

Supporting Information

for

Fabrication of photothermally active poly(vinyl alcohol) films with gold nanostars for antibacterial applications

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Additional Data

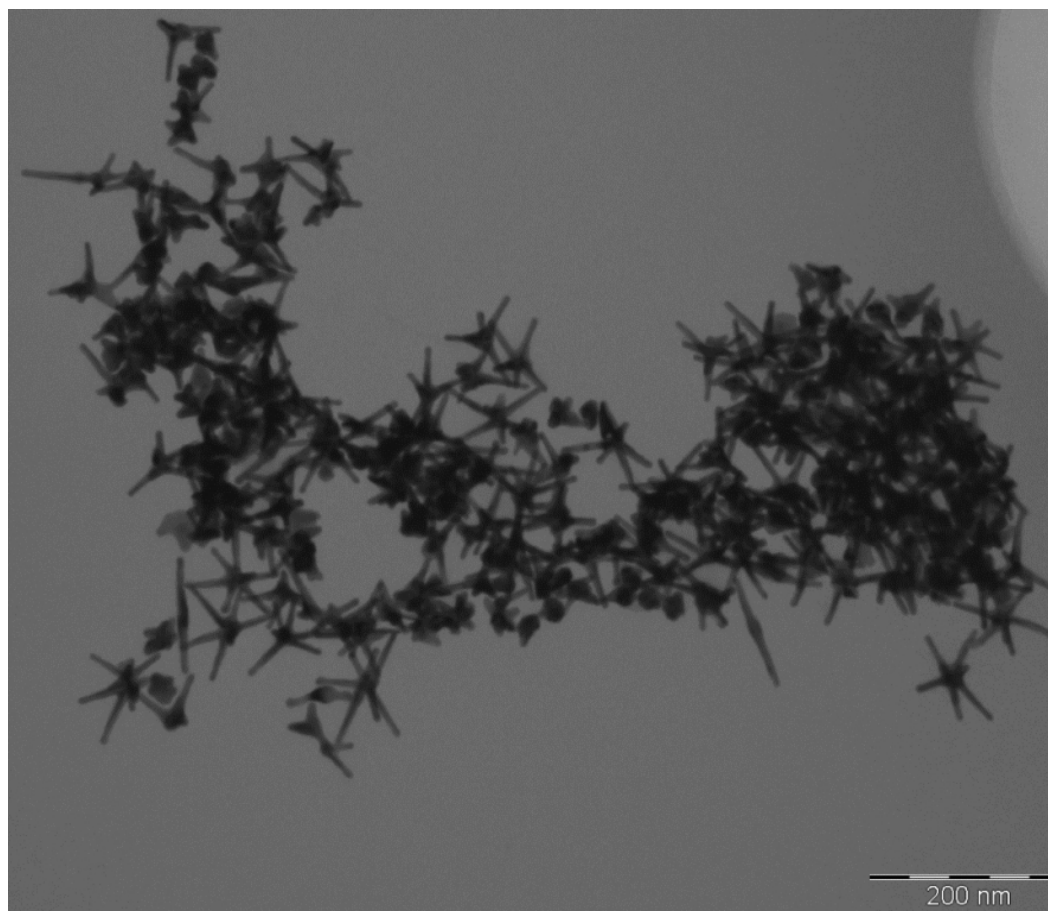


Figure S1: Example of TEM image of gold nanostars synthesized in the presence of non-ionic surfactant Triton X-100.

