Electronic Supplementary Material

Magnetic solid phase extraction using polydopamine coated magnetic multiwalled carbon nanotube composites coupled with high performance liquid chromatography for the determination of chlorophenols

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Fig. S1.

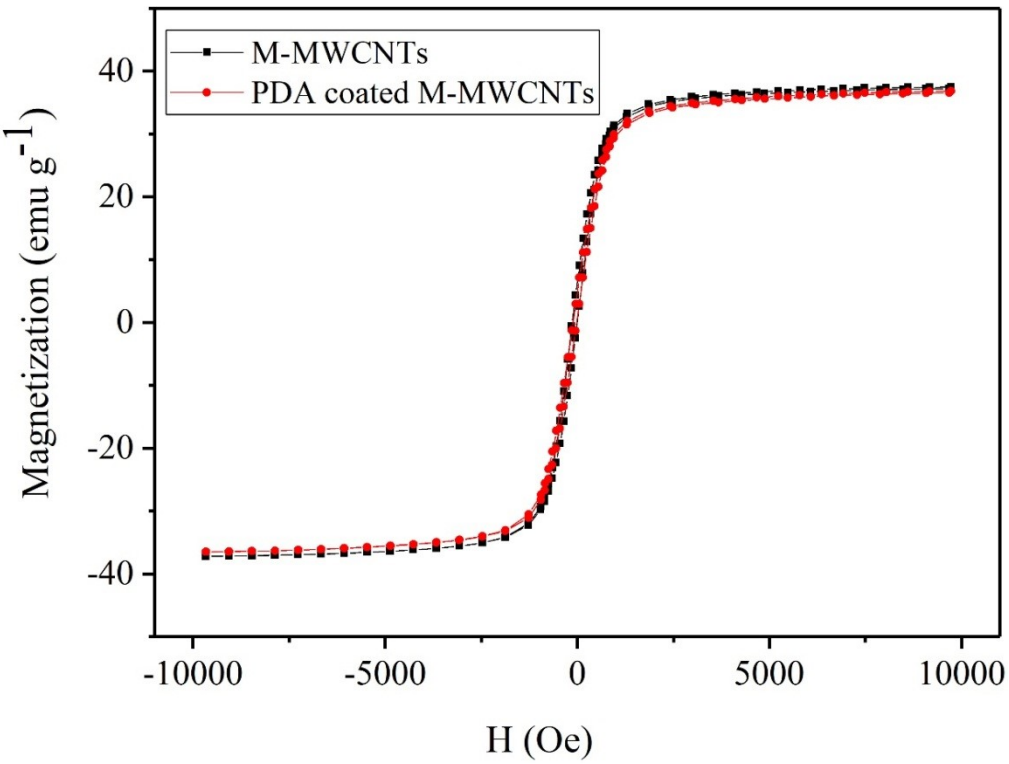
M-MWCNTs
PDA coated M-MWCNTs
Magnetization (emu g-1)
40
20
0
-20
-40
-10000
-5000
0
5000
10000
H (Oe)

Fig. S2.

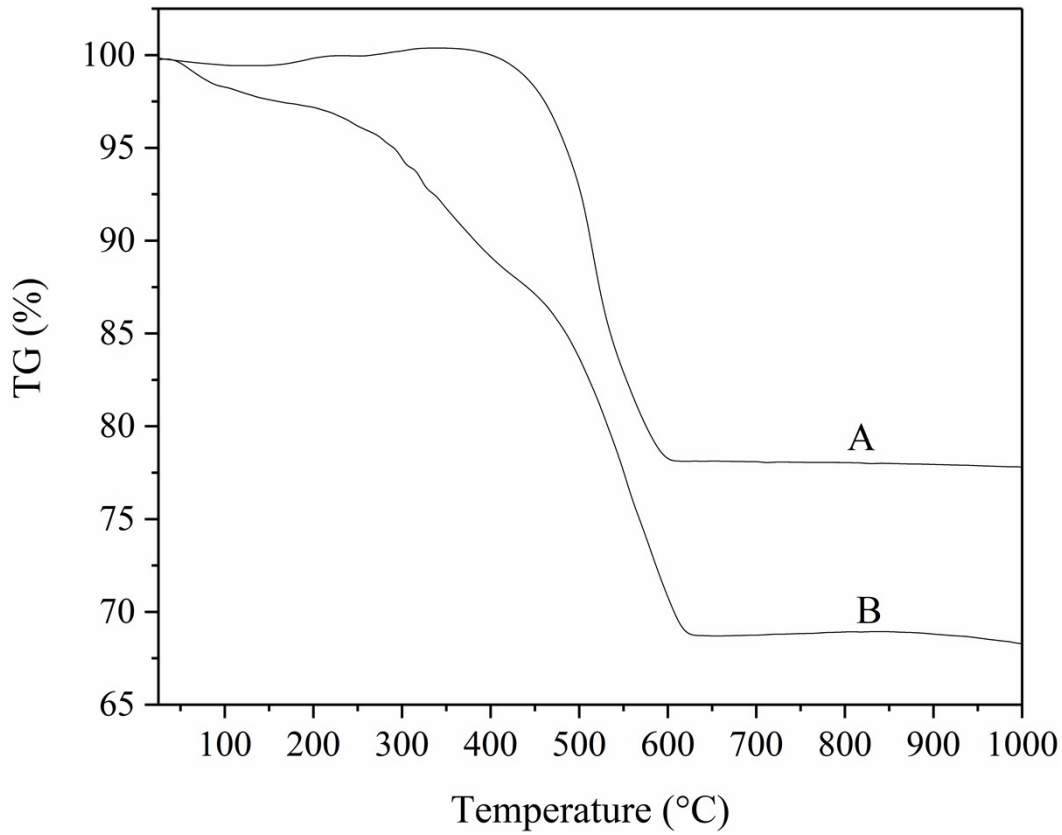
TG (%)
100
95
90
85
80
75
70
65
A
B
100
200
300
400
500
600
700
800
900
1000
Temperature (°C)

Fig. S3.

