Electronic Supplementary Material (ESI) for Nanoscale.

Supporting information:

An all-in-one nanoparticle (AION) contrast agent for breast cancer screening with DEM-CT-MRI-NIRF imaging

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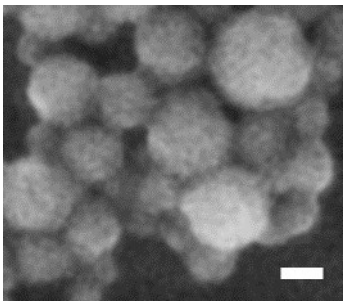

Figure S1. SEM image of AION showing the morphology of the particles (scale bar = 100 nm).

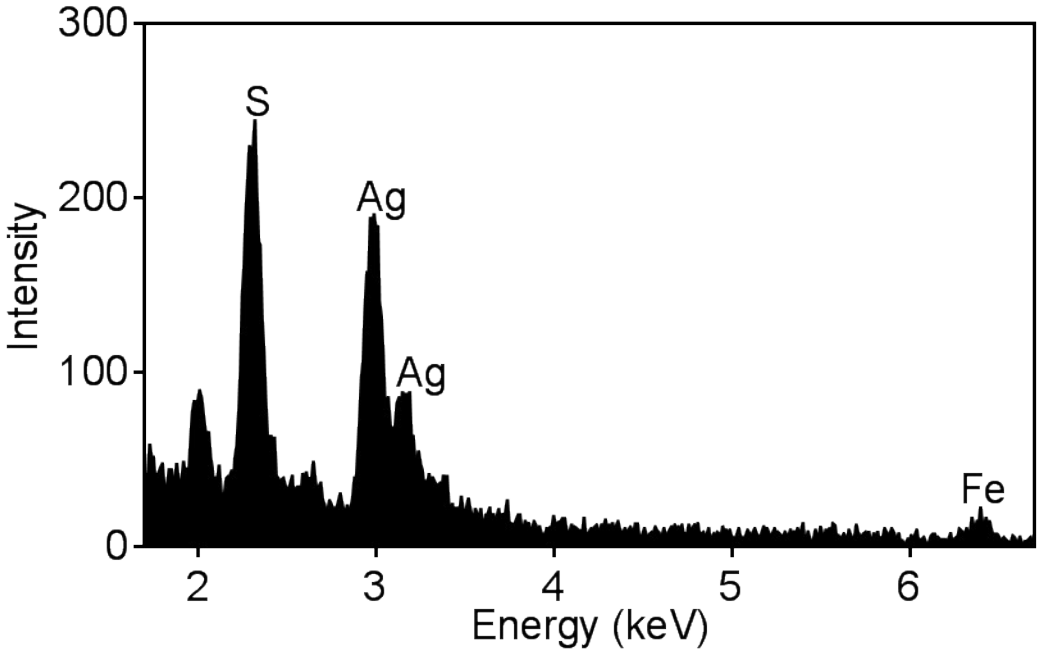

Figure S2. EDX spectrum of AION.

