

1 **Supporting Information**

2

3 **A multifunctional eutectogel loaded with baicalein and**  
4 **MXene for diabetic infected wound healing under mild**  
5 **photothermal condition**

6

7 Naijun Dong<sup>a</sup>, Chuanxiang Wei<sup>a</sup>, Xiaoshi He<sup>a</sup>, Min Li<sup>a</sup>, Bo Tan<sup>a</sup>, Jiajun Fang<sup>a</sup>,

8 Yuesheng Dong<sup>a</sup>, Yaqin Sun<sup>a</sup>, Zhilong Xiu<sup>a,\*</sup>, Yongxin Qin<sup>b</sup>, and Xiaoguang Xu<sup>c</sup>

9

10 <sup>a</sup>MOE Key Laboratory of Intelligent Bio-Manufacturing, School of Bioengineering,

11 Dalian University of Technology, 2 Linggong Road, Hi-tech Zone, Dalian 116024,

12 China

13 <sup>b</sup>Department of Critical Care Medicine, The First Affiliated Hospital of Dalian

14 Medical University, 222 Zhongshan Road, Xigang District, Dalian 116011, China

15 <sup>c</sup>High Altitude Medical Research Center, The People's Hospital of Naqu, 15 Zhejiang

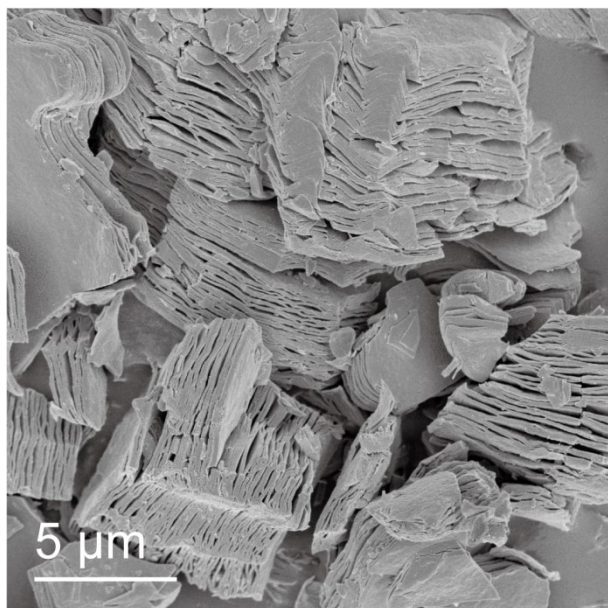
16 Middle Road, Seni District, Xizang Naqu 852007, China

17

18 \*Corresponding author:

19 Zhilong Xiu

20 E-mail address: [zhlxiu@dlut.edu.cn](mailto:zhlxiu@dlut.edu.cn)



21

22

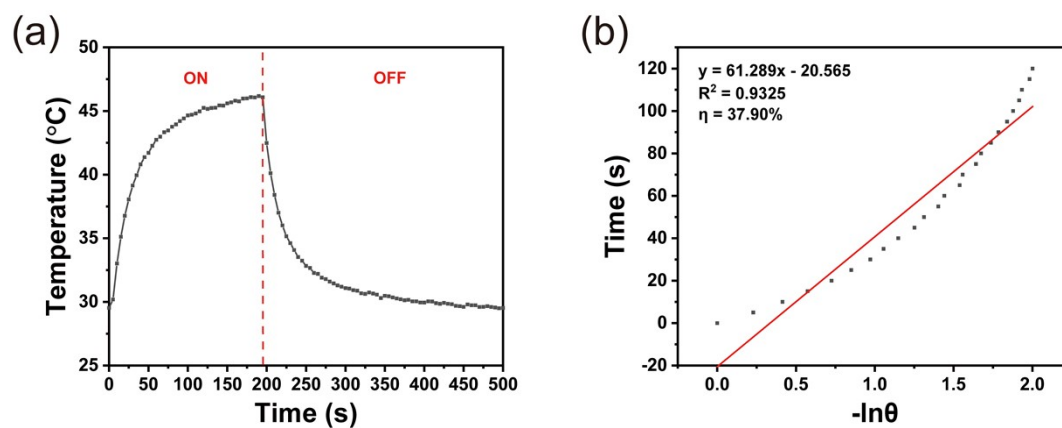
**Fig. S1.** SEM image of multilayer Ti<sub>3</sub>C<sub>2</sub>.



