Electronic Supplementary Material (ESI) for RSC Advances.

Green fluorescent organic nanoparticles based on carbon dots and self-polymerized dopamine for cell imaging

Tianxiang Zhang,[a] Hongwei Xu,[a] He Wang,[b] Jinyang Zhu,[b] Yue Zhai,[b] Xue Bai,[a] Biao Dong,[a]*
Hongwei Song[a]*

[a.] *State Key Laboratory on Integrated Optoelectronics, College of Electronic Science and Engineering, Jilin University, 2699 Qianjin Street, Changchun, 130012, P. R. China.*

[b.] *College of Physics, Jilin University, 2699 Qianjin Street, Changchun, 130012, P. R. China.*

E-mail: songhw@jlu.edu.cn, dongb@jlu.edu.cn;
Tel and Fax: +86-0431-81736614

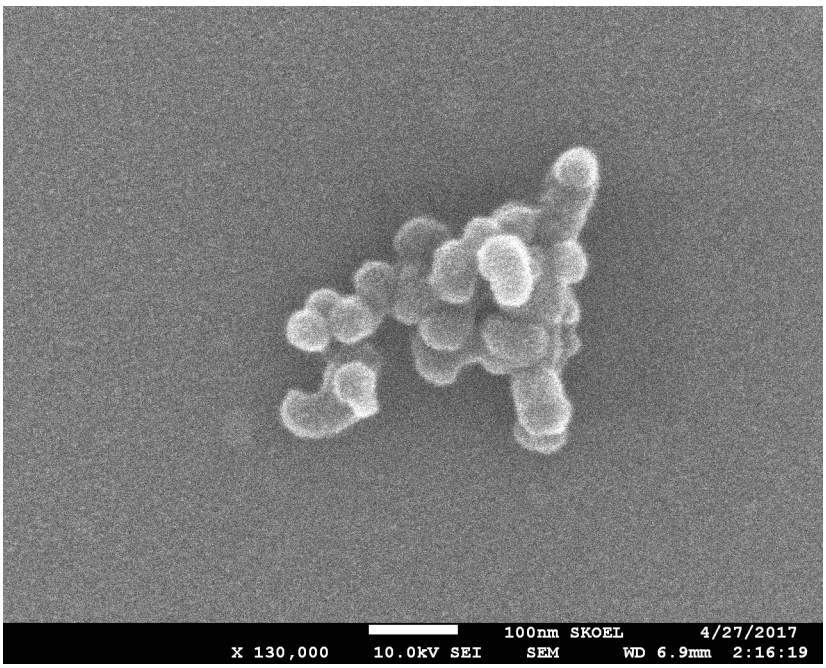

Fig. S1 The SEM image of prepared CDs-PDA-FONs (measured in silicon slice).

