

Supporting information

Highly Sensitive and Selective Detection of Naproxen via Molecularly Imprinted Carbon Dots as a Fluorescent Sensor

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Table S1. The preparation recipe of human urine sample.

Compound	Mass or Volume
NaCl	0.52 g
CaCl ₂	0.028 g
MgSO ₄	0.24 g
KH ₂ PO ₄	0.142 g
KH ₂ PO ₄	0.16 g
C ₆ H ₈ O ₇	1.5 g
CH ₃ CHOHCOOH	0.009 g
CO(NH ₂) ₂	1.021 g
NH ₄ Cl	0.134 g
NaHCO ₃	0.21 g
H ₂ O	100 mL

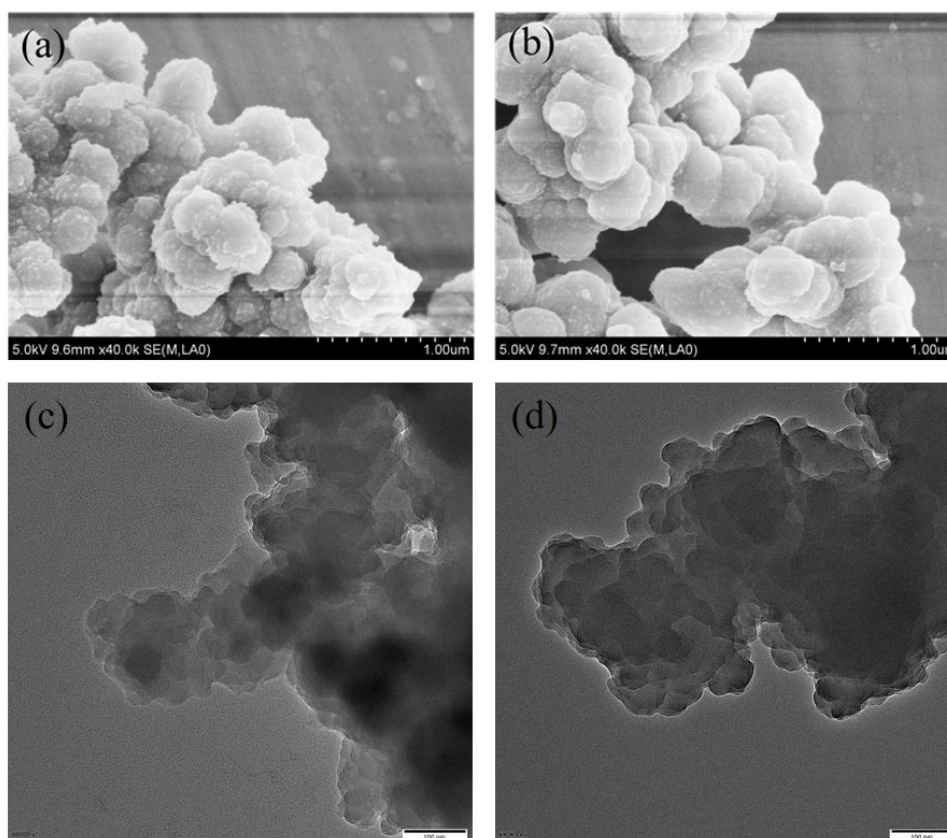


Fig. S1. SEM and TEM images of (a, c) MIP@CDs; (b, d) NIP@CDs.

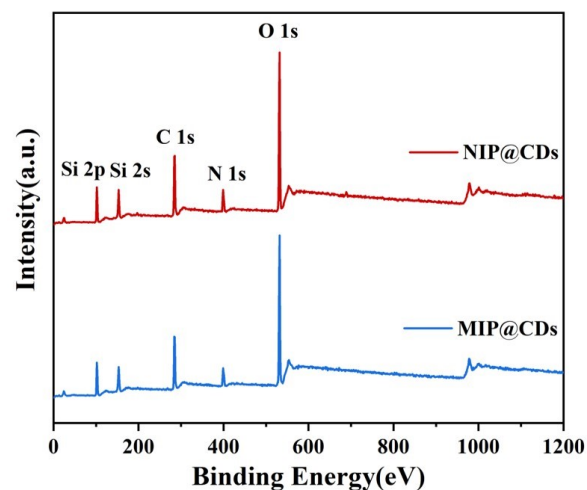


Fig. S2. The XPS survey scans of MIP@CDs and NIP@CDs.

