

# A semi-covalent molecularly imprinted fluorescent sensor for highly specific recognition and optosensing of bisphenol A

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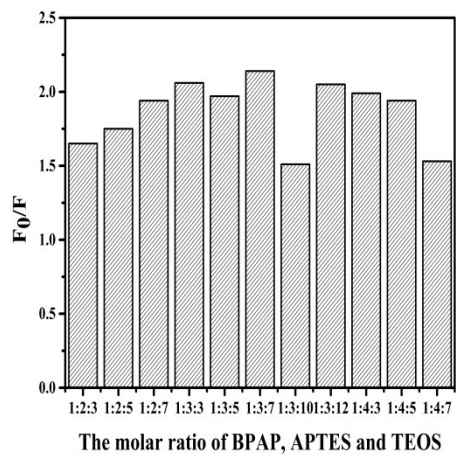
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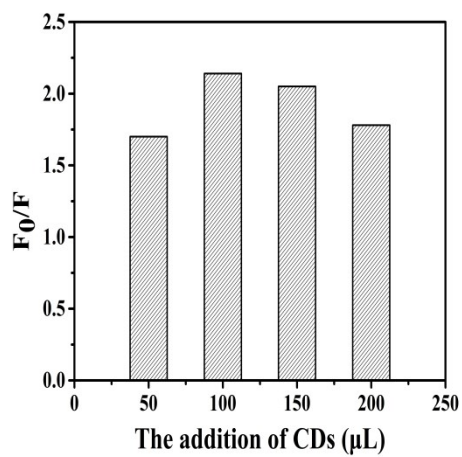
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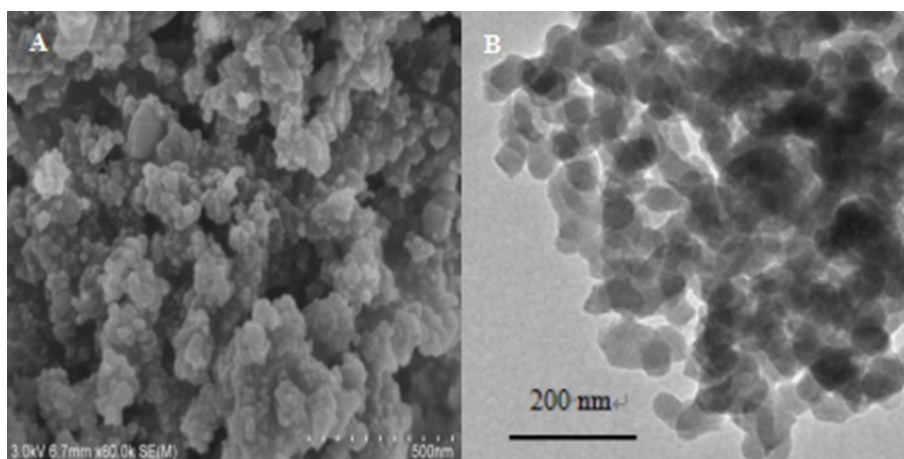
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**Fig.S1** Effects of molar ratio of template molecule, functional monomers and cross-linker on imprinting effect of CDs@MIP.