23

24

**Fig. S2.** Photographs of PAA EG, BAI/PAA EG, and MXene/PAA EG.

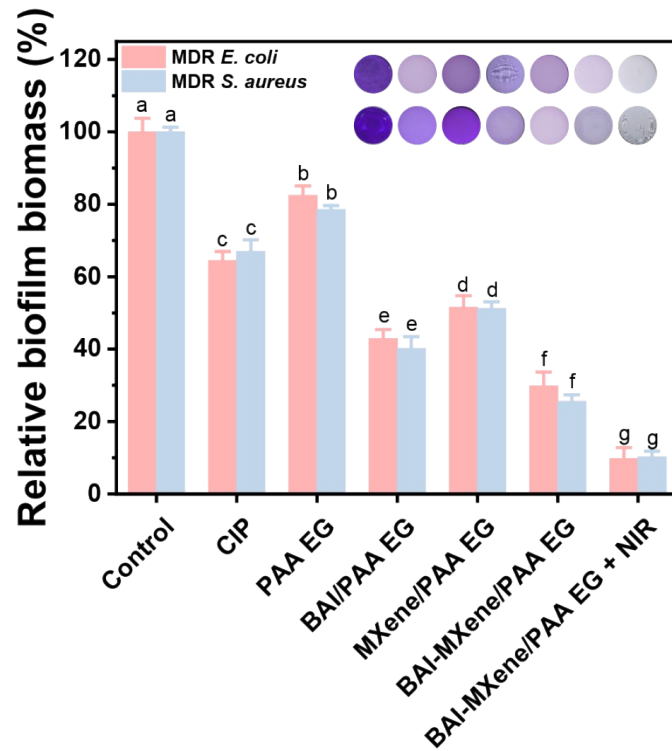


25

26 **Fig. S3.** Photothermal conversion performance of BAI-MXene/PAA EG. (a) The

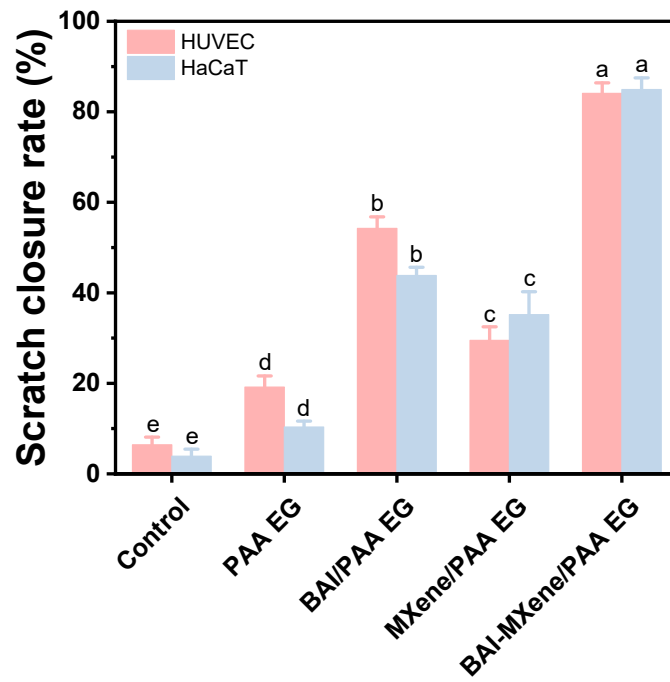
27 cooling curve of photothermal layer under 808 nm light irradiation; (b) The linear

28 relationship between time and  $\ln\theta$ .



