

Supporting Information

**Gd-DTPA Coupled Ag₂Se Quantum Dots for Dual-Modality Magnetic Resonance Imaging and
Fluorescence Imaging in the Second Near-Infrared Window**

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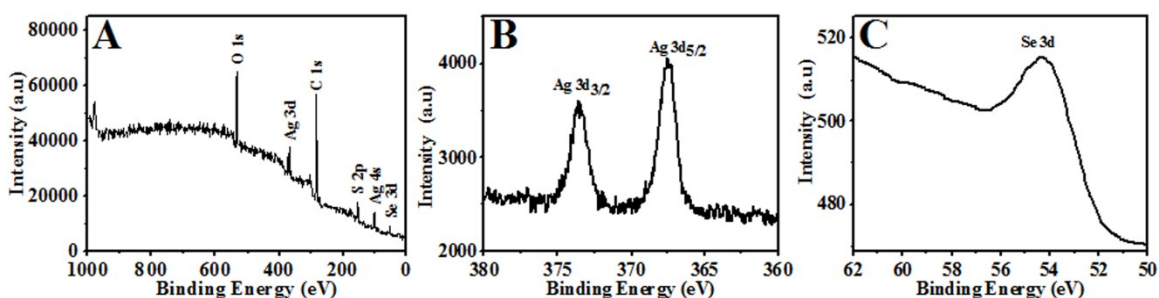


Figure S1. Characterization of hydrophobic Ag₂Se QDs: (A) XPS survey spectrum, high-resolution XPS spectra of (B) Ag 3d and (C) Se 3d.

Table S1. ICP-AES results of the as-prepared Ag₂Se QDs

sample	c (Ag) (ppm)	c (Se) (ppm)	atomic ratio of Ag/Se
Ag ₂ Se QDs	2.75	0.94	2.78:1

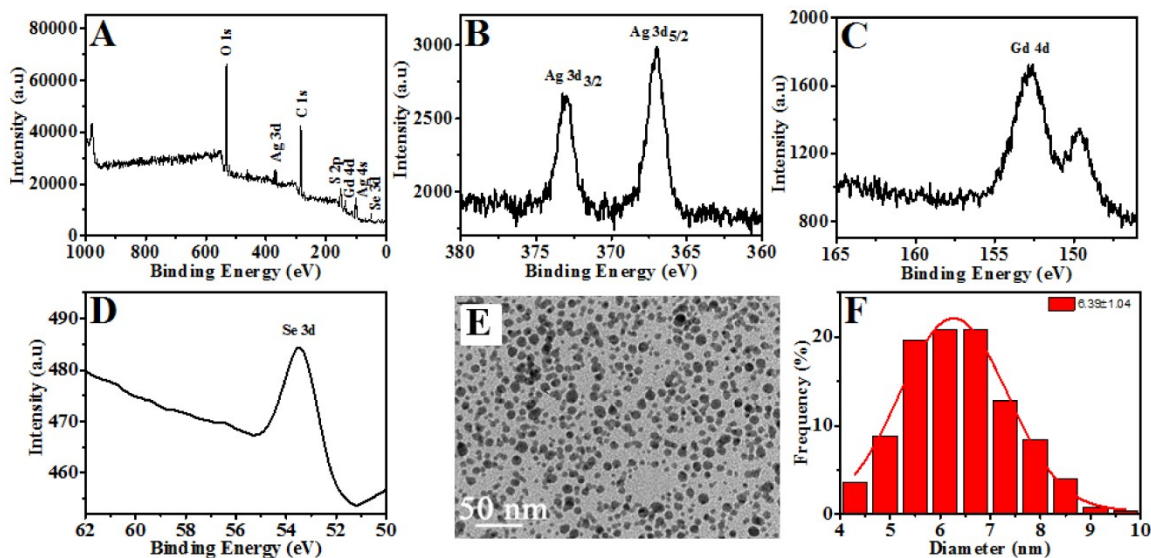


Figure S2. Characterization of the Ag₂Se-Gd QDs: (A) XPS survey spectrum, high-resolution XPS spectra of (B) Ag 3d, (C) Gd 4d and (D) Se 3d. (E) TEM image, (F) corresponding size distribution histograms.

