Electronic Supplementary Information (ESI)

Photothermal conversion upon near-infrared irradiation of fluorescent carbon nanoparticles formed from carbonized polydopamine

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Fig. S1 FT-IR characterization of (a) polydopamine (pDA), (b) FNP-pDA and (c) surface passivated FNP-pDA.
Fig. S2 $^1$H NMR (400, MHz, D$_2$O) spectroscopic analysis of polydopamine (pDA), FNP-pDA and surface passivated FNP-pDA.
Fig. S3 Fluorescence life time curve of FNP-pDA and surface passivated FNP-pDA in 375 nm wavelength. The $\tau$ value indicates respective fluorescence lifetime.
Fig. S4 The concentration dependent (5 and 10 mg/mL) photothermal conversion of (a) FNP-pDA and (b) surface passivated FNP-pDA in response to NIR light irradiation. The NIR laser was 808 nm and 2W/cm² power intensity.
The temperature and time (NIR irradiation) dependent the percentage of bacterial viability treated of (a, b) FNP-pDA and (c, d) surface passivated FNP-pDA incubate with *S. aureus* and *E. coli* bacteria, respectively.

**Fig. S5** The temperature and time (NIR irradiation) dependent the percentage of bacterial viability treated of (a, b) FNP-pDA and (c, d) surface passivated FNP-pDA incubate with *S. aureus* and *E. coli* bacteria, respectively.
Fig. S6 The time (NIR irradiation) dependent the bacterial zone of inhibition (number) treated with FNP-pDA and surface passivated FNP-pDA in *S. aureus* and *E. coli* bacteria, respectively.