Electronic Supplementary Material (ESI) for Soft Matter.

Supporting Information to "Antibacterial, Wearable, Transparent Tannic Acid-Thioctic Acid-Phytic Acid Hydrogel for Adhesive Bandage"

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Figure S1 Photos on Hydrogels that were pre-wetted and adhered onto the window.

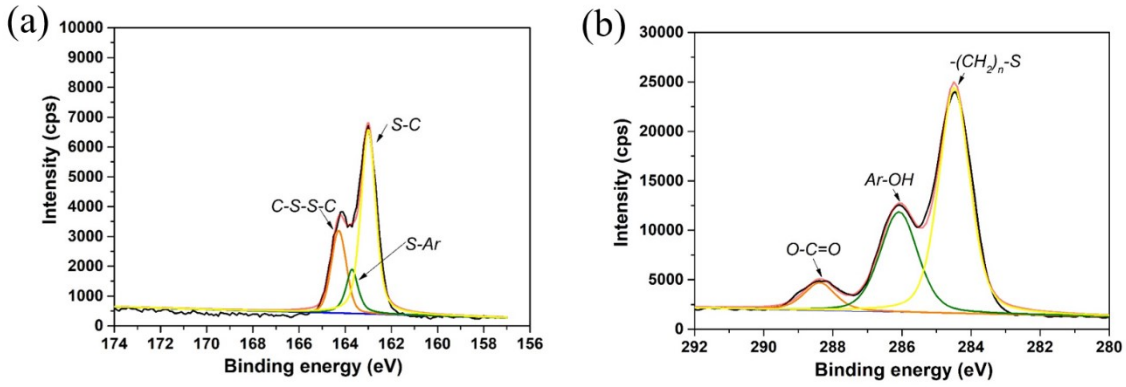

Figure S2 XPS spectra of the hydrogel. (a) S2p spectrum of TATAPA-2 hydrogel; (b) C1s spectrum of TATAPA-2 hydrogel.

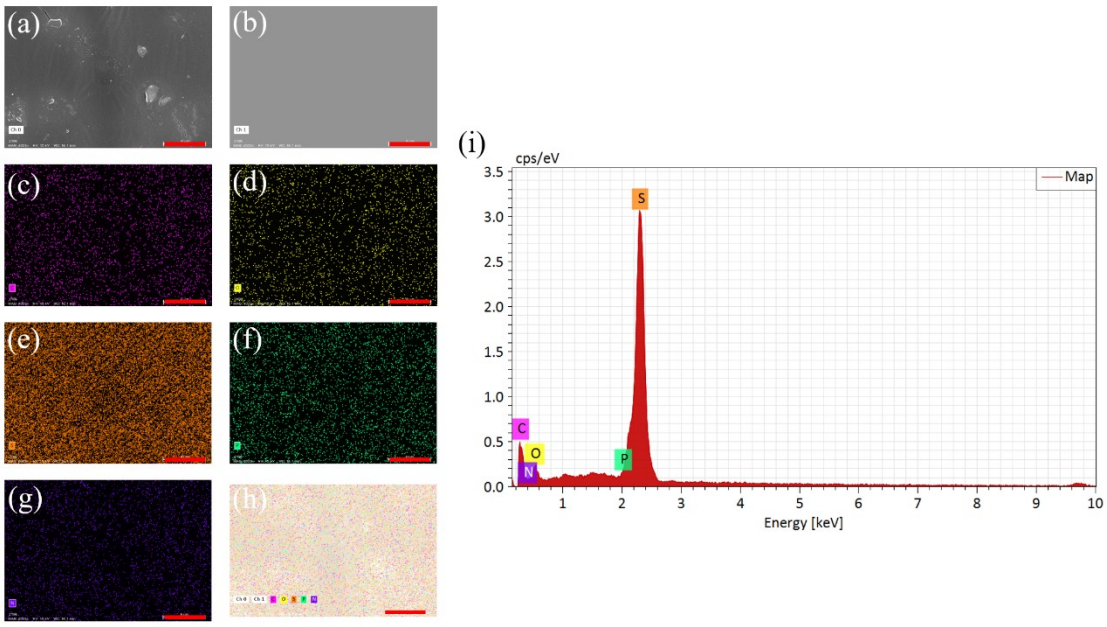

Figure S3 (a,b) The morphology of TATAPA-2 hydrogel view by SEM; (c-h) Elementary mapping images of the TATAPA-2 hydrogel; (i) Energy-dispersive spectroscopy spectrum.

