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

ICG@ZIF-8/PDA/Ag composites as chemo-photothermal antibacterial agents for efficient sterilization and enhanced wound disinfection

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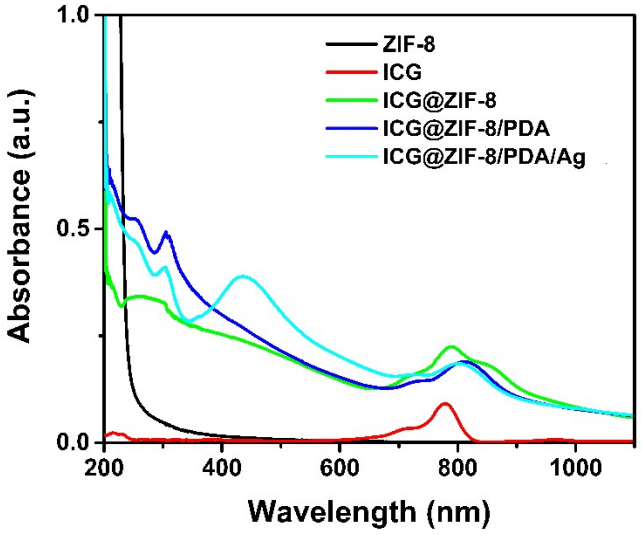

Figure S1. UV-Vis-NIR spectra of ZIF-8, ICG, ICG@ZIF-8, and ICG@ZIF-8/PDA.

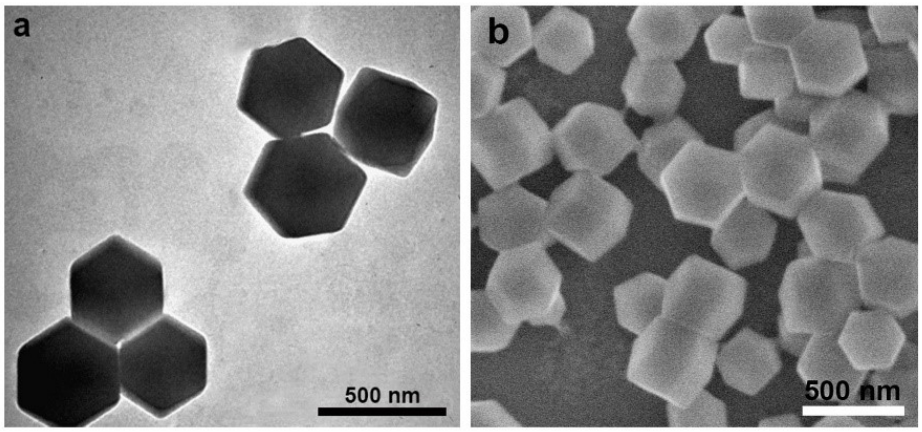

Figure S2. (a) TEM and (b) SEM images of ZIF-8.

