Supporting Information for

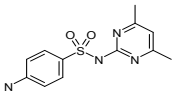
"Adsorption of sulfamethazine by multi-walled carbon nanotubes: effects of aqueous solution chemistry"

Table S1 Basic MWCNTs structural properties [1, a].

Name	Outer diameter [b] (nm)	Inner diameter [b] (nm)	Carbon content [c] (%)	Oxygen content [c] (%)	Surface area [d] ($m^2 \cdot g^{-1}$)	Mesopore volume [d] ($cm^3 \cdot g^{-1}$)	Micropore volume [d] ($cm^3 \cdot g^{-1}$)
P-MWCNTs	10-20	5-10	99	0.85	167	0.619	0.016
H-MWCNTs	10-20	5-10	92	7.07	185	0.756	0.024

[a] The data are herein presented in Table S1 were firstly published in Chen et al., 2009.
[b] The diameters were determined by transmission electron microscope (TEM);
[c] The carbon and oxygen contents were determined by X-ray photoelectron spectroscopy (XPS);
[d] The surface area and pore volume were determined by nitrogen gas adsorption and desorption at 77k with ASAP2000 (Micromeritics Instrument Corporation).

Table S2 Structures and physicochemical properties of sulfamethazine.

Compound	CAS number [a]	Chemical structure [a]	Molecular weight(g·mol^{-1})	Water solubility (g·L^{-1}) [2]	pKa [3-5]
sulfamethazine	57-68-1		278.33	1.5	2.28 7.42

a:from chemBlink Database of Chemicals from Around the World
http://www.chemblink.com/products/57-68-1.htm

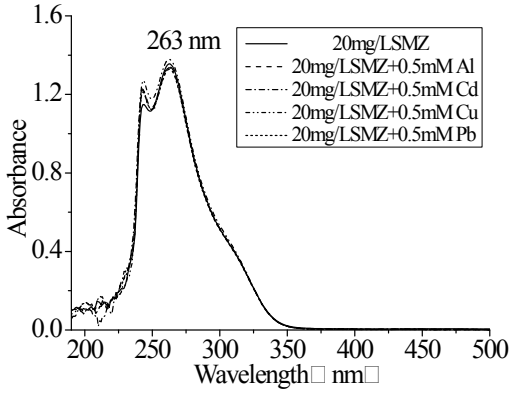


Fig. S1 Absorbance of sulfamethazine at wavelength of 190-500nm.

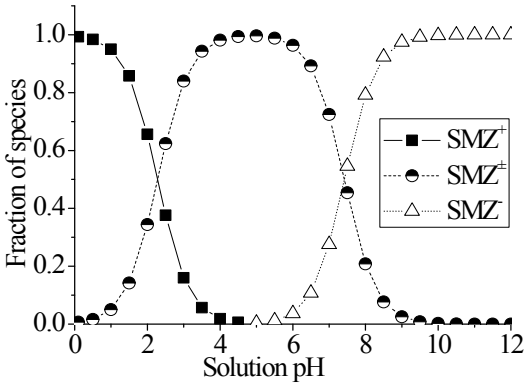


Fig. S2 The species distribution for SMZ at different solution pH. The fraction values go from zero to one (0% to 100%) and are usually plotted against a free concentration.

60 Literature cited

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