

**Electronic Supplementary Material (ESI) for RSC Advances.
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Supplementary Information

Bio-distribution and bio-availability of silver and gold in rat tissues with silver/gold nanorod administration

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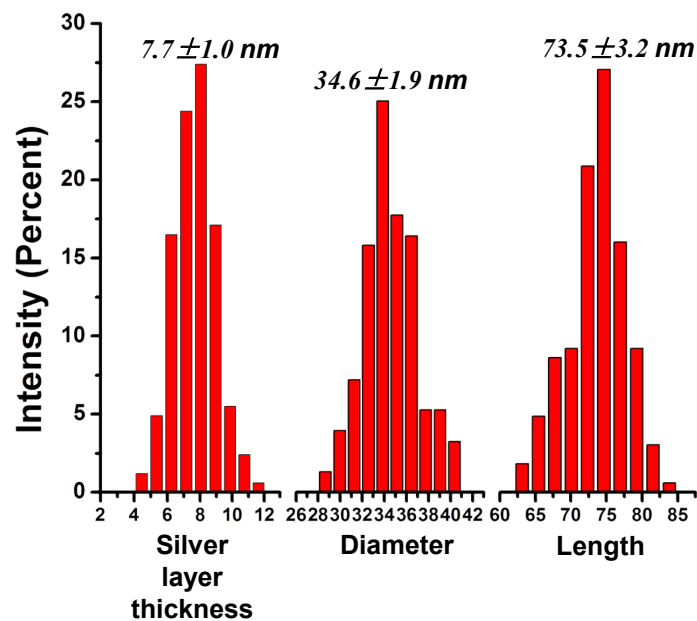


Fig. S1 Statistical analysis of silver thickness, diameter and length of Au@Ag NRs based on TEM. (n=154)

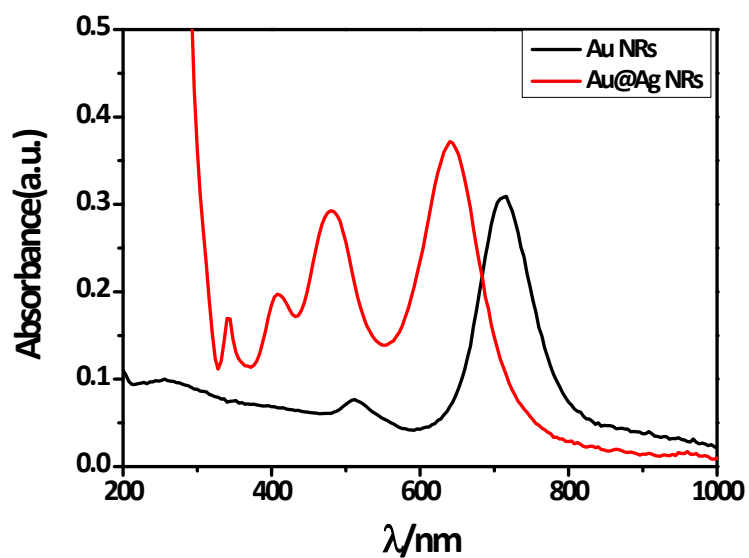


Fig. S2 UV-Vis absorbance spectra of Au@Ag NRs in water. Au NRs were tested as control.

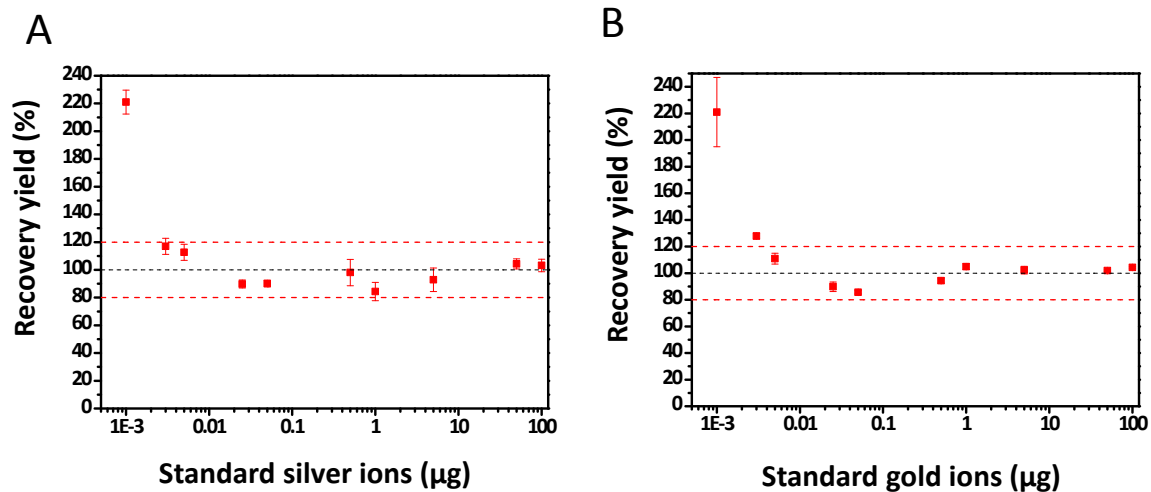


Fig. S3 The recovery of silver (A) and gold (B) ions in the standard solution. A series of standard solutions containing from 0.001 to 100 μg Ag or Au were digested by microwave and then measured by ICP-MS (n=3 for each concentration). Black line: the recovery ratio of 100%. Red line: the recovery ratio of 100±20%.