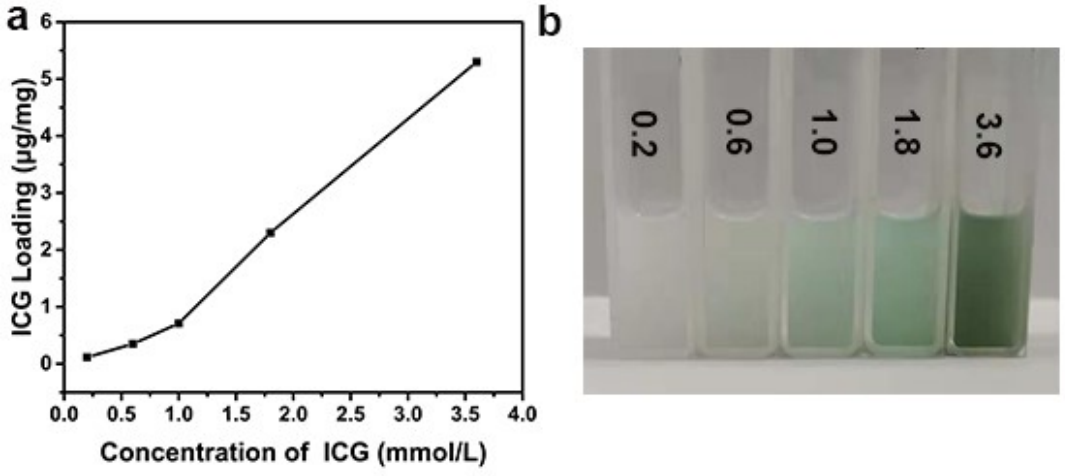

Figure S3. (a) ICG loading efficiency in ICG@ZIF-8 composites and (b) corresponding photos of ICG@ZIF-8 methanol solution with adding ICG of different concentration at 0.2 mM, 0.8 mM, 1.0 mM, 1.8, and 3.6 mM.

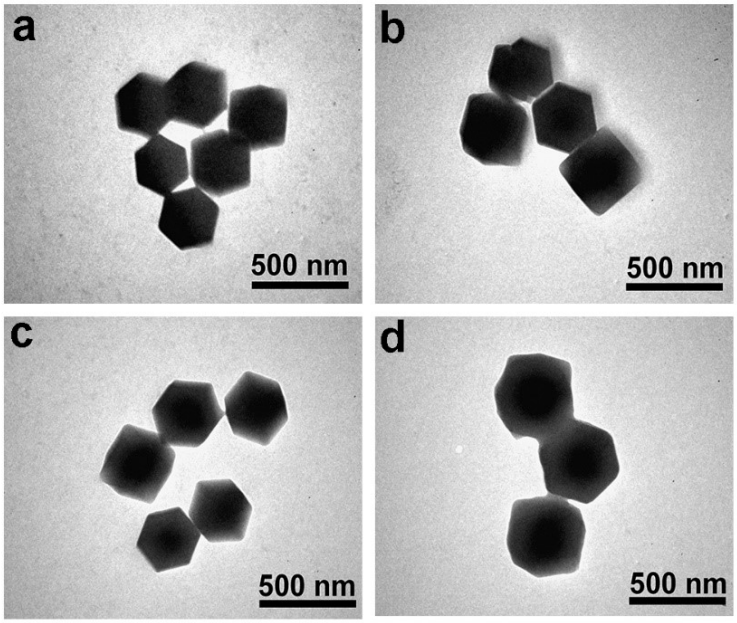

Figure S4. TEM images of ICG@ZIF-8 with different ICG-loading at (a) 0.2 mM, (b) 0.8 mM, (c) 1.0 mM, and (d) 1.8 mM.

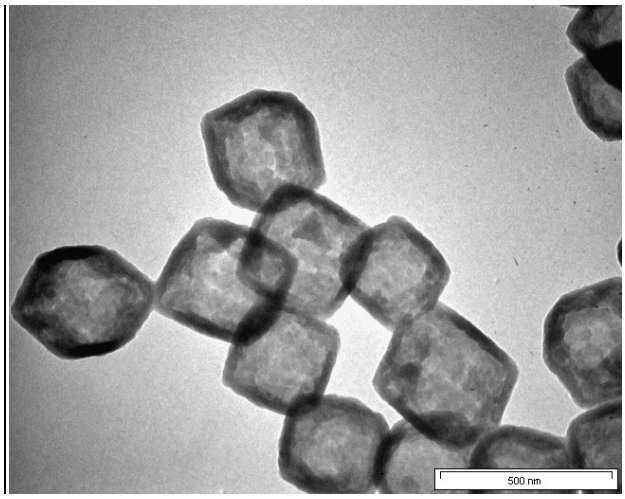

Figure S5. TEM image of ZIF-8/PDA nanoparticles.