29

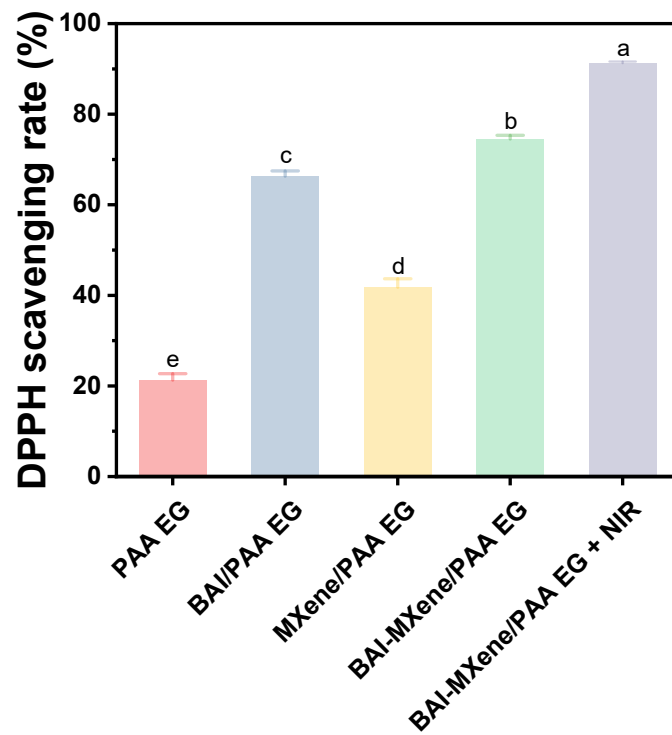
30 **Fig. S4.** Crystal violet staining was used for quantitative analysis and imaging of  
 31 biofilm biomass under different treatment conditions. Values are shown as the mean  $\pm$   
 32 SD ( $n = 3$ ). Means that do not share a letter are significantly different ( $P < 0.05$ ).



33

34 **Fig. S5.** Quantitative analysis of scratch closure rate. Values are shown as the mean  $\pm$

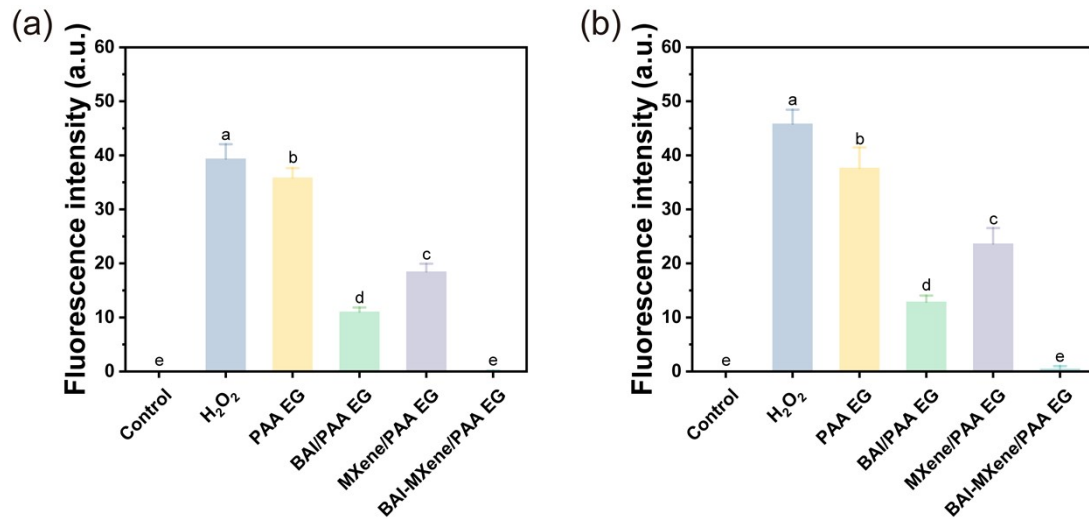
35 SD ( $n = 3$ ). Means that do not share a letter are significantly different ( $P < 0.05$ ).