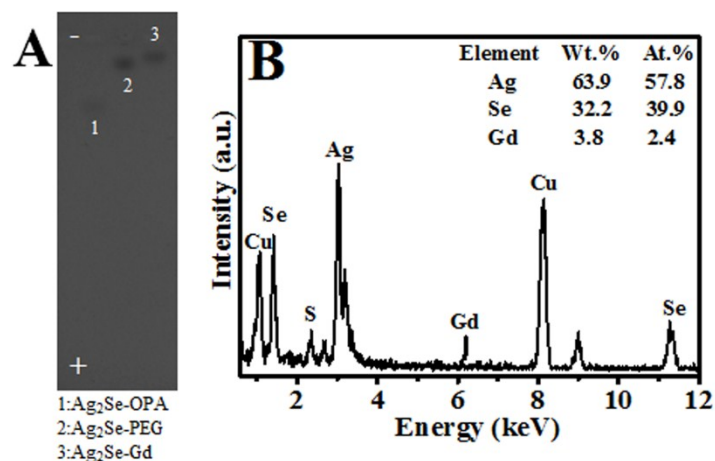


Figure S3 Characterization of the Ag₂Se-Gd QDs: (A) Agarose gel electrophoresis result of Ag₂Se-OPA QDs, Ag₂Se-PEG QDs and Ag₂Se-Gd QDs. (B) EDX image.

Table S2. ICP-AES results of the as-prepared Ag₂Se-Gd QDs

sample	c (Ag) (ppm)	c (Gd) (ppm)	c (Se) (ppm)
Ag ₂ Se-Gd QDs	27	0.26	9.002

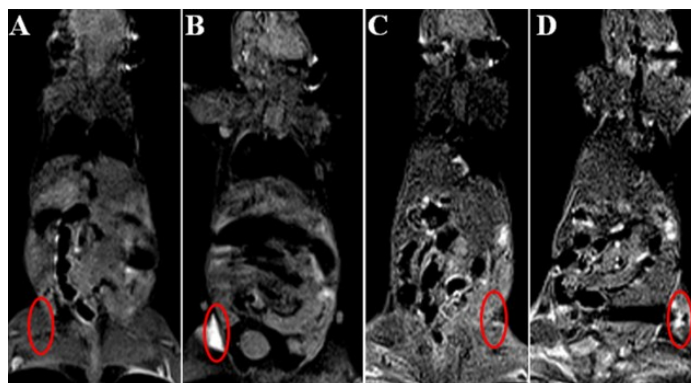


Figure S4. Comparison of *in vivo* T₁-weighted MR Imaging of Ag₂Se-Gd QDs with Gd-DTPA: (A, C) control group, (B) Ag₂Se-Gd QDs, (D) Gd-DTPA.

