Electronic Supplementary Material (ESI) for Environmental Science: Nano.

Supporting Information

Functionalized nanocomposite for simultaneous removal of antibiotics and As(III) in swine urine aqueous solution and soil

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Number of figure: 6

Number of table: 2

Number of pages: 9

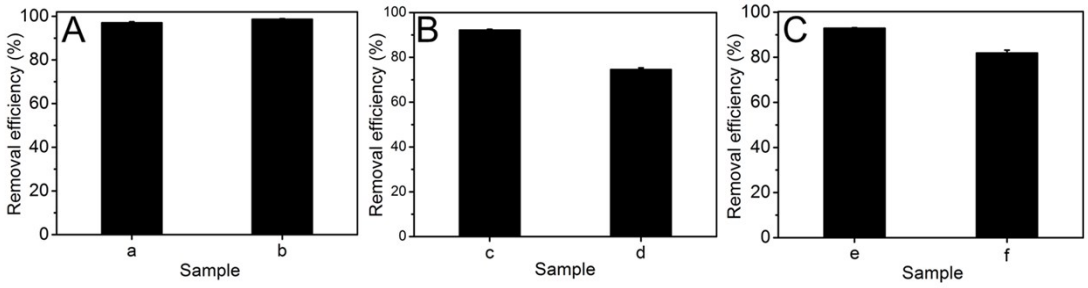

Fig. S1 (A) Removal efficiencies of (a) OAM and (b) OAM/As on CTC at 30°C. (B) Removal efficiencies of (c) OAM and (d) OAM/CTC on As(III) at 30°C. (C) Removal efficiencies of OAM on (e) CTC and (f) As(III) simultaneous at 30°C.

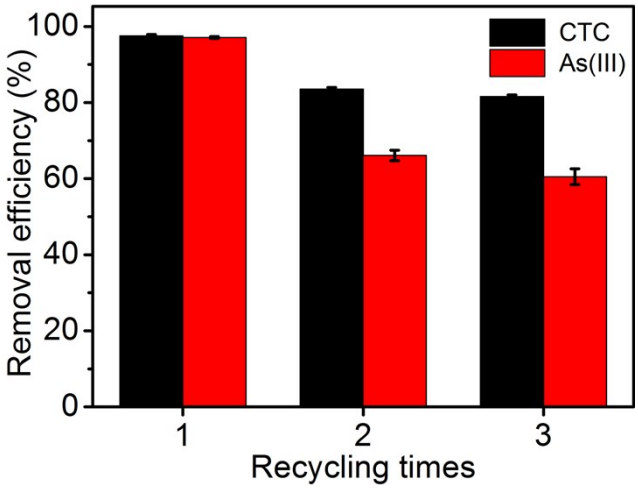

Fig. S2 Reuse of OAM for three cycles.

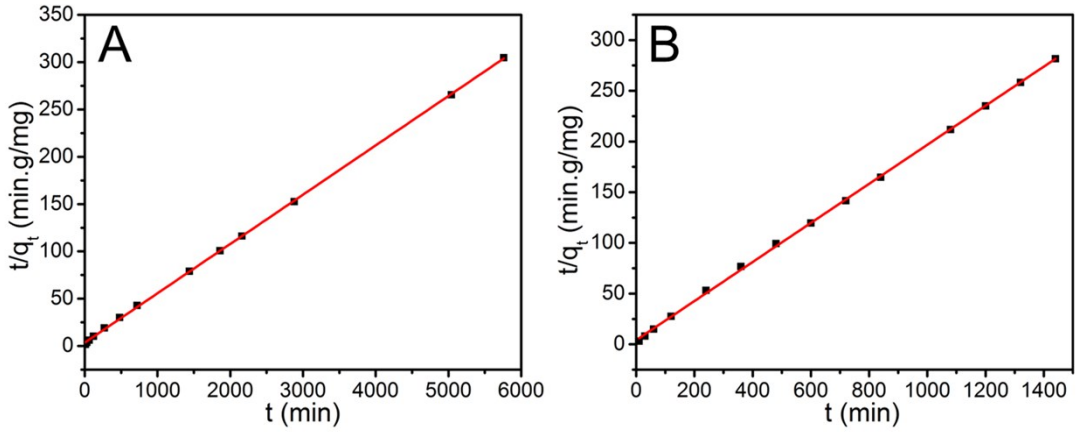

Fig. S3 The plots of pseudo-second-order kinetics for the adsorption of CTC (A) and As(III) (B) on OAM.

