

Supplementary Material

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Table S1. The adsorption kinetic fitting parameters.

	Pseudo-second-order model			Pseudo-first-order model		
	R ²	q _e	K ₂	R ²	q _e	K ₁
CS	0.990	208.83	6.67×10 ⁻⁵	0.962	190.903	1.11×10 ⁻²
CS/ZIF-8-36%	0.989	350.192	4.95×10 ⁻⁵	0.973	333.67	1.37×10 ⁻²
CS/ZIF-8-51%	0.998	405.648	1.90×10 ⁻⁵	0.963	382.865	6.34×10 ⁻³
ZIF-8	0.995	498.448	2.8×10 ⁻⁵	0.974	470.872	1.14×10 ⁻²
CS/ZIF-8-60%	0.995	605.864	1.6×10 ⁻⁵	0.975	573.74	7.21×10 ⁻³

Table S2. Langmuir and Freundlich Constants and Correlation Coefficients.

	Langmuir adsorption			Freundlich adsorption		
	q _{max}	K _L	R ²	K _F	n	R ²
CS	208.83	0.000008	0.995	222.27	2.367	0.983
CS/ZIF-8-36%	368.096	0.0004	0.994	417.40	1.594	0.981
CS/ZIF-8-51%	446.8	0.0031	0.994	531.14	1.277	0.992
ZIF-8	510	0.0051	0.997	615.26	1.212	0.995
CS/ZIF-8-60%	625	0.0154	0.997	773.55	1.112	0.995

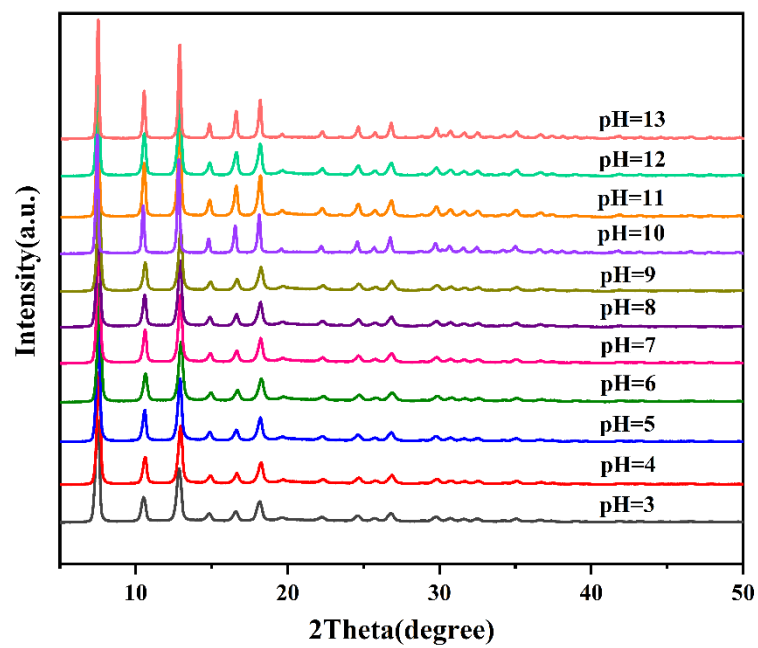


Figure S1. CS/ZIF-8-60% after soaking in uranum aqueous solutions of different pH values for 3 days