36

37 **Fig. S6.** DPPH clearance rate of different samples. Values are shown as the mean  $\pm$

38 SD ( $n = 3$ ). Means that do not share a letter are significantly different ( $P < 0.05$ ).

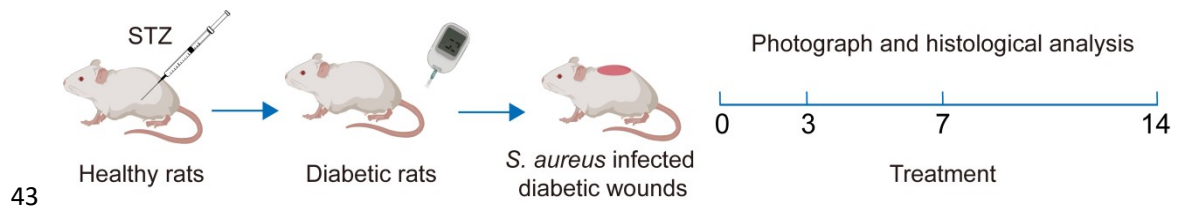


39

40 **Fig. S7.** Quantification of DCFH-DA fluorescence intensity in (a) HUVECs and (b)

41 HaCaT cells. Values are shown as the mean  $\pm$  SD ( $n = 3$ ). Means that do not share a

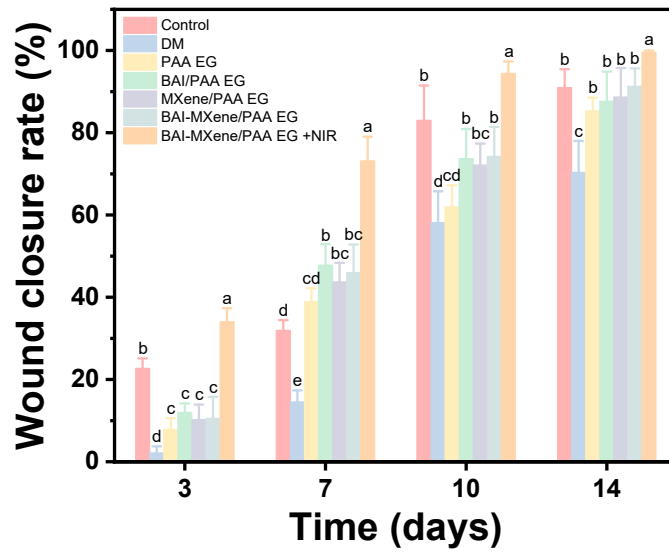
42 letter are significantly different ( $P < 0.05$ ).



43

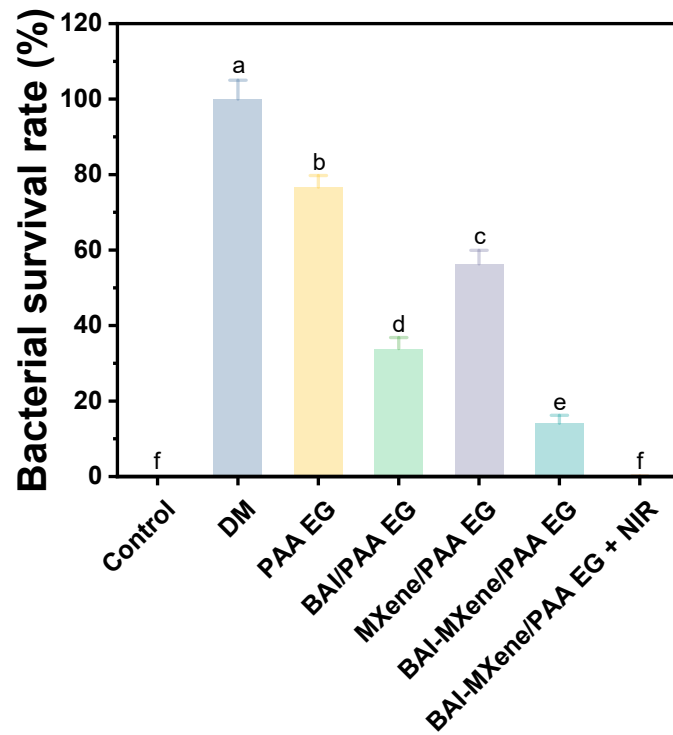
44 **Fig. S8.** Schematic diagram of the construction of diabetic rat model and the

