A cruciform petal-like (ZIF-8) with bactericidal activity against foodborne Gram-positive bacteria for antibacterial food packaging

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1. Pictures and Tables Section

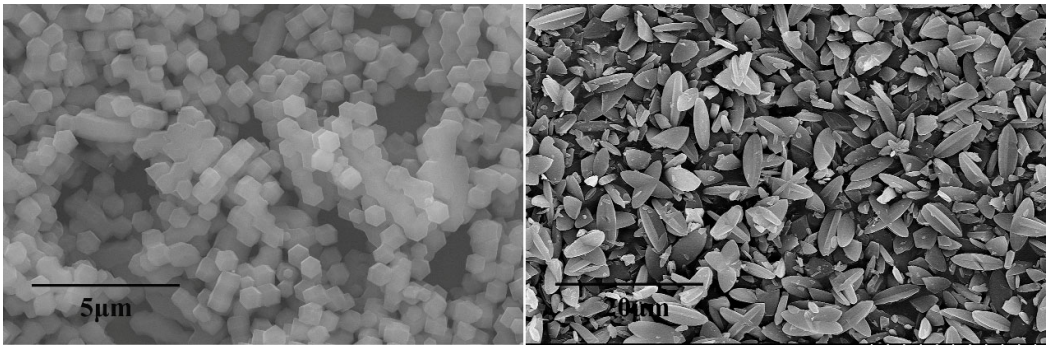

Figure S1. The SEM image of D- ZIF-8 (**left**) and P-ZIF-8 (**right**).

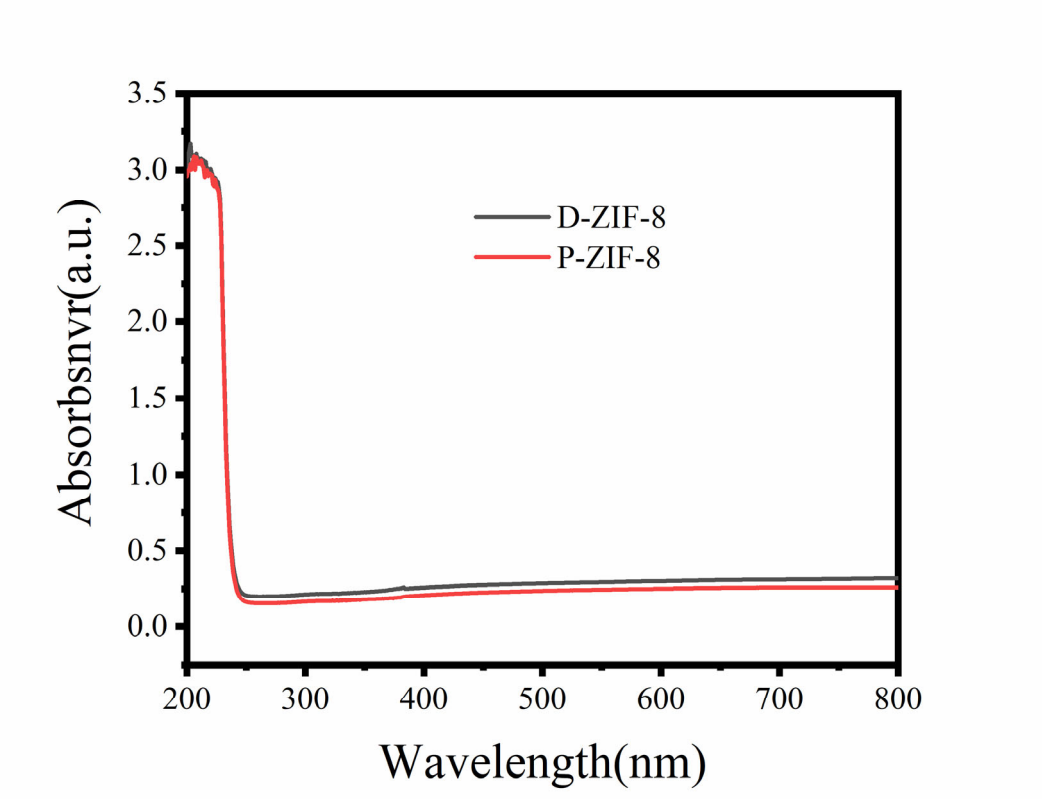

Figure S2. The UV full-wavelength scan of the two form of ZIF-8.

