

Electronic Supplementary Information

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Title Hierarchical porous spheres shaped conjugated microporous polymers for efficient removal of antibiotics from water

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Table S1 The porous properties of CMPSN-1 to CMPSN-C2.

Samples	S_{BET} [m ² g ⁻¹]	S_{micro} [m ² g ⁻¹]	V_{micro} [cm ³ g ⁻¹]	V_{total} [cm ³ g ⁻¹]	D_{BJH} [nm]
CMPSN-1	105	39	0.020	0.222	8.65
CMPSN-2	56	--	0.0002	0.175	9.09
CMPSN-C1	1045	909	0.422	0.508	3.19
CMPSN-C2	668	558	0.259	0.327	3.49

Table S2 Order kinetic parameters of three kinetic models

Samples	Pseudo-first order kinetics		Modified pseudo-first order kinetics		Pseudo-second order kinetics	
	k_1/min^{-1}	R^2	K_1/min^{-1}	R^2	$k_2 \times 10^6 / (\text{mg} (\text{g min})^{-1})$	R^2
CMPSN-1	0.00487	0.98285	0.00404	0.97501	97730	0.99459
CMPSN-2	0.00665	0.93014	0.00548	0.87211	75740	0.98419

Table S3 Regression equations for Langmuir isotherm

Temperature (K)	Samples	Regression equation C_e/q_e	R^2	q_m (mg g ⁻¹)	b (L mg ⁻¹)
298	CMPSN-1	$0.00444C_e + 2.83507$	0.99080	225.23	0.00157
	CMPSN-2	$0.00476C_e + 1.48021$	0.98172	210.08	0.00322
	CMPSN-C1	$0.00879C_e + 4.23399$	0.99268	113.77	0.00208
	CMPSN-C2	$0.01163C_e + 2.91190$	0.99874	85.985	0.00399

Table S4 Regression equations for Fleunldich isotherm

Temperature (K)	Samples	Regression equation C_e/q_e	R^2	K	$1/n$
298	CMPSN-1	$0.76951 \ln C_e - 0.13586$	0.99401	0.87296	0.76951
	CMPSN-2	$0.61171 \ln C_e + 1.11365$	1	3.04545	0.61171
	CMPSN-C1	$0.70837 \ln C_e - 0.29676$	0.99098	0.74322	0.70837
	CMPSN-C2	$0.56475 \ln C_e + 0.58823$	0.98754	1.80080	0.56475

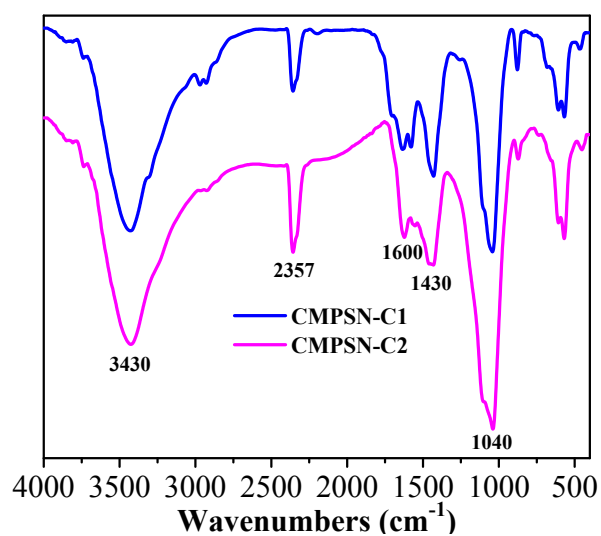


Fig. S1 FTIR spectra of CMPSN-C1 and CMPSN-C2.

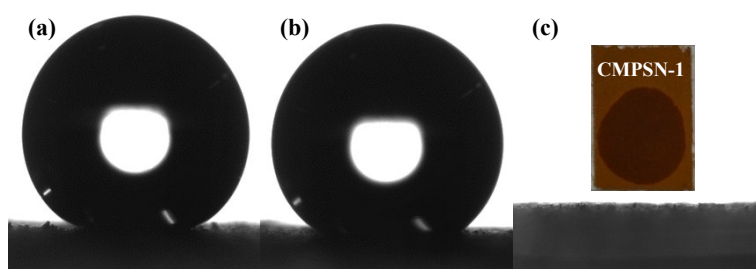


Fig. 2S The measurement of contact angle with water for (a) CMPSN-1 and (b) CMPSN-2. (c) Image of ethanol droplet on CMPSN-1.