45 treatment process.



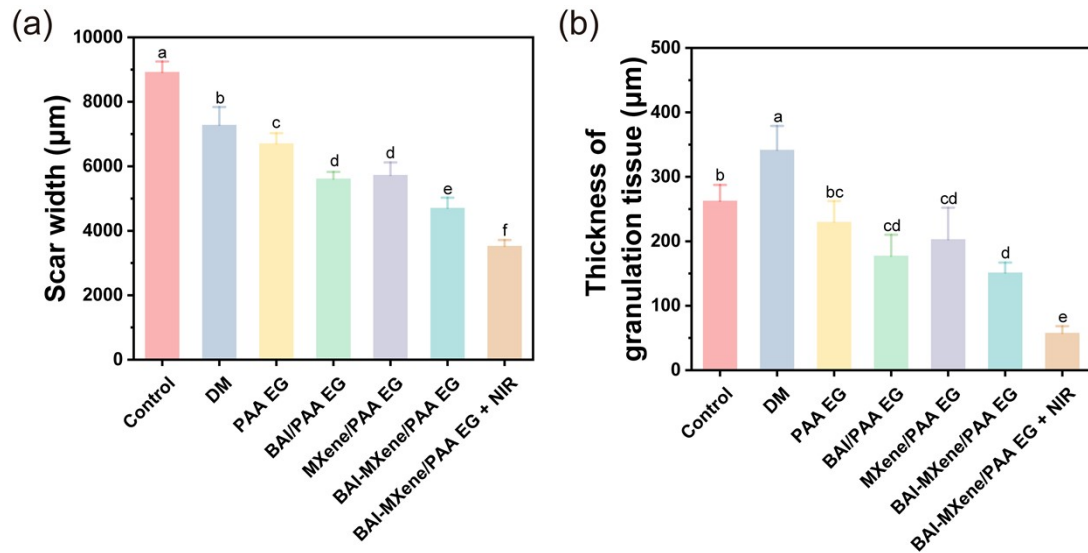
46

47 **Fig. S9.** Wound closure rate of rats after different treatments. Values are shown as the  
 48 mean  $\pm$  SD ( $n = 5$ ). Means that do not share a letter are significantly different ( $P <$   
 49 0.05).



50

51 **Fig. S10.** Bacterial survival rate of *S. aureus* in rats with different treatment. Values  
 52 are shown as the mean  $\pm$  SD ( $n = 5$ ). Means that do not share a letter are significantly  
 53 different ( $P < 0.05$ ).

