Electronic Supplementary Material (ESI)

Bi_2S_3@mSiO_2@Ag Nanocomposite for Enhanced CT Visualization and Antibacterial Response to Gastrointestinal Tract

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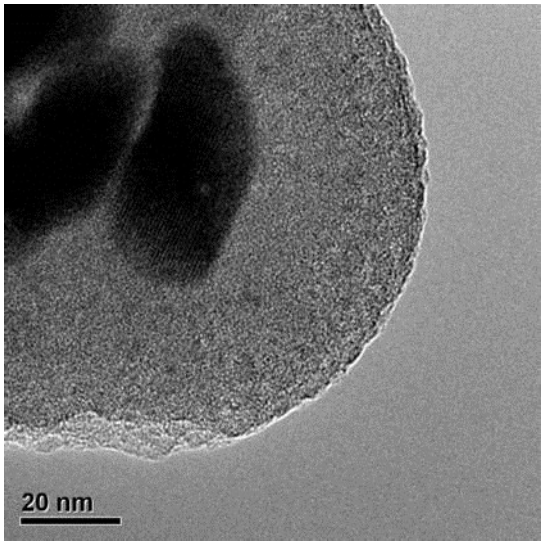

Fig. S1 TEM image of Bi_2S_3@mSiO_2 NPs.

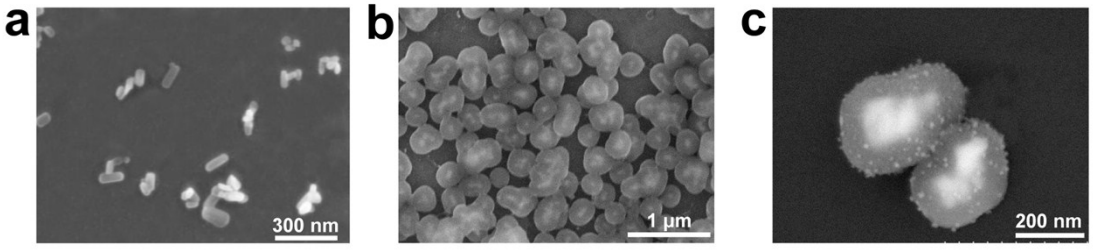

Fig. S2 SEM images of (a) Bi_2S_3 NPs, (b)Bi_2S_3@mSiO_2 NPs, (c) Bi_2S_3@mSiO_2@Ag nanocomposite.

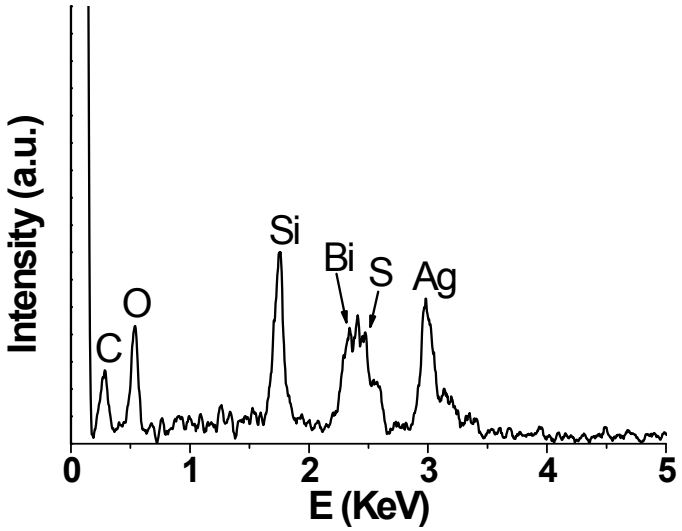

Fig. S3 EDS of Bi_2S_3@mSiO_2@Ag nanocomposite.

