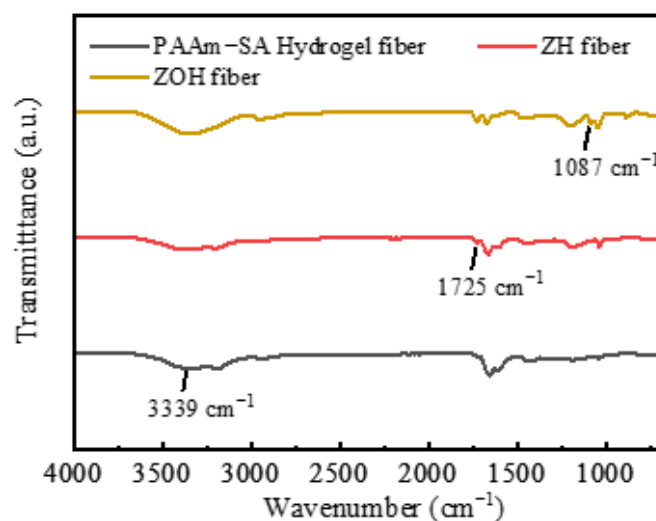
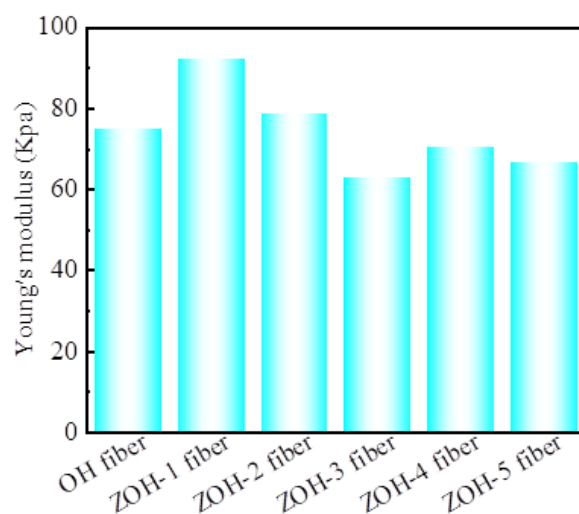


# High-Performance Zwitterionic Organohydrogel Fiber in Bioelectronics for Monitoring Bioinformation

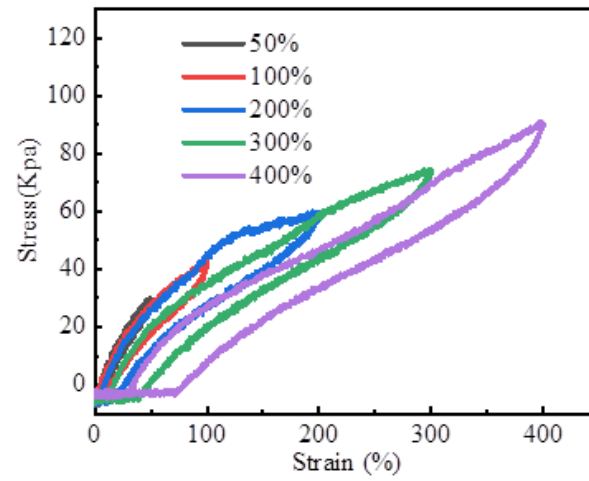
Jun Xia, Jiabei Luo, Boya Chang, Chuanyue Sun, Kerui Li, Qinghong Zhang, Yaogang Li, Hongzhi Wang and Chengyi Hou



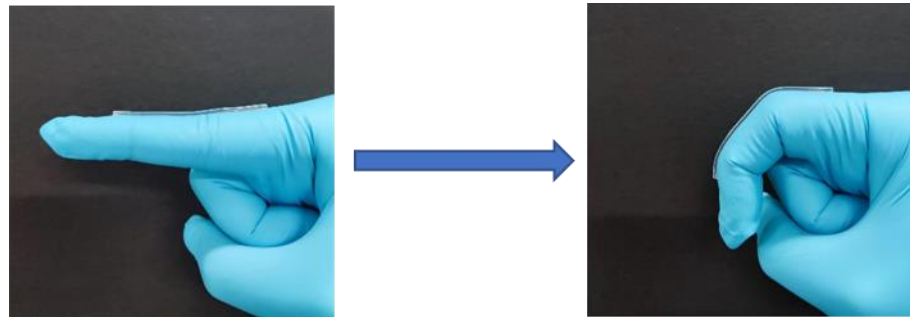
**Figure S1.** The FTIR spectrum of PAAm-SA Hydrogel fiber, ZH fiber and ZOH fiber.



