## NIR-II-photoresponsive CoSnO<sub>3</sub> nanozymes for mild photothermalaugmented nanocatalytic cancer therapy

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Fig. S1 The hydrodynamic diameters of CoSn(OH)<sub>6</sub> and CoSnO<sub>3</sub>.



Fig. S2 The high-resolution TEM image of CoSnO<sub>3</sub>.



Fig. S3 The survey XPS, high-resolution Co 2p, Sn 3d, and O 1s spectra of CoSn(OH)<sub>6</sub>.



Fig. S4 Zeta potential of CoSn(OH)<sub>6</sub> and CoSnO<sub>3</sub>.



Fig. S5 FTIR spectra of CoSn(OH)<sub>6</sub> and CoSnO<sub>3</sub>.



Figure S6. Laser-power-density-dependent photothermal behaviors of CoSnO3 nanocubes with varied

concentrations under the 1064 nm laser irradiation.



Fig. S7 The photothermal stability evaluation of CoSnO<sub>3</sub> under 808 or 1064 nm laser irradiation.



Fig. S8 Absorption spectra of the oxidized TMB catalyzed by CoSnO<sub>3</sub> at pH 7.4.



Fig. S9 GSH depletion ability evaluation of CoSnO<sub>3</sub>.



Figure S10. Relative cell viability of LO2 cells treated with  $CoSnO_3$  with mild NIR-II laser irradiation (0.4 W/cm<sup>2</sup>).



Fig. S11 Time-dependent NIR fluorescence intensity of ICG-labeled  $CoSnO_3$  in the major organs and tumor tissues based on the fluorescence imaging results.



Fig. S12 Quantitative result of pulmonary metastatic nodules in each group.



Figure S13. The contents of GSH/GSSG in the tumor tissues of mice after different treatments.



Fig. S14 Mice weight curves in each group.



**Fig. S15** H&E-stained images obtained from the major organs (heart, liver, spleen, lung, and kidney) of mice in different treatment groups.



**Fig. S16** Biochemical blood analysis and hematological index of the mice that were sacrificed at 14 days after different treatments.