Supporting information

Characterizations

The optical properties of the prepared materials were evaluated by Cary Eclipse spectrofluorometer. Besides, multiple techniques including scanning electron microscopy (SEM, Hitachi S-4800), transmission electron microscopy (TEM, JEM-2100), X-ray photoelectron spectroscopy (XPS, HI5700ESCA), X-ray diffraction (XRD, Rigaku D/max-2500 X-ray diffractometer), Fourier-transform infrared (FT-IR, Nicolet NEXUS-470) and volumetric adsorption analyzer (JW-BK 132F) were used to characterize the fabricated samples.

Table S1 The proportion of functional monomer, template molecule and crosslinker to prepare CdTe@H-ZIF-8/CDs@MIPs.

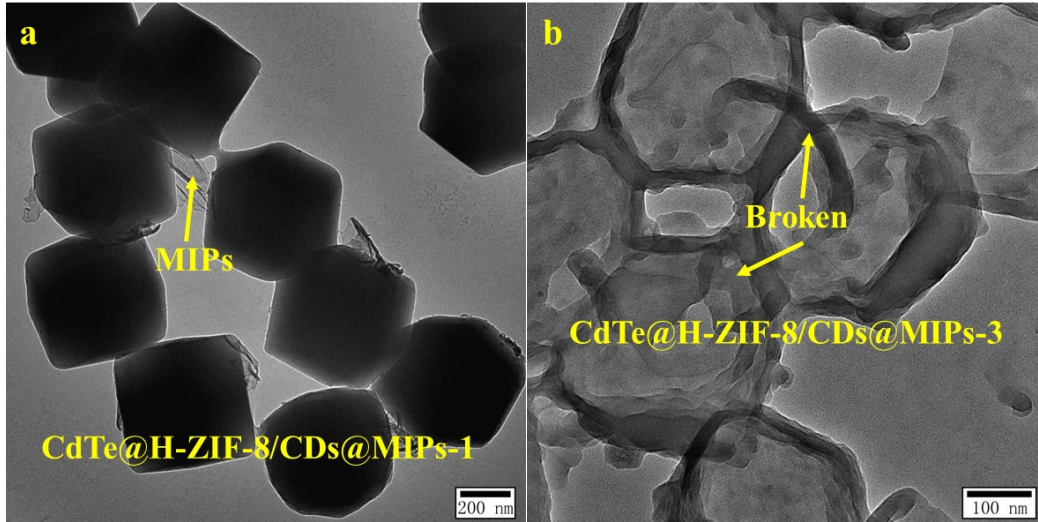| Sample	AM (mmol)	VPBA (mmol)	DA (mmol)	MBAAM (mmol)
CdTe@H-ZIF-8/CDs@MIPs-1	0.02	0.02	0.04	0.09
CdTe@H-ZIF-8/CDs@MIPs-2	0.08	0.08	0.04	0.36
CdTe@H-ZIF-8/CDs@MIPs-3	0.16	0.06	0.04	0.72