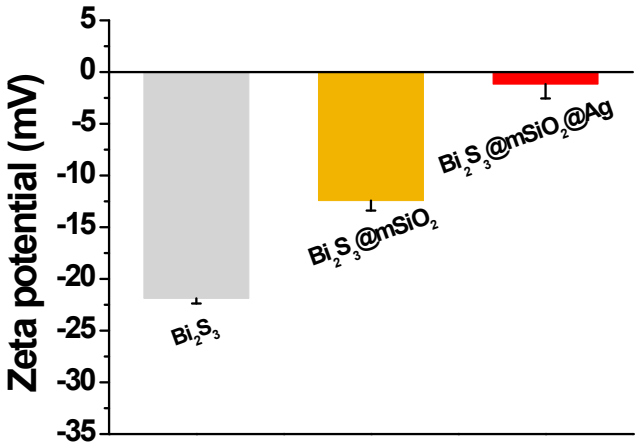

Fig. S4 Zeta potentials of Bi_2S_3 NPs, Bi_2S_3@mSiO_2 NPs, Bi_2S_3@mSiO_2@Ag nanocomposite.

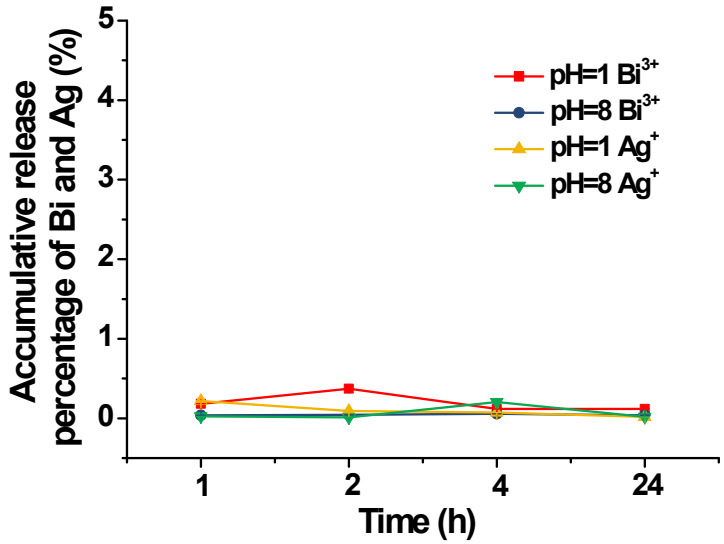

Fig. S5 Accumulative release profiles of Bi_2S_3@mSiO_2@Ag at pH 1.0 and 8.0 buffer solutions during 24 h, showed no obvious released Bi^{3+} and Ag^{+} in the above two pH solutions, and demonstrated the desired chemical stability of Bi_2S_3@mSiO_2@Ag.

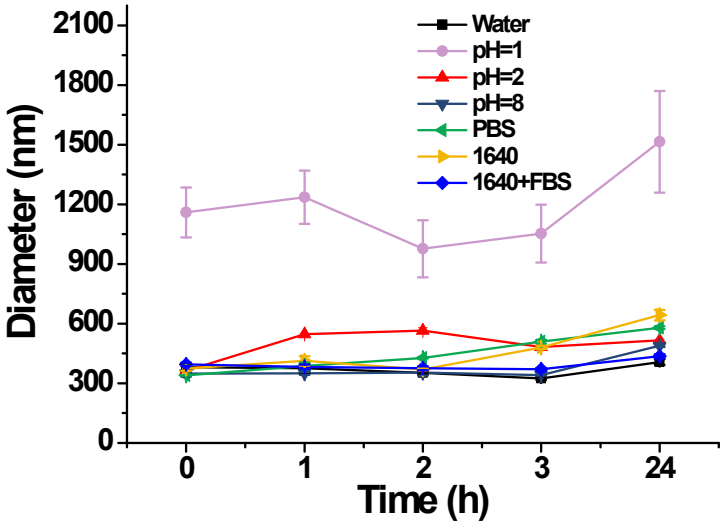

Fig. S6 Hydrodynamic diameters of Bi_2S_3@mSiO_2@Ag nanocomposite after dissolving in water, buffer solutions (pH 1.0, 2.0 and 8.0), 1640 cell medium and 1640 cell medium containing 10% fetal bovine serum (FBS) at different time points (0, 1, 2, 3 and 24 h).