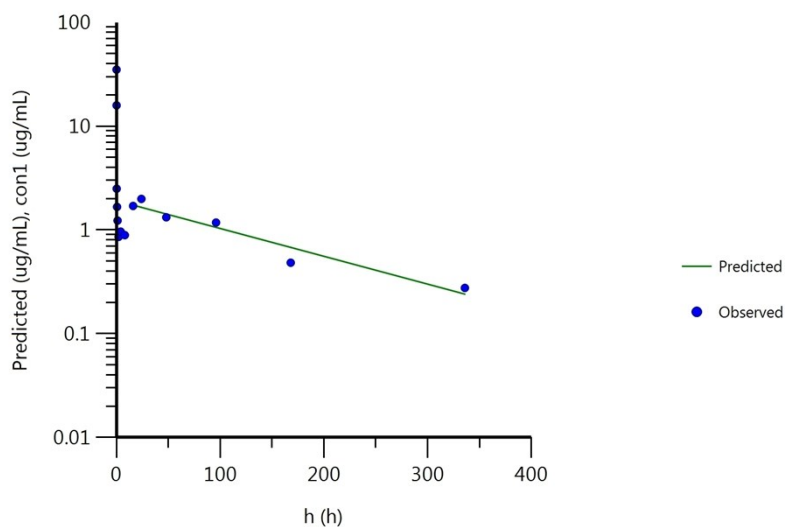


Fig. S4 Observed Ag concentrations in the i.v. group v.s. predicted model (noncompartmental model)

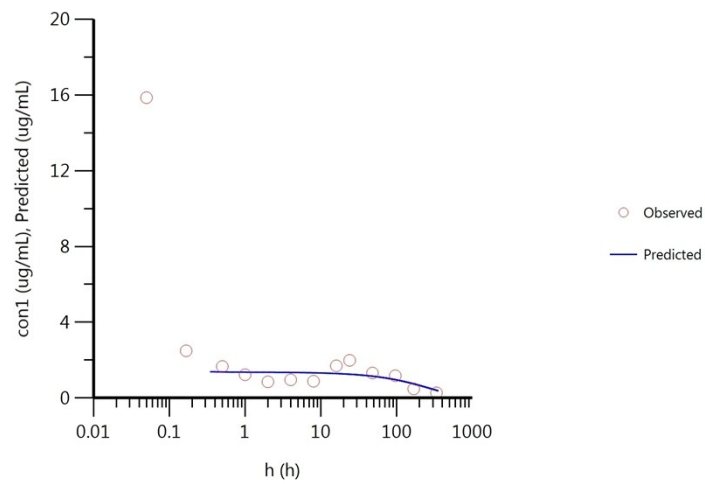


Fig. S5 Observed Ag concentrations in the i.v. group v.s. predicted model (two-compartment model)

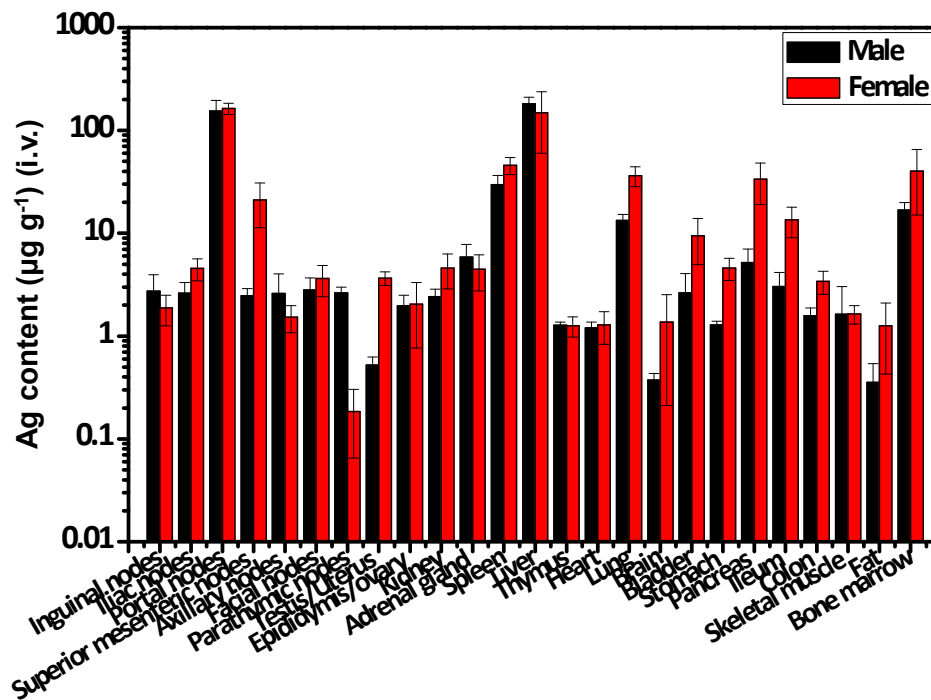


Fig. S6 The average content of Ag in male and female organs at 24 h after an i.v. injection. All data were deducted by the background value from blank organs.

