Enhanced Uptake of Iodide from Solutions by Hollow Cu-Based Adsorbents

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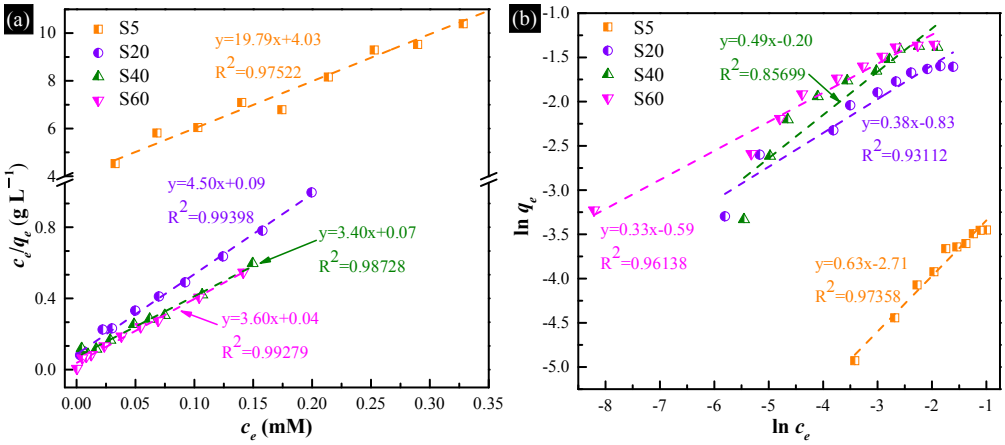

Figure S1. Fitting curves of the Langmuir (a) and Freundlich models (b) for the uptake isotherms of all hollow Cu-based adsorbents.

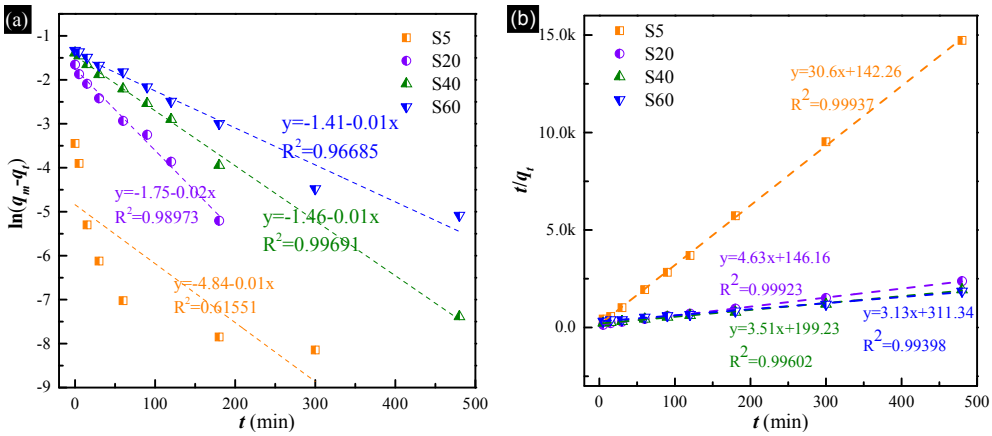

Figure S2. Pseudo-first-order (a) and pseudo-second-order (b) kinetics models for iodide anions removal on all as-synthesized samples.

