

Table S1. Experimental data of kinetics of Eggshell and the composite for Pb²⁺ As⁵⁺ and Hg²⁺

Eggshell					
Pb		As		Hg	
t(h)	qe(mg/g)	t(h)	qe(mg/g)	t(h)	qe(mg/g)
0.25	0.32	0.25	0.29	0.25	0.30
0.5	0.38	0.5	0.36	0.5	0.38
1	0.45	1	0.41	1	0.45
2	0.58	2	0.49	2	0.50
4	0.59	4	0.50	4	0.54
6	0.6	6	0.51	6	0.55
8	0.63	8	0.54	8	0.57
12	0.62	12	0.57	12	0.59
16	0.65	16	0.58	16	0.59

[Eggshell/ Ag-Fe]					
Pb		As		Hg	
t(h)	qe(mg/g)	t(h)	qe(mg/g)	t(h)	qe(mg/g)
0.25	1.03	0.25	1.30	0.25	1.28
0.5	1.38	0.5	1.34	0.5	1.33
1	1.45	1	1.45	1	1.46
2	1.58	2	1.20	2	1.39
4	1.59	4	1.55	4	1.50
6	1.60	6	1.56	6	1.52
8	1.63	8	1.57	8	1.51
12	1.63	12	1.58	12	1.53
16	1.64	16	1.60	16	1.54

Table S2. Experimental data of isotherms for Pb²⁺ As⁵⁺ and Hg²⁺ onto Eggshell and composite

Eggshell					
Ce (mg/L)	qe(mg/g)	Ce (mg/L)	qe(mg/g)	Ce (mg/L)	qe(mg/g)
0.06	0.41	0.20	1.04	0.055	0.61
0.08	0.62	0.35	1.35	0.074	0.72
0.15	0.81	0.45	1.97	0.19	0.82
0.21	1.26	0.57	2.36	0.29	0.94
0.31	1.59	0.67	2.99	0.39	1.06
0.45	1.87	0.78	3.22	0.50	1.07
0.56	1.99	0.88	3.73	0.60	1.10
0.67	2.10	1.06	4.46	0.70	1.25
0.69	2.30	1.49	4.77	0.80	1.30
0.87	2.50	1.98	4.96	0.89	1.33
1.08	2.80	2.48	4.93	0.99	1.34
1.48	3.15	2.93	5.27	1.50	1.39
1.99	3.18	3.38	5.05	1.99	1.40
2.49	3.20			2.50	1.45
2.99	3.27			2.99	1.52
3.49	3.41			3.50	1.60

[Eggshell/ Ag-Fe]					
Ce (mg/L)	qe(mg/g)	Ce (mg/L)	qe(mg/g)	Ce (mg/L)	qe(mg/g)
0.043	0.48	0.096	0.39	0.10	0.45
0.39	0.60	0.61	0.70	0.63	0.64
0.72	0.80	1.13	0.97	1.09	0.85
1.02	0.99	1.46	1.33	1.47	1.15
1.31	1.29	1.76	1.74	1.80	1.66
1.62	1.57	2.04	2.22	2.10	2.12
1.91	1.85	2.33	2.52	2.32	2.53
2.23	2.11	2.50	2.95	2.78	2.84
2.40	2.36	2.63	3.25	3.16	3.04
2.63	2.62	2.94	3.53	3.58	3.12
2.91	2.81	3.24	3.55	4.01	3.24
3.17	2.99	3.59	3.70		
		3.82	3.69		
		4.06	3.53		