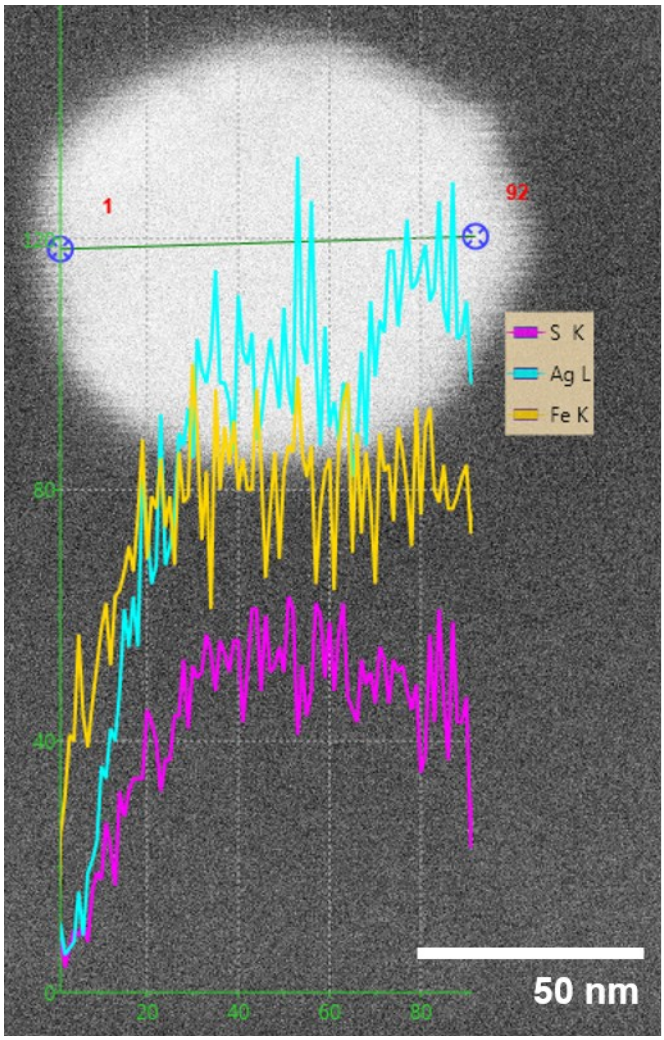

Figure S3. A representative EDX line scan across a single AION particle.

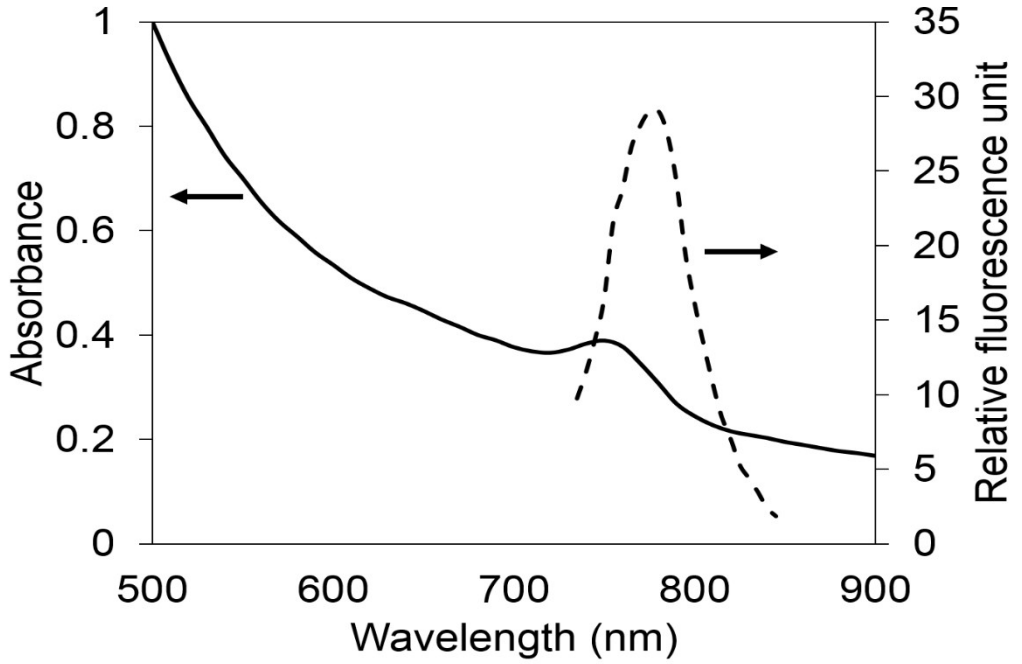

Figure S4. Absorption and fluorescence emission spectra of AION.