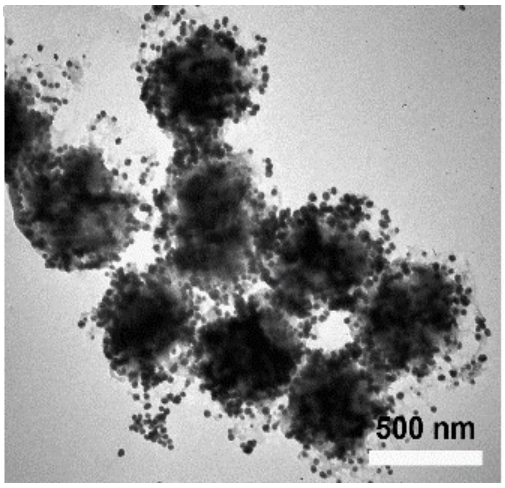

Figure S6. TEM images of ICG@ZIF-8/PDA/Ag composites prepared with 16 mg mL^{-1} $AgNO_3$.

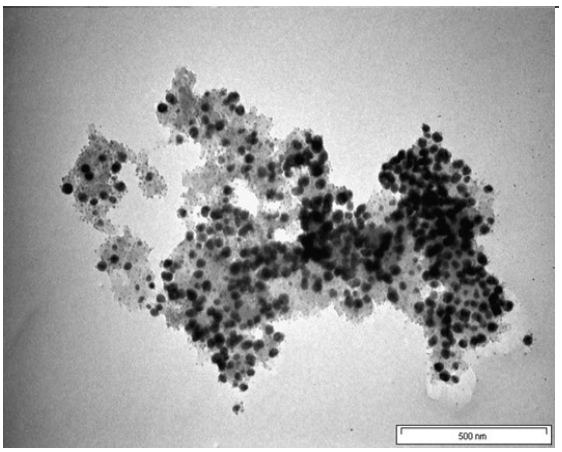

Figure S7. TEM images showed the collapse of ICG@ZIF-8/PDA/Ag after 808 nm laser irradiation for 20 min at 1.5 W cm^{-2} followed by 12 h of incubation.