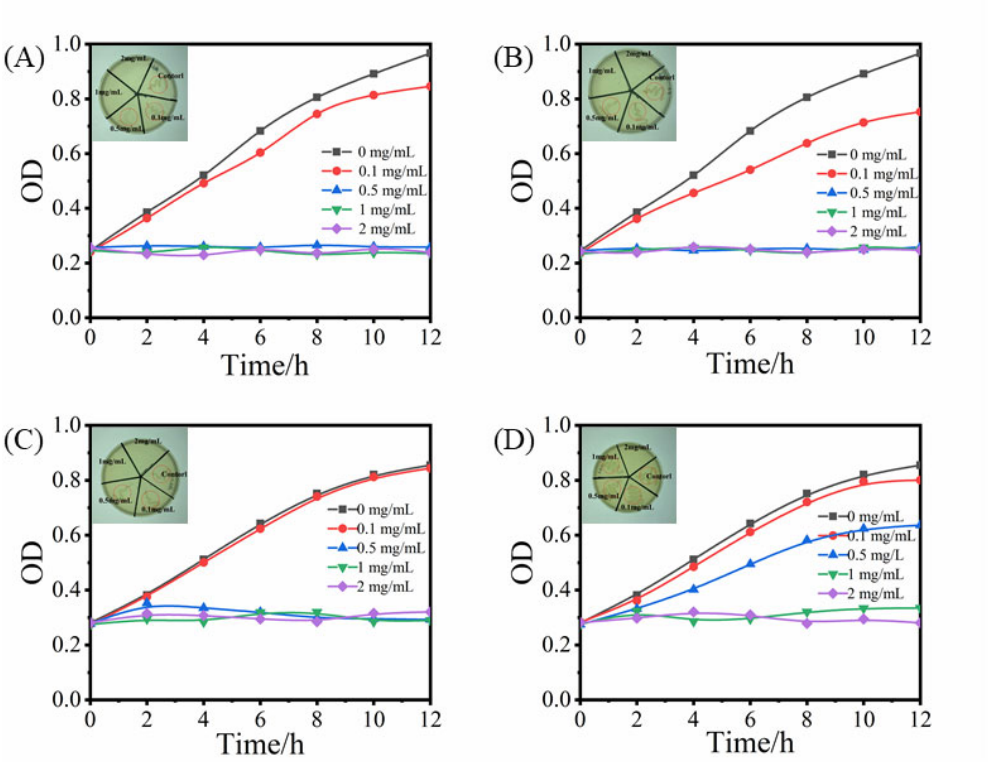

Figure S3. Antibacterial curve and solid plate diagram of the ZIF-8. (**A**)P-ZIF-8+*E. coli*; (**B**) D-ZIF-8+*E. coli*; (**C**) P-ZIF-8+ *S. aureus*; (**D**) D-ZIF-8+ *S. aureus.*

Table S1. MIC and MBC of ZIF-8

Materials	MIC(*E. coli*)	MBC(*E. coli*)	MIC(*S. aureus*)	MBC(*S. aureus*)
P ZIF-8	0.5 mg/ml	1 mg/ml	0.5 mg/mL	1 mg/mL
D ZIF-8	0.5 mg/ml	1 mg/ml	1 mg/mL	2 mg/mL

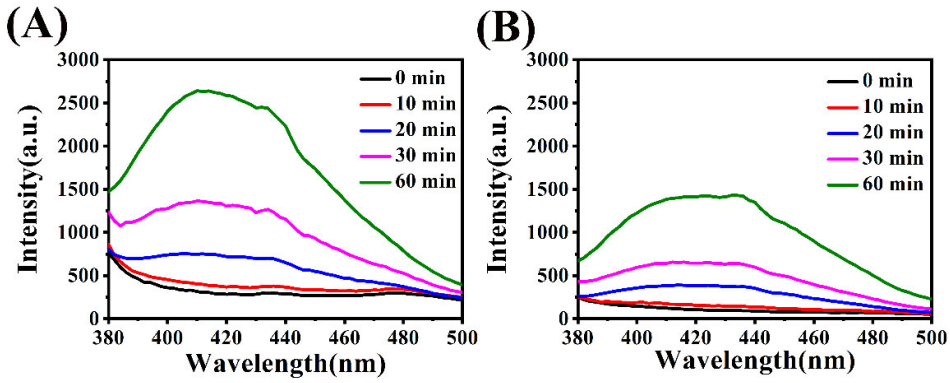

Figure S4. Fluorescence intensity of TA excited by ZIF-8 under illumination. (**A**) D-ZIF-8; (**B**) P-ZIF-8.

