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## **Supplementary Information**

## Bilayer dressing based on aerogel/electrospun mats with self-catalytic hydrogen sulfide

## generation and enhanced antioxidant ability

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1. UV-Vis spectra of keratin and KTC



Fig.S1 UV-Vis spectra of keratin and KTC

2. H-NMR of keratin and KTC



Fig.S2 H-NMR of keratin(lower) and KTC(upper)

3. H-NMR spectrum of GelMA



Fig.S3 The H-NMR spectra of GelMA

## 4. Water vapor transmission

Table S1Water vapor transmission profile for control and PU/GSH layer.

Samples	Water Vapor Transmission Rate (mL/m <sup>2</sup> /day)
Control	$1369.4 \pm 94.2$
PU/GSH layer	$1264.3 \pm 80.3$

5. H&E staining



500 μm

Fig.S4 The newborn hair follicles (A) and the newborn sebaceous glands (B) in the ulcer bed as treated with PU/GSH//GelMA/KTC bilayer dressing for 15 days (blue arrows indicated hair follicles and green arrows indicated sebaceous glands, respectively).