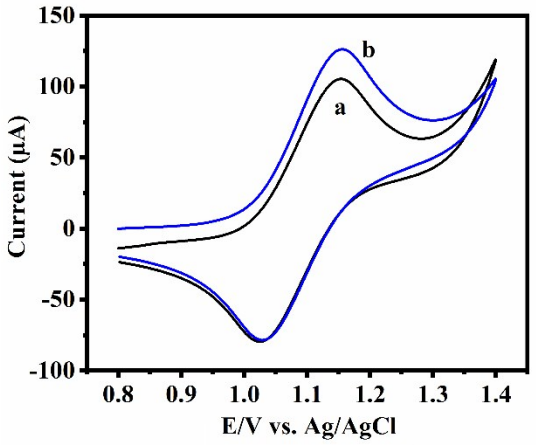

Fig. S1: CV studies of the bare SPCE (a), and NFO/SPCE (b) in the 5 mM $[Ru(bpy)_3]^{2+}$/0.1 M KCl) with scan rate of 50 mVs^{-1}.

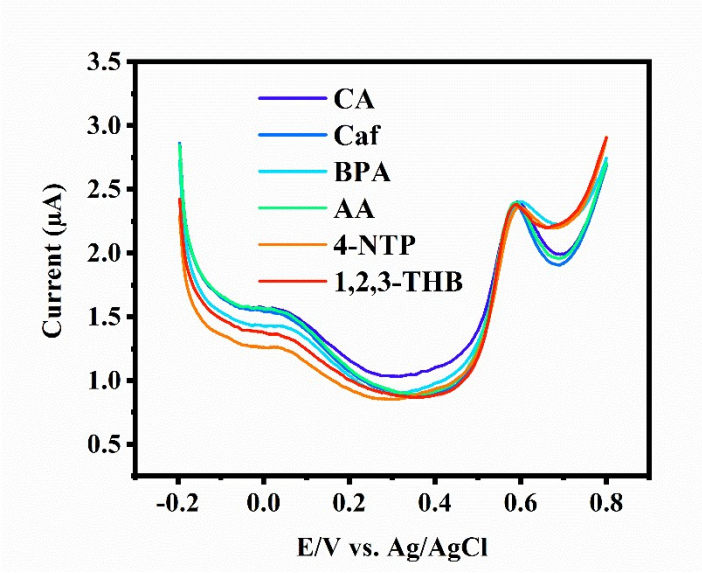

Fig. S2: DPV response peaks of different concentration of phenolic and rich polyphenolic interfering compounds on NFO/SPCE at 50 mVs^{-1} in PBS (7.0)

Table S1: Previously published report in comparison with proposed sensor

Electrode	**LOD** (nM)	**Linear range (µM)**	**Method**	**Reference**
GNPs−MWCNTs−CS/GCE	0.05	0.1–100	DPV	[1]

thionine–CB–SPE	200	0.5–50	i-t	[2]
Au-Cu@BSA-GNRs/GCE	4.0	2.0– 0	SWASV *	[3]
MWCNT−PDDA−AuPd	60	0.18–18	DPV	[4]
MB−incubated SH−*β*−CD/NPGL/GE	60	0.3–100	SWV	[5]
AuNPs /CBNPs/SPCE	8.8	0.07–10	DPV	[6]
$NiFe_2O_4$/SPCE	6.0	0.02–12.5	DPV	Present work

GNPs−MWCNTs−CS/GCE: Graphene nanoplatelets (GNPs), multiwalled carbon nanotube (MWCNTs) and chitosan (CS) modified glassy carbon electrode**;** thionine–CB–SPE: laccase–thionine–carbon black-modified screen-printed electrode; Au-Cu@BSA-GNRs/GCE: Au-Cu bimetallic nanoclusters–bovine serum albumin–graphene nanoribbons modified glassy carbon electrode; MWCNT−PDDA−AuPd: Poly (diallyldimethylammonium chloride)–AuPd (gold palladium) bimetallic incorporated carboxylic multi-walled carbon nanotubes; MB−incubated SH−*β*−CD/NPGL/GE: gold leaf (NPGL) with thiolated beta-cyclodextrin (SH-*β*-CD)**;** AuNPs /CBNPs/SPCE: Screen printed carbon electrode modified with molecularly imprinted polymer (US-MagMIP) and carbon black nanoparticles (CBNPs)

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Table S2: Determination of BPA in tea samples

Sample	**BPA concentration (µM)**		**Recovery (%)**	**RSD (%)**
	Added	**Found**		
Black tea	1.5	1.44	96.0	1.9
	2.5	2.48	99.2	1.3
	4.5	4.34	97.58	1.8
	6	5.79	96.5	2.5
Green tea	2	1.94	97	1.4
	4	3.88	96.75	1.3
	6.5	6.32	97.23	2.3

	8	8.09	101.1	1.6

References

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