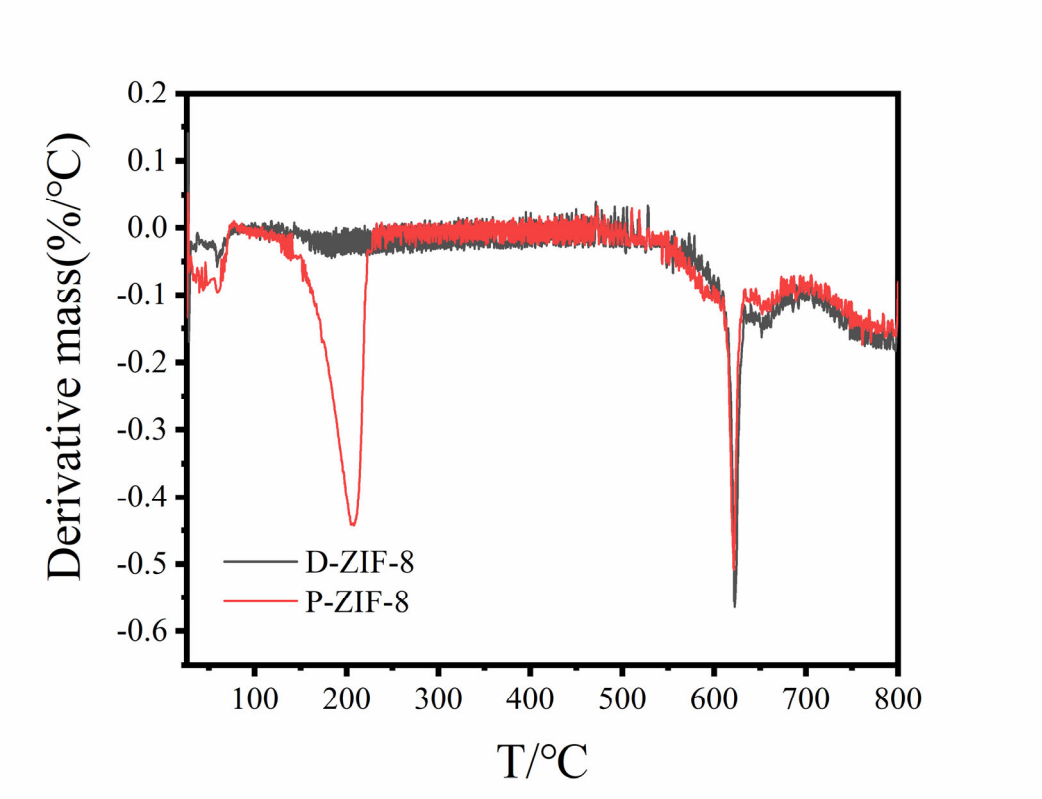

Figure S5. DTG of D-ZIF-8 and P-ZIF-8.

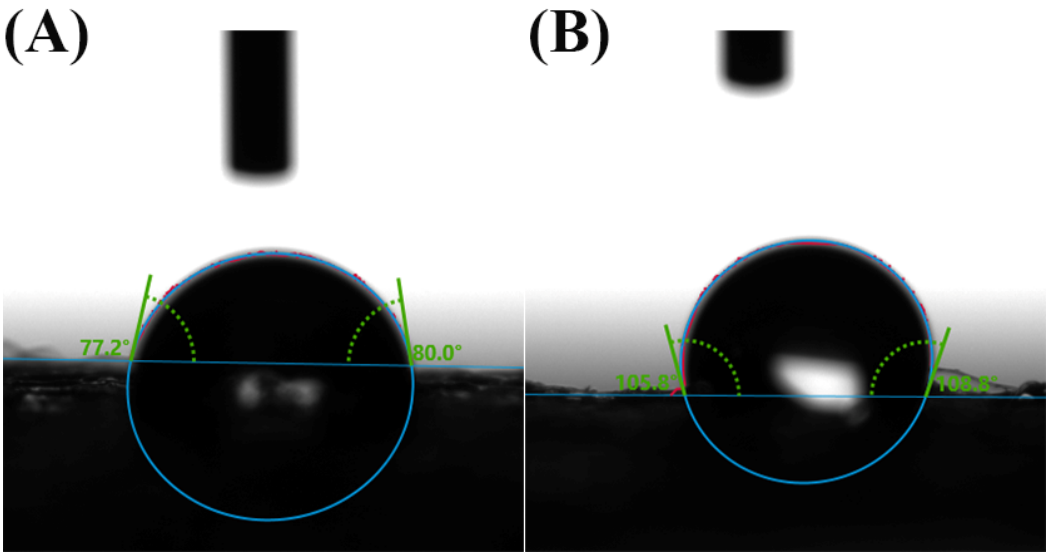

Figure S6. Contact angle with 20 μL water. (**A**) Fiber; (**B**) ZIF-8-Film.

