## **Supporting Information for**

## Synthesis and study of amorphous calcium phosphate dual-

## targeted drug-carrying platforms

Huan Hong, <sup>1,4</sup> Wentao Ma, <sup>1,4</sup> Yushuang Jiao, <sup>1,4</sup> Bo Cheng, <sup>6</sup> Jing Yang, <sup>5</sup> Binbin Li<sup>1, 2, 4</sup> and Xinyu Wang<sup>1, 2, 3, 4, 6\*</sup>

<sup>1</sup>State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology, Wuhan 430070, P.R. China

<sup>2</sup>Sanya Science and Education Innovation Park, Wuhan University of Technology, Sanya 572000, *P.R. China*.

<sup>3</sup>Foshan Xianhu Laboratory of the Advanced Energy Science and Technology Guangdong Laborat ory, Xianhu hydrogen Valley, Foshan 528200, P.R. China

<sup>4</sup>Biomedical Materials and Engineering Research Center of Hubei Province, Wuhan University of Technology, Wuhan 430070, P.R. China

<sup>5</sup>School of Foreign Languages, Wuhan University of Technology, Wuhan 430070, P.R. China <sup>6</sup>Department of Stomatology, Zhongnan Hospital of Wuhan University, Wuhan 430060, P.R. China

\* Corresponding author: Xinyu Wang E-mail address: wangxinyu@whut.edu.cn



**Fig. S1** Particle size distribution based on the number (a-d) and comparison graphs (e) of CaP, HEP/ACP, DS-HEP/ACP and DS-HEP/ACP@AT. Data are presented as the mean  $\pm$  SD (n = 3)



Fig.S2 SEM images of DS-HEP/ACP at different magnifications.



**Fig.S3** (a) UV-vis absorption spectra of AT under different solvents, the next largest absorption peaks appeared at 247 nm and 241 nm for ethanol and PBS as solvents, respectively. The standard curve between absorption intensity and concentrations of AT for ethanol (b), PBS at pH 5.5 (c), and PBS at pH 7.4 (d) as solvent, respectively.



Fig.S4 The cumulative amount of released drug versus the square root of release time for the DS-HEP/ACP drug delivery system in both PBS solutions with pH 5.5 and pH 7.4 in the first 2.5 h at 37  $^{\circ}$ C. Data are presented as mean  $\pm$  SD (n  $\geq$  3).



**Fig.S5** (a) Cytotoxicity test results of HUVECs cocultured with different concentrations of DS-HEP/ACP for 1, 2 and 3 days. (b) Live/dead staining results of HUVECs cocultured with different concentrations of DS-HEP/ACP for 1 day. Scale bar: 100  $\mu$ m. Data in (a) are mean  $\pm$  SD (n  $\geq$  3).



**Fig.S6** Cytotoxicity test results of RAW264.7 cocultured with different drug-encapsulated samples for 1 day. Data are presented as mean  $\pm$  SD (n  $\geq$  3).



Fig.S7 Hemolysis analysis of blood samples after exposure to various concentrations of DS-HEP/ACP. Data are presented as mean  $\pm$  SD (n=3).