

Supplementary Material

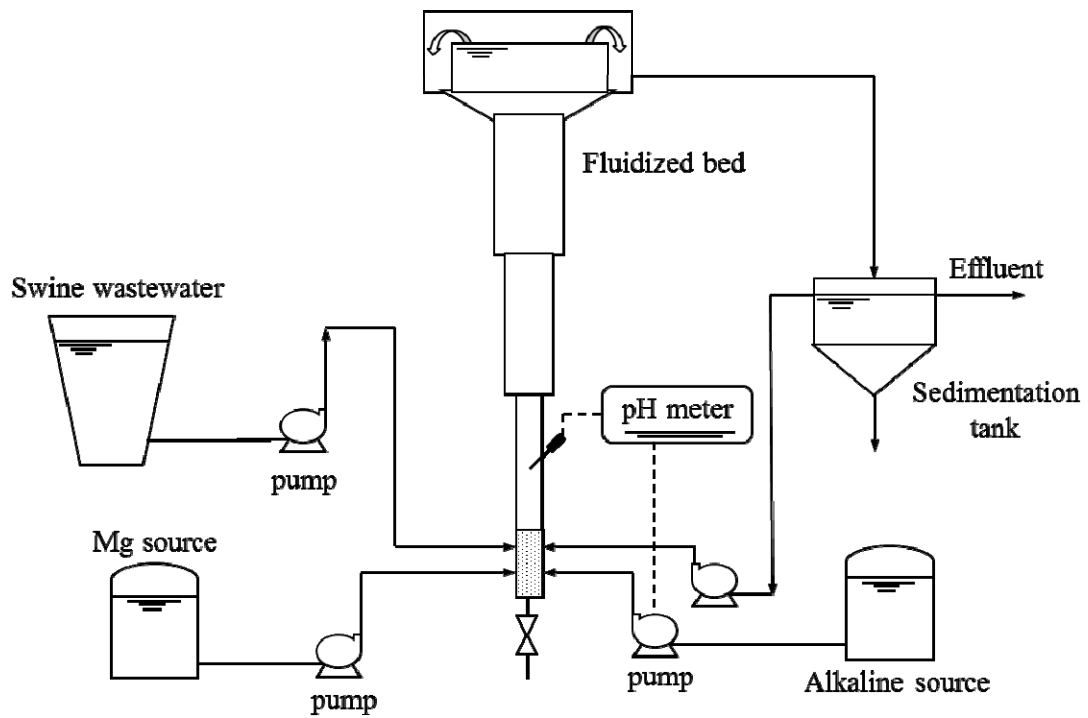


Fig. S1 Schematic of the fluidized bed system

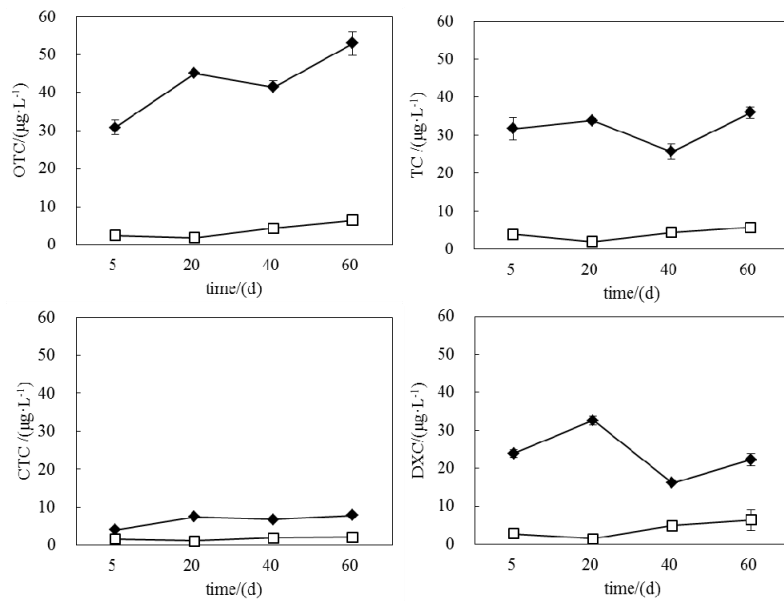


Fig. S2 Tetracyclines in the influent and effluent of the fluidized bed. TC, tetracycline; OTC, oxytetracycline; CTC, chlortetracycline; DXC, doxycycline