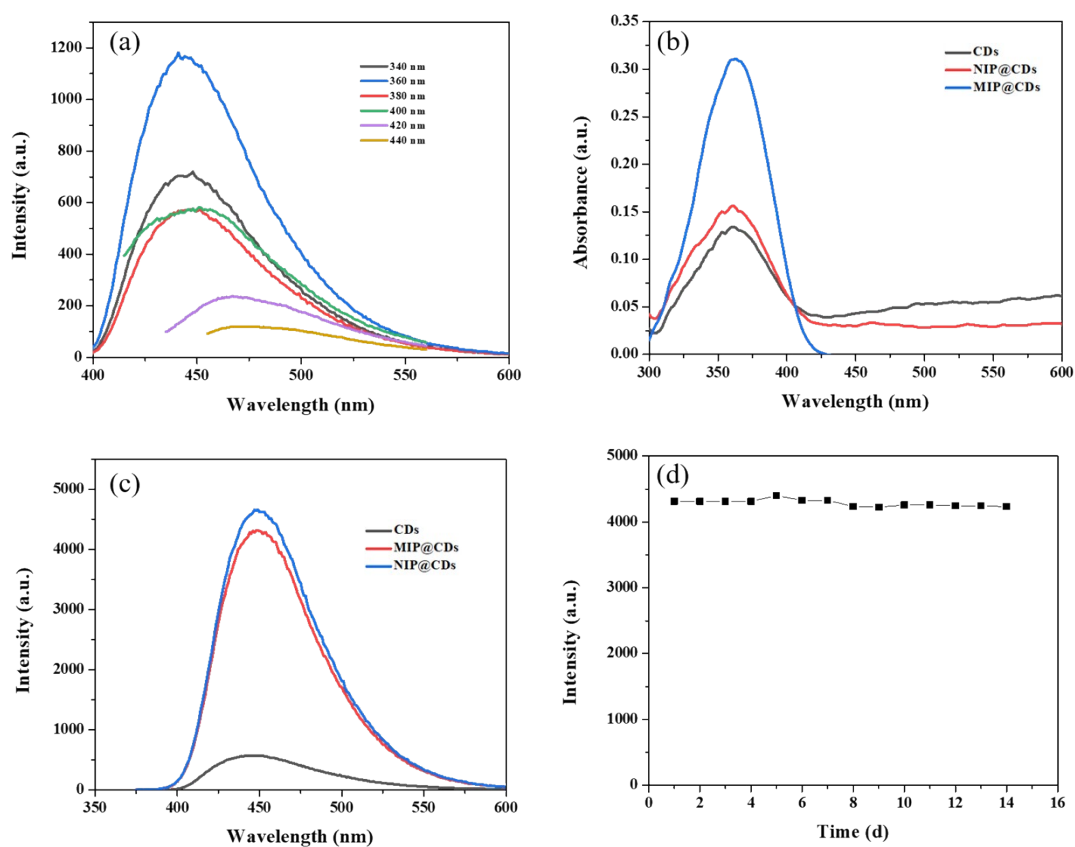


Fig. S3. (a) The emission spectra of the CDs in ethanol with different excitation wavelengths; Absorption (b) and emission (c) spectra of CDs, MIP@CDs, NIP@CDs; (d) The emission intensity of MIP@CDs (280 mg/L) at 448nm within 14 days.

Table S2 Different methods for naproxen detection.

Method	Materials	LOD	Linear range	references
Electrochemical method	AgNPs@GO- β -CD	0.08 μ M	0.4-80 μ M	1
Chiral electrochemical method	L- CYS/AuNPs/Au E	0.67 μ M	2-20 μ M	2
Photoelectrochemical method	BiVO ₄ /CuO	5 nM	5-480 nM	3
Plasmon method	T β -CD-Au NPs	0.6 μ g/L	4-180 μ g/L	4
Electrochemical method	FeNi ₃ /CuS/BiOCl nanocomposite	0.06 μ M	0.2-500 μ M	5
Microextraction method	Hollow fiber liquid	1.3 ng/L	4-300 ng/L	6
Fluorescent method	MIP@CDs	0.03 μ M	0.05-4 μ M	this work

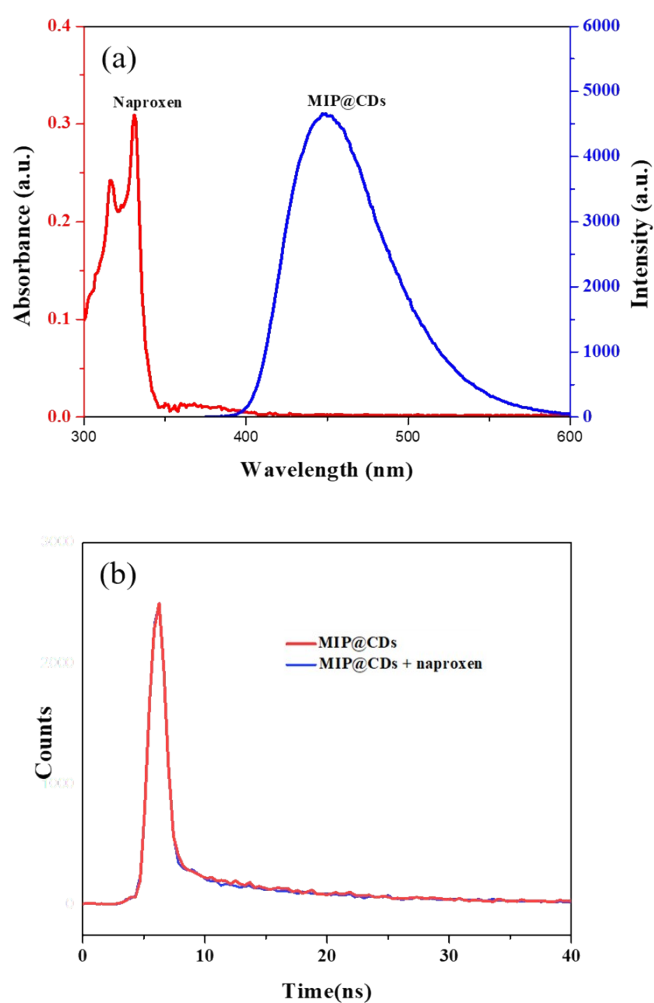


Fig. S4. (a) Absorption spectra of naproxen and emission spectra of MIP@CDs; (b) Fluorescence decay traces of MIP@CDs in the absence and presence of naproxen.

References:

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