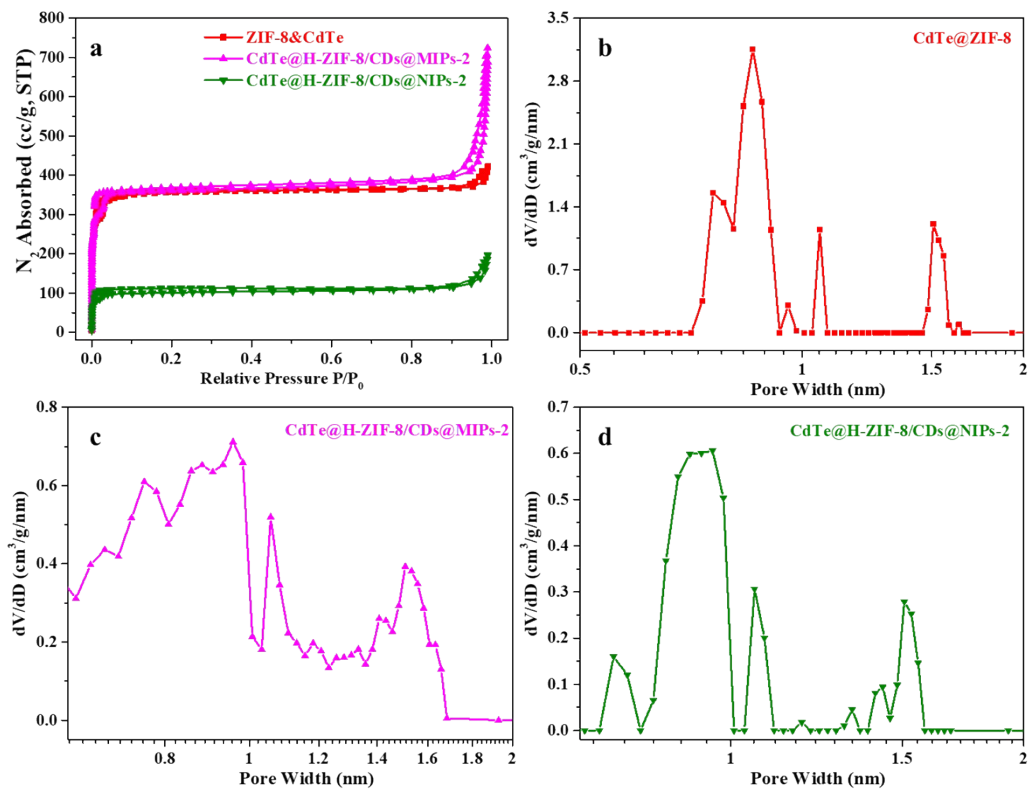Fig. S1 The TEM images of CdTe@H-ZIF-8/CDs@MIPs-1 (a) and CdTe@H-ZIF-8/CDs@MIPs-3 (b)