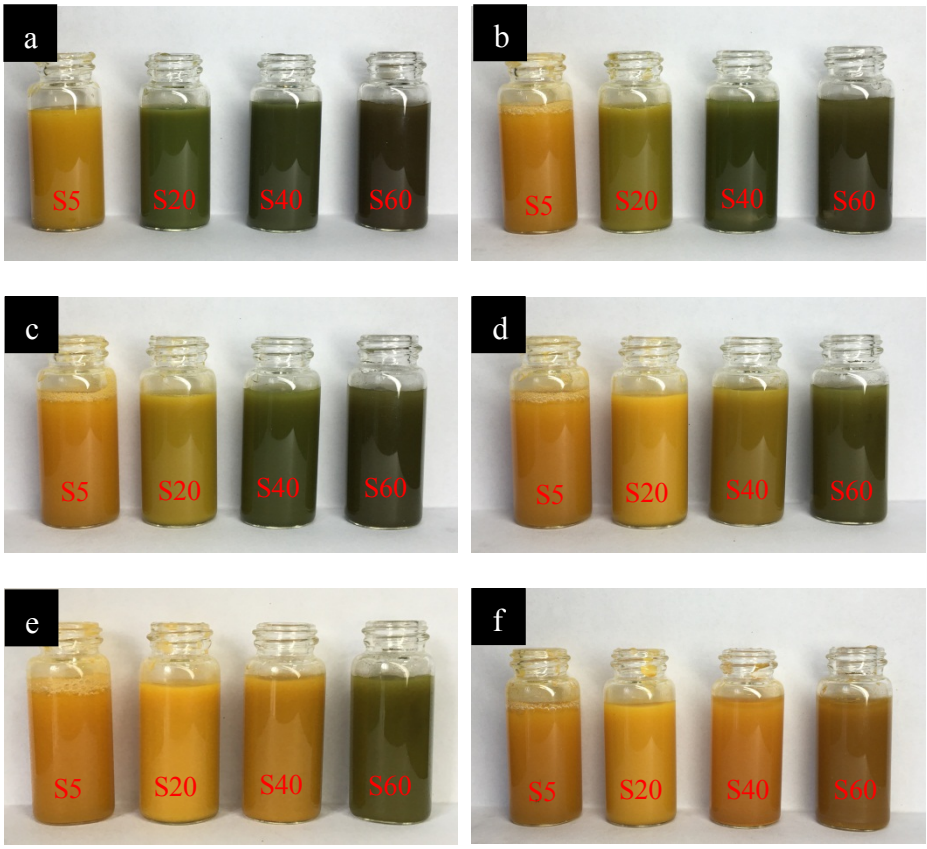

Figure S3. Photographs showing the solution color changes during the uptake process of all Cu-based adsorbents. (a) o h, (b) 1 h. (c) 1.5 h, (d) 4.5 h, (e) 6 h and (f) 12 h.

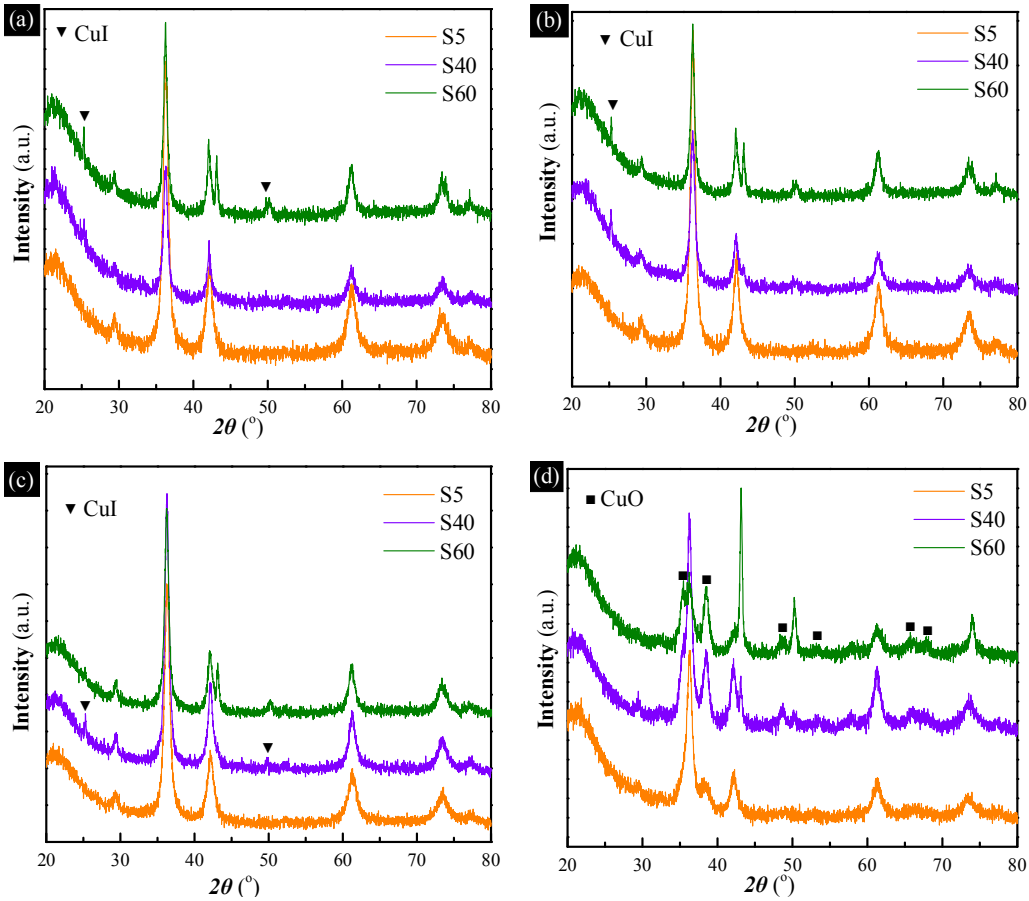

Figure S4. XRD patterns of S5, S40 and S60 after the uptake of I^- anions in the presence of high concentrations of Cl^- (a), NO_3^- (b), SO_4^{2-} (c), and CO_3^{2-} (d) anions.

Table S1 Isotherm parameters for the uptake of I^- anions by all hollow Cu-based adsorbents.

Sample	**Langmuir model**			**Frenudlich model**		
	q_m	b	R^2	K_f	$1/n$	R^2
S5	0.05	0.01	0.97522	0.07	0.63	0.97358
S20	0.22	2.47	0.99398	0.44	0.38	0.93112
S40	0.29	4.20	0.98728	0.82	0.49	0.85699
S60	0.27	6.94	0.99279	0.56	0.33	0.96138

Table S2 Kinetic parameters for the uptake of I^- anions by all hollow Cu-based adsorbents.

Adsorbent	Pseudo-first-order			Pseudo-second-order		
	k_1 (g mmol^{-1} min^{-1})	q_m (mmol^{-1})	R^2	k_2 (g mmol^{-1} min^{-1})	q_m (mmol^{-1})	R^2
S5	0.01	0.01	0.61551	6.58	0.03	0.99937
S20	0.02	0.17	0.98973	0.15	0.22	0.99923
S40	0.01	0.23	0.99691	0.06	0.29	0.99602
S60	0.01	0.24	0.96685	0.03	0.31	0.99398