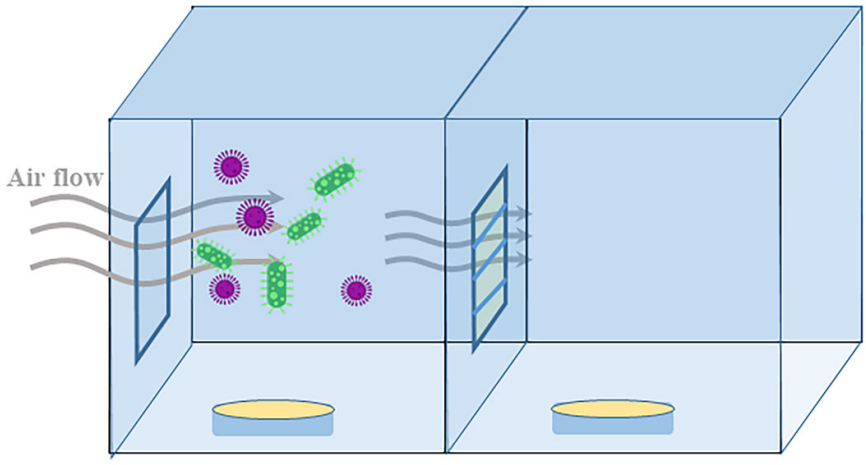

Figure S7. Schematic diagram of filter test device.

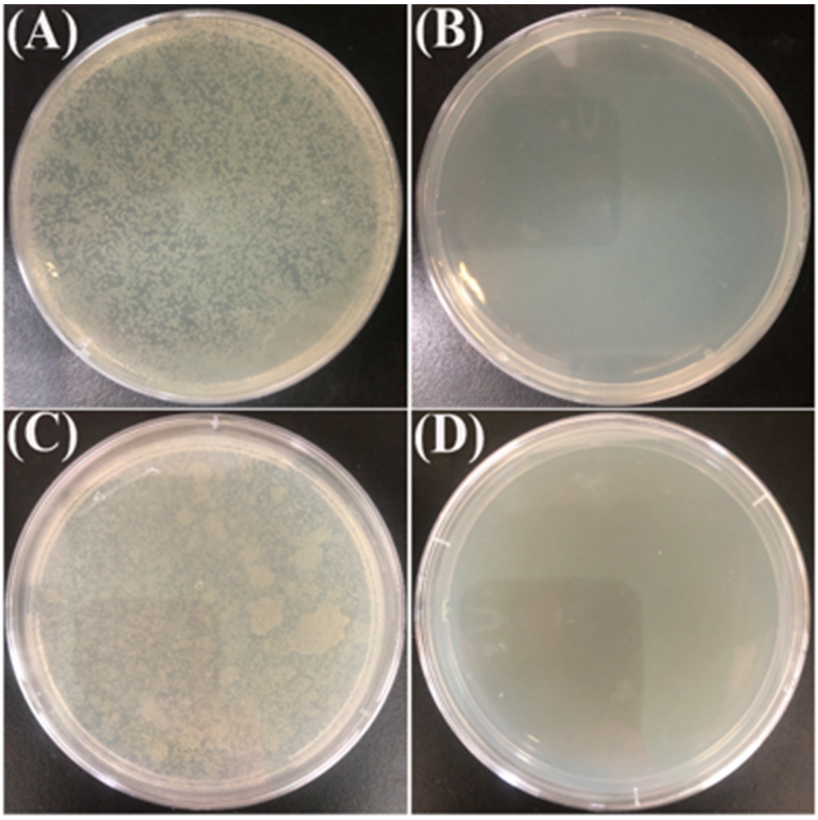

Figure S8. (**A**) A solid medium in an environment fill with *E. coli*; (**B**) A solid medium in an environment fill with *E. coli* isolated with ZIF-8-Film; (**C**) A solid medium in an environment fill with *S. aureus*; (**D**) A solid medium in an environment fill with *S. aureus* isolated with ZIF-8-Film.

