Supporting Information

All-in-one NIR-activated nanoplatforms for enhanced bacterial biofilm eradication

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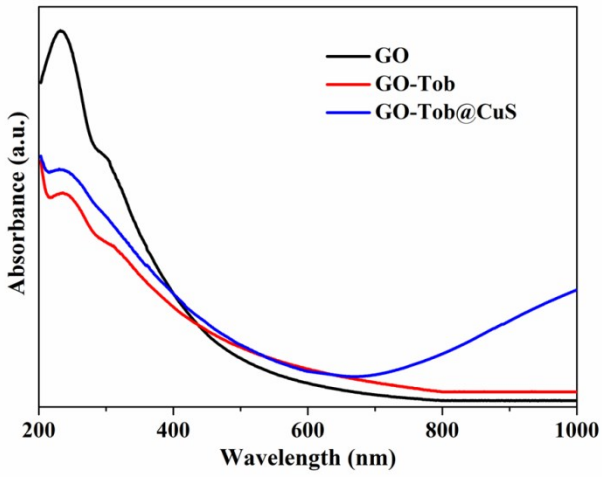

Fig. S1 UV-vis-NIR spectra of the GO, GO-Tob and GO-Tob@CuS.

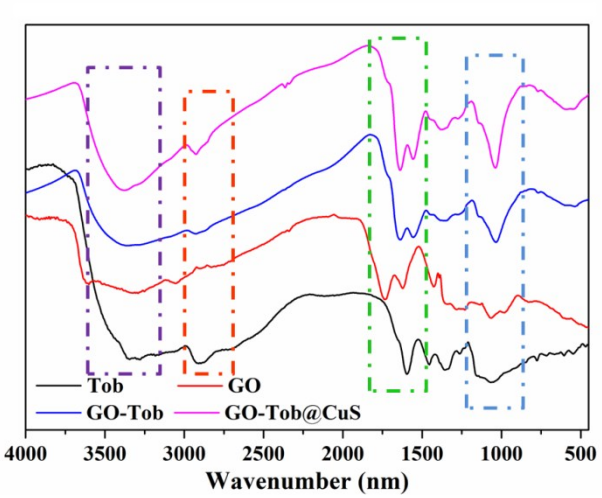

Fig. S2 The comparative FTIR spectra of Tob, GO, GO-Tob and GO-Tob@CuS.

As shown in Figure S2, for GO, numerous peaks were appeared due to the stretching and bending modes of various functional groups such as O-H stretching mode (3300-3400 cm^{-1}), C=O stretching mode (1700-1750 cm^{-1}), O-H bending mode (1380-1400 cm^{-1}), C-O (epoxy) stretching mode (1150-1220 cm^{-1}), and C-O (alkoxy) stretching mode (980-1020 cm^{-1}). The peak from 1580 to 1630 cm^{-1} was responsible for the unoxidized graphitic domains. For Go-Tob, the peaks at 3000-3500 and 1520-1650 cm^{-1} were attributed to N-H stretching and bending modes, respectively. The signal at 1360-1420 cm^{-1} was corresponded to the N-H vibrational mode.

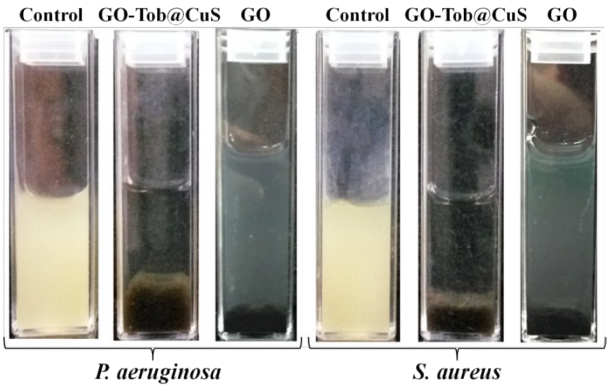

Fig. S3 The photographs of bacterial suspensions before and after treatment of GO-Tob@CuS nanocomposites.

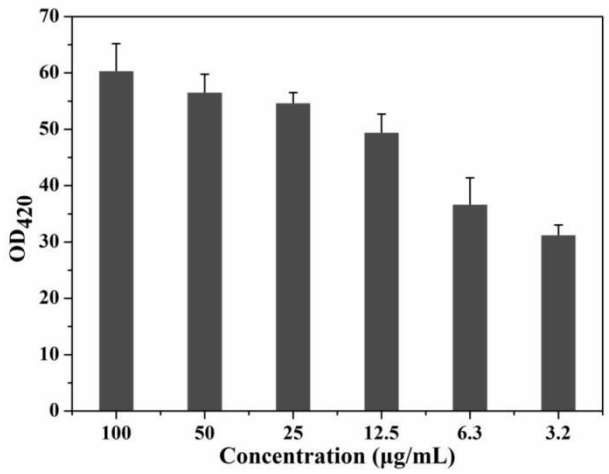

Fig. S4 The absorption of ONP in solution containing different concentrations of GO-Tob@CuS.

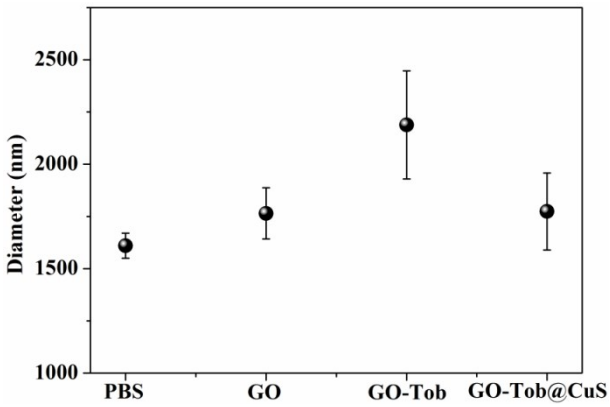

Fig. S5 The average diameters of alginate solution before and after being treated with GO, GO-Tob and GO-Tob@CuS.

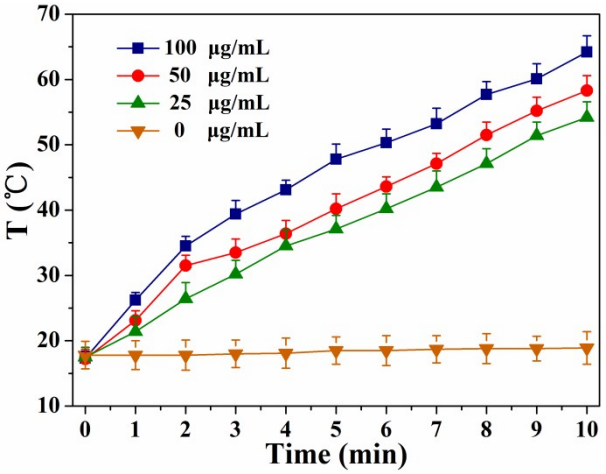

Fig. S6 Temperature changes of GO-Tob@CuS in cell-culture medium with different concentrations irradiated by NIR laser.

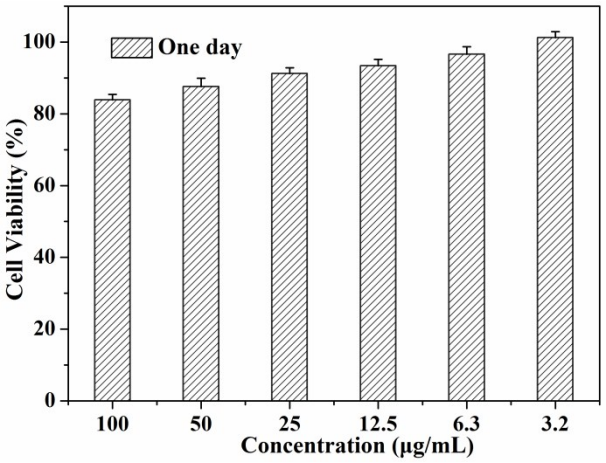

Fig S7 Relative viabilities of NIH 3T3 cells after being treated with GO-Tob@CuS nanocomposites at different concentrations for 24 h.

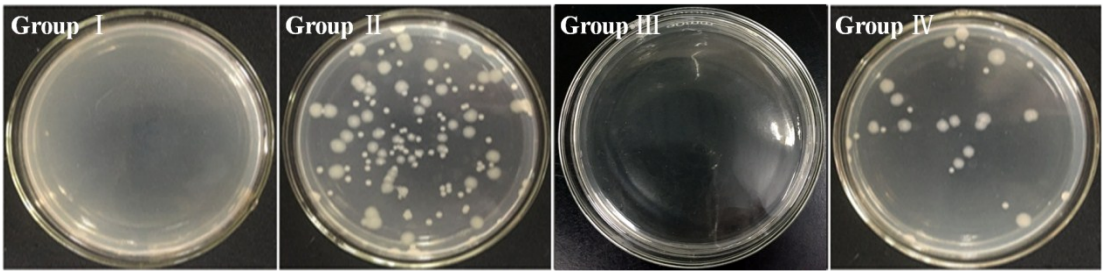

Fig. S8 Photographs of bacterial cultures from the skin tissue of bacterial infected rats.