Table S1 The content of Ag and Au in different organs at 24 h after s.c. injection.

s.c. injection (n=8 including 4 males and 4 females)		
Organs	Ag content ($\mu\text{g g}^{-1}$)	Au content ($\mu\text{g g}^{-1}$)
Inguinal nodes	1.5 \pm 1.2	0
Iliac nodes	1.4 \pm 1.4	0
Portal nodes	1.9 \pm 1.2	0
Superior mesenteric nodes	0.4 \pm 0.2	0
Axillary nodes	27.1 \pm 16.1	1.5 \pm 2.0
Facial nodes	0.3 \pm 0.1	0
Parathyroid nodes	0.5 \pm 0.5	0
Testis	0.13 \pm 0.01	0.01 \pm 0.03
Uterus	0.7 \pm 0.2	0.10 \pm 0.01
Epididymis	0.38 \pm 0.04	0.11 \pm 0.07
Ovary	0.9 \pm 0.3	0.08 \pm 0.05
Kidney	3.2 \pm 4.7	0.15 \pm 0.16
Adrenal gland	189.4 \pm 183.6	0
Spleen	0.8 \pm 0.2	1.0 \pm 1.3
Liver	3.4 \pm 1.9	2.5 \pm 3.1
Thymus	0.8 \pm 0.8	0.06 \pm 0.05
Heart	22.5 \pm 23.2	0.09 \pm 0.12
Lung	0.4 \pm 0.1	0.04 \pm 0.04
Brain	0.06 \pm 0.04	0
Bladder	0.3 \pm 0.1	0.07 \pm 0.15
Stomach	0.3 \pm 0.1	0.06 \pm 0.08
Pancreas	0.4 \pm 0.1	0.3 \pm 0.5
Ileum	0.6 \pm 0.3	0.11 \pm 0.16
Colon	0.5 \pm 0.3	0.3 \pm 0.4
Skeletal muscle	0.12 \pm 0.07	0.10 \pm 0.14
Fat	0.35 \pm 0.43	0.01 \pm 0.01
Bone marrow	5.8 \pm 3.4	0.137

Table S2 The gender-related distribution of Ag and Au in different organs at 24 h after i.v. injection.

i.v. injection (n=8 including 4 males and 4 females)				
Organs	Ag content ($\mu\text{g g}^{-1}$)		Au content ($\mu\text{g g}^{-1}$)	
	Male	Female	Male	Female
Inguinal nodes	2.7±1.2	1.9±0.6	0.07	0.12±0.06
Iliac nodes	2.6±0.7	4.6±1.1	2.4±0.9	0
Portal nodes	154.6±42.1	163.7±20.8	147.3±25.0	171.1±29.1
Superior mesenteric nodes	2.5±0.4	21.2±9.8	1.3±0.7	0.16±0.10
Axillary nodes	2.6±1.4	1.5±0.5	0.43±0.03	0.05±0.08
Facial nodes	2.8±0.9	3.6±1.2	1.8±0.6	1.5±0.9
Parathyroid nodes	2.6±0.4	0.19±0.12**	0.30±0.01	0
Testis/Uterus	0.5±0.1	3.7±0.6	0.10±0.06	0.16±0.03
Epididymis/Ovary	2.0±0.5	2.0±1.3	0.7±0.2	0.8±0.1
Kidney	2.4±0.4	4.6±1.7	0.9±0.5	0.3±0.1
Adrenal gland	5.9±1.9	4.5±1.7	4.7±0.8	2.3±1.2
Spleen	29.7±6.8	45.9±8.7	32.7±7.6	44.0±9.0
Liver	182.1±28.4	148.8±88.8	1863.5±181.8	159.3±86.6**
Thymus	1.3±0.1	1.3±0.3	0.4±0.1	0.31±0.15
Heart	1.2±0.2	1.3±0.5	0.58±0.04	0.34±0.03
Lung	13.3±1.9	36.4±8.0**	9.8±2.3	9.5±2.9
Brain	0.4±0.1	1.4±1.2	0.05±0.03	0
Bladder	2.6±1.4	9.5±4.5	0.19±0.06	0.15±0.17
Stomach	1.3±0.1	4.6±1.1	0.18±0.14	0
Pancreas	5.2±1.8	33.7±14.7	0.26±0.07	0.6±0.3
Ileum	3.0±1.1	13.5±4.4	0.19±0.01	0.4±0.2
Colon	1.6±0.3	3.4±0.9	0.15±0.06	0.9±0.3
Skeletal muscle	1.6±1.4	1.64±0.33	0.15±0.07	0.21±0.19
Fat	0.36±0.18	1.7±0.8	0.14±0.08	0.6±0.5
Bone marrow	16.9±3.1	40.3±25.2	15.5±5.6	14.06

Significant difference by One-Way ANOVA between males and females. (p<0.01)