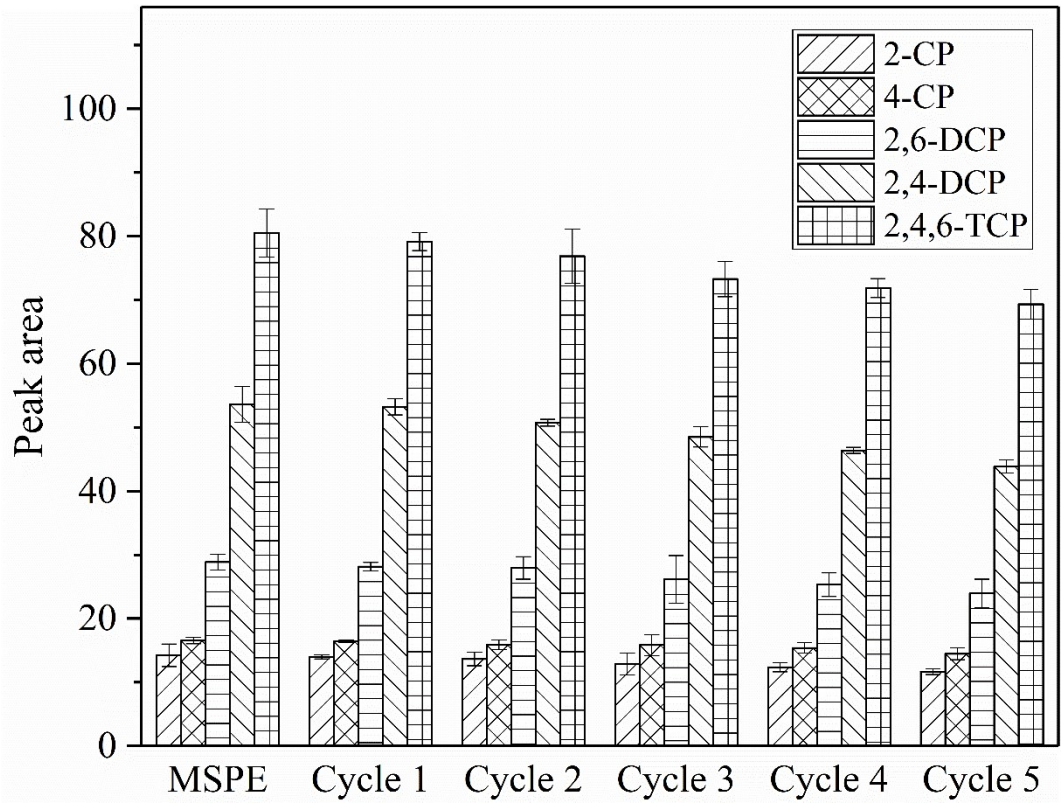

Table S1. Magnetic parameters of M-MWCNTs and PDA coated M-MWCNTs

Adsorbents	Saturation magnetization (Ms, emu g^{-1})	Residual magnetization (Mr, emu g^{-1})	Coercivity (Hc, Oe)
M-MWCNTs	37.5	3.66	63.8
PDA coated M-MWCNTs	36.8	3.17	44.8

Table S2. Comparison of this proposed method with reported MSPE-HPLC method for CPs in water samples

Analyte	Adsorbent	Linear range (μg L^{-1})	LOD (μg L^{-1})	Recovery (%)	sample	Ref.
4-CP, 2,4-DCP, 2,4,6-TCP, 2,3,5,6-TeCP, PCP	Fe_3O_4@SiO_2@IL-MIPs	500–50000	50	83.0–96.9	seawater	38
2-CP, 2,4-DCP, 2,4,6-TCP	Fe@SiO_2@PANI	60–10000 for 2-CP, 40–10000 for 2,4-DCP, 90–10000 for 2,4,6-TCP	10–30	83.4–118.5	river water, reservoir water, wastewater	39
2-CP, 4-CP, 2,3-CP, 3, 4-CP	Fe_3O_4@C nanocomposite	0.1–100	0.01–0.03	92.0–99.0	lake water	40
2-CP, 3-CP, 2,3-DCP, 3,4-DCP	magnetic porous carbon	1.0–100.0	0.10–0.12	90.8–102.3	mineral water	41
2-CP, 4-CP, 2,4-DCP, 2,4,5-TCP	carbon-coated magnetic nanoparticles	500–20000	140–430	94.0–99.4	tap water, industrial effluent, well water	42
2-CP, 4-CP, 2,4-DCP, 2,6-DCP, 2,4,6-TCP	PDA coated M-MWCNTs	2.0–200 for 2-CP, 4-CP, 1.0–200 for 2,4-DCP, 2,6-DCP, 2,4,6-TCP	0.10–0.31	76.87–106.5	tap water, river water, lake water, sea water	This work

Abbreviation: TeCP, tetrachlorophenol; IL, ionic liquid; PANI, polyaniline