Supporting Information

A fiber-shaped light-emitting pressure sensor for visualized dynamic

monitoring

Xufeng Zhou^a, Xiaojie Xu^a, Yong Zuo^a, Meng Liao^a, Xiang Shi^a, Chuanrui Chen^a, Songlin Xie^a, Peng Zhou^b, Xuemei Sun^a* and Huisheng Peng^a

^aState Key Laboratory of Molecular Engineering of Polymers, Department of Macromolecular Science and Laboratory of Advanced Materials, Fudan University, Shanghai 200438, China. *E-mail: sunxm@fudan.edu.cn. ^bState Key Laboratory of ASIC and System, School of Microelectronics, Fudan University, Shanghai 200433, China

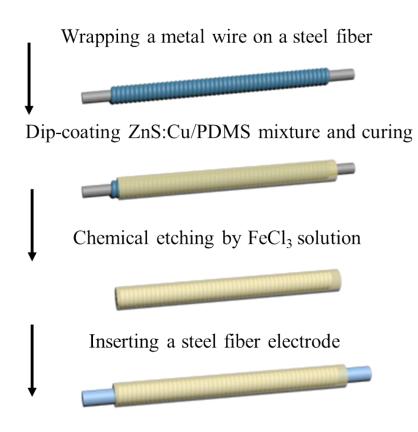


Fig. S1. Schematic illustration of preparing a fiber-shaped light-emitting pressure sensor.

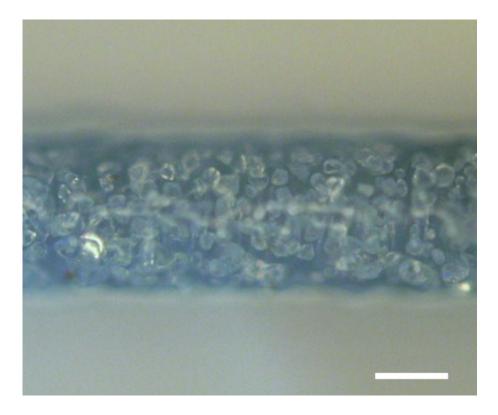


Fig. S2. Optical micrograph of a ZnS:Cu/PDMS hollow fiber. Scale bar, 100 μm.

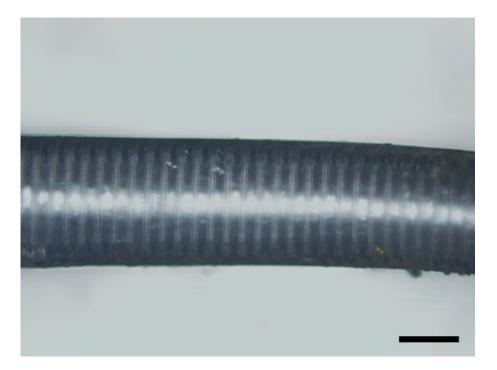


Fig. S3. Optical micrograph of a bare PDMS hollow fiber with uniaxial folded microstructures prepared by wrapping the copper fiber with a diameter of 30 μ m. Scale bar, 100 μ m.

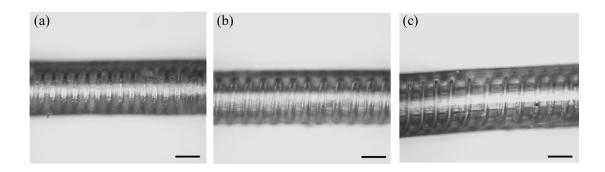


Fig. S4. Optical micrographs of bare PDMS hollow fibers with uniaxial folded microstructures with different distances of (a) 45 μ m, (b) 60 μ m, (c) 75 μ m. Scale bar, 100 μ m.

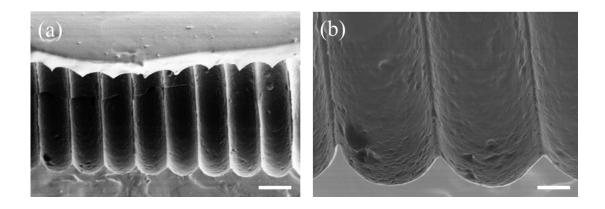


Fig. S5. SEM image of the bare PDMS hollow fiber with uniaxial folded microstructures in low magnification (a) and high magnification (b). Scale bars in a and b, 50 μ m and 10 μ m, respectively.

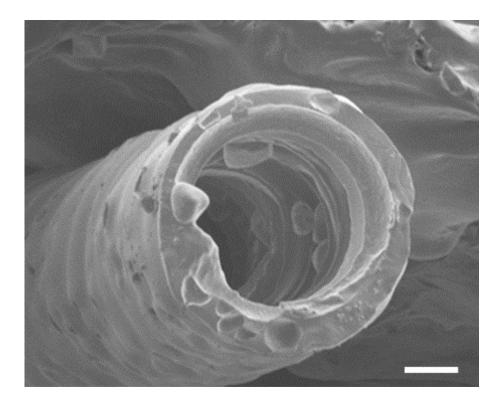


Fig. S6. Cross-sectional SEM image of the ZnS:Cu/PDMS hollow fiber with uniaxial folded microstructures. Scale bar, 50 μ m.

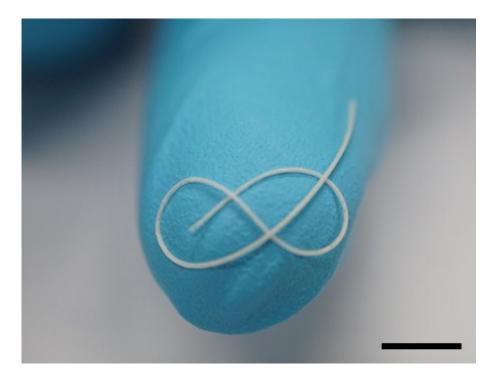


Fig. S7. The photograph of the ZnS:Cu/PDMS hollow fiber on the finger. Scale bar, 0.5 cm.

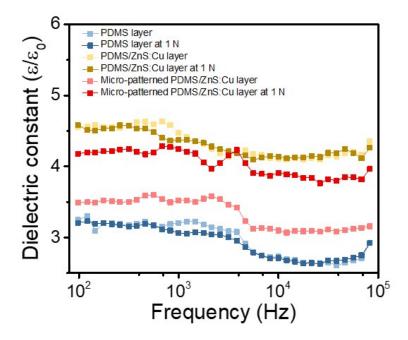


Fig. S8. AC frequency-dependent dielectric constants of PDMS, ZnS:Cu/PDMS composite layers with and without micro-patterns.

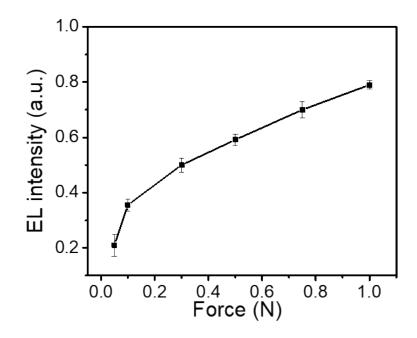


Fig. S9. The dependence of the EL intensity of the FLPS with increasing forces.