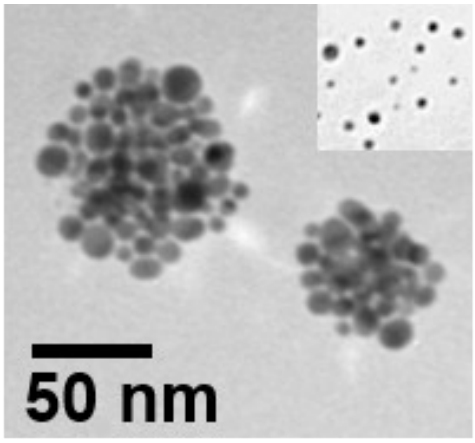

Figure S5. TEM image of AgNP with the inset showing a TEM image of as-prepared 5 nm pure silver nanoparticles (same scale bar).

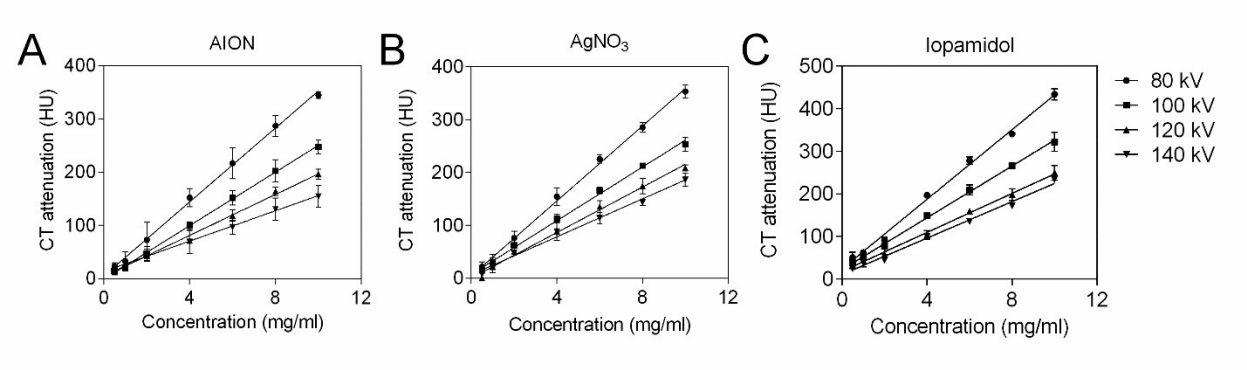

Figure S6. CT attenuation (HU) vs. concentration (mg/ml) for (A) AION, (B) $AgNO_3$ and (C) iopamidol at tube voltages of 80, 100, 120 and 140 kV.

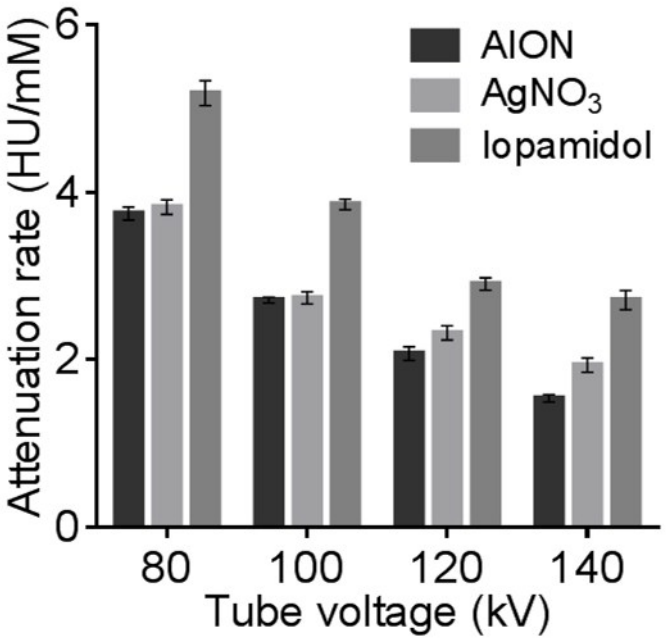

Figure S7. CT attenuation rates of different agents given in unit of HU mM^{-1} for each tube voltage. Error bars are one standard deviation.

