Electronic Supplementary Material

PVP-coated Sb₂Se₃ nanorods as nanotheranostic agent for photoacoustic imaging and photothermal therapy in NIR-I biowindows

Botao Qu^{#a}, Xiaoyan Li,^{#a} Xiaomin Zhang,^a Weihua Li^b and Ruiping Zhang^{*a}

^a School of Basic Medical Sciences, Shanxi Medical University; Imaging College of Shanxi
Medical University; Imaging Department of the Affiliated Da Yi Hospital of Shanxi Medical
University, Taiyuan 030001, Shanxi, China. Email: zrp_7142@163.com
^b Department of Radiology, the First Affiliated Hospital of Shenzhen University, Shenzhen Second
People's Hospital, Shenzhen 518035, Guangdong, China.

[#] The first two authors contributed equally to this work.



Fig. S1 FTIR spectra of PVP, Sb_2Se_3 and PVP-coated Sb_2Se_3 nanorods.



Fig. S2 Zeta potentials of Sb₂Se₃ and PVP-coated Sb₂Se₃ nanorods.



Fig. S3 (A) Temperature changes of PVP-coated Sb₂Se₃ nanorods at different concentrations exposed to 980 nm laser at a power density of 1.0 W/cm². (B) Infrared thermal images of the solution containing PVP-coated Sb₂Se₃ nanorods under the NIR laser (980 nm, 1.0 W/cm²) irradiation for 5 min. (C) Temperature change of PVP-coated Sb₂Se₃ nanorods at a constant concentration with different power. (D) Temperature variation of PVP- coated Sb₂Se₃ nanorods aqueous solution under 980 nm laser irradiation (1.0 W/cm²) for four laser on/off cycles.



Fig. S4 The quantitative analysis of cell viability of Hep-2 cells after incubation with PBS, PBS + NIR (808 nm), PVP-coated Sb₂Se₃ nanorods, and PVP-coated Sb₂Se₃ nanorods + NIR (808 nm).



Fig. S5 (A) Fluorescence images of live (green) and dead (red) cells stained by Calcein AM and PI after being treated with PBS, PBS + NIR (980 nm), PVP-coated Sb₂Se₃ nanorods, and PVP-coated Sb₂Se₃ nanorods + NIR (980 nm). Scale bar: 100 μ m. (B) The quantitative analysis of cell viability of Hep-2 cells after incubation with PBS, PBS + NIR (980 nm), PVP-coated Sb₂Se₃ nanorods, and PVP-coated Sb₂Se₃ nanorods + NIR (980 nm).



Fig. S6 (A) IR thermal images of Hep-2 tumor bearing nude mice. (B) Time-dependent temperature changes in mice tumor after different treatments. (C) Representative photographs of mice tumor after various treatment 0-14 day. (D) Tumor growth curves of Hep-2 tumor bearing nude mice after treatment for 14 days. (E) Body weights of mice during different treatments.

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