

1 **Supporting Information**

2 **Preparation of temperature sensitive molecularly imprinted**
3 **polymer coatings on nickel foam for determination of**
4 **ofloxacin in Yellow River water by solid-phase**
5 **microextraction**

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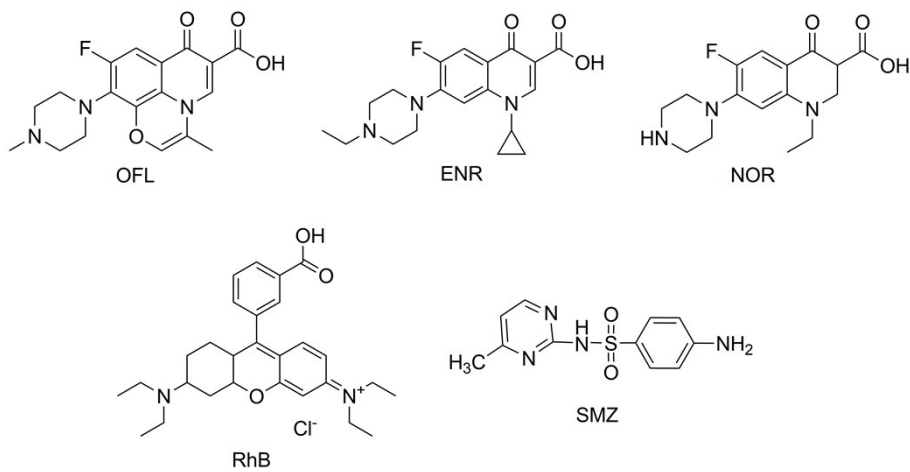
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2 1. Structures of compounds studied in the work

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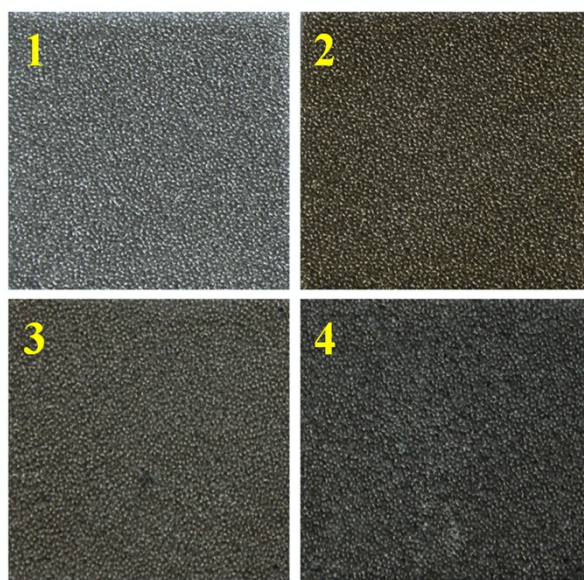
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Fig.S1. Structures of compounds studied in the work

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7 2. Pictures of original NF (1), D- NF (2), MIP-NF (3), NIP-NF (4).

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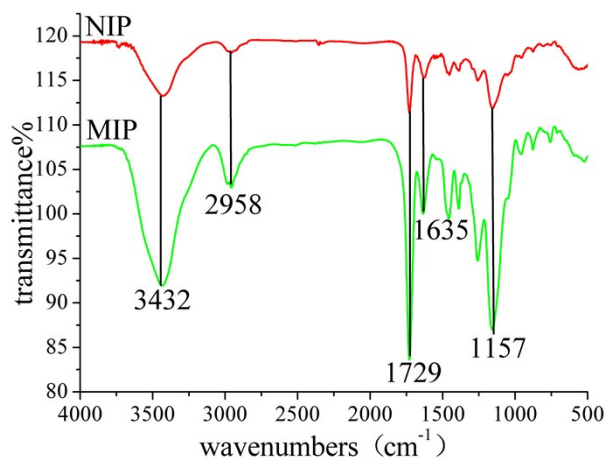


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10 Fig.S2. Pictures of original NF (1), D- NF (2), MIP-NF (3), NIP-NF (4).

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1 3. IR spectra of NIP (a) and MIP (b) materials



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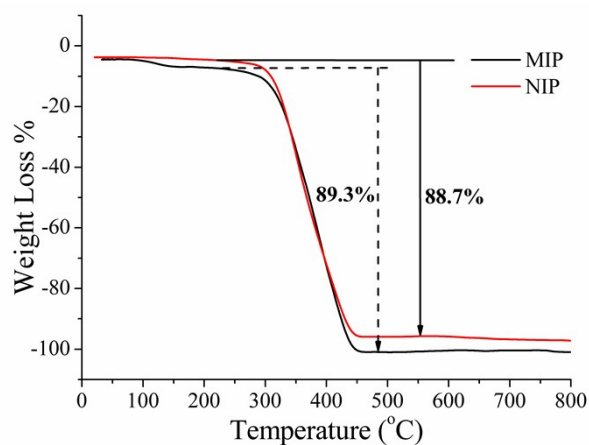
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Fig.S3. IR spectra of NIP and MIP materials.

4 1157 cm⁻¹ is the asymmetric stretching vibration peak of Si-O-Si and 1635 cm⁻¹
5 is the vibration peak of C=C. 1729 cm⁻¹ is the vibration peak of C=O of EGDMA and
6 2958 cm⁻¹ is the characteristic absorption peak of C-H. The transmittance at 3432 cm⁻¹
7 shows that materials have abundant hydroxyl groups after dopamine modified. The
8 presence of above characteristic absorption peaks proved that the synthesis of MIP
9 was successful.