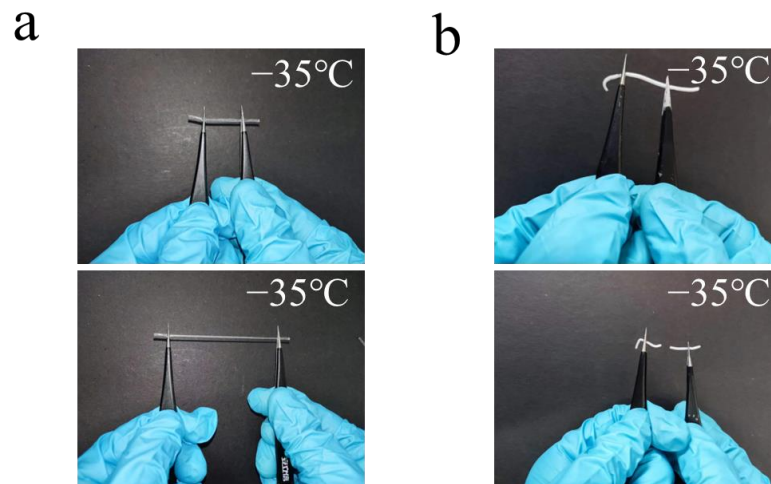
**Figure S2.** Young's modulus of the ZOH fiber with different monomer ratio (SBMA to AM).



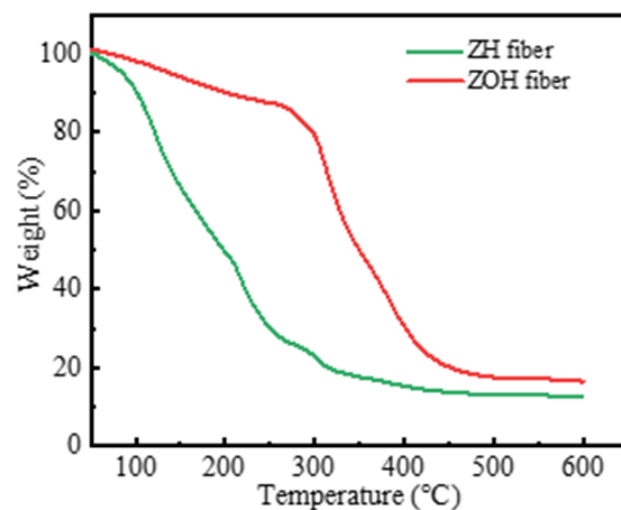
**Figure S3.** Cyclic tensile stress-strain curves of the ZOH fiber with strains of 50%, 100%, 200%, 300%, 400%.



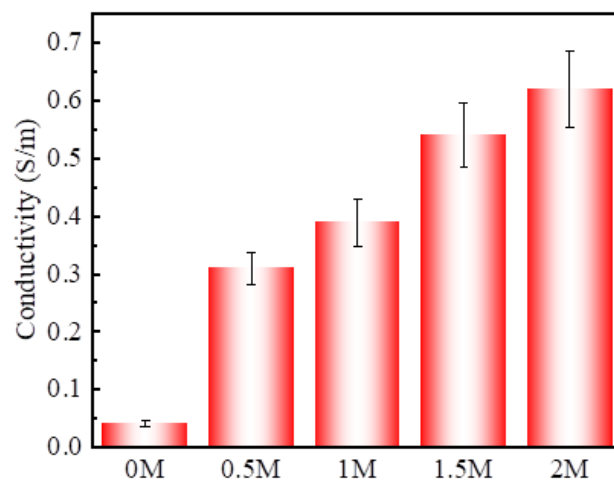
**Figure S4.** Compliance of the ZOH fiber on substrates.