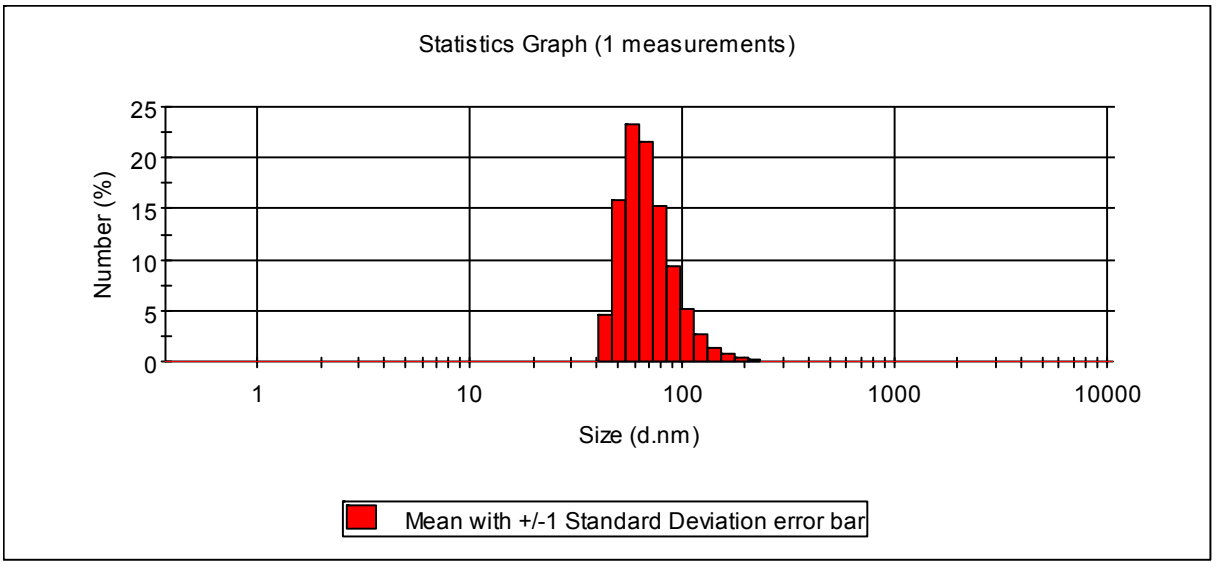

Fig. S2 The DLS size distribution of prepared CDs-PDA-FONs.

