Supporting Information

Platelet-membrane-camouflaged bismuth sulfide nanorods for synergistic radio-photothermal therapy against cancer

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Fig. S1 Nitrogen adsorption-desorption isotherms of BMSNRs and BMSNR@PMs. The insets indicate the distributions of pore diameters. The pore diameter of BMSNR@PMs cannot be detected.

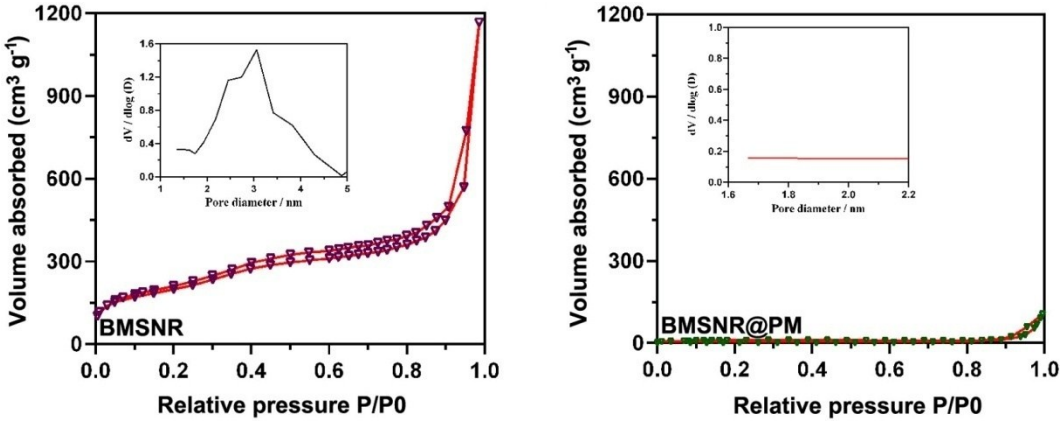

Fig. S2 TEM image of BMSNR@PMs after incubation with mouse serum at 37 °C for 12 h. The scale is 100 nm. The result indicated that BMSNR@PMs were stable in serum.

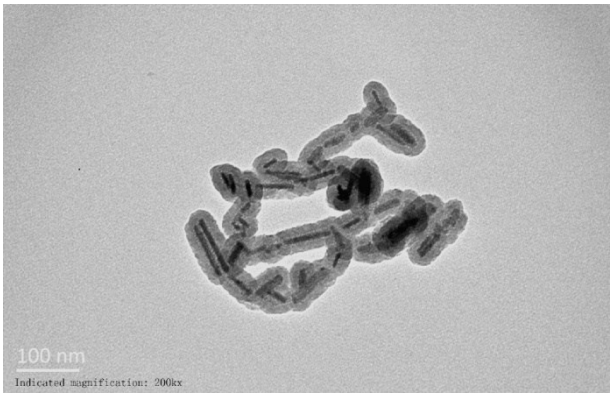

Fig. S3 Contents of hemoglobin (HGB) in mice blood. BALB/c mice were intravenously injected with 25 mg kg^{-1} of BMSNR and BMSNR@PM. The content of HGB was analyzed with a Sysmex XT-2000i fully automatic hematology analyzer at 1 and 21 days post-treatment. The results are presented as means ± SD.

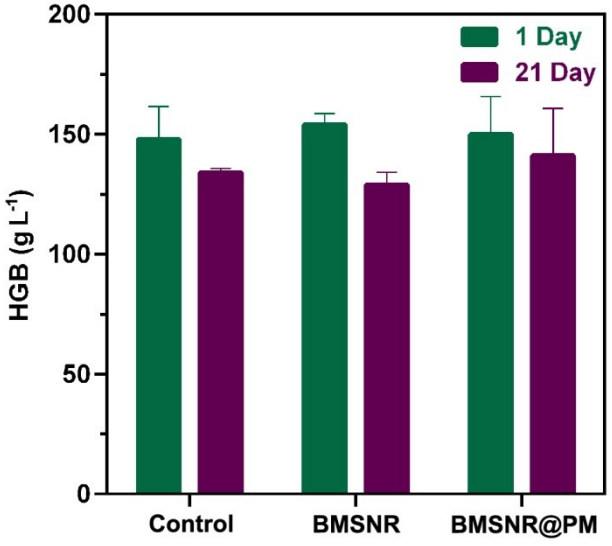

Fig. S4 Flow cytometry of RAW264.7 cells treated with the nanomaterials for 6 h. RAW264.7 cells (3×10^5 CFU) seeded in a 24-well plate were cultured overnight and incubated with 100 μg mL^{-1} of FITC-BMSNR and FITC-BMSNR@PM (based on the dose of BMSNRs) at 37 °C for 6 h. Flow cytometry (BD, Franklin Lakes, NJ, US) was employed to count the percentage of fluorocytes, in which 15,000 events per sample were obtained. The result showed that the average endocytosis of the BMSNR in RAW264.7 cells was reduced from 35.7% to 5.48% upon PM coating.

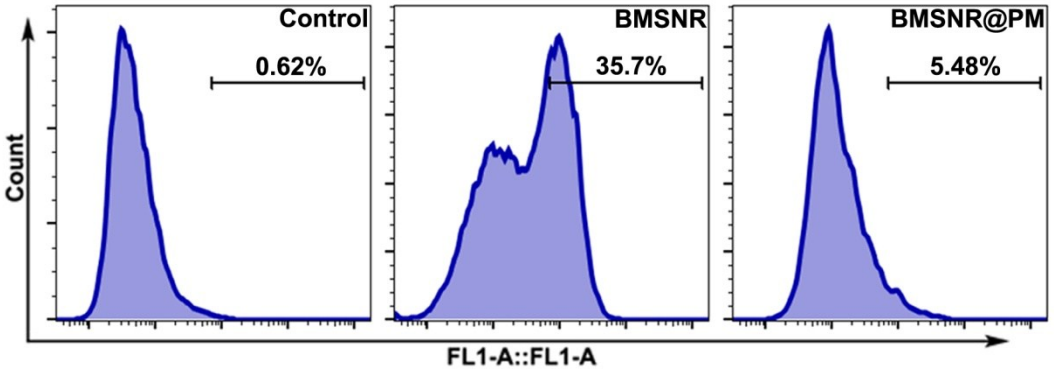

Fig. S5 *In vivo* fluorescence imaging of Cy7-labeled nanomaterials at 6 h post-treatment. Cy7-BMSNR and Cy7-BMSNR@PM were intravenously administered at 50 mg kg^{-1}. The distribution of Cy7-labeled nanomaterials in tumor-bearing mice was visualized with an IVIS spectrum imaging system (Perkin Elmer, Shanghai, CHN).

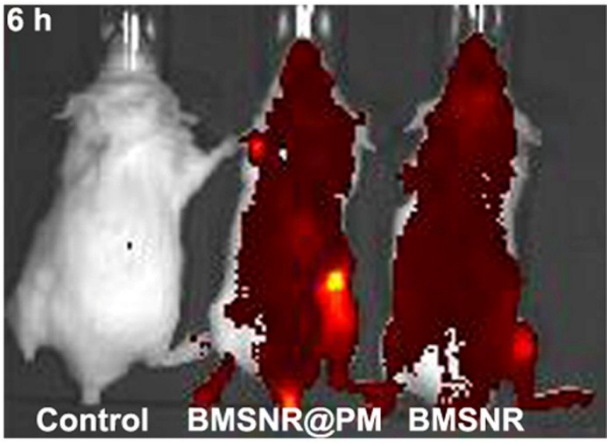

Fig. S6 *In vitro* fluorescence imaging of FITC-labeled nanomaterials at 72 h post-treatment. FITC-BMSNR and FITC-BMSNR@PM were intravenously administered at 50 mg kg^{-1}. The main organs (heart, liver, spleen, lung, and kidney) and tumor tissues were harvested after 72 h. The distribution of FITC-labeled nanomaterials in tumor-bearing mice was visualized with an IVIS spectrum imaging system (Perkin Elmer, Shanghai, CHN).

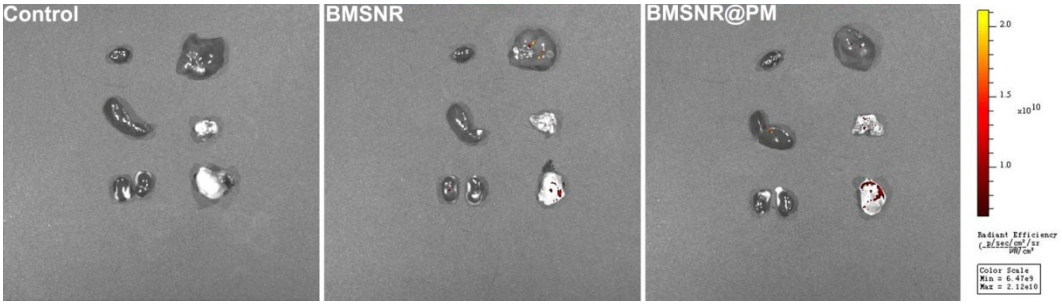

Fig. S7 Temperature alterations of BMSNR@PM irradiated with an 808 nm near infrared laser. Different concentrations of BMSNR@PM dissolved in deionized water were exposed to 808 nm laser irradiation (1.0 W cm^{-2}) for 10 min. The temperature variation was monitored with a thermoelectric thermometer (HH806W, Omega, US).

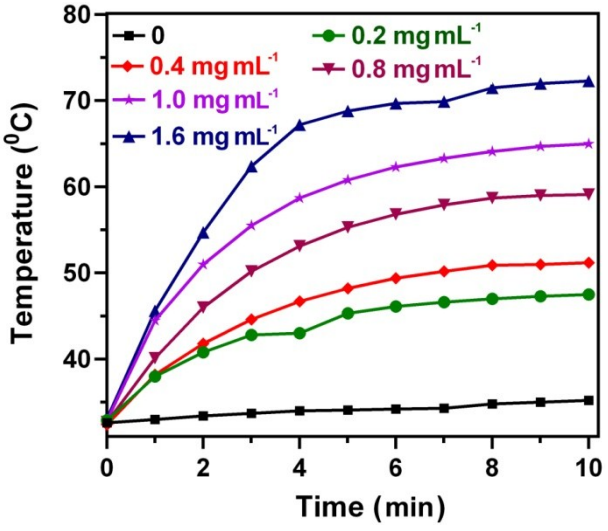

Fig. S8 Calcein/PI double staining illustrating the survival and death of 4T1 cells exposed to PBS. Green signal represent living cells. Images were taken using a fluorescence microscope. The scale is 20 μm.

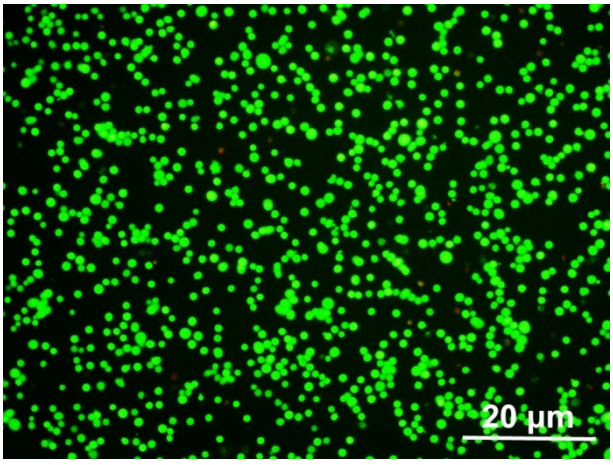

Figure S9. Thermal images of mice treated with NaCl and 25 mg kg^{-1} of BMSNR@PM. The thermal images of mice irradiated with an 808 nm laser (1.0 W cm^{-2}, 10 min) were acquired using a Fortric 226S infrared thermal imaging system (Shanghai, CHN). The inset is the image of NaCl-treated mouse. After treatment with BMSNR@PM, the tumor temperature increased by 12.9 °C**.**

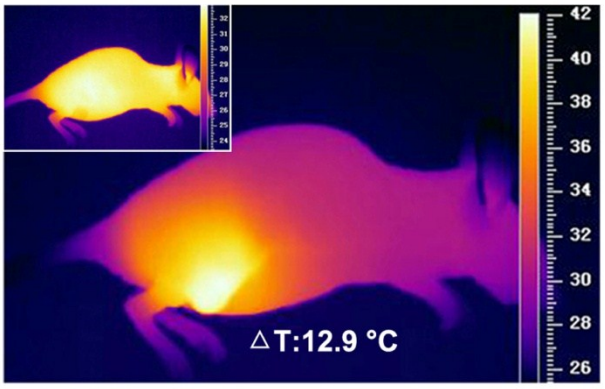

Fig. S10 Isobologram analysis of the synergistic effect of BMSNR@PM-based PTT on

radiotherapy *in vivo*. The data point corresponds to the growth inhibition ratio in the BMSNR@PM/NIR/IR treatment.

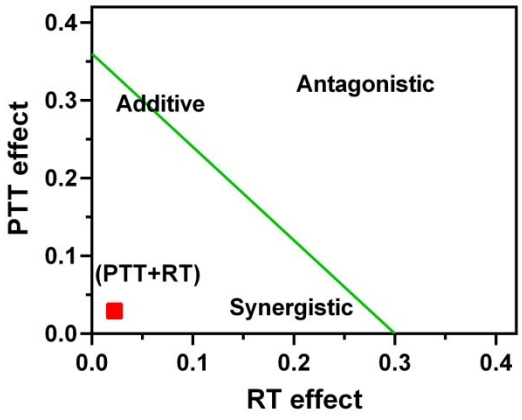

Fig. S11 CT and PA imaging of BMSNR@PM. To evaluate the CT imaging capacity, different

doses of BMSNR@PM (1.3, 2.5, 5.0, 10.0, 20.0, and 30.0 mg) were resuspended in 1 mL of deionized water containing 1% agarose. Tumor-bearing BALB/c mice were intravenously injected with NaCl or 50 mg kg^{-1} of BMSNR@PM. CT images of BMSNR@PM *in vitro* and *in vivo* were obtained on a Quantum FX Micro-CT system (Perkin Elmer, Shanghai, CHN). The PA images at 2, 6, 24, and 48 h post-BMSNR@PM injection were taken through a Vision 128 optoacoustic system (iTheramedical, Beijing, CHN). (A) CT images and HU values of BMSNR@PM *in vitro*. (B) CT images of BMSNR@PM in tumor-bearing mice. T, tumor. (C) PA images and signals of BMSNR@PM-treated tumor-bearing mice at different time points.