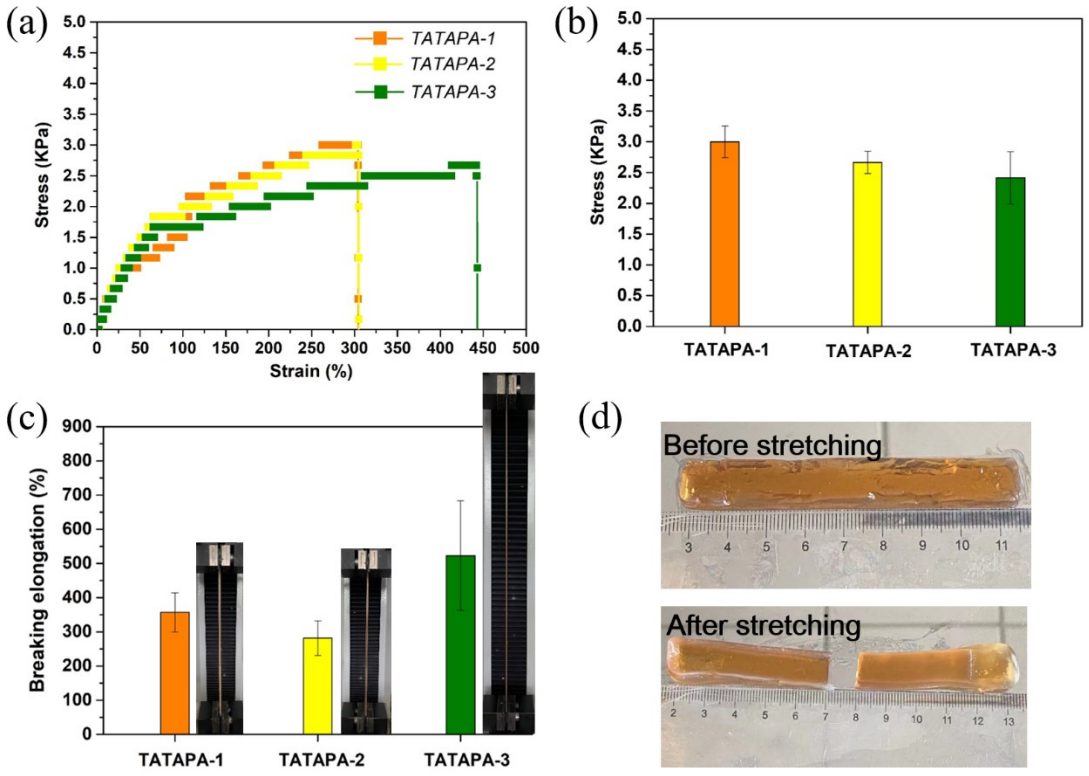

Figure S4 (a) Stress-strain curves of TATAPA-1, TATAPA-2 and TATAPA-3 hydrogels; (b) Tensile strength of the hydrogels; (c) Maximum breaking elongation of the hydrogels; (d) Photos of the TATAPA-2 hydrogel before and

after stretching.

