

## Supporting Information

# Thermo-Responsive Palladium-Ruthenium Nanozyme Synergistic Photodynamic Therapy for Metastatic Breast Cancer Management

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Concentration ratio of PdRu

Nanoparticles	Pd	Ru
Concentration (ppm)	1.010	0.373
Ratio	3	1

Table 1. Concentration ratio of PdRu.

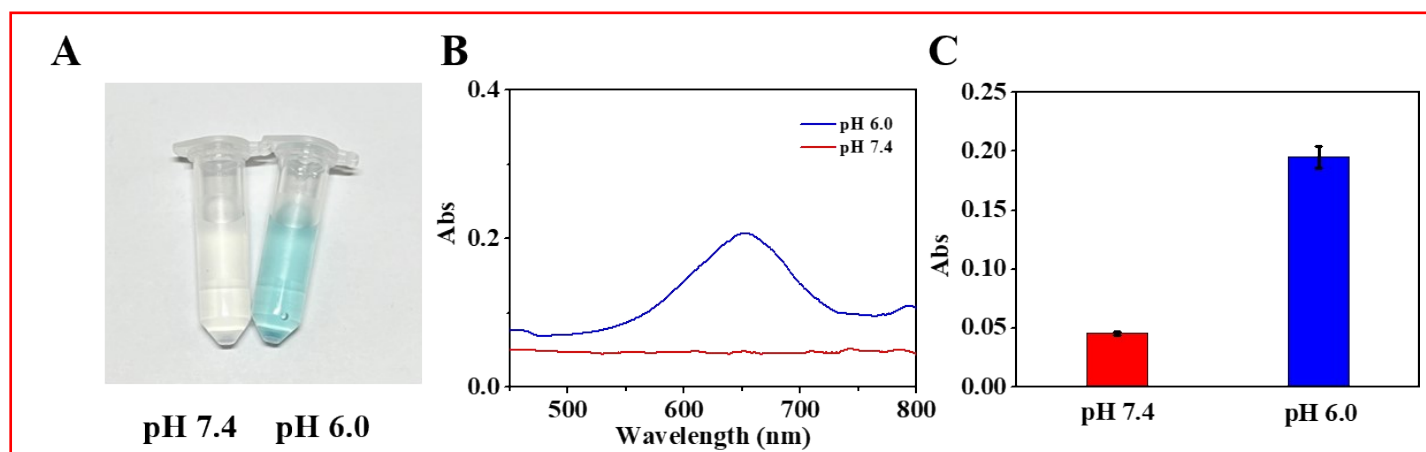


Figure S1 (A) Photos after the reaction of sPdRu with 3, 3', 5, 5' - tetramethylbenzidine (TMB) in the presence of 1 mM H<sub>2</sub>O<sub>2</sub> (pH 7.4 and pH 6.0). (B) Ultraviolet absorption spectrum. (C) Quantitative plot of absorbance at 625 nm.