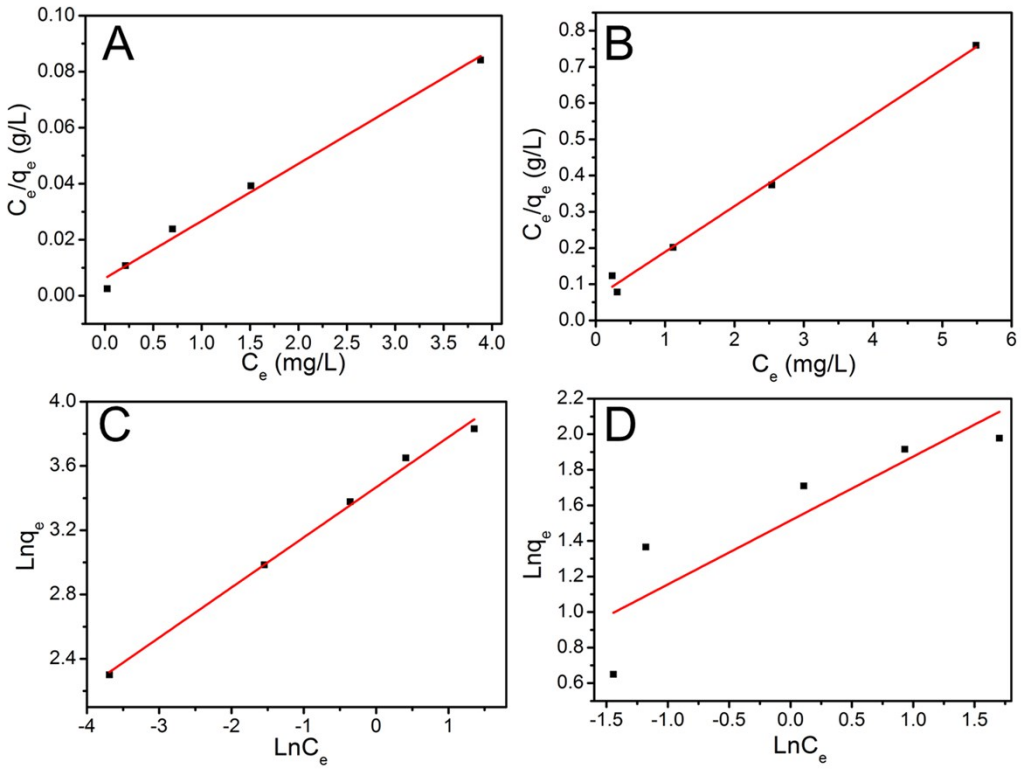

Fig. S4 Langmuir plots for (A) CTC and (B) As(III); Freundlich plots for (C) CTC and (D) As(III).

