Supporting Information

Dual Enzyme-Mimicking Radical Generator for Enhanced

Photodynamic Therapy via Series-Parallel Catalysis

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PEG-MnMOF74	Size (nm)	PDI
In water	175.7	0.08
In saline	171.0	0.13
In cell culture medium	173.0	0.13
In PBS	239.7	0.13

Table S1 Size summary of PEG/MOF in various media.



Figure S1 TEM images of (a, b) MnMOF74 and (c, d) PEG-MnMOF74.



Figure S2 XPS spectra of MnMOF74 and PEG-MnMOF74.



 $\label{eq:Figure S3} Figure \ S3 \ Cell \ viability \ of \ PEG-MnMOF74 \ in \ 4T1 \ cell \ cultures \ with \ (b) \ and \ without \ (a, \ c) \ 808 \ nm$

laser irradiation.



Figure S4 Quantitative image analysis of live/dead cell staining results.



Figure S5 In vitro PA contrast images and PA values of ICG@PEGMnMOF74 at different ICG concentrations.



Figure S6 Biochemical blood indexes and hematological indexes of Balb/c mice at 30 day after intravenous injection of ICG@PEG-MnMOF74 at the dosages of 10, 40 and 80 mg kg-1.