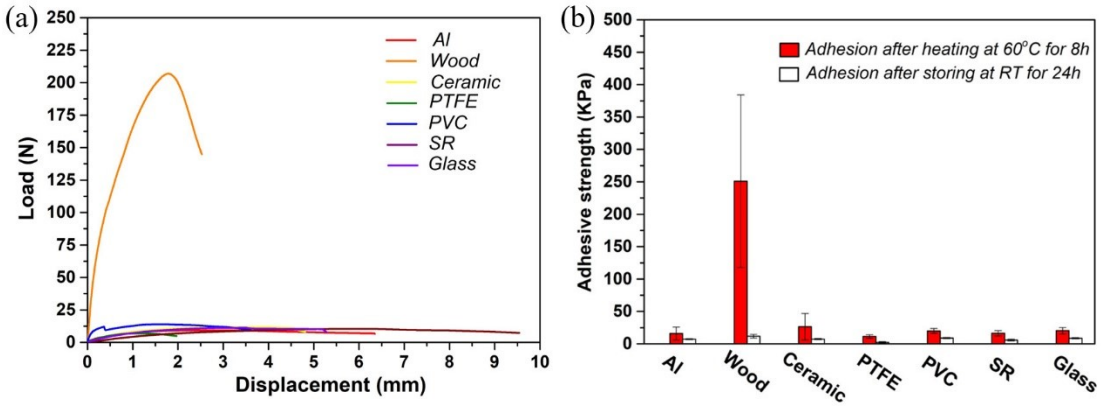

Figure S5 Adhesive properties of the dried TATAPA hydrogels. (a) Representative load−displacement curves of the TATAPA-2 patch (25 mm width, 25 mm length, 1 mm thickness) to various daily used substrates; (b) Adhesive strength of the dried TATAPA-2 hydrogel with different substrates.

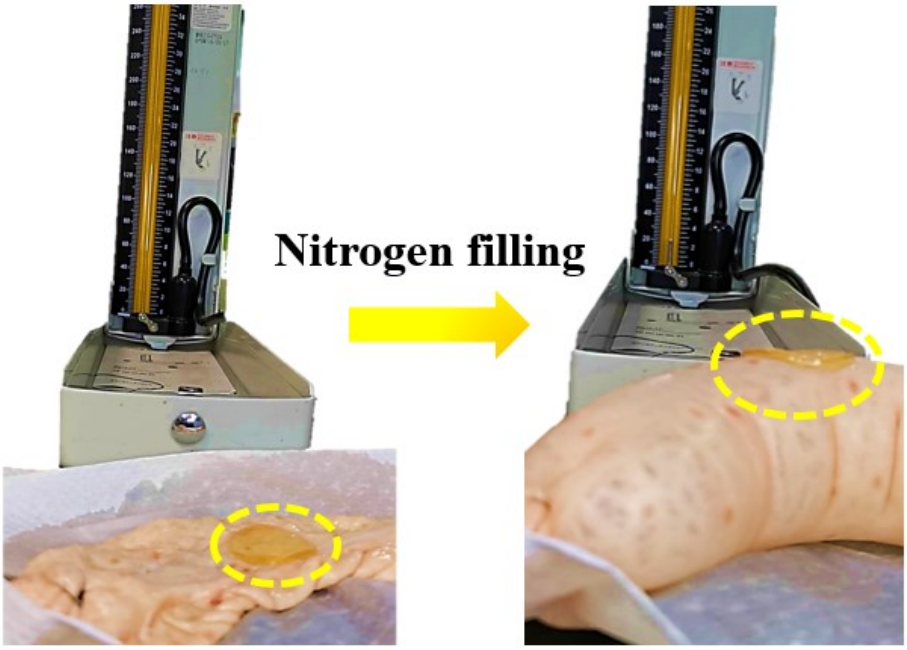

Figure S6 Images on the TATAPA-adhered intestine membrane before and after nitrogen filling