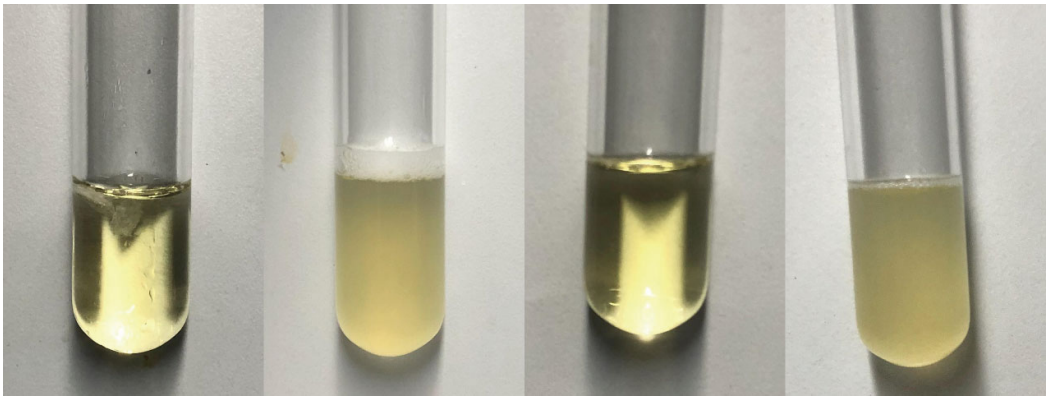

Figure S9. From left to right are ZIF-8-Film+*E. coli*, fiber+*E. coli*, ZIF-8-Film+*S. aureus*, fiber+*S. aureus*.

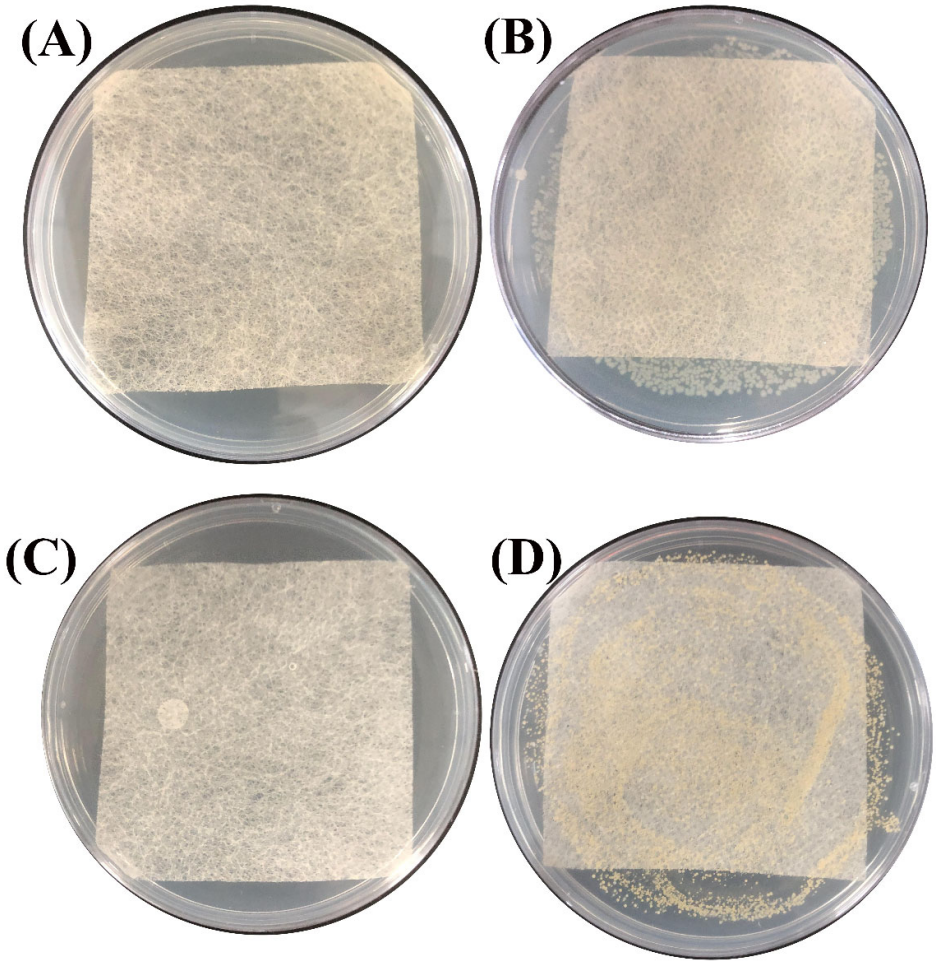

Figure S10. (**A**) ZIF-8-Film+*E. coli*;(**B**) fiber+*E. coli*;(**C**) ZIF-8-Film+*S. aureus;*(**D**) fiber+*S. aureus.*