

Supplementary Information

**Copper Metal-Organic Framework Loaded on Chitosan  
Film for Efficient Inhibition of Bacteria and Therapy of  
Local Infection**

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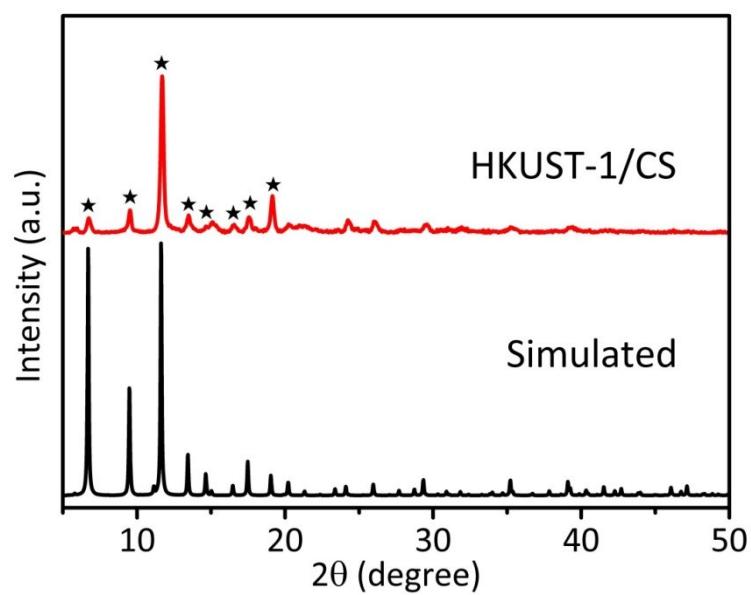
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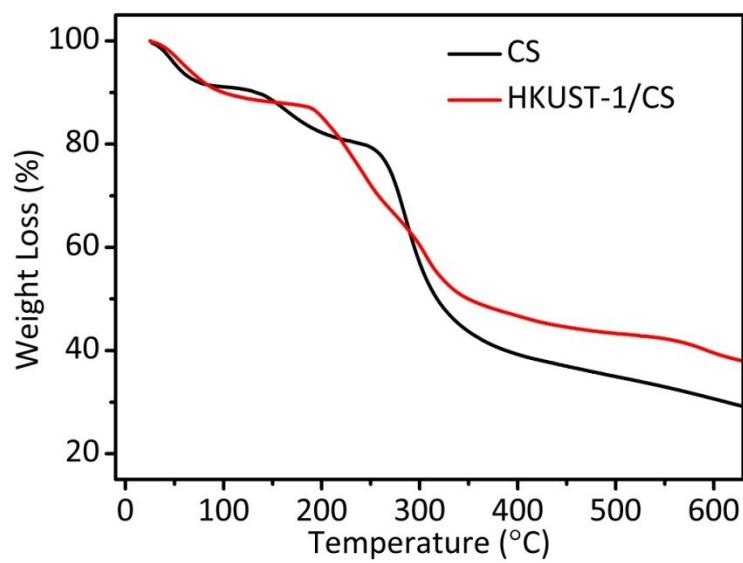
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**Table S1.** FTIR spectrum signals and assignments for CS, Cu<sup>2+</sup>/CS and HKUST-1/CS films.

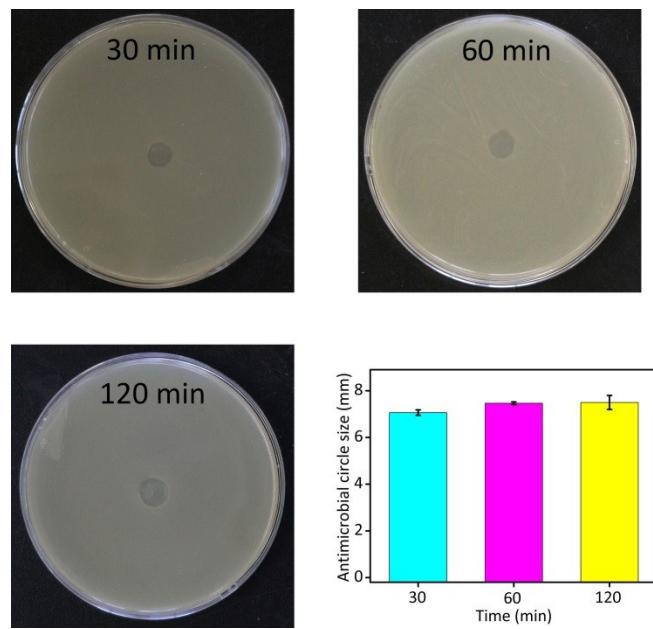
	Assignments	Chitosan	Cu <sup>2+</sup> /CS	HKUST-1/CS
A	$\nu$ (OH); H <sub>2</sub> O	3600-3000	3600-3000	3600-3000
B	$\nu$ (NH)	3355-3278, 1559	3355-3278, --	3355-3278, --
C	$\nu$ (C-H)	2879, 2923	--	--
D	$\nu$ (C=O)	1650	1648	1563, 1640
E	$\nu$ (C-O-C)	1150	1150	1150
F	$\nu$ (C-O) glycosidic bond	1056, 1020	1056,1020	1047, 1010
G	$\nu$ (C=C) benzene-ring	--	--	735, 731
H	$\nu$ (Cu-O)	--	--	725