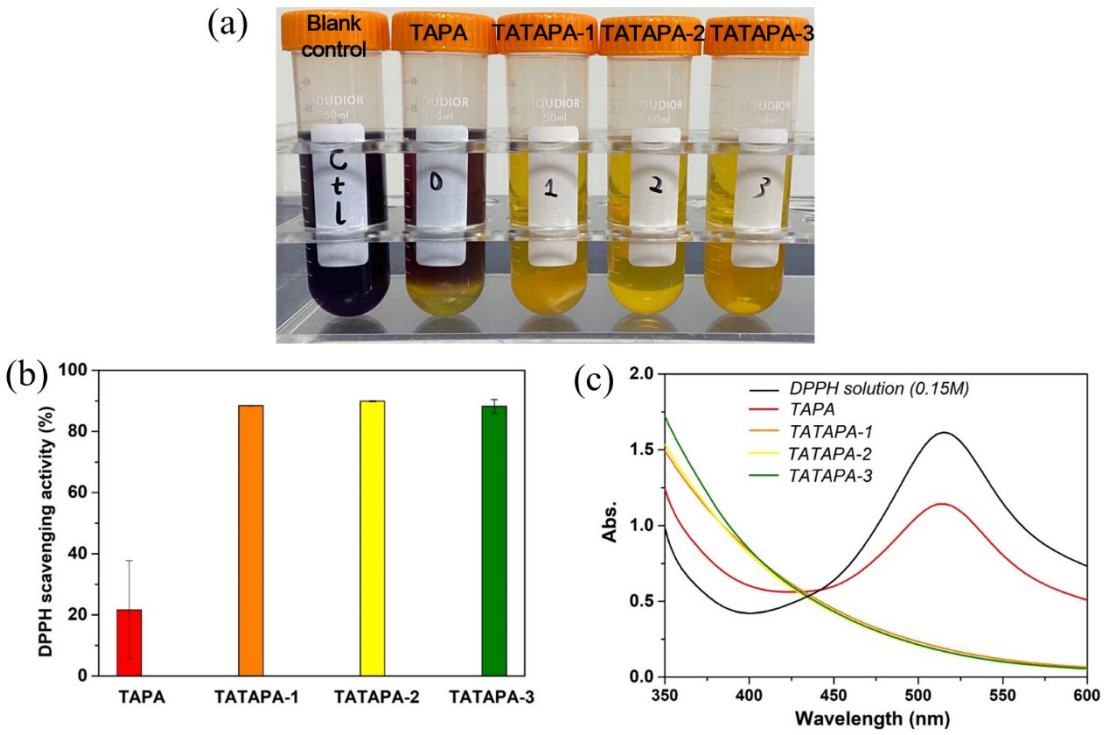

Figure S7 (a) Image of DPPH ethanol solutions (0.15 mM) after various hydrogels immersion for 10 min; (b) Antioxidant abilities of the TAPA, TATAPA-

1, TATAPA-2 and TATAPA-3 hydrogels; (c) UV-vis spectra of DPPH solutions before and after various hydrogels immersion.

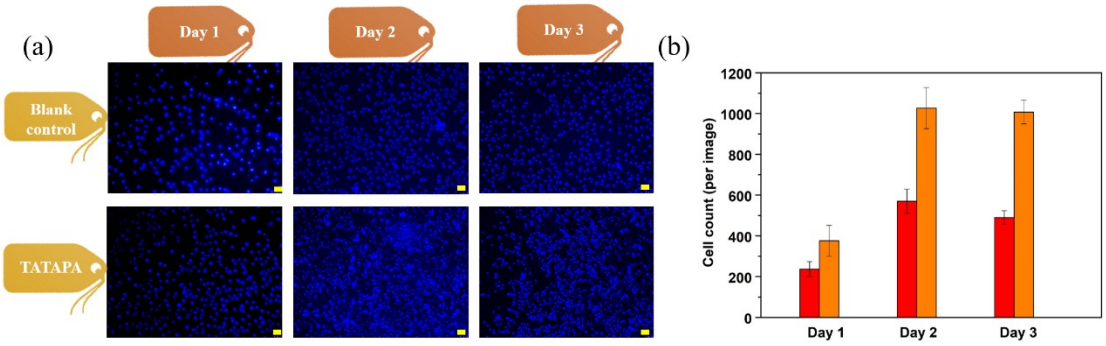

Figure S8 *In vitro* biocompatibility studies of the TATAPA-2 hydrogel with L929 cells. (a) Photos of the DAPI stained cells, scale bar=50 μm; (b) cell count (per image) of the blank control and TATAPA-2 hydrogel in function of time.

