Electronic Supplementary Material (ESI) for Nanoscale.
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Supporting Information

Ultrasmall $AgBiSe_2$ Nanodots for CT/Thermal-imaging Guided Photothermal Tumor Therapy in NIR-II Biowindow

Jingge Zhang,[a] Enna Ha,*[a] Danyang Li,[a] Luyang Wang[b] and Junqing Hu[a,c]

[a] College of Health Science and Environmental Engineering, Shenzhen Technology University, Shenzhen 518118, P. R. China.

[b] College of New Materials and New Energies, Shenzhen Technology University, Shenzhen 518118, P. R. China

[c] Shenzhen Bay Laboratory, Shenzhen, 518132, P. R. China

* Corresponding author E-mail address: haenna@sztu.edu.cn

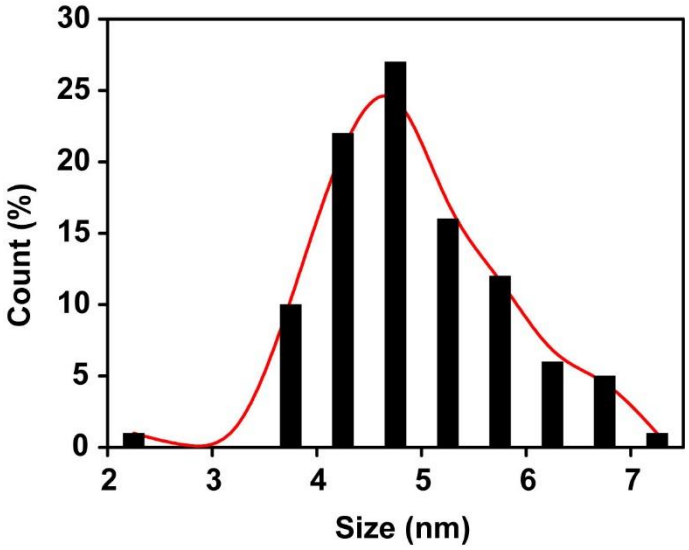

Fig S1. Size distribution graph of $AgBiSe_2$ nanodots.

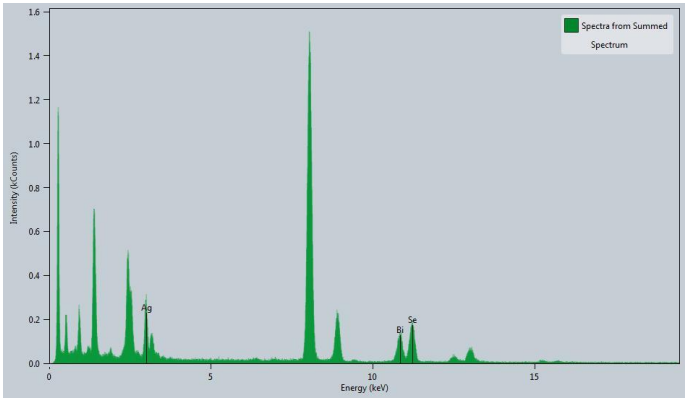

Fig S2. EDX spectrum of $AgBiSe_2$ nanodots.