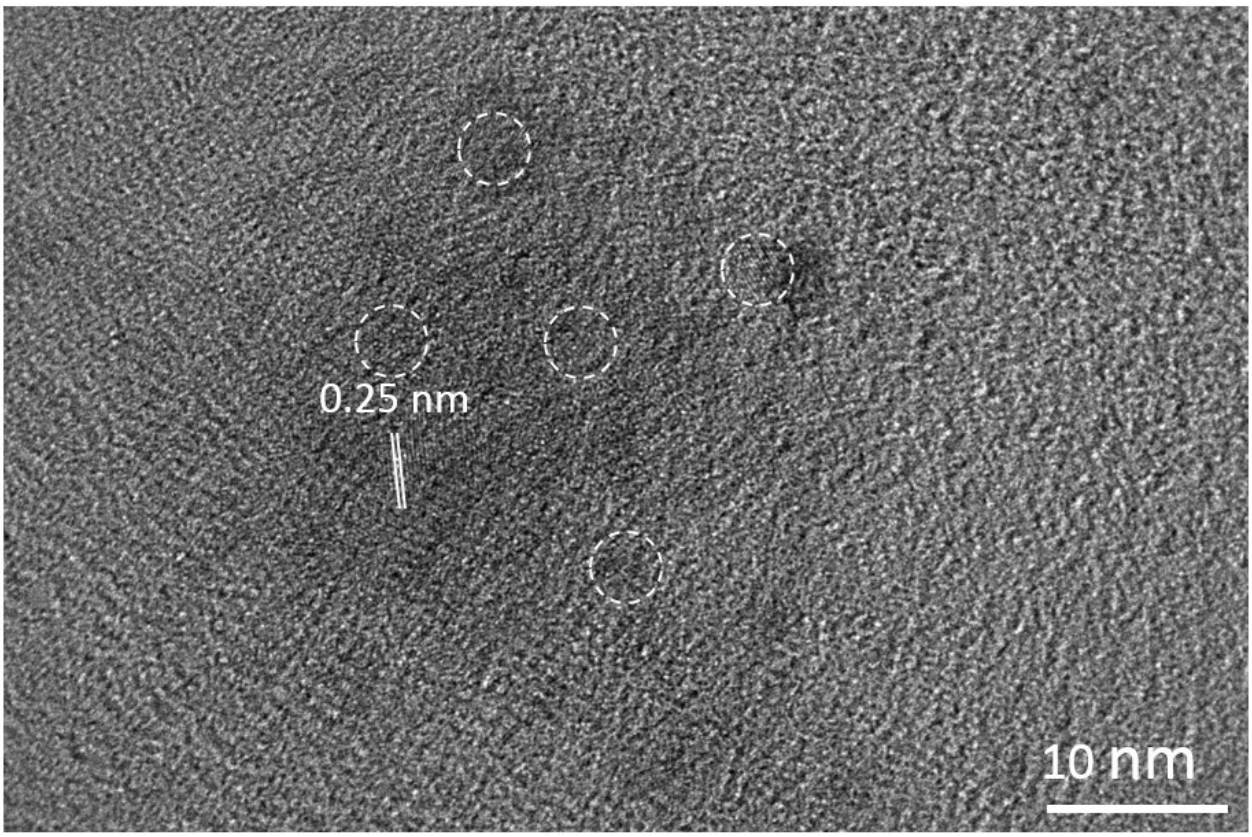

Fig. S3 The High resolution TEM images of prepared CDs-PDA-FONs. The white circle was the inside CDs.

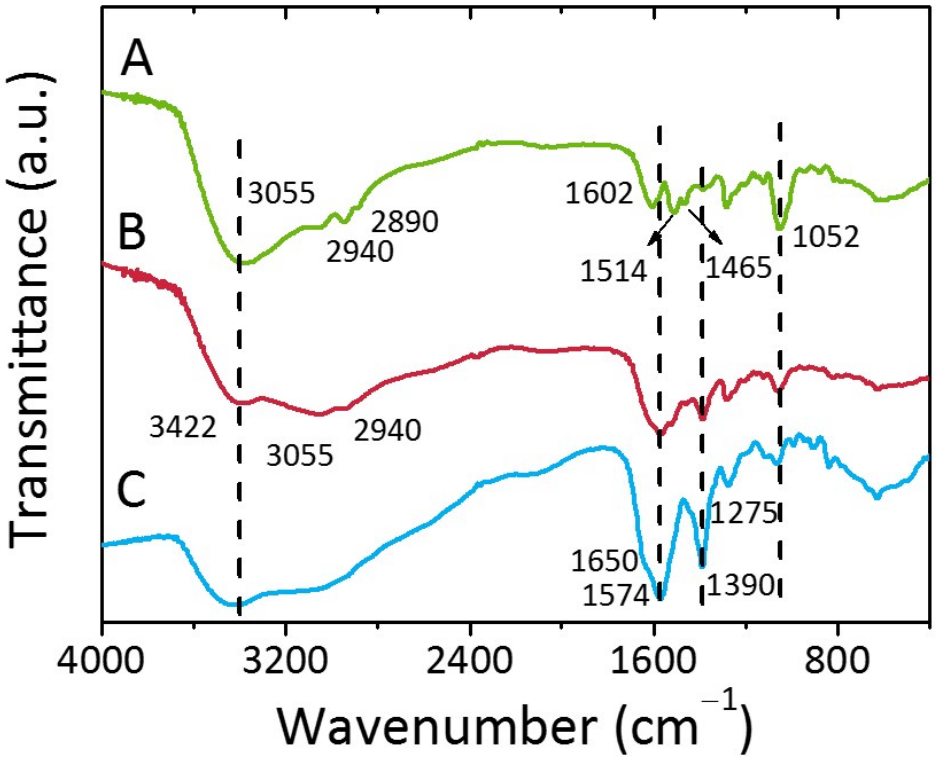

Fig. S4 The FT-IR spectra of (A) CDs, (B) CDs-PDA-FONs and (C) PDA-FONs, respectively.

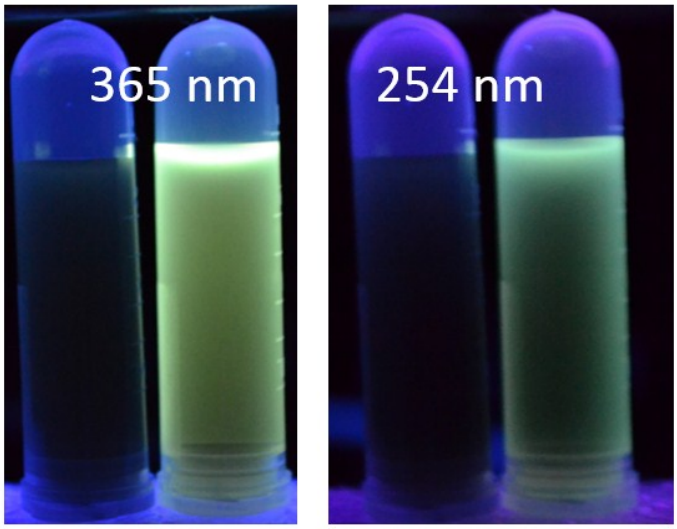

Fig. S5. The digital photos of PDA-FONs (left samples) and CDs-PDA-FONs (right samples) under UV lamp excited by 365 nm and 254 nm, respectively.