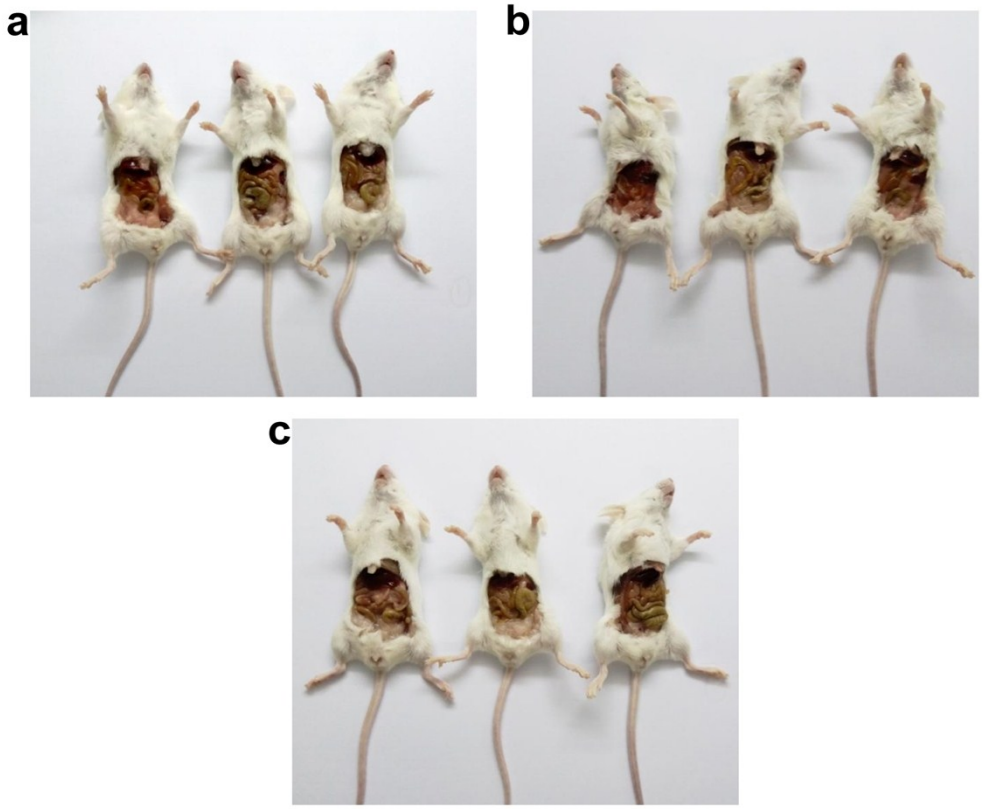

Fig. S7 The photographs of intestine-infected BALB/c mice. Three groups of mice were sacrificed at the fourth day and the intestines were harvested for further analysis. (a) PBS, (b) Bi_2S_3@$mSiO_2$, (c) Bi_2S_3@$mSiO_2$@Ag.

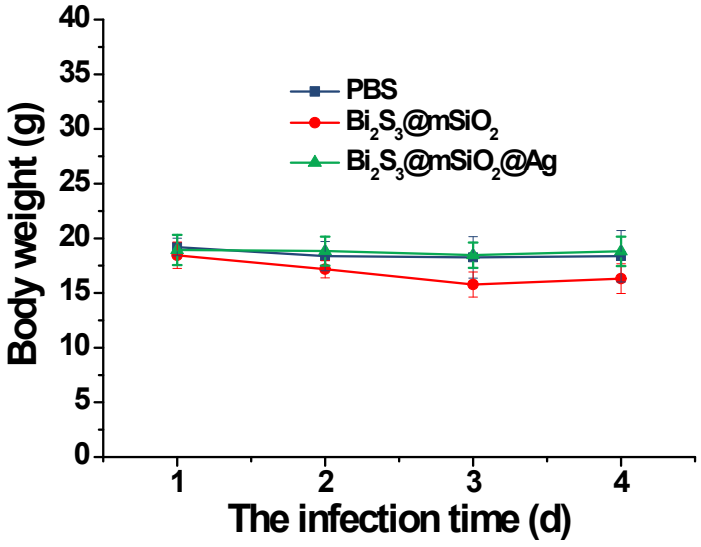

Fig. S8 The body weights of mice under different treatments within four days.