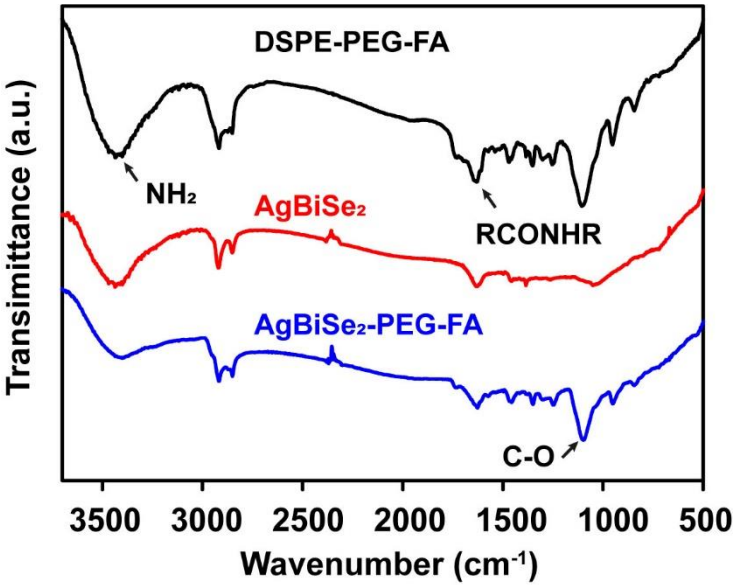

Fig S3. FTIR spectra of $AgBiSe_2$, DSPE- PEG-FA and $AgBiSe_2$-PEG-FA.

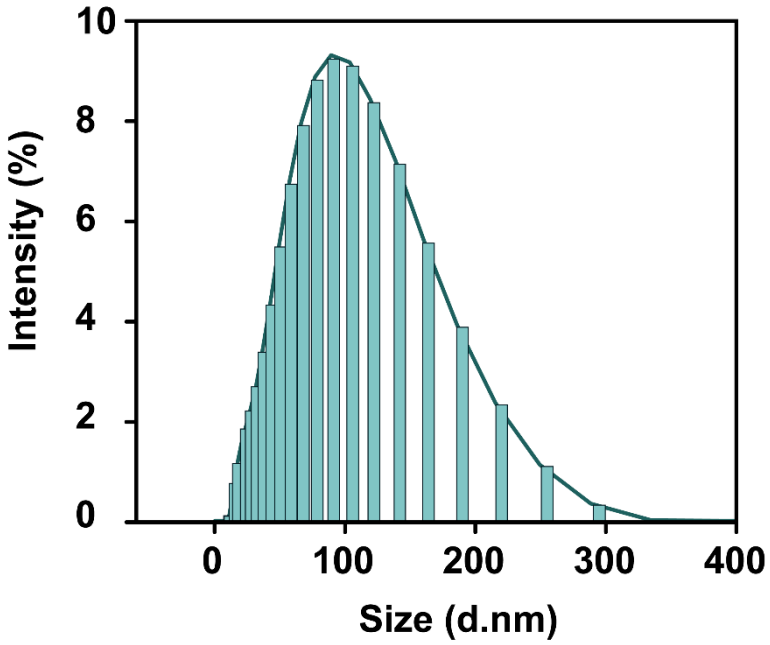

Fig S4. DLS analysis result of $AgBiSe_2$-PEG-FA.

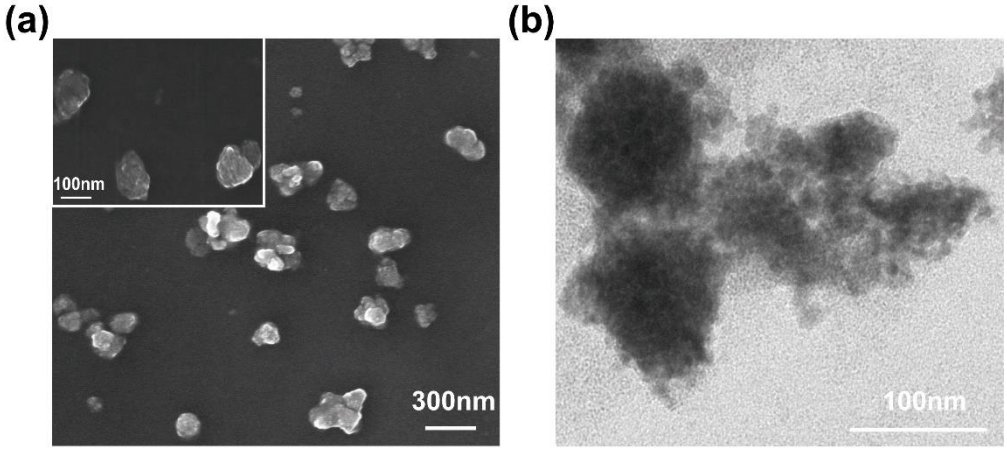

Fig S5. a) SEM and b) TEM of $AgBiSe_2$-PEG-FA.

