Supporting Materials

Bacteriophage Nanofiber Fabrication Using Near Field Electrospinning

Ryota Sugimoto^{a,b}, Ju Hun Lee^{a,b,1}, Ju-Hyuck Lee^{a,b,2}, Hyo-Eon Jin ^{a,b,3}, So-Young Yoo^{d,*},

and Seung-Wuk Lee^{a,b,c*}

^a Department of Bioengineering, University of California at Berkeley, Berkeley, CA, 94720, USA.

^b Biological Systems and Engineering, Lawrence Berkeley National Laboratory, Berkeley, CA 94720

^c Tsinghua Berkeley Shenzhen Institute, Berkeley, USA

^dBIO-IT Foundry Technology Institute Pusan National University Busan 609-735, and Research Institute for Convergence of Biomedical Science and Technology Yangsan 626-770, Republic of Korea.

*Corresponding authors: <u>yoosy@pusan.ac.kr</u> & <u>leesw@berkeley.edu</u>



Figure S1. (A) Schematic of the phage wet spinning. (B) Polarized microscope image of a wet spun fiber

Figure S1. Wet spinning of M13 phage. A. Schematic of wet spun phage fiber fabrication. Phage solution (30 mg/ml with 50 mM TBS/ DIW) was extruded into 2.5 % glutaraldehyde/DIW solution. **B**. Polarized optical microscopy images of the wet-spun phages. These images show nonspecific orientation of crystalline structure resulted by phage wet spinning.



Figure S2. Elastic modulus of electrospun phage fibers. The distribution of the elastic modulus of electro spun phage nanofibers. The force-indentation data was collected from 50 different points in five phage electrospun fibers using AFM nanoindentation method. The elastic modulus was calculated by Oliver-Pharr model.