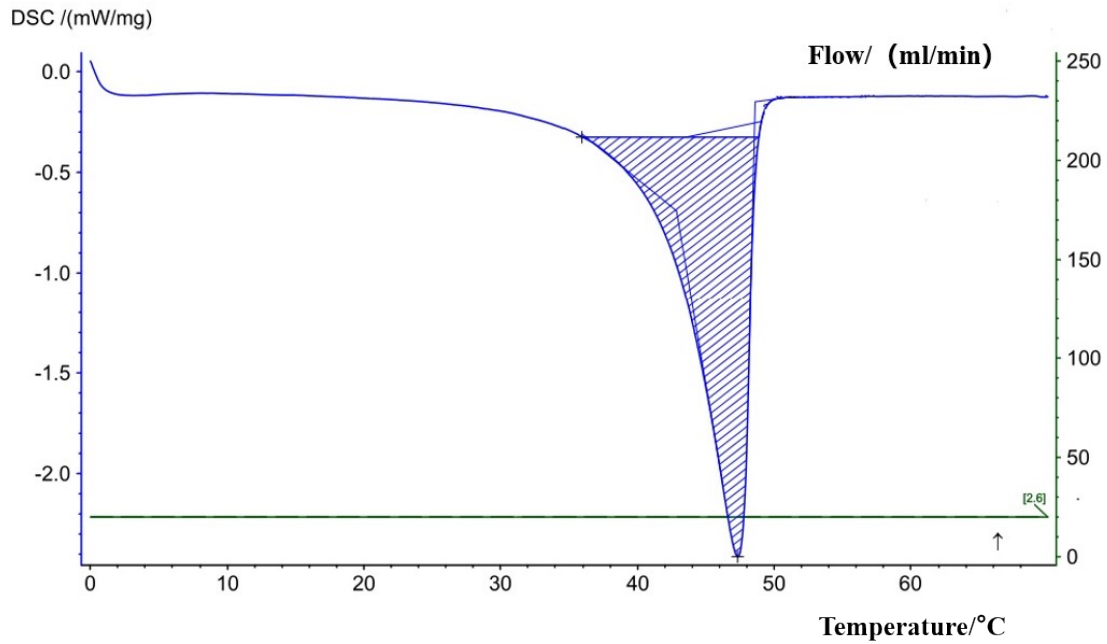


Figure S2 According to the DSC diagram of PCM, the phase transition temperature of PCM is 47 ° C.

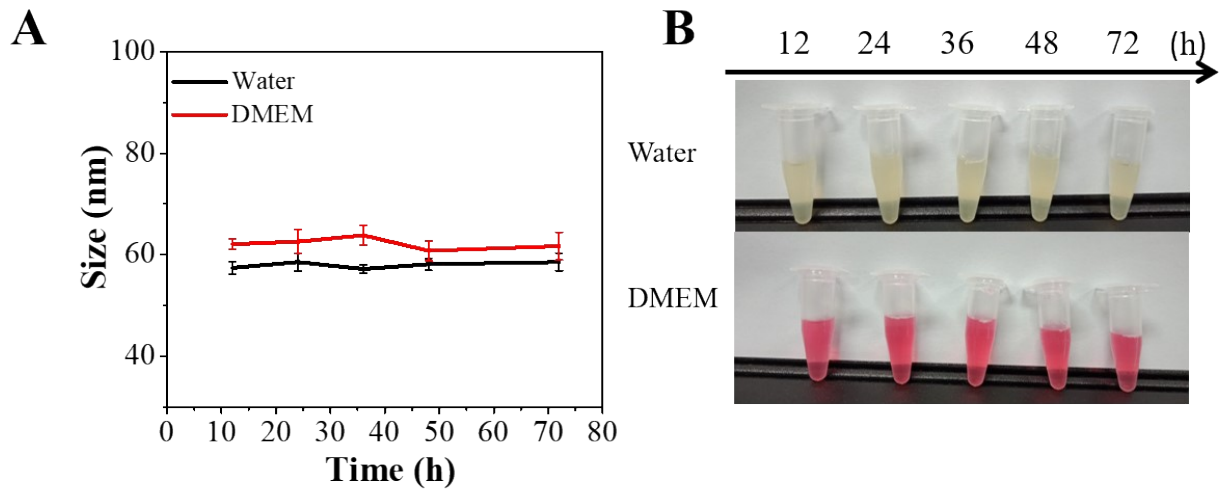


Figure S3 (A) Particle size changes of PdRu-RCE@PCM NPs in water and DMEM medium for 72 hour. (B) Color changes of PdRu-RCE@PCM NPs in water and DMEM medium for 72 hours.

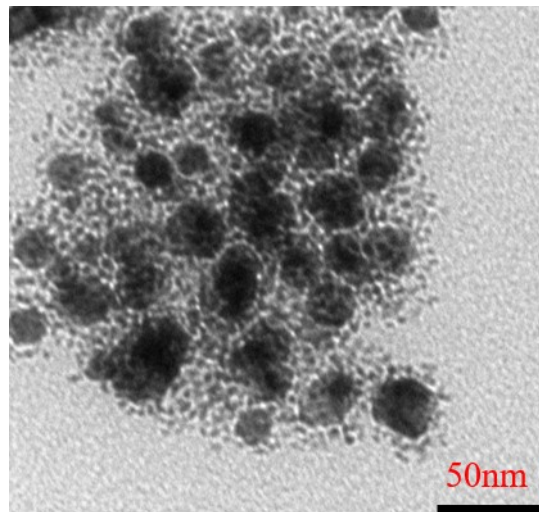


Figure S4 TEM diagram of PdRu-RCE@PCM NPs after 10 minutes of near infrared laser irradiation

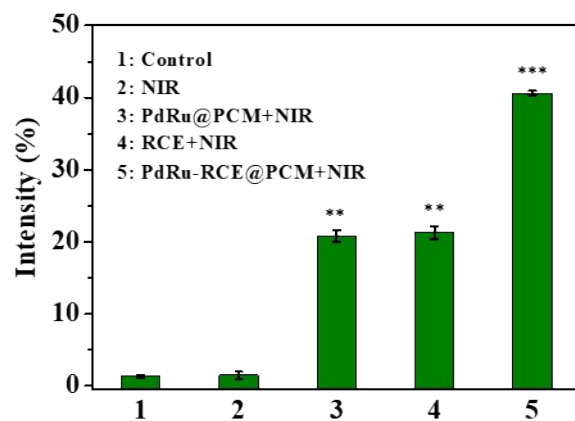


Figure S5 ROS fluorescence quantification.

