Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Convenient and sensitive detection of norfloxacin with fluorescent carbon dots

(Supporting Information)

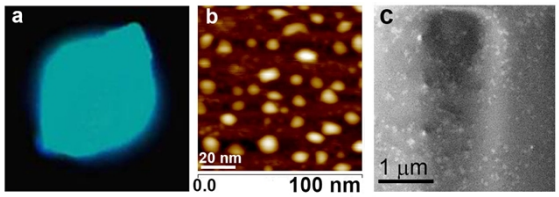

Figure S1 (a) Fluorescent microscopy image of CDs under excitation of 360 nm. (b) Atomic force microscopy (AFM) image of CDs. (c) Scanning electron microscopy (SEM) image of CDs.

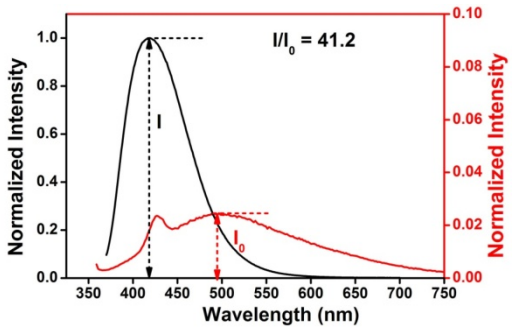

Figure S2. PL spectra of CDs and CDs–NOR system with NOR concentration of 9.93×10^{-5} mol·L^{-1} (25 ℃, pH=7.4, red trace-CDs; black trace-CDs-NOR).

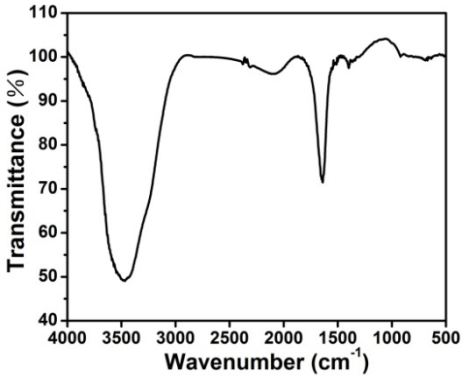

Figure S3. FTIR spectrum of hydroxyl -group-free CDs.

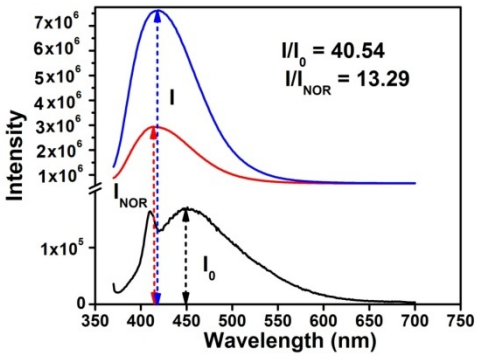

Figure S4. PL spectra of CDs, NOR and CDs – NOR system with NOR concentration of 9.77×10^{-5} mol·L^{-1} (25 ℃, pH=7.4, black trace-CDs; red trace-NOR; blue trace-CDs-NOR system).

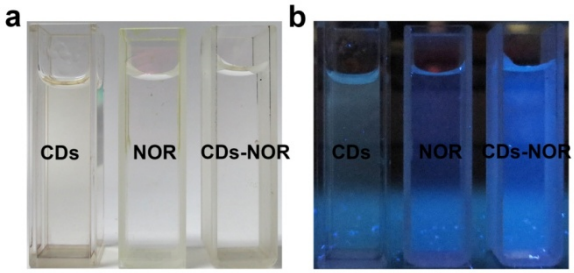

Figure S5. Photographs of CDs solution, NOR solution and CDs-NOR solution with NOR concentration of 9.77×10^{-5} mol·L^{-1} （25 ℃, pH=7.4） under room light (a) and UV lamp (365 nm, center) illumination (b).

Table S1 Comparison of detection limit of different methods for the determination of NOR.

methods	**detection limit (μM)**	**ref**
HPLC	1.57	6
reverse phase-HPLC-fluorescent	0.24	10
capillary electrophoresis	0.31	17
SIA	7.95	21
this method (pH = 5.9)	0.0133	this work
this method (pH = 7.4)	0.038	this work

Table S2.The I/I_0 when CDs were mixed with other substances.

Reagent	Groups	I/I_0
1,3-Di(4-pyridyl)propane	-N	1.35
Dibenzoyl-L-tartaric acid monohydrate	-COOH	2.30
3,5-Pyridinedicarboxylic acid	-N,-COOH	4.10
flusilazole	-F,-N	6.53
Isonicotinic acid hydrazide	-N,-CO	1.67
1,2,4-Triazole	-N	5.20
Di-P-Toluoyl-L-Tartaric Acid	-COOH	3.43
1,3,5-Benzenetricarboxylic acid	-COOH	1.78
Imidazole	-N	3.45
2.4 Diamino-6-hydroxypyrimidine	-N,-OH	8.45
o-Difluoro Benzene	-F	10.23
Benzene	-	0.65

Table S3. The I/I_0 when different amount of hydrazine hydrate was added into the CDs solution.

CDs (mL)	Hydrazine Hydrate (mL)	Amount of Oxygen-Groups ($mol \cdot L^{-1}$)	I/I_0
3	0.00	6.75×10^{-4}	42.39
3	0.10	5.5×10^{-4}	35.45
3	0.20	4.5×10^{-4}	32.35
3	0.30	3.5×10^{-4}	30.32
3	0.40	3×10^{-4}	25.50
3	0.50	2×10^{-4}	23.34
3	0.60	1.5×10^{-4}	15.78