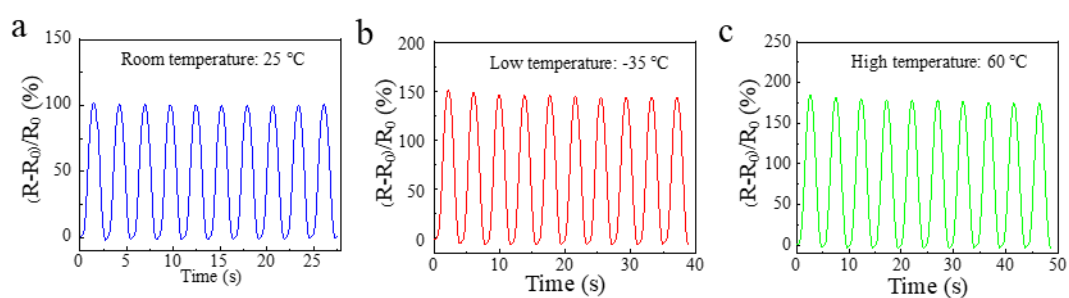
**Figure S5.** (a, b) Photographs demonstrate the stretchability of the ZOH fiber and the ZH fiber at  $-35^{\circ}\text{C}$ .



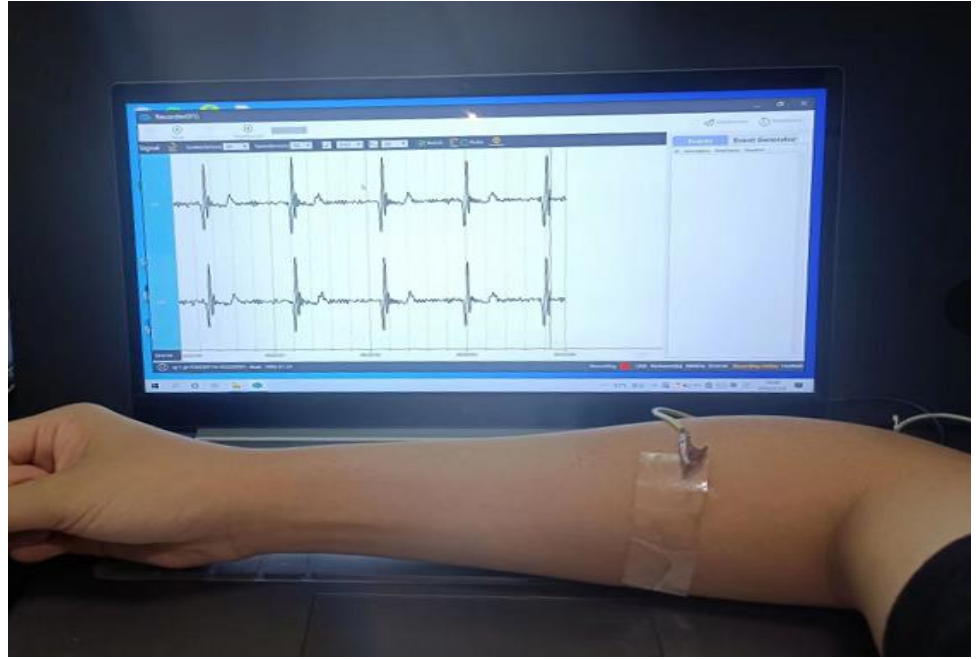
**Figure S6.** The TG curves of the ZH fiber and the ZOH fiber.



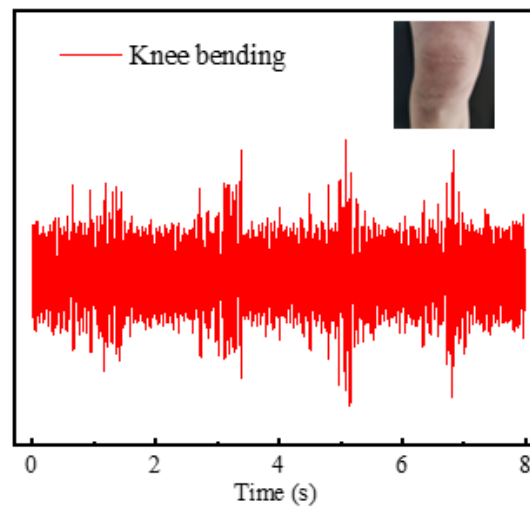
**Figure S7.** Ionic conductivity of the ZOH fiber with different LiCl addition.