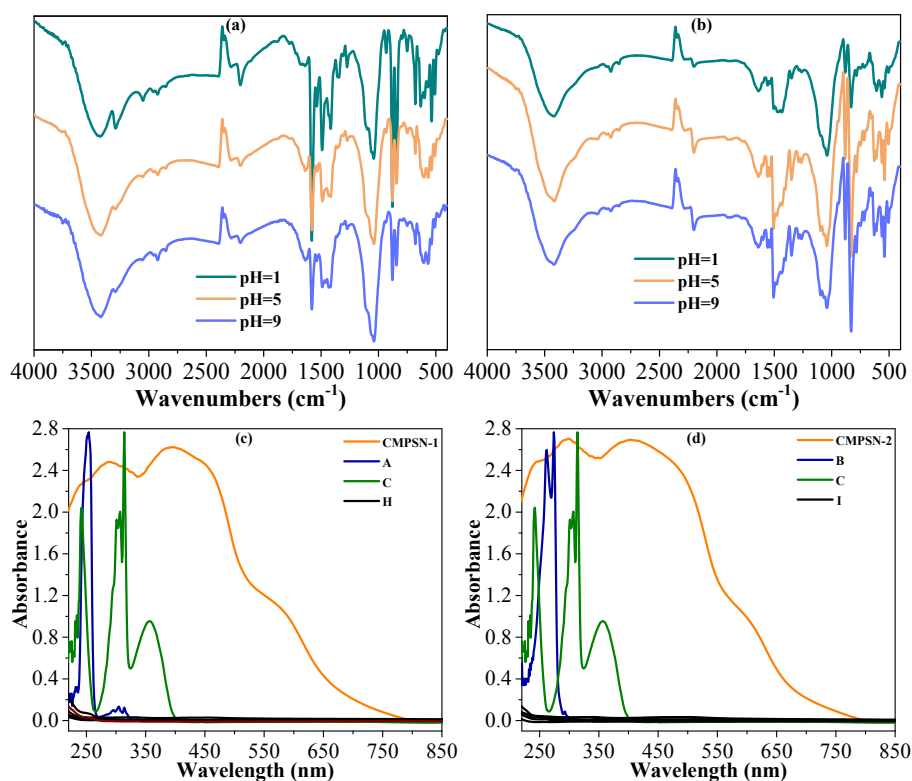


Fig. S3 Stability test results of CMPSN-1 and CMPSN-2. (a) FTIR spectra of CMPSN-1, (b) FTIR spectra of CMPSN-2, (c) UV-vis adsorption spectra of CMPSN-1, A: 1,3,5-triethynylbenzene, C: 4,7-dibromobenzo[c][1,2,5]thiadiazolesolutions and H: different pH filtrate of CMPSN-1 and (d) UV-vis adsorption spectra of CMPSN-1, B: 1,4-diethynylbenzene, C: 4,7-dibromobenzo[c][1,2,5]thiadiazolesolutions and I: different pH filtrate of CMPSN-2.

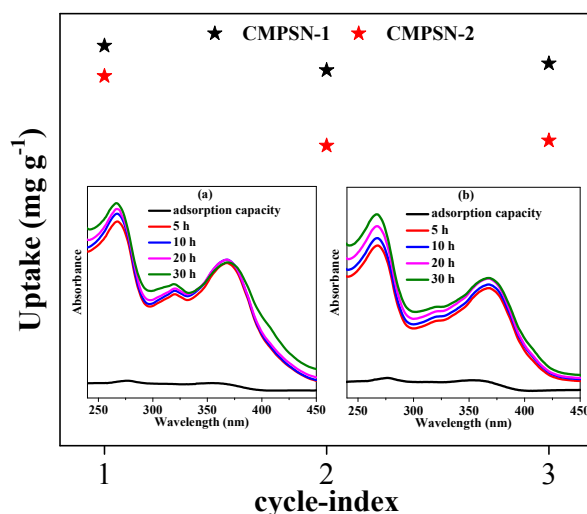


Fig. S4 Recyclability of CMPSN-1 and CMPSN-2, inset are the desorption curves of (a) CMPSN-1 and (b) CMPSN-2.