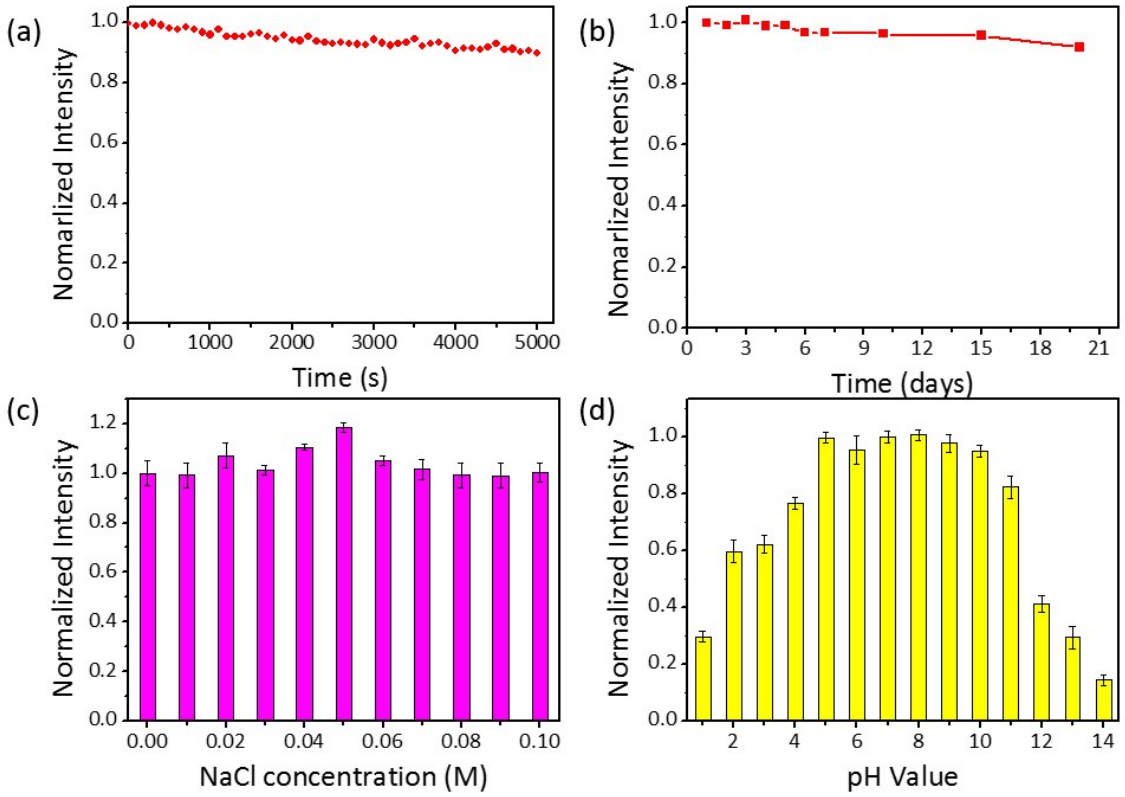

Fig. S6. The stability of as-prepared CDs-PDA-FONs. (a) Photostability which measured by continuous Xenon lamp radiation (50 W). (b) Storage stability in dark and -4°C. The influence on fluorescence of CDs-PDA-FONs of concentration of NaCl (c) and pH value (d).

