

Magnetic, Optical Gold Nanorods for Recyclable Photothermal Ablation of Bacteria

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Figure captions

Fig. ES1 Experiment involving bactericidal activity measurement. (a) Decreased OD₆₀₀ values were obtained when exposing *E. coli* and *E. faecalis* to different photothermal temperatures from laser irradiation with GNR-MNP. The maximum bactericidal temperature (MBT) values were obtained from liner fit curve. (b) Impact of continuous laser irradiation on elemental composition of GNR-MNP.

Fig. ES2 Temperature history. The difference in temperature change for the laser enable photothermal method (Red) and hot-plate heat induced method (Green), compared to room temperature (Black).

Fig. ES3 The increasing temperature effect of hot plate mediated heat bath on the viability of bacteria. The fluorescence microscopy images (imaged at 100X magnification. Scale bar = 15 μ m) representing different levels of temperature exposure of bacterial strains (a) *E.coli* and (b) *E.faecalis* at 40, 50, 60, 70, 80, 90, and 100 °C in a saline solution for 15 min.

Fig. ES4 Hot-plate temperature effect. Graphical summary of the cell lysis rate for the two bacteria at different temperatures of hot-plate induced heat.

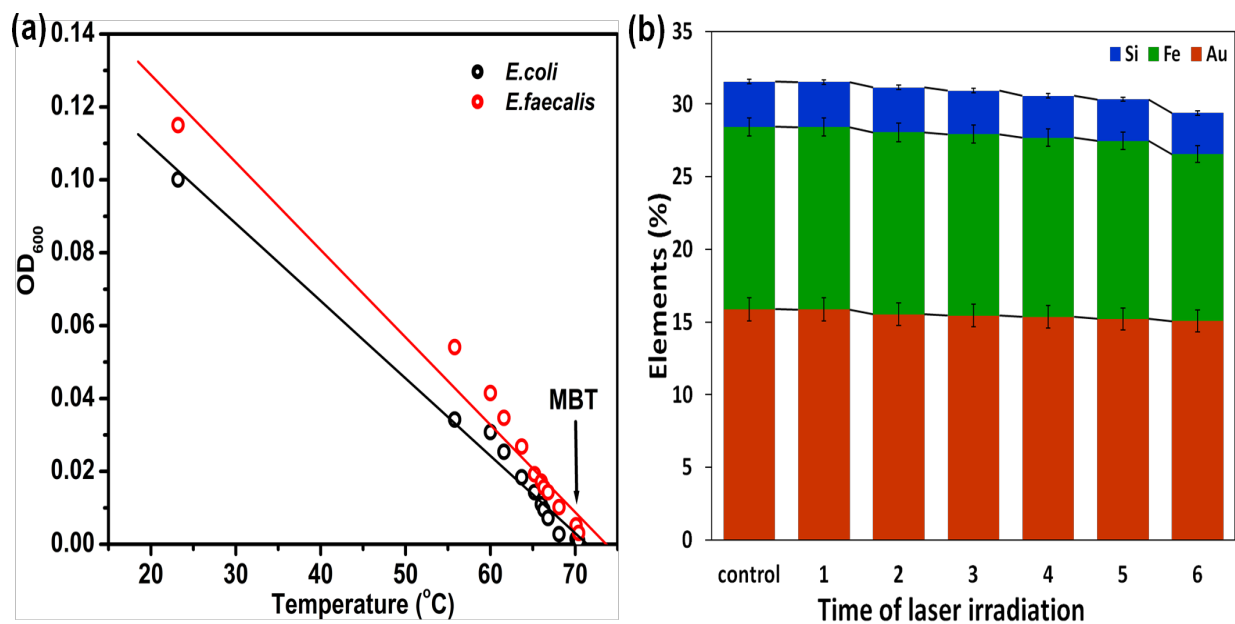


Fig. ES1

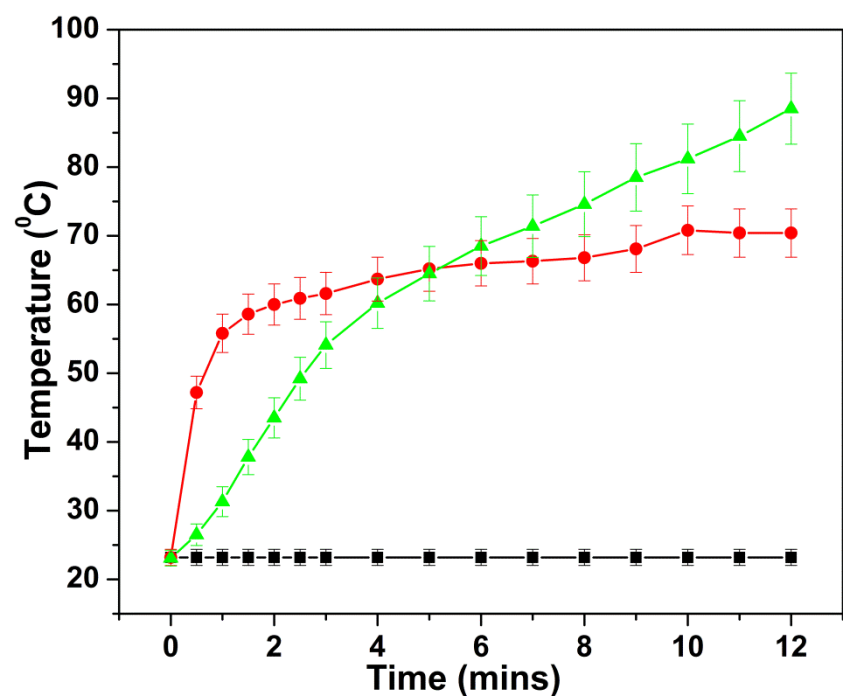


Fig. ES2

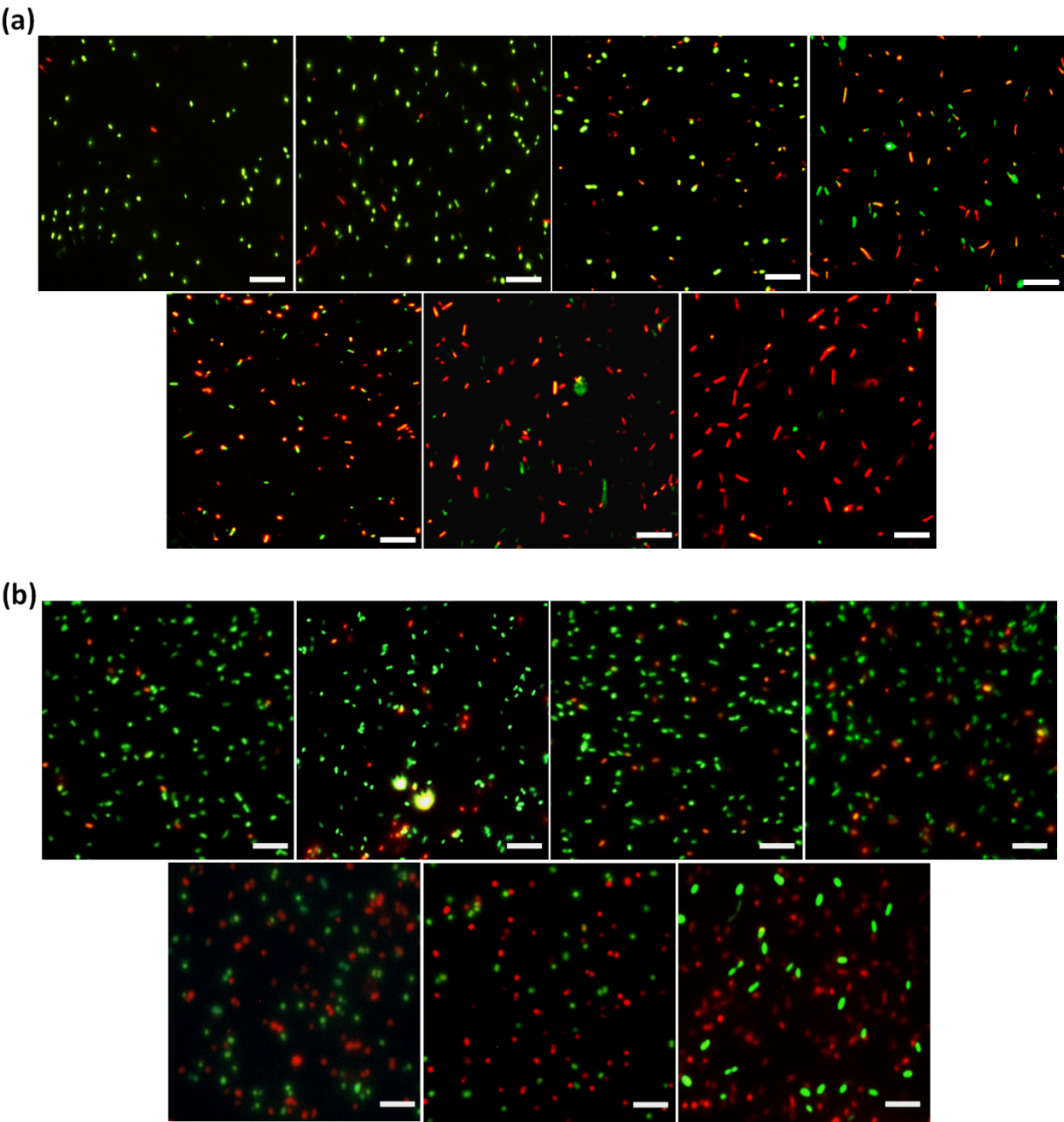


Fig. ES3

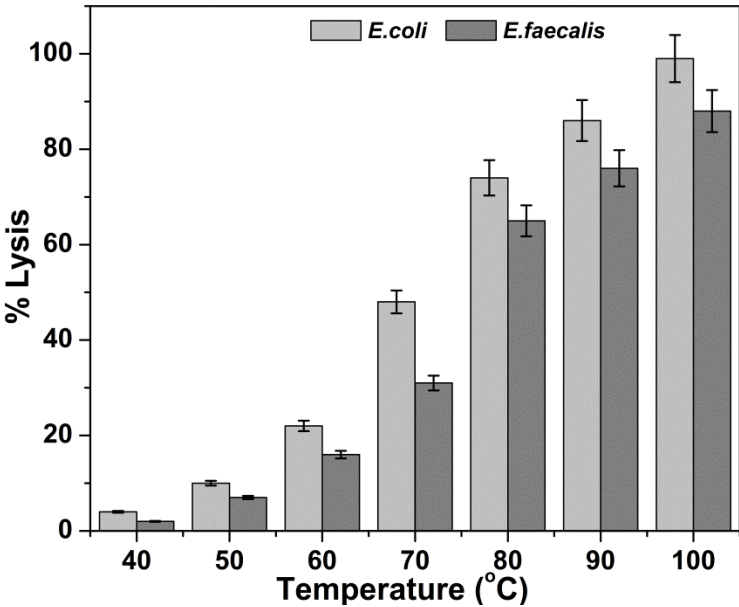


Fig. ES4