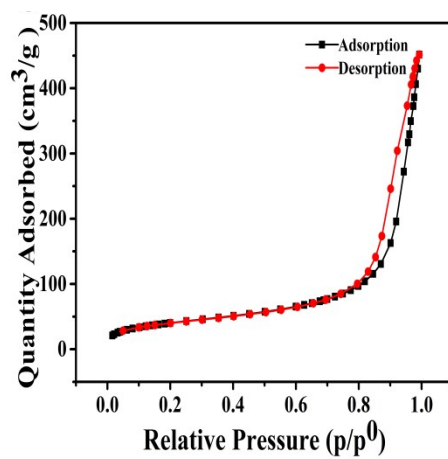


**Fig. S2** Effects of additional volume of CDs on imprinting of CDs@MIP.

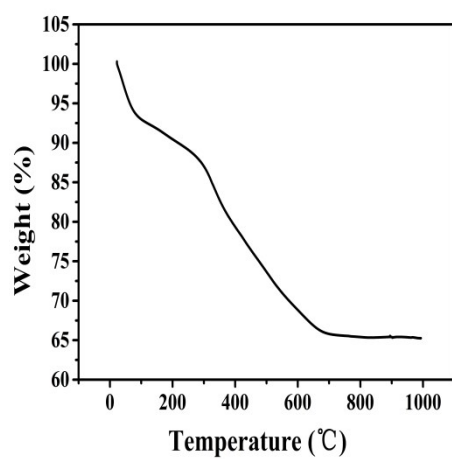


**Fig.S3** Scanning electron microscopy (A) and transmission electron microscopy (B) images of

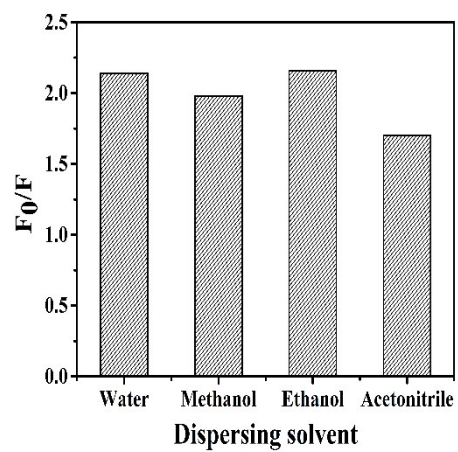
CDs@MIP.



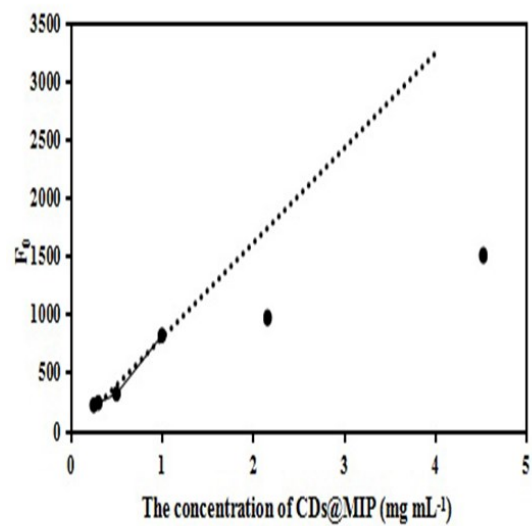
**Fig. S4** N<sub>2</sub> adsorption-desorption curves for CDs@MIP



