Supporting Information

Muscle-inspired MXene/PVA hydrogel with high toughness and photothermal therapy for promoting bacteria-infected wound healing

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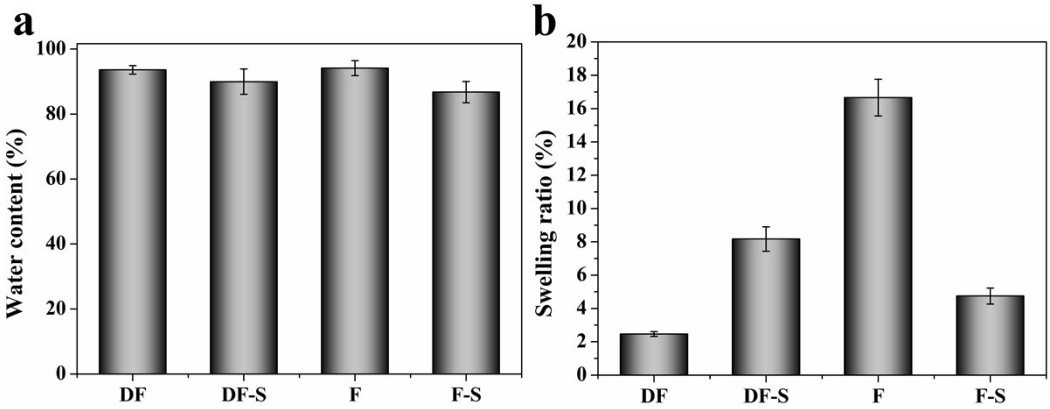

Figure S1. (a) Water content and (b) swelling ratio of DF, DF-S, F and F-S hydrogels; Rheological properties of DF, DF-S, F and F-S hydrogels.

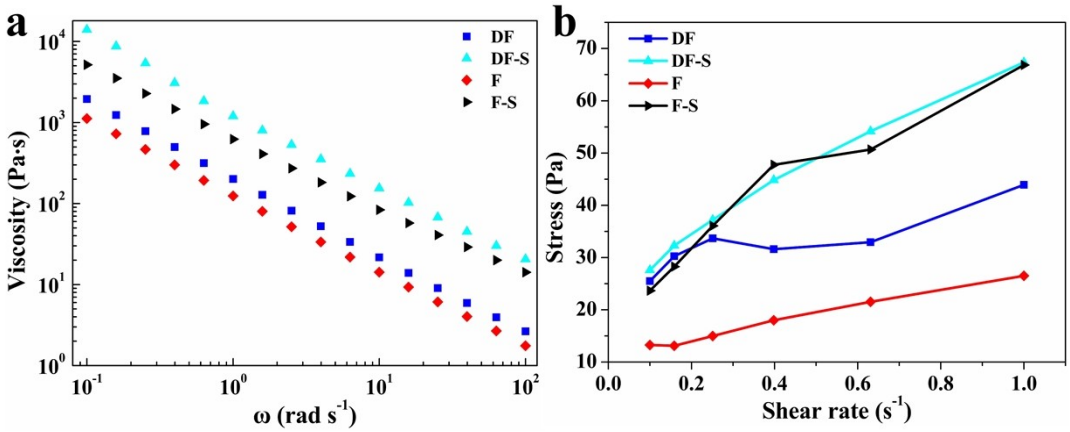

Figure S2. Rheological properties of DF, DF-S, F and F-S hydrogels. Frequency dependence of (a) viscosity and shears rate dependence of (b) stress.

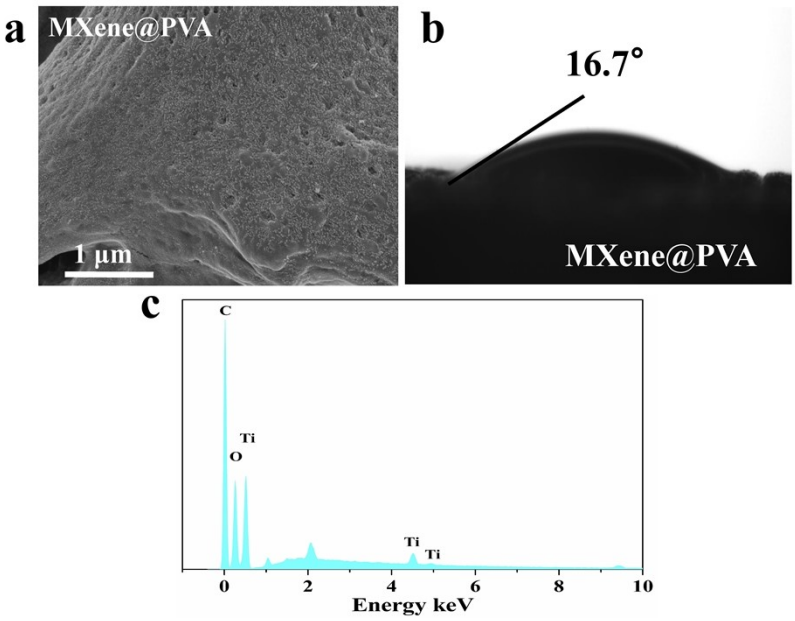

Figure S3. (a) SEM images of MXene@PVA (1 μm); (b) The contact angle measurement of MXene@PVA; (c) EDS spectrum of MXene@PVA hydrogel.