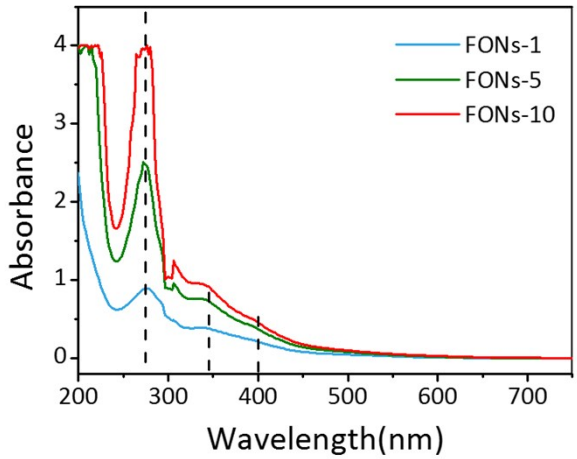

Fig. S7. The absorption spectra of different FONs prepared at different reaction time for 1 h, 5 h, and 10h, respectively.

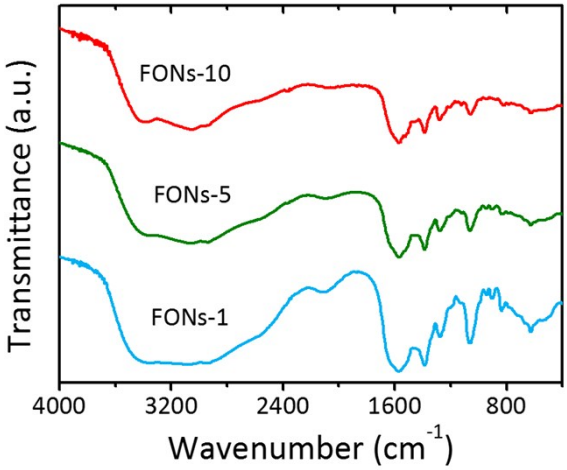

Fig. S8. The FT-IR spectra of different FONs.

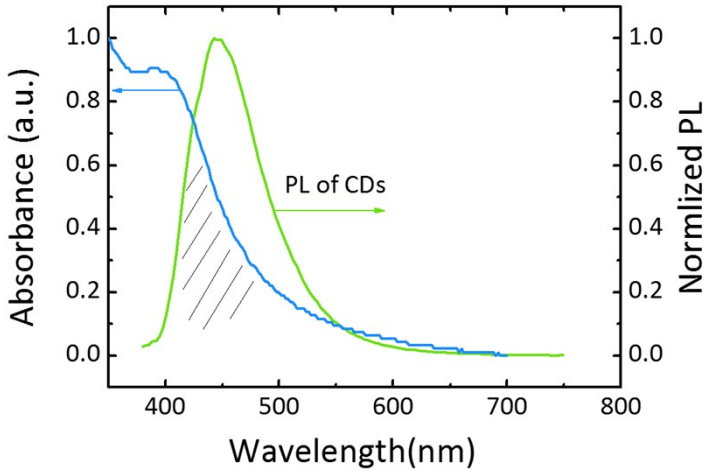

Fig. S9. The spectra overlap between CDs and PDA-FONs.

Table S1. The fit parameter of decay at 445 nm.

445 nm	*t1*	*f1*	*t2*	*f2*	*t3*	*f3*	*<t>*	*X^2*
CDs	7.04	3.3	14.09	96.7	-	-	13.8	1.11
FONs-1	3.96	5.3	11.91	94.5	0.68	0.2	11.5	1.17
FONs-5	3.41	12.7	11.36	86.4	0.71	0.8	10.3	1.15
FONs-10	2.87	24.2	11.14	73.4	0.80	2.4	8.9	1.09

Table S2. The fit parameter of decay at 515 nm.

515 nm	*t1*	*f1*	*t2*	*f2*	*t3*	*f3*	*<t>*	*X^2*
PDA-FNs	0.54	10.6	2.25	53.1	8.21	36.3	4.5	0.89
FONs-1	-	-	5.43	16.1	10.24	83.9	9.1	1.16
FONs-5	-	-	4.72	12.7	9.76	87.3	9.9	1.22
FONs-10	-	-	4.58	11.2	10.66	88.8	9.4	1.17