Supporting Information

Skin-Adhesive and Self-Healing Diagnostic Wound Dressings for Diabetic Wounds Healing Monitoring and Electrophysiological Signal Recording

Zishuo Hou,‡[ac] Tengjiao Wang,*‡[abd] Lei Wang,‡[a] Junjie Wang,[a] Yong Zhang,[c] Qian Zhou,[a] Zhengheng Zhang,[a] Peng Li*[ad] and Wei Huang*[ad]

[a] Frontiers Science Center for Flexible Electronics (FSCFE), Xi'an Institute of Flexible Electronics (IFE) & Xi'an Institute of Biomedical Materials and Engineering (IBME), Northwestern Polytechnical University (NPU), 127 West Youyi Road, Xi'an, Shaanxi, 710072, P. R. China;

[b] Chongqing Innovation Center, Northwestern Polytechnical University, Chongqing, 401135, P. R. China;

[c] State Key Laboratory for Mechanical Behavior of Materials, Shaanxi International Research Center for Soft Matter, Xi'an Jiaotong University, Xi'an, Shaanxi, 710049, P. R. China;

[d] School of Flexible Electronics, Henan Institute of Flexible Electronics (HIFE), Henan University, 379 Mingli Road, Zhengzhou 450046, P. R. China;

‡ These authors contributed equally;

*email: iamtjwang@nwpu.edu.cn; iampli@nwpu.edu.cn; iamwhuang@nwpu.edu.cn;

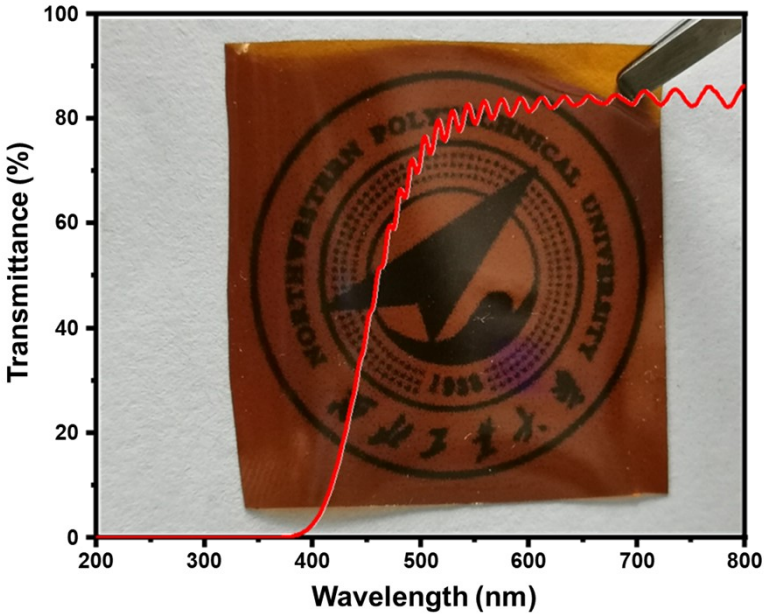

Fig. S1 Transmittance spectrum of commercial PI film.

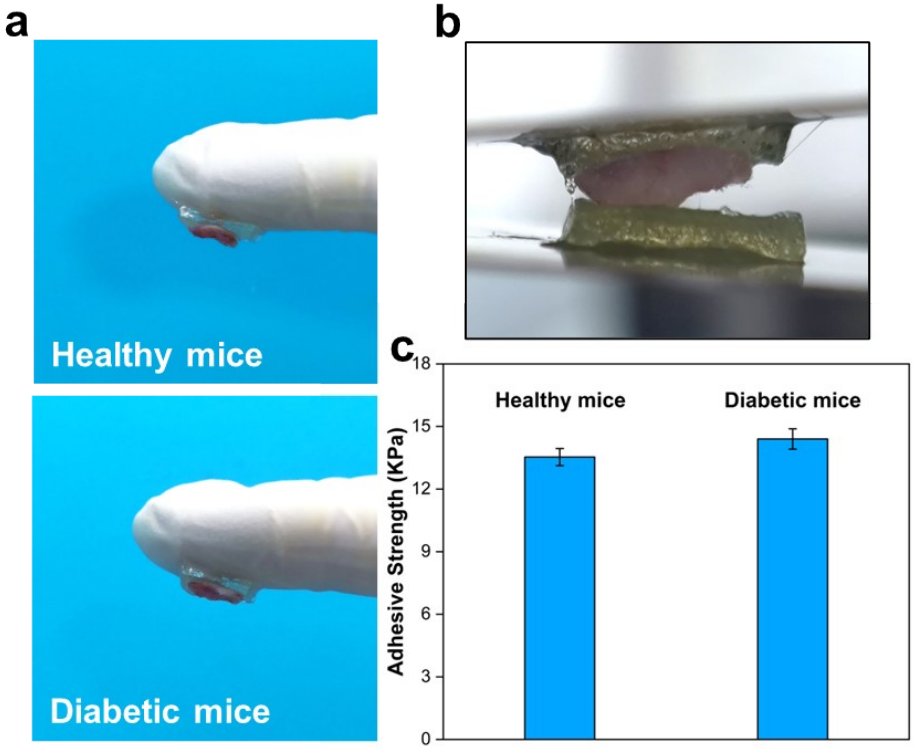

Fig. S2 Adhesive properties of PADU substrate to mice skin. (a) Photos of PADU adhering to diabetic and healthy mice skin. (b) Photos of the adhesion test. (c) Adhesion strength of PADU to mice skin.

