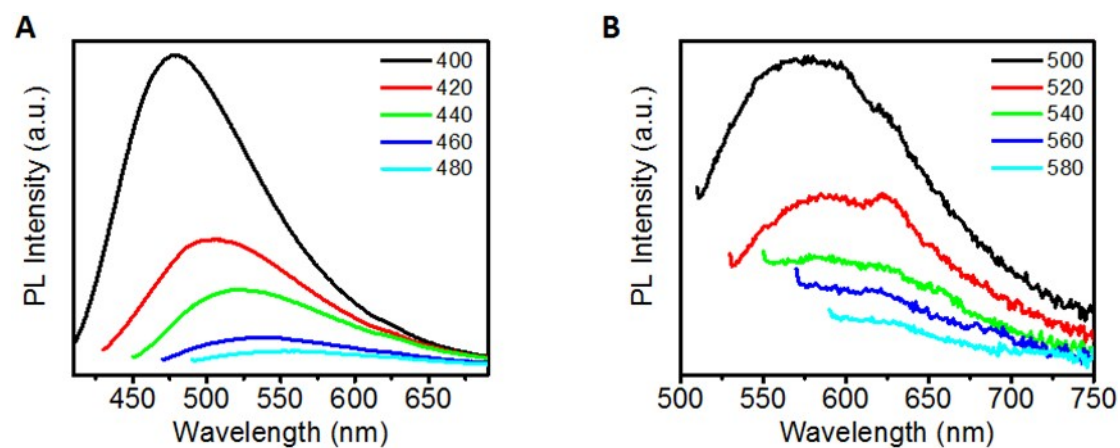


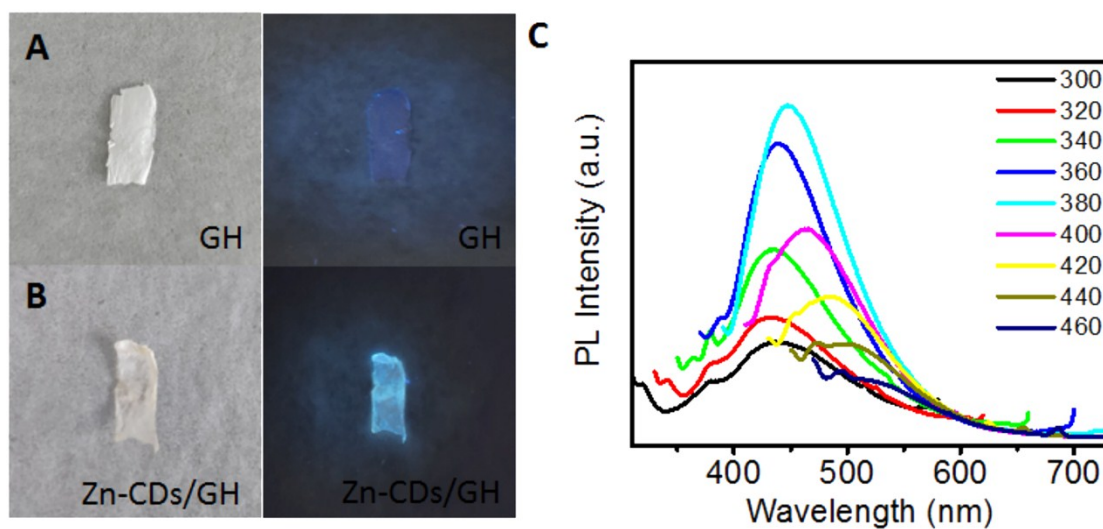
## Supplementary Information

### Osteogenic Potential of Zn<sup>2+</sup>-passivated Carbon Dots for Bone Regeneration *in Vivo*

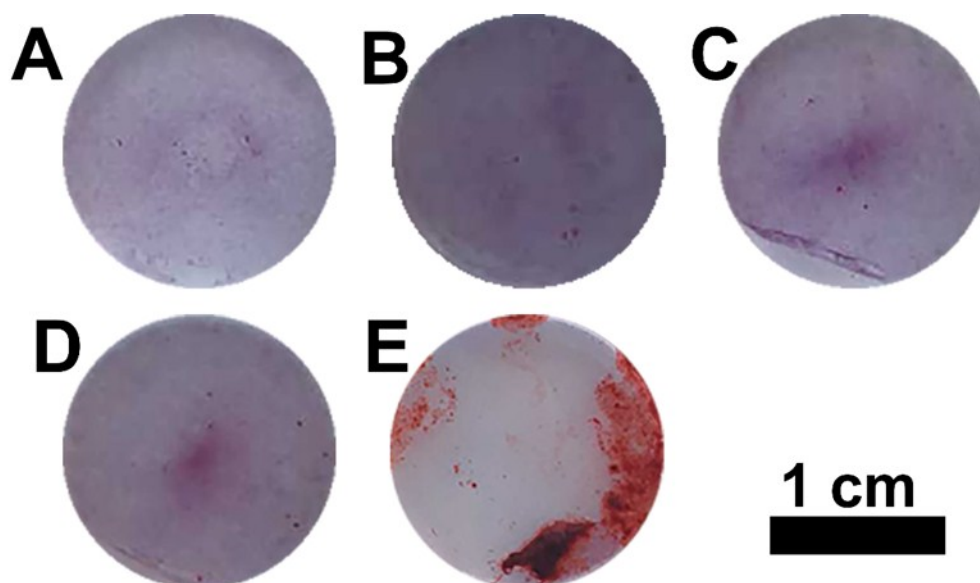
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**Figure S1.** The PL spectra of Zn-CDs under long excitation wavelengths at 400-580 nm.



**Figure S2.** The photographs of GH scaffolds (A) and Zn-CDs/GH (B) under daylight (left) and UV light irradiation (right). (C) The PL spectra of Zn-CDs/GH under different excitation wavelengths.



**Figure S3.** The scanning images of Alizarin red staining (A) Control group, (B) Zn-G group under the concentration of  $Zn^{2+}$  at  $10^{-5}$  mol/L, (C, D, E) Zn-CDs group under the concentration of  $Zn^{2+}$  at  $10^{-7}$  mol/L (C),  $10^{-6}$  mol/L (D) and  $10^{-5}$  mol/L (E).