Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Supporting Information

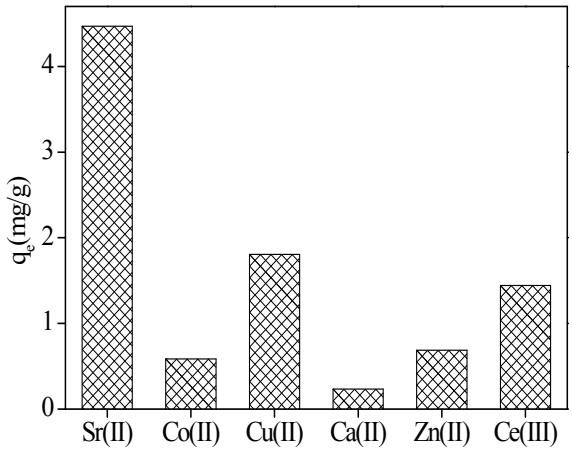

Fig. S1 Binding behaviors of Sr(II) and its five analogues onto RAFT-IIP.

Table S1 Parameters of two isotherm models for adsorption of Sr(II) onto RAFT-IIP and NIP at different temperatures.

Adsorbent	Temp. (°C)	$q_{e(exp)}$ (mg/g)	Langmuir				Freundlich		
			q_m(mg/g)	K_L(L/mg)	R^2	R_L	K_F(mg/g)(L/g)$^{1/n}$	1/n	R^2
IIP	25	135.28	145.77	3.39×10^{-2}	0.992	0.0557	9.88	0.48	0.981
	35	143.75	149.25	5.26×10^{-2}	0.995	0.0366	14.62	0.42	0.974
	45	151.25	155.76	5.97×10^{-2}	0.996	0.0324	16.24	0.41	0.972
NIP	25	34.63	36.26	4.73×10^{-2}	0.998	0.0406	3.94	0.37	0.951
	35	39.85	40.72	4.86×10^{-2}	0.998	0.0395	4.99	0.37	0.974
	45	46.25	47.73	4.51×10^{-2}	0.997	0.0425	5.71	0.38	0.932

Table S2 Parameters of three kinetic models for adsorption of Sr(II) onto RAFT-IIP.

Parameter	$q_{e(exp)}$ (mg/g)	Pseudo-first-order kinetics			Pseudo-second-order kinetics			Elovich		
		$q_{e(cal)}$ (mg/g)	k_1(min^{-1})	R^2	$q_{e(cal)}$ (mg/g)	k_2 (mg/g·min)	R^2	a (mg/g·min)	b (g/mg)	R^2
Temp.(°C)										
25	8.93	4.54	3.41×10^{-2}	0.863	9.86	5.71×10^{-3}	0.993	0.55	0.48	0.895
35	9.83	3.15	3.50×10^{-2}	0.817	10.42	9.47×10^{-3}	0.997	1.27	0.52	0.855
45	11.23	3.71	3.55×10^{-2}	0.835	11.75	1.06×10^{-2}	0.999	2.66	0.53	0.889
C_0 (mg/L)										
3.0	5.13	1.63	2.93×10^{-2}	0.821	5.44	1.78×10^{-2}	0.996	1.30	0.99	0.832
5.0	8.93	4.54	3.41×10^{-2}	0.863	9.86	5.71×10^{-3}	0.993	0.55	0.48	0.895
8.0	11.63	5.03	3.76×10^{-2}	0.809	12.85	4.45×10^{-3}	0.993	0.55	0.37	0.895