Supplementary Materials

Table S1. Analysis of Variance for Response surface quadratic model

Source	Sum of Squares	DF	Mean Square	F Value	p-value Prob > F
Model	739.75	9	82.19	9.51	0.0036
X_1	563.35	1	563.35	65.17	< 0.0001
X_2	6.08	1	6.08	0.70	0.4295
X_3	72.26	1	72.26	8.36	0.0233
X_1X_2	1.25	1	1.25	0.14	0.7153
X_1X_3	0.020	1	0.020	0.002349	0.9627
X_2X_3	43.06	1	43.06	4.98	0.0608
X_1^2	13.26	1	13.26	1.53	0.2555
X_2^2	26.63	1	26.63	3.08	0.1227
X_3^2	14.97	1	14.97	1.73	0.2296
Residual	60.51	7	8.64		
Lack of Fit	37.65	3	12.55	2.20	0.2311
Pure Error	22.86	4	5.72		
Cor Total	800.27	16			

Table S2. The concentration of metal ions in supernatant after the reaction and leaching behavior of the precipitate under optimal condition

	Cr (mg/L)
Leaching concentration (pH =4.93)	2.78
The concentration of the supernatant	UD
EPA TCLP Standard	5
GB5085.3-1996 (Chinese standard)	15

* UD related to undetected