

*Supporting Information for*

**Thermosensitive Liposomal Nanomedicine-Functionalized Photothermal Composite  
Scaffolds for Light-Guided Cancer Therapy**

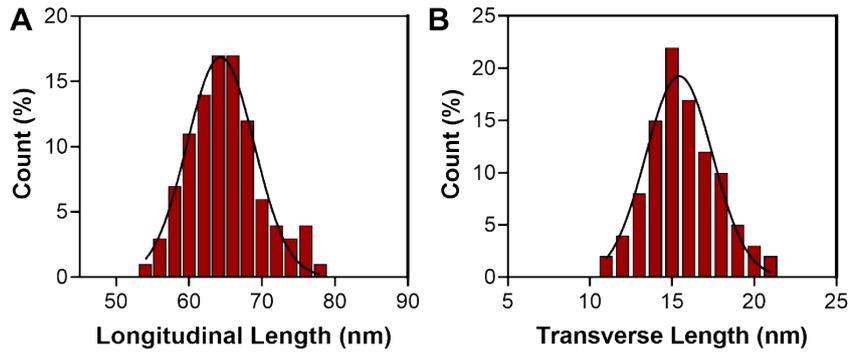
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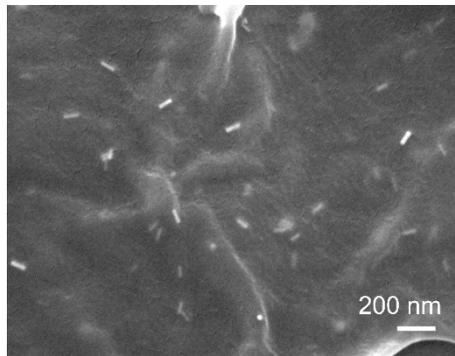
*b Graduate School of Science and Technology, University of Tsukuba, Ibaraki 305-8577, Japan.*

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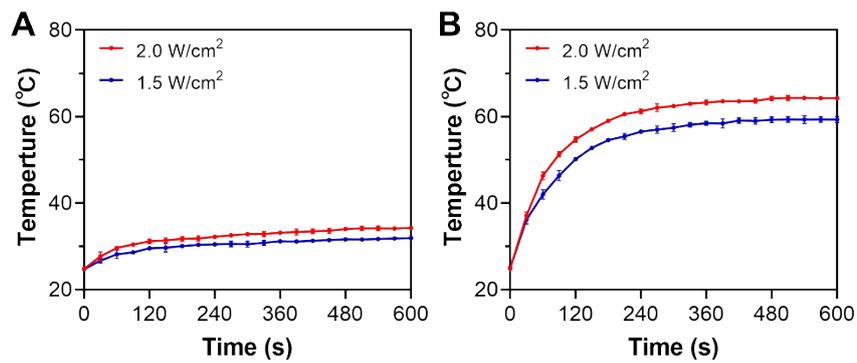
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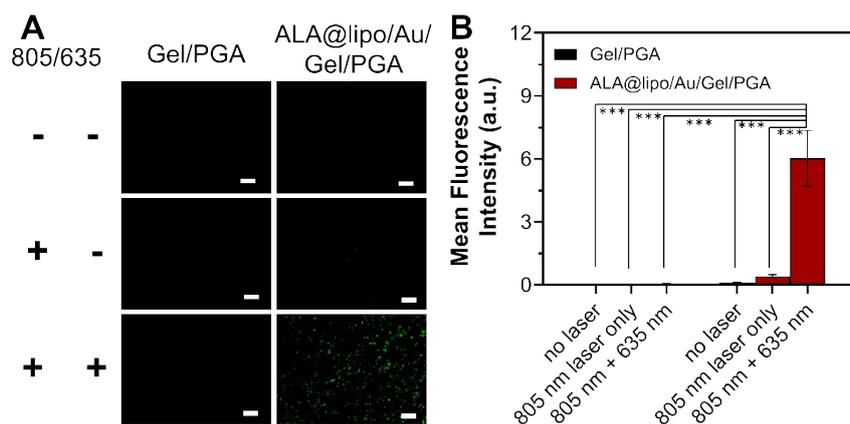
**Figure S1** (A) Longitudinal length distribution and (B) transverse length of Au nanorods.



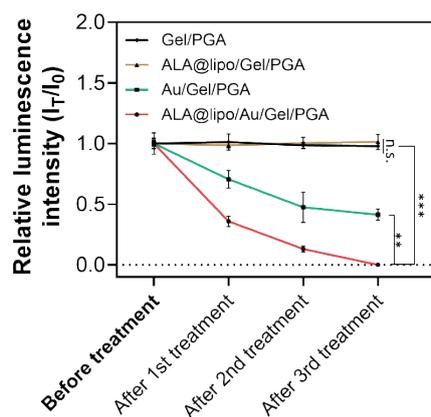
**Figure S2** SEM image of the AuNRs on the pore surface of Au/Gel/PGA scaffold.



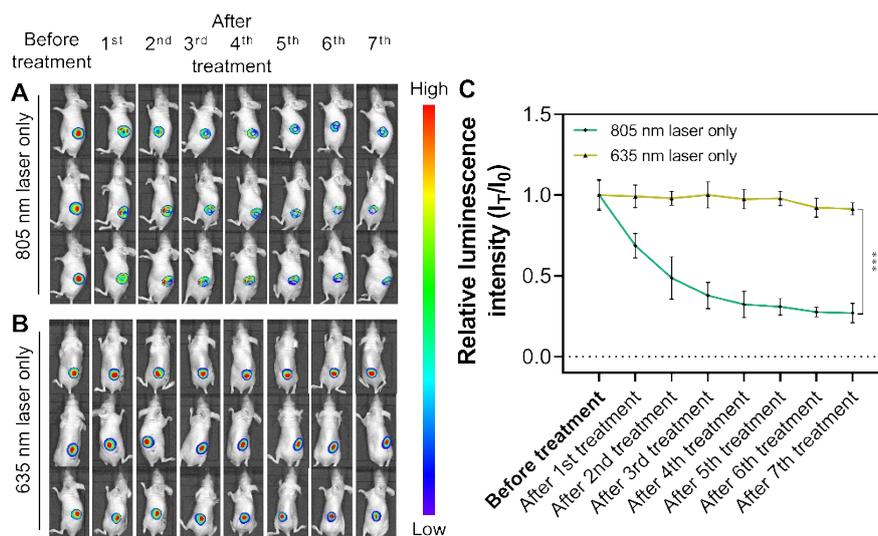
**Figure S3** Curves showing the temperature change of the (A) ALA@lipo/Gel/PGA and (B) Au/Gel/PGA composite scaffolds after 10 min of 805 nm NIR laser irradiation at intensities of 1.5 and 2.0 W/cm<sup>2</sup>.



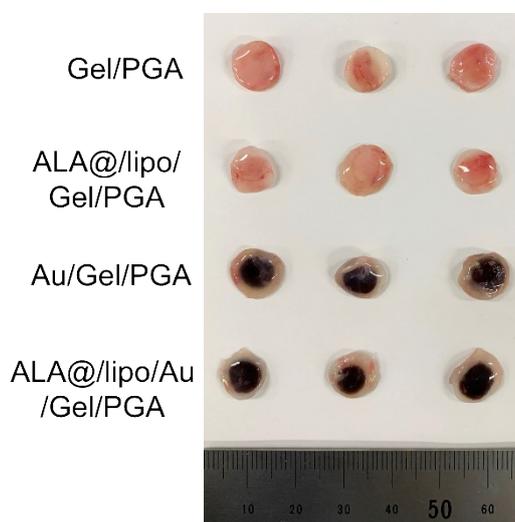
**Figure S4** (A) Fluorescent images and (B) corresponding mean fluorescence intensities of intracellular ROS in MDA-MB-231 cancer cells seeded on the Gel/PGA and ALA@lipo/Au/Gel/PGA composite scaffolds under different laser irradiation. Scale bar: 200  $\mu$ m. The data are presented as the means  $\pm$  S.D.s (n = 3). Significant differences: \*\*\*p < 0.001.



**Figure S5** Quantitative analysis of the bioluminescent signals of mice in different groups before and after laser irradiation. The data are presented as the means  $\pm$  S.D.s (n = 3). Significant differences: \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001; and N.S. = no significant difference.



**Figure S6** Whole-body bioluminescence images of the mice before and after single (A) 805 nm NIR laser or (B) 635 nm laser irradiation. (C) Quantitative analysis of the bioluminescent signals of mice in different groups before and after treatment. The data are presented as the means  $\pm$  S.D.s (n = 3), Significant differences: \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001; and N.S. = no significant difference.



**Figure S7** Gross appearance of the Gel/PGA, ALA@lipo/Gel/PGA, Au/Gel/PGA, and ALA@lipo/Au/Gel/PGA composite scaffolds at 15 days after subcutaneous implantation.