Fig. S2 N$_2$ adsorption-desorption isotherm (a) and the corresponding pore size distributions (b) of different samples
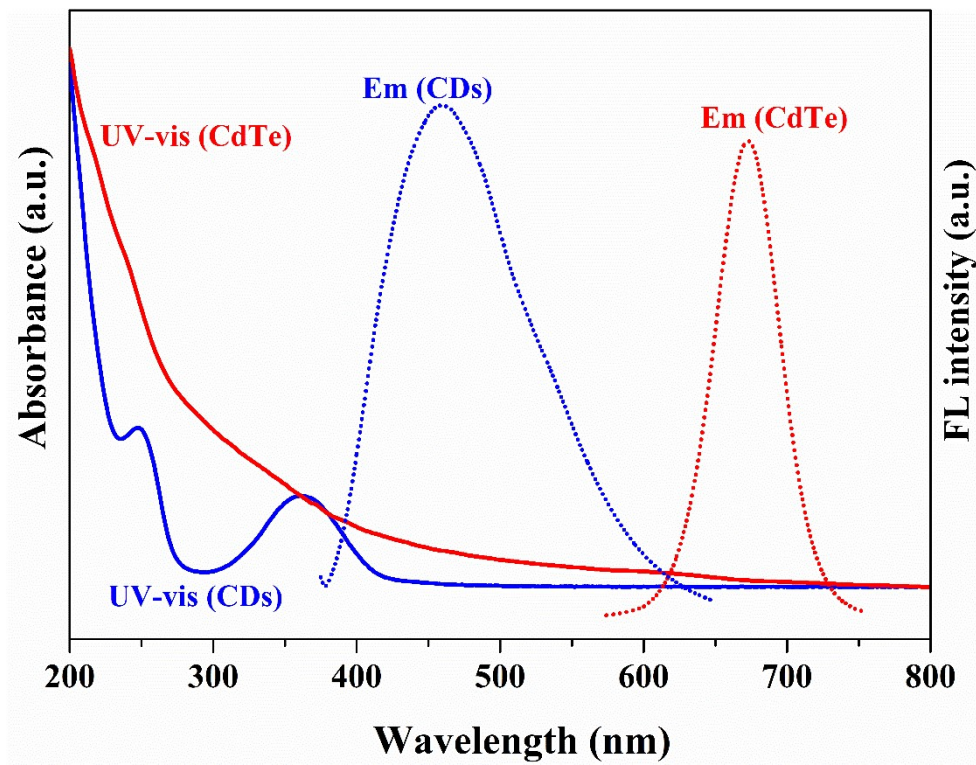
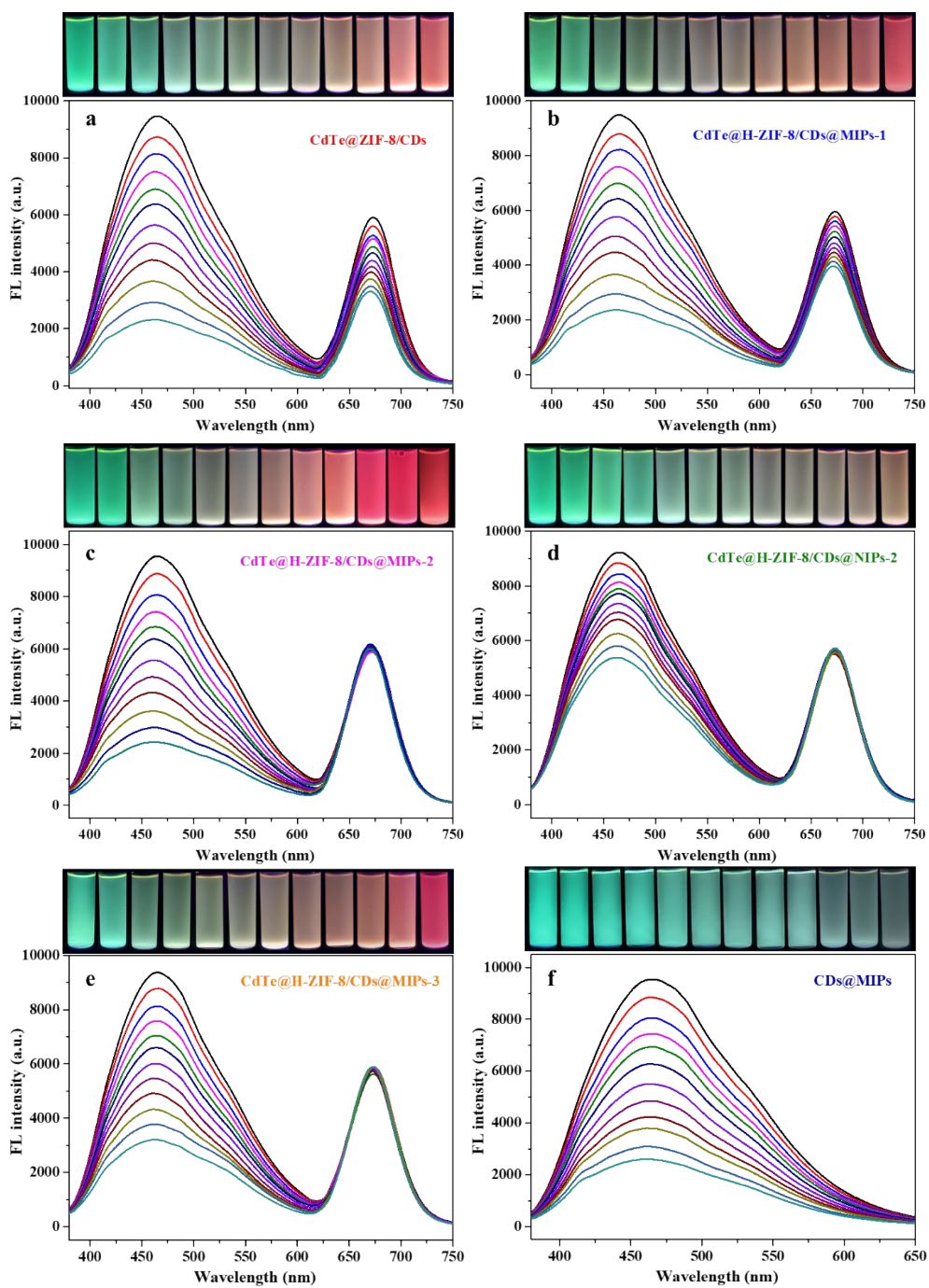Fig. S3 The absorption spectra and emission spectra of CDs and CdTe QDs