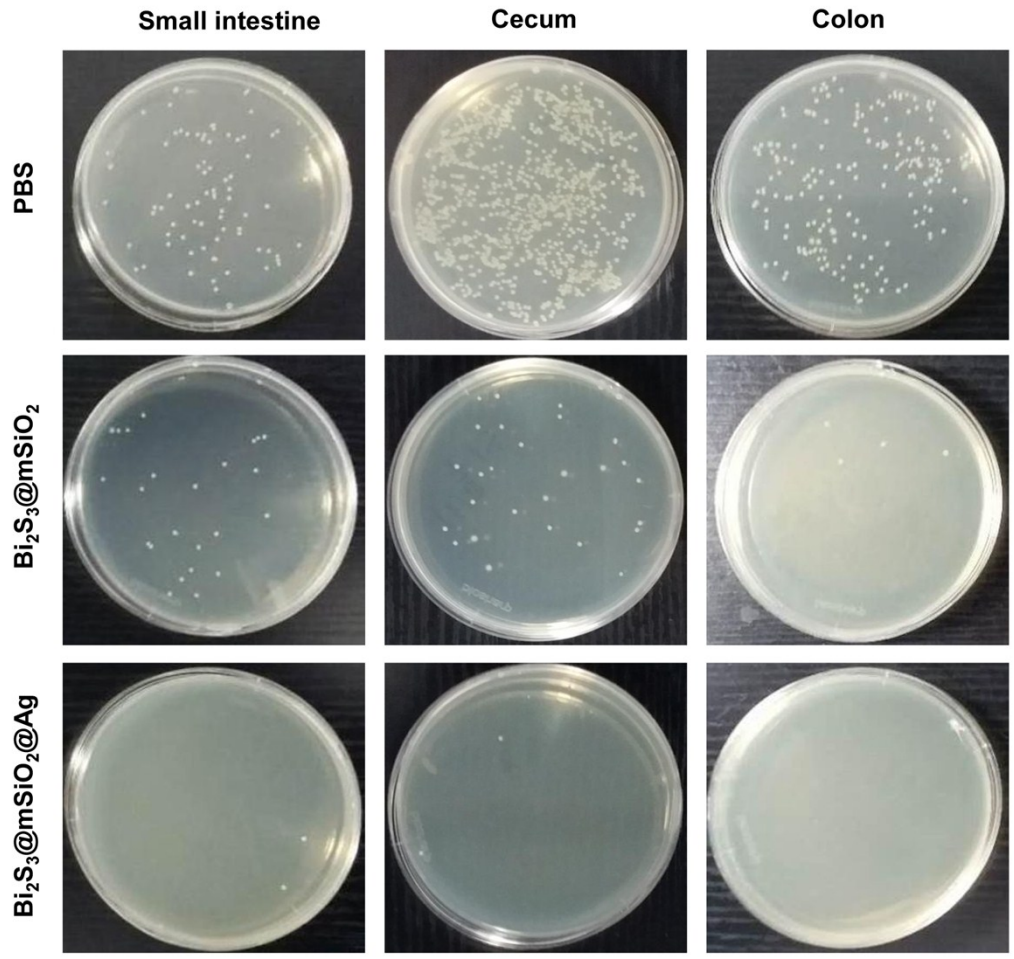

Fig. S9 Bacterial colonies in the small intestine, cecum, and colon after different treatment.

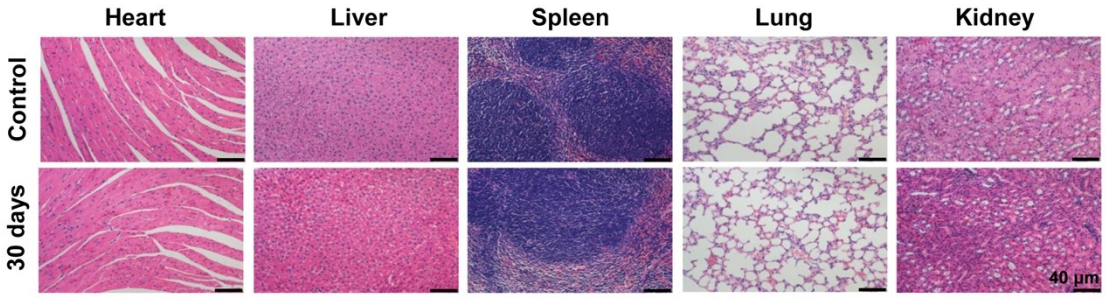

Fig. S10 H&E stained images of main organs collected from mice at the 30th day after oral administration of Bi_2S_3@$mSiO_2$@Ag nanocomposite with the concentration of 10 mg mL^{-1}.