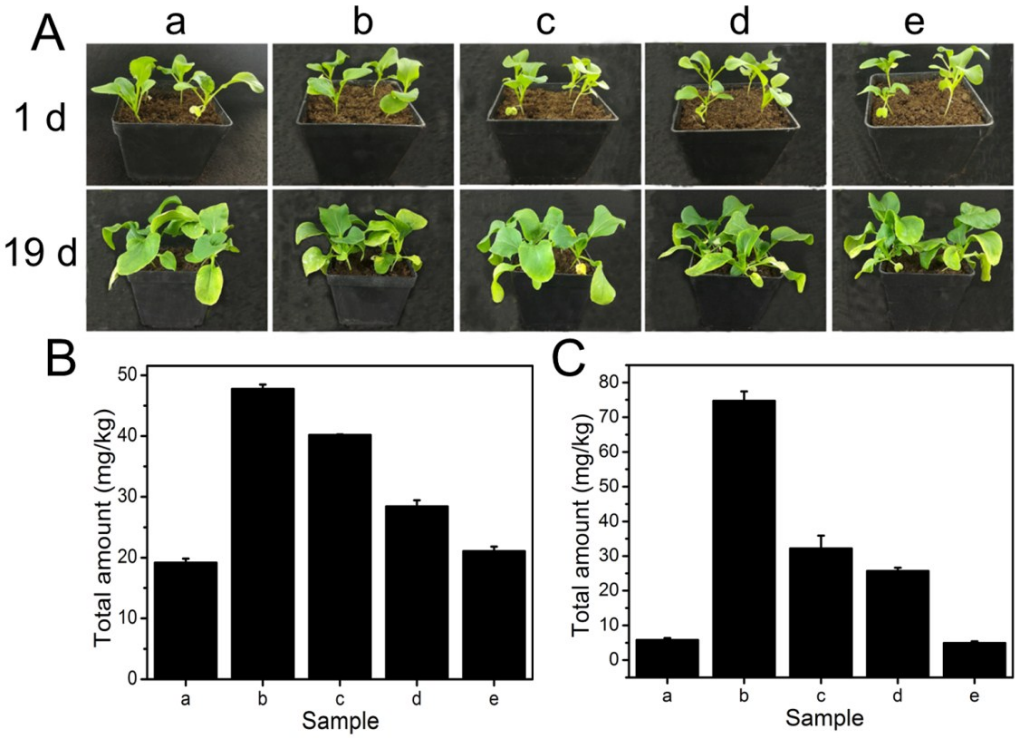

Fig. S5 (A) Digital photographs and (B and C) total amounts of CTC and As of pakchoi in peat soil (130 g) irrigated by (a) SUAS and (b-e) SUAS containing CTC and As(III) treated with 0, 0.3, 0.6, and 0.9 g of OAM.

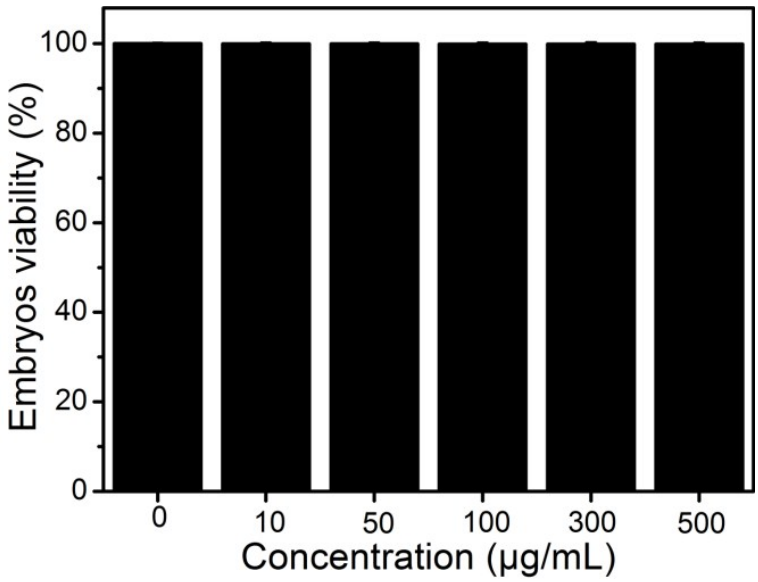

Fig. S6 Embryos viability of Caenorhabditis elegans after 24 h treatment by OAM with different concentrations.

Table S1 Kinetic parameters for the adsorption of CTC and As(III) by OAM

	pseudo-second-order		
Pollutants	q_e (mg/g)	k_2 (g/(mg·min))	R^2
CTC	19.18	7.66×10^{-4}	0.9998
As(III)	5.19	8.85×10^{-3}	0.9996

Table S2 Adsorption isotherm parameters for CTC and As(III) by OAM at 30^{o}C

	Langmuir model			Freundlich model		
Pollutants	Q_0 (mg/g)	b (L/mg)	R^2	n	K_F [(mg/g) (L/mg)$^{1/n}$]	R^2
CTC	48.92	3.28	0.9886	3.21	1.24	0.9935
As(III)	7.94	1.20	0.9931	2.78	0.42	0.7227