Fig. S4 Fluorescence spectra of fluorescence sensor with different concentration of DA and corresponding fluorescent photos under UV lamp (a-f)
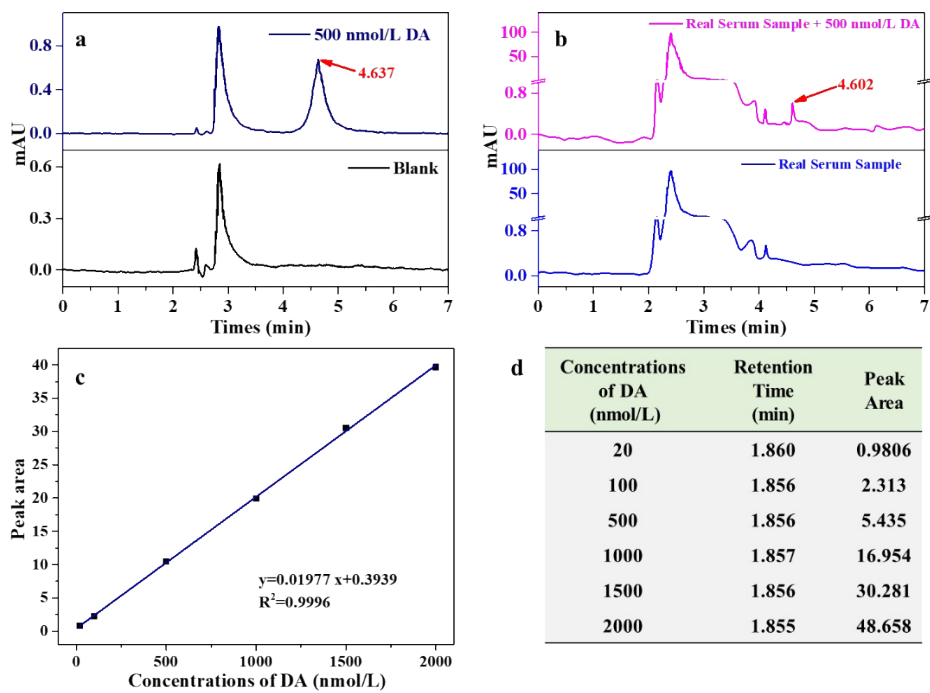
Fig. S5 Chromatogram of HPLC: (a) standard blank and 500 nM DA standard solution, (b) Serum sample blank and serum sample spiked with 500 nM DA standard solution. (c) DA standard curve, (d) DA standard concentration and its corresponding retention time and peak area

Table S2 The corresponding linear equation and detection limit of fluorescence sensor

Sample	Linear equation	R^2	LOD (nM)
CdTe@ZIF-8/CDs	$-\log[(I_{464}/I_{673})/(I_{464}/I_{673})_0]=$ $5.59002*10^{-4}$ [c] - 0.00709	0.97928	75.67
CdTe@H-ZIF-8/CDs@MIPs-1	$-\log[(I_{464}/I_{673})/(I_{464}/I_{673})_0]=$ $6.95518*10^{-4}$ [c] - 0.00304	0.98809	50.10
CdTe@H-ZIF-8/CDs@MIPs-2	$-\log[(I_{464}/I_{673})/(I_{464}/I_{673})_0]=$ $1.02*10^{-3}$ [c] + 0.00998	0.99745	12.35
CdTe@H-ZIF-8/CDs@NIPs-2	$-\log[(I_{464}/I_{673})/(I_{464}/I_{673})_0]=$ $3.90119*10^{-4}$ [c] + 0.01483	0.98704	96.06
CdTe@H-ZIF-8/CDs@MIPs-3	$-\log[(I_{464}/I_{673})/(I_{464}/I_{673})_0]=$ $7.80416*10^{-4}$ [c] + 0.01899	0.992	39.13