Support Information for

Microneedle-Mediated Transdermal H₂S Gas Therapy for Psoriasis

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Fig. S1 Characterization of AlaCOS. (a) Mass spectrum. (b) UV-Vis. (c) 13C-NMR.



Fig. S2 FTIR spectra of HA and HP.



Fig. S3 DLS diagram of HP-AC NPs.



Fig. S4 Zeta potential of HP-AC NPs.



Fig. S5 Calibration curve of AlaCOS in DIW.



Fig. S6 Evaluation of the therapeutic effects of different treatment. (a) Flow cytometry analysis of CD206. (b) Median fluorescence intensity of CD206, *** P < 0.001.



Fig. S7 Schematic diagram for the preparation of HP-AC MN.



Fig. S8 HE staining of skin sections after puncture by MN.



Fig. S9 AlaCOS release curve in HP-AC MN under different pH conditions (n = 3).



Fig. S10 The images of the application of (a) 1MN and (b) 3MN in a psoriasis mouse model.



Fig. S11 Body weight changes of various groups.



Fig. S12 Liver and kidney function indexes of different groups, dashed lines represent the normal ranges of each index.



Fig. S13 H&E section images of major organs of control and 3MN groups.



Fig. S14 Mean fluorescence intensity of (a) Ki-67, (b) TNF- α , (c) IL-17, (d) IL-23, (e) CD206, and (f) CD86 of different groups in the immunofluorescent images. * P < 0.033, ** P < 0.002, *** P < 0.001.