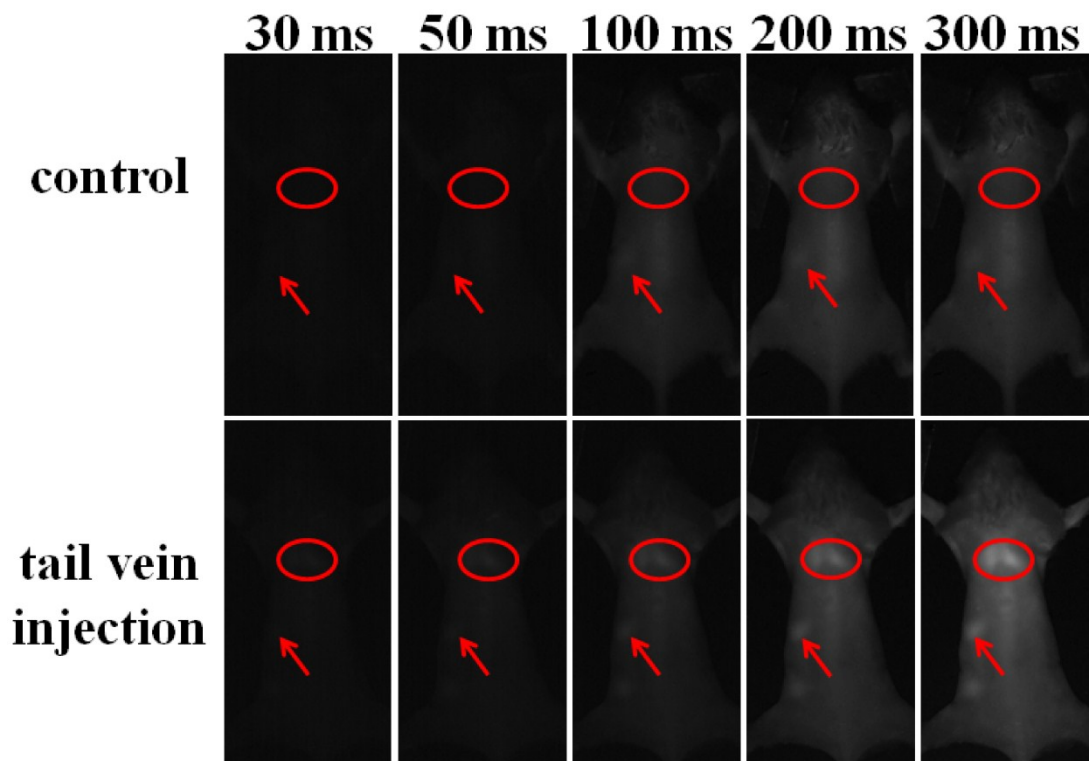


Figure S5. NIR-II fluorescence pictures of different exposure time with tail vein injection (prone position) *in vivo*.