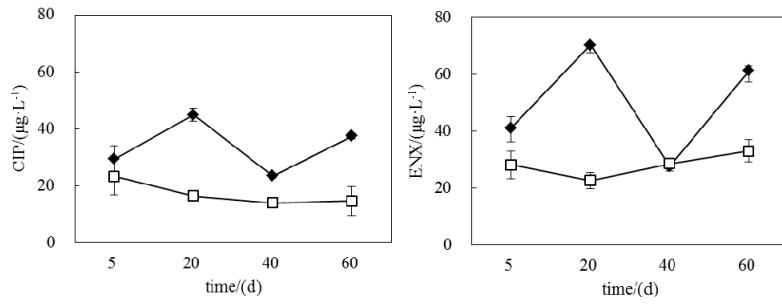
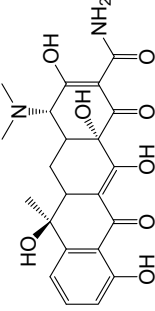
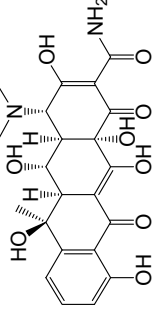
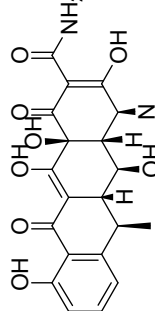
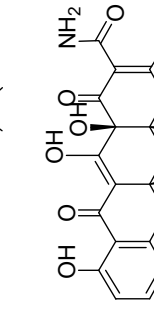


Fig. S3 Fluoroquinolones in the influent and effluent of the fluidized bed. CIP, ciprofloxacin; ENX, enrofloxacin

Table S1 Property of swine wastewater (mg·L⁻¹)

Term	Range	Term	Range
pH	7.44~7.79	SO ₄ ²⁻	121.3~177.7
COD	352.4~538.5	NO ₃ ⁻ -N	0.3~3.1
SS	122~172	Cl ⁻	82.6~103.7
PO ₄ ³⁻ -P	48.9~171.2	K ⁺	153.4~189.4
Total phosphorus	74.9~260.3	Mg ²⁺	5.1~19.6
NH ₄ ⁺ -N	269.1~595.9	Ca ²⁺	41.5~45.6
Total nitrogen	311.8~709.0		

Table S2 the property of tetracyclines (Zhou et al., 2012)*

Name	Abbreviation	Molecular weight	Molecular formula	Solubility (mg/L)	K _{ow}	pK _a	Molecular structure
Tetracycline	TC	444.45	C ₂₂ H ₂₄ N ₂ O ₈	1700	0.0645	3.30; 7.68; 9.68	
Oxytetracycline	OTC	460.44	C ₂₂ H ₂₄ N ₂ O ₉	1000	0.0602	3.22; 7.46; 8.94	
Doxycycline	DXC	444.45	C ₂₂ H ₂₄ N ₂ O ₈	630	0.9550	3.02 7.97 9.15	
Chlortetracycline	CTC	478.89	C ₂₂ H ₂₃ ClN ₂ O ₈	630	0.2399	3.33; 7.55; 9.33	

* L. Zhou, G. Ying, S. Liu, J. Zhao, F. Chen, R. Zhang, R. Zhang, F. Peng, Q. Zhang, Simultaneous determination of human and veterinary antibiotics in various environmental matrices by rapid resolution liquid chromatography-electrospray ionization tandem mass spectrometry, J. Chromatogr. A 1244 (2012) 123-138