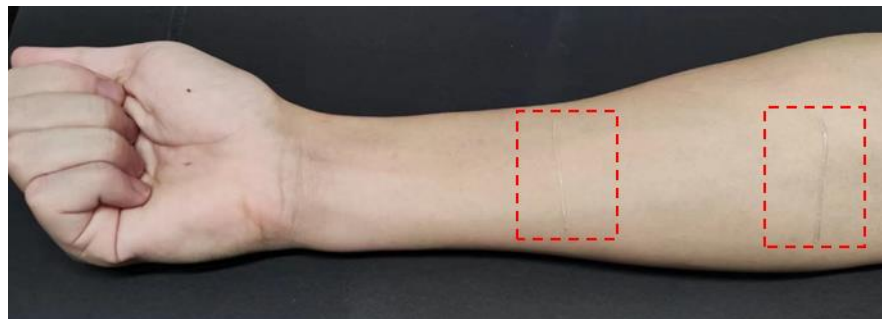
**Figure S8.** Relative resistance changes of the ZOH fiber-based sensor on around 100% strain at (a) room temperature (25°C), (b) low temperature (-35°C) (c) high temperature (60°C).



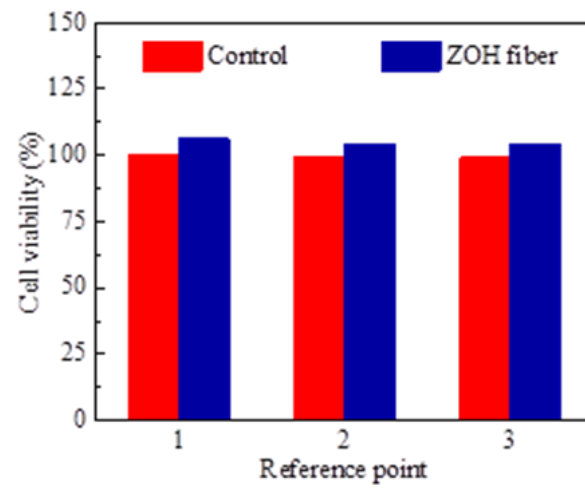
**Figure S9.** Photos of bioelectrical signals tested by the ZOH fiber.



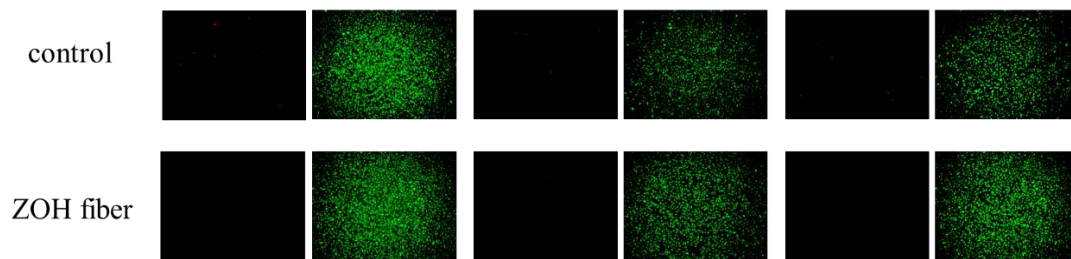
**Figure S10.** EMG signal of knee bending detected by ZOH fiber-based electrodes.



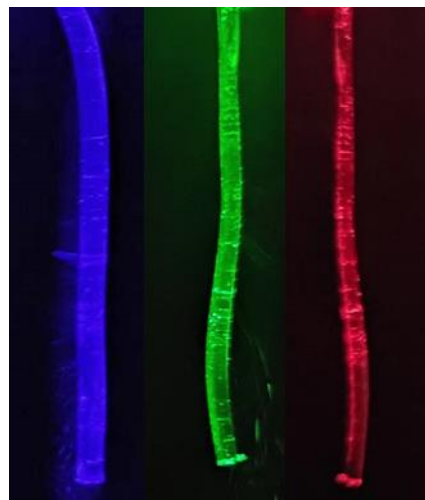
**Figure S11.** The positions of ZOH fiber-based electrodes.



**Figure S12.** Cell viability of the ZOH fiber and control group.



**Figure S13.** Fluorescence images of dead cells (red) and living cells (green) after cultured on different substrates after 24 hours.



**Figure S14.** Photos of lasers of different wavelengths passing through the non-cladded ZOH fiber.