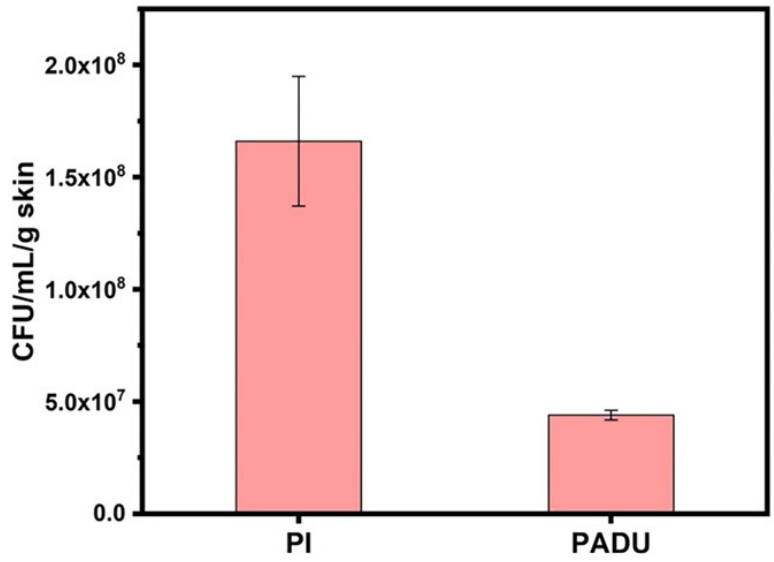

Fig. S3 The colonies number of PI and PADU group in anti-inflammation experiments.

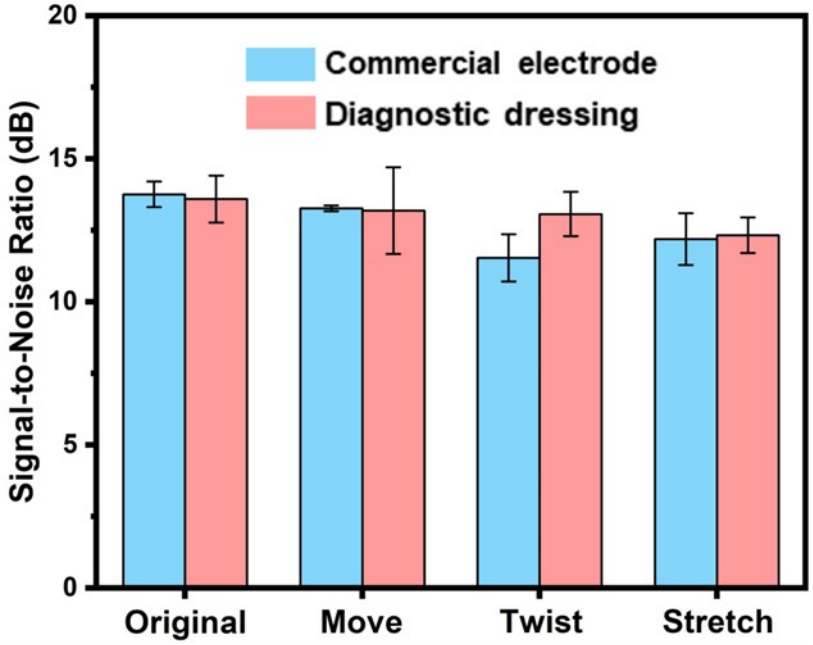

Fig. S4 Comparison of the SNR between commercial electrode and the diagnostic wound dressing.

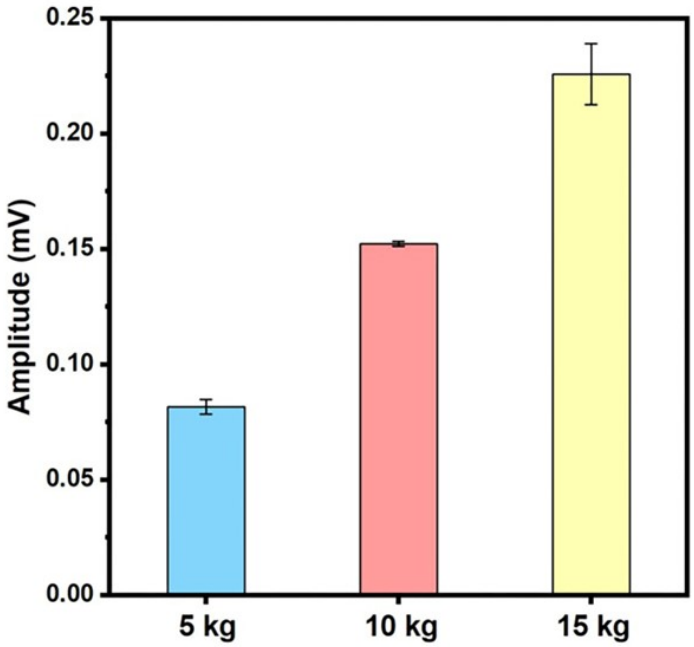

Fig. S5 The maximal relative voltage of EMG collected with the diagnostic wound dressing while gripping the wrist developer.