Supporting Information

For

Selective identification of *p*-nitroaniline by bromine-mediated polarization of carbon dots

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Supplementary materials

Table S1 Table summarizing surface atomic ratios of single BBCNs and BBCNs/PNA.

Name	Atomic %	
	BBCNs	BBCNs/PNA
Br3d	6.52	6.44
O1s	10.74	9.54
C1s	52.83	51.88
B1s	29.91	29.27
N1s	-	2.86

Table S2 Table summarizing FL lifetime parameters of BBCNs/PNA ensemble.

Sample	τ_1/ ns (A_1/%)	τ_2/ ns (A_2/%)	τ_3/ ns (A_3/%)	τ^a_{ave}, ns
BBCNs	1.91 (32.74)	4.88 (36.54)	14.26 (30.72)	6.79
BBCNs/50 μM PNA	1.73 (29.27)	4.36 (39.33)	13.19 (31.40)	6.36
BBCNs/100 μM PNA	1.65 (31.81)	4.57 (39.86)	12.50 (28.34)	5.89

[a] The average lifetime is calculated according to $\tau_{ave} = \Sigma A_i \tau_i$.

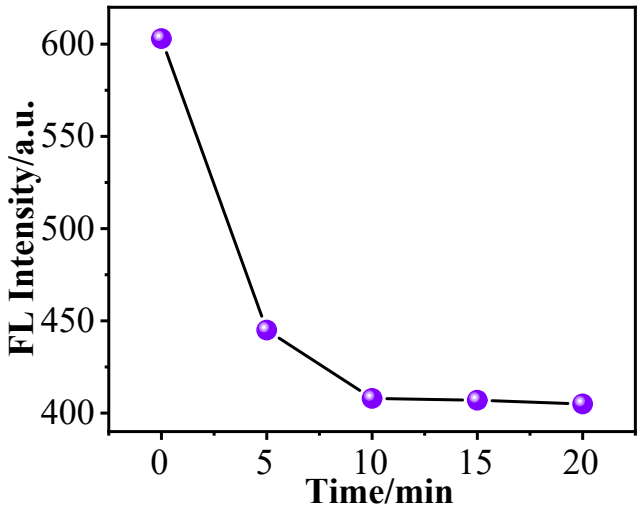

Fig. S1 FL intensities at 405 nm of the BBCNs after adding the PNA (50 μM) at various standing times.

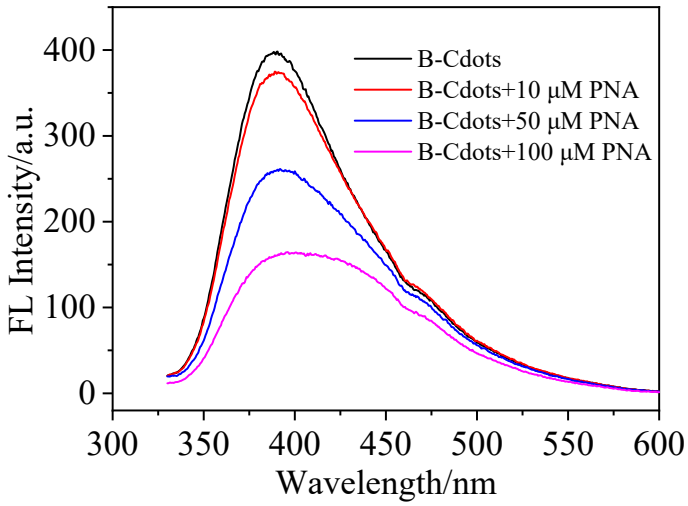

Fig. S2 FL spectra of B-Cdots synthesized by phenylboric acid precursor in the absence and presence of the PNA, respectively.

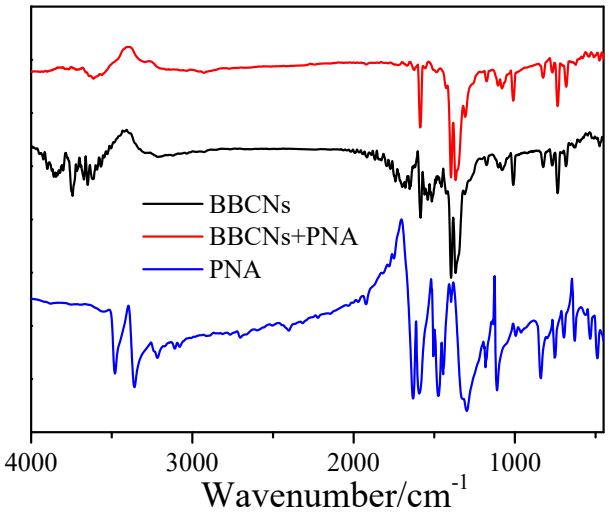

Fig. S3 FT-IR spectra of PNA, BBCNs and a mixture of BBCNs and PNA.