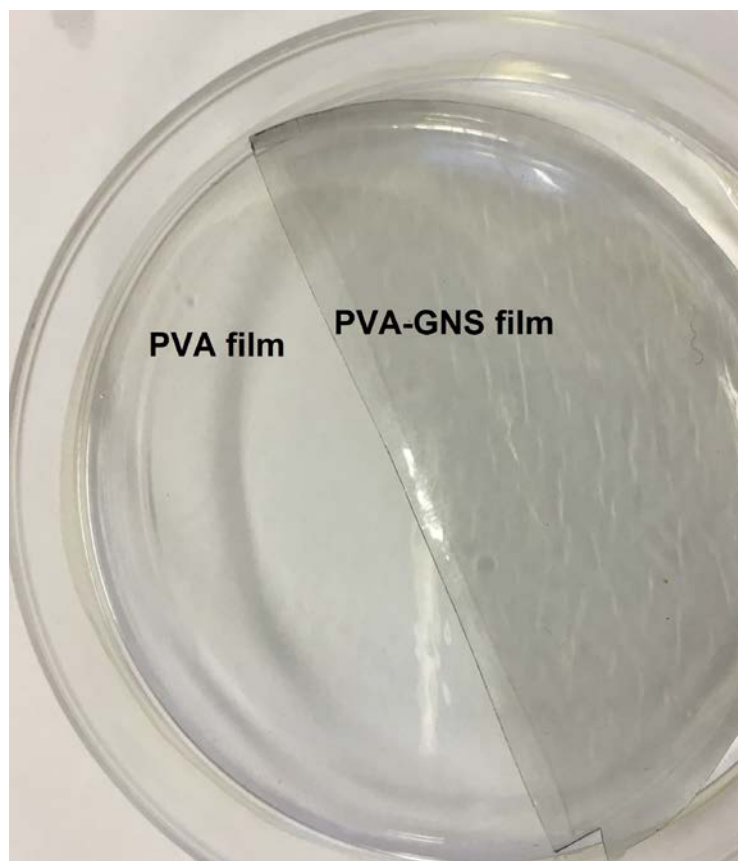


Figure S2: Photo of fabricated blank PVA and PVA-GNS films.

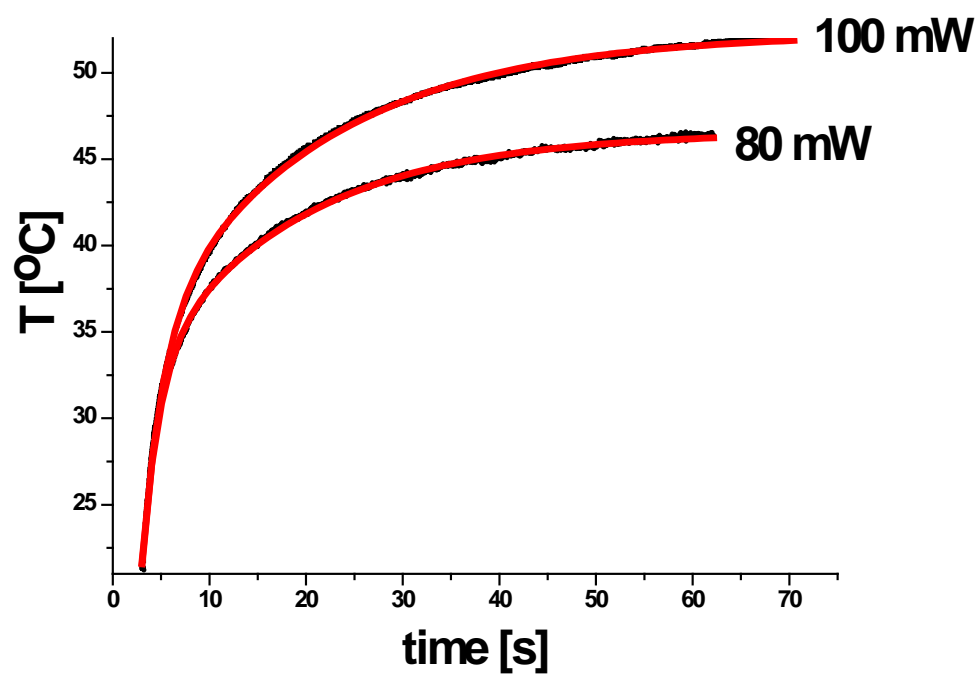


Figure S3: The increase of temperature of PVA-GNS film upon irradiation with 800 nm laser (laser powers are 80 mW and 100 mW). The red line is the double exponential best fit function to the data.