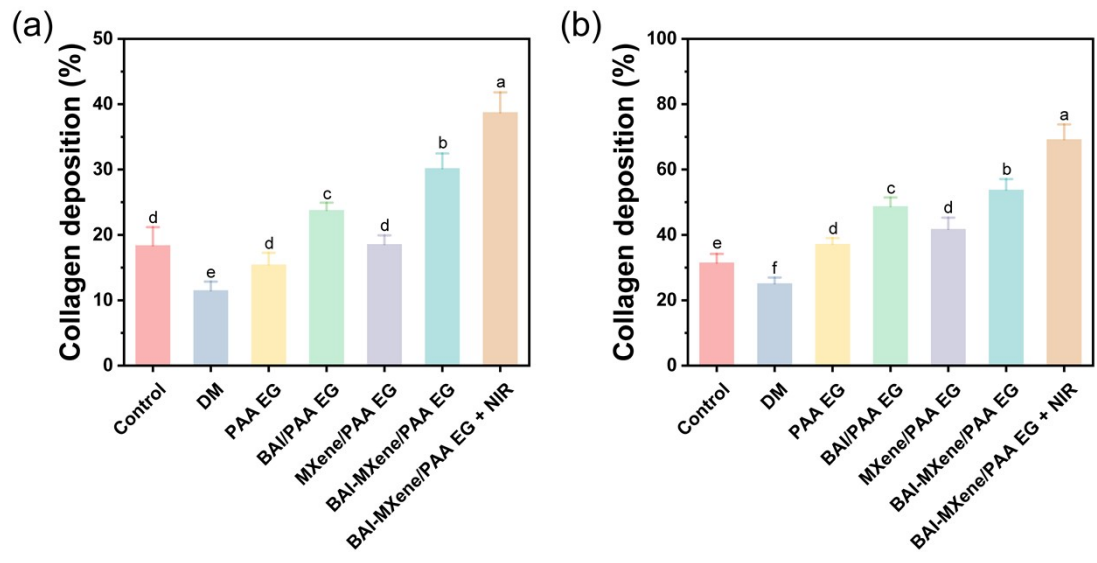


54

55 **Fig. S11.** Quantitative analysis of (a) scar width on day 7, and (b) thickness of

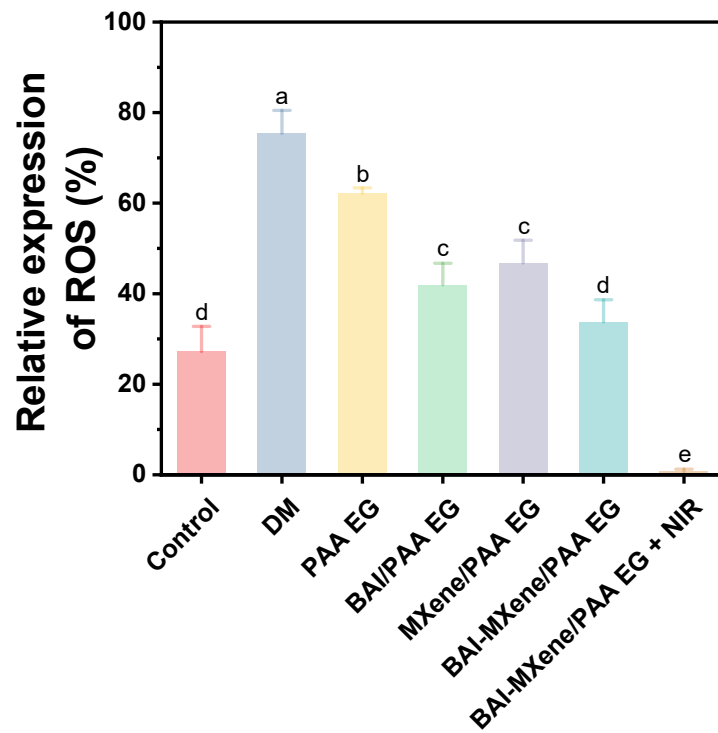
56 granulation tissue on day 14 in each group. Values are shown as the mean  $\pm$  SD ( $n =$

57 5). Means that do not share a letter are significantly different ( $P < 0.05$ ).