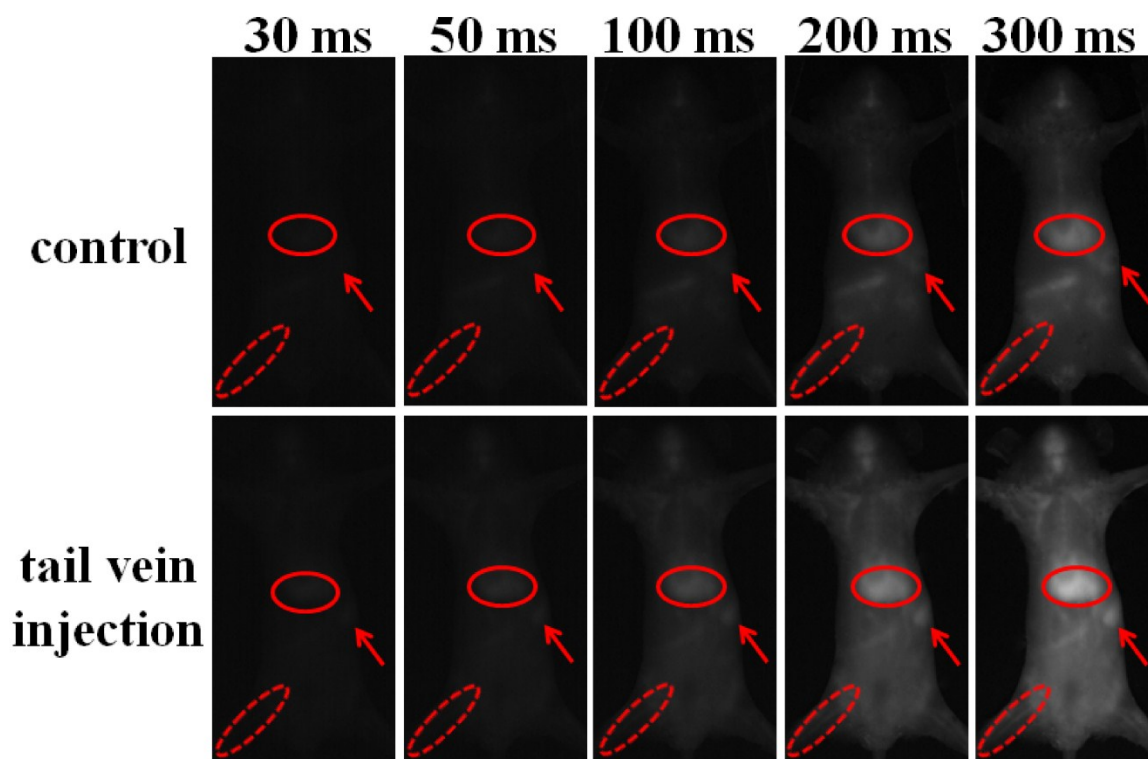


Figure S6. NIR-II fluorescence pictures of different exposure time with tail vein injection (supine position) *in vivo*.

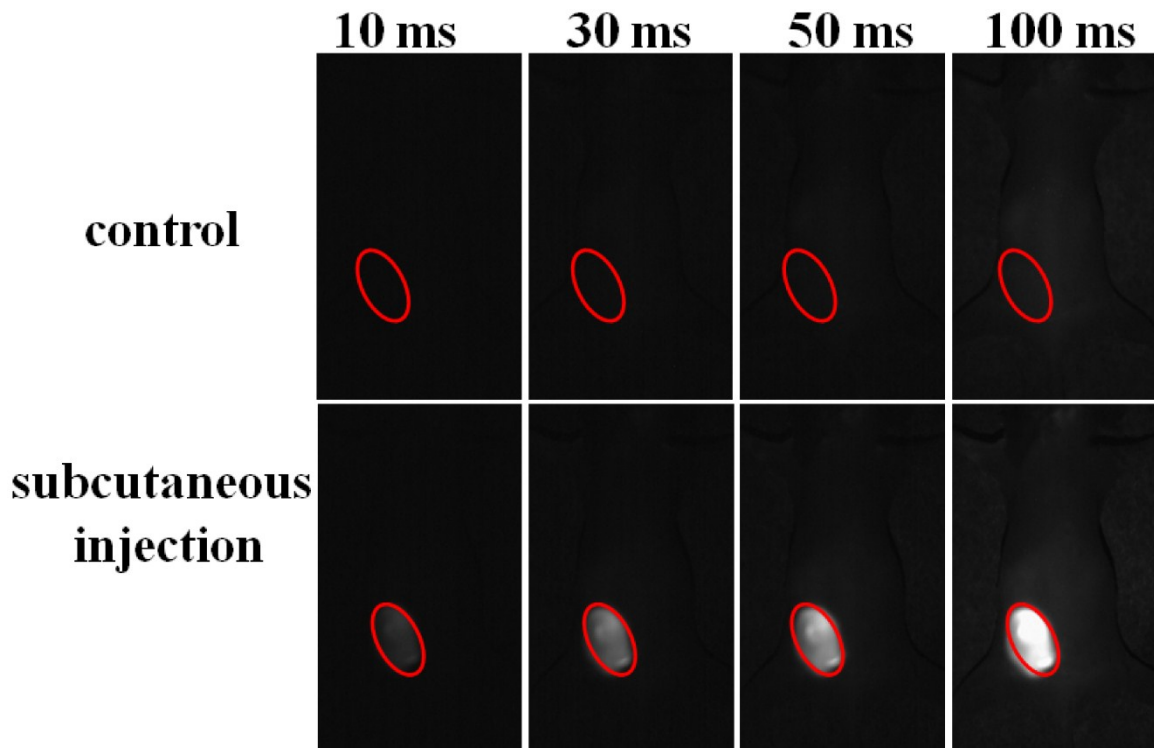


Figure S7. NIR-II fluorescence pictures of different exposure time with subcutaneous injection (prone position) *in vivo*.