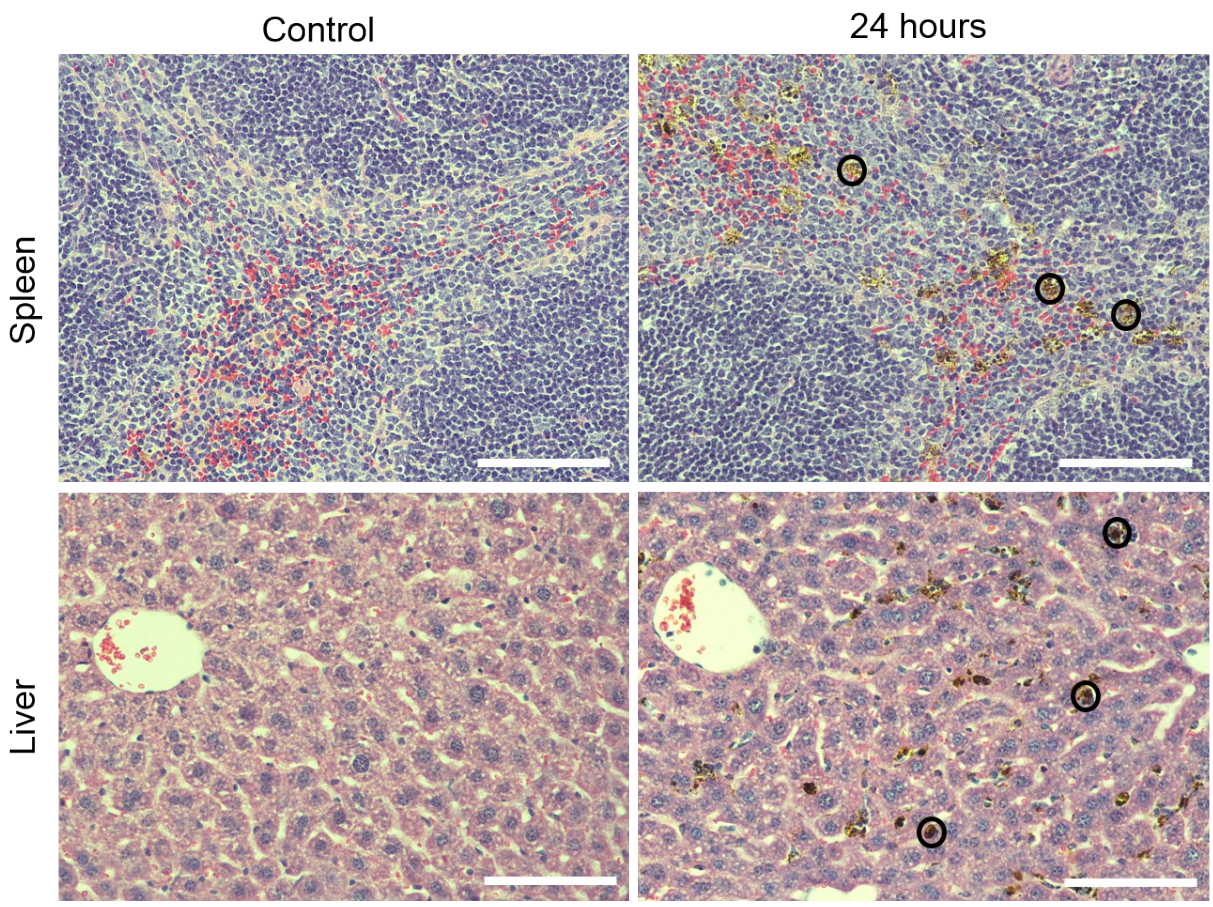

Figure S8. Representative H&E stained micrographs of major organs including liver and spleen collected from control mice and AION treated mice at 24 hours after injection. The dose of AION was 250 mg Ag/kg. No apparent organ damage or lesion was observed from the treated mice in comparison with the control. AION in these organs are indicated by black circles. Scale bar = 100 μm.