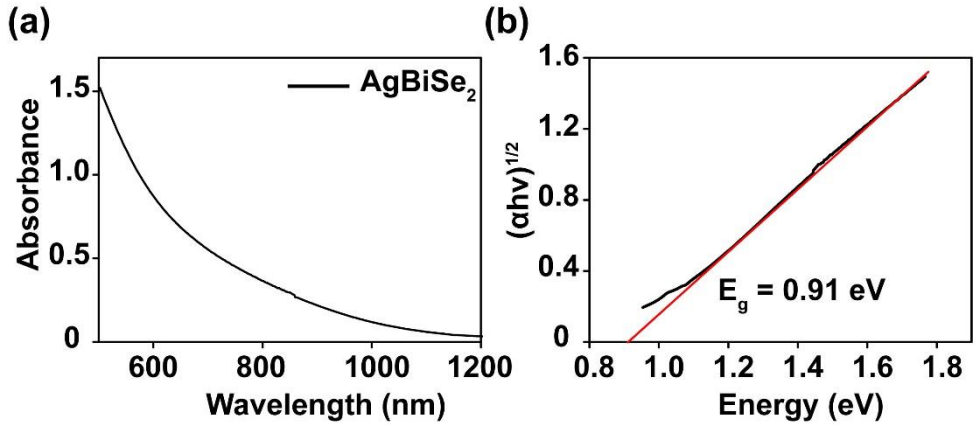

Fig S6. (a) UV-Vis-NIR absorption spectrum and (b) Tauc plot calculation for $AgBiSe_2$ nanodots.

The band gap of $AgBiSe_2$ nanodots is calculated as follows. Eg can be determined by the Tauc plot equation, where h is the Planck's constant, ν is the frequency of light, B is proportional constant, and n equals to 2 as $AgBiSe_2$ is an indirect semiconductor.

(αhν)^1/n=B(hν−Eg)

Accordingly, the band gap (Eg) of $AgBiSe_2$ is determined to be 0.91 eV.

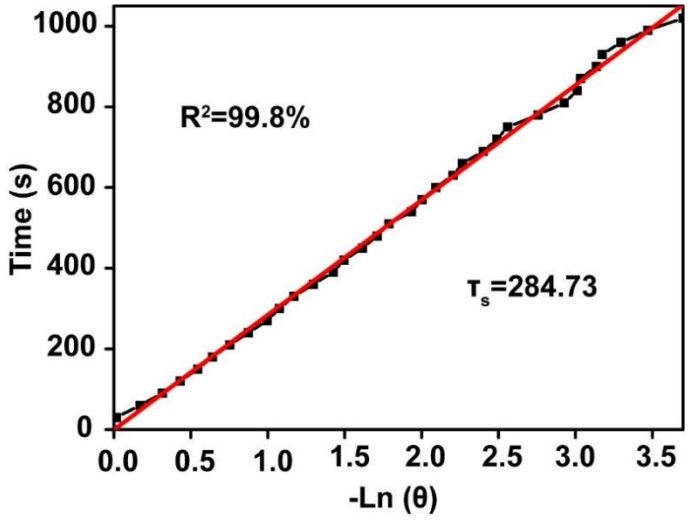

Fig S7. Fitting plots of time *versus* −ln θ during the cooling period.

