Supporting Information

Enhanced reductive removal of ciprofloxacin in pharmaceutical wastewater using biogenic palladium nanoparticles by bubbling H₂

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Ion type	Concentration of remained Pd ²⁺ after adsorption*
	(mg L ⁻¹)
Pd^{2+}	80.61
$Pd^{2+} Ca^{2+}$	93.23
Pd^{2+} Zn^{2+}	85.21
$Pd^{2+}Mg^{2+}$	86.13
$Pd^{2+} Na^+$	81.33
Pd ²⁺ Cu ²⁺	85.19

Table S1 Effect of common ion on Pd²⁺ adsorption on *E. coli* cells

*The original concentration of Pd^{2+} in the wastewater is 200 mg L^{-1} .



Figure S1 The concentration of remained Pd²⁺after adsorption



Figure S2 XPS spectra of reduced Pd(0) NPs on *E.coli* cells in the absence (A) and presence (B) of Cu²⁺



io 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 Counts vs. Mass-to-Charge (m/z)

Figure S3 MS acquisition parameters for solution after reaction in positive ion atmospheric pressure chemical ionization



Figure S4 MS acquisition parameters for solution after reaction in negative ion atmospheric pressure chemical ionization