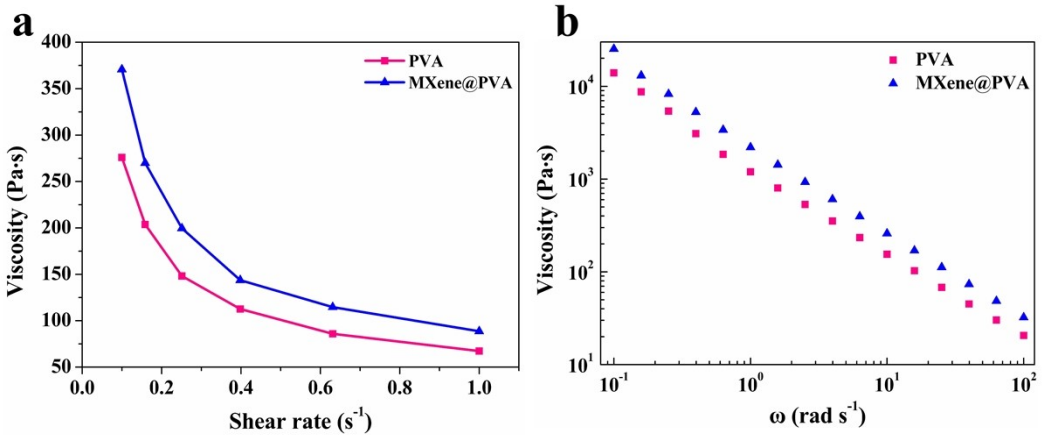

Figure S4. Rheological properties of PVA and MXene@PVA hydrogels. Shears rate dependence of (a) viscosity and frequency dependence of (b) viscosity.

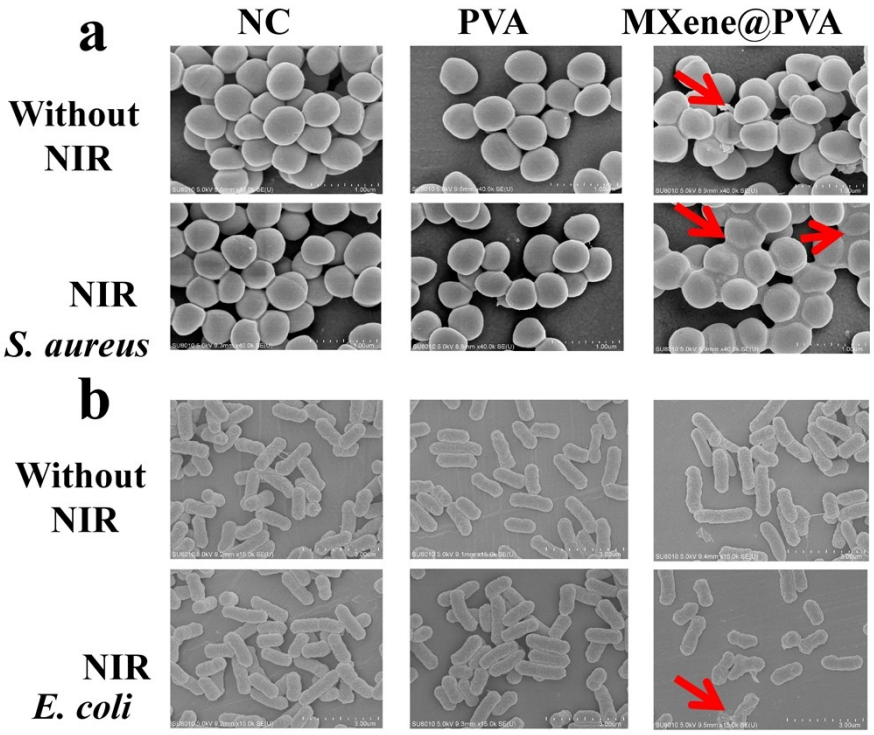

Figure S5. SEM images of *S. aureus* (a) and *E. coli* (b) cells with various treatments.

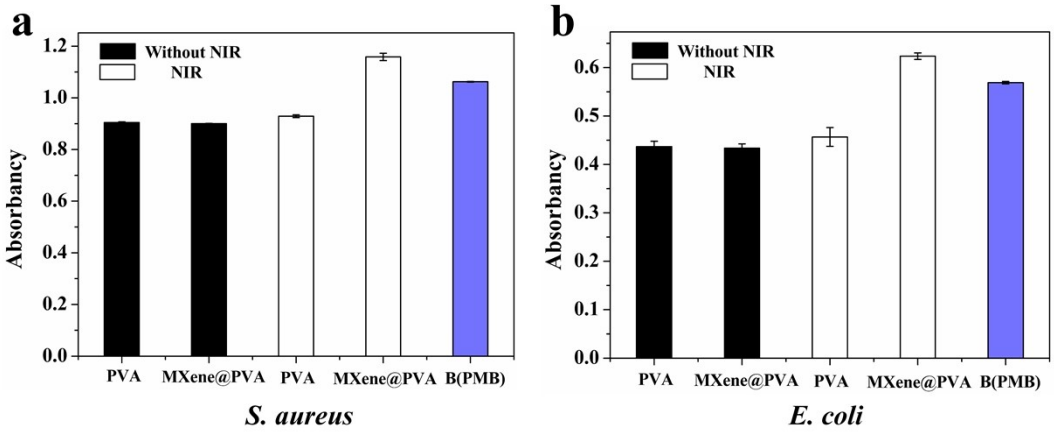

Figure S6. Bacterial membrane permeability assays of *S. aureus* (a) and *E. coli* (b) using NPN fluorescence assay

Table S1. Proportion of elements in MXene@PVA hydrogel

Element	C	O	Ti
weight ratio (%)	39.08	57.81	3.03

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