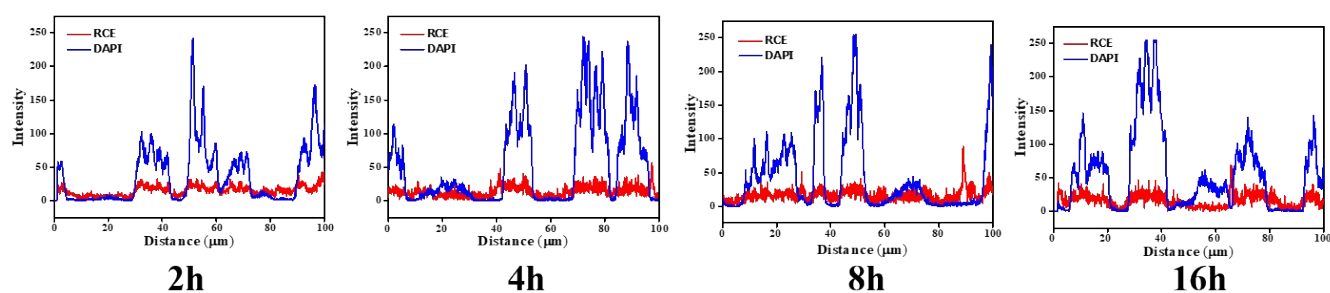


Figure S6 Fluorescence quantitative analysis of PdRu-RCE@PCM NPs uptake by 4T1 cells.

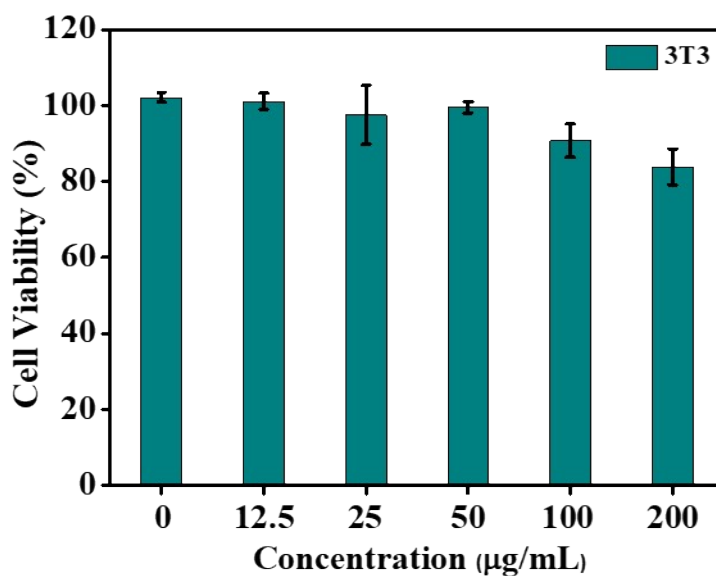


Figure S7 Cytotoxicity of PdRu-RCE@PCM NPs to 3T3 cells.

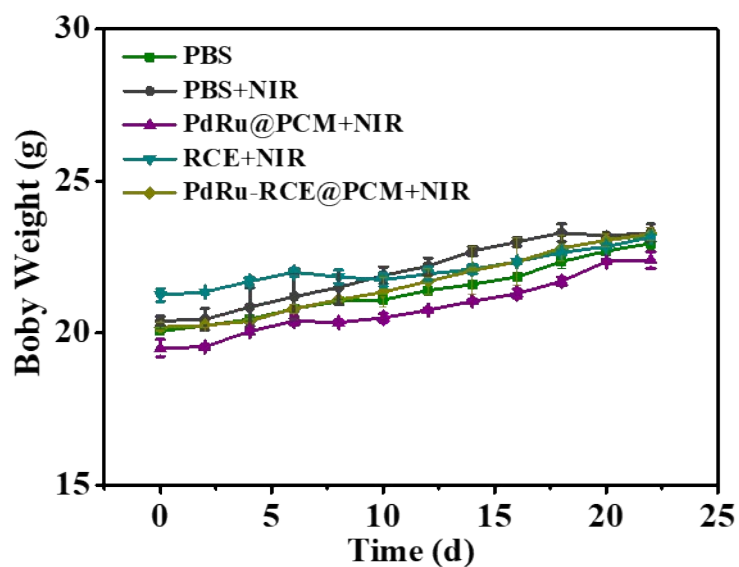


Figure S8 Changes in body weight of mice.

