

## Supplementary information

### Silver loaded biodegradable carboxymethyl chitin films with long-lasting antibacterial activity for infected wound healing

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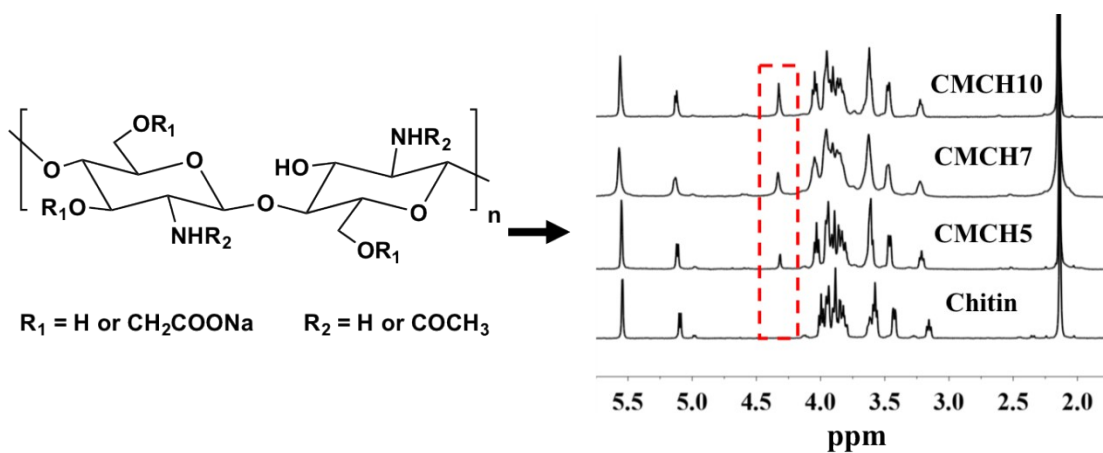


Fig. S1 <sup>1</sup>H NMR spectra of CMCH and Chitin in 20% DCl in D<sub>2</sub>O.

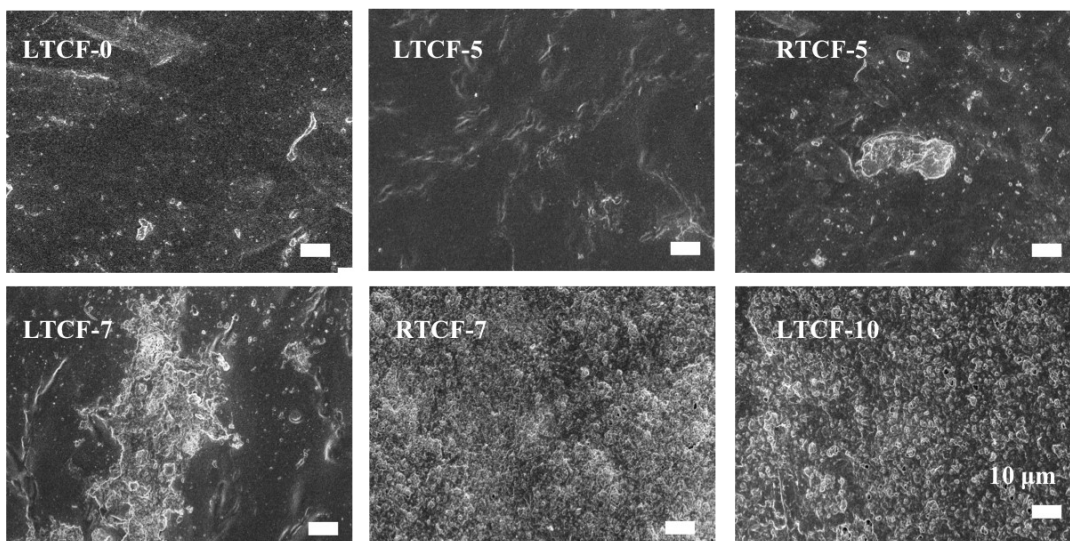


Fig. S2 SEM images of carboxymethyl chitin films.

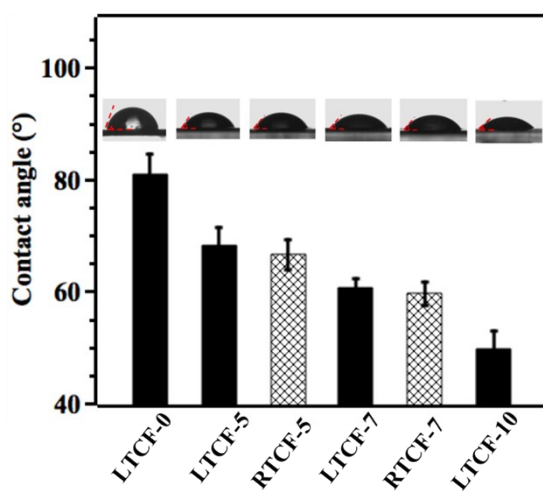


Fig. S3 The contact angles of carboxymethyl chitin films.

