## SUPPORTING INFORMATION

A Zr-based metal-organic framework drug release system with long-lasting antibacterial behavior for accelerating wound healing

Hui-Qian Zheng,<sup>a</sup> Han-Xiao Feng,<sup>a</sup> Bing-Xin Li,<sup>a</sup> Yi-Fei Hui,<sup>a</sup> Yi-Han Lin,<sup>a</sup> Xian-Feng Su,<sup>a</sup> Lai-Peng Yan, \*<sup>b,c,d</sup> Zijie Zhou,<sup>b,c,d</sup> Zu-Jin Lin, \*<sup>a</sup> and Faqiang Tang\*<sup>b,c,d</sup>

<sup>a</sup> Department of Applied Chemistry, College of Life Sciences, Fujian Agriculture and Forestry University, Fuzhou 350002, P. R. China.

<sup>b</sup> Shengli Clinical Medical College of Fujian Medical University, Fuzhou, 350001, P.
R. China. E-mail: yanlaipeng@fjmu.edu.cn; faqiangtang@fjmu.edu.cn.

<sup>c</sup> Orthopedic and Sports Medicine Center, Fujian Provincial Hospital, Fuzhou, Fujian, 350001, P. R. China.

<sup>d</sup> Orthopedic and Sports Medicine Center, Fuzhou University Affiliated Provincial Hospital, Fuzhou, Fujian, 350001, P. R. China.

\*Author to whom correspondence can be addressed: yanlaipeng@fjmu.edu.cn, faqiangtang@fjmu.edu.cn, and linzujin@fafu.edu.cn.



Fig. S1 Pore distribution of SU-102 and CIP@SU-102 derived from  $N_2$  sorption isotherms by DFT model.



Fig. S2 Particle size distributions of (a) SU-102 and (b) CIP@SU-102.



Fig. S3 Zeta potential of SU-102 and CIP@SU-102.



**Fig. S4** Inhibition zone experiments of SU-102, CIP@SU-102 and CIP against *E. coli*, *S. aureus* and MRSA, respectively.



Fig. S5 Plate photographs showing the antimicrobial performances of CIP@SU-102 after 20 days' CIP release.



Fig. S6 SEM images of bacteria before and after treating with CIP@SU-102.



Fig. S7 Fluorescence images (AO/PI images) of live/dead (green/red) bacteria under various treatments.

Table S1 MBC values of as-prepared CIP@SU-102 against E. coli, S. aureus, and

	CIP@SU-102	CIP@SU-102 after drug release		
		PBS, pH=7.4	PBS, pH=5.0	$H_2O$
E. coli	0.5	2.0	8.0	1.0
S. aureus	8.0	16	16	16
MRSA	32	64	32	32

MRSA, respectively.