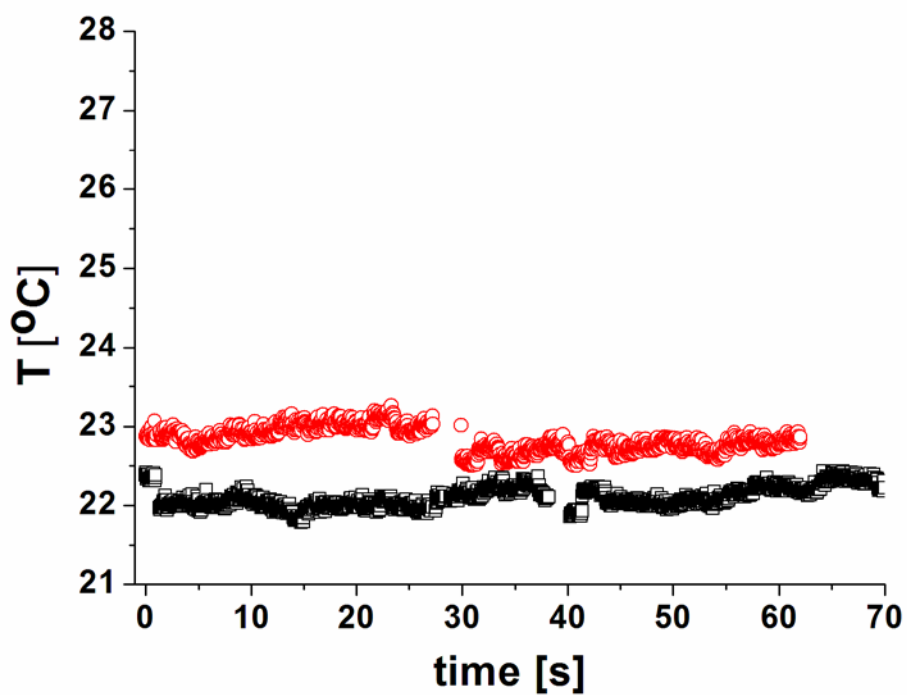


Figure S4: The changes of temperature of blank PVA film upon irradiation with 800 nm laser. Laser powers are 100 mW (open squares) and 400 mW (open circles). The mismatch in the time scale at 38 s (open squares) and 28 s (open circles) correspond to the auto-calibration procedure of the thermocamera.

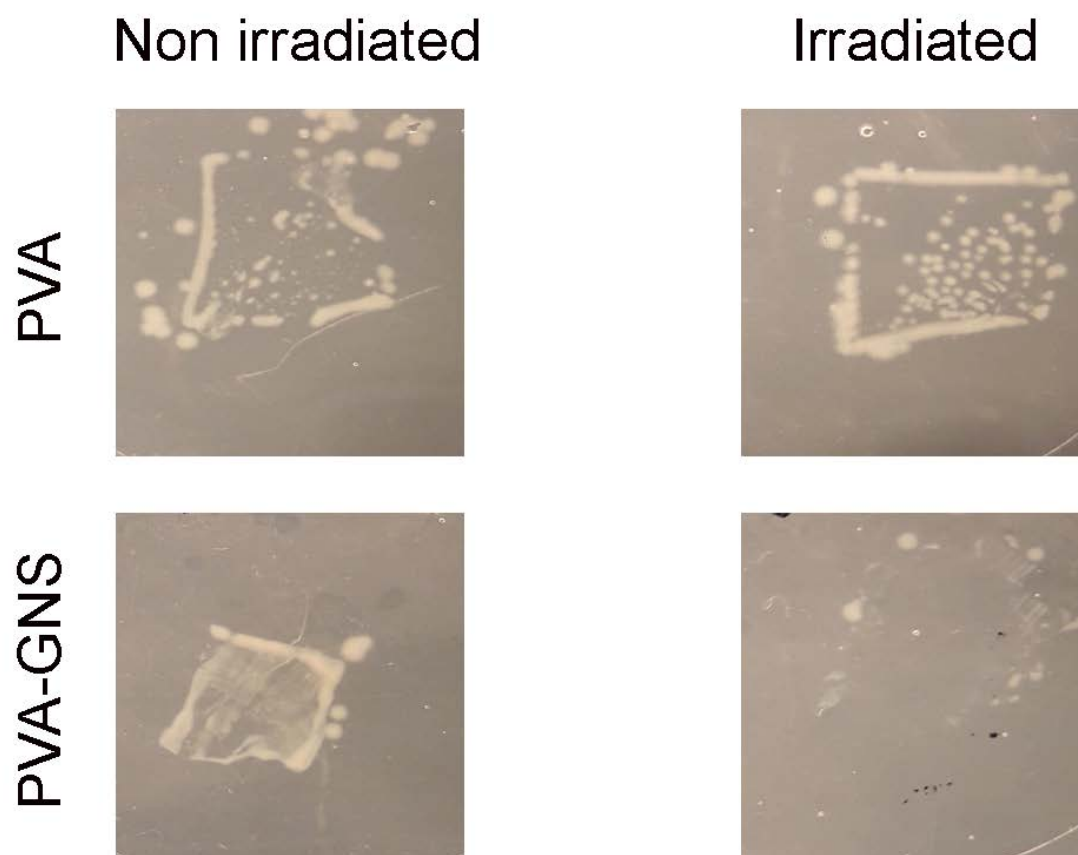


Figure S5: Blank PVA and PVA-GNS films inoculated with *E.coli*, either irradiated or not were transferred to LB agar plates and allowed to growth at 37 °C. Bacteria growth can be observed as single or confluent colonies, mirroring the film edge shape. A clear antibacterial effect was induced in irradiated PVA-GNS, as shown by the almost total absence of bacterial growth, although a precise quantification was not possible due to bacterial confluence growth.