58

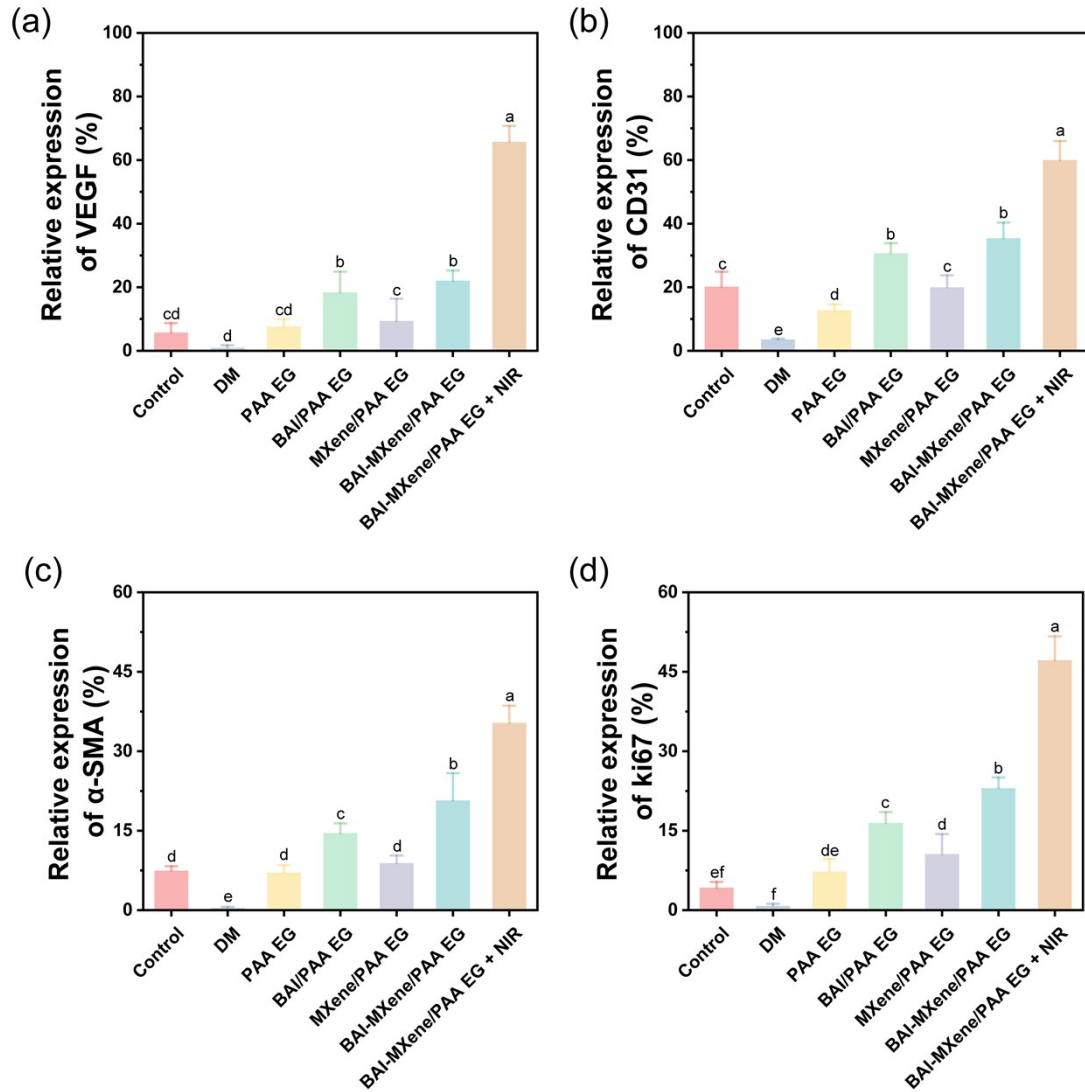
59 **Fig. S12.** Quantification of collagen deposition density in different groups on (a) day  
 60 7 and (b) day 14. Values are shown as the mean  $\pm$  SD ( $n = 5$ ). Means that do not share  
 61 a letter are significantly different ( $P < 0.05$ ).



62

63 **Fig. S13.** The relative expression of ROS in different groups. Values are shown as the  
 64 mean  $\pm$  SD ( $n = 5$ ). Means that do not share a letter are significantly different ( $P <$

65 0.05).