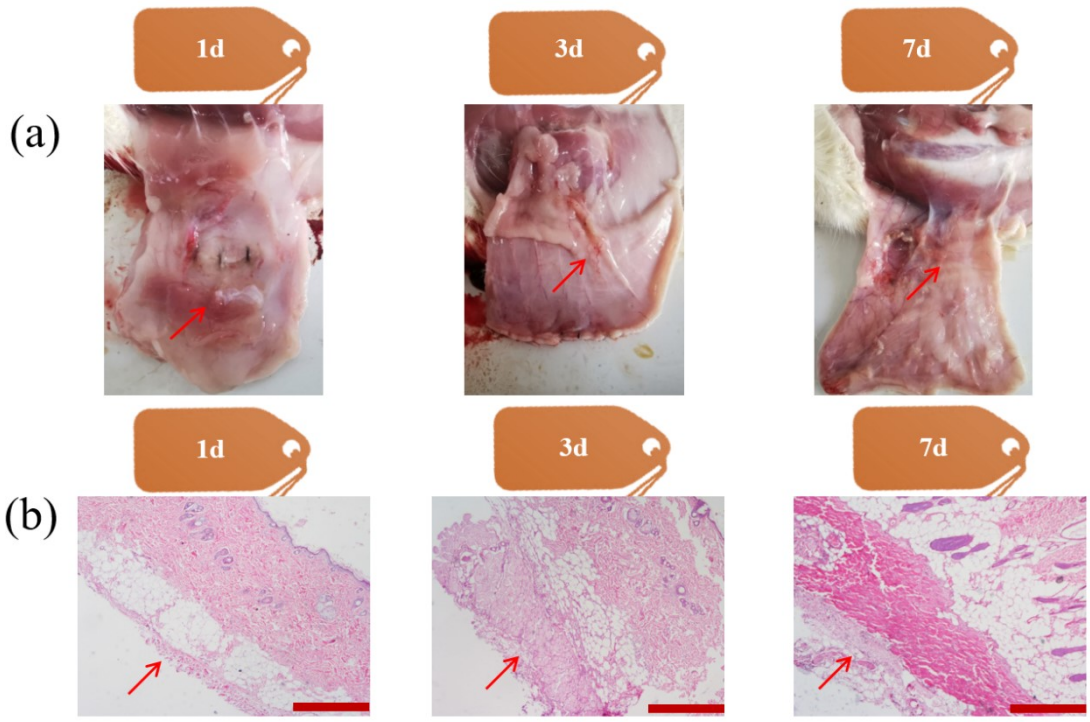
(a)
1d
3d
7d
(b)
1d
3d
7d

Figure S9 *In vivo* degradation of the TATAPA-2 hydrogel. (a) Photos on the degradation process of the TATAPA-2 hydrogel after implanted under the rats' skin; (b) H&E staining images of the adjacent tissue at 1d, 3d and 7d day, scale bar=500 μm.

Supporting Movies

Movie S1: Wearable TATAPA hydrogel on the arm of the corresponding author. The movie is real-time.

Movie S2: The facile peeling off performance of TATAPA hydrogel. The movie is real-time.

Movie S3: The utilization of TATAPA hydrogel as a waterproof tape for a broken rubber waterpipe. The movie is real-time.

Movie S4: The hemostatic effect of TATAPA hydrogel in a rat femoral artery model. The movie is real-time.

Movie S5: The hemostatic effect of TATAPA hydrogel in a rat liver hemostasis model. The movie is real-time.