Supporting Information

Carbon dots-MnO_2 nanocomposites for As(III) detection in groundwater with high sensitivity and selectivity

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Figure captions:

Fig. S1 UV absorption spectra (a), fluorescence excitation spectra (b) and emission spectra (c) of CDs. *Inset* is images of CDs under sunlight (I) and UV light (II).

Fig. S2 Fluorescence emission spectra of CDs (a), UV absorption spectra of MnO_2 NSs (b) and $KMnO_4$ (c) in water.

Fig. S3 (a) Fluorescence response of CDs (5 μg/mL) in the presence of increasing concentrations of $KMnO_4$, and (b) fluorescence intensity changes of CDs (5 μg/mL) *versus* the concentrations of $KMnO_4$.

Fig. S4 Fluorescence intensity changes of CDs-MnO_2 nanocomposites. (a) In the presence of NaCl with different concentrations; (b) Standing for 0-120 min; (c) After synthesis repeats for 6 times.

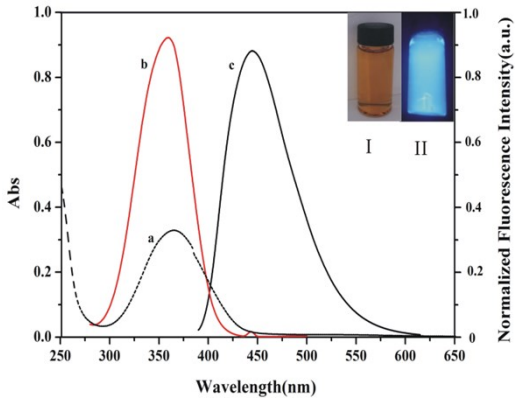


Fig. S1 UV absorption spectra (a), fluorescence excitation spectra (b) and emission spectra (c) of CDs. *Inset* are the images of CDs solution under sunlight (I) and UV light (II).

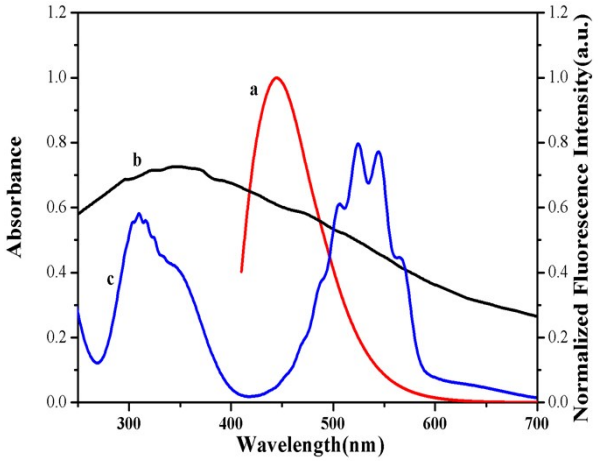


Fig. S2 Fluorescence emission spectra of CDs (a), UV absorption spectra of MnO_2 NSs (b) and $KMnO_4$ (c) in water.

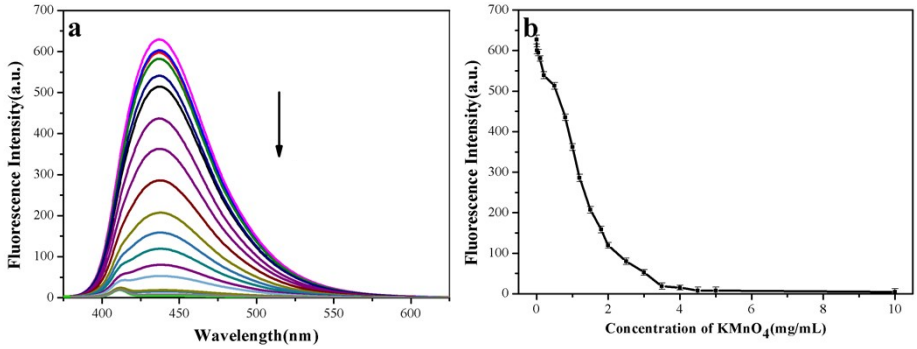
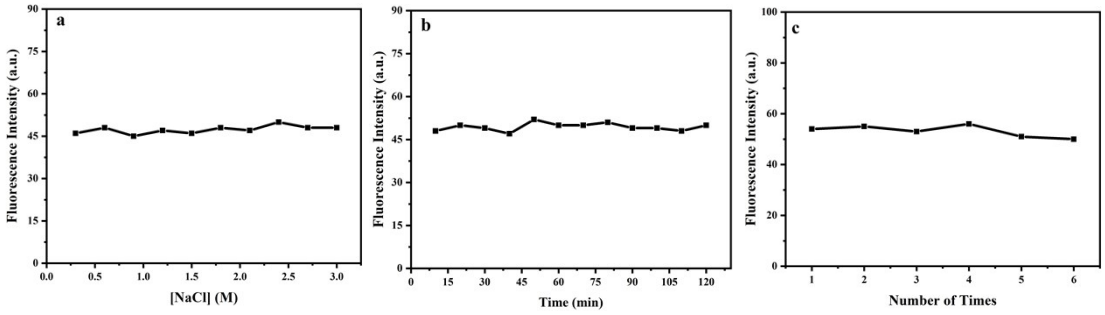


Fig. S3 (a) Fluorescence response of CDs (5 μg/mL) in the presence of increasing concentrations of $KMnO_4$, and (b) fluorescence intensity changes of CDs (5 μg/mL) *versus* the concentrations of $KMnO_4$.



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