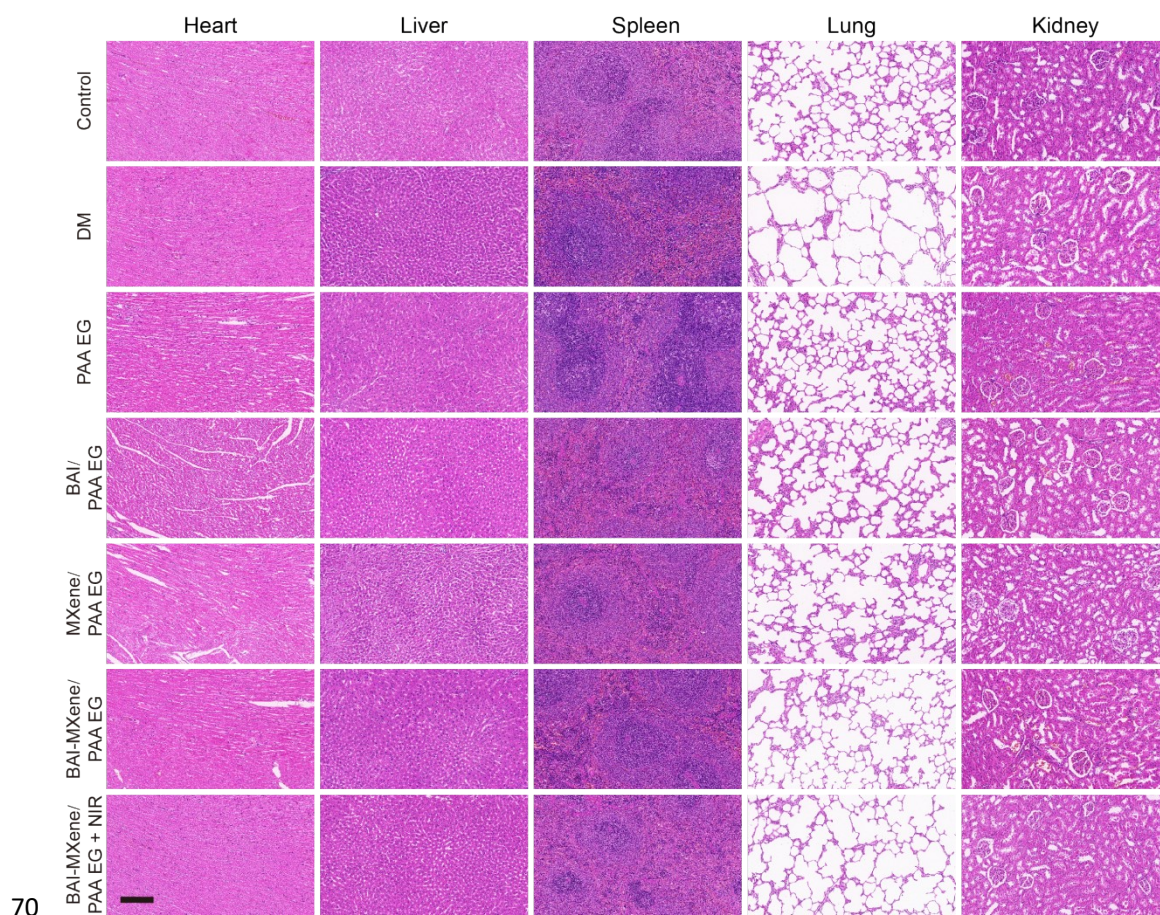


66

67 **Fig. S14.** The relative expression of (a) VEGF, (b) CD31, (c) α-SMA and (d) Ki67 in

68 different groups. Values are shown as the mean ± SD ( $n = 5$ ). Means that do not share

69 a letter are significantly different ( $P < 0.05$ ).



71 **Fig. S15.** H&E staining results of main organs (the heart, liver, spleen, lung, and  
72 kidney) after different treatments. Scale bar: 200  $\mu$ m.