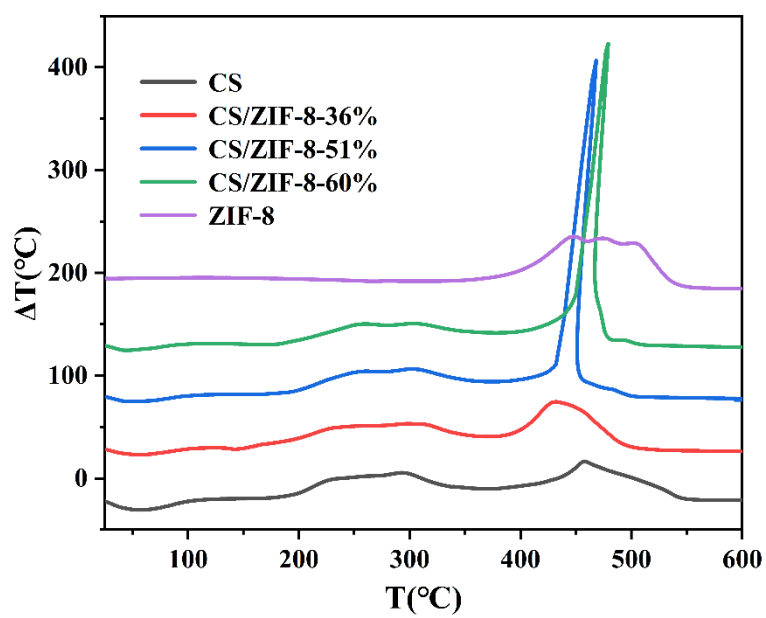


Figure S2. DTA of CS/ZIF-8 composite beads with different content of ZIF-8.

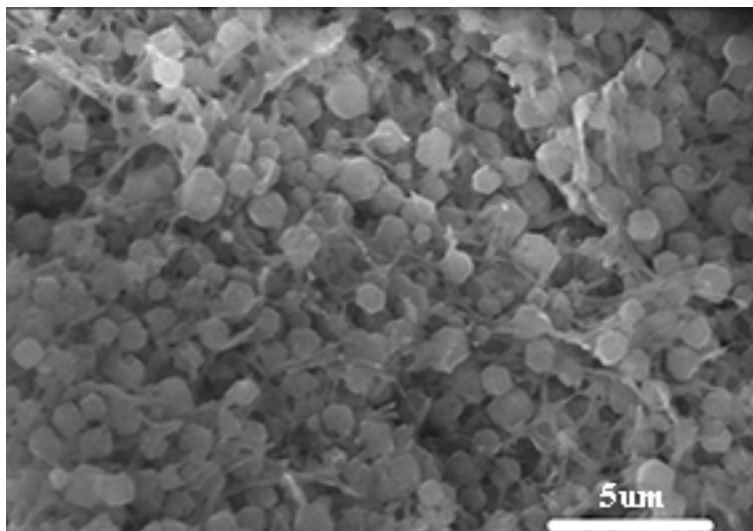


Figure S3. SEM of CS/ZIF-8-60% composite beads after uranium adsorption.

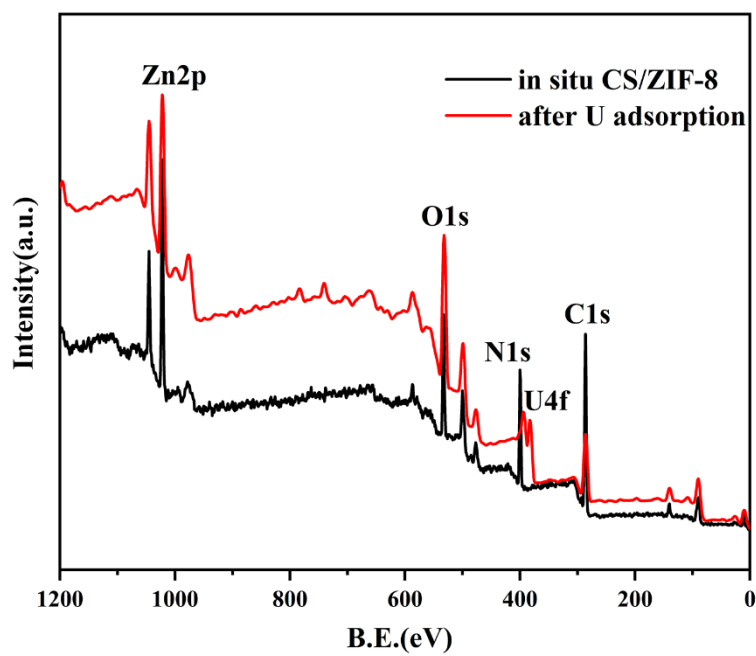


Figure S4. The survey XPS spectra of the CS/ZIF-8-60% composite beads before and after adsorption of U (VI).