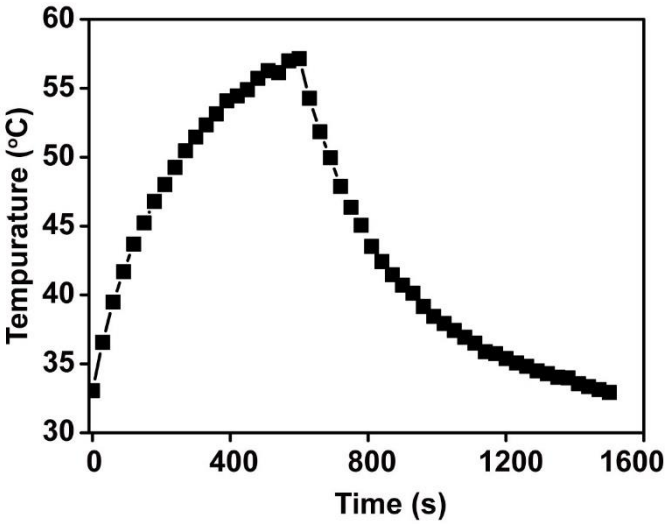

Fig S8. Temperature change profile of DSPE-PEG-FA modified $AgBiSe_2$ (150 ppm) upon irradiation for 10 min (1064 nm) and cooling process.

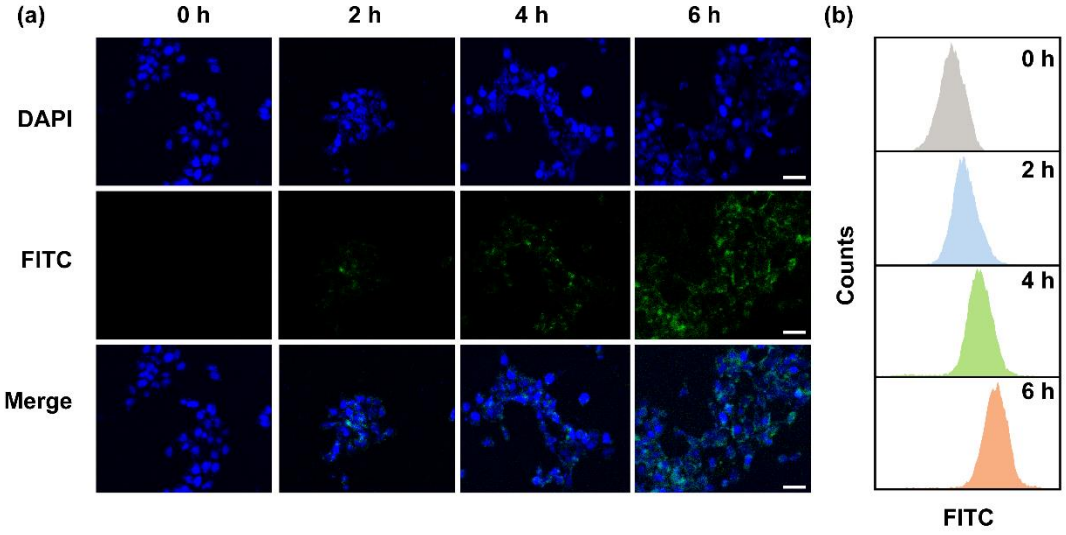

Fig S9. (a) CLSM analysis (scale: 50 μm) and (b) flow cytometry analysis of cellular uptake performance of FITC-labeled $AgBiSe_2$-PEG-FA (150 ppm) in 4T1 cells at varying treatment time.

