

Electronic Supporting Information for

Fluorescent and magnetic dual-responsive coreshell imprinting microspheres strategy for recognition and detection of phycocyanin

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Fig. S1 Size distribution of C-MIP obtained by laser particle analyzer.

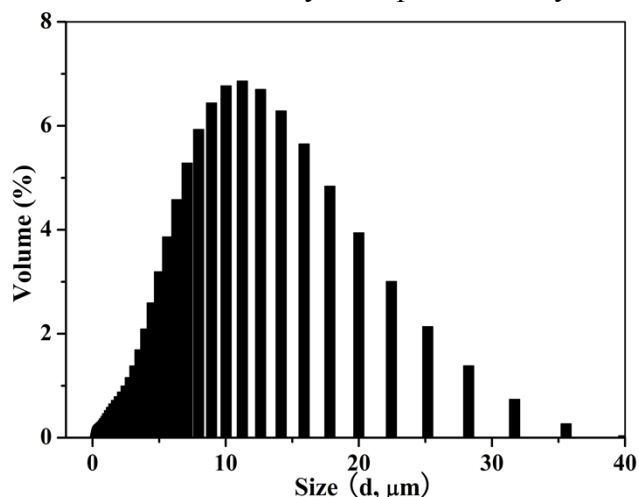


Fig. S2 (a) Adsorption isotherm of MIPs and NIPs for phycocyanin in aqueous solution, (b) adsorption kinetics of C-MIP, N-MIP and C-NIP for phycocyanin in aqueous solution, (c) adsorption selectivity of C-MIP and C-NIP for phycocyanin, LZM, CEA, and BSA in aqueous solution, and (d) stability and regeneration of the C-MIP and C-NIP for phycocyanin. Experimental conditions: (a) $V = 2.0$ mL; mass of polymer, 20 mg; adsorption time, 12 h. (b) $V = 100$ mL; $C_0 = 0.01$ mg/mL; mass of polymer, 100 mg. (c) $V = 2.0$ mL; $C_0 = 0.5$ mg/mL; mass of polymer, 20 mg; adsorption time, 12 h. (d) $V = 10$ mL; $C_0 = 0.02$ mg/mL; the mass of polymer, 20 mg; adsorption time, 3 h.