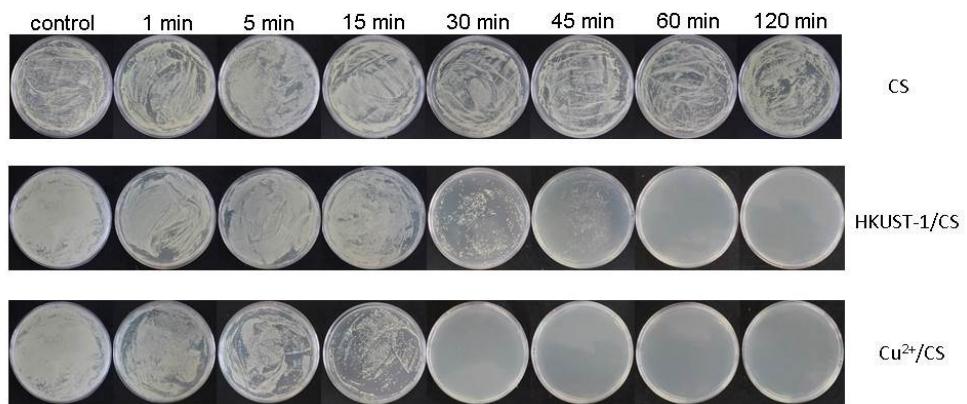
**Fig. S1.** XRD patterns of as synthesized HKUST-1/CS film and simulated HKUST-1 (CCDC No.:112954).



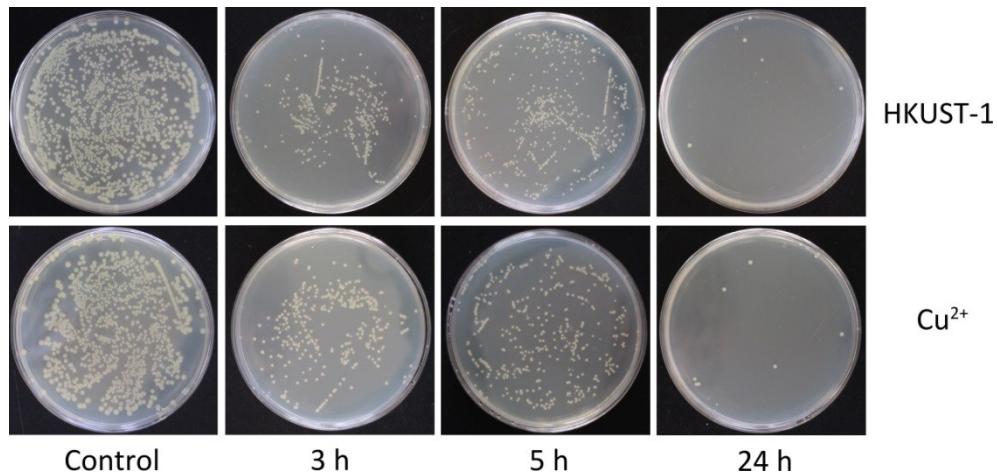
**Fig. S2.** TGA curves of the synthesized CS and HKUST-1/CS films.



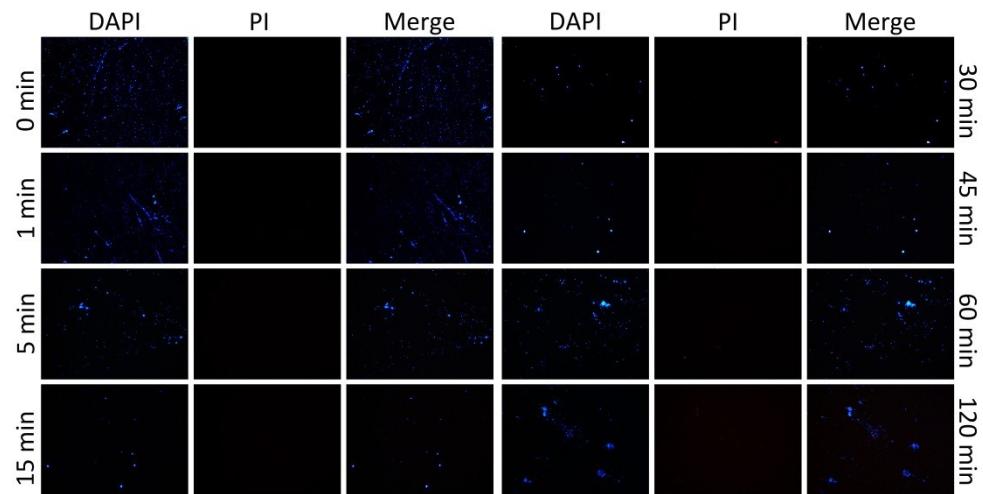
**Fig. S3.** Antibacterial activity of  $\text{NaNO}_3/\text{CS}$  film against *S. aureus* after 30, 60 and 120 min.



**Fig. S4.** Photographs of *S. aureus* bacterial colonies after treatment with CS, Cu<sup>2+</sup>/CS and HKUST-1/CS films for different times.



**Fig. S5.** Photographs of *E. coli* colonies after treatment with Cu<sup>2+</sup> (10<sup>-4</sup> M) and HKUST-1/CS film (0.4 mg) at different times.



**Fig. S6.** Representative fluorescent images of *S. aureus* without any treatment after 0, 1, 5, 15, 30, 45, 60 and 120 min.