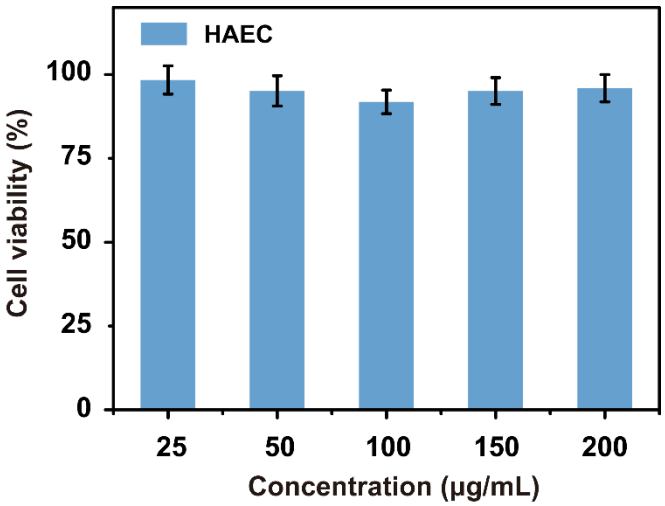

Fig S10. Cell viability of HAEC cells after 24 h of incubation with different concentrations of $AgBiSe_2$ nanodots.

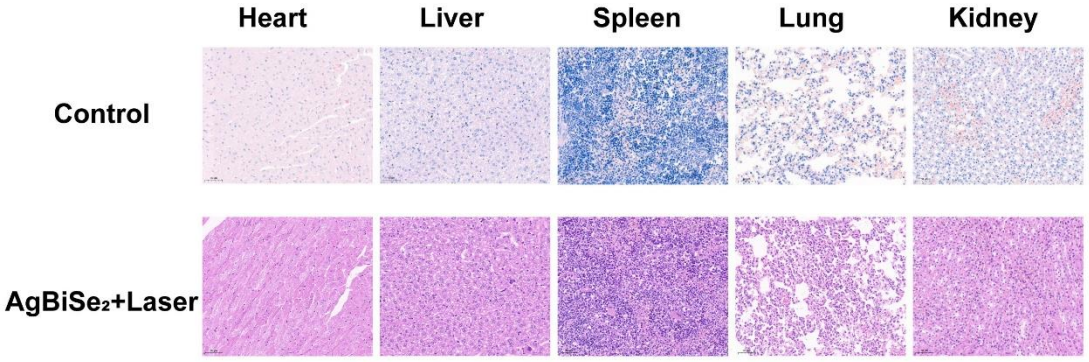

Fig S11. HE staining images of the excised organs of BALB/c tumor-bearing mice at 14^{th} day after treatment.

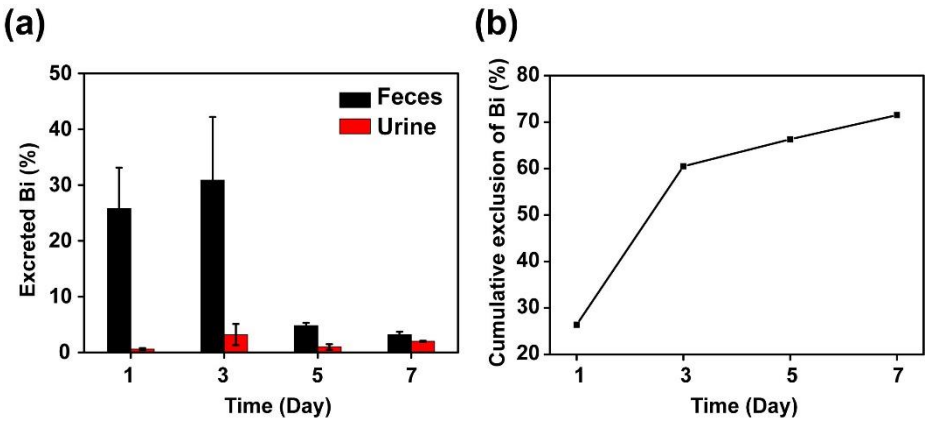

Fig S12. (a) The concentration of Bi in feces and urine at different times after injection of $AgBiSe_2$ in normal mice. n=3. (b) Cumulative exclusion of Bi in feces and urine at different times.

Table S1 EDS result of $AgBiSe_2$

Sample	Mass ratio (%)	Atomic ratio (%)
Ag	25.15	27.41
Bi	41.95	23.60
Se	32.91	48.99