Supporting Information

for

Fabrication of Cu-Ag Bimetal Nanotube-Based Copper Silicates for Enhancement of Antibacterial Activities

Weijun Fang,*# chaofa Xu,b Jun Zheng,* c Guangjun Chen a and Kong Jiang a

a College of Basic Medicine, Anhui Medical University, Hefei 230032, P.R. China,

b Sate Key Laboratory of Physical Chemistry of Solid Surfaces, Xiamen University, Xiamen 361005, P.R. China

c Center of Modern Experimental Technology, Anhui University, Hefei 230039, Anhui, China

Corresponding Author

* E-mail: wjfAng81@163.com (Weijun Fang)

* E-mail: jzheng@ahu.edu.cn (Jun Zheng)
**Figure S1.** XP spectra of Ag$^+$/CSNTs and Ag$^+$/CSNAHSs: (a) high-resolution spectra of Ag3d, (b) high-resolution spectra of Cu2p. The binding energy scale has been adjusted to the C1s line at 284.6 eV.

**Figure S2.** SEM images and TEM images (inset) of HMSHs.
Figure S3. Bacterial growth curves in LB liquid medium inoculated with different concentrations of CSNTs or CSNAHSs. Gram-negative bacteria: (a) *E. coli* BL21 and (b) *E. coli* JM109; Gram-positive bacteria: (c) *B. subtilis* and (d) *S. aureus*. 