

Table 1S. Results of CCD conditions and experimental / predicted values for each

Run No.	X ₁	X ₂	X ₃	X ₄	Chromium uptake (%) ^a	
					Experimental	Predicted
1	+1	-1	-1	+1	90	82
2	+2	0	0	0	100	100
3	+1	+1	-1	-1	68	66
4	0	0	-2	0	62	67
5	+1	+1	+1	+1	91	100
6	+1	-1	+1	-1	86	85
7	0	0	0	0	96	94
8	+1	-1	+1	+1	100	100
9	0	0	0	+2	95	90
10	0	0	0	0	94	94
11	0	0	0	0	87	94
12	0	0	+2	0	96	86
13	-1	-1	+1	+1	82	85
14	0	0	0	0	96	94
15	+1	+1	+1	-1	73	69
16	-1	-1	-1	+1	73	69
17	-1	-1	-1	-1	73	65
18	0	0	0	0	94	93
19	-1	+1	-1	+1	54	56
20	-1	+1	-1	40	50	39
21	+1	+1	-1	+1	100	100
22	-1	+1	+1	+1	45	47
23	0	-2	0	0	78	82
24	0	0	0	0	96	94
25	-1	+1	+1	-1	30	35
26	-2	0	0	0	48	53
27	0	0	0	-2	45	49
28	0	+2	0	0	61	53
29	-1	-1	+1	-1	97	86
30	+1	-1	-1	-1	67	58

^{a,b} chromium uptake (%) and Cell growth were studied at pH 7 and 37 °C under shaking 180 rpm after 3h.

Table 2S. ANOVA for Cr(VI) bioreduction Quadratic model analysis of variance

Source	Value	F	DF	Mean Square	F	p-value	Prob >
Model	1028.95		14	787.78	12.67	<0.0001	Significant
X ₁ -pH	3151.04		1	3151.04	50.69	<0.0001	Significant
X ₂ -Temp	1520.04		1	1520.04	24.45	0.0002	Significant
X ₃ -Glu	1520.04		1	1520.04	24.45	0.0002	Significant
X ₄ -RPM	392.04		1	392.04	6.31	0.0240	Significant
X ₁ X ₂	1139.06		1	1139.06	18.32	0.0007	Significant
X ₁ X ₄	27.56		1	27.56	0.44	0.5156	
X ₁ X ₃	430.56		1	430.56	6.93	0.0189	Significant
X ₂ X ₄	564.06		1	564.06	9.07	0.0088	Significant
X ₂ X ₃	138.06		1	138.06	2.22	0.1569	
X ₄ X ₃	45.56		1	45.56	0.73	0.4054	
X ₁ ²	649.07		1	649.07	10.44	0.0056	
X ₂ ²	984.00		1	984.00	15.83	0.0012	
X ₃ ²	943.36		1	943.36	15.18	0.0014	
X ₄ ²	358.36		1	358.36	5.77	0.0298	
Residual	932.42		15				
Lack of Fit	871.58		10				
Pure Error	60.83		5				
Cor Total	11961.37		29				
Std. Dev.	7.88		R-Squared	0.9220			
Mean	77.57		Adj R-Squared	0.8893			
C.V. %	10.16		Pred R-Squared	0.5730			
PRESS	5107.92		Adeq Precision	11.816			

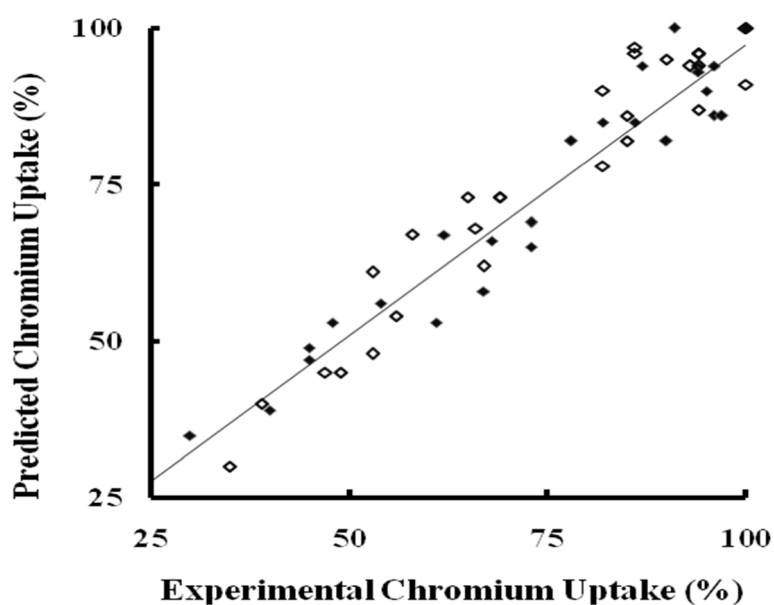


Fig. 1S. Predicted values of experimental chromium uptake efficiency versus experimental values of them. (◇) Validation conditions and (◆) Model development conditions