10 4. Thermogravimetric curves of MIP and NIP.

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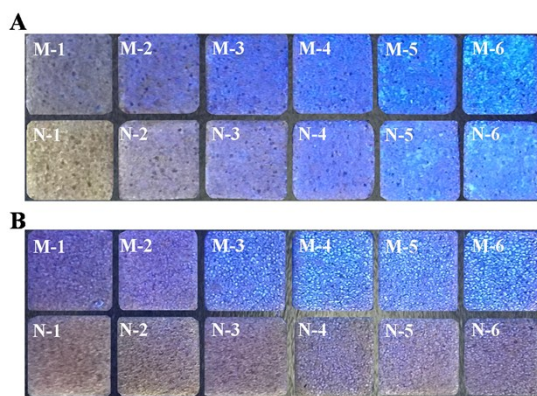
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Fig.S4. Thermogravimetric curves of MIP and NIP.

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2 **5. Photos of MIP-NF(M) and NIP-NF(N) after static adsorption of ENR or RhB**
3 **under ultraviolet light or natural light.**

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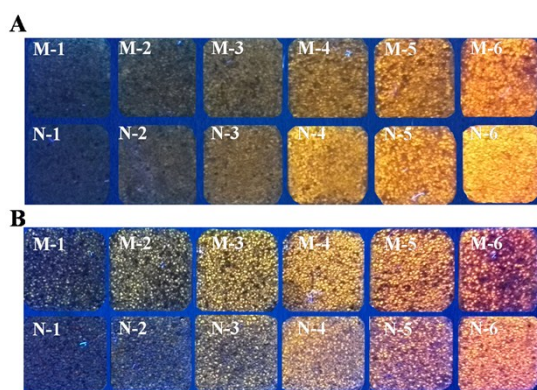


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6 Fig.S5. Photos of MIP-NF(M) and NIP-NF(N) after static adsorption of ENR for 24 h (A) and in
7 air for another 12 h (B) under ultraviolet lamp.

8 Conditions: adsorption temperature: 25°C; samples: 10 mL ENR aqueous solutions with different
9 concentrations (1-6 were 5, 10, 20,40, 80, 100 $\mu\text{g mL}^{-1}$, respectively).

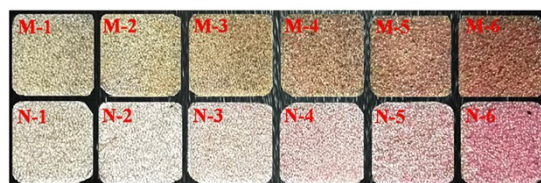
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12 Fig.S6. Photos of MIP -NF(M) and NIP-NF (N) after static adsorption of RhB for 24 h (A) and in
13 air for another 12 h (B) under ultraviolet lamp.

14 Conditions: adsorption temperature: 25°C; samples: 10 mL RhB aqueous solutions with different
15 concentrations (1-6 were 0.1, 0.2, 0.5,1, 2, 4 $\mu\text{g mL}^{-1}$, respectively).



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2 Fig.S7. Photos of MIP –NF (M) and NIP-NF (N) after static adsorption of RhB for 24 h under
3 natural light
4 Conditions: same as Fig.S6.
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6 6. Elemental analysis of NIP and MIP.

7 Table S1 Elemental analysis of NIP and MIP (n=2)

Sample	N (%)	Average	C (%)	Average	H (%)	Average
NIP	0.34	0.36	48.00	48.11	6.839	6.908
	0.35		48.21		6.977	
MIP ¹	0.68	0.65	52.51	52.56	6.673	6.646
	0.61		52.60		6.619	
MIP ²	0.38	0.36	47.78	47.81	6.778	6.849
	0.35		47.83		6.919	

8 ¹ and ² meant before and after removal of template molecules, respectively.

9 7. Pore structure parameters of MIP and NIP.

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11 Table S2 Pore structure parameters of MIP and NIP

Sample	S_{BET} (m^2g^{-1})	V_{BJH} (cm^3g^{-1})		D_{BJH} (nm)	
		Adsorption	Desorption	Adsorption	Desorption
MIP	13.0757	0.0461	0.0464	16.2100	14.8069
NIP	0.3893	0.0010	0.0012	7.8233	7.9747

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13 8. The adsorption and desorption quantity of temperature sensitive experiment

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2 Table S3 The adsorption and desorption quantity on MIP-NF at different temperature

Temperature (°C)	25	35	45
Adsorption quantity ($\mu\text{g g}^{-1}$)	280.2	235.1	213.1
Desorption quantity($\mu\text{g g}^{-1}$)	36.91	43.56	63.89

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4 9. Parameters of Langmuir and Freundlich equations

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6 Table S4 Parameters of Langmuir and Freundlich equations

Material	Langmuir			Freundlich		
	K_L	Q_{\max}	R^2	K_f	n	R^2
MIP	0.0558	666.7	0.9912	0.8550	1.059	0.9527
NIP	0.1094	628.9	0.9926	0.9335	1.026	0.9761

7 K_L is Langmuir adsorption constants. K_F is Freundlich adsorption constant and $1/n$ is the

8 adsorption index indicating adsorption strength.