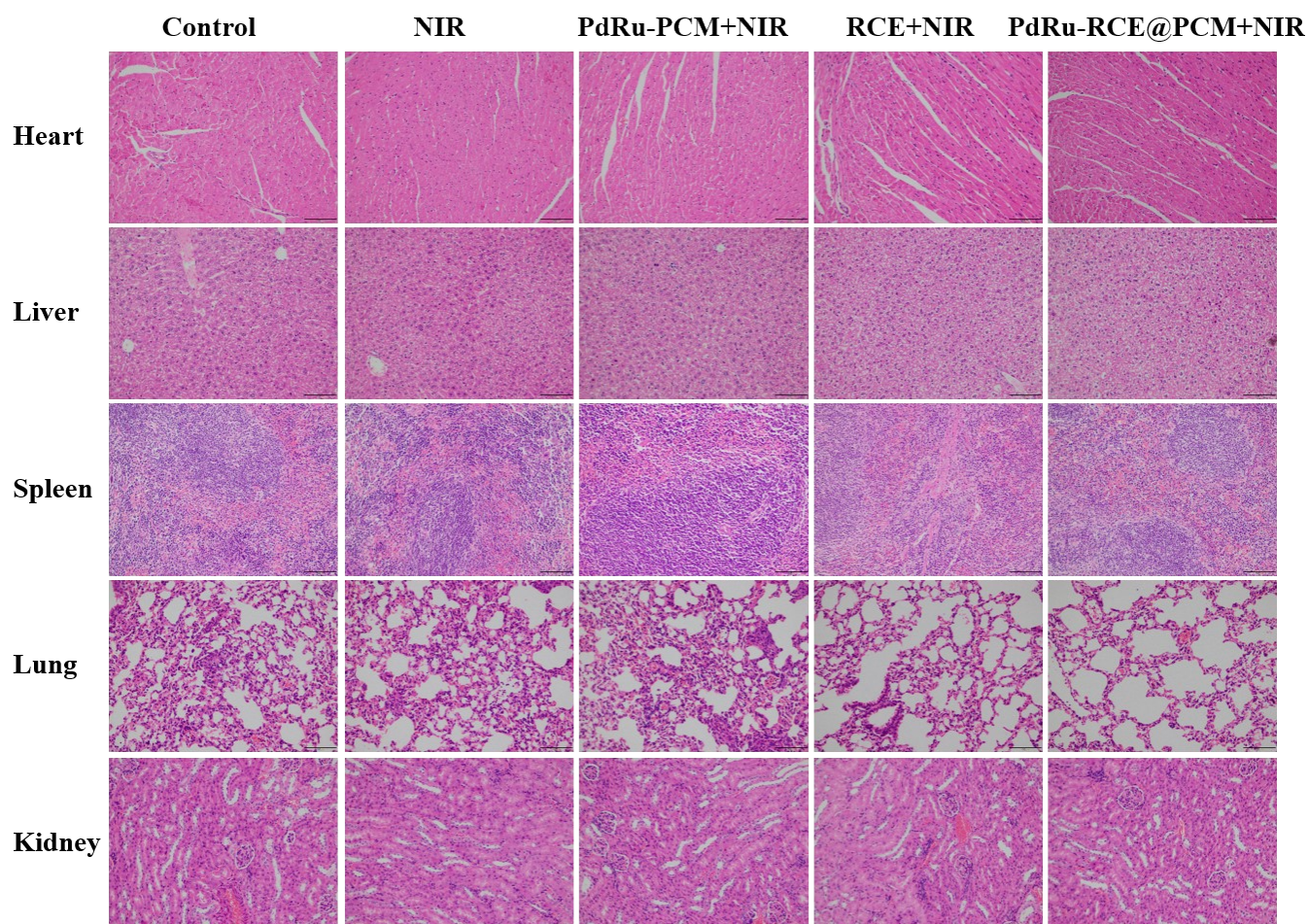


Figure S9 H&E staining of main organs (heart, liver, spleen, lung and kidney) in mice.