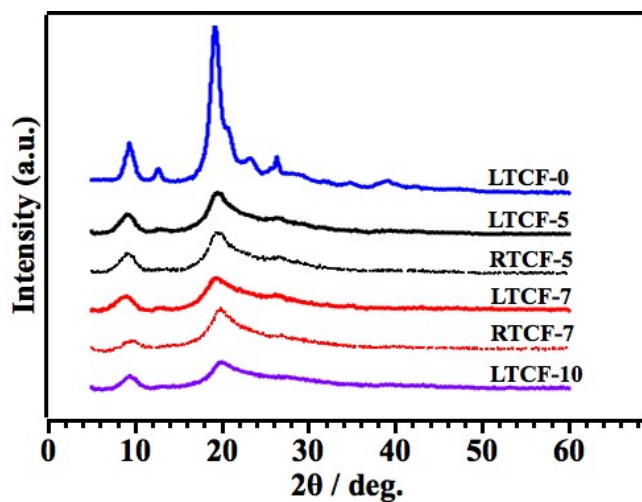


Fig. S4 The XRD spectra of carboxymethyl chitin films.

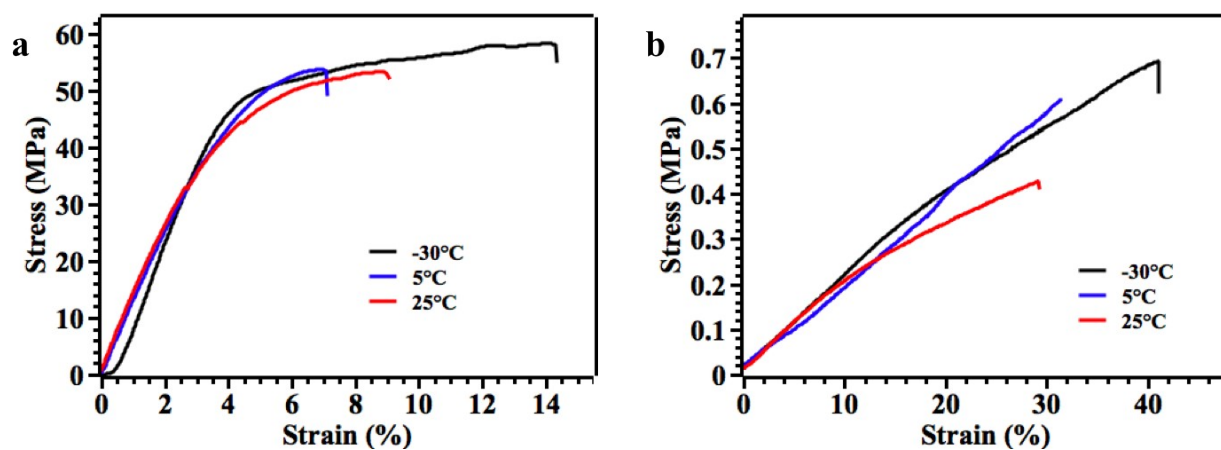


Fig. S5 The tensile stress-strain curves of CMCH5 films prepared under different regeneration temperatures (-30°C, 5°C and 20°C) in (a) dry state and (b) wet state.

Table S1 Comparison of tensile strength between the LTCF-5 and biodegradable dressings reported in the past three years and commercially available dressings

Sample	Tensile strength
LTCF-5	~56 MPa
HA-CC <sup>1</sup>	~14 MPa
CTS/GEL/10 v.% BA <sup>2</sup>	~35 MPa
Agar-LBG <sup>3</sup>	~45 MPa
Ch/HA <sup>4</sup>	~27MPa
PC4 <sup>5</sup>	~9.37 MPa
N-SuC <sup>6</sup>	~10 MPa
G-BSA-AG26 <sup>7</sup>	~4 MPa
VCF2 <sup>8</sup>	~24MPa
Resolut@LT regenerative membrane (Gore) <sup>9</sup>	~11.7 MPa
Kaltostat@ (ConvaTec) <sup>9</sup>	~1.3 MPa

Legend for videos

Supplementary video 1. The foldability of carboxymethyl chitin film.

## References

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