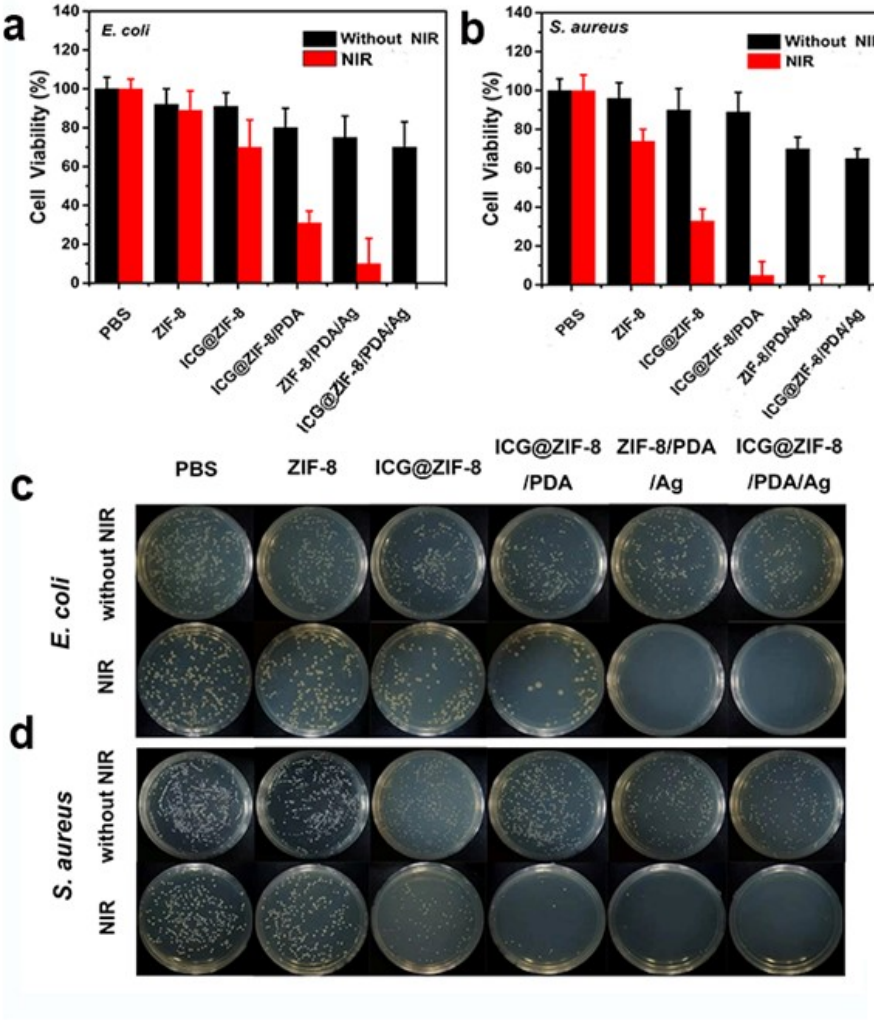

Figure S8. Bacterial cell viability of (a) *E. coli* and (b) *S. aureus* treated with ZIF-8, ICG@ZIF-8, ICG@ZIF-8/PDA, ZIF-8/PDA/Ag, and ICG@ZIF-8/PDA/Ag with and without NIR laser irradiation (808 nm, 1.5 W cm^{-2}, 20 min). The corresponding photographs of bacterial colonies formation of (c) *E. coli* and (d) *S. aureus* under different treatments.

