Supporting Information

## Imaging of Carotid Artery Inflammatory Plaques with Superparamagnetic Nanoparticles and an External Magnet Collar

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Figure S1. Diameter distribution curves of Fe<sub>3</sub>O<sub>4</sub> nanoparticles and SNPs in water measured by dynamic light scattering technique (A). The thermogravimetric (TG) analysis (B) and the Fourier transform infrared spectrometer (FT-IR) (C) result of the SNPs, as compared with the 5 Fe<sub>3</sub>O<sub>4</sub> nanoparticles.



Figure S2. Scanning Electron Microscope (SEM) images of (A)  $Fe_3O_4$  nanoparticles and (B) SNPs



Figure S3. (A to D): PD-T2 MRI images taken 0, 6, 12 and 24 hours after the intravenous injection of designed dosage of SNPs solution. The LCCA endothelium of 12-hours' post
5 injection (green arrow in C) presented lower signal intensity than other three time-points.



**Figure S4.** The serum MMP-9 (A) and VEGF (B) expression of three surgery groups and one paired group without surgery. Values are means  $\pm$  SD; \*\*\*P<0.001 vs other groups; n=6.

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