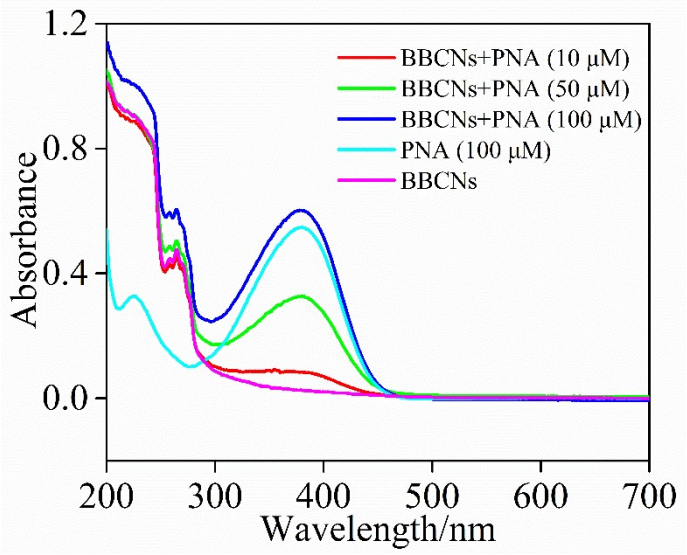

Fig. S4 UV-vis absorption spectra of pure PNA, single BBCNs and the mixture of BBCNs and PNA with different concentrations.

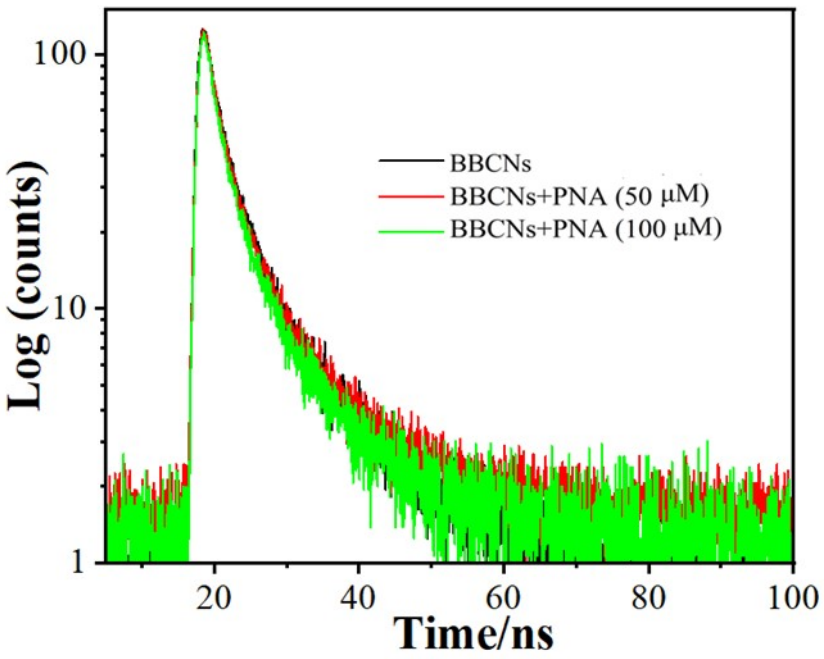

Fig. S5 Decay of the FL of the BBCNs in the absence and presence of PNA.

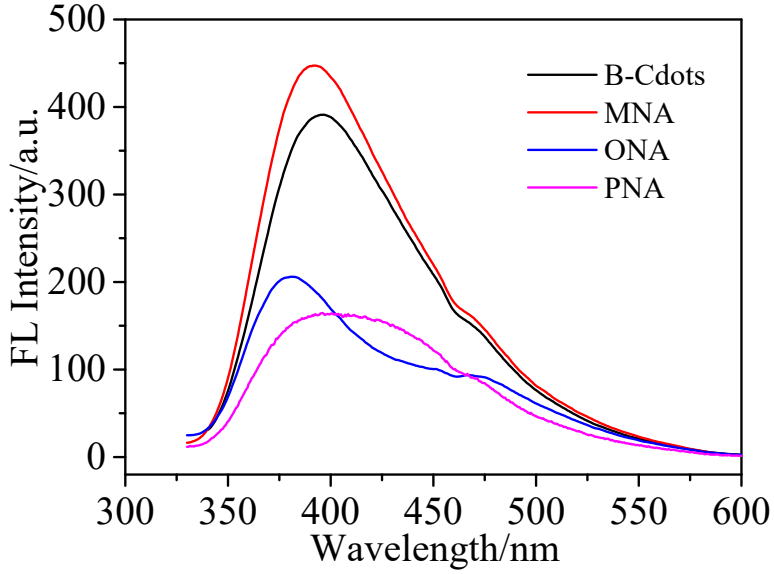

Fig. S6 FL spectra of single B-Cdots synthesized by phenylboric acid precursor in the absence and presence of various nitroaniline isomers (100 μM).

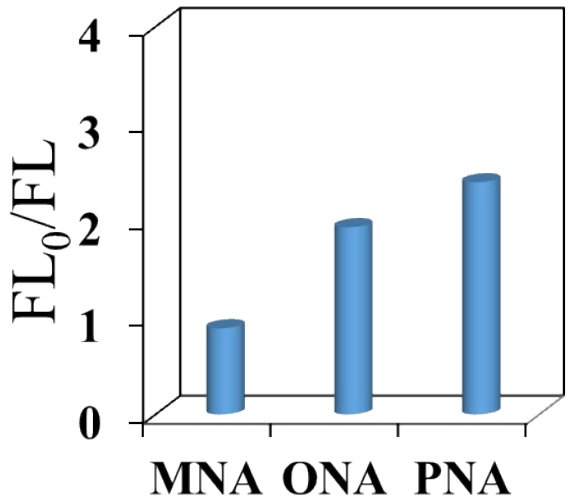

Fig. S7 The [FL_0/FL] diagrams of B-Cdots prepared by phenylboronic acid in the presence of various nitroaniline isomers (100 μM).