**Fig. S5** Thermo-gravimetric analysis curve of CDs@MIP in N<sub>2</sub>.

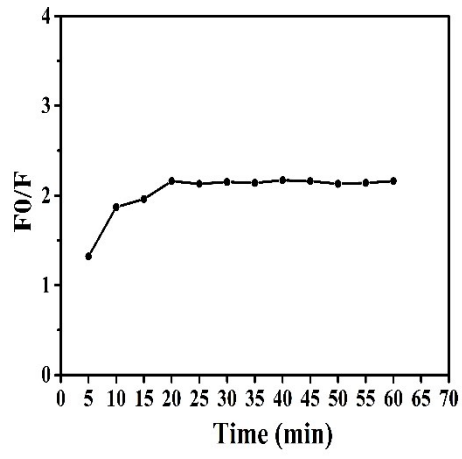


**Fig. S6** Effects of dispersing solvent on CDs@MIP imprinting.

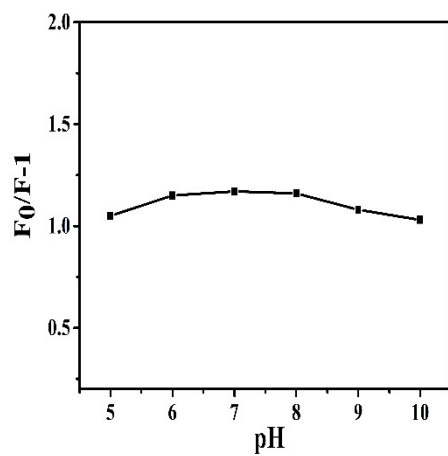


**Fig. S7** Effects of CDs@MIP concentration on fluorescence intensity.

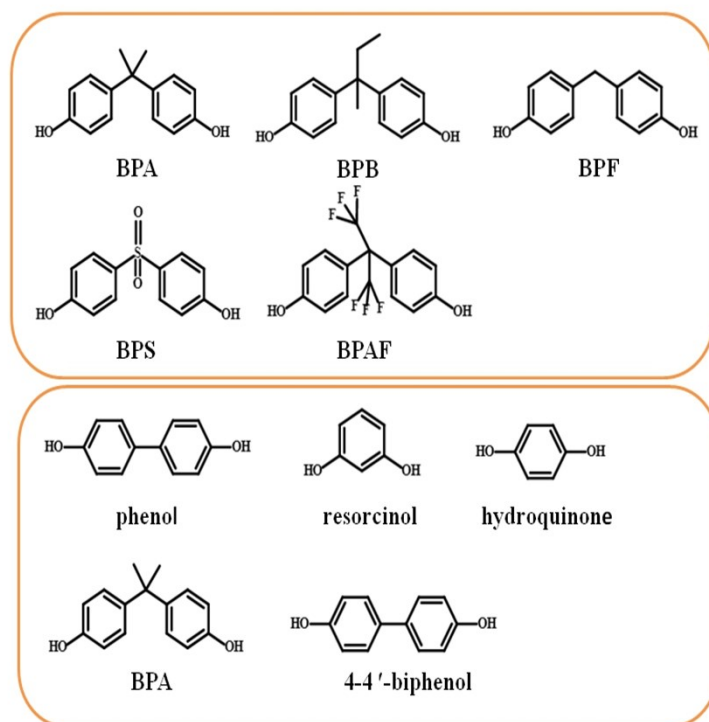




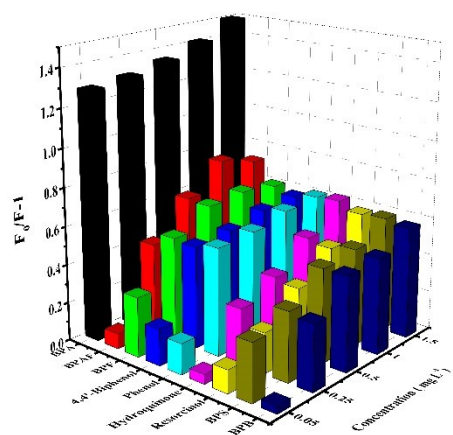
**Fig. S8** Kinetic uptake of BPA molecules on to CDs@MIP



**Fig. S9** Effect of pH on the fluorescence change of CDs@MIP sensor

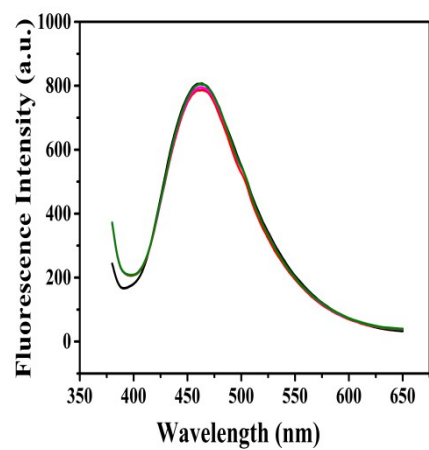


**Fig. S10** Structures of BPA analogues.

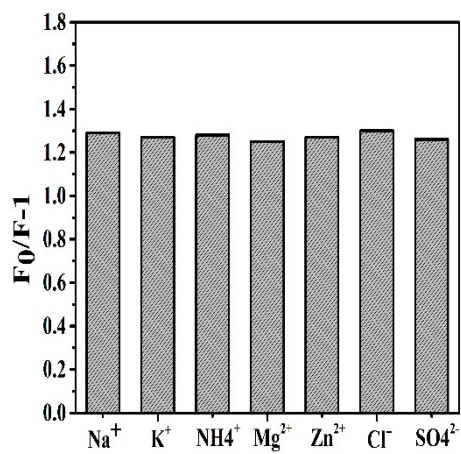


**Fig. S11** Selective adsorption of CDs@MIP to different concentration of BPA, BPB, BPS, BPF,

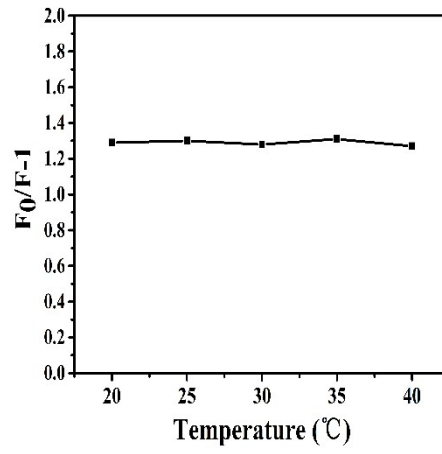
BPAF, phenol, hydroquinone, 4,4'-biphenol and resorcinol.



**Fig. S12** Fluorescence spectra of CDs @ MIP from four different batches.



**Fig. S13** Influence of potentially interfering ions on fluorescence response of CDs@MIP



**Fig. S14** Effect of temperature on the fluorescence change of CDs@MIP sensor

**Table S1** Comparison of different methods for BPA detection

Categorys	CDs@MIP sensor	Reported methods	References
pH	5-10	4	43
Linear range	0.025-2 mg L <sup>-1</sup>	0.0228-0.57 mg L <sup>-1</sup>	42
Response time	20 min	40 min	41
Limit of detection	0.016 mg L <sup>-1</sup>	0.0228 mg L <sup>-1</sup>	40