Electronic Supplementary Material (ESI) for Materials Advances.

Supporting Information

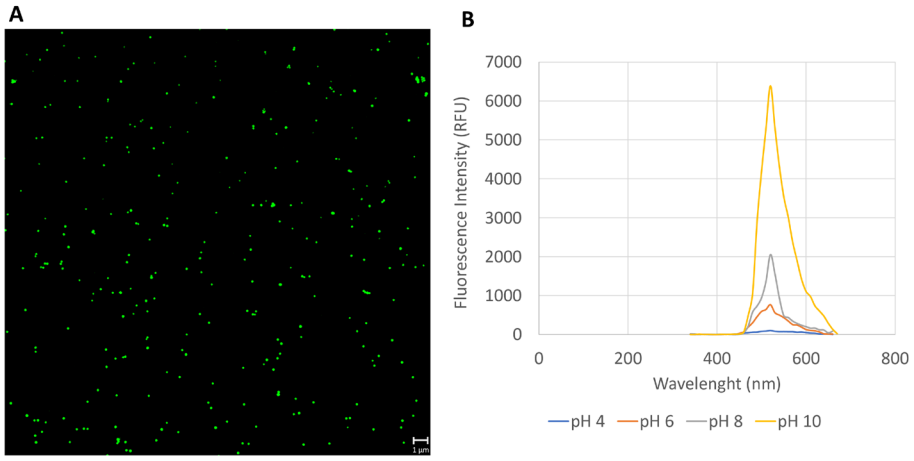

Figure S1. (**A**) Fluorescence microscopy image (magnification 40x) of GEF imprinted particles and (**B**) fluorescence emission spectra of MIP_1 as a function of the media pH

Table S1. Hydrodynamic mean diameter, polydispersity index, and ξ-Potential of imprinted and non-imprinted particles

Matrix	Mean Diameter, nm	Polydispersity Index (PI)	ξ-Potential (mV)
MIP_1	269.4 ± 72.9	0.039	-30.5 ± 0.6
NIP_1	221.4 ± 66.0	0.170	-27.9 ± 0.9
MIP_2	717.6 ± 39.7	0.614	-26.0 ± 0.3
NIP_2	717.4 ± 12.3	0.748	-21.8 ± 0.8
MIP_3	369.6 ± 80.3	0.196	-26.9 ± 0.6
NIP_3	556.1 ± 97.4	0.197	-24.5 ± 0.4

Table S2. Determination of BSA binding capacity of MIPs and NIPs prepared in PBS buffer (10^{-3} M, pH 7.4)

Polymer	EGDMA	TRIM	Bound BSA (%)
MIP_1	10 mmol	/	32.7 ± 0.4
NIP_1	10 mmol	/	35.6 ± 0.7
MIP_2	/	10 mmol	33.8 ± 1.6
NIP_2	/	10 mmol	34.4 ± 1.4
MIP_3	5 mmol	5 mmol	36.3 ± 1.2
NIP_3	5 mmol	5 mmol	34.4 ± 1.9

Table S3. Percentages of bound GEF and VAN by imprinted (MIP_1) and non-imprinted (NIP_1) particles and α/ε values for different

C_i (mol/L)	Bound GEF (%)		Bound VAN (%)		αGEF	αVAN	ε
	MIP_1	NIP_1	MIP_1	NIP_1			
$4.0 \cdot 10^{-5}$	87.5 ± 0.4	48.0 ± 1.1	48.6 ± 1.1	34.8 ± 0.5	1.82	1.40	1.80
$7.5 \cdot 10^{-5}$	86.8 ± 0.7	10.2 ± 0.5	24.3 ± 0.4	12.9 ± 0.8	8.51	1.88	3.57
$1.5 \cdot 10^{-4}$	59.8 ± 1.2	7.1 ± 0.8	10.7 ± 0.7	8.7 ± 0.6	8.42	1.23	5.59
$2.5 \cdot 10^{-4}$	61.8 ± 0.9	12.9 ± 0.4	12.9 ± 1.0	10.3 ± 1.0	4.79	1.25	4.79
$3.0 \cdot 10^{-4}$	60.5 ± 1.0	20.9 ± 0.9	16.5 ± 0.6	13.9 ± 0.6	2.89	1.19	3.67
$3.5 \cdot 10^{-4}$	63.0 ± 0.7	30.0 ± 0.7	15.3 ± 0.9	12.9 ± 0.7	2.10	1.19	4.12
$4.0 \cdot 10^{-4}$	46.5 ± 0.5	23.4 ± 0.7	17.7 ± 0.9	15.3 ± 0.6	1.99	1.16	2.63
$4.5 \cdot 10^{-4}$	53.7 ± 0.9	25.7 ± 0.8	19.0 ± 0.8	17.3 ± 0.9	2.09	1.10	2.83
$5.0 \cdot 10^{-4}$	46.4 ± 1.1	23.0 ± 0.5	17.6 ± 0.5	19.8 ± 0.8	2.02	0.89	2.64
$6.0 \cdot 10^{-4}$	43.5 ± 1.1	18.7 ± 0.9	16.2 ± 0.6	18.3 ± 0.7	2.33	0.89	2.69

Table S4. Parameters of GEF adsorption by obtained MIPs and NIPs.

Polymer	Langmuir model			Freundlich model		
	K_L	Q_{max}	R^2	m	K_F	R^2
MIP_1	12,4	$5{,}98 \times 10^{-5}$	0,94	0,44	$1{,}43 \times 10^{-3}$	0,96
NIP_1	9,0	$9{,}94 \times 10^{-6}$	0,19	0,81	$6{,}10 \times 10^{-3}$	0,58
MIP_2	4,1	$4{,}99 \times 10^{-5}$	0,88	0,61	$3{,}67 \times 10^{-3}$	0,95
NIP_2	0,3	$5{,}22 \times 10^{-5}$	0,73	0,99	$1{,}64 \times 10^{-2}$	0,83
MIP_3	18,5	$3{,}77 \times 10^{-5}$	0,74	0,37	$6{,}04 \times 10^{-4}$	0,88
NIP_3	4,6	$1{,}06 \times 10^{-5}$	0,31	0,60	$7{,}84 \times 10^{-4}$	0,60

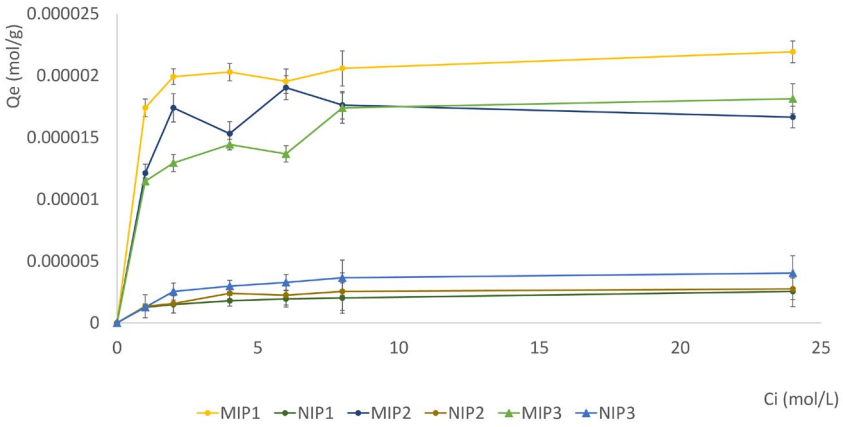

Figure S2. GEF adsorption kinetic curves for MIPs and NIPs.

Table S5. Kinetic fitting data for MIPs and NIPs.

Polymer	Q_e (exp)	Pseudo-first order			Pseudo-second order		
		K_1	Q_e [43]	R^2	K_2	Q_e [43]	R^2
MIP_1	2.19×10^{-5}	0.17	4.41×10^{-6}	0.95	1.29×10^{-5}	2.25×10^{-5}	0.99
NIP_1	2.59×10^{-5}	0.12	1.44×10^{-6}	0.98	1.96×10^{-5}	2.69×10^{-6}	0.99
MIP_2	1.70×10^{-5}	0.10	3.60×10^{-6}	0.80	1.34×10^{-6}	1.67×10^{-5}	0.99
NIP_2	2.74×10^{-5}	0.28	2.32×10^{-6}	0.92	2.54×10^{-5}	2.90×10^{-6}	0.99
MIP_3	1.81×10^{-5}	0.35	1.43×10^{-5}	0.97	4.66×10^{-4}	1.89×10^{-5}	0.99
NIP_3	3.63×10^{-6}	0.29	1.14×10^{-6}	0.64	1.99×10^{-5}	3.86×10^{-6}	0.99

Table S6. Linear fitting of cumulative drug diffusion curves.

Polymer	Zero-Order Kinetic Model		First-Order Kinetic Model		Higuchi Kinetic Model		Ritger-Peppas Kinetic Model		
	R^2	K_0	R^2	K_1	R^2	K_H	R^2	K_p	n
MIP	0.7173	0.0063	0.8228	-0.0124	0.8486	0.0650	0.9485	0.1260	0.7599
NIP	0.6643	0.0079	0.8979	-0.0386	0.8080	0.0822	0.9857	0.2784	0.6305