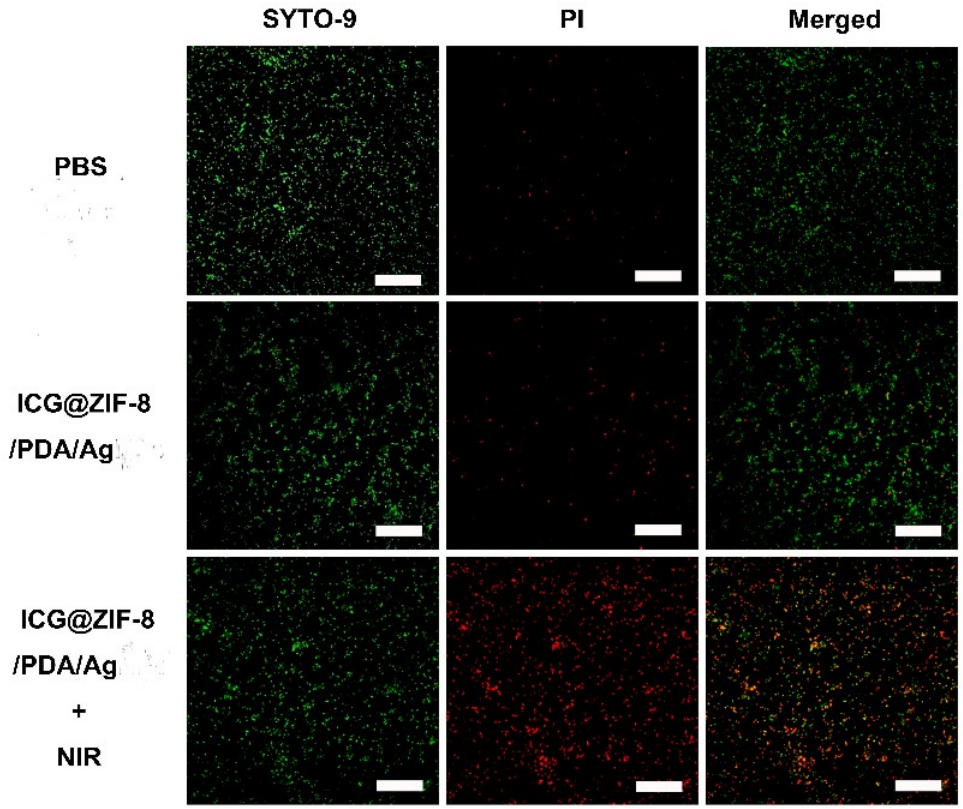

Figure S9. Fluorescence images of *E. coli* incubated with PBS, ICG@ZIF-8/PDA/Ag (100 μg mL^{-1}) and ICG@ZIF-8/PDA/Ag (100 μg mL^{-1}) with NIR irradiation (808 nm, 1.5 W cm^{-2}, 20 min), followed by incubation of 3 h in a 37 °C shaker. Live/Dead Backlight assay kit to used for live/dead bacterial cell fluorescence staining. Green fluorescence SYTO-9 can penetrate all bacterial membranes to stain the nucleic acid, and red fluorescence PI can only penetrate dead bacteria with disrupted membrane to stain the cells. Merged images were overlap of green and red images. Scale bar represents 10 μm.

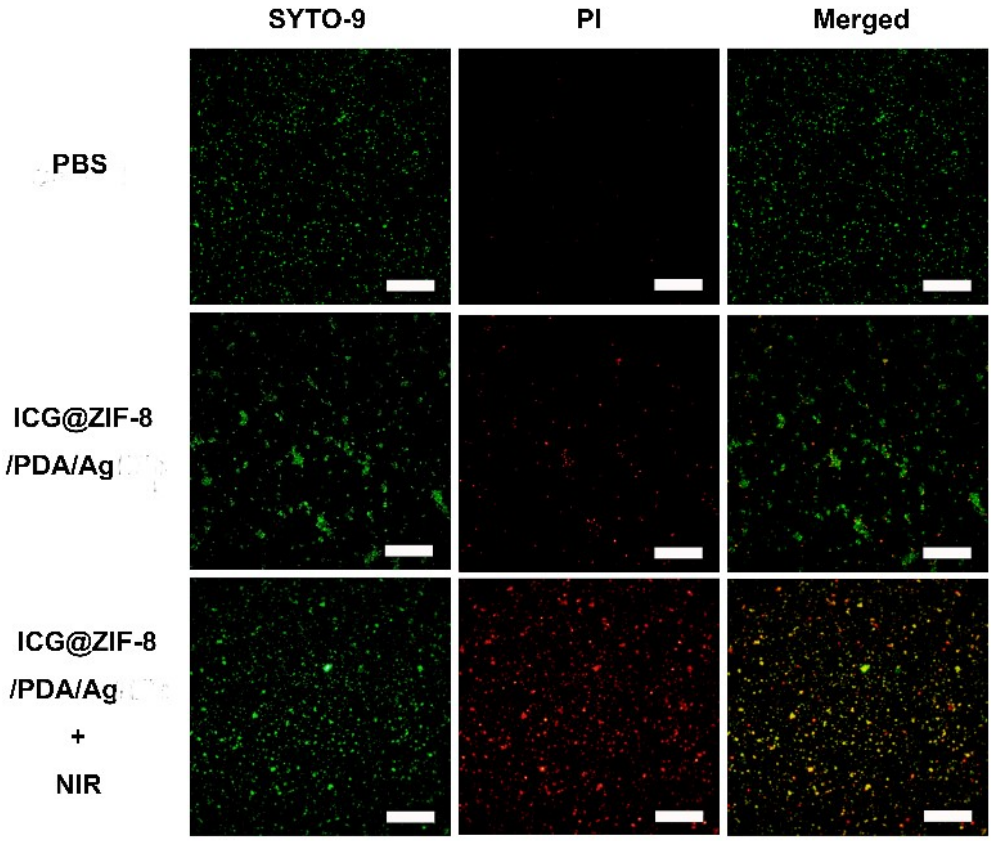

Figure S10. Fluorescence images of *S. aureus* incubated with PBS, ICG@ZIF-8/PDA/Ag (100 μg mL^{-1}) and ICG@ZIF-8/PDA/Ag (100 μg mL^{-1}) with NIR irradiation (808 nm, 1.5 W cm^{-2}, 20 min), followed by incubation of 3 h in a 37 °C shaker. Cell were strained with SYTO-9 (green) and PI (red). Merged images were overlap of green and red images. Scale bar represents 10 μm.