## **Supporting Information**

## Cetyltrimethylammonium Bromide (CTAB)-Loaded SiO<sub>2</sub>-Ag Mesoporous Nanocomposite as an Efficient Antibacterial Agent

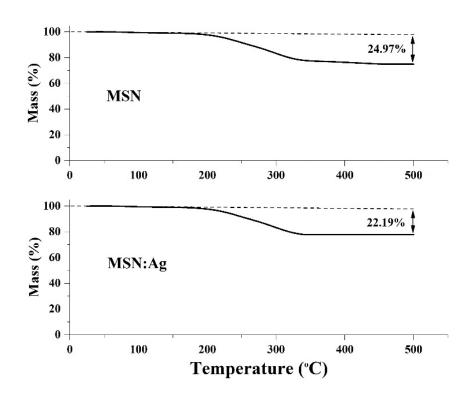


Figure S1. TGA curves for bare MSN and MSN:Ag.

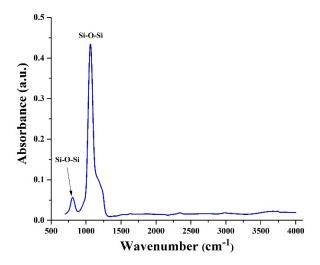
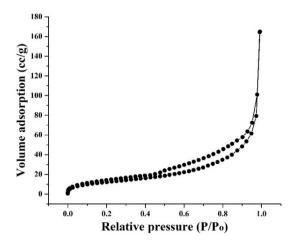
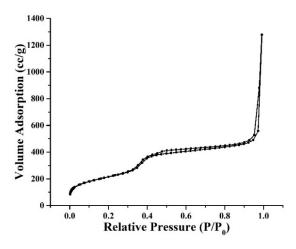


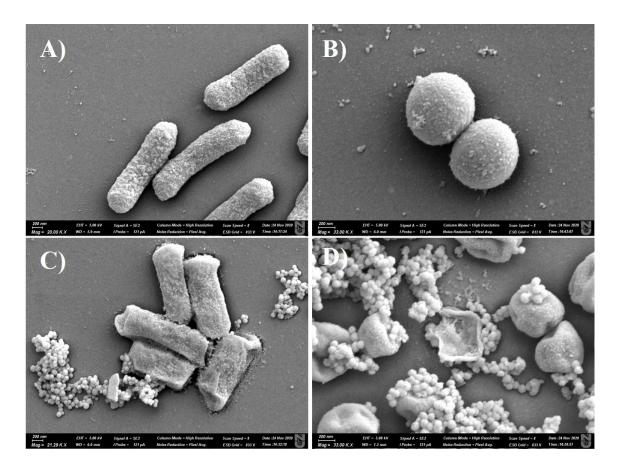
Figure S2. FTIR analysis of MSN:Ag nanocomposite after the TGA.



**Figure S3.** Nitrogen adsorption-desorption isotherm of MSN:Ag after the synthesis process.



**Figure S4.** Nitrogen adsorption-desorption isotherm of MSN:Ag after the calcination at  $500\ ^{\circ}\text{C}.$ 



**Figure S5.** SEM images of control *E.coli* (A) and *S.aureus* (B). SEM images of MSN:Ag incubated with *E.coli* (C) and *S.aureus* (D).