Supporting Information for

# Self-Powered Implantable Skin-Like Glucometer for Real-Time Detection of Blood Glucose Level *in vivo*

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## Figures and Table

**Table S1** Comparison of the voltage of the device in different solutions

| g $L^{-1}$ / V | 0 | 0.024 | 0.045 | 0.076 | 0.119 |
|---|---|---|---|---|---|
| Urea | 0.428 | 0.431 | 0.423 | 0.435 | 0.436 |
| Fructose | 0.398 | 0.389 | 0.400 | 0.398 | 0.398 |
| $H^+$ | 0.600 | 0.479 | 0.435 | 0.358 | 0.301 |
| $H_2O_2$ | 0.458 | 0.296 | 0.196 | 0.128 | 0.076 |
| Glucose | 0.446 | 0.393 | 0.276 | 0.188 | 0.096 |

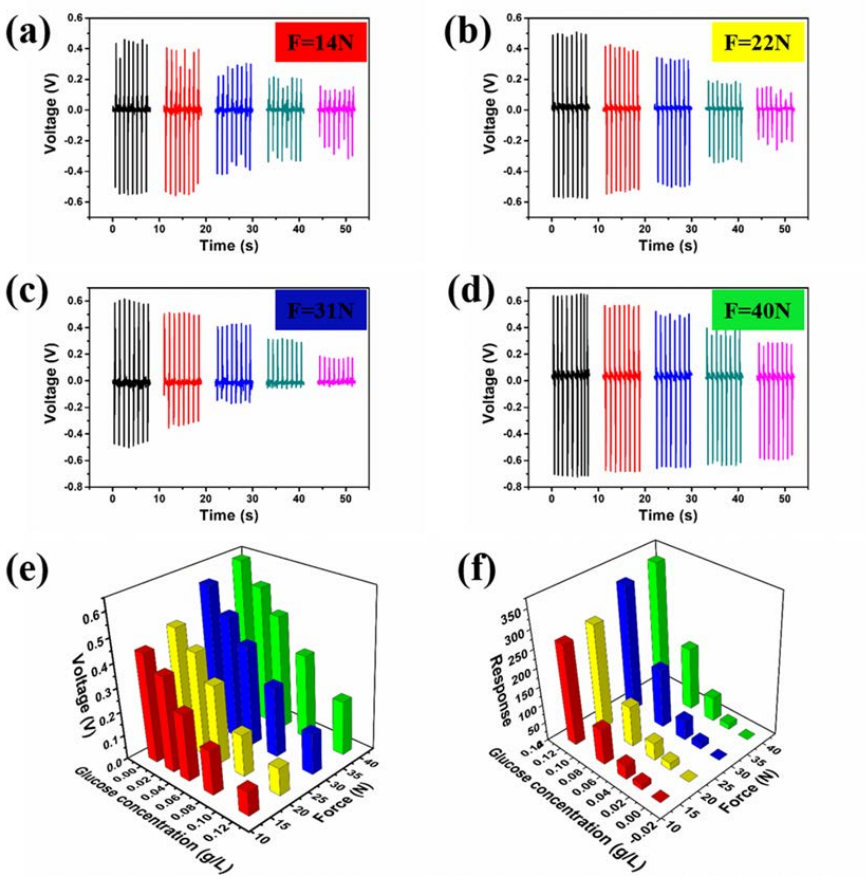


**Fig. S1 a-d** The outputting piezoelectric voltage of self-powered implantable skin-like glucometer with different applied forces. **e** The relationship between the outputting piezoelectric voltage and applied force. **f** The glucose response under different applied forces