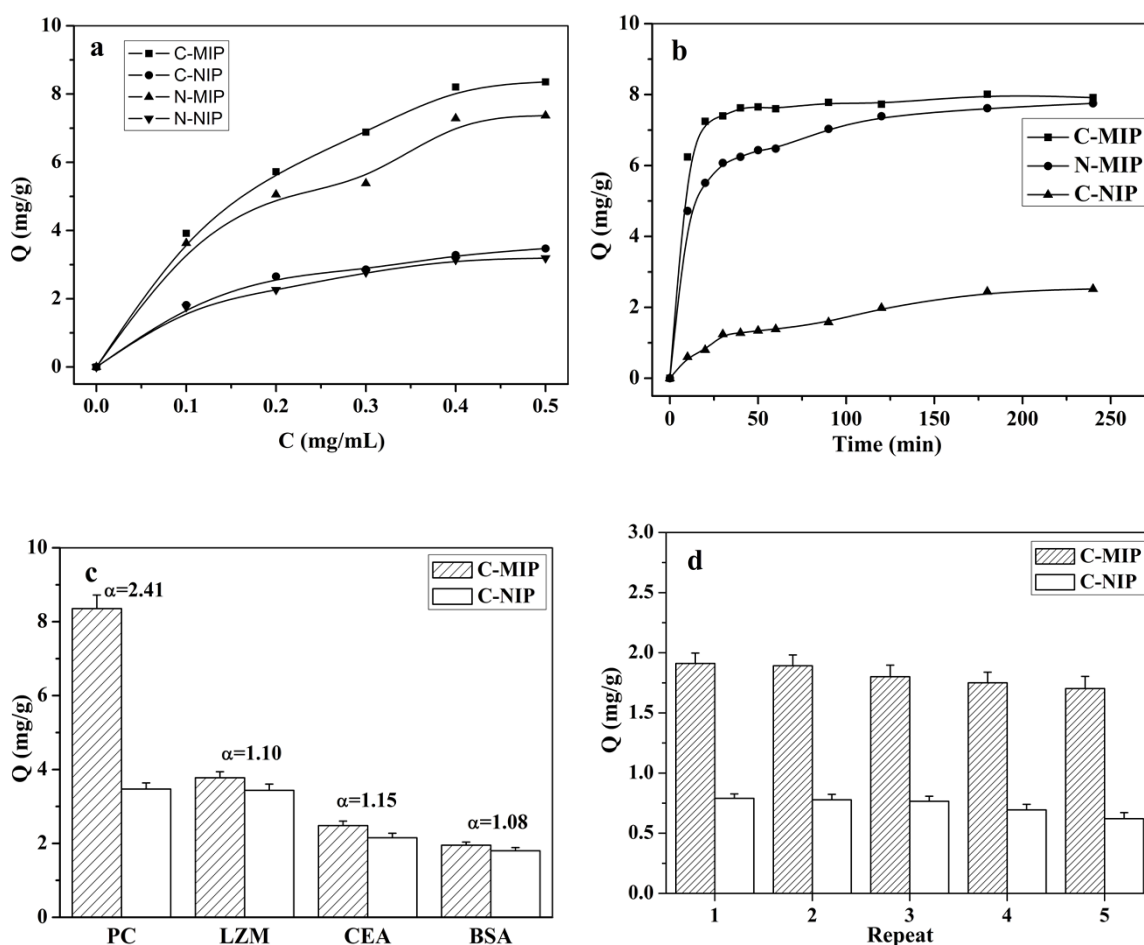


Fig. S3 Scatchard plots of the C-MIPs.

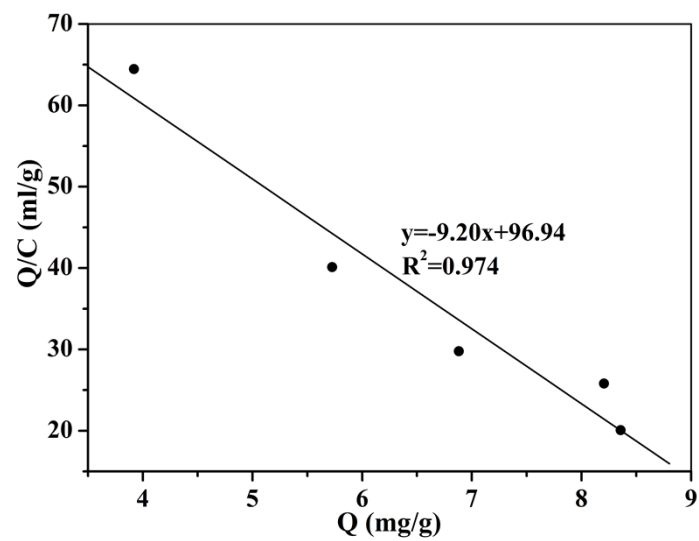


Fig. S4 Fluorescence microscopy images of particles: (a) C-MIP, (b) C-MIP in the presence of phycocyanin, and (c) bright-field image of (b).

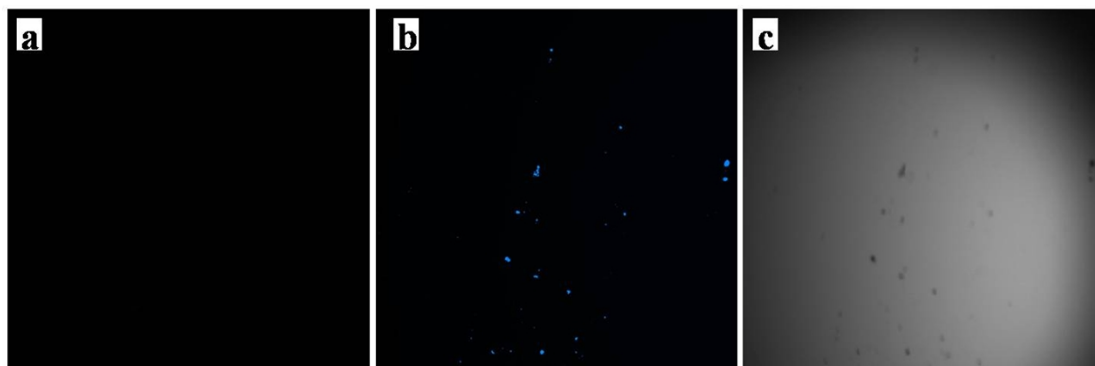


Table S1 Isotherm model parameters for the C-MIP and N-MIP.

Isotherm model	Parameter	C-MIP	N-MIP
Langmuir $\left(\frac{C_e}{Q_e} = \frac{1}{Q_{\max}} C_e + \frac{1}{K_f Q_{\max}} \right)$	R^2 ^(a)	0.988	0.952
	Q_{\max} ^(b)	13.61	10.19
	K_f ^(c)	0.311	0.352
Freundlich $\left(\lg Q_e = \frac{1}{n} \lg C_e + \lg K_f \right)$	R^2	0.979	0.940
	K_f ^(d)	12.01	10.33
	$1/n$ ^(e)	0.467	0.413

^a Correlation coefficient.

^b Maximum binding capacity, mg/g.

^c Langmuir constant.

^d Indicative constant for adsorption capacity of the adsorbent.

^e Ranging from 0 to 1, measuring the adsorption intensity or surface heterogeneity.