

## Supplementary Information

### **Functional Hydroxyapatite Bioceramics with Excellent Osteoconductivity and Stern-Interface Induced Antibacterial Ability**

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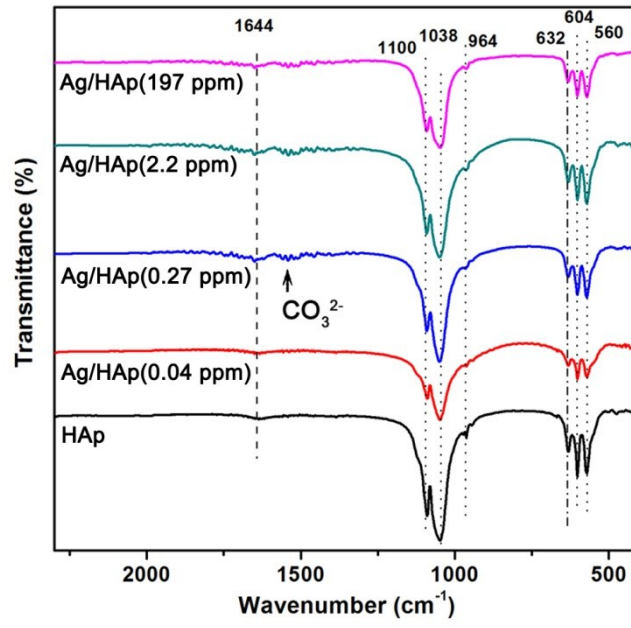
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**Fig. S1** FTIR spectra of HAp and Ag/HAp bioceramics calcined at 1000 °C for 3 h

**Table S1.** The real density ( $\rho_r$ ) and theoretical density ( $\rho_t$ ) of HAp and Ag/HAp bioceramics calcined at 1000 °C for 3 h.

samples	Real density ( $\rho_r$ , g/cm <sup>3</sup> )	Theoretical density ( $\rho_t$ , g/cm <sup>3</sup> )	Relatively density (%)
HAp	3.0215	3.16	95.62
Ag/HAp(0.04 ppm)	3.0557	3.16	96.70
Ag/HAp(0.27 ppm)	3.0584	3.16	96.78
Ag/HAp(2.2 ppm)	3.0847	3.16	97.62
Ag/HAp(197 ppm)	3.1084	3.16	98.37

### **Methods of real density ( $\rho_r$ ) and theoretical density ( $\rho_t$ ) measurement**

The bulk density of the obtained HAp and Ag/HAp bioceramics was measured by the Archimedes method, using ethanol as the medium. The “dry weight” ( $M_D$ ), the “wet weight” ( $M_W$ ) (infiltrating ethanol into the open pores of the samples), and the “floating weight” ( $M_F$ ) of the samples in ethanol were measured, and the bulk density of the Ag/HAp bioceramics was calculated using the equation  $\rho_E * M_D / (M_W - M_F)$ , in which  $\rho_E$  represents the density of ethanol at the experimental temperature. To infiltrate ethanol into the open pores of the samples, the bioceramics were placed in a flask filled with ethanol and evacuated. The wet weight ( $M_W$ ) of the samples was measured after wiping the samples with wet cotton to remove the water absorbed on the surfaces of the samples.