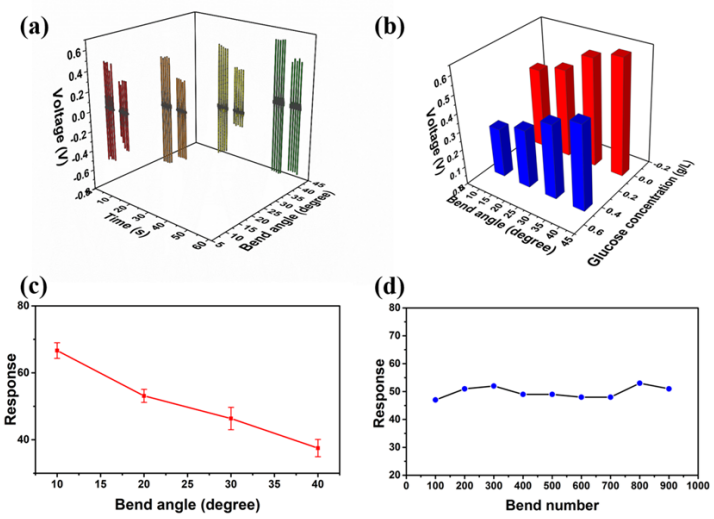


**Fig. S2** Glucose response of self-powered implantable skin-like glucometer under different bending angles. **a** The outputting piezoelectric voltage of the device under different bending angles. **b** The relationship between piezo-biosensing performance and bending angle. **c** The response varies with the bending angle. **d** The relationship between response and bending number

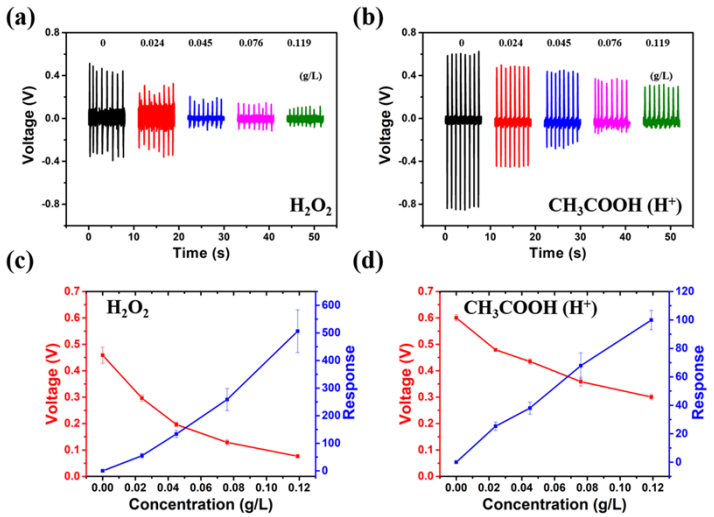


**Fig. S3 a** The outputting piezoelectric voltage of the self-powered implantable skin-like glucometer at different $H_2O_2$ concentration. **b** The outputting piezoelectric voltage of the device at different $CH_3COOH$ concentration. **c** The outputting piezoelectric voltage and the response of the self-powered implantable skin-like glucometer against different $H_2O_2$ concentration. **d** The outputting piezoelectric voltage and the response of the device against different $H_2O_2$ concentration

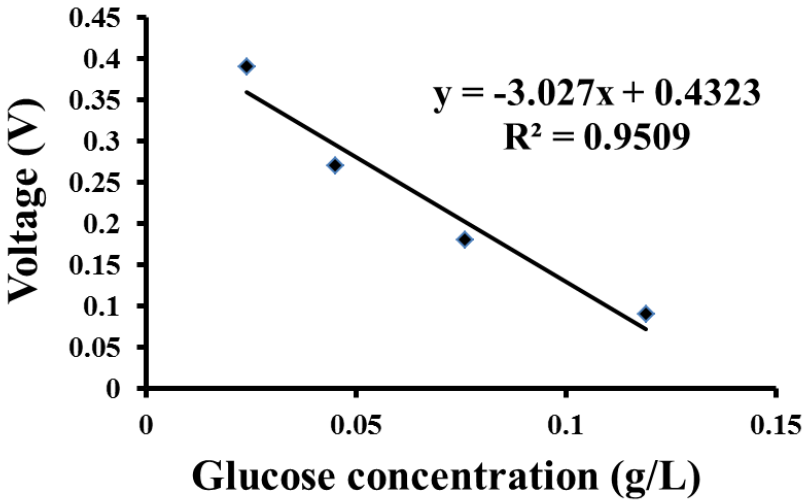


**Fig. S4** Linear fitting dependencies between voltage and glucose concentration