

Supporting Information

Bioinspired Helical Hydrogel Scaffold with Real-Time Sensing for Enhanced Precision in Gynecological digital vaginal Examination

*Weipeng Lu^{1,†}, Qing He^{1,†}, Zheng Mao¹, Songchao Fu¹, Yue Wang¹, Zhiwei Jiang¹,
Ying Wang¹, Yue Cao¹, Sunlong Li¹ Cihui Liu^{1*}, Qian Dong^{2,3,4*}*

¹Center for Future Optoelectronic Functional Materials, School of Computer and Electronic Information/School of Artificial Intelligence, Nanjing Normal University, Nanjing 210023, China

²Department of Obstetrics and Gynecology, Ren Ji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China.

³Shanghai Key Laboratory of Gynecologic Oncology, Ren Ji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China.

⁴State Key Laboratory of Oncogenes and Related Genes, Shanghai Cancer Institute, Ren Ji Hospital, School of Medicine. Shanghai Jiao Tong University, Shanghai, China.

†The authors contributed equally to this work.

Corresponding author: cihui@njnu.edu.cn (Prof. Cihui Liu); dongqian95fy@126.com (Prof. Qian Dong)

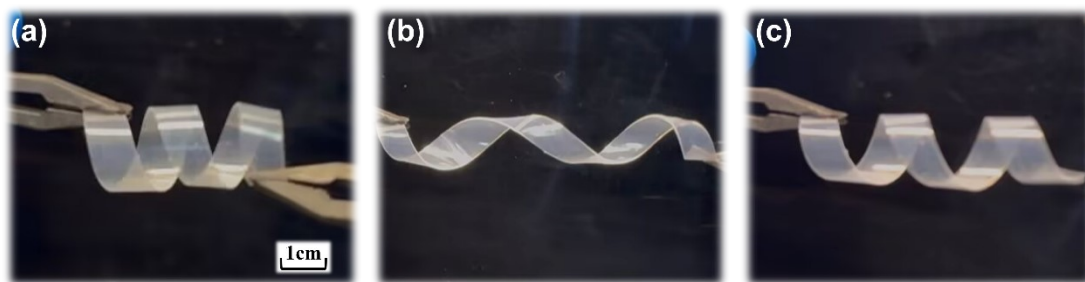


Figure. S1 Carbon nanotube-free material test results. (a) unstretched thin film stent; (b) stretched thin film stent; (c) 10-minute recovery state after removal of external force.

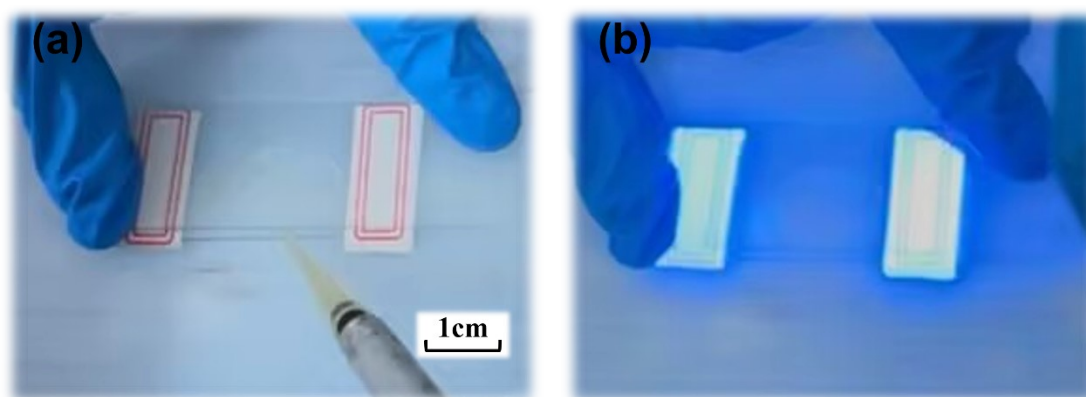


Figure. S2 Experimental diagram of PNiPAAm film preparation. (a) PNiPAAm precursor mixture was injected into the slide. (b) Irradiation was performed with UV light.

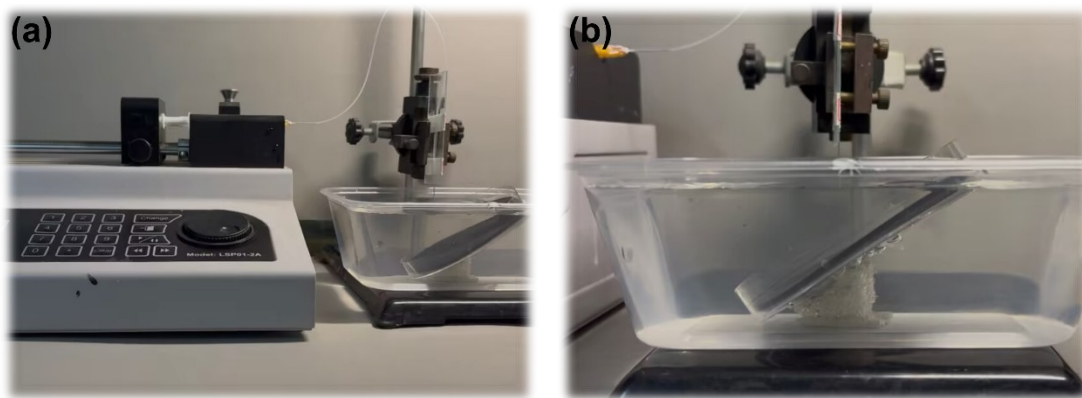


Figure. S3 Experimental diagram of photonic crystal arrays prepared by two-dimensional deposition method. (a) SiO_2 nanoparticles deposited on PDMS film. (b) Photonic crystal deposition process.

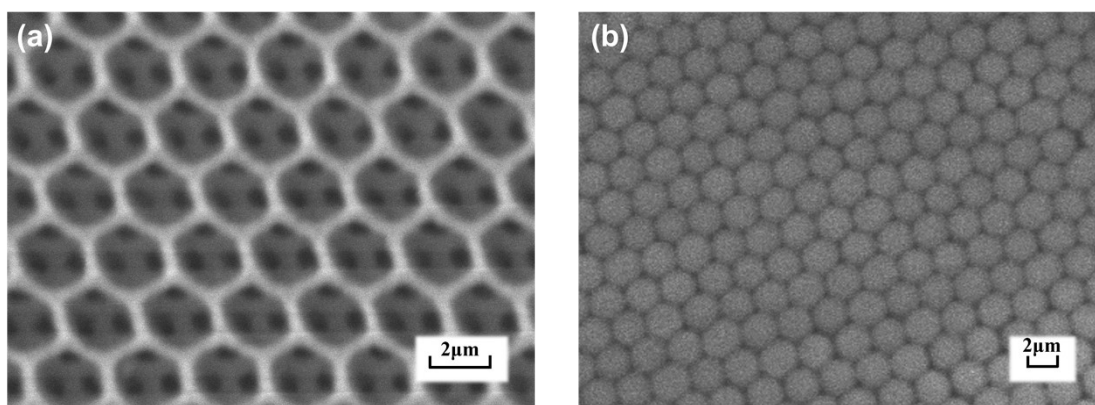


Figure. S